Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627km,37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:41.7±1.4,22°.1S×0°.2×179°.3W×0°.2,h600km,n22,
σ1§55/24,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

IDC 01 00:00:00.6±1.3**,2˚89S×129˚59E,h0^{km},mb3.7**/3**, mbtmp3.7**/5**,ML3.7**/2**,Error ellipse: s-maj=35.3km s-min=22.4km az=90.0,Hypocentre not reviewed by the ISC,Seram**

ATH ***01*** *00:01:01.9,36˚64N×25˚66E,h23^{km}±2^{km},ML2.5/7, Manual Solution by S.Liakopoulos First location: 2020/02/01 00:01:41, This location: 2020/02/01 01:13:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 2 km*
THE ***01*** *00:01:02.1,37˚N±2˚×2˚6E±˚,h10^{km}±2^{km},M2.4/8, MLh2.4/8*
ISK ***01*** *00:01:03.0,36˚44N×25˚89E,h9^{km},ML2.1/10*
ISC 01 00:01:01.3±0.9**,36˚59N**±0˚03×**25˚78E**±0˚03**,h13**^{km}±9^{km}**, n37,**σ**0**^{s}**96**/52**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR8	**Santorini-Mono**	**0.31**	**233**	P	**Pg**	**00 01 07.8**	**+0.2**
THR2	**Thira island,**	**0.32**	**243**	P	**Pg**	**00 01 08.2**	**+0.4**
THERA	**Ancient Thera,**	**0.33**	**228**	P	**Pg**	**00 01 08.4**	**+0.3**
THERA				S	**Sg**	**00 01 13.2**	**+0.5**
THERA	**Ancient Thera,**	**0.33**	**228**	P	**Pg**	**00 01 08.4**	**+0.3**
THERA				S	**Sg**	**00 01 13.2**	**+0.5**
THR3	**Thira Island,**	**0.36**	**239**	P	**Pg**	**00 01 09.1**	**+0.6**
SNT5	**Nea Kammeni, S**	**0.36**	**239**	P	**Pg**	**00 01 08.8**	**+0.1**
SNT5				S	**Sg**	**00 01 14.0**	**+0.4**
SNT5	**Nea Kammeni, S**	**0.36**	**239**	P	**Pg**	**00 01 09.0**	**+0.3**
SNT5				S	**Sg**	**00 01 14.2**	**+0.6**
SAP3	**Santorini-Thir**	**0.39**	**246**	P	**Pg**	**00 01 09.1**	**+0.1**
SAP3				S	**Sg**	**00 01 14.9**	**+0.7**
SAP3	**Santorini-Thir**	**0.39**	**246**	P	**Pg**	**00 01 09.3**	**+0.3**
SAP3				S	**Sg**	**00 01 14.1**	**-0.2**
THR6	**Thira Island,**	**0.39**	**233**	P	**Pg**	**00 01 09.7**	**+0.5**
THR9	**Santorini-Faro**	**0.41**	**236**	P	**Pg**	**00 01 09.2**	**-0.4**
NAX1	**Naxos Island**	**0.60**	**327**	P	**Pg**	**00 01 12.3**	**-0.9**
NAX1				S	**Sg**	**00 01 19.6**	**-1.6**
KLNA	**Kalymnos**	**1.02**	**69**	P	**Pn**	**00 01 21.3**	**-0.1**
KLNA				S	**Sn**	**00 01 36.4**	**+0.8**
MHLO	**Agia Marina, M**	**1.11**	**275**	P	**Pb**	**00 01 22.5**	**0.0**
MHLO				S	**Sg**	**00 01 37.2**	**-0.1**
BODT	**Bodrum**	**1.31**	**69**	Pn	**Pg**	**00 01 28.1**	**+1.5**
BODT				Sn	**Sn**	**00 01 46.5**	**+3.7**
NPS	**Neapolis**	**1.33**	**186**	P	**Pn**	**00 01 25.7**	**0.0**
NPS	**Neapolis**	**1.33**	**186**	P	**Pb**	**00 01 25.8**	**-0.5**
SMG	**Samos**	**1.40**	**37**	P	**Pn**	**00 01 27.0**	**+0.4**
SMG	**Samos**	**1.40**	**37**	P	**Pn**	**00 01 27.0**	**+0.4**
SMG				S	**Sb**	**00 01 43.7**	**-1.4**
DAT	**Datca**	**1.45**	**84**	Pn	**Pg**	**00 01 28.6**	**-0.6**
IDI	**Anoyia**	**1.49**	**209**	Pn	**Pg**	**00 01 29.9**	**-0.1**
IDI				Sn	**Sg**	**00 01 48.4**	**-0.9**
IDI	**Anoyia**	**1.49**	**209**	P	**Pn**	**00 01 28.2**	**+0.3**
IDI				S	**Sg**	**00 01 48.7**	**-0.6**
IDI	**Anoyia**	**1.49**	**209**	P	**Pn**	**00 01 27.4**	**-0.5**
ZKR	**Zakros**	**1.52**	**166**	Pn	**Pg**	**00 01 29.2**	**-1.3**
ZKR				Sn	**Sb**	**00 01 47.6**	**-0.9**
KARP	**Karpathos**	**1.53**	**133**	Pn	**Pb**	**00 01 28.8**	**-0.7**
KARP	**Karpathos**	**1.53**	**133**	P	**Pb**	**00 01 28.9**	**-0.7**
KARP	**Karpathos**	**1.53**	**133**	P	**Pb**	**00 01 29.1**	**-0.5**
GCAM	**G?zelcaml?**	**1.60**	**46**	Pn	**Pg**	**00 01 33.1**	**+1.0**
MLSB	**Milas**	**1.75**	**66**	Pn	**Pg**	**00 01 33.7**	**-1.1**
VAM	**Vamos**	**1.75**	**228**	P	**Pb**	**00 01 33.2**	**0.0**
VAM				S	**Sn**	**00 01 53.9**	**+0.4**
CHOS	**Chios island**	**1.81**	**7**	P	**Pn**	**00 01 32.0**	**-0.3**
CHOS	**Chios island**	**1.81**	**7**	P	**Pn**	**00 01 31.5**	**-0.8**
ARG	**Arkhangelos**	**1.93**	**101**	Pn	**Pb**	**00 01 35.2**	**-1.2**
ARG	**Arkhangelos**	**1.93**	**101**	P	**Pb**	**00 01 35.0**	**-1.4**
ARG	**Arkhangelos**	**1.93**	**101**	P	**Pb**	**00 01 35.1**	**-1.2**
TURN	**Turunc**	**1.99**	**84**	Pn	**Pb**	**00 01 37.3**	**-0.1**
CAME	**Cameli-Denizli**	**2.85**	**82**	Pn	**Pn**	**00 01 49.1**	**+2.4**

ISK ***01*** *00:03:48.3,38˚41N×39˚21E,h2^{km},ML4.3/12*
IDC ***01*** *00:03:50.0±0.6,38˚41N×39˚32E,h0^{km},mb3.9/19, mbtmp3.9/29,ML3.5/9,MS3.4/36,Error ellipse: s-maj=12.4km s-min=7.9km az=158.0*
AFAD ***01*** *00:03:49.2,38˚45N×39˚25E,h20^{km}±1^{km},MW4.2*
MED_RC ***01*** *00:03:50.0±0.4,38˚42N×39˚21E,h10^{km},MW4.2/20, Moment Tensor Solution.Mantle waves: s20,c21; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.09±.15; $M_{\theta\theta}$-1.92±.22; $M_{\phi\phi}$1.83±.18; $M_{r\theta}$0.90±.53; $M_{\theta\phi}$2.05±.14; $M_{\phi r}$0.74±.40; Best double couple: $M_0$3.01000×10^{15} NP1:ϕ_s337.00000°,δ69.00000°, λ174.00000°. NP2:ϕ_s70.00000°,δ84.00000°,λ21.00000°. Principal axes: T 3.1000, Plg19.0000°, Azm296.0000°; N -0.1700, Plg68.0000°, Azm85.0000°; P -2.9200, Plg11.0000°, Azm202.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
MOS ***01*** *00:03:51.3±1.1,38˚48N×39˚20E,h18^{km},mb4.3/10 Error ellipse: s-maj=10.0km s-min=6.4km az=67.7*
NEIC ***01*** *00:03:51.3±2.0,38˚37N±0˚04×39˚27E±0˚05,h10^{km}±2^{km}, mb4.2/6,Error ellipse: s-maj=8.1km s-min=5.9km az=220.0*
ISC 01 00:03:50.4±1.1**,38˚44N**±0˚02×**39˚26E**±0˚02**,h3**^{km}±7^{km}**, n164,**σ**1**^{s}**23**/172**,mb4.0**/37**,MS3.3**/28**,10C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.22**	**285**	P	**Pg**	**00 03 54.5**	**-0.2**
ELZG				S	**Sg**	**00 03 58.5**	**+0.9**
ELZG				IAML		00 03 59.0	
	comp=E,12µm,0.6s						
ELZG				IAML		00 04 01.0	
	comp=N,8µm,0.7s						
ELZ	**Elazig**	**0.25**	**351**	P	**Pg**	**00 03 55.1**	**-0.2**
ELZ				S	**Sg**	**00 03 59.5**	**+0.9**
ELZ				IAML		00 04 00.0	
	comp=E,18µm,0.4s						
ELZ				IAML		00 04 04.0	
	comp=N,6µm,0.6s						
MDNT	**Maden**	**0.34**	**98**	P	**Pg**	**00 03 55.7**	**-1.1**
MDNT				S	**Sg**	**00 04 02.6**	**+1.4**
MDNT				IAML		00 04 07.0	
	comp=N,1µm,0.8s						
MDNT				IAML		00 04 07.0	
	comp=E,7µm,0.5s						
KOVA	**Elazig, Kovanc**	**0.51**	**58**	P	**Pg**	**00 03 59.2**	**-0.9**
KOVA				IAML		00 04 09.0	
	comp=E,7µm,0.6s						
KOVA				S	**Sb**	**00 04 09.1**	**-0.8**
KOVA				IAML		00 04 13.0	
	comp=N,5µm,0.8s						
MAYA	**Malatya/Merkez**	**0.67**	**260**	P	**Pg**	**00 04 02.3**	**-0.9**
MAYA				S	**Sg**	**00 04 11.8**	**0.0**
NARI	**Adyaman-Kaht**	**0.68**	**215**	P	**Pg**	**00 04 02.7**	**-0.7**
TNCL	**Tunceli-Merkez**	**0.71**	**18**	P	**Pg**	**00 04 02.5**	**-1.5**
TNCL				S	**Sb**	**00 04 15.0**	**-0.6**
TNCL				IAML		00 04 18.0	
	comp=N,5µm,0.8s						
TNCL				IAML		00 04 22.0	
	comp=E,7µm,0.7s						
MCKZ	**Bingol**	**0.71**	**342**	P	**Pg**	**00 04 03.0**	**-1.1**
MCKZ				S	**Sg**	**00 04 13.6**	**+0.2**
MCKZ				IAML		00 04 14.0	
	comp=N,9µm,0.4s						
MCKZ				IAML		00 04 14.0	
	comp=E,3µm,0.4s						
KAHTU	**Kahta**	**0.81**	**219**	P	**Pg**	**00 04 05.2**	**-0.8**
KAHTU				S	**Sb**	**00 04 18.2**	**-0.4**
KAHTU				IAML		00 04 23.0	
	comp=E,7µm,0.4s						
KAHTU				IAML		00 04 26.0	
	comp=N,6µm,0.5s						
DYBB	**Diyarbakir**	**0.85**	**125**	Pg	**Pg**	**00 04 06.0**	**-0.6**
DYBB				Sg	**Sb**	**00 04 18.9**	**-0.6**
HANM	**anlurfa/Hi**	**0.91**	**199**	P	**Pg**	**00 04 07.1**	**-0.6**
HANM				IAML		00 04 23.0	
	comp=E,6µm,0.4s						
HANM				S	**Sn**	**00 04 23.3**	**-0.4**
HANM				IAML		00 04 24.0	
	comp=N,8µm,0.5s						
MAYK		**0.91**	**71**	P	**Pg**	**00 04 06.4**	**-1.5**
MAYK				S	**Sn**	**00 04 23.4**	**-0.5**
MAYK				IAML		00 04 33.0	
	comp=N,3µm,0.7s						
MAYK				IAML		00 04 49.0	
	comp=E,3.1nm,1.5s						
ARPR	**Arapgir-MALATY**	**0.97**	**312**	Pg	**Pg**	**00 04 07.9**	**-1.1**
ARPR				Sg	**Sn**	**00 04 24.4**	**-1.1**
ARPR	**Arapgir-MALATY**	**0.97**	**312**	Pg	**Pg**	**00 04 07.9**	**-1.1**
ARPR				Sg	**Sg**	**00 04 21.7**	**0.0**
URFA	**Urfa**	**1.05**	**199**	Pg	**Pg**	**00 04 08.1**	**-2.5**
URFA				Sg	**Sg**	**00 04 23.2**	**-1.0**
AKCD	**Akcadag**	**1.06**	**263**	P	**Pg**	**00 04 09.3**	**-1.4**
AKCD				S	**Sb**	**00 04 24.7**	**-1.0**
AKCD				IAML		00 04 28.0	
	comp=E,8µm,0.5s						
AKCD				IAML		00 04 29.0	
	comp=N,1µm,0.5s						
ILIC	**ilic-Erzincan**	**1.15**	**332**	Pn	**Pg**	**00 04 11.1**	**-1.2**
ILIC				Sn	**Sb**	**00 04 28.0**	**-0.2**
ERZN	**Erzincan**	**1.20**	**17**	Pn	**Pg**	**00 04 12.1**	**-1.3**
ATAB	**Bozova**	**1.23**	**219**	P	**Pg**	**00 04 12.9**	**-1.1**
ATAB				S	**Sn**	**00 04 32.4**	**+0.8**
BNGB	**Bingl**	**1.24**	**63**	Pn	**Pg**	**00 04 13.7**	**-0.4**
BNGB				Sn	**Sn**	**00 04 32.3**	**+0.3**
SANL	**SANLIURFA_Merk**	**1.28**	**190**	P	**Pg**	**00 04 14.2**	**-0.7**
MDIV		**1.29**	**313**	P	**Pg**	**00 04 13.3**	**-1.8**
MDIV				S	**Sn**	**00 04 32.8**	**-0.6**
MDIV				IAML		00 04 34.0	
	comp=N,3µm,0.8s						
MDIV				IAML		00 04 35.0	
	comp=E,4µm,1.2s						
EUZM	**Uzumlu**	**1.31**	**15**	P	**Pg**	**00 04 13.9**	**-1.6**
EUZM				S	**Sb**	**00 04 33.3**	**+0.3**
AKCA	**Adyaman/G¶l**	**1.40**	**243**	P	**Pn**	**00 04 16.1**	**-0.7**
AKCA				S	**Sn**	**00 04 38.5**	**+2.7**
YEDI	**Yedisu-Bingol**	**1.41**	**45**	Pn	**Pn**	**00 04 16.5**	**-0.6**
SLHN	**Bingol, Solhan**	**1.47**	**69**	P	**Pn**	**00 04 16.6**	**-1.3**
SLHN				S	**Sg**	**00 04 40.7**	**+3.0**
SURC	**SANLIURFA_SURC**	**1.64**	**198**	P	**Pn**	**00 04 19.2**	**-0.9**
SURC				S	**Sg**	**00 04 43.2**	**+0.2**
KARO	**Karliova-Bingo**	**1.65**	**58**	Pn	**Pn**	**00 04 19.8**	**-0.5**
MARD	**Mardin**	**1.65**	**133**		**Pn**	**00 04 18.7**	**-1.5**
MARD	**Mardin**	**1.65**	**133**	P	**Pn**	**00 04 18.7**	**-1.5**
MARD				S	**Sn**	**00 04 41.4**	**-0.6**
BTMN	**Batman**	**1.68**	**108**	P	**Pn**	**00 04 19.7**	**-1.0**
BTMN				S	**Sb**	**00 04 43.7**	**+0.2**
KELT	**Kelkit**	**1.71**	**360**	P	**Pn**	**00 04 21.9**	**+0.7**
KELT				S	**Sb**	**00 04 44.9**	**+0.5**
GZT	**Gaziantep**	**1.72**	**232**	P	**Pn**	**00 04 20.8**	**-0.6**
GZT				S	**Sg**	**00 04 47.6**	**+1.9**
ECAT	**Cat-ERZURUM**	**1.77**	**48**	P	**Pn**	**00 04 23.0**	**+0.9**
KOPT	**Kop Dagi**	**1.85**	**31**		**Pn**	**00 04 23.9**	**+0.7**
NZIP	**Nizip/Gaziante**	**1.88**	**223**	P	**Pn**	**00 04 22.9**	**-0.5**
NZIP				S	**Sg**	**00 04 51.0**	**+0.4**
SUSE	**Susehri**	**1.95**	**335**	P	**Pb**	**00 04 26.4**	**-0.2**
GAZ	**Gaziantep**	**2.06**	**233**		**Pn**	**00 04 25.1**	**-0.8**
GAZ	**Gaziantep**	**2.06**	**233**	Pn	**Pn**	**00 04 24.5**	**-1.4**
BAYT	**Aydıntepe-Bayb**	**2.07**	**19**	Pn	**Pn**	**00 04 25.7**	**-0.4**
KMRS	**Kahramanmaras**	**2.08**	**244**	Pn	**Pn**	**00 04 25.2**	**-1.0**
GURO	**Guroymak-BITLI**	**2.18**	**86**		**Pn**	**00 04 27.0**	**-0.6**
GURO	**Guroymak-BITLI**	**2.18**	**86**	Pn	**Pn**	**00 04 27.6**	**0.0**
BNN	**Bunyan**	**2.70**	**280**	Pn	**Pn**	**00 04 35.9**	**+1.0**
TOKA	**Tokat**	**2.86**	**312**		**Pn**	**00 04 38.4**	**+1.5**
KARS	**Kars**	**3.67**	**52**		**Pn**	**00 04 48.5**	**+0.3**
KARS	**Kars**	**3.67**	**52**	P	**Pn**	**00 04 48.5**	**+0.3**
BR131	**Keskin Array S**	**4.56**	**288**		**Pn**	**00 05 00.2**	**-0.2**
BR131	**Keskin Array S**	**4.56**	**288**	*ce*P	**Pn**	**00 05 00.5**	**+0.2**
BRTR	**Keskin Array B**	**4.56**	**288**	Pn	**Pn**	**00 05 02.5**	**+2.1**
	3.5nm,0.3s,baz=127,slow=10,SNR=65						
BRTR				Lg	Lg	00 06 20.8	
	1.2nm,0.3s,baz=101,slow=25,SNR=6.4						
BRTR				LR	LR	00 07 14.2	
	comp=Z,616nm,20.7s,baz=120,slow=44						
	10nm,0.5s						
BRTR	**Keskin Array B**	**4.56**	**288**		**Pn**	**00 05 01.8**	**+1.5**
BRTR	**Keskin Array B**	**4.56**	**288**	P	**Pn**	**00 05 01.8**	**+1.5**
GNI	**Garni**	**4.58**	**66**	Pn	**Pn**	**00 05 01.7**	**+1.0**
	3.2nm,0.3s,baz=298,slow=5.8,SNR=24						
GNI				Lg	Lg	00 06 13.3	
	0.5nm,0.3s,baz=74,slow=10,SNR=3.3						
GNI				LR	LR	00 06 53.4	
	comp=Z,132nm,19.6s,baz=257,slow=40						
	9.3nm,0.5s						
GNI	**Garni**	**4.58**	**66**		**Pn**	**00 05 01.3**	**+0.6**
GNI	**Garni**	**4.58**	**66**	*ce*P	**Pn**	**00 05 01.4**	**+0.7**
BEIL	**Beino**	**4.61**	**213**	*e*P	**Pn**	**00 05 01.3**	**+0.4**
ILGA	**Ilgaz**	**5.01**	**303**		**Pn**	**00 05 08.8**	**+2.2**
VSLR	**Vesyoloye**	**5.05**	**6**⇑	*e*P	**Pn**	**00 05 06.8**	**-0.2**
VSLR				pmax	pmax		
	comp=Z,35nm,1.1s						
SOC	**Sochi**	**5.15**	**4**	*e*P	**Pn**	**00 05 08.1**	**-0.2**
SOC				*e*		00 06 06.5	
SOC				MLR	MLR		
	comp=Z,237nm,13.0s						
ZAHL	**Zahle**	**5.32**	**212**	*e*P	**Pn**	**00 05 11.5**	**+0.6**
BZK	**Bozkurt**	**5.34**	**313**	Pn	**Pn**	**00 05 11.2**	**+0.3**
BHL	**Bhannes**	**5.38**	**214**	*e*P	**Pn**	**00 05 11.8**	**+0.1**
DQRL	**Deir Qamar**	**5.59**	**213**	*e*P	**Pn**	**00 05 15.5**	**+1.1**
RCY	**Rachaya**	**5.66**	**210**	*e*P	**Pn**	**00 05 15.9**	**+0.4**
QRWL	**Qaraoun**	**5.68**	**212**	*e*P	**Pn**	**00 05 15.3**	**-0.3**
CSS	**Mathiatis**	**5.89**	**236**		**Pn**	**00 05 19.4**	**+0.8**
KBZ	**Khabaz**	**5.96**	**26**	Pn	**Pn**	**00 05 21.0**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=162,slow=5.0,SNR=6.7						
KBZ				LR	LR	00 08 03.4	
	comp=Z,511nm,19.5s,baz=221,slow=42						
	comp=Z,1.3nm,0.6s						
KIV	**Kislovodsk**	**6.09**	**24**	Pn	**Pn**	**00 05 21.3**	**+0.1**
KIV	**Kislovodsk**	**6.09**	**24**	*e*P	**Pn**	**00 05 21.8**	**+0.5**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,100nm,9.0s						
KVAR	**Kislovodsk Arr**	**6.09**	**24**	Pn	**Pn**	**00 05 23.7**	**+2.3**
	baz=209,slow=14						
	comp=Z,1.3nm,0.4s						
MMAI	**Mount Meron Ar**	**6.25**	**211**	Pn	**Pn**	**00 05 24.2**	**+0.6**
	comp=Z,5.1nm,0.3s,baz=48,slow=14,SNR=4.9						
MMAI				Lg	Lg	00 07 09.1	
	comp=Z,5.3nm,0.3s,baz=35,slow=37,SNR=1.7						
	comp=Z,2.8nm,0.3s						
ASF	**Jabal al Asfar**	**6.54**	**198**	Pn	**Pn**	**00 05 28.0**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=42,slow=7.2,SNR=11						
ASF				Lg	Lg	00 07 17.3	
	comp=Z,7.3nm,0.3s,baz=208,slow=22,SNR=5.3						
	comp=Z,23nm,1.0s						
ASF	**Jabal al Asfar**	**6.54**	**198**	P	**Pn**	**00 05 28.0**	**+0.4**
MDUB	**Mudurnu**	**6.56**	**291**	Pn	**Pn**	**00 05 28.1**	**+0.4**
BORA	**Eskisehir**	**6.99**	**285**	Pn	**Pn**	**00 05 35.4**	**+1.7**
BALJ	**Balqa**	**6.99**	**206**		**Pn**	**00 05 34.3**	**+0.6**
AKT	**Akhty**	**7.18**	**62**	*e*P	**Pn**	**00 05 37.8**	**+1.5**
AKT				MLR	MLR		
	comp=Z,174nm,10.0s						
MAK	**Makhachkala**	**7.72**	**52**	*e*P	**Pn**	**00 05 40.9**	**-2.7**
MAK				*e*S	**Sn**	**00 07 06.9**	**-4.6**
MAK				pmax	pmax		
	comp=Z,154nm,1.3s						
MAK				MLR	MLR		
	comp=Z,499nm,9.0s						
GHAJ	**Ghor Haditha**	**7.74**	**204**		**Pn**	**00 05 43.5**	**-0.3**
AKAS	**Kas**	**8.00**	**257**	Pn	**Pn**	**00 05 46.7**	**-0.9**
EIL	**Elat**	**9.45**	**203**	Pn	**Pn**	**00 06 07.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=22,slow=16,SNR=2.3						
EIL				Lg	Lg	00 08 48.7	
	comp=Z,0.4nm,0.3s,baz=162,slow=12,SNR=2.1						
EIL				LR	LR	00 10 06.5	
	comp=Z,392nm,20.7s,baz=326,slow=40						
	comp=Z,2.8nm,0.6s						
IDI	**Anoyia**	**11.93**	**259**	Pn	**Pn**	**00 06 41.3**	**-0.1**
	comp=Z,12nm,0.9s,baz=77,slow=19,SNR=1.7						
IDI				LR	LR	00 12 18.8	
	comp=Z,222nm,18.7s,baz=100,slow=42						
MLR	**Muntele Rosu**	**12.15**	**310**	LR	LR	00 12 37.7	
	comp=Z,232nm,19.7s,baz=72,slow=43						
AKASG	**Malin Array Be**	**14.18**	**333**	Pn	**Pn**	**00 07 11.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=149,slow=13,SNR=1.6						
	comp=Z,0.6nm,0.5s						
OBN	**Obninsk**	**16.78**	**355**	LR	LR	00 15 52.4	
	comp=Z,47nm,19.9s,baz=309,slow=43						
AKTO	**Aktyubinsk**	**17.92**	**42**	P	**P**	**00 08 01.5**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=246,slow=8.8,SNR=4.5						
AKTO				LR	LR	00 16 34.9	
	comp=Z,104nm,19.7s,baz=64,slow=43						
	comp=Z,2.2nm,0.6s						
AB31	**Akbulak array**	**18.36**	**47**	P	**P**	**00 08 06.1**	**+0.1**
ABKAR	**Akbulak array**	**18.36**	**47**		**Pn**	**00 08 05.3**	**-0.6**
RONA	**Rosalia, Austr**	**19.10**	**306**	*e*P	**P**	**00 08 11.4**	**-2.7**
	comp=Z,3.3nm,1.2s						
CONA	**Conrad Observa**	**19.46**	**307**	*e*pP	**P**	**00 08 15.7**	**-2.4**
	comp=Z,6.8nm,1.4s						
VRAC	**Vranov**	**19.55**	**311**	LR	LR	00 17 13.3	
	comp=Z,102nm,18.8s,baz=114,slow=41						
UOSS	**Minazif**	**19.68**	**128**		**P**	**00 08 20.1**	**-0.5**
UOSS				IAmb	IAmb	00 09 04.2	
	comp=Z,6.6nm,0.8s						
FDMO	**Fiordimonte**	**20.32**	**291**	P	**P**	**00 08 27.6**	**+0.1**
FDMO				IAmb	IAmb	00 08 38.0	
	comp=Z,6.9nm,0.8s						
MOA	**Molln**	**20.44**	**305**	*e*P	**P**	**00 08 25.7**	**-3.1**
	comp=Z,0.8nm,0.7s						
BIOA	**Bad Ischl, Aus**	**20.80**	**305**	*e*P	**P**	**00 08 33.5**	**+0.9**
	comp=Z,6.7nm,1.1s						
KBA	**Koelnbreinsper**	**20.82**	**303**	*e*pP	Pn	00 08 35.4	-0.1
	comp=Z,2.2nm,0.7s						
GERES	**GERESS Array B**	**21.12**	**308**	P	**P**	**00 08 37.0**	**+0.8**
	comp=Z,1.0nm,0.9s,baz=128,slow=8.6,SNR=5.5						
GERES				LR	LR	00 17 58.4	
	comp=Z,71nm,19.3s,baz=62,slow=40						
	comp=Z,1.0nm,0.9s						
GERES	**GERESS Array B**	**21.12**	**308**	P	**P**	**00 08 37.0**	**+0.8**
KIRV	**Kirov**	**21.21**	**15**	P	**P**	**00 08 37.2**	**+0.4**
	comp=Z,3.4nm,0.5s,baz=198,slow=9.6,SNR=4.1						
KIRV				LR	LR	00 18 00.5	
	comp=Z,72nm,18.5s,baz=206,slow=40						
	comp=Z,3.4nm,0.5s						
KHC	**Kasperske Hory**	**21.30**	**308**⇑	*e*P	**P**	**00 08 36.6**	**-1.5**
KHC				pmax	pmax		
	comp=Z,10.0nm,1.8s						
LESA	**Schwarzleotal**	**21.35**	**303**	*e*P	**P**	**00 08 39.3**	**+0.7**
	comp=Z,8.0nm,1.5s						
WTTA	**Wattenberg**	**22.00**	**303**	*e*pP	**P**	**00 08 45.5**	**-0.2**
	comp=Z,7.3nm,1.7s						
ARTI	**Arti**	**22.00**	**29**	LR	LR	00 19 31.6	
	comp=Z,64nm,19.8s,baz=229,slow=43						
ARTI	**Arti**	**22.00**	**29**	P	**P**	**00 08 44.0**	**-1.5**
ARTI				IAmb	IAmb	00 08 54.0	
	comp=Z,5.5nm,0.6s						
ARTI	**Arti**	**22.00**	**29** *d*	*i*P	**P**	**00 08 45.1**	**-0.4**
ARTI				S	**S**	**00 12 44.6**	**-4.1**
ARTI				pmax	pmax		
	comp=Z,11nm,1.6s						
WATA	**Walderalm**	**22.05**	**303**	*e*pP	**P**	**00 08 46.6**	**+0.3**
	comp=Z,7.1nm,0.9s						
SQTA	**Sankt Quirin**	**22.27**	**302**	*e*pP	**P**	**00 08 49.7**	**+1.1**
	comp=Z,8.8nm,1.3s						
MOTA	**Moosalm**	**22.37**	**303**	*e*pP	**P**	**00 08 49.5**	**-0.2**
	comp=Z,2.1nm,0.7s						
KLMR	**Klimovskoe**	**22.44**	**0**	*e*P	**P**	**00 08 49.4**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,29nm,1.5s						
CLL	**Collm**	**22.48**	**313**	*e*P	**P**	**00 08 52.0**	**+1.4**
CLL	**Collm**	**22.48**	**313**	*e*P	**P**	**00 08 52.0**	**+1.4**
CLL				AMS	AMS	00 18 00.0	
	comp=Z,100nm,19.1s						
FETA	**Feichten**	**22.55**	**302**	*e*pP	**P**	**00 08 49.1**	**-2.5**
	comp=Z,2.6nm,0.9s						
RETA	**Reutte**	**22.63**	**303**	*e*pP	**P**	**00 08 52.4**	**0.0**
	comp=Z,0.1nm,0.4s						
DAVOX	**Davos/Dischmat**	**23.07**	**301**	LR	LR	00 19 58.9	
	comp=Z,124nm,19.0s,baz=66,slow=42						
DAVA	**Damuels**	**23.17**	**302**	*e*pP	**P**	**00 08 56.7**	**-1.4**
	comp=Z,6.4nm,0.8s						
KEST	**Kesra**	**23.97**	**273**	P	**P**	**00 09 07.8**	**+1.7**
	comp=Z,9.7nm,0.9s,baz=36,slow=6.0,SNR=9.5						
	comp=Z,9.7nm,0.9s						
KEST	**Kesra**	**23.97**	**273**	P	**P**	**00 09 07.8**	**+1.7**
KEST				IAmb	IAmb	00 09 11.9	
	comp=Z,12nm,0.9s						
KKAR	**Karatay Array**	**24.04**	**69**	P	**P**	**00 09 07.2**	**+0.6**
KKAR	**Karatay Array**	**24.04**	**69**	P	**P**	**00 09 07.2**	**+0.6**
FINES	**FINESS Array B**	**24.45**	**345**	P	**P**	**00 09 10.8**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=162,slow=7.2,SNR=9.1						
FINES				LR	LR	00 20 35.7	
	comp=Z,68nm,20.3s,baz=212,slow=41						
	comp=Z,1.3nm,0.6s						
BORK	**Borovoye**	**25.88**	**46**⇑	*e*P	**P**	**00 09 25.6**	**+2.4**
BORK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVAR	**Borovoye Array**	**25.91**	**46**	P	**P**	**00 09 23.4**	**0.0**
	comp=Z,1.8nm,0.9s,baz=194,slow=5.3,SNR=4.3						
BVAR				LR	LR	00 21 04.0	
	comp=Z,78nm,18.5s,baz=251,slow=40						
	comp=Z,1.8nm,0.9s						
AAK	**Ala-Archa**	**26.98**	**70**	LR	LR	00 22 34.8	
	comp=Z,71nm,18.2s,baz=280,slow=42						
AAK	**Ala-Archa**	**26.98**	**70**⇑	*e*P	**P**	**00 09 35.7**	**+2.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
HFS	**Hagfors**	**27.06**	**332**	P	**P**	**00 09 35.5**	**+1.8**
	comp=Z,2.7nm,0.9s,baz=107,slow=9.5,SNR=1.7						
	comp=Z,2.7nm,0.9s						
NOA	**NORSAR Array B**	**28.58**	**331**	LR	LR	00 23 42.9	
	comp=Z,72nm,20.5s,baz=140,slow=42						
FURI	**Furi**	**29.42**	**181**	LR	LR	00 20 24.9	
	comp=Z,42nm,20.0s,baz=360,slow=34						
KURBB	**Kurchatov Arra**	**30.17**	**53**	P	**P**	**00 10 02.7**	**+1.2**
	comp=Z,6.8nm,1.1s,baz=267,slow=9.1,SNR=24						
KURBB				LR	LR	00 24 20.5	
	comp=Z,76nm,19.8s,baz=172,slow=41						
	comp=Z,6.8nm,1.1s						
ARCES	**ARCESS Array B**	**32.02**	**351**	P	**P**	**00 10 16.8**	**-0.9**
	comp=Z,5.0nm,1.1s,baz=146,slow=9.0,SNR=1.8						
ARCES				LR	LR	00 24 56.7	
	comp=Z,57nm,18.7s,baz=124,slow=40						
	comp=Z,5.0nm,1.1s						
MK31	**Makanchi Array**	**32.41**	**61** *d*	*e*P	**P**	**00 10 22.6**	**+1.3**
MKAR	**Makanchi Array**	**32.41**	**61**	P	**P**	**00 10 22.3**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=271,slow=6.5,SNR=10						
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**32.41**	**61**	P	**P**	**00 10 21.8**	**+0.4**
MKAR	**Makanchi Array**	**32.41**	**61**	*ce*P	**P**	**00 10 22.2**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ESDC	**Sonseca Array**	**33.35**	**286**	P	**P**	**00 10 28.2**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=69,slow=8.9,SNR=5.7						
	comp=Z,0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**34.47**	**48**	P	**P**	**00 10 39.5**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=263,slow=8.1,SNR=5.5						
ZALV				LR	LR	00 26 02.7	
	comp=Z,58nm,19.3s,baz=272,slow=39						
	comp=Z,0.9nm,0.6s						
DGZ	**Jazzator, Alta**	**35.82**	**56**⇑	*e*P	**P**	**00 10 51.1**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MDT	**Midelt**	**35.84**	**275**	LR	LR	00 26 41.8	
	comp=Z,37nm,19.7s,baz=15,slow=38						
WMQ	**Urumqi**	**36.46**	**66**	*e*P	**P**	**00 10 58.3**	**+1.8**
WMQ				pP	sP	00 11 00.3	+1.9
MBAR	**Mbarara**	**39.63**	**193**	LR	LR	00 27 50.9	
	comp=Z,52nm,20.7s,baz=22,slow=36						
NRIK	**Noril'sk**	**40.16**	**24**	LR	LR	00 32 18.2	
	comp=Z,37nm,19.6s,baz=218,slow=42						
TORD	**Torodi Ar. Bea**	**41.73**	**243**	P	**P**	**00 11 39.5**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=45,slow=5.8,SNR=5.7						
	comp=Z,0.9nm,0.8s						
GTA2	**Gaotai**	**46.26**	**69**	*e*P	**P**	**00 12 18.6**	**+1.5**
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	**48.46**	**56**	P	**P**	**00 12 35.4**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=283,slow=7.0,SNR=6.1						
	comp=Z,0.6nm,0.7s						
PALK	**Pallekele**	**48.56**	**119**	LR	LR	00 34 49.9	
	comp=Z,53nm,18.4s,baz=333,slow=38						
ULN	**Ulaanbaatar**	**48.88**	**56**	P	**P**	**00 12 37.3**	**-0.1**
ULN	**Ulaanbaatar**	**48.88**	**56**	*ce*P	**P**	**00 12 39.4**	**+2.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZDM	**Lanzhou Array**	**50.44**	**72**	P	**P**	**00 12 50.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=290,slow=4.2,SNR=1.5						
	comp=Z,0.3nm,0.3s						
LZH	**Lanzhou**	**50.50**	**71**	*e*P	**P**	**00 12 51.0**	**+1.1**
LZH				pP	sP	00 12 55.3	+3.4
LZH				pmax	pmax		
	comp=Z,8.0nm,1.5s						
TIXI	**Tiksi**	**53.92**	**23**	LR	LR	00 40 03.0	
	comp=Z,31nm,19.0s,baz=219,slow=40						
HHC	**Hu-ho-hao-te**	**54.23**	**63**	*e*P	**P**	**00 13 16.4**	**-1.1**
HHC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
LSZ	**Lusaka**	**54.43**	**193**	LR	LR	00 36 39.1	
	comp=Z,82nm,21.1s,baz=260,slow=36						
CMAR	**Chiang Mai Arr**	**55.17**	**93**	P	**P**	**00 13 23.4**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=298,slow=8.7,SNR=5.6						
CMAR				LR	LR	00 41 22.8	
	comp=Z,10nm,20.0s,baz=245,slow=41						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.6nm,0.3s						
HILR	Hailar Array B	56.34	51	P	P	00 13 31.5	-1.0
	comp=Z,0.7nm,0.7s,baz=169,slow=8.5,SNR=3.9						
	comp=Z,0.7nm,0.7s						
YAK	Yakutsk	57.09	34	LR	LR	00 41 04.6	
	comp=Z,54nm,19.0s,baz=334,slow=39						
TSUM	Tsumeb	60.84	204	LR	LR	00 41 29.7	
	comp=Z,83nm,18.2s,baz=346,slow=37						
KLR	Kul'dur	63.57	47	LR	LR	00 47 04.7	
	comp=Z,9.5nm,20.8s,baz=282,slow=41						
LBTB	Lobatse	64.41	194	LR	LR	00 44 00.7	
	comp=Z,62nm,19.1s,baz=347,slow=37						
SEY	Seymchan	65.83	27	*ce*P	P	00 14 37.8	+1.2
SEY				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KSRS	Korea Array	67.08	60	P	P	00 14 45.5	+0.5
	comp=Z,1.5nm,0.9s,baz=289,slow=6.6,SNR=4.0						
KSRS				LR	LR	00 47 08.6	
	comp=Z,36nm,19.1s,baz=290,slow=39						
	comp=Z,1.5nm,0.9s						
MA2	Magadan	67.27	31	LR	LR	00 47 26.1	
	comp=Z,51nm,19.9s,baz=295,slow=39						
SCHQ	Schefferville	67.73	323	P	P	00 14 48.7	-0.2
	comp=Z,4.4nm,0.9s,baz=44,slow=3.6,SNR=3.8						
	comp=Z,4.4nm,0.9s						
BOSA	Boshof	67.98	193	LR	LR	00 44 45.8	
	comp=Z,55nm,18.8s,baz=216,slow=36						
SUR	Sutherland	72.52	196	LR	LR	00 49 41.3	
	comp=Z,65nm,18.9s,baz=344,slow=38						
YKA	Yellowknife Ar	77.23	348	P	P	00 15 46.7	+1.3
	comp=Z,0.3nm,0.8s,baz=18,slow=5.7,SNR=3.4						
	comp=Z,0.3nm,0.8s						

*DNK **01** 00:11:37.2±1.7, 51°.51N×16°.12E, h9km±74km, ML2.9, Presumed earthquake*
*IPEC **01** 00:11:37.1±0.2, 51°.47N×16°.41E, h1km, ML1.7/6, Error ellipse: s-maj=2.5km s-min=1.4km az=78.0*
*VIE **01** 00:11:38.5±0.8, 51°.36N×16°.00E, h0km, mb2.3/1, ml2.3/3, Error ellipse: s-maj=5.2km s-min=3.6km az=27.0 77 km WNW of Wroclaw Suspected Mining induced.*
*PRU **01** 00:11:39.6, 51°.39N×16°.19E, h0km*
ISC 01 00:11:35.4±0.9, **51°.54N**±0°.03×**16°.27E**±0°.04, **h0**km, **n30**, σ1s**12**/58, **Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	179	*e*Pg	Pg	00 11 49.5	+0.8
KSP				*e*Sg	Sg	00 11 57.5	-0.3
CHVC	Chvalec	0.96	188	*e*PG	Pb	00 11 54.6	-0.4
CHVC				*e*SG	Sg	00 12 06.0	-0.3
OSTC	Ostas	0.98	182	*e*PG	Pb	00 11 55.0	-0.3
OSTC				*e*SG	Sg	00 12 07.2	+0.2
UPC	Upice	1.05	189	*e*PG	Pg	00 11 55.8	+0.4
UPC				*e*SG	Sg	00 12 08.3	-0.7
	comp=Z,27nm,0.2s						
DPC	Dobruska-Polom	1.19	179	*e*PG	Pg	00 11 58.3	+0.1
DPC				*e*SG	Sg	00 12 13.4	-0.2
	comp=Z,11nm,0.6s						
PIVO	Bartosovice	1.36	173	*e*Pg	Pb	00 12 01.9	+0.1
	baz=356						
PIVO				*e*Sg	Sg	00 12 17.5	-1.7
	7.4nm,0.2s,baz=356						
PVCC	Panska Ves	1.48	227	*e*PG	Pg	00 12 03.7	0.0
PVCC				*e*SG	Sg	00 12 23.1	+0.3
	comp=Z,56nm,0.2s						
BRG	Berggiesshubel	1.61	246	Pg	Pg	00 12 06.7	+0.4
BRG				Sg	Sb	00 12 27.0	+0.2
BRG				Amp		00 12 28.4	
	comp=Z,12nm,0.4s						
RYBC	Ceska Rybna	1.74	184	*e*Pn	Pn	00 12 07.4	+0.5
	baz=7.4						
RYBC				*e*Sg	Sn	00 12 29.6	-0.1
	comp=Z,12nm,0.2s,baz=7.4						
STEB	Steborice	1.87	149	*e*PG	Pg	00 12 11.1	-0.1
STEB				*e*SG	Sg	00 12 35.2	-0.2
	comp=Z,13nm,0.3s						
PRU	Pruhonice	1.90	216	*e*SG	Sn	00 12 34.5	+0.8
	comp=Z,9.2nm,0.4s						
MORC	Moravsky Berou	1.94	155	*e*Pn	Pn	00 12 09.6	-0.1
	baz=337						
MORC				*e*Sg	Sn	00 12 34.7	0.0
	comp=Z,5.8nm,0.5s,baz=337						
MORC	Moravsky Berou	1.94	155	*e*PN	Pn	00 12 09.7	0.0
MORC				*e*SG	Sn	00 12 34.8	0.0
HSKC	Hora Svate Kat	2.02	244	*e*SG	Sb	00 12 39.6	+0.9
	comp=Z,15nm,0.6s						
CLL	Collm	2.06	265	*e*Pg	Pg	00 12 15.0	+0.1
CLL				*e*Sg	Sb	00 12 40.0	+0.2
	comp=Z,6.0nm,0.5s						
OKC	Ostrava-Krasne	2.08	144	*e*SG	Sg	00 12 41.7	-0.5
VRAC	Vranov	2.24	175	*e*Pn	Pn	00 12 14.3	+0.5
	baz=357						
VRAC				*e*Sg	Sb	00 12 44.6	-0.5
	comp=Z,4.0nm,0.3s,baz=357						
VRAC	Vranov	2.24	175	*e*PN	Pn	00 12 14.3	+0.5
VRAC				*e*SG	Sb	00 12 44.7	-0.4
TREC	Trest	2.30	193	*e*SG	Sb	00 12 47.2	+0.4
KRUC	Moravsky	2.48	178	*e*Pn	Pn	00 12 17.6	+0.5
	baz=0.2						
KRUC				*e*Pg	Pb	00 12 21.1	+0.3
	baz=0.2						
KRUC				*e*Sg	Sb	00 12 52.3	+0.4
	comp=Z,2.0nm,0.2s,baz=0.2						
KRUC	Moravsky	2.48	178	*e*PN	Pn	00 12 17.7	+0.6
KRUC				*e*PG	Pb	00 12 21.1	+0.3
KRUC				*e*SG	Sb	00 12 52.3	+0.4
KHC	Kasperske Hory	2.96	217	*e*PN	Pn	00 12 23.0	-0.8
KHC				*e*PG	Pb	00 12 30.1	+1.0
KHC				*e*SN	Sn	00 12 58.0	-2.0
KHC				*e*SG	Sb	00 13 07.7	+1.8
	comp=Z,3.8nm,0.4s						
CKRC	Cesky Krumlov	3.00	206	*e*SG	Sg	00 13 09.6	-2.2
MODS	Modra-Piesok	3.23	168	*e*SG	Sb	00 13 15.4	+1.8
CONA	Conrad Observa	3.62	184	*i* Pn	Pn	00 12 30.8	-2.0
	comp=Z,0.1nm,0.1s						
CONA				*e*Sg	Sg	00 13 30.1	-1.6
	comp=Z,1.9nm,0.5s						
BSD	Bornholm Skovb	3.67	348	*i* P	Pn	00 12 35.0	+1.6
BSD				*i* S	Sn	00 13 15.7	-1.7
BSD				IAML		00 13 23.6	
	comp=Z,16nm,0.9s						
MOA	Molln	3.92	200	*i* Pn	Pn	00 12 36.1	-0.7
	comp=Z,0.1nm,0.1s						
MOA				*e*Sg	Sb	00 13 37.1	+3.9
	comp=Z,2.3nm,0.6s						
LUNU	Lund	4.43	339	*i* P	Pn	00 12 44.9	+1.0
LUNU				*i* S	Sn	00 13 35.9	-0.2
BJUU	Bjuv	4.94	338	*i* P	Pn	00 12 51.1	+0.4
BJUU				*i* S	Sn	00 13 45.5	-3.0
DEL	Delary	5.14	345	*i* P	Pn	00 12 54.6	+1.1
DEL				*i* S	Sn	00 13 51.6	-1.9

*IDC **01** 00:38:51.4±1.7, 0°.10N×91°.20W, h0km, mb3.8/9, mbtmp3.9/9, MS3.2/5, Error ellipse: s-maj=60.4km s-min=15.0km az=44.0*
*NEIC **01** 00:38:52.7±2.4, 0°.1N±0°.1×90°.95W±0°.09, h10km±1km, mb4.3/30, Error ellipse: s-maj=22.4km s-min=11.4km az=29.0*
ISC 01 00:38:53.0±1.0, **0°.1N**±0°.2×**91°.1W**±0°.2, **h10**km, **n53**, σ1s**28**/43, **mb4.2**/25, **MS3.2**/3, **Galapagos Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I20EC	Galapagos	1.01	132	Pg	Pb	00 39 11.8	-0.8
	baz=301,slow=23						
PAYG	Puerto Ayora	1.12	132	Pn	Pb	00 39 12.7	-1.9
JTS	Las Juntas de	11.86	31	LR	LR	00 45 16.7	
	comp=Z,117nm,19.3s,baz=186,slow=32						
ATAH	Atahualpa	14.58	120	LR	LR	00 46 59.1	
	comp=Z,59nm,19.5s,baz=325,slow=33						
SDV	Santo Domingo	22.20	66	P	P	00 43 50.9	+0.9
	2.0nm,0.7s,baz=180,slow=5.1,SNR=4.2						
SDV				LR	LR	00 51 42.5	
	comp=Z,98nm,20.9s,baz=252,slow=35						
	2.0nm,0.7s						
SJG	San Juan	30.39	53	LR	LR	00 55 26.4	
	comp=Z,35nm,19.0s,baz=90,slow=33						
TXAR	Lajitas Array	31.46	339	P	P	00 45 16.1	+1.1
	1.2nm,1.0s,baz=157,slow=11,SNR=7.2						
	1.2nm,1.0s						
TXAR	Lajitas Array	31.46	339	P	P	00 45 14.1	-0.9
ABQ	Albuquerque	37.53	339	P	P	00 46 06.7	-0.9
TASM	ASL Pad, Albuq	37.53	339	P	P	00 46 05.7	-1.9
TASM				IAmb	IAmb	00 46 12.2	
	comp=Z,2.2nm,0.8s						
TASM	ASL Pad, Albuq	37.53	339	P	P	00 46 09.8	+2.2
TASM	ASL Pad, Albuq	37.53	339	P	P	00 46 05.8	-1.8
TASM				IAmb	IAmb	00 46 15.2	
	comp=Z,3.0nm,1.1s						
TASM	ASL Pad, Albuq	37.53	339	P	P	00 46 06.9	-0.8
TASM				IAmb	IAmb	00 46 15.2	
	comp=Z,3.1nm,1.1s						
MDP	Montagnes des	38.75	82	LR	LR	01 00 46.7	
	comp=Z,46nm,20.4s,baz=76,slow=34						
SDCO	Great Sand Dun	39.76	342		P	00 46 26.5	+0.1
SDCO				IAmb	IAmb	00 46 30.8	
	comp=Z,5.6nm,1.2s						
WUAZ	Wupatki	39.99	334		P	00 46 28.2	0.0
WUAZ				IAmb	IAmb	00 46 33.1	
	comp=Z,9.5nm,1.0s						
PV13	Radium Mtn., P	41.25	339	P	P	00 46 38.3	-0.3
PV13				IAmb	IAmb	00 46 43.0	
	comp=Z,5.2nm,0.9s						
PV02	Paradox Valley	41.26	339	P	P	00 46 37.5	-1.3
PV18	Skein Mesa, Pa	41.36	339	P	P	00 46 38.3	-1.2
PV18				IAmb	IAmb	00 46 43.8	
	comp=Z,6.6nm,0.8s						
PV12	Saucer Basin,	41.38	339	P	P	00 46 39.3	-0.5
PV11	David Mesa, Pa	41.39	339	P	P	00 46 38.0	-1.8
PV11				IAmb	IAmb	00 47 10.9	
	comp=Z,7.6nm,1.2s						
PV16	Nyswonger Mesa	41.42	339	P	P	00 46 41.6	+1.5
PV16				IAmb	IAmb	00 46 43.8	
	comp=Z,5.9nm,1.2s						
PV19	Morning Glory	41.44	339	P	P	00 46 42.0	+1.8
PV04	Paradox Valley	41.49	339	P	P	00 46 39.6	-0.9
PV04				IAmb	IAmb	00 46 45.1	
	comp=Z,6.5nm,0.9s						
PV10	Paradox Valley	41.52	339	P	P	00 46 39.4	-1.5
PV10				IAmb	IAmb	00 46 44.7	
	comp=Z,5.5nm,1.0s						
PV23	Carpenter Ridg	41.58	339	P	P	00 46 40.8	-0.6
PV23				IAmb	IAmb	00 46 47.3	
	comp=Z,8.2nm,0.9s						
ISCO	Idaho Springs	41.69	343	P	P	00 46 41.4	-0.9
ISCO				IAmb	IAmb	00 46 49.5	
	comp=Z,2.7nm,0.8s						
V12A	Nelson	41.78	331	P	P	00 46 41.8	-1.1
V12A				IAmb	IAmb	00 46 47.1	
	comp=Z,3.8nm,0.9s						
HMU	Henry Mountain	41.79	337	P	P	00 46 41.5	-1.7
QSM	Queen of Sheba	42.99	329	P	P	00 46 54.1	+1.5
QSM				IAmb	IAmb	00 46 56.7	
	comp=Z,5.2nm,0.9s						
GWY	Greenwater Val	43.05	329		P	00 46 55.6	+2.2
GWY				IAmb	IAmb	00 47 00.6	
	comp=Z,4.7nm,1.1s						
ECSD	EROS Data Cent	43.74	354		P	00 46 58.5	0.0
ECSD				IAmb	IAmb	00 47 02.2	
	comp=Z,5.2nm,0.8s						
BSUT	Blindstream Ca	44.05	338		P	00 47 03.2	+1.6
BDFB	Brasilia	45.33	112	P	P	00 47 13.5	+1.6
	comp=Z,2.7nm,0.8s,baz=258,slow=9.3,SNR=4.7						
	comp=Z,2.7nm,0.8s						
PDAR	Pinedale Array	45.61	341	P	P	00 47 14.3	+0.5
	comp=Z,0.7nm,1.0s,baz=176,slow=8.6,SNR=5.2						
	comp=Z,0.7nm,1.0s						
NVAR	Mina Array Bea	45.61	330	P	P	00 47 14.2	+0.3
	comp=Z,2.8nm,0.8s,baz=154,slow=8.7,SNR=13						
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	45.61	330	P	P	00 47 13.9	0.0
FXWY	Fox Creek	46.88	340	P	P	00 47 24.1	+0.3
FXWY				IAmb	IAmb	00 47 27.8	
	comp=Z,3.8nm,1.1s						
AY01	Puyuhuapi	47.26	162	P	P	00 47 27.4	+1.0
HLID	Hailey	48.04	337		P	00 47 34.6	+1.9
HLID				IAmb	IAmb	00 47 36.1	
	comp=Z,4.6nm,1.2s						
ULM	Lac du Bonnet	50.15	356	P	P	00 47 47.2	-1.3
	comp=Z,2.3nm,0.6s,baz=158,slow=8.0,SNR=5.0						
	comp=Z,2.3nm,0.6s						
ULM	Lac du Bonnet	50.15	356	P	P	00 47 48.1	-0.5
YKA	Yellowknife Ar	64.72	348	P	P	00 49 29.6	-1.5
	comp=Z,0.7nm,0.8s,baz=151,slow=5.6,SNR=8.4						
	comp=Z,0.7nm,0.8s						
YKA	Yellowknife Ar	64.72	348	P	P	00 49 30.9	-0.2
ILAR	Eielson Array	75.97	339	P	P	00 50 38.5	-1.5
	comp=Z,0.6nm,0.9s,baz=132,slow=3.7,SNR=6.0						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	75.97	339	P	P	00 50 39.0	-1.0
ESDC	Sonseca Array	87.76	50	P	P	00 51 42.6	0.0
	comp=Z,0.7nm,0.9s,baz=290,slow=8.1,SNR=4.1						
	comp=Z,0.7nm,0.9s						
H11N3	WAKE ISLAND Hy	101.24	290	T	T	02 45 09.3	
	baz=86,slow=73,SNR=6.5						
H11N2	WAKE ISLAND Hy	101.25	290	T	T	02 45 18.4	
	baz=86,slow=73,SNR=12						
H11N1	WAKE ISLAND Hy	101.26	290	T	T	02 45 17.7	
	baz=86,slow=73,SNR=12						
H11S2	WAKE ISLAND Hy	101.52	289	T	T	02 45 30.3	
	baz=86,slow=74,SNR=9.3						
H11S1	WAKE ISLAND Hy	101.52	289	T	T	02 45 24.8	
	baz=86,slow=74,SNR=5.8						
H11S3	WAKE ISLAND Hy	101.53	289	T	T	02 45 28.2	
	baz=86,slow=74,SNR=4.5						

*FUNV **01** 00:50:01.1, 6°.03N×72°.34W, h9km, MW3.8, Presumed earthquake*
*RSNC **01** 00:50:02.3±0.0, 6°N±1°×7°2W±°, h0km±3km, M2.9, mb3.8, ML2.5, MLv3.4*
ISC 01 00:50:01.2±1.3, **6°.21N**±0°.03×**72°.30W**±0°.04, **h8**km±10km, **n30**, σ1s**87**/54, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUSC	La Rusia	0.84	248	P	Pg	00 50 16.7	-0.8
RUSC				S	Sg	00 50 27.6	-1.0
BARC	Barichara	0.96	293	P	Pb	00 50 20.2	0.0
BARC				S	Sg	00 50 32.9	+0.7
PAMC	Pamplona, Colo	1.19	340	P	Pn	00 50 25.1	+0.5
PAMC				S	Sn	00 50 40.9	-0.3
BRJC	Barrancabermej	1.63	298	P	Pb	00 50 31.9	+0.4
BRJC				S	Sg	00 50 53.9	+0.4
CAPV	Capacho	1.64	359	*e*P	Pg	00 50 33.0	+0.2
CAPV				*e*S	Sg	00 50 54.6	+0.5
SPBC	San Pablo de B	1.85	253	P	Pb	00 50 36.3	+0.9
SPBC				S	Sn	00 50 57.7	+0.7
CHIC	Chingaza	2.12	222	P	Pb	00 50 39.2	-1.0
CHIC				S	Sb	00 51 08.3	+1.4
PTBC	PUERTO BERRIO,	2.17	279	P	Pn	00 50 39.0	+1.3
PTBC				S	Sb	00 51 07.0	-0.9
OCAC	Ocana	2.26	333	P	Pg	00 50 44.9	+0.4
OCAC				S	Sg	00 51 14.9	+1.1
CVER	Cruz Verde, Cu	2.44	227	P	Pb	00 50 46.5	+0.9
SOCV	Socops	2.51	35	*e*P	Pn	00 50 44.2	+1.9
VILC	Villavicencio,	2.51	214	P	Pn	00 50 43.9	+1.5
VILC				S	Sb	00 51 19.5	+1.8
NORC	Norcasia	2.64	256	P	Pn	00 50 45.2	+1.0
NORC				S	Sb	00 51 20.2	-1.2
SDV	Santo Domingo	3.13	32	P	Pn	00 50 52.0	+1.0
HELC	Santa Helena	3.21	270	P	Pn	00 50 51.8	-0.6
HELC				S	Sb	00 51 36.6	-1.7
HELC	Santa Helena	3.21	270	*e*P	Pn	00 50 51.1	-1.3
ANIL	Santa Ana	3.53	241	P	Pn	00 50 57.0	+0.3
ANIL				S	Sn	00 51 39.2	+0.3
UREC	San Jos de Ur	3.56	296	P	Pn	00 50 57.9	+1.1
UREC				S	Sb	00 51 50.9	+3.0
PRAC	Prado	3.58	226	P	Pn	00 50 56.6	-0.5
PRAC				S	Sn	00 51 40.7	+1.0
URMC	La Uribe, Meta	3.60	215	P	Pn	00 50 59.7	+2.2
URMC				S	Sg	00 51 54.6	-2.4
CBOC	Ciudad Bolivar	3.71	265	P	Pn	00 51 00.9	+1.9
CBOC				S	Sb	00 51 48.9	-3.5
ORTC	Ortega, Tolima	3.72	232	P	Pn	00 50 58.6	-0.5
ORTC				S	Sn	00 51 43.0	-0.2
SJCC	San Jacinto, C	4.64	322	P	Pn	00 51 12.9	+1.1
TEPV	Terepaima	4.83	39	*e*P	Pn	00 51 14.5	+0.2
TEPV				*e*S	Sn	00 52 09.8	-0.7
MAPV	Macapo	5.23	46	*e*P	Pn	00 51 19.8	-0.1
MAPV				*e*S	Sn	00 52 17.6	-2.9
URIC	Uribia, Colomb	5.46	3	P	Pn	00 51 21.8	-1.2
URIC				S	Sn	00 52 26.1	0.0
CACV	CAICARA DEL OR	5.87	76	*e*P	Pn	00 51 34.0	+5.4
CACV				*e*S	Sn	00 52 43.6	+7.5
BENV	Beln	5.96	51	*e*P	Pn	00 51 29.1	-0.7
BENV				*e*S	Sn	00 52 35.4	-3.0
TURV	Turiamo	6.10	46	*e*P	Pn	00 51 31.4	-0.3
TURV				*e*S	Sn	00 52 39.3	-2.4
TACV	Tcata	6.51	53	*e*P	Pn	00 51 36.9	-0.6
TACV				*e*S	Sn	00 52 47.2	-4.8

*ISK **01** 01:03:34.6, 40°.73N×42°.32E, h3km, ML2.5/8*
*AFAD **01** 01:03:36.3, 40°.70N×42°.37E, h7km±4km, ML2.1*
ISC 01 01:03:35.6±1.2, **40°.72N**±0°.02×**42°.34E**±0°.03, **h3**km±10km, **n18**, σ1s**16**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.16	178	Pg	Pg	01 03 38.3	-0.4
SENK				Sg	Sg	01 03 41.9	+1.0
GOLE	Ardahan-G¶le	0.23	59	P	Pg	01 03 40.9	+0.9
GOLE				S	Sg	01 03 44.2	+1.3
GOLE				IAML		01 03 45.0	
	comp=N,1μm,0.2s						
GOLE				IAML		01 03 45.0	
	comp=E,923nm,0.1s						
DDEM	Demirkent	0.48	291	P	Pb	01 03 46.1	-0.7
DDEM				S	Sb	01 03 53.5	-0.8
DDEM				IAML		01 03 55.0	
	comp=N,893nm,0.4s						
DDEM				IAML		01 03 56.0	
	comp=E,565nm,0.2s						
AHAN	Ardahan-Merkez	0.49	26	P	Pb	01 03 46.6	-0.4
AHAN				IAML		01 03 55.0	
	comp=N,177nm,0.4s						
AHAN				S	Sb	01 03 55.6	+0.9
AHAN				IAML		01 04 03.0	
	comp=E,176nm,0.5s						
BOZK	Kars-Merkez-Bo	0.50	105	P	Pb	01 03 46.0	-1.2
BOZK				IAML		01 03 54.0	
	comp=E,157nm,0.2s						
BOZK				S	Sb	01 03 54.9	-0.1
BOZK				IAML		01 03 55.0	
	comp=N,155nm,0.5s						
KARS	Kars	0.57	99	Pg	Pb	01 03 47.3	-1.0
KARS				Sg	Sb	01 03 55.5	-1.3
KOPR	Koprukoy-ERZUR	0.82	207	Pg	Pg	01 03 50.8	-0.5
KOPR				Sg	Sb	01 04 02.9	-1.2
EPOS	Posof	0.83	20	P	Pb	01 03 52.7	-0.1
EPOS				S	Sn	01 04 06.1	-1.3
EPOS				IAML		01 04 07.0	
	comp=E,47nm,0.3s						
EPOS				IAML		01 04 10.0	
	comp=N,83nm,0.6s						
DIGO	Kars	0.84	111	P	Pg	01 03 51.4	-0.3
DIGO				S	Sb	01 04 03.4	-1.4
DIGO				IAML		01 04 05.0	
	comp=N,281nm,0.4s						
DIGO				IAML		01 04 07.0	
	comp=E,253nm,0.5s						
EATA	Eleskirt	0.87	172	P	Pg	01 03 52.4	+0.2
EATA				S	Sb	01 04 06.0	+0.5
EATA				IAML		01 04 12.0	
	comp=N,33nm,0.7s						
EATA				IAML		01 04 14.0	
	comp=E,35nm,0.6s						
HOPA	Hopa-Artvin	0.95	315	Pg	Pg	01 03 53.5	-0.3
HOPA				Sg	Sb	01 04 07.0	-0.7
EAK	Akyaka	0.96	92	P	Pb	01 03 54.3	-0.7
EAK				S	Sb	01 04 08.1	-0.1
EAK				IAML		01 04 09.0	
	comp=N,134nm,0.3s						
EAK				IAML		01 04 32.0	
	comp=E,57nm,0.6s						
ERZM	Erzurum	1.11	223	P	Pn	01 03 57.9	-0.3
ERZM				S	Sn	01 04 18.0	+3.8
KOTA	Agri, Merkez-K	1.13	144	P	Pn	01 03 58.2	-0.3
KOTA				S	Sn	01 04 17.0	+2.3
KOTA				IAML		01 04 19.0	
	comp=N,14nm,0.9s						
KOTA				IAML		01 04 19.0	
	comp=E,16nm,1.5s						
AGRB	Hanur-Agry	1.25	156	Pn	Pb	01 03 59.4	-0.5
AGRB				Sn	Sn	01 04 17.9	+0.3
BAYT	Aydıntepe-Bayb	1.71	260	Pn	Pn	01 04 06.0	-0.5
GNI	Garni	1.92	107	Pn	Pb	01 04 10.1	-1.2
GURO	Guroymak-BITLI	2.18	186	Pn	Pn	01 04 13.0	+0.1

*RSPR **01** 01:15:25.2, 17°.95N×66°.85W, h12km, MD2.9/7*
*NEIC **01** 01:15:25.3±1.1, 17°.94N±0°.05×66°.852W±0°.006, h10km±1km, ML3.0/35, Md2.9/7(RSPR), Error ellipse: s-maj=8.3km s-min=2.4km az=4.0*
*SDD **01** 01:15:26.0±1.7, 17°.95N×66°.84W, h12km±28km, MD3.6, ML2.7, MW3.2, Presumed earthquake*
ISC 01 01:15:25.0±0.9, **17°.95N**±0°.05×**66°.84W**±0°.02, **h15**km±5km, **n40**, σ0s**53**/68, **18C-3D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.05	306		Pg	01 15 27.6	-0.2
GBPR					Sg	01 15 29.1	-0.4
GBPR	Guanica, Bosqu	0.05	306	⇑*i*P	Pg	01 15 27.6	-0.2
GBPR				*e*S	Sg	01 15 29.1	-0.4
MLPR	Magueyes Islan	0.20	277		Pg	01 15 29.4	-0.2
MLPR				Sg	Sg	01 15 32.5	-0.1
MLPR				IAML		01 15 33.1	
	3μm,0.3s						
OBIP	Obispado Ponce	0.24	67		Pg	01 15 30.5	+0.2
OBIP	Obispado Ponce	0.24	67	⇓*i*P	Pg	01 15 30.5	+0.2
OBIP				*e*S	Sg	01 15 34.6	+0.7
CRPR	Cabo Rojo, PR	0.27	283		Pg	01 15 30.5	-0.2
CRPR				Sg	Sg	01 15 34.1	-0.4
CRPR	Cabo Rojo, PR	0.27	283	IAML		01 15 34.8	
	2μm,0.2s						
CRPR				IAML		01 15 36.3	
	2μm,0.3s						
CRPR	Cabo Rojo, PR	0.27	283	⇑*e*Pg	Pg	01 15 30.5	-0.2
CRPR				⇑*e*Sg	Sg	01 15 34.3	-0.3
CRPR				IAML		01 15 34.8	
	comp=N,2μm,0.2s						
CRPR	Cabo Rojo, PR	0.27	283	⇑*i*P	Pg	01 15 30.5	-0.2
CRPR				*e*S	Sg	01 15 34.3	-0.3
CELP	Cerrillos	0.28	63		Pg	01 15 31.1	+0.2
CELP				Sg	Sg	01 15 35.5	+0.6
CELP				IAML		01 15 36.8	
	comp=N,2μm,0.2s						
UUPR	Utuado, UPR, P	0.33	20		Pg	01 15 31.6	-0.2
UUPR				Sg	Sg	01 15 36.1	-0.3
LSP	Las Mesas	0.33	314		Pg	01 15 31.7	-0.2
LSP					Sg	01 15 36.9	+0.5
LSP	Las Mesas	0.33	314	⇓*i*P	Pg	01 15 31.7	-0.2
LSP				*e*S	Sg	01 15 36.9	+0.5
PRSN	Puerto Rico Se	0.40	313		Pg	01 15 32.8	-0.3
PRSN				Sg	Sg	01 15 38.3	-0.1
PRSN	Puerto Rico Se	0.40	313	⇑*e*Pg	Pg	01 15 32.6	-0.4
PRSN				⇑*e*Sg	Sg	01 15 38.5	-0.1
PRSN				IAML		01 15 40.1	
	comp=N,2μm,0.2s						
PRSN	Puerto Rico Se	0.40	313	⇑*i*P	Pg	01 15 32.7	-0.3
PRSN				*e*S	Sg	01 15 38.4	-0.1
AGPR	Aguadilla, PR	0.58	333		Pg	01 15 35.9	-0.5
AGPR				Sg	Sg	01 15 43.7	-0.4
AGPR				IAML		01 15 44.3	
	comp=N,902nm,0.3s						
AGPR				IAML		01 15 44.5	
	comp=N,504nm,0.4s						
AGPR	Aguadilla, PR	0.58	333	⇑*e*Pg	Pg	01 15 35.9	-0.5
AGPR				*e*Sg	Sg	01 15 44.0	-0.2
AGPR				IAML		01 15 44.4	
	comp=N,783nm,0.2s						
AGPR	Aguadilla, PR	0.58	333	⇑*e*P	Pg	01 15 35.9	-0.5
AGPR				*e*S	Sg	01 15 43.9	-0.2
ECPR	Experimental S	0.58	51		Pg	01 15 36.2	-0.3
ECPR				Sg	Sg	01 15 44.2	-0.1
ECPR				IAML		01 15 47.2	
	comp=N,1μm,0.2s						
ECPR	Experimental S	0.58	51	⇑*e*P	Pg	01 15 36.2	-0.3
ECPR				*e*S	Sg	01 15 44.3	0.0
EMPR	Esperanza - Ma	0.60	29		Pg	01 15 36.9	0.0
EMPR					Sb	01 15 45.6	-0.1
EMPR	Esperanza - Ma	0.60	29	⇑*e*P	Pg	01 15 36.9	0.0
EMPR				*e*S	Sb	01 15 45.6	-0.1
SJG	San Juan	0.68	76		Pg	01 15 37.9	-0.3
SJG				IAML		01 15 49.0	
	comp=N,540nm,0.2s						
SJG	San Juan	0.68	76	⇑*e*Pg	Pg	01 15 37.8	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SJG				⇑eSg	Sg	01 15 47.4	+0.2
SJG	San Juan	0.68	76	⇑eP	Pg	01 15 38.0	-0.2
SJG				eS	Sg	01 15 47.3	+0.2
IDE	Isla Desecheo	0.75	306		Pg	01 15 38.8	-0.8
IDE					Sg	01 15 49.2	-0.3
IDE	Isla Desecheo	0.75	306	⇑eP	Pg	01 15 38.8	-0.8
IDE				eS	Sg	01 15 49.2	-0.3
PDPR	Patillas Dam,	0.78	85		Pg	01 15 39.7	-0.5
GCPR	Guaynabo City	0.80	63		Pg	01 15 40.1	-0.5
GCPR	Guaynabo City	0.80	63		Sg	01 15 50.5	-0.8
GCPR	Guaynabo City	0.80	63	⇑eP	Pg	01 15 40.1	-0.5
GCPR				eS	Sg	01 15 50.5	-0.8
HUMP	Col San Antoni	0.96	78		Pb	01 15 42.6	-0.8
HUMP				IAML		01 15 59.8	
	comp=N,365nm,0.3s						
HUMP				IAML		01 15 60.0	
	comp=N,341nm,0.2s						
HUMP	Col San Antoni	0.96	78		Sb	01 15 55.3	-0.6
HUMP	Col San Antoni	0.96	78	⇓eP	Pb	01 15 42.6	-0.8
HUMP				eS	Sb	01 15 55.3	-0.6
CUPR	Culebra, Puert	1.52	76	Pn	Pb	01 15 52.7	-0.3
PCDR	Punta Cana, DR	1.57	291	⇑ePg	Pb	01 15 53.9	+0.1
PCDR				IAML		01 16 22.1	
	comp=N,89nm,0.5s						
MIDR	Miches	2.34	297	⇑ePg	Pb	01 16 06.6	-0.3
MIDR				⇑eSg	Sb	01 16 36.9	+1.3
MIDR				IAML		01 16 40.8	
	comp=N,22nm,0.4s						
DR12	Loma Pena Alta	2.56	290	Pn	Pn	01 16 07.9	+1.9
HATOM	Hato Mayor del	2.56	290	⇑ePg	Pb	01 16 09.3	-1.3
HATOM				⇑eSg	Sb	01 16 40.8	-1.1
HATOM				IAML		01 16 51.4	
	comp=N,26nm,1.5s						

*ISK **01** 01:16:43.8, 38°.43N×39°.20E, h5km, ML2.4/9*
*AFAD **01** 01:16:45.6, 38°.44N×39°.27E, h7km±4km, ML2.5*
ISC 01 01:16:45.4±0.9**, 38°.44N**±0°.03×**39°.25E**±0°.03**, h14**km±7km**, n17, σ0s.84**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.22	286	P	Pg	01 16 50.3	0.0
ELZG				S	Sg	01 16 54.7	+1.0
ELZG				IAML		01 16 56.0	
	comp=N,1µm,0.5s						
ELZG				IAML		01 16 56.0	
	comp=E,2µm,0.6s						
ELZ	Elazig	0.25	352	P	Pb	01 16 51.1	-0.7
ELZ				IAML		01 16 55.0	
	comp=N,2µm,0.3s						
ELZ				S	Sb	01 16 55.7	-0.4
MDNT	Maden	0.34	98	P	Pg	01 16 52.0	-0.4
MDNT				S	Sg	01 16 57.0	-0.2
KOVA	Elazig, Kovanc	0.52	59	P	Pb	01 16 56.0	-0.3
KOVA				S	Sb	01 17 05.0	+1.3
MAYA	Malatya/Merkez	0.66	260	P	Pb	01 16 58.1	-0.7
MAYA				S	Sb	01 17 08.0	+0.2
MAYA				IAML		01 17 09.0	
	comp=E,154nm,0.2s						
MAYA				IAML		01 17 11.0	
	comp=N,244nm,0.6s						
NARI	Adyaman-Kaht	0.68	215	P	Pb	01 16 59.0	0.0
NARI				S	Sb	01 17 09.8	+1.5
MCKZ	Bingol	0.71	342	P	Pg	01 16 58.9	-0.3
MCKZ				S	Sb	01 17 09.5	+0.1
MCKZ				IAML		01 17 10.0	
	comp=E,337nm,0.5s						
KAHTU	Kahta	0.81	219	P	Pb	01 17 01.8	+0.5
KAHTU				S	Sn	01 17 14.4	+0.1
KAHTU				IAML		01 17 31.0	
	comp=E,101nm,0.9s						
DYBB	Diyarbakir	0.85	124	Pg	Pb	01 17 02.0	0.0
DYBB				Sg	Sn	01 17 15.3	-0.1
URFA	Urfa	1.05	199	Pg	Pg	01 17 04.2	-1.5
URFA				Sg	Sb	01 17 19.9	+0.8
ILIC	ilic-Erzincan	1.14	332	Pn	Pb	01 17 06.8	-0.2
ILIC				Sn	Sn	01 17 23.1	+0.4
ERZN	Erzincan	1.20	18	Pn	Pn	01 17 08.2	+0.3
BNGB	Bingl	1.25	63	Pn	Pn	01 17 09.4	+0.9
YEDI	Yedisu-Bingol	1.42	45	Pn	Pg	01 17 12.1	-0.6
GAZ	Gaziantep	2.05	233	Pn	Pb	01 17 21.1	-1.4
KMRS	Kahramanmaras	2.08	244	Pn	Pb	01 17 21.4	-1.5
GURO	Guroymak-BITLI	2.19	86	Pn	Pb	01 17 23.6	-1.2

*BGR **01** 01:19:37.6±0.8, 53°.38N×3°.28E, h10km, ML2.5/3, Error ellipse: s-maj=11.1km s-min=6.7km az=123.0*
*DNK **01** 01:19:37.0±2.0, 53°.37N×3°.34E, h22km±119km, ML3.4, Confirmed Earthquake*
*LDG **01** 01:19:38.1±0.4, 53°.16N×3°.16E, h2km, Ml3.1/5, Error ellipse: s-maj=6.8km s-min=5.9km az=16.0*
*UCC **01** 01:19:38.4, 53°.06N×3°.21E, h3km, ML3.1*
ISC 01 01:19:33.2±1.4**, 53°.29N**±0°.04×**3°.37E**±0°.03**, h14**km±10km**, n51, σ2s.75**/97**, 26D, North Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WACR	West Acre	1.75	252	eP	Pg	01 20 05.7	-1.0
WACR				eS	Sb	01 20 26.4	-0.4
WACR				IAML		01 20 33.3	
	comp=N,67nm,0.2s						
WACR				IAML		01 20 34.8	
	comp=E,59nm,0.2s						
ELMS	Elmsett, Ipswi	1.88	231	eP	Pg	01 20 08.8	-0.4
ELMS				eS	Sb	01 20 30.2	-0.2
ELMS				IAML		01 20 40.2	
	comp=E,104nm,0.2s						
ELMS				IAML		01 20 40.4	
	comp=N,103nm,0.2s						
BOST	Ostende	2.07	188	dP	Pb	01 20 11.6	+1.2
BOST				dS	Sb	01 20 36.0	0.0
LMK	Market Rasen	2.22	276	eP	Pb	01 20 13.5	+0.5
LMK				IAML		01 20 48.4	
	comp=E,84nm,0.4s						
LMK				IAML		01 20 48.5	
	comp=N,93nm,0.4s						
WTSB	Winterswijk	2.47	121	eSn	Sn	01 20 46.7	+3.7
UCC	Uccle	2.57	166	ePn	Pb	01 20 18.8	-0.1
UCC				eSn	Sn	01 20 48.4	+3.2
UCC	Uccle	2.57	166	dP	Pb	01 20 18.8	-0.1
UCC				dS	Sn	01 20 48.4	+3.2
BOPT	Opiter	2.59	146	dPn	Pb	01 20 19.1	-0.1
BOPT				dSn	Sn	01 20 45.8	+0.1
BEBN	Eben Emael	2.87	149	dPn	Pb	01 20 24.1	0.0
CWF	Charnwood Fore	2.88	261	eP	Pb	01 20 21.5	-2.7
CWF				IAML		01 21 08.7	
	comp=N,18nm,0.4s						
CWF				IAML		01 21 14.5	
	comp=E,12nm,0.4s						
HGN	Heimansgroeve	2.98	147	ePn	Pb	01 20 25.1	-0.9
HGN				eSn	Sn	01 21 00.2	+4.8
BGES	Gesves	3.10	159	dPn	Pb	01 20 26.3	-1.7
BGES				dSn	Sn	01 21 01.0	+2.7
BGES				dSg	Sg	01 21 14.2	+1.6
	comp=Z,2.7nm,0.1s						
BCLA	Clavier	3.11	157	dPn	Pb	01 20 26.3	-1.9
BCLA				dSn	Sn	01 20 59.9	+1.2
BCLA				dSg	Sg	01 21 13.2	+0.1
	comp=E,4.7nm,0.2s						
MEM	Membach	3.14	148	ePn	Pb	01 20 27.2	-1.6
MEM				eSn	Sn	01 21 03.5	+4.1
MEM	Membach	3.14	148	dPn	Pb	01 20 27.1	-1.6
MEM				dP	Pb	01 20 27.2	-1.6
MEM				dSn	Sn	01 21 02.9	+3.5
MEM				dS	Sb	01 21 03.1	-3.8
DREG	Dreilaegerbach	3.17	145	ePn	Pb	01 20 27.6	-1.6
DREG				eSn	Sn	01 21 03.7	+3.5
DOU	Dourbes	3.29	166	dPn	Pn	01 20 28.5	+4.3
DOU				dSn	Sn	01 21 02.6	-0.4
DOU				dSg	Sg	01 21 18.3	-0.3
	comp=N,2.4nm,0.2s						
RCHB	Rochefort	3.34	159	ePn	Pb	01 20 30.0	-2.1
RCHB				eSn	Sn	01 21 06.7	+2.3
RCHB	Rochefort	3.34	159	dP	Pb	01 20 29.8	-2.3
RCHB				dS	Sn	01 21 06.7	+2.3
BHOU	Houvegnez	3.36	150	dPn	Pn	01 20 29.0	+3.8
BHOU				dSn	Sn	01 21 07.7	+2.8
LKLB	Kalborn	3.62	151	dPn	Pb	01 20 34.1	-2.7
LKLB				dSn	Sn	01 21 12.8	+1.6
KASTN	Kahler Asten	3.74	122	ePn	Pb	01 20 36.0	-3.0
KASTN				eSn	Sn	01 21 16.6	+2.4
BSEG	Bad Segeberg	4.19	78	ePn	Pn	01 20 39.8	+3.2
BSEG				eSn	Sn	01 21 25.6	+0.4
BSEG	Bad Segeberg	4.19	78	iP	Pn	01 20 40.3	+3.8
BSEG				iS	Sn	01 21 24.2	-1.0
TNS	Taunus Mts	4.40	132	ePn	Pn	01 20 45.8	+6.3
TNS				eSn	Sn	01 21 34.5	+3.9
CLZ	Clausthal	4.51	106	ePn	Pn	01 20 46.1	+5.1
CLZ				eSn	Sn	01 21 33.9	+0.6
FLN	La Foliniere	5.14	210	ePn	Pn	01 20 52.0	+2.4
FLN				eSn	Sn	01 21 47.1	-1.6
LDF	La Druitiere	5.19	207	ePn	Pn	01 20 53.7	+3.4
LDF				eSn	Sn	01 21 48.1	-1.9
SNART	Snartemo	5.51	22	iP	Pn	01 20 57.1	+2.5
GRR	Gorron	5.59	210	ePn	Pn	01 20 56.0	+0.2
GRR				eSn	Sn	01 21 56.9	-2.8
HOMB	Homborsund	5.77	28	iP	Pn	01 20 59.6	+1.3
HOMB				iS	Sn	01 22 01.9	-2.3
LOR	Lormes	6.03	177	ePn	Pn	01 21 04.6	+2.7
LOR				eSn	Sn	01 22 08.5	-2.3
	comp=N,1.5nm,0.2s						
SSF	Saint Saulge	6.23	179	ePn	Pn	01 21 07.2	+2.5
SSF				eSn	Sn	01 22 13.2	-2.4
	comp=N,1.5nm,0.2s						
BJUU	Bjuv	6.26	60	iP	Pn	01 21 07.6	+2.7
BJUU				iS	Sn	01 22 14.7	-1.4
SGMF	Saint Gilles	6.28	219	ePn	Pn	01 21 07.0	+1.7
SGMF				eSn	Sn	01 22 14.8	-2.1
	comp=N,1.5nm,0.1s						
LUNU	Lund	6.33	64	iP	Pn	01 21 09.2	+3.2
LUNU				iS	Sn	01 22 14.7	-3.2
ONAU	Onsala	6.38	46	iP	Pn	01 21 08.8	+2.2
ONAU				iS	Sn	01 22 15.6	-3.5
ROSF	Rostrenen	6.50	223	ePn	Pn	01 21 09.2	+0.9
ROSF				eSn	Sn	01 22 17.8	-4.4
	comp=N,1.2nm,0.1s						
AVF	Avril sur Loir	6.50	180	ePn	Pn	01 21 11.0	+2.6
AVF				eSn	Sn	01 22 19.8	-2.5
SMF	Signal de Mont	6.66	177	ePn	Pn	01 21 13.1	+2.6
SMF				eSn	Sn	01 22 22.3	-3.8
TJOU	Tjoern	6.66	41	iP	Pn	01 21 12.9	+2.5
TJOU				iS	Sn	01 22 20.8	-5.3
BGF	Bois d'Agland	6.75	183	ePn	Pn	01 21 15.2	+3.5
QUIF	Quistinic	6.79	220	ePn	Pn	01 21 13.6	+1.3
QUIF				eSn	Sn	01 22 25.7	-3.7
	comp=N,0.5nm,0.1s						
DEL	Delary	6.85	58	iP	Pn	01 21 15.8	+2.8
DEL				iS	Sn	01 22 27.5	-3.1
BORU	Boraas	6.89	47	iP	Pn	01 21 16.1	+2.4
BORU				iS	Sn	01 22 28.7	-3.1
BSD	Bornholm Skovb	7.02	70	iP	Pn	01 21 17.2	+1.9
BSD				iS	Sn	01 22 31.3	-3.5
BSD				IAML		01 22 39.4	
	comp=Z,18nm,1.3s						
MFF	Saint Martin d	7.06	200	ePn	Pn	01 21 17.8	+1.7
MFF				eSn	Sn	01 22 32.1	-4.0
STRU	Stroemstad	7.22	34	iP	Pn	01 21 19.1	+1.0
STRU				iS	Sn	01 22 34.4	-5.4
RJF	Les Rejaudoux	8.08	189	ePn	Pn	01 21 31.6	+1.6
RJF				eSn	Sn	01 22 56.8	-4.3
LFF	La Frestale	8.53	193	eSn	Sn	01 23 07.6	-4.5
EPF	Esparros	10.46	192	eSn	Sn	01 23 52.6	-7.0

*SOF **01** 01:19:49.5, 41°.29N±0°.01×22°.79E±0°.01, h10km±1km, MD2.6/4*
*SKO **01** 01:19:49.5, 41°.27N×22°.76E, h15km, ML1.6*
*BEO **01** 01:19:51.3±0.6, 41°.28N×22°.77E, h0km, ML1.8/8*
ISC 01 01:19:49.8±1.2**, 41°.29N**±0°.05×**22°.77E**±0°.04**, h11**km±10km**, n15, σ0s.40**/24**, 1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.15	281	⇓iPg	Pg	01 19 53.4	0.0
VAY				iSg	Sg	01 19 55.8	0.0
VAY				eLg	Lg	01 19 55.9	
VAY				eLg	Lg	01 19 56.1	
	comp=E,212nm,0.3s						
KKB	Krupnik	0.61	26	iP	Pg	01 20 01.8	0.0
KKB				iS	Sg	01 20 09.7	-0.2
SRS	Serrai	0.65	105	ePg	Pg	01 20 02.4	0.0
SRS				eSg	Sb	01 20 11.8	-0.3
MMB	Musomishta	0.78	71	iP	Pg	01 20 04.8	-0.2
MMB				iS	Sg	01 20 15.3	+0.1
BOSS	Bosilegrad	1.22	350	ePg	Pb	01 20 12.9	0.0
BOSS				eSg	Sn	01 20 29.7	+0.4
PLNA	Plana	1.28	22	iP	Pg	01 20 14.2	-0.3
PLNA				iS	Sg	01 20 31.1	0.0
VTS	Vitosha	1.37	15	iP	Pb	01 20 15.5	0.0
VTS				iS	Sg	01 20 33.9	-0.1
VTS	Vitosha	1.37	15	ePg	Pb	01 20 15.5	0.0
VTS				eSg	Sg	01 20 34.5	+0.5
RZN	Rozhen	1.54	74	iP	Pb	01 20 18.6	+0.2
BLSH	Balsha	1.61	14	iP	Pg	01 20 21.8	+1.1
BARS	Barje	1.68	335	ePn	Pb	01 20 20.4	-0.3
PLD	Plovdiv	1.71	59	ePg	Pb	01 20 21.5	+0.2
PLD				eSg	Sg	01 20 44.5	-0.4
ZAPS	Zavoj	1.98	357	ePn	Pg	01 20 27.1	-0.8
SELS	Selova	2.28	328	ePn	Pb	01 20 31.5	+0.5
BOVS	Bovan	2.47	342	ePn	Pb	01 20 33.7	-0.5

*DNK **01** 01:20:25.4±1.3, 53°.44N×3°.42E, h10km, ML3.4, Confirmed Earthquake*
*BGS **01** 01:20:28.4±1.0, 53°.31N×3°.16E, h10km, ML2.9*
*LDG **01** 01:20:28.0±1.5, 52°.98N×3°.42E, h2km, Ml2.7/4, Error ellipse: s-maj=24.8km s-min=20.4km az=33.0*
*UCC **01** 01:20:28.1, 53°.05N×3°.22E, h10km, ML3.2*
ISC 01 01:20:21.4±0.8**, 53°.33N**±0°.05×**3°.33E**±0°.04**, h10**km**, n32, σ3s.02**/55**, 13D, North Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WACR	West Acre	1.74	251	eP	Pg	01 20 54.7	0.0
WACR				eS	Sb	01 21 15.4	+0.1
WACR				IAML		01 21 24.3	
	comp=E,81nm,0.1s						
WACR				IAML		01 21 25.2	
	comp=N,112nm,0.3s						
ELMS	Elmsett, Ipswi	1.89	230	eP	Pg	01 20 57.8	+0.2
ELMS				eS	Sb	01 21 19.2	-0.2
ELMS				IAML		01 21 27.8	
	comp=E,148nm,0.3s						
ELMS				IAML		01 21 35.1	
	comp=N,144nm,0.3s						
BOST	Ostende	2.11	187	dP	Pb	01 21 00.1	+0.4
BOST				dS	Sn	01 21 24.6	+1.7
LMK	Market Rasen	2.19	275	eP	Pb	01 21 02.5	+1.4
LMK				IAML		01 21 43.8	
	comp=E,102nm,0.3s						
LMK				IAML		01 21 44.0	
	comp=N,98nm,0.3s						
UCC	Uccle	2.61	166	dP	Pn	01 21 07.0	+3.4
UCC				dS	Sn	01 21 37.0	+1.7
BSKQ	Steenkerk	2.72	170	dP	Pn	01 21 08.6	+3.5
BSKQ				dS	Sn	01 21 39.6	+1.5
CWF	Charnwood Fore	2.86	260	eP	Pn	01 21 10.5	+3.4
MEM	Membach	3.19	148	dP	Pn	01 21 15.8	+4.2
MEM				dS	Sn	01 21 50.9	+1.3
MEM	Membach	3.19	148	dSg	Pn	01 21 15.6	+4.0
	comp=E,9.5nm,0.2s						
DOU	Dourbes	3.33	166	dP	Pn	01 21 15.7	+2.2
DOU				dS	Sn	01 21 54.2	+1.1
RCHB	Rochefort	3.39	159	dP	Pn	01 21 17.5	+3.2
RCHB				dS	Sn	01 21 55.5	+1.0
FLN	La Foliniere	5.16	209	ePn	Pn	01 21 39.9	+1.2
FLN				eSn	Sn	01 22 35.4	-2.9
	comp=E,1.7nm,0.1s						
LDF	La Druitiere	5.22	206	eSn	Sn	01 22 36.9	-2.7
	comp=E,0.5nm,0.1s						
GRR	Gorron	5.61	210	eSn	Sn	01 22 45.3	-4.0
HOMB	Homborsund	5.75	28	eP	Pn	01 21 48.7	+2.0
HOMB				iS	Sn	01 22 50.2	-2.4
LOR	Lormes	6.08	177	ePn	Pn	01 21 52.7	+1.4
LOR				eSn	Sn	01 22 57.5	-3.3
BJUU	Bjuv	6.26	60	iP	Pn	01 21 56.2	+2.6
BJUU				iS	Sn	01 23 02.5	-2.6
SSF	Saint Saulge	6.28	179	ePn	Pn	01 21 55.5	+1.5
SSF				eSn	Sn	01 23 01.9	-3.8
SGMF	Saint Gilles	6.30	219	ePn	Pn	01 21 55.2	+0.9
SGMF				eSn	Sn	01 23 00.6	-5.7
	comp=E,0.6nm,0.1s						
LUNU	Lund	6.33	65	iP	Pn	01 21 56.5	+1.8
LUNU				iS	Sn	01 23 03.9	-3.1
ONAU	Onsala	6.37	47	iP	Pn	01 21 57.4	+2.1
ONAU				iS	Sn	01 23 03.6	-4.2
ROSF	Rostrenen	6.51	223	eSn	Sn	01 23 06.5	-5.1
AVF	Avril sur Loir	6.54	180	ePn	Pn	01 21 59.2	+1.5
AVF				eSn	Sn	01 23 08.7	-3.6
TJOU	Tjoern	6.65	42	iP	Pn	01 22 01.2	+2.2
TJOU				iS	Sn	01 23 10.7	-4.0
SMF	Signal de Mont	6.70	177	ePn	Pn	01 22 01.1	+1.3
SMF				eSn	Sn	01 23 11.2	-4.9
BGF	Bois d'Agland	6.79	183	ePn	Pn	01 22 02.7	+1.7
QUIF	Quistinic	6.81	220	eSn	Sn	01 23 13.3	-5.5
	comp=E,0.3nm,0.1s						
DEL	Delary	6.84	58	iP	Pn	01 22 04.2	+2.5
DEL				iS	Sn	01 23 16.4	-3.2
BORU	Boraas	6.88	47	iP	Pn	01 22 04.0	+1.7
BORU				iS	Sn	01 23 17.8	-2.7
BSD	Bornholm Skovb	7.03	71	iP	Pn	01 22 06.5	+2.3
BSD				iS	Sn	01 23 19.5	-4.5
BSD				IAML		01 23 28.4	
	comp=Z,15nm,1.1s						
TCF	Toulx Ste Croi	7.08	186	eSn	Sn	01 23 22.2	-3.5
STRU	Stroemstad	7.20	34	iP	Pn	01 22 08.9	+2.3
STRU				iS	Sn	01 23 22.9	-5.5

*NEIC **01** 01:35:16.7±1.4, 17°.88N±0°.03×66°.99W±0°.01, h10km±1km, ML3.0/35, Md3.1/7(RSPR), Error ellipse: s-maj=5.5km s-min=2.4km az=10.0*
*OSPL **01** 01:35:17.3±0.3, 17°.91N×66°.99W, h16km±3km, ML3.2, Presumed earthquake*
*RSPR **01** 01:35:17.6, 17°.95N×66°.97W, h11km, MD3.1/7*
*SDD **01** 01:35:18.6±1.5, 17°.96N×66°.96W, h12km±9km, MD2.9, ML2.5, MW2.8, Presumed earthquake*
ISC 01 01:35:17.1±0.9**, 17°.94N**±0°.05×**66°.95W**±0°.02**, h16**km±5km**, n42, σ0s.62**/72**, 15C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.08	63		Pg	01 35 20.4	0.0
GBPR					Sg	01 35 22.6	+0.1
GBPR	Guanica, Bosqu	0.08	63	⇓iP	Pg	01 35 20.4	0.0
GBPR				eS	Sg	01 35 22.6	+0.1
MLPR	Magueyes Islan	0.09	290		Pg	01 35 20.1	-0.4
MLPR				Sg	Sg	01 35 22.1	-0.7
MLPR				IAML		01 35 22.2	
	8µm,0.2s						
MLPR				IAML		01 35 22.4	
	12µm,0.3s						
CRPR	Cabo Rojo, PR	0.16	294		Pg	01 35 21.0	-0.4
CRPR				Sg	Sg	01 35 23.5	-0.7
CRPR	Cabo Rojo, PR	0.16	294	IAML		01 35 21.3	
	2µm,0.2s						
CRPR				IAML		01 35 24.0	
	2µm,0.2s						
CRPR	Cabo Rojo, PR	0.16	294	⇑ePg	Pg	01 35 21.0	-0.4
CRPR				⇑eSg	Sg	01 35 23.7	-0.5
CRPR				IAML		01 35 24.0	
	comp=N,2µm,0.1s						
CRPR	Cabo Rojo, PR	0.16	294	⇑iP	Pg	01 35 21.1	-0.4
CRPR				eS	Sg	01 35 23.7	-0.5
CRPR	Cabo Rojo, PR	0.16	294	iP	Pg	01 35 21.0	-0.4
CRPR				eS	Sg	01 35 23.7	-0.5
CRPR				IAML		01 35 24.3	
	comp=Z,2µm,0.2s						
LSP	Las Mesas	0.27	332		Pg	01 35 23.0	-0.1
LSP					Sg	01 35 26.9	-0.2
LSP	Las Mesas	0.27	332	⇑iP	Pg	01 35 23.0	-0.1
LSP				eS	Sg	01 35 26.9	-0.2
PRSN	Puerto Rico Se	0.33	327		Pg	01 35 23.9	-0.2
PRSN				Sg	Sg	01 35 28.9	+0.1
PRSN				IAML		01 35 29.5	
	comp=Z,5µm,0.4s						
PRSN				IAML		01 35 30.1	
	comp=Z,4µm,0.2s						
PRSN	Puerto Rico Se	0.33	327	⇑ePg	Pg	01 35 23.9	-0.2
PRSN				⇑eSg	Sg	01 35 28.6	-0.3
PRSN				IAML		01 35 29.8	
	comp=N,3µm,0.2s						
PRSN	Puerto Rico Se	0.33	327	⇑iP	Pg	01 35 23.9	-0.2
PRSN				eS	Sg	01 35 28.5	-0.4
OBIP	Obispado Ponce	0.35	73		Pg	01 35 24.5	+0.1
OBIP				IAML		01 35 30.3	
	comp=N,574nm,0.4s						
OBIP	Obispado Ponce	0.35	73		Sg	01 35 30.0	+0.7
OBIP	Obispado Ponce	0.35	73	⇑iP	Pg	01 35 24.5	+0.2
OBIP				eS	Sg	01 35 30.0	+0.7
OBIP	Obispado Ponce	0.35	73	iP	Pg	01 35 24.5	+0.1
OBIP				eS	Sg	01 35 30.1	+0.7
OBIP				IAML		01 35 30.4	
	comp=Z,7µm,0.1s						
CELP	Cerrillos	0.38	69		Pg	01 35 25.1	+0.1
CELP				Sg	Sg	01 35 31.0	+0.7
CELP				IAML		01 35 31.4	
	comp=Z,2µm,0.3s						
CELP				IAML		01 35 31.8	
	comp=Z,1µm,0.3s						
UUPR	Utuado, UPR, P	0.38	35		Pg	01 35 24.9	-0.2
UUPR				IAML		01 35 30.2	
	comp=Z,2µm,0.3s						
UUPR				Sg	Sg	01 35 30.6	+0.2
UUPR				IAML		01 35 32.5	
	comp=Z,4µm,0.4s						
AGPR	Aguadilla, PR	0.55	344		Pg	01 35 27.7	-0.3
AGPR				Sg	Sg	01 35 35.0	-0.3
AGPR				IAML		01 35 35.5	
	comp=Z,1µm,0.4s						
AGPR				IAML		01 35 35.7	
	comp=Z,608nm,0.3s						
AGPR	Aguadilla, PR	0.55	344	⇓ePg	Pg	01 35 27.7	-0.3
AGPR				⇑eSg	Sg	01 35 34.8	-0.6
AGPR				IAML		01 35 37.6	
	comp=N,498nm,0.3s						
AGPR	Aguadilla, PR	0.55	344	⇑iP	Pg	01 35 27.8	-0.3
AGPR				eS	Sg	01 35 35.1	-0.3
AGPR	Aguadilla, PR	0.55	344	iP	Pg	01 35 27.7	-0.3
AGPR				eS	Sg	01 35 35.1	-0.3
AGPR				IAML		01 35 36.1	
	comp=Z,430nm,0.2s						
IDE	Isla Desecheo	0.67	312		Pg	01 35 29.7	-0.6
IDE					Sg	01 35 38.4	-0.7
IDE	Isla Desecheo	0.67	312	⇑iP	Pg	01 35 29.7	-0.6
IDE				eS	Sg	01 35 38.4	-0.7
ECPR	Experimental S	0.68	56	Pg	Pg	01 35 29.9	-0.6
ECPR				IAML		01 35 40.0	
	comp=Z,1µm,0.2s						
ECPR				IAML		01 35 40.9	
	comp=Z,1µm,0.2s						
ECPR	Experimental S	0.68	56	⇑iP	Pg	01 35 30.0	-0.5
ECPR				eS	Sg	01 35 39.3	-0.2
SJG	San Juan	0.78	77		Pg	01 35 31.8	-0.7
SJG				IAML		01 35 43.5	
	comp=Z,428nm,0.2s						
SJG				IAML		01 35 44.1	
	comp=Z,258nm,0.2s						
SJG	San Juan	0.78	77	⇑ePg	Pg	01 35 32.0	-0.4
SJG				⇑eSg	Sg	01 35 43.1	+0.2
SJG	San Juan	0.78	77	⇓iP	Pg	01 35 31.7	-0.7
SJG				eS	Sg	01 35 42.3	-0.5
SJG	San Juan	0.78	77	iP	Pg	01 35 31.8	-0.7
SJG				iSg	Sg	01 35 42.5	-0.3
SJG				IAML		01 35 43.2	
	comp=Z,3µm,0.2s						
PDPR	Patillas Dam,	0.89	85		Pg	01 35 33.8	-0.7
PDPR				IAML		01 35 47.5	
	comp=Z,142nm,0.1s						
PDPR				IAML		01 35 47.6	
	comp=Z,150nm,0.1s						
GCPR	Guaynabo City	0.91	66		Pg	01 35 33.7	-1.1
GCPR				IAML		01 35 48.9	
	comp=N,123nm,0.4s						
GCPR				IAML		01 35 51.9	
	comp=E,97nm,0.3s						
GCPR	Guaynabo City	0.91	66		Sg	01 35 45.3	-1.4
GCPR	Guaynabo City	0.91	66	⇑eP	Pg	01 35 33.8	-1.0
GCPR				eS	Sg	01 35 45.3	-1.4
HUMP	Col San Antoni	1.07	79		Pb	01 35 36.3	-0.9
HUMP				IAML		01 35 54.6	
	comp=E,309nm,0.2s						
HUMP				IAML		01 35 54.6	
	comp=E,398nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.07**	**79**		**Sb**	**01 35 50.5**	**-0.5**
HUMP	**Col San Antoni**	**1.07**	**79**	⇑eP	**Pb**	**01 35 36.7**	**-0.6**
HUMP				eS	**Sb**	**01 35 50.5**	**-0.5**
PCDR	**Punta Cana, DR**	**1.47**	**293**	⇑ePg	**Pb**	**01 35 44.7**	**+0.6**
PCDR				⇑eSg	**Sn**	**01 36 02.7**	**+0.8**
PCDR				IAML		01 36 20.1	
	comp=N,73nm,2.0s						
CUPR	**Culebra, Puert**	**1.63**	**77**	Pn	**Pn**	**01 35 46.4**	**+1.2**
MIDR	**Miches**	**2.25**	**298**	⇑ePg	**Pb**	**01 35 57.1**	**-0.2**
MIDR				⇑eSg	**Sb**	**01 36 25.6**	**+0.8**
MIDR				IAML		01 36 30.3	
	comp=N,17nm,0.5s						
MIDR				IAML		01 36 31.5	
	comp=N,19nm,1.2s						
HATOM	**Hato Mayor del**	**2.46**	**291**	⇑ePg	**Pb**	**01 35 59.5**	**-1.4**
HATOM				⇑eSg	**Sb**	**01 36 32.3**	**+1.3**
HATOM				IAML		01 36 39.6	
	comp=N,15nm,1.1s						

*CATAC **01** 01:58:59.5±0.3, 14°N±2°×89°.2W±0°.9, h11km±1km, M2.9/16, MLv2.9/16, Error ellipse: s-maj=3.4km s-min=1.9km az=6.3, confirmed*
*SNET **01** 01:58:59.0±0.8, 13°.72N×89°.20W, h11km±1km, ML2.6, Presumed earthquake*
*GCG **01** 01:59:00.0±0.7, 13°.71N×89°.21W, h11km±10km, MD3.7, Presumed earthquake*
ISC 01 01:58:59.6±0.9**, 13°.70N**±0°.03×**89°.20W**±0°.02**, h15**km±4km**, n44, σ0.s33**/68**, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UTEC	**Universidad Te**	**0.01**	**299**	P	**Pg**	**01 59 02.3**	**0.0**
UTEC				S	**Sg**	**01 59 03.6**	**-0.5**
UESS	**Universidad de**	**0.02**	**350**	eP	**Pg**	**01 59 02.3**	**0.0**
UESS				eS	**Sg**	**01 59 04.0**	**-0.2**
SEMO	**Seminario San**	**0.03**	**281**	P	**Pg**	**01 59 02.1**	**-0.2**
SEMO				S	**Sg**	**01 59 03.8**	**-0.3**
SEMO	**Seminario San**	**0.03**	**281**	eP	**Pg**	**01 59 02.2**	**-0.2**
IGN	**Direccin Gen**	**0.03**	**59**	P	**Pg**	**01 59 02.5**	**+0.2**
IGN				S	**Sg**	**01 59 03.8**	**-0.4**
UDBS	**Universidad Do**	**0.04**	**67**	P	**Pg**	**01 59 02.4**	**0.0**
UDBS				S	**Sg**	**01 59 03.9**	**-0.4**
UDBS	**Universidad Do**	**0.04**	**67**	eP	**Pg**	**01 59 02.4**	**0.0**
UDBS				eS	**Sg**	**01 59 04.1**	**-0.1**
UEES	**Universidad Ev**	**0.04**	**293**	P	**Pg**	**01 59 02.4**	**-0.1**
UEES	**Universidad Ev**	**0.04**	**293**	eP	**Pg**	**01 59 02.3**	**-0.1**
UEES				eS	**Sg**	**01 59 04.1**	**-0.3**
PIC2	**El Picacho**	**0.07**	**308**	eP	**Pg**	**01 59 03.0**	**+0.2**
PIC2				eS	**Sg**	**01 59 05.7**	**+0.7**
PANCS	**Alcalda de**	**0.09**	**169**	P	**Pg**	**01 59 02.7**	**-0.1**
PANCS				S	**Sg**	**01 59 04.5**	**-0.3**
PANCS	**Alcalda de**	**0.09**	**169**	eP	**Pg**	**01 59 02.7**	**-0.1**
BOQS	**Boqueron**	**0.09**	**294**	eP	**Pg**	**01 59 03.1**	**+0.2**
LFU	**La Fuente**	**0.10**	**58**	eP	**Pg**	**01 59 03.1**	**+0.2**
PMON	**Piamonte**	**0.12**	**277**	P	**Pb**	**01 59 03.5**	**-0.1**
PMON	**Piamonte**	**0.12**	**277**	eP	**Pb**	**01 59 03.5**	**-0.1**
PMON				eS	**Sg**	**01 59 06.2**	**+0.7**
LFRS	**El Faro**	**0.15**	**120**	eP	**Pb**	**01 59 03.9**	**-0.3**
LBRS	**Las Brisas**	**0.15**	**75**	eP	**Pb**	**01 59 04.0**	**-0.2**
QUEZ	**Alcaldia de Qu**	**0.15**	**332**	eP	**Pb**	**01 59 03.9**	**-0.4**
QUEZ				eS	**Sg**	**01 59 07.1**	**+0.8**
LALI	**Alcalda de L**	**0.24**	**210**	eP	**Pb**	**01 59 05.6**	**-0.1**
LALI				eS	**Sb**	**01 59 10.0**	**+0.3**
LALI	**Alcalda de L**	**0.24**	**210**	i P	**Pb**	**01 59 05.6**	**-0.1**
LALI				i S	**Sb**	**01 59 09.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.25**	**260**	P	**Pb**	**01 59 05.6**	**-0.3**
JAYA	**Jayaque - finc**	**0.25**	**260**	eP	**Pb**	**01 59 05.6**	**-0.3**
JAYA				eS	**Sb**	**01 59 09.8**	**-0.4**
JAYA	**Jayaque - finc**	**0.25**	**260**	i P	**Pb**	**01 59 05.6**	**-0.3**
JAYA				i S	**Sg**	**01 59 09.3**	**+0.5**
PAVA	**Las Pavas**	**0.25**	**87**	P	**Pb**	**01 59 05.8**	**-0.1**
PAVA				S	**Sb**	**01 59 09.9**	**-0.3**
PAVA	**Las Pavas**	**0.25**	**87**	eP	**Pb**	**01 59 05.8**	**-0.1**
PAVA				eS	**Sb**	**01 59 10.1**	**-0.1**
UESV	**Universidad de**	**0.40**	**99**	P	**Pb**	**01 59 08.7**	**+0.2**
UESV				S	**Sb**	**01 59 14.4**	**0.0**
SNJE	**San Jose**	**0.43**	**293**	eP	**Pb**	**01 59 09.0**	**-0.1**
CEVE	**Cerro Verde**	**0.43**	**287**	P	**Pb**	**01 59 09.5**	**+0.4**
CEVE	**Cerro Verde**	**0.43**	**287**	eP	**Pb**	**01 59 09.3**	**+0.2**
TECO	**Alcaldia de Te**	**0.43**	**112**	P	**Pb**	**01 59 08.8**	**-0.1**
TECO				S	**Sb**	**01 59 15.1**	**-0.3**
UNIC	**Universidad Ca**	**0.44**	**310**	P	Pn	01 59 16.7	+5.2
SCLA	**Alcaldia de Sa**	**0.46**	**89**	P	**Pb**	**01 59 09.4**	**+0.1**
SCLA				S	**Sb**	**01 59 16.6**	**+0.6**
LLGN	**La Laguna**	**0.52**	**28**	P	**Pb**	**01 59 10.0**	**-0.5**
LLGN				S	**Sb**	**01 59 17.5**	**-0.4**
NUBE	**Las Nubes**	**0.60**	**290**	P	**Pb**	**01 59 12.0**	**+0.1**
NUBE				S	**Sb**	**01 59 20.7**	**+0.4**
NUBE	**Las Nubes**	**0.60**	**290**	eP	**Pb**	**01 59 11.9**	**0.0**
NUBE	**Las Nubes**	**0.60**	**290**	i P	**Pb**	**01 59 11.9**	**0.0**
TECA	**Tecapa**	**0.70**	**107**	eP	**Pb**	**01 59 14.2**	**+0.5**
MTO3	**Montecristo**	**0.71**	**347**	P	**Pg**	**01 59 13.5**	**-0.2**
MTO3				S	**Sb**	**01 59 23.3**	**-0.3**
MTO3	**Montecristo**	**0.71**	**347**	eP	**Pg**	**01 59 13.4**	**-0.2**
MTO3	**Montecristo**	**0.71**	**347**	i P	**Pg**	**01 59 13.4**	**-0.2**
FAME	**Alcaldia de Sa**	**0.81**	**280**	P	**Pg**	**01 59 14.7**	**-0.6**
FAME				S	**Sb**	**01 59 26.6**	**+0.5**
ESQI	**Esquipulas**	**0.87**	**351**	P	**Pb**	**01 59 16.5**	**+0.1**
ESQI				S	**Sb**	**01 59 28.5**	**+0.5**
PACA	**Pacayal**	**0.88**	**105**	P	**Pb**	**01 59 17.4**	**+0.8**

*SSNC **01** 02:03:58.1±2.2, 19°.64N×78°.76W, h10km±14km, MD3.8, ML3.3, Presumed earthquake*
*JSN **01** 02:03:59.5±1.4, 19°.78N×78°.65W, h30km±999km, MD3.9, MW4.0, Presumed earthquake*
ISC 01 02:03:56.6±1.0**, 19°.64N**±0°.06×**78°.76W**±0°.04**, h10**km**, n17, σ0.s77**/21**, 1C-1D, Cuba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**0.95**	**276**	eP	**Pb**	**02 04 15.2**	**+0.1**
CBCY				eS	**Sb**	**02 04 28.0**	**+0.2**
CBCY				IAML		02 04 30.1	
	comp=N,685nm,0.2s						
CBCY				IAML		02 04 31.1	
	comp=E,483nm,0.3s						
LCCY	**Blossom Villag**	**1.25**	**271**	eP	**Pn**	**02 04 19.5**	**-0.6**
LCCY				eS	**Sb**	**02 04 35.5**	**-1.0**
LCCY				IAML		02 04 42.0	
	comp=E,610nm,0.7s						
LCCY				IAML		02 04 43.2	
	comp=N,683nm,0.4s						
LMGC	**Las Mercedes**	**1.70**	**75**	eP	**Pn**	**02 04 26.0**	**-0.4**
LMGC				eS	**Sn**	**02 04 47.5**	**-0.7**
LMGC				IAML		02 04 49.5	
	comp=N,360nm,0.2s						
LMGC				IAML		02 04 50.3	
	comp=E,362nm,0.1s						
CCCC	**Cccc**	**1.81**	**31**	eP	**Pb**	**02 04 29.7**	**-0.1**
MTDJ	**Mount Denham**	**1.82**	**140**	eP	**Pn**	**02 04 28.7**	**+0.6**
MTDJ	**Mount Denham**	**1.82**	**140**	⇓iP	**Pn**	**02 04 28.7**	**+0.6**
MTDJ				i S	**Sn**	**02 04 51.0**	**-0.3**
CHIV	**Chivirico**	**2.23**	**81**	eP	**Pn**	**02 04 34.7**	**+1.1**
YAR	**Yar**	**2.37**	**72**	eP	**Pn**	**02 04 36.1**	**+0.6**
STH	**Stony Hill**	**2.41**	**130**	⇑iP	**Pn**	**02 04 36.7**	**+0.6**
MARVS	**Santiago de Cu**	**2.71**	**82**	eP	**Pn**	**02 04 39.5**	**-0.8**
HLGC	**Holguin**	**2.82**	**63**	eP	**Pn**	**02 04 42.5**	**+0.7**
RCC	**Rio Carpintero**	**2.90**	**83**	eP	**Pn**	**02 04 43.1**	**+0.2**
PINC	**Pinares de May**	**2.91**	**73**	eP	**Pn**	**02 04 42.9**	**-0.1**
GTBY	**Guantanamo Bay**	**3.44**	**85**	eP	**Pn**	**02 04 49.4**	**-0.9**
QMBU	**Quimbuelo**	**3.75**	**81**	eP	**Pn**	**02 04 54.7**	**+0.1**
MASC	**Masc**	**4.29**	**82**	eP	**Pn**	**02 05 03.4**	**+1.4**
SOR	**Soroa**	**5.06**	**309**	eP	**Pn**	**02 05 13.9**	**+1.4**

IDC 01 02:05:18.8±1.8**, 6°.97S**×**127°.90E, h0**km**, mb3.5**/2**, mbtmp4.0**/5**, ML4.2**/3**, Error ellipse: s-maj=106.6km s-min=25.0km az=73.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.28**	**191**	Pn	Pn	02 08 01.9	+0.6
	1.0nm,0.3s,baz=22,slow=13,SNR=23						
FITZ				Sn	Sn	02 09 53.0	-15
	1.7nm,0.3s,baz=120,slow=20,SNR=6.9						
	2.6nm,0.4s						
WRA	**Warramunga Arr**	**14.33**	**155**	Pn	Pn	02 08 42.1	-1.0
	1.3nm,0.3s,baz=327,slow=14,SNR=56						
WRA				Sn	Sn	02 11 06.8	-16
	1.6nm,0.3s,baz=332,slow=22,SNR=8.2						
	3.7nm,0.6s						
ASAR	**Alice Springs**	**17.58**	**161**	P	Pn	02 09 25.6	+0.2
	0.9nm,0.3s,baz=341,slow=11,SNR=112						
ASAR				S	Sn	02 12 25.0	-17
	0.8nm,0.5s,baz=325,slow=16,SNR=7.4						
	8.0nm,0.6s						
MKAR	**Makanchi Array**	**67.07**	**328**	P	P	02 16 14.8	+0.8
	0.2nm,0.5s,baz=113,slow=7.2,SNR=4.6						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**71.41**	**329**	P	P	02 16 40.2	-0.6
	0.2nm,0.4s,baz=130,slow=5.3,SNR=4.4						
	0.2nm,0.4s						

*SNET **01** 02:09:57.5±1.2, 13°.92N×89°.43W, h5km±3km, ML2.3, Presumed earthquake*
*GCG **01** 02:09:57.8±0.9, 13°.89N×89°.45W, h13km±10km, MD3.7, Presumed earthquake*
*CATAC **01** 02:09:58.3±0.7, 14°N±2°×8°9W±°, h6km±3km, M2.6/9, MLv2.6/9, Error ellipse: s-maj=3.8km s-min=2.6km az=29.2, confirmed*
ISC 01 02:09:58.5±0.9**, 13°.90N**±0°.03×**89°.43W**±0°.02**, h9**km±7km**, n28, σ0.s93**/44**, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEDA	**San Andres**	**0.10**	**159**	P	**Pg**	**02 10 00.6**	**-0.5**
CEDA	**San Andres**	**0.10**	**159**	eP	**Pg**	**02 09 59.9**	**-1.2**
CEDA				eS	**Sg**	**02 10 02.7**	**-0.2**
UNIC	**Universidad Ca**	**0.14**	**306**	P	**Pg**	**02 10 01.8**	**+0.1**
UNIC				S	**Sg**	**02 10 04.2**	**+0.3**
QUEZ	**Alcaldia de Qu**	**0.17**	**112**	eP	**Pg**	**02 10 02.0**	**-0.1**
QUEZ				eS	**Sg**	**02 10 05.6**	**+1.0**
SNJE	**San Jose**	**0.17**	**260**	eP	**Pg**	**02 10 02.5**	**+0.2**
SNJE				eP		02 10 02.5	
SBLS	**San Blas**	**0.19**	**252**	eP	**Pg**	**02 10 03.0**	**+0.4**
SBLS				eP	**Pg**	**02 10 03.0**	**+0.4**
CEVE	**Cerro Verde**	**0.20**	**249**	P	**Pg**	**02 10 03.2**	**+0.5**
CEVE	**Cerro Verde**	**0.20**	**249**	eP	**Pg**	**02 10 03.3**	**+0.5**
CEVE				eS	**Sg**	**02 10 07.1**	**+1.4**
RTR	**El Retiro**	**0.21**	**269**	eP	**Pg**	**02 10 03.4**	**+0.6**
PMON	**Piamonte**	**0.22**	**148**	P	**Pg**	**02 10 03.3**	**+0.2**
PMON	**Piamonte**	**0.22**	**148**	eP	**Pg**	**02 10 03.3**	**+0.2**
PMON				eS	**Sg**	**02 10 07.0**	**+0.9**
BOQS	**Boqueron**	**0.22**	**138**	eP	**Pg**	**02 10 03.8**	**+0.6**
PIC2	**El Picacho**	**0.23**	**132**	eP	**Pg**	**02 10 04.4**	**+1.1**
PIC2				eS	**Sg**	**02 10 08.4**	**+1.8**
JAYA	**Jayaque - finc**	**0.24**	**184**	P	**Pg**	**02 10 03.4**	**-0.1**
JAYA				S	**Sg**	**02 10 07.2**	**+0.2**
JAYA	**Jayaque - finc**	**0.24**	**184**	eP	**Pg**	**02 10 03.4**	**-0.1**
JAYA				IAML		02 10 08.4	
	comp=Z,1μm,0.2s						
JAYA	**Jayaque - finc**	**0.24**	**184**	i P	**Pg**	**02 10 03.4**	**-0.1**
JAYA				i S	**Sg**	**02 10 06.9**	**0.0**
UEES	**Universidad Ev**	**0.26**	**134**	P	**Pb**	**02 10 05.0**	**-0.5**
UEES				S	**Sb**	**02 10 08.2**	**-1.9**
UEES	**Universidad Ev**	**0.26**	**134**	eP	**Pg**	**02 10 03.7**	**-0.1**
RBDL	**Robledal**	**0.33**	**311**	eP	**Pb**	**02 10 05.2**	**-1.3**
RBDL				eS	**Sb**	**02 10 10.5**	**-1.5**
NUBE	**Las Nubes**	**0.34**	**271**	P	**Pg**	**02 10 05.2**	**-0.1**
NUBE	**Las Nubes**	**0.34**	**271**	eP	**Pb**	**02 10 05.5**	**-1.2**
NUBE				eS	**Sb**	**02 10 10.4**	**-1.9**
NUBE				IAML		02 10 11.6	
	comp=Z,170nm,0.2s						
NUBE	**Las Nubes**	**0.34**	**271**	i P	**Pb**	**02 10 05.4**	**-1.3**
NUBE				i S	**Sg**	**02 10 10.3**	**+0.5**
LOAL	**Lomas de Alarc**	**0.35**	**286**	P	**Pn**	**02 10 12.0**	**+2.2**
MTO3	**Montecristo**	**0.50**	**8**	P	**Pg**	**02 10 08.2**	**-0.1**
MTO3	**Montecristo**	**0.50**	**8**	eP	**Pg**	**02 10 08.1**	**-0.2**
MTO3				eS	**Sg**	**02 10 15.6**	**+0.6**
MTO3	**Montecristo**	**0.50**	**8**	i P	**Pg**	**02 10 08.2**	**-0.1**
PAVA	**Las Pavas**	**0.52**	**111**	P	**Pb**	**02 10 08.6**	**-1.1**
PAVA				S	**Sb**	**02 10 16.2**	**-1.2**
LLGN	**La Laguna**	**0.54**	**61**	P	**Pg**	**02 10 08.9**	**-0.1**
LLGN				S	**Sb**	**02 10 18.1**	**0.0**

*IDC **01** 02:18:30.9±1.3, 35°.12N×27°.87E, h0km, mb3.3/4, mbtmp3.2/6, ML2.9/2, Error ellipse: s-maj=36.3km s-min=19.3km az=161.0*
*AFAD **01** 02:18:30.4, 35°.02N×27°.68E, h12km±3km, ML2.5*
*ISK **01** 02:18:33.7, 35°.19N×27°.86E, h6km, ML2.8/13*
*ATH **01** 02:18:34.9, 35°.24N×27°.98E, h15km±6km, ML2.8/5, Manual Solution by N.Liadopoulou First location: 2020/02/01 02:20:02, This location: 2020/02/01 05:12:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **01** 02:18:35.1, 35°N±17°×2°8E±2°2, h0km±23km, M2.8/8, MLh2.8/8*
ISC 01 02:18:32.9±1.4**, 35°.10N**±0°.04×**27°.92E**±0°.03**, h8**km±9km**, n52, σ1.s16**/70**, mb3.1**/3**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.76**	**306**	Pg	**Pg**	**02 18 47.0**	**-0.6**
KARP				Sg	**Sg**	**02 18 56.9**	**-0.7**
KARP	**Karpathos**	**0.76**	**306**	P	**Pg**	**02 18 46.7**	**-1.0**
KARP				S	**Sg**	**02 18 58.1**	**+0.5**
KARP	**Karpathos**	**0.76**	**306**	P	**Pg**	**02 18 46.6**	**-1.0**
KARP				S	**Sg**	**02 18 59.1**	**+1.5**
KSS1	**Kassos Island**	**0.87**	**292**	P	**Pn**	**02 18 52.1**	**+0.6**
KSS1				S	**Sn**	**02 19 03.8**	**-0.5**
ARG	**Arkhangelos**	**1.13**	**9**	Pg	**Pb**	**02 18 54.3**	**-0.4**
ARG				Sg	**Sb**	**02 19 09.0**	**-0.5**
ARG	**Arkhangelos**	**1.13**	**9**	P	**Pb**	**02 18 54.2**	**-0.5**
ARG				S	**Sb**	**02 19 10.5**	**+1.0**
ARG	**Arkhangelos**	**1.13**	**9**	P	**Pb**	**02 18 53.4**	**-1.3**
ARG				S	**Sb**	**02 19 06.5**	**-3.0**
ZKR	**Zakros**	**1.39**	**271**	Pn	**Pb**	**02 18 59.7**	**+0.5**
ZKR	**Zakros**	**1.39**	**271**	P	**Pb**	**02 18 59.7**	**+0.5**
ZKR	**Zakros**	**1.39**	**271**	P	**Pb**	**02 18 59.2**	**0.0**
YAZI	**Mula-Dat§a-**	**1.62**	**347**	P	**Pn**	**02 19 02.1**	**+0.3**
YAZI				S	**Sb**	**02 19 25.4**	**+1.7**
YAZI				IAML		02 19 29.0	
	comp=E,82nm,0.5s						
YAZI				IAML		02 19 34.0	
	comp=N,58nm,0.5s						
DAT	**Datca**	**1.65**	**351**	Pn	**Pn**	**02 19 02.5**	**+0.2**
DAT				Sn	**Sn**	**02 19 23.6**	**-0.1**
DAT	**Datca**	**1.65**	**351**	P	**Pn**	**02 19 02.8**	**+0.5**
DAT				S	**Sb**	**02 19 26.2**	**+1.6**
DAT				IAML		02 19 30.0	
	comp=E,88nm,0.4s						
DAT				IAML		02 19 34.0	
	comp=N,87nm,0.4s						
DATC	**Datca-Mugla**	**1.67**	**353**	Pn	**Pn**	**02 19 02.8**	**+0.4**
TURN	**Turunc**	**1.69**	**9**	Pn	**Pn**	**02 19 03.4**	**+0.6**
TURN	**Turunc**	**1.69**	**9**	P	**Pn**	**02 19 04.1**	**+1.3**
TURN				S	**Sg**	**02 19 27.9**	**+0.5**
TURN				IAML		02 19 34.0	
	comp=N,59nm,0.3s						
TURN				IAML		02 19 38.0	
	comp=E,80nm,0.8s						
AKAS	**Kas**	**1.78**	**50**	Pn	**Pn**	**02 19 05.1**	**+1.0**
DALY	**Dalyan (Mula)**	**1.82**	**19**	Pn	**Pn**	**02 19 05.5**	**+1.1**
NPS	**Neapolis**	**1.89**	**276**	P	**Pb**	**02 19 07.9**	**+0.2**
NPS	**Neapolis**	**1.89**	**276**	P	**Pb**	**02 19 07.0**	**-0.7**
SABU	**Mula-Dalaman**	**1.92**	**26**	P	**Pn**	**02 19 06.8**	**+0.8**
SABU				S	**Sg**	**02 19 37.5**	**+2.8**
SABU				IAML		02 19 54.0	
	comp=E,41nm,0.6s						
SABU				IAML		02 20 00.0	
	comp=N,40nm,1.3s						
BDRM	**Kayabasi**	**2.00**	**349**	P	**Pn**	**02 19 07.8**	**+0.8**
BDRM				S	**Sn**	**02 19 33.8**	**+1.6**
BDRM				IAML		02 19 40.0	
	comp=E,47nm,0.7s						
BODT	**Bodrum**	**2.02**	**346**	Pn	**Pn**	**02 19 07.7**	**+0.4**
BODT	**Bodrum**	**2.02**	**346**	P	**Pn**	**02 19 08.8**	**+1.5**
YER	**Yerkesik**	**2.05**	**8**	Pn	**Pn**	**02 19 08.5**	**+0.7**
YER	**Yerkesik**	**2.05**	**8**	P	**Pn**	**02 19 09.2**	**+1.4**
CAME	**Cameli-Denizli**	**2.16**	**31**	Pn	**Pn**	**02 19 10.2**	**+0.9**
MULA	**Mugla, Merkez-**	**2.18**	**9**	P	**Pb**	**02 19 11.9**	**-0.7**
MULA				S	**Sb**	**02 19 42.3**	**+2.5**
MULA				IAML		02 19 56.0	
	comp=E,38nm,0.8s						
MULA				IAML		02 20 02.0	
	comp=N,24nm,0.7s						
MLSB	**Milas**	**2.19**	**357**	Pn	**Pn**	**02 19 10.2**	**+0.5**
THERA	**Ancient Thera,**	**2.35**	**303**	P	**Pn**	**02 19 12.7**	**+0.8**
THERA	**Ancient Thera,**	**2.35**	**303**	P	**Pn**	**02 19 12.5**	**+0.7**
SNT5	**Nea Kammeni, S**	**2.43**	**303**	P	**Pn**	**02 19 13.5**	**+0.6**
IDI	**Anoyia**	**2.48**	**275**	Pn	**Pn**	**02 19 15.1**	**+1.3**
IDI	**Anoyia**	**2.48**	**275**	P	**Pb**	**02 19 16.5**	**-1.3**
IDI	**Anoyia**	**2.48**	**275**	P	**Pn**	**02 19 15.0**	**+1.3**
AYDN	**Tasoluk**	**2.56**	**359**	P	**Pn**	**02 19 15.2**	**+0.5**
AYDN				S	**Sn**	**02 19 46.0**	**0.0**
AYDN				IAML		02 20 05.0	
	comp=N,24nm,0.6s						
AYDN				IAML		02 20 07.0	
	comp=E,31nm,0.9s						
GCAM	**G?zelcaml?**	**2.65**	**348**	P	**Pn**	**02 19 15.7**	**-0.3**
GCAM				S	**Sn**	**02 19 48.1**	**-0.2**
GCAM				IAML		02 19 58.0	
	comp=E,29nm,0.8s						
GCAM				IAML		02 20 36.0	
	comp=N,35nm,1.2s						
SMG	**Samos**	**2.75**	**342**	P	**Pn**	**02 19 17.7**	**+0.4**
SMG	**Samos**	**2.75**	**342**	P	**Pn**	**02 19 17.2**	**0.0**
VAM	**Vamos**	**3.06**	**277**	P	**Pn**	**02 19 24.1**	**+2.6**
VAM	**Vamos**	**3.06**	**277**	P	**Pn**	**02 19 23.3**	**+1.8**
IMMV	**Iera Moni Meta**	**3.24**	**278**	P	**Pn**	**02 19 25.8**	**+1.8**
KNDR	**Palaiochora Ch**	**3.52**	**273**	P	**Pn**	**02 19 29.3**	**+1.5**
CHOS	**Chios island**	**3.60**	**336**	P	**Pn**	**02 19 28.5**	**-0.6**
AKMS	**Akamas**	**3.63**	**90**	P	**Pn**	**02 19 30.1**	**+0.7**
NATA	**Nata**	**3.84**	**93**	P	**Pn**	**02 19 33.2**	**+0.9**
BRTR	**Keskin Array B**	**6.49**	**43**	Pn	**Pn**	**02 20 09.1**	**+0.3**
	0.1nm,0.3s,baz=219,slow=16,SNR=1.8						
BRTR				Sn	**Sn**	**02 21 24.2**	**+1.3**
	0.1nm,0.3s,baz=218,slow=27,SNR=2.8						
	0.3nm,0.7s						
MMAI	**Mount Meron Ar**	**6.55**	**106**	Pn	**Pn**	**02 20 08.3**	**-1.3**
	1.1nm,0.3s,baz=306,slow=14,SNR=12						
MMAI				Sn	**Sn**	**02 21 23.9**	**-0.7**
	1.3nm,0.3s,baz=304,slow=26,SNR=5.5						
	9.4nm,1.0s						
ESDC	**Sonseca Array**	**25.66**	**290**	P	**P**	**02 24 01.0**	**-2.2**
	0.5nm,0.7s,baz=86,slow=9.8,SNR=4.5						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**32.23**	**234**	P	**P**	**02 25 01.6**	**-0.2**
	0.3nm,0.5s,baz=39,slow=6.0,SNR=4.6						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**39.41**	**51**	P	**P**	**02 26 03.2**	**+0.2**
	0.3nm,0.6s,baz=276,slow=8.5,SNR=2.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**41.92**	**57**	P	**P**	**02 26 23.5**	**-0.4**
	0.2nm,0.8s,baz=278,slow=6.3,SNR=2.7						
	0.2nm,0.8s						

*IDC **01** 02:28:22.6±1.7, 16°.33S×177°.91W, h0km, mb4.3/5, mbtmp4.3/5, Error ellipse: s-maj=136.1km s-min=28.8km az=156.0*
*NEIC **01** 02:29:21.9±2.4, 18°.11S±0°.09×178°.0W±0°.1, h597km±13km, mb4.4/13, Error ellipse: s-maj=19.7km s-min=13.1km az=84.0*
ISC 01 02:29:21.5±0.9**, 18°.0S**±0°.2×**178°.0W**±0°.1**, h600**km**, n23, σ0.s96**/23**, mb4.3**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.77**	**274**	P	**P**	**02 30 47.0**	**+1.5**
NIUE	**Niue**	**7.73**	**99**	P	**P**	**02 31 17.2**	**-1.1**
PINNC	**Pines Island,**	**14.39**	**249**	P	**P**	**02 32 23.0**	**-1.1**
SANVU	**Saraoutou**	**14.40**	**278**	P	**P**	**02 32 23.5**	**-0.8**
EIDS	**Eidsvold**	**29.59**	**250**	P	**P**	**02 34 39.7**	**-0.1**
CTAO	**Charters Tower**	**33.81**	**261**	P	**P**	**02 35 15.6**	**-0.1**
CTAO				IAmb	IAmb	02 35 16.1	
	comp=Z,6.0nm,0.8s						
COEN	**Coen**	**37.49**	**270**	P	**P**	**02 35 46.6**	**+0.5**
STKA	**Stephens Creek**	**38.91**	**241**	P	**P**	**02 35 58.0**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=83,slow=10,SNR=15						
	comp=Z,4.0nm,0.6s						
STKA	**Stephens Creek**	**38.91**	**241**	P	**P**	**02 35 58.0**	**+0.6**
INKA	**Innaminka**	**39.06**	**248**	P	**P**	**02 35 59.5**	**+0.9**
INKA				IAmb	IAmb	02 35 59.7	
	comp=Z,4.2nm,0.5s						
BBOO	**Buckleboo**	**43.69**	**241**	P	**P**	**02 36 34.6**	**-0.3**
BBOO				IAmb	IAmb	02 37 13.9	
	comp=Z,36nm,1.4s						
WR8	**Warramunga Arr**	**44.84**	**260**	P	**P**	**02 36 42.9**	**-1.1**
WRA	**Warramunga Arr**	**44.99**	**260**	P	**P**	**02 36 43.6**	**-1.5**
	comp=Z,4.1nm,0.6s,baz=95,slow=7.4,SNR=39						
	comp=Z,4.1nm,0.6s						
WRA	**Warramunga Arr**	**44.99**	**260**	P	**P**	**02 36 43.6**	**-1.5**
AS31	**Alice Springs**	**45.13**	**254**	P	**P**	**02 36 45.9**	**-0.3**
AS31				IAmb	IAmb	02 36 46.8	
	comp=Z,3.8nm,0.5s						
ASAR	**Alice Springs**	**45.13**	**254**	P	**P**	**02 36 45.9**	**-0.3**
	comp=Z,11nm,0.6s,baz=87,slow=8.8,SNR=142						
	comp=Z,11nm,0.6s						
MTN	**Manton Dam**	**49.18**	**268**	P	**P**	**02 37 15.4**	**-1.1**
MTN				IAmb	IAmb	02 37 29.6	
	comp=Z,16nm,1.2s						
KNRA	**Kununurra**	**50.86**	**264**	P	**P**	**02 37 27.7**	**-1.1**
KNRA				IAmb	IAmb	02 37 30.2	
	comp=Z,22nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.39**	**261**	P	**P**	**02 37 45.9**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=95,slow=12,SNR=5.7						
	comp=Z,2.2nm,0.8s						
VNDA	**Vanda**	**60.36**	**185**	P	**P**	**02 38 34.5**	**+1.3**
VNDA				IAmb	IAmb	02 38 38.9	
	comp=Z,26nm,1.4s						
BELA	**Belgrano 2**	**82.00**	**173**	P	**P**	**02 40 39.2**	**-0.2**
TXAR	**Lajitas Array**	**85.73**	**57**	P	**P**	**02 40 59.2**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=224,slow=3.5,SNR=6.3						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**85.73**	**57**	P	**P**	**02 40 59.4**	**+0.7**

*ISK **01** 02:34:00.7, 38°.26N×42°.80E, h8km, ML2.6/7*
*AFAD **01** 02:34:01.4, 38°.29N×42°.79E, h7km±3km, ML2.2*
ISC 01 02:34:01.2±1.0**, 38°.28N**±0°.03×**42°.81E**±0°.03**, h9**km±9km**, n15, σ0.s61**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.14**	**70**	Pg	**Pg**	**02 34 04.5**	**0.0**
AKDM				Sg	**Sg**	**02 34 07.2**	**+0.3**
PERV	**Siirt/Pervari-**	**0.40**	**212**	P	**Pb**	**02 34 09.7**	**-0.7**
PERV				S	**Sb**	**02 34 18.0**	**+1.4**
PERV				IAML		02 34 20.0	
	comp=E,353nm,0.4s						
PERV				IAML		02 34 21.0	
	comp=N,570nm,0.4s						
TVAN	**Van**	**0.53**	**62**	P	**Pg**	**02 34 11.1**	**-0.4**
TVAN				S	**Sb**	**02 34 20.2**	**-0.4**
TVAN				IAML		02 34 27.0	
	comp=E,147nm,0.4s						
TVAN				IAML		02 34 34.0	
	comp=N,162nm,0.6s						
ADCV	**BITLIS_Adilcev**	**0.53**	**353**	P	**Pb**	**02 34 12.5**	**-0.4**
ADCV				IAML		02 34 21.0	
	comp=N,663nm,0.2s						
ADCV				IAML		02 34 21.0	
	comp=E,573nm,0.6s						
ADCV				S	**Sb**	**02 34 21.1**	**+0.4**
BLIS	**Bitlis-Merkez**	**0.56**	**284**	P	**Pb**	**02 34 12.8**	**-0.5**
BLIS				S	**Sb**	**02 34 20.7**	**-0.8**
BLIS				IAML		02 34 23.0	
	comp=E,273nm,0.2s						
BLIS				IAML		02 34 24.0	
	comp=N,289nm,0.2s						
GURO	**Guroymak-BITLI**	**0.67**	**294**	Pg	**Pg**	**02 34 14.2**	**0.0**
GURO				Sg	**Sb**	**02 34 23.7**	**-0.8**
MLAZ	**Malazgirt-MUS**	**0.88**	**347**	Pg	**Pb**	**02 34 18.5**	**-0.3**
MLAZ				Sg	**Sb**	**02 34 31.6**	**+0.8**
VMUR	**Van-Muradiye**	**0.93**	**40**	P	**Pg**	**02 34 18.6**	**-0.4**
VMUR				S	**Sb**	**02 34 32.4**	**+0.4**
VMUR				IAML		02 34 33.0	
	comp=N,60nm,0.4s						
VMUR				IAML		02 34 34.0	
	comp=E,59nm,0.3s						
DORK	**Agr/Tutak/Do**	**1.11**	**359**	P	**Pg**	**02 34 22.0**	**-0.5**
DORK				S	**Sb**	**02 34 37.7**	**+0.5**
DORK				IAML		02 34 38.0	
	comp=E,99nm,0.4s						
DORK				IAML		02 34 39.0	
	comp=N,77nm,0.4s						
MUSM	**Mu-Merkez**	**1.11**	**294**	P	**Pb**	**02 34 22.4**	**-0.2**
MUSM				S	**Sb**	**02 34 37.4**	**+0.1**
MUSM				IAML		02 34 40.0	
	comp=N,45nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MUSM				IAML		02 34 40.0	
	comp=E,36nm,0.5s						
CUKT	Cukurca	1.21	148	Pn	Pg	02 34 24.1	-0.3
AGRB	Hanur-Agry	1.30	6	Pn	Pn	02 34 25.9	+0.2
KARO	Karliova-Bingo	1.72	307	Pn	Pn	02 34 31.9	+0.5
BNGB	Bingl	1.81	294	Pn	Pn	02 34 33.2	+0.5
KOPR	Koprukoy-ERZUR	1.86	337	Pn	Pn	02 34 34.1	+0.7

*VAO **01** 02:35:55.3±0.4, 24°.38S×67°.08W, h158km, mb5.1, Presumed earthquake*

*NEIC **01** 02:35:56.6, 24°.43S×66°.94W, h160km*

*MOS **01** 02:35:56.2±1.3, 24°.45S×66°.98W, h163km, mb5.2/15, Error ellipse: s-maj=11.8km s-min=6.9km az=99.5*

*SJA **01** 02:35:56.2±0.7, 24°.49S×67°.10W, h198km±6km, ML5.3, MW5.1*

*NEIC **01** 02:35:56.6, 24°.43S×67°.27W, h160km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.98; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$7.84; $M_{r\theta}$1.03; $M_{\theta\phi}$-0.30; $M_{\phi r}$-0.00; Fault plane solution: $M_0$7.52000×10^{16} NP1: ϕ_s187.22000°, δ45.60000°, λ-76.94000°. NP2: ϕ_s348.88000°, δ45.90000°, λ-102.99000°. Principal axes: T 7.8509, Plg0.0000°, Azm88.0000°; N -0.7026, Plg9.0000°, Azm358.0000°; P -7.1483, Plg81.0000°, Azm179.0000°;*

*BJI **01** 02:35:56.5, 23°.66S×67°.49W, h159km, mB5.2/3*

*GFZ **01** 02:35:57.1, 24°.45S×66°.97W, h184km, MW5.2, Moment Tensor Solution. s64 Moment tensor: M_{rr}-7.59; $M_{\theta\theta}$0.39; $M_{\phi\phi}$7.20; $M_{r\theta}$1.14; $M_{\theta\phi}$0.40; $M_{\phi r}$-0.32; Fault plane solution: NP1:ϕ_s191.00000°, δ45.00000°, λ-77.00000°. NP2:ϕ_s355.00000°, δ47.00000°, λ-10.00000°. Principal axes: T 7.2300, Plg1.0000°, Azm93.0000°; N 0.5300, Plg8.0000°, Azm3.0000°; P -7.7600, Plg82.0000°, Azm190.0000°;*

*IDC **01** 02:35:57.3±1.2, 24°.35S×66°.90W, h162km±10km, mb4.9/23, mbtmp5.3/29, MS3.8/10 Error ellipse: s-maj=11.7km s-min=7.5km az=71.0*

*NEIC **01** 02:35:57.4±2.1, 24°.45S±0°.06×66°.96W±0°.04, h160km±4km, mb5.3/647, Mww5.2/41, Mwr5.3(GUC), Error ellipse: s-maj=9.0km s-min=2.9km az=151.0*

*GUC **01** 02:35:58.2±0.6, 24°.46S×67°.35W, h197km±6km, ML5.4*

*GCMT **01** 02:36:01.4±0.2, 24°.41S±0°.01×67°.07W±0°.01, h188km±1km, MW5.2/136, Moment Tensor Solution. s71,c87; s136,c218; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.92±.01; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$0.94±.02; $M_{r\theta}$0.07±.01; $M_{\theta\phi}$-0.03±.01; $M_{\phi r}$-0.00±.02; Best double couple: $M_0$0.93500×10^{17} NP1:ϕ_s183.00000°, δ45.00000°, λ-84.00000°. NP2:ϕ_s354.00000°, δ45.00000°, λ-96.00000°. Principal axes: T 0.9470, Plg0.0000°, Azm89.0000°; N -0.0240, Plg4.0000°, Azm359.0000°; P -0.9220, Plg86.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 02:35:56.7±0.4, **24°.40S**±0°.03×**67°.05W**±0°.04, **h163**km±3km, **n810**, σ**1s51**/589, **mb5.3**/339, **29C-29D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		0.68	75	eP	Pn	02 36 24.6	+3.6
SALTA				eP		02 36 24.8	
SALTA				eP		02 36 25.0	
SLA	San Lorenzo	1.45	103	⇑eP	Pn	02 36 30.8	+3.9
SLA	San Lorenzo	1.45	103	eP	Pn	02 36 11.8	-15
AF01	San Pedro de A	1.78	324		Pn	02 36 34.5	+3.9
AF01	San Pedro de A	1.78	324	⇓iP	Pn	02 36 34.4	+3.9
AF01				iS	Sn	02 37 02.4	+5.9
AF01				IAML		02 37 04.8	
	comp=N,29μm,0.4s						
AF01	San Pedro de A	1.78	324	eP	Pn	02 36 34.6	+4.1
AF01				eS	Sn	02 37 02.8	+6.3
AF01				IAML		02 37 20.5	
	comp=Z,17μm,0.7s						
AZAP	Zapla	1.82	85	eP	Pn	02 36 34.2	+3.3
FSA	Cafayete	1.96	150	eP	Pn	02 36 34.8	+2.5
FSA				eS	Sn	02 37 03.0	+3.1
YJA	Yavi	2.63	33	eP	Pn	02 36 44.3	+3.7
YJA	Yavi	2.63	33	eP	Pn	02 36 44.7	+4.1
YJA				eS	Sn	02 37 20.7	+6.3
PB06	IPOC Station P	2.86	306		Pn	02 36 45.4	+2.3
PB06	IPOC Station P	2.86	306	⇓eP	Pn	02 36 45.3	+2.2
PB06				⇑iP		02 36 45.6	
PB06	IPOC Station P	2.86	306	eP	Pn	02 36 45.5	+2.4
PB06				eS	Sn	02 37 21.3	+2.3
PB14	IPOC Station P	3.06	265		Pn	02 36 46.9	+1.2
PB14	IPOC Station P	3.06	265	⇑iP	Pn	02 36 46.9	+1.2
PB14				eS	Sn	02 37 23.3	-0.3
PB14				IAML		02 37 29.2	
	comp=N,8μm,0.6s						
PB14	IPOC Station P	3.06	265	eP	Pn	02 36 46.8	+1.2
PB14				eS	Sn	02 37 23.6	0.0
AC02	Maricunga	3.06	217		Pn	02 36 48.0	+2.2
AC02	Maricunga	3.06	217	⇓iP	Pn	02 36 47.9	+2.0
AC02				eS	Sn	02 37 26.0	+2.0
AC02				IAML		02 37 33.0	
	comp=N,3μm,0.3s						
AC02	Maricunga	3.06	217	eP	Pn	02 36 48.0	+2.2
AC02				eS	Sn	02 37 29.7	+5.8
AC02				eS		02 37 31.8	
PB05	IPOC Station P	3.27	297		Pn	02 36 49.9	+1.7
PB05	IPOC Station P	3.27	297	⇑iP	Pn	02 36 49.7	+1.5
PB05				iS	Sn	02 37 28.9	+0.8
PB05	IPOC Station P	3.27	297	eP	Pn	02 36 49.8	+1.5
PB05				eS	Sn	02 37 30.4	+2.2
PB05				IAML		02 37 34.9	
	comp=Z,6μm,0.4s						
PB09	IPOC Station P	3.29	322		Pn	02 36 51.2	+2.8
PB09	IPOC Station P	3.29	322	iP	Pn	02 36 51.2	+2.8
PB09	IPOC Station P	3.29	322	eP	Pn	02 36 51.2	+2.8
PB09				eS	Sn	02 37 31.0	+2.5
PB03	IPOC Station P	3.42	313		Pn	02 36 51.9	+1.9
PB03	IPOC Station P	3.42	313	⇑iP	Pn	02 36 52.0	+1.9
PB03	IPOC Station P	3.42	313	eP	Pn	02 36 51.9	+1.9
PB03				eS	Sn	02 37 31.8	+0.4
AC01	Pan de Azucar	3.65	241		Pn	02 36 53.2	+0.3
AC01	Pan de Azucar	3.65	241	⇑iP	Pn	02 36 53.2	+0.3
AC01	Pan de Azucar	3.65	241	eP	Pn	02 36 53.1	+0.3
AC01				eS	Sn	02 37 35.7	-0.8
AC01				IAML		02 37 37.1	
	comp=Z,3μm,0.5s						
TINO	Tinogasta	3.67	187	eP	Pn	02 36 55.9	+2.7
PB07	IPOC Station P	3.73	315		Pn	02 36 55.8	+1.7
PB07	IPOC Station P	3.73	315	⇑iP	Pn	02 36 55.8	+1.7
PB07	IPOC Station P	3.73	315	eP	Pn	02 36 55.6	+1.6
PB07				eS	Sn	02 37 38.9	+0.3
PB01	IPOC Station P	4.03	326		Pn	02 36 59.2	+1.3
PB01	IPOC Station P	4.03	326	⇑iP	Pn	02 36 59.2	+1.3
PB01	IPOC Station P	4.03	326	eP	Pn	02 36 59.1	+1.3
PB01				eS	Sn	02 37 46.3	+0.9
PB01				IAML		02 37 48.8	
	comp=Z,4μm,0.2s						
PB02	IPOC Station P	4.04	319		Pn	02 36 59.1	+1.2
PB02	IPOC Station P	4.04	319	⇑iP	Pn	02 36 59.1	+1.2
PB02	IPOC Station P	4.04	319	eP	Pn	02 36 58.9	+1.0
PB02				eS	Sn	02 37 45.9	+0.3
AC06	Mina Casimiro	4.18	225		Pn	02 36 59.5	-0.2
AC06	Mina Casimiro	4.18	225	⇑iP	Pn	02 36 59.5	-0.2
GO03	Copiapo	4.28	221		Pn	02 37 00.8	-0.2
GO03	Copiapo	4.28	221	iP	Pn	02 37 00.7	-0.2
GO03	Copiapo	4.28	221	eP	Pn	02 37 01.0	0.0
GO03				eS	Sn	02 37 50.3	-0.8
GO03				IAML		02 37 52.8	
	comp=Z,3μm,0.3s						
VCA	Vinchina	4.44	193	⇑eP	Pn	02 37 05.7	+2.6
VCA	Vinchina	4.44	193	eP	Pn	02 36 49.0	-14
PATCX	Punta Patache	4.57	321		Pn	02 37 05.0	+0.1
PB08	IPOC Station P	4.67	335		Pn	02 37 08.4	+1.9
PB08	IPOC Station P	4.67	335	⇑eP	Pn	02 37 08.4	+1.9
HMBC	Humberstone	4.87	327		Pn	02 37 08.7	-0.2
ACLC	CERRO LA CRUZ	5.00	179	eP	Pn	02 37 11.6	+1.0
TA02	Huaiquique	5.00	325	eP	Pn	02 37 10.9	+0.5
TA02	Huaiquique	5.00	325	eP	Pn	02 37 10.6	+0.1
TA02				eS	Sn	02 38 10.1	+2.0
TA02				IAML		02 38 19.3	
	comp=Z,2μm,1.2s						
GO01	Chusmiza	5.11	337		Pn	02 37 13.6	+1.3
GO01	Chusmiza	5.11	337	⇑eP	Pn	02 37 13.2	+0.8
PB11	IPOC Station P	5.21	332	⇑eP	Pn	02 37 13.2	-0.2
AC04	Llanos de Chal	5.23	223		Pn	02 37 12.4	-1.0
AC04	Llanos de Chal	5.23	223	⇑eP	Pn	02 37 12.0	-1.3
AC04	Llanos de Chal	5.23	223	eP	Pn	02 37 12.6	-0.8
AC04				eS	Sn	02 38 03.9	-9.5
AC05	El Transito	5.27	212	⇑eP	Pn	02 37 13.5	-0.5
AC05	El Transito	5.27	212	eP	Pn	02 37 14.1	0.0
AC05				eS	Sn	02 38 12.6	-2.0
AC05				IAML		02 38 15.5	
	comp=Z,1μm,0.7s						
LCO	Las Campanas	5.63	215		Pn	02 37 17.3	-1.6
LCO	Las Campanas	5.63	215	P	Pn	02 37 17.3	-1.6
LCO	Las Campanas	5.63	215	⇑eP	Pn	02 37 17.4	-1.6
CO01	Juntas del Tor	6.18	205		Pn	02 37 26.6	+0.5
CO05	La Serena	6.64	213		Pn	02 37 29.8	-2.1
ZON	Zonda	7.26	191		Pn	02 37 39.6	-0.7
ZON	Zonda	7.26	191	P	Pn	02 37 39.6	-0.7
LPAZ	La Paz	8.14	353	P	Pn	02 37 54.5	+2.0
	comp=Z,61nm,0.4s,baz=160,slow=9.0,SNR=364						
LPAZ				S	Sn	02 39 21.1	-2.7
	comp=Z,83nm,0.6s,baz=358,slow=18,SNR=7.4						
LPAZ				LR	LR	02 41 43.2	
	comp=Z,876nm,20.1s,baz=200,slow=43						
CPUP	Villa Florida	9.00	104	P	Pn	02 38 02.2	-1.1
	comp=Z,51nm,0.6s,baz=286,slow=13,SNR=134						
CPUP	Villa Florida	9.00	104		Pn	02 38 02.0	-1.4
CPUP	Villa Florida	9.00	104	P	Pn	02 38 02.0	-1.4
MURT	Porto Murtinho	9.12	74	eP	Pn	02 38 03.5	-1.5
MT05	Renca	9.52	199		Pn	02 38 07.9	-2.3
MT03	Universidad Ad	9.55	198		Pn	02 38 10.2	-0.4
VA05	Santo Domingo	10.04	202		Pn	02 38 13.1	-3.9
SIV	San Ignacio	10.08	35	P	Pn	02 38 16.8	-0.8
	comp=Z,77nm,0.6s,baz=216,slow=14,SNR=473						
SIV				S	Sn	02 39 55.2	-14
	comp=Z,14nm,0.5s,baz=224,slow=18,SNR=3.1						
MT01	Popeta	10.11	200		Pn	02 38 14.6	-3.4
BDQN	Bodoquena, MS	10.31	70	eP	Pn	02 38 19.7	-1.0
BO01	Tunca	10.55	199		Pn	02 38 20.5	-3.3
PSAL	Palomas, Salto	10.69	131	eP	Pn	02 38 24.8	-0.7
AMBA	Amambai (Brazi	11.15	85	eP	Pn	02 38 30.4	-1.3
AQDB	Aquidauana	11.20	72		Pn	02 38 31.2	-1.1
AQDB	Aquidauana	11.20	72	eP	Pn	02 38 31.3	-1.1
PTLB	Pontes e Lacer	11.61	41		Pn	02 38 37.3	-0.3
PTLB	Pontes e Lacer	11.61	41	eP	Pn	02 38 37.0	-0.6
BI02	San Fabin de	12.75	196	P	Pn	02 38 50.9	-1.4
VILB	Vilhena	13.11	31	P	Pn	02 38 57.9	+0.9
VILB	Vilhena	13.11	31	eP	Pn	02 38 57.4	+0.4
TRCB	Terra Rica	13.32	86	P	Pn	02 38 58.9	-0.8
TRCB	Terra Rica	13.32	86	eP	Pn	02 38 58.3	-1.3
BI05	Punta Hualpn	13.38	202	P	Pn	02 38 58.1	-2.2
CPSB	Cacapava Do Su	13.48	119	eP	Pn	02 39 00.2	-1.4
SALV	Santo Antonio	13.61	54	eP	Pn	02 39 02.4	-0.8
PTGB	Pitanga	13.64	94	eP	Pn	02 39 02.3	-1.5
ITAB	Concordia	13.73	105	P	Pn	02 39 04.5	-0.2
ITAB	Concordia	13.73	105	eP	Pn	02 39 04.0	-0.7
PLTB	Pedras Altas	13.95	125	P	Pn	02 39 06.4	-1.1
PLTB	Pedras Altas	13.95	125	eP	Pn	02 39 05.9	-1.6
TRQA	Tornquist	14.28	164	P	Pn	02 39 09.2	-2.4
TRQA	Tornquist	14.28	164	P	Pn	02 39 09.2	-2.4
TRQA	Tornquist	14.28	164	eP	Pn	02 39 09.5	-2.0
C2SB	Chapadao do Su	14.36	70	eP	Pn	02 39 12.8	+0.1
PCMB	Pacaembu	14.80	82	eP	Pn	02 39 17.2	-1.1
CNLB	Canela	15.26	112	eP	Pn	02 39 21.9	-1.9
NNA	Nana	15.45	321	P	P	02 39 28.3	+1.1
	comp=Z,63nm,0.9s,baz=147,slow=10,SNR=16						
NNA				S	Sn	02 42 11.4	-7.2
	comp=Z,16nm,0.5s,baz=224,slow=2.4,SNR=4.4						
NNA	Nana	15.45	321	P	P	02 39 27.9	+0.7
NNA	Nana	15.45	321	ceP	Pn	02 39 27.0	+0.7
GO06	Curarrehue	15.59	193	P	Pn	02 39 27.0	-0.9
FRTB	Fartura	16.04	90	eP	Pn	02 39 32.7	-0.6
PDRB	Porto dos Gac	16.06	39	eP	Pn	02 39 31.3	-2.4
ITRB	Iturama	16.16	76	eP	Pn	02 39 34.3	-0.6
LR04	Corral	16.34	198	eP	P	02 39 34.2	-2.5
PLCA	Paso Flores	16.55	189	P	Pn	02 39 39.6	+0.2
	comp=Z,16nm,0.5s,baz=17,slow=12,SNR=41						
PLCA				S	Sn	02 42 56.1	+12
	comp=Z,20nm,1.3s,baz=240,slow=18,SNR=3.5						
PLCA				PcP	PcP	02 44 19.9	-0.2
	comp=Z,8.1nm,0.7s,baz=80,slow=1.3,SNR=6.7						
PLCA	Paso Flores	16.55	189	P	Pn	02 39 39.5	+0.1
PLCA	Paso Flores	16.55	189	P	Pn	02 39 39.5	+0.1
ARAG	Araguaiana, MT	16.72	62	eP	P	02 39 41.1	-0.1
CLDB	Colider	17.19	40	eP	P	02 39 45.8	-0.6
BB19B	Bebedouro	17.41	83	eP	P	02 39 47.8	-1.0
LL05	Los Muermos	17.78	196	eP	P	02 39 52.0	-0.5
SPB	Sao Paulo	17.95	91	P	P	02 39 54.8	+0.2
SPB	Sao Paulo	17.95	91	eP	P	02 39 54.5	0.0
PET01	Itanhaem-SP	18.02	94	eP	P	02 39 55.1	-0.3
RCLB	Rio Claro- Sao	18.03	88	eP	P	02 39 55.1	-0.5
VAO	Valinhos	18.45	90	P	P	02 39 60.0	-0.2
VAO	Valinhos	18.45	90	eP	P	02 39 59.9	-0.2
LL01	San Ignacio de	18.47	193	⇓eP	Pn	02 40 01.8	-0.3
IPMB	Ipameri, GO	18.68	74	eP	P	02 40 02.4	-0.3
LL02	Futaleuf	19.15	191	⇓eP	P	02 40 07.3	-0.1
SNDB	Serra Nova Dou	19.39	53	eP	P	02 40 09.5	-0.9
GO07	Milladeo Hill,	19.44	195	eP	P	02 40 10.4	-0.2
PARB	Paraibuna	19.63	91	eP	P	02 40 12.1	-0.9
BDFB	Brasilia	19.88	68	P	P	02 40 15.9	+0.2
	comp=Z,34nm,0.4s,baz=234,slow=8.8,SNR=90						
BDFB				S	S	02 43 45.7	-5.2
	comp=Z,8.2nm,0.9s,baz=202,slow=19,SNR=1.5						
BDFB	Brasilia	19.88	68	P	P	02 40 15.7	0.0
LJUN	La Junta	20.04	191	⇓eP	P	02 40 16.2	-0.8
ATAH	Atahualpa	20.32	326	P	P	02 40 22.8	+2.0
	comp=Z,13nm,0.9s,baz=75,slow=9.4,SNR=7.5						
ATAH				S	S	02 44 00.6	+0.6
	comp=Z,4.5nm,0.8s,baz=100,slow=19,SNR=1.8						
AY01	Puyuhuapi	20.48	192	P	P	02 40 21.5	-0.3
AY01	Puyuhuapi	20.48	192	eP	P	02 40 21.3	-0.5
NPGB	Novo Progresso	20.58	35	eP	P	02 40 20.3	-2.8
BSCB	Bom Sucesso	20.83	85	eP	P	02 40 24.2	-1.6
TEFE	Tefe	20.91	7	eP	P	02 40 25.3	-1.2
USPA	Uspallante	21.08	192	eP	P	02 40 26.5	-1.6
CUEV	Cuervo	21.29	192	eP	P	02 40 29.2	-1.4
CYQE	Coyhaique	21.47	190	⇓eP	P	02 40 35.1	+2.8
CHAC	Puerto Chacabu	21.48	191	⇓eP	P	02 40 30.8	-1.6
COYC	Coyhaique	21.51	190	P	P	02 40 32.6	-0.1
COYC	Coyhaique	21.51	190	eP	P	02 40 31.8	-0.9
MACA	Manacapuru-AM	22.00	17	P	P	02 40 35.9	-2.2
MACA				IAmb	IAmb	02 40 40.3	
	comp=Z,55nm,0.6s						
MACA	Manacapuru-AM	22.00	17	eP	P	02 40 35.4	-2.6
DIAM	Diamantina, MG	22.59	79	eP	P	02 40 43.0	-1.0
ITTB	Itaituba	22.71	30	eP	P	02 40 42.7	-2.1
DUB01	Friburgo-RJ	22.79	89	eP	P	02 40 44.8	-0.7
JANB	Januaria	23.31	71	eP	P	02 40 48.8	-1.6
MCRA	Macar, Loja	23.48	326	P	P	02 40 53.0	+1.1
	comp=Z,492nmcomp=Z,32nm,0.8s						
CAM01	Campos-RJ	23.49	89	eP	P	02 40 51.0	-0.8
SGC2	Sao Gabriel da	24.11	0	P	P	02 40 57.3	-0.3
	comp=Z,2μmcomp=Z,169nm,1.4s						
SDBA	SAO DESIDERIO	24.12	64	eP	P	02 40 55.9	-1.9
SMTB	Santa Maria do	24.17	54	eP	P	02 40 56.6	-1.6
PRPB	Parauapebas	24.54	45	eP	P	02 40 59.5	-2.1
ALF01	Guarapari-ES	24.60	86	eP	P	02 41 01.2	-0.8
SJMB	Sao Joao De Ma	24.70	82	eP	P	02 41 01.8	-1.1
BSFB	Barra de Sao F	24.97	82	eP	P	02 41 04.3	-1.0
RIB01	Linhares ES	25.23	84	eP	P	02 41 06.5	-1.3
GUA01	Guaratinga, BA	26.65	78	eP	P	02 41 19.5	-1.0
BONI	La Bonita	26.72	336	P	P	02 41 24.2	+2.8
	comp=Z,44nm,1.1s						
OTAV	Otavalo	26.87	334	P	P	02 41 25.9	+2.9
OTAV	Otavalo	26.87	334	P	P	02 41 25.9	+2.9
OTAV				pmax	pmax		
	comp=Z,13nm,0.9s						
GO09	Cerro Castillo	27.13	187	IAmb	IAmb	02 41 29.1	
	comp=Z,231nm,2.0s						
ABR01	Abrolhos, BA	27.17	82	eP	P	02 41 25.1	0.0
MACC	Macarena, Meta	27.20	345	P	P	02 41 25.0	-0.5
	comp=Z,40nm,0.9s						
CMC01	Camacan, BA	27.37	76	eP	P	02 41 25.2	-1.7
BOAV	Boa Vista	27.39	14	P	P	02 41 27.2	+0.1
BOAV	Boa Vista	27.39	14	eP	P	02 41 27.0	-0.1
MG05	Puerto Natales	27.55	187	P	P	02 41 28.3	+0.2
MG05				IAmb	IAmb	02 41 29.3	
	comp=Z,45nm,0.6s						
NBIT	Itapeh - BA	27.61	75	eP	P	02 41 28.0	-1.2
GARC	Garzon, Huila	27.68	342	P	P	02 41 31.6	+1.7
	comp=Z,1μmcomp=Z,149nm,0.8s						
BBAC	Balboa, Cauca	28.07	338	P	P	02 41 36.0	+2.6
	comp=Z,1μmcomp=Z,138nm,0.8s						
EFI	East Falkland	28.09	168	ceP	P	02 41 32.5	-0.4
EFI				pmax	pmax		
	comp=Z,32nm,0.9s						
POPC	Popayan, Colom	28.37	339	P	P	02 41 38.6	+2.5
	comp=Z,1μmcomp=Z,100nm,1.3s						
JAMC	Jamundi, Valle	29.00	340	P	P	02 41 43.7	+2.0
	comp=Z,694nmcomp=Z,63nm,0.9s						
VILC	Villavicencio,	29.07	346	P	P	02 41 44.0	+1.8
	comp=Z,667nmcomp=Z,89nm,0.7s						
ORTC	Ortega, Tolima	29.25	343	P	P	02 41 45.0	+1.3
	comp=Z,617nmcomp=Z,74nm,0.9s						
MG03	Isla Dawson	29.52	184	P	P	02 41 46.0	+0.5
MG03				IAmb	IAmb	02 41 46.4	
	comp=Z,63nm,0.8s						
ROSC	El Rosal	29.92	345	P	P	02 41 50.5	+0.6
	comp=Z,23nm,0.5s,baz=151,slow=23,SNR=11						
ROSC				LR	LR	02 56 09.4	
	comp=Z,507nm,18.0s,baz=146,slow=40						
	comp=Z,23nm,0.5s						
ROSC	El Rosal	29.92	345	P	P	02 41 51.1	+1.2
ROSC				IAmb	IAmb	02 41 53.9	
	comp=Z,26nm,0.6s						
USHA	Ushuaia	30.41	182	P	P	02 41 53.7	+0.3
	comp=Z,16nm,0.5s,baz=6.6,slow=8.4,SNR=9.3						
	comp=Z,16nm,0.5s						
NBPS	Pedro II - PI	31.68	55	eP	P	02 42 03.4	-1.8
PAMC	Pamplona, Colo	32.03	349	P	P	02 42 07.7	-0.9
	comp=Z,664nmcomp=Z,48nm,0.8s						
DBBC	Dabeiba	32.48	343	P	P	02 42 12.4	+0.3
MDP	Montagnes des	32.51	27	P	P	02 42 11.1	-1.2
	comp=Z,8.8nm,0.4s,baz=206,slow=10,SNR=23						
MDP				LR	LR	02 57 12.3	
	comp=Z,286nm,19.0s,baz=152,slow=39						
	comp=Z,8.8nm,0.4s						
SDV	Santo Domingo	33.27	354	P	P	02 42 18.3	-0.8
	comp=Z,33nm,0.9s,baz=177,slow=9.1,SNR=32						
SDV				LR	LR	02 57 07.0	
	comp=Z,226nm,19.3s,baz=200,slow=38						
	comp=Z,33nm,0.9s						
SDV	Santo Domingo	33.27	354	P	P	02 42 17.9	-1.2
SDV				IAmb	IAmb	02 42 19.1	
	comp=Z,48nm,1.0s						
SDV	Santo Domingo	33.27	354	eP	P	02 42 17.8	-1.2
SDV	Santo Domingo	33.27	354	P	P	02 42 18.1	-1.0
	comp=Z,488nmcomp=Z,45nm,0.8s						
NBPA	Parau_RN	34.21	62	eP	P	02 42 25.3	-1.7
ARGC	Ariguani, Magd	34.77	348	P	P	02 42 30.8	-1.0
	comp=Z,2μmcomp=Z,143nm,0.7s						
SJCC	San Jacinto, C	35.00	346	P	P	02 42 33.1	-0.7
	comp=Z,904nmcomp=Z,108nm,0.7s						
RCBR	Riachuelo	35.15	63	P	P	02 42 34.3	-0.8
RCBR	Riachuelo	35.15	63	P	P	02 42 34.3	-0.8
RCBR				pmax	pmax		
	comp=Z,30nm,0.8s						
RCBR	Riachuelo	35.15	63	eP	P	02 42 34.2	-0.9
RCBR	Riachuelo	35.15	63	P	P	02 42 33.7	-1.4
NBPV	Pedro Velho	35.31	65	eP	P	02 42 35.6	-0.9
GRGR	Grenville	36.69	9	P	P	02 42 48.3	+0.2
RAFA	San Farael, Vo	37.87	332	P	P	02 43 00.5	+2.1
RAFA				IAmb	IAmb	02 43 02.4	
	comp=Z,83nm,0.8s						
MCLT	Moule a Chique	38.35	10	eP	P	02 43 01.3	-0.7
SLAC	Saint Lucia, A	38.54	10	eP	P	02 43 02.4	-1.2
SLCP	Castries, St.	38.63	9	eP	P	02 43 06.8	+2.4
SLBI	Saint Lucia, B	38.65	9	eP	P	02 43 04.2	-0.4
JTS	Las Juntas de	38.66	331	P	P	02 43 07.4	+2.7
JTS	Las Juntas de	38.66	331	⇑eP	P	02 43 05.8	+1.1
JTS				pmax	pmax		
	comp=Z,41nm,1.1s						
JTS	Las Juntas de	38.66	331	P	P	02 43 06.0	+1.3
BIM	Bigot	39.12	9	P	P	02 43 07.4	-1.1
CXM	Morne La Croix	39.40	9	IAmb	IAmb	02 43 12.2	
	comp=Z,202nm,0.9s						
SVN	Savane Anatole	39.43	9	P	P	02 43 09.2	-1.9
ESPZ	Base Esperanza	39.55	173	IAmb	IAmb	02 43 13.8	
	comp=Z,140nm,1.4s						
DSLB	Salisbury	39.98	8	eP	P	02 43 13.7	-1.8
TBG	Guadaloupe-3	40.36	8	eP	P	02 43 07.5	-11
ATGZ	Broadband at L	40.59	8	eP	P	02 43 19.6	-0.9
DHSZ	Broadband at M	40.76	8	eP	P	02 43 21.3	-0.6
DSDZ	La Diserade, G	40.89	9	eP	P	02 43 21.0	-2.0
GDSD	La Dsirade Is	40.89	9	P	P	02 43 21.2	-1.8
GDSD				IAmb	IAmb	02 43 21.8	
	comp=Z,57nm,1.0s						
SIUN	Universidad Ur	41.65	334	IAmb	IAmb	02 43 31.0	
	comp=Z,10nm,0.9s						
SABA	Saba	41.93	5	P	P	02 43 30.3	-1.2
SABA				IAmb	IAmb	02 43 30.8	
	comp=Z,95nm,1.0s						
ANWB	Willy Bob	42.13	7	P	P	02 43 30.0	-3.1
ANWB	Willy Bob	42.13	7	eP	P	02 43 29.5	-3.6
PDPR	Patillas Dam,	42.18	1	IAmb	IAmb	02 43 32.4	
	comp=Z,84nm,0.9s						
OBIP	Obispado Ponce	42.19	1	IAmb	IAmb	02 43 33.7	
	comp=Z,42nm,0.7s						
SJG	San Juan	42.27	1	P	P	02 43 32.5	-1.7
	comp=Z,68nm,0.7s,baz=165,slow=4.3,SNR=33						
	comp=Z,68nm,0.7s						
SJG	San Juan	42.27	1	P	P	02 43 32.3	-1.9
SJG				IAmb	IAmb	02 43 33.1	
	comp=Z,86nm,0.8s						
SJG	San Juan	42.27	1	P	P	02 43 32.3	-1.9
SJG				pmax	pmax		
	comp=Z,87nm,0.8s						
SJG	San Juan	42.27	1	P	P	02 43 32.4	-1.7
SJG	San Juan	42.27	1	P	P	02 43 31.3	-2.9
SJG				pP	pP	02 44 06.9	-4.2
PRSN	Puerto Rico Se	42.36	360	P	P	02 43 32.8	-2.1
PRSN				IAmb	IAmb	02 43 34.0	
	comp=Z,85nm,0.8s						
UUPR	Utuado, UPR, P	42.40	0	IAmb	IAmb	02 43 34.6	
	comp=Z,112nm,0.9s						
GCPR	Guaynabo City	42.47	1	P	P	02 43 33.8	-2.0
ECPR	Experimental S	42.47	1	IAmb	IAmb	02 43 34.5	
	comp=Z,75nm,0.7s						
DR12	Loma Pena Alta	42.99	357	P	P	02 43 37.9	-2.2
SDDR	Presa de Saban	43.32	354	P	P	02 43 43.9	+1.2
SC01	Santiago de lo	43.71	355	IAmb	IAmb	02 43 46.1	
	comp=Z,57nm,0.7s						
ESQI	Esquipulas	44.42	328	IAmb	IAmb	02 43 54.7	
	comp=Z,60nm,1.0s						
SOR	Soroa	49.41	340	P	P	02 44 30.8	+0.7
SOR				IAmb	IAmb	02 44 31.7	
	comp=Z,66nm,0.8s						
SOR	Soroa	49.41	340	P	P	02 44 30.8	+0.7
SOR				pmax	pmax		
	comp=Z,66nm,0.8s						
BELA	Belgrano 2	55.65	172	P	P	02 45 16.1	+0.8
VNA3	Neumayer Olymp	56.79	161	⇓P	P	02 45 24.0	+0.5
	comp=Z,77nm,0.7s						
VNA1	Neumayer--Stat	56.99	160	⇓P	P	02 45 25.8	+1.0
	comp=Z,62nm,0.8s						
VNA2	Neumayer--Watz	57.35	160	⇓P	P	02 45 28.0	+0.5
	comp=Z,80nm,0.5s,baz=287,slow=6.9						
ZAIG	Zacatecas	58.21	321	IAmb	IAmb	02 45 37.8	
	comp=Z,37nm,0.9s						
RGRS	Roger Stewart	58.35	347	IAmb	IAmb	02 47 17.9	
	comp=Z,1μm,1.7s						
SNAA	Sanae	58.99	161	⇓P	P	02 45 39.1	+0.2
	comp=Z,874nm,0.5s						
SNAA	Sanae	58.99	161	P	P	02 45 39.1	+0.2
	comp=Z,35nm,0.5s,baz=281,slow=7.0,SNR=54						
SNAA				PcP	PcP	02 46 26.5	+0.4
	comp=Z,12nm,0.5s,baz=244,slow=6.0,SNR=6.0						
	comp=Z,35nm,0.5s						
SNAA	Sanae	58.99	161	P	P	02 45 39.5	+0.6
152A	Waverly Hall	59.20	343	IAmb	IAmb	02 45 41.5	
	comp=Z,54nm,1.0s						
HBVL	Hebbronville	59.58	327	IAmb	IAmb	02 46 32.4	
	comp=Z,33nm,1.0s						
GOGA	Godfrey	59.58	344	IAmb	IAmb	02 45 44.2	
	comp=Z,42nm,0.9s						
HODGE	Hodges	60.08	345	P	P	02 45 46.7	+0.1
HODGE				IAmb	IAmb	02 45 48.1	
	comp=Z,36nm,1.0s						
BIRD	Birdtown, Kers	60.09	347	P	P	02 45 47.4	+0.7
Y52A	Lilburn	60.16	344	IAmb	IAmb	02 45 48.1	
	comp=Z,63nm,0.9s						
LRAL	Lakeview Retre	60.20	341	IAmb	IAmb	02 45 48.4	
	comp=Z,49nm,0.9s						
146A	Union	60.48	339	IAmb	IAmb	02 45 50.8	
	comp=Z,84nm,1.1s						
W57A	Gilead	60.49	348	IAmb	IAmb	02 45 50.9	
	comp=Z,67nm,0.9s						
PAULI	Pauline	60.54	346	IAmb	IAmb	02 45 50.9	

comp=Z,49nm,0.8s
VBMS Vicksburg 60.60 337 lAmb lAmb 02 45 51.8
comp=Z,85nm,1.4s
Z47A Carrollton 60.68 340 lAmb lAmb 02 45 51.6
comp=Z,65nm,1.1s
HKT Hockley 60.70 331 P **P** **02 45 51.8 +1.0**
HKT lAmb lAmb 02 45 53.1
comp=Z,52nm,1.1s
HKT Hockley 60.70 331 P **P** **02 45 51.8 +1.0**
HKT pmax pmax
comp=Z,52nm,1.1s
HKT Hockley 60.70 331 P **P** **02 45 51.7 +1.0**
HKT x x 02 46 28.5
HKT pP **pP** **02 46 29.5 -0.9**
HKT PcP **PcP** **02 46 35.6 +2.3**
KMSC Kings Mountain 60.75 347 lAmb lAmb 02 45 52.8
comp=Z,72nm,1.0s
Y49A Blount Mountai 60.80 342 lAmb lAmb 02 45 52.3
comp=Z,45nm,0.9s
EF02 Christine 60.94 328 lAmb lAmb 02 45 54.6
comp=Z,179nm,0.8s
EF04 Eagle Ford 04 60.95 329 lAmb lAmb 02 45 54.2
comp=Z,70nm,0.9s
V58A Windy Hill, Pi 60.95 349 lAmb lAmb 02 45 53.9
comp=Z,67nm,1.3s
BG3 Lake Jocassee 60.96 345 lAmb lAmb 02 45 54.1
comp=Z,41nm,0.8s
MLDN Muldoon 61.10 330 lAmb lAmb 02 45 56.0
comp=Z,59nm,0.8s
FPAL Fort Paine 61.21 343 lAmb lAmb 02 45 55.2
comp=Z,32nm,0.9s
W52A Murphy 61.30 344 lAmb lAmb 02 45 56.1
comp=Z,49nm,0.9s
V53A Saluda 61.58 345 lAmb lAmb 02 45 58.1
comp=Z,46nm,0.9s
U56A King 61.72 348 lAmb lAmb 02 45 59.2
comp=Z,56nm,1.0s
CPCT Cooper Cave 61.78 344 lAmb lAmb 02 45 59.1
comp=Z,52nm,0.8s
TKL Tuckaleechee C 61.80 345 LR LR 03 14 23.3
comp=Z,42nm,21.1s,baz=176,slow=37
TKL Tuckaleechee C 61.80 345 lAmb lAmb 02 45 59.1
comp=Z,72nm,1.1s
435B Jarrell 62.19 330 lAmb lAmb 02 46 02.7
comp=Z,41nm,0.8s
Z41A Richland Creek 62.37 336 lAmb lAmb 02 46 05.1
comp=Z,45nm,0.9s
DRIO Del Rio 62.49 327 lAmb lAmb 02 46 04.6
comp=Z,55nm,1.1s
TZTN Tazewell 62.59 345 lAmb lAmb 02 46 04.2
comp=Z,27nm,0.9s
BBTS Babate 62.76 57 P **P** **02 46 05.5 +0.5**
comp=Z,39nm,0.9s,baz=135,slow=0.0,SNR=6.5
comp=Z,39nm,0.9s
R58B Mineral 62.87 350 lAmb lAmb 02 46 06.9
comp=Z,42nm,1.2s
CLTN Cedars of Leba 62.87 343 lAmb lAmb 02 46 06.2
comp=Z,42nm,0.8s
U49A Red Boiling Sp 63.12 343 lAmb lAmb 02 46 07.0
comp=Z,30nm,0.7s
WHTX Lake Whitney, 63.16 331 lAmb lAmb 02 46 09.0
comp=Z,60nm,0.9s
BRDY Brady 63.26 330 lAmb lAmb 02 46 09.5
comp=Z,44nm,0.8s
WVT Waverly 63.33 341 P **P** **02 46 07.8 -0.5**
WVT Waverly 63.33 341 P **P** **02 46 07.8 -0.5**
WVT pmax pmax
comp=Z,120nm,0.9s
WVT Waverly 63.33 341 P **P** **02 46 07.6 -0.7**
T50A Nancy 63.35 344 lAmb lAmb 02 46 09.0
comp=Z,38nm,0.8s
FW13 Cleburne 63.45 331 lAmb lAmb 02 46 10.8
comp=Z,49nm,0.8s
NVL N'lazarevskaya 63.52 159 *e*P **P** **02 46 09.5 +0.3**
NVL *e* 02 46 44.7
NVL *e* 02 48 30.9
NVL *e*PPP PPP 02 50 02.5
NVL *e*S **S** **02 54 30.2 +1.0**
NVL *e*SS **SS** **02 58 41.1 +2.3**
NVL pmax pmax
comp=Z,10.0nm,1.1s
R55A Marlinton 63.55 349 lAmb lAmb 02 46 12.2
comp=Z,59nm,1.0s
S51A Beattyville 63.64 345 lAmb lAmb 02 46 11.2
comp=Z,43nm,1.1s
MIAR Mount Ida 63.80 336 lAmb lAmb 02 46 13.0
comp=Z,53nm,1.1s
OZNA Ozona 63.97 328 lAmb lAmb 02 46 14.4
comp=Z,43nm,0.9s
TXAR Lajitas Array 63.98 325 P **P** **02 46 13.9 +1.0**
comp=Z,11nm,0.7s,baz=152,slow=8.5,SNR=114
TXAR PKPPKP **P'P'df** **03 14 59.3 -3.1**
comp=Z,0.6nm,1.0s,baz=284,slow=5.1,SNR=3.6
comp=Z,11nm,0.7s
WHAR Wooly Hollow 64.00 337 lAmb lAmb 02 46 13.9
comp=Z,34nm,1.2s
Q56A Snyder Ridge, 64.13 350 lAmb lAmb 02 46 15.7
comp=Z,33nm,0.9s
LCAR Lake Charles 64.32 338 lAmb lAmb 02 46 15.7
comp=Z,53nm,1.4s
Q54A Coxs Mills 64.36 348 lAmb lAmb 02 46 16.2
comp=Z,36nm,0.9s
R50A Paris 64.43 345 lAmb lAmb 02 46 15.7
comp=Z,26nm,0.9s
FCAR Ozark Folk Cen 64.48 338 lAmb lAmb 02 46 16.8
comp=Z,54nm,1.3s
Q52A Bidwell 64.62 347 lAmb lAmb 02 46 17.7
comp=Z,56nm,0.9s
R49A Shelbyville 64.64 344 lAmb lAmb 02 46 17.3
comp=Z,30nm,0.9s
ABTX Abilene, Hawle 64.67 330 lAmb lAmb 02 46 19.6
comp=Z,58nm,1.0s
SGCY Sterling City 64.78 328 lAmb lAmb 02 46 19.5
comp=Z,39nm,0.8s
ALPN Alpine 64.79 325 lAmb lAmb 02 46 19.7
comp=Z,29nm,0.7s
MCWV Mont Chateau 64.84 349 lAmb lAmb 02 46 19.9
comp=Z,50nm,0.9s
WCI Wyandotte Cave 64.87 343 P **P** **02 46 17.9 -0.4**
WCI Wyandotte Cave 64.87 343 P **P** **02 46 17.9 -0.4**
WCI pmax pmax
comp=Z,68nm,0.6s
WCI Wyandotte Cave 64.87 343 P **P** **02 46 17.5 -0.8**
Q51A Peebles 64.92 346 lAmb lAmb 02 46 19.5
comp=Z,62nm,1.1s
USIN University of 64.99 342 lAmb lAmb 02 46 19.2
comp=Z,45nm,0.8s
TMB01 Midkiff 65.05 327 lAmb lAmb 02 46 21.4
comp=Z,47nm,1.0s
TPB05 Hovey Rd 65.06 326 lAmb lAmb 02 46 22.1
comp=Z,76nm,0.8s
S44A Carbondale 65.20 341 lAmb lAmb 02 46 21.1
comp=Z,50nm,1.0s
SIUC Southern Illin 65.21 341 lAmb lAmb 02 46 21.2
comp=Z,57nm,1.1s
N62A Caumsett State 65.27 355 lAmb lAmb 02 46 22.3
comp=Z,41nm,0.8s
TPB01 Permian Basin 65.32 326 lAmb lAmb 02 46 23.9
comp=Z,95nm,0.8s
PAL Palisades 65.39 354 lAmb lAmb 02 46 23.1
comp=Z,35nm,1.2s
O54A Avella 65.44 349 lAmb lAmb 02 46 22.7
comp=Z,22nm,0.6s
HHAR Hobbs 65.48 336 lAmb lAmb 02 46 23.7
comp=Z,46nm,0.9s
SSPA Standing Stone 65.49 351 P **P** **02 46 23.0 +0.7**
X34A Smith Ranch, M 65.55 332 lAmb lAmb 02 46 24.5
comp=Z,46nm,0.8s
TPB06 Permian Basin 65.59 326 lAmb lAmb 02 46 25.3
comp=Z,82nm,0.7s
O52A Adamsville 65.65 348 lAmb lAmb 02 46 24.3
comp=Z,56nm,0.8s
PECS Pecos 65.70 326 lAmb lAmb 02 46 25.8
comp=Z,26nm,0.7s
129A Stewart Farms, 65.73 328 lAmb lAmb 02 46 25.6
comp=Z,52nm,1.1s
RLO Rose Lookout 65.78 335 lAmb lAmb 02 46 25.4
comp=Z,37nm,0.6s
U38A Gravette 65.79 336 lAmb lAmb 02 46 25.5
comp=Z,128nm,1.8s
QSPA South Pole Qui 65.80 180 P **P** **02 46 25.0 +0.8**
comp=Z,40nm,0.5s,baz=170,slow=0.5,SNR=53
comp=Z,40nm,0.5s
QSPA South Pole Qui 65.80 180 P **P** **02 46 25.2 +0.9**
QSPA South Pole Qui 65.80 180 P **P** **02 46 24.9 +0.6**
QSPA x x 02 47 09.2
P48A Milroy 65.81 344 lAmb lAmb 02 46 24.4
comp=Z,56nm,1.1s
BLO Bloomington 65.81 344 lAmb lAmb 02 46 24.3
comp=Z,48nm,0.7s
VHRN Van Horn 65.82 325 lAmb lAmb 02 46 26.9
comp=Z,55nm,0.9s
OLIL Olney 65.83 342 lAmb lAmb 02 46 24.5
comp=Z,124nm,1.6s
TUL3 Leonard 65.86 335 lAmb lAmb 02 46 26.2
comp=Z,82nm,1.2s
POST Post 65.91 329 lAmb lAmb 02 46 28.4
comp=Z,41nm,0.8s
FNO Franklin 65.94 333 lAmb lAmb 02 46 26.4
comp=Z,42nm,0.8s
128A Castleberry Fa 66.02 328 lAmb lAmb 02 46 27.5
comp=Z,34nm,0.9s
KSCT Kent School, K 66.06 355 lAmb lAmb 02 46 27.7
comp=Z,46nm,1.5s
M57A Sunshine Farm, 66.07 352 lAmb lAmb 02 46 28.0
comp=Z,58nm,1.3s
L64A Middleborough 66.10 357 lAmb lAmb 02 46 27.7
comp=Z,57nm,1.3s
KSPA Keystone Colle 66.12 353 lAmb lAmb 02 46 28.2
comp=Z,42nm,1.0s
N53A Lisbon 66.13 349 lAmb lAmb 02 46 27.9
comp=Z,56nm,1.2s
PAMR Moraine State 66.13 349 lAmb lAmb 02 46 28.2
comp=Z,76nm,1.1s
DKNS Dickens 66.13 329 lAmb lAmb 02 46 28.0
comp=Z,45nm,0.8s
CCM Cathedral Cave 66.15 339 P **P** **02 46 26.6 0.0**
CCM Cathedral Cave 66.15 339 P **P** **02 46 26.6 0.0**
CCM pmax pmax
comp=Z,126nm,1.1s
CCM Cathedral Cave 66.15 339 P **P** **02 46 26.4 -0.2**
CCM PcP **PcP** **02 46 56.3 +0.8**
O49A Covington 66.25 346 lAmb lAmb 02 46 27.7
comp=Z,78nm,1.0s
Q44A Meyer Farm, Va 66.25 341 lAmb lAmb 02 46 27.3
comp=Z,58nm,1.1s
P46A Rosedale 66.41 343 lAmb lAmb 02 46 28.3
comp=Z,56nm,1.0s
N51A Ashland 66.53 347 lAmb lAmb 02 46 29.7
comp=Z,64nm,1.0s
PAOC Oil Creek Stat 66.62 350 lAmb lAmb 02 46 31.0
comp=Z,70nm,0.9s
L59A Walton 66.67 354 lAmb lAmb 02 46 32.0
comp=Z,79nm,1.0s
MNTX Cornudas Mount 66.75 325 lAmb lAmb 02 46 31.9
comp=Z,43nm,0.9s
BINY Binghamton 66.78 353 lAmb lAmb 02 46 32.6
comp=Z,76nm,1.0s
L56A Greenwood 66.92 352 lAmb lAmb 02 46 33.1
comp=Z,74nm,1.1s
M52A Chesterland 66.94 348 lAmb lAmb 02 46 32.6
comp=Z,60nm,1.0s
T35A Sooner Cattle 67.02 335 lAmb lAmb 02 46 33.7
comp=Z,65nm,1.1s
TRY Troy 67.08 355 lAmb lAmb 02 46 34.6
comp=Z,103nm,1.4s
P43A Skaggs, Pawnee 67.08 341 lAmb lAmb 02 46 32.8
comp=Z,76nm,0.8s
SFIN Lafayette 67.10 343 lAmb lAmb 02 46 32.5
comp=Z,82nm,1.0s
M50A Fremont 67.13 347 lAmb lAmb 02 46 33.5
comp=Z,52nm,0.8s
ELIB Princess Elisa 67.14 160 *d*P **P** **02 46 33.3 +0.6**
comp=Z,84nm,0.5s
ELIB *d*PcP **PcP** **02 47 00.1 +0.6**
K57A Scipio Center 67.37 352 lAmb lAmb 02 46 35.6
comp=Z,65nm,1.0s
EPT El Paso 67.40 324 lAmb lAmb 02 46 36.6
comp=Z,40nm,0.8s
ELIS Ellis County 67.47 332 lAmb lAmb 02 46 37.0
comp=Z,48nm,0.9s
AMTX Amarillo 67.49 330 lAmb lAmb 02 46 36.8
comp=Z,56nm,1.1s
OK038 West end E0370 67.54 333 lAmb lAmb 02 46 36.9
comp=Z,40nm,0.9s
MMNY Mt. Morris Dam 67.55 351 lAmb lAmb 02 46 36.9
comp=Z,95nm,1.1s
NOKA Waynoka 67.75 333 lAmb lAmb 02 46 38.0
comp=Z,34nm,0.8s
HSIG 67.85 319 P **P** **02 46 39.3 +1.8**
HSIG lAmb lAmb 02 46 40.4
comp=Z,57nm,1.0s
J59A Piesco 67.88 354 lAmb lAmb 02 46 39.4
comp=Z,66nm,1.0s
HNH Hanover 67.94 356 lAmb lAmb 02 46 40.2
comp=Z,44nm,1.3s
DBIC Dimbokro 67.98 71 P **P** **02 46 37.5 -1.1**
comp=Z,8.1nm,0.5s,baz=257,slow=6.6,SNR=18
comp=Z,8.1nm,0.5s
DBIC Dimbokro 67.98 71 P **P** **02 46 37.5 -1.1**
DBIC Dimbokro 67.98 71 P **P** **02 46 37.4 -1.3**
DBIC PcP **PcP** **02 47 03.3 -0.5**
J57A Williamstown 67.98 353 lAmb lAmb 02 46 39.5
comp=Z,46nm,1.0s
PH02 Texas Public H 68.03 330 lAmb lAmb 02 46 41.2
comp=Z,55nm,1.3s
J55A Hilton 68.06 352 lAmb lAmb 02 46 39.8
comp=Z,76nm,1.4s
AAM Ann Arbor 68.12 347 lAmb lAmb 02 46 39.1
comp=Z,32nm,0.5s
M44A Midewin, Midew 68.29 343 lAmb lAmb 02 46 40.1
comp=Z,56nm,1.0s
PECO Prince Edward 68.61 352 lAmb lAmb 02 46 43.4
comp=Z,60nm,0.9s
121A Cookes Peak, D 68.67 324 lAmb lAmb 02 46 46.0
comp=Z,75nm,1.0s
KSU1 Kansas State U 68.96 336 lAmb lAmb 02 46 44.9
comp=Z,37nm,0.8s
GGN Saint George 69.19 0 P **P** **02 46 45.9 +0.5**
RTBA Rita Blanca 69.26 330 lAmb lAmb 02 46 49.8
comp=Z,45nm,0.8s
DELO Deloro Mine 69.26 352 lAmb lAmb 02 46 47.3
comp=Z,140nm,1.8s
N38A Joes South For 69.28 339 lAmb lAmb 02 46 47.0
comp=Z,57nm,0.9s
L42A Oliver, Polo 69.31 342 lAmb lAmb 02 46 46.8
comp=Z,51nm,0.8s
G62A West of Eustis 69.36 357 lAmb lAmb 02 46 48.7
comp=Z,58nm,1.5s
WBO Williamsburg 69.47 354 lAmb lAmb 02 46 48.8
comp=Z,31nm,0.9s
SADO Sadowa 69.72 351 LR LR 03 19 12.1
comp=Z,50nm,21.6s,baz=189,slow=37
SADO Sadowa 69.72 351 lAmb lAmb 02 46 49.3
comp=Z,29nm,0.7s
ABQ Albuquerque 69.85 326 lAmb lAmb 02 46 52.8
comp=Z,50nm,0.9s
ANMO Albuquerque 69.85 326 P **P** **02 46 52.0 +2.0**
ANMO lAmb lAmb 02 46 52.8
comp=Z,49nm,0.9s
ANMO Albuquerque 69.85 326 *d* *i*P **P** **02 46 51.3 +1.3**
ANMO pmax pmax
comp=Z,45nm,0.9s
ANMO Albuquerque 69.85 326 P **P** **02 46 51.7 +1.7**
TASM ASL Pad, Albuq 69.86 326 lAmb lAmb 02 46 52.9
comp=Z,51nm,0.9s
TASM ASL Pad, Albuq 69.86 326 lAmb lAmb 02 46 52.9
comp=Z,51nm,0.9s
TASM ASL Pad, Albuq 69.86 326 lAmb lAmb 02 46 52.9
comp=Z,51nm,0.9s
TASM ASL Pad, Albuq 69.86 326 lAmb lAmb 02 46 52.8
comp=Z,52nm,0.9s
LMN Caledonia Moun 69.95 2 P **P** **02 46 50.5 +0.4**
TUC Tucson 70.17 322 P **P** **02 46 53.0 +1.2**
TUC lAmb lAmb 02 46 54.9
comp=Z,45nm,1.1s
TUC Tucson 70.17 322 P **P** **02 46 53.0 +1.2**
TUC pmax pmax
comp=Z,45nm,1.2s
TUC Tucson 70.17 322 P **P** **02 46 52.7 +0.9**
SCIA State Center 70.28 340 lAmb lAmb 02 46 53.4
comp=Z,81nm,1.0s
BUKO Buck Lake 70.42 351 lAmb lAmb 02 46 54.3
comp=Z,59nm,1.0s
T25A Trinidad 70.60 329 lAmb lAmb 02 46 57.3
comp=Z,38nm,0.7s
TRQ Mont Tremblant 70.62 354 lAmb lAmb 02 46 55.5
comp=Z,39nm,1.0s
PIX Pinacate 71.18 319 lAmb lAmb 02 47 00.6
comp=Z,42nm,0.9s
I40A Norwalk 71.32 342 lAmb lAmb 02 46 58.8
comp=Z,36nm,0.5s
BATG Bathurst New B 71.35 1 P **P** **02 46 59.1 +0.6**
BATG lAmb lAmb 02 47 00.2
comp=Z,61nm,1.5s
SFX San Felipe 71.65 318 P **P** **02 47 02.2 +1.5**
SFX lAmb lAmb 02 47 03.5
comp=Z,40nm,0.8s
G40A Rib Lake 72.48 343 lAmb lAmb 02 47 06.7
comp=Z,64nm,1.4s
MVCO Mesa Verde 72.65 326 lAmb lAmb 02 47 09.7
comp=Z,44nm,0.8s
OGNE Ogallala 72.69 333 lAmb lAmb 02 47 09.1
comp=Z,50nm,0.8s
WUAZ Wupatki 72.87 323 lAmb lAmb 02 47 11.4
comp=Z,61nm,0.8s
ECSD EROS Data Cent 73.03 338 lAmb lAmb 02 47 10.0
comp=Z,73nm,1.1s
SPMN Marine on St. 73.17 341 lAmb lAmb 02 47 10.2
comp=Z,70nm,0.9s
BLYC Blythe 73.37 320 lAmb lAmb 02 47 14.1
comp=Z,54nm,1.0s
PV01 Paradox Valley 73.40 327 lAmb lAmb 02 47 14.3
comp=Z,64nm,1.3s
PV15 Paradox Valley 73.52 327 lAmb lAmb 02 47 15.2
comp=Z,58nm,1.0s
PV02 Paradox Valley 73.54 327 lAmb lAmb 02 47 15.1
comp=Z,74nm,1.2s
PV13 Radium Mtn., P 73.55 327 lAmb lAmb 02 47 14.9
comp=Z,52nm,1.0s
PV05 Paradox Valley 73.62 327 lAmb lAmb 02 47 15.1
comp=Z,42nm,1.0s
CBX Cerro Bola 73.64 318 lAmb lAmb 02 47 15.8
comp=Z,64nm,0.9s
PV18 Skein Mesa, Pa 73.66 327 lAmb lAmb 02 47 15.4
comp=Z,53nm,0.9s
PV12 Saucer Basin, 73.66 327 lAmb lAmb 02 47 15.6
comp=Z,41nm,0.9s
PV19 Morning Glory 73.74 327 lAmb lAmb 02 47 15.9
comp=Z,61nm,1.2s
PV20 West Nyswonger 73.76 327 lAmb lAmb 02 47 16.0
comp=Z,53nm,1.1s
DRLN Deer Lake 73.82 6 lAmb lAmb 02 47 14.3
comp=Z,79nm,0.9s
PV22 Blue Mesa, Par 73.82 327 lAmb lAmb 02 47 16.5
comp=Z,59nm,1.0s
PV10 Paradox Valley 73.82 327 lAmb lAmb 02 47 16.0
comp=Z,68nm,1.0s
BC3 Big Chuckawall 73.85 320 lAmb lAmb 02 47 16.7
comp=Z,45nm,0.9s
PV23 Carpenter Ridg 73.87 327 lAmb lAmb 02 47 16.7
comp=Z,45nm,1.0s
BAR Barrett 73.90 318 P **P** **02 47 16.0 +2.0**
BAR lAmb lAmb 02 47 16.9
comp=Z,41nm,0.9s
U15A North Rim 74.05 323 lAmb lAmb 02 47 18.6
comp=Z,54nm,1.0s
E38A The Farm, Brul 74.08 343 lAmb lAmb 02 47 15.7
comp=Z,56nm,0.9s
VNDA Vanda 74.30 190 P **P** **02 47 17.3 +1.7**
comp=Z,12nm,1.0s,baz=120,slow=3.3,SNR=5.6
comp=Z,12nm,1.0s
VNDA Vanda 74.30 190 lAmb lAmb 02 47 17.9
comp=Z,68nm,1.5s
HMU Henry Mountain 74.35 325 lAmb lAmb 02 47 20.1
comp=Z,52nm,1.1s
PFO Pinyon Flats O 74.42 319 LR LR 03 15 01.5
comp=Z,45nm,21.6s,baz=104,slow=32
PFO Pinyon Flats O 74.42 319 P **P** **02 47 19.2 +2.1**
PFO Pinyon Flats O 74.42 319 *de*P **P** **02 47 18.8 +1.7**
PFO pmax pmax
comp=Z,38nm,1.0s
PFO Pinyon Flats O 74.42 319 P **P** **02 47 19.0 +1.9**
DNR Dunn Ranch,Anz 74.49 319 lAmb lAmb 02 47 20.8
comp=Z,63nm,0.8s
HAYD Hayden 74.64 329 lAmb lAmb 02 47 21.9
comp=Z,90nm,1.9s
O20A White River Ci 74.80 328 lAmb lAmb 02 47 22.1
comp=Z,80nm,0.9s
V12A Nelson 74.96 321 lAmb lAmb 02 47 23.1
comp=Z,43nm,1.0s
ELS Elsinore Mount 75.02 318 lAmb lAmb 02 47 23.5
comp=Z,41nm,0.8s
SRU San Rafael Swe 75.13 326 lAmb lAmb 02 47 23.7
comp=Z,58nm,0.8s
EYMN Ely 75.30 343 lAmb lAmb 02 47 22.6
comp=Z,69nm,1.1s
SZCU Shurtz Canyon 75.34 324 lAmb lAmb 02 47 25.9
comp=Z,83nm,1.6s
P18A Preston Nutter 75.39 327 lAmb lAmb 02 47 25.8
comp=Z,52nm,0.9s
TBO Thunder Bay 75.42 345 lAmb lAmb 02 47 23.6
comp=Z,77nm,0.8s
CCUT Cedar City 75.45 324 lAmb lAmb 02 47 26.8
comp=Z,78nm,0.9s
P17A Butcher Ranch, 75.52 326 lAmb lAmb 02 47 26.1
comp=Z,60nm,1.0s
BFSC Mount Baldy Ra 75.57 319 lAmb lAmb 02 47 26.6
comp=Z,58nm,1.4s
RDMU Red Mountain 75.78 328 lAmb lAmb 02 47 27.4
comp=Z,50nm,0.9s
GSC Goldstone, Bar 75.79 320 lAmb lAmb 02 47 28.1
comp=Z,84nm,1.6s
MWC Mount Wilson 75.80 318 lAmb lAmb 02 47 28.1
comp=Z,101nm,1.6s
PASC Pasadena Art C 75.84 318 lAmb lAmb 02 47 28.1
comp=Z,49nm,1.1s
K22A Casper 76.00 331 lAmb lAmb 02 47 28.7
comp=Z,55nm,1.1s
RSSD Black Hills 76.15 333 P **P** **02 47 28.0 +1.1**
RSSD Black Hills 76.15 333 P **P** **02 47 28.0 +1.1**
RSSD pmax pmax
comp=Z,17nm,0.9s
RSSD Black Hills 76.15 333 P **P** **02 47 27.8 +1.0**
RSSD PcP **PcP** **02 47 39.2 +1.0**
CCCA Chr Cany lake 76.28 320 lAmb lAmb 02 47 30.3
comp=Z,43nm,0.8s
GWY Greenwater Val 76.33 321 lAmb lAmb 02 47 30.8
comp=Z,46nm,0.9s
BSUT Blindstream Ca 76.33 327 lAmb lAmb 02 47 31.2
comp=Z,53nm,0.9s
TPO Tropico Hills 76.35 319 lAmb lAmb 02 47 30.7
comp=Z,66nm,1.4s
PSUT Pine Spring 76.44 324 lAmb lAmb 02 47 31.7
comp=Z,48nm,0.9s
TPNV Topopah Spring 76.62 321 lAmb lAmb 02 47 33.0
comp=Z,64nm,1.1s
FURC Furnace Creek, 76.64 321 lAmb lAmb 02 47 32.8
comp=Z,54nm,1.0s
WCT Wildcat Mounta 76.73 321 lAmb lAmb 02 47 33.6
comp=Z,47nm,1.0s
TORD Torodi Ar. Bea 76.76 69 P **P** **02 47 30.1 -0.6**
comp=Z,41nm,0.9s,baz=258,slow=4.9,SNR=218
TORD S **S** **02 56 56.6 -8.1**
comp=Z,1.6nm,0.9s,baz=239,slow=13,SNR=4.9
comp=Z,41nm,0.9s
AGMN Agassiz Nation 76.84 341 lAmb lAmb 02 47 31.8
comp=Z,54nm,0.9s
PDAR Pinedale Array 77.47 329 P **P** **02 47 35.5 +1.2**
comp=Z,10nm,0.7s,baz=128,slow=8.6,SNR=72
PDAR PKKPbc **PKKPbc** **03 06 35.5 -4.3**
comp=Z,0.2nm,0.4s,baz=48,slow=2.9,SNR=6.4
comp=Z,10nm,0.7s
PDAR Pinedale Array 77.47 329 P **P** **02 47 35.3 +1.0**
EPLO Experimental L 77.47 343 lAmb lAmb 02 47 35.1
comp=Z,77nm,0.9s
VES Vestal, Richgr 77.51 319 lAmb lAmb 02 47 37.2
comp=Z,100nm,1.0s
HWUT Hardware Ranch 77.54 327 lAmb lAmb 02 47 37.1
comp=Z,201nm,1.9s
TSUM Tsumeb 77.59 106 P **P** **02 47 34.8 -0.7**
TSUM Tsumeb 77.59 106 P **P** **02 47 34.3 -1.2**
BGU Big Grassy Mou 77.76 326 lAmb lAmb 02 47 38.5
comp=Z,63nm,1.4s
TIN Tinemaha, Big 77.83 320 lAmb lAmb 02 47 39.5
comp=Z,78nm,1.0s
AHID Auburn Hatcher 78.19 328 lAmb lAmb 02 47 40.7
comp=Z,87nm,0.9s
HVU Hansel Valley 78.27 327 lAmb lAmb 02 47 41.0
comp=Z,39nm,0.9s
PKD Bear Valley Ra 78.46 318 lAmb lAmb 02 47 42.4
comp=Z,50nm,1.2s
KOOLE Kule 78.47 110 *i*P **P** **02 47 39.7 -0.6**
SNOW Snow King Moun 78.56 329 lAmb lAmb 02 47 43.1
comp=Z,38nm,0.8s
ULM Lac du Bonnet 78.59 342 P **P** **02 47 40.1 +0.1**
comp=Z,47nm,0.8s,baz=150,slow=6.3,SNR=64
comp=Z,47nm,0.8s
ULM Lac du Bonnet 78.59 342 lAmb lAmb 02 47 41.2
comp=Z,84nm,1.1s
ULM Lac du Bonnet 78.59 342 *d* *i*P **P** **02 47 39.9 -0.1**
MOOW Moose Ponds 78.78 329 lAmb lAmb 02 47 44.0
comp=Z,90nm,1.9s

NVAR Mina Array Bea 78.82 321 P P 02 47 43.7 +1.9
comp=Z,14nm,0.9s,baz=153,slow=6.4,SNR=61
NVAR PKKPbc **PKKPbc 03 06 35.2 -1.1**
comp=Z,0.3nm,0.4s,baz=340,slow=4.5,SNR=4.2
NVAR LR LR 03 20 36.7
comp=Z,30nm,19.3s,baz=196,slow=34
comp=Z,14nm,0.9s
NVAR Mina Array Bea 78.82 321 P P 02 47 43.3 +1.5
SCHQ Schefferville 78.91 0 P P 02 47 42.0 +0.4
comp=Z,13nm,0.6s,baz=198,slow=4.8,SNR=34
SCHQ LR LR 03 25 49.8
comp=Z,33nm,18.2s,baz=222,slow=38
comp=Z,13nm,0.6s
LKGWB Lokgwabe 78.93 111 P P 02 47 44.8 +2.0
LKGWB IAmb IAmb 02 47 47.2
comp=Z,106nm,1.8s
LAO LASA Array 79.13 334 IAmb IAmb 02 47 45.2
comp=Z,72nm,0.8s
BBGB Big Mountain B 79.18 318 IAmb IAmb 02 47 48.6
comp=Z,41nm,0.9s
YMP Mirror Lake Pl 79.27 330 IAmb IAmb 02 48 01.8
comp=Z,48nm,1.0s
YNE Yellowstone No 79.41 331 IAmb IAmb 02 47 47.5
comp=Z,69nm,1.0s
YMR Madison River 79.58 330 IAmb IAmb 02 47 49.1
comp=Z,82nm,0.9s
GRHM Grahamstown, E 79.71 122 P P 02 47 47.2 +0.5
GRHM IAmb IAmb 02 47 48.4
comp=Z,86nm,1.3s
YHB Horse Butte 79.75 330 IAmb IAmb 02 47 49.8
comp=Z,52nm,0.9s
YHL Hebgen Lake 79.82 330 IAmb IAmb 02 47 49.9
comp=Z,34nm,0.7s
GRTLG Ghanzi 79.95 109 *i* P **P 02 47 46.8 -1.6**
PNTR Pine Nut 80.01 321 IAmb IAmb 02 47 51.3
comp=Z,63nm,0.8s
KGCAE Kacgae 80.24 111 *i* P **P 02 47 49.8 0.0**
PAHR Pah Rah Range 80.31 322 IAmb IAmb 02 47 52.8
comp=Z,76nm,1.0s
MPK Martis Peak 80.40 321 IAmb IAmb 02 47 53.6
comp=Z,80nm,1.3s
HLID Hailey 80.40 327 IAmb IAmb 02 47 53.4
comp=Z,77nm,0.8s
BCYI Bear Canyon 80.46 328 IAmb IAmb 02 47 53.8
comp=Z,88nm,1.5s
CCD Concordia, Ant 80.51 183 P P 02 47 51.0 +0.4
BOSA Boshof 80.59 117 P P 02 47 51.2 -0.4
comp=Z,18nm,0.6s,baz=257,slow=3.6,SNR=51
comp=Z,18nm,0.6s
BOSA Boshof 80.59 117 P P 02 47 51.3 -0.4
BOSA Boshof 80.59 117 P P 02 47 51.3 -0.4
BOSA pmax pmax
comp=Z,37nm,1.0s
BOSA Boshof 80.59 117 P P 02 47 50.8 -0.9
AVE Averroes 80.71 47 P P 02 47 51.8 0.0
AVE IAmb IAmb 02 47 54.0
comp=Z,90nm,1.0s
DLMT Dillon 80.86 329 IAmb IAmb 02 47 55.4
comp=Z,64nm,1.1s
MAW Mawson 81.07 163 P P 02 47 54.1 +0.9
comp=Z,46nm,0.7s,baz=193,slow=5.4,SNR=18
MAW LR LR 03 25 02.1
comp=Z,54nm,18.5s,baz=212,slow=36
comp=Z,46nm,0.7s
SKOMA Sekoma 81.07 113 *i* P **P 02 47 54.4 +0.1**
CVS Carmenet Viney 81.19 319 IAmb IAmb 02 47 56.7
comp=Z,56nm,1.0s
SUTB Sutter Butte 81.37 320 IAmb IAmb 02 47 57.4
comp=Z,99nm,1.6s
ORV Oroville 81.42 320 IAmb IAmb 02 47 58.2
comp=Z,50nm,1.1s
EGMT Eagleton 81.65 333 IAmb IAmb 02 47 58.3
comp=Z,58nm,0.9s
O03E Paynes Creek 82.08 321 IAmb IAmb 02 48 00.3
comp=Z,40nm,1.0s
PFVI Vila Bisbo 82.14 43 *eP* **P 02 48 00.3 +1.0**
HATC Hat Creek Radi 82.23 321 IAmb IAmb 02 48 02.0
comp=Z,69nm,1.0s
MD01 Midelt array s 82.25 49 P P 02 48 01.3 +1.1
LBTB Lobatse 82.27 114 P P 02 48 00.2 -0.3
LBTB sP **sP 02 48 56.4 -3.6**
PLID Pearl Lake 82.29 327 IAmb IAmb 02 48 02.5
comp=Z,69nm,0.8s
J08A Circle Bar Ran 82.32 325 IAmb IAmb 02 48 02.9
comp=Z,61nm,0.8s
MDT Midelt 82.33 49 P P 02 48 01.4 +0.9
comp=Z,37nm,1.0s,baz=249,slow=5.3,SNR=64
comp=Z,37nm,1.0s
MORF Marmelete 82.36 43 *eP* **P 02 48 01.5 +1.1**
MORF IAmb IAmb 02 48 01.8
comp=Z,51nm,1.4s
MORF Marmelete 82.36 43 *eP* **P 02 48 01.5 +1.1**
PTEO Sao Teotonio 82.46 43 *eP* **P 02 48 02.5 +1.5**
PTEO *i* IAmb IAmb 02 48 03.9
comp=Z,53nm,1.0s
PBDV Barranco-do-Ve 82.77 44 *eP* **P 02 48 03.8 +1.2**
PBDV *i* IAmb IAmb 02 48 04.9
comp=Z,45nm,1.1s
M03C McCloud 82.91 321 IAmb IAmb 02 48 04.9
comp=Z,39nm,0.9s
PCVE Castro Verde 82.94 43 *eP* **P 02 48 04.6 +1.1**
PCVE *i* IAmb IAmb 02 48 05.6
comp=Z,37nm,0.9s
MESJ Messejana 82.96 43 *eP* **P 02 48 04.5 +1.0**
MESJ IAmb IAmb 02 48 05.5
comp=Z,32nm,0.9s
MESJ Messejana 82.96 43 *eP* **P 02 48 04.6 +1.1**
MESJ *i* IAmb IAmb 02 48 05.2
comp=Z,51nm,1.0s
MESJ Messejana 82.96 43 *eP* **P 02 48 04.5 +1.0**
PMAFR Mafra 83.00 42 *eP* **P 02 48 05.2 +1.5**
PVAQ Vaqueiros 83.01 44 *eP* **P 02 48 04.7 +0.9**
LPHEP Lephephe 83.14 112 IAmb IAmb 02 48 06.5
comp=Z,54nm,1.1s
LPHEP Lephephe 83.14 112 *i* P **P 02 48 04.6 -0.4**
K05A Summer Lake 83.19 323 IAmb IAmb 02 48 07.6
comp=Z,79nm,0.9s
PBEJ Beja 83.30 43 *eP* **P 02 48 06.2 +1.0**
PBEJ *i* IAmb IAmb 02 48 06.9
comp=Z,24nm,0.8s
MOE Montemor 83.30 42 *eP* **P 02 48 06.4 +1.2**
KHWEE KHWEE 83.35 111 IAmb IAmb 02 48 07.6
comp=Z,86nm,1.0s
KHWEE KHWEE 83.35 111 *i* P **P 02 48 05.9 -0.3**
KMPM Mount Pierce 83.51 320 IAmb IAmb 02 48 08.6
comp=Z,37nm,1.0s
EVO Evora 83.52 43 *eP* **P 02 48 07.3 +0.9**
F10A Beach Ranch, E 83.53 327 IAmb IAmb 02 48 12.6
comp=Z,28nm,0.8s
K04D Chiloquin, OR 83.59 323 IAmb IAmb 02 48 09.0
comp=Z,56nm,0.9s
L04D Klamath Falls 83.63 322 IAmb IAmb 02 48 08.8
comp=Z,40nm,1.1s
PSBE So Bento 83.65 41 *eP* **P 02 48 05.8 -1.2**
PARRA Arraiolos 83.67 42 *eP* **P 02 48 07.9 +0.8**
PARRA *i* IAmb IAmb 02 48 10.3
comp=Z,30nm,1.5s
PMTG Montargil 83.72 42 *eP* **P 02 48 08.4 +1.1**
PMTG *i* IAmb IAmb 02 48 11.2
comp=Z,78nm,1.6s
J05D Fort Rock, OR 83.75 323 IAmb IAmb 02 48 10.0
comp=Z,64nm,1.3s
PBAR Barrancos 83.90 43 *eP* **P 02 48 09.1 +0.8**
PBAR *i* IAmb IAmb 02 48 10.1
comp=Z,22nm,1.7s
PINE Pine Mountain 83.93 324 IAmb IAmb 02 48 11.3
comp=Z,64nm,0.9s
PESTR Estremoz 83.98 43 *eP* **P 02 48 09.6 +0.9**
PESTR *i* IAmb IAmb 02 48 11.8
comp=Z,48nm,1.8s
PSARD Sardoal 84.08 42 *eP* **P 02 48 10.0 +0.8**
PSARD *i* IAmb IAmb 02 48 12.3
comp=Z,51nm,1.9s
KRMB Red Mountain 84.09 321 IAmb IAmb 02 48 11.9
comp=Z,47nm,1.1s
PCAS Casmilo, Conde 84.16 41 *eP* **P 02 48 10.2 +0.7**
J04A Umpqua Nationa 84.19 323 IAmb IAmb 02 48 12.1
comp=Z,50nm,0.8s
FFC Flin Flon 84.32 341 P P 02 48 10.1 +0.1
FFC Flin Flon 84.32 341 P P 02 48 10.1 +0.1
FFC pmax pmax
comp=Z,27nm,1.1s
FFC Flin Flon 84.32 341 P P 02 48 10.1 +0.1
PMRV Marv??o 84.45 42 *eP* **P 02 48 11.2 +0.2**
PMRV *i* IAmb IAmb 02 48 13.1
comp=Z,37nm,1.5s

I05D Terrebonne, OR 84.51 324 IAmb IAmb 02 48 13.9
comp=Z,48nm,0.8s
SOOWA Sowa 84.56 110 *i* P **P 02 48 13.1 +0.8**
WIFE Three Sisters- 84.58 324 IAmb IAmb 02 48 14.3
comp=Z,36nm,0.9s
TAM Tamanrasset 84.62 62 P P 02 48 12.9 +0.4
PCBR Castelo Branco 84.65 42 *eP* **P 02 48 12.7 +0.7**
PCBR *i* IAmb IAmb 02 48 13.1
comp=Z,32nm,0.9s
K02D Willamette Mer 84.71 322 IAmb IAmb 02 48 15.0
comp=Z,68nm,1.2s
I04A Tendick Farm, 84.72 323 IAmb IAmb 02 48 14.0
comp=Z,38nm,1.1s
KSANE Kasane 84.76 107 IAmb IAmb 02 48 15.2
comp=Z,42nm,1.1s
KSANE Kasane 84.76 107 *i* P **P 02 48 13.9 +0.6**
PTO Porto 84.78 40 *eP* **P 02 48 13.3 +0.7**
PVIS Viseu 84.94 41 *eP* **P 02 48 13.8 +0.3**
MTE Manteigas 84.95 41 IAmb IAmb 02 48 15.2
comp=Z,59nm,0.9s
MTE Manteigas 84.95 41 *eP* **P 02 48 14.3 +0.6**
MTE *i* IAmb IAmb 02 48 15.3
comp=Z,69nm,1.1s
HAWA Hanford 84.97 327 IAmb IAmb 02 48 15.8
comp=Z,48nm,1.0s
G05A Wamic 85.10 325 IAmb IAmb 02 48 22.1
comp=Z,96nm,1.3s
D08A Wollman Farm, 85.12 327 IAmb IAmb 02 48 16.4
comp=Z,45nm,1.1s
WAH2 Wahluke Slope 85.23 327 IAmb IAmb 02 48 16.9
comp=Z,40nm,1.0s
BROLN Tlhalogang 85.30 111 *i* P **P 02 48 16.2 +0.3**
BUCK Buck Mountain 85.30 323 IAmb IAmb 02 48 17.3
comp=Z,55nm,0.8s
HOOD Mount Hood Mea 85.33 325 IAmb IAmb 02 48 20.4
comp=Z,35nm,0.8s
PVRL Vila Real 85.39 41 *eP* **P 02 48 16.6 +0.8**
PVRL *i* IAmb IAmb 02 48 17.5
comp=Z,67nm,1.1s
POLO Laias de Olo 85.40 40 *eP* **P 02 48 16.6 +0.8**
PCAB Cabril 85.47 40 *eP* **P 02 48 16.8 +0.7**
PGAV Gavieira, Arco 85.49 40 *eP* **P 02 48 16.9 +0.7**
EPH Ephrata 85.66 327 IAmb IAmb 02 48 19.3
comp=Z,26nm,1.0s
MVO Moncorvo 85.73 41 *eP* **P 02 48 18.2 +0.7**
MVO *i* IAmb IAmb 02 48 19.4
comp=Z,83nm,1.2s
LTY Liberty 86.13 327 IAmb IAmb 02 48 21.0
comp=Z,63nm,1.3s
B08A Colville Reser 86.22 328 IAmb IAmb 02 48 21.2
comp=Z,63nm,1.6s
LON Longmire 86.36 326 IAmb IAmb 02 48 36.0
comp=Z,54nm,1.7s
PAB San Pablo 86.41 44 P P 02 48 21.9 +1.1
PAB IAmb IAmb 02 48 22.7
comp=Z,44nm,0.9s
PAB San Pablo 86.41 44 P P 02 48 21.9 +1.1
PAB pmax pmax
comp=Z,45nm,1.0s
ESDC Sonseca Array 86.72 44 P P 02 48 23.1 +0.7
comp=Z,111nm,0.8s,baz=234,slow=4.5,SNR=54
comp=Z,111nm,0.8s
ESDC Sonseca Array 86.72 44 P P 02 48 23.3 +0.9
D05A Enumclaw 86.75 326 IAmb IAmb 02 48 23.9
comp=Z,51nm,0.9s
LSZ Lusaka 88.44 106 PKKPbc PKKPbc 03 06 14.0 +2.1
comp=Z,2.6nm,0.6s,baz=115,slow=6.4,SNR=8.4
LSZ Lusaka 88.44 106 P P 02 48 33.4 +2.2
LSZ IAmb IAmb 02 48 34.1
comp=Z,68nm,1.4s
LSZ Lusaka 88.44 106 P P 02 48 33.4 +2.2
LSZ pmax pmax
comp=Z,68nm,1.4s
LSZ Lusaka 88.44 106 P P 02 48 32.6 +1.4
CASY Casey 89.58 179 P P 02 48 36.8 +1.3
BLKN Baker Lake 91.27 348 IAmb IAmb 02 48 43.9
comp=Z,62nm,1.8s
CEST Esterri de Car 91.62 43 IAmb IAmb 02 48 48.9
comp=Z,23nm,1.2s
KEST Kesra 93.69 52 P P 02 48 56.2 +1.2
comp=Z,7.1nm,0.8s,baz=274,slow=4.4,SNR=14
KEST PKKP **PKKPdf 03 05 58.4 -0.5**
comp=Z,1.0nm,0.4s,baz=275,slow=3.5,SNR=7.3
comp=Z,7.1nm,0.8s
ILON Igloolik, Nuna 94.12 355 IAmb IAmb 02 48 57.1
comp=Z,19nm,0.9s
YKAW1 Yellowknife Wh 94.44 340 IAmb IAmb 02 48 59.2
comp=Z,31nm,1.1s
YKA Yellowknife Ar 94.49 340 P P 02 48 58.2 +0.4
comp=Z,9.4nm,0.7s,baz=131,slow=3.8,SNR=199
comp=Z,9.4nm,0.7s
YKA Yellowknife Ar 94.49 340 P P 02 48 58.5 +0.6
SSB Saint Sauveur 95.03 42 IAmb IAmb 02 49 02.6
comp=Z,13nm,1.1s
VSL Villasalto 95.44 49 IAmb IAmb 02 49 04.3
comp=Z,10nm,0.9s
MBAR Mbarara 96.85 94⇑ *eP* **P 02 49 07.0 -3.1**
MBAR pmax pmax
comp=Z,5.0nm,1.3s
DLBC Dease Lake 97.56 332 P Pdif 02 49 12.9 +0.8
comp=Z,8.9nm,0.8s,baz=113,slow=4.6,SNR=16
comp=Z,8.9nm,0.8s
ECH Echery 98.02 41 IAmb IAmb 02 49 15.4
comp=Z,16nm,1.2s
TUE Stuetta 98.56 43 P P 02 49 17.0 0.0
FUORN Ofenpass-Fuorn 99.19 43 IAmb IAmb 02 49 21.4
comp=Z,10nm,1.1s
DAVA Damuels 99.24 42 *i* Pdiff **Pdif 02 49 20.0 +0.1**
comp=Z,14nm,0.9s,SNR=4.6
KIP Kipapa 99.41 289⇑ *eP* **Pdif 02 49 21.5 +0.4**
UBR Ueberruh 99.55 42 *eP* Pdiff **Pdif 02 49 22.0 +0.7**
FETA Feichten 99.65 43 *eP* Pdiff **Pdif 02 49 22.2 +0.4**
comp=Z,9.4nm,1.1s
RETA Reutte 99.87 42 *i* Pdiff **Pdif 02 49 22.7 +0.1**
comp=Z,10nm,1.3s,SNR=4.6
MOTA Moosalm 100.02 43 *eP* Pdiff **Pdif 02 49 24.1 +0.7**
comp=Z,14nm,1.2s,SNR=4.8
SQTA Sankt Quirin 100.03 43 *eP* Pdiff **Pdif 02 49 24.0 +0.5**
comp=Z,10nm,0.7s,SNR=10
WATA Walderalm 100.31 43 *eP* Pdiff **Pdif 02 49 24.5 -0.2**
comp=Z,11nm,1.3s
WTTA Wattenberg 100.31 43 *eP* Pdiff **Pdif 02 49 24.9 +0.1**
comp=Z,11nm,1.0s
ABTA Abfaltersbach 100.65 43 *eP* Pdiff **Pdif 02 49 26.3 +0.2**
comp=Z,5.4nm,0.8s
LESA Schwarzleotal 101.03 43 *eP* Pdiff **Pdif 02 49 27.9 +0.1**
comp=Z,2.7nm,0.7s
GRF Grafenberg Arr 101.08 40 *eP* Pdiff **Pdif 02 49 25.8 -2.1**
GRF *eL* L 03 32 24.2
comp=Z,66nm,19.2s
KBA Koelnbreinsper 101.30 43 *eP* Pdiff **Pdif 02 49 29.0 -0.1**
comp=Z,2.3nm,0.9s
MOX Moxa 101.70 40 *eL* L 03 36 47.9
comp=Z,52nm,21.1s
BIOA Bad Ischl, Aus 101.73 43 *eP* Pdiff **Pdif 02 49 31.3 +0.4**
comp=Z,0.3nm,0.3s
KHC Kasperske Hory 102.26 42⇑ *eP* **Pdif 02 49 31.6 -1.6**
INK Inuvik 104.25 339 Pdiff **Pdif 02 49 41.3 -0.2**
comp=Z,1.5nm,0.9s,baz=104,slow=2.6,SNR=4.3
HFS Hagfors 106.40 31 PKKP 03 05 35.6
comp=Z,1.3nm,0.5s,baz=116,slow=6.6,SNR=6.9
ILAR Eielson Array 107.59 334 Pdiff **Pdif 02 49 56.6 +0.1**
comp=Z,0.6nm,0.7s,baz=142,slow=3.1,SNR=5.9
ILAR PKiKP **PKiKP 02 54 03.5 -0.1**
comp=Z,1.6nm,1.1s,baz=136,slow=0.7,SNR=6.6
ILAR PKKPbc **PKKPbc 03 05 16.8 -4.0**
comp=Z,0.3nm,0.4s,baz=307,slow=3.4,SNR=6.2
AKASG Malin Array Be 112.36 43 PKiKP **PKiKP 02 54 12.5 -0.5**
comp=Z,1.6nm,0.3s,baz=266,slow=2.8,SNR=17
AKASG PKKPbc **PKKPbc 03 05 03.1 -1.7**
comp=Z,0.2nm,0.3s,baz=62,slow=3.9,SNR=4.2
AKASG Malin Array Be 112.36 43 *c* PKiKP **PKiKP 02 54 12.3 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKBB Malin Array Si 112.36 43⇑ *i* PKiKP **PKiKP 02 54 12.5 -0.5**
SPITS Spitsbergen Ar 112.36 13 PKKPbc PKKPbc 03 05 03.0 -2.5
comp=Z,4.6nm,0.9s,baz=109,slow=7.8,SNR=6.8
FINES FINESS Array B 112.60 31 PKiKP **PKiKP 02 54 12.1 -1.0**
comp=Z,6.6nm,1.1s,baz=350,slow=5.8,SNR=7.8
FINES PKKPbc PKKPbc 03 04 52.8 -12
comp=Z,4.9nm,1.1s,baz=96,slow=3.8,SNR=4.9
MMAI Mount Meron Ar 112.83 63 PKiKP **PKiKP 02 54 14.7 +0.1**
comp=Z,8.8nm,1.0s,baz=35,slow=5.3,SNR=11
BRTR Keskin Array B 113.08 55 PKiKP **PKiKP 02 54 14.3 -0.6**
comp=Z,2.5nm,0.8s,baz=203,slow=2.7,SNR=12
BRTR PKKPab **PKKPab 03 05 09.4 +1.1**
comp=Z,1.2nm,0.7s,baz=88,slow=3.4,SNR=6.4

BRTR Keskin Array B 113.08 55 *c* PKiKP **PKiKP 02 54 14.6 -0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 113.51 23 PKiKP **PKiKP 02 54 13.9 -0.8**
comp=Z,6.7nm,1.1s,baz=325,slow=1.5,SNR=4.0
ARCES PKKPbc **PKKPbc 03 04 59.2 -2.2**
comp=Z,1.9nm,0.5s,baz=73,slow=4.1,SNR=10.0
ASF Jabal al Asfar 113.84 64 PKiKP **PKiKP 02 54 16.5 0.0**
comp=Z,3.8nm,0.7s,baz=141,slow=6.5,SNR=5.4
OBN Obninsk 117.36 39 PKP **PKPdf 02 54 22.4 0.0**
comp=Z,17nm,0.3s,baz=180,slow=3.0,SNR=5.4
OBN Obninsk 117.36 39 PKPdf 02 54 22.3 -0.1
OBN Obninsk 117.36 39 *d* PKiKP **PKPdf 02 54 22.2 -0.2**
OBN 02 55 04.0
OBN 02 55 19.0
OBN 02 55 34.0
OBN PS **PKKPdf 03 05 18.0 +2.9**
OBN SS SS 03 11 35.0 +1.2
OBN SSS SSS 03 15 52.0
OBN pmax pmax
comp=Z,49nm,1.7s
MOS Moscow 118.00 38 *i* PKiKP **PKPdf 02 54 22.4 -1.2**
MOS *e* 02 54 59.8
MOS *e* 02 55 22.5
MOS pmax pmax
comp=Z,25nm,0.9s
LPSR Galich'ya Gora 118.60 42 *e*PKiKP **PKPdf 02 54 24.1 -0.8**
LPSR pmax pmax
comp=Z,35nm,0.9s
VSR Storozhevoye 118.66 43 *e*PKiKP **PKPdf 02 54 22.2 -2.9**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORR Voronezh 118.72 43 *e*PKiKP **PKPdf 02 54 24.2 -0.9**
VORR pmax pmax
comp=Z,18nm,0.9s
VORD Divnogorie 118.72 44 *e*PKiKP **PKPdf 02 54 21.8 -3.4**
VORD pmax pmax
comp=Z,10.0nm,0.9s
RAYN Ar Rayn 118.95 76 PKiKP 02 54 27.0 +0.4
RAYN Ar Rayn 118.95 76 PKiKP **PKiKP 02 54 27.1 +0.4**
RAYN Ar Rayn 118.95 76 PKiKP **PKiKP 02 54 27.0 +0.4**
VRH Novokhopyorsk 120.26 44 *e*PKiKP **PKPdf 02 54 26.4 -1.7**
VRH pmax pmax
comp=Z,20nm,0.9s
SHA1 Shidzhatmaz 120.39 52 *d* PKiKP **PKPdf 02 54 29.0 0.0**
KIV Kislovodsk 120.44 52 PKPdf 02 54 28.7 -0.2
KIV Kislovodsk 120.44 52 PKiKP **PKPdf 02 54 28.6 -0.2**
KIV Kislovodsk 120.44 52 *e*PKiKP **PKPdf 02 54 28.3 -0.6**
KIV pmax pmax
comp=Z,19nm,1.1s
KVAR Kislovodsk Arr 120.44 52 PKP PKiKP 02 54 29.5 +0.5
comp=Z,5.4nm,0.9s,baz=90,slow=20,SNR=3.5
KBZ Khabaz 120.57 52 PKiKP 02 54 29.5 +0.5
comp=Z,11nm,0.8s,baz=198,slow=4.1,SNR=18
KBZ Khabaz 120.57 52 *d* PKiKP **PKPdf 02 54 29.2 +0.3**
GNI Garni 121.56 57 PKP **PKiKP 02 54 31.9 +0.5**
comp=Z,6.3nm,0.8s,baz=78,slow=19,SNR=4.4
NWAO Narrogin (SRO) 122.84 184 PKiKP **PKPdf 02 54 33.4 -0.5**
comp=Z,9.6nm,0.8s,baz=104,slow=8.3,SNR=4.1
BELG Belogornoye 123.91 42 PKP PKPdf 02 54 35.1 +0.1
comp=Z,54nm,0.8s,baz=288,slow=1.2,SNR=26
KIRV Kirov 124.25 35 PKP PKPdf 02 54 34.8 -0.7
comp=Z,19nm,0.6s,baz=206,slow=0.8,SNR=8.5
KIRV Kirov 124.25 35 *d* PKiKP **PKPdf 02 54 35.4 -0.1**
BILL Bilibino 125.84 338 *d* PKiKP **PKPdf 02 54 38.7 +0.3**
BILL pmax pmax
comp=Z,20nm,1.7s
MZR Muzera 125.90 78 *i* PKiKP **PKPdf 02 54 40.3 +0.5**
SNR=20
ASUD Al Ashush, Dub 127.92 77 *i* PKiKP **PKPdf 02 54 44.2 +0.5**
SNR=8.7
ASAR Alice Springs 128.07 205 PKhKP PKPpre 02 54 28.7
comp=Z,0.3nm,0.3s,baz=136,slow=1.4,SNR=5.7
ASAR PKP **PKPdf 02 54 44.0 -0.1**
comp=Z,16nm,0.7s,baz=145,slow=2.1,SNR=89
ASAR PKKP **PKKPdf 03 04 52.4 -0.8**
comp=Z,0.3nm,0.4s,baz=2.2,slow=1.5,SNR=4.7
FAQ Al Faqa, Dubai 128.19 77 *i* PKiKP **PKPdf 02 54 44.3 +0.1**
SNR=10
NAZ Nazwa, Dubai 128.30 77 PKiKP PKPdf 02 54 44.4 0.0
ASHO Ashiyiah 128.59 77 *i* PKiKP **PKPdf 02 54 45.0 0.0**
SNR=7.7
HATD Hatta, Dubai 128.68 77 *i* PKiKP **PKPdf 02 54 45.1 -0.1**
SNR=5.9
UOSS Minazif 128.77 77 PKiKP PKPdf 02 54 44.7 -0.6
MSFE Esma-Masafi 128.82 76 PKiKP PKPdf 02 54 45.0 -0.4
SOHO SOHO 128.89 78 *i* PKiKP **PKPdf 02 54 45.0 -0.5**
SNR=20
MDH Madha 128.93 76 PKiKP PKPdf 02 54 44.6 -0.9
SHME Shamm 128.94 75 *i* PKiKP **PKPdf 02 54 45.7 +0.2**
SNR=11
BANOM Banah 129.05 76 *i* PKiKP **PKPdf 02 54 45.5 -0.4**
SNR=13
ARTI Arti 129.45 36 *i* PKIKP **PKPdf 02 54 46.1 +0.5**
ARTI 02 56 58.1
ARTI SS SS 03 14 08.8 +2.6
AKTO Aktyubinsk 130.61 44 PKP PKiKP 02 54 48.9 0.0
comp=Z,11nm,0.7s,baz=244,slow=8.8,SNR=34
AKTO SKPbc **SKPbc 02 57 56.6 0.0**
comp=Z,13nm,0.9s,baz=274,slow=3.5,SNR=14
WRA Warramunga Arr 131.25 207 PKhKP PKPpre 02 54 34.5
comp=Z,0.4nm,0.4s,baz=140,slow=1.4,SNR=6.5
WRA PKP **PKPdf 02 54 50.0 -0.2**
comp=Z,9.3nm,0.4s,baz=159,slow=1.7,SNR=74
WRA SKPbc **SKPbc 02 57 59.1 -0.9**
comp=Z,5.3nm,0.9s,baz=155,slow=3.7,SNR=9.5
WRAB Tennant Creek 131.25 207 *d* PKiKP **PKPdf 02 54 50.3 +0.1**
WRAB pmax pmax
comp=Z,24nm,1.7s
NRIK Noril'sk 132.57 12 PKP **PKPdf 02 54 51.5 +0.4**
comp=Z,4.3nm,0.8s,baz=118,slow=2.8,SNR=7.3
PMG Port Moresby 132.63 229 *c* PKiKP **PKiKP 02 54 54.3 +0.2**
PMG pmax pmax
comp=Z,15nm,1.7s
SEY Seymchan 133.43 336⇓ *i* PKiKP **PKPdf 02 54 53.9 +1.0**
SEY pmax pmax
comp=Z,31nm,1.3s
PETK Petropavlovsk- 135.90 322 PKP **PKPdf 02 54 59.0 +1.1**
comp=Z,13nm,0.7s,baz=84,slow=5.4,SNR=8.3
PETK Petropavlovsk- 135.90 322 PKiKP **PKPdf 02 54 59.0 +1.1**
FITZ Fitzroy Crossi 135.98 198 SKPbc **SKPbc 02 58 15.5 -0.3**
comp=Z,3.5nm,0.8s,baz=259,slow=5.2,SNR=4.9
MA2 Magadan 136.07 333 *c* PKiKP **PKPdf 02 54 59.2 +1.2**
MA2 pmax pmax
comp=Z,11nm,1.7s
BORK Borovoye 137.10 37 PKPdf 02 55 01.2 +1.1
BORK Borovoye 137.10 37⇓ *i* PKiKP **PKPdf 02 55 01.0 +0.9**
BORK pmax pmax
comp=Z,10.0nm,1.0s
BVAR Borovoye Array 137.15 37 PKP **PKPdf 02 55 00.9 +0.8**
comp=Z,13nm,0.8s,baz=310,slow=1.5,SNR=15
BVAR Borovoye Array 137.15 37 PKiKP **PKPdf 02 55 01.0 +0.8**
MTN Manton Dam 138.94 208 PKPpre 02 54 55.5
KURBB Kurchatov Arra 142.73 36 PKhKP PKPpre 02 55 07.6
KURBB SKPbc **SKPbc 02 58 32.9 -0.3**
comp=Z,1.5nm,0.7s,baz=300,slow=3.5,SNR=4.2
EKS2 Erkin-Say 143.01 51 P PKPbc 02 55 08.9 +0.3
SNR=8.8
USP Ospenovka 143.34 50 P PKPbc 02 55 09.8 +0.4
SNR=6.8
AAK Ala-Archa 143.53 51 P PKPbc 02 55 10.8 +0.7
SNR=21
CHMS Chumysh 143.60 50 P PKPbc 02 55 10.7 +0.6
SNR=6.5
UCH Uchtor 143.66 51 P PKPbc 02 55 12.1 +1.2
SNR=12
ZALV Zalesovo Beam 143.77 28 PKP PKPbc 02 55 10.6 +0.5
comp=Z,62nm,0.8s,baz=302,slow=4.6,SNR=213
ZALV SKPbc **SKPbc 02 58 35.7 +0.1**
comp=Z,9.6nm,0.8s,baz=304,slow=3.7,SNR=9.6
KBK Karagaybulak 143.84 50 P PKPbc 02 55 12.0 +1.0
SNR=17
BATI Baumata 144.04 198 PKP PKPbc 02 55 13.0 +0.9
TKM2 Tokmak 2 144.21 50 P PKPbc 02 55 12.9 +0.8
SNR=14
NIL Nilore 144.27 66 PKPab 02 55 12.5 +0.5
NIL Nilore 144.27 66 PKiKP **PKPab 02 55 12.5 +0.5**
SOEI Soe 144.29 199 PKP PKPbc 02 55 13.8 +0.8
PALK Pallekele 144.75 113 PKP PKPbc 02 55 15.0 +0.6
BASI Baing, Sumba 144.79 193 PKP **PKPdf 02 55 17.0 +1.9**
ULHL Ulahol 144.88 50 P **PKPdf 02 55 15.7 +1.0**
SNR=12
TYV Tymovskoe 145.05 327 *e*PKiKP **PKPdf 02 55 15.2 +0.8**
TYV pmax pmax
comp=Z,400nm,2.5s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TYV				pmax	pmax		
	comp=Z,70nm,1.5s						
KSH2	**Kashi**	**145.25**	**56**	PKPbc	**PKPab**	**02 55 16.1**	**+0.4**
WSI	**Waingapu**	**145.38**	**193**	PKP	**PKPab**	**02 55 17.4**	**+0.9**
SRPI	**Serui, Papua**	**145.45**	**224**	PKP	**PKPab**	**02 55 18.3**	**+1.4**
MMRI	**Maumere**	**145.93**	**197**	PKP	**PKPbc**	**02 55 18.0**	**0.0**
EDFI	**Ende, Flores**	**145.96**	**196**	PKP	**PKPdf**	**02 55 17.5**	**+0.3**
BOD	**Bodaibo**	**146.61**	**359**	*e*PKIKP	**PKPdf**	**02 55 16.6**	**-0.2**
BOD				pmax	pmax		
	comp=Z,42nm,1.2s						
PLAI	**Plampang**	**146.64**	**189**	PKP	**PKPbc**	**02 55 19.9**	**-0.1**
MAKZ	**Makanchi**	**146.67**	**40**		**PKPdf**	**02 55 18.2**	**+0.8**
MAKZ	**Makanchi**	**146.67**	**40**	PKIKP	**PKPdf**	**02 55 18.2**	**+0.8**
MKAR	**Makanchi Array**	**146.87**	**40**	PKPbc	**PKPdf**	**02 55 18.6**	**+0.9**
	comp=Z,159nm,0.9s,baz=283,slow=1.9,SNR=270						
DBNI	**Kabupaten Domp**	**146.88**	**190**	PKP	**PKPbc**	**02 55 20.8**	**+0.1**
FAKI	**Fak Fak**	**146.99**	**217**		**PKPbc**	**02 55 20.3**	**-0.8**
HYB	**Hyderabad**	**147.19**	**96**	*e*PKPbc	**PKPbc**	**02 55 21.3**	**-0.3**
HYB				*e*PKiKP	**PKPab**	**02 55 23.6**	**0.0**
YSS	**Yuzhno-Sakhali**	**147.27**	**321**		**PKPbc**	**02 55 20.0**	**-0.8**
YSS	**Yuzhno-Sakhali**	**147.27**	**321**	*e*PKIKP	**PKPdf**	**02 55 19.2**	**+0.9**
YSS				pmax	pmax		
	comp=Z,70nm,0.8s						
RTBI	**Rangdo, Negare**	**147.28**	**184**	PKP	**PKPbc**	**02 55 22.3**	**+0.4**
JAGI	**Jajag, Banyuwa**	**147.31**	**182**	PKP	**PKPbc**	**02 55 21.7**	**-0.2**
ABJI	**Asem Bagus**	**147.97**	**182**	PKP	**PKiKP**	**02 55 25.4**	**0.0**
SJI	**Sawahan**	**148.04**	**178**	PKP	**PKPbc**	**02 55 24.3**	**+0.3**
GRNR	**Gornyy**	**148.04**	**331**	⇓*i*PKIKP	**PKPbc**	**02 55 21.8**	**-1.0**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LEM	**Lembang**	**148.53**	**170**	PKPbc	**PKiKP**	**02 55 26.8**	**-0.1**
	comp=Z,262nm,0.7s,baz=129,slow=3.8,SNR=38						
KRAI	**Karang Ratu**	**148.61**	**211**	PKP	**PKPbc**	**02 55 24.7**	**-0.7**
ZEA	**Zeya**	**148.80**	**344**	*e*PKIKP	**PKPdf**	**02 55 21.2**	**+0.6**
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
ASAJ	**Asahikawa**	**148.84**	**316**	PKPbc	**PKiKP**	**02 55 26.3**	**0.0**
	comp=Z,41nm,0.9s,baz=214,slow=5.1,SNR=11						
KASI	**Kota Agung**	**149.13**	**163**	PKP	**PKPbc**	**02 55 26.8**	**+0.1**
SIJI	**Sorong**	**149.23**	**218**	PKP	**PKPbc**	**02 55 27.6**	**+0.6**
NLAI	**Namlea**	**149.27**	**209**	PKP	**PKiKP**	**02 55 27.9**	**-0.2**
KAPI	**Kappang**	**150.02**	**194**	PKPbc	**PKPbc**	**02 55 29.2**	**+0.4**
	comp=Z,37nm,0.5s,baz=199,slow=2.4,SNR=16						
KAPI	**Kappang**	**150.02**	**194**	PKP	**PKiKP**	**02 55 30.0**	**+0.3**
SANI	**Sanana**	**150.81**	**208**	PKP	**PKPbc**	**02 55 30.7**	**0.0**
SPSI	**Sidrap Palu**	**151.03**	**194**	PKP	**PKiKP**	**02 55 32.0**	**+0.2**
MOY	**Mondy**	**151.28**	**16**	*e*PKIKP	**PKPdf**	**02 55 26.2**	**+1.5**
MOY				pmax	pmax		
	comp=Z,90nm,1.5s						
WMQ	**Urumqi**	**151.68**	**41**	*e*PKPbc	**PKPdf**	**02 55 25.9**	**+0.4**
WMQ				PKPab	**PKPab**	**02 55 43.0**	**+1.7**
TLY	**Talaya**	**151.85**	**12***c*	*i*PKIKP	**PKiKP**	**02 55 33.8**	**+1.5**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HEH	**HeiHe**	**151.85**	**340**	PKPbc	**PKPbc**	**02 55 31.4**	**-0.6**
MMSI	**Mamuju**	**152.45**	**193**	PKP	**PKiKP**	**02 55 36.5**	**+1.8**
TPI	**Tanjungpandan**	**152.52**	**168**	PKP	**PKiKP**	**02 55 35.1**	**+0.3**
SNSI	**Sinabang, Aceh**	**152.87**	**141**	PKP	**PKiKP**	**02 55 36.9**	**+1.3**
LUWI	**Luwuk**	**152.97**	**202**	PKP	**PKiKP**	**02 55 37.0**	**+1.2**
HILR	**Hailar Array B**	**154.34**	**350**	PKP	**PKPdf**	**02 55 29.4**	**+0.3**
	comp=Z,5.9nm,0.7s,baz=202,slow=0.8,SNR=9.3						
HILR				PKPbc	**PKPbc**	**02 55 37.6**	**+0.1**
	comp=Z,5.4nm,0.4s,baz=34,slow=2.3,SNR=18						
HILR				PKPab	**PKPab**	**02 55 52.4**	**+0.1**
	comp=Z,22nm,0.7s,baz=46,slow=4.3,SNR=20						
RPSI	**Rantau Prapat**	**154.52**	**146**		**PKPab**	**02 55 54.8**	**+0.9**
PSI	**Prapat**	**154.61**	**146**	PKP2	**PKPab**	**02 55 54.8**	**+0.3**
USRK	**Ussuriysk Ar.**	**154.87**	**326**	PKP	**PKPdf**	**02 55 31.2**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=329,slow=1.1,SNR=5.3						
USRK				PKPbc	**PKiKP**	**02 55 39.2**	**+0.5**
	comp=Z,13nm,1.0s,baz=49,slow=1.6,SNR=7.9						
MPSI	**Mapaga**	**155.15**	**197**	PKP	PKPab	02 55 46.1	-10
MJAR	**Matsushiro Arr**	**155.17**	**305**	PKPbc	PKPdf	02 55 40.0	+9.3
	comp=Z,3.5nm,0.4s,baz=79,slow=1.6,SNR=10						
MJAR				PKPab	**PKPab**	**02 55 57.0**	**+0.7**
	comp=Z,26nm,0.9s,baz=81,slow=2.5,SNR=20						
MJAR	**Matsushiro Arr**	**155.17**	**305**		**PKPab**	**02 55 56.9**	**+0.6**
MAJO	**Matsushiro**	**155.17**	**305**		**PKPab**	**02 55 57.3**	**+1.0**
MAJO	**Matsushiro**	**155.17**	**305**	PKP2	**PKPab**	**02 55 57.3**	**+1.0**
BNX	**BinXian**	**155.72**	**335**	⇓PKPbc	**PKPdf**	**02 55 30.4**	**-0.7**
SONM	**Songino Array**	**156.04**	**11**	PKP	**PKPdf**	**02 55 32.7**	**+1.0**
	comp=Z,4.8nm,0.9s,baz=254,slow=1.0,SNR=24						
SONM				PKPab	**PKPab**	**02 55 58.5**	**-1.2**
	comp=Z,8.6nm,0.7s,baz=322,slow=3.1,SNR=17						
CN2	**Changchun**	**158.10**	**335**	*e*PKP	**PKPdf**	**02 55 33.8**	**-0.4**
XLT	**XiLinHaoTe**	**160.38**	**353**	*e*PKP	**PKPdf**	**02 55 37.8**	**+0.9**
XLT				PKPab	**PKPab**	**02 56 19.5**	**+1.0**
XLT				PP	**PP**	**03 00 00.4**	**-0.1**
GOMU	**GeErMu**	**160.46**	**49**	PKP	**PKPdf**	**02 55 38.2**	**+0.6**
GTA2	**Gaotai**	**161.29**	**33**	*e*PKP	**PKPdf**	**02 55 38.7**	**+0.6**
GTA2				pPKP	PKPab	02 56 23.4	+0.6
GTA2				PP	**PP**	**03 00 08.2**	**+2.2**
KSRS	**Korea Array**	**161.75**	**319**	PKP	**PKPdf**	**02 55 39.0**	**+0.6**
	comp=Z,6.2nm,1.0s,baz=118,slow=0.3,SNR=16						
KSRS				PKPab	**PKPab**	**02 56 25.7**	**+1.0**
	comp=Z,5.4nm,0.8s,baz=47,slow=3.4,SNR=10						
BTO2	**Baotou**	**163.50**	**8**	*e*PKP	**PKPdf**	**02 55 39.2**	**-1.1**
BTO2				PKPab	**PKPab**	**02 56 32.6**	**+0.3**
HHC	**Hu-ho-hao-te**	**163.56**	**4**	*e*PKP	**PKPdf**	**02 55 40.6**	**+0.3**
BJI2	**Beijing**	**164.20**	**351**	PKP	**PKPdf**	**02 55 41.3**	**+0.6**
BJI2				sPKP	**sPKPdf**	**02 56 40.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**165.69**	**112**	PKP	**PKPdf**	**02 55 43.5**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=257,slow=2.1,SNR=19						
CMAR				PKPab	**PKPab**	**02 56 42.5**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=252,slow=4.6,SNR=14						
CMAR	**Chiang Mai Arr**	**165.69**	**112**		**PKPdf**	**02 55 42.8**	**+0.2**
CHTO	**Chiang Mai**	**165.84**	**110**		**PKPdf**	**02 55 42.8**	**0.0**
CHTO	**Chiang Mai**	**165.84**	**110**	PKIKP	**PKPdf**	**02 55 42.8**	**0.0**
LZH	**Lanzhou**	**165.96**	**32**	*e*PKP	**PKPdf**	**02 55 43.9**	**+1.3**
LZDM	**Lanzhou Array**	**165.99**	**33**	PKP	**PKPdf**	**02 55 43.6**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=22,slow=1.6,SNR=10.0						
LZDM				PKPab	**PKPab**	**02 56 44.4**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=302,slow=2.8,SNR=5.1						
TNCH	**TengChong**	**166.87**	**84**	PKP	**PKPdf**	**02 55 43.9**	**+0.3**
TNCH				pPKP	pPKPdf	02 56 25.5	-2.7
TNCH				PKPab	**PKPab**	**02 56 48.0**	**0.0**
TNCH				PP	**PP**	**03 00 34.2**	**-2.6**
TNCH				AMB	AMB		
	comp=Z,120nm,5.2s						
HNS	**HongShan**	**166.96**	**354**	⇓PKP	**PKPdf**	**02 55 43.9**	**+0.8**
HNS				PKPab	**PKPab**	**02 56 47.7**	**+0.3**
TIA	**Tai'an**	**167.69**	**344**	PKP	**PKPdf**	**02 55 43.9**	**+0.2**
CD2	**Chengdu**	**169.59**	**49**	PKP	**PKPdf**	**02 55 45.0**	**-0.1**
PZH	**PanZhiHua**	**169.66**	**76**	PKP	**PKPdf**	**02 55 44.8**	**-0.6**
XAN	**Xi'an**	**169.78**	**19**	⇓PKP	**PKPdf**	**02 55 45.6**	**+0.5**
LYN	**LuoYang**	**169.88**	**2**	*e*PKP	**PKPdf**	**02 55 46.2**	**+1.1**
LYN				PKPab	**PKPab**	**02 57 00.2**	**-0.2**
KMI2	**Kunming**	**170.70**	**83**	PKP	**PKPdf**	**02 55 46.4**	**+0.2**
NJ2	**Nanjing**	**170.77**	**327**	*e*PKP	**PKPdf**	**02 55 47.4**	**+1.7**
WHN	**Wuhan**	**173.76**	**349**	PKP	**PKPdf**	**02 55 47.6**	**+0.6**
WHN				PKPab	**PKPab**	**02 57 17.4**	**-0.3**

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*IDC **01** 02:36:53.1±0.7, 11.°22S×118.°45E, h0km, mb4.3/16, mbtmp4.3/18, ML4.4/2, MS3.3/12, Error ellipse: s-maj=27.7km s-min=14.9km az=69.0*

*BJI **01** 02:36:53.3, 11.°40S×118.°40E, h10km, mB4.7/3, mb4.4/31, Ms4.4/2, Ms7 4.1/2*

*NEIC **01** 02:36:54.3±1.8, 11.°41S±0.°07×118.°43E±0.°07, h10km±1km, mb4.7/26, Error ellipse: s-maj=12.4km s-min=10.8km az=210.0*

*DJA **01** 02:36:56.8±0.3, 11°S±3°×11°8E±°, h43km±10km, M4.8/28, mb4.9/28, mB5.3/12, MLv4.8/24, Mw(mB)4.7/12, MwMwp5.5/1, Mwp5.7/1*

ISC 01 02:36:56.0±0.4**, 11.°43S**±0.°05×**118.°46E**±0.°05**, h26km, n120, σ1.s60**/120**, mb4.6**/33**, MS3.4**/8**, 1C, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**2.00**	**27**	P	**Pn**	**02 37 27.8**	**-0.4**
WBSI				S	**Sn**	**02 37 50.4**	**-2.1**
BASI	**Baing, Sumba**	**2.40**	**60**	P	**Pn**	**02 37 33.3**	**-0.4**
BASI				S	**Sn**	**02 38 02.6**	**+0.2**
WSI	**Waingapu**	**2.52**	**46**	P	**Pn**	**02 37 33.8**	**-1.5**
PLAI	**Plampang**	**2.67**	**345**	P	**Pn**	**02 37 37.0**	**-0.5**
PLAI	**Plampang**	**2.67**	**345**	P	**Pn**	**02 37 36.3**	**-1.2**
PLAI				S	**Sn**	**02 38 05.7**	**-3.3**
DBNI	**Kabupaten Domp**	**2.92**	**357**	P	**Pn**	**02 37 40.7**	**-0.1**
DBNI				S	**Sn**	**02 38 13.2**	**-1.8**
TWSI	**Taliwang, Sumb**	**3.10**	**330**	P	**Pn**	**02 37 43.0**	**-0.2**
KHKI	**Kahang-Kahang**	**4.14**	**317**	P	**Pn**	**02 37 58.5**	**+0.8**
KHKI				S	**Sn**	**02 38 43.1**	**-2.2**
EDFI	**Ende, Flores**	**4.15**	**50**	P	**Pn**	**02 37 56.5**	**-1.4**
IGBI	**Denpasar**	**4.17**	**308**	P	**Pn**	**02 37 56.6**	**-1.4**
DNP	**Denpasar**	**4.21**	**310**	P	**Pn**	**02 37 58.0**	**-0.6**
RTBI	**Rangdo, Negare**	**4.55**	**310**	P	**Pn**	**02 38 02.9**	**-0.4**
MMRI	**Maumere**	**4.64**	**54**	Pn	**Pn**	**02 38 03.2**	**-1.3**
MMRI	**Maumere**	**4.64**	**54**	P	**Pn**	**02 38 04.0**	**-0.6**
MMRI	**Maumere**	**4.64**	**54**	P	**Pn**	**02 38 03.7**	**-0.9**
JAGI	**Jajag, Banyuwa**	**5.16**	**304**		**Pn**	**02 38 09.1**	**-2.6**
JAGI	**Jajag, Banyuwa**	**5.16**	**304**	P	**Pn**	**02 38 09.8**	**-1.9**
JAGI	**Jajag, Banyuwa**	**5.16**	**304**	P	**Pn**	**02 38 09.9**	**-1.8**
	0.8nm3μm68nm,0.6s						
BATI	**Baumata**	**5.25**	**77**	Pn	**Pn**	**02 38 14.0**	**+1.1**
	21nm,0.3s,baz=106,slow=5.0,SNR=5.3						
BATI				Sn	**Sn**	**02 39 11.6**	**-1.2**
	24nm,0.3s,baz=341,slow=21,SNR=4.0						
	47nm,0.3s						
BATI	**Baumata**	**5.25**	**77**	P	**Pn**	**02 38 14.1**	**+1.1**
	1.0nm89nm,0.6s						
ABJI	**Asem Bagus**	**5.51**	**311**	P	**Pn**	**02 38 16.7**	**+0.2**
	0.5nm2μm80nm,0.6s						
BSSI	**Bau Bau, Buton**	**5.62**	**21**	P	**Pn**	**02 38 19.1**	**+1.0**
GMJI	**Gumukmas**	**5.85**	**302**	P	**Pn**	**02 38 20.3**	**-0.9**
	0.3nm31μm59nm,0.5s						
SOEI	**Soe**	**5.95**	**74**		**Pn**	**02 38 22.6**	**0.0**
SOEI	**Soe**	**5.95**	**74**	P	**Pn**	**02 38 23.6**	**+0.9**
SOEI	**Soe**	**5.95**	**74**	P	**Pn**	**02 38 23.5**	**+0.9**
	0.8nm2μm135nm,0.7s						
BLJI	**Banyuglugur**	**6.04**	**307**	P	**Pn**	**02 38 23.2**	**-0.5**
	0.6nm3μm53nm,0.5s						
KMMI	**Kalianget**	**6.21**	**314**	P	**Pn**	**02 38 27.0**	**+0.8**
	0.2nm55nm,1.0s						
BKSI	**Bulukumba**	**6.29**	**15**	P	**Pn**	**02 38 28.3**	**+1.1**
	0.9nm140nm,0.6s						
KAPI	**Kappang**	**6.50**	**11**	Pn	**Pn**	**02 38 31.6**	**+1.5**
	2.3nm,0.3s,baz=206,slow=4.2,SNR=5.6						
KAPI				Sn	**Sn**	**02 39 39.8**	**-3.8**
	12nm,0.3s,baz=88,slow=21,SNR=6.5						
KAPI				LR	LR	02 41 22.6	
	comp=Z,370nm,19.6s,baz=182,slow=43						
KAPI	**Kappang**	**6.50**	**11**		**Pn**	**02 38 31.3**	**+1.2**
KAPI	**Kappang**	**6.50**	**11**	P	**Pn**	**02 38 31.4**	**+1.2**
KAPI	**Kappang**	**6.50**	**11**	P	**Pn**	**02 38 30.9**	**+0.8**
	32nm,0.6s						
SPSI	**Sidrap Palu**	**7.53**	**10**	P	**Pn**	**02 38 45.3**	**+1.1**
	0.2nm3μm45nm,0.8s						
SNJI	**Sawahan-Nganju**	**7.54**	**298**	P	**Pn**	**02 38 44.9**	**+0.4**
	0.4nm65nm,1.2s						
SJI	**Sawahan**	**7.55**	**299**	P	**Pn**	**02 38 45.0**	**+0.4**
	0.4nm84nm,0.9s						
PCJI	**Pacitan**	**7.86**	**293**	P	**Pn**	**02 38 47.7**	**-1.1**
	1μm105nm,1.0s						
PMSI	**Majene**	**7.89**	**3**	P	**Pn**	**02 38 48.6**	**-0.6**
NGJI	**Ngawi**	**8.00**	**300**	P	**Pn**	**02 38 52.2**	**+1.5**
	75nm,0.8s						
TTSI	**Tana Toraja**	**8.44**	**9**	P	**Pn**	**02 38 58.2**	**+1.5**
	1μm66nm,0.8s						
UGM	**Wanagama**	**8.57**	**293**		**Pn**	**02 38 57.2**	**-1.3**
UGM	**Wanagama**	**8.57**	**293**	P	**Pn**	**02 38 57.1**	**-1.4**
UGM	**Wanagama**	**8.57**	**293**	P	**Pn**	**02 38 57.8**	**-0.7**
	58nm,0.8s						
MMSI	**Mamuju**	**8.70**	**3**	P	**Pn**	**02 38 59.8**	**-0.5**
	56nm,0.7s						
FITZ	**Fitzroy Crossi**	**9.60**	**135**	Pn	**Pn**	**02 39 11.4**	**-1.1**
	1.9nm,0.3s,baz=322,slow=10.0,SNR=29						
FITZ				Sn	**Sn**	**02 40 54.2**	**-5.5**
	4.9nm,0.3s,baz=191,slow=22,SNR=9.7						
FITZ				LR	LR	02 42 58.6	
	comp=Z,352nm,20.2s,baz=340,slow=38						
MBWA	**Marble Bar**	**9.75**	**173**		**Pn**	**02 39 12.5**	**-2.2**
MBWA	**Marble Bar**	**9.75**	**173**	P	**Pn**	**02 39 12.6**	**-2.1**
PSA00	**Pilbara Seismi**	**10.17**	**173**		**Pn**	**02 39 18.6**	**-1.9**
KPJI	**Karang Pucung**	**10.24**	**293**	P	**Pn**	**02 39 19.3**	**-2.2**
	34nm,0.7s						
KNRA	**Kununurra**	**10.87**	**114**	Pn	**Pn**	**02 39 28.7**	**-1.4**
BBJI	**Bungbulang**	**11.37**	**289**		**Pn**	**02 39 33.5**	**-3.5**
BBJI	**Bungbulang**	**11.37**	**289**	P	**Pn**	**02 39 33.3**	**-3.7**
LEM	**Lembang**	**11.64**	**292**	LR	LR	02 44 35.3	
	comp=Z,57nm,21.3s,baz=360,slow=40						
GIRL	**Giralia**	**11.86**	**199**	Pn	**Pn**	**02 39 42.6**	**-0.9**
MTN	**Manton Dam**	**12.47**	**98**	Pn	**Pn**	**02 39 51.2**	**-0.7**
MEEK	**Meekatharra**	**15.13**	**179**	P	**Pn**	**02 40 25.9**	**-2.2**
FAKI	**Fak Fak**	**16.07**	**59**	Pn	**Pn**	**02 40 39.6**	**-0.9**
FAKI				IAmb	IAmb	02 40 59.5	
	comp=Z,99nm,1.4s						
FAKI	**Fak Fak**	**16.07**	**59**	P	**Pn**	**02 40 39.1**	**-1.4**
	comp=Z,43nm,1.4s						
SIJI	**Sorong**	**16.49**	**51**	Pn	**P**	**02 40 47.5**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=256,slow=12,SNR=2.3						
MNAI	**Manna**	**16.88**	**293**		**P**	**02 40 51.8**	**-0.8**
MNAI	**Manna**	**16.88**	**293**	P	**P**	**02 40 51.3**	**-1.3**
EGSI	**Enggano, Bengk**	**17.11**	**289**	P	**Pn**	**02 40 50.3**	**-3.2**
WRA	**Warramunga Arr**	**17.46**	**121**	P	**Pn**	**02 40 55.3**	**-2.6**
	comp=Z,1.2nm,0.5s,baz=290,slow=13,SNR=15						
WRA	**Warramunga Arr**	**17.46**	**121**		**Pn**	**02 40 55.9**	**-2.0**
WR8	**Warramunga Arr**	**17.60**	**121**		**Pn**	**02 40 57.4**	**-2.3**
MORW	**Morawa**	**17.69**	**187**		**Pn**	**02 40 59.9**	**-0.8**
MORW				IAmb	IAmb	02 41 10.9	
	comp=Z,44nm,1.2s						
AS31	**Alice Springs**	**19.08**	**132**		**Pn**	**02 41 18.4**	**+0.6**
ASAR	**Alice Springs**	**19.08**	**132**	P	**Pn**	**02 41 18.4**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=322,slow=14,SNR=35						
ASAR				LR	LR	02 48 31.6	
	comp=Z,109nm,20.0s,baz=298,slow=36						
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**19.08**	**132**	P	**Pn**	**02 41 20.4**	**+2.7**
FORT	**Forrest**	**21.21**	**157**		**P**	**02 41 40.7**	**+0.9**
FORT				IAmb	IAmb	02 41 54.6	
	comp=Z,29nm,0.9s						
NWAO	**Narrogin (SRO)**	**21.42**	**183**	P	**P**	**02 41 44.4**	**+2.2**
	comp=Z,7.7nm,0.6s,baz=353,slow=9.2,SNR=7.2						
	comp=Z,7.7nm,0.6s						
NWAO	**Narrogin (SRO)**	**21.42**	**183**		**P**	**02 41 44.3**	**+2.1**
NWAO				IAmb	IAmb	02 41 53.7	
	comp=Z,57nm,1.1s						
COEN	**Coen**	**24.24**	**99**		**P**	**02 42 11.1**	**0.0**
COEN				IAmb	IAmb	02 42 30.6	
	comp=Z,19nm,1.1s						
BBOO	**Buckleboo**	**26.72**	**146**	P	**P**	**02 42 34.0**	**+0.5**
CTA	**Charters Tower**	**28.06**	**111**	LR	LR	02 53 26.3	
	comp=Z,54nm,19.7s,baz=247,slow=35						
STKA	**Stephens Creek**	**29.48**	**137**	P	**P**	**02 42 59.8**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=353,slow=16,SNR=1.8						
STKA				LR	LR	02 55 35.1	
	comp=Z,123nm,18.3s,baz=333,slow=38						
	comp=Z,1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**35.40**	**327**	P	**P**	**02 43 50.2**	**+0.2**
	comp=Z,2.2nm,0.3s,baz=152,slow=6.6,SNR=7.6						
CMAR				LR	LR	02 59 19.4	
	comp=Z,48nm,19.2s,baz=150,slow=38						
	comp=Z,2.2nm,0.3s						
KMI2	**Kunming**	**39.45**	**337**	P	**P**	**02 44 25.6**	**+1.0**
KMI2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH	**PanZhiHua**	**41.06**	**337**	P	**P**	**02 44 40.7**	**+3.0**
PALK	**Pallekele**	**41.91**	**295**	LR	LR	03 02 22.6	
	comp=Z,17nm,18.2s,baz=86,slow=37						
BRDH	**Bariadhala**	**42.89**	**322**	LR	LR	03 04 12.0	
	comp=Z,52nm,19.4s,baz=279,slow=38						
NJ2	**Nanjing**	**43.24**	**0**	*e*P	**P**	**02 44 58.8**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN	**Xi'an**	**46.12**	**349**	⇑P	**P**	**02 45 17.1**	**-1.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LZDM	**Lanzhou Array**	**49.15**	**344**	P	**P**	**02 45 41.7**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=179,slow=13,SNR=2.7						
	comp=Z,0.7nm,0.4s						
LZH	**Lanzhou**	**49.23**	**344**	*e*P	**P**	**02 45 42.7**	**+0.1**
LZH				pP	pP	02 45 48.7	+0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
KSRS	**Korea Array**	**49.43**	**10**	P	**P**	**02 45 44.0**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=186,slow=7.7,SNR=2.8						
	comp=Z,1.2nm,0.6s						
MJAR	**Matsushiro Arr**	**51.22**	**20**	P	**P**	**02 45 55.6**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=194,slow=8.2,SNR=1.7						
	comp=Z,0.6nm,0.3s						
HHC	**Hu-ho-hao-te**	**52.41**	**353**	*e*P	**P**	**02 46 09.0**	**+2.7**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,41nm,4.4s						
GTA2	**Gaotai**	**53.56**	**342**	*e*P	**P**	**02 46 15.0**	**+0.1**
GTA2				sP	sP	02 46 24.9	+1.2
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**56.72**	**12**	P	**P**	**02 46 35.3**	**-2.1**
	comp=Z,2.3nm,0.5s,baz=197,slow=7.1,SNR=8.5						
	comp=Z,2.3nm,0.5s						
URZ	**Urewera**	**58.47**	**128**	LR	LR	03 11 53.9	
	comp=Z,80nm,18.3s,baz=352,slow=36						
SONM	**Songino Array**	**59.97**	**351**	P	**P**	**02 46 59.9**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=172,slow=7.5,SNR=6.6						
	comp=Z,0.9nm,0.5s						
HILR	**Hailar Array B**	**60.73**	**1**	P	**P**	**02 47 05.3**	**0.0**
	comp=Z,3.1nm,0.6s,baz=179,slow=11,SNR=8.0						
	comp=Z,3.1nm,0.6s						
KLR	**Kul'dur**	**61.52**	**10**	LR	LR	03 15 18.6	
	comp=Z,4.8nm,19.3s,baz=140,slow=38						
WMQ	**Urumqi**	**61.71**	**335**	*e*P	**P**	**02 47 14.7**	**+2.6**
WMQ				sP	sP	02 47 22.7	+1.8
WMQ				PcP	**PcP**	**02 47 54.2**	**+0.9**
WMQ				PP	PP	02 49 36.6	+8.3
WMQ				S	**S**	**02 55 33.5**	**+0.1**
WUS	**Wushi**	**63.66**	**328**	IAmb	IAmb	02 47 36.0	
	comp=Z,6.6nm,0.9s						
KSH2	**Kashi**	**64.23**	**324**	P	**P**	**02 47 29.1**	**0.0**
KSH2				sP	sP	02 47 38.3	+0.4
KSH2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBL	**Kabul**	**65.46**	**316**	P	**P**	**02 47 36.8**	**-0.5**
KBL				IAmb	IAmb	02 48 03.0	
	comp=Z,6.8nm,0.9s						
BOOM	**Boomskoye usch**	**66.30**	**327**	P	**P**	**02 47 42.5**	**0.0**
BOOM				IAmb	IAmb	02 47 53.2	
	comp=Z,10nm,1.0s						
MKAR	**Makanchi Array**	**66.38**	**334**	P	**P**	**02 47 43.0**	**+0.3**
	comp=Z,6.8nm,0.7s,baz=149,slow=7.7,SNR=80						
MKAR				LR	LR	03 19 09.7	
	comp=Z,29nm,19.0s,baz=138,slow=38						
	comp=Z,6.8nm,0.7s						
MKAR	**Makanchi Array**	**66.38**	**334**		**P**	**02 47 42.8**	**+0.1**
AAK	**Ala-Archa**	**67.18**	**326**		**P**	**02 47 48.4**	**+0.3**
AAK				IAmb	IAmb	02 47 59.0	
	comp=Z,8.3nm,1.1s						
BTK	**Batken**	**67.62**	**322**	IAmb	IAmb	02 48 05.6	
	comp=Z,5.4nm,1.0s						
KKAR	**Karatay Array**	**69.70**	**325**	P	**P**	**02 48 03.6**	**-0.1**
KURBB	**Kurchatov Arra**	**70.91**	**334**	P	**P**	**02 48 10.5**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=145,slow=5.4,SNR=13						
	comp=Z,1.9nm,0.6s						
KURK	**Kurchatov**	**70.94**	**334**	P	**P**	**02 48 10.5**	**-0.5**
KURK	**Kurchatov**	**70.94**	**334**	IAmb	IAmb	02 48 34.2	
	comp=Z,7.0nm,1.1s						
ZAA0	**Zalesovo Array**	**71.12**	**340**	IAmb	IAmb	02 48 11.8	
	comp=Z,4.2nm,0.7s						
ZALV	**Zalesovo Beam**	**71.12**	**340**	P	**P**	**02 48 11.3**	**-0.7**
	comp=Z,4.0nm,0.6s,baz=143,slow=4.6,SNR=22						
	comp=Z,4.0nm,0.6s						
ZALV	**Zalesovo Beam**	**71.12**	**340**		**P**	**02 48 10.9**	**-1.1**
PETK	**Petropavlovsk-**	**72.50**	**24**	P	**P**	**02 48 20.9**	**+0.6**
	comp=Z,8.4nm,0.9s,baz=314,slow=1.0,SNR=4.2						
	comp=Z,8.4nm,0.9s						
MA2	**Magadan**	**75.39**	**16**	P	**P**	**02 48 37.9**	**+0.7**
MA2				IAmb	IAmb	02 48 49.9	
	comp=Z,10nm,1.0s						
BVAR	**Borovoye Array**	**76.19**	**332**	P	**P**	**02 48 42.2**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=141,slow=9.3,SNR=6.9						
	comp=Z,1.8nm,0.7s						
NRIK	**Noril'sk**	**83.43**	**349**	P	**P**	**02 49 20.1**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=107,slow=6.8,SNR=2.4						
	comp=Z,1.8nm,0.6s						
NRIK	**Noril'sk**	**83.43**	**349**	IAmb	IAmb	02 50 01.6	
	comp=Z,7.0nm,1.4s						
GURO	**Guroymak-BITLI**	**86.67**	**310**	P	**P**	**02 49 39.8**	**+2.0**
BRTR	**Keskin Array B**	**93.27**	**310**	P	**P**	**02 50 09.5**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=149,slow=10,SNR=4.8						
	comp=Z,0.8nm,0.9s						
NVAR	**Mina Array Bea**	**122.95**	**52**	PKP	**PKiKP**	**02 55 53.4**	**+2.5**
	comp=Z,0.4nm,0.7s,baz=347,slow=2.2,SNR=3.9						
BDFB	**Brasilia**	**149.95**	**207**	PKPbc	**PKPbc**	**02 56 45.5**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=22,slow=2.4,SNR=3.8						
LPAZ	**La Paz**	**151.70**	**167**	PKPbc	**PKiKP**	**02 56 52.9**	**+2.5**
	comp=Z,1.6nm,0.8s,baz=278,slow=2.9,SNR=6.0						
LPAZ				PKPab	**sPKPbc**	**02 57 00.9**	**+1.6**
	comp=Z,1.9nm,0.8s,baz=152,slow=3.4,SNR=6.6						

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*IDC **01** 02:39:52.9±1.1, 11.°37S×118.°29E, h0km, mb4.4/8, mbtmp4.3/10, ML4.1/2, Error ellipse: s-maj=45.2km s-min=23.0km az=76.0*

*NEIC **01** 02:39:54.1±2.1, 11.°45S±0.°07×118.°46E±0.°06, h10km±1km, mb4.1/6, Error ellipse: s-maj=12.4km s-min=8.2km az=152.0*

ISC 01 02:39:55.8±0.6**, 11.°47S**±0.°06×**118.°52E**±0.°07**, h26km, n32, σ1.s70**/33**, mb4.5**/9**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**4.62**	**53**	Pn	**Pn**	**02 41 04.6**	**+0.6**
BATI	**Baumata**	**5.21**	**77**	Sn	**Sn**	**02 42 12.4**	**+1.0**
	23nm,0.3s,baz=278,slow=24,SNR=5.2						
JAGI	**Jajag, Banyuwa**	**5.23**	**304**		**Pn**	**02 41 09.5**	**-2.8**
SOEI	**Soe**	**5.90**	**74**	Pn	**Pn**	**02 41 22.1**	**+0.3**
KAPI	**Kappang**	**6.53**	**11**	Pn	**Pn**	**02 41 30.3**	**+0.2**
	2.9nm,0.3s,baz=247,slow=1.6,SNR=5.4						
KAPI				Sn	**Sn**	**02 42 39.2**	**-4.6**
	1.6nm,0.3s,baz=41,slow=19,SNR=1.7						
	11nm,0.4s						
KAPI	**Kappang**	**6.53**	**11**		**Pn**	**02 41 30.2**	**0.0**
UGM	**Wanagama**	**8.63**	**293**		**Pn**	**02 41 58.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**9.54**	**135**	Sn	**Sn**	**02 43 53.1**	**-4.8**
	2.5nm,0.3s,baz=171,slow=17,SNR=3.8						
MBWA	**Marble Bar**	**9.71**	**173**	Pn	**Pn**	**02 42 13.1**	**-0.8**
PSA00	**Pilbara Seismi**	**10.13**	**173**	Pn	**Pn**	**02 42 19.2**	**-0.5**
GIRL	**Giralia**	**11.84**	**200**	Pn	**Pn**	**02 42 43.3**	**+0.2**
FAKI	**Fak Fak**	**16.04**	**59**	Pn	**Pn**	**02 43 38.9**	**-1.0**
WB0	**Warramunga Arr**	**17.37**	**120**	P	**Pn**	**02 43 55.3**	**-1.3**
WB0				IAmb	IAmb	02 44 17.3	
	comp=Z,15nm,1.1s						
WRA	**Warramunga Arr**	**17.40**	**121**	P	**Pn**	**02 43 55.0**	**-1.9**
	comp=Z,3.0nm,0.8s,baz=290,slow=13,SNR=5.4						
WRA				S	Sn	02 46 58.8	-11
	comp=Z,1.6nm,0.6s,baz=294,slow=25,SNR=2.5						
WR8	**Warramunga Arr**	**17.54**	**121**	Pn	**Pn**	**02 43 58.5**	**-0.2**
WR8				IAmb	IAmb	02 44 21.3	
	comp=Z,20nm,1.2s						
MORW	**Morawa**	**17.67**	**187**	Pn	**Pn**	**02 43 58.9**	**-1.3**
MORW				IAmb	IAmb	02 44 07.3	
	comp=Z,32nm,1.1s						
ASAR	**Alice Springs**	**19.02**	**132**	P	**Pn**	**02 44 19.1**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=321,slow=15,SNR=6.0						
	comp=Z,1.7nm,0.6s						
NWAO	**Narrogin (SRO)**	**21.39**	**183**	P	**P**	**02 44 43.1**	**+1.6**
	comp=Z,4.6nm,0.6s,baz=45,slow=7.1,SNR=1.8						
	comp=Z,4.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**56.74**	**12**	P	**P**	**02 49 37.0**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=168,slow=6.2,SNR=6.0						
	comp=Z,2.8nm,0.5s						
SONM	**Songino Array**	**60.01**	**351**	P	**P**	**02 50 00.5**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=170,slow=8.6,SNR=3.9						
	comp=Z,0.7nm,0.5s						
SONM	**Songino Array**	**60.01**	**351**	P	**P**	**02 50 00.2**	**-0.1**
HILR	**Hailar Array B**	**60.77**	**1**	P	**P**	**02 50 05.8**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=189,slow=9.4,SNR=4.1						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**66.43**	**334**	P	**P**	**02 50 43.3**	**+0.5**
	comp=Z,2.9nm,0.5s,baz=154,slow=6.9,SNR=25						
	comp=Z,2.9nm,0.5s						
MKAR	**Makanchi Array**	**66.43**	**334**	P	**P**	**02 50 43.4**	**+0.6**
GAR	**Garm**	**67.33**	**321**	P	**P**	**02 50 49.8**	**+1.0**
KURBB	**Kurchatov Arra**	**70.96**	**334**	P	**P**	**02 51 11.4**	**+0.5**
	comp=Z,4.7nm,0.2s,baz=142,slow=4.4,SNR=3.0						
	comp=Z,4.7nm,0.2s						
ZALV	**Zalesovo Beam**	**71.17**	**340**	P	**P**	**02 51 11.9**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=147,slow=5.2,SNR=11						
	comp=Z,2.3nm,0.5s						
ZALV	**Zalesovo Beam**	**71.17**	**340**	P	**P**	**02 51 11.7**	**-0.4**
PETK	**Petropavlovsk-**	**72.51**	**24**	P	**P**	**02 51 22.4**	**+2.3**
	comp=Z,3.0nm,0.8s,baz=212,slow=2.4,SNR=4.6						
	comp=Z,3.0nm,0.8s						
PETK	**Petropavlovsk-**	**72.51**	**24**	P	**P**	**02 51 22.6**	**+2.4**
AB31	**Akbulak array**	**79.30**	**325**	P	**P**	**02 51 60.0**	**+1.0**
AB31				IAmb	IAmb	02 52 04.1	
	comp=Z,2.3nm,1.2s						
ABKAR	**Akbulak array**	**79.30**	**325**	P	**P**	**02 52 00.3**	**+1.3**

IDC 01 02:53:20.7±34.0**, 25°.13S×179°.55W, h379**km±290km**, mb3.2**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=223.5km s-min=133.9km az=128.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	31.91	272	P	P	02 59 13.8	+1.1
	1.5nm,0.3s,baz=88,slow=14,SNR=4.8						
	1.5nm,0.3s						
ASAR	Alice Springs	42.25	262	P	P	03 00 38.1	-0.5
	0.6nm,0.6s,baz=90,slow=6.6,SNR=11						
	0.6nm,0.6s						
WRA	Warramunga Arr	42.74	267	P	P	03 00 41.7	-0.9
	1.0nm,0.5s,baz=104,slow=8.0,SNR=13						
	1.0nm,0.5s						
NOA	NORSAR Array B	143.35	351	PKP	PKPbc	03 12 08.6	+0.6
	1.3nm,0.9s,baz=9.8,slow=2.3,SNR=4.0						
HFS	Hagfors	143.83	349	PKP	PKPdf	03 12 10.3	-0.5
	3.9nm,0.7s,baz=39,slow=2.8,SNR=16						
MMAI	Mount Meron Ar	148.56	293	PKPbc	PKiKP	03 12 24.8	-0.3
	3.8nm,0.9s,baz=101,slow=4.6,SNR=6.5						
BRTR	Keskin Array B	148.63	306	PKPbc	PKPbc	03 12 22.1	-1.8
	0.6nm,0.8s,baz=11,slow=2.7,SNR=2.0						

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*IDC **01** 02:53:21.8±1.2, 27°.22N×130°.06E, h0km, mb3.7/6, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=27.4km s-min=18.8km az=53.0*

*JMA **01** 02:53:24.4±0.1, 27°.2N±0°.4×130°.2E±0°.6, h54km, MV4.1/18, NEAR AMAMI-OSHIMA ISLAND*

ISC 01 02:53:24.3±1.8**, 27°.20N**±0°.04×**130°.17E**±0°.04**, h23**km±15km**, n23, σ1s.06**/38**, mb3.7**/6**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.12	351	P	Pb	02 53 45.0	0.0
JZK				eS	Sb	02 53 59.7	+0.5
JTK	Tokunoshima	1.23	298	i P	Pn	02 53 45.7	-0.4
JTK				eS	Sn	02 54 00.9	-1.2
JAM	Amami Oshima	1.31	337	i P	Pn	02 53 46.9	-0.3
JAM				eS	Sn	02 54 02.8	-1.1
JAMN	Amaminishikomi	1.36	320	i P	Pn	02 53 47.4	-0.5
JAMN				S	Sn	02 54 03.8	-1.5
JOKE	Okinoerabujima	1.44	277	i P	Pn	02 53 48.5	-0.4
JOKE				eS	Sn	02 54 06.2	-0.9
JYRO	Yoronjima	1.54	264	i P	Pn	02 53 50.0	-0.4
JYRO				eS	Sn	02 54 08.7	-1.1
JKDJ	Kitadaitoujima	1.60	141	eP	Pn	02 53 50.7	-0.5
JKDJ				eS	Sn	02 54 09.6	-1.6
JMZ	Minamidaito 2	1.67	145	eP	Pn	02 53 51.2	-0.9
JMZ				eS	Sn	02 54 10.9	-1.9
JOW	Kunigami	1.73	258	Pn	Pn	02 53 52.8	-0.2
	179nm,0.3s,baz=111,slow=14,SNR=603						
JOW				Sn	Sn	02 54 13.2	-1.2
	244nm,0.3s,baz=276,slow=28,SNR=26						
JOW	Kunigami	1.73	258	i P	Pn	02 53 52.8	-0.2
JOW				eS	Sn	02 54 13.1	-1.4
JIH	Iheya	1.97	266	i P	Pn	02 53 56.0	-0.3
JIH				eS	Sn	02 54 18.8	-1.5
JNTH	Nagotoyohara	2.04	251	i P	Pn	02 53 57.0	-0.2
JNTH				S	Sn	02 54 20.6	-1.4
JTAJ	Takarajima	2.12	336	eP	Pn	02 53 57.8	-0.6
JTAJ				S	Sn	02 54 21.9	-2.1
JJT3	Tamagusuku3	2.38	244	P	Pn	02 54 01.9	-0.1
JJT3				eS	Sn	02 54 29.8	-0.7
JNN	Nakanoshima	2.64	354	eS	Sn	02 54 35.9	-1.1
JAGN	Aguni-jima	2.69	258	P	Pn	02 54 05.9	-0.3
JAGN				eS	Sn	02 54 36.2	-1.8
JNU	Nakatsue	5.93	6	Pn	Pn	02 54 50.9	+0.1
	1.5nm,0.3s,baz=340,slow=2.6,SNR=5.7						
	4.2nm,0.4s						
LZDM	Lanzhou Array	24.13	298	P	P	02 58 39.9	+1.0
	1.8nm,0.4s,baz=125,slow=12,SNR=8.8						
	1.8nm,0.4s						
MKAR	Makanchi Array	42.20	311	P	P	03 01 14.9	-0.5
	0.4nm,0.6s,baz=97,slow=10,SNR=2.6						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	45.37	315	P	P	03 01 40.4	-0.4
	0.3nm,0.4s,baz=101,slow=9.0,SNR=2.4						
	0.3nm,0.4s						
WRA	Warramunga Arr	47.04	175	P	P	03 01 54.7	+0.6
	0.6nm,0.7s,baz=351,slow=8.6,SNR=5.5						
	0.6nm,0.7s						
CTA	Charters Tower	49.52	160	P	P	03 02 14.5	+1.1
	3.3nm,0.7s,baz=352,slow=10,SNR=3.9						
	3.3nm,0.7s						
ASAR	Alice Springs	50.70	176	P	P	03 02 23.9	+1.6
	0.3nm,0.4s,baz=355,slow=7.9,SNR=9.7						
	0.3nm,0.4s						

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*IDC **01** 02:58:35.0±3.9, 11°.49S×118°.19E, h0km, mb3.9/3, mbtmp3.8/5, ML3.3/2, MS2.8/1, Error ellipse: s-maj=353.4km s-min=22.2km az=52.0*

ISC 01 02:58:41.8±2.0**, 11°.1S**±0°.6×**119°.2E**±0°.8**, h35**km**, n7, σ3s.31**/7**, mb3.8**/3**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	6.03	5	LR	LR	03 02 43.0	
	comp=Z,74nm,18.8s,baz=196,slow=38						
FITZ	Fitzroy Crossi	9.37	139	Pn	Pn	03 00 54.8	+0.5
	0.3nm,0.3s,baz=322,slow=12,SNR=20						
FITZ				Sn	Sn	03 02 33.7	-4.8
	0.6nm,0.3s,baz=194,slow=22,SNR=7.0						
	1.3nm,0.4s						
WRA	Warramunga Arr	17.04	123	P	P	03 02 39.3	+0.4
	0.7nm,0.7s,baz=288,slow=14,SNR=5.2						
ASAR	Alice Springs	18.79	134	P	Pn	03 03 02.9	+3.8
	0.1nm,0.3s,baz=305,slow=11,SNR=6.3						
	1.1nm,0.7s						
STKA	Stephens Creek	29.27	138	P	P	03 04 41.9	+1.1
	2.3nm,0.7s,baz=333,slow=9.0,SNR=3.9						
	2.3nm,0.7s						
MKAR	Makanchi Array	66.37	333	P	P	03 09 25.9	-1.2
	0.5nm,0.6s,baz=149,slow=7.0,SNR=7.8						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	71.03	339	P	P	03 09 54.2	-1.7
	0.5nm,0.6s,baz=140,slow=5.6,SNR=2.5						
	0.5nm,0.6s						

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*GUC **01** 03:02:03.5±0.8, 32°.05S×69°.86W, h132km±6km, ML3.6*

*SJA **01** 03:02:03.1±0.8, 32°.02S×69°.52W, h109km±3km, ML3.3, MW3.5*

ISC 01 03:02:03.4±1.2**, 32°.03S**±0°.02×**69°.56W**±0°.03**, h117**km±7km**, n59, σ1s.23**/106**, 11C, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.32	44	eP	Pn	03 02 19.6	-0.8
RTLS				eS	Sn	03 02 32.3	-0.9
ASAL	Salagasta	0.83	132	eP	Pn	03 02 23.4	-0.2
ASAL				eS	Sn	03 02 37.5	-1.4
ZON	Zonda	0.89	57	eP	Pn	03 02 23.7	-0.5
ZON				eS	Sn	03 02 38.9	-0.9
ZON				IAML		03 02 40.9	
	comp=Z,473nm,0.2s						
ARCO	CERRO ARCO	0.97	147	eP	Pn	03 02 24.9	-0.1
ARCO				eS	Sn	03 02 40.3	-1.0
ARCO				IAML		03 02 42.3	
	comp=Z,1μm,0.4s						
SJA	San Juan	0.99	60	eP	Pn	03 02 13.7	-11
SJA				eS	Sn	03 02 41.9	+0.4
SJA				IAML		03 02 42.0	
	comp=Z,704nm,0.2s						
VA03	San Esteban	1.11	229⥣	eP	Pn	03 02 26.3	-0.1
VA03				eS	Sn	03 02 43.9	0.0
VA03				IAML		03 02 45.5	
	comp=E,3μm,0.2s						
VA03	San Esteban	1.11	229	eP	Pn	03 02 26.3	-0.1
VA03				eS	Sn	03 02 44.3	+0.5
VA03				IAML		03 02 45.3	
	comp=Z,762nm,0.2s						
DOCA	Reserva Natura	1.15	21	eP	Pn	03 02 25.9	-1.2
RTLL	Cerro Villicun	1.16	53	eP	Pn	03 02 26.4	-0.4
RTLL				eS	Sn	03 02 44.3	-0.3
RTLL				IAML		03 02 45.8	
	comp=Z,1μm,0.3s						
CO04	Los Peladeros	1.20	269⥣	eP	Pn	03 02 26.6	-0.9
CO04				eS	Sn	03 02 44.5	-1.3
CO04				IAML		03 02 46.9	
	comp=E,2μm,0.3s						
AAGR	Agrelo	1.22	150	eP	Pn	03 02 27.8	+0.2
AAGR				eS	Sn	03 02 46.4	+0.5
AAGR				IAML		03 02 49.6	
	comp=Z,430nm,0.4s						
MT04	Ro Olivares	1.45	199	eP	Pn	03 02 31.4	+1.1
MT04				eS	Sn	03 02 52.6	+1.8
MT04	Ro Olivares	1.45	199	eP	Pn	03 02 31.4	+1.1
MT04				eS	Sn	03 02 53.1	+2.4
MT08	Bocatoma Ro	1.46	195	eP	Pn	03 02 31.6	+1.2
MT08				eS	Sn	03 02 55.5	+4.6
PEL	Peldehue	1.46	220	eP	Pn	03 02 30.1	-0.1
PEL				eS	Sn	03 02 51.0	+0.5
PEL				IAML		03 02 52.5	
	comp=Z,216nm,0.6s						
CO02	Combarbal	1.48	304⥣	eP	Pn	03 02 30.1	-0.3
CO02				eS	Sn	03 02 51.0	-0.1
CO02	Combarbal	1.48	304	eP	Pn	03 02 30.2	-0.3
CO02				eS	Sn	03 02 51.5	+0.4
CO02				IAML		03 02 54.1	
	comp=Z,635nm,0.2s						
MT10	Hacienda Santa	1.49	213⥣	eP	Pn	03 02 30.9	+0.3
MT10				eS	Sn	03 02 52.4	+1.1
MT10				IAML		03 02 57.2	
	comp=E,1μm,0.3s						
ACCO	Cerro Coronel	1.50	16	eP	Pn	03 02 31.3	+0.3
ACCO				eP		03 02 31.4	
ACCO				eS	Sn	03 02 53.6	+1.7
CO03	El Pedregal	1.53	321⥣	eP	Pn	03 02 31.2	+0.1
CO03				eS	Sn	03 02 52.9	+0.7
CO03				IAML		03 02 55.4	
	comp=N,1μm,0.3s						
CO03	El Pedregal	1.53	321	eP	Pn	03 02 31.4	+0.3
CO03				eS	Sn	03 02 53.4	+1.2
CO03				IAML		03 02 57.4	
	comp=Z,288nm,0.3s						
ROCH	El Roble	1.54	232⥣	eP	Pn	03 02 30.8	-0.5
ROCH				eS	Sn	03 02 51.5	-1.1
ROCH				IAML		03 02 55.5	
	comp=N,1μm,0.4s						
VA06	Catapilco	1.56	250⥣	eP	Pn	03 02 30.1	-1.2
VA06				eS	Sn	03 02 50.7	-1.9
VA06				IAML		03 02 52.5	
	comp=E,1μm,0.6s						
MT14	Cerro Cal¡n	1.59	211	eP	Pn	03 02 32.2	+0.5
MT14				eS	Sn	03 02 53.8	+0.5
MT14				IAML		03 02 56.0	
	comp=E,665nm,0.2s						
MT03	Universidad Ad	1.66	209	eP	Pn	03 02 33.4	+0.7
MT03				eS	Sn	03 02 56.2	+1.3
MT03				IAML		03 02 58.3	
	comp=Z,395nm,0.2s						
MT05	Renca	1.68	216	eP	Pn	03 02 33.1	+0.3
MT05				eS	Sn	03 02 56.6	+1.4
MT05				IAML		03 02 59.9	
	comp=Z,345nm,0.5s						
AVIZ	Vizcacheras	1.69	149	eP	Pn	03 02 33.4	+0.5
AVIZ				eS	Sn	03 02 55.0	-0.4
MT02	Curacav	1.81	227	eP	Pn	03 02 32.8	-1.5
MT02				eS	Sn	03 02 57.3	-0.6
MT02				IAML		03 03 02.7	
	comp=Z,133nm,0.2s						
MT13	San Alfonso	1.81	200	eP	Pn	03 02 35.5	+1.1
MT13				eS	Sn	03 03 00.1	+1.9
MT13				IAML		03 03 01.3	
	comp=Z,116nm,0.3s						
AROD	Rodeo	1.86	2	eP	Pn	03 02 36.4	+1.1
AROD				eP		03 02 36.5	
AROD				eS	Sn	03 03 00.5	+0.9
LMEL	Las Melosas	1.89	196	eP	Pn	03 02 36.2	+0.7
LMEL				IAML		03 03 09.6	
	comp=N,226nm,0.3s						
ACDV	Cuesta del Vie	1.89	12	eP	Pn	03 02 36.5	+1.0
ACDV				eS	Sn	03 03 02.1	+2.1
ACDV				IAML		03 03 02.3	
	comp=Z,165nm,0.8s						
VA01	Torpederas	2.02	240	eP	Pn	03 02 19.4	-17
VA01				IAML		03 03 00.6	
	comp=Z,152nm,0.3s						
CO01	Juntas del Tor	2.10	347⥣	eP	Pn	03 02 39.8	+1.6
CO01				eS	Sn	03 03 08.2	+3.4
CO01	Juntas del Tor	2.10	347	eP	Pn	03 02 39.8	+1.6
CO01				eS	Sn	03 03 08.1	+3.4
GO04	Tololo Observa	2.14	330	eP	Pn	03 02 38.4	-0.2
GO04				eS	Sn	03 03 05.6	0.0
GO04	Tololo Observa	2.14	330	eP	Pn	03 02 38.9	+0.3
GO04				eS	Sn	03 03 06.0	+0.4
GO04				IAML		03 03 08.8	
	comp=Z,632nm,0.7s						
BO04	La Punta	2.14	204⥣	eP	Pn	03 02 39.0	+0.5
BO04				eS	Sn	03 03 05.9	+0.5
BO04				IAML		03 03 07.4	
	comp=E,334nm,0.7s						
CO06	Fray Jorge	2.23	307⥣	eP	Pn	03 02 38.2	-1.4
CO06				eS	Sn	03 03 06.9	-0.5
CO06				IAML		03 03 15.7	
	comp=N,543nm,0.4s						
AVFE	Valle Fertil	2.26	53	eP	Pn	03 02 40.0	-0.1
AVFE				eS	Sn	03 03 08.2	0.0
AVFE				IAML		03 03 09.5	
	comp=Z,182nm,0.3s						
MT01	Popeta	2.32	217	eP	Pn	03 02 39.7	-0.9
MT01				eS	Sn	03 03 08.2	-1.1
MT01				IAML		03 03 12.5	
	comp=Z,83nm,0.3s						
CO05	La Serena	2.55	325	eP	Pn	03 02 42.9	-0.8
CO05				eS	Sn	03 03 13.1	-1.7
CO05				IAML		03 03 15.9	
	comp=N,413nm,0.4s						
ACHE	Chepes	2.62	71	eS	Sn	03 03 16.1	-0.4
BO01	Tunca	2.68	208⥣	eP	Pn	03 02 44.6	-0.7
BO01				eS	Sn	03 03 15.9	-1.8
BO01	Tunca	2.68	208	eP	Pn	03 02 44.9	-0.4
BO01				eS	Sn	03 03 17.1	-0.6
BO01				IAML		03 03 17.1	
	comp=Z,48nm,0.3s						
RFA	San Rafael	2.88	162	eP	Pn	03 02 47.6	-0.5
RFA				eS	Sn	03 03 20.9	-1.5
RFA				IAML		03 03 49.6	
	comp=Z,70nm,0.4s						
BO02	Sierra Bellavi	2.94	200	eP	Pn	03 02 49.2	+0.4
BO02				eS	Sn	03 03 27.3	+3.5
BO02				IAML		03 03 30.7	
	comp=Z,90nm,0.2s						
LCO	Las Campanas	3.17	342	eP	Pn	03 02 50.9	-1.1
LCO				eS	Sn	03 03 29.2	-0.4
AC05	El Transito	3.24	349	eP	Pn	03 02 53.1	+0.2
AC05				eS	Sn	03 03 31.9	+0.7
AC05				IAML		03 03 35.9	
	comp=Z,66nm,0.4s						
MRA	San Martin	3.28	98	eP	Pn	03 02 52.9	-0.4
MRA				eS	Sn	03 03 19.1	-13
MRA				IAML		03 03 33.3	
	comp=Z,118nm,0.5s						
ACLC	CERRO LA CRUZ	3.43	42	eP	Pn	03 02 55.6	+0.2
ACLC				eS	Sn	03 03 36.4	+0.6
ACLC				IAML		03 03 39.7	
	comp=Z,37nm,0.7s						
VCA	Vinchina	3.49	20	eP	Pn	03 02 58.2	+2.0
VCA				eS	Sn	03 03 36.5	-0.5
VCA				IAML		03 03 57.7	
	comp=Z,73nm,0.5s						
GO05	Hualane	3.57	213	eP	Pn	03 02 44.9	-12
GO05				eS	Sn	03 03 28.4	-10
GO05				IAML		03 03 44.5	
	comp=Z,26nm,0.5s						
AC04	Llanos de Chal	4.03	341	eP	Pn	03 03 01.9	-1.4
AC04				IAML		03 04 05.5	
	comp=Z,58nm,0.4s						
TCA	Tanti	4.29	82	eP	Pn	03 03 06.1	-0.7
TCA				eS	Sn	03 03 53.5	-2.5
TCA				IAML		03 04 09.9	
	comp=Z,52nm,0.6s						
TINO	Tinogasta	4.32	24	eP	Pn	03 03 08.5	+1.3
GO03	Copiapo	4.46	352	eP	Pn	03 03 09.8	+0.7
GO03				eS	Sn	03 03 58.6	-1.5
GO03				IAML		03 04 29.9	
	comp=Z,24nm,0.7s						
BI02	San Fabin de	4.83	197	eP	Pn	03 03 14.1	0.0
BI02				IAML		03 04 15.3	
	comp=Z,9.2nm,2.3s						
AC02	Maricunga	5.19	4	eP	Pn	03 03 20.0	+0.6
AC02				eS	Sn	03 04 18.3	-0.1
AC02				IAML		03 04 46.8	
	comp=Z,10nm,2.8s						

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*IDC **01** 03:07:53.8±1.1, 25°.55S×179°.62E, h504km±14km, mb3.6/10, mbtmp4.5/12, Error ellipse: s-maj=23.6km s-min=12.7km az=172.0*

*NOU **01** 03:07:55.6, 25°.58S×179°.65E, h523km, mb4.2/18, South of Fiji Islands*

*NEIC **01** 03:07:55.2±1.8, 25°.5S±0°.1×179°.7E±0°.1, h513km±7km, mb4.4/19, Error ellipse: s-maj=18.5km s-min=15.8km az=52.0*

ISC 01 03:07:54.2±0.6**, 25°.48S**±0°.06×**179°.63E**±0°.08**, h507**km**, n102, σ1s.87**/122**, mb4.3**/20**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.34	150	P	P	03 09 16.5	+0.7
	652nm,0.2s,baz=86,slow=7.8,SNR=15						
RAO				S	S	03 10 19.6	-2.8
	188nm,0.3s,baz=287,slow=19,SNR=1.7						
RAO	Raoul Island	4.34	150	P	P	03 09 17.2	+1.4
RAO	Raoul Island	4.34	150	P	P	03 09 17.7	+1.9
GLKZ	Green Lake	4.35	151	P	P	03 09 16.0	+0.2
GLKZ				S	S	03 10 26.0	+3.4
MSVF	Nonsavu	7.85	349	P	P	03 09 47.8	-1.7
MARNC	Mare, Loyalty	11.37	288	P	P	03 10 27.5	+1.4
MARNC	Mare, Loyalty	11.37	288	P	P	03 10 27.2	+1.1
WCZ	Waipu Caves	11.37	202	P	P	03 10 28.6	+2.7
PINNC	Pines Island,	11.49	282	P	P	03 10 29.4	+1.9
NIUE	Niue	11.57	59	P	P	03 10 21.9	-6.5
MXZ	Matakaoa Point	12.10	185	P	P	03 10 34.6	+1.1
MXZ	Matakaoa Point	12.10	185	P	P	03 10 34.7	+1.1
MXZ	Matakaoa Point	12.10	185	P	P	03 10 34.7	+1.1
MXZ				S	S	03 12 48.0	+3.1
AWAZ	Awhitu Peninsu	12.31	199	P	P	03 10 37.8	+2.0
HAZ	Te Kaha	12.34	187	P	P	03 10 35.8	-0.4
HAZ				S	S	03 12 49.2	-0.4
WMGZ	Waiomatatini S	12.34	185	P	P	03 10 35.6	-0.6
WMGZ				S	S	03 12 51.2	+1.4
PKGZ	Pakihiroa	12.42	186	P	P	03 10 39.0	+2.0
PKGZ				S	S	03 12 55.5	+4.3
DZM	Mont Dzumac	12.54	283	P	P	03 10 38.9	+0.2
	5.3nm,0.7s,baz=71,slow=15,SNR=5.0						
DZM	Mont Dzumac	12.54	283	P	P	03 10 39.5	+0.9
DZM	Mont Dzumac	12.54	283	P	P	03 10 41.6	+2.9
RUGZ	Raukumara Rang	12.56	187	P	P	03 10 36.9	-1.7
RUGZ				S	S	03 12 52.1	-1.9
PUZ	Puketiti	12.61	185	P	P	03 10 41.3	+2.3
TWGZ	Tauwhareparae	12.73	186	P	P	03 10 40.9	+0.5
TWGZ				S	S	03 12 59.8	+2.4
URZ	Urewera	12.92	189	P	P	03 10 41.7	-0.5
	9.8nm,0.3s,baz=324,slow=0.7,SNR=18						
URZ				S	S	03 12 56.4	-4.4
	12nm,0.7s,baz=172,slow=15,SNR=3.0						
URZ	Urewera	12.92	189	P	P	03 10 40.7	-1.6
URZ	Urewera	12.92	189	P	P	03 10 39.8	-2.5
URZ				S	S	03 13 03.4	+2.6
MWZ	Matawai	12.94	187	P	P	03 10 43.1	+0.6
MWZ				S	S	03 13 04.4	+3.1
CNGZ	Carnagh Statio	13.02	185	P	P	03 10 42.3	-1.0
RAGZ	Rawiri	13.11	188	P	P	03 10 44.2	-0.2
RIGZ	Rimuhau	13.28	186	P	P	03 10 45.0	-1.2
RIGZ				S	S	03 13 04.1	-3.7
MTHZ	Maungataniwha	13.54	189	P	P	03 10 48.5	-0.4
MTHZ				S	S	03 13 13.5	+0.6
HIZ	Hauiti	13.61	196	P	P	03 10 50.8	+1.3
NMHZ	Naumai	13.78	189	P	P	03 10 50.7	-0.8
NMHZ				S	S	03 13 19.1	+1.5
BKZ	Black Stump Fm	13.90	190	P	P	03 10 51.6	-1.1
BKZ	Black Stump Fm	13.90	190	P	P	03 10 51.6	-1.1
BKZ				S	S	03 13 17.6	-2.2
PXZ	Pawanui	14.69	188	P	P	03 11 02.8	+1.9
PXZ				S	S	03 13 31.7	-3.2
BFZ	Birch Farm	15.42	190	P	P	03 11 09.3	+0.8
OGWZ	Otaki Gorge	15.74	193	P	P	03 11 10.5	-1.3
OGWZ				S	S	03 13 49.8	-4.9
HOWZ	Holdsworth Sta	15.75	192	P	P	03 11 10.8	-1.2
HOWZ				S	S	03 13 48.4	-6.6
PAWZ	Paruwai Farm	16.24	191	P	P	03 11 16.2	-0.9
PAWZ				S	S	03 13 59.2	-4.6
MSWZ	Moikau Station	16.30	192	P	P	03 11 16.7	-1.0
MSWZ				S	S	03 13 56.7	-8.3
TCW	Tory Channel	16.31	195	P	P	03 11 16.9	-0.8
TCW				S	S	03 14 01.0	-4.0
SNZO	South Karori	16.31	193	P	P	03 11 17.6	-0.1
QRZ	Quartz Range	16.41	199	P	P	03 11 19.4	+0.6
QRZ	Quartz Range	16.41	199	P	P	03 11 19.2	+0.5
TKNZ	Takaka Hill	16.47	198	P	P	03 11 18.7	-0.7
NNZ	Nelson	16.53	197	P	P	03 11 19.1	-0.9
TUWZ	Tuamarina	16.59	195	P	P	03 11 19.5	-1.1
THZ	Tophouse	17.17	197	P	P	03 11 25.2	-1.3
DSZ	Denniston Nort	17.47	200	P	P	03 11 28.6	-0.7
KHZ	Kahutara	17.62	195	P	P	03 11 29.9	-0.7
KHZ	Kahutara	17.62	195	P	P	03 11 29.0	-1.5
GVZ	Greta Valley S	18.26	196	P	P	03 11 36.6	+0.2
LTZ	Lake Taylor	18.29	197	P	P	03 11 35.8	-0.9
INZ	Inchbonnie	18.47	199	P	P	03 11 37.6	-0.7
INZ	Inchbonnie	18.47	199	P	P	03 11 38.1	-0.2
OXZ	Oxford	18.86	197	P	P	03 11 40.2	-1.6
WVZ	Waitaha Valley	19.00	200	P	P	03 11 43.0	-0.2
LHI	Lord Howe Isla	19.04	247	P	P	03 11 46.5	+2.8
EIDS	Eidsvold	25.77	264	P	P	03 12 45.1	+0.9
EIDS				IAmb	IAmb	03 12 45.8	
	comp=Z,17nm,0.8s						
EIDS	Eidsvold	25.77	264	P	P	03 12 44.9	+0.7
CTA	Charters Tower	31.18	273	P	P	03 13 32.2	+0.6
	comp=Z,12nm,0.5s,baz=96,slow=10.0,SNR=26						
	comp=Z,12nm,0.5s						
CTAO	Charters Tower	31.18	273	P	P	03 13 32.3	+0.7
CTAO				IAmb	IAmb	03 13 33.0	
	comp=Z,21nm,1.1s						
CTAO	Charters Tower	31.18	273	P	P	03 13 32.3	+0.7
STKA	Stephens Creek	33.85	250	P	P	03 13 53.6	-0.5
	comp=Z,1.4nm,0.5s,baz=169,slow=9.5,SNR=3.0						
	comp=Z,1.4nm,0.5s						
STKA	Stephens Creek	33.85	250	P	P	03 13 53.8	-0.3
PMG	Port Moresby	34.73	292	P	P	03 14 01.1	-0.5
	comp=Z,13nm,0.8s,baz=111,slow=6.7,SNR=4.0						
	comp=Z,13nm,0.8s						
COEN	Coen	36.07	282	P	P	03 14 13.6	+0.7
COEN				IAmb	IAmb	03 14 14.2	
	comp=Z,9.6nm,0.8s						
COEN	Coen	36.07	282	P	P	03 14 13.5	+0.7
QIS	Mount Isa	37.07	269	P	P	03 14 20.8	-0.2
BBOO	Buckleboo	38.54	249	P	P	03 14 32.5	-0.4
AS31	Alice Springs	41.47	262		P	03 14 56.1	-0.5
ASAR	Alice Springs	41.47	262	P	P	03 14 56.3	-0.3
	comp=Z,4.2nm,0.7s,baz=91,slow=6.7,SNR=51						
ASAR				PcP	PcP	03 16 41.6	-1.0
	comp=Z,0.5nm,0.6s,baz=97,slow=3.9,SNR=2.6						
ASAR				ScP	ScP	03 19 44.0	-0.2
	comp=Z,0.3nm,0.7s,baz=97,slow=3.6,SNR=2.3						
ASAR				S	S	03 20 35.8	+0.6
	comp=Z,0.5nm,0.7s,baz=99,slow=16,SNR=4.5						
	comp=Z,4.2nm,0.7s						
ASAR	Alice Springs	41.47	262		P	03 14 56.0	-0.6
WR8	Warramunga Arr	41.84	268	P	P	03 14 58.9	-0.7
WR8				IAmb	IAmb	03 15 00.3	
	comp=Z,9.6nm,1.1s						
WRA	Warramunga Arr	41.99	268	P	P	03 15 00.0	-0.7
	comp=Z,3.7nm,0.5s,baz=103,slow=8.0,SNR=29						
WRA				S	S	03 20 42.0	-0.7
	comp=Z,0.6nm,0.9s,baz=103,slow=14,SNR=1.3						
	comp=Z,3.7nm,0.5s						
WRA	Warramunga Arr	41.99	268	P	P	03 15 00.2	-0.5
KNRA	Kununurra	48.37	271	IAmb	IAmb	03 15 49.9	
	comp=Z,13nm,0.6s						
MORW	Morawa	56.03	251	P	P	03 16 44.0	-0.7
MORW				IAmb	IAmb	03 16 54.1	
	comp=Z,27nm,1.5s						
MJAR	Matsushiro Arr	73.01	326	P	P	03 18 31.2	-0.9
	comp=Z,1.4nm,0.6s,baz=136,slow=5.9,SNR=4.1						
	comp=Z,1.4nm,0.6s						
MJAR	Matsushiro Arr	73.01	326	P	P	03 18 31.1	-1.0
BELA	Belgrano 2	74.91	173	P	P	03 18 42.1	-0.2
KSRS	Korea Array	79.25	321	P	P	03 19 06.7	+0.2
	comp=Z,1.1nm,0.6s,baz=90,slow=22,SNR=4.9						
	comp=Z,1.1nm,0.6s						
KMPM	Mount Pierce	83.85	40	P	P	03 19 30.7	+0.5
KMPM				IAmb	IAmb	03 19 43.7	
	comp=Z,26nm,1.4s						
SLBS	Sierra La Lagu	83.88	60	P	P	03 19 30.4	-0.2
SLBS				IAmb	IAmb	03 19 31.6	
	comp=Z,14nm,1.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
O02D	Mt. Diablo Mer	84.47	41	P	P	03 19 34.5	+1.2
O02D				IAmb	IAmb	03 19 35.9	
	comp=Z,8.7nm,1.1s						
NVAR	Mina Array Bea	86.12	44	P	P	03 19 41.7	+0.3
	comp=Z,1.3nm,0.7s,baz=222,slow=8.1,SNR=13						
	comp=Z,1.3nm,0.7s						
NVAR	Mina Array Bea	86.12	44	P	P	03 19 41.6	+0.2
TPNV	Topopah Spring	86.56	46	IAmb	IAmb	03 19 44.7	
	comp=Z,3.1nm,0.8s						
CMAR	Chiang Mai Arr	89.76	290	P	P	03 19 58.1	-0.5
	comp=Z,1.6nm,0.3s,baz=115,slow=5.0,SNR=1.7						
	comp=Z,1.6nm,0.3s						
CMAR	Chiang Mai Arr	89.76	290	P	P	03 19 59.1	+0.4
MTPU	Mount Pierson	89.85	47	P	P	03 19 59.3	+0.2
MTPU				IAmb	IAmb	03 20 01.1	
	comp=Z,3.6nm,0.9s						
TXAR	Lajitas Array	91.55	58	P	P	03 20 07.3	+0.4
	comp=Z,1.1nm,0.8s,baz=218,slow=6.8,SNR=12						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	91.55	58	P	P	03 20 07.7	+0.9
BOSA	Boshof	120.84	206	PKP	PKiKP	03 25 49.6	+0.3
	comp=Z,6.5nm,1.3s,baz=153,slow=2.3,SNR=1.8						
ARCES	ARCESS Array B	133.36	348	SKPbc	SKPbc	03 28 52.3	+0.1
	comp=Z,2.8nm,0.8s,baz=29,slow=2.8,SNR=6.4						
FINES	FINESS Array B	139.83	341	SKPbc	SKPbc	03 29 11.8	+0.3
	comp=Z,1.8nm,0.7s,baz=28,slow=2.9,SNR=8.0						
OBN	Obninsk	139.93	328	PKP	PKPdf	03 26 23.6	-0.4
	comp=Z,8.9nm,0.4s,baz=56,slow=3.6,SNR=2.5						
NOA	NORSAR Array B	143.58	351	PKP	PKPbc	03 26 30.1	+1.0
	comp=Z,0.3nm,0.6s,baz=346,slow=2.3,SNR=1.5						
HFS	Hagfors	144.02	348	PKP	PKPbc	03 26 29.2	-1.2
	comp=Z,1.0nm,0.4s,baz=26,slow=3.1,SNR=8.6						
MMAI	Mount Meron Ar	148.01	292	PKPbc	PKPbc	03 26 43.0	+0.3
	comp=Z,1.1nm,0.4s,baz=48,slow=9.1,SNR=5.3						
BRTR	Keskin Array B	148.23	305	PKPbc	PKPbc	03 26 42.6	-0.6
	comp=Z,1.3nm,0.7s,baz=86,slow=3.8,SNR=6.1						

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*IDC **01** 03:08:26.1±0.8, 37°.69N×144°.24E, h0km, mb3.6/12, mbtmp3.6/14, ML3.7/2, MS3.1/2, Error ellipse: s-maj=19.8km s-min=18.3km az=154.0*
*NIED **01** 03:08:30.4, 37°.81N×144°.07E, h50km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr-2.90; Mθθ0.29; Mφφ2.61; Mrθ-0.65; Mθφ1.49; Mφr3.20; Fault plane solution: Mo4.53000×10^14 NP1:φs48.00000°, δ29.00000°, λ-47.00000°. NP2:φs181.00000°, δ69.00000°, λ-111.00000°.*
*JMA **01** 03:08:30.4±0.2, 37°.8N±0°.8×144°.1E±1°.0, h50km, MV4.1/27, FAR E OFF NORTH HONSHU*
ISC 01 03:08:31.6±0.8, **37°.80N**±0°.06×**144°.11E**±0°.07, **h35km, n30,** σ**0s.99**/37, **mb3.6**/12, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.15	284	eP	Pn	03 09 04.3	-0.6
JIKH				eS	Sn	03 09 29.2	-1.1
JIO	Ouri	2.27	287	eP	Pn	03 09 06.0	-0.6
JIO				eS	Sn	03 09 32.4	-0.9
OFUJ	Ofunato	2.30	304	P	Pn	03 09 06.4	-0.6
OFUJ				eS	Sn	03 09 33.5	-0.6
JKMT	Kesennumamotoy	2.31	297	P	Pn	03 09 06.5	-0.6
JKMT				eS	Sn	03 09 33.4	-0.8
JMK	Ichinoseki	2.54	298	eP	Pn	03 09 10.2	-0.1
JMK				eS	Sn	03 09 39.7	-0.4
JOM	Ohasama	2.77	308	eP	Pn	03 09 13.5	+0.1
JOM				S	Sn	03 09 46.0	+0.4
JOTO	OTAMA OYAMA	3.01	266	eP	Pn	03 09 16.9	+0.1
JOTO				eS	Sn	03 09 51.4	-0.2
JYK	Kaneyama	3.15	292	eP	Pn	03 09 19.2	+0.5
JYK				eS	Sn	03 09 55.8	+0.7
JANG	Nango	3.27	323	eP	Pn	03 09 19.9	-0.3
JANG				eS	Sn	03 09 56.2	-1.7
JAG	Ashikaga	3.97	251	P	Pn	03 09 29.1	-0.9
JAG				eS	Sn	03 10 12.7	-2.5
JOT	Ohata	4.29	327	eS	Sn	03 10 21.2	-1.8
MJAR	Matsushiro Arr	4.88	257	Pn	Pn	03 09 42.9	+0.5
	0.5nm,0.3s,baz=70,slow=11,SNR=18						
MJAR				Sn	Sn	03 10 39.6	+1.9
	0.2nm,0.3s,baz=56,slow=25,SNR=4.5						
	3.0nm,0.3s						
ASAJ	Asahikawa	6.41	350	Pn	Pn	03 10 04.4	+1.0
	3.2nm,0.3s,baz=209,slow=10,SNR=15						
ASAJ				Sn	Sn	03 11 13.6	-1.7
	1.1nm,0.3s,baz=168,slow=21,SNR=1.7						
	6.0nm,0.3s						
JNU	Nakatsue	11.76	251	LR	LR	03 16 21.6	
	comp=Z,183nm,18.9s,baz=34,slow=40						
KSRS	Korea Array	12.84	273	LR	LR	03 15 40.9	
	comp=Z,36nm,22.0s,baz=80,slow=34						
HILR	Hailar Array B	21.07	312	P	P	03 13 13.9	+1.2
	1.0nm,0.4s,baz=113,slow=11,SNR=2.7						
	1.0nm,0.4s						
H11N2	WAKE ISLAND Hy	26.78	126	T	T	03 41 58.6	
	baz=318,slow=74						
H11N1	WAKE ISLAND Hy	26.79	126	T	T	03 41 58.0	
	baz=318,slow=74						
H11N3	WAKE ISLAND Hy	26.79	126	T	T	03 41 55.4	
	baz=318,slow=74						
SONM	Songino Array	29.16	302	P	P	03 14 29.8	+0.2
	0.1nm,0.3s,baz=84,slow=9.4,SNR=1.4						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	42.99	312	P	P	03 16 27.8	+0.6
	0.3nm,0.4s,baz=77,slow=6.2,SNR=2.1						
	0.3nm,0.4s						
MKAR	Makanchi Array	45.53	302	P	P	03 16 48.1	+0.4
	0.7nm,0.7s,baz=87,slow=8.4,SNR=7.5						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	47.22	308	P	P	03 17 01.6	+0.7
	1.2nm,0.5s,baz=80,slow=8.0,SNR=11						
	1.2nm,0.5s						
ILAR	Eielson Array	47.69	33	P	P	03 17 04.2	0.0
	1.1nm,0.7s,baz=258,slow=6.3,SNR=18						
	1.1nm,0.7s						
BVAR	Borovoye Array	51.64	312	P	P	03 17 35.6	+1.0
	0.6nm,0.6s,baz=62,slow=10.0,SNR=2.9						
	0.6nm,0.6s						
WRA	Warramunga Arr	58.17	191	P	P	03 18 20.3	-1.7
	1.0nm,0.7s,baz=11,slow=6.9,SNR=5.6						
	1.0nm,0.7s						
ASAR	Alice Springs	61.89	191	P	P	03 18 47.4	-0.1
	0.4nm,0.7s,baz=10,slow=6.9,SNR=7.0						
	0.4nm,0.7s						
YKA	Yellowknife Ar	62.05	31	P	P	03 18 48.1	0.0
	0.1nm,0.4s,baz=243,slow=6.2,SNR=1.9						
	0.1nm,0.4s						
NVAR	Mina Array Bea	72.80	55	P	P	03 19 57.1	+0.3
	0.8nm,0.7s,baz=308,slow=7.1,SNR=5.8						
	0.8nm,0.7s						
PDAR	Pinedale Array	75.58	47	P	P	03 20 12.8	-0.2
	0.3nm,0.6s,baz=321,slow=3.4,SNR=3.6						
	0.3nm,0.6s						

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*AFAD **01** 03:15:32.3, 34°.81N×27°.10E, h8km±4km, ML3.5*
*ISK **01** 03:15:38.5, 35°.12N×27°.81E, h6km, ML3.6/14*
*HLW **01** 03:15:39.0, 35°.15N×27°.92E, h6km±5km, Ml3.3*
*ATH **01** 03:15:40.0±0.2, 35°.14N×27°.90E, h10km, ML3.6/16, Manual Solution by N.Liadopoulou First location: 2020/02/01 03:17:05, This location: 2020/07/06 07:42:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **01** 03:15:42.6, 35°N±15°×2°8E±1°7, h0km±28km, M3.2/10, MLh3.2/10*
*GII **01** 03:15:42.8±0.0, 34°.81N±0°.06×28°.01E±0°.02, h0km, Mws3.5, confirmed*
*IDC **01** 03:15:42.1±4.6, 35°.16N×27°.81E, h26km±33km, mb3.7/15, mbtmp3.8/26, ML3.4/9, MS3.1/4, Error ellipse: s-maj=18.3km s-min=11.6km az=176.0*
ISC 01 03:15:38.7±1.4, **35°.06N**±0°.04×**27°.86E**±0°.03, **h8km**±9km, **n130,** σ**1s.62**/152, **mb3.8**/14, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.75	311	Pg	Pg	03 15 51.8	-1.4
KARP				Sg	Sg	03 16 02.0	-1.0
KARP	Karpathos	0.75	311	P	Pg	03 15 52.2	-1.0
KARP				S	Sg	03 16 01.5	-1.5
KARP	Karpathos	0.75	311	P	Pg	03 15 52.4	-0.8
KARP				S	Sb	03 16 04.5	0.0
ARG	Arkhangelos	1.17	11	Pn	Pb	03 16 00.3	-0.9
ARG				Sn	Sn	03 16 16.3	-1.3
ARG	Arkhangelos	1.17	11	P	Pb	03 16 00.4	-0.9
ARG				S	Sb	03 16 14.3	-2.3
ARG	Arkhangelos	1.17	11	P	Pg	03 16 00.0	-1.2
ARG				S	Sb	03 16 15.4	-1.2
ZKR	Zakros	1.35	273	Pn	Pn	03 16 03.9	0.0
ZKR	Zakros	1.35	273	P	Pn	03 16 03.9	0.0
RDI1	Rhodes Town Ha	1.42	12	P	Pg	03 16 04.5	-1.5
SIT2	Siteia	1.45	276	P	Pn	03 16 06.3	+1.2
YAZI	Mula-Dat§a-	1.65	349	P	Pn	03 16 08.5	+0.5
YAZI				S	Sg	03 16 32.7	+0.9
DAT	Datca	1.68	352	Pn	Pn	03 16 08.6	+0.1
DAT	Datca	1.68	352	P	Pn	03 16 09.0	+0.5
DAT				S	Sg	03 16 36.0	+3.2
DAT				IAML		03 16 41.0	
	comp=N,433nm,0.6s						
DAT				IAML		03 16 41.0	
	comp=E,564nm,0.7s						
DATC	Datca-Mugla	1.70	355	Pn	Pn	03 16 08.5	-0.2
TURN	Turunc	1.74	10	Pn	Pn	03 16 09.1	-0.1
TURN	Turunc	1.74	10	P	Pb	03 16 10.3	-0.6
TURN				IAML		03 16 41.0	
	comp=E,301nm,0.6s						
TURN				S	Sg	03 16 41.1	+6.4
TURN				IAML		03 16 48.0	
	comp=N,361nm,0.7s						
AKAS	Kas	1.84	50	Pn	Pb	03 16 11.5	-1.2
NPS	Neapolis	1.85	277	P	Pn	03 16 12.4	+1.6
DALY	Dalyan (Mula)	1.87	20	Pn	Pn	03 16 11.1	+0.2
SABU	Mula-Dalaman	1.98	27	P	Pn	03 16 12.0	-0.5
SABU				S	Sg	03 16 49.4	+7.1
SABU				IAML		03 16 58.0	
	comp=E,231nm,1.0s						
SABU				IAML		03 17 05.0	
	comp=N,260nm,1.2s						
BDRM	Kayabasi	2.03	351	P	Pn	03 16 13.6	+0.4
BDRM				S	Sg	03 16 42.3	-1.6
BDRM				IAML		03 16 55.0	
	comp=E,295nm,0.7s						
BODT	Bodrum	2.05	348	Pn	Pn	03 16 13.3	-0.2
BODT	Bodrum	2.05	348	P	Pn	03 16 14.3	+0.8
YER	Yerkesik	2.10	9	Pn	Pn	03 16 14.3	+0.1
YER	Yerkesik	2.10	9	P	Pb	03 16 15.2	-1.8
CAME	Cameli-Denizli	2.21	31	Pn	Pn	03 16 16.3	+0.4
MULA	Mugla, Merkez-	2.22	9	P	Pb	03 16 18.1	-1.1
MULA				IAML		03 16 57.0	
	comp=E,263nm,0.9s						
MLSB	Milas	2.23	358	Pn	Pn	03 16 16.1	+0.1
THERA	Ancient Thera,	2.34	305	P	Pn	03 16 18.6	+1.1
THERA	Ancient Thera,	2.34	305	P	Pn	03 16 18.1	+0.6
THR8	Santorini-Mono	2.36	305	P	Pn	03 16 18.9	+1.2
DNZT	Denizli-Tavas-	2.41	23	P	Pb	03 16 19.9	-2.4
DNZT				S	Sg	03 16 59.9	+3.8
DNZT				IAML		03 17 12.0	
	comp=N,150nm,0.9s						
THR2	Thira island,	2.41	306	P	Pn	03 16 19.9	+1.5
THR3	Thira Island,	2.41	305	P	Pn	03 16 20.1	+1.7
SNT5	Nea Kammeni, S	2.41	304	P	Pn	03 16 20.0	+1.5
SNT5	Nea Kammeni, S	2.41	304	P	Pn	03 16 19.5	+1.0
THR9	Santorini-Faro	2.42	303	P	Pn	03 16 20.1	+1.6
IDI	Anoyia	2.44	276	Pn	Pn	03 16 21.2	+2.3
	28nm,0.5s,baz=117,slow=9.8,SNR=24						
IDI				Sn	Sn	03 16 47.1	-1.9
	7.9nm,0.3s,baz=13,slow=16,SNR=7.2						
IDI				LR	LR	03 17 41.2	
	comp=Z,389nm,21.1s,baz=74,slow=50						
IDI	Anoyia	2.44	276	Pn	Pn	03 16 19.6	+0.6
IDI	Anoyia	2.44	276	P	Pn	03 16 21.6	+2.7
IDI	Anoyia	2.44	276	P	Pn	03 16 20.4	+1.5
TAVA	DENIZLI_Tavas	2.55	19	P	Pn	03 16 20.3	-0.1
TAVA				IAML		03 17 09.0	
	comp=N,168nm,1.2s						
TAVA				IAML		03 17 13.0	
	comp=E,213nm,0.6s						
GCAM	G?zelcaml?	2.68	349	Pn	Pn	03 16 22.6	+0.4
SMG	Samos	2.77	343	P	Pn	03 16 23.7	+0.3
SMG	Samos	2.77	343	P	Pn	03 16 23.1	-0.2
VAM	Vamos	3.02	278	P	Pn	03 16 29.8	+3.1
GVD	Gavdhos	3.11	267	P	Pn	03 16 29.7	+1.7
CHAN	Chania	3.16	279	P	Pn	03 16 29.6	+0.9
IMMV	Iera Moni Meta	3.20	278	P	Pn	03 16 31.9	+2.7
IMMV	Iera Moni Meta	3.20	278	P	Pn	03 16 31.2	+2.0
MHLO	Agia Marina, M	3.25	301	P	Pn	03 16 30.6	+0.7
KNDR	Palaiochora Ch	3.48	274	P	Pn	03 16 34.3	+1.2
ISP	Isparta	3.49	37	P	Pn	03 16 33.1	-0.3
CHOS	Chios island	3.62	337	P	Pn	03 16 35.2	0.0
AKMS	Akamas	3.67	89	P	Pn	03 16 36.5	+0.7
ANKY	Antikythira Is	3.81	284	P	Pn	03 16 39.1	+1.4
NATA	Nata	3.88	93	P	Pn	03 16 39.4	+0.7
ALFC	Alefka	3.88	87	P	Pn	03 16 38.8	0.0
KARY	Karystos	4.05	318	P	Pn	03 16 41.9	+1.0
VLI	Veliai	4.33	294	P	Pn	03 16 45.9	+1.2
DION	Dionisos Attik	4.37	315	P	Pn	03 16 46.4	+1.0
ATHU	Athens Univers	4.38	313	P	Pn	03 16 46.2	+0.7
PTL	Penteli	4.39	314	P	Pn	03 16 46.5	+0.9
MET6	Megalochori,Me	4.43	306	P	Pn	03 16 47.2	+1.0
ASGA	Asgata	4.43	92	P	Pn	03 16 46.9	+0.6
CSS	Mathiatis	4.49	90	P	Pn	03 16 49.4	+2.4
CSS				S	Sn	03 17 39.9	+0.5
CSS	Mathiatis	4.49	90	P	Pn	03 16 47.7	+0.7
STFN	Stefani	4.66	313	P	Pn	03 16 50.2	+0.8
MVOU	Mavrovouni	4.74	89	P	Pn	03 16 51.3	+0.9
VIL2	Platees	4.85	312	P	Pn	03 16 51.9	-0.1
ITM	Ithomi	5.25	295	P	Pn	03 16 58.0	+0.6
LIA	Limnos Island	5.28	337	P	Pn	03 16 58.3	+0.5
PYL	PYLOS	5.29	292	P	Pn	03 16 59.1	+1.1
KLV	Kalavryta, Ach	5.48	305	P	Pn	03 17 01.6	+0.9
SWA2		6.15	200	P	Pn	03 17 11.3	+1.6
RYAN	Fayoum	6.30	160	P	Pn	03 17 14.4	+2.5
RYAN				S	Sn	03 18 22.5	-1.6
BRTR	Keskin Array B	6.54	43	Pn	Pn	03 17 16.3	+1.0
	0.3nm,0.3s,baz=224,slow=15,SNR=7.8						
BRTR				Sn	Sn	03 18 30.2	-0.1
	0.2nm,0.3s,baz=209,slow=25,SNR=6.2						
	2.1nm,0.6s						
MMAI	Mount Meron Ar	6.58	106	Pn	Pn	03 17 16.9	+1.1
	1.9nm,0.3s,baz=298,slow=12,SNR=7.4						
MMAI				Sn	Sn	03 18 27.4	-3.8
	4.7nm,0.3s,baz=311,slow=30,SNR=7.9						
	1.8nm,0.4s						
AMAZ	Amatzia	6.87	119	P	Pn	03 17 20.8	+1.0
AMAZ				S	Sn	03 18 37.5	-0.7
KZIT	Kziot	6.88	125	P	Pn	03 17 20.0	+0.2
KZIT				S	Sn	03 18 36.0	-2.2
KSHT	Keshet	6.92	105	P	Pn	03 17 22.4	+2.0
KSHT				S	Sn	03 18 39.2	-0.2
HMDT	Nahal Hemdat	6.98	111	P	Pn	03 17 22.1	+0.9
UJAP	Al Uja	7.07	114	P	Pn	03 17 24.3	+1.9
DSI	Dead Sea	7.19	117	P	Pn	03 17 25.6	+1.5
MSBI	Mazada	7.31	119	P	Pn	03 17 26.4	+0.7
KRMI	Paran Flat	7.60	128	P	Pn	03 17 31.3	+1.5
PRNI	Paran	7.63	126	P	Pn	03 17 31.0	+0.8
PRNI				S	Sn	03 18 55.2	-1.7
HRFI	Mount Harif	7.86	128	P	Pn	03 17 34.5	+1.2
HRFI				S	Sn	03 19 00.4	-2.0
HFRF	Wahat Farafira	7.89	177	P	Pn	03 17 35.3	+1.5
HFRF				S	Sn	03 19 01.8	-1.6
MBRI	Mt Berech	7.94	129	P	Pn	03 17 35.2	+0.7
EIL	Elat	8.05	130	Pn	Pn	03 17 37.2	+1.3
	0.5nm,0.3s,baz=292,slow=3.1,SNR=6.9						
EIL				Sn	Sn	03 19 02.0	-5.1
	1.2nm,0.3s,baz=70,slow=12,SNR=6.1						
	4.8nm,0.4s						
EIL	Elat	8.05	130	P	Pn	03 17 36.6	+0.7
ASF	Jabal al Asfar	8.07	108	Pn	Pn	03 17 37.4	+1.1
	0.3nm,0.3s,baz=327,slow=7.2,SNR=6.3						
ASF				Sn	Sn	03 19 00.8	-6.9
	0.2nm,0.3s,baz=145,slow=8.9,SNR=1.4						
ASF				LR	LR	03 22 41.6	
	comp=Z,35nm,20.0s,baz=189,slow=52						
	2.9nm,0.8s						
MLR	Muntele Rosu	10.52	353	Pn	Pn	03 18 11.7	+1.8
	0.2nm,0.3s,baz=124,slow=15,SNR=1.9						
	1.0nm,0.3s						
VAE	Valguarnera	11.12	286	Pn	Pn	03 18 20.2	+2.2
	4.9nm,0.9s,baz=56,slow=18,SNR=1.4						
VAE				Sn	Sn	03 20 18.7	-4.0
	0.1nm,0.3s,baz=215,slow=12,SNR=2.7						
KBZ	Khabaz	14.48	49	Pn	P	03 19 09.2	-1.4
	0.1nm,0.3s,baz=232,slow=16,SNR=9.4						
	2.4nm,0.9s						
SOKA	Soboth	15.11	324	ePn	Pn	03 19 12.7	+0.3
	1.2nm,0.6s						
KEST	Kesra	15.12	278	Pn	Pn	03 19 14.2	+1.6
	0.1nm,0.3s,baz=94,slow=15,SNR=5.8						
	1.8nm,0.9s						
STHS	Stebnicka Huta	15.15	343	eP	P	03 19 24.8	+6.7
OBKA	Obir	15.22	323	ePn	Pn	03 19 12.0	-1.9
	0.4nm,0.5s						
KBA	Koelnbreinsper	16.21	322	ePn	Pn	03 19 26.2	-0.8
	7.0nm,1.0s						
MOA	Molln	16.31	326	eP	Pn	03 19 29.7	+1.6
	0.5nm,0.7s						
VRAC	Vranov	16.48	333	Pn	Pn	03 19 31.0	+0.9
	0.2nm,0.3s,baz=138,slow=12,SNR=3.0						
	1.0nm,0.6s						
BIOA	Bad Ischl, Aus	16.50	324	ePn	Pn	03 19 31.5	+1.1
	0.7nm,0.8s						
LESA	Schwarzleotal	16.79	322	eP	Pn	03 19 35.7	+1.6
	4.1nm,0.9s						
WTTA	Wattenberg	17.22	320	ePn	Pn	03 19 39.4	-0.3
	8.1nm,1.6s						
WATA	Walderalm	17.30	320	ePn	Pn	03 19 39.8	-0.7
	7.6nm,1.0s						
GERES	GERESS Array B	17.30	327	P	Pn	03 19 41.1	+0.6
	baz=148,slow=13,SNR=5.4						
	0.8nm,0.6s						
SQTA	Sankt Quirin	17.42	319	ePn	Pn	03 19 42.9	+0.8
	4.5nm,0.9s						
MOTA	Moosalm	17.55	319	ePn	Pn	03 19 43.7	0.0
	4.2nm,0.8s						
FETA	Feichten	17.56	318	ePn	Pn	03 19 44.0	+0.2
	0.1nm,0.4s						
KHC	Kasperske Hory	17.57	328	eP	Pn	03 19 44.1	+0.3
RETA	Reutte	17.82	319	ePn	Pn	03 19 46.8	-0.2
	1.0nm,0.6s						
ESDC	Sonseca Array	25.63	290	P	P	03 21 08.6	-0.1
	1.0nm,0.5s,baz=82,slow=9.7,SNR=16						
	1.0nm,0.5s						
FINES	FINESS Array B	26.43	358	P	P	03 21 13.5	-2.1
	2.1nm,0.9s,baz=178,slow=10.0,SNR=5.8						
	2.1nm,0.9s						
HFS	Hagfors	26.73	344	P	P	03 21 17.0	-1.4
	3.0nm,0.8s,baz=170,slow=10.0,SNR=5.8						
	3.0nm,0.8s						
NOA	NORSAR Array B	28.11	343	P	P	03 21 30.3	-0.5
	1.1nm,0.9s,baz=151,slow=7.9,SNR=3.3						
	1.1nm,0.9s						
TORD	Torodi Ar. Bea	32.17	234	P	P	03 22 08.0	+0.9
	2.3nm,1.0s,baz=41,slow=5.5,SNR=13						
	2.3nm,1.0s						
BVAR	Borovoye Array	34.82	46	P	P	03 22 31.1	+1.2
	0.8nm,0.8s,baz=262,slow=5.5,SNR=3.6						
	0.8nm,0.8s						
KURBB	Kurchatov Arra	39.47	51	P	P	03 23 09.9	+0.6
	1.9nm,0.8s,baz=276,slow=8.8,SNR=11						
	1.9nm,0.8s						
DBIC	Dimbokro	41.27	234	LR	LR	03 44 26.3	
	comp=Z,48nm,19.0s,baz=140,slow=42						
MKAR	Makanchi Array	41.98	57	P	P	03 23 30.2	0.0
	0.7nm,0.6s,baz=281,slow=6.6,SNR=7.7						
	0.7nm,0.6s						
ZALV	Zalesovo Beam	43.48	46	P	P	03 23 43.5	+1.4
	0.5nm,0.5s,baz=270,slow=7.2,SNR=2.7						
	0.5nm,0.5s						
SPITS	Spitsbergen Ar	43.51	357	P	P	03 23 42.4	+0.3
	12nm,1.0s,baz=153,slow=11,SNR=2.1						
	12nm,1.0s						
SONM	Songino Array	57.83	51	P	P	03 25 31.8	+1.1
	1.2nm,0.7s,baz=287,slow=7.6,SNR=8.7						
	1.2nm,0.7s						
LZDM	Lanzhou Array	60.19	65	P	P	03 25 48.4	+0.9
	0.3nm,0.3s,baz=343,slow=4.6,SNR=4.0						
	0.3nm,0.3s						
SCHQ	Schefferville	64.69	320	P	P	03 26 15.2	-1.8
	3.0nm,0.8s,baz=56,slow=8.2,SNR=6.3						
	3.0nm,0.8s						
YAK	Yakutsk	64.84	31	LR	LR	03 56 26.1	
	comp=Z,38nm,21.0s,baz=284,slow=38						
YKA	Yellowknife Ar	78.20	343	P	P	03 27 38.6	+0.3
	0.1nm,0.7s,baz=28,slow=5.5,SNR=4.1						
	0.1nm,0.7s						
ILAR	Eielson Array	80.41	358	P	P	03 27 50.7	+0.3
	0.5nm,1.1s,baz=3.5,slow=5.5,SNR=2.1						
	0.5nm,1.1s						

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*ISK **01** 03:25:42.6, 38°.28N×38°.84E, h5km, ML2.5/7*
*AFAD **01** 03:25:44.3, 38°.32N×38°.86E, h7km±2km, ML2.1*
ISC 01 03:25:43.6±1.1, **38°.29N**±0°.03×**38°.84E**±0°.04, **h9km**±10km, **n14,** σ**0s.53**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.24	30	P	Pg	03 25 48.6	+0.2
ELZG				S	Sg	03 25 52.0	+0.2
ELZG				IAML		03 25 53.0	
	comp=N,1μm,0.4s						
ELZG				IAML		03 25 53.0	
	comp=E,1μm,0.3s						
MAYA	Malatya/Merkez	0.32	276	P	Pb	03 25 51.7	0.0
MAYA				S	Sb	03 25 56.8	-0.2
MAYA				IAML		03 25 57.0	
	comp=N,746nm,0.2s						
MAYA				IAML		03 25 57.0	
	comp=E,818nm,0.2s						
NARI	Adyaman-Kaht	0.41	188	P	Pb	03 25 53.4	+0.4
NARI				S	Sb	03 25 59.6	+0.2
ELZ	Elazig	0.49	36	P	Pg	03 25 53.3	+0.1
ELZ				S	Sg	03 25 59.6	-0.1
ELZ				IAML		03 26 00.0	
	comp=N,136nm,0.3s						
ELZ				IAML		03 26 00.0	
	comp=E,188nm,0.4s						
KAHTU	Kahta	0.52	200	P	Pb	03 25 55.9	+1.0
KAHTU				S	Sb	03 26 03.2	+0.7
KAHTU				IAML		03 26 06.0	
	comp=E,103nm,0.5s						
KAHTU				IAML		03 26 10.0	
	comp=N,129nm,0.4s						
MCKZ	Bingol	0.83	8	P	Pg	03 25 59.6	0.0
MCKZ				S	Sb	03 26 10.9	-0.8
MCKZ				IAML		03 26 11.0	
	comp=N,79nm,0.3s						
MCKZ				IAML		03 26 11.0	
	comp=E,156nm,0.3s						
URFA	Urfa	0.85	181	Pg	Pg	03 25 59.0	-0.9
URFA				Sg	Sb	03 26 12.7	+0.6
KOVA	Elazig, Kovanc	0.87	61	P	Pn	03 26 01.6	-0.6
KOVA				S	Sn	03 26 15.7	+0.6
ARPR	Arapgir-MALATY	0.89	334	Pg	Pg	03 26 00.9	+0.2
ARPR				Sg	Sb	03 26 14.4	+1.0
DYBB	Diyarbakir	1.08	108	Pn	Pb	03 26 04.8	+0.3
DYBB				Sn	Sn	03 26 20.2	0.0
ILIC	ilic-Erzincan	1.18	350	Pn	Pb	03 26 06.3	+0.1
BNGB	Bingl	1.60	64	Pn	Pb	03 26 13.2	-0.3
GAZ	Gaziantep	1.70	230	Pn	Pb	03 26 14.9	-0.2
KMRS	Kahramanmaras	1.72	243	Pn	Pb	03 26 15.3	-0.1

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*SSNC **01** 03:27:46.3±1.4, 18°.82N×81°.30W, h20km±24km, MD3.2, MW2.7, Presumed earthquake*
*JSN **01** 03:27:46.0±1.8, 20°.17N×80°.94W, h51km±999km, MW4.1, Presumed earthquake*
ISC 01 03:27:47.5±2.0, **19°.10N**±0°.09×**80°.94W**±0°.08, **h10km, n13,** σ**2s.19**/18, **2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	Blossom Villag	0.99	55	eP	Pn	03 28 08.8	+1.4
LCCY				eS	Sg	03 28 17.5	-1.8
CBCY	The Bluff, Cay	1.28	60	eP	Pg	03 28 12.4	+0.3
CBCY				eS	Sn	03 28 30.5	+1.8
MGV	Manicaragua	3.13	17	eP	Pn	03 28 37.7	+0.9
MTDJ	Mount Denham	3.34	105	eP	Pn	03 28 40.3	+0.4
MTDJ				eS	Sn	03 29 18.8	-0.9
MTDJ	Mount Denham	3.34	105	⇓iP	Pn	03 28 41.0	+1.1
CCCC	Cccc	3.64	54	eP	Pb	03 28 51.2	-0.7
LMGC	Las Mercedes	3.83	75	eP	Pn	03 28 47.6	+1.1
LMGC				eS	Sn	03 29 34.3	+2.7
LMGC				eSg	Sb	03 29 37.2	-4.4
STH	Stony Hill	4.05	104	⇓iP	Pn	03 28 50.2	+0.6
SOR	Soroa	4.15	333	eP	Pn	03 28 51.2	+0.3
CHIV	Chivirico	4.36	78	eP	Pn	03 28 57.8	+4.1
MARVS	Santiago de Cu	4.83	79	eP	Pn	03 29 02.6	+2.3
RCC	Rio Carpintero	5.02	79	eP	Pn	03 29 03.8	+0.9
PINC	Pinares de May	5.04	73	eP	Pn	03 29 06.0	+2.9

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*RSPR **01** 03:41:38.3, 17°.85N×66°.86W, h10km, MD3.1/7*
*NEIC **01** 03:41:38.3±1.2, 17°.85N±0°.01×66°.84W±0°.01, h10km±1km,*

ML3.2/35, Md3.1/7(RSPR), Error ellipse: s-maj=3.2km s-min=1.9km az=346.0

*OSPL **01** 03:41:38.5±0.6, 17.°84N×66.°87W, h16^{km}±9^{km}, ML3.8, Presumed earthquake*

*SDD **01** 03:41:38.3±2.1, 17.°84N×66.°85W, h20^{km}±23^{km}, MD3.7, ML2.8, MW3.4, Presumed earthquake*

ISC 01 03:41:38.3±1.0, **17.°88N**±0.°05×**66.°84W**±0.°02, **h16**^{km}±5^{km}, **n44**, σ**0.^{s}46**/69, **9C-8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.10**	**339**		**Pg**	**03 41 41.6**	**-0.1**
GBPR					**Sg**	**03 41 43.9**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.10**	**339**	⇑*i*P	**Pg**	**03 41 41.6**	**-0.1**
GBPR				*e*S	**Sg**	**03 41 43.9**	**+0.1**
MLPR	**Magueyes Islan**	**0.21**	**294**		**Pg**	**03 41 43.0**	**-0.2**
MLPR				Sg	**Sg**	**03 41 46.5**	**0.0**
MLPR				IAML		03 41 46.8	
	6µm,0.5s						
MLPR				IAML		03 41 47.0	
	3µm,0.3s						
OBIP	**Obispado Ponce**	**0.28**	**55**		**Pg**	**03 41 44.4**	**+0.1**
OBIP	**Obispado Ponce**	**0.28**	**55**	⇓*i*P	**Pg**	**03 41 44.4**	**+0.1**
OBIP				*e*S	**Sb**	**03 41 49.2**	**-0.2**
OBIP	**Obispado Ponce**	**0.28**	**55**	*i* P	**Pg**	**03 41 44.4**	**+0.1**
OBIP				*e*S	**Sb**	**03 41 49.2**	**-0.2**
OBIP				IAML		03 41 50.1	
	comp=Z,11µm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.28**	**296**		**Pg**	**03 41 44.2**	**-0.2**
CRPR				Sg	**Sg**	**03 41 48.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.28**	**296**	IAML		03 41 48.6	
	comp=Z,3µm,0.2s						
CRPR				IAML		03 41 48.8	
	comp=Z,2µm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.28**	**296**	⇑*e*Pg	**Pg**	**03 41 44.2**	**-0.2**
CRPR				⇓*e*Sg	**Sg**	**03 41 48.4**	**-0.1**
CRPR				IAML		03 41 48.7	
	comp=N,2µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.28**	**296**	⇑*i*P	**Pg**	**03 41 44.2**	**-0.2**
CRPR				*e*S	**Sg**	**03 41 48.4**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.28**	**296**	*i* P	**Pg**	**03 41 44.2**	**-0.2**
CRPR				*e*S	**Sg**	**03 41 48.4**	**-0.1**
CRPR				IAML		03 41 48.7	
	comp=Z,2µm,0.3s						
CELP	**Cerrillos**	**0.32**	**53**		**Pg**	**03 41 45.1**	**+0.1**
CELP				Sg	**Sb**	**03 41 50.3**	**-0.2**
CELP				IAML		03 41 51.0	
	comp=Z,3µm,0.2s						
CELP				IAML		03 41 51.2	
	comp=Z,2µm,0.1s						
LSP	**Las Mesas**	**0.37**	**322**		**Pg**	**03 41 45.9**	**0.0**
LSP					**Sb**	**03 41 51.9**	**-0.3**
LSP	**Las Mesas**	**0.37**	**322**	⇓*i*P	**Pg**	**03 41 45.9**	**0.0**
LSP				*e*S	**Sb**	**03 41 51.9**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.39**	**18**		**Pg**	**03 41 46.1**	**-0.1**
UUPR				Sg	**Sg**	**03 41 51.6**	**0.0**
PRSN	**Puerto Rico Se**	**0.44**	**319**		**Pg**	**03 41 46.9**	**-0.2**
PRSN				IAML		03 41 54.3	
	comp=Z,3µm,0.2s						
PRSN				IAML		03 41 58.0	
	comp=Z,3µm,0.3s						
PRSN	**Puerto Rico Se**	**0.44**	**319**		**Sg**	**03 41 53.4**	**+0.2**
PRSN	**Puerto Rico Se**	**0.44**	**319**	⇑*e*Pg	**Pg**	**03 41 46.9**	**-0.2**
PRSN				⇑*e*Sg	**Sg**	**03 41 53.3**	**+0.2**
PRSN				IAML		03 41 56.2	
	comp=N,1µm,0.2s						
PRSN	**Puerto Rico Se**	**0.44**	**319**	⇑*i*P	**Pg**	**03 41 47.0**	**-0.2**
PRSN				*e*S	**Sg**	**03 41 53.4**	**+0.2**
ECPR	**Experimental S**	**0.63**	**47**		**Pg**	**03 41 50.3**	**-0.4**
ECPR				IAML		03 42 00.9	
	comp=N,2µm,0.3s						
ECPR	**Experimental S**	**0.63**	**47**	⇓*i*P	**Pg**	**03 41 50.4**	**-0.4**
ECPR				*e*S	**Sg**	**03 41 59.0**	**-0.1**
AGPR	**Aguadilla, PR**	**0.63**	**336**		**Pg**	**03 41 50.3**	**-0.5**
AGPR				IAML		03 42 03.0	
	comp=N,528nm,0.5s						
AGPR	**Aguadilla, PR**	**0.63**	**336**	⇑*e*Pg	**Pg**	**03 41 50.3**	**-0.5**
AGPR				⇓*e*Sg	**Sg**	**03 41 59.4**	**+0.2**
AGPR				IAML		03 42 06.8	
	comp=N,437nm,0.3s						
AGPR	**Aguadilla, PR**	**0.63**	**336**	⇑*i*P	**Pg**	**03 41 50.3**	**-0.5**
AGPR				*e*S	**Sg**	**03 41 59.5**	**+0.2**
AGPR	**Aguadilla, PR**	**0.63**	**336**	*i* P	**Pg**	**03 41 50.3**	**-0.5**
EMPR	**Esperanza - Ma**	**0.66**	**27**		**Pg**	**03 41 51.4**	**+0.1**
EMPR					**Sb**	**03 42 00.8**	**+0.3**
EMPR	**Esperanza - Ma**	**0.66**	**27**	⇑*e*P	**Pg**	**03 41 51.4**	**+0.1**
EMPR				*e*S	**Sb**	**03 42 00.8**	**+0.3**
SJG	**San Juan**	**0.70**	**71**		**Pg**	**03 41 51.5**	**-0.5**
SJG	**San Juan**	**0.70**	**71**	⇓*e*P	**Pg**	**03 41 51.5**	**-0.5**
SJG				*e*S	**Sg**	**03 42 01.3**	**+0.1**
SJG	**San Juan**	**0.70**	**71**	*i* P	**Pg**	**03 41 51.5**	**-0.5**
SJG				*e*S	**Sb**	**03 42 01.7**	**+0.1**
SJG				IAML		03 42 03.6	
	comp=Z,6µm,0.2s						
IDE	**Isla Desecheo**	**0.78**	**310**		**Pb**	**03 41 52.7**	**-0.9**
IDE					**Sb**	**03 42 03.4**	**-0.6**
IDE	**Isla Desecheo**	**0.78**	**310**	⇑*e*P	**Pb**	**03 41 52.7**	**-0.9**
IDE				*e*S	**Sb**	**03 42 03.4**	**-0.6**
PDPR	**Patillas Dam,**	**0.79**	**80**		**Pb**	**03 41 53.3**	**-0.5**
GCPR	**Guaynabo City**	**0.84**	**60**		**Pb**	**03 41 53.8**	**-0.7**
GCPR	**Guaynabo City**	**0.84**	**60**		**Sb**	**03 42 05.2**	**-0.4**
GCPR	**Guaynabo City**	**0.84**	**60**	⇑*e*P	**Pb**	**03 41 53.8**	**-0.7**
GCPR				*e*S	**Sb**	**03 42 05.2**	**-0.4**
HUMP	**Col San Antoni**	**0.98**	**75**		**Pb**	**03 41 56.1**	**-0.8**
HUMP				IAML		03 42 11.0	
	comp=Z,362nm,0.2s						
HUMP				IAML		03 42 13.3	
	comp=Z,318nm,0.2s						
HUMP	**Col San Antoni**	**0.98**	**75**		**Sb**	**03 42 09.5**	**-0.2**
HUMP	**Col San Antoni**	**0.98**	**75**	⇓*e*P	**Pb**	**03 41 56.1**	**-0.8**
HUMP				*e*S	**Sb**	**03 42 09.5**	**-0.2**
CUPR	**Culebra, Puert**	**1.54**	**74**		**Pb**	**03 42 05.9**	**-0.7**
PCDR	**Punta Cana, DR**	**1.59**	**293**	⇑*e*Pg	**Pb**	**03 42 06.7**	**-0.7**
PCDR				IAML		03 42 34.4	
	comp=N,94nm,1.3s						
MIDR	**Miches**	**2.36**	**298**	⇑*e*Pg	**Pb**	**03 42 20.2**	**-0.4**
DR12	**Loma Pena Alta**	**2.57**	**291**		**Pn**	**03 42 21.0**	**+1.5**
HATOM	**Hato Mayor del**	**2.57**	**291**	⇓*e*Pg	**Pn**	**03 42 20.8**	**+1.4**
HATOM				IAML		03 43 03.1	
	comp=N,40nm,1.4s						

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*ISK **01** 03:58:38.9, 41.°07N×45.°27E, h5^{km}, ML2.2/6*

*AZER **01** 03:58:38.1, 41.°08N×45.°44E, h10^{km}, ml3.0*

*AFAD **01** 03:58:40.8, 40.°96N×45.°30E, h11^{km}±1^{km}, ML2.5*

ISC 01 03:58:39.6±0.8, **41.°04N**±0.°02×**45.°42E**±0.°02, **h10**^{km}±6^{km}, **n39**, σ**0.^{s}99**/73, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
QZX	**Qazax, Azerbai**	**0.04**	**290**	P	**Pg**	**03 58 41.8**	**+0.1**
QZX				S	**Sg**	**03 58 42.9**	**-0.2**
GDB	**GEDABAY**	**0.41**	**142**	P	**Pg**	**03 58 47.6**	**-0.1**
GDB				S	**Sg**	**03 58 53.3**	**+0.1**
GANJ	**Ganja**	**0.79**	**120**	P	**Pg**	**03 58 54.2**	**-0.7**
GANJ				S	**Sg**	**03 59 04.6**	**-0.5**
TBLG	**Delisi**	**0.86**	**323**	Pg	**Pg**	**03 58 54.9**	**-1.3**
TBLG				Sg	**Sg**	**03 59 06.9**	**-0.5**
GNI	**Garni**	**1.03**	**210**	Pg	**Pb**	**03 58 59.3**	**-0.4**
GNI				Sg	**Sn**	**03 59 14.2**	**-0.7**
ZKTA	**Zakatala**	**1.08**	**56**	P	**Pb**	**03 58 59.8**	**-0.6**
ZKTA				S	**Sg**	**03 59 15.2**	**+0.7**
MNGR	**Mingechevir, A**	**1.29**	**102**	P	**Pg**	**03 59 04.4**	**0.0**
MNGR				S	**Sg**	**03 59 23.8**	**+2.7**
SEKA	**Sheki**	**1.35**	**82**	Pg	**Pn**	**03 59 04.0**	**-0.6**
SEKA				Sg	**Sg**	**03 59 23.2**	**+0.1**
HYR	**Heyderabad**	**1.39**	**198**	Pn	**Pg**	**03 59 06.3**	**-0.1**
HYR				Sg	**Sg**	**03 59 26.0**	**+1.5**
EAK	**Akyaka**	**1.42**	**256**	P	**Pn**	**03 59 05.7**	**0.0**
EAK				S	**Sb**	**03 59 24.5**	**-0.1**
EAK				IAML		03 59 29.0	
	comp=E,94nm,0.7s						
EAK				IAML		03 59 35.0	
	comp=N,76nm,0.5s						
BRDA	**Brd**	**1.55**	**120**	Pn	**Pg**	**03 59 09.3**	**0.0**
BRDA				Sn	**Sg**	**03 59 31.5**	**+2.2**
IGDI	**IGDIR**	**1.56**	**222**	P	**Pn**	**03 59 07.9**	**+0.4**
IGDI				S	**Sb**	**03 59 28.6**	**+0.1**
IGDI	**IGDIR**	**1.56**	**222**	Pg	**Pn**	**03 59 07.7**	**+0.2**
IGDI				Sg	**Sb**	**03 59 28.3**	**-0.2**
AGDM	**Agdam**	**1.59**	**126**	Pn	**Pb**	**03 59 08.9**	**-0.1**
AGDM				Sg	**Sb**	**03 59 29.9**	**+0.7**
SBZ	**Shahbuz**	**1.65**	**177**	Pn	**Pb**	**03 59 10.4**	**+0.3**
SBZ				Sg	**Sg**	**03 59 32.5**	**-0.1**
DIGO	**Kars**	**1.68**	**249**	P	**Pb**	**03 59 10.4**	**-0.4**
DIGO				S	**Sb**	**03 59 31.7**	**-0.4**
DIGO				IAML		03 59 33.0	
	comp=N,131nm,0.5s						
DIGO				IAML		03 59 36.0	
	comp=E,185nm,0.3s						
KARS	**Kars**	**1.83**	**258**	Pn	**Pn**	**03 59 11.1**	**-0.1**
KARS				Sn	**Sn**	**03 59 34.7**	**+0.2**
QBL	**Gabala**	**1.83**	**92**	Pn	**Pb**	**03 59 12.5**	**-0.7**
QBL				Sn	**Sg**	**03 59 38.1**	**-0.4**
NAX	**Nakhchivan**	**1.87**	**178**	Pn	**Pg**	**03 59 15.0**	**-0.5**
NAX				Sn	**Sg**	**03 59 39.9**	**+0.2**
ZRD	**Zardab**	**1.88**	**113**	Pn	**Pb**	**03 59 14.2**	**+0.2**
ZRD				Sn	**Sg**	**03 59 41.0**	**+1.0**
XNQ	**Khinaliq**	**2.06**	**86**	Pn	**Pn**	**03 59 15.5**	**+1.0**
XNQ				Sn	**Sb**	**03 59 43.5**	**+0.6**
EPOS	**Posof**	**2.08**	**284**	P	**Pb**	**03 59 18.1**	**+0.5**
EPOS				S	**Sb**	**03 59 45.2**	**+1.6**
EPOS				IAML		03 59 47.0	
	comp=E,36nm,0.3s						
EPOS				IAML		03 59 48.0	
	comp=N,38nm,0.4s						
BLQ	**Beylaqan**	**2.10**	**128**	Pn	**Pb**	**03 59 17.2**	**-0.6**
BLQ				Sn	**Sb**	**03 59 44.9**	**+1.0**
KOTA	**Agri, Merkez-K**	**2.10**	**235**	P	**Pb**	**03 59 17.4**	**-0.6**
KOTA				S	**Sg**	**03 59 48.7**	**+1.6**
IML	**Ismayilli**	**2.10**	**96**	Pn	**Pb**	**03 59 16.9**	**-1.0**
IML				Sn	**Sb**	**03 59 44.3**	**+0.1**
QRD	**Qoradiz**	**2.15**	**137**	Pn	**Pb**	**03 59 17.9**	**-0.7**
QRD				Sn	**Sb**	**03 59 45.7**	**+0.5**
ORD	**Ordubad**	**2.16**	**168**	Pn	**Pb**	**03 59 18.5**	**-0.3**
ORD				Sn	**Sb**	**03 59 46.8**	**+1.1**
QSAR	**Qusar**	**2.19**	**77**	Pn	**Pb**	**03 59 18.5**	**-0.9**
QSAR				Sn	**Sb**	**03 59 48.2**	**+1.7**
KDMR	**Kurdemir**	**2.20**	**107**	Sn	**Sb**	**03 59 48.3**	**+1.5**
QUBA	**Quba, Azerbaij**	**2.34**	**81**	Pn	**Pb**	**03 59 20.8**	**-1.1**
QUBA				Sn	**Sb**	**03 59 50.3**	**-0.5**
AGRB	**Hanur-Agry**	**2.37**	**233**	Pn	**Pn**	**03 59 19.4**	**+0.7**
SENK	**Senkaya-Erzuru**	**2.38**	**259**	Pn	**Pn**	**03 59 19.1**	**+0.2**
PQL	**Pirkuli**	**2.42**	**95**	Sn	**Sb**	**03 59 53.0**	**-0.1**
SIZA	**Siyzn**	**2.63**	**88**	Pg	**Pb**	**03 59 27.8**	**+0.9**
SIZA				Sg	**Sb**	**04 00 01.1**	**+1.9**
ATGJ	**Altiaghaj**	**2.67**	**93**	Pg	**Pb**	**03 59 27.7**	**+0.2**
ATGJ				Sg	**Sb**	**04 00 00.9**	**+0.6**
GLBA	**Clilabad**	**2.90**	**127**	Pg	**Pb**	**03 59 30.4**	**-1.1**
GLBA				Sn	**Sb**	**04 00 06.0**	**-0.9**
KOPR	**Koprukoy-ERZUR**	**2.92**	**250**	Pn	**Pn**	**03 59 26.9**	**+0.6**
YRD	**Yardimli**	**3.03**	**134**	Pg	**Pb**	**03 59 31.6**	**-2.2**
YRD				Sn	**Sb**	**04 00 10.7**	**-0.2**
LRK	**Lerik**	**3.28**	**136**	Pg	**Pb**	**03 59 36.3**	**-1.8**
LRK				Sg	**Sg**	**04 00 21.9**	**-3.3**

IDC 01 04:05:09.5±64.0, **19.°73S**×**176.°88W**, **h0**^{km}, **mb4.0**/3, **mbtmp4.0**/3, **MS4.0**/1, **Error ellipse: s-maj=1178.0km s-min=177.5km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.07**	**243**	P	P	04 12 38.3	-0.1
	1.1nm,0.5s,baz=84,slow=10,SNR=2.5						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**45.72**	**256**	P	P	04 13 33.2	+0.4
	2.5nm,0.8s,baz=98,slow=7.6,SNR=21						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**45.75**	**261**	P	P	04 13 32.3	-0.7
	1.1nm,0.4s,baz=96,slow=8.2,SNR=14						
	1.1nm,0.4s						
SIJI	**Sorong**	**54.07**	**284**	LR	LR	04 36 44.4	
	comp=Z,123nm,18.6s,baz=116,slow=35						

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*IDC **01** 04:05:36.7±1.2, 54.°00S×2.°15W, h0^{km}, mb4.0/6, mbtmp4.1/7, ML4.6/1, MS3.9/24, Error ellipse: s-maj=42.4km s-min=23.5km az=74.0*

*NEIC **01** 04:05:39.3±0.7, 54.°1S±0.°1×2.°2W±0.°1, h10^{km}±2^{km}, mb4.7/11, Error ellipse: s-maj=22.9km s-min=11.7km az=185.0*

ISC 01 04:05:38.7±0.7, **54.°0S**±0.°1×**2.°2W**±0.°1, **h10**^{km}, **n52**, σ**0.^{s}92**/24, **mb4.5**/10, **MS3.9**/23, **4D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.94**	**187**	⇓P	**P**	**04 09 37.7**	**+0.4**
	comp=Z,3.8nm,0.2s						
VNA2	**Neumayer--Watz**	**17.15**	**186**	⇓P	**P**	**04 09 39.5**	**-0.2**
	comp=Z,3.4nm,0.2s,baz=9.0,slow=15						
VNA3	**Neumayer Olymp**	**17.62**	**188**	⇓P	**P**	**04 09 46.6**	**+1.6**
	comp=Z,1.9nm,0.2s						
SNAA	**Sanae**	**17.75**	**181**	⇓P	**P**	**04 09 48.5**	**+2.1**
	comp=Z,69nm,0.2s						
SNAA	**Sanae**	**17.75**	**181**	P	**P**	**04 09 46.6**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=346,slow=11,SNR=26						
SNAA				LR	LR	04 15 22.7	
	comp=Z,307nm,18.4s,baz=24,slow=33						
	comp=Z,17nm,0.6s						
SNAA	**Sanae**	**17.75**	**181**	P	**P**	**04 09 46.5**	**+0.2**
SUR	**Sutherland**	**27.12**	**46**	LR	LR	04 19 25.7	
	comp=Z,378nm,21.1s,baz=206,slow=31						
PMSA	**Palmer Station**	**31.95**	**226**	LR	LR	04 22 24.3	
	comp=Z,172nm,20.5s,baz=136,slow=32						
BOSA	**Boshof**	**32.30**	**49**	LR	LR	04 22 55.3	
	comp=Z,170nm,18.0s,baz=210,slow=32						
H04S2	**CROZET ISLANDS**	**34.44**	**101**	T	T	04 49 08.8	
	baz=238,slow=75,SNR=23						
H04S3	**CROZET ISLANDS**	**34.44**	**101**	T	T	04 49 10.1	
	baz=238,slow=75,SNR=23						
H04S1	**CROZET ISLANDS**	**34.45**	**101**	T	T	04 49 09.8	
	baz=238,slow=75,SNR=22						
KOOLE	**Kule**	**35.26**	**37**	P	**P**	**04 12 34.0**	**+0.6**
KOOLE				IAmb	IAmb	04 12 36.2	
	comp=Z,34nm,1.4s						
LBTB	**Lobatse**	**35.58**	**47**	LR	LR	04 24 56.0	
	comp=Z,269nm,18.5s,baz=208,slow=33						
KGCAE	**Kacgae**	**36.13**	**40**	P	**P**	**04 12 40.6**	**-0.4**
KGCAE				IAmb	IAmb	04 12 43.7	
	comp=Z,32nm,1.5s						
QSPA	**South Pole Qui**	**36.25**	**180**	P	**P**	**04 12 40.6**	**-1.1**
	comp=Z,4.8nm,0.6s,baz=231,slow=4.5,SNR=6.1						
QSPA				LR	LR	04 26 58.5	
	comp=Z,160nm,20.1s,baz=220,slow=35						
	comp=Z,4.8nm,0.6s						
QSPA	**South Pole Qui**	**36.25**	**180**	P	**P**	**04 12 41.9**	**+0.2**
QSPA				IAmb	IAmb	04 12 43.1	
	comp=Z,6.0nm,0.8s						
MG01	**Puerto William**	**36.80**	**241**	P	**P**	**04 12 46.2**	**0.0**
GRTLG	**Ghanzi**	**37.12**	**38**	P	**P**	**04 12 49.5**	**+0.1**
GRTLG				IAmb	IAmb	04 12 53.1	
	comp=Z,7.5nm,0.7s						
TSUM	**Tsumeb**	**37.91**	**31**	LR	LR	04 25 47.1	
	comp=Z,146nm,18.9s,baz=204,slow=32						
TSUM	**Tsumeb**	**37.91**	**31**	P	**P**	**04 12 57.6**	**+1.5**
XAUDM	**Khaudum**	**39.76**	**36**	P	**P**	**04 13 12.0**	**+0.4**
XAUDM				IAmb	IAmb	04 13 14.7	
	comp=Z,9.7nm,1.1s						
LSZ	**Lusaka**	**45.33**	**43**	LR	LR	04 30 28.9	
	comp=Z,307nm,20.5s,baz=165,slow=33						
SPB	**Sao Paulo**	**45.37**	**294**	P	**P**	**04 13 58.6**	**+1.6**
SPB				IAmb	IAmb	04 14 06.2	
	comp=Z,18nm,1.2s						
H10S2	**ASCENSION HYDR**	**46.02**	**343**	T	T	05 03 43.8	
	baz=168,slow=74,SNR=22						
H10S3	**ASCENSION HYDR**	**46.03**	**343**	T	T	05 03 46.2	
	baz=52,slow=74,SNR=19						
PLCA	**Paso Flores**	**46.37**	**257**	P	**P**	**04 14 04.2**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=54,slow=3.0,SNR=2.9						
	comp=Z,0.8nm,0.8s						
VNDA	**Vanda**	**48.37**	**175**	P	**P**	**04 14 19.8**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=204,slow=6.5,SNR=1.8						
VNDA				LR	LR	04 34 10.7	
	comp=Z,270nm,19.4s,baz=182,slow=35						
	comp=Z,3.7nm,0.9s						
VNDA	**Vanda**	**48.37**	**175**	P	**P**	**04 14 20.4**	**+0.4**
CPUP	**Villa Florida**	**48.79**	**282**	LR	LR	04 32 15.6	
	comp=Z,38nm,19.8s,baz=120,slow=33						
BDFB	**Brasilia**	**52.22**	**299**	P	**P**	**04 14 50.0**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=186,slow=5.2,SNR=3.0						
	comp=Z,1.4nm,0.6s						
BDFB	**Brasilia**	**52.22**	**299**	P	**P**	**04 14 50.0**	**+0.1**
BDFB				IAmb	IAmb	04 14 59.3	
	comp=Z,10nm,1.4s						
MBAR	**Mbarara**	**59.73**	**39**	LR	LR	04 39 02.6	
	comp=Z,100nm,21.4s,baz=200,slow=34						
DBIC	**Dimbokro**	**60.48**	**357**	LR	LR	04 34 47.9	
	comp=Z,48nm,20.2s,baz=185,slow=29						
LPAZ	**La Paz**	**62.87**	**280**	P	**P**	**04 16 04.9**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=105,slow=5.5,SNR=3.7						
LPAZ				LR	LR	04 40 45.0	
	comp=Z,24nm,20.1s,baz=46,slow=34						
	comp=Z,1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.96**	**4**	P	**P**	**04 16 31.3**	**0.0**
	comp=Z,0.3nm,0.9s,baz=193,slow=11,SNR=2.1						
	comp=Z,0.3nm,0.9s						
FURI	**Furi**	**71.50**	**43**	LR	LR	04 47 11.9	
	comp=Z,133nm,18.8s,baz=193,slow=35						
H01W2	**Cape Leeuwin H**	**75.85**	**131**	T	T	05 41 19.0	
	baz=212,slow=75,SNR=38						
H01W1	**Cape Leeuwin H**	**75.86**	**131**	T	T	05 41 20.1	
	baz=212,slow=75,SNR=38						
H01W3	**Cape Leeuwin H**	**75.86**	**131**	T	T	05 41 17.8	
	baz=212,slow=75,SNR=37						
ROSC	**El Rosal**	**83.52**	**287**	LR	LR	04 53 47.1	
	comp=Z,67nm,19.2s,baz=206,slow=35						
MDT	**Midelt**	**86.48**	**358**	LR	LR	04 52 38.1	
	comp=Z,71nm,20.1s,baz=216,slow=33						
URZ	**Urewera**	**88.11**	**179**	LR	LR	04 53 33.7	
	comp=Z,65nm,21.9s,baz=155,slow=33						
EIL	**Elat**	**89.30**	**32**	LR	LR	04 57 45.8	
	comp=Z,119nm,18.5s,baz=112,slow=35						
KEST	**Kesra**	**89.92**	**9**	LR	LR	04 53 44.5	
	comp=Z,26nm,19.6s,baz=325,slow=32						
SJG	**San Juan**	**90.17**	**301**	LR	LR	04 56 34.6	
	comp=Z,31nm,18.4s,baz=160,slow=34						
ASF	**Jabal al Asfar**	**92.23**	**32**	LR	LR	04 59 25.9	
	comp=Z,54nm,18.6s,baz=203,slow=35						
MMAI	**Mount Meron Ar**	**92.55**	**31**	LR	LR	04 59 31.4	
	comp=Z,57nm,18.7s,baz=227,slow=35						
ESDC	**Sonseca Array**	**93.31**	**359**	LR	LR	04 56 26.0	
	comp=Z,44nm,18.2s,baz=302,slow=33						
BRTR	**Keskin Array B**	**98.31**	**27**	LR	LR	05 04 08.4	
	comp=Z,39nm,20.1s,baz=249,slow=36						
HILR	**Hailar Array B**	**144.67**	**73**	PKP	**PKPab**	**04 25 11.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=253,slow=5.9,SNR=1.6						
YKA	**Yellowknife Ar**	**145.02**	**312**	PKPbc	**PKPbc**	**04 25 13.3**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=99,slow=3.1,SNR=15						

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*SJA **01** 04:11:52.3±0.7, 22.°56S×66.°28W, h282^{km}±4^{km}, ML4.1, MW3.9*

*IDC **01** 04:12:02.3±3.3, 21.°69S×66.°04W, h310^{km}±21^{km}, mb3.4/1, mbtmp3.7/4, Error ellipse: s-maj=60.2km s-min=22.8km az=45.0*

ISC 01 04:11:54.3±0.8, **22.°62S**±0.°05×**66.°41W**±0.°05, **h262**^{km}±8^{km}, **n26**, σ**2.^{s}15**/45, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**0.94**	**62**	*e*P	**Pn**	**04 12 30.5**	**-0.4**
YJA				*e*S	S	04 12 50.0	-10
SALTA		**1.60**	**178**	*e*P	**Pn**	**04 12 35.5**	**+0.5**
SALTA				*e*S	**S**	**04 13 07.8**	**+0.5**
AF01	**San Pedro de A**	**1.67**	**258**	*e*P	**Pn**	**04 12 37.5**	**+2.1**
AF01				*e*S	**S**	**04 13 08.0**	**+0.3**
AZAP	**Zapla**	**2.02**	**143**	*e*P	**Pn**	**04 12 37.2**	**-1.0**
AZAP				*e*S	**S**	**04 13 12.2**	**-0.7**
SLA	**San Lorenzo**	**2.25**	**159**	*e*P	**Pn**	**04 12 40.5**	**+0.2**
PB09	**IPOC Station P**	**2.75**	**287**	*e*P	**Pn**	**04 12 46.4**	**+1.2**
PB09				*e*S	**S**	**04 13 27.7**	**+2.3**
PB09				IAML		04 13 30.1	
	comp=Z,136nm,0.1s						
PB06	**IPOC Station P**	**2.92**	**268**	*e*P	**Pn**	**04 12 48.0**	**+1.0**
PB06				*e*S	**S**	**04 13 29.0**	**+0.4**
PB06				IAML		04 13 33.8	
	comp=Z,215nm,0.2s						
PB03	**IPOC Station P**	**3.15**	**280**	*e*P	**Pn**	**04 12 49.9**	**+0.5**
PB03				*e*S	**S**	**04 13 32.4**	**-0.6**
PB03				IAML		04 13 36.5	
	comp=Z,394nm,0.2s						
PB01	**IPOC Station P**	**3.26**	**298**	*e*P	**Pn**	**04 12 51.2**	**+0.6**
PB01				*e*S	**S**	**04 13 34.6**	**-0.5**
PB01				IAML		04 13 38.1	
	comp=Z,242nm,0.2s						
PB07	**IPOC Station P**	**3.34**	**285**	*e*P	**Pn**	**04 12 52.2**	**+0.7**
PB07				*e*S	**S**	**04 13 36.3**	**-0.6**
PB07				IAML		04 13 37.2	
	comp=Z,285nm,0.1s						
PB02	**IPOC Station P**	**3.49**	**291**	*e*P	**Pn**	**04 12 53.4**	**+0.4**
PB02				*e*S	**S**	**04 13 38.1**	**-1.5**
PB02				IAML		04 13 39.6	
	comp=Z,560nm,0.2s						
FSA	**Cafayete**	**3.50**	**174**	*e*P	**Pn**	**04 12 53.6**	**+0.5**
PB05	**IPOC Station P**	**3.51**	**265**	*e*P	**Pn**	**04 12 54.0**	**+0.8**
PB05				*e*S	**S**	**04 13 39.4**	**-0.7**
PB05				IAML		04 13 41.6	
	comp=Z,107nm,0.3s						
PB08	**IPOC Station P**	**3.55**	**313**	*e*P	**Pn**	**04 12 55.1**	**+1.0**
PB08				*e*S	**S**	**04 13 42.0**	**+0.6**
PB08				IAML		04 13 43.8	
	comp=Z,94nm,0.3s						
GO01	**Chusmiza**	**3.92**	**318**	*e*P	**Pn**	**04 12 59.1**	**+0.8**
GO01				*e*S	**S**	**04 13 50.8**	**+1.6**
GO01				IAML		04 13 55.0	
	comp=Z,120nm,0.1s						
PB11	**IPOC Station P**	**4.16**	**313**	*e*P	**Pn**	**04 13 00.3**	**-0.4**
PB11				*e*S	**S**	**04 13 51.5**	**-2.1**
PB11				IAML		04 13 52.3	
	comp=Z,181nm,0.2s						
PB14	**IPOC Station P**	**4.17**	**241**	*e*P	**Pn**	**04 13 01.9**	**+0.9**
PB14				*e*S	**S**	**04 13 50.6**	**-3.4**
PB14				IAML		04 13 56.4	
	comp=Z,260nm,0.3s						
TA02	**Huaiquique**	**4.18**	**303**	*e*P	**Pn**	**04 13 01.5**	**+0.7**
TA02				*e*S	**S**	**04 13 52.0**	**-1.7**
TA02				IAML		04 13 53.4	
	comp=Z,285nm,0.1s						
AC02	**Maricunga**	**4.87**	**210**	*e*P	**Pn**	**04 13 09.8**	**+0.3**
AC02				*e*S	**S**	**04 14 04.4**	**-5.0**
PB16	**IPOC Station P**	**5.16**	**325**	*e*P	**Pn**	**04 13 14.2**	**+1.2**
PB16				*e*S	**S**	**04 14 10.9**	**-4.9**
AC01	**Pan de Azucar**	**5.19**	**227**	*e*P	**Pn**	**04 13 12.9**	**+0.1**
AC01				*e*S	**S**	**04 14 08.5**	**-7.1**
AC01				IAML		04 14 14.0	
	comp=Z,49nm,0.2s						
LPAZ	**La Paz**	**6.50**	**345**	P	**Pn**	**04 13 28.5**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=145,slow=3.2,SNR=8.6						
LPAZ				S	**S**	**04 14 40.7**	**-5.4**
	comp=Z,2.0nm,0.9s,baz=278,slow=25,SNR=4.2						
CPUP	**Villa Florida**	**9.06**	**116**	P	**P**	**04 14 10.8**	**+3.2**
	comp=Z,0.8nm,0.7s,baz=299,slow=14,SNR=3.1						
BDFB	**Brasilia**	**18.70**	**71**	P	**P**	**04 15 53.0**	**-1.1**
	comp=Z,3.6nm,0.6s,baz=246,slow=10.0,SNR=7.5						
TORD	**Torodi Ar. Bea**	**75.57**	**69**	P	**P**	**04 23 09.8**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=246,slow=6.2,SNR=13						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**145.11**	**39**	PKP	**PKPdf**	**04 31 01.4**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=316,slow=3.3,SNR=6.4						

DJA 01 04:19:26.2±0.9, **4.°N**±6.°×**12.°6E**±.°, **h21**^{km}±5^{km}, **M4.1**/8, **mB5.3**/1, **mb4.2**/4, **MLv4.1**/8, **Mw(mB)4.8**/1, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.07**	**228**	P	Pn	04 19 45.6	-0.5
SGSI				S	Sn	04 20 00.6	+0.2
TNTI	**Ternate**	**3.76**	**164**	P	Pn	04 20 22.8	-0.2
MRSI	**Marisa**	**5.87**	**228**	P	Pn	04 20 53.2	+1.1
	0.2nm3µm31nm,0.5s						
SANI	**Sanana**	**6.43**	**183**	P	Pn	04 20 59.4	-0.3
	0.1nm16nm,0.9s						

DJA 01 04:33:50.1±0.5, **8.°S**±6.°×**11.°7E**±.°, **h17**^{km}±5^{km}, **M3.6**/12, **mB6.2**/1, **mb4.0**/3, **MLv3.5**/12, **Mw(mB)5.9**/1, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.41**	**131**	P	Pb	04 33 59.3	+0.4
TWSI				S	Sb	04 34 06.3	+1.5
KHKI	**Kahang-Kahang**	**0.96**	**276**	P	Pb	04 34 08.3	0.0
KHKI				S	Sg	04 34 21.6	+0.3
PLAI	**Plampang**	**1.25**	**107**	P	Pn	04 34 12.9	+0.2
PLAI				S	Sn	04 34 29.7	+0.6
DNP	**Denpasar**	**1.36**	**261**	P	Pn	04 34 14.2	-0.1
IGBI	**Denpasar**	**1.45**	**256**	P	Pb	04 34 16.4	-0.3

IGBI S Sb 04 34 35.5 +0.7
RTBI Rangdo, Negare 1.61 270 P Pn 04 34 17.7 -0.1
RTBI S Sn 04 34 38.5 +0.3
DBNI Kabupaten Domp 1.72 91 P Pn 04 34 19.9 +0.6
JAGI Jajag, Banyuwa 2.39 270 P Pn 04 34 27.7 -0.8
GMJI Gumukmas 3.10 273 P Pn 04 34 37.6 -0.7
BSSI Bau Bau, Buton 4.52 60 P Pn 04 34 56.2 -1.7
SNJI Sawahan-Nganju 4.81 278 P Pn 04 35 02.5 +0.5
EDFI Ende, Flores 5.07 94 P Pn 04 35 04.0 -1.5
0.1nm23µm12nm,1.3s
PCJI Pacitan 5.34 273 P Pn 04 35 08.5 -0.6
0.1nm28nm,1.7s
PMSI Majene 5.46 25 P Pn 04 35 12.6 +1.8

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*BUL **01** 04:35:03.9±1.0, 26.°65S×23.°46E, h12km±25km, MD3.6, Presumed earthquake*
*BGSI **01** 04:35:13.0±1.6, 26.°89S×26.°59E, h29km±97km, ML2.5*
ISC 01 04:35:06.6±1.5**, 26.°88S**±0.°05×**26.°6E**±0.°1**, h5km, n11, σ1.°82**/16**, South Africa**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LBTB Lobatse 2.08 333 *i* P **Pg** **04 35 45.6 -0.8**
LBTB *i* S **Sn** **04 36 07.1 -1.5**
LBTB IAML 04 36 13.9
comp=E,90nm,0.4s
LBTB Lobatse 2.08 333 *i* P **Pb** **04 35 45.2 +0.3**
LBTB *i* S **Sg** **04 36 13.8 +0.4**
LBTB Lobatse 2.08 333 P **Pb** **04 35 44.8 0.0**
BOSA Boshof 2.12 215 *i* P **Pn** **04 35 44.0 +1.2**
BOSA *i* S **Sg** **04 36 14.4 -0.3**
BOSA Boshof 2.12 215 P **Pn** **04 35 44.0 +1.2**
SKOMA Sekoma 3.39 313 *i* P **Pn** **04 36 02.4 +2.2**
SKOMA *i* S **Sn** **04 36 39.0 -2.0**
SKOMA IAML 04 37 07.5
comp=N,27nm,0.2s
LPHEP Lephephe 3.57 348 *i* P **Pn** **04 36 05.1 +2.4**
LPHEP *i* S **Sn** **04 36 44.2 -1.2**
LPHEP IAML 04 37 01.3
comp=E,29nm,0.2s
LPHEP Lephephe 3.57 348 P **Pn** **04 36 05.1 +2.4**
MREMI Moremi 4.35 10 P **Pn** **04 36 15.2 +1.7**
BROLN Tlhalogang 5.79 6 *i* P **Pn** **04 36 34.4 +1.2**
BROLN *i* S **Sn** **04 37 36.8 -3.3**
BROLN IAML 04 38 09.0
comp=E,12nm,0.5s
BLWY Bulawayo 6.95 15 *i* P Pn 04 36 57.5 +8.3
BLWY *i* S Sb 04 38 20.9 -10

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*IDC **01** 04:37:37.8±2.5, 4.°44S×144.°33E, h101km±25km, mb3.2/4, mbtmp3.6/7, MS3.1/2, Error ellipse: s-maj=26.6km s-min=18.9km az=57.0*
ISC 01 04:37:37.8±1.1**, 4.°4S**±0.°1×**144.°3E**±0.°2**, h100km, n9, σ0.°68**/8**, mb3.3**/4**, Near north coast of New Guinea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAY Jayapura 4.08 298 P **Pn** **04 38 38.3 +0.2**
6.9nm,0.4s,baz=123,slow=5.7,SNR=5.9
PMG Port Moresby 5.69 150 P **Pn** **04 39 00.4 +0.5**
24nm,0.6s,baz=346,slow=8.3,SNR=6.4
PMG S **Sn** **04 40 03.6 -0.4**
8.7nm,0.4s,baz=325,slow=17,SNR=1.8
CTA Charters Tower 15.68 173 LR LR 04 48 34.5
comp=Z,15nm,20.2s,baz=14,slow=42
WRA Warramunga Arr 18.23 211 P **P** **04 41 42.1 -1.3**
0.5nm,0.5s,baz=31,slow=11,SNR=13
ASAR Alice Springs 21.61 207 P **P** **04 42 20.4 +0.5**
0.5nm,0.5s,baz=39,slow=7.5,SNR=11
0.5nm,0.5s
FITZ Fitzroy Crossi 22.77 232 P **P** **04 42 31.9 -0.1**
2.2nm,0.5s,baz=47,slow=9.2,SNR=5.4
2.2nm,0.5s
JCJ Chichijima 31.41 356 LR LR 04 54 07.7
comp=Z,137nm,21.1s,baz=150,slow=32
MKAR Makanchi Array 74.60 321 P **P** **04 49 06.1 0.0**
0.2nm,0.7s,baz=113,slow=5.3,SNR=2.9
0.2nm,0.7s
ILAR Eielson Array 85.11 24 P **P** **04 50 02.1 -0.3**
0.3nm,0.6s,baz=248,slow=5.0,SNR=5.8
0.3nm,0.6s

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*IDC **01** 04:37:29.2±1.3, 45.°39N×148.°37E, h0km, mb3.8/6, mbtmp3.8/6, MS3.7/2, Error ellipse: s-maj=39.9km s-min=33.3km az=71.0*
*NEIC **01** 04:37:39.4±0.9, 45.°3N±0.°1×148.°63E±0.°10, h87km±9km, mb4.2/7, Error ellipse: s-maj=15.1km s-min=9.7km az=164.0*
*MOS **01** 04:37:41.2±1.4, 44.°78N×148.°51E, h91km, mb4.0/2, Error ellipse: s-maj=35.5km s-min=17.1km az=139.6*
*JMA **01** 04:37:43.0±0.5, 44°N±3°×14°8E±°, h128km, MV3.6/23, SE OFF ETOROFU*
*SKHL **01** 04:37:42.3±0.1, 44.°50N×148.°50E, h100km±7km, mb4.6/4, msha5.2/4*
ISC 01 04:37:42.5±0.8**, 44.°87N**±0.°07×**148.°20E**±0.°08**, h123km**±6km**, n49, σ2.°29**/57**, mb3.8**/11**, 2C-1D, Kuril Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 0.43 327 *c i*PN **Pn** **04 37 59.3 -1.0**
KUR *i* S **Sn** **04 38 13.5 -0.3**
KUR Kuril'sk 0.43 327 *e*P **Pn** **04 38 00.9 +0.6**
KUR AMB AMB 04 38 01.4
220nm,0.4s
KUR *e*S **Sn** **04 38 14.9 +1.1**
KUR A A 04 38 17.5
420nm,0.4s
KUR A A 04 38 17.5
150nm,0.4s
YUK Yuzh-Kuril'sk 1.87 244 *c i*PN **Pn** **04 38 14.8 +0.4**
YUK *i* S **Sn** **04 38 38.4 -0.4**
YUK pmax pmax
comp=Z,677nm,0.2s
YUK smax smax
comp=N,238nm,0.2s
YUK smax smax
comp=E,383nm,0.3s
YUK Yuzh-Kuril'sk 1.87 244 *e*P **Pn** **04 38 14.4 0.0**
YUK AMB AMB 04 38 15.1
comp=E,500nm,0.5s
YUK *i* S **Sn** **04 38 38.2 -0.6**
YUK A A 04 38 42.7
comp=E,240nm,0.5s
YUK A A 04 38 42.7
comp=E,380nm,0.5s
GLVR Golovnino 2.23 241 *e*PN **Pn** **04 38 18.8 -0.1**
GLVR *e*S **Sn** **04 38 46.4 -0.4**
GLVR pmax pmax
comp=Z,131nm,0.1s
GLVR smax smax
comp=N,138nm,0.1s
GLVR smax smax
comp=E,315nm,0.5s
GLVR Golovnino 2.23 241 *e*P **Pn** **04 38 18.8 -0.1**
GLVR AMB AMB 04 38 19.6
comp=E,130nm,0.4s
GLVR *e*S **Sn** **04 38 46.4 -0.4**
GLVR A A 04 38 47.3
comp=E,140nm,0.3s
GLVR A A 04 38 47.3
comp=E,320nm,0.3s
NEM2 Nemuro 2 2.32 230 P **Pn** **04 38 18.9 -1.1**
NEM2 *e*S **Sn** **04 38 45.5 -3.3**
NMR Nemuro--Hokkai 2.33 231 ⇓*i*PN **Pn** **04 38 18.7 -1.3**
NMR *i* S **Sn** **04 38 45.2 -3.7**
NMR Nemuro--Hokkai 2.33 231 *i* P **Pn** **04 38 18.8 -1.3**
JRA Rausu 2.39 248 *e*P **Pn** **04 38 21.5 +0.6**
JNSB Nemuroshibetsu 2.54 246 *e*P **Pn** **04 38 23.6 +0.8**
JNSB *e*S **Sn** **04 38 55.3 +1.5**
JKHN Kushirohamanak 2.83 232 *e*P **Pn** **04 38 25.7 -0.8**
JKHN *e*S **Sn** **04 38 57.2 -3.3**
AKK Akkeshi 3.05 234 *e*P **Pn** **04 38 28.3 -1.1**
JAK Akkeshi 3.15 235 P **Pn** **04 38 29.6 -1.1**
JAK *e*S **Sn** **04 39 04.4 -3.5**
JTKR Abashiri--Toko 3.20 255 *e*P **Pn** **04 38 32.2 +0.8**
JAR Ashorobuto 3.56 245 *e*P **Pn** **04 38 37.1 +1.0**
JAR *e*S **Sn** **04 39 18.1 +0.4**
JKK2 Kamakawa 2 4.03 258 *e*P **Pn** **04 38 43.9 +1.5**
JKA Kamikawa-asahi 4.08 261 Pn **Pn** **04 38 44.6 +1.6**
JKA Kamikawa-asahi 4.08 261 *e*P **Pn** **04 38 44.6 +1.6**
ASAJ Asahikawa 4.08 261 PN **Pn** **04 38 44.6 +1.6**
JCH Churui 4.17 239 *e*S **Sn** **04 39 28.9 -3.2**
YSS Yuzhno-Sakhali 4.33 301 Pn **Pn** **04 38 44.9 -1.5**
JNBK Urakawa-nobuka 4.73 239 *e*P **Pn** **04 38 49.4 -2.3**
JOT Ohata 6.29 239 *e*S **Sn** **04 40 17.2 -6.0**
JANG Nango 6.67 230 *e*S Sn 04 40 24.9 -7.5
MJB9 Matsu-Tunnel 11.25 226 Pn **Pn** **04 40 24.1 +4.5**
MAJO Matsushiro 11.25 226 Pn **Pn** **04 40 23.8 +4.2**
MAJO Matsushiro 11.25 226 PN **Pn** **04 40 23.8 +4.2**
RIDG Independent Ri 41.10 39 P **P** **04 45 09.9 -4.0**
RIDG IAmb IAmb 04 45 22.8
comp=Z,4.5nm,1.1s
GLB Gilahina Butte 41.87 42 P **P** **04 45 15.9 -4.3**
GLB IAmb IAmb 04 45 36.5
comp=Z,10nm,1.3s
MKAR Makanchi Array 44.74 297 P **P** **04 45 43.2 -0.1**
comp=Z,0.4nm,0.6s,baz=77,slow=8.0,SNR=5.9
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 44.74 297 P **P** **04 45 44.0 +0.6**
KKAR Karatay Array 53.86 298 P **P** **04 46 52.9 +0.2**
HNR Honiara 55.08 166 P **P** **04 47 04.0 +2.5**
HNR IAmb IAmb 04 47 23.2
comp=Z,6.9nm,0.5s
HNR Honiara 55.08 166 P **P** **04 47 04.1 +2.5**
HNR pmax pmax
comp=Z,7.0nm,0.5s
AB31 Akbulak array 56.95 309 P **P** **04 47 14.3 -0.4**
AB31 IAmb IAmb 04 47 14.9
comp=Z,1.1nm,0.9s
ABKAR Akbulak array 56.95 309 P **P** **04 47 14.5 -0.2**
ARCES ARCESS Array B 58.46 340 LR LR 05 16 05.3
comp=Z,33nm,18.1s,baz=182,slow=40
FIA1 FINESS Array S 64.22 333 P **P** **04 48 02.5 -1.2**
FINES FINESS Array B 64.22 333 P **P** **04 48 02.5 -1.2**
comp=Z,1.7nm,0.6s,baz=40,slow=6.2,SNR=14
comp=Z,1.7nm,0.6s
FINES FINESS Array B 64.22 333 P **P** **04 48 02.6 -1.1**
WRA Warramunga Arr 65.73 194 P P 04 48 19.0 +5.1
comp=Z,1.1nm,1.1s,baz=10,slow=7.2,SNR=2.5
comp=Z,1.1nm,1.1s
WRA Warramunga Arr 65.73 194 P **P** **04 48 18.4 +4.5**
WRA Warramunga Arr 65.73 194 P **P** **04 48 18.4 +4.5**
NVAR Mina Array Bea 66.35 59 P **P** **04 48 17.5 -0.7**
comp=Z,0.2nm,0.5s,baz=307,slow=6.7,SNR=2.5
comp=Z,0.2nm,0.5s
NOA NORSAR Array B 68.83 339 P **P** **04 48 32.5 -0.6**
comp=Z,1.0nm,1.0s,baz=32,slow=6.5,SNR=4.0
comp=Z,1.0nm,1.0s
HFS Hagfors 68.95 338 P **P** **04 48 33.0 -0.8**
comp=Z,4.1nm,1.1s,baz=25,slow=6.0,SNR=1.7
comp=Z,4.1nm,1.1s
KVAR Kislovodsk Arr 69.57 312 LR LR 05 21 30.6
comp=Z,97nm,18.7s,baz=228,slow=38
BURAR Bucovina Array 75.18 324 P **P** **04 49 11.9 +0.7**
BURAR IAmb IAmb 04 49 20.7
comp=Z,1.5nm,1.2s

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*MOS **01** 04:43:00.6±1.3, 44.°68N×148.°59E, h67km, mb4.1/5, Error ellipse: s-maj=9.6km s-min=8.7km az=88.9*
MOS Felt (III) at Kurilsk; (II-III) at Reydovo.
*JMA **01** 04:43:01.9±0.6, 44°N±2°×14°8E±°, h0km, MV4.7/28, SE OFF ETOROFU*
*NIED **01** 04:43:01.9, 44.°30N×148.°36E, h0km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr-0.32; Mθθ-0.23; Mφφ0.56; Mrθ0.22; Mθφ-0.48; Mφr1.12; Fault plane solution: Mo1.33000×10^15 NP1: φs296.00000°, δ27.00000°, λ-162.00000°. NP2: φs189.00000°, δ82.00000°, λ-64.00000°.*
*IDC **01** 04:43:02.1±0.9, 44.°93N×148.°35E, h56km±5km, mb3.6/16, mbtmp3.8/19, MS2.8/10 Error ellipse: s-maj=25.5km s-min=14.2km az=172.0*
*SKHL **01** 04:43:02.7±0.1, 44.°70N×148.°60E, h68km±6km, mb5.5/4*
*NEIC **01** 04:43:05.9±1.2, 44.°9N±0.°2×148.°4E±0.°1, h84km±7km, mb4.3/19, Error ellipse: s-maj=21.7km s-min=14.7km az=182.0*
ISC 01 04:43:02.0±0.8**, 44.°67N**±0.°05×**148.°59E**±0.°06**, h62km**±6km**, n132, σ1.°51**/139**, mb4.1**/36**, 6C-3D, Kuril Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 0.76 318 *d i*PN Pn 04 43 15.2 -1.9
KUR *i* S **Sn** **04 43 25.8 -2.4**
KUR pmax pmax
comp=Z,3µm,0.4s
KUR pmax pmax
comp=E,892nm,0.3s
KUR pmax pmax
comp=N,784nm,0.2s
KUR smax smax
comp=N,10µm,0.2s
KUR smax smax
comp=E,10µm,0.2s
KUR Kuril'sk 0.76 318 *e*P **Pn** **04 43 16.9 -0.2**
KUR AMB AMB 04 43 16.9
comp=E,2µm,0.3s
KUR *e*S **Sn** **04 43 27.5 -0.7**
KUR A A 04 43 28.6
comp=E,11µm,0.3s
KUR A A 04 43 28.6
comp=E,9µm,0.3s
YUK Yuzh-Kuril'sk 2.06 253 *c i*PN **Pn** **04 43 34.9 +0.7**
YUK *i* S **Sn** **04 43 58.6 -0.1**
YUK pmax pmax
comp=Z,2µm,0.2s
YUK pmax pmax
comp=E,377nm,0.1s
YUK smax smax
comp=N,2µm,0.2s
YUK smax smax
comp=E,3µm,0.4s
YUK Yuzh-Kuril'sk 2.06 253 *e*P **Pn** **04 43 34.7 +0.5**
YUK AMB AMB 04 43 36.6
comp=E,2µm,0.3s
YUK *e*S **Sn** **04 43 58.8 +0.1**
YUK A A 04 44 04.3
comp=E,2µm,0.3s
YUK A A 04 44 04.3
comp=E,3µm,0.3s
GLVR Golovnino 2.40 248 *e*PN **Pn** **04 43 39.3 +0.5**
GLVR *e*S **Sn** **04 44 09.2 +2.2**
GLVR pmax pmax
comp=Z,644nm,0.2s
GLVR smax smax
comp=E,2µm,0.2s
GLVR smax smax
comp=N,1µm,0.3s
GLVR Golovnino 2.40 248 *e*P **Pn** **04 43 39.3 +0.5**
GLVR AMB AMB 04 43 41.4
comp=N,640nm,0.2s
GLVR *e*S **Sn** **04 44 09.2 +2.2**
GLVR A A 04 44 16.2
comp=N,1µm,0.3s
GLVR A A 04 44 16.2
comp=N,2µm,0.3s
NEM2 Nemuro 2 2.43 239 P **Pn** **04 43 38.8 -0.5**
NEM2 *e*S **Sn** **04 44 06.2 -1.7**
NMR Nemuro--Hokkai 2.44 239 ⇓*i*PN **Pn** **04 43 38.7 -0.7**
NMR *e*S **Sn** **04 44 07.7 -0.3**
NMR Nemuro--Hokkai 2.44 239 *i* P **Pn** **04 43 38.9 -0.5**
NMR *e*S **Sn** **04 44 07.7 -0.3**
RUSJ Misakicho 2.46 258 ⇑*i*PN **Pn** **04 43 41.9 +2.2**
RUSJ *i* S **Sn** **04 44 11.9 +3.3**
JRA Rausu 2.59 255 P **Pn** **04 43 42.9 +1.4**
JRA *e*S **Sn** **04 44 12.9 +1.1**
JNSB Nemuroshibetsu 2.73 252 *e*P **Pn** **04 43 44.9 +1.6**
JKHN Kushirohamanak 2.94 239 *e*P **Pn** **04 43 46.4 +0.2**
JNK Nakash 2.99 250 P **Pn** **04 43 48.1 +1.2**
AKK Akkeshi 3.17 240 *e*P **Pn** **04 43 50.0 +0.6**
JAK Akkeshi 3.28 241 P **Pn** **04 43 50.7 -0.1**
JAK *e*S **Sn** **04 44 27.0 -1.5**
JTKR Abashiri--Toko 3.43 260 *e*P **Pn** **04 43 54.2 +1.3**
JAR Ashorobuto 3.74 250 *e*P **Pn** **04 43 59.0 +1.8**
JAR *e*S **Sn** **04 44 42.7 +2.8**
JKK2 Kamakawa 2 4.27 261 *e*P **Pn** **04 44 06.8 +2.4**
JCH Churui 4.31 243 *e*P **Pn** **04 44 06.4 +1.4**
JCH *e*S **Sn** **04 44 54.6 +0.6**
JKA Kamikawa-asahi 4.33 265 **Pn** **04 44 07.2 +2.0**
ASAJ Asahikawa 4.33 265 P **Pn** **04 44 05.2 0.0**
comp=N,11nm,0.4s,baz=67,slow=14,SNR=16
ASAJ LR LR 04 45 51.8
comp=N,95nm,20.9s,baz=30,slow=40
ASAJ Asahikawa 4.33 265 PN **Pn** **04 44 07.2 +2.0**
YSS Yuzhno-Sakhali 4.67 301 **Pn** **04 44 10.8 +1.0**
YSS Yuzhno-Sakhali 4.67 301 *e*PN **Pn** **04 44 10.7 +0.8**
YSS *e*S **Sn** **04 45 03.5 +0.7**
YSS pmax pmax
comp=N,80nm,0.5s
YSS pmax pmax
comp=E,90nm,0.5s
YSS pmax pmax
comp=Z,110nm,0.5s
YSS pmax pmax
comp=Z,100nm,3.5s
YSS MLR MLR
comp=E,200nm,16.0s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS Yuzhno-Sakhali 4.67 301 *e*P **Pn** **04 44 10.7 +0.8**
YSS *e*S **Sn** **04 45 01.7 -1.1**
JWK2 Keihoku 4.79 280 *e*P **Pn** **04 44 14.5 +3.0**
JNBK Urakawa-nobuka 4.87 243 P **Pn** **04 44 13.5 +0.8**
JRBN Rebuntou 5.38 281 *e*P **Pn** **04 44 22.1 +2.5**
JOT Ohata 6.43 242 *e*P **Pn** **04 44 34.1 +0.2**
JANG Nango 6.76 233 *e*P **Pn** **04 44 37.4 -1.2**
JANG *e*S **Sn** **04 45 48.5 -5.6**
JOSM Okushiri--Mats 7.12 252 *e*P **Pn** **04 44 45.0 +1.5**
TYV Tymovskoe 7.37 329 *e*PN **Pn** **04 44 48.7 +1.9**
TYV pmax pmax
comp=Z,6.0nm,0.9s
TYV pmax pmax
comp=Z,100nm,2.6s
TYV Tymovskoe 7.37 329 *e*P **Pn** **04 44 48.2 +1.4**
TYV *e*S **Sn** **04 46 07.0 -1.9**
SKR Severo-Kuril's 7.87 37 *e*P **Pn** **04 44 56.5 +2.9**
PAU Pauzhetka 8.74 36 *e*P **Pn** **04 45 07.4 +1.8**
PETK Petropavlovsk- 10.35 32 LR LR 04 50 08.8
comp=Z,10nm,18.6s,baz=138,slow=42
MJA0 Matsu Arr-Jizo 11.29 228 *e*PN **Pn** **04 45 40.0 -0.5**
MJAR Matsushiro Arr 11.31 228 P **Pn** **04 45 40.0 -0.7**
comp=Z,1.0nm,0.5s,baz=34,slow=14,SNR=4.1
VLA Vladivostok 12.15 269 ⇑*e*PN **Pn** **04 45 50.9 -1.2**
VLA pmax pmax
comp=Z,7.0nm,0.2s
KLR Kul'dur 12.37 298 LR LR 04 50 41.9
comp=Z,14nm,18.8s,baz=116,slow=38
KLR Kul'dur 12.37 298 ⇓*e*PN **Pn** **04 45 54.8 -0.3**
KLR pmax pmax
comp=Z,1.0nm,1.1s
KLR Kul'dur 12.37 298 *e*P **Pn** **04 45 54.8 -0.3**
KSRS Korea Array 17.14 252 LR LR 04 52 21.4
comp=Z,25nm,20.7s,baz=335,slow=33
SEY Seymchan 18.43 5 ⇑*e*P **P** **04 47 11.7 -0.2**
SEY pmax pmax
comp=Z,8.0nm,2.1s
SEY Seymchan 18.43 5 *e*P **P** **04 47 11.8 -0.2**
HILR Hailar Array B 20.16 294 P **P** **04 47 30.3 -0.7**
comp=Z,0.5nm,0.3s,baz=96,slow=12,SNR=2.5
YAK Yakutsk 20.59 334 LR LR 04 55 39.3
comp=Z,43nm,18.4s,baz=69,slow=37
YAK Yakutsk 20.59 334 ⇑*e*P **P** **04 47 35.8 +0.4**
YAK pmax pmax
comp=Z,6.0nm,0.7s
YAK Yakutsk 20.59 334 *e*P **P** **04 47 35.9 +0.5**
SONM Songino Array 29.08 291 P **P** **04 48 55.1 -1.4**
comp=Z,0.2nm,0.4s,baz=77,slow=7.6,SNR=3.6
SONM LR LR 05 02 29.6
comp=Z,30nm,18.7s,baz=194,slow=40
comp=Z,0.2nm,0.4s
H11N2 WAKE ISLAND Hy 29.16 143 T T 05 19 51.8
baz=333,slow=76,SNR=272
H11N1 WAKE ISLAND Hy 29.18 143 T T 05 19 52.9
baz=333,slow=76,SNR=319
H11N3 WAKE ISLAND Hy 29.18 143 T T 05 19 52.9
baz=333,slow=76,SNR=282
H11S1 WAKE ISLAND Hy 30.16 144 T T 05 21 04.8
baz=334,slow=76,SNR=434
H11S3 WAKE ISLAND Hy 30.17 144 T T 05 21 03.2
baz=334,slow=76,SNR=344
H11S2 WAKE ISLAND Hy 30.18 144 T T 05 21 06.2
baz=334,slow=76,SNR=252
F19K Shaleruckik Mo 35.82 33 P **P** **04 49 54.4 -0.6**
H19K Roundabout Mou 36.14 35 P **P** **04 49 58.5 +0.8**
H19K IAmb IAmb 04 50 15.1
comp=Z,4.4nm,1.1s
ILAR Eielson Array 40.13 37 P **P** **04 50 31.2 -0.1**
comp=Z,0.4nm,0.6s,baz=267,slow=7.5,SNR=3.1
ILAR LR LR 05 06 52.0
comp=Z,4.9nm,18.1s,baz=58,slow=36
comp=Z,0.4nm,0.6s
BMAR Burnt Mountain 41.00 33 P **P** **04 50 39.7 +1.3**
ZALV Zalesovo Beam 41.27 307 PcP **PcP** **04 52 38.0 -0.2**
comp=Z,1.1nm,0.6s,baz=102,slow=2.1,SNR=5.3
ZALV pPcP 04 52 54.0
comp=Z,0.7nm,0.6s,baz=44,slow=8.7,SNR=3.6
MKAR Makanchi Array 45.08 297 P **P** **04 51 10.9 -0.7**
comp=Z,0.2nm,0.5s,baz=69,slow=7.9,SNR=4.9
MKAR PcP **PcP** **04 52 51.0 -0.3**
comp=Z,0.4nm,0.6s,baz=65,slow=3.8,SNR=3.9
comp=Z,0.2nm,0.5s
MKAR Makanchi Array 45.08 297 P **P** **04 51 11.2 -0.4**
MKAR Makanchi Array 45.08 297 *i* P **P** **04 51 14.6 +3.0**
MKAR Makanchi Array 45.08 297 *e*P **P** **04 51 14.6 +3.0**
INK Inuvik 45.08 31 P **P** **04 51 11.6 +0.4**
INK IAmb IAmb 04 51 28.1
comp=Z,2.8nm,1.1s
INK Inuvik 45.08 31 P **P** **04 51 11.6 +0.4**
INK pmax pmax
comp=Z,3.0nm,1.1s
KURK Kurchatov 45.88 304 P **P** **04 51 18.2 +0.5**
KURK Kurchatov 45.88 304 ⇑*e*P **P** **04 51 20.3 +2.5**
KURK pmax pmax
comp=Z,1.0nm,1.2s
KURK Kurchatov 45.88 304 *e*P **P** **04 51 20.4 +2.6**
KURBB Kurchatov Arra 45.96 304 P **P** **04 51 17.8 -0.7**
comp=Z,0.5nm,0.3s,baz=75,slow=8.1,SNR=2.7
KURBB PcP **PcP** **04 52 53.5 -0.7**
comp=Z,0.3nm,0.4s,baz=68,slow=3.4,SNR=4.3
comp=Z,0.5nm,0.3s
BVAR Borovoye Array 49.72 309 P **P** **04 51 46.5 -1.0**
comp=Z,0.3nm,0.5s,baz=62,slow=8.0,SNR=2.0
BVAR PcP **PcP** **04 53 07.5 -0.2**
comp=Z,0.6nm,0.5s,baz=90,slow=1.5,SNR=3.6
BVAR LR LR 05 15 39.4
comp=Z,54nm,18.4s,baz=244,slow=40
comp=Z,0.3nm,0.5s
BOOM Boomskoye usch 51.03 295 P **P** **04 51 58.7 +1.0**
BOOM Boomskoye usch 51.03 295 P **P** **04 51 58.7 +1.0**
BOOM pmax pmax
comp=Z,14nm,1.2s
SPITS Spitsbergen Ar 54.08 349 LR LR 05 19 08.9
comp=Z,33nm,18.2s,baz=207,slow=40
YKA Yellowknife Ar 54.46 35 P **P** **04 52 23.2 +0.8**
comp=Z,0.7nm,0.8s,baz=304,slow=7.8,SNR=8.7
YKA pP pP 04 52 37.4 -1.5
comp=Z,0.4nm,0.6s,baz=304,slow=7.6,SNR=4.6
comp=Z,0.7nm,0.8s
YKA Yellowknife Ar 54.46 35 P **P** **04 52 23.0 +0.5**
YKA Yellowknife Ar 54.46 35 *e*P **P** **04 52 23.7 +1.2**
AB31 Akbulak array 57.29 309 P **P** **04 52 42.7 -0.2**
AB31 IAmb IAmb 04 52 45.0
comp=Z,3.6nm,1.4s
ABKAR Akbulak array 57.29 309 P **P** **04 52 42.5 -0.5**
ILON Igloolik, Nuna 60.39 18 P **P** **04 53 02.9 -1.2**
ILON IAmb IAmb 04 53 43.5
comp=Z,3.6nm,1.3s
PLID Pearl Lake 63.46 52 P **P** **04 53 26.4 +1.0**
PLID IAmb IAmb 04 54 00.9
comp=Z,2.2nm,1.1s
FIA1 FINESS Array S 64.52 333 P **P** **04 53 30.6 -1.1**
FINES FINESS Array B 64.52 333 P **P** **04 53 28.7 -3.0**
comp=Z,1.9nm,0.5s,baz=53,slow=6.3,SNR=19
comp=Z,1.9nm,0.5s
FINES FINESS Array B 64.52 333 P **P** **04 53 30.6 -1.1**
FINES FINESS Array B 64.52 333 P **P** **04 53 30.6 -1.1**
FCC Fort Churchill 64.70 31 P **P** **04 53 33.1 +0.1**
FCC IAmb IAmb 04 53 33.6
comp=Z,3.4nm,1.1s
FCC Fort Churchill 64.70 31 P **P** **04 53 33.1 +0.1**
FCC pmax pmax
comp=Z,3.0nm,1.1s
NVAR Mina Array Bea 66.22 59 P **P** **04 53 44.8 +1.4**
comp=Z,0.6nm,0.8s,baz=289,slow=6.9,SNR=6.0
NVAR pP **pP** **04 54 00.2 +0.1**
comp=Z,1.1nm,0.7s,baz=287,slow=6.6,SNR=7.8
comp=Z,0.6nm,0.8s
PDAR Pinedale Array 68.53 51 P **P** **04 53 58.9 +0.9**
comp=Z,0.6nm,0.6s,baz=264,slow=1.4,SNR=7.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PDAR				pP	pP	04 54 13.5	-1.3
	comp=Z,0.5nm,0.6s,baz=255,slow=2.1,SNR=4.5						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	68.53	51	P	P	04 53 59.0	+1.0
NC303	NORSAR Array S	68.91	339	P	P	04 53 59.1	-0.6
NOA	NORSAR Array B	69.11	339	P	P	04 53 59.9	-1.1
	comp=Z,0.4nm,0.3s,baz=30,slow=6.7,SNR=26						
	comp=Z,0.4nm,0.3s						
HFS	Hagfors	69.24	338	P	P	04 54 00.0	-1.7
	comp=Z,1.3nm,0.3s,baz=32,slow=3.9,SNR=38						
	comp=Z,1.3nm,0.3s						
AKASG	Malin Array Be	71.44	324	P	P	04 54 14.7	-0.7
	comp=Z,0.4nm,0.3s,baz=40,slow=5.4,SNR=4.8						
	comp=Z,0.4nm,0.3s						
PV10	Paradox Valley	71.76	54	P	P	04 54 19.2	+1.4
PV10				IAmb	IAmb	04 54 35.8	
	comp=Z,4.9nm,0.9s						
BUR08	Bucovina Ar. S	75.48	324	P	P	04 54 39.1	-0.2
BUR08				IAmb	IAmb	04 55 20.8	
	comp=Z,7.7nm,1.4s						
BURAR	Bucovina Array	75.50	324	P	P	04 54 39.4	0.0
ANMO	Albuquerque	75.63	55	LR	LR	05 27 23.2	
	comp=Z,12nm,19.1s,baz=244,slow=35						
SCHQ	Schefferville	76.41	20	P	P	04 54 44.3	0.0
	comp=Z,2.4nm,0.9s,baz=331,slow=10.0,SNR=3.9						
	comp=Z,2.4nm,0.9s						
STEB	Steborice	76.51	330	*e*P	P	04 54 45.7	+0.8
DPC	Dobruska-Polom	76.67	331	*e*P	P	04 54 46.5	+0.6
DPC	Dobruska-Polom	76.67	331	*e*P	P	04 54 46.5	+0.6
EKA	Eskdalemuir Ar	77.53	344	P	P	04 54 49.7	-0.9
	comp=Z,1.2nm,0.3s,baz=19,slow=4.9,SNR=10						
	comp=Z,1.2nm,0.3s						
ZVC	Zvikov	78.17	332	*e*P	P	04 54 54.4	+0.1
KHC	Kasperske Hory	78.65	332	P	P	04 54 57.1	+0.2
KHC				IAmb	IAmb	04 54 57.7	
	comp=Z,4.0nm,0.5s						
KHC	Kasperske Hory	78.65	332	*e*P	P	04 54 57.1	+0.2
KHC	Kasperske Hory	78.65	332	*e*P	P	04 54 57.1	+0.2
CKRC	Cesky Krumlov	78.66	331	*e*P	P	04 54 56.9	-0.1
CKRC	Cesky Krumlov	78.66	331	*e*P	P	04 54 56.9	-0.1
GEC2	GERESS Array S	78.85	332	P	P	04 54 57.6	-0.5
GEC2				IAmb	IAmb	04 55 00.1	
	comp=Z,3.5nm,1.2s						
GERES	GERESS Array B	78.85	332	P	P	04 54 57.6	-0.5
	comp=Z,1.0nm,0.4s,baz=43,slow=5.9,SNR=8.4						
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	78.85	332	*e*P	P	04 54 57.8	-0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CONA	Conrad Observa	78.88	330	*e*P	P	04 54 55.8	-2.5
	comp=Z,0.4nm,0.3s						
RONA	Rosalia, Austr	78.91	329	*e*P	P	04 54 54.8	-3.6
	comp=Z,1.7nm,0.7s						
SOKA	Soboth	80.24	330	*e*P	P	04 55 04.3	-1.4
	comp=Z,0.1nm,0.2s						
LESA	Schwarzleotal	80.42	331	*e*P	P	04 55 03.6	-3.0
	comp=Z,0.1nm,0.1s						
WATA	Walderalm	80.87	332	*e*P	P	04 55 05.9	-3.2
	comp=Z,2.2nm,0.5s						
WTTA	Wattenberg	80.92	332	*e*P	P	04 55 06.6	-2.8
	comp=Z,2.8nm,0.3s						
RETA	Reutte	81.01	333	*e*P	P	04 55 06.2	-3.6
	comp=Z,1.1nm,0.7s						
MOTA	Moosalm	81.02	332	*e*P	P	04 55 06.5	-3.4
	comp=Z,2.3nm,0.9s						
TX31	Lajitas Ar. Si	81.28	57	P	P	04 55 12.9	+1.4
TXAR	Lajitas Array	81.28	57	P	P	04 55 12.8	+1.3
	comp=Z,0.6nm,0.5s,baz=293,slow=3.8,SNR=8.7						
TXAR				pP	pP	04 55 28.3	-0.6
	comp=Z,1.2nm,0.7s,baz=302,slow=4.2,SNR=11						
	comp=Z,0.6nm,0.5s						
TXAR	Lajitas Array	81.28	57	P	P	04 55 13.0	+1.4
FDMO	Fiordimonte	84.07	329	P	P	04 55 25.6	-0.1
FDMO				IAmb	IAmb	04 55 26.1	
	comp=Z,2.9nm,0.6s						
NRCA	Norcia	84.24	329	P	P	04 55 26.3	-0.3
H03N2	Juan Fernandez	141.93	90	T	T	07 41 19.0	
	baz=304,slow=77,SNR=3.4						
H03N3	Juan Fernandez	141.94	90	T	T	07 41 06.6	
	baz=304,slow=77,SNR=10						
H03N1	Juan Fernandez	141.94	90	T	T	07 41 16.9	
	baz=304,slow=77,SNR=17						
SNAA	Sanae	149.64	197	PKPbc	PKiKP	05 02 43.5	-0.6
	comp=Z,1.3nm,0.3s,baz=298,slow=23,SNR=7.8						
PLCA	Paso Flores	151.16	96	PKPbc	PKiKP	05 02 48.6	+0.3
	comp=Z,0.7nm,0.7s,baz=223,slow=14,SNR=1.9						

*BJI **01** 04:43:48.2, 19°.05S×173°.83W, h51km, mB5.3/7, mb4.8/20, Ms4.8/2, Ms7 4.7/3*

*MOS **01** 04:43:50.8±2.6, 19°.34S×174°.90W, h38km, mb5.0/19, Error ellipse: s-maj=12.4km s-min=11.0km az=84.2*

*NEIC **01** 04:43:50.4±2.3, 19°.3S±0°.1×174°.6W±0°.1, h37km±5km, mb5.0/199, Error ellipse: s-maj=17.4km s-min=12.8km az=147.0*

*NOU **01** 04:43:55.7, 19°.62S×174°.05W, h77km, mb4.9/21, Tonga Islands*

*IDC **01** 04:43:55.9±0.5, 19°.41S×174°.71W, h92km±4km, mb4.3/21, mbtmp4.6/21, MS3.5/19, Error ellipse: s-maj=16.5km s-min=12.3km az=124.0*

ISC 01 04:43:55.1±0.4**, 19°.54S**±0°.05×**174°.48W**±0°.07**, h87**km±3km**, h87**km**:pP-P, n379,** σ1s**82**/290**, mb4.8**/126**, 37C-37D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.30	287	P	Pn	04 45 04.5	+6.2
NIUE	Niue	4.32	85		Pn	04 44 54.2	-4.3
NIUE	Niue	4.32	85	P	Pn	04 44 54.6	-3.9
NIUE	Niue	4.32	85	S	Sn	04 45 37.8	-10
NIUE	Niue	4.32	85	P	Pn	04 44 53.2	-5.4
NIUE				S	Sn	04 45 37.2	-11
TAVE	Taveuni	5.88	298	P	Pn	04 45 26.0	+6.3
DGTI	Dogotuki	6.38	299	P	Pn	04 45 32.1	+5.6
MSVF	Nonsavu	7.31	283	P	Pn	04 45 46.1	+6.8
RAO	Raoul Island	10.17	197	S	Sn	04 48 06.6	-3.7
	195nm,0.3s,baz=73,slow=23,SNR=5.7						
RAO	Raoul Island	10.17	197	Pn	Pn	04 46 16.0	-2.2
RAO	Raoul Island	10.17	197	P	Pn	04 46 16.0	-2.2
GLKZ	Green Lake	10.18	197	P	Pn	04 46 16.9	-1.4
GLKZ				S	Sn	04 48 07.7	-2.8
RAR	Rarotonga	13.89	99	P	Pn	04 47 04.8	-3.5
	318nm,1.0s,baz=260,slow=7.4,SNR=26						
RAR	Rarotonga	13.89	99		Pn	04 47 05.0	-3.2
RAR	Rarotonga	13.89	99	P	Pn	04 47 05.0	-3.2
RAR	Rarotonga	13.89	99	P	Pn	04 47 05.0	-3.2
RAR	Rarotonga	13.89	99	P	Pn	04 47 04.7	-3.5
MARNC	Mare, Loyalty	16.50	260		P	04 47 42.8	+0.3
MARNC				IAmb	IAmb	04 47 45.1	
	comp=Z,84nm,1.0s						
MARNC	Mare, Loyalty	16.50	260	P	P	04 47 45.9	+3.4
PINNC	Pines Island,	17.14	257	P	P	04 47 52.9	+3.3
YATNC	Mamie plateau,	17.60	259	P	Pn	04 47 59.4	+4.5
DZM	Mont Dzumac	18.01	259	P	Pn	04 48 01.2	+1.3
	baz=121,slow=19						
DZM				LR	LR	04 52 35.5	
	comp=Z,175nm,21.7s,baz=134,slow=29						
DZM	Mont Dzumac	18.01	259	*e*P	Pn	04 48 00.4	+0.4
	comp=Z,94nm,1.1s						
DZM				*e*LR	LR	04 52 10.8	
	comp=Z,519nm,25.9s						
DZM	Mont Dzumac	18.01	259		Pn	04 48 01.7	+1.7
DZM	Mont Dzumac	18.01	259	P	Pn	04 48 03.5	+3.5
ONTNC	Ouen Toro	18.02	258	P	Pn	04 48 03.2	+3.2
MXZ	Matakaoa Point	19.03	198	P	Pn	04 48 12.0	+0.1
MXZ	Matakaoa Point	19.03	198	P	P	04 48 08.1	-2.2
KUZ	Kuaotunu	19.18	205	P	Pn	04 48 15.0	+1.4
KUZ	Kuaotunu	19.18	205	P	Pn	04 48 14.7	+1.1
HAZ	Te Kaha	19.37	199	P	P	04 48 14.4	+0.6
HAZ				S	S	04 51 33.2	-15
PKGZ	Pakihiroa	19.38	198	P	P	04 48 14.6	+0.5
PKGZ				S	S	04 51 35.1	-14
PUZ	Puketiti	19.52	197	P	P	04 48 15.3	-0.3
RUGZ	Raukumara Rang	19.59	199	P	P	04 48 16.5	0.0
TWGZ	Tauwhareparae	19.70	198	P	Pn	04 48 20.9	+1.1
URZ	Urewera	20.04	200	P	P	04 48 22.1	+1.0
	comp=Z,40nm,0.5s,baz=360,slow=5.2,SNR=18						
URZ				S	S	04 51 51.7	-10
	comp=Z,10nm,0.4s,baz=73,slow=23,SNR=9.4						
	comp=Z,40nm,0.5s						
URZ	Urewera	20.04	200	P	P	04 48 22.5	+1.3
TOZ	Tahuroa Road	20.12	204		Pn	04 48 25.6	+1.0
HIZ	Hauiti	21.05	204	P	P	04 48 34.6	+2.5
BKZ	Black Stump Fm	21.06	200	P	P	04 48 32.9	+0.6
PXZ	Pawanui	21.74	198	P	P	04 48 38.9	-0.5
BFZ	Birch Farm	22.52	199	P	P	04 48 48.6	+0.8
TBI	Tubuai	23.58	104	*e*LR	LR	04 54 25.7	
	comp=Z,2μm,52.0s						
TBI				*e*T	T	05 13 19.5	
	comp=Z,20nm,0.2s						
TCW	Tory Channel	23.64	202	P	P	04 48 57.5	-1.0
TCW				S	S	04 53 04.5	-2.1
PAE	Paea	23.67	90	*e*T	T	05 13 12.0	
	comp=Z,15nm,0.3s						
PPT2	Papeete2	23.68	89	*e*S	S	04 52 57.4	-11
	comp=Z,138nm,21.5s						
PPT2				*e*LR	LR	04 54 34.8	
	comp=Z,181nm,28.5s						
PPT2				*e*LR	LR	04 54 39.0	
	comp=Z,246nm,29.2s						
PPT2				*e*T	T	05 13 15.2	
	comp=Z,7.1nm,0.3s						
PPT	Papeete	23.69	89	LR	LR	04 56 29.6	
	comp=Z,123nm,21.2s,baz=324,slow=32						
QRZ	Quartz Range	23.95	205	P	P	04 49 02.7	+1.4
QRZ	Quartz Range	23.95	205	P	P	04 49 02.9	+1.6
TKNZ	Takaka Hill	23.96	204	P	P	04 49 00.7	-0.7
TKNZ				S	S	04 53 15.1	+3.1
NNZ	Nelson	23.96	203	P	P	04 49 01.5	+0.1
NNZ				S	S	04 53 12.3	+0.4
MRNZ	Matariki Terra	24.36	204	P	P	04 49 06.2	+1.3
MRNZ				S	S	04 53 22.5	+4.2
THZ	Tophouse	24.61	203	P	P	04 49 08.2	+0.8
THZ				S	S	04 53 25.5	+3.1
KHZ	Kahutara	24.96	201	P	P	04 49 14.1	+3.7
KHZ	Kahutara	24.96	201	P	P	04 49 11.2	+0.8
DSZ	Denniston Nort	25.02	205	P	P	04 49 13.8	+2.7
DSZ				S	S	04 53 34.4	+5.4
LTZ	Lake Taylor	25.73	203	P	P	04 49 21.3	+3.8
INZ	Inchbonnie	26.00	204	P	P	04 49 21.9	+2.1
INZ				S	S	04 53 50.1	+6.0
OXZ	Oxford	26.29	203	P	P	04 49 26.7	+4.2
WVZ	Waitaha Valley	26.57	205	P	P	04 49 26.7	+1.7
HNR	Honiara	26.68	288	LR	LR	04 58 50.7	
	comp=Z,6.4nm,19.6s,baz=46,slow=34						
RPZ	Rata Peaks	26.99	204	P	P	04 49 31.7	+2.9
RPZ	Rata Peaks	26.99	204	P	P	04 49 33.8	+5.0
ARCZ	Arundel	27.14	203	P	P	04 49 33.9	+3.7
TMZ	Timaru	27.58	203	P	P	04 49 36.9	+2.9
JCZ	Jackson Bay	28.19	206	P	P	04 49 42.4	+2.8
TAOE	Nuku Hiva Isla	34.87	77	*e*T	T	05 27 03.7	
	comp=Z,30nm,0.2s						
CTA	Charters Tower	36.89	262	P	P	04 50 54.7	-0.9
	comp=Z,10nm,0.5s,baz=98,slow=11,SNR=12						
CTA				LR	LR	05 04 32.1	
	comp=Z,80nm,20.7s,baz=53,slow=34						
	comp=Z,10nm,0.5s						
CTAO	Charters Tower	36.89	262	P	P	04 50 54.8	-0.9
CTAO				IAmb	IAmb	04 50 57.1	
	comp=Z,18nm,0.9s						
CTAO	Charters Tower	36.89	262	P	P	04 50 54.8	-0.9
CTAO				pmax	pmax		
	comp=Z,18nm,1.0s						
PMG	Port Moresby	38.40	280	LR	LR	05 05 21.4	
	comp=Z,76nm,18.3s,baz=172,slow=34						
PMG	Port Moresby	38.40	280	⇑*e*P	P	04 51 07.9	-0.5
PMG				pmax	pmax		
	comp=Z,15nm,1.7s						
COEN	Coen	40.85	271		P	04 51 27.7	-1.1
STKA	Stephens Creek	41.18	244	P	P	04 51 29.9	-1.5
	comp=Z,4.8nm,0.9s,baz=87,slow=11,SNR=5.6						
STKA				LR	LR	05 06 12.8	
	comp=Z,53nm,19.9s,baz=33,slow=33						
	comp=Z,4.8nm,0.9s						
STKA	Stephens Creek	41.18	244	IAmb	IAmb	04 51 35.5	
	comp=Z,23nm,0.8s						
STKA	Stephens Creek	41.18	244	⇑*e*P	P	04 51 30.0	-1.3
BBOO	Buckleboo	45.93	243	P	P	04 52 07.5	-2.0
BBOO				IAmb	IAmb	04 53 18.0	
	comp=Z,29nm,1.3s						
AS31	Alice Springs	47.96	255		P	04 52 25.1	-0.3
ASAR	Alice Springs	47.96	255	P	P	04 52 23.6	-1.9
	comp=Z,6.0nm,0.5s,baz=86,slow=8.5,SNR=62						
ASAR				PcP	PcP	04 53 51.6	-0.9
	comp=Z,3.5nm,0.8s,baz=102,slow=3.9,SNR=7.4						
ASAR				S	S	04 59 11.2	-5.9
	comp=Z,2.3nm,1.0s,baz=93,slow=16,SNR=9.1						
ASAR				LR	LR	05 10 37.2	
	comp=Z,58nm,21.1s,baz=101,slow=34						
	comp=Z,6.0nm,0.5s						
ASAR	Alice Springs	47.96	255	P	P	04 52 23.8	-1.7
ASAR	Alice Springs	47.96	255	P	P	04 52 23.8	-1.7
WB0	Warramunga Arr	47.99	261	P	P	04 52 23.5	-2.2
WB0				IAmb	IAmb	04 52 54.0	
	comp=Z,31nm,1.8s						
WRAB	Tennant Creek	48.01	260	⇑*e*P	P	04 52 24.0	-1.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WRA	Warramunga Arr	48.02	260	P	P	04 52 23.8	-2.0
	comp=Z,2.4nm,0.5s,baz=97,slow=5.5,SNR=7.4						
WRA				PcP	PcP	04 53 51.0	-1.7
	comp=Z,1.2nm,0.8s,baz=92,slow=3.8,SNR=2.3						
	comp=Z,2.4nm,0.5s						
WRA	Warramunga Arr	48.02	260	P	P	04 52 23.9	-2.0
WRA	Warramunga Arr	48.02	260	P	P	04 52 23.9	-2.0
WRA						04 53 51.0	
WRA				pmax	pmax		
	comp=Z,3.0nm,1.9s						
MTN	Manton Dam	52.48	269	P	P	04 52 58.2	-1.4
MTN				IAmb	IAmb	04 54 15.4	
	comp=Z,18nm,1.2s						
KNRA	Kununurra	54.03	264	P	P	04 53 10.1	-0.9
KNRA				IAmb	IAmb	04 53 11.6	
	comp=Z,12nm,0.8s						
SBA	Scott Base	59.07	185	P	P	04 53 49.4	+3.6
SBA	Scott Base	59.07	185	P	P	04 53 49.4	+3.6
SBA				pmax	pmax		
	comp=Z,381nm,2.0s						
VNDA	Vanda	59.18	186	P	P	04 53 48.6	+2.1
	comp=Z,9.8nm,0.8s,baz=353,slow=6.2,SNR=7.3						
	comp=Z,9.8nm,0.8s						
VNDA	Vanda	59.18	186	P	P	04 53 49.2	+2.7
VNDA	Vanda	59.18	186	P	P	04 53 49.3	+2.7
VNDA				pmax	pmax		
	comp=Z,103nm,2.0s						
VNDA	Vanda	59.18	186	P	P	04 53 49.0	+2.4
VNDA				PcP	PcP	04 54 35.3	+1.2
BATI	Baumata	60.24	269	LR	LR	05 18 21.0	
	comp=Z,65nm,21.4s,baz=18,slow=34						
CCD	Concordia, Ant	64.23	195	P	P	04 54 22.5	+1.5
CCD				PcP	PcP	04 54 57.1	+2.0
QSPA	South Pole Qui	70.53	180	P	P	04 55 02.5	+1.9
	comp=Z,27nm,0.9s,baz=42,slow=2.1,SNR=25						
	comp=Z,27nm,0.9s						
QSPA	South Pole Qui	70.53	180	P	P	04 55 01.9	+1.3
QSPA	South Pole Qui	70.53	180	P	P	04 55 02.1	+1.5
QSPA				x	x	04 55 16.6	
MJAR	Matsushiro Arr	71.46	321	P	P	04 55 05.1	-1.3
	comp=Z,2.8nm,0.9s,baz=158,slow=5.6,SNR=4.8						
	comp=Z,2.8nm,0.9s						
MJAR	Matsushiro Arr	71.46	321	P	P	04 55 05.1	-1.3
MJAR				pmax	pmax		
	comp=Z,13nm,1.5s						
ASAJ	Asahikawa	74.52	329	LR	LR	05 20 56.2	
	comp=Z,45nm,21.5s,baz=67,slow=30						
MNRC	McLaughlin Min	75.81	39	IAmb	IAmb	04 55 33.8	
	comp=Z,20nm,1.1s						
TPO	Tropico Hills	76.02	45	IAmb	IAmb	04 55 34.6	
	comp=Z,13nm,1.1s						
VES	Vestal, Richgr	76.03	44	IAmb	IAmb	04 55 34.2	
	comp=Z,24nm,1.0s						
LPIG	La Paz	76.08	58	LR	LR	05 20 53.6	
	comp=Z,31nm,18.7s,baz=160,slow=29						
PETK	Petropavlovsk-	76.25	343	P	P	04 55 33.2	-0.8
	comp=Z,4.5nm,0.8s,baz=124,slow=8.5,SNR=4.0						
PETK				LR	LR	05 22 35.0	
	comp=Z,33nm,21.0s,baz=163,slow=30						
	comp=Z,4.5nm,0.8s						
LEM	Lembang	76.38	268	LR	LR	05 31 04.0	
	comp=Z,28nm,18.1s,baz=6.0,slow=37						
PFO	Pinyon Flats O	76.49	47	P	P	04 55 36.1	+0.1
YSS	Yuzhno-Sakhali	76.58	331	⇓*e*P	P	04 55 34.8	-1.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
N02D	Trinity Center	77.01	38	IAmb	IAmb	04 55 38.3	
	comp=Z,39nm,1.9s						
O03E	Paynes Creek	77.10	39	IAmb	IAmb	04 56 05.5	
	comp=Z,16nm,1.3s						
BC3	Big Chuckawall	77.20	47	IAmb	IAmb	04 55 41.6	
	comp=Z,23nm,1.7s						
GSC	Goldstone, Bar	77.22	45	IAmb	IAmb	04 55 41.8	
	comp=Z,17nm,1.6s						
MPK	Martis Peak	77.54	40	IAmb	IAmb	04 56 08.0	
	comp=Z,13nm,1.1s						
DSP	Deep Springs	77.66	43	IAmb	IAmb	04 55 44.1	
	comp=Z,13nm,1.1s						
PNTR	Pine Nut	77.67	41	IAmb	IAmb	04 55 44.0	
	comp=Z,12nm,1.0s						
IRM	Iron Mountain	77.70	47	IAmb	IAmb	04 55 44.2	
	comp=Z,14nm,1.3s						
GRAC	Grapevine Rang	77.83	43	IAmb	IAmb	04 55 45.2	
	comp=Z,28nm,1.3s						
LHV	Little Huntoon	77.85	42	IAmb	IAmb	04 55 45.7	
	comp=Z,18nm,1.3s						
NVAR	Mina Array Bea	78.08	42	P	P	04 55 45.3	+0.5
	comp=Z,5.9nm,0.9s,baz=223,slow=8.3,SNR=33						
NVAR				pP	pP	04 56 10.6	+3.1
	comp=Z,3.8nm,0.9s,baz=226,slow=9.4,SNR=5.1						
NVAR				LR	LR	05 22 43.4	
	comp=Z,37nm,20.4s,baz=175,slow=30						
	comp=Z,5.9nm,0.9s						
NVAR	Mina Array Bea	78.08	42	P	P	04 55 45.5	+0.6
NV11	Mina Array Sit	78.17	42	IAmb	IAmb	04 55 46.7	
	comp=Z,18nm,1.2s						
WCT	Wildcat Mounta	78.19	44	IAmb	IAmb	04 55 47.2	
	comp=Z,20nm,1.8s						
KSRS	Korea Array	78.41	317	P	P	04 55 46.4	0.0
	comp=Z,1.6nm,0.8s,baz=134,slow=5.1,SNR=4.5						
KSRS				LR	LR	05 27 58.7	
	comp=Z,4.1nm,19.1s,baz=205,slow=34						
	comp=Z,1.6nm,0.8s						
K05A	Summer Lake	79.17	37	IAmb	IAmb	04 55 52.3	
	comp=Z,13nm,0.9s						
J05D	Fort Rock, OR	79.34	37	IAmb	IAmb	04 55 53.0	
	comp=Z,14nm,0.9s						
PRN	Pahroc Range	79.58	44	IAmb	IAmb	04 55 55.6	
	comp=Z,16nm,1.3s						
TUC	Tucson	79.80	50	P	P	04 55 55.4	+1.2
TUC	Tucson	79.80	50	P	P	04 55 55.4	+1.2
TUC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TUC	Tucson	79.80	50	P	P	04 55 55.3	+1.0
TUC				PcP	PcP	04 56 01.6	0.0
PINE	Pine Mountain	79.83	36	IAmb	IAmb	04 55 55.4	
	comp=Z,12nm,0.9s						
P18K	Big Mountain,	80.21	10	IAmb	IAmb	04 55 55.8	
	comp=Z,22nm,0.9s						
M17K	Holitna River	81.81	8	IAmb	IAmb	04 56 05.7	
	comp=Z,19nm,1.1s						
MTPU	Mount Pierson	81.82	45	IAmb	IAmb	04 56 07.8	
	comp=Z,14nm,1.3s						
L16K	Owhat River	81.85	7	IAmb	IAmb	04 56 05.9	
	comp=Z,17nm,1.1s						
NJ2	Nanjing	81.86	308	*e*P	P	04 56 05.3	+0.2
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TCRU	Three Creeks R	81.95	44	IAmb	IAmb	04 58 37.6	
	comp=Z,5.9nm,0.5s						
BMO	Blue Mountains	82.53	37	IAmb	IAmb	04 56 09.4	
	comp=Z,13nm,1.4s						
E08A	Dider Farm, El	82.56	35	IAmb	IAmb	04 56 09.6	
	comp=Z,11nm,1.1s						
F10A	Beach Ranch, E	83.25	36	IAmb	IAmb	04 56 12.8	
	comp=Z,14nm,0.9s						
J16K	Anvik River	83.26	6	IAmb	IAmb	04 56 56.1	
	comp=Z,22nm,1.4s						
PLID	Pearl Lake	83.42	37	IAmb	IAmb	04 56 14.3	
	comp=Z,35nm,1.9s						
KLR	Kul'dur	83.43	328	⇑*e*P	P	04 56 13.3	+0.4
KLR				pmax	pmax		
	comp=Z,7.0nm,2.5s						
HLID	Hailey	83.46	39	IAmb	IAmb	04 56 14.9	
	comp=Z,9.7nm,0.9s						
SRU	San Rafael Swe	83.49	45	IAmb	IAmb	04 56 15.2	
	comp=Z,7.7nm,0.9s						
MNTX	Cornudas Mount	83.51	53	IAmb	IAmb	04 56 15.8	
	comp=Z,12nm,1.2s						
P17A	Butcher Ranch,	83.54	44	IAmb	IAmb	04 56 15.8	
	comp=Z,13nm,1.3s						
BNX	BinXian	83.59	323	⇑P	P	04 56 13.8	0.0
BNX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TX31	Lajitas Ar. Si	83.76	56	IAmb	IAmb	04 56 16.7	
	comp=Z,10nm,1.3s						
TXAR	Lajitas Array	83.76	56	P	P	04 56 15.9	+0.8
	comp=Z,2.7nm,1.0s,baz=206,slow=5.4,SNR=15						
TXAR				pP	pP	04 56 40.8	+2.8
	comp=Z,1.2nm,0.9s,baz=231,slow=9.5,SNR=4.0						
	comp=Z,2.7nm,1.0s						
TXAR	Lajitas Array	83.76	56	P	P	04 56 15.4	+0.2
TXAR	Lajitas Array	83.76	56	P	P	04 56 15.4	+0.2
H03S2	Juan Fernandez	83.78	124	T	T	06 28 46.5	
	baz=248,slow=75,SNR=148						
MA2	Magadan	83.79	343	P	P	04 56 12.8	-1.6
	comp=Z,3.6nm,0.8s,baz=118,slow=4.0,SNR=4.7						
	comp=Z,3.6nm,0.8s						
MA2	Magadan	83.79	343	*ce*P	P	04 56 13.6	-0.8
MA2				pmax	pmax		
	comp=Z,4.0nm,1.3s						
H03S1	Juan Fernandez	83.80	124	T	T	06 28 47.5	
	baz=248,slow=75,SNR=177						
H03S3	Juan Fernandez	83.80	124	T	T	06 28 46.7	
	baz=248,slow=75,SNR=164						
J18K	Innoko River	83.89	8	IAmb	IAmb	04 56 16.0	
	comp=Z,9.2nm,1.1s						
H03N2	Juan Fernandez	83.91	123	T	T	06 29 01.3	
	baz=257,slow=72,SNR=197						
H03N3	Juan Fernandez	83.91	123	T	T	06 29 04.2	
	baz=257,slow=72,SNR=116						
PV05	Paradox Valley	83.92	46	IAmb	IAmb	04 56 18.1	
	comp=Z,12nm,1.1s						
H03N1	Juan Fernandez	83.93	123	T	T	06 28 57.5	
	baz=257,slow=72,SNR=116						
P18A	Preston Nutter	83.95	44	IAmb	IAmb	04 57 23.6	
	comp=Z,26nm,2.0s						
PV10	Paradox Valley	84.11	46	IAmb	IAmb	04 56 17.6	
	comp=Z,12nm,1.0s						
PV18	Skein Mesa, Pa	84.14	46	IAmb	IAmb	04 56 18.0	
	comp=Z,12nm,1.1s						
PV13	Radium Mtn., P	84.15	46	IAmb	IAmb	04 56 18.6	
	comp=Z,11nm,1.2s						
PV16	Nyswonger Mesa	84.16	46	IAmb	IAmb	04 56 18.9	
	comp=Z,17nm,1.4s						
PV03	Paradox Valley	84.18	46	IAmb	IAmb	04 57 04.6	
	comp=Z,12nm,1.3s						
PV11	David Mesa, Pa	84.19	46	IAmb	IAmb	04 56 19.0	
	comp=Z,18nm,1.4s						
PV04	Paradox Valley	84.21	46	IAmb	IAmb	04 56 44.8	
	comp=Z,8.5nm,1.1s						
TASM	ASL Pad, Albuq	84.23	50	IAmb	IAmb	04 56 19.6	
	comp=Z,11nm,1.1s						
TASM	ASL Pad, Albuq	84.23	50	IAmb	IAmb	04 56 19.6	
	comp=Z,12nm,1.1s						
TASM	ASL Pad, Albuq	84.23	50	IAmb	IAmb	04 56 19.6	
	comp=Z,12nm,1.1s						
TASM	ASL Pad, Albuq	84.23	50	IAmb	IAmb	04 56 19.5	
	comp=Z,12nm,1.1s						
ABQ	Albuquerque	84.24	50	IAmb	IAmb	04 56 19.6	
	comp=Z,12nm,1.1s						
ANMO	Albuquerque	84.24	50	*i* P	P	04 56 17.4	-0.2
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ANMO	Albuquerque	84.24	50	P	P	04 56 18.5	+0.9
ALPN	Alpine	84.25	55	IAmb	IAmb	04 56 19.6	
	comp=Z,9.5nm,1.1s						
TPB01	Permian Basin	84.39	55	IAmb	IAmb	04 56 20.1	
	comp=Z,12nm,1.3s						
BCYI	Bear Canyon	84.49	39	IAmb	IAmb	04 56 20.1	
	comp=Z,12nm,1.4s						
TPB05	Hovey Rd	84.73	55	IAmb	IAmb	04 56 22.3	
	comp=Z,13nm,1.0s						
TRF	Thorofare Moun	84.86	11	IAmb	IAmb	04 56 21.2	
	comp=Z,15nm,1.0s						
M26K	Nabesna, AK	85.39	14	IAmb	IAmb	04 56 23.6	
	comp=Z,17nm,1.2s						
FXWY	Fox Creek	85.56	41	IAmb	IAmb	04 56 39.1	
	comp=Z,11nm,1.7s						
L26K	Log Cabin Wild	85.85	14	IAmb	IAmb	04 56 26.4	
	comp=Z,10nm,1.0s						
G18K	Tagagawik	86.01	6	IAmb	IAmb	04 57 07.7	
	comp=Z,19nm,1.6s						
PDAR	Pinedale Array	86.02	42	P	P	04 56 25.9	-0.4
	comp=Z,1.2nm,0.9s,baz=211,slow=2.6,SNR=5.3						
PDAR				pP	pP	04 56 51.0	+1.6
	comp=Z,0.9nm,0.8s,baz=214,slow=3.0,SNR=4.3						
PDAR				LR	LR	05 27 48.6	

comp=Z,21nm,19.7s,baz=10.0,slow=31
comp=Z,1.2nm,0.9s
YHL Hebgen Lake 86.11 40 IAmb IAmb 04 56 28.8
comp=Z,9.2nm,1.2s
128A Castleberry Fa 86.12 54 IAmb IAmb 04 56 54.3
comp=Z,8.8nm,0.9s
RIDG Independent Ri 86.16 13 IAmb IAmb 04 56 26.5
comp=Z,13nm,1.2s
I21K Tanana 86.19 9 IAmb IAmb 04 56 26.8
comp=Z,11nm,1.0s
L27K Beaver Creek, 86.23 14 IAmb IAmb 04 56 27.6
comp=Z,12nm,1.3s
SEY Seymchan 86.23 345 P **P 04 56 25.9 -0.7**
comp=Z,7.4nm,0.9s,baz=138,slow=5.1,SNR=16
comp=Z,7.4nm,0.9s
SEY Seymchan 86.23 345⇓*e*P **P 04 56 26.0 -0.6**
SEY pmax pmax
comp=Z,9.0nm,0.8s
HEH HeiHe 86.27 327 *e*P **P 04 56 24.3 -2.8**
HEH pmax pmax
comp=Z,4.0nm,0.8s
HDA Harding Lake 86.34 12 IAmb IAmb 04 56 27.4
comp=Z,14nm,1.0s
G19K Purcell Mounta 86.42 7 IAmb IAmb 04 56 28.6
comp=Z,8.5nm,1.1s
H21K Melozitna Rive 86.52 9 IAmb IAmb 04 56 29.7
comp=Z,14nm,1.2s
SCRK Sand Creek 86.55 13 IAmb IAmb 04 56 29.1
comp=Z,10nm,1.1s
I23K Minto, Yukon-K 86.58 10 IAmb IAmb 04 56 29.1
comp=Z,14nm,1.2s
COLA College 86.60 11*d i*P **P 04 56 27.4 -0.9**
COLA pmax pmax
comp=Z,22nm,1.0s
COLA College 86.60 11 P **P 04 56 27.4 -0.9**
IL31 86.68 11 IAmb IAmb 04 56 29.7
comp=Z,13nm,1.3s
ILAR Eielson Array 86.68 11 P **P 04 56 27.8 -1.0**
comp=Z,3.7nm,0.9s,baz=227,slow=5.3,SNR=25
ILAR pP **pwP 04 56 53.2 +1.7**
comp=Z,1.8nm,1.0s,baz=213,slow=7.0,SNR=3.2
ILAR LR LR 05 29 14.1
comp=Z,20nm,18.8s,baz=353,slow=31
comp=Z,3.7nm,0.9s
ILAR Eielson Array 86.68 11 P **P 04 56 27.5 -1.3**
ILAR Eielson Array 86.68 11 P **P 04 56 27.5 -1.3**
J25K Salcha River, 86.83 12 IAmb IAmb 04 56 30.3
comp=Z,12nm,1.2s
Q24A Divide 87.06 47 P **P 04 56 30.3 -1.3**
Q24A IAmb IAmb 04 56 31.5
comp=Z,11nm,0.8s
G21K Allakaket 87.23 8 IAmb IAmb 04 57 17.5
comp=Z,19nm,1.6s
HNS HongShan 87.37 311 ⇓P **P 04 56 33.3 +0.6**
HNS pmax pmax
comp=Z,6.0nm,1.0s
PLCA Paso Flores 87.50 132 P **P 04 56 34.1 +0.5**
comp=Z,3.5nm,1.1s,baz=207,slow=9.5,SNR=3.5
PLCA LR LR 05 30 38.3
comp=Z,53nm,19.3s,baz=216,slow=32
comp=Z,3.5nm,1.1s
PRP Porcupine Dome 87.61 12 P **P 04 56 33.5 +0.1**
E19K Redstone River 87.67 7 IAmb IAmb 04 56 59.4
comp=Z,8.6nm,1.1s
RDOG Red Dog Mine 87.75 4 IAmb IAmb 04 56 42.7
comp=Z,8.7nm,0.7s
LYN LuoYang 87.75 308 P **P 04 56 33.0 -1.6**
LYN pmax pmax
comp=Z,11nm,0.9s
K29M Barlow Dome 87.94 15 IAmb IAmb 04 56 36.7
comp=Z,11nm,1.2s
ELIB Princess Elisa 87.94 185 *d*P **P 04 56 35.4 +0.3**
comp=Z,8.7nm,1.0s
APMT Aspermont 88.22 54 IAmb IAmb 04 57 04.7
comp=Z,11nm,1.1s
ENH Enshi 88.27 303 P **P 04 56 37.8 +0.6**
ZEA Zeya 88.44 330 *e*P **P 04 56 37.9 +0.5**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
BILL Bilibino 88.46 353⇑*e*P **P 04 56 36.3 -0.9**
BILL pmax pmax
comp=Z,11nm,1.7s
SNAA Sanae 88.85 177 P **P 04 56 38.7 -0.6**
comp=Z,7.0nm,0.9s,baz=154,slow=4.5,SNR=6.7
comp=Z,7.0nm,0.9s
SNAA Sanae 88.85 177*ce*P **P 04 56 39.6 +0.3**
SNAA pmax pmax
comp=Z,7.0nm,1.0s
D20K Etivluk River 88.95 6 IAmb IAmb 04 56 40.4
comp=Z,4.8nm,0.9s
H27K Steamboat Moun 89.03 13 IAmb IAmb 04 56 40.9
comp=Z,13nm,1.5s
C19K Lookout Ridge 89.04 5 IAmb IAmb 04 56 40.9
comp=Z,6.6nm,0.9s
G26K Porcupine Rive 89.21 12 IAmb IAmb 04 56 43.0
comp=Z,9.6nm,1.1s
I30M Mount Dempster 89.35 15 IAmb IAmb 04 56 42.6
comp=Z,11nm,1.3s
MT01 Popeta 89.73 126 P **P 04 56 44.7 +0.6**
NVL N'lazarevskaya 89.83 182 *e*P **P 04 56 46.9 +3.1**
NVL *e* 05 00 20.5
NVL *e*PPP PPP 05 02 17.8
NVL *e*S **SKSac 05 07 14.0 +7.6**
NVL *e*SS SS 05 13 38.2 +12
NVL *e*SSS SSS 05 17 14.9
NVL pmax pmax
comp=Z,5.0nm,0.6s
XAN Xi'an 90.21 306 ⇓P **P 04 56 46.5 +0.2**
XAN pmax pmax
comp=Z,6.0nm,1.2s
E27K Coleen River 90.70 12 IAmb IAmb 04 56 49.4
comp=Z,7.6nm,1.2s
HHC Hu-ho-hao-te 91.08 313 *e*P **P 04 56 49.4 -0.8**
HHC pmax pmax
comp=Z,4.0nm,0.8s
HHC pmax pmax
comp=Z,87nm,4.7s
E28M Babbage River 91.46 12 IAmb IAmb 04 56 52.4
comp=Z,8.1nm,1.1s
E29M Blow River 91.62 13 IAmb IAmb 04 56 52.6
comp=Z,15nm,1.5s
D27M Malcolm River 91.73 11 IAmb IAmb 04 56 54.8
comp=Z,11nm,1.4s
CMAR Chiang Mai Arr 92.93 288 P **P 04 56 59.1 0.0**
comp=Z,3.4nm,1.0s,baz=110,slow=3.0,SNR=16
CMAR LR LR 05 37 04.6
comp=Z,6.0nm,20.9s,baz=105,slow=34
comp=Z,3.4nm,1.0s
CMAR Chiang Mai Arr 92.93 288 P **P 04 56 59.7 +0.5**
CMAR Chiang Mai Arr 92.93 288*ce*P **P 04 57 00.3 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.2s
JTS Las Juntas de 92.94 80⇑*e*P **P 04 56 58.2 -1.1**
JTS pmax pmax
comp=Z,6.0nm,0.9s
PZH PanZhiHua 93.21 297 P **P 04 57 00.6 +0.2**
YKA Yellowknife Ar 94.28 24 P **P 04 57 04.2 -0.2**
comp=Z,1.5nm,0.9s,baz=248,slow=4.5,SNR=19
YKA pP **pP 04 57 28.4 +1.0**
comp=Z,0.9nm,0.9s,baz=247,slow=4.6,SNR=4.1
comp=Z,1.5nm,0.9s
YKA Yellowknife Ar 94.28 24 P **P 04 57 03.6 -0.7**
YKA Yellowknife Ar 94.28 24 P **P 04 57 03.6 -0.7**
ULN Ulaanbaatar 96.82 318⇑*e*P **P 04 57 17.5 +1.0**
ULN pmax pmax
comp=Z,2.0nm,1.1s
A36M Sachs Harbour 97.14 14 IAmb IAmb 04 57 18.9
comp=Z,5.9nm,0.9s
SONM Songino Array 97.22 318 P **P 04 57 17.0 -1.3**
comp=Z,0.6nm,0.9s,baz=66,slow=3.7,SNR=3.7
comp=Z,0.6nm,0.9s
ULM Lac du Bonnet 97.77 39 LR LR 05 34 51.9
comp=Z,60nm,18.1s,baz=27,slow=31
TIXI Tiksi 98.69 344⇓*e*P **P 04 57 23.4 -0.7**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
LPAZ La Paz 99.34 111 LR LR 05 33 48.8
comp=Z,39nm,19.3s,baz=240,slow=30
MK31 Makanchi Array 112.94 313*c i*PKIKP **PKiKP 05 02 20.6 -1.5**
MKAR Makanchi Array 112.94 313 PKiKP **PKiKP 05 02 21.0 -1.1**
comp=Z,0.5nm,0.6s,baz=116,slow=1.8,SNR=6.9
MKAR pPKiKP **pPKiKP 05 02 46.0 -0.1**
comp=Z,0.5nm,0.7s,baz=54,slow=2.5,SNR=3.8
MKAR PKKPbc **PKKPbc 05 13 08.9 -1.7**
comp=Z,0.7nm,1.0s,baz=290,slow=3.6,SNR=5.9
BVAR Borovoye Array 120.45 321 PKP **PKPdf 05 02 35.4 -0.9**
comp=Z,1.7nm,0.7s,baz=52,slow=7.7,SNR=7.2
BVAR pPKP **pPKPdf 05 03 01.2 +0.8**
comp=Z,1.5nm,0.7s,baz=48,slow=2.2,SNR=4.3
BORK Borovoye 120.49 321⇑*i*PKIKP **PKPdf 05 02 35.4 -1.0**
BORK pmax pmax
comp=Z,8.0nm,2.5s
ARTI Arti 126.36 327 *i* PKIKP **PKPdf 05 02 44.9 -2.7**
ARTI 05 09 52.0
LVZ Lovozero 128.28 346 ⇓PKIKP **PKPdf 05 02 51.2 +0.2**
KLMR Klimovskoe 132.27 338 *e*PKIKP **PKPdf 05 02 57.1 -1.5**
KLMR pmax pmax
comp=Z,13nm,1.4s
AKASG Malin Array Be 143.68 334 PKP PKPab 05 03 16.6 -0.1
comp=Z,1.0nm,0.5s,baz=39,slow=3.0,SNR=7.4
AKASG Malin Array Be 143.68 334 *i* PKIKP **PKiKP 05 03 25.7 +2.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
BSEG Bad Segeberg 145.47 355 *e*PKPbc **PKPdf 05 03 22.7 -0.1**
baz=11,slow=2.7
SORM Soroca 146.00 332 ⇑P **PKPdf 05 03 24.3 +0.3**
SORM Soroca 146.00 332 ⇑PKIKP **PKPdf 05 03 24.3 +0.3**
FLTG Flechtingen 146.97 354 *e*PKPbc **PKPbc 05 03 27.2 -0.3**
baz=11,slow=2.7
KSP Ksiaz 147.62 347 *e*PKP **PKPbc 05 03 29.6 +0.2**
BURAR Bucovina Array 147.73 335 ⇑P **PKiKP 05 03 31.2 -0.7**
BURAR Bucovina Array 147.73 335 ⇑PKP2 **PKiKP 05 03 31.2 -0.7**
CLL Collm 147.75 351⇓*e*PKIKP **PKPdf 05 03 28.0 +1.2**
CLL *i* 05 03 29.3
CLL *i* 05 03 31.4
CLL *e* 05 03 43.0
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL pmax pmax
comp=Z,18nm,0.8s
CLL pmax pmax
comp=Z,11nm,0.9s
CLL Collm 147.75 351 *e*PKPdf **PKPdf 05 03 28.0 +1.2**
comp=Z,5.0nm,1.0s
CLL ⇓*i*PKPbc **PKPbc 05 03 29.3 -0.4**
comp=Z,18nm,0.8s
CLL ⇑*i*PKPab **PKiKP 05 03 31.4 -0.3**
comp=Z,11nm,0.9s
CLL *e*pPKPbc **pPKPdf 05 03 43.0 -7.9**
CLL *ex* x 05 03 55.0
OSTC Ostas 147.90 347 *e*PKIKP **PKPbc 05 03 30.5 +0.3**
OSTC Ostas 147.90 347⇑*e*PKP **PKPbc 05 03 30.5 +0.3**
UPC Upice 147.99 347 *e*PKIKP **PKPbc 05 03 30.3 -0.1**
UPC Upice 147.99 347⇑*e*PKP **PKPbc 05 03 30.3 -0.1**
BRG Berggiesshubel 148.03 350 *e*PKPbc **PKPbc 05 03 30.2 -0.3**
baz=11,slow=2.7
BRG Berggiesshubel 148.03 350 Amp 05 03 59.7
comp=Z,3.5nm,0.9s
BRG Berggiesshubel 148.03 350 *i* PKP **PKPbc 05 03 30.4 -0.1**
BRG Berggiesshubel 148.03 350 Amp 05 03 31.1
comp=Z,7.0nm,0.8s
BRG Berggiesshubel 148.03 350 pPKP **PKPab 05 03 38.6 +5.2**
BRG Berggiesshubel 148.03 350 Amp 05 03 39.9
comp=Z,3.9nm,0.7s
BRG Berggiesshubel 148.03 350 PP pPKiKP 05 03 56.4 +0.1
DPC Dobruska-Polom 148.07 347 *e*PKIKP **PKPbc 05 03 30.8 +0.1**
DPC Dobruska-Polom 148.07 347⇑*e*PKP **PKPbc 05 03 30.8 +0.1**
STEB Steborice 148.13 345⇑*e*PKP **PKPbc 05 03 30.6 -0.2**
MBAR Mbarara 148.18 234*c i*PKP2 **PKiKP 05 03 33.7 -0.3**
MBAR pmax pmax
comp=Z,10.0nm,1.0s
PVCC Panska Ves 148.25 349 *e*PKIKP **PKPbc 05 03 31.2 +0.1**
PVCC Panska Ves 148.25 349⇑*e*PKP **PKPbc 05 03 31.2 +0.1**
CFR Carcaliu 148.29 329 ⇓P **PKPbc 05 03 29.6 -1.7**
CFR Carcaliu 148.29 329 ⇓PKIKP **PKPbc 05 03 29.6 -1.7**
MORC Moravsky Berou 148.33 345 ⇓P **PKPbc 05 03 31.2 -0.2**
MORC Moravsky Berou 148.33 345 ⇓PKIKP **PKPbc 05 03 31.2 -0.2**
MORC Moravsky Berou 148.33 345 *e*PKP **PKPbc 05 03 31.6 +0.2**
TPGR Topolog 148.39 328 ⇓P **PKPbc 05 03 32.0 +0.3**
LANS Liptovska Anna 148.40 342 *e*PKIKP **PKPbc 05 03 31.1 -0.5**
LANS Liptovska Anna 148.40 342 *e*PKP **PKPbc 05 03 31.1 -0.5**
VRI Vrincioaia 148.45 331 ⇓P **PKPbc 05 03 31.0 -0.8**
VRI Vrincioaia 148.45 331 ⇓PKIKP **PKPbc 05 03 31.0 -0.8**
BRTR Keskin Array B 148.55 316 PKPbc **PKPbc 05 03 32.2 -0.3**
comp=Z,6.7nm,0.9s,baz=141,slow=3.7,SNR=25
BRTR Keskin Array B 148.55 316 **PKPbc 05 03 31.9 -0.5**
MOX Moxa 148.58 353 *e*PKPbc **PKPbc 05 03 31.6 -0.4**
baz=11,slow=2.7
MOX *eL* L 06 17 58.7
comp=Z,111nm,18.7s
MAUC Maruska 148.64 344⇑*e*PKP **PKPbc 05 03 32.1 -0.1**
PLN Plauen 148.67 352 *e*PKPbc **PKPbc 05 03 31.9 -0.4**
baz=11,slow=2.7
KIRS Kirsehir-Merke 148.67 315 ⇑P **PKPbc 05 03 32.2 -0.5**
TANN Tannenbergstha 148.70 351 *e*PKPbc **PKPbc 05 03 32.3 -0.1**
baz=11,slow=2.7
PRU Pruhonice 148.77 349 *e*PKIKP **PKPbc 05 03 32.3 -0.2**
PRU Pruhonice 148.77 349⇑*e*PKP **PKPbc 05 03 32.3 -0.2**
PRU *ex* x 05 03 57.8
UCC Uccle 148.79 1 *d*PKP **PKPbc 05 03 31.3 -1.2**
DOPR Dopca 148.97 333 ⇑P **PKPbc 05 03 33.2 +0.1**
VRAC Vranov 148.99 344 PKPbc **PKPbc 05 03 33.0 0.0**
comp=Z,3.7nm,0.7s,baz=227,slow=1.9,SNR=3.7
VRAC Vranov 148.99 346 *e*PKP **PKPbc 05 03 33.2 +0.1**
BSTI Sart Tilman 149.02 360 *d*PKP **PKPbc 05 03 33.3 +0.2**
MLR Muntele Rosu 149.09 331 ⇓P **PKPbc 05 03 33.2 -0.4**
MLR Muntele Rosu 149.09 331 ⇓PKIKP **PKPbc 05 03 33.2 -0.4**
JAVC Velka Javorina 149.15 344 *e*PKP **PKiKP 05 03 34.9 +0.2**
MANZ Manzenberg 149.17 352 *e*PKPbc **PKPbc 05 03 33.3 -0.2**
baz=11,slow=2.7
KRUC Moravsky 149.27 346 *e*PKP **PKPbc 05 03 33.9 +0.1**
BMRD Maredsous 149.30 1 *d*PKP **PKPbc 05 03 33.9 +0.1**
MARR Marisel-Cluj 149.32 336 ⇓P **PKPbc 05 03 33.5 -0.6**
ROTZ Rotzenmuhle 149.37 351 *e*PKPbc **PKPbc 05 03 33.8 -0.2**
baz=11,slow=2.7
PSZ Piszkesteto 149.38 341 ⇓P **PKPbc 05 03 33.4 -0.7**
PSZ Piszkesteto 149.38 341 ⇓PKIKP **PKPbc 05 03 33.4 -0.7**
DRGR 149.38 337 ⇓P **PKPbc 05 03 33.8 -0.4**
DRGR 149.38 337 ⇓PKIKP **PKPbc 05 03 33.8 -0.4**
RCHB Rochefort 149.45 0 *d*PKP **PKPbc 05 03 33.4 -0.7**
DOU Dourbes 149.50 1 *d*PKP **PKPbc 05 03 33.9 -0.4**
VOIR 149.53 332 ⇓P **PKiKP 05 03 35.2 -0.5**
VOIR 149.53 332 ⇓PKP2 **PKiKP 05 03 35.2 -0.5**
SMOL Smolenice 149.53 344 *e*PKP2 **PKiKP 05 03 35.0 -0.5**
GRF Grafenberg Arr 149.57 353 *e*L L 06 17 14.4
comp=Z,97nm,20.4s
MODS Modra-Piesok 149.70 344 *e*PKHKP PKPpre 05 03 35.5
MODS Modra-Piesok 149.70 344 *e*PKP **PKiKP 05 03 35.5 -0.3**
ARR Arges 149.76 333 ⇓P **PKiKP 05 03 36.0 -0.1**
KHC Kasperske Hory 149.77 349 *e*PKHKP PKPpre 05 03 34.9
KHC Kasperske Hory 149.77 349⇑*e*PKP **PKPbc 05 03 34.9 -0.1**
KHC *ex* x 05 04 00.6
WLF Walferdange 149.94 359 *d*PKP **PKPbc 05 03 35.8 +0.5**
WLF Walferdange 149.94 359 *e*PKPbc **PKPbc 05 03 35.9 +0.5**
baz=11,slow=2.7
CKRC Cesky Krumlov 149.94 348 *e*PKHKP PKPpre 05 03 35.4
CKRC Cesky Krumlov 149.94 348⇑*e*PKP **PKPbc 05 03 35.4 0.0**
GEC2 GERESS Array S 150.03 349 *e*PKPbc **PKPbc 05 03 35.2 -0.5**
baz=11,slow=2.7
GERES GERESS Array B 150.03 349 PKPbc **PKPbc 05 03 35.1 -0.5**
comp=Z,4.3nm,0.9s,baz=18,slow=2.1,SNR=12
LOT Lotru 150.07 334 ⇓P **PKPbc 05 03 35.4 -0.6**
MMAI Mount Meron Ar 150.15 303 PKPbc **PKPbc 05 03 36.6 +0.1**
comp=Z,6.3nm,0.7s,baz=29,slow=10,SNR=4.6
SIRR Siria 150.22 337 ⇑P **PKPbc 05 03 36.4 +0.3**
CONA Conrad Observa 150.46 346 *e*PKP **PKPbc 05 03 36.7 -0.1**
comp=Z,13nm,1.2s
CONA *ep*PKP **pPKPbc 05 04 02.6 +2.2**
comp=Z,2.0nm,0.9s
GZR Gura Zlata 150.52 335 ⇓P **PKPbc 05 03 36.5 -0.5**
GZR Gura Zlata 150.52 335 ⇓PKIKP **PKPbc 05 03 36.5 -0.5**
RONA Rosalia, Austr 150.57 345 *i* PKP **PKPbc 05 03 36.8 -0.2**
comp=Z,9.7nm,0.8s,SNR=9.0
RONA Rosalia, Austr 150.57 345 *e*P **PKPbc 05 03 36.8 -0.2**
comp=Z,9.7nm,0.8s,SNR=9.0
BZS Buzias 150.78 337 ⇑P **PKPbc 05 03 37.4 -0.1**
BZS Buzias 150.78 337 ⇑PKIKP **PKPbc 05 03 37.4 -0.1**
FUR Furstenfeldbru 151.06 352 *e*PKPbc **PKPbc 05 03 38.1 0.0**
baz=11,slow=2.7
HERR Herculane 151.09 335 ⇑P **PKPbc 05 03 37.1 -1.1**
BIOA Bad Ischl, Aus 151.15 349 *e*PKP **PKPbc 05 03 38.0 -0.3**
comp=Z,3.6nm,0.9s
ARSA Arzberg 151.17 346 *e*PKP **PKPbc 05 03 37.6 -0.9**
comp=Z,3.5nm,1.1s
BFO Black Forest 151.19 356 *e*PKPbc **PKPbc 05 03 38.2 -0.2**
baz=11,slow=2.7
RJOB Jochberg 151.25 350 *e*PKPbc **PKPbc 05 03 38.2 -0.4**
baz=11,slow=2.7
MORH Mrgy, Hungar 151.28 341 ⇑P **PKPbc 05 03 38.4 -0.2**
PLVB Pleven 151.31 330 ⇑P **PKiKP 05 03 39.1 -0.2**
MDVR Moldovita 151.45 335 ⇑P **PKPbc 05 03 38.9 -0.2**
LESA Schwarzleotal 151.58 350 *e*PKP **PKPbc 05 03 38.4 -1.0**
comp=Z,5.8nm,1.0s
KBA Koelnbreinsper 151.79 349 *e*PKP **PKPbc 05 03 38.8 -1.2**
comp=Z,7.1nm,1.0s
RETA Reutte 151.79 352 *e*PKP **PKPbc 05 03 39.3 -0.6**
comp=Z,1.3nm,0.4s
SOKA Soboth 151.83 346 *i* PKP **PKPbc 05 03 39.1 -0.9**
comp=Z,7.2nm,1.0s,SNR=8.5
SOKA Soboth 151.83 346 *e*P **PKPbc 05 03 39.1 -0.9**
comp=Z,7.2nm,1.0s,SNR=8.5
WATA Walderalm 151.83 351 *e*PKP **PKPbc 05 03 39.3 -0.7**
comp=Z,3.9nm,0.6s
WATA *ep*PKP **pPKPbc 05 04 04.4 +0.4**
comp=Z,1.8nm,0.6s
PERS Pernice 151.85 346 *i* PKPbc **PKPbc 05 03 39.0 -1.0**
MOTA Moosalm 151.89 352 *e*PKP **PKPbc 05 03 39.4 -0.9**
comp=Z,8.9nm,0.9s
MOTA *ep*PKP **sPKPdf 05 04 06.1 -0.7**
comp=Z,14nm,1.1s
WTTA Wattenberg 151.90 351 *e*PKP **PKPbc 05 03 39.7 -0.5**
comp=Z,15nm,1.5s
WTTA *ep*PKP **pPKPbc 05 04 05.5 +1.3**
comp=Z,4.2nm,0.6s
SQTA Sankt Quirin 152.00 352 *e*PKP **PKPbc 05 03 39.3 -1.2**
comp=Z,8.5nm,1.2s
SQTA *ep*PKP **pPKPbc 05 04 06.1 +1.7**
comp=Z,11nm,1.4s
DAVA Damuels 152.09 354 *i* PKP **PKPbc 05 03 40.1 -0.6**
comp=Z,1.9nm,0.6s,SNR=4.5
DAVA Damuels 152.09 354 *e*P **PKPbc 05 03 40.1 -0.6**
comp=Z,1.9nm,0.6s,SNR=4.5
MYKA Terra Mystica 152.17 348 *e*PKP **PKPbc 05 03 39.7 -1.0**
comp=Z,0.1nm,0.2s
MYKA *ep*PKP **sPKPdf 05 04 06.6 -0.6**
comp=Z,1.2nm,0.4s
FETA Feichten 152.26 352 *i* PKP **PKPbc 05 03 40.2 -0.8**
comp=Z,8.1nm,1.2s,SNR=5.6
FETA *ep*PKP **pPKPbc 05 04 05.6 +0.6**
comp=Z,2.1nm,0.7s
ABTA Abfaltersbach 152.26 350 *e*PKP **PKPbc 05 03 39.9 -1.1**
comp=Z,0.1nm,0.3s
BOVS Bovan 152.40 334 ⇓P **PKPbc 05 03 39.7 -1.6**
CRNS Crni Vrh 152.56 347 *e*PKPbc **PKPbc 05 03 40.4 -1.2**
BOJS Bojanci 152.88 345 *i* PKPbc **PKPbc 05 03 42.0 -0.2**
ESDC Sonseca Array 158.33 20 PKPab **PKPab 05 04 17.4 +0.3**
comp=Z,1.9nm,1.0s,baz=318,slow=4.1,SNR=7.5
TORD Torodi Ar. Bea 172.66 149 PKP **PKPdf 05 03 53.4 -1.6**
comp=Z,2.2nm,0.9s,baz=231,slow=2.7,SNR=11
TORD pPKP **pPKPdf 05 04 20.1 +0.9**
comp=Z,0.9nm,0.9s,baz=231,slow=2.7,SNR=3.1
TORD PKPab **PKPab 05 05 20.4 -0.3**
comp=Z,2.4nm,1.1s,baz=217,slow=7.6,SNR=7.3
TORD Torodi Ar. Bea 172.66 149 **PKPdf 05 03 53.9 -1.1**

*KOLA **01** 04:59:31.2, 67.63N×33.85E, h0km, ML1.7, Error ellipse: s-maj=2.9km s-min=1.8km az=140.0, Khibiny, mines Rasvumchorr, Central*
*HEL **01** 04:59:31.0±0.2, 67.59N×33.89E, h0km, ML1.8, Suspected explosion*
*IDC **01** 04:59:32.3±2.0, 67.73N×33.77E, h0km, mbtmp3.6/5, ML2.5/5, Error ellipse: s-maj=23.8km s-min=11.3km az=72.0*

ISC 01 04:59:29.5±0.9, **67.58N**±0.04×**33.95E**±0.04, **h0km**, **n30**, σ1**f**41/52, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.21**	**269**	P	**Pg**	**04 59 34.0**	**+0.5**
APA				S	**Sg**	**04 59 36.8**	**+0.6**
APA0	**Apatity Array**	**0.37**	**275**	P	**Pg**	**04 59 36.6**	**0.0**
APA0				S	**Sg**	**04 59 41.6**	**+0.3**
LVZ	**Lovozero**	**0.42**	**39**	P	**Pb**	**04 59 38.6**	**-1.2**
LVZ				S	**Sg**	**04 59 44.2**	**+1.3**
LVZ	**Lovozero**	**0.42**	**39**	PG	**Pg**	**04 59 38.2**	**+0.7**
	baz=225						
LVZ				SG	**Sg**	**04 59 44.2**	**+1.3**
KVDA	**Kovda**	**0.98**	**206**	P	**Pb**	**04 59 49.3**	**-0.1**
KVDA				S	**Sb**	**05 00 03.0**	**+0.2**
VRF	**Varrio**	**1.67**	**278**	PG	**Pn**	**04 59 60.0**	**0.0**
VRF				smax	smax	05 00 20.2	
	comp=Z,9.2nm,0.2s						
VRF				SG	**Sn**	**05 00 21.2**	**-0.8**
OLKF	**Oulanka, Finla**	**2.19**	**237**	PG	**Pb**	**05 00 09.7**	**-0.2**
	baz=48						
OLKF				smax	smax	05 00 35.5	
	comp=Z,7.4nm,0.2s						
KU6	**Riekki**	**2.24**	**228**	PG	**Pb**	**05 00 10.4**	**-0.4**
	baz=48						
KU6				smax	smax	05 00 37.1	
	comp=Z,3.0nm,0.2s						
KU6				SG	**Sg**	**05 00 40.8**	**-0.5**
RAJF	**Raja-Jooseppi**	**2.31**	**296**	PB	**Pn**	**05 00 09.6**	**+0.9**
RAJF				SB	**Sn**	**05 00 38.1**	**+0.4**
MSF	**Maaselka**	**2.57**	**232**	PG	**Pb**	**05 00 15.4**	**-1.0**
MSF				SG	**Sg**	**05 00 50.7**	**-1.2**
KU2	**Taivalkoski**	**2.95**	**233**	PG	**Pb**	**05 00 23.5**	**+0.6**
	baz=51						
VADS	**Vadso**	**3.05**	**329**	P	**Pn**	**05 00 19.2**	**+0.3**
VADS				S	**Sn**	**05 00 55.2**	**-0.8**
RANF	**Ranua**	**3.24**	**244**	PB	**Pb**	**05 00 26.3**	**-1.5**
	baz=61						
RANF				SG	**Sb**	**05 01 09.2**	**+1.4**
RNF	**Rovaniemi**	**3.25**	**256**	PN	**Pn**	**05 00 22.6**	**+1.0**
	baz=68						
RNF				SN	**Sn**	**05 01 03.5**	**+2.5**
KEV	**Kevo**	**3.35**	**314**	PN	**Pn**	**05 00 23.4**	**+0.3**
KEV				SN	**Sn**	**05 01 03.4**	**-0.1**
ARA0	**ARCESS Array S**	**3.67**	**306**	PN	**Pn**	**05 00 26.8**	**-0.7**
ARA0				SG	**Sb**	**05 01 22.9**	**+2.7**
ARCES	**ARCESS Array B**	**3.67**	**306**	Pn	**Pn**	**05 00 27.7**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=122,slow=14,SNR=41						
ARCES				Pg	**Pb**	**05 00 35.5**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=115,slow=11,SNR=5.6						
ARCES				Sn	**Sn**	**05 01 09.2**	**-2.2**
	comp=Z,1.2nm,0.3s,baz=122,slow=24,SNR=8.2						
ARCES				Lg	Lg	05 01 22.7	
	comp=Z,2.4nm,0.3s,baz=115,slow=31,SNR=14						
	comp=Z,3.2nm,0.4s						
ARCES	**ARCESS Array B**	**3.67**	**306**	P	**Pn**	**05 00 26.7**	**-0.8**
ARCES				S	**Sn**	**05 01 09.5**	**-1.9**
KLF	**Kolari**	**3.87**	**270**	PN	**Pn**	**05 00 32.2**	**+2.0**
KLF				SN	**Sn**	**05 01 16.9**	**+0.6**
HEF	**Hetta**	**3.96**	**287**	PN	**Pn**	**05 00 32.7**	**+1.3**
	baz=97						
HEF				SN	**Sn**	**05 01 18.4**	**-0.2**
TOF	**Tornio**	**4.09**	**253**	PG	**Pb**	**05 00 43.0**	**+0.8**
TOF				SN	**Sn**	**05 01 23.1**	**+1.4**
OUL	**Oulu**	**4.10**	**236**	PB	**Pb**	**05 00 40.6**	**-1.8**
KTK1	**Kautokeino**	**4.23**	**295**	SN	**Sn**	**05 01 24.8**	**-0.4**
LANU	**Lannavaara**	**4.56**	**281**	PN	**Pn**	**05 00 39.5**	**-0.2**
LANU				SG	**Sb**	**05 01 47.9**	**+2.2**
ERTU	**Ertsjaerv**	**4.72**	**263**	PN	**Pn**	**05 00 43.7**	**+1.9**
ERTU				SN	**Sn**	**05 01 36.0**	**-1.0**
FINES	**FINESS Array B**	**7.03**	**213**	Pn	**Pn**	**05 01 15.3**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=5.0						
FINES				Lg	Lg	05 03 05.2	
	comp=Z,0.5nm,0.3s,baz=23,slow=25,SNR=8.1						
	comp=Z,1.8nm,0.9s						
FAUS	**Fauske**	**7.17**	**277**	S	**Sn**	**05 02 33.0**	**-4.3**
HFS	**Hagfors**	**11.59**	**240**	Pn	**Pn**	**05 02 14.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=42,slow=14,SNR=1.9						
HFS				Lg	Lg	05 05 26.9	
	comp=Z,0.3nm,0.3s,baz=52,slow=26,SNR=4.7						
	comp=Z,4.3nm,1.1s						
SPITS	**Spitsbergen Ar**	**11.75**	**342**	Pn	**Pn**	**05 02 14.8**	**-3.2**
	baz=144,slow=13						
	comp=Z,14nm,1.1s						
NOA	**NORSAR Array B**	**11.78**	**247**	Pn	**Pn**	**05 02 16.8**	**-1.8**
	baz=50,slow=13,SNR=1.1						
	comp=Z,0.6nm,0.8s						

*FUNV **01** 04:59:40.6, 6.66N×73.43W, h166km, MW3.6, Presumed earthquake*
*RSNC **01** 04:59:45.4±0.0, 7.1×7.3W, h151km±2km, M2.7, mb3.1, ML2.4*

ISC 01 04:59:43.8±1.3, **6.86N**±0.03×**73.11W**±0.04, **h159**km±8km, **n30**, σ1**f**43/56, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**196**	P	**Pn**	**05 00 05.6**	**-0.1**
BARC				S	**Sn**	**05 00 20.9**	**-1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PAMC	Pamplona, Colo	0.63	40	P	Pn	05 00 08.7	+1.3
PAMC				S	Sn	05 00 26.1	+0.6
BRJC	Barrancabermej	0.64	280	P	Pn	05 00 07.3	+0.4
BRJC				S	Sn	05 00 24.3	-0.3
RUSC	La Rusia	0.96	179	P	Pn	05 00 09.6	-0.1
RUSC				S	Sn	05 00 28.6	-0.9
CAPV	Capacho	1.27	38	eP	Pn	05 00 13.0	+0.9
CAPV				eS	Sn	05 00 35.0	+1.1
PTBC	PUERTO BERRIO,	1.38	257	P	Pn	05 00 12.1	-0.8
PTBC				S	Sn	05 00 33.5	-1.6
OCAC	Ocana	1.39	351	P	Pn	05 00 13.7	+0.6
OCAC				S	Sn	05 00 35.7	0.0
SPBC	San Pablo de B	1.54	219	P	Pn	05 00 14.4	-0.2
SPBC				S	Sn	05 00 36.5	-1.7
CHIC	Chingaza	2.30	196	P	Pn	05 00 23.8	+0.4
CHIC				S	Sn	05 00 53.9	-0.1
ROSC	El Rosal	2.34	211	P	Pn	05 00 25.5	+1.6
ROSC				S	Sn	05 00 58.2	+3.4
CVER	Cruz Verde, Cu	2.51	203	P	Pn	05 00 27.0	+0.9
CVER				S	Sn	05 00 59.6	+1.0
UREC	San Jos de Ur	2.56	290	P	Pn	05 00 25.2	-1.0
UREC				S	Sn	05 00 57.5	-1.4
SOCV	Socops	2.64	57	eP	Pn	05 00 27.7	+0.5
VILC	Villavicencio,	2.79	192	P	Pn	05 00 29.4	+0.3
VILC				S	Sn	05 01 03.6	-0.6
CBOC	Ciudad Bolivar	3.05	251	P	Pn	05 00 34.1	+1.7
CBOC				S	Sn	05 01 09.7	-0.3
DBBC	Dabeiba	3.08	273	P	Pn	05 00 33.2	+0.5
DBBC				S	Sn	05 01 10.3	-0.3
SDV	Santo Domingo	3.17	50	P	Pn	05 00 34.2	+0.3
SDV				S	Sn	05 01 13.4	+0.6
ARGC	Ariguani, Magd	3.19	339	P	Pn	05 00 35.7	+1.8
ARGC				S	Sn	05 01 15.0	+2.2
MCQV	Machiques	3.22	10	eP	Pn	05 00 32.5	-1.9
MCQV				eS	Sn	05 01 13.0	-0.7
ANIL	Santa Ana	3.28	224	P	Pn	05 00 37.2	+1.8
ANIL				S	Sn	05 01 17.1	+1.8
PRAC	Prado	3.59	210	P	Pn	05 00 39.1	0.0
PRAC				S	Sn	05 01 21.7	-0.4
APAC	Apartado, Choc	3.60	287	P	Pn	05 00 39.2	+0.1
APAC				S	Sn	05 01 22.5	+0.4
ORTC	Ortega, Tolima	3.62	216	P	Pn	05 00 39.8	+0.3
ORTC				S	Sn	05 01 23.6	+0.8
SJCC	San Jacinto, C	3.65	326	P	Pn	05 00 39.6	-0.3
SJCC				S	Sn	05 01 20.6	-2.9
URMC	La Uribe, Meta	3.81	200	P	Pn	05 00 42.7	+0.8
URMC				S	Sn	05 01 25.6	-1.5
YOTC	Yotoco, Valle	4.31	229	P	Pn	05 00 49.4	+0.9
SMRC	Santa Marta, M	4.42	346	P	Pn	05 00 50.8	+1.0
SMRC				S	Sn	05 01 39.3	-2.0
MACC	Macarena, Meta	4.74	189	P	Pn	05 00 53.0	-1.1
MACC				S	Sn	05 01 44.1	-4.8
POPC	Popayan, Colom	5.57	220	P	Pn	05 01 08.0	+2.8
FLOC	Florencia	5.82	206	P	Pn	05 01 07.5	-0.9

IDC 01 05:35:50.1±10.0**,4°.57S**×**148°.48E,h0**km**,mb3.7**/3**, mbtmp3.8**/3**,Error ellipse: s-maj=167.2km s-min=91.9km az=13.0,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.98	195	Sn	Sn	05 37 57.0	-7.6
	4.5nm,0.3s,baz=184,slow=17,SNR=7.1						
WRA	Warramunga Arr	20.57	221	P	P	05 40 29.9	-0.8
	1.5nm,0.5s,baz=46,slow=11,SNR=22						
	1.5nm,0.5s						
ASAR	Alice Springs	23.63	215	P	P	05 41 02.9	-0.2
	1.0nm,0.5s,baz=51,slow=8.2,SNR=24						
	1.0nm,0.5s						
STKA	Stephens Creek	27.93	193	P	P	05 41 43.0	+0.9
	0.8nm,0.3s,baz=353,slow=9.5,SNR=1.7						
	0.8nm,0.3s						

*NNC **01** 05:43:30.1±0.7,44°.95N×82°.31E,h31km±9km,mb3.7, mpv3.5,Error ellipse: s-maj=7.2km s-min=4.5km az=133.0*
*SOME **01** 05:43:31.0,45°.02N×82°.43E,h25km*
ISC 01 05:43:28.4±1.1**,45°.00N**±0°.05×**82°.57E**±0°.06**,h10**km**,n39, σ2s.06**/54**,4C-4D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	1.81	354	⇓Pn	Pn	05 43 59.4	-0.3
	7.7nm,0.2s,baz=169,slow=17,SNR=204						
MK31				⇑Sn	Sn	05 44 21.8	-0.8
	27nm,0.3s,baz=25,slow=25,SNR=16						
MAKZ	Makanchi	1.85	347	⇑Pn	Pn	05 44 00.1	-0.2
	9.1nm,0.5s						
MAKZ				⇓Sn	Sn	05 44 23.4	-0.5
	9.0nm,0.2s						
DJR	Jarkent	2.09	252	Pg	Pb	05 44 06.6	+0.1
	2.3nm,0.1s						
DJR				Lg	Lg	05 44 32.2	
	4.9nm,0.3s						
DJR	Jarkent	2.09	252	eP	Pb	05 44 06.6	+0.1
	2.3nm,0.1s						
DJR				eS	Sb	05 44 32.2	-0.3
	4.9nm,0.3s						
KTMS	Ketmen	2.22	226	Pg	Pb	05 44 07.7	-1.1
	3.3nm,0.1s						
KTMS				Lg	Lg	05 44 34.3	
	29nm,0.2s						
KTMS	Ketmen	2.22	226	eP	Pb	05 44 07.7	-1.1
	3.3nm,0.1s						
KTMS				eS	Sn	05 44 34.3	+1.2
	29nm,0.2s						
KAPS	Kapalarasan	2.29	278	Pg	Pb	05 44 10.0	+0.2
	12nm,0.0s						
KAPS				Lg	Lg	05 44 38.2	
	88nm,0.1s						
PDGK	Podgornoye	2.77	234	⇑Pg	Pb	05 44 18.6	+0.5
	2.3nm,0.6s						
PDGK				⇓Lg	Lg	05 44 54.8	
	60nm,0.6s						
SHLS	Shalkode	2.90	232	Pg	Pn	05 44 16.3	+1.6
	9.4nm,0.2s						
SHLS				Lg	Lg	05 44 49.2	
	90nm,0.3s						
SHLS	Shalkode	2.90	232	eP	Pn	05 44 16.3	+1.6
	9.4nm,0.2s						
SHLS				eS	Sn	05 44 49.2	-0.5
	90nm,0.3s						
ZSN	Zaisan	2.93	32	Pg	Pb	05 44 22.6	+1.9
	7.4nm,0.4s						
ZSN				Lg	Lg	05 44 59.5	
	32nm,0.4s						
ZSN	Zaisan	2.93	32	eP	Pb	05 44 22.6	+1.9
	7.4nm,0.4s						
ZSN				eS	Sg	05 44 59.5	-2.9
	32nm,0.4s						
TDK	Taldyqorghan	2.95	272	Pg	Pb	05 44 21.5	+0.4
	48nm,0.2s						
TDK				Lg	Lg	05 44 57.8	
	86nm,0.3s						
TDK	Taldyqorghan	2.95	272	eP	Pb	05 44 21.5	+0.4
	48nm,0.2s						
TDK				eS	Sb	05 44 57.8	+0.6
	86nm,0.3s						
BLB	Baldybastay	3.06	254	Pg	Pb	05 44 23.5	+0.5
	14nm,0.2s						
BLB				Lg	Lg	05 45 01.4	
	56nm,0.4s						
UZB	Uzynbulak	3.15	235	Pg	Pb	05 44 24.5	-0.2
	4.4nm,0.3s						
UZB				Lg	Lg	05 45 03.1	
	20nm,0.3s						
UZB	Uzynbulak	3.15	235	eP	Pb	05 44 24.5	-0.2
	4.4nm,0.3s						
UZB				eS	Sb	05 45 03.1	-0.2
	20nm,0.3s						
KPKS	Kokpek	3.18	243	Pg	Pb	05 44 25.6	+0.5
	0.6nm,0.2s						
KPKS				Lg	Lg	05 45 05.3	
	73nm,0.5s						
KPKS	Kokpek	3.18	243	eP	Pb	05 44 25.6	+0.5
	0.6nm,0.2s						
KPKS				eS	Sb	05 45 05.3	+1.3
	73nm,0.5s						
ARXS	Arharly	3.47	259	Pg	Pb	05 44 30.7	+0.6
	4.4nm,0.3s						
ARXS				Lg	Lg	05 45 13.9	
	17nm,0.2s						
ARXS	Arharly	3.47	259	eP	Pb	05 44 30.7	+0.6
	4.4nm,0.3s						
ARXS				eS	Sb	05 45 13.9	+1.6
	17nm,0.2s						
KURS	Kuram	3.50	246	Pg	Pb	05 44 31.3	+0.8
	1.7nm,0.5s						
KURS				Lg	Lg	05 45 14.8	
	7.4nm,0.4s						
SATY	Saty	3.57	239	Pg	Pb	05 44 31.8	0.0
	4.1nm,0.1s						
SATY				Lg	Lg	05 45 15.6	
	48nm,0.2s						
KOTS	Kotyrbulak	4.30	248	eP	Pb	05 44 47.2	+2.9
	2.6nm,0.4s						
KOTS				eS	Sg	05 45 41.6	-5.0
	20nm,0.4s						
MDOK	Medeo	4.38	247	Pg	Pb	05 44 47.0	+1.5
	2.9nm,0.2s						
MDOK				Lg	Lg	05 45 41.7	
	10nm,0.3s						
KTBS	Karatobe	4.41	255	Pg	Pb	05 44 47.7	+1.6
	2.0nm,0.4s						
KTBS				Lg	Lg	05 45 42.9	
	0.4nm,0.4s						
KTBS	Karatobe	4.41	255	eP	Pb	05 44 47.7	+1.6
	2.0nm,0.4s						
KTBS				eS	Sb	05 45 42.9	+3.6
	0.4nm,0.4s						
TNSS	Tian-Shan	4.50	246	Pg	Pb	05 44 49.6	+1.8
	1.4nm,0.3s						
TNSS				Lg	Lg	05 45 46.2	
	2.2nm,0.3s						
TNSS	Tian-Shan	4.50	246	eP	Pb	05 44 49.6	+1.8
	1.4nm,0.3s						
TNSS				eS	Sb	05 45 46.2	+4.0
	2.2nm,0.3s						
KUU	Kurty	4.59	258	Pg	Pb	05 44 51.2	+2.1
	4.6nm,0.1s						
KUU				Lg	Lg	05 45 48.9	
	6.4nm,0.0s						
KUU	Kurty	4.59	258	eP	Pb	05 44 51.2	+2.1
	4.6nm,0.1s						
KUU				eS	Sb	05 45 48.9	+4.4
	6.4nm,0.0s						
MTBS	Maitube	4.80	249	Pg	Pb	05 44 55.0	+2.3
	1.4nm,0.1s						
MTBS				Lg	Lg	05 45 55.5	
	11nm,0.3s						
MTBS	Maitube	4.80	249	eP	Pb	05 44 55.0	+2.3
	1.4nm,0.1s						
MTBS				eS	Sb	05 45 55.5	+5.0
	11nm,0.3s						
KST	Kastek	5.15	250	Pg	Pg	05 45 06.0	-1.0
	4.9nm,1.1s						
KST				Lg	Lg	05 46 14.5	
	7.5nm,0.3s						
KST	Kastek	5.15	250	eP	Pg	05 45 02.9	-4.1
	0.7nm,0.1s						
KST				eS	Sg	05 46 08.7	-4.9
	4.9nm,0.2s						
DGS	Degeres	5.20	253	Pg	Pg	05 45 07.0	-0.9
	1.9nm,0.4s						
DGS				Lg	Lg	05 46 16.3	
	12nm,0.8s						
DGS	Degeres	5.20	253	eP	Pg	05 45 07.0	-0.9
	1.9nm,0.4s						
DGS				eS	Sg	05 46 16.3	+1.1
	12nm,0.8s						
KURBB	Kurchatov Arra	6.25	336	⇓Lg	Lg	05 46 46.6	
	23nm,0.6s						
KURK	Kurchatov	6.30	337	⇑Lg	Lg	05 46 49.2	
	3.1nm,0.7s						

*IDC **01** 05:45:48.3±0.8,7°.98N×76°.23W,h0km,mb3.7/6, mbtmp3.7/7,ML2.5/1,MS3.2/6,Error ellipse: s-maj=64.3km s-min=16.5km az=60.0*
*CATAC **01** 05:45:54.4±0.7,8°N±4°×7°5W±°,h20km±5km,M4.2/6, MLv4.2/6,Error ellipse: s-maj=9.3km s-min=4.2km az=19.0, confirmed*
*RSNC **01** 05:45:56.0±0.0,8°N±1°×7°5W±°,h21km±3km,M3.8,mb4.0, ML3.4*
ISC 01 05:45:54.6±1.1**,8°.25N**±0°.03×**75°.29W**±0°.03**,h30**km±9km**, n55,**σ**1s.48**/75**,mb3.7**/6**,MS3.1**/6**,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UREC	San Jos de Ur	0.55	205	P	Pb	05 46 04.9	-1.0
UREC				S	Sb	05 46 12.5	-1.1
APAC	Apartado, Choc	1.32	255	P	Pb	05 46 18.7	-0.1
DBBC	Dabeiba	1.53	217	P	Pn	05 46 19.8	-0.1
DBBC				S	Sb	05 46 40.2	-1.2
SJCC	San Jacinto, C	1.64	4	P	Pb	05 46 23.7	-0.5
SJCC				S	Sn	05 46 36.6	-5.0
SJCC	San Jacinto, C	1.64	4	P	Pb	05 46 23.3	-0.9
SJCC				S	Sb	05 46 45.9	+1.4
PTBC	PUERTO BERRIO,	1.89	154	P	Pn	05 46 24.3	-0.6
PTBC				S	Sn	05 46 46.9	-0.9
ARGC	Ariguani, Magd	1.90	33	P	Pb	05 46 29.3	+0.6
ARGC				S	Sb	05 46 52.7	+0.6
OCAC	Ocana	1.95	90	P	Pn	05 46 26.0	+0.1
OCAC				S	Sn	05 46 50.6	+1.1
BRJC	Barrancabermej	1.99	129	P	Pn	05 46 26.6	+0.3
BRJC				S	Sn	05 46 51.4	+1.1
CAPC	Capurgana	2.07	281	P	Pn	05 46 28.5	+1.1
CAPC				S	Sn	05 46 51.9	-0.3
CAP2	Capurgana	2.08	281	P	Pn	05 46 28.5	+1.0
CAP2				S	Sn	05 46 52.9	+0.4
CBOC	Ciudad Bolivar	2.48	197	P	Pn	05 46 33.3	+0.2
CBOC				S	Sn	05 47 04.2	+1.8
BARC	Barichara	2.67	128	P	Pn	05 46 36.2	+0.5
BARC				S	Sn	05 47 08.0	+0.8
PTAC	Punta Ardita,	2.72	246	P	Pn	05 46 36.5	+0.2
PTAC				S	Sn	05 47 09.8	+1.5
PAMC	Pamplona, Colo	2.73	109	P	Pn	05 46 37.6	+0.8
PAMC				S	Sn	05 47 10.3	+1.3
SPBC	San Pablo de B	2.85	155	P	Pn	05 46 36.9	-1.3
SPBC				S	Sn	05 47 10.8	-0.8
SOLC	Bahia Solano	2.91	226	P	Pn	05 46 40.2	+1.3
SOLC				S	Sn	05 47 14.4	+1.6
RUSC	La Rusia	3.21	137	P	Pn	05 46 43.2	-0.3
RUSC				S	Sn	05 47 23.3	+2.3
RUSC	La Rusia	3.21	137	P	Pn	05 46 43.4	-0.1
RUSC				S	Sn	05 47 21.8	+0.8
ROSC	El Rosal	3.52	164	Pn	Pn	05 46 47.4	-0.3
	8.9nm,0.3s,baz=333,slow=12,SNR=15						
ROSC				Sn	Sn	05 47 32.0	+3.4
	30nm,0.3s,baz=5.5,slow=23,SNR=8.0						
	8.1nm,0.3s						
ROSC	El Rosal	3.52	164	P	Pn	05 46 47.8	+0.1
CVER	Cruz Verde, Cu	3.90	162	P	Pn	05 46 52.7	-0.3
CVER				S	Sn	05 47 38.6	+0.6
CHIC	Chingaza	3.92	157	P	Pn	05 46 52.8	-0.4
CHIC				S	Sn	05 47 39.0	+0.6
ORTC	Ortega, Tolima	4.32	179	P	Pn	05 47 00.9	+2.6
YOTC	Yotoco, Valle	4.37	194	P	Pn	05 47 00.2	+1.1
VILC	Villavicencio,	4.41	159	P	Pn	05 46 59.2	-0.5
PRAC	Prado	4.53	175	P	Pn	05 47 02.4	+1.2
BCIP	Isla Barro Col	4.58	282	P	Pn	05 47 02.7	+0.8
BCIP				S	Sn	05 47 55.0	+0.8
SDV	Santo Domingo	4.65	82	P	Pn	05 47 04.1	+1.1
SDV				S	Sn	05 47 55.9	-0.3
URIC	Uribia, Colomb	4.72	43	P	Pn	05 47 06.5	+2.6
URIC				S	Sn	05 47 58.2	+0.5
URMC	La Uribe, Meta	5.05	170	P	Pn	05 47 08.7	+0.2
JAMC	Jamundi, Valle	5.19	195	P	Pn	05 47 11.2	+0.7
	18nm,0.9s						
POPC	Popayan, Colom	5.84	194	P	Pn	05 47 20.8	+1.4
POPC				S	Sn	05 48 26.3	+0.8
MACC	Macarena, Meta	6.24	167	P	Pn	05 47 22.1	-2.6
BBAC	Balboa, Cauca	6.49	198	P	Pn	05 47 28.7	+0.4
BBAC				S	Sn	05 48 42.9	+1.4
FLOC	Florencia	6.63	183	P	Pn	05 47 30.1	-0.1
GTBY	Guantanamo Bay	11.61	1	*i* P	Pn	05 48 41.0	+2.7
GTBY				IAmb	IAmb	05 48 41.1	
	comp=Z,26nm,1.6s						
RCC	Rio Carpintero	11.68	358	*i* P	Pn	05 48 41.6	+2.3
RCC				IAmb	IAmb	05 48 43.8	
	comp=Z,7.8nm,0.7s						
QMBU	Quimbuelo	11.89	2	*i* P	Pn	05 48 42.8	+0.6
QMBU				IAmb	IAmb	05 48 56.4	
	comp=Z,9.8nm,1.8s						
MASC	Masc	11.90	5	*i* P	Pn	05 48 43.3	+1.0
MASC				IAmb	IAmb	05 48 52.9	
	comp=Z,24nm,1.2s						
PINC	Pinares de May	12.17	358	*i* P	Pn	05 48 48.7	+2.7
PINC				IAmb	IAmb	05 48 50.4	
	comp=Z,8.0nm,1.6s						
CCCC	Cccc	13.09	350	*i* P	Pn	05 49 00.8	+2.2
CCCC				IAmb	IAmb	05 49 12.1	
	comp=Z,12nm,2.8s						
MDP	Montagnes des	22.71	96	LR	LR	06 00 04.9	
	comp=Z,63nm,18.7s,baz=306,slow=36						
LPAZ	La Paz	25.39	164	P	P	05 51 17.1	-3.2
	comp=Z,1.6nm,0.8s,baz=350,slow=7.5,SNR=6.6						
LPAZ				LR	LR	06 02 03.1	
	comp=Z,58nm,19.9s,baz=280,slow=38						
	comp=Z,1.6nm,0.8s						
SIV	San Ignacio	27.90	150	LR	LR	06 03 30.6	
	comp=Z,86nm,20.2s,baz=274,slow=38						
BDFB	Brasilia	35.97	131	P	P	05 52 55.3	+2.2
	comp=Z,0.6nm,0.3s,baz=289,slow=7.9,SNR=2.0						
	comp=Z,0.6nm,0.3s						
LPIG	La Paz	36.99	299	LR	LR	06 08 49.6	
	comp=Z,29nm,19.9s,baz=146,slow=38						
CPUP	Villa Florida	38.55	154	P	P	05 53 14.7	-0.1
	comp=Z,0.4nm,0.5s,baz=344,slow=7.4,SNR=3.4						
	comp=Z,0.4nm,0.5s						
ANMO	Albuquerque	39.01	318	LR	LR	06 13 00.8	
	comp=Z,22nm,18.1s,baz=86,slow=42						
NVAR	Mina Array Bea	48.95	315	P	P	05 54 31.6	-7.0
	comp=Z,0.1nm,0.5s,baz=121,slow=7.3,SNR=1.7						
	comp=Z,0.1nm,0.5s						
YKA	Yellowknife Ar	61.19	340	P	P	05 56 04.8	-1.5
	comp=Z,1.1nm,0.8s,baz=132,slow=6.5,SNR=18						
	comp=Z,1.1nm,0.8s						
DLBC	Dease Lake	65.05	332	LR	LR	06 25 46.2	
	comp=Z,22nm,20.2s,baz=128,slow=37						
ILAR	Eielson Array	74.77	335	P	P	05 57 28.9	-2.7
	comp=Z,0.7nm,0.9s,baz=135,slow=4.4,SNR=7.4						
	comp=Z,0.7nm,0.9s						
ASAR	Alice Springs	148.12	238	PKPbc	PKPdf	06 05 34.5	-0.6
	comp=Z,0.8nm,0.7s,baz=112,slow=3.3,SNR=7.2						
WRA	Warramunga Arr	149.06	245	PKPbc	PKPdf	06 05 37.3	+0.6
	comp=Z,0.8nm,0.8s,baz=99,slow=2.3,SNR=6.5						

*IDC **01** 05:50:47.0±1.0,25°.16S×86°.22E,h0km,mb3.9/9, mbtmp3.9/9,MS3.3/3,Error ellipse: s-maj=35.9km s-min=22.3km az=42.0*
*NEIC **01** 05:50:50.6±1.8,24°.8S±0°.2×86°.52E±0°.09,h10km±1km, mb4.3/11,Error ellipse: s-maj=25.6km s-min=14.1km az=173.0*
ISC 01 05:50:49.6±0.7**,25°.0S**±0°.1×**86°.5E**±0°.1**,h10**km**,n32, **σ**0s.97**/25**,mb4.0**/14**,MS3.1**/3**,South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	14.87	208	Pn	Pn	05 54 21.9	+2.0
H08S2	Diego Garcia H	21.78	320	T	T	06 18 18.4	
	baz=145,slow=74,SNR=70						
H08S1	Diego Carcia H	21.79	320	T	T	06 18 23.5	
	baz=145,slow=74,SNR=38						
H08S3	Diego Garcia H	21.80	320	T	T	06 18 19.6	
	baz=145,slow=74,SNR=124						
DGAR	Diego Garcia	21.99	320	P	P	05 55 43.1	-0.8
H01W3	Cape Leeuwin H	25.88	119	T	T	06 23 08.5	
	baz=284,slow=75,SNR=10						
H01W2	Cape Leeuwin H	25.88	119	T	T	06 23 09.2	
	baz=284,slow=75,SNR=8.5						
H01W1	Cape Leeuwin H	25.90	119	T	T	06 23 10.6	
	baz=284,slow=75,SNR=7.8						
PALK	Pallekele	32.52	349	LR	LR	06 07 58.3	
	comp=Z,40nm,19.4s,baz=178,slow=32						
FORT	Forrest	37.08	109	P	P	05 58 00.1	0.0
FORT				IAmb	IAmb	05 58 01.8	
	comp=Z,10nm,1.2s						
KNRA	Kununurra	40.60	85	P	P	05 58 30.7	+0.8
KNRA				IAmb	IAmb	05 59 14.2	
	comp=Z,19nm,1.4s						
ASAR	Alice Springs	43.09	99	P	P	05 58 50.5	+0.2
	comp=Z,1.9nm,0.7s,baz=263,slow=7.5,SNR=27						
ASAR				PcP	PcP	06 00 39.3	-0.8
	comp=Z,0.5nm,0.7s,baz=256,slow=3.7,SNR=3.4						
ASAR				LR	LR	06 16 16.2	
	comp=Z,20nm,18.1s,baz=112,slow=35						
	comp=Z,1.9nm,0.7s						
ASAR	Alice Springs	43.09	99	P	P	05 58 50.2	0.0
AS31	Alice Springs	43.09	99	P	P	05 58 49.7	-0.6
WRA	Warramunga Arr	44.36	94	P	P	05 59 01.2	+0.7
	comp=Z,1.2nm,0.6s,baz=259,slow=8.0,SNR=16						
	comp=Z,1.2nm,0.6s						
WRA	Warramunga Arr	44.36	94	P	P	05 58 60.0	-0.5
CHTO	Chiang Mai	45.17	17	P	P	05 59 06.7	-0.1
CHTO				IAmb	IAmb	05 59 35.2	
	comp=Z,3.1nm,1.2s						
STKA	Stephens Creek	48.55	111	P	P	05 59 33.1	-0.1
	comp=Z,1.0nm,0.5s,baz=230,slow=7.1,SNR=3.1						
	comp=Z,1.0nm,0.5s						
SNAA	Sanae	66.32	200	P	P	06 01 35.1	-3.0
	comp=Z,4.2nm,0.9s,baz=131,slow=6.4,SNR=2.0						
	comp=Z,4.2nm,0.9s						
AAK	Ala-Archa	68.16	351	LR	LR	06 30 15.0	
	comp=Z,40nm,18.6s,baz=340,slow=35						
KKAR	Karatay Array	69.30	348	P	P	06 01 57.9	+0.9
MKAR	Makanchi Array	71.51	357	P	P	06 02 11.1	+0.7
	comp=Z,0.4nm,0.9s,baz=182,slow=7.2,SNR=3.0						
	comp=Z,0.4nm,0.9s						
SONM	Songino Array	74.64	14	P	P	06 02 29.2	+0.1
	comp=Z,0.3nm,0.6s,baz=193,slow=5.9,SNR=1.8						
	comp=Z,0.3nm,0.6s						
SONM	Songino Array	74.64	14	P	P	06 02 29.0	-0.1
SONM				IAmb	IAmb	06 02 49.1	
	comp=Z,3.0nm,1.5s						
ULN	Ulaanbaatar	74.81	14	P	P	06 02 31.5	+1.4
ULN				IAmb	IAmb	06 03 03.1	
	comp=Z,6.0nm,1.3s						
KURBB	Kurchatov Arra	75.57	355	P	P	06 02 33.6	-0.5
	comp=Z,0.8nm,0.7s,baz=181,slow=5.0,SNR=4.7						
	comp=Z,0.8nm,0.7s						
ZAA0	Zalesovo Array	78.59	359	P	P	06 02 50.5	-0.6
ZAA0				IAmb	IAmb	06 03 18.5	
	comp=Z,1.3nm,0.9s						
ZALV	Zalesovo Beam	78.59	359	P	P	06 02 51.0	0.0
	comp=Z,0.6nm,0.5s,baz=190,slow=4.5,SNR=3.7						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	78.59	359	P	P	06 02 51.9	+0.8
BR131	Keskin Array S	81.03	322	P	P	06 03 05.3	+0.4
BR131				IAmb	IAmb	06 03 28.6	
	comp=Z,4.1nm,1.2s						
BRTR	Keskin Array B	81.03	322	P	P	06 03 04.8	0.0
	comp=Z,1.3nm,0.8s,baz=132,slow=4.6,SNR=6.5						
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	81.03	322	P	P	06 03 04.4	-0.4

*NEIC **01** 05:54:13.9±1.8,19°.04N±0°.06×67°.64W±0°.04,h10km±1km, ML2.5/35,Md3.3/7(RSPR),Error ellipse: s-maj=12.2km s-min=3.1km az=27.0*
*OSPL **01** 05:54:13.2±1.3,19°.07N×67°.80W,h0km±7km,ML2.8, Presumed earthquake*
*RSPR **01** 05:54:13.1,19°.02N×68°.05W,h54km±15km,MD3.3/7*
*SDD **01** 05:54:16.8±2.1,18°.02N×67°.73W,h17km±12km,MD3.0, ML2.3,MW2.7,Presumed earthquake*
ISC 01 05:54:15.9±1.2**,18°.95N**±0°.08×**67°.69W**±0°.03**,h17**km±9km**, n39,**σ**0s.97**/56**,19C,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.59	160		Pb	05 54 27.9	+0.1
IDE	Isla Desecheo	0.59	160	⇑eP	Pb	05 54 27.9	+0.1
AGPR	Aguadilla, PR	0.72	131		Pg	05 54 29.4	-0.6
AGPR				IAML		05 54 42.5	
	150nm,0.2s						
AGPR	Aguadilla, PR	0.72	131	*i* P	Pg	05 54 29.9	-0.2
AGPR				⇑*i*S	Sb	05 54 40.2	+0.4
AGPR				IAML		05 54 41.2	
	comp=E,41nm,0.2s						
AGPR				IAML		05 54 48.8	
	comp=N,137nm,0.2s						
AGPR	Aguadilla, PR	0.72	131	⇑eP	Pg	05 54 29.8	-0.2
AGPR	Aguadilla, PR	0.72	131	*i* P	Pg	05 54 29.7	-0.3
AGPR				eS	Sb	05 54 40.3	+0.6
AGPR				IAML		05 54 41.3	
	comp=Z,60nm,1.4s						
PCDR	Punta Cana, DR	0.79	237	⇑*i*P	Pg	05 54 30.6	-0.6
PCDR				⇑*i*S	Sb	05 54 41.3	-0.2
PCDR				IAML		05 54 46.6	
	comp=N,92nm,0.7s						
PCDR				IAML		05 54 48.8	
	comp=E,102nm,1.5s						
PCDR				IAML		05 54 52.2	

	comp=N,79nm,1.7s						
PRSN	**Puerto Rico Se**	**0.89**	**145**		**Pb**	**05 54 32.5**	**-0.4**
LSP	**Las Mesas**	**0.96**	**143**		**Pb**	**05 54 34.0**	**0.0**
LSP					**Sn**	**05 54 49.0**	**+1.1**
LSP	**Las Mesas**	**0.96**	**143**	⇑*e*P	**Pb**	**05 54 34.0**	**0.0**
LSP				*e*S	**Sn**	**05 54 49.0**	**+1.1**
HIDR	**Higuey Centro**	**1.04**	**250**	⇑*i*P	**Pb**	**05 54 34.9**	**-0.5**
HIDR				IAML		05 54 49.5	
	comp=N,94nm,0.2s						
HIDR				⇑*i*S	**Sn**	**05 54 50.6**	**+0.8**
HIDR				IAML		05 54 53.5	
	comp=E,72nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.08**	**150**		**Sn**	**05 54 52.1**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.08**	**150**		**Pb**	**05 54 35.5**	**-0.6**
CRPR				IAML		05 54 55.4	
	comp=E,70nm,0.8s						
CRPR				IAML		05 54 55.9	
	comp=E,110nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.08**	**150**	⇑*e*P	**Pb**	**05 54 34.8**	**-1.4**
CRPR				*e*S	**Sn**	**05 54 52.1**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.08**	**150**	*e*S	**Sn**	**05 54 52.2**	**+1.2**
CRPR				IAML		05 54 55.6	
	comp=Z,106nm,0.3s						
MLPR	**Magueyes Islan**	**1.15**	**148**	Pn	**Pn**	**05 54 36.1**	**-1.1**
MLPR				IAML		05 54 56.8	
	comp=Z,88nm,0.4s						
MLPR				IAML		05 54 57.7	
	comp=Z,64nm,0.4s						
UUPR	**Utuado, UPR, P**	**1.15**	**127**		**Pn**	**05 54 35.9**	**-1.3**
EMPR	**Esperanza - Ma**	**1.19**	**113**		**Pn**	**05 54 37.5**	**-0.3**
EMPR	**Esperanza - Ma**	**1.19**	**113**	⇑*e*P	**Pn**	**05 54 37.5**	**-0.3**
EMPR				*e*S	**Sg**	**05 54 56.5**	**+2.0**
MIDR	**Miches**	**1.29**	**272**	⇑*i*P	**Pg**	**05 54 41.4**	**+0.6**
MIDR				⇑*i*S	**Sg**	**05 54 59.6**	**+2.0**
MIDR				IAML		05 55 00.9	
	comp=N,81nm,0.3s						
MIDR				IAML		05 55 00.9	
	comp=N,78nm,0.3s						
OBIP	**Obispado Ponce**	**1.36**	**131**		**Sb**	**05 54 58.9**	**+0.7**
OBIP	**Obispado Ponce**	**1.36**	**131**		**Pn**	**05 54 38.8**	**-1.4**
OBIP	**Obispado Ponce**	**1.36**	**131**	⇑*e*P	**Pn**	**05 54 38.9**	**-1.2**
OBIP				*e*S	**Sb**	**05 54 58.9**	**+0.7**
OBIP	**Obispado Ponce**	**1.36**	**131**	*i* P	**Pn**	**05 54 38.9**	**-1.2**
OBIP				*e*S	**Sb**	**05 54 59.1**	**+0.9**
OBIP				IAML		05 55 04.2	
	comp=Z,252nm,0.1s						
ECPR	**Experimental S**	**1.40**	**116**		**Pn**	**05 54 39.5**	**-1.2**
ECPR	**Experimental S**	**1.40**	**116**	⇑*e*P	**Pn**	**05 54 39.8**	**-0.9**
DR12	**Loma Pena Alta**	**1.61**	**265**	Pn	**Pb**	**05 54 45.5**	**+0.3**
HATOM	**Hato Mayor del**	**1.61**	**265**	⇑*i*P	**Pg**	**05 54 45.7**	**-1.2**
HATOM				⇑*i*S	**Sb**	**05 55 06.0**	**+0.7**
HATOM				IAML		05 55 11.4	
	comp=N,19nm,0.5s						
GCPR	**Guaynabo City**	**1.65**	**112**		**Pn**	**05 54 43.2**	**-0.9**
GCPR					**Sn**	**05 55 04.7**	**-0.2**
GCPR	**Guaynabo City**	**1.65**	**112**	⇑*e*P	**Pn**	**05 54 44.2**	**+0.1**
GCPR				*e*S	**Sg**	**05 55 08.2**	**-0.9**
SJG	**San Juan**	**1.68**	**119**		**Pn**	**05 54 42.5**	**-2.0**
SJG				IAML		05 55 11.4	
	comp=N,42nm,0.3s						
SJG				IAML		05 55 13.3	
	comp=N,36nm,0.3s						
SJG	**San Juan**	**1.68**	**119**	⇑*e*P	**Pn**	**05 54 43.5**	**-1.0**
SJG				*e*S	**Sb**	**05 55 08.3**	**+1.1**
SJG	**San Juan**	**1.68**	**119**	*i* P	**Pn**	**05 54 44.2**	**-0.3**
SJG				*e*S	**Sb**	**05 55 07.3**	**+0.1**
SJG				IAML		05 55 11.1	
	comp=Z,439nm,0.2s						
PDPR	**Patillas Dam,**	**1.83**	**120**	Pn	**Pn**	**05 54 46.0**	**-0.6**
HUMP	**Col San Antoni**	**1.92**	**114**		**Sb**	**05 55 13.4**	**-0.7**
HUMP	**Col San Antoni**	**1.92**	**114**	Pn	**Pn**	**05 54 46.4**	**-1.4**
HUMP				IAML		05 55 19.4	
	comp=Z,40nm,0.9s						
HUMP				IAML		05 55 27.1	
	comp=Z,24nm,0.6s						
HUMP	**Col San Antoni**	**1.92**	**114**	⇑*e*P	**Pn**	**05 54 47.9**	**+0.1**
HUMP				*e*S	**Sb**	**05 55 13.4**	**-0.7**
CUPR	**Culebra, Puert**	**2.37**	**105**	Pn	**Pn**	**05 54 53.4**	**-0.6**
SDDR	**Presa de Saban**	**3.41**	**271**	Pn	**Pn**	**05 55 06.6**	**-1.7**
SDDR				IAML		05 55 33.7	
	comp=Z,15nm,2.5s						

*NEIC **01** 06:17:53.8±0.8, 17.°81N±0.°03×66.°839W±0.°008, h10km±1km, ML3.8/42, Md3.6/8(RSPR), Error ellipse: s-maj=4.8km s-min=2.6km az=6.0*
*RSPR **01** 06:17:54.3, 17.°85N×66.°86W, h4km, MD3.6/8*
*OSPL **01** 06:17:54.4±0.8, 17.°80N×66.°86W, h9km±4km, ML4.0, Presumed earthquake*
*SDD **01** 06:17:54.2±1.0, 17.°81N×66.°83W, h20km±14km, MD3.7, ML3.7, MW4.0, Presumed earthquake*
ISC 01 06:17:53.9±1.0**, 17.°83N**±0.°05×**66.°87W**±0.°02**, h15**km±6km**, n72,** σ**0s98**/98**, 9C-10D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.15**	**355**		**Pg**	**06 17 57.3**	**-0.5**
GBPR	**Guanica, Bosqu**	**0.15**	**355**	⇓*i*P	**Pg**	**06 17 57.3**	**-0.5**
MLPR	**Magueyes Islan**	**0.22**	**310**		**Pg**	**06 17 59.0**	**+0.1**
MLPR				Sg	**Sg**	**06 18 02.7**	**+0.5**
MLPR				IAML		06 18 03.1	
	12µm,0.4s						
MLPR				IAML		06 18 03.2	
	23µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.29**	**308**		**Pg**	**06 18 00.3**	**+0.3**
CRPR				Sg	**Sb**	**06 18 05.1**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.29**	**308**	IAML		06 18 05.4	
	46µm,0.5s						
CRPR				IAML		06 18 05.6	
	24µm,0.7s						
CRPR	**Cabo Rojo, PR**	**0.29**	**308**	⇓*e*Pg	**Pg**	**06 18 00.5**	**+0.4**
CRPR				⇑*e*Sg	**Sb**	**06 18 05.1**	**-0.5**
CRPR				IAML		06 18 05.3	
	comp=N,33µm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.29**	**308**	⇑*i*P	**Pg**	**06 18 00.3**	**+0.3**
CRPR				*e*S	**Sg**	**06 18 04.8**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.29**	**308**	*i* P	**Pg**	**06 18 00.1**	**+0.1**
CRPR				*e*S	**Sg**	**06 18 04.9**	**+0.6**
CRPR				IAML		06 18 05.6	
	comp=Z,17µm,0.6s						
OBIP	**Obispado Ponce**	**0.33**	**49**		**Pg**	**06 18 00.4**	**-0.3**
OBIP	**Obispado Ponce**	**0.33**	**49**		**Sb**	**06 18 06.2**	**-0.4**
OBIP	**Obispado Ponce**	**0.33**	**49**	⇓*i*P	**Pg**	**06 18 00.5**	**-0.2**
OBIP				*e*S	**Sb**	**06 18 06.2**	**-0.4**
OBIP	**Obispado Ponce**	**0.33**	**49**	*i* P	**Pg**	**06 18 00.5**	**-0.2**
OBIP				*e*S	**Sg**	**06 18 05.2**	**-0.1**
OBIP				IAML		06 18 08.2	
	comp=Z,13µm,0.5s						
CELP	**Cerrillos**	**0.37**	**48**		**Pg**	**06 18 01.3**	**-0.1**
LSP	**Las Mesas**	**0.41**	**329**		**Pg**	**06 18 02.1**	**0.0**
LSP	**Las Mesas**	**0.41**	**329**	⇓*i*P	**Pg**	**06 18 02.1**	**0.0**
UUPR	**Utuado, UPR, P**	**0.45**	**18**		**Pg**	**06 18 02.7**	**-0.1**
UUPR				Sg	**Sg**	**06 18 08.9**	**0.0**
PRSN	**Puerto Rico Se**	**0.47**	**326**		**Pg**	**06 18 03.4**	**+0.1**
PRSN	**Puerto Rico Se**	**0.47**	**326**		**Sb**	**06 18 10.6**	**-0.1**
PRSN	**Puerto Rico Se**	**0.47**	**326**	⇑*e*Pg	**Pg**	**06 18 03.2**	**0.0**
PRSN				⇑*e*Sg	**Sb**	**06 18 10.8**	**+0.1**
PRSN				IAML		06 18 13.5	
	comp=N,17µm,0.3s						
PRSN	**Puerto Rico Se**	**0.47**	**326**	⇑*i*P	**Pg**	**06 18 03.3**	**0.0**
PRSN				*e*S	**Sb**	**06 18 10.6**	**-0.1**
AGPR	**Aguadilla, PR**	**0.68**	**340**		**Pg**	**06 18 06.8**	**-0.4**
AGPR				IAML		06 18 18.5	
	comp=N,3µm,0.4s						
AGPR				IAML		06 18 19.4	
	comp=N,4µm,0.5s						
AGPR	**Aguadilla, PR**	**0.68**	**340**	⇑*e*Pg	**Pg**	**06 18 06.8**	**-0.4**
AGPR				⇓*e*Sg	**Sg**	**06 18 16.5**	**+0.2**
AGPR				IAML		06 18 19.4	
	comp=N,3µm,0.5s						
AGPR	**Aguadilla, PR**	**0.68**	**340**	⇑*i*P	**Pg**	**06 18 06.9**	**-0.4**
AGPR				*e*S	**Sg**	**06 18 16.4**	**+0.2**
AGPR	**Aguadilla, PR**	**0.68**	**340**	*i* P	**Pg**	**06 18 06.8**	**-0.4**
AGPR				*e*S	**Sg**	**06 18 16.4**	**+0.2**
AGPR				IAML		06 18 21.2	
	comp=Z,2µm,0.6s						
ECPR	**Experimental S**	**0.69**	**44**		**Pg**	**06 18 06.7**	**-0.6**
ECPR				IAML		06 18 18.8	
	comp=Z,7µm,0.3s						
ECPR	**Experimental S**	**0.69**	**44**	⇓*i*P	**Pg**	**06 18 06.7**	**-0.6**
ECPR				*e*S	**Sg**	**06 18 16.6**	**+0.2**
EMPR	**Esperanza - Ma**	**0.72**	**26**		**Pg**	**06 18 07.8**	**-0.2**
EMPR					**Sb**	**06 18 18.1**	**+0.2**
EMPR	**Esperanza - Ma**	**0.72**	**26**	⇓*i*P	**Pg**	**06 18 07.8**	**-0.2**
EMPR				*e*S	**Sb**	**06 18 18.1**	**+0.2**
SJG	**San Juan**	**0.74**	**67**		**Pg**	**06 18 07.6**	**-0.7**
SJG				IAML		06 18 23.2	
	comp=Z,3µm,0.5s						
SJG	**San Juan**	**0.74**	**67**	⇓*i*P	**Pg**	**06 18 07.7**	**-0.7**
SJG				*e*S	**Sb**	**06 18 18.8**	**+0.4**
SJG	**San Juan**	**0.74**	**67**	*i* P	**Pg**	**06 18 07.6**	**-0.7**
SJG				*e*S	**Sg**	**06 18 18.2**	**+0.1**
SJG				IAML		06 18 23.1	
	comp=Z,29µm,0.2s						
IDE	**Isla Desecheo**	**0.80**	**314**		**Pg**	**06 18 08.8**	**-0.7**
IDE					**Sb**	**06 18 20.4**	**+0.1**
IDE	**Isla Desecheo**	**0.80**	**314**	⇓*i*P	**Pg**	**06 18 08.8**	**-0.7**
IDE				*e*S	**Sb**	**06 18 20.4**	**+0.1**
PDPR	**Patillas Dam,**	**0.83**	**77**		**Pb**	**06 18 09.4**	**-0.5**
PDPR				IAML		06 18 25.7	
	comp=Z,3µm,0.5s						
GCPR	**Guaynabo City**	**0.89**	**57**		**Pb**	**06 18 10.3**	**-0.7**
GCPR	**Guaynabo City**	**0.89**	**57**		**Sb**	**06 18 22.4**	**-0.3**
GCPR	**Guaynabo City**	**0.89**	**57**	⇑*i*P	**Pb**	**06 18 10.1**	**-0.9**
GCPR				*e*S	**Sb**	**06 18 22.4**	**-0.3**
HUMP	**Col San Antoni**	**1.02**	**72**		**Pb**	**06 18 12.8**	**-0.5**
HUMP				IAML		06 18 31.4	
	comp=Z,2µm,0.5s						
HUMP	**Col San Antoni**	**1.02**	**72**		**Sb**	**06 18 25.9**	**-0.6**
HUMP	**Col San Antoni**	**1.02**	**72**	⇓*i*P	**Pb**	**06 18 12.3**	**-0.9**
HUMP				*e*S	**Sb**	**06 18 25.9**	**-0.6**
CUPR	**Culebra, Puert**	**1.58**	**72**		**Pn**	**06 18 22.0**	**+0.6**
PCDR	**Punta Cana, DR**	**1.59**	**296**	⇑*e*Pg	**Pn**	**06 18 22.3**	**+0.7**
PCDR				IAML		06 18 57.2	
	comp=N,847nm,1.0s						
HIDR	**Higuey Centro**	**1.92**	**294**	⇑*e*Pg	**Pn**	**06 18 27.3**	**+1.3**
HIDR				IAML		06 18 58.3	
	comp=N,610nm,0.2s						
MIDR	**Miches**	**2.37**	**299**	⇑*e*Pg	**Pn**	**06 18 33.5**	**+1.2**
MIDR				IAML		06 19 15.0	
	comp=N,203nm,0.9s						
DR12	**Loma Pena Alta**	**2.57**	**292**	Pn	**Pn**	**06 18 37.1**	**+1.9**
HATOM	**Hato Mayor del**	**2.57**	**292**	⇑*e*Pg	**Pb**	**06 18 37.8**	**-2.0**
HATOM				IAML		06 19 22.2	
	comp=N,214nm,0.6s						
SMDR	**Samana, DR**	**2.64**	**304**		**Pb**	**06 18 40.8**	**-0.1**
SMDR					**Sb**	**06 19 15.3**	**+2.1**
SDD	**Santo Domingo**	**2.96**	**283**	Pn	**Pn**	**06 18 41.5**	**+1.0**
SDD				IAML		06 19 34.8	
	comp=E,334nm,0.8s						
SDD				IAML		06 19 49.0	
	comp=N,298nm,1.4s						
BANI	**BANI**	**3.37**	**280**	Pn	**Pn**	**06 18 46.7**	**+0.6**
SABA	**Saba**	**3.46**	**93**	Pn	**Pn**	**06 18 47.8**	**+0.5**
SABA	**Saba**	**3.46**	**93**		**Sn**	**06 19 30.5**	**+2.4**
SABA	**Saba**	**3.46**	**93**	⇑*e*P	**Pn**	**06 18 48.5**	**+1.2**
SABA				*e*S	**Sn**	**06 19 30.5**	**+2.4**
SMRT	**St. Maarten**	**3.62**	**86**	Pn	**Pn**	**06 18 49.3**	**-0.2**
SKI	**Saint Kitts**	**3.97**	**96**	*e*P	**Pn**	**06 18 54.3**	**0.0**
SC01	**Santiago de lo**	**3.99**	**294**	Pn	**Pn**	**06 18 58.1**	**+3.4**
SDDR	**Presa de Saban**	**4.35**	**286**	Pn	**Pn**	**06 19 03.1**	**+3.5**
SDDR	**Presa de Saban**	**4.35**	**286**	*i* P	**Pb**	**06 19 08.1**	**-2.1**
SDDR				*e*S	**Sb**	**06 20 03.0**	**+0.4**
SDDR				*e*Sg	**Sg**	**06 20 13.6**	**-0.1**
MBFL	**Flemmings, Mon**	**4.57**	**103**	*e*P	**Pn**	**06 19 02.5**	**-0.1**
MBWH	**Windy Hill**	**4.59**	**103**	*e*P	**Pn**	**06 19 03.5**	**+0.5**
MLYT	**Lee's Yard**	**4.60**	**103**	*e*P	**Pn**	**06 19 03.1**	**+0.1**
ANWB	**Willy Bob**	**4.84**	**91**	*e*P	**Pn**	**06 19 06.1**	**-0.3**
DHSZ	**Broadband at M**	**5.12**	**107**	*e*P	**Pn**	**06 19 12.1**	**+2.0**
GDHS	**Morne Mazeau,**	**5.12**	**107**	Pn	**Pn**	**06 19 10.0**	**-0.2**
ATGZ	**Broadband at L**	**5.21**	**109**	*e*P	**Pn**	**06 19 10.2**	**-1.1**
ABD	**La Joyeuse, An**	**5.32**	**104**	Pn	**Pn**	**06 19 12.7**	**-0.1**
ABD				IAML		06 21 19.6	
	comp=N,84nm,1.7s						
CBE	**Ff, Capester**	**5.33**	**108**	Pn	**Pn**	**06 19 15.0**	**+2.0**
CBE				IAML		06 19 54.8	
	comp=E,95nm,0.9s						
MAGL	**Barre de l'ile**	**5.66**	**108**	Pn	**Pn**	**06 19 18.4**	**+0.8**
DSLB	**Salisbury**	**5.74**	**114**	*e*P	**Pn**	**06 19 19.3**	**+0.7**
MPOM	**Morne Pois Mar**	**6.68**	**119**	Pn	**Pn**	**06 19 32.3**	**+0.7**
MASC	**Masc**	**7.35**	**290**	*i* P	**Pn**	**06 19 41.3**	**+0.6**
QMBU	**Quimbuelo**	**7.88**	**289**	*i* P	**Pn**	**06 19 47.5**	**-0.6**
QMBU				*i* S	**Sn**	**06 21 14.1**	**-2.9**
RCC	**Rio Carpintero**	**8.63**	**286**	*i* P	**Pn**	**06 19 58.0**	**-0.4**

*SSNC **01** 06:22:09.7±1.1, 19.°55N×78.°16W, h34km±53km, MD3.1, ML1.8, Presumed earthquake*
*JSN **01** 06:22:11.1±1.1, 19.°57N×77.°88W, h30km±999km, MD3.5, Presumed earthquake*
ISC 01 06:22:08.0±1.7**, 19.°54N**±0.°06×**78.°16W**±0.°05**, h31**km±18km**, n14,** σ**1s68**/20**, 1C-1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.20**	**64**	*e*P	**Pn**	**06 22 29.1**	**+0.4**
LMGC				*e*S	**Sn**	**06 22 43.3**	**-0.7**
LMGC				IAML		06 22 44.8	
	comp=N,43nm,0.1s						
LMGC				IAML		06 22 45.4	
	comp=E,33nm,0.2s						
MTDJ	**Mount Denham**	**1.44**	**156**	*e*P	**Pn**	**06 22 32.4**	**+0.4**
MTDJ	**Mount Denham**	**1.44**	**156**	⇑*i*P	**Pn**	**06 22 32.9**	**+0.9**
MTDJ				*i* S	**Sn**	**06 22 50.0**	**+0.1**
CBCY	**The Bluff, Cay**	**1.52**	**278**	*e*P	**Pn**	**06 22 33.0**	**-0.1**
CCCC	**Cccc**	**1.69**	**12**	*e*P	**Pb**	**06 22 39.9**	**+1.5**
CHIV	**Chivirico**	**1.70**	**75**	*e*P	**Pn**	**06 22 35.4**	**-0.1**
CHIV				*e*S	**Sn**	**06 22 54.6**	**-1.5**
CHIV				*e*Sg	**Sb**	**06 22 56.1**	**-3.4**
CHIV				IAML		06 22 56.2	
	comp=N,10.0nm,0.1s						
CHIV				IAML		06 22 56.3	
	comp=E,9.0nm,0.1s						
LCCY	**Blossom Villag**	**1.82**	**274**	*e*P	**Pn**	**06 22 37.3**	**+0.1**
STH	**Stony Hill**	**1.94**	**139**	⇓*i*P	**Pn**	**06 22 39.5**	**+0.6**
MARVS	**Santiago de Cu**	**2.17**	**78**	*e*P	**Pn**	**06 22 42.3**	**+0.2**
MARVS				*e*S	**Sn**	**06 23 05.9**	**-2.1**
MARVS				IAML		06 23 08.2	
	comp=E,4.7nm,0.2s						
MARVS				IAML		06 23 08.8	
	comp=N,4.3nm,0.2s						
RCC	**Rio Carpintero**	**2.36**	**79**	*e*P	**Pn**	**06 22 45.1**	**+0.4**
RCC				*e*S	**Sn**	**06 23 11.6**	**-1.0**
RCC				IAML		06 23 13.8	
	comp=E,2.6nm,0.1s						
RCC				IAML		06 23 15.2	
	comp=N,1.8nm,0.1s						
PINC	**Pinares de May**	**2.41**	**67**	*e*P	**Pn**	**06 22 47.5**	**+2.1**
GTBY	**Guantanamo Bay**	**2.89**	**82**	*e*P	**Pn**	**06 22 54.4**	**+2.4**
QMBU	**Quimbuelo**	**3.21**	**78**	*e*P	**Pn**	**06 22 57.5**	**+1.1**
MASC	**Masc**	**3.75**	**80**	*e*P	**Pn**	**06 23 06.9**	**+3.2**

*RSNC **01** 06:30:07.4±0.0, 7°N±1°×7°3W±°, h152km±2km, M2.9, mb3.3, ML2.6*
*FUNV **01** 06:30:07.3, 6.°76N×73.°09W, h166km, MW3.5, Presumed earthquake*
ISC 01 06:30:06.5±1.3**, 6.°84N**±0.°03×**73.°11W**±0.°04**, h154**km±8km**, n31,** σ**1s34**/60**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**195**	P	**Pn**	**06 30 27.6**	**-0.1**
BARC				S	**Sn**	**06 30 43.4**	**-0.5**
BRJC	**Barrancabermej**	**0.64**	**282**	P	**Pn**	**06 30 29.6**	**+0.6**
BRJC				S	**Sn**	**06 30 46.6**	**+0.4**
PAMC	**Pamplona, Colo**	**0.64**	**40**	P	**Pn**	**06 30 30.8**	**+1.1**
PAMC				S	**Sn**	**06 30 47.8**	**+0.5**
RUSC	**La Rusia**	**0.94**	**178**	P	**Pn**	**06 30 31.8**	**0.0**
RUSC				S	**Sn**	**06 30 50.6**	**-0.5**
CAPV	**Capacho**	**1.29**	**38**	*e*P	**Pn**	**06 30 35.8**	**+1.3**
CAPV				*e*S	**Sn**	**06 30 57.4**	**+1.4**
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	P	**Pn**	**06 30 34.4**	**-0.6**
PTBC				S	**Sn**	**06 30 55.7**	**-1.2**
OCAC	**Ocana**	**1.40**	**352**	P	**Pn**	**06 30 35.9**	**+0.3**
OCAC				S	**Sn**	**06 30 58.0**	**+0.1**
SPBC	**San Pablo de B**	**1.52**	**219**	P	**Pn**	**06 30 36.7**	**0.0**
SPBC				S	**Sn**	**06 30 58.8**	**-1.0**
CHIC	**Chingaza**	**2.28**	**196**	P	**Pn**	**06 30 46.0**	**+0.4**
CHIC				S	**Sn**	**06 31 15.2**	**-0.5**
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**06 30 48.0**	**+1.9**
ROSC				S	**Sn**	**06 31 16.9**	**+0.3**
CVER	**Cruz Verde, Cu**	**2.50**	**203**	P	**Pn**	**06 30 49.4**	**+1.2**
CVER				S	**Sn**	**06 31 21.9**	**+1.5**
UREC	**San Jos de Ur**	**2.56**	**291**	P	**Pn**	**06 30 48.3**	**-0.3**
UREC				S	**Sn**	**06 31 19.2**	**-1.9**
SOCV	**Socops**	**2.66**	**57**	*e*P	**Pn**	**06 30 51.1**	**+1.4**
SOCV				*e*S	**Sn**	**06 31 22.0**	**-1.2**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**06 30 51.3**	**0.0**
VILC				S	**Sn**	**06 31 25.6**	**-0.4**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	P	**Pn**	**06 30 55.6**	**+0.9**
CBOC				S	**Sn**	**06 31 33.4**	**+1.4**
DBBC	**Dabeiba**	**3.08**	**273**	P	**Pn**	**06 30 55.9**	**+0.8**
DBBC				S	**Sn**	**06 31 32.4**	**-0.3**
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**06 30 57.0**	**+0.4**
SDV				S	**Sn**	**06 31 33.7**	**-1.7**
ARGC	**Ariguani, Magd**	**3.20**	**340**	P	**Pn**	**06 30 59.1**	**+2.5**
ARGC				S	**Sn**	**06 31 37.6**	**+2.2**
MCQV	**Machiques**	**3.24**	**10**	*e*P	**Pn**	**06 30 57.7**	**+0.7**
MCQV				*e*S	**Sn**	**06 31 35.8**	**-0.5**
ANIL	**Santa Ana**	**3.26**	**224**	P	**Pn**	**06 31 00.7**	**+3.1**
ANIL				S	**Sn**	**06 31 38.6**	**+1.3**
PRAC	**Prado**	**3.57**	**210**	P	**Pn**	**06 31 01.7**	**+0.3**
PRAC				S	**Sn**	**06 31 43.4**	**-0.6**
APAC	**Apartado, Choc**	**3.59**	**287**	P	**Pn**	**06 31 01.8**	**+0.2**
APAC				S	**Sn**	**06 31 44.4**	**0.0**
ORTC	**Ortega, Tolima**	**3.60**	**216**	P	**Pn**	**06 31 02.1**	**+0.3**
ORTC				S	**Sn**	**06 31 45.1**	**+0.3**
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	**06 31 01.4**	**-1.1**
SJCC				S	**Sn**	**06 31 42.8**	**-3.2**
URMC	**La Uribe, Meta**	**3.79**	**200**	P	**Pn**	**06 31 04.2**	**0.0**
URMC				S	**Sn**	**06 31 48.1**	**-1.0**
YOTC	**Yotoco, Valle**	**4.29**	**229**	P	**Pn**	**06 31 09.1**	**-1.7**
YOTC				S	**Sn**	**06 32 03.1**	**+2.3**
MACC	**Macarena, Meta**	**4.72**	**189**	P	**Pn**	**06 31 14.7**	**-1.7**
MACC				S	**Sn**	**06 32 06.8**	**-4.1**
URIC	**Uribia, Colomb**	**4.95**	**13**	P	**Pn**	**06 31 17.4**	**-2.0**
URIC				S	**Sn**	**06 32 16.7**	**+0.4**
MAPV	**Macapo**	**5.48**	**57**	*e*P	**Pn**	**06 31 25.9**	**-0.5**
FLOC	**Florencia**	**5.80**	**206**	P	**Pn**	**06 31 30.3**	**-0.4**
FLOC				S	**Sn**	**06 32 36.8**	**+0.2**
BENV	**Beln**	**6.28**	**60**	*e*P	**Pn**	**06 31 36.0**	**-1.0**

KRSC 01 06:41:26.0±0.9**, 52.°62N**×**159.°61E, h44**km±13km**, Ml3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.57**	**344**	*e*P	Pn	06 41 38.5	+0.6
NLC				*e*S	Sn	06 41 47.7	+1.3
DALK	**Dalny**	**0.66**	**309**	*e*P	Pn	06 41 39.8	+0.7
DALK				*e*S	Sn	06 41 49.2	+0.8
RUS	**Russkaya**	**0.70**	**255**	*e*P	Pn	06 41 40.2	+0.8
RUS				*e*S	Sn	06 41 50.6	+1.4
PET	**Petropavlovsk**	**0.71**	**305**	*e*P	Pn	06 41 40.4	+0.8
PET				*e*S	Sn	06 41 50.3	+0.9
INSR	**Institute**	**0.76**	**307**	*e*P	Pn	06 41 41.1	+0.8
INSR				*e*S	Sn	06 41 51.7	+1.1
UGLR	**Uglovaya**	**0.76**	**321**	*e*P	Pn	06 41 41.6	+1.2
UGLR				*e*S	Sn	06 41 52.7	+1.9
SDLR	**Sedlovina**	**0.79**	**327**	*e*P	Pn	06 41 41.7	+0.8
SDLR				*e*S	Sn	06 41 52.9	+1.2
SMAR	**Somma**	**0.81**	**323**	*e*P	Pn	06 41 42.0	+0.8
SMAR				*e*S	Sn	06 41 53.0	+0.7
AVH	**Avacha**	**0.83**	**321**	*e*P	Pn	06 41 42.7	+1.3
AVH				*e*S	Sn	06 41 54.7	+2.1
KRER	**Koryakskii**	**0.86**	**323**	*e*P	Pn	06 41 43.2	+1.3
KRER				*e*S	Sn	06 41 55.3	+1.8
MTVR	**Mutnovka**	**0.88**	**262**	*e*P	Pn	06 41 43.2	+1.0
MTVR				*e*S	Sn	06 41 55.5	+1.6
KOK	**Koryaka**	**0.89**	**319**	*e*P	Pn	06 41 43.5	+1.2
KOK				*e*S	Sn	06 41 55.8	+1.7
KRMR	**Karymshinskiy**	**0.92**	**284**	*e*P	Pn	06 41 43.5	+0.9
KRMR				*e*S	Sn	06 41 55.5	+0.9
GRL	**Gorelyy**	**0.94**	**266**	*e*P	Pn	06 41 44.5	+1.6
KRX	**Arik**	**0.94**	**322**	*e*P	Pn	06 41 43.9	+1.0
KRX				*e*S	Sn	06 41 56.5	+1.2
ASAK	**Asacha**	**1.07**	**258**	*e*P	Pn	06 41 46.2	+1.6
ASAK				*e*S	Sn	06 42 00.8	+2.3
KDTR	**Khodutka, Kamc**	**1.25**	**230**	*e*P	Pn	06 41 48.0	+1.1
KDTR				*e*S	Sn	06 42 03.8	+1.3
KII	**Karymskiy**	**1.42**	**356**	*e*P	Pn	06 41 50.6	+1.2
KII				*e*S	Sn	06 42 07.8	+0.9
GNL	**Ganaly**	**1.47**	**318**	*e*P	Pn	06 41 52.1	+2.0
GNL				*e*S	Sn	06 42 10.8	+2.5
APC	**Apacha**	**1.52**	**283**	*e*P	Pn	06 41 52.9	+2.2
APC				*e*S	Sn	06 42 11.8	+2.6
MIPR	**Malaya Ipel'ka**	**1.78**	**260**	*e*P	Pn	06 41 56.6	+2.4
PAU	**Pauzhetka**	**2.08**	**237**	*e*P	Pn	06 42 01.1	+2.7
TUMD	**Tumrok D**	**2.63**	**10**	*e*P	Pn	06 42 07.7	+1.8
TUMD				*e*S	Sn	06 42 37.5	+0.9
SKR	**Severo-Kuril's**	**2.92**	**230**	*e*P	Pn	06 42 12.4	+2.5
SKR				*e*S	Sn	06 42 46.3	+2.8
KMNR	**Kamenistaya**	**3.16**	**6**	*e*P	Pn	06 42 16.9	+3.6
KMNR				*e*S	Sn	06 42 54.2	+4.4
ESO	**Esso**	**3.35**	**351**	*e*P	Pn	06 42 18.2	+2.3
KOZ	**Kozyrevsk**	**3.45**	**2**	*e*P	Pn	06 42 20.0	+2.8
KBTR	**Krutoberegovo**	**4.05**	**26**	*e*P	Pn	06 42 31.3	+5.9
KBG	**Krutoberegovo**	**4.07**	**25**	*e*P	Pn	06 42 30.8	+5.2
SMKR	**Semkarok**	**4.11**	**14**	*e*P	Pn	06 42 31.1	+4.7

*JMA **01** 06:56:02.1±0.1, 24.°7N±0.°8×123.°7E±0.°3, h74km±1km, MV2.7/12, NW OFF ISHIGAKIJIMA IS*
ISC 01 06:56:02.5±1.6**, 24.°7N**±0.°1×**123.°76E**±0.°04**, h76**km±13km**, n17,** σ**0s73**/26**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.33**	**184**	P	**Pn**	**06 56 14.4**	**-0.2**
IRIF				S	**Sn**	**06 56 23.9**	**+0.5**
JIJ	**Ishigaki jima**	**0.46**	**131**	P	**Pn**	**06 56 15.3**	**-0.3**
JIJ				S	**Sn**	**06 56 25.1**	**-0.1**
JKRS	**Kuro-shima**	**0.48**	**152**	P	**Pn**	**06 56 16.0**	**+0.2**
JKRS				S	**Sn**	**06 56 26.3**	**+0.8**
JISG	**Ishigakijimahi**	**0.51**	**99**	P	**Pn**	**06 56 15.8**	**-0.2**
JISG				S	**Sn**	**06 56 25.9**	**-0.1**
HATJ	**Hateruma jima**	**0.61**	**176**	P	**Pn**	**06 56 17.1**	**+0.1**
HATJ				S	**Sn**	**06 56 28.8**	**+1.2**
YOJ	**Yonaguni jima**	**0.71**	**253**	P	**Pn**	**06 56 17.7**	**-0.3**
YOJ	**Yonaguni jima**	**0.71**	**253**	P	**Pn**	**06 56 17.7**	**-0.3**
YOJ				*e*S	**Sn**	**06 56 28.6**	**-0.8**
JYNG	**Yonagunijimaku**	**0.77**	**254**	P	**Pn**	**06 56 18.3**	**-0.3**
JYNG				*e*S	**Sn**	**06 56 30.0**	**-0.6**
JTJ	**Tarama**	**0.86**	**91**	P	**Pn**	**06 56 19.6**	**-0.1**
JTJ				S	**Sn**	**06 56 32.7**	**+0.2**
JIRB	**Irabujima**	**1.30**	**83**	*e*S	**Sn**	**06 56 41.5**	**-0.5**
JIKM	**Ikemajima**	**1.38**	**79**	*e*P	**Pn**	**06 56 26.2**	**+0.1**
JIKM				*e*S	**Sn**	**06 56 43.7**	**-0.2**
JMJ2	**Miyako jima3**	**1.43**	**87**	*e*S	**Sn**	**06 56 44.9**	**-0.2**
NACB	**Ninganchiao**	**2.03**	**256**	P	**Pn**	**06 56 34.9**	**+0.1**
YHNB	**Yeheng**	**2.17**	**271**	P	**Pn**	**06 56 38.7**	**+2.1**
YULB	**Yu-li**	**2.58**	**241**	P	**Pn**	**06 56 40.6**	**-1.6**
SSLB	**Suanglung**	**2.71**	**252**	P	**Pn**	**06 56 43.3**	**-0.6**
TPUB	**Ta-pu**	**3.17**	**245**	P	**Pn**	**06 56 50.7**	**+0.6**

*NEIC **01** 07:08:22.0±0.7, 19.°21N±0.°06×67.°80W±0.°04, h10km±2km, ML3.0/37, Md3.0/8(RSPR), Error ellipse: s-maj=10.9km s-min=5.1km az=28.0*
*RSPR **01** 07:08:23.6, 19.°18N×68.°08W, h30km±30km, MD3.0/8*
*OSPL **01** 07:08:28.7±2.7, 19.°15N×67.°15W, h4km±20km, ML3.0, Presumed earthquake*
*SDD **01** 07:08:28.6±2.1, 18.°92N×67.°68W, h0km±14km, MD3.1, ML2.9, MW3.1, Presumed earthquake*
ISC 01 07:08:26.6±1.4**, 18.°98N**±0.°07×**67.°66W**±0.°03**, h7**km±10km**, n45,** σ**1s20**/65**, 22C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.61**	**164**		**Pg**	**07 08 38.9**	**+0.6**
IDE	**Isla Desecheo**	**0.61**	**164**	⇑*e*P	**Pg**	**07 08 38.9**	**+0.6**
AGPR	**Aguadilla, PR**	**0.72**	**134**		**Pg**	**07 08 40.6**	**+0.2**
AGPR				IAML		07 08 52.4	
	434nm,0.4s						
AGPR				IAML		07 09 00.2	
	251nm,0.3s						
AGPR	**Aguadilla, PR**	**0.72**	**134**	⇑*i*P	**Pg**	**07 08 41.0**	**+0.5**
AGPR				*i* S	**Sg**	**07 08 51.1**	**+1.2**
AGPR				IAML		07 08 52.3	
	comp=N,378nm,0.4s						
AGPR	**Aguadilla, PR**	**0.72**	**134**	⇑*e*P	**Pg**	**07 08 40.8**	**+0.3**
AGPR	**Aguadilla, PR**	**0.72**	**134**	*i* P	**Pg**	**07 08 40.8**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AGPR				eS	Sg	07 08 51.3	+1.4
AGPR				IAML		07 08 53.5	
	comp=Z,186nm,0.2s						
PCDR	**Punta Cana, DR**	**0.83**	**236**	⇑iP	**Pg**	**07 08 42.6**	**+0.2**
PCDR				⇑iS	**Sg**	**07 08 53.2**	**+0.1**
PCDR				IAML		07 08 55.5	
	comp=N,249nm,0.8s						
PCDR				IAML		07 08 59.5	
	comp=N,318nm,0.3s						
PRSN	**Puerto Rico Se**	**0.90**	**147**		**Pg**	**07 08 44.1**	**+0.3**
PRSN					**Sn**	**07 08 59.9**	**+1.0**
PRSN	**Puerto Rico Se**	**0.90**	**147**		**Pg**	**07 08 43.7**	**-0.1**
PRSN				IAML		07 09 03.1	
	comp=N,796nm,0.3s						
PRSN				IAML		07 09 08.6	
	comp=N,764nm,0.3s						
PRSN	**Puerto Rico Se**	**0.90**	**147**	⇑iP	**Pg**	**07 08 43.3**	**-0.5**
PRSN				⇑iS	**Sg**	**07 08 56.6**	**+1.2**
PRSN				IAML		07 09 07.8	
	comp=N,443nm,0.3s						
PRSN	**Puerto Rico Se**	**0.90**	**147**	⇑eP	**Pg**	**07 08 44.1**	**+0.3**
PRSN				eS	**Sn**	**07 08 59.9**	**+1.0**
LSP	**Las Mesas**	**0.96**	**146**		**Pg**	**07 08 45.2**	**+0.2**
LSP	**Las Mesas**	**0.96**	**146**	⇑eP	**Pg**	**07 08 45.2**	**+0.2**
HIDR	**Higuey Centro**	**1.07**	**249**	⇑iP	**Pg**	**07 08 46.1**	**-1.1**
HIDR				⇑iS	**Sg**	**07 09 00.0**	**-1.1**
HIDR				IAML		07 09 05.1	
	comp=N,435nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.09**	**152**		**Sn**	**07 09 05.0**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.09**	**152**		**Pg**	**07 08 46.9**	**-0.6**
CRPR				IAML		07 09 06.9	
	comp=N,234nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.09**	**152**	⇑iP	**Pg**	**07 08 47.3**	**-0.3**
CRPR				iS	**Sg**	**07 09 02.6**	**+0.8**
CRPR				IAML		07 09 08.2	
	comp=N,342nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.09**	**152**	⇑eP	**Pg**	**07 08 47.2**	**-0.3**
CRPR				eS	**Sn**	**07 09 05.0**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.09**	**152**	iP	**Pg**	**07 08 47.4**	**-0.3**
CRPR				eS	**Sb**	**07 09 02.8**	**+0.5**
CRPR				IAML		07 09 06.7	
	comp=Z,333nm,0.6s						
UUPR	**Utuado, UPR, P**	**1.14**	**129**		**Pb**	**07 08 46.9**	**-1.7**
MLPR	**Magueyes Islan**	**1.16**	**150**		**Pb**	**07 08 47.2**	**-1.7**
MLPR				IAML		07 09 08.0	
	comp=Z,276nm,0.5s						
MLPR				IAML		07 09 08.9	
	comp=Z,204nm,0.5s						
EMPR	**Esperanza - Ma**	**1.18**	**115**		**Pb**	**07 08 48.2**	**-1.0**
EMPR					**Sn**	**07 09 07.7**	**+1.9**
EMPR	**Esperanza - Ma**	**1.18**	**115**	⇑eP	**Pb**	**07 08 48.2**	**-1.0**
EMPR				eS	**Sn**	**07 09 07.7**	**+1.9**
GBPR	**Guanica, Bosqu**	**1.24**	**143**		**Pn**	**07 08 49.7**	**-0.6**
GBPR					**Sn**	**07 09 08.3**	**+1.1**
GBPR	**Guanica, Bosqu**	**1.24**	**143**	⇑eP	**Pn**	**07 08 49.7**	**-0.6**
GBPR				eS	**Sn**	**07 09 08.3**	**+1.1**
MIDR	**Miches**	**1.32**	**271**	⇑iP	**Pn**	**07 08 51.0**	**-0.4**
MIDR				iS	**Sn**	**07 09 10.7**	**+1.5**
MIDR				IAML		07 09 12.1	
	comp=N,274nm,0.3s						
MIDR				IAML		07 09 12.1	
	comp=N,274nm,0.3s						
CELP	**Cerrillos**	**1.36**	**131**		**Pn**	**07 08 50.6**	**-1.4**
CELP				IAML		07 09 16.8	
	comp=N,151nm,0.3s						
CELP				IAML		07 09 17.8	
	comp=N,160nm,0.3s						
OBIP	**Obispado Ponce**	**1.36**	**133**		**Sg**	**07 09 12.4**	**+2.0**
OBIP	**Obispado Ponce**	**1.36**	**133**		**Pn**	**07 08 50.5**	**-1.5**
OBIP	**Obispado Ponce**	**1.36**	**133**	⇑eP	**Pn**	**07 08 50.9**	**-1.1**
OBIP				eS	**Sg**	**07 09 12.4**	**+2.0**
OBIP	**Obispado Ponce**	**1.36**	**133**	iP	**Pn**	**07 08 50.7**	**-1.3**
OBIP				eS	**Sb**	**07 09 07.4**	**-2.6**
OBIP				IAML		07 09 15.7	
	comp=Z,541nm,0.1s						
ECPR	**Experimental S**	**1.39**	**118**		**Pn**	**07 08 50.4**	**-2.0**
ECPR				IAML		07 09 14.2	
	comp=Z,220nm,0.3s						
ECPR				IAML		07 09 19.8	
	comp=Z,228nm,0.2s						
ECPR	**Experimental S**	**1.39**	**118**	⇑eP	**Pn**	**07 08 51.1**	**-1.3**
GCPR	**Guaynabo City**	**1.63**	**114**		**Sg**	**07 09 20.4**	**+1.3**
GCPR	**Guaynabo City**	**1.63**	**114**		**Pn**	**07 08 54.9**	**-0.9**
GCPR	**Guaynabo City**	**1.63**	**114**	⇑eP	**Pn**	**07 08 55.5**	**-0.2**
GCPR				eS	**Sg**	**07 09 20.4**	**+1.3**
DR12	**Loma Pena Alta**	**1.64**	**264**	Pn	**Pn**	**07 08 56.6**	**+0.6**
HATOM	**Hato Mayor del**	**1.64**	**264**	⇑iP	**Pn**	**07 08 56.5**	**+0.5**
HATOM				⇑iS	**Sb**	**07 09 17.8**	**-0.4**
HATOM				IAML		07 09 20.8	
	comp=N,78nm,0.4s						
SJG	**San Juan**	**1.67**	**121**		**Pn**	**07 08 55.0**	**-1.2**
SJG				IAML		07 09 22.5	
	comp=N,104nm,0.3s						
SJG				IAML		07 09 24.4	
	comp=N,98nm,0.3s						
PDPR	**Patillas Dam,**	**1.82**	**121**		**Pn**	**07 08 57.2**	**-1.1**
HUMP	**Col San Antoni**	**1.90**	**116**		**Sb**	**07 09 26.2**	**+0.6**
HUMP	**Col San Antoni**	**1.90**	**116**	Pn	**Pn**	**07 08 58.4**	**-1.1**
HUMP	**Col San Antoni**	**1.90**	**116**	⇑eP	**Pn**	**07 08 58.6**	**-0.8**
HUMP				eS	**Sb**	**07 09 26.2**	**+0.6**
CUPR	**Culebra, Puert**	**2.35**	**106**	Pn	**Pn**	**07 09 02.9**	**-2.6**
SDDR	**Presa de Saban**	**3.44**	**271**	eS	**Sb**	**07 10 12.4**	**+2.6**

*JMA **01** 07:13:30.4±0.1, 24°.0N±0°.3×121°.7E±0°.5, h34km, MV3.4/16, TAIWAN REGION*
*TAP **01** 07:13:30.9, 24°.09N×121°.72E, h33km, ML4.0, B*
ISC 01 07:13:31.0±0.9**, 24°.07N**±0°.01×**121°.73E**±0°.02**, h33**km±2km**, n151, σ0^s.73**/259**, 7C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.13**	**274**	⇑iP	**Pb**	**07 13 36.7**	**-0.2**
TWD				iS	**Sb**	**07 13 41.0**	**+0.1**
ETL	**Fush Village**	**0.13**	**311**	iP	**Pb**	**07 13 36.8**	**-0.2**
ETL				iS	**Sb**	**07 13 41.4**	**+0.2**
HWA	**Hwalien**	**0.15**	**232**	⇑iP	**Pb**	**07 13 37.3**	**+0.2**
HWA				iS	**Sb**	**07 13 42.5**	**+1.2**
NACB	**Ninganchiao**	**0.16**	**309**	⇑iP	**Pb**	**07 13 36.9**	**-0.3**
NACB				iS	**Sb**	**07 13 41.3**	**-0.2**
TEYL	**Yanliau Villag**	**0.24**	**212**	iP	**Pb**	**07 13 37.8**	**-0.2**
TEYL				S	**Sb**	**07 13 43.4**	**+0.8**
ETM	**Tongmen**	**0.24**	**245**	⇑iP	**Pb**	**07 13 37.9**	**-0.1**
ETM				iS	**Sb**	**07 13 42.9**	**+0.1**
EAHA	**Aohua**	**0.26**	**1**	iP	**Pn**	**07 13 37.7**	**-0.5**
EAHA				S	**Sn**	**07 13 42.6**	**+0.2**
ETLH	**Xiulin Townshi**	**0.27**	**301**	iP	**Pn**	**07 13 38.1**	**-0.3**
ETLH				iS	**Sb**	**07 13 43.3**	**-0.2**
SHUL	**Shoufeng**	**0.32**	**209**	P	**Pb**	**07 13 39.0**	**0.0**
SHUL				S	**Sb**	**07 13 46.4**	**+2.0**
ENA	**Nanau**	**0.36**	**1**	P	**Pb**	**07 13 39.0**	**-0.4**
ENA				S	**Sb**	**07 13 45.2**	**-0.1**
ESL	**Shilin**	**0.38**	**227**	⇑iP	**Pb**	**07 13 39.2**	**-0.6**
ESL				S	**Sb**	**07 13 45.2**	**-0.5**
EWUT	**Wuta**	**0.38**	**6**	iP	**Pb**	**07 13 39.4**	**-0.4**
TEGC	**Jichi Village**	**0.40**	**206**	iP	**Pb**	**07 13 40.1**	**0.0**
WHF	**Hehuan Shan**	**0.43**	**280**	eP	**Pb**	**07 13 40.5**	**-0.4**
WHF				S	**Sb**	**07 13 47.3**	**-0.4**
WARBT	**Fenglin Townsh**	**0.47**	**222**	eP	**Pb**	**07 13 40.3**	**-0.9**
WARBT				S	**Sb**	**07 13 47.1**	**-1.0**
NNSB	**Datong**	**0.48**	**318**	⇓iP	**Pb**	**07 13 40.9**	**-0.4**
NNSB				S	**Sb**	**07 13 48.0**	**-0.4**
FUSS	**Fushou**	**0.48**	**292**	iP	**Pb**	**07 13 41.3**	**-0.2**
FUSS				S	**Sb**	**07 13 48.7**	**0.0**
EGFH	**Guangfu**	**0.49**	**215**	P	**Pb**	**07 13 40.7**	**-0.7**
NNS	**Nan Shan**	**0.49**	**318**	iP	**Pb**	**07 13 41.1**	**-0.4**
NNS				S	**Sb**	**07 13 48.5**	**-0.4**
LATG	**Datong**	**0.50**	**338**	⇓iP	**Pb**	**07 13 41.1**	**-0.6**
LATG				S	**Sb**	**07 13 48.8**	**-0.3**
OWD	**Renai**	**0.52**	**257**	P	**Pb**	**07 13 41.5**	**-0.5**
OWD				S	**Sb**	**07 13 48.8**	**-0.8**
EOS4	**EOS4**	**0.54**	**85**	iP	**Pb**	**07 13 41.8**	**-0.1**
EOS4				S	**Sn**	**07 13 50.0**	**+0.4**
TWT	**Tachien**	**0.54**	**290**	eP	**Pn**	**07 13 42.4**	**-0.1**
TWT				S	**Sb**	**07 13 50.1**	**0.0**
TWC	**Suao**	**0.55**	**11**	eP	**Pb**	**07 13 42.1**	**-0.3**
TWC				eS	**Sb**	**07 13 49.5**	**-0.6**
TDCB	**Techi**	**0.56**	**289**	iP	**Pb**	**07 13 42.4**	**-0.2**
TDCB				S	**Sb**	**07 13 50.3**	**-0.3**
NDS	**Dongshan**	**0.56**	**358**	P	**Pb**	**07 13 42.2**	**-0.4**
NDS				eS	**Sb**	**07 13 49.7**	**-0.8**
WUSB	**Renai**	**0.57**	**262**	iP	**Pb**	**07 13 42.5**	**-0.2**
WUSB				S	**Sb**	**07 13 50.4**	**-0.5**
EOS2	**EOS2**	**0.57**	**53**	eP	**Pb**	**07 13 43.5**	**+0.9**
EOS3	**EOS3**	**0.57**	**68**	eP	**Pb**	**07 13 43.3**	**+0.6**
ENTT	**Nioudou**	**0.59**	**345**	iP	**Pn**	**07 13 42.5**	**-0.5**
ENTT				S	**Sb**	**07 13 50.7**	**-0.5**
VWDT	**VWDT**	**0.63**	**240**	P	**Pn**	**07 13 43.2**	**-0.2**
VWDT				S	**Sn**	**07 13 52.5**	**+0.1**
HGSD	**Ruisui**	**0.64**	**206**	P	**Pn**	**07 13 43.6**	**-0.1**
HGSD				eS	**Sn**	**07 13 55.5**	**+2.7**
TWE	**Neicheng**	**0.65**	**355**	P	**Pn**	**07 13 43.5**	**-0.4**
TWE				S	**Sb**	**07 13 52.9**	**0.0**
EHY	**Hungye**	**0.68**	**214**	P	**Pn**	**07 13 42.8**	**-1.4**
EHY				eS	**Sb**	**07 13 52.9**	**-0.7**
YHNB	**Yeheng**	**0.68**	**331**	P	**Pn**	**07 13 43.9**	**-0.4**
YHNB	**Yeheng**	**0.68**	**331**	⇓iP	**Pn**	**07 13 44.0**	**-0.4**
YHNB				S	**Sb**	**07 13 53.2**	**-0.6**
NSK	**Sanguang**	**0.69**	**330**	⇓iP	**Pn**	**07 13 44.2**	**-0.3**
NSK				S	**Sn**	**07 13 53.2**	**-0.9**
FUSB	**Fushanzhiwuyua**	**0.70**	**349**	P	**Pn**	**07 13 44.2**	**-0.4**
FUSB				S	**Sn**	**07 13 53.8**	**-0.5**
NWLT	**Wulai**	**0.73**	**343**	P	**Pn**	**07 13 44.7**	**-0.3**
NWLT				S	**Sn**	**07 13 54.4**	**-0.7**
WHP	**Taichung City**	**0.75**	**286**	iP	**Pb**	**07 13 45.8**	**+0.1**
WHP				S	**Sb**	**07 13 55.7**	**0.0**
WCS	**Beigang Elemen**	**0.75**	**269**	eS	**Sn**	**07 13 55.4**	**-0.1**
SSLB	**Suanglung**	**0.77**	**249**	P	**Pn**	**07 13 45.3**	**-0.2**
SSLB	**Suanglung**	**0.77**	**249**	⇑iP	**Pn**	**07 13 45.3**	**-0.2**
SSLB				S	**Sn**	**07 13 54.8**	**-1.1**
YULB	**Yu-li**	**0.78**	**211**	P	**Pn**	**07 13 44.5**	**-1.2**
YULB	**Yu-li**	**0.78**	**211**	eP	**Pn**	**07 13 44.4**	**-1.3**
YULB				eS	**Sn**	**07 13 55.9**	**-0.5**
SMLT	**Sun Moon Lake**	**0.79**	**256**	⇑iP	**Pn**	**07 13 45.9**	**+0.1**
SMLT				iS	**Sn**	**07 13 56.1**	**-0.4**
EGS		**0.79**	**13**	eP	**Pb**	**07 13 46.9**	**+0.6**
NFF	**Wufeng Townshi**	**0.79**	**315**	iP	**Pb**	**07 13 46.1**	**-0.3**
NFF				S	**Sn**	**07 13 56.3**	**-0.3**
ECBN	**Changbin**	**0.79**	**199**	eP	**Pn**	**07 13 45.7**	**-0.1**
ECBN				eS	**Sb**	**07 13 57.2**	**+0.4**
TYC	**Yuchr**	**0.82**	**258**	iP	**Pn**	**07 13 46.2**	**+0.1**
TYC				S	**Sn**	**07 13 56.7**	**-0.4**
KSHI	**Guanxi Townshi**	**0.87**	**324**	iP	**Pb**	**07 13 47.9**	**+0.3**
KSHI				S	**Sb**	**07 14 00.3**	**+1.3**
LIOB	**Emei**	**0.87**	**311**	P	**Pb**	**07 13 47.9**	**+0.2**
LIOB				S	**Sb**	**07 13 59.2**	**+0.2**
NSTT	**Nanjuang**	**0.87**	**310**	iP	**Pb**	**07 13 47.8**	**+0.1**
NSTT				S	**Sb**	**07 13 58.7**	**-0.3**
WHYT	**Xinyi Township**	**0.89**	**245**	iP	**Pb**	**07 13 47.7**	**-0.3**
WHYT				iS	**Sb**	**07 13 59.8**	**+0.2**
TIPB	**Shuangxi**	**0.90**	**5**	eP	**Pb**	**07 13 48.0**	**-0.2**
NHDH	**Xindian Distri**	**0.91**	**348**	P	**Pb**	**07 13 47.9**	**-0.4**
NHDH				S	**Sb**	**07 13 59.9**	**-0.3**
TWA	**Mucha**	**0.92**	**351**	eP	**Pb**	**07 13 48.1**	**-0.4**
TWA				S	**Sn**	**07 13 59.5**	**-0.1**
TWQ1	**Liyutan**	**0.92**	**288**	P	**Pb**	**07 13 49.0**	**+0.5**
TWQ1				eS	**Sb**	**07 14 01.4**	**+1.0**
CHKH	**Chenggong**	**0.93**	**200**	eP	**Pn**	**07 13 47.7**	**0.0**
CHKH				S	**Sb**	**07 14 01.1**	**+0.4**
TATO	**Taipei**	**0.93**	**346**	P	**Pn**	**07 13 48.1**	**+0.4**
NSY	**Sanyi**	**0.95**	**291**	iP	**Pb**	**07 13 49.8**	**+0.8**
NSY				S	**Sb**	**07 14 02.1**	**+0.8**
FULB	**Fuli**	**0.96**	**205**	eP	**Pn**	**07 13 48.1**	**0.0**
FULB				eS	**Sb**	**07 14 01.2**	**-0.3**
TWB1	**Santiao Chiao**	**0.96**	**14**	P	**Pb**	**07 13 49.2**	**0.0**
TWB1				S	**Sn**	**07 14 00.8**	**+0.1**
TCU	**Taichung**	**0.97**	**275**	eP	**Pb**	**07 13 49.9**	**+0.6**
TCU				S	**Sb**	**07 14 03.3**	**+1.5**
NMLH	**Miaoli**	**0.98**	**299**	eP	**Pb**	**07 13 49.6**	**+0.1**
NMLH				iS	**Sb**	**07 14 03.4**	**+1.4**
WNT	**Mingjian**	**0.98**	**259**	P	**Pb**	**07 13 49.9**	**+0.4**
WNT				iS	**Sb**	**07 14 03.4**	**+1.3**
TAP	**Taipei**	**0.99**	**348**	P	**Pn**	**07 13 48.2**	**-0.3**
TAP				eS	**Sb**	**07 14 02.4**	**+0.1**
SBCB	**Hsinchu**	**0.99**	**317**	P	**Pb**	**07 13 49.8**	**+0.1**
SBCB				S	**Sb**	**07 14 04.0**	**+1.6**
WFSB	**Wu-fen Shan**	**1.00**	**2**	P	**Pb**	**07 13 49.9**	**+0.1**
WFSB				S	**Sb**	**07 14 02.7**	**+0.1**
HSN	**Hsinchu**	**1.01**	**316**	iP	**Pb**	**07 13 49.9**	**0.0**
HSN				iS	**Sb**	**07 14 04.2**	**+1.2**
ALS	**Alishan**	**1.02**	**237**	P	**Pb**	**07 13 49.8**	**-0.5**
ALS				S	**Sb**	**07 14 03.7**	**+0.2**
CHKT	**Chengkung**	**1.02**	**199**	P	**Pb**	**07 13 49.6**	**-0.6**
CHKT				eS	**Sb**	**07 14 02.9**	**-0.4**
NCU	**National Centr**	**1.02**	**331**	eP	**Pn**	**07 13 48.0**	**-1.0**
NCU				eS	**Sn**	**07 14 02.4**	**+0.1**
NCUH	**Zhongli**	**1.02**	**331**	P	**Pb**	**07 13 49.8**	**-0.4**
NCUH				eS	**Sb**	**07 14 04.2**	**+0.8**
SXI1	**Grass Mountain**	**1.03**	**7**	P	**Pb**	**07 13 50.0**	**-0.3**
SXI1				S	**Sb**	**07 14 04.3**	**+0.7**
TWS1	**Kuangyinshan**	**1.06**	**344**	P	**Pn**	**07 13 49.9**	**+0.3**
TWS1				S	**Sb**	**07 14 04.6**	**+0.1**
WCHH	**Zhanghua**	**1.07**	**271**	P	**Pb**	**07 13 50.9**	**-0.2**
WCHH				S	**Sb**	**07 14 05.9**	**+1.1**
CHN5	**Tsauling**	**1.07**	**244**	eP	**Pb**	**07 13 51.1**	**-0.1**
CHN5				eS	**Sb**	**07 14 05.6**	**+0.6**
TNOU	**National Taiwa**	**1.07**	**2**	eP	**Pb**	**07 13 50.9**	**-0.2**
ECS	**Chishang**	**1.08**	**206**	P	**Pn**	**07 13 49.8**	**0.0**
ECS				eS	**Sn**	**07 14 04.1**	**+0.5**
YM01	**YM01**	**1.08**	**352**	eP	**Pn**	**07 13 50.1**	**+0.3**
YM01				eS	**Sb**	**07 14 04.6**	**-0.5**
WCH1	**Changhua City**	**1.08**	**270**	eP	**Pb**	**07 13 50.5**	**-0.8**
WCH1				eS	**Sb**	**07 14 06.5**	**+1.4**
ELDTW	**Lidau**	**1.10**	**217**	eP	**Pn**	**07 13 49.2**	**-0.9**
ELDTW				eS	**Sn**	**07 14 04.1**	**-0.1**
ZUZH	**Zhuzihu**	**1.10**	**351**	P	**Pn**	**07 13 50.1**	**0.0**
ZUZH				eS	**Sn**	**07 14 04.3**	**+0.1**
NTST	**Danshui**	**1.12**	**347**	P	**Pn**	**07 13 50.3**	**0.0**
NTST				S	**Sb**	**07 14 06.6**	**+0.5**
YM08	**YM08**	**1.12**	**353**	P	**Pn**	**07 13 50.1**	**-0.3**
ANP	**Anpu**	**1.13**	**350**	eP	**Pn**	**07 13 50.4**	**-0.1**
WGK	**Gukeng**	**1.14**	**251**	eP	**Pb**	**07 13 52.5**	**+0.3**
WDL	**Douliou City**	**1.15**	**252**	eP	**Pb**	**07 13 52.8**	**+0.5**
WDLH	**Douliu**	**1.16**	**251**	eP	**Pb**	**07 13 52.2**	**-0.3**
WDLH				S	**Sb**	**07 14 07.8**	**+0.6**
JYNG	**Yonagunijimaku**	**1.17**	**71**	eP	**Pn**	**07 13 51.0**	**0.0**
JYNG				eS	**Sn**	**07 14 05.9**	**+0.1**
TWY	**Chenhua**	**1.21**	**354**	eP	**Pn**	**07 13 52.0**	**+0.5**
WCKO	**Fanlu**	**1.21**	**239**	eP	**Pn**	**07 13 51.4**	**-0.1**
WCKO				eS	**Sn**	**07 14 07.6**	**+0.7**
YOJ	**Yonaguni jima**	**1.23**	**71**	P	**Pn**	**07 13 51.9**	**+0.1**
YOJ	**Yonaguni jima**	**1.23**	**71**	eP	**Pn**	**07 13 51.9**	**+0.1**
YOJ				eS	**Sn**	**07 14 07.2**	**-0.1**
YOJ	**Yonaguni jima**	**1.23**	**71**	eP	**Pn**	**07 13 51.9**	**+0.1**
YOJ				eS	**Sn**	**07 14 07.2**	**-0.1**
WRL	**Guolierlin Hig**	**1.25**	**263**	P	**Pb**	**07 13 53.4**	**-0.6**
WRL				eS	**Sb**	**07 14 10.0**	**+0.1**
STYH	**Taoyuan**	**1.25**	**225**	P	**Pn**	**07 13 53.0**	**+0.8**
STYH				S	**Sb**	**07 14 09.9**	**0.0**
TPUB	**Ta-pu**	**1.27**	**233**	P	**Pb**	**07 13 53.8**	**-0.5**
TPUB				S	**Sb**	**07 14 10.0**	**-0.4**
CHN2	**Minshiung**	**1.27**	**245**	eP	**Pn**	**07 13 52.0**	**-0.4**
CHN2				eS	**Sb**	**07 14 13.0**	**+2.6**
WTP	**Ta-pu**	**1.31**	**232**	P	**Pb**	**07 13 54.4**	**-0.7**
WTP				eS	**Sb**	**07 14 11.1**	**-0.6**
CHY	**Chiayi**	**1.33**	**245**	P	**Pb**	**07 13 54.9**	**-0.5**
CHY				eS	**Sb**	**07 14 12.8**	**+0.7**
WTCT	**Ta-ch'eng**	**1.34**	**261**	eP	**Pn**	**07 13 52.9**	**-0.5**
WTCT				eS	**Sb**	**07 14 13.6**	**+1.1**
TWG	**Pinlang**	**1.38**	**206**	eP	**Pn**	**07 13 53.0**	**-1.0**
TWGBT	**Beinan**	**1.38**	**206**	P	**Pn**	**07 13 53.0**	**-1.0**
TWGBT	**Beinan**	**1.38**	**206**	P	**Pn**	**07 13 52.9**	**-1.1**
TWGBT				eS	**Sn**	**07 14 10.1**	**-1.0**
TWK	**Hsinying**	**1.39**	**235**	P	**Pb**	**07 13 55.7**	**-0.8**
TWK				S	**Sb**	**07 14 14.5**	**+0.6**
CHN1	**Nanshi**	**1.41**	**232**	eP	**Pb**	**07 13 56.3**	**-0.5**
CHN1				S	**Sb**	**07 14 15.2**	**+0.7**
SNST	**Tainan City**	**1.42**	**233**	eP	**Pb**	**07 13 56.6**	**-0.2**
SNST				eS	**Sb**	**07 14 15.5**	**+1.0**
SGST	**Jiashian**	**1.44**	**227**	eP	**Pn**	**07 13 55.6**	**+0.8**
SGST				eS	**Sb**	**07 14 15.9**	**+0.5**
WSF	**Szhu**	**1.45**	**253**	eP	**Pn**	**07 13 55.6**	**+0.8**
WSF				eS	**Sb**	**07 14 16.7**	**+1.3**
WSL	**Shuilin Townsh**	**1.48**	**249**	P	**Pb**	**07 13 57.0**	**-0.9**
WSL				eS	**Sb**	**07 14 16.5**	**0.0**
CHN8	**Yiju**	**1.57**	**243**	P	**Pb**	**07 13 58.2**	**-1.3**
CHN8				S	**Sb**	**07 14 19.2**	**+0.3**
PCYT	**Pengchaiyu**	**1.58**	**11**	P	**Pn**	**07 13 57.7**	**+1.0**
ECL	**Taimali**	**1.63**	**206**	eP	**Pn**	**07 13 57.5**	**+0.2**
SSD	**Sandimen**	**1.66**	**218**	P	**Pb**	**07 13 59.8**	**-1.2**
SSD				S	**Sb**	**07 14 21.2**	**-0.4**
SCLT	**Jiali**	**1.67**	**238**	eP	**Pn**	**07 13 57.5**	**-0.4**
SCLT				eS	**Sb**	**07 14 22.2**	**+0.4**
TWM1	**Shoushan**	**1.73**	**224**	eP	**Pb**	**07 14 00.6**	**-1.5**
TWM1				eS	**Sb**	**07 14 26.1**	**+2.6**
MASBT	**Mashibuluo**	**1.77**	**215**	eP	**Pn**	**07 14 00.3**	**+1.1**
MASBT				eS	**Sb**	**07 14 23.6**	**-1.0**
TSCK	**Chigu Township**	**1.77**	**239**	eP	**Pn**	**07 13 59.4**	**+0.2**
TSCK				eS	**Sb**	**07 14 23.8**	**-0.8**
IRIF	**Iriomote-Funau**	**1.84**	**81**	eP	**Pn**	**07 14 00.2**	**0.0**
IRIF				eS	**Sn**	**07 14 22.0**	**-0.4**
EAST	**Anshuo**	**1.87**	**206**	eP	**Pn**	**07 14 02.3**	**+1.7**
HATJ	**Hateruma jima**	**1.89**	**90**	eP	**Pn**	**07 14 01.5**	**+0.5**
HATJ				eS	**Sn**	**07 14 23.9**	**+0.2**
SCZT	**Fangliau**	**1.98**	**211**	eP	**Pb**	**07 14 04.1**	**-2.2**
SCZT				eS	**Sb**	**07 14 29.3**	**-1.3**
LAY	**Lan-yu**	**2.03**	**185**	eP	**Pn**	**07 14 01.9**	**-1.0**
SLIU	**Shizi**	**2.04**	**205**	eP	**Pn**	**07 14 03.3**	**+0.4**
PHUB	**P'eng-hu**	**2.06**	**255**	iP	**Pn**	**07 14 03.9**	**+0.7**
PHUB				eS	**Sn**	**07 14 29.0**	**+1.3**
PNG	**Penghu**	**2.06**	**256**	P	**Pn**	**07 14 03.6**	**+0.5**
PNG				eS	**Sn**	**07 14 28.4**	**+0.7**
LYUB	**Lan-yu**	**2.06**	**184**	eP	**Pn**	**07 14 01.7**	**-1.6**
WDGT	**Dungji**	**2.06**	**247**	eP	**Pn**	**07 14 04.8**	**+1.5**
WDGT				S	**Sn**	**07 14 29.2**	**+1.3**
JKRS	**Kuro-shima**	**2.09**	**85**	eS	**Sn**	**07 14 29.5**	**+1.1**
SMST	**Manzhou Townsh**	**2.20**	**202**	eP	**Pn**	**07 14 06.5**	**+1.3**
JIJ	**Ishigaki jima**	**2.22**	**82**	P	**Pn**	**07 14 05.6**	**+0.1**
JIJ				eS	**Sn**	**07 14 31.2**	**-0.6**
VWUC	**VWUC**	**2.27**	**294**	eP	**Pn**	**07 14 05.9**	**-0.3**
VCHM	**Qimei**	**2.28**	**248**	P	**Pn**	**07 14 07.1**	**+0.9**
VCHM				eS	**Sn**	**07 14 34.3**	**+1.0**
TWK1	**Hengchun**	**2.28**	**202**	eP	**Pn**	**07 14 08.3**	**+2.0**
TWK1				eS	**Sn**	**07 14 33.8**	**+0.5**
TWKBT	**Hengchun**	**2.28**	**202**	eP	**Pn**	**07 14 07.0**	**+0.7**
TWKBT				eS	**Sn**	**07 14 33.9**	**+0.6**
JISG	**Ishigakijimahi**	**2.41**	**77**	eP	**Pn**	**07 14 08.3**	**+0.3**
JISG				eS	**Sn**	**07 14 35.6**	**-0.7**
MATB	**Ma-tsu**	**2.63**	**322**	eP	**Pn**	**07 14 10.4**	**-0.7**
JTJ	**Tarama**	**2.77**	**78**	eS	**Sn**	**07 14 44.9**	**-0.3**
KNM	**Kinmen**	**3.03**	**277**	eP	**Pn**	**07 14 17.9**	**+1.3**
LYJJ	**Jianjiangzhen**	**3.05**	**325**	eP	**Pn**	**07 14 16.6**	**-0.3**
KNMB	**Chin-men Tao**	**3.08**	**278**	eP	**Pn**	**07 14 17.0**	**-0.2**
XPSS	**Dashiqiu**	**3.17**	**334**	eP	**Pn**	**07 14 17.4**	**-1.1**
MHZQ	**Yeshan**	**3.18**	**310**	eP	**Pn**	**07 14 17.8**	**-0.8**
JIKM	**Ikemajima**	**3.31**	**74**	eS	**Sn**	**07 14 59.4**	**+0.6**
JMJ2	**Miyako jima3**	**3.34**	**78**	eS	**Sn**	**07 15 00.2**	**+0.7**
AXDP	**Jialang**	**3.53**	**284**	eP	**Pn**	**07 14 23.3**	**-0.1**
ZPLA	**Ao Xicun**	**3.65**	**269**	eP	**Pn**	**07 14 25.0**	**-0.1**
DSXP	**Dongshan**	**3.96**	**266**	eP	**Pn**	**07 14 29.0**	**-0.4**
SXFK	**Yanhouchang**	**4.37**	**303**	eP	**Pn**	**07 14 34.4**	**-0.6**

ISC 01 07:13:38.3±0.9**, 45°.29N**±0°.03×**15°.38E**±0°.06**, h10**km**, n13, σ0^s.81**/20**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.23**	**337**	⇑iPg	**Pg**	**07 13 42.1**	**-0.9**
BOJS				iSg	**Sg**	**07 13 46.3**	**+0.2**
PLIT	**Plitvice**	**0.45**	**157**	ePg	**Pg**	**07 13 45.8**	**-1.3**
PLIT				Sg	**Sg**	**07 13 52.4**	**-0.6**
GBRS	**Gornja Briga**	**0.46**	**301**	iPg	**Pg**	**07 13 46.5**	**-0.9**
GBRS				IAML		07 13 54.0	
	comp=Z,2.9nm,0.1s						
CRES	**Cresnjevec Ost**	**0.54**	**6**	iPg	**Pb**	**07 13 49.3**	**-0.4**
CRES				eSg	**Sb**	**07 13 57.9**	**+0.3**
CRES				IAML		07 14 04.3	
	comp=Z,4.0nm,0.2s						
VISS	**Visnje**	**0.63**	**324**	iPg	**Pg**	**07 13 49.9**	**-0.7**
VISS				IAML		07 14 03.6	
	comp=Z,3.5nm,0.2s						
LEGS	**Legarje**	**0.66**	**356**	iPg	**Pg**	**07 13 51.3**	**+0.3**
RABC	**Rab**	**0.69**	**218**	Sg	**Sg**	**07 14 00.1**	**-0.4**
PDKS	**Podkum**	**0.81**	**341**	iPg	**Pb**	**07 13 54.9**	**+0.4**
PDKS				IAML		07 14 09.0	
	comp=Z,0.6nm,0.1s						
VIRC	**Vir**	**1.03**	**193**	ePg	**Pb**	**07 13 58.4**	**+0.2**
VIRC				Sg	**Sn**	**07 14 13.3**	**+0.2**
DUGI	**Dugi Otok**	**1.32**	**190**	ePn	**Pb**	**07 14 03.3**	**+0.2**
DUGI				Sg	**Sg**	**07 14 22.4**	**+1.6**
MORI	**Morici**	**1.45**	**170**	ePn	**Pb**	**07 14 05.2**	**0.0**
MORI				Sn	**Sg**	**07 14 26.3**	**+1.5**
ZIRJ	**Zirje**	**1.65**	**173**	ePn	**Pb**	**07 14 08.6**	**-0.1**
ZIRJ				Sn	**Sg**	**07 14 32.3**	**+1.0**
RICI	**Ricice**	**2.20**	**144**	Sn	**Sb**	**07 14 45.5**	**+0.2**

*IDC **01** 07:16:27.9±3.2, 35°.13S×179°.40W, h0km, mb4.0/2, mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=74.2km s-min=36.4km az=123.0*
*WEL **01** 07:16:31.3±1.6, 35°S±9°×17°9W±1°5, h33km, M4.0/7, ML3.9/13, MLv4.0/7, Error ellipse: s-maj=19.5km s-min=11.1km az=98.7*
ISC 01 07:16:30.5±1.9**, 35°.26S**±0°.10×**179°.0W**±0°.2**, h35**km**, n26, σ0^s.55**/30**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.18**	**223**	P	**Pn**	**07 17 17.7**	**-0.3**
MXZ				S	**Sn**	**07 17 54.5**	**-0.2**
WMGZ	**Waiomatatini S**	**3.31**	**219**	P	**Pn**	**07 17 20.5**	**+0.7**
PKGZ	**Pakihiroa**	**3.53**	**222**	P	**Pn**	**07 17 23.7**	**+0.9**
PKGZ				S	**Sn**	**07 18 04.4**	**+1.2**
PUZ	**Puketiti**	**3.59**	**218**	P	**Pn**	**07 17 23.6**	**0.0**
PUZ				S	**Sn**	**07 18 04.8**	**0.0**
HAZ	**Te Kaha**	**3.62**	**226**	P	**Pn**	**07 17 24.5**	**+0.5**
RUGZ	**Raukumara Rang**	**3.82**	**224**	P	**Pn**	**07 17 27.4**	**+0.5**
TKGZ	**Te Karaka**	**4.08**	**218**	P	**Pn**	**07 17 30.3**	**0.0**
MWZ	**Matawai**	**4.16**	**222**	P	**Pn**	**07 17 31.2**	**-0.4**
RIGZ	**Rimuhau**	**4.32**	**216**	P	**Pn**	**07 17 33.3**	**-0.4**
RAGZ	**Rawiri**	**4.34**	**221**	P	**Pn**	**07 17 34.3**	**+0.2**
URZ	**Urewera**	**4.35**	**225**	Pn	**Pn**	**07 17 33.4**	**-0.6**
	4.5nm,0.3s,baz=339,slow=2.7,SNR=31						
URZ				Sn	**Sn**	**07 18 22.9**	**-0.5**
	6.2nm,0.3s,baz=323,slow=20,SNR=12						
	13nm,0.3s						
URZ	**Urewera**	**4.35**	**225**	P	**Pn**	**07 17 33.4**	**-0.6**
KUZ	**Kuaotunu**	**4.56**	**250**	P	**Pn**	**07 17 36.9**	**0.0**
KNZ	**Kokohu**	**4.62**	**215**	P	**Pn**	**07 17 36.7**	**-1.0**
MHGZ	**Mahia Peninsul**	**4.62**	**212**	P	**Pn**	**07 17 38.6**	**+0.8**
RTZ	**Ruatahuna**	**4.67**	**223**	P	**Pn**	**07 17 38.7**	**+0.2**
TOZ	**Tahuroa Road**	**5.10**	**239**	P	**Pn**	**07 17 44.2**	**-0.1**
MKAZ	**Moumakai**	**5.10**	**247**	P	**Pn**	**07 17 44.6**	**+0.3**
BKZ	**Black Stump Fm**	**5.32**	**222**	P	**Pn**	**07 17 47.8**	**+0.3**
WCZ	**Waipu Caves**	**5.50**	**261**	P	**Pn**	**07 17 50.3**	**+0.5**
PXZ	**Pawanui**	**5.80**	**214**	P	**Pn**	**07 17 53.9**	**-0.1**
NGZ	**Ngauruhoe**	**5.84**	**226**	P	**Pn**	**07 17 54.6**	**0.0**
OUZ	**Omahuta**	**6.09**	**268**	P	**Pn**	**07 17 58.1**	**+0.1**
ASAR	**Alice Springs**	**42.28**	**273**	P	**P**	**07 24 20.6**	**-0.2**
	1.9nm,0.4s,baz=117,slow=7.2,SNR=42						
	1.9nm,0.4s						
WRA	**Warramunga Arr**	**43.71**	**278**	P	**P**	**07 24 31.4**	**-1.0**
	0.5nm,0.4s,baz=119,slow=7.7,SNR=13						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**149.35**	**336**	PKPbc	**PKiKP**	**07 36 16.6**	**+0.7**
	2.7nm,0.9s,baz=38,slow=3.0,SNR=4.8						

*NNC **01** 07:17:10.4±0.7, 51°.94N×74°.35E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=74.2km s-min=4.6km az=25.0, Suspected Mining explosion.*
*IDC **01** 07:17:14.6±1.0, 51°.88N×74°.38E, h0km, mbtmp2.5/4, ML1.8/4, Error ellipse: s-maj=41.9km s-min=9.8km az=27.0*
ISC 01 07:17:12.0±1.2**, 51°.8N**±0°.1×**74°.20E**±0°.09**, h0**km**, n12, σ1^s.09**/8**, 6C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**2.62**	**299**	⇓Pg	**Pb**	**07 17 59.4**	**-0.3**
	2.5nm,0.9s						
BVA0				⇑Lg	Lg	07 18 34.1	
	13nm,0.6s						
BVAR	**Borovoye Array**	**2.62**	**299**	Pn	**Pb**	**07 17 59.5**	**-0.2**
	0.1nm,0.3s,baz=112,slow=16,SNR=12						
BVAR				Sn	**Sb**	**07 18 31.6**	**-0.8**
	0.6nm,0.3s,baz=114,slow=22,SNR=32						
	1.9nm,0.5s						
BRVK	**Borovoye**	**2.69**	**299**	⇑Pg	**Pb**	**07 18 00.3**	**-0.6**
	3.0nm,1.0s						
BRVK				⇑Lg	Lg	07 18 35.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.98	112	Pn	Pn	07 18 01.5	+1.1
	0.1nm,0.3s,baz=300,slow=15,SNR=8.0						
KURBB				Lg	Lg	07 18 41.6	
	0.2nm,0.3s,baz=303,slow=10,SNR=7.0						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	2.98	112	⇑Pg	Pb	07 18 04.6	-1.3
	4.1nm,0.7s						
KURBB				⇑Lg	Lg	07 18 42.9	
	28nm,0.8s						
KURK	Kurchatov	3.00	110	⇓Lg	Lg	07 18 42.7	
	6.2nm,0.8s						
I46RU	ZALESOVO INFRA	6.77	68	I	I	07 55 40.0	
	0.1nm,0.7s,baz=255,slow=334,SNR=10						
ZALV	Zalesovo Beam	6.77	68	Pn	Pn	07 18 53.3	+0.9
	0.1nm,0.3s,baz=260,slow=13,SNR=5.5						
	1.5nm,0.8s						
MAKZ	Makanchi	7.15	132	⇑Lg	Lg	07 20 57.5	
	3.0nm,0.8s						
MK31	Makanchi Array	7.31	131	⇓Lg	Lg	07 20 59.7	
	1.3nm,0.6s,baz=324,slow=25,SNR=3.5						
MKAR	Makanchi Array	7.31	131	Pn	Pn	07 19 01.0	+1.0
	baz=316,slow=11,SNR=2.3						
MKAR				Lg	Lg	07 20 58.0	
	0.1nm,0.3s,baz=326,slow=28,SNR=6.7						
	0.1nm,0.5s						
AAK	Ala-Archa	9.21	179	Lg	Lg	07 22 00.6	
	0.2nm,0.3s,baz=48,slow=24,SNR=1.6						

*WEL **01** 07:25:34.5±0.8, 35°S±5°×17°9W±°, h33km, M4.4/10, ML4.3/12, MLv4.4/10, Error ellipse: s-maj=13.2km s-min=4.8km az=112.1*
*IDC **01** 07:25:43.2±3.1, 35.10°S×179.47°W, h0km, mb4.2/2, mbtmp4.2/3, ML3.6/1, MS3.5/9, Error ellipse: s-maj=72.1km s-min=36.0km az=123.0*
*NOU **01** 07:25:58.0, 35.72°S×179.96°E, h81km, mb4.2/8, Off E. Coast of N. Island, N.Z.*
ISC 01 07:25:46.5±1.8**, 35.28°S**±0.10×**179.0°W**±0.1**, h47**km**, n50, σ0s.96**/50**, MS3.5**/8**, East of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.15	223	P	Pn	07 26 33.0	-0.6
MXZ	Matakaoa Point	3.15	223	P	Pn	07 26 32.6	-1.0
MXZ				S	Sn	07 27 09.2	-0.7
WMGZ	Waiomatatini S	3.28	219	P	Pn	07 26 34.9	-0.4
WMGZ				S	Sn	07 27 14.6	+1.5
PKGZ	Pakihiroa	3.49	221	P	Pn	07 26 37.9	-0.3
PKGZ				S	Sn	07 27 18.8	+0.5
PUZ	Puketiti	3.55	217	P	Pn	07 26 38.3	-0.8
PUZ				S	Sn	07 27 21.1	+1.2
HAZ	Te Kaha	3.58	225	P	Pn	07 26 39.3	-0.2
HAZ				S	Sn	07 27 22.8	+2.3
TWGZ	Tauwhareparae	3.77	219	P	Pn	07 26 42.4	+0.2
TWGZ				S	Sn	07 27 27.2	+1.8
RUGZ	Raukumara Rang	3.78	224	P	Pn	07 26 42.1	-0.4
RUGZ				S	Sn	07 27 26.3	+0.6
CNGZ	Carnagh Statio	3.90	214	P	Pn	07 26 43.8	-0.2
TKGZ	Te Karaka	4.04	218	P	Pn	07 26 45.3	-0.5
MWZ	Matawai	4.13	221	P	Pn	07 26 45.8	-1.3
RIGZ	Rimuhau	4.29	216	P	Pn	07 26 48.7	-0.6
RAGZ	Rawiri	4.30	221	P	Pn	07 26 49.2	-0.3
URZ	Urewera	4.31	225	Pn	Pn	07 26 48.5	-1.0
	3.4nm,0.3s,baz=360,slow=6.4,SNR=33						
URZ				Sn	Sn	07 27 37.5	-1.0
	9.5nm,0.3s,baz=141,slow=23,SNR=12						
	27nm,0.5s						
URZ	Urewera	4.31	225	P	Pn	07 26 49.1	-0.4
URZ	Urewera	4.31	225	P	Pn	07 26 48.4	-1.2
PRGZ	Paritu Road	4.41	213	P	Pn	07 26 49.9	-1.0
KUZ	Kuaotunu	4.52	250	P	Pn	07 26 51.7	-0.7
KUZ	Kuaotunu	4.52	250	P	Pn	07 26 51.4	-1.0
SNGZ	Shannon Statio	4.56	219	P	Pn	07 26 52.3	-0.7
SNGZ				S	Sn	07 27 44.2	-0.4
KNZ	Kokohu	4.58	214	P	Pn	07 26 51.7	-1.5
MHGZ	Mahia Peninsul	4.58	212	P	Pn	07 26 53.2	-0.1
RTZ	Ruatahuna	4.63	223	P	Pn	07 26 55.5	+1.5
RAHZ	Arahi	4.79	220	P	Pn	07 26 56.9	+0.7
RAHZ				S	Sn	07 27 49.7	-0.7
MTHZ	Maungataniwha	4.87	222	P	Pn	07 26 56.7	-0.6
MKAZ	Moumakai	5.06	247	P	Pn	07 27 00.1	+0.3
NMHZ	Naumai	5.07	220	P	Pn	07 27 00.3	+0.2
ARHZ	Aropaoanui	5.10	218	P	Pn	07 27 00.3	-0.1
BKZ	Black Stump Fm	5.29	221	P	Pn	07 27 02.8	-0.2
BKZ	Black Stump Fm	5.29	221	P	Pn	07 27 02.1	-0.9
WCZ	Waipu Caves	5.46	261	P	Pn	07 27 05.0	-0.2
OUZ	Omahuta	6.05	268	P	Pn	07 27 13.4	-0.1
OUZ	Omahuta	6.05	268	P	Pn	07 27 12.7	-0.7
CTZ	Chatham Island	8.64	168	P	Pn	07 27 47.5	-1.5
QRZ	Quartz Range	8.67	228	P	Pn	07 27 47.5	-1.9
KHZ	Kahutara	9.19	217	P	Pn	07 27 57.1	+0.6
JCZ	Jackson Bay	12.86	223	P	Pn	07 28 45.0	-1.6
DZM	Mont Dzumac	18.31	312	LR	LR	07 35 55.9	
	comp=Z,280nm,19.0s,baz=117,slow=34						
DZM	Mont Dzumac	18.31	312	eLR	LR	07 34 11.2	
	246nm,25.6s						
RAR	Rarotonga	21.93	55	LR	LR	07 40 04.9	
	comp=Z,26nm,18.1s,baz=233,slow=39						
PPT2	Papeete2	31.53	64	eLR	LR	07 40 06.7	
	99nm,26.5s						
PPT2				eLR	LR	07 40 12.3	
	108nm,24.5s						
CTA	Charters Tower	34.08	287	LR	LR	07 44 00.4	
	comp=Z,33nm,18.5s,baz=84,slow=33						
PMG	Port Moresby	40.19	302	LR	LR	07 47 31.1	
	comp=Z,79nm,19.4s,baz=142,slow=33						
ASAR	Alice Springs	42.25	273	P	P	07 33 35.5	+0.1
	4.1nm,0.7s,baz=116,slow=7.7,SNR=54						
ASAR				LR	LR	07 51 31.2	
	comp=Z,104nm,18.2s,baz=112,slow=37						
	4.1nm,0.7s						
WRA	Warramunga Arr	43.68	278	P	P	07 33 46.4	-0.6
	1.6nm,0.8s,baz=118,slow=7.7,SNR=14						
	1.6nm,0.8s						
BATI	Baumata	57.59	281	LR	LR	08 02 23.8	
	comp=Z,69nm,18.1s,baz=118,slow=38						
RPN	Rapa Nui	59.06	103	LR	LR	07 58 02.1	
	comp=Z,31nm,18.2s,baz=234,slow=33						
KAPI	Kappang	63.77	283	LR	LR	08 04 21.2	
	comp=Z,27nm,18.4s,baz=144,slow=37						
PLCA	Paso Flores	79.81	133	LR	LR	08 07 01.3	
	comp=Z,27nm,20.5s,baz=198,slow=31						
FINES	FINESS Array B	149.35	336	PKPbc	PKiKP	07 45 31.8	+1.3
	3.7nm,0.8s,baz=28,slow=2.6,SNR=5.8						

*CATAC **01** 07:29:04.7±0.2, 9°N±2°×8°3W±°, h8km±1km, M3.6/13, MLv3.6/13, Error ellipse: s-maj=4.4km s-min=3.7km az=47.0, confirmed*
*UPA **01** 07:29:04.8±1.6, 8.70°N×83.29°W, h28km±17km, MW3.8, Presumed earthquake*
*UCR **01** 07:29:04.8±0.6, 8.68°N×83.28°W, h25km±1km, MW3.9, Fault plane solution: NP1:φs211.77000°, δ46.92000°, λ69.25000°., Presumed earthquake*
ISC 01 07:29:05.0±0.8**, 8.71°N**±0.02×**83.26°W**±0.02**, h19**km±5km**, n77, σ0s.83**/97**, 9C-34D, Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EDAD	Golfito	0.11	120	⇑eP	Pg	07 29 08.8	-0.2
EDAD				eS	Sg	07 29 11.8	+0.1
FITO	Golfito	0.14	127	⇑eP	Pb	07 29 08.8	+1.5
FITO				eS	Sg	07 29 11.9	-0.1
PTJ1	Puerto Jimnez	0.18	192	P	Pb	07 29 09.6	+0.9
PTJ1	Puerto Jimnez	0.18	192	⇑eP	Pb	07 29 09.5	+0.9
PTJ1				eS	Sg	07 29 14.0	+1.1
FIMO	Fila Mora	0.29	342	⇓eP	Pg	07 29 12.1	+0.4
PIRO	Carate, Puerto	0.31	193	P	Pg	07 29 11.4	-0.5
PIRO				S	Sg	07 29 17.1	+0.6
PIRO	Carate, Puerto	0.31	193	⇑eP	Pg	07 29 11.3	-0.5
VITO	San Vito	0.31	69	⇓eP	Pb	07 29 12.7	+0.7
PANP	Palmar Norte	0.32	322	⇓eP	Pg	07 29 11.9	0.0
EDP2	Potrero Grande	0.32	16	⇓eP	Pb	07 29 12.7	+0.5
NELY	Ciudad Neily	0.32	100	⇓eP	Pg	07 29 12.1	+0.1
CDITO	Canoas	0.41	109	P	Pg	07 29 13.2	-0.3
CDITO				S	Sg	07 29 19.8	+0.5
RSRNO	Rio Sereno	0.41	75	⇓iP	Pb	07 29 14.4	+0.5
RSRNO				eS	Sn	07 29 22.1	-1.2
RSRNO	Rio Sereno	0.41	75	⇓eP	Pb	07 29 14.3	+0.5
MLIR3	Monte Lirio, C	0.44	79	⇓iP	Pg	07 29 14.7	+0.5
MLIR3				eS	Sn	07 29 23.2	-0.9
LPPC	Paso Canoas	0.46	113	eP	Pg	07 29 13.5	-0.9
BURE	Buenos Aires	0.47	351	⇓eP	Pg	07 29 14.9	+0.3
ALCO	Alturas Coton,	0.49	61	⇓eP	Pg	07 29 15.1	0.0
SCLRA	Santa Clara, W	0.49	75	⇓iP	Pg	07 29 15.5	+0.4
SCLRA				eS	Sn	07 29 24.9	-0.5
SCLRA	Santa Clara, W	0.49	75	⇓eP	Pg	07 29 15.5	+0.4
OCHAL	Ojochal	0.54	316	P	Pb	07 29 15.3	-0.6
OCHAL				S	Sg	07 29 23.4	+0.2
EDPE	Pejibaye, P	0.54	326	⇓eP	Pb	07 29 15.5	-0.4
DRK0	Durika	0.55	2	P	Pb	07 29 15.0	-1.2
DRK0				S	Sg	07 29 23.7	0.0
DRK0	Durika	0.55	2	⇓eP	Pb	07 29 14.9	-1.2
LESP3	La Esperanza,	0.56	123	⇓iP	Pb	07 29 15.7	-0.4
BRU2	Volcan	0.57	81	P	Pb	07 29 16.4	-0.1
BRU2	Volcan	0.57	81	⇓iP	Pb	07 29 16.4	-0.1
BRU2				eS	Sg	07 29 25.2	+0.9
BRU2	Volcan	0.57	81	⇓eP	Pb	07 29 16.4	-0.1
ARIEL	Armuelles	0.58	136	⇑iP	Pn	07 29 22.6	+4.3
ARIEL				eS	Sn	07 29 31.3	+3.9
PTPA	Petro Terminal	0.64	142	eP	Pb	07 29 17.2	-0.4
CLLRA	Cordillera,	0.64	87	⇓iP	Pb	07 29 17.6	-0.1
CLLRA				eS	Sb	07 29 26.6	+0.3
CLLRA	Cordillera,	0.64	87	⇓eP	Pb	07 29 17.5	-0.1
SAJE	San Jernim	0.68	339	⇓eP	Pb	07 29 17.7	-0.7
JEFFS	S de V. Baru	0.72	93	⇓iP	Pb	07 29 18.7	-0.4
JEFFS	S de V. Baru	0.72	93	eP	Pb	07 29 18.7	-0.4
ZEDO	Perez Zeledon	0.76	327	⇓eP	Pb	07 29 19.3	-0.5
BQTLY	Boquete Panama	0.80	86	iP	Pb	07 29 19.7	-0.7
BQTLY				eS	Sb	07 29 31.5	+0.7
BQTLY	Boquete Panama	0.80	86	⇓eP	Pb	07 29 19.6	-0.7
DAP26	falda E V. Bar	0.83	85	⇓iP	Pb	07 29 20.0	-1.0
DAP26				eS	Sb	07 29 31.4	-0.6
DAP26	falda E V. Bar	0.83	85	⇓eP	Pb	07 29 20.0	-1.0
DVD	David	0.85	109	⇑iP	Pb	07 29 20.8	-0.4
DVD				eS	Sb	07 29 31.8	-0.4
BGUAL	Bijagual, Pana	0.94	102	iP	Pb	07 29 21.8	-1.0
BGUAL				eS	Sb	07 29 33.8	-1.1
CEUA	Cerro Uatsi, L	0.96	19	eP	Pb	07 29 23.7	+0.5
BUS1	Rivas	0.97	330	⇓eP	Pb	07 29 22.4	-1.1
BRIBI	Bribri	1.01	26	eP	Pn	07 29 24.6	+0.5
LAES	El Progreso Va	1.07	11	⇓eP	Pb	07 29 24.9	-0.1
PBNVO	Pueblo Nuevo,	1.07	80	⇓eP	Pb	07 29 23.4	-1.7
RBALA	Bur	1.11	81	⇑iP	Pn	07 29 24.3	-1.3
RBALA				eS	Sb	07 29 38.7	-1.1
RBALA	Bur	1.11	81	⇓eP	Pn	07 29 24.1	-1.5
PIEC	Cerro El Cedra	1.14	323	eP	Pn	07 29 25.1	-1.2
RAZU	San Marcos de	1.21	322	eP	Pn	07 29 26.5	-0.6
PITB	Pirrs, San	1.21	322	eP	Pn	07 29 26.1	-1.0
PICV	PH. Pirrs	1.29	315	eP	Pn	07 29 27.4	-0.8
VERB	Verbena	1.30	341	⇓eP	Pn	07 29 27.8	-0.6
PCAYA	Pacayas	1.32	336	eP	Pn	07 29 28.1	-0.5
VTCV	VTCV, Calle Va	1.35	340	⇓eP	Pn	07 29 28.5	-0.5
RAFA	San Farael, Vo	1.35	337	eP	Pn	07 29 28.6	-0.6
ABRB	Las Abras (San	1.36	341	eP	Pn	07 29 28.9	-0.4
RESJ	San Isidro (Tu	1.36	344	eP	Pn	07 29 29.1	-0.1
TAAN	Batan	1.37	357	⇑eP	Pn	07 29 29.9	+0.7
CVTV	Tajo	1.37	340	⇓eP	Pn	07 29 29.1	-0.5
VTR0	Volcan Turrial	1.39	339	eP	Pn	07 29 29.4	-0.5
VICA	Volcano Irazu	1.39	336	eP	Pn	07 29 29.1	-0.7
CVTR	Volcan Turrial	1.39	339	eP	Pn	07 29 29.4	-0.5
LCOCO	El Coco	1.40	348	⇓eP	Pn	07 29 29.9	+0.3
ACOS	Acosta	1.40	321	eP	Pn	07 29 29.0	-0.7
IRES	Siquirres	1.40	350	eP	Pn	07 29 29.8	+0.2
RMDIO	Remedios, Chir	1.50	109	⇑iP	Pn	07 29 31.6	+0.7
HDC	Heredia	1.53	327	eP	Pn	07 29 31.1	-0.5
CARI	Cariari	1.71	344	eP	Pn	07 29 34.2	+0.4
TRT2	Tortugero	1.90	346	P	Pn	07 29 36.8	+0.4
TRT2				S	Sb	07 30 01.9	-0.4
TRT2	Tortugero	1.90	346	⇓eP	Pn	07 29 36.5	+0.1
JTS	Las Juntas de	2.29	313	P	Pn	07 29 42.7	+0.8
JTS				S	Sn	07 30 10.4	+0.8
COVE	Coope Vega, Sa	2.29	331	P	Pb	07 29 44.9	-0.9
INDI	Punta indio, G	2.49	298	P	Pn	07 29 44.6	0.0
CMARA	Lajas Hojancha	2.50	302	P	Pn	07 29 45.8	+1.0
CMARA				S	Sn	07 30 15.4	+0.6
BOAB	BOACO BROADBAN	4.40	328	P	Pn	07 30 12.7	+1.8

*OSPL **01** 07:32:25.8±0.8, 18.65°N×71.43°W, h19km±4km, ML2.1, Presumed earthquake*
*SDD **01** 07:32:27.0±2.0, 18.58°N×71.44°W, h20km±13km, MD2.9, ML2.1, MW2.6, Presumed earthquake*
ISC 01 07:32:26.2±0.9**, 18.59°N**±0.03×**71.43°W**±0.06**, h17**km±5km**, n9, σ0s.72**/18**, 6C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LONE3	El Aguacate, B	0.03	296	iP	Pg	07 32 29.0	-0.4
LONE3				eS	Sg	07 32 31.7	+0.1
LONE3				IAML		07 32 32.8	
	comp=Z,416nm,0.4s						
NEDR	Neiba UASD	0.11	175	⇑ePg	Pb	07 32 29.6	-0.3
NEDR				⇑eSg	Sg	07 32 33.4	+1.2
NEDR				IAML		07 32 34.0	
	comp=N,226nm,0.3s						
LODU1	El Espartillar	0.24	191	iP	Pb	07 32 31.6	-0.5
LODU1				eS	Sb	07 32 35.5	-0.6
LODU1				IAML		07 32 36.4	
	comp=Z,317nm,0.2s						
JIDR	Jimani	0.41	256	⇓ePg	Pg	07 32 34.4	-0.3
JIDR				⇓eSg	Sb	07 32 41.6	+0.5
JIDR				IAML		07 32 41.7	
	comp=N,134nm,0.2s						
PODR	Polo	0.44	162	⇑ePg	Pg	07 32 34.9	-0.4
PODR				⇓eSg	Sg	07 32 42.4	+0.9
PODR				IAML		07 32 42.6	
	comp=N,219nm,0.3s						
PODR	Polo	0.44	162	iP	Pg	07 32 34.9	-0.4
PODR				eS	Sg	07 32 42.1	+0.7
PODR				IAML		07 32 42.6	
	comp=Z,2μm,0.2s						
REDR	Restauracion	0.57	3	⇓ePg	Pn	07 32 39.6	-0.1
REDR				⇑eSg	Sn	07 32 49.9	+1.2
REDR				IAML		07 32 50.2	
	comp=N,99nm,0.1s						
LOBH	Bahia de las A	0.75	196	iP	Pb	07 32 40.0	-0.8
LOBH				eS	Sb	07 32 51.0	+0.2
LOBH				IAML		07 33 02.9	
	comp=Z,57nm,1.9s						
MADR	Mao Valverde	1.02	18	⇑ePg	Pb	07 32 44.7	-0.7
MADR				⇑eSg	Sg	07 32 59.8	+0.5
MADR				IAML		07 33 05.4	
	comp=N,60nm,2.1s						

IDC 01 08:04:31.0±5.1**, 8.35°S**×**158.62°E, h147**km±63km**, mb3.2**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=95.5km s-min=27.6km az=142.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.70	130	P	Pn	08 05 02.9	+0.4
	13nm,0.2s,baz=358,slow=2.8,SNR=25						
HNR				S	Sn	08 05 26.7	+0.1
	9.5nm,0.3s,baz=222,slow=23,SNR=9.6						
WRA	Warramunga Arr	26.17	241	P	P	08 09 52.4	+0.4
	0.5nm,0.3s,baz=67,slow=9.2,SNR=8.7						
	0.5nm,0.3s						
H11S3	WAKE ISLAND Hy	27.83	17	T	T	08 39 12.2	
	baz=195,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	27.83	17	T	T	08 39 10.6	
	baz=195,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	27.85	17	T	T	08 39 19.5	
	baz=195,slow=76,SNR=2.2						
ASAR	Alice Springs	28.15	234	P	P	08 10 09.2	-0.4
	0.3nm,0.4s,baz=62,slow=9.6,SNR=11						
	0.3nm,0.4s						
H11N1	WAKE ISLAND Hy	29.05	16	T	T	08 40 47.0	
	baz=196,slow=76,SNR=3.3						
H11N3	WAKE ISLAND Hy	29.06	16	T	T	08 40 51.3	
	baz=196,slow=76,SNR=4.3						
H11N2	WAKE ISLAND Hy	29.07	16	T	T	08 40 48.9	
	baz=196,slow=76,SNR=3.6						
ILAR	Eielson Array	83.34	21	P	P	08 16 41.1	0.0
	0.5nm,1.0s,baz=210,slow=7.1,SNR=3.0						
	0.5nm,1.0s						

*RSPR **01** 08:12:44.5, 17.91°N×66.92°W, h7km, MD3.1/9*
*NEIC **01** 08:12:44.4±1.4, 17.90°N±0.03×66.907°W±0.005, h10km±1km, ML3.3/37, Md3.1/9(RSPR), Error ellipse: s-maj=5.2km s-min=2.7km az=1.0*
*OSPL **01** 08:12:44.3±0.3, 17.87°N×66.92°W, h15km±3km, ML3.5, Presumed earthquake*
*SDD **01** 08:12:44.6±2.5, 17.88°N×66.91°W, h21km±19km, MD3.5, ML2.9, MW3.7, Presumed earthquake*
ISC 01 08:12:43.9±1.0**, 17.89°N**±0.05×**66.89°W**±0.02**, h14**km±6km**, n48, σ0s.52**/69**, 12C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.09	8		Pg	08 12 46.8	-0.2
GBPR	Guanica, Bosqu	0.09	8	⇑eP	Pg	08 12 46.8	-0.2
MLPR	Magueyes Islan	0.17	299		Pg	08 12 47.9	-0.1
MLPR				Sg	Sg	08 12 50.4	-0.3
MLPR				IAML		08 12 51.1	
	13μm,0.3s						
CRPR	Cabo Rojo, PR	0.24	300		Pg	08 12 49.0	-0.1
CRPR					Sg	08 12 52.5	-0.2
CRPR	Cabo Rojo, PR	0.24	300	IAML		08 12 53.5	
	6μm,0.3s						
CRPR				IAML		08 12 53.9	
	6μm,0.3s						
CRPR	Cabo Rojo, PR	0.24	300	⇑ePg	Pg	08 12 49.0	-0.1
CRPR				⇑eSg	Sg	08 12 52.6	0.0
CRPR				IAML		08 12 53.1	
	comp=N,5μm,0.2s						
CRPR	Cabo Rojo, PR	0.24	300	⇑eP	Pg	08 12 49.0	-0.1
CRPR				eS	Sg	08 12 52.6	0.0
CRPR	Cabo Rojo, PR	0.24	300	iP	Pg	08 12 49.0	-0.1
CRPR				eS	Sg	08 12 52.4	-0.2
CRPR				IAML		08 12 52.8	
	comp=Z,4μm,0.4s						
OBIP	Obispado Ponce	0.31	60		Pg	08 12 50.7	+0.4
OBIP					Sb	08 12 55.9	-0.3
OBIP	Obispado Ponce	0.31	60	⇓eP	Pg	08 12 50.8	+0.4
OBIP				eS	Sb	08 12 56.5	+0.3
OBIP	Obispado Ponce	0.31	60	iP	Pg	08 12 50.8	+0.4
OBIP				eS	Sb	08 12 55.9	-0.3
OBIP				IAML		08 12 56.7	
	comp=Z,9μm,0.1s						
LSP	Las Mesas	0.34	327		Pg	08 12 50.8	-0.1
LSP	Las Mesas	0.34	327	⇓eP	Pg	08 12 50.8	-0.1
CELP	Cerrillos	0.35	58		Pg	08 12 51.3	+0.2
CELP				Sg	Sb	08 12 57.4	+0.1
CELP				IAML		08 12 57.8	
	comp=Z,2μm,0.2s						
CELP				IAML		08 12 58.0	
	comp=Z,2μm,0.2s						
UUPR	Utuado, UPR, P	0.40	24		Pg	08 12 51.8	-0.1
PRSN	Puerto Rico Se	0.41	324		Pg	08 12 51.9	-0.2
PRSN					Sg	08 12 57.7	0.0
PRSN	Puerto Rico Se	0.41	324	IAML		08 13 00.1	
	comp=Z,6μm,0.3s						
PRSN				IAML		08 13 02.0	
	comp=Z,4μm,0.3s						
PRSN	Puerto Rico Se	0.41	324	⇑ePg	Pg	08 12 51.9	-0.2
PRSN				⇑eSg	Sg	08 12 57.9	+0.3
PRSN				IAML		08 13 00.0	
	comp=N,4μm,0.2s						
PRSN	Puerto Rico Se	0.41	324	⇑eP	Pg	08 12 51.9	-0.2
PRSN				eS	Sg	08 12 57.7	0.0
AGPR	Aguadilla, PR	0.61	340		Pg	08 12 55.5	-0.5
AGPR				IAML		08 13 04.2	
	comp=N,1μm,0.4s						
AGPR				IAML		08 13 04.6	
	comp=N,1μm,0.3s						
AGPR	Aguadilla, PR	0.61	340	⇑ePg	Pg	08 12 55.5	-0.5
AGPR				⇓eSg	Sg	08 13 03.7	-0.4
AGPR				IAML		08 13 04.5	
	comp=N,1μm,0.2s						
AGPR	Aguadilla, PR	0.61	340	⇑eP	Pg	08 12 55.5	-0.5
AGPR				eS	Sg	08 13 03.9	-0.3
AGPR	Aguadilla, PR	0.61	340	iP	Pg	08 12 55.5	-0.5
AGPR				eS	Sg	08 13 03.8	-0.3
AGPR				IAML		08 13 06.2	
	comp=Z,508nm,0.1s						
ECPR	Experimental S	0.66	49		Pg	08 12 56.5	-0.3
ECPR	Experimental S	0.66	49	⇓eP	Pg	08 12 56.6	-0.3
ECPR				eS	Sg	08 13 05.9	+0.3
EMPR	Esperanza - Ma	0.68	30		Pg	08 12 57.2	0.0
EMPR					Sb	08 13 07.1	+0.4
EMPR	Esperanza - Ma	0.68	30	⇓eP	Pg	08 12 57.2	0.0
EMPR				eS	Sb	08 13 07.1	+0.4
SJG	San Juan	0.74	72		Pg	08 12 58.1	-0.2
SJG	San Juan	0.74	72	IAML		08 13 09.2	
	comp=Z,944nm,0.4s						
SJG	San Juan	0.74	72	⇓eP	Pg	08 12 58.1	-0.2
SJG				eS	Sb	08 13 09.1	+0.6
SJG	San Juan	0.74	72	iP	Pg	08 12 58.1	-0.2
SJG				eS	Sg	08 13 08.3	+0.2
SJG				IAML		08 13 09.2	
	comp=Z,11μm,0.2s						
IDE	Isla Desecheo	0.74	312		Pg	08 12 57.8	-0.6
IDE					Sg	08 13 08.0	-0.2
IDE	Isla Desecheo	0.74	312	⇑eP	Pg	08 12 57.8	-0.6
IDE				eS	Sg	08 13 08.0	-0.2
PDPR	Patillas Dam,	0.84	81		Pb	08 12 59.9	-0.3
GCPR	Guaynabo City	0.88	61		Pb	08 13 00.2	-0.6
GCPR	Guaynabo City	0.88	61		Sb	08 13 11.7	-0.7
GCPR	Guaynabo City	0.88	61	⇑eP	Pb	08 13 00.2	-0.6
GCPR				eS	Sb	08 13 12.1	-0.2
HUMP	Col San Antoni	1.02	75		Pb	08 13 02.8	-0.6
HUMP	Col San Antoni	1.02	75	⇑eP	Pb	08 13 02.8	-0.6
HUMP				eS	Sn	08 13 17.7	-0.2
PCDR	Punta Cana, DR	1.55	294	ePg	Pg	08 13 12.9	-0.7
PCDR				IAML		08 13 44.5	
	comp=N,126nm,0.9s						
CUPR	Culebra, Puert	1.59	74		Pb	08 13 12.6	-0.4
MIDR	Miches	2.32	298	ePg	Pn	08 13 23.1	+1.5
MIDR				IAML		08 13 59.3	
	comp=N,32nm,0.5s						
DR12	Loma Pena Alta	2.53	291		Pn	08 13 26.0	+1.5
HATOM	Hato Mayor del	2.53	291	ePg	Pn	08 13 25.9	+1.4
HATOM				IAML		08 14 07.3	
	comp=N,30nm,0.6s						
SDD	Santo Domingo	2.93	282	Pn	Pn	08 13 29.9	0.0
SDD				IAML		08 13 57.5	
	comp=N,159nm,2.0s						
SDD				IAML		08 14 31.1	
	comp=E,168nm,2.3s						
BANI	BANI	3.33	279	Pn	Pn	08 13 36.9	+1.2
SABA	Saba	3.49	94	Pn	Pn	08 13 37.1	-0.6
SDDR	Presa de Saban	4.31	285	Pn	Pn	08 13 50.7	+1.6

*CATAC **01** 08:19:28.5±0.7, 13°N±4°×9°1W±°, h18km±4km, M3.0/12, MLv3.0/12, Error ellipse: s-maj=8.7km s-min=4.7km az=12.9, confirmed*
*SNET **01** 08:19:29.5±0.9, 13.62°N×90.57°W, h55km±17km, ML2.8, Presumed earthquake*
*GCG **01** 08:19:29.4±1.9, 13.61°N×90.55°W, h54km±60km, MD3.9, Presumed earthquake*
ISC 01 08:19:29.7±1.7**, 13.55°N**±0.08×**90.41°W**±0.04**, h3**km±12km**, n31, σ1s.04**/48**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.48	53	P	Pb	08 19 41.7	+0.9
FAME				S	Sb	08 19 51.4	+3.2
PCG5	San Vicente Pa	0.66	2	iP	Pn	08 19 45.3	-0.8
NUBE	Las Nubes	0.70	60	P	Pb	08 19 45.0	+0.4
NUBE	Las Nubes	0.70	60	eP	Pb	08 19 45.0	+0.4
NUBE				eS	Sn	08 19 57.3	-0.8
NUBE				IAML		08 19 58.0	
	comp=Z,77nm,0.3s						
NUBE	Las Nubes	0.70	60	iP	Pb	08 19 45.1	+0.4
NUBE				iS	Sn	08 19 56.7	-1.4
FG16	Alotenango, Sa	0.72	352	iP	Pn	08 19 47.2	+0.1
LOAL	Lomas de Alarc	0.75	54	P	Pb	08 19 46.1	+0.6
LOAL				S	Sn	08 19 59.1	-0.1
CEVE	Cerro Verde	0.81	70	P	Pb	08 19 47.0	+0.4
CEVE				S	Sn	08 20 00.3	-0.6
SBLS	San Blas	0.81	69	eP	Pb	08 19 47.0	+0.4
SBLS				eP		08 19 47.2	
SBLS				eS	Sn	08 20 00.9	-0.1
RTR	El Retiro	0.81	65	eP	Pb	08 19 47.4	+0.8
SNJE	San Jose	0.84	68	eP	Pb	08 19 47.5	+0.4
RBDL	Robledal	0.90	51	eP	Pb	08 19 48.1	+0.1
JAYA	Jayaque - finc	0.94	84	P	Pg	08 19 48.3	+0.6
JAYA				S	Sb	08 20 03.0	+1.4
JAYA	Jayaque - finc	0.94	84	eP	Pg	08 19 48.5	+0.8
JAYA				eS	Sn	08 20 03.4	-0.5
JAYA				IAML		08 20 04.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,791nm,0.2s						
JAYA	**Jayaque - finc**	**0.94**	**84**	*i* P	**Pg**	**08 19 48.3**	**+0.6**
JAYA				*i* S	**Sb**	**08 20 01.7**	**+0.1**
UNIC	**Universidad Ca**	**0.94**	**63**	P	**Pb**	**08 19 48.6**	**0.0**
UNIC				S	**Sn**	**08 20 03.6**	**-0.2**
PMON	**Piamonte**	**1.07**	**81**	P	**Pg**	**08 19 50.6**	**+0.2**
PMON				S	**Sn**	**08 20 07.2**	**0.0**
UEES	**Universidad Ev**	**1.15**	**82**	P	**Pg**	**08 19 51.5**	**-0.3**
UEES				S	**Sn**	**08 20 08.8**	**-0.2**
PANCS	**Alcalda de**	**1.19**	**87**	P	**Pg**	**08 19 52.3**	**-0.3**
PANCS				S	**Sb**	**08 20 09.6**	**+0.7**
STG5	**El Palmar, Qui**	**1.25**	**313**	*i* P	**Pg**	**08 19 54.6**	**+0.9**
STG8	**El Palmar, Qui**	**1.28**	**314**	*i* P	**Pg**	**08 19 54.5**	**+0.2**
STG8				*i* S	**Sn**	**08 20 12.7**	**+0.2**
STG2	**El Palmar, Qui**	**1.29**	**313**	*i* S	**Sn**	**08 20 13.8**	**+1.2**
MTO3	**Montecristo**	**1.32**	**50**	P	**Pg**	**08 19 53.7**	**-1.3**
MTO3				S	**Sn**	**08 20 14.2**	**+0.8**
MTO3	**Montecristo**	**1.32**	**50**	*e*P	**Pg**	**08 19 53.2**	**-1.8**
MTO3	**Montecristo**	**1.32**	**50**	*i* P	**Pg**	**08 19 53.7**	**-1.3**
UESV	**Universidad de**	**1.58**	**87**	P	**Pn**	**08 19 57.6**	**-1.0**
TECO	**Alcaldia de Te**	**1.58**	**90**	P	**Pn**	**08 19 57.2**	**-1.4**
RTAL	**Retalhuleu**	**1.58**	**308**	P	**Pn**	**08 19 55.3**	**-3.3**
SCLA	**Alcaldia de Sa**	**1.64**	**85**	P	**Pn**	**08 19 58.5**	**-0.9**
PACA	**Pacayal**	**2.03**	**92**	P	**Pn**	**08 20 04.6**	**-0.3**
PACA				S	**Sn**	**08 20 31.1**	**+0.3**
RANC	**El Ranchito**	**2.06**	**93**	P	**Pn**	**08 20 04.3**	**-1.1**
RANC				S	**Sn**	**08 20 32.3**	**+0.6**

*MOS **01** 08:21:40.0±1.1, 42°88N×145°97E, h50km, mb4.4/3, Error ellipse: s-maj=13.0km s-min=7.3km az=93.7*
MOS Felt (III) at Golovnino, Goryachiy Plyazh, Yuzhno-Kurilsk.
*SKHL **01** 08:21:41.8±0.1, 42°90N×146°10E, h62km±7km, mb5.6/5*
*NEIC **01** 08:21:42.8±0.7, 42°87N±0°10×145°8E±0°1, h52km±10km, mb4.3/13, Error ellipse: s-maj=15.4km s-min=14.5km az=81.0*
*NIED **01** 08:21:42.2, 42°99N×145°94E, h47km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr2.41; Mθθ3.62; Mφφ-6.02; Mrθ3.48; Mθφ-3.82; Mφr2.57; Fault plane solution: M0 7.64000×10^14 NP1: φs156.00000°, δ51.00000°, λ14.00000°. NP2: φs57.00000°, δ80.00000°, λ140.00000°.*
*JMA **01** 08:21:42.2±0.1, 43°0N±0°5×145°9E±0°7, h47km±1km, MD4.2/40, MV4.4/40, OFF NEMURO PENINSULA*
JMA Felt II J1 at OFF NEMURO PENINSULA .
*IDC **01** 08:21:44.2±2.6, 43°04N×145°85E, h58km±23km, mb3.6/13, mbtmp3.8/17, ML3.6/4, MS2.8/5, Error ellipse: s-maj=32.8km s-min=16.7km az=171.0*
ISC 01 08:21:40.7±1.5**, 42°95N**±0°05×**145°99E**±0°05**, h30**km±10km**, n95,** σ**1s16**/104**, mb4.1**/20**, 1C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.45**	**336**	*i* P	**Pn**	**08 21 52.2**	**+1.0**
NEM2				A	A	08 21 52.2	
	comp=N,39nm,0.3s,comp=E,46nm,0.2s						
NEM2				S	**Sn**	**08 21 59.2**	**+0.9**
NMR	**Nemuro--Hokkai**	**0.46**	**335**	⇓ *i*PN	**Pn**	**08 21 52.2**	**+0.9**
NMR				*i* S	**Sn**	**08 21 59.1**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.46**	**335**	*i* P	**Pn**	**08 21 52.2**	**+0.9**
NMR				AMB	AMB	08 21 52.5	
	comp=E,3µm,0.2s						
JKHN	**Kushirohamanak**	**0.62**	**283**	*i* P	**Pn**	**08 21 54.4**	**+0.9**
JKHN				*e*S	**Sn**	**08 22 03.3**	**+0.9**
AKK	**Akkeshi**	**0.85**	**275**	*e*P	**Pn**	**08 21 57.0**	**+0.5**
AKK				*e*S	**Sn**	**08 22 08.5**	**+0.6**
GLVR	**Golovnino**	**0.86**	**337**	*e*PN	**Pn**	**08 21 57.4**	**+0.7**
GLVR				*i* S	**Sb**	**08 22 08.6**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,2µm,0.3s						
GLVR				pmax	pmax		
	comp=E,309nm,0.2s						
GLVR				smax	smax		
	comp=N,14µm,0.3s						
GLVR				smax	smax		
	comp=E,43µm,0.3s						
GLVR	**Golovnino**	**0.86**	**337**	*e*P	**Pn**	**08 21 57.4**	**+0.7**
GLVR				AMB	AMB	08 21 58.0	
	comp=E,2µm,0.3s						
GLVR				*i* S	**Sb**	**08 22 08.6**	**+0.2**
GLVR				A	A	08 22 09.9	
	comp=E,14µm,0.3s						
GLVR				A	A	08 22 09.9	
	comp=E,43µm,0.3s						
JAK	**Akkeshi**	**0.95**	**273**	*i* P	**Pb**	**08 21 58.9**	**+0.2**
JAK				A	A	08 21 58.9	
	comp=N,7.0nm,1.7s,comp=E,9.0nm,0.3s						
JAK				S	**Sn**	**08 22 11.1**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**1.09**	**355**	*c i*PN	**Pn**	**08 22 00.3**	**+0.4**
YUK				*i* S	**Sn**	**08 22 13.4**	**-0.5**
YUK				pmax	pmax		
	comp=N,688nm,0.2s						
YUK				pmax	pmax		
	comp=Z,5µm,0.2s						
YUK				pmax	pmax		
	comp=E,614nm,0.1s						
YUK				smax	smax		
	comp=N,15µm,0.3s						
YUK				smax	smax		
	comp=E,24µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.09**	**355**	*i* P	**Pn**	**08 22 00.0**	**+0.1**
YUK				AMB	AMB	08 22 00.8	
	comp=E,5µm,0.2s						
YUK				*i* S	**Sn**	**08 22 13.6**	**-0.3**
YUK				A	A	08 22 13.8	
	comp=E,15µm,0.4s						
YUK				A	A	08 22 13.8	
	comp=E,24µm,0.4s						
JNSB	**Nemuroshibetsu**	**1.10**	**319**	*i* P	**Pb**	**08 22 00.6**	**-0.4**
JNSB				A	A	08 22 00.6	
	comp=N,22nm,0.5s,comp=E,14nm,0.7s						
JNSB				S	**Sn**	**08 22 14.4**	**+0.4**
JNK	**Nakash**	**1.13**	**305**	*i* P	**Pn**	**08 22 00.9**	**+0.5**
JNK				S	**Sn**	**08 22 14.2**	**-0.6**
JRA	**Rausu**	**1.17**	**328**	*i* P	**Pb**	**08 22 01.9**	**-0.5**
JRA				A	A	08 22 01.9	
	comp=N,8.0nm,1.0s,comp=E,11nm,0.4s						
JRA				S	**Sn**	**08 22 16.1**	**+0.1**
RUSJ	**Misakicho**	**1.28**	**335**	⇓ *i*PN	**Pb**	**08 22 03.7**	**-0.4**
RUSJ				*i* S	**Sb**	**08 22 19.8**	**-0.3**
JOB	**Onbets**	**1.58**	**269**	*i* P	**Pn**	**08 22 07.7**	**+1.0**
JOB				*e*S	**Sn**	**08 22 26.0**	**-0.1**
JAR	**Ashorobuto**	**1.66**	**283**	*i* P	**Pn**	**08 22 09.0**	**+1.2**
JAR				*e*S	**Sn**	**08 22 28.5**	**+0.4**
JTKR	**Abashiri--Toko**	**1.83**	**305**	*i* P	**Pn**	**08 22 11.6**	**+1.6**
JTKR				S	**Sn**	**08 22 33.5**	**+1.4**
JCH	**Churui**	**1.96**	**261**	P	**Pn**	**08 22 12.8**	**+0.9**
JCH				*e*S	**Sn**	**08 22 36.4**	**+0.9**
KUR	**Kuril'sk**	**2.65**	**30**	*e*PN	**Pn**	**08 22 21.7**	**+0.3**
KUR				*i* S	**Sn**	**08 22 52.8**	**+0.3**
KUR	**Kuril'sk**	**2.65**	**30**	*e*P	**Pn**	**08 22 21.4**	**0.0**
KUR				AMB	AMB	08 22 26.7	
	comp=E,390nm,0.4s						
KUR				*e*S	**Sn**	**08 22 51.0**	**-1.5**
KUR				A	A	08 22 59.0	
	comp=E,570nm,0.2s						
KUR				A	A	08 22 59.0	
	comp=E,640nm,0.2s						
JKA	**Kamikawa-asahi**	**2.73**	**296**		**Pn**	**08 22 25.0**	**+2.6**
JKA	**Kamikawa-asahi**	**2.73**	**296**	*e*P	**Pn**	**08 22 25.0**	**+2.6**
ASAJ	**Asahikawa**	**2.73**	**296**	P	**Pn**	**08 22 25.1**	**+2.7**
	comp=E,30nm,0.3s,baz=112,slow=11,SNR=98						
ASAJ				S	**Sb**	**08 22 59.8**	**-2.0**
	comp=E,226nm,0.6s,baz=346,slow=22,SNR=12						
	comp=E,79nm,0.3s						
ASAJ	**Asahikawa**	**2.73**	**296**	PN	**Pn**	**08 22 25.0**	**+2.6**
YSS	**Yuzhno-Sakhali**	**4.62**	**331**	Pn	**Pn**	**08 22 50.1**	**+1.8**
YSS	**Yuzhno-Sakhali**	**4.62**	**331**	*e*PN	**Pn**	**08 22 50.3**	**+2.0**
YSS				pmax	pmax		
	comp=Z,20nm,0.3s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS				MLR	MLR		
	comp=N,300nm,15.0s						
YSS	**Yuzhno-Sakhali**	**4.62**	**331**	*e*P	**Pn**	**08 22 50.5**	**+2.2**
YSS				*e*S	**Sn**	**08 23 40.7**	**-0.2**
TYV	**Tymovskoe**	**8.24**	**345**	*e*PN	**Pn**	**08 23 41.2**	**+3.2**
TYV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,2.4s						
TYV	**Tymovskoe**	**8.24**	**345**	*e*P	**Pn**	**08 23 40.6**	**+2.6**
MJAR	**Matsushiro Arr**	**8.76**	**226**	P	**Pn**	**08 23 46.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=5.7						
MJAR				LR	LR	08 27 16.1	
	comp=Z,64nm,18.5s,baz=28,slow=38						
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**8.76**	**226**		**Pn**	**08 23 44.3**	**-1.0**
MJB9	**Matsu-Tunnel**	**8.76**	**226**	Pn	**Pn**	**08 23 45.1**	**-0.2**
JGF	**Kuroka**	**9.93**	**225**	Pn	**Pn**	**08 24 00.5**	**-0.8**
NKL	**Nikolayevsk**	**10.80**	**343**	*e*P	**Pn**	**08 24 14.9**	**+1.8**
PAU	**Pauzhetka**	**11.25**	**37**	*e*P	**Pn**	**08 24 19.3**	**+0.1**
PAU				AMB	AMB	08 24 30.3	
	comp=Z,40nm,0.5s						
PEA0B	**Petropavlovsk-**	**12.81**	**33**	Pn	**Pn**	**08 24 41.4**	**+0.7**
PEA0B	**Petropavlovsk-**	**12.81**	**33**	PN	**Pn**	**08 24 41.4**	**+0.7**
PETK	**Petropavlovsk-**	**12.81**	**33**	P	**Pn**	**08 24 42.5**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=210,slow=14,SNR=5.5						
	comp=Z,4.2nm,1.0s						
PETK	**Petropavlovsk-**	**12.81**	**33**		**Pn**	**08 24 41.9**	**+1.2**
KSRS	**Korea Array**	**14.85**	**254**	LR	LR	08 30 29.6	
	comp=Z,20nm,18.5s,baz=35,slow=36						
KSAR	**Wonju Array Be**	**14.88**	**254**	Pn	**Pn**	**08 25 07.1**	**-1.8**
KSAR	**Wonju Array Be**	**14.88**	**254**	P	**Pn**	**08 25 07.1**	**-1.8**
MA2	**Magadan**	**16.91**	**8**	P	**Pn**	**08 25 33.6**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=155,slow=14,SNR=4.7						
MA2				LR	LR	08 32 15.5	
	comp=Z,28nm,18.9s,baz=233,slow=38						
HILR	**Hailar Array B**	**19.25**	**299**	P	**P**	**08 26 03.1**	**+0.6**
	baz=111,slow=11						
	comp=Z,1.1nm,0.7s						
SEY	**Seymchan**	**20.37**	**8**	P	**P**	**08 26 14.3**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=180,slow=11,SNR=6.2						
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**28.01**	**294**	P	**P**	**08 27 29.3**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=90,slow=7.4,SNR=6.7						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**28.01**	**294**	P	**P**	**08 27 27.6**	**-1.3**
SONM	**Songino Array**	**28.01**	**294**	P	**P**	**08 27 27.6**	**-1.3**
H11N2	**WAKE ISLAND Hy**	**29.08**	**136**	T	T	08 58 31.4	
	baz=328,slow=76,SNR=1275						
H11N1	**WAKE ISLAND Hy**	**29.09**	**136**	T	T	08 58 37.3	
	baz=328,slow=76,SNR=1148						
H11N3	**WAKE ISLAND Hy**	**29.09**	**136**	T	T	08 58 37.7	
	baz=328,slow=76,SNR=1094						
GUMO	**Guam**	**29.27**	**182**	LR	LR	08 38 16.0	
	comp=Z,20nm,20.2s,baz=72,slow=34						
TIXI	**Tiksi**	**29.98**	**349**	LR	LR	08 40 16.5	
	comp=Z,39nm,19.0s,baz=13,slow=37						
H11S1	**WAKE ISLAND Hy**	**30.01**	**138**	T	T	08 59 39.2	
	baz=329,slow=76,SNR=1771						
H11S3	**WAKE ISLAND Hy**	**30.02**	**138**	T	T	08 59 39.6	
	baz=329,slow=76,SNR=1891						
H11S2	**WAKE ISLAND Hy**	**30.03**	**138**	T	T	08 59 46.0	
	baz=329,slow=76,SNR=1653						
TNA	**Tin City**	**33.98**	**32**	P	**P**	**08 28 21.7**	**+0.6**
TNA				IAmb	IAmb	08 28 25.4	
	comp=Z,5.6nm,1.4s						
J14K	**Nanvaranak Lak**	**35.13**	**38**	P	**P**	**08 28 31.9**	**+0.9**
J14K				IAmb	IAmb	08 28 51.1	
	comp=Z,2.6nm,0.9s						
C16K	**Lisburne Hills**	**35.84**	**29**	P	**P**	**08 28 38.9**	**+1.8**
C16K				IAmb	IAmb	08 28 53.2	
	comp=Z,5.1nm,1.4s						
G16K	**Koyuk River**	**36.17**	**34**	P	**P**	**08 28 39.8**	**-0.2**
H19K	**Roundabout Mou**	**38.62**	**34**	P	**P**	**08 29 01.3**	**+0.5**
ILAR	**Eielson Array**	**42.63**	**36**	P	**P**	**08 29 34.1**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=256,slow=4.0,SNR=16						
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**44.21**	**298**	P	**P**	**08 29 46.7**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=82,slow=9.4,SNR=6.1						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**44.21**	**298**	P	**P**	**08 29 45.6**	**-1.3**
MKAR	**Makanchi Array**	**44.21**	**298**	P	**P**	**08 29 45.6**	**-1.3**
MKAR	**Makanchi Array**	**44.21**	**298**	*e*P	**P**	**08 29 45.6**	**-1.3**
KURK	**Kurchatov**	**45.28**	**304**	P	**P**	**08 29 53.7**	**-1.6**
KURK	**Kurchatov**	**45.28**	**304**	P	**P**	**08 29 53.7**	**-1.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**45.28**	**304**	*e*P	**P**	**08 29 53.7**	**-1.6**
KURBB	**Kurchatov Arra**	**45.36**	**304**	P	**P**	**08 29 54.9**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=75,slow=7.5,SNR=2.8						
	comp=Z,0.7nm,0.6s						
I30M	**Mount Dempster**	**47.01**	**34**	P	**P**	**08 30 09.3**	**+0.5**
I30M				IAmb	IAmb	08 30 14.9	
	comp=Z,2.4nm,0.8s						
TARG	**Taragay, Kyrgy**	**49.13**	**293**	P	**P**	**08 30 25.8**	**-0.1**
TARG				IAmb	IAmb	08 30 40.3	
	comp=Z,4.5nm,1.2s						
TARG	**Taragay, Kyrgy**	**49.13**	**293**	P	**P**	**08 30 25.8**	**-0.1**
TARG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BESE	**Bessie Mountai**	**49.41**	**43**	P	**P**	**08 30 28.0**	**+0.7**
KEKH	**Kekaha**	**49.43**	**97**	P	**P**	**08 30 28.8**	**+0.9**
BOOM	**Boomskoye usch**	**50.05**	**295**	P	**P**	**08 30 31.4**	**-1.2**
BOOM				IAmb	IAmb	08 30 45.7	
	comp=Z,5.1nm,1.0s						
BOOM	**Boomskoye usch**	**50.05**	**295**	P	**P**	**08 30 31.4**	**-1.2**
BOOM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KKAR	**Karatay Array**	**53.34**	**298**	P	**P**	**08 30 56.7**	**-0.3**
KKAR	**Karatay Array**	**53.34**	**298**	P	**P**	**08 30 56.7**	**-0.3**
AB31	**Akbulak array**	**56.91**	**309**	P	**P**	**08 31 21.9**	**-0.7**
AB31				IAmb	IAmb	08 31 22.7	
	comp=Z,1.8nm,0.7s						
ABKAR	**Akbulak array**	**56.91**	**309**	P	**P**	**08 31 21.6**	**-0.9**
YKA	**Yellowknife Ar**	**56.94**	**33**	P	**P**	**08 31 22.8**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=304,slow=7.1,SNR=6.9						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**65.20**	**333**	P	**P**	**08 32 17.4**	**-1.2**
	comp=Z,1.7nm,0.6s,baz=49,slow=8.6,SNR=11						
	comp=Z,1.7nm,0.6s						
FINES	**FINESS Array B**	**65.20**	**333**	P	**P**	**08 32 18.0**	**-0.6**
FINES	**FINESS Array B**	**65.20**	**333**	P	**P**	**08 32 18.0**	**-0.6**
NVAR	**Mina Array Bea**	**68.72**	**57**	P	**P**	**08 32 43.1**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=306,slow=6.5,SNR=5.8						
	comp=Z,0.6nm,0.7s						
NB2	**NORSAR Subarra**	**70.04**	**338**	P	**P**	**08 32 48.8**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**70.04**	**338**	P	**P**	**08 32 48.3**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=33,slow=6.2,SNR=6.7						
	comp=Z,1.9nm,0.7s						
HFS	**Hagfors**	**70.10**	**337**	P	**P**	**08 32 48.8**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=50,slow=8.1,SNR=13						
	comp=Z,2.5nm,0.6s						
PDAR	**Pinedale Array**	**71.07**	**49**	P	**P**	**08 32 56.7**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=239,slow=0.9,SNR=3.8						
	comp=Z,0.3nm,0.6s						
AKASG	**Malin Array Be**	**71.72**	**323**	P	**P**	**08 32 58.8**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=40,slow=6.8,SNR=4.0						
	comp=Z,0.8nm,0.4s						
TXAR	**Lajitas Array**	**83.80**	**55**	P	**P**	**08 34 08.2**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=286,slow=4.1,SNR=6.0						
	comp=Z,0.4nm,0.7s						
H03N2	**Juan Fernandez**	**143.81**	**90**	T	T	11 22 03.3	
	baz=302,slow=77,SNR=5.4						
H03N3	**Juan Fernandez**	**143.82**	**90**	T	T	11 22 04.2	
	baz=302,slow=77,SNR=8.8						
H03N1	**Juan Fernandez**	**143.82**	**90**	T	T	11 22 08.0	
	baz=302,slow=77,SNR=12						

IDC 01 08:27:17.9±6.3**, 5°09S**×**152°76E, h0**km**, mb3.4**/4**, mbtmp3.4**/4**, MS2.9**/2**, Error ellipse: s-maj=204.3km s-min=33.4km az=109.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.02**	**232**	LR	LR	08 31 46.0	
	comp=Z,73nm,18.1s,baz=328,slow=38						
CTA	**Charters Tower**	**16.20**	**202**	LR	LR	08 36 05.1	
	comp=Z,49nm,18.3s,baz=30,slow=32						
WRA	**Warramunga Arr**	**23.22**	**229**	P	P	08 32 26.9	0.0
	0.4nm,0.6s,baz=53,slow=9.8,SNR=4.6						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**25.91**	**223**	P	P	08 32 51.8	-0.2
	0.4nm,0.5s,baz=49,slow=9.1,SNR=5.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**80.52**	**319**	P	P	08 39 32.4	+0.3
	0.3nm,0.8s,baz=106,slow=5.7,SNR=3.0						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**81.37**	**326**	P	P	08 39 36.4	0.0
	0.2nm,0.3s,baz=113,slow=5.7,SNR=1.8						
	0.2nm,0.3s						

*KRSC **01** 08:33:42.8±0.9, 55°66N×162°68E, h32km±15km, Ml3.8*
*IDC **01** 08:33:43.3±1.2, 55°97N×162°18E, h0km, mb3.4/6, mbtmp3.3/7, ML2.2/1, MS2.6/1, Error ellipse: s-maj=41.2km s-min=21.2km az=152.0*
ISC 01 08:33:47.0±0.8**, 55°83N**±0°05×**162°43E**±0°05**, h28**km**, n40,** σ**1s74**/42**, mb3.3**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.44**	**30**	*e*P	**Pn**	**08 33 54.5**	**-2.9**
KBTR				*e*S	**Sn**	**08 34 04.6**	**+0.1**
KBG	**Krutoberegovo**	**0.46**	**20**	*e*P	**Pn**	**08 33 55.0**	**-2.7**
KBG				*e*S	**Sn**	**08 34 05.2**	**+0.4**
SMKR	**Semkarok**	**0.93**	**325**	*e*P	**Pb**	**08 34 03.6**	**-0.9**
ZLN	**Zelenaya**	**0.93**	**282**	*e*P	**Pn**	**08 34 03.0**	**-1.3**
CIRR	**Tsirk**	**0.99**	**288**	*e*P	**Pn**	**08 34 05.1**	**0.0**
LGNR	**Loginova**	**1.01**	**285**	*e*P	**Pn**	**08 34 04.9**	**-0.7**
BZP	**Bezymyannyi-Pe**	**1.07**	**275**	*e*P	**Pn**	**08 34 04.1**	**-2.1**
BZWR	**Bezymyannyi-We**	**1.10**	**278**	*e*P	**Pn**	**08 34 04.9**	**-1.7**
KIRR	**Kirishev**	**1.18**	**277**	*e*P	**Pn**	**08 34 06.1**	**-1.6**
KMNR	**Kamenistaya**	**1.24**	**268**	*e*P	**Pn**	**08 34 07.4**	**-1.1**
KPT	**Kopyto**	**1.25**	**277**	*e*P	**Pn**	**08 34 07.5**	**-1.2**
TUMD	**Tumrok D**	**1.31**	**242**	*e*P	**Pn**	**08 34 06.7**	**-2.7**
TUMD				*e*S	**Sn**	**08 34 24.2**	**-1.8**
KOZ	**Kozyrevsk**	**1.46**	**280**	*e*P	**Pn**	**08 34 11.3**	**-0.1**
SRDR	**Sredinnyy**	**1.60**	**289**	*e*P	**Pn**	**08 34 13.7**	**+0.3**
SRDR				*e*S	**Sb**	**08 34 36.7**	**+1.1**
ESO	**Esso**	**2.10**	**274**	*e*P	**Pn**	**08 34 19.6**	**-0.7**
KII	**Karymskiy**	**2.48**	**225**	*e*P	**Pn**	**08 34 23.4**	**-2.2**
TIGL	**Tigil**	**2.84**	**315**	*e*P	**Pb**	**08 34 32.9**	**-3.9**
SDLR	**Sedlovina**	**3.28**	**220**	*e*P	**Pn**	**08 34 35.1**	**-1.6**
KRX	**Arik**	**3.31**	**223**	*e*P	**Pn**	**08 34 36.7**	**-0.3**
SMAR	**Somma**	**3.33**	**221**	*e*P	**Pn**	**08 34 35.6**	**-1.7**
AVH	**Avacha**	**3.35**	**221**	*e*P	**Pn**	**08 34 36.6**	**-0.9**
UGLR	**Uglovaya**	**3.36**	**220**	*e*P	**Pn**	**08 34 35.3**	**-2.3**
GNL	**Ganaly**	**3.36**	**232**	*e*P	**Pn**	**08 34 37.0**	**-0.8**
KOK	**Koryaka**	**3.37**	**223**	*e*P	**Pn**	**08 34 36.1**	**-1.6**
OSSR	**Ossora**	**3.45**	**5**	*e*P	**Pn**	**08 34 40.0**	**+1.3**
PETK	**Petropavlovsk-**	**3.88**	**227**	Pn	**Pn**	**08 34 43.6**	**-1.1**
	0.9nm,0.3s,baz=66,slow=16,SNR=18						
PETK				Sn	**Sn**	**08 35 33.3**	**+4.0**
	1.7nm,0.3s,baz=48,slow=20,SNR=5.9						
PETK				LR	LR	08 36 18.6	
	comp=Z,80nm,19.3s,baz=62,slow=40						
	1.9nm,0.5s						
KRMR	**Karymshinskiy**	**3.92**	**222**	*e*P	**Pn**	**08 34 45.3**	**+0.2**
GRL	**Gorelyy**	**4.16**	**220**	*e*P	**Pn**	**08 34 48.0**	**-0.7**
MTVR	**Mutnovka**	**4.18**	**218**	*e*P	**Pn**	**08 34 47.0**	**-1.9**
ASAK	**Asacha**	**4.36**	**220**	*e*P	**Pn**	**08 34 52.1**	**+0.7**
TIXI	**Tiksi**	**21.25**	**331**	P	**P**	**08 38 33.0**	**+2.6**
	2.2nm,0.8s,baz=117,slow=7.0,SNR=6.1						
ILAR	**Eielson Array**	**25.95**	**49**	P	**P**	**08 39 16.3**	**-0.3**
	0.7nm,0.8s,baz=269,slow=8.9,SNR=7.9						
	0.7nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**36.20**	**173**	T	T	09 18 55.1	
	baz=356,slow=76,SNR=79						
H11N3	**WAKE ISLAND Hy**	**36.21**	**173**	T	T	09 18 59.5	
	baz=356,slow=76,SNR=53						
H11N1	**WAKE ISLAND Hy**	**36.21**	**173**	T	T	09 18 56.9	
	baz=356,slow=76,SNR=68						
YKA	**Yellowknife Ar**	**40.24**	**46**	P	**P**	**08 41 21.6**	**+0.8**
	0.3nm,0.7s,baz=304,slow=8.5,SNR=4.6						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**48.22**	**295**	P	**P**	**08 42 23.4**	**-1.4**
	0.1nm,0.5s,baz=57,slow=5.3,SNR=2.3						
	0.1nm,0.5s						
PDAR	**Pinedale Array**	**55.04**	**64**	P	**P**	**08 43 18.3**	**+2.2**
	0.3nm,0.5s,baz=306,slow=7.5,SNR=3.1						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**58.14**	**337**	P	**P**	**08 43 37.0**	**-0.4**
	1.5nm,0.8s,baz=28,slow=6.5,SNR=4.9						
	1.5nm,0.8s						
TXAR	**Lajitas Array**	**68.36**	**70**	P	**P**	**08 44 46.4**	**+0.7**
	0.1nm,0.4s,baz=297,slow=5.6,SNR=4.7						
	0.1nm,0.4s						

*IDC **01** 08:35:22.1±1.7, 3°03N×89°90E, h0km, mb3.6/4, mbtmp3.6/6, ML4.0/2, MS3.0/1, Error ellipse: s-maj=49.5km s-min=25.6km az=55.0*
ISC 01 08:35:23.3±1.3**, 3°0N**±0°2×**89°9E**±0°2**, h10**km**, n17,** σ**1s42**/7**, mb3.5**/4**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**10.06**	**295**	Pn	**Pn**	**08 37 47.8**	**-0.2**
	0.4nm,0.3s,baz=132,slow=13,SNR=1.7						
PALK				Sn	Sn	08 39 30.0	-11
	5.6nm,0.3s,baz=321,slow=5.1,SNR=13						
	1.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**17.71**	**29**	P	**Pn**	**08 39 30.1**	**-0.1**
	0.5nm,0.3s,baz=209,slow=11,SNR=5.3						
	0.7nm,0.3s						
H08S3	**Diego Garcia H**	**20.34**	**239**	T	T	09 00 52.5	
	baz=59,slow=76,SNR=55						
H08S2	**Diego Garcia H**	**20.34**	**238**	T	T	09 00 56.4	
	baz=59,slow=76,SNR=32						
H08S1	**Diego Carcia H**	**20.35**	**238**	T	T	09 00 55.0	
	baz=59,slow=76,SNR=20						
H01W3	**Cape Leeuwin H**	**44.07**	**151**	T	T	09 30 12.3	
	baz=325,slow=76,SNR=6.0						
MKAR	**Makanchi Array**	**44.08**	**353**	P	**P**	**08 43 30.8**	**-0.8**
	0.6nm,0.7s,baz=167,slow=8.6,SNR=6.4						
	0.6nm,0.7s						
H01W2	**Cape Leeuwin H**	**44.08**	**151**	T	T	09 30 11.5	
	baz=325,slow=76,SNR=4.3						
H01W1	**Cape Leeuwin H**	**44.09**	**151**	T	T	09 30 25.1	
	baz=325,slow=76,SNR=5.6						
SONM	**Songino Array**	**46.84**	**15**	P	**P**	**08 43 54.3**	**+0.7**
	1.4nm,0.6s,baz=194,slow=9.3,SNR=12						
	1.4nm,0.6s						
KSRS	**Korea Array**	**48.87**	**41**	LR	LR	09 05 42.6	
	comp=Z,15nm,18.7s,baz=70,slow=37						
WRA	**Warramunga Arr**	**49.26**	**120**	P	**P**	**08 44 10.7**	**-1.9**
	0.2nm,0.4s,baz=294,slow=7.7,SNR=2.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**50.41**	**124**	P	**P**	**08 44 22.3**	**+1.0**
	0.2nm,0.7s,baz=303,slow=7.8,SNR=1.4						
	0.2nm,0.7s						
H04N2	**CROZET ISLANDS**	**59.44**	**210**	T	T	09 49 44.6	
	baz=46,slow=75,SNR=14						
H04N1	**CROZET ISLANDS**	**59.45**	**210**	T	T	09 49 45.3	
	baz=46,slow=75,SNR=18						
H04N3	**CROZET ISLANDS**	**59.46**	**210**	T	T	09 49 43.9	
	baz=46,slow=75,SNR=15						
TXAR	**Lajitas Array**	**145.29**	**21**	PKPbc	**PKPdf**	**08 55 03.8**	**+1.5**
	0.2nm,0.5s,baz=336,slow=3.3,SNR=4.0						

*IDC **01** 08:36:56.4±2.1, 13°28N×91°18W, h0km, mb3.7/4, mbtmp3.7/6, ML3.7/2, MS3.3/2, Error ellipse: s-maj=39.1km s-min=19.2km az=127.0*
*CATAC **01** 08:37:00.3±0.4, 13°N±3°×9°1W±°, h1km, M4.1/18, MLv4.1/18, Error ellipse: s-maj=6.4km s-min=3.2km az=33.1, confirmed*
*SNET **01** 08:37:01.8±1.2, 13°48N×91°20W, h2km±10km, ML3.8, Presumed earthquake*
*GCG **01** 08:37:01.1±1.8, 13°53N×91°39W, h15km±15km, ML4.2, Presumed earthquake*
*NEIC **01** 08:37:05.1±1.8, 13°56N±0°08×91°31W±0°08, h35km±2km, mb4.1/11, Error ellipse: s-maj=16.8km s-min=9.2km az=225.0*
ISC 01 08:36:59.1±1.7**, 13°42N**±0°06×**91°34W**±0°04**, h4**km±10km**, n87,** σ**1s49**/103**, mb4.0**/7**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.97**	**360**	*e*P	**Pn**	**08 37 21.5**	**+1.9**
STG2	**El Palmar, Qui**	**1.01**	**358**	*e*P	**Pn**	**08 37 22.9**	**+2.8**
STG8	**El Palmar, Qui**	**1.02**	**359**	*e*P	**Pn**	**08 37 22.6**	**+2.2**
STG8				IAML		08 37 42.6	
	comp=E,4µm,0.2s						
RTAL	**Retalhuleu**	**1.15**	**343**		**Pg**	**08 37 20.5**	**-0.6**
RTAL	**Retalhuleu**	**1.15**	**343**	P	**Pg**	**08 37 20.4**	**-0.7**
RTAL				S	**Sg**	**08 37 35.5**	**-0.5**
FG16	**Alotenango, Sa**	**1.17**	**44**	*i* P	**Pg**	**08 37 20.9**	**-0.7**
FG16				IAML		08 37 48.0	
	comp=E,18µm,0.2s						
PCG5	**San Vicente Pa**	**1.22**	**50**	*i* P	**Pg**	**08 37 21.6**	**-1.0**
FAME	**Alcaldia de Sa**	**1.35**	**72**	P	**Pn**	**08 37 24.0**	**-0.8**
SOKI	**Kika Raxquin**	**1.39**	**357**	*i* P	**Pn**	**08 37 24.6**	**-1.1**
GCG4	**OSOP**	**1.40**	**34**	*e*P	**Pn**	**08 37 25.7**	**+0.2**
QUEO	**Labor Ovalle**	**1.45**	**353**	*i* P	**Pn**	**08 37 26.0**	**-0.4**
NUBE	**Las Nubes**	**1.59**	**72**	P	**Pn**	**08 37 27.8**	**-0.4**
NUBE				S	**Sn**	**08 37 47.0**	**-2.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	1.59	72	eP	Pn	08 37 28.1	-0.1
NUBE				eS	Sn	08 37 48.8	-0.5
NUBE	Las Nubes	1.59	72	eP	Pn	08 37 27.8	-0.4
SMCA	Catarina	1.59	333	i P	Pn	08 37 26.4	-1.7
LOAL	Lomas de Alarc	1.62	69	P	Pn	08 37 28.9	+0.4
LOAL				S	Sn	08 37 49.5	-0.4
LOAL	Lomas de Alarc	1.62	69	eP	Pn	08 37 28.6	+0.1
CEVE	Cerro Verde	1.72	76	P	Pn	08 37 30.5	+0.5
CEVE				S	Sn	08 37 52.5	0.0
CEVE	Cerro Verde	1.72	76	eP	Pn	08 37 31.2	+1.2
CEVE				eS	Sb	08 37 53.9	+0.5
SBLS	San Blas	1.72	76	eP	Pn	08 37 30.3	+0.2
SBLS				eP	Pb	08 37 30.8	-0.7
SBLS				eS	Sg	08 37 54.8	+0.4
THIG		1.73	329	eP	Pn	08 37 28.5	-1.4
APG	El Apazote	1.79	28	Pn	Pn	08 37 31.8	+0.9
	comp=E,2.3nm,0.3s,baz=185,slow=11,SNR=61						
APG				Lg	Lg	08 37 55.0	
	comp=E,2.9nm,0.3s,baz=235,slow=22,SNR=6.3						
UNIC	Universidad Ca	1.83	72	P	Pn	08 37 31.9	+0.5
UNIC				S	Sn	08 37 54.6	-0.3
JAYA	Jayaque - finc	1.85	83	P	Pn	08 37 31.9	+0.1
JAYA	Jayaque - finc	1.85	83	eP	Pn	08 37 32.2	+0.4
JAYA				eS	Sn	08 37 55.7	0.0
JAYA				IAML		08 38 00.5	
	comp=Z,1μm,0.2s						
JAYA	Jayaque - finc	1.85	83	i P	Pn	08 37 32.0	+0.1
HUEH	Huehuetenango	1.89	355		Pn	08 37 32.4	0.0
HUEH	Huehuetenango	1.89	355	P	Pn	08 37 33.2	+0.9
HUEH	Huehuetenango	1.89	355	IAML		08 38 15.1	
	comp=E,2μm,0.8s						
PMON	Piamonte	1.99	82	P	Pn	08 37 34.6	+1.0
PMON	Piamonte	1.99	82	eP	Pn	08 37 34.6	+1.0
PMON				eS	Sn	08 37 60.0	+0.9
BOQS	Boqueron	2.03	81	eP	Pn	08 37 35.1	+0.8
UEES	Universidad Ev	2.06	82	P	Pn	08 37 36.2	+1.5
UEES				S	Sb	08 38 02.5	-0.8
SEMO	Seminario San	2.08	82	P	Pn	08 37 36.1	+1.3
SEMO				S	Sn	08 38 01.7	+0.5
MTO3	Montecristo	2.15	63		Pn	08 37 36.3	+0.3
MTO3	Montecristo	2.15	63	P	Pn	08 37 36.9	+1.0
MTO3	Montecristo	2.15	63	eP	Pn	08 37 36.9	+1.0
MTO3				eS	Sb	08 38 05.1	-0.9
MTO3	Montecristo	2.15	63	i P	Pn	08 37 36.7	+0.7
ESQI	Esquipulas	2.25	60		Pn	08 37 38.6	+1.5
ESQI	Esquipulas	2.25	60	P	Pn	08 37 38.2	+1.1
ESQI				S	Sb	08 38 08.1	-0.4
ESQI	Esquipulas	2.25	60	eP	Pn	08 37 38.4	+1.2
ZAFR2	Estanzuela, Za	2.25	59	eP	Pn	08 37 38.6	+1.5
PAVA	Las Pavas	2.35	83	P	Pn	08 37 40.2	+1.5
PAVA	Las Pavas	2.35	83	eP	Pn	08 37 40.1	+1.4
LLGN	La Laguna	2.44	72	S	Sb	08 38 12.4	-1.7
SCLA	Alcaldia de Sa	2.56	84	P	Pn	08 37 43.0	+1.7
SCLA				S	Sb	08 38 16.4	-1.0
PACA	Pacayal	2.94	89	P	Pn	08 37 49.0	+2.3
PACA	Pacayal	2.94	89	eP	Pn	08 37 48.5	+1.8
CCIG	Comitan	2.94	345		Pn	08 37 47.9	+1.1
LCND	La Caada	3.36	92	P	Pn	08 37 54.2	+1.8
CNCH	Conchagua	3.42	92	P	Pn	08 37 54.9	+1.6
PETF	Flores	3.75	22		Pn	08 37 59.0	+1.2
PETF	Flores	3.75	22	i P	Pn	08 37 59.2	+1.4
TGUH	Tegucigalpa,Un	4.00	80		Pn	08 38 02.5	+1.2
CRIN	San Cristobal	4.24	99		Pn	08 38 05.2	+0.6
HERN	Volcan Telica	4.47	100	Pn	Pn	08 38 09.2	+1.4
CNGN	Cerro Negro	4.62	101	Pn	Pn	08 38 10.8	+1.1
CMIG	Matias Romero	5.00	317	Pn	Pn	08 38 15.6	+0.7
	comp=E,1.6nm,0.3s,baz=147,slow=11,SNR=15						
CMIG				Sn	Sn	08 39 15.2	+2.0
	comp=E,3.4nm,0.3s,baz=53,slow=7.5,SNR=4.6						
	comp=E,1.6nm,0.2s						
BOAB	BOACO BROADBAN	5.62	99		Pn	08 38 24.1	+0.7
SIUN	Universidad Ur	6.39	87		Pn	08 38 35.7	+1.6
JUD3	Juan Diaz 3	6.54	119		Pn	08 38 38.5	+2.3
JTS	Las Juntas de	6.99	116	Pn	Pn	08 38 40.4	-1.8
	comp=E,0.7nm,0.3s,baz=307,slow=13,SNR=3.6						
JTS				Sn	Sn	08 39 55.1	-7.1
	comp=E,0.4nm,0.3s,baz=35,slow=24,SNR=0.9						
JTS				Lg	Lg	08 40 23.3	
	comp=E,0.2nm,0.3s,baz=281,slow=18,SNR=3.6						
JTS	Las Juntas de	6.99	116	Pn	Pn	08 38 45.5	+3.2
TEIG	Tepich	7.37	23		Pn	08 38 48.9	+1.3
TLIG	Tlapa	8.09	301	Pn	Pn	08 38 58.8	+1.3
BRU2	Volcan	9.65	118	Pn	Pn	08 39 21.8	+2.7
SOR	Soroa	12.22	39	Pn	Pn	08 39 55.6	+1.5
451A	Vernon	17.87	16	P	P	08 41 12.4	+3.0
TXAR	Lajitas Array	19.53	326	P	P	08 41 28.9	+1.2
	comp=E,0.1nm,0.3s,baz=154,slow=12,SNR=24						
	comp=E,2.2nm,0.8s						
TXAR	Lajitas Array	19.53	326	P	P	08 41 28.6	+0.8
TX31	Lajitas Ar. Si	19.53	326		P	08 41 28.4	+0.7
PLPT	Palo Pinto	20.32	343	P	P	08 41 35.8	-0.5
PLPT				IAmb	IAmb	08 41 37.6	
	comp=Z,7.2nm,0.9s						
ALPN	Alpine	20.34	328		P	08 41 38.0	+1.4
ALPN				IAmb	IAmb	08 41 40.3	
	comp=Z,5.5nm,0.8s						
TMB01	Midkiff	20.66	333	P	P	08 41 39.7	-0.4
TMB01				IAmb	IAmb	08 41 41.5	
	comp=Z,5.0nm,1.0s						
MNHN	Monahans	20.70	331		P	08 41 40.6	+0.2
MNHN				IAmb	IAmb	08 41 42.5	
	comp=Z,14nm,0.9s						
TPB01	Permian Basin	20.86	329	P	P	08 41 43.9	+1.6
TPB01				IAmb	IAmb	08 41 44.9	
	comp=Z,4.9nm,0.7s						
PECS	Pecos	21.25	329	P	P	08 41 46.6	+0.1
PECS				IAmb	IAmb	08 41 48.5	
	comp=Z,10nm,0.9s						
VHRN	Van Horn	21.37	326		P	08 41 48.3	+0.5
VHRN				IAmb	IAmb	08 41 50.7	
	comp=Z,6.8nm,0.9s						
TKL	Tuckaleechee C	23.16	16	P	P	08 42 04.9	-1.8
	comp=Z,2.7nm,0.8s,baz=297,slow=19,SNR=1.8						
TKL				LR	LR	08 51 04.8	
	comp=Z,65nm,20.7s,baz=186,slow=36						
	comp=Z,2.7nm,0.8s						
CRNM	Carthage	24.76	328	P	P	08 42 22.7	+0.5
NVAR	Mina Array Bea	34.52	321	P	P	08 43 50.5	+1.7
	comp=Z,1.5nm,0.8s,baz=126,slow=6.4,SNR=16						
	comp=Z,1.5nm,0.8s						
J08A	Circle Bar Ran	37.87	327	P	P	08 44 17.9	+0.6
J08A				IAmb	IAmb	08 44 18.8	
	comp=Z,3.7nm,0.8s						
PB01	IPOC Station P	40.42	148	P	P	08 44 40.7	+1.9
YKA	Yellowknife Ar	51.73	346	P	P	08 46 04.7	-2.6
	comp=Z,0.6nm,0.8s,baz=152,slow=7.0,SNR=10						
	comp=Z,0.6nm,0.8s						
FRB	Frobisher Bay	52.73	13	LR	LR	09 09 47.4	
	comp=Z,38nm,19.0s,baz=86,slow=37						
ILAR	Eielson Array	63.62	337	P	P	08 47 28.5	-2.5
	comp=Z,0.6nm,0.9s,baz=111,slow=5.7,SNR=4.8						
	comp=Z,0.6nm,0.9s						
CMAR	Chiang Mai Arr	146.74	342	PKPbc	PKPdf	08 56 41.9	+0.2
	comp=Z,0.9nm,0.3s,baz=358,slow=2.7,SNR=8.4						

IDC 01 08:41:53.2±21.0**,21°.99S**×**175°.76W,h406**^{km}±150^{km}**, mb3.0**/4**,mbtmp3.9**/5**,Error ellipse: s-maj=326.1km s-min=46.4km az=140.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.50	266	P	P	08 45 22.1	+0.2
	5.7nm,0.7s,baz=86,slow=16,SNR=5.7						
ASAR	Alice Springs	46.23	258	P	P	08 49 39.1	-1.1
	0.7nm,0.9s,baz=90,slow=7.1,SNR=8.2						
	0.7nm,0.9s						
WRA	Warramunga Arr	46.48	263	P	P	08 49 42.3	+0.1
	1.0nm,0.4s,baz=100,slow=8.3,SNR=11						
	1.0nm,0.4s						
FITZ	Fitzroy Crossi	54.91	263	P	P	08 50 45.2	+1.0
	1.2nm,0.6s,baz=98,slow=7.1,SNR=1.6						
	1.2nm,0.6s						
ILAR	Eielson Array	89.31	12	P	P	08 54 04.1	-0.1
	0.4nm,1.0s,baz=206,slow=5.2,SNR=1.8						
	0.4nm,1.0s						

*NEIC **01** 08:46:58.0±1.6,17°.88N±0°.04×66°.91W±0°.01,h10^{km}±1^{km}, ML2.6/33,Md2.7/7(RSPR),Error ellipse: s-maj=6.6km s-min=2.4km az=10.0*

RSPR 01 08:46:58.5,17°.91N×66°.92W,h12^{km}**,MD2.7**/7**,7C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.07	34		Pg	08 47 01.3	+0.2
GBPR					Sg	08 47 03.3	+0.4
GBPR	Guanica, Bosqu	0.07	34	⇑eP	Pg	08 47 01.3	+0.2
GBPR				eS	Sg	08 47 03.3	+0.4
MLPR	Magueyes Islan	0.13	296		Pg	08 47 01.9	+0.2
MLPR				IAML		08 47 05.0	
	3μm,0.3s						
MLPR				IAML		08 47 05.1	
	1μm,0.3s						
CRPR	Cabo Rojo, PR	0.20	297		Pg	08 47 03.0	+0.2
CRPR					Sg	08 47 06.3	+0.5
CRPR	Cabo Rojo, PR	0.20	297	IAML		08 47 06.7	
	2μm,0.2s						
CRPR				IAML		08 47 06.9	
	2μm,0.2s						
CRPR	Cabo Rojo, PR	0.20	297	⇑eP	Pg	08 47 03.0	+0.2
CRPR				eS	Sg	08 47 06.3	+0.5
LSP	Las Mesas	0.30	329		Pg	08 47 04.7	0.0
LSP					Sb	08 47 10.0	-0.8
LSP	Las Mesas	0.30	329	⇓eP	Pg	08 47 04.7	0.0
LSP				eS	Sb	08 47 10.0	-0.8
OBIP	Obispado Ponce	0.33	67		Pg	08 47 04.8	-0.3
OBIP	Obispado Ponce	0.33	67		Sg	08 47 09.2	-0.4
OBIP				IAML		08 47 10.4	
	comp=N,101nm,0.2s						
OBIP	Obispado Ponce	0.33	67	⇓eP	Pg	08 47 04.8	-0.3
OBIP				eS	Sg	08 47 10.1	+0.5
PRSN	Puerto Rico Se	0.37	325		Pg	08 47 05.7	-0.2
PRSN					Sg	08 47 11.4	+0.6
PRSN	Puerto Rico Se	0.37	325	IAML		08 47 11.6	
	comp=N,860nm,0.2s						
PRSN				IAML		08 47 14.1	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	0.37	325	⇑eP	Pg	08 47 05.7	-0.2
PRSN				eS	Sg	08 47 11.4	+0.6
UUPR	Utuado, UPR, P	0.39	30		Pg	08 47 05.5	-0.7
UUPR				IAML		08 47 11.6	
	comp=N,3μm,0.4s						
UUPR				IAML		08 47 13.0	
	comp=N,2μm,0.3s						
AGPR	Aguadilla, PR	0.58	342		Pg	08 47 09.2	-0.6
AGPR				IAML		08 47 17.3	
	comp=N,328nm,0.5s						
AGPR				IAML		08 47 22.4	
	comp=N,169nm,0.3s						
AGPR	Aguadilla, PR	0.58	342	⇑eP	Pg	08 47 09.2	-0.6
AGPR				eS	Sg	08 47 17.1	-0.4
ECPR	Experimental S	0.67	53		Pg	08 47 10.3	-1.2
ECPR				IAML		08 47 21.2	
	comp=N,351nm,0.2s						
ECPR				IAML		08 47 22.5	
	comp=N,322nm,0.2s						
ECPR	Experimental S	0.67	53	⇓eP	Pg	08 47 10.3	-1.2
ECPR				eS	Sg	08 47 20.2	-0.1
IDE	Isla Desecheo	0.70	312		Pg	08 47 11.6	-0.6
IDE					Sg	08 47 21.1	-0.4
IDE	Isla Desecheo	0.70	312	⇑eP	Pg	08 47 11.6	-0.6
IDE				eS	Sg	08 47 21.1	-0.4
SJG	San Juan	0.76	75	Pg	Pg	08 47 12.0	-1.2
SJG	San Juan	0.76	75	IAML		08 47 23.3	
	comp=N,128nm,0.3s						
SJG				IAML		08 47 29.7	
	comp=N,75nm,0.2s						
SJG	San Juan	0.76	75	⇓eP	Pg	08 47 11.9	-1.3
SJG				eS	Sg	08 47 22.8	-0.4
PDPR	Patillas Dam,	0.86	83		Pg	08 47 13.8	-1.3
PDPR				IAML		08 47 27.5	
	comp=N,49nm,0.1s						
PDPR				IAML		08 47 29.8	
	comp=N,43nm,0.3s						
GCPR	Guaynabo City	0.89	64		Sg	08 47 25.8	-1.5
GCPR	Guaynabo City	0.89	64	Pg	Pg	08 47 14.1	-1.6
GCPR				IAML		08 47 29.9	
	comp=N,38nm,0.4s						
GCPR				IAML		08 47 32.2	
	comp=E,30nm,0.2s						
GCPR	Guaynabo City	0.89	64	⇑eP	Pg	08 47 14.0	-1.7
GCPR				eS	Sg	08 47 25.8	-1.5
HUMP	Col San Antoni	1.05	77		Sb	08 47 31.0	-1.1
HUMP	Col San Antoni	1.05	77		Pb	08 47 16.8	-1.7
HUMP				IAML		08 47 34.0	
	comp=E,103nm,0.3s						
HUMP				IAML		08 47 34.4	
	comp=E,56nm,0.2s						
HUMP	Col San Antoni	1.05	77	⇑eP	Pb	08 47 17.0	-1.5
HUMP				eS	Sb	08 47 31.0	-1.1
CUPR	Culebra, Puert	1.61	76	Pn	Pn	08 47 26.5	-0.1
DR12	Loma Pena Alta	2.49	291	Pn	Pb	08 47 41.0	-2.1

IDC 01 08:51:12.0±6.3**,6°.36S**×**125°.17E,h477**^{km}±89^{km}**,mb2.9**/2**, mbtmp3.6**/5**,Error ellipse: s-maj=76.8km s-min=31.9km az=43.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.68	178	P	P	08 53 47.8	+0.6
	0.7nm,0.3s,baz=9.7,slow=9.2,SNR=9.2						
WRA	Warramunga Arr	16.18	147	P	P	08 54 33.8	-1.3
	0.7nm,0.4s,baz=324,slow=11,SNR=11						
ASAR	Alice Springs	19.15	155	P	P	08 55 04.2	0.0
	0.5nm,0.5s,baz=330,slow=8.9,SNR=8.9						
CTA	Charters Tower	24.61	126	P	P	08 55 53.9	+0.5
	3.0nm,0.8s,baz=298,slow=8.7,SNR=1.8						
	3.0nm,0.8s						
MKAR	Makanchi Array	65.13	329	P	P	09 01 04.8	-0.1
	0.2nm,0.6s,baz=140,slow=5.6,SNR=1.7						
	0.2nm,0.6s						

*KRNET **01** 09:05:20.9±0.1,39°.04N×73°.40E,mb3.4*
*NNC **01** 09:05:23.7±1.7,38°.55N×73°.06E,h75^{km}±61^{km},mb3.4, mpv3.6,Error ellipse: s-maj=15.9km s-min=9.8km az=26.0*

ISC 01 09:05:21.8±1.5**,38°.98N**±0°.08×**73°.43E**±0°.04**,h10**^{km}**,n19,** σ**2**^{s}**15**/30**,19C-10D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.03	3	⇑iP	Pg	09 05 39.6	-2.1
SFK				⇑iS	Sg	09 05 53.7	-1.4
SALK	Salom-Alik	1.92	9	⇓eP	Pb	09 05 56.2	-0.8
SALK				⇓eS	Sb	09 06 21.6	+0.4
BTK	Batken	2.29	299	⇓eP	Pb	09 06 01.7	-1.4
BTK				⇓iS	Sb	09 06 30.9	-0.6
ARSB	Arslanbob	2.36	352	⇑eP	Pb	09 06 02.7	-1.8
ARSB				⇑eS	Sb	09 06 32.3	-1.5
GAR	Garm	2.42	271	⇑iP	Pn	09 06 02.6	+1.0
GAR				⇑iS	Sb	09 06 35.6	+0.1
JNKS	Jany-Kuch	2.67	39	⇑eP	Pb	09 06 07.5	-2.3
JNKS				⇑eS	Sb	09 06 41.3	-1.5
ARLS	Aral	2.96	13	⇑iP	Pn	09 06 10.6	+1.7
ARLS				⇑iS	Sn	09 06 47.1	+2.5
ARK	Arkit	3.03	339	⇑eP	Pn	09 06 11.6	+1.7
ARK				⇑eS	Sn	09 06 48.5	+2.3
TRKS	Terek-Say	3.09	326	⇑eP	Pn	09 06 11.6	+0.9
TRKS				⇑eS	Sn	09 06 48.5	+0.7
NRN	Naryn	3.14	38	⇑eP	Pn	09 06 13.4	+1.7
NRN				⇑eS	Sn	09 06 51.6	+2.2
MNAS	Manas	3.57	349	⇓eP	Pn	09 06 19.2	+1.8
MNAS				⇓eS	Sn	09 07 01.6	+1.9
AAK	Ala-Archa	3.74	12	⇓P	Pb	09 06 25.1	-2.9
	5.1nm,0.6s						
AAK				⇑S	Sb	09 07 14.4	+0.9
	20nm,1.1s						
IUG	Iuzhnay	4.08	322	Pg	Pb	09 06 31.1	-2.7
	41nm,0.6s						
IUG				Lg	Lg	09 07 18.1	
	36nm,1.0s						
KDJ	Kajisay	4.25	41	⇓eP	Pn	09 06 29.2	+2.5
KDJ				⇓eS	Sn	09 07 18.8	+2.3
KK31	Karatay Array	4.67	333	⇑P	Pn	09 06 35.6	+3.3
	2.3nm,0.5s,baz=62,slow=39,SNR=16						
KK31				⇓S	Sn	09 07 31.8	+5.2
	6.2nm,0.5s,baz=151,slow=23,SNR=4.0						
KTBS	Karatobe	5.32	26	P	Pb	09 06 48.1	-6.8
	3.3nm,0.8s						
SATY	Saty	5.55	41	P	Pn	09 06 50.2	+5.7
	5.1nm,1.0s						
ARXS	Arharly	6.18	31	P	Pn	09 06 59.8	+6.7
	2.9nm,0.7s						
AB31	Akbulak array	14.09	321	⇑P	Pn	09 08 41.4	0.0
	0.3nm,0.5s,baz=133,slow=14,SNR=7.7						

*IDC **01** 09:09:22.4±0.5,2°.95S×101°.07E,h0^{km},mb4.6/32, mbtmp4.6/34,ML4.7/2,MS3.4/13,Error ellipse: s-maj=20.3km s-min=8.8km az=49.0*
*BJI **01** 09:09:28.2,3°.06S×101°.01E,h63^{km},mB5.1/13,mb4.7/48, Ms4.3/5,Ms7 4.0/7*
*MOS **01** 09:09:28.5±1.0,2°.89S×101°.09E,h55^{km},mb5.1/35,Error ellipse: s-maj=11.3km s-min=5.2km az=112.8*
*DJA **01** 09:09:30.4±0.2,3°S±2°×10°1E±°,h68^{km}±4^{km},M4.7/24, mB5.0/6,mb4.7/20,MLv4.8/24,Mw(mB)4.3/6*
*NEIC **01** 09:09:31.5±1.3,2°.92S±0°.08×101°.1E±0°.1,h63^{km}±7^{km}, mb5.0/51,Error ellipse: s-maj=18.1km s-min=4.0km az=51.0*

ISC 01 09:09:30.4±0.4**,2°.93S**±0°.04×**101°.02E**±0°.04**,h58**^{km}±3^{km}**, h58**^{km}**:pP-P,n305,**σ**1**^{s}**43**/334**,mb4.8**/102**,MS3.7**/16**, 16C-3D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.95	28	P	Pn	09 09 47.4	-0.3
KRJI				S	Sn	09 10 01.8	+1.3
PPSI	Pulau Pagai	1.02	279	P	Pn	09 09 49.0	+0.4
PPSI				S	Sn	09 10 04.8	+2.8
MASI	Maura Aman, Be	1.24	100	P	Pn	09 09 51.2	-0.4
MASI				S	Sn	09 10 08.5	+1.1
UBSI	University, Be	1.50	123	P	Pn	09 09 55.1	+0.1
UBSI				S	Sn	09 10 14.2	+0.6
KSI	Kapahiang	1.73	114	P	Pn	09 09 58.5	+0.3
PDSI	Padang	2.08	345	P	Pn	09 10 02.8	-0.2
MNAI	Manna	2.40	126		Pn	09 10 07.0	-0.3
MNAI	Manna	2.40	126	P	Pn	09 10 14.2	+6.9
MNAI	Manna	2.40	126	P	Pn	09 10 08.0	+0.7
MNAI				S	Sn	09 10 35.5	-0.1
SISI	Saibi	2.50	310	P	Pn	09 10 09.0	+0.4
PPI	Padang Panjang	2.54	346	P	Pn	09 10 10.0	+0.9
PPI				S	Sn	09 10 40.2	+1.4
EGSI	Enggano, Bengk	2.71	152	P	Pn	09 10 11.1	-0.5
EGSI				S	Sn	09 10 43.7	+0.5
JMBI	JAMBI	2.92	64	P	Pn	09 10 14.2	-0.2
MDSI	Maura Dua	3.51	116	P	Pn	09 10 23.8	+1.3
LWLI	Liwa	3.68	124	P	Pn	09 10 25.1	+0.2
PBSI	Pulau Batu	3.96	316	P	Pn	09 10 28.7	+0.1
MNSI	Mandailing Nat	3.97	339	P	Pn	09 10 30.2	+1.4
KLI	Kotabumi	4.29	117	P	Pn	09 10 33.9	+0.8
DSRI	Dabo	4.31	56	P	Pn	09 10 33.7	+0.2
KASI	Kota Agung	4.32	127	P	Pn	09 10 34.2	+0.6
KASI				S	Sn	09 11 21.8	-1.0
BTDF	Bukit Timah Da	5.08	33	P	Pn	09 10 44.9	+0.9
BTDF	Bukit Timah Da	5.08	33	P	Pn	09 10 44.4	+0.4
	0.5nm2μm134nm,0.8s						
TPRI	Tanjung Pinang	5.19	43	P	Pn	09 10 46.1	+0.6
GSI	Gunungsitoli	5.43	321		Pn	09 10 48.9	0.0
GSI	Gunungsitoli	5.43	321	P	Pn	09 10 48.4	-0.5
	0.9nm4μm90nm,0.5s						
MYKOM	Kota Tinggi	5.48	31		Pn	09 10 49.8	+0.4
MYKOM	Kota Tinggi	5.48	31	P	Pn	09 10 50.3	+0.8
MYKOM	Kota Tinggi	5.48	31	P	Pn	09 10 49.7	+0.2
	0.5nm2μm101nm,0.8s						
RPSI	Rantau Prapat	5.97	339		Pn	09 10 57.7	+1.5
PSI	Prapat	6.07	340	P	Pn	09 11 01.8	+4.2
PSI	Prapat	6.07	340	P	Pn	09 10 57.7	+0.1
PSI	Prapat	6.07	340	P	Pn	09 10 57.8	+0.1
TPI	Tanjungpandan	6.63	89	P	Pn	09 11 04.4	-0.9
SNSI	Sinabang, Aceh	7.08	318	P	Pn	09 11 10.8	-0.6
	0.4nm47nm,0.6s						
KCSI	Kotacane, Aceh	7.18	333	P	Pn	09 11 13.1	+0.2
	0.2nm19nm,0.7s						
IPM	Ipoh	7.36	0		Pn	09 11 17.6	+2.3
IPM	Ipoh	7.36	0	P	Pn	09 11 19.6	+4.3
IPM	Ipoh	7.36	0	P	Pn	09 11 18.8	+3.5
	0.3nm86nm,0.5s						
CNJI	Cibinong	7.48	126	P	Pn	09 11 14.8	-2.1
	0.2nm28nm,1.0s						
LEM	Lembang	7.63	121	Pn	Pn	09 11 15.7	-3.4
	9.0nm,0.3s,baz=312,slow=21,SNR=1.9						
LEM				Sn	Sn	09 12 44.7	+0.4
	6.0nm,0.3s,baz=321,slow=23,SNR=1.3						
LEM				LR	LR	09 14 39.9	
	comp=Z,220nm,19.5s,baz=281,slow=42						
	18nm,0.3s						
BBJI	Bungbulang	7.99	125		Pn	09 11 22.9	-1.1
BBJI	Bungbulang	7.99	125	P	Pn	09 11 23.1	-0.9
	0.1nm24nm,0.6s						
KULM	Kulim	8.18	357		Pn	09 11 26.1	-0.3
KULM	Kulim	8.18	357	P	Pn	09 11 29.7	+3.3
KULM	Kulim	8.18	357	P	Pn	09 11 27.7	+1.3
	37nm,0.8s						
MLSI	Meulaboh, Aceh	8.51	327	P	Pn	09 11 31.6	+0.6
KPJI	Karang Pucung	9.01	119	P	Pn	09 11 37.4	-0.5
	46nm,0.6s						
UGM	Wanagama	10.68	118		Pn	09 11 59.9	-0.8
UGM	Wanagama	10.68	118	P	Pn	09 12 01.1	+0.4
	41nm,1.6s						
PCJI	Pacitan	11.38	118	P	Pn	09 12 08.0	-2.3
	27nm,1.1s						
SNJI	Sawahan-Nganju	11.73	115	P	Pn	09 12 15.5	+0.3
	59nm,0.7s						
GMJI	Gumukmas	13.46	114	P	Pn	09 12 38.6	0.0
JAGI	Jajag, Banyuwa	14.18	113	Pn	Pn	09 12 46.4	-1.9
JAGI	Jajag, Banyuwa	14.18	113	P	Pn	09 12 46.0	-2.3
	1μm39nm,0.5s						
PLAI	Plampang	17.67	110	P	Pn	09 13 30.6	-2.0
	42nm,0.8s						
DBNI	Kabupaten Domp	18.07	109	P	P	09 13 35.6	-1.7
	12nm,0.6s						
KAPI	Kappang	18.80	97	P	P	09 13 43.4	-2.0
	3.1nm,0.3s,baz=262,slow=13,SNR=15						
KAPI				LR	LR	09 21 46.7	
	comp=Z,100nm,19.3s,baz=258,slow=40						
	9.5nm,0.5s						
KAPI	Kappang	18.80	97	P	Pn	09 13 46.1	-0.3
KAPI	Kappang	18.80	97	P	Pn	09 13 48.4	+2.0
KAPI	Kappang	18.80	97	P	Pn	09 13 46.4	0.0
	32nm,1.0s						
MPSI	Mapaga	19.15	81	P	Pn	09 13 49.8	-0.8
WBSI	Waikabubak, Su	19.43	111	P	P	09 13 50.9	-1.4
TOLI2	Tolitoli	20.16	79		P	09 14 00.8	+0.6
TOLI2	Tolitoli	20.16	79	P	Pn	09 14 01.7	-0.8
CMAR	Chiang Mai Arr	21.35	355	P	P	09 14 10.8	-2.1
	5.3nm,0.8s,baz=185,slow=10,SNR=19						
CMAR				LR	LR	09 22 49.0	
	comp=Z,63nm,18.3s,baz=185,slow=38						
	5.3nm,0.8s						
CMAR	Chiang Mai Arr	21.35	355	P	P	09 14 08.4	-4.5
CMAR	Chiang Mai Arr	21.35	355	P	P	09 14 08.4	-4.5
PALK	Pallekele	22.66	297	LR	LR	09 21 42.4	
	comp=Z,66nm,21.9s,baz=108,slow=33						
FITZ	Fitzroy Crossi	28.45	124	P	P	09 15 19.4	-0.6
	2.5nm,0.5s,baz=308,slow=7.9,SNR=8.8						
	2.5nm,0.5s						
PZH	PanZhiHua	29.27	1	P	P	09 15 30.8	+3.5
HYB	Hyderabad	30.00	313	eP	P	09 15 34.9	+1.1
KNRA	Kununurra	30.11	117	P	P	09 15 33.9	-0.9
KNRA				IAmb	IAmb	09 16 06.8	
	comp=Z,59nm,1.9s						
FAKI	Fak Fak	31.19	91	P	P	09 15 43.9	-0.5
FAKI				IAmb	IAmb	09 15 52.0	
	comp=Z,55nm,1.2s						
KNMB	Chin-men Tao	32.04	31	P	P	09 15 51.3	-0.4
ENH	Enshi	33.99	13		P	09 16 07.7	-1.1
ENH				IAmb	IAmb	09 16 08.4	
	comp=Z,14nm,1.1s						
ENH	Enshi	33.99	13	P	P	09 16 07.6	-1.1
ENH				x	x	09 16 22.2	
H01W3	Cape Leeuwin H	34.05	161	T	T	09 52 46.4	
	baz=336						
H01W2	Cape Leeuwin H	34.06	161	T	T	09 52 47.4	
	baz=336						
H01W1	Cape Leeuwin H	34.07	161	T	T	09 52 34.1	
	baz=336						
WB0	Warramunga Arr	36.63	120	P	P	09 16 31.0	-0.5
WB0				IAmb	IAmb	09 16 32.3	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	36.65	120	P	P	09 16 30.9	-0.8
	comp=Z,5.2nm,0.4s,baz=303,slow=8.9,SNR=65						
WRA				PcP	PcP	09 18 54.1	+0.4
	comp=Z,1.1nm,0.5s,baz=307,slow=2.2,SNR=3.3						
	comp=Z,5.2nm,0.4s						
WRA	Warramunga Arr	36.65	120		P	09 16 31.1	-0.6
WRA	Warramunga Arr	36.65	120	i P	P	09 16 30.8	-0.9
WRA				pmax	pmax		
	comp=Z,7.0nm,0.4s						
WRAB	Tennant Creek	36.66	120	P	P	09 16 31.4	-0.4

WRAB IAmb IAmb 09 16 33.0
comp=Z,11nm,0.8s
WRAB Tennant Creek 36.66 120 *ce*P **P 09 16 31.3 -0.4**
WRAB pmax pmax
comp=Z,9.0nm,0.6s
WRAB Tennant Creek 36.66 120 P **P 09 16 31.2 -0.6**
WR8 Warramunga Ar 36.80 120 P **P 09 16 32.4 -0.5**
WR8 IAmb IAmb 09 16 33.5
comp=Z,27nm,1.1s
XAN Xi'an 37.52 11 ⇓P **P 09 16 37.7 -1.2**
XAN pmax pmax
comp=Z,31nm,0.8s
XAN Xi'an 37.52 11 P **P 09 16 37.5 -1.4**
AS31 Alice Springs 37.89 126 P **P 09 16 42.4 +0.2**
ASAR Alice Springs 37.89 126 P **P 09 16 42.4 +0.2**
comp=Z,4.4nm,0.7s,baz=300,slow=8.0,SNR=45
ASAR PcP **PcP 09 18 58.5 +1.0**
comp=Z,1.7nm,0.6s,baz=311,slow=2.5,SNR=7.1
ASAR S **S 09 22 30.2 +0.4**
comp=Z,0.5nm,0.6s,baz=300,slow=15,SNR=9.2
comp=Z,4.4nm,0.7s
NJ2 Nanjing 38.70 25 *e*P **P 09 16 50.3 +1.6**
NJ2 pmax pmax
comp=Z,4.0nm,0.6s
LZDM Lanzhou Array 38.77 3 P **P 09 16 48.6 -1.1**
comp=Z,1.6nm,0.5s,baz=198,slow=9.3,SNR=6.5
LZDM PcP **PcP 09 19 00.6 +0.3**
comp=Z,0.6nm,0.4s,baz=223,slow=5.5,SNR=5.3
LZDM S **S 09 22 49.1 +5.9**
comp=Z,0.8nm,0.3s,baz=109,slow=26,SNR=4.6
comp=Z,1.6nm,0.5s
LYN LuoYang 38.81 15 P **P 09 16 49.9 +0.3**
LYN pP pP 09 17 02.9 -1.5
LYN sS sS 09 23 09.7 +1.8
LYN pmax pmax
comp=Z,56nm,0.9s
LYN pmax pmax
comp=Z,140nm,5.6s
LYN LR LR
comp=Z,170nm,14.8s
LYN LR LR
comp=Z,150nm,15.1s
LYN LR LR
comp=Z,220nm,15.5s
LZH Lanzhou 38.91 4 *e*P **P 09 16 50.3 -0.3**
LZH pmax pmax
comp=Z,20nm,1.4s
HNS HongShan 42.09 16 ⇑P **P 09 17 16.6 -0.1**
HNS pmax pmax
comp=Z,6.0nm,1.0s
GTA2 Gaotai 42.23 359 *e*P **P 09 17 17.7 -0.2**
GTA2 PcP **PcP 09 19 11.7 +0.5**
GTA2 pmax pmax
comp=Z,3.0nm,0.6s
BTO2 Baotou 44.22 10 *e*P **P 09 17 37.4 +3.4**
BTO2 pP **pP 09 17 53.1 +4.2**
BTO2 S **S 09 24 09.6 +6.2**
BTO2 pmax pmax
comp=Z,10.0nm,0.6s
BTO2 pmax pmax
comp=Z,250nm,5.8s
BTO2 LR LR
comp=Z,150nm,4.7s
BTO2 LR LR
comp=Z,240nm,4.7s
BTO2 LR LR
comp=Z,310nm,5.0s
HHC Hu-ho-hao-te 44.62 11 *e*P **P 09 17 40.6 +3.4**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.6s
NIL Nilore 44.83 327 **P 09 17 38.9 0.0**
NIL Nilore 44.83 327 P **P 09 17 38.9 0.0**
NIL pmax pmax
comp=Z,31nm,0.7s
INKA Innaminka 45.23 127 P **P 09 17 42.7 +0.6**
JNU Nakatsue 45.64 36 LR LR 09 35 47.1
comp=Z,28nm,21.6s,baz=227,slow=35
CTA Charters Tower 47.29 115 P **P 09 17 58.5 +0.1**
comp=Z,7.6nm,0.7s,baz=292,slow=9.2,SNR=9.5
comp=Z,7.6nm,0.7s
CTAO Charters Tower 47.29 115 P **P 09 17 57.8 -0.7**
CTAO Charters Tower 47.29 115 P **P 09 17 57.8 -0.7**
CTAO pmax pmax
comp=Z,9.0nm,0.9s
KSRS Korea Array 47.31 29 P **P 09 17 57.6 -0.6**
comp=Z,1.5nm,0.5s,baz=227,slow=8.3,SNR=7.6
KSRS LR LR 09 37 45.5
comp=Z,19nm,20.3s,baz=210,slow=36
comp=Z,1.5nm,0.5s
STKA Stephens Creek 47.78 132 P **P 09 18 02.1 +0.1**
comp=Z,5.5nm,0.6s,baz=315,slow=7.8,SNR=18
STKA LR LR 09 38 38.0
comp=Z,38nm,21.5s,baz=16,slow=37
comp=Z,5.5nm,0.6s
STKA Stephens Creek 47.78 132 P **P 09 18 02.9 +0.8**
STKA Stephens Creek 47.78 132 P **P 09 18 02.9 +0.8**
STKA pmax pmax
comp=Z,198nm,1.8s
KSH2 Kashi 47.99 333 P **P 09 18 04.6 +0.9**
KSH2 pP pP 09 18 17.2 -1.4
KSH2 pmax pmax
comp=Z,13nm,0.8s
WMQ Urumqi 48.06 347 *e*P **P 09 18 05.5 +1.4**
WMQ S **S 09 24 53.6 -4.7**
WMQ pmax pmax
comp=Z,47nm,0.9s
WMQ LR LR
comp=Z,160nm,24.2s
WMQ Urumqi 48.06 347 P **P 09 18 05.0 +0.9**
WUS Wushi 48.21 338 **P 09 18 05.3 0.0**
WUS IAmb IAmb 09 18 07.8
comp=Z,12nm,0.8s
WUS Wushi 48.21 338 P **P 09 18 06.2 +0.9**
WUS pP **pP 09 18 19.3 -0.9**
XLT XiLinHaoTe 48.55 15 *e*P **P 09 18 08.4 +0.6**
XLT pmax pmax
comp=Z,6.0nm,1.0s
XLT pmax pmax
comp=Z,100nm,6.3s
MANEM Manem 48.61 329 P **P 09 18 08.0 -0.7**
TARG Taragay, Kyrgy 49.20 337 **P 09 18 13.4 +0.1**
TARG IAmb IAmb 09 18 28.9
comp=Z,5.9nm,0.7s
TARG Taragay, Kyrgy 49.20 337 P **P 09 18 13.4 +0.1**
TARG pmax pmax
comp=Z,6.0nm,0.7s
SHLS Shalkode 49.83 339 *e*P **P 09 18 17.6 -0.1**
SHLS pmax pmax
comp=Z,5.0nm,0.5s
SHLS Shalkode 49.83 339 *e*P **P 09 18 17.7 -0.1**
comp=Z,5.0nm,0.5s
UZB Uzynbulak 49.97 339 *e*P **P 09 18 19.9 +1.1**
UZB pmax pmax
comp=Z,6.0nm,0.4s
UZB Uzynbulak 49.97 339 *e*P **P 09 18 20.0 +1.1**
comp=Z,6.4nm,0.4s
DRK Karamyk 50.03 330 P **P 09 18 20.3 +0.8**
DRK Karamyk 50.03 330 P **P 09 18 20.3 +0.8**
DRK pmax pmax
comp=Z,31nm,0.6s
SATY Saty 50.12 338 *e*P **P 09 18 21.0 +1.1**
SATY pmax pmax
comp=Z,3.0nm,0.5s
SATY Saty 50.12 338 *e*P **P 09 18 21.0 +1.1**
comp=Z,2.8nm,0.5s
GAR Garm 50.41 329 P **P 09 18 21.6 -0.6**
GAR IAmb IAmb 09 18 25.4
comp=Z,12nm,0.6s
SHAA Shahritus 50.54 326 P **P 09 18 22.8 -0.4**
SHAA IAmb IAmb 09 18 30.5
comp=Z,140nm,1.7s
BOOM Boomskoye usch 50.59 336 **P 09 18 24.0 +0.5**
BOOM IAmb IAmb 09 18 26.6
comp=Z,7.2nm,0.6s
BOOM Boomskoye usch 50.59 336 P **P 09 18 24.0 +0.5**
BOOM pmax pmax
comp=Z,7.0nm,0.6s
TNSS Tian-Shan 50.65 337 *e*P **P 09 18 25.1 +0.8**
TNSS Tian-Shan 50.65 337 *e*P **P 09 18 25.1 +0.8**
MDOK Medeo 50.72 337 *e*P **P 09 18 25.6 +1.1**
MDOK Medeo 50.72 337 *e*P **P 09 18 25.6 +1.1**
CHGR Chuyangaron 50.76 328 P **P 09 18 24.8 0.0**
CHGR IAmb IAmb 09 18 25.4
comp=Z,29nm,1.1s
CHGR Chuyangaron 50.76 328 P **P 09 18 24.8 0.0**
CHGR pmax pmax
comp=Z,29nm,1.1s
SONM Songino Array 50.77 5 P **P 09 18 25.5 +0.7**
comp=Z,19nm,0.9s,baz=184,slow=9.1,SNR=94
SONM PcP **PcP 09 19 41.4 +0.3**
comp=Z,1.5nm,0.4s,baz=194,slow=4.3,SNR=9.0
comp=Z,19nm,0.9s
SONM Songino Array 50.77 5 **P 09 18 25.2 +0.4**
SONM IAmb IAmb 09 18 26.9
comp=Z,19nm,1.0s
SONM Songino Array 50.77 5 P **P 09 18 25.2 +0.4**
SONM pmax pmax
comp=Z,19nm,1.0s
ULN Ulaanbaatar 50.86 5 P **P 09 18 26.1 +0.7**
ULN IAmb IAmb 09 18 27.0
comp=Z,8.8nm,0.8s
ULN Ulaanbaatar 50.86 5 *ce*P **P 09 18 25.8 +0.3**
ULN pmax pmax
comp=Z,10.0nm,0.8s
ULN Ulaanbaatar 50.86 5 P **P 09 18 25.4 0.0**
BTK Batken 50.95 330 IAmb IAmb 09 18 28.1
comp=Z,12nm,0.6s
UCH Uchtor 50.96 335 P **P 09 18 28.0 +1.2**
SNR=5.8
TKM2 Tokmak 2 51.09 336 P **P 09 18 28.8 +1.4**
SNR=14
KBK Karagaybulak 51.13 335 P **P 09 18 29.4 +1.8**
SNR=5.9
AAK Ala-Archa 51.31 335 **P 09 18 29.0 +0.1**
AAK Ala-Archa 51.31 335 *ce*P **P 09 18 29.3 +0.4**
AAK pmax pmax
comp=Z,3.0nm,0.8s
EKS2 Erkin-Say 51.63 334 P **P 09 18 32.8 +1.5**
SNR=31
TDK Taldyqorghan 51.81 340 *e*P **P 09 18 33.7 +1.3**
TDK Taldyqorghan 51.81 340 *e*P **P 09 18 33.8 +1.3**
USP Ospenovka 51.82 335 P **P 09 18 33.5 +0.9**
SNR=14
ZSN Zaisan 52.14 346 *e*P **P 09 18 36.0 +1.2**
ZSN pmax pmax
comp=Z,10.0nm,0.8s
ZSN Zaisan 52.14 346 *e*P **P 09 18 36.0 +1.2**
comp=Z,9.6nm,0.8s
MK31 Makanchi Array 52.20 344 *ce*P **P 09 18 35.8 +0.5**
MKAR Makanchi Array 52.20 344 P **P 09 18 35.6 +0.3**
comp=Z,15nm,0.6s,baz=159,slow=8.9,SNR=174
comp=Z,15nm,0.6s
MKAR Makanchi Array 52.20 344 **P 09 18 35.3 0.0**
MKAR Makanchi Array 52.20 344 *i* P **P 09 18 35.5 +0.2**
MKAR pmax pmax
comp=Z,15nm,0.6s
MAKZ Makanchi 52.30 344 **P 09 18 36.0 -0.1**
MAKZ IAmb IAmb 09 18 37.7
comp=Z,12nm,1.1s
MAKZ Makanchi 52.30 344 P **P 09 18 36.0 -0.1**
MAKZ pmax pmax
comp=Z,12nm,1.1s
MAKZ Makanchi 52.30 344 P **P 09 18 36.1 0.0**
MAKZ pP **pP 09 18 49.5 -1.8**
MAKZ x x 09 18 51.8
MAKZ sP **sP 09 18 54.9 -3.0**
MJAR Matsushiro Arr 52.37 38 P **P 09 18 36.2 -0.5**
comp=Z,2.2nm,0.7s,baz=189,slow=8.0,SNR=9.2
comp=Z,2.2nm,0.7s
MJAR Matsushiro Arr 52.37 38 P **P 09 18 35.3 -1.5**
MJAR IAmb IAmb 09 19 23.8
comp=Z,14nm,1.6s
MJAR Matsushiro Arr 52.37 38 P **P 09 18 35.3 -1.5**
MJAR pmax pmax
comp=Z,14nm,1.6s
DZA Taraz 52.90 333 *e*P **P 09 18 41.7 +1.1**
DZA Taraz 52.90 333 *e*P **P 09 18 41.7 +1.1**
IUG Iuzhnay 52.93 331 *e*P **P 09 18 41.9 +1.0**
IUG pmax pmax
comp=Z,7.0nm,0.6s
IUG Iuzhnay 52.93 331 *e*P **P 09 18 42.0 +1.0**
comp=Z,7.1nm,0.6s
EIDS Eidsvold 53.02 120 P **P 09 18 41.7 -0.1**
EIDS IAmb IAmb 09 18 43.1
comp=Z,9.8nm,0.8s
CHM Chimkent 53.27 331 *e*P **P 09 18 44.7 +1.4**
CHM Chimkent 53.27 331 *e*P **P 09 18 44.7 +1.4**
KNGR Kungurtug, Tuv 53.41 357 *i* P **P 09 18 45.6 +1.3**
KNGR pmax pmax
comp=Z,10.0nm,0.7s
KK31 Karatay Array 53.44 332 **P 09 18 44.6 +0.1**
KK31 Karatay Array 53.44 332 P **P 09 18 44.7 +0.1**
KK31 pmax pmax
comp=Z,4.0nm,1.1s
KKAR Karatay Array 53.44 332 **P 09 18 44.5 0.0**
KKAR Karatay Array 53.44 332 P **P 09 18 44.5 0.0**
DGZ Jazzator, Alta 53.72 349 *i* P **P 09 18 46.8 +0.2**
DGZ pmax pmax
comp=Z,28nm,0.4s
BNX BinXian 53.82 23 ⇓P **P 09 18 47.8 +0.5**
BNX pmax pmax
comp=Z,10.0nm,0.7s
MOY Mondy 54.39 360 *e*P **P 09 18 52.0 +0.6**
TLY Talaya 54.45 2 *ce*P **P 09 18 53.7 +1.9**
TLY pmax pmax
comp=Z,7.0nm,0.8s
USRK Ussuriysk Ar. 54.51 27 P **P 09 18 52.2 0.0**
comp=Z,12nm,0.7s,baz=213,slow=4.6,SNR=9.9
comp=Z,12nm,0.7s
HILR Hailar Array B 54.73 15 P **P 09 18 54.1 +0.3**
comp=Z,1.8nm,0.4s,baz=188,slow=9.3,SNR=7.0
comp=Z,1.8nm,0.4s
KURBB Kurchatov Arra 56.73 343 P **P 09 19 08.4 +0.4**
comp=Z,4.1nm,0.6s,baz=160,slow=6.7,SNR=21
KURBB PcP **PcP 09 20 04.4 +0.9**
comp=Z,0.7nm,0.4s,baz=146,slow=3.3,SNR=0.7
comp=Z,4.1nm,0.6s
KURK Kurchatov 56.78 343 **P 09 19 08.2 -0.3**
KURK IAmb IAmb 09 19 09.6
comp=Z,7.7nm,0.7s
KURK Kurchatov 56.78 343 *ce*P **P 09 19 09.0 +0.6**
KURK pmax pmax
comp=Z,17nm,1.5s
KURK Kurchatov 56.78 343 P **P 09 19 08.5 +0.1**
KURK pP **pP 09 19 22.2 -1.6**
ZAA0 Zalesovo Array 58.27 349 **P 09 19 18.8 0.0**
ZALV Zalesovo Beam 58.27 349 P **P 09 19 18.9 +0.1**
comp=Z,44nm,0.8s,baz=168,slow=5.3,SNR=162
comp=Z,44nm,0.8s
ZALV Zalesovo Beam 58.27 349 **P 09 19 18.8 -0.1**
KLR Kul'dur 58.37 23 *ce*P **P 09 19 20.1 +0.4**
KLR pmax pmax
comp=Z,1.0nm,0.8s
ZEA Zeya 60.57 18 *e*P **P 09 19 35.3 +0.6**
H04N2 CROZET ISLANDS 60.66 217 T T 10 24 43.9
baz=59,slow=75,SNR=237
H04N1 CROZET ISLANDS 60.67 217 T T 10 24 44.4
baz=59,slow=75,SNR=197
H04N3 CROZET ISLANDS 60.68 217 T T 10 24 43.1
baz=59,slow=75,SNR=177
BVAR Borovoye Array 61.40 339 P **P 09 19 40.1 -0.3**
comp=Z,5.9nm,0.5s,baz=142,slow=7.5,SNR=36
comp=Z,5.9nm,0.5s
BORK Borovoye 61.45 339 **P 09 19 40.2 -0.4**
BORK IAmb IAmb 09 19 41.6
comp=Z,18nm,1.1s
BORK Borovoye 61.45 339 *ce*P **P 09 19 40.5 -0.2**
BORK pmax pmax
comp=Z,8.0nm,0.8s
BORK Borovoye 61.45 339 P **P 09 19 40.3 -0.4**
BORK pP **pP 09 19 53.8 -2.4**
BORK x x 09 19 56.0
BORK x x 09 19 57.5
YSS Yuzhno-Sakhali 61.74 31 *ce*P **P 09 19 43.6 +0.8**
YSS pmax pmax
comp=Z,17nm,1.3s
AB31 Akbulak array 62.94 331 **P 09 19 51.1 +0.3**
AB31 IAmb IAmb 09 19 51.8
comp=Z,21nm,0.9s
ABKAR Akbulak array 62.94 331 **P 09 19 50.8 0.0**
FURI Furi 63.23 281 LR LR 09 43 42.9
comp=Z,31nm,19.3s,baz=134,slow=33
KMBO Kilima Mbogo 63.74 270 *i* P **P 09 19 56.2 -0.9**
KMBO pmax pmax
comp=Z,14nm,0.3s
AKTO Aktyubinsk 64.66 331 P **P 09 20 01.8 -0.3**
comp=Z,3.7nm,0.5s,baz=139,slow=6.0,SNR=11
comp=Z,3.7nm,0.5s
DZM Mont Dzumac 66.16 113 P **P 09 20 13.3 +0.9**
DZM IAmb IAmb 09 21 39.5
comp=Z,20nm,1.3s
SVE Sverdlovsk 67.92 337 *e*P **P 09 20 24.1 +1.3**
YAK Yakutsk 68.39 14 *e*P **P 09 20 25.3 -0.3**
YAK *e**PP **pP 09 20 42.5 +1.1**
YAK *e* 09 20 50.3
YAK *e* 09 22 56.6
YAK *e*S **S 09 29 22.0 -0.3**
YAK *e**SS SKiKP 09 30 00.2 -14
YAK *e* 09 30 18.1
YAK *e*SS **SS 09 33 47.1 +0.1**
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,138nm,4.4s
YAK pmax pmax
comp=N,132nm,6.2s
YAK pmax pmax
comp=E,100nm,3.2s
YAK smax smax
comp=E,88nm,4.9s
YAK smax smax
comp=N,43nm,3.5s
ARTI Arti 68.50 336 P **P 09 20 26.5 0.0**
comp=N,11nm,0.5s,baz=128,slow=3.9,SNR=16
comp=N,11nm,0.5s
ARTI Arti 68.50 336 P **P 09 20 26.3 -0.2**
ARTI Arti 68.50 336 *c i*P **P 09 20 26.4 0.0**
ARTI *PP **pP 09 20 40.3 -1.9**
ARTI 09 22 54.8
ARTI S **S 09 29 24.1 +0.1**
ARTI SS **SS 09 33 42.8 -6.2**
ARTI pmax pmax
comp=Z,9.0nm,0.6s
ARTI Arti 68.50 336 P **P 09 20 26.5 0.0**
ARTI pP **pP 09 20 40.4 -1.8**
ARTI x x 09 20 44.1
MAW Mawson 69.64 195 LR LR 09 42 37.3
comp=Z,86nm,21.5s,baz=74,slow=29
KBZ Khabaz 69.67 319 P **P 09 20 34.7 +0.8**
comp=Z,4.9nm,0.8s,baz=134,slow=6.6,SNR=10.0
comp=Z,4.9nm,0.8s
KBZ Khabaz 69.67 319 *ce*P **P 09 20 35.7 +1.8**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
SHA1 Shidzhatmaz 69.83 319 *ce*P **P 09 20 37.1 +1.8**
KIV Kislovodsk 69.91 319 P **P 09 20 36.6 +1.1**
comp=Z,8.0nm,0.8s
MBAR Mbarara 70.27 270 LR LR 09 48 26.8
comp=Z,28nm,18.4s,baz=71,slow=33
BELG Belogornoye 71.04 329 P **P 09 20 42.1 0.0**
comp=Z,14nm,0.6s,baz=150,slow=5.7,SNR=9.6
comp=Z,14nm,0.6s
BELG Belogornoye 71.04 329 *i* P **P 09 20 41.8 -0.3**
BELG pmax pmax
comp=Z,2.0nm,0.7s
MMAI Mount Meron Ar 71.40 306 P **P 09 20 45.0 +0.2**
comp=Z,6.4nm,0.9s,baz=90,slow=12,SNR=2.2
comp=Z,6.4nm,0.9s
NRIK Noril'sk 72.71 355 P **P 09 20 51.4 -0.4**
comp=Z,4.6nm,0.4s,baz=153,slow=5.1,SNR=13
comp=Z,4.6nm,0.4s
NRIK Noril'sk 72.71 355 P **P 09 20 51.8 0.0**
NRIK Noril'sk 72.71 355 P **P 09 20 51.8 0.0**
NRIK pmax pmax
comp=Z,9.0nm,1.0s
MA2 Magadan 73.46 24 P **P 09 20 55.9 -0.5**
MA2 IAmb IAmb 09 20 57.8
comp=Z,8.7nm,0.8s
MA2 Magadan 73.46 24 *ce*P **P 09 20 56.4 0.0**
MA2 pmax pmax
comp=Z,8.0nm,0.7s
MA2 Magadan 73.46 24 P **P 09 20 56.5 0.0**
comp=Z,13nm,1.0s
MA2 Magadan 73.46 24 P **P 09 20 56.4 0.0**
CSS Mathiatis 73.59 308 P **P 09 20 59.2 +1.4**
comp=Z,23nm,1.1s
PET Petropavlovsk 73.59 32 P **P 09 20 56.7 -0.6**
KIRV Kirov 73.64 335 P **P 09 20 58.5 +1.1**
comp=Z,22nm,0.6s,baz=94,slow=2.4,SNR=6.1
comp=Z,22nm,0.6s
KIRV Kirov 73.64 335 *ce*P **P 09 20 58.4 +1.0**
VRH Novokhopyorsk 73.66 326 *e*P **P 09 20 56.1 -1.6**
VRH pmax pmax
comp=Z,10.0nm,0.9s
BR104 Keskin Array S 74.69 312 P **P 09 21 04.5 +0.3**
comp=Z,4.1nm,1.1s
BR131 Keskin Array S 74.69 312 **P 09 21 03.8 -0.4**
BR131 Keskin Array S 74.69 312 P **P 09 21 03.8 -0.4**
BR131 pmax pmax
comp=Z,17nm,1.8s
BRTR Keskin Array B 74.69 312 P **P 09 21 04.7 +0.4**
comp=Z,2.7nm,0.7s,baz=136,slow=7.2,SNR=13
comp=Z,2.7nm,0.7s
BRTR Keskin Array B 74.69 312 P **P 09 21 04.0 -0.2**
BRTR Keskin Array B 74.69 312 P **P 09 21 04.1 -0.2**
BR105 Keskin Array S 74.71 312 P **P 09 21 04.3 0.0**
comp=Z,4.2nm,0.7s
BR106 Keskin Array S 74.71 312 P **P 09 21 04.5 +0.1**
comp=Z,3.5nm,0.8s
GVZ Greta Valley S 74.88 134 P **P 09 21 06.1 +1.0**
VORD Divnogorie 74.94 325 *e*P **P 09 21 03.9 -1.3**
VORD pmax pmax
comp=Z,9.0nm,0.9s
VSR Storozhevoye 75.12 325 *e*P **P 09 21 04.1 -2.1**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VORR Voronezh 75.28 325 *e*P **P 09 21 05.1 -2.0**
LBTB Lobatse 75.55 245 LR LR 09 51 54.5
comp=Z,17μm,18.2s,baz=146,slow=34
LPSR Galich'ya Gora 75.82 326 *e*P **P 09 21 09.3 -0.9**
LPSR pmax pmax
comp=Z,9.0nm,0.8s
BOSA Boshof 76.10 241 LR LR 09 46 32.4
comp=Z,46nm,19.8s,baz=22,slow=29
SEY Seymchan 76.11 22 *ce*P **P 09 21 12.0 +0.3**
SEY pmax pmax
comp=Z,5.0nm,0.6s
TIXI Tiksi 76.61 9 P **P 09 21 13.5 -0.8**
TIXI IAmb IAmb 09 21 14.8
comp=Z,8.1nm,0.7s
TIXI Tiksi 76.61 9 *i* P **P 09 21 13.2 -1.1**
TIXI pmax pmax
comp=Z,14nm,1.2s
TIXI Tiksi 76.61 9 P **P 09 21 13.1 -1.2**
BKZ Black Stump Fm 76.90 129 P **P 09 21 16.6 -0.2**
OBN Obninsk 78.12 328 *de*P **P 09 21 22.8 -0.2**
OBN 09 21 34.0
OBN *SS **sS 09 31 36.0 -3.7**
OBN *e* 09 32 25.5
OBN SS **SS 09 36 10.0 -5.6**
OBN pmax pmax
comp=Z,10.0nm,0.4s
OBN MLR MLR
comp=Z,83nm,17.0s
CTYL Yalikoy Yolu 79.09 313 P **P 09 21 29.2 +0.5**
KLMR Klimovskoe 79.11 334 *e*P **P 09 21 28.2 -0.2**
KLMR pmax pmax
comp=Z,16nm,1.3s
TIRR Tirgusor 79.72 316 P **P 09 21 31.7 -0.4**
comp=Z,13nm,2.0s
SUR Sutherland 80.16 238 LR LR 09 50 26.0
comp=Z,28nm,19.6s,baz=134,slow=31
SORM Soroca 80.70 320 P **P 09 21 37.9 +0.6**
AK10 Malin Array Si 80.79 322 P **P 09 21 38.8 +1.1**
AK05 Malin Array Si 80.83 322 P **P 09 21 38.8 +0.9**
AKASG Malin Array Be 80.84 322 P **P 09 21 37.7 -0.3**
comp=Z,0.6nm,0.5s,baz=88,slow=5.1,SNR=4.1
comp=Z,0.6nm,0.5s
AK04 Malin Array Si 80.88 322 P **P 09 21 38.9 +0.7**
AK18 Malin Array Si 80.94 322 P **P 09 21 39.2 +0.7**
AK21 Malin Array Si 80.97 322 P **P 09 21 39.4 +0.7**
AK19 Malin Array Si 80.97 322 P **P 09 21 39.5 +0.8**
AK20 Malin Array Si 80.98 322 P **P 09 21 38.8 +0.1**
LUBAR Lubar, Ukraine 81.53 321 P **P 09 21 42.4 +0.7**
MI29 MI29, Kamyanyy 81.61 322 P **P 09 21 42.8 +0.7**
MLR Muntele Rosu 81.67 317 P **P 09 21 43.1 +0.4**
comp=Z,1.2nm,0.4s,baz=140,slow=7.7,SNR=3.6
comp=Z,1.2nm,0.4s
KMPD K-Podol'skiy 82.03 320 P **P 09 21 44.7 +0.4**
BURAR Bucovina Array 82.62 319 P **P 09 21 49.2 +1.6**
BUR08 Bucovina Ar. S 82.64 319 P **P 09 21 49.7 +2.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUR08				IAmb	IAmb	09 22 13.4	
	comp=Z,14nm,1.5s						
MNK	**Minsk**	**82.66**	**326**	*i* P	**P**	**09 21 47.5**	**+0.1**
	comp=E,22nm,1.5s						
MNK				*i* P	**P**	**09 21 47.5**	**+0.1**
	comp=N,16nm,0.8s						
MNK				*i* P	**P**	**09 21 47.5**	**+0.1**
	comp=Z,16nm,0.8s,baz=105						
MNK				*i* pP	**pP**	**09 22 04.1**	**+0.6**
MNK				*i* sP	**sP**	**09 22 11.3**	**+1.5**
MNK				*i* PP	**PP**	**09 24 57.0**	**-0.9**
MNK				*i* PPP	PPP	09 26 49.5	
MNK				*i* S	**SKSac**	**09 32 01.2**	**-2.5**
MNK				*i* sS	**sS**	**09 32 30.1**	**+2.5**
MNK				*i* SS	**SS**	**09 37 18.8**	**-4.7**
MNK				*i* SSS	SSS	09 40 39.6	
MNK				*i* LQ	LQ	09 53 18.6	
MNK				*i* LRM	MLR	09 59 47.3	
	comp=Z,82nm,19.3s						
MNK				*i* LRM	MLR	09 59 54.1	
	comp=N,57nm,15.9s						
MNK				*i* LRM	MLR	10 00 01.0	
	comp=E,90nm,15.9s						
MNK	**Minsk**	**82.66**	**326**	*i* P	**P**	**09 21 47.5**	**+0.1**
MNK				*i* *PP	**pP**	**09 22 04.1**	**+0.6**
MNK				*i* *SP	**sP**	**09 22 11.3**	**+1.5**
MNK				*i*		09 24 56.9	
MNK				*i* PPP	PPP	09 26 49.4	
MNK				*i* S	**SKSac**	**09 32 01.2**	**-2.5**
MNK				*i* SS	**SS**	**09 37 18.8**	**-4.7**
MNK				pmax	pmax		
	comp=N,16nm,0.8s						
MNK				pmax	pmax		
	comp=E,22nm,1.5s						
MNK				pmax	pmax		
	comp=Z,16nm,0.8s						
MNK				MLR	MLR		
	comp=Z,82nm,19.0s						
MNK				MLR	MLR		
	comp=N,57nm,16.0s						
MNK				MLR	MLR		
	comp=E,90nm,16.0s						
TSUM	**Tsumeb**	**82.84**	**251**	LR	LR	09 53 17.5	
	comp=E,43nm,21.7s,baz=142,slow=32						
RNPP5	**Staryi Chortor**	**83.01**	**322**	P	**P**	**09 21 50.3**	**+0.9**
LIT	**Litokhoron**	**83.12**	**311**	P	**P**	**09 21 50.3**	**+0.1**
LIT	**Litokhoron**	**83.12**	**311**	P	**P**	**09 21 50.3**	**+0.1**
LIT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NACGM	**Naroch**	**83.38**	**326**	*e*P	**P**	**09 21 52.7**	**+1.5**
	comp=Z,18nm,0.8s,baz=105						
BILL	**Bilibino**	**83.67**	**20**	*i* P	**P**	**09 21 53.7**	**+1.2**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.8s						
LVZ	**Lovozero**	**84.00**	**340**	P	**P**	**09 21 53.9**	**-0.3**
FINES	**FINESS Array B**	**85.40**	**332**	P	**P**	**09 22 01.4**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=127,slow=6.4,SNR=18						
	comp=Z,1.6nm,0.4s						
FINES	**FINESS Array B**	**85.40**	**332**	P	**P**	**09 22 02.1**	**+0.8**
FINES	**FINESS Array B**	**85.40**	**332**	P	**P**	**09 22 02.1**	**+0.8**
NVL	**N'lazarevskaya**	**86.98**	**199**	*e*P	**P**	**09 22 12.7**	**+3.8**
NVL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARCES	**ARCESS Array B**	**87.69**	**340**	P	**P**	**09 22 12.8**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=77,slow=5.2,SNR=11						
	comp=Z,1.9nm,0.4s						
ARCES	**ARCESS Array B**	**87.69**	**340**	P	**P**	**09 22 12.7**	**+0.4**
ARCES	**ARCESS Array B**	**87.69**	**340**	P	**P**	**09 22 12.7**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,163nm,2.0s						
GERES	**GERESS Array B**	**90.41**	**319**	P	**P**	**09 22 26.9**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=90,slow=5.3,SNR=7.2						
	comp=Z,1.3nm,0.8s						
CIMO	**Cimolais**	**91.11**	**316**	P	**P**	**09 22 29.7**	**+0.7**
CIMO				IAmb	IAmb	09 22 31.2	
	comp=Z,6.4nm,0.7s						
HFS	**Hagfors**	**91.18**	**330**	P	**P**	**09 22 29.4**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=117,slow=5.2,SNR=7.5						
	comp=Z,3.2nm,0.8s						
SPB2	**Spitsbergen Ar**	**91.74**	**348**	P	**P**	**09 22 30.9**	**-0.3**
SPITS	**Spitsbergen Ar**	**91.75**	**348**	P	**P**	**09 22 31.1**	**-0.1**
	comp=Z,13nm,1.0s,baz=114,slow=8.4,SNR=15						
	comp=Z,13nm,1.0s						
NOA	**NORSAR Array B**	**92.45**	**331**	P	**P**	**09 22 34.9**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=93,slow=5.0,SNR=3.5						
	comp=Z,1.0nm,0.7s						
ANM	**Nome**	**94.19**	**26**	P	**P**	**09 22 42.7**	**0.0**
ANM				IAmb	IAmb	09 23 55.4	
	comp=Z,13nm,1.6s						
ANM	**Nome**	**94.19**	**26**	P	**P**	**09 22 42.7**	**0.0**
ANM				pmax	pmax		
	comp=Z,13nm,1.6s						
RDOG	**Red Dog Mine**	**94.98**	**22**	P	**P**	**09 22 45.9**	**-0.4**
RDOG				IAmb	IAmb	09 25 13.8	
	comp=Z,13nm,1.6s						
YKA	**Yellowknife Ar**	**114.96**	**17**	PKP	**PKiKP**	**09 28 03.7**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=330,slow=3.6,SNR=2.6						
NVAR	**Mina Array Bea**	**129.66**	**40**	PKP	**PKiKP**	**09 28 34.8**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=293,slow=3.8,SNR=4.2						
ULM	**Lac du Bonnet**	**130.73**	**14**	PKP	**PKPdf**	**09 28 35.2**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=42,slow=6.0,SNR=3.7						
PDAR	**Pinedale Array**	**131.88**	**30**	PKP	**PKPdf**	**09 28 37.9**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=90,slow=2.0,SNR=4.1						
CPUP	**Villa Florida**	**144.15**	**214**	PKP	**PKPdf**	**09 29 01.3**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=146,slow=3.6,SNR=4.0						
BDFB	**Brasilia**	**144.23**	**238**	PKP	**PKPdf**	**09 29 01.7**	**+0.7**
	comp=Z,2.2nm,0.5s,baz=121,slow=5.9,SNR=4.2						
TXAR	**Lajitas Array**	**144.80**	**39**	PKP	**PKPdf**	**09 29 01.5**	**-0.1**
	comp=Z,4.7nm,0.5s,baz=254,slow=0.7,SNR=82						
TXAR				SKP	**SKPbc**	**09 32 37.3**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=339,slow=0.9,SNR=3.5						

*IDC **01** 09:20:15.7±1.1, 9°.28S×114°.31E, h0^{km}, mb3.9/10, mbtmp3.9/12, ML3.9/2, Error ellipse: s-maj=48.0km s-min=15.7km az=49.0*

*DJA **01** 09:20:27.2±0.3, 9°S±4°×11°5E±°, h56^{km}±5^{km}, M4.6/24, mB5.3/4, mb4.6/13, MLv4.5/24, Mw(mB)4.8/4, MwMwp6.2/1, Mwp6.2/1*

ISC 01 09:20:26.1±0.8**, 9°.23S**±0°.08×**114°.75E**±0°.04**, h82**^{km}±7^{km}**, n44,** σ**1°.71**/53**, mb3.8**/10**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**0.56**	**44**	P	**Pn**	**09 20 40.9**	**+0.2**
IGBI				S	**Sn**	**09 20 50.9**	**-0.5**
DNP	**Denpasar**	**0.71**	**40**	P	**Pn**	**09 20 42.9**	**+0.8**
DNP				S	**Sn**	**09 20 55.0**	**+1.0**
RTBI	**Rangdo, Negare**	**0.79**	**14**	P	**Pn**	**09 20 43.1**	**+0.1**
RTBI				S	**Sn**	**09 20 55.8**	**+0.4**
JAGI	**Jajag, Banyuwa**	**0.96**	**322**	P	**Pn**	**09 20 44.7**	**-0.2**
JAGI				S	**Sn**	**09 20 57.9**	**-0.9**
KHKI	**Kahang-Kahang**	**1.21**	**45**	P	**Pn**	**09 20 50.0**	**+2.2**
KHKI				S	**Sn**	**09 21 06.4**	**+2.3**
ABJI	**Asem Bagus**	**1.51**	**340**	P	**Pn**	**09 20 53.2**	**+1.5**
GMJI	**Gumukmas**	**1.60**	**306**	P	**Pn**	**09 20 53.7**	**+0.8**
GMJI				S	**Sn**	**09 21 13.8**	**+0.7**
BLJI	**Banyuglugur**	**1.87**	**322**	P	**Pn**	**09 20 58.0**	**+1.7**
BLJI				S	**Sn**	**09 21 19.9**	**+0.6**
TWSI	**Taliwang, Sumb**	**2.16**	**77**	P	**Pn**	**09 21 01.4**	**+1.2**
KMMI	**Kalianget**	**2.30**	**340**	P	**Pn**	**09 21 04.3**	**+2.2**
PLAI	**Plampang**	**3.02**	**83**	P	**Pn**	**09 21 13.4**	**+1.7**
SNJI	**Sawahan-Nganju**	**3.29**	**296**	P	**Pn**	**09 21 18.0**	**+2.4**
SJI	**Sawahan**	**3.30**	**296**	P	**Pn**	**09 21 17.2**	**+1.5**
DBNI	**Kabupaten Domp**	**3.59**	**79**	P	**Pn**	**09 21 21.6**	**+2.0**
PCJI	**Pacitan**	**3.68**	**286**	P	**Pn**	**09 21 22.3**	**+1.6**
NGJI	**Ngawi**	**3.74**	**299**	P	**Pn**	**09 21 23.4**	**+1.8**
UGM	**Wanagama**	**4.38**	**287**	P	**Pn**	**09 21 33.2**	**+2.9**
UGM				S	**Sn**	**09 22 20.5**	**+0.3**
WBSI	**Waikabubak, Su**	**4.60**	**95**	P	**Pn**	**09 21 34.9**	**+1.6**
WBSI				S	**Sn**	**09 22 22.8**	**-2.7**
BASI	**Baing, Sumba**	**5.83**	**100**	P	**Pn**	**09 21 50.4**	**+0.4**
	120nm,0.7s						
KPJI	**Karang Pucung**	**6.06**	**288**	P	**Pn**	**09 21 55.5**	**+2.3**
	0.2nm38nm,0.6s						
BSSI	**Bau Bau, Buton**	**6.46**	**62**	P	**Pn**	**09 22 00.6**	**+1.9**
	0.3nm44nm,0.8s						
KAPI	**Kappang**	**6.49**	**50**	Pn	**Pn**	**09 21 59.6**	**+0.5**
	3.2nm,0.3s,baz=187,slow=4.9,SNR=5.5						
KAPI				Sn	**Sn**	**09 23 10.8**	**-0.9**
	10nm,0.3s,baz=249,slow=22,SNR=19						
	12nm,0.4s						
KAPI	**Kappang**	**6.49**	**50**	P	**Pn**	**09 22 00.2**	**+1.1**
EDFI	**Ende, Flores**	**6.87**	**87**	P	**Pn**	**09 22 03.9**	**-0.5**
	0.2nm735nm40nm,0.9s						
PMSI	**Majene**	**7.04**	**36**	P	**Pn**	**09 22 08.6**	**+2.0**
BBJI	**Bungbulang**	**7.24**	**283**	P	**Pn**	**09 22 10.6**	**+1.2**
	0.1nm13nm,0.6s						
MMSI	**Mamuju**	**7.70**	**33**	P	**Pn**	**09 22 17.5**	**+1.9**
	0.1nm915nm25nm,1.4s						
CNJI	**Cibinong**	**7.78**	**284**	P	**Pn**	**09 22 17.6**	**+0.9**
	0.2nm27nm,1.2s						
MNAI	**Manna**	**12.67**	**292**	P	**Pn**	**09 23 21.8**	**-1.5**
EGSI	**Enggano, Bengk**	**12.96**	**286**	P	**Pn**	**09 23 24.5**	**-2.6**
FITZ	**Fitzroy Crossi**	**13.77**	**131**	Pn	**Pn**	**09 23 36.8**	**-1.0**
	0.4nm,0.3s,baz=318,slow=5.1,SNR=18						
FITZ				Sn	Sn	09 26 00.4	-8.8
	1.5nm,0.3s,baz=171,slow=18,SNR=14						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**21.72**	**122**	P	**P**	**09 25 11.5**	**+0.7**
	1.3nm,0.4s,baz=294,slow=12,SNR=29						
WRA				S	**S**	**09 29 05.1**	**-1.6**
	0.6nm,0.6s,baz=284,slow=24,SNR=4.9						
	1.3nm,0.4s						
ASAR	**Alice Springs**	**23.27**	**130**	P	**P**	**09 25 28.1**	**+1.3**
	1.5nm,0.4s,baz=302,slow=9.3,SNR=52						
ASAR				S	**S**	**09 29 38.2**	**+5.3**
	0.2nm,0.6s,baz=294,slow=23,SNR=1.6						
	1.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.63**	**330**	P	**P**	**09 26 39.4**	**-2.2**
	1.0nm,0.3s,baz=160,slow=7.7,SNR=5.0						
	1.0nm,0.3s						
STKA	**Stephens Creek**	**33.58**	**136**	P	**P**	**09 27 00.6**	**+2.1**
	2.6nm,0.7s,baz=302,slow=9.9,SNR=4.9						
	2.6nm,0.7s						
H08S2	**Diego Garcia H**	**41.81**	**269**	T	T	10 12 48.5	
	baz=96						
H08S3	**Diego Garcia H**	**41.82**	**269**	T	T	10 12 55.4	
	baz=96						
H08S1	**Diego Carcia H**	**41.83**	**269**	T	T	10 12 53.0	
	baz=96						
LZDM	**Lanzhou Array**	**46.13**	**348**	P	**P**	**09 28 42.6**	**-0.2**
	0.6nm,0.3s,baz=153,slow=9.7,SNR=2.5						
	0.6nm,0.3s						
SONM	**Songino Array**	**57.29**	**353**	P	**P**	**09 30 04.4**	**-1.0**
	0.2nm,0.4s,baz=178,slow=9.7,SNR=2.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**62.84**	**336**	P	**P**	**09 30 42.5**	**-0.7**
	0.4nm,0.4s,baz=149,slow=7.6,SNR=8.8						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**67.84**	**341**	P	**P**	**09 31 13.7**	**-1.6**
	0.6nm,0.5s,baz=150,slow=5.8,SNR=3.1						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**72.58**	**334**	P	**P**	**09 31 43.6**	**-0.7**
	0.2nm,0.3s,baz=126,slow=3.7,SNR=2.4						
	0.2nm,0.3s						
BRTR	**Keskin Array B**	**89.07**	**310**	P	**P**	**09 33 13.3**	**+0.7**
	0.7nm,0.8s,baz=107,slow=7.9,SNR=3.8						
	0.7nm,0.8s						

IDC 01 09:20:37.6±999.0**, 48°.83N**×**47°.82E, h0**^{km}**, Error ellipse: s-maj=2226.0km s-min=182.2km az=71.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**6.82**	**73**	I	I	10 00 00.0	
	baz=262,slow=293,SNR=0.9						
I46RU	**ZALESOVO INFRA**	**23.46**	**63**	I	I	11 45 20.0	
	baz=271,slow=322,SNR=0.6						
I34MN	**SONGINO INFRAS**	**38.14**	**69**	I	I	13 14 10.0	
	baz=293,slow=338,SNR=1.3						

*IDC **01** 09:43:53.3±0.5, 28°.90N×95°.71E, h0^{km}, mb4.4/33, mbtmp4.4/35, ML4.8/3, MS3.8/48, Error ellipse: s-maj=12.7km s-min=10.8km az=60.0*

*MOS **01** 09:43:53.2±1.1, 28°.94N×95°.77E, h9^{km}, mb4.9/41, MS4.1/5, Error ellipse: s-maj=7.1km s-min=4.0km az=116.6*

*NEIC **01** 09:43:55.8±1.2, 28°.98N±0°.07×95°.72E±0°.08, h10^{km}±1^{km}, mb4.9/120, Error ellipse: s-maj=11.9km s-min=11.0km az=30.0*

*BJI **01** 09:43:55.8, 28°.92N×95°.72E, h13^{km}, mB4.9/24, mb4.6/59, ML4.5/13, Ms4.3/55, Ms7 4.2/56*

*NDI **01** 09:43:56.8±2.2, 29°.01N×95°.57E, h20^{km}±16^{km}, ML5.1, MW5.1*

ISC 01 09:43:55.3±0.6**, 28°.94N**±0°.03×**95°.62E**±0°.03**, h12**^{km}±3^{km}**, n425,** σ**1°.71**/400**, mb4.8**/143**, MS4.0**/54**, 14C-3D, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PASG	**PASIGHAT**	**0.91**	**197**	*e*P	**Pn**	**09 44 14.2**	**+0.3**
PASG				*e*S	**Sn**	**09 44 27.2**	**+0.3**
ZIRO	**ZIRO**	**2.10**	**229**	*e*P	**Pn**	**09 44 30.9**	**+0.4**
ZIRO				*e*S	**Sn**	**09 44 54.9**	**-1.7**
ZIRO				IAML		09 45 08.3	
	comp=N,92µm,0.8s						
ZIRO				IAML		09 45 13.4	
	comp=E,53µm,0.3s						
ITAN	**ITANAGAR**	**2.45**	**224**	*e*P	**Pn**	**09 44 35.4**	**+0.3**
ITAN				*e*S	**Sn**	**09 45 04.5**	**-0.5**
ITAN				IAML		09 45 18.7	
	comp=N,41µm,0.3s						
ITAN				IAML		09 45 18.8	
	comp=E,67µm,0.4s						
JORH	**JORHAT**	**2.50**	**209**	*e*P	**Pn**	**09 44 36.6**	**+0.9**
JORH				*e*S	**Sn**	**09 45 05.8**	**-0.3**
JORH				IAML		09 45 20.5	
	comp=E,19µm,0.4s						
JORH				IAML		09 45 22.0	
	comp=N,19µm,0.4s						
MOKO	**MOKOCHONG**	**2.78**	**201**	*e*P	**Pb**	**09 44 42.6**	**-2.5**
MOKO				*e*S	**Sn**	**09 45 13.7**	**+0.3**
MOKO				IAML		09 45 18.7	
	comp=E,15µm,0.5s						
MOKO				IAML		09 45 19.0	
	comp=N,10µm,0.4s						
TEZP	**TEZPUR**	**3.41**	**228**	*e*P	**Pn**	**09 44 48.6**	**+0.4**
TEZP				*e*S	**Sn**	**09 45 26.2**	**-2.3**
TEZP				IAML		09 45 34.0	
	comp=E,8µm,0.2s						
TEZP				IAML		09 45 34.8	
	comp=N,8µm,0.1s						
KOHI	**KOHIMA**	**3.47**	**203**	*e*P	**Pn**	**09 44 50.1**	**+0.8**
KOHI				*e*S	**Sn**	**09 45 27.9**	**-2.5**
KOHI				IAML		09 45 52.3	
	comp=E,9µm,0.4s						
KOHI				IAML		09 45 59.1	
	comp=N,9µm,0.8s						
TAWA	**Tawang**	**3.57**	**249**	*e*P	**Pn**	**09 44 50.5**	**-0.4**
TAWA				*e*S	**Sn**	**09 45 28.5**	**-4.7**
TAWA				IAML		09 45 42.4	
	comp=E,7µm,0.1s						
TAWA				IAML		09 45 43.1	
	comp=N,7µm,0.3s						
LSA	**Lhasa**	**3.98**	**282**		**Pn**	**09 44 59.8**	**+3.3**
LSA	**Lhasa**	**3.98**	**282**	Pn	**Pn**	**09 44 58.0**	**+1.4**
LSA				Sn	**Sn**	**09 45 41.4**	**-2.0**
LSA				smax	smax		
	comp=N,470nm,0.6s						
LSA				smax	smax		
	comp=N,670nm,0.7s						
LSA	**Lhasa**	**3.98**	**282**	P	**Pn**	**09 44 59.8**	**+3.3**
IMP	**Imphal**	**4.35**	**201**	*e*P	**Pn**	**09 45 04.7**	**+3.3**
IMP				*e*S	**Sn**	**09 45 48.7**	**-3.4**
IMP				IAML		09 46 26.4	
	comp=N,5µm,0.8s						
IMP				IAML		09 46 27.0	
	comp=E,3µm,0.8s						
GUWA	**GUWAHATI**	**4.43**	**233**	*e*P	**Pn**	**09 45 02.2**	**-0.1**
GUWA				*e*S	**Sn**	**09 45 49.9**	**-4.0**
GUWA				IAML		09 46 16.9	
	comp=N,5µm,0.5s						
GUWA				IAML		09 46 18.9	
	comp=E,4µm,0.3s						
TNCH	**TengChong**	**4.67**	**146**	Pn	**Pn**	**09 45 07.7**	**+1.9**
TNCH				Sn	**Sb**	**09 46 09.0**	**-4.5**
TNCH				Sg	**Sg**	**09 46 27.2**	**+1.9**
TNCH				smax	smax		
	comp=E,1µm,1.1s						
TNCH				smax	smax		
	comp=E,1µm,0.9s						
TNCH				LR	LR		
	comp=E,980nm,4.0s						
SHL	**Shillong**	**4.73**	**226**		**Pn**	**09 45 07.5**	**+0.9**
SHL	**Shillong**	**4.73**	**226**	*e*P	**Pn**	**09 45 04.5**	**-2.1**
SHL				*e*S	**Sn**	**09 45 55.5**	**-5.9**
SHL				IAML		09 46 29.5	
	comp=E,5µm,0.9s						
SHL				IAML		09 46 29.9	
	comp=N,5µm,0.8s						
SHL	**Shillong**	**4.73**	**226**	P	**Pn**	**09 45 07.5**	**+0.9**
MORE	**Moreh**	**4.83**	**195**		**Pn**	**09 45 12.2**	**+4.4**
SILR	**SILCHAR**	**4.84**	**212**	*e*P	**Pn**	**09 45 08.3**	**+0.3**
SILR				*e*S	**Sn**	**09 46 01.3**	**-2.7**
SILR				IAML		09 46 10.1	
	comp=N,4µm,0.2s						
SILR				IAML		09 46 13.0	
	comp=E,6µm,0.3s						
PZH	**PanZhiHua**	**5.94**	**113**	Pn	**Pn**	**09 45 25.3**	**+2.1**
PZH				Sn	**Sn**	**09 46 30.0**	**-1.2**
PZH				Sg	**Sg**	**09 46 58.6**	**-7.4**
PZH				smax	smax		
	comp=E,380nm,1.6s						
PZH				smax	smax		
	comp=E,200nm,1.9s						
COBR	**COOCHBEHAR**	**6.07**	**246**	*e*P	**Pn**	**09 45 22.4**	**-2.4**
COBR				*e*S	**Sn**	**09 46 26.8**	**-7.4**
COBR				IAML		09 47 11.7	
	comp=E,3µm,0.7s						
COBR				IAML		09 47 14.9	
	comp=N,4µm,0.4s						
GTK	**Tadong**	**6.41**	**257**	*e*P	**Pn**	**09 45 27.4**	**-2.2**
GTK				*e*S	**Sn**	**09 46 34.7**	**-8.0**
GTK				IAML		09 46 49.8	
	comp=N,1µm,0.1s						
GTK				IAML		09 46 50.6	
	comp=E,2µm,0.4s						
SAIH	**SAIHA**	**6.84**	**201**	*e*P	**Pn**	**09 45 35.8**	**+0.2**
SAIH				*e*S	**Sn**	**09 46 48.4**	**-5.1**
SAIH				IAML		09 47 02.6	
	comp=N,1µm,0.6s						
SAIH				IAML		09 47 04.0	
	comp=E,2µm,1.2s						
BRDH	**Bariadhala**	**7.19**	**211**	Pn	**Pn**	**09 45 40.9**	**+0.6**
	comp=E,44nm,0.3s,baz=57,slow=9.6,SNR=11						
BRDH				Sn	**Sn**	**09 47 02.3**	**+0.5**
	comp=E,90nm,0.3s,baz=170,slow=22,SNR=9.4						
BRDH				LR	LR	09 49 19.4	
	comp=E,551nm,21.8s,baz=7.0,slow=45						
GOMU	**GeErMu**	**7.28**	**355**	Pn	**Pn**	**09 45 42.1**	**+0.4**
GOMU				Sn	**Sn**	**09 47 06.1**	**+1.7**
GOMU				smax	smax		
	comp=E,30nm,0.9s						
GOMU				smax	smax		
	comp=E,21nm,0.8s						
CD2	**Chengdu**	**7.33**	**72**	Pn	**Pn**	**09 45 45.2**	**+3.0**
CD2				Sg	**Sg**	**09 47 47.6**	**-2.9**
CD2				smax	smax		
	comp=E,90nm,1.4s						
CD2				smax	smax		
	comp=E,150nm,1.5s						
CD2				LR	LR		
	comp=E,2µm,7.8s						
CD2				LR	LR		
	comp=E,1µm,9.4s						
CD2				LR	LR		
	comp=E,2µm,10.8s						
KMI2	**Kunming**	**7.39**	**119**	⇑Pn	Pn	09 45 48.1	+5.0
KMI2				Pg	**Pg**	**09 46 17.2**	**+0.4**
KMI2				Sn	**Sn**	**09 47 10.7**	**+3.7**
KMI2				smax	smax		
	comp=N,170nm,1.8s						
KMI2				smax	smax		
	comp=E,150nm,1.6s						
KMI2				LR	LR		
	comp=N,3µm,7.8s						
KMI2				LR	LR		
	comp=E,2µm,7.4s						
KMI2				LR	LR		
	comp=Z,920nm,17.0s						
SHBG	**Sahibganj**	**8.02**	**244**	*e*P	**Pn**	**09 45 50.3**	**-1.3**
SHBG				*e*S	Sn	09 47 12.5	-10
SHBG				IAML		09 47 26.8	
	comp=E,1µm,0.3s						
SHBG				IAML		09 48 23.5	
	comp=N,2µm,0.8s						
LZDM	**Lanzhou Array**	**9.77**	**42**	Pn	**Pn**	**09 46 16.5**	**+0.6**
	baz=180,slow=3.0						
LZDM				LR	LR	09 50 27.2	
	comp=N,945nm,19.2s,baz=190,slow=40						
	comp=N,24nm,0.4s						
LZH	**Lanzhou**	**9.95**	**42**	P	**Pn**	**09 46 20.4**	**+2.2**
LZH				pP		09 46 24.8	
LZH				pmax	pmax		
	comp=N,95nm,1.5s						
LZH				pmax	pmax		
	comp=N,110nm,5.2s						
LZH				LR	LR		
	comp=N,1µm,11.0s						
LZH				LR	LR		
	comp=N,1µm,9.6s						
LZH				LR	LR		
	comp=N,2µm,10.7s						
BOK	**Bokaro**	**10.12**	**242**	*e*P	**Pn**	**09 46 18.5**	**-2.0**
BOK				*e*S	Sn	09 48 03.7	-10
BOK				IAML		09 49 22.7	
	comp=E,547nm,0.4s						
BOK				IAML		09 49 22.8	
	comp=N,924nm,0.4s						
GAYA	**Gaya**	**10.15**	**248**	*e*P	**Pn**	**09 46 20.2**	**-0.6**
GAYA				*e*S	Sn	09 48 03.0	-12
GAYA				IAML		09 48 16.9	
	comp=N,806nm,0.4s						
GAYA				IAML		09 48 22.3	
	comp=E,990nm,0.2s						
VLK	**Valmikinagar**	**10.43**	**265**	*e*P	**Pn**	**09 46 22.8**	**-1.9**
VLK				*e*S	Sn	09 48 08.1	-13
VLK				IAML		09 48 24.3	
	comp=N,773nm,0.3s						
VLK				IAML		09 48 26.2	
	comp=E,802nm,0.4s						
CHTO	**Chiang Mai**	**10.52**	**163**		**Pn**	**09 46 28.3**	**+2.3**
CHTO	**Chiang Mai**	**10.52**	**163**	P	**Pn**	**09 46 29.0**	**+3.0**
CHTO	**Chiang Mai**	**10.52**	**163**	P	**Pn**	**09 46 28.3**	**+2.3**
CHTO	**Chiang Mai**	**10.52**	**163**	P	**Pn**	**09 46 28.2**	**+2.2**
CM31	**Chiang Mai Arr**	**10.86**	**163**	Pn	**Pn**	**09 46 32.7**	**+2.1**
CMAR	**Chiang Mai Arr**	**10.86**	**163**	Pn	**Pn**	**09 46 31.2**	**+0.6**
	comp=E,0.6nm,0.3s,baz=333,slow=12,SNR=38						
CMAR				Sn	**Sn**	**09 48 31.4**	**-0.7**
	baz=5.1,slow=15						
CMAR				LR	LR	09 51 11.6	
	comp=E,638nm,19.7s,baz=340,slow=41						
	comp=E,5.7nm,0.7s						
GTA2	**Gaotai**	**11.07**	**17**	*e*P	**Pn**	**09 46 33.9**	**+0.4**
GTA2				pmax	pmax		
	comp=E,14nm,0.6s						
GTA2				LR	LR		
	comp=E,1µm,12.4s						
GTA2				LR	LR		
	comp=E,580nm,12.0s						
GTA2				LR	LR		
	comp=E,1µm,13.1s						
ENH	**Enshi**	**12.14**	**80**		**Pn**	**09 46 47.3**	**-0.8**
ENH	**Enshi**	**12.14**	**80**	P	**Pn**	**09 46 48.5**	**+0.4**
BWNR	**Bhubaneshwar**	**12.41**	**228**	*e*P	**Pn**	**09 46 50.5**	**-1.3**
BWNR				*e*S	Sn	09 48 57.6	-13
BWNR				IAML		09 49 13.4	
	comp=N,563nm,0.2s						
BWNR				IAML		09 50 39.2	
	comp=E,445nm,0.7s						
XAN	**Xi'an**	**12.43**	**63**	⇓P	**Pn**	**09 46 50.1**	**-2.0**
XAN				sP	P	09 46 59.0	-5.1
XAN				S	**Sn**	**09 49 04.6**	**-6.0**
XAN				pmax	pmax		
	comp=E,16nm,1.0s						
XAN				pmax	pmax		
	comp=E,190nm,5.7s						
XAN				LR	LR		
	comp=E,760nm,7.2s						
XAN				LR	LR		
	comp=E,440nm,5.5s						
XAN				LR	LR		
	comp=E,700nm,11.7s						
PTH	**Pithoragarh**	**13.48**	**277**	*e*P	**Pn**	**09 47 04.3**	**-2.3**
PTH				*e*S	Sn	09 49 19.9	-17
PTH				IAML		09 49 32.0	
	comp=N,166nm,0.7s						
PTH				IAML		09 49 35.3	
	comp=E,162nm,0.5s						
GULI	**GuiLin**	**13.62**	**102**	P	**Pn**	**09 47 10.1**	**+1.8**
GULI				S	**Sn**	**09 49 39.9**	**+0.3**
GULI				pmax	pmax		

comp=E,8.0nm,1.4s
GULI LR LR
comp=E,230nm,8.4s
GULI LR LR
comp=E,360nm,12.3s
GULI LR LR
comp=E,590nm,11.4s
BLSP Bilaspur 13.91 244 *e*P **Pn 09 47 11.7 -0.6**
BLSP *e*S **Sn 09 49 46.9 +0.1**
BLSP IAML 09 50 26.9
comp=N,41nm,0.3s
BLSP IAML 09 51 18.2
comp=E,58nm,0.9s
RAGD RAYAGADA 14.70 232 *e*P **Pn 09 47 21.4 -1.7**
RAGD *e*S **Sn 09 50 07.0 +0.9**
RAGD IAML 09 50 16.6
comp=E,20nm,1.4s
RAGD IAML 09 50 20.3
comp=N,16nm,0.3s
HNLY HANLEY 14.81 289 *e*P **Pn 09 47 22.3 -2.7**
HNLY IAmb IAmb 09 47 57.9
comp=Z,25nm,1.6s
HNLY *e*S **Sn 09 50 06.9 -2.4**
LYN LuoYang 15.38 64 P **Pn 09 47 31.1 -1.0**
LYN sP P 09 47 37.0 +0.2
LYN pmax pmax
comp=Z,17nm,0.8s
LYN LR LR
comp=Z,290nm,6.9s
LYN LR LR
comp=Z,380nm,6.9s
LYN LR LR
comp=Z,360nm,8.6s
SMLA Simla 16.14 282 *e*P **Pn 09 47 40.0 -1.9**
SMLA IAmb IAmb 09 47 54.8
comp=Z,22nm,0.4s
SMLA *e*S **Sn 09 50 38.0 -2.8**
WMQ Urumqi 16.16 339 *e*P **Pn 09 47 41.9 -0.3**
WMQ pP P 09 47 47.0 +1.6
WMQ sP sP 09 47 51.9 +0.1
WMQ sS S 09 50 52.4 -2.2
WMQ pmax pmax
comp=Z,15nm,1.3s
WMQ LR LR
comp=Z,680nm,14.3s
WMQ LR LR
comp=Z,420nm,15.3s
WMQ LR LR
comp=Z,310nm,11.5s
QIZ Qiongzhong 16.30 124 P **P 09 47 48.0 +1.0**
QIZ S **Sn 09 50 49.5 +4.7**
QIZ LR LR
comp=Z,420nm,11.4s
QIZ LR LR
comp=Z,370nm,14.8s
QIZ LR LR
comp=Z,630nm,10.1s
WHN Wuhan 16.35 80 P **Pn 09 47 45.7 +1.1**
WHN LR LR
comp=Z,1μm,13.3s
BTO2 Baotou 16.58 41 *e*P **Pn 09 47 46.2 -1.5**
BTO2 PP **PnPn 09 48 02.1 +5.2**
BTO2 S **Sn 09 50 47.1 -4.6**
BTO2 pmax pmax
comp=Z,21nm,1.2s
BTO2 pmax pmax
comp=Z,230nm,4.7s
BTO2 LR LR
comp=Z,2μm,11.3s
BTO2 LR LR
comp=Z,2μm,11.2s
BTO2 LR LR
comp=Z,3μm,12.2s
HHC Hu-ho-hao-te 17.64 43 *e*P **Pn 09 47 59.4 -1.5**
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,87nm,4.0s
HHC LR LR
comp=Z,750nm,10.2s
HHC LR LR
comp=Z,540nm,9.8s
HHC LR LR
comp=Z,720nm,11.0s
NRDN NARMADA NAGARI 7.72 254 *e*P **Pn 09 48 02.0 +0.1**
NRDN IAML 09 48 30.7
NRDN *e*S **Sn 09 51 17.5 -2.0**
HNS HongShan 18.05 57 ⇑P **P 09 48 06.2 -0.1**
HNS pmax pmax
comp=Z,12nm,1.0s
HNS LR LR
comp=Z,360nm,12.7s
HNS LR LR
comp=Z,470nm,14.9s
HNS LR LR
comp=Z,650nm,17.7s
WUS Wushi 18.13 317 **P 09 48 07.4 0.0**
WUS IAmb IAmb 09 48 12.3
comp=Z,59nm,0.9s
SHLS Shalkode 19.24 322 *e*P **P 09 48 18.8 -0.7**
SHLS Shalkode 19.24 322 *e*P **P 09 48 18.8 -0.7**
TARG Taragay, Kyrgy 19.30 316 **Pn 09 48 21.8 +0.3**
TARG Taragay, Kyrgy 19.30 316 P **Pn 09 48 21.8 +0.3**
TARG pmax pmax
comp=Z,32nm,0.8s
PRZ Przheval'sk 19.40 319 **Pn 09 48 22.3 -0.2**
PRZ IAmb IAmb 09 48 26.3
comp=Z,48nm,0.9s
PRZ Przheval'sk 19.40 319 P **Pn 09 48 22.3 -0.2**
PRZ pmax pmax
comp=Z,48nm,0.9s
HYB Hyderabad 19.41 238 *e*P **Pn 09 48 23.2 +0.6**
HYB *i* P **Pn 09 48 23.2 +0.6**
KSH2 Kashi 19.46 307 P **Pn 09 48 23.5 +0.4**
KSH2 sP sP 09 48 31.4 +3.1
KSH2 S **Sn 09 51 59.6 -1.8**
KSH2 pmax pmax
comp=Z,13nm,0.9s
KSH2 pmax pmax
comp=Z,210nm,5.3s
KSH2 LR LR
comp=Z,280nm,13.7s
KSH2 LR LR
comp=Z,680nm,14.8s
KSH2 LR LR
comp=Z,530nm,16.2s
UZB Uzynbulak 19.48 321 *e*P **Pn 09 48 24.0 +0.6**
UZB Uzynbulak 19.48 321 *e*P **Pn 09 48 24.0 +0.6**
TIA Tai'an 19.50 63 P **P 09 48 22.8 +0.6**
TIA pmax pmax
comp=Z,5.0nm,0.8s
NIL Nilore 19.68 289 **Pn 09 48 25.9 +0.2**
NIL Nilore 19.68 289 P **Pn 09 48 25.9 +0.2**
NIL pmax pmax
comp=Z,28nm,0.9s
SATY Saty 19.76 320 *e*P **Pn 09 48 27.3 +0.6**
SATY *e*S **Sn 09 52 11.1 +2.4**
SATY Saty 19.76 320 *e*P **Pn 09 48 27.4 +0.6**
SATY *e*S **Sn 09 52 11.1 +2.4**
BJT Baijiatuau 20.18 51 **P 09 48 29.6 0.0**
BJT Baijiatuau 20.18 51 P Pn 09 48 31.5 0.0
BJT Baijiatuau 20.18 51 P **P 09 48 29.6 0.0**
BJT pmax pmax
comp=Z,7.0nm,0.7s
BJI2 Beijing 20.18 51 P Pn 09 48 30.7 -0.8
BJI2 pP sP 09 48 34.8 -1.3
BJI2 S **S 09 52 11.3 -4.6**
BJI2 pmax pmax
comp=Z,5.0nm,0.7s
BJI2 LR LR
comp=Z,300nm,11.1s
BJI2 LR LR
comp=Z,220nm,10.0s
BJI2 LR LR
comp=Z,460nm,12.0s
NJ2 Nanjing 20.25 75 *e*P **P 09 48 31.2 +0.7**
NJ2 pmax pmax
comp=Z,5.0nm,0.7s
ZSN Zaisan 20.29 339 *e*P Pn 09 48 32.5 -0.3
ZSN *e*S Sn 09 52 21.1 -0.1
ZSN pmax pmax
comp=Z,25nm,0.9s
ZSN Zaisan 20.29 339 *e*P Pn 09 48 32.5 -0.3
comp=Z,25nm,0.9s
ZSN *e*S Sn 09 52 21.1 0.0

TNSS Tian-Shan 20.59 318 *e*P Pn 09 48 36.3 -0.4
TNSS Tian-Shan 20.59 318 *e*P Pn 09 48 36.4 -0.4
MDOK Medeo 20.60 319 *e*P Pn 09 48 36.5 -0.2
MDOK *e*S Sn 09 52 28.4 -0.6
MDOK Medeo 20.60 319 *e*P Pn 09 48 36.6 -0.1
MDOK *e*S Sn 09 52 28.5 -0.5
SONM Songino Array 20.64 21 P **P 09 48 34.6 -0.1**
comp=Z,20nm,0.7s,baz=208,slow=12,SNR=78
SONM LR LR 09 57 18.5
comp=Z,651nm,19.4s,baz=191,slow=39
comp=Z,20nm,0.7s
SONM Songino Array 20.64 21 P **P 09 48 34.1 -0.6**
SONM Songino Array 20.64 21 P **P 09 48 34.1 -0.6**
SONM pmax pmax
comp=Z,27nm,0.9s
MK31 Makanchi Array 20.65 333*ce*P **P 09 48 35.6 +0.8**
MKAR Makanchi Array 20.65 333 P **P 09 48 35.5 +0.8**
comp=Z,26nm,0.6s,baz=139,slow=14,SNR=241
comp=Z,26nm,0.6s
MKAR Makanchi Array 20.65 333 **P 09 48 35.2 +0.4**
MKAR Makanchi Array 20.65 333 P **P 09 48 35.2 +0.4**
MAKZ Makanchi 20.79 333 **P 09 48 36.4 +0.2**
MAKZ IAmb IAmb 09 48 39.9
comp=Z,53nm,0.8s
MAKZ Makanchi 20.79 333 P **P 09 48 36.4 +0.2**
MAKZ pmax pmax
comp=Z,53nm,0.9s
BOOM Boomskoye usch 20.87 316 P Pn 09 48 38.6 -1.3
BOOM IAmb IAmb 09 48 45.1
comp=Z,29nm,0.6s
BOOM Boomskoye usch 20.87 316 P Pn 09 48 38.6 -1.2
BOOM pmax pmax
comp=Z,29nm,0.6s
ULN Ulaanbaatar 20.87 22 P **P 09 48 36.8 -0.5**
ULN IAmb IAmb 09 48 38.3
comp=Z,32nm,0.7s
ULN Ulaanbaatar 20.87 22*ce*P **P 09 48 36.5 -0.8**
ULN pmax pmax
comp=Z,29nm,0.6s
ULN Ulaanbaatar 20.87 22 P **P 09 48 36.4 -0.8**
comp=Z,2μmcomp=Z,225nm,0.9s
KBK Karagaybulak 21.58 315 P **P 09 48 48.0 +3.1**
SNR=6.7
UCH Uchtor 21.62 313 P **P 09 48 47.7 +2.0**
SNR=18
DGZ Jazzator, Alta 21.66 345 *i* P **P 09 48 46.7 +1.0**
DGZ pmax pmax
comp=Z,27nm,0.7s
KNGR Kungurtug, Tuv 21.69 3 *i* P **P 09 48 48.0 +2.0**
KNGR pmax pmax
comp=Z,38nm,1.0s
MANEM Manem 21.75 299 P **P 09 48 48.0 +1.1**
AAK Ala-Archa 21.85 314 P **P 09 48 49.0 +1.2**
comp=Z,11nm,1.0s,baz=144,slow=7.4,SNR=17
comp=Z,11nm,1.0s
AAK Ala-Archa 21.85 314 P **P 09 48 50.3 +2.5**
SNR=7.9
AAK Ala-Archa 21.85 314 **P 09 48 49.5 +1.7**
AAK IAmb IAmb 09 48 57.3
comp=Z,33nm,0.8s
AAK Ala-Archa 21.85 314*ce*P **P 09 48 50.6 +2.8**
AAK pmax pmax
comp=Z,37nm,0.8s
CHMS Chumysh 21.88 315 P **P 09 48 49.9 +1.9**
SNR=7.4
XLT XiLinHaoTe 22.14 42 *e*P **P 09 48 50.5 -0.4**
XLT pP pP 09 48 54.0 -1.1
XLT sP sP 09 48 59.5 +2.1
XLT pmax pmax
comp=Z,32nm,1.1s
XLT pmax pmax
comp=Z,140nm,3.9s
XLT LR LR
comp=Z,780nm,12.1s
XLT LR LR
comp=Z,1μm,12.6s
USP Ospenovka 22.18 316 P **P 09 48 52.4 +1.1**
SNR=9.0
ARSB Arslanbob 22.19 310 P **P 09 48 51.9 +0.4**
ARSB Arslanbob 22.19 310 P **P 09 48 51.9 +0.4**
ARSB pmax pmax
comp=Z,33nm,1.3s
DRK Karamyk 22.27 304 P **P 09 48 52.7 +0.1**
DRK Karamyk 22.27 304 P **P 09 48 52.7 +0.1**
DRK pmax pmax
comp=Z,61nm,0.7s
MOY Mondy 23.06 9 *e*P **P 09 49 01.6 +1.0**
MOY pmax pmax
comp=Z,29nm,1.7s
BTK Batken 23.19 305 P **P 09 49 02.7 +0.8**
BTK IAmb IAmb 09 49 11.2
comp=Z,32nm,0.7s
BTK Batken 23.19 305 P **P 09 49 02.7 +0.8**
BTK pmax pmax
comp=Z,33nm,0.7s
GAR Garm 23.20 302 P **P 09 49 03.5 +1.3**
KBL Kabul 23.25 291 P **P 09 49 03.9 +1.1**
KBL IAmb IAmb 09 49 20.1
comp=Z,37nm,0.9s
KBL Kabul 23.25 291 P **P 09 49 03.9 +1.1**
KBL pmax pmax
comp=Z,37nm,0.9s
TLY Talaya 23.50 13 P **P 09 49 06.2 +1.4**
YULB Yu-li 23.67 98 P **P 09 49 07.8 +0.9**
YULB IAmb IAmb 09 49 12.3
comp=Z,56nm,1.7s
DL2 Dalian 23.69 58 *e*P **P 09 49 05.9 -0.9**
DL2 *e*S **S 09 53 20.4 -1.1**
DL2 pmax pmax
comp=Z,22nm,0.9s
DL2 LR LR
comp=Z,340nm,15.8s
DL2 LR LR
comp=Z,450nm,15.4s
DL2 LR LR
comp=Z,480nm,14.6s
NACB Ninganchiao 23.69 95 P **P 09 49 08.2 +1.2**
NACB IAmb IAmb 09 49 18.6
comp=Z,100nm,1.8s
CHGR Chuyangaron 23.97 301 P **P 09 49 11.0 +1.4**
CHGR Chuyangaron 23.97 301 P **P 09 49 11.0 +1.4**
CHGR pmax pmax
comp=Z,65nm,0.8s
KULM Kulim 24.00 168 P **P 09 49 09.8 -0.1**
KULM Kulim 24.00 168 P **P 09 49 10.1 +0.2**
KULM Kulim 24.00 168 P **P 09 49 09.7 -0.1**
comp=Z,67nm,0.9s
DZA Taraz 24.00 312 *e*P **P 09 49 12.3 +2.5**
DZA Taraz 24.00 312 *e*P **P 09 49 12.3 +2.5**
IRK Irkutsk 24.16 13 *e*P **P 09 49 11.9 +0.8**
IRK pmax pmax
comp=Z,70nm,2.4s
SHAA Shahritus 24.49 298 P **P 09 49 15.3 +0.8**
SHAA IAmb IAmb 09 49 39.4
comp=Z,56nm,1.0s
IUG Iuzhnay 24.54 309 *e*P **P 09 49 17.2 +2.3**
IUG pmax pmax
comp=Z,18nm,0.8s
IUG Iuzhnay 24.54 309 *e*P **P 09 49 17.2 +2.3**
comp=Z,18nm,0.8s
MLSI Meulaboh, Aceh 24.55 178 P **P 09 49 13.6 -1.3**
comp=Z,131nm,0.9s
KK31 Karatay Array 24.63 312 P **P 09 49 16.4 +0.8**
KK31 Karatay Array 24.63 312 P **P 09 49 16.4 +0.8**
KK31 pmax pmax
comp=Z,13nm,0.9s
KKAR Karatay Array 24.63 312 P **P 09 49 16.7 +1.1**
KKAR Karatay Array 24.63 312 P **P 09 49 16.7 +1.1**
IPM Ipoh 24.86 167 P **P 09 49 17.6 -0.2**
CHM Chimkent 24.90 309 *e*P **P 09 49 20.4 +2.4**
CHM Chimkent 24.90 309 *e*P **P 09 49 20.4 +2.4**
BRLS Borolday 25.04 311 *e*P **P 09 49 21.6 +2.3**
BRLS Borolday 25.04 311 *e*P **P 09 49 21.7 +2.3**
KURBB Kurchatov Arra 25.21 334 P **P 09 49 21.8 +1.1**
comp=Z,14nm,1.0s,baz=145,slow=10,SNR=65
KURBB LR LR 10 00 28.2
comp=Z,443nm,18.4s,baz=212,slow=39
comp=Z,14nm,1.0s
KURK Kurchatov 25.25 334 P **P 09 49 21.6 +0.5**
KURK Kurchatov 25.25 334*ce*P **P 09 49 22.4 +1.3**
KURK pmax pmax
comp=Z,33nm,1.3s
KCSI Kotacane, Aceh 25.36 175 P **P 09 49 23.0 +0.7**
comp=Z,1μmcomp=Z,24nm,0.9s
PALK Pallekele 25.74 216 LR LR 10 00 27.3

comp=Z,200nm,21.5s,baz=25,slow=39
PALK Pallekele 25.74 216 *i* P **P 09 49 27.6 +1.8**
PALK pmax pmax
comp=Z,15nm,0.9s
SNY Shenyang 26.04 53 ⇓P **P 09 49 28.2 -0.1**
SNY pmax pmax
comp=Z,18nm,0.6s
PSI Prapat 26.18 173 P **P 09 49 30.8 +0.9**
PSI pmax pmax
comp=Z,8.0nm,0.8s
ZAA0 Zalesovo Array 26.21 345 **P 09 49 30.3 +0.6**
ZALV Zalesovo Beam 26.21 345 P **P 09 49 30.3 +0.5**
comp=Z,39nm,0.6s,baz=164,slow=9.5,SNR=153
comp=Z,39nm,0.6s
ZALV Zalesovo Beam 26.21 345 *i* P **P 09 49 30.2 +0.5**
ZALV pmax pmax
comp=Z,40nm,0.6s
RPSI Rantau Prapat 26.28 173 P **P 09 49 30.8 +0.1**
SNSI Sinabang, Aceh 26.39 178 P **P 09 49 32.0 +0.4**
comp=Z,75nm,1.0s
BRZS Berezniki 27.29 327 *e*P **P 09 49 41.7 +2.2**
BRZS Berezniki 27.29 327 *e*P **P 09 49 41.8 +2.2**
HIA Hailar 27.41 36 P **P 09 49 38.3 -2.3**
HIA Hailar 27.41 36 P **P 09 49 43.1 +2.5**
HIA Hailar 27.41 36 P **P 09 49 38.3 -2.3**
HIA pmax pmax
comp=Z,9.0nm,0.9s
HILR Hailar Array B 27.60 35 P **P 09 49 42.1 -0.2**
comp=Z,3.3nm,0.5s,baz=235,slow=10,SNR=9.7
comp=Z,3.3nm,0.5s
CN2 Changchun 28.04 50 *e*P **P 09 49 47.0 +0.7**
CN2 *e*S **S 09 54 28.6 -2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,200nm,11.0s
CN2 LR LR
comp=Z,300nm,11.0s
CN2 LR LR
comp=Z,200nm,10.0s
KSRS Korea Array 28.23 64 P **P 09 49 47.1 -0.9**
comp=Z,1.2nm,0.5s,baz=259,slow=8.5,SNR=8.7
KSRS LR LR 10 01 17.9
comp=Z,63nm,19.6s,baz=245,slow=37
comp=Z,1.2nm,0.5s
JOW Kunigami 28.89 86 LR LR 10 01 45.0
comp=Z,103nm,20.3s,baz=278,slow=37
BNX BinXian 30.07 47 ⇑P **P 09 50 04.4 +0.1**
BNX pmax pmax
comp=Z,17nm,0.8s
BVAR Borovoye Array 30.40 329 P **P 09 50 07.4 +0.3**
comp=Z,2.7nm,0.6s,baz=130,slow=8.1,SNR=10
comp=Z,2.7nm,0.6s
JNU Nakatsue 30.41 73 LR LR 10 03 13.1
comp=Z,176nm,18.6s,baz=272,slow=38
BORK Borovoye 30.44 329 P **P 09 50 08.5 +1.0**
BORK Borovoye 30.44 329*ce*P **P 09 50 09.4 +1.9**
BORK pmax pmax
comp=Z,7.0nm,0.9s
HEH HeiHe 32.08 40 *e*P **P 09 50 22.0 +0.1**
HEH pmax pmax
comp=Z,8.0nm,0.9s
PPBI Pangkal Pinang 32.52 160 P **P 09 50 27.6 +1.5**
ZEA Zeya 33.84 34 *e*P **P 09 50 39.2 +1.9**
AB31 Akbulak array 33.89 317 P **P 09 50 38.0 +0.2**
ABKAR Akbulak array 33.89 317 P **P 09 50 38.0 +0.2**
KLR Kul'dur 34.15 44 LR LR 10 06 03.2
comp=Z,131nm,18.0s,baz=250,slow=39
KLR Kul'dur 34.15 44*ce*P **P 09 50 40.6 +0.6**
KLR pmax pmax
comp=Z,5.0nm,2.5s
MJAR Matsushiro Arr 36.38 67 P **P 09 50 59.5 0.0**
comp=Z,0.9nm,0.7s,baz=279,slow=10,SNR=4.5
MJAR LR LR 10 06 34.7
comp=Z,33nm,21.7s,baz=248,slow=38
comp=Z,0.9nm,0.7s
TOLI2 Tolitoli 36.63 135 P **P 09 51 01.4 -0.3**
TOLI2 IAmb IAmb 09 51 02.9
comp=Z,12nm,0.7s
TOLI2 Tolitoli 36.63 135 P **P 09 51 03.2 +1.5**
BBKI Banjar Baru 37.12 147 P **P 09 51 06.9 +1.0**
SVE Sverdlovsk 37.17 329 *e*P **P 09 51 07.8 +1.9**
SVE pmax pmax
comp=N,13nm,0.9s
LEM Lembang 37.38 160 LR LR 10 06 35.5
comp=N,111nm,21.8s,baz=326,slow=36
ARTI Arti 37.99 327 P **P 09 51 13.3 +0.5**
ARTI IAmb IAmb 09 51 14.5
comp=Z,12nm,0.6s
ARTI Arti 37.99 327*c i* P **P 09 51 13.8 +1.0**
ARTI 09 52 38.8
ARTI 09 53 25.3
ARTI S **S 09 57 05.4 +0.9**
ARTI SS **SnSn 09 59 42.5 -4.0**
ARTI pmax pmax
comp=Z,10.0nm,0.9s
CTJI Waduk Cacaban 38.05 158 P **P 09 51 15.2 +1.5**
KPJI Karang Pucung 38.27 158 P **P 09 51 16.1 +0.5**
comp=Z,55nm,0.9s
SMRI Semarang 38.52 156 P **P 09 51 21.4 +3.7**
MMSI Mamuju 38.57 141 P **P 09 51 19.1 +0.9**
comp=Z,67nm,1.0s
TTSI Tana Toraja 39.37 140 P **P 09 51 25.6 +0.7**
comp=Z,2μmcomp=Z,26nm,0.7s
LUWI Luwuk 39.54 134 P **P 09 51 27.0 +0.7**
YAK Yakutsk 39.93 24 LR LR 10 09 08.8
comp=Z,268nm,21.1s,baz=262,slow=38
YAK Yakutsk 39.93 24 P **P 09 51 28.7 -0.2**
YAK IAmb IAmb 09 51 29.8
comp=Z,22nm,0.7s
YAK Yakutsk 39.93 24 *e*P **P 09 51 28.8 -0.2**
YAK *e* 09 53 00.9
YAK *e*S **S 09 57 31.5 -2.0**
YAK *e*SS **SS 10 00 30.1 +0.1**
YAK *e*SSS SSS 10 00 52.3
YAK *e* 10 01 32.5
YAK pmax pmax
comp=Z,13nm,0.6s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,10.0nm,1.8s
YAK pmax pmax
comp=Z,122nm,4.2s
YAK pmax pmax
comp=N,49nm,3.3s
YAK pmax pmax
comp=E,90nm,5.3s
YAK smax smax
comp=N,75nm,4.2s
YAK smax smax
comp=E,29nm,2.1s
SPSI Sidrap Palu 40.10 141 P **P 09 51 31.1 +0.2**
comp=E,37nm,1.4s
ASAJ Asahikawa 40.12 55 P **P 09 51 29.6 -1.2**
comp=E,7.5nm,0.9s,baz=259,slow=5.2,SNR=4.9
ASAJ LR LR 10 09 10.7
comp=E,84nm,18.9s,baz=290,slow=38
comp=E,7.5nm,0.9s
ASAJ Asahikawa 40.12 55 P **P 09 51 31.1 +0.3**
ASAJ pmax pmax
comp=Z,112nm,1.7s
JKA Kamikawa-asahi 40.12 55 P **P 09 51 31.1 +0.2**
YSS Yuzhno-Sakhali 40.61 50 *e*P **P 09 51 35.0 +0.2**
YSS *e*S **S 09 57 45.3 +1.2**
YSS *e*SS **SS 10 00 34.2 -10**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=Z,400nm,16.0s
NRIK Noril'sk 40.71 356 P **P 09 51 35.7 +0.4**
comp=Z,5.1nm,0.6s,baz=161,slow=7.0,SNR=12
NRIK LR LR 10 10 03.0
comp=Z,180nm,18.1s,baz=184,slow=38
comp=Z,5.1nm,0.6s
NRIK Noril'sk 40.71 356 P **P 09 51 35.1 -0.3**
NRIK Noril'sk 40.71 356 P **P 09 51 35.1 -0.3**
NRIK pmax pmax
comp=Z,5.0nm,0.7s
GMJI Gumukmas 40.79 152 P **P 09 51 37.7 +1.1**
comp=Z,17nm,1.2s
MAK Makhachkala 40.85 303 *e*P **P 09 51 34.4 -2.5**
MAK *e* 09 53 10.3
MAK *e*PPP PPP 09 53 36.4

MAK eS S 09 57 44.7 -3.1
MAK eSS SS 10 00 48.9 -0.1
MAK pmax pmax
comp=Z,169nm,1.1s
MAK MLR MLR
comp=Z,193nm,16.0s
KAPI Kappang 40.96 142 LR LR 10 10 46.2
comp=Z,90nm,19.7s,baz=313,slow=39
JAGI Jajag, Banyuwa 41.26 152 P P 09 51 40.2 -0.2
GNI Garni 42.86 299 LR LR 10 14 07.5
comp=Z,47nm,18.1s,baz=116,slow=42
KIRV Kirov 43.30 327ceP P 09 51 58.1 +1.5
KBZ Khabaz 44.24 304 P P 09 52 05.0 +0.5
comp=Z,1.4nm,0.7s,baz=205,slow=8.1,SNR=2.4
comp=Z,1.4nm,0.7s
KBZ Khabaz 44.24 304 P P 09 52 05.0 +0.5
KIV Kislovodsk 44.40 305 eP P 09 52 07.8 +1.9
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,91nm,16.0s
RAYN Ar Rayn 45.02 275 P P 09 52 11.7 +0.7
RAYN Ar Rayn 45.02 275 P P 09 52 11.7 +0.7
RAYN pmax pmax
comp=Z,4.0nm,0.9s
TIXI Tiksi 46.47 14 LR LR 10 12 45.2
comp=Z,64nm,20.3s,baz=188,slow=37
TIXI Tiksi 46.47 14 P P 09 52 20.9 -0.7
TIXI Tiksi 46.47 14ceP P 09 52 21.0 -0.7
TIXI pmax pmax
comp=Z,3.0nm,0.6s
VORD Divnogorie 47.14 314 eP P 09 52 26.5 -0.8
VORD pmax pmax
comp=Z,7.0nm,1.0s
VSR Storozhevoye 47.25 314 eP P 09 52 26.7 -1.4
VSR pmax pmax
comp=Z,5.0nm,0.9s
SOEI Soe 47.37 140 P P 09 52 28.6 -0.9
SOEI Soe 47.37 140 P P 09 52 29.3 -0.3
SOEI Soe 47.37 140 P P 09 52 28.7 -0.9
BATI Baumata 47.40 141 LR LR 10 15 34.9
comp=Z,84nm,19.0s,baz=247,slow=40
LPSR Galich'ya Gora 47.55 316 eP P 09 52 29.6 -0.8
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MA2 Magadan 47.99 34 LR LR 10 14 44.6
comp=Z,174nm,18.9s,baz=256,slow=39
GUMO Guam 48.03 98 LR LR 10 13 05.1
comp=Z,36nm,20.3s,baz=49,slow=36
MOS Moscow 48.73 320 eP P 09 52 40.0 +0.5
KLMR Klimovskoe 48.78 327 eP P 09 52 40.3 +0.5
KLMR pmax pmax
comp=Z,19nm,0.8s
OBN Obninsk 49.24 319↓↓eP P 09 52 45.2 +1.8
OBN *PP pP 09 52 48.0 -0.2
OBN *SP sP 09 52 50.0 -0.2
OBN eSSS SSS 10 04 35.9
OBN pmax pmax
comp=Z,58nm,3.0s
OBN MLR MLR
comp=Z,270nm,19.0s
SEY Seymchan 49.62 30 eP P 09 52 44.9 -1.3
SEY pmax pmax
comp=Z,3.0nm,1.4s
ASF Jabal al Asfar 50.14 289 LR LR 10 18 13.7
comp=Z,69nm,19.4s,baz=58,slow=41
PEA0B Petropavlovsk- 50.84 43 P P 09 52 56.1 +0.5
PEA0B Petropavlovsk- 50.84 43 P P 09 52 56.1 +0.5
PEA0B pmax pmax
comp=Z,50nm,1.2s
PETK Petropavlovsk- 50.84 43 P P 09 52 55.5 -0.1
comp=Z,3.8nm,0.8s,baz=259,slow=4.4,SNR=4.2
PETK LR LR 10 16 42.2
comp=Z,203nm,19.6s,baz=261,slow=39
comp=Z,3.8nm,0.8s
MMAI Mount Meron Ar 51.19 291 LR LR 10 19 49.4
comp=Z,64nm,18.8s,baz=94,slow=42
BRTR Keskin Array B 51.40 299 P P 09 53 00.6 +0.3
comp=Z,0.9nm,0.7s,baz=126,slow=8.9,SNR=5.3
comp=Z,0.9nm,0.7s
BRTR Keskin Array B 51.40 299 P P 09 53 00.3 +0.1
EIL Elat 52.36 287 LR LR 10 20 04.4
comp=Z,91nm,19.4s,baz=124,slow=41
LVZ Lovozero 52.66 335 P P 09 53 09.3 +0.2
LVZ Lovozero 52.66 335 P P 09 53 09.3 +0.2
LVZ pmax pmax
comp=Z,116nm,1.7s
JOF Joensuu 53.00 329 eP P 09 53 12.5 +1.0
JAY Jayapura 53.32 118 LR LR 10 13 41.7
comp=Z,32nm,21.2s,baz=308,slow=34
AK09 Malin Array Si 53.48 313 P P 09 53 14.9 -0.4
AK08 Malin Array Si 53.50 313 P P 09 53 15.4 0.0
AK08 pP pP 09 53 18.5 -1.8
AK10 Malin Array Si 53.50 313 P P 09 53 15.4 0.0
AKASG Malin Array Be 53.51 314 P P 09 53 15.6 +0.1
comp=Z,2.6nm,0.4s,baz=77,slow=6.8,SNR=19
AKASG LR LR 10 18 41.6
comp=Z,131nm,19.4s,baz=86,slow=39
comp=Z,2.6nm,0.4s
AKBB Malin Array Si 53.51 314 P P 09 53 15.8 +0.3
AKBB IAmb IAmb 09 53 16.2
comp=Z,9.1nm,0.7s
AKBB Malin Array Si 53.51 314 P P 09 53 15.8 +0.3
AKBB pmax pmax
comp=Z,9.0nm,0.7s
AKBB Malin Array Si 53.51 314 P P 09 53 15.2 -0.3
AK03 Malin Array Si 53.52 314 P P 09 53 14.8 -0.7
AK01 Malin Array Si 53.52 314 P P 09 53 14.8 -0.8
KIEV Kiev 53.52 314 P P 09 53 15.8 +0.2
KIEV IAmb IAmb 09 53 16.2
comp=Z,8.1nm,0.7s
KIEV Kiev 53.52 314 P P 09 53 15.8 +0.2
KIEV pmax pmax
comp=Z,8.0nm,0.7s
KIEV Kiev 53.52 314 P P 09 53 15.2 -0.4
comp=Z,54nm,0.8s
AK02 Malin Array Si 53.53 313 P P 09 53 15.2 -0.4
AK05 Malin Array Si 53.53 313 P P 09 53 15.2 -0.4
AK07 Malin Array Si 53.53 313 P P 09 53 15.2 -0.5
AK06 Malin Array Si 53.54 313 P P 09 53 15.2 -0.5
AK04 Malin Array Si 53.55 314 P P 09 53 15.3 -0.5
AK11 Malin Array Si 53.55 314 P P 09 53 15.3 -0.5
AK12 Malin Array Si 53.56 313 P P 09 53 15.4 -0.5
MNK Minsk 54.22 318 iP P 09 53 19.9 -0.8
comp=E,21nm,0.6s
MNK iP P 09 53 19.9 -0.8
comp=N,14nm,0.8s
MNK iP P 09 53 19.9 -0.8
comp=Z,9.0nm,0.7s,baz=89
MNK iPP PP 09 55 22.2 0.0
MNK iPPP PPP 09 56 30.0
MNK iS S 10 00 58.6 +1.1
MNK iSS SS 10 04 39.0 0.0
MNK iSSS SSS 10 06 22.0
MNK iLQ LQ 10 12 36.9
MNK iLRM MLR 10 18 08.1
comp=E,118nm,15.5s
MNK iLRM MLR 10 18 19.6
comp=Z,237nm,19.7s
MNK iLRM MLR 10 18 40.8
comp=N,159nm,17.2s
MNK Minsk 54.22 318 iP P 09 53 19.8 -0.8
MNK i 09 55 22.1
MNK iPPP PPP 09 56 29.9
MNK iS S 10 00 58.6 +1.1
MNK iSS SS 10 04 39.0 0.0
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK pmax pmax
comp=N,14nm,0.8s
MNK pmax pmax
comp=E,21nm,0.6s
MNK MLR MLR
comp=E,118nm,16.0s
MNK MLR MLR
comp=Z,237nm,20.0s
MNK MLR MLR
comp=N,159nm,17.0s
LUBAR Lubar, Ukraine 54.50 313 P P 09 53 21.6 -1.1
KNRA Kununurra 54.71 140 P P 09 53 24.1 -0.5
KNRA IAmb IAmb 09 54 40.2
comp=Z,26nm,1.4s
ELL Elmali 54.81 296 P P 09 53 26.1 +0.7
ELL Elmali 54.81 296 P P 09 53 26.1 +0.7
ELL pmax pmax
comp=Z,22nm,1.0s
MBWA Marble Bar 54.97 152 P P 09 53 26.1 -0.3
FITZ Fitzroy Crossi 55.02 145 LR LR 10 21 12.0
comp=Z,45nm,18.0s,baz=326,slow=41
FIA1 FINESS Array S 55.30 327 P P 09 53 28.6 +0.3
FINES FINESS Array B 55.30 327 P P 09 53 29.2 +0.9
comp=Z,2.6nm,0.5s,baz=85,slow=7.9,SNR=29
comp=Z,2.6nm,0.5s
FINES FINESS Array B 55.30 327 P P 09 53 29.4 +1.1
FINES FINESS Array B 55.30 327 P P 09 53 29.4 +1.1
SUF Sumiainen 55.33 328 eP P 09 53 29.2 +0.6
PSA00 Pilbara Seismi 55.38 152 P P 09 53 29.2 -0.2
PSA00 IAmb IAmb 09 53 30.1
comp=Z,9.0nm,1.0s
RNPP9 Sopachiv 55.57 315 P P 09 53 29.8 -0.6
VRI Vrincioaia 55.61 308 P P 09 53 31.6 +0.7
comp=Z,11nm,1.7s
KEF Keuruu 55.90 328 eP P 09 53 33.7 +1.0
MEF Metsahovi 56.09 325 eP P 09 53 35.6 +1.6
MLR Muntele Rosu 56.20 307 LR LR 10 21 39.5
comp=Z,134nm,18.1s,baz=44,slow=40
ARCES ARCESS Array B 56.26 337 P P 09 53 35.5 +0.3
comp=Z,3.0nm,0.8s,baz=100,slow=4.2,SNR=6.2
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 56.26 337 P P 09 53 35.3 +0.2
ARCES ARCESS Array B 56.26 337 P P 09 53 35.3 +0.2
ARCES pmax pmax
comp=Z,180nm,2.0s
BILL Bilibino 56.27 25 P P 09 53 36.1 +0.8
BILL IAmb IAmb 09 53 36.5
comp=Z,7.5nm,0.7s
BILL Bilibino 56.27 25ceP P 09 53 35.8 +0.6
BILL pmax pmax
comp=Z,6.0nm,0.7s
BURAR Bucovina Array 56.41 310 P P 09 53 37.4 +0.7
VOIR 56.84 308 P P 09 53 40.5 +0.8
VAF Ylistaro 56.94 329 eP P 09 53 40.8 +0.8
SPITS Spitsbergen Ar 59.69 346 P P 09 53 59.5 +0.5
comp=Z,6.1nm,0.7s,baz=110,slow=12,SNR=9.8
SPITS LR LR 10 24 03.2
comp=Z,115nm,18.9s,baz=132,slow=40
comp=Z,6.1nm,0.7s
MORC Moravsky Berou 61.06 314 eP P 09 54 09.8 +0.8
JAVC Velka Javorina 61.17 313 eP P 09 54 11.1 +1.4
WB0 Warramunga Arr 61.20 138 P P 09 54 09.6 -0.5
WRAB Tennant Creek 61.30 138 P P 09 54 10.8 0.0
WRAB Tennant Creek 61.30 138ceP P 09 54 10.4 -0.4
WRAB pmax pmax
comp=Z,9.0nm,0.6s
WRA Warramunga Arr 61.30 138 P P 09 54 10.7 -0.1
comp=Z,6.0nm,0.7s,baz=325,slow=7.6,SNR=82
comp=Z,6.0nm,0.7s
WRA Warramunga Arr 61.30 138 P P 09 54 09.6 -1.2
WRA Warramunga Arr 61.30 138 P P 09 54 09.6 -1.2
HFS Hagfors 61.43 326 P P 09 54 11.9 +0.7
comp=Z,2.8nm,0.5s,baz=94,slow=9.4,SNR=11
HFS LR LR 10 23 06.1
comp=Z,116nm,19.1s,baz=118,slow=38
comp=Z,2.8nm,0.5s
MODS Modra-Piesok 61.52 312 eP P 09 54 22.3 +10
MODS Modra-Piesok 61.52 312 eP P 09 54 22.2 +10
DPC Dobruska-Polom 61.72 314 eP P 09 54 15.2 +1.8
DPC Dobruska-Polom 61.72 314 eP P 09 54 15.2 +1.8
VRAC Vranov 61.77 313 LR LR 10 25 14.6
comp=Z,116nm,18.8s,baz=43,slow=40
VRAC Vranov 61.77 313 eP P 09 54 14.6 +0.9
KRUC Moravsky 61.95 313 eP P 09 54 15.9 +1.0
RONA Rosalia, Austr 62.32 311 eP P 09 54 18.7 +1.2
comp=Z,1.2nm,1.2s
NB2 NORSAR Subarra 62.48 327 P P 09 54 18.3 0.0
comp=Z,2.4nm,0.5s,baz=81,slow=6.9
NOA NORSAR Array B 62.48 327 P P 09 54 18.8 +0.5
comp=Z,3.3nm,0.6s,baz=72,slow=8.5,SNR=16
NOA LR LR 10 23 25.1
comp=Z,115nm,19.3s,baz=265,slow=38
comp=Z,3.3nm,0.6s
CONA Conrad Observa 62.55 312 eP P 09 54 19.9 +0.9
comp=Z,0.5nm,0.7s
ARSA Arzberg 62.93 311 eP P 09 54 22.6 +1.1
comp=Z,0.7nm,0.6s
ZVC Zvikov 63.26 314 eP P 09 54 24.8 +1.1
CKRC Cesky Krumlov 63.34 313 eP P 09 54 25.5 +1.3
CKRC Cesky Krumlov 63.34 313 eP P 09 54 25.5 +1.3
CLL Collm 63.55 316 eP P 09 54 29.0 +3.5
CLL Collm 63.55 316 eP P 09 54 29.0 +3.5
CLL Collm 63.55 316 eL L 10 25 40.7
comp=Z,131nm,18.5s
GEC2 GERESS Array S 63.72 313 eP P 09 54 27.9 +1.0
comp=Z,2.1nm,0.5s,baz=74,slow=6.5
GEC2 eL L 10 25 47.4
comp=Z,144nm,18.6s
GERES GERESS Array B 63.72 313 P P 09 54 27.9 +1.0
comp=Z,1.8nm,0.5s,baz=65,slow=6.8,SNR=14
GERES LR LR 10 25 40.9
comp=Z,138nm,18.0s,baz=67,slow=39
comp=Z,1.8nm,0.5s
KHC Kasperske Hory 63.73 313 eP P 09 54 27.6 +0.8
KHC Kasperske Hory 63.73 313 eP P 09 54 27.6 +0.8
OBKA Obir 63.77 310 epP pP 09 54 29.8 -2.3
comp=Z,1.3nm,0.6s
AS31 Alice Springs 63.97 141 P P 09 54 28.8 +0.2
ASAR Alice Springs 63.98 141 P P 09 54 28.8 +0.1
comp=Z,3.2nm,0.6s,baz=325,slow=6.5,SNR=63
ASAR LR LR 10 27 01.1
comp=Z,36nm,18.1s,baz=296,slow=40
comp=Z,3.2nm,0.6s
TANN Tannenbergstha 64.11 315 eP P 09 54 30.2 +0.9
comp=Z,2.0nm,0.6s,baz=74,slow=6.5
WET Wettzell 64.17 314 eP P 09 54 30.7 +1.0
comp=Z,2.0nm,0.4s,baz=74,slow=6.5
WET eL L 10 24 42.3
comp=Z,155nm,19.1s
KBA Koelnbreinsper 64.42 311 eP P 09 54 31.6 +0.1
comp=Z,0.6nm,0.7s
ROTZ Rotzenmuhle 64.43 314 eP P 09 54 32.8 +1.4
comp=Z,0.7nm,0.5s,baz=74,slow=6.5
BSEG Bad Segeberg 64.50 319 eL L 10 24 38.9
comp=Z,131nm,21.9s
MOX Moxa 64.57 315 eL L 10 25 55.4
comp=Z,101nm,21.7s
LESA Schwarzleotal 64.76 312 eP P 09 54 33.9 +0.2
comp=Z,0.8nm,0.4s
NWAO Nagoin (SRO) 64.85 160 LR LR 10 23 04.1
comp=Z,84nm,21.0s,baz=86,slow=36
CLZ Clausthal 65.01 317 eP P 09 54 36.2 +1.1
comp=Z,6.1nm,0.6s,baz=74,slow=6.5
ABTA Abfaltersbach 65.06 311 eP P 09 54 35.8 +0.2
comp=Z,0.8nm,0.8s
GRF Grafenberg Arr 65.07 315 eL L 10 25 17.3
comp=Z,131nm,21.6s
FUR Furstenfeldbru 65.46 313 eL L 10 22 25.6
comp=Z,115nm,19.5s
WTTA Wattenberg 65.48 312 eP P 09 54 38.3 -0.2
comp=Z,0.4nm,0.5s
SQTA Sankt Quirin 65.78 312 eP P 09 54 40.5 +0.2
comp=Z,1.5nm,0.6s
MOTA Moosalm 65.81 312 eP P 09 54 41.1 +0.6
comp=Z,0.4nm,0.4s
RETA Reutte 65.99 312 eP P 09 54 41.6 0.0
comp=Z,1.7nm,0.6s
FUORN Ofenpass-Fuorn 66.57 312 P P 09 54 46.0 +0.5
FUORN IAmb IAmb 09 55 17.9
comp=Z,21nm,1.8s
TNS Taunus Mts 66.63 316 eL L 10 22 20.1
comp=Z,104nm,21.9s
C16K Lisburne Hills 66.70 24 IAmb IAmb 09 54 48.4
comp=Z,17nm,1.4s
DAVOX Davos/Dischmat 66.78 312 LR LR 10 27 37.7
comp=Z,96nm,19.2s,baz=77,slow=39
BFO Black Forest 67.29 314 eL L 10 26 55.3
comp=Z,140nm,21.2s
C18K Utukok River 68.00 23 IAmb IAmb 09 54 54.8
comp=Z,4.0nm,0.7s
C19K Lookout Ridge 68.34 22 IAmb IAmb 09 54 59.2
comp=Z,6.8nm,0.7s
MBAR Mbarara 68.47 257 P P 09 54 58.4 +0.5
comp=Z,2.3nm,0.2s,baz=80,slow=18,SNR=1.5
comp=Z,2.3nm,0.2s
MBAR Mbarara 68.47 257 IAmb IAmb 09 55 14.5
comp=Z,6.5nm,1.2s
MBAR Mbarara 68.47 257 P P 09 54 58.4 +0.5
MBAR pmax pmax
comp=Z,7.0nm,1.2s
E18K Tukpahlearik C 68.69 24 IAmb IAmb 09 55 01.0
comp=Z,4.5nm,0.8s
VOI Vohitsoka 69.07 228 P P 09 55 01.4 0.0
D19K Kuna River 69.09 22 IAmb IAmb 09 55 11.3
comp=Z,6.8nm,0.8s
D20K Etivluk River 69.48 22 IAmb IAmb 09 55 13.8
comp=Z,6.8nm,0.8s
E19K Redstone River 69.85 23 IAmb IAmb 09 55 08.3
comp=Z,5.2nm,0.8s
F19K Shaleruckik Mo 69.94 24 IAmb IAmb 09 55 06.5
comp=Z,5.4nm,0.7s
H18K Honhosa River 70.48 26 IAmb IAmb 09 55 10.5
comp=Z,6.6nm,1.0s
D22K Ayikyak River 70.66 21 IAmb IAmb 09 55 12.0
comp=Z,6.5nm,0.8s
KEST Kesra 70.97 301 P P 09 55 13.9 +1.0
comp=Z,1.5nm,0.4s,baz=68,slow=10,SNR=1.7
comp=Z,1.5nm,0.4s
D23K Nanushuk River 71.23 20 IAmb IAmb 09 55 15.6
comp=Z,9.8nm,0.8s
EKA Eskdalemuir Ar 71.43 323 P P 09 55 15.3 +0.1
comp=Z,2.1nm,0.6s,baz=67,slow=4.9,SNR=8.8
comp=Z,2.1nm,0.6s
J19K Poorman 72.07 26 IAmb IAmb 09 55 20.5
comp=Z,12nm,1.1s
QLP Quilpie 72.26 135 P P 09 55 21.6 +1.0
H21K Melozitna Rive 72.27 24 IAmb IAmb 09 55 33.8
comp=Z,13nm,1.2s
E24K Your Creek 72.40 21 IAmb IAmb 09 55 23.9
comp=Z,7.4nm,0.7s
I21K Tanana 72.82 24 IAmb IAmb 09 55 34.7
comp=Z,7.9nm,0.9s
C27K Jago River 72.89 18 IAmb IAmb 09 55 25.6
comp=Z,6.2nm,0.8s
K20K Telida 72.99 26 IAmb IAmb 09 56 36.8
comp=Z,8.7nm,1.2s
G24K Hadweenzic Riv 73.51 22 IAmb IAmb 09 56 21.5
comp=Z,26nm,1.9s
BPAW Bear Paw Mtn. 73.76 25 IAmb IAmb 09 55 30.3
comp=Z,12nm,1.1s
SUMG Summit 74.02 347 P P 09 55 30.9 0.0
SUMG IAmb IAmb 09 55 53.0
comp=Z,18nm,1.3s
SUMG Summit 74.02 347 P P 09 55 30.9 0.0
SUMG pmax pmax
comp=Z,17nm,1.3s
KTH Kantishna Hill 74.09 25 P P 09 55 31.4 +0.4
NEA2 Nenana 74.18 24 IAmb IAmb 09 55 41.7
comp=Z,7.2nm,0.8s
E27K Coleen River 74.39 19 IAmb IAmb 09 55 43.5
comp=Z,14nm,1.6s
COLA College 74.45 23 P P 09 55 33.6 +0.6
COLA College 74.45 23 P P 09 55 33.6 +0.6
COLA College 74.45 23 P P 09 55 33.6 +0.6
G26K Porcupine Rive 74.53 21 P P 09 55 34.4 +1.0
STKA Stephens Creek 74.61 141 P P 09 55 33.4 -1.0
comp=Z,3.8nm,0.8s,baz=299,slow=7.2,SNR=6.0
STKA LR LR 10 32 50.2
comp=Z,44nm,18.4s,baz=261,slow=39
comp=Z,3.8nm,0.8s
STKA Stephens Creek 74.61 141 *i* P P 09 55 33.9 -0.4
BORG Borgarnes 74.67 337 LR LR 10 28 33.0
comp=Z,59nm,18.9s,baz=95,slow=36
ILAR Eielson Array 74.84 23 P P 09 55 34.6 -0.7
comp=Z,2.2nm,1.0s,baz=296,slow=5.6,SNR=18
ILAR LR LR 10 29 35.3
comp=Z,71nm,19.0s,baz=270,slow=37
comp=Z,2.2nm,1.0s
PRP Porcupine Dome 74.85 22 P P 09 55 36.0 +0.5
PRP IAmb IAmb 09 55 46.8
comp=Z,37nm,1.9s
A36M Sachs Harbour 75.45 12 IAmb IAmb 09 55 39.7
comp=Z,9.1nm,0.8s
H27K Steamboat Moun 75.68 21 IAmb IAmb 09 55 42.0
comp=Z,9.1nm,0.8s
SCRK Sand Creek 76.33 23 P P 09 55 43.8 -0.2
SCRK IAmb IAmb 09 55 54.0
comp=Z,9.0nm,1.0s
F30M Barrier River 76.40 18 IAmb IAmb 09 55 49.9
comp=Z,12nm,1.1s
RES Resolute Bay 76.41 3 LR LR 10 30 33.6
comp=Z,61nm,21.1s,baz=10.0,slow=37
INK Inuvik 76.49 17 IAmb IAmb 09 56 17.9
comp=Z,10nm,1.2s
KDAK Kodiak Island 76.58 31 LR LR 10 32 58.6
comp=Z,100nm,19.2s,baz=301,slow=38
I28M Miner Creek 76.69 21 IAmb IAmb 09 55 56.3
comp=Z,5.3nm,0.8s
CMSA Cobar Memorial 76.71 138 P P 09 55 47.1 +0.7
G31M Satah River 77.31 18 IAmb IAmb 09 55 49.9
comp=Z,8.6nm,0.9s
L27K Beaver Creek, 77.66 23 IAmb IAmb 09 55 53.3
comp=Z,6.5nm,0.8s
BCAR Beaver Creek A 77.67 23 P P 09 55 52.8 +1.3
J29N Klondike Camp 77.91 21 IAmb IAmb 09 56 03.9
comp=Z,8.4nm,0.9s
I30M Mount Dempster 77.93 20 IAmb IAmb 09 56 03.1
comp=Z,6.5nm,0.8s
M27K Edge Creek, AK 78.10 24 IAmb IAmb 09 55 56.9
comp=Z,9.7nm,1.2s
J30M Hart River 78.41 20 IAmb IAmb 09 57 01.8
comp=Z,16nm,1.7s
POIN Pond Inlet 78.54 358 P P 09 55 56.4 +0.4
POIN IAmb IAmb 09 56 05.8
comp=Z,11nm,1.5s
LSZ Lusaka 78.55 245 P P 09 55 57.3 +0.2
comp=Z,7.1nm,0.6s,baz=56,slow=6.8,SNR=12
comp=Z,7.1nm,0.6s
LSZ Lusaka 78.55 245 P P 09 55 57.5 +0.4
LSZ IAmb IAmb 09 55 58.0
comp=Z,6.5nm,0.6s
LSZ Lusaka 78.55 245 P P 09 55 57.5 +0.4
LSZ pmax pmax
comp=Z,7.0nm,0.6s
K29M Barlow Dome 78.55 21 IAmb IAmb 09 57 17.0
comp=Z,27nm,1.9s
ESDC Sonseca Array 78.85 309 P P 09 55 59.3 +0.9
comp=Z,0.6nm,0.8s,baz=73,slow=4.9,SNR=4.2
comp=Z,0.6nm,0.8s
N32M Quiet Lake 81.93 22 IAmb IAmb 09 56 25.5
comp=Z,11nm,0.9s
DLBC Dease Lake 85.00 22 LR LR 10 40 09.8
comp=Z,78nm,18.2s,baz=297,slow=40
YKA Yellowknife Ar 85.72 14 P P 09 56 33.3 -0.5
comp=Z,0.8nm,0.8s,baz=327,slow=5.2,SNR=12
comp=Z,0.8nm,0.8s
LBTB Lobatse 86.03 239 P P 09 56 36.4 +0.3
LBTB IAmb IAmb 09 56 37.4
comp=Z,9.3nm,0.9s
LBTB Lobatse 86.03 239 P P 09 56 36.4 +0.3
LBTB pmax pmax
comp=Z,9.0nm,0.9s
FRB Frobisher Bay 86.79 353 LR LR 10 38 56.6
comp=Z,90nm,19.4s,baz=316,slow=38
TORD Torodi Ar. Bea 87.12 283 P P 09 56 42.2 +0.6
comp=Z,2.3nm,0.8s,baz=55,slow=2.4,SNR=14
comp=Z,2.3nm,0.8s
TORD Torodi Ar. Bea 87.12 283 P P 09 56 41.5 -0.1
BOSA Boshof 88.30 236 P P 09 56 47.5 +0.5
comp=Z,5.5nm,1.3s,baz=18,slow=3.2,SNR=1.2
comp=Z,5.5nm,1.3s
BOSA Boshof 88.30 236 P P 09 56 47.7 +0.6
BOSA Boshof 88.30 236 P P 09 56 47.7 +0.6
BOSA pmax pmax
comp=Z,42nm,1.8s
TSUM Tsumeb 89.18 248 LR LR 10 36 48.5
comp=Z,9.7nm,18.1s,baz=336,slow=36
SUR Sutherland 93.57 235 LR LR 10 38 59.1
comp=Z,35nm,18.1s,baz=132,slow=35
SCHQ Schefferville 95.22 350 LR LR 10 43 25.5
comp=Z,70nm,20.5s,baz=5.0,slow=38
NEW Newport 97.73 21 LR LR 10 46 21.7
comp=Z,94nm,18.5s,baz=62,slow=38
TXAR Lajitas Array 119.20 19 PKP **PKPdf 10 02 43.9 -0.9**
comp=Z,0.1nm,0.5s,baz=173,slow=2.0,SNR=5.5
SIV San Ignacio 154.97 296 PKPab **PKPab 10 04 11.9 -1.0**
comp=Z,0.4nm,0.4s,baz=76,slow=8.3,SNR=4.4
PLCA Paso Flores 163.67 220 PKPab **PKPab 10 04 49.0 -1.1**
comp=Z,2.8nm,0.8s,baz=158,slow=4.6,SNR=7.8

BUC 01 09:52:16.8±0.3, 45.06N×23.21E, h3km±2km, ml1.2/4, 7C-8D, Error ellipse: s-maj=2.5km s-min=1.8km az=140.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GZR	**Gura Zlata**	**0.45**	**317**	⇑P		Pg	09 52 25.9	+0.4
GZR				⇑S		Sg	09 52 32.0	+0.6
LOT	**Lotru**	**0.55**	**45**	⇓P		Pg	09 52 28.0	+0.6
LOT				⇓S		Sg	09 52 35.2	+0.6
HERR	**Herculane**	**0.59**	**253**	⇓P		Pg	09 52 28.4	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HERR				⇓S	Sg	09 52 36.5	+0.7
PUNG	Punghina	0.81	194	⇑S	Sg	09 52 43.1	+0.4
MDVR	Moldovita	1.10	256	⇓P	Pg	09 52 37.7	-0.1
MDVR				⇓S	Sb	09 52 53.8	+0.6
BZS	Buzias	1.25	297	⇑P	Pg	09 52 40.5	-0.4
BZS				⇑S	Sg	09 52 56.7	-0.4
MARR	Marisel-Cluj	1.62	358	⇓P	Pn	09 52 46.0	-0.3
MARR				⇑S	Sb	09 53 07.9	-0.2
SIRR	Siria	1.62	319	⇑S	Sg	09 53 09.1	+0.1
DRGR		1.77	349	⇓S	Sb	09 53 12.9	+0.5

*JMA **01** 10:04:31.9±0.6, 22˚N±3˚×12˚3E±˚, h50km, MV2.8/12, FAR S OFF ISHIGAKIJIMA*
*TAP **01** 10:04:33.1, 22˚41N×122˚81E, h60km±1km, ML3.4, D*
ISC 01 10:04:32.2±1.5**, 22˚41N**±0˚05×**122˚93E**±0˚04**, h50km, n81, σ1s61**/134**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LYUB	Lan-yu	1.31	252	P	Pn	10 04 53.6	-0.5
LYUB				eS	Sn	10 05 09.4	-1.0
LAY	Lan-yu	1.33	254	S	Sn	10 05 09.2	-1.8
CHKT	Chengkung	1.60	296	eP	Pn	10 04 57.5	-0.6
CHKT				eS	Sn	10 05 14.8	-2.7
CHKH	Chenggong	1.61	299	eP	Pn	10 04 56.8	-1.5
CHKH				eS	Sn	10 05 14.5	-3.4
FULB	Fuli	1.70	298	eP	Pn	10 04 58.5	-1.0
FULB				eS	Sn	10 05 17.8	-2.4
ECS	Chishang	1.72	294	eP	Pn	10 04 59.4	-0.3
ECS				eS	Sn	10 05 18.2	-2.3
TWGBT	Beinan	1.75	284	P	Pn	10 05 03.6	+3.4
TWGBT	Beinan	1.75	284	eP	Pn	10 05 00.0	-0.2
TWGBT				eS	Sn	10 05 20.0	-1.4
HGSD	Ruisui	1.76	308	eP	Pn	10 04 58.9	-1.3
HGSD				eS	Sn	10 05 18.4	-3.0
TWG	Pinlang	1.76	284	eP	Pn	10 05 00.1	-0.2
TWG				eS	Sn	10 05 19.7	-1.9
YULB	Yu-li	1.79	303	P	Pn	10 05 00.6	-0.2
YULB	Yu-li	1.79	303	eP	Pn	10 05 00.2	-0.5
YULB				eS	Sn	10 05 21.8	-0.6
EOS4	EOS4	1.79	342	eS	Sn	10 05 21.5	-0.3
HATJ	Hateruma jima	1.83	26	P	Pn	10 05 01.2	0.0
HATJ				eS	Sn	10 05 22.3	-0.8
ECL	Taimali	1.83	276	eP	Pn	10 05 01.0	-0.3
ECL				eS	Sn	10 05 22.0	-1.3
EHY	Hungye	1.84	307	eP	Pn	10 05 01.0	-0.3
EHY				eS	Sn	10 05 22.5	-1.0
SHUL	Shoufeng	1.86	318	eS	Sn	10 05 22.1	-1.9
EGFH	Guangfu	1.87	313	eP	Pn	10 05 01.4	-0.3
EGFH				eS	Sn	10 05 21.6	-2.5
EAST	Anshuo	1.93	270	eP	Pn	10 05 02.6	0.0
EAST				eS	Sn	10 05 25.4	-0.2
ELDTW	Lidau	1.93	294	eP	Pn	10 05 02.5	-0.1
ELDTW				eS	Sn	10 05 24.4	-1.3
WARBT	Fenglin Townsh	1.93	313	P	Pn	10 05 02.0	-0.6
WARBT				S	Sn	10 05 23.5	-2.2
EOS3	EOS3	1.95	343	eP	Pn	10 05 03.4	+0.7
EOS3				eS	Sn	10 05 25.9	-0.1
ESL	Shilin	1.96	316	eP	Pn	10 05 01.3	-1.7
ESL				eS	Sn	10 05 23.1	-3.3
SMST	Manzhou Townsh	1.98	259	P	Pn	10 05 03.5	+0.3
SMST				eS	Sn	10 05 25.9	-0.9
SLIU	Shizi	1.98	265	eP	Pn	10 05 03.4	+0.2
SLIU				eS	Sn	10 05 25.4	-1.5
TWKBT	Hengchun	2.02	257	eP	Pn	10 05 04.3	+0.5
TWKBT				eS	Sn	10 05 27.4	-0.4
TWK1	Hengchun	2.02	257	eS	Sn	10 05 26.8	-1.1
JYNG	Yonagunijimaku	2.03	0	eP	Pn	10 05 05.5	+1.5
JYNG				eS	Sn	10 05 29.4	+1.2
YOJ	Yonaguni jima	2.05	2	eP	Pn	10 05 05.0	+0.8
YOJ				eS	Sn	10 05 29.2	+0.7
IRIF	Iriomote-Funau	2.06	21	eP	Pn	10 05 04.5	+0.3
IRIF				eS	Sn	10 05 28.0	-0.7
TWD	Chiawan	2.07	324	eS	Sn	10 05 24.6	-4.4
HEN	Hengchun	2.07	259	eS	Sn	10 05 29.0	-0.1
JKRS	Kuro-shima	2.08	28	eP	Pn	10 05 05.0	+0.5
JKRS				eS	Sn	10 05 29.2	0.0
EOS2	EOS2	2.10	342	eS	Sn	10 05 30.1	+0.5
VWDT	VWDT	2.12	309	eP	Pn	10 05 05.5	+0.3
VWDT				eS	Sn	10 05 29.8	-0.5
MASBT	Mashibuluo	2.13	276	eP	Pn	10 05 05.8	+0.5
MASBT				eS	Sn	10 05 30.2	-0.4
SCZT	Fangliau	2.14	269	eP	Pn	10 05 06.4	+1.0
NACB	Ninganchiao	2.14	325	P	Pn	10 05 05.1	-0.4
NACB	Ninganchiao	2.14	325	P	Pn	10 05 04.8	-0.7
NACB				S	Sn	10 05 28.5	-2.4
OWD	Renai	2.23	314	eP	Pn	10 05 06.6	-0.3
OWD				eS	Sn	10 05 31.5	-1.7
ETLH	Xiulin Townshi	2.23	324	P	Pn	10 05 06.4	-0.4
ETLH				eS	Sn	10 05 32.1	-1.1
ALS	Alishan	2.24	300	eP	Pn	10 05 08.9	+1.7
ALS				eS	Sn	10 05 34.2	+0.4
JIJ	Ishigaki jima	2.24	30	eP	Pn	10 05 06.6	-0.3
JIJ				S	Sn	10 05 31.9	-1.5
SGST	Jiashian	2.27	288	eP	Pn	10 05 06.4	-0.8
SSLB	Suanglung	2.28	307	P	Pn	10 05 08.8	+1.4
SSLB	Suanglung	2.28	307	eP	Pn	10 05 07.9	+0.5
SSLB				eS	Sn	10 05 31.6	-2.7
EWUT	Wuta	2.29	333	eS	Sn	10 05 34.1	-0.3
WTP	Ta-pu	2.29	292	eP	Pn	10 05 09.3	+1.7
WTP				eS	Sn	10 05 37.2	+2.6
WUSB	Renai	2.29	314	eP	Pn	10 05 08.2	+0.5
WUSB				eS	Sn	10 05 32.3	-2.5
TPUB	Ta-pu	2.30	293	P	Pn	10 05 09.5	+1.8
TPUB	Ta-pu	2.30	293	eP	Pn	10 05 09.1	+1.5
TPUB				eS	Sn	10 05 37.3	+2.5
WHF	Hehuan Shan	2.31	319	eP	Pn	10 05 08.4	+0.3
WHF				eS	Sn	10 05 33.8	-1.8
CHN1	Nanshi	2.34	290	eP	Pn	10 05 10.9	+2.6
CHN1				eS	Sn	10 05 39.0	+3.0
SMLT	Sun Moon Lake	2.37	309	eP	Pn	10 05 10.4	+1.6
SNST	Tainan City	2.38	290	eP	Pn	10 05 11.2	+2.4
SNST				eS	Sn	10 05 40.0	+3.2
CHN5	Tsauling	2.39	300	eP	Pn	10 05 11.4	+2.5
CHN5				eS	Sn	10 05 40.3	+3.3
FUSS	Fushou	2.40	320	eP	Pn	10 05 09.4	+0.2
TWK	Hsinying	2.41	291	eP	Pn	10 05 11.8	+2.6
TWK				eS	Sn	10 05 41.2	+3.7
TYC	Yuchr	2.42	308	eP	Pn	10 05 11.4	+2.2
TWT	Tachien	2.44	319	eP	Pn	10 05 10.8	+1.0
TWT				eS	Sn	10 05 36.4	-2.2
TDCB	Techi	2.45	319	eS	Sn	10 05 38.4	-0.4
NNSB	Datong	2.46	325	eP	Pn	10 05 10.1	+0.2
NNSB				eS	Sn	10 05 38.7	-0.3
NNS	Nan Shan	2.48	325	eP	Pn	10 05 10.4	+0.2
NNS				eS	Sn	10 05 38.8	-0.5
LATG	Datong	2.48	329	eP	Pn	10 05 10.5	+0.3
LATG				eS	Sn	10 05 38.5	-0.8
NDS	Dongshan	2.48	334	eP	Pn	10 05 10.6	+0.5
NDS				eS	Sn	10 05 38.7	-0.5
JISG	Ishigakijimahi	2.51	30	eS	Sn	10 05 39.1	-0.9
WHP	Taichung City	2.60	316	eP	Pn	10 05 14.7	+2.8
WHP				eS	Sn	10 05 42.2	-0.1
FUSB	Fushanzhiwuyua	2.64	333	eP	Pn	10 05 14.3	+1.8
FUSB				eS	Sn	10 05 41.4	-2.0
YHNB	Yeheng	2.66	328	P	Pn	10 05 13.1	+0.4
YHNB	Yeheng	2.66	328	eP	Pn	10 05 13.3	+0.6
YHNB				eS	Sn	10 05 43.2	-0.7
NSK	Sanguang	2.68	328	eP	Pn	10 05 13.8	+0.9
NSK				eS	Sn	10 05 43.1	-1.0
NWLT	Wulai	2.70	331	eS	Sn	10 05 43.7	-0.9
TIPB	Shuangxi	2.75	339	eP	Pn	10 05 15.3	+1.5
TIPB				eS	Sn	10 05 45.7	0.0
TWQ1	Liyutan	2.77	315	eS	Sn	10 05 48.7	+2.4
NFF	Wufeng Townshi	2.77	323	eP	Pn	10 05 16.4	+2.3
NFF				eS	Sn	10 05 46.5	+0.1
NSTT	Nanjuang	2.83	322	eP	Pn	10 05 17.3	+2.3
LIOB	Emei	2.83	322	eP	Pn	10 05 17.4	+2.4
SXI1	Grass Mountain	2.84	340	eP	Pn	10 05 14.1	-1.1
KSHI	Guanxi Townshi	2.85	326	eP	Pn	10 05 17.9	+2.7
KSHI				eS	Sn	10 05 50.2	+1.8
VWUC	VWUC	4.10	310	eS	Sn	10 06 18.0	-0.9
MATB	Ma-tsu	4.61	324	eS	Sn	10 06 29.4	-2.3

*IDC **01** 10:05:45.2±1.3, 18˚08N×66˚97W, h0km, mb3.4/6, mbtmp3.5/7, ML2.8/1, Error ellipse: s-maj=36.7km s-min=9.3km az=5.0*
*NEIC **01** 10:05:47.0±1.3, 17˚81N±0˚02×66˚87W±0˚01, h10km±1km, ML4.2/41, ML4.0/6(RSPR), Mwr3.8/14(SLM), Error ellipse: s-maj=3.3km s-min=2.8km az=192.0*
*PTWC **01** 10:05:47, 17˚90N×66˚80W, Ml4.2/14*
*OSPL **01** 10:05:47.9±0.3, 17˚85N×66˚87W, h17km±3km, ML4.3, Presumed earthquake*
*SDD **01** 10:05:48.4±1.6, 17˚88N×66˚86W, h20km±13km, MD3.5, ML3.8, MW4.1, Presumed earthquake*
*NEIC **01** 10:05:48, 17˚91N×66˚86W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr0.33; Mθθ4.53; Mφφ-4.86; Mrθ1.34; Mθφ2.90; Mφr1.54; Fault plane solution: M0 5.89000×10^14 NP1:φs28.00000°, δ85.00000°, λ160.00000°. NP2:φs120.00000°, δ70.00000°, λ5.00000°. Principal axes: T 5.8896, Plg17.0000°, Azm342.0000°; N 0.0025, Plg69.0000°, Azm196.0000°; P -5.8921, Plg11.0000°, Azm76.0000°;*
*RSPR **01** 10:05:48.5, 17˚91N×66˚87W, h11km, MD3.5/6*
ISC 01 10:05:46.5±0.8**, 17˚79N**±0˚04×**66˚88W**±0˚02**, h18**km±3km**, n104, σ1s52**/123**, mb3.6**/5**, 4C-12D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.19	359		Pb	10 05 51.2	+0.3
GBPR	Guanica, Bosqu	0.19	359	⇓iP	Pb	10 05 51.2	+0.3
MLPR	Magueyes Islan	0.24	319		Pb	10 05 52.5	+0.3
MLPR				IAML		10 05 56.1	
	83µm,0.6s						
MLPR				IAML		10 05 56.3	
	47µm,0.4s						
CRPR	Cabo Rojo, PR	0.31	315		Pg	10 05 53.6	+0.3
CRPR	Cabo Rojo, PR	0.31	315	IAML		10 05 57.8	
	32µm,0.6s						
CRPR				IAML		10 05 58.0	
	26µm,0.8s						
CRPR	Cabo Rojo, PR	0.31	315	P	Pg	10 05 53.1	-0.1
CRPR	Cabo Rojo, PR	0.31	315	⇓ePg	Pg	10 05 53.5	+0.3
CRPR				IAML		10 05 57.8	
	comp=N,21µm,0.2s						
CRPR				⇑eSg	Sb	10 05 57.9	-0.3
CRPR	Cabo Rojo, PR	0.31	315	⇓iP	Pg	10 05 53.5	+0.3
CRPR				eS	Sb	10 05 57.6	-0.6
CRPR	Cabo Rojo, PR	0.31	315	i P	Pg	10 05 53.5	+0.3
CRPR				eS	Sb	10 05 57.6	-0.6
CRPR				IAML		10 05 58.4	
	comp=Z,21µm,0.7s						
OBIP	Obispado Ponce	0.36	45		Pg	10 05 54.0	-0.1
OBIP	Obispado Ponce	0.36	45	P	Pg	10 05 53.4	-0.7
OBIP	Obispado Ponce	0.36	45	⇓iP	Pg	10 05 54.0	-0.1
OBIP				eS	Sg	10 05 58.7	-0.5
OBIP	Obispado Ponce	0.36	45	i P	Pg	10 05 54.0	-0.1
OBIP				eS	Sg	10 05 58.7	-0.5
OBIP				IAML		10 05 59.2	
	comp=Z,65µm,0.3s						
CELP	Cerrillos	0.40	45		Pg	10 05 54.7	-0.1
CELP				IAML		10 06 00.3	
	comp=Z,24µm,0.3s						
CELP				IAML		10 06 00.4	
	comp=Z,47µm,0.4s						
LSP	Las Mesas	0.43	333		Pg	10 05 55.2	-0.1
LSP	Las Mesas	0.43	333	⇓iP	Pg	10 05 55.2	-0.1
UUPR	Utuado, UPR, P	0.49	18		Pb	10 05 55.6	-0.9
PRSN	Puerto Rico Se	0.50	329		Pb	10 05 56.3	-0.4
PRSN				IAML		10 06 03.2	
	comp=Z,26µm,0.2s						
PRSN	Puerto Rico Se	0.50	329		Sg	10 06 02.8	-0.4
PRSN	Puerto Rico Se	0.50	329	P	Pb	10 05 56.2	-0.4
PRSN	Puerto Rico Se	0.50	329	⇑ePg	Pb	10 05 56.2	-0.4
PRSN				⇓eSg	Sg	10 06 02.4	-0.8
PRSN				IAML		10 06 03.2	
	comp=N,32µm,0.3s						
PRSN	Puerto Rico Se	0.50	329	⇑iP	Pb	10 05 56.3	-0.4
PRSN				eS	Sg	10 06 02.8	-0.4
AGPR	Aguadilla, PR	0.71	342		Pb	10 05 59.6	-0.7
AGPR	Aguadilla, PR	0.71	342	P	Pb	10 05 58.9	-1.4
AGPR	Aguadilla, PR	0.71	342	⇑ePg	Pb	10 05 59.6	-0.7
AGPR				⇓eSg	Sb	10 06 08.5	-1.3
AGPR				IAML		10 06 12.2	
	comp=N,4µm,0.3s						
AGPR	Aguadilla, PR	0.71	342	⇑iP	Pb	10 05 59.7	-0.7
AGPR				eS	Sb	10 06 08.5	-1.3
AGPR	Aguadilla, PR	0.71	342	i P	Pb	10 05 59.6	-0.7
AGPR				eS	Sb	10 06 08.4	-1.3
AGPR				IAML		10 06 14.6	
	comp=Z,3µm,0.3s						
ECPR	Experimental S	0.72	43		Pb	10 05 59.6	-0.8
ECPR				IAML		10 06 10.3	
	comp=Z,14µm,0.2s						
ECPR				IAML		10 06 12.8	
	comp=Z,13µm,0.2s						
ECPR	Experimental S	0.72	43	⇓iP	Pb	10 05 59.7	-0.8
ECPR				eS	Sb	10 06 08.5	-1.5
SJG	San Juan	0.76	65	LR	LR	10 05 48.2	
	comp=Z,18nm,19.5s,baz=58,slow=3.8						
SJG				Pg	Pb	10 06 01.0	-0.2
	comp=Z,450nm,0.3s,baz=259,slow=14,SNR=489						
SJG				Lg	Lg	10 06 11.1	
	comp=Z,2µm,0.3s,baz=360,slow=19,SNR=37						
SJG	San Juan	0.76	65		Pb	10 06 01.1	-0.2
SJG	San Juan	0.76	65	P	Pb	10 06 00.9	-0.2
SJG	San Juan	0.76	65	⇑ePg	Pb	10 06 01.1	-0.1
SJG				⇓eSg	Sb	10 06 10.8	-0.5
SJG	San Juan	0.76	65	⇓iP	Pb	10 06 01.0	-0.2
SJG				eS	Sb	10 06 11.2	0.0
SJG	San Juan	0.76	65	i P	Pb	10 06 01.0	-0.2
SJG				eS	Sb	10 06 10.8	-0.5
SJG				IAML		10 06 14.3	
	comp=Z,101µm,0.2s						
IDE	Isla Desecheo	0.82	316		Pb	10 06 01.9	-0.3
IDE					Sb	10 06 12.3	-0.7
IDE	Isla Desecheo	0.82	316	⇑iP	Pb	10 06 01.9	-0.3
IDE				eS	Sb	10 06 12.3	-0.7
PDPR	Patillas Dam,	0.85	74		Pb	10 06 02.6	0.0
GCPR	Guaynabo City	0.92	55		Pb	10 06 03.2	-0.7
GCPR					Sb	10 06 14.8	-0.9
GCPR	Guaynabo City	0.92	55	P	Pb	10 06 03.1	-0.7
GCPR	Guaynabo City	0.92	55	⇓iP	Pb	10 06 03.4	-0.5
GCPR				eS	Sb	10 06 14.2	-1.5
HUMP	Col San Antoni	1.04	70		Pb	10 06 05.7	-0.3
HUMP				IAML		10 06 22.1	
	comp=Z,4µm,0.4s						
HUMP				IAML		10 06 22.7	
	comp=Z,5µm,0.2s						
HUMP	Col San Antoni	1.04	70		Sb	10 06 19.5	+0.3
HUMP	Col San Antoni	1.04	70	P	Pb	10 06 05.1	-0.8
HUMP	Col San Antoni	1.04	70	⇓iP	Pb	10 06 05.6	-0.3
HUMP				eS	Sb	10 06 19.7	+0.4
CUPR	Culebra, Puert	1.60	71		Pn	10 06 15.0	+1.1
PCDR	Punta Cana, DR	1.60	297	ePg	Pb	10 06 16.8	+1.3
PCDR				IAML		10 06 50.7	
	comp=N,1µm,1.0s						
HIDR	Higuey Centro	1.92	295	ePg	Pb	10 06 20.7	-0.3
HIDR				IAML		10 06 57.1	
	comp=N,1µm,0.7s						
MIDR	Miches	2.38	300	P	Pn	10 06 26.0	+1.4
MIDR	Miches	2.38	300	ePg	Pb	10 06 27.4	-1.5
MIDR				IAML		10 07 07.7	
	comp=N,376nm,1.1s						
DR12	Loma Pena Alta	2.58	293		Pn	10 06 30.1	+2.7
HATOM	Hato Mayor del	2.58	293	ePg	Pb	10 06 30.2	-2.0
HATOM				IAML		10 07 15.2	
	comp=N,398nm,0.6s						
SDD	Santo Domingo	2.96	283	Pn	Pn	10 06 33.8	+1.2
SDD				IAML		10 07 35.2	
	comp=N,503nm,0.8s						
SDD				IAML		10 07 35.5	
	comp=E,486nm,0.8s						
BANI	BANI	3.37	281	Pn	Pn	10 06 38.2	-0.1
SABA	Saba	3.47	92		Pn	10 06 40.9	+1.3
SMRT	St. Maarten	3.63	85		Pn	10 06 42.7	+0.9
SMRT	St. Maarten	3.63	85	P	Pn	10 06 42.7	+0.9
SC01	Santiago de lo	4.00	295		Pn	10 06 48.7	+1.8
SDDR	Presa de Saban	4.35	287	i P	Pb	10 06 58.8	-3.7
SDDR				IVmB_BB		10 07 13.4	
	comp=Z,1µm,1.0s						
SDDR				IAmb	IAmb	10 07 13.6	
	comp=Z,87nm,0.6s						
MBFL	Flemmings, Mon	4.58	102	eP	Pn	10 06 56.0	+1.2
MBFL	Flemmings, Mon	4.58	102	e	Sn	10 07 47.4	-0.2
MBWH	Windy Hill	4.60	102	eP	Pn	10 06 56.2	+1.0
MBWH	Windy Hill	4.60	102	e	Sn	10 07 46.2	-1.9
MLYT	Lee's Yard	4.60	103	eP	Pn	10 06 55.6	+0.5
MLYT	Lee's Yard	4.60	103	e	Sn	10 07 46.8	-1.4
ANWB	Willy Bob	4.85	91		Pn	10 06 58.8	+0.2
ANWB	Willy Bob	4.85	91	eP	Pn	10 06 57.1	-1.5
ANWB	Willy Bob	4.85	91	e	Sn	10 07 55.1	+0.7
DHSZ	Broadband at M	5.12	106	eP	Pn	10 07 03.5	+1.3
DHSZ	Broadband at M	5.12	106	e	Sn	10 07 58.7	-2.2
GDHS	Morne Mazeau,	5.12	106		Pn	10 07 03.9	+1.6
GDHS				IAML		10 08 05.0	
	comp=N,257nm,0.4s						
ATGZ	Broadband at L	5.21	108	eP	Pn	10 07 04.2	+0.8
ATGZ	Broadband at L	5.21	108	e	Sn	10 08 01.0	-2.1
MMLZ	Guadeloupe Bro	5.28	108	eP	Pn	10 07 05.7	+1.3
MMLZ	Guadeloupe Bro	5.28	108	e	Sn	10 08 03.6	-1.3
ABD	La Joyeuse, An	5.32	103	Pn	Pn	10 07 06.0	+1.1
ABD				IAML		10 09 31.1	
	comp=E,142nm,1.6s						
ABD				IAML		10 10 38.4	
	comp=N,128nm,1.6s						
TBG	Guadaloupe-3	5.37	110	eP	Pn	10 07 06.8	+1.1
TDBA	Terre de Bas,	5.38	110	Pn	Pn	10 07 07.7	+1.9
GRTK	Grand Turk	5.46	313	P	Pn	10 07 08.7	+1.8
GRTK	Grand Turk	5.46	313	i P	Pn	10 07 06.9	0.0
GRTK				IAmb	IAmb	10 07 17.5	
	comp=Z,120nm,1.2s						
MAGL	Barre de l'ile	5.66	108	Pn	Pn	10 07 11.2	+1.5
DSLB	Salisbury	5.73	113	eP	Pn	10 07 11.7	+1.0
DSLB	Salisbury	5.73	113	e	Sn	10 08 10.9	-5.1
DSDZ	La Diserade, G	5.75	104	eP	Pn	10 07 12.5	+1.6
DSDZ	La Diserade, G	5.75	104	e	Sn	10 08 13.0	-3.4
GDSD	La Dsirade Is	5.75	104	Pn	Pn	10 07 11.5	+0.5
DWS	Wesley	5.77	112	e	Sn	10 08 20.9	+3.8
BIM	Bigot	6.46	119	Pn	Pn	10 07 22.0	+1.3
BIM	Bigot	6.46	119	eP	Pn	10 07 21.0	+0.3
BIM	Bigot	6.46	119	e	Sn	10 08 30.6	-3.5
MPOM	Morne Pois Mar	6.67	119	Pn	Pn	10 07 25.8	+2.2
SLBI	Saint Lucia, B	6.80	123	e	Sn	10 08 35.2	-7.2
MASC	Masc	7.35	290	i P	Pn	10 07 35.4	+2.5
MASC				IAmb	IAmb	10 07 56.7	
	comp=Z,29nm,2.0s						
QMBU	Quimbuelo	7.88	289	i P	Pn	10 07 41.5	+1.3
QMBU				IAmb	IAmb	10 08 04.8	
	comp=Z,13nm,1.2s						
GTBY	Guantanamo Bay	8.08	287	i P	Pn	10 07 44.0	+1.0
GTBY				IAmb	IAmb	10 07 51.1	
	comp=Z,39nm,1.1s						
RCC	Rio Carpintero	8.63	286	i P	Pn	10 07 51.2	+0.7
RCC				IAmb	IAmb	10 08 12.1	
	comp=Z,11nm,1.2s						
MARVS	Santiago de Cu	8.82	286	i P	Pn	10 07 54.1	+1.0
MARVS				IAmb	IAmb	10 08 10.0	
	comp=Z,15nm,1.0s						
MARVS				IVmB_BB		10 08 53.4	
	comp=Z,13µm,1.0s						
SDV	Santo Domingo	9.57	203	Pn	Pn	10 08 07.9	+4.3
	comp=Z,0.8nm,0.3s,baz=17,slow=6.9,SNR=4.0						
SDV				Sn	Sn	10 09 47.9	-3.0
	comp=Z,0.6nm,0.3s,baz=321,slow=18,SNR=1.6						
	comp=Z,2.0nm,0.4s						
TXAR	Lajitas Array	35.49	296	P	P	10 12 42.0	-0.4
	comp=Z,0.3nm,0.7s,baz=108,slow=9.6,SNR=4.0						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	49.12	306	P	P	10 14 33.3	-0.1
	comp=Z,0.2nm,0.7s,baz=92,slow=8.1,SNR=2.4						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	55.49	335	P	P	10 15 18.8	-1.2
	comp=Z,0.5nm,0.6s,baz=111,slow=6.9,SNR=13						
	comp=Z,0.5nm,0.6s						
ESDC	Sonseca Array	58.14	54	P	P	10 15 38.8	-0.5
	comp=Z,0.5nm,0.7s,baz=272,slow=8.2,SNR=5.9						
	comp=Z,0.5nm,0.7s						
TORD	Torodi Ar. Bea	65.94	83	P	P	10 16 33.2	+1.2
	comp=Z,0.2nm,0.5s,baz=297,slow=6.3,SNR=1.8						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	69.81	333	P	P	10 16 57.3	+1.8
	comp=Z,0.4nm,0.8s,baz=66,slow=5.5,SNR=4.5						
	comp=Z,0.4nm,0.8s						

*KNET **01** 10:06:52.7±0.5, 43˚24N×75˚05E, h16km±3km, ml2.1, Error ellipse: s-maj=4.0km s-min=2.2km az=22.0*
*NNC **01** 10:06:52.2±0.2, 43˚28N×75˚07E, h4km±3km, mb3.5, mpv3.4, Error ellipse: s-maj=2.6km s-min=1.4km az=158.0*
*KRNET **01** 10:06:52.6±0.1, 43˚29N×75˚07E, h19km, mb2.9*
*SOME **01** 10:06:53.2, 43˚40N×75˚15E*
ISC 01 10:06:52.5±0.8**, 43˚31N**±0˚02×**75˚08E**±0˚02**, h0km, n39, σ0s54**/71**, 29C-16D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGDS	Sogindy	0.36	294	P	Pg	10 07 00.0	+0.7
	128nm,0.1s						
SGDS				S	Sg	10 07 04.9	+1.0
	270nm,0.1s						
CHMS	Chumysh	0.39	218	P	Pg	10 07 00.2	+0.3
	23nm,0.1s,SNR=108						
CHMS				⇑S	Sg	10 07 05.4	+0.5
	204nm,0.1s						
CHMS	Chumysh	0.39	218	⇑iP	Pg	10 07 00.1	+0.2
CHMS				⇑iS	Sg	10 07 05.3	+0.4
USP	Ospenovka	0.42	265	⇑P	Pg	10 07 00.9	+0.4
	64nm,0.2s,SNR=356						
USP				⇑S	Sg	10 07 06.5	+0.5
	194nm,0.1s						
USP	Ospenovka	0.42	265	⇑iP	Pg	10 07 00.9	+0.4
USP				⇑iS	Sg	10 07 06.5	+0.5
DGS	Degeres	0.51	97	P	Pg	10 07 03.1	+0.8
	52nm,0.2s						
DGS				S	Sg	10 07 10.1	+1.2
	25nm,0.1s						
TKM2	Tokmak 2	0.54	135	⇑P	Pg	10 07 02.9	+0.1
	12nm,0.1s,SNR=15						
TKM2				⇑S	Sg	10 07 10.2	+0.4
	128nm,0.1s						
TKM2	Tokmak 2	0.54	135	⇑iP	Pg	10 07 02.8	0.0
TKM2				⇑iS	Sg	10 07 10.2	+0.4
FRU1	Bishkek	0.59	214	⇑iP	Pg	10 07 03.8	0.0
FRU1				⇑iS	Sg	10 07 11.7	+0.2
KBK	Karagaybulak	0.66	188	⇓P	Pg	10 07 04.8	-0.2
	58nm,0.1s,SNR=79						
KBK				⇑S	Sg	10 07 13.7	+0.2
	100nm,0.2s						
KBK	Karagaybulak	0.66	188	⇑iP	Pg	10 07 05.2	+0.2
KBK				⇑iS	Sg	10 07 14.0	+0.5
KST	Kastek	0.70	112	P	Pg	10 07 06.4	+0.6
	9.3nm,0.1s						
KST				S	Sg	10 07 15.9	+1.0
	27nm,0.2s						
AAK	Ala-Archa	0.79	213	⇑P	Pg	10 07 07.6	-0.1
	24nm,0.2s,SNR=89						
AAK				⇓S	Sg	10 07 18.0	+0.2
	44nm,0.2s						
AAK	Ala-Archa	0.79	213	⇓P	Pg	10 07 07.4	-0.3
	2.1nm,0.3s						
AAK				⇓S	Sg	10 07 17.9	0.0
	3.6nm,0.3s						
AAK	Ala-Archa	0.79	213	⇓iP	Pg	10 07 07.5	-0.1
AAK				⇓iS	Sg	10 07 18.1	+0.2
MTBS	Maitube	1.00	100	P	Pb	10 07 12.1	-0.7
	1.9nm,0.1s						
MTBS				S	Sb	10 07 25.8	-0.8
	23nm,0.2s						
BOOM	Boomskoye usch	1.03	142	⇑eP	Pg	10 07 11.7	-0.5
BOOM				⇑eS	Sg	10 07 25.2	-0.4
KUU	Kurty	1.09	57	P	Pg	10 07 13.3	-0.1
	4.9nm,0.1s						
KUU				S	Sb	10 07 28.1	-0.9
	44nm,0.1s						
EKS2	Erkin-Say	1.15	236	⇓P	Pg	10 07 14.0	-0.5
	11nm,0.1s,SNR=57						
EKS2				⇓S	Sg	10 07 29.0	-0.4
	19nm,0.2s						
UCH	Uchtor	1.15	201	⇓P	Pg	10 07 14.1	-0.4
	16nm,0.1s,SNR=84						
UCH				⇓S	Sg	10 07 29.4	-0.1
	22nm,0.1s						
IZV	Izvestkoviy	1.16	103	P	Pg	10 07 14.0	-0.6
	10nm,0.1s						
IZV				S	Sg	10 07 29.1	-0.5
	50nm,0.2s						
KTBS	Karatobe	1.24	70	P	Pg	10 07 16.0	-0.2
	2.6nm,0.1s						
KTBS				S	Sb	10 07 32.6	-0.6
	16nm,0.2s						
TNSS	Tian-Shan	1.39	100	P	Pg	10 07 18.9	-0.2
	6.8nm,0.2s						

TNSS				S	Sb	10 07 37.5	-0.6
	12nm,0.2s						
MDOK	Medeo	1.45	95	Pg	Pn	10 07 19.9	-0.1
	9.7nm,0.2s						
MDOK				Lg	Lg	10 07 39.0	
	38nm,0.2s						
MRKS	Merke	1.47	248	P	Pn	10 07 20.2	-0.1
	4.1nm,0.1s						
MRKS				S	Sg	10 07 39.3	-0.3
	54nm,0.2s						
ARLS	Aral	1.55	201	⇑eP	Pn	10 07 20.9	-0.5
ARLS				⇑eS	Sg	10 07 41.3	-0.8
BTLS	Baital	1.89	337	P	Pn	10 07 25.8	-0.2
	8.0nm,0.2s						
BTLS				S	Sn	10 07 49.1	-1.3
	30nm,0.1s						
KDJ	Kajisay	1.94	126	⇑eP	Pn	10 07 27.8	+0.9
KDJ				⇑eS	Sb	10 07 53.4	-0.3
NRN	Naryn	1.99	160	⇑eP	Pn	10 07 28.2	+0.5
NRN				⇑eS	Sn	10 07 54.1	+0.6
MNAS	Manas	2.06	247	⇓eP	Pn	10 07 28.9	+0.4
MNAS				⇓eS	Sn	10 07 55.6	+0.7
ARXS	Arharly	2.19	65	Pg	Pb	10 07 32.7	-0.3
	2.2nm,0.1s						
ARXS				Lg	Lg	10 08 01.1	
	38nm,0.2s						
KURS	Kuram	2.26	84	Pg	Pb	10 07 34.0	-0.2
	1.0nm,0.1s						
KURS				Lg	Lg	10 08 03.3	
	9.8nm,0.4s						
JNKS	Jany-Kuch	2.29	170	⇓eP	Pn	10 07 32.2	+0.5
JNKS				⇓eS	Sn	10 08 01.1	+0.4
ARSB	Arslanbob	2.52	219	⇑eP	Pn	10 07 35.1	+0.4
ARSB				⇑eS	Sn	10 08 06.6	+0.4
BLB	Baldybastay	2.59	71	Pg	Pb	10 07 39.6	-0.2
	18nm,0.1s						
BLB				Lg	Lg	10 08 12.8	
	37nm,0.3s						
SALK	Salom-Alik	2.59	202	⇑eP	Pn	10 07 36.2	+0.4
SALK				⇑eS	Sn	10 08 08.0	-0.1
KPKS	Kokpek	2.63	85	Pg	Pb	10 07 40.4	-0.1
KPKS				Lg	Lg	10 08 14.2	
UZB	Uzynbulak	2.89	92	Pg	Pb	10 07 45.6	+0.7
	1.8nm,0.1s						
UZB				Lg	Lg	10 08 23.0	
	8.0nm,0.2s						
PDGK	Podgornoye	3.22	88	⇓Pg	Pb	10 07 51.8	+1.2
	1.1nm,0.3s						
PDGK				⇓Lg	Lg	10 08 34.3	
	8.9nm,0.7s						

*CATAC **01** 10:26:49.6±0.6, 7°N±2°×7°3W±°, h164km±5km, M4.6/9, mb4.3/2, mB4.4/2, MLv4.8/9, Mw(mB)3.6/2, Error ellipse: s-maj=11.4km s-min=4.2km az=97.3, confirmed*

*FUNV **01** 10:26:49.4, 6°55N×73°20W, h157km, MW4.7, Presumed earthquake*

*IDC **01** 10:26:51.6±0.6, 6°80N×73°00W, h160km±6km, mb3.8/10, mbtmp4.4/15, Error ellipse: s-maj=13.7km s-min=7.0km az=130.0*

*NEIC **01** 10:26:51.5±1.5, 6°76N±0°08×72°97W±0°09, h155km±9km, mb4.5/224, Error ellipse: s-maj=13.5km s-min=10.2km az=120.0*

*RSNC **01** 10:26:52.1±0.0, 7°N±1°×7°3W±°, h149km±1km, M4.5, mB5.1, mb5.0, ML4.2, Mw(mB)4.4*

ISC 01 10:26:51.3±0.6, **6°84N**±0°03×**73°08W**±0°03, **h154**km±5km, **n247**, σ1s**52**/214, **mb4.6**/105, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.27	203	P	Pn	10 27 12.6	+0.1
BARC				S	Sn	10 27 28.1	-0.6
PAMC	Pamplona, Colo	0.62	37	P	Pn	10 27 15.3	+1.0
PAMC				S	Sn	10 27 32.5	+0.7
BRJC	Barrancabermej	0.67	281	P	Pn	10 27 14.2	+0.2
BRJC				S	Sn	10 27 31.3	0.0
RUSC	La Rusia	0.94	180	P	Pn	10 27 16.5	-0.1
RUSC				S	Sn	10 27 35.4	-0.5
RUSC	La Rusia	0.94	180	P	Pn	10 27 16.4	-0.2
RUSC				S	Sn	10 27 35.0	-0.9
CAPV	Capacho	1.27	37	eP	Pn	10 27 20.6	+1.5
CAPV				eS	Sn	10 27 42.0	+1.7
PTBC	PUERTO BERRIO,	1.40	258	P	Pn	10 27 19.0	-1.2
PTBC				S	Sn	10 27 40.1	-2.1
OCAC	Ocana	1.41	350	P	Pn	10 27 20.6	+0.2
OCAC				S	Sn	10 27 42.4	-0.3
SPBC	San Pablo de B	1.54	220	P	Pn	10 27 21.4	-0.3
SPBC				S	Sn	10 27 43.5	-1.5
CHIC	Chingaza	2.29	197	P	Pn	10 27 30.3	-0.2
CHIC				S	Sn	10 27 59.7	-1.1
ROSC	El Rosal	2.34	212	P	Pn	10 27 32.4	+1.3
	874nm,0.3s,baz=88,slow=17,SNR=330						
ROSC				S	Sn	10 28 03.2	+1.5
	4µm,0.4s,baz=93,slow=16,SNR=14						
ROSC	El Rosal	2.34	212		Pn	10 27 32.3	+1.2
ROSC				Sn	Sn	10 28 00.6	-1.2
ROSC	El Rosal	2.34	212	P	Pn	10 27 32.0	+0.9
ROSC				S	Sn	10 28 01.1	-0.7
CVER	Cruz Verde, Cu	2.51	203	P	Pn	10 27 33.9	+0.7
CVER				S	Sn	10 28 04.8	-0.7
UREC	San Jos de Ur	2.60	290	P	Pn	10 27 31.8	-2.0
UREC				S	Sn	10 28 03.0	-3.6
SOCV	Socops	2.63	57	eP	Pn	10 27 35.4	+1.2
SOCV				eS	Sn	10 28 07.0	-0.4
VILC	Villavicencio,	2.78	193	P	Pn	10 27 35.7	-0.5
VILC				S	Sn	10 28 09.7	-1.3
RECRC	Villamaria, Ca	2.94	231	P	Pn	10 27 38.7	+0.2
RECRC				S	Sn	10 28 16.4	+1.4
NIZA	Niza - Manizal	2.97	233	P	Pn	10 27 39.4	+0.7
NIZA				S	Sn	10 28 16.8	+1.5
CBOC	Ciudad Bolivar	3.07	252	P	Pn	10 27 39.7	-0.2
DBBC	Dabeiba	3.11	273	P	Pn	10 27 39.9	-0.4
DBBC				S	Sn	10 28 15.1	-3.2
SDV	Santo Domingo	3.16	50	P	Pn	10 27 42.0	+1.0
	608nm,0.4s,baz=209,slow=5.5,SNR=1131						
SDV				S	Sn	10 28 19.9	+0.4
	626nm,0.4s,baz=98,slow=24,SNR=14						
SDV	Santo Domingo	3.16	50	P	Pn	10 27 41.9	+0.9
SDV				S	Sn	10 28 19.6	+0.1
ARGC	Ariguani, Magd	3.21	339	P	Pn	10 27 42.7	+1.2
ARGC				S	Sn	10 28 20.9	+0.4
MCQV	Machiques	3.23	10	eP	Pn	10 27 42.4	+0.6
MCQV				eS	Sn	10 28 22.2	+1.3
ANIL	Santa Ana	3.29	225	P	Pn	10 27 42.4	-0.4
ANIL				S	Sn	10 28 23.6	+1.0
PRAC	Prado	3.59	210	P	Pn	10 27 45.8	-0.6
PRAC				S	Sn	10 28 28.4	-0.8
PRAC	Prado	3.59	210	P	Pn	10 27 45.7	-0.8
PRAC				S	Sn	10 28 28.2	-1.1
ORTC	Ortega, Tolima	3.63	217	P	Pn	10 27 45.9	-1.0
ORTC				S	Sn	10 28 29.0	-1.1
APAC	Apartado, Choc	3.63	287	P	Pn	10 27 46.3	-0.5
APAC				S	Sn	10 28 27.5	-2.5
SJCC	San Jacinto, C	3.68	326	P	Pn	10 27 46.1	-1.5
SJCC				S	Sn	10 28 28.0	-3.2
SJCC	San Jacinto, C	3.68	326	P	Pn	10 27 46.1	-1.5
SJCC				S	Sn	10 28 28.4	-2.9
URMC	La Uribe, Meta	3.80	200	P	Pn	10 27 49.4	+0.2
URMC				S	Sn	10 28 33.1	-1.1
YOTC	Yotoco, Valle	4.32	229	P	Pn	10 27 54.2	-1.8
YOTC				S	Sn	10 28 47.5	+1.2
SOLC	Bahia Solano	4.35	262	P	Pn	10 27 56.0	-0.2
SOLC				S	Sn	10 28 46.9	+0.2
CAPC	Capurgana	4.59	293	P	Pn	10 27 57.0	-2.4
CAPC				S	Sn	10 28 46.0	-6.6
PIZC	Pizarro, Choco	4.65	247	P	Pn	10 28 01.0	+0.8
PIZC				S	Sn	10 28 52.8	-1.1
PTAC	Punta Ardita,	4.71	274	P	Pn	10 27 59.9	-1.0
PTAC				S	Sn	10 28 51.8	-3.4
MACC	Macarena, Meta	4.73	189	P	Pn	10 27 59.6	-1.7
MACC				S	Sn	10 28 51.6	-4.3
TEPV	Terepaima	4.94	51	eP	Pn	10 28 04.0	0.0
TEPV				eS	Sn	10 28 59.3	-1.5
URI	Uribia	4.94	12	P	Pn	10 28 02.8	-1.2
URI				S	Sn	10 28 56.2	-4.7
URIC	Uribia, Colomb	4.95	12	P	Pn	10 28 02.7	-1.4
URIC				S	Sn	10 28 58.9	-2.0
JAMC	Jamundi, Valle	5.08	225	P	Pn	10 28 04.7	-1.4
	3µm115nm,0.6s						
JAMC				S	Sn	10 29 03.7	-0.8
	3µm115nm,0.6s						
GARC	Garzon, Huila	5.21	208	P	Pn	10 28 06.1	-1.8
GARC				S	Sn	10 29 03.9	-3.8
MAPV	Macapo	5.45	57	eP	Pn	10 28 10.6	-0.2
MAPV				eS	Sn	10 29 10.6	-2.4
POPC	Popayan, Colom	5.58	220	P	Pn	10 28 11.8	-0.9
	2µm147nm,0.7s						
FLOC	Florencia	5.82	206	P	Pn	10 28 14.4	-1.3
FLOC				S	Sn	10 29 21.3	-0.5
FLOC	Florencia	5.82	206	P	Pn	10 28 14.6	-1.2
	2µm195nm,0.8s						
JACV	Jacura	5.95	45	eP	Pn	10 28 17.2	-0.3
BENV	Beln	6.24	60	eP	Pn	10 28 20.6	-0.8
BENV				eS	Sn	10 29 28.1	-3.8
TURV	Turiamo	6.30	55	eP	Pn	10 28 20.9	-1.1
BBAC	Balboa, Cauca	6.34	221	P	Pn	10 28 21.2	-1.6
	2µm167nm,0.7s						
CRUC	La Cruz	6.51	217	P	Pn	10 28 26.1	+0.9
CACV	CAICARA DEL OR	6.53	83	eP	Pn	10 28 30.0	+4.9
TACV	Tcata	6.82	61	eP	Pn	10 28 27.2	-1.9
TACV				eS	Sn	10 29 41.5	-4.3
GCUF	Volcan Galeras	7.02	218	P	Pn	10 28 31.5	-0.6
	797nm89nm,0.8s						
FUNV	FUNVISIS	7.17	59	eP	Pn	10 28 32.7	-1.0
FUNV				eS	Sn	10 29 49.9	-4.2
CMBC	Cumbal	7.54	219	P	Pn	10 28 39.1	+0.1
	246nm,0.7s						
BONI	La Bonita	7.75	215	P	Pn	10 28 41.6	0.0
	723nm80nm,0.6s						
OTAV	Otavalo	8.47	219		Pn	10 28 50.2	-1.3
PAC1	Pacto, Paraso	8.67	221	P	Pn	10 28 52.6	-1.2
PCRV	Puerto La Cruz	8.98	68	P	Pn	10 28 58.2	+0.4
	2.5nm,0.9s,baz=337,slow=12,SNR=37						
SLOR	San Lorenzo -	9.27	216		Pn	10 29 01.1	-1.0
BRU2	Volcan	9.72	282		Pn	10 29 09.0	+1.2
HDC	Heredia	11.36	287	Pn	Pn	10 29 30.6	+1.3
STH	Stony Hill	11.74	342	iP	Pn	10 29 37.3	+3.1
MTDJ	Mount Denham	12.12	339		Pn	10 29 40.0	+0.9
MTDJ	Mount Denham	12.12	339	iP	Pn	10 29 41.4	+2.2
MTDJ				IVmB_BB		10 29 42.8	
	comp=Z,2µm,1.0s						
MTDJ				IAmb	IAmb	10 29 43.1	
	comp=Z,100nm,0.6s						
MTDJ	Mount Denham	12.12	339	iP	Pn	10 29 42.0	+2.8
SDDR	Presa de Saban	12.19	8		Pn	10 29 39.8	-0.3
JTS	Las Juntas de	12.23	287	P	Pn	10 29 41.3	+0.7
	comp=Z,3.3nm,0.6s,baz=58,slow=8.7,SNR=3.7						
JTS	Las Juntas de	12.23	287		Pn	10 29 41.7	+1.1
DR12	Loma Pena Alta	12.41	17	Pn	Pn	10 29 41.5	-1.4
JUD3	Juan Diaz 3	12.76	286		Pn	10 29 49.1	+1.7
OBIP	Obispado Ponce	12.80	29	Pn	Pn	10 29 46.6	-1.2
AGPR	Aguadilla, PR	12.93	26	Pn	Pn	10 29 49.1	-0.4
PDPR	Patillas Dam,	13.06	31		Pn	10 29 50.0	-1.2
SJG	San Juan	13.08	30	P	Pn	10 29 50.7	-0.7
	comp=Z,16nm,0.4s,baz=204,slow=11,SNR=13						
SJG	San Juan	13.08	30		Pn	10 29 48.8	-2.6
ECPR	Experimental S	13.15	29		Pn	10 29 51.0	-1.3
GTBY	Guantanamo Bay	13.15	352	iP	Pn	10 29 54.8	+2.4
GTBY				IAmb	IAmb	10 30 13.4	
	comp=Z,51nm,1.0s						
GTBY	Guantanamo Bay	13.15	352	iP	P	10 29 56.5	-0.3
HUMP	Col San Antoni	13.26	31	Pn	Pn	10 29 52.6	-1.1
BOAV	Boa Vista	13.27	109		Pn	10 29 51.7	-2.2
GCPR	Guaynabo City	13.28	30	Pn	Pn	10 29 53.6	-0.3
MASC	Masc	13.30	355	iP	Pn	10 29 56.1	+1.9
MASC				IAmb	IAmb	10 30 01.6	
	comp=Z,34nm,0.8s						
RCC	Rio Carpintero	13.32	349	iP	Pn	10 29 56.1	+1.7
RCC				IVmB_BB		10 29 59.2	
	comp=Z,620nm,1.0s						
RCC				IAmb	IAmb	10 29 59.2	
	comp=Z,43nm,0.6s						
MARVS	Santiago de Cu	13.36	348	iP	Pn	10 29 57.2	+2.2
MARVS				IAmb	IAmb	10 29 59.8	
	comp=Z,30nm,1.2s						
MARVS				IVmB_BB		10 30 56.7	
	comp=Z,2µm,1.0s						
QMBU	Quimbuelo	13.38	353	iP	Pn	10 29 56.3	+1.0
QMBU				IAmb	IAmb	10 30 09.2	
	comp=Z,26nm,0.9s						
CHIV	Chivirico	13.45	346	Pn	Pn	10 29 55.5	-0.6
CHIV	Chivirico	13.45	346	iP	Pn	10 29 57.3	+1.2
CHIV				IAmb	IAmb	10 30 11.1	
	comp=Z,15nm,1.1s						
CHIV				IVmB_BB		10 30 56.3	
	comp=Z,3µm,1.0s						
LMGC	Las Mercedes	13.68	344	iP	Pn	10 30 00.9	+1.8
LMGC				IAmb	IAmb	10 30 05.0	
	comp=Z,23nm,0.9s						
LMGC				IVmB_BB		10 30 55.5	
	comp=Z,590nm,1.0s						
CUPR	Culebra, Puert	13.70	33	Pn	Pn	10 29 56.5	-2.7
PINC	Pinares de May	13.82	349	iP	P	10 30 03.4	-0.7
PINC				IVmB_BB		10 30 05.6	
	comp=Z,470nm,1.0s						
PINC				IAmb	IAmb	10 30 05.9	
	comp=Z,44nm,0.5s						
USIM	UNAN	14.03	293	Pn	Pn	10 30 03.8	+0.3
HLGC	Holguin	14.26	349	iP	P	10 30 10.9	+1.8
HLGC				IAmb	IAmb	10 30 14.5	
	comp=Z,34nm,0.8s						
ATAH	Atahualpa	14.86	201	P	Pn	10 30 14.6	+0.3
	comp=Z,6.6nm,0.8s,baz=64,slow=7.2,SNR=7.4						
CCCC	Cccc	14.98	343	iP	Pn	10 30 15.9	+0.6
CCCC				IAmb	IAmb	10 30 25.3	
	comp=Z,15nm,0.7s						
TGUH	Tegucigalpa,Un	15.69	298		Pn	10 30 24.4	+0.2
TGUH				IAmb	IAmb	10 30 27.3	
	comp=Z,43nm,1.1s						
MACA	Manacapuru-AM	15.87	128		Pn	10 30 23.4	-3.0
MACA				IAmb	IAmb	10 30 26.0	
	comp=Z,16nm,0.8s						
MTO3	Montecristo	17.67	296	P	P	10 30 47.5	+0.4
MTO3				IAmb	IAmb	10 30 51.0	
	comp=Z,14nm,0.7s						
ESQI	Esquipulas	17.71	297	P	P	10 30 48.0	+0.6
ESQI				IAmb	IAmb	10 30 51.8	
	comp=Z,24nm,0.7s						
SOR	Soroa	18.52	330	P	P	10 30 57.0	+0.9
SOR				IAmb	IAmb	10 30 59.1	
	comp=Z,32nm,1.2s						
APG	El Apazote	18.89	297	P	P	10 31 00.1	-0.2
	comp=Z,0.9nm,0.7s,baz=114,slow=9.7,SNR=10						
TEIG	Tepich	19.86	314		P	10 31 11.4	+0.9
LPAZ	La Paz	23.50	168	P	P	10 31 47.7	-0.4
	comp=Z,2.3nm,0.8s,baz=344,slow=6.8,SNR=8.6						
	comp=Z,2.3nm,0.8s						
LPAZ	La Paz	23.50	168	P	P	10 31 46.6	-1.4
656A	Willston	24.11	339	P	P	10 31 53.3	+0.4
152A	Waverly Hall	27.89	339	P	P	10 32 28.8	+2.0
152A				IAmb	IAmb	10 32 29.3	
	comp=Z,15nm,0.8s						
GOGA	Godfrey	28.14	341	P	P	10 32 30.6	+1.6
GOGA				IAmb	IAmb	10 33 07.0	
	comp=Z,22nm,1.4s						
JSC	Jenkinsville	28.33	346	P	P	10 32 31.7	+1.0
JSC				IAmb	IAmb	10 32 45.6	
	comp=Z,12nm,1.2s						
HODGE	Hodges	28.55	344	P	P	10 32 34.4	+1.8
HODGE				IAmb	IAmb	10 32 43.7	
	comp=Z,14nm,1.4s						
Y52A	Lilburn	28.75	341	P	P	10 32 36.4	+2.0
346A	Big Creek Wild	28.83	330	P	P	10 32 37.4	+2.2
W57A	Gilead	28.88	348	P	P	10 32 36.8	+1.2
W57A				IAmb	IAmb	10 33 03.6	
	comp=Z,15nm,1.2s						
BG3	Lake Jocassee	29.45	343	P	P	10 32 42.8	+2.1
Y49A	Blount Mountai	29.58	337	P	P	10 32 43.7	+1.9
Y49A				IAmb	IAmb	10 32 44.2	
	comp=Z,12nm,0.7s						
VBMS	Vicksburg	30.03	329	P	P	10 32 46.4	+0.6
X48A	Hartselle	30.35	337	IAmb	IAmb	10 32 50.9	
	comp=Z,12nm,0.7s						
HBVL	Hebbronville	31.55	313	P	P	10 32 59.0	-0.3
HBVL				IAmb	IAmb	10 33 01.4	
	comp=Z,11nm,0.6s						
WVT	Waverly	32.13	337	P	P	10 33 04.5	+0.3
R50A	Paris	32.91	344	IAmb	IAmb	10 33 13.7	
	comp=Z,14nm,0.8s						
X40A	Basin Creek Fa	33.00	329	IAmb	IAmb	10 33 13.0	
	comp=Z,8.1nm,0.7s						
WHAR	Wooly Hollow	33.37	331	IAmb	IAmb	10 33 16.2	
	comp=Z,11nm,0.8s						
WCI	Wyandotte Cave	33.46	341	P	P	10 33 16.7	+1.0
WCI				IAmb	IAmb	10 33 17.7	
	comp=Z,13nm,0.7s						
LCAR	Lake Charles	33.47	333	IAmb	IAmb	10 33 17.4	
	comp=Z,8.7nm,0.7s						
FCAR	Ozark Folk Cen	33.77	332	IAmb	IAmb	10 33 19.5	
	comp=Z,16nm,1.0s						
T42A	Van Buren	34.24	334	IAmb	IAmb	10 33 23.9	
	comp=Z,14nm,0.7s						
BRDY	Brady	34.34	318	IAmb	IAmb	10 33 24.2	
	comp=Z,18nm,1.3s						
Z35A	Perchaven, San	34.60	323	IAmb	IAmb	10 33 27.2	
	comp=Z,15nm,0.8s						
MGMO	Mountain Grove	34.87	333	IAmb	IAmb	10 33 29.3	
	comp=Z,11nm,1.0s						
PLPT	Palo Pinto	34.90	321	IAmb	IAmb	10 33 29.1	
	comp=Z,9.9nm,0.6s						
HHAR	Hobbs	34.97	330		P	10 33 28.8	+0.1
HHAR				IAmb	IAmb	10 33 29.4	
	comp=Z,6.6nm,0.7s						
PAOC	Oil Creek Stat	35.02	351	P	P	10 33 30.3	+1.1
PAOC				IAmb	IAmb	10 33 32.3	
	comp=Z,25nm,1.5s						
CCM	Cathedral Cave	35.17	335	P	P	10 33 31.3	+0.9
U38A	Gravette	35.31	330	IAmb	IAmb	10 33 31.8	
	comp=Z,6.0nm,0.8s						
RLO	Rose Lookout	35.43	329	IAmb	IAmb	10 33 33.2	
	comp=Z,14nm,0.7s						
ABTX	Abilene, Hawle	35.61	320	IAmb	IAmb	10 33 35.5	
	comp=Z,10nm,0.8s						
WTFS	Witchita Falls	35.63	322	IAmb	IAmb	10 33 35.6	
	comp=Z,11nm,0.7s						
TUL3	Leonard	35.64	327	IAmb	IAmb	10 33 35.0	
	comp=Z,9.6nm,0.7s						
N47A	Urbana	35.72	344	IAmb	IAmb	10 33 36.7	
	comp=Z,13nm,0.8s						
S39A	Bolivar	35.79	332	IAmb	IAmb	10 33 37.3	
	comp=Z,7.9nm,0.6s						
R40A	Maddies Statio	35.81	334	IAmb	IAmb	10 33 36.5	
	comp=Z,10nm,0.6s						
TX31	Lajitas Ar. Si	36.48	312		P	10 33 42.3	+0.4
TX31				IAmb	IAmb	10 33 43.1	
	comp=Z,4.7nm,0.8s						
TXAR	Lajitas Array	36.48	312	P	P	10 33 42.4	+0.5
	comp=Z,4.0nm,0.7s,baz=128,slow=9.0,SNR=54						
TXAR				PcP	PcP	10 36 03.5	+0.9
	comp=Z,0.6nm,0.6s,baz=154,slow=5.4,SNR=7.2						
	comp=Z,4.0nm,0.7s						
WMOK	Wichita Mounta	36.49	323	IAmb	IAmb	10 33 42.0	
	comp=Z,6.4nm,0.7s						
J57A	Williamstown	36.51	356	IAmb	IAmb	10 33 43.7	
	comp=Z,8.5nm,0.6s						
HDIL	Hopedale	36.57	339	P	P	10 33 42.2	-0.1
OK048	Pawnee Station	36.64	327	IAmb	IAmb	10 33 43.7	
	comp=Z,14nm,0.8s						
229A	Bryant Ranch,	36.64	317	IAmb	IAmb	10 33 44.7	
	comp=Z,22nm,1.1s						
SN07	Snyder 07	36.72	319	IAmb	IAmb	10 33 44.6	
	comp=Z,7.9nm,0.7s						
T35A	Sooner Cattle	36.78	328	IAmb	IAmb	10 33 44.6	
	comp=Z,12nm,1.1s						
129A	Stewart Farms,	37.08	318	IAmb	IAmb	10 33 48.0	
	comp=Z,11nm,1.0s						
TPB05	Hovey Rd	37.09	314	IAmb	IAmb	10 33 48.1	
	comp=Z,14nm,0.6s						
TPB01	Permian Basin	37.43	314	IAmb	IAmb	10 33 50.8	
	comp=Z,6.5nm,0.6s						
P38A	Dawn	37.46	334		P	10 33 50.0	+0.1
128A	Castleberry Fa	37.49	317	IAmb	IAmb	10 33 51.6	
	comp=Z,16nm,0.6s						
VHRN	Van Horn	38.21	313		P	10 33 57.0	+0.5
VHRN				IAmb	IAmb	10 33 58.2	
	comp=Z,5.6nm,0.8s						
AMTX	Amarillo	38.36	321	IAmb	IAmb	10 33 59.4	
	comp=Z,12nm,0.7s						
MSTX	Muleshoe	38.49	319	IAmb	IAmb	10 34 00.1	
	comp=Z,13nm,1.0s						
MNTQ	Montreal, Queb	38.51	359	IAmb	IAmb	10 34 01.3	
	comp=Z,11nm,1.0s						
L40A	Anamosa	38.59	338	IAmb	IAmb	10 33 59.2	
	comp=Z,10nm,0.6s						
MNTX	Cornudas Mount	38.99	314		P	10 34 03.5	+0.6
MNTX				IAmb	IAmb	10 34 04.9	
	comp=Z,9.3nm,0.8s						
E62A	Clayton Lake	39.75	4	P	P	10 34 10.4	+1.6
E62A				IAmb	IAmb	10 34 11.0	
	comp=Z,4.9nm,0.6s						
RTBA	Rita Blanca	40.02	322		P	10 34 11.6	+0.2
RTBA				IAmb	IAmb	10 34 12.2	
	comp=Z,6.6nm,0.7s						
D62A	Allapoint, All	40.24	4	P	P	10 34 14.5	+1.6
D62A				IAmb	IAmb	10 34 14.9	
	comp=Z,8.8nm,0.6s						
VLDQ	Val d'Or	41.29	356	P	P	10 34 23.2	+1.7
T25A	Trinidad	41.50	321	P	P	10 34 25.2	+1.5
T25A				IAmb	IAmb	10 34 26.1	
	comp=Z,10nm,1.3s						
ANMO	Albuquerque	41.52	317		P	10 34 23.0	-0.9
TASM	ASL Pad, Albuq	41.53	317	P	P	10 34 24.3	+0.4
TASM				IAmb	IAmb	10 34 27.9	
	comp=Z,4.7nm,1.1s						
TASM	ASL Pad, Albuq	41.53	317	IAmb	IAmb	10 34 26.5	
	comp=Z,4.4nm,1.2s						
ECSD	EROS Data Cent	42.15	334	IAmb	IAmb	10 34 29.3	
	comp=Z,26nm,1.5s						
SDCO	Great Sand Dun	42.56	321		P	10 34 33.2	+0.9
TUC	Tucson	43.27	311		P	10 34 38.9	+1.1
EYMN	Ely	43.86	342	P	P	10 34 42.5	+0.2
PV15	Paradox Valley	44.80	320	IAmb	IAmb	10 34 52.5	
	comp=Z,19nm,1.0s						
PV02	Paradox Valley	44.89	319	IAmb	IAmb	10 34 52.9	
	comp=Z,14nm,0.7s						
PV13	Radium Mtn., P	44.91	319	IAmb	IAmb	10 34 53.0	
	comp=Z,10nm,0.7s						
PV12	Saucer Basin,	44.99	319	IAmb	IAmb	10 34 53.7	
	comp=Z,15nm,0.8s						
PV18	Skein Mesa, Pa	45.02	319	IAmb	IAmb	10 34 55.6	
	comp=Z,14nm,0.8s						
PV05	Paradox Valley	45.05	319	IAmb	IAmb	10 34 53.5	
	comp=Z,6.4nm,0.7s						
PV19	Morning Glory	45.10	319	IAmb	IAmb	10 34 56.4	
	comp=Z,11nm,1.1s						
PV20	West Nyswonger	45.11	319	IAmb	IAmb	10 34 56.1	
	comp=Z,16nm,1.3s						
WUAZ	Wupatki	45.23	315	IAmb	IAmb	10 34 56.1	
	comp=Z,13nm,0.8s						
AGMN	Agassiz Nation	45.62	339	IAmb	IAmb	10 34 56.8	
	comp=Z,11nm,0.6s						
HMU	Henry Mountain	46.05	318	IAmb	IAmb	10 35 02.7	
	comp=Z,20nm,1.1s						
RDMU	Red Mountain	46.78	322	IAmb	IAmb	10 35 07.0	
	comp=Z,10nm,1.3s						
P17A	Butcher Ranch,	46.89	320	IAmb	IAmb	10 35 08.2	
	comp=Z,9.4nm,1.0s						
ULM	Lac du Bonnet	47.28	340	P	P	10 35 08.4	-0.6
	comp=Z,11nm,0.5s,baz=142,slow=7.9,SNR=21						
	comp=Z,11nm,0.5s						
ULM	Lac du Bonnet	47.28	340	IAmb	IAmb	10 35 09.8	
	comp=Z,12nm,0.6s						
BSUT	Blindstream Ca	47.50	321	IAmb	IAmb	10 35 13.1	
	comp=Z,7.0nm,0.8s						
MPU	Maple Canyon	47.77	320	IAmb	IAmb	10 35 14.8	
	comp=Z,6.8nm,0.9s						
V12A	Nelson	47.83	313	IAmb	IAmb	10 35 15.3	
	comp=Z,8.1nm,0.8s						
PDAR	Pinedale Array	48.09	324	P	P	10 35 16.0	+0.3
	comp=Z,2.2nm,0.6s,baz=128,slow=9.1,SNR=24						
PDAR				PcP	PcP	10 36 40.1	-0.9
	comp=Z,0.5nm,0.7s,baz=131,slow=5.7,SNR=2.8						
	comp=Z,2.2nm,0.6s						
SCHQ	Schefferville	48.12	5	P	P	10 35 16.1	+0.7
	comp=Z,10nm,0.6s,baz=192,slow=7.3,SNR=32						
	comp=Z,10nm,0.6s						
HWUT	Hardware Ranch	48.61	322	IAmb	IAmb	10 35 21.1	
	comp=Z,5.8nm,0.7s						
SHOC	Shoshone, Teco	48.94	313	IAmb	IAmb	10 35 24.8	
	comp=Z,8.5nm,1.1s						
AHID	Auburn Hatcher	48.99	323	IAmb	IAmb	10 35 23.6	
	comp=Z,6.1nm,0.9s						
BGU	Big Grassy Mou	49.15	320	IAmb	IAmb	10 35 25.1	
	comp=Z,9.0nm,0.7s						
SNOW	Snow King Moun	49.20	324	IAmb	IAmb	10 35 25.9	
	comp=Z,17nm,1.4s						
LOHW	Long Hollow	49.20	324	IAmb	IAmb	10 35 25.6	
	comp=Z,4.3nm,0.6s						
CCCA	Chr Cany lake	49.59	312	IAmb	IAmb	10 35 28.6	
	comp=Z,6.6nm,0.7s						
YHL	Hebgen Lake	50.28	325	IAmb	IAmb	10 35 34.9	
	comp=Z,17nm,1.3s						
DSP	Deep Springs	50.80	313	IAmb	IAmb	10 35 38.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,7.3nm,1.0s						
VES	Vestal, Richgr	50.99	311	IAmb	IAmb	10 35 39.6	
	comp=Z,15nm,1.0s						
NVAR	Mina Array Bea	51.50	315	P	P	10 35 42.3	+0.7
	comp=Z,2.0nm,0.7s,baz=124,slow=7.6,SNR=18						
NVAR				PcP	PcP	10 36 54.0	+0.4
	comp=Z,0.8nm,0.6s,baz=136,slow=4.4,SNR=5.6						
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	51.50	315	P	P	10 35 42.1	+0.6
MFID	Camas Ranch	52.24	321	IAmb	IAmb	10 35 48.9	
	comp=Z,6.1nm,0.7s						
PNTR	Pine Nut	52.70	315	IAmb	IAmb	10 35 52.1	
	comp=Z,5.3nm,0.8s						
MPK	Martis Peak	53.09	315	IAmb	IAmb	10 35 56.3	
	comp=Z,8.2nm,0.9s						
PLID	Pearl Lake	53.23	323	IAmb	IAmb	10 35 55.2	
	comp=Z,5.0nm,0.9s						
WVOR	Wild Horse Val	53.54	319	IAmb	IAmb	10 35 59.5	
	comp=Z,4.9nm,0.8s						
FCC	Fort Churchill	54.26	347	IAmb	IAmb	10 36 01.4	
	comp=Z,9.1nm,1.2s						
SUTB	Sutter Butte	54.30	314	IAmb	IAmb	10 36 03.2	
	comp=Z,11nm,1.4s						
F10A	Beach Ranch, E	54.43	323	IAmb	IAmb	10 36 03.3	
	comp=Z,5.5nm,0.5s						
O03E	Paynes Creek	54.74	315	IAmb	IAmb	10 36 12.2	
	comp=Z,12nm,1.4s						
BLKN	Baker Lake	59.67	349	IAmb	IAmb	10 36 39.2	
	comp=Z,7.3nm,0.6s						
YKA	Yellowknife Ar	63.26	340	P	P	10 37 03.0	-0.2
	comp=Z,4.3nm,0.6s,baz=134,slow=5.9,SNR=128						
	comp=Z,4.3nm,0.6s						
YKAW3	Yellowknife Wh	63.30	340	P	P	10 37 03.8	+0.3
WRGLY	Wrigley	66.90	338	IAmb	IAmb	10 37 27.4	
	comp=Z,8.2nm,0.6s						
WTLY	Watson Lake, Y	67.51	333	IAmb	IAmb	10 37 32.0	
	comp=Z,6.8nm,0.7s						
SUMG	Summit	68.96	11	P	P	10 37 40.3	+0.4
N32M	Quiet Lake	69.86	333	IAmb	IAmb	10 37 46.9	
	comp=Z,15nm,1.0s						
M30M	Minto, Yukon	72.03	334	IAmb	IAmb	10 37 59.7	
	comp=Z,6.6nm,0.8s						
F31M	Tsiigehtchic	72.73	339	IAmb	IAmb	10 38 02.9	
	comp=Z,5.0nm,0.6s						
F30M	Barrier River	73.52	339	IAmb	IAmb	10 38 08.1	
	comp=Z,14nm,1.2s						
TORD	Torodi Ar. Bea	73.69	78	P	P	10 38 06.8	-2.0
	comp=Z,0.2nm,0.4s,baz=274,slow=7.1,SNR=4.4						
	comp=Z,0.2nm,0.4s						
E29M	Blow River	74.55	340	IAmb	IAmb	10 38 13.5	
	comp=Z,5.0nm,0.7s						
RIDG	Independent Ri	75.86	334	IAmb	IAmb	10 38 22.3	
	comp=Z,15nm,1.1s						
PRP	Porcupine Dome	76.56	336	P	P	10 38 25.1	+0.5
BMAR	Burnt Mountain	76.66	338	P	P	10 38 25.5	+0.6
HDA	Harding Lake	76.91	335	IAmb	IAmb	10 38 27.1	
	comp=Z,5.2nm,0.8s						
ILAR	Eielson Array	76.96	335	P	P	10 38 26.4	-0.2
	comp=Z,1.3nm,0.8s,baz=104,slow=4.3,SNR=18						
	comp=Z,1.3nm,0.8s						
ILAR	Eielson Array	76.96	335	P	P	10 38 26.6	0.0
B22K	Teshekpuk Lake	80.34	340	IAmb	IAmb	10 38 46.5	
	comp=Z,9.1nm,1.0s						
NOA	NORSAR Array B	81.29	29	P	P	10 38 50.3	+0.1
	comp=Z,0.6nm,0.6s,baz=251,slow=4.7,SNR=2.0						
	comp=Z,0.6nm,0.6s						
D20K	Etivluk River	81.31	338	IAmb	IAmb	10 38 51.9	
	comp=Z,7.1nm,1.2s						
KPA	Kalaupapa	81.90	290	P	P	10 38 54.9	+0.7
ZALV	Zalesovo Beam	116.64	14	PKP	PKPdf	10 45 16.9	-0.3
	comp=Z,0.6nm,0.5s,baz=236,slow=1.6,SNR=3.8						
KURBB	Kurchatov Arra	117.72	20	PKP	PKPdf	10 45 18.8	-0.5
	comp=Z,0.2nm,0.5s,baz=318,slow=1.7,SNR=2.3						
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	10 45 27.6	-0.7
	comp=Z,0.4nm,0.4s,baz=289,slow=2.7,SNR=10						
SONM	Songino Array	125.56	0	PKP	PKPdf	10 45 33.8	-0.9
	comp=Z,0.3nm,0.4s,baz=107,slow=1.5,SNR=3.1						
HHC	Hu-ho-hao-te	132.35	355	*e*P	PKPdf	10 45 46.1	-1.7
NJ2	Nanjing	139.68	344	*e*P	PKPdf	10 46 01.7	+0.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAR	Alice Springs	149.16	234	PKPbc	PKPbc	10 46 21.6	-0.8
	comp=Z,1.1nm,0.5s,baz=115,slow=3.8,SNR=19						
WRA	Warramunga Arr	150.38	241	PKPbc	PKPbc	10 46 24.3	-1.2
	comp=Z,1.5nm,0.5s,baz=110,slow=2.5,SNR=25						
CMAR	Chiang Mai Arr	153.66	17	PKPbc	PKPbc	10 46 32.9	-0.1
	comp=Z,1.2nm,0.7s,baz=332,slow=3.0,SNR=6.5						

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*ISN **01** 10:29:03.9±0.7, 32°.01N×47°.90E, h20km±21km, ML3.2, Presumed earthquake Hypocentre not reviewed by the ISC*

*IDC **01** 10:29:04.9±18.0, 32°.24N×47°.84E, h0km, mb4.2/6, mbtmp4.2/6, Error ellipse: s-maj=360.2km s-min=35.2km az=11.0*

*TEH **01** 10:29:07.3, 32°.20N×47°.95E, h18km±28km, ML3.3, Presumed earthquake*

ISC 01 10:29:06.7±1.0**, 32°.18N**±0°.08**×47°.91E**±0°.08**, h10km, n24, σ1s.20**/25**, mb4.0**/6**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AHWZ	Ahwaz	1.05	143	Pg	Pg	10 29 27.0	+0.1
AMIS	Naft Sefid	1.28	113	Pg	Pn	10 29 31.0	+0.4
AMIS				Sg	Sn	10 29 49.2	+1.4
RAFI	Al-Rafai	1.59	254	*e*Pn		10 29 35.0	
RAFI				*e*Sn		10 29 57.0	
RAFI				AML		10 30 02.6	
	comp=N,427nm,0.5s						
RAFI				AML		10 30 03.5	
	comp=E,265nm,0.4s						
IBDR	Badra	1.91	300	*e*Pn		10 29 40.5	
IBDR				*e*Sn		10 30 07.5	
KCHF	Cheshme Sefid,	2.21	341	Pn	Pn	10 29 45.1	+1.4
JHBN	Jahan bin	2.33	88	Pn	Pn	10 29 46.7	+1.3
ZNGN	Zangian	2.50	91	Pn	Pn	10 29 49.0	+1.3
GLG1	Gilan-e-Gharb	2.56	319	Pn	Pn	10 29 50.4	+2.1
IPIR	Pirpir	2.57	78	Pn	Pn	10 29 49.9	+1.2
IDHR	Dehrash	2.82	334	Pn	Pn	10 29 53.1	+1.1
HAGD	Aghdareh	2.83	21	Pn	Pn	10 29 52.8	+0.7
IBRJ	Brojen	2.85	95	Pn	Pn	10 29 53.6	+1.0
BHD	Baghdad	3.17	291	*e*Pn		10 29 58.0	
BHD				*e*Sn		10 30 37.0	
KLNJ	Kolanjah	3.35	109	Pn	Pn	10 30 00.8	+1.4
HGHA	Hamedan- Ghaye	3.39	13	Pn	Pn	10 30 01.1	+1.2
IQOM	Qom	3.74	44	Pn	Pn	10 30 05.8	+1.0
QABG	Abgarm-Qazvin	3.78	21	Pn	Pn	10 30 06.8	+1.5
IRAM	Ramesheh	3.81	94	Pn	Pn	10 30 06.2	+0.5
KRSH	Karshahi	3.97	62	Pn	Pn	10 30 09.1	+1.4
ISFB	Sefidab	4.22	58	Pn	Pn	10 30 12.2	+1.0
IKRK	Kirkuk	4.38	318	*e*Pn		10 30 15.0	
IKRK				*e*Sn		10 31 08.0	
IKRK				AML		10 31 18.6	
	comp=E,49nm,0.7s						
IKRK				AML		10 31 21.5	
	comp=N,70nm,0.3s						
IDMV	Damavand	4.82	44	Pn	Pn	10 30 20.3	+0.7
MKAR	Makanchi Array	30.01	51	P	P	10 35 15.1	-0.4
	comp=N,0.3nm,0.4s,baz=248,slow=11,SNR=7.3						
	comp=N,0.3nm,0.4s						
FINES	FINESS Array B	32.54	341	P	P	10 35 36.0	-1.5
	comp=N,1.0nm,0.7s,baz=148,slow=7.6,SNR=6.1						
	comp=N,1.0nm,0.7s						
ZALV	Zalesovo Beam	34.07	39	P	P	10 35 50.6	-0.4
	comp=N,0.8nm,0.4s,baz=248,slow=8.5,SNR=6.1						
	comp=N,0.8nm,0.4s						
HFS	Hagfors	35.92	331	P	P	10 36 05.8	-1.2
	comp=N,8.9nm,1.0s,baz=124,slow=10,SNR=4.1						
	comp=N,8.9nm,1.0s						
ARCES	ARCESS Array B	39.48	348	P	P	10 36 35.8	-1.0
	comp=N,3.2nm,0.9s,baz=155,slow=11,SNR=1.7						
	comp=N,3.2nm,0.9s						
SPITS	Spitsbergen Ar	48.12	352	P	P	10 37 46.0	-0.2
	comp=N,24nm,1.2s,baz=133,slow=8.6,SNR=5.4						
	comp=N,24nm,1.2s						

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*IDC **01** 10:45:13.4±0.8, 45°.40N×148°.07E, h0km, mb3.5/8, mbtmp3.7/14, ML3.1/5, MS3.3/20, Error ellipse: s-maj=24.5km s-min=15.6km az=139.0*

*MOS **01** 10:45:13.0±0.9, 45°.47N×147°.94E, h8km, mb4.3/3, Error ellipse: s-maj=12.6km s-min=7.3km az=79.8*

MOS Felt (II) at Reydovo.

*SKHL **01** 10:45:15.8±0.2, 45°.50N×147°.90E, h18km±7km, mb5.3/4*

ISC 01 10:45:16.4±0.9**, 45°.44N**±0°.04**×147°.93E**±0°.07**, h19km**±4km**, n68, σ1s.29**/62**, mb3.6**/10**, MS3.5**/14**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.21	193	*d i*PN	Pg	10 45 20.1	-1.6
KUR				*e*S	Sg	10 45 23.6	-1.6
KUR				pmax	pmax		
	comp=Z,3μm,0.4s						
KUR				pmax	pmax		
	comp=N,1μm,0.3s						
KUR				pmax	pmax		
	comp=E,537nm,0.4s						
KUR				smax	smax		
	comp=E,15μm,0.7s						
KUR				smax	smax		
	comp=N,12μm,0.4s						
KUR	Kuril'sk	0.21	193	*e*P	Pg	10 45 22.0	+0.3
KUR				AMB	AMB	10 45 22.5	
	comp=N,3μm,0.4s						
KUR				*e*S	Sg	10 45 26.5	+1.3
KUR				A	A	10 45 27.4	
	comp=N,15μm,0.3s						
KUR				A	A	10 45 27.4	
	comp=N,12μm,0.3s						
YUK	Yuzh-Kuril'sk	2.04	227	PN	Pn	10 45 47.2	-2.4
YUK				*i* S	Sb	10 46 15.7	-2.0
YUK				pmax	pmax		
	comp=E,113nm,0.2s						
YUK				pmax	pmax		
	comp=Z,209nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.6s						
YUK				smax	smax		
	comp=E,406nm,0.7s						
YUK	Yuzh-Kuril'sk	2.04	227	*e*P	Pn	10 45 49.5	-0.1
YUK				AMB	AMB	10 45 54.0	
	comp=E,210nm,0.2s						
YUK				*i* S	Sn	10 46 14.3	-0.2
YUK				A	A	10 46 26.0	
	comp=E,2μm,0.5s						
YUK				A	A	10 46 26.0	
	comp=E,2μm,0.5s						
GLVR	Golovnino	2.42	226	PN	Pn	10 45 55.5	+0.6
GLVR				*i* S	Sb	10 46 28.1	-0.6
GLVR				pmax	pmax		
	comp=Z,169nm,0.5s						
GLVR				pmax	pmax		
	comp=N,119nm,0.4s						
GLVR				smax	smax		
	comp=N,504nm,0.6s						
GLVR				smax	smax		
	comp=E,627nm,0.8s						
GLVR	Golovnino	2.42	226	*e*P	Pn	10 45 55.2	+0.3
GLVR				AMB	AMB	10 45 57.6	
	comp=E,170nm,0.2s						
GLVR				*i* S	Sn	10 46 25.0	+1.1
GLVR				A	A	10 46 33.9	
	comp=E,500nm,0.3s						
GLVR				A	A	10 46 33.9	
	comp=E,630nm,0.3s						
NMR	Nemuro--Hokkai	2.61	218	*e*PN	Pn	10 45 57.2	-0.2
NMR				*i* S	Sb	10 46 32.0	-2.0
NMR	Nemuro--Hokkai	2.61	218	*e*P	Pn	10 45 57.2	-0.2
NMR				*i* S	Sn	10 46 28.9	+0.5
AKK	Akkeshi	3.29	224	*e*P	Pn	10 46 07.0	+0.2
YSS	Yuzhno-Sakhali	3.90	295	*e*PN	Pn	10 46 13.4	-1.8
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
YSS	Yuzhno-Sakhali	3.90	295	*e*P	Pn	10 46 13.7	-1.5
YSS				*e*S	Sn	10 46 58.0	-2.4
JKA	Kamikawa-asahi	4.02	253	*e*P	Pn	10 46 18.7	+1.8
ASAJ	Asahikawa	4.02	253	Pn	Pn	10 46 18.7	+1.8
	comp=E,1.4nm,0.3s,baz=62,slow=6.3,SNR=20						
ASAJ				Sn	Sn	10 47 05.2	+1.8
	comp=E,1.8nm,0.3s,baz=86,slow=32,SNR=5.1						
	comp=E,3.4nm,0.3s						
UGL	Uglegorsk	5.40	314	*e*PN	Pn	10 46 35.3	-0.5
UGL				pmax	pmax		
	comp=Z,40nm,0.9s						
UGL	Uglegorsk	5.40	314	*e*P	Pn	10 46 35.3	-0.5
UGL				*e*S	Sn	10 47 35.3	-2.0
TYV	Tymovskoe	6.47	329	*e*PN	Pn	10 46 50.5	+0.1
TYV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TYV				pmax	pmax		
	comp=Z,100nm,2.8s						
TYV	Tymovskoe	6.47	329	*e*P	Pn	10 46 50.0	-0.4
TYV				*e*S	Sn	10 48 00.7	-3.0
OKH	Okha	8.74	340	*e*P	Pn	10 47 22.5	+0.9
OKH				*e*S	Sn	10 48 58.6	-0.8
NKL	Nikolayevsk	9.05	331	*e*P	Pn	10 47 24.1	-1.7
PETK	Petropavlovsk-	9.97	36	Pn	Pn	10 47 38.0	-0.4
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=4.5						
PETK				LR	LR	10 52 05.6	
	comp=Z,66nm,18.1s,baz=148,slow=41						
	comp=Z,3.8nm,0.9s						
MJAR	Matsushiro Arr	11.53	223	Pn	Pn	10 48 01.4	+1.5
	baz=28,slow=13,SNR=5.1						
MJAR				LR	LR	10 53 04.6	
	comp=Z,119nm,18.5s,baz=47,slow=41						
	comp=Z,0.9nm,0.8s						
KLR	Kul'dur	11.61	295	LR	LR	10 52 43.7	
	comp=Z,23nm,19.7s,baz=100,slow=38						
KLR	Kul'dur	11.61	295	*i* PN	Pn	10 48 02.2	+1.3
KLR	Kul'dur	11.61	295	*e*P	Pn	10 48 02.2	+1.3
MA2	Magadan	14.26	6	Pn	Pn	10 48 35.8	-1.2
	comp=Z,0.5nm,0.3s,baz=191,slow=16,SNR=4.3						
MA2				LR	LR	10 54 36.4	
	comp=Z,53nm,18.3s,baz=168,slow=39						
MA2	Magadan	14.26	6	*i* P	Pn	10 48 36.5	-0.5
MA2				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MA2	Magadan	14.26	6	*e*P	Pn	10 48 36.5	-0.5
HEH	HeiHe	14.58	297	*e*P	P	10 48 48.9	+1.1
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSRS	Korea Array	16.96	249	LR	LR	10 54 46.6	
	comp=Z,31nm,19.5s,baz=75,slow=34						
SEY	Seymchan	17.71	7	P	P	10 49 21.8	-0.5
	comp=Z,0.1nm,0.3s,baz=172,slow=8.4,SNR=13						
	comp=Z,1.6nm,0.6s						
SEY	Seymchan	17.71	7	*i* P	P	10 49 21.3	-1.0
SEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SEY	Seymchan	17.71	7	*e*P	P	10 49 21.3	-1.0
HIA	Hailar	19.43	292	*i* P	Pn	10 49 42.2	-0.4
HIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HILR	Hailar Array B	19.43	292	P	Pn	10 49 42.8	+0.1
	baz=97,slow=11						
	comp=Z,5.6nm,0.7s						
YAK	Yakutsk	19.69	334	P	Pn	10 49 44.9	-0.7
	comp=Z,8.0nm,0.4s,baz=130,slow=19,SNR=4.8						
YAK				LR	LR	10 57 46.4	
	comp=Z,108nm,18.5s,baz=119,slow=38						
YAK	Yakutsk	19.69	334	*e*P	Pn	10 49 46.7	+1.1
YAK				*e*S	Sn	10 53 29.4	+3.4
YAK				pmax	pmax		
	comp=Z,14nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,55nm,2.5s						
YAK				pmax	pmax		
	comp=N,46nm,2.9s						
YAK				pmax	pmax		
	comp=E,23nm,2.6s						
YAK				smax	smax		
	comp=N,72nm,3.7s						
YAK				smax	smax		
	comp=E,54nm,3.2s						
YAK	Yakutsk	19.69	334	*e*P	Pn	10 49 46.7	+1.1
JOW	Kunigami	24.32	227	LR	LR	11 01 21.1	
	comp=E,43nm,18.5s,baz=184,slow=40						
BILL	Bilibino	24.58	17	*i* P	P	10 50 36.5	+1.8
BILL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	Bilibino	24.58	17	*e*P	P	10 50 36.5	+1.8
TIXI	Tiksi	27.82	347	LR	LR	11 03 07.8	
	comp=Z,32nm,18.2s,baz=190,slow=38						
H11N2	WAKE ISLAND Hy	30.06	142	T	T	11 22 21.2	
	baz=334,slow=76,SNR=57						
H11N1	WAKE ISLAND Hy	30.07	142	T	T	11 22 22.2	
	baz=334,slow=76,SNR=47						
H11N3	WAKE ISLAND Hy	30.07	142	T	T	11 22 22.5	
	baz=334,slow=76,SNR=50						
H11S1	WAKE ISLAND Hy	31.06	144	T	T	11 23 35.5	
	baz=334,slow=76,SNR=82						
H11S3	WAKE ISLAND Hy	31.07	144	T	T	11 23 36.0	
	baz=334,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	31.08	144	T	T	11 23 36.9	
	baz=334,slow=76,SNR=61						
NRIK	Noril'sk	38.05	330	LR	LR	11 09 15.5	
	comp=Z,43nm,19.2s,baz=48,slow=38						
COLA	College	39.38	37	*i* P	P	10 52 43.8	-0.4
COLA				pmax	pmax		
	comp=Z,16nm,2.1s						
ILAR	Eielson Array	39.80	37	P	P	10 52 47.9	+0.2
	comp=Z,1.4nm,1.0s,baz=275,slow=7.8,SNR=10						
	comp=Z,1.4nm,1.0s						
ZALV	Zalesovo Beam	40.45	306	LR	LR	11 09 55.6	
	comp=Z,59nm,19.0s,baz=54,slow=37						
MKAR	Makanchi Array	44.32	296	P	P	10 53 24.4	-0.4
	comp=Z,0.2nm,0.7s,baz=93,slow=7.4,SNR=2.4						
MKAR				LR	LR	11 12 39.2	
	comp=Z,65nm,19.3s,baz=44,slow=37						
	comp=Z,0.2nm,0.7s						
AAK	Ala-Archa	51.14	295	LR	LR	11 18 36.4	
	comp=Z,32nm,19.7s,baz=20,slow=39						
YKA	Yellowknife Ar	54.09	35	P	P	10 54 39.6	+0.4
	comp=Z,0.3nm,0.5s,baz=306,slow=7.7,SNR=12						
	comp=Z,0.3nm,0.5s						
PMG	Port Moresby	54.60	181	LR	LR	11 18 24.9	
	comp=Z,8.6nm,18.7s,baz=332,slow=36						
AKTO	Aktyubinsk	56.86	310	LR	LR	11 20 48.0	
	comp=Z,50nm,19.7s,baz=76,slow=38						
NVAR	Mina Array Bea	66.22	59	P	P	10 56 02.1	-0.9
	comp=Z,0.4nm,0.7s,baz=298,slow=5.7,SNR=3.5						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	66.24	194	P	P	10 56 03.0	+0.1
	comp=Z,0.6nm,0.6s,baz=7.1,slow=6.6,SNR=3.5						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	66.24	194	P	P	10 56 03.0	+0.1
NOA	NORSAR Array B	68.23	339	LR	LR	11 28 46.6	
	comp=Z,32nm,19.1s,baz=255,slow=38						
HFS	Hagfors	68.35	337	LR	LR	11 30 07.6	
	comp=Z,53nm,18.1s,baz=306,slow=39						
PDAR	Pinedale Array	68.40	51	P	P	10 56 16.9	0.0
	comp=Z,0.3nm,0.6s,baz=259,slow=2.1,SNR=4.9						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	69.95	194	P	P	10 56 26.6	+0.4
	comp=Z,0.2nm,0.5s,baz=18,slow=7.5,SNR=4.8						
ASAR				LR	LR	11 26 17.8	
	comp=Z,8.4nm,20.7s,baz=270,slow=35						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	70.55	324	LR	LR	11 30 20.8	
	comp=Z,46nm,19.8s,baz=342,slow=38						
SCHQ	Schefferville	75.84	20	LR	LR	11 32 34.1	
	comp=Z,33nm,18.3s,baz=340,slow=38						
BRTR	Keskin Array B	76.78	314	LR	LR	11 38 51.0	
	comp=Z,32nm,19.1s,baz=279,slow=42						
TXAR	Lajitas Array	81.25	57	P	P	10 57 31.1	-0.1
	comp=Z,0.4nm,0.7s,baz=296,slow=3.6,SNR=6.6						
	comp=Z,0.4nm,0.7s						
PLCA	Paso Flores	151.69	94	PKPbc	PKiKP	11 05 08.4	-1.0
	comp=Z,1.0nm,0.8s,baz=255,slow=5.4,SNR=3.7						

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*JMA **01** 10:47:55.3±0.4, 22°N±2°×12°3E±°, h50km, MV2.7/10, FAR S OFF ISHIGAKIJIMA*

*TAP **01** 10:47:56.4, 22°.44N×122°.83E, h51km±1km, ML3.3, D*

ISC 01 10:47:55.7±1.5**, 22°.42N**±0°.05**×122°.93E**±0°.04**, h50km, n73, σ1s.36**/131**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LYUB	Lan-yu	1.31	252	*i* P	Pn	10 48 17.3	-0.3
LYUB				S	Sn	10 48 32.6	-1.4
LAY	Lan-yu	1.33	254	P	Pn	10 48 17.1	-0.8
LAY				S	Sn	10 48 33.0	-1.5
CHKT	Chengkung	1.60	296	P	Pn	10 48 20.4	-1.1
CHKT				S	Sn	10 48 38.1	-2.8
CHKH	Chenggong	1.61	299	P	Pn	10 48 20.6	-1.1
CHKH				S	Sn	10 48 38.4	-3.0
ECBN	Changbin	1.63	304	*e*S	Sn	10 48 39.4	-2.5
TTN	Taitung	1.68	282	*e*P	Pn	10 48 22.9	+0.3
FULB	Fuli	1.70	298	P	Pn	10 48 21.5	-1.4
FULB				S	Sn	10 48 41.1	-2.4
EHD	Haiduan	1.75	295	P	Pn	10 48 23.4	-0.2
EHD				S	Sn	10 48 42.9	-1.8
HGSD	Ruisui	1.75	308	*e*P	Pn	10 48 22.2	-1.4
HGSD				*e*S	Sn	10 48 42.4	-2.4
TWGBT	Beinan	1.75	284	P	Pn	10 48 23.2	-0.4
TWGBT				S	Sn	10 48 43.3	-1.6
TWG	Pinlang	1.76	284	*i* P	Pn	10 48 23.2	-0.6
TWG				S	Sn	10 48 43.1	-1.9
EOS4	EOS4	1.79	342	*e*P	Pn	10 48 23.9	+0.1
EOS4				*e*S	Sn	10 48 44.6	-0.5
YULB	Yu-li	1.79	303	*i* P	Pn	10 48 23.2	-1.0
YULB				S	Sn	10 48 44.2	-1.6
HATJ	Hateruma jima	1.82	26	P	Pn	10 48 24.5	0.0
HATJ				S	Sn	10 48 45.7	-0.8
ECL	Taimali	1.83	276	*e*P	Pn	10 48 24.8	+0.1
ECL				*e*S	Sn	10 48 45.8	-1.1
EHY	Hungye	1.84	307	*e*P	Pn	10 48 24.1	-0.7
EHY				*e*S	Sn	10 48 45.3	-1.6
SHUL	Shoufeng	1.86	318	*e*P	Pn	10 48 24.2	-0.8
SHUL				*e*S	Sn	10 48 45.4	-1.9
TAWH	Dawu Township	1.89	268	*e*P	Pn	10 48 25.7	+0.2
TAWH				*e*S	Sn	10 48 47.3	-0.9
WARBT	Fenglin Townsh	1.92	313	P	Pn	10 48 25.3	-0.7
WARBT				S	Sn	10 48 46.8	-2.3
ELDTW	Lidau	1.93	294	P	Pn	10 48 25.7	-0.4
ELDTW				*e*S	Sn	10 48 47.3	-1.9
EAST	Anshuo	1.93	269	*e*P	Pn	10 48 26.4	+0.4
EAST				*e*S	Sn	10 48 48.5	-0.6
EOS3	EOS3	1.94	343	*e*P	Pn	10 48 27.1	+1.0
EOS3				*e*S	Sn	10 48 50.4	+1.1
TSEB	Hengchuen, Pin	1.95	255	*e*S	Sn	10 48 52.0	+2.4
ESL	Shilin	1.96	316	P	Pn	10 48 25.4	-1.1
ESL				S	Sn	10 48 47.0	-2.9
SMST	Manzhou Townsh	1.98	259	*e*P	Pn	10 48 27.1	+0.4
SMST				*e*S	Sn	10 48 49.6	-0.8
SLIU	Shizi	1.98	265	*e*P	Pn	10 48 27.0	+0.2
JYNG	Yonagunijimaku	2.03	0	*e*P	Pn	10 48 27.6	+0.2
JYNG				*e*S	Sn	10 48 53.1	+1.6
ETM	Tongmen	2.03	320	*e*P	Pn	10 48 27.2	-0.3
ETM				*e*S	Sn	10 48 49.4	-2.3
YOJ	Yonaguni jima	2.04	2	P	Pn	10 48 28.8	+1.2
YOJ				S	Sn	10 48 52.6	+0.8
IRIF	Iriomote-Funau	2.05	21	*e*P	Pn	10 48 27.8	+0.1
IRIF				*e*S	Sn	10 48 51.5	-0.5
JKRS	Kuro-shima	2.07	28	*e*P	Pn	10 48 28.3	+0.4
VWDT	VWDT	2.12	309	P	Pn	10 48 28.9	+0.3
VWDT				*e*S	Sn	10 48 53.2	-0.6
STYH	Taoyuan	2.12	291	*e*P	Pn	10 48 29.0	+0.3
STYH				*e*S	Sn	10 48 53.8	-0.1
MASBT	Mashibuluo	2.13	276	P	Pn	10 48 28.8	0.0
MASBT				*e*S	Sn	10 48 53.5	-0.7
NACB	Ninganchiao	2.14	325	P	Pn	10 48 28.2	-0.7
NACB				*e*S	Sn	10 48 52.0	-2.3
SCZT	Fangliau	2.14	269	*e*P	Pn	10 48 29.5	+0.6
SCZT				*e*S	Sn	10 48 54.5	+0.3
STYT	Tauyuan	2.14	291	P	Pn	10 48 29.1	+0.1
SSD	Sandimen	2.15	279	*e*P	Pn	10 48 29.4	+0.3
SSD				*e*S	Sn	10 48 53.1	-1.4
OWD	Renai	2.22	314	P	Pn	10 48 30.2	-0.1
OWD				S	Sn	10 48 54.8	-1.8
ETLH	Xiulin Townshi	2.23	324	P	Pn	10 48 29.9	-0.3
ETLH				S	Sn	10 48 54.9	-1.7
JIJ	Ishigaki jima	2.24	30	*e*P	Pn	10 48 29.8	-0.5
JIJ				*e*S	Sn	10 48 55.6	-1.1
ALS	Alishan	2.24	300	*e*P	Pn	10 48 31.3	+0.7
ALS				*e*S	Sn	10 48 57.6	+0.4
SGST	Jiashian	2.27	287	*e*P	Pn	10 48 31.2	+0.5
SSLB	Suanglung	2.27	307	*e*P	Pn	10 48 30.9	+0.1
SSLB				S	Sn	10 48 56.2	-1.5
WUSB	Renai	2.29	314	*e*P	Pn	10 48 31.5	+0.4
WTP	Ta-pu	2.29	292	P	Pn	10 48 32.4	+1.3
WTP				*e*S	Sn	10 49 00.2	+2.1
TPUB	Ta-pu	2.30	293	P	Pn	10 48 32.8	+1.7
TPUB				*e*S	Sn	10 48 59.6	+1.4
WHYT	Xinyi Township	2.30	304	*e*P	Pn	10 48 32.1	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN1	Nanshi	2.34	290	P	Pn	10 48 33.8	+2.0
CHN1				S	Sn	10 49 01.3	+2.0
CHN4	Tsaushan	2.35	294	eP	Pn	10 48 33.8	+2.0
CHN4				eS	Sn	10 49 01.4	+2.0
SMLT	Sun Moon Lake	2.37	308	eP	Pn	10 48 33.5	+1.3
WCKO	Fanlu	2.37	296	eP	Pn	10 48 32.6	+0.5
WCKO				eS	Sn	10 49 01.5	+1.5
CHN5	Tsauling	2.38	300	eP	Pn	10 48 34.2	+1.8
CHN5				eS	Sn	10 49 02.5	+2.1
FUSS	Fushou	2.39	320	eP	Pn	10 48 33.1	+0.4
TWK	Hsinying	2.41	291	P	Pn	10 48 34.5	+1.9
TWK				eS	Sn	10 49 04.4	+3.5
TYC	Yuchr	2.42	308	eP	Pn	10 48 34.2	+1.5
NNSH	Datong	2.46	325	eP	Pn	10 48 33.2	-0.1
NNSH				eS	Sn	10 49 00.3	-1.9
LATG	Datong	2.47	329	iP	Pn	10 48 33.8	+0.2
LATG				eS	Sn	10 49 01.8	-0.9
NDS	Dongshan	2.47	333	eP	Pn	10 48 33.8	+0.3
NDS				eS	Sn	10 49 01.4	-1.1
JISG	Ishigakijimahi	2.51	30	eP	Pn	10 48 34.2	+0.2
JISG				S	Sn	10 49 01.8	-1.5
WDLH	Douliu	2.54	300	P	Pn	10 48 36.9	+2.5
WDLH				eS	Sn	10 49 07.0	+2.8
ENTT	Nioudou	2.54	331	eP	Pn	10 48 35.2	+0.7
ENTT				eS	Sn	10 49 03.6	-0.7
TWE	Neicheng	2.57	333	eP	Pn	10 48 36.1	+1.3
WHP	Taichung City	2.60	316	eP	Pn	10 48 36.8	+1.5
WHP				eS	Sn	10 49 05.6	-0.2
FUSB	Fushanzhiwuyua	2.64	332	P	Pn	10 48 36.7	+0.9
FUSB				eS	Sn	10 49 06.6	-0.1
YHNB	Yeheng	2.66	328	P	Pn	10 48 36.9	+0.7
YHNB				eS	Sn	10 49 05.8	-1.3
NSK	Sanguang	2.67	328	eP	Pn	10 48 37.1	+0.8
NSK				eS	Sn	10 49 06.6	-0.9
NWLT	Wulai	2.69	331	eP	Pn	10 48 37.5	+1.0
TIPB	Shuangxi	2.74	339	eP	Pn	10 48 38.8	+1.6
TIPB				eS	Sn	10 49 08.8	-0.3
TWQ1	Liyutan	2.76	315	eP	Pn	10 48 39.9	+2.4
TWQ1				eS	Sn	10 49 11.3	+1.7
NFF	Wufeng Townshi	2.76	323	eP	Pn	10 48 40.0	+2.4
SXI1	Grass Mountain	2.84	340	eP	Pn	10 48 39.1	+0.6
SXI1				eS	Sn	10 49 11.9	+0.3
VWUC	VWUC	4.09	309	eP	Pn	10 48 57.0	+1.3
VWUC				S	Sn	10 49 42.2	-0.1

*AFAD **01** 10:58:42.4, 34°.97N×28°.19E, h5km±5km, ML2.7*
*ISK **01** 10:58:46.8, 35°.20N×27°.99E, h1km, ML2.9/19*
*GII **01** 10:58:49.5±0.0, 35°.055N±0°.003×28°.139E±0°.001, h0km, Mws3.2, confirmed*
*ATH **01** 10:58:49.1±0.6, 35°.29N×28°.03E, h10km±4km, ML2.9/6, Manual Solution by N.Liadopoulou First location: 2020/02/01 11:00:15, This location: 2020/02/01 11:10:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*THE **01** 10:58:52.5, 35°N±15°×2°8E±1°5, h9km±21km, M2.7/7, MLh2.7/7*
ISC 01 10:58:47.9±1.3, **35°.17N**±0°.04×**28°.02E**±0°.03, **h11**km±11km, **n66**, σ1s.**10**/87, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.80	299	Pg	Pg	10 59 02.5	-0.8
KARP				Sg	Sg	10 59 13.8	0.0
KARP	Karpathos	0.80	299	P	Pg	10 59 02.3	-1.0
KARP				S	Sg	10 59 13.4	-0.4
KARP	Karpathos	0.80	299	P	Pg	10 59 02.3	-1.0
KARP				S	Sb	10 59 14.4	-0.4
KSS1	Kassos Island	0.94	286	P	Pn	10 59 07.8	+0.8
KSS1				S	Sn	10 59 20.4	0.0
ARG	Arkhangelos	1.05	5	Pg	Pg	10 59 07.2	-0.9
ARG				Sg	Sg	10 59 22.2	+0.4
ARG	Arkhangelos	1.05	5	P	Pg	10 59 07.7	-0.4
ARG				S	Sg	10 59 19.9	-2.0
ARG	Arkhangelos	1.05	5	P	Pg	10 59 07.7	-0.4
ARG				S	Sg	10 59 19.4	-2.5
ZKR	Zakros	1.48	269	Pn	Pn	10 59 15.0	+0.5
ZKR	Zakros	1.48	269	P	Pg	10 59 17.9	+1.6
ZKR	Zakros	1.48	269	P	Pg	10 59 16.1	-0.2
ZKR				S	Sg	10 59 35.0	-0.4
YAZI	Mula-Dat§a-	1.58	343	P	Pn	10 59 15.9	0.0
YAZI				S	Sg	10 59 41.5	+2.7
YAZI				IAML		10 59 46.0	
	comp=N,63nm,0.8s						
YAZI				IAML		10 59 48.0	
	comp=E,68nm,0.7s						
DAT	Datca	1.60	347	Pn	Pn	10 59 16.4	+0.1
IZZE	Mula-Seydike	1.60	37	P	Pn	10 59 13.0	-3.3
IZZE				IAML		10 59 53.0	
	comp=E,90nm,0.4s						
IZZE				IAML		10 59 55.0	
	comp=N,112nm,0.6s						
KSL	Kastellorizon	1.61	52	P	Pb	10 59 19.1	+1.5
KSL	Kastellorizon	1.61	52	P	Pn	10 59 16.4	+0.2
TURN	Turunc	1.62	6	Pn	Pn	10 59 16.9	+0.5
TURN				Sn	Sb	10 59 38.9	+0.7
TURN	Turunc	1.62	6	P	Pn	10 59 16.2	-0.2
TURN				S	Sg	10 59 42.6	+2.7
TURN				IAML		10 59 47.0	
	comp=N,100nm,0.4s						
TURN				IAML		10 59 47.0	
	comp=E,100nm,0.5s						
AKAS	Kas	1.67	50	Pn	Pn	10 59 18.2	+0.9
AKAS	Kas	1.67	50	P	Pn	10 59 17.1	-0.3
AKAS				IAML		10 59 48.0	
	comp=N,112nm,0.6s						
AKAS				IAML		10 59 58.0	
	comp=E,79nm,0.6s						
DALY	Dalyan (Mula)	1.73	17	Pn	Pn	10 59 18.4	+0.5
SABU	Mula-Dalaman	1.82	25	P	Pn	10 59 17.9	-1.4
SABU				IAML		10 59 55.0	
	comp=E,70nm,0.8s						
SABU				IAML		10 59 57.0	
	comp=N,52nm,0.9s						
BDRM	Kayabasi	1.95	346	P	Pn	10 59 21.9	+0.8
BDRM				S	Sb	10 59 48.0	+0.1
BDRM				IAML		10 59 54.0	
	comp=E,92nm,0.5s						
NPS	Neapolis	1.97	274	P	Pb	10 59 24.3	+0.4
NPS	Neapolis	1.97	274	P	Pb	10 59 23.0	-0.9
YER	Yerkesik	1.98	6	Pn	Pn	10 59 22.2	+0.8
YER	Yerkesik	1.98	6	P	Pn	10 59 22.4	+0.9
BODT	Bodrum	1.98	343	Pn	Pn	10 59 21.9	+0.5
BODT	Bodrum	1.98	343	P	Pn	10 59 21.7	+0.2
CAME	Cameli-Denizli	2.06	30	Pn	Pn	10 59 23.3	+0.7
KNIK	Mula-Seydike	2.10	36	P	Pn	10 59 22.0	-1.2
MLSB	Milas	2.13	355	Pn	Pn	10 59 23.9	+0.3
ELL	Elmali	2.20	44	Pn	Pn	10 59 25.4	+0.8
DNZT	Denizli-Tavas-	2.26	21	P	Pn	10 59 26.0	+0.7
THERA	Ancient Thera,	2.39	301	P	Pn	10 59 27.6	+0.6
TAVA	DENIZLI_Tavas	2.41	17	P	Pn	10 59 28.2	+0.8
GOLH	Golhisar	2.41	31	P	Pn	10 59 28.1	+0.6
IACM	Heraklion	2.42	274	P	Pn	10 59 28.7	+1.3
THR3	Thira Island,	2.46	301	P	Pn	10 59 28.7	+0.6
SNT5	Nea Kammeni, S	2.47	301	P	Pn	10 59 29.3	+1.2
SNT5	Nea Kammeni, S	2.47	301	P	Pn	10 59 28.7	+0.6
THR9	Santorini-Faro	2.47	300	P	Pn	10 59 28.7	+0.5
AYDN	Tasoluk	2.49	357	P	Pn	10 59 29.3	+0.8
APMY	Acipayam-Deniz	2.52	24	Pn	Pn	10 59 29.9	+0.9
IDI	Anoyia	2.57	274	P	Pn	10 59 30.8	+1.3
KORT	Korkueli	2.63	45	Pn	Pn	10 59 31.7	+1.2
SMG	Samos	2.71	340	P	Pn	10 59 31.2	-0.3
AYDB	Zeytinkoy-Aydi	2.78	358	Pn	Pn	10 59 33.4	+0.9
ODEM	Odemis-Izmir	3.10	1	Pn	Pn	10 59 38.1	+1.2
VAM	Vamos	3.13	276	P	Pn	10 59 38.6	+1.3
KULA	Kula-Manisa	3.38	9	Pn	Pn	10 59 41.9	+1.1
URLA	Izmir	3.39	341	Pn	Pn	10 59 42.0	+1.2
GORD	Gordes-Manisa	3.74	2	Pn	Pn	10 59 47.3	+1.7
NATA	Nata	3.76	95	P	Pn	10 59 47.1	+1.3
ANKY	Antikythira Is	3.91	282	P	Pn	10 59 48.9	+1.0
KTHA	Kythira Island	4.18	287	P	Pn	10 59 52.8	+1.1
ASGA	Asgata	4.31	94	P	Pn	10 59 54.5	+1.1
CSS	Mathiatis	4.36	91	P	Pn	10 59 55.4	+1.3
MMA0B	Mount Meron ar	6.49	107	P	Pn	11 00 23.5	0.0
MMA0B				S	Sn	11 01 37.1	-0.5
HMDT	Nahal Hemdat	6.89	113	P	Pn	11 00 28.5	-0.4
HMDT				S	Sn	11 01 46.6	-0.8
DSI	Dead Sea	7.12	118	P	Pn	11 00 32.0	-0.1
DSI				S	Sn	11 01 51.0	-2.1
MSBI	Mazada	7.25	120	P	Pn	11 00 34.4	+0.6
MSBI				S	Sn	11 01 54.9	-1.1
KRMI	Paran Flat	7.57	130	P	Pn	11 00 38.2	0.0
KRMI				S	Sn	11 02 02.6	-1.5
PRNI	Paran	7.59	127	P	Pn	11 00 38.6	+0.1
PRNI				S	Sn	11 02 02.8	-1.8
HRFI	Mount Harif	7.82	129	P	Pn	11 00 41.8	+0.1
HRFI				S	Sn	11 02 08.6	-1.7
MBRI	Mt Berech	7.91	131	P	Pn	11 00 43.2	+0.3
MBRI				S	Sn	11 02 11.4	-1.2
EIL	Elat	8.02	131	P	Pn	11 00 44.6	+0.2
EIL				S	Sn	11 02 13.9	-1.3

*JMA **01** 11:03:33.2±0.4, 22°N±2°×12°3E±°, h48km, MV2.9/14, FAR S OFF ISHIGAKIJIMA*
*TAP **01** 11:03:34.0, 22°.40N×122°.84E, h54km±1km, ML3.6, D*
ISC 01 11:03:33.0±1.4, **22°.36N**±0°.05×**122°.95E**±0°.04, **h50**km, **n104**, σ1s.**31**/184, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	1.32	254	iP	Pn	11 03 54.9	-0.1
LYUB				iS	Sn	11 04 10.2	-1.3
LAY	Lan-yu	1.33	256	iP	Pn	11 03 54.9	-0.4
LAY				iS	Sn	11 04 10.4	-1.6
CHKT	Chengkung	1.64	297	P	Pn	11 03 58.3	-1.1
CHKT				S	Sn	11 04 16.3	-3.0
CHKH	Chenggong	1.66	300	P	Pn	11 03 58.5	-1.1
CHKH				S	Sn	11 04 17.1	-2.7
ECBN	Changbin	1.68	305	S	Sn	11 04 17.9	-2.4
TTN	Taitung	1.71	284	eP	Pn	11 04 00.4	0.0
FULB	Fuli	1.74	299	eP	Pn	11 04 00.0	-0.8
FULB				eS	Sn	11 04 19.9	-2.0
ECS	Chishang	1.76	295	eP	Pn	11 04 01.0	-0.1
ECS				eS	Sn	11 04 21.6	-0.7
TWGBT	Beinan	1.79	285	P	Pn	11 04 01.2	-0.2
TWGBT	Beinan	1.79	285	S	Sn	11 04 21.8	-1.2
TWGBT	Beinan	1.79	285	eP	Pn	11 04 01.3	-0.2
TWGBT				eS	Sn	11 04 21.4	-1.6
EHD	Haiduan	1.79	296	eP	Pn	11 04 01.2	-0.3
EHD				eS	Sn	11 04 21.5	-1.6
TWG	Pinlang	1.79	285	eP	Pn	11 04 01.4	-0.2
TWG				eS	Sn	11 04 21.6	-1.6
HGSD	Ruisui	1.80	309	eP	Pn	11 04 00.2	-1.4
HGSD				eS	Sn	11 04 20.7	-2.7
YULB	Yu-li	1.84	304	P	Pn	11 04 01.1	-1.0
YULB	Yu-li	1.84	304	P	Pn	11 04 01.2	-0.9
YULB				eS	Sn	11 04 22.6	-1.7
EOS4	EOS4	1.84	342	eP	Pn	11 04 02.0	+0.1
EOS4				S	Sn	11 04 22.9	-0.9
ECL	Taimali	1.86	278	P	Pn	11 04 02.3	-0.1
ECL				eS	Sn	11 04 23.7	-1.1
HATJ	Hateruma jima	1.86	25	eP	Pn	11 04 02.5	+0.1
HATJ				eS	Sn	11 04 23.7	-1.1
EHY	Hungye	1.88	308	P	Pn	11 04 02.2	-0.6
EHY				S	Sn	11 04 23.5	-1.9
SHUL	Shoufeng	1.91	318	eP	Pn	11 04 03.9	+0.7
SHUL				eS	Sn	11 04 24.2	-1.7
TAWH	Dawu Township	1.91	270	eP	Pn	11 04 03.6	+0.5
TAWH				eS	Sn	11 04 25.5	-0.5
EAST	Anshuo	1.94	271	eP	Pn	11 04 03.9	+0.2
EAST				eS	Sn	11 04 25.9	-1.0
ELDTW	Lidau	1.96	295	eP	Pn	11 04 03.5	-0.5
ELDTW				eS	Sn	11 04 25.4	-2.1
WARBT	Fenglin Townsh	1.97	313	eP	Pn	11 04 03.3	-0.7
WARBT				S	Sn	11 04 25.2	-2.4
SMST	Manzhou Townsh	1.99	261	eP	Pn	11 04 04.7	+0.5
SMST				eS	Sn	11 04 26.5	-1.4
SLIU	Shizi	2.00	266	eP	Pn	11 04 04.8	+0.4
SLIU				eS	Sn	11 04 27.8	-0.3
EOS3	EOS3	2.00	343	eP	Pn	11 04 05.0	+0.8
EOS3				eS	Sn	11 04 28.9	+0.9
ESL	Shilin	2.01	316	eS	Sn	11 04 25.3	-3.2
TWKBT	Hengchun	2.02	258	eP	Pn	11 04 05.4	+0.7
TWKBT				eS	Sn	11 04 28.0	-0.8
TWK1	Hengchun	2.03	259	eP	Pn	11 04 05.6	+0.8
TWK1				eS	Sn	11 04 29.0	0.0
HEN	Hengchun	2.08	261	eS	Sn	11 04 29.5	-0.7
JYNG	Yonagunijimaku	2.08	360	eP	Pn	11 04 06.6	+1.2
JYNG				eS	Sn	11 04 30.0	-0.2
ETM	Tongmen	2.08	320	eP	Pn	11 04 06.0	+0.4
IRIF	Iriomote-Funau	2.09	20	eP	Pn	11 04 05.8	+0.2
YOJ	Yonaguni jima	2.09	2	P	Pn	11 04 08.0	+2.4
YOJ	Yonaguni jima	2.09	2	eP	Pn	11 04 06.9	+1.3
YOJ				S	Sn	11 04 30.7	+0.3
JKRS	Kuro-shima	2.11	27	P	Pn	11 04 06.5	+0.7
JKRS				S	Sn	11 04 30.3	-0.5
TWD	Chiawan	2.12	324	eP	Pn	11 04 05.4	-0.5
EOS2	EOS2	2.15	342	eP	Pn	11 04 07.6	+1.3
EOS2				eS	Sn	11 04 32.1	+0.4
SCZT	Fangliau	2.16	271	eP	Pn	11 04 07.4	+0.9
YUS	Yu-Shan	2.16	302	eP	Pn	11 04 07.0	0.0
YUS				eS	Sn	11 04 31.1	-1.7
MASBT	Mashibuluo	2.16	277	eP	Pn	11 04 07.0	+0.5
MASBT				eS	Sn	11 04 31.5	-0.6
STYH	Taoyuan	2.16	292	eP	Pn	11 04 07.0	+0.4
STYH				eS	Sn	11 04 31.6	-0.6
VWDT	VWDT	2.17	310	P	Pn	11 04 06.7	+0.1
VWDT				eS	Sn	11 04 30.7	-1.6
STYT	Tauyuan	2.17	292	eP	Pn	11 04 07.2	+0.4
STYT				eS	Sn	11 04 31.8	-0.8
SSD	Sandimen	2.18	281	eP	Pn	11 04 07.3	+0.5
SSD				eS	Sn	11 04 31.9	-0.7
NACB	Ninganchiao	2.19	326	P	Pn	11 04 06.2	-0.8
NACB	Ninganchiao	2.19	326	S	Sn	11 04 30.1	-2.8
NACB	Ninganchiao	2.19	326	P	Pn	11 04 06.1	-0.9
NACB				S	Sn	11 04 29.9	-3.1
EAHA	Aohua	2.25	331	eS	Sn	11 04 33.0	-1.4
JIJ	Ishigaki jima	2.27	29	P	Pn	11 04 08.1	0.0
JIJ				eS	Sn	11 04 33.3	-1.6
OWD	Renai	2.27	314	eP	Pn	11 04 08.0	-0.3
OWD				S	Sn	11 04 32.9	-2.3
ETLH	Xiulin Townshi	2.28	324	eP	Pn	11 04 07.7	-0.5
ETLH				S	Sn	11 04 33.5	-1.7
ALS	Alishan	2.28	300	eP	Pn	11 04 09.3	+0.7
ALS				eS	Sn	11 04 36.0	+0.4
SGST	Jiashian	2.30	289	iP	Pn	11 04 09.3	+0.9
SGST				iS	Sn	11 04 36.4	+0.7
SSLB	Suanglung	2.32	308	P	Pn	11 04 08.8	0.0
SSLB	Suanglung	2.32	308	S	Sn	11 04 33.9	-2.3
SSLB	Suanglung	2.32	308	P	Pn	11 04 08.8	0.0
SSLB				S	Sn	11 04 34.5	-1.7
WTP	Ta-pu	2.33	293	P	Pn	11 04 10.4	+1.5
WTP				eS	Sn	11 04 37.7	+1.4
TPUB	Ta-pu	2.33	294	P	Pn	11 04 10.5	+1.5
TPUB	Ta-pu	2.33	294	eP	Pn	11 04 10.2	+1.2
TPUB				eS	Sn	11 04 37.9	+1.4
EWUT	Wuta	2.34	333	eP	Pn	11 04 09.6	+0.6
EWUT				eS	Sn	11 04 36.1	-0.3
ENA	Nanau	2.34	332	eP	Pn	11 04 09.9	+0.9
ENA				eS	Sn	11 04 35.6	-0.9
WUSB	Renai	2.34	314	P	Pn	11 04 09.4	+0.2
WUSB				S	Sn	11 04 35.4	-1.4
WHYT	Xinyi Township	2.34	305	eP	Pn	11 04 10.0	+0.9
WHYT				eS	Sn	11 04 36.9	+0.1
WHF	Hehuan Shan	2.36	319	eP	Pn	11 04 09.6	0.0
WHF				eS	Sn	11 04 36.4	-1.2
CHN1	Nanshi	2.38	291	eP	Pn	11 04 11.2	+1.6
CHN1				eS	Sn	11 04 39.8	+2.2
CHN4	Tsaushan	2.39	295	eP	Pn	11 04 11.5	+1.8
CHN4				eS	Sn	11 04 39.0	+1.3
WCKO	Fanlu	2.41	297	eP	Pn	11 04 12.5	+2.4
WCKO				eS	Sn	11 04 40.4	+2.0
SMLT	Sun Moon Lake	2.42	309	eP	Pn	11 04 11.6	+1.4
SMLT				eS	Sn	11 04 38.0	-0.7
SNST	Tainan City	2.42	291	eP	Pn	11 04 12.1	+2.0
SNST				eS	Sn	11 04 41.2	+2.7
CHN5	Tsauling	2.43	301	eP	Pn	11 04 12.3	+2.0
CHN5				eS	Sn	11 04 41.4	+2.6
TWK	Hsinying	2.44	292	eP	Pn	11 04 12.2	+1.7
TWK				eS	Sn	11 04 41.8	+2.6
TWC	Suao	2.45	336	eP	Pn	11 04 12.0	+1.4
TWC				eS	Sn	11 04 38.7	-0.6
TYC	Yuchr	2.46	309	eP	Pn	11 04 11.2	+0.6
TYC				eS	Sn	11 04 39.6	+0.1
TWT	Tachien	2.49	319	eS	Sn	11 04 39.5	-1.0
DPDB	Guoxing	2.50	312	eP	Pn	11 04 13.1	+1.9
DPDB				eS	Sn	11 04 40.3	-0.2
TDCB	Techi	2.50	319	eP	Pn	11 04 12.3	+1.0
TDCB				eS	Sn	11 04 39.7	-1.0
NNSH	Datong	2.51	325	eP	Pn	11 04 11.5	0.0
NNSH				eS	Sn	11 04 39.5	-1.4
WCS	Beigang Elemen	2.52	312	eP	Pn	11 04 12.2	+0.7
WCS				eS	Sn	11 04 40.7	-0.4
NNS	Nan Shan	2.52	325	eP	Pn	11 04 11.7	0.0
NNS				eS	Sn	11 04 39.8	-1.6
LATG	Datong	2.53	329	P	Pn	11 04 12.1	+0.4
LATG				iS	Sn	11 04 39.9	-1.4
NDS	Dongshan	2.53	334	eP	Pn	11 04 12.6	+1.0
NDS				eS	Sn	11 04 40.9	-0.3
JISG	Ishigakijimahi	2.54	29	eP	Pn	11 04 11.6	-0.2
JISG				S	Sn	11 04 40.2	-1.4
WNT	Mingjian	2.57	306	eP	Pn	11 04 14.8	+2.5
WDLH	Douliu	2.58	301	eP	Pn	11 04 14.8	+2.5
WDLH				eS	Sn	11 04 45.2	+2.6
ENTT	Nioudou	2.60	331	eP	Pn	11 04 13.6	+1.0
ENTT				eS	Sn	11 04 41.8	-1.2
TWE	Neicheng	2.63	334	eP	Pn	11 04 13.7	+0.8
TWE				eS	Sn	11 04 43.2	-0.4
WHP	Taichung City	2.65	316	eP	Pn	11 04 15.2	+1.9
FUSB	Fushanzhiwuyua	2.69	333	eP	Pn	11 04 14.7	+0.8
FUSB				eS	Sn	11 04 45.0	-0.4
YHNB	Yeheng	2.71	328	P	Pn	11 04 15.0	+0.8
YHNB	Yeheng	2.71	328	S	Sn	11 04 43.8	-2.1
YHNB	Yeheng	2.71	328	eP	Pn	11 04 15.1	+0.8
YHNB				eS	Sn	11 04 44.5	-1.4
NSK	Sanguang	2.73	328	eP	Pn	11 04 15.2	+0.8
NSK				eS	Sn	11 04 44.7	-1.5
NWLT	Wulai	2.75	331	eP	Pn	11 04 15.4	+0.8
NWLT				eS	Sn	11 04 45.8	-0.8
JTJ	Tarama	2.78	35	S	Sn	11 04 46.6	-0.8
TIPB	Shuangxi	2.79	339	eP	Pn	11 04 16.5	+1.2
TIPB				eS	Sn	11 04 47.4	-0.4
NFF	Wufeng Townshi	2.82	324	eP	Pn	11 04 17.6	+2.0
NFF				eS	Sn	11 04 47.9	-0.5
NSTT	Nanjuang	2.88	322	eP	Pn	11 04 17.0	+0.6
NSTT				eS	Sn	11 04 49.6	-0.2
LIOB	Emei	2.88	322	eP	Pn	11 04 18.1	+1.6
LIOB				eS	Sn	11 04 50.0	0.0
SXI1	Grass Mountain	2.89	340	eP	Pn	11 04 17.7	+1.0
SXI1				eS	Sn	11 04 49.6	-0.7
KSHI	Guanxi Townshi	2.90	326	eP	Pn	11 04 18.9	+2.1
KSHI				eS	Sn	11 04 50.2	-0.2
YM01	YM01	3.05	336	eP	Pn	11 04 20.4	+1.6
YM01				eS	Sn	11 04 54.6	+0.6

*MEX **01** 11:22:13.5±0.7, 14°.68N×91°.89W, h93km±6km, MD4.0*
*CATAC **01** 11:22:14.0±0.4, 14°N±4°×9°2W±°, h59km±4km, M3.1/13, MLv3.1/13, Error ellipse: s-maj=9.5km s-min=3.1km az=34.6, confirmed*
*GCG **01** 11:22:15.0±1.5, 14°.55N×91°.99W, h65km±12km, MD3.7, ML3.7, Presumed earthquake*
ISC 01 11:22:12.3±1.3, **14°.42N**±0°.06×**92°.17W**±0°.04, **h74**km±7km, **n35**, σ1s.**73**/59, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCA	Catarina	0.44	12	iP	Pn	11 22 25.4	+0.4
SMCA				eS	Sn	11 22 34.6	+0.3
SMCA				IAML		11 22 36.0	
	comp=E,1μm,0.1s						
RTAL	Retalhuleu	0.47	78	eP	Pn	11 22 25.8	+0.6
RTAL				eS	Sn	11 22 35.6	+0.8
RTAL	Retalhuleu	0.47	78	P	Pn	11 22 26.3	+1.1
RTAL				S	Sn	11 22 36.0	+1.3
THIG		0.49	349	eP	Pn	11 22 26.6	+1.2
THIG				eS	Sn	11 22 36.7	+1.7
THIG		0.49	349	iP	Pn	11 22 26.4	+1.0
CHUJ	Union Juarez	0.67	5	eP	Pn	11 22 27.0	-0.4
CHUJ				eS	Sn	11 22 37.9	-0.7
PATR	El Naranjo	0.69	355	eP	Pn	11 22 27.0	-0.6
PATR				eS	Sn	11 22 38.1	-0.9
PAVE	Pavencul	0.77	360	eP	Pn	11 22 28.4	-0.1
PAVE				eS	Sn	11 22 40.0	-0.4
STG2	El Palmar, Qui	0.77	89	iP	Pn	11 22 26.8	-1.6
STG2				iS	Sn	11 22 36.0	-4.3
QUEO	Labor Ovalle	0.78	55	iP	Pn	11 22 29.6	+1.0
STG8	El Palmar, Qui	0.79	88	iP	Pn	11 22 27.2	-1.6
STG8				iS	Sn	11 22 37.8	-3.2
STG8				IAML		11 22 39.2	
	comp=N,4μm,0.1s						
STG5	El Palmar, Qui	0.80	91	iP	Pn	11 22 27.0	-1.7
SOKI	Kika Raxquin	0.84	62	iP	Pn	11 22 30.2	+0.7
HUEH	Huehuetenango	1.10	36	eP	Pn	11 22 32.4	0.0
HUEH				eS	Sn	11 22 46.9	-0.6
HUEH	Huehuetenango	1.10	36	P	Pn	11 22 32.9	+0.5
HUEH	Huehuetenango	1.10	36	eP	Pn	11 22 32.5	+0.1
FG16	Alotenango, Sa	1.62	95	iP	Pn	11 22 35.4	-3.7
FG16				iS	Sn	11 22 48.7	-11
FG16				IAML		11 22 56.7	
	comp=E,4μm,0.2s						
PCIG		1.63	322	eP	Pn	11 22 40.4	+1.4
PCIG				eS	Sn	11 23 00.5	+1.2
APG	El Apazote	1.75	71	iP	Pn	11 22 41.0	+0.1
PCG5	San Vicente Pa	1.75	97	iP	Pn	11 22 38.3	-2.5
CCIG	Comitan	1.85	1	eP	Pn	11 22 42.2	0.0
CCIG				eS	Sn	11 23 03.7	-1.1
CCIG	Comitan	1.85	1	P	Pn	11 22 43.0	+0.9
CCIG				S	Sn	11 23 05.1	+0.3
FAME	Alcaldia de Sa	2.17	105	P	Pn	11 22 47.7	+1.4
FAME				S	Sn	11 23 12.8	+0.5
NUBE	Las Nubes	2.38	102	P	Pn	11 22 50.5	+1.3
NUBE				S	Sn	11 23 18.6	+1.1
CARR	Arriaga	2.47	317	eP	Pn	11 22 53.3	+2.9
CARR				eS	Sn	11 23 22.0	+2.4
TGIG		2.51	339	eP	Pn	11 22 52.0	+1.0
TGIG				eS	Sn	11 23 19.6	-1.1
CEVE	Cerro Verde	2.54	103	P	Pn	11 22 53.5	+2.0
CEVE				S	Sn	11 23 24.1	+2.5
MTO3	Montecristo	2.72	90	P	Pn	11 22 53.9	0.0
JAYA	Jayaque - finc	2.75	106	P	Pn	11 22 58.3	+4.0
JAYA				S	Sn	11 23 26.5	-0.1
PMON	Piamonte	2.86	104	P	Pn	11 22 56.7	+0.9
PMON				S	Sn	11 23 30.6	+1.4
PETF	Flores	3.33	42	P	Pn	11 23 01.9	-0.1
UXUV	UXUV	3.45	327	eP	Pn	11 23 04.5	+0.9
UXUV				eS	Sn	11 23 41.5	-1.9
CMIG	Matias Romero	3.72	316	eP	Pn	11 23 06.4	-1.0
CMIG				eS	Sn	11 23 51.3	+1.2
HUIG	Huatulco	4.03	290	eP	Pn	11 23 11.5	-0.1
HUIG				eS	Sn	11 23 52.2	-5.4
NEUV	Arroyo Zacate	4.78	314	eP	Pn	11 23 20.9	-1.0
NEUV				eS	Sn	11 24 14.6	-1.4

DJA 01 11:45:17.0±0.9, **2°S**±2°×**12°3E**±°, **h33**km±16km, **M3.8**/12, **mB4.9**/1, **mb3.9**/3, **MLv3.7**/12, **Mw(mB)4.2**/1, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.90	9	P	Pn	11 45 33.2	-0.2
LUWI				S	Sb	11 45 46.5	+0.5
APSI	Ampana	1.42	316	P	Pn	11 45 39.9	-0.6
KDI	Kendari	2.00	180	P	Pn	11 45 49.2	+0.6
MRSI	Marisa	2.50	344	P	Pn	11 45 55.2	-0.2
PCI	Palu	2.98	290	P	Pn	11 46 00.9	-1.0
TTSI	Tana Toraja	3.02	249	P	Pn	11 46 03.3	+0.8
TTSI				S	Sn	11 46 35.9	-1.6
SANI	Sanana	3.36	92	P	Pn	11 46 06.9	-0.3
SANI				S	Sn	11 46 46.5	+0.6
SPSI	Sidrap Palu	3.49	235	P	Pn	11 46 09.3	+0.2
SPSI				S	Sn	11 46 49.9	+0.6
MPSI	Mapaga	3.55	310	P	Pn	11 46 09.2	-0.6
MPSI				S	Sn	11 46 51.5	+0.9
PMSI	Majene	4.02	247	P	Pn	11 46 16.6	+0.2
BSSI	Bau Bau, Buton	4.69	207	P	Pn	11 46 25.5	0.0
EDFI	Ende, Flores	6.83	188	P	Pn	11 46 54.7	-0.3
	0.1nm6.9nm,1.1s						

*SSNC **01** 11:54:21.7±1.9, 19°.30N×79°.06W, h20km±13km, MD3.3, ML2.4, Presumed earthquake*
*JSN **01** 11:54:26.7±1.2, 17°.85N×77°.06W, h252km±18km, MD3.9, Presumed earthquake*
ISC 01 11:54:19.9±1.4, **19°.29N**±0°.06×**79°.08W**±0°.04, **h31**km±15km, **n15**, σ1s.**36**/27, **1C**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBCY	The Bluff, Cay	0.78	305	eP	Pn	11 54 35.0	+0.2
CBCY				eS	Sb	11 54 44.6	-0.6
CBCY				IAML		11 54 44.8	
	comp=N,526nm,0.2s						
CBCY				IAML		11 54 45.2	
	comp=E,359nm,0.2s						
LCCY	Blossom Villag	1.01	292	eP	Pb	11 54 38.6	-0.3
LCCY				eP	Pb	11 54 38.6	-0.3
LCCY				eS	Sn	11 54 50.7	-0.5
LCCY				IAML		11 54 52.5	
	comp=E,111nm,0.1s						
MTDJ	Mount Denham	1.81	126	eP	Pn	11 54 50.0	+0.9
MTDJ				eS	Sn	11 55 10.9	-0.1
MTDJ				IAML		11 55 14.4	
	comp=E,47nm,0.1s						
MTDJ				IAML		11 55 15.4	
	comp=E,36nm,0.1s						
MTDJ	Mount Denham	1.81	126	⇑iP	Pb	11 55 00.3	+7.8
LMGC	Las Mercedes	2.10	68	eP	Pn	11 54 53.5	+0.5
LMGC				eS	Sn	11 55 16.9	-1.2
LMGC				IAML		11 55 18.1	
	comp=N,40nm,0.1s						
LMGC				IAML		11 55 18.6	
	comp=E,37nm,0.1s						
CCCC	Cccc	2.27	33	eP	Pb	11 54 60.0	-0.2
CCCC				eS	Sb	11 55 28.6	+0.9
CCCC				IAML		11 55 32.1	
	comp=N,4.2nm,0.2s						
CCCC				IAML		11 55 33.4	
	comp=E,4.9nm,0.2s						
STH	Stony Hill	2.47	119	i P	Pn	11 54 59.1	+1.0
CHIV	Chivirico	2.61	74	eP	Pn	11 54 59.9	-0.1
CHIV				eS	Sn	11 55 28.0	-2.6
CHIV				IAML		11 55 30.1	
	comp=N,14nm,0.1s						
CHIV				IAML		11 55 30.1	
	comp=E,14nm,0.1s						
MGV	Manicaragua	2.93	343	eP	Pn	11 55 05.7	+1.4
MGV				eS	Sn	11 55 38.5	0.0
MGV				IAML		11 55 40.2	
	comp=N,11nm,0.1s						
MARVS	Santiago de Cu	3.08	76	eP	Pn	11 55 06.4	0.0
MARVS				eS	Sn	11 55 39.6	-2.7
MARVS				IAML		11 55 43.8	
	comp=E,7.9nm,0.1s						
MARVS				IAML		11 55 45.6	
	comp=N,9.9nm,0.1s						
RCC	Rio Carpintero	3.27	77	eP	Pn	11 55 09.4	+0.4
RCC				eS	Sn	11 55 44.6	-2.3
PINC	Pinares de May	3.32	68	eP	Pn	11 55 11.4	+1.7
PINC				eS	Sn	11 55 48.4	+0.3
GTBY	Guantanamo Bay	3.80	80	eP	Pn	11 55 16.8	+0.5
GTBY				eS	Sn	11 55 58.1	-1.9
QMBU	Quimbuelo	4.12	77	eP	Pn	11 55 22.1	+1.2
MASC	Masc	4.65	78	eP	Pn	11 55 30.2	+2.1
MASC				eS	Sn	11 56 22.8	+1.7

*IDC **01** 11:55:35.8±1.0, 17°.26S×177°.98W, h0km, mb3.8/8, mbtmp3.8/8, Error ellipse: s-maj=48.7km s-min=21.3km az=144.0*

ISC 01 11:55:35.6±0.8**, 17°.1S**±0°.2×**178°.2W**±0°.2**, h10km, n16, σ4s.25**/15**, mb3.7**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	21.45	190	P	P	12 00 24.7	+0.8
	5.9nm,0.9s,baz=317,slow=18,SNR=1.9						
	5.9nm,0.9s						
WRA	Warramunga Arr	44.98	259	P	P	12 03 54.7	+3.3
	0.5nm,0.5s,baz=98,slow=6.6,SNR=10						
	0.5nm,0.5s						
ASAR	Alice Springs	45.20	253	P	P	12 03 56.0	+2.8
	3.0nm,0.5s,baz=90,slow=8.4,SNR=66						
	3.0nm,0.5s						
NVAR	Mina Array Bea	78.73	44	P	P	12 07 41.2	+2.5
	0.5nm,0.6s,baz=255,slow=6.3,SNR=5.0						
	0.5nm,0.6s						
ILAR	Eielson Array	85.09	13	P	P	12 08 13.7	+2.4
	0.2nm,0.6s,baz=211,slow=4.5,SNR=4.5						
	0.2nm,0.6s						
TXAR	Lajitas Array	85.41	58	P	P	12 08 15.2	+1.4
	1.0nm,0.8s,baz=222,slow=5.8,SNR=13						
	1.0nm,0.8s						
PDAR	Pinedale Array	86.65	43	P	P	12 08 20.6	+0.7
	0.2nm,0.6s,baz=258,slow=6.1,SNR=2.0						
	0.2nm,0.6s						
YKA	Yellowknife Ar	93.55	25	P	P	12 08 52.8	+1.4
	0.3nm,1.0s,baz=243,slow=5.3,SNR=3.1						
	0.3nm,1.0s						
GNI	Garni	136.44	311	PKP	PKPdf	12 14 52.6	-5.7
KIV	Kislovodsk	136.44	317	PKP	PKPdf	12 14 53.3	-4.7
RNPP9	Sopachiv	140.80	336	PKP	PKPdf	12 15 01.6	-4.0
LUBAR	Lubar, Ukraine	141.18	333	PKP	PKPdf	12 15 01.8	-4.6
BAL3X	Bal3x, Balta	141.77	330	PKP	PKPdf	12 15 02.3	-5.2
KMPD	K-Podol'skiy	142.76	333	PKP	PKPdf	12 15 03.5	-5.7
KIS	Kishinev	142.80	329	PKP	PKPdf	12 15 03.9	-5.5
KWP	Kalwaria Pacla	143.44	337	PKP	PKPab	12 15 05.7	-0.9

*NEIC **01** 12:23:07.5±1.6, 26°.63S±0°.08×176°.1W±0°.1, h10km±1km, mb4.6/11, Error ellipse: s-maj=18.6km s-min=12.4km az=118.0*

*IDC **01** 12:23:08.8±0.7, 26°.73S×176°.53W, h0km, mb4.1/10, mbtmp4.1/13, ML4.0/3, MS3.5/8, Error ellipse: s-maj=26.1km s-min=19.1km az=133.0*

ISC 01 12:23:11.9±0.5**, 26°.72S**±0°.07×**176°.5W**±0°.1**, h29km, n57, σ2s.53**/49**, mb4.4**/17**, MS3.5**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.83	207	Pn	Pn	12 23 55.6	+0.5
	73nm,0.3s,baz=68,slow=17,SNR=5.8						
RAO				Sn	Sn	12 24 31.2	+3.0
	124nm,0.3s,baz=280,slow=22,SNR=3.7						
	251nm,0.4s						
RAO	Raoul Island	2.83	207		Pn	12 23 55.1	0.0
NIUE	Niue	9.71	40	Pn	Pn	12 25 22.6	-7.0
MSVF	Nonsavu	10.28	329		Pn	12 25 35.0	-2.6
URZ	Urewera	12.71	204	Pn	Pn	12 26 11.4	+0.7
	0.4nm,0.3s,baz=305,slow=18,SNR=1.5						
URZ				Sn	Sn	12 28 25.7	-5.4
	1.3nm,0.3s,baz=37,slow=23,SNR=9.8						
	4.4nm,0.7s						
RAR	Rarotonga	16.21	74	LR	LR	12 32 06.9	
	comp=Z,62nm,20.4s,baz=249,slow=33						
DZM	Mont Dzumac	16.24	283	Pn	P	12 26 59.9	-1.0
	0.3nm,0.3s,baz=77,slow=14,SNR=4.6						
	4.9nm,0.9s						
PPT	Papeete	26.48	75	LR	LR	12 37 00.7	
	comp=Z,48nm,18.9s,baz=163,slow=31						
HNR	Honiara	28.17	303	LR	LR	12 38 10.5	
	comp=Z,6.2nm,20.1s,baz=289,slow=32						
CAN	Canberra	30.69	245	P	P	12 29 26.6	+2.4
CAN				IAmb	IAmb	12 29 52.1	
	comp=Z,8.6nm,1.0s						
CTA	Charters Tower	34.75	273	LR	LR	12 43 09.3	
	comp=Z,85nm,18.1s,baz=52,slow=35						
CTAO	Charters Tower	34.75	273	P	P	12 30 00.7	+0.8
CTAO				IAmb	IAmb	12 30 12.9	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	36.77	252	LR	LR	12 44 05.8	
	comp=Z,71nm,19.0s,baz=25,slow=34						
COEN	Coen	39.75	280	P	P	12 30 42.4	+0.1
COEN				IAmb	IAmb	12 30 55.6	
	comp=Z,10nm,1.0s						
AS31	Alice Springs	44.79	263	P	P	12 31 22.9	-0.4
ASAR	Alice Springs	44.79	263	P	P	12 31 23.9	+0.5
	comp=Z,0.7nm,0.5s,baz=99,slow=7.5,SNR=6.3						
ASAR				PcP	PcP	12 33 06.5	+1.3
	comp=Z,1.0nm,0.9s,baz=111,slow=3.7,SNR=4.3						
ASAR				LR	LR	12 48 23.0	
	comp=Z,73nm,19.3s,baz=112,slow=34						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	44.79	263	P	P	12 31 22.8	-0.5
WRA	Warramunga Arr	45.45	268	P	P	12 31 28.8	+0.2
	comp=Z,3.5nm,0.7s,baz=106,slow=7.7,SNR=18						
WRA				PcP	PcP	12 33 08.7	+1.3
	comp=Z,1.5nm,0.9s,baz=107,slow=3.3,SNR=5.7						
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	45.45	268	P	P	12 31 27.9	-0.7
WB0	Warramunga Arr	45.46	268	P	P	12 31 28.0	-0.7
WB0				IAmb	IAmb	12 31 32.5	
	comp=Z,5.5nm,0.8s						
FORT	Forrest	48.39	251	P	P	12 31 51.8	+0.4
KNRA	Kununurra	51.90	271	P	P	12 32 17.6	-0.6
KNRA				IAmb	IAmb	12 32 21.4	
	comp=Z,11nm,0.9s						
NWAO	Narrogin (SRO)	57.02	247	LR	LR	12 54 39.5	
	comp=Z,44nm,19.2s,baz=42,slow=33						
BATI	Baumata	58.62	274	LR	LR	12 58 45.6	
	comp=Z,82nm,18.1s,baz=156,slow=36						
QSPA	South Pole Qui	63.38	180	P	P	12 33 37.5	-0.9
LEM	Lembang	74.40	270	LR	LR	13 06 34.8	
	comp=Z,40nm,20.9s,baz=237,slow=35						
GO08	Villa O'Higgin	79.01	139	P	P	12 35 11.2	-1.9
GO08				IAmb	IAmb	12 35 39.3	
	comp=Z,7.7nm,1.1s						
H03S2	Juan Fernandez	81.36	123	T	T	14 04 44.1	
	baz=243,slow=74,SNR=8.2						
H03S1	Juan Fernandez	81.38	123	T	T	14 04 45.2	
	baz=243,slow=74,SNR=8.0						
H03S3	Juan Fernandez	81.38	123	T	T	14 04 46.1	
	baz=243,slow=74,SNR=8.1						
SNAA	Sanae	81.78	178	P	P	12 35 27.2	-0.5
SNAA				IAmb	IAmb	12 35 35.0	
	comp=Z,4.4nm,1.1s						
KSRS	Korea Array	82.46	319	P	P	12 35 32.1	+0.6
	comp=Z,1.1nm,0.6s,baz=125,slow=5.6,SNR=4.5						
	comp=Z,1.1nm,0.6s						
KSAR	Wonju Array Be	82.48	318	P	P	12 35 31.8	+0.2
PETK	Petropavlovsk-	82.62	345	P	P	12 35 35.4	+3.4
	comp=Z,5.8nm,0.9s,baz=176,slow=5.7,SNR=2.8						
	comp=Z,5.8nm,0.9s						
PLCA	Paso Flores	84.01	133	P	P	12 35 41.1	+1.2
	comp=Z,1.9nm,1.1s,baz=204,slow=2.5,SNR=2.9						
	comp=Z,1.9nm,1.1s						
NVAR	Mina Array Bea	84.62	42	P	P	12 35 45.3	+2.4
	comp=Z,2.1nm,1.0s,baz=227,slow=8.7,SNR=11						
	comp=Z,2.1nm,1.0s						
NVAR	Mina Array Bea	84.62	42	P	P	12 35 39.4	-3.5
TXAR	Lajitas Array	89.26	57	P	P	12 36 07.4	+1.9
	comp=Z,0.7nm,1.0s,baz=240,slow=5.9,SNR=3.7						
	comp=Z,0.7nm,1.0s						
PDAR	Pinedale Array	92.54	43	P	P	12 36 22.6	+1.9
	comp=Z,0.6nm,0.8s,baz=230,slow=3.7,SNR=4.1						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	92.54	43	P	P	12 36 18.1	-2.5
QLMT	Earthquake Lak	92.62	40	P	P	12 36 18.0	-2.9
SEY	Seymchan	92.72	346	P	P	12 36 21.7	+1.1
	comp=Z,0.3nm,0.4s,baz=81,slow=3.8,SNR=3.5						
	comp=Z,0.3nm,0.4s						
CMAR	Chiang Mai Arr	93.48	289	P	P	12 36 27.3	+2.1
	comp=Z,0.4nm,0.5s,baz=144,slow=3.1,SNR=4.5						
	comp=Z,0.4nm,0.5s						
CMAR	Chiang Mai Arr	93.48	289	P	P	12 36 24.5	-0.8
MKAR	Makanchi Array	116.41	311	PKP	PKPdf	12 41 52.6	0.0
	comp=Z,0.3nm,0.5s,baz=199,slow=2.4,SNR=4.8						
FINES	FINESS Array B	142.11	343	PKhKP	PKPpre	12 42 36.8	
	comp=Z,1.4nm,0.9s,baz=153,slow=0.9,SNR=5.1						
NB2	NORSAR Subarra	145.29	353	PKP	PKPdf	12 42 46.9	+0.6
	comp=Z,7.5nm,1.1s,baz=8.9,slow=3.8						
NOA	NORSAR Array B	145.29	353	PKPbc	PKPdf	12 42 47.1	+0.8
	comp=Z,2.8nm,0.9s,baz=7.0,slow=2.5,SNR=5.1						
HFS	Hagfors	145.88	351	PKPbc	PKPbc	12 42 48.4	+0.5
	comp=Z,1.8nm,0.4s,baz=71,slow=5.0,SNR=8.4						
AKASG	Malin Array Be	149.06	328	PKPbc	PKPbc	12 42 56.6	-0.3
	comp=Z,0.7nm,0.5s,baz=42,slow=2.8,SNR=5.9						
AK14	Malin Array Si	149.16	328	PKP	PKPdf	12 42 47.4	-5.6
AK13	Malin Array Si	149.20	328	PKP	PKPdf	12 42 47.1	-5.9
RNPP9	Sopachiv	150.08	331	PKP	PKPdf	12 42 48.4	-6.0
RNPP2	Kostyukhnivka	150.14	331	PKP	PKPdf	12 42 48.6	-5.9
BRTR	Keskin Array B	151.82	305	PKPbc	PKiKP	12 43 06.0	+1.5
	comp=Z,0.7nm,0.8s,baz=151,slow=4.9,SNR=2.3						
KMPD	K-Podol'skiy	151.83	327	PKP	PKPdf	12 42 52.0	-5.2
TORD	Torodi Ar. Bea	166.39	172	PKP	PKPdf	12 43 16.7	+1.6
	comp=Z,1.1nm,1.0s,baz=239,slow=4.2,SNR=3.6						
TORD				PKPab	PKPab	12 44 17.3	+0.9
	comp=Z,1.0nm,0.8s,baz=204,slow=5.6,SNR=5.4						

*SJA **01** 12:37:38.1±0.7, 22°.70S×68°.69W, h114km±5km, ML3.7, MW3.8*

*GUC **01** 12:37:39.9±0.6, 22°.66S×68°.72W, h109km±4km, ML3.9*

ISC 01 12:37:39.3±1.4**, 22°.66S**±0°.03×**68°.68W**±0°.05**, h111km**±10km**, n33, σ1s.59**/50**, 6C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.55	122	⇓iP	Pn	12 37 56.7	-0.2
AF01	San Pedro de A	0.55	122	eP	Pn	12 37 56.7	-0.2
AF01				IAML		12 38 24.8	
	comp=Z,2µm,0.7s						
PB06	IPOC Station P	0.82	267	⇑iP	Pn	12 37 58.5	-0.4
PB06				i S	Sn	12 38 13.2	-0.6
PB06				IAML		12 38 14.1	
	comp=N,3µm,0.2s						
PB06	IPOC Station P	0.82	267	eP	Pn	12 37 58.6	-0.4
PB06				eS	Sn	12 38 14.3	+0.5
PB06				IAML		12 38 15.8	
	comp=Z,2µm,0.3s						
PB09	IPOC Station P	1.00	329	⇑iP	Pn	12 38 01.3	+0.5
PB09				i S	Sn	12 38 17.0	+0.1
PB09	IPOC Station P	1.00	329	eP	Pn	12 38 00.8	0.0
PB09				eS	Sn	12 38 17.7	+0.8
PB09				IAML		12 38 18.1	
	comp=Z,1µm,0.3s						
PB03	IPOC Station P	1.16	301	⇑iP	Pn	12 38 02.4	0.0
PB03				i S	Sn	12 38 19.1	-0.9
PB03				IAML		12 38 20.0	
	comp=N,2µm,0.5s						
PB03	IPOC Station P	1.16	301	eP	Pn	12 38 02.4	0.0
PB03				eS	Sn	12 38 19.5	-0.4
PB03				IAML		12 38 19.8	
	comp=Z,1µm,0.5s						
PB05	IPOC Station P	1.42	262	⇑iP	Pn	12 38 05.0	-0.3
PB05				i S	Sn	12 38 24.2	-0.8
PB05	IPOC Station P	1.42	262	eP	Pn	12 38 05.0	-0.3
PB05				eS	Sn	12 38 25.4	+0.4
PB05				IAML		12 38 31.1	
	comp=Z,414nm,0.5s						
PB07	IPOC Station P	1.45	310	⇑iP	Pn	12 38 05.9	+0.2
PB07				i S	Sn	12 38 25.3	-0.5
PB07				IAML		12 38 26.6	
	comp=E,2µm,0.2s						
PB07	IPOC Station P	1.45	310	eP	Pn	12 38 05.8	+0.1
PB07				eS	Sn	12 38 25.8	+0.1
PB07				IAML		12 38 28.2	
	comp=Z,1µm,0.3s						
PB02	IPOC Station P	1.75	320	⇑iP	Pn	12 38 09.6	+0.4
PB02				i S	Sn	12 38 31.7	-0.3
PB02				IAML		12 38 36.7	
	comp=E,2µm,0.3s						
PB02	IPOC Station P	1.75	320	eP	Pn	12 38 09.9	+0.6
PB02				eS	Sn	12 38 32.5	+0.5
PB02				IAML		12 38 37.9	
	comp=Z,2µm,0.4s						
PB01	IPOC Station P	1.77	335	⇓iP	Pn	12 38 10.0	+0.4
PB01				i S	Sn	12 38 32.8	+0.2
PB01				IAML		12 38 34.0	
	comp=E,2µm,0.2s						
PB01	IPOC Station P	1.77	335	eP	Pn	12 38 09.8	+0.2
PB01				eS	Sn	12 38 33.8	+1.2
PB01				IAML		12 38 34.3	
	comp=Z,917nm,0.2s						
PX03	IPOC Station P	2.41	338	eP	Pn	12 38 15.9	-1.8
PB14	IPOC Station P	2.52	219	eP	Pn	12 38 19.3	+0.1
PB14				eS	Sn	12 38 55.8	+5.9
PB14				IAML		12 38 58.5	
	comp=Z,275nm,0.3s						
PB08	IPOC Station P	2.54	350	i P	Pn	12 38 20.7	+1.0
PB08	IPOC Station P	2.54	350	eP	Pn	12 38 21.0	+1.3
PB08				eS	Sn	12 38 48.0	-2.6
SALTA		2.66	126	eP	Pn	12 38 19.8	-1.5
SALTA				eP		12 38 30.3	
TA02	Huaiquique	2.73	330	eP	Pn	12 38 22.6	+0.8
TA02				IAML		12 39 04.6	
	comp=N,551nm,0.2s						
TA02	Huaiquique	2.73	330	eP	Pn	12 38 19.3	-2.5
TA02				eS	Sn	12 38 44.3	-10
TA02				IAML		12 39 01.9	
	comp=Z,213nm,0.5s						
GO01	Chusmiza	3.01	351	i P	Pn	12 38 26.5	+0.6
GO01	Chusmiza	3.01	351	eP	Pn	12 38 26.8	+0.9
GO01				eS	Sn	12 38 49.9	-12
GO01				IAML		12 39 00.1	
	comp=Z,112nm,0.6s						
PB11	IPOC Station P	3.02	342	i P	Pn	12 38 25.4	-0.4
PB11	IPOC Station P	3.02	342	eP	Pn	12 38 25.2	-0.6
PB11				eS	Sn	12 38 49.1	-12
PB11				IAML		12 39 29.1	
	comp=Z,180nm,0.4s						
SLA	San Lorenzo	3.56	126	eP	Pn	12 38 36.5	+3.6
SLA	San Lorenzo	3.56	126	eP	Pn	12 38 36.8	+3.8
AZAP	Zapla	3.67	116	eP	Pn	12 38 30.8	-3.6
AC01	Pan de Azucar	3.89	206	i P	Pn	12 38 35.5	-1.6
AC02	Maricunga	4.18	185	eP	Pn	12 38 40.7	-0.8
AC02				eS	Sn	12 39 27.2	-2.5
AC02				IAML		12 40 01.4	
	comp=Z,47nm,0.7s						
PB16	IPOC Station P	4.37	350	eP	Pn	12 38 45.4	+1.2
PB16				eS	Sn	12 39 45.8	+11
PB16				IAML		12 39 58.8	
	comp=Z,35nm,0.6s						

IDC 01 12:44:07.4±46.0**, 15°.93S**×**173°.65W, h0km, mb4.1**/3**, mbtmp4.1**/3**, Error ellipse: s-maj=892.0km s-min=181.5km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.56	240	P	P	12 52 14.3	+1.0
	0.8nm,0.3s,baz=101,slow=10,SNR=4.7						
	0.8nm,0.3s						
WRA	Warramunga Arr	49.49	257	P	P	12 52 59.4	-0.7
	0.4nm,0.4s,baz=98,slow=7.5,SNR=8.3						
	0.4nm,0.4s						
ASAR	Alice Springs	49.72	252	P	P	12 53 01.4	-0.4
	3.5nm,0.4s,baz=89,slow=8.0,SNR=79						
	3.5nm,0.4s						

IDC 01 12:52:49.7±4.0**, 0°.26S**×**136°.03E, h0km, mb3.3**/3**, mbtmp3.3**/4**, ML3.1**/1**, MS3.1**/2**, Error ellipse: s-maj=210.1km s-min=25.7km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	14.33	130	LR	LR	13 02 32.6	
	comp=Z,48nm,18.3s,baz=30,slow=41						
WRA	Warramunga Arr	19.63	185	P	P	12 57 18.9	-1.1
	0.1nm,0.3s,baz=3.6,slow=10,SNR=4.8						
	0.5nm,0.7s						
ASAR	Alice Springs	23.36	185	P	P	12 58 00.6	+0.6
	0.3nm,0.5s,baz=6.2,slow=11,SNR=9.2						
	0.3nm,0.5s						
ASAJ	Asahikawa	44.57	7	LR	LR	13 19 09.1	
	comp=Z,26nm,18.3s,baz=354,slow=35						
MKAR	Makanchi Array	66.23	323	P	P	13 03 40.1	+0.5
	0.3nm,0.7s,baz=116,slow=6.7,SNR=2.4						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	68.49	330	P	P	13 03 53.3	-0.4
	0.2nm,0.3s,baz=133,slow=6.3,SNR=2.0						
	0.2nm,0.3s						

*NIED **01** 13:10:47.0, 37°.24N×141°.61E, h49km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.09; $M_{\theta\theta}$-1.30; $M_{\phi\phi}$-4.79; $M_{r\theta}$0.14; $M_{\theta\phi}$-2.24; $M_{\phi r}$3.17; Fault plane solution: $M_0$6.77000×10^{14} NP1: ϕ_s215.00000°, δ33.00000°, λ107.00000°. NP2: ϕ_s16.00000°, δ59.00000°, λ80.00000°.*

*IDC **01** 13:10:47.4±2.1, 37°.09N×141°.65E, h52km±19km, mb3.5/13, mbtmp3.8/18, ML3.2/5, MS2.7/2 Error ellipse: s-maj=16.6km s-min=12.1km az=86.0*

*JMA **01** 13:10:47.0±0.1, 37°.2N±0°.4×141°.6E±0°.9, h49km±1km, MV3.9/37, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

ISC 01 13:10:46.0±0.9**, 37°.18N**±0°.05×**141°.72E**±0°.08**, h36km**±2km**, n39, σ0s.94**/39**, mb3.7**/13**, 14D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.70	286	⇓iP	Pn	13 10 59.4	-0.1
JFK				⇓eS	Sn	13 11 08.0	-1.0
ONAJ	Iwakimizuishiy	0.74	264	⇓iP	Pn	13 11 00.2	+0.3
ONAJ				⇓S	Sn	13 11 09.6	-0.4
JMST	Minamisoumatoc	0.86	310	⇓iP	Pn	13 11 01.3	-0.2
JMST				⇓S	Sn	13 11 11.7	-1.2
JFFD	Fukushimafurud	0.93	265	⇓iP	Pn	13 11 02.7	+0.2
JFFD				⇓S	Sn	13 11 14.1	-0.6
JMM	Marumori	1.01	313	⇓iP	Pn	13 11 03.4	-0.1
JHO	Hitachi	1.08	239	⇓iP	Pn	13 11 04.8	+0.3
JOTO	OTAMA OYAMA	1.17	289	i P	Pn	13 11 06.5	+0.8
JOTO				S	Sn	13 11 20.6	+0.1
JIO	Ouri	1.31	347	⇓iP	Pn	13 11 07.9	+0.2
JIO				⇓S	Sn	13 11 23.2	-0.6
JOU	Okura	1.45	325	i P	Pn	13 11 10.0	+0.3
JFY	Yanaizu	1.62	279	⇓iP	Pn	13 11 12.8	+0.7
JYS	Shirataka	1.68	309	⇓iP	Pn	13 11 13.6	+0.8
MJAR	Matsushiro Arr	2.89	258	P	Pn	13 11 31.0	+1.6
	1.1nm,0.3s,baz=81,slow=14,SNR=44						
MJAR				S	Sn	13 12 02.8	-0.1
	6.2nm,0.4s,baz=23,slow=2.7,SNR=4.8						
MJAR				LR	LR	13 12 53.1	
	comp=Z,145nm,20.3s,baz=40,slow=45						
	8.6nm,0.4s						
JHJ	Hachijo jima 2	4.35	202	P	Pn	13 11 50.5	+1.0
	19nm,0.3s,baz=75,slow=20,SNR=1.3						
JHJ				S	Sn	13 12 38.1	-0.8
	60nm,0.3s,baz=77,slow=23,SNR=5.7						
	46nm,0.3s						
ASAJ	Asahikawa	6.96	5	P	Pn	13 12 26.1	+0.8
	0.6nm,0.3s,baz=212,slow=16,SNR=11						
ASAJ				S	Sn	13 13 42.3	-1.0
	3.0nm,0.6s,baz=320,slow=24,SNR=1.1						
	2.7nm,0.4s						
USRK	Ussuriysk Ar.	10.18	317	P	Pn	13 13 11.9	+2.4
	0.2nm,0.3s,baz=126,slow=14,SNR=1.7						
	2.3nm,0.6s						
KSRS	Korea Array	10.99	276	P	Pn	13 13 20.0	-0.6
	0.1nm,0.3s,baz=90,slow=14,SNR=1.9						
KSRS				LR	LR	13 17 04.2	
	comp=Z,35nm,18.7s,baz=95,slow=34						
	0.8nm,0.7s						
SONM	Songino Array	27.91	304	P	P	13 16 32.3	-0.3
	0.6nm,0.6s,baz=92,slow=8.0,SNR=4.0						
	0.6nm,0.6s						
H11N2	WAKE ISLAND Hy	28.01	121	T	T	13 46 08.5	
	baz=315,slow=75,SNR=60						
H11N1	WAKE ISLAND Hy	28.02	121	T	T	13 46 21.9	
	baz=315,slow=75,SNR=65						
H11N3	WAKE ISLAND Hy	28.03	121	T	T	13 46 10.5	
	baz=315,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	28.73	124	T	T	13 47 06.9	
	baz=316,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	28.73	124	T	T	13 47 06.9	
	baz=316,slow=76,SNR=46						
H11S2	WAKE ISLAND Hy	28.75	124	T	T	13 47 06.8	
	baz=316,slow=76,SNR=34						
CMAR	Chiang Mai Arr	41.77	255	P	P	13 18 32.3	+0.4
	0.7nm,0.4s,baz=62,slow=8.4,SNR=4.1						
	0.7nm,0.4s						
ZALV	Zalesovo Beam	42.00	312	P	P	13 18 32.8	-0.5
	0.7nm,0.5s,baz=91,slow=9.3,SNR=5.0						
	0.7nm,0.5s						
MKAR	Makanchi Array	44.25	302	P	P	13 18 51.4	-0.3
	0.8nm,0.6s,baz=88,slow=10,SNR=12						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	46.11	308	P	P	13 19 05.5	-0.8
	2.6nm,0.7s,baz=84,slow=9.0,SNR=4.0						
	2.6nm,0.7s						
ILAR	Eielson Array	49.24	32	P	P	13 19 31.1	+0.6
	0.7nm,0.8s,baz=263,slow=5.9,SNR=9.7						
	0.7nm,0.8s						
BVAR	Borovoye Array	50.66	312	P	P	13 19 40.5	-0.8
	0.3nm,0.4s,baz=72,slow=4.8,SNR=4.9						
	0.3nm,0.4s						
WRA	Warramunga Arr	57.24	188	P	P	13 20 26.7	-3.0
	1.7nm,0.5s,baz=7.6,slow=6.9,SNR=28						
	1.7nm,0.5s						
ASAR	Alice Springs	60.97	188	P	P	13 20 55.8	+0.3
	0.7nm,0.7s,baz=9.2,slow=6.4,SNR=6.1						
	0.7nm,0.7s						
FINES	FINESS Array B	68.80	332	P	P	13 21 46.7	+0.7
	2.7nm,0.9s,baz=62,slow=3.3,SNR=1.6						
	2.7nm,0.9s						
AKASG	Malin Array Be	74.33	322	P	P	13 22 18.6	-0.9
	0.3nm,0.4s,baz=46,slow=6.5,SNR=2.5						
	0.3nm,0.4s						
PDAR	Pinedale Array	77.39	46	P	P	13 22 38.3	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.2nm,0.6s,baz=228,slow=3.8,SNR=3.5						
	0.2nm,0.6s						
TXAR	Lajitas Array	89.84	53	P	P	13 23 41.9	+0.7
	0.2nm,0.7s,baz=320,slow=5.7,SNR=2.3						
	0.2nm,0.7s						
LPAZ	La Paz	146.41	60	PKPbc	PKPbc	13 30 24.1	-0.2
	0.7nm,0.4s,baz=270,slow=3.0,SNR=2.4						
H03N2	Juan Fernandez	146.79	96	T	T	16 14 33.9	
	baz=295						
H03N3	Juan Fernandez	146.81	96	T	T	16 14 36.0	
	baz=295,slow=74						
H03N1	Juan Fernandez	146.81	96	T	T	16 14 32.8	
	baz=295,slow=74						

IDC 01 13:11:46.2±48.0, 16.40S×174.98W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=909.0km s-min=180.8km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.22	240	P	P	13 19 41.3	+0.1
	1.5nm,0.4s,baz=87,slow=7.5,SNR=5.6						
	1.5nm,0.4s						
WRA	Warramunga Arr	48.14	258	P	P	13 20 29.5	+1.0
	0.4nm,0.6s,baz=91,slow=8.1,SNR=3.5						
	0.4nm,0.6s						
ASAR	Alice Springs	48.36	253	P	P	13 20 29.1	-1.0
	7.4nm,0.5s,baz=88,slow=8.3,SNR=106						
	7.4nm,0.5s						

IDC 01 13:11:57.0±7.1, 18.31S×177.40E, h0km, mb3.6/3, mbtmp3.6/3, MS3.2/2, Error ellipse: s-maj=319.3km s-min=36.6km az=145.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.64	260	P	P	13 19 38.9	-0.2
	0.1nm,0.3s,baz=90,slow=8.1,SNR=5.4						
	0.1nm,0.3s						
ASAR	Alice Springs	40.84	255	P	P	13 19 40.8	-0.1
	0.8nm,0.5s,baz=89,slow=9.1,SNR=16						
	0.8nm,0.5s						
BATI	Baumata	52.55	271	LR	LR	13 43 07.1	
	comp=Z,34nm,18.1s,baz=248,slow=36						
ILAR	Eielson Array	87.22	15	P	P	13 24 44.8	0.0
	0.3nm,0.5s,baz=219,slow=4.9,SNR=6.1						
	0.3nm,0.5s						
YAK	Yakutsk	88.51	340	LR	LR	14 03 41.8	
	comp=Z,8.6nm,19.6s,baz=108,slow=35						

IGIL 01 13:16:08.7, 35.16N×11.52W, h24km, ML2.4
MDD 01 13:16:08.9±1.1, 35.08N×11.42W, h28km±21km, Mb4.2/5, M_mb3.6/6, Error ellipse: s-maj=19.2km s-min=5.8km az=69.0
INMG 01 13:16:09.7±1.2, 35.14N×11.50W, h27km, ML2.5, Error ellipse: s-maj=6.8km s-min=4.3km az=104.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Horseshoe-Ampere
ISC 01 13:16:03.5±1.8, 35.13N±0.08×11.48W±0.08, h10km, n44, σ2.38/81, 4C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.93	46	P	Pn	13 16 52.2	+2.0
PFVI				S	Sn	13 17 24.2	-1.3
PFVI	Vila Bisbo	2.93	46	eP	Pn	13 16 52.4	+2.2
PFVI				eS	Sn	13 17 24.4	-1.0
PFVI				i IAML		13 17 25.7	
PFVI				i IAML		13 17 25.8	
PFVI				i IAML		13 17 31.6	
MORF	Marmelete	3.15	46	eP	Pn	13 16 55.6	+2.4
MORF				eS	Sn	13 17 29.7	-1.2
MORF				IAML		13 17 35.3	
	comp=N,26nm,0.4s						
MORF	Marmelete	3.15	46	eP	Pn	13 16 55.6	+2.4
MORF				eS	Sn	13 17 30.6	-0.3
MORF				i IAML		13 17 32.1	
MORF				i IAML		13 17 35.3	
MORF				i IAML		13 17 36.1	
PTEO	Sao Teotonio	3.28	42	eP	Pn	13 16 57.4	+2.4
PTEO				eS	Sn	13 17 32.8	-1.2
PTEO				i IAML		13 17 34.8	
PTEO				i IAML		13 17 34.9	
PTEO				i IAML		13 17 41.2	
PBDV	Barranco-do-Ve	3.56	53	eP	Pn	13 17 01.3	+2.5
PBDV				eS	Sn	13 17 40.4	-0.6
PBDV				i IAML		13 17 43.9	
PBDV				i IAML		13 17 46.5	
PBDV				i IAML		13 17 51.0	
PCVE	Castro Verde	3.73	47	P	Pn	13 17 03.8	+2.6
PCVE				S	Sn	13 17 43.8	-1.4
PCVE	Castro Verde	3.73	47	eP	Pn	13 17 04.0	+2.8
PCVE				eS	Sn	13 17 44.9	-0.3
PCVE				i IAML		13 17 46.2	
PCVE				i IAML		13 17 46.7	
PCVE				i IAML		13 17 47.3	
MESJ	Messejana	3.77	43	eP	Pn	13 17 04.0	+2.3
MESJ				eS	Sn	13 17 44.3	-1.8
MESJ				IAML		13 17 48.3	
	comp=N,5.3nm,0.2s						
MESJ	Messejana	3.77	43	eP	Pn	13 17 04.3	+2.6
MESJ				eS	Sn	13 17 45.4	-0.7
MESJ				i IAML		13 17 48.8	
MESJ				i IAML		13 17 48.8	
MESJ				i IAML		13 17 54.9	
PVAQ	Vaqueiros	3.79	52	eP	Pn	13 17 04.5	+2.4
PVAQ				eS	Sn	13 17 46.0	-0.7
PVAQ				i IAML		13 17 48.2	
PVAQ				i IAML		13 17 49.5	
PVAQ				i IAML		13 17 51.7	
PBEJ	Beja	4.10	44	eP	Pn	13 17 08.7	+2.5
PBEJ				eS	Sn	13 17 53.0	-1.2
PBEJ				i IAML		13 17 54.8	
PBEJ				i IAML		13 17 56.2	
PBEJ				i IAML		13 17 57.7	
PMAFR	Mafra	4.20	24	eP	Pn	13 17 10.2	+2.5
PMAFR				eS	Sn	13 17 57.1	+0.3
PMAFR				i IAML		13 17 58.3	
PMAFR				i IAML		13 17 59.1	
PMAFR				i IAML		13 18 01.2	
MOE	Montemor	4.21	36	eP	Pn	13 17 10.4	+2.6
MOE				eS	Sn	13 17 55.8	-1.3
MOE				i IAML		13 17 59.0	
MOE				i IAML		13 18 01.1	
MOE				i IAML		13 18 02.6	
ARNO	Arenosillo	4.31	62	P	Pn	13 17 11.8	+2.6
EVO	Evora	4.39	38	P	Pn	13 17 12.7	+2.5
EVO				S	Sn	13 17 59.2	-2.2
EVO	Evora	4.39	38	eP	Pn	13 17 12.6	+2.3
EVO				eS	Sn	13 17 59.9	-1.4
EVO				i IAML		13 18 01.3	
EVO				i IAML		13 18 02.2	
EVO				i IAML		13 18 02.3	
PMPST	Porto Santo, M	4.52	244	eP	Pn	13 17 11.8	-0.3
PMPST				eS	Sn	13 17 58.9	-5.8
PMPST				i IAML		13 18 04.5	
PMPST				i IAML		13 18 05.6	
PMPST				i IAML		13 18 06.3	
PARRA	Arraiolos	4.59	36	eP	Pn	13 17 15.3	+2.3
PARRA				eS	Sn	13 18 04.7	-1.8
PARRA				i IAML		13 18 07.0	
PARRA				i IAML		13 18 07.8	
PARRA				i IAML		13 18 10.4	
EMIN	Mina Concepcio	4.68	54	P	Pn	13 17 16.5	+2.3
EMIN				S	Sn	13 18 06.8	-1.9
EMIN	Mina Concepcio	4.68	54	P	Pn	13 17 16.6	+2.3
EMIN				⇑iIVmb_VC		13 17 18.5	
	comp=N,102nm,SNR=2.0						
EMIN				S	Sn	13 18 07.3	-1.4
PBAR	Barrancos	4.69	48	P	Pn	13 17 16.5	+2.2
PBAR				S	Sn	13 18 07.2	-1.6
PBAR	Barrancos	4.69	48	eP	Pn	13 17 16.9	+2.6
PBAR				eS	Sn	13 18 07.4	-1.4
PBAR				i IAML		13 18 09.5	
PBAR				i IAML		13 18 09.6	
PBAR				i IAML		13 18 11.6	
PMTG	Montargil	4.71	32	eP	Pn	13 17 16.8	+2.1
PMTG				eS	Sn	13 18 06.8	-2.6
PMTG				i IAML		13 18 08.2	
PMTG				i IAML		13 18 11.8	
PMTG				i IAML		13 18 12.6	
PESTR	Estremoz	4.86	39	eS	Sn	13 18 10.6	-2.4
PESTR				i IAML		13 18 13.3	
PESTR				i IAML		13 18 13.9	
PESTR				i IAML		13 18 15.4	
PSBE	So Bento	4.87	25	eP	Pn	13 17 18.3	+1.4
PSBE				eS	Sn	13 18 10.8	-2.5
ESPR	Espera	4.88	68	P	Pn	13 17 18.7	+1.8
ESPR				S	Sn	13 18 11.5	-1.9
ESPR	Espera	4.88	68	P	Pn	13 17 18.9	+2.0
ESPR				⇑iIVmb_VC		13 17 21.6	
	comp=N,228nm,SNR=3.3						
ESPR				S	Sn	13 18 11.7	-1.7
EBAD	Badajoz	5.09	43	P	Pn	13 17 22.4	+2.6
EBAD				S	Sn	13 18 16.7	-1.9
PSARD	Sardoal	5.18	30	eP	Pn	13 17 24.2	+3.0
PSARD				eS	Sn	13 18 19.0	-2.1
PSARD				i IAML		13 18 21.0	
PSARD				i IAML		13 18 25.2	
PSARD				i IAML		13 18 25.3	
PMRV	Marv??o	5.39	36	eP	Pn	13 17 26.2	+2.3
PMRV				eS	Sn	13 18 23.6	-2.5
PMRV				i IAML		13 18 25.0	
PMRV				i IAML		13 18 25.1	
PMRV				i IAML		13 18 25.9	
PCAS	Casmilo, Conde	5.45	25	eP	Pn	13 17 28.0	+3.1
PCAS				eS	Sn	13 18 25.3	-2.4
PCAS				i IAML		13 18 29.8	
PCAS				i IAML		13 18 30.0	
PCAS				i IAML		13 18 30.8	
IFR	Ifrane	5.49	105	P	Pn	13 17 27.0	+1.5
PCBR	Castelo Branco	5.68	33	eP	Pn	13 17 29.7	+1.8
PCBR				eS	Sn	13 18 30.5	-2.6
PCBR				i IAML		13 18 31.8	
PCBR				i IAML		13 18 35.6	
PCBR				i IAML		13 18 37.4	
ECAB	El Cabril	5.69	57	P	Pn	13 17 29.8	+1.7
ECAB				S	Sn	13 18 29.7	-3.9
ECAB	El Cabril	5.69	57	P	Pn	13 17 30.3	+2.1
ECAB				⇑iIVmb_VC		13 17 31.1	
	comp=N,181nm,SNR=2.9						
ECAB				S	Sn	13 18 30.3	-3.2
PVIS	Viseu	6.25	26	eS	Sn	13 18 45.4	-2.1
EADA	Adamuz	6.32	59	P	Pn	13 17 38.6	+1.8
EADA				S	Sn	13 18 45.3	-3.8
EADA	Adamuz	6.32	59	P	Pn	13 17 38.6	+1.8
EADA				⇑iIVmb_VC		13 17 39.7	
	comp=N,139nm,SNR=2.7						
EADA				S	Sn	13 18 46.0	-3.0
MVO	Moncorvo	6.97	29	eP	Pn	13 17 48.8	+3.0
MVO				eS	Sn	13 19 00.6	-4.5
MVO				i IAML		13 19 03.0	
MVO				i IAML		13 19 04.4	
MVO				i IAML		13 19 08.8	
PAB	San Pablo	7.19	50	P	Pn	13 17 50.3	+1.6
PAB				S	Sn	13 19 06.6	-3.9
PSIM	Granatula de C	7.19	57	P	Pn	13 17 51.6	+2.8
ELOB	Lobios	7.24	21	S	Sn	13 19 08.3	-3.5
UCM	Universidad Co	8.32	49	P	Pn	13 18 06.7	+2.4

NEIC 01 13:21:33.6±1.1, 17.96N±0.04×66.727W±0.009, h10km±1km, ML3.5/35, Md3.4/6(RSPR), Error ellipse: s-maj=6.2km s-min=2.3km az=8.0
RSPR 01 13:21:33.7, 17.97N×66.74W, h7km, MD3.4/6
OSPL 01 13:21:34.4±0.8, 17.97N×66.73W, h10km±5km, ML3.8, Presumed earthquake
SDD 01 13:21:34.9±2.5, 18.03N×66.66W, h0km±9km, MD3.7, ML3.2, MW3.3, Presumed earthquake
ISC 01 13:21:33.3±0.9, 17.95N±0.04×66.73W±0.02, h13km±5km, n46, σ0.57/76, 11C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.14	279		Pg	13 21 37.0	+0.2
GBPR					Sg	13 21 39.1	-0.2
GBPR	Guanica, Bosqu	0.14	279	⇓iP	Pg	13 21 37.0	+0.2
GBPR				eS	Sg	13 21 39.1	-0.2
OBIP	Obispado Ponce	0.15	54		Pg	13 21 37.0	+0.1
OBIP				Sg	Sg	13 21 39.6	0.0
OBIP	Obispado Ponce	0.15	54	⇓iP	Pg	13 21 37.1	+0.1
OBIP				eS	Sg	13 21 39.5	0.0
OBIP	Obispado Ponce	0.15	54	i P	Pg	13 21 37.1	+0.1
OBIP				eS	Sg	13 21 39.5	0.0
OBIP				IAML		13 21 39.6	
	comp=Z,73µm,0.5s						
CELP	Cerrillos	0.19	50		Pg	13 21 37.8	+0.1
CELP				Sg	Sg	13 21 40.7	+0.1
CELP				IAML		13 21 42.1	
	comp=Z,7µm,0.4s						
CELP				IAML		13 21 42.1	
	comp=Z,9µm,0.3s						
MLPR	Magueyes Islan	0.29	273		Pg	13 21 39.8	+0.4
MLPR				IAML		13 21 45.8	
	comp=Z,4µm,0.5s						
UUPR	Utuado, UPR, P	0.30	3		Pg	13 21 39.2	-0.3
CRPR	Cabo Rojo, PR	0.36	279		Pg	13 21 40.7	+0.1
CRPR				IAML		13 21 50.9	
	comp=Z,2µm,0.7s						
CRPR	Cabo Rojo, PR	0.36	279		Sb	13 21 46.6	-0.5
CRPR	Cabo Rojo, PR	0.36	279	⇑iP	Pb	13 21 41.2	-0.3
CRPR				⇑iS	Sb	13 21 46.8	-0.4
CRPR				IAML		13 21 51.5	
	comp=N,2µm,0.8s						
CRPR	Cabo Rojo, PR	0.36	279	⇑iP	Pg	13 21 40.8	+0.1
CRPR				eS	Sb	13 21 46.6	-0.5
CRPR	Cabo Rojo, PR	0.36	279	i P	Pg	13 21 40.7	+0.1
CRPR				eS	Sb	13 21 46.5	-0.6
CRPR				IAML		13 21 49.8	
	comp=Z,2µm,0.5s						
LSP	Las Mesas	0.40	304		Pg	13 21 41.4	+0.1
LSP					Sg	13 21 47.3	+0.5
LSP	Las Mesas	0.40	304	⇑iP	Pg	13 21 41.4	+0.1
LSP				eS	Sg	13 21 47.3	+0.5
PRSN	Puerto Rico Se	0.47	304		Pg	13 21 42.0	-0.5
PRSN				IAML		13 21 55.5	
	comp=Z,8µm,0.3s						
PRSN				IAML		13 21 56.2	
	comp=Z,6µm,0.4s						
PRSN	Puerto Rico Se	0.47	304		Sg	13 21 49.5	+0.5
PRSN	Puerto Rico Se	0.47	304	⇓iP	Pg	13 21 42.6	0.0
PRSN				⇑iS	Sg	13 21 49.4	+0.5
PRSN				IAML		13 21 55.5	
	comp=N,4µm,0.2s						
PRSN	Puerto Rico Se	0.47	304	⇑eP	Pg	13 21 42.4	-0.2
PRSN				eS	Sg	13 21 49.5	+0.5
ECPR	Experimental S	0.51	44		Pg	13 21 43.2	-0.1
ECPR				IAML		13 21 53.2	
	comp=N,5µm,0.3s						
ECPR				IAML		13 21 53.8	
	comp=N,6µm,0.2s						
ECPR	Experimental S	0.51	44	⇓iP	Pg	13 21 43.3	-0.1
ECPR				eS	Sg	13 21 50.5	+0.4
EMPR	Esperanza - Ma	0.56	20		Pg	13 21 44.5	+0.3
EMPR					Sb	13 21 52.5	-0.2
EMPR	Esperanza - Ma	0.56	20	⇑iP	Pg	13 21 44.5	+0.3
EMPR				eS	Sb	13 21 52.5	-0.2
SJG	San Juan	0.58	74		Pg	13 21 44.7	+0.1
SJG				IAML		13 21 56.4	
	comp=N,2µm,0.8s						
SJG	San Juan	0.58	74	⇓iP	Pg	13 21 44.7	+0.1
SJG				eS	Sb	13 21 53.9	+0.5
SJG	San Juan	0.58	74	i P	Pg	13 21 44.7	+0.1
SJG				eS	Sb	13 21 52.9	-0.5
SJG				IAML		13 21 54.5	
	comp=Z,16µm,0.1s						
AGPR	Aguadilla, PR	0.62	325		Pg	13 21 45.5	0.0
AGPR				IAML		13 22 00.2	
	comp=Z,3µm,0.8s						
AGPR				IAML		13 22 00.8	
	comp=Z,3µm,0.8s						
AGPR	Aguadilla, PR	0.62	325	⇑iP	Pg	13 21 45.3	-0.2
AGPR				⇑iS	Sg	13 21 53.3	-0.5
AGPR				IAML		13 21 58.2	
	comp=N,3µm,1.1s						
AGPR	Aguadilla, PR	0.62	325	⇑iP	Pg	13 21 45.3	-0.2
AGPR				eS	Sg	13 21 53.9	+0.1
AGPR	Aguadilla, PR	0.62	325	i P	Pg	13 21 45.3	-0.2
AGPR				eS	Sg	13 21 53.7	-0.1
AGPR				IAML		13 21 58.1	
	comp=Z,2µm,0.5s						
PDPR	Patillas Dam,	0.68	84		Pg	13 21 46.5	0.0
GCPR	Guaynabo City	0.71	60		Pg	13 21 46.8	-0.4
GCPR				IAML		13 21 57.0	
	comp=N,1µm,0.5s						
GCPR	Guaynabo City	0.71	60		Sg	13 21 56.7	+0.1
GCPR	Guaynabo City	0.71	60	⇑iP	Pg	13 21 47.0	-0.2
GCPR				eS	Sg	13 21 56.7	+0.1
IDE	Isla Desecheo	0.82	302		Pg	13 21 48.7	-0.6
IDE					Sb	13 22 01.1	+0.6
IDE	Isla Desecheo	0.82	302	⇑iP	Pg	13 21 48.7	-0.6
IDE				eS	Sb	13 22 01.1	+0.6
HUMP	Col San Antoni	0.86	77		Pg	13 21 49.2	-0.7
HUMP				IAML		13 22 03.9	
	comp=N,716nm,0.3s						
HUMP	Col San Antoni	0.86	77		Sg	13 22 01.4	+0.1
HUMP	Col San Antoni	0.86	77	⇓iP	Pg	13 21 49.3	-0.7
HUMP				eS	Sg	13 22 01.4	+0.1
CUPR	Culebra, Puert	1.43	75		Pn	13 21 58.9	+0.1
CUPR					Pb	13 21 59.2	-0.5
PCDR	Punta Cana, DR	1.66	290	⇓iP	Pb	13 22 03.6	-0.1
PCDR				⇑iS	Sg	13 22 26.0	-0.8
PCDR				IAML		13 22 36.7	
	comp=N,229nm,0.7s						
PCDR				IAML		13 22 36.8	
	comp=N,252nm,0.6s						
HIDR	Higuey Centro	1.99	289	⇑iP	Pb	13 22 08.1	-1.2
HIDR				⇑iS	Sb	13 22 33.8	-0.3
HIDR				IAML		13 22 43.9	
	comp=N,168nm,0.2s						
MIDR	Miches	2.42	295	⇑iP	Pn	13 22 13.8	+1.2
MIDR				i S	Sb	13 22 45.2	-1.4
MIDR				IAML		13 22 53.1	
	comp=N,59nm,1.1s						
MIDR				IAML		13 23 00.7	
	comp=N,81nm,0.5s						
DR12	Loma Pena Alta	2.65	289	Pn	Pb	13 22 18.5	-2.1
HATOM	Hato Mayor del	2.65	289	i P	Pb	13 22 19.2	-1.4
HATOM				⇑iS	Sn	13 22 49.6	+1.9
HATOM				IAML		13 23 02.3	
	comp=N,88nm,1.1s						
SABA	Saba	3.34	95	Pn	Pn	13 22 25.9	+0.6

UCR 01 13:24:07.6±0.7, 10.38N×84.58W, h91km±2km, MW3.7, Presumed earthquake
UPA 01 13:24:09.7±1.0, 10.54N×84.16W, h10km±64km, MW3.1, Presumed earthquake
ISC 01 13:24:08.0±1.6, 10.31N±0.07×84.59W±0.04, h93km±8km, n64, σ0.68/85, 2C, Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FORC	Fortuna	0.18	333	eP	Pn	13 24 21.2	-0.1
FORC				eS	Sn	13 24 31.1	-0.1
VACR	Volcan Arenal	0.18	331	eP	Pn	13 24 21.2	-0.2
ARE1	Arenal 1	0.20	319	eP	Pn	13 24 21.4	0.0
VARE2	V. Arenal	0.20	319	eP	Pn	13 24 21.4	-0.1
CEDE	Laguna Cedeo	0.21	327	eP	Pn	13 24 21.4	-0.2
MTEVE	Monteverde	0.24	272	eP	Pn	13 24 21.6	-0.1
MTEVE				eS	Sn	13 24 32.2	+0.3
REZ	Monterrey de S	0.24	333	eP	Pn	13 24 21.6	-0.1
SRA1	San Ramn	0.25	155	eP	Pn	13 24 21.3	-0.4
SRA1				eS	Sn	13 24 32.0	+0.1
RAMO	San Ramon	0.25	152	eP	Pn	13 24 21.2	-0.5
RAMO				eS	Sn	13 24 32.1	+0.2
TABAC	Tabacon	0.26	317	eP	Pn	13 24 21.6	-0.1
PALD	Palmares	0.29	149	eP	Pn	13 24 21.5	-0.5
PALD				eS	Sn	13 24 32.3	0.0
JTS	Las Juntas de	0.36	267	eP	Pn	13 24 21.7	-0.4
JTS				eS	Sn	13 24 32.5	-0.2
VPS8	V Poas	0.36	111	eP	Pn	13 24 22.6	0.0
JUNT	Juntas	0.37	266	eP	Pn	13 24 21.7	-0.4
JUNT				eS	Sn	13 24 32.6	-0.1
ARTO	Ro Cuarto	0.37	85	eP	Pn	13 24 22.0	-0.2
ARTO				eS	Sn	13 24 32.6	-0.1
ATEO	Atenas	0.39	148	eP	Pn	13 24 22.2	-0.2
ATEO				eS	Sn	13 24 33.3	+0.2
TILA	Tilaran	0.41	293	eP	Pn	13 24 22.3	-0.2
TILA				eS	Sn	13 24 33.7	+0.5
QUEB	Quebradon, Cot	0.43	316	eP	Pn	13 24 22.3	-0.4
INVE	Universidad In	0.50	290	eP	Pn	13 24 23.0	-0.1
INVE				eS	Sn	13 24 34.7	+0.4
TIMP	Tierras Morena	0.50	303	eP	Pn	13 24 22.9	-0.3
BELE	Belen	0.51	130	eP	Pn	13 24 23.2	-0.1
BELE				eS	Sn	13 24 34.9	+0.2
TENO	El Achiote	0.55	316	eP	Pn	13 24 23.5	0.0
ACOS	Acosta	0.66	141	eP	Pn	13 24 24.6	0.0
ACOS				eS	Sn	13 24 37.4	+0.5
CUI	Cuipilapa	0.66	301	eP	Pn	13 24 24.4	-0.2
CUI				eS	Sn	13 24 37.3	+0.4
HORNC	Hornillas	0.71	305	eP	Pn	13 24 24.7	-0.3
TRIO	Tres Rios	0.71	124	eP	Pn	13 24 25.1	0.0
TRIO				eS	Sn	13 24 38.3	+0.5
NYURE	Nandayure	0.72	245	eP	Pn	13 24 24.9	-0.1
NYURE				eS	Sn	13 24 37.5	-0.3
MESS	Mesas	0.73	306	eP	Pn	13 24 25.1	-0.2
ELVJ	El Viejo (Barb	0.74	281	eP	Pn	13 24 26.3	+1.2
PLVR	Palo Verde	0.75	273	eP	Pn	13 24 25.4	-0.1
PLVR				eS	Sn	13 24 38.8	+0.2
PICV	PH. Pirrs	0.78	150	eP	Pn	13 24 25.9	+0.2
VICA	Volcano Irazu	0.80	114	eP	Pn	13 24 26.1	-0.2
CVTG	V. Turrialba,	0.82	101	eP	Pn	13 24 26.0	0.0
CVTG				eS	Sn	13 24 40.0	+0.5
REPA	Paraso	0.85	124	eP	Pn	13 24 26.7	+0.2
CVTQ	Turrialba Volc	0.86	110	eP	Pn	13 24 26.8	0.0
CVTQ				eS	Sn	13 24 41.4	+0.5
CVTR	Volcan Turrial	0.86	109	eP	Pn	13 24 26.7	-0.2
VTR0	Volcan Turrial	0.86	110	eP	Pn	13 24 26.6	-0.3
GPS2	Hotel Rincn d	0.87	300	eP	Pn	13 24 26.2	-0.4
CMARA	Lajas Hojancha	0.87	251	eP	Pn	13 24 26.4	-0.2
TRT2	Tortugero	0.87	74	eP	Pn	13 24 26.1	-0.4
CVTV	Tajo	0.88	110	eP	Pn	13 24 27.0	+0.1
GPS3	Bodega del ICE	0.88	300	eP	Pn	13 24 26.5	-0.2
VRLE	La Escondida,	0.90	302	eP	Pn	13 24 26.8	-0.2
VTCV	VTCV, Calle Va	0.91	111	eP	Pn	13 24 27.2	+0.1
ABRB	Las Abras (San	0.91	109	eP	Pn	13 24 27.2	+0.1
PIEC	Cerro El Cedra	0.92	138	eP	Pn	13 24 27.3	-0.1
JUD3	Juan Diaz 3	0.95	261	eP	Pn	13 24 27.2	-0.2
LAPC	Finca la Perla	0.95	299	eP	Pn	13 24 26.9	-0.4
VERB	Verbena	0.95	112	eP	Pn	13 24 27.9	+0.3
RESJ	San Isidro (Tu	0.97	107	eP	Pn	13 24 27.9	+0.2
ALIBA	Liberia Airpor	0.98	287	eP	Pn	13 24 27.9	+0.2
LCOCO	El Coco	1.04	102	eP	Pn	13 24 28.4	0.0
BUS1	Rivas	1.12	132	eP	Pn	13 24 29.7	0.0
SAJE	San Jernim	1.43	132	eP	Pn	13 24 33.2	0.0
EDPE	Pejibaye, P	1.52	139	eP	Pn	13 24 34.4	+0.2
LAES	El Progreso Va	1.61	110	eP	Pn	13 24 35.5	+0.2
DRK0	Durika	1.68	128	eP	Pn	13 24 35.5	-1.0
BRU2	Volcan	2.40	129	eP	Pn	13 24 47.3	+1.5
BRU2				eS	Sn	13 25 15.0	+0.3
CLLRA	Cordillera,	2.49	128	eP	Pn	13 24 47.7	+0.7
CLLRA				eS	Sn	13 25 17.1	+0.3
JEFFS	S de V. Baru	2.60	129	eP	Pn	13 24 48.9	+0.5
JEFFS				eS	Sn	13 25 14.4	-4.9
BQTLY	Boquete Panama	2.60	126	eP	Pn	13 24 49.3	+0.8
DAP26	falda E V. Bar	2.62	125	⇑iP	Pn	13 24 50.0	+1.3
DVD	David	2.81	131	eP	Pn	13 25 09.1	+18
KKNTU	Kakintº	3.11	118	⇑iP	Pn	13 24 55.3	+0.2

DJA 01 13:26:29.8±0.3, 0°S±3°×12°4E±°, h61km±21km, M3.9/12, mB4.7/1, mb4.1/3, MLv3.8/12, Mw(mB)3.9/1, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.61	241	P	Pn	13 26 56.3	+0.3
LUWI				S	Sn	13 27 17.2	+1.3
MRSI	Marisa	2.35	288	P	Pn	13 27 04.8	-1.3
SANI	Sanana	2.54	135	P	Pn	13 27 07.7	-1.0
SANI				S	Sn	13 27 37.5	-1.0
APSI	Ampana	2.62	255	P	Pn	13 27 09.8	+0.1
NLAI	Namlea	4.16	136	P	Pn	13 27 32.0	+1.1
NLAI				S	Sn	13 28 18.8	+0.5
MPSI	Mapaga	4.32	278	P	Pn	13 27 34.7	+1.7
TTSI	Tana Toraja	5.17	237	P	Pn	13 27 44.4	-0.2
	0.1nm19nm,0.6s						
SPSI	Sidrap Palu	5.75	230	P	Pn	13 27 53.2	+0.6
	0.1nm678nm11nm,1.1s						
SOEI	Soe	9.44	179	P	Pn	13 28 43.4	+0.1

*RSPR **01** 13:38:01.6, 17°.88N×66°.86W, h13km, MD3.0/8*
*SDD **01** 13:38:02.9±2.1, 17°.93N×66°.83W, h0km±9km, MD3.3, ML2.9, MW2.9, Presumed earthquake*
NEIC 01 13:38:01.1±1.0**, 17°.84N**±0°.03×**66°.85W**±0°.01**, h10**km±1km**, ML3.2**/35**, Md3.0**/8(RSPR)**, 14C-6D, Error ellipse: s-maj=5.5km s-min=2.6km az=5.0, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.14**	**350**		Pg	13 38 04.6	+0.4
GBPR					Sg	13 38 07.0	+0.6
GBPR	**Guanica, Bosqu**	**0.14**	**350**	⇑iP	Pg	13 38 04.6	+0.4
GBPR				eS	Sg	13 38 07.0	+0.6
MLPR	**Magueyes Islan**	**0.22**	**305**		Pg	13 38 06.0	+0.3
MLPR				Sg	Sg	13 38 09.3	+0.6
MLPR				IAML		13 38 09.9	
	8μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.29**	**304**		Pg	13 38 07.1	+0.1
CRPR	**Cabo Rojo, PR**	**0.29**	**304**	IAML		13 38 11.5	
	4μm,0.2s						
CRPR				IAML		13 38 11.7	
	7μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**304**	⇑iP	Pg	13 38 07.2	+0.2
CRPR				⇑iS	Sg	13 38 11.0	0.0
CRPR				IAML		13 38 11.3	
	comp=N,5μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**304**	⇓iP	Pg	13 38 07.2	+0.2
CRPR				eS	Sg	13 38 11.3	+0.3
OBIP	**Obispado Ponce**	**0.31**	**49**		Pg	13 38 07.4	+0.1
OBIP	**Obispado Ponce**	**0.31**	**49**	⇓iP	Pg	13 38 07.3	+0.1
OBIP				eS	Sg	13 38 12.0	+0.5
CELP	**Cerrillos**	**0.35**	**48**		Pg	13 38 08.0	0.0
LSP	**Las Mesas**	**0.40**	**326**		Pg	13 38 08.7	-0.3
LSP					Sg	13 38 14.4	+0.1
LSP	**Las Mesas**	**0.40**	**326**	⇓iP	Pg	13 38 08.7	-0.3
LSP				eS	Sg	13 38 14.4	+0.1
UUPR	**Utuado, UPR, P**	**0.43**	**17**		Pg	13 38 08.8	-0.7
PRSN	**Puerto Rico Se**	**0.47**	**324**		Pg	13 38 09.8	-0.4
PRSN	**Puerto Rico Se**	**0.47**	**324**		Sg	13 38 16.1	-0.3
PRSN	**Puerto Rico Se**	**0.47**	**324**	⇑iP	Pg	13 38 09.7	-0.5
PRSN				⇑iS	Sg	13 38 14.1	-2.3
PRSN				IAML		13 38 18.1	
	comp=N,4μm,0.2s						
PRSN	**Puerto Rico Se**	**0.47**	**324**	⇑iP	Pg	13 38 09.7	-0.5
PRSN				eS	Sg	13 38 16.1	-0.3
ECPR	**Experimental S**	**0.67**	**44**		Pg	13 38 13.1	-0.9
ECPR				IAML		13 38 23.9	
	comp=N,694nm,0.2s						
ECPR				IAML		13 38 27.5	
	comp=N,662nm,0.2s						
ECPR	**Experimental S**	**0.67**	**44**	⇓eP	Pg	13 38 13.2	-0.8
ECPR				eS	Sg	13 38 22.6	-0.2
AGPR	**Aguadilla, PR**	**0.67**	**339**		Pg	13 38 13.0	-1.1
AGPR				IAML		13 38 24.8	
	comp=N,741nm,0.6s						
AGPR				IAML		13 38 25.8	
	comp=N,936nm,0.3s						
AGPR	**Aguadilla, PR**	**0.67**	**339**	⇓iP	Pg	13 38 13.1	-0.9
AGPR				⇓iS	Sg	13 38 21.8	-1.1
AGPR				IAML		13 38 27.0	
	comp=N,937nm,0.7s						
AGPR	**Aguadilla, PR**	**0.67**	**339**	⇑iP	Pg	13 38 13.0	-1.1
AGPR				eS	Sg	13 38 21.6	-1.3
EMPR	**Esperanza - Ma**	**0.70**	**26**		Pg	13 38 13.9	-0.7
EMPR					Sg	13 38 23.3	-0.6
EMPR	**Esperanza - Ma**	**0.70**	**26**	⇑iP	Pg	13 38 13.9	-0.7
EMPR				eS	Sg	13 38 23.3	-0.6
SJG	**San Juan**	**0.72**	**68**		Pg	13 38 14.7	-0.4
SJG				IAML		13 38 27.4	
	comp=N,630nm,0.6s						
SJG				IAML		13 38 27.6	
	comp=N,1μm,0.4s						
SJG	**San Juan**	**0.72**	**68**	⇑eP	Pg	13 38 14.6	-0.4
SJG				eS	Sg	13 38 24.3	-0.1
IDE	**Isla Desecheo**	**0.80**	**313**		Pg	13 38 15.4	-1.2
IDE					Sg	13 38 25.7	-1.3
IDE	**Isla Desecheo**	**0.80**	**313**	⇑eP	Pg	13 38 15.4	-1.2
IDE				eS	Sg	13 38 25.7	-1.3
PDPR	**Patillas Dam,**	**0.81**	**77**		Pg	13 38 16.7	0.0
PDPR				IAML		13 38 31.0	
	comp=N,584nm,0.6s						
GCPR	**Guaynabo City**	**0.87**	**57**		Pg	13 38 17.4	-0.4
GCPR	**Guaynabo City**	**0.87**	**57**		Sg	13 38 29.3	+0.2
GCPR	**Guaynabo City**	**0.87**	**57**	⇑eP	Pg	13 38 16.7	-1.1
GCPR				eS	Sg	13 38 29.3	+0.2
HUMP	**Col San Antoni**	**1.00**	**72**		Pb	13 38 20.5	0.0
HUMP				IAML		13 38 35.4	
	comp=N,523nm,0.3s						
HUMP				IAML		13 38 35.5	
	comp=N,543nm,0.3s						
HUMP	**Col San Antoni**	**1.00**	**72**		Sg	13 38 32.9	-0.5
HUMP	**Col San Antoni**	**1.00**	**72**	⇑eP	Pg	13 38 19.4	-1.0
HUMP				eS	Sg	13 38 32.9	-0.5
CUPR	**Culebra, Puert**	**1.56**	**72**		Pn	13 38 28.9	0.0
PCDR	**Punta Cana, DR**	**1.60**	**295**	⇑iP	Pn	13 38 29.3	-0.1
PCDR				⇑iS	Sb	13 38 50.8	-0.2
PCDR				IAML		13 38 56.9	
	comp=N,109nm,0.5s						
PCDR				IAML		13 39 11.2	
	comp=N,154nm,2.9s						
HIDR	**Higuey Centro**	**1.92**	**293**	i P	Pn	13 38 34.0	+0.1
HIDR				⇑iS	Sn	13 38 58.3	+0.2
HIDR				IAML		13 39 04.8	
	comp=N,101nm,0.2s						
MIDR	**Miches**	**2.38**	**299**	⇑iP	Pb	13 38 43.2	-0.8
MIDR				⇑iS	Sn	13 39 09.2	-0.1
MIDR				IAML		13 39 17.9	
	comp=N,40nm,0.7s						
MIDR				IAML		13 39 20.1	
	comp=N,40nm,0.3s						
DR12	**Loma Pena Alta**	**2.58**	**292**		Pn	13 38 43.4	+0.4
HATOM	**Hato Mayor del**	**2.58**	**292**	⇑iP	Pn	13 38 43.9	+0.9
HATOM				i S	Sn	13 39 13.8	-0.7
HATOM				IAML		13 39 25.4	
	comp=N,42nm,0.8s						
SABA	**Saba**	**3.45**	**93**		Pn	13 38 54.8	-0.1

KRSC 01 13:58:36.0±1.2**, 49°.92N**×**157°.01E, h60**km±26km**, Ml3.5, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.96**	**324**	eP	Pn	13 58 54.0	+0.6
SKR				eS	Sn	13 59 06.2	-0.1
PAU	**Pauzhetka**	**1.56**	**355**	eP	Pn	13 59 03.3	+1.9
PAU				eS	Sn	13 59 22.7	+2.1
KDTR	**Khodutka, Kamc**	**2.01**	**19**	eP	Pn	13 59 10.1	+2.6
KDTR				eS	Sn	13 59 34.3	+2.7
MTVR	**Mutnovka**	**2.67**	**16**	eP	Pn	13 59 19.5	+2.7
MTVR				eS	Sn	13 59 51.4	+3.4
GRL	**Gorelyy**	**2.72**	**14**	eP	Pn	13 59 20.5	+3.1
GRL				eS	Sn	13 59 52.6	+3.4
KRMR	**Karymshinskiy**	**3.00**	**13**	eS	Sn	14 00 00.8	+5.0
PET	**Petropavlovsk**	**3.28**	**18**	eS	Sn	14 00 06.0	+3.5
DALK	**Dalny**	**3.31**	**19**	eP	Pn	13 59 27.8	+2.6
DALK				eS	Sn	14 00 06.1	+2.9
UGLR	**Uglovaya**	**3.49**	**18**	eP	Pn	13 59 30.8	+3.0
AVH	**Avacha**	**3.52**	**17**	eP	Pn	13 59 31.5	+3.2
KOK	**Koryaka**	**3.53**	**16**	eP	Pn	13 59 31.4	+3.0
SDLR	**Sedlovina**	**3.56**	**18**	eP	Pn	13 59 31.2	+2.3
KRX	**Arik**	**3.60**	**16**	eP	Pn	13 59 32.5	+3.2

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*DJA **01** 14:01:18.6±0.3, 8°S±7°×11°8E±°, h195km±4km, M4.0/19, mb4.0/7, MLv4.1/19*
*IDC **01** 14:01:19.9±5.5, 7°.74S×118°.50E, h212km±51km, mb2.8/2, mbtmp3.7/5, Error ellipse: s-maj=91.7km s-min=24.8km az=58.0*
ISC 01 14:01:18.3±0.9**, 8°.22S**±0°.09×**118°.10E**±0°.05**, h202**km±8km**, n26, σ1s.13**/34**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	**Kabupaten Domp**	**0.36**	**143**	P	**Pn**	**14 01 45.7**	**+0.4**
DBNI				S	**S**	**14 02 06.8**	**+0.5**
PLAI	**Plampang**	**0.69**	**207**	P	**Pn**	**14 01 46.7**	**+0.2**
PLAI				S	**S**	**14 02 08.3**	**-0.1**
TWSI	**Taliwang, Sumb**	**1.31**	**247**	P	**Pn**	**14 01 50.1**	**-0.5**
TWSI				S	**S**	**14 02 15.6**	**+0.3**
WBSI	**Waikabubak, Su**	**1.91**	**138**	P	**Pn**	**14 01 56.1**	**-0.1**
WBSI				S	**S**	**14 02 26.2**	**+1.1**
KHKI	**Kahang-Kahang**	**2.47**	**266**	P	**Pn**	**14 02 02.5**	**+0.5**
WSI	**Waingapu**	**2.61**	**124**	P	**Pn**	**14 02 03.4**	**-0.2**
DNP	**Denpasar**	**2.89**	**261**	P	**Pn**	**14 02 06.7**	**-0.1**
IGBI	**Denpasar**	**2.98**	**258**	P	**Pn**	**14 02 08.0**	**+0.2**
IGBI				S	**S**	**14 02 46.5**	**+0.6**
RTBI	**Rangdo, Negare**	**3.13**	**265**	P	**Pn**	**14 02 10.3**	**+0.6**
BSSI	**Bau Bau, Buton**	**3.14**	**49**	P	**Pn**	**14 02 10.2**	**+0.4**
BASI	**Baing, Sumba**	**3.16**	**129**	P	**Pn**	**14 02 10.3**	**+0.3**
EDFI	**Ende, Flores**	**3.59**	**99**	P	**Pn**	**14 02 14.8**	**-0.6**
EDFI				S	**S**	**14 02 58.7**	**-0.7**
JAGI	**Jajag, Banyuwa**	**3.91**	**266**	P	**Pn**	**14 02 18.6**	**-0.5**
JAGI				S	**S**	**14 03 04.9**	**-1.3**
MMRI	**Maumere**	**4.12**	**96**	P	**Pn**	**14 02 22.2**	**+0.5**
GMJI	**Gumukmas**	**4.60**	**269**	P	**Pn**	**14 02 26.5**	**-1.3**
BATI	**Baumata**	**5.84**	**110**	P	**Pn**	**14 02 44.0**	**+0.3**
	12nm,0.4s,baz=68,slow=0.8,SNR=0.9						
BATI				S	**S**	**14 03 48.6**	**-2.2**
	27nm,0.4s,baz=327,slow=22,SNR=8.7						
BATI	**Baumata**	**5.84**	**110**	P	**Pn**	**14 02 43.8**	**+0.1**
SJI	**Sawahan**	**6.29**	**274**	P	Pn	14 02 53.4	+3.9
SOEI	**Soe**	**6.29**	**105**	P	**Pn**	**14 02 50.4**	**+0.9**
	0.2nm24nm,0.8s						
SNJI	**Sawahan-Nganju**	**6.29**	**273**	P	**Pn**	**14 02 50.1**	**+0.5**
	0.2nm15nm,0.4s						
PCJI	**Pacitan**	**6.85**	**270**	P	**Pn**	**14 02 56.8**	**+0.1**
	0.2nm30nm,1.2s						
UGM	**Wanagama**	**7.50**	**272**	P	**Pn**	**14 03 03.9**	**-1.3**
	39nm,2.2s						
FITZ	**Fitzroy Crossi**	**12.26**	**144**	P	**Pn**	**14 04 09.4**	**+2.9**
	0.9nm,0.3s,baz=345,slow=12,SNR=8.9						
FITZ				S	**S**	**14 06 20.1**	**-3.1**
	2.0nm,0.5s,baz=186,slow=18,SNR=8.2						
WRA	**Warramunga Arr**	**19.58**	**128**	P	**P**	**14 05 32.5**	**+1.2**
	1.2nm,0.3s,baz=301,slow=12,SNR=44						
ASAR	**Alice Springs**	**21.58**	**137**	P	**P**	**14 05 53.7**	**+1.4**
	1.1nm,0.5s,baz=315,slow=9.1,SNR=33						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**63.36**	**333**	P	**P**	**14 11 24.9**	**-1.1**
	0.1nm,0.4s,baz=145,slow=6.0,SNR=1.4						
	0.1nm,0.4s						

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*IDC **01** 14:02:55.1±0.9, 16°.05S×173°.89W, h0km, mb4.1/8, mbtmp4.2/10, ML3.6/2, MS2.9/1, Error ellipse: s-maj=46.9km s-min=17.6km az=151.0*
ISC 01 14:03:05.8±0.7**, 16°.7S**±0°.2×**173°.55W**±0°.09**, h100**km**, n20, σ1s.09**/14**, mb4.1**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**13.77**	**111**	Pn	**P**	**14 06 21.4**	**-0.6**
	1.5nm,0.3s,baz=246,slow=10,SNR=3.9						
RAR				Sn	**Sn**	**14 08 47.9**	**-0.6**
	0.4nm,0.3s,baz=109,slow=15,SNR=2.3						
	26nm,0.9s						
DZM	**Mont Dzumac**	**19.61**	**251**	P	**P**	**14 07 26.1**	**-0.3**
	0.3nm,0.3s,baz=76,slow=17,SNR=5.1						
	7.2nm,1.0s						
PPT	**Papeete**	**22.92**	**96**	LR	LR	14 15 19.5	
	comp=Z,32nm,21.3s,baz=208,slow=32						
H11S2	**WAKE ISLAND Hy**	**40.02**	**330**	T	T	14 52 06.4	
	baz=146,slow=74						
H11S3	**WAKE ISLAND Hy**	**40.03**	**330**	T	T	14 52 06.4	
	baz=146,slow=74						
H11S1	**WAKE ISLAND Hy**	**40.04**	**330**	T	T	14 52 06.4	
	baz=146						
H11N3	**WAKE ISLAND Hy**	**40.98**	**331**	T	T	14 53 16.4	
	baz=146						
H11N1	**WAKE ISLAND Hy**	**40.99**	**331**	T	T	14 53 14.7	
	baz=146						
H11N2	**WAKE ISLAND Hy**	**41.00**	**331**	T	T	14 53 19.8	
	baz=146						
STKA	**Stephens Creek**	**43.27**	**241**	P	**P**	**14 10 58.4**	**+0.7**
	2.5nm,0.5s,baz=69,slow=8.7,SNR=7.0						
	2.5nm,0.5s						
WRA	**Warramunga Arr**	**49.42**	**258**	P	**P**	**14 11 46.0**	**0.0**
	1.0nm,0.4s,baz=97,slow=6.0,SNR=18						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**49.58**	**253**	P	**P**	**14 11 46.5**	**-0.7**
	4.6nm,0.7s,baz=90,slow=7.7,SNR=53						
	4.6nm,0.7s						
PETK	**Petropavlovsk-**	**73.83**	**342**	P	**P**	**14 14 27.5**	**-1.8**
	2.3nm,0.8s,baz=119,slow=7.8,SNR=4.3						
	2.3nm,0.8s						
NVAR	**Mina Array Bea**	**75.40**	**42**	P	**P**	**14 14 39.9**	**+0.9**
	0.7nm,0.7s,baz=230,slow=9.0,SNR=7.3						
	0.7nm,0.7s						
TXAR	**Lajitas Array**	**81.46**	**56**	P	**P**	**14 15 14.4**	**+2.0**
	0.7nm,0.8s,baz=225,slow=7.1,SNR=7.8						
	0.7nm,0.8s						
PDAR	**Pinedale Array**	**83.33**	**42**	P	**P**	**14 15 22.3**	**+0.3**
	1.7nm,0.7s,baz=213,slow=3.0,SNR=18						
	1.7nm,0.7s						
ILAR	**Eielson Array**	**83.75**	**11**	P	**P**	**14 15 22.1**	**-1.2**
	0.4nm,0.5s,baz=230,slow=4.0,SNR=2.8						
	0.4nm,0.5s						
ARCES	**ARCESS Array B**	**125.88**	**352**	PKP	**PKPdf**	**14 21 55.6**	**+0.2**
	14nm,1.2s,baz=343,slow=1.9,SNR=4.2						
FINES	**FINESS Array B**	**133.19**	**347**	PKP	**PKPdf**	**14 22 10.3**	**+0.8**
	5.2nm,1.1s,baz=9.9,slow=3.2,SNR=4.6						
BRTR	**Keskin Array B**	**147.07**	**320**	PKPbc	**PKPab**	**14 22 40.1**	**+0.8**
	1.0nm,0.5s,baz=45,slow=2.9,SNR=6.9						

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*IDC **01** 14:04:54.7±1.6, 9°.57S×149°.03E, h0km, mb3.7/5, mbtmp3.7/6, ML2.7/1, MS2.5/1, Error ellipse: s-maj=41.4km s-min=26.1km az=149.0*
ISC 01 14:04:57.8±1.2**, 9°.7S**±0°.2×**149°.0E**±0°.1**, h22**km**, n9, σ0s.89**/9**, mb4.0**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**1.82**	**278**	Pn	**Pn**	**14 05 27.2**	**-0.7**
	53nm,0.3s,baz=79,slow=14,SNR=113						
PMG				LR	LR	14 05 50.7	
	comp=Z,56nm,18.9s,baz=346,slow=30						
PMG				Sn	**Sb**	**14 05 52.8**	**-0.1**
	75nm,0.3s,baz=179,slow=21,SNR=15						
CTA	**Charters Tower**	**10.69**	**194**	LR	LR	14 11 15.8	
	comp=Z,27nm,19.5s,baz=188,slow=35						
WRA	**Warramunga Arr**	**17.44**	**233**	P	**P**	**14 09 00.7**	**-0.4**
	baz=56,slow=11,SNR=1.9						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**20.03**	**224**	P	**Pn**	**14 09 31.6**	**+0.3**
	1.9nm,0.7s,baz=60,slow=10.0,SNR=22						
	1.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.14**	**247**	P	**P**	**14 10 12.1**	**-0.4**
	3.6nm,0.6s,baz=79,slow=8.7,SNR=6.1						
	3.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**56.74**	**300**	P	**P**	**14 14 41.6**	**+1.1**
	0.7nm,0.4s,baz=112,slow=6.0,SNR=5.0						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**81.56**	**320**	P	**P**	**14 17 14.7**	**+0.8**
	0.2nm,0.6s,baz=99,slow=4.5,SNR=2.3						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**88.08**	**23**	P	**P**	**14 17 45.0**	**-1.3**
	0.6nm,1.0s,baz=232,slow=6.7,SNR=2.4						
	0.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**147.77**	**279**	PKPbc	**PKPbc**	**14 24 42.6**	**+0.6**
	3.7nm,1.3s,baz=24,slow=0.5,SNR=4.3						

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*IDC **01** 14:10:54.3±1.8, 63°.20N×150°.82W, h130km±20km, mb3.5/5, mbtmp3.7/9, Error ellipse: s-maj=35.2km s-min=17.5km az=115.0*
*AEIC **01** 14:10:55.4±0.7, 63°.19N±0°.04×150°.71W±0°.03, h133km±5km, Error ellipse: s-maj=5.6km s-min=1.2km az=195.0*
*NEIC **01** 14:10:55.2±0.6, 63°.21N±0°.04×150°.76W±0°.09, h137km±3km, ML3.4/244, ML3.2(AEIC), Error ellipse: s-maj=5.9km s-min=5.7km az=111.0*
ISC 01 14:10:54.8±0.8**, 63°.19N**±0°.03×**150°.76W**±0°.03**, h140**km±6km**, n245, σ0s.67**/215**, mb3.9**/5**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.34**	**39**		**Pn**	**14 11 14.6**	**0.0**
TRF				IAML		14 11 29.7	
	comp=E,732nm,0.8s						
TRF				IAML		14 11 31.4	
	comp=N,900nm,0.3s						
TRF	**Thorofare Moun**	**0.34**	**39**		**Sn**	**14 11 29.0**	**-0.6**
KTH	**Kantishna Hill**	**0.38**	**349**		**Pn**	**14 11 14.6**	**0.0**
KTH				Sn	**Sn**	**14 11 28.3**	**-1.3**
KTH				IAML		14 11 29.2	
	comp=E,652nm,0.7s						
KTH				IAML		14 11 29.4	
	comp=N,810nm,1.1s						
L22K	**Petersville**	**0.66**	**180**		**Pn**	**14 11 16.2**	**+0.1**
L22K				Sn	**Sn**	**14 11 31.9**	**-0.4**
PPLA	**Purkeypile**	**0.71**	**247**		**Pn**	**14 11 16.8**	**+0.3**
PPLA				IAML		14 11 33.2	
	comp=E,304nm,0.9s						
PPLA				IAML		14 11 33.3	
	comp=N,539nm,1.1s						
PPLA	**Purkeypile**	**0.71**	**247**		**Sn**	**14 11 32.7**	**-0.3**
CUT	**Chulitna**	**0.82**	**164**		**Pn**	**14 11 17.4**	**+0.2**
CUT	**Chulitna**	**0.82**	**164**		**Sn**	**14 11 34.4**	**+0.4**
RND	**Reindeer**	**0.89**	**75**		**Pn**	**14 11 17.8**	**0.0**
RND				IAML		14 11 35.8	
	comp=E,579nm,0.4s						
RND				IAML		14 11 36.0	
	comp=N,492nm,0.7s						
RND	**Reindeer**	**0.89**	**75**		**Sn**	**14 11 34.9**	**-0.4**
BPAW	**Bear Paw Mtn.**	**0.92**	**354**		**Pn**	**14 11 17.8**	**-0.2**
BPAW				IAML		14 11 34.5	
	comp=E,210nm,0.3s						
BPAW				IAML		14 11 34.6	
	comp=N,456nm,0.7s						
BPAW	**Bear Paw Mtn.**	**0.92**	**354**		**Sn**	**14 11 34.2**	**-1.5**
WAT7	**Susitna Watana**	**0.94**	**111**		**Pn**	**14 11 18.2**	**-0.1**
WAT7					**Sn**	**14 11 35.4**	**-0.7**
CHUM	**Lake Minchumin**	**0.99**	**316**		**Pn**	**14 11 18.7**	**+0.2**
CHUM					**Sn**	**14 11 35.5**	**-1.1**
MCK	**McKinley**	**0.99**	**55**		**Pn**	**14 11 18.6**	**+0.1**
MCK				IAML		14 11 37.9	
	comp=N,235nm,0.5s						
MCK				IAML		14 11 39.5	
	comp=E,272nm,0.5s						
WAT1	**Susitna Watana**	**1.07**	**109**		**Pn**	**14 11 19.5**	**+0.2**
WAT1					**Sn**	**14 11 37.5**	**-0.5**
SKT	**Skwentna**	**1.26**	**197**		**Sn**	**14 11 41.4**	**+0.2**
SKT	**Skwentna**	**1.26**	**197**		**Pn**	**14 11 21.4**	**+0.2**
M22K	**Willow**	**1.47**	**168**		**Pn**	**14 11 23.7**	**+0.4**
K20K	**Telida**	**1.50**	**278**		**Pn**	**14 11 23.8**	**+0.1**
K20K				IAML		14 11 45.2	
	comp=N,258nm,0.5s						
K20K				IAML		14 11 45.3	
	comp=E,354nm,1.0s						
K20K	**Telida**	**1.50**	**278**		**Sn**	**14 11 44.1**	**-1.7**
WAT6	**Susitna Watana**	**1.51**	**112**		**Pn**	**14 11 23.6**	**-0.3**
WAT6					**Sn**	**14 11 45.0**	**-1.2**
DHY	**Denali Highway**	**1.54**	**93**		**Pn**	**14 11 24.4**	**+0.2**
DHY				IAML		14 11 48.1	
	comp=N,550nm,0.6s						
NEA2	**Nenana**	**1.60**	**27**		**Pn**	**14 11 24.3**	**-0.4**
NEA2	**Nenana**	**1.60**	**27**		**Sn**	**14 11 46.1**	**-1.5**
GHO	**Glory Hole Cre**	**1.66**	**148**		**Pn**	**14 11 25.8**	**+0.3**
M20K	**Styx River**	**1.71**	**221**		**Pn**	**14 11 26.0**	**0.0**
M20K	**Styx River**	**1.71**	**221**	IAML		14 11 51.4	
	comp=E,325nm,0.6s						
M20K				IAML		14 11 53.8	
	comp=N,219nm,0.6s						
SUA	**Susitna One**	**1.73**	**180**		**Pn**	**14 11 27.5**	**+1.2**
SUA				IAML		14 11 52.2	
	comp=E,396nm,0.7s						
SUA				IAML		14 11 52.7	
	comp=N,270nm,0.8s						
WRH	**Wood River Hil**	**1.75**	**41**		**Sn**	**14 11 50.0**	**-0.6**
WRH	**Wood River Hil**	**1.75**	**41**		**Pn**	**14 11 26.3**	**-0.1**
PMR	**Palmer**	**1.77**	**154**		**Pn**	**14 11 26.5**	**-0.1**
PMR				IAML		14 11 50.9	
	comp=E,365nm,0.3s						
PMR				IAML		14 11 53.1	
	comp=N,285nm,0.2s						
PMR	**Palmer**	**1.77**	**154**		**Sn**	**14 11 50.3**	**-0.6**
SML	**Sawmill**	**1.79**	**140**		**Sn**	**14 11 51.0**	**-0.4**
SML	**Sawmill**	**1.79**	**140**		**Pn**	**14 11 26.7**	**-0.2**
J20K	**Nowinta River**	**1.81**	**305**		**Pn**	**14 11 27.1**	**+0.1**
J20K				IAML		14 11 50.8	
	comp=E,112nm,0.6s						
J20K				IAML		14 11 51.5	
	comp=N,98nm,0.6s						
J20K	**Nowinta River**	**1.81**	**305**		**Sn**	**14 11 50.3**	**-1.5**
CCB	**Clear Creek Bu**	**1.96**	**40**		**Pn**	**14 11 28.7**	**-0.2**
I23K	**Minto, Yukon-K**	**2.06**	**17**		**Pn**	**14 11 30.1**	**+0.1**
I23K	**Minto, Yukon-K**	**2.06**	**17**		**Sn**	**14 11 55.8**	**-1.3**
I21K	**Tanana**	**2.07**	**346**		**Pn**	**14 11 30.2**	**0.0**
KNK	**Knik Glacier**	**2.08**	**148**		**Pn**	**14 11 30.6**	**+0.2**
KNK				IAML		14 12 05.3	
	comp=N,416nm,0.4s						
HDA	**Harding Lake**	**2.09**	**52**		**Pn**	**14 11 30.1**	**-0.3**
HDA				IAML		14 11 59.2	
	comp=N,169nm,0.4s						
HDA				IAML		14 12 03.6	
	comp=E,105nm,0.5s						
SCM	**Sheep Creek Mo**	**2.09**	**129**		**Pn**	**14 11 30.3**	**-0.2**
SCM				IAML		14 12 05.7	
	comp=E,414nm,0.5s						
MDM	**Murphy Dome**	**2.10**	**31**		**Pn**	**14 11 30.4**	**-0.2**
SPU	**Mount Spurr**	**2.10**	**197**		**Pn**	**14 11 30.8**	**+0.2**
SPCR	**Spurr Chakacha**	**2.10**	**199**		**Pn**	**14 11 31.0**	**+0.3**
COLA	**College**	**2.12**	**36**		**Pn**	**14 11 30.7**	**-0.1**
COLA	**College**	**2.12**	**36**	IAML		14 12 02.5	
	comp=E,99nm,0.6s						
COLA				IAML		14 12 03.3	
	comp=E,124nm,0.6s						
CKL	**Chakachamna La**	**2.13**	**201**		**Pn**	**14 11 31.5**	**+0.4**
L19K	**White Mountain**	**2.14**	**244**		**Pn**	**14 11 31.2**	**+0.2**
L19K	**White Mountain**	**2.14**	**244**	IAML		14 11 58.8	
	comp=E,75nm,1.2s						
L19K				IAML		14 11 59.0	
	comp=N,71nm,1.0s						
RC01	**Rabbit Creek A**	**2.16**	**167**		**Pn**	**14 11 31.4**	**+0.2**
RC01				IAML		14 12 00.4	
	comp=E,345nm,0.2s						
I20K	**Naaghedeneel**	**2.30**	**316**		**Pn**	**14 11 33.0**	**+0.1**
I20K				IAML		14 12 27.7	
	comp=N,236nm,0.8s						
I20K				IAML		14 12 39.8	
	comp=E,167nm,0.7s						
J19K	**Poorman**	**2.32**	**293**		**Pn**	**14 11 33.4**	**+0.3**
J19K				IAML		14 12 03.1	
	comp=E,76nm,0.8s						
J19K				IAML		14 12 03.1	
	comp=N,113nm,0.8s						
K24K	**Donnelly Dome**	**2.32**	**72**		**Pn**	**14 11 33.6**	**+0.4**
K24K				IAML		14 12 06.2	
	comp=E,215nm,0.4s						
K24K				IAML		14 12 07.9	
	comp=N,213nm,0.3s						
IL31		**2.34**	**45**		**Pn**	**14 11 33.1**	**-0.2**
ILAR	**Eielson Array**	**2.34**	**45**	P	**Pn**	**14 11 33.3**	**-0.1**
	comp=N,60nm,0.4s,baz=228,slow=12,SNR=1116						
ILAR				S	**Sn**	**14 12 02.1**	**-0.9**
	comp=N,19nm,0.9s,baz=228,slow=17,SNR=22						
ILAR	**Eielson Array**	**2.34**	**45**		**Pn**	**14 11 33.0**	**-0.4**
PAX	**Paxson**	**2.42**	**93**	IAML		14 12 11.9	
	comp=N,171nm,0.5s						
PAX				IAML		14 12 13.4	
	comp=E,139nm,0.4s						
H21K	**Melozitna Rive**	**2.63**	**341**		**Pn**	**14 11 37.0**	**-0.1**
H21K	**Melozitna Rive**	**2.63**	**341**	IAML		14 12 09.0	
	comp=E,46nm,1.0s						
H21K				IAML		14 12 09.7	
	comp=N,67nm,1.1s						
J18K	**Innoko River**	**2.70**	**279**		**Pn**	**14 11 38.3**	**+0.3**
SLKM	**Skilak Lake**	**2.70**	**174**		**Pn**	**14 11 38.5**	**+0.5**
SLKM				IAML		14 12 13.1	
	comp=E,247nm,0.3s						
RIDG	**Independent Ri**	**2.71**	**76**		**Pn**	**14 11 38.4**	**+0.3**
RIDG				IAML		14 12 17.2	
	comp=N,177nm,0.4s						
RIDG				IAML		14 12 17.2	
	comp=E,249nm,0.6s						
H22K	**Ishtalitna Cre**	**2.73**	**355**		**Pn**	**14 11 38.5**	**+0.2**
DFR	**Drift River**	**2.76**	**200**		**Pn**	**14 11 39.2**	**+0.4**
O22K	**Cooper Landing**	**2.76**	**169**		**Pn**	**14 11 38.9**	**+0.2**
RDJH	**Redoubt Jeurge**	**2.78**	**201**		**Pn**	**14 11 40.0**	**+0.9**
J25K	**Salcha River,**	**2.78**	**57**		**Pn**	**14 11 38.8**	**-0.2**
J25K	**Salcha River,**	**2.78**	**57**	IAML		14 12 14.2	
	comp=E,145nm,0.4s						
J25K				IAML		14 12 17.1	
	comp=N,100nm,0.5s						
KLU	**Klutina**	**2.83**	**125**		**Pn**	**14 11 39.1**	**-0.5**
RDWB	**Redoubt West**	**2.88**	**201**		**Pn**	**14 11 41.0**	**+0.6**
GLI	**Glacier Island**	**2.89**	**142**		**Pn**	**14 11 39.9**	**-0.5**
L18K	**Granite Mounta**	**2.90**	**253**		**Pn**	**14 11 40.9**	**+0.4**
L18K	**Granite Mounta**	**2.90**	**253**	IAML		14 12 14.9	

L18K IAML 14 12 35.1
comp=N,45nm,0.8s
RDSO Redoubt South 2.90 200 Pn 14 11 41.2 +0.6
M18K Stony River 2.91 236 Pn 14 11 40.6 0.0
H20K Anotleneega Mo 2.93 324 Pn 14 11 40.6 -0.2
RED Redoubt Volcan 2.94 200 Pn 14 11 42.1 +1.1
RED IAML 14 12 20.3
comp=E,83nm,0.7s
RED IAML 14 12 22.0
comp=N,62nm,0.8s
H24K Noodor Dome 2.94 24 Pn 14 11 40.9 -0.1
N19K Bonanza Creek 2.96 218 Pn 14 11 42.1 +0.7
N19K IAML 14 12 37.1
comp=E,39nm,0.9s
N19K IAML 14 12 40.3
comp=N,52nm,0.8s
DOT Dot Lake 3.05 78 IAML 14 12 24.9
comp=E,85nm,0.5s
DOT IAML 14 12 27.1
comp=N,76nm,0.5s
IM02 Indian Mountai 3.11 337 Pn 14 11 43.0 -0.2
GCSA Galena City Sc 3.12 303 Pn 14 11 43.3 +0.1
SCRK Sand Creek 3.13 72 IAML 14 12 24.9
comp=N,153nm,0.6s
SCRK IAML 14 12 25.8
comp=E,88nm,0.7s
SEW Seward 3.16 168 Pn 14 11 43.9 +0.1
SEW IAML 14 12 22.1
comp=N,157nm,0.4s
WACK Wrangell Chich 3.21 109 Pn 14 11 44.5 -0.3
MENT Mentasta 3.22 91 Pn 14 11 44.5 0.0
MENT IAML 14 12 34.3
comp=E,111nm,0.4s
MENT IAML 14 12 39.8
comp=N,164nm,0.6s
PRP Porcupine Dome 3.27 42 Pn 14 11 45.2 -0.1
PRP IAML 14 12 24.4
comp=N,48nm,0.6s
PRP IAML 14 12 25.9
comp=E,52nm,0.7s
N25K Chitina, Valde 3.28 116 Pn 14 11 45.6 +0.2
N25K IAML 14 12 26.7
comp=E,80nm,0.6s
N25K IAML 14 12 27.0
comp=N,119nm,0.5s
IVE Iliamna Volcan 3.36 200 Pn 14 11 47.0 +0.5
L26K Log Cabin Wild 3.37 89 Pn 14 11 46.7 +0.1
L26K Log Cabin Wild 3.37 89 IAML 14 12 38.5
comp=N,149nm,0.4s
L26K IAML 14 12 39.5
comp=E,108nm,0.4s
ILS Iliamna Low So 3.42 200 Pn 14 11 47.8 +0.5
BRLK Bradley Lake 3.44 181 Pn 14 11 47.9 +0.5
BRLK Bradley Lake 3.44 181 IAML 14 12 29.2
comp=E,104nm,0.8s
BRLK IAML 14 12 29.6
comp=N,131nm,0.7s
J26L Joseph Creek 3.45 64 IAML 14 12 30.5
comp=N,137nm,0.6s
HIN Hinchinbrook I 3.45 142 Pn 14 11 47.2 -0.4
BRSE Bradley Lake S 3.46 180 Pn 14 11 47.9 +0.2
K17K Iditarod 3.48 266 Pn 14 11 48.3 +0.5
K17K IAML 14 12 29.5
comp=E,57nm,0.8s
K17K IAML 14 12 52.0
comp=N,37nm,0.7s
N18K Kilae Creek 3.49 226 Pn 14 11 48.7 +0.6
N18K IAML 14 12 29.9
comp=E,32nm,1.1s
N18K IAML 14 12 30.3
comp=N,35nm,0.9s
G21K Allakaket 3.54 342 Pn 14 11 49.0 +0.2
G23K Bananza Creek 3.55 5 Pn 14 11 49.0 +0.1
EYAK Cordova Ski Ar 3.56 136 Pn 14 11 48.9 -0.1
EYAK Cordova Ski Ar 3.56 136 IAML 14 12 50.0
comp=E,110nm,0.5s
EYAK IAML 14 12 51.2
comp=N,101nm,1.0s
P23K Montague Islan 3.58 152 Pn 14 11 48.8 -0.5
M17K Holitna River 3.59 243 Pn 14 11 49.5 +0.1
M17K IAML 14 13 02.4
comp=N,49nm,0.9s
M17K IAML 14 13 04.5
comp=E,48nm,0.8s
L17K Donlin 3.63 256 Pn 14 11 50.1 +0.2
BMRM Bremner River 3.65 125 Pn 14 11 49.6 -0.7
CNPM China Poot 3.68 184 Pn 14 11 51.0 +0.4
GLB Gilahina Butte 3.69 115 Pn 14 11 50.8 +0.1
GLB IAML 14 12 34.7
comp=N,114nm,0.7s
GLB IAML 14 12 35.8
comp=E,92nm,0.6s
J17K VABM Dome 3.76 277 Pn 14 11 51.9 +0.3
J17K VABM Dome 3.76 277 IAML 14 13 03.1
comp=E,20nm,1.2s
J17K IAML 14 13 03.3
comp=N,25nm,0.9s
G24K Hadweenzic Riv 3.80 20 Pn 14 11 52.0 0.0
G24K Hadweenzic Riv 3.80 20 IAML 14 12 38.0
comp=N,31nm,0.9s
H18K Honhosa River 3.87 304 Pn 14 11 53.4 +0.4
GOAT Goat Mountain 3.87 130 Pn 14 11 52.9 -0.3
VRDI Verde Repeater 3.95 117 Pn 14 11 54.0 -0.2
VRDI IAML 14 12 58.5
comp=N,65nm,1.1s
VRDI IAML 14 13 03.4
comp=E,54nm,0.8s
G19K Purcell Mounta 4.02 320 Pn 14 11 54.7 -0.3
RAGM Ragged Mountai 4.03 131 Pn 14 11 55.0 -0.2
MCARA McCarthy VSAT 4.04 113 Pn 14 11 55.6 +0.3
N17K Nushagak Hills 4.05 232 Pn 14 11 55.6 +0.3
N17K Nushagak Hills 4.05 232 IAML 14 12 58.0
comp=E,18nm,1.0s
N17K IAML 14 13 07.7
comp=N,20nm,0.7s
L27K Beaver Creek, 4.06 88 Pn 14 11 55.1 -0.4
BC02 Beaver Creek A 4.07 88 Pn 14 11 55.2 -0.5
FYU Fort Yukon 4.13 32 Pn 14 11 56.5 +0.1
FYU Fort Yukon 4.13 32 IAML 14 12 44.8
comp=E,44nm,0.7s
FYU IAML 14 12 45.4
comp=N,43nm,0.7s
M27K Edge Creek, AK 4.17 98 Pn 14 11 57.5 +0.4
M27K Edge Creek, AK 4.17 98 IAML 14 13 09.1
comp=N,23nm,1.2s
M27K IAML 14 13 22.8
comp=E,18nm,0.9s
F21K Alatna River 4.21 345 Pn 14 11 58.1 +0.6
L16K Owhat River 4.31 254 Pn 14 11 59.2 +0.4
G18K Tagagawik 4.36 312 Pn 14 11 59.5 +0.1
BERG Berg Lake 4.37 127 Pn 14 11 59.2 -0.4
P18K Big Mountain, 4.37 211 Pn 14 12 00.1 +0.4
P18K Big Mountain, 4.37 211 IAML 14 12 50.2
comp=E,13nm,0.9s
H17K Granite Mounta 4.39 298 Pn 14 12 00.2 +0.4
H17K Granite Mounta 4.39 298 IAML 14 13 25.0
comp=E,14nm,0.9s
F20K Avaraart Lake 4.41 334 Pn 14 12 00.4 +0.4
M16K Timber Creek 4.42 244 Pn 14 12 00.6 +0.3
M16K Timber Creek 4.42 244 IAML 14 12 51.1
comp=E,18nm,0.8s
M16K IAML 14 12 52.8
comp=N,34nm,0.9s
J16K Anvik River 4.45 276 Pn 14 12 01.1 +0.4
J16K Anvik River 4.45 276 IAML 14 13 24.4
comp=N,12nm,1.2s
KAIM Kayak Island 4.46 134 Pn 14 12 00.1 -0.8
KAIM Kayak Island 4.46 134 IAML 14 13 19.5
comp=N,73nm,1.1s
TGL Tana Glacier 4.47 120 Pn 14 12 00.6 -0.4
Q19K Cape Douglas, 4.50 199 Pn 14 12 01.9 +0.6
I17K Unalakleet 4.50 283 Pn 14 12 02.0 +0.8
KHIT Khitrov Hills 4.50 124 Pn 14 12 00.8 -0.7
BALM Baldy 4.50 115 Pn 14 12 01.1 -0.4
SUCK Suckling Hills 4.57 130 Pn 14 12 01.9 -0.4
O17K Koliganek Bris 4.58 224 Pn 14 12 02.7 +0.4
GRIN Grindle Hills 4.58 126 Pn 14 12 02.2 -0.3
BVCY Beaver Creek 4.61 95 Pn 14 12 02.5 -0.3
WAX Waxell Ridge 4.65 123 Pn 14 12 02.7 -0.7
I27K Kandik River 4.65 55 Pn 14 12 03.1 -0.3
I27K Kandik River 4.65 55 IAML 14 13 13.9
comp=N,22nm,0.9s
I27K IAML 14 13 19.0
comp=E,22nm,0.7s

SYI Shuyak Island 4.66 191 Pn 14 12 03.3 -0.2
SYI Shuyak Island 4.66 191 IAML 14 12 58.0
comp=N,63nm,0.9s
N16K Nishlik Lake 4.67 238 Pn 14 12 03.9 +0.3
F19K Shaleruckik Mo 4.71 324 Pn 14 12 04.0 -0.2
ISLE Juniper Island 4.75 119 Pn 14 12 04.2 -0.6
BARN Barnard Glacie 4.78 112 Pn 14 12 05.4 +0.2
BARN Barnard Glacie 4.78 112 IAML 14 13 25.2
comp=E,40nm,0.7s
BARN IAML 14 13 27.1
comp=N,34nm,0.7s
G26K Porcupine Rive 4.79 35 Pn 14 12 04.7 -0.5
G26K Porcupine Rive 4.79 35 IAML 14 13 02.5
comp=N,34nm,1.1s
G26K IAML 14 13 02.9
comp=E,21nm,1.2s
SNH Sunshine Point 4.83 125 Pn 14 12 05.7 -0.1
G17K Kiwalik Mounta 4.88 303 Pn 14 12 06.7 +0.3
GRNC Granite Creek 4.91 116 Pn 14 12 06.4 -0.6
GRNC Granite Creek 4.91 116 IAML 14 13 28.6
comp=E,30nm,0.8s
GRNC IAML 14 13 30.2
comp=N,48nm,0.8s
F25K Christian Rive 4.92 24 Pn 14 12 06.8 -0.1
BAGL Bagley Icefiel 4.92 119 Pn 14 12 06.5 -0.4
CTGM Chitina Glacie 4.96 112 IAML 14 13 29.3
comp=N,27nm,0.8s
CTGM IAML 14 13 32.0
comp=E,17nm,1.0s
BM03 Burnt Mountain 4.97 29 Pn 14 12 07.6 0.0
E24K Your Creek 5.00 10 Pn 14 12 08.3 +0.4
H27K Steamboat Moun 5.00 48 Pn 14 12 07.3 -0.7
H27K Steamboat Moun 5.00 48 IAML 14 13 05.2
comp=N,14nm,1.1s
H27K IAML 14 13 08.5
comp=E,11nm,0.7s
K15K Wolf Creek Mou 5.03 265 Pn 14 12 09.2 +0.8
O16K Kokwok River B 5.04 228 Pn 14 12 08.8 +0.3
O16K Kokwok River B 5.04 228 IAML 14 13 54.4
comp=N,8.1nm,1.0s
KAHG Katmai Hook Gl 5.06 203 Pn 14 12 09.8 +1.0
E19K Redstone River 5.07 331 Pn 14 12 09.2 +0.4
KARR Katmai Rainbow 5.08 204 Pn 14 12 09.9 +0.8
MESA MESA 5.17 122 Pn 14 12 10.3 -0.1
LOGN Logan Glacier 5.17 113 IAML 14 13 33.3
comp=E,22nm,0.8s
LOGN IAML 14 13 34.9
comp=N,23nm,0.6s
L15K Ungalak Mounta 5.21 258 Pn 14 12 10.7 0.0
KAWH Katmai 5.21 204 Pn 14 12 11.4 +0.6
I28M Miner Creek 5.23 59 IAML 14 13 13.2
comp=N,20nm,0.9s
I28M IAML 14 13 32.6
comp=E,14nm,0.7s
F26K Sheenjek River 5.30 28 Pn 14 12 11.6 -0.3
F26K Sheenjek River 5.30 28 IAML 14 13 11.7
comp=N,7.3nm,0.9s
G27K Doyon Strip 5.30 43 Pn 14 12 10.9 -1.1
G27K Doyon Strip 5.30 43 IAML 14 13 11.4
comp=N,7.6nm,1.0s
G27K IAML 14 13 11.8
comp=E,9.3nm,0.9s
M15K Kasigluk River 5.31 246 Pn 14 12 12.5 +0.5
TABL Table Mountain 5.33 117 Pn 14 12 12.0 -0.5
TABL Table Mountain 5.33 117 IAML 14 13 41.8
comp=N,20nm,0.7s
TABL IAML 14 13 49.2
comp=E,24nm,1.2s
KAKN Katmai Knife C 5.34 205 Pn 14 12 12.9 +0.4
N15K Kwethluk River 5.37 240 Pn 14 12 13.3 +0.4
N15K Kwethluk River 5.37 240 IAML 14 13 34.4
comp=E,11nm,1.0s
N15K IAML 14 13 47.9
comp=N,11nm,1.1s
E25K Arctic Village 5.40 21 Pn 14 12 13.4 +0.2
E25K Arctic Village 5.40 21 IAML 14 13 15.3
comp=E,8.9nm,1.2s
P16K Nushagak River 5.44 223 Pn 14 12 14.9 +1.0
YUK8 Steele Glacier 5.49 105 Pn 14 12 15.3 +0.7
KDAK Kodiak Island 5.50 190 P **Pn 14 12 14.2 -0.4**
comp=E,5.3nm,0.3s,baz=7.1,slow=8.1,SNR=31
KDAK S **Sn 14 13 11.1 -5.7**
comp=E,15nm,0.3s,baz=27,slow=6.4,SNR=12
G16K Koyuk River 5.51 299 Pn 14 12 15.3 +0.6
ANCK Angle Creek 5.52 207 Pn 14 12 15.7 +0.7
F17K Baldwin Pennin 5.54 311 Pn 14 12 15.3 +0.2
O28M Mount Upton 5.54 111 Pn 14 12 15.4 0.0
M29M Somme Creek 5.69 92 Pn 14 12 17.4 +0.2
D22K Ayikyak River 5.77 353 Pn 14 12 19.8 +1.6
D23K Nanushuk River 5.81 0 Pn 14 12 20.2 +1.5
L14K Kuka Creek 5.87 257 Pn 14 12 20.9 +1.5
PCA Pinnacle 5.89 117 Pn 14 12 19.8 -0.1
O15K Ungalikthiuk R 5.95 232 Pn 14 12 21.7 +1.1
K29M Barlow Dome 5.96 78 Pn 14 12 20.8 -0.1
D20K Etivluk River 6.04 339 Pn 14 12 22.4 +0.5
E17K Hotham Inlet 6.08 315 Pn 14 12 22.8 +0.4
G15K Niukluk 6.09 293 Pn 14 12 23.2 +0.7
OHAK Old Harbor 6.11 193 Pn 14 12 22.1 -0.7
H29M Whitestone 6.12 55 Pn 14 12 22.4 -0.4
D19K Kuna River 6.12 334 Pn 14 12 23.4 +0.5
PLK3 Peulik 3 6.15 209 Pn 14 12 24.6 +1.2
BCPM Bancas Point 6.22 116 Pn 14 12 24.3 -0.1
YUK6 Outpost Mounta 6.25 106 Pn 14 12 24.6 -0.2
E27K Coleen River 6.28 33 Pn 14 12 24.7 -0.3
M30M Minto, Yukon 6.42 89 Pn 14 12 26.6 -0.3
O14K Tigyukauivet M 6.42 237 Pn 14 12 27.6 +0.7
F15K North Star Dit 6.51 299 Pn 14 12 28.8 +0.6
J30M Hart River 6.52 71 Pn 14 12 28.8 +0.4
I30M Mount Dempster 6.60 66 Pn 14 12 29.1 -0.4
N30M Aishikik Lake 6.60 99 Pn 14 12 29.4 0.0
C18K Utukok River 6.94 327 Pn 14 12 34.1 +0.2
F14K Arctic Creek 7.14 296 Pn 14 12 37.4 +1.0
P30M Million Dollar 7.25 109 Pn 14 12 38.1 0.0
B22K Teshekpuk Lake 7.26 353 Pn 14 12 38.4 +0.3
C17K DeLong Mountai 7.35 322 Pn 14 12 39.8 +0.5
E29M Blow River 7.42 40 Pn 14 12 40.0 -0.2
TNA Tin City 7.81 295 Pn 14 12 46.5 +1.1
C16K Lisburne Hills 7.87 317 Pn 14 12 46.0 -0.3
INK Inuvik 8.74 47 P **Pn 14 12 56.8 -1.0**
comp=E,0.6nm,0.4s,baz=247,slow=13,SNR=9.6
YKA Yellowknife Ar 16.39 76 P **P 14 14 37.0 +0.4**
comp=E,0.1nm,0.5s,baz=282,slow=14,SNR=5.5
SPITS Spitsbergen Ar 38.65 4 P **P 14 18 04.6 +0.7**
comp=E,0.7nm,0.3s,baz=359,slow=10,SNR=14
comp=E,0.7nm,0.3s
ZALV Zalesovo Beam 55.43 324 P **P 14 20 14.1 0.0**
comp=E,0.5nm,0.5s,baz=26,slow=7.4,SNR=3.0
comp=E,0.5nm,0.5s
BVAR Borovoye Array 59.73 333 P **P 14 20 44.9 +0.8**
comp=E,0.7nm,0.4s,baz=24,slow=8.7,SNR=5.4
comp=E,0.7nm,0.4s
MKAR Makanchi Array 62.59 322 P **P 14 21 03.3 -0.2**
comp=E,0.4nm,0.5s,baz=41,slow=6.8,SNR=9.2
comp=E,0.4nm,0.5s
AKASG Malin Array Be 66.46 0 P **P 14 21 28.8 +0.3**
comp=E,0.8nm,0.4s,baz=4.6,slow=6.6,SNR=5.5
comp=E,0.8nm,0.4s

*NEIC **01** 14:14:04.1±2.0,5.64N±0.08×126.7E±0.2,h89km±6km, mb4.5/20, Error ellipse: s-maj=25.3km s-min=9.0km az=72.0*
*DJA **01** 14:14:05.3±0.5,6.7N±4.2×12.7E±.°, h93km±5km, M4.6/21, mb4.8/21, mB5.1/11, MLv4.8/11, Mw(mB)4.5/11, MwMwp6.1/1, Mwp6.1/1*
*IDC **01** 14:14:06.0±1.2,5.71N×126.56E, h94km±9km, mb3.9/17, mbtmp4.3/19, MS2.5/4, Error ellipse: s-maj=32.4km s-min=8.9km az=67.0*
ISC 01 14:14:05.9±0.4,5.60N±0.05×126.60E±0.08,h100km,n92, σ1§49/91,**mb4.3**/29,**1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.78**	**325**	P		**Pn**	**14 14 34.5**	**-1.2**
	258nm,0.4s,baz=273,slow=2.1,SNR=7.3							
DAV				S		**Sn**	**14 14 55.7**	**-2.8**
	1μm,0.5s,baz=270,slow=23,SNR=25							
DAV				LR		LR	14 15 14.9	
	comp=Z,218nm,18.9s,baz=254,slow=41							
DAV	**Davao City (W)**	**1.78**	**325**	Pn		**Pn**	**14 14 33.3**	**-2.4**
DAV	**Davao City (W)**	**1.78**	**325**	P		**Pn**	**14 14 34.3**	**-1.4**
SGSI	**Sangihe**	**2.18**	**210**	P		**Pn**	**14 14 40.2**	**-0.7**
SGSI				S		**Sn**	**14 15 09.6**	**+2.0**

TNTI Ternate 4.85 171 Pn 14 15 16.2 -0.5
TNTI Ternate 4.85 171 P **Pn 14 15 16.6 -0.1**
MRSI Marisa 6.89 223 P **Pn 14 15 45.3 +0.9**
TOLI2 Tolitoli 7.32 233 Pn 14 15 48.1 -2.1
SANI Sanana 7.62 185 P **Pn 14 15 52.2 -2.1**
3μm111nm,0.6s
LUWI Luwuk 7.62 210 Pn 14 15 57.7 +3.3
LUWI Luwuk 7.62 210 P **Pn 14 15 56.9 +2.5**
1μm106nm,0.6s
SIJI Sorong 7.93 144 P **Pn 14 16 00.0 +1.4**
12nm,0.4s,baz=337,slow=15,SNR=12
SIJI S **Sn 14 17 26.4 -0.3**
12nm,0.9s,baz=166,slow=21,SNR=1.9
SIJI Sorong 7.93 144 P **Pn 14 15 58.5 -0.1**
APSI Ampana 8.14 218 P Pn 14 16 05.5 +4.1
MPSI Mapaga 8.49 232 P **Pn 14 16 05.0 -1.2**
19nm,0.7s
NLAI Namlea 8.79 177 P **Pn 14 16 09.5 -0.7**
KRAI Karang Ratu 9.04 169 P **Pn 14 16 14.3 +0.7**
FAKI Fak Fak 10.17 146 P **Pn 14 16 29.2 +0.2**
32nm,1.6s
KDI Kendari 10.29 203 P **Pn 14 16 30.5 -0.2**
TTSI Tana Toraja 10.94 218 P **Pn 14 16 39.1 -0.3**
68nm,0.9s
MMSI Mamuju 11.26 223 P **Pn 14 16 44.4 +0.6**
51nm,0.7s
SPSI Sidrap Palu 11.70 216 P **Pn 14 16 49.8 +0.2**
882nm41nm,0.6s
KAPI Kappang 12.57 213 P **Pn 14 17 01.3 +0.1**
19nm,0.6s,baz=15,slow=8.3,SNR=12
KAPI LR LR 14 22 03.4
comp=Z,26nm,19.8s,baz=57,slow=38
KAPI Kappang 12.57 213 Pn **Pn 14 16 58.0 -3.2**
KAPI Kappang 12.57 213 P **Pn 14 17 01.3 +0.1**
21nm,1.1s
EDFI Ende, Flores 15.07 199 P **P 14 17 35.0 -1.7**
31nm,0.8s
SOEI Soe 15.43 189 P 14 17 39.0 -1.6
SOEI IAmb IAmb 14 18 03.9
comp=Z,20nm,0.7s
BATI Baumata 15.97 191 P **P 14 17 47.1 +0.6**
comp=Z,60nm,0.5s,baz=321,slow=1.0,SNR=12
BATI Baumata 15.97 191 P **P 14 17 45.7 -0.9**
comp=Z,774nmcomp=Z,59nm,0.5s
DBNI Kabupaten Domp 16.26 211 P **P 14 17 48.4 -1.4**
comp=Z,17nm,1.0s
WSI Waingapu 16.41 203 P **P 14 17 51.3 -0.1**
WBSI Waikabubak, Su 16.76 205 P **P 14 17 56.0 +0.7**
comp=Z,63nm,1.1s
PLAI Plampang 16.82 212 P **P 14 17 56.3 +0.4**
comp=Z,97nm,0.8s
BASI Baing, Sumba 16.82 201 P **P 14 17 57.5 +1.6**
comp=Z,105nm,1.1s
TWSI Taliwang, Sumb 17.23 214 P **Pn 14 17 59.5 -0.9**
comp=Z,54nm,0.9s
JAGI Jajag, Banyuwa 18.69 222 Pn 14 18 17.2 -0.8
JAGI IAmb IAmb 14 18 32.7
comp=Z,24nm,1.0s
JAGI Jajag, Banyuwa 18.69 222 P **Pn 14 18 17.9 -0.2**
MTN Manton Dam 18.86 166 P **P 14 18 15.3 -3.1**
JOW Kunigami 21.18 4 LR LR 14 27 42.6
comp=Z,12nm,19.1s,baz=80,slow=39
KNRA Kununurra 21.24 174 P 14 18 42.7 -1.4
COEN Coen 25.45 140 P **P 14 19 22.4 -2.4**
WB0 Warramunga Arr 26.34 163 P 14 19 31.7 -1.1
WB0 IAmb IAmb 14 19 40.6
comp=Z,13nm,0.6s
WRAB Tennant Creek 26.49 163 P **P 14 19 33.5 -0.5**
WRA Warramunga Arr 26.50 164 P **P 14 19 35.4 +1.2**
comp=Z,2.6nm,0.6s,baz=344,slow=10,SNR=28
WRA PcP **PcP 14 22 58.4 +1.6**
comp=Z,0.4nm,0.4s,baz=324,slow=2.9,SNR=2.5
WRA ScP **ScP 14 26 30.7 +2.8**
comp=Z,1.0nm,1.1s,baz=336,slow=3.0,SNR=2.8
comp=Z,2.6nm,0.6s
WRA Warramunga Arr 26.50 164 P **P 14 19 32.1 -2.0**
WR8 Warramunga Arr 26.55 163 P **P 14 19 34.5 -0.1**
WR8 IAmb IAmb 14 19 42.6
comp=Z,6.8nm,0.7s
NJ2 Nanjing 27.30 346 *eP* **P 14 19 42.2 +1.0**
NJ2 pmax pmax
comp=Z,4.0nm,0.7s
MBWA Marble Bar 27.43 194 P **P 14 19 41.3 -1.1**
MBWA IAmb IAmb 14 19 50.4
comp=Z,7.1nm,0.7s
PSA00 Pilbara Seismi 27.80 194 P **P 14 19 44.3 -1.5**
PSA00 IAmb IAmb 14 19 51.1
comp=Z,11nm,0.7s
PSA00 Pilbara Seismi 27.80 194 P 14 19 43.6 -2.1
PSA00 IAmb IAmb 14 19 50.6
comp=Z,9.3nm,1.0s
CMAR Chiang Mai Arr 29.86 298 P **P 14 20 03.3 -0.8**
comp=Z,0.7nm,0.3s,baz=115,slow=7.5,SNR=5.5
comp=Z,0.7nm,0.3s
AS31 Alice Springs 29.94 166 P **P 14 20 02.5 -2.3**
ASAR Alice Springs 29.95 167 P **P 14 20 06.2 +1.4**
comp=Z,2.3nm,0.4s,baz=342,slow=7.1,SNR=73
ASAR PcP **PcP 14 23 07.0 +1.8**
comp=Z,1.6nm,0.5s,baz=347,slow=2.3,SNR=12
ASAR ScP **ScP 14 26 41.5 +2.9**
comp=Z,0.3nm,0.5s,baz=336,slow=2.9,SNR=4.5
comp=Z,2.3nm,0.4s
ASAR Alice Springs 29.95 167 P **P 14 20 04.4 -0.4**
ASAR PcP **PcP 14 23 07.1 +1.8**
GIRL Giralia 30.56 203 P **P 14 20 10.9 +0.7**
PZH PanZhiHua 31.55 314 P **P 14 20 21.3 +2.3**
KRSS Korea Array 31.73 2 LR LR 14 34 13.8
comp=Z,6.1nm,19.6s,baz=355,slow=38
MJAR Matsushiro Arr 32.59 18 LR LR 14 38 08.1
comp=Z,9.0nm,18.1s,baz=185,slow=44
XAN Xi'an 32.71 332 ⇑P **P 14 20 28.5 -0.5**
XAN pmax pmax
comp=Z,3.0nm,0.4s
HNS HongShan 33.47 343 ⇓P P 14 20 40.3 +4.8
HNS pmax pmax
comp=Z,6.0nm,1.0s
FORT Forrest 36.20 178 P **P 14 20 57.4 -1.6**
FORT IAmb IAmb 14 21 01.3
comp=Z,7.2nm,0.6s
LZDM Lanzhou Array 36.83 328 P **P 14 21 05.4 +0.6**
comp=Z,0.3nm,0.3s,baz=155,slow=8.2,SNR=4.0
comp=Z,0.3nm,0.3s
HHC Hu-ho-hao-te 37.60 341 *eP* **P 14 21 13.2 +2.2**
HHC pmax pmax
comp=Z,2.0nm,0.5s
HHC pmax pmax
comp=Z,160nm,4.6s
BBOO Buckleboo 39.24 167 P **P 14 21 23.4 -1.3**
NWAO Narrogin (SRO) 39.33 192 P **P 14 21 25.4 0.0**
NWAO IAmb IAmb 14 21 47.6
comp=Z,9.4nm,1.0s
STKA Stephens Creek 39.91 160 P **P 14 21 32.4 +2.1**
comp=Z,3.0nm,0.6s,baz=339,slow=8.7,SNR=11
comp=Z,3.0nm,0.6s
STKA Stephens Creek 39.91 160 P 14 21 27.9 -2.4
H11S3 WAKE ISLAND Hy 41.13 68 T T 15 05 49.6
baz=257,slow=75,SNR=5.2
H11S1 WAKE ISLAND Hy 41.15 68 T T 15 05 52.6
baz=257,slow=75,SNR=5.0
H11S2 WAKE ISLAND Hy 41.15 68 T T 15 05 45.6
baz=257,slow=75,SNR=8.5
GTA2 Gaotai 41.53 328 *eP* **P 14 21 46.1 +2.4**
GTA2 PcP **PcP 14 23 41.4 +2.0**
GTA2 pmax pmax
comp=Z,2.0nm,0.5s
H11N1 WAKE ISLAND Hy 41.60 67 T T 15 06 23.2
baz=255
H11N2 WAKE ISLAND Hy 41.61 67 T T 15 06 30.5
baz=255
H11N3 WAKE ISLAND Hy 41.62 67 T T 15 06 27.5
baz=255
SONM Songino Array 45.50 341 P **P 14 22 15.1 -0.3**
comp=Z,0.4nm,0.5s,baz=160,slow=9.1,SNR=6.1
SONM PcP **PcP 14 23 53.3 +0.6**
comp=Z,0.4nm,0.5s,baz=146,slow=5.0,SNR=2.7
comp=Z,0.4nm,0.5s
WMQ Urumqi 51.14 324 *eP* **P 14 23 00.5 +1.7**
WMQ LR LR
comp=Z,160nm,24.0s
MKAR Makanchi Array 55.97 325 P **P 14 23 33.7 -0.2**
comp=Z,1.8nm,0.5s,baz=119,slow=7.8,SNR=43
comp=Z,1.8nm,0.5s
MKAR Makanchi Array 55.97 325 P **P 14 23 32.4 -1.5**
ZALV Zalesovo Beam 58.88 333 P **P 14 23 53.7 -0.5**
comp=Z,1.0nm,0.4s,baz=122,slow=7.2,SNR=5.6
comp=Z,1.0nm,0.4s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	60.11	327	P	P	14 24 02.1	-0.7
	comp=Z,1.4nm,0.5s,baz=128,slow=6.1,SNR=7.0						
	comp=Z,1.4nm,0.5s						
KURK	Kurchatov	60.11	327	P	P	14 24 01.4	-1.3
KURK				IAmb	IAmb	14 24 02.8	
	comp=Z,2.9nm,0.6s						
BVAR	Borovoye Array	65.70	327	P	P	14 24 39.3	-0.5
	comp=Z,0.9nm,0.6s,baz=148,slow=6.0,SNR=6.4						
	comp=Z,0.9nm,0.6s						
NRIK	Noril'sk	68.60	346	P	P	14 24 56.8	-1.0
	comp=Z,3.0nm,0.7s,baz=124,slow=8.1,SNR=5.0						
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	83.48	26	P	P	14 26 22.4	+0.1
	comp=Z,0.2nm,0.5s,baz=254,slow=5.9,SNR=7.3						
	comp=Z,0.2nm,0.5s						
VNDA	Vanda	85.28	173	P	P	14 26 32.7	+1.7
	comp=Z,5.3nm,1.0s,baz=315,slow=2.9,SNR=1.8						
	comp=Z,5.3nm,1.0s						
SPITS	Spitsbergen Ar	88.64	349	P	P	14 26 47.5	+0.1
	comp=Z,15nm,1.1s,baz=106,slow=8.1,SNR=5.2						
	comp=Z,15nm,1.1s						
ARCES	ARCESS Array B	88.66	340	P	P	14 26 48.0	+0.3
	comp=Z,3.7nm,0.8s,baz=86,slow=4.8,SNR=7.3						
	comp=Z,3.7nm,0.8s						
ARCES	ARCESS Array B	88.66	340	P	P	14 26 47.1	-0.6
FINES	FINESS Array B	90.14	332	P	P	14 26 55.0	+0.3
	comp=Z,0.8nm,0.5s,baz=72,slow=6.2,SNR=9.6						
	comp=Z,0.8nm,0.5s						
FINES	FINESS Array B	90.14	332	P	P	14 26 53.8	-0.9
HFS	Hagfors	96.32	332	P	P	14 27 22.2	-0.9
	comp=Z,0.9nm,0.6s,baz=38,slow=5.4,SNR=4.4						
	comp=Z,0.9nm,0.6s						
TORD	Torodi Ar. Bea	122.20	289	PKP	PKiKP	14 32 50.7	+0.4
	comp=Z,1.4nm,0.7s,baz=266,slow=1.2,SNR=7.5						

*MDD **01** 14:28:06.0±0.6, 43°.60N×14°.29W, h30km, Mb4.6/33, M_mb4.0/33, Error ellipse: s-maj=4.4km s-min=3.7km az=116.0*

*IGIL **01** 14:28:09.7, 43°.60N×14°.18W, h32km, ML3.4*

*INMG **01** 14:28:10.8±1.9, 43°.60N×14°.17W, h19km, ML3.4, Error ellipse: s-maj=6.7km s-min=4.1km az=83.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Abissal Iberica*

ISC 01 14:28:05.6±2.8**, 43°.43N**±0°.08×**13°.9W**±0°.1**, h10km, n70, σ2s.42**/134**, 18C, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMAZ	Mazaricos	3.60	96	⇑P	Pn	14 29 03.5	+2.0
EMAZ				S	Sn	14 29 41.7	-2.4
STS	Santiago	3.92	96	⇑P	Pn	14 29 08.1	+2.2
STS				S	Sn	14 29 51.7	-0.2
EZAM	Zamans	4.01	107	P	Pn	14 29 09.8	+2.7
EZAM				⇑iIVmb_VC		14 29 10.1	
	745nm,SNR=3.4						
EZAM				S	Sn	14 29 53.4	-0.8
EAGO	Agolada(Pontev	4.27	97	P	Pn	14 29 12.5	+1.8
EAGO				S	Sn	14 29 58.9	-1.7
PGAV	Gavieira, Arco	4.37	108	eP	Pn	14 29 14.9	+2.8
PGAV				eS	Sn	14 30 03.1	-0.1
PGAV				i IAML		14 30 05.5	
PGAV				i IAML		14 30 05.7	
PGAV				i IAML		14 30 05.9	
PTO	Porto	4.53	119	eS	Sn	14 30 06.8	+0.1
PTO				i IAML		14 30 08.4	
PTO				i IAML		14 30 09.1	
PTO				i IAML		14 30 09.2	
ELOB	Lobios	4.55	108	P	Pn	14 29 17.4	+2.8
ELOB				⇑iIVmb_VC		14 29 17.6	
	539nm,SNR=2.9						
ELOB				S	Sn	14 30 07.8	+0.1
PCAB	Cabril	4.64	110	⇑eP	Pn	14 29 18.9	+3.1
PCAB				eS	Sn	14 30 09.8	+0.1
PCAB				i IAML		14 30 13.1	
PCAB				i IAML		14 30 13.1	
PCAB				i IAML		14 30 13.2	
EPON	Pontenova	4.89	89	P	Pn	14 29 20.7	+1.5
EPON				⇑iIVmb_VC		14 29 21.7	
	462nm,SNR=2.8						
EPON				S	Sn	14 30 14.0	-1.9
POLO	Lamas de Olo	4.94	113	eP	Pn	14 29 22.8	+2.9
POLO				eS	Sn	14 30 17.4	+0.2
POLO				i IAML		14 30 19.6	
POLO				i IAML		14 30 20.0	
POLO				i IAML		14 30 20.4	
PVRL	Vila Real	5.04	113	eS	Sn	14 30 19.2	-0.3
PVRL				i IAML		14 30 22.3	
PVRL				i IAML		14 30 22.4	
PVRL				i IAML		14 30 24.0	
PVIS	Viseu	5.21	119	eP	Pn	14 29 26.5	+3.0
PVIS				eS	Sn	14 30 23.3	-0.4
PCAS	Casmilo, Conde	5.24	128	eP	Pn	14 29 27.0	+3.0
PCAS				eS	Sn	14 30 24.5	0.0
PCAS				i IAML		14 30 27.6	
PCAS				i IAML		14 30 28.0	
PCAS				i IAML		14 30 29.1	
PSBE	So Bento	5.46	134	eP	Pn	14 29 27.5	+0.5
PSBE				eS	Sn	14 30 26.8	-3.1
PSBE				i IAML		14 30 30.5	
PSBE				i IAML		14 30 31.8	
PSBE				i IAML		14 30 32.9	
MVO	Moncorvo	5.55	112	eP	Pn	14 29 31.1	+2.8
MVO				eS	Sn	14 30 31.0	-1.2
MVO				i IAML		14 30 33.7	
MVO				i IAML		14 30 35.4	
MVO				i IAML		14 30 48.6	
MTE	Manteigas	5.60	121	eP	Pn	14 29 30.5	+1.4
MTE				eS	Sn	14 30 32.9	-0.6
MTE				i IAML		14 30 36.2	
MTE				i IAML		14 30 44.5	
MTE				i IAML		14 30 47.3	
PMAFR	Mafra	5.65	141	eP	Pn	14 29 32.9	+3.3
PMAFR				eS	Sn	14 30 33.5	-1.0
PMAFR				i IAML		14 30 38.8	
PMAFR				i IAML		14 30 39.2	
PMAFR				i IAML		14 30 39.7	
PSARD	Sardoal	5.74	130	eP	Pn	14 29 33.7	+2.9
PSARD				eS	Sn	14 30 36.2	-0.5
PSARD				i IAML		14 30 37.7	
PSARD				i IAML		14 30 39.3	
PSARD				i IAML		14 30 39.6	
PCBR	Castelo Branco	5.98	125	eP	Pn	14 29 37.0	+2.9
PCBR				eS	Sn	14 30 41.5	-1.1
PCBR				i IAML		14 30 45.3	
PCBR				i IAML		14 30 46.0	
PCBR				i IAML		14 30 46.1	
PMTG	Montargil	6.09	134	eP	Pn	14 29 38.6	+3.0
PMTG				eS	Sn	14 30 44.2	-1.0
PMTG				i IAML		14 30 46.8	
PMTG				i IAML		14 30 47.0	
PMTG				i IAML		14 30 48.3	
PMRV	Marv??o	6.30	127	eP	Pn	14 29 41.1	+2.7
PMRV				eS	Sn	14 30 48.6	-1.9
PMRV				i IAML		14 30 51.0	
PMRV				i IAML		14 30 51.8	
PMRV				i IAML		14 30 52.1	
EARI	Arriondas	6.31	88	P	Pn	14 29 40.3	+1.6
EARI				⇑iIVmb_VC		14 29 40.9	
	388nm,SNR=2.2						
EARI				S	Sn	14 30 47.2	-3.6
EJUZ	Juzbado, Salam	6.36	109	P	Pn	14 29 41.0	+1.6
EJUZ				S	Sn	14 30 52.1	-0.1
PARRA	Arraiolos	6.37	134	eP	Pn	14 29 41.9	+2.4
PARRA				eS	Sn	14 30 50.2	-2.1
PARRA				i IAML		14 30 52.2	
PARRA				i IAML		14 30 55.1	
PARRA				i IAML		14 30 55.1	
MOE	Montemor	6.44	138	eP	Pn	14 29 42.5	+2.1
MOE				eS	Sn	14 30 50.7	-3.2
MOE				i IAML		14 30 52.3	
MOE				i IAML		14 30 52.7	
MOE				i IAML		14 30 57.5	
PESTR	Estremoz	6.57	132	P	Pn	14 29 43.8	+1.6
PESTR				S	Sn	14 30 54.0	-3.2
PESTR	Estremoz	6.57	132	eP	Pn	14 29 44.5	+2.2
PESTR				eS	Sn	14 30 54.1	-3.2
PESTR				i IAML		14 30 59.4	
PESTR				i IAML		14 30 59.4	
PESTR				i IAML		14 30 59.9	
EVO	Evora	6.60	136	P	Pn	14 29 44.8	+2.2
EVO				S	Sn	14 30 56.1	-1.7
EVO	Evora	6.60	136	eP	Pn	14 29 45.0	+2.4
EVO				eS	Sn	14 30 56.4	-1.4
EVO				i IAML		14 30 57.7	
EVO				i IAML		14 31 01.0	
EVO				i IAML		14 31 01.7	
EPLA	Plasencia	6.72	117	P	Pn	14 29 47.6	+3.2
EPLA				⇑iIVmb_VC		14 29 48.4	
	370nm,SNR=3.5						
EPLA				S	Sn	14 30 59.1	-1.9
EBAD	Badajoz	6.97	130	P	Pn	14 29 49.4	+1.7
EBAD				S	Sn	14 31 04.8	-2.2
EBAD	Badajoz	6.97	130	P	Pn	14 29 50.5	+2.7
EBAD				⇑iIVmb_VC		14 29 58.3	
	142nm,SNR=2.4						
EBAD				S	Sn	14 31 04.5	-2.5
MESJ	Messejana	7.04	141	eP	Pn	14 29 51.8	+3.0
MESJ				eS	Sn	14 31 05.9	-2.9
MESJ				IAML		14 31 12.0	
	comp=E,15nm,0.2s						
MESJ	Messejana	7.04	141	eP	Pn	14 29 51.9	+3.2
MESJ				eS	Sn	14 31 06.5	-2.3
MESJ				i IAML		14 31 11.6	
MESJ				i IAML		14 31 11.6	
MESJ				i IAML		14 31 13.3	
PBEJ	Beja	7.06	138	eS	Sn	14 31 06.7	-2.6
PBEJ				i IAML		14 31 11.5	
PBEJ				i IAML		14 31 12.0	
PBEJ				i IAML		14 31 13.2	
PTEO	Sao Teotonio	7.06	145	eP	Pn	14 29 51.9	+2.9
PTEO				eS	Sn	14 31 07.1	-2.2
PTEO				i IAML		14 31 10.7	
PTEO				i IAML		14 31 10.8	
PTEO				i IAML		14 31 13.6	
ALT03	Santillana del	7.09	87	P	Pn	14 29 51.3	+1.9
ALT01	Santillana del	7.10	87	P	Pn	14 29 51.5	+2.1
ALT01				S	Sn	14 31 07.9	-2.2
ALT02	Santillana del	7.10	87	P	Pn	14 29 51.5	+2.1
ALT02				⇑iIVmb_VC		14 29 52.1	
	comp=E,499nm,SNR=1.9						
ALT02				S	Sn	14 31 08.8	-1.3
ALT04	Santillana del	7.10	87	P	Pn	14 29 51.5	+2.1
ALT04				S	Sn	14 31 08.8	-1.3
PCVE	Castro Verde	7.29	141	P	Pn	14 29 55.0	+2.8
PCVE				S	Sn	14 31 12.1	-2.9
PCVE	Castro Verde	7.29	141	eP	Pn	14 29 54.8	+2.6
PCVE				eS	Sn	14 31 12.1	-2.9
PCVE				i IAML		14 31 17.8	
PCVE				i IAML		14 31 17.9	
PCVE				i IAML		14 31 18.1	
MORF	Marmelete	7.30	145	eP	Pn	14 29 54.9	+2.7
MORF				eS	Sn	14 31 11.8	-3.4
MORF				IAML		14 31 18.4	
	comp=E,45nm,0.1s						
MORF	Marmelete	7.30	145	eP	Pn	14 29 55.0	+2.7
MORF				eS	Sn	14 31 12.5	-2.7
MORF				i IAML		14 31 18.1	
MORF				i IAML		14 31 18.1	
MORF				i IAML		14 31 19.4	
PBAR	Barrancos	7.37	133	P	Pn	14 29 55.9	+2.6
PBAR				S	Sn	14 31 14.9	-2.0
PBAR	Barrancos	7.37	133	eP	Pn	14 29 56.2	+3.0
PBAR				eS	Sn	14 31 15.0	-2.0
PBAR				i IAML		14 31 18.3	
PBAR				i IAML		14 31 18.7	
PBAR				i IAML		14 31 21.2	
PFVI	Vila Bisbo	7.38	147	P	Pn	14 29 55.2	+1.9
PFVI				S	Sn	14 31 14.0	-3.0
PFVI	Vila Bisbo	7.38	147	eP	Pn	14 29 55.7	+2.4
PFVI				eS	Sn	14 31 14.3	-2.7
PFVI				i IAML		14 31 19.0	
PFVI				i IAML		14 31 19.2	
PFVI				i IAML		14 31 20.0	
CIBOR	Castaar de Ib	7.38	118	P	Pn	14 29 56.7	+3.3
CIBOR				S	Sn	14 31 16.8	-0.3
ELAN	Lanestosa	7.61	88	P	Pn	14 29 58.1	+1.6
ELAN				⇑iIVmb_VC		14 29 58.1	
	comp=E,220nm,SNR=1.4						
ELAN				S	Sn	14 31 19.8	-2.9
PVAQ	Vaqueiros	7.63	140	eP	Pn	14 29 59.6	+2.8
PVAQ				eS	Sn	14 31 19.9	-3.4
PVAQ				i IAML		14 31 26.1	
PVAQ				i IAML		14 31 27.5	
PVAQ				i IAML		14 31 28.8	
PBDV	Barranco-do-Ve	7.66	142	P	Pn	14 30 00.2	+2.9
PBDV				S	Sn	14 31 21.6	-2.6
PBDV	Barranco-do-Ve	7.66	142	eP	Pn	14 30 00.3	+3.1
PBDV				eS	Sn	14 31 21.4	-2.7
PBDV				i IAML		14 31 27.1	
PBDV				i IAML		14 31 27.7	
PBDV				i IAML		14 31 28.3	
GUD	Guadarrama	7.74	108	P	Pn	14 30 01.9	+3.4
GUD				⇑iIVmb_VC		14 30 02.8	
	comp=E,102nm,SNR=2.1						
GUD				S	Sn	14 31 26.1	-0.2
EMIN	Mina Concepcio	7.87	134	P	Pn	14 30 03.1	+3.0
EMIN				S	Sn	14 31 25.3	-3.8
EMIN	Mina Concepcio	7.87	134	P	Pn	14 30 02.1	+2.0
EMIN				S	Sn	14 31 27.0	-2.1
PAB	San Pablo	8.13	115	P	Pn	14 30 07.3	+3.6
PAB				⇑iIVmb_VC		14 30 07.6	
	comp=E,115nm,SNR=2.3						
PAB				S	Sn	14 31 33.5	-2.1
ESBB	Sonseca Array	8.32	113	P	Pn	14 30 08.5	+2.2
ESBB				⇑iIVmb_VC		14 31 07.5	
	comp=E,125nm,SNR=2.2						
ESBB				S	Sn	14 31 38.5	-1.7
ESDC	Sonseca Array	8.32	113	P	Pn	14 30 09.0	+2.7
ESDC				⇑iIVmb_VC		14 30 10.0	
	comp=E,125nm,SNR=2.5						
ESDC				S	Sn	14 31 39.4	-0.8
ECAB	El Cabril	8.35	127	P	Pn	14 30 09.2	+2.5
ECAB				S	Sn	14 31 38.5	-2.4
ECAB	El Cabril	8.35	127	P	Pn	14 30 09.3	+2.7
ECAB				S	Sn	14 31 38.8	-2.1
EADA	Adamuz	8.79	124	P	Pn	14 30 15.2	+2.5
EADA				S	Sn	14 31 48.5	-3.2
EADA	Adamuz	8.79	124	P	Pn	14 30 14.4	+1.7
EADA				⇑iIVmb_VC		14 30 21.3	
	comp=E,116nm,SNR=2.1						
EADA				S	Sn	14 31 48.5	-3.2
PSIM	Granatula de C	8.91	118	P	Pn	14 30 16.6	+2.2
PSIM				S	Sn	14 31 51.6	-3.1
ESPR	Espera	8.97	134	P	Pn	14 30 18.8	+3.6
ESPR				S	Sn	14 31 53.6	-2.7
ESPR	Espera	8.97	134	P	Pn	14 30 17.4	+2.2
ESPR				⇑iIVmb_VC		14 30 19.3	
	comp=E,117nm,SNR=2.0						
ESPR				S	Sn	14 31 52.2	-4.0
CCA1	Carnmenellis	8.98	38	P	Pn	14 30 11.6	-3.6
CCA1				S	Sn	14 31 42.4	-14
ETOR	Torete	9.15	103	P	Pn	14 30 19.0	+1.2
ETOR				S	Sn	14 31 59.6	-1.2
EORO	Oroz-Betelu	9.19	89	S	Sn	14 31 59.0	-2.8
ESAC	San Caprasio	10.03	95	P	Pn	14 30 30.8	+1.1
ESAC				⇑iIVmb_VC		14 30 37.6	
	comp=E,377nm,SNR=2.2						
ESAC				S	Sn	14 32 19.7	-2.6

*NEIC **01** 14:44:00.7±1.9, 18°.79N±0°.08×80°.89W±0°.07, h10km±2km, mb4.2/5, Error ellipse: s-maj=13.3km s-min=11.6km az=177.0*

*IDC **01** 14:44:01.8±0.8, 18°.94N×80°.78W, h0km, mb3.8/13, mbtmp3.9/15, ML3.1/3, MS3.4/11, Error ellipse: s-maj=22.2km s-min=19.1km az=27.0*

*SSNC **01** 14:44:05.5±2.3, 18°.95N×80°.70W, h0km±41km, MD3.8, ML3.7, Presumed earthquake*

*JSN **01** 14:44:05.1±1.7, 18°.84N×80°.74W, h0km±999km, MD4.7, MW4.9, Presumed earthquake*

ISC 01 14:44:05.8±0.6**, 18°.90N**±0°.06×**80°.88W**±0°.06**, h35km, n66, σ1s.90**/62**, mb3.9**/12**, MS3.4**/8**, 1C-1D, North of Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCCY	Blossom Villag	1.07	44	eP	Pn	14 44 22.1	-2.2
LCCY				eS	Sn	14 44 35.1	-2.9
LCCY				IAML		14 44 41.9	
	comp=E,744nm,0.3s						
LCCY				IAML		14 44 48.0	
	comp=N,1µm,0.6s						
CBCY	The Bluff, Cay	1.34	51	eP	Pn	14 44 25.8	-2.3
CBCY				eS	Sn	14 44 41.3	-3.4
CBCY				IAML		14 44 50.5	
	comp=N,1µm,0.4s						
MTDJ	Mount Denham	3.24	101		Pn	14 44 52.9	-1.3
MTDJ	Mount Denham	3.24	101	eP	Pn	14 44 53.8	-0.5
MTDJ				eS	Sn	14 45 30.1	-1.6
MTDJ				IAML		14 45 33.0	
	comp=N,625nm,0.4s						
MTDJ				IAML		14 45 33.8	
	comp=N,280nm,0.4s						
MGV	Manicaragua	3.30	15	eP	Pn	14 44 53.2	-1.9
MGV				IAML		14 45 34.5	
	comp=N,148nm,0.2s						
MGV				IAML		14 45 35.4	
	comp=E,167nm,0.2s						
CCCC	Cccc	3.71	51	eP	Pn	14 45 04.1	+3.4
CAIB	Caibarien	3.81	20		Pn	14 45 00.6	-1.4
CAIB	Caibarien	3.81	20	eP	Pn	14 45 02.2	+0.2
CAIB				eS	Sn	14 45 43.8	-1.7
CAIB				IAML		14 45 47.3	
	comp=E,263nm,0.5s						
CAIB				IAML		14 45 49.2	
	comp=N,51nm,0.2s						
LMGC	Las Mercedes	3.83	72	eP	Pn	14 45 03.9	+1.6
LMGC				eS	Sn	14 45 45.1	-1.0
LMGC				IAML		14 45 47.7	
	comp=E,36nm,0.3s						
LMGC				IAML		14 45 51.8	
	comp=N,20nm,0.1s						
STH	Stony Hill	3.94	101	⇓iP	Pn	14 45 03.4	-0.4
HOJ	Hope	4.01	102	⇑iP	Pn	14 45 06.1	+1.2
CAMR	Camarioca	4.17	354		Pn	14 45 06.1	-0.9
CAMR	Camarioca	4.17	354	eP	Pn	14 45 09.1	+2.1
CHIV	Chivirico	4.34	75	Pn	Pn	14 45 09.0	-0.4
SOR	Soroa	4.36	333		Pn	14 45 08.2	-1.3
SOR	Soroa	4.36	333	eP	Pn	14 45 11.5	+1.9
YAR	Yar	4.50	70	eP	Pn	14 45 13.7	+2.2
YAR				eS	Sn	14 46 03.1	+0.5
YAR				IAML		14 46 10.6	
	comp=E,51nm,0.6s						
YAR				IAML		14 46 14.9	
	comp=N,32nm,0.6s						
GTBY	Guantanamo Bay	5.54	78	eP	Pn	14 45 28.8	+3.1
NMDO	Nuevo Mundo	5.79	72	Pn	Pn	14 45 29.4	+0.2
SIUN	Universidad Ur	6.37	217	Pn	Pn	14 45 35.3	-1.9
061Z	Ochoppi	6.94	360	Pn	Pn	14 45 43.0	-1.9
TEIG	Tepich	7.10	282	Pn	Pn	14 45 45.1	-2.2
SDDR	Presa de Saban	9.07	88	Pn	Pn	14 46 12.2	-2.2
ESQI	Esquipulas	9.19	243	Pn	Pn	14 46 12.2	-3.8
MTO3	Montecristo	9.28	242	Pn	Pn	14 46 13.3	-4.1
JTS	Las Juntas de	9.42	205	LR	LR	14 49 47.7	
	comp=N,157nm,20.0s,baz=6.1,slow=36						
APG	El Apazote	9.96	249	Pn	Pn	14 46 27.1	+0.4
	baz=96,slow=15,SNR=3.8						
BANI	BANI	9.98	91	Pn	Pn	14 46 18.5	-8.4
SDD	Santo Domingo	10.40	91	Pn	Pn	14 46 27.1	-5.4
656A	Willston	10.53	352	Pn	Pn	14 46 32.4	-1.9
DR12	Loma Pena Alta	10.88	89	Pn	Pn	14 46 39.9	+0.7
553A	Crawfordville	11.70	345	Pn	Pn	14 46 48.5	-1.7
451A	Vernon	12.48	340	Pn	Pn	14 46 58.4	-2.4
TIGA	Tifton	12.73	349	Pn	Pn	14 47 04.1	-0.1
250A	Grady	13.90	341	Pn	Pn	14 47 18.1	-2.2
SDV	Santo Domingo	14.06	134	Pn	Pn	14 47 21.0	-1.8
	comp=N,0.7nm,0.3s,baz=336,slow=12,SNR=4.1						
SDV				LR	LR	14 52 31.1	
	comp=N,59nm,19.4s,baz=275,slow=36						
	comp=N,3.3nm,0.5s						
152A	Waverly Hall	14.14	347	Pn	Pn	14 47 20.7	-2.9
GOGA	Godfrey	14.64	351	Pn	Pn	14 47 28.3	-2.1
LRAL	Lakeview Retre	15.11	340	Pn	Pn	14 47 34.2	-2.5
BG3	Lake Jocassee	16.14	354	Pn	Pn	14 47 48.3	-1.6
BG3				IAmb	IAmb	14 48 29.0	
	comp=Z,22nm,1.5s						
V53A	Saluda	16.80	355	P	P	14 47 59.3	-0.9
CPCT	Cooper Cave	16.80	350	P	P	14 47 58.3	-1.9
CPCT				IAmb	IAmb	14 48 17.5	
	comp=Z,27nm,1.3s						
TKL	Tuckaleechee C	16.89	352	Pn	Pn	14 47 58.1	-1.4
	comp=Z,0.3nm,0.3s,baz=180,slow=11,SNR=3.5						
TKL				LR	LR	14 54 36.4	
	comp=Z,103nm,18.9s,baz=170,slow=38						
	comp=Z,6.8nm,0.9s						
TKL	Tuckaleechee C	16.89	352	Pn	Pn	14 47 56.7	-2.8
TKL				IAmb	IAmb	14 48 16.3	
	comp=Z,37nm,1.4s						
TXAR	Lajitas Array	23.21	301	P	P	14 49 09.5	-0.4
	comp=Z,1.6nm,0.8s,baz=114,slow=10,SNR=14						
	comp=Z,1.6nm,0.8s						
SADO	Sadowa	25.84	3	LR	LR	14 59 32.0	
	comp=Z,61nm,20.1s,baz=174,slow=36						
ULM	Lac du Bonnet	33.50	342	LR	LR	15 04 52.0	
	comp=Z,69nm,20.3s,baz=192,slow=37						
PDAR	Pinedale Array	33.96	321	P	P	14 50 47.0	+0.9
	comp=Z,0.3nm,0.7s,baz=119,slow=9.3,SNR=3.9						
	comp=Z,0.3nm,0.7s						
SCHQ	Schefferville	37.44	13	LR	LR	15 06 44.7	
	comp=Z,41nm,21.0s,baz=198,slow=36						
NVAR	Mina Array Bea	37.84	309	P	P	14 51 22.0	+2.6
	comp=Z,0.3nm,0.8s,baz=91,slow=7.4,SNR=1.9						
	comp=Z,0.3nm,0.8s						
FRB	Frobisher Bay	45.60	8	LR	LR	15 09 52.2	
	comp=Z,52nm,21.3s,baz=220,slow=34						
YKA	Yellowknife Ar	49.41	340	P	P	14 52 52.9	+1.1
	comp=Z,0.2nm,0.8s,baz=129,slow=7.5,SNR=4.1						
YKA				LR	LR	15 13 03.9	
	comp=Z,46nm,18.7s,baz=73,slow=35						
	comp=Z,0.2nm,0.8s						
SFJD	Kangerlussuaq	51.87	15	LR	LR	15 17 20.7	
	comp=Z,31nm,18.2s,baz=183,slow=39						
INK	Inuvik	59.18	340	LR	LR	15 20 40.1	
	comp=Z,39nm,19.0s,baz=305,slow=37						
PLCA	Paso Flores	60.09	171	P	P	14 54 10.2	+0.7
	comp=Z,1.8nm,0.8s,baz=340,slow=7.9,SNR=4.5						
	comp=Z,1.8nm,0.8s						
ILAR	Eielson Array	62.88	334	P	P	14 54 29.3	+1.2
	comp=Z,1.2nm,1.0s,baz=107,slow=4.0,SNR=13						
	comp=Z,1.2nm,1.0s						
EKA	Eskdalemuir Ar	67.71	37	P	P	14 54 59.9	+0.5
	comp=Z,0.4nm,0.5s,baz=279,slow=5.7,SNR=1.1						
	comp=Z,0.4nm,0.5s						
ESDC	Sonseca Array	68.27	54	P	P	14 55 03.7	+0.3
	comp=Z,1.5nm,0.9s,baz=285,slow=5.8,SNR=9.5						
	comp=Z,1.5nm,0.9s						
SPITS	Spitsbergen Ar	73.12	12	P	P	14 55 33.3	+1.1
	comp=Z,5.0nm,0.9s,baz=181,slow=3.3,SNR=5.4						
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	78.03	20	P	P	14 56 01.9	+1.5
	comp=Z,7.2nm,1.1s,baz=300,slow=5.5,SNR=4.1						
	comp=Z,7.2nm,1.1s						
TORD	Torodi Ar. Bea	78.93	80	P	P	14 56 08.2	+1.9
	comp=Z,0.5nm,0.8s,baz=277,slow=6.6,SNR=1.9						
	comp=Z,0.5nm,0.8s						
GERES	GERESS Array B	78.94	42	P	P	14 56 06.7	+0.7
	comp=Z,0.1nm,0.2s,baz=294,slow=8.5,SNR=1.7						
	comp=Z,0.1nm,0.2s						
FINES	FINESS Array B	81.39	28	P	P	14 56 20.6	+1.8
	comp=Z,2.8nm,0.9s,baz=305,slow=4.9,SNR=1.5						
	comp=Z,2.8nm,0.9s						
AKASG	Malin Array Be	87.62	37	LR	LR	15 37 06.9	
	comp=Z,28nm,18.0s,baz=296,slow=36						
WRA	Warramunga Arr	146.81	262	PKPbc	PKPab	15 03 46.0	-0.4
	comp=Z,0.6nm,0.6s,baz=86,slow=3.8,SNR=12						
ASAR	Alice Springs	147.30	255	PKPbc	PKiKP	15 03 49.8	+1.1
	comp=Z,0.6nm,0.6s,baz=101,slow=4.1,SNR=14						

NOU 01 14:44:39.8, 15°.59S×167°.67E, h134km, MLv3.9/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.47	287	P	Pn	14 45 00.3	+1.1
SANVU	Saraoutou	0.47	287	S	Sn	14 45 16.6	+2.8
DVP	Devils Point	2.18	167	P	Pn	14 45 16.8	+0.6
DVP	Devils Point	2.18	167	S	Sn	14 45 44.7	+0.6
YATNC	Mamie plateau,	6.48	186	S	Sn	14 47 25.4	-0.1

IDC 01 15:18:15.6±15.0**, 5°.90S×127°.06E, h204km**±162km**, mb3.0**/2**, mbtmp3.6**/4**, Error ellipse: s-maj=93.6km s-min=40.2km az=42.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.65	154	P	P	15 21 44.6	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.5nm,0.3s,baz=335,slow=11,SNR=24						
WRA				S	S	15 24 39.7	+0.6
	0.2nm,0.4s,baz=326,slow=24,SNR=1.8						
ASAR	Alice Springs	18.85	160	P	P	15 22 20.9	+0.5
	0.8nm,0.3s,baz=344,slow=11,SNR=28						
CTA	Charters Tower	23.38	129	P	P	15 23 05.9	-0.2
	1.3nm,0.5s,baz=285,slow=12,SNR=1.1						
	1.3nm,0.5s						
MKAR	Makanchi Array	65.73	328	P	P	15 28 38.5	+0.1
	0.1nm,0.4s,baz=130,slow=5.8,SNR=2.0						
	0.1nm,0.4s						

IDC 01 15:50:06.2±5.3**, 21°.84N**×**144°.13E, h0km, mb3.4**/4**, mbtmp3.5**/5**, ML3.0**/1**, MS2.9**/1**, Error ellipse: s-maj=215.5km s-min=24.2km az=78.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	15.53	342	Pn	Pn	15 53 45.5	-1.1
	0.1nm,0.3s,baz=168,slow=17,SNR=7.3						
MJAR				LR	LR	15 59 13.5	
	comp=Z,44nm,18.5s,baz=88,slow=35						
	0.9nm,0.7s						
KSRS	Korea Array	20.94	322	P	P	15 54 51.5	+0.8
	0.9nm,0.5s,baz=143,slow=9.3,SNR=5.0						
	0.9nm,0.5s						
WRA	Warramunga Arr	42.61	194	P	P	15 58 04.1	-0.3
	0.2nm,0.4s,baz=13,slow=8.6,SNR=4.6						
	0.2nm,0.4s						
ASAR	Alice Springs	46.31	193	P	P	15 58 34.0	+0.1
	0.3nm,0.8s,baz=15,slow=6.5,SNR=4.3						
	0.3nm,0.8s						
BVAR	Borovoye Array	63.14	319	P	P	16 00 35.6	-0.2
	0.7nm,0.4s,baz=99,slow=5.6,SNR=4.8						
	0.7nm,0.4s						

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*IDC **01** 15:53:37.2±13.0, 32°.56N×47°.91E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=261.1km s-min=32.9km az=9.0*

*TEH **01** 15:53:37.8, 32°.19N×47°.95E, h17km±22km, ML3.3, Presumed earthquake*

ISC 01 15:53:36.8±1.0**, 32°.15N**±0°.08×**47°.89E**±0°.08**, h10km, n29, σ1s36**/30**, mb4.0**/7**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHWZ	Ahwaz	1.04	142	Pg	Pg	15 53 57.5	+0.7
AMIS	Naft Sefid	1.28	112	Pg	Pn	15 54 01.3	+0.5
AMIS				Sg	Sn	15 54 19.7	+1.7
IDOB	Doab	1.65	8	Pg	Pb	15 54 07.5	+0.1
KCHF	Cheshme Sefid,	2.23	342	Pn	Pn	15 54 16.4	+2.3
IGHG	Ghaleghazi	2.44	333	Pn	Pn	15 54 18.6	+1.7
ZNGN	Zangian	2.51	90	Pn	Pn	15 54 19.1	+1.1
IPIR	Pirpir	2.59	77	Pn	Pn	15 54 20.1	+1.1
SNQR	Sonqor, Kerman	2.71	355	Pn	Pn	15 54 22.7	+2.0
IDHR	Dehrash	2.83	334	Pn	Pn	15 54 23.9	+1.5
HAGD	Aghdareh	2.86	21	Pn	Pn	15 54 23.1	+0.4
IBRJ	Brojen	2.87	94	Pn	Pn	15 54 24.2	+1.3
IKLH	Kolahrood	3.32	68	Pn	Pn	15 54 30.6	+1.6
QAMS	Qamsar	3.34	61	Pn	Pn	15 54 31.0	+1.6
KLNJ	Kolanjah	3.36	109	Pn	Pn	15 54 30.9	+1.3
HGHA	Hamedan- Ghaye	3.42	13	Pn	Pn	15 54 31.9	+1.5
IQOM	Qom	3.77	44	Pn	Pn	15 54 36.2	+0.9
QABG	Abgarm-Qazvin	3.81	21	Pn	Pn	15 54 37.7	+1.9
IRAM	Ramesheh	3.83	94	Pn	Pn	15 54 37.2	+1.2
KRSH	Karshahi	4.00	62	Pn	Pn	15 54 39.4	+1.1
IVRN	Varamin	4.28	47	Pn	Pn	15 54 43.2	+1.2
IGZV	Ghazvin	4.64	24	Pn	Pn	15 54 48.5	+1.3
IDMV	Damavand	4.85	44	Pn	Pn	15 54 50.9	+0.8
BVAR	Borovoye Array	26.43	31	P	P	15 59 12.2	-1.3
	0.5nm,0.5s,baz=232,slow=7.7,SNR=3.3						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	29.17	42	P	P	15 59 37.7	-0.4
	0.6nm,0.7s,baz=247,slow=9.6,SNR=5.0						
	0.6nm,0.7s						
MKAR	Makanchi Array	30.04	51	P	P	15 59 45.4	-0.5
	0.4nm,0.4s,baz=247,slow=9.4,SNR=7.7						
	0.4nm,0.4s						
FINES	FINESS Array B	32.56	341	P	P	16 00 06.2	-1.6
	3.9nm,1.1s,baz=144,slow=9.6,SNR=6.2						
	3.9nm,1.1s						
ZALV	Zalesovo Beam	34.11	39	P	P	16 00 20.3	-1.1
	0.7nm,0.4s,baz=235,slow=8.1,SNR=5.6						
	0.7nm,0.4s						
HFS	Hagfors	35.94	331	P	P	16 00 36.2	-1.0
	4.2nm,1.0s,baz=129,slow=11,SNR=1.9						
	4.2nm,1.0s						
SPITS	Spitsbergen Ar	48.14	352	P	P	16 02 15.6	-0.9
	3.8nm,0.8s,baz=157,slow=7.7,SNR=4.1						
	3.8nm,0.8s						

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*IDC **01** 15:59:34.2±3.8, 19°.23S×169°.23E, h163km±43km, mb3.4/7, mbtmp3.9/8, Error ellipse: s-maj=77.6km s-min=31.8km az=148.0*

ISC 01 15:59:34.1±1.4**, 19°.0S**±0°.2×**169°.0E**±0°.3**, h147km, n19, σ1s51**/20**, mb3.7**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.95	218	P	Pn	16 00 34.6	+0.9
	30nm,0.4s,baz=0.0,slow=20						
DZM				S	Sn	16 01 18.3	-1.6
	59nm,0.5s,baz=321,slow=23,SNR=9.0						
CTA	Charters Tower	21.50	263	P	P	16 04 12.7	+1.1
	2.2nm,0.8s,baz=76,slow=12,SNR=1.7						
	2.2nm,0.8s						
WRA	Warramunga Arr	32.70	262	P	P	16 05 51.4	-1.4
	0.5nm,1.0s,baz=95,slow=8.0,SNR=7.6						
	0.5nm,1.0s						
ASAR	Alice Springs	33.01	256	P	P	16 05 54.9	-0.6
	2.3nm,0.4s,baz=82,slow=8.4,SNR=91						
	2.3nm,0.4s						
MJAR	Matsushiro Arr	62.40	332	P	P	16 09 40.8	-0.6
	0.9nm,0.8s,baz=147,slow=5.1,SNR=2.4						
	0.9nm,0.8s						
CMAR	Chiang Mai Arr	78.21	294	P	P	16 11 18.9	+1.0
	0.8nm,0.8s,baz=138,slow=4.6,SNR=6.4						
	0.8nm,0.8s						
SONM	Songino Array	86.87	323	P	P	16 12 02.1	-0.1
	0.9nm,0.8s,baz=130,slow=5.8,SNR=4.7						
	0.9nm,0.8s						
ILAR	Eielson Array	90.01	17	P	P	16 12 14.5	-2.0
	0.2nm,0.5s,baz=236,slow=4.8,SNR=1.9						
	0.2nm,0.5s						
MKAR	Makanchi Array	101.39	316	P	Pdif	16 13 09.4	+0.7
	0.2nm,0.7s,baz=100,slow=4.8,SNR=2.3						
GERES	GERESS Array B	144.14	332	PKP	PKPab	16 18 50.5	0.0
	0.7nm,0.7s,baz=60,slow=2.4,SNR=3.3						
ARSA	Arzberg	144.43	329	*i* PKiKP	PKiKP	16 19 01.5	+4.9
	2.4nm,0.4s						
MOA	Molln	144.61	330	*i* PKP	PKPdf	16 18 52.4	-0.8
	7.2nm,1.1s						
BIOA	Bad Ischl, Aus	145.02	331	*e*PKP	PKPab	16 18 53.7	0.0
	4.3nm,1.0s						
SOKA	Soboth	145.06	328	*i* PKP	PKPbc	16 18 53.6	-0.2
	2.4nm,0.5s						
LESA	Schwarzleotal	145.66	331	*e*PKP	PKPbc	16 18 55.2	-0.4
	2.2nm,0.5s						
MYKA	Terra Mystica	145.78	329	*e*PKP	PKPab	16 18 57.1	+0.5
	0.9nm,0.4s						
WATA	Walderalm	146.22	332	*e*PKP	PKPab	16 18 57.8	-0.6
	6.0nm,1.5s						
MOTA	Moosalm	146.42	332	*e*PKP	PKPbc	16 18 57.5	-0.5
	3.1nm,1.0s						
FETA	Feichten	146.83	332	*e*PKP	PKPbc	16 18 59.1	-0.1
	2.4nm,1.1s						

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*NEIC **01** 16:04:05.6±1.2, 44°.71S±0°.09×81°.3W±0°.2, h10km±2km, mb4.6/15, Mwr5.0(GUC), Error ellipse: s-maj=19.7km s-min=14.3km az=283.0*

*IDC **01** 16:04:05.5±1.3, 45°.45S×80°.56W, h0km, mb4.2/5, mbtmp4.3/6, ML4.6/1, MS4.2/36, Error ellipse: s-maj=45.3km s-min=29.7km az=152.0*

*GUC **01** 16:04:06.6±1.8, 44°.58S×81°.11W, h10km, MS4.6*

*GCMT **01** 16:04:10.6±0.1, 44°.97S±0°.01×81°.27W±0°.01, h22km, MW5.3/143, Moment Tensor Solution. s92,c139; s143,c247; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.11±.02; $M_{\theta\theta}$0.44±.02; $M_{\phi\phi}$-0.32±.02; $M_{r\theta}$0.16±.03; $M_{\theta\phi}$-1.09±.02; $M_{\phi r}$-0.03±.03; Best double couple: $M_0$1.16500×10^{17} NP1:ϕ_s171.00000°, δ82.00000°, λ1.00000°. NP2:ϕ_s80.00000°, δ89.00000°, λ172.00000°. Principal axes: T 1.2280, Plg6.0000°, Azm35.0000°; N -0.1250, Plg82.0000°, Azm250.0000°; P -1.1030, Plg4.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 16:04:05.6±0.6**, 44°.71S**±0°.08×**81°.18W**±0°.07**, h10km, n133, σ1s30**/93**, mb4.3**/10**, MS4.2**/35**, 3D, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	5.66	76	*e*S	Sn	16 06 32.4	-2.3
GO07				IVMs_BB	IVMs_BB	16 07 56.1	
	comp=Z,7μm,8.3s						
CUEV	Cuervo	5.76	97	*e*P	Pn	16 05 32.3	+1.2
CUEV				IVMs_BB	IVMs_BB	16 07 31.6	
	comp=Z,4μm,8.6s						
CUEV	Cuervo	5.76	97	*e*P	Pn	16 05 31.9	+0.7
CUEV				IVMs_BB	IVMs_BB	16 07 24.3	
	comp=N,8μm,8.1s						
LL07	Hotel Espejo d	5.88	74	Pn	Pn	16 05 33.1	+0.4
LL07				Sn	Sn	16 06 41.4	+1.2
LL07	Hotel Espejo d	5.88	74	*e*P	Pn	16 05 33.6	+0.9
LL07				IVMs_BB	IVMs_BB	16 07 03.6	
	comp=Z,2μm,3.4s						
LL07	Hotel Espejo d	5.88	74	*e*P	Pn	16 05 33.1	+0.4
LL07				IVMs_BB	IVMs_BB	16 08 06.9	
	comp=Z,6μm,8.3s						
CHAC	Puerto Chacabu	6.01	100	*e*P	Pn	16 05 38.0	+3.6
CHAC				IVMs_BB	IVMs_BB	16 08 47.5	
	comp=Z,15μm,6.1s						
LL06	Loncomilla	6.03	68	*e*P	Pn	16 05 34.7	-0.1
COYC	Coyhaique	6.50	101		Pn	16 05 41.5	+0.3
COYC	Coyhaique	6.50	101	*e*P	Pn	16 05 41.9	+0.8
COYC				IVMs_BB	IVMs_BB	16 07 44.2	
	comp=Z,3μm,7.3s						
AY03	Cochrane	6.50	116		Pn	16 05 41.3	0.0
AY03	Cochrane	6.50	116	*e*P	Pn	16 05 44.1	+2.9
AY03				IVMs_BB	IVMs_BB	16 08 00.5	
	comp=Z,4μm,5.5s						
AY03	Cochrane	6.50	116	*e*P	Pn	16 05 44.1	+2.9
AY03				IVMs_BB	IVMs_BB	16 08 06.0	
	comp=Z,5μm,5.5s						
CYQE	Coyhaique	6.51	101	*e*P	Pn	16 05 48.0	+6.7
LL05	Los Muermos	6.54	62		Pn	16 05 41.5	-0.3
LL05	Los Muermos	6.54	62	*e*P	Pn	16 05 41.6	-0.1
LL05				IVMs_BB	IVMs_BB	16 09 27.5	
	comp=Z,7μm,4.1s						
LL01	San Ignacio de	6.78	73		Pn	16 05 43.9	-1.2
LL01	San Ignacio de	6.78	73	*e*P	Pn	16 05 45.2	+0.1
LL02	Futaleuf	6.91	81	*e*P	Pn	16 05 47.3	+0.5
LL02				*e*S	Sn	16 07 06.5	+1.1
LL02				IVMs_BB	IVMs_BB	16 08 38.8	
	comp=Z,4μm,6.5s						
GO08	Villa O'Higgin	7.03	125		Pn	16 05 47.6	-0.9
GO08	Villa O'Higgin	7.03	125	*e*P	Pn	16 05 48.8	+0.3
GO08	Villa O'Higgin	7.03	125	*e*P	Pn	16 05 49.5	+1.1
GO08				IVMs_BB	IVMs_BB	16 08 30.3	
	comp=Z,4μm,6.8s						
LR04	Corral	7.50	53	Pn	Pn	16 05 54.7	-0.3
PLCA	Paso Flores	8.77	67	Pn	Pn	16 06 13.5	+1.0
	comp=Z,1.5nm,0.3s,baz=231,slow=11,SNR=38						
PLCA				Sn	Sn	16 07 40.8	-11
	baz=238,slow=14						
PLCA				LR	LR	16 09 13.0	
	comp=Z,2μm,20.5s,baz=238,slow=35						
	comp=Z,25nm,0.8s						
PLCA	Paso Flores	8.77	67		Pn	16 06 13.0	+0.5
PLCA	Paso Flores	8.77	67	*e*P	Pn	16 06 11.2	-1.3
GO06	Curarrehue	8.84	58		Pn	16 06 14.3	+0.8
GO06	Curarrehue	8.84	58	*e*P	Pn	16 06 13.7	+0.2
GO06				IVMs_BB	IVMs_BB	16 10 02.7	
	comp=Z,3μm,7.7s						
GO09	Cerro Castillo	8.84	141		Pn	16 06 14.1	+0.8
GO09	Cerro Castillo	8.84	141	*e*P	Pn	16 06 14.1	+0.8
GO09				IVMs_BB	IVMs_BB	16 09 16.0	
	comp=Z,4μm,11.8s						
LC01	Cunco	9.05	53	*e*P	Pn	16 06 15.4	-0.8
MG05	Puerto Natales	9.06	143		Pn	16 06 17.0	+0.7
BI05	Punta Hualpn	9.99	40		Pn	16 06 29.4	+0.3
MG04	Isla Riesco	10.32	146		Pn	16 06 34.5	+1.0
H03S1	Juan Fernandez	10.99	10	T	T	16 18 19.1	
	baz=185,slow=73,SNR=210						
H03S2	Juan Fernandez	10.99	10	T	T	16 18 22.0	
	baz=185,slow=73,SNR=199						
BI02	San Fabin de	11.00	46		Pn	16 06 43.2	+0.2
H03S3	Juan Fernandez	11.01	10	T	T	16 18 24.1	
	baz=185,slow=73,SNR=231						
MG02	Cerro Sombrero	11.28	140	Pn	Pn	16 06 46.6	-0.1
MG03	Isla Dawson	11.51	146		Pn	16 06 49.5	-0.3
ML02	Panimavida	11.63	43	Pn	Pn	16 06 52.0	+0.5
GO05	Hualane	12.00	39		Pn	16 06 56.7	0.0
BO02	Sierra Bellavi	12.72	42		Pn	16 07 06.6	+0.1
BO01	Tunca	12.90	40		Pn	16 07 07.7	-1.3
MT01	Popeta	13.27	39		Pn	16 07 12.5	-1.5
VA05	Santo Domingo	13.29	37	Pn	Pn	16 07 15.5	+1.3
BO04	La Punta	13.46	41		Pn	16 07 16.1	-0.5
MT09	Talagante	13.46	39		Pn	16 07 16.8	+0.1
MT13	San Alfonso	13.81	41	Pn	Pn	16 07 21.5	0.0
MT02	Curacav	13.83	38		Pn	16 07 21.8	+0.2
CO04	Los Peladeros	14.95	36		Pn	16 07 37.2	+0.1
CO02	Combarbal	15.67	34	IAmb	IAmb	16 07 53.9	
	comp=Z,22nm,0.6s						
TRQA	Tornquist	15.85	72	Pn	Pn	16 07 49.7	+1.0
CO06	Fray Jorge	15.90	31	Pn	Pn	16 07 49.6	+0.2
CO06				IAmb	IAmb	16 08 00.2	
	comp=Z,45nm,1.1s						
CO03	El Pedregal	16.12	34		Pn	16 07 54.3	+2.0
CO03				IAmb	IAmb	16 07 57.3	
	comp=Z,21nm,0.6s						
GO04	Tololo Observa	16.66	33	Pn	Pn	16 07 56.8	-2.6
GO04				IAmb	IAmb	16 08 09.8	
	comp=Z,62nm,0.9s						
EFI	East Falkland	16.87	123	Pn	Pn	16 07 58.4	-3.2
CO01	Juntas del Tor	17.12	35	P	P	16 08 06.8	-0.1
CO01				IAmb	IAmb	16 08 15.5	
	comp=Z,48nm,1.4s						
LCO	Las Campanas	17.74	32	P	Pn	16 08 12.7	-0.2
AC05	El Transito	18.06	32		Pn	16 08 17.5	+0.8
AC05				IAmb	IAmb	16 08 24.3	
	comp=Z,32nm,0.8s						
PB14	IPOC Station P	21.87	27	P	P	16 08 58.2	-0.6
PMSA	Palmer Station	22.26	161	LR	LR	16 14 10.9	
	comp=Z,696nm,21.4s,baz=328,slow=28						
PSAL	Palomas, Salto	22.94	62	*e*P	P	16 09 08.6	-1.2
PB03	IPOC Station P	24.48	26	P	P	16 09 24.7	-0.3
PB07	IPOC Station P	24.74	26	P	P	16 09 26.9	-0.5
PLTB	Pedras Altas	25.09	68	*e*P	P	16 09 30.2	0.0
CPSB	Cacapava Do Su	26.06	66	*e*P	P	16 09 38.9	-0.3
CPUP	Villa Florida	26.55	54	P	P	16 09 45.5	+2.0
	comp=Z,29nm,1.1s,baz=228,slow=9.6,SNR=20						
CPUP				LR	LR	16 20 36.8	
	comp=Z,677nm,18.7s,baz=220,slow=37						
	comp=Z,29nm,1.1s						
CPUP	Villa Florida	26.55	54	P	P	16 09 45.3	+1.8
CPUP				IAmb	IAmb	16 09 51.2	
	comp=Z,23nm,1.0s						
RPN	Rapa Nui	28.56	298	LR	LR	16 18 11.2	
	comp=Z,1μm,21.9s,baz=122,slow=29						
MURT	Porto Murtinho	30.09	48	*e*P	P	16 10 13.7	-1.4
LPAZ	La Paz	30.40	25	P	P	16 10 22.9	+4.3
	comp=Z,1.7nm,0.7s,baz=244,slow=5.7,SNR=6.5						
	comp=Z,1.7nm,0.7s						
LPAZ	La Paz	30.40	25	*e*P	P	16 10 17.8	-0.7
AMBA	Amambai (Brazi	30.52	53	*e*P	P	16 10 19.1	+0.2
NNA	Nana	32.82	8	LR	LR	16 20 25.6	
	comp=Z,684nm,20.4s,baz=194,slow=29						
SIV	San Ignacio	33.28	37	LR	LR	16 24 10.1	
	comp=Z,355nm,19.5s,baz=222,slow=36						
PTLB	Pontes e Lacer	34.62	40		P	16 10 54.0	-0.9
PTLB				IAmb	IAmb	16 11 14.1	
	comp=Z,14nm,1.3s						
PTLB	Pontes e Lacer	34.62	40	*e*P	P	16 10 54.7	-0.1
VAO	Valinhos	35.34	64	P	P	16 11 01.2	0.0
VAO				IAmb	IAmb	16 11 06.6	
	comp=Z,17nm,1.2s						
SALV	Santo Antonio	35.88	45	*e*P	P	16 11 05.4	-0.3
ATAH	Atahualpa	37.51	5	LR	LR	16 23 00.6	
	comp=Z,626nm,19.4s,baz=195,slow=30						
PDRB	Porto dos Gac	39.08	40	*e*P	P	16 11 32.5	-0.4
CLDB	Colider	40.16	41	*e*P	P	16 11 41.2	-0.7
BDFB	Brasilia	40.28	55	P	P	16 11 45.2	+2.3
	comp=Z,8.1nm,1.0s,baz=208,slow=4.7,SNR=8.1						
	comp=Z,8.1nm,1.0s						
DIAM	Diamantina, MG	40.87	62	*e*P	P	16 11 47.6	-0.3
SNDB	Serra Nova Dou	41.45	47	*e*P	P	16 11 52.2	-0.3
VNA3	Neumayer Olymp	42.56	153	⇓P	P	16 12 02.0	+1.0
	comp=Z,4.1nm,0.8s						
JANB	Januaria	42.94	58	*e*P	P	16 12 04.6	-0.1
VNA2	Neumayer--Watz	43.32	153	⇓P	P	16 12 05.3	-1.8
	comp=Z,4.0nm,0.6s,baz=248,slow=9.2						
NPGB	Novo Progresso	43.74	39	*e*P	P	16 12 10.7	-0.4
SNAA	Sanae	44.71	154	LR	LR	16 28 22.8	
	comp=Z,213nm,18.9s,baz=268,slow=33						
QSPA	South Pole Qui	45.54	180	LR	LR	16 28 22.1	
	comp=Z,186nm,18.3s,baz=142,slow=32						
SMTB	Santa Maria do	46.03	49	*e*P	P	16 12 29.3	-0.1
ROSC	El Rosal	49.70	9	LR	LR	16 31 48.2	
	comp=Z,1μm,20.1s,baz=245,slow=33						
VNDA	Vanda	52.12	194	LR	LR	16 32 47.7	
	comp=Z,228nm,18.7s,baz=123,slow=33						
ELIB	Princess Elisa	52.38	158	*d*P	P	16 13 17.6	+0.1
	comp=Z,5.8nm,1.0s						
SDV	Santo Domingo	54.19	13	LR	LR	16 35 33.2	
	comp=Z,340nm,18.5s,baz=244,slow=34						
JTS	Las Juntas de	54.84	355	LR	LR	16 31 10.8	
	comp=Z,228nm,20.9s,baz=184,slow=29						
RCBR	Riachuelo	55.26	59	LR	LR	16 38 34.7	
	comp=Z,148nm,19.2s,baz=204,slow=37						
MDP	Montagnes des	55.80	35	LR	LR	16 36 27.8	
	comp=Z,350nm,20.1s,baz=166,slow=35						
PPT2	Papeete2	62.55	272	*e*S	S	16 22 58.3	+0.7
	comp=Z,188nm,28.2s						
PPT2				*e*SS	SS	16 26 59.6	-2.0
	comp=Z,91nm,27.5s						
PPT2				*e*LR	LR	16 33 02.1	
	comp=Z,197nm,22.0s						
PPT2				*e*LR	LR	16 33 06.7	
	comp=Z,270nm,25.0s						
PPT	Papeete	62.56	272	LR	LR	16 34 56.6	
	comp=Z,130nm,21.1s,baz=201,slow=29						
CMIG	Matias Romero	62.76	345	LR	LR	16 35 37.4	
	comp=Z,110nm,21.6s,baz=172,slow=30						
SJG	San Juan	64.00	16	LR	LR	16 41 47.2	
	comp=Z,117nm,20.3s,baz=174,slow=35						
MAW	Mawson	64.76	166	LR	LR	16 40 20.6	
	comp=Z,359nm,19.7s,baz=208,slow=34						
RAR	Rarotonga	67.43	262	LR	LR	16 35 47.1	
	comp=Z,158nm,19.9s,baz=126,slow=28						
URZ	Urewera	71.43	234	LR	LR	16 38 39.5	
	comp=Z,178nm,20.1s,baz=132,slow=29						
LPIG	La Paz	73.47	332	LR	LR	16 40 20.0	
	comp=Z,138nm,21.7s,baz=26,slow=29						
RAO	Raoul Island	74.47	244	LR	LR	16 40 03.5	
	comp=Z,104nm,20.9s,baz=128,slow=29						
SUR	Sutherland	75.62	121	LR	LR	16 41 49.7	
	comp=Z,328nm,21.3s,baz=220,slow=30						
TXAR	Lajitas Array	76.49	340	P	P	16 16 02.0	+6.5
	comp=Z,0.7nm,0.9s,baz=142,slow=6.3,SNR=5.3						
	comp=Z,0.7nm,0.9s						
TKL	Tuckaleechee C	80.03	358	LR	LR	16 46 07.1	
	comp=Z,150nm,21.2s,baz=180,slow=31						
ANMO	Albuquerque	82.53	339	LR	LR	16 45 52.3	
	comp=Z,85nm,21.9s,baz=144,slow=30						
TSUM	Tsumeb	82.73	110	LR	LR	16 45 40.6	
	comp=Z,143nm,21.1s,baz=160,slow=30						
LBTB	Lobatse	83.80	119	LR	LR	16 48 16.1	
	comp=Z,133nm,21.0s,baz=222,slow=32						
PFO	Pinyon Flats O	84.29	331	LR	LR	16 47 32.0	
	comp=Z,33nm,18.1s,baz=154,slow=31						
DBIC	Dimbokro	85.03	76	LR	LR	16 47 30.5	
	comp=Z,128nm,21.7s,baz=218,slow=31						
SADO	Sadowa	89.11	1	LR	LR	16 55 54.4	
	comp=Z,48nm,20.2s,baz=187,slow=35						
NVAR	Mina Array Bea	89.28	332	P	P	16 17 08.6	+6.9
	comp=Z,0.4nm,0.6s,baz=172,slow=6.5,SNR=2.3						
NVAR				LR	LR	16 48 16.5	
	comp=Z,74nm,21.6s,baz=174,slow=29						
	comp=Z,0.4nm,0.6s						
DZM	Mont Dzumac	89.42	239	*e*LR	LR	16 45 28.1	
	comp=Z,341nm,27.0s						
LSZ	Lusaka	92.56	114	LR	LR	16 53 26.0	
	comp=Z,195nm,21.5s,baz=213,slow=32						
TORD	Torodi Ar. Bea	94.15	76	LR	LR	16 53 19.6	
	comp=Z,72nm,20.6s,baz=225,slow=32						
STKA	Stephens Creek	94.41	215	LR	LR	16 52 25.7	
	comp=Z,241nm,19.1s,baz=196,slow=31						
NEW	Newport	97.81	337	LR	LR	16 57 40.4	
	comp=Z,60nm,18.1s,baz=121,slow=33						
H11S2	WAKE ISLAND Hy	118.41	268	T	T	18 32 26.0	
	baz=130,slow=74						
H11S1	WAKE ISLAND Hy	118.42	268	T	T	18 32 23.7	
	baz=130						
H11S3	WAKE ISLAND Hy	118.42	268	T	T	18 32 25.7	
	baz=130,slow=74						
CMAR	Chiang Mai Arr	153.83	180	PKPbc	PKPbc	16 24 03.6	-1.5
	comp=Z,0.4nm,0.8s,baz=228,slow=2.7,SNR=4.2						
NJ2	Nanjing	159.91	238	*e*P	PKPdf	16 24 06.4	+1.8
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	167.03	40	PKP	PKPdf	16 24 11.3	+0.7
	comp=Z,0.2nm,0.2s,baz=318,slow=1.9,SNR=1.6						
MKAR	Makanchi Array	168.26	74	PKP	PKPdf	16 24 13.8	+2.1
	comp=Z,0.5nm,0.9s,baz=282,slow=2.8,SNR=1.7						
MKAR				PKPab	PKPab	16 25 21.6	+1.1
	comp=Z,1.3nm,1.0s,baz=298,slow=2.6,SNR=5.1						
HHC	Hu-ho-hao-te	169.87	252	*e*P	PKPdf	16 24 09.8	-3.3
WMQ	Urumqi	171.97	92	*e*PKP	PKPdf	16 24 15.7	+1.7
WMQ				sPKP		16 24 38.1	
WMQ				LR	LR		
	comp=E,730nm,23.9s						
WMQ				LR	LR		
	comp=Z,120nm,24.0s						

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*GCG **01** 16:04:31.5±0.6, 14°.44N×95°.49W, h26km, MD4.5, ML4.6, Presumed earthquake*

*MEX **01** 16:04:50.4±1.0, 15°.03N×94°.18W, h14km±20km, MD4.4*

ISC 01 16:04:37.9±1.5**, 14°.89N**±0°.05×**94°.48W**±0°.02**, h0km**±11km**, n32, σ1s72**/52**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARR	Arriaga	1.46	22	*e*P	Pb	16 05 08.0	+2.1
CARR				*e*S	Sg	16 05 23.9	-0.9
PCIG		1.46	56	*e*P	Pg	16 05 08.4	+2.4
PCIG				*e*S	Sg	16 05 22.2	-2.7
HUIG	Huatulco	1.80	299	*e*P	Pg	16 05 16.7	+4.3
HUIG				*e*S	Sg	16 05 35.8	+0.1
PATR	El Naranjo	2.18	84	*e*P	Pb	16 05 19.3	+1.0
PATR				*e*S	Sn	16 05 41.9	-1.5
CMIG	Matias Romero	2.23	350	*e*P	Pg	16 05 20.6	+0.1
CMIG				*e*S	Sn	16 05 44.9	+0.6
PAVE	Pavencul	2.25	82	*e*P	Pb	16 05 20.3	+0.8
PAVE				*e*S	Sn	16 05 42.0	-3.0
TGIG		2.29	35	*e*P	Pg	16 05 21.4	-0.4
TGIG				*e*S	Sn	16 05 45.7	-0.2
TGIG		2.29	35	*i* P	Pg	16 05 21.4	-0.4
TGIG				IAML		16 05 50.0	
	comp=E,1μm,0.4s						
CHUJ	Union Juarez	2.30	85	*e*P	Pb	16 05 20.9	+0.5
CHUJ				*e*S	Sn	16 05 44.6	-1.9
SMCA	Catarina	2.32	90	*i* P	Pb	16 05 21.9	+1.3
UXUV	UXUV	2.44	7	*e*P	Pg	16 05 24.1	-0.5
UXUV				*e*S	Sb	16 05 52.1	-1.1
CCIG	Comitan	2.65	58	*e*P	Pb	16 05 26.6	+0.3
CCIG				*i* S	Sn	16 05 56.5	+1.5
CCIG	Comitan	2.65	58	*i* P	Pg	16 05 28.0	-0.7
CCIG				IAML		16 06 03.0	
	comp=N,785nm,0.6s						
HUEH	Huehuetenango	2.91	81	*e*P	Pb	16 05 31.4	+0.7
HUEH				*e*S	Sn	16 06 01.7	+0.3
HUEH	Huehuetenango	2.91	81	*i* P	Pb	16 05 31.7	+1.0
HUEH				IAML		16 06 11.3	
	comp=E,2μm,0.4s						
SOKI	Kika Raxquin	2.98	91	*i* P	Pb	16 05 32.2	+0.1
STG2	El Palmar, Qui	3.04	98	*i* P	Pn	16 05 28.5	+1.2
STG8	El Palmar, Qui	3.06	98	*i* P	Pn	16 05 28.8	+1.1
STG8				IAML		16 06 03.5	
	comp=E,968nm,0.2s						
STG5	El Palmar, Qui	3.07	99	*i* P	Pn	16 05 28.9	+1.2
NEUV	Arroyo Zacate	3.08	336	*e*P	Pb	16 05 33.4	-0.2
NEUV				*e*S	Sn	16 06 07.4	+2.0
QUIS	Sacapulas	3.30	83	*e*P	Pb	16 05 37.2	-0.1
YOIG	Yosondua	3.54	304	*e*P	Pg	16 05 43.9	-1.9
YOIG				*e*S	Sn	16 06 13.9	-3.3
PNIG	Pinotepa	3.82	294	*e*P	Pb	16 05 45.9	-0.3
PNIG				*e*S	Sn	16 06 24.7	+1.0
APG	El Apazote	3.88	88	*i* P	Pb	16 05 45.4	-2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TXIG	Tlaxiaco	3.94	307	eP	Pb	16 05 48.8	+0.3
TXIG				eS	Sn	16 06 23.0	-4.0
TOIG	Toxpalan	4.04	322	eP	Pb	16 05 50.5	+0.5
TOIG				eS	Sn	16 06 29.4	+0.1
HLIG	Huajuapan de L	4.33	313	eP	Pb	16 05 53.8	-1.2
HLIG				iS	Sn	16 06 34.1	-2.4
FTIG	Fresnillo de T	4.62	311	eP	Pb	16 05 58.3	-1.6
FTIG				iS	Sn	16 06 44.1	+0.7
MGIG	Malinaltepec	4.63	301	eP	Pb	16 05 57.4	-2.7
MGIG				eS	Sn	16 06 45.0	+1.2
CRIG	Cruz Grande	4.84	293	eP	Pb	16 06 00.8	-2.8
CRIG				eS	Sn	16 06 48.1	-0.7
PETF	Flores	4.87	65	iP	Pn	16 05 58.4	+5.9
DAIG	Los Arroyos	5.41	294	eP	Pn	16 06 02.6	+2.8
DAIG				iS	Sn	16 07 02.3	-0.5

TRN 01 16:06:16.4, 15.36N×60.71W, h60km, MD3.5, East of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLPL	La Plaine	0.52	267	eP	Pn	16 06 29.9	+1.3
DLPL				eS	Sn	16 06 39.6	+2.2
ILAM	Ilet Lapin Mar	0.60	195	eP	Pn	16 06 30.8	+1.3
ILAM				eS	Sn	16 06 41.1	+2.1
DWS	Wesley	0.61	290	eP	Pn	16 06 30.7	+1.1
DWS				eS	Sn	16 06 40.9	+1.7
SVN	Savane Anatole	0.67	221	eP	Pn	16 06 31.7	+1.3
SVN				eS	Sn	16 06 42.5	+1.9
DSLB	Salisbury	0.69	277	eP	Pn	16 06 32.1	+1.6
DSLB				eS	Sn	16 06 42.9	+2.1
BIM	Bigot	0.90	203	eP	Pn	16 06 34.6	+1.3
BIM				eS	Sn	16 06 47.3	+1.7
DSDZ	La Diserade, G	1.01	340	eP	Pn	16 06 35.2	+0.7
DSDZ				eS	Sn	16 06 50.0	+1.9
TBG	Guadaloupe-3	1.02	299	eP	Pn	16 06 35.7	+1.0
TBG				eS	Sn	16 06 49.1	+0.7
MMLZ	Guadeloupe Bro	1.15	307	eP	Pn	16 06 37.5	+1.1
MMLZ				eS	Sn	16 06 52.4	+1.2
ATGZ	Broadband at L	1.22	307	eP	Pn	16 06 38.5	+1.1
ATGZ				eS	Sn	16 06 54.5	+1.5
SLBI	Saint Lucia, B	1.35	191	eP	Pn	16 06 40.0	+0.9
SLBI				eS	Sn	16 06 57.0	+0.9
DHSZ	Broadband at M	1.36	312	eP	Pn	16 06 40.4	+1.2
DHSZ				eS	Sn	16 06 57.9	+1.5
SLAC	Saint Lucia, A	1.46	187	eP	Pn	16 06 41.7	+1.1
SLAC				eS	Sn	16 07 00.2	+1.4
MBWH	Windy Hill	1.98	314	eP	Pn	16 06 49.1	+1.4
MBWH				eS	Sn	16 07 13.8	+2.5
MBFL	Flemmings, Mon	2.00	314	eP	Pn	16 06 50.1	+2.2
MBFL				eS	Sn	16 07 14.3	+2.5
SVB	Belmont	2.14	194	eP	Pn	16 06 51.1	+1.3
SVB				eS	Sn	16 07 16.7	+1.5
ANWB	Willy Bob	2.52	336	eP	Pn	16 06 55.9	+0.9
ANWB				eS	Sn	16 07 25.0	+0.5

ISK 01 16:23:30.9, 34.31N×33.43E, h20km, ML2.9/12
NIC 01 16:23:35.1, 34.56N×33.84E, h13km±3km, Ml2.8/11
GII 01 16:23:35.5±0.0, 34.580N±0.003×33.770E±0.001, h0km, Mws2.7, confirmed
GRAL 01 16:23:38.5±0.4, 34.60N×34.06E, h110km±29km, MD3.2
AFAD 01 16:23:40.0, 35.01N×33.89E, h24km±3km, ML2.3
ISC 01 16:23:34.1±1.3, 34.56N±0.02×33.86E±0.03, h4km±11km, n62, σ0s88/100, 3D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PARAL	Paralimni	0.46	19	P	Pb	16 23 44.8	+0.1
PARAL				S	Sb	16 23 52.4	+0.5
PARAL				AML	AML	16 23 55.3	
	2.3nm,0.5s						
PARAL				AML	AML	16 23 58.1	
	2.5nm,0.7s						
MVOU	Mavrovouni	0.49	338⇓	iP	Pg	16 23 43.4	-0.1
MVOU				S	Sg	16 23 51.6	+1.6
MVOU				AML	AML	16 23 56.0	
	1.0nm,0.4s						
MVOU				AML	AML	16 23 57.4	
	1.0nm,0.3s						
ASGA	Asgata	0.55	294⇓	iP	Pg	16 23 44.0	-0.7
ASGA				S	Sb	16 23 53.6	-1.0
ASGA				AML	AML	16 23 57.1	
	1.1nm,0.5s						
ASGA				AML	AML	16 24 04.9	
	1.2nm,0.4s						
CSS	Mathiatis	0.59	313	Pg	Pg	16 23 44.3	-1.2
CSS	Mathiatis	0.59	313⇓	iP	Pg	16 23 44.4	-1.2
CSS				S	Sb	16 23 55.1	-0.7
CSS				AML	AML	16 23 56.6	
	1.0nm,0.3s						
CSS				AML	AML	16 23 59.2	
	1.1nm,0.4s						
CSS	Mathiatis	0.59	313	P	Pg	16 23 44.2	-1.2
ATHAL	Athalassa	0.69	327	P	Pb	16 23 49.0	+0.2
ATHAL				S	Sb	16 24 00.0	+1.3
ATHAL				AML	AML	16 24 03.9	
	2.8nm,0.4s						
ATHAL				AML	AML	16 24 06.1	
	3.2nm,0.8s						
LFK	Lefkose	0.77	340	Pg	Pb	16 23 50.1	+0.1
LFK				Sg	Sn	16 24 04.0	+0.2
XYLS	Xyliatos	0.81	304	P	Pg	16 23 50.2	+0.6
XYLS				S	Sb	16 24 01.2	-0.7
XYLS				AML	AML	16 24 02.8	
	1.8nm,0.5s						
XYLS				AML	AML	16 24 06.8	
	1.1nm,0.2s						
APOL	The Sanctuary	0.83	278	P	Pb	16 23 50.9	-0.2
APOL				S	Sb	16 24 03.0	+0.4
APOL				AML	AML	16 24 03.6	
	1.8nm,0.4s						
APOL				AML	AML	16 24 04.1	
	1.9nm,0.5s						
TROD	Troodos	0.91	296	P	Pg	16 23 50.9	-0.5
TROD				S	Sb	16 24 06.0	+1.1
TROD				AML	AML	16 24 08.8	
	1.6nm,0.5s						
TROD				AML	AML	16 24 11.5	
	1.2nm,0.4s						
NATA	Nata	1.09	282	P	Pb	16 23 55.6	+0.1
NATA				S	Sn	16 24 11.8	+0.3
NATA				AML	AML	16 24 17.1	
	1.6nm,0.7s						
NATA				AML	AML	16 24 22.5	
	1.4nm,0.7s						
ALFC	Alefka	1.20	300	P	Pg	16 23 56.5	-0.5
ALFC				S	Sg	16 24 11.9	-0.7
ALFC				AML	AML	16 24 15.8	
	1.4nm,0.4s						
ALFC				AML	AML	16 24 17.9	
	1.4nm,0.7s						
AKMS	Akamas	1.34	290	P	Pn	16 23 59.3	-0.2
AKMS				S	Sn	16 24 17.7	0.0
AKMS				AML	AML	16 24 20.0	
	1.3nm,0.7s						
AKMS				AML	AML	16 24 24.1	
	0.7nm,0.5s						
TISA	Tisan-Mersin	1.61	355	Pn	Pn	16 24 02.6	-0.6
BECE	Buyukeceli-Mer	1.61	351	Pn	Pn	16 24 02.4	-0.9
BHL	Bhannes	1.62	113	eP	Pn	16 24 04.4	+0.9
GULN	MERSIN_Gulnar	1.64	351	P	Pn	16 24 03.5	-0.2
GULN				S	Sn	16 24 24.5	-0.7
GULN				IAML		16 24 28.0	
	comp=E,46nm,0.8s						
KARG	Kargicak-Mersi	1.65	356	Pn	Pn	16 24 03.2	-0.6
KARG				Sn	Sb	16 24 26.6	+0.6
DQRL	Deir Qamar	1.65	121	eP	Pn	16 24 04.8	+0.8
DQRL				eS	Sn	16 24 24.4	-1.3
IKL	Isikli	1.68	355	Pn	Pn	16 24 03.6	-0.6
TEPK	Tepekoy-MERSIN	1.68	351	Pn	Pn	16 24 03.5	-0.8
HWQ	Hawqa	1.75	99	eP	Pn	16 24 05.6	+0.3
HWQ				eS	Sn	16 24 25.6	-2.4
QRWL	Qaraoun	1.82	123	eP	Pn	16 24 07.1	+0.9
ZAHL	Zahle	1.82	112	eP	Pn	16 24 06.5	+0.2
HNTI	Hanita	1.83	143	P	Pn	16 24 07.5	+1.2
HNTI				S	Sn	16 24 29.6	-0.4
KEBE	Keben-Mersin	1.89	356	Pn	Pn	16 24 06.8	-0.4
TEVE	Tevekalti-Mers	1.90	350	Pn	Pn	16 24 06.6	-0.8
BEIL	Beino	1.92	90	eP	Pn	16 24 07.4	-0.1
BEIL				eS	Sn	16 24 28.7	-3.4
RCY	Rachaya	1.95	122	eP	Pn	16 24 08.6	+0.4
MMA0B	Mount Meron ar	2.01	140	P	Pn	16 24 09.4	+0.6
MMA0B				S	Sn	16 24 33.8	-0.6
GEM	Giv'at Ha'Em	2.02	131	P	Pn	16 24 09.6	+0.8
GEM				S	Sn	16 24 34.6	+0.2
NATI	Neve Ativ	2.03	129	P	Pn	16 24 10.0	+1.0
NATI				S	Sn	16 24 34.2	-0.5
OFRI	`Ofer	2.15	154	P	Pn	16 24 10.4	-0.4
OFRI				S	Sn	16 24 37.3	-0.5
KSHT	Keshet	2.26	134	P	Pn	16 24 13.1	+0.8
KSHT				S	Sn	16 24 40.7	0.0
MMLI	Mount Malkishu	2.49	148	P	Pn	16 24 16.0	+0.7
MMLI				S	Sn	16 24 46.1	-0.1
SLTI	Sal'it	2.52	157	P	Pn	16 24 16.0	+0.3
SLTI				S	Sn	16 24 46.9	+0.1
HDMB	Hadim	2.65	335	Pn	Pn	16 24 15.4	-2.3
KRMN	Karaman	2.65	350	Pn	Pn	16 24 16.9	-0.8
YURE	YUREGIR	2.68	32	P	Pn	16 24 18.1	+0.1
HMDT	Nahal Hemdat	2.69	148	P	Pn	16 24 18.7	+0.6
HMDT				S	Sn	16 24 50.9	-0.2
SALP	Salfit	2.72	155	P	Pn	16 24 18.6	0.0
SALP				S	Sn	16 24 51.7	-0.3
KKBE	Karaman, Kazim	2.76	345	P	Pn	16 24 20.6	+1.4
KKBE				S	Sn	16 24 52.3	-0.7
KKBE				IAML		16 24 58.0	
	comp=E,29nm,1.0s						
KKBE				IAML		16 24 59.0	
	comp=N,19nm,0.8s						
GULE	Gulek	2.82	15	P	Pn	16 24 21.4	+1.4
KERG	Konya-Eregli	2.86	4	P	Pn	16 24 21.6	+1.0
KARA	Karaisali	2.86	19	Pn	Pn	16 24 21.0	+0.5
DSI	Dead Sea	3.24	156	P	Pn	16 24 26.0	+0.3
DSI				S	Sn	16 25 04.4	-0.3
SEDI	Konya, Seydise	3.35	330	S	Sn	16 25 08.3	+0.7
YTIR	Yattir	3.36	161	P	Pn	16 24 27.8	+0.4
YTIR				S	Sn	16 25 07.1	-0.6
MSBI	Mazada	3.47	158	P	Pn	16 24 29.3	+0.4
MSBI				S	Sn	16 25 10.3	-0.1
NIDE	Nigde/Merkez-G	3.51	12	P	Pn	16 24 31.1	+1.5
KONT	Konya--Tatoy	3.59	341	P	Pn	16 24 32.8	+2.3
KZIT	Kziot	3.67	173	P	Pn	16 24 31.4	-0.2
KZIT				S	Sn	16 25 14.6	-0.7
BSIR	Belisirma, Guz	3.72	5	P	Pn	16 24 33.7	+1.3
YAHY	KAYSERI_Yahyal	3.73	19	P	Pn	16 24 33.0	+0.4
ALIN	Konya, Altinte	3.81	348	P	Pn	16 24 35.4	+1.7
IDAN	Idan	3.90	162	P	Pn	16 24 35.4	+0.6
IDAN				S	Sn	16 25 20.7	-0.3
PRNI	Paran	4.31	167	P	Pn	16 24 40.7	+0.3
PRNI				S	Sn	16 25 30.7	-0.3
KRMI	Paran Flat	4.49	170	P	Pn	16 24 43.3	+0.4
KRMI				S	Sn	16 25 35.3	-0.3
HRFI	Mount Harif	4.62	167	P	Pn	16 24 45.1	+0.4
HRFI				S	Sn	16 25 38.4	-0.3
MBRI	Mt Berech	4.83	169	P	Pn	16 24 48.2	+0.5
MBRI				S	Sn	16 25 43.8	-0.3
EIL	Elat	4.96	169	P	Pn	16 24 50.0	+0.6
EIL				S	Sn	16 25 47.2	0.0

SJA 01 16:31:38.2±0.7, 33.12S×68.99W, h16km±2km, ML3.6, MW3.7
GUC 01 16:31:39.5±0.9, 33.17S×69.08W, h10km±12km, ML3.4
ISC 01 16:31:37.6±1.1, 33.14S±0.02×68.94W±0.02, h14km±10km, n57, σ1s75/99, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAL	Salagasta	0.56	10	eP	Pb	16 31 49.7	+0.6
ASAL				eS	Sb	16 31 57.5	+0.4
MT08	Bocatoma Ro	0.95	251	eP	Pg	16 31 56.2	+0.2
MT08	Bocatoma Ro	0.95	251	eP	Pb	16 31 56.0	+0.1
MT08				eS	Sn	16 32 09.6	-0.7
MT04	Ro Olivares	1.03	255	eP	Pg	16 31 57.6	+0.1
MT04	Ro Olivares	1.03	255	eP	Pb	16 31 57.5	+0.1
MT04				eS	Sn	16 32 11.8	-0.6
LMEL	Las Melosas	1.27	236	eP	Pg	16 32 02.1	+0.1
LMEL				eS	Sg	16 32 19.1	+0.5
LMEL				IAML		16 32 19.9	
	comp=N,3μm,0.1s						
MT13	San Alfonso	1.27	241	eP	Pg	16 32 02.1	0.0
MT13				eS	Sg	16 32 18.9	+0.2
MT13				IAML		16 32 19.6	
	comp=N,2μm,0.2s						
MT13	San Alfonso	1.27	241	eP	Pg	16 32 02.1	0.0
MT13				eS	Sg	16 32 19.2	+0.5
MT13				IAML		16 32 21.8	
	comp=Z,867nm,0.4s						
MT10	Hacienda Santa	1.34	264	eP	Pb	16 32 03.0	+0.4
MT10				IAML		16 32 22.6	
	comp=N,4μm,0.3s						
MT16	CCHEN	1.35	257	eP	Pg	16 32 03.3	-0.3
MT16				IAML		16 32 23.6	
	comp=N,341nm,0.3s						
MT03	Universidad Ad	1.36	255	eP	Pb	16 32 03.1	+0.2
MT03				eS	Sg	16 32 21.6	+0.2
MT03				IAML		16 32 23.1	
	comp=E,1μm,0.4s						
MT03	Universidad Ad	1.36	255	eP	Pg	16 32 03.5	-0.2
MT03				eS	Sg	16 32 22.2	+0.8
MT03				IAML		16 32 22.8	
	comp=Z,886nm,0.2s						
MT14	Cerro Cal¡n	1.36	259	eP	Pg	16 32 03.5	-0.2
MT14				eS	Sg	16 32 21.7	+0.3
MT14				IAML		16 32 25.3	
	comp=E,1μm,0.4s						
RTLS	Leoncito	1.37	347	eP	Pg	16 32 03.9	-0.1
RTLS				eS	Sg	16 32 24.3	+2.5
RTLS				IAML		16 32 25.8	
	comp=Z,1μm,0.6s						
MT15	Las Vizcachas	1.39	250	eP	Pg	16 32 04.1	-0.1
MT15				IAML		16 32 25.0	
	comp=N,1μm,0.2s						
VA03	San Esteban	1.40	285	eP	Pg	16 32 04.1	-0.5
VA03				IAML		16 32 23.8	
	comp=E,2μm,0.3s						
VA03	San Esteban	1.40	285	eP	Pg	16 32 04.1	-0.5
VA03				eS	Sg	16 32 23.1	+0.3
VA03				IAML		16 32 23.8	
	comp=Z,1μm,0.7s						
PEL	Peldehue	1.46	269	eP	Pb	16 32 04.9	+0.3
PEL				IAML		16 32 24.9	
	comp=N,611nm,0.3s						
PEL	Peldehue	1.46	269	eP	Pn	16 31 59.6	-4.0
PEL				eS	Sg	16 32 24.8	+0.1
PEL				IAML		16 32 25.9	
	comp=Z,403nm,0.3s						
MT12	Pirque	1.47	246	eP	Pg	16 32 05.5	-0.2
MT12				IAML		16 32 26.2	
	comp=N,898nm,0.3s						
MT05	Renca	1.52	260	eP	Pg	16 32 06.6	-0.3
MT05				eS	Sg	16 32 27.7	+1.0
MT05				IAML		16 32 27.8	
	comp=Z,554nm,0.8s						
ZON	Zonda	1.60	8	eP	Pn	16 31 52.0	-14
ZON				eS	Sg	16 32 30.0	+0.7
ZON				IAML		16 32 33.8	
	comp=Z,262nm,0.2s						
SJA	San Juan	1.64	12	eP	Pb	16 32 08.3	+0.7
SJA				eS	Sg	16 32 30.9	+0.5
SJA				IAML		16 32 31.4	
	comp=Z,547nm,0.2s						
RFA	San Rafael	1.67	166	eP	Pn	16 32 07.2	+0.6
RFA				eS	Sg	16 32 33.0	+1.4
RFA				IAML		16 32 35.1	
	comp=Z,1μm,0.3s						
ACAN	Cantantal	1.71	60	eP	Pn	16 32 08.2	+1.1
ACAN				IAML		16 32 48.6	
	comp=Z,3μm,0.3s						
ROCH	El Roble	1.74	275	eP	Pb	16 32 10.1	+0.5
ROCH				eS	Sg	16 32 33.5	-0.3
ROCH				IAML		16 32 36.6	
	comp=E,487nm,0.7s						
ROCH				IAML		16 32 36.6	
	comp=E,942nm,0.6s						
MT09	Talagante	1.82	249	eP	Pb	16 32 10.7	-0.1
MT09				eS	Sg	16 32 35.7	-0.6
MT09				IAML		16 32 37.0	
	comp=N,892nm,0.2s						
MT02	Curacav	1.84	266	eP	Pb	16 32 11.2	+0.2
MT02				IAML		16 32 37.1	
	comp=N,560nm,0.4s						
MT02	Curacav	1.84	266	eP	Pb	16 32 11.3	+0.2
MT02				eS	Sg	16 32 36.3	-0.6
MT02				IAML		16 32 36.8	
	comp=Z,507nm,0.8s						
RTLL	Cerro Villicun	1.85	13	eP	Pb	16 32 11.1	-0.1
RTLL				eS	Sb	16 32 35.7	+1.4
RTLL				IAML		16 32 37.4	
	comp=Z,1μm,0.4s						
MT01	Popeta	2.06	249	eP	Pb	16 32 13.6	-1.1
MT01				IAML		16 32 43.6	
	comp=N,784nm,0.2s						
MT01	Popeta	2.06	249	eP	Pb	16 32 13.9	-0.9
MT01				eS	Sg	16 32 42.8	-1.0
MT01				IAML		16 32 43.6	
	comp=Z,790nm,0.3s						
VA06	Catapilco	2.06	286	eP	Pb	16 32 14.2	-0.7
BO01	Tunca	2.18	234	eP	Pb	16 32 15.9	-0.9
BO01	Tunca	2.18	234	eP	Pb	16 32 15.7	-1.1
BO01				IAML		16 32 47.3	
	comp=Z,246nm,0.6s						
BO02	Sierra Bellavi	2.25	222	eP	Pn	16 32 15.6	+1.2
BO02				eS	Sb	16 32 45.5	-0.2
BO02				IAML		16 32 50.9	
	comp=Z,146nm,0.2s						
VA01	Torpederas	2.27	272	eP	Pb	16 32 17.6	-0.8
VA01	Torpederas	2.27	272	eP	Pb	16 32 19.4	+1.0
VA01				eS	Sg	16 32 50.0	-0.7
VA01				IAML		16 32 51.5	
	comp=Z,195nm,0.6s						
ACCO	Cerro Coronel	2.55	358	eP	Pb	16 32 21.9	-1.5
ACCO				eS	Sb	16 32 54.1	-0.5
CO02	Combarbal	2.60	317	eP	Pb	16 32 22.6	-1.5
CO02				eS	Sb	16 32 54.1	-1.9
EDS3	Malargue	2.65	188	eP	Pb	16 32 23.6	-1.3
EDS3				eS	Sg	16 33 05.1	+2.3
CO03	El Pedregal	2.73	327	eP	Pb	16 32 25.1	-1.2
CO03				eS	Sb	16 32 58.2	-1.5
CO03				IAML		16 33 06.1	
	comp=Z,311nm,0.9s						
ACHE	Chepes	2.76	45	eP	Pn	16 32 22.4	+0.7
ACHE				eS	Sg	16 33 04.8	-1.6
AVFE	Valle Fertil	2.78	27	eP	Pn	16 32 20.8	-1.0
AVFE				eS	Sb	16 32 59.4	-1.7
AVFE				IAML		16 33 06.2	
	comp=Z,159nm,0.7s						
MRA	San Martin	2.81	76	eP	Pn	16 32 23.9	+1.6
MRA				eS	Sb	16 33 01.8	-0.2
MRA				IAML		16 33 08.7	
	comp=Z,448nm,0.3s						
ACDV	Cuesta del Vie	2.96	357	eP	Pn	16 32 26.9	+2.5
ACDV				eS	Sb	16 33 05.4	-1.1
ACDV				IAML		16 33 11.7	
	comp=Z,173nm,1.2s						
AROD	Rodeo	3.00	351	eP	Pb	16 32 28.7	-2.3
AROD				eS	Sb	16 33 06.9	-0.7
GO05	Hualane	3.10	232	eP	Pn	16 32 28.2	+2.0
GO05				eS	Sb	16 33 10.0	-0.3
GO05				IAML		16 33 17.2	
	comp=Z,134nm,0.9s						
CO01	Juntas del Tor	3.30	342	eP	Pn	16 32 28.5	-0.7
CO01				eS	Sg	16 33 20.3	-3.4
CO01				IAML		16 33 27.7	
	comp=Z,104nm,0.6s						
ML02	Panimavida	3.32	217	eP	Pb	16 32 33.2	-3.1
ML02				eS	Sg	16 33 24.7	+0.5
ML02				IAML		16 33 53.0	
	comp=Z,71nm,0.2s						
GO04	Tololo Observa	3.35	331	eP	Pb	16 32 35.1	-1.9
GO04				eS	Sb	16 33 17.1	-0.7
GO04				IAML		16 33 27.0	
	comp=Z,520nm,0.5s						
ACLC	CERRO LA CRUZ	4.08	25	eP	Pn	16 32 42.2	+2.5
ACLC				eS	Sb	16 33 42.3	+3.8
ACLC				IAML		16 33 50.5	
	comp=Z,72nm,0.4s						
TCA	Tanti	4.10	65	eP	Pn	16 32 37.4	-2.6
TCA				eS	Sg	16 33 46.4	-2.8
TCA				IAML		16 33 50.2	
	comp=Z,220nm,0.5s						
LCO	Las Campanas	4.38	339	eP	Pn	16 32 46.0	+2.0
LCO				eS	Sb	16 33 51.9	+4.4
LCO				IAML		16 34 03.1	
	comp=Z,155nm,0.7s						
VCA	Vinchina	4.43	8	eP	Pn	16 32 48.4	+3.7
VCA				eS	Sb	16 33 51.6	+2.7
VCA				eS	Sg	16 33 54.1	-5.9
VCA				IAML		16 34 12.6	
	comp=Z,118nm,0.4s						
AC05	El Transito	4.44	345	eP	Pn	16 32 48.2	+3.5
AC05				eS	Sb	16 33 54.2	+5.2
AC05				IAML		16 34 14.5	
	comp=Z,50nm,1.0s						
TINO	Tinogasta	5.20	14	eP	Pn	16 32 58.4	+3.3
TINO				eS	Sb	16 34 14.0	+3.3

NEIC 01 16:33:02.1±0.8, 17.90N±0.04×66.96W±0.01, h10km±1km, ML2.6/29, Md2.9/4(RSPR), Error ellipse: s-maj=7.7km s-min=2.4km az=10.0
RSPR 01 16:33:02.6, 17.92N×66.96W, h6km, MD2.9/4, 1C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.09	56		Pg	16 33 04.9	+0.3
GBPR					Sg	16 33 06.6	+0.6
GBPR	Guanica, Bosqu	0.09	56⇑	iP	Pg	16 33 04.9	+0.3
GBPR				eS	Sg	16 33 06.6	+0.6
MLPR	Magueyes Islan	0.09	299		Pg	16 33 04.8	+0.2
MLPR				IAML		16 33 06.9	
	5μm,0.4s						
MLPR				IAML		16 33 07.0	
	10μm,0.3s						
CRPR	Cabo Rojo, PR	0.17	300		Pg	16 33 06.2	+0.2
CRPR				IAML		16 33 09.8	
	2μm,0.3s						
CRPR				IAML		16 33 10.6	
	2μm,0.3s						
CRPR	Cabo Rojo, PR	0.17	300		Sg	16 33 09.2	+1.0
CRPR	Cabo Rojo, PR	0.17	300⇓	eP	Pg	16 33 06.3	+0.4
CRPR				eS	Sg	16 33 09.2	+1.0
LSP	Las Mesas	0.28	334		Pg	16 33 08.4	+0.4
LSP					Sg	16 33 12.8	+1.0
LSP	Las Mesas	0.28	334⇑	iP	Pg	16 33 08.4	+0.4
LSP				eS	Sg	16 33 12.8	+1.0
PRSN	Puerto Rico Se	0.34	329	Pg	Pg	16 33 09.4	+0.1
PRSN				IAML		16 33 15.3	
	2μm,0.3s						
PRSN				IAML		16 33 17.0	
	1μm,0.3s						
PRSN	Puerto Rico Se	0.34	329		Sg	16 33 15.0	+1.2
PRSN	Puerto Rico Se	0.34	329⇑	iP	Pg	16 33 09.4	+0.2
PRSN				eS	Sg	16 33 15.0	+1.2
OBIP	Obispado Ponce	0.35	70		Pg	16 33 09.7	+0.2
OBIP					Sg	16 33 15.5	+1.3
OBIP	Obispado Ponce	0.35	70	IAML		16 33 16.0	
	comp=N,64nm,0.3s						
OBIP	Obispado Ponce	0.35	70⇓	iP	Pg	16 33 09.7	+0.2
OBIP				eS	Sg	16 33 15.5	+1.3
CELP	Cerrillos	0.39	67	IAML		16 33 17.1	
	comp=N,208nm,0.3s						
CELP				IAML		16 33 18.0	
	comp=N,187nm,0.3s						
AGPR	Aguadilla, PR	0.56	345		Pg	16 33 13.2	-0.2
AGPR				IAML		16 33 21.8	
	comp=N,648nm,0.4s						
AGPR				IAML		16 33 24.9	
	comp=N,222nm,0.4s						
AGPR	Aguadilla, PR	0.56	345⇑	iP	Pg	16 33 13.4	0.0
AGPR				eS	Sg	16 33 21.3	+0.6
IDE	Isla Desecheo	0.67	313		Pg	16 33 15.4	-0.2
IDE					Sg	16 33 24.6	+0.3
IDE	Isla Desecheo	0.67	313⇓	iP	Pg	16 33 15.4	-0.2
IDE				eS	Sg	16 33 24.6	+0.3
ECPR	Experimental S	0.69	55		Pg	16 33 15.3	-0.6
ECPR				IAML		16 33 25.9	
	comp=N,364nm,0.3s						
ECPR				IAML		16 33 29.5	
	comp=N,256nm,0.2s						
ECPR	Experimental S	0.69	55⇓	iP	Pg	16 33 15.4	-0.5
ECPR				eS	Sg	16 33 25.2	+0.4
SJG	San Juan	0.79	76		Pg	16 33 17.1	-0.7
SJG	San Juan	0.79	76	IAML		16 33 31.4	
	comp=N,86nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SJG				IAML		16 33 30.2	
	comp=N,84nm,0.4s						
SJG	**San Juan**	**0.79**	**76⇓**	eP	Pg	16 33 17.1	-0.7
SJG				eS	Sg	16 33 28.4	+0.3
GCPR	**Guaynabo City**	**0.92**	**65**		Pg	16 33 19.3	-0.9
GCPR					Sg	16 33 31.6	-0.5
GCPR	**Guaynabo City**	**0.92**	**65**	IAML		16 33 31.9	
	comp=N,51nm,0.3s						
GCPR				IAML		16 33 34.3	
	comp=E,36nm,0.3s						
GCPR	**Guaynabo City**	**0.92**	**65⇓**	eP	Pg	16 33 19.3	-0.9
GCPR				eS	Sg	16 33 31.6	-0.5
HUMP	**Col San Antoni**	**1.08**	**78**		Pg	16 33 21.9	-1.3
HUMP					Sg	16 33 37.0	-0.2
HUMP	**Col San Antoni**	**1.08**	**78**	IAML		16 33 42.0	
	comp=E,70nm,0.3s						
HUMP				IAML		16 33 43.5	
	comp=E,52nm,0.2s						
HUMP	**Col San Antoni**	**1.08**	**78⇑**	eP	Pg	16 33 21.9	-1.3
HUMP				eS	Sg	16 33 37.0	-0.2

*NEIC **01** 16:36:37.8±0.9, 17°.90N±0°.03×66°.96W±0°.01, h10km±1km, ML2.5/31, Md2.7/5(RSPR), Error ellipse: s-maj=5.5km s-min=2.3km az=10.0*

RSPR 01 16:36:38.0, 17°.92N×66°.96W, h6km, MD2.7/5, 2C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**54**		Pg	16 36 40.3	+0.3
GBPR					Sg	16 36 42.0	+0.6
GBPR	**Guanica, Bosqu**	**0.09**	**54⇑**	iP	Pg	16 36 40.3	+0.3
GBPR				eS	Sg	16 36 42.0	+0.6
MLPR	**Magueyes Islan**	**0.10**	**300**		Pg	16 36 40.3	+0.2
MLPR				IAML		16 36 42.4	
	3μm,0.4s						
MLPR				IAML		16 36 42.4	
	5μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.17**	**300**		Pg	16 36 41.7	+0.4
CRPR					Sg	16 36 44.6	+1.0
CRPR	**Cabo Rojo, PR**	**0.17**	**300**	IAML		16 36 44.8	
	1μm,0.2s						
CRPR				IAML		16 36 46.0	
	1μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.17**	**300⇓**	iP	Pg	16 36 41.7	+0.4
CRPR				eS	Sg	16 36 44.6	+1.0
LSP	**Las Mesas**	**0.28**	**334**		Pg	16 36 43.9	+0.4
LSP					Sg	16 36 48.7	+1.4
LSP	**Las Mesas**	**0.28**	**334⇑**	iP	Pg	16 36 43.9	+0.4
LSP				eS	Sg	16 36 48.7	+1.4
PRSN	**Puerto Rico Se**	**0.34**	**329**	Pg	Pg	16 36 44.8	+0.1
PRSN				IAML		16 36 52.6	
	1μm,0.3s						
PRSN				IAML		16 36 53.7	
	2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.34**	**329**		Sg	16 36 50.4	+1.2
PRSN	**Puerto Rico Se**	**0.34**	**329⇑**	iP	Pg	16 36 44.8	+0.2
PRSN				eS	Sg	16 36 50.4	+1.2
OBIP	**Obispado Ponce**	**0.35**	**70**		Pg	16 36 45.2	+0.3
OBIP					Sg	16 36 50.6	+1.1
OBIP	**Obispado Ponce**	**0.35**	**70**	IAML		16 36 51.7	
	comp=N,59nm,0.2s						
OBIP	**Obispado Ponce**	**0.35**	**70⇑**	iP	Pg	16 36 45.2	+0.3
OBIP				eS	Sg	16 36 50.6	+1.1
UUPR	**Utuado, UPR, P**	**0.40**	**34**	IAML		16 36 56.0	
	comp=N,1μm,0.3s						
UUPR				IAML		16 36 58.1	
	comp=N,1μm,0.3s						
AGPR	**Aguadilla, PR**	**0.56**	**345**		Pg	16 36 48.7	-0.1
AGPR				IAML		16 36 57.1	
	comp=N,270nm,0.3s						
AGPR				IAML		16 36 57.2	
	comp=N,465nm,0.5s						
AGPR	**Aguadilla, PR**	**0.56**	**345⇑**	iP	Pg	16 36 48.8	0.0
AGPR				eS	Sg	16 36 56.5	+0.3
IDE	**Isla Desecheo**	**0.68**	**313**		Pg	16 36 50.8	-0.2
IDE					Sg	16 37 00.7	+1.0
IDE	**Isla Desecheo**	**0.68**	**313⇑**	iP	Pg	16 36 50.8	-0.2
IDE				eS	Sg	16 37 00.7	+1.0
EMPR	**Esperanza - Ma**	**0.69**	**36**		Pg	16 36 51.2	+0.1
EMPR					Sb	16 37 01.4	-0.7
EMPR	**Esperanza - Ma**	**0.69**	**36⇑**	iP	Pg	16 36 51.2	+0.1
EMPR				eS	Sb	16 37 01.4	-0.7
ECPR	**Experimental S**	**0.69**	**55**		Pg	16 36 50.7	-0.6
ECPR				IAML		16 37 01.4	
	comp=N,412nm,0.2s						
ECPR				IAML		16 37 02.7	
	comp=N,350nm,0.2s						
ECPR	**Experimental S**	**0.69**	**55⇑**	iP	Pg	16 36 50.8	-0.4
ECPR				eS	Sg	16 37 00.8	+0.5
SJG	**San Juan**	**0.79**	**76**		Pg	16 36 52.6	-0.6
SJG	**San Juan**	**0.79**	**76**	IAML		16 37 04.8	
	comp=N,107nm,0.3s						
SJG				IAML		16 37 05.7	
	comp=N,68nm,0.4s						
SJG	**San Juan**	**0.79**	**76⇑**	eP	Pg	16 36 52.6	-0.6
SJG				eS	Sg	16 37 03.8	+0.3
PDPR	**Patillas Dam,**	**0.90**	**84**	Pg	Pg	16 36 54.4	-0.8
PDPR				IAML		16 37 27.5	
	comp=N,52nm,0.1s						
PDPR				IAML		16 37 27.7	
	comp=N,45nm,0.1s						
GCPR	**Guaynabo City**	**0.92**	**65**		Pg	16 36 54.6	-0.9
GCPR					Sg	16 37 07.0	-0.5
GCPR	**Guaynabo City**	**0.92**	**65**	IAML		16 37 07.3	
	comp=N,47nm,0.2s						
GCPR				IAML		16 37 09.7	
	comp=E,34nm,0.3s						
GCPR	**Guaynabo City**	**0.92**	**65⇓**	eP	Pg	16 36 54.6	-0.9
GCPR				eS	Sg	16 37 07.0	-0.5
HUMP	**Col San Antoni**	**1.08**	**78**		Pg	16 36 57.4	-1.2
HUMP					Sg	16 37 11.8	-0.8
HUMP	**Col San Antoni**	**1.08**	**78**	IAML		16 37 16.4	
	comp=E,53nm,0.2s						
HUMP				IAML		16 37 16.4	
	comp=E,47nm,0.2s						
HUMP	**Col San Antoni**	**1.08**	**78⇑**	eP	Pg	16 36 57.4	-1.2
HUMP				eS	Sg	16 37 11.8	-0.8
CUPR	**Culebra, Puert**	**1.64**	**76**	Pn	Pn	16 37 07.3	0.0
DR12	**Loma Pena Alta**	**2.46**	**291**	Pn	Pn	16 37 19.6	+0.9

*CNRM **01** 16:49:53.4, 36°.07N×8°.56W, h65km, ML2.3*
*SFS **01** 16:49:56.6, 36°.16N×8°.44W, h37km, ML2.6/9, ML2.7/10, MLv2.7/10*
*IGIL **01** 16:49:57.6, 36°.30N×8°.42W, h10km, ML1.6*
*INMG **01** 16:49:57.6±1.3, 36°.30N×8°.42W, h10km±7km, ML1.7, Error ellipse: s-maj=9.2km s-min=3.2km az=49.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Albufeira*
*MDD **01** 16:49:57.6±1.1, 36°.38N×8°.25W, h2km, mb_Lg2.5/4, Error ellipse: s-maj=9.5km s-min=4.2km az=31.0*

ISC 01 16:49:53.3±2.4, 36°.25N±0°.09×8°.38W±0°.06, h6km±12km, n46, σ1.32/77, 3D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.95**	**338**	P	**Pn**	**16 50 13.6**	**+0.4**
PFVI				S	**Sn**	**16 50 25.6**	**-1.4**
PFVI	**Vila Bisbo**	**0.95**	**338⇓**	iP	**Pn**	**16 50 13.7**	**+0.5**
PFVI				eS	**Sn**	**16 50 26.1**	**-1.0**
PFVI				i IAML		16 50 26.4	
PFVI				i IAML		16 50 26.4	
PFVI				i IAML		16 50 33.0	
PBDV	**Barranco-do-Ve**	**1.05**	**20**	P	**Pn**	**16 50 15.3**	**+0.7**
PBDV				S	**Sn**	**16 50 30.7**	**+1.2**
PBDV	**Barranco-do-Ve**	**1.05**	**20**	eP	**Pn**	**16 50 16.3**	**+1.7**
PBDV				eS	**Sn**	**16 50 31.0**	**+1.4**
PBDV				i IAML		16 50 36.6	
PBDV				i IAML		16 50 37.3	
PBDV				i IAML		16 50 39.3	
MORF	**Marmelete**	**1.07**	**348**	eP	**Pn**	**16 50 15.6**	**+0.7**
MORF				eS	**Sn**	**16 50 28.6**	**-1.5**
MORF				IAML		16 50 30.3	
	comp=E,20nm,0.1s						
MORF	**Marmelete**	**1.07**	**348**	eP	**Pn**	**16 50 15.6**	**+0.7**
MORF				eS	**Sn**	**16 50 29.6**	**-0.5**
MORF				i IAML		16 50 29.8	
MORF				i IAML		16 50 34.5	
MORF				i IAML		16 50 35.5	
PVAQ	**Vaqueiros**	**1.27**	**25⇓**	eP	**Pn**	**16 50 19.1**	**+1.6**
PVAQ				eS	**Sn**	**16 50 35.5**	**+0.7**
PVAQ				i IAML		16 50 42.5	
PVAQ				i IAML		16 50 43.6	
PVAQ				i IAML		16 50 44.5	
PVAQ	**Vaqueiros**	**1.27**	**25**	P	**Pb**	**16 50 18.2**	**+0.7**
PVAQ				S	**Sn**	**16 50 37.2**	**+2.4**
PTEO	**Sao Teotonio**	**1.32**	**348⇓**	eP	**Pn**	**16 50 19.2**	**+0.9**
PTEO				eS	**Sn**	**16 50 35.7**	**-0.4**
PTEO				i IAML		16 50 36.8	
PTEO				i IAML		16 50 36.9	
PTEO				i IAML		16 50 39.7	
PCVE	**Castro Verde**	**1.40**	**11**	P	**Pn**	**16 50 20.3**	**+1.0**
PCVE				S	**Sn**	**16 50 38.0**	**-0.2**
PCVE	**Castro Verde**	**1.40**	**11**	eP	**Pn**	**16 50 21.1**	**+1.8**
PCVE				eS	**Sn**	**16 50 38.6**	**+0.4**
PCVE				i IAML		16 50 39.7	
PCVE				i IAML		16 50 41.8	
PCVE				i IAML		16 50 42.1	
MESJ	**Messejana**	**1.59**	**4**	eP	**Pg**	**16 50 23.5**	**-0.2**
MESJ				eS	**Sn**	**16 50 42.1**	**-0.6**
MESJ				IAML		16 50 44.0	
	comp=N,3.5nm,0.1s						
MESJ	**Messejana**	**1.59**	**4**	eP	**Pg**	**16 50 23.5**	**-0.2**
MESJ				eS	**Sg**	**16 50 43.2**	**-1.2**
MESJ				i IAML		16 50 44.1	
MESJ				i IAML		16 50 54.5	
MESJ				i IAML		16 50 56.0	
PBEJ	**Beja**	**1.82**	**13**	eP	**Pn**	**16 50 26.5**	**+1.5**
PBEJ				eS	**Sb**	**16 50 48.8**	**-1.1**
PBEJ				i IAML		16 50 50.5	
PBEJ				i IAML		16 50 51.7	
CNIL	**Conil**	**1.88**	**86**	P	**Pn**	**16 50 26.9**	**+1.0**
EMIN	**Mina Concepcio**	**2.04**	**42**	P	**Pn**	**16 50 28.4**	**+0.3**
EMIN				S	**Sn**	**16 50 52.5**	**-1.3**
ESPR	**Espera**	**2.12**	**72**	P	**Pn**	**16 50 30.5**	**+1.3**
ESPR				S	**Sn**	**16 50 55.0**	**-0.9**
ESPR	**Espera**	**2.12**	**72**	Pn	**Pn**	**16 50 30.3**	**+1.1**
ESPR				Sn	**Sn**	**16 50 54.9**	**-0.9**
ESPR				i IVmb_Lg		16 50 59.2	
PBAR	**Barrancos**	**2.20**	**29**	P	**Pn**	**16 50 31.4**	**+1.2**
PBAR				S	**Sn**	**16 50 56.1**	**-1.6**
PBAR	**Barrancos**	**2.20**	**29**	eP	**Pn**	**16 50 32.0**	**+1.7**
PBAR				eS	**Sn**	**16 50 57.8**	**+0.1**
PBAR				i IAML		16 50 60.0	
PBAR				i IAML		16 51 00.2	
PBAR				i IAML		16 51 09.8	
MOE	**Montemor**	**2.27**	**1**	eP	**Pn**	**16 50 32.6**	**+1.4**
MOE				eS	**Sn**	**16 50 59.3**	**-0.2**
MOE				i IAML		16 51 00.1	
MOE				i IAML		16 51 01.2	
MOE				i IAML		16 51 01.5	
EVO	**Evora**	**2.29**	**7**	P	**Pn**	**16 50 32.6**	**+1.0**
EVO				S	**Sn**	**16 50 59.7**	**-0.4**
EVO	**Evora**	**2.29**	**7**	eP	**Pn**	**16 50 32.9**	**+1.3**
EVO				eS	**Sn**	**16 50 60.0**	**-0.2**
EVO				i IAML		16 51 01.5	
EVO				i IAML		16 51 02.7	
EVO				i IAML		16 51 02.7	
PARRA	**Arraiolos**	**2.57**	**6**	eP	**Pn**	**16 50 36.6**	**+1.2**
PARRA				eS	**Sn**	**16 51 06.5**	**-0.5**
PARRA				i IAML		16 51 08.1	
PARRA				i IAML		16 51 08.5	
PARRA				i IAML		16 51 08.6	
E1302	**La Puebla de C**	**2.67**	**70**	Pn	**Pn**	**16 50 39.2**	**+2.4**
E1302				Sn	**Sn**	**16 51 08.0**	**-1.4**
E1302				i IVmb_Lg		16 52 21.9	
PESTR	**Estremoz**	**2.68**	**13**	P	**Pn**	**16 50 38.5**	**+1.5**
PESTR				S	**Sn**	**16 51 09.1**	**-0.7**
PESTR	**Estremoz**	**2.68**	**13**	eP	**Pn**	**16 50 39.2**	**+2.2**
PESTR				eS	**Sn**	**16 51 09.1**	**-0.7**
PESTR	**Estremoz**	**2.68**	**13**	P	**Pn**	**16 50 37.3**	**+0.3**
PESTR				S	**Sn**	**16 51 11.3**	**+1.4**
EBAD	**Badajoz**	**2.72**	**23**	P	**Pn**	**16 50 38.8**	**+1.3**
EBAD				S	**Sn**	**16 51 10.2**	**-0.5**
EBAD	**Badajoz**	**2.72**	**23**	Pn	**Pn**	**16 50 38.5**	**+1.0**
EBAD				Sn	**Sn**	**16 51 09.0**	**-1.8**
EBAD				i IVmb_Lg		16 51 14.3	
PMAFR	**Mafra**	**2.79**	**345**	eP	**Pn**	**16 50 40.3**	**+1.8**
PMAFR				eS	**Sn**	**16 51 11.7**	**-0.7**
PMAFR				i IAML		16 51 14.8	
PMTG	**Montargil**	**2.81**	**2**	eP	**Pn**	**16 50 40.1**	**+1.3**
PMTG				eS	**Sn**	**16 51 12.0**	**-1.0**
PMTG				i IAML		16 51 13.4	
PMTG				i IAML		16 51 13.4	
PMTG				i IAML		16 51 22.5	
ECAB	**El Cabril**	**2.98**	**52**	P	**Pn**	**16 50 42.0**	**+0.9**
ECAB				S	**Sn**	**16 51 14.2**	**-2.9**
ECAB	**El Cabril**	**2.98**	**52**	Pn	**Pn**	**16 50 43.2**	**+2.1**
ECAB				Sn	**Sn**	**16 51 13.9**	**-3.3**
ECAB				i IVmb_Lg		16 51 19.0	
PMRV	**Marv??o**	**3.27**	**14**	eP	**Pn**	**16 50 46.3**	**+1.3**
PMRV				eS	**Sn**	**16 51 23.7**	**-0.5**
PMRV				i IAML		16 51 24.6	
PMRV				i IAML		16 51 25.4	
PSBE	**So Bento**	**3.27**	**354**	eP	**Pn**	**16 50 44.4**	**-0.7**
PSARD	**Sardoal**	**3.35**	**3**	eP	**Pn**	**16 50 47.5**	**+1.4**
PSARD				eS	**Sn**	**16 51 25.7**	**-0.5**
PSARD				i IAML		16 51 27.5	
PSARD				i IAML		16 51 28.0	
PSARD				i IAML		16 51 28.2	
EADA	**Adamuz**	**3.58**	**57**	P	**Pn**	**16 50 50.8**	**+1.4**
EADA				S	**Sn**	**16 51 29.7**	**-2.3**
EADA	**Adamuz**	**3.58**	**57**	Sn	**Sn**	**16 51 30.6**	**-1.5**
PCAS	**Casmilo, Conde**	**3.79**	**359**	eP	**Pn**	**16 50 53.8**	**+1.5**
PCAS				eS	**Sn**	**16 51 36.4**	**-0.8**
IFR	**Ifrane**	**3.82**	**135**	S	Sn	16 51 32.4	-5.7
AKLM	**AKL**	**4.08**	**114**	P	Pn	16 50 52.7	-3.5
AKLM				S	Sn	16 51 39.0	-5.3
MD31	**MD31**	**4.51**	**137**	P	Pn	16 50 59.0	-3.2
MD31				S	Sn	16 51 50.2	-4.7
MDT	**Midelt**	**4.63**	**137**	P	Pn	16 51 00.9	-3.0
MDT				S	Sn	16 51 53.5	-4.5
TISM	**Timmit**	**4.80**	**160**	P	Pn	16 51 01.9	-4.1
TISM				S	Sn	16 51 55.7	-6.2
OUZM	**OUZ**	**5.50**	**165**	P	Pn	16 51 11.9	-3.8
OUZM				S	Sn	16 52 13.9	-5.5

*IDC **01** 17:13:36.3±6.5, 18°.97S×177°.56W, h362km±65km, mb3.5/10, mbtmp4.2/11, Error ellipse: s-maj=70.7km s-min=19.6km az=151.0*
*NEIC **01** 17:13:37.3±1.4, 19°.0S±0°.2×177°.5W±0°.1, h375km±8km, mb4.4/35, Error ellipse: s-maj=24.5km s-min=16.4km az=169.0*

ISC 01 17:13:39.6±0.6, 18°.9S±0°.1×177°.66W±0°.10, h400km, n55, σ1.09/58, mb4.1/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**1.27**	**300**	P	Pn	17 14 25.0	-6.8
TAVE	**Taveuni**	**3.04**	**315**	P	**Pn**	**17 14 39.8**	**-3.4**
DGTI	**Dogotuki**	**3.57**	**316**	P	**Pn**	**17 14 44.7**	**-3.1**
MSVF	**Nonsavu**	**4.23**	**285**		**Pn**	**17 14 51.6**	**-2.4**
RTV	**Rentapao**	**13.25**	**272**	P	**Pn**	**17 16 36.4**	**+1.0**
DVP	**Devils Point**	**13.49**	**273**	P	**Pn**	**17 16 39.0**	**+0.9**
DZM	**Mont Dzumac**	**15.23**	**255**	P	**P**	**17 16 55.3**	**+0.5**
	17nm,0.9s,baz=51,slow=15						
DZM	**Mont Dzumac**	**15.23**	**255**	P	**P**	**17 16 55.8**	**+1.1**
DZM				IAmb	IAmb	17 16 57.2	
	comp=Z,17nm,0.8s						
STKA	**Stephens Creek**	**38.80**	**242**	P	**P**	**17 20 27.6**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=77,slow=13,SNR=12						
	comp=Z,2.3nm,0.4s						
STKA	**Stephens Creek**	**38.80**	**242**	P	**P**	**17 20 27.6**	**-0.4**
INKA	**Innaminka**	**39.05**	**249**	P	**P**	**17 20 30.8**	**+0.7**
WB0	**Warramunga Arr**	**45.13**	**261**	P	**P**	**17 21 18.1**	**-0.6**
WRA	**Warramunga Arr**	**45.16**	**260**	P	**P**	**17 21 18.6**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=96,slow=7.8,SNR=61						
WRA				PcP	**PcP**	**17 22 52.1**	**+0.6**
	comp=Z,0.6nm,1.0s,baz=87,slow=3.4,SNR=2.1						
	comp=Z,0.9nm,0.3s						
WRA	**Warramunga Arr**	**45.16**	**260**	P	**P**	**17 21 17.6**	**-1.3**
AS31	**Alice Springs**	**45.22**	**255**		**P**	**17 21 19.2**	**-0.1**
ASAR	**Alice Springs**	**45.22**	**255**	P	**P**	**17 21 19.6**	**+0.3**
	comp=Z,9.4nm,0.6s,baz=93,slow=8.2,SNR=201						
ASAR				PcP	**PcP**	**17 22 52.4**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=93,slow=3.8,SNR=4.6						
	comp=Z,9.4nm,0.6s						
ASAR	**Alice Springs**	**45.22**	**255**		**P**	**17 21 19.1**	**-0.2**
ASAR					**PcP**	**17 22 50.7**	**-0.9**
MTN	**Manton Dam**	**49.48**	**269**	P	**P**	**17 21 51.1**	**-0.7**
MTN				IAmb	IAmb	17 22 33.8	
	comp=Z,31nm,1.4s						
FORT	**Forrest**	**50.24**	**245**	P	**P**	**17 21 56.4**	**-0.8**
FORT				IAmb	IAmb	17 21 57.1	
	comp=Z,9.0nm,0.6s						
KNRA	**Kununurra**	**51.10**	**265**	P	**P**	**17 22 03.4**	**-0.3**
KNRA				IAmb	IAmb	17 22 20.5	
	comp=Z,24nm,1.4s						
PSA00	**Pilbara Seismi**	**58.35**	**256**	P	**P**	**17 22 55.0**	**-0.1**
PSA00				IAmb	IAmb	17 22 56.1	
	comp=Z,14nm,0.7s						
PSA00	**Pilbara Seismi**	**58.35**	**256**	P	**P**	**17 22 54.8**	**-0.2**
PSA00				IAmb	IAmb	17 22 56.5	
	comp=Z,10nm,0.8s						
PSA00				PcP	**PcP**	**17 23 42.0**	**+0.9**
MBWA	**Marble Bar**	**58.53**	**256**		**P**	**17 22 56.1**	**-0.1**
MBWA				IAmb	IAmb	17 23 27.5	
	comp=Z,39nm,1.4s						
NWAO	**Narrogin (SRO)**	**59.39**	**242**	P	**P**	**17 23 01.5**	**-0.4**
NWAO				IAmb	IAmb	17 23 28.0	
	comp=Z,34nm,1.4s						
SBA	**Scott Base**	**59.50**	**184**	P	**P**	**17 23 00.8**	**-1.1**
MORW	**Morawa**	**60.75**	**247**	P	**P**	**17 23 10.4**	**-0.7**
GIRL	**Giralia**	**63.30**	**254**	P	**P**	**17 23 28.8**	**+0.9**
JAGI	**Jajag, Banyuwa**	**66.72**	**269**	P	**P**	**17 23 49.3**	**-0.5**
UGM	**Wanagama**	**70.32**	**268**	P	**P**	**17 24 13.1**	**+1.2**
MNRC	**McLaughlin Min**	**77.26**	**41**	P	**P**	**17 24 51.6**	**+0.4**
MNRC				IAmb	IAmb	17 25 09.3	
	comp=Z,13nm,1.5s						
NVAR	**Mina Array Bea**	**79.63**	**43**	P	**P**	**17 25 04.4**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=227,slow=8.3,SNR=8.2						
	comp=Z,1.8nm,0.8s						
NVAR	**Mina Array Bea**	**79.63**	**43**	P	**P**	**17 25 04.2**	**0.0**
X16A	**Lo Mia Camp, P**	**82.26**	**50**	P	**P**	**17 25 18.0**	**0.0**
X16A				IAmb	IAmb	17 25 20.3	
	comp=Z,2.8nm,0.8s						
U15A	**North Rim**	**82.64**	**48**	P	**P**	**17 25 19.6**	**-0.4**
U15A				IAmb	IAmb	17 25 21.9	
	comp=Z,2.9nm,0.8s						
ELK	**Elko**	**82.88**	**43**	P	**P**	**17 25 20.9**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=261,slow=6.0,SNR=5.0						
	comp=Z,1.3nm,0.8s						
KNK	**Knik Glacier**	**83.36**	**14**	P	**P**	**17 25 22.8**	**0.0**
MTPU	**Mount Pierson**	**83.52**	**46**	P	**P**	**17 25 24.7**	**+0.2**
GHO	**Glory Hole Cre**	**83.58**	**13**	P	**P**	**17 25 23.1**	**-0.8**
KULM	**Kulim**	**83.86**	**278**	P	**P**	**17 25 27.5**	**+1.2**
EPH	**Ephrata**	**83.99**	**35**	P	**P**	**17 25 24.5**	**-1.7**
EPH				IAmb	IAmb	17 25 25.4	
	comp=Z,20nm,0.7s						
SCM	**Sheep Creek Mo**	**83.99**	**14**	P	**P**	**17 25 26.5**	**+0.6**
BCPM	**Bancas Point**	**84.41**	**18**	P	**P**	**17 25 30.2**	**+2.3**
N25K	**Chitina, Valde**	**84.44**	**15**	P	**P**	**17 25 28.6**	**+0.4**
N25K				IAmb	IAmb	17 25 29.1	
	comp=Z,14nm,1.4s						
GLB	**Gilahina Butte**	**84.50**	**16**	P	**P**	**17 25 29.0**	**+0.6**
GLB				IAmb	IAmb	17 26 11.2	
	comp=Z,16nm,1.4s						
MG03	**Isla Dawson**	**84.66**	**145**	P	**P**	**17 25 28.5**	**-1.0**
VHRN	**Van Horn**	**85.48**	**56**		**P**	**17 25 35.0**	**+0.9**
VHRN				IAmb	IAmb	17 25 35.7	
	comp=Z,2.3nm,0.8s						
TX31	**Lajitas Ar. Si**	**85.92**	**57**	P	**P**	**17 25 36.5**	**+0.4**
TX31				IAmb	IAmb	17 25 50.2	
	comp=Z,6.2nm,1.4s						
TXAR	**Lajitas Array**	**85.92**	**57**	P	**P**	**17 25 37.6**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=219,slow=7.2,SNR=16						
	comp=Z,1.7nm,0.8s						
TXAR	**Lajitas Array**	**85.92**	**57**	P	**P**	**17 25 36.5**	**+0.3**
ILAR	**Eielson Array**	**86.67**	**13**	P	**P**	**17 25 39.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=212,slow=5.4,SNR=8.7						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**86.67**	**13**	P	**P**	**17 25 38.2**	**-0.6**
PDAR	**Pinedale Array**	**87.57**	**43**	P	**P**	**17 25 44.1**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=252,slow=3.0,SNR=3.5						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**87.57**	**43**	P	**P**	**17 25 43.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**89.87**	**289**	P	**P**	**17 25 57.6**	**+2.7**
	comp=Z,0.6nm,0.3s,baz=111,slow=2.9,SNR=5.9						
	comp=Z,0.6nm,0.3s						
YKA	**Yellowknife Ar**	**94.91**	**25**	P	**P**	**17 26 17.3**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=240,slow=4.7,SNR=2.3						
	comp=Z,0.2nm,0.8s						

*SCB **01** 17:22:22.9±1.1, 21°.42S×67°.60W, h147km±24km, ML2.2/1, Error ellipse: s-maj=11.0km s-min=5.9km az=0.0*
*GUC **01** 17:22:33.0±0.7, 21°.66S×68°.45W, h127km±7km, ML2.6*

ISC 01 17:22:22.2±1.4, 21°.55S±0°.09×67°.66W±0°.05, h150km, n16, σ2.40/16, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.50**	**260**	eP	**Pn**	**17 22 53.7**	**+1.8**
PB09	**IPOC Station P**	**1.50**	**260**	Pg	**Pn**	**17 22 53.8**	**+1.9**
PB01	**IPOC Station P**	**1.78**	**286**	eP	**Pn**	**17 22 56.7**	**+1.8**
PB01				eS	**Sn**	**17 23 14.5**	**-5.4**
PB01				IAML		17 23 19.4	
	comp=N,61nm,0.1s						
PB01	**IPOC Station P**	**1.78**	**286**	Pg	**Pn**	**17 22 57.1**	**+2.2**
MOCB	**Mochara**	**1.90**	**82**	Pg	**Pn**	**17 22 57.6**	**+0.9**
MOCB				Sg	**Sn**	**17 23 22.7**	**-0.3**
MOCB				IAML		17 23 24.1	
	comp=N,14nm,0.5s						
PB03	**IPOC Station P**	**2.01**	**255**	eP	**Pn**	**17 22 58.2**	**+0.6**
PB03				IAML		17 23 18.6	
	comp=N,78nm,0.2s						
PB07	**IPOC Station P**	**2.08**	**265**	eP	**Pn**	**17 22 59.0**	**+0.5**
PB07				IAML		17 23 20.7	
	comp=N,89nm,0.2s						
YJA	**Yavi**	**2.09**	**108**	Pg	**Pn**	**17 23 00.1**	**+1.3**
PB02	**IPOC Station P**	**2.10**	**276**	eP	**Pn**	**17 22 59.7**	**+1.2**
PB02				IAML		17 23 22.6	
	comp=N,97nm,0.2s						
PB02	**IPOC Station P**	**2.10**	**276**	Pg	**Pn**	**17 22 59.8**	**+1.2**
PB06	**IPOC Station P**	**2.12**	**237**	eP	**Pn**	**17 23 00.6**	**+1.7**
PB06				IAML		17 23 23.1	
	comp=E,104nm,0.1s						
GO01	**Chusmiza**	**2.36**	**322**	eP	Pn	17 23 08.8	+6.7
GO01				IAML		17 23 41.5	
	comp=N,76nm,0.1s						
PB11	**IPOC Station P**	**2.58**	**313**	eP	**Pn**	**17 23 08.9**	**+4.4**
PB05	**IPOC Station P**	**2.69**	**241**	eP	**Pn**	**17 23 06.8**	**+1.0**
PB16	**IPOC Station P**	**3.64**	**331**	eP	Pn	17 23 26.6	+8.2
SOET	**ToroToro**	**3.83**	**27**	Pg	**Pn**	**17 23 19.9**	**-0.7**

*ISK **01** 17:34:02.5, 38°.98N×25°.41E, h4km, ML3.6/32*
*IDC **01** 17:34:02.4±2.0, 38°.98N×25°.39E, h0km, mb3.5/3, mbtmp3.4/7, ML3.3/3, MS2.8/1, Error ellipse: s-maj=30.5km s-min=23.4km az=73.0*
*AFAD **01** 17:34:04.4, 38°.99N×25°.54E, h28km, MW3.6*
*ATH **01** 17:34:04.6, 38°.96N×25°.52E, h19km±3km, ML3.2/19, Manual Solution by A.Agalos First location: 2020/02/01 17:35:12, This location: 2020/02/01 17:44:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **01** 17:34:05.3, 39°N±1°×2°6E±°, h23km±2km, M3.1/29, MLh3.1/29*

ISC 01 17:34:03.7±1.1, 38°.95N±0°.02×25°.51E±0°.02, h6km±9km, n184, σ0.73/230, mb3.4/3, 16C-12D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.37**	**46**	Pg	**Pb**	**17 34 12.9**	**+0.2**
SIGR	**SIGRI**	**0.37**	**46**	P	**Pb**	**17 34 12.7**	**+0.1**
SIGR				S	**Sb**	**17 34 18.4**	**-0.3**
SIGR	**SIGRI**	**0.37**	**46**	P	**Pb**	**17 34 12.8**	**+0.1**
SIGR				S	**Sb**	**17 34 17.5**	**-1.3**
EAG2	**Marmaro, Chios**	**0.62**	**131**	P	**Pb**	**17 34 16.9**	**0.0**
PRK	**Paraskevi**	**0.66**	**63**	P	**Pb**	**17 34 16.8**	**-0.8**
PRK				S	**Sb**	**17 34 26.0**	**-1.0**
PRK	**Paraskevi**	**0.66**	**63**	P	**Pb**	**17 34 16.7**	**-0.8**
PRK				S	**Sb**	**17 34 26.4**	**-0.6**
GPNR	**Gulpinar-Canak**	**0.69**	**44**	Pg	**Pg**	**17 34 17.3**	**+0.3**
GPNR				Sg	**Sb**	**17 34 28.4**	**+0.3**
CHOS	**Chios island**	**0.71**	**143**	Pg	**Pb**	**17 34 18.4**	**-0.1**
CHOS				Sg	**Sb**	**17 34 28.9**	**+0.4**
CHOS	**Chios island**	**0.71**	**143**	P	**Pb**	**17 34 18.3**	**-0.1**
CHOS				S	**Sb**	**17 34 27.4**	**-1.1**
CHOS	**Chios island**	**0.71**	**143**	P	**Pb**	**17 34 18.2**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CHOS				S	Sb	17 34 28.8	+0.3
EFSA	Agios Efstrati	0.71	325	P	Pb	17 34 17.9	-0.6
KOCA	Canakkale, Ayv	0.73	41	P	Pb	17 34 18.2	-0.7
KOCA				S	Sb	17 34 28.4	-0.7
KOCA				IAML		17 34 34.0	
	comp=N,2μm,0.5s						
SKY	Skiros Island	0.76	265	P	Pb	17 34 19.2	0.0
SKY	Skiros Island	0.76	265	P	Pb	17 34 19.4	+0.1
SKY				S	Sb	17 34 30.8	+0.9
KARB	zmir-Karabur	0.76	112	P	Pb	17 34 19.3	0.0
CESE	eme	0.88	135	Pg	Pn	17 34 21.9	-0.6
KRBN	Karaburun	0.89	114	Pg	Pb	17 34 21.6	+0.1
LIA	Limnos Island	0.98	345	P	Pg	17 34 22.3	-0.1
LIA				S	Sb	17 34 36.8	+0.6
LIA	Limnos Island	0.98	345	P	Pg	17 34 22.4	-0.1
LIA				S	Sb	17 34 36.1	-0.1
BOZC	Bozcaada	0.98	25	Pg	Pg	17 34 22.2	-0.3
BOZC				Sg	Sb	17 34 36.5	+0.2
BOZC	Bozcaada	0.98	25	P	Pg	17 34 22.1	-0.3
BOZC				P	Pb	17 34 22.4	-0.8
BOZC				S	Sb	17 34 35.7	-0.6
BOZC				S	Sg	17 34 36.3	+1.0
BOZC				IAML		17 34 37.0	
	comp=N,2μm,0.6s						
BOZC				IAML		17 34 37.0	
	comp=N,2μm,0.5s						
BOZC				IAML		17 34 37.0	
	comp=E,2μm,0.6s						
BOZC				IAML		17 34 37.0	
	comp=E,1μm,0.7s						
FOCM	Foa	0.98	104	Pg	Pn	17 34 23.5	-0.5
AYVA	Ayvalik	0.98	68	P	Pn	17 34 23.6	-0.5
AYVA				S	Sb	17 34 36.0	-0.3
AYVA				IAML		17 34 38.0	
	comp=N,1μm,0.8s						
URLA	Izmir	1.03	125	Pn	Pn	17 34 24.1	-0.7
URLA				Sn	Sn	17 34 40.6	+1.0
URLA	Izmir	1.03	125	P	Pb	17 34 23.9	-0.1
EZNE	Ezine-Canakkal	1.04	39	Pg	Pg	17 34 23.5	-0.1
EZNE				Sg	Sn	17 34 39.0	-0.6
ZEYE	Izmir, Urla-Ze	1.05	132	P	Pn	17 34 24.5	-0.5
EZN	Ezine	1.07	36	Pn	Pg	17 34 23.9	-0.4
EZN	Ezine	1.07	36	P	Pg	17 34 23.9	-0.4
EZN				S	Sg	17 34 38.0	-0.2
BAGT	Foa	1.09	106	P	Pn	17 34 25.1	-0.3
BAGT				S	Sn	17 34 40.6	-0.2
BAGT				IAML		17 34 44.0	
	comp=E,706nm,0.9s						
DKL	Dikili	1.09	83	Pn	Pn	17 34 25.2	-0.3
IZMD	zmir-Dikili-	1.10	88	P	Pb	17 34 25.1	-0.1
IZMD				P	Pb	17 34 25.1	-0.1
BAYC	CANAKKALE_Bayr	1.12	45	P	Pg	17 34 24.8	-0.4
BAYC				S	Sg	17 34 39.3	-0.5
BAYC				IAML		17 34 44.0	
	comp=N,738nm,0.9s						
KYMI	Kymi, Euboea I	1.15	254	P	Pb	17 34 25.7	-0.3
KYMI	Kymi, Euboea I	1.15	254	P	Pb	17 34 25.7	-0.3
KYMI				S	Sb	17 34 41.3	+0.1
ECEA	Canakkale, Ece	1.20	25	P	Pg	17 34 26.1	-0.7
ECEA				S	Sn	17 34 43.3	-0.4
ECEA				IAML		17 34 45.0	
	comp=N,3μm,0.6s						
ZEDA	zmir-Bergama	1.22	89	P	Pb	17 34 26.8	-0.3
ZEDA				S	Sg	17 34 41.9	-0.9
ZEDA				IAML		17 34 50.0	
	comp=N,233nm,0.7s						
KARY	Karystos	1.25	223	P	Pg	17 34 27.6	-0.1
KARY				S	Sb	17 34 43.2	-0.8
KARY	Karystos	1.25	223	P	Pn	17 34 26.9	-0.8
KARY				S	Sb	17 34 43.6	-0.5
GADA	Gvkgeada	1.27	13	Pn	Pn	17 34 27.4	-0.6
GADA				Sn	Sn	17 34 45.5	+0.1
GADA	Gvkgeada	1.27	13	P	Pn	17 34 27.0	-1.0
GADA				S	Sg	17 34 44.4	-0.1
AOS	Alonnisos	1.29	280	P	Pg	17 34 28.4	0.0
AOS				S	Sn	17 34 47.3	+1.4
CNKL	anakkale-Mer	1.30	31	P	Pn	17 34 27.8	-0.6
CNKL				P	Pb	17 34 28.3	-0.3
CNKL				S	Sb	17 34 44.9	-0.6
CNKL				S	Sb	17 34 44.9	-0.6
CNKL				IAML		17 34 47.0	
	comp=N,521nm,0.4s						
CNKL				IAML		17 34 47.0	
	comp=E,699nm,0.5s						
CNKL				IAML		17 34 50.0	
	comp=N,687nm,0.5s						
AOS2	Alonissos-2	1.31	279	P	Pn	17 34 28.3	-0.3
AOS2				S	Sb	17 34 45.2	-0.7
BLCB	Balcova	1.32	115	Pn	Pg	17 34 29.2	+0.1
BLCB	Balcova	1.32	115	P	Pg	17 34 29.1	0.0
BUHA	Balikesir, Bur	1.33	65	P	Pn	17 34 28.5	-0.3
BUHA				S	Sn	17 34 46.6	-0.3
BUHA				IAML		17 34 51.0	
	comp=E,817nm,0.5s						
COMU	Canakkale	1.36	33	Pn	Pn	17 34 29.0	-0.3
YAYO	Edremit-Balk	1.38	61	Pn	Pg	17 34 30.1	0.0
DGB	zmir	1.40	130	P	Pn	17 34 29.3	-0.5
CAMT	Merkez	1.42	98	P	Pn	17 34 29.9	-0.1
TNSA	Tinos	1.44	191	P	Pn	17 34 29.7	-0.6
SMTH	Samothraki Isl	1.52	0	P	Pn	17 34 30.2	-1.2
SMTH				S	Sn	17 34 50.3	-1.2
SMTH	Samothraki Isl	1.52	0	P	Pn	17 34 30.6	-0.8
DION	Dionisos Attik	1.52	235	P	Pn	17 34 31.0	-0.5
DION				S	Sn	17 34 50.0	-1.5
DION	Dionisos Attik	1.52	235	P	Pn	17 34 30.8	-0.7
PTL	Penteli	1.58	236	P	Pn	17 34 31.5	-0.7
PTL	Penteli	1.58	236	P	Pn	17 34 31.6	-0.6
SOMA	Soma-Manisa	1.59	82	Pn	Pb	17 34 32.9	-0.5
CANM	Can-anakkale	1.59	48	Pn	Pb	17 34 32.8	-0.7
GELI	Tayfur-Gelibol	1.62	27	Pn	Pn	17 34 32.5	-0.3
SMG	Samos	1.62	140	P	Pn	17 34 32.8	0.0
SMG				S	Sn	17 34 53.0	-1.0
SMG	Samos	1.62	140	P	Pn	17 34 33.1	+0.2
LAPS	Lapseki, ANA	1.65	38	P	Pb	17 34 34.3	-0.2
LAPS				S	Sn	17 34 54.1	-0.8
LAPS				IAML		17 34 58.0	
	comp=N,646nm,0.6s						
YENI	Yenice-Canakka	1.66	53	Pn	Pn	17 34 33.6	+0.2
ATHU	Athens Univers	1.68	235	P	Pn	17 34 31.9	-1.7
ATHU	Athens Univers	1.68	235	P	Pn	17 34 32.0	-1.6
DUVT	Torbali	1.68	115	P	Pb	17 34 34.2	-0.9
LPK	Lapseki	1.71	34	Pn	Pn	17 34 33.9	-0.2
ENZZ	Sultanice-Enez	1.72	16	Pn	Pn	17 34 33.9	-0.3
STFN	Stefani	1.73	244	P	Pn	17 34 34.2	-0.2
STFN	Stefani	1.73	244	P	Pn	17 34 34.4	+0.1
VLY	Voula,Athens	1.74	231	P	Pn	17 34 33.9	-0.6
VLY	Voula,Athens	1.74	231	P	Pn	17 34 33.9	-0.6
THAS	Thassos island	1.76	340	P	Pn	17 34 33.9	-0.8
THAS	Thassos island	1.76	340	P	Pn	17 34 33.8	-0.9
STEP	BALIKESIR_Sava	1.77	75	P	Pg	17 34 38.6	+1.1
STEP				S	Sg	17 35 01.7	+1.4
MAGU	Magoula	1.80	242	P	Pn	17 34 35.0	-0.2
MAGU	Magoula	1.80	242	P	Pn	17 34 35.0	-0.2
CAVK	Edirne/Enez-Ca	1.81	16	⇑P	Pb	17 34 36.7	-0.5
CAVK				⇑S	Sb	17 35 00.3	+0.2
BALY	Balya	1.81	64	P	Pg	17 34 39.5	+1.1
BALY				S	Sg	17 35 02.6	+0.7
NEO	Neokhori	1.82	282	P	Pn	17 34 34.9	-0.7
NEO	Neokhori	1.82	282	P	Pn	17 34 35.0	-0.5
OUR	Ouranopolis	1.82	320	Pn	Pn	17 34 34.3	-1.2
OUR	Ouranopolis	1.82	320	P	Pn	17 34 35.3	-0.2
OUR	Ouranopolis	1.82	320	P	Pn	17 34 35.4	-0.2
BIGA	Biga-Canakkale	1.83	43	Pn	Pn	17 34 36.3	+0.6
GCAM	G?zelcaml?	1.84	132	Pn	Pb	17 34 36.6	-1.2
ENEZ	Enez	1.85	15	Pn	Pn	17 34 35.7	-0.2
ENEZ	Enez	1.85	15	P	Pn	17 34 36.2	+0.3
ERIK	Erikli-Kesan	1.88	24	Pn	Pn	17 34 36.3	-0.1
VILL	Villia	1.90	246	P	Pn	17 34 36.3	-0.4
GOKT	Kean, EDRN	1.91	26	P	Pn	17 34 37.3	+0.5
GOKT				S	Sn	17 35 01.6	+0.4
GOKT				IAML		17 35 05.0	
	comp=N,363nm,0.4s						
VIL2	Platees	1.91	248	P	Pn	17 34 36.2	-0.7
ATIT	Gnen	1.94	54	P	Pb	17 34 39.0	-0.5
ATIT				S	Sg	17 35 06.0	-0.2
ATIT				IAML		17 35 08.0	
	comp=N,544nm,0.7s						
ATAL	Atalanti	1.96	263	P	Pn	17 34 37.2	-0.4
ATAL	Atalanti	1.96	263	P	Pn	17 34 37.0	-0.6
ALN	Alexandroupoli	1.98	12	Pn	Pn	17 34 37.5	-0.3
ALN	Alexandroupoli	1.98	12	P	Pn	17 34 36.9	-0.8
ALN	Alexandroupoli	1.98	12	P	Pn	17 34 37.0	-0.8
LKR	Lokris	1.99	262	P	Pn	17 34 37.6	-0.3
KRBG	Karabiga-Canak	1.99	43	Pn	Pn	17 34 38.0	+0.1
GONE	Gonen-Balikesi	2.00	56	Pn	Pn	17 34 38.7	+0.6
BKES	Balkesir-Mer	2.03	67	P	Pn	17 34 38.5	+0.1
KTTT	Salihli	2.03	97	P	Pn	17 34 38.8	+0.2
KESN	Edirne-Kesan	2.07	25	P	Pn	17 34 38.8	-0.6
RKY	Sarkoy-Tekirda	2.15	36	Pn	Pn	17 34 40.8	+0.6
MET5	Makryloggos,Me	2.16	233	P	Pn	17 34 39.7	-0.5
SART	Tekirdag	2.16	36	P	Pn	17 34 41.2	+0.9
MET1	Methana Town,	2.17	231	P	Pn	17 34 40.1	-0.2
CMHT	Manyas	2.17	60	P	Pn	17 34 39.9	-0.5
MET2	Kameni Chora,	2.18	233	P	Pn	17 34 39.6	-0.8
KAVA	Kavala	2.18	340	P	Pn	17 34 39.9	-0.6
KAVA	Kavala	2.18	340	P	Pn	17 34 39.9	-0.6
RDO	Rodhopi	2.19	0	Pn	Pn	17 34 40.1	-0.5
RDO	Rodhopi	2.19	0	P	Pn	17 34 39.9	-0.8
RDO	Rodhopi	2.19	0	P	Pn	17 34 39.7	-0.9
LTK	Loutraki	2.20	246	P	Pn	17 34 41.3	+0.4
LTK	Loutraki	2.20	246	P	Pn	17 34 40.7	-0.2
AXAR	Agios Charalam	2.24	266	P	Pn	17 34 41.2	-0.1
MADA	Marmara adas	2.27	43	P	Pb	17 34 44.8	-0.2
GAZK	Gazikoy-TEKIRD	2.27	37	Pn	Pn	17 34 42.3	+0.6
MRMT	Marmara Adasi	2.30	44	Pn	Pn	17 34 42.7	+0.5
UKOP	Uzunkopru-Edir	2.34	21	Pn	Pn	17 34 42.6	0.0
BODT	Bodrum	2.36	143	Pn	Pn	17 34 44.0	+1.0
BAND	Balkesir-Ban	2.44	54	⇑P	Pn	17 34 44.7	+0.6
BAND	Balkesir-Ban	2.44	54	P	Pn	17 34 42.7	-1.4
HORT	Hortiatis	2.48	312	P	Pn	17 34 45.0	+0.3
AGG	Agios Georgios	2.48	273	P	Pn	17 34 44.9	+0.2
AGG	Agios Georgios	2.48	273	P	Pn	17 34 45.0	+0.2
SOH	Sokhos	2.50	319	P	Pn	17 34 45.0	0.0
LIT	Litokhoron	2.60	297	P	Pn	17 34 46.6	+0.2
SRS	Serrai	2.62	326	P	Pn	17 34 46.6	+0.1
KDZ	Kurdzhali	2.68	357	Pn	Pn	17 34 45.6	-1.8
GUR	Goura	2.69	249	P	Pn	17 34 47.9	+0.3
DAT	Datca	2.76	143	Pn	Pn	17 34 49.4	+0.8
THL	Klokotos Trika	2.79	284	P	Pn	17 34 48.8	0.0
KLV	Kalavryta, Ach	2.79	252	P	Pn	17 34 49.0	0.0
RZN	Rozhen	2.80	348	P	Pn	17 34 49.5	+0.3
ANX	Ano Chora	2.83	264	P	Pn	17 34 50.0	+0.5
EFP	Efpalio	2.87	261	P	Pn	17 34 50.4	+0.4
MMB	Musomishta	2.92	333	P	Pn	17 34 51.2	+0.4
KNT	Kendrikon	2.98	319	P	Pn	17 34 51.8	+0.2
VAY	Valandovo	3.27	317	*e*Pn	Pn	17 34 54.9	-0.6
VAY				*e*Sn	Sb	17 35 42.4	+0.2
KKB	Krupnik	3.41	328	P	Pn	17 34 58.4	+0.9
JMB	Yambol	3.62	12	P	Pb	17 35 08.0	0.0
IDI	Anoyia	3.69	188	Pn	Pn	17 35 00.1	-1.3
	11nm,1.0s,baz=8.4,slow=10.0,SNR=2.2						
PLNA	Plana	3.86	336	P	Pn	17 35 05.0	+1.3
VTS	Vitosha	4.05	335	P	Pn	17 35 06.9	+0.6
BLSH	Balsha	4.25	337	P	Pn	17 35 10.9	+1.9
PRD	Provadia	4.44	18	*e*P	Pn	17 35 12.0	+0.4
MPEP	Malo Peshtene	4.60	344	P	Pn	17 35 14.7	+1.0
RAZG	Razgrad	4.67	9	⇓P	Pn	17 35 15.2	+0.5
MANR	Mangalia	5.38	24	⇑P	Pn	17 35 26.0	+1.5
ICOR	Ion Corvin	5.44	18	⇓P	Pn	17 35 25.2	-0.1
BOVS	Bovan	5.49	330	⇓P	Pn	17 35 25.6	-0.3
BRTR	Keskin Array B	6.34	80	Pn	Pn	17 35 39.4	+1.5
	0.1nm,0.3s,baz=265,slow=13,SNR=5.1						
BRTR				Lg	Lg	17 37 26.4	
	baz=266,slow=30						
	0.7nm,0.6s						
HERR	Herculane	6.36	340	⇑P	Pn	17 35 37.7	-0.2
ARR	Arges	6.44	354	⇓P	Pn	17 35 38.9	-0.3
MDVR	Moldovita	6.48	335	⇑P	Pn	17 35 39.2	-0.4
VOIR		6.49	357	⇑P	Pn	17 35 39.7	-0.1
NEHR	Nehoiu	6.50	5	⇑P	Pn	17 35 40.3	+0.5
MLR	Muntele Rosu	6.54	3	Pn	Pn	17 35 39.9	-0.7
	0.3nm,0.3s,baz=145,slow=16,SNR=3.4						
MLR				LR	LR	17 38 39.5	
	comp=Z,76nm,18.7s,baz=154,slow=42						
	2.3nm,0.7s						
MLR	Muntele Rosu	6.54	3	⇓P	Pn	17 35 41.2	+0.7
LOT	Lotru	6.62	349	⇓P	Pn	17 35 42.4	+0.8
GZR	Gura Zlata	6.75	343	⇓P	Pn	17 35 43.2	-0.1
TNR	Turnu Rosu	6.76	353	⇓P	Pn	17 35 44.4	+1.0
COVR	Voineasa-Covas	6.91	4	⇑P	Pn	17 35 45.3	-0.2
PLOR	Plostina	6.94	7	⇑P	Pn	17 35 47.1	+1.1
VRI	Vrincioaia	6.96	7	⇓P	Pn	17 35 47.8	+1.5
MATE	Matera	6.99	287	⇑P	Pn	17 35 46.2	-0.4
DOPR	Dopca	7.01	359	⇑P	Pn	17 35 48.5	+1.6
TURR	Turia	7.11	3	⇓P	Pn	17 35 49.1	+0.9
VLDR	Vladesti	7.14	15	⇓P	Pn	17 35 49.4	+0.8
DEV	Deva	7.19	345	⇓P	Pn	17 35 50.3	+1.0
BZS	Buzias	7.26	338	⇑P	Pn	17 35 49.9	-0.3
TESR	Tescani	7.60	6	⇑P	Pn	17 35 55.9	+0.9
MARR	Marisel-Cluj	7.92	348	⇑P	Pn	17 36 00.3	+0.9
BURAR	Bucovina Array	8.66	359	⇑P	Pn	17 36 11.5	+2.0
MMAI	Mount Meron Ar	9.96	123	Pn	Pn	17 36 28.7	+1.2
	0.9nm,0.3s,baz=326,slow=15,SNR=6.0						
	0.5nm,0.3s						
MODS	Modra-Piesok	11.14	330	*e*PN	Pn	17 36 39.3	-4.2
KURBB	Kurchatov Arra	38.60	55	P	P	17 41 27.9	+0.5
	0.2nm,0.4s,baz=280,slow=9.1,SNR=2.6						
	0.2nm,0.4s						
MKAR	Makanchi Array	41.54	60	P	P	17 41 52.4	+0.5
	0.5nm,0.7s,baz=268,slow=7.8,SNR=6.3						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	42.24	49	P	P	17 41 58.0	+0.5
	0.6nm,0.6s,baz=280,slow=8.4,SNR=4.6						
	0.6nm,0.6s						

*NNC **01** 17:39:57.1±0.3, 43°.28N×78°.79E, h1km±2km, mb2.6, mpv2.6, Error ellipse: s-maj=2.6km s-min=1.6km az=4.0*
*KRNET **01** 17:39:57.5±0.1, 43°.20N×78°.73E, h11km, mb2.4*
*SOME **01** 17:39:57.7, 43°.25N×78°.73E, h10km*
ISC 01 17:39:57.4±0.9**, 43°.25N**±0°.02×**78°.72E**±0°.02**, h7**km±8km**,**
n39, σ**0s.90**/74**, 14C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPKS	Kokpek	0.22	353	P	Pg	17 40 02.1	+0.3
	8.6nm,0.1s						
KPKS				S	Sg	17 40 05.4	+0.5
	210nm,0.2s						
KPKS	Kokpek	0.22	353	*e*P	Pg	17 40 02.1	+0.3
	8.6nm,0.1s						
KPKS				*e*S	Sg	17 40 05.4	+0.5
	210nm,0.2s						
UZB	Uzynbulak	0.24	114	P	Pg	17 40 02.0	-0.2
	41nm,0.1s						
UZB				S	Sg	17 40 05.2	-0.3
	144nm,0.1s						
UZB	Uzynbulak	0.24	114	*e*P	Pg	17 40 02.0	-0.2
UZB				*e*S	Sg	17 40 05.2	-0.3
UZB	Uzynbulak	0.24	114	*e*P	Pg	17 40 02.0	-0.2
	41nm,0.1s						
UZB				*e*S	Sg	17 40 05.2	-0.3
	144nm,0.1s						
SATY	Saty	0.30	231	P	Pg	17 40 04.0	+0.7
	7.3nm,0.1s						
SATY				S	Sg	17 40 08.6	+1.3
	114nm,0.1s						
KURS	Kuram	0.47	301	P	Pg	17 40 07.1	+0.6
	0.5nm,0.1s						
KURS				S	Sg	17 40 13.8	+1.1
	3.4nm,0.2s						
SHLS	Shalkode	0.55	99	P	Pn	17 40 13.0	+1.3
	0.9nm,0.1s						
SHLS				S	Sn	17 40 24.3	+3.1
	4.2nm,0.1s						
SHLS	Shalkode	0.55	99	*e*P	Pn	17 40 13.1	+1.3
	0.9nm,0.1s						
SHLS				*e*S	Sn	17 40 24.3	+3.1
	4.2nm,0.1s						
PDGK	Podgornoye	0.57	81	⇑P	Pg	17 40 07.4	-1.0
	0.4nm,0.3s						
PDGK				⇑S	Sg	17 40 14.4	-1.4
	5.7nm,0.5s						
PRZ	Przheval'sk	0.80	197	⇑*e*P	Pg	17 40 11.7	-1.0
PRZ				⇑*e*S	Sg	17 40 21.2	-1.9
BLB	Baldybastay	0.87	348	P	Pg	17 40 13.6	-0.5
	1.2nm,0.2s						
BLB				S	Sg	17 40 25.0	-0.4
	13nm,0.1s						
ARXS	Arharly	1.17	326	P	Pb	17 40 19.1	-0.8
	1.8nm,0.1s						
ARXS				S	Sb	17 40 34.6	-0.7
	3.1nm,0.1s						
ARXS	Arharly	1.17	326	*e*P	Pb	17 40 19.1	-0.8
	1.8nm,0.1s						
ARXS				*e*S	Sb	17 40 34.6	-0.7
	3.1nm,0.1s						
KOTS	Kotyrbulak	1.18	270	P	Pb	17 40 20.2	0.0
	0.8nm,0.1s						
KOTS				S	Sn	17 40 36.2	-0.6
	10.0nm,0.2s						
KOTS	Kotyrbulak	1.18	270	*e*P	Pb	17 40 20.2	0.0
KOTS				*e*S	Sn	17 40 36.3	-0.6
KOTS	Kotyrbulak	1.18	270	*e*P	Pb	17 40 20.2	0.0
	0.8nm,0.1s						
KOTS				*e*S	Sn	17 40 36.2	-0.6
	10.0nm,0.2s						
DJR	Jarkent	1.33	35	P	Pn	17 40 22.0	-0.6
	1.1nm,0.2s						
DJR				S	Sb	17 40 39.5	-0.6
	3.5nm,0.2s						
DJR	Jarkent	1.33	35	*e*P	Pn	17 40 21.9	-0.6
	1.1nm,0.2s						
DJR				*e*S	Sb	17 40 39.5	-0.6
	3.5nm,0.2s						
KTBS	Karatobe	1.56	288	P	Pb	17 40 26.5	-0.1
	1.8nm,0.2s						
KTBS				S	Sg	17 40 47.3	-0.2
	3.1nm,0.2s						
KTBS	Karatobe	1.56	288	*e*P	Pb	17 40 26.5	-0.1
	1.8nm,0.2s						
KTBS				*e*S	Sg	17 40 47.3	-0.2
	3.1nm,0.2s						
IZV	Izvestkoviy	1.56	263	P	Pg	17 40 27.5	+0.2
	0.6nm,0.1s						
IZV				S	Sg	17 40 48.7	+1.3
	2.3nm,0.1s						
IZV	Izvestkoviy	1.56	263	*e*P	Pg	17 40 27.5	+0.2
	0.6nm,0.1s						
IZV				*e*S	Sg	17 40 48.8	+1.3
	2.3nm,0.1s						
KDJ	Kajisay	1.59	226	⇑*e*P	Pb	17 40 26.9	-0.4
KDJ				⇑*e*S	Sb	17 40 47.8	+0.1
TARG	Taragay, Kyrgy	1.66	204	⇑*i*P	Pb	17 40 28.3	-0.3
TARG				⇑*i*S	Sb	17 40 49.8	0.0
MTBS	Maitube	1.68	267	P	Pg	17 40 29.4	-0.2
	0.7nm,0.1s						
MTBS				S	Sg	17 40 52.1	+0.6
	6.8nm,0.3s						
MTBS	Maitube	1.68	267	*e*P	Pg	17 40 29.4	-0.2
	0.7nm,0.1s						
MTBS				*e*S	Sg	17 40 52.1	+0.6
	6.8nm,0.3s						
KST	Kastek	2.03	265	Pg	Pg	17 40 35.7	-0.6
	0.2nm,0.1s						
KST				Lg	Lg	17 41 02.9	
	2.3nm,0.2s						
KST	Kastek	2.03	265	*e*P	Pg	17 40 35.7	-0.6
	0.2nm,0.1s						
KST				*e*S	Sg	17 41 03.0	+0.3
	2.3nm,0.2s						
ULHL	Ulahol	2.08	242	⇑*i*P	Pb	17 40 35.8	+0.2
ULHL				⇑*i*S	Sg	17 41 03.4	-0.9
KAPS	Kapalarasan	2.09	12	Pg	Pb	17 40 35.6	-0.1
	1.6nm,0.1s						
KAPS				Lg	Lg	17 41 02.9	
	17nm,0.2s						
DGS	Degeres	2.16	271	Pg	Pb	17 40 37.5	+0.6
	0.5nm,0.1s						
DGS				Lg	Lg	17 41 06.0	
	8.0nm,0.4s						
DGS	Degeres	2.16	271	*e*P	Pb	17 40 37.5	+0.6
	0.5nm,0.1s						
DGS				*e*S	Sg	17 41 06.0	-0.7
	8.0nm,0.4s						
BOOM	Boomskoye usch	2.18	251	⇑*e*P	Pb	17 40 37.6	+0.3
BOOM				⇑*i*S	Sg	17 41 06.3	-1.2
KRBS	Karabastau	2.26	283	Pg	Pb	17 40 39.0	+0.4
	0.3nm,0.2s						
KRBS				Lg	Lg	17 41 08.8	
	2.1nm,0.1s						
KRBS	Karabastau	2.26	283	*e*P	Pb	17 40 39.0	+0.4
KRBS				*e*S	Sg	17 41 08.7	-1.4
KRBS	Karabastau	2.26	283	*e*P	Pb	17 40 39.0	+0.4
	0.3nm,0.2s						
KRBS				*e*S	Sg	17 41 08.8	-1.4
	2.1nm,0.1s						
TKM2	Tokmak 2	2.31	263	⇓*i*P	Pb	17 40 40.4	+0.8
TKM2				⇓*i*S	Sg	17 41 10.6	-1.1
NRN	Naryn	2.71	229	⇑*e*P	Pb	17 40 45.3	-1.1
NRN				⇑*e*S	Sb	17 41 18.9	-1.1

*IDC **01** 17:52:22.8±3.8, 19°.26N×146°.64E, h67km±35km, mb3.6/14, mbtmp3.9/16, ML3.8/2, MS3.6/2, Error ellipse: s-maj=30.9km s-min=15.7km az=83.0*
*NEIC **01** 17:52:23.0±1.6, 19°.26N±0°.03×146°.7E±0°.1, h73km±8km, mb4.2/18, Error ellipse: s-maj=18.8km s-min=4.2km az=92.0*
ISC 01 17:52:19.1±0.6**, 19°.31N**±0°.07×**146°.7E**±0°.1**, h35**km**, n44,**
σ**0s.92**/39**, mb4.1**/18**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	Saipan	4.13	192	Pn	Pn	17 53 23.6	+3.8
GUMO	Guam	5.95	197	P	Pn	17 53 48.4	+3.7
	9.3nm,0.3s,baz=6.7,slow=17,SNR=1.5						
GUMO				S	Sn	17 54 53.2	+1.5
	60nm,0.6s,baz=18,slow=20,SNR=1.7						
	41nm,0.5s						
JCJ	Chichijima	8.79	333	LR	LR	17 57 04.2	
	comp=Z,83nm,20.8s,baz=348,slow=32						
PATS	Pohnpei	16.77	136	Pn	Pn	17 56 10.9	-0.6
INU	Inuyama	18.12	334	P	Pn	17 56 28.3	+0.2
INU				IAmb	IAmb	17 56 48.8	
	comp=Z,27nm,1.3s						
JGF	Kuroka	18.20	335		P	17 56 29.4	+0.3
JGF				IAmb	IAmb	17 57 00.3	
	comp=Z,20nm,1.2s						
MJAR	Matsushiro Arr	18.72	338	P	Pn	17 56 36.6	+1.3
	comp=Z,0.1nm,0.3s,baz=157,slow=9.9,SNR=10						
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	18.72	338	P	Pn	17 56 35.8	+0.4
MAJO	Matsushiro	18.72	338	P	P	17 56 34.8	0.0
MAJO				IAmb	IAmb	17 56 48.9	
	comp=Z,18nm,1.3s						
MJB9	Matsu-Tunnel	18.72	338	P	Pn	17 56 35.6	+0.2
MJB9				IAmb	IAmb	17 56 49.9	
	comp=Z,17nm,1.3s						
H11S3	WAKE ISLAND Hy	18.94	89	T	T	18 16 35.5	
	baz=278						
H11S1	WAKE ISLAND Hy	18.95	89	T	T	18 16 34.4	
	baz=278						
H11S2	WAKE ISLAND Hy	18.96	89	T	T	18 16 37.2	
	baz=278						
SSLB	Suanglung	24.33	285	P	P	17 57 32.9	-0.9
KSRS	Korea Array	24.40	322	P	P	17 57 34.4	+0.1
	comp=Z,2.3nm,0.7s,baz=149,slow=9.0,SNR=8.4						
	comp=Z,2.3nm,0.7s						
KSAR	Wonju Array Be	24.42	322	P	P	17 57 36.0	+1.6
COEN	Coen	33.23	186	P	P	17 58 54.7	+1.6
PETK	Petropavlovsk-	34.80	12	P	P	17 59 06.5	+0.1
SOEI	Soe	36.36	219	P	P	17 59 19.6	-0.7
WB0	Warramunga Arr	40.66	198	P	P	17 59 55.3	-0.9
WB0				IAmb	IAmb	17 59 59.0	
	comp=Z,8.0nm,1.2s						
WRAB	Tennant Creek	40.83	198	P	P	17 59 56.0	-1.6
WRA	Warramunga Arr	40.84	198	P	P	17 59 57.5	-0.2
	comp=Z,0.4nm,0.4s,baz=8.8,slow=8.7,SNR=9.4						
	comp=Z,0.4nm,0.4s						
LZDM	Lanzhou Array	41.18	303	P	P	18 00 01.8	+1.0
	comp=Z,0.5nm,0.4s,baz=111,slow=7.9,SNR=2.1						
	comp=Z,0.5nm,0.4s						
SONM	Songino Array	43.26	321	P	P	18 00 18.1	+0.8
	comp=Z,0.3nm,0.4s,baz=124,slow=7.0,SNR=4.4						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	43.26	321	P	P	18 00 17.6	+0.2
ASAR	Alice Springs	44.49	197	P	P	18 00 27.4	+0.1
	comp=Z,0.2nm,0.4s,baz=21,slow=7.4,SNR=12						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	44.49	197	P	P	18 00 26.6	-0.7
CMAR	Chiang Mai Arr	45.07	277	P	P	18 00 32.8	+0.7
	comp=Z,0.5nm,0.8s,baz=69,slow=8.2,SNR=5.8						
	comp=Z,0.5nm,0.8s						
CMAR	Chiang Mai Arr	45.07	277	P	P	18 00 30.4	-1.7
INKA	Innaminka	47.12	187	P	P	18 00 46.2	-1.8
INKA				IAmb	IAmb	18 01 23.7	
	comp=Z,3.8nm,1.5s						
ZAA0	Zalesovo Array	58.11	322	P	P	18 02 09.1	+0.1
ZAA0				IAmb	IAmb	18 02 09.5	

	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	58.11	322	P	P	18 02 08.8	-0.2
	comp=Z,2.1nm,0.6s,baz=109,slow=8.4,SNR=13						
	comp=Z,2.1nm,0.6s						
SYI	Shuyak Island	58.65	32	P	P	18 02 11.8	-0.9
MK31	Makanchi Array	58.72	314	P	P	18 02 13.6	+0.1
MKAR	Makanchi Array	58.72	314	P	P	18 02 13.4	-0.1
	comp=Z,0.9nm,0.6s,baz=88,slow=9.6,SNR=14						
MKAR				PcP	PcP	18 03 02.4	-0.7
	comp=Z,0.4nm,0.6s,baz=79,slow=6.1,SNR=4.7						
	comp=Z,0.9nm,0.6s						
KURK	Kurchatov	61.45	318	P	P	18 02 30.6	-1.4
KURK				IAmb	IAmb	18 02 32.5	
	comp=Z,1.9nm,0.6s						
KURBB	Kurchatov Arra	61.50	318	P	P	18 02 32.1	-0.2
	comp=Z,2.1nm,0.5s,baz=95,slow=7.6,SNR=27						
	comp=Z,2.1nm,0.5s						
ILAR	Eielson Array	62.69	26	P	P	18 02 40.5	+0.4
	comp=Z,0.4nm,0.9s,baz=270,slow=10,SNR=2.6						
	comp=Z,0.4nm,0.9s						
BVAR	Borovoye Array	66.61	320	P	P	18 03 06.2	+0.3
	comp=Z,5.1nm,0.7s,baz=88,slow=6.3,SNR=18						
	comp=Z,5.1nm,0.7s						
KKAR	Karatay Array	67.10	309	P	P	18 03 07.9	-1.4
YKA	Yellowknife Ar	77.02	28	P	P	18 04 09.1	+0.9
	comp=Z,0.1nm,0.4s,baz=293,slow=6.4,SNR=2.8						
	comp=Z,0.1nm,0.4s						
ARCES	ARCESS Array B	82.20	342	P	P	18 04 37.0	+0.7
	comp=Z,4.2nm,0.9s,baz=59,slow=7.6,SNR=4.6						
	comp=Z,4.2nm,0.9s						
ELK	Elko	83.52	49	LR	LR	18 40 08.5	
	comp=Z,168nm,19.0s,baz=226,slow=34						
FINES	FINESS Array B	86.72	336	P	P	18 04 58.8	-0.4
	comp=Z,3.2nm,0.9s,baz=70,slow=3.4,SNR=15						
	comp=Z,3.2nm,0.9s						

*UPP **01** 18:00:11.1±0.1, 67°.84N×20°.18E, h0km, ML2.2, Confirmed Induced event*
*HEL **01** 18:00:11.8±0.7, 67°.88N×20°.05E, h0km, ML1.2, Suspected explosion*
*IDC **01** 18:00:16.5±1.2, 67°.76N×20°.87E, h0km, mbtmp2.9/4, ML1.8/4, Error ellipse: s-maj=19.7km s-min=9.9km az=111.0*
ISC 01 18:00:12.0±0.9, **67°.86N**±0°.03×**20°.20E**±0°.04, **h0**km, **n20**, σ1s.**32**/30, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.11	29	P	Pg	18 00 13.8	-0.2
	baz=226						
KUA				S	Sg	18 00 15.8	+0.5
RATU	Laukkuluspa	0.23	261	P	Pg	18 00 15.6	-0.9
KOVU	Salmi	0.36	358	S	Sg	18 00 23.8	+0.2
NIKU	Nikkaluokta	0.44	271	P	Pg	18 00 19.3	-1.1
LANU	Lannavaara	0.70	74	P	Pg	18 00 24.5	-0.9
LANU				S	Sg	18 00 34.6	+0.2
LANU	Lannavaara	0.70	74	PG	Pb	18 00 26.2	-0.9
LANU				SB	Sb	18 00 37.5	+0.2
HEF	Hetta	1.41	65	PG	Pn	18 00 37.1	-1.7
	baz=246						
HEF				smax	smax	18 00 55.6	
	comp=Z,2.1nm,0.2s						
HEF				SN	Sn	18 01 01.2	+3.1
ERTU	Ertsjaerv	1.52	149	PB	Pn	18 00 39.8	-0.6
	baz=325						
ERTU				SG	Sb	18 00 59.8	-1.1
KLF	Kolari	1.58	112	PG	Pb	18 00 41.2	-0.8
KLF				smax	smax	18 01 00.8	
	comp=Z,1.6nm,0.2s						
KLF				SG	Sn	18 01 01.5	-0.7
KTK1	Kautokeino	1.61	43	PG	Pn	18 00 41.7	0.0
KTK1				SN	Sg	18 01 03.8	+0.1
ARA0	ARCESS Array S	2.56	47	PG	Pb	18 00 57.9	-0.9
ARA0				SG	Sb	18 01 30.9	0.0
ARCES	ARCESS Array B	2.56	47	Pn	Pb	18 00 58.7	-0.1
	comp=Z,0.2nm,0.3s,baz=225,slow=15,SNR=5.8						
ARCES				Sn	Sb	18 01 29.0	-1.8
	comp=Z,0.5nm,0.3s,baz=226,slow=26,SNR=7.7						
	comp=Z,1.5nm,0.6s						
RNF	Rovaniemi	2.59	116	PN	Pn	18 00 55.9	+0.9
	baz=300						
RNF				SB	Sb	18 01 30.9	-0.5
RAJF	Raja-Jooseppi	3.09	75	SG	Sb	18 01 47.6	+1.7
KEV	Kevo	3.12	49	SB	Sb	18 01 45.1	-1.6
RANF	Ranua	3.19	123	SB	Sb	18 01 50.7	+2.0
OLKF	Oulanka, Finla	3.92	109	SG	Sg	18 02 15.9	-1.7
FINES	FINESS Array B	6.92	156	Pn	Pn	18 01 56.4	+1.9
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=1.5						
FINES				Sn	Sn	18 03 15.1	+1.4
	comp=Z,0.1nm,0.3s,baz=344,slow=19,SNR=3.3						
FINES				Lg	Lg	18 03 43.9	
	comp=Z,0.1nm,0.3s,baz=340,slow=28,SNR=1.0						
	comp=Z,3.0nm,1.1s						
NOA	NORSAR Array B	7.86	214	Pn	Pn	18 02 11.3	+3.9
	baz=32,slow=17,SNR=2.1						
	comp=Z,0.3nm,0.7s						
HFS	Hagfors	8.26	203	Pn	Pn	18 02 15.2	+2.3
	comp=Z,0.1nm,0.3s,baz=22,slow=16,SNR=0.9						
	comp=Z,1.1nm,0.8s						

*IDC **01** 18:32:18.8±4.6, 30°.23N×142°.00E, h0km, mb3.6/6, mbtmp3.6/8, ML3.1/2, Error ellipse: s-maj=188.9km s-min=17.7km az=71.0*
*JMA **01** 18:32:18.5±0.3, 30°.4N±0°.8×14°3E±°, h48km, MV3.9/22, NEAR TORISHIMA IS*
ISC 01 18:32:20.4±1.2, **30°.50N**±0°.09×**142°.7E**±0°.2, **h24**km, **n16**, σ1s.**57**/20, **mb3.7**/6, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	3.42	187	Pn	Pn	18 33 02.8	-9.3
	4.6nm,0.3s,baz=18,slow=20,SNR=1.7						
JCJ				Sn	Sn	18 33 35.0	-17
	11nm,0.3s,baz=287,slow=19,SNR=2.0						
JHJ2	Mitsune	3.55	318	eP	Pn	18 33 12.5	-1.5
JHJ2				eS	Sn	18 33 54.5	-0.6
JHJ	Hachijo jima 2	3.57	318	Pn	Pn	18 33 12.5	-1.7
	12nm,0.3s,baz=166,slow=12,SNR=1.4						
JHJ				Sn	Sn	18 33 54.8	-0.9
	8.5nm,0.3s,baz=120,slow=20,SNR=1.4						
	94nm,0.6s						
BSO1	Boso 1	4.37	342	eS	Sn	18 34 16.2	+1.4
BSO3	Boso 3	4.65	338	eP	Pn	18 33 28.6	-0.2
JOD2	Odawara 2	5.61	329	eP	Pn	18 33 42.3	0.0
JYT	Yasato	6.07	341	eP	Pn	18 33 48.9	+0.4
JYT				eS	Sn	18 34 57.5	+0.3
JRY	Ryogami san	6.33	331	eP	Pn	18 33 53.1	+0.9
JHO	Hitachi	6.34	345	eP	Pn	18 33 50.6	-1.6
JHO				eS	Sn	18 34 59.4	-4.5
MJAR	Matsushiro Arr	7.07	330	Pn	Pn	18 34 03.0	+0.6
	0.1nm,0.3s,baz=155,slow=11,SNR=16						
MJAR				Sn	Sn	18 35 23.5	+1.5
	baz=142,slow=13,SNR=4.1						
	1.2nm,0.5s						
SONM	Songino Array	32.63	312	P	P	18 38 49.5	-0.9
	0.4nm,0.7s,baz=101,slow=7.5,SNR=2.0						
	0.4nm,0.7s						
MKAR	Makanchi Array	48.68	307	P	P	18 41 03.8	+1.2
	0.4nm,0.7s,baz=88,slow=8.1,SNR=5.1						
	0.4nm,0.7s						
WRA	Warramunga Arr	50.78	190	P	P	18 41 17.3	-1.5
	0.4nm,0.4s,baz=9.6,slow=7.8,SNR=6.0						
	0.4nm,0.4s						
ASAR	Alice Springs	54.51	190	P	P	18 41 46.0	-0.3
	0.6nm,0.5s,baz=8.0,slow=6.4,SNR=17						
	0.6nm,0.5s						
BVAR	Borovoye Array	55.85	316	P	P	18 41 56.4	+0.7
	0.4nm,0.5s,baz=77,slow=6.4,SNR=2.5						
	0.4nm,0.5s						
BRTR	Keskin Array B	83.99	313	P	P	18 44 50.6	+1.6
	0.5nm,0.8s,baz=46,slow=8.3,SNR=3.0						
	0.5nm,0.8s						

*NEIC **01** 18:34:41.7±0.8, 17°.88N±0°.04×67°.04W±0°.02, h15km±2km, ML2.5/35, Md2.9/3(RSPR), Error ellipse: s-maj=6.6km s-min=2.1km az=196.0*
RSPR 01 18:34:43.0, 17°.93N×67°.03W, h9km, MD2.9/3, 6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLPR	Magueyes Islan	0.04	334		Pg	18 34 44.8	+0.1
MLPR				Sg	Sg	18 34 46.0	0.0
MLPR				IAML		18 34 46.4	
	5µm,0.2s						
MLPR				IAML		18 34 46.9	
	3µm,0.1s						
CRPR	Cabo Rojo, PR	0.11	312		Sg	18 34 47.6	+0.2
CRPR	Cabo Rojo, PR	0.11	312		Pg	18 34 45.6	0.0
CRPR				IAML		18 34 48.0	
	1µm,0.3s						
CRPR				IAML		18 34 48.3	
	2µm,0.1s						
CRPR	Cabo Rojo, PR	0.11	312	⇑iP	Pg	18 34 45.8	+0.2
CRPR				eS	Sg	18 34 47.6	+0.2
GBPR	Guanica, Bosqu	0.15	73		Pg	18 34 46.4	+0.2
GBPR					Sg	18 34 49.1	+0.7
GBPR	Guanica, Bosqu	0.15	73	⇑iP	Pg	18 34 46.4	+0.2
GBPR				eS	Sg	18 34 49.1	+0.7
LSP	Las Mesas	0.25	347		Pg	18 34 48.2	+0.2
LSP					Sg	18 34 52.1	+0.7
LSP	Las Mesas	0.25	347	⇑iP	Pg	18 34 48.2	+0.2
LSP				eS	Sg	18 34 52.1	+0.7
PRSN	Puerto Rico Se	0.30	338	Pg	Pg	18 34 48.9	-0.1
PRSN				Sg	Sg	18 34 53.6	+0.4
PRSN				IAML		18 34 55.4	
	2µm,0.2s						
PRSN				IAML		18 34 56.9	
	1µm,0.3s						
PRSN	Puerto Rico Se	0.30	338	⇑iP	Pg	18 34 49.1	0.0
PRSN				eS	Sg	18 34 53.9	+0.8
OBIP	Obispado Ponce	0.41	75		Pg	18 34 50.6	-0.4
OBIP					Sg	18 34 56.9	+0.3
OBIP				IAML		18 34 57.6	
	comp=N,50nm,0.3s						
OBIP	Obispado Ponce	0.41	75	⇓eP	Pg	18 34 51.0	-0.1
OBIP				eS	Sg	18 34 57.2	+0.6
UUPR	Utuado, UPR, P	0.43	42		Pg	18 34 51.0	-0.5
UUPR				Sg	Sg	18 34 56.8	-0.4
UUPR				IAML		18 34 59.0	
	comp=N,1µm,0.3s						
UUPR				IAML		18 35 03.9	
	comp=N,966nm,0.4s						
CELP	Cerrillos	0.45	72		Pg	18 34 51.5	-0.2
CELP				IAML		18 34 58.7	
	comp=N,138nm,0.3s						
CELP				IAML		18 34 59.4	
	comp=N,105nm,0.2s						
AGPR	Aguadilla, PR	0.54	351		Pg	18 34 52.9	-0.5
AGPR				IAML		18 35 01.1	
	comp=N,138nm,0.3s						
AGPR				IAML		18 35 01.1	
	comp=N,252nm,0.5s						
AGPR	Aguadilla, PR	0.54	351	⇑iP	Pg	18 34 53.1	-0.3
AGPR				eS	Sg	18 35 00.7	+0.1
IDE	Isla Desecheo	0.62	317		Pg	18 34 54.5	-0.6
IDE					Sg	18 35 03.4	+0.3
IDE	Isla Desecheo	0.62	317	⇓iP	Pg	18 34 54.5	-0.6
IDE				eS	Sg	18 35 03.4	+0.3
EMPR	Esperanza - Ma	0.72	41		Pg	18 34 56.8	0.0
EMPR					Sg	18 35 06.8	+0.6
EMPR	Esperanza - Ma	0.72	41	⇓eP	Pg	18 34 56.8	0.0
EMPR				eS	Sg	18 35 06.8	+0.6
ECPR	Experimental S	0.74	59		Pg	18 34 56.0	-1.2
ECPR				IAML		18 35 07.2	
	comp=N,505nm,0.2s						
ECPR				IAML		18 35 07.7	
	comp=N,292nm,0.2s						
ECPR	Experimental S	0.74	59	⇓iP	Pg	18 34 56.4	-0.9
ECPR				eS	Sg	18 35 06.5	-0.3
SJG	San Juan	0.85	78		Pg	18 34 58.3	-1.1
SJG				IAML		18 35 10.6	
	comp=N,68nm,0.3s						
SJG				IAML		18 35 12.0	
	comp=N,59nm,0.3s						
SJG	San Juan	0.85	78	eS	Sg	18 35 09.4	-1.1
PDPR	Patillas Dam,	0.96	85		Pg	18 35 00.4	-1.0
PDPR				IAML		18 35 17.9	
	comp=N,40nm,0.3s						
PDPR				IAML		18 35 23.8	
	comp=N,28nm,0.2s						
GCPR	Guaynabo City	0.97	67		Sg	18 35 12.9	-1.4
GCPR	Guaynabo City	0.97	67		Pg	18 35 00.4	-1.3
GCPR				IAML		18 35 15.2	
	comp=E,27nm,0.8s						
GCPR				IAML		18 35 19.0	
	comp=N,33nm,0.6s						
GCPR	Guaynabo City	0.97	67	⇓eP	Pg	18 35 00.1	-1.6
GCPR				eS	Sg	18 35 12.9	-1.4
HUMP	Col San Antoni	1.14	79		Sg	18 35 18.7	-0.9
HUMP	Col San Antoni	1.14	79		Pb	18 35 03.5	-1.3
HUMP				IAML		18 35 21.9	
	comp=N,66nm,0.4s						
HUMP				IAML		18 35 25.9	
	comp=N,42nm,0.2s						
HUMP	Col San Antoni	1.14	79	⇓eP	Pb	18 35 03.5	-1.4
HUMP				eS	Sg	18 35 18.7	-0.9
CUPR	Culebra, Puert	1.70	77	Pn	Pn	18 35 10.1	-2.7
DR12	Loma Pena Alta	2.39	291	Pn	Pn	18 35 19.1	-3.3

*IDC **01** 18:36:53.9±0.6, 37°.59N×118°.75W, h0km, mb4.0/11, mbtmp4.0/17, ML3.7/6, MS3.6/32, Error ellipse: s-maj=9.0km s-min=5.0km az=97.0*
*NEIC **01** 18:36:53.9, 37°.40N×118°.95W, h22km, Moment Tensor Solution. Duration: 0 Moment tensor: Scale 10^15Nm; Mrr-2.80; Mθθ-1.06; Mφφ3.86; Mrθ-2.51; Mθφ-4.71; Mφr0.04; Fault plane solution: M0 6.36000×10^15 NP1:φs8.00000°, δ57.30000°, λ-23.77000°. NP2:φs111.38000°, δ70.17000°, λ-144.95000°. Principal axes: T 6.9091, Plg8.0000°, Azm237.0000°; N -1.2964, Plg50.0000°, Azm137.0000°; P -5.6127, Plg38.0000°, Azm334.0000°;*
*NEIC **01** 18:36:53.9, 37°.60N×118°.82W, h22km*
*NEIC **01** 18:36:53.8±1.3, 37°.61N±0°.02×118°.79W±0°.03, h10km±1km, mb4.4/24, ML4.6/162, Mwr4.4/133, Mww4.5/14, ML4.6/9(REN), Mwr4.4/5(NCEDC), Error ellipse: s-maj=4.2km s-min=2.9km az=57.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-1.62; Mθθ-0.20; Mφφ1.82; Mrθ-0.17; Mθφ-4.02; Mφr-0.76; Fault plane solution: M0 4.44000×10^15 NP1:φs98.03000°, δ74.45000°, λ-170.34000°. NP2:φs5.42000°, δ80.70000°, λ-15.76000°. Principal axes: T 4.9885, Plg4.0000°, Azm52.0000°; N -1.4663, Plg72.0000°, Azm156.0000°; P -3.5222, Plg18.0000°, Azm321.0000°;*
*NEIC **01** 18:36:54.3, 37°.59N×118°.82W, h10km*
*NCEDC **01** 18:36:54.3±1.5, 37°.59N±0°.02×118°.82W±0°.03, h10km±3km, Error ellipse: s-maj=3.7km s-min=0.5km az=53.0*
*REN **01** 18:36:54.0±1.5, 37°.59N±0°.02×118°.81W±0°.03, h9km±3km, Error ellipse: s-maj=3.5km s-min=2.7km az=50.0*
*NEIC **01** 18:36:54.3, 37°.59N×118°.82W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-2.43; Mθθ-0.38; Mφφ2.82; Mrθ0.75; Mθφ-4.45; Mφr-2.13; Fault plane solution: M0 5.65000×10^15 NP1:φs3.13000°, δ78.28000°, λ-33.49000°. NP2:φs100.79000°, δ57.29000°, λ-166.03000°. Principal axes: T 6.4815, Plg14.0000°, Azm56.0000°; N -2.5870, Plg55.0000°, Azm166.0000°; P -3.8945, Plg32.0000°, Azm317.0000°;*
*NEIC **01** 18:36:54.6, 37°.62N×118°.81W, h5km*
ISC 01 18:36:54.4±0.7, **37°.59N**±0°.02×**118°.81W**±0°.02, **h11**km±4km, **n271**, σ1s.**16**/257, **mb4.2**/16, **MS3.6**/27, **California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCVM	Convict Lake	0.02	274		Pg	18 36 56.5	-0.3
EXSG	Experiment Sta	0.03	322		Pg	18 36 56.7	-0.1
EXSG					Sg	18 36 58.6	+0.2
MLAC	Mammoth, Mammo	0.05	330		Pg	18 36 56.8	-0.1
MDRNC	Doe Ridge	0.05	335		Pg	18 36 56.9	-0.1
MCMM	Convict Lake	0.06	291		Pg	18 36 56.8	-0.1
MGPM	Gravel Pit	0.09	296		Pg	18 36 57.1	-0.1
MLCM	Laurel Creek C	0.09	285		Pg	18 36 57.0	-0.2
MLHM	Little Hot Cre	0.09	356		Pg	18 36 57.4	+0.1
MCBM	Casa Benchmark	0.09	308		Pg	18 36 57.2	-0.1
MCSM	Casa Diablo Ho	0.10	310		Pg	18 36 57.3	-0.1
MEMM	East Mammoth H	0.13	306		Pg	18 36 57.7	-0.1
MMLB	Mammoth Lakes	0.15	297		Pg	18 36 58.1	0.0
MLIM	Lincoln Peak	0.17	286		Pg	18 36 58.5	0.0
MLIM					Sg	18 37 01.3	-0.1
MLIM	Lincoln Peak	0.17	286		Pg	18 36 58.5	0.0
MDYM	Dry Creek	0.18	293		Pg	18 36 58.5	0.0
MDYM					Sg	18 37 01.4	0.0
MMPM	Mammoth Pass	0.18	277		Pg	18 36 58.2	-0.3
MMPM	Mammoth Pass	0.18	277		Pg	18 36 58.2	-0.3
MMPM					Sg	18 37 00.9	-0.5
MMSM	Mammoth Summit	0.18	283		Pg	18 36 58.6	-0.1
MINS	Minaret Summit	0.21	288		Pg	18 36 58.8	-0.3
MINS					Sg	18 37 01.9	-0.5
MDPB	Devils Postpil	0.22	281		Pg	18 36 58.9	-0.3
MDPB					Sg	18 37 02.0	-0.5
MDCM	Deadman Creek	0.22	303		Pg	18 36 59.0	-0.2
MRCM	Red Rock Canyo	0.25	70		Pg	18 36 59.9	+0.2
MCDM	Chidago Canyon	0.29	98		Pb	18 37 00.8	-0.9
MTUM	Tungsten Hills	0.30	141		Pg	18 37 00.7	+0.1
MFBM	Five Bridges	0.34	118		Pb	18 37 01.7	-0.8
KCC	Kaiser Creek	0.49	237		Pg	18 37 03.4	-0.5
KCC					Sg	18 37 09.9	-0.5
DSP	Deep Springs	0.70	108		Pg	18 37 07.6	-0.3
DSP				Sg	Sg	18 37 16.8	-0.3
DSP				IAML		18 37 17.9	
	comp=E,19µm,0.8s						
DSP				IAML		18 37 19.1	
	comp=N,15µm,0.6s						
LHV	Little Huntoon	0.70	20		Pg	18 37 07.8	-0.2
LHV				Sg	Sg	18 37 16.3	-0.9
LHV				IAML		18 37 20.4	
	comp=N,47µm,0.5s						
LHV				IAML		18 37 23.3	
	comp=E,32µm,0.6s						
TIN	Tinemaha, Big	0.70	139		Pg	18 37 08.1	0.0
TIN				Sg	Sb	18 37 17.6	-0.8
TIN				IAML		18 37 19.2	
	comp=E,33µm,0.8s						
TIN				IAML		18 37 23.9	
	comp=N,36µm,0.7s						
MMIM	Miami Mountain	0.76	258		Pg	18 37 08.5	-0.7
TVH1	TV Hill, Hawth	0.87	2		Pg	18 37 11.1	-0.1
TVH1	TV Hill, Hawth	0.87	2		Sg	18 37 23.0	+0.4
NV08	Mina Array Sit	0.90	25		Pg	18 37 11.4	-0.4
NV09	Mina Array Sit	0.92	24		Pg	18 37 11.9	-0.3
NVAR	Mina Array Bea	0.93	25	Pg	Pg	18 37 10.9	-1.4
	comp=N,2µm,0.3s,baz=212,slow=17						
NVAR				Lg	Lg	18 37 23.9	
	comp=N,4µm,0.3s,baz=218,slow=18,SNR=22						
NVAR	Mina Array Bea	0.93	25		Pg	18 37 11.5	-0.9
NV11	Mina Array Sit	0.99	31		Pg	18 37 12.9	-0.5
NV11				Sg	Sg	18 37 26.0	-0.3
NV11				IAML		18 37 27.4	
	comp=E,11µm,0.9s						
MHDM	Hidden Dam	0.99	242		Pb	18 37 12.5	-0.9
LCH	Last Change Ra	0.99	111		Pg	18 37 13.1	-0.4
LCH					Sb	18 37 26.4	-0.4
MBUM	Mount Bullion	1.01	269		Pb	18 37 12.7	-1.2
MBUM					Sg	18 37 25.6	-1.3
BUCR	Buckhorn Ranch	1.07	275		Pb	18 37 13.7	-1.2
BUCR					Sb	18 37 27.1	-1.8
LEGD	La Grand CA	1.13	251		Pb	18 37 15.0	-0.9
KARE	Kearney REC, C	1.14	210		Pb	18 37 15.0	-1.0
EBP	Ebbets Pass	1.27	322		Pn	18 37 18.2	0.0
EBP					Sb	18 37 35.2	+0.4
CWC	Cottonwood Cre	1.29	153		Pn	18 37 17.9	-0.5
CWC					Sb	18 37 34.7	-0.5
GRAC	Grapevine Rang	1.29	117		Pg	18 37 18.9	-0.3
GRAC				Sg	Sg	18 37 36.5	+0.5
CGO	Cerro Gordo	1.31	142		Pn	18 37 18.4	-0.5
CMB	Columbia Colle	1.33	290		Pn	18 37 18.0	-0.9
CMB					Sb	18 37 35.2	-1.2
CMB				IAML		18 37 37.0	
	comp=E,7µm,0.7s						
CMB				IAML		18 37 39.0	
	comp=N,14µm,1.0s						
VOG	Valley Oaks Go	1.35	200		Pn	18 37 19.0	0.0
SPG2	Springville 2	1.39	179		Pn	18 37 19.6	0.0
WLHM	Little Horse	1.49	164		Pb	18 37 21.6	-0.6
SGV	South Grapevin	1.54	113		Pb	18 37 22.4	-0.6
PNTR	Pine Nut	1.62	338		Pn	18 37 23.5	+0.4
PNTR				IAML		18 37 32.3	
	comp=E,5µm,0.6s						
PNTR					Sb	18 37 45.7	+0.7
WSRE	Westside REC,	1.63	221		Pb	18 37 24.3	-0.1
MFS	McCloud Flat S	1.66	152		Pb	18 37 24.9	-0.1
WELL	Weller Preserv	1.74	300		Pn	18 37 25.1	+0.7
WELL	Weller Preserv	1.74	300	IAML		18 37 50.2	
	comp=E,8µm,0.5s						
WELL				IAML		18 37 50.5	
	comp=N,9µm,0.8s						
VES	Vestal, Richgr	1.76	187		Pb	18 37 26.1	-0.5
WCSM	Coso Springs S	1.77	152		Pb	18 37 27.0	+0.1
Q09A	Carvers	1.78	45		Pn	18 37 25.6	+0.4
BMSM	Mercy Hot Spri	1.84	240		Pb	18 37 27.2	-0.8
MPMC	Manual Prospec	1.86	145		Pn	18 37 26.6	+0.3
WASM	Alta Sierra Ca	1.86	174		Pb	18 37 28.2	-0.2
WNMM	Nine Mile Cany	1.89	157		Pb	18 37 27.6	-1.1
WCT	Wildcat Mounta	1.91	114		Pn	18 37 27.5	+0.5
WCT				IAML		18 38 00.6	
	comp=N,3µm,0.6s						
WCT				IAML		18 38 01.1	
	comp=E,3µm,0.7s						
FURC	Furnace Creek,	1.92	125		Pn	18 37 27.6	+0.7
FURC				IAML		18 38 10.2	
	comp=E,5µm,1.1s						
FURC				IAML		18 38 14.7	
	comp=N,4µm,1.1s						
ISA	Isabella, Lake	1.94	172		Pb	18 37 29.0	-0.8
ISA				IAML		18 37 55.7	
	comp=N,4µm,0.3s						
ISA				IAML		18 37 55.8	
	comp=E,6µm,0.9s						
WORM	Onyx Ranch	1.94	166		Pb	18 37 29.3	-0.5
MPK	Martis Peak	1.96	331		Pn	18 37 28.5	+0.8
MPK				IAML		18 38 00.1	
	comp=E,3µm,0.9s						
MPK				IAML		18 38 05.5	
	comp=N,4µm,0.9s						
AVNL	Avenal, CA USA	1.97	218		Pb	18 37 29.2	-1.0
MTOS	Mt Oso, Westle	2.01	268		Pn	18 37 29.5	+1.4
CLC	China Lake	2.02	151		Pn	18 37 28.8	+0.4
HPCM	Pacheco Lake	2.04	256		Pn	18 37 29.9	+1.3
BBGB	Big Mountain B	2.05	241		Pb	18 37 30.5	-1.1
CTM	Castle Mountai	2.06	217		Pb	18 37 30.7	-1.1
SRTC	Snort	2.08	155		Pb	18 37 30.5	-1.6
PSMM	Smith Mountain	2.09	224		Pn	18 37 30.6	+1.3
JCNB	Joaquin Canyon	2.10	219		Pn	18 37 30.9	+1.4
PMPB	Monarch Peak	2.11	230		Pn	18 37 30.8	+1.2
LTR	Lone Tree Road	2.12	251		Pn	18 37 30.9	+1.3
TRC	Taylor Ranch	2.12	220		Pn	18 37 31.0	+1.3
LRV	Little Rabbit	2.12	237		Pn	18 37 31.1	+1.4
PPTM	Peach Tree Val	2.13	227		Pn	18 37 31.0	+1.1
PHFM	Heflinger Ranc	2.13	217		Pn	18 37 31.0	+1.1
PMRM	Maxey Ranch	2.14	213		Pn	18 37 31.3	+1.3
TPNV	Topopah Spring	2.14	107		Pn	18 37 30.4	+0.3
TPNV				IAML		18 38 06.7	
	comp=N,6µm,0.9s						
TPNV				IAML		18 38 07.1	
	comp=N,6µm,0.8s						
GHIB	Gold Hill	2.15	216		Pn	18 37 30.9	+0.8
GHIB	Gold Hill	2.15	216		Pn	18 37 30.9	+0.8
PSTM	Stockdale Moun	2.15	220		Pn	18 37 31.3	+1.2
PKD	Bear Valley Ra	2.15	221		Pn	18 37 31.4	+1.2
PKD				IAML		18 38 16.3	
	comp=N,4µm,0.9s						
PKD				IAML		18 38 17.6	
	comp=E,5µm,1.1s						
HFEM	San Felipe	2.16	255		Pn	18 37 31.6	+1.4
BVL	Bear Valley	2.16	243		Pn	18 37 31.5	+1.2
PHPM	Hope Ranch	2.16	223		Pn	18 37 31.4	+1.1
PAHR	Pah Rah Range	2.16	348		Pn	18 37 30.8	+0.3
PVCM	Vineyard Canyo	2.17	220		Pn	18 37 31.5	+1.1
THIS	South End of C	2.18	212		Pn	18 37 32.0	+1.3
SDH	Striped Hills	2.19	115		Pn	18 37 31.6	+0.9
PAGB	Antelope Grade	2.19	212		Pn	18 37 31.8	+1.1
PKLM	Kerr Lake	2.19	215		Pn	18 37 31.9	+1.2
CDC	Canada Road	2.21	256		Pn	18 37 32.5	+1.6
HCAM	Canada Road	2.21	256		Pb	18 37 33.0	-1.3
PEAR	Peavine Mounta	2.21	336		Pn	18 37 32.1	+0.9
YUBA	Cisco Grove, Y	2.21	323		Pn	18 37 32.0	+0.7
GWY	Greenwater Val	2.21	129		Pn	18 37 31.2	0.0
GWY				IAML		18 38 12.1	
	comp=E,2µm,1.1s						
BJOM	Mount Johnson	2.22	245		Pn	18 37 32.6	+1.6
MAGC	SCE Magundon P	2.23	182		Pb	18 37 34.3	-0.2
PWKM	Work Ranch	2.24	218		Pn	18 37 32.5	+1.1

NSP Numbskull Pass 2.24 112 Pn 18 37 32.1 +0.5
QSM Queen of Sheba 2.25 136 Pn 18 37 31.8 +0.3
QSM IAML 18 38 15.6
comp=N,2µm,0.9s
PPO Portuguese Can 2.25 221 Pn 18 37 32.8 +1.2
PBPM Bitterwater Pu 2.25 207 Pn 18 37 32.8 +1.3
BAKC Calstate 2.25 186 Pb 18 37 34.5 -0.6
CBSNC Byron Hot Spri 2.26 277 Pn 18 37 32.9 +1.3
CMLM Mount Lewis 2.26 268 Pn 18 37 33.3 +1.5
SAO San Andreas Ge 2.26 249 Pn 18 37 33.0 +1.4
MHC Mount Hamilton 2.27 265 Pn 18 37 33.2 +1.3
BSGM Shirttail Gulc 2.28 240 Pn 18 37 33.2 +1.3
TCHL Shandon 2.29 215 Pn 18 37 33.6 +1.5
LRMC Laurel Mtn Rad 2.29 156 Pn 18 37 32.9 +0.7
LRMC IAML 18 38 08.9
comp=E,2µm,0.6s
LRMC IAML 18 38 09.5
comp=N,2µm,0.2s
TRAY Twisselman Ran 2.29 208 Pn 18 37 33.1 +1.0
FRP Fremont Peak 2.30 250 Pn 18 37 33.3 +1.1
FRP Fremont Peak 2.30 250 Pn 18 37 33.2 +1.1
SCZ Santa Cruz 2.30 245 Pn 18 37 33.2 +1.0
CSR Chase Ranch 2.30 255 Pn 18 37 33.3 +1.1
CCOB Coe Ranch Numb 2.31 263 Pn 18 37 34.0 +1.7
BJCM Johnson Can. 2.31 244 Pn 18 37 33.6 +1.2
AMDNV Amargosa 2.32 119 Pn 18 37 33.7 +1.3
HLPM Lions Peak 2.32 257 Pn 18 37 33.7 +1.3
TWIT Twitchell Isla 2.33 283 Pb 18 37 35.8 -0.6
YEG Yeguas Mountai 2.34 204 Pn 18 37 34.4 +1.6
WENL Wente Vineyard 2.34 272 Pn 18 37 34.6 +1.8
HJGM San Juan Grade 2.35 251 Pn 18 37 33.7 +0.9
BSRM Salinas Radio 2.35 248 Pn 18 37 33.7 +0.8
TEJ El Tejon 2.36 178 Pb 18 37 35.4 -1.4
CCCA Chr Cany lake 2.36 150 Pn 18 37 34.2 +1.1
CCCA Chr Cany lake 2.36 150 IAML 18 38 13.4
comp=N,3µm,0.8s
CCCA IAML 18 38 25.1
comp=E,3µm,1.1s
CALM Calaveras Res. 2.38 268 Pn 18 37 34.7 +1.4
TSCN Private Proper 2.39 212 Pn 18 37 35.1 +1.7
CVLM Vallecito 2.41 272 Pn 18 37 35.5 +1.9
PCCM Crazy Canyon 2.41 232 Pn 18 37 35.3 +1.6
BSMM Soledad Missio 2.42 241 Pn 18 37 35.2 +1.3
CARC Carrizo Plain 2.42 201 Pn 18 37 35.4 +1.4
TCAS Cass Winery, P 2.43 216 Pn 18 37 35.6 +1.6
S11A Rachel 2.43 88 Pn 18 37 35.3 +1.2
DTP Desert Tortois 2.44 161 Pn 18 37 36.1 +1.9
HERM Elkhorn Road 2.45 252 Pn 18 37 35.4 +1.2
BDM Black Diamond 2.45 279 Pn 18 37 36.3 +2.0
MCY Mercury 2.45 111 Pn 18 37 35.1 +0.7
CRGC Crocker Grade 2.46 198 Pn 18 37 35.9 +1.5
ARVC Arvin 2.46 180 Pb 18 37 37.5 -1.1
SMMC Simmler 2.46 203 Pn 18 37 35.9 +1.4
PANM San Antonio Re 2.47 224 Pn 18 37 35.9 +1.4
JEPS Jepson Natural 2.48 287 Pn 18 37 36.9 +2.3
JELB Ellicott, Sant 2.50 256 Pn 18 37 35.9 +1.0
HULI Fort Hunter Li 2.50 232 Pn 18 37 35.9 +1.0
HULI IAML 18 38 24.0
comp=E,3µm,1.4s
HULI IAML 18 38 27.2
comp=N,3µm,0.7s
CNIC Niles Canyon 2.51 271 Pn 18 37 36.5 +1.4
CRHM Round Hill Res 2.54 277 Pn 18 37 37.8 +2.3
FORD Fort Ord Natur 2.54 250 Pn 18 37 36.1 +0.7
RAMR Ramage Ranch 2.56 221 Pn 18 37 37.1 +1.3
CTAM Taylor 2.58 281 Pn 18 38 38.1 +2.1
SFRE Sierra Foothil 2.58 311 Pn 18 37 36.4 +0.3
RUSS Russell Ranch 2.60 292 Pb 18 37 38.9 -2.0
BPRM Ponciano Ridge 2.62 244 Pn 18 37 37.6 +1.0
JSJM St Joseph 2.63 265 Pn 18 37 38.3 +1.7
CSLM San Leandro Hi 2.63 274 Pn 18 37 37.9 +1.2
SMCB Saint Mary's C 2.63 276 Pn 18 37 38.2 +2.0
SHOC Shoshone, Teco 2.64 129 Pn 18 37 38.7 +1.8
SHOC IAML 18 38 39.0
comp=N,4µm,1.1s
SHOC IAML 18 38 57.2
comp=E,3µm,1.2s
NADM Allendale 2.65 290 Pn 18 37 39.2 +2.3
PAPM Alder Peak 2.65 232 Pn 18 37 38.2 +1.2
JUCM University of 2.65 258 Pn 18 37 38.0 +1.0
R11B Troy Canyon, C 2.66 72 Pn 18 37 37.4 +0.1
BRIB Briones 2.67 278 Pn 18 37 38.6 +1.3
HMOM Monterey 2.68 249 Pn 18 37 38.7 +1.3
JBMM Black Mountain 2.68 265 Pn 18 37 38.4 +1.0
JRSC Jasper Ridge 2.74 267 Pn 18 37 39.1 +0.9
JRSC IAML 18 38 32.6
comp=N,2µm,1.2s
JRSC IAML 18 38 40.1
comp=E,2µm,1.1s
TPO Tropico Hills 2.75 170 Pn 18 37 40.5 +2.1
TPO IAML 18 38 28.2
comp=N,1µm,1.1s
GSC Goldstone, Bar 2.79 144 IAML 18 38 31.8
comp=E,2µm,0.9s
SUTB Sutter Butte 2.86 306 Pn 18 37 40.3 +0.4
ORV Oroville 2.88 314 Pn 18 37 40.8 +0.6
ORV IAML 18 38 27.8
comp=E,1µm,0.7s
OSI Osito Audit: C 2.97 179 IAML 18 38 28.5
comp=E,2µm,1.3s
OSI IAML 18 38 35.4
comp=N,2µm,1.1s
CVS Carmenet Viney 2.98 286 Pn 18 37 42.1 +0.5
CVS IAML 18 38 27.9
comp=N,2µm,1.0s
CVS IAML 18 38 33.1
comp=E,2µm,1.0s
PRN Pahroc Range 2.99 92 Pn 18 37 42.1 +0.3
SHPR Sheep Range 3.11 109 Pn 18 37 44.8 +1.3
MNRC McLaughlin Min 3.14 295 IAML 18 38 47.3
comp=E,2µm,1.2s
MNRC IAML 18 38 58.5
comp=N,2µm,1.2s
MCCM Marconi Confer 3.27 281 IAML 18 39 00.5
comp=E,1µm,0.9s
MCCM IAML 18 39 03.5
comp=N,1µm,1.1s
PASC Pasadena Art C 3.45 171 IAML 18 38 47.4
comp=N,861nm,1.2s
PASC IAML 18 38 49.6
comp=E,1µm,1.2s
O03E Paynes Creek 3.57 320 IAML 18 39 11.0
comp=N,2µm,1.0s
HATC Hat Creek Radi 3.83 328 Pn 18 37 54.7 +1.5
HATC IAML 18 39 20.9
comp=N,1µm,2.6s
HATC IAML 18 39 23.9
comp=E,1µm,1.9s
PSUT Pine Spring 4.02 75 Pn 18 37 56.3 +0.2
PSUT IAML 18 39 05.7
comp=E,1µm,1.0s
PSUT IAML 18 39 11.6
comp=N,1µm,0.8s
O02D Mt. Diablo Mer 4.04 311 IAML 18 39 09.2
comp=N,472nm,1.1s
O02D IAML 18 39 19.9
comp=E,575nm,0.9s
DANC Danby, Needles 4.04 136 IAML 18 39 18.2
comp=E,616nm,1.0s
DANC IAML 18 39 32.1
comp=N,756nm,1.0s
ELK Elko 4.20 40 Pn Pn 18 37 58.7 +0.2
ELK comp=N,12nm,0.3s,baz=233,slow=12,SNR=168 Pg **Pb 18 38 07.5 -0.8**
ELK comp=N,59nm,0.3s,baz=229,slow=12,SNR=34 Lg Lg 18 39 05.5
comp=N,241nm,0.3s,baz=150,slow=16,SNR=15
comp=N,69nm,0.5s
ELK Elko 4.20 40 Pn 18 37 58.7 +0.2
ELK IAML 18 39 10.2
comp=N,549nm,0.3s
ELK IAML 18 39 11.0
comp=N,532nm,0.5s
CCUT Cedar City 4.33 89 IAML 18 39 18.8
comp=E,407nm,0.7s
CCUT IAML 18 39 24.8
comp=N,509nm,1.1s
PFO Pinyon Flats O 4.41 154 Pn **Pn 18 38 02.9 +1.6**
PFO comp=N,2.5nm,0.3s,baz=348,slow=15,SNR=29 Pg **Pb 18 38 10.3 -1.5**
PFO comp=N,8.3nm,0.3s,baz=335,slow=15,SNR=19 Lg Lg 18 39 13.2
comp=N,21nm,0.3s,baz=241,slow=19,SNR=6.4
PFO LR LR 18 39 56.0
comp=N,773nm,18.2s,baz=332,slow=42
comp=N,7.0nm,0.4s
PFO Pinyon Flats O 4.41 154 Pn 18 38 01.9 +0.6
LCMT Little Creek M 4.47 96 Pn 18 38 03.3 +1.1
SZCU Shurtz Canyon 4.54 88 IAML 18 39 25.6
comp=N,444nm,1.0s
SZCU IAML 18 39 28.2
comp=E,561nm,1.1s
BC3 Big Chuckawall 4.78 144 IAML 18 40 00.3
comp=N,258nm,1.6s
KNB Kanab 4.80 95 IAML 18 39 32.3
comp=N,583nm,1.5s
KNB IAML 18 39 34.7
comp=E,439nm,1.2s
YBH Yreka Blue Hor 5.12 325 Pn **Pn 18 38 13.6 +2.6**
comp=E,0.2nm,0.3s,baz=152,slow=4.7,SNR=58
YBH Lg Lg 18 39 35.6
comp=E,0.3nm,0.3s,baz=148,slow=7.5,SNR=6.6
YBH LR LR 18 40 16.9
comp=E,24nm,21.0s,baz=170,slow=39
JCC Jacoby Creek, 5.18 310 Pn 18 38 12.5 +0.7
JCC IAML 18 39 55.8
comp=E,195nm,2.4s
MTPU Mount Pierson 5.26 83 Pn 18 38 14.3 +1.1
MTPU IAML 18 39 45.9
comp=E,249nm,1.0s
MTPU IAML 18 39 50.6
comp=N,355nm,1.3s
TJX Tijuana 5.27 164 Pn 18 38 14.2 +1.2
DUG Dugway, Tooele 5.35 59 Pn 18 38 15.9 +1.6
DUG IAML 18 39 48.2
comp=N,344nm,1.6s
DUG IAML 18 39 49.9
comp=N,284nm,1.2s
PDAR Pinedale Array 8.76 51 Pn **Pn 18 39 04.6 +3.4**
comp=N,0.6nm,0.3s,baz=246,slow=14,SNR=29
PDAR Lg Lg 18 41 28.6
comp=N,0.7nm,0.3s,baz=233,slow=28,SNR=2.0
comp=N,4.7nm,0.7s
PDAR Pinedale Array 8.76 51 Pn 18 39 04.8 +3.6
ANMO Albuquerque 10.31 101 Pn **Pn 18 39 23.3 +0.9**
comp=N,0.1nm,0.3s,baz=302,slow=12,SNR=2.8
ANMO Lg Lg 18 42 12.2
comp=N,0.2nm,0.3s,baz=328,slow=19,SNR=7.8
ANMO LR LR 18 43 56.1
comp=N,68nm,20.2s,baz=286,slow=41
comp=N,1.3nm,1.0s
NEW Newport 10.74 6 Pn **Pn 18 39 30.3 +2.2**
baz=170,slow=12,SNR=1.4
NEW LR LR 18 43 46.3
comp=N,96nm,20.3s,baz=208,slow=38
comp=N,1.1nm,0.7s
NEW Newport 10.74 6 Pn 18 39 29.4 +1.3
TXAR Lajitas Array 15.07 119 Pn **P 18 40 30.1 -2.5**
baz=303,slow=12,SNR=16
TXAR Lg Lg 18 44 45.8
baz=304,slow=30,SNR=2.9
TXAR LR LR 18 45 57.1
comp=N,81nm,20.2s,baz=298,slow=36
comp=N,2.5nm,1.1s
LPIG La Paz 15.29 149 LR LR 18 46 03.1
comp=N,206nm,18.9s,baz=22,slow=36
KSU1 Kansas State U 17.48 78 P **P 18 40 58.5 -0.7**
KSU1 IAmb IAmb 18 41 01.6
comp=Z,31nm,1.1s
ECSD EROS Data Cent 17.90 63 P **P 18 41 03.7 -0.1**
AGMN Agassiz Nation 19.84 50 P **P 18 41 24.5 -0.6**
FFC Flin Flon 20.63 28 P **P 18 41 33.3 -0.3**
ULM Lac du Bonnet 20.71 45 P **P 18 41 34.3 -0.2**
comp=Z,14nm,0.8s,baz=238,slow=11,SNR=11
ULM LR LR 18 50 04.8
comp=Z,145nm,20.8s,baz=190,slow=38
comp=Z,14nm,0.8s
ULM Lac du Bonnet 20.71 45 P P 18 41 34.0 -0.5
ULM IAmb IAmb 18 41 39.0
comp=Z,16nm,0.8s
SPMN Marine on St. 20.88 60 P P 18 41 35.9 -0.5
SPMN IAmb IAmb 18 41 38.4
comp=Z,14nm,0.6s
R40A Maddies Statio 20.92 80 P P 18 41 36.4 -0.5
R40A IAmb IAmb 18 41 43.3
comp=Z,21nm,1.2s
P40A Paris 20.99 76 P P 18 41 37.3 -0.3
P40A IAmb IAmb 18 41 51.1
comp=Z,19nm,1.1s
FCAR Ozark Folk Cen 21.43 86 P P 18 41 41.5 -0.8
L40A Anamosa 21.61 69 P P 18 41 42.4 -1.8
EPLO Experimental L 21.69 48 P P 18 41 44.6 -0.4
EPLO IAmb IAmb 18 41 50.4
comp=Z,12nm,1.1s
N41A Harden Midland 21.86 73 P P 18 41 45.6 -1.3
T42A Van Buren 22.02 83 P P 18 41 48.4 -0.3
T42A IAmb IAmb 18 42 19.4
comp=Z,17nm,1.2s
E38A The Farm, Brul 22.05 57 P P 18 41 47.1 -1.9
E38A IAmb IAmb 18 41 55.7
comp=Z,14nm,0.9s
DLBC Dease Lake 22.11 344 LR LR 18 50 44.6
comp=Z,167nm,20.2s,baz=116,slow=38
L42A Oliver, Polo 22.76 70 P P 18 41 56.3 -0.3
CGM3 Cape Girardeau 23.11 82 P P 18 41 59.9 -0.3
CGM3 IAmb IAmb 18 42 13.2
comp=Z,9.1nm,1.0s
Q44A Meyer Farm, Va 23.39 78 P P 18 42 01.4 -1.7
OXF Oxford 23.92 88 P P 18 42 07.1 -1.2
YKA Yellowknife Ar 25.07 5 P P 18 42 19.9 +1.5
comp=Z,1.3nm,0.9s,baz=191,slow=9.3,SNR=13
YKA LR LR 18 53 20.4
comp=Z,90nm,19.6s,baz=72,slow=39
comp=Z,1.3nm,0.9s
YKA Yellowknife Ar 25.07 5 P P 18 42 18.4 0.0
FCC Fort Churchill 26.56 29 P P 18 42 29.6 -2.4
W50A Signal Mountai 26.99 85 P P 18 42 33.4 -2.8
W50A IAmb IAmb 18 43 15.9
comp=Z,7.5nm,1.0s
TKL Tuckaleechee C 28.09 83 LR LR 18 54 48.1
comp=Z,108nm,19.2s,baz=286,slow=38
CMIG Matias Romero 29.32 128 LR LR 18 54 51.9
comp=Z,153nm,21.9s,baz=346,slow=37
KDAK Kodiak Island 29.93 323 LR LR 18 53 11.1
comp=Z,116nm,18.7s,baz=134,slow=33
SADO Sadowa 30.47 64 LR LR 18 56 27.3
comp=Z,135nm,19.9s,baz=316,slow=39
INK Inuvik 31.84 350 LR LR 18 56 22.8
comp=Z,86nm,20.2s,baz=342,slow=37
ILAR Eielson Array 31.88 338 P **P 18 43 21.8 +2.6**
comp=Z,1.7nm,0.8s,baz=134,slow=8.4,SNR=32
ILAR LR LR 18 56 59.6
comp=Z,154nm,19.2s,baz=114,slow=38
comp=Z,1.7nm,0.8s
ILAR Eielson Array 31.88 338 P P 18 43 19.1 -0.1
RES Resolute Bay 38.87 10 LR LR 19 01 51.6
comp=Z,40nm,20.3s,baz=340,slow=38
SCHQ Schefferville 38.87 47 P P 18 44 19.7 +0.2
comp=Z,6.4nm,1.0s,baz=282,slow=19,SNR=5.5
SCHQ LR LR 19 02 05.7
comp=Z,42nm,18.4s,baz=282,slow=39
comp=Z,6.4nm,1.0s
FRB Frobisher Bay 39.66 32 LR LR 19 01 20.4
comp=Z,126nm,21.9s,baz=300,slow=37
SFJD Kangerlussuaq 47.58 30 LR LR 19 05 42.9
comp=Z,99nm,19.2s,baz=216,slow=36
SJG San Juan 49.76 98 LR LR 19 10 07.5
comp=Z,33nm,19.7s,baz=182,slow=40
SDV Santo Domingo 51.92 111 LR LR 19 10 11.7
comp=Z,72nm,20.0s,baz=252,slow=38
MA2 Magadan 58.68 323 LR LR 19 10 48.9
comp=Z,38nm,18.6s,baz=76,slow=35
BORG Borgarnes 59.71 30 LR LR 19 13 20.8
comp=Z,206nm,18.6s,baz=288,slow=37
TIXI Tiksi 61.28 340 LR LR 19 16 53.2
comp=Z,34nm,18.2s,baz=22,slow=39
ARCES ARCESS Array B 70.02 13 LR LR 19 19 48.7
comp=Z,32nm,18.4s,baz=293,slow=37
FINES FINESS Array B 77.26 16 P **P 18 48 48.1 -0.1**
comp=Z,4.0nm,1.0s,baz=335,slow=6.2,SNR=1.8
comp=Z,4.0nm,1.0s
MJAR Matsushiro Arr 77.50 307 P **P 18 48 53.4 +3.3**
comp=Z,1.1nm,0.7s,baz=51,slow=4.8,SNR=4.6
comp=Z,1.1nm,0.7s
MJAR Matsushiro Arr 77.50 307 P P 18 48 49.6 -0.5
MJAR IAmb IAmb 18 48 51.4
comp=Z,3.3nm,1.2s
ESDC Sonseca Array 82.61 45 P P 18 49 18.6 +0.9
comp=Z,1.1nm,0.7s,baz=306,slow=5.4,SNR=13
ESDC LR LR 19 23 56.0
comp=Z,22nm,19.1s,baz=6.0,slow=34
comp=Z,1.1nm,0.7s
ESDC Sonseca Array 82.61 45 P P 18 49 17.8 +0.1
ESDC IAmb IAmb 18 49 25.1
comp=Z,3.1nm,1.4s
GERES GERESS Array B 84.18 29 LR LR 19 30 53.1
comp=Z,62nm,20.2s,baz=252,slow=38
DAVOX Davos/Dischmat 84.26 33 LR LR 19 28 09.9
comp=Z,51nm,18.2s,baz=264,slow=36
BDFB Brasilia 84.89 114 LR LR 19 32 29.8
comp=Z,22nm,18.2s,baz=208,slow=39
SONM Songino Array 85.89 331 P P 18 49 36.0 +1.8
comp=Z,0.6nm,0.8s,baz=45,slow=2.6,SNR=4.1
SONM LR LR 19 28 45.9
comp=Z,53nm,18.4s,baz=20,slow=36
comp=Z,0.6nm,0.8s
SONM Songino Array 85.89 331 P P 18 49 33.5 -0.8
ZALV Zalesovo Beam 86.58 346 P P 18 49 39.5 +2.2
comp=Z,0.3nm,0.5s,baz=2.3,slow=7.2,SNR=1.6
comp=Z,0.3nm,0.5s
ZALV Zalesovo Beam 86.58 346 P P 18 49 37.4 +0.1
HHC Hu-ho-hao-te 89.35 324 *e*P **P 18 49 48.2 -2.8**
HHC pmax pmax
comp=Z,1.0nm,0.6s
HHC pmax pmax
comp=Z,43nm,4.7s
BVAR Borovoye Array 89.40 354 P P 18 49 50.4 -0.5
comp=Z,0.6nm,0.6s,baz=0.0,slow=4.3,SNR=5.4
BVAR LR LR 19 34 57.8
comp=Z,41nm,18.6s,baz=349,slow=39
comp=Z,0.6nm,0.6s
KURK Kurchatov 90.74 349 P P 18 49 57.0 -0.1
KURBB Kurchatov Arra 90.85 349 P P 18 49 58.8 +1.1
comp=Z,0.4nm,0.5s,baz=14,slow=4.5,SNR=7.2
comp=Z,0.4nm,0.5s
AKTO Aktyubinsk 92.31 2 LR LR 19 38 33.8
comp=Z,34nm,18.6s,baz=160,slow=40
BRTR Keskin Array B 99.00 21 LR LR 19 35 48.1
comp=Z,14nm,18.6s,baz=328,slow=36

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*IDC **01** 18:59:57.9±1.4,38.28N×38.89E,h0km,mb3.5/3,*
mbtmp3.4/5,ML3.2/2,MS3.5/1,Error ellipse: s-maj=23.2km
s-min=15.9km az=174.0
*ISK **01** 18:59:58.4,38.34N×38.86E,h5km,ML3.4/10*
*AFAD **01** 18:59:58.3,38.33N×38.80E,h7km±1km,MW3.6*
ISC 01 18:59:58.6±1.0,**38.32N**±0.02×**38.86E**±0.02,**h7**km±8km,
n49,σ0°88/62,mb3.5/3,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.20**	**30**	P	**Pg**	**19 00 03.2**	**+0.5**
ELZG				IAML		19 00 06.0	
	comp=E,3µm,0.3s						
ELZG				S	**Sg**	**19 00 06.3**	**+0.8**
ELZG				IAML		19 00 07.0	
	comp=N,2µm,0.6s						
MAYA	**Malatya/Merkez**	**0.34**	**270**	P	**Pg**	**19 00 04.8**	**-0.5**
MAYA				IAML		19 00 09.0	
	comp=N,5µm,0.4s						
MAYA				S	**Sg**	**19 00 09.4**	**-0.4**
MAYA				IAML		19 00 12.0	
	comp=E,5µm,0.6s						
NARI	**Adyaman-Kaht**	**0.45**	**190**	P	**Pg**	**19 00 07.4**	**+0.2**
NARI				S	**Sg**	**19 00 13.5**	**+0.4**
NARI				IAML		19 00 17.0	
	comp=E,2µm,0.6s						
ELZ	**Elazig**	**0.46**	**37**	P	**Pg**	**19 00 07.5**	**+0.1**
KAHTU	**Kahta**	**0.55**	**201**	P	**Pg**	**19 00 09.3**	**0.0**
KAHTU				IAML		19 00 17.0	
	comp=E,4µm,0.7s						
KAHTU				S	**Sg**	**19 00 17.3**	**+0.8**
MDNT	**Maden**	**0.65**	**84**	P	**Pg**	**19 00 09.6**	**-1.6**
AZEY	**Adyaman-Merk**	**0.70**	**223**	P	**Pg**	**19 00 11.9**	**-0.3**
AKCD	**Akcadag**	**0.74**	**268**	P	**Pg**	**19 00 12.0**	**-0.8**
AKCD				S	**Sg**	**19 00 21.6**	**-0.7**
AKCD				IAML		19 00 25.0	
	comp=E,2µm,0.5s						
HANM	**anlurfa/Hi**	**0.74**	**179**	P	**Pg**	**19 00 13.1**	**+0.2**
MCKZ	**Bingol**	**0.80**	**7**	P	**Pg**	**19 00 13.3**	**-0.7**
MCKZ				S	**Sg**	**19 00 24.4**	**0.0**
MCKZ				IAML		19 00 25.0	
	comp=N,3µm,0.3s						
KOVA	**Elazig, Kovanc**	**0.84**	**63**	P	**Pg**	**19 00 12.7**	**-2.1**
ARPR	**Arapgir-MALATY**	**0.87**	**332**	Pg	**Pg**	**19 00 15.0**	**-0.3**
ARPR				Sg	**Sb**	**19 00 27.7**	**-0.4**
TNCL	**Tunceli-Merkez**	**0.95**	**34**	P	**Pg**	**19 00 16.3**	**-0.6**
ATAB	**Bozova**	**0.96**	**208**	P	**Pg**	**19 00 16.7**	**-0.3**
AKCA	**Adyaman/G¶l**	**1.06**	**241**	P	**Pg**	**19 00 18.4**	**-0.6**
AKCA				S	**Sg**	**19 00 32.7**	**-0.2**
AKCA				IAML		19 00 39.0	
	comp=N,2µm,0.7s						
DIYA	**Diyarbakir**	**1.07**	**111**	P	**Pb**	**19 00 19.7**	**+0.1**
DIYA				S	**Sb**	**19 00 33.8**	**-0.1**
DIYA				IAML		19 00 37.0	
	comp=N,550nm,0.5s						
DYBB	**Diyarbakir**	**1.08**	**110**	Pn	**Pb**	**19 00 19.7**	**+0.1**
DYBB				Sn	**Sn**	**19 00 34.9**	**-0.6**
ILIC	**ilic-Erzincan**	**1.15**	**349**	Pn	**Pg**	**19 00 20.1**	**-0.6**
ILIC				Sn	**Sn**	**19 00 36.4**	**-1.0**
SANL	**SANLIURFA_Merk**	**1.16**	**175**	P	**Pg**	**19 00 20.6**	**-0.2**
SANL				S	**Sg**	**19 00 33.2**	**-2.5**
SANL				IAML		19 00 38.0	
	comp=N,3µm,0.5s						
MDIV		**1.18**	**328**	P	**Pg**	**19 00 20.4**	**-0.9**
MAYK		**1.25**	**70**	P	**Pg**	**19 00 22.2**	**-0.4**
GZT	**Gaziantep**	**1.41**	**227**	P	**Pn**	**19 00 24.7**	**-0.2**
ERZN	**Erzincan**	**1.43**	**28**	Pn	**Pb**	**19 00 25.4**	**-0.3**
SURC	**SANLIURFA_SURC**	**1.46**	**188**	P	**Pn**	**19 00 25.5**	**+0.1**
SURC				S	**Sn**	**19 00 44.5**	**-0.2**
SURC				IAML		19 00 47.0	
	comp=N,1µm,0.7s						
EUZM	**Uzumlu**	**1.53**	**25**	P	**Pb**	**19 00 26.9**	**-0.4**
EUZM				S	**Sg**	**19 00 48.4**	**+0.7**
EUZM				IAML		19 00 51.0	
	comp=E,322nm,0.5s						
BNGB	**Bingl**	**1.57**	**64**	Pn	**Pb**	**19 00 27.4**	**-0.7**
NZIP	**Nizip/Gaziante**	**1.59**	**217**	P	**Pn**	**19 00 27.0**	**-0.2**
YEDI	**Yedisu-Bingol**	**1.72**	**49**	Pn	**Pn**	**19 00 29.6**	**+0.4**
MBOZ		**1.74**	**355**	P	**Pb**	**19 00 30.4**	**-0.5**
GAZ	**Gaziantep**	**1.74**	**229**	Pn	**Pb**	**19 00 30.2**	**-0.7**
KMRS	**Kahramanmaras**	**1.75**	**243**	Pn	**Pn**	**19 00 30.1**	**+0.6**
SLHN	**Bingol, Solhan**	**1.81**	**69**	P	**Pg**	**19 00 33.2**	**-0.1**
KELT	**Kelkit**	**1.85**	**9**	P	**Pb**	**19 00 32.4**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.85**	**95**	Pn	**Pn**	**19 00 31.5**	**+0.6**
KARO	**Karliova-Bingo**	**1.97**	**59**	Pn	**Pn**	**19 00 33.1**	**+0.4**
BAYT	**Aydıntepe-Bayb**	**2.29**	**25**	Pn	**Pn**	**19 00 37.7**	**+0.6**
GURO	**Guroymak-BITLI**	**2.50**	**84**	Pn	**Pn**	**19 00 40.7**	**+0.8**
BRTR	**Keskin Array B**	**4.30**	**291**	Pn	**Pn**	**19 01 06.6**	**+2.0**
	0.6nm,0.3s,baz=108,slow=12,SNR=15						
BRTR				Lg	Lg	19 02 17.6	
	baz=108,slow=28						
	1.9nm,0.7s						
BEIL	**Beino**	**4.35**	**211**	*e*P	**Pn**	**19 01 05.5**	**+0.4**
HWQ	**Hawqa**	**4.67**	**211**	*e*P	**Pn**	**19 01 10.7**	**+1.0**
ZAHL	**Zahle**	**5.07**	**209**	*e*P	**Pn**	**19 01 15.8**	**+0.6**
BHL	**Bhannes**	**5.12**	**211**	*e*P	**Pn**	**19 01 16.6**	**+0.8**
DQRL	**Deir Qamar**	**5.32**	**211**	*e*P	**Pn**	**19 01 20.8**	**+2.2**
RCY	**Rachaya**	**5.41**	**208**	*e*P	**Pn**	**19 01 21.3**	**+1.5**
MMAI	**Mount Meron Ar**	**6.00**	**209**	Pn	**Pn**	**19 01 29.2**	**+1.3**
	1.4nm,0.3s,baz=27,slow=12,SNR=6.3						
MMAI				Lg	Lg	19 03 06.7	
	3.1nm,0.3s,baz=27,slow=41,SNR=5.7						
	4.1nm,0.7s						
FINES	**FINESS Array B**	**24.47**	**345**	P	**P**	**19 05 19.4**	**+1.3**
	1.8nm,0.8s,baz=155,slow=23,SNR=1.2						
	1.8nm,0.8s						
MKAR	**Makanchi Array**	**32.74**	**61**	P	**P**	**19 06 33.0**	**+1.1**
	0.3nm,0.5s,baz=269,slow=7.0,SNR=9.9						
	0.3nm,0.5s						
SONM	**Songino Array**	**48.79**	**56**	P	**P**	**19 08 43.3**	**-1.1**
	0.2nm,0.5s,baz=275,slow=6.4,SNR=2.4						
	0.2nm,0.5s						
DBIC	**Dimbokro**	**50.51**	**243**	LR	LR	19 33 10.2	
	comp=Z,50nm,18.9s,baz=11,slow=39						

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*ISK **01** 19:03:04.5,38.32N×38.83E,h5km,ML3.1/11*
*AFAD **01** 19:03:05.4,38.33N×38.80E,h11±2km,MW3.5*
ISC 01 19:03:05.5±0.9,**38.33N**±0.02×**38.80E**±0.02,**h13**km±8km,
n48,σ0°66/71,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.22**	**40**	P	**Pg**	**19 03 10.6**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG				S	Sg	19 03 13.7	0.0
ELZG				IAML		19 03 14.0	
	comp=N,1µm,0.2s						
ELZG				IAML		19 03 14.0	
	comp=E,2µm,0.3s						
MAYA	Malatya/Merkez	0.30	269	P	Pb	19 03 12.1	-0.6
MAYA				S	Sb	19 03 16.5	-1.1
MAYA				IAML		19 03 17.0	
	comp=N,4µm,0.2s						
NARI	Adyaman-Kaht	0.45	184	P	Pb	19 03 14.8	-0.5
NARI				S	Sg	19 03 20.5	+0.2
NARI				IAML		19 03 23.0	
	comp=N,889nm,0.6s						
ELZ	Elazig	0.48	41	P	Pg	19 03 14.9	-0.1
ELZ				S	Sg	19 03 21.6	+0.2
KAHTU	Kahta	0.55	196	P	Pb	19 03 16.5	-0.4
KAHTU				S	Sb	19 03 23.9	-0.8
KAHTU				IAML		19 03 24.0	
	comp=E,3µm,0.7s						
AZEY	Adyaman-Merk	0.68	220	P	Pb	19 03 19.3	+0.1
AKCD	Akcadag	0.69	267	P	Pb	19 03 19.0	-0.5
AKCD				S	Sb	19 03 28.6	-0.4
AKCD				IAML		19 03 30.0	
	comp=N,2µm,0.2s						
AKCD				IAML		19 03 30.0	
	comp=E,2µm,0.4s						
MDNT	Maden	0.69	84	P	Pg	19 03 18.5	-0.4
HANM	anlurfa/Hi	0.75	175	P	Pb	19 03 20.2	-0.2
MCKZ	Bingol	0.80	10	P	Pb	19 03 21.2	-0.1
MCKZ				S	Sb	19 03 32.0	-0.2
MCKZ				IAML		19 03 33.0	
	comp=N,4µm,0.2s						
MCKZ				IAML		19 03 33.0	
	comp=E,6µm,0.3s						
ARPR	Arapgir-MALATY	0.85	335	Pg	Pb	19 03 22.1	0.0
ARPR				Sg	Sn	19 03 35.3	-0.3
KOVA	Elazig, Kovanc	0.88	64	P	Pg	19 03 21.7	-0.8
ATAB	Bozova	0.95	205	P	Pn	19 03 25.3	+0.8
TNCL	Tunceli-Merkez	0.97	36	P	Pg	19 03 23.6	-0.7
AKCA	Adyaman/G¶l	1.03	239	P	Pb	19 03 25.5	+0.3
DIYA	Diyarbakir	1.11	111	P	Pn	19 03 27.2	+0.3
DIYA				S	Sb	19 03 41.3	+0.2
DYBB	Diyarbakir	1.12	109	Pn	Pn	19 03 26.8	-0.1
ILIC	ilic-Erzincan	1.14	351	Pn	Pn	19 03 27.4	+0.2
MDIV		1.15	329	P	Pn	19 03 28.1	+0.7
SANL	SANLIURFA_Merk	1.17	173	P	Pn	19 03 28.2	+0.7
SANL				S	Sn	19 03 44.0	+0.7
SANL				IAML		19 03 45.0	
	comp=N,2µm,0.5s						
SANL				IAML		19 03 45.0	
	comp=E,1µm,0.3s						
MAYK		1.29	71	P	Pn	19 03 29.3	+0.1
GZT	Gaziantep	1.38	226	P	Pg	19 03 32.5	+0.5
GZT				S	Sg	19 03 50.8	+0.8
GZT				IAML		19 03 53.0	
	comp=N,576nm,0.4s						
ERZN	Erzincan	1.45	29	Pn	Pg	19 03 32.6	-0.7
ERZN				Sn	Sg	19 03 53.2	+1.1
SURC	SANLIURFA_SURC	1.46	186	P	Pg	19 03 33.0	-0.4
EUZM	Uzumlu	1.54	27	P	Pb	19 03 34.0	0.0
NZIP	Nizip/Gaziante	1.56	215	P	Pg	19 03 34.7	-0.8
NZIP				S	Sg	19 03 55.7	-0.2
NZIP				IAML		19 03 57.0	
	comp=E,312nm,0.5s						
KHMN	Narli-Kahraman	1.60	235	Pn	Pg	19 03 35.4	-0.9
KHMN				Sn	Sg	19 03 57.8	+0.7
BNGB	Bingl	1.61	65	Pn	Pb	19 03 35.2	+0.1
BNGB				Sn	Sg	19 03 57.5	+0.2
GAZ	Gaziantep	1.71	228	Pn	Pb	19 03 36.8	0.0
KMRS	Kahramanmaras	1.71	242	Pn	Pb	19 03 36.9	0.0
MBOZ		1.73	356	P	Pg	19 03 38.3	-0.4
YEDI	Yedisu-Bingol	1.75	50	Pn	Pb	19 03 37.2	-0.4
SLHN	Bingol, Solhan	1.85	69	P	Pb	19 03 39.6	+0.4
KELT	Kelkit	1.85	11	P	Pn	19 03 37.8	+0.7
KELT				S	Sg	19 04 04.2	-0.8
CUAYA	Sivas-Altinyay	1.86	301	P	Pg	19 03 40.2	-0.9
MARD	Mardin	1.86	122	P	Pb	19 03 39.7	+0.2
MARD				S	Sb	19 04 02.5	-0.2
MARD				IAML		19 04 06.0	
	comp=N,490nm,0.5s						
SVAN	Silvan-Diyarba	1.89	95	Pn	Pb	19 03 38.9	-1.0
SVAN	Silvan-Diyarba	1.89	95	P	Pb	19 03 38.9	-1.0
SVAN				S	Sb	19 04 03.1	-0.4
SVAN				IAML		19 04 08.0	
	comp=N,92nm,0.4s						
SUSE	Susehri	1.93	346	P	Pg	19 03 42.5	-0.1
SUSE				S	Sg	19 04 08.9	+1.2
BTMN	Batman	1.99	102	P	Pn	19 03 38.3	-0.6
BTMN				S	Sb	19 04 06.4	0.0
SCER	sogukcermik	2.01	320	P	Pg	19 03 43.0	-1.0
ALUC	Giresun/Alucra	2.01	359	P	Pg	19 03 43.3	-0.8
ALUC				S	Sg	19 04 10.8	+0.6
ALUC				IAML		19 04 14.0	
	comp=E,193nm,0.6s						
ECAT	Cat-ERZURUM	2.12	52	P	Pb	19 03 43.0	-0.8
KOPT	Kop Dagi	2.14	37	P	Pn	19 03 41.6	+0.5
MUSM	Mu-Merkez	2.16	79	P	Pb	19 03 43.0	-1.5
MUSM				S	Sn	19 04 08.3	+0.3
MUSM				IAML		19 04 15.0	
	comp=E,41nm,0.7s						
MUSM				IAML		19 04 16.0	
	comp=N,38nm,0.4s						
MIDY	Mardin/Midyat-	2.25	113	P	Pb	19 03 46.0	0.0
MIDY				S	Sb	19 04 14.1	+0.3
MIDY				IAML		19 04 24.0	
	comp=N,204nm,0.4s						
BAYT	Aydıntepe-Bayb	2.31	26	Pn	Pn	19 03 45.0	+1.6
GURO	Guroymak-BITLI	2.54	84	Pn	Pn	19 03 48.2	+1.6

*SJA **01** 19:11:57.7±0.9, 24°.30S×67°.19W, h201km±11km, ML3.8, MW3.6*
*NEIC **01** 19:11:59.3±1.6, 24°.36S±0°.08×67°.3W±0°.1, h191km±9km, mb4.0/3, ML4.0(GUC), Error ellipse: s-maj=17.5km s-min=10.0km az=111.0*
*GUC **01** 19:12:01.9±0.7, 24°.16S×67°.52W, h190km±5km, ML4.0*
*IDC **01** 19:12:08.3±10.0, 23°.56S×66°.63W, h213km±73km, mb3.1/1, mbtmp3.8/3, Error ellipse: s-maj=112.8km s-min=34.7km az=24.0*
ISC 01 19:11:58.5±0.7**, 24°.31S**±0°.04×**67°.24W**±0°.04**, h191**km±7km**, n66,** σ1s**37**/87**, 10C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALTA		0.83	85	eP	Pn	19 12 26.4	-0.4
SALTA				eP	Pn	19 12 26.5	-0.4
AF01	San Pedro de A	1.60	327		Pn	19 12 34.2	+1.5
AF01				Sn	S	19 13 01.2	+2.1
AF01	San Pedro de A	1.60	327	eP	Pn	19 12 34.2	+1.5
AF01				eS	S	19 12 59.5	+0.4
AF01	San Pedro de A	1.60	327	eP	Pn	19 12 34.6	+1.9
AF01				eS	S	19 13 00.9	+1.8
SLA	San Lorenzo	1.64	105	⇓eP	Pn	19 12 33.2	+0.4
SLA	San Lorenzo	1.64	105	eP	Pn	19 12 33.3	+0.5
SLA				eS	S	19 12 59.5	+0.1
AZAP	Zapla	1.99	88	eP	Pn	19 12 36.5	0.0
AZAP				eS	S	19 13 05.0	-0.9
FSA	Cafayete	2.13	148	eP	Pn	19 12 38.1	+0.2
YJA	Yavi	2.65	37	eP	Pn	19 12 43.9	-0.1
YJA	Yavi	2.65	37	eP	Pn	19 12 44.9	+0.9
PB06	IPOC Station P	2.67	306		Pn	19 12 44.7	+0.8
PB06				Sn	S	19 13 18.4	-0.8
PB06	IPOC Station P	2.67	306	⇑eP	Pn	19 12 45.3	+1.3
PB06				iS	S	19 13 18.3	-0.9
PB06				IAML		19 13 20.9	
	comp=N,684nm,0.1s						
PB06	IPOC Station P	2.67	306	eP	Pn	19 12 45.0	+1.1
PB06				IAML		19 13 22.6	
	comp=Z,293nm,0.1s						
PB14	IPOC Station P	2.90	263		Pn	19 12 47.4	+0.7
PB14	IPOC Station P	2.90	263	⇑iP	Pn	19 12 47.4	+0.7
PB14	IPOC Station P	2.90	263	eP	Pn	19 12 47.6	+0.8
PB14				IAML		19 13 27.9	
	comp=Z,101nm,0.1s						
AC02	Maricunga	3.04	214		Pn	19 12 50.0	+1.3
AC02	Maricunga	3.04	214	⇑iP	Pn	19 12 49.7	+1.1
PB05	IPOC Station P	3.08	297		Pn	19 12 49.7	+0.9
PB05	IPOC Station P	3.08	297	⇑iP	Pn	19 12 49.6	+0.9
PB05				iS	S	19 13 26.0	-1.9
PB05	IPOC Station P	3.08	297	eP	Pn	19 12 49.6	+0.9
PB05				IAML		19 13 31.4	
	comp=Z,91nm,0.2s						
PB09	IPOC Station P	3.10	323		Pn	19 12 50.8	+1.7
PB09	IPOC Station P	3.10	323	⇑iP	Pn	19 12 50.8	+1.7
PB09				eS	S	19 13 27.6	-1.0
PB09				IAML		19 13 31.9	
	comp=N,205nm,0.2s						
PB09	IPOC Station P	3.10	323	eP	Pn	19 12 50.1	+1.0
PB09				IAML		19 13 33.0	
	comp=Z,134nm,0.2s						
PB03	IPOC Station P	3.22	314		Pn	19 12 51.5	+1.0
PB03	IPOC Station P	3.22	314	⇑iP	Pn	19 12 51.5	+1.0
PB03				iS	S	19 13 29.5	-1.6
PB03				IAML		19 13 31.2	
	comp=E,323nm,0.2s						
PB03	IPOC Station P	3.22	314	eP	Pn	19 12 51.6	+1.0
PB03				IAML		19 13 37.6	
	comp=Z,272nm,0.1s						
PB07	IPOC Station P	3.54	316		Pn	19 12 55.5	+1.0
PB07	IPOC Station P	3.54	316	⇑iP	Pn	19 12 55.3	+0.9
PB07				iS	S	19 13 36.4	-1.7
PB07				IAML		19 13 37.0	
	comp=E,295nm,0.2s						
PB07	IPOC Station P	3.54	316	eP	Pn	19 12 55.2	+0.8
PB07				IAML		19 13 41.3	
	comp=Z,164nm,0.2s						
AC01	Pan de Azucar	3.55	238		Pn	19 12 54.5	+0.2
AC01	Pan de Azucar	3.55	238	⇑iP	Pn	19 12 54.3	0.0
AC01				iS	S	19 13 35.9	-2.2
AC01	Pan de Azucar	3.55	238	eP	Pn	19 12 54.4	0.0
AC01				IAML		19 13 39.8	
	comp=Z,71nm,0.2s						
PB02	IPOC Station P	3.85	320		Pn	19 12 58.9	+0.7
PB02	IPOC Station P	3.85	320	⇑iP	Pn	19 12 58.7	+0.5
PB02	IPOC Station P	3.85	320	eP	Pn	19 12 58.7	+0.5
PB02				IAML		19 13 48.4	
	comp=Z,306nm,0.2s						
PB01	IPOC Station P	3.85	327		Pn	19 12 58.6	+0.4
PB01	IPOC Station P	3.85	327	⇑iP	Pn	19 12 58.6	+0.4
PB01				iS	S	19 13 43.5	-1.5
PB01	IPOC Station P	3.85	327	eP	Pn	19 12 58.8	+0.5
PB01				IAML		19 13 49.2	
	comp=Z,101nm,0.2s						
GO03	Copiapo	4.24	219	Pn	Pn	19 13 02.2	-0.8
GO03	Copiapo	4.24	219	iP	Pn	19 13 02.4	-0.7
GO03				iS	S	19 13 51.6	-2.1
GO03	Copiapo	4.24	219	eP	Pn	19 13 02.9	-0.1
GO03				eS	S	19 13 52.2	-1.4
GO03				IAML		19 13 54.7	
	comp=Z,91nm,0.3s						
PATCX	Punta Patache	4.39	322		Pn	19 13 05.8	+0.8
PATCX	Punta Patache	4.39	322	iP	Pn	19 13 05.0	0.0
PATCX				iS	S	19 13 53.2	-4.0
PATCX	Punta Patache	4.39	322	eP	Pn	19 13 05.3	+0.3
PATCX				IAML		19 14 02.9	
	comp=Z,51nm,0.3s						
PB08	IPOC Station P	4.51	337		Pn	19 13 07.7	+0.9
HMBC	Humberstone	4.70	328	eP	Pn	19 13 08.3	-0.7
HMBC				iS	S	19 14 00.4	-3.9
HMBC	Humberstone	4.70	328	eP	Pn	19 13 08.9	-0.1
HMBC				eS	S	19 14 01.7	-2.7
HMBC				IAML		19 14 05.7	
	comp=Z,107nm,0.4s						
GO01	Chusmiza	4.96	338		Pn	19 13 13.9	+1.3
PB11	IPOC Station P	5.05	333		Pn	19 13 12.7	-0.8
PB11	IPOC Station P	5.05	333	eP	Pn	19 13 13.3	-0.2
PB11				IAML		19 14 16.3	
	comp=Z,50nm,0.3s						
ACLC	CERRO LA CRUZ	5.11	177	eP	Pn	19 13 15.0	+0.8
AC05	El Transito	5.26	210	Pn	Pn	19 13 15.4	-0.8
AC05	El Transito	5.26	210	eP	Pn	19 13 16.9	+0.7
AC05				eS	S	19 14 15.8	-1.7
CO03	El Pedregal	7.19	204	Pn	Pn	19 13 41.0	-0.3
LPAZ	La Paz	8.02	354	P	Pn	19 13 54.0	+1.3
	comp=Z,2.4nm,0.3s,baz=162,slow=8.8,SNR=19						
LPAZ				S	S	19 15 18.9	-4.4
	comp=Z,0.8nm,0.7s,baz=358,slow=7.5,SNR=1.9						
LPAZ	La Paz	8.02	354		Pn	19 13 53.7	+1.0
TRCB	Terra Rica	13.48	87		P	19 15 05.2	-0.1
PLTB	Pedras Altas	14.14	125		P	19 15 11.6	-0.9
TRQA	Tornquist	14.42	163		P	19 15 14.8	-0.7
VAO	Valinhos	18.62	90	P	Pn	19 16 02.3	-2.2
VAO				IAmb	IAmb	19 16 04.4	
	comp=Z,6.8nm,0.6s						
BDFB	Brasilia	20.00	68	P	P	19 16 16.9	+0.1
	comp=Z,3.3nm,0.7s,baz=241,slow=10,SNR=5.1						
BDFB	Brasilia	20.00	68	P	P	19 16 17.1	+0.3
BDFB				IAmb	IAmb	19 16 18.8	
	comp=Z,5.5nm,1.0s						
TORD	Torodi Ar. Bea	76.89	69	P	P	19 23 32.4	+2.4
	comp=Z,0.3nm,0.5s,baz=246,slow=6.7,SNR=5.6						
	comp=Z,0.3nm,0.5s						
BOSA	Boshof	80.79	117	P	P	19 23 52.4	+1.1
BOSA				IAmb	IAmb	19 24 21.4	
	comp=Z,2.2nm,0.9s						
MKAR	Makanchi Array	146.90	40	PKPbc	PKiKP	19 31 22.7	+2.0
	comp=Z,0.1nm,0.4s,baz=344,slow=4.8,SNR=1.7						

*AEIC **01** 19:14:25.6±1.2, 65°.98N±0°.03×166°.16W±0°.04, h3km±5km, Error ellipse: s-maj=4.7km s-min=2.4km az=172.0*
*NEIC **01** 19:14:25, 65°.92N×166°.17W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.08; $M_{\theta\theta}$0.92; $M_{\phi\phi}$0.16; $M_{r\theta}$-0.80; $M_{\theta\phi}$-0.48; $M_{\phi r}$0.01; Fault plane solution: $M_0$1.38000×10^{14} NP1:ϕ_s102.00000°, δ63.00000°, λ-104.00000°. NP2:ϕ_s310.00000°, δ30.00000°, λ-65.00000°. Principal axes: T 1.3797, Plg17.0000°, Azm202.0000°; N -0.0012, Plg12.0000°, Azm108.0000°; P -1.3785, Plg69.0000°, Azm344.0000°;*
*NEIC **01** 19:14:26.4±1.1, 65°.98N±0°.03×166°.18W±0°.10, h8km±7km, ML3.5/60, ML3.4(AEIC), Mwr3.4/6(SLM) Error ellipse: s-maj=5.8km s-min=4.1km az=103.0*
*IDC **01** 19:14:27.3±1.5, 66°.23N×166°.66W, h0km, mb3.5/2, mbtmp3.7/5, ML3.3/3, MS3.3/1, Error ellipse: s-maj=40.1km s-min=18.9km az=6.0*
ISC 01 19:14:26.2±1.3**, 65°.99N**±0°.04×**166°.18W**±0°.03**, h8**km±9km**, n91,** σ1s**04**/107**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
F14K	Arctic Creek	0.52	187		Pg	19 14 35.9	-0.3
F14K					Sg	19 14 42.7	-0.3
F15K	North Star Dit	0.69	113		Pg	19 14 39.6	+0.1
F15K				Sg	Sg	19 14 48.9	+0.4
TNA	Tin City	0.84	240		Pg	19 14 41.6	-0.8
TNA					Sg	19 14 52.8	-0.4
TNA				IAML		19 14 56.6	
	comp=E,2µm,0.9s						
TNA				IAML		19 14 57.3	
	comp=N,2µm,0.6s						
G15K	Niukluk	1.34	137		Pn	19 14 50.9	-0.3
G15K					Pg	19 14 51.2	-0.6
G15K					Sg	19 15 08.2	-1.0
G15K					Sb	19 15 09.1	+0.3
ANM	Nome	1.47	166		Pn	19 14 53.0	0.0
ANM					Sb	19 15 11.8	-0.7
ANM				IAML		19 15 14.4	
	comp=E,556nm,0.5s						
ANM				IAML		19 15 15.1	
	comp=N,492nm,0.5s						
G16K	Koyuk River	1.69	109		Pn	19 14 55.8	-0.2
G16K				Sn	Sn	19 15 17.6	-0.2
G16K				IAML		19 15 22.8	
	comp=N,375nm,0.7s						
F17K	Baldwin Pennin	2.05	75		Pn	19 15 01.4	+0.4
F17K					Sb	19 15 29.8	+0.6
E17K	Hotham Inlet	2.06	56		Pn	19 15 00.4	-0.7
E17K					Sb	19 15 30.4	+0.9
D17K	Noatak River	2.11	34		Pn	19 15 01.5	-0.3
H16K	Elim	2.14	128		Pn	19 15 02.1	0.0
H16K					Sn	19 15 29.5	+0.7
H16K					Sb	19 15 29.6	-2.1
RDOG	Red Dog Mine	2.44	30		Pn	19 15 06.4	0.0
RDOG				Sn	Sn	19 15 36.4	+0.1
E18K	Tukpahlearik C	2.64	54		Pn	19 15 09.8	+0.7
E18K				IAML		19 15 56.0	
	comp=N,279nm,0.7s						
E18K				IAML		19 16 03.4	
	comp=E,201nm,0.8s						
F18K	Selawik	2.71	74		Pn	19 15 09.9	-0.1
C17K	DeLong Mountai	2.76	24		Pn	19 15 10.8	+0.1
H17K	Granite Mounta	2.82	109		Pn	19 15 11.7	+0.2
H17K				IAML		19 16 03.2	
	comp=E,159nm,0.6s						
G18K	Tagagawik	3.08	88		Pn	19 15 14.9	-0.2
G18K				Sn	Sn	19 15 51.3	-0.9
I17K	Unalakleet	3.14	130		Pn	19 15 16.5	+0.5
GAMB	Gambell	3.24	229		Pn	19 15 17.5	+0.2
GAMB				IAML		19 16 13.2	
	comp=N,171nm,0.7s						
C18K	Utukok River	3.30	34		Pn	19 15 18.6	+0.5
C18K				IAML		19 16 23.1	
	comp=E,82nm,1.1s						
H18K	Honhosa River	3.35	101		Pn	19 15 19.2	+0.3
H18K				Sn	Sn	19 15 59.3	+0.5
H18K				IAML		19 16 18.9	
	comp=E,104nm,0.6s						
H18K				IAML		19 16 23.2	
	comp=N,134nm,0.8s						
J14K	Nanvaranak Lak	3.44	159		Pn	19 15 20.5	+0.4
J14K				IAML		19 16 19.9	
	comp=N,106nm,0.9s						
J14K				IAML		19 16 23.6	
	comp=E,111nm,0.8s						
F19K	Shaleruckik Mo	3.48	72		Pn	19 15 20.5	-0.2
J16K	Anvik River	3.62	136		Pn	19 15 22.6	+0.1
G19K	Purcell Mounta	3.71	83		Pn	19 15 23.4	-0.4
G19K				IAML		19 16 29.1	
	comp=N,79nm,0.8s						
G19K				IAML		19 16 36.0	
	comp=E,77nm,0.7s						
J17K	VABM Dome	4.00	127		Pn	19 15 28.8	+0.9
J17K				IAML		19 16 38.0	
	comp=N,66nm,0.7s						
D19K	Kuna River	4.02	48		Pn	19 15 28.6	+0.5
D19K				IAML		19 16 44.8	
	comp=N,78nm,1.0s						
D19K				IAML		19 16 47.2	
	comp=E,63nm,1.1s						
C19K	Lookout Ridge	4.02	36		Pn	19 15 29.1	+1.0
C19K				IAML		19 16 46.3	
	comp=N,49nm,1.0s						
C19K				IAML		19 16 49.1	
	comp=E,55nm,0.9s						
H19K	Roundabout Mou	4.04	92		Pn	19 15 28.4	+0.2
H19K				IAML		19 16 41.8	
	comp=E,46nm,0.8s						
H19K				IAML		19 16 49.4	
	comp=N,51nm,0.8s						
GCSA	Galena City Sc	4.09	103		Pn	19 15 29.8	+0.9
K13K	Kusilvak Mount	4.12	170		Pn	19 15 29.8	+0.4
K13K				IAML		19 16 40.3	
	comp=E,87nm,0.7s						
K15K	Wolf Creek Mou	4.23	149		Pn	19 15 31.7	+0.8
F20K	Avaraart Lake	4.32	71		Pn	19 15 32.2	+0.2
F20K				IAML		19 16 57.6	
	comp=N,42nm,1.0s						
D20K	Etivluk River	4.60	49		Pn	19 15 36.8	+0.9
D20K				IAML		19 16 58.8	
	comp=E,37nm,0.7s						
D20K				IAML		19 17 00.0	
	comp=N,43nm,0.7s						
H20K	Anotleneega Mo	4.69	91		Pn	19 15 37.3	+0.1
K17K	Iditarod	4.74	130		Pn	19 15 38.8	+0.9
J18K	Innoko River	4.78	118		Pn	19 15 39.2	+0.7
J18K				IAML		19 17 03.6	
	comp=N,31nm,1.0s						
L15K	Ungalak Mounta	4.80	152		Pn	19 15 39.8	+1.1
J19K	Poorman	4.91	109		Pn	19 15 40.6	+0.4
L14K	Kuka Creek	4.92	160		Pn	19 15 41.4	+1.1
I20K	Naaghedeneel	5.03	98		Pn	19 15 42.4	+0.5
G21K	Allakaket	5.15	78		Pn	19 15 43.8	+0.3
L17K	Donlin	5.19	135		Pn	19 15 44.9	+0.8
F21K	Alatna River	5.21	70		Pn	19 15 45.3	+0.9
L16K	Owhat River	5.21	142		Pn	19 15 44.9	+0.5
L16K				IAML		19 17 12.0	
	comp=N,25nm,3.4s						
L16K				IAML		19 17 27.4	
	comp=E,27nm,4.0s						
C21K	Knifeblade Rid	5.39	49		Pn	19 15 48.2	+1.3
J20K	Nowinta River	5.40	104		Pn	19 15 47.5	+0.6
M14K	Bethel	5.59	158	Pn	Pn	19 15 50.6	+1.1
M11K	Mekoryuk	5.62	180		Pn	19 15 50.4	+0.4
K20K	Telida	5.83	111		Pn	19 15 53.4	+0.5
M15K	Kasigluk River	5.86	153		Pn	19 15 54.2	+1.0
I21K	Tanana	5.94	91		Pn	19 15 54.6	+0.2
D22K	Ayikyak River	5.95	55		Pn	19 15 55.2	+0.7
M17K	Holitna River	6.02	136	Pn	Pn	19 15 56.9	+1.4
H22K	Ishtalitna Cre	6.05	84		Pn	19 15 56.6	+0.6
CHUM	Lake Minchumin	6.25	103		Pn	19 16 00.0	+1.3
L19K	White Mountain	6.26	122		Pn	19 15 59.6	+0.8
N14K	Kuskokwak Cree	6.42	159		Pn	19 16 01.8	+0.9
M18K	Stony River	6.43	130		Pn	19 16 02.4	+1.3
B22K	Teshekpuk Lake	6.45	42	Pn	Pn	19 16 01.0	-0.3
N15K	Kwethluk River	6.46	152		Pn	19 16 01.8	+0.3
N16K	Nishlik Lake	6.46	145		Pn	19 16 03.0	+1.4
A22K	Sinclair Lake	6.50	34		Pn	19 16 01.7	-0.3
D23K	Nanushuk River	6.65	56		Pn	19 16 04.7	+0.6
PPLA	Purkeypile	6.79	111		Pn	19 16 07.0	+0.7
E23K	Chandalar	6.80	65		Pn	19 16 07.3	+1.0
TOLK	Toolik Lake Re	6.94	60		Pn	19 16 09.1	+0.9
KTH	Kantishna Hill	6.96	103		Pn	19 16 09.4	+1.0
N18K	Kilae Creek	7.05	134		Pn	19 16 11.5	+1.9
M20K	Styx River	7.06	120		Pn	19 16 11.5	+1.6
O14K	Tigyukauivet M	7.12	159		Pn	19 16 11.9	+1.3
E24K	Your Creek	7.22	65		Pn	19 16 13.9	+1.9
TRF	Thorofare Moun	7.26	103		Pn	19 16 13.6	+1.0
NEA2	Nenana	7.30	93		Pn	19 16 13.3	+0.3
N19K	Bonanza Creek	7.37	129		Pn	19 16 15.7	+1.6
O16K	Kokwok River B	7.40	146		Pn	19 16 15.6	+1.1
L22K	Petersville	7.54	110		Pn	19 16 16.9	+0.5
SPNN	North Nagishla	7.56	121		Pn	19 16 18.6	+1.8
C24K	Franklin Bluff	7.58	53		Pn	19 16 16.8	0.0
MCK	McKinley	7.68	99		Pn	19 16 19.2	+1.0
CCB	Clear Creek Bu	7.80	91		Pn	19 16 20.1	+0.2
RND	Reindeer	7.85	101		Pn	19 16 21.9	+1.2
IL31		8.14	90		Pn	19 16 24.8	+0.3
ILAR	Eielson Array	8.14	90	Pn	Pn	19 16 24.9	+0.4
	comp=E,0.5nm,0.3s,baz=283,slow=13,SNR=50						
ILAR				Sn	Sn	19 17 55.0	-1.6
	comp=E,0.2nm,0.3s,baz=283,slow=25,SNR=5.4						
	comp=E,1.5nm,0.4s						
ILAR	Eielson Array	8.14	90		Pn	19 16 24.4	-0.2
F25K	Christian Rive	8.26	69		Pn	19 16 27.0	+0.8
P18K	Big Mountain,	8.30	138		Pn	19 16 27.6	+0.8
KDAK	Kodiak Island	10.41	136	Pn	Pn	19 16 59.0	+3.4
	comp=E,0.4nm,0.3s,baz=240,slow=12,SNR=1.9						
	comp=E,9.6nm,0.8s						
INK	Inuvik	12.80	65	Pn	Pn	19 17 29.4	+1.2
	comp=E,0.1nm,0.3s,baz=276,slow=6.8,SNR=4.5						
INK				Sn	Sn	19 19 45.5	-5.2
	baz=258,slow=17,SNR=1.1						
	comp=E,0.8nm,0.7s						
YKA	Yellowknife Ar	22.15	75	P	P	19 19 23.9	+1.9
	comp=E,1.1nm,0.8s,baz=304,slow=12,SNR=9.2						
	comp=E,1.1nm,0.8s						
ARTI	Arti	53.41	331	LR	LR	19 48 09.8	
	comp=E,24nm,18.4s,baz=314,slow=38						
CMAR	Chiang Mai Arr	75.28	282	P	P	19 26 10.6	+1.0
	comp=E,0.6nm,0.8s,baz=29,slow=6.1,SNR=6.6						
	comp=E,0.6nm,0.8s						

*KRNET **01** 19:22:09.7±0.1, 39°.75N×76°.85E, mb3.4*
*SOME **01** 19:22:09.7, 39°.80N×76°.78E, h10km*
*NNC **01** 19:22:11.5±0.7, 39°.85N×76°.86E, h4km±6km, mb3.8, mpv3.5, Error ellipse: s-maj=4.9km s-min=3.7km az=174.0*
ISC 01 19:22:08.8±1.8**, 39°.55N**±0°.09×**76°.78E**±0°.04**, h10**km**, n49,** σ1s**76**/75**, 21C-11D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNKS	Jany-Kuch	1.74	330	⇑iP	Pb	19 22 40.0	-0.9
JNKS				⇑iS	Sb	19 23 01.9	-1.0
NRN	Naryn	1.97	343	⇑eP	Pn	19 22 42.9	+0.4
NRN				⇑iS	Sb	19 23 07.9	-1.8
TARG	Taragay, Kyrgy	2.31	19	⇑iP	Pb	19 22 48.6	-2.2
TARG				⇑iS	Sb	19 23 16.9	-2.6
SFK	Sufi-Kurgan	2.56	281	⇑eP	Pb	19 22 54.7	-0.3
SFK				⇑eS	Sb	19 23 28.1	+1.4
KDJ	Kajisay	2.59	7	⇑eP	Pn	19 22 52.6	+1.6
KDJ				⇑eS	Sn	19 23 23.5	+0.9
SALK	Salom-Alik	2.62	301	⇓eP	Pb	19 22 55.1	-0.9
SALK				⇓eS	Sb	19 23 28.1	-0.3
ULHL	Ulahol	2.72	352	⇑iP	Pn	19 22 54.2	+1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULHL				⇑eS	Sn	19 23 27.1	+1.3
ARLS	**Aral**	**2.97**	**322**	⇑eP	**Pb**	**19 22 58.8**	**-3.0**
ARLS				⇑iS	Sn	19 23 34.4	+2.6
BOOM	**Boomskoye usch**	**3.00**	**348**	⇑eP	**Pn**	**19 22 58.3**	**+1.7**
BOOM				⇑iS	Sn	19 23 33.5	+0.8
PRZ	**Przheval'sk**	**3.17**	**22**	⇓eP	**Pn**	**19 23 00.8**	**+1.8**
PRZ				⇓eS	Sn	19 23 37.6	+0.6
ARSB	**Arslanbob**	**3.39**	**303**	⇑eP	**Pb**	**19 23 05.4**	**-3.7**
ARSB				⇑eS	Sn	19 23 46.1	+3.7
IZV	**Izvestkoviy**	**3.48**	**358**	Pg	**Pb**	**19 23 09.9**	**-0.7**
	3.1nm,0.2s						
IZV				Lg	Lg	19 23 53.2	
	31nm,0.6s						
IZV	**Izvestkoviy**	**3.48**	**358**	eP	**Pb**	**19 23 09.9**	**-0.7**
	3.1nm,0.2s						
IZV				eS	**Sb**	**19 23 53.2**	**+0.1**
	31nm,0.6s						
TNSS	**Tian-Shan**	**3.48**	**2**	Pg	**Pb**	**19 23 09.2**	**-1.5**
	4.1nm,0.3s						
TNSS				Lg	Lg	19 23 52.3	
	10nm,0.9s						
TNSS	**Tian-Shan**	**3.48**	**2**	eP	**Pb**	**19 23 09.2**	**-1.5**
	4.1nm,0.3s						
TNSS				eS	**Sb**	**19 23 52.3**	**-1.0**
	10nm,0.9s						
AAK	**Ala-Archa**	**3.53**	**331**	⇓Pn	**Pn**	**19 23 04.1**	**+0.2**
	2.2nm,0.5s						
AAK				⇓Lg	Lg	19 23 56.1	
	18nm,0.6s						
KST	**Kastek**	**3.54**	**350**	Pg	**Pb**	**19 23 11.2**	**-0.4**
	7.4nm,0.5s						
KST				Lg	Lg	19 23 55.4	
	23nm,0.3s						
KST	**Kastek**	**3.54**	**350**	eP	**Pb**	**19 23 11.2**	**-0.4**
	7.4nm,0.5s						
KST				eS	**Sb**	**19 23 55.4**	**+0.8**
	23nm,0.3s						
MTBS	**Maitube**	**3.58**	**356**	Pg	**Pb**	**19 23 11.4**	**-0.9**
	4.9nm,0.2s						
MTBS				Lg	Lg	19 23 55.7	
	35nm,0.5s						
MTBS	**Maitube**	**3.58**	**356**	eP	**Pb**	**19 23 11.4**	**-0.9**
	4.9nm,0.2s						
MTBS				eS	**Sb**	**19 23 55.7**	**-0.2**
	35nm,0.5s						
MDOK	**Medeo**	**3.61**	**3**	Pg	**Pb**	**19 23 11.2**	**-1.6**
	10nm,0.4s						
MDOK				Lg	Lg	19 23 55.6	
	55nm,0.7s						
KNDC	**Almaty**	**3.66**	**2**	⇑Pg	**Pb**	**19 23 13.4**	**-0.2**
	19nm,0.5s						
KNDC				⇑Lg	Lg	19 24 00.5	
	92nm,0.5s						
KOTS	**Kotyrbulak**	**3.69**	**4**	Pg	**Pb**	**19 23 13.5**	**-0.6**
	8.6nm,0.3s						
KOTS				Lg	Lg	19 23 59.6	
	85nm,0.3s						
KOTS	**Kotyrbulak**	**3.69**	**4**	eP	**Pb**	**19 23 13.5**	**-0.6**
	8.6nm,0.3s						
KOTS				eS	**Sb**	**19 23 59.6**	**+0.8**
	85nm,0.3s						
SATY	**Saty**	**3.71**	**19**	Pg	**Pb**	**19 23 13.5**	**-1.0**
	9.7nm,0.3s						
SATY				Lg	Lg	19 23 59.7	
	21nm,0.5s						
DGS	**Degeres**	**3.76**	**349**	Pg	**Pb**	**19 23 15.3**	**0.0**
	7.0nm,0.4s						
DGS				Lg	Lg	19 24 02.3	
	33nm,0.6s						
DGS	**Degeres**	**3.76**	**349**	eP	**Pb**	**19 23 15.3**	**0.0**
	7.0nm,0.4s						
DGS				eS	**Sb**	**19 24 02.3**	**+1.3**
	33nm,0.6s						
UZB	**Uzynbulak**	**3.97**	**24**	Pg	**Pb**	**19 23 18.1**	**-0.8**
	5.8nm,0.2s						
UZB				Lg	Lg	19 24 07.2	
	7.7nm,0.4s						
UZB	**Uzynbulak**	**3.97**	**24**	eP	**Pb**	**19 23 18.1**	**-0.8**
	5.8nm,0.2s						
UZB				eS	**Sb**	**19 24 07.2**	**+0.3**
	7.7nm,0.4s						
KURS	**Kuram**	**4.07**	**14**	Pg	**Pb**	**19 23 20.5**	**0.0**
	3.1nm,0.3s						
KURS				Lg	Lg	19 24 11.4	
	6.8nm,0.6s						
SHLS	**Shalkode**	**4.13**	**28**	Pg	**Pg**	**19 23 25.1**	**-2.8**
	4.2nm,0.3s						
SHLS				Lg	Lg	19 24 19.2	
	14nm,0.5s						
SHLS	**Shalkode**	**4.13**	**28**	eP	**Pg**	**19 23 25.1**	**-2.8**
	4.2nm,0.3s						
SHLS				eS	**Sg**	**19 24 19.2**	**-2.1**
	14nm,0.5s						
KTBS	**Karatobe**	**4.16**	**359**	Pg	**Pb**	**19 23 21.5**	**-0.5**
	4.8nm,0.3s						
KTBS				Lg	Lg	19 24 13.2	
	7.5nm,0.7s						
KTBS	**Karatobe**	**4.16**	**359**	eP	**Pb**	**19 23 21.5**	**-0.5**
	4.8nm,0.3s						
KTBS				eS	**Sb**	**19 24 13.2**	**+0.9**
	7.5nm,0.7s						
KPKS	**Kokpek**	**4.16**	**19**	Pg	**Pb**	**19 23 22.1**	**-0.1**
	4.1nm,0.3s						
KPKS				Lg	Lg	19 24 14.3	
	21nm,0.3s						
KPKS	**Kokpek**	**4.16**	**19**	eP	**Pb**	**19 23 22.1**	**-0.1**
	4.1nm,0.3s						
KPKS				eS	**Sb**	**19 24 14.3**	**+1.7**
	21nm,0.3s						
MRKS	**Merke**	**4.17**	**321**	Pg	**Pb**	**19 23 23.1**	**+0.9**
	2.5nm,0.3s						
MRKS				Lg	Lg	19 24 16.3	
	19nm,0.6s						
MRKS	**Merke**	**4.17**	**321**	eP	**Pb**	**19 23 23.1**	**+0.9**
	2.5nm,0.3s						
MRKS				eS	**Sb**	**19 24 16.3**	**+3.6**
	19nm,0.6s						
SGDS	**Sogindy**	**4.21**	**338**	Pg	**Pb**	**19 23 24.0**	**+1.0**
	4.3nm,0.1s						
SGDS				Lg	Lg	19 24 17.4	
	17nm,0.3s						
KRBS	**Karabastau**	**4.22**	**349**	Pg	**Pb**	**19 23 23.2**	**0.0**
	6.6nm,0.4s						
KRBS				Lg	Lg	19 24 16.1	
	23nm,0.4s						
KRBS	**Karabastau**	**4.22**	**349**	eP	**Pb**	**19 23 23.2**	**0.0**
	6.6nm,0.4s						
KRBS				eS	**Sb**	**19 24 16.1**	**+1.9**
	23nm,0.4s						
PDGK	**Podgornoye**	**4.29**	**28**	⇓Pg	**Pb**	**19 23 22.8**	**-1.5**
	7.1nm,0.8s						
PDGK				⇓Lg	Lg	19 24 19.0	
	18nm,0.8s						
MNAS	**Manas**	**4.36**	**314**	⇓eP	**Pn**	**19 23 18.5**	**+3.2**
MNAS				⇓eS	**Sn**	**19 24 08.8**	**+2.5**
BLB	**Baldybastay**	**4.71**	**15**	Pg	**Pb**	**19 23 32.7**	**+1.1**
	12nm,0.6s						
BLB				Lg	Lg	19 24 32.1	
	30nm,0.5s						
ARXS	**Arharly**	**4.72**	**9**	Pg	**Pb**	**19 23 32.6**	**+0.9**
	3.0nm,0.5s						
ARXS				Lg	Lg	19 24 32.4	
	15nm,0.4s						
ARXS	**Arharly**	**4.72**	**9**	eP	**Pb**	**19 23 32.6**	**+0.9**
	3.0nm,0.5s						
ARXS				eS	**Sb**	**19 24 32.4**	**+3.8**
	15nm,0.4s						
DJR	**Jarkent**	**5.28**	**24**	Pg	**Pb**	**19 23 42.8**	**+1.7**
	1.1nm,0.4s						
DJR				Lg	Lg	19 24 49.8	
	4.1nm,0.4s						
DJR	**Jarkent**	**5.28**	**24**	eP	**Pb**	**19 23 42.8**	**+1.7**
	1.1nm,0.4s						
DJR				eS	**Sb**	**19 24 49.8**	**+5.2**
	4.1nm,0.4s						
KK31	**Karatay Array**	**5.90**	**309**	⇑Pg	**Pg**	**19 23 57.9**	**-3.9**
	0.7nm,0.6s,baz=128,slow=17,SNR=3.8						
KK31				⇓Lg	Lg	19 25 17.0	
	2.5nm,0.5s,baz=124,slow=28,SNR=3.2						

ATH 01 19:27:57.2, 38°.97N×25°.53E, h24km±3km, ML2.2/7, Manual Solution by A.Agalos First location: 2020/02/01 19:29:07, This location: 2020/02/01 19:35:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km, Aegean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.35**	**46**	P	Pb	19 28 04.9	0.0
SIGR				S	Sb	19 28 10.2	+0.1
EAG2	**Marmaro, Chios**	**0.62**	**133**	P	Pb	19 28 09.8	+0.4
PRK	**Paraskevi**	**0.64**	**64**	P	Pb	19 28 08.7	-1.0
PRK				S	Sb	19 28 18.0	-0.3
CHOS	**Chios island**	**0.71**	**145**	P	Pb	19 28 10.7	-0.3
CHOS				S	Sb	19 28 20.8	+0.4
LIA	**Limnos Island**	**0.97**	**344**	P	Pb	19 28 14.4	-0.9
LIA				S	Sn	19 28 28.0	-0.3
KYMI	**Kymi, Euboea I**	**1.17**	**254**	P	Pn	19 28 16.9	-1.1
KYMI				S	Sb	19 28 34.0	+0.6
KARY	**Karystos**	**1.27**	**223**	P	Pn	19 28 19.0	-0.4
AOS2	**Alonissos-2**	**1.33**	**278**	P	Pn	19 28 20.0	-0.2
AOS2				S	Sb	19 28 38.0	0.0
SMTH	**Samothraki Isl**	**1.50**	**360**	P	Pn	19 28 23.0	+0.3
DION	**Dionisos Attik**	**1.54**	**235**	P	Pn	19 28 23.0	-0.2
SMG	**Samos**	**1.62**	**140**	P	Pn	19 28 24.9	+0.5
THAS	**Thassos island**	**1.75**	**339**	P	Pn	19 28 25.9	-0.2
OUR	**Ouranopolis**	**1.81**	**319**	P	Pn	19 28 27.1	+0.1
ALN	**Alexandroupoli**	**1.97**	**11**	P	Pn	19 28 29.6	+0.5
RDO	**Rodhopi**	**2.17**	**0**	P	Pn	19 28 31.6	-0.2

*ISK **01** 19:28:08.7, 39°.01N×27°.83E, h9km, ML2.1/7*
*AFAD **01** 19:28:09.5, 38°.98N×27°.85E, h7km±3km, ML1.4*
ISC 01 19:28:09.3±1.0, 39°.00N±0°.03×27°.83E±0°.03, h12km±7km, n15, σ0s.67/23, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.12**	**185**	Pg	**Pg**	**19 28 11.9**	**-0.5**
AKS				Sg	**Sg**	**19 28 14.4**	**-0.2**
AKHS	**Akhisar**	**0.12**	**185**	P	**Pg**	**19 28 12.5**	**+0.1**
AKHS				S	**Sg**	**19 28 14.9**	**+0.2**
AKHS				IAML		19 28 15.0	
	comp=E,163nm,0.2s						
GORD	**Gordes-Manisa**	**0.29**	**108**	Pg	**Pg**	**19 28 14.9**	**-0.3**
GOMA	**Golmarmara-Man**	**0.30**	**166**	Pg	**Pg**	**19 28 15.3**	**-0.1**
GOMA				Sg	**Sg**	**19 28 20.1**	**+0.6**
KTTT	**Salihli**	**0.37**	**146**	P	**Pg**	**19 28 16.5**	**-0.2**
KTTT				S	**Sg**	**19 28 21.7**	**-0.1**
KTTT				IAML		19 28 22.0	
	comp=N,18nm,0.2s						
STEP	**BALIKESIR_Sava**	**0.39**	**347**	P	**Pg**	**19 28 17.5**	**+0.5**
STEP				IAML		19 28 24.0	
	comp=N,46nm,0.2s						
STEP				IAML		19 28 24.0	
	comp=E,85nm,0.3s						
STEP				S	**Sb**	**19 28 24.1**	**+0.1**
CAMT	**Merkez**	**0.47**	**238**	P	**Pb**	**19 28 19.9**	**+0.3**
CAMT				IAML		19 28 28.0	
	comp=E,39nm,0.3s						
CAMT				S	**Sb**	**19 28 28.2**	**+1.7**
CAMT				IAML		19 28 30.0	
	comp=N,49nm,0.3s						
ZEDA	**zmir-Bergama**	**0.58**	**267**	P	**Pg**	**19 28 18.8**	**-1.9**
ZEDA				S	**Sb**	**19 28 30.1**	**+0.4**
ZEDA				IAML		19 28 39.0	
	comp=E,29nm,0.3s						
ZEDA				IAML		19 28 41.0	
	comp=N,17nm,0.5s						
IZMD	**zmir-Dikili-**	**0.70**	**269**	P	Pg	19 28 17.1	-5.7
IZMD				S	**Sb**	**19 28 33.6**	**+0.5**
ODEM	**Odemis-Izmir**	**0.75**	**165**	Pg	**Pg**	**19 28 23.6**	**-0.2**
MANT	**Manisa**	**0.77**	**131**	P	**Pb**	**19 28 24.2**	**-0.5**
MANT				S	**Sb**	**19 28 34.8**	**-0.3**
SIMA	**Simav-Kutahya**	**0.90**	**84**	Pg	**Pg**	**19 28 26.4**	**-0.3**
SUSR	**Susurluk-Balik**	**0.98**	**12**	Pg	**Pg**	**19 28 27.9**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**177**	Pg	**Pb**	**19 28 29.4**	**-0.1**
NAZL	**Nazilli-Aydin**	**1.10**	**160**	Pn	**Pb**	**19 28 30.2**	**0.0**

*IDC **01** 19:33:35.4±1.7, 3°.39S×149°.17E, h0km, mb3.8/8, mbtmp3.8/9, ML1.6/1, MS3.6/16, Error ellipse: s-maj=56.6km s-min=21.0km az=104.0*
ISC 01 19:33:38.6±1.5, 3°.4S±0°.1×149°.1E±0°.3, h19km, n27, σ1s.09/11, mb3.8/8, MS3.6/16, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.25**	**198**	Pn	**Pn**	**19 35 11.8**	**+1.9**
	0.8nm,0.3s,baz=356,slow=7.7,SNR=5.2						
PMG				Sn	**Sn**	**19 36 18.6**	**-2.1**
	0.4nm,0.3s,baz=272,slow=15,SNR=1.8						
	5.7nm,0.7s						
WRA	**Warramunga Arr**	**21.84**	**220**	P	**P**	**19 38 29.6**	**-0.5**
	4.5nm,0.9s,baz=40,slow=12,SNR=24						
	4.5nm,0.9s						
ASAR	**Alice Springs**	**24.91**	**215**	P	**P**	**19 39 00.8**	**0.0**
	7.3nm,0.9s,baz=48,slow=8.1,SNR=37						
ASAR				LR	LR	19 48 44.0	
	comp=Z,114nm,22.0s,baz=57,slow=36						
	7.3nm,0.9s						
BATI	**Baumata**	**26.13**	**254**	LR	LR	19 51 45.7	
	comp=Z,111nm,19.5s,baz=98,slow=42						
FITZ	**Fitzroy Crossi**	**27.22**	**236**	LR	LR	19 50 53.7	
	comp=Z,198nm,19.2s,baz=53,slow=38						
H11S3	**WAKE ISLAND Hy**	**27.83**	**38**	T	T	20 08 38.4	
	baz=220,slow=76,SNR=68						
H11S2	**WAKE ISLAND Hy**	**27.84**	**38**	T	T	20 08 38.1	
	baz=220,slow=76,SNR=72						
H11S1	**WAKE ISLAND Hy**	**27.85**	**38**	T	T	20 08 38.9	
	baz=220,slow=76,SNR=69						
H11N1	**WAKE ISLAND Hy**	**28.89**	**37**	T	T	20 09 59.8	
	baz=219,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**28.90**	**37**	T	T	20 10 03.1	
	baz=219,slow=76,SNR=26						
H11N2	**WAKE ISLAND Hy**	**28.90**	**37**	T	T	20 09 58.2	
	baz=219,slow=76,SNR=36						
JCJ	**Chichijima**	**31.07**	**348**	LR	LR	19 51 55.0	
	comp=Z,42nm,18.5s,baz=161,slow=35						
MJAR	**Matsushiro Arr**	**41.04**	**347**	LR	LR	19 58 49.9	
	comp=Z,53nm,19.2s,baz=170,slow=37						
ASAJ	**Asahikawa**	**47.69**	**354**	LR	LR	20 00 40.0	
	comp=Z,46nm,22.0s,baz=190,slow=34						
CMAR	**Chiang Mai Arr**	**53.96**	**296**	P	**P**	**19 43 02.1**	**+0.4**
	1.1nm,1.1s,baz=109,slow=7.7,SNR=5.5						
	1.1nm,1.1s						
MA2	**Magadan**	**62.83**	**1**	LR	LR	20 13 29.7	
	comp=Z,23nm,18.1s,baz=186,slow=38						
SONM	**Songino Array**	**63.24**	**329**	P	**P**	**19 44 05.5**	**-0.5**
	0.4nm,0.6s,baz=151,slow=3.3,SNR=2.6						
SONM				LR	LR	20 10 54.5	
	comp=Z,42nm,20.5s,baz=116,slow=35						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**76.89**	**320**	P	**P**	**19 45 29.8**	**+0.1**
	0.7nm,0.8s,baz=94,slow=7.7,SNR=5.5						
MKAR				LR	LR	20 19 18.0	
	comp=Z,38nm,19.0s,baz=332,slow=36						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**77.99**	**327**	P	**P**	**19 45 35.7**	**0.0**
	0.2nm,0.3s,baz=99,slow=4.5,SNR=1.4						
ZALV				LR	LR	20 20 24.7	
	comp=Z,29nm,19.0s,baz=86,slow=36						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**80.46**	**322**	P	**P**	**19 45 49.5**	**+0.3**
	0.7nm,0.2s,baz=107,slow=4.5,SNR=1.5						
KURBB				LR	LR	20 22 11.4	
	comp=Z,29nm,19.6s,baz=176,slow=36						
	0.7nm,0.2s						
AAK	**Ala-Archa**	**81.06**	**314**	LR	LR	20 22 33.0	
	comp=Z,44nm,19.7s,baz=127,slow=36						
ILAR	**Eielson Array**	**82.31**	**23**	P	**P**	**19 45 58.2**	**-0.5**
	0.3nm,0.9s,baz=240,slow=7.2,SNR=4.3						
	0.3nm,0.9s						
NRIK	**Noril'sk**	**83.50**	**342**	LR	LR	20 23 23.3	
	comp=Z,27nm,19.3s,baz=99,slow=36						
ARTI	**Arti**	**93.23**	**326**	LR	LR	20 28 31.3	
	comp=Z,59nm,21.2s,baz=82,slow=35						
NVAR	**Mina Array Bea**	**94.14**	**52**	LR	LR	20 21 17.7	
	comp=Z,38nm,20.6s,baz=266,slow=30						
PFO	**Pinyon Flats O**	**95.58**	**57**	LR	LR	20 21 54.1	
	comp=Z,30nm,19.2s,baz=220,slow=30						
TORD	**Torodi Ar. Bea**	**146.38**	**289**	PKPbc	**PKPbc**	**19 53 18.9**	**-0.5**
	0.9nm,0.7s,baz=114,slow=0.2,SNR=7.0						

IDC 01 19:36:19.2±2.1, 7°.06S×150°.97E, h0km, mb3.4/3, mbtmp3.5/4, ML1.3/1, Error ellipse: s-maj=114.5km s-min=27.6km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.44**	**238**	Pn	Pn	19 37 29.0	+1.2
	1.2nm,0.3s,baz=47,slow=12,SNR=1.0						
PMG				Sn	Sn	19 38 18.4	-1.8
	5.7nm,0.3s,baz=125,slow=20,SNR=8.4						
	4.3nm,0.4s						
WRA	**Warramunga Arr**	**20.60**	**230**	P	P	19 40 59.4	-0.8
	0.9nm,0.7s,baz=56,slow=11,SNR=6.7						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**23.27**	**223**	P	P	19 41 28.6	0.0
	0.7nm,0.6s,baz=56,slow=9.3,SNR=6.9						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**84.93**	**22**	P	P	19 48 56.4	+0.4
	0.3nm,0.9s,baz=253,slow=5.7,SNR=4.7						
	0.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**149.18**	**284**	PKPbc	PKPbc	19 56 09.9	-0.9
	0.5nm,0.5s,baz=38,slow=5.4,SNR=4.3						

*UCR **01** 19:41:46.8±0.3, 10°.17N×86°.77W, h4km±32km, MW3.8, Presumed earthquake*
*CATAC **01** 19:41:47.2±0.6, 10°N±3°×8°7W±°, h8km±5km, M3.8/14, MLv3.8/14, Error ellipse: s-maj=8.6km s-min=4.4km az=39.1, confirmed*
ISC 01 19:41:46.3±1.9, 10°.12N±0°.07×86°.77W±0°.08, h10km, n53, σ1s.22/59, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JUD3	**Juan Diaz 3**	**1.21**	**88**	eP	**Pb**	**19 42 09.2**	**-0.2**
INDI	**Punta indio, G**	**1.27**	**101**	P	**Pn**	**19 42 10.1**	**-0.1**
INDI				S	**Sg**	**19 42 27.7**	**+0.3**
ALIBA	**Liberia Airpor**	**1.29**	**69**	eP	**Pg**	**19 42 11.4**	**+0.2**
ELI1	**Hacienda Flor**	**1.31**	**66**	P	**Pg**	**19 42 11.5**	**+0.1**
ELI1	**Hacienda Flor**	**1.31**	**66**	eP	**Pg**	**19 42 11.6**	**+0.1**
CMARA	**Lajas Hojancha**	**1.33**	**94**	P	**Pn**	**19 42 11.0**	**0.0**
LAPC	**Finca la Perla**	**1.47**	**64**	eP	**Pb**	**19 42 13.2**	**-0.5**
LCRUZ	**La Cruz**	**1.47**	**49**	eP	**Pb**	**19 42 13.5**	**-0.3**
GPS2	**Hotel Rincn d**	**1.53**	**66**	eP	**Pb**	**19 42 14.6**	**-0.2**
VRLE	**La Escondida,**	**1.54**	**64**	eP	**Pb**	**19 42 14.7**	**-0.3**
VORI	**VORI**	**1.56**	**63**	eP	**Pg**	**19 42 15.4**	**-0.9**
CARN	**Rivas**	**1.62**	**49**	P	**Pb**	**19 42 15.9**	**-0.5**
CARN	**Rivas**	**1.62**	**49**	eP	**Pb**	**19 42 15.7**	**-0.6**
PEJA	**Penjamo Buenos**	**1.63**	**62**	eP	**Pb**	**19 42 16.4**	**-0.1**
CUI	**Cuipilapa**	**1.67**	**71**	eP	**Pb**	**19 42 16.4**	**-0.8**
MESS	**Mesas**	**1.67**	**68**	eP	**Pb**	**19 42 16.3**	**-0.9**
HORNC	**Hornillas**	**1.68**	**69**	eP	**Pb**	**19 42 16.6**	**-0.7**
INVE	**Universidad In**	**1.72**	**78**	eP	**Pb**	**19 42 17.7**	**-0.3**
VMAR	**Armenia, Volca**	**1.77**	**67**	eP	**Pb**	**19 42 18.1**	**-0.7**
TIMP	**Tierras Morena**	**1.79**	**75**	eP	**Pb**	**19 42 18.4**	**-0.8**
MORN	**Al O del Volca**	**1.80**	**38**	P	**Pb**	**19 42 18.2**	**-1.2**
MORN				S	**Sb**	**19 42 41.8**	**-0.2**
JTS	**Las Juntas de**	**1.80**	**84**	P	**Pn**	**19 42 17.9**	**+0.4**
JTS				S	**Sb**	**19 42 41.5**	**-0.5**
JTS	**Las Juntas de**	**1.80**	**84**	eP	**Pn**	**19 42 17.6**	**+0.2**
QUEB	**Quebradon, Cot**	**1.91**	**75**	eP	**Pb**	**19 42 20.4**	**-0.9**
NANN	**Nandasmo**	**1.92**	**19**	P	**Pb**	**19 42 20.6**	**-0.9**
NANN				S	**Sg**	**19 42 45.8**	**-2.2**
TABAC	**Tabacon**	**2.01**	**79**	eP	**Pb**	**19 42 22.3**	**-0.7**
ARE1	**Arenal 1**	**2.05**	**80**	eP	**Pb**	**19 42 23.3**	**-0.3**
VARE2	**V. Arenal**	**2.05**	**80**	eP	**Pb**	**19 42 23.5**	**-0.2**
COPN	**Copaltepe**	**2.06**	**5**	P	**Pn**	**19 42 21.7**	**+0.7**
COPN	**Copaltepe**	**2.06**	**5**	eP	**Pn**	**19 42 21.5**	**+0.5**
CEDE	**Laguna Cedeo**	**2.07**	**80**	eP	**Pb**	**19 42 23.5**	**-0.4**
MOM2	**El Cardon**	**2.32**	**7**	P	**Pn**	**19 42 25.4**	**+0.8**
CNGN	**Cerro Negro**	**2.37**	**2**	P	**Pn**	**19 42 25.9**	**+0.6**
CNGN	**Cerro Negro**	**2.37**	**2**	eP	**Pn**	**19 42 25.8**	**+0.5**
VPS8	**V Poas**	**2.49**	**88**	eP	**Pb**	**19 42 29.3**	**-2.1**
PKGN	**Cerro Pekin**	**2.54**	**355**	P	**Pn**	**19 42 28.6**	**+0.9**
CRIN	**San Cristobal**	**2.58**	**354**	eP	**Pn**	**19 42 29.0**	**+0.8**
PICV	**PH. Pirrs**	**2.58**	**101**	eP	**Pb**	**19 42 30.8**	**-2.0**
LCR2	**La Lucha 2**	**2.75**	**98**	S	**Sn**	**19 43 06.5**	**+2.4**
PIEC	**Cerro El Cedra**	**2.82**	**100**	eP	**Pn**	**19 42 33.3**	**+1.7**
VICA	**Volcano Irazu**	**2.88**	**92**	eP	**Pn**	**19 42 35.2**	**+2.5**
CSGN	**Cosiguina Volc**	**2.94**	**345**	eP	**Pn**	**19 42 34.2**	**+1.0**
CVTG	**V. Turrialba,**	**2.95**	**89**	eP	**Pb**	**19 42 36.3**	**-2.8**
LIMN	**Finca el Limon**	**2.95**	**8**	P	**Pn**	**19 42 34.1**	**+0.7**
LIMN				S	**Sn**	**19 43 09.7**	**+0.8**
VTR0	**Volcan Turrial**	**2.97**	**92**	eP	**Pn**	**19 42 35.5**	**+1.6**
CVTR	**Volcan Turrial**	**2.97**	**92**	eP	**Pb**	**19 42 36.6**	**-2.9**
CVTV	**Tajo**	**2.98**	**92**	eP	**Pb**	**19 42 37.1**	**-2.5**
ABRB	**Las Abras (San**	**3.01**	**92**	eP	**Pn**	**19 42 36.7**	**+2.4**
BUS1	**Rivas**	**3.03**	**100**	eP	**Pn**	**19 42 36.4**	**+1.6**
RCON	**San Juan de Ri**	**3.40**	**10**	P	**Pn**	**19 42 41.0**	**+1.4**
RCON				S	**Sn**	**19 43 20.9**	**+0.9**
RCPN	**Sur Rio San Ju**	**3.45**	**11**	P	**Pn**	**19 42 41.5**	**+1.2**
DRK0	**Durika**	**3.58**	**103**	eP	**Pn**	**19 42 43.0**	**+0.9**
PACA	**Pacayal**	**3.66**	**336**	P	**Pn**	**19 42 44.3**	**+1.1**

*NNC **01** 19:44:06.8±0.7, 42°.59N×79°.57E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=4.5km s-min=2.5km az=139.0*
*SOME **01** 19:44:06.9, 42°.55N×79°.55E, h10km*
*KRNET **01** 19:44:07.2±0.1, 42°.56N×79°.61E, h23km, mb2.9*
ISC 01 19:44:05.7±1.6, 42°.54N±0°.04×79°.53E±0°.05, h10km±10km, n37, σ0s.72/64, 9C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.62**	**356**	P	**Pb**	**19 44 19.0**	**+0.2**
	66nm,0.1s						
SHLS				S	**Sb**	**19 44 27.9**	**+0.2**
	143nm,0.2s						
SHLS	**Shalkode**	**0.62**	**356**	eP	**Pb**	**19 44 19.1**	**+0.2**
	66nm,0.1s						
SHLS				eS	**Sb**	**19 44 27.9**	**+0.2**
	143nm,0.2s						
UZB	**Uzynbulak**	**0.71**	**329**	P	**Pb**	**19 44 20.3**	**-0.1**
	3.3nm,0.1s						
UZB				S	**Sb**	**19 44 30.3**	**0.0**
	10nm,0.1s						
UZB	**Uzynbulak**	**0.71**	**329**	eP	**Pb**	**19 44 20.3**	**-0.1**
UZB				eS	**Sb**	**19 44 30.3**	**0.0**
UZB	**Uzynbulak**	**0.71**	**329**	eP	**Pb**	**19 44 20.3**	**-0.1**
	3.3nm,0.1s						
UZB				eS	**Sb**	**19 44 30.3**	**0.0**
	10nm,0.1s						
PDGK	**Podgornoye**	**0.79**	**358**	⇑P	**Pg**	**19 44 20.5**	**-0.5**
	3.0nm,0.3s						
PDGK				⇓S	**Sg**	**19 44 31.5**	**+0.1**
	1.2nm,0.2s						
PRZ	**Przheval'sk**	**0.83**	**267**	⇑iP	**Pn**	**19 44 24.0**	**+0.3**
PRZ				⇑iS	**Sn**	**19 44 36.4**	**+0.2**
SATY	**Saty**	**0.98**	**303**	P	**Pn**	**19 44 25.6**	**0.0**
	0.7nm,0.1s						
SATY				S	**Sn**	**19 44 39.0**	**-0.7**
	14nm,0.1s						
KPKS	**Kokpek**	**1.12**	**327**	P	**Pn**	**19 44 27.5**	**0.0**
	1.2nm,0.1s						
KPKS				S	**Sn**	**19 44 42.8**	**-0.3**
	3.6nm,0.2s						
KPKS	**Kokpek**	**1.12**	**327**	eP	**Pn**	**19 44 27.8**	**+0.3**
	1.2nm,0.1s						
KPKS				eS	**Sn**	**19 44 42.7**	**-0.4**
	3.6nm,0.2s						
KURS	**Kuram**	**1.38**	**314**	P	**Pg**	**19 44 32.8**	**+0.6**
	0.5nm,0.1s						
KURS				S	**Sg**	**19 44 51.3**	**+1.3**
	2.0nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.51**	**238**	⇑eP	**Pb**	**19 44 34.3**	**+0.2**
TARG				⇑iS	**Sg**	**19 44 55.0**	**+0.6**
BLB	**Baldybastay**	**1.74**	**334**	P	**Pg**	**19 44 39.0**	**0.0**
	2.0nm,0.1s						
BLB				S	**Sg**	**19 45 01.9**	**+0.3**
	21nm,0.1s						
KDJ	**Kajisay**	**1.79**	**258**	⇓eP	**Pg**	**19 44 40.3**	**+0.4**
KDJ				⇓eS	**Sg**	**19 45 03.5**	**+0.4**
DJR	**Jarkent**	**1.81**	**6**	P	**Pb**	**19 44 39.7**	**+0.8**
	1.5nm,0.1s						
DJR				S	**Sg**	**19 45 03.1**	**-0.7**
	2.6nm,0.2s						
DJR	**Jarkent**	**1.81**	**6**	eP	**Pb**	**19 44 39.7**	**+0.8**
	1.5nm,0.1s						
DJR				eS	**Sg**	**19 45 03.1**	**-0.7**
	2.6nm,0.2s						
KOTS	**Kotyrbulak**	**1.91**	**292**	Pg	**Pg**	**19 44 42.4**	**+0.1**
	5.1nm,0.1s						
KOTS				Lg	Lg	19 45 09.3	
	12nm,0.2s						
KOTS	**Kotyrbulak**	**1.91**	**292**	eP	**Pg**	**19 44 42.7**	**+0.5**
	5.1nm,0.1s						
KOTS				eS	**Sg**	**19 45 08.5**	**+1.5**

	12nm,0.2s						
TNSS	Tian-Shan	1.96	286	Pg	Pg	19 44 43.2	-0.1
	0.9nm,0.1s						
TNSS				Lg	Lg	19 45 10.0	
	0.9nm,0.2s						
TNSS	Tian-Shan	1.96	286	eP	Pg	19 44 43.2	-0.1
	0.9nm,0.1s						
TNSS				eS	Sg	19 45 09.2	+0.4
	0.9nm,0.2s						
ARXS	Arharly	2.08	324	Pg	Pg	19 44 45.2	-0.4
	0.6nm,0.1s						
ARXS				Lg	Lg	19 45 12.5	
	6.0nm,0.2s						
ARXS	Arharly	2.08	324	eP	Pg	19 44 45.2	-0.4
	0.6nm,0.1s						
ARXS				eS	Sg	19 45 12.5	-0.2
	6.0nm,0.2s						
IZV	Izvestkoviy	2.20	284	Pg	Pb	19 44 46.1	+0.3
	7.0nm,0.1s						
IZV				Lg	Lg	19 45 15.1	
	3.1nm,0.1s						
IZV	Izvestkoviy	2.20	284	eP	Pb	19 44 45.9	+0.2
	7.0nm,0.1s						
IZV				eS	Sb	19 45 13.8	+0.6
	3.1nm,0.1s						
MTBS	Maitube	2.35	286	Pg	Pg	19 44 50.3	-0.5
	2.8nm,0.2s						
MTBS				Lg	Lg	19 45 21.2	
	4.3nm,0.1s						
MTBS	Maitube	2.35	286	eP	Pg	19 44 50.3	-0.5
	2.8nm,0.2s						
MTBS				eS	Sg	19 45 21.2	-0.1
	4.3nm,0.1s						
KTBS	Karatobe	2.39	300	Pg	Pg	19 44 50.5	-1.1
	1.2nm,0.1s						
KTBS				Lg	Lg	19 45 22.1	
	2.1nm,0.2s						
KTBS	Karatobe	2.39	300	eP	Pg	19 44 50.5	-1.1
	1.2nm,0.1s						
KTBS				eS	Sg	19 45 22.1	-0.4
	2.1nm,0.2s						
ULHL	Ulahol	2.45	264	⇑eP	Pb	19 44 49.4	-0.6
ULHL				⇑iS	Sb	19 45 20.6	+0.3
BOOM	Boomskoye usch	2.65	270	⇓iP	Pb	19 44 52.5	-0.9
BOOM				⇓iS	Sb	19 45 25.9	-0.2
KST	Kastek	2.67	282	Pg	Pg	19 44 55.9	-0.9
	1.1nm,0.1s						
KST				Lg	Lg	19 45 31.8	
	2.0nm,0.1s						
KST	Kastek	2.67	282	eP	Pg	19 44 55.9	-0.9
	1.1nm,0.1s						
KST				eS	Sg	19 45 30.9	-0.5
	2.0nm,0.1s						
DGS	Degeres	2.85	286	Pg	Pg	19 44 59.3	-1.0
	1.4nm,0.2s						
DGS				Lg	Lg	19 45 36.7	
	3.2nm,0.2s						
DGS	Degeres	2.85	286	eP	Pg	19 44 59.3	-1.0
	1.4nm,0.2s						
DGS				eS	Sg	19 45 36.7	-0.4
	3.2nm,0.2s						
KRBS	Karabastau	3.05	294	Pg	Pb	19 45 02.1	+2.0
	0.8nm,0.3s						
KRBS				Lg	Lg	19 45 41.7	
	1.8nm,0.3s						
KRBS	Karabastau	3.05	294	eP	Pb	19 45 02.1	+2.0
	0.8nm,0.3s						
KRBS				eS	Sg	19 45 41.7	-1.8
	1.8nm,0.3s						
AAK	Ala-Archa	3.72	273	⇑Pg	Pg	19 45 15.7	-1.1
	1.5nm,1.0s						
AAK				⇑Lg	Lg	19 46 06.1	
	0.9nm,0.8s						

*DNK **01** 19:44:08.6±3.8, 81°.50N×2°.94W, h23km±37km, ML1.9, Presumed earthquake*
*BER **01** 19:44:13.3±2.0, 81°.18N×3°.10W, h10km, Mw2.9, ML2.0(DNK), Confirmed Earthquake*
ISC 01 19:44:06.3±1.1**, 81°.3N**±0°.1×**4°.22W**±0°.06**, h10**km**, n10, σ2.s65**/17**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	Nord	1.89	285	iP	Pb	19 44 40.6	-0.1
NOR				iS	Sb	19 45 02.8	-1.6
NOR				IAML		19 46 21.8	
	comp=Z,6.2nm,2.1s						
KBS	Kingsbay	3.65	122	eP	Pn	19 45 04.2	+1.4
KBS				eS	Sn	19 45 42.2	-3.6
KBS				IAML		19 45 48.9	
	comp=Z,4.0nm,0.5s						
KBS	Kingsbay	3.65	122	iP	Pn	19 45 02.9	+0.1
KBS				iS	Sn	19 45 42.7	-3.1
BRBB	Barentsburg B	4.59	125	eP	Pn	19 45 18.4	+2.8
BRBA	Barentsburg A	4.62	125	eP	Pn	19 45 19.3	+3.3
SPA0	Spitsbergen Ar	4.80	120	eP	Pn	19 45 20.2	+1.7
SPA0				eS	Sn	19 46 11.6	-2.5
SPA0				IAML		19 46 21.3	
	comp=Z,2.3nm,0.8s						
HSPB	Hornsund (broa	5.66	129	eP	Pn	19 45 33.0	+2.7
DBG	Daneborg	7.75	214	eP	Pn	19 46 01.7	+2.8
DBG				eS	Sn	19 47 23.9	-2.7
DBG	Daneborg	7.75	214	iP	Pn	19 46 00.7	+1.7
DBG				iS	Sn	19 47 25.1	-1.5
DBG				IAML		19 48 24.9	
	comp=Z,11nm,3.1s						
NEEM	North Greenlan	9.18	270	iP	Pn	19 46 21.3	+2.4
NEEM				IAML		19 47 58.3	
	comp=Z,1.4nm,0.7s						
NEEM				iS	Sn	19 47 59.0	-3.2

*IDC **01** 19:47:38.2±2.8, 7°.32S×118°.98E, h0km, mb3.3/2, mbtmp3.4/3, ML3.6/1, MS3.8/1, Error ellipse: s-maj=276.3km s-min=28.6km az=53.0*
*DJA **01** 19:47:55.7±0.3, 8°S±8°×11°9E±°, h168km±5km, M3.7/12, mb3.7/5, MLv3.7/12*
ISC 01 19:47:55.4±1.1**, 8°.0S**±0°.1×**118°.56E**±0°.05**, h150**km**, n20, σ1.s72**/25**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	Kabupaten Domp	0.52	208	P	Pn	19 48 19.6	+2.7
DBNI				S	Sn	19 48 37.8	+4.5
PLAI	Plampang	1.10	224	P	Pn	19 48 22.7	+1.7
PLAI				S	Sn	19 48 42.6	+2.0
WBSI	Waikabubak, Su	1.79	153	P	Pn	19 48 29.6	+1.4
WBSI				S	Sn	19 48 54.4	+0.9
WSI	Waingapu	2.36	133	P	Pn	19 48 35.6	+0.7
WSI				S	Sn	19 49 05.5	+0.2
KHKI	Kahang-Kahang	2.94	263	P	Pn	19 48 43.9	+2.0
BASI	Baing, Sumba	2.95	137	P	Pn	19 48 41.9	-0.2
EDFI	Ende, Flores	3.18	103	P	Pn	19 48 46.6	+1.4
EDFI				S	Sn	19 49 26.0	+2.3
IGBI	Denpasar	3.46	257	P	Pn	19 48 49.5	+0.8
IGBI				S	Sn	19 49 30.1	+0.2
RTBI	Rangdo, Negare	3.60	263	P	Pn	19 48 50.3	-0.2
MMRI	Maumere	3.69	100	P	Pn	19 48 52.1	+0.4
JAGI	Jajag, Banyuwa	4.38	264	P	Pn	19 49 00.1	-0.5
KMMI	Kalianget	4.65	282	P	Pn	19 49 05.7	+1.4
GMJI	Gumukmas	5.07	267	P	Pn	19 49 08.8	-0.9
BATI	Baumata	5.49	114	P	Pn	19 49 15.7	+0.4
	0.1nm17nm,1.1s						
SOEI	Soe	5.90	107	P	Pn	19 49 20.8	-0.1
	14nm,1.0s						
PCJI	Pacitan	7.31	268	P	Pn	19 49 39.3	-0.3
DAV	Davao City (W)	16.56	25	LR	LR	19 57 23.5	
	comp=Z,357nm,21.2s,baz=316,slow=37						
WRA	Warramunga Arr	19.33	129	P	P	19 52 06.9	-2.4
	0.2nm,0.3s,baz=312,slow=8.8,SNR=6.9						
	1.2nm,0.8s						
ASAR	Alice Springs	21.40	138	P	P	19 52 30.6	-0.9
	0.7nm,0.4s,baz=315,slow=10,SNR=23						
	0.7nm,0.4s						
MKAR	Makanchi Array	63.41	333	P	P	19 58 06.7	-2.3
	0.1nm,0.3s,baz=128,slow=5.9,SNR=2.1						
	0.1nm,0.3s						

IDC 01 19:53:31.4±4.4**, 2°.83S**×**147°.85E, h0**km**, mb3.7**/2**, mbtmp3.8**/3**, ML1.2**/1**, MS3.4**/4**, Error ellipse: s-maj=129.7km s-min=38.8km az=91.0, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.57	186	Pn	Pn	19 55 10.9	+1.6
	0.3nm,0.3s,baz=204,slow=20,SNR=1.5						
PMG				Sn	Sn	19 56 24.8	-0.2
	0.7nm,0.3s,baz=311,slow=1.6,SNR=2.1						
	9.6nm,0.9s						
WRA	Warramunga Arr	21.52	217	P	P	19 58 22.3	+0.1
	2.4nm,0.9s,baz=40,slow=11,SNR=9.5						
	2.4nm,0.9s						
ASAR	Alice Springs	24.72	212	P	P	19 58 54.0	-0.6
	1.9nm,0.9s,baz=49,slow=8.0,SNR=16						
ASAR				LR	LR	20 08 47.6	
	comp=Z,65nm,20.3s,baz=41,slow=37						
	1.9nm,0.9s						
DZM	Mont Dzumac	26.31	138	LR	LR	20 07 42.7	
	comp=Z,110nm,19.2s,baz=322,slow=32						
FITZ	Fitzroy Crossi	26.53	234	LR	LR	20 10 46.3	
	comp=Z,77nm,19.0s,baz=44,slow=39						
H11S3	WAKE ISLAND Hy	28.17	40	T	T	20 28 38.9	
	baz=220,slow=76,SNR=45						
H11S2	WAKE ISLAND Hy	28.18	41	T	T	20 28 39.7	
	baz=220,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	28.18	40	T	T	20 28 38.5	
	baz=220,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	29.19	39	T	T	20 29 51.0	
	baz=219,slow=76,SNR=4.1						
H11N3	WAKE ISLAND Hy	29.20	39	T	T	20 29 54.0	
	baz=219,slow=76,SNR=9.0						
H11N2	WAKE ISLAND Hy	29.21	39	T	T	20 29 54.2	
	baz=219,slow=76,SNR=11						
NRIK	Noril'sk	82.54	342	LR	LR	20 41 05.9	
	comp=Z,24nm,20.5s,baz=332,slow=35						
TORD	Torodi Ar. Bea	145.00	289	PKPbc	PKPab	20 13 10.5	-0.5
	0.5nm,0.8s,baz=46,slow=4.6,SNR=3.0						

*IDC **01** 19:54:22.5±0.7, 4°.20N×126°.65E, h0km, mb3.7/13, mbtmp3.8/14, ML3.9/1, MS3.1/8, Error ellipse: s-maj=44.2km s-min=14.0km az=65.0*
*DJA **01** 19:54:24.6±1.5, 4°N±10°×12°7E±°, h13km±5km, M4.4/12, mB5.2/2, mb4.4/9, MLv4.4/12, Mw(mB)4.5/2*
*NEIC **01** 19:54:27.9±2.3, 4°.22N±0°.08×126°.82E±0°.09, h35km±2km, mb4.5/17, Error ellipse: s-maj=18.0km s-min=10.8km az=232.0*
ISC 01 19:54:27.6±0.5**, 4°.23N**±0°.06×**126°.79E**±0°.07**, h35**km**, n58, σ1.s23**/55**, mb4.1**/21**, MS2.9**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.37	247	P	Pn	19 54 48.6	-1.7
SGSI				S	Sn	19 55 05.3	-1.9
TNTI	Ternate	3.48	171		Pn	19 55 19.1	-0.2
TNTI	Ternate	3.48	171	P	Pn	19 55 20.4	+1.1
MRSI	Marisa	6.11	233	P	Pn	19 55 56.7	+1.2
	0.3nm908nm58nm,0.5s						
LUWI	Luwuk	6.60	218	Pn	Pn	19 56 02.7	+0.5
LUWI	Luwuk	6.60	218	P	Pn	19 56 02.5	+0.3
SWI	Sorong	6.74	138	P	Pn	19 56 04.4	+0.2
	0.1nm40nm,1.0s						
SIJI	Sorong	6.75	138	Pn	Pn	19 56 05.2	+0.9
	2.3nm,0.3s,baz=157,slow=23,SNR=11						
SIJI				Sn	Sn	19 57 17.9	-2.2
	baz=354,slow=19						
SIJI				LR	LR	19 59 01.6	
	comp=Z,156nm,19.3s,baz=82,slow=41						
	8.2nm,0.4s						
SIJI	Sorong	6.75	138	P	Pn	19 56 04.2	-0.1
	0.1nm23nm,0.9s						
TOLI2	Tolitoli	6.75	243	Pn	Pn	19 56 03.9	-0.4
APSI	Ampana	7.24	225	P	Pn	19 56 15.3	+4.3
NLAI	Namlea	7.42	178	P	Pn	19 56 14.1	+0.6
	0.1nm26nm,1.2s						
KRAI	Karang Ratu	7.66	168	P	Pn	19 56 17.5	+0.7
MPSI	Mapaga	7.90	241	P	Pn	19 56 18.7	-1.3
	0.1nm14nm,0.9s						
FAKI	Fak Fak	8.95	142	Pn	Pn	19 56 35.0	+0.5
FAKI	Fak Fak	8.95	142	P	Pn	19 56 35.4	+0.9
KKM	Kota Kinabalu	10.69	280	Pn	Pn	19 57 00.2	+1.7
KAPI	Kappang	11.56	218	LR	LR	20 02 03.5	
	comp=Z,120nm,20.1s,baz=42,slow=40						
SOEI	Soe	14.12	190		P	19 57 53.1	+0.7
BATI	Baumata	14.67	192	Pn	Pn	19 57 55.7	+2.9
	0.7nm,0.3s,baz=0.0,slow=19,SNR=2.5						
MTN	Manton Dam	17.50	166	Pn	Pn	19 58 27.2	-1.8
KNRA	Kununurra	19.87	174	P	P	19 58 54.8	-1.2
KNRA				IAmb	IAmb	19 59 11.1	
	comp=Z,13nm,0.8s						
TPUB	Ta-pu	19.88	343	P	P	19 58 55.8	-0.2
LEM	Lembang	22.07	240	LR	LR	20 09 28.0	
	comp=Z,46nm,18.4s,baz=11,slow=41						
WB0	Warramunga Arr	24.99	163		P	19 59 47.3	-0.9
WB0				IAmb	IAmb	19 59 57.3	
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	25.14	163	P	P	19 59 48.5	-1.1
	comp=Z,2.9nm,0.6s,baz=342,slow=10,SNR=8.0						
	comp=Z,2.9nm,0.6s						
WRA	Warramunga Arr	25.14	163	P	P	19 59 47.1	-2.5
ASAR	Alice Springs	28.58	166	P	P	20 00 21.1	+0.5
	comp=Z,0.3nm,0.5s,baz=354,slow=8.4,SNR=6.9						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	28.58	166	P	P	20 00 21.8	+1.2
CMAR	Chiang Mai Arr	30.68	300	P	P	20 00 38.5	-0.7
	comp=Z,0.7nm,0.8s,baz=113,slow=6.9,SNR=7.9						
CMAR				LR	LR	20 12 44.4	
	comp=Z,24nm,21.4s,baz=170,slow=36						
	comp=Z,0.7nm,0.8s						
CHTO	Chiang Mai	30.82	300	P	P	20 00 40.9	+0.4
KSRS	Korea Array	33.09	2	P	P	20 01 01.8	+1.7
	comp=Z,0.4nm,0.7s,baz=186,slow=10.0,SNR=1.1						
	comp=Z,0.4nm,0.7s						
BJT	Baijiatuau	36.90	346	P	P	20 01 33.5	+0.5
BJT				IAmb	IAmb	20 01 45.2	
	comp=Z,8.1nm,1.4s						
BBOO	Buckleboo	37.87	167	P	P	20 01 41.4	+0.2
LZDM	Lanzhou Array	38.09	329	P	P	20 01 42.8	-0.7
	comp=Z,0.3nm,0.3s,baz=176,slow=10,SNR=4.6						
	comp=Z,0.3nm,0.3s						
STKA	Stephens Creek	38.57	160	P	P	20 01 47.7	+0.5
	comp=Z,4.2nm,0.7s,baz=341,slow=9.3,SNR=6.8						
	comp=Z,4.2nm,0.7s						
STKA	Stephens Creek	38.57	160	P	P	20 01 47.2	0.0
SHL	Shillong	39.64	306	P	P	20 01 55.2	-1.3
SHL				IAmb	IAmb	20 01 56.5	
	comp=Z,6.9nm,0.5s						
ARMA	Armidale	41.84	147	P	P	20 02 14.8	+0.2
ARMA				IAmb	IAmb	20 02 17.0	
	comp=Z,18nm,1.1s						
LSA	Lhasa	42.16	311	P	P	20 02 18.9	+1.3
PALK	Pallekele	45.94	276	LR	LR	20 21 30.4	
	comp=Z,16nm,20.0s,baz=132,slow=36						
SONM	Songino Array	46.85	341	P	P	20 02 54.8	+0.5
	comp=Z,0.5nm,0.8s,baz=156,slow=7.4,SNR=3.3						
	comp=Z,0.5nm,0.8s						
PETK	Petropavlovsk-	54.95	22	LR	LR	20 26 58.1	
	comp=Z,11nm,20.4s,baz=132,slow=36						
MKAR	Makanchi Array	57.19	325	P	P	20 04 10.9	-0.3
	comp=Z,0.4nm,0.5s,baz=124,slow=7.7,SNR=11						
MKAR				PcP	PcP	20 05 06.1	+0.6
	comp=Z,0.6nm,0.6s,baz=132,slow=2.1,SNR=2.1						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	57.19	325	P	P	20 04 10.6	-0.6
MAKZ	Makanchi	57.37	325	P	P	20 04 12.7	+0.2
MAKZ				IAmb	IAmb	20 04 56.3	
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	60.18	333	P	P	20 04 31.1	-0.6
	comp=Z,0.2nm,0.3s,baz=123,slow=7.1,SNR=2.5						
	comp=Z,0.2nm,0.3s						
ZALV	Zalesovo Beam	60.18	333	P	P	20 04 30.5	-1.3
KURBB	Kurchatov Arra	61.36	327	P	P	20 04 39.7	-0.2
	comp=Z,1.2nm,0.8s,baz=122,slow=7.2,SNR=12						
	comp=Z,1.2nm,0.8s						
KURK	Kurchatov	61.36	327	P	P	20 04 39.4	-0.5
KURK				IAmb	IAmb	20 04 52.0	
	comp=Z,2.9nm,0.9s						
BFZ	Birch Farm	63.54	140	P	P	20 04 53.3	-1.4
BVAR	Borovoye Array	66.94	327	P	P	20 05 16.2	-0.4
	comp=Z,0.8nm,0.9s,baz=124,slow=7.8,SNR=3.1						
	comp=Z,0.8nm,0.9s						
BORK	Borovoye	66.99	327	P	P	20 05 15.9	-0.9
BORK				IAmb	IAmb	20 05 31.7	
	comp=Z,2.0nm,0.8s						
TIXI	Tiksi	67.35	1	P	P	20 05 18.9	+0.2
TIXI				IAmb	IAmb	20 05 37.9	
	comp=Z,3.0nm,0.8s						
NRIK	Noril'sk	69.97	346	P	P	20 05 34.8	-0.3
	comp=Z,0.8nm,0.2s,baz=144,slow=4.4,SNR=1.6						
	comp=Z,0.8nm,0.2s						
ILAR	Eielson Array	84.63	25	P	P	20 06 56.7	-0.6
	comp=Z,0.3nm,0.9s,baz=256,slow=5.7,SNR=1.6						
	comp=Z,0.3nm,0.9s						
FURI	Furi	87.50	279	LR	LR	20 44 16.9	
	comp=Z,15nm,20.5s,baz=126,slow=34						
DLBC	Dease Lake	93.29	31	LR	LR	20 47 07.4	
	comp=Z,28nm,21.5s,baz=14,slow=34						

*JMA **01** 19:54:42.7±0.1, 24°N±2°×123°.0E±0°.5, h46km±1km, MV2.6/12, NW OFF ISHIGAKIJIMA IS*
*TAP **01** 19:54:42.7, 24°.29N×122°.93E, h40km, ML3.1, D*
ISC 01 19:54:43.0±1.2**, 24°.30N**±0°.04×**122°.98E**±0°.02**, h44**km±7km**, n96, σ1.s08**/143**, 3C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.15	348	iP	Pn	19 54 50.2	-0.2
JYNG				S	Sn	19 54 55.5	0.0
YOJ	Yonaguni jima	0.16	10	P	Pn	19 54 50.3	-0.2
YOJ	Yonaguni jima	0.16	10	P	Pn	19 54 56.0	+5.5
YOJ	Yonaguni jima	0.16	10	P	Pn	19 54 50.4	-0.2
YOJ				eS	Sn	19 54 55.7	0.0
YOJ	Yonaguni jima	0.16	10	⇑iP	Pn	19 54 50.3	-0.2
YOJ				iS	Sn	19 54 55.8	0.0
EOS3	EOS3	0.61	269	iP	Pn	19 54 55.2	+0.1
EOS3				S	Sn	19 55 04.4	+0.6
EOS4	EOS4	0.63	254	P	Pn	19 54 55.9	+0.6
IRIF	Iriomote-Funau	0.68	87	eP	Pn	19 54 56.0	-0.4
IRIF				eS	Sn	19 55 05.8	-0.1
EOS2	EOS2	0.69	280	iP	Pn	19 54 56.0	-0.3
EOS2				eS	Sn	19 55 06.1	+0.2
HATJ	Hateruma jima	0.79	108	eP	Pn	19 54 57.6	-0.1
JKRS	Kuro-shima	0.94	94	eP	Pn	19 54 59.9	+0.1
JKRS				eS	Sn	19 55 12.8	+0.6
JIJ	Ishigaki jima	1.06	86	eP	Pn	19 55 01.1	-0.3
JIJ				eS	Sn	19 55 14.5	-0.6
TWC	Suao	1.08	287	iP	Pn	19 55 00.7	-1.0
TWC				eS	Sn	19 55 13.2	-2.2
EGS		1.10	300	P	Pn	19 55 00.8	-1.2
TWB1	Santiao Chiao	1.15	308	P	Pn	19 55 01.8	-0.8
TWB1				eS	Sn	19 55 15.6	-1.5
NDS	Dongshan	1.20	286	P	Pn	19 55 02.1	-1.3
NDS				eS	Sn	19 55 16.3	-2.1
JISG	Ishigakijimahi	1.25	77	iP	Pn	19 55 03.8	-0.1
JISG				eS	Sn	19 55 19.4	-0.2
TIPB	Shuangxi	1.25	303	eP	Pn	19 55 03.7	-0.3
TIPB				iS	Sn	19 55 18.2	-1.4
ETL	Fush Village	1.25	264	eP	Pn	19 55 04.3	+0.3
ETL				eS	Sn	19 55 18.7	-1.0
TWE	Neicheng	1.27	290	iP	Pn	19 55 04.2	0.0
TWE				eS	Sn	19 55 19.1	-1.0
NACB	Ninganchiao	1.27	265	P	Pn	19 55 04.2	-0.1
NACB	Ninganchiao	1.27	265	S	Sn	19 55 19.0	-1.2
NACB	Ninganchiao	1.27	265	⇓iP	Pn	19 55 04.0	-0.4
NACB				eS	Sn	19 55 19.8	-0.5
SXI1	Grass Mountain	1.28	308	iP	Pn	19 55 04.3	-0.2
SXI1				iS	Sn	19 55 19.9	-0.7
TWD	Chiawan	1.28	260	⇑iP	Pn	19 55 04.2	-0.2
TWD				S	Sn	19 55 19.8	-0.8
ENTT	Nioudou	1.33	285	iP	Pn	19 55 05.7	+0.5
ENTT				eS	Sn	19 55 22.1	+0.4
NWF	Wu-fen Shan	1.33	305	eP	Pn	19 55 03.8	-1.4
NWF				eS	Sn	19 55 21.8	-0.1
WFSB	Wu-fen Shan	1.33	305	eP	Pn	19 55 04.1	-1.1
WFSB				S	Sn	19 55 20.7	-1.0
TEYL	Yanliau Villag	1.34	251	eP	Pn	19 55 04.9	-0.3
LATG	Datong	1.35	280	eP	Pn	19 55 06.4	+0.9
FUSB	Fushanzhiwuyua	1.35	290	P	Pn	19 55 05.3	-0.2
FUSB				eS	Sn	19 55 21.9	-0.3
ETLH	Xiulin Townshi	1.37	266	eP	Pn	19 55 05.6	-0.2
ETLH				S	Sn	19 55 22.6	-0.2
SHUL	Shoufeng	1.39	249	eP	Pn	19 55 05.7	-0.3
SHUL				eS	Sn	19 55 22.8	-0.4
ETM	Tongmen	1.40	256	eP	Pn	19 55 05.3	-0.8
ETM				S	Sn	19 55 22.4	-1.0
NWLT	Wulai	1.43	290	eP	Pn	19 55 07.7	+1.2
NWLT				S	Sn	19 55 23.0	-1.1
TWA	Mucha	1.44	298	eP	Pn	19 55 07.0	+0.3
TWA				eS	Sn	19 55 23.3	-1.1
TEGC	Jichi Village	1.44	246	eP	Pn	19 55 07.7	+1.1
TEGC				eS	Sn	19 55 25.2	+0.8
LXIB	Xiulin Townshi	1.46	259	⇑P	Pn	19 55 06.4	-0.7
LXIB				eS	Sn	19 55 25.1	0.0
NNS	Nan Shan	1.47	276	P	Pn	19 55 08.5	+1.3
ESL	Shilin	1.50	251	eP	Pn	19 55 06.3	-1.1
YHNB	Yeheng	1.51	284	P	Pn	19 55 09.0	+1.4
YHNB	Yeheng	1.51	284	eP	Pn	19 55 09.1	+1.4
NSK	Sanguang	1.52	284	iP	Pn	19 55 09.3	+1.5
NSK				eS	Sn	19 55 27.2	+0.6
YM01	YM01	1.53	304	eP	Pn	19 55 07.8	-0.1
YM01				eS	Sn	19 55 25.9	-0.8
EGFH	Guangfu	1.55	246	eP	Pn	19 55 07.6	-0.6
ZUZH	Zhuzihu	1.56	304	eP	Pn	19 55 08.7	+0.3
WARBT	Fenglin Townsh	1.57	249	P	Pn	19 55 07.3	-1.2
WARBT				eS	Sn	19 55 25.8	-1.8
FUSS	Fushou	1.59	268	eP	Pn	19 55 09.1	+0.2
JTJ	Tarama	1.60	77	eP	Pn	19 55 09.2	+0.3
JTJ				eS	Sn	19 55 28.5	+0.1
HGSD	Ruisui	1.64	241	eP	Pn	19 55 08.1	-1.2
HGSD				iS	Sn	19 55 27.2	-2.0
TWT	Tachien	1.65	269	iP	Pn	19 55 10.7	+1.1
TDCB	Techi	1.66	269	eP	Pn	19 55 10.7	+0.9
TDCB				S	Sn	19 55 30.7	+0.6
OWD	Renai	1.69	259	eP	Pn	19 55 09.8	-0.3
OWD				S	Sn	19 55 29.3	-1.3
ECBN	Changbin	1.71	235	P	Pn	19 55 09.1	-1.2
ECBN				eS	Sn	19 55 28.5	-2.5
EHY	Hungye	1.71	243	iP	Pn	19 55 09.3	-1.1
NFF	Wufeng Townshi	1.73	281	eP	Pn	19 55 12.0	+1.3
WUSB	Renai	1.73	260	eP	Pn	19 55 10.8	+0.1
WUSB				S	Sn	19 55 31.8	+0.2
VWDT	VWDT	1.77	252	iP	Pn	19 55 11.3	+0.2
VWDT				eS	Sn	19 55 32.3	-0.1
YULB	Yu-li	1.79	240	P	Pn	19 55 10.3	-1.1
YULB	Yu-li	1.79	240	S	Sn	19 55 31.3	-1.6
YULB	Yu-li	1.79	240	iP	Pn	19 55 10.4	-1.0
YULB				eS	Sn	19 55 31.0	-1.9
LIOB	Emei	1.82	281	eP	Pn	19 55 13.3	+1.4
CHKH	Chenggong	1.82	233	eP	Pn	19 55 09.9	-2.0
NSTT	Nanjuang	1.83	281	eP	Pn	19 55 13.9	+1.8
WHP	Taichung City	1.86	270	eP	Pn	19 55 14.0	+1.5
WHP				S	Sn	19 55 35.5	+0.8
FULB	Fuli	1.90	235	eP	Pn	19 55 11.5	-1.4
CHKT	Chengkung	1.90	231	eP	Pn	19 55 11.2	-1.8
SSLB	Suanglung	1.92	255	P	Pn	19 55 13.8	+0.5
SSLB	Suanglung	1.92	255	S	Sn	19 55 35.4	-0.9
SSLB	Suanglung	1.92	255	eP	Pn	19 55 13.5	+0.2
SSLB				eS	Sn	19 55 35.8	-0.5
SMLT	Sun Moon Lake	1.95	258	eP	Pn	19 55 14.4	+0.7
SMLT				S	Sn	19 55 36.9	-0.1
TWQ1	Liyutan	2.02	272	eP	Pn	19 55 16.9	+2.3
WHYT	Xinyi Township	2.04	253	eP	Pn	19 55 15.6	+0.8
TCU	Taichung	2.11	266	eP	Pn	19 55 17.4	+1.6
ELDTW	Lidau	2.11	239	P	Pn	19 55 14.7	-1.3
ALS	Alishan	2.14	249	eP	Pn	19 55 16.9	+0.4
WNT	Mingjian	2.14	259	eP	Pn	19 55 18.1	+1.8
CHN5	Tsauling	2.22	252	P	Pn	19 55 18.3	+0.8
TWGBT	Beinan	2.29	230	P	Pn	19 55 19.7	+1.4
TWGBT	Beinan	2.29	230	eP	Pn	19 55 17.4	-0.9
TWG	Pinlang	2.29	230	eP	Pn	19 55 17.1	-1.2
WGK	Gukeng	2.30	255	eP	Pn	19 55 20.6	+2.2
STYH	Taoyuan	2.31	241	eP	Pn	19 55 18.7	+0.1
STYH				S	Sn	19 55 45.5	-0.3
WDLH	Douliu	2.32	255	eP	Pn	19 55 20.9	+2.3
WDLH				iS	Sn	19 55 48.0	+2.1
WCKO	Fanlu	2.34	249	eP	Pn	19 55 19.4	+0.4
WCKO				S	Sn	19 55 46.3	-0.3
TPUB	Ta-pu	2.37	246	P	Pn	19 55 20.2	+0.7
TPUB	Ta-pu	2.37	246	S	Sn	19 55 48.5	+1.1
TPUB	Ta-pu	2.37	246	eP	Pn	19 55 20.9	+1.5
TPUB				iS	Sn	19 55 48.8	+1.4
WTP	Ta-pu	2.41	245	eP	Pn	19 55 21.7	+1.7
WTP				S	Sn	19 55 49.9	+1.6
WRL	Guolierlin Hig	2.41	261	eP	Pn	19 55 21.1	+1.2
TWK	Hsinying	2.50	246	P	Pn	19 55 23.0	+1.7
CHN1	Nanshi	2.51	244	eP	Pn	19 55 22.8	+1.5
SGST	Jiashian	2.51	242	P	Pn	19 55 22.5	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNST	Tainan City	2.52	245	eP	Pn	19 55 22.8	+1.3
SSD	Sandimen	2.65	235	eP	Pn	19 55 24.6	+1.2
MASBT	Mashibuluo	2.73	233	eP	Pn	19 55 26.2	+1.8

SJA 01 19:59:14.7±1.2,23°.93S×66°.85W,h209km±12km,ML3.1, MW3.5
GUC 01 19:59:15.9±0.7,23°.96S×66°.92W,h199km±10km,ML3.3
ISC 01 19:59:16.8±1.3,23°.89S±0°.05×66°.89W±0°.06,h181km,n27, σ1s.10/40,4C,Jujuy Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALTA		0.60	124	iP	Pn	19 59 44.4	+1.6
SALTA				IAML		20 00 07.6	
	comp=Z,18nm,1.2s						
SLA	San Lorenzo	1.51	123	eP	Pn	19 59 50.1	+0.9
AZAP	Zapla	1.70	102	iP	Pn	19 59 51.4	+0.3
AZAP				IAML		20 00 28.0	
	comp=Z,19nm,0.7s						
FSA	Cafayete	2.36	160	iP	Pn	19 59 58.2	+0.1
FSA				iS	Sn	20 00 29.4	-1.0
PB06	IPOC Station P	2.73	295	⇑iP	Pn	20 00 04.0	+1.4
PB06				iS	Sn	20 00 39.5	+1.5
PB06				IAML		20 00 43.9	
	comp=E,86nm,0.3s						
PB06	IPOC Station P	2.73	295	iP	Pn	20 00 03.9	+1.4
PB06				iS	Sn	20 00 39.9	+1.8
PB06				IAML		20 00 42.0	
	comp=Z,40nm,0.1s						
PB09	IPOC Station P	3.01	313	iP	Pn	20 00 07.5	+1.7
PB09				iS	Sn	20 00 46.3	+2.3
PB09				IAML		20 00 50.2	
	comp=N,28nm,0.5s						
PB09	IPOC Station P	3.01	313	iP	Pn	20 00 06.8	+1.0
PB09				iS	Sn	20 00 44.0	0.0
PB09				IAML		20 00 49.7	
	comp=Z,32nm,0.5s						
PB03	IPOC Station P	3.21	304	⇑iP	Pn	20 00 09.2	+0.9
PB03	IPOC Station P	3.21	304	iP	Pn	20 00 09.4	+1.1
PB03				iS	Sn	20 00 48.8	+0.4
PB03				IAML		20 00 51.4	
	comp=Z,52nm,0.2s						
PB05	IPOC Station P	3.21	288	⇑eP	Pn	20 00 08.8	+0.5
PB05				IAML		20 00 52.2	
	comp=E,34nm,0.3s						
PB05	IPOC Station P	3.21	288	iP	Pn	20 00 09.2	+1.0
PB05				IAML		20 00 55.4	
	comp=Z,16nm,0.6s						
PB14	IPOC Station P	3.29	256	eP	Pn	20 00 09.7	+0.3
PB14	IPOC Station P	3.29	256	iP	Pn	20 00 09.6	+0.2
PB14				iS	Sn	20 00 49.7	-0.7
PB14				IAML		20 00 52.4	
	comp=Z,45nm,0.7s						
PB07	IPOC Station P	3.50	307	⇑iP	Pn	20 00 12.6	+0.6
PB07	IPOC Station P	3.50	307	iP	Pn	20 00 12.0	0.0
PB07				iS	Sn	20 00 54.3	-0.7
PB07				IAML		20 00 59.0	
	comp=Z,40nm,0.2s						
AC02	Maricunga	3.56	214	eP	Pn	20 00 13.3	+0.3
PB01	IPOC Station P	3.71	319	eP	Pn	20 00 15.0	+0.5
PB01	IPOC Station P	3.71	319	iP	Pn	20 00 14.7	+0.1
PB01				iS	Sn	20 00 59.3	-0.3
PB01				IAML		20 01 01.5	
	comp=Z,51nm,0.2s						
PB02	IPOC Station P	3.78	312	iP	Pn	20 00 15.7	+0.5
PB02	IPOC Station P	3.78	312	iP	Pn	20 00 15.8	+0.5
PB02				iS	Sn	20 00 59.9	-1.1
PB02				IAML		20 01 09.4	
	comp=Z,58nm,0.2s						
AC01	Pan de Azucar	4.05	235	eP	Pn	20 00 17.5	-1.1
PATCX	Punta Patache	4.30	315	eP	Pn	20 00 21.2	-0.6
PATCX				eS	Sn	20 01 11.3	-1.5
PATCX	Punta Patache	4.30	315	iP	Pn	20 00 21.6	-0.3
PATCX				IAML		20 01 24.9	
	comp=Z,19nm,0.7s						
HMBC	Humberstone	4.54	322	eP	Pn	20 00 24.1	-1.1
HMBC				eS	Sn	20 01 16.1	-2.6
HMBC	Humberstone	4.54	322	iP	Pn	20 00 24.7	-0.4
HMBC				iS	Sn	20 01 16.9	-1.7
HMBC				IAML		20 01 21.5	
	comp=Z,60nm,0.4s						
PB11	IPOC Station P	4.85	327	iP	Pn	20 00 28.6	-0.4
PB11				IAML		20 01 27.4	
	comp=Z,20nm,0.2s						

SOME 01 20:02:07.1,39°.62N×72°.78E,h10km
NNC 01 20:02:09.0±1.4,39°.68N×72°.73E,h7km±21km,mb3.6, mpv3.3,Error ellipse: s-maj=11.0km s-min=5.1km az=0.0
KRNET 01 20:02:09.1±0.1,39°.58N×73°.00E,h14km,mb3.2
ISC 01 20:02:10.0±1.0,39°.63N±0°.05×72°.98E±0°.02,h10km,n59, σ2s.59/95,37C-15D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.55	47	⇑iP	Pg	20 02 20.5	-0.3
SFK				⇑iS	Sb	20 02 29.0	-1.0
OHH	Osh	0.90	350	⇑iP	Pg	20 02 27.2	-0.2
OHH				⇑iS	Sb	20 02 41.1	+1.1
DRK	Karamyk	0.93	261	⇑iP	Pg	20 02 27.1	-0.8
DRK				⇑iS	Sb	20 02 40.3	-0.6
SALK	Salom-Alik	1.40	27	⇓iP	Pb	20 02 36.5	+0.1
SALK				⇓iS	Sg	20 02 56.5	+1.3
ARSB	Arslanbob	1.69	360	⇓iP	Pb	20 02 41.8	+0.5
ARSB				⇓eS	Sg	20 03 05.4	+1.1
BTK	Batken	1.72	285	⇑iP	Pb	20 02 41.8	0.0
BTK				⇑iS	Sg	20 03 05.8	+0.5
ARK	Arkit	2.30	341	⇑iP	Pb	20 02 51.3	-0.3
ARK				⇑iS	Sb	20 03 21.9	+1.8
TRKS	Terek-Say	2.36	324	⇓iP	Pb	20 02 51.0	-1.7
TRKS				⇓iS	Sb	20 03 21.6	-0.3
ARLS	Aral	2.45	24	⇑iP	Pb	20 02 52.9	-1.3
ARLS				⇑iS	Sb	20 03 25.1	+0.6
JNKS	Jany-Kuch	2.47	54	⇑iP	Pb	20 02 53.3	-1.3
JNKS				⇑iS	Sb	20 03 25.7	+0.5
UCH	Uchtor	2.84	24	⇓iP	Pb	20 02 58.7	-2.4
UCH				⇓iS	Sb	20 03 35.0	-1.1
MNAS	Manas	2.87	353	⇑iP	Pb	20 02 59.2	-2.3
MNAS				⇑iS	Sb	20 03 35.8	-0.9
NRN	Naryn	2.92	51	⇑iP	Pb	20 02 59.1	-3.3
NRN				⇑iS	Sb	20 03 35.5	-2.7
EKS2	Erkin-Say	3.08	11	⇑iP	Pb	20 03 01.9	-3.2
EKS2				⇑iS	Sb	20 03 40.6	-2.2
MRKS	Merke	3.11	3	Pg	Pb	20 03 07.1	+1.5
	2.6nm,0.3s						
MRKS				Lg	Lg	20 03 50.7	
	22nm,0.5s						
MRKS	Merke	3.11	3	eP	Pb	20 03 07.1	+1.5
	2.6nm,0.3s						
MRKS				eS	Sg	20 03 50.7	+0.7
	22nm,0.5s						
AAK	Ala-Archa	3.21	20	⇑Pg	Pb	20 03 06.6	-0.6
	6.8nm,0.8s						
AAK				⇑Lg	Lg	20 03 50.4	
	7.5nm,0.6s						
AAK	Ala-Archa	3.21	20	⇑iP	Pn	20 03 03.7	+3.0
AAK				⇑iS	Sb	20 03 43.6	-2.9
IUG	Iuzhnay	3.36	319	Pg	Pb	20 03 07.5	-2.3
	6.3nm,0.2s						
IUG				Lg	Lg	20 03 51.3	
	32nm,0.5s						
IUG	Iuzhnay	3.36	319	eP	Pb	20 03 07.5	-2.3
	6.3nm,0.2s						
IUG				eS	Sb	20 03 51.3	+0.6
	32nm,0.5s						
KBK	Karagaybulak	3.36	26	⇓iP	Pn	20 03 05.9	+3.1
KBK				⇓iS	Sb	20 03 47.3	-3.6
FRU1	Bishkek	3.41	21	⇑iP	Pn	20 03 06.6	+3.3
FRU1				⇑iS	Sb	20 03 48.6	-3.4
ULHL	Ulahol	3.59	42	⇑iP	Pn	20 03 08.9	+2.9
ULHL				⇑iS	Sn	20 03 52.4	+3.8
CHMS	Chumysh	3.62	21	⇑iP	Pn	20 03 09.2	+3.1
CHMS				⇑iS	Sn	20 03 53.0	+4.1
BOOM	Boomskoye usch	3.62	37	⇑iP	Pn	20 03 09.1	+2.7
BOOM				⇑iS	Sn	20 03 52.9	+3.6
USP	Ospenovka	3.81	17	⇑iP	Pn	20 03 11.9	+3.2
USP				⇑iS	Sn	20 03 57.5	+3.9
TKM2	Tokmak 2	3.83	30	⇓iP	Pn	20 03 12.2	+3.0
TKM2				⇓iS	Sn	20 03 58.4	+4.0
KK31	Karatay Array	3.93	333	Pg	Pb	20 03 17.5	-2.0
	0.8nm,0.3s,baz=146,slow=16,SNR=43						
KK31				⇑Lg	Lg	20 04 08.3	
	3.9nm,0.3s,baz=152,slow=23,SNR=6.5						
KST	Kastek	4.08	32	Pg	Pb	20 03 23.4	+1.4
	3.6nm,0.3s						
KST				Lg	Lg	20 04 18.8	
	5.9nm,0.4s						
KST	Kastek	4.08	32	eP	Pb	20 03 23.4	+1.4
	3.6nm,0.3s						
KST				eS	Sg	20 04 18.8	-2.2
	5.9nm,0.4s						
BRLS	Borolday	4.14	326	Pg	Pb	20 03 19.3	-3.6
	1.3nm,0.2s						
BRLS				Lg	Lg	20 04 11.1	
	4.8nm,0.2s						
BRLS	Borolday	4.14	326	eP	Pb	20 03 19.3	-3.6
	1.3nm,0.2s						
BRLS				eS	Sb	20 04 11.1	-1.9
	4.8nm,0.2s						
DGS	Degeres	4.17	29	Pg	Pg	20 03 26.7	-3.2
DGS				Lg	Lg	20 04 24.2	
DGS	Degeres	4.17	29	eP	Pg	20 03 26.7	-3.2
	1.6nm,0.5s						
DGS				eS	Sg	20 04 24.2	+0.3
	8.6nm,0.8s						
TARG	Taragay, Kyrgy	4.22	59	⇑iP	Pn	20 03 17.3	+2.5
TARG				⇑iS	Sn	20 04 07.4	+3.0
MTBS	Maitube	4.35	35	Pg	Pg	20 03 29.9	-3.4
	1.0nm,0.1s						
MTBS				Lg	Lg	20 04 30.2	
	4.8nm,0.2s						
MTBS	Maitube	4.35	35	eP	Pg	20 03 29.9	-3.4
	1.0nm,0.1s						
MTBS				eS	Sg	20 04 29.0	-0.7
	4.8nm,0.2s						
IZV	Izvestkoviy	4.36	38	Pg	Pg	20 03 30.0	-3.6
	2.7nm,0.6s						
IZV				Lg	Lg	20 04 29.4	
	17nm,0.5s						
IZV	Izvestkoviy	4.36	38	eP	Pg	20 03 30.0	-3.6
	2.7nm,0.6s						
IZV				eS	Sg	20 04 29.4	-0.7
	17nm,0.5s						
TNSS	Tian-Shan	4.52	40	Pg	Pg	20 03 33.3	-3.4
	0.2nm,0.1s						
TNSS				Lg	Lg	20 04 36.2	
	2.6nm,0.4s						
TNSS	Tian-Shan	4.52	40	eP	Pg	20 03 34.1	-2.6
	0.9nm,0.3s						
TNSS				eS	Sg	20 04 36.3	+1.0
	2.6nm,0.4s						
KRBS	Karabastau	4.53	26	Pg	Pb	20 03 32.8	+3.1
KRBS				Lg	Lg	20 04 34.5	
KRBS	Karabastau	4.53	26	eP	Pb	20 03 32.8	+3.1
	1.5nm,0.5s						
KRBS				eS	Sg	20 04 34.5	-1.0
	5.1nm,0.4s						
KOTS	Kotyrbulak	4.75	39	Pg	Pb	20 03 36.6	+3.1
	2.8nm,0.4s						
KOTS				Lg	Lg	20 04 40.6	
	20nm,0.5s						
KOTS	Kotyrbulak	4.75	39	eP	Pb	20 03 36.6	+3.1
	2.8nm,0.4s						
KOTS				eS	Sg	20 04 40.6	-1.9
	20nm,0.5s						
KTBS	Karatobe	4.93	33	Pg	Pg	20 03 40.3	-4.1
	1.3nm,0.4s						
KTBS				Lg	Lg	20 04 46.9	
	4.0nm,0.5s						
KTBS	Karatobe	4.93	33	eP	Pg	20 03 40.3	-4.1
	1.3nm,0.4s						
KTBS				eS	Sg	20 04 46.9	-1.3
	4.0nm,0.5s						
PRZ	Przheval'sk	4.99	53	⇓iP	Pn	20 03 28.1	+3.0
PRZ				⇓iS	Sn	20 04 25.7	+2.8
SATY	Saty	5.33	48	Pg	Pg	20 03 48.4	-3.6
	2.3nm,0.4s						
SATY				Lg	Lg	20 05 01.3	
	5.3nm,0.3s						
KURS	Kuram	5.47	44	Pg	Pg	20 03 51.9	-2.9
KURS				Lg	Lg	20 05 07.4	
KPKS	Kokpek	5.74	46	Pg	Pg	20 03 57.1	-2.9
	0.6nm,0.2s						
KPKS				Lg	Lg	20 05 16.6	
	6.1nm,0.5s						
KPKS	Kokpek	5.74	46	eP	Pg	20 03 57.1	-2.9
	0.6nm,0.2s						
KPKS				eS	Sg	20 05 16.6	+2.3
	6.1nm,0.5s						
UZB	Uzynbulak	5.74	50	Pg	Pg	20 03 55.8	-4.2
UZB				Lg	Lg	20 05 13.5	
UZB	Uzynbulak	5.74	50	eP	Pg	20 03 55.8	-4.2
	3.4nm,0.2s						
UZB				eS	Sg	20 05 13.5	-0.8
	3.4nm,0.6s						
ARXS	Arharly	5.83	37	Pg	Pg	20 03 58.0	-3.6
	1.5nm,0.6s						
ARXS				Lg	Lg	20 05 17.8	
	7.7nm,0.5s						
ARXS	Arharly	5.83	37	eP	Pg	20 03 58.0	-3.6
	1.5nm,0.6s						
ARXS				eS	Sg	20 05 17.8	+0.7
	7.7nm,0.5s						
BLB	Baldybastay	6.06	41	Pg	Pg	20 04 01.2	-4.8
	1.4nm,0.1s						
BLB				Lg	Lg	20 05 23.1	
	7.0nm,0.3s						
PDGK	Podgornoye	6.12	51	⇓Lg	Lg	20 05 24.6	
	6.4nm,1.0s						
AB31	Akbulak array	13.37	320	Pn	Pn	20 05 16.9	-2.8
	0.9nm,0.8s,baz=131,slow=12,SNR=5.4						

NEIC 01 20:16:24.6±0.8,7°.2S±0°.1×120°.1E±0°.1,h536km±10km, mb4.1/23,Error ellipse: s-maj=17.5km s-min=13.9km az=66.0
IDC 01 20:16:24.9±0.7,7°.19S×120°.17E,h536km±5km,mb3.4/16, mbtmp4.2/21,Error ellipse: s-maj=23.6km s-min=9.3km az=61.0
DJA 01 20:16:24.5±0.2,7°S±3°×12°0E±°,h517km±3km,M4.1/19, mB4.7/4,mb3.9/15,MLv4.2/19,Mw(mB)3.9/4
ISC 01 20:16:23.8±0.5,7°.29S±0°.05×120°.13E±0°.06,h531km±6km, n108,σ0s.99/122,mb4.0/27,Flores Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSSI	Bau Bau, Buton	1.20	18	P	P	20 17 29.2	+0.4
EDFI	Ende, Flores	2.12	133	P	P	20 17 30.9	-1.5
DBNI	Kabupaten Domp	2.17	236	P	P	20 17 32.4	-0.1
DBNI				S	S	20 18 27.2	-1.2
KAPI	Kappang	2.29	351	P	P	20 17 35.2	+2.0
	11nm,0.5s,baz=165,slow=4.3,SNR=11						
KAPI				S	S	20 18 31.2	+1.7
	9.5nm,0.6s,baz=339,slow=22,SNR=12						
KAPI	Kappang	2.29	351	P	P	20 17 34.0	+0.8
KAPI				S	S	20 18 30.6	+1.0
KAPI	Kappang	2.29	351	P	P	20 17 34.1	+0.9
KAPI	Kappang	2.29	351	P	P	20 17 34.7	+1.5
WSI	Waingapu	2.37	176	P	P	20 17 33.7	+0.1
WSI				S	S	20 18 29.5	-0.8
WBSI	Waikabubak, Su	2.45	197	P	P	20 17 34.0	0.0
WBSI				S	S	20 18 29.2	-1.9
MMRI	Maumere	2.48	123	P	P	20 17 34.4	+0.2
MMRI	Maumere	2.48	123	P	P	20 17 34.9	+0.7
MMRI	Maumere	2.48	123	S	S	20 18 30.6	-0.8
MMRI	Maumere	2.48	123	P	P	20 17 33.8	-0.4
MMRI				S	S	20 18 29.2	-2.2
PLAI	Plampang	2.79	237	P	P	20 17 36.6	+0.6
PLAI	Plampang	2.79	237	S	S	20 18 33.4	-1.2
PLAI	Plampang	2.79	237	P	P	20 17 36.5	+0.6
PLAI				S	S	20 18 33.3	-1.3
BASI	Baing, Sumba	2.94	171	P	P	20 17 37.9	+1.0
BASI				S	S	20 18 36.1	-0.3
SPSI	Sidrap Palu	3.32	354	P	P	20 17 38.4	-1.1
BATI	Baumata	4.54	130	P	P	20 17 49.7	+1.0
	34nm,0.4s,baz=332,slow=2.5,SNR=22						
BATI				S	S	20 18 55.5	-2.4
	26nm,0.5s,baz=26,slow=22,SNR=12						
BATI	Baumata	4.54	130	P	P	20 17 49.0	+0.3
KHKI	Kahang-Kahang	4.60	256	P	P	20 17 49.7	+0.5
MMSI	Mamuju	4.73	345	P	P	20 17 51.8	+1.5
SOEI	Soe	4.77	121	P	P	20 17 50.8	+0.1
SOEI	Soe	4.77	121	P	P	20 17 52.0	+1.3
SOEI	Soe	4.77	121	S	S	20 19 02.1	+0.5
SOEI	Soe	4.77	121	P	P	20 17 51.1	+0.4
IGBI	Denpasar	5.16	253	P	P	20 17 54.3	+0.4
RTBI	Rangdo, Negare	5.27	257	P	P	20 17 55.2	+0.3
	0.3nm43nm,0.8s						
JAGI	Jajag, Banyuwa	6.04	258	P	P	20 18 01.3	-0.6
JAGI	Jajag, Banyuwa	6.04	258	P	P	20 18 01.2	-0.6
JAGI	Jajag, Banyuwa	6.04	258	S	S	20 19 19.0	-3.0
JAGI	Jajag, Banyuwa	6.04	258	P	P	20 18 01.0	-0.9
	0.2nm17nm,0.5s						
KMMI	Kalianget	6.12	272	P	P	20 18 04.6	+2.0
	0.1nm13nm,0.8s						
GMJI	Gumukmas	6.69	261	P	P	20 18 07.6	-0.5
	0.1nm23nm,1.9s						
LUWI	Luwuk	6.74	23	P	P	20 18 09.2	+0.5
LUWI	Luwuk	6.74	23	P	P	20 18 09.6	+1.0
LUWI	Luwuk	6.74	23	P	P	20 18 09.1	+0.5
	0.2nm63nm,1.0s						
MPSI	Mapaga	7.58	358	P	P	20 18 17.7	+0.9
	0.1nm415nm28nm,0.6s						
SANI	Sanana	7.82	49	P	P	20 18 19.7	+0.4
SANI	Sanana	7.82	49	P	P	20 18 19.6	+0.3
MRSI	Marisa	7.92	13	P	P	20 18 20.5	+0.2
	538nm69nm,0.9s						
NLAI	Namlea	8.02	60	P	P	20 18 22.3	+1.0
	3µm29nm,0.5s						
SNJI	Sawahan-Nganju	8.31	266	P	P	20 18 28.0	+3.6
TOLI2	Tolitoli	8.37	4	P	P	20 18 24.4	-0.4
TOLI2	Tolitoli	8.37	4	P	P	20 18 24.6	-0.2
FITZ	Fitzroy Crossi	12.01	154	P	P	20 19 03.5	+1.0
	5.7nm,0.4s,baz=337,slow=7.6,SNR=19						
MTN	Manton Dam	12.16	118	P	P	20 19 04.1	0.0
BBJI	Bungbulang	12.38	268	P	P	20 19 06.4	0.0
	4.9nm,0.8s						
SBUM	Sibu	12.48	321	P	P	20 19 08.3	+0.9
SIJI	Sorong	12.81	61	P	P	20 19 11.2	+0.3
	9.0nm,0.7s,baz=266,slow=1.5,SNR=3.8						
DBJI	Dramaga	13.30	272	P	P	20 19 18.9	+2.9
MBWA	Marble Bar	13.79	182	P	P	20 19 22.0	+1.0
MBWA	Marble Bar	13.79	182	P	P	20 19 22.1	+1.0
KKM	Kota Kinabalu	13.81	343	P	P	20 19 20.6	-0.8
KKM	Kota Kinabalu	13.81	343	P	P	20 19 21.1	-0.3
KKM	Kota Kinabalu	13.81	343	P	P	20 19 20.2	-1.2
	23nm,1.2s						
PSA00	Pilbara Seismi	14.20	181	P	P	20 19 26.3	+1.0
PSA00	Pilbara Seismi	14.20	181	P	P	20 19 26.2	+1.0
GIRL	Giralia	16.29	200	P	P	20 19 47.5	+0.9
WB0	Warramunga Arr	18.59	133	P	P	20 20 08.4	+0.3
WB0				IAmb	IAmb	20 20 13.3	
	comp=Z,5.9nm,1.1s						
WRA	Warramunga Arr	18.66	134	P	P	20 20 09.5	+0.8
	comp=Z,1.8nm,0.7s,baz=312,slow=10,SNR=26						
WRA				S	S	20 23 11.0	-0.8
	comp=Z,0.5nm,0.7s,baz=317,slow=17,SNR=2.4						
MEEK	Meekatharra	19.30	184	P	P	20 20 15.4	+0.9
AS31	Alice Springs	20.98	142	P	P	20 20 30.5	+0.7
AS31				IAmb	IAmb	20 20 31.5	
	comp=Z,1.2nm,0.3s						
ASAR	Alice Springs	20.98	142	P	P	20 20 30.9	+1.1
	comp=Z,1.8nm,0.3s,baz=319,slow=8.5,SNR=60						
ASAR				S	S	20 23 48.4	-0.6
	comp=Z,0.8nm,0.9s,baz=309,slow=14,SNR=4.1						
ASAR				PcP	PcP	20 24 14.7	+0.4
	comp=Z,0.6nm,0.5s,baz=335,slow=1.5,SNR=11						
ASAR				ScP	ScP	20 27 00.5	-0.6
	comp=Z,0.3nm,0.7s,baz=327,slow=1.3,SNR=4.5						
	comp=Z,1.8nm,0.3s						
ASAR	Alice Springs	20.98	142	P	P	20 20 30.4	+0.6
MORW	Morawa	22.00	190	P	P	20 20 39.6	+0.7
BLDU	Ballidu	23.43	187	P	P	20 20 52.5	+0.9
COEN	Coen	23.59	108	P	P	20 20 52.8	-0.4
COEN				IAmb	IAmb	20 20 54.1	
	comp=Z,7.0nm,0.9s						
FORT	Forrest	24.52	163	P	P	20 21 02.3	+1.0
FORT				IAmb	IAmb	20 21 03.0	
	comp=Z,8.4nm,1.1s						
NWAO	Narrogin (SRO)	25.65	186	P	P	20 21 12.0	+0.7
BBOO	Buckleboo	29.39	152	P	P	20 21 44.6	+0.5
STKA	Stephens Creek	31.61	144	P	P	20 22 04.7	+1.6
	comp=Z,1.7nm,0.4s,baz=331,slow=8.0,SNR=8.0						
	comp=Z,1.7nm,0.4s						
CMAR	Chiang Mai Arr	33.04	321	P	P	20 22 16.0	+0.5
	comp=Z,0.2nm,0.6s,baz=136,slow=8.9,SNR=2.2						
CMAR				PcP	PcP	20 24 45.1	+1.5
	comp=Z,0.4nm,0.5s,baz=135,slow=4.3,SNR=4.3						
ENH	Enshi	38.72	345	P	P	20 23 02.0	-0.4
ENH				IAmb	IAmb	20 23 26.8	
	comp=Z,9.3nm,1.5s						
MORE	Moreh	40.21	322	P	P	20 23 13.7	-0.8
MORE				IAmb	IAmb	20 23 14.7	
	comp=Z,2.8nm,0.5s						
PATS	Pohnpei	40.59	71	P	P	20 23 17.1	-0.6
KSRS	Korea Array	45.10	9	P	P	20 23 52.2	-0.4
	comp=Z,1.1nm,0.7s,baz=181,slow=6.4,SNR=3.4						
	comp=Z,1.1nm,0.7s						
LSA	Lhasa	46.14	324	P	P	20 24 00.8	-0.4
MJAR	Matsushiro Arr	46.78	20	P	P	20 24 03.7	-1.8
	comp=Z,1.4nm,0.8s,baz=205,slow=9.2,SNR=2.8						
	comp=Z,1.4nm,0.8s						
USRK	Ussuriysk Ar.	52.36	11	P	P	20 24 45.7	-0.6
	comp=Z,4.6nm,0.7s,baz=198,slow=6.5,SNR=4.8						
	comp=Z,4.6nm,0.7s						
JKA	Kamikawa-asahi	55.05	20	P	P	20 25 04.6	-0.8
JKA				IAmb	IAmb	20 25 13.1	
	comp=Z,38nm,1.5s						
ULN	Ulaanbaatar	56.12	349	P	P	20 25 12.6	-0.3
SONM	Songino Array	56.21	349	P	P	20 25 13.6	+0.1
	comp=Z,1.7nm,0.6s,baz=166,slow=9.2,SNR=17						
	comp=Z,1.7nm,0.6s						
SONM	Songino Array	56.21	349	P	P	20 25 13.1	-0.4
HILR	Hailar Array B	56.61	360	P	P	20 25 16.1	-0.1
	comp=Z,0.7nm,0.4s,baz=169,slow=8.1,SNR=4.6						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	63.47	332	P	P	20 26 02.0	+0.3
	comp=Z,3.8nm,0.5s,baz=142,slow=7.8,SNR=98						
	comp=Z,3.8nm,0.5s						
MKAR	Makanchi Array	63.47	332	P	P	20 26 01.9	+0.2
AAK	Ala-Archa	64.73	324	P	P	20 26 10.3	+0.2
	comp=Z,0.8nm,0.5s,baz=193,slow=4.4,SNR=4.6						
	comp=Z,0.8nm,0.5s						
AAK	Ala-Archa	64.73	324	P	P	20 26 10.0	0.0
ARSB	Arslanbob	64.83	322	P	P	20 26 10.4	-0.3
ARSB				IAmb	IAmb	20 26 11.2	
	comp=Z,2.3nm,0.5s						
BTK	Batken	65.44	320	P	P	20 26 14.4	0.0
BTK				IAmb	IAmb	20 26 14.6	
	comp=Z,4.8nm,1.4s						
KKAR	Karatay Array	67.36	323	P	P	20 26 25.5	-0.7
ZAA0	Zalesovo Array	67.86	338		P	20 26 28.1	-0.8
ZAA0				IAmb	IAmb	20 26 28.9	
	comp=Z,4.5nm,0.8s						
ZALV	Zalesovo Beam	67.86	338	P	P	20 26 28.2	-0.7
	comp=Z,4.2nm,0.3s,baz=134,slow=5.2,SNR=17						
	comp=Z,4.2nm,0.3s						
ZALV	Zalesovo Beam	67.86	338		P	20 26 28.0	-1.0
KURBB	Kurchatov Arra	67.95	333	P	P	20 26 29.8	+0.2
	comp=Z,2.1nm,0.5s,baz=145,slow=5.8,SNR=11						
	comp=Z,2.1nm,0.5s						
KURK	Kurchatov	67.98	333		P	20 26 29.5	-0.2
KURK				IAmb	IAmb	20 26 30.4	
	comp=Z,4.9nm,0.9s						
PETK	Petropavlovsk-	68.07	23	P	P	20 26 30.9	+0.6
	comp=Z,3.1nm,0.9s,baz=267,slow=3.0,SNR=5.3						
	comp=Z,3.1nm,0.9s						
PETK	Petropavlovsk-	68.07	23	P	P	20 26 30.0	-0.3
MA2	Magadan	70.98	16	P	P	20 26 47.9	+0.4
	comp=Z,4.0nm,0.6s,baz=195,slow=6.8,SNR=5.6						
	comp=Z,4.0nm,0.6s						
BVAR	Borovoye Array	73.33	331	P	P	20 27 01.5	+0.2
	comp=Z,0.9nm,0.6s,baz=134,slow=8.3,SNR=6.3						
	comp=Z,0.9nm,0.6s						
SEY	Seymchan	74.23	15	P	P	20 27 06.7	+0.5
	comp=Z,3.0nm,0.5s,baz=222,slow=5.1,SNR=26						
	comp=Z,3.0nm,0.5s						
AB31	Akbulak array	76.82	324	P	P	20 27 20.3	-0.6
ABKAR	Akbulak array	76.82	324	P	P	20 27 20.0	-0.9
AKTO	Aktyubinsk	78.47	325	P	P	20 27 29.6	-0.2
	comp=Z,1.5nm,0.7s,baz=198,slow=4.6,SNR=5.2						
	comp=Z,1.5nm,0.7s						
TIXI	Tiksi	78.99	3	P	P	20 27 31.3	-0.8
TIXI				IAmb	IAmb	20 27 32.6	
	comp=Z,7.0nm,1.4s						
G19K	Purcell Mounta	93.70	24	P	P	20 28 43.5	+0.2
G19K				IAmb	IAmb	20 29 07.6	
	comp=Z,3.7nm,1.4s						
TORD	Torodi Ar. Bea	119.25	281	PKP	PKiKP	20 34 13.8	+0.1
	comp=Z,0.3nm,0.5s,baz=96,slow=1.7,SNR=2.6						

IDC 01 20:33:14.0±2.0, 1°.91N×124°.65E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=189.7km s-min=28.5km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.71	157	P	P	20 38 28.2	+0.4
	0.5nm,1.0s,baz=335,slow=11,SNR=4.8						
	0.5nm,1.0s						
ASAR	Alice Springs	26.97	161	P	P	20 38 57.5	-0.1
	0.2nm,0.5s,baz=345,slow=12,SNR=4.1						
	0.2nm,0.5s						
MKAR	Makanchi Array	57.90	327	P	P	20 43 07.6	-0.3
	0.1nm,0.5s,baz=136,slow=6.9,SNR=1.9						
	0.1nm,0.5s						

*IDC **01** 20:52:01.5±2.5, 32°.66N×49°.14E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=49.3km s-min=34.7km az=156.0*
*TEH **01** 20:52:02.7, 32°.48N×49°.22E, h12km±20km, ML3.4, Presumed earthquake*
ISC 01 20:52:04.0±0.7, 32°.44N±0°.04×49°.21E±0°.05, h23km, n28, σ1s.41/29, mb3.8/6, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMIS	Naft Sefid	0.78	175	Pg	Pb	20 52 18.0	-0.9
AMIS				Sg	Sn	20 52 31.0	+0.4
AHWZ	Ahwaz	1.21	204	Pg	Pb	20 52 27.0	+0.8
JHBN	Jahan bin	1.25	99	Pg	Pn	20 52 26.7	+0.3
IPIR	Pirpir	1.44	80	Pg	Pn	20 52 30.0	+1.1
IDOB	Doab	1.60	327	Pg	Pb	20 52 32.5	-0.4
IBRJ	Brojen	1.82	107	Pn	Pn	20 52 35.6	+1.5
IKLH	Kolahrood	2.17	66	Pn	Pn	20 52 41.1	+2.0
IBZA	Bozab	2.32	331	Pn	Pn	20 52 42.6	+1.6
HAGD	Aghdareh	2.37	359	Pn	Pn	20 52 42.9	+1.1
KLNJ	Kolanjah	2.48	125	Pn	Pn	20 52 44.8	+1.4
IALM	Almabolaq	2.56	340	Pn	Pn	20 52 46.0	+1.6
KCHF	Cheshme Sefid,	2.58	316	Pn	Pn	20 52 45.8	+1.2
IQOM	Qom	2.85	32	Pn	Pn	20 52 50.2	+1.8
KRSH	Karshahi	2.88	57	Pn	Pn	20 52 50.3	+1.6
IGHG	Ghaleghazi	2.90	311	Pn	Pn	20 52 50.8	+1.7
ISFB	Sefidab	3.17	52	Pn	Pn	20 52 54.1	+1.6
GLG1	Gilan-e-Gharb	3.23	302	Pn	Pn	20 52 54.9	+1.5
QABG	Abgarm-Qazvin	3.27	5	Pn	Pn	20 52 56.0	+1.9
IVRN	Varamin	3.30	39	Pn	Pn	20 52 56.3	+2.0
IGZV	Ghazvin	4.02	12	Pn	Pn	20 53 05.9	+1.5
BRTR	Keskin Array B	14.53	304	Pn	P	20 55 33.9	-0.8
	baz=127,slow=11,SNR=1.6						
AKASG	Malin Array Be	23.46	327	P	P	20 57 10.8	-0.8
	0.2nm,0.2s,baz=139,slow=8.6,SNR=1.5						
	0.2nm,0.2s						
MKAR	Makanchi Array	28.99	51	P	P	20 58 02.0	+0.1
	0.1nm,0.5s,baz=253,slow=10,SNR=1.5						
	0.1nm,0.5s						
FINES	FINESS Array B	32.66	340	P	P	20 58 32.7	-1.3
	1.8nm,0.8s,baz=134,slow=8.0,SNR=4.2						
	1.8nm,0.8s						
HFS	Hagfors	36.23	331	P	P	20 59 03.7	-1.2
	2.3nm,0.9s,baz=118,slow=8.3,SNR=9.1						
	2.3nm,0.9s						
NOA	NORSAR Array B	37.75	331	P	P	20 59 16.1	-1.8
	0.4nm,0.6s,baz=128,slow=7.2,SNR=1.3						
	0.4nm,0.6s						
TORD	Torodi Ar. Bea	47.40	257	P	P	21 00 37.7	+0.9
	0.2nm,0.5s,baz=63,slow=8.3,SNR=2.3						
	0.2nm,0.5s						
SPITS	Spitsbergen Ar	48.02	351	P	P	21 00 40.5	-0.3
	14nm,1.1s,baz=138,slow=11,SNR=1.8						

*DJA **01** 21:05:52.1±0.8, 4°N±7°×12°7E±°, h73km±5km, M4.4/12, mB5.0/4, mb4.4/9, MLv4.4/12, Mw(mB)4.4/4*
*IDC **01** 21:06:08.3±5.0, 2°.99N×127°.16E, h147km±55km, mb3.2/4, mbtmp3.7/5, MS3.1/1, Error ellipse: s-maj=75.4km s-min=25.9km az=72.0*
ISC 01 21:05:49.1±4.3, 4°.5N±0°.4×126°.6E±0°.1, h100km, n18, σ1s.32/17, mb3.5/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.37	233	P	Pn	21 06 13.4	-0.4
SGSI				S	Sn	21 06 30.7	-1.8
TNTI	Ternate	3.80	169	P	Pn	21 06 44.9	-0.8
MRSI	Marisa	6.16	229	P	Pn	21 07 18.7	+1.0
SANI	Sanana	6.56	186	P	Pn	21 07 23.1	0.0
	0.2nm20nm,1.0s						
LUWI	Luwuk	6.73	215	P	Pn	21 07 25.3	-0.2
	0.2nm55nm,0.7s						
SWI	Sorong	7.08	139	P	Pn	21 07 30.6	+0.4
	0.1nm18nm,0.6s						
SIJI	Sorong	7.09	139	P	Pn	21 07 31.1	+0.8
	10nm,0.3s,baz=160,slow=22,SNR=18						
SIJI				S	Sn	21 08 32.9	-17
	2.3nm,0.2s,baz=211,slow=19,SNR=1.4						
SIJI	Sorong	7.09	139	P	Pn	21 07 30.3	0.0
APSI	Ampana	7.33	223	P	Pn	21 07 37.3	+3.7
	0.1nm27nm,0.9s						
NLAI	Namlea	7.73	176	P	Pn	21 07 37.3	-1.7
KRAI	Karang Ratu	7.99	167	P	Pn	21 07 42.8	+0.2
	0.1nm1μm11nm,1.0s						
FAKI	Fak Fak	9.29	143	P	Pn	21 08 00.0	-0.3
	37nm,1.3s						
WBSI	Waikabubak, Su	15.81	207	P	P	21 09 29.0	+1.0
FITZ	Fitzroy Crossi	22.50	182	P	P	21 10 39.9	-0.6
	4.6nm,0.9s,baz=3.5,slow=9.3,SNR=2.8						
	4.6nm,0.9s						
WRA	Warramunga Arr	25.47	163	P	P	21 11 09.0	+0.9
	1.7nm,0.5s,baz=343,slow=10.0,SNR=17						
	1.7nm,0.5s						
ASAR	Alice Springs	28.91	166	P	P	21 11 39.0	+0.1
	0.3nm,0.8s,baz=341,slow=7.3,SNR=4.5						
	0.3nm,0.8s						
CTA	Charters Tower	31.16	142	LR	LR	21 25 28.9	
	comp=Z,37nm,19.4s,baz=58,slow=39						
MKAR	Makanchi Array	56.84	325	P	P	21 15 48.1	+25
	0.1nm,0.4s,baz=123,slow=6.5,SNR=2.5						
	0.1nm,0.4s						

IDC 01 21:19:07.4±1.6, 8°.56N×126°.74E, h0km, mb3.7/5, mbtmp3.7/5, MS3.7/1, Error ellipse: s-maj=82.4km s-min=22.7km az=62.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.87	218	LR	LR	21 20 14.3	
	comp=Z,67nm,18.4s,baz=4.0,slow=36						
CMAR	Chiang Mai Arr	28.72	293	P	P	21 25 08.0	+1.3
	0.4nm,0.4s,baz=104,slow=8.4,SNR=5.7						
	0.4nm,0.4s						
WRA	Warramunga Arr	29.29	165	P	P	21 25 11.7	0.0
	0.7nm,1.0s,baz=332,slow=10,SNR=1.4						
	0.7nm,1.0s						
ASAR	Alice Springs	32.78	168	P	P	21 25 42.6	0.0
	0.2nm,0.8s,baz=339,slow=8.3,SNR=2.5						
	0.2nm,0.8s						
KURBB	Kurchatov Arra	57.74	326	P	P	21 29 00.1	0.0
	0.6nm,0.5s,baz=122,slow=7.4,SNR=8.4						
	0.6nm,0.5s						
FINES	FINESS Array B	87.61	332	P	P	21 31 56.0	-1.4
	1.0nm,0.5s,baz=58,slow=5.2,SNR=4.2						
	1.0nm,0.5s						
DLBC	Dease Lake	89.62	31	LR	LR	22 08 03.2	
	comp=Z,42nm,20.9s,baz=129,slow=33						

*NEIC **01** 21:20:03.4±0.6, 17°.781N±0°.008×66°.89W±0°.02, h10km±1km, ML2.5/35, Md2.8/5(RSPR), Error ellipse: s-maj=2.8km s-min=2.6km az=175.0*
RSPR 01 21:20:04.0, 17°.83N×66°.90W, h3km, MD2.8/5, 1C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.14	7		Pg	21 20 07.3	+0.5
GBPR					Sg	21 20 09.6	+0.9
GBPR	Guanica, Bosqu	0.14	7	⇑iP	Pg	21 20 07.3	+0.5
GBPR				eS	Sg	21 20 09.6	+0.9
MLPR	Magueyes Islan	0.20	314		Pg	21 20 08.3	+0.5
MLPR				Sg	Sg	21 20 11.4	+1.0
MLPR				IAML		21 20 12.1	
	531nm,0.3s						
MLPR				IAML		21 20 14.6	
	598nm,0.4s						
CRPR	Cabo Rojo, PR	0.27	311		Pg	21 20 09.6	+0.4
CRPR					Sg	21 20 13.5	+0.9
CRPR	Cabo Rojo, PR	0.27	311	IAML		21 20 15.4	
	360nm,0.2s						
CRPR				IAML		21 20 17.2	
	288nm,0.5s						
CRPR	Cabo Rojo, PR	0.27	311	⇑iP	Pg	21 20 09.6	+0.5
CRPR				eS	Sg	21 20 13.6	+0.9
OBIP	Obispado Ponce	0.35	53		Pg	21 20 11.0	+0.4
OBIP				IAML		21 20 17.9	
	comp=N,80nm,0.4s						
OBIP	Obispado Ponce	0.35	53	⇓iP	Pg	21 20 11.1	+0.4
OBIP				eS	Sg	21 20 16.5	+1.3
CELP	Cerrillos	0.39	51		Pg	21 20 11.8	+0.4
CELP				IAML		21 20 21.3	
	comp=N,186nm,0.4s						
CELP				IAML		21 20 21.3	
	comp=N,315nm,0.3s						
LSP	Las Mesas	0.39	332		Pg	21 20 12.1	+0.6
LSP					Sb	21 20 18.4	-1.6
LSP	Las Mesas	0.39	332	⇓iP	Pg	21 20 12.1	+0.6
LSP				eS	Sb	21 20 18.4	-1.6
PRSN	Puerto Rico Se	0.45	328	Pg	Pg	21 20 13.1	+0.5
PRSN				IAML		21 20 23.5	
	comp=N,1μm,0.3s						
PRSN				IAML		21 20 25.3	
	comp=N,698nm,0.3s						
PRSN	Puerto Rico Se	0.45	328		Sg	21 20 19.4	+0.9
PRSN	Puerto Rico Se	0.45	328	⇓eP	Pg	21 20 13.2	+0.5
PRSN				eS	Sg	21 20 19.4	+0.9
UUPR	Utuado, UPR, P	0.45	22		Pg	21 20 13.0	+0.3
UUPR				IAML		21 20 23.4	
	comp=N,1μm,0.4s						
UUPR				IAML		21 20 23.7	
	comp=N,1μm,0.3s						
AGPR	Aguadilla, PR	0.67	342		Pg	21 20 16.8	0.0
AGPR				IAML		21 20 29.2	
	comp=N,160nm,0.4s						
AGPR				IAML		21 20 29.6	
	comp=N,160nm,0.5s						
AGPR	Aguadilla, PR	0.67	342	⇑iP	Pg	21 20 16.8	0.0
AGPR				eS	Sg	21 20 26.2	+0.8
ECPR	Experimental S	0.70	46		Pg	21 20 17.2	-0.2
ECPR				IAML		21 20 20.4	
	comp=N,376nm,0.2s						
ECPR				IAML		21 20 29.5	
	comp=N,423nm,0.2s						
ECPR	Experimental S	0.70	46	⇑iP	Pg	21 20 17.3	-0.2
ECPR				eS	Sb	21 20 28.2	-0.7
EMPR	Esperanza - Ma	0.73	28		Pg	21 20 18.6	+0.6
EMPR					Sb	21 20 29.3	-0.5
EMPR	Esperanza - Ma	0.73	28	⇑iP	Pg	21 20 18.6	+0.6
EMPR				eS	Sb	21 20 29.3	-0.5
SJG	San Juan	0.76	68		Pg	21 20 18.2	-0.4
SJG				IAML		21 20 33.6	
	comp=N,148nm,0.4s						
SJG				IAML		21 20 33.6	
	comp=N,115nm,0.4s						
SJG	San Juan	0.76	68	⇓iP	Pg	21 20 18.3	-0.4
SJG				eS	Sb	21 20 30.6	-0.2
IDE	Isla Desecheo	0.78	315		Pg	21 20 19.4	+0.5
IDE					Sg	21 20 30.1	+1.1
IDE	Isla Desecheo	0.78	315	⇓eP	Pg	21 20 19.4	+0.5
IDE				eS	Sg	21 20 30.1	+1.1
PDPR	Patillas Dam,	0.85	77		Pg	21 20 19.7	-0.6
PDPR				IAML		21 20 23.1	
	comp=N,37nm,0.2s						
PDPR				IAML		21 20 36.5	
	comp=N,91nm,0.8s						
GCPR	Guaynabo City	0.91	58		Pg	21 20 20.9	-0.5
GCPR				IAML		21 20 39.7	
	comp=N,49nm,0.6s						
GCPR				IAML		21 20 41.2	
	comp=E,34nm,0.4s						
GCPR	Guaynabo City	0.91	58	⇑eP	Pg	21 20 20.6	-0.8
GCPR				eS	Sg	21 20 30.6	-2.6
HUMP	Col San Antoni	1.04	73		Pg	21 20 23.0	-1.0
HUMP	Col San Antoni	1.04	73	IAML		21 20 42.4	
	comp=E,56nm,0.5s						
HUMP				IAML		21 20 47.2	
	comp=E,55nm,0.6s						
HUMP	Col San Antoni	1.04	73	⇓iP	Pg	21 20 23.1	-0.9
HUMP				eS	Sg	21 20 38.1	+0.6
CUPR	Culebra, Puert	1.61	73		Pn	21 20 31.8	-1.5
DR12	Loma Pena Alta	2.54	292	Pn	Pn	21 20 45.0	-1.2

*ISK **01** 21:21:50.0, 39°.08N×27°.85E, h9km±1km, ML1.8/11*
AFAD 01 21:21:50.0, 39°.10N×27°.81E, h7km±4km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.22	180	P	Pg	21 21 55.1	+0.8
AKHS				S	Sg	21 21 59.1	+1.9
AKHS				IAML		21 22 00.0	
	comp=E,62nm,0.4s						
STEP	BALIKESIR_Sava	0.29	345	P	Pg	21 21 56.6	+0.9
STEP				S	Sg	21 22 00.6	+1.0
STEP				IAML		21 22 02.0	
	comp=N,126nm,0.3s						
STEP				IAML		21 22 02.0	
	comp=E,188nm,0.3s						
GORD	Gordes-Manisa	0.34	123	Pg	Pg	21 21 56.6	-0.1
GORD				Sg	Sg	21 22 01.4	+0.2
GOMA	Golmarmara-Man	0.40	168	Pg	Pg	21 21 57.9	+0.2
GOMA				Sg	Sg	21 22 03.7	+0.8
KTTT	Salihli	0.46	152	P	Pg	21 21 59.2	+0.3
KTTT				S	Sg	21 22 06.0	+1.0
KTTT				IAML		21 22 06.0	
	comp=N,19nm,0.9s						
CAMT	Merkez	0.52	228	P	Pb	21 22 01.3	-0.2
CAMT				S	Sb	21 22 09.4	+0.1
CAMT				IAML		21 22 10.0	
	comp=E,29nm,0.3s						
CAMT				IAML		21 22 12.0	
	comp=N,22nm,0.3s						
BALB	Balikesir	0.55	6	Pg	Pb	21 22 01.5	-0.4
BALB				Sg	Sb	21 22 09.8	-0.2
ZEDA	zmir-Bergama	0.59	258	P	Pg	21 22 01.0	-0.3
ZEDA				S	Sg	21 22 09.6	+0.6
ZEDA				IAML		21 22 12.0	
	comp=E,11nm,0.2s						
ZEDA				IAML		21 22 29.0	
	comp=N,19nm,0.8s						
IZMD	zmir-Dikili-	0.70	261	P	Pg	21 22 03.5	+0.1
IZMD				S	Sg	21 22 13.2	+0.7
IZMD				IAML		21 22 18.0	
	comp=E,8.8nm,1.1s						
BUHA	Balikesir, Bur	0.70	306	P	Pg	21 22 03.8	+0.3
BUHA				S	Sn	21 22 17.6	+0.2
BUHA				IAML		21 22 18.0	
	comp=E,13nm,0.4s						
BUHA				IAML		21 22 33.0	
	comp=N,13nm,0.7s						
DEMI	Demirci	0.71	94	P	Pg	21 22 03.8	+0.2
DEMI				S	Sg	21 22 13.3	+0.5
DEMI				IAML		21 22 15.0	
	comp=E,25nm,0.2s						
DEMI				IAML		21 22 17.0	
	comp=N,27nm,0.3s						
YAYO	Edremit-Balk	0.77	312	Pg	Pb	21 22 05.9	+0.2
YAYO				Sg	Sb	21 22 17.6	+1.2
MANT	Manisa	0.84	136	P	Pg	21 22 06.5	+0.4
MANT				S	Sg	21 22 17.5	+0.4
MANT				IAML		21 22 20.0	
	comp=N,11nm,0.4s						
MANT				IAML		21 22 20.0	
	comp=E,15nm,0.7s						
ODEM	Odemis-Izmir	0.84	166	Pg	Pg	21 22 06.4	+0.2
ODEM				Sg	Sb	21 22 18.2	-0.4
BAGT	Foa	0.87	240	P	Pg	21 22 04.6	-2.1
BAGT				S	Sb	21 22 20.2	+1.0
BAGT				IAML		21 22 22.0	
	comp=N,25nm,0.7s						
BAGT				IAML		21 22 27.0	
	comp=E,23nm,0.6s						
KULA	Kula-Manisa	0.88	131	Pg	Pg	21 22 06.7	-0.2
KULA				Sg	Sg	21 22 18.9	+0.5
SUSR	Susurluk-Balik	0.89	14	Pg	Pb	21 22 07.6	-0.2
SIMA	Simav-Kutahya	0.91	90	Pg	Pg	21 22 07.3	-0.2
SIMA				Sg	Sb	21 22 20.0	-0.6
BLCB	Balcova	0.93	221	Pg	Pb	21 22 08.6	+0.1
IZMR	zmir-demi	0.96	173	P	Pb	21 22 09.0	0.0
IZMR				IAML		21 22 23.0	
	comp=E,13nm,0.4s						
IZMR				S	Sn	21 22 23.5	-0.4
IZMR				IAML		21 22 24.0	
	comp=N,11nm,0.4s						
KIRA	zmir-Kiraz	1.01	153	P	Pb	21 22 09.7	-0.2
KIRA				S	Sb	21 22 23.6	+0.2
KIRA				IAML		21 22 25.0	
	comp=E,15nm,0.4s						
KIRA				IAML		21 22 26.0	
	comp=N,11nm,0.6s						
AYDB	Zeytinkoy-Aydi	1.15	177	Pn	Pb	21 22 12.2	-0.1
NAZL	Nazilli-Aydin	1.19	161	Pn	Pg	21 22 12.8	0.0

*NAO **01** 21:22:11.3, 38°.39N×22°.46E, h10km, MB4.5*
*MOS **01** 21:22:20.6±1.1, 39°.13N×20°.51E, h13km, mb4.9/45, Error ellipse: s-maj=4.7km s-min=2.9km az=67.6*
*IDC **01** 21:22:21.2±0.5, 39°.32N×20°.68E, h0km, mb4.5/28, mbtmp4.5/40, ML4.1/10, MS3.6/49, Error ellipse: s-maj=10.6km s-min=9.3km az=27.0*
*ATH **01** 21:22:22.8, 39°.19N×20°.65E, h15km, Mw4.5, Moment Tensor Solution. s11 Moment tensor: M_{rr}5.96; $M_{\theta\theta}$-2.07; $M_{\phi\phi}$-3.90; $M_{r\theta}$3.36; $M_{\theta\phi}$3.77; $M_{\phi r}$-1.18; Fault plane solution: NP1:ϕ_s126.00000°, δ60.00000°, λ72.00000°. NP2:ϕ_s339.00000°, δ35.00000°, λ118.00000°.*
*BEO **01** 21:22:22.2±0.6, 39°.07N×20°.27E, h12km±2km, ML4.4/14*
*NEIC **01** 21:22:22.8±1.7, 39°.23N±0°.06×20°.62E±0°.06, h9km±3km, mb4.9/89, Error ellipse: s-maj=8.3km s-min=6.5km az=203.0*
*TIR **01** 21:22:22.8, 39°.14N×20°.43E, h31km±2km, Ml4.6/6*
*MED_RC **01** 21:22:23.0±0.3, 39°.17N×20°.52E, h18km, MW4.7/35, Moment Tensor Solution.Mantle waves: s35,c49; Duration: 1s.0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.25±.12; $M_{\theta\theta}$-0.39±.07; $M_{\phi\phi}$-0.86±.07; $M_{r\theta}$0.11±.11; $M_{\theta\phi}$0.75±.04; $M_{\phi r}$0.15±.09; Best double couple: $M_0$1.35000×10^{16} NP1:ϕ_s135.00000°, δ44.00000°, λ77.00000°. NP2:ϕ_s332.00000°, δ47.00000°, λ102.00000°. Principal axes: T 1.2800, Plg81.0000°, Azm316.0000°; N 0.1300, Plg9.0000°, Azm144.0000°; P -1.4100, Plg1.0000°, Azm54.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MCSM **01** 21:22:23.8±0.4, 39°N±3°×2°0E±°, h10km±2km, mB4.7, mb4.7, MLv4.9, Mw(mB)4.0*
*PDG **01** 21:22:23.2±0.1, 39°.24N×20°.50E, h12km±4km, MD4.6/5, ML4.5/13, Error ellipse: s-maj=4.1km s-min=4.0km az=90.0*
*THE **01** 21:22:23.1, 39°.2N±0°.7×2°1E±°, h0km, M4.5/52, MLh4.5/52*
*AFAD **01** 21:22:25.0, 39°.17N×20°.66E, h52km±18km, MW4.5*
ISC 01 21:22:23.1±0.6, 39°.17N±0°.01×20°.61E±0°.02, h16km±4km, n879, σ1s.63/982, mb4.7/115, MS3.7/41, 106C-40D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRGA	Parga	0.20	307	P	Pb	21 22 28.1	-0.3
PRGA				S	Sb	21 22 31.8	-0.1
ARTB	Arta	0.29	92	P	Pg	21 22 28.5	-0.8
ARTB				S	Sg	21 22 32.5	-1.0
ART2	Arta	0.30	93	P	Pg	21 22 28.7	-0.8
ART2				S	Sg	21 22 33.2	-0.6
TSLK	Tsoukalades, L	0.34	174	P	Pb	21 22 30.6	-0.3
TSLK				S	Sb	21 22 35.9	-0.2
TSLK	Tsoukalades, L	0.34	174	P	Pb	21 22 30.6	-0.3
TSLK				S	Sb	21 22 35.9	-0.2
LKD2	Lefkada island	0.38	174	⇓Pg	Pb	21 22 31.2	-0.3
LKD2				Sg	Sb	21 22 38.5	+1.3
LKD2	Lefkada island	0.38	174	P	Pg	21 22 31.0	+0.2
LKD2				S	Sb	21 22 37.5	+0.3
LKD2	Lefkada island	0.38	174	P	Pg	21 22 31.1	+0.2
LKD2				S	Sb	21 22 37.0	-0.2
IGT	Igoumenitsa	0.42	330	⇓Pg	Pg	21 22 31.3	-0.4
IGT				Sg	Sb	21 22 38.4	0.0
IGT				AML	AML	21 22 40.2	
	96nm,0.3s						
IGT	Igoumenitsa	0.42	330	P	Pg	21 22 30.8	-0.9
IGT				S	Sb	21 22 38.0	-0.5
IGT	Igoumenitsa	0.42	330	P	Pg	21 22 30.9	-0.7
IGT				S	Sg	21 22 37.4	-0.1
IGT	Igoumenitsa	0.42	330	ePg	Pg	21 22 31.0	-0.7
IGT				eSg	Sb	21 22 38.7	+0.2
NYDR	Nydri-Lefkada	0.46	171	P	Pg	21 22 32.1	-0.1
NYDR				S	Sb	21 22 39.9	+0.6
NYDR	Nydri-Lefkada	0.46	171	P	Pg	21 22 32.3	0.0
NYDR				S	Sb	21 22 39.6	+0.2
DRAG	Dragano-Lefkad	0.48	183	S	Sb	21 22 40.5	+0.4
DRAG	Dragano-Lefkad	0.48	183	P	Pg	21 22 32.5	-0.3
DRAG				S	Sb	21 22 39.8	-0.3
LFKM	Lefkimmi	0.51	304	P	Pb	21 22 33.5	-0.2
LFKM				S	Sg	21 22 40.3	+0.3
JAN	Janina	0.53	21	P	Pg	21 22 32.6	-0.9
JAN				S	Sb	21 22 41.6	+0.2
JAN	Janina	0.53	21	P	Pg	21 22 32.6	-0.9
JAN				S	Sg	21 22 40.2	-0.5
PRMD	Pramanda	0.53	46	P	Pg	21 22 33.1	-0.5
PRMD				S	Sb	21 22 42.3	+0.8
AMPL	Ampelaki	0.53	117	P	Pg	21 22 33.4	-0.3
AMPL				S	Sb	21 22 42.7	+1.1
EVGI	Lefkada island	0.55	176	P	Pg	21 22 33.6	-0.3
EVGI				S	Sb	21 22 42.7	+0.8
EVGI	Lefkada island	0.55	176	P	Pg	21 22 33.6	-0.3
EVGI				S	Sb	21 22 41.9	0.0
TETR	Tetrakomo, Epi	0.55	71	P	Pg	21 22 33.2	-0.8
TETR				S	Sb	21 22 42.5	+0.4
TETR	Tetrakomo, Epi	0.55	71	P	Pg	21 22 33.2	-0.8
TETR				S	Sg	21 22 40.5	-0.8
FSK	Fiskardo	0.71	183	P	Pg	21 22 36.0	-1.0
FSK				S	Sb	21 22 47.0	+0.5
FSK	Fiskardo	0.71	183	P	Pg	21 22 36.0	-1.0
AST1	Astakos	0.73	149	P	Pg	21 22 37.3	0.0
AST1				S	Sb	21 22 47.6	+0.5
MSVA	Metsovo	0.75	36	P	Pg	21 22 37.4	-0.4
VSK1	VASILIKIADES	0.76	183	P	Pg	21 22 36.9	-1.0
VSK1				S	Sb	21 22 48.7	+0.7
KEK	Kerkira	0.83	311		Pb	21 22 38.2	-1.0
KEK					Sn	21 22 51.3	-0.8
KEK	Kerkira	0.83	311	P	Pb	21 22 38.5	-0.7
KEK				S	Sn	21 22 51.5	-0.6
KEK	Kerkira	0.83	311	⇑P	Pb	21 22 38.4	-0.9
PVO	Paravola	0.90	127	P	Pb	21 22 40.2	-0.2
PVO				S	Sn	21 22 55.0	+1.1
PVO	Paravola	0.90	127	P	Pb	21 22 40.2	-0.2
DMLN	Damoulianata-K	0.94	191	P	Pb	21 22 40.3	-0.9
DMLN				S	Sn	21 22 54.5	-0.4
DMLN	Damoulianata-K	0.94	191	P	Pb	21 22 39.9	-1.3
EVR	Evrytania	0.97	105	P	Pb	21 22 40.7	-0.9
EVR	Evrytania	0.97	105	P	Pb	21 22 41.0	-0.6
LXR1	Lixouri, Cepha	0.97	188	P	Pb	21 22 41.8	+0.2
KPRO	Kipourio	0.98	36	P	Pb	21 22 40.6	-1.3
VLS	Valsamata	0.99	181	P	Pb	21 22 40.8	-1.2
VLS	Valsamata	0.99	181	P	Pb	21 22 40.7	-1.2
ARG2	Argostoli	0.99	185	P	Pb	21 22 41.8	-0.1
RTZL	Ratzakli, Kefa	1.10	173	P	Pb	21 22 42.9	-0.8
PENT	Pentalofos	1.11	22	P	Pb	21 22 43.5	-0.5
AXS	Araxos	1.14	148	P	Pn	21 22 44.1	-0.3
AXS	Araxos	1.14	148	P	Pn	21 22 43.6	-0.8
THL	Klokotos Trika	1.16	70	P	Pn	21 22 44.3	-0.4
THL				S	Sg	21 23 05.6	+4.8
THL	Klokotos Trika	1.16	70	P	Pn	21 22 43.9	-0.8
THL	Klokotos Trika	1.16	70	P	Pn	21 22 43.9	-0.8
ANX	Ano Chora	1.17	119	P	Pb	21 22 45.2	+0.1
ANX	Ano Chora	1.17	119	P	Pn	21 22 44.8	-0.2
MAKR	Makrakomi, Fth	1.20	97	P	Pn	21 22 45.3	0.0
MAKR				S	Sg	21 23 02.6	+0.7
MAKR	Makrakomi, Fth	1.20	97	P	Pn	21 22 45.0	-0.3
EFP	Efpalio	1.25	126	P	Pb	21 22 46.8	+0.4
EFP				S	Sg	21 23 06.8	+3.1
EFP	Efpalio	1.25	126	P	Pn	21 22 46.2	+0.2
NEST	Nestorio	1.29	15	Pg	Pg	21 22 47.7	-0.4
NEST				Sg	Sg	21 23 08.9	+3.9
NEST				AML	AML	21 23 16.4	
	55nm,1.0s						
NEST	Nestorio	1.29	15	P	Pb	21 22 47.5	+0.3
RLS	Riolos of Patr	1.29	148	P	Pn	21 22 46.7	+0.1
RLS				S	Sg	21 23 07.6	+2.6
RLS	Riolos of Patr	1.29	148	P	Pn	21 22 46.4	-0.2
ORTH	Orthonies,Zaky	1.31	177	P	Pb	21 22 47.8	+0.3

ORTH Orthonies,Zaky 1.31 177 P Pn 21 22 47.0 +0.2
AGG Agios Georgios 1.35 96 P Pb 21 22 48.0 0.0
AGG Agios Georgios 1.35 96 P Pg 21 22 49.0 -0.1
AGG Agios Georgios 1.35 96 ⇑P Pn 21 22 47.5 +0.1
SERG Sergoula 1.36 123 P Pg 21 22 48.9 -0.5
KALE Kalithea 1.43 122 P Pb 21 22 50.0 +0.6
KALE Kalithea 1.43 122 P Pb 21 22 49.5 +0.2
KZN Kozani 1.45 38 P Pn 21 22 49.2 +0.4
KZN Kozani 1.45 38 P Pn 21 22 49.2 +0.4
KBN Korca 1.46 5 P Pb 21 22 50.4 +0.4
KBN S Sg 21 23 11.3 +0.9
KBN Korca 1.46 5 P Pb 21 22 49.9 -0.2
KBN Korca 1.46 5 P Pg 21 22 51.7 +0.4
LTHK Lithakia 1.47 173 P Pb 21 22 49.6 -0.4
LTHK Lithakia 1.47 173 P Pn 21 22 49.2 +0.3
DRO Drossia 1.49 144 P Pn 21 22 49.7 +0.5
DRO Drossia 1.49 144 P Pn 21 22 49.7 +0.5
VLO Vlora 1.56 327 Pg Pb 21 22 52.2 +0.6
VLO Sg Sg 21 23 14.7 +1.3
VLO AML AML 21 23 26.6
52nm,0.7s
VLO Vlora 1.56 327 P Pb 21 22 52.1 +0.6
AXAR Agios Charalam 1.65 103 P Pb 21 22 54.0 +0.8
AXAR Agios Charalam 1.65 103 P Pb 21 22 53.1 0.0
KLV Kalavryta, Ach 1.65 132 P Pb 21 22 52.7 -0.5
KLV Kalavryta, Ach 1.65 132 P Pn 21 22 52.0 +0.5
LIT Litokhoron 1.73 57 Pn 21 22 53.2 +0.6
LIT Litokhoron 1.73 57 P Pb 21 22 54.8 +0.3
LIT Litokhoron 1.73 57 P Pn 21 22 53.2 +0.6
LIT Litokhoron 1.73 57 P Pg 21 22 55.5 -0.8
LIT S Sb 21 23 16.7 +0.7
LIT IAML 21 23 29.0
comp=N,7µm,1.0s
LIT Litokhoron 1.73 57 ⇑P Pn 21 22 52.8 +0.3
GUR Goura 1.83 132 P Pb 21 22 55.5 -0.8
GUR Goura 1.83 132 P Pn 21 22 55.2 +1.1
LKR Lokris 1.94 105 P Pb 21 22 57.3 -0.7
LKR Lokris 1.94 105 P Pb 21 22 56.8 -1.3
ATAL Atalanti 1.94 103 P Pb 21 22 58.2 0.0
OHR Ohrid 1.95 4 *i* Pn Pb 21 22 59.2 +0.9
OHR *e*Sn Sg 21 23 30.9 +5.1
NEO Neokhori 2.04 85 P Pb 21 22 59.0 -0.8
NEO Neokhori 2.04 85 P Pn 21 22 58.3 +1.5
LTK Loutraki 2.17 121 P Pb 21 23 01.4 -0.7
LTK Loutraki 2.17 121 P Pb 21 23 00.7 -1.4
ITM Ithomi 2.24 152 Pn Pb 21 23 03.2 0.0
ITM Sn Sg 21 23 37.4 +2.2
ITM Ithomi 2.24 152 Pn Pb 21 23 01.4 +1.8
ITM Ithomi 2.24 152 P Pb 21 23 02.4 -0.8
ITM Ithomi 2.24 152 ⇑P Pb 21 23 02.4 -0.8
TIR Tirane 2.25 346 Pn Pb 21 23 02.0 -1.4
TIR Sn Sg 21 23 33.4 -2.1
TIR AML AML 21 23 56.4
12nm,0.8s
GRG Griva 2.26 37 P Pb 21 23 02.0 -1.6
VIL2 Platees 2.29 114 P Pb 21 23 03.1 -1.0
THE Thessaloniki 2.33 50 Pn Pb 21 23 03.7 -1.0
THE Sn Sb 21 23 34.6 +1.3
THE AML AML 21 23 45.9
6.6nm,1.1s
THE Thessaloniki 2.33 50 P Pn 21 23 02.3 +1.5
VILL Villia 2.34 114 P Pb 21 23 03.8 -1.2
HORT Hortiatis 2.39 53 P Pn 21 23 03.6 +1.8
PYL PYLOS 2.44 158 P Pb 21 23 04.5 -2.1
PYL PYLOS 2.44 158 P Pn 21 23 03.9 +1.6
PLG Polygyros 2.50 60 P Pn 21 23 04.7 +1.5
PLG Polygyros 2.50 60 P Pn 21 23 04.3 +1.1
STFN Stefani 2.50 112 P Pb 21 23 06.2 -1.5
STFN Stefani 2.50 112 P Pn 21 23 05.1 +1.8
PHP Peshkopia 2.52 357 Pn Pb 21 23 06.1 -1.9
PHP Peshkopia 2.52 357 P Pn 21 23 05.3 +1.8
MAGU Magoula 2.52 115 P Pb 21 23 06.2 -1.9
AOS Alonnisos 2.54 89 P Pn 21 23 05.9 +2.1
VAY Valandovo 2.62 34 ⇓*i* Pn Pb 21 23 07.5 -2.3
VAY *e*Sn Sb 21 23 42.4 +0.6
KNT Kendrikon 2.66 41 P Pn 21 23 07.5 +2.2
ATHU Athens Univers 2.76 115 P Pn 21 23 08.6 +1.8
KYMI Kymi, Euboea I 2.78 100 P Pn 21 23 09.6 +2.6
PTL Penteli 2.79 113 P Pn 21 23 09.7 +2.6
DION Dionisos Attik 2.82 112 P Pn 21 23 10.4 +2.7
VLY Voula,Athens 2.82 117 P Pn 21 23 10.1 +2.5
SKO Skopje 2.87 12 *i* Pn Pn 21 23 10.7 +2.4
SKO *e*Sn Sb 21 23 49.0 0.0
ULC Ulcinj 2.98 340 *e*Pn Pn 21 23 10.3 +0.5
ULC *i* Sn Sn 21 23 46.5 +1.3
TIP Timpagrande 2.99 271 P Pn 21 23 11.3 +1.3
TIP S Sn 21 23 46.5 +1.0
TIP Timpagrande 2.99 271 Pn Pn 21 23 10.9 +0.9
TIP Timpagrande 2.99 271 ⇓P Pn 21 23 10.5 +0.5
TIP ⇓S Sn 21 23 43.4 -2.1
TIP Timpagrande 2.99 271 P Pn 21 23 10.4 +0.5
SDA Shkodra 3.00 344 Pn Pn 21 23 11.4 +1.3
SDA Sn Sn 21 23 48.9 +3.2
SDA AML AML 21 24 15.7
4.1nm,1.1s
SRS Serrai 3.01 49 *e*Pn Pn 21 23 12.3 +2.2
SRS *e*Sn Sb 21 23 50.8 -2.0
DRME Dracevica, Mon 3.21 341 *e*Pn Pn 21 23 13.4 +0.5
DRME *e*Sn Sn 21 23 51.8 +1.1
KKB Krupnik 3.29 35 *i* P Pn 21 23 16.8 +2.7
MATE Matera 3.35 298 ⇑P Pn 21 23 15.1 +0.3
MATE ⇑S Sn 21 23 51.8 -2.3
MATE Matera 3.35 298 ⇑P Pn 21 23 14.9 +0.2
MMB Musomishta 3.38 44 *i* P Pn 21 23 17.9 +2.6
BUM Brajici-Budva 3.39 338 ⇑*i* Pn Pn 21 23 15.9 +0.4
BUM *i* Sn Sn 21 23 56.3 +0.9
PDG Podgorica 3.42 343 Pn Pn 21 23 16.9 +1.1
PDG Podgorica 3.42 343 Pn 21 23 16.4 +0.7
PDG Podgorica 3.42 343 ⇑P Pn 21 23 16.7 +0.9
PDG Podgorica 3.42 343 *e*Pn Pn 21 23 16.4 +0.7
PDG *i* Sn Sn 21 23 57.0 +1.1
PDG Podgorica 3.42 343 ⇑P Pn 21 23 16.5 +0.7
PVY Plav 3.46 352 *e*Pn Pn 21 23 16.9 +0.4
PVY *i* Sn Sn 21 23 57.9 +0.7
CEME Cevo 3.61 340 *e*Pn Pn 21 23 18.8 +0.3
CEME *e*Sn Sn 21 24 01.5 +0.7
BOSS Bosilegrad 3.62 23 *e*Pn Pn 21 23 20.7 +2.2
BOSS *e*Sn Sn 21 24 05.5 +4.6
HCY Herceg Novi 3.65 335 *e*Pn Pn 21 23 18.6 -0.4
HCY *i* Sn Sn 21 24 02.3 +0.6
IVA Berane 3.74 352 *e*Pn Pn 21 23 20.8 +0.5
IVA *i* Sn Sn 21 24 04.5 +0.4
BARS Barje 3.76 14 *e*Pn Pn 21 23 22.2 +1.7
BARS *e*Sn Sn 21 24 08.5 +4.1
KOME Kolasin 3.77 348 *e*Pn Pn 21 23 21.1 +0.4
KOME *e*Sn Sn 21 24 05.4 +0.6
CEL Celeste 3.80 258 P Pn 21 23 22.0 +1.0
CEL S Sn 21 24 05.0 -0.4
CEL Celeste 3.80 258 Pn 21 23 21.1 +0.1
CEL Celeste 3.80 258 P Pn 21 23 21.6 +0.6
CEL Celeste 3.80 258 ⇑P Pn 21 23 21.5 +0.4
NKME Niksic 3.81 341 *e*Pn Pn 21 23 21.6 +0.4
NKME *e*Sn Sn 21 24 06.3 +0.6
MRVN Minervino Murg 3.88 301 ⇑P Pn 21 23 22.5 +0.4
ACER Acerenza 3.93 296 Pn 21 23 23.7 +0.8
PLNA Plana 3.94 32 *i* P Pn 21 23 26.2 +3.2
TRAN Tran 3.98 22 *i* P Pn 21 23 26.1 +2.6
VTS Vitosha 3.98 29 *i* P Pn 21 23 25.9 +2.2
VTS Vitosha 3.98 29 *e*Pn Pn 21 23 25.9 +2.2
VTS *e*Sn Sn 21 24 13.5 +3.4
RZN Rozhen 4.04 50 *i* P Pn 21 23 27.5 +3.0
BRY Bratogost 4.05 338 ⇑*i* Pn Pn 21 23 24.4 -0.1
BRY *i* Sn Sn 21 24 11.9 +0.2
SELS Selova 4.07 5 *e*Pn Pn 21 23 25.9 +1.2
SOF Sofia 4.08 30 *e*P Pn 21 23 28.7 +3.7
SJES Sjenica 4.12 354 *e*Pn Pn 21 23 27.0 +1.5
SJES *e*Sn Sn 21 24 15.6 +4.2
BLSH Balsha 4.21 28 *i* P Pn 21 23 30.0 +3.4
GOAD anakkale-G¶ 4.21 75 P Pn 21 23 28.7 +2.0
UPM Unac-Piva 4.23 343 *e*Pn Pn 21 23 27.7 +0.6
UPM *i* Sn Sn 21 24 16.4 +0.1
PLE Pljevlja 4.26 348 *e*Pn Pn 21 23 28.0 +0.5
PLE *i* Sn Sn 21 24 17.0 +0.1
RDO Rodhopi 4.26 61 Pn Pn 21 23 29.7 +2.3
RDO Sn Sn 21 24 19.6 +2.8
RDO Rodhopi 4.26 61 Pn 21 23 28.5 +1.1
RDO Rodhopi 4.26 61 ⇑P Pn 21 23 29.0 +1.6
BOZC Bozcaada 4.27 79 P Pn 21 23 29.2 +1.8
PGB Panagyurishte 4.30 38 *i* P Pn 21 23 31.0 +3.1
KOCA Canakkale, Ayv 4.30 84 P Pn 21 23 30.3 +2.4

PLD Plovdiv 4.33 45 *i* P Pn 21 23 31.2 +2.9
PLD Plovdiv 4.33 45 *e*Pn Pn 21 23 31.3 +2.9
PLD *e*Sn Sn 21 24 21.1 +2.6
ZAPS Zavoj 4.38 20 *e*Pn Pn 21 23 31.2 +2.2
ZAPS *e*Sn Sn 21 24 23.6 +3.9
ECEA Canakkale, Ece 4.39 77 P Pn 21 23 32.5 +3.4
GOCS Kraljevo Serbi 4.40 3 *e*Pn Pn 21 23 30.4 +1.1
IVAS Ivanjica 4.42 356 *e*Pn Pn 21 23 30.0 +0.4
EZN Ezine 4.47 80 P Pn 21 23 34.2 +4.0
EZN Ezine 4.47 80 P Pn 21 23 33.0 +2.8
EZN Ezine 4.47 80 P Pn 21 23 33.0 +2.8
ALN Alexandroupoli 4.52 66 Pn 21 23 31.8 +0.9
ALN Alexandroupoli 4.52 66 P Pn 21 23 31.8 +0.9
ALN Alexandroupoli 4.52 66 P Pn 21 23 32.5 +1.6
CAVK Edirne/Enez-Ca 4.54 69 ⇑P Pn 21 23 34.7 +3.6
CAVK Edirne/Enez-Ca 4.54 69 P Pn 21 23 33.6 +2.4
BOVS Bovan 4.54 10 ⇑P Pn 21 23 32.4 +1.2
BOVS Bovan 4.54 10 *e*Pn Pn 21 23 32.2 +1.0
BOVS *e*Sn Sn 21 24 24.3 +0.7
KARB zmir-Karabur 4.56 94 P Pn 21 23 34.7 +3.3
BAYC CANAKKALE_Bayr 4.63 81 P Pn 21 23 35.8 +3.3
BAYC S Sn 21 24 20.3 -5.7
BAYC IAML 21 24 30.0
comp=N,115nm,0.7s
ZEYE Izmir, Urla-Ze 4.71 99 P Pn 21 23 36.3 +2.9
BLKB Belogradchik 4.72 19 *e*Pn Pn 21 23 35.9 +2.2
BLKB *e*Sn Sn 21 24 31.0 +3.0
GRUS Gruza 4.72 1 *e*Pn Pn 21 23 34.5 +0.8
AYVA Ayvalik 4.73 86 P Pn 21 23 36.3 +2.6
URLA Izmir 4.75 98 P Pn 21 23 37.9 +3.8
DIM Dimitrovgrad 4.75 51 *e*P Pn 21 23 36.9 +2.8
BBLS Lazi&#263i 4.78 350 *e*Pn Pn 21 23 34.9 +0.3
ZAGS Zajecar 4.80 14 *e*Pn Pn 21 23 36.2 +1.4
ZAGS *e*Sn Sn 21 24 30.7 +0.7
MPEP Malo Peshtene 4.81 28 *i* P Pn 21 23 37.6 +2.8
BAGT Foa 4.90 94 P Pn 21 23 39.6 +3.5
DKL Dikili 4.90 89 ⇑P Pn 21 23 40.4 +4.3
DIVS Divibare 4.95 355 *e*Pn Pn 21 23 37.5 +0.6
DIVS *e*Sn Sn 21 24 34.4 +0.5
PAOL Paolisi 4.99 294 Pn 21 23 39.1 +1.6
TRUS Trudelj 5.06 358 *e*Pn Pn 21 23 38.9 +0.6
SVIS Svilajnac 5.12 5 *e*Pn Pn 21 23 40.6 +1.5
VAE Valguarnera 5.15 253 Pn Pn 21 23 40.9 +1.2
15nm,0.6s,baz=159,slow=12,SNR=9.7
VAE Sn Sn 21 24 38.7 -0.2
22nm,0.3s,baz=7.7,slow=13,SNR=5.1
IDI Anoyia 5.16 137 Pn Pn 21 23 40.4 +0.6
30nm,0.5s,baz=279,slow=18,SNR=39
IDI Sn Sn 21 24 39.1 0.0
13nm,0.3s,baz=174,slow=23,SNR=6.2
IDI Anoyia 5.16 137 Pn 21 23 40.1 +0.3
IDI Anoyia 5.16 137 ⇑P Pn 21 23 40.8 +0.9
PLVB Pleven 5.19 34 ⇓P Pn 21 23 42.6 +2.5
PVL Pavlikeni 5.24 40 *i* P Pn 21 23 44.1 +3.2
BAIL Bailesti 5.27 22 ⇑P Pn 21 23 44.7 +3.6
RAFF Raffo Rosso 5.29 250 Pn 21 23 40.6 -0.9
KUBS Kucevo 5.30 8 *e*Pn Pn 21 23 41.1 -0.6
PUNG Punghina 5.40 18 ⇑P Pn 21 23 45.9 +2.9
TEKS Tekeris 5.44 352 *e*Pn Pn 21 23 43.2 -0.4
TEKS *e*Sn Sn 21 24 43.4 -2.4
ELND Elena 5.48 45 ⇑P Pn 21 23 46.6 +2.6
AVAS Avala Beograd 5.53 359 *e*Pn Pn 21 23 44.7 -0.1
AVAS *e*Sn Sn 21 24 46.6 -1.4
JMB Yambol 5.59 52 *i* P Pn 21 23 47.7 +2.1
VLAD Vladila 5.61 29 ⇓P Pn 21 23 49.4 +3.6
BALB Balikesir 5.65 83 Pn 21 23 47.7 +1.2
BALB Balikesir 5.65 83 ⇑P Pn 21 23 50.4 +3.9
MDVR Moldovita 5.67 8 ⇑P Pn 21 23 48.0 +1.2
USI Ustica 5.81 268 ⇑P Pn 21 23 49.5 +0.9
SRE Strehaia 5.82 19 ⇑P Pn 21 23 52.2 +3.4
SRE Strehaia 5.82 19 P Pn 21 23 52.2 +3.4
INTR Introdacqua 5.84 301 Pn 21 23 50.2 +1.1
WDD Wied Dalam 5.87 237 Pn 21 23 48.3 -1.1
WDD Wied Dalam 5.87 237 ⇑P Pn 21 23 49.3 -0.1
HERR Herculane 5.87 13 ⇓P Pn 21 23 51.2 +1.8
BAND Balkesir-Ban 5.89 76 ⇓P Pn 21 23 53.7 +3.9
VRSS Vrsac 5.98 5 *e*Pn Pn 21 23 51.0 +0.1
FRGS Fruska Gora 6.02 355 *e*Pn Pn 21 23 51.5 0.0
FRGS *e*Sn Sn 21 24 57.6 -2.4
COPA Copaceanca 6.05 33 ⇓P Pn 21 23 54.0 +2.1
BLY Banja Luka 6.13 337 ⇑P Pn 21 23 53.2 +0.1
BLY Banja Luka 6.13 337 ⇑P Pn 21 23 53.2 +0.1
BANR Banloc 6.22 3 ⇑P Pn 21 23 55.5 +1.2
MANT Manisa 6.25 94 Pn 21 23 55.9 +1.1
RAZG Razgrad 6.25 43 ⇑P Pn 21 23 57.5 +2.9
HUMR Humele 6.27 30 ⇓P Pn 21 23 57.0 +2.0
CTYL Yalikoy Yolu 6.31 66 P Pn 21 23 57.9 +2.5
2µm170nm,0.7s
AQU L'Aquila 6.33 303 ⇑P Pn 21 23 57.4 +1.6
KARP Karpathos 6.35 123 Pn 21 23 56.7 +0.6
KARP Karpathos 6.35 123 P Pn 21 23 59.5 +3.4
0.6nm2µm163nm,1.0s
KARP Karpathos 6.35 123 ⇑P Pn 21 24 00.1 +4.0
CAMP Campotosto 6.41 304 Pn 21 23 58.4 +1.4
GZR Gura Zlata 6.43 14 ⇑P Pn 21 23 58.8 +1.6
GZR Gura Zlata 6.43 14 P Pn 21 23 58.3 +1.1
SGRR Singureni 6.45 37 ⇑P Pn 21 24 00.8 +3.4
BZS Buzias 6.49 6 ⇓P Pn 21 23 59.3 +1.3
BZS Buzias 6.49 6 P Pn 21 23 59.2 +1.3
BZS Buzias 6.49 6 ⇑P Pn 21 23 58.1 +0.1
PRD Provadia 6.50 50 *i* P Pn 21 24 01.0 +2.9
ARG Arkhangelos 6.65 114 Pn 21 24 02.6 +2.4
ARG Arkhangelos 6.65 114 P Pn 21 24 02.6 +2.4
ARG Arkhangelos 6.65 114 ⇑P Pn 21 24 04.9 +4.7
LOT Lotru 6.70 19 ⇑P Pn 21 24 03.6 +2.6
GUMA Gualdo di Mace 6.73 308 Pn 21 24 02.1 +0.9
NRCA Norcia 6.75 305 Pn 21 24 03.0 +1.4
KLYT Kilyos 6.79 69 P Pn 21 24 04.3 +2.3
0.4nm1µm110nm,0.8s
FDMO Fiordimonte 6.87 307 Pn 21 24 04.5 +1.3
ARR Arges 6.88 24 ⇓P Pn 21 24 06.1 +2.7
MTUR Matau 6.90 27 ⇑P Pn 21 24 06.6 +2.9
MTUR Matau 6.90 27 P Pn 21 24 06.5 +2.9
SULR 6.93 36 ⇑P Pn 21 24 07.3 +3.3
CICN Ciocanesti 6.95 42 ⇓P Pn 21 24 08.1 +3.8
CESX Cesi 6.99 302 Pn 21 24 05.9 +1.1
LEHL Lehliu 7.04 39 ⇓P Pn 21 24 08.8 +3.3
VOIR 7.08 26 ⇓P Pn 21 24 09.1 +3.0
VOIR 7.08 26 P Pn 21 24 09.1 +3.0
VOIR 7.08 26 P Pn 21 24 08.8 +2.7
0.2nm54nm,0.7s
MORH Mrgy, Hungar 7.19 349 P Pn 21 24 07.0 -0.6
0.1nm22nm,0.8s
PSN Preselentsi 7.21 49 *i* P Pn 21 24 11.2 +3.4
KALB Balgarevo 7.25 52 ⇑P Pn 21 24 12.4 +4.1
ICOR Ion Corvin 7.31 45 ⇓P Pn 21 24 12.4 +3.1
MURB Monte Urbino 7.34 306 Pn 21 24 11.3 +1.6
AMRR Amara 7.40 41 ⇑P Pn 21 24 14.1 +3.7
AMRR Amara 7.40 41 P Pn 21 24 14.1 +3.7
ISR Istrita 7.40 35 ⇑P Pn 21 24 13.9 +3.3
ISR Istrita 7.40 35 P Pn 21 24 13.8 +3.3
MGAB Montegabbione 7.43 303 ⇑P Pn 21 24 12.4 +1.5
PGOR Pogoanele 7.45 38 ⇓P Pn 21 24 15.1 +4.0
MLR Muntele Rosu 7.45 30 Pn Pn 21 24 14.9 +3.6
9.1nm,0.3s,baz=330,slow=5.0,SNR=56
MLR Sn Sn 21 25 29.4 -6.2
baz=27,slow=18
MLR LR LR 21 27 22.2
comp=Z,536nm,20.7s,baz=208,slow=41
MLR Muntele Rosu 7.45 30 Pn 21 24 13.7 +2.4
MLR Muntele Rosu 7.45 30 ⇑P Pn 21 24 13.6 +2.4
MLR Muntele Rosu 7.45 30 P Pn 21 24 13.6 +2.3
MLR Muntele Rosu 7.45 30 P Pn 21 24 13.9 +2.6
0.5nm2µm160nm,1.2s
BOJS Bojanci 7.47 330 *i* Pn Pn 21 24 11.0 -0.4
BOJS *e*Sn Sn 21 25 32.7 -3.1
MDB Medias 7.50 21 ⇓P Pn 21 24 14.4 +2.5
MDB Medias 7.50 21 P Pn 21 24 14.4 +2.5
NEHR Nehoiu 7.54 32 ⇓P Pn 21 24 16.1 +3.7
MANR Mangalia 7.58 50 ⇓P Pn 21 24 15.7 +2.8
BORA Eskisehir 7.65 82 Pn 21 24 16.0 +2.1
DOPR Dopca 7.66 26 ⇑P Pn 21 24 16.2 +2.2
MARR Marisel-Cluj 7.73 13 ⇑P Pn 21 24 17.0 +2.0
ELL Elmali 7.74 105 Pn Pn 21 24 16.4 +1.2
ELL Elmali 7.74 105 P Pn 21 24 16.4 +1.2
BISRR Bisoca 7.81 33 ⇓P Pn 21 24 19.2 +3.0
BISRR Bisoca 7.81 33 P Pn 21 24 18.9 +2.7
1.2nm394nm,0.8s
BEHE Becsehely 7.82 340 Pn 21 24 16.2 -0.1
BOSR Bodos 7.84 27 ⇑P Pn 21 24 19.4 +2.9
COVR Voineasa-Covas 7.85 30 ⇓P Pn 21 24 20.4 +3.8

TIRR Tirgusor 7.87 45 Pn 21 24 18.3 +1.5
TIRR Tirgusor 7.87 45 ⇑P Pn 21 24 20.8 +3.9
TIRR Tirgusor 7.87 45 P Pn 21 24 18.3 +1.5
TIRR Tirgusor 7.87 45 P Pn 21 24 19.1 +2.2
0.2nm600nm34nm,0.9s
ISP Isparta 7.89 97 Pn Pn 21 24 18.3 +1.0
ISP Isparta 7.89 97 P Pn 21 24 18.3 +1.0
OZUR 7.91 27 ⇑P Pn 21 24 20.7 +3.2
TURR Turia 7.96 28 ⇓P Pn 21 24 21.3 +3.2
PLOR Plostina 8.03 32 ⇑P Pn 21 24 22.7 +3.5
PLOR Plostina 8.03 32 P Pn 21 24 22.7 +3.5
VRI Vrincioaia 8.08 32 ⇓P Pn 21 24 23.4 +3.7
VRI Vrincioaia 8.08 32 P Pn 21 24 23.4 +3.7
TPGR Topolog 8.13 43 ⇑P Pn 21 24 23.2 +2.7
ODBI Odobesti 8.13 34 ⇓P Pn 21 24 24.2 +3.7
CFR Carcaliu 8.20 41 ⇑P Pn 21 24 24.0 +2.6
CFR Carcaliu 8.20 41 P Pn 21 24 24.0 +2.6
MDUB Mudurnu 8.26 78 Pn 21 24 23.8 +1.5
PANC Panciu 8.26 34 ⇑P Pn 21 24 26.1 +3.9
TRI Trieste 8.27 324 Pn 21 24 21.4 -0.9
TRI Trieste 8.27 324 P Pn 21 24 21.4 -0.9
OSSC Osservatorio P 8.28 305 Pn 21 24 23.4 +0.9
MPLH Magyarpolny 8.31 345 P Pn 21 24 22.4 -0.5
84nm,0.8s
GHRR 8.52 34 ⇑P Pn 21 24 28.7 +2.9
GHRR 8.52 34 P Pn 21 24 27.5 +1.7
SABO M.te Sabotino 8.55 325 Pn 21 24 25.6 -0.6
SOKA Soboth 8.55 333 *i* Pn Pn 21 24 25.4 -0.8
40nm,0.5s,SNR=35
SOKA *e*Sn Sn 21 25 58.6 -3.8
46nm,1.1s
TESR Tescani 8.58 29 ⇓P Pn 21 24 29.7 +3.1
TESR Tescani 8.58 29 P Pn 21 24 28.2 +1.6
59nm,0.8s
OBKA Obir 8.58 331 *i* Pn Pn 21 24 26.0 -0.7
34nm,0.6s,SNR=24
OBKA *e*Sn Sn 21 26 00.4 -2.8
30nm,0.4s
OBKA Obir 8.58 331 *e*P Pn 21 24 26.0 -0.7
baz=144,slow=13
VLDR Vladesti 8.66 37 ⇓P Pn 21 24 31.2 +3.6
VSL Villasalto 8.71 276 Pn 21 24 28.8 +0.4
VSL Villasalto 8.71 276 ⇑P Pn 21 24 30.4 +1.9
BMR Baia Mare 8.76 13 ⇑P Pn 21 24 31.8 +2.7
BMR Baia Mare 8.76 13 P Pn 21 24 31.7 +2.7
PSZ Piszkesteto 8.77 357 Pn 21 24 28.6 -0.6
PSZ Piszkesteto 8.77 357 ⇑P Pn 21 24 30.6 +1.4
PSZ Piszkesteto 8.77 357 P Pn 21 24 30.6 +1.4
PSZ Piszkesteto 8.77 357 ⇑P Pn 21 24 29.4 +0.2
BIR Birlad 8.77 34 ⇑P Pn 21 24 32.8 +3.5
BIR Birlad 8.77 34 P Pn 21 24 32.8 +3.5
SRO Srobarova 8.80 350 *e*P Pn 21 24 32.2 +2.5
SRO Srobarova 8.80 350 *e*PN Pn 21 24 32.2 +2.5
ZCCA Zocca 8.87 309 Pn 21 24 31.8 +1.2
ARSA Arzberg 8.89 337 Pn 21 24 30.1 -0.8
ARSA Arzberg 8.89 337 *i* Pn Pn 21 24 30.0 -0.9
11nm,0.3s,SNR=12
ARSA *e*Sn Sn 21 26 12.6 +1.8
10.0nm,1.3s
ARSA Arzberg 8.89 337 *e*P Pn 21 24 30.0 -0.9
baz=144,slow=13
PRED Cave del Predi 8.92 327 Pn 21 24 30.9 -0.5
PTCC Patocco-Chiusa 8.98 326 ⇑P Pn 21 24 31.8 -0.4
MYKA Terra Mystica 9.04 328 *i* Pn Pn 21 24 32.7 -0.3
12nm,0.7s,SNR=11
MYKA *e*Sn Sn 21 26 15.5 +1.1
10nm,0.4s
TEOL Teolo 9.06 316 Pn 21 24 32.1 -1.1
BURAR Bucovina Array 9.09 20 Pn 21 24 35.0 +1.3
BURAR Bucovina Array 9.09 20 ⇑P Pn 21 24 36.3 +2.7
BURAR Bucovina Array 9.09 20 P Pn 21 24 36.3 +2.7
RONA Rosalia, Austr 9.09 341 *e*Pn Pn 21 24 33.7 +0.1
4.0nm,0.3s,SNR=6.0
RONA *e*Sn Sn 21 26 17.2 +1.7
14nm,0.9s
BUR08 Bucovina Ar. S 9.11 20 Pn 21 24 35.5 +1.5
PRAR RASCA 9.16 25 ⇑P Pn 21 24 37.8 +3.3
STAL STALIGIAL 9.16 323 Pn 21 24 33.8 -0.9
KORU Korolevo 9.17 11 P Pn 21 24 35.5 +0.8
BERU Beregovo 9.18 9 P Pn 21 24 35.6 +0.7
KECS Kecovo 9.31 360 *e*P Pn 21 24 40.1 +3.4
KECS Kecovo 9.31 360 *e*PN Pn 21 24 40.1 +3.4
CIMO Cimolais 9.33 323 Pn 21 24 35.8 -1.2
BRIU Brid 9.33 10 P Pn 21 24 37.7 +0.8
MUKU Mukachevo 9.40 9 P Pn 21 24 38.6 +0.7
CONA Conrad Observa 9.41 340 *i* Pn Pn 21 24 37.9 -0.2
7.0nm,0.7s
CONA *e*Sn Sn 21 26 27.4 +3.8
23nm,1.4s
HOLU Holmets 9.45 7 P Pn 21 24 39.2 +0.7
PRMA PARMA 9.49 309 Pn 21 24 38.9 -0.1
MODS Modra-Piesok 9.51 346 *e*P Pn 21 24 39.7 +0.3
MODS Modra-Piesok 9.51 346 *e*PN Pn 21 24 39.7 +0.3
KBA Koelnbreinsper 9.52 329 *e*Pn Pn 21 24 39.7 0.0
12nm,0.5s,SNR=17
KBA *i* Sn Sn 21 26 25.5 -0.9
14nm,0.6s
KBA Koelnbreinsper 9.52 329 *e*P Pn 21 24 39.5 -0.2
baz=144,slow=13
KEST Kesra 9.59 253 Pn Pn 21 24 42.4 +1.8
0.8nm,0.3s,baz=65,slow=4.4,SNR=21
KEST Sn Sn 21 26 25.9 -2.0
0.6nm,0.3s,baz=99,slow=23,SNR=6.1
KEST LR LR 21 29 18.8
comp=Z,406nm,21.8s,baz=82,slow=43
14nm,0.9s
KEST Kesra 9.59 253 Pn 21 24 42.6 +2.0
ABTA Abfaltersbach 9.62 325 *i* Pn Pn 21 24 40.4 -0.5
15nm,0.4s,SNR=14
ABTA *e*Sn Sn 21 26 25.9 -2.8
151nm,2.0s
MOA Molln 9.82 334 *i* Pn Pn 21 24 43.7 0.0
36nm,1.0s,SNR=15
MOA *i* Sn Sn 21 26 31.6 -2.0
12nm,0.5s
MOA Molln 9.82 334 *e*P Pn 21 24 43.7 0.0
baz=144,slow=13
BIOA Bad Ischl, Aus 9.91 332 *i* Pn Pn 21 24 44.6 -0.3
33nm,0.5s,SNR=32
BIOA *e*Sn Sn 21 26 35.1 -0.6
44nm,1.1s
JAVC Velka Javorina 9.92 349 *e*PN Pn 21 24 45.8 +0.8
BOB Bobbio (Coli) 10.02 308 ⇑P Pn 21 24 48.6 +2.2
LESA Schwarzleotal 10.07 328 *i* Pn Pn 21 24 47.1 0.0
32nm,0.4s,SNR=27
LESA *i* Sn Sn 21 26 37.1 -2.7
22nm,0.6s
BR105 Keskin Array S 10.08 83 P Pn 21 24 50.0 +2.6
112nm17nm,0.8s
BR106 Keskin Array S 10.08 83 P Pn 21 24 51.0 +3.6
72nm9.8nm,0.8s
BR131 Keskin Array S 10.10 83 Pn 21 24 49.2 +1.6
BR131 Keskin Array S 10.10 83 P Pn 21 24 49.2 +1.6
BRTR Keskin Array B 10.10 83 Pn Pn 21 24 51.5 +3.9
0.6nm,0.3s,baz=264,slow=11,SNR=21
BRTR Sn Sn 21 26 40.5 -0.1
baz=224,slow=54
BRTR LR LR 21 28 55.8
comp=Z,191nm,19.9s,baz=256,slow=39
2.9nm,0.5s
BRTR Keskin Array B 10.10 83 Pn 21 24 50.9 +3.3
BR104 Keskin Array S 10.10 83 P Pn 21 24 51.3 +3.7
87nm11nm,0.7s
NIE Niedzica 10.25 359 *e*P Pn 21 24 51.3 +1.7
NIE Niedzica 10.25 359 P Pn 21 24 51.0 +1.4
16nm,1.0s
RJOB Jochberg 10.27 329 *e*P Pn 21 24 50.4 +0.5
baz=144,slow=13
KMPD K-Podol'skiy 10.30 22 P Pn 21 24 52.3 +2.2
KIRS Kirsehir-Merke 10.34 86 ⇑P Pn 21 24 56.1 +5.2
KRUC Moravsky 10.34 344 *e*PN Pn 21 24 50.6 -0.2
MAUC Maruska 10.39 350 *e*PN Pn 21 24 51.9 +0.5
WTTA Wattenberg 10.40 324 *i* Pn Pn 21 24 51.7 -0.1
36nm,0.6s,SNR=14
WTTA *i* Sn Sn 21 26 44.3 -3.8
72nm,0.7s
WTTA Wattenberg 10.40 324 *e*P Pn 21 24 51.6 -0.1
baz=144,slow=13
WATA Walderalm 10.48 324 *i* Pn Pn 21 24 53.5 +0.6
38nm,0.6s,SNR=30
WATA *e*Sn Sn 21 26 47.6 -2.4
45nm,0.7s
VRAC Vranov 10.54 345 Pn Pn 21 24 51.9 -1.5
0.3nm,0.3s,baz=180,slow=15,SNR=6.6

VRAC LR LR 21 29 40.6
comp=Z,175nm,18.0s,baz=172,slow=42
5.8nm,0.9s
VRAC Vranov 10.54 345 ⇑P **Pn 21 24 53.7 +0.2**
VRAC Vranov 10.54 345 P **Pn 21 24 53.7 +0.2**
VRAC Vranov 10.54 345 *e*PN **Pn 21 24 52.9 -0.6**
BZK Bozkurt 10.57 70 Pn **Pn 21 24 56.1 +2.2**
SORM Soroca 10.57 29 P **Pn 21 24 55.7 +1.8**
12nm,0.6s
SQTA Sankt Quirin 10.57 323 *i* Pn **Pn 21 24 54.6 +0.6**
28nm,0.8s,SNR=14
SQTA *i* Sn **Sn 21 26 50.0 -2.1**
48nm,0.7s
SQTA Sankt Quirin 10.57 323 *e*P **Pn 21 24 55.4 +1.4**
baz=144,slow=13
FUORN Ofenpass-Fuorn 10.63 318 Pn 21 24 55.2 +0.3
CKRC Cesky Krumlov 10.66 337 *e*P **Pn 21 24 54.6 -0.5**
CKRC MLR MLR
comp=Z,2μm,9.2s
CKRC Cesky Krumlov 10.66 337 *e*PN **Pn 21 24 54.6 -0.5**
CKRC AMS AMS 21 30 10.0
comp=Z,2μm,9.2s
FETA Feichten 10.66 321 *e*Pn **Pn 21 24 55.9 +0.6**
comp=Z,5.7nm,0.7s
FETA *e*Sn **Sn 21 26 53.2 -1.1**
comp=Z,16nm,0.7s
MOTA Moosalm 10.71 323 *i* Pn **Pn 21 24 56.4 +0.4**
comp=Z,78nm,0.8s,SNR=27
MOTA *i* Sn **Sn 21 26 54.0 -1.5**
comp=Z,64nm,0.8s
MOTA Moosalm 10.71 323 *e*P **Pn 21 24 56.7 +0.7**
baz=144,slow=13
MORC Moravsky Berou 10.83 349 Pn 21 24 58.4 +0.9
MORC Moravsky Berou 10.83 349 ⇑P **Pn 21 24 58.5 +1.0**
MORC Moravsky Berou 10.83 349 P **Pn 21 24 58.5 +1.0**
MORC Moravsky Berou 10.83 349 ⇑P **Pn 21 24 58.5 +0.9**
MORC Moravsky Berou 10.83 349 *e*PN **Pn 21 24 58.1 +0.6**
GEC2 GERESS Array S 10.87 335 Pn 21 24 57.4 -0.8
GEC2 GERESS Array S 10.87 335 *e*P **Pn 21 24 56.5 -1.6**
baz=144,slow=13
GERES GERESS Array B 10.87 335 Pn **Pn 21 24 57.0 -1.1**
comp=Z,0.5nm,0.3s,baz=155,slow=13,SNR=47
GERES Sn **Sn 21 26 55.0 -4.5**
comp=Z,0.2nm,0.3s,baz=154,slow=24,SNR=5.7
comp=Z,9.1nm,0.5s
DAVOX Davos/Dischmat 10.93 318 Pn **Pn 21 24 59.9 +0.8**
comp=Z,2.7nm,0.3s,baz=110,slow=13,SNR=33
DAVOX Sn **Sn 21 26 54.9 -6.2**
comp=Z,1.7nm,0.3s,baz=61,slow=24,SNR=4.2
comp=Z,9.9nm,0.5s
RETA Reutte 10.97 322 *i* Pn **Pn 21 25 00.3 +0.9**
comp=Z,8.3nm,0.6s
RETA *e*Sn **Sn 21 27 00.7 -1.2**
comp=Z,22nm,0.6s
RETA Reutte 10.97 322 *e*P **Pn 21 25 00.2 +0.8**
baz=144,slow=13
CSS Mathiatis 11.00 108 Pn 21 25 01.3 +1.5
TUE Stuetta 11.02 315 Pn 21 25 00.2 0.0
TUE Stuetta 11.02 315 P **Pn 21 25 00.0 -0.3**
comp=Z,107nm,0.9s
TUE Stuetta 11.02 315 ⇑P **Pn 21 25 00.3 0.0**
KHC Kasperske Hory 11.16 335 Pn 21 25 00.4 -1.6
KHC Kasperske Hory 11.16 335 *e*P **Pn 21 25 00.0 -2.0**
KHC *e* 21 27 01.3
KHC MLR MLR
comp=Z,1μm,11.2s
KHC Kasperske Hory 11.16 335 *e*PN **Pn 21 25 00.0 -2.0**
KHC *ex* x 21 25 09.0
KHC *e*SN **Sn 21 27 01.3 -5.2**
KHC AMS AMS 21 30 20.0
comp=Z,1μm,11.2s
KHC Kasperske Hory comp=Z,22nm,0.8s **11.16 335** P **Pn 21 25 00.4 -1.6**
KHC Kasperske Hory 11.16 335 ⇑P **Pn 21 25 00.9 -1.2**
ZVC Zvikov 11.25 338 *e*PN **Pn 21 25 02.5 -0.6**
ZVC AMS AMS 21 30 30.0
comp=Z,1μm,10.6s
DAVA Damuels 11.27 320 *i* Pn **Pn 21 25 04.5 +1.0**
comp=Z,6.2nm,0.4s
DAVA *e*Sn **Sn 21 27 06.9 -2.2**
comp=Z,23nm,0.7s
WET Wettzell 11.41 333 *e*P **Pn 21 25 03.9 -1.5**
baz=144,slow=13
DPC Dobruska-Polom 11.59 346 AMS AMS 21 30 10.0
comp=Z,2μm,10.2s
PRU Pruhonice 11.65 340 *e*P **Pn 21 25 07.9 -0.7**
PRU MLR MLR
comp=Z,1μm,10.1s
PRU Pruhonice 11.65 340 *e*PN **Pn 21 25 07.9 -0.7**
PRU AMS AMS 21 30 50.0
comp=Z,1μm,10.1s
BNN Bunyan 11.86 87 Pn **Pn 21 25 13.5 +1.7**
BNI Bardonecchia 11.89 304 Pn **Pn 21 25 12.6 +0.5**
BNI Bardonecchia 11.89 304 P **Pn 21 25 12.6 +0.5**
LUBAR Lubar, Ukraine 11.89 23 P **Pn 21 25 13.4 +1.4**
SENIN Lac Senin/Sane 12.13 311 Pn 21 25 16.4 +0.9
TOKA Tokat 12.28 80 Pn **Pn 21 25 18.6 +1.3**
NKC Novy Kostel 12.48 335 *e*P **Pn 21 25 20.9 +0.8**
NKC MLR MLR
comp=Z,1μm,14.0s
NKC Novy Kostel 12.48 335 *e*PN **Pn 21 25 20.9 +0.8**
NKC AMS AMS 21 31 10.0
comp=Z,1μm,14.0s
HSKC Hora Svate Kat 12.51 338 AMS AMS 21 31 10.0
comp=Z,2μm,10.3s
BRG Berggiesshubel 12.61 340 *e*P **Pn 21 25 22.8 +1.0**
BRG Amp 21 25 26.2
comp=Z,3.3nm,0.9s
RNPP5 Staryi Chortor 12.62 15 P **Pn 21 25 23.0 +1.1**
STU Stuttgart 12.63 323 Pn 21 25 21.0 -1.0
STU Stuttgart 12.63 323 P **Pn 21 25 21.0 -1.0**
STU Stuttgart 12.63 323 ⇑P **Pn 21 25 21.5 -0.5**
STU Stuttgart 12.63 323 *e*P **Pn 21 25 20.7 -1.3**
baz=144,slow=13
BFO Black Forest 12.74 320 Pn 21 25 22.2 -1.4
BFO Black Forest 12.74 320 P **Pn 21 25 22.2 -1.4**
BFO Black Forest 12.74 320 ⇑P **Pn 21 25 22.8 -0.8**
AK07 Malin Array Si 12.90 25 P **Pn 21 25 26.6 +0.9**
AK13 Malin Array Si 12.91 25 P **Pn 21 25 27.0 +1.2**
AK06 Malin Array Si 12.93 25 P **Pn 21 25 27.0 +0.9**
AK14 Malin Array Si 12.94 25 P **Pn 21 25 27.1 +0.9**
AK05 Malin Array Si 12.96 25 P **Pn 21 25 27.0 +0.5**
AK12 Malin Array Si 12.97 25 P **Pn 21 25 27.0 +0.4**
AK17 Malin Array Si 12.97 25 P **Pn 21 25 27.2 +0.5**
AK16 Malin Array Si 12.97 25 P **Pn 21 25 27.2 +0.5**
AK09 Malin Array Si 12.98 25 P **Pn 21 25 27.3 +0.5**
AK19 Malin Array Si 12.99 24 P **Pn 21 25 27.9 +1.0**
AK08 Malin Array Si 12.99 25 P **Pn 21 25 27.7 +0.8**
AK02 Malin Array Si 12.99 25 P **Pn 21 25 27.7 +0.7**
AK11 Malin Array Si 13.00 25 P **Pn 21 25 27.9 +0.8**
KIEV Kiev 13.03 25 Pn 21 25 27.6 +0.2
KIEV Kiev 13.03 25 P **Pn 21 25 28.8 +1.4**
KIEV Kiev 13.03 25 P **Pn 21 25 27.6 +0.2**
KIEV Kiev 13.03 25 ⇑P **Pn 21 25 29.3 +1.9**
AKASG Malin Array Be 13.04 25 Pn **Pn 21 25 28.3 +0.7**
comp=Z,0.5nm,0.3s,baz=212,slow=12,SNR=12
AKASG LR LR 21 31 01.1
comp=Z,365nm,19.4s,baz=210,slow=40
AKASG Malin Array Be 13.04 25 *i* P **Pn 21 25 28.1 +0.5**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 13.04 25 Pn 21 25 26.8 -0.8
AKBB Malin Array Si 13.04 25 *ce*P **Pn 21 25 28.7 +1.1**
AKBB pmax pmax
comp=Z,8.0nm,1.1s
MOX Moxa 13.11 334 *e*P **Pn 21 25 28.4 -0.3**
baz=144,slow=13
CLL Collm 13.26 339 *i* P **P 21 25 41.8 +1.4**
comp=Z,31nm,1.2s
CLL AMS AMS 21 31 00.0
CLL Collm 13.26 339 *e*P **P 21 25 42.0 +1.6**
baz=144,slow=13
ECH Echery 13.27 317 Pn 21 25 30.2 -0.6
ECH Echery 13.27 317 P **Pn 21 25 30.2 -0.6**
ECH Echery 13.27 317 ⇑P **Pn 21 25 31.4 +0.6**
MMAI Mount Meron Ar 13.44 113 Pn **Pn 21 25 32.0 -1.2**
comp=Z,2.2nm,0.3s,baz=322,slow=15,SNR=8.2
MMAI Sn **Sn 21 27 54.6 -7.7**
comp=Z,0.7nm,0.3s,baz=287,slow=21,SNR=1.7
MMAI LR LR 21 31 36.9
comp=Z,238nm,18.8s,baz=294,slow=41
comp=Z,1.0nm,0.4s
ANN Anapa 13.72 60 *e*P **Pn 21 25 36.8 -0.1**
ANN *e*S **Sn 21 28 09.6 +0.8**
SALP Salfit 13.81 116 ⇑P **Pn 21 25 38.4 +0.2**

BALJ Balqa 14.11 115 Pn 21 25 41.5 -0.9
GHAJ Ghor Haditha 14.51 118 Pn 21 25 46.6 -1.2
LOR Lormes 14.63 309 ⇑P **Pn 21 25 48.6 -0.8**
FLTG Flechtingen 14.68 337 *e*P **P 21 25 56.4 +0.3**
baz=144,slow=13
WLF Walferdange 14.70 320 *d*P **P 21 25 58.0 +1.6**
comp=Z,16nm,1.0s
SUW Suwalki 14.96 6 *e*P **Pn 21 25 55.9 +2.2**
SUW Suwalki 14.96 6 P **Pn 21 25 53.6 -0.1**
SUW Suwalki 14.96 6 P **Pn 21 25 53.6 -0.1**
ASF Jabal al Asfar 14.96 113 Pn **Pn 21 25 53.3 -0.7**
comp=Z,0.3nm,0.3s,baz=302,slow=5.2,SNR=5.1
ASF LR LR 21 32 43.1
comp=Z,132nm,19.0s,baz=265,slow=42
comp=Z,5.9nm,0.9s
SOC Sochi 15.01 67 *e*P **Pn 21 25 55.9 +1.4**
SOC *e* 21 28 43.9
SOC MLR MLR
comp=Z,46nm,8.0s
EIL Elat 15.14 124 Pn **Pn 21 25 53.2 -3.1**
comp=Z,1.0nm,0.3s,baz=271,slow=5.7,SNR=8.0
EIL Sn Sn 21 28 28.5 -15
comp=Z,1.6nm,0.3s,baz=314,slow=12,SNR=5.2
EIL LR LR 21 33 18.0
comp=Z,86nm,19.3s,baz=358,slow=43
BTNL Ternell 15.32 323 *d*P **P 21 26 05.2 +1.9**
KOPT Kop Dagi 15.36 81 Pn 21 26 00.5 +1.1
MEM Membach 15.39 323 *d*P **P 21 26 06.5 +2.4**
comp=Z,24nm,0.9s
BUG Bochum--Univer 15.42 327 *e*P **P 21 26 06.4 +2.1**
baz=144,slow=13
RCHB Rochefort 15.47 320 *d*P **P 21 26 06.2 +1.2**
comp=Z,10nm,1.2s
BSTI Sart Tilman 15.58 322 *d*P **P 21 26 08.6 +2.3**
RETH Rethem/Aller, 15.64 334 *e*P **P 21 26 08.2 +1.5**
baz=144,slow=13
DOU Dourbes 15.75 319 *d*P **P 21 26 09.4 +1.3**
comp=Z,12nm,1.0s
LABN Labinsk 15.93 63 *e*P **P 21 26 08.8 -1.3**
LABN *e*S **Sn 21 29 07.6 +4.8**
LABN pmax pmax
comp=Z,58nm,0.9s
MARD Mardin 15.96 90 Pn 21 26 08.4 +1.3
ERBR Yeremizino-Bor 16.05 60 *e*P **Pn 21 26 09.5 +1.5**
ERBR *e*S **Sn 21 29 08.8 +3.2**
ERBR pmax pmax
comp=Z,52nm,1.0s
MNK Minsk 16.11 15 *i* P **Pn 21 26 06.3 -2.5**
comp=E,52nm,1.0s
MNK *i* P **Pn 21 26 06.3 -2.5**
comp=N,28nm,1.1s
MNK *i* P **Pn 21 26 06.3 -2.5**
comp=Z,51nm,0.9s,baz=201
MNK *i* PP **pP 21 26 14.8 -1.7**
MNK *i* PPP PPP 21 26 21.9
MNK *i* S **Sn 21 29 05.2 -1.9**
MNK *i* SS S 21 29 42.3 +22
MNK *i* LQ LQ 21 30 44.5
MNK *i* LR LR 21 32 15.2
MNK *i* LRM MLR 21 32 36.2
comp=N,265nm,15.0s
MNK *i* LRM MLR 21 32 51.2
comp=E,203nm,13.7s
MNK *i* LRM MLR 21 32 53.1
comp=Z,246nm,16.0s
MNK Minsk 16.11 15 *i* P **Pn 21 26 06.3 -2.5**
MNK *i* S **Sn 21 29 05.2 -1.9**
MNK pmax pmax
comp=Z,51nm,0.9s
MNK pmax pmax
comp=E,52nm,1.0s
MNK pmax pmax
comp=N,28nm,1.1s
MNK MLR MLR
comp=N,265nm,15.0s
MNK MLR MLR
comp=E,203nm,14.0s
MNK MLR MLR
comp=Z,246nm,16.0s
NACGM Naroch 16.29 13 *e*P **Pn 21 26 12.1 +1.1**
UCC Uccle 16.31 321 *d*P **P 21 26 16.0 +1.8**
BSEG Bad Segeberg 16.35 338 *e*P **P 21 26 14.9 +0.2**
baz=144,slow=13
PABE Paberze 16.50 7 Pn 21 26 12.5 -1.3
GURO Guruymak-BITLI 16.70 85 P **Pn 21 26 17.4 +0.9**
NEUR Neytrino 17.11 69 *i* P **P 21 26 24.2 +0.8**
SHA1 Shidzhatmaz 17.14 67 *i* P **Pn 21 26 22.1 0.0**
KIV Kislovodsk 17.19 67 Pn 21 26 22.1 -0.5
KIV Kislovodsk 17.19 67 P **P 21 26 24.7 +0.5**
KIV Kislovodsk 17.19 67 *e*P **P 21 26 24.1 -0.1**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,52nm,14.0s
KIV Kislovodsk 17.19 67 P **P 21 26 25.1 +0.9**
KIV P **P 21 26 25.1 +0.9**
KIV Kislovodsk 17.19 67 ⇑P **P 21 26 26.1 +1.9**
KBZ Khabaz 17.31 68 P **P 21 26 26.4 +1.1**
comp=Z,8.0nm,0.8s,baz=290,slow=10,SNR=14
KBZ Khabaz 17.31 68 *i* P **P 21 26 25.0 -0.3**
GOF Gofitskoye 17.63 63 *ce*P **P 21 26 30.5 +1.5**
VORD Divnogorie 17.64 42 *e*P **Pn 21 26 26.8 -1.3**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 17.72 41 *e*P **Pn 21 26 27.9 -1.2**
VSR pmax pmax
comp=Z,10.0nm,1.1s
NCK Nalchik 17.78 69 *i* P **Pn 21 26 29.6 -0.3**
VORR Voronezh 18.01 40 *e*P **P 21 26 34.2 +1.1**
VORR pmax pmax
comp=Z,17nm,0.7s
LPSR Galich'ya Gora 18.45 37 *e*P **P 21 26 37.1 -0.8**
LPSR pmax pmax
comp=Z,56nm,0.9s
GNI Garni 18.60 79 P **Pn 21 26 40.7 +0.6**
comp=Z,0.5nm,0.3s,baz=236,slow=23,SNR=5.1
comp=Z,10nm,0.7s
GNI Garni 18.60 79 P **P 21 26 39.4 -0.4**
GNI IAmb IAmb 21 26 45.7
comp=Z,82nm,1.5s
GNI Garni 18.60 79 P **P 21 26 39.4 -0.4**
GNI pmax pmax
comp=Z,82nm,1.5s
GNI Garni 18.60 79 P **P 21 26 39.6 -0.2**
ESBB Sonseca Array 18.98 279 P **Pn 21 26 44.8 +0.2**
ESDC Sonseca Array 18.98 279 P **Pn 21 26 45.5 +0.9**
comp=Z,0.4nm,0.3s,baz=75,slow=11,SNR=40
ESDC LR LR 21 33 40.0
comp=Z,229nm,19.2s,baz=80,slow=36
comp=Z,7.1nm,0.9s
ESDC Sonseca Array 18.98 279 P **Pn 21 26 44.4 -0.2**
VRH Novokhopyorsk 19.06 44 *e*P **Pn 21 26 46.3 +0.9**
VRH pmax pmax
comp=Z,24nm,0.8s
OBN Obninsk 19.22 29 P **P 21 26 45.1 -1.2**
comp=Z,2.5nm,0.3s,baz=338,slow=16,SNR=4.2
OBN LR LR 21 35 28.6
comp=Z,122nm,19.2s,baz=170,slow=41
comp=Z,7.4nm,0.4s
OBN Obninsk 19.22 29 P **P 21 26 45.4 -0.8**
OBN IAmb IAmb 21 26 51.8
comp=Z,38nm,0.6s
OBN Obninsk 19.22 29 ⇓ *i*P **P 21 26 45.5 -0.8**
OBN S **S 21 30 24.0 +0.6**
OBN pmax pmax
comp=Z,44nm,1.7s
OBN MLR MLR
comp=Z,285nm,16.0s
PAB San Pablo 19.29 279 Pn 21 26 47.9 -0.5
PAB San Pablo 19.29 279 P **Pn 21 26 47.9 -0.5**
PAB pmax pmax
comp=Z,11nm,0.9s
MTSE Matsula 19.67 5 *e*P **Pn 21 26 52.1 -0.5**
VSU Vasula 19.71 10 *ce*P **Pn 21 26 53.3 +0.2**
VSU pmax pmax
comp=Z,43nm,0.8s
VSU Vasula 19.71 10 *e*P **Pn 21 26 52.5 -0.6**
VSU Vasula 19.71 10 ⇑P **P 21 26 50.2 -1.4**
MOS Moscow 20.09 29 *e*P **P 21 26 52.0 -3.8**
MOS pmax pmax
comp=Z,51nm,0.9s
ARBE Arbavere 20.58 8 *e*P Pn 21 27 04.8 +1.5
MAK Makhachkala 20.60 71 *e*P **P 21 26 58.6 -2.8**
MAK *e*S **S 21 30 48.2 -2.9**
MAK pmax pmax
comp=Z,87nm,0.7s
MAK MLR MLR
comp=Z,99nm,16.0s
TAM Tamanrasset 20.78 223 Pn 21 27 04.8 -1.2
TAM Tamanrasset 20.78 223 P **P 21 27 04.8 +1.1**
TAM pmax pmax
comp=Z,16nm,0.9s
TAM Tamanrasset 20.78 223 ⇑P **Pn 21 27 09.3 +3.3**
AKT Akhty 20.78 75 *e*P **P 21 27 04.4 +0.8**
AKT *e* 21 27 23.3
AKT *e*S Sn 21 30 58.8 -1.4
AKT pmax pmax
comp=Z,17nm,0.7s
AKT smax smax
comp=N,19nm,1.1s
AKT smax smax
comp=E,39nm,1.8s
LBWR Ladybower, Pea 20.87 320 *e*P **P 21 27 04.2 -0.2**
LBWR IAmb IAmb 21 27 08.6
comp=Z,18nm,0.8s
AAL Aland 21.04 359 *e*P **P 21 27 05.8 -0.2**
MVO Moncorvo 21.18 284 *e*P **P 21 27 11.5 +3.6**
MEF Metsahovi 21.21 5 *e*P **P 21 27 08.1 +0.3**
MDT Midelt 21.33 261 P **P 21 27 11.2 +1.6**
comp=Z,6.3nm,0.8s,baz=87,slow=9.3,SNR=14
comp=Z,6.3nm,0.8s
FOEL Foel Wylfa 21.35 318 *e*P **P 21 27 10.8 +1.2**
FOEL IAmb IAmb 21 27 14.3
comp=Z,32nm,1.1s
MD01 Midelt array s 21.42 261 P 21 27 10.4 -0.2
MD31 MD31 21.42 261 P 21 27 09.8 -0.7
HFS Hagfors 21.44 351 P **P 21 27 09.7 -0.7**
comp=Z,18nm,0.6s,baz=156,slow=11,SNR=31
HFS LR LR 21 35 53.8
comp=Z,90nm,21.0s,baz=156,slow=38
comp=Z,18nm,0.6s
PUL Pulkovo 21.53 13 *i* P **P 21 27 09.4 -1.9**
PBAR Barrancos 21.58 276 *e*P **P 21 27 14.7 +2.7**
PBAR *i* IAmb IAmb 21 27 22.3
comp=Z,52nm,1.7s
PMRV Marv??o 21.64 280 *e*P **P 21 27 14.6 +1.9**
PMRV *i* IAmb IAmb 21 27 18.5
comp=Z,35nm,1.5s
KONO Kongsberg 21.66 345 P **P 21 27 12.1 -0.6**
KONO Kongsberg 21.66 345 *ce*P **P 21 27 12.2 -0.6**
KONO pmax pmax
comp=Z,115nm,2.5s
KONO Kongsberg 21.66 345 ⇑P **P 21 27 12.4 -0.3**
EDMD Edmundbyers 21.82 323 *e*P **P 21 27 14.4 0.0**
EDMD IAmb IAmb 21 27 17.6
comp=Z,14nm,0.7s
PVIS Viseu 21.87 283 *e*P **P 21 27 18.0 +2.8**
PESTR Estremoz 21.88 278 P 21 27 15.0 -0.3
PESTR Estremoz 21.88 278 *e*P **P 21 27 15.6 +0.3**
PESTR *i* IAmb IAmb 21 27 20.3
comp=Z,31nm,1.3s
RAF Rauma 21.89 2 *e*P **P 21 27 13.7 -1.5**
PSARD Sardoal 22.20 280 *e*P **P 21 27 20.4 +1.6**
PSARD *i* IAmb IAmb 21 27 28.3
comp=Z,53nm,1.7s
PARRA Arraiolos 22.23 278 *e*P **P 21 27 20.8 +1.7**
PARRA *i* IAmb IAmb 21 27 28.7
comp=Z,26nm,1.6s
PBEJ Beja 22.25 276 *e*P **P 21 27 19.9 +0.6**
PBEJ *i* IAmb IAmb 21 27 28.7
comp=Z,32nm,1.9s
EVO Evora 22.26 277 *e*P **P 21 27 20.5 +1.1**
EVO *i* IAmb IAmb 21 27 28.3
comp=Z,24nm,1.6s
PVAQ Vaqueiros 22.27 274 P **P 21 27 18.6 -0.9**
PVAQ Vaqueiros 22.27 274 *e*P **P 21 27 19.3 -0.2**
NC602 NORSAR Array S 22.32 348 P **P 21 27 18.6 -1.2**
PMTG Montargil 22.33 279 *e*P **P 21 27 20.4 +0.2**
PMTG *i* IAmb IAmb 21 27 33.0
comp=Z,21nm,1.2s
PCAS Casmilo, Conde 22.40 282 *e*P **P 21 27 22.5 +1.6**
PCAS *i* IAmb IAmb 21 27 26.3
comp=Z,55nm,2.2s
PCVE Castro Verde 22.47 275 *e*P **P 21 27 25.4 +3.8**
PBDV Barranco-do-Ve 22.47 274 *e*P **P 21 27 22.2 +0.5**
PBDV *i* IAmb IAmb 21 27 26.8
comp=Z,34nm,1.6s
FINES FINESS Array B 22.56 7 P **P 21 27 21.2 -1.1**
comp=Z,22nm,0.8s,baz=174,slow=9.8,SNR=25
FINES LR LR 21 36 42.4
comp=Z,239nm,19.9s,baz=212,slow=38
comp=Z,22nm,0.8s
FINES FINESS Array B 22.56 7 P 21 27 21.4 -1.0
FIA1 FINESS Array S 22.56 7 P 21 27 21.7 -0.7
MESJ Messejana 22.56 276 *e*P **P 21 27 22.5 -0.1**
MESJ IAmb IAmb 21 27 26.9
comp=Z,34nm,1.4s
MESJ Messejana 22.56 276 P **P 21 27 22.1 -0.5**
MESJ IAmb IAmb 21 27 31.4
comp=Z,69nm,1.7s
MESJ Messejana 22.56 276 *e*P **P 21 27 22.6 -0.1**
MESJ *i* IAmb IAmb 21 27 32.3
comp=Z,42nm,1.7s
MESJ Messejana 22.56 276 P **P 21 27 22.1 -0.5**
MESJ pmax pmax
comp=Z,69nm,1.7s
NB2 NORSAR Subarra 22.66 348 P **P 21 27 22.3 -1.2**
comp=Z,12nm,0.8s,baz=158,slow=10
NOA NORSAR Array B 22.66 348 P **P 21 27 22.6 -0.9**
comp=Z,14nm,0.9s,baz=160,slow=8.8,SNR=24
comp=Z,14nm,0.9s
EKA Eskdalemuir Ar 22.67 323 P **P 21 27 23.4 -0.1**
comp=Z,43nm,0.8s,baz=122,slow=11,SNR=85
EKA LR LR 21 38 38.2
comp=Z,186nm,19.2s,baz=114,slow=43
comp=Z,43nm,0.8s
ESK Eskdalemuir 22.68 323 P 21 27 23.4 -0.3
ESK Eskdalemuir 22.68 323 *e*P **P 21 27 23.3 -0.3**
ESK IAmb IAmb 21 27 24.3
comp=Z,34nm,0.7s
ESK Eskdalemuir 22.68 323 P **P 21 27 23.4 -0.3**
ESK pmax pmax
comp=Z,108nm,1.2s
ESK Eskdalemuir 22.68 323 ⇑P **P 21 27 23.6 -0.1**
BELG Belogornoye 22.86 46 *i* P **P 21 27 26.2 +0.7**
BELG pmax pmax
comp=Z,17nm,0.9s
PTEO Sao Teotonio 23.02 275 *e*P **P 21 27 27.9 +0.6**
PTEO *i* IAmb IAmb 21 27 35.1
comp=Z,52nm,1.3s
EDI Edinburgh 23.03 325 *e*P **P 21 27 26.4 -0.9**
EDI IAmb IAmb 21 27 29.7
comp=Z,19nm,0.7s
KEF Keuruu 23.18 5 *e*P **P 21 27 29.9 +1.2**
SUF Sumiainen 23.82 6 *e*P **P 21 27 35.3 +0.2**
VAF Ylistaro 23.94 2 *e*P **P 21 27 37.3 +1.1**
JOF Joensuu 24.65 12 *e*P **P 21 27 44.0 +1.3**
KLMR Klimovskoe 24.70 22 *e*P **P 21 27 45.6 +2.4**
KLMR pmax pmax
comp=Z,15nm,1.0s
RAYN Ar Rayn 26.25 119 P 21 27 58.3 +0.6
RAYN Ar Rayn 26.25 119 *i* P SNR=5.8 **P 21 27 59.1 +1.4**
RAYN Ar Rayn 26.25 119 P **P 21 27 58.3 +0.6**
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 26.25 119 P **P 21 27 59.2 +1.6**
RAYN Ar Rayn 26.25 119 ⇑P **P 21 28 00.1 +2.5**
KIRV Kirov 26.80 34 LR LR 21 38 25.6
comp=Z,141nm,21.5s,baz=348,slow=36
KIRV Kirov 26.80 34 *ce*P **P 21 28 00.7 -1.5**
AKTO Aktyubinsk 28.54 54 LR LR 21 39 40.7
comp=Z,107nm,21.6s,baz=294,slow=37
SMRA Abu-Samra 29.23 110 P **P 21 28 24.2 -0.1**
APA Apatity 29.33 10 ⇓ *e*P **P 21 28 24.5 -0.2**
APA *e* 21 29 23.0
APA pmax pmax
comp=Z,8.0nm,1.1s
APA MLR MLR
comp=Z,2μm,4.8s
TRNA Turayna 29.52 110 P **P 21 28 27.6 +0.8**
AB31 Akbulak array 29.64 57 P 21 28 27.1 -0.6
ABKAR Akbulak array 29.64 57 P 21 28 27.1 -0.6
ARTI Arti 30.18 43 LR LR 21 40 38.2
comp=Z,60nm,18.7s,baz=284,slow=36
ARTI Arti 30.18 43 P 21 28 31.5 -0.8
ARTI Arti 30.18 43 *c* i P **P 21 28 31.4 -0.9**
ARTI S **S 21 33 32.5 +1.8**
ARTI pmax pmax
comp=Z,33nm,1.1s

ARTI Arti 30.18 43 ⇑P **P 21 28 31.4 -0.9**
ARCES ARCESS Array B 30.54 3 P **P 21 28 33.8 -1.7**
comp=Z,5.7nm,0.6s,baz=191,slow=8.8,SNR=19
ARCES LR LR 21 41 51.0
comp=Z,214nm,18.0s,baz=184,slow=38
comp=Z,5.7nm,0.6s
ARCES ARCESS Array B 30.54 3 P **P 21 28 34.5 -1.0**
ARCES ARCESS Array B 30.54 3 P **P 21 28 34.5 -1.0**
ARCES pmax pmax
comp=Z,137nm,2.0s
JRN Qarnain Island 30.61 108 P **P 21 28 36.8 +0.4**
TORD Torodi Ar. Bea 30.84 218 P **P 21 28 39.7 +1.1**
comp=Z,3.4nm,0.6s,baz=26,slow=6.7,SNR=22
TORD LR LR 21 43 45.2
comp=Z,88nm,18.0s,baz=46,slow=41
comp=Z,3.4nm,0.6s
TORD Torodi Ar. Bea 30.84 218 P **P 21 28 38.7 +0.1**
GHWR Ruwais 31.20 109 P **P 21 28 41.5 -0.1**
SVE Sverdlovsk 31.50 43 *eP* **P 21 28 44.1 +0.1**
SVE pmax pmax
comp=E,21nm,0.9s
MZR Muzera 32.22 110 *i* P **P 21 28 50.3 -0.4**
SNR=13
MZR Muzera 32.22 110 P **P 21 28 50.2 -0.5**
AJN Ajban 32.41 106 P **P 21 28 52.5 +0.1**
SHME Shamm 32.45 103 P **P 21 28 52.4 -0.3**
SHME Shamm 32.45 103 P **P 21 28 54.1 +1.4**
SHME P **P 21 28 54.1 +1.4**
BANOM Banah 32.64 103 P **P 21 28 53.8 -0.6**
BANOM Banah 32.64 103 P **P 21 28 54.7 +0.3**
NAZ Nazwa, Dubai 32.67 105 *i* P **P 21 28 54.5 -0.2**
SNR=17
NAZ Nazwa, Dubai 32.67 105 P **P 21 28 54.6 0.0**
SNR=17
NAZ P **P 21 28 54.6 0.0**
SNR=17
FAQ Al Faqa, Dubai 32.76 106 P **P 21 28 55.3 -0.1**
FAQ Al Faqa, Dubai 32.76 106 P **P 21 28 55.2 -0.2**
MASF Masafi 32.84 104 P **P 21 28 56.2 +0.1**
MSFE Esma-Masafi 32.84 104 P **P 21 28 56.2 0.0**
MDH Madha 32.98 104 P **P 21 28 55.9 -1.4**
UOSS Minazif 33.11 105 **P 21 28 57.8 -0.7**
UOSS IAmb IAmb 21 29 04.2
comp=Z,7.0nm,0.8s
UOSS Minazif 33.11 105 P **P 21 28 57.6 -0.9**
UOSS Minazif 33.11 105 P **P 21 28 57.8 -0.7**
UOSS P **P 21 28 57.8 -0.7**
UOSS Minazif 33.11 105 ⇑P **P 21 28 58.0 -0.4**
HATD Hatta, Dubai 33.12 105 *i* P **P 21 28 58.0 -0.5**
SNR=5.8
HATD Hatta, Dubai 33.12 105 P **P 21 28 57.0 -1.6**
SNR=5.8
HATD P **P 21 28 57.0 -1.6**
SNR=5.8
ASHO Ashiyiah 33.14 105 P **P 21 28 57.9 -0.9**
SNR=6.0
ALNE Al Ain 33.27 106 *i* P **P 21 28 59.4 -0.5**
SNR=10
ALNE Al Ain 33.27 106 P **P 21 28 59.5 -0.4**
HRA Herat 33.48 85 **P 21 29 01.8 -0.1**
HRA IAmb IAmb 21 29 03.0
comp=Z,12nm,0.8s
UMZA Um Al Zommool 33.62 109 P **P 21 29 02.8 -0.2**
SOHO SOHO 33.81 106 *i* P **P 21 29 04.4 -0.1**
SNR=9.1
SOHO SOHO 33.81 106 P **P 21 29 04.2 -0.4**
SOHO P **P 21 29 04.2 -0.4**
FURI Furi 34.22 147 LR LR 21 44 26.5
comp=Z,105nm,19.4s,baz=341,slow=39
HOQ Hoqain 34.71 106 P **P 21 29 11.8 -0.6**
HOQ P **P 21 29 11.8 -0.6**
BSY Bisya 35.11 107 P **P 21 29 15.6 -0.3**
BORG Borgarnes 35.29 330 LR LR 21 44 50.1
comp=Z,73nm,21.6s,baz=146,slow=38
DOK Doka 35.49 116 P **P 21 29 19.1 0.0**
SMDO Samad 35.56 106 P **P 21 29 19.7 -0.2**
ABTO Aybut 35.77 118 P **P 21 29 22.6 +0.9**
RBK Rabkut 36.30 117 P **P 21 29 25.3 -0.8**
BORK Borovoye 36.40 51 **P 21 29 26.4 -0.1**
BORK IAmb IAmb 21 29 27.6
comp=Z,13nm,0.8s
BORK Borovoye 36.40 51 *ceP* **P 21 29 26.7 +0.1**
BORK pmax pmax
comp=Z,18nm,0.9s
BORK Borovoye 36.40 51 ⇑P **P 21 29 26.7 +0.1**
BVAR Borovoye Array 36.44 51 P **P 21 29 27.2 +0.3**
comp=Z,8.3nm,0.6s,baz=270,slow=5.9,SNR=71
BVAR LR LR 21 45 57.4
comp=Z,69nm,18.3s,baz=278,slow=39
comp=Z,8.3nm,0.6s
WBK Wadi Bani Khal 36.52 105 P **P 21 29 28.5 +0.6**
WBK P **P 21 29 28.5 +0.6**
DMTO DMTO 36.67 116 P **P 21 29 29.0 -0.2**
SNR=8.3
MHTO MHTO 36.74 109 P **P 21 29 31.0 +1.2**
SNR=9.2
MHTO P **P 21 29 31.0 +1.2**
SNR=9.2
CHM Chimkent 36.85 69 *eP* **P 21 29 30.2 -0.3**
CHM Chimkent 36.85 69 *eP* **P 21 29 30.3 -0.3**
SHAA Shahritus 36.96 77 **P 21 29 31.5 -0.1**
SHAA IAmb IAmb 21 29 43.1
comp=Z,18nm,0.8s
JLN Jalan Bani Buh 37.11 106 P **P 21 29 33.1 +0.1**
IUG Iuzhnay 37.20 69 *eP* **P 21 29 33.1 -0.5**
IUG pmax pmax
comp=Z,13nm,0.7s
IUG Iuzhnay 37.20 69 *eP* **P 21 29 33.1 -0.5**
comp=Z,13nm,0.7s
KK31 Karatay Array 37.35 67 **P 21 29 35.0 +0.2**
KK31 IAmb IAmb 21 29 36.1
comp=Z,13nm,0.7s
KK31 Karatay Array 37.35 67 P **P 21 29 35.0 +0.2**
KK31 pmax pmax
comp=Z,13nm,0.7s
KKAR Karatay Array 37.35 67 **P 21 29 34.8 0.0**
KKAR Karatay Array 37.35 67 P **P 21 29 34.8 0.0**
BRZS Berezniki 37.92 56 *eP* **P 21 29 39.0 -0.6**
BRZS Berezniki 37.92 56 *eP* **P 21 29 39.0 -0.6**
DZA Taraz 37.98 68 *eP* **P 21 29 39.7 -0.4**
DZA Taraz 37.98 68 *eP* **P 21 29 39.8 -0.4**
LODK Lodwar 38.03 156 P **P 21 29 41.7 +0.9**
BTK Batken 38.27 72 **P 21 29 42.6 -0.1**
BTK IAmb IAmb 21 29 51.5
comp=Z,18nm,0.7s
BTK Batken 38.27 72 P **P 21 29 42.7 -0.1**
BTK pmax pmax
comp=Z,18nm,0.7s
KBL Kabul 38.67 81 **P 21 29 45.9 -0.4**
KBL Kabul 38.67 81 P **P 21 29 45.9 -0.4**
KBL pmax pmax
comp=Z,4.0nm,0.9s
KBL Kabul 38.67 81 P **P 21 29 46.7 +0.4**
KBL P **P 21 29 46.7 +0.4**
SPITS Spitsbergen Ar 39.16 359 P **P 21 29 49.8 +0.1**
comp=Z,5.6nm,0.8s,baz=143,slow=5.0,SNR=9.3
SPITS LR LR 21 48 05.5
comp=Z,117nm,18.2s,baz=172,slow=40
comp=Z,5.6nm,0.8s
SPITS Spitsbergen Ar 39.16 359 P **P 21 29 49.4 -0.3**
SPITS pmax pmax
comp=Z,158nm,1.9s
ARSB Arslanbob 39.54 70 **P 21 29 53.5 +0.1**
ARSB IAmb IAmb 21 30 03.2
comp=Z,32nm,1.3s
ARSB Arslanbob 39.54 70 P **P 21 29 53.5 +0.1**
ARSB pmax pmax
comp=Z,32nm,1.3s
DBIC Dimbokro 39.67 222 P **P 21 29 57.0 +2.6**
comp=Z,2.5nm,0.5s,baz=34,slow=7.6,SNR=4.7
DBIC LR LR 21 47 51.0
comp=Z,178nm,18.8s,baz=46,slow=38
comp=Z,2.5nm,0.5s
DBIC Dimbokro 39.67 222 P **P 21 29 54.5 +0.1**
DBIC IAmb IAmb 21 30 32.5
comp=Z,47nm,1.9s
DBIC Dimbokro 39.67 222 P **P 21 29 54.6 +0.1**
DBIC pmax pmax
comp=Z,47nm,2.0s
AAK Ala-Archa 40.30 67 P **P 21 30 00.2 +0.4**
AAK LR LR 21 51 44.3
comp=Z,82nm,19.0s,baz=292,slow=44
comp=Z,4.0nm,0.8s
AAK Ala-Archa 40.30 67 **P 21 30 00.0 +0.2**
AAK IAmb IAmb 21 30 04.0
comp=Z,31nm,1.7s
AAK Ala-Archa 40.30 67 *i* P **P 21 30 00.2 +0.4**
SNR=10.0
AAK Ala-Archa 40.30 67 *ceP* **P 21 29 59.7 -0.1**
AAK pmax pmax
comp=Z,20nm,1.7s
AAK Ala-Archa 40.30 67 P **P 21 30 00.0 +0.2**
AAK Ala-Archa 40.30 67 ⇑P **P 21 30 00.3 +0.5**
FRU1 Bishkek 40.36 67 P **P 21 30 00.2 +0.1**
FRU1 IAmb IAmb 21 30 01.7
comp=Z,15nm,0.8s
FRU1 Bishkek 40.36 67 P **P 21 30 00.2 +0.1**
FRU1 pmax pmax
comp=Z,15nm,0.8s
MBAR Mbarara 40.65 164 LR LR 21 48 10.0
comp=Z,111nm,18.2s,baz=349,slow=38
KURBB Kurchatov Arra 41.59 54 P **P 21 30 09.6 -0.5**
comp=Z,13nm,0.8s,baz=284,slow=9.0,SNR=68
KURBB LR LR 21 50 01.9
comp=Z,46nm,18.1s,baz=174,slow=40
comp=Z,13nm,0.8s
KURK Kurchatov 41.64 54 **P 21 30 10.1 -0.3**
KURK IAmb IAmb 21 30 10.9
comp=Z,24nm,1.2s
KURK Kurchatov 41.64 54 *ceP* **P 21 30 09.8 -0.6**
KURK pmax pmax
comp=Z,21nm,1.1s
KURK Kurchatov 41.64 54 ⇑P **P 21 30 09.9 -0.5**
AAA Alma-Ata 41.89 66 *eP* **P 21 30 12.1 -0.6**
AAA pmax pmax
comp=Z,7.0nm,0.6s
AAA Alma-Ata 41.89 66 *eP* **P 21 30 12.2 -0.6**
comp=Z,7.3nm,0.6s
TNSS Tian-Shan 41.96 66 *eP* **P 21 30 12.7 -0.9**
TNSS Tian-Shan 41.96 66 *eP* **P 21 30 12.7 -0.9**
MDOK Medeo 42.00 66 *eP* **P 21 30 13.1 -0.6**
MDOK Medeo 42.00 66 *eP* **P 21 30 13.1 -0.6**
KSH2 Kashi 42.05 72 P **P 21 30 14.6 +0.4**
KSH2 pP pP 21 30 17.8 -1.4
KSH2 pmax pmax
comp=Z,7.0nm,1.1s
NIL Nilore 42.24 81 **P 21 30 15.1 -0.5**
NIL IAmb IAmb 21 30 31.3
comp=Z,19nm,0.9s
NIL Nilore 42.24 81 P **P 21 30 15.1 -0.5**
NIL pmax pmax
comp=Z,19nm,0.9s
TDK Taldyqorghan 42.51 63 *eP* **P 21 30 17.1 -0.5**
TDK Taldyqorghan 42.51 63 *eP* **P 21 30 17.2 -0.5**
SEM Semipalatinsk 42.71 54 *eP* **P 21 30 18.9 -0.6**
SEM pmax pmax
comp=Z,10.0nm,0.8s
SEM Semipalatinsk 42.71 54 *eP* **P 21 30 18.9 -0.6**
comp=Z,10nm,0.8s
TARG Taragay, Kyrgy 42.92 68 **P 21 30 21.5 0.0**
TARG Taragay, Kyrgy 42.92 68 P **P 21 30 21.5 0.0**
TARG pmax pmax
comp=Z,7.0nm,1.0s
SATY Saty 42.98 65 *eP* **P 21 30 21.0 -0.6**
SATY Saty 42.98 65 *eP* **P 21 30 21.1 -0.6**
UZB Uzynbulak 43.40 65 *eP* **P 21 30 24.3 -0.7**
UZB Uzynbulak 43.40 65 *eP* **P 21 30 24.4 -0.6**
SHLS Shalkode 43.70 65 *eP* **P 21 30 29.4 +1.9**
SHLS Shalkode 43.70 65 *eP* **P 21 30 29.4 +1.9**
SUMG Summit 43.93 338 *i* P **P 21 30 29.6 +0.4**
SUMG IAmb IAmb 21 30 31.1
comp=Z,5.8nm,0.9s
SUMG Summit 43.93 338 ⇑P **P 21 30 30.6 +1.4**
NOR Nord 44.51 353 *i* P **P 21 30 33.1 -0.2**
NOR IAmb IAmb 21 30 33.9
comp=Z,14nm,1.3s
MAKZ Makanchi 44.52 59 P **P 21 30 32.5 -1.3**
MAKZ Makanchi 44.52 59 P **P 21 30 32.6 -1.3**
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
MAKZ Makanchi 44.52 59 ⇑P **P 21 30 33.4 -0.5**
MK31 Makanchi Array 44.73 59 *ceP* **P 21 30 35.2 -0.4**
MKAR Makanchi Array 44.73 59 P **P 21 30 35.0 -0.6**
comp=Z,14nm,0.5s,baz=278,slow=7.2,SNR=92
MKAR LR LR 21 50 52.3
comp=Z,63nm,21.6s,baz=334,slow=38
comp=Z,14nm,0.5s
MKAR Makanchi Array 44.73 59 *ceP* **P 21 30 35.2 -0.4**
MKAR pmax pmax
comp=Z,14nm,0.5s
ZAA0 Zalesovo Array 44.99 49 **P 21 30 36.8 -0.6**
ZALV Zalesovo Beam 44.99 49 P **P 21 30 36.9 -0.5**
comp=Z,35nm,0.6s,baz=276,slow=8.5,SNR=209
ZALV LR LR 21 51 17.4
comp=Z,63nm,18.3s,baz=315,slow=39
comp=Z,35nm,0.6s
ZALV Zalesovo Beam 44.99 49 **P 21 30 36.8 -0.6**
NRIK Noril'sk 45.88 27 P **P 21 30 44.7 +0.3**
comp=Z,9.8nm,0.9s,baz=251,slow=6.4,SNR=15
NRIK LR LR 21 50 39.5
comp=Z,84nm,20.6s,baz=263,slow=37
comp=Z,9.8nm,0.9s
NRIK Noril'sk 45.88 27 **P 21 30 44.4 +0.1**
NRIK IAmb IAmb 21 30 46.8
comp=Z,19nm,1.1s
NRIK Noril'sk 45.88 27 *i* P **P 21 30 45.7 +1.4**
NRIK pmax pmax
comp=Z,23nm,1.2s
ZSN Zaisan 46.28 58 *eP* **P 21 30 47.4 -0.4**
ZSN pmax pmax
comp=Z,7.0nm,1.1s
ZSN Zaisan 46.28 58 *eP* **P 21 30 47.5 -0.4**
comp=Z,6.8nm,1.1s
DGZ Jazzator, Alta 47.39 54 *d i* P **P 21 30 56.8 +0.2**
DGZ pmax pmax
comp=Z,11nm,0.8s
SFJD Kangerlussuaq 47.41 330 LR LR 21 51 50.6
comp=Z,84nm,18.8s,baz=116,slow=37
GDH Godhavn 48.44 333 *i* P **P 21 31 04.4 +0.2**
GDH IAmb IAmb 21 31 05.3
comp=Z,8.3nm,0.8s
WMQ Urumqi 49.23 62 *eP* **P 21 31 15.3 +4.5**
WMQ LR LR
comp=N,380nm,21.3s
WMQ LR LR
comp=E,850nm,24.2s
TULEG Thule 52.17 343 **P 21 31 31.9 -0.4**
TULEG IAmb IAmb 21 31 33.0
comp=Z,12nm,1.3s
KNGR Kungurtug, Tuv 53.35 51 *i* P **P 21 31 42.8 +1.2**
KNGR pmax pmax
comp=Z,6.0nm,1.4s
MSEY Mahe Island 54.21 135 P **P 21 31 48.4 +0.2**
MSEY Mahe Island 54.21 135 P **P 21 31 48.4 +0.2**
MSEY pmax pmax
comp=Z,66nm,1.2s
DRLN Deer Lake 54.54 308 P **P 21 31 50.2 0.0**
DRLN IAmb IAmb 21 32 03.5
comp=Z,21nm,1.1s
LSZ Lusaka 54.62 171 LR LR 21 55 36.3
comp=Z,82nm,18.6s,baz=336,slow=36
FRB Frobisher Bay 55.35 327 LR LR 21 56 57.8
comp=Z,96nm,18.1s,baz=22,slow=38
TLY Talaya 56.57 48 P **P 21 32 04.5 -0.3**
TLY IAmb IAmb 21 32 06.3
comp=Z,9.4nm,1.0s
LSA Lhasa 57.63 76 P **P 21 32 12.3 -0.9**
LSA IAmb IAmb 21 32 13.4
comp=Z,4.8nm,0.7s
LSA Lhasa 57.63 76 P **P 21 32 12.3 -0.9**
LSA pmax pmax
comp=Z,5.0nm,0.7s
SCHQ Schefferville 57.78 317 P **P 21 32 13.2 -0.1**
comp=Z,2.9nm,0.5s,baz=74,slow=5.4,SNR=14
comp=Z,2.9nm,0.5s
ILON Igloolik, Nuna 58.07 336 **P 21 32 15.3 +0.2**
ILON IAmb IAmb 21 32 16.2
comp=Z,8.1nm,0.9s
TIXI Tiksi 58.70 21 LR LR 22 00 58.5
comp=Z,230nm,18.2s,baz=358,slow=40
TIXI Tiksi 58.70 21 **P 21 32 19.8 +0.3**
TIXI Tiksi 58.70 21 *ceP* **P 21 32 19.9 +0.5**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
RES Resolute Bay 58.84 344 LR LR 21 58 01.5
comp=Z,63nm,18.5s,baz=18,slow=36
GTA2 Gaotai 59.23 62 *eP* **P 21 32 23.1 -0.7**
GTA2 pmax pmax
comp=Z,9.0nm,0.7s
SONM Songino Array 59.78 51 P **P 21 32 27.1 -0.4**
comp=Z,3.5nm,0.8s,baz=288,slow=9.5,SNR=27
SONM LR LR 22 00 20.1
comp=Z,78nm,18.6s,baz=283,slow=38
comp=Z,3.5nm,0.8s
SONM Songino Array 59.78 51 P **P 21 32 27.1 -0.4**
SONM IAmb IAmb 21 32 28.2
comp=Z,5.3nm,1.0s
SONM Songino Array 59.78 51 P **P 21 32 27.1 -0.4**
SONM pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 60.17 51 **P 21 32 29.5 -0.6**
ULN Ulaanbaatar 60.17 51 *ceP* **P 21 32 30.1 0.0**
ULN pmax pmax
comp=Z,9.0nm,1.7s
ICQ Pointe Anglais 60.27 311 P **P 21 32 30.9 +0.3**
SHL Shillong 60.31 80 **P 21 32 29.5 -2.0**
SHL IAmb IAmb 21 32 30.0
comp=Z,6.3nm,0.5s
SHL Shillong 60.31 80 P **P 21 32 29.5 -2.0**
SHL pmax pmax
comp=Z,6.0nm,0.5s
PALK Pallekele 62.38 104 P **P 21 32 44.8 -0.6**
PALK Pallekele 62.38 104 P **P 21 32 44.8 -0.6**
PALK pmax pmax
comp=Z,105nm,1.9s
LZDM Lanzhou Array 63.67 64 P **P 21 32 53.1 -0.9**
comp=Z,3.2nm,0.6s,baz=290,slow=4.3,SNR=11
comp=Z,3.2nm,0.6s
LZH Lanzhou 63.70 64 *eP* **P 21 32 53.7 -0.4**
LZH pP pP 21 32 56.6 -2.7
LZH pmax pmax
comp=Z,9.0nm,1.6s
LBTB Lobatse 64.02 175 LR LR 22 02 49.8
comp=Z,45nm,19.0s,baz=354,slow=38
YAK Yakutsk 64.22 30 LR LR 22 03 13.8
comp=Z,90nm,18.5s,baz=282,slow=38
YAK Yakutsk 64.22 30 **P 21 32 56.0 -0.8**
YAK Yakutsk 64.22 30 *i* P **P 21 32 56.4 -0.4**
YAK pmax pmax
comp=Z,9.0nm,0.8s
TNCH TengChong 65.65 77 P **P 21 33 07.9 +0.9**
TNCH sP pP 21 33 12.0 -0.2
TNCH PP PP 21 35 39.9 +8.6
TNCH S **S 21 41 46.6 -5.8**
TNCH sS pS 21 41 55.1 -3.7
TNCH pmax pmax
comp=Z,8.0nm,2.1s
TNCH pmax pmax
comp=Z,110nm,4.4s
TNCH LR LR
comp=N,110nm,5.2s
TNCH LR LR
comp=E,120nm,5.4s
TNCH LR LR
comp=Z,110nm,4.9s
CD2 Chengdu 66.35 69 *eP* **P 21 33 10.0 -1.2**
HHC Hu-ho-hao-te 66.42 56 *eP* **P 21 33 11.1 -0.6**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,61nm,3.5s
A36M Sachs Harbour 66.57 349 **P 21 33 12.6 +0.8**
BOSA Boshof 67.57 176 P **P 21 33 21.1 +2.2**
comp=Z,1.5nm,0.6s,baz=344,slow=10,SNR=4.7
BOSA LR LR 22 04 47.0
comp=Z,94nm,18.2s,baz=18,slow=38
comp=Z,1.5nm,0.6s
BOSA Boshof 67.57 176 P **P 21 33 19.6 +0.7**
BOSA Boshof 67.57 176 P **P 21 33 19.6 +0.7**
BOSA pmax pmax
comp=Z,49nm,2.0s
XLT XiLinHaoTe 67.60 51 *eP* **P 21 33 18.6 -0.5**
XLT pmax pmax
comp=Z,5.0nm,0.9s
XLT pmax pmax
comp=Z,99nm,4.8s
XAN Xi'an 68.32 63 ⇓P **P 21 33 23.0 -0.7**
XAN pmax pmax
comp=Z,9.0nm,1.2s
FCC Fort Churchill 68.43 329 **P 21 33 24.3 +0.4**
FCC IAmb IAmb 21 33 25.6
comp=Z,8.3nm,1.1s
FCC Fort Churchill 68.43 329 P **P 21 33 24.3 +0.4**
FCC pmax pmax
comp=Z,8.0nm,1.1s
C36M Paulatuk 68.71 347 **P 21 33 25.7 +0.3**
C36M IAmb IAmb 21 33 26.8
comp=Z,8.5nm,0.8s
SADO Sadowa 69.65 312 LR LR 22 04 39.0
comp=Z,33nm,18.3s,baz=82,slow=36
CM31 Chiang Mai Arr 69.69 82 P **P 21 33 30.8 -1.6**
CM31 IAmb IAmb 21 33 32.3
comp=Z,8.2nm,1.4s
CMAR Chiang Mai Arr 69.69 82 P **P 21 33 30.9 -1.5**
comp=Z,2.3nm,0.7s,baz=305,slow=7.6,SNR=29
CMAR LR LR 22 08 37.0
comp=Z,17nm,20.4s,baz=290,slow=40
comp=Z,2.3nm,0.7s
CMAR Chiang Mai Arr 69.69 82 P **P 21 33 31.0 -1.4**
CMAR Chiang Mai Arr 69.69 82 *i* P **P 21 33 31.2 -1.1**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
HEH HeiHe 70.24 41 *eP* **P 21 33 35.1 -0.1**
HEH pmax pmax
comp=Z,6.0nm,0.7s
HNS HongShan 70.36 58 ⇓P **P 21 33 35.8 -0.4**
HNS pmax pmax
comp=Z,4.0nm,0.9s
ENH Enshi 70.81 66 P **P 21 33 38.0 -1.2**
ENH IAmb IAmb 21 33 38.8
comp=Z,7.6nm,0.7s
INK Inuvik 71.10 350 **P 21 33 40.2 +0.1**
INK IAmb IAmb 21 33 40.7
comp=Z,29nm,2.0s
INK Inuvik 71.10 350 P **P 21 33 40.2 +0.1**
INK pmax pmax
comp=Z,29nm,2.0s
SUR Sutherland 71.18 180 LR LR 22 06 42.8
comp=Z,55nm,20.9s,baz=357,slow=37
SEY Seymchan 71.19 21 *ceP* **P 21 33 42.2 +1.4**
SEY pmax pmax
comp=Z,11nm,1.7s
F30M Barrier River 72.05 351 **P 21 33 46.3 +0.4**
F30M IAmb IAmb 21 33 59.0
comp=Z,24nm,1.6s
TOLK Toolik Lake Re 72.26 356 P **P 21 33 48.0 +0.7**
TOLK IAmb IAmb 21 33 50.9
comp=Z,8.8nm,1.1s
YKA Yellowknife Ar 72.49 340 P **P 21 33 49.1 +0.5**
comp=Z,2.9nm,0.8s,baz=29,slow=5.6,SNR=39
YKA LR LR 22 08 28.7
comp=Z,38nm,18.0s,baz=304,slow=38
comp=Z,2.9nm,0.8s
YKA Yellowknife Ar 72.49 340 P **P 21 33 48.5 -0.1**
G31M Satah River 72.50 350 P **P 21 33 48.8 +0.2**
G31M IAmb IAmb 21 33 49.7
comp=Z,7.4nm,0.8s
BNX BinXian 73.04 45 ⇑P **P 21 33 50.8 -1.4**
BNX pmax pmax
comp=Z,6.0nm,0.8s
KLR Kul'dur 73.07 40 LR LR 22 10 01.0
comp=Z,10nm,18.2s,baz=326,slow=39
BMAR Burnt Mountain 73.13 354 P **P 21 33 53.8 +1.4**
CN2 Changchun 73.16 47 *eP* **P 21 33 51.3 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
MA2 Magadan 73.36 24 LR LR 22 08 55.7
comp=Z,62nm,18.3s,baz=312,slow=38
MA2 Magadan 73.36 24 **P 21 33 54.1 +0.3**
MA2 IAmb IAmb 21 33 55.6
comp=Z,19nm,1.2s
MA2 Magadan 73.36 24 *ceP* **P 21 33 55.1 +1.3**
MA2 pmax pmax
comp=Z,11nm,1.0s
MA2 Magadan 73.36 24 P **P 21 33 54.4 +0.6**
MA2 pP **pP 21 33 59.1 0.0**
E18K Tukpahlearik C 73.73 0 P **P 21 33 56.7 +0.8**
E18K IAmb IAmb 21 33 57.8
comp=Z,6.9nm,0.8s
MDP Montagnes des 73.81 263 LR LR 22 04 26.0
comp=Z,31nm,18.1s,baz=80,slow=34
FFC Flin Flon 74.36 329 P **P 21 33 60.0 +0.2**
FFC IAmb IAmb 21 34 18.3
comp=Z,20nm,1.9s
FFC Flin Flon 74.36 329 P **P 21 34 00.0 +0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FFC				pmax	pmax		
	comp=Z,20nm,1.9s						
I28M	Miner Creek	74.62	352	P	P	21 34 01.8	+0.6
ULM	Lac du Bonnet	74.94	323	P	P	21 34 03.1	-0.1
	comp=Z,10.0nm,0.9s,baz=45,slow=5.9,SNR=13						
	comp=Z,10.0nm,0.9s						
ULM	Lac du Bonnet	74.94	323		P	21 34 03.5	+0.3
ULM				IAmb	IAmb	21 34 04.7	
	comp=Z,12nm,1.0s						
ULM	Lac du Bonnet	74.94	323	P	P	21 34 03.5	+0.3
ULM				pmax	pmax		
	comp=Z,12nm,1.0s						
DAWY	Dawson	75.89	351		P	21 34 09.5	+1.0
DAWY				IAmb	IAmb	21 34 10.5	
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	75.93	355	P	P	21 34 09.2	+0.5
	comp=Z,1.5nm,0.8s,baz=4.1,slow=5.6,SNR=19						
	comp=Z,1.5nm,0.8s						
NJ2	Nanjing	76.26	60	eP	P	21 34 12.5	+1.4
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PDPR	Patillas Dam,	76.30	282	P	P	21 34 12.3	+0.9
WRH	Wood River Hil	76.32	355		P	21 34 11.1	+0.3
WRH				IAmb	IAmb	21 34 12.3	
	comp=Z,6.3nm,0.8s						
SCRK	Sand Creek	76.47	353	P	P	21 34 11.9	0.0
SCRK				IAmb	IAmb	21 34 13.1	
	comp=Z,29nm,2.0s						
BCAR	Beaver Creek A	77.14	352	P	P	21 34 16.7	+1.1
WCI	Wyandotte Cave	77.90	310	P	P	21 34 20.6	+0.4
WCI	Wyandotte Cave	77.90	310	P	P	21 34 20.6	+0.4
WCI				pmax	pmax		
	comp=Z,42nm,1.5s						
KSRS	Korea Array	78.65	51	P	P	21 34 23.6	-0.8
	comp=Z,2.2nm,0.8s,baz=306,slow=4.5,SNR=5.9						
	comp=Z,2.2nm,0.8s						
KULM	Kulim	78.96	92	P	P	21 34 25.1	-1.4
PCA	Pinnacle	79.84	350	P	P	21 34 29.4	-1.2
ECSD	EROS Data Cent	79.89	319		P	21 34 30.7	-0.4
ECSD				IAmb	IAmb	21 34 32.1	
	comp=Z,14nm,1.4s						
YSS	Yuzhno-Sakhali	79.93	36		P	21 34 30.8	-0.3
YSS	Yuzhno-Sakhali	79.93	36	ceP	P	21 34 31.8	+0.6
YSS				pmax	pmax		
	comp=Z,35nm,1.3s						
PETK	Petropavlovsk-	80.88	25	LR	LR	22 16 55.8	
	comp=Z,43nm,18.8s,baz=311,slow=41						
LRAL	Lakeview Retre	81.73	306		P	21 34 41.9	+0.8
LRAL				IAmb	IAmb	21 34 43.4	
	comp=Z,18nm,1.1s						
ASAJ	Asahikawa	81.97	38	P	P	21 34 41.6	-0.5
ASAJ				pmax	pmax		
	comp=Z,36nm,1.3s						
JKA	Kamikawa-asahi	81.97	38	P	P	21 34 41.6	-0.6
BDFB	Brasilia	84.00	244	P	P	21 34 55.1	+2.0
	comp=Z,2.6nm,0.6s,baz=292,slow=5.4,SNR=3.9						
BDFB				LR	LR	22 12 50.3	
	comp=Z,49nm,18.5s,baz=358,slow=36						
	comp=Z,2.6nm,0.6s						
MJAR	Matsushiro Arr	85.25	46	P	P	21 34 59.0	-0.2
	comp=Z,5.7nm,0.9s,baz=319,slow=4.6,SNR=13						
	comp=Z,5.7nm,0.9s						
MJAR	Matsushiro Arr	85.25	46		P	21 34 58.9	-0.2
MJAR				IAmb	IAmb	21 35 10.8	
	comp=Z,24nm,1.9s						
MJAR	Matsushiro Arr	85.25	46	P	P	21 34 58.9	-0.2
MJAR				pmax	pmax		
	comp=Z,24nm,1.9s						
PDAR	Pinedale Array	86.77	326	P	P	21 35 06.7	-0.1
	comp=Z,1.1nm,0.7s,baz=64,slow=5.4,SNR=11						
	comp=Z,1.1nm,0.7s						
PDAR	Pinedale Array	86.77	326	P	P	21 35 06.9	+0.1
WMOK	Wichita Mounta	87.56	314	P	P	21 35 11.3	+0.8
WMOK				IAmb	IAmb	21 35 20.3	
	comp=Z,5.4nm,0.9s						
WMOK	Wichita Mounta	87.56	314	P	P	21 35 11.3	+0.8
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HMU	Henry Mountain	91.20	324		P	21 35 28.1	+0.2
HMU				IAmb	IAmb	21 35 29.1	
	comp=Z,7.7nm,0.8s						
ANMO	Albuquerque	91.50	319	ceP	P	21 35 29.9	+0.6
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
TXAR	Lajitas Array	94.34	314	P	P	21 35 43.8	+1.4
	comp=Z,1.9nm,0.8s,baz=75,slow=3.8,SNR=20						
	comp=Z,1.9nm,0.8s						
TXAR	Lajitas Array	94.34	314	P	P	21 35 43.6	+1.3
TXAR	Lajitas Array	94.34	314	P	P	21 35 43.6	+1.3
CPUP	Villa Florida	97.57	242	LR	LR	22 20 55.2	
	comp=Z,77nm,20.2s,baz=80,slow=36						
LPAZ	La Paz	99.14	257	LR	LR	22 22 39.5	
	comp=Z,26nm,18.8s,baz=58,slow=36						
WRA	Warramunga Arr	120.50	92	PKP	PKPdf	21 41 13.5	-0.7
	comp=Z,0.9nm,0.8s,baz=323,slow=1.5,SNR=6.6						
ASAR	Alice Springs	122.21	96	PKP	PKPdf	21 41 17.1	-0.4
	comp=Z,1.8nm,0.8s,baz=341,slow=1.8,SNR=16						

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*BGS **01** 21:26:54.5±0.4, 49.86N×2.01W, h5km, ML1.9*
*LDG **01** 21:26:55.6±0.2, 49.77N×1.99W, h5km, Ml2.7/7, Error ellipse: s-maj=3.1km s-min=2.8km az=153.0*
*STR **01** 21:26:56.9±0.0, 49.7N±0.1×2.0W±0.1, h14km, MLv2.4/6, LOCSAT earthModelID haslach_taup-2.11 preliminary*
ISC 01 21:26:53.5±1.2**, 49.82N**±0.03×**2.01W**±0.03**, h5**km±11km**, n28, σ0.88**/53**, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JLP	Les Platons	0.58	186	eP	Pb	21 27 05.9	-0.3
JDG	Jersey Dam (Ga	0.63	182	eP	Pb	21 27 06.8	-0.2
JRS	Jersey	0.63	185	eP	Pb	21 27 06.9	-0.2
JRS				eS	Sb	21 27 16.3	+0.1
JDC	Jersey Dam (Cr	0.64	182	eP	Pb	21 27 06.9	-0.3
JDC				IAML		21 27 19.0	
	comp=E,62nm,0.1s						
JDC				IAML		21 27 19.3	
	comp=N,133nm,0.2s						
JSA	Saint Aubin	0.65	189	eP	Pb	21 27 07.2	-0.1
JSA				IAML		21 27 20.6	
	comp=N,20nm,0.2s						
JSA				IAML		21 27 21.4	
	comp=E,16nm,0.1s						
JSA	Saint Aubin	0.65	189	Pg	Pb	21 27 07.1	-0.2
JSA				Pn	Pn	21 27 08.1	-1.2
LOUF	Saint-Loup	1.24	157	Pn	Pn	21 27 17.9	+0.3
LOUF				Sg	Sn	21 27 35.9	+1.2
PLEF	Pleven - 22200	1.35	189	Pg	Pb	21 27 19.4	+0.1
PLEF				Sg	Sn	21 27 39.3	+2.0
FLN	La Foliniere	1.46	136	ePg	Pg	21 27 21.7	+0.2
FLN				eSg	Sg	21 27 41.2	+0.8
	comp=E,17nm,0.2s						
LOCF	Locquirec - 29	1.58	224	Pn	Pn	21 27 21.9	-0.2
LOCF				Pg	Pb	21 27 23.9	+0.7
LOCF				Sn	Sn	21 27 42.2	-0.8
LOCF				Sg	Sg	21 27 44.9	+0.7
SGMF	Saint Gilles	1.61	193	ePg	Pb	21 27 24.2	+0.5
SGMF				eSg	Sg	21 27 45.3	+0.1
	comp=E,9.8nm,0.3s						
GRR	Gorron	1.62	152	ePg	Pg	21 27 24.6	0.0
GRR				eSg	Sg	21 27 46.4	+0.7
	comp=E,21nm,0.2s						
SWN1	Swindon	1.70	5	Pn	Pb	21 27 25.1	-0.1
SWN1				Sn	Sb	21 27 47.3	+0.4
ROSF	Rostrenen	1.70	210	ePg	Pg	21 27 26.2	0.0
ROSF				eSg	Sg	21 27 48.8	+0.6
	comp=E,18nm,0.3s						
ROSF	Rostrenen	1.70	210	eP	Pn	21 27 24.2	+0.3
ROSF				eS	Sn	21 27 46.2	+0.1
ROSF				IAML		21 27 51.7	
	comp=N,8.4nm,0.2s						
ROSF				IAML		21 27 52.4	
	comp=E,10.0nm,0.4s						
ROSF	Rostrenen	1.70	210	Pn	Pn	21 27 24.0	+0.1
ROSF				Pg	Pg	21 27 26.5	+0.4
ROSF				Sg	Sg	21 27 49.3	+1.1
LDF	La Druitiere	1.75	134	ePg	Pg	21 27 27.0	0.0
LDF				eSg	Sg	21 27 50.2	+0.6
	comp=E,14nm,0.3s						
STRD	Stroud	1.96	357	eP	Pn	21 27 27.2	-0.2
HTL	Hartland	1.97	307	eP	Pn	21 27 27.0	-0.5
HTL	Hartland	1.97	307	Pn	Pb	21 27 29.2	-0.6
HTL				Sn	Sb	21 27 56.0	+1.4
GUEF	Guhenno - 56	1.98	192	Pn	Pn	21 27 27.6	-0.1
GUEF				Pg	Pg	21 27 31.4	-0.1
GUEF				Sn	Sn	21 27 52.5	-0.4
SOMF	Saint-Ouen-de-	2.04	138	Pg	Pg	21 27 32.3	-0.4
SOMF				Sn	Sn	21 27 54.7	+0.3
SOMF				Sg	Sg	21 27 59.6	+0.5
QUIF	Quistinic	2.06	202	ePn	Pn	21 27 28.4	-0.3
QUIF				ePg	Pb	21 27 32.3	+1.0
QUIF				eSg	Sg	21 27 59.1	-0.4
	comp=E,4.2nm,0.2s						
MONM	Monmouth	2.08	346	IAML		21 27 58.5	
	comp=N,21nm,0.2s						
MONM				IAML		21 27 59.0	
	comp=E,19nm,0.3s						
BEGF	Beganne - 5601	2.22	184	Pn	Pn	21 27 30.7	-0.2
BEGF				Pg	Pg	21 27 35.4	-0.6
BEGF				Sg	Sg	21 28 04.5	-0.2
MCH1	Michaelchurch	2.26	344	IAML		21 28 02.8	
	comp=E,9.9nm,0.4s						
MCH1				IAML		21 28 13.8	
	comp=N,4.0nm,0.4s						
OLIV	Plomelin	2.37	217	Pn	Pn	21 27 32.5	-0.4
OLIV				Sn	Sn	21 27 59.7	-2.6
MFF	Saint Martin d	3.46	158	ePg	Pg	21 27 58.7	-1.0
MFF				eSg	Sg	21 28 41.1	-3.4
	comp=N,2.0nm,0.2s						

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*TAP **01** 21:42:33.8, 24.79N×122.89E, h134km±1km, ML2.8, C*
*JMA **01** 21:42:35.4±0.3, 25°N±2°×123.0E±0.9, h113km, MV1.6/13, NW OFF ISHIGAKIJIMA IS*
ISC 01 21:42:33.8±1.7**, 24.78N**±0.07×**122.90E**±0.03**, h135**km±10km**, n48, σ0.79**/82**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.33	172	P	Pn	21 42 53.0	+0.4
YOJ	Yonaguni jima	0.34	162	eP	Pn	21 42 53.0	+0.4
YOJ	Yonaguni jima	0.34	162	eP	Pn	21 42 52.9	+0.3
YOJ				eS	Sn	21 43 05.9	-0.9
EOS2	EOS2	0.70	239	eP	Pn	21 42 55.9	+1.4
EOS2				eS	Sn	21 43 11.3	+1.1
EOS3	EOS3	0.72	227	eP	Pn	21 42 55.4	+0.8
EOS3				eS	Sn	21 43 10.3	-0.1
EOS4	EOS4	0.84	219	eP	Pn	21 42 56.1	+0.8
EOS4				S	Sn	21 43 12.2	+0.6
TWB1	Santiao Chiao	0.85	285	eP	Pn	21 42 56.0	+0.3
IRIF	Iriomote-Funau	0.88	120	eS	Sn	21 43 13.1	+0.2
TIPB	Shuangxi	0.99	281	eP	Pn	21 42 56.9	-0.1
TIPB				eS	Sn	21 43 14.2	-0.5
NDS	Dongshan	1.08	262	eP	Pn	21 42 57.3	-0.6
NDS				eS	Sn	21 43 14.8	-1.3
HATJ	Hateruma jima	1.10	131	eS	Sn	21 43 16.7	+0.3
ENA	Nanau	1.11	252	eP	Pn	21 42 57.9	-0.2
JKRS	Kuro-shima	1.15	118	P	Pn	21 42 59.3	+0.8
JKRS				eS	Sn	21 43 17.5	+0.3
FUSB	Fushanzhiwuyua	1.19	269	eP	Pn	21 42 59.2	+0.2
FUSB				eS	Sn	21 43 17.2	-0.9
JIJ	Ishigaki jima	1.21	110	P	Pn	21 42 59.2	+0.1
JIJ				eS	Sn	21 43 17.3	-1.0
ENTT	Nioudou	1.22	264	eP	Pn	21 42 59.5	+0.3
ENTT				eS	Sn	21 43 18.8	+0.3
NWLT	Wulai	1.27	270	eS	Sn	21 43 19.8	+0.4
LATG	Datong	1.27	259	eP	Pn	21 43 00.4	+0.5
LATG				eS	Sn	21 43 19.8	+0.2
JISG	Ishigakijimahi	1.30	98	eP	Pn	21 42 59.9	-0.1
JISG				eS	Sn	21 43 19.1	-0.9
ETL	Fush Village	1.32	242	eP	Pn	21 42 60.0	-0.3
NACB	Ninganchiao	1.33	243	eP	Pn	21 42 59.5	-0.8
NACB				eS	Sn	21 43 18.9	-1.7
TWD	Chiawan	1.38	240	eP	Pn	21 43 00.5	-0.4
TWD				eS	Sn	21 43 20.5	-0.9
YHNB	Yeheng	1.39	266	P	Pn	21 43 01.3	+0.3
YHNB				S	Sn	21 43 21.2	-0.6
NSK	Sanguang	1.40	266	eP	Pn	21 43 01.3	+0.1
NSK				eS	Sn	21 43 21.4	-0.6
ETLH	Xiulin Townshi	1.41	246	eP	Pn	21 43 01.1	-0.2
ETLH				eS	Sn	21 43 21.8	-0.5
NNSH	Datong	1.42	256	eP	Pn	21 43 01.6	+0.1
ETM	Tongmen	1.52	238	eP	Pn	21 43 02.1	-0.3
ETM				eS	Sn	21 43 23.9	-0.3
LXIB	Xiulin Townshi	1.55	241	eP	Pn	21 43 02.8	-0.2
LXIB				eS	Sn	21 43 24.0	-1.1
NFF	Wufeng Townshi	1.62	265	eP	Pn	21 43 03.6	0.0
NFF				eS	Sn	21 43 25.8	-0.7
JTJ	Tarama	1.65	95	P	Pn	21 43 03.9	+0.1
JTJ				eS	Sn	21 43 26.1	-0.6
LIOB	Emei	1.72	266	eP	Pn	21 43 05.3	+0.7
LIOB				eS	Sn	21 43 27.8	-0.4
NSTT	Nanjuang	1.73	265	eP	Pn	21 43 05.9	+1.1
NSTT				eS	Sn	21 43 27.6	-0.9
WARBT	Fenglin Townsh	1.74	233	eP	Pn	21 43 04.6	-0.3
OWD	Renai	1.77	243	eP	Pn	21 43 05.5	+0.1
OWD				eS	Sn	21 43 28.9	-0.7
WUSB	Renai	1.80	244	eP	Pn	21 43 06.3	+0.5
WUSB				eS	Sn	21 43 29.9	-0.3
WHP	Taichung City	1.85	255	eP	Pn	21 43 07.1	+0.8
WHP				eS	Sn	21 43 31.4	+0.3
HGSD	Ruisui	1.86	227	eP	Pn	21 43 06.5	+0.2
HGSD				eS	Sn	21 43 30.7	-0.5
VWDT	VWDT	1.90	238	eP	Pn	21 43 07.7	+0.9
VWDT				eS	Sn	21 43 31.5	-0.6
EHY	Hungye	1.92	229	eP	Pn	21 43 06.5	-0.5
EHY				eS	Sn	21 43 30.9	-1.6
YULB	Yu-li	2.01	227	eP	Pn	21 43 08.0	-0.1
YULB				eS	Sn	21 43 31.4	-3.2
SMLT	Sun Moon Lake	2.03	244	eP	Pn	21 43 09.4	+0.9
SMLT				eS	Sn	21 43 36.0	+1.0
SSLB	Suanglung	2.03	241	eP	Pn	21 43 09.5	+1.1
SSLB				eS	Sn	21 43 35.2	+0.3
JIRB	Irabujima	2.07	88	eP	Pn	21 43 09.0	+0.2
FULB	Fuli	2.15	223	eP	Pn	21 43 10.2	+0.3
FULB				eS	Sn	21 43 37.9	+0.4
WHYT	Xinyi Township	2.16	240	eP	Pn	21 43 11.4	+1.4
WHYT				eS	Sn	21 43 39.3	+1.6
JMJ	Miyako jima 2	2.18	89	eP	Pn	21 43 10.2	+0.1
JMJ2	Miyako jima3	2.21	91	eP	Pn	21 43 11.1	+0.6
JOGS	Gusukube	2.28	90	P	Pn	21 43 11.9	+0.5

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*ISK **01** 22:02:49.0, 38.82N×40.10E, h2km, ML2.7/11*
*AFAD **01** 22:02:49.6, 38.80N×40.08E, h7km±4km, ML2.7*
ISC 01 22:02:50.1±1.0**, 38.82N**±0.02×**40.09E**±0.02**, h9**km±9km**, n27, σ1.25**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAYK		0.23	111	P	Pg	22 02 54.2	-0.6
MAYK				S	Sg	22 02 58.5	+0.5
MAYK				IAML		22 02 59.0	
	comp=N,2μm,0.2s						
KOVA	Elazig, Kovanc	0.24	243	P	Pg	22 02 54.5	-0.6
KOVA				IAML		22 02 58.0	
	comp=N,1μm,0.2s						
KOVA				S	Sg	22 02 58.5	+0.1
KOVA				IAML		22 02 59.0	
	comp=E,1μm,0.5s						
BNGB	Bingl	0.49	69	Pg	Pg	22 02 59.2	-0.5
BNGB				Sg	Sg	22 03 06.9	+0.8
TNCL	Tunceli-Merkez	0.52	305	P	Pg	22 02 59.8	-0.5
TNCL				IAML		22 03 08.0	
	comp=E,1μm,0.9s						
TNCL				S	Sb	22 03 08.1	-1.1
TNCL				IAML		22 03 09.0	
	comp=N,1μm,0.3s						
MDNT	Maden	0.53	217	P	Pg	22 02 59.6	-0.8
MDNT				IAML		22 03 08.0	
	comp=E,378nm,0.7s						
MDNT				S	Sb	22 03 08.4	-1.1
MDNT				IAML		22 03 10.0	
	comp=N,361nm,0.6s						
ELZ	Elazig	0.70	260	P	Pg	22 03 02.8	-0.9
ELZ				IAML		22 03 14.0	
	comp=E,253nm,0.5s						
ELZ				S	Sb	22 03 14.5	0.0
YEDI	Yedisu-Bingol	0.71	29	Pg	Pg	22 03 03.4	-0.5
YEDI				Sg	Sg	22 03 13.9	+0.7
SLHN	Bingol, Solhan	0.74	79	P	Pg	22 03 04.3	-0.1
SLHN				IAML		22 03 18.0	
	comp=N,483nm,0.2s						
SLHN				IAML		22 03 18.0	
	comp=E,1μm,0.5s						
ERZN	Erzincan	0.82	340	Pg	Pg	22 03 05.8	-0.1
ERZN				Sg	Sb	22 03 17.7	-0.2
DYBB	Diyarbakir	0.86	177	Pg	Pb	22 03 06.6	-0.7
KARO	Karliova-Bingo	0.89	56	Pg	Pg	22 03 06.9	-0.4
KARO				Sg	Sb	22 03 19.9	-0.2
MCKZ	Bingol	0.92	289	P	Pg	22 03 06.2	-1.6
MCKZ				S	Sb	22 03 19.9	-0.9
MCKZ				IAML		22 03 23.0	
	comp=N,197nm,0.2s						
ELZG	Elazig	0.92	250	P	Pg	22 03 06.7	-1.2
ELZG				S	Sn	22 03 23.0	0.0
ELZG				IAML		22 03 29.0	
	comp=N,143nm,0.5s						
ELZG				IAML		22 03 29.0	
	comp=E,186nm,0.4s						
EUZM	Uzumlu	0.94	341	P	Pg	22 03 07.6	-0.6
EUZM				S	Sb	22 03 22.1	+0.8
EUZM				IAML		22 03 24.0	
	comp=E,191nm,0.6s						
MAYA	Malatya/Merkez	1.40	250	P	Pn	22 03 15.2	-0.7
MAYA				S	Sg	22 03 40.7	+5.8
ARPR	Arapgir-MALATY	1.40	282	Pn	Pn	22 03 15.7	-0.3
NARI	Adyaman-Kaht	1.40	229	P	Pg	22 03 16.0	-1.0
NARI				IAML		22 03 37.0	
	comp=E,72nm,0.9s						
NARI				S	Sg	22 03 37.9	+2.7
EDAM	Erzurum-Paland	1.41	40	Pn	Pn	22 03 16.4	+0.1
KELT	Kelkit	1.48	334	P	Pb	22 03 17.4	-0.5
GURO	Guroymak-BITLI	1.54	99	Pn	Pb	22 03 18.5	-0.5
HANM	anlurfa/Hi	1.56	218	P	Pg	22 03 19.3	-0.7
HANM				S	Sg	22 03 40.8	+0.6
HANM				IAML		22 03 42.0	
	comp=N,206nm,0.4s						
BAYT	Aydıntepe-Bayb	1.57	1	Pn	Pb	22 03 19.5	-0.1
MBOZ		1.67	318	P	Pb	22 03 20.6	-0.4
MDIV		1.67	288	P	Pn	22 03 20.0	+0.3
MDIV				S	Sg	22 03 43.4	-0.4
MDIV				IAML		22 03 47.0	
	comp=N,72nm,0.6s						
MDIV				IAML		22 03 49.0	
	comp=E,55nm,0.9s						
KOPR	Koprukoy-ERZUR	1.80	49	Pn	Pb	22 03 22.7	-0.7
GAZ	Gaziantep	2.81	235	Pn	Pn	22 03 36.6	+1.3
SARI	SarD1z-Kayseri	2.91	263	Pn	Pn	22 03 37.9	+1.2

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*OSPL **01** 22:05:24.6±0.8, 18.06N×68.76W, h186km±11km, ML3.5, Presumed earthquake*
*SDD **01** 22:05:25.2±2.2, 17.88N×68.75W, h152km±32km, MD3.2, ML2.8, MW2.9, Presumed earthquake*
ISC 01 22:05:26.9±2.1**, 17.9N**±0.2×**68.80W**±0.05**, h120**km±27km**, n12, σ1.49**/19**, 1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HIDR	Higuey Centro	0.74	6	ePg	Pn	22 05 45.4	-1.2
HIDR				eSg	Sn	22 06 03.6	+2.1
HIDR				IAML		22 06 06.8	
	comp=N,138nm,0.2s						
HIDR				IAML		22 06 07.6	
	comp=E,101nm,0.2s						
HATOM	Hato Mayor del	1.08	329	ePg	Pn	22 05 48.4	-1.4
HATOM				eSg	Sn	22 06 07.0	-0.2
HATOM				IAML		22 06 11.4	
	comp=N,48nm,0.3s						
HATOM				IAML		22 06 11.5	
	comp=E,38nm,0.2s						
MIDR	Miches	1.15	348	ePg	Pn	22 05 49.5	-1.0
MIDR				eSg	Sn	22 06 08.9	+0.6
MIDR				IAML		22 06 10.6	
	comp=E,47nm,0.1s						
MIDR				IAML		22 06 11.1	
	comp=N,63nm,0.2s						
MIDR				IAML		22 06 11.1	
	comp=N,63nm,0.2s						
BANI	BANI	1.58	290	ePg	Pn	22 05 55.4	+0.1
BANI				IAML		22 06 25.9	
	comp=N,64nm,1.1s						
AGPR	Aguadilla, PR	1.72	69	ePg	Pn	22 05 56.2	-0.6
AGPR				IAML		22 06 24.4	
	comp=E,51nm,0.3s						
AGPR				IAML		22 06 32.5	
	comp=N,82nm,2.0s						
AGPR	Aguadilla, PR	1.72	69	i P	Pn	22 05 56.2	-0.6
AGPR				eS	Sn	22 06 20.8	+1.1
PODR	Polo	2.38	278	ePg	Pn	22 06 04.0	-1.4
PODR				IAML		22 06 39.6	
	comp=E,58nm,0.2s						
PODR				IAML		22 06 40.5	
	comp=N,42nm,0.5s						
PODR	Polo	2.38	278	i P	Pn	22 06 05.1	-0.3
PODR				eS	Sn	22 06 35.4	+0.5
PODR				IAML		22 06 39.4	
	comp=Z,349nm,0.2s						
LOVI	El Cajuil, Ovi	2.45	269	i P	Pn	22 06 06.2	+0.2
LOVI				eS	Sn	22 06 36.2	+0.1
LODU1	El Espartillar	2.59	281	i P	Pn	22 06 07.4	-0.5
LODU1				IAML		22 06 46.5	
	comp=Z,71nm,2.5s						
LONE3	El Aguacate, B	2.64	287	i P	Pn	22 06 07.5	-1.1
LONE3				eS	Sn	22 06 39.0	-1.7
REDR	Restauracion	2.79	298	⇓eSg	Sn	22 06 47.9	+4.0
REDR				IAML		22 06 48.9	
	comp=N,41nm,0.2s						
REDR				IAML		22 06 50.2	
	comp=E,26nm,0.1s						

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*BJI **01** 22:18:47.8, 0.01N×120.89E, h103km, mB4.9/10, mb4.6/39*
*IDC **01** 22:18:49.7±0.8, 0.42N×120.64E, h73km±6km, mb4.1/18, mbtmp4.4/19, MS3.4/5, Error ellipse: s-maj=29.5km s-min=11.4km az=67.0*
*NEIC **01** 22:18:50.2±1.9, 0.59N±0.05×120.64E±0.08, h69km±6km, mb4.7/56, Error ellipse: s-maj=11.8km s-min=6.4km az=79.0*
*DJA **01** 22:18:50.4±0.2, 1°N±2°×12°1E±°, h48km±7km, M4.6/21, mB5.1/4, mb4.6/12, MLv4.7/21, Mw(mB)4.5/4*
ISC 01 22:18:50.0±0.5**, 0.55N**±0.04×**120.64E**±0.04**, h74**km±5km**, n140, σ1.18**/149**, mb4.6**/53**, 1C-1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOLI2	Tolitoli	0.58	14		Pn	22 19 03.6	-0.3
TOLI2				Sn	Sn	22 19 12.9	-1.3
TOLI2	Tolitoli	0.58	14	P	Pn	22 19 03.4	-0.6
TOLI2	Tolitoli	0.58	14	P	Pn	22 19 13.9	+10
MPSI	Mapaga	0.77	254	P	Pn	22 19 05.8	-0.2
MPSI				S	Sn	22 19 16.9	-1.0
MRSI	Marisa	1.30	93	P	Pn	22 19 12.9	+0.4
MRSI				S	Sn	22 19 29.6	+0.2
PCI	Palu	1.65	209	P	Pn	22 19 16.7	-0.4
PCI				S	Sn	22 19 37.9	+0.3
APSI	Ampana	1.76	145	P	Pn	22 19 20.2	+1.6
LUWI	Luwuk	2.65	127		Pn	22 19 31.8	+1.3
LUWI				Sn	Sn	22 20 02.5	+0.8
LUWI	Luwuk	2.65	127	P	Pn	22 19 31.8	+1.3
MMSI	Mamuju	3.65	208	P	Pn	22 19 44.6	+0.4
TTSI	Tana Toraja	3.66	193	P	Pn	22 19 45.7	+1.4
TARAI	Tarakan	4.13	312	P	Pn	22 19 48.4	-2.3
BKB	Balikpapan	4.15	244	P	Pn	22 19 50.8	-0.2
PMSI	Majene	4.37	203	P	Pn	22 19 56.5	+2.5
SPSI	Sidrap Palu	4.56	191	P	Pn	22 19 57.5	+0.9
KKSI	Kolaka, Sulawe	4.79	168	P	Pn	22 20 00.3	+0.6
KDI	Kendari	4.89	156	P	Pn	22 20 01.7	+0.6
KAPI	Kappang	5.59	189	P	Pn	22 20 11.7	+1.1
	28nm,0.3s,baz=322,slow=7.3,SNR=17						
KAPI				LR	LR	22 22 42.9	
	comp=Z,174nm,20.7s,baz=336,slow=43						
KAPI	Kappang	5.59	189		Pn	22 20 10.8	+0.2
KAPI	Kappang	5.59	189	P	Pn	22 20 11.5	+0.8
MTKI	Muara Teweh, K	5.93	256	P	Pn	22 20 17.2	+1.9
SANI	Sanana	5.94	116	P	Pn	22 20 13.9	-1.4
SANI	Sanana	5.94	116	P	Pn	22 20 13.6	-1.7
	0.2nm29nm,0.7s						
BSSI	Bau Bau, Buton	6.65	181	P	Pn	22 20 25.1	0.0
	0.3nm42nm,0.7s						
KKM	Kota Kinabalu	7.03	321		Pn	22 20 30.8	+0.4
KKM	Kota Kinabalu	7.03	321	P	Pn	22 20 31.1	+0.8
KKM	Kota Kinabalu	7.03	321	P	Pn	22 20 30.7	+0.4
NLAI	Namlea	7.47	120	P	Pn	22 20 36.9	+0.6
	0.3nm1μm72nm,0.7s						
SBUM	Sibu	8.63	283		Pn	22 20 51.9	-0.3

KRAI Karang Ratu 8.65 116 P **Pn** **22 20 54.2 +1.8**
5µm34nm,0.9s
KMMI Kalianget 10.06 221 P **Pn** **22 21 13.5 +1.7**
27nm,0.9s
KHKI Kahang-Kahang 10.17 209 P **Pn** **22 21 15.0 +1.7**
33nm,0.8s
WBSI Waikabubak, Su 10.20 187 P **Pn** **22 21 15.3 +1.7**
23nm,0.8s
SOEI Soe 10.85 161 **Pn** **22 21 25.2 +2.6**
JAGI Jajag, Banyuwa 11.05 216 Pn **Pn** **22 21 26.2 +1.0**
BATI Baumata 11.10 164 P **Pn** **22 21 29.2 +3.3**
37nm,0.7s,baz=274,slow=12,SNR=4.4
BATI LR LR 22 26 00.2
comp=Z,318nm,21.3s,baz=322,slow=39
SAUI Saumlaki 13.59 129 P **Pn** **22 21 57.9 -1.7**
MTN Manton Dam 16.89 142 **Pn** **22 22 42.0 +0.2**
MTN IAmb IAmb 22 22 44.4
comp=Z,15nm,0.5s
KNRA Kununurra 18.00 154 P **P** **22 22 54.9 -0.1**
FITZ Fitzroy Crossi 19.17 165 P **P** **22 23 08.2 +0.5**
comp=Z,23nm,0.5s,baz=2.7,slow=7.5,SNR=74
FITZ LR LR 22 31 32.1
comp=Z,58nm,20.0s,baz=22,slow=40
IPM Ipoh 19.98 282 **P** **22 23 16.8 +0.1**
IPM IAmb IAmb 22 23 19.5
comp=Z,25nm,0.9s
IPM Ipoh 19.98 282 P **P** **22 23 17.8 +1.2**
KULM Kulim 20.51 284 **P** **22 23 22.7 +0.4**
KULM IAmb IAmb 22 23 24.6
comp=Z,28nm,1.0s
KULM Kulim 20.51 284 P **P** **22 23 23.6 +1.3**
RPSI Rantau Prapat 21.81 276 P **P** **22 23 36.4 +0.1**
PSA00 Pilbara Seismi 22.00 182 P **P** **22 23 36.4 -1.8**
YULB Yu-li 22.72 2 P **P** **22 23 45.1 -0.8**
YULB IAmb IAmb 22 24 15.4
comp=Z,24nm,1.1s
GSI Gunungsitoli 23.07 272 P **P** **22 23 49.3 -0.3**
GSI Gunungsitoli 23.07 272 P **P** **22 23 49.8 +0.2**
YHNB Yeheng 23.99 2 P **P** **22 23 57.3 -0.6**
YHNB IAmb IAmb 22 24 15.8
comp=Z,60nm,1.5s
WB0 Warramunga Arr 24.28 147 **P** **22 23 59.2 -1.3**
WRAB Tennant Creek 24.39 147 P **P** **22 24 00.6 -0.9**
WRA Warramunga Arr 24.39 147 P **P** **22 24 00.3 -1.2**
comp=Z,5.6nm,0.8s,baz=334,slow=9.3,SNR=47
comp=Z,5.6nm,0.8s
WRA Warramunga Arr 24.39 147 P **P** **22 23 59.8 -1.8**
COEN Coen 26.57 124 P **P** **22 24 20.6 -0.8**
AS31 Alice Springs 27.30 153 **P** **22 24 27.3 -0.5**
ASAR Alice Springs 27.30 153 P **P** **22 24 27.6 -0.3**
comp=Z,3.0nm,0.6s,baz=340,slow=13,SNR=49
ASAR ScP **ScP** **22 31 17.2 -2.8**
comp=Z,0.6nm,0.8s,baz=341,slow=3.5,SNR=4.4
comp=Z,3.0nm,0.6s
CMAR Chiang Mai Arr 27.76 311 P **P** **22 24 33.7 +1.7**
comp=Z,1.0nm,0.3s,baz=142,slow=7.1,SNR=8.0
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 27.76 311 **P** **22 24 32.0 -0.1**
QIS Mount Isa 28.01 140 P **P** **22 24 34.9 +0.7**
PMG Port Moresby 28.19 111 LR LR 22 36 49.6
comp=Z,61nm,19.8s,baz=302,slow=38
KMI2 Kunming 29.95 326 ⇑P **P** **22 24 54.0 +2.3**
NJ2 Nanjing 31.38 357 *e*P **P** **22 25 07.2 +3.3**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
ENH Enshi 31.41 341 P **P** **22 25 03.9 -0.3**
ENH IAmb IAmb 22 25 07.0
comp=Z,6.0nm,0.7s
PZH PanZhiHua 31.57 326 P **P** **22 25 08.8 +3.0**
FORT Forrest 31.94 168 P **P** **22 25 08.1 -0.7**
XAN Xi'an 35.08 343 ⇓P **P** **22 25 35.5 -0.7**
XAN pmax pmax
comp=Z,3.0nm,1.2s
BBOO Buckleboo 36.23 158 P **P** **22 25 45.0 -1.0**
BBOO IAmb IAmb 22 26 10.6
comp=Z,9.7nm,0.9s
BBOO Buckleboo 36.23 158 P **P** **22 25 45.6 -0.3**
SHL Shillong 37.27 314 **P** **22 25 54.8 -0.3**
SHL IAmb IAmb 22 25 57.0
comp=Z,5.9nm,0.7s
KSRS Korea Array 37.34 10 P **P** **22 25 57.1 +1.9**
comp=Z,1.8nm,0.8s,baz=192,slow=9.9,SNR=6.2
KSRS pP **pP** **22 26 13.0 -0.1**
comp=Z,2.2nm,0.7s,baz=188,slow=8.7,SNR=6.5
comp=Z,1.8nm,0.8s
STKA Stephens Creek 37.86 150 P **P** **22 25 58.2 -1.6**
comp=Z,2.8nm,0.7s,baz=333,slow=9.8,SNR=6.1
comp=Z,2.8nm,0.7s
BJI2 Beijing 39.50 355 P **P** **22 26 15.2 +1.8**
BJI2 pmax pmax
comp=Z,6.0nm,0.7s
BJI2 pmax pmax
comp=Z,73nm,6.9s
BJT Baijiatuau 39.50 355 **P** **22 26 14.1 +0.8**
BJT IAmb IAmb 22 26 15.8
comp=Z,8.2nm,0.7s
LSA Lhasa 40.36 319 **P** **22 26 22.3 +1.0**
PALK Pallekele 40.38 281 P **P** **22 26 20.7 -0.4**
HHC Hu-ho-hao-te 40.95 349 *e*P **P** **22 26 27.0 +1.5**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,86nm,3.8s
HHC LR LR
comp=Z,110nm,11.4s
HHC LR LR
comp=Z,120nm,11.2s
HHC LR LR
comp=Z,99nm,12.6s
NGOA Tingoa Renbel 40.96 108 P **P** **22 26 28.1 +2.2**
GTA2 Gaotai 43.20 336 *e*P **P** **22 26 45.6 +1.7**
GTA2 pmax pmax
comp=Z,6.0nm,0.9s
XLT XiLinHaoTe 43.36 355 *e*P **P** **22 26 46.5 +1.5**
XLT pmax pmax
comp=Z,6.0nm,1.1s
XLT pmax pmax
comp=Z,69nm,7.3s
CAN Canberra 44.43 146 P **P** **22 26 53.9 +0.2**
MDJ Mudanjiang 44.60 9 **P** **22 26 54.8 0.0**
MDJ IAmb IAmb 22 27 14.9
comp=Z,17nm,1.0s
MDJ Mudanjiang 44.60 9 P **P** **22 26 54.4 -0.4**
MDJ pmax pmax
comp=Z,11nm,1.2s
USRK Ussuriysk Ar. 44.62 12 P **P** **22 26 55.1 +0.1**
comp=Z,3.3nm,0.6s,baz=184,slow=6.6,SNR=17
USRK pP **pP** **22 27 13.9 +0.6**
comp=Z,4.9nm,0.8s,baz=196,slow=8.6,SNR=6.6
comp=Z,3.3nm,0.6s
JKA Kamikawa-asahi 47.58 21 P **P** **22 27 17.7 -0.5**
ULN Ulaanbaatar 48.59 348 **P** **22 27 26.9 +0.7**
ULN IAmb IAmb 22 27 28.8
comp=Z,9.7nm,1.4s
SONM Songino Array 48.70 347 P **P** **22 27 28.2 +1.2**
comp=Z,1.8nm,0.7s,baz=168,slow=8.4,SNR=16
SONM PcP **PcP** **22 28 50.7 -0.5**
comp=Z,0.7nm,0.6s,baz=167,slow=4.1,SNR=2.0
comp=Z,1.8nm,0.7s
SONM Songino Array 48.70 347 P **P** **22 27 27.9 +0.8**
HILR Hailar Array B 48.83 359 P **P** **22 27 29.0 +1.1**
comp=Z,1.1nm,0.3s,baz=178,slow=12,SNR=5.0
HILR pP **pP** **22 27 47.0 +0.7**
comp=Z,6.8nm,0.3s,baz=158,slow=9.1,SNR=3.6
comp=Z,1.1nm,0.3s
HEH HeiHe 49.86 6 *e*P **P** **22 27 36.2 +0.6**
HEH pmax pmax
comp=Z,9.0nm,1.0s
HEH pmax pmax
comp=Z,140nm,4.0s
WMQ Urumqi 52.13 330 *e*P **P** **22 27 55.2 +2.3**
WMQ pmax pmax
comp=Z,11nm,0.9s
TLY Talaya 52.93 347 P **P** **22 27 58.4 -0.2**
TLY IAmb IAmb 22 28 01.3
comp=Z,4.8nm,1.0s
WUS Wushi 55.11 323 **P** **22 28 15.3 +0.5**
WUS IAmb IAmb 22 28 17.7
comp=Z,12nm,1.3s
NIL Nilore 55.26 312 P **P** **22 28 15.8 -0.1**
TARG Taragay, Kyrgy 56.28 322 P **P** **22 28 23.4 -0.1**
TARG IAmb IAmb 22 28 44.5
comp=Z,7.1nm,1.3s
KSH2 Kashi 56.28 319 P **P** **22 28 24.7 +1.4**
KSH2 pmax pmax
comp=Z,7.0nm,0.8s

MKAR Makanchi Array 56.93 329 P **P** **22 28 29.1 +1.6**
comp=Z,4.6nm,0.4s,baz=129,slow=9.2,SNR=108
MKAR PcP **PcP** **22 29 21.6 -0.6**
comp=Z,1.4nm,0.6s,baz=116,slow=5.5,SNR=4.6
comp=Z,4.6nm,0.4s
MKAR Makanchi Array 56.93 329 **P** **22 28 28.6 +1.1**
MAKZ Makanchi 57.10 329 P **P** **22 28 29.5 +0.7**
MAKZ IAmb IAmb 22 28 30.6
comp=Z,5.6nm,0.6s
BOOM Boomskoye usch 57.85 322 P **P** **22 28 35.1 +0.8**
BOOM IAmb IAmb 22 28 37.0
comp=Z,5.3nm,0.8s
KBL Kabul 58.80 311 **P** **22 28 41.7 +0.6**
AAK Ala-Archa 58.83 322 **P** **22 28 42.3 +1.2**
AAK IAmb IAmb 22 28 43.5
comp=Z,5.2nm,0.6s
DRK Karamyk 58.98 317 P **P** **22 28 43.1 +0.7**
DRK IAmb IAmb 22 28 44.8
comp=Z,6.1nm,0.7s
ARSB Arslanbob 59.10 320 **P** **22 28 44.0 +1.0**
ARSB IAmb IAmb 22 28 45.4
comp=Z,6.5nm,1.0s
BTK Batken 59.92 317 **P** **22 28 48.4 -0.2**
SHAA Shahritus 60.71 314 P **P** **22 28 53.3 -0.7**
SHAA IAmb IAmb 22 29 10.7
comp=Z,5.8nm,0.9s
ZAA0 Zalesovo Array 60.86 337 **P** **22 28 54.3 -0.3**
ZAA0 IAmb IAmb 22 28 55.9
comp=Z,5.5nm,0.8s
ZALV Zalesovo Beam 60.86 337 P **P** **22 28 54.7 +0.1**
comp=Z,1.1nm,0.7s,baz=129,slow=6.0,SNR=24
comp=Z,4.1nm,0.7s
ZALV Zalesovo Beam 60.86 337 **P** **22 28 54.6 0.0**
KURBB Kurchatov Arra 61.33 331 P **P** **22 28 58.9 +1.1**
comp=Z,4.5nm,0.7s,baz=135,slow=6.8,SNR=39
comp=Z,4.5nm,0.7s
KURK Kurchatov 61.34 331 **P** **22 28 58.8 +0.8**
KK31 Karatay Array 61.58 320 **P** **22 29 00.1 +0.4**
KKAR Karatay Array 61.58 320 **P** **22 29 00.1 +0.4**
YAK Yakutsk 61.71 5 P **P** **22 29 00.1 0.0**
THZ Tophouse 63.16 138 P **P** **22 29 10.3 0.0**
BKZ Black Stump Fm 64.51 135 P **P** **22 29 18.9 -0.3**
BVAR Borovoye Array 66.81 330 P **P** **22 29 34.9 +1.2**
comp=Z,3.2nm,0.6s,baz=128,slow=9.6,SNR=19
comp=Z,3.2nm,0.6s
BORK Borovoye 66.86 330 **P** **22 29 34.5 +0.5**
BORK IAmb IAmb 22 29 35.9
comp=Z,7.6nm,0.9s
AB31 Akbulak array 70.86 323 **P** **22 29 59.6 +0.6**
AB31 IAmb IAmb 22 30 00.7
comp=Z,8.1nm,0.8s
ABKAR Akbulak array 70.86 323 **P** **22 29 59.5 +0.5**
TIXI Tiksi 71.19 3 P **P** **22 29 59.4 -1.0**
TIXI IAmb IAmb 22 30 20.9
comp=Z,7.7nm,1.1s
NRIK Noril'sk 72.17 348 P **P** **22 30 06.8 +0.4**
comp=Z,1.4nm,0.5s,baz=129,slow=7.0,SNR=2.9
comp=Z,1.4nm,0.5s
NRIK Noril'sk 72.17 348 P **P** **22 30 06.5 +0.1**
ARTI Arti 74.53 329 **P** **22 30 20.6 0.0**
VOI Vohitsoka 75.24 247 **P** **22 30 24.6 -1.0**
VOI IAmb IAmb 22 30 53.1
comp=Z,16nm,1.2s
GURO Guroymak-BITLI 80.75 309 P **P** **22 30 55.9 +0.1**
GURO IAmb IAmb 22 31 16.8
comp=Z,5.6nm,0.9s
KBZ Khabaz 80.77 314 P **P** **22 30 55.4 -0.1**
comp=Z,3.7nm,0.9s,baz=145,slow=6.1,SNR=4.8
comp=Z,3.7nm,0.9s
J17K VABM Dome 85.16 26 P **P** **22 31 18.3 +0.4**
BR131 Keskin Array S 87.34 310 **P** **22 31 28.2 -1.1**
BRTR Keskin Array B 87.34 310 P **P** **22 31 28.8 -0.5**
comp=Z,1.5nm,0.8s,baz=116,slow=4.5,SNR=9.3
BRTR pP **pP** **22 31 48.1 -1.6**
comp=Z,0.8nm,0.7s,baz=134,slow=6.1,SNR=3.8
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 87.34 310 P **P** **22 31 28.4 -0.9**
AKASG Malin Array Be 90.48 321 P **P** **22 31 42.5 -1.1**
comp=Z,0.9nm,0.6s,baz=75,slow=4.4,SNR=4.3
comp=Z,0.9nm,0.6s
KIEV Kiev 90.49 321 P **P** **22 31 42.3 -1.4**
KIEV IAmb IAmb 22 31 43.0
comp=Z,3.9nm,1.1s
ILAR Eielson Array 90.57 25 P **P** **22 31 40.9 -2.8**
comp=Z,0.2nm,0.5s,baz=271,slow=5.9,SNR=4.8
FINES FINESS Array B 91.72 331 P **P** **22 31 48.2 -0.8**
comp=Z,1.7nm,0.7s,baz=72,slow=6.2,SNR=4.7
comp=Z,1.7nm,0.7s
FINES FINESS Array B 91.72 331 P **P** **22 31 47.9 -1.2**
SPB2 Spitsbergen Ar 92.38 348 P **P** **22 31 50.6 -1.2**
SPITS Spitsbergen Ar 92.38 348 P **P** **22 31 50.4 -1.5**
comp=Z,1.9nm,0.4s,baz=92,slow=10,SNR=21
comp=Z,1.9nm,0.4s
BURAR Bucovina Array 93.27 318 P **P** **22 31 55.5 -1.2**
BURAR IAmb IAmb 22 32 01.9
comp=Z,3.0nm,1.4s
VRAC Vranov 98.73 320 LR LR 23 23 57.3
comp=Z,53nm,18.1s,baz=20,slow=40

*IDC **01** 22:21:04.2±0.7, 14°.69N×144°.39E, h0km, mb4.0/17, mbtmp4.1/17, MS3.5/31, Error ellipse: s-maj=25.4km s-min=12.8km az=81.0*
*NEIC **01** 22:21:05.6±1.0, 14°.59N±0°.04×144°.37E±0°.09, h7km±5km, mb4.4/13, Error ellipse: s-maj=12.5km s-min=5.3km az=99.0*
ISC 01 22:21:07.9±0.5, 14°.60N±0°.05×144°.35E±0°.08, h27km, n75, σ0s83/38, mb4.3/21, MS3.6/28, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.13**	**153**	Pn	**Pn**	**22 21 27.8**	**-0.1**
	152nm,0.3s,baz=315,slow=4.4,SNR=29						
GUMO				Sn	**Sn**	**22 21 42.5**	**-0.1**
	430nm,0.3s,baz=78,slow=20,SNR=15						
GUMO	**Guam**	**1.13**	**153**		**Pn**	**22 21 27.4**	**-0.5**
GUMO				Sn	**Sn**	**22 21 42.8**	**+0.2**
DPSS	**Saipan**	**1.53**	**65**		**Pn**	**22 21 33.7**	**+0.1**
DPSS				Sn	**Sn**	**22 21 52.7**	**0.0**
JHJ	**Hachijo jima 2**	**18.90**	**348**	LR	LR	22 31 35.5	
	comp=Z,146nm,21.4s,baz=156,slow=34						
JOW	**Kunigami**	**19.32**	**312**	LR	LR	22 31 25.9	
	comp=Z,279nm,19.9s,baz=138,slow=32						
DAV	**Davao City (W)**	**19.88**	**250**	LR	LR	22 31 26.2	
	comp=Z,206nm,21.8s,baz=71,slow=31						
SIJI	**Sorong**	**20.09**	**221**	LR	LR	22 31 55.4	
	comp=Z,222nm,21.2s,baz=218,slow=32						
H11S3	**WAKE ISLAND Hy**	**21.76**	**77**	T	T	22 49 03.9	
	baz=262,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**21.77**	**77**	T	T	22 49 03.3	
	baz=262,slow=75,SNR=25						
H11S2	**WAKE ISLAND Hy**	**21.78**	**77**	T	T	22 48 57.0	
	baz=262,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy**	**22.13**	**74**	T	T	22 49 24.8	
	baz=259,slow=75,SNR=7.2						
JNU	**Nakatsue**	**22.13**	**329**	LR	LR	22 33 06.4	
	comp=Z,32nm,21.1s,baz=120,slow=33						
H11N2	**WAKE ISLAND Hy**	**22.13**	**74**	T	T	22 49 28.3	
	baz=259,slow=75,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**22.14**	**74**	T	T	22 49 25.9	
	baz=259,slow=75,SNR=6.8						
MJAR	**Matsushiro Arr**	**22.53**	**347**	P	**P**	**22 26 06.3**	**+0.5**
	2.3nm,1.0s,baz=172,slow=7.6,SNR=4.6						
MJAR				LR	LR	22 33 42.8	
	comp=Z,121nm,20.4s,baz=170,slow=34						
	2.3nm,1.0s						
MJAR	**Matsushiro Arr**	**22.53**	**347**	P	**P**	**22 26 05.2**	**-0.6**
MJAR				IAmb	IAmb	22 26 40.5	
	comp=Z,5.8nm,1.3s						
KSRS	**Korea Array**	**27.04**	**330**	LR	LR	22 37 12.9	
	comp=Z,64nm,18.7s,baz=155,slow=36						
ASAJ	**Asahikawa**	**29.46**	**357**	LR	LR	22 37 50.0	
	comp=Z,43nm,21.9s,baz=215,slow=34						
KAPI	**Kappang**	**31.22**	**233**	LR	LR	22 38 20.8	
	comp=Z,56nm,21.4s,baz=40,slow=33						
BATI	**Baumata**	**32.06**	**221**	LR	LR	22 39 12.7	
	comp=Z,98nm,21.4s,baz=54,slow=34						
WB0	**Warramunga Arr**	**35.53**	**196**	P	**P**	**22 28 02.7**	**-0.1**
WB0				IAmb	IAmb	22 28 25.5	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**35.71**	**196**	P	**P**	**22 28 05.3**	**+0.9**
	comp=Z,4.3nm,0.7s,baz=14,slow=9.5,SNR=24						
	comp=Z,4.3nm,0.7s						
WRA	**Warramunga Arr**	**35.71**	**196**	P	**P**	**22 28 02.0**	**-2.5**
KLR	**Kul'dur**	**36.05**	**346**	LR	LR	22 41 49.9	
	comp=Z,24nm,18.9s,baz=152,slow=35						

AS31 Alice Springs 39.38 195 P **P** **22 28 36.3 +0.9**
ASAR Alice Springs 39.38 195 P **P** **22 28 37.4 +1.9**
comp=Z,0.7nm,0.6s,baz=17,slow=11,SNR=9.8
comp=Z,0.7nm,0.6s
PETK Petropavlovsk- 39.85 13 LR LR 22 42 25.1
comp=Z,78nm,20.0s,baz=190,slow=32
LZDM Lanzhou Array 42.07 308 P **P** **22 28 57.8 -0.2**
comp=Z,0.2nm,0.3s,baz=125,slow=7.4,SNR=5.4
comp=Z,0.2nm,0.3s
LEM Lembang 42.19 242 LR LR 22 47 57.2
comp=Z,28nm,21.3s,baz=26,slow=38
DZM Mont Dzumac 42.40 149 LR LR 22 44 10.3
comp=Z,116nm,21.1s,baz=234,slow=33
DZM Mont Dzumac 42.40 149 *e*LR LR 22 40 56.5
comp=Z,171nm,27.4s
CM31 Chiang Mai Arr 43.61 282 P **P** **22 29 10.2 -0.2**
CM31 IAmb IAmb 22 29 11.9
comp=Z,14nm,1.5s
CMAR Chiang Mai Arr 43.61 282 P **P** **22 29 09.7 -0.7**
comp=Z,0.6nm,0.4s,baz=77,slow=6.0,SNR=9.3
CMAR LR LR 22 48 08.1
comp=Z,42nm,18.1s,baz=90,slow=37
comp=Z,0.6nm,0.4s
CMAR Chiang Mai Arr 43.61 282 P **P** **22 29 09.8 -0.5**
MA2 Magadan 45.15 5 P **P** **22 29 21.6 -0.4**
comp=Z,2.0nm,0.3s,baz=164,slow=4.2,SNR=4.3
comp=Z,2.0nm,0.3s
MA2 Magadan 45.15 5 P **P** **22 29 21.9 -0.1**
MA2 IAmb IAmb 22 29 23.8
comp=Z,7.1nm,0.9s
SONM Songino Array 45.62 325 P **P** **22 29 26.3 +0.2**
comp=Z,1.3nm,0.8s,baz=139,slow=9.0,SNR=4.6
comp=Z,1.3nm,0.8s
SONM Songino Array 45.62 325 P **P** **22 29 27.2 +1.1**
STKA Stephens Creek 46.29 183 P **P** **22 29 32.8 +1.5**
comp=Z,2.6nm,0.7s,baz=349,slow=11,SNR=3.9
comp=Z,2.6nm,0.7s
BBOO Buckleboo 47.80 189 P **P** **22 29 42.7 -0.5**
SEY Seymchan 48.60 5 P **P** **22 29 50.1 +1.2**
comp=Z,3.4nm,1.0s,baz=209,slow=5.6,SNR=6.1
comp=Z,3.4nm,1.0s
LSA Lhasa 51.09 296 **P** **22 30 09.0 0.0**
LSA IAmb IAmb 22 30 12.0
comp=Z,3.6nm,0.9s
RAO Raoul Island 56.82 140 LR LR 22 53 21.4
comp=Z,52nm,20.9s,baz=72,slow=34
MKAR Makanchi Array 60.41 316 P **P** **22 31 15.5 +0.4**
comp=Z,1.9nm,0.7s,baz=89,slow=8.1,SNR=8.5
comp=Z,1.9nm,0.7s
ZALV Zalesovo Beam 60.51 324 P **P** **22 31 15.9 +0.4**
comp=Z,1.2nm,0.6s,baz=89,slow=8.5,SNR=4.5
comp=Z,1.2nm,0.6s
ZALV Zalesovo Beam 60.51 324 P **P** **22 31 16.0 +0.4**
PALK Pallekele 62.75 271 LR LR 22 56 34.3
comp=Z,85nm,19.8s,baz=244,slow=34
KDAK Kodiak Island 63.49 32 LR LR 22 59 53.6
comp=Z,25nm,18.8s,baz=227,slow=37
KURK Kurchatov 63.49 320 P **P** **22 31 35.7 +0.1**
KURBB Kurchatov Arra 63.53 320 P **P** **22 31 35.9 0.0**
comp=Z,6.0nm,0.9s,baz=101,slow=6.9,SNR=18
comp=Z,6.0nm,0.9s
NRIK Noril'sk 65.02 341 P **P** **22 31 44.5 -0.8**
comp=Z,3.0nm,0.8s,baz=124,slow=7.8,SNR=4.1
comp=Z,3.0nm,0.8s
NRIK Noril'sk 65.02 341 P **P** **22 31 46.4 +1.0**
RAR Rarotonga 65.38 122 LR LR 22 54 20.3
comp=Z,54nm,21.8s,baz=270,slow=30
ILAR Eielson Array 67.88 26 P **P** **22 32 02.6 -1.1**
comp=Z,0.4nm,0.6s,baz=256,slow=6.0,SNR=5.9
comp=Z,0.4nm,0.6s
BVAR Borovoye Array 68.82 321 P **P** **22 32 10.8 +0.9**
comp=Z,2.2nm,0.6s,baz=101,slow=7.7,SNR=7.2
comp=Z,2.2nm,0.6s
BORK Borovoye 68.87 322 P **P** **22 32 10.8 +0.6**
BORK IAmb IAmb 22 32 13.0
comp=Z,2.5nm,0.7s
PPT Papeete 72.58 114 LR LR 23 02 06.5
comp=Z,48nm,18.2s,baz=187,slow=34
PPT2 Papeete2 72.59 114 *e*LR LR 22 54 15.4
comp=Z,179nm,27.8s
PPT2 *e*LR LR 22 54 24.4
comp=Z,237nm,29.5s
DLBC Dease Lake 75.41 33 LR LR 23 03 55.3
comp=Z,19nm,19.3s,baz=257,slow=34
BBB Bella Bella 77.12 39 LR LR 22 58 31.8
comp=Z,98nm,20.9s,baz=186,slow=29
TAOE Nuku Hiva Isla 78.40 102 *e*LR LR 22 56 57.0
comp=Z,274nm,27.3s
YKA Yellowknife Ar 82.20 27 P **P** **22 33 25.9 -0.4**
comp=Z,0.2nm,0.3s,baz=293,slow=6.6,SNR=7.7
YKA LR LR 23 08 00.4
comp=Z,32nm,21.5s,baz=306,slow=34
comp=Z,0.2nm,0.3s
RES Resolute Bay 83.69 13 LR LR 23 11 43.5
comp=Z,12nm,19.9s,baz=7.5,slow=36
NEW Newport 84.81 42 LR LR 23 03 53.1
comp=Z,77nm,20.1s,baz=32,slow=30
NVAR Mina Array Bea 86.69 51 LR LR 23 12 27.4
comp=Z,40nm,18.1s,baz=324,slow=36
GNI Garni 87.88 311 LR LR 23 16 17.1
comp=Z,88nm,19.8s,baz=158,slow=38
PFO Pinyon Flats O 89.49 55 LR LR 23 15 33.9
comp=Z,29nm,18.2s,baz=254,slow=37
FINES FINESS Array B 90.04 335 P **P** **22 34 04.0 -1.1**
comp=Z,2.4nm,0.8s,baz=18,slow=5.0,SNR=3.3
comp=Z,2.4nm,0.8s
FINES FINESS Array B 90.04 335 P **P** **22 34 05.0 0.0**
PDAR Pinedale Array 91.61 45 LR LR 23 09 30.2
comp=Z,25nm,19.5s,baz=312,slow=32
ANMO Albuquerque 96.82 51 LR LR 23 11 08.8
comp=Z,26nm,19.8s,baz=314,slow=31
LPIG La Paz 97.61 63 LR LR 23 12 34.8
comp=Z,35nm,18.8s,baz=24,slow=32
H03N2 Juan Fernandez 136.61 123 T T 01 11 18.7
baz=258,slow=73,SNR=23
H03N3 Juan Fernandez 136.62 123 T T 01 11 19.9
baz=258,slow=73,SNR=19
H03N1 Juan Fernandez 136.63 123 T T 01 11 19.7
baz=258,slow=73,SNR=28

*AZER **01** 22:59:00.0, 41°.78N×46°.37E, h4km, ml2.5*
*MOS **01** 22:59:01.9, 41°.97N×46°.56E, h10km, MPVA3.2*
*DRS **01** 22:59:01.3, 41°.88N×46°.47E, h15km*
*NORS **01** 22:59:03.8, 41°.99N×46°.46E, h1km, MPVA3.2*
ISC 01 22:59:02.2±0.9, 41°.92N±0°.02×46°.47E±0°.02, h13km±7km, n41, σ1s42/81, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLTR	**Tlyarata**	**0.21**	**335**	*e*Pg	**Pb**	**22 59 06.8**	**-1.2**
	41nm,0.3s						
TLTR				*e*Sg	**Sg**	**22 59 11.6**	**+1.3**
	357nm,0.4s						
ZKTA	**Zakatala**	**0.30**	**158**	P	**Pg**	**22 59 07.8**	**-0.6**
ZKTA				S	**Sg**	**22 59 13.1**	**+0.5**
KMKR	**Kumukh**	**0.51**	**65**	*e*Pg	**Pb**	**22 59 12.5**	**-0.8**
	37nm,0.5s						
KMKR				*e*Sg	**Sb**	**22 59 19.9**	**-0.7**
	384nm,0.5s						
XNZR	**Khunzakh**	**0.65**	**15**	*e*Pg	**Pn**	**22 59 15.7**	**-1.6**
	12nm,0.5s						
XNZR				*e*Sg	**Sn**	**22 59 25.2**	**-2.3**
	64nm,0.5s						
BTLR	**Botlikh**	**0.77**	**346**	*e*Pg	**Pb**	**22 59 17.3**	**-0.3**
	9.0nm,0.3s						
BTLR				*e*Sg	**Sn**	**22 59 28.3**	**-2.1**
	71nm,0.3s						
ARKR	**Arakani**	**0.79**	**29**	*e*Pg	**Pb**	**22 59 17.5**	**-0.3**
	18nm,0.5s						
ARKR				*e*Sg	**Sb**	**22 59 28.3**	**-0.1**
	76nm,0.3s						
UNCR	**Uncukul**	**0.83**	**17**	*e*Pg	**Pn**	**22 59 18.4**	**-1.3**
	18nm,0.2s						
UNCR				*e*Sg	**Sn**	**22 59 29.8**	**-2.1**
	56nm,0.7s						
SEKA	**Sheki**	**0.89**	**142**	Pg	**Pg**	**22 59 17.3**	**-2.1**
SEKA				Sg	**Sg**	**22 59 30.0**	**-1.2**
URKR	**Urkarakh**	**0.90**	**73**	*e*Pg	**Pn**	**22 59 20.2**	**-0.5**
	9.0nm,0.3s						
URKR				*e*Sg	**Sn**	**22 59 32.8**	**-0.8**
	36nm,0.5s						
KRNR	**Karanay**	**0.97**	**19**	*e*Pg	**Pn**	**22 59 20.6**	**-1.0**
	11nm,0.4s						
KRNR				*e*Sg	**Sn**	**22 59 34.0**	**-1.3**
	29nm,0.4s						
BUJR	**Buynaksk**	**1.02**	**27**	*e*Pg	**Pn**	**22 59 22.5**	**+0.2**
	17nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BUJR				eSg	Sn	22 59 36.9	+0.3
	98nm,0.4s						
SGKR	Sergokala	1.03	58	ePg	Pn	22 59 22.7	+0.2
	15nm,0.4s						
SGKR				eSg	Sn	22 59 37.1	+0.3
	47nm,0.4s						
AKT	Akhty	1.04	114	ePg	Pg	22 59 21.3	-0.9
	15nm,0.2s						
AKT				eSg	Sg	22 59 35.4	-0.4
	74nm,0.5s						
DVE	Vedeno	1.07	346	ePg	Pn	22 59 23.1	0.0
	14nm,0.3s						
DVE				eSg	Sn	22 59 37.9	+0.1
	27nm,0.7s						
DBC	Dubki	1.14	13	ePg	Pn	22 59 24.8	+0.8
	9.0nm,0.8s						
DBC				eSg	Sn	22 59 40.8	+1.4
	24nm,0.4s						
DLMR	Dylym	1.16	6	ePg	Pn	22 59 25.0	+0.8
	34nm,0.4s						
DLMR				eSg	Sn	22 59 41.3	+1.4
	126nm,0.4s						
QZX	Qazax, Azerbai	1.19	224	P	Pn	22 59 22.2	-2.4
QZX				S	Sb	22 59 38.4	-1.6
MNGR	Mingechevir, A	1.23	158	P	Pn	22 59 23.6	-1.5
MNGR				S	Sb	22 59 41.3	+0.2
GANJ	Ganja	1.27	185	P	Pn	22 59 23.1	-2.7
GANJ				S	Sb	22 59 39.8	-2.6
KSMR	Kasumkent	1.28	104	ePg	Pg	22 59 26.7	-0.1
	24nm,0.2s						
KSMR				eSg	Sg	22 59 44.5	+1.1
	147nm,0.4s						
GDB	GEDABAY	1.31	205	P	Pn	22 59 23.4	-3.0
GDB				S	Sb	22 59 40.5	-3.1
GROC	Groznyy	1.38	339	ePg	Pg	22 59 28.3	-0.4
	10.0nm,0.4s						
GROC				eSg	Sg	22 59 46.9	+0.2
	24nm,0.4s						
DRN	Derbent	1.39	85	ePg	Pb	22 59 27.9	-0.1
	28nm,0.6s						
DRN				eSg	Sg	22 59 46.9	-0.1
	60nm,0.3s						
QSAR	Qusar	1.40	106	Pn	Pb	22 59 28.7	+0.5
QSAR				Sn	Sg	22 59 48.1	+0.8
QBL	Gabala	1.41	133	Pn	Pn	22 59 26.6	-1.1
QBL				Sn	Sb	22 59 47.6	+1.3
XNQ	Khinaliq	1.46	120	Pn	Pn	22 59 28.2	-0.2
XNQ				Sn	Sg	22 59 51.3	+2.1
QUBA	Quba, Azerbaij	1.61	110	Pn	Pn	22 59 30.5	+0.1
QUBA				Sn	Sg	22 59 54.1	-0.1
KMGR	Komgaron	1.65	314	ePg	Pg	22 59 35.2	+1.3
KMGR				eSg	Sg	22 59 56.9	+1.7
IML	Ismayilli	1.71	131	Pn	Pn	22 59 31.7	0.0
IML				Sn	Sg	22 59 57.5	+0.4
BRDA	Brd	1.73	162	Pn	Pn	22 59 31.7	-0.4
BRDA				Sn	Sb	22 59 56.5	+0.9
LACR	Lac	1.85	300	ePg	Pg	22 59 39.4	+1.7
LACR				eSg	Sg	23 00 04.0	+2.1
AGDM	Agdam	1.87	165	Pn	Pn	22 59 33.3	-0.6
AGDM				Sn	Sn	22 59 59.0	+1.6
ZRD	Zardab	1.87	150	Pn	Pn	22 59 34.3	+0.3
ZRD				Sn	Sb	23 00 01.4	+1.8
SIZA	Siyzn	2.01	114	Pn	Pb	22 59 39.1	+0.5
SIZA				Sn	Sg	23 00 07.7	+0.9
KDMR	Kurdemir	2.01	139	Sn	Sn	23 00 02.8	+2.0
BLQ	Beylaqan	2.34	159	Pn	Pn	22 59 41.2	+0.8
BLQ				Sn	Sn	23 00 12.3	+3.2
HYR	Heyderabad	2.52	210	Pn	Pn	22 59 41.8	-1.1
HYR				Sg	Sb	23 00 17.9	-0.3
QRD	Qoradiz	2.54	165	Pn	Pn	22 59 44.2	+1.1
QRD				Sn	Sn	23 00 16.7	+2.9
SBZ	Shahbuz	2.61	196	Pn	Pn	22 59 45.9	+1.6
SBZ				Sg	Sn	23 00 19.2	+3.3
YRD	Yardimli	3.29	155	Pn	Pn	22 59 52.4	-1.2
YRD				Sn	Sn	23 00 32.6	0.0
LRK	Lerik	3.57	156	Pn	Pn	22 59 56.2	-1.2
LRK				Sn	Sn	23 00 39.2	-0.3

*DNK **01** 23:10:40.9±3.3, 81.°66N×2.°79W, h36km±38km, ML1.5, Presumed earthquake*

BER 01 23:10:42.8±1.3**, 81.°30N×3.°57W, h10**km**, Mw2.5, ML2.0**(DNK)**, Confirmed Earthquake, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	1.98	285	eP	Pn	23 11 14.6	-1.7
NOR	Nord	1.98	285	i P	Pn	23 11 13.5	-2.8
NOR				i S	Sn	23 11 32.5	-8.6
NOR				IAML		23 11 36.4	
	comp=Z,3.7nm,0.4s						
KBS	Kingsbay	3.57	124	eP	Pn	23 11 35.3	-2.8
KBS				IAML		23 11 36.8	
	comp=Z,1.0nm,0.1s						
KBS	Kingsbay	3.57	124	i P	Pn	23 11 35.2	-2.9
KBS				i S	Sn	23 12 12.4	-7.8
BRBB	Barentsburg B	4.51	126	eP	Pn	23 11 49.7	-1.3
SPA0	Spitsbergen Ar	4.72	121	eP	Pn	23 11 52.1	-1.7
HSPB	Hornsund (broa	5.58	130	eP	Pn	23 12 04.3	-1.4
DBG	Daneborg	7.81	215	eP	Pn	23 12 32.8	-3.4
DBG	Daneborg	7.81	215	i P	Pn	23 12 33.7	-2.5
DBG				i S	Sn	23 13 58.1	-6.4
DBG				IAML		23 14 52.1	
	comp=Z,1.8nm,1.0s						

*TIR **01** 23:13:31.8, 41.°70N×19.°62E, h19km±1km, Ml2.3/5*
*PDG **01** 23:13:31.2±0.1, 41.°67N×19.°69E, h10km, ML2.5/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*BEO **01** 23:13:31.4±0.6, 41.°61N×19.°66E, h3km±2km, ML2.2/12*
*SKO **01** 23:13:33.9, 41.°76N×19.°78E, h0km, ML2.3*

ISC 01 23:13:31.5±1.0**, 41.°67N**±0.°02×**19.°55E**±0.°02**, h9**km±9km**, n48,** σ1.°**46**/91**, 1C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	Ulcinj	0.37	323	ePg	Pb	23 13 39.6	-0.7
ULC				i Sg	Sb	23 13 46.7	+0.4
SDA	Shkodra	0.39	355	Pg	Pg	23 13 39.4	+0.3
SDA				Sg	Sb	23 13 45.7	-0.9
SDA				AML	AML	23 13 48.1	
	0.5nm,0.2s						
SDA				AML	AML	23 13 49.3	
	0.5nm,0.4s						
TIR	Tirane	0.40	143	Pg	Pg	23 13 39.5	+0.3
TIR				Sg	Sb	23 13 46.0	-0.8
TIR				AML	AML	23 13 46.6	
	3.6nm,0.4s						
TIR				AML	AML	23 13 46.7	
	2.4nm,0.3s						
DRME	Dracevica, Mon	0.59	333	ePg	Pg	23 13 43.1	+0.3
DRME				i Sg	Sb	23 13 53.2	+0.8
PHP	Peshkopia	0.67	88	Pg	Pg	23 13 43.4	-1.0
PHP				Sg	Sg	23 13 52.6	-0.5
PHP				AML	AML	23 13 54.3	
	1.7nm,0.2s						
PDG	Podgorica	0.79	344	Pg	Pg	23 13 46.5	-0.3
PDG				Sg	Sb	23 13 58.4	+0.1
PDG	Podgorica	0.79	344	ePg	Pg	23 13 46.4	-0.3
PDG				i Sg	Sb	23 13 59.6	+1.3
PDG	Podgorica	0.79	344	ePg	Pg	23 13 46.4	-0.3
PDG				eSg	Sn	23 14 00.0	-0.8
BUM	Brajici-Budva	0.80	323	ePg	Pb	23 13 47.3	-0.3
BUM				i Sg	Sn	23 14 00.9	-0.2
PVY	Plav	0.98	18	⇓iPg	Pg	23 13 48.4	-1.9
PVY				i Sg	Sg	23 14 03.6	+0.6
CEME	Cevo	1.00	332	ePg	Pg	23 13 50.1	-0.5
CEME				i Sg	Sn	23 14 06.9	+0.9
OHR	Ohrid	1.09	120	⇓iPg	Pg	23 13 52.1	-0.3
OHR				i Sg	Sn	23 14 08.8	+0.5
OHR				eLg	Lg	23 14 09.7	
	comp=N,111nm,0.4s						
OHR				eLg	Lg	23 14 10.7	
	comp=E,79nm,0.6s						
HCY	Herceg Novi	1.11	315	ePg	Pn	23 13 52.9	-0.3
HCY				i Sg	Sn	23 14 11.8	+3.2
KOME	Kolasin	1.18	359	ePg	Pg	23 13 53.1	-1.1
KOME				i Sg	Sn	23 14 11.8	+1.2
NKME	Niksic	1.19	338	ePg	Pg	23 13 53.8	-0.4
NKME				i Sg	Sn	23 14 13.2	+2.6
VLO	Vlora	1.20	182	Pg	Pn	23 13 56.2	+1.8
IVA	Berane	1.23	12	ePg	Pn	23 13 53.8	-1.2
IVA				i Sg	Sn	23 14 12.6	+0.8
KBN	Korca	1.40	138	Pn	Pg	23 13 58.4	0.0
KBN				Sn	Sg	23 14 19.2	+2.7
KBN				AML	AML	23 14 25.4	
	comp=E,0.2nm,0.7s						
BRY	Bratogost	1.44	329	ePg	Pg	23 13 58.8	-0.4
BRY				i Sg	Sg	23 14 21.8	+3.9
DBRK	Dubrovnik	1.45	314	i Pn	Pb	23 13 58.3	-0.3
DBRK				Sg	Sg	23 14 20.3	+2.4
SKO	Skopje	1.45	77	ePg	Pn	23 13 56.9	-0.9
SKO				i Sg	Sn	23 14 16.5	-0.4
UPM	Unac-Piva	1.61	343	⇓iPn	Pb	23 14 01.1	-0.3
UPM				i Sn	Sg	23 14 25.5	+2.3
SJES	Sjenica	1.62	11	ePg	Pn	23 14 01.0	+0.6
SJES				eSg	Sg	23 14 24.7	+1.0
PLE	Pljevlja	1.67	356	⇑iPn	Pn	23 14 01.5	+0.5
PLE				i Sn	Sg	23 14 25.8	+0.7
NEST	Nestorio	1.69	137	Pn	Pg	23 14 03.3	-0.5
NEST				Sn	Sg	23 14 26.4	+0.7
NEST				AML	AML	23 14 30.6	
	comp=E,0.1nm,0.7s						
NEST				AML	AML	23 14 34.5	
	comp=E,0.1nm,0.4s						
STON	Ston	1.83	312	i Pn	Pb	23 14 05.2	+0.2
STON				Sn	Sg	23 14 29.3	-0.8
STON	Ston	1.83	312	ePn	Pb	23 14 04.9	-0.1
STON				eSn	Sg	23 14 29.7	-0.4
SELS	Selova	1.94	36	ePn	Pn	23 14 05.0	+0.4
SELS				eSn	Sn	23 14 29.6	+0.4
IVAS	Ivanjica	1.96	13	ePn	Pn	23 14 04.8	-0.2
IVAS				eSn	Sb	23 14 32.1	+0.1
BARS	Barje	2.04	55	ePn	Pn	23 14 05.8	-0.2
BARS				eSn	Sn	23 14 32.0	+0.4
BBLS	Lazi&#263i	2.20	357	ePn	Pb	23 14 11.5	0.0
BBLS				eSn	Sb	23 14 39.5	+0.6
IGT	Igoumenitsa	2.21	164	Pn	Pb	23 14 11.0	-0.6
IGT				Sn	Sg	23 14 40.8	-1.8
LSTV	Lastovo	2.26	300	ePn	Pb	23 14 11.7	-0.7
LSTV				Sn	Sb	23 14 41.1	+0.7
VAY	Valandovo	2.30	98	ePn	Pn	23 14 09.8	+0.3
VAY				i Sg	Sn	23 14 39.9	+2.0
VAY				eLg	Lg	23 14 43.2	
	comp=N,16nm,0.6s						
VAY				eLg	Lg	23 14 45.5	
	comp=E,12nm,0.7s						
BOSS	Bosilegrad	2.33	68	ePn	Pn	23 14 11.1	+1.0
BOSS				eSn	Sn	23 14 39.5	+0.6
GRUS	Gruza	2.38	21	ePn	Pn	23 14 10.4	-0.3
GRUS				eSn	Sn	23 14 40.5	+0.5
DIVS	Divibare	2.45	7	eSn	Sb	23 14 44.6	-1.5
BOVS	Bovan	2.53	38	ePn	Pn	23 14 13.2	+0.5
BOVS				eSn	Sn	23 14 44.4	+0.7
RICI	Ricice	2.55	317	ePn	Pb	23 14 15.1	-2.4
RICI				Sn	Sb	23 14 47.2	-1.8
HVAR	Hvar	2.75	304	ePn	Pb	23 14 19.5	-1.2
HVAR				Sn	Sb	23 14 52.5	-2.1
ZAPS	Zavoj	2.79	54	ePn	Pn	23 14 17.5	+1.1
ZAPS				eSn	Sn	23 14 49.9	-0.3
ZAGS	Zajecar	2.92	42	ePn	Pn	23 14 19.3	+1.3
ZAGS				eSn	Sn	23 14 53.9	+0.7
KUBS	Kucevo	3.16	29	ePn	Pn	23 14 21.8	+0.5
KIJV	Kijevo	3.29	316	i Pn	Pn	23 14 25.9	+2.7
KIJV				Sn	Sb	23 15 06.4	-3.7
MORI	Morici	3.58	309	Sn	Sn	23 15 12.1	+2.6
MORI	Morici	3.58	309	ePg	Pn	23 14 21.4	-5.7
MORI				Sg	Pg	23 14 35.4	-4.7
VIRC	Vir	4.21	310	ePg	Pn	23 14 32.1	-3.7
VIRC				Sg	Pg	23 14 52.0	-0.2
NVLJ	Novalja	4.48	312	i Pn	Pn	23 14 37.4	-2.1
NVLJ				Sn	Pg	23 15 00.2	+2.9

IDC 01 23:30:35.5±7.7**, 41.°32S×78.°26E, h0**km**, mb3.5**/3**, mbtmp3.5**/3**, MS3.3**/5**, Error ellipse: s-maj=285.2km s-min=51.0km az=27.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	27.65	193	LR	LR	23 44 39.3	
	comp=Z,85nm,20.7s,baz=84,slow=30						
H01W2	Cape Leeuwin H	28.80	89	T	T	00 06 22.2	
	baz=247,slow=74,SNR=10						
H01W3	Cape Leeuwin H	28.81	89	T	T	00 06 25.2	
	baz=247,slow=74,SNR=10.0						
H01W1	Cape Leeuwin H	28.82	89	T	T	00 06 25.9	
	baz=247,slow=74,SNR=9.7						
BOSA	Boshof	44.61	269	LR	LR	23 53 21.9	
	comp=Z,36nm,21.3s,baz=190,slow=31						
PALK	Pallekele	48.41	3	LR	LR	23 54 55.6	
	comp=Z,29nm,20.0s,baz=168,slow=30						
ASAR	Alice Springs	49.29	87	P	P	23 39 25.7	-0.6
	0.3nm,0.6s,baz=253,slow=5.2,SNR=4.9						
	0.3nm,0.6s						
WRA	Warramunga Arr	51.80	83	P	P	23 39 45.8	+0.5
	0.7nm,0.8s,baz=231,slow=7.7,SNR=1.6						
	0.7nm,0.8s						
CMAR	Chiang Mai Arr	62.49	22	LR	LR	00 04 32.0	
	comp=Z,10nm,19.3s,baz=185,slow=33						
BRDH	Bariadhala	64.87	14	LR	LR	00 05 08.5	
	comp=Z,34nm,20.4s,baz=348,slow=32						
MKAR	Makanchi Array	87.80	3	P	P	23 43 25.7	-0.3
	0.3nm,0.8s,baz=179,slow=5.8,SNR=2.6						
	0.3nm,0.8s						
ILAR	Eielson Array	145.28	32	PKPbc	PKPbc	23 50 13.1	-0.7
	0.3nm,0.9s,baz=285,slow=1.8,SNR=3.4						

*IDC **02** 00:02:44.8±0.8, 18.°74N×67.°77W, h0km, mb3.8/10, mbtmp3.8/10, MS3.2/7, Error ellipse: s-maj=26.5km s-min=15.1km az=44.0*
*NEIC **02** 00:02:47.7±1.8, 18.°90N±0.°04×67.°65W±0.°04, h10km±1km, mb4.4/20, ML4.5/47, Mwr4.2/34, ML4.2/9(RSPR), Error ellipse: s-maj=8.3km s-min=4.6km az=40.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-1.93; Mθθ0.26; Mφφ1.67; Mrθ-0.51; Mθφ1.38; Mφr1.04; Fault plane solution: M0 2.56000×10^15 NP1:φs56.37000°, δ43.23000°, λ-49.86000°. NP2:φs187.19000°, δ58.43000°, λ-121.22000°. Principal axes: T 2.6049, Plg8.0000°, Azm299.0000°; N -0.1008, Plg26.0000°, Azm205.0000°; P -2.5041, Plg62.0000°, Azm45.0000°;*
*OSPL **02** 00:02:48.7±1.3, 19.°05N×67.°59W, h7km±7km, ML4.8, Presumed earthquake*
*NEIC **02** 00:02:48.8, 18.°88N×67.°66W, h18km*
*SDD **02** 00:02:49.2±2.2, 18.°97N×67.°66W, h0km±11km, MD4.0, ML4.3, MW4.0, Presumed earthquake*
*RSPR **02** 00:02:50.8, 18.°86N×67.°69W, h10km±31km, MD3.2/9*

ISC 02 00:02:47.9±1.2**, 18.°99N**±0.°05×**67.°66W**±0.°03**, h11**km±8km**, n125,** σ1.°**42**/151**, mb4.2**/17**, MS3.3**/7**, 18C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.62	163		Pg	00 03 00.1	+0.1
IDE	Isla Desecheo	0.62	163	⇑iP	Pg	00 03 00.1	+0.1
AGPR	Aguadilla, PR	0.73	135		Pg	00 03 01.7	-0.4
AGPR				Sg	Sg	00 03 11.6	-0.1
AGPR				IAML		00 03 13.2	
	19µm,0.5s						
AGPR	Aguadilla, PR	0.73	135	⇑iP	Pg	00 03 02.3	+0.3
AGPR				⇑iS	Sg	00 03 12.5	+0.8
AGPR				IAML		00 03 13.0	
	comp=N,13µm,0.4s						
AGPR	Aguadilla, PR	0.73	135	⇑iP	Pg	00 03 02.0	-0.1
AGPR				eS	Sg	00 03 11.8	+0.2
AGPR	Aguadilla, PR	0.73	135	i P	Pg	00 03 01.9	-0.2
AGPR				eS	Sg	00 03 12.2	+0.6
AGPR				IAML		00 03 13.2	
	comp=Z,8µm,0.5s						
PRSN	Puerto Rico Se	0.91	147		Pg	00 03 04.3	-1.1
PRSN				Sn	Sg	00 03 17.1	-0.1
PRSN	Puerto Rico Se	0.91	147	⇑iP	Pg	00 03 04.5	-0.9
PRSN				⇑iS	Sg	00 03 17.8	+0.5
PRSN				IAML		00 03 29.6	
	comp=N,26µm,0.3s						
PRSN	Puerto Rico Se	0.91	147	⇑eP	Pg	00 03 05.2	-0.2
PRSN				eS	Sg	00 03 17.4	+0.2
LSP	Las Mesas	0.97	146		Pg	00 03 06.2	-0.5
LSP	Las Mesas	0.97	146	⇓eP	Pg	00 03 06.2	-0.5
HIDR	Higuey Centro	1.07	249	⇑iP	Pg	00 03 07.3	-1.3
HIDR				⇑iS	Sg	00 03 21.7	-0.9
HIDR				IAML		00 03 24.5	
	comp=N,10µm,0.7s						
HIDR	Higuey Centro	1.07	249	⇓iP	Pg	00 03 07.5	-1.1
HIDR				eS	Sg	00 03 21.3	-1.2
CRPR	Cabo Rojo, PR	1.10	152		Pg	00 03 07.1	-2.1
CRPR	Cabo Rojo, PR	1.10	152	IAML		00 03 28.0	
	comp=N,13µm,0.7s						
CRPR	Cabo Rojo, PR	1.10	152	⇑iP	Pg	00 03 08.6	-0.6
CRPR				⇑iS	Sb	00 03 23.8	+0.4
CRPR				IAML		00 03 29.2	
	comp=N,17µm,0.6s						
CRPR	Cabo Rojo, PR	1.10	152	eS	Sb	00 03 23.8	+0.4
CRPR	Cabo Rojo, PR	1.10	152	i P	Pg	00 03 08.8	-0.3
CRPR				eS	Sg	00 03 23.3	-0.2
CRPR				IAML		00 03 27.8	
	comp=Z,11µm,0.3s						
UUPR	Utuado, UPR, P	1.15	129		Pb	00 03 08.2	-1.6
MLPR	Magueyes Islan	1.17	150		Pg	00 03 08.4	-2.0
MLPR				IAML		00 03 28.5	
	comp=Z,14µm,0.8s						
MLPR				IAML		00 03 28.9	
	comp=Z,14µm,0.5s						
EMPR	Esperanza - Ma	1.19	115		Pb	00 03 09.2	-1.2
EMPR					Sb	00 03 26.0	+0.3
EMPR	Esperanza - Ma	1.19	115	⇑eP	Pb	00 03 09.2	-1.2
EMPR				eS	Sb	00 03 26.0	+0.3
GBPR	Guanica, Bosqu	1.25	143		Pb	00 03 10.7	-0.8
GBPR					Sb	00 03 26.2	-1.4
GBPR	Guanica, Bosqu	1.25	143	⇓eP	Pb	00 03 10.7	-0.8
GBPR				eS	Sb	00 03 26.2	-1.4
MIDR	Miches	1.31	270	⇑iP	Pn	00 03 11.7	-0.5
MIDR				i S	Sb	00 03 31.0	+1.5
MIDR				IAML		00 03 33.2	
	comp=N,3µm,1.1s						
MIDR				IAML		00 03 33.2	
	comp=N,3µm,1.1s						
CELP	Cerrillos	1.37	131		Pn	00 03 11.8	-1.1
CELP				IAML		00 03 34.2	
	comp=N,5µm,0.4s						
CELP				IAML		00 03 34.5	
	comp=N,8µm,0.5s						
OBIP	Obispado Ponce	1.37	133		Pn	00 03 11.9	-1.1
OBIP					Sb	00 03 29.3	-1.8
OBIP	Obispado Ponce	1.37	133	⇑eP	Pn	00 03 11.9	-1.1
OBIP				eS	Sb	00 03 29.6	-1.5
OBIP	Obispado Ponce	1.37	133	i P	Pn	00 03 11.6	-1.4
OBIP				eS	Sb	00 03 29.8	-1.3
OBIP				IAML		00 03 34.5	
	comp=Z,32µm,0.2s						
ECPR	Experimental S	1.40	118		Pn	00 03 11.7	-1.6
ECPR				IAML		00 03 33.8	
	comp=Z,8µm,0.2s						
ECPR				IAML		00 03 40.7	
	comp=Z,9µm,0.2s						
ECPR	Experimental S	1.40	118	⇑eP	Pn	00 03 12.1	-1.3
ECPR				eS	Sb	00 03 31.0	-0.9
SMDR	Samana, DR	1.48	282		Pn	00 03 15.0	+0.6
SMDR					Sn	00 03 35.2	+1.4
SMDR	Samana, DR	1.48	282	⇓iP	Pn	00 03 15.1	+0.7
SMDR				⇑iS	Sn	00 03 35.4	+1.7
SMDR				IAML		00 03 38.7	
	comp=N,3µm,0.8s						
SMDR	Samana, DR	1.48	282	⇑iP	Pn	00 03 15.0	+0.6
SMDR				eS	Sn	00 03 35.2	+1.4
GCPR	Guaynabo City	1.64	114		Pn	00 03 15.7	-1.0
GCPR					Sn	00 03 35.4	-2.4
GCPR	Guaynabo City	1.64	114	⇑eP	Pn	00 03 16.2	-0.5
GCPR				eS	Sn	00 03 38.3	+0.5
DR12	Loma Pena Alta	1.64	263		Pn	00 03 16.6	-0.2
HATOM	Hato Mayor del	1.64	263	⇑iP	Pn	00 03 17.1	+0.4
HATOM				i S	Sn	00 03 39.2	+1.3
HATOM				IAML		00 03 41.6	
	comp=N,3µm,0.9s						
SJG	San Juan	1.68	121	Pn	Pn	00 03 16.3	-0.8
	comp=N,83nm,0.3s,baz=305,slow=13,SNR=110						
SJG				Sn	Sn	00 03 39.1	+0.4
	comp=N,841nm,0.3s,baz=74,slow=20,SNR=14						
SJG				LR	LR	00 03 42.9	
	comp=N,614nm,19.5s,baz=38,slow=35						
SJG	San Juan	1.68	121		Pn	00 03 16.3	-0.8
SJG					Sn	00 03 38.0	-0.6
SJG				IAML		00 03 43.5	
	comp=N,4µm,0.3s						
SJG				IAML		00 03 45.0	
	comp=N,4µm,0.3s						
SJG	San Juan	1.68	121	eP	Pn	00 03 15.6	-1.6
SJG	San Juan	1.68	121	i P	Pn	00 03 16.3	-0.8
SJG				i S	Sn	00 03 38.8	+0.1
SJG	San Juan	1.68	121	⇓eP	Pn	00 03 16.4	-0.8
SJG				eS	Sn	00 03 38.1	-0.6
SJG	San Juan	1.68	121	i P	Pn	00 03 15.7	-1.4
SJG				eS	Sn	00 03 37.6	-1.0
SJG				IAML		00 03 43.2	
	comp=Z,40µm,0.2s						
PDPR	Patillas Dam,	1.83	121		Pn	00 03 18.1	-1.2
HUMP	Col San Antoni	1.91	116		Pn	00 03 19.5	-0.9
HUMP					Sn	00 03 44.2	-0.3
HUMP	Col San Antoni	1.91	116	⇑eP	Pn	00 03 19.9	-0.5
HUMP				eS	Sn	00 03 44.9	+0.4
SDD	Santo Domingo	2.20	257		Pn	00 03 25.6	+1.2
SDD				IAML		00 03 59.0	
	comp=N,4µm,1.1s						
SDD				IAML		00 04 10.0	
	comp=E,4µm,1.0s						
CUPR	Culebra, Puert	2.35	106		Pn	00 03 24.8	-1.7
BANI	BANI	2.62	257		Pn	00 03 31.9	+1.6
SC01	Santiago de lo	2.93	279		Pn	00 03 36.3	+1.8
SDDR	Presa de Saban	3.43	271		Pn	00 03 42.6	+1.2
SDDR				IAML		00 04 42.3	
	comp=E,1µm,0.8s						
SDDR				IAML		00 04 47.3	
	comp=E,1µm,0.9s						
SDDR	Presa de Saban	3.43	271	eP	Pn	00 03 46.5	+5.0
SDDR				eS	Sb	00 04 31.2	+0.7
SDDR				IAML		00 04 35.1	
	comp=E,867nm,0.8s						
SDDR				IAML		00 04 35.8	
	comp=E,804nm,0.7s						
SDDR	Presa de Saban	3.43	271	eP	Pn	00 03 43.8	+2.4
LOPP1	Punta Rusia, P	3.45	285	i P	Pn	00 03 42.3	+0.7
GRTK	Grand Turk	4.12	308	eP	Pn	00 03 50.7	-0.1
GRTK				eS	Sn	00 04 37.3	-1.7
GRTK				IAML		00 04 42.1	
	comp=E,246nm,0.1s						
GRTK				IAML		00 04 42.5	
	comp=E,129nm,0.1s						
SABA	Saba	4.41	107	Pn	Pn	00 03 54.2	-0.6
SABA				IAML		00 05 14.0	
	comp=E,661nm,0.9s						
SABA				IAML		00 05 21.6	
	comp=N,332nm,0.6s						
SABA	Saba	4.41	107		Sn	00 04 46.7	+0.5
SABA	Saba	4.41	107	⇑eP	Pn	00 03 58.9	+4.1
SABA				eS	Sn	00 04 46.7	+0.5
SMRT	St. Maarten	4.45	101		Pn	00 03 54.4	-0.9
SMRT				IAML		00 04 59.0	
	comp=N,313nm,0.8s						
SMRT				IAML		00 04 59.1	
	comp=E,388nm,0.6s						
SKI	Saint Kitts	4.96	109	eP	Pn	00 04 02.9	+0.5
MBFL	Flemmings, Mon	5.64	112	eP	Pn	00 04 13.6	+1.8
MBWH	Windy Hill	5.67	112	eP	Pn	00 04 13.6	+1.5
ANWB	Willy Bob	5.73	102	eP	Pn	00 04 11.2	-1.8
DHSZ	Broadband at M	6.24	115	eP	Pn	00 04 23.7	+3.8
GDHS	Morne Mazeau,	6.24	115	Pn	Pn	00 04 19.5	-0.5
MASC	Masc	6.31	282	eP	Pn	00 04 20.6	-0.3
MASC				eS	Sn	00 05 30.2	-2.7
MASC				IAML		00 05 33.9	
	comp=N,11nm,0.2s						
MASC				IAML		00 05 34.7	
	comp=E,23nm,0.2s						
ATGZ	Broadband at L	6.35	116	eP	Pn	00 04 22.3	+0.8
MMLZ	Guadeloupe Bro	6.42	116	eP	Pn	00 04 27.7	+5.3
MAGL	Barre de l'ile	6.79	115	Pn	Pn	00 04 26.4	-1.2
DSDZ	La Diserade, G	6.83	112	eP	Pn	00 04 26.5	-1.5
QMBU	Quimbuelo	6.85	281	eP	Pn	00 04 26.2	-2.1
QMBU				eS	Sn	00 05 40.9	-5.5
QMBU				IAML		00 05 46.6	
	comp=N,40nm,0.3s						
QMBU				IAML		00 05 47.2	
	comp=E,32nm,0.2s						
DSLB	Salisbury	6.93	120	eP	Pn	00 04 30.5	+1.1
MOAC	Moa	7.07	285	eP	Pn	00 04 29.9	-1.4
MOAC				eS	Sn	00 05 46.1	-5.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOAC				IAML		00 05 49.1	
	comp=E,9.2nm,0.2s						
MOAC				IAML		00 05 49.7	
	comp=N,9.5nm,0.1s						
NMDO	Nuevo Mundo	7.07	284	Pn	Pn	00 04 31.0	-0.4
GTBY	Guantanamo Bay	7.09	279	eP	Pn	00 04 31.1	-0.5
GTBY				eS	Sn	00 05 49.4	-2.9
GTBY				IAML		00 05 52.0	
	comp=N,8.5nm,0.1s						
GTBY				IAML		00 05 53.0	
	comp=N,16nm,0.3s						
RCC	Rio Carpintero	7.65	279	eP	Pn	00 04 38.7	-0.6
RCC				eS	Sn	00 06 01.8	-4.2
RCC				IAML		00 06 04.4	
	comp=N,6.2nm,0.2s						
RCC				IAML		00 06 05.8	
	comp=E,12nm,0.2s						
BIM	Bigot	7.72	124	Pn	Pn	00 04 40.0	-0.3
BIM	Bigot	7.72	124	eP	Pn	00 04 42.4	+2.1
SLBI	Saint Lucia, B	8.09	127	eP	Pn	00 04 46.2	+0.8
HLGC	Holguin	8.12	285	eP	Pn	00 04 46.6	+0.7
HLGC				eS	Sn	00 06 14.7	-3.2
HLGC				IAML		00 06 20.0	
	comp=E,8.0nm,0.2s						
HLGC				IAML		00 06 20.8	
	comp=N,23nm,0.6s						
CCCC	Cccc	9.75	285	eP	Pn	00 05 02.7	-5.4
CCCC				eS	Sn	00 06 42.4	-15
CCCC				IAML		00 06 44.9	
	comp=E,6.2nm,0.3s						
CCCC				IAML		00 06 48.2	
	comp=N,4.5nm,0.2s						
SDV	Santo Domingo	10.45	196	Pn	Pn	00 05 18.8	+0.9
	comp=N,1.4nm,0.3s,baz=30,slow=8.7,SNR=21						
SDV				Sn	Sn	00 07 03.9	-11
	comp=N,0.5nm,0.3s,baz=17,slow=18,SNR=1.3						
SDV	Santo Domingo	10.45	196		Pn	00 05 16.8	-1.1
ROSC	El Rosal	15.49	206	Pn	Pn	00 06 29.6	+2.7
	comp=N,4.0nm,0.3s,baz=23,slow=10.0,SNR=11						
ROSC	El Rosal	15.49	206		Pn	00 06 27.3	+0.4
Y60A	Bolivia	17.67	330		Pn	00 06 54.6	+0.5
BOAV	Boa Vista	17.91	156	P	Pn	00 06 56.0	-1.1
Y58A	Scranton	18.32	327	P	P	00 07 03.6	+1.5
V61A	Roper	18.50	337	P	P	00 07 05.3	+1.2
W57A	Gilead	19.46	328	P	P	00 07 15.6	+1.0
W57A				IAmb	IAmb	00 07 24.4	
	comp=Z,32nm,1.4s						
T59A	Double "B" Far	19.91	336	P	P	00 07 20.9	+1.4
T59A				IAmb	IAmb	00 07 54.2	
	comp=Z,20nm,1.5s						
OTAV	Otavalo	21.43	211		P	00 07 34.8	-1.9
TKL	Tuckaleechee C	21.88	323	P	P	00 07 41.6	+0.8
	comp=Z,2.4nm,0.9s,baz=162,slow=14,SNR=1.7						
TKL				S	S	00 11 36.1	-6.4
	comp=Z,2.8nm,0.8s,baz=236,slow=7.3,SNR=1.8						
TKL				LR	LR	00 14 57.0	
	comp=Z,60nm,21.4s,baz=149,slow=33						
	comp=Z,2.4nm,0.9s						
TKL	Tuckaleechee C	21.88	323	P	P	00 07 42.5	+1.7
TKL				IAmb	IAmb	00 08 16.3	
	comp=Z,23nm,1.4s						
APG	El Apazote	22.16	263	LR	LR	00 17 15.2	
	comp=Z,14nm,18.1s,baz=282,slow=40						
S54A	Dingess, Beckl	22.21	330	P	P	00 07 43.7	-0.8
Q56A	Snyder Ridge,	22.34	336	P	P	00 07 46.3	+0.4
Q56A				IAmb	IAmb	00 08 27.3	
	comp=Z,15nm,1.2s						
M63A	Gales Ferry	22.66	351	P	P	00 07 51.0	+1.9
M63A				IAmb	IAmb	00 08 33.8	
	comp=Z,15nm,1.0s						
SADO	Sadowa	27.44	342	LR	LR	00 20 05.1	
	comp=Z,72nm,18.1s,baz=142,slow=38						
ATAH	Atahualpa	28.03	203	LR	LR	00 21 32.1	
	comp=Z,89nm,19.7s,baz=39,slow=41						
TXAR	Lajitas Array	34.31	294	P	P	00 09 33.5	-1.2
	comp=Z,0.6nm,0.8s,baz=103,slow=8.8,SNR=7.9						
TXAR				PcP	PcP	00 12 10.5	-0.4
	comp=Z,0.9nm,1.0s,baz=114,slow=3.5,SNR=4.8						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	34.31	294	P	P	00 09 35.1	+0.4
TX31	Lajitas Ar. Si	34.31	294	P	P	00 09 34.6	-0.1
TX31				IAmb	IAmb	00 09 38.6	
	comp=Z,5.7nm,1.4s						
LPAZ	La Paz	35.05	181	P	P	00 09 36.9	-4.9
	comp=Z,0.4nm,0.3s,baz=112,slow=5.4,SNR=1.9						
	comp=Z,0.4nm,0.3s						
LPAZ	La Paz	35.05	181	P	P	00 09 38.5	-3.3
VHRN	Van Horn	35.68	297	P	P	00 09 46.3	-0.3
VHRN				IAmb	IAmb	00 10 14.5	
	comp=Z,4.9nm,1.1s						
SCHQ	Schefferville	35.79	1	P	P	00 09 46.9	-0.1
	comp=Z,1.0nm,0.6s,baz=184,slow=4.7,SNR=4.4						
	comp=Z,1.0nm,0.6s						
ANMO	Albuquerque	37.79	303	LR	LR	00 27 38.5	
	comp=Z,70nm,18.8s,baz=126,slow=40						
SDCO	Great Sand Dun	37.86	308	P	P	00 10 04.8	-0.4
HMBC	Humberstone	39.08	183	P	P	00 10 12.4	-3.0
HMBC				IAmb	IAmb	00 10 51.9	
	comp=Z,23nm,1.5s						
LPIG	La Paz	39.88	285	LR	LR	00 26 48.0	
	comp=Z,41nm,18.5s,baz=32,slow=36						
PB07	IPOC Station P	40.52	183	P	P	00 10 24.5	-2.9
PB07				IAmb	IAmb	00 11 01.1	
	comp=Z,21nm,1.3s						
PDAR	Pinedale Array	42.48	313	LR	LR	00 27 40.0	
	comp=Z,26nm,21.3s,baz=99,slow=35						
CPUP	Villa Florida	46.15	167	P	P	00 11 09.2	-3.3
	comp=Z,2.2nm,0.8s,baz=8.8,slow=8.3,SNR=5.1						
	comp=Z,2.2nm,0.8s						
NVAR	Mina Array Bea	47.82	305	P	P	00 11 26.2	+0.3
	comp=Z,1.2nm,0.9s,baz=102,slow=8.1,SNR=4.2						
	comp=Z,1.2nm,0.9s						
NVAR	Mina Array Bea	47.82	305	P	P	00 11 25.8	-0.2
YKA	Yellowknife Ar	54.10	335	P	P	00 12 12.1	-0.5
	comp=Z,0.4nm,0.4s,baz=114,slow=6.3,SNR=11						
	comp=Z,0.4nm,0.4s						
ESDC	Sonseca Array	58.05	55	P	P	00 12 41.2	0.0
	comp=Z,0.9nm,0.9s,baz=268,slow=7.1,SNR=5.7						
	comp=Z,0.9nm,0.9s						
DLBC	Dease Lake	59.61	327	P	P	00 12 51.3	-0.5
	comp=Z,2.3nm,0.9s,baz=122,slow=11,SNR=3.3						
	comp=Z,2.3nm,0.9s						
INK	Inuvik	63.64	338	P	P	00 13 18.3	-0.3
INK				IAmb	IAmb	00 13 19.2	
	comp=Z,4.1nm,1.1s						
ILAR	Eielson Array	68.41	333	P	P	00 13 48.7	-0.8
	comp=Z,1.5nm,0.9s,baz=104,slow=4.4,SNR=12						
	comp=Z,1.5nm,0.9s						
ILAR	Eielson Array	68.41	333	P	P	00 13 49.2	-0.3
HHC	Hu-ho-hao-te	120.47	1	eP	PKPdf	00 21 37.9	-2.1
PZH	PanZhiHua	133.63	13	PKP	PKPdf	00 22 07.1	+1.6

*RSPR **02** 00:06:49.8, 19°.23N×68°.32W, h8km±24km, MD3.0/5*
*OSPL **02** 00:06:52.8±1.0, 19°.10N×67°.99W, h0km±5km, ML3.5, Presumed earthquake*
*NEIC **02** 00:06:54.3±2.7, 19°.20N±0°.05×67°.56W±0°.05, h10km±2km, ML3.1/37, Md3.0/5(RSPR), Error ellipse: s-maj=9.6km s-min=6.6km az=35.0*
ISC 02 00:06:52.8±1.5, **19°.16N**±0°.08×**67°.82W**±0°.04, **h7**km±10km, **n37**, σ**1s.38**/54, **12C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.84	157		Pg	00 07 08.9	0.0
IDE	Isla Desecheo	0.84	157	⇑eP	Pg	00 07 08.9	0.0
AGPR	Aguadilla, PR	0.96	136		Pg	00 07 10.6	-0.7
AGPR				IAML		00 07 26.0	
	940nm,0.3s						
AGPR	Aguadilla, PR	0.96	136	⇑eP	Pg	00 07 10.9	-0.4
AGPR	Aguadilla, PR	0.96	136	iP	Pg	00 07 11.1	-0.2
AGPR				eS	Sb	00 07 25.3	+0.6
AGPR				IAML		00 07 25.8	
	comp=Z,342nm,0.2s						
PRSN	Puerto Rico Se	1.14	146		Sn	00 07 33.6	+2.7
PRSN	Puerto Rico Se	1.14	146	Pn	Pg	00 07 13.8	-0.8
PRSN	Puerto Rico Se	1.14	146	⇑eP	Pg	00 07 14.1	-0.5
PRSN				eS	Sn	00 07 33.6	+2.7
LSP	Las Mesas	1.20	144		Pg	00 07 14.9	-1.0
LSP					Sn	00 07 33.8	+1.2
LSP	Las Mesas	1.20	144	⇑eP	Pg	00 07 14.9	-1.0
LSP				eS	Sn	00 07 33.8	+1.2
CRPR	Cabo Rojo, PR	1.33	149		Pn	00 07 16.3	-1.5
CRPR					Sg	00 07 35.8	+0.1
CRPR	Cabo Rojo, PR	1.33	149	IAML		00 07 39.7	
	comp=Z,424nm,0.5s						
CRPR				IAML		00 07 41.9	
	comp=Z,312nm,0.4s						
CRPR	Cabo Rojo, PR	1.33	149	⇑eP	Pn	00 07 16.9	-0.9
CRPR				eS	Sn	00 07 36.5	+0.8
CRPR	Cabo Rojo, PR	1.33	149	iP	Pn	00 07 17.2	-0.5
CRPR				eS	Sg	00 07 35.5	-0.1
CRPR				IAML		00 07 41.2	
	comp=Z,256nm,0.5s						
UUPR	Utuado, UPR, P	1.38	131		Pn	00 07 17.3	-1.2
MLPR	Magueyes Islan	1.40	148		Pn	00 07 17.3	-1.3
MLPR				IAML		00 07 41.5	
	comp=Z,316nm,0.4s						
MLPR				IAML		00 07 41.8	
	comp=Z,410nm,0.3s						
EMPR	Esperanza - Ma	1.40	119		Pn	00 07 19.2	+0.5
EMPR	Esperanza - Ma	1.40	119	⇑eP	Pn	00 07 19.2	+0.5
EMPR				eS	Sn	00 07 40.8	+3.3
GBPR	Guanica, Bosqu	1.48	143		Pn	00 07 19.1	-0.7
GBPR	Guanica, Bosqu	1.48	143	⇑eP	Pn	00 07 19.1	-0.7
DR12	Loma Pena Alta	1.52	256	Pn	Pg	00 07 24.0	+2.0
OBIP	Obispado Ponce	1.60	134		Pn	00 07 20.6	-0.9
OBIP					Sn	00 07 40.8	-1.6
OBIP	Obispado Ponce	1.60	134	⇑eP	Pn	00 07 20.9	-0.6
OBIP				eS	Sg	00 07 45.3	+1.0
OBIP	Obispado Ponce	1.60	134	iP	Pn	00 07 21.0	-0.6
OBIP				eS	Sn	00 07 43.1	+0.7
OBIP				IAML		00 07 48.5	
	comp=Z,1μm,0.3s						
ECPR	Experimental S	1.61	121		Pn	00 07 21.0	-0.7
ECPR	Experimental S	1.61	121	⇑eP	Pn	00 07 21.0	-0.7
ECPR				eS	Sg	00 07 47.3	+2.6
GCPR	Guaynabo City	1.85	117		Pn	00 07 24.6	-0.3
GCPR					Sn	00 07 44.4	-4.2
GCPR	Guaynabo City	1.85	117	⇑eP	Pn	00 07 25.2	+0.2
GCPR				eS	Sg	00 07 53.3	+1.0
SJG	San Juan	1.90	123		Pn	00 07 24.2	-1.3
SJG				IAML		00 07 55.3	
	comp=Z,159nm,0.3s						
SJG				IAML		00 07 55.6	
	comp=Z,152nm,0.4s						
SJG	San Juan	1.90	123	⇑eP	Pn	00 07 25.6	0.0
SJG				eS	Sg	00 07 54.1	+0.3
SJG	San Juan	1.90	123	iP	Pn	00 07 26.7	+1.1
SJG				eS	Sn	00 07 50.5	+0.8
SJG				IAML		00 07 56.2	
	comp=Z,2μm,0.1s						
PDPR	Patillas Dam,	2.05	123	Pn	Pn	00 07 27.0	-0.7
HUMP	Col San Antoni	2.12	118		Pn	00 07 28.9	+0.2
HUMP					Sn	00 07 52.5	-2.9
HUMP	Col San Antoni	2.12	118	⇑eP	Pn	00 07 29.1	+0.4
HUMP				eS	Sb	00 07 59.7	+1.5
BANI	BANI	2.52	253	Pn	Pg	00 07 39.9	-1.3
CUPR	Culebra, Puert	2.55	109	Pn	Pn	00 07 34.3	-0.3
SDDR	Presa de Saban	3.28	267	Pn	Pb	00 07 50.2	-1.3
SDDR				IAML		00 08 50.4	
	comp=Z,32nm,0.6s						
SDDR				IAML		00 08 57.0	
	comp=Z,43nm,0.8s						

*IDC **02** 00:11:16.8±1.3, 19°.32N×67°.30W, h0km, mb3.4/3, mbtmp3.5/4, ML2.4/1, MS2.8/2, Error ellipse: s-maj=51.4km s-min=22.4km az=57.0*
*NEIC **02** 00:11:17.8±1.1, 19°.03N±0°.04×67°.56W±0°.05, h10km±1km, mb3.6/1, Error ellipse: s-maj=10.6km s-min=4.4km az=47.0*
*RSPR **02** 00:11:20.4, 18°.94N×67°.61W, h6km±2km*
*PTWC **02** 00:11:29, 18°.50N×67°.00W, Ml4.3/14*
ISC 02 00:11:19.8±0.8, **18°.96N**±0°.05×**67°.56W**±0°.04, **h27**km, **n60**, σ**0s.76**/60, **mb3.4**/3, **8C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.57	171		Pb	00 11 30.3	-1.0
IDE					Sb	00 11 39.7	+0.6
IDE	Isla Desecheo	0.57	171	⇑eP	Pb	00 11 30.3	-1.0
IDE				eS	Sb	00 11 39.7	+0.6
AGPR	Aguadilla, PR	0.65	138	Pg	Pb	00 11 32.2	-0.4
AGPR	Aguadilla, PR	0.65	138	P	Pb	00 11 32.1	-0.5
AGPR	Aguadilla, PR	0.65	138	⇓eP	Pb	00 11 32.4	-0.2
AGPR				eS	Sb	00 11 42.3	+1.1
PRSN	Puerto Rico Se	0.84	151	Pg	Pn	00 11 35.0	-0.8
PRSN	Puerto Rico Se	0.84	151	P	Pn	00 11 35.3	-0.5
PRSN	Puerto Rico Se	0.84	151	⇑eP	Pn	00 11 35.1	-0.7
LSP	Las Mesas	0.90	150		Pn	00 11 36.4	-0.3
LSP					Sb	00 11 48.9	+0.5
LSP	Las Mesas	0.90	150	⇑eP	Pn	00 11 36.4	-0.3
LSP				eS	Sb	00 11 48.9	+0.5
CRPR	Cabo Rojo, PR	1.04	155		Pn	00 11 38.1	-0.4
CRPR	Cabo Rojo, PR	1.04	155	P	Pn	00 11 38.4	-0.2
CRPR	Cabo Rojo, PR	1.04	155	⇑eP	Pn	00 11 38.2	-0.4
UUPR	Utuado, UPR, P	1.06	131		Pn	00 11 38.8	-0.2
EMPR	Esperanza - Ma	1.09	116		Pb	00 11 39.5	-0.5
EMPR	Esperanza - Ma	1.09	116	⇓eP	Pb	00 11 39.5	-0.5
MLPR	Magueyes Islan	1.10	153		Pn	00 11 39.0	-0.4
HIDR	Higuey Centro	1.15	252	eS	Sn	00 11 54.0	-1.0
GBPR	Guanica, Bosqu	1.17	146		Pn	00 11 41.0	+0.6
GBPR	Guanica, Bosqu	1.17	146	⇓eP	Pn	00 11 41.0	+0.6
CELP	Cerrillos	1.28	133		Pn	00 11 42.5	+0.6
OBIP	Obispado Ponce	1.28	135		Pn	00 11 42.0	+0.1
OBIP	Obispado Ponce	1.28	135	P	Pn	00 11 42.1	+0.1
OBIP	Obispado Ponce	1.28	135	⇑eP	Pn	00 11 41.9	-0.1
ECPR	Experimental S	1.30	119		Pn	00 11 42.5	+0.2
ECPR	Experimental S	1.30	119	⇓eP	Pn	00 11 42.2	-0.1
GCPR	Guaynabo City	1.54	114		Pn	00 11 45.4	-0.2
GCPR	Guaynabo City	1.54	114	P	Pb	00 11 46.3	-1.4
GCPR	Guaynabo City	1.54	114	⇑eP	Pn	00 11 46.0	+0.4
SMDR	Samana, DR	1.57	282		Pn	00 11 45.2	-0.7
SMDR	Samana, DR	1.57	282	⇓eP	Pn	00 11 45.2	-0.7
SJG	San Juan	1.58	122	Pn	Pn	00 11 46.3	+0.3
	24nm,0.3s,baz=304,slow=11,SNR=20						
SJG	San Juan	1.58	122		Pn	00 11 46.4	+0.3
SJG	San Juan	1.58	122	P	Pn	00 11 46.8	+0.7
SJG	San Juan	1.58	122	⇑eP	Pn	00 11 46.6	+0.6
DR12	Loma Pena Alta	1.73	265		Pn	00 11 47.4	-0.7
PDPR	Patillas Dam,	1.74	122		Pn	00 11 48.6	+0.4
HUMP	Col San Antoni	1.82	116		Pn	00 11 49.8	+0.5
HUMP	Col San Antoni	1.82	116	P	Pb	00 11 50.5	-1.9
HUMP	Col San Antoni	1.82	116	⇑eP	Pn	00 11 50.0	+0.6
CUPR	Culebra, Puert	2.26	106		Pn	00 11 55.0	-0.4
BANI	BANI	2.71	258		Pn	00 12 02.9	+1.2
SC01	Santiago de lo	3.03	279		Pn	00 12 06.3	+0.4
SDDR	Presa de Saban	3.52	271		Pn	00 12 13.5	+0.7
SMRT	St. Maarten	4.36	101		Pn	00 12 25.0	+0.8
DHSZ	Broadband at M	6.14	115	eP	Pb	00 13 13.9	+7.9
GDHS	Morne Mazeau,	6.14	115	Pn	Pn	00 12 49.4	+0.5
MMLZ	Guadeloupe Bro	6.33	116	eP	Pb	00 13 16.5	+7.3
CBE	Ff, Capester	6.37	116	Pn	Pn	00 12 52.6	+0.6
DSLB	Salisbury	6.83	120	eP	Pb	00 13 14.9	-3.0
SLBI	Saint Lucia, B	8.00	127	eP	Pb	00 13 38.1	+0.4
CHIV	Chivirico	8.41	278	Pn	Pn	00 13 20.2	+0.3
SDV	Santo Domingo	10.44	197	Pn	Pn	00 13 55.3	+7.3
	0.3nm,0.3s,baz=6.9,slow=11,SNR=4.7						
	4.4nm,0.8s						
SDV	Santo Domingo	10.44	197	Pn	Pn	00 13 48.0	0.0
ROSC	El Rosal	15.50	206	LR	LR	00 22 14.2	
	comp=Z,29nm,18.1s,baz=6.1,slow=41						
BOAV	Boa Vista	17.84	156		P	00 15 27.3	+0.5
BOAV				IAmb	IAmb	00 15 30.3	
	comp=Z,5.1nm,1.1s						
MDP	Montagnes des	20.04	132	LR	LR	00 23 58.3	
	comp=Z,31nm,20.7s,baz=304,slow=38						
TXAR	Lajitas Array	34.40	294	P	P	00 18 05.9	+0.8
	comp=Z,0.4nm,1.0s,baz=120,slow=8.2,SNR=2.5						
	comp=Z,0.4nm,1.0s						
YKA	Yellowknife Ar	54.17	335	P	P	00 20 42.6	+0.1
	comp=Z,0.2nm,0.5s,baz=118,slow=6.4,SNR=5.2						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	68.48	333	P	P	00 22 19.2	-0.1
	comp=Z,0.4nm,0.9s,baz=90,slow=4.4,SNR=5.3						
	comp=Z,0.4nm,0.9s						

*OSPL **02** 00:11:36.0±1.5, 18°.98N×67°.94W, h7km±14km, ML5.0, Presumed earthquake*
*IDC **02** 00:11:36.6±0.8, 18°.69N×67°.73W, h0km, mb4.0/14, mbtmp4.0/14, Error ellipse: s-maj=22.0km s-min=14.5km az=38.0*
*NEIC **02** 00:11:39.0±1.5, 18°.94N±0°.04×67°.63W±0°.04, h10km±1km, mb4.5/25, ML4.5/45, Mwr4.1/27, Md4.3/7(RSPR), Error ellipse: s-maj=7.4km s-min=4.5km az=226.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.04; $M_{\theta\theta}$0.34; $M_{\phi\phi}$0.70; $M_{r\theta}$0.61; $M_{\theta\phi}$1.00; $M_{\phi r}$0.09; Fault plane solution: $M_0$1.50000×10^{15} NP1: ϕ_s242.79000°, δ59.84000°, λ-60.15000°. NP2: ϕ_s13.99000°, δ41.42000°, λ-130.58000°. Principal axes: T 1.6227, Plg10.0000°, Azm312.0000°; N -0.2971, Plg25.0000°, Azm47.0000°; P -1.3255, Plg62.0000°, Azm202.0000°;*
*SDD **02** 00:11:39.4±2.2, 19°.09N×67°.59W, h0km±11km, MD3.8, ML4.3, MW4.3, Presumed earthquake*
*NEIC **02** 00:11:39, 18°.91N×67°.65W, h10km*
*RSNC **02** 00:11:39.6±0.5, 19°N±4°×6°8W±°, h0km, mb4.5, ML3.8*
*RSPR **02** 00:11:39.5, 18°.90N×67°.82W, h10km±31km, MD4.2/7*
ISC 02 00:11:40.9±1.0, **18°.83N**±0°.03×**67°.68W**±0°.02, **h29**km±7km, **n163**, σ**1s.92**/218, **mb4.3**/22, **21C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.48	156		Pn	00 11 51.2	-0.6
IDE	Isla Desecheo	0.48	156	⇓eP	Pn	00 11 51.2	-0.6
IDE				eS	Sn	00 12 00.0	+0.7
AGPR	Aguadilla, PR	0.65	124	Pg	Pb	00 11 53.3	-0.6
AGPR				Sg	Sn	00 12 03.5	0.0
AGPR				IAML		00 12 05.2	
	23μm,0.5s						
AGPR	Aguadilla, PR	0.65	124	⇑iP	Pb	00 11 51.7	-2.1
AGPR				⇑iS	Sn	00 12 04.4	+0.9
AGPR				IAML		00 12 05.2	
	comp=N,18μm,0.3s						
AGPR	Aguadilla, PR	0.65	124	⇑iP	Pb	00 11 53.2	-0.6
AGPR				eS	Sn	00 12 03.9	+0.4
AGPR	Aguadilla, PR	0.65	124	⇑iP	Pb	00 11 53.2	-0.6
AGPR				eS	Sn	00 12 03.9	+0.4
AGPR	Aguadilla, PR	0.65	124	iP	Pb	00 11 53.0	-0.8
AGPR				eS	Sn	00 12 04.5	+1.1
AGPR				IAML		00 12 05.4	
	comp=Z,8μm,0.3s						
PRSN	Puerto Rico Se	0.80	140		Pb	00 11 55.6	-0.6
PRSN					Pn	00 11 56.0	-0.2
PRSN					Sn	00 12 08.9	+1.9
PRSN	Puerto Rico Se	0.80	140	⇑iP	Pn	00 11 57.3	+1.2
PRSN				⇑iS	Sn	00 12 10.3	+3.3
PRSN				IAML		00 12 16.6	
	comp=N,20μm,0.2s						
PRSN	Puerto Rico Se	0.80	140	⇑eP	Pb	00 11 55.6	-0.6
PRSN				eS	Sn	00 12 08.0	+1.0
PRSN	Puerto Rico Se	0.80	140	⇓eP	Pn	00 11 56.0	-0.2
LSP	Las Mesas	0.86	139		Pb	00 11 56.0	-1.4
LSP					Sn	00 12 09.2	+0.4
LSP	Las Mesas	0.86	139	⇑eP	Pb	00 11 56.0	-1.4
LSP				eS	Sn	00 12 09.2	+0.4
CRPR	Cabo Rojo, PR	0.98	146	Pg	Pb	00 11 58.0	-1.4
CRPR					Sn	00 12 15.3	+3.7
CRPR	Cabo Rojo, PR	0.98	146	⇑iP	Pn	00 11 59.5	+0.7
CRPR				⇑iS	Sn	00 12 17.1	+5.4
CRPR				IAML		00 12 20.5	
	comp=N,16μm,0.6s						
CRPR	Cabo Rojo, PR	0.98	146	⇑eP	Pb	00 11 55.9	-3.4
CRPR				eS	Sn	00 12 15.4	+3.7
CRPR	Cabo Rojo, PR	0.98	146	⇑iP	Pb	00 11 56.0	-3.4
CRPR	Cabo Rojo, PR	0.98	146	iP	Pb	00 11 57.2	-2.2
CRPR				eS	Sn	00 12 14.9	+3.3
CRPR				IAML		00 12 18.3	
	comp=Z,14μm,0.5s						
HIDR	Higuey Centro	1.01	257	⇑iP	Pn	00 12 00.5	+1.4
HIDR				⇑iS	Sn	00 12 15.0	+2.7
HIDR				IAML		00 12 17.8	
	comp=N,7μm,0.3s						
HIDR	Higuey Centro	1.01	257	⇓iP	Pn	00 11 58.9	-0.2
HIDR				eS	Sn	00 12 12.4	+0.1
MLPR	Magueyes Islan	1.05	145		Pn	00 11 58.2	-1.4
MLPR				IAML		00 12 19.3	
	comp=N,12μm,0.6s						
MLPR				IAML		00 12 19.9	
	comp=N,10μm,0.7s						
UUPR	Utuado, UPR, P	1.08	122		Pn	00 12 00.0	0.0
GBPR	Guanica, Bosqu	1.14	138		Sn	00 12 17.4	+1.8
GBPR					Sb	00 12 18.1	+1.6
GBPR	Guanica, Bosqu	1.14	138	⇑eP	Pn	00 11 58.9	-2.0
GBPR				eS	Sn	00 12 17.4	+1.8
GBPR	Guanica, Bosqu	1.14	138	⇑iP	Pn	00 11 58.0	-2.9
EMPR	Esperanza - Ma	1.15	108		Pn	00 11 59.2	-1.8
EMPR					Sn	00 12 16.5	+0.8
EMPR	Esperanza - Ma	1.15	108	⇑eP	Pn	00 11 59.2	-1.8
EMPR				eS	Sn	00 12 16.5	+0.8
OBIP	Obispado Ponce	1.29	127		Pn	00 12 02.9	0.0
OBIP	Obispado Ponce	1.29	127	⇓eP	Pn	00 12 02.0	-0.9
OBIP				eS	Sb	00 12 19.9	-0.8
OBIP	Obispado Ponce	1.29	127	⇑iP	Pn	00 12 01.0	-1.9
OBIP				eS	Sb	00 12 19.9	-0.8
OBIP	Obispado Ponce	1.29	127	iP	Pn	00 12 02.1	-0.9
OBIP				eS	Sb	00 12 21.3	+0.6
OBIP				IAML		00 12 25.7	
	comp=Z,29μm,0.3s						
CELP	Cerrillos	1.29	125		Pn	00 12 03.0	+0.1
CELP				IAML		00 12 25.4	
	comp=Z,5μm,0.5s						
CELP				IAML		00 12 25.8	
	comp=Z,10μm,0.5s						
MIDR	Miches	1.30	277	P	Pn	00 12 02.5	-0.6
MIDR	Miches	1.30	277	⇑iP	Pb	00 12 04.5	-0.3
MIDR				⇑iS	Sb	00 12 22.2	+1.1
MIDR				IAML		00 12 26.3	
	comp=N,2μm,0.9s						
MIDR				IAML		00 12 26.3	
	comp=N,2μm,0.9s						
ECPR	Experimental S	1.35	112		Pn	00 12 03.3	-0.5
ECPR				IAML		00 12 26.0	
	comp=N,9μm,0.2s						
ECPR				IAML		00 12 33.7	
	comp=N,10μm,0.2s						
ECPR	Experimental S	1.35	112	⇑iP	Pn	00 12 03.5	-0.3
ECPR				eS	Sn	00 12 21.4	+0.6
ECPR	Experimental S	1.35	112	⇑iP	Pn	00 12 03.5	-0.3
ECPR				eS	Sn	00 12 20.6	-0.2
SMDR	Samana, DR	1.50	288		Pn	00 12 05.7	0.0
SMDR					Pb	00 12 06.1	-2.0
SMDR					Sb	00 12 26.7	+0.1
SMDR					Sn	00 12 27.5	+3.2
SMDR	Samana, DR	1.50	288	P	Pn	00 12 05.9	+0.1
SMDR	Samana, DR	1.50	288	⇑iP	Pn	00 12 05.6	-0.2
SMDR				⇑iS	Sb	00 12 26.0	-0.7
SMDR				IAML		00 12 31.3	
	comp=N,3μm,1.0s						
SMDR	Samana, DR	1.50	288	⇑iP	Pb	00 12 06.1	-2.0
SMDR				eS	Sb	00 12 26.7	+0.1
GCPR	Guaynabo City	1.60	109		Pn	00 12 07.2	-0.1
GCPR					Sn	00 12 27.2	+0.2
GCPR	Guaynabo City	1.60	109	⇓eP	Pn	00 12 06.8	-0.5
GCPR				eS	Sb	00 12 28.3	-1.5
GCPR	Guaynabo City	1.60	109	⇑iP	Pb	00 12 09.7	-0.2
GCPR				eS	Sb	00 12 28.3	-1.5
DR12	Loma Pena Alta	1.61	269	Pn	Pb	00 12 08.3	-1.7
HATOM	Hato Mayor del	1.61	269	⇑iP	Pb	00 12 10.1	+0.1
HATOM				⇑iS	Sb	00 12 30.6	+0.7
HATOM				IAML		00 12 32.9	
	comp=N,3μm,0.6s						
SJG	San Juan	1.62	116	Pn	Pn	00 12 06.9	-0.6
	comp=N,158nm,0.3s,baz=322,slow=7.9,SNR=17						
SJG				Sn	Sn	00 12 28.2	+0.8
	comp=N,220nm,0.3s,baz=277,slow=19,SNR=14						
SJG	San Juan	1.62	116		Pn	00 12 07.1	-0.3
SJG				IAML		00 12 34.2	
	comp=N,5μm,0.4s						
SJG				IAML		00 12 35.6	
	comp=N,4μm,0.4s						
SJG	San Juan	1.62	116	P	Pn	00 12 07.5	0.0
SJG	San Juan	1.62	116	e	Sn	00 12 30.8	+3.3
SJG	San Juan	1.62	116	⇑iP	Pn	00 12 07.2	-0.3
SJG				⇑iS	Sb	00 12 29.2	-1.0
SJG	San Juan	1.62	116	⇑iP	Pn	00 12 07.2	-0.3
SJG				eS	Sb	00 12 28.8	-1.4
SJG	San Juan	1.62	116	⇑iP	Pn	00 12 07.2	-0.3
SJG				eS	Sb	00 12 28.9	-1.4
SJG	San Juan	1.62	116	iP	Pn	00 12 07.7	+0.2
SJG				eS	Sb	00 12 30.4	+0.2
SJG				IAML		00 12 34.9	
	comp=Z,63μm,0.5s						
PDPR	Patillas Dam,	1.77	117		Pn	00 12 09.7	+0.2
HUMP	Col San Antoni	1.87	111		Pn	00 12 11.1	+0.2

HUMP	**Col San Antoni**	**1.87**	**111**		**Sb**	**00 12 35.3**	**-2.1**
HUMP	**Col San Antoni**	**1.87**	**111**⇓	*i*P	**Pn**	**00 12 11.7**	**+0.8**
HUMP				*e*S	**Sb**	**00 12 36.4**	**-1.0**
HUMP	**Col San Antoni**	**1.87**	**111**⇓	*i*P	**Pn**	**00 12 11.7**	**+0.8**
HUMP				*e*S	**Sb**	**00 12 36.1**	**-1.2**
NADR	**Nagua**	**2.12**	**285**	P	**Pb**	**00 12 16.9**	**-1.8**
SDD	**Santo Domingo**	**2.15**	**260**		**Pn**	**00 12 15.4**	**+0.7**
SDD				IAML		00 12 54.4	
	comp=N,4µm,0.9s						
SDD				IAML		00 12 55.8	
	comp=E,4µm,0.9s						
CUPR	**Culebra, Puert**	**2.34**	**102**	Pn	**Pn**	**00 12 17.1**	**-0.2**
BANI	**BANI**	**2.57**	**261**	Pn	**Pn**	**00 12 21.7**	**+1.0**
SC01	**Santiago de lo**	**2.94**	**282**		**Pn**	**00 12 26.8**	**+1.2**
SDDR	**Presa de Saban**	**3.42**	**273**	Pn	**Pn**	**00 12 33.6**	**+1.3**
SDDR				IAML		00 13 33.1	
	comp=E,1µm,0.9s						
SDDR				IAML		00 13 35.4	
	comp=E,1µm,0.7s						
SDDR	**Presa de Saban**	**3.42**	**273**	*e*P	**Pb**	**00 12 37.1**	**-3.6**
SDDR				*e*S	**Sb**	**00 13 22.5**	**+0.5**
SDDR				IAML		00 13 31.2	
	comp=E,1µm,0.7s						
SDDR				IAML		00 13 35.6	
	comp=E,1µm,0.6s						
SDDR	**Presa de Saban**	**3.42**	**273**	P	**Pn**	**00 12 35.5**	**+3.2**
SDDR				S	**Sb**	**00 13 24.3**	**+2.4**
SDDR	**Presa de Saban**	**3.42**	**273**	*e*P	Pb	00 12 35.8	-5.0
GRTK	**Grand Turk**	**4.20**	**310**	*e*P	**Pn**	**00 12 42.0**	**-1.0**
GRTK				*e*S	**Sn**	**00 13 30.6**	**-0.5**
GRTK				IAML		00 13 33.1	
	comp=E,191nm,0.2s						
GRTK				IAML		00 13 33.8	
	comp=E,147nm,0.3s						
GRTK	**Grand Turk**	**4.20**	**310**	P	**Pn**	**00 12 41.6**	**-1.3**
GRTK				S	**Sn**	**00 13 26.9**	**-4.1**
SABA	**Saba**	**4.39**	**105**		**Pn**	**00 12 45.6**	**0.0**
SABA				IAML		00 14 11.6	
	comp=N,370nm,0.7s						
SABA				IAML		00 14 19.9	
	comp=E,608nm,0.8s						
SMRT	**St. Maarten**	**4.44**	**99**		**Pn**	**00 12 45.9**	**-0.5**
SMRT				IAML		00 13 47.7	
	comp=N,315nm,0.6s						
SMRT				IAML		00 13 50.2	
	comp=E,340nm,0.5s						
MBFL	**Flemmings, Mon**	**5.61**	**111**	*e*P	**Pn**	**00 13 02.8**	**+0.4**
MBWH	**Windy Hill**	**5.63**	**111**	*e*P	**Pn**	**00 13 01.5**	**-1.2**
ANWB	**Willy Bob**	**5.72**	**101**	P	**Pn**	**00 12 59.9**	**-4.0**
ANWB				S	**Sn**	**00 14 02.4**	**-6.2**
ANWB	**Willy Bob**	**5.72**	**101**	*e*P	**Pn**	**00 13 03.2**	**-0.7**
GDHS	**Morne Mazeau,**	**6.19**	**113**	Pn	**Pn**	**00 13 10.1**	**-0.4**
ATGZ	**Broadband at L**	**6.30**	**115**	*e*P	**Pn**	**00 13 11.7**	**-0.2**
MASC	**Masc**	**6.32**	**283**	*e*P	**Pn**	**00 13 10.3**	**-1.8**
MASC				*e*S	**Sn**	**00 14 22.1**	**-1.2**
MASC				IAML		00 14 23.9	
	comp=N,11nm,0.2s						
MASC				IAML		00 14 26.3	
	comp=E,14nm,0.2s						
CBE	**Ff, Capester**	**6.42**	**114**	Pn	**Pn**	**00 13 13.4**	**-0.1**
DSDZ	**La Diserade, G**	**6.79**	**111**	*e*P	**Pn**	**00 13 21.7**	**+3.1**
QMBU	**Quimbuelo**	**6.86**	**283**	*e*P	**Pn**	**00 13 17.9**	**-1.6**
QMBU				*e*S	**Sn**	**00 14 33.3**	**-3.4**
QMBU				IAML		00 14 36.1	
	comp=N,40nm,0.4s						
QMBU				IAML		00 14 38.9	
	comp=E,37nm,0.3s						
NMDO	**Nuevo Mundo**	**7.09**	**285**	Pn	**Pn**	**00 13 21.3**	**-1.4**
GTBY	**Guantanamo Bay**	**7.10**	**280**	*e*P	**Pn**	**00 13 21.9**	**-0.9**
GTBY				*e*S	**Sn**	**00 14 41.2**	**-1.3**
GTBY				IAML		00 14 43.1	
	comp=E,5.4nm,0.1s						
GTBY				IAML		00 14 43.8	
	comp=E,10nm,0.2s						
GTBY	**Guantanamo Bay**	**7.10**	**280**	P	Pn	00 13 15.6	-7.2
RCC	**Rio Carpintero**	**7.65**	**280**	*e*P	**Pn**	**00 13 29.8**	**-0.6**
RCC				*e*S	**Sn**	**00 14 53.7**	**-2.5**
RCC				IAML		00 14 57.0	
	comp=E,16nm,0.5s						
RCC				IAML		00 15 03.3	
	comp=N,5.7nm,0.3s						
BIM	**Bigot**	**7.65**	**123**	*e*P	Pn	00 13 25.6	-4.9
MPOM	**Morne Pois Mar**	**7.86**	**123**	Pn	**Pn**	**00 13 33.3**	**0.0**
URIC	**Uribia, Colomb**	**8.22**	**211**	P	**Pn**	**00 13 35.1**	**-3.1**
	comp=N,26nm,1.2s						
SVB	**Belmont**	**8.29**	**131**	*e*P	**Pn**	**00 13 40.8**	**+1.5**
CHIV	**Chivirico**	**8.32**	**279**	Pn	**Pn**	**00 13 39.4**	**-0.2**
CCCC	**Cccc**	**9.77**	**286**	*e*P	Pn	00 13 51.8	-7.7
CCCC				*e*S	Sn	00 15 32.8	-15
CCCC				IAML		00 15 39.6	
	comp=E,5.0nm,0.3s						
CCCC				IAML		00 15 41.3	
	comp=N,10nm,0.6s						
SMRC	**Santa Marta, M**	**9.90**	**221**	P	**Pn**	**00 13 58.8**	**-2.5**
	comp=N,25nm,0.7s						
SMRC				S	**Sn**	**00 15 45.6**	**-5.9**
	comp=N,25nm,0.7s						
SDV	**Santo Domingo**	**10.29**	**197**	Pn	**Pn**	**00 14 10.0**	**+3.2**
	comp=N,2.2nm,0.3s,baz=28,slow=8.4,SNR=9.8						
SDV				Sn	**Sn**	**00 15 59.6**	**-1.8**
	comp=N,1.0nm,0.3s,baz=352,slow=16,SNR=1.8						
SDV	**Santo Domingo**	**10.29**	**197**	Pn	**Pn**	**00 14 06.6**	**-0.2**
SDV	**Santo Domingo**	**10.29**	**197**	P	**Pn**	**00 14 11.4**	**+4.6**
SJCC	**San Jacinto, C**	**11.47**	**220**	P	Pn	00 14 13.7	-9.2
SJCC				S	**Sn**	**00 16 25.1**	**-5.0**
OCAC	**Ocana**	**11.87**	**208**	P	**Pn**	**00 14 30.2**	**+1.8**
OCAC				S	**Sn**	**00 16 33.4**	**-6.6**
PAMC	**Pamplona, Colo**	**12.42**	**204**	P	**Pn**	**00 14 34.5**	**-1.8**
	comp=N,19nm,0.7s						
PAMC				S	**Sn**	**00 16 49.9**	**-4.1**
	comp=N,19nm,0.7s						
BARC	**Barichara**	**13.29**	**204**	P	**Pn**	**00 14 51.9**	**+4.0**
UREC	**San Jos de Ur**	**13.40**	**216**	P	**Pn**	**00 14 49.8**	**+0.6**
UREC				S	**Sn**	**00 17 10.8**	**-6.4**
PTBC	**PUERTO BERRIO,**	**13.88**	**209**	P	Pn	00 14 46.6	-9.2
DBBC	**Dabeiba**	**14.38**	**216**	P	**Pn**	**00 15 05.7**	**+3.1**
HELC	**Santa Helena**	**14.71**	**212**	P	**Pn**	**00 15 10.1**	**+2.7**
ROSC	**El Rosal**	**15.34**	**206**	Pn	**Pn**	**00 15 17.9**	**+2.1**
	comp=N,1.6nm,0.3s,baz=135,slow=20,SNR=2.0						
ROSC	**El Rosal**	**15.34**	**206**	Pn	**Pn**	**00 15 16.4**	**+0.5**
ORTC	**Ortega, Tolima**	**16.57**	**207**	P	**Pn**	**00 15 31.2**	**-0.1**
	comp=N,31nm,0.8s						
PRAC	**Prado**	**16.59**	**206**	P	**Pn**	**00 15 31.6**	**0.0**
	comp=N,13nm,0.8s						
URMC	**La Uribe, Meta**	**16.82**	**204**	P	**P**	**00 15 38.0**	**+1.6**
YOTC	**Yotoco, Valle**	**17.01**	**211**	P	**P**	**00 15 42.0**	**+3.4**
MACC	**Macarena, Meta**	**17.65**	**201**	P	**P**	**00 15 46.7**	**+1.2**
	comp=N,12nm,0.7s						
BOAV	**Boa Vista**	**17.77**	**156**	P	**Pn**	**00 15 46.5**	**+0.2**
BOAV	**Boa Vista**	**17.77**	**156**	P	**P**	**00 15 48.6**	**+1.7**
JAMC	**Jamundi, Valle**	**17.84**	**211**	P	**P**	**00 15 50.8**	**+3.0**
POPC	**Popayan, Colom**	**18.43**	**210**	P	**Pn**	**00 15 58.0**	**+3.4**
Y58A	**Scranton**	**18.43**	**327**	P	**P**	**00 15 53.2**	**-0.8**
Y58A				IAmb	IAmb	00 16 23.4	
	comp=Z,42nm,1.2s						
V61A	**Roper**	**18.64**	**337**		**Pn**	**00 15 56.5**	**-0.1**
V61A				IAmb	IAmb	00 16 24.2	
	comp=Z,49nm,1.0s						
JTS	**Las Juntas de**	**18.73**	**245**	P	**Pn**	**00 15 58.3**	**+0.2**
JTS	**Las Juntas de**	**18.73**	**245**	P	**Pn**	**00 16 02.2**	**+4.1**
X58A	**Rowland**	**18.78**	**329**	P	**P**	**00 15 57.8**	**-0.1**
FLOC	**Florencia**	**18.84**	**205**	P	**Pn**	**00 16 02.6**	**+3.3**
SGC2	**Sao Gabriel da**	**18.88**	**178**	P	**Pn**	**00 16 03.1**	**+3.4**
OTAV	**Otavalo**	**21.29**	**211**		**P**	**00 16 25.9**	**+0.2**
TKL	**Tuckaleechee C**	**21.98**	**323**	P	**P**	**00 16 33.7**	**+1.1**
	comp=Z,3.9nm,0.9s,baz=145,slow=16,SNR=3.0						
TKL				S	**S**	**00 20 29.7**	**-4.1**
	comp=Z,6.1nm,0.7s,baz=58,slow=13,SNR=5.8						
	comp=Z,3.9nm,0.9s						
TKL	**Tuckaleechee C**	**21.98**	**323**	P	**P**	**00 16 32.9**	**+0.3**
TKL				IAmb	IAmb	00 16 35.9	
	comp=Z,25nm,1.4s						
WVT	**Waverly**	**24.74**	**318**	P	**P**	**00 16 59.1**	**-0.8**
WVT				IAmb	IAmb	00 17 11.5	
	comp=Z,7.6nm,1.1s						
SIUC	**Southern Illin**	**26.60**	**319**	P	**P**	**00 17 16.7**	**0.0**
SIUC				IAmb	IAmb	00 17 21.0	
	comp=Z,10.0nm,0.8s						
S44A	**Carbondale**	**26.61**	**319**	P	**P**	**00 17 16.9**	**+0.1**
S44A				IAmb	IAmb	00 17 23.3	
	comp=Z,9.1nm,0.8s						
TX31	**Lajitas Ar. Si**	**34.35**	**295**	P	**P**	**00 18 25.2**	**-0.2**
TX31				IAmb	IAmb	00 18 32.9	
	comp=Z,7.2nm,1.4s						
TXAR	**Lajitas Array**	**34.35**	**295**	P	**P**	**00 18 25.7**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=113,slow=9.6,SNR=6.0						
TXAR				PcP	**PcP**	**00 21 02.8**	**+1.7**
	comp=Z,0.6nm,0.9s,baz=122,slow=6.6,SNR=4.7						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**34.35**	**295**	P	**P**	**00 18 25.8**	**+0.4**
ALPN	**Alpine**	**34.51**	**296**	P	**P**	**00 18 27.0**	**+0.1**
ALPN				IAmb	IAmb	00 18 48.0	
	comp=Z,5.4nm,1.0s						
LPAZ	**La Paz**	**34.90**	**181**	P	**P**	**00 18 28.6**	**-2.1**
	comp=Z,1.4nm,0.9s,baz=355,slow=11,SNR=2.1						
	comp=Z,1.4nm,0.9s						
LPAZ	**La Paz**	**34.90**	**181**	P	**P**	**00 18 30.4**	**-0.4**
PTLB	**Pontes e Lacer**	**35.09**	**166**	P	**P**	**00 18 31.5**	**-0.2**
PTLB				IAmb	IAmb	00 18 32.5	
	comp=Z,3.4nm,0.9s						
SCHQ	**Schefferville**	**35.94**	**1**	P	**P**	**00 18 38.7**	**0.0**
	comp=Z,1.9nm,0.6s,baz=185,slow=4.2,SNR=6.1						
	comp=Z,1.9nm,0.6s						
PB16	**IPOC Station P**	**36.98**	**183**	P	**P**	**00 18 47.3**	**-1.2**
PB16				IAmb	IAmb	00 18 53.1	
	comp=Z,4.0nm,0.9s						
SDCO	**Great Sand Dun**	**37.94**	**308**		**P**	**00 18 55.5**	**-0.8**
CPUP	**Villa Florida**	**46.00**	**167**	P	**P**	**00 20 00.3**	**-1.4**
	comp=Z,1.6nm,0.7s,baz=329,slow=8.9,SNR=6.2						
	comp=Z,1.6nm,0.7s						
NVAR	**Mina Array Bea**	**47.89**	**305**	P	**P**	**00 20 18.3**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=114,slow=5.3,SNR=4.6						
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**47.89**	**305**	P	**P**	**00 20 17.1**	**+0.3**
CO01	**Juntas del Tor**	**48.58**	**183**	P	**P**	**00 20 22.8**	**+0.8**
YKA	**Yellowknife Ar**	**54.23**	**335**	P	**P**	**00 21 03.7**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=113,slow=6.4,SNR=17						
	comp=Z,1.5nm,0.8s						
ESDC	**Sonseca Array**	**58.15**	**55**	P	**P**	**00 21 33.5**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=273,slow=7.3,SNR=16						
	comp=Z,2.6nm,0.8s						
ESDC	**Sonseca Array**	**58.15**	**55**	P	**P**	**00 21 32.3**	**+0.1**
A36M	**Sachs Harbour**	**62.42**	**343**		**P**	**00 22 00.1**	**-0.7**
A36M				IAmb	IAmb	00 22 01.4	
	comp=Z,3.9nm,0.8s						
E29M	**Blow River**	**65.37**	**337**	P	**P**	**00 22 20.1**	**-0.1**
E29M				IAmb	IAmb	00 22 21.7	
	comp=Z,3.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**66.58**	**83**	P	**P**	**00 22 29.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=258,slow=9.3,SNR=4.4						
	comp=Z,0.6nm,0.6s						
BMAR	**Burnt Mountain**	**67.74**	**336**	P	**P**	**00 22 35.2**	**-0.2**
TAM	**Tamanrasset**	**67.91**	**72**		**P**	**00 22 37.6**	**+0.1**
NOA	**NORSAR Array B**	**68.34**	**31**	P	**P**	**00 22 39.6**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=271,slow=6.2,SNR=4.0						
	comp=Z,1.0nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**68.36**	**46**	P	**P**	**00 22 40.1**	**+0.1**
ILAR	**Eielson Array**	**68.54**	**333**	P	**P**	**00 22 40.8**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=105,slow=4.6,SNR=15						
	comp=Z,1.4nm,0.8s						
ILAR	**Eielson Array**	**68.54**	**333**	P	**P**	**00 22 39.9**	**-0.5**
BPAW	**Bear Paw Mtn.**	**70.32**	**332**	P	**P**	**00 22 51.0**	**-0.6**
ARCES	**ARCESS Array B**	**73.63**	**21**	P	**P**	**00 23 13.3**	**+2.1**
	comp=Z,3.6nm,1.1s,baz=282,slow=4.5,SNR=4.4						
	comp=Z,3.6nm,1.1s						
FINES	**FINESS Array B**	**75.43**	**30**	P	**P**	**00 23 23.0**	**+1.2**
	comp=Z,4.8nm,1.1s,baz=286,slow=7.1,SNR=4.0						
	comp=Z,4.8nm,1.1s						
FINES	**FINESS Array B**	**75.43**	**30**	P	**P**	**00 23 21.7**	**-0.1**
MLR	**Muntele Rosu**	**79.29**	**46**	P	**P**	**00 23 45.6**	**+1.6**
	comp=Z,5.3nm,0.8s,baz=306,slow=1.6,SNR=7.2						
	comp=Z,5.3nm,0.8s						
MLR	**Muntele Rosu**	**79.29**	**46**	P	**P**	**00 23 45.1**	**+1.2**
MLR				IAmb	IAmb	00 23 46.8	
	comp=Z,5.2nm,0.7s						
HHC	**Hu-ho-hao-te**	**120.62**	**1**	*e*P	**PKPdf**	**00 30 25.8**	**-4.6**
NJ2	**Nanjing**	**129.02**	**353**	*e*P	**PKPdf**	**00 30 46.0**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PZH	**PanZhiHua**	**133.78**	**13**	PKP	**PKPdf**	**00 30 54.7**	**-1.2**

*NEIC **02** 00:19:11.8±1.6, 19°.07N±0°.03×67°.57W±0°.04, h10km±1km, ML2.7/33, Md2.9/4(RSPR), Error ellipse: s-maj=7.2km s-min=3.9km az=230.0*

RSPR 02 00:19:10.1, 19°.11N×67°.98W, h5km±25km**, MD2.9**/4**, 12C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.86**	**146**		Pg	00 19 24.7	-1.9
IDE	**Isla Desecheo**	**0.86**	**146**⇑	*e*P	Pg	00 19 24.7	-1.9
AGPR	**Aguadilla, PR**	**1.04**	**127**		Pg	00 19 26.6	-3.6
AGPR				Sg	Sg	00 19 37.9	-5.7
AGPR				IAML		00 19 38.0	
	250nm,0.4s						
AGPR				IAML		00 19 42.1	
	209nm,0.3s						
AGPR	**Aguadilla, PR**	**1.04**	**127**⇑	*e*P	Pg	00 19 26.7	-3.4
AGPR				*e*S	Sg	00 19 42.0	-1.6
PRSN	**Puerto Rico Se**	**1.19**	**138**		Pg	00 19 30.1	-2.8
PRSN	**Puerto Rico Se**	**1.19**	**138**	Pg	Pg	00 19 29.8	-3.1
PRSN				IAML		00 19 49.3	
	541nm,0.2s						
PRSN				IAML		00 19 54.3	
	623nm,0.3s						
PRSN	**Puerto Rico Se**	**1.19**	**138**⇑	*e*P	Pg	00 19 30.1	-2.8
LSP	**Las Mesas**	**1.26**	**137**		Pg	00 19 31.1	-3.1
LSP	**Las Mesas**	**1.26**	**137**⇑	*e*P	Pg	00 19 31.1	-3.1
DR12	**Loma Pena Alta**	**1.36**	**257**	Pn	Pg	00 19 42.8	+6.6
DR12				Sn	Sn	00 20 03.0	+8.8
CRPR	**Cabo Rojo, PR**	**1.37**	**143**		Pn	00 19 32.3	-3.5
CRPR	**Cabo Rojo, PR**	**1.37**	**143**	IAML		00 19 52.5	
	128nm,0.7s						
CRPR				IAML		00 19 53.9	
	156nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.37**	**143**⇑	*e*P	Pn	00 19 33.3	-2.6
CRPR				*e*S	Sb	00 19 50.5	-3.5
MLPR	**Magueyes Islan**	**1.44**	**142**	Pn	Pn	00 19 33.4	-3.4
MLPR				IAML		00 19 52.6	
	134nm,0.4s						
MLPR				IAML		00 19 53.7	
	189nm,0.4s						
UUPR	**Utuado, UPR, P**	**1.47**	**125**		Pn	00 19 33.4	-3.9
UUPR					Sn	00 19 48.9	-7.9
UUPR				IAML		00 19 53.3	
	601nm,0.4s						
UUPR				IAML		00 19 56.3	
	1µm,0.4s						
EMPR	**Esperanza - Ma**	**1.51**	**114**		Pn	00 19 34.1	-3.7
EMPR	**Esperanza - Ma**	**1.51**	**114**⇑	*e*P	Pn	00 19 34.1	-3.7
EMPR				*e*S	Sn	00 19 53.2	-4.7
GBPR	**Guanica, Bosqu**	**1.54**	**137**		Pn	00 19 35.5	-2.7
GBPR	**Guanica, Bosqu**	**1.54**	**137**⇑	*e*P	Pn	00 19 35.5	-2.7
OBIP	**Obispado Ponce**	**1.68**	**129**		Pn	00 19 36.5	-3.6
OBIP					Sn	00 19 56.1	-5.9
OBIP				IAML		00 19 59.2	
	comp=N,27nm,0.4s						
OBIP	**Obispado Ponce**	**1.68**	**129**⇑	*e*P	Pn	00 19 36.7	-3.4
OBIP				*e*S	Sn	00 19 58.0	-4.0
ECPR	**Experimental S**	**1.72**	**117**		Pn	00 19 36.6	-4.1
ECPR				Sn	Sn	00 19 55.4	-7.7
ECPR				IAML		00 20 03.2	
	comp=N,189nm,0.2s						
ECPR				IAML		00 20 04.2	
	comp=N,163nm,0.2s						
ECPR	**Experimental S**	**1.72**	**117**⇑	*e*P	Pn	00 19 36.9	-3.8
ECPR				*e*S	Sn	00 19 59.2	-4.0
GCPR	**Guaynabo City**	**1.97**	**113**		Pn	00 19 40.7	-3.4
GCPR				IAML		00 20 10.4	
	comp=N,23nm,0.3s						
GCPR				IAML		00 20 14.2	
	comp=E,21nm,0.5s						
GCPR	**Guaynabo City**	**1.97**	**113**⇑	*e*P	Pn	00 19 41.3	-2.7
SJG	**San Juan**	**2.00**	**119**		Pn	00 19 41.2	-3.3
SJG				IAML		00 20 06.5	
	comp=E,46nm,0.5s						
SJG				IAML		00 20 09.6	
	comp=E,62nm,0.2s						
SJG	**San Juan**	**2.00**	**119**⇑	*e*P	Pn	00 19 42.0	-2.5
PDPR	**Patillas Dam,**	**2.15**	**120**	Pn	Pn	00 19 43.7	-2.9
PDPR				IAML		00 20 11.9	
	comp=E,31nm,0.2s						
PDPR				IAML		00 20 16.1	
	comp=E,32nm,0.7s						
HUMP	**Col San Antoni**	**2.24**	**115**		Pn	00 19 44.7	-3.2
HUMP	**Col San Antoni**	**2.24**	**115**		Pn	00 19 46.2	-1.7
HUMP				IAML		00 20 21.5	
	comp=E,41nm,1.0s						
HUMP				IAML		00 20 23.6	
	comp=E,37nm,0.2s						
HUMP	**Col San Antoni**	**2.24**	**115**⇑	*e*P	Pn	00 19 45.8	-2.0
HUMP				*e*S	Sn	00 20 12.9	-2.9
BANI	**BANI**	**2.36**	**253**	Pn	Pg	00 19 55.7	+0.3

ROM 02 00:23:27.8±0.1**, 42°.633N**±0°.004×**13°.228E**±0°.005**, h13**km**, ML1.0**/12**, Error ellipse: s-maj=0.5km s-min=0.1km az=26.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.08**	**92**	P	Pg	00 23 31.0	+0.3
SMA1				S	Sg	00 23 32.9	+0.2
SMA1				AML	AML		
	comp=E,652µm,0.2s						
SMA1				AML	AML		
	comp=N,240µm,0.5s						
RM33	**Pellescritta (**	**0.12**	**185**	P	Pb	00 23 31.9	-0.2
RM33				S	Sg	00 23 34.2	+0.6
RM33				AML	AML		
	comp=E,101µm,0.6s						
RM33				AML	AML		
	comp=N,56µm,0.1s						
LNSS	**Leonessa**	**0.14**	**258**	P	Pg	00 23 31.8	+0.3
LNSS				S	Sg	00 23 34.4	+0.4
LNSS				AML	AML		
	comp=E,108µm,0.1s						
LNSS				AML	AML		
	comp=N,95µm,0.3s						
NRCA	**Norcia**	**0.22**	**337**	P	Pg	00 23 33.1	+0.4
NRCA				S	Sg	00 23 36.6	+0.7
NRCA				AML	AML		
	comp=E,89µm,0.9s						
NRCA				AML	AML		
	comp=N,59µm,0.2s						
NRCA				AML	AML		
	comp=E,89µm,1.1s						
GAVE	**Gavelli**	**0.25**	**284**	P	Pg	00 23 33.6	+0.3
GAVE				S	Sg	00 23 37.7	+0.8
GAVE				AML	AML		
	comp=E,50µm,0.6s						
GAVE				AML	AML		
	comp=N,43µm,0.2s						
GAVE				AML	AML		
	comp=N,43µm,1.8s						
GAVE				AML	AML		
	comp=E,50µm,1.4s						
MMO1	**Montemonaco**	**0.28**	**15**	P	Pb	00 23 34.2	-0.5
MMO1				S	Sb	00 23 38.7	-0.7
TERO	**Teramo**	**0.28**	**92**	P	Pg	00 23 33.9	+0.2
TERO				S	Sg	00 23 38.0	+0.5
TERO				AML	AML		
	comp=E,25µm,1.5s						
TERO				AML	AML		
	comp=N,33µm,1.3s						
TERO				AML	AML		
	comp=N,33µm,0.7s						
TERO				AML	AML		
	comp=E,25µm,0.5s						
ARRO	**Arrone**	**0.35**	**261**	P	Pg	00 23 35.1	+0.3
ARRO				S	Sb	00 23 40.5	-0.7

*MOS **02** 00:23:46.6±1.3, 39°.05N×27°.96E, h13km, mb4.4/21, Error ellipse: s-maj=5.6km s-min=3.4km az=87.0*
*MED_RC **02** 00:23:47.0±0.3, 39°.02N×27°.85E, h17km±1km, MW4.6/45, Moment Tensor Solution.Mantle waves: s45,c61; Duration: 1s1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.23±.04; $M_{\theta\theta}$0.48±.04; $M_{\phi\phi}$-0.25±.03; $M_{r\theta}$-0.21±.06; $M_{\theta\phi}$-0.83±.03; $M_{\phi r}$-0.36±.07; Best double couple: $M_0$1.02000×10^{16} NP1:ϕ_s82.00000°, δ70.00000°, λ-160.00000°. NP2:ϕ_s345.00000°, δ71.00000°, λ-21.00000°. Principal axes: T 1.0200, Plg1.0000°, Azm33.0000°; N -0.0100, Plg62.0000°, Azm125.0000°; P -1.0200, Plg28.0000°, Azm303.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*PDG **02** 00:23:47.9±0.6, 39°.02N×27°.85E, h18km, ML4.6/8 Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*ISK **02** 00:23:47.3, 39°.00N×27°.86E, h15km, ML4.8/36*
*AFAD **02** 00:23:47.8, 39°.01N×27°.87E, h7km±3km, ML4.6*
*GII **02** 00:23:48.6±0.0, 38°.564N±0°.002×27°.667E±0°.001, h0km, Mws5.0, confirmed*
*NEIC **02** 00:23:48.0±1.8, 39°.01N±0°.04×27°.89E±0°.06, h10km±1km, mb4.4/27, Error ellipse: s-maj=7.9km s-min=5.9km az=101.0*
*CFUSG **02** 00:23:49.8, 39°.10N×28°.30E, h10km, Mb3.5/7, MD3.6/6, MSH3.9/8*
*THE **02** 00:23:49.4, 39°N±2°×2°8E±°, h14km±15km, M4.3/35, MLh4.3/35*
*MCSM **02** 00:23:49.1±0.3, 39°N±2°×2°8E±°, h14km±2km, mB5.1, mb4.7, MLv5.0, Mw(mB)4.4*
*GFZ **02** 00:23:49.8, 39°.02N×27°.88E, h10km, MW4.4, Moment Tensor Solution. s47 Moment tensor: M_{rr}-0.51; $M_{\theta\theta}$1.50; $M_{\phi\phi}$-1.00; $M_{r\theta}$-1.61; $M_{\theta\phi}$-5.06; $M_{\phi r}$0.57; Fault plane solution: NP1:ϕ_s354.00000°, δ75.00000°, λ5.00000°. NP2:ϕ_s263.00000°, δ85.00000°, λ165.00000°. Principal axes: T 5.8800, Plg14.0000°, Azm217.0000°; N -0.8500, Plg74.0000°, Azm65.0000°; P -5.0300, Plg7.0000°, Azm309.0000°;*
*IDC **02** 00:23:50.7±1.5, 38°.98N×27°.94E, h35km±14km, mb3.7/14, mbtmp4.0/26, ML3.8/9, MS3.6/47 Error ellipse: s-maj=10.2km s-min=9.8km az=1.0*

ISC 02 00:23:48.0±0.7**, 39°.00N**±0°.01×**27°.89E**±0°.01**, h15**km±4km**, n560, σ1s47**/633**, mb4.2**/37**, MS3.6**/34**, 63C-57D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.14**	**205**	P	**Pg**	**00 23 51.3**	**-0.4**
AKHS				S	**Sg**	**00 23 54.0**	**-0.2**
AKHS				IAML		00 23 54.0	
	comp=E,19µm,0.5s						
AKS	**Akhisar**	**0.14**	**205**	Pg	**Pg**	**00 23 50.9**	**-0.8**
AKS				Sg	**Sg**	**00 23 53.6**	**-0.6**
GORD	**Gordes-Manisa**	**0.24**	**112**	Pg	**Pg**	**00 23 53.7**	**+0.3**
GORD				Sg	**Sg**	**00 23 57.7**	**+0.7**
GOMA	**Golmarmara-Man**	**0.29**	**176**	Pg	**Pg**	**00 23 54.0**	**-0.2**
GOMA				Sg	**Sg**	**00 23 58.7**	**+0.3**
SOMA	**Soma-Manisa**	**0.32**	**299**	Pg	**Pg**	**00 23 53.8**	**-0.8**
SOMA				Sg	**Sg**	**00 23 59.2**	**+0.1**
KTTT	**Salihli**	**0.35**	**153**	P	**Pg**	**00 23 55.5**	**+0.3**
KTTT				S	**Sg**	**00 23 59.9**	**-0.2**
KTTT				IAML		00 24 01.0	
	comp=N,4µm,0.6s						
STEP	**BALIKESIR_Sava**	**0.40**	**341**	P	**Pg**	**00 23 55.9**	**-0.1**
STEP				S	**Sg**	**00 24 01.5**	**0.0**
STEP				IAML		00 24 02.0	
	comp=N,17µm,0.4s						
CAMT	**Merkez**	**0.52**	**241**	P	**Pg**	**00 23 58.3**	**+0.1**
CAMT				S	**Sb**	**00 24 06.5**	**+0.5**
CAMT				IAML		00 24 08.0	
	comp=N,4µm,0.4s						
ZEDA	**zmir-Bergama**	**0.63**	**267**	P	**Pg**	**00 24 00.4**	**0.0**
ZEDA				S	**Sg**	**00 24 08.7**	**-0.1**
ZEDA				IAML		00 24 09.0	
	comp=N,5µm,0.7s						
ZEDA				IAML		00 24 09.0	
	comp=E,2µm,0.4s						
BALB	**Balikesir**	**0.64**	**359**		**Pg**	**00 24 00.1**	**-0.3**
BALB				Sg	**Sg**	**00 24 08.7**	**-0.2**
BALB	**Balikesir**	**0.64**	**359**	Pg	**Pg**	**00 24 00.3**	**-0.2**
BALB				Sg	**Sb**	**00 24 09.8**	**+0.3**
DEMI	**Demirci**	**0.65**	**86**	P	**Pb**	**00 24 01.2**	**+0.2**
BKES	**Balkesir-Mer**	**0.73**	**2**	P	**Pg**	**00 24 01.9**	**-0.4**
BKES				S	**Sg**	**00 24 11.9**	**0.0**
BKES				IAML		00 24 15.0	
	comp=E,1µm,0.6s						
MANT	**Manisa**	**0.73**	**134**		**Pg**	**00 24 02.3**	**0.0**
MANT				Sg	**Sg**	**00 24 12.2**	**+0.2**
MANT	**Manisa**	**0.73**	**134**	P	**Pg**	**00 24 02.4**	**0.0**
ODEM	**Odemis-Izmir**	**0.74**	**169**	Pg	**Pg**	**00 24 02.3**	**-0.1**
ODEM				Sg	**Sb**	**00 24 12.6**	**+0.1**
IZMD	**zmir-Dikili-**	**0.75**	**269**	P	**Pg**	**00 24 02.7**	**+0.1**
IZMD				P	**Pg**	**00 24 02.7**	**+0.1**
IZMD				S	**Sg**	**00 24 11.5**	**-0.9**
IZMD				IAML		00 24 13.0	
	comp=N,2µm,0.7s						
IZMD				IAML		00 24 13.0	

comp=N,2µm,0.7s
DURS Dursunbey 0.75 37 P Pg 00 24 02.3 -0.3
BALY Balya 0.77 344 P Pg 00 24 02.8 -0.1
BALY S Sg 00 24 12.6 -0.4
BALY IAML 00 24 13.0
comp=E,4µm,0.4s
DKL Dikili 0.77 275 Pg Pg 00 24 02.1 -0.8
DKL Sg Sg 00 24 12.9 -0.2
KULA Kula-Manisa 0.78 129 Pg Pg 00 24 03.2 +0.1
BUHA Balikesir, Bur 0.80 309 P Pg 00 24 03.1 -0.5
DST Dursunbey 0.83 43 Pg Pn 00 24 04.0 0.0
DST Sg Sn 00 24 16.5 -0.6
DUVT Torbali 0.85 204 P Pb 00 24 04.1 -0.4
DUVT S Sg 00 24 15.3 -0.4
DUVT IAML 00 24 18.0
comp=E,1µm,0.3s
SIMA Simav-Kutahya 0.86 84 Pg Pb 00 24 04.8 +0.2
SMAA Simav-Kutahya 0.86 83 Pg Pg 00 24 04.7 +0.1
IZMR zmir-demi 0.87 177 P Pb 00 24 04.7 0.0
IZMR P Pb 00 24 04.8 0.0
IZMR S Sg 00 24 15.3 -0.8
IZMR S Sb 00 24 15.4 -0.7
IZMR IAML 00 24 17.0
comp=E,1µm,0.4s
IZMR IAML 00 24 18.0
comp=N,10µm,0.5s
IZMR IAML 00 24 18.0
comp=N,10µm,0.5s
IZMR IAML 00 24 18.0
comp=E,3µm,0.9s
BLKS Balkesir-Sus 0.87 4 P Pb 00 24 04.1 -0.7
BLKS P Pg 00 24 04.4 -0.5
BLKS S Sg 00 24 16.0 -0.4
BLKS IAML 00 24 17.0
comp=E,1µm,1.0s
BLKS IAML 00 24 17.0
comp=E,1µm,1.0s
YAYO Edremit-Balk 0.88 314 Pg Pb 00 24 04.2 -0.7
YAYO Sg Sg 00 24 16.6 +0.1
BAGT Foa 0.88 247 P Pb 00 24 04.9 0.0
BAGT S Sg 00 24 16.9 +0.3
BAGT IAML 00 24 19.0
comp=N,6µm,0.9s
BAGT IAML 00 24 20.0
comp=E,4µm,1.4s
KIRA zmir-Kiraz 0.90 153 P Pb 00 24 05.5 +0.1
KIRA S Sg 00 24 18.0 +0.8
KIRA IAML 00 24 20.0
comp=E,3µm,0.6s
KIRA IAML 00 24 21.0
comp=N,2µm,0.9s
BLCB Balcova 0.90 227 Pg Pb 00 24 04.8 -0.5
BLCB Sg Sg 00 24 17.7 +0.3
BLCB Balcova 0.90 227 P Pb 00 24 04.7 -0.7
BLCB S Sg 00 24 17.6 +0.3
USAK Uak-Merkez 0.93 108 P Pb 00 24 05.9 +0.1
FOCM Foa 0.95 253 Pg Pb 00 24 05.6 -0.5
SUSR Susurluk-Balik 0.97 9 Pg Pb 00 24 06.3 -0.2
AYVA Ayvalik 0.98 289 P Pb 00 24 06.8 +0.1
AYVA S Sg 00 24 20.0 +0.2
AYVA IAML 00 24 23.0
comp=N,4µm,1.1s
AYVA IAML 00 24 24.0
comp=E,2µm,0.6s
CMHT Manyas 1.01 4 P Pb 00 24 07.3 +0.1
CMHT S Sb 00 24 20.2 -0.1
CMHT IAML 00 24 22.0
comp=E,3µm,0.8s
SHAP Saphane-Kutahy 1.04 88 Pg Pn 00 24 08.3 +0.2
AYDB Zeytinkoy-Aydi 1.05 180 Pg Pb 00 24 07.9 -0.1
GONE Gonen-Balikesi 1.05 352 Pg Pb 00 24 07.9 0.0
YENI Yenice-Canakka 1.06 332 Pg Pb 00 24 07.8 -0.2
NAZL Nazilli-Aydin 1.08 163 Pn Pn 00 24 08.7 +0.1
ATIT Gnen 1.11 347 P Pg 00 24 09.3 0.0
ATIT S Sb 00 24 23.1 0.0
ATIT IAML 00 24 24.0
comp=N,2µm,0.7s
ATIT IAML 00 24 26.0
comp=E,2µm,0.6s
SULTU Buldan 1.17 144 P Pb 00 24 10.4 +0.4
EMET Ktahya-Emet 1.17 71 P Pg 00 24 11.0 +0.3
GEDZ Gediz 1.19 87 Pn Pb 00 24 10.6 +0.4
CANM Can-anakkale 1.20 328 Pn Pn 00 24 10.1 -0.1
GMLD Gumuldur 1.20 220 Pn Pn 00 24 10.3 +0.1
URLA Izmir 1.20 238 Pn Pn 00 24 10.1 -0.1
URLA Izmir 1.20 238 P Pn 00 24 10.1 -0.1
KABB zmir-Karabur 1.20 254 P Pg 00 24 10.2 -0.2
DGB zmir 1.23 220 P Pn 00 24 10.4 -0.3
DGB S Sb 00 24 26.5 -0.1
DGB IAML 00 24 30.0
comp=N,5µm,0.4s
KUSD Kusadasi-Aydin 1.23 203 Pn Pn 00 24 10.8 +0.1
GDZ Gediz 1.24 86 P Pg 00 24 12.2 +0.3
GDZ S Sg 00 24 28.8 +0.6
GDZ IAML 00 24 31.0
comp=N,2µm,0.9s
ESEN Aydn-Nazilli 1.26 163 P Pb 00 24 11.5 +0.2
BAYC CANAKKALE_Bayr 1.27 306 P Pn 00 24 11.5 +0.3
BAYC S Sb 00 24 27.7 -0.2
BAYC IAML 00 24 31.0
comp=N,2µm,0.5s
BAYC IAML 00 24 31.0
comp=E,1µm,0.3s
PRK Paraskevi 1.28 281 P Pb 00 24 11.7 0.0
PRK S Sg 00 24 28.9 -0.5
TVSB Tavsanli 1.30 69 Pn Pb 00 24 12.2 0.0
ORLT Orhaneli 1.30 36 Pn Pn 00 24 12.0 +0.3
ORLT Orhaneli 1.30 36 P Pb 00 24 12.3 +0.1
ORLT S Sn 00 24 29.5 +0.7
ORLT IAML 00 24 34.0
comp=E,2µm,0.7s
ORLT IAML 00 24 39.0
comp=N,2µm,0.9s
KCTX Karacabey (Bur 1.31 16 Pn Pn 00 24 11.9 +0.1
ZEYE Izmir, Urla-Že 1.33 235 P Pn 00 24 11.7 -0.2
AYDN Tasoluk 1.34 180 P Pn 00 24 12.5 +0.3
AYDN S Sn 00 24 29.8 +0.1
AYDN IAML 00 24 34.0
comp=N,4µm,0.3s
EDC Edincik 1.34 359 Pn Pn 00 24 12.4 +0.2
BAND Balkesir-Ban 1.36 7 ⇑P Pn 00 24 12.7 +0.2
BAND Balkesir-Ban 1.36 7 P Pn 00 24 11.4 -1.0
BAND S Sn 00 24 29.5 -0.7
BAND IAML 00 24 33.0
comp=E,1µm,0.4s
BAND IAML 00 24 34.0
comp=N,1µm,0.3s
GCAM G?zelcaml? 1.40 202 P Pn 00 24 12.7 -0.2
BIGA Biga-Canakkale 1.40 336 Pn Pn 00 24 13.1 +0.2
EZNE Ezine-Canakkal 1.40 303 Pn Pn 00 24 12.9 0.0
PASA Karahalli, USA 1.41 117 P Pb 00 24 14.4 +0.3
CESE eme 1.41 242 Pn Pn 00 24 13.1 0.0
GPNR Gulpinar-Canak 1.44 289 Pn Pn 00 24 13.4 0.0
KOCA Canakkale, Ayv 1.45 291 P Pn 00 24 13.6 0.0
KHL Karahalli 1.45 117 Pn Pb 00 24 14.4 -0.3
KRBG Karabiga-Canak 1.46 342 Pn Pn 00 24 14.0 +0.2
EZN Ezine 1.46 305 Pn Pn 00 24 13.8 0.0
EZN Ezine 1.46 305 P Pn 00 24 14.2 +0.3
EZN S Sn 00 24 32.8 +0.1
EZN Ezine 1.46 305 P Pn 00 24 14.1 +0.3
LAPS Lapseki, ANA 1.49 327 P Pb 00 24 15.9 -0.1
LAPS S Sn 00 24 31.7 -1.7
LAPS IAML 00 24 36.0
comp=N,8µm,0.5s
LAPS IAML 00 24 36.0
comp=E,2µm,0.7s
ULDT Uludag 1.49 40 P Pg 00 24 16.4 -0.3
SMG Samos 1.53 213 P Pn 00 24 14.0 -0.8
SMG S Sn 00 24 34.9 +0.5
CHOS Chios island 1.56 247 Pn Pn 00 24 15.3 +0.1
CHOS Chios island 1.56 247 P Pn 00 24 15.6 +0.4
CHOS S Sn 00 24 35.4 +0.1
MDNY Mudanya-Bursa 1.57 29 Pn Pn 00 24 15.6 +0.4
CNKL anakkale-Mer 1.57 313 P Pn 00 24 15.3 -0.1
CNKL P Pb 00 24 15.8 -1.0
CNKL S Sn 00 24 34.4 -1.0
CNKL IAML 00 24 40.0
comp=N,3µm,0.4s
CNKL IAML 00 24 40.0
comp=N,3µm,0.4s
SIGR SIGRI 1.59 278 P Pb 00 24 16.9 -0.2
SIGR S Sn 00 24 35.4 -0.6
DOMA Ktahya-Doman 1.60 60 P Pg 00 24 18.5 -0.3
DOMA S Sn 00 24 36.6 +0.3
DOMA IAML 00 24 41.0
comp=N,2µm,0.6s
DOMA IAML 00 24 46.0
comp=E,2µm,0.7s
MADA Marmara adas 1.61 351 P Pn 00 24 15.3 -0.5
LPK Lapseki 1.62 328 Pn Pn 00 24 16.5 +0.5
DDIM Aydin, Didim 1.62 198 P Pg 00 24 18.5 -0.6
BOZC Bozcaada 1.65 301 Pn Pn 00 24 16.5 +0.1
BOZC Bozcaada 1.65 301 P Pn 00 24 16.9 +0.5
BOZC P Pn 00 24 16.9 +0.5
ECEA Canakkale, Ece 1.69 309 P Pn 00 24 17.5 +0.6
TAVA DENIZLI_Tavas 1.73 152 P Pn 00 24 18.0 +0.4
MULA Mugla, Merkez- 1.78 169 P Pn 00 24 19.1 +0.9
YER Yerkesik 1.89 170 P Pn 00 24 20.1 +0.3
YER S Sb 00 24 45.1 -0.5
GADA Gvkgeada 1.94 308 P Pn 00 24 20.8 +0.4
GADA S Sn 00 24 44.5 -0.1
BODT Bodrum 1.99 193 P Pn 00 24 22.1 +1.0
BODT S Sb 00 24 47.7 -0.8
CAVK Edirne/Enez-Ca 2.15 322 ⇓P Pn 00 24 24.5 +1.3
BORA Eskisehir 2.17 65 Pn 00 24 24.4 +0.7
ENEZ Enez 2.19 323 P Pn 00 24 24.8 +1.0
ENEZ S Sb 00 24 53.0 -1.2
LIA Limnos Island 2.28 294 P Pn 00 24 25.6 +0.6
LIA S Sn 00 24 52.6 -0.1
SMTH Samothraki Isl 2.34 310 P Pn 00 24 26.3 +0.4
ALN Alexandroupoli 2.36 324 Pn 00 24 26.8 +0.6
ALN Alexandroupoli 2.36 324 P Pn 00 24 26.6 +0.4
ALN Alexandroupoli 2.36 324 P Pn 00 24 26.8 +0.6
ISP Isparta 2.38 119 Pn 00 24 27.1 +0.6
ISP Isparta 2.38 119 *i* P **Pn 00 24 26.8 +0.2**
ISP Isparta 2.38 119 P Pn 00 24 27.2 +0.6
KLYT Kilyos 2.42 21 Pn Pn 00 24 27.0 +0.1
CTYL Yalikoy Yolu 2.49 7 Pn Pn 00 24 28.2 +0.3
ELL Elmali 2.76 144 Pn 00 24 33.6 +1.8
ELL Elmali 2.76 144 P Pn 00 24 33.6 +1.8
ARG Arkhangelos 2.79 176 Pn 00 24 32.3 +0.2
ARG Arkhangelos 2.79 176 P Pn 00 24 32.3 +0.2
ARG Arkhangelos 2.79 176 P Pn 00 24 32.3 +0.2
RDO Rodhopi 2.80 321 Pn 00 24 33.0 +0.8
RDO Rodhopi 2.80 321 P Pn 00 24 33.1 +1.0
KARY Karystos 2.88 251 P Pn 00 24 33.4 +0.2
THAS Thassos island 2.92 304 P Pn 00 24 33.6 -0.2
MDUB Mudurnu 2.94 59 Pn 00 24 34.7 +0.4
KYMI Kymi, Euboea I 2.98 264 P Pn 00 24 35.6 +0.9
AKAS Kas 3.08 153 Pn 00 24 37.7 +1.6
AOS Alonnisos 3.12 274 P Pn 00 24 38.1 +1.4
KSL Kastellorizon 3.15 154 P Pn 00 24 38.9 +1.9
THR8 Santorini-Mono 3.22 217 P Pn 00 24 37.8 -0.2
DION Dionisos Attik 3.24 255 P Pn 00 24 38.8 +0.5
SNT5 Nea Kammeni, S 3.26 218 P Pn 00 24 39.1 +0.6
KAVA Kavala 3.27 309 P Pn 00 24 39.3 +0.7
OUR Ouranopolis 3.29 295 P Pn 00 24 39.4 +0.4
PTL Penteli 3.30 254 P Pn 00 24 39.5 +0.4
KARP Karpathos 3.50 190 Pn 00 24 42.4 +0.5
KARP Karpathos 3.50 190 P Pn 00 24 42.5 +0.7
KARP Karpathos 3.50 190 Pn Pn 00 24 43.4 +1.6
KARP S Sn 00 25 26.1 +3.1
DIM Dimitrovgrad 3.51 331 P Pn 00 24 42.9 +0.9
DIM Dimitrovgrad 3.51 331 *i* P **Pn 00 24 43.1 +1.1**
RZN Rozhen 3.61 319 P Pn 00 24 44.4 +0.9
RZN Rozhen 3.61 319 *i* P **Pn 00 24 44.8 +1.3**
JMB Yambol 3.63 344 *e*P **Pn 00 24 45.1 +1.4**
NEO Neokhori 3.64 276 P Pn 00 24 43.9 +0.1
VILL Villia 3.68 258 P Pn 00 24 45.3 +0.9
ATAL Atalanti 3.81 267 P Pn 00 24 47.1 +1.0
SRS Serrai 3.92 304 P Pn 00 24 48.0 +0.5
PLD Plovdiv 3.95 324 *i* P **Pn 00 24 49.0 +1.0**
MMB Musomishta 4.06 310 P Pn 00 24 50.6 +1.0
MMB Musomishta 4.06 310 *i* P **Pn 00 24 50.6 +1.0**
PRD Provadia 4.17 355 *i* P **Pn 00 24 52.3 +1.3**
LIT Litokhoron 4.32 286 Pn 00 24 54.2 +1.1
LIT Litokhoron 4.32 286 P Pn 00 24 53.7 +0.6
LIT Litokhoron 4.32 286 P Pn 00 24 54.2 +1.1
AGG Agios Georgios 4.33 272 P Pn 00 24 54.3 +1.0
KNT Kendrikon 4.39 301 P Pn 00 24 55.1 +0.9
IDI Anoyia 4.41 214 Pn Pn 00 24 54.8 +0.4
18nm,0.6s,baz=42,slow=12,SNR=19
IDI Pg **Pg 00 25 12.9 +0.4**
8.4nm,0.3s,baz=33,slow=13,SNR=11
IDI Sn **Sn 00 25 41.4 -4.2**
4.7nm,0.3s,baz=235,slow=6.7,SNR=5.2
IDI Lg Lg 00 26 08.6
10nm,0.3s,baz=286,slow=20,SNR=4.9
IDI LR LR 00 26 51.1
comp=Z,930nm,18.8s,baz=353,slow=41
IDI Anoyia 4.41 214 Pn 00 24 54.4 -0.1
IDI Anoyia 4.41 214 P Pn 00 24 54.4 -0.1
KALB Balgarevo 4.42 5 ⇑P Pn 00 24 55.6 +1.2
LOZB Loznitsa 4.47 348 ⇑P Pn 00 24 56.1 +0.9
GUR Goura 4.48 258 P Pn 00 24 56.6 +1.2
SZH Strazhitsa 4.50 342 *i* P **Pn 00 24 56.3 +0.8**
BR105 Keskin Array S 4.50 79 P Pn 00 24 57.9 +2.2
BR106 Keskin Array S 4.50 79 P Pn 00 24 58.0 +2.3
PGB Panagyurishte 4.50 322 *i* P **Pn 00 24 56.9 +1.3**
BR104 Keskin Array S 4.51 79 P Pn 00 24 58.0 +2.1
BR131 Keskin Array S 4.51 79 00 24 57.4 +1.5
BR131 Keskin Array S 4.51 79 *i* P **Pn 00 24 57.6 +1.7**
BRTR Keskin Array B 4.51 79 Pn Pn 00 24 57.9 +1.9
4.3nm,0.3s,baz=254,slow=13,SNR=131
BRTR Pg **Pg 00 25 14.2 -0.2**
8.5nm,0.3s,baz=259,slow=16,SNR=31
BRTR Sn **Sn 00 25 47.2 -1.0**
5.0nm,0.3s,baz=19,slow=24,SNR=4.1
BRTR Lg Lg 00 26 13.7
4.4nm,0.3s,baz=262,slow=20,SNR=23
BRTR LR LR 00 26 58.3
comp=Z,1µm,21.7s,baz=268,slow=42
14nm,0.5s
PVL Pavlikeni 4.60 334 *i* P **Pn 00 24 58.3 +1.4**
KKB Krupnik 4.61 309 *i* P **Pn 00 24 58.8 +1.7**
PSN Preselentsi 4.63 2 *i* P **Pn 00 24 58.2 +0.8**
RAZG Razgrad 4.68 348 ⇑P Pn 00 24 59.2 +1.1
VAY Valandovo 4.69 301 ⇓/Pn **Pn 00 24 59.6 +1.4**
VAY *e*Sn **Sg 00 26 19.6 +1.2**
KIRS Kirsehir-Merke 4.69 87 ⇑P Pn 00 25 00.8 +2.4
CIDE Kastamonu/Cide 4.81 52 ⇓P Pn 00 25 01.4 +1.5
MANR Mangalia 4.84 6 ⇑P Pn 00 25 01.2 +1.0
PLNA Plana 4.85 317 *i* P **Pn 00 25 02.3 +1.8**
ILGA Ilgaz 4.92 64 Pn 00 25 00.1 -1.5
PLVB Pleven 5.03 332 ⇑P Pn 00 25 04.1 +1.3
ITM Ithomi 5.04 251 Pn 00 25 04.3 +1.2
EFOR EFORIE 5.10 6 ⇓P Pn 00 25 04.6 +0.7
ICOR Ion Corvin 5.11 359 ⇑P Pn 00 25 04.2 +0.3
TSCT Constanta Port 5.19 6 ⇑P Pn 00 25 06.6 +1.6
MFTR Murfatlar 5.19 4 ⇑P Pn 00 25 06.7 +1.7
BLSH Balsha 5.20 319 *i* P **Pn 00 25 07.3 +2.1**
CICN Ciocanesti 5.23 353 ⇑P Pg 00 25 35.0 +6.9
CVDA Cernavoda 5.33 1 ⇑P Pn 00 25 06.1 -0.8
MPED Malo Peshtene 5.36 326 *i* P **Pn 00 25 08.7 +1.3**
SGRR Singureni 5.41 345 ⇓P Pn 00 25 09.3 +1.2
TIRR Tirgusor 5.47 4 Pn 00 25 08.8 0.0
TIRR Tirgusor 5.47 4 ⇑P Pn 00 25 08.9 +0.1
TIRR Tirgusor 5.47 4 ⇑P Pn 00 25 08.9 +0.1
TIRR Tirgusor 5.47 4 Pn Pn 00 25 09.0 +0.1
0.6nm39nm,0.8s
COPA Copaceanca 5.50 340 ⇓P Pn 00 25 09.7 +0.4
TRAN Tran 5.51 316 *i* P **Pn 00 25 11.7 +2.2**
BZK Bozkurt 5.52 56 Pn 00 25 10.4 +0.9
BZK Bozkurt 5.52 56 ⇑P Pn 00 25 12.0 +2.4
BZK Bozkurt 5.52 56 P Pn 00 25 11.0 +1.4
1.4nm2µm228nm,1.2s
LEHL Lehliu 5.53 352 ⇓P Pn 00 25 10.6 +1.0
TLBR Topalu 5.54 1 ⇓P Pn 00 25 10.6 +0.8
VLAD Vladila 5.63 333 ⇓P Pn 00 25 11.7 +0.5
SKO Skopje 5.74 303 *i* P**n Pn 00 25 14.7 +2.1**
VALD Valchedram 5.76 326 *i* P **Pn 00 25 13.9 +1.1**
JURR Jurilovca 5.81 7 ⇑P Pn 00 25 14.7 +1.2
OHR Ohrid 5.83 293 ⇓/Pn **Pn 00 25 16.7 +2.7**
TPGR Topolog 5.86 4 ⇑P Pn 00 25 14.8 +0.5
HUMR Humele 5.93 339 ⇓P Pn 00 25 15.8 +0.5
CSS Mathiatis 5.94 131 Pn 00 25 16.1 +0.8
CSS Mathiatis 5.94 131 Pn Pn 00 25 17.4 +2.1
0.2nm43nm,0.9s
CSS Mathiatis 5.94 131 P Pn 00 25 15.9 +0.5
CSS S Sn 00 26 22.1 -1.0
BAIL Bailesti 6.06 327 ⇓P Pn 00 25 17.1 +0.1
CFR Carcaliu 6.17 2 ⇑P Pn 00 25 18.6 +0.1
CFR Carcaliu 6.17 2 ⇑P Pn 00 25 18.6 +0.1
ISR Istrita 6.19 351 ⇑P Pn 00 25 20.9 +2.1
ISR Istrita 6.19 351 ⇑P Pn 00 25 21.0 +2.1
BNN Bunyan 6.21 89 Pn 00 25 20.2 +1.0
TLCR 6.22 6 ⇑P Pn 00 25 20.8 +1.7
TLCR 6.22 6 ⇑P Pn 00 25 20.8 +1.7
KEK Kerkira 6.31 279 Pn 00 25 22.1 +1.6
GRER 6.41 354 ⇑P Pn 00 25 24.7 +2.9
PUNG Punghina 6.45 326 ⇓P Pn 00 25 29.2 +7.0
SCHLR Schela 6.46 360 ⇑P Pn 00 25 22.3 -0.2
GIUM Giurgiulesti 6.48 2 ⇓P Pn 00 25 22.4 -0.3
SCHL Schela 6.49 360 ⇓P Pn 00 25 20.7 -2.2
NEHR Nehoiu 6.53 350 ⇑P Pn 00 25 26.2 +2.7
BOVS Bovan 6.56 317 ⇑P Pn 00 25 25.4 +1.5
MTUR Matau 6.56 342 ⇓P Pn 00 25 23.9 -0.1
MTUR Matau 6.56 342 ⇓P Pn 00 25 23.9 -0.1
TUDR 6.59 359 ⇓P Pn 00 25 23.8 -0.4
TATR Tatarca 6.59 1 ⇑P Pn 00 25 25.6 +1.3
BISRR Bisoca 6.60 353 ⇑P Pb 00 25 39.2 -3.3
MLR Muntele Rosu 6.64 348 Pn **Pn 00 25 27.6 +2.5**
2.1nm,0.3s,baz=148,slow=2.9,SNR=20
MLR Sn **Sn 00 26 41.8 +1.2**
8.3nm,0.3s,baz=126,slow=17,SNR=6.4
MLR Lg Lg 00 27 24.3
4.6nm,0.3s,baz=254,slow=19,SNR=1.8
MLR LR LR 00 28 46.4
comp=Z,586nm,18.1s,baz=179,slow=44
16nm,0.5s
MLR Muntele Rosu 6.64 348 Pn 00 25 26.4 +1.2
MLR Muntele Rosu 6.64 348 ⇑P Pn 00 25 27.2 +2.1
MLR Muntele Rosu 6.64 348 P Pn 00 25 25.9 +0.8
0.8nm1µm110nm,1.1s
SCTR Scanteiesti 6.67 1 ⇑P Pn 00 25 26.6 +1.3
TOKA Tokat 6.76 76 Pn 00 25 28.7 +2.0
VOIR 6.77 343 P Pn 00 25 26.3 -0.5
0.4nm32nm,0.8s
ODBI Odobesti 6.79 355 ⇓P Pn 00 25 28.9 +2.0
VLDR Vladesti 6.84 1 ⇓P Pn 00 25 29.2 +1.6
VARL Varlezi 6.89 360 ⇓P Pn 00 25 29.9 +1.5
PLOR Plostina 6.91 353 ⇑P Pn 00 25 30.6 +1.9
PLOR Plostina 6.91 353 ⇑P Pn 00 25 30.6 +1.9
VRI Vrincioaia 6.91 353 ⇓P Pn 00 25 30.4 +1.7
VRI Vrincioaia 6.91 353 ⇓P Pn 00 25 30.4 +1.7
VRI Vrincioaia 6.91 353 P Pn 00 25 29.8 +1.1
0.8nm106nm,0.8s
DJES Djerdap 6.93 326 ⇓P Pn 00 25 27.7 -1.3
COVR Voineasa-Covas 6.95 350 ⇓P Pn 00 25 31.3 +2.0
PVY Plav 7.00 303 *e*Pn **Pn 00 25 31.6 +1.5**
SEV Sevastopol' 7.02 36⇑ *e*P **Pn 00 25 30.5 +0.3**
SEV *e*S **Sn 00 26 47.2 -2.5**
SEV Sevastopol' 7.02 36⇑ *e*P **Pn 00 25 30.5 +0.3**
SEV pmax pmax 00 25 46.3
comp=Z,20nm,0.4s
SEV *e*S **Sn 00 26 47.2 -2.5**
SEV smax smax 00 26 52.3
comp=N,24nm,0.5s
GHRR 7.06 357 ⇑P Pn 00 25 31.8 +1.0
GHRR 7.06 357 P Pn 00 25 31.8 +1.0
LOT Lotru 7.13 336 ⇓P Pn 00 25 31.6 -0.2
HERR Herculane 7.15 327 ⇑P Pn 00 25 31.9 0.0
TNR Turnu Rosu 7.16 339 ⇓P Pb 00 25 46.8 -5.2
IVA Berane 7.18 305 *e*Pn **Pn 00 25 33.5 +1.0**
IVA *i* Sn **Sn 00 26 52.9 -0.9**
TURR Turia 7.18 350 ⇓P Pn 00 25 34.3 +1.9
DOPR Dopca 7.20 346 ⇑P Pn 00 25 34.5 +1.8
YAL Yalta 7.21 39 *e*P **Pn 00 25 33.0 +0.3**
YAL *e*S **Sn 00 26 51.3 -3.0**
YAL Yalta 7.21 39 *e*P **Pn 00 25 33.0 +0.3**
YAL pmax pmax 00 25 44.5
comp=Z,18nm,0.4s
YAL *e*S **Sn 00 26 51.3 -3.0**
YAL smax smax 00 26 53.3
comp=N,36nm,0.5s
YAL smax smax 00 26 53.3
comp=E,54nm,0.5s
ULC Ulcinj 7.22 297 *e*Pn **Pn 00 25 34.1 +1.1**
ULC *i* Sn **Sn 00 26 53.9 -0.8**
TARU Tarkhankut 7.24 27 *e*P **Pn 00 25 34.1 +0.9**
TARU pmax pmax 00 25 42.5
comp=Z,45nm,0.6s
TARU *e*S **Sn 00 26 54.2 -0.9**
TARU smax smax 00 26 54.8
comp=N,159nm,0.9s
TARU smax smax 00 26 54.8
comp=E,91nm,1.0s
OZUR 7.26 348 ⇑P Pn 00 25 33.8 +0.3
BOSR Bodos 7.26 348 ⇓P Pn 00 25 34.3 +0.9
BIR Birlad 7.26 359 ⇑P Pn 00 25 35.3 +1.8
DRME Dracevica, Mon 7.35 298 *e*Pn **Pn 00 25 35.9 +1.2**
DRME *i* Sn **Sn 00 26 56.9 -0.9**
MDVR Moldovita 7.38 323 ⇓P Pn 00 25 35.3 +0.1
PDG Podgorica 7.40 300 Pn 00 25 38.1 +2.8
PDG Podgorica 7.40 300 ⇑P Pn 00 25 39.0 +3.7
PDG Podgorica 7.40 300 *e*Pn **Pn 00 25 36.6 +1.3**
ONER Baraj Valea Uz 7.41 352 ⇓P Pn 00 25 37.7 +2.2
KOME Kolasin 7.41 304 ⇓/Pn **Pn 00 25 36.8 +1.1**
KOME *i* Sn **Sn 00 26 58.5 -1.0**
GZR Gura Zlata 7.43 331 ⇓P Pn 00 25 35.6 -0.2
GZR Gura Zlata 7.43 331 ⇓P Pn 00 25 35.6 -0.2
LEOM Leova 7.47 2 P Pn 00 25 37.9 +1.6
DNZ2 Donuzlav2 7.49 30 *e*P **Pn 00 25 38.0 +1.4**
DNZ2 pmax pmax 00 25 48.0
comp=Z,25nm,0.4s
DNZ2 *e*S **Sn 00 27 01.6 +0.3**
DNZ2 smax smax 00 27 04.4
comp=N,102nm,0.8s
DNZ2 smax smax 00 27 04.4
comp=E,72nm,0.7s
SIM Simferopol' 7.54 36 *e*P **Pn 00 25 41.0 +3.7**
SIM *e* 00 26 59.4
SIM pmax pmax
comp=Z,44nm,0.4s
SIM smax smax
comp=E,210nm,1.0s
SIM MLR MLR
comp=Z,280nm,15.0s
SIM Simferopol' 7.54 36 *e*S **Sn 00 26 58.8 -3.6**
SIM smax smax 00 27 03.4
comp=N,89nm,0.5s
SIM smax smax 00 27 03.4
comp=E,198nm,0.1s
TESR Tescani 7.56 353 ⇑P Pn 00 25 38.2 +0.6
TESR Tescani 7.56 353 P Pn 00 25 38.1 +0.6
comp=E,0.3nmcomp=E,71nm,0.8s
MDB Medias 7.59 341 ⇑P Pn 00 25 40.2 +2.2
MDB Medias 7.59 341 ⇑P Pn 00 25 40.2 +2.2
BUM Brajici-Budva 7.59 299 *e*Pn **Pn 00 25 41.4 +3.3**
VASR Vaslui 7.63 359 ⇑P Pn 00 25 39.5 +0.9
PURM Purcari 7.66 10 ⇓P Pn 00 25 38.7 -0.3
PURM Purcari 7.66 10 P Pn 00 25 38.7 -0.3
comp=E,0.5nmcomp=E,162nm,0.9s
CEME Cevo 7.67 300 *e*Pn **Pn 00 25 40.7 +1.5**
CEME *i* Sn **Sn 00 27 04.8 -1.1**
PLE Pljevlja 7.73 307 *e*Pn **Pn 00 25 41.1 +1.0**
NKME Niksic 7.74 302 *e*Pn **Pn 00 25 41.4 +1.2**
NKME *i* Sn **Sn 00 27 06.4 -1.2**
DEV Deva 7.80 333 ⇑P Pn 00 25 41.8 +0.9
DEV Deva 7.80 333 ⇑P Pn 00 25 41.8 +0.9
SUDU Sudak 7.92 40 *e*P **Pn 00 25 43.0 +0.6**
SUDU *e*S **Sn 00 27 09.3 -2.4**
SUDU Sudak 7.92 40 *e*P **Pn 00 25 43.0 +0.6**
SUDU pmax pmax 00 26 02.1
comp=Z,26nm,0.5s
SUDU *e*S **Sn 00 27 09.3 -2.4**
SUDU smax smax 00 27 13.5
comp=N,214nm,0.5s
SUDU smax smax 00 27 13.5
comp=E,132nm,0.8s
TGMR Targu Mures 7.92 343 ⇓P Pn 00 25 46.5 +4.0
HCY Herceg Novi 7.92 299 *e*Pn **Pn 00 25 43.8 +1.3**
HCY *i* Sn **Sn 00 27 10.7 -1.2**
UPM Unac-Piva 7.97 305 *e*Pn **Pn 00 25 44.6 +1.1**
UPM *i* Sn **Sn 00 27 11.9 -1.6**
NE56 Odesa 7.98 15 P Pn 00 25 45.0 +1.7
KIS Kishinev 8.02 5 ⇓P Pn 00 25 47.2 +3.3
KIS Kishinev 8.02 5 ⇓P Pn 00 25 47.2 +3.3
KIS Kishinev 8.02 5 P Pn 00 25 44.1 +0.2
comp=E,0.2nmcomp=E,48nm,0.6s
BRY Bratogost 8.07 302 *e*Pn **Pn 00 25 48.0 +3.2**
BZS Buzias 8.08 327 ⇓P Pn 00 25 44.3 -0.4
BZS Buzias 8.08 327 ⇓P Pn 00 25 44.3 -0.4
BANR Banloc 8.11 324 ⇑P Pn 00 25 44.0 -1.1
FEO Feodosiya 8.20 40 *e*P **Pn 00 25 45.9 -0.5**
FEO *e*S **Sn 00 27 15.9 -2.8**

FEO	**Feodosiya**	**8.20**	**40**	*e*P	**Pn**	**00 25 45.9**	**-0.5**
FEO				pmax	pmax	00 26 01.9	
	comp=Z,41nm,0.6s						
FEO				*e*S	**Sn**	**00 27 15.9**	**-2.8**
FEO				smax	smax	00 27 25.9	
	comp=N,35nm,0.5s,comp=E,26nm,0.5s						
CJR	**Cluj-Napoca**	**8.32**	**339**	⇓P	**Pn**	**00 25 48.3**	**+0.2**
CJR	**Cluj-Napoca**	**8.32**	**339**	⇓P	**Pn**	**00 25 48.3**	**+0.2**
HNTI	**Hanita**	**8.35**	**133**	P	**Pn**	**00 25 47.3**	**-1.1**
HNTI				S	**Sn**	**00 27 20.7**	**-1.7**
MARR	**Marisel-Cluj**	**8.43**	**337**	⇑P	**Pn**	**00 25 53.1**	**+3.5**
PRAR	**RASCA**	**8.44**	**352**	⇓P	**Pn**	**00 25 51.7**	**+2.0**
MMC7	**Mount Meron ar**	**8.52**	**132**	P	**Pn**	**00 25 49.8**	**-1.0**
MMA0B	**Mount Meron ar**	**8.53**	**132**	P	**Pn**	**00 25 50.2**	**-0.7**
MMA0B				S	**Sn**	**00 27 24.7**	**-2.3**
MMAI	**Mount Meron Ar**	**8.53**	**132**	Pn	**Pn**	**00 25 50.9**	**-0.1**
	comp=E,5.2nm,0.3s,baz=326,slow=13,SNR=34						
MMAI				Sn	**Sn**	**00 27 22.6**	**-4.4**
	comp=E,4.8nm,0.3s,baz=326,slow=30,SNR=6.2						
MMAI				LR	LR	00 30 54.0	
	comp=E,161nm,18.6s,baz=296,slow=50						
	comp=E,3.3nm,0.3s						
NATI	**Neve Ativ**	**8.55**	**130**	P	**Pn**	**00 25 50.7**	**-0.5**
NATI				S	**Sn**	**00 27 25.9**	**-1.4**
OFRI	**`Ofer**	**8.59**	**136**	P	**Pn**	**00 25 50.6**	**-1.1**
OFRI				S	**Sn**	**00 27 25.9**	**-2.4**
BLGI	**Bet Lehem HaGe**	**8.62**	**134**	P	**Pn**	**00 25 51.1**	**-1.0**
BLGI				S	**Sn**	**00 27 27.4**	**-1.6**
TIP	**Timpagrande**	**8.66**	**275**		**Pn**	**00 25 53.6**	**+0.9**
TIP	**Timpagrande**	**8.66**	**275**	⇑P	**Pn**	**00 25 54.1**	**+1.4**
TIP	**Timpagrande**	**8.66**	**275**	P	**Pn**	**00 25 54.6**	**+1.9**
	comp=E,26nm,0.9s						
DRGR		**8.66**	**336**	⇑P	**Pn**	**00 25 53.4**	**+0.7**
DRGR		**8.66**	**336**	⇑P	**Pn**	**00 25 53.4**	**+0.7**
MATE	**Matera**	**8.76**	**284**	⇓P	**Pn**	**00 25 54.0**	**-0.1**
KSHT	**Keshet**	**8.79**	**131**	P	**Pn**	**00 25 55.5**	**+0.9**
KSHT				S	**Sn**	**00 27 31.2**	**-2.2**
BURAR	**Bucovina Array**	**8.82**	**348**		**Pn**	**00 25 55.9**	**+0.9**
BURAR	**Bucovina Array**	**8.82**	**348**	⇓P	**Pn**	**00 25 55.8**	**+0.8**
BURAR	**Bucovina Array**	**8.82**	**348**	⇓P	**Pn**	**00 25 55.8**	**+0.8**
BUR08	**Bucovina Ar. S**	**8.86**	**348**		**Pn**	**00 25 56.4**	**+0.9**
MESR	**Meseseni**	**8.91**	**338**	⇑P	Pn	00 26 11.6	+16
SLTI	**Sal'it**	**8.91**	**137**	P	**Pn**	**00 25 54.9**	**-1.2**
SLTI				S	**Sn**	**00 27 33.7**	**-2.5**
MMLI	**Mount Malkishu**	**8.96**	**135**	P	**Pn**	**00 25 55.9**	**-1.1**
MMLI				S	**Sn**	**00 27 34.7**	**-3.0**
BAL3X	**Bal3x, Balta**	**9.02**	**7**	P	**Pn**	**00 25 56.9**	**-0.6**
SORM	**Soroca**	**9.13**	**2**	⇑P	**Pn**	**00 25 58.0**	**-1.2**
SORM	**Soroca**	**9.13**	**2**	⇑P	**Pn**	**00 25 58.0**	**-1.2**
SORM	**Soroca**	**9.13**	**2**	Pn	**Pn**	**00 25 58.4**	**-0.8**
HMDT	**Nahal Hemdat**	**9.16**	**135**	P	**Pn**	**00 25 59.3**	**-0.3**
HMDT				S	**Sn**	**00 27 40.7**	**-1.7**
ANN	**Anapa**	**9.17**	**48**	*e*P	**Pn**	**00 26 03.0**	**+3.3**
ANN				*e*S	**Sn**	**00 27 38.9**	**-3.7**
ANN				pmax	pmax		
	comp=N,71nm,1.2s						
ANN				MLR	MLR		
	comp=E,487nm,20.0s						
BMR	**Baia Mare**	**9.24**	**341**	⇓P	Pn	00 26 10.8	+10
BMR	**Baia Mare**	**9.24**	**341**	⇓P	Pn	00 26 10.8	+10
BALJ	**Balqa**	**9.35**	**135**		**Pn**	**00 26 02.7**	**+0.5**
ACER	**Acerenza**	**9.35**	**285**		**Pn**	**00 26 03.2**	**+1.0**
AMAZ	**Amatzia**	**9.41**	**140**	P	**Pn**	**00 26 00.9**	**-2.1**
AMAZ				S	**Sn**	**00 27 44.9**	**-3.5**
RAKU	**Rahkiv**	**9.41**	**345**	P	**Pn**	**00 26 06.5**	**+3.5**
CEL	**Celeste**	**9.42**	**269**		**Pn**	**00 26 04.2**	**+1.0**
CEL	**Celeste**	**9.42**	**269**	Pn	**Pn**	**00 26 04.3**	**+1.2**
	comp=E,28nm,1.0s						
KSV	**Kosov**	**9.53**	**349**	P	**Pn**	**00 26 06.0**	**+1.4**
DSI	**Dead Sea**	**9.61**	**138**	P	**Pn**	**00 26 04.1**	**-1.7**
DSI				S	**Sn**	**00 27 51.0**	**-2.6**
KMPD	**K-Podol'skiy**	**9.61**	**354**	P	**Pn**	**00 26 04.7**	**-1.0**
YTIR	**Yattir**	**9.64**	**140**	P	**Pn**	**00 26 04.9**	**-1.4**
YTIR				S	**Sn**	**00 27 51.0**	**-3.5**
KZIT	**Kziot**	**9.68**	**145**	P	**Pn**	**00 26 04.9**	**-1.9**
KZIT				S	**Sn**	**00 27 50.7**	**-4.5**
TRSU	**Trosnyk**	**9.77**	**340**	P	**Pn**	**00 26 09.7**	**+1.9**
KORU	**Korolevo**	**9.78**	**341**	P	**Pn**	**00 26 07.9**	**-0.1**
MSBI	**Mazada**	**9.81**	**139**	P	**Pn**	**00 26 06.9**	**-1.5**
MSBI				S	**Sn**	**00 27 55.2**	**-3.0**
BLY	**Banja Luka**	**9.83**	**309**	⇑P	**Pn**	**00 26 10.1**	**+1.4**
MORH	**Mrgy, Hungar**	**9.91**	**320**	⇓P	**Pn**	**00 26 10.5**	**+0.7**
MORH	**Mrgy, Hungar**	**9.91**	**320**	Pn	**Pn**	**00 26 10.3**	**+0.5**
	comp=E,461nmcomp=E,31nm,0.9s						
GHAJ	**Ghor Haditha**	**9.92**	**138**	Pn	**Pn**	**00 26 11.1**	**+1.1**
GHAJ	**Ghor Haditha**	**9.92**	**138**	P	**Pn**	**00 26 08.2**	**-1.7**
GHAJ				S	**Sn**	**00 27 57.7**	**-3.3**
BSZH	**Besenyszg**	**9.98**	**329**	⇓P	Pn	00 26 18.6	+7.8
SOC	**Sochi**	**10.01**	**59**	*e*P	**Pn**	**00 26 12.2**	**+1.1**
SOC				*e*		00 28 04.5	
SOC				pmax	pmax		
	comp=Z,53nm,1.1s						
SOC				MLR	MLR		
	comp=Z,379nm,20.0s						
ASF	**Jabal al Asfar**	**10.01**	**130**	Pn	**Pn**	**00 26 10.6**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=320,slow=23,SNR=5.9						
ASF				Sn	**Sn**	**00 28 04.7**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=114,slow=20,SNR=1.3						
ASF				LR	LR	00 30 36.8	
	comp=Z,205nm,21.6s,baz=296,slow=41						
	comp=Z,2.9nm,0.6s						
MEZ	**Mezhgor'ye**	**10.02**	**343**	Pn	**Pn**	**00 26 10.7**	**-0.6**
RMNI	**Mount Ramon**	**10.11**	**144**	P	**Pn**	**00 26 10.9**	**-1.8**
RMNI				S	**Sn**	**00 28 01.7**	**-4.1**
ZFRI	**Zfri**	**10.34**	**142**	P	**Pn**	**00 26 13.8**	**-1.9**
ZFRI				S	**Sn**	**00 28 07.5**	**-3.8**
PAOL	**Paolisi**	**10.42**	**285**		**Pn**	**00 26 18.9**	**+2.1**
PRNI	**Paran**	**10.43**	**144**	P	**Pn**	**00 26 15.4**	**-1.6**
PRNI				S	**Sn**	**00 28 09.0**	**-4.6**
UZHM	**Uzhgorod**	**10.44**	**339**	Pn	**Pn**	**00 26 16.7**	**-0.2**
KRMI	**Paran Flat**	**10.50**	**146**	P	**Pn**	**00 26 16.1**	**-1.9**
KRMI				S	**Sn**	**00 28 11.2**	**-4.1**
PSZ	**Piszkesteto**	**10.63**	**330**	Pn	**Pn**	**00 26 19.9**	**+0.1**
PSZ	**Piszkesteto**	**10.63**	**330**	⇓P	**Pn**	**00 26 21.1**	**+1.4**
PSZ	**Piszkesteto**	**10.63**	**330**	⇓P	**Pn**	**00 26 21.1**	**+1.4**
HRFI	**Mount Harif**	**10.71**	**144**	P	**Pn**	**00 26 19.2**	**-1.6**
HRFI				S	**Sn**	**00 28 16.2**	**-4.2**
VAE	**Valguarnera**	**10.71**	**266**	Pn	**Pn**	**00 26 23.3**	**+2.5**
	comp=Z,4.9nm,0.8s,baz=349,slow=10,SNR=2.2						
RAFF	**Raffo Rosso**	**10.81**	**265**		**Pn**	**00 26 22.5**	**+0.4**
MBRI	**Mt Berech**	**10.86**	**146**	P	**Pn**	**00 26 21.1**	**-1.9**
MBRI				S	**Sn**	**00 28 20.0**	**-4.3**
LUBAR	**Lubar, Ukraine**	**10.92**	**360**	Pn	**Pn**	**00 26 23.3**	**-0.3**
EIL	**Elat**	**10.98**	**146**	Pn	**Pn**	**00 26 23.2**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=17,slow=3.3,SNR=8.2						
EIL				Sn	Sn	00 28 17.1	-10
	comp=Z,0.7nm,0.3s,baz=41,slow=11,SNR=2.2						
	comp=Z,6.8nm,0.6s						
EIL	**Elat**	**10.98**	**146**	P	**Pn**	**00 26 22.1**	**-2.4**
EIL				S	**Sn**	**00 28 22.5**	**-4.7**
INTR	**Introdacqua**	**11.06**	**290**		**Pn**	**00 26 24.5**	**-1.2**
MPLH	**Magyarpolny**	**11.12**	**321**	P	**Pn**	**00 26 27.6**	**+1.2**
	comp=Z,123nm,1.0s						
SRO	**Srobarova**	**11.22**	**325**	*e*P	Pn	00 26 36.5	+8.8
SRO	**Srobarova**	**11.22**	**325**	*e*	Pn	00 26 36.4	+8.7
ERBR	**Yeremizino-Bor**	**11.47**	**50**	*e*P	Pn	00 26 39.5	+8.3
ERBR				pmax	pmax		
	comp=Z,24nm,0.8s						
CAMP	**Campotosto**	**11.53**	**292**		**Pn**	**00 26 31.7**	**-0.4**
AK07	**Malin Array Si**	**11.59**	**4**	Pn	**Pn**	**00 26 32.8**	**+0.1**
AK06	**Malin Array Si**	**11.62**	**4**	Pn	**Pn**	**00 26 33.1**	**-0.1**
AK10	**Malin Array Si**	**11.64**	**4**	Pn	**Pn**	**00 26 33.5**	**+0.1**
AK09	**Malin Array Si**	**11.65**	**4**	Pn	**Pn**	**00 26 33.9**	**+0.3**
AKASG	**Malin Array Be**	**11.74**	**4**	Pn	**Pn**	**00 26 33.5**	**-1.2**
	comp=Z,1.5nm,0.3s,baz=192,slow=13,SNR=4.4						
AKASG				Sn	**Sn**	**00 28 41.3**	**-4.1**
	comp=Z,0.4nm,0.3s,baz=194,slow=22,SNR=4.8						
AKASG				LR	LR	00 31 03.8	
	comp=Z,286nm,19.7s,baz=196,slow=37						
	comp=Z,0.4nm,0.3s						
AKASG	**Malin Array Be**	**11.74**	**4**		**Pn**	**00 26 34.0**	**-0.8**
AKASG	**Malin Array Be**	**11.74**	**4**	*i* P	**Pn**	**00 26 39.4**	**+4.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NRCA	**Norcia**	**11.81**	**294**		**Pn**	**00 26 35.8**	**-0.2**
FDMO	**Fiordimonte**	**11.88**	**295**	Pn	**Pn**	**00 26 35.9**	**-0.9**
SHA1	**Shidzhatmaz**	**12.06**	**62**	*i* P	**Pn**	**00 26 39.4**	**0.0**
MODS	**Modra-Piesok**	**12.10**	**324**	*e*P	P	00 26 47.8	-4.7
MODS	**Modra-Piesok**	**12.10**	**324**	*e*	P	00 26 47.8	-4.7
RONA	**Rosalia, Austr**	**12.10**	**320**	*e*Pn	**Pn**	**00 26 40.7**	**+0.9**
	comp=Z,5.7nm,1.0s						
KIV	**Kislovodsk**	**12.15**	**61**	*e*P	**Pn**	**00 26 41.6**	**+1.1**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,94nm,13.0s						
ARSA	**Arzberg**	**12.22**	**316**		**Pn**	**00 26 41.5**	**+0.1**
ARSA	**Arzberg**	**12.22**	**316**	*e*Pn	**Pn**	**00 26 41.4**	**+0.1**
	comp=Z,5.8nm,1.1s						
KBZ	**Khabaz**	**12.22**	**62**	Pn	**Pn**	**00 26 45.2**	**+3.8**
	comp=Z,4.1nm,1.0s,baz=335,slow=9.0,SNR=4.8						
KBZ				LR	LR	00 32 25.3	
	comp=Z,427nm,18.5s,baz=254,slow=42						
KBZ	**Khabaz**	**12.22**	**62**	*i* P	**Pn**	**00 26 41.6**	**+0.2**
OBKA	**Obir**	**12.33**	**312**	P	P	00 26 49.6	-5.6
	comp=Z,2.9nm,1.0s						
MURB	**Monte Urbino**	**12.34**	**295**	Pn	**Pn**	**00 26 42.5**	**-0.6**
RNPP1	**Kostyukhnivka**	**12.44**	**354**	Pn	**Pn**	**00 26 44.6**	**+0.3**
CONA	**Conrad Observa**	**12.47**	**320**	*e*Pn	**Pn**	**00 26 44.5**	**-0.4**
	comp=Z,7.9nm,1.0s						
SABO	**M.te Sabotino**	**12.63**	**308**	Pn	**Pn**	**00 26 48.8**	**+1.7**
NCK	**Nalchik**	**12.64**	**64**	*i* P	**Pn**	**00 26 47.4**	**+0.2**
KRUC	**Moravsky**	**13.00**	**324**	*e*PN	**Pn**	**00 26 53.7**	**+1.6**
GNI	**Garni**	**13.06**	**80**	LR	LR	00 32 28.2	
	comp=Z,357nm,19.0s,baz=280,slow=40						
VRAC	**Vranov**	**13.10**	**326**	Pn	**Pn**	**00 26 57.9**	**+4.6**
	comp=Z,0.2nm,0.3s,baz=143,slow=11,SNR=5.6						
VRAC				LR	LR	00 32 29.7	
	comp=Z,143nm,18.8s,baz=172,slow=40						
VRAC	**Vranov**	**13.10**	**326**	*e*PN	**Pn**	**00 26 54.0**	**+0.7**
CIMO	**Cimolais**	**13.50**	**308**	Pn	**Pn**	**00 26 57.5**	**-1.4**
TEOL	**Teolo**	**13.59**	**303**		**Pn**	**00 26 59.0**	**-1.1**
ABTA	**Abfaltersbach**	**13.66**	**309**	*e*P	**Pn**	**00 27 04.5**	**+3.4**
	comp=Z,4.5nm,0.6s,SNR=5.6						
CKRC	**Cesky Krumlov**	**13.84**	**320**	*e*P	**Pn**	**00 27 05.9**	**+2.4**
CKRC	**Cesky Krumlov**	**13.84**	**320**	*e*P	**Pn**	**00 27 05.9**	**+2.4**
LESA	**Schwarzleotal**	**13.91**	**312**	*e*Pn	**Pn**	**00 27 03.3**	**-1.2**
	comp=Z,6.3nm,1.7s,SNR=4.4						
GEC2	**GERESS Array S**	**14.17**	**319**		**Pn**	**00 27 09.8**	**+1.7**
GERES	**GERESS Array B**	**14.17**	**319**	Pn	**Pn**	**00 27 10.2**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=125,slow=11,SNR=1.6						
GERES				LR	LR	00 32 59.2	
	comp=Z,214nm,19.7s,baz=165,slow=39						
	comp=Z,1.3nm,0.5s						
VORD	**Divnogorie**	**14.41**	**30**	*e*P	**Pn**	**00 27 09.1**	**-2.1**
VORD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KHC	**Kasperske Hory**	**14.41**	**319**	*i* P	**Pn**	**00 27 11.2**	**-0.1**
KHC	**Kasperske Hory**	**14.41**	**319**	*e*P	**Pn**	**00 27 11.5**	**+0.2**
KHC				AMS	AMS	00 33 50.0	
	comp=Z,400nm,15.4s						
WTTA	**Wattenberg**	**14.44**	**310**	*e*Pn	**Pn**	**00 27 10.7**	**-1.1**
	comp=Z,1.1nm,0.5s						
WATA	**Walderalm**	**14.51**	**310**	*e*Pn	**Pn**	**00 27 12.0**	**-0.7**
	comp=Z,1.7nm,0.6s						
VSR	**Storozhevoye**	**14.56**	**29**	*e*P	**Pn**	**00 27 10.4**	**-2.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SQTA	**Sankt Quirin**	**14.67**	**309**	Pn	**Pn**	**00 27 13.5**	**-1.5**
	comp=Z,6.2nm,1.0s						
MOTA	**Moosalm**	**14.79**	**310**	*e*Pn	**Pn**	**00 27 15.2**	**-1.5**
	comp=Z,4.7nm,0.8s						
FETA	**Feichten**	**14.87**	**308**	Pn	**Pn**	**00 27 16.9**	**-0.9**
	comp=Z,19nm,1.1s						
PVCC	**Panska Ves**	**14.88**	**325**	AMS	AMS	00 35 00.0	
	comp=Z,600nm,12.1s						
VORR	**Voronezh**	**14.94**	**28**	*e*P	**Pn**	**00 27 17.0**	**-1.4**
VORR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**14.99**	**306**		**Pn**	**00 27 19.8**	**+0.4**
RETA	**Reutte**	**15.06**	**310**	*e*P	**P**	**00 27 27.5**	**+2.0**
	comp=Z,4.6nm,0.9s						
KEST	**Kesra**	**15.10**	**263**	Pn	**P**	**00 27 25.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=57,slow=8.2,SNR=12						
KEST				LR	LR	00 34 33.3	
	comp=Z,140nm,18.3s,baz=308,slow=42						
KEST	**Kesra**	**15.10**	**263**		**Pn**	**00 27 22.8**	**+2.0**
KEST				IAmb	IAmb	00 27 34.1	
	comp=Z,18nm,0.9s						
DAVOX	**Davos/Dischmat**	**15.30**	**306**	Pn	**P**	**00 27 26.0**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=124,slow=9.0,SNR=22						
DAVOX				LR	LR	00 33 50.1	
	comp=Z,410nm,19.1s,baz=92,slow=39						
	comp=Z,1.8nm,0.9s						
MAK	**Makhachkala**	**15.33**	**69**	*e*P	**Pn**	**00 27 20.9**	**-2.8**
MAK				*e*S	**Sn**	**00 30 08.0**	**-5.1**
MAK				pmax	pmax		
	comp=Z,67nm,1.5s						
MAK				MLR	MLR		
	comp=Z,211nm,18.0s						
BRG	**Berggiesshubel**	**15.41**	**325**	*e*P	**P**	**00 27 31.5**	**+2.3**
BRG				Amp		00 27 31.9	
	comp=Z,5.6nm,0.9s						
MNK	**Minsk**	**15.51**	**360**	*i* P	**Pn**	**00 27 25.9**	**0.0**
	comp=E,14nm,1.0s						
MNK				*i* P	**Pn**	**00 27 25.9**	**0.0**
	comp=N,20nm,1.2s						
MNK				*i* P	**Pn**	**00 27 25.9**	**0.0**
	comp=Z,7.0nm,0.9s,baz=180						
MNK				*i* PP	**PnPn**	**00 27 34.0**	**-0.2**
MNK				*i* PPP	PPP	00 27 41.5	
MNK				*i* S	**Sn**	**00 30 17.8**	**+0.5**
MNK				*i* SS	**S**	**00 30 32.2**	**-0.7**
MNK				*i* SSS	SSS	00 30 44.7	
MNK				*i* LRM	MLR	00 34 15.9	
	comp=N,134nm,12.1s						
MNK				*i* LRM	MLR	00 34 19.1	
	comp=Z,238nm,14.7s						
MNK				*i* LRM	MLR	00 34 21.3	
	comp=E,243nm,16.2s						
MNK	**Minsk**	**15.51**	**360**	*i* P	**Pn**	**00 27 25.9**	**0.0**
MNK				*i* S	**Sn**	**00 30 17.8**	**+0.5**
MNK				pmax	pmax		
	comp=N,20nm,1.2s						
MNK				pmax	pmax		
	comp=E,14nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,134nm,12.0s						
MNK				MLR	MLR		
	comp=Z,238nm,15.0s						
MNK				MLR	MLR		
	comp=E,243nm,16.0s						
DAVA	**Damuels**	**15.51**	**308**	*e*P	**P**	**00 27 33.2**	**+2.7**
	comp=E,23nm,1.0s,SNR=11						
TUE	**Stuetta**	**15.51**	**305**		**Pn**	**00 27 27.2**	**+0.9**
TUE				IAmb	IAmb	00 27 45.7	
	comp=Z,14nm,1.1s						
VRH	**Novokhopyorsk**	**15.59**	**34**	*e*P	**Pn**	**00 27 26.2**	**-0.9**
VRH				pmax	pmax		
	comp=Z,32nm,0.9s						
LPSR	**Galich'ya Gora**	**15.60**	**26**	*e*P	**Pn**	**00 27 25.4**	**-1.8**
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
NACGM	**Naroch**	**15.93**	**358**	*e*P	**Pn**	**00 27 33.2**	**+1.8**
	comp=Z,18nm,0.9s,baz=177						
CLL	**Collm**	**16.14**	**325**	*i* P	**P**	**00 27 39.0**	**+1.7**
CLL	**Collm**	**16.14**	**325**	*i* P	**P**	**00 27 39.0**	**+1.7**
CLL				*e*x	x	00 28 04.0	
SENIN	**Lac Senin/Sane**	**16.80**	**303**		**P**	**00 27 44.4**	**-0.6**
BNI	**Bardonecchia**	**16.86**	**298**		**P**	**00 27 45.5**	**0.0**
BNI				IAmb	IAmb	00 27 54.9	
	comp=Z,37nm,1.3s						
BNI	**Bardonecchia**	**16.86**	**298**	P	**P**	**00 27 45.5**	**0.0**
BNI				pmax	pmax		
	comp=Z,37nm,1.3s						
OBN	**Obninsk**	**17.14**	**17**	P	**Pn**	**00 27 43.9**	**-2.9**
	comp=Z,5.2nm,0.4s,baz=162,slow=19,SNR=3.4						
OBN				LR	LR	00 35 34.1	
	comp=Z,177nm,18.3s,baz=271,slow=41						
OBN	**Obninsk**	**17.14**	**17**	*e*P	**P**	**00 27 49.3**	**+0.9**
OBN				pmax	pmax		
	comp=Z,28nm,1.3s						
OBN				MLR	MLR		
	comp=Z,154nm,6.0s						
MOS	**Moscow**	**17.96**	**18**	*e*P	Pn	00 27 46.8	-10
WLF	**Walferdange**	**18.78**	**312**	*d*P	**Pn**	**00 28 10.3**	**+3.2**
BELG	**Belogornoye**	**19.13**	**39**	P	**P**	**00 28 09.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=131,slow=5.8,SNR=7.7						
BELG				LR	LR	00 37 26.3	
	comp=Z,152nm,18.2s,baz=268,slow=43						
	comp=Z,26nm,0.9s						
BELG	**Belogornoye**	**19.13**	**39**	*i* P	**P**	**00 28 10.7**	**+0.4**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BTNL	**Ternell**	**19.22**	**314**	*d*P	**Pn**	**00 28 19.0**	**+6.7**
MEM	**Membach**	**19.30**	**314**	*d*P	**Pn**	**00 28 14.3**	**+1.1**
VSU	**Vasula**	**19.49**	**358**	*i* P	**P**	**00 28 13.4**	**-0.8**
VSU				pmax	pmax		
	comp=Z,26nm,1.0s						
BMRD	**Maredsous**	**19.87**	**312**	*d*P	**Pn**	**00 28 20.7**	**+0.7**
DOU	**Dourbes**	**19.88**	**311**	*d*P	**P**	**00 28 18.8**	**+0.3**
	comp=Z,6.1nm,1.2s						
RAYN	**Ar Rayn**	**21.50**	**131**		**P**	**00 28 35.6**	**-0.7**
RAYN	**Ar Rayn**	**21.50**	**131**	P	**P**	**00 28 35.6**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	**FINESS Array B**	**22.50**	**358**	P	**P**	**00 28 46.5**	**-0.1**
	comp=Z,9.2nm,1.0s,baz=175,slow=11,SNR=7.8						
FINES				LR	LR	00 37 40.6	
	comp=Z,214nm,18.0s,baz=186,slow=37						
	comp=Z,9.2nm,1.0s						
FINES	**FINESS Array B**	**22.50**	**358**	P	**P**	**00 28 45.6**	**-1.0**
FINES	**FINESS Array B**	**22.50**	**358**	*i* P	**P**	**00 28 50.7**	**+4.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FIA1	**FINESS Array S**	**22.50**	**358**	P	**P**	**00 28 45.6**	**-1.0**
HFS	**Hagfors**	**22.97**	**342**	P	**P**	**00 28 55.0**	**+3.4**
	comp=Z,3.7nm,0.9s,baz=151,slow=16,SNR=1.7						
KLMR	**Klimovskoe**	**23.05**	**15**	*e*P	**P**	**00 28 51.8**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,42nm,1.3s						
KIRV	**Kirov**	**23.99**	**28**	LR	LR	00 38 33.7	
	comp=Z,133nm,19.9s,baz=213,slow=37						
KIRV	**Kirov**	**23.99**	**28**	*i* P	**P**	**00 29 02.3**	**+0.6**
AKTO	**Aktyubinsk**	**24.10**	**52**	LR	LR	00 41 15.6	
	comp=Z,211nm,18.7s,baz=350,slow=43						
NOA	**NORSAR Array B**	**24.38**	**340**	P	**P**	**00 29 06.2**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=152,slow=8.7,SNR=1.6						
NOA				LR	LR	00 39 45.3	
	comp=Z,113nm,18.6s,baz=140,slow=39						
	comp=Z,1.7nm,0.9s						
ESDC	**Sonseca Array**	**24.58**	**282**	P	**P**	**00 29 07.8**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=70,slow=8.1,SNR=10						
ESDC				LR	LR	00 38 13.6	
	comp=Z,57nm,19.7s,baz=84,slow=35						
	comp=Z,1.0nm,0.7s						
ESDC	**Sonseca Array**	**24.58**	**282**	P	**P**	**00 29 07.1**	**-0.3**
PAB	**San Pablo**	**24.89**	**282**	P	**P**	**00 29 10.3**	**0.0**
PAB				IAmb	IAmb	00 29 16.3	
	comp=Z,8.4nm,1.2s						
PAB	**San Pablo**	**24.89**	**282**	P	**P**	**00 29 10.3**	**0.0**
PAB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TAM	**Tamanrasset**	**24.99**	**236**		**P**	**00 29 10.8**	**-0.5**
TAM				IAmb	IAmb	00 29 27.0	
	comp=Z,13nm,1.0s						
TAM	**Tamanrasset**	**24.99**	**236**	P	**P**	**00 29 10.8**	**-0.5**
TAM				pmax	pmax		
	comp=Z,13nm,1.0s						
AB31	**Akbulak array**	**25.01**	**55**		**P**	**00 29 10.6**	**-0.6**
ABKAR	**Akbulak array**	**25.01**	**55**	P	**P**	**00 29 10.8**	**-0.4**
EKA	**Eskdalemuir Ar**	**26.38**	**318**	P	**P**	**00 29 22.5**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=134,slow=10.0,SNR=2.0						
	comp=Z,1.8nm,0.9s						
ARTI	**Arti**	**26.58**	**39**	LR	LR	00 40 09.1	
	comp=Z,71nm,20.3s,baz=238,slow=37						
ARTI	**Arti**	**26.58**	**39**		**P**	**00 29 24.1**	**-1.2**
ARTI	**Arti**	**26.58**	**39***c*	*i*P	**P**	**00 29 25.5**	**+0.2**
ARTI				S	**S**	**00 34 00.9**	**+1.8**
ARTI				pmax	pmax		
	comp=Z,12nm,0.9s						
MD01	**Midelt array s**	**27.04**	**267**	P	**P**	**00 29 29.4**	**-0.4**
PVAQ	**Vaqueiros**	**27.92**	**278**	P	**P**	**00 29 37.5**	**0.0**
PVAQ				IAmb	IAmb	00 29 51.6	
	comp=Z,13nm,1.2s						
KK31	**Karatay Array**	**32.15**	**69**	P	**P**	**00 30 14.8**	**-0.1**
KK31				IAmb	IAmb	00 30 17.3	
	comp=Z,5.5nm,1.4s						
KK31	**Karatay Array**	**32.15**	**69**	P	**P**	**00 30 14.8**	**-0.1**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KKAR	**Karatay Array**	**32.15**	**69**	P	**P**	**00 30 14.6**	**-0.3**
KKAR	**Karatay Array**	**32.15**	**69**	P	**P**	**00 30 14.6**	**-0.3**
BVAR	**Borovoye Array**	**32.16**	**50**	LR	LR	00 45 17.5	
	comp=Z,113nm,20.0s,baz=257,slow=40						
TORD	**Torodi Ar. Bea**	**34.64**	**229**	P	**P**	**00 30 37.6**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=37,slow=6.1,SNR=20						
	comp=Z,1.3nm,0.5s						
AAK	**Ala-Archa**	**35.11**	**69**	LR	LR	00 48 25.6	
	comp=Z,110nm,19.6s,baz=282,slow=42						
AAK	**Ala-Archa**	**35.11**	**69**	P	**P**	**00 30 41.6**	**+0.8**
AAK				IAmb	IAmb	00 31 18.4	
	comp=Z,2.9nm,0.9s						
AAK	**Ala-Archa**	**35.11**	**69***c*	*e*P	**P**	**00 30 42.6**	**+1.7**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FRU1	**Bishkek**	**35.18**	**68**	P	**P**	**00 30 42.0**	**+0.7**
FRU1	**Bishkek**	**35.18**	**68**	P	**P**	**00 30 42.0**	**+0.7**
FRU1				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BOOM	**Boomskoye usch**	**36.19**	**69**	P	**P**	**00 30 51.0**	**+0.9**
BOOM				IAmb	IAmb	00 30 53.5	
	comp=Z,5.7nm,0.9s						
BOOM	**Boomskoye usch**	**36.19**	**69**	P	**P**	**00 30 51.0**	**+0.9**
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	**Nilore**	**36.64**	**84**	P	**P**	**00 30 54.1**	**+0.2**
NIL				IAmb	IAmb	00 31 08.9	
	comp=Z,5.1nm,0.9s						
NIL	**Nilore**	**36.64**	**84**	P	**P**	**00 30 54.1**	**+0.2**
NIL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSH2	**Kashi**	**36.67**	**74**	P	**P**	**00 30 56.7**	**+2.4**
KSH2				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KURBB	**Kurchatov Arra**	**37.07**	**55**	P	**P**	**00 30 57.5**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=278,slow=9.0,SNR=13						
KURBB				LR	LR	00 48 35.6	
	comp=Z,132nm,18.2s,baz=176,slow=40						
	comp=Z,1.6nm,0.7s						
JMIC	**Jan Mayen**	**37.09**	**341**	LR	LR	00 47 51.3	
	comp=Z,91nm,18.5s,baz=72,slow=39						
KURK	**Kurchatov**	**37.12**	**55**	P	**P**	**00 30 57.4**	**-0.3**
KURK	**Kurchatov**	**37.12**	**55**	P	**P**	**00 30 57.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BORG	**Borgarnes**	**38.32**	**328**	LR	LR	00 49 33.0	
	comp=Z,160nm,19.4s,baz=154,slow=40						
WUS	**Wushi**	**38.86**	**70**	P	**P**	**00 31 12.8**	**+0.1**
MBAR	**Mbarara**	**39.50**	**176**	LR	LR	00 48 51.2	
	comp=Z,43nm,18.0s,baz=12,slow=38						
MK31	**Makanchi Array**	**39.91**	**61***c*	*e*P	**P**	**00 31 24.0**	**+2.7**
MKAR	**Makanchi Array**	**39.91**	**61**	P	**P**	**00 31 22.2**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=271,slow=8.4,SNR=16						
MKAR				LR	LR	00 49 57.7	
	comp=Z,132nm,19.4s,baz=268,slow=39						
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**39.91**	**61**		**P**	**00 31 21.9**	**+0.6**
MKAR	**Makanchi Array**	**39.91**	**61***c*	*e*P	**P**	**00 31 22.6**	**+1.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAA0	**Zalesovo Array**	**40.81**	**49**	P	**P**	**00 31 28.7**	**+0.1**
ZAA0				IAmb	IAmb	00 31 59.6	
	comp=Z,5.9nm,1.4s						
ZALV	**Zalesovo Beam**	**40.81**	**49**	P	**P**	**00 31 28.8**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=279,slow=9.9,SNR=8.3						
ZALV				LR	LR	00 50 39.6	
	comp=Z,54nm,19.0s,baz=274,slow=39						
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**40.81**	**49**	P	**P**	**00 31 28.6**	**0.0**
ZALV	**Zalesovo Beam**	**40.81**	**49**	*i* P	**P**	**00 31 29.2**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DGZ	**Jazzator, Alta**	**42.85**	**55**	*i* P	**P**	**00 31 45.8**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NRIK	**Noril'sk**	**43.48**	**26**	P	**P**	**00 31 51.3**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=228,slow=6.0,SNR=8.6						
	comp=Z,2.6nm,0.6s						
NRIK	**Noril'sk**	**43.48**	**26**	P	**P**	**00 31 50.9**	**+0.8**
NRIK				IAmb	IAmb	00 31 53.0	
	comp=Z,3.7nm,0.8s						
NRIK	**Noril'sk**	**43.48**	**26**	*i* P	**P**	**00 31 50.8**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DBIC	**Dimbokro**	**43.67**	**231**	P	**P**	**00 31 52.5**	**+0.2**
	comp=Z,4.7nm,1.1s,baz=75,slow=10,SNR=3.1						
DBIC				LR	LR	00 52 29.5	
	comp=Z,61nm,19.4s,baz=46,slow=39						
	comp=Z,4.7nm,1.1s						
DBIC	**Dimbokro**	**43.67**	**231**	P	**P**	**00 31 52.9**	**+0.6**
DBIC				IAmb	IAmb	00 31 55.7	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,11nm,1.2s						
DBIC	Dimbokro	43.67	231	P	P	00 31 52.9	+0.6
DBIC				pmax	pmax		
	comp=Z,11nm,1.2s						
GTA2	Gaotai	54.23	65	eP	P	00 33 14.3	+1.1
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	55.40	53	P	P	00 33 21.2	-0.4
	comp=Z,0.9nm,0.9s,baz=321,slow=12,SNR=5.6						
SONM				LR	LR	01 00 12.9	
	comp=Z,88nm,18.9s,baz=11,slow=39						
	comp=Z,0.9nm,0.9s						
ULN	Ulaanbaatar	55.80	53	iP	P	00 33 24.9	+0.4
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TIXI	Tiksi	56.80	22	ceP	P	00 33 33.1	+2.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
PALK	Pallekele	56.91	109	LR	LR	01 00 49.0	
	comp=Z,52nm,18.8s,baz=318,slow=39						
FRB	Frobisher Bay	58.50	329	LR	LR	01 00 35.4	
	comp=Z,65nm,18.6s,baz=9.0,slow=38						
YAK	Yakutsk	61.47	32	LR	LR	01 02 09.6	
	comp=Z,42nm,21.3s,baz=284,slow=37						
YAK	Yakutsk	61.47	32	iP	P	00 34 08.4	+4.9
SCHQ	Schefferville	61.70	319	P	P	00 34 04.0	-1.2
	comp=Z,3.5nm,0.9s,baz=99,slow=12,SNR=4.4						
SCHQ				LR	LR	00 59 57.0	
	comp=Z,26nm,18.7s,baz=38,slow=35						
	comp=Z,3.5nm,0.9s						
HHC	Hu-ho-hao-te	61.74	59	eP	P	00 34 07.4	+1.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LBTB	Lobatse	63.72	182	LR	LR	01 01 48.3	
	comp=Z,23nm,18.5s,baz=332,slow=36						
LBTB	Lobatse	63.72	182	P	P	00 34 20.2	+1.3
LBTB	Lobatse	63.72	182	P	P	00 34 20.3	+1.3
LBTB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CMAR	Chiang Mai Arr	64.06	87	LR	LR	01 07 17.8	
	comp=Z,36nm,20.2s,baz=185,slow=41						
A36M	Sachs Harbour	67.70	351	P	P	00 34 44.8	+0.8
SEY	Seymchan	69.18	24	ceP	P	00 34 56.3	+2.9
SEY				pmax	pmax		
	comp=Z,7.0nm,2.5s						
KLR	Kul'dur	69.45	43	LR	LR	01 08 50.9	
	comp=Z,18nm,18.1s,baz=320,slow=39						
E19K	Redstone River	73.79	2	P	P	00 35 22.0	+0.8
E19K				IAmb	IAmb	00 35 22.9	
	comp=Z,4.0nm,1.1s						
SADO	Sadowa	73.90	315	LR	LR	01 06 24.4	
	comp=Z,40nm,19.3s,baz=104,slow=34						
KSRS	Korea Array	74.25	55	P	P	00 35 22.1	-2.2
	comp=Z,1.0nm,0.8s,baz=308,slow=4.6,SNR=4.2						
KSRS				LR	LR	01 11 48.6	
	comp=Z,115nm,18.6s,baz=300,slow=39						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	74.45	343	ceP	P	00 35 30.2	+5.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
G21K	Allakaket	74.81	1	P	P	00 35 28.0	+0.8
G21K				IAmb	IAmb	00 35 53.5	
	comp=Z,6.6nm,1.4s						
ILAR	Eielson Array	76.48	358	P	P	00 35 35.5	-1.2
	comp=Z,0.3nm,0.7s,baz=337,slow=5.2,SNR=4.4						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	76.48	358	P	P	00 35 38.0	+1.3
ILAR	Eielson Array	76.48	358	P	P	00 35 38.1	+1.3
WRH	Wood River Hil	76.81	358	P	P	00 35 39.2	+0.6
ASAJ	Asahikawa	78.45	42	LR	LR	01 14 31.3	
	comp=Z,107nm,18.2s,baz=349,slow=39						
PETK	Petropavlovsk-	78.50	28	LR	LR	01 12 58.5	
	comp=Z,93nm,18.0s,baz=330,slow=38						
JNU	Nakatsue	78.82	56	LR	LR	01 15 34.8	
	comp=Z,48nm,19.9s,baz=338,slow=39						
JOW	Kunigami	81.03	63	LR	LR	01 16 41.7	
	comp=Z,37nm,18.1s,baz=146,slow=39						
MJAR	Matsushiro Arr	81.16	50	LR	LR	01 15 05.7	
	comp=Z,51nm,18.1s,baz=352,slow=38						
TKL	Tuckaleechee C	82.56	310	LR	LR	01 12 46.8	
	comp=Z,51nm,18.5s,baz=58,slow=36						
BDFB	Brasilia	89.15	249	LR	LR	01 16 29.3	
	comp=Z,65nm,19.3s,baz=41,slow=35						
ANMO	Albuquerque	95.16	324	LR	LR	01 22 33.7	
	comp=Z,49nm,18.0s,baz=54,slow=37						
NVL	N'lazarevskaya	110.07	186	iPKIKP	PKiKP	00 42 19.5	+1.8
NVL				e		00 42 52.8	
NVL				ePPP	PPP	00 45 11.8	
NVL				e		00 49 31.3	
NVL				eSS	SS	00 58 19.8	+2.9
NVL				eSSS	SSS	01 02 26.3	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,327nm,17.0s						

MEX 02 00:25:10.2±0.5, 19°.52N×102°.16W, h20km±8km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.13	141	eP	Pb	00 25 12.9	-2.6
URUA				eS	Sb	00 25 16.0	-3.3
INCO	Volcan de Coli	1.36	270	eP	Pn	00 25 31.9	-2.5
INCO				eS	Sn	00 25 48.8	-3.3
MNGA	Volcan de Coli	1.38	268	eP	Pn	00 25 31.9	-2.7
MNGA				eS	Sn	00 25 48.7	-3.6
SOMAC	Volcano de Col	1.39	270	eP	Pn	00 25 33.0	-1.7
SOMAC				eS	Sn	00 25 48.7	-4.0
CEGR	Campo Tres	1.61	266	eP	Pn	00 25 35.2	-2.4
CEGR				eS	Sn	00 25 55.1	-2.7
MMIG	Aquila	1.66	223	eP	Pn	00 25 34.7	-3.5
MMIG				eS	Sn	00 25 55.8	-3.2
CDAR	Ciudad de Arme	1.84	252	eP	Pn	00 25 38.5	-2.2
CDAR				eS	Sn	00 26 00.5	-2.9
ZIIG	Zihuatanejo	2.02	161	eP	Pn	00 25 41.1	-1.9
ZIIG				eS	Sn	00 26 04.8	-2.9
ARIG	Puente Sto Nin	2.12	125	eP	Pn	00 25 44.9	+0.4
ARIG				eS	Sb	00 26 13.3	-0.4
CJM	Chamela	2.72	270	eP	Pn	00 25 53.1	+0.3
CJM				eS	Sn	00 26 24.7	-0.4

*IDC **02** 00:25:35.6±1.6, 18°.96N×67°.61W, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=53.9km s-min=22.8km az=29.0*

*NEIC **02** 00:25:36.3±0.7, 18°.99N±0°.07×67°.59W±0°.06, h10km±2km, mb3.6/2, Error ellipse: s-maj=14.3km s-min=6.8km az=32.0*

ISC 02 00:25:38.8±0.8, 18°.9N±0°.1×67°.64W±0°.07, h27km, n25, σ0°.71/25, mb3.5/4, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.63	128	Pg	Pb	00 25 51.0	-0.3
AGPR	Aguadilla, PR	0.63	128	P	Pb	00 25 51.1	-0.2
PRSN	Puerto Rico Se	0.79	144	Pg	Pn	00 25 54.1	0.0
PRSN	Puerto Rico Se	0.79	144	P	Pn	00 25 53.8	-0.3
CRPR	Cabo Rojo, PR	0.98	149		Pn	00 25 57.2	+0.4
MLPR	Magueyes Islan	1.04	147		Pn	00 25 58.2	+0.5
UUPR	Utuado, UPR, P	1.05	124		Pn	00 25 57.4	-0.4
CELP	Cerrillos	1.27	127	Pn	Pn	00 26 01.3	+0.5
OBIP	Obispado Ponce	1.27	129	Pn	Pn	00 26 00.7	0.0
OBIP	Obispado Ponce	1.27	129	P	Pn	00 26 01.1	+0.3
ECPR	Experimental S	1.32	114	Pn	Pn	00 26 01.0	-0.5
SJG	San Juan	1.59	117	Pn	Pn	00 26 05.5	+0.2
	17nm,0.3s,baz=302,slow=10.0,SNR=20						
SJG	San Juan	1.59	117	Pn	Pn	00 26 05.2	0.0
SJG	San Juan	1.59	117	P	Pn	00 26 05.3	0.0
SJG	San Juan	1.59	117	P	Pn	00 26 05.3	0.0
DR12	Loma Pena Alta	1.65	268	Pn	Pn	00 26 06.2	+0.1
HUMP	Col San Antoni	1.84	112	P	Pn	00 26 08.0	-0.6
DSDZ	La Diserade, G	6.76	111	eP	Pn	00 27 17.1	+0.8
DSLB	Salisbury	6.84	119	eP	Pn	00 27 17.9	+0.3
BOAV	Boa Vista	17.78	156	Pn	Pn	00 29 43.4	-1.1
BOAV				IAmb	IAmb	00 29 44.2	
	comp=Z,2.8nm,1.0s						
WVT	Waverly	24.76	318	P	P	00 30 56.2	-2.0
WVT				IAmb	IAmb	00 31 00.1	
	comp=Z,2.5nm,1.0s						
TXAR	Lajitas Array	34.38	295	P	P	00 32 25.0	+1.0
	comp=Z,0.3nm,0.7s,baz=110,slow=6.8,SNR=3.6						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	54.23	335	P	P	00 35 01.6	-0.4
	comp=Z,0.3nm,0.7s,baz=110,slow=6.8,SNR=4.6						
	comp=Z,0.3nm,0.7s						
ESDC	Sonseca Array	58.10	55	P	P	00 35 31.4	+1.3
	comp=Z,0.6nm,0.9s,baz=270,slow=9.0,SNR=3.3						
	comp=Z,0.6nm,0.9s						
TORD	Torodi Ar. Bea	66.53	84	P	P	00 36 27.3	+0.4
	comp=Z,0.4nm,1.0s,baz=298,slow=3.1,SNR=1.3						
	comp=Z,0.4nm,1.0s						

*IDC **02** 00:25:40.7±0.6, 18°.77N×67°.66W, h0km, mb4.1/17, mbtmp4.1/18, ML2.9/1, MS3.6/2, Error ellipse: s-maj=17.4km s-min=12.6km az=42.0*

*PTWC **02** 00:25:41, 18°.70N×67°.40W, h20km, Ml4.4/16*

*NEIC **02** 00:25:43.5±1.5, 18°.87N±0°.06×67°.69W±0°.05, h10km±1km, mb4.5/48, ML4.4/43, Mwr4.1/38, ML4.1(RSPR), Error ellipse: s-maj=11.0km s-min=5.0km az=214.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.18; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$1.43; $M_{r\theta}$0.68; $M_{\theta\phi}$0.85; $M_{\phi r}$-0.39; Fault plane solution: $M_0$1.76000×10^{15} NP1: ϕ_s352.79000°, δ56.46000°, λ-133.42000°. NP2: ϕ_s232.51000°, δ52.74000°, λ-43.96000°. Principal axes: T 1.7897, Plg2.0000°, Azm112.0000°; N -0.0627, Plg35.0000°, Azm20.0000°; P -1.7271, Plg55.0000°, Azm205.0000°;*

*NEIC **02** 00:25:43.5, 18°.87N×67°.69W, h10km*

*SDD **02** 00:25:44.9±2.1, 18°.98N×67°.73W, h0km±13km, MD3.8, ML4.2, MW4.0, Presumed earthquake*

*OSPL **02** 00:25:44.0±1.4, 19°.13N×67°.49W, h4km±9km, ML4.6, Presumed earthquake*

*RSPR **02** 00:25:46.8, 18°.93N×67°.69W, h10km±31km*

*RSNC **02** 00:25:48.7±1.2, 19°N±6°×6°8W±°, h34km±14km, mB4.9, mb4.5, ML3.8, Mw(mB)4.1*

ISC 02 00:25:43.8±1.1, 18°.95N±0°.04×67°.72W±0°.02, h20km±6km, n191, σ1°.64/224, mb4.4/32, 18C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.75	130	Pg	Pb	00 25 57.0	-1.2
AGPR				Sg	Sb	00 26 06.9	-1.1
AGPR				IAML		00 26 08.2	
	21μm,0.6s						
AGPR				IAML		00 26 08.4	
	15μm,0.5s						
AGPR	Aguadilla, PR	0.75	130	⇓iP	Pb	00 25 57.4	-0.8
AGPR				IAML		00 26 08.1	
	comp=N,14μm,0.4s						
AGPR				iS	Sg	00 26 08.5	-0.1
AGPR	Aguadilla, PR	0.75	130	⇑eP	Pb	00 25 57.8	-0.5
AGPR				eS	Sb	00 26 07.8	-0.3
AGPR	Aguadilla, PR	0.75	130	iP	Pb	00 25 57.4	-0.8
AGPR				eS	Sb	00 26 07.3	-0.7
AGPR				IAML		00 26 12.7	
	comp=Z,5μm,0.2s						
PCDR	Punta Cana, DR	0.77	235	⇑iP	Pg	00 25 59.1	+0.1
PCDR				⇑iS	Sg	00 26 09.7	+0.6
PRSN	Puerto Rico Se	0.91	143		Pb	00 25 59.9	-1.0
PRSN				IAML		00 26 17.7	
	comp=Z,15μm,0.3s						
PRSN				IAML		00 26 19.4	
	comp=Z,19μm,0.3s						
PRSN	Puerto Rico Se	0.91	143		Sg	00 26 13.8	+0.1
PRSN	Puerto Rico Se	0.91	143	⇑iP	Pb	00 26 00.8	-0.1
PRSN				⇑iS	Sb	00 26 13.0	+0.3
PRSN				IAML		00 26 16.8	
	comp=N,11μm,0.2s						
PRSN	Puerto Rico Se	0.91	143	⇑eP	Pb	00 26 00.8	-0.1
PRSN				eS	Sg	00 26 13.8	+0.1
LSP	Las Mesas	0.98	142		Pb	00 26 01.7	-0.5
LSP	Las Mesas	0.98	142	⇑eP	Pb	00 26 01.7	-0.5
HIDR	Higuey Centro	1.01	249	⇑iP	Pb	00 26 02.6	-0.1
HIDR				iS	Sb	00 26 15.6	-0.1
HIDR				IAML		00 26 26.3	
	comp=N,5μm,0.2s						
HIDR	Higuey Centro	1.01	249	⇓eP	Pb	00 26 02.8	0.0
HIDR				eS	Sg	00 26 17.0	0.0
CRPR	Cabo Rojo, PR	1.10	148	Pg	Pn	00 26 03.0	-1.2
CRPR				IAML		00 26 21.9	
	comp=N,9μm,1.0s						
CRPR				IAML		00 26 22.0	
	comp=N,16μm,0.5s						
CRPR	Cabo Rojo, PR	1.10	148		Sg	00 26 19.6	-0.2
CRPR	Cabo Rojo, PR	1.10	148	iP	Pg	00 26 06.1	+0.8
CRPR				⇑iS	Sg	00 26 21.0	+1.2
CRPR				IAML		00 26 21.9	
	comp=N,13μm,0.6s						
CRPR	Cabo Rojo, PR	1.10	148	⇓iP	Pg	00 26 05.9	+0.7
CRPR				eS	Sg	00 26 19.6	-0.2
CRPR	Cabo Rojo, PR	1.10	148	iP	Pg	00 26 05.5	+0.3
CRPR				eS	Sg	00 26 20.9	+1.1
CRPR				IAML		00 26 21.9	
	comp=Z,12μm,0.5s						
MLPR	Magueyes Islan	1.17	147	Pg	Pn	00 26 04.3	-0.7
MLPR				IAML		00 26 23.3	
	comp=Z,10μm,0.8s						
MLPR				IAML		00 26 23.9	
	comp=Z,11μm,0.5s						
UUPR	Utuado, UPR, P	1.17	126		Pn	00 26 03.9	-1.3
UUPR				IAML		00 26 22.2	
	comp=Z,36μm,0.4s						
UUPR				IAML		00 26 25.3	
	comp=Z,51μm,0.4s						
EMPR	Esperanza - Ma	1.22	113		Pb	00 26 06.4	+0.2
EMPR					Sb	00 26 20.8	-0.8
EMPR	Esperanza - Ma	1.22	113	⇓eP	Pb	00 26 06.4	+0.2
EMPR				eS	Sb	00 26 20.8	-0.8
GBPR	Guanica, Bosqu	1.25	141		Pn	00 26 05.8	-0.5
GBPR					Sn	00 26 22.4	-0.1
GBPR	Guanica, Bosqu	1.25	141	⇑eP	Pn	00 26 05.8	-0.5
GBPR				eS	Sn	00 26 22.4	-0.1
MIDR	Miches	1.26	272	⇑iP	Pg	00 26 08.3	0.0
MIDR				⇑iS	Sn	00 26 22.6	-0.2
MIDR				IAML		00 26 28.6	
	comp=N,3μm,1.0s						
MIDR				IAML		00 26 28.6	
	comp=N,3μm,1.0s						
CELP	Cerrillos	1.39	129		Pn	00 26 07.5	-0.6
CELP				IAML		00 26 28.7	
	comp=N,3μm,0.7s						
CELP				IAML		00 26 32.1	
	comp=N,5μm,0.7s						
OBIP	Obispado Ponce	1.39	130		Pn	00 26 07.4	-0.7
OBIP				IAML		00 26 31.1	
	comp=N,2μm,0.6s						
OBIP	Obispado Ponce	1.39	130	⇓eP	Pn	00 26 07.4	-0.7
OBIP				eS	Sb	00 26 26.3	-0.2
OBIP	Obispado Ponce	1.39	130	iP	Pn	00 26 07.4	-0.7
OBIP				eS	Sn	00 26 24.9	-1.0
OBIP				IAML		00 26 29.5	
	comp=Z,13μm,0.2s						
ECPR	Experimental S	1.43	116		Pn	00 26 07.5	-1.2
ECPR				IAML		00 26 30.1	
	comp=Z,8μm,0.7s						
ECPR				IAML		00 26 31.4	
	comp=Z,6μm,0.2s						
ECPR	Experimental S	1.43	116	⇑eP	Pn	00 26 08.8	+0.1
ECPR				eS	Sn	00 26 23.5	-3.5
SMDR	Samana, DR	1.43	284		Pb	00 26 10.7	+0.8
SMDR					Sn	00 26 27.1	+0.2
SMDR	Samana, DR	1.43	284	iP	Pg	00 26 10.8	-0.7
SMDR				⇑iS	Sb	00 26 28.3	+0.6
SMDR				IAML		00 26 33.9	
	comp=N,4μm,0.8s						
SMDR	Samana, DR	1.43	284	⇓iP	Pb	00 26 10.7	+0.8
SMDR				eS	Sn	00 26 27.1	+0.2
HATOM	Hato Mayor del	1.58	264	⇑iP	Pb	00 26 11.9	-0.6
HATOM				⇑iS	Sb	00 26 33.0	+0.9
HATOM				IAML		00 26 37.0	
	comp=N,3μm,1.6s						
GCPR	Guaynabo City	1.68	112		Pn	00 26 11.8	-0.3
GCPR	Guaynabo City	1.68	112	⇓eP	Pn	00 26 12.2	+0.2
GCPR				eS	Sn	00 26 31.8	-1.2
SJG	San Juan	1.71	119	Pn	Pn	00 26 11.8	-0.7
	comp=N,88nm,0.3s,baz=293,slow=15,SNR=31						
SJG				Sn	Sn	00 26 30.8	-2.9
	comp=N,126nm,0.3s,baz=112,slow=23,SNR=14						
SJG	San Juan	1.71	119	Pn	Pn	00 26 12.3	-0.2
SJG				IAML		00 26 36.7	
	comp=N,4μm,0.5s						
SJG				IAML		00 26 37.4	
	comp=N,3μm,0.6s						
SJG	San Juan	1.71	119	S	Sn	00 26 32.5	-1.2
SJG	San Juan	1.71	119	⇑eP	Pn	00 26 13.1	+0.7
SJG				eS	Sn	00 26 32.4	-1.2
SJG	San Juan	1.71	119	iP	Pn	00 26 11.8	-0.7
SJG				eS	Sn	00 26 32.9	-0.8
SJG				IAML		00 26 40.4	
	comp=Z,21μm,0.3s						
PDPR	Patillas Dam,	1.86	120	Pn	Pn	00 26 14.5	-0.1
HUMP	Col San Antoni	1.94	114	Pn	Pn	00 26 16.9	+1.1
HUMP	Col San Antoni	1.94	114	⇑iP	Pb	00 26 17.2	-1.4
HUMP				eS	Sn	00 26 37.7	-1.9
SDD	Santo Domingo	2.14	257		Pn	00 26 19.5	+1.1
CUPR	Culebra, Puert	2.40	105		Pn	00 26 22.6	+0.6
SC01	Santiago de lo	2.88	280		Pn	00 26 30.7	+2.0
SC01	Santiago de lo	2.88	280	P	Pn	00 26 30.4	+1.7
SDDR	Presa de Saban	3.38	271		Pn	00 26 37.6	+2.1
SDDR	Presa de Saban	3.38	271	P	Pn	00 26 36.0	+0.4
SDDR	Presa de Saban	3.38	271	eP	Pn	00 26 38.2	+2.6
SDDR				eS	Sb	00 27 26.5	+2.6
SDDR				IAML		00 27 32.7	
	comp=Z,654nm,0.5s						
SDDR				IAML		00 27 34.9	
	comp=Z,1μm,0.4s						
SDDR	Presa de Saban	3.38	271	P	Pn	00 26 36.9	+1.3
SDDR				S	Sb	00 27 21.9	-2.0
SDDR	Presa de Saban	3.38	271	⇓eP	Pn	00 26 38.4	+2.8
PODR	Polo	3.47	258	P	Pn	00 26 38.7	+1.7
GRTK	Grand Turk	4.10	309	eP	Pn	00 26 40.4	-5.0
GRTK				eS	Sn	00 27 28.8	-4.0
GRTK				IAML		00 27 36.0	
	comp=Z,233nm,0.2s						
GRTK				IAML		00 27 37.2	
	comp=Z,205nm,0.2s						
GRTK	Grand Turk	4.10	309	P	Pn	00 26 41.6	-3.8
SABA	Saba	4.45	107		Pn	00 26 49.7	-0.6
SABA				IAML		00 28 15.2	
	comp=N,357nm,0.9s						
SMRT	St. Maarten	4.50	101		Pn	00 26 50.4	-0.5
SMRT				IAML		00 27 50.3	
	comp=E,392nm,0.4s						
SMRT				IAML		00 27 53.9	
	comp=N,355nm,0.7s						
SMRT	St. Maarten	4.50	101	⇑eP	Pn	00 26 52.3	+1.4
ANWB	Willy Bob	5.78	102	P	Pn	00 27 10.3	+1.8
	comp=N,142nm,0.8s						
ANWB	Willy Bob	5.78	102	eP	Pn	00 27 06.5	-2.0
MASC	Masc	6.26	282	P	Pn	00 27 19.4	+4.2
MASC	Masc	6.26	282	eP	Pn	00 27 10.0	-5.1
MASC				eS	Sn	00 28 19.9	-6.3
MASC				IAML		00 28 27.7	
	comp=E,11nm,0.2s						
MASC				IAML		00 28 28.4	
	comp=N,17nm,0.2s						
DHSZ	Broadband at M	6.27	114	eP	Pn	00 27 11.9	-3.4
GDHS	Morne Mazeau,	6.27	114	Pn	Pn	00 27 13.3	-2.1
ATGZ	Broadband at L	6.38	115	eP	Pn	00 27 16.2	-0.6
ABD	La Joyeuse, An	6.43	112	Pn	Pn	00 27 17.0	-0.5
MMLZ	Guadeloupe Bro	6.45	116	eP	Pn	00 27 18.4	+0.6
CBE	Ff, Capester	6.50	115	Pn	Pn	00 27 18.8	+0.4
QMBU	Quimbuelo	6.80	282	eP	Pn	00 27 18.0	-4.6
QMBU				eS	Sn	00 28 32.8	-6.8
QMBU				IAML		00 28 41.0	
	comp=N,49nm,0.3s						
QMBU				IAML		00 28 43.0	
	comp=E,59nm,0.3s						
MAGL	Barre de l'ile	6.83	115	Pn	Pn	00 27 22.8	-0.2
MOAC	Moa	7.03	285	eP	Pn	00 27 21.8	-3.9
MOAC				eS	Sn	00 28 40.0	-5.1
GTBY	Guantanamo Bay	7.04	279	eP	Pn	00 27 24.2	-1.7
GTBY				eS	Sn	00 28 43.9	-1.6
GTBY				IAML		00 28 53.5	
	comp=E,22nm,0.4s						
GTBY				IAML		00 28 54.5	
	comp=E,16nm,0.5s						
GTBY	Guantanamo Bay	7.04	279	P	Pn	00 27 31.9	+6.0
	comp=E,31nm,0.8s						
RCC	Rio Carpintero	7.60	279	eP	Pn	00 27 31.4	-2.1
RCC				eS	Sn	00 28 56.2	-3.0
RCC				IAML		00 29 00.9	
	comp=N,6.5nm,0.2s						
RCC				IAML		00 29 01.7	
	comp=E,11nm,0.2s						
BIM	Bigot	7.74	124	Pn	Pn	00 27 35.5	-0.1
BIM	Bigot	7.74	124	eP	Pn	00 27 36.3	+0.8
HLGC	Holguin	8.08	285	eP	Pn	00 27 38.9	-1.3
HLGC				eS	Sn	00 29 07.7	-3.3
HLGC				IAML		00 29 13.6	
	comp=E,8.6nm,0.2s						
HLGC				IAML		00 29 16.1	
	comp=N,25nm,0.3s						
SLBI	Saint Lucia, B	8.11	126	eP	Pn	00 27 42.2	+1.6
URIC	Uribia, Colomb	8.30	210	P	Pn	00 27 44.6	+1.4
	comp=N,29nm,1.3s						
URIC				S	Sn	00 29 04.1	-12
	comp=N,29nm,1.3s						
SVB	Belmont	8.39	131	eP	Pn	00 27 43.4	-1.0
CCCC	Cccc	9.71	285	eP	Pn	00 27 51.9	-11
CCCC				eS	Sn	00 29 31.0	-20
CCCC				IAML		00 29 41.7	
	comp=E,4.8nm,0.4s						
CCCC				IAML		00 29 41.7	
	comp=N,18nm,0.6s						
SDV	Santo Domingo	10.40	196	Pn	Pn	00 28 09.9	-2.3
	comp=N,1.1nm,0.3s,baz=42,slow=7.6,SNR=7.9						
SDV				Sn	Sn	00 30 04.7	-3.6
	comp=N,1.3nm,0.3s,baz=284,slow=17,SNR=1.8						
	comp=N,4.3nm,0.6s						
SDV	Santo Domingo	10.40	196		Pn	00 28 10.9	-1.2
SDV	Santo Domingo	10.40	196	eP	Pn	00 28 10.3	-1.9
SDV	Santo Domingo	10.40	196	P	Pn	00 28 14.0	+1.9
	comp=N,26nm,0.8s						
SJCC	San Jacinto, C	11.54	220	P	Pn	00 28 26.0	-1.7
OCAC	Ocana	11.96	208	P	Pn	00 28 38.8	+5.3
	comp=N,25nm,0.6s						
PAMC	Pamplona, Colo	12.52	203	P	Pn	00 28 42.4	+1.0
	comp=N,233nmcomp=N,17nm,0.6s						
BARC	Barichara	13.39	204	P	Pn	00 28 56.6	+3.5
	comp=N,15nm,1.1s						
UREC	San Jos de Ur	13.48	215	P	Pn	00 28 56.3	+2.2
PTBC	PUERTO BERRIO,	13.97	209	P	P	00 29 06.2	-2.6
	comp=N,18nm,0.8s						
RUSC	La Rusia	13.99	203	P	Pn	00 29 02.9	+1.3
	comp=N,26nm,0.8s						
SPBC	San Pablo de B	14.60	206	P	Pn	00 29 11.1	+1.6
	comp=N,15nm,0.7s						
HELC	Santa Helena	14.79	212	P	Pn	00 29 14.4	+2.0
	comp=N,14nm,0.8s						
NORC	Norcasia	15.02	209	P	P	00 29 20.0	-0.5
	comp=N,8.2nm,0.7s						
CBOC	Ciudad Bolivar	15.32	213	P	P	00 29 21.8	-2.1
	comp=N,13nm,0.7s						
CHIC	Chingaza	15.40	203	P	P	00 29 23.3	-1.7
	comp=N,13nm,1.0s						
ROSC	El Rosal	15.44	206	Pn	P	00 29 23.9	-1.6
	comp=N,2.9nm,0.3s,baz=58,slow=20,SNR=4.1						
ROSC	El Rosal	15.44	206		Pn	00 29 21.6	+0.7
ROSC				IAmb	IAmb	00 29 34.8	
	comp=Z,20nm,0.8s						
ORTC	Ortega, Tolima	16.66	207	P	P	00 29 39.7	+1.0
	comp=Z,23nm,1.5s						
PRAC	Prado	16.69	206	P	P	00 29 39.1	+0.1
	comp=Z,13nm,1.5s						
URMC	La Uribe, Meta	16.91	203	P	Pn	00 29 39.0	-0.6
656A	Willston	17.02	310	Pn	P	00 29 41.9	-0.7
YOTC	Yotoco, Valle	17.10	211	P	P	00 29 43.8	+0.2
	comp=Z,14nm,0.9s						
BOAV	Boa Vista	17.90	156		Pn	00 29 51.7	-0.1
BOAV				IAmb	IAmb	00 30 03.0	
	comp=Z,22nm,1.3s						
BOAV	Boa Vista	17.90	156	eP	Pn	00 29 49.7	-2.1
JAMC	Jamundi, Valle	17.93	210	P	P	00 29 56.0	+3.1
	comp=Z,8.2nm,1.5s						
V61A	Roper	18.51	337	P	Pn	00 30 00.4	+1.2
V61A				IAmb	IAmb	00 30 15.2	
	comp=Z,36nm,0.6s						
POPC	Popayan, Colom	18.52	209	P	Pn	00 30 00.5	+0.9
	comp=Z,7.8nm,0.8s						
JTS	Las Juntas de	18.75	245	P	Pn	00 30 03.9	+1.6
	comp=Z,12nm,0.9s,baz=270,slow=20,SNR=2.2						
JTS	Las Juntas de	18.75	245	P	P	00 30 00.3	-1.5
JTS				IAmb	IAmb	00 30 09.3	
	comp=Z,23nm,1.1s						
FLOC	Florencia	18.93	205	P	Pn	00 30 06.1	+1.6
W57A	Gilead	19.46	328	P	Pn	00 30 11.1	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
W57A				IAmb	IAmb	00 30 18.9	
	comp=Z,28nm,1.4s						
V58A	Windy Hill, Pi	19.57	331	P	Pn	00 30 12.2	+0.3
V58A				IAmb	IAmb	00 30 20.6	
	comp=Z,9.8nm,0.6s						
T59A	Double "B" Far	19.92	336	P	Pn	00 30 17.0	+0.9
KMSC	Kings Mountain	20.14	326	P	Pn	00 30 19.3	+0.6
V55A	Taylorsville	20.63	327	P	Pn	00 30 24.1	-0.3
V55A				IAmb	IAmb	00 30 35.5	
	comp=Z,19nm,1.1s						
250A	Grady	21.14	311	P	P	00 30 29.6	+1.9
250A				IAmb	IAmb	00 30 33.9	
	comp=Z,46nm,1.2s						
V53A	Saluda	21.34	324	P	P	00 30 30.0	+0.2
OTAV	Otavalo	21.37	211	P	P	00 30 30.1	-0.7
OTAV				IAmb	IAmb	00 30 40.0	
	comp=Z,38nm,1.1s						
OTAV	Otavalo	21.37	211	eP	P	00 30 30.7	-0.1
TKL	Tuckaleechee C	21.87	323	P	P	00 30 38.3	+2.8
	comp=Z,6.3nm,1.0s,baz=161,slow=12,SNR=4.3						
TKL				S	S	00 34 31.7	-4.6
	comp=Z,9.9nm,0.9s,baz=185,slow=22,SNR=5.7						
	comp=Z,6.3nm,1.0s						
TKL	Tuckaleechee C	21.87	323	P	P	00 30 37.6	+2.2
TKL				IAmb	IAmb	00 30 40.8	
	comp=Z,14nm,1.1s						
CPCT	Cooper Cave	22.16	321		P	00 30 40.2	+1.6
CPCT				IAmb	IAmb	00 30 45.2	
	comp=Z,24nm,1.4s						
Y49A	Blount Mountai	22.32	315	P	P	00 30 41.1	+0.7
Y49A				IAmb	IAmb	00 30 44.9	
	comp=Z,22nm,1.1s						
TZTN	Tazewell	22.38	325	P	P	00 30 42.3	+1.4
TZTN				IAmb	IAmb	00 30 45.7	
	comp=Z,39nm,1.4s						
W50A	Signal Mountai	22.47	320	P	P	00 30 43.2	+1.3
WVT	Waverly	24.63	318		P	00 31 04.2	+1.1
WVT				IAmb	IAmb	00 31 05.0	
	comp=Z,7.3nm,0.8s						
SIUC	Southern Illin	26.49	319	P	P	00 31 21.4	+1.5
P43A	Skaggs, Pawnee	27.91	322	P	P	00 31 34.1	+1.5
MGMO	Mountain Grove	28.12	315	P	P	00 31 35.5	+0.9
MGMO				IAmb	IAmb	00 31 36.9	
	comp=Z,6.9nm,0.8s						
JFWS	Jewell Farm	30.54	326		P	00 31 56.7	+0.7
WMOK	Wichita Mounta	31.70	306	P	P	00 32 07.1	+0.7
WMOK				IAmb	IAmb	00 32 08.7	
	comp=Z,4.3nm,0.8s						
CLDB	Colider	31.88	157	eP	P	00 32 06.2	-1.9
PDRB	Porto dos Gac	32.24	160	eP	P	00 32 10.4	-0.8
VILB	Vilhena	32.56	166	eP	P	00 32 13.8	-0.2
SMTB	Santa Maria do	34.03	143	eP	P	00 32 28.5	+1.7
TXAR	Lajitas Array	34.27	294	P	P	00 32 30.7	+1.7
	comp=Z,1.1nm,0.8s,baz=108,slow=8.3,SNR=9.7						
TXAR				PcP	PcP	00 35 06.3	+1.0
	comp=Z,1.2nm,0.9s,baz=126,slow=5.4,SNR=7.6						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	34.27	294	P	P	00 32 30.1	+1.1
TX31	Lajitas Ar. Si	34.27	294		P	00 32 30.2	+1.3
TX31				IAmb	IAmb	00 32 56.6	
	comp=Z,8.4nm,1.5s						
ECSD	EROS Data Cent	34.61	322		P	00 32 32.5	+0.9
ECSD				IAmb	IAmb	00 32 33.6	
	comp=Z,8.1nm,0.9s						
NBPS	Pedro II - PI	34.75	129	eP	P	00 32 33.5	+0.3
LPAZ	La Paz	35.02	181	P	P	00 32 33.5	-2.5
	comp=Z,1.2nm,0.9s,baz=20,slow=6.2,SNR=2.8						
	comp=Z,1.2nm,0.9s						
LPAZ	La Paz	35.02	181	P	P	00 32 33.8	-2.2
PTLB	Pontes e Lacer	35.21	166	P	P	00 32 34.9	-2.1
PTLB	Pontes e Lacer	35.21	166	eP	P	00 32 35.4	-1.6
SCHQ	Schefferville	35.82	1	P	P	00 32 42.5	+0.6
	comp=Z,4.9nm,0.8s,baz=181,slow=7.7,SNR=8.7						
	comp=Z,4.9nm,0.8s						
SALV	Santo Antonio	36.60	160	eP	P	00 32 48.4	-0.5
PB16	IPOC Station P	37.10	183	P	P	00 32 50.8	-3.0
PB16				IAmb	IAmb	00 33 10.7	
	comp=Z,9.3nm,1.3s						
ARAG	Araguaiana, MT	37.83	155	eP	P	00 32 57.9	-1.5
SDCO	Great Sand Dun	37.84	308		P	00 33 00.3	+0.6
GO01	Chusmiza	38.41	182	P	P	00 33 02.2	-2.5
GO01				IAmb	IAmb	00 33 07.3	
	comp=Z,5.5nm,0.8s						
ULM	Lac du Bonnet	38.45	331	P	P	00 33 04.8	+0.6
	comp=Z,2.1nm,0.6s,baz=139,slow=7.7,SNR=4.3						
	comp=Z,2.1nm,0.6s						
HMBC	Humberstone	39.05	183	P	P	00 33 07.6	-2.1
HMBC				IAmb	IAmb	00 33 09.9	
	comp=Z,7.5nm,0.7s						
PB07	IPOC Station P	40.48	183	P	P	00 33 19.2	-2.4
PB07				IAmb	IAmb	00 33 19.9	
	comp=Z,13nm,1.0s						
PDAR	Pinedale Array	42.47	313	P	P	00 33 39.2	+1.3
	comp=Z,0.3nm,0.6s,baz=91,slow=4.0,SNR=3.1						
PDAR				PcP	PcP	00 35 31.3	+0.6
	comp=Z,0.6nm,0.7s,baz=98,slow=2.4,SNR=4.2						
	comp=Z,0.3nm,0.6s						
AMBA	Amambai (Brazi	43.44	163	eP	P	00 33 43.2	-2.4
FCC	Fort Churchill	44.16	341	P	P	00 33 51.4	+0.5
IRM	Iron Mountain	44.65	300		P	00 33 56.5	+1.1
IRM				IAmb	IAmb	00 33 59.3	
	comp=Z,6.8nm,0.9s						
CPUP	Villa Florida	46.13	167	P	P	00 34 04.5	-2.4
	comp=Z,1.9nm,0.7s,baz=349,slow=12,SNR=6.2						
	comp=Z,1.9nm,0.7s						
NVAR	Mina Array Bea	47.80	305	P	P	00 34 21.9	+1.5
	comp=Z,2.0nm,0.9s,baz=107,slow=7.0,SNR=8.2						
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	47.80	305	P	P	00 34 21.0	+0.7
SFJD	Kangerlussuaq	49.28	9	LR	LR	00 56 19.3	
	comp=Z,63nm,18.1s,baz=106,slow=37						
YKA	Yellowknife Ar	54.11	335	P	P	00 35 07.7	+0.5
	comp=Z,2.4nm,0.8s,baz=113,slow=6.4,SNR=29						
	comp=Z,2.4nm,0.8s						
MD01	Midelt array s	57.55	63	P	P	00 35 33.0	+0.5
ESDC	Sonseca Array	58.11	55	P	P	00 35 37.6	+1.4
	comp=Z,2.5nm,0.8s,baz=273,slow=7.4,SNR=15						
	comp=Z,2.5nm,0.8s						
ESDC	Sonseca Array	58.11	55	P	P	00 35 36.8	+0.6
EKA	Eskdalemuir Ar	60.18	36	P	P	00 35 49.8	-0.4
	comp=Z,2.0nm,0.8s,baz=304,slow=5.9,SNR=4.9						
	comp=Z,2.0nm,0.8s						
DBIC	Dimbokro	62.22	92	P	P	00 36 04.2	-0.4
	comp=Z,2.6nm,0.7s,baz=302,slow=5.1,SNR=4.8						
	comp=Z,2.6nm,0.7s						
DBIC	Dimbokro	62.22	92	P	P	00 36 04.8	+0.1
A36M	Sachs Harbour	62.30	343	P	P	00 36 04.9	+0.7
INK	Inuvik	63.65	338		P	00 36 13.8	+0.6
L27K	Beaver Creek,	66.08	331	P	P	00 36 30.3	+1.0
L27K				IAmb	IAmb	00 36 31.7	
	comp=Z,5.7nm,1.1s						
TORD	Torodi Ar. Bea	66.60	84	P	P	00 36 33.0	-0.3
	comp=Z,0.7nm,0.6s,baz=261,slow=7.8,SNR=5.2						
	comp=Z,0.7nm,0.6s						
SCRK	Sand Creek	67.12	332		P	00 36 37.2	+1.2
BMAR	Burnt Mountain	67.61	336	P	P	00 36 39.6	+0.6
PRP	Porcupine Dome	67.87	334		P	00 36 41.8	+1.0
TAM	Tamanrasset	67.90	72	P	P	00 36 43.0	+1.3
NOA	NORSAR Array B	68.26	31	P	P	00 36 44.5	+1.3
	comp=Z,1.7nm,0.8s,baz=271,slow=6.5,SNR=4.7						
	comp=Z,1.7nm,0.8s						
FUORN	Ofenpass-Fuorn	68.30	47	P	P	00 36 44.9	+1.0
ILAR	Eielson Array	68.42	333	P	P	00 36 44.6	+0.6
	comp=Z,2.7nm,0.9s,baz=106,slow=4.7,SNR=20						
ILAR				LR	LR	01 06 34.0	
	comp=Z,45nm,20.6s,baz=355,slow=36						
	comp=Z,2.7nm,0.9s						
ILAR	Eielson Array	68.42	333	P	P	00 36 44.3	+0.3
H24K	Noodor Dome	68.85	334		P	00 36 47.6	+0.8
MODS	Modra-Piesok	72.80	44	eP	P	00 37 12.3	+1.2
ARCES	ARCESS Array B	73.53	21	P	P	00 37 16.2	+1.2
	comp=Z,7.5nm,0.8s,baz=290,slow=3.5,SNR=5.1						
	comp=Z,7.5nm,0.8s						
ARCES	ARCESS Array B	73.53	21	P	P	00 37 15.8	+0.8
ARCES				IAmb	IAmb	00 37 23.6	
	comp=Z,11nm,1.2s						
FINES	FINESS Array B	75.34	30	P	P	00 37 26.4	+0.8
	comp=Z,2.3nm,0.7s,baz=297,slow=8.4,SNR=4.5						
	comp=Z,2.3nm,0.7s						
BURAR	Bucovina Array	78.17	44	P	P	00 37 43.1	+1.1
STKA	Stephens Creek	150.67	238	PKPbc	PKPbc	00 45 35.0	-0.1
	comp=Z,5.9nm,1.1s,baz=63,slow=2.3,SNR=4.5						

*HEL **02** 00:33:51.5±0.5, 67°84N×20°23E, h0km, ML1.7, Suspected explosion*

UPP 02 00:33:50.7±0.0, 67°84N×20°21E, h0km, ML2.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	24	P	Pg	00 33 53.3	+0.2
	baz=224						
KUA				S	Sg	00 33 54.9	+0.4
RATU	Laukkuluspa	0.23	265	P	Pg	00 33 55.4	+0.2
KOVU	Salmi	0.38	358	P	Pg	00 33 58.0	0.0
KOVU				S	Sg	00 34 03.2	+0.3
NIKU	Nikkaluokta	0.44	274	P	Pg	00 33 59.2	0.0
NIKU				S	Sg	00 34 05.3	+0.4
LANU	Lannavaara	0.71	72	P	Pg	00 34 04.1	-0.1
LANU				S	Sg	00 34 13.7	+0.4
LANU	Lannavaara	0.71	72	PG	Pg	00 34 04.2	0.0
LANU				SG	Sg	00 34 11.6	-1.7
DUNU	Dundret	0.74	169	P	Pg	00 34 04.5	-0.3
MASU	Masugnsbyn	0.79	119	P	Pg	00 34 05.5	-0.3
SALU	Saltoluokta	0.80	235	P	Pg	00 34 05.8	-0.2
KIF	Kilpisjarvi	1.19	10	PG	Pg	00 34 13.6	+0.2
KIF				smax	smax	00 34 28.8	
	comp=Z,12nm,0.2s						
KIF				SN	Sn	00 34 32.1	+0.8
PAJU	Pajala	1.39	125	P	Pg	00 34 16.2	-1.1
HEF	Hetta	1.41	65	PG	Pn	00 34 16.8	-0.9
HEF				smax	smax	00 34 34.0	
	comp=Z,5.1nm,0.2s						
HEF				SN	Sn	00 34 38.8	+1.9
ERTU	Ertsjaerv	1.51	148	P	Pn	00 34 18.5	-0.5
ERTU	Ertsjaerv	1.51	148	PN	Pn	00 34 18.5	-0.4
ERTU				SN	Sn	00 34 40.3	+1.0
KLF	Kolari	1.57	111	PG	Pn	00 34 19.7	-0.1
KLF				smax	smax	00 34 38.2	
	comp=Z,4.0nm,0.2s						
KLF				SN	Sg	00 34 44.1	+3.1
KTK1	Kautokeino	1.62	42	PG	Pn	00 34 20.7	+0.2
KTK1				SN	Sg	00 34 45.2	+2.4
HARU	Harads	1.71	169	P	Pn	00 34 22.3	+0.6
TOF	Tornio	2.40	136	smax	smax	00 35 02.2	
	comp=Z,3.0nm,0.2s						
TOF				SG	Sb	00 35 05.4	+0.6
ARA0	ARCESS Array S	2.58	46	PG	Pb	00 34 38.8	+1.1
ARA0				SG	Sb	00 35 11.3	+1.4
RNF	Rovaniemi	2.58	116	PG	Pg	00 34 38.9	-1.2
RNF				SG	Sb	00 35 10.5	+0.6
RAJF	Raja-Jooseppi	3.10	74	PG	Pb	00 34 46.5	0.0
RAJF				SG	Sg	00 35 27.6	-2.5
KEV	Kevo	3.13	49	PG	Pb	00 34 48.4	+1.3
KEV				SB	Sb	00 35 23.4	-2.3
RANF	Ranua	3.18	122	SG	Sg	00 35 31.1	-1.5
VRF	Varrio	3.57	87	SG	Sb	00 35 41.1	+2.6

*ISK **02** 00:34:06.5, 39°00N×27°85E, h7km, ML3.5/24*
*AFAD **02** 00:34:06.8, 39°01N×27°86E, h7km±2km, ML3.1*
*THE **02** 00:34:08.2, 39°N±4°×2°8E±°, h4km±16km, M2.9/10, MLh2.9/10*

ISC 02 00:34:07.0±0.9, 39°00N±0°02×27°86E±0°02, h11km±7km, n59, σ0s38/82, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.13	195	P	Pg	00 34 10.2	+0.2
AKS	Akhisar	0.13	196	Pg	Pg	00 34 09.6	-0.5
AKS				Sg	Sg	00 34 12.1	-0.2
GORD	Gordes-Manisa	0.27	111	Pg	Pg	00 34 12.5	+0.1
SOMA	Soma-Manisa	0.29	301	Pg	Pg	00 34 12.8	-0.1
SOMA				Sg	Sg	00 34 17.3	+0.4
GOMA	Golmarmara-Man	0.30	171	Pg	Pg	00 34 13.0	0.0
GOMA				Sg	Sg	00 34 17.8	+0.8
KTTT	Salihli	0.36	150	P	Pg	00 34 14.2	0.0
KTTT				S	Sg	00 34 18.8	-0.2
STEP	BALIKESIR_Sava	0.39	344	P	Pg	00 34 14.8	+0.1
CAMT	Merkez	0.50	239	P	Pg	00 34 16.9	+0.3
CAMT				S	Sb	00 34 24.9	0.0
CAMT				IAML		00 34 26.0	
	comp=E,2μm,0.4s						
ZEDA	zmir-Bergama	0.61	267	P	Pb	00 34 19.5	-0.2
ZEDA				S	Sg	00 34 27.2	+0.4
ZEDA				IAML		00 34 28.0	
	comp=N,969nm,0.3s						
BALB	Balikesir	0.64	2	Pg	Pg	00 34 19.4	+0.1
BALB				Sg	Sb	00 34 29.1	+0.1
DEMI	Demirci	0.67	86	P	Pg	00 34 20.0	+0.1
DEMI				S	Sg	00 34 28.0	-0.8
DEMI				IAML		00 34 29.0	
	comp=N,2μm,0.1s						
DEMI				IAML		00 34 29.0	
	comp=E,1μm,0.2s						
IZMD	zmir-Dikili-	0.72	269	P	Pb	00 34 21.2	-0.5
IZMD				P	Pg	00 34 21.6	+0.6
IZMD				S	Sg	00 34 30.8	+0.3
IZMD				S	Sb	00 34 31.1	-0.6
IZMD				IAML		00 34 32.0	
	comp=N,410nm,0.5s						
IZMD				IAML		00 34 32.0	
	comp=N,417nm,0.6s						
BKES	Balkesir-Mer	0.73	4	P	Pg	00 34 20.9	-0.2
DKL	Dikili	0.74	276	Pg	Pg	00 34 21.3	-0.1
ODEM	Odemis-Izmir	0.75	167	Pg	Pg	00 34 21.4	0.0
MANT	Manisa	0.75	133	P	Pg	00 34 21.3	-0.2
MANT				S	Sg	00 34 30.7	-0.6
MANT				IAML		00 34 32.0	
	comp=N,398nm,0.4s						
BALY	Balya	0.76	346	P	Pg	00 34 21.7	+0.1
BALY				IAML		00 34 32.0	
	comp=E,1μm,0.4s						
BALY				S	Sb	00 34 32.2	-0.5
BALY				IAML		00 34 33.0	
	comp=N,788nm,0.3s						
DURS	Dursunbey	0.77	39	P	Pg	00 34 21.5	-0.3
BUHA	Balikesir, Bur	0.78	310	P	Pg	00 34 22.0	-0.1
BUHA				S	Sb	00 34 32.7	-0.6
KULA	Kula-Manisa	0.80	128	Pg	Pg	00 34 22.1	-0.2
DST	Dursunbey	0.84	44	Pg	Pg	00 34 23.3	+0.1
DUVT	Torbali	0.84	202	P	Pg	00 34 23.2	0.0
BAGT	Foa	0.86	246	P	Pb	00 34 23.6	-0.2
BAGT				S	Sb	00 34 35.6	+0.2
BAGT				IAML		00 34 36.0	
	comp=E,1μm,0.4s						
YAYO	Edremit-Balk	0.86	315	Pg	Pg	00 34 23.4	-0.2
IZMR	zmir-demi	0.87	175	P	Pg	00 34 23.8	+0.1
IZMR				P	Pb	00 34 24.1	+0.1
BLKS	Balkesir-Sus	0.87	6	P	Pg	00 34 23.2	-0.7
SIMA	Simav-Kutahya	0.88	84	Pg	Pg	00 34 24.0	+0.1
SMAA	Simav-Kutahya	0.88	83	Pg	Pg	00 34 24.1	+0.2
BLCB	Balcova	0.89	226	Pg	Pg	00 34 23.7	-0.4
BLCB	Balcova	0.89	226	P	Pg	00 34 23.9	-0.2
BLCB				S	Sb	00 34 36.6	+0.3
KIRA	zmir-Kiraz	0.91	152	P	Pg	00 34 24.3	-0.3
FOCM	Foa	0.93	252	Pg	Pg	00 34 24.4	-0.4
USAK	Uak-Merkez	0.95	107	P	Pg	00 34 24.6	-0.6
AYVA	Ayvalik	0.96	289	P	Pb	00 34 25.6	+0.1
SUSR	Susurluk-Balik	0.97	10	Pg	Pg	00 34 25.3	-0.4
CMHT	Manyas	1.01	5	P	Pg	00 34 25.8	-0.6
YENI	Yenice-Canakka	1.05	333	Pg	Pg	00 34 26.7	-0.4
GONE	Gonen-Balikesi	1.05	353	Pg	Pg	00 34 26.9	-0.3
AYDB	Zeytinkoy-Aydi	1.06	179	Pg	Pg	00 34 26.8	-0.5
SHAP	Saphane-Kutahy	1.06	89	Pg	Pb	00 34 27.6	+0.2
NAZL	Nazilli-Aydin	1.09	162	Pn	Pg	00 34 27.8	-0.2
KRBN	Karaburun	1.10	249	Pn	Pg	00 34 27.8	-0.3
URLA	Izmir	1.18	237	Pn	Pg	00 34 29.0	-0.6
CANM	Can-anakkale	1.18	329	Pn	Pb	00 34 29.6	+0.2
GMLD	Gumuldur	1.18	219	Pn	Pb	00 34 29.6	+0.2
GEDZ	Gediz	1.21	88	Pn	Pb	00 34 30.3	+0.4
PRK	Paraskevi	1.26	282	P	Pn	00 34 30.4	-0.1
PRK				S	Sb	00 34 47.0	+0.1
GCAM	G?zelcaml?	1.39	201	Pn	Pb	00 34 32.9	-0.1
EZN	Ezine	1.44	305	P	Pn	00 34 33.0	0.0
EZN				S	Sg	00 34 52.8	-0.6
SMG	Samos	1.52	212	P	Pb	00 34 34.9	-0.3
SMG				S	Sg	00 34 56.4	+0.5
CHOS	Chios island	1.54	247	P	Pn	00 34 34.2	-0.2
CHOS				S	Sg	00 34 56.5	0.0
SIGR	SIGRI	1.57	278	P	Pb	00 34 36.0	-0.1
SIGR				S	Sn	00 34 55.2	0.0
GADA	Gvkgeada	1.92	309	P	Pn	00 34 39.7	+0.1
GADA				S	Sn	00 35 04.0	+0.2
ENEZ	Enez	2.17	323	P	Pn	00 34 43.7	+0.6
LIA	Limnos Island	2.25	294	P	Pn	00 34 44.3	+0.1
SMTH	Samothraki Isl	2.32	310	P	Pn	00 34 45.1	0.0
ALN	Alexandroupoli	2.35	324	P	Pn	00 34 47.1	+1.6
RDO	Rodhopi	2.78	321	P	Pn	00 34 52.0	+0.6
ARG	Arkhangelos	2.79	176	P	Pn	00 34 51.6	+0.1

*OSPL **02** 00:34:30.8±1.3, 19°14N×67°70W, h0km±7km, ML3.9, Presumed earthquake*
*NEIC **02** 00:34:32.0±1.2, 19°03N±0°05×67°61W±0°03, h10km±1km, ML3.5/41, Md3.3/8(RSPR), Error ellipse: s-maj=9.1km s-min=2.9km az=209.0*
*RSPR **02** 00:34:36.0, 18°84N×67°69W, h10km±31km, MD3.3/8*

ISC 02 00:34:31.7±1.1, 19°05N±0°05×67°64W±0°03, h17km±9km, n48, σ0s87/75, 3C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.68	167		Pb	00 34 45.1	0.0
IDE					Sg	00 34 53.4	-0.7
IDE	Isla Desecheo	0.68	167	⇑iP	Pb	00 34 45.1	0.0
IDE				eS	Sg	00 34 53.4	-0.7
AGPR	Aguadilla, PR	0.76	139		Pb	00 34 46.9	+0.4
AGPR					Sb	00 34 57.0	+0.3
AGPR				IAML		00 34 58.5	
	2μm,0.3s						
AGPR	Aguadilla, PR	0.76	139	⇑iP	Pb	00 34 47.1	+0.5
AGPR				eS	Sb	00 34 56.6	-0.1
AGPR	Aguadilla, PR	0.76	139	iP	Pb	00 34 46.8	+0.3
AGPR				eS	Sb	00 34 57.4	+0.7
AGPR				IAML		00 35 02.8	
	comp=Z,856nm,0.2s						
PRSN	Puerto Rico Se	0.95	150	Pg	Pg	00 34 49.8	-0.4
PRSN					Sb	00 35 01.7	-0.3
PRSN	Puerto Rico Se	0.95	150	⇑iP	Pn	00 34 50.2	-0.1
PRSN				eS	Sg	00 35 02.3	-0.4
LSP	Las Mesas	1.01	149		Pn	00 34 51.2	0.0
LSP					Sn	00 35 05.5	+0.4
LSP	Las Mesas	1.01	149	⇑eP	Pn	00 34 51.2	0.0
LSP				eS	Sn	00 35 05.5	+0.4
HIDR	Higuey Centro	1.12	246	⇓eP	Pb	00 34 52.6	0.0
HIDR				eS	Sb	00 35 06.1	-0.7
CRPR	Cabo Rojo, PR	1.15	154		Pb	00 34 52.4	-0.7
CRPR				IAML		00 35 13.2	
	comp=Z,1μm,0.3s						
CRPR				IAML		00 35 18.1	
	comp=Z,899nm,0.9s						
CRPR	Cabo Rojo, PR	1.15	154		Sg	00 35 09.5	+0.4
CRPR	Cabo Rojo, PR	1.15	154	⇑eP	Pb	00 34 53.0	-0.1
CRPR	Cabo Rojo, PR	1.15	154	iP	Pb	00 34 52.8	-0.3
CRPR				eS	Sg	00 35 11.0	+1.9
CRPR				IAML		00 35 17.9	
	comp=Z,1μm,0.9s						
UUPR	Utuado, UPR, P	1.18	132		Pn	00 34 53.3	-0.1
UUPR				Sg	Sb	00 35 08.6	0.0
EMPR	Esperanza - Ma	1.20	118		Pg	00 34 54.5	-0.3
EMPR					Sg	00 35 11.0	+0.5
EMPR	Esperanza - Ma	1.20	118	⇓iP	Pg	00 34 54.5	-0.3
EMPR				eS	Sg	00 35 11.0	+0.5
MLPR	Magueyes Islan	1.21	152		Pn	00 34 53.5	-0.4
MLPR				IAML		00 35 13.3	
	comp=Z,833nm,0.3s						
MLPR				IAML		00 35 14.0	
	comp=Z,1μm,0.4s						
GBPR	Guanica, Bosqu	1.29	146		Pb	00 34 55.8	+0.3
GBPR					Sn	00 35 12.2	+0.5
GBPR	Guanica, Bosqu	1.29	146	⇑iP	Pb	00 34 55.8	+0.3
GBPR				eS	Sn	00 35 12.2	+0.5
CELP	Cerrillos	1.40	134		Pn	00 34 56.8	+0.4
CELP				IAML		00 35 20.1	
	comp=Z,787nm,0.3s						
CELP				IAML		00 35 21.7	
	comp=Z,684nm,0.3s						
OBIP	Obispado Ponce	1.40	135		Pn	00 34 56.8	+0.3
OBIP	Obispado Ponce	1.40	135		Sb	00 35 15.5	+0.5
OBIP	Obispado Ponce	1.40	135	⇓iP	Pb	00 34 57.2	-0.3
OBIP				eS	Sb	00 35 15.5	+0.5
OBIP	Obispado Ponce	1.40	135	iP	Pn	00 34 56.9	+0.4
OBIP				eS	Sg	00 35 16.8	-0.2
OBIP				IAML		00 35 21.3	
	comp=Z,2μm,0.2s						
ECPR	Experimental S	1.41	121		Pn	00 34 56.8	+0.1
ECPR				IAML		00 35 24.2	
	comp=Z,1μm,0.3s						
ECPR	Experimental S	1.41	121	⇓iP	Pn	00 34 57.1	+0.5
ECPR				eS	Sb	00 35 15.5	+0.2
SMDR	Samana, DR	1.48	280		Pg	00 34 59.9	-0.4
SMDR					Sg	00 35 20.8	+1.1
SMDR	Samana, DR	1.48	280	⇓iP	Pg	00 34 59.9	-0.4
GCPR	Guaynabo City	1.65	116	Pn	Pb	00 35 00.9	-0.7
GCPR	Guaynabo City	1.65	116		Sg	00 35 24.2	-0.7
GCPR	Guaynabo City	1.65	116	⇑eP	Pb	00 35 01.2	-0.5
GCPR				eS	Sg	00 35 24.2	-0.7
DR12	Loma Pena Alta	1.67	261		Pb	00 35 01.8	-0.2
SJG	San Juan	1.69	123		Pn	00 35 01.4	+0.9
SJG	San Juan	1.69	123	IAML		00 35 28.8	
	comp=Z,387nm,0.3s						
SJG				IAML		00 35 31.9	
	comp=Z,395nm,0.4s						
SJG	San Juan	1.69	123	⇑iP	Pb	00 35 01.7	-0.7
SJG				eS	Sb	00 35 23.5	+0.1
SJG	San Juan	1.69	123	iP	Pn	00 35 01.5	+1.0
SJG				eS	Sb	00 35 23.8	+0.4
SJG				IAML		00 35 28.7	
	comp=Z,5μm,0.2s						
PDPR	Patillas Dam,	1.84	123		Pn	00 35 03.6	+1.0
HUMP	Col San Antoni	1.92	118		Pn	00 35 04.8	+1.2
HUMP	Col San Antoni	1.92	118		Sb	00 35 30.1	+0.1
HUMP	Col San Antoni	1.92	118	⇓iP	Pb	00 35 06.6	+0.2
HUMP				eS	Sb	00 35 30.1	+0.1
SDD	Santo Domingo	2.23	255	Pn	Pn	00 35 09.3	+1.3
CUPR	Culebra, Puert	2.35	108	Pn	Pn	00 35 10.1	+0.5
SDDR	Presa de Saban	3.45	269	Pn	Pn	00 35 25.4	+0.6
SDDR	Presa de Saban	3.45	269	eP	Pb	00 35 32.5	0.0
SDDR				eS	Sb	00 36 17.6	+3.4
SDDR				IAML		00 36 22.1	
	comp=Z,111nm,0.6s						
SDDR				IAML		00 36 24.2	
	comp=Z,100nm,0.4s						
MASC	Masc	6.31	281	eP	Pn	00 36 05.2	+1.2
MASC				eS	Sn	00 37 14.0	-1.8
MASC				IAML		00 37 18.3	
	comp=E,2.6nm,0.2s						
MASC				IAML		00 37 20.0	
	comp=N,2.7nm,0.1s						
QMBU	Quimbuelo	6.86	281	eP	Pn	00 36 11.3	-0.3
QMBU				eS	Sn	00 37 25.8	-3.4
QMBU				IAML		00 37 31.6	
	comp=N,6.0nm,0.3s						
QMBU				IAML		00 37 33.0	
	comp=E,7.5nm,0.2s						
GTBY	Guantanamo Bay	7.10	278	eP	Pn	00 36 15.5	+0.6
GTBY				eS	Sn	00 37 33.1	-2.1
GTBY				IAML		00 37 35.8	
	comp=E,8.9nm,0.4s						
GTBY				IAML		00 37 37.3	
	comp=E,6.7nm,0.2s						

IDC 02 00:40:05.9±52.0, 22°62S×173°31W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=997.7km s-min=176.7km az=87.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.90	247	P	P	00 47 48.5	-1.5
	2.0nm,0.6s,baz=82,slow=10.0,SNR=6.1						
	2.0nm,0.6s						
ASAR	Alice Springs	48.32	258	P	P	00 48 49.7	+0.2
	0.6nm,0.4s,baz=85,slow=6.6,SNR=20						
	0.6nm,0.4s						
WRA	Warramunga Arr	48.65	263	P	P	00 48 52.8	+0.6
	2.9nm,0.5s,baz=100,slow=8.0,SNR=19						
	2.9nm,0.5s						

IGQ 02 00:40:43.5±0.6, 2°S±2°×8°1W±°, h19km±2km, M3.6/13, Mjma3.8/12, MLv3.4/13, 3C-6D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALI	Salinas	0.11	26	⇓P	Pg	00 40 48.6	+1.1
SALI				S	Sg	00 40 52.1	+2.0
ALIBE	La Libertad	0.20	77	P	Pg	00 40 50.0	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALIBE				S	Sg	00 40 55.0	+3.0
PPLP	Puerto Lpez	0.78	20	P	Pg	00 40 58.5	-0.4
PPLP				⇑P	Pb	00 40 58.3	-0.3
PPLP				S	Sg	00 41 10.0	+0.6
MORR	Playas El Morr	0.78	117	⇓P	Pb	00 40 58.4	-0.1
MORR				S	Sg	00 41 09.6	+0.2
CSOL	CASCOL	0.85	44	⇑P	Pb	00 40 59.7	0.0
CSOL				S	Sn	00 41 12.9	+0.4
ISPT	Isla de la Pla	1.02	358	P	Pb	00 41 02.6	+0.1
ISPT				S	Sg	00 41 16.8	0.0
JIPI	JIPIJAPA	1.04	28	⇑P	Pb	00 41 02.7	-0.2
AC07	Ecuador-Guayaq	1.06	83	P	Pg	00 41 04.1	-0.1
ISPG	Isla Puna-Puer	1.10	128	P	Pb	00 41 04.5	+0.4
AGUAY	Guayaquil	1.11	78	P	Pn	00 41 02.7	-1.3
MILO	Milagro-Astudi	1.48	90	P	Pn	00 41 08.5	-0.7
ARNL	Arenillas	1.58	142	P	Pn	00 41 10.7	+0.1
ABAB	Ecuador-Univer	1.60	72	P	Pn	00 41 09.8	-1.0
PCRA	Pucara 2	1.79	121	P	Pn	00 41 12.8	-1.0
COHC	Cochancay	1.79	96	P	Pn	00 41 14.2	+0.7
PECV	Mancha de Ca P	1.80	33	P	Pn	00 41 11.7	-1.9
JSCH	Cashca Tororas	2.14	75	P	Pn	00 41 17.9	-0.7
CHSH	Refugio Sur-Vo	2.31	70	P	Pn	00 41 21.6	+0.5
MCRA	Macar, Loja	2.34	152	P	Pn	00 41 20.3	-0.7
GONZ	Gonzanam	2.54	140	P	Pn	00 41 25.1	+1.0
BMAS	Trigal station	2.67	73	P	Pn	00 41 25.7	-0.2
BOSC	San Juan Bosco	2.68	109	P	Pg	00 41 34.6	-0.5
JUI6	Juive	2.71	72	P	Pn	00 41 26.9	+0.5
BPAT	Tungurahua Vol	2.72	73	P	Pn	00 41 27.9	+1.2
ILLI	Illinizas Sur	2.79	56	P	Pn	00 41 29.1	+1.4
SRAM	San Ramn-Vol	2.91	58	P	Pn	00 41 31.6	+2.5
PIS1	Pisayambo	2.92	65	P	Pb	00 41 32.8	-2.5
BRRN	Barrancas-Volc	2.97	60	P	Pn	00 41 32.6	+2.5
SLOR	San Lorenzo -	2.98	59	⇓P	Pn	00 41 33.0	+2.9
BMOR	Cotopaxi Volca	3.01	59	P	Pn	00 41 33.5	+2.8
SUCR	Mariscal Sucre	3.02	57	P	Pb	00 41 34.1	-2.9
BREF	Cotopaxi Volca	3.05	58	P	Pn	00 41 34.1	+2.7
BVC2	Cotopaxi Volca	3.08	58	⇓P	Pn	00 41 34.6	+2.9
BTAM	Cotopaxi Volca	3.09	59	⇓P	Pn	00 41 34.8	+3.0
VC1	Cotopaxi 1	3.10	58	P	Pb	00 41 35.2	-3.2
TAMB	Tambo	3.10	59	⇓P	Pn	00 41 34.9	+2.9
PITA	Cotopaxi Volc	3.12	57	P	Pn	00 41 35.3	+3.1
TOMA	Boca Toma-Volc	3.15	56	P	Pn	00 41 35.7	+3.2
GGPT	Toaza - Volcan	3.17	50	P	Pn	00 41 34.7	+1.9
ZUMB	Zumba	3.18	144	P	Pn	00 41 34.7	+2.0
JUA2	San Juan 2	3.19	50	P	Pn	00 41 35.5	+2.4
TERV	Terraza Guagua	3.21	49	P	Pn	00 41 35.4	+1.9
GGPC	Guagua Pichinc	3.22	49	P	Pn	00 41 35.7	+2.2
PINO	Pino	3.22	49	P	Pn	00 41 35.3	+1.6
YANA	Yana	3.27	49	P	Pn	00 41 35.9	+1.6
ANTG	Antisana-Guama	3.30	58	P	Pn	00 41 37.8	+3.1
ANTM	Antisana-La Mi	3.31	58	P	Pn	00 41 37.8	+3.0
ANTS	Antisana-Sarah	3.37	58	P	Pn	00 41 38.9	+3.1
PAC1	Pacto, Paraso	3.39	42	P	Pn	00 41 36.3	+0.7
ANTI	Antisana	3.41	58	P	Pn	00 41 39.6	+3.4
PUEM	Granja Avicola	3.42	51	P	Pn	00 41 39.1	+3.0
PULU	Pululahua	3.42	48	P	Pn	00 41 38.2	+2.0
ARDO	Archidona, Ten	3.48	68	P	Pn	00 41 39.8	+3.0
PKYU	Pakayacu	3.50	80	P	Pn	00 41 40.2	+3.2
OTAV	Otavalo	3.60	46	P	Pn	00 41 40.1	+1.3
CUIC	Cuicocha-Domo	3.71	46	P	Pn	00 41 42.7	+2.4
CAYR	Refugio Cayamb	3.80	53	P	Pn	00 41 45.1	+3.4
URCU	Urcuqui	3.88	46	P	Pn	00 41 44.8	+2.2
YAHU	Yahuarcocha	3.97	48	P	Pn	00 41 47.3	+3.5
CHMA	Chilma	4.32	44	P	Pn	00 41 51.3	+2.8
CHL1	Volc¡n Chiles	4.35	45	P	Pn	00 41 52.6	+3.5
ECEN	Cerro Negro	4.35	45	P	Pn	00 41 52.8	+3.6
CHL2	Volc¡n Chiles	4.38	46	P	Pn	00 41 53.0	+3.5

*NEIC **02** 00:55:22.5±1.2, 17°.85N±0°.04×66°.82W±0°.01, h10km±1km, ML2.8/35, Md3.1/1(RSPR), Error ellipse: s-maj=6.3km s-min=2.8km az=7.0*

RSPR 02 00:55:23.3, 17°.92N×66°.83W, h13km, 2C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.07	321		Pg	00 55 26.0	+0.1
GBPR					Sg	00 55 27.9	+0.2
GBPR	Guanica, Bosqu	0.07	321	⇑iP	Pg	00 55 26.0	+0.1
GBPR				eS	Sg	00 55 27.9	+0.2
MLPR	Magueyes Islan	0.21	284		Pg	00 55 27.7	-0.1
MLPR				Sg	Sg	00 55 31.2	+0.4
MLPR				IAML		00 55 31.4	
	2µm,0.3s						
MLPR				IAML		00 55 31.5	
	2µm,0.5s						
OBIP	Obispado Ponce	0.25	61		Pg	00 55 28.4	-0.1
OBIP				Sg	Sg	00 55 32.6	+0.5
OBIP				IAML		00 55 33.4	
	comp=N,190nm,0.1s						
OBIP	Obispado Ponce	0.25	61	⇓iP	Pg	00 55 28.5	-0.1
OBIP				eS	Sg	00 55 32.6	+0.5
CRPR	Cabo Rojo, PR	0.28	288		Pg	00 55 28.8	-0.2
CRPR				Sg	Sg	00 55 32.8	-0.1
CRPR	Cabo Rojo, PR	0.28	288	IAML		00 55 33.3	
	comp=N,2µm,0.2s						
CRPR				IAML		00 55 33.7	
	comp=N,2µm,0.2s						
CRPR	Cabo Rojo, PR	0.28	288	⇑eP	Pg	00 55 28.8	-0.2
CRPR				eS	Sg	00 55 32.9	+0.1
CELP	Cerrillos	0.29	58		Pg	00 55 29.2	0.0
CELP				Sg	Sg	00 55 33.8	+0.6
CELP				IAML		00 55 34.3	
	comp=N,1µm,0.3s						
CELP				IAML		00 55 34.6	
	comp=N,617nm,0.1s						
UUPR	Utuado, UPR, P	0.35	18		Pg	00 55 30.1	-0.2
UUPR				Sg	Sg	00 55 35.0	-0.1
UUPR				IAML		00 55 37.8	
	comp=N,4µm,0.4s						
UUPR				IAML		00 55 38.2	
	comp=N,7µm,0.4s						
LSP	Las Mesas	0.35	317		Pg	00 55 30.2	-0.1
LSP					Sg	00 55 35.8	+0.7
LSP	Las Mesas	0.35	317	⇑iP	Pg	00 55 30.2	-0.1
LSP				eS	Sg	00 55 35.8	+0.7
PRSN	Puerto Rico Se	0.42	315		Pg	00 55 31.3	-0.3
PRSN				Sg	Sg	00 55 37.5	+0.4
PRSN				IAML		00 55 41.8	
	comp=N,1µm,0.2s						
PRSN				IAML		00 55 41.9	
	comp=N,1µm,0.3s						
PRSN	Puerto Rico Se	0.42	315	⇑iP	Pg	00 55 31.2	-0.4
PRSN				eS	Sg	00 55 37.0	-0.1
ECPR	Experimental S	0.60	49		Pg	00 55 34.3	-0.7
ECPR				Sg	Sg	00 55 42.6	-0.3
ECPR				IAML		00 55 43.6	
	comp=N,697nm,0.2s						
ECPR				IAML		00 55 44.2	
	comp=N,816nm,0.3s						
ECPR	Experimental S	0.60	49	⇓iP	Pg	00 55 34.2	-0.7
ECPR				eS	Sg	00 55 42.1	-0.8
AGPR	Aguadilla, PR	0.60	334		Pg	00 55 34.3	-0.8
AGPR				Sg	Sg	00 55 43.1	0.0
AGPR				IAML		00 55 48.0	
	comp=N,230nm,0.5s						
AGPR				IAML		00 55 50.8	
	comp=N,220nm,0.4s						
AGPR	Aguadilla, PR	0.60	334	⇑iP	Pg	00 55 34.4	-0.7
AGPR				eS	Sg	00 55 42.9	-0.2
EMPR	Esperanza - Ma	0.62	28		Pg	00 55 35.3	-0.2
EMPR					Sg	00 55 44.0	+0.2
EMPR	Esperanza - Ma	0.62	28	⇑eP	Pg	00 55 35.3	-0.2
EMPR				eS	Sg	00 55 44.0	+0.2
SJG	San Juan	0.68	74		Pg	00 55 35.6	-0.9
SJG				Sg	Sg	00 55 45.0	-0.5
SJG	San Juan	0.68	74	IAML		00 55 45.9	
	comp=N,197nm,0.6s						
SJG				IAML		00 55 47.3	
	comp=N,142nm,0.2s						
SJG	San Juan	0.68	74	⇓iP	Pg	00 55 35.6	-0.9
SJG				eS	Sg	00 55 45.1	-0.4
IDE	Isla Desecheo	0.77	307		Pg	00 55 37.3	-0.8
IDE					Sg	00 55 47.2	-1.0
IDE	Isla Desecheo	0.77	307	⇑iP	Pg	00 55 37.3	-0.8
IDE				eS	Sg	00 55 47.2	-1.0
PDPR	Patillas Dam,	0.78	83	Pg	Pg	00 55 37.5	-0.9
PDPR				Sg	Sg	00 55 47.9	-0.7
PDPR				IAML		00 55 49.9	
	comp=N,148nm,0.1s						
PDPR				IAML		00 55 52.8	
	comp=N,91nm,0.1s						
GCPR	Guaynabo City	0.81	61		Pg	00 55 37.8	-1.3
GCPR				IAML		00 55 52.0	
	comp=N,93nm,0.5s						
GCPR				IAML		00 55 53.1	
	comp=E,75nm,0.5s						
GCPR	Guaynabo City	0.81	61	⇑iP	Pg	00 55 37.9	-1.2
GCPR				eS	Sg	00 55 46.4	-3.2
HUMP	Col San Antoni	0.96	77		Pb	00 55 40.2	-1.7
HUMP				Sg	Sg	00 55 53.2	-1.2
HUMP				IAML		00 55 57.1	
	comp=E,299nm,0.3s						
HUMP				IAML		00 55 57.0	
	comp=E,182nm,0.2s						
HUMP	Col San Antoni	0.96	77	⇓iP	Pb	00 55 40.3	-1.5
HUMP				eS	Sg	00 55 53.1	-1.4
CUPR	Culebra, Puert	1.52	75		Pn	00 55 49.9	-0.4
DR12	Loma Pena Alta	2.57	290		Pn	00 56 06.8	+2.1

ISK 02 00:56:44.8, 38°.96N×27°.85E, h10km, ML1.8/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.08	201	Pg	Pg	00 56 47.5	+0.4
AKS				Sg	Sg	00 56 49.4	+0.6
GOMA	Golmarmara-Man	0.25	168	Pg	Pg	00 56 50.5	+0.6
GOMA				Sg	Sg	00 56 54.6	+1.2
GORD	Gordes-Manisa	0.26	101	Pg	Pg	00 56 50.5	+0.4
GORD				Sg	Sg	00 56 54.7	+1.1
SOMA	Soma-Manisa	0.32	309	Pg	Pg	00 56 50.9	-0.2
BALB	Balikesir	0.68	2	Pg	Pb	00 56 58.9	+0.1
ODEM	Odemis-Izmir	0.70	165	Pg	Pb	00 56 58.9	-0.3
ODEM				Sg	Sb	00 57 09.0	0.0
DKL	Dikili	0.75	279	Pg	Pb	00 56 59.9	0.0
KULA	Kula-Manisa	0.77	125	Pg	Pg	00 56 59.7	0.0
BLCB	Balcova	0.85	228	Pg	Pb	00 57 01.7	0.0
SIMA	Simav-Kutahya	0.89	82	Pg	Pb	00 57 02.4	0.0
YAYO	Edremit-Balk	0.89	317	Pg	Pg	00 57 02.0	+0.1
AYDB	Zeytinkoy-Aydi	1.01	178	Pg	Pb	00 57 04.7	+0.2
SUSR	Susurluk-Balik	1.02	10	Pg	Pn	00 57 05.1	-0.2
NAZL	Nazilli-Aydin	1.05	161	Pg	Pn	00 57 05.5	-0.2
YENI	Yenice-Canakka	1.09	334	Pn	Pn	00 57 06.1	0.0
GONE	Gonen-Balikesi	1.10	353	Pn	Pn	00 57 06.3	0.0
URLA	Izmir	1.15	239	Pn	Pn	00 57 07.2	+0.2
GEDZ	Gediz	1.22	85	Pn	Pg	00 57 08.6	+0.4
CANM	Can-anakkale	1.22	330	Pn	Pg	00 57 08.5	+0.2

AFAD 02 00:56:49.8, 40°.87N×28°.22E, h7km±3km, ML2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELBA	Catalca	0.32	30	P	Pb	00 56 57.2	-0.7
CATL	atalca, ST	0.48	13	P	Pg	00 56 59.7	+0.5
CATL				S	Sg	00 57 06.1	+0.6
CATL				IAML		00 57 07.0	
	comp=N,189nm,0.2s						
CATL				IAML		00 57 07.0	
	comp=E,196nm,0.2s						
MADA	Marmara adas	0.57	241	P	Pg	00 57 00.7	-0.2
MURA	Muratl, TEK	0.62	297	P	Pb	00 57 02.4	-0.5
VIZE	Kirklareli, Vi	0.76	338	P	Pb	00 57 04.9	-0.5
VIZE				S	Sg	00 57 15.1	+0.7
VIZE				IAML		00 57 18.0	
	comp=N,124nm,0.1s						
VIZE				IAML		00 57 19.0	
	comp=E,82nm,0.3s						
KURT	Yalova, Merkez	0.81	110	P	Pb	00 57 05.8	-0.3
KURT				S	Sg	00 57 14.5	-1.2
SATE	Sancaktepe,	0.82	80	P	Pb	00 57 06.1	-0.4
SATE				S	Sb	00 57 17.2	-0.5
SATE				IAML		00 57 19.0	
	comp=N,118nm,0.3s						
ORLT	Orhaneli	0.97	148	P	Pg	00 57 08.3	-0.2
ORLT				S	Sg	00 57 20.4	-0.7
ORLT				IAML		00 57 24.0	
	comp=E,140nm,0.4s						
ULDT	Uludag	1.01	136	P	Pg	00 57 08.8	-0.4
ULDT				S	Sg	00 57 22.6	+0.3
ULDT				IAML		00 57 25.0	
	comp=N,62nm,0.5s						
ARMN	Kirklareli, Me	1.16	329	P	Pg	00 57 12.0	0.0
ARMN				S	Sg	00 57 27.1	+0.1
ARMN				IAML		00 57 31.0	
	comp=E,22nm,0.5s						
SEMS	Kocaeli-K¶rfe	1.16	89	P	Pg	00 57 11.7	-0.2
SEMS				S	Sb	00 57 27.6	+0.3
SEMS				IAML		00 57 30.0	
	comp=E,84nm,0.3s						
KIRK	Kırklareli	1.24	318	P	Pb	00 57 13.1	-0.4
KIRK				S	Sg	00 57 28.9	-0.8
KIRK				IAML		00 57 31.0	
	comp=N,18nm,0.2s						

*SOF **02** 00:57:42.8, 40°.82N±0°.01×28°.16E±0°.01, h18km±2km, MD3.9/12*
*ISK **02** 00:57:43.3, 40°.84N×28°.18E, h14km, ML3.9/13*
*AFAD **02** 00:57:43.5, 40°.84N×28°.20E, h7km±3km, MW3.5*
*MCSM **02** 00:57:44.7±0.6, 41°N±3°×2°8E±°, h9km±4km, mb4.0, MLv4.0*
*CFUSG **02** 00:57:44.6, 40°.90N×28°.40E, h10km, Mb3.4/8, MD3.4/8, MSH3.3/8*
*THE **02** 00:57:45.3, 41°N±6°×2°8E±1°4, h89km±33km, M3.5/19, MLh3.5/19*

ISC 02 00:57:43.7±0.8, 40°.84N±0°.02×28°.19E±0°.02, h17km±6km, n164, σ1s.04/193, 27C-20D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOTS	Marmara Eregli	0.22	314	Pg	Pg	00 57 48.7	-0.1
BOTS				Sg	Sg	00 57 52.4	+0.1
SINB	Sinanoba-Istan	0.31	59	Pg	Pg	00 57 50.6	+0.2
SINB				Sg	Sb	00 57 56.1	+0.5
ELBA	Catalca	0.36	31	P	Pg	00 57 51.0	-0.2
ELBA				S	Sg	00 57 55.4	-0.8
ELBA				IAML		00 57 56.0	
	comp=N,5µm,0.1s						
ELBA				IAML		00 57 59.0	
	comp=E,6µm,0.4s						
SLVT	Silivri	0.39	2	Pg	Pg	00 57 51.5	-0.3
SLVT				Sg	Sg	00 57 57.1	-0.1
YKBL	Yakuplu-Istanb	0.39	67	Pg	Pg	00 57 52.1	+0.3
AVCI	Avcilar-stanb	0.43	69	Pg	Pg	00 57 52.7	+0.2
CRLT	Corlu	0.45	310	Pg	Pg	00 57 52.9	+0.1
CTKS	Kestanelik-??a	0.46	31	Pg	Pg	00 57 52.8	-0.3
BAND	Balkesir-Ban	0.49	188	⇑P	Pg	00 57 52.1	-1.4
BAND	Balkesir-Ban	0.49	188	P	Pg	00 57 53.1	-0.5
MRMT	Marmara Adasi	0.51	242	Pg	Pg	00 57 53.9	-0.1
CATL	atalca, ST	0.52	14	P	Pg	00 57 53.8	-0.3
CATL				S	Sg	00 58 00.1	-0.9
CATL				IAML		00 58 01.0	
	comp=N,7µm,0.2s						
CATL				IAML		00 58 01.0	
	comp=E,8µm,0.2s						
TKR	Tekirdag	0.52	287	Pg	Pg	00 57 54.1	0.0
MADA	Marmara adas	0.54	243	P	Pg	00 57 55.0	+0.4
EDC	Edincik	0.55	207	Pg	Pg	00 57 54.2	-0.5
BGKT	Bogazkoy	0.56	52	Pg	Pg	00 57 54.5	-0.3
ARMT	Armutlu	0.58	118	Pg	Pg	00 57 55.1	-0.2
ARMT				Sg	Sb	00 58 03.7	+0.3
KCTX	Karacabey (Bur	0.59	167	Pg	Pg	00 57 54.9	-0.5
MURA	Muratl, TEK	0.61	300	P	Pg	00 57 56.0	+0.1
CTYL	Yalikoy Yolu	0.64	7	Pg	Pg	00 57 55.8	-0.5
CTYL	Yalikoy Yolu	0.64	7	P	Pg	00 57 55.8	-0.5
GAZK	Gazikoy-TEKIRD	0.66	262	Pg	Pg	00 57 56.6	-0.1
BRGA	Burgazada-Ista	0.67	86	Pg	Pg	00 57 56.7	-0.1
HYBA	Heybeliada-Ist	0.68	87	Pg	Pg	00 57 56.9	-0.2
ISK	Istanbul-Kandi	0.70	71	Pg	Pg	00 57 56.8	-0.6
KAVV	Kandilli-Istan	0.70	71	Pg	Pg	00 57 57.2	-0.2
MDNY	Mudanya-Bursa	0.71	131	Pg	Pg	00 57 57.4	-0.2
BUYA	Buyukada-Istan	0.71	87	Pg	Pg	00 57 57.6	-0.1
KLYT	Kilyos	0.77	57	Pg	Pg	00 57 58.4	-0.3
KLYT	Kilyos	0.77	57	P	Pg	00 57 58.3	-0.4
SART	Tekirdag	0.78	259	P	Pg	00 57 58.5	-0.5
SART				S	Sg	00 58 09.4	0.0
SART				IAML		00 58 10.0	
	comp=N,2µm,0.4s						
SART				IAML		00 58 10.0	
	comp=E,2µm,0.3s						
VIZE	Kirklareli, Vi	0.78	340	P	Pg	00 57 58.6	-0.4
VIZE				S	Sg	00 58 08.4	-1.0
VIZE				IAML		00 58 11.0	
	comp=N,4µm,0.2s						
RKY	Sarkoy-Tekirda	0.78	259	Pg	Pg	00 57 58.5	-0.5
KRBG	Karabiga-Canak	0.81	237	Pg	Pg	00 57 58.9	-0.7
KURT	Yalova, Merkez	0.81	108	P	Pg	00 57 59.3	-0.3
KURT				P	Pb	00 57 59.4	0.0
KURT				S	Sb	00 58 10.6	+0.4
KURT				IAML		00 58 13.0	
	comp=N,2µm,0.5s						
TUZL	Tuzla-Istanbul	0.82	92	Pg	Pg	00 57 59.4	-0.3
CMHT	Manyas	0.84	191	P	Pg	00 57 59.7	-0.5
SATE	Sancaktepe,	0.85	78	P	Pg	00 57 59.5	-0.8
SATE				S	Sg	00 58 10.3	-1.2
SATE				IAML		00 58 12.0	
	comp=N,4µm,0.3s						
GONE	Gonen-Balikesi	0.88	206	Pg	Pb	00 58 00.7	+0.1
SUSR	Susurluk-Balik	0.88	185	Pg	Pb	00 58 00.5	-0.1
LAFA	Gebze-Kocaeli	0.89	95	Pg	Pb	00 58 00.8	+0.1
ATIT	Gnen	0.90	212	P	Pb	00 58 00.8	0.0
ATIT				S	Sb	00 58 12.9	+0.5
ATIT				IAML		00 58 16.0	
	comp=E,1µm,0.3s						
YLVH	Yalova	0.91	99	Pg	Pb	00 58 01.3	+0.3
ORLT	Orhaneli	0.96	146	Pg	Pb	00 58 02.1	+0.1
ORLT	Orhaneli	0.96	146	P	Pb	00 58 01.7	-0.3
ORLT				S	Sn	00 58 15.7	-0.1
ORLT				IAML		00 58 17.0	
	comp=E,4µm,0.4s						
BIGA	Biga-Canakkale	0.97	235	Pg	Pb	00 58 02.2	+0.2
BLKS	Balkesir-Sus	0.98	190	P	Pb	00 58 02.2	-0.1
BLKS				P	Pg	00 58 02.3	-0.4
BLKS				S	Sb	00 58 14.3	-0.6
BLKS				S	Sg	00 58 14.6	-1.1
BLKS				IAML		00 58 16.0	
	comp=N,442nm,0.8s						
BLKS				IAML		00 58 16.0	
	comp=N,446nm,0.8s						
ULDT	Uludag	1.00	134	P	Pb	00 58 02.7	-0.1
ULDT				S	Sg	00 58 16.5	+0.1
ULDT				IAML		00 58 19.0	
	comp=N,2µm,0.5s						
YENI	Yenice-Canakka	1.16	219	Pn	Pn	00 58 05.3	+0.1
ARMN	Kirklareli, Me	1.17	331	P	Pn	00 58 05.7	+0.3
ARMN				S	Sb	00 58 20.3	-0.1
ARMN				IAML		00 58 21.0	
	comp=N,393nm,0.5s						
ARMN				IAML		00 58 22.0	
	comp=E,890nm,0.4s						
SEMS	Kocaeli-K¶rfe	1.18	88	P	Pn	00 58 05.5	+0.1
SEMS				S	Sn	00 58 21.4	+0.4
SEMS				IAML		00 58 22.0	
	comp=N,3µm,0.4s						
CANM	Can-anakkale	1.20	227	Pn	Pn	00 58 05.8	+0.1
KIRK	Kırklareli	1.25	319	P	Pn	00 58 06.6	+0.2
HISA	Bilecik-Osmane	1.37	105	P	Pn	00 58 08.3	+0.2
CAVK	Edirne/Enez-Ca	1.54	265	⇑P	Pn	00 58 10.3	-0.1
ENEZ	Enez	1.55	267	P	Pn	00 58 10.7	+0.1
ENEZ				S	Sn	00 58 30.5	+0.3
ALN	Alexandroupoli	1.63	273	P	Pn	00 58 11.4	-0.2
ALN				S	Sn	00 58 33.8	+1.7
EZN	Ezine	1.75	235	P	Pn	00 58 13.8	+0.5
EZN				S	Sn	00 58 36.3	+1.2
EZN	Ezine	1.75	235	P	Pb	00 58 15.3	0.0
GADA	Gvkgeada	1.86	250	P	Pn	00 58 15.8	+0.9
SAHE	Sakarya_HENDEK	2.02	89	⇑P	Pn	00 58 18.3	+1.2
RDO	Rodhopi	2.03	280	P	Pn	00 58 17.3	+0.2
SMTH	Samothraki Isl	2.06	261	P	Pn	00 58 17.1	-0.4
JMB	Yambol	2.06	324	P	Pn	00 58 18.4	+0.8
JMB	Yambol	2.06	324	iP	Pn	00 58 18.6	+1.0
PRK	Paraskevi	2.17	223	P	Pn	00 58 19.3	+0.3
DIM	Dimitrovgrad	2.30	302	P	Pn	00 58 21.5	+0.6
DIM	Dimitrovgrad	2.30	302	iP	Pn	00 58 21.5	+0.6
PRD	Provadia	2.39	346	iP	Pn	00 58 22.7	+0.6
SIGR	SIGRI	2.42	228	P	Pn	00 58 24.8	+2.3
LIA	Limnos Island	2.48	249	P	Pn	00 58 23.2	-0.1
KALB	Balgarevo	2.57	4	⇓P	Pb	00 58 28.5	-0.9
THAS	Thassos island	2.65	266	P	Pn	00 58 25.2	-0.4
ELND	Elena	2.71	321	⇑P	Pb	00 58 31.3	-0.4
RZN	Rozhen	2.74	289	P	Pn	00 58 27.3	+0.3
RZN	Rozhen	2.74	289	iP	Pn	00 58 27.5	+0.5
KAVA	Kavala	2.79	274	P	Pn	00 58 27.6	+0.1
LOZB	Loznitsa	2.79	335	⇑P	Pb	00 58 34.2	+1.0
PSN	Preselentsi	2.79	359	iP	Pn	00 58 28.4	+0.7
PLD	Plovdiv	2.90	298	P	Pn	00 58 29.8	+0.7
SZH	Strazhitsa	2.93	327	P	Pn	00 58 30.5	+0.9
SZH	Strazhitsa	2.93	327	P	Pn	00 58 30.6	+1.1
CHOS	Chios island	2.95	215	P	Pn	00 58 29.3	-0.6
MANR	Mangalia	2.99	6	⇑P	Pn	00 58 33.2	+2.9
PVL	Pavlikeni	3.20	316	iP	Pn	00 58 34.6	+1.3
OUR	Ouranopolis	3.24	262	P	Pn	00 58 33.2	-0.6
MFTR	Murfatlar	3.34	3	⇓P	Pb	00 58 44.7	+2.2
MMB	Musomishta	3.42	283	P	Pn	00 58 37.0	+0.7
MMB	Musomishta	3.42	283	iP	Pn	00 58 37.4	+1.0
SRS	Serrai	3.49	276	P	Pn	00 58 37.2	0.0
TIRR	Tirgusor	3.62	3	⇑P	Pn	00 58 40.6	+1.6
TIRR	Tirgusor	3.62	3	P	Pn	00 58 39.8	+0.8
PLG	Polygyros	3.64	264	P	Pn	00 58 39.0	-0.3
SOH	Sokhos	3.67	271	P	Pn	00 58 39.8	0.0
TLBR	Topalu	3.70	358	⇓P	Pg	00 58 53.8	-0.8
CIDE	Kastamonu/Cide	3.73	72	⇓P	Pn	00 58 42.0	+1.5
SGRR	Singureni	3.75	335	⇑P	Pg	00 58 53.8	-1.8
LEHL	Lehliu	3.77	345	⇓P	Pg	00 58 56.0	+0.1
PLNA	Plana	3.92	296	iP	Pn	00 58 44.4	+1.1
KKB	Krupnik	3.94	286	P	Pn	00 58 44.4	+1.0
KKB	Krupnik	3.94	286	iP	Pn	00 58 44.6	+1.2
COPA	Copaceanca	3.96	327	⇑P	Pn	00 58 43.8	+0.2
TPGR	Topolog	4.02	2	⇓P	Pg	00 59 00.7	+0.1
SULR		4.09	340	⇑P	Pg	00 59 01.1	-1.0
VTS	Vitosha	4.11	297	iP	Pn	00 58 47.2	+1.3
MPEP	Malo Peshtene	4.16	309	iP	Pn	00 58 47.2	+0.8
BLSH	Balsha	4.18	300	iP	Pn	00 58 48.2	+1.4
VLAD	Vladila	4.22	320	⇑P	Pn	00 58 46.5	-0.7
VAY	Valandovo	4.27	278	iPn	Pn	00 58 48.8	+0.8
VAY				iSg	Sg	00 59 59.8	-1.1
BR106	Keskin Array S	4.30	103	P	Pn	00 58 50.3	+1.8
BR105	Keskin Array S	4.30	103	P	Pn	00 58 50.4	+1.9
BR104	Keskin Array S	4.32	103	P	Pn	00 58 50.8	+2.0
CFR	Carcaliu	4.33	360	⇑P	Pn	00 58 49.6	+0.8
TLCR		4.37	6	⇑P	Pn	00 58 51.4	+2.1
BZK	Bozkurt	4.51	74	⇑P	Pn	00 58 53.6	+2.4
BZK	Bozkurt	4.51	74	P	Pn	00 58 52.5	+1.2
IZVR	Izvoarele	4.71	356	⇑P	Pb	00 59 02.7	-3.1
KIRS	Kirsehir-Merke	4.72	109	⇑P	Pn	00 58 57.2	+3.0
NEHR	Nehoiu	4.79	344	⇓P	Pn	00 58 57.5	+2.4
MLR	Muntele Rosu	4.93	341	⇓P	Pn	00 58 59.9	+2.8
MLR	Muntele Rosu	4.93	341	P	Pn	00 58 59.3	+2.2
ODBI	Odobesti	4.99	351	⇓P	Pn	00 58 58.4	+0.6
VLDR	Vladesti	5.00	359	⇑P	Pn	00 58 59.7	+1.7
PLOR	Plostina	5.13	348	⇓P	Pn	00 59 01.9	+2.1
VRI	Vrincioaia	5.13	349	⇓P	Pn	00 59 01.6	+1.8
VRI	Vrincioaia	5.13	349	P	Pn	00 59 01.6	+1.8
VOIR		5.13	334	P	Pn	00 59 01.7	+1.8
	0.1nm7.9nm,0.5s						
COVR	Voineasa-Covas	5.21	345	⇓P	Pn	00 59 03.3	+2.4
TURR	Turia	5.45	344	⇑P	Pn	00 59 06.0	+1.8
SEV	Sevastopol'	5.48	46	⇓iP	Pn	00 59 05.1	+0.6
SEV				pmax	pmax	00 59 06.5	
	comp=Z,8.0nm,0.3s						
SEV				eS	Sn	01 00 05.2	-1.9
SEV				smax	smax	01 00 09.9	
	comp=N,8.0nm,0.2s						
SEV				smax	smax	01 00 09.9	
	comp=E,17nm,0.4s						
DOPR	Dopca	5.51	339	⇓P	Pn	00 59 06.1	+1.0
OZUR		5.54	342	⇑P	Pn	00 59 06.3	+1.0
TARU	Tarkhankut	5.54	34	eP	Pn	00 59 06.4	+1.1
TARU				pmax	pmax	00 59 06.7	
	comp=Z,29nm,0.6s						
TARU				eS	Sn	01 00 08.8	+0.3
TARU				smax	smax	01 00 10.6	
	comp=N,32nm,0.4s						
TARU				smax	smax	01 00 10.6	
	comp=E,32nm,0.4s						
BOSR	Bodos	5.54	341	⇑P	Pn	00 59 06.5	+1.0
BOVS	Bovan	5.56	302	⇓P	Pn	00 59 06.4	+0.7
YAL	Yalta	5.71	48	⇓eP	Pn	00 59 08.2	+0.5
YAL				pmax	pmax	00 59 09.0	
	comp=Z,7.0nm,0.2s						
YAL				eS	Sn	01 00 11.1	-1.7

YAL smax smax 01 00 11.3
comp=N,9.0nm,0.3s
YAL smax smax 01 00 11.3
comp=E,20nm,0.4s
TESR Tescani 5.78 349 ⇑P Pn 00 59 08.9 +0.2
TESR Tescani 5.78 349 P Pn 00 59 09.5 +0.8
DNZ2 Donuzlav2 5.84 37 *e*P Pn 00 59 10.5 +1.1
DNZ2 pmax pmax 00 59 15.1
comp=Z,8.0nm,0.2s
DNZ2 *e*S **Sn 01 00 15.0 -0.9**
DNZ2 smax smax 01 00 20.3
comp=N,13nm,0.2s
DNZ2 smax smax 01 00 20.3
comp=E,13nm,0.3s
MDB Medias 5.98 334 ⇑P Pn 00 59 13.6 +2.2
SIM Simferopol' 5.98 45⇓*e*P Pn 00 59 12.3 +0.8
SIM pmax pmax 00 59 13.6
comp=Z,22nm,0.2s
SIM *e*S **Sn 01 00 18.9 -0.7**
SIM smax smax 01 00 21.5
comp=N,27nm,0.4s
SIM smax smax 01 00 21.5
comp=E,12nm,0.3s
MDVR Moldovita 6.18 312 ⇑P Pn 00 59 14.2 0.0
SUDU Sudak 6.43 49⇓*e*P Pn 00 59 18.1 +0.4
SUDU pmax pmax 00 59 22.5
comp=Z,36nm,0.7s
SUDU *e*S **Sn 01 00 30.4 -0.3**
SUDU smax smax 01 00 35.9
comp=N,24nm,0.3s
SUDU smax smax 01 00 35.9
comp=E,9.0nm,0.2s
FEO Feodosiya 6.74 49⇓*e*P Pn 00 59 21.5 -0.3
FEO pmax pmax 00 59 26.3
comp=Z,21nm,0.5s
FEO *e*S **Sn 01 00 37.1 -0.9**
FEO smax smax 01 00 41.8
comp=N,9.0nm,0.3s
FEO smax smax 01 00 41.8
comp=E,4.0nm,0.2s
PDG Podgorica 6.88 286 ⇑P Pn 00 59 25.3 +1.5
BURAR Bucovina Array 7.10 344 ⇓P Pn 00 59 28.6 +1.7
BAL3X Bal3x, Balta 7.17 8 P Pn 00 59 28.2 +0.5
SORM Soroca 7.29 1 ⇑P Pn 00 59 29.0 -0.4
SORM Soroca 7.29 1 P Pn 00 59 29.1 -0.4
comp=E,0.1nmcomp=E,7.3nm,0.6s
BMR Baia Mare 7.61 335 ⇑P Pn 00 59 41.0 +7.2
KMPD K-Podol'skiy 7.82 352 P Pn 00 59 38.5 +1.9
MEZ Mezhgor'ye 8.36 338 P Pn 00 59 44.7 +0.6
MORH Mrgy, Hungar 8.77 311 ⇑P Pn 00 59 51.8 +2.1
LUBAR Lubar, Ukraine 9.09 358 P Pn 00 59 55.7 +1.7
AK07 Malin Array Si 9.74 4 P Pn 01 00 02.8 -0.1
AK06 Malin Array Si 9.77 4 P Pn 01 00 04.2 +0.8
AK10 Malin Array Si 9.79 4 P Pn 01 00 04.3 +0.7
AK13 Malin Array Si 9.79 3 P Pn 01 00 04.4 +0.7
AK09 Malin Array Si 9.80 4 P Pn 01 00 04.2 +0.3
AK05 Malin Array Si 9.81 4 P Pn 01 00 04.6 +0.7
KIEV Kiev 9.88 4 P Pn 01 00 06.1 +1.2
AKBB Malin Array Si 9.89 4 P Pn 01 00 05.9 +0.9
RNPP2 Kostyukhnivka 10.61 352 P Pn 01 00 15.9 +1.0
RNPP8 Varash 10.62 352 P Pn 01 00 16.0 +1.0

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*NEIC **02** 00:59:49.5±1.5, 33°.580N±0°.009×116°.818W±0°.005, h10km±4km, ML3.8/100, Mwr3.6/6(PAS), Error ellipse: s-maj=1.4km s-min=0.4km az=154.0*
*IDC **02** 00:59:50.6±1.8, 33°.52N×116°.79W, h0km, mb3.1/1, mbtmp3.1/5, ML3.3/4, MS3.6/1, Error ellipse: s-maj=19.9km s-min=7.4km az=21.0*
*PAS **02** 00:59:50.6±2.1, 33°.58N±0°.01×116°.82W±0°.01, h5km±2km, Error ellipse: s-maj=2.0km s-min=1.3km az=48.0*
ISC 02 00:59:50.2±0.8**, 33°.54N**±0°.02×**116°.81W**±0°.02**, h11**km±5km**, n110,** σ**1s.05**/130**, Southern California**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BZNA Buzz No.'s Pla 0.13 110 Pg 00 59 54.0 +0.5
BZNA **Sg 00 59 56.3 +0.5**
DNR Dunn Ranch,Anz 0.16 79 Pg 00 59 54.0 +0.1
SNDA J Saunders Pla 0.17 85 Pg 00 59 54.3 +0.2
POB Polly Butte 0.17 329 Pg 00 59 53.6 -0.6
POB **Sg 00 59 55.6 -1.3**
GVDA Garner Valley 0.18 42 Pg 00 59 53.6 -0.6
GVDA **Sg 00 59 55.8 -1.2**
FRD Ford Ranch, An 0.18 103 Pg 00 59 54.7 +0.4
FRD **Sg 00 59 57.6 +0.6**
DGR Domenigoni Val 0.20 305 Pg 00 59 54.2 -0.3
DGR **Sg 00 59 56.8 -0.7**
BACC Bachelor Mtn. 0.20 292 Sg 00 59 57.3 -0.3
HMTC Hemet 0.23 317 Pg 00 59 54.6 -0.6
HMTC **Sg 00 59 57.4 -1.0**
PFO Pinyon Flats O 0.30 76 Pg **Pb 00 59 56.3 -1.5**
255nm,0.3s,baz=269,slow=16,SNR=2160
PFO Lg Lg 01 00 00.3
2µm,0.3s,baz=276,slow=12,SNR=163
PFO Pinyon Flats O 0.30 76 Pb 00 59 56.3 -1.5
PFO IAML 01 00 00.7
12µm,0.7s
MATG Mataguay Scout 0.36 158 Pb 00 59 58.7 -0.1
MATG **Sb 01 00 04.2 -0.4**
PMD Palm Desert 0.38 73 Pb 00 59 57.5 -1.5
PMD IAML 01 00 02.5
comp=E,5µm,0.3s
PMD IAML 01 00 02.6
comp=N,10µm,0.8s
BBSC Beaumont Base 0.41 340 Pg 00 59 58.0 -0.4
BBSC **Sg 01 00 03.0 -0.8**
BORC Borrego Spring 0.43 129 Pb 00 59 59.5 -0.3
BORC **Sb 01 00 05.4 -0.9**
BORC IAML 01 00 06.2
comp=E,5µm,0.5s
DEVC Devers 0.44 26 Sg 01 00 04.3 -0.5
PEC Perris 0.46 321 Sg 01 00 04.3 -1.0
JUEM Julian Eagle M 0.49 158 Sb 01 00 07.7 -0.5
RAY Raywood Flat 0.50 0 Sg 01 00 05.9 -0.8
ELS Elsinore Mount 0.52 282 Pg 01 00 00.2 -0.3
ELS **Sg 01 00 07.3 -0.1**
ELS Elsinore Mount 0.52 282 IAML 01 00 07.6
comp=N,4µm,0.7s
ELS IAML 01 00 08.6
comp=E,2µm,0.7s
DPP Dos Picos Cty 0.55 191 Pb 01 00 01.4 -0.4
DPP **Sb 01 00 09.2 -0.6**
DPP IAML 01 00 10.0
comp=E,3µm,0.2s
MLL Mill Creek 0.56 350 Sg 01 00 07.9 -0.8
SLH Sleepy Hollow 0.58 126 Pn 01 00 02.5 -1.9
RSBC Riverside Bore 0.61 316 Pg 01 00 01.3 -0.8
RSBC **Sg 01 00 09.1 -1.0**
SVD Seven Oaks Dam 0.61 337 Pg 01 00 01.6 -0.6
SVD **Sg 01 00 09.5 -0.8**
EML El Monte Cty P 0.65 182 Sb 01 00 12.0 -0.5
BRGC Borrego Mounta 0.65 124 Pn 01 00 03.8 -1.5
RVR Riverside 0.65 314 Sg 01 00 10.2 -1.3
HLNC Highland 0.67 330 Pg 01 00 02.9 -0.5
HLNC **Sg 01 00 11.7 -0.5**
CFSC Central Fire S 0.69 326 Pg 01 00 03.2 -0.4
CFSC **Sg 01 00 12.4 -0.2**
CPE Camp Elliot 0.69 201 Pb 01 00 03.8 -0.5
CPE IAML 01 00 16.4
comp=E,3µm,0.5s
CTCC Cactus City 0.70 80 Sb 01 00 13.3 -0.8
CRNC Corona 0.71 299 Pg 01 00 03.3 -0.7
CRNC **Sg 01 00 12.3 -0.9**
BBRC Big Bear Solar 0.73 353 Sg 01 00 12.6 -1.4
SALN Salton City 0.74 110 Pn 01 00 05.2 -1.4
SALN **Sb 01 00 15.1 -0.1**
MTRP Mission Trails 0.74 196 Pb 01 00 04.7 -0.5
MTRP **Sb 01 00 15.2 -0.2**
FON Fontana 0.77 317 Pg 01 00 04.0 -1.0
FON **Sg 01 00 13.8 -1.2**
MLSC Mira Loma 0.78 307 Sg 01 00 14.5 -1.0
CTW Cottonwood Mou 0.80 80 Pb 01 00 05.5 -0.7
CTW **Sb 01 00 16.1 -0.9**
SDMC San Diego Miss 0.80 200 Pn 01 00 05.8 -1.7
SDMC **Sb 01 00 16.9 -0.1**
SIL Silver Peak 0.81 359 Sg 01 00 15.1 -1.4
GTM Goat Mountain 0.85 27 Pg 01 00 05.4 -1.2
GTM **Sg 01 00 15.7 -2.0**
BAR Barrett 0.86 172 Pn 01 00 07.0 -1.4
BAR IAML 01 00 19.8
comp=N,5µm,0.2s
BAR Barrett 0.86 172 Sb 01 00 18.5 -0.3
BFSC Mount Baldy Ra 0.99 315 Pg 01 00 08.0 -1.4
TJX Tijuana 1.04 191 Pn 01 00 10.1 -0.8
BC3 Big Chuckawall 1.14 84 Pb 01 00 11.1 -1.0
BC3 IAML 01 00 30.1
comp=N,3µm,0.8s
BC3 IAML 01 00 30.2
comp=E,2µm,0.7s
YUH Yuha Desert 1.16 140 Pn 01 00 11.9 -0.5
CBX Cerro Bola 1.23 174 Pn 01 00 13.4 0.0
MWC Mount Wilson 1.24 304 Pg 01 00 12.6 -1.5
MWC IAML 01 00 32.4
comp=N,2µm,0.4s
MWC IAML 01 00 32.6
comp=E,2µm,0.4s
PASC Pasadena Art C 1.30 299 Pn 01 00 13.3 -1.1
PASC IAML 01 00 33.1
comp=N,1µm,0.6s
IRM Iron Mountain 1.52 66 Pn 01 00 16.6 -0.8
IRM IAML 01 00 38.6
comp=N,960nm,0.4s
IRM IAML 01 00 40.1
comp=E,703nm,0.8s
DANC Danby, Needles 1.62 47 Pn 01 00 17.9 -0.9
DANC IAML 01 00 42.7
comp=E,1µm,0.8s
DANC IAML 01 00 45.2
comp=N,1µm,0.5s
CCX Cicese 1.67 176 Pb 01 00 19.9 -1.0
CCX IAML 01 00 46.3
comp=N,2µm,0.8s
CPBX Cerro Prieto 1.69 131 Pn 01 00 18.6 -1.1
ESJX Sierra Juarez 1.69 154 Pg 01 00 20.6 -2.1
ESJX IAML 01 00 46.0
comp=N,2µm,0.3s
ESJX IAML 01 00 48.3
comp=E,2µm,0.7s
GLA Glamis 1.73 106 Pn 01 00 19.4 -1.0
GLA IAML 01 00 50.7
comp=E,1µm,0.6s
GLA IAML 01 01 00.2
comp=N,730nm,0.6s
GSC Goldstone, Bar 1.76 0 Pn 01 00 20.1 -0.6
GSC IAML 01 00 47.2
comp=N,1µm,0.8s
GSC IAML 01 00 48.6
comp=E,1µm,0.7s
TPO Tropico Hills 1.78 319 Pn 01 00 21.1 +0.1
TPO IAML 01 00 47.3
comp=E,781nm,0.7s
OSI Osito Audit: C 1.92 305 Pn 01 00 22.5 -0.4
OSI IAML 01 00 52.9
comp=N,935nm,0.6s
OSI IAML 01 00 54.9
comp=E,628nm,0.6s
BLYC Blythe 1.92 83 Pn 01 00 22.1 -0.8
BLYC IAML 01 00 51.2
comp=N,1µm,0.8s
BLYC IAML 01 00 58.3
comp=E,718nm,0.6s
CCCA Chr Cany lake 2.04 347 Pn 01 00 24.5 0.0
LRMC Laurel Mtn Rad 2.07 340 Pn 01 00 24.6 -0.4
LRMC IAML 01 00 56.3
comp=E,884nm,0.8s
NEE2 Needles Airpor 2.19 55 Pn **Pn 01 00 26.4 -0.3**
NEE2 IAML 01 01 04.7
comp=N,1µm,0.7s
MTPC Mountain Pass 2.20 28 Pn 01 00 25.8 -1.2
VTX Valle De La Tr 2.31 158 Pb 01 00 29.1 -2.8
VTX IAML 01 01 03.8
comp=N,852nm,0.7s
CLC China Lake 2.36 344 Pn 01 00 27.9 -1.2
SHOC Shoshone, Teco 2.40 11 Pn 01 00 29.1 -0.4
QSM Queen of Sheba 2.42 359 Pn 01 00 29.7 -0.1
QSM IAML 01 01 07.0
comp=N,671nm,0.5s
QSM IAML 01 01 08.4
comp=E,683nm,0.6s
ISA Isabella, Lake 2.52 328 Pn 01 00 31.0 -0.3
GWY Greenwater Val 2.65 3 Pn 01 00 32.8 -0.2
GWY IAML 01 01 14.3
comp=E,486nm,0.6s
GWY IAML 01 01 23.3
comp=N,399nm,0.6s
113A Mohawk Valley, 2.67 106 Pn 01 00 32.5 -0.7
V12A Nelson 2.72 36 Pn 01 00 33.6 -0.4
W13A Hualapai Mount 2.88 56 Pn 01 00 35.9 -0.4
FURC Furnace Creek, 2.92 359 Pn 01 00 36.6 0.0
VES Vestal, Richgr 2.96 321 Pn 01 00 37.8 +0.6
SFX San Felipe 3.00 146 Pn 01 00 37.7 0.0
CWC Cottonwood Cre 3.08 341 Pn 01 00 39.3 +0.4
Y14A Wickenburg 3.20 82 Pn 01 00 40.1 -0.4
WCT Wildcat Mounta 3.25 3 Pn 01 00 41.3 0.0
SHPR Sheep Range 3.26 24 Pn 01 00 41.1 -0.3
TPNV Topopah Spring 3.44 8 Pn 01 00 44.2 +0.4
TPNV IAML 01 01 42.8
comp=N,204nm,0.6s
TPNV IAML 01 01 43.0
comp=N,133nm,0.5s
PIX Pinacate 3.45 124 Pn 01 00 43.1 -0.8
GRAC Grapevine Rang 3.48 353 Pn 01 00 45.0 +0.6
GRAC IAML 01 01 45.0
comp=E,238nm,0.8s
GRAC IAML 01 01 49.3
comp=N,340nm,1.2s
TIN Tinemaha, Big 3.69 342 Pn 01 00 46.9 -0.5
214A Organ Pipe Nat 3.72 114 Pn 01 00 46.9 -0.8
PKD Bear Valley Ra 3.90 309 Pn 01 00 49.8 -0.4
DSP Deep Springs 3.94 346 Pn 01 00 51.5 +0.8
PMPB Monarch Peak 4.23 310 Pn 01 00 53.8 -0.9
HULI Fort Hunter Li 4.40 305 Pn 01 00 56.6 -0.4
HULI IAML 01 01 59.1
comp=N,55nm,3.4s
HULI IAML 01 02 19.5
comp=E,61nm,3.8s
LCMT Little Creek M 4.53 39 Pn 01 00 59.5 +0.5
X16A Lo Mia Camp, P 4.55 77 Pn 01 00 59.6 +0.4
BBGB Big Mountain B 4.61 312 Pn 01 00 59.7 -0.2
U15A North Rim 4.70 51 Pn 01 01 02.0 +0.6
CCUT Cedar City 4.89 34 Pn 01 01 04.6 +0.6
LHV Little Huntoon 4.90 344 Pn 01 01 05.3 +1.5
WUAZ Wupatki 4.91 65 Pn 01 01 04.9 +0.8
WUAZ IAML 01 02 25.3
comp=E,61nm,0.5s
WUAZ IAML 01 02 37.3
comp=E,72nm,0.9s
SAO San Andreas Ge 4.98 312 Pn **Pn 01 01 04.2 -0.7**
NVAR Mina Array Bea 5.03 347 Pn **Pn 01 01 07.7 +1.8**
comp=E,0.9nm,0.3s,baz=168,slow=13,SNR=12
NVAR Pg **Pb 01 01 17.9 -0.5**
comp=E,2.5nm,0.3s,baz=138,slow=14,SNR=21
NVAR Lg Lg 01 02 30.4
comp=E,1.2nm,0.3s,baz=147,slow=30,SNR=5.6
comp=E,2.4nm,0.6s
NVAR Mina Array Bea 5.03 347 Pn 01 01 06.0 +0.1
SZCU Shurtz Canyon 5.06 36 Pn **Pn 01 01 05.9 -0.4**
PKCU Pink Cliffs 5.36 42 Pn **Pn 01 01 11.7 +1.2**
MHC Mount Hamilton 5.47 315 Pn **Pn 01 01 11.2 -0.6**
ELK Elko 7.30 9 Pn **Pn 01 01 39.0 +2.0**
comp=E,0.5nm,0.3s,baz=192,slow=8.0,SNR=12
ELK Lg Lg 01 03 36.1
comp=E,0.6nm,0.3s,baz=93,slow=4.4,SNR=4.3
comp=E,1.5nm,0.4s
ANMO Albuquerque 8.69 78 Lg Lg 01 04 21.0
comp=E,0.1nm,0.3s,baz=74,slow=11,SNR=6.0
PDAR Pinedale Array 10.84 30 Pn **Pn 01 02 29.6 +4.2**
baz=204,slow=9.2,SNR=3.8
comp=E,0.4nm,0.7s
TXAR Lajitas Array 11.98 107 Pn **Pn 01 02 43.7 +2.6**
comp=E,0.1nm,0.3s,baz=282,slow=13,SNR=6.7
comp=E,0.1nm,0.3s
ILAR Eielson Array 36.23 339 P **P 01 06 56.5 +3.6**
comp=E,0.2nm,0.6s,baz=138,slow=10,SNR=4.1
comp=E,0.2nm,0.6s
JTS Las Juntas de 37.28 121 LR LR 01 22 00.8
comp=E,79nm,18.1s,baz=115,slow=36

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*NEIC **02** 01:01:23.8±1.2, 61°.94S±0°.04×165°.8E±0°.6, h10km±1km, mb4.7/12, Error ellipse: s-maj=48.9km s-min=5.6km az=83.0*
*GCMT **02** 01:01:25.8±0.3, 62°.12S±0°.02×165°.15E±0°.05, h26km±1km, MW5.0/75, Moment Tensor Solution. s24,c28; s75,c100; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.62±.25; Mθθ4.25±.20; Mφφ-3.62±.19; Mrθ-0.93±.29; Mθφ-1.68±.16; Mφr-1.38±.40; Best double couple: M0 4.62100×10^16 NP1:φs325.00000°, δ70.00000°, λ-11.00000°. NP2: φs58.00000°, δ80.00000°, λ-159.00000°. Principal axes: T 4.6730, Plg7.0000°, Azm190.0000°; N -0.0980, Plg67.0000°, Azm83.0000°; P -4.5700, Plg22.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **02** 01:01:27.9±2.8, 62°.53S×161°.86E, h0km, mb4.2/4, mbtmp4.3/5, ML4.4/1, MS4.0/25 Error ellipse: s-maj=162.1km s-min=23.3km az=73.0*
ISC 02 01:01:24.0±1.0**, 61°.96S**±0°.09×**165°.8E**±0°.3**, h10**km**, n53,** σ**1s.34**/20**, mb4.5**/7**, MS3.9**/25**, Balleny Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
VNDA Vanda 15.69 183 Pn **Pn 01 05 03.4 -1.4**
1.4nm,0.3s,baz=358,slow=12,SNR=21
VNDA LR LR 01 09 58.5
comp=Z,1µm,20.7s,baz=3.5,slow=34
4.6nm,0.4s
VNDA Vanda 15.69 183 Pn 01 05 03.5 -1.2
SBA Scott Base 15.98 179 Pn **Pn 01 05 08.1 -0.3**
SBA IAmb IAmb 01 05 38.9
comp=Z,153nm,1.5s
WHZ Wether Hill Ro 16.14 5 P 01 05 13.9 -0.1
MLZ Mavora Lakes 16.68 6 Pn **Pn 01 05 17.0 -0.6**
MLZ IAmb IAmb 01 05 30.0
comp=Z,61nm,1.4s
URZ Urewera 24.73 22 LR LR 01 16 30.5
comp=Z,876nm,19.1s,baz=186,slow=35
QSPA South Pole Qui 28.14 180 P **P 01 07 16.1 +0.2**
comp=Z,9.4nm,1.0s,baz=14,slow=4.0,SNR=5.6
QSPA LR LR 01 17 28.3
comp=Z,528nm,18.4s,baz=32,slow=35
comp=Z,9.4nm,1.0s
QSPA South Pole Qui 28.14 180 P **P 01 07 16.4 +0.4**
QSPA IAmb IAmb 01 07 20.6
comp=Z,11nm,1.1s
STKA Stephens Creek 33.92 321 P **P 01 08 08.0 +1.0**
comp=Z,2.0nm,0.8s,baz=174,slow=16,SNR=3.4
STKA LR LR 01 19 39.2
comp=Z,214nm,18.7s,baz=167,slow=33
comp=Z,2.0nm,0.8s
STKA Stephens Creek 33.92 321 P **P 01 08 07.6 +0.7**
MAW Mawson 39.34 216 LR LR 01 24 50.3
comp=Z,387nm,20.1s,baz=118,slow=37
DZM Mont Dzumac 39.86 1 *e*LR LR 01 19 36.9
comp=Z,173nm,27.4s
H01W1 Cape Leeuwin H 42.03 286 T T 01 54 01.9
baz=146,slow=75,SNR=48
H01W2 Cape Leeuwin H 42.03 286 T T 01 54 02.0
baz=146,slow=75,SNR=58
H01W3 Cape Leeuwin H 42.05 286 T T 01 54 03.1
baz=146,slow=75,SNR=50
NWAO Narrogin (SRO) 42.30 290 LR LR 01 23 30.2
comp=Z,82nm,18.2s,baz=94,slow=32
ASAR Alice Springs 43.98 316 P **P 01 09 30.9 -0.4**
comp=Z,4.0nm,0.7s,baz=160,slow=8.2,SNR=23
ASAR LR LR 01 24 56.0
comp=Z,73nm,18.2s,baz=132,slow=33
comp=Z,4.0nm,0.7s
ASAR Alice Springs 43.98 316 P **P 01 09 30.0 -1.3**
AS31 Alice Springs 43.98 316 P 01 09 30.6 -0.6
CTA Charters Tower 43.99 333 LR LR 01 24 57.8
comp=Z,203nm,19.1s,baz=138,slow=32
CTAO Charters Tower 43.99 333 P **P 01 09 30.3 -1.0**
CTAO IAmb IAmb 01 09 43.0
comp=Z,25nm,1.4s
SNAA Sanae 46.42 185 LR LR 01 28 27.9
comp=Z,370nm,18.9s,baz=178,slow=36
RAR Rarotonga 47.09 46 LR LR 01 27 06.1
comp=Z,121nm,19.4s,baz=218,slow=32
WR8 Warramunga Arr 47.25 318 P **P 01 09 56.2 -0.9**
WR8 IAmb IAmb 01 10 08.4
comp=Z,11nm,1.3s
WRA Warramunga Arr 47.32 318 P **P 01 09 55.8 -1.8**
comp=Z,0.9nm,0.8s,baz=161,slow=6.6,SNR=6.0
WRA PcP **PcP 01 11 30.2 +1.7**
comp=Z,1.1nm,0.9s,baz=158,slow=3.5,SNR=5.4
comp=Z,0.9nm,0.8s
PMSA Palmer Station 48.26 154 LR LR 01 25 48.7
comp=Z,114nm,21.1s,baz=110,slow=30
TBI Tubuai 49.01 59 *e*LR LR 01 23 39.6
comp=Z,838nm,23.8s
TBI *e*T T 02 03 06.9
comp=Z,61nm,0.3s
COEN Coen 50.60 331 P **P 01 10 24.9 +2.1**
COEN IAmb IAmb 01 10 31.0
comp=Z,10.0nm,1.1s
FITZ Fitzroy Crossi 52.01 309 LR LR 01 31 00.5
comp=Z,79nm,18.4s,baz=156,slow=35
HNR Honiara 52.60 353 LR LR 01 29 51.8
comp=Z,8.6nm,18.6s,baz=358,slow=32
KNRA Kununurra 53.13 313 P **P 01 10 41.0 -0.7**
PAE Paea 54.08 56 *e*T T 02 09 27.0
comp=Z,11nm,0.2s
PPT2 Papeete2 54.15 56 *e*LR LR 01 25 51.5
comp=Z,160nm,27.2s
PPT2 *e*LR LR 01 25 58.3
comp=Z,180nm,25.8s
PPT2 *e*T T 02 09 27.8
comp=Z,20nm,0.3s
PPT Papeete 54.17 56 LR LR 01 29 57.9
comp=Z,75nm,19.0s,baz=216,slow=30
PMG Port Moresby 54.20 337 LR LR 01 30 31.2
comp=Z,164nm,19.5s,baz=182,slow=32
TIAR Tiarei 54.27 56 *e*T T 02 09 35.0
comp=Z,41nm,0.3s
VAH Vaihoa 57.05 57 *e*T T 02 13 10.9
comp=Z,3.3nm,0.2s
RABL Rabaul 58.53 344 P **P 01 11 19.0 -1.5**
BATI Baumata 60.00 310 LR LR 01 36 52.5
comp=Z,112nm,18.4s,baz=31,slow=36
JAY Jayapura 62.23 331 LR LR 01 35 47.8
comp=Z,57nm,19.4s,baz=46,slow=33
RPN Rapa Nui 64.05 99 LR LR 01 32 27.5
comp=Z,73nm,19.1s,baz=224,slow=28
KAPI Kappang 66.22 308 LR LR 01 40 19.1
comp=Z,54nm,19.1s,baz=140,slow=36
SUR Sutherland 81.83 209 LR LR 01 46 24.1
comp=Z,117nm,21.4s,baz=155,slow=34
BOSA Boshof 84.32 214 LR LR 01 47 18.4
comp=Z,88nm,21.4s,baz=173,slow=33
H08S2 Diego Garcia H 84.88 263 T T 02 47 33.3
baz=151,slow=76,SNR=14
H08S1 Diego Carcia H 84.89 263 T T 02 47 33.7
baz=151,slow=76,SNR=15
H08S3 Diego Garcia H 84.90 263 T T 02 47 41.9
baz=151,slow=76,SNR=22
CPUP Villa Florida 85.45 142 LR LR 01 48 15.0
comp=Z,49nm,19.8s,baz=218,slow=33
PALK Pallekele 94.07 278 LR LR 01 51 15.1
comp=Z,35nm,18.0s,baz=155,slow=32
TSUM Tsumeb 95.26 210 LR LR 01 54 36.8
comp=Z,202nm,21.9s,baz=160,slow=34
CMAR Chiang Mai Arr 95.81 299 LR LR 01 55 49.1
comp=Z,20nm,18.9s,baz=155,slow=34
JNU Nakatsue 98.87 331 LR LR 01 59 09.7
comp=Z,41nm,18.4s,baz=52,slow=35
MKAR Makanchi Array 127.14 301 PKP **PKiKP 01 20 30.6 +2.8**
comp=Z,1.0nm,1.0s,baz=134,slow=5.2,SNR=4.6

IDC 02 01:13:15.9±2.9**, 5°.67S**×**129°.92E, h132**km±38km**, mb3.5**/1**, mbtmp3.9**/5**, Error ellipse: s-maj=72.0km s-min=19.8km az=87.0, Banda Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SIJI Sorong 4.95 16 P Pn 01 14 28.8 +0.3
17nm,0.2s,baz=38,slow=6.0,SNR=39
SIJI S Sn 01 15 21.1 -3.8
20nm,0.3s,baz=264,slow=23,SNR=10
FITZ Fitzroy Crossi 13.04 198 P Pn 01 16 15.7 -0.7
2.4nm,0.7s,baz=25,slow=9.7,SNR=13
FITZ S Sn 01 18 32.6 -7.7
0.9nm,0.3s,baz=150,slow=20,SNR=1.8
WRA Warramunga Arr 14.83 164 P Pn 01 16 37.4 -1.7
0.5nm,0.4s,baz=346,slow=9.5,SNR=18
WRA S Sn 01 19 12.4 -11
1.4nm,0.5s,baz=349,slow=18,SNR=8.2
ASAR Alice Springs 18.30 168 P Pn 01 17 21.2 -0.2
2.5nm,0.6s,baz=345,slow=9.2,SNR=43
ASAR S S 01 20 38.0 -4.5

	0.3nm,0.6s,baz=331,slow=15,SNR=3.8						
MKAR	**Makanchi Array**	**67.08**	**327**	P	P	01 23 55.0	-0.1
	0.6nm,0.4s,baz=113,slow=8.2,SNR=19						
	0.6nm,0.4s						

*NEIC **02** 01:28:09.2±1.1, 19°.00N±0°.03×67°.65W±0°.03, h10km±2km, ML3.1/33, Md2.9/9(RSPR), Error ellipse: s-maj=5.0km s-min=4.2km az=319.0*

RSPR 02 01:28:12.8, 18°.86N×67°.67W, h10km±31km, MD2.9/9, 3C-10D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.51**	**158**		Pg	01 28 21.9	-0.8
IDE					Sg	01 28 29.9	+0.5
IDE	**Isla Desecheo**	**0.51**	**158**	⇓iP	Pg	01 28 21.9	-0.8
IDE				eS	Sg	01 28 29.9	+0.5
AGPR	**Aguadilla, PR**	**0.66**	**126**		Pg	01 28 23.9	-1.7
AGPR					Sg	01 28 33.8	-0.5
AGPR				IAML		01 28 35.3	
	726nm,0.5s						
AGPR				IAML		01 28 35.9	
	474nm,0.3s						
AGPR	**Aguadilla, PR**	**0.66**	**126**	⇓iP	Pg	01 28 23.9	-1.6
AGPR				eS	Sg	01 28 33.8	-0.4
PRSN	**Puerto Rico Se**	**0.81**	**142**		Pg	01 28 26.9	-1.5
PRSN					Sg	01 28 39.1	+0.1
PRSN	**Puerto Rico Se**	**0.81**	**142**	IAML		01 28 45.3	
	1µm,0.2s						
PRSN				IAML		01 28 48.0	
	2µm,0.2s						
PRSN	**Puerto Rico Se**	**0.81**	**142**	⇓eP	Pg	01 28 26.9	-1.5
PRSN				eS	Sg	01 28 39.1	+0.1
LSP	**Las Mesas**	**0.88**	**141**		Pg	01 28 27.9	-1.9
LSP					Sb	01 28 41.9	-0.1
LSP	**Las Mesas**	**0.88**	**141**	⇓eP	Pg	01 28 27.9	-1.9
LSP				eS	Sb	01 28 41.9	-0.1
CRPR	**Cabo Rojo, PR**	**1.00**	**148**		Sb	01 28 46.3	+0.8
CRPR	**Cabo Rojo, PR**	**1.00**	**148**	⇓iP	Pg	01 28 32.2	+0.1
CRPR				eS	Sb	01 28 46.3	+0.8
HIDR	**Higuey Centro**	**1.03**	**255**	⇑eP	Pg	01 28 29.5	-3.0
HIDR				eS	Sg	01 28 43.8	-2.1
MLPR	**Magueyes Islan**	**1.07**	**146**		Pg	01 28 31.4	-2.0
MLPR				IAML		01 28 50.6	
	470nm,0.4s						
MLPR				IAML		01 28 51.9	
	316nm,0.3s						
UUPR	**Utuado, UPR, P**	**1.09**	**124**		Pg	01 28 30.5	-3.2
UUPR				IAML		01 28 51.5	
	3µm,0.4s						
UUPR				IAML		01 28 55.1	
	3µm,0.3s						
EMPR	**Esperanza - Ma**	**1.15**	**109**		Pb	01 28 31.8	-3.0
EMPR					Sb	01 28 48.2	-1.5
EMPR	**Esperanza - Ma**	**1.15**	**109**	⇓iP	Pb	01 28 31.8	-3.0
EMPR				eS	Sb	01 28 48.2	-1.5
GBPR	**Guanica, Bosqu**	**1.16**	**139**		Pb	01 28 32.8	-2.2
GBPR					Sg	01 28 50.3	+0.2
GBPR	**Guanica, Bosqu**	**1.16**	**139**	⇑iP	Pb	01 28 32.8	-2.2
GBPR				eS	Sg	01 28 50.3	+0.2
OBIP	**Obispado Ponce**	**1.30**	**129**		Pn	01 28 33.9	-3.1
OBIP					Sb	01 28 52.0	-2.0
OBIP	**Obispado Ponce**	**1.30**	**129**	IAML		01 28 57.8	
	comp=N,94nm,0.3s						
OBIP	**Obispado Ponce**	**1.30**	**129**	⇓iP	Pn	01 28 33.9	-3.1
OBIP				eS	Sb	01 28 52.0	-2.0
ECPR	**Experimental S**	**1.35**	**113**		Pn	01 28 34.2	-3.6
ECPR				IAML		01 28 58.1	
	comp=N,623nm,0.2s						
ECPR				IAML		01 29 00.6	
	comp=N,434nm,0.2s						
ECPR	**Experimental S**	**1.35**	**113**	⇓iP	Pn	01 28 34.0	-3.7
ECPR				eS	Sb	01 28 52.0	-3.6
SMDR	**Samana, DR**	**1.50**	**287**		Pn	01 28 36.5	-3.2
SMDR					Sn	01 28 56.2	-3.2
SMDR	**Samana, DR**	**1.50**	**287**	⇓eP	Pn	01 28 36.5	-3.2
SMDR				eS	Sn	01 28 56.2	-3.2
GCPR	**Guaynabo City**	**1.60**	**110**		Pn	01 28 38.9	-2.3
GCPR					Sn	01 28 59.3	-2.7
GCPR	**Guaynabo City**	**1.60**	**110**	IAML		01 29 04.3	
	comp=E,76nm,0.5s						
GCPR				IAML		01 29 11.0	
	comp=N,56nm,0.5s						
GCPR	**Guaynabo City**	**1.60**	**110**	⇑eP	Pn	01 28 38.9	-2.3
GCPR				eS	Sn	01 28 59.3	-2.7
SJG	**San Juan**	**1.62**	**117**		Pn	01 28 38.4	-3.1
SJG	**San Juan**	**1.62**	**117**	IAML		01 29 03.3	
	comp=N,184nm,0.5s						
SJG				IAML		01 29 08.5	
	comp=N,176nm,0.3s						
SJG	**San Juan**	**1.62**	**117**	⇓eP	Pn	01 28 38.4	-3.1
SJG				eS	Sn	01 29 00.0	-2.5
PDPR	**Patillas Dam,**	**1.78**	**118**		Pn	01 28 40.2	-3.4
PDPR				IAML		01 29 08.0	
	comp=N,79nm,0.2s						
PDPR				IAML		01 29 13.2	
	comp=N,90nm,0.2s						
HUMP	**Col San Antoni**	**1.87**	**112**		Pn	01 28 41.9	-3.0
HUMP					Sn	01 29 07.7	-0.9
HUMP	**Col San Antoni**	**1.87**	**112**	IAML		01 29 17.5	
	comp=N,123nm,0.2s						
HUMP				IAML		01 29 14.5	
	comp=N,88nm,0.2s						
HUMP	**Col San Antoni**	**1.87**	**112**	⇑eP	Pn	01 28 41.9	-3.0
HUMP				eS	Sn	01 29 07.7	-0.9
CUPR	**Culebra, Puert**	**2.33**	**103**	Pn	Pn	01 28 46.9	-4.3
CUPR				IAML		01 29 29.0	
	comp=N,27nm,0.9s						
CUPR				IAML		01 29 31.4	
	comp=N,27nm,0.8s						

IDC 02 01:37:15.2±1.6, 3°.14S×130°.87E, h0km, mb3.4/2, mbtmp3.4/5, ML3.2/3, Error ellipse: s-maj=72.7km s-min=20.2km az=90.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.29**	**10**	Pn	Pn	01 37 54.6	+0.3
	2.0nm,0.3s,baz=216,slow=22,SNR=12						
SIJI				Sn	Sn	01 38 23.2	0.0
	4.6nm,0.3s,baz=273,slow=23,SNR=6.8						
	4.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.72**	**199**	Pn	Pn	01 40 57.1	-1.1
	0.1nm,0.3s,baz=25,slow=14,SNR=1.0						
	1.4nm,0.6s						
WRA	**Warramunga Arr**	**17.04**	**169**	P	Pn	01 41 14.0	-1.1
	0.1nm,0.3s,baz=351,slow=12,SNR=5.5						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**20.61**	**172**	P	P	01 41 56.9	+0.6
	1.8nm,0.4s,baz=351,slow=11,SNR=44						
	1.8nm,0.4s						
MKAR	**Makanchi Array**	**65.53**	**326**	P	P	01 48 00.7	+0.1
	0.1nm,0.6s,baz=124,slow=8.2,SNR=1.6						
	0.1nm,0.6s						

*IDC **02** 01:42:01.5±2.9, 32°.16S×178°.54W, h0km, mb3.6/2, mbtmp3.8/3, ML4.0/1, Error ellipse: s-maj=67.8km s-min=35.7km az=112.0*

*WEL **02** 01:42:03.6±1.0, 32°S±8°×17°8W±1°7, h0km, M4.5/6, mB5.0/3, ML4.4/10, MLv4.5/6, Mw(mB)4.3/3, Error ellipse: s-maj=24.1km s-min=6.1km az=110.8*

ISC 02 01:41:58.8±1.6, 32°.30S±0°.07×177°.5W±0°.2, h21km, n22, σ2s.42/30, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.06**	**352**	P	**Pb**	**01 42 51.1**	**-1.3**
GLKZ				S	**Sn**	**01 43 22.0**	**+0.3**
MXZ	**Matakaoa Point**	**6.30**	**212**	P	**Pn**	**01 43 33.5**	**+3.1**
MXZ				S	**Sn**	**01 44 40.5**	**-1.3**
PKGZ	**Pakihiroa**	**6.65**	**212**	P	**Pn**	**01 43 38.4**	**+3.1**
PKGZ				S	**Sn**	**01 44 50.5**	**0.0**
HAZ	**Te Kaha**	**6.70**	**214**	P	**Pn**	**01 43 38.9**	**+2.9**
HAZ				S	**Sn**	**01 44 51.7**	**0.0**
PUZ	**Puketiti**	**6.75**	**210**	P	Pn	01 43 42.0	+5.5
RUGZ	**Raukumara Rang**	**6.92**	**214**	P	**Pn**	**01 43 41.9**	**+2.8**
RUGZ				S	**Sn**	**01 44 57.4**	**+0.3**
TWGZ	**Tauwhareparae**	**6.95**	**211**	P	**Pn**	**01 43 42.2**	**+2.7**
TWGZ				S	**Sn**	**01 44 57.3**	**-0.6**
TKGZ	**Te Karaka**	**7.23**	**211**	P	Pn	01 43 48.8	+5.7
MWZ	**Matawai**	**7.29**	**213**	P	**Pn**	**01 43 46.6**	**+2.6**
MWZ				S	**Sn**	**01 45 04.1**	**-2.0**
URZ	**Urewera**	**7.42**	**215**	Pn	**Pn**	**01 43 46.9**	**+1.1**
	2.8nm,0.3s,baz=251,slow=4.2,SNR=18						
URZ				Sn	**Sn**	**01 45 05.1**	**-4.3**
	1.8nm,0.3s,baz=164,slow=20,SNR=9.3						
	7.1nm,0.3s						
URZ	**Urewera**	**7.42**	**215**	P	**Pn**	**01 43 46.9**	**+1.1**
URZ				S	**Sn**	**01 45 06.4**	**-3.0**
RAGZ	**Rawiri**	**7.47**	**213**	P	**Pn**	**01 43 47.7**	**+1.2**
RAGZ				S	**Sn**	**01 45 08.0**	**-2.6**
RIGZ	**Rimuhau**	**7.49**	**210**	P	**Pn**	**01 43 48.7**	**+1.9**
PRGZ	**Paritu Road**	**7.62**	**209**	P	Pn	01 43 53.7	+5.1
WCZ	**Waipu Caves**	**7.71**	**240**	P	**Pn**	**01 43 53.9**	**+4.1**
KNZ	**Kokohu**	**7.79**	**209**	P	**Pn**	**01 43 53.1**	**+2.3**
OUZ	**Omahuta**	**8.01**	**246**	P	**Pn**	**01 43 56.8**	**+3.0**
BKZ	**Black Stump Fm**	**8.44**	**214**	P	**Pn**	**01 44 02.1**	**+2.3**
BKZ				S	**Sn**	**01 45 31.3**	**-3.1**
NGZ	**Ngauruhoe**	**8.88**	**218**	P	**Pn**	**01 44 08.3**	**+2.3**
ASAR	**Alice Springs**	**43.51**	**269**	P	**P**	**01 49 59.4**	**-1.6**
	0.2nm,0.4s,baz=105,slow=7.8,SNR=4.9						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**44.67**	**274**	P	**P**	**01 50 08.7**	**-1.6**
	0.5nm,0.3s,baz=112,slow=8.1,SNR=15						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**147.09**	**339**	PKPbc	**PKiKP**	**02 01 43.2**	**+1.5**
	6.9nm,1.2s,baz=33,slow=4.5,SNR=8.0						

*IDC **02** 01:41:58.2±0.6, 18°.85N×67°.63W, h0km, mb4.0/15, mbtmp4.0/16, ML3.1/1, MS3.1/4, Error ellipse: s-maj=17.2km s-min=13.6km az=52.0*

*OSPL **02** 01:41:59.3±1.0, 19°.03N×67°.75W, h3km±5km, ML4.7, Presumed earthquake*

*NEIC **02** 01:42:00.9±1.7, 18°.98N±0°.03×67°.53W±0°.04, h10km±1km, mb4.5/51, ML4.4/47, ML4.2/7(RSPR), Error ellipse: s-maj=7.5km s-min=2.8km az=236.0*

*RSNC **02** 01:42:01.2±0.8, 19°N±8°×6°8W±°, h0km, mB5.2, mb4.5, ML3.5, Mw(mB)4.5*

*RSPR **02** 01:42:01.8, 18°.99N×67°.70W, h10km±31km, MD3.3/7*

*SDD **02** 01:42:02.1±2.5, 18°.96N×67°.65W, h0km±12km, MD3.7, ML4.3, MW4.0, Presumed earthquake*

ISC 02 01:42:02.4±1.0, 18°.91N±0°.04×67°.69W±0°.02, h28km±8km, n156, σ1s.85/189, mb4.4/40, MS3.1/3, 18C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.56**	**158**		**Pb**	**01 42 12.8**	**-1.0**
IDE					**Sb**	**01 42 21.7**	**+0.2**
IDE	**Isla Desecheo**	**0.56**	**158**	⇓iP	**Pb**	**01 42 12.8**	**-1.0**
IDE				eS	**Sb**	**01 42 21.7**	**+0.2**
AGPR	**Aguadilla, PR**	**0.70**	**129**		**Pb**	**01 42 14.5**	**-1.6**
AGPR				Sg	**Sb**	**01 42 24.5**	**-1.0**
AGPR				IAML		01 42 25.6	
	18µm,0.5s						
AGPR	**Aguadilla, PR**	**0.70**	**129**	⇑iP	**Pb**	**01 42 14.6**	**-1.6**
AGPR				⇑iS	**Sb**	**01 42 24.9**	**-0.6**
AGPR				IAML		01 42 25.5	
	comp=N,13µm,0.3s						
AGPR	**Aguadilla, PR**	**0.70**	**129**	⇑iP	**Pb**	**01 42 14.7**	**-1.5**
AGPR				eS	**Sb**	**01 42 24.7**	**-0.8**
AGPR	**Aguadilla, PR**	**0.70**	**129**	iP	**Pb**	**01 42 14.5**	**-1.6**
AGPR				eS	**Sb**	**01 42 24.9**	**-0.6**
AGPR				IAML		01 42 25.8	
	comp=Z,8µm,0.3s						
PCDR	**Punta Cana, DR**	**0.76**	**239**	⇑iP	**Pb**	**01 42 16.8**	**-0.3**
PCDR				⇑iS	**Sb**	**01 42 27.1**	**-0.1**
PRSN	**Puerto Rico Se**	**0.86**	**143**		**Pn**	**01 42 17.2**	**-1.4**
PRSN					**Sb**	**01 42 30.2**	**+0.3**
PRSN	**Puerto Rico Se**	**0.86**	**143**	⇑iP	**Pn**	**01 42 17.2**	**-1.4**
PRSN				⇑iS	**Sb**	**01 42 29.9**	**-0.1**
PRSN				IAML		01 42 35.2	
	comp=N,19µm,0.2s						
PRSN	**Puerto Rico Se**	**0.86**	**143**	⇓eP	**Pn**	**01 42 17.6**	**-1.1**
PRSN				eS	**Sn**	**01 42 30.8**	**+0.5**
LSP	**Las Mesas**	**0.93**	**142**		**Pn**	**01 42 18.5**	**-1.1**
LSP					**Sn**	**01 42 32.7**	**+0.7**
LSP	**Las Mesas**	**0.93**	**142**	⇓eP	**Pn**	**01 42 18.5**	**-1.1**
LSP				eS	**Sn**	**01 42 32.7**	**+0.7**
HIDR	**Higuey Centro**	**1.02**	**252**	⇓iP	**Pn**	**01 42 20.5**	**-0.4**
HIDR				⇑iS	**Sn**	**01 42 34.2**	**0.0**
HIDR				IAML		01 42 37.5	
	comp=N,6µm,0.6s						
HIDR	**Higuey Centro**	**1.02**	**252**	⇓eP	**Pn**	**01 42 20.5**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.05**	**148**		**Pn**	**01 42 20.3**	**-1.0**
CRPR				IAML		01 42 40.9	
	comp=N,12µm,0.5s						
CRPR				IAML		01 42 44.0	
	comp=N,6µm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.05**	**148**		**Sb**	**01 42 36.2**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.05**	**148**	⇑iP	**Pn**	**01 42 20.8**	**-0.5**
CRPR				⇑iS	**Sb**	**01 42 37.5**	**+2.1**
CRPR				IAML		01 42 41.5	
	comp=N,10µm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.05**	**148**	⇓eP	**Pn**	**01 42 20.6**	**-0.7**
CRPR				eS	**Sb**	**01 42 36.2**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.05**	**148**	iP	**Pn**	**01 42 20.9**	**-0.3**
CRPR				eS	**Sb**	**01 42 36.2**	**+0.7**
CRPR				IAML		01 42 41.1	
	comp=Z,8µm,0.7s						
MLPR	**Magueyes Islan**	**1.12**	**147**		**Pn**	**01 42 21.0**	**-1.2**
MLPR				IAML		01 42 40.8	
	comp=Z,6µm,0.8s						
MLPR				IAML		01 42 41.3	
	comp=Z,12µm,0.5s						
UUPR	**Utuado, UPR, P**	**1.13**	**125**		**Pn**	**01 42 20.8**	**-1.6**
EMPR	**Esperanza - Ma**	**1.18**	**111**		**Pn**	**01 42 21.8**	**-1.3**
EMPR					**Sn**	**01 42 37.8**	**-0.4**
EMPR	**Esperanza - Ma**	**1.18**	**111**	⇑iP	**Pn**	**01 42 21.8**	**-1.3**
EMPR				eS	**Sn**	**01 42 37.8**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.21**	**140**		**Pn**	**01 42 23.2**	**-0.2**
GBPR					**Sb**	**01 42 39.9**	**0.0**
GBPR	**Guanica, Bosqu**	**1.21**	**140**	⇑eP	**Pn**	**01 42 23.2**	**-0.2**
GBPR				eS	**Sb**	**01 42 39.9**	**0.0**
MIDR	**Miches**	**1.29**	**274**	⇑iP	**Pn**	**01 42 24.6**	**+0.1**
MIDR				⇑iS	**Sb**	**01 42 43.8**	**+1.6**
MIDR				IAML		01 42 47.6	
	comp=N,4µm,0.6s						
MIDR				IAML		01 42 47.9	
	comp=N,4µm,0.5s						
CELP	**Cerrillos**	**1.34**	**128**		**Pn**	**01 42 24.5**	**-0.8**
CELP				IAML		01 42 49.9	
	comp=N,4µm,0.2s						
OBIP	**Obispado Ponce**	**1.34**	**130**		**Pn**	**01 42 24.5**	**-0.8**
OBIP	**Obispado Ponce**	**1.34**	**130**		**Sn**	**01 42 42.7**	**+0.5**
OBIP	**Obispado Ponce**	**1.34**	**130**	⇑iP	**Pn**	**01 42 24.6**	**-0.8**
OBIP				eS	**Sn**	**01 42 42.7**	**+0.5**
OBIP	**Obispado Ponce**	**1.34**	**130**	iP	**Pn**	**01 42 24.5**	**-0.8**
OBIP				eS	**Sn**	**01 42 43.2**	**+1.0**
OBIP				IAML		01 42 47.0	
	comp=Z,20µm,0.2s						
ECPR	**Experimental S**	**1.39**	**115**		**Pn**	**01 42 24.5**	**-1.4**
ECPR				IAML		01 42 50.0	
	comp=Z,8µm,0.2s						
ECPR				IAML		01 42 54.3	
	comp=Z,8µm,0.2s						
ECPR	**Experimental S**	**1.39**	**115**	⇑iP	**Pn**	**01 42 24.6**	**-1.4**
ECPR				eS	**Sn**	**01 42 43.1**	**-0.3**
SMDR	**Samana, DR**	**1.47**	**285**		**Pn**	**01 42 27.4**	**+0.4**
SMDR					**Sb**	**01 42 48.1**	**+0.8**
SMDR	**Samana, DR**	**1.47**	**285**	⇑iP	**Pn**	**01 42 27.6**	**+0.6**
SMDR				⇑iS	**Sb**	**01 42 48.1**	**+0.8**
SMDR				IAML		01 42 51.7	
	comp=N,4µm,0.5s						
SMDR	**Samana, DR**	**1.47**	**285**	⇓eP	**Pn**	**01 42 27.4**	**+0.4**
DR12	**Loma Pena Alta**	**1.61**	**266**		**Pn**	**01 42 29.3**	**+0.4**
HATOM	**Hato Mayor del**	**1.61**	**266**	⇑iP	**Pb**	**01 42 31.7**	**+0.2**
HATOM				⇑iS	**Sb**	**01 42 52.3**	**+1.0**
HATOM				IAML		01 42 55.4	
	comp=N,3µm,0.7s						
GCPR	**Guaynabo City**	**1.64**	**111**		**Pn**	**01 42 28.2**	**-1.1**
GCPR	**Guaynabo City**	**1.64**	**111**		**Sn**	**01 42 48.8**	**-0.7**
GCPR	**Guaynabo City**	**1.64**	**111**	⇓eP	**Pn**	**01 42 28.3**	**-1.1**
GCPR				eS	**Sn**	**01 42 48.8**	**-0.7**
SJG	**San Juan**	**1.66**	**118**	Pn	**Pn**	**01 42 28.5**	**-1.2**
	comp=N,154nm,0.3s,baz=304,slow=12,SNR=90						
SJG				Sn	**Sn**	**01 42 47.8**	**-2.3**
	comp=N,288nm,0.3s,baz=75,slow=5.6,SNR=12						
SJG	**San Juan**	**1.66**	**118**	IAML		01 42 55.6	
	comp=N,4µm,0.5s						
SJG				IAML		01 42 55.9	
	comp=N,3µm,0.3s						
SJG	**San Juan**	**1.66**	**118**	P	**Pn**	**01 42 28.5**	**-1.2**
SJG				S	**Sn**	**01 42 51.3**	**+1.2**
SJG	**San Juan**	**1.66**	**118**	⇑iP	**Pn**	**01 42 29.2**	**-0.5**
SJG				iS	**Sn**	**01 42 51.1**	**+1.0**
SJG	**San Juan**	**1.66**	**118**	⇑eP	**Pn**	**01 42 28.6**	**-1.2**
SJG				eS	**Sn**	**01 42 50.5**	**+0.4**
SJG	**San Juan**	**1.66**	**118**	iP	**Pn**	**01 42 28.5**	**-1.2**
SJG				eS	**Sn**	**01 42 51.6**	**+1.6**
SJG				IAML		01 42 56.1	
	comp=Z,28µm,0.2s						
PDPR	**Patillas Dam,**	**1.81**	**119**		**Pn**	**01 42 30.8**	**-1.0**
HUMP	**Col San Antoni**	**1.91**	**113**		**Pn**	**01 42 32.1**	**-0.9**
HUMP	**Col San Antoni**	**1.91**	**113**		**Sn**	**01 42 56.1**	**0.0**
HUMP	**Col San Antoni**	**1.91**	**113**	⇓eP	**Pn**	**01 42 32.3**	**-0.7**
HUMP				eS	**Sn**	**01 42 56.1**	**0.0**
SDD	**Santo Domingo**	**2.15**	**258**		**Pb**	**01 42 40.6**	**-0.2**
CUPR	**Culebra, Puert**	**2.36**	**104**		**Pn**	**01 42 37.5**	**-1.8**
BANI	**BANI**	**2.58**	**259**		**Pb**	**01 42 45.5**	**-2.6**
SC01	**Santiago de lo**	**2.92**	**281**		**Pb**	**01 42 50.7**	**-3.0**
SDDR	**Presa de Saban**	**3.41**	**272**		**Pn**	**01 42 57.3**	**+3.6**
SDDR	**Presa de Saban**	**3.41**	**272**	eP	**Pb**	**01 42 59.5**	**-2.6**
SDDR				eS	**Sb**	**01 43 41.4**	**-1.8**
SDDR				IAML		01 43 53.5	
	comp=Z,1µm,0.4s						
SDDR				IAML		01 43 54.6	
	comp=Z,1µm,0.6s						
SDDR	**Presa de Saban**	**3.41**	**272**	P	**Pn**	**01 42 57.6**	**+3.9**
SDDR				S	**Sb**	**01 43 45.0**	**+1.8**
GRTK	**Grand Turk**	**4.14**	**309**		**Pn**	**01 43 04.8**	**+1.0**
GRTK				IAML		01 43 49.7	
	comp=Z,465nm,0.3s						
GRTK				IAML		01 43 51.1	
	comp=Z,319nm,0.5s						
GRTK	**Grand Turk**	**4.14**	**309**	eP	**Pn**	**01 43 03.0**	**-0.8**
GRTK				eS	**Sn**	**01 43 48.4**	**-2.9**
GRTK				IAML		01 43 55.2	
	comp=Z,270nm,0.3s						
GRTK				IAML		01 43 55.2	
	comp=Z,273nm,0.2s						
GRTK	**Grand Turk**	**4.14**	**309**	P	**Pn**	**01 43 01.7**	**-2.1**
GRTK				S	**Sn**	**01 43 48.0**	**-3.3**
SMRT	**St. Maarten**	**4.46**	**100**		**Pn**	**01 43 07.3**	**-0.9**
SMRT				IAML		01 44 08.7	
	comp=E,304nm,0.5s						
SMRT				IAML		01 44 11.3	
	comp=N,258nm,0.6s						
ANWB	**Willy Bob**	**5.74**	**101**		**Pn**	**01 43 29.1**	**+3.2**
ANWB	**Willy Bob**	**5.74**	**101**	P	**Pn**	**01 43 28.0**	**+2.2**
	comp=N,3µmcomp=N,180nm,1.2s						
ANWB				S	**Sn**	**01 44 28.8**	**-2.0**
	comp=N,3µmcomp=N,180nm,1.2s						
ANWB	**Willy Bob**	**5.74**	**101**	eP	**Pn**	**01 43 24.7**	**-1.1**
DHSZ	**Broadband at M**	**6.23**	**114**	eP	**Pn**	**01 43 35.8**	**+3.3**
MASC	**Masc**	**6.30**	**283**	eP	**Pn**	**01 43 32.9**	**-0.5**
MASC				eS	**Sn**	**01 44 42.1**	**-2.3**
MASC				IAML		01 44 47.9	
	comp=N,26nm,0.3s						
MASC				IAML		01 44 49.6	
	comp=E,23nm,0.3s						
ATGZ	**Broadband at L**	**6.34**	**115**	eP	**Pn**	**01 43 36.1**	**+2.1**
MMLZ	**Guadeloupe Bro**	**6.41**	**115**	eP	**Pn**	**01 43 35.5**	**+0.4**
DSDZ	**La Diserade, G**	**6.82**	**111**	eP	**Pn**	**01 43 41.3**	**+0.6**
QMBU	**Quimbuelo**	**6.84**	**282**	eP	**Pn**	**01 43 38.9**	**-2.0**
QMBU				eS	**Sn**	**01 44 54.1**	**-3.8**
QMBU				IAML		01 44 58.4	
	comp=N,72nm,0.3s						
QMBU				IAML		01 44 59.8	
	comp=E,78nm,0.3s						
DSLB	**Salisbury**	**6.92**	**119**	eP	**Pn**	**01 43 42.0**	**0.0**
MOAC	**Moa**	**7.06**	**285**	eP	**Pn**	**01 43 41.7**	**-2.2**
MOAC				eS	**Sn**	**01 44 59.0**	**-4.3**
MOAC				IAML		01 45 03.1	
	comp=N,23nm,0.4s						
MOAC				IAML		01 45 04.7	
	comp=E,13nm,0.3s						
GTBY	**Guantanamo Bay**	**7.08**	**279**	eP	**Pn**	**01 43 43.0**	**-1.2**
GTBY				eS	**Sn**	**01 45 00.0**	**-3.7**
GTBY				IAML		01 45 05.0	
	comp=E,18nm,0.5s						
GTBY				IAML		01 45 05.5	
	comp=E,23nm,0.5s						
GTBY	**Guantanamo Bay**	**7.08**	**279**	P	**Pn**	**01 43 42.1**	**-2.0**
GTBY				S	**Sn**	**01 44 59.9**	**-3.7**
BIM	**Bigot**	**7.70**	**124**	eP	**Pn**	**01 43 52.9**	**+0.1**
PINC	**Pinares de May**	**7.79**	**283**	eP	**Pn**	**01 43 51.6**	**-2.4**
PINC				eS	**Sn**	**01 45 17.4**	**-3.8**
PINC				IAML		01 45 23.3	
	comp=N,7.8nm,0.1s						
PINC				IAML		01 45 23.6	
	comp=E,7.8nm,0.1s						
MARVS	**Santiago de Cu**	**7.82**	**279**	eP	**Pn**	**01 43 54.3**	**-0.1**
MARVS				eS	**Sn**	**01 45 18.6**	**-3.5**
MARVS				IAML		01 45 21.8	
	comp=E,8.8nm,0.3s						
MARVS				IAML		01 45 25.2	
	comp=N,13nm,0.3s						
SLBI	**Saint Lucia, B**	**8.07**	**126**	eP	**Pn**	**01 43 58.8**	**+1.0**
HLGC	**Holguin**	**8.12**	**285**	eP	**Pn**	**01 43 59.7**	**+1.2**
HLGC				eS	**Sn**	**01 45 28.8**	**-0.6**
HLGC				IAML		01 45 32.6	
	comp=N,36nm,0.6s						
HLGC				IAML		01 45 32.7	
	comp=E,25nm,0.5s						
URIC	**Uribia, Colomb**	**8.28**	**211**	P	**Pn**	**01 44 00.0**	**-0.7**
	comp=E,21nm,1.3s						
URIC				S	**Sn**	**01 45 28.4**	**-4.9**
	comp=E,21nm,1.3s						
CCCC	**Cccc**	**9.74**	**285**	eP	Pn	01 44 13.2	-7.5
CCCC				eS	Sn	01 45 54.6	-15
CCCC				IAML		01 45 57.5	
	comp=E,10.0nm,0.4s						
CCCC				IAML		01 45 59.1	
	comp=N,14nm,0.5s						
SMRC	**Santa Marta, M**	**9.95**	**220**	P	**Pn**	**01 44 20.6**	**-3.1**
	comp=N,26nm,1.1s						
SMRC				S	**Sn**	**01 46 06.5**	**-8.0**
	comp=N,26nm,1.1s						
SDV	**Santo Domingo**	**10.36**	**196**	Pn	**Pn**	**01 44 27.6**	**-1.9**
	comp=N,1.6nm,0.3s,baz=37,slow=8.1,SNR=8.1						
SDV				LR	LR	01 49 02.0	
	comp=N,84nm,18.3s,baz=16,slow=41						
	comp=N,1.7nm,0.4s						
SDV	**Santo Domingo**	**10.36**	**196**		**Pn**	**01 44 30.8**	**+1.3**
SDV	**Santo Domingo**	**10.36**	**196**	P	**Pn**	**01 44 30.5**	**+1.0**
SDV				S	**Sn**	**01 46 23.0**	**-1.8**
OCAC	**Ocana**	**11.93**	**208**	P	**Pn**	**01 44 52.9**	**+2.0**
OCAC				S	**Sn**	**01 46 57.0**	**-6.2**
PAMC	**Pamplona, Colo**	**12.49**	**204**	P	**Pn**	**01 44 59.4**	**+0.6**
PAMC				S	Sn	01 47 08.5	-8.8
BARC	**Barichara**	**13.36**	**204**	P	**Pn**	**01 45 12.1**	**+1.6**
UREC	**San Jos de Ur**	**13.46**	**216**	P	**Pn**	**01 45 13.1**	**+1.5**
APAC	**Apartado, Choc**	**13.94**	**219**	P	**Pn**	**01 45 17.2**	**-1.0**
	comp=N,19nm,0.7s						
RUSC	**La Rusia**	**13.96**	**203**	P	**Pn**	**01 45 18.7**	**-0.3**
DBBC	**Dabeiba**	**14.44**	**216**	P	**Pn**	**01 45 26.5**	**+1.4**
SPBC	**San Pablo de B**	**14.57**	**206**	P	**Pn**	**01 45 29.9**	**+3.0**
HELC	**Santa Helena**	**14.77**	**212**	P	**Pn**	**01 45 32.8**	**+3.0**
NORC	**Norcasia**	**15.00**	**209**	P	**Pn**	**01 45 35.1**	**+2.5**
CBOC	**Ciudad Bolivar**	**15.29**	**213**	P	**Pn**	**01 45 36.9**	**+0.2**
	comp=N,614nmcomp=N,20nm,1.0s						
CHIC	**Chingaza**	**15.37**	**203**	P	**Pn**	**01 45 38.7**	**+0.8**
ROSC	**El Rosal**	**15.41**	**206**	Pn	**Pn**	**01 45 40.4**	**+2.1**
	comp=N,2.0nm,0.3s,baz=14,slow=7.6,SNR=8.5						
ROSC	**El Rosal**	**15.41**	**206**		**P**	**01 45 41.0**	**-1.7**
ROSC				IAmb	IAmb	01 45 52.2	
	comp=Z,26nm,0.8s						
ROSC	**El Rosal**	**15.41**	**206**	P	**P**	**01 45 44.1**	**+1.4**
ANIL	**Santa Ana**	**16.19**	**209**	P	**P**	**01 45 53.5**	**+2.2**
ORTC	**Ortega, Tolima**	**16.64**	**207**	P	**Pn**	**01 45 54.9**	**+1.1**
PRAC	**Prado**	**16.66**	**206**	P	**P**	**01 45 56.5**	**+0.3**
BOAV	**Boa Vista**	**17.85**	**156**		**P**	**01 46 09.7**	**+0.4**
JTS	**Las Juntas de**	**18.76**	**245**	P	**Pn**	**01 46 22.2**	**+2.2**
	comp=Z,17nm,1.1s,baz=90,slow=15,SNR=4.5						
OTAV	**Otavalo**	**21.35**	**211**	P	**P**	**01 46 50.9**	**+2.9**
OTAV				IAmb	IAmb	01 46 57.3	
	comp=Z,35nm,1.1s						
TKL	**Tuckaleechee C**	**21.92**	**323**	P	**P**	**01 46 58.3**	**+4.8**
	comp=Z,2.7nm,0.8s,baz=156,slow=14,SNR=2.0						
TKL				S	**S**	**01 50 48.4**	**-5.8**
	comp=Z,3.3nm,0.4s,baz=241,slow=18,SNR=4.4						
TKL				LR	LR	01 54 59.0	
	comp=Z,41nm,19.2s,baz=135,slow=36						
TKL	**Tuckaleechee C**	**21.92**	**323**	IAmb	IAmb	01 47 30.3	
	comp=Z,33nm,1.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
APG	El Apazote	22.12	263	P	P	01 47 00.1	+4.0
	comp=Z,0.2nm,0.3s,baz=139,slow=9.3,SNR=4.6						
WVT	Waverly	24.68	318		P	01 47 21.7	+0.8
WVT				IAmb	IAmb	01 47 22.8	
	comp=Z,21nm,1.4s						
SIUC	Southern Illin	26.54	319	IAmb	IAmb	01 47 40.1	
	comp=Z,13nm,0.9s						
ATAH	Atahualpa	27.95	203	P	P	01 47 52.3	+1.2
	comp=Z,5.6nm,0.8s,baz=134,slow=15,SNR=4.1						
ATAH				LR	LR	02 01 09.2	
	comp=Z,48nm,18.6s,baz=16,slow=41						
	comp=Z,5.6nm,0.8s						
P43A	Skaggs, Pawnee	27.96	322	P	P	01 47 51.4	+0.9
MGMO	Mountain Grove	28.17	315	IAmb	IAmb	01 47 54.1	
	comp=Z,5.2nm,0.8s						
PLPT	Palo Pinto	30.71	303	IAmb	IAmb	01 48 18.4	
	comp=Z,5.1nm,0.9s						
WMOK	Wichita Mounta	31.75	306	P	P	01 48 24.8	+0.6
WMOK				IAmb	IAmb	01 48 26.1	
	comp=Z,3.8nm,0.8s						
MNHN	Monahans	33.93	298	IAmb	IAmb	01 48 45.5	
	comp=Z,3.5nm,0.6s						
TXAR	Lajitas Array	34.31	295	P	P	01 48 48.0	+1.3
	comp=Z,1.0nm,0.7s,baz=112,slow=9.2,SNR=13						
TXAR				PcP	PcP	01 51 23.8	+1.1
	comp=Z,1.3nm,0.9s,baz=107,slow=5.2,SNR=7.1						
	comp=Z,1.0nm,0.7s						
ALPN	Alpine	34.47	296	IAmb	IAmb	01 48 50.1	
	comp=Z,5.2nm,0.8s						
ECSD	EROS Data Cent	34.66	322		P	01 48 50.3	+0.8
ECSD				IAmb	IAmb	01 48 51.3	
	comp=Z,5.0nm,0.8s						
LPAZ	La Paz	34.98	181	P	P	01 48 52.6	-0.5
	comp=Z,0.5nm,0.4s,baz=348,slow=6.8,SNR=4.5						
	comp=Z,0.5nm,0.4s						
VHRN	Van Horn	35.69	297	IAmb	IAmb	01 49 07.9	
	comp=Z,5.3nm,0.9s						
SCHQ	Schefferville	35.87	1	P	P	01 49 00.7	+1.0
	comp=Z,2.1nm,0.6s,baz=185,slow=7.1,SNR=6.3						
	comp=Z,2.1nm,0.6s						
SDCO	Great Sand Dun	37.88	308		P	01 49 18.7	+1.3
PV02	Paradox Valley	40.46	307	P	P	01 49 39.5	+0.6
PV02				IAmb	IAmb	01 49 41.6	
	comp=Z,11nm,1.2s						
PV18	Skein Mesa, Pa	40.60	307	P	P	01 49 40.1	+0.1
PV18				IAmb	IAmb	01 49 43.0	
	comp=Z,8.8nm,1.0s						
PDAR	Pinedale Array	42.52	313	P	P	01 49 55.7	0.0
	comp=Z,0.4nm,0.8s,baz=84,slow=7.6,SNR=3.4						
PDAR				PcP	PcP	01 51 48.5	+0.5
	comp=Z,0.3nm,0.6s,baz=97,slow=2.6,SNR=4.1						
PDAR				LR	LR	02 07 16.5	
	comp=Z,32nm,19.1s,baz=244,slow=36						
	comp=Z,0.4nm,0.8s						
IRM	Iron Mountain	44.70	300		P	01 50 15.7	+2.5
IRM				IAmb	IAmb	01 50 16.6	
	comp=Z,5.3nm,0.9s						
YUH	Yuha Desert	45.17	297	IAmb	IAmb	01 50 20.4	
	comp=Z,5.3nm,0.9s						
TPNV	Topopah Spring	45.99	303	IAmb	IAmb	01 50 48.0	
	comp=Z,6.2nm,1.1s						
DPP	Dos Picos Cty	46.06	298	IAmb	IAmb	01 50 33.2	
	comp=Z,8.1nm,1.1s						
CPUP	Villa Florida	46.08	167	P	P	01 50 21.6	-2.4
	comp=Z,1.8nm,0.8s,baz=343,slow=11,SNR=5.0						
	comp=Z,1.8nm,0.8s						
CPUP	Villa Florida	46.08	167	IAmb	IAmb	01 50 30.4	
	comp=Z,2.9nm,0.9s						
WCT	Wildcat Mounta	46.27	303	IAmb	IAmb	01 50 59.2	
	comp=Z,5.7nm,1.3s						
NV11	Mina Array Sit	47.73	305	IAmb	IAmb	01 50 39.7	
	comp=Z,3.8nm,0.8s						
NVAR	Mina Array Bea	47.84	305	P	P	01 50 39.1	+1.0
	comp=Z,1.7nm,0.8s,baz=110,slow=4.7,SNR=13						
	comp=Z,1.7nm,0.8s						
YKA	Yellowknife Ar	54.16	335	P	P	01 51 24.9	+0.1
	comp=Z,1.6nm,0.8s,baz=113,slow=6.5,SNR=23						
	comp=Z,1.6nm,0.8s						
ESDC	Sonseca Array	58.11	55	P	P	01 51 54.9	+1.3
	comp=Z,1.4nm,0.9s,baz=273,slow=7.4,SNR=9.3						
	comp=Z,1.4nm,0.9s						
EKA	Eskdalemuir Ar	60.20	36	P	P	01 52 08.5	+0.8
	comp=Z,1.0nm,0.7s,baz=308,slow=7.1,SNR=5.1						
	comp=Z,1.0nm,0.7s						
A36M	Sachs Harbour	62.34	343	P	P	01 52 22.3	+0.4
E29M	Blow River	65.29	337	IAmb	IAmb	01 52 42.5	
	comp=Z,4.6nm,0.8s						
TORD	Torodi Ar. Bea	66.58	84	P	P	01 52 50.4	-0.2
	comp=Z,1.1nm,1.0s,baz=261,slow=8.4,SNR=4.7						
	comp=Z,1.1nm,1.0s						
SCRK	Sand Creek	67.17	332	P	P	01 52 55.0	+1.4
G26K	Porcupine Rive	67.31	336	IAmb	IAmb	01 52 57.1	
	comp=Z,2.5nm,1.0s						
PRP	Porcupine Dome	67.92	334	P	P	01 52 58.7	+0.3
F25K	Christian Rive	68.08	336	IAmb	IAmb	01 53 01.7	
	comp=Z,3.7nm,0.9s						
NOA	NORSAR Array B	68.28	31	P	P	01 52 59.5	-1.1
	comp=Z,1.0nm,0.7s,baz=270,slow=6.2,SNR=3.5						
	comp=Z,1.0nm,0.7s						
D25K	Kavik River	68.46	338	IAmb	IAmb	01 53 02.9	
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	68.46	333	P	P	01 53 01.6	-0.1
	comp=Z,1.8nm,0.9s,baz=89,slow=4.9,SNR=17						
	comp=Z,1.8nm,0.9s						
E24K	Your Creek	69.18	337	IAmb	IAmb	01 53 08.4	
	comp=Z,4.2nm,0.9s						
G23K	Bananza Creek	69.77	335	IAmb	IAmb	01 53 12.2	
	comp=Z,4.7nm,0.9s						
ARCES	ARCESS Array B	73.56	21	P	P	01 53 32.6	+0.1
	comp=Z,1.4nm,0.5s,baz=194,slow=2.5,SNR=6.3						
	comp=Z,1.4nm,0.5s						
FINES	FINESS Array B	75.37	30	P	P	01 53 43.9	+0.8
	comp=Z,2.1nm,0.9s,baz=253,slow=4.2,SNR=3.9						
	comp=Z,2.1nm,0.9s						
HHC	Hu-ho-hao-te	120.55	1	eP	PKPdf	02 00 48.9	-3.0
PZH	PanZhiHua	133.71	13	PKP	PKPdf	02 01 17.7	+0.3

*RSPR **02** 01:44:27.1, 18.°00N×66.°79W, h13km, MD3.7/5*
*NEIC **02** 01:44:27.4±2.1, 18.°05N±0.°02×66.°764W±0.°009, h10km±1km, ML4.0/35, Md3.7/5(RSPR), Error ellipse: s-maj=2.6km s-min=1.5km az=181.0*
*SDD **02** 01:44:27.5±0.7, 18.°02N×66.°78W, h4km±49km, MD3.5, ML3.9, MW3.7, Presumed earthquake*
*IDC **02** 01:44:31.1±1.1, 18.°50N×66.°09W, h0km, mb3.7/3, mbtmp3.7/3, MS3.5/1, Error ellipse: s-maj=51.4km s-min=7.8km az=100.0*
ISC 02 01:44:27.5±0.8**, 18.°03N**±0.°03×**66.°78W**±0.°02**, h14**km±5km**, n48,** σ1.s02/63**, mb3.8**/3**, 8C-12D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.11	242		Pg	01 44 30.3	-0.5
GBPR	Guanica, Bosqu	0.11	242	⇑eP	Pg	01 44 30.3	-0.5
OBIP	Obispado Ponce	0.16	85		Pg	01 44 31.2	-0.3
OBIP	Obispado Ponce	0.16	85	⇓eP	Pg	01 44 31.3	-0.3
OBIP				eS	Sg	01 44 34.3	+0.1
CELP	Cerrillos	0.19	76		Pg	01 44 31.8	-0.2
CELP				Sg	Sg	01 44 35.1	+0.1
CELP				IAML		01 44 35.4	
	41µm,0.4s						
CELP				IAML		01 44 35.5	
	60µm,0.2s						
UUPR	Utuado, UPR, P	0.23	13	Pg	Pg	01 44 32.2	-0.4
UUPR				Sg	Sg	01 44 35.7	-0.4
MLPR	Magueyes Islan	0.26	257	Pg	Pg	01 44 32.3	-0.8
MLPR				Sg	Sg	01 44 36.3	-0.7
MLPR				IAML		01 44 36.6	
	17µm,0.5s						
MLPR				IAML		01 44 36.8	
	31µm,0.4s						
CRPR	Cabo Rojo, PR	0.32	266	Pg	Pg	01 44 33.2	-0.9
CRPR				Sg	Sg	01 44 37.4	-1.2
CRPR	Cabo Rojo, PR	0.32	266	IAML		01 44 38.0	
	21µm,0.1s						
CRPR				IAML		01 44 38.1	
	17µm,0.2s						
CRPR	Cabo Rojo, PR	0.32	266	⇓ePg	Pg	01 44 33.2	-0.9
CRPR				⇓eSg	Sg	01 44 36.5	-2.1
CRPR				IAML		01 44 38.1	
	comp=N,20µm,0.2s						
CRPR	Cabo Rojo, PR	0.32	266	⇓eP	Pg	01 44 33.2	-0.9
CRPR				eS	Sg	01 44 37.9	-0.7
LSP	Las Mesas	0.33	296		Pg	01 44 33.6	-0.8
LSP	Las Mesas	0.33	296	⇓eP	Pg	01 44 33.6	-0.8
PRSN	Puerto Rico Se	0.40	298		Pg	01 44 34.5	-1.0
PRSN				Sg	Sg	01 44 40.5	-0.5
PRSN	Puerto Rico Se	0.40	298	⇑ePg	Pg	01 44 34.6	-1.0
PRSN				⇓eSg	Sg	01 44 40.5	-0.5
PRSN				IAML		01 44 42.5	
	comp=N,33µm,0.2s						
PRSN	Puerto Rico Se	0.40	298	⇑eP	Pg	01 44 34.5	-1.0
PRSN				eS	Sg	01 44 40.6	-0.5
ECPR	Experimental S	0.49	53	Pg	Pg	01 44 36.5	-0.7
ECPR				Sg	Sg	01 44 43.6	-0.1
ECPR				IAML		01 44 44.8	
	comp=N,18µm,0.2s						
ECPR				IAML		01 44 45.0	
	comp=N,16µm,0.2s						
ECPR	Experimental S	0.49	53	⇓eP	Pg	01 44 36.5	-0.7
ECPR				eS	Sg	01 44 43.3	-0.4
EMPR	Esperanza - Ma	0.50	27		Pg	01 44 37.4	-0.1
EMPR					Sb	01 44 44.8	-0.6
EMPR	Esperanza - Ma	0.50	27	⇓eP	Pg	01 44 37.4	-0.1
EMPR				eS	Sb	01 44 44.8	-0.6
AGPR	Aguadilla, PR	0.54	324	Pg	Pg	01 44 37.2	-1.1
AGPR				IAML		01 44 49.4	
	comp=N,6µm,0.4s						
AGPR	Aguadilla, PR	0.54	324	⇑ePg	Pg	01 44 37.2	-1.1
AGPR				⇓eSg	Sg	01 44 44.7	-0.7
AGPR				IAML		01 44 49.3	
	comp=N,6µm,0.4s						
AGPR	Aguadilla, PR	0.54	324	⇑eP	Pg	01 44 37.1	-1.1
AGPR				eS	Sg	01 44 45.4	-0.1
SJG	San Juan	0.60	82	Pg	Pg	01 44 38.2	-1.1
	comp=N,242nm,0.3s,baz=299,slow=23,SNR=17						
SJG				Lg	Lg	01 44 44.5	
	comp=N,475nm,0.3s,baz=303,slow=20,SNR=17						
SJG	San Juan	0.60	82	IAML		01 44 49.0	
	comp=N,6µm,0.5s						
SJG	San Juan	0.60	82	⇓ePg	Pg	01 44 38.3	-1.1
SJG				⇓eSg	Sg	01 44 46.7	-0.6
SJG	San Juan	0.60	82	⇓eP	Pg	01 44 38.2	-1.1
GCPR	Guaynabo City	0.71	67		Pg	01 44 40.2	-1.2
GCPR	Guaynabo City	0.71	67		Sg	01 44 49.9	-1.0
GCPR	Guaynabo City	0.71	67	⇑eP	Pg	01 44 40.2	-1.2
GCPR				eS	Sg	01 44 49.9	-1.0
PDPR	Patillas Dam,	0.72	91		Pg	01 44 40.2	-1.3
IDE	Isla Desecheo	0.76	298		Pg	01 44 40.6	-1.6
IDE	Isla Desecheo	0.76	298	⇑eP	Pg	01 44 40.6	-1.6
HUMP	Col San Antoni	0.89	83		Pg	01 44 42.6	-2.1
HUMP				IAML		01 45 00.6	
	comp=N,3µm,0.2s						
HUMP	Col San Antoni	0.89	83		Sg	01 44 55.3	-1.1
HUMP	Col San Antoni	0.89	83	⇑eP	Pg	01 44 42.8	-1.9
HUMP				eS	Sg	01 44 55.3	-1.1
CUPR	Culebra, Puert	1.45	79	Pn	Pn	01 44 52.5	-0.7
DR12	Loma Pena Alta	2.59	287	Pn	Pn	01 45 10.3	+1.3
SMRT	St. Maarten	3.52	89	Pn	Pn	01 45 21.2	-0.6
GDHS	Morne Mazeau,	5.10	109	Pn	Pn	01 45 44.4	+0.8
ABD	La Joyeuse, An	5.28	106		Pn	01 45 45.4	-0.6
CBE	Ff, Capester	5.31	111	Pn	Pn	01 45 48.4	+1.9
BIM	Bigot	6.50	122	Pn	Pn	01 46 01.1	-1.6
SDV	Santo Domingo	9.83	203	Pn	Pn	01 46 50.3	+1.6
SCHQ	Schefferville	36.74	360	P	P	01 51 35.2	+1.1
	comp=N,1.4nm,0.8s,baz=184,slow=13,SNR=2.2						
	comp=N,1.4nm,0.8s						
YKA	Yellowknife Ar	55.32	335	P	P	01 54 05.9	+5.5
	comp=N,0.2nm,0.7s,baz=116,slow=5.9,SNR=2.2						
	comp=N,0.2nm,0.7s						
ESDC	Sonseca Array	57.92	54	P	P	01 54 19.9	+0.5
	comp=N,1.8nm,0.9s,baz=264,slow=6.9,SNR=8.6						
	comp=N,1.8nm,0.9s						
RES	Resolute Bay	58.70	352	LR	LR	02 21 41.9	
	comp=N,44nm,19.1s,baz=22,slow=38						

*IDC **02** 01:45:50.4±1.0, 8.°39S×37.°84E, h0km, mb4.2/5, mbtmp4.3/7, ML4.3/2, MS3.4/6, Error ellipse: s-maj=34.0km s-min=17.0km az=131.0*
*NEIC **02** 01:45:52.3±1.1, 8.°2S±0.°1×37.°7E±0.°2, h10km±2km, mb4.2/9, Error ellipse: s-maj=33.8km s-min=16.4km az=111.0*
ISC 02 01:45:50.6±0.9**, 8.°49S**±0.°08×**37.°92E**±0.°10**, h10**km**, n34,** σ2.s00/33**, mb4.4**/5**, MS3.4**/6**, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIBK	Kibwezi	6.11	1		Pn	01 47 18.6	-2.6
MBAR	Mbarara	10.61	317	Pn	Pn	01 48 22.8	-0.2
	1.1nm,0.3s,baz=143,slow=11,SNR=4.9						
MBAR				Sn	Sn	01 50 21.0	-1.1
	1.5nm,0.3s,baz=66,slow=19,SNR=2.2						
MBAR				Lg	Lg	01 51 18.2	
	2.0nm,0.3s,baz=220,slow=17,SNR=5.4						
	3.0nm,0.2s						
LSZ	Lusaka	11.67	234	Pn	Pn	01 48 39.0	+1.6
	1.0nm,0.3s,baz=50,slow=11,SNR=13						
LSZ				Sn	Sn	01 50 49.6	+1.7
	0.5nm,0.3s,baz=350,slow=22,SNR=4.5						
LSZ				Lg	Lg	01 51 59.4	
	0.5nm,0.3s,baz=171,slow=9.5,SNR=4.4						
	4.0nm,0.5s						
LSZ	Lusaka	11.67	234		Pn	01 48 38.4	+1.0
LSZ	Lusaka	11.67	234	iP	Pn	01 48 39.3	+1.9
BLWY	Bulawayo	14.67	217	iP	Pn	01 49 16.9	-1.6
BROLN	Tlhalogang	16.17	218	iP	Pn	01 49 36.0	-2.3
BROLN				iS	Sn	01 52 27.5	-10
SOOWA	Sowa	16.49	222	iP	Pn	01 49 39.7	-2.6
SOOWA				iS	Sn	01 52 41.3	-4.2
SOOWA				IAML		01 55 21.9	
	comp=E,43nm,0.9s						
KHWEE	KHWEE	17.98	221	P	Pn	01 50 00.7	-0.2
KHWEE				IAmb	IAmb	01 50 28.3	
	comp=Z,15nm,0.9s						
LPHEP	Lephephe	18.77	217	P	P	01 50 08.7	-1.5
LPHEP				IAmb	IAmb	01 50 23.1	
	comp=Z,16nm,1.1s						
LPHEP	Lephephe	18.77	217	iP	P	01 50 06.3	-3.9
LPHEP				iS	Sn	01 53 28.6	-12
LPHEP				IAML		01 56 41.4	
	comp=E,31nm,6.3s						
LBTB	Lobatse	20.20	214	P	P	01 50 28.6	+2.8
	comp=E,5.9nm,1.0s,baz=39,slow=9.1,SNR=4.7						
LBTB				Lg	Lg	01 56 22.0	
	comp=E,0.1nm,0.3s,baz=295,slow=17,SNR=2.2						
	comp=E,5.9nm,1.0s						
LBTB	Lobatse	20.20	214	P	P	01 50 26.0	+0.2
LBTB	Lobatse	20.20	214	iP	P	01 50 27.6	+1.8
GRTLG	Ghanzi	20.57	230	P	P	01 50 31.0	+1.1
GRTLG				IAmb	IAmb	01 50 38.4	
	comp=Z,15nm,1.4s						
GRTLG	Ghanzi	20.57	230	iP	P	01 50 31.7	+1.9
GRTLG				IAML		01 57 11.4	
	comp=N,25nm,3.5s						
KGCAE	Kacgae	20.77	225	P	P	01 50 30.5	-1.6
KGCAE	Kacgae	20.77	225	iP	P	01 50 32.6	+0.6
KGCAE				IAML		01 57 13.0	
	comp=E,40nm,1.1s						
LKGWB	Lokgwabe	22.28	224	P	P	01 50 45.3	-3.0
KOOLE	Kule	22.30	228	P	P	01 50 50.4	+1.9
KOOLE				IAmb	IAmb	01 50 58.2	
	comp=Z,12nm,0.8s						
KOOLE	Kule	22.30	228	iP	P	01 50 50.9	+2.4
KOOLE				IAML		01 58 10.6	
	comp=E,24nm,6.2s						
TSUM	Tsumeb	22.41	240	Lg	Lg	01 57 48.9	
	comp=E,0.1nm,0.3s,baz=281,slow=19,SNR=2.0						
BOSA	Boshof	23.30	209	P	P	01 51 00.0	+1.1
	comp=E,6.3nm,0.9s,baz=32,slow=9.0,SNR=8.1						
BOSA				LR	LR	01 58 42.5	
	comp=E,106nm,21.4s,baz=36,slow=33						
	comp=E,6.3nm,0.9s						
BOSA	Boshof	23.30	209	P	P	01 51 00.5	+1.5
BOSA				IAmb	IAmb	01 51 15.5	
	comp=Z,10nm,1.0s						
BOSA	Boshof	23.30	209	iP	P	01 51 00.8	+1.8
PALK	Pallekele	45.43	71	LR	LR	02 08 23.1	
	comp=Z,48nm,21.2s,baz=196,slow=30						
MDT	Midelt	57.67	318	LR	LR	02 19 31.1	
	comp=Z,88nm,19.2s,baz=186,slow=35						
CMAR	Chiang Mai Arr	65.88	65	P	P	01 56 38.8	+1.7
	comp=Z,0.8nm,0.3s,baz=262,slow=7.5,SNR=4.7						
CMAR				LR	LR	02 23 52.9	
	comp=Z,8.2nm,18.6s,baz=280,slow=35						
	comp=Z,0.8nm,0.3s						
MKAR	Makanchi Array	67.71	31	P	P	01 56 48.6	+0.3
	comp=Z,2.1nm,0.9s,baz=224,slow=5.8,SNR=15						
MKAR				LR	LR	02 26 31.6	
	comp=Z,25nm,21.0s,baz=312,slow=36						
	comp=Z,2.1nm,0.9s						
MKAR	Makanchi Array	67.71	31	P	P	01 56 48.2	-0.1
KURBB	Kurchatov Arra	68.58	26	P	P	01 56 55.6	+2.1
	comp=Z,2.2nm,0.2s,baz=228,slow=7.0,SNR=6.7						
	comp=Z,2.2nm,0.2s						
KURK	Kurchatov	68.68	26	P	P	01 56 55.5	+1.3
SONM	Songino Array	82.18	39	LR	LR	02 37 30.6	
	comp=Z,21nm,18.4s,baz=102,slow=38						
NVAR	Mina Array Bea	143.30	328	PKP	PKPdf	02 05 25.4	-0.6
	comp=Z,1.3nm,0.9s,baz=86,slow=0.8,SNR=7.6						

AFAD 02 01:50:03.0, 39.°06N×27.°78E, h7km±5km**, ML1.2, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.18	172	P	Pg	01 50 09.4	+2.7
STEP	BALIKESIR_Sava	0.32	351	P	Pg	01 50 09.1	-0.1
KTTT	Salihli	0.45	147	P	Pb	01 50 12.5	-0.7
KTTT				S	Sg	01 50 17.8	+0.3
CAMT	Merkez	0.48	230	P	Pg	01 50 12.8	+0.6
ZEDA	zmir-Bergama	0.56	260	P	Pg	01 50 13.1	-0.6
ZEDA				IAML		01 50 16.0	
	comp=N,14nm,1.6s						
ZEDA				S	Sb	01 50 23.3	+0.1
DEMI	Demirci	0.73	91	P	Pg	01 50 17.5	+0.5
MANT	Manisa	0.83	133	P	Pb	01 50 19.6	-0.3
IZMR	zmir-demi	0.93	172	P	Pb	01 50 21.8	+0.3

ISK 02 01:50:38.3, 39.°01N×27.°84E, h16km**, ML1.3**/9**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.13	188	Pg	Pb	01 50 42.4	0.0
AKS				Sg	Sb	01 50 45.4	+0.3
SOMA	Soma-Manisa	0.28	302	Pg	Pb	01 50 44.8	-0.1
SOMA				Sg	Sb	01 50 49.2	-0.1
GORD	Gordes-Manisa	0.28	111	Pg	Pb	01 50 44.8	-0.2
ODEM	Odemis-Izmir	0.76	166	Pg	Pb	01 50 53.5	+0.4
ODEM				Sg	Sn	01 51 04.5	-0.9
KULA	Kula-Manisa	0.81	127	Pg	Pg	01 50 54.5	+0.4
YAYO	Edremit-Balk	0.84	316	Pg	Pn	01 50 55.2	-0.3
YAYO				Sg	Sn	01 51 07.5	0.0
SIMA	Simav-Kutahya	0.90	85	Pg	Pn	01 50 56.0	-0.3
SIMA				Sg	Sn	01 51 08.9	0.0
SUSR	Susurluk-Balik	0.97	11	Pg	Pn	01 50 57.5	+0.3
AYDB	Zeytinkoy-Aydi	1.06	178	Pg	Pg	01 50 58.9	0.0
NAZL	Nazilli-Aydin	1.10	161	Pn	Pg	01 50 59.5	-0.1

*SOME **02** 01:57:24.7, 41.°45N×84.°67E, h10km*
*NNC **02** 01:57:28.4±3.0, 41.°08N×84.°12E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=23.3km s-min=18.8km az=4.0*
ISC 02 01:57:27.5±2.3**, 41.°64N**±0.°10×**84.°56E**±0.°08**, h10**km**, n29,** σ2.s56/40**, 14C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	3.59	302	Pg	Pb	01 58 32.7	+1.4
	7.9nm,0.6s						
KTMS				Lg	Lg	01 59 22.7	
	92nm,0.6s						
KTMS	Ketmen	3.59	302	eP	Pb	01 58 32.7	+1.4
	8.2nm,0.3s						
KTMS				eS	Sg	01 59 22.7	-0.2
	60nm,0.3s						
SHLS	Shalkode	4.07	294	Pg	Pb	01 58 36.9	-2.4
	37nm,0.3s						
SHLS				Lg	Lg	01 59 31.1	
	244nm,0.4s						
SHLS	Shalkode	4.07	294	eP	Pb	01 58 36.4	-2.9
	15nm,0.3s						
SHLS				eS	Sb	01 59 28.9	+0.3
	247nm,0.5s						
PDGK	Podgornoye	4.11	296	⇑Pn	Pn	01 58 33.9	+3.4
	11nm,0.8s						
PDGK				⇑Pg	Pg	01 58 45.9	-0.4
	30nm,0.7s						
PDGK				⇑Sn	Sn	01 59 19.3	+0.6
	29nm,0.7s						
PDGK				⇓Lg	Lg	01 59 35.6	
	120nm,0.8s						
UZB	Uzynbulak	4.37	292	Pg	Pg	01 58 47.9	-3.2
	20nm,0.4s						
UZB				Lg	Lg	01 59 47.9	
	62nm,0.3s						
UZB	Uzynbulak	4.37	292	eP	Pb	01 58 46.9	+2.4
	9.0nm,0.2s						
UZB				eS	Sg	01 59 46.8	-1.0
	62nm,0.3s						
DJR	Jarkent	4.41	309	Pg	Pg	01 58 49.5	-2.6
	14nm,0.4s						
DJR				Lg	Lg	01 59 51.3	
	30nm,0.8s						
DJR	Jarkent	4.41	309	eP	Pg	01 58 49.5	-2.6
	14nm,0.4s						
DJR				eS	Sg	01 59 51.3	+2.1
	30nm,0.8s						
KPKS	Kokpek	4.71	295	Pg	Pb	01 58 52.0	+1.8
	0.5nm,0.4s						
KPKS				Lg	Lg	01 59 55.5	
	64nm,0.2s						
KPKS	Kokpek	4.71	295	eP	Pb	01 58 52.0	+1.8
	0.5nm,0.4s						
KPKS				eS	Sg	01 59 55.5	-3.1
	64nm,0.2s						
SATY	Saty	4.77	289	Pg	Pb	01 58 54.0	+2.7
	21nm,0.4s						
SATY				Lg	Lg	01 59 59.3	
	54nm,0.8s						
KURS	Kuram	5.07	293	Pg	Pb	01 58 58.6	+2.3
	11nm,0.7s						
KURS				Lg	Lg	02 00 09.4	
	34nm,0.9s						
BLB	Baldybastay	5.10	301	Pg	Pb	01 59 00.9	+4.0
	16nm,0.1s						
BLB				Lg	Lg	02 00 11.7	
	80nm,0.4s						
MK31	Makanchi Array	5.40	343	⇑Pn	Pb	01 59 00.4	-1.6
	0.3nm,0.3s,baz=157,slow=13,SNR=5.8						
MK31				⇑Pg	Pg	01 59 18.0	+7.0
	0.9nm,0.3s,baz=164,slow=15,SNR=7.2						
MK31				⇑Sn	Sb	02 00 06.4	-0.5
	5.3nm,0.6s,baz=86,slow=32,SNR=4.0						
MK31				⇑Lg	Lg	02 00 31.0	
	60nm,0.8s,baz=161,slow=27,SNR=6.4						
ARXS	Arharly	5.57	300	Pg	Pb	01 59 08.4	+3.5
	7.3nm,0.4s						
ARXS				Lg	Lg	02 00 24.3	
	39nm,0.6s						
ARXS	Arharly	5.57	300	eP	Pb	01 59 09.4	+4.6
	7.3nm,0.7s						
ARXS				eS	Sg	02 00 25.3	-0.9
	41nm,0.6s						
KOTS	Kotyrbulak	5.73	289	Pg	Pg	01 59 14.0	-3.4
	28nm,0.3s						
KOTS				Lg	Lg	02 00 33.7	
	77nm,0.7s						
KOTS	Kotyrbulak	5.73	289	eP	Pg	01 59 14.0	-3.4
	28nm,0.3s						
KOTS				eS	Sg	02 00 33.7	+2.1
	77nm,0.7s						
TNSS	Tian-Shan	5.81	286	Pg	Pb	01 59 12.6	+3.4
	3.1nm,0.8s						
TNSS				Lg	Lg	02 00 32.5	
	8.1nm,0.6s						
TNSS	Tian-Shan	5.81	286	eP	Pg	01 59 13.7	-5.1
	1.9nm,0.4s						
TNSS				eS	Sg	02 00 32.6	-1.4
	9.5nm,0.6s						
ZSN	Zaisan	5.81	2	Pg	Pg	01 59 16.2	-2.6
	2.7nm,0.2s						
ZSN				Lg	Lg	02 00 37.1	
	36nm,0.6s						
ZSN	Zaisan	5.81	2	eP	Pg	01 59 16.2	-2.6
	2.7nm,0.2s						
ZSN				eS	Sg	02 00 37.1	+3.0
	36nm,0.6s						
KTBS	Karatobe	6.16	292	Pg	Pg	01 59 23.1	-2.5
	7.7nm,0.3s						
KTBS				Lg	Lg	02 00 49.5	
	14nm,0.7s						
KTBS	Karatobe	6.16	292	eP	Pg	01 59 21.4	-4.1
	4.4nm,0.5s						
KTBS				eS	Sg	02 00 45.8	+0.5
	0.2nm,0.3s						

AAK	**Ala-Archa**	**7.55**	**281**	⇑Pn	**Pn**	**01 59 19.0**	**+1.2**
	0.4nm,0.4s						
AAK				⇑Pg	Pg	01 59 46.7	-5.3
	2.5nm,0.7s						
AAK				⇑Lg	Lg	02 01 22.3	
	10nm,0.9s						
KURBB	**Kurchatov Arra**	**9.90**	**337**	⇑Pn	**Pn**	**01 59 52.2**	**+2.3**
	0.7nm,0.6s						
KURBB				⇑Sn	Sn	02 02 01.2	+20
	3.3nm,0.6s						
KURBB				⇓Lg	Lg	02 02 56.1	
	33nm,0.8s						
KURK	**Kurchatov**	**9.96**	**338**	⇑Pn	Pn	01 59 55.5	+4.9
	0.1nm,0.6s						
KURK				⇑Sn	Sn	02 02 02.8	+20
	2.5nm,0.8s						
KURK				⇓Lg	Lg	02 02 58.5	
	7.7nm,0.8s						
KK31	**Karatay Array**	**10.50**	**283**	⇓Pn	**Pn**	**01 59 56.9**	**-1.2**
	0.1nm,0.2s,baz=192,slow=13,SNR=6.4						
KK31				⇓Lg	Lg	02 02 59.4	
	5.3nm,0.9s						

*SFS **02** 01:57:41.0,35.°45N×3.°76W,h0^{km},ML2.8/13,ML2.8/13, MLv2.7/13*
*MDD **02** 01:57:41.3±0.5,35.°44N×3.°76W,h6^{km}±4^{km},mb_Lg2.4/19, Error ellipse: s-maj=4.1km s-min=2.9km az=161.0*
*CNRM **02** 01:57:41.5,35.°52N×3.°81W,h25^{km},ML2.0*
*INMG **02** 01:57:42.4±1.7,35.°46N×3.°71W,h14^{km}±8^{km},ML1.9,Error ellipse: s-maj=4.2km s-min=3.5km az=122.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*
ISC 02 01:57:40.9±1.1**,35.°47N**±0.°02×**3.°75W**±0.°03**,h14**^{km}±9^{km}**, n61,**σ**1**^{s}**30**/117**,1C,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.29**	**212**	P	**Pb**	**01 57 48.8**	**+0.8**
PALE				S	**Sb**	**01 57 54.0**	**+1.4**
WMELI	**Melilla**	**0.67**	**103**	P	**Pg**	**01 57 53.2**	**-0.7**
WMELI				S	**Sg**	**01 58 02.3**	**-0.5**
EMEL	**Melilla**	**0.67**	**104**	⇑Pg	**Pg**	**01 57 53.7**	**-0.2**
EMEL				Pg	**Pg**	**01 57 53.7**	**-0.2**
EMEL				Sg	**Sg**	**01 58 02.4**	**-0.3**
EMEL				Sg	**Sg**	**01 58 02.4**	**-0.3**
EMLI	**Melilla**	**0.68**	**104**	P	**Pg**	**01 57 53.4**	**-0.6**
EMLI				S	**Sg**	**01 58 02.3**	**-0.7**
EALB	**Alboran**	**0.75**	**51**	P	**Pg**	**01 57 55.1**	**-0.4**
EALB				S	**Sg**	**01 58 05.6**	**+0.2**
EALB	**Alboran**	**0.75**	**51**	Pg	**Pg**	**01 57 55.6**	**+0.2**
EALB				Pg	**Pg**	**01 57 55.7**	**+0.2**
EALB				Sg	**Sg**	**01 58 05.6**	**+0.2**
EALB				Sg	**Sb**	**01 58 06.0**	**+0.2**
AKLM	**AKL**	**0.96**	**186**	P	**Pb**	**01 57 58.7**	**-0.6**
AKLM				S	**Sb**	**01 58 11.7**	**-0.2**
TAF	**Taforalt**	**1.27**	**120**	P	**Pn**	**01 58 04.9**	**+0.5**
TAF				S	**Sg**	**01 58 22.4**	**+0.5**
SMIR	**Smir Dam**	**1.35**	**280**	P	**Pn**	**01 58 04.1**	**-1.1**
SMIR				S	**Sn**	**01 58 21.8**	**-1.2**
CHEFC	**Chefchaouen**	**1.35**	**255**	P	**Pn**	**01 58 04.3**	**-1.1**
CHEFC				S	**Sb**	**01 58 21.5**	**-1.7**
EMIJ	**Mijas**	**1.37**	**323**	Pn	**Pn**	**01 58 06.0**	**+0.3**
EMIJ				Sn	**Sn**	**01 58 23.8**	**+0.1**
EMIJ				*i* IVmb_Lg		01 58 26.8	
ECEU	**Ceuta**	**1.39**	**288**	P	**Pn**	**01 58 06.7**	**+0.8**
ECEU	**Ceuta**	**1.39**	**288**	Pn	**Pn**	**01 58 05.2**	**-0.7**
ECEU				Sn	**Sn**	**01 58 21.9**	**-2.2**
ECEU				*i* IVmb_Lg		01 58 23.5	
ELGU	**Los Guajares,**	**1.40**	**4**	P	**Pn**	**01 58 05.2**	**-0.9**
ELGU				S	**Sn**	**01 58 24.5**	**0.0**
ELGU	**Los Guajares,**	**1.40**	**4**	Pn	**Pn**	**01 58 05.9**	**-0.3**
ELGU				Sn	**Sn**	**01 58 24.9**	**+0.4**
ELGU				*i* IVmb_Lg		01 58 29.2	
EMAL	**Malaga-Limoner**	**1.41**	**337**	P	**Pn**	**01 58 05.6**	**-0.5**
EMAL				S	**Sn**	**01 58 23.6**	**-0.8**
JBK	**JBK**	**1.49**	**139**	P	**Pn**	**01 58 07.2**	**-0.2**
JBK				S	**Sn**	**01 58 27.0**	**+0.2**
EGOR	**Sierra Gorda,**	**1.67**	**350**	P	**Pn**	**01 58 10.0**	**+0.2**
EGOR				S	**Sn**	**01 58 32.1**	**+1.0**
EGOR	**Sierra Gorda,**	**1.67**	**350**	Pn	**Pn**	**01 58 09.8**	**0.0**
EGOR				Sn	**Sn**	**01 58 31.5**	**+0.4**
EGOR				*i* IVmb_Lg		01 58 40.0	
EJIF	**Jimena Fronter**	**1.71**	**306**	Pn	**Pn**	**01 58 10.2**	**0.0**
EJIF				Sn	**Sn**	**01 58 32.0**	**+0.1**
RSA	**Sarsar**	**1.79**	**252**	P	**Pn**	**01 58 10.7**	**-0.7**
RSA				S	**Sn**	**01 58 33.0**	**-1.0**
LCRM	**LCR**	**2.00**	**208**	P	**Pn**	**01 58 15.7**	**+1.3**
LCRM				S	**Sb**	**01 58 42.5**	**+0.6**
ESPR	**Espera**	**2.21**	**310**	P	**Pn**	**01 58 17.1**	**+0.1**
ESPR				S	**Sn**	**01 58 46.4**	**+2.2**
IFR	**Ifrane**	**2.25**	**211**	P	**Pn**	**01 58 18.3**	**+0.4**
IFR				S	**Sn**	**01 58 45.7**	**+0.1**
EQES	**Quesada**	**2.40**	**13**	Pn	**Pn**	**01 58 20.3**	**+0.5**
EQES				Sn	**Sn**	**01 58 49.4**	**+0.4**
EQES				*i* IVmb_Lg		01 58 53.9	
MD31	**MD31**	**2.72**	**198**	P	**Pn**	**01 58 24.5**	**+0.2**
MD31				S	**Sn**	**01 58 57.8**	**+0.7**
MDT	**Midelt**	**2.74**	**195**	P	**Pn**	**01 58 24.6**	**+0.1**
MDT				S	**Sn**	**01 58 58.7**	**+1.2**
EADA	**Adamuz**	**2.78**	**346**	P	**Pn**	**01 58 26.4**	**+1.4**
EADA				S	**Sn**	**01 59 00.5**	**+2.2**
EADA	**Adamuz**	**2.78**	**346**	Pn	**Pn**	**01 58 25.5**	**+0.6**
EADA				Sn	**Sn**	**01 58 58.2**	**-0.2**
EADA				*i* IVmb_Lg		01 59 03.0	
ECAB	**El Cabril**	**2.93**	**333**	P	**Pn**	**01 58 27.7**	**+0.6**
ECAB				S	**Sn**	**01 59 03.6**	**+1.6**
ECAB	**El Cabril**	**2.93**	**333**	Pn	**Pn**	**01 58 27.6**	**+0.6**
ECAB				Sn	**Sn**	**01 59 01.4**	**-0.6**
ECAB				*i* IVmb_Lg		01 59 21.4	
EMUR	**La Murta**	**3.11**	**40**	*i* IVmb_Lg		01 59 02.3	
EMUR				Sn	**Sn**	**01 59 04.1**	**-2.6**
PSIM	**Granatula de C**	**3.35**	**360**	Pn	**Pn**	**01 58 33.3**	**+0.5**
PSIM				Sn	**Sn**	**01 59 11.7**	**-0.8**
ETOB	**Tobarra**	**3.63**	**28**	P	**Pn**	**01 58 38.4**	**+1.6**
ETOB				S	**Sn**	**01 59 19.8**	**+0.4**
ETOB	**Tobarra**	**3.63**	**28**	Pn	**Pn**	**01 58 37.6**	**+0.9**
ETOB				Sn	**Sn**	**01 59 18.6**	**-0.8**
ETOB				*i* IVmb_Lg		01 59 33.0	
PVAQ	**Vaqueiros**	**3.74**	**302**	*e*P	**Pn**	**01 58 39.1**	**+0.9**
PVAQ				*e*S	**Sn**	**01 59 21.3**	**-0.7**
PVAQ				*i* IAML		01 59 25.6	
PVAQ				*i* IAML		01 59 27.2	
PVAQ				*i* IAML		01 59 27.8	
PVAQ	**Vaqueiros**	**3.74**	**302**	P	**Pn**	**01 58 36.6**	**-1.6**
PVAQ				S	**Sn**	**01 59 20.3**	**-1.7**
PBAR	**Barrancos**	**3.78**	**317**	P	**Pn**	**01 58 38.8**	**+0.1**
PBAR				S	**Sn**	**01 59 21.7**	**-1.3**
PBAR	**Barrancos**	**3.78**	**317**	*e*S	**Sn**	**01 59 22.8**	**-0.1**
PBAR				*i* IAML		01 59 23.6	
PBAR				*i* IAML		01 59 27.3	
PBAR				*i* IAML		01 59 27.4	
PBDV	**Barranco-do-Ve**	**3.81**	**299**	P	**Pn**	**01 58 38.8**	**-0.4**
PBDV				S	**Sn**	**01 59 22.8**	**-1.1**
PBDV	**Barranco-do-Ve**	**3.81**	**299**	*e*P	**Pn**	**01 58 40.1**	**+0.9**
PBDV				*e*S	**Sn**	**01 59 24.0**	**+0.1**
PBDV				*i* IAML		01 59 24.3	
PBDV				*i* IAML		01 59 25.7	
PBDV				*i* IAML		01 59 29.7	
PCVE	**Castro Verde**	**4.07**	**303**	S	**Sn**	**01 59 29.9**	**-0.3**
PCVE	**Castro Verde**	**4.07**	**303**	*e*P	**Pn**	**01 58 44.2**	**+1.4**
PCVE				*e*S	**Sn**	**01 59 30.9**	**+0.6**
PCVE				*i* IAML		01 59 32.6	
PCVE				*i* IAML		01 59 34.6	
PCVE				*i* IAML		01 59 45.1	
PAB	**San Pablo**	**4.10**	**354**	Pn	**Pn**	**01 58 44.5**	**+1.3**
PAB				Sn	**Sn**	**01 59 29.5**	**-1.6**
PAB				*i* IVmb_Lg		01 59 49.2	
EBAD	**Badajoz**	**4.19**	**323**	P	**Pn**	**01 58 44.9**	**+0.5**
EBAD				S	**Sn**	**01 59 31.4**	**-1.8**
EBAD	**Badajoz**	**4.19**	**323**	Pn	**Pn**	**01 58 45.1**	**+0.7**
EBAD				Sn	**Sn**	**01 59 31.5**	**-1.8**
EBAD				*i* IVmb_Lg		01 59 37.6	
MESJ	**Messejana**	**4.30**	**305**	*e*P	**Pn**	**01 58 47.6**	**+1.7**
MESJ				*e*S	**Sn**	**01 59 35.2**	**-0.7**
MESJ				*i* IAML		01 59 40.4	
MESJ				*i* IAML		01 59 40.4	
MESJ				*i* IAML		01 59 41.4	
MORF	**Marmelete**	**4.36**	**296**	*e*P	**Pn**	**01 58 50.5**	**+3.8**
MORF				*e*S	**Sn**	**01 59 37.2**	**-0.2**
CIBOR	**Castaar de Ib**	**4.37**	**343**	Pn	**Pn**	**01 58 47.4**	**+0.6**
CIBOR				Sn	**Sn**	**01 59 35.9**	**-1.7**
PFVI	**Vila Bisbo**	**4.42**	**294**	*e*S	**Sn**	**01 59 34.8**	**-4.2**
PTEO	**Sao Teotonio**	**4.51**	**299**	*e*P	**Pn**	**01 58 50.5**	**+1.8**
PTEO				*e*S	**Sn**	**01 59 41.0**	**0.0**
PTEO				*i* IAML		01 59 44.7	
PTEO				*i* IAML		01 59 58.7	
PESTR	**Estremoz**	**4.57**	**319**	*e*S	**Sn**	**01 59 41.1**	**-1.5**
EVO	**Evora**	**4.58**	**313**	*e*S	**Sn**	**01 59 41.1**	**-1.7**
MOE	**Montemor**	**4.78**	**311**	*e*P	**Pn**	**01 58 55.4**	**+2.9**
MOE				*e*S	**Sn**	**01 59 47.8**	**0.0**
PARRA	**Arraiolos**	**4.79**	**316**	*e*P	**Pn**	**01 58 53.8**	**+1.2**
PARRA				*e*S	**Sn**	**01 59 47.2**	**-0.7**
PARRA				*i* IAML		01 59 48.8	
PARRA				*i* IAML		01 59 58.1	
PARRA				*i* IAML		02 00 03.4	
PMRV	**Marv??o**	**4.90**	**325**	*e*P	**Pn**	**01 58 56.2**	**+2.0**
PMRV				*e*S	**Sn**	**01 59 47.1**	**-3.6**
EPLA	**Plasencia**	**4.95**	**339**	Pn	**Pn**	**01 58 56.1**	**+1.3**
EPLA				*i* IVmb_Lg		01 59 49.9	
PMTG	**Montargil**	**5.07**	**317**	*e*P	**Pn**	**01 58 58.7**	**+2.3**
PMTG				*e*S	**Sn**	**01 59 52.9**	**-1.8**
PMTG				*i* IAML		01 59 55.0	
PCBR	**Castelo Branco**	**5.27**	**327**	*e*P	**Pn**	**01 59 03.0**	**+3.7**
EIBI	**Ibiza**	**5.40**	**47**	Pn	**Pn**	**01 59 00.8**	**-0.1**
EIBI				Sn	**Sn**	**02 00 00.3**	**-2.7**
EIBI				*i* IVmb_Lg		02 00 11.1	
PSARD	**Sardoal**	**5.41**	**321**	*e*P	**Pn**	**01 59 03.4**	**+2.2**
PSARD				*e*S	**Sn**	**02 00 02.1**	**-1.3**
PSARD				*i* IAML		02 00 03.4	
PSARD				*i* IAML		02 00 06.6	
PSARD				*i* IAML		02 00 17.6	

*RSPR **02** 02:08:09.9,19.°16N×68.°01W,h8^{km}±24^{km},MD3.3/8*
*NEIC **02** 02:08:10.2±1.0,18.°97N±0.°06×67.°82W±0.°06,h10^{km}±2^{km}, ML2.9/35,Md3.3/8(RSPR),Error ellipse: s-maj=13.3km s-min=3.0km az=43.0*
*SDD **02** 02:08:15.3±2.2,18.°94N×67.°65W,h21^{km}±397^{km},MD3.4, ML3.0,MW3.6,Presumed earthquake*
ISC 02 02:08:11.8±1.2**,19.°03N**±0.°06×**67.°67W**±0.°03**,h9**^{km}±10^{km}**, n41,**σ**0**^{s}**90**/61**,22C-5D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.66**	**164**		**Pb**	**02 08 25.3**	**-0.3**
IDE	**Isla Desecheo**	**0.66**	**164**	⇑*e*P	**Pb**	**02 08 25.3**	**-0.3**
AGPR	**Aguadilla, PR**	**0.77**	**136**		**Pg**	**02 08 26.7**	**+0.1**
AGPR					**Sb**	**02 08 37.2**	**-0.7**
AGPR				IAML		02 08 38.5	
	376nm,0.3s						
AGPR	**Aguadilla, PR**	**0.77**	**136**	*e*Pg	**Pb**	**02 08 26.9**	**-0.4**
AGPR				⇑*e*Sg	**Sb**	**02 08 37.4**	**-0.5**
AGPR				IAML		02 08 38.6	
	comp=N,299nm,0.2s						
AGPR	**Aguadilla, PR**	**0.77**	**136**	⇑*e*P	**Pn**	**02 08 27.9**	**-0.9**
PCDR	**Punta Cana, DR**	**0.84**	**233**	*e*Pg	**Pn**	**02 08 30.8**	**+0.8**
PCDR				IAML		02 08 45.5	
	comp=N,219nm,0.7s						
PRSN	**Puerto Rico Se**	**0.94**	**148**		**Pg**	**02 08 28.7**	**-1.2**
PRSN					**Sg**	**02 08 41.9**	**-0.4**
PRSN	**Puerto Rico Se**	**0.94**	**148**	⇓*e*Pg	**Pb**	**02 08 30.4**	**0.0**
PRSN				⇑*e*Sg	**Sg**	**02 08 42.0**	**-0.2**
PRSN				IAML		02 08 46.5	
	comp=N,491nm,0.3s						
PRSN	**Puerto Rico Se**	**0.94**	**148**	⇑*e*P	**Pn**	**02 08 30.7**	**-0.6**
PRSN				*e*S	**Sn**	**02 08 45.8**	**+0.9**
LSP	**Las Mesas**	**1.01**	**147**		**Pn**	**02 08 31.6**	**-0.6**
LSP	**Las Mesas**	**1.01**	**147**	⇑*e*P	**Pn**	**02 08 31.6**	**-0.6**
HIDR	**Higuey Centro**	**1.08**	**247**	⇓*e*Pg	**Pn**	**02 08 32.8**	**-0.5**
HIDR				⇑*e*Sg	**Sn**	**02 08 47.2**	**-1.2**
HIDR				IAML		02 08 49.4	
	comp=N,212nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.14**	**152**		**Pb**	**02 08 32.3**	**-1.5**
CRPR				IAML		02 08 53.1	
	comp=N,176nm,0.7s						
CRPR				IAML		02 08 54.5	
	comp=N,214nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.14**	**152**		**Sn**	**02 08 51.5**	**+1.6**
CRPR	**Cabo Rojo, PR**	**1.14**	**152**	⇓*e*Pg	**Pb**	**02 08 33.5**	**-0.3**
CRPR				⇑*e*Sg	**Sb**	**02 08 48.1**	**-0.6**
CRPR				IAML		02 08 53.0	
	comp=N,216nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.14**	**152**	⇑*e*P	**Pb**	**02 08 33.5**	**-0.3**
CRPR				*e*S	**Sn**	**02 08 51.5**	**+1.6**
UUPR	**Utuado, UPR, P**	**1.18**	**130**		**Pb**	**02 08 32.5**	**-2.0**
MLPR	**Magueyes Islan**	**1.21**	**150**	Pn	**Pn**	**02 08 34.0**	**-0.9**
MLPR				IAML		02 08 53.2	
	comp=N,223nm,0.5s						
MLPR				IAML		02 08 54.2	
	comp=N,242nm,0.4s						
EMPR	**Esperanza - Ma**	**1.21**	**117**		**Pn**	**02 08 34.5**	**-0.4**
EMPR	**Esperanza - Ma**	**1.21**	**117**	⇑*e*P	**Pn**	**02 08 34.5**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.28**	**144**		**Pb**	**02 08 36.0**	**-0.2**
GBPR					**Sg**	**02 08 55.5**	**+2.3**
GBPR	**Guanica, Bosqu**	**1.28**	**144**	⇑*e*P	**Pb**	**02 08 36.0**	**-0.2**
GBPR				*e*S	**Sg**	**02 08 55.5**	**+2.3**
CELP	**Cerrillos**	**1.40**	**132**		**Pn**	**02 08 36.5**	**-1.1**
CELP				IAML		02 09 00.2	
	comp=N,161nm,0.3s						
CELP				IAML		02 09 03.0	
	comp=N,130nm,0.2s						
OBIP	**Obispado Ponce**	**1.40**	**134**		**Pn**	**02 08 37.1**	**-0.6**
OBIP	**Obispado Ponce**	**1.40**	**134**		**Sg**	**02 08 57.7**	**+0.8**
OBIP	**Obispado Ponce**	**1.40**	**134**	⇑*e*P	**Pn**	**02 08 37.3**	**-0.4**
OBIP				*e*S	**Sg**	**02 08 57.7**	**+0.8**
ECPR	**Experimental S**	**1.42**	**119**		**Pn**	**02 08 37.2**	**-0.7**
ECPR	**Experimental S**	**1.42**	**119**	⇑*e*P	**Pn**	**02 08 37.4**	**-0.6**
SMDR	**Samana, DR**	**1.46**	**281**	⇑*e*Pg	**Pg**	**02 08 39.5**	**-0.4**
SMDR				⇑*e*Sg	**Sg**	**02 09 00.4**	**+1.6**
SMDR				IAML		02 09 02.5	
	comp=N,126nm,0.2s						
HATOM	**Hato Mayor del**	**1.64**	**262**	*e*Pg	**Pg**	**02 08 43.4**	**+0.2**
HATOM				⇓*e*Sg	**Sb**	**02 09 02.4**	**-0.7**
HATOM				IAML		02 09 06.8	
	comp=N,60nm,0.4s						
GCPR	**Guaynabo City**	**1.66**	**115**		**Pn**	**02 08 41.2**	**0.0**
GCPR					**Sg**	**02 09 06.6**	**+1.3**
GCPR	**Guaynabo City**	**1.66**	**115**	⇑*e*P	**Pn**	**02 08 41.2**	**0.0**
GCPR				*e*S	**Sg**	**02 09 06.6**	**+1.3**
SJG	**San Juan**	**1.70**	**122**	Pn	**Pn**	**02 08 41.2**	**-0.5**
SJG				IAML		02 09 08.7	
	comp=N,109nm,0.3s						
SJG				IAML		02 09 10.1	
	comp=N,88nm,0.4s						
SJG	**San Juan**	**1.70**	**122**	⇑*e*P	**Pn**	**02 08 41.9**	**+0.1**
SJG				*e*S	**Sg**	**02 09 06.6**	**0.0**
PDPR	**Patillas Dam,**	**1.85**	**122**	Pn	**Pn**	**02 08 43.5**	**-0.4**
HUMP	**Col San Antoni**	**1.94**	**117**		**Pn**	**02 08 45.1**	**+0.1**
HUMP	**Col San Antoni**	**1.94**	**117**		**Sb**	**02 09 12.5**	**+0.9**
HUMP	**Col San Antoni**	**1.94**	**117**	⇑*e*P	**Pb**	**02 08 46.7**	**-0.6**
HUMP				*e*S	**Sb**	**02 09 12.5**	**+0.9**
NADR	**Nagua**	**2.09**	**279**	⇑*e*Pg	**Pg**	**02 08 51.5**	**-0.4**
NADR				⇑*e*Sg	**Sg**	**02 09 18.4**	**-0.8**
NADR				IAML		02 09 29.0	
	comp=N,276nm,0.3s						
DR08	**Loma La Naviza**	**2.23**	**269**	⇑*e*Pg	**Pb**	**02 08 53.0**	**+0.7**
DR08				⇓*e*Sg	**Sb**	**02 09 19.9**	**-0.2**
DR08				IAML		02 09 27.0	
	comp=N,2μm,0.2s						
BANI	**BANI**	**2.63**	**257**	*e*Pg	**Pb**	**02 08 58.7**	**-0.5**
BANI				⇑*e*Sg	**Sb**	**02 09 31.8**	**+0.2**
BANI				IAML		02 09 38.1	
	comp=N,89nm,0.8s						

IDC 02 02:09:28.8±1.3**,0.°48N**×**125.°32E,h0**^{km}**,mb3.5**/4**, mbtmp3.5**/4**,Error ellipse: s-maj=147.2km s-min=21.2km az=67.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.14**	**157**	P	P	02 14 24.7	-1.6
	0.9nm,0.8s,baz=336,slow=11,SNR=6.6						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**25.41**	**161**	P	P	02 14 59.4	+1.1
	0.3nm,0.4s,baz=346,slow=12,SNR=9.3						
	0.3nm,0.4s						
SONM	**Songino Array**	**49.95**	**343**	P	P	02 18 25.2	+0.6
	0.4nm,0.6s,baz=142,slow=4.9,SNR=3.7						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**59.45**	**327**	P	P	02 19 33.0	-0.5
	0.5nm,0.3s,baz=119,slow=7.7,SNR=17						
	0.5nm,0.3s						

*AEIC **02** 02:13:19.6±2.5,65.°98N±0.°04×166.°2W±0.°1,h12^{km}±5^{km}, Error ellipse: s-maj=7.3km s-min=5.3km az=86.0*
*IDC **02** 02:13:20.7±1.5,66.°20N×166.°56W,h0^{km},mb3.7/3, mbtmp3.8/6,ML3.3/3,Error ellipse: s-maj=36.3km s-min=19.9km az=6.0*
*NEIC **02** 02:13:20.3,65.°98N×166.°26W,h10^{km}*
*NEIC **02** 02:13:20.3±2.2,65.°98N±0.°02×166.°21W±0.°06,h10^{km}±1^{km}, mb_Lg3.3/32,ML3.6/64,Mwr3.5/17,ML3.5(AEIC),Error ellipse: s-maj=4.9km s-min=3.9km az=231.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.50; $M_{\theta\theta}$1.85; $M_{\phi\phi}$-0.34; $M_{r\theta}$-0.34; $M_{\theta\phi}$-0.07; $M_{\phi r}$1.40; Fault plane solution: $M_0$2.23000×10^{14} NP1: ϕ_s122.95000°,δ61.01000°,λ-52.42000°. NP2: ϕ_s245.16000°,δ46.12000°,λ-137.74000°. Principal axes: T 1.9057, Plg8.0000°, Azm187.0000°; N 0.5482, Plg32.0000°, Azm282.0000°; P -2.4539, Plg56.0000°, Azm84.0000°;*
ISC 02 02:13:18.9±1.4**,66.°00N**±0.°03×**166.°20W**±0.°03**,h0**^{km}±10^{km}**, n126,**σ**1**^{s}**04**/124**,mb3.4**/3**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
F14K	**Arctic Creek**	**0.53**	**186**		**Pg**	**02 13 29.3**	**+0.3**
F14K					**Sb**	**02 13 37.2**	**-2.0**
F15K	**North Star Dit**	**0.70**	**114**		**Pg**	**02 13 32.9**	**+0.5**
F15K				Sg	**Sg**	**02 13 42.4**	**+0.9**
TNA	**Tin City**	**0.84**	**239**		**Pg**	**02 13 34.9**	**0.0**
TNA					**Sg**	**02 13 46.1**	**+0.4**
TNA				IAML		02 13 50.0	
	comp=E,2μm,0.9s						
TNA				IAML		02 13 50.7	
	comp=N,2μm,0.6s						
G15K	**Niukluk**	**1.35**	**137**		**Pn**	**02 13 44.2**	**-0.8**
G15K					**Pb**	**02 13 44.6**	**-0.5**
G15K					**Sg**	**02 14 02.8**	**+0.5**
G15K					**Sn**	**02 14 03.4**	**-0.3**
ANM	**Nome**	**1.48**	**166**		**Pb**	**02 13 46.4**	**-0.9**
ANM				IAML		02 14 12.0	
	comp=E,614nm,0.6s						
ANM	**Nome**	**1.48**	**166**		**Sn**	**02 14 05.0**	**-1.8**
ANM					**Sb**	**02 14 05.3**	**-1.3**
G16K	**Koyuk River**	**1.70**	**109**		**Pn**	**02 13 49.3**	**-0.5**
G16K				IAML		02 14 16.5	
	comp=N,491nm,0.6s						
G16K				IAML		02 14 23.2	
	comp=E,442nm,0.7s						
G16K	**Koyuk River**	**1.70**	**109**		**Sb**	**02 14 12.2**	**-0.8**
F17K	**Baldwin Pennin**	**2.06**	**75**		**Pn**	**02 13 53.7**	**-0.9**
E17K	**Hotham Inlet**	**2.06**	**56**		**Pn**	**02 13 53.9**	**-0.9**
E17K					**Pb**	**02 13 55.0**	**-2.2**
E17K					**Sb**	**02 14 24.0**	**+0.7**
D17K	**Noatak River**	**2.11**	**34**		**Pn**	**02 13 54.8**	**-0.6**
D17K					**Sn**	**02 14 21.7**	**-0.5**
D17K					**Sb**	**02 14 25.8**	**+1.3**
H16K	**Elim**	**2.15**	**128**		**Pn**	**02 13 55.4**	**-0.6**
H16K					**Sn**	**02 14 23.2**	**-0.1**
H16K					**Sb**	**02 14 23.7**	**-2.2**
C16K	**Lisburne Hills**	**2.31**	**8**		**Pn**	**02 13 58.2**	**0.0**
C16K	**Lisburne Hills**	**2.31**	**8**	IAmb_Lg		02 14 38.6	
	comp=Z,102nm,0.7s						
C16K				IAML		02 14 43.7	
	comp=N,288nm,0.8s						
G17K	**Kiwalik Mounta**	**2.34**	**100**		**Pn**	**02 13 58.0**	**-0.7**
RDOG	**Red Dog Mine**	**2.44**	**31**		**Pn**	**02 13 59.6**	**-0.3**
RDOG	**Red Dog Mine**	**2.44**	**31**		**Sn**	**02 14 29.5**	**-0.9**
RDOG	**Red Dog Mine**	**2.44**	**31**	IAmb_Lg		02 14 43.5	
	comp=Z,82nm,0.8s						
E18K	**Tukpahlearik C**	**2.64**	**55**		**Pn**	**02 14 02.9**	**+0.1**
E18K	**Tukpahlearik C**	**2.64**	**55**	IAML		02 14 56.8	
	comp=E,248nm,0.8s						
F18K	**Selawik**	**2.71**	**74**		**Pn**	**02 14 03.6**	**-0.1**
C17K	**DeLong Mountai**	**2.75**	**24**		**Pn**	**02 14 04.6**	**+0.4**
C17K					**Sn**	**02 14 39.0**	**+0.9**
C17K					**Sb**	**02 14 40.3**	**-2.9**
H17K	**Granite Mounta**	**2.83**	**109**		**Pn**	**02 14 05.4**	**+0.1**
H17K	**Granite Mounta**	**2.83**	**109**	IAmb_Lg		02 14 56.0	
	comp=Z,127nm,0.8s						
H17K				IAML		02 14 56.6	
	comp=E,171nm,0.6s						
H17K				IAML		02 14 57.5	
	comp=N,139nm,0.7s						
G18K	**Tagagawik**	**3.09**	**88**		**Pn**	**02 14 08.6**	**-0.4**
G18K	**Tagagawik**	**3.09**	**88**		**Sn**	**02 14 45.3**	**-1.3**
I17K	**Unalakleet**	**3.16**	**130**		**Pn**	**02 14 08.9**	**-0.9**
GAMB	**Gambell**	**3.24**	**229**		**Pn**	**02 14 10.4**	**-0.4**
GAMB					Pb	02 14 10.7	-6.5
GAMB	**Gambell**	**3.24**	**229**	IAML		02 15 04.9	
	comp=N,182nm,0.7s						
GAMB				IAML		02 15 05.7	
	comp=E,187nm,0.8s						
C18K	**Utukok River**	**3.29**	**34**		**Pn**	**02 14 12.0**	**+0.3**
C18K	**Utukok River**	**3.29**	**34**	IAmb_Lg		02 15 13.8	
	comp=Z,108nm,1.1s						
C18K				IAML		02 15 18.0	
	comp=E,103nm,0.8s						
H18K	**Honhosa River**	**3.37**	**101**		**Pn**	**02 14 12.6**	**-0.1**
H18K	**Honhosa River**	**3.37**	**101**	IAmb_Lg		02 15 14.6	
	comp=Z,120nm,0.8s						
H18K				IAML		02 15 16.5	
	comp=N,164nm,0.8s						
H18K				IAML		02 15 19.8	
	comp=E,115nm,0.6s						
J14K	**Nanvaranak Lak**	**3.46**	**159**		**Pn**	**02 14 14.5**	**+0.6**
J14K				IAML		02 15 13.4	
	comp=N,110nm,0.9s						
J14K				IAmb_Lg		02 15 16.0	
	comp=Z,85nm,0.7s						
J14K				IAML		02 15 17.0	
	comp=E,128nm,0.8s						
F19K	**Shaleruckik Mo**	**3.49**	**72**		**Pn**	**02 14 13.9**	**-0.5**
F19K					Pb	02 14 14.2	-7.2
J16K	**Anvik River**	**3.64**	**136**		**Pn**	**02 14 16.2**	**-0.2**
G19K	**Purcell Mounta**	**3.72**	**84**		**Pn**	**02 14 16.8**	**-0.7**
G19K					Pb	02 14 17.4	-8.0
G19K	**Purcell Mounta**	**3.72**	**84**	IAML		02 15 20.9	
	comp=E,73nm,0.8s						
G19K				IAmb_Lg		02 15 25.7	
	comp=Z,94nm,1.1s						
G19K				IAML		02 15 29.9	
	comp=N,92nm,0.8s						
E19K	**Redstone River**	**3.85**	**64**		**Pn**	**02 14 19.6**	**+0.2**
E19K	**Redstone River**	**3.85**	**64**	IAML		02 15 27.8	
	comp=E,66nm,0.6s						
E19K				IAmb_Lg		02 15 32.1	
	comp=Z,92nm,1.1s						
E19K				IAML		02 15 37.3	
	comp=N,89nm,0.6s						
D19K	**Kuna River**	**4.02**	**48**		**Pn**	**02 14 22.1**	**+0.4**
D19K	**Kuna River**	**4.02**	**48**	IAML		02 15 40.6	
	comp=E,76nm,1.1s						
C19K	**Lookout Ridge**	**4.02**	**36**		**Pn**	**02 14 22.2**	**+0.5**
C19K	**Lookout Ridge**	**4.02**	**36**	IAmb_Lg		02 15 35.2	
	comp=Z,66nm,1.1s						
C19K				IAML		02 15 39.6	
	comp=N,68nm,1.0s						
C19K				IAML		02 15 45.0	
	comp=E,69nm,1.1s						
J17K	**VABM Dome**	**4.02**	**127**		**Pn**	**02 14 22.6**	**+0.9**
J17K				IAmb_Lg		02 15 32.6	
	comp=Z,112nm,1.1s						
J17K				IAML		02 15 36.4	
	comp=N,82nm,1.1s						
H19K	**Roundabout Mou**	**4.05**	**92**		**Pn**	**02 14 22.1**	**+0.1**
H19K	**Roundabout Mou**	**4.05**	**92**	IAML		02 15 32.7	
	comp=E,50nm,0.6s						
H19K				IAML		02 15 33.5	
	comp=N,64nm,0.6s						
GCSA	**Galena City Sc**	**4.10**	**104**		**Pn**	**02 14 22.9**	**+0.2**
K13K	**Kusilvak Mount**	**4.14**	**170**	IAML		02 15 33.7	
	comp=E,95nm,0.7s						
K13K				IAmb_Lg		02 15 33.9	
	comp=Z,89nm,0.8s						
K13K				IAML		02 15 39.0	
	comp=N,92nm,0.6s						
K13K	**Kusilvak Mount**	**4.14**	**170**		**Pn**	**02 14 23.3**	**+0.1**
K13K					Pb	02 14 23.7	-8.9
K15K	**Wolf Creek Mou**	**4.24**	**149**		**Pn**	**02 14 25.1**	**+0.4**
K15K	**Wolf Creek Mou**	**4.24**	**149**	IAmb_Lg		02 15 45.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,106nm,1.1s						
F20K	**Avaraart Lake**	**4.32**	**71**		**Pn**	**02 14 26.4**	**+0.7**
F20K	**Avaraart Lake**	**4.32**	**71**	IAML		02 15 50.9	
	comp=N,53nm,1.0s						
E20K	**Nigu River**	**4.52**	**55**		**Pn**	**02 14 28.7**	**+0.2**
E20K					Pb	02 14 29.1	-10
D20K	**Etivluk River**	**4.60**	**49**		**Pn**	**02 14 30.2**	**+0.6**
D20K	**Etivluk River**	**4.60**	**49**	IAML		02 15 52.8	
	comp=E,56nm,1.0s						
D20K				IAML		02 15 53.3	
	comp=N,55nm,0.8s						
D20K				IAmb_Lg		02 15 59.0	
	comp=Z,44nm,0.9s						
H20K	**Anotleneega Mo**	**4.70**	**91**		**Pn**	**02 14 31.0**	**0.0**
K17K	**Iditarod**	**4.76**	**130**		**Pn**	**02 14 32.3**	**+0.5**
J18K	**Innoko River**	**4.79**	**118**		**Pn**	**02 14 32.9**	**+0.6**
J18K	**Innoko River**	**4.79**	**118**	IAmb_Lg		02 15 56.6	
	comp=Z,47nm,1.1s						
J18K				IAML		02 15 57.0	
	comp=N,40nm,1.0s						
L15K	**Ungalak Mounta**	**4.81**	**152**		**Pn**	**02 14 33.0**	**+0.5**
J19K	**Poorman**	**4.92**	**109**		**Pn**	**02 14 34.4**	**+0.4**
L14K	**Kuka Creek**	**4.93**	**160**		**Pn**	**02 14 34.8**	**+0.7**
I20K	**Naaghedeneel**	**5.05**	**98**		**Pn**	**02 14 36.3**	**+0.6**
G21K	**Allakaket**	**5.16**	**78**		**Pn**	**02 14 37.5**	**+0.2**
L17K	**Donlin**	**5.20**	**135**		**Pn**	**02 14 38.4**	**+0.6**
F21K	**Alatna River**	**5.21**	**71**		**Pn**	**02 14 38.1**	**0.0**
L16K	**Owhat River**	**5.23**	**142**		**Pn**	**02 14 38.8**	**+0.6**
B20K	**Meade River**	**5.26**	**36**		**Pn**	**02 14 37.8**	**-0.9**
C21K	**Knifeblade Rid**	**5.40**	**49**		**Pn**	**02 14 41.6**	**+1.1**
J20K	**Nowinta River**	**5.41**	**104**		**Pn**	**02 14 41.1**	**+0.4**
H21K	**Melozitna Rive**	**5.52**	**87**		**Pn**	**02 14 42.7**	**+0.5**
M14K	**Bethel**	**5.60**	**158**		**Pn**	**02 14 44.5**	**+1.2**
M14K				IAmb_Lg		02 16 20.3	
	comp=Z,38nm,1.1s						
L18K	**Granite Mounta**	**5.63**	**128**		**Pn**	**02 14 44.8**	**+1.0**
M11K	**Mekoryuk**	**5.64**	**180**		**Pn**	**02 14 44.2**	**+0.4**
K20K	**Telida**	**5.84**	**111**		**Pn**	**02 14 47.2**	**+0.6**
M15K	**Kasigluk River**	**5.87**	**152**		**Pn**	**02 14 47.5**	**+0.4**
D22K	**Ayikyak River**	**5.95**	**55**		**Pn**	**02 14 49.1**	**+1.0**
M16K	**Timber Creek**	**5.95**	**144**		**Pn**	**02 14 48.9**	**+0.8**
I21K	**Tanana**	**5.95**	**91**		**Pn**	**02 14 48.7**	**+0.5**
M17K	**Holitna River**	**6.04**	**136**	IAmb_Lg		02 16 39.9	
	comp=Z,36nm,1.2s						
H22K	**Ishtalitna Cre**	**6.06**	**84**	Pn	**Pn**	**02 14 48.3**	**-1.4**
CHUM	**Lake Minchumin**	**6.27**	**103**		**Pn**	**02 14 53.4**	**+0.9**
L19K	**White Mountain**	**6.27**	**122**		**Pn**	**02 14 53.5**	**+0.9**
B22K	**Teshekpuk Lake**	**6.45**	**42**		**Pn**	**02 14 55.0**	**+0.1**
M18K	**Stony River**	**6.45**	**130**		**Pn**	**02 14 55.8**	**+0.8**
N15K	**Kwethluk River**	**6.47**	**152**		**Pn**	**02 14 56.2**	**+0.9**
N16K	**Nishlik Lake**	**6.48**	**145**		**Pn**	**02 14 56.5**	**+1.1**
A22K	**Sinclair Lake**	**6.49**	**34**		**Pn**	**02 14 55.4**	**-0.1**
MLY	**Manley**	**6.50**	**91**	Pn	**Pn**	**02 14 55.7**	**0.0**
BPAW	**Bear Paw Mtn.**	**6.71**	**99**		**Pn**	**02 14 59.3**	**+0.7**
E23K	**Chandalar**	**6.81**	**65**	Pn	**Pn**	**02 15 01.9**	**+1.9**
PPLA	**Purkeypile**	**6.81**	**111**		**Pn**	**02 15 01.3**	**+1.2**
N17K	**Nushagak Hills**	**6.83**	**139**		**Pn**	**02 15 01.3**	**+1.1**
TOLK	**Toolik Lake Re**	**6.95**	**60**		**Pn**	**02 15 03.1**	**+1.2**
KTH	**Kantishna Hill**	**6.97**	**104**	Pn	**Pn**	**02 15 03.1**	**+0.9**
N18K	**Kilae Creek**	**7.06**	**134**		**Pn**	**02 15 04.8**	**+1.4**
M20K	**Styx River**	**7.08**	**120**		**Pn**	**02 15 05.0**	**+1.3**
O14K	**Tigyukauivet M**	**7.14**	**159**		**Pn**	**02 15 05.4**	**+0.9**
E24K	**Your Creek**	**7.23**	**65**		**Pn**	**02 15 07.4**	**+1.7**
TRF	**Thorofare Moun**	**7.27**	**103**		**Pn**	**02 15 07.0**	**+0.6**
N19K	**Bonanza Creek**	**7.39**	**129**		**Pn**	**02 15 08.8**	**+0.9**
O16K	**Kokwok River B**	**7.42**	**146**		**Pn**	**02 15 09.2**	**+1.0**
O17K	**Koliganek Bris**	**7.50**	**142**		**Pn**	**02 15 10.7**	**+1.4**
L22K	**Petersville**	**7.56**	**110**		**Pn**	**02 15 12.6**	**+2.3**
SPNN	**North Nagishla**	**7.58**	**122**		**Pn**	**02 15 11.4**	**+0.8**
SKT	**Skwentna**	**7.60**	**115**		**Pn**	**02 15 12.5**	**+1.7**
MCK	**McKinley**	**7.69**	**99**		**Pn**	**02 15 12.9**	**+0.9**
WRH	**Wood River Hil**	**7.75**	**93**		**Pn**	**02 15 12.7**	**-0.1**
CCB	**Clear Creek Bu**	**7.81**	**92**		**Pn**	**02 15 13.9**	**+0.2**
CKL	**Chakachamna La**	**7.82**	**122**		**Pn**	**02 15 14.2**	**+0.3**
RND	**Reindeer**	**7.87**	**101**		**Pn**	**02 15 14.6**	**+0.1**
IL31		**8.15**	**90**		**Pn**	**02 15 18.1**	**-0.1**
ILAR	**Eielson Array**	**8.15**	**90**	Pn	**Pn**	**02 15 18.4**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=286,slow=14,SNR=60						
ILAR				Sn	**Sn**	**02 16 47.6**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=287,slow=22,SNR=5.7						
	comp=Z,1.6nm,0.4s						
D25K	**Kavik River**	**8.23**	**57**		**Pn**	**02 15 18.8**	**-0.7**
P18K	**Big Mountain,**	**8.32**	**138**		**Pn**	**02 15 21.8**	**+1.2**
E25K	**Arctic Village**	**8.32**	**66**		**Pn**	**02 15 22.1**	**+1.5**
DHY	**Denali Highway**	**8.61**	**101**		**Pn**	**02 15 24.2**	**-0.6**
BM01	**Burnt Mountain**	**8.69**	**71**		**Pn**	**02 15 25.8**	**+0.1**
KDAK	**Kodiak Island**	**10.42**	**136**	Pn	**Pn**	**02 15 51.3**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=7.6,slow=4.5,SNR=8.5						
	comp=Z,12nm,1.0s						
INK	**Inuvik**	**12.81**	**65**	Pn	**Pn**	**02 16 22.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=281,slow=16,SNR=5.2						
INK				Sn	Sn	02 18 34.5	-10
	baz=270,slow=3.0,SNR=1.1						
	comp=Z,1.0nm,1.0s						
A36M	**Sachs Harbour**	**15.56**	**49**		**Pn**	**02 16 56.2**	**-3.0**
YKA	**Yellowknife Ar**	**22.15**	**75**	P	**P**	**02 18 17.6**	**+1.8**
	comp=Z,1.2nm,0.8s,baz=303,slow=12,SNR=9.0						
	comp=Z,1.2nm,0.8s						
NVAR	**Mina Array Bea**	**38.72**	**111**	P	**P**	**02 20 47.0**	**+2.5**
	comp=Z,0.6nm,0.8s,baz=318,slow=7.6,SNR=5.4						
	comp=Z,0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.27**	**282**	P	**P**	**02 25 04.6**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=32,slow=7.6,SNR=4.1						
	comp=Z,1.0nm,0.3s						

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*RSPR **02** 02:26:55.5, 19°.11N×67°.98W, h10km±29km, MD3.9/6*
*NEIC **02** 02:26:55.9±0.9, 19°.05N±0°.04×67°.71W±0°.04, h10km±1km, ML4.0/39, Md3.9/6(RSPR), Error ellipse: s-maj=8.8km s-min=3.4km az=44.0*
*OSPL **02** 02:26:57.5±1.4, 19°.04N×67°.73W, h10km±15km, ML4.2, Presumed earthquake*
*SDD **02** 02:26:59.2±1.8, 18°.97N×67°.65W, h19km±94km, MD3.6, ML3.9, MW4.1, Presumed earthquake*
ISC 02 02:26:53.2±1.4, **19°.16N**±0°.07×**67°.78W**±0°.03, **h7**km±10km, **n56**, σ**1§70**/70, **22C-5D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.82**	**159**		**Pg**	**02 27 10.2**	**+1.1**
IDE	**Isla Desecheo**	**0.82**	**159**	⇑eP	**Pg**	**02 27 10.2**	**+1.1**
PCDR	**Punta Cana, DR**	**0.86**	**221**	⇓ePg	**Pn**	**02 27 13.7**	**+2.0**
PCDR				⇑eSg	**Sn**	**02 27 25.1**	**+0.5**
PCDR				IAML		02 27 26.4	
	comp=N,3μm,0.9s						
AGPR	**Aguadilla, PR**	**0.94**	**137**		**Pg**	**02 27 11.9**	**+0.6**
AGPR					**Sg**	**02 27 22.2**	**-1.2**
AGPR				IAML		02 27 23.7	
	comp=N,4μm,0.5s						
AGPR	**Aguadilla, PR**	**0.94**	**137**	⇑ePg	**Pg**	**02 27 11.9**	**+0.6**
AGPR				⇓eSg	**Sg**	**02 27 22.6**	**-0.9**
AGPR				IAML		02 27 24.2	
	comp=N,4μm,0.2s						
AGPR	**Aguadilla, PR**	**0.94**	**137**	⇓eP	**Pg**	**02 27 12.2**	**+0.9**
AGPR	**Aguadilla, PR**	**0.94**	**137**	*i* P	**Pg**	**02 27 12.0**	**+0.7**
AGPR				eS	**Sg**	**02 27 22.5**	**-0.9**
AGPR				IAML		02 27 24.5	
	comp=Z,2μm,0.4s						
HIDR	**Higuey Centro**	**1.05**	**238**	⇑ePg	**Pn**	**02 27 17.3**	**+2.9**
HIDR				⇑eSg	**Sn**	**02 27 31.7**	**+2.4**
HIDR				IAML		02 27 34.5	
	comp=N,1μm,0.6s						
PRSN	**Puerto Rico Se**	**1.12**	**147**		**Pb**	**02 27 14.9**	**0.0**
PRSN					**Sb**	**02 27 27.4**	**-2.3**
PRSN	**Puerto Rico Se**	**1.12**	**147**	⇑ePg	**Pb**	**02 27 15.1**	**+0.2**
PRSN				⇑eSg	**Sb**	**02 27 29.3**	**-0.3**
PRSN				IAML		02 27 37.2	
	comp=N,5μm,0.2s						
PRSN	**Puerto Rico Se**	**1.12**	**147**	⇑eP	**Pb**	**02 27 15.0**	**+0.2**
LSP	**Las Mesas**	**1.18**	**146**		**Pn**	**02 27 16.3**	**+0.1**
LSP	**Las Mesas**	**1.18**	**146**	⇑eP	**Pn**	**02 27 16.3**	**+0.1**
MIDR	**Miches**	**1.21**	**262**	⇑ePg	Pn	02 27 21.6	+5.0
MIDR				IAML		02 27 43.1	
	comp=N,1μm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.31**	**151**		**Pn**	**02 27 18.0**	**0.0**
CRPR				IAML		02 27 37.9	
	comp=N,2μm,0.8s						
CRPR				IAML		02 27 39.7	
	comp=N,4μm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.31**	**151**		**Sb**	**02 27 34.4**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.31**	**151**	⇑ePg	**Pn**	**02 27 17.8**	**-0.2**
CRPR				IAML		02 27 39.5	
	comp=N,4μm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.31**	**151**	⇑eP	**Pn**	**02 27 18.2**	**+0.2**
CRPR				eS	**Sb**	**02 27 34.4**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.31**	**151**	eS	**Sb**	**02 27 34.2**	**-1.1**
CRPR				IAML		02 27 38.1	
	comp=Z,4μm,0.4s						
SMDR	**Samana, DR**	**1.33**	**276**	⇓ePg	Pn	02 27 24.7	+6.4
SMDR				⇑eSg	Sn	02 27 45.7	+9.4
SMDR				IAML		02 27 51.0	
	comp=N,1μm,0.7s						
UUPR	**Utuado, UPR, P**	**1.35**	**132**		**Pn**	**02 27 18.7**	**+0.1**
EMPR	**Esperanza - Ma**	**1.37**	**120**		**Pn**	**02 27 19.6**	**+0.9**
EMPR					**Sn**	**02 27 38.8**	**+1.7**
EMPR	**Esperanza - Ma**	**1.37**	**120**	⇑eP	**Pn**	**02 27 19.6**	**+0.9**
EMPR				eS	**Sn**	**02 27 38.8**	**+1.7**
MLPR	**Magueyes Islan**	**1.38**	**149**		**Pn**	**02 27 18.9**	**+0.1**
MLPR				IAML		02 27 38.4	
	comp=N,2μm,0.5s						
MLPR				IAML		02 27 39.3	
	comp=N,3μm,0.5s						
GBPR	**Guanica, Bosqu**	**1.46**	**144**		**Pn**	**02 27 20.9**	**+0.9**
GBPR					**Sn**	**02 27 39.0**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.46**	**144**	⇓eP	**Pn**	**02 27 20.9**	**+0.9**
GBPR				eS	**Sn**	**02 27 39.0**	**-0.4**
DR12	**Loma Pena Alta**	**1.56**	**256**		Pg	02 27 27.0	+3.9
HATOM	**Hato Mayor del**	**1.56**	**256**	⇑ePg	Pg	02 27 27.3	+4.2
HATOM				IAML		02 27 51.5	
	comp=N,660nm,1.1s						
CELP	**Cerrillos**	**1.57**	**133**		**Pn**	**02 27 21.9**	**+0.3**
CELP				IAML		02 27 45.8	
	comp=N,2μm,0.3s						
CELP				IAML		02 27 48.1	
	comp=N,2μm,0.3s						
OBIP	**Obispado Ponce**	**1.57**	**135**		**Pn**	**02 27 22.1**	**+0.5**
OBIP	**Obispado Ponce**	**1.57**	**135**		**Sn**	**02 27 43.0**	**+0.8**
OBIP	**Obispado Ponce**	**1.57**	**135**	⇑eP	**Pn**	**02 27 21.9**	**+0.3**
OBIP				eS	**Sn**	**02 27 43.0**	**+0.8**
OBIP	**Obispado Ponce**	**1.57**	**135**	*i* P	**Pn**	**02 27 21.9**	**+0.3**
OBIP				eS	**Sn**	**02 27 39.3**	**-2.9**
OBIP				eS	**Sb**	**02 27 40.7**	**-2.2**
OBIP				IAML		02 27 44.8	
	comp=Z,5μm,0.2s						
ECPR	**Experimental S**	**1.58**	**122**		**Pn**	**02 27 22.1**	**+0.4**
ECPR	**Experimental S**	**1.58**	**122**	⇑eP	**Pn**	**02 27 22.1**	**+0.4**
GCPR	**Guaynabo City**	**1.82**	**118**		**Pn**	**02 27 25.8**	**+0.9**
GCPR	**Guaynabo City**	**1.82**	**118**		**Sn**	**02 27 49.1**	**+0.9**
GCPR	**Guaynabo City**	**1.82**	**118**	⇑eP	**Pn**	**02 27 25.9**	**+0.9**
GCPR				eS	**Sn**	**02 27 49.1**	**+0.9**
SJG	**San Juan**	**1.87**	**124**		**Pn**	**02 27 26.3**	**+0.7**
SJG	**San Juan**	**1.87**	**124**	IAML		02 27 52.4	
	comp=Z,1μm,0.4s						
SJG				IAML		02 27 55.2	
	comp=Z,1μm,0.3s						
SJG	**San Juan**	**1.87**	**124**	⇑eP	**Pn**	**02 27 26.6**	**+0.9**
SJG				eS	**Sn**	**02 27 49.3**	**-0.2**
SJG	**San Juan**	**1.87**	**124**	*i* P	**Pn**	**02 27 26.5**	**+0.9**
SJG				eS	**Sn**	**02 27 48.4**	**-1.0**
SJG				IAML		02 27 53.7	
	comp=Z,11μm,0.5s						
HUMP	**Col San Antoni**	**2.09**	**119**		**Pn**	**02 27 29.6**	**+0.9**
HUMP				IAML		02 28 06.8	
	comp=Z,613nm,0.3s						
HUMP	**Col San Antoni**	**2.09**	**119**		**Sn**	**02 27 57.3**	**+2.3**
HUMP	**Col San Antoni**	**2.09**	**119**	⇑eP	**Pn**	**02 27 29.9**	**+1.2**
HUMP				eS	**Sn**	**02 27 57.3**	**+2.3**
DR08	**Loma La Naviza**	**2.13**	**265**	⇑ePg	Pg	02 27 37.7	+3.7
DR08				⇑eSg	Sg	02 28 06.8	+5.2
DR08				IAML		02 28 08.2	
	comp=N,7μm,0.8s						
CUPR	**Culebra, Puert**	**2.52**	**109**		**Pn**	**02 27 35.0**	**+0.5**
BANI	**BANI**	**2.56**	**253**		**Pg**	**02 27 43.3**	**+1.0**
SDDR	**Presa de Saban**	**3.32**	**267**		**Pg**	**02 27 54.4**	**-2.5**
SDDR				IAML		02 28 52.1	
	comp=N,302nm,0.7s						
SDDR				IAML		02 28 52.8	
	comp=N,292nm,1.0s						
SDDR	**Presa de Saban**	**3.32**	**267**	eP	**Pg**	**02 27 56.1**	**-0.8**
SDDR				eS	**Sg**	**02 28 41.0**	**+1.0**
SDDR				IAML		02 28 48.7	
	comp=N,145nm,0.6s						
SDDR				IAML		02 28 51.9	
	comp=N,277nm,0.6s						
MASC	**Masc**	**6.16**	**280**	eP	Pn	02 28 29.0	+4.4
MASC				eS	**Sn**	**02 29 38.1**	**+2.7**
MASC				IAML		02 29 43.5	
	comp=E,5.5nm,0.2s						
MASC				IAML		02 29 46.0	
	comp=N,7.0nm,0.4s						
QMBU	**Quimbuelo**	**6.70**	**280**	eP	Pn	02 28 36.9	+4.7
QMBU				eS	**Sn**	**02 29 51.0**	**+2.2**
QMBU				IAML		02 29 54.8	
	comp=E,16nm,0.4s						
QMBU				IAML		02 29 56.6	
	comp=N,13nm,0.2s						
GTBY	**Guantanamo Bay**	**6.95**	**277**	eP	Pn	02 28 41.0	+5.5
GTBY				eS	**Sn**	**02 29 59.6**	**+4.7**
GTBY				IAML		02 30 01.4	
	comp=N,3.9nm,0.2s						
GTBY				IAML		02 30 02.7	
	comp=N,12nm,0.7s						
RCC	**Rio Carpintero**	**7.51**	**278**	eP	Pn	02 28 51.1	+8.0
CCCC	**Cccc**	**9.59**	**284**	eP	**Pn**	**02 29 12.1**	**+0.3**
CCCC				eS	**Sn**	**02 30 51.6**	**-8.3**
CCCC				IAML		02 30 55.6	
	comp=N,3.6nm,0.5s						
CCCC				IAML		02 30 58.1	
	comp=E,3.0nm,0.5s						
SLOR	**San Lorenzo -**	**22.39**	**209**	P	**P**	**02 31 52.0**	**-0.9**

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*IDC **02** 02:27:07.5±0.8, 35°.14N×27°.81E, h0km, mb4.0/12, mbtmp3.9/19, ML3.2/7, MS3.2/2, Error ellipse: s-maj=19.2km s-min=13.3km az=169.0*
*AFAD **02** 02:27:07.0, 35°.17N×27°.96E, h3km±28km, ML3.2*
*GII **02** 02:27:08.5±0.0, 34°.960N±0°.002×27°.907E±0°.001, h0km, Mws3.6, confirmed*
*NEIC **02** 02:27:09.6±2.3, 35°.12N±0°.06×27°.822E±0°.008, h10km±1km, mb4.1/12, Error ellipse: s-maj=9.8km s-min=2.9km az=183.0*
*ISK **02** 02:27:09.4, 35°.16N×27°.83E, h8km, ML3.4/32*
*ATH **02** 02:27:09.5±0.2, 35°.11N×27°.94E, h10km, ML3.5/13, Manual Solution by N.Liadopoulou First location: 2020/02/02 02:28:37, This location: 2020/07/06 07:33:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **02** 02:27:10.6, 35°N±5°×2°8E±°, h6km±11km, M3.1/15, MLh3.1/15*
ISC 02 02:27:08.3±1.3, **35°.04N**±0°.04×**27°.87E**±0°.03, **h9**km±9km, **n180**, σ**1§16**/209, **mb4.0**/14, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.77**	**311**		**Pg**	**02 27 22.0**	**-1.2**
KARP	**Karpathos**	**0.77**	**311**	Pg	**Pg**	**02 27 22.5**	**-0.7**
KARP				Sg	**Sg**	**02 27 32.5**	**-0.8**
KARP	**Karpathos**	**0.77**	**311**	P	**Pg**	**02 27 22.6**	**-0.6**
KARP				S	**Sg**	**02 27 33.4**	**+0.1**
KARP	**Karpathos**	**0.77**	**311**	P	**Pg**	**02 27 22.8**	**-0.5**
ARG	**Arkhangelos**	**1.19**	**10**		**Pb**	**02 27 30.6**	**-0.6**
ARG	**Arkhangelos**	**1.19**	**10**	Pn	**Pb**	**02 27 30.8**	**-0.4**
ARG	**Arkhangelos**	**1.19**	**10**	P	**Pb**	**02 27 31.0**	**-0.1**
ARG				S	**Sg**	**02 27 47.1**	**+0.4**
ARG	**Arkhangelos**	**1.19**	**10**	P	**Pb**	**02 27 30.6**	**-0.6**
ARG				S	**Sb**	**02 27 45.7**	**-1.0**
ZKR	**Zakros**	**1.36**	**274**	Pn	**Pb**	**02 27 34.4**	**+0.4**
ZKR				Sn	**Sg**	**02 27 53.2**	**+1.1**
ZKR	**Zakros**	**1.36**	**274**	P	**Pn**	**02 27 34.3**	**+0.7**
ZKR	**Zakros**	**1.36**	**274**	P	**Pn**	**02 27 33.5**	**-0.1**
ZKR				S	**Sg**	**02 27 54.2**	**+2.1**
RDI1	**Rhodes Town Ha**	**1.44**	**11**	P	**Pn**	**02 27 34.4**	**-0.2**
SIT2	**Siteia**	**1.46**	**277**	P	**Pb**	**02 27 36.1**	**+0.5**
YAZI	**Mula-Dat§a-**	**1.68**	**348**	P	**Pn**	**02 27 36.7**	**-1.1**
DAT	**Datca**	**1.70**	**352**	Pn	**Pn**	**02 27 38.6**	**+0.2**
DATC	**Datca-Mugla**	**1.73**	**354**	Pn	**Pn**	**02 27 38.8**	**+0.2**
TURN	**Turunc**	**1.76**	**10**	Pn	**Pn**	**02 27 39.4**	**+0.4**
TURN	**Turunc**	**1.76**	**10**	P	**Pb**	**02 27 41.1**	**+0.3**
IZZE	**Mula-Seydike**	**1.78**	**38**	P	**Pn**	**02 27 38.2**	**-1.1**
IZZE				IAML		02 28 06.0	
	comp=E,251nm,0.4s						
KSL	**Kastellorizon**	**1.78**	**51**	P	**Pn**	**02 27 39.6**	**+0.3**
KSL				S	**Sb**	**02 28 04.0**	**+0.3**
AKAS	**Kas**	**1.85**	**49**		**Pn**	**02 27 41.3**	**+0.9**
AKAS	**Kas**	**1.85**	**49**	Pn	**Pn**	**02 27 41.5**	**+1.1**
AKAS	**Kas**	**1.85**	**49**	P	**Pn**	**02 27 40.1**	**-0.2**
AKAS				IAML		02 28 35.0	
	comp=N,358nm,0.8s						
AKAS				IAML		02 28 36.0	
	comp=E,318nm,1.4s						
NPS	**Neapolis**	**1.87**	**278**	P	**Pb**	**02 27 42.6**	**-0.1**
DALY	**Dalyan (Mula)**	**1.89**	**19**	Pn	**Pn**	**02 27 41.2**	**+0.4**
SABU	**Mula-Dalaman**	**1.99**	**26**	P	**Pn**	**02 27 42.6**	**+0.3**
SABU				IAML		02 28 34.0	
	comp=N,214nm,1.5s						
BDRM	**Kayabasi**	**2.05**	**350**	P	**Pn**	**02 27 44.5**	**+1.4**
BDRM				IAML		02 28 26.0	
	comp=E,189nm,0.8s						
BODT	**Bodrum**	**2.07**	**347**	Pn	**Pn**	**02 27 44.2**	**+0.8**
BODT	**Bodrum**	**2.07**	**347**	P	**Pn**	**02 27 45.0**	**+1.6**
BODT				S	**Sn**	**02 28 08.9**	**-0.4**
YER	**Yerkesik**	**2.12**	**9**	Pn	**Pn**	**02 27 44.8**	**+0.8**
YER	**Yerkesik**	**2.12**	**9**	P	**Pn**	**02 27 45.4**	**+1.3**
YER				S	**Sn**	**02 28 11.3**	**+0.7**
CAME	**Cameli-Denizli**	**2.23**	**31**	Pn	**Pn**	**02 27 46.6**	**+1.0**
MULA	**Mugla, Merkez-**	**2.24**	**9**	P	**Pn**	**02 27 47.5**	**+1.7**
MULA				IAML		02 28 31.0	
	comp=E,130nm,0.9s						
MLSB	**Milas**	**2.25**	**358**	Pn	**Pn**	**02 27 46.0**	**+0.1**
KNIK	**Mula-Seydike**	**2.27**	**37**	P	**Pn**	**02 27 47.0**	**+0.8**
THERA	**Ancient Thera,**	**2.36**	**305**	P	**Pn**	**02 27 48.5**	**+1.2**
THERA				S	**Sn**	**02 28 16.5**	**+0.1**
THERA	**Ancient Thera,**	**2.36**	**305**	P	**Pn**	**02 27 48.5**	**+1.2**
ELL	**Elmali**	**2.38**	**43**		**Pn**	**02 27 49.4**	**+1.8**
ELL	**Elmali**	**2.38**	**43**	Pn	**Pn**	**02 27 49.1**	**+1.5**
THR8	**Santorini-Mono**	**2.38**	**306**	P	**Pn**	**02 27 47.9**	**+0.4**
CAEL	**Denizli, Camel**	**2.39**	**29**	P	**Pn**	**02 27 48.4**	**+0.6**
CAEL				IAML		02 28 51.0	
	comp=N,267nm,0.9s						
CAEL				IAML		02 28 51.0	
	comp=E,346nm,1.5s						
DNZT	**Denizli-Tavas-**	**2.42**	**22**	P	**Pn**	**02 27 49.4**	**+1.1**
SNT5	**Nea Kammeni, S**	**2.43**	**305**	P	**Pn**	**02 27 48.5**	**+0.2**
SNT5	**Nea Kammeni, S**	**2.43**	**305**	P	**Pn**	**02 27 49.6**	**+1.3**
THR3	**Thira Island,**	**2.43**	**305**	P	**Pn**	**02 27 48.8**	**+0.5**
THR9	**Santorini-Faro**	**2.44**	**303**	P	**Pn**	**02 27 48.9**	**+0.6**
IDI	**Anoyia**	**2.46**	**277**	Pn	**Pb**	**02 27 51.3**	**-1.4**
	6.7nm,0.3s,baz=2.7,slow=7.2,SNR=50						
IDI	**Anoyia**	**2.46**	**277**	Pn	**Pn**	**02 27 50.6**	**+1.9**
IDI	**Anoyia**	**2.46**	**277**	P	**Pb**	**02 27 51.3**	**-1.4**
IDI	**Anoyia**	**2.46**	**277**	P	**Pn**	**02 27 50.3**	**+1.6**
THR5	**Thira Island,**	**2.47**	**305**	P	**Pn**	**02 27 48.6**	**-0.2**
TAVA	**DENIZLI_Tavas**	**2.56**	**19**	P	**Pn**	**02 27 50.4**	**+0.2**
TAVA				IAML		02 28 44.0	
	comp=N,108nm,0.8s						
GOLH	**Golhisar**	**2.58**	**31**	P	**Pn**	**02 27 51.3**	**+0.8**
GOLH				IAML		02 28 50.0	
	comp=E,162nm,1.1s						
GOLH				IAML		02 29 03.0	
	comp=N,149nm,1.5s						
AYDN	**Tasoluk**	**2.62**	**0**	P	**Pn**	**02 27 50.9**	**0.0**
AYDN				IAML		02 28 42.0	
	comp=E,103nm,0.6s						
APMY	**Acipayam-Deniz**	**2.69**	**25**	Pn	**Pn**	**02 27 52.7**	**+0.8**
GCAM	**G?zelcaml?**	**2.71**	**349**	Pn	**Pn**	**02 27 52.9**	**+0.9**
GCAM	**G?zelcaml?**	**2.71**	**349**	P	**Pn**	**02 27 53.8**	**+1.7**
DNIZ	**Denizli-Tavas-**	**2.75**	**20**	P	**Pn**	**02 27 54.8**	**+2.0**
ESEN	**Aydn-Nazilli**	**2.78**	**8**	P	**Pn**	**02 27 54.3**	**+1.2**
SMG	**Samos**	**2.79**	**343**	P	**Pn**	**02 27 53.4**	**+0.1**
SMG	**Samos**	**2.79**	**343**	P	**Pn**	**02 27 53.1**	**-0.2**
KORT	**Korkueli**	**2.81**	**45**	Pn	**Pn**	**02 27 55.1**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**2.90**	**0**	Pn	**Pn**	**02 27 54.9**	**0.0**
ANTB	**Antalya**	**2.92**	**50**	Pn	**Pn**	**02 27 57.6**	**+2.6**
NAZL	**Nazilli-Aydin**	**2.94**	**6**	Pn	**Pn**	**02 27 56.2**	**+0.9**
INCE	**Denizli-Bozkur**	**3.00**	**27**	P	**Pn**	**02 27 56.7**	**+0.5**
INCE				IAML		02 29 03.0	
	comp=E,80nm,1.1s						
INCE				IAML		02 29 04.0	
	comp=N,96nm,0.7s						
VAM	**Vamos**	**3.03**	**278**	P	**Pn**	**02 27 58.8**	**+2.2**
IZMR	**zmir-demi**	**3.09**	**1**	P	**Pn**	**02 27 57.2**	**-0.2**
SULTU	**Buldan**	**3.10**	**13**	P	**Pn**	**02 27 56.2**	**-1.3**
GVD	**Gavdhos**	**3.12**	**267**	Pn	**Pn**	**02 27 59.8**	**+2.1**
GVD	**Gavdhos**	**3.12**	**267**	P	**Pn**	**02 27 59.5**	**+1.8**
GVD	**Gavdhos**	**3.12**	**267**	P	**Pn**	**02 27 59.5**	**+1.8**
CHAN	**Chania**	**3.17**	**280**	P	**Pn**	**02 28 00.2**	**+1.8**
IMMV	**Iera Moni Meta**	**3.21**	**279**	Pn	**Pn**	**02 28 01.4**	**+2.4**
IMMV	**Iera Moni Meta**	**3.21**	**279**	P	**Pn**	**02 28 01.2**	**+2.2**
IMMV	**Iera Moni Meta**	**3.21**	**279**	P	**Pn**	**02 28 00.9**	**+1.9**
ODEM	**Odemis-Izmir**	**3.24**	**3**	Pn	**Pn**	**02 27 59.5**	**+0.1**
BCK	**Bucak**	**3.27**	**41**	Pn	**Pn**	**02 28 01.3**	**+1.5**
BASM	**Basmaki-Afyon**	**3.37**	**31**	Pn	**Pn**	**02 28 02.4**	**+1.2**
BLCB	**Balcova**	**3.41**	**349**	Pn	**Pn**	**02 28 02.5**	**+0.8**
BLCB	**Balcova**	**3.41**	**349**	P	**Pn**	**02 28 02.4**	**+0.8**
URLA	**Izmir**	**3.47**	**343**	Pn	**Pn**	**02 28 03.7**	**+1.1**
KNDR	**Palaiochora Ch**	**3.49**	**274**	Pn	**Pn**	**02 28 05.1**	**+2.3**
KNDR	**Palaiochora Ch**	**3.49**	**274**	P	**Pn**	**02 28 04.6**	**+1.8**
MANT	**Manisa**	**3.49**	**9**		**Pn**	**02 28 03.1**	**0.0**
ISP	**Isparta**	**3.50**	**37**	Pn	**Pn**	**02 28 05.1**	**+1.9**
ISP	**Isparta**	**3.50**	**37**	P	**Pn**	**02 28 02.9**	**-0.2**
KULA	**Kula-Manisa**	**3.53**	**10**	Pn	**Pn**	**02 28 04.3**	**+0.9**
CHOS	**Chios island**	**3.65**	**337**	Pn	**Pn**	**02 28 06.0**	**+0.9**
CHOS	**Chios island**	**3.65**	**337**	P	**Pn**	**02 28 05.7**	**+0.6**
AKMS	**Akamas**	**3.66**	**89**	P	**Pn**	**02 28 05.6**	**+0.3**
ANKY	**Antikythira Is**	**3.82**	**284**	P	**Pn**	**02 28 09.0**	**+1.6**
NATA	**Nata**	**3.87**	**92**	P	**Pn**	**02 28 08.4**	**+0.4**
GORD	**Gordes-Manisa**	**3.87**	**4**	Pn	**Pn**	**02 28 09.8**	**+1.7**
ALFC	**Alefka**	**3.88**	**87**	P	**Pn**	**02 28 08.0**	**-0.2**
KARY	**Karystos**	**4.07**	**318**	P	**Pn**	**02 28 12.1**	**+1.3**
KTHA	**Kythira Island**	**4.10**	**289**	P	**Pn**	**02 28 12.7**	**+1.4**
VLY	**Voula,Athens**	**4.32**	**312**	P	**Pn**	**02 28 15.4**	**+1.1**
VLI	**Veliai**	**4.34**	**294**	P	**Pn**	**02 28 15.2**	**+0.6**
VLI	**Veliai**	**4.34**	**294**	P	**Pn**	**02 28 15.7**	**+1.1**
DION	**Dionisos Attik**	**4.39**	**315**	P	**Pn**	**02 28 15.8**	**+0.6**
ATHU	**Athens Univers**	**4.40**	**313**	P	**Pn**	**02 28 16.6**	**+1.2**
ASGA	**Asgata**	**4.42**	**92**	P	**Pn**	**02 28 15.8**	**+0.2**
ATHP	**Athens-Neo Psi**	**4.43**	**313**	P	**Pn**	**02 28 17.5**	**+1.7**
MET6	**Megalochori,Me**	**4.45**	**306**	P	**Pn**	**02 28 17.5**	**+1.4**
MET5	**Makryloggos,Me**	**4.46**	**307**	P	**Pn**	**02 28 17.3**	**+1.1**
CSS	**Mathiatis**	**4.48**	**89**		**Pn**	**02 28 17.0**	**+0.6**
CSS	**Mathiatis**	**4.48**	**89**	P	**Pn**	**02 28 16.9**	**+0.4**
STFN	**Stefani**	**4.68**	**313**	P	**Pn**	**02 28 20.4**	**+1.1**
KYMI	**Kymi, Euboea I**	**4.69**	**321**	P	**Pn**	**02 28 20.6**	**+1.2**
MVOU	**Mavrovouni**	**4.73**	**89**	P	**Pn**	**02 28 20.1**	**+0.2**
VIL2	**Platees**	**4.87**	**312**	P	**Pn**	**02 28 22.2**	**+0.3**
LTK	**Loutraki**	**4.95**	**308**	P	**Pn**	**02 28 23.6**	**+0.7**
BORA	**Eskisehir**	**5.25**	**22**	Pn	**Pn**	**02 28 26.8**	**-0.3**
ITM	**Ithomi**	**5.27**	**296**		**Pn**	**02 28 29.5**	**+2.2**
ITM	**Ithomi**	**5.27**	**296**	P	**Pn**	**02 28 29.3**	**+2.0**
LIA	**Limnos Island**	**5.30**	**337**	P	**Pn**	**02 28 28.5**	**+0.7**
PYL	**PYLOS**	**5.31**	**292**	P	**Pn**	**02 28 28.7**	**+0.9**
LKR	**Lokris**	**5.32**	**314**	P	**Pn**	**02 28 29.0**	**+1.1**
KLV	**Kalavryta, Ach**	**5.50**	**305**	P	**Pn**	**02 28 31.1**	**+0.6**
AXAR	**Agios Charalam**	**5.59**	**313**	P	**Pn**	**02 28 32.3**	**+0.5**
NEO	**Neokhori**	**5.65**	**320**	P	**Pn**	**02 28 33.1**	**+0.5**
ANX	**Ano Chora**	**5.95**	**308**	P	**Pn**	**02 28 37.7**	**+0.9**
MAKR	**Makrakomi, Fth**	**6.07**	**313**	P	**Pn**	**02 28 38.9**	**+0.5**
RDO	**Rodhopi**	**6.37**	**344**		**Pn**	**02 28 43.5**	**+1.2**
BRTR	**Keskin Array B**	**6.55**	**43**	Pn	**Pn**	**02 28 46.4**	**+1.3**
	0.2nm,0.3s,baz=222,slow=15,SNR=10						
BRTR				Sn	**Sn**	**02 29 57.9**	**-2.2**
	0.1nm,0.3s,baz=212,slow=19,SNR=8.7						
	1.3nm,0.7s						
BR131	**Keskin Array S**	**6.55**	**43**		**Pn**	**02 28 45.5**	**+0.4**
MMC7	**Mount Meron ar**	**6.56**	**106**	P	**Pn**	**02 28 44.7**	**-0.4**
MMA0B	**Mount Meron ar**	**6.57**	**106**	P	**Pn**	**02 28 44.9**	**-0.3**
MMA0B				S	**Sn**	**02 30 00.1**	**-0.2**
MMAI	**Mount Meron Ar**	**6.57**	**106**	Pn	**Pn**	**02 28 45.1**	**-0.2**
	2.6nm,0.3s,baz=314,slow=15,SNR=14						
MMAI				Sn	**Sn**	**02 29 58.2**	**-2.1**
	2.2nm,0.3s,baz=301,slow=20,SNR=2.7						
	1.1nm,0.3s						
NATI	**Neve Ativ**	**6.76**	**103**	P	**Pn**	**02 28 47.4**	**-0.3**
NATI				S	**Sn**	**02 30 03.8**	**-1.0**
MMLI	**Mount Malkishu**	**6.80**	**110**	P	**Pn**	**02 28 47.9**	**-0.5**
MMLI				S	**Sn**	**02 30 05.0**	**-1.0**
KZIT	**Kziot**	**6.86**	**125**	P	**Pn**	**02 28 48.6**	**-0.5**
KZIT				S	**Sn**	**02 30 05.8**	**-1.6**
KSHT	**Keshet**	**6.90**	**105**	P	**Pn**	**02 28 49.6**	**-0.2**
KSHT				S	**Sn**	**02 30 07.7**	**-0.8**
HMDT	**Nahal Hemdat**	**6.96**	**111**	P	**Pn**	**02 28 50.1**	**-0.4**
HMDT				S	**Sn**	**02 30 09.0**	**-0.9**
YTIR	**Yattir**	**7.09**	**119**	P	**Pn**	**02 28 51.6**	**-0.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YTIR				S	Sn	02 30 11.7	-1.5
BALJ	Balqa	7.12	112	Pn	Pn	02 28 54.1	+1.4
DSI	Dead Sea	7.17	117	P	Pn	02 28 52.8	-0.7
DSI				S	Sn	02 30 14.1	-1.0
MSBI	Mazada	7.29	119	P	Pn	02 28 54.5	-0.5
MSBI				S	Sn	02 30 16.8	-1.1
BNN	Bunyan	7.43	57		Pn	02 28 59.3	+2.2
GHAJ	Ghor Haditha	7.45	118		Pn	02 28 59.3	+2.1
GHAJ	Ghor Haditha	7.45	118	P	Pn	02 28 56.2	-1.0
GHAJ				S	Sn	02 30 20.5	-1.3
KRMI	Paran Flat	7.58	128	P	Pn	02 28 58.9	-0.2
KRMI				S	Sn	02 30 24.2	-1.0
ZFRI	Zfri	7.60	124	P	Pn	02 28 58.4	-0.9
ZFRI				S	Sn	02 30 24.4	-1.2
PRNI	Paran	7.61	126	P	Pn	02 28 59.4	-0.1
PRNI				S	Sn	02 30 23.7	-2.2
HRFI	Mount Harif	7.84	128	P	Pn	02 29 01.9	-0.7
HRFI				S	Sn	02 30 30.6	-0.9
MBRI	Mt Berech	7.92	129	P	Pn	02 29 03.1	-0.7
MBRI				S	Sn	02 30 32.3	-1.3
EIL	Elat	8.03	130	Pn	Pn	02 29 05.3	+0.1
	2.3nm,0.3s,baz=351,slow=12,SNR=17						
EIL				Sn	Sn	02 30 31.5	-4.7
	1.3nm,0.3s,baz=11,slow=23,SNR=6.2						
	9.0nm,0.5s						
EIL	Elat	8.03	130	P	Pn	02 29 04.8	-0.4
EIL				S	Sn	02 30 34.3	-1.9
ASF	Jabal al Asfar	8.05	108	Pn	Pn	02 29 05.2	-0.4
	0.5nm,0.3s,baz=116,slow=23,SNR=9.4						
ASF				Sn	Sn	02 30 36.5	-0.4
	0.2nm,0.3s,baz=135,slow=17,SNR=1.4						
	2.2nm,0.6s						
PDG	Podgorica	9.98	320	Pn	Pn	02 29 31.7	-0.2
CEL	Celeste	10.15	292	Pn	Pn	02 29 32.9	-1.4
VAE	Valguarnera	11.14	287	Pn	Pn	02 29 48.6	+0.7
	1.3nm,0.3s,baz=197,slow=14,SNR=5.5						
	3.6nm,0.5s						
RAFF	Raffo Rosso	11.14	285		Pn	02 29 47.1	-0.7
KBZ	Khabaz	14.48	49	Pn	Pn	02 30 35.4	+1.9
	0.1nm,0.3s,baz=220,slow=8.7,SNR=4.6						
	1.4nm,0.9s						
KEST	Kesra	15.13	278	Pn	Pn	02 30 41.8	-0.6
	0.1nm,0.3s,baz=171,slow=19,SNR=2.9						
	1.6nm,0.8s						
KEST	Kesra	15.13	278	Pn	Pn	02 30 41.5	-0.9
KEST				IAmb	IAmb	02 31 07.1	
	comp=Z,9.4nm,1.2s						
SABO	M.te Sabotino	15.38	320	Pn	Pn	02 30 45.7	+0.2
SABO				IAmb	IAmb	02 31 04.2	
	comp=Z,27nm,1.5s						
VRAC	Vranov	16.50	333	LR	LR	02 39 02.3	
	comp=Z,101nm,19.4s,baz=342,slow=44						
SENIN	Lac Senin/Sane	19.21	312	P	P	02 31 31.1	-1.6
SENIN				IAmb	IAmb	02 31 45.2	
	comp=Z,7.0nm,1.1s						
TAM	Tamanrasset	23.00	244	P	P	02 32 14.7	+1.0
TAM				IAmb	IAmb	02 32 17.1	
	comp=Z,5.5nm,0.9s						
ESBB	Sonseca Array	25.65	290	P	P	02 32 38.2	-0.2
ESBB				IAmb	IAmb	02 33 10.8	
	comp=Z,5.9nm,1.3s						
ESDC	Sonseca Array	25.65	290	P	P	02 32 37.8	-0.7
	comp=Z,1.1nm,0.5s,baz=82,slow=9.6,SNR=44						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	26.45	358	P	P	02 32 45.6	+0.3
	comp=Z,2.4nm,0.8s,baz=181,slow=9.0,SNR=5.9						
FINES				PcP	PcP	02 36 10.8	+0.6
	comp=Z,9.7nm,1.3s,baz=183,slow=3.8,SNR=4.8						
	comp=Z,2.4nm,0.8s						
HFS	Hagfors	26.75	344	P	P	02 32 47.3	-0.8
	comp=Z,3.1nm,0.8s,baz=160,slow=9.3,SNR=6.0						
	comp=Z,3.1nm,0.8s						
AB31	Akbulak array	27.46	49	P	P	02 32 56.4	+1.8
AB31				IAmb	IAmb	02 33 26.5	
	comp=Z,5.8nm,1.5s						
ABKAR	Akbulak array	27.46	49	P	P	02 32 55.0	+0.4
FURI	Furi	27.84	157	LR	LR	02 44 27.4	
	comp=Z,43nm,19.9s,baz=44,slow=37						
EKA	Eskdalemuir Ar	29.45	323	P	P	02 33 11.1	-1.1
	comp=Z,0.3nm,0.5s,baz=124,slow=9.9,SNR=3.0						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	32.16	234	P	P	02 33 37.7	+1.1
	comp=Z,3.3nm,0.6s,baz=29,slow=6.1,SNR=36						
	comp=Z,3.3nm,0.6s						
KURBB	Kurchatov Arra	39.47	51	P	P	02 34 39.5	+0.7
	comp=Z,0.9nm,0.3s,baz=276,slow=8.7,SNR=3.4						
	comp=Z,0.9nm,0.3s						
KURK	Kurchatov	39.53	51	P	P	02 34 39.5	+0.1
DBIC	Dimbokro	41.27	235	P	P	02 34 55.2	+1.0
	comp=Z,3.1nm,0.8s,baz=55,slow=8.8,SNR=3.6						
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	41.98	57	P	P	02 35 01.6	+1.8
	comp=Z,0.5nm,0.5s,baz=272,slow=7.3,SNR=12						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	41.98	57	P	P	02 35 00.1	+0.4
ZALV	Zalesovo Beam	43.48	46	P	P	02 35 11.7	-0.1
	comp=Z,0.4nm,0.4s,baz=281,slow=10,SNR=3.4						
	comp=Z,0.4nm,0.4s						
SPITS	Spitsbergen Ar	43.53	357	P	P	02 35 11.6	-0.3
	comp=Z,9.1nm,1.1s,baz=138,slow=6.8,SNR=3.7						
	comp=Z,9.1nm,1.1s						
SONM	Songino Array	57.84	51	P	P	02 37 01.3	+0.9
	comp=Z,0.4nm,0.5s,baz=296,slow=6.9,SNR=5.3						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	57.84	51	P	P	02 37 02.8	+2.4
SCHQ	Schefferville	64.71	320	P	P	02 37 44.5	-2.2
	comp=Z,1.3nm,0.5s,baz=28,slow=6.6,SNR=6.8						
	comp=Z,1.3nm,0.5s						

IDC 02 02:46:44.2±9.1, 5°44S×146°02E, h90^{km}±63^{km}, mb3.6/3, mbtmp3.9/5, ML1.1/1, Error ellipse: s-maj=99.3km s-min=51.2km az=47.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.10	164	P	Pn	02 47 45.2	+0.5
	0.9nm,0.3s,baz=202,slow=19,SNR=1.8						
PMG				S	Sn	02 48 31.7	+0.2
	10nm,0.3s,baz=162,slow=21,SNR=8.0						
	4.4nm,0.3s						
WRA	Warramunga Arr	18.35	217	P	Pn	02 50 52.6	-0.3
	1.0nm,0.3s,baz=38,slow=11,SNR=24						
ASAR	Alice Springs	21.55	212	P	P	02 51 27.2	+0.7
	1.5nm,0.8s,baz=46,slow=7.8,SNR=23						
	1.5nm,0.8s						
FITZ	Fitzroy Crossi	23.55	236	P	P	02 51 45.7	-1.0
	4.6nm,0.5s,baz=51,slow=11,SNR=19						
	4.6nm,0.5s						
STKA	Stephens Creek	26.62	188	P	P	02 52 14.7	+0.3
	0.9nm,0.4s,baz=11,slow=14,SNR=3.0						
	0.9nm,0.4s						

IDC 02 02:47:55.4±2.6, 33°13S×56°48E, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=86.5km s-min=48.0km az=44.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	13.50	194	T	T	03 06 49.7	
	baz=19,slow=75,SNR=39						
H04N1	CROZET ISLANDS	13.50	194	T	T	03 06 53.4	
	baz=19,slow=75,SNR=44						
H04N3	CROZET ISLANDS	13.52	194	T	T	03 06 47.4	
	baz=19,slow=75,SNR=48						
H08S1	Diego Carcia H	29.38	34	T	T	03 23 04.3	
	baz=207,slow=76,SNR=6.7						
H08S2	Diego Garcia H	29.38	34	T	T	03 23 08.4	
	baz=207						
H08S3	Diego Garcia H	29.40	34	T	T	03 23 00.5	
	baz=207,slow=76,SNR=8.9						
H01W2	Cape Leeuwin H	47.24	109	T	T	03 46 40.1	
	baz=256,slow=75,SNR=6.3						
H01W3	Cape Leeuwin H	47.25	109	T	T	03 46 35.6	
	baz=256,slow=75,SNR=6.4						
H01W1	Cape Leeuwin H	47.26	109	T	T	03 46 37.4	
	baz=256,slow=75,SNR=7.9						
CMAR	Chiang Mai Arr	65.39	45	P	P	02 58 40.7	+0.7
	1.1nm,0.3s,baz=236,slow=7.3,SNR=7.0						
	1.1nm,0.3s						
ASAR	Alice Springs	67.38	104	P	P	02 58 52.6	-0.3
	0.4nm,0.8s,baz=236,slow=6.2,SNR=4.5						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	85.64	14	P	P	03 00 33.9	-1.6
	0.6nm,0.9s,baz=209,slow=4.7,SNR=4.7						
	0.6nm,0.9s						
BVAR	Borovoye Array	86.65	8	P	P	03 00 40.5	+0.1
	0.9nm,0.9s,baz=197,slow=4.4,SNR=6.3						
	0.9nm,0.9s						
YKA	Yellowknife Ar	150.08	352	PKPbc	PKPbc	03 07 47.5	+0.3
	0.6nm,0.9s,baz=351,slow=3.0,SNR=8.7						

SDD 02 02:52:52.1±1.6, 19°01N×67°64W, h8^{km}±114^{km}, MD3.5, ML2.6, MW2.9, 9C-5D, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.73	137	⇓ePg	Pg	02 53 05.4	-0.8
AGPR				⇑eSg	Sg	02 53 16.2	+0.5
AGPR				IAML		02 53 20.2	
	comp=N,284nm,0.1s						
PCDR	Punta Cana, DR	0.86	235	⇓ePg	Pg	02 53 07.5	-1.1
PCDR				⇓eSg	Sg	02 53 18.8	-1.0
PCDR				IAML		02 53 26.0	
	comp=N,177nm,1.5s						
PRSN	Puerto Rico Se	0.91	149	⇓ePg	Pg	02 53 08.1	-1.5
PRSN				IAML		02 53 24.3	
	comp=N,504nm,0.2s						
HIDR	Higuey Centro	1.10	248	⇑ePg	Pg	02 53 11.0	-2.3
HIDR				⇑eSg	Sg	02 53 27.2	-0.5
HIDR				IAML		02 53 33.7	
	comp=N,157nm,0.2s						
CRPR	Cabo Rojo, PR	1.11	153	⇑ePg	Pg	02 53 11.9	-1.6
CRPR				⇑eSg	Sg	02 53 26.4	-1.5
CRPR				IAML		02 53 31.7	
	comp=N,238nm,0.5s						
MIDR	Miches	1.34	269	⇑ePg	Pn	02 53 15.7	-1.5
MIDR				IAML		02 53 37.1	
	comp=N,96nm,0.4s						
SMDR	Samana, DR	1.50	281	⇑ePg	Pn	02 53 18.6	-0.7
SMDR				⇑eSg	Sb	02 53 39.5	+0.1
SMDR				IAML		02 53 52.4	
	comp=N,86nm,1.1s						
HATOM	Hato Mayor del	1.67	263	⇑ePg	Pn	02 53 21.9	+0.2
HATOM				⇓eSg	Sb	02 53 44.6	+0.3
HATOM				IAML		02 53 49.7	
	comp=N,62nm,0.8s						

*IDC **02** 02:55:55.8±3.9, 18°08N×82°47W, h0^{km}, mb3.1/2, mbtmp3.1/2, MS2.7/3, Error ellipse: s-maj=160.0km s-min=50.3km az=61.0*

*SSNC **02** 02:55:57.3±2.3, 18°45N×81°58W, h0^{km}±23^{km}, MD3.3, ML3.3, Presumed earthquake*

ISC 02 02:55:57.9±1.2, 18°42N±0°09×81°60W±0°07, h35^{km}, n17, σ1°25/19, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	1.90	49	eP	Pn	02 56 27.4	-0.4
LCCY				eS	Sn	02 56 51.0	+0.6
LCCY				IAML		02 56 55.5	
	comp=E,84nm,0.3s						
LCCY				IAML		02 56 56.4	
	comp=N,110nm,0.3s						
CBCY	The Bluff, Cay	2.18	53	eP	Pn	02 56 31.0	-0.7
CBCY				eS	Sn	02 56 56.8	-0.7
CBCY				IAML		02 56 58.3	
	comp=N,113nm,0.2s						
CBCY				IAML		02 56 59.8	
	comp=E,86nm,0.2s						
MTDJ	Mount Denham	3.87	92	eP	Pn	02 56 54.9	-0.1
MTDJ				eS	Sn	02 57 39.0	-0.3
MTDJ				IAML		02 57 44.9	
	comp=E,89nm,0.4s						
MTDJ				IAML		02 57 44.9	
	comp=E,63nm,0.3s						
MGV	Manicaragua	3.97	22	eP	Pn	02 56 56.0	-0.3
MGV				eS	Sn	02 57 41.7	0.0
MGV				IAML		02 57 44.7	
	comp=E,93nm,0.1s						
MGV				IAML		02 57 45.0	
	comp=N,33nm,0.2s						
SOR	Soroa	4.54	343	eP	Pn	02 57 05.6	+1.3
CCCC	Cccc	4.54	52	eP	Pn	02 57 09.9	+5.7
CCCC				eS	Sn	02 58 05.3	+9.4
CCCC				IAML		02 58 09.8	
	comp=E,4.2nm,0.3s						
CCCC				IAML		02 58 13.5	
	comp=N,3.8nm,0.2s						
LMGC	Las Mercedes	4.64	69	eP	Pn	02 57 06.7	+1.2
LMGC				eS	Sn	02 57 58.9	+0.7
LMGC				IAML		02 58 03.7	
	comp=N,3.7nm,0.1s						
LMGC				IAML		02 58 05.6	
	comp=E,3.5nm,0.1s						
RCC	Rio Carpintero	5.79	73	eP	Pn	02 57 21.7	+0.2
RCC				eS	Sn	02 58 24.8	-1.8
PINC	Pinares de May	5.85	69	eP	Pn	02 57 24.7	+2.5
QMBU	Quimbuelo	6.65	73	eP	Pn	02 57 34.5	+1.3
CMIG	Matias Romero	12.73	266	LR	LR	03 03 04.4	
	comp=E,40nm,19.3s,baz=176,slow=36						
SDV	Santo Domingo	14.25	130	LR	LR	03 04 32.2	
	comp=E,33nm,21.2s,baz=67,slow=35						
SJG	San Juan	14.68	89	LR	LR	03 05 54.0	
	comp=E,28nm,18.6s,baz=322,slow=39						
TXAR	Lajitas Array	22.88	302	P	P	03 00 56.0	-2.7
	comp=E,0.4nm,0.9s,baz=118,slow=7.7,SNR=5.9						
	comp=E,0.4nm,0.9s						
PDAR	Pinedale Array	33.90	322	P	P	03 02 38.5	+0.8
	comp=E,0.3nm,0.6s,baz=141,slow=8.3,SNR=4.0						
	comp=E,0.3nm,0.6s						
WRA	Warramunga Arr	146.06	261	PKPbc	PKPdf	03 15 34.2	+0.1
	comp=E,0.3nm,0.7s,baz=88,slow=3.1,SNR=2.1						
ASAR	Alice Springs	146.51	255	PKPbc	PKPbc	03 15 37.0	+0.6
	comp=E,0.5nm,0.7s,baz=94,slow=3.7,SNR=4.2						

IDC 02 02:56:05.6±3.8, 32°03S×57°81E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=160.5km s-min=43.8km az=43.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	14.86	196	T	T	03 15 01.1	
	baz=19,slow=75,SNR=35						
H04N1	CROZET ISLANDS	14.86	197	T	T	03 15 02.2	
	baz=19,slow=75,SNR=34						
H04N3	CROZET ISLANDS	14.87	197	T	T	03 15 01.1	
	baz=19,slow=75,SNR=39						
H01W2	Cape Leeuwin H	46.55	110	T	T	03 54 41.7	
	baz=256,slow=75,SNR=4.3						
H01W3	Cape Leeuwin H	46.55	110	T	T	03 54 43.3	
	baz=256,slow=75,SNR=5.6						
H01W1	Cape Leeuwin H	46.57	110	T	T	03 54 42.6	
	baz=256,slow=75,SNR=5.3						
ASAR	Alice Springs	66.56	104	P	P	03 06 57.4	-0.4
	0.2nm,0.5s,baz=238,slow=4.9,SNR=3.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	68.58	101	P	P	03 07 11.3	+0.7
	0.2nm,0.5s,baz=244,slow=5.9,SNR=1.3						
	0.2nm,0.5s						
MKAR	Makanchi Array	81.51	17	P	P	03 08 24.6	0.0
	0.4nm,0.8s,baz=198,slow=4.1,SNR=3.9						
	0.4nm,0.8s						
YKA	Yellowknife Ar	149.14	353	PKPbc	PKPbc	03 15 54.5	-0.5
	0.2nm,0.7s,baz=1.3,slow=2.8,SNR=7.1						

MEX 02 03:01:07.7±0.5, 19°52N×102°12W, h26^{km}±7^{km}, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URUA	Uruapan	0.10	157	eP	Pb	03 01 11.1	-1.7
URUA				eS	Sb	03 01 14.1	-2.1
INCO	Volcan de Coli	1.40	271	eP	Pn	03 01 29.3	-2.7
INCO				eS	Sn	03 01 45.9	-4.0
MNGA	Volcan de Coli	1.42	268	eP	Pn	03 01 29.4	-2.7
MNGA				eS	Sn	03 01 46.9	-3.1
CEGR	Campo Tres	1.65	266	eP	Pn	03 01 33.6	-1.5
CEGR				eS	Sn	03 01 53.5	-2.1
MMIG	Aquila	1.69	224	eP	Pn	03 01 33.7	-1.9
MMIG				eS	Sn	03 01 53.1	-3.2
CDAR	Ciudad de Arme	1.88	253	eP	Pn	03 01 37.1	-1.1
CDAR				eS	Sn	03 01 59.0	-2.0
ARIG	Puente Sto Nin	2.08	126	eP	Pb	03 01 43.8	-1.0
ARIG				eS	Sb	03 02 12.4	+2.2

*IDC **02** 03:01:05.2±5.0, 44°95S×80°83W, h0^{km}, mb3.9/3, mbtmp3.9/4, ML4.4/2, MS3.7/8, Error ellipse: s-maj=90.0km s-min=43.4km az=80.0*

*GCMT **02** 03:01:06.7±0.4, 44°98S±0°02×81°35W±0°03, h19^{km}±1^{km}, MW4.8/67, Moment Tensor Solution. s20,c24; s67,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.34±.13; $M_{\theta\theta}$0.98±.12; $M_{\phi\phi}$-0.63±.10; $M_{r\theta}$-0.45±.22; $M_{\theta\phi}$-1.96±.09; $M_{\phi r}$0.27±.20; Best double couple: $M_0$2.17000×10^{16} NP1:ϕ_s349.00000°, δ82.00000°, λ7.00000°. NP2: ϕ_s258.00000°, δ83.00000°, λ172.00000°. Principal axes: T 2.3920, Plg11.0000°, Azm214.0000°; N -0.4440, Plg79.0000°, Azm38.0000°; P -1.9480, Plg1.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 03:01:08.7±2.0, 44°8S±0°1×80°6W±0°2, h10^{km}±2^{km}, mb4.2/5 Error ellipse: s-maj=25.4km s-min=17.2km az=285.0*

ISC 02 03:01:10.7±1.7, 44°7S±0°1×80°3W±0°2, h10^{km}, n29, σ1°32/19, mb3.9/3, MS3.6/7, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	5.02	74		Pn	03 02 26.3	+0.3
LL07	Hotel Espejo d	5.25	72		Pn	03 02 31.0	+1.8
LL05	Los Muermos	5.96	59		Pn	03 02 39.0	+0.2
GO08	Villa O'Higgin	6.51	128		Pn	03 02 47.6	+1.1
PLCA	Paso Flores	8.17	64	Pn	Pn	03 03 12.0	+2.7
	0.6nm,0.3s,baz=234,slow=11,SNR=32						
PLCA				Sn	Sn	03 04 39.6	-2.1
	baz=240,slow=20						
PLCA				LR	LR	03 06 00.6	
	comp=Z,378nm,21.3s,baz=236,slow=34						
	3.3nm,0.5s						
PLCA	Paso Flores	8.17	64		Pn	03 03 11.7	+2.4
GO06	Curarrehue	8.28	55		Pn	03 03 12.5	+1.6
GO09	Cerro Castillo	8.45	144		Pn	03 03 12.6	-0.5
H03S1	Juan Fernandez	10.89	6	T	T	03 15 17.3	
	baz=186,slow=73,SNR=72						
H03S2	Juan Fernandez	10.89	6	T	T	03 15 21.2	
	baz=186,slow=73,SNR=85						
H03S3	Juan Fernandez	10.90	6	T	T	03 15 22.0	
	baz=186,slow=73,SNR=78						
USHA	Ushuaia	12.68	147	Pn	Pn	03 04 07.0	-3.9
	7.3nm,0.3s,baz=35,slow=4.9,SNR=4.1						
MT09	Talagante	13.04	36		Pn	03 04 15.2	-0.9
MT08	Bocatoma Ro	13.75	39		Pn	03 04 26.8	+1.0
VA03	San Esteban	14.10	36		Pn	03 04 28.8	-1.7
CO02	Combarbal	15.30	31	Pn	Pn	03 04 46.3	-0.5
CO03	El Pedregal	15.75	32	Pn	Pn	03 04 52.8	+0.2
CO03				IAmb	IAmb	03 04 55.4	
	comp=Z,8.9nm,0.7s						
CO01	Juntas del Tor	16.74	32	Pn	Pn	03 05 06.1	+0.5
AC02	Maricunga	19.94	30	P	P	03 05 43.0	-0.3
AC02				IAmb	IAmb	03 05 47.9	
	comp=Z,16nm,1.4s						
CPUP	Villa Florida	26.01	53	P	P	03 06 44.0	+0.3
	comp=Z,2.5nm,0.8s,baz=231,slow=10,SNR=9.7						
	comp=Z,2.5nm,0.8s						
CPUP	Villa Florida	26.01	53	P	P	03 06 44.2	+0.5
CPUP				IAmb	IAmb	03 06 49.8	
	comp=Z,14nm,1.3s						
RPN	Rapa Nui	29.14	297	LR	LR	03 15 25.9	
	comp=Z,94nm,19.5s,baz=140,slow=30						
LPAZ	La Paz	30.11	24	P	P	03 07 21.1	-0.1
	comp=Z,0.6nm,0.8s,baz=211,slow=8.1,SNR=3.7						
	comp=Z,0.6nm,0.8s						
NNA	Nana	32.73	6	LR	LR	03 18 16.5	
	comp=Z,87nm,19.0s,baz=180,slow=31						
ATAH	Atahualpa	37.45	3	LR	LR	03 19 58.4	
	comp=Z,163nm,18.0s,baz=192,slow=30						
BDFB	Brasilia	39.73	54	P	P	03 08 43.2	-0.4
	comp=Z,1.9nm,0.7s,baz=212,slow=14,SNR=3.7						
BDFB				LR	LR	03 23 46.6	
	comp=Z,79nm,20.6s,baz=82,slow=34						
	comp=Z,1.9nm,0.7s						
SNAA	Sanae	44.43	154	LR	LR	03 24 01.1	
	comp=Z,61nm,18.1s,baz=206,slow=31						
VNDA	Vanda	52.30	194	LR	LR	03 29 42.0	
	comp=Z,67nm,18.1s,baz=177,slow=33						
MAW	Mawson	64.61	165	LR	LR	03 37 53.8	
	comp=Z,86nm,18.9s,baz=215,slow=34						

*TAP **02** 03:01:31.5, 24°52N×122°71E, h99^{km}, ML2.8, C*

*JMA **02** 03:01:32.5±0.2, 24°N±2°×122°7E±0°6, h89^{km}±1^{km}, MV1.6/9, NW OFF ISHIGAKIJIMA IS*

ISC 02 03:01:32.0±1.6, 24°50N±0°06×122°69E±0°03, h97^{km}±9^{km}, n44, σ0°56/73, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.23	101	P	Pn	03 01 45.8	-0.1
JYNG				eS	Sn	03 01 55.3	-0.9
YOJ	Yonaguni jima	0.29	97	eP	Pn	03 01 46.0	-0.1
YOJ				eS	Sn	03 01 55.7	-1.0
YOJ	Yonaguni jima	0.29	97	P	Pn	03 01 46.0	-0.1
YOJ				eS	Sn	03 01 57.3	+0.6
EOS3	EOS3	0.40	239	iP	Pn	03 01 47.0	+0.5
EOS3				iS	Sn	03 01 58.8	+1.4
EOS2	EOS2	0.43	260	P	Pn	03 01 47.1	+0.4
EOS2				S	Sn	03 01 58.9	+1.1
EOS4	EOS4	0.51	223	eP	Pn	03 01 47.1	0.0
EOS4				eS	Sn	03 01 59.0	+0.7
EGS		0.78	297	eP	Pn	03 01 49.9	+0.1
ESAO	Su ao	0.78	276	eS	Sn	03 02 03.6	+0.4
TWC	Suao	0.78	279	eP	Pn	03 01 49.9	+0.1
TWB1	Santiao Chiao	0.82	309	eP	Pn	03 01 50.0	-0.3
TWB1				eS	Sn	03 02 02.4	-1.5
ENA	Nanau	0.87	266	P	Pn	03 01 50.7	0.0
ENA				S	Sn	03 02 05.1	+0.2
EAHA	Aohua	0.89	259	eP	Pn	03 01 51.0	0.0
EAHA				eS	Sn	03 02 05.6	+0.5
TIPB	Shuangxi	0.92	301	P	Pn	03 01 50.7	-0.6
TIPB				S	Sn	03 02 05.3	-0.6
TWE	Neicheng	0.96	284	eS	Sn	03 02 06.1	-0.5
ENTT	Nioudou	1.04	278	eP	Pn	03 01 52.8	+0.2
ENTT				eS	Sn	03 02 08.1	0.0
FUSB	Fushanzhiwuyua	1.04	285	P	Pn	03 01 52.9	+0.2
FUSB				eS	Sn	03 02 08.4	+0.2
NACB	Ninganchiao	1.05	253	P	Pn	03 01 52.3	-0.5
NACB				eS	Sn	03 02 08.5	+0.1
LATG	Datong	1.06	272	eP	Pn	03 01 53.2	+0.2
LATG				eS	Sn	03 02 08.7	-0.1
TWD	Chiawan	1.08	248	P	Pn	03 01 52.6	-0.5
TWD				eS	Sn	03 02 08.1	-0.9
ETLH	Xiulin Townshi	1.14	256	eP	Pn	03 01 53.8	0.0
ETLH				eS	Sn	03 02 10.0	-0.4
NNSH	Datong	1.20	267	eP	Pn	03 01 54.5	0.0
NNSH				eS	Sn	03 02 10.7	-0.8
NNS	Nan Shan	1.20	268	eP	Pn	03 01 54.9	+0.2
NNS				eS	Sn	03 02 11.5	-0.2
YM01	YM01	1.21	303	eS	Sn	03 02 11.5	-0.1
YHNB	Yeheng	1.21	279	eP	Pn	03 01 55.2	+0.5
YHNB				eS	Sn	03 02 11.4	-0.3
ETM	Tongmen	1.22	245	eP	Pn	03 01 54.3	-0.4
ETM				eS	Sn	03 02 11.0	-0.8
NSK	Sanguang	1.23	279	eP	Pn	03 01 55.0	+0.1
NSK				eS	Sn	03 02 11.7	-0.4
JIJ	Ishigaki jima	1.33	95	eP	Pn	03 01 56.3	+0.3
JIJ				eS	Sn	03 02 13.1	-1.0
WHF	Hehuan Shan	1.35	255	eP	Pn	03 01 56.6	-0.1
WHF				eS	Sn	03 02 14.5	-0.7
TWT	Tachien	1.40	260	eS	Sn	03 02 16.2	+0.1
TDCB	Techi	1.42	261	eP	Pn	03 01 58.1	+0.8
TDCB				iS	Sn	03 02 15.8	-0.5
WARBT	Fenglin Townsh	1.42	237	P	Pn	03 01 56.6	-0.6
NFF	Wufeng Townshi	1.44	276	eP	Pn	03 01 58.2	+0.8
NFF				eS	Sn	03 02 16.9	+0.2
JISG	Ishigakijimahi	1.48	86	eP	Pn	03 01 58.2	+0.4
JISG				S	Sn	03 02 17.7	+0.4
OWD	Renai	1.49	249	eP	Pn	03 01 58.0	-0.1
WUSB	Renai	1.52	251	P	Pn	03 01 58.9	+0.4
WUSB				S	Sn	03 02 18.7	+0.1
HGSD	Ruisui	1.53	230	eP	Pn	03 01 58.0	-0.5
LIOB	Emei	1.53	276	eS	Sn	03 02 19.0	+0.4
NSTT	Nanjuang	1.55	275	eS	Sn	03 02 18.6	-0.3
EHY	Hungye	1.59	232	eP	Pn	03 01 59.1	-0.2
VWDT	VWDT	1.60	243	eP	Pn	03 01 59.6	+0.3
VWDT				eS	Sn	03 02 19.9	-0.1
WHP	Taichung City	1.61	263	eP	Pn	03 02 01.2	+1.6

WHP				S	Sn	03 02 20.8	+0.4
YULB	Yu-li	1.68	230	eP	Pn	03 02 00.1	-0.4
SSLB	Suanglung	1.74	246	eP	Pn	03 02 01.1	0.0
JTJ	Tarama	1.83	85	eS	Sn	03 02 25.6	+0.2

*RSPR **02** 03:18:56.4, 17°.99N×67°.06W, h7km, MD3.5/6*
*NEIC **02** 03:18:56.1±0.8, 17°.97N±0°.03×67°.08W±0°.02, h10km±1km, ML3.7/35, Md3.5/6(RSPR), Mwr3.5/8(SLM), Error ellipse: s-maj=6.0km s-min=2.4km az=21.0*
*NEIC **02** 03:18:56, 18°.00N×67°.06W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.22; $M_{\theta\theta}$1.35; $M_{\phi\phi}$-1.13; $M_{r\theta}$0.02; $M_{\theta\phi}$1.31; $M_{\phi r}$-0.71; Fault plane solution: $M_0$1.95000×10^{14} NP1:ϕ_s23.00000°, δ81.00000°, λ-160.00000°. NP2:ϕ_s290.00000°, δ70.00000°, λ-10.00000°. Principal axes: T 1.9466, Plg7.0000°, Azm155.0000°; N -0.0004, Plg68.0000°, Azm47.0000°; P -1.9462, Plg21.0000°, Azm248.0000°;*
*OSPL **02** 03:18:56.3±0.4, 17°.96N×67°.09W, h10km±2km, ML4.1, Presumed earthquake*
*SDD **02** 03:18:58.2±2.5, 18°.04N×67°.04W, h0km±15km, MD3.4, ML3.3, MW3.4, Presumed earthquake*
ISC 02 03:18:54.2±0.9**, 17°.93N**±0°.05×**67°.11W**±0°.02**, h18**km±3km**, n47, σ0s.71**/73**, 13C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLPR	Magueyes Islan	0.07	57		Pg	03 18 58.0	+0.4
MLPR				Sg	Sg	03 18 59.2	-0.7
MLPR				IAML		03 18 59.4	
	74µm,0.2s						
CRPR	Cabo Rojo, PR	0.07	356	Pg	Pg	03 18 58.2	+0.6
CRPR				Sg	Sg	03 18 59.2	-0.7
CRPR	Cabo Rojo, PR	0.07	356	IAML		03 18 59.5	
	162µm,0.3s						
CRPR				IAML		03 18 59.6	
	121µm,0.2s						
CRPR	Cabo Rojo, PR	0.07	356	⇑iP	Pg	03 18 58.2	+0.6
CRPR				⇑iS	Sg	03 18 59.4	-0.5
CRPR				IAML		03 18 59.9	
	comp=N,75µm,0.1s						
CRPR	Cabo Rojo, PR	0.07	356	⇑iP	Pg	03 18 58.2	+0.6
CRPR				eS	Sg	03 18 59.1	-0.8
CRPR	Cabo Rojo, PR	0.07	356	iP	Pg	03 18 58.2	+0.6
CRPR				eS	Sg	03 18 59.3	-0.7
CRPR				IAML		03 18 59.5	
	comp=Z,191µm,0.1s						
GBPR	Guanica, Bosqu	0.22	79		Pb	03 19 00.5	+0.8
GBPR	Guanica, Bosqu	0.22	79	⇑iP	Pb	03 19 00.5	+0.8
LSP	Las Mesas	0.24	4		Pb	03 19 00.4	+0.3
LSP	Las Mesas	0.24	4	⇓iP	Pb	03 19 00.4	+0.3
PRSN	Puerto Rico Se	0.29	352		Pb	03 19 01.4	+0.6
PRSN				Sg	Sb	03 19 05.4	+0.1
PRSN				IAML		03 19 09.1	
	comp=Z,28µm,0.3s						
PRSN	Puerto Rico Se	0.29	352	⇑iP	Pb	03 19 01.4	+0.6
PRSN				iS	Sg	03 19 04.1	-0.7
PRSN				IAML		03 19 08.4	
	comp=N,38µm,0.3s						
PRSN	Puerto Rico Se	0.29	352	⇑iP	Pb	03 19 01.5	+0.6
PRSN				eS	Sb	03 19 05.6	+0.2
UUPR	Utuado, UPR, P	0.48	49		Pb	03 19 04.4	+0.1
OBIP	Obispado Ponce	0.49	77		Pb	03 19 04.9	+0.6
OBIP	Obispado Ponce	0.49	77		Sb	03 19 11.1	0.0
OBIP	Obispado Ponce	0.49	77	⇓iP	Pb	03 19 04.9	+0.6
OBIP				eS	Sb	03 19 11.1	0.0
OBIP	Obispado Ponce	0.49	77	iP	Pb	03 19 04.9	+0.6
OBIP				eS	Sb	03 19 11.3	+0.1
OBIP				IAML		03 19 11.7	
	comp=Z,8µm,0.2s						
CELP	Cerrillos	0.52	74		Pb	03 19 05.4	+0.5
CELP				IAML		03 19 17.5	
	comp=Z,2µm,0.5s						
AGPR	Aguadilla, PR	0.53	359		Pb	03 19 05.7	+0.6
AGPR				IAML		03 19 12.8	
	comp=Z,6µm,0.6s						
AGPR				IAML		03 19 15.1	
	comp=Z,6µm,0.4s						
AGPR	Aguadilla, PR	0.53	359	⇑iP	Pb	03 19 05.8	+0.6
AGPR				iS	Sg	03 19 10.9	-1.2
AGPR				IAML		03 19 12.8	
	comp=N,4µm,0.3s						
AGPR	Aguadilla, PR	0.53	359	⇑iP	Pb	03 19 05.7	+0.6
AGPR				eS	Sg	03 19 12.2	+0.1
AGPR	Aguadilla, PR	0.53	359	iP	Pb	03 19 05.7	+0.6
AGPR				eS	Sg	03 19 12.2	+0.1
AGPR				IAML		03 19 15.1	
	comp=Z,2µm,0.2s						
IDE	Isla Desecheo	0.57	322		Pn	03 19 07.0	-0.5
IDE					Sb	03 19 15.1	+1.5
IDE	Isla Desecheo	0.57	322	⇑eP	Pn	03 19 07.0	-0.5
IDE				eS	Sb	03 19 15.1	+1.5
EMPR	Esperanza - Ma	0.77	45		Pn	03 19 09.9	-0.4
EMPR					Sg	03 19 19.8	+0.3
EMPR	Esperanza - Ma	0.77	45	⇓iP	Pn	03 19 09.9	-0.4
EMPR				eS	Sg	03 19 19.8	+0.3
ECPR	Experimental S	0.80	61		Pg	03 19 10.0	0.0
ECPR				IAML		03 19 20.7	
	comp=Z,2µm,0.3s						
ECPR				IAML		03 19 22.0	
	comp=Z,3µm,0.2s						
ECPR	Experimental S	0.80	61	⇓iP	Pg	03 19 10.0	0.0
ECPR				eS	Sg	03 19 20.4	-0.2
SJG	San Juan	0.93	79		Pg	03 19 12.1	-0.2
SJG	San Juan	0.93	79	⇓eP	Pg	03 19 12.1	-0.2
SJG				eS	Sg	03 19 24.4	0.0
SJG	San Juan	0.93	79	iP	Pg	03 19 12.3	0.0
SJG				eS	Sg	03 19 24.1	-0.4
SJG				IAML		03 19 28.3	
	comp=Z,11µm,0.3s						
PDPR	Patillas Dam,	1.03	85	Pg	Pn	03 19 14.1	+0.2
GCPR	Guaynabo City	1.04	69		Pn	03 19 14.0	0.0
GCPR	Guaynabo City	1.04	69		Sb	03 19 26.9	-0.2
GCPR	Guaynabo City	1.04	69	⇑eP	Pn	03 19 14.0	0.0
GCPR				eS	Sb	03 19 26.9	-0.2
HUMP	Col San Antoni	1.21	80		Pg	03 19 17.6	0.0
HUMP					Sn	03 19 32.3	0.0
HUMP	Col San Antoni	1.21	80	IAML		03 19 37.0	
	comp=Z,866nm,0.5s						
HUMP				IAML		03 19 38.0	
	comp=Z,639nm,0.3s						
HUMP	Col San Antoni	1.21	80	⇑eP	Pg	03 19 17.6	0.0
HUMP				eS	Sn	03 19 32.3	0.0
HIDR	Higuey Centro	1.67	293	⇑iP	Pg	03 19 26.6	+0.2
HIDR				iS	Sb	03 19 46.3	+1.1
HIDR				IAML		03 19 53.2	
	comp=N,379nm,0.3s						
CUPR	Culebra, Puert	1.77	78		Pb	03 19 26.4	+0.2
MIDR	Miches	2.12	300	⇑iP	Pb	03 19 33.5	+1.3
MIDR				⇑iS	Sb	03 19 59.5	+1.3
MIDR				IAML		03 20 12.1	
	comp=N,115nm,0.6s						
MIDR				IAML		03 20 12.1	
	comp=N,115nm,0.6s						
DR12	Loma Pena Alta	2.32	292		Pb	03 19 35.9	+0.2
HATOM	Hato Mayor del	2.32	292	⇑iP	Pb	03 19 37.4	+1.7
HATOM				iS	Sb	03 20 05.2	+1.1
HATOM				IAML		03 20 17.2	
	comp=N,147nm,0.6s						
SMDR	Samana, DR	2.39	305		Pg	03 19 39.7	-0.5
SMDR					Sg	03 20 09.3	-1.9
SMDR	Samana, DR	2.39	305	⇑iP	Pb	03 19 37.5	+0.7
SMDR				⇑iS	Sb	03 20 04.5	-1.6
SDDR	Presa de Saban	4.11	285		Pb	03 20 04.9	-1.2

*IDC **02** 03:19:43.9±14.0, 7°.40S×127°.57E, h114km±156km, mb3.4/2, mbtmp3.9/5, ML3.8/3, MS3.7/1, Error ellipse: s-maj=136.1km s-min=56.0km az=40.0*
ISC 02 03:19:42.4±1.4**, 7°.3S**±0°.1×**127°.8E**±0°.1**, h100**km**, n7, σ0s.72**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.96	234	S	Sn	03 21 50.9	0.0
	69nm,0.5s,baz=156,slow=20,SNR=3.2						
FITZ	Fitzroy Crossi	10.92	191	P	Pn	03 22 15.4	-0.3
	0.4nm,0.3s,baz=13,slow=11,SNR=9.9						
FITZ				S	Sn	03 24 05.0	-11
	4.5nm,0.3s,baz=134,slow=18,SNR=6.5						
	4.6nm,1.0s						
WRA	Warramunga Arr	14.09	154	P	Pn	03 22 57.1	-0.6
	0.5nm,0.3s,baz=328,slow=13,SNR=15						
WRA				S	Sn	03 25 20.4	-13
	3.3nm,0.4s,baz=325,slow=23,SNR=16						
	1.7nm,0.8s						
ASAR	Alice Springs	17.31	161	P	P	03 23 38.8	+1.0
	0.8nm,0.3s,baz=335,slow=11,SNR=57						
ASAR				S	Sn	03 26 40.4	-10
	1.3nm,0.6s,baz=328,slow=16,SNR=7.3						
	4.0nm,0.6s						
HILR	Hailar Array B	57.05	354	LR	LR	03 55 47.4	
	comp=Z,61nm,20.7s,baz=50,slow=38						
MKAR	Makanchi Array	67.28	328	P	P	03 30 26.6	+0.2
	0.5nm,0.6s,baz=126,slow=7.7,SNR=6.9						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	71.62	329	P	P	03 30 52.7	-0.3
	0.5nm,0.6s,baz=135,slow=5.1,SNR=10						
	0.5nm,0.6s						

*ISK **02** 03:21:21.8, 39°.08N×27°.81E, h5km, ML2.6/13*
AFAD 02 03:21:21.8, 39°.08N×27°.83E, h7km±3km**, ML2.1, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.20	184	P	Pg	03 21 26.0	+0.2
AKS	Akhisar	0.20	184	Pg	Pg	03 21 25.8	0.0
AKS				Sg	Sg	03 21 29.7	+1.2
SOMA	Soma-Manisa	0.24	288	Pg	Pg	03 21 26.9	+0.3
SOMA				Sg	Sg	03 21 30.6	+0.7
STEP	BALIKESIR_Sava	0.31	343	P	Pn	03 21 31.4	-1.4
GORD	Gordes-Manisa	0.32	122	Pg	Pg	03 21 28.8	+0.8
GOMA	Golmarmara-Man	0.38	170	Pg	Pg	03 21 29.7	+0.6
GOMA				Sg	Sb	03 21 35.5	-1.4
KTTT	Salihli	0.44	152	P	Pg	03 21 30.8	+0.5
CAMT	Merkez	0.52	231	P	Pg	03 21 32.5	+0.6
CAMT				S	Sg	03 21 38.9	+0.2
BALB	Balikesir	0.56	4	Pg	Pb	03 21 33.4	-0.6
ZEDA	zmir-Bergama	0.60	259	P	Pg	03 21 33.8	+0.4
ZEDA				S	Sg	03 21 41.3	+0.2
ZEDA				IAML		03 21 50.0	
	comp=N,257nm,0.6s						
BKES	Balkesir-Mer	0.66	6	P	Pg	03 21 34.7	+0.3
BKES				S	Sg	03 21 42.8	-0.2
BKES				IAML		03 21 57.0	
	comp=N,91nm,0.4s						
BALY	Balya	0.68	346	P	Pg	03 21 35.2	+0.3
DEMI	Demirci	0.69	93	P	Pg	03 21 35.2	+0.2
IZMD	zmir-Dikili-	0.71	263	P	Pg	03 21 35.2	-0.2
IZMD				P	Pb	03 21 35.4	-1.1
DURS	Dursunbey	0.72	43	P	Pg	03 21 35.8	+0.2
DURS				S	Sg	03 21 43.9	-1.1
DURS				IAML		03 21 47.0	
	comp=N,58nm,0.2s						
DURS				IAML		03 21 51.0	
	comp=E,104nm,0.4s						
BUHA	Balikesir, Bur	0.72	306	P	Pg	03 21 36.2	+0.5
DKL	Dikili	0.72	270	Pg	Pg	03 21 35.9	+0.2
YAYO	Edremit-Balk	0.79	312	Pg	Pg	03 21 37.4	+0.4
BLKS	Balkesir-Sus	0.80	7	P	Pg	03 21 37.3	+0.1
BLKS				S	Sg	03 21 45.0	-2.6
BLKS				S	Sb	03 21 45.2	-3.9
BLKS				IAML		03 22 00.0	
	comp=N,73nm,0.7s						
MANT	Manisa	0.82	136	P	Pn	03 21 39.9	-0.1
ODEM	Odemis-Izmir	0.82	167	Pg	Pb	03 21 38.2	-0.3
KULA	Kula-Manisa	0.86	131	Pg	Pb	03 21 39.0	-0.1
BAGT	Foa	0.88	241	P	Pb	03 21 39.5	+0.2
BAGT				S	Sg	03 21 48.1	-1.8
BAGT				IAML		03 22 00.0	
	comp=N,257nm,0.7s						
SIMA	Simav-Kutahya	0.90	89	Pg	Pb	03 21 39.4	-0.3
DUVT	Torbali	0.91	199	P	Pg	03 21 39.5	+0.2
AYVA	Ayvalik	0.92	285	P	Pb	03 21 40.2	+0.2
BLCB	Balcova	0.93	222	Pg	Pg	03 21 39.9	+0.3
FOCM	Foa	0.94	247	Pg	Pg	03 21 39.9	+0.2
IZMR	zmir-demi	0.95	174	P	Pb	03 21 40.6	+0.1
USAK	Uak-Merkez	0.99	111	P	Pb	03 21 41.1	-0.2
USAK				S	Sg	03 21 49.4	-4.3
USAK				IAML		03 22 06.0	
	comp=N,31nm,0.6s						
AYDB	Zeytinkoy-Aydi	1.13	178	Pn	Pb	03 21 43.7	-0.1
DGB	zmir	1.27	216	P	Pg	03 21 46.1	0.0

*ATH **02** 03:25:41.1±0.3, 39°.11N×28°.03E, h10km, ML3.8/25, Manual Solution by N.Liadopoulou First location: 2020/02/02 03:26:58, This location: 2020/02/02 07:57:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*IDC **02** 03:25:41.2±1.0, 39°.11N×27°.72E, h0km, mb3.5/7, mbtmp3.5/11, ML3.4/3, MS3.2/9, Error ellipse: s-maj=16.1km s-min=14.2km az=10.0*
*ISK **02** 03:25:41.9, 39°.08N×27°.82E, h14km, ML4.2/25*
*AFAD **02** 03:25:42.4, 39°.07N×27°.81E, h7km±2km, MW4.0*
*THE **02** 03:25:43.4, 39°N±2°×2°8E±°, h10km±14km, M3.8/17, MLh3.8/17*
*CFUSG **02** 03:25:45.4, 39°.40N×28°.10E, h10km, Mb2.9/6, MD3.5/5, MSH3.0/6*
*SOF **02** 03:25:50.7, 39°.70N±0°.04×27°.48E±0°.01, h12km±3km, MD3.8/10*
ISC 02 03:25:42.6±0.8**, 39°.08N**±0°.02×**27°.83E**±0°.01**, h14**km±6km**, n197, σ1s.19**/247**, mb3.4**/6**, MS3.0**/3**, 22C-17D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKS	Akhisar	0.20	185	Pg	Pg	03 25 46.3	-0.9
AKS				Sg	Sg	03 25 50.5	+0.2
AKHS	Akhisar	0.20	184	P	Pg	03 25 46.9	-0.4
SOMA	Soma-Manisa	0.24	288	Pg	Pg	03 25 47.4	-0.5
SOMA				Sg	Sg	03 25 51.5	0.0
GORD	Gordes-Manisa	0.32	123	Pg	Pg	03 25 49.2	0.0
GOMA	Golmarmara-Man	0.38	170	Pg	Pg	03 25 49.9	-0.4
KTTT	Salihli	0.44	153	P	Pg	03 25 51.3	-0.2
KTTT				S	Sg	03 25 56.6	-0.8
KTTT				IAML		03 25 59.0	
	comp=N,3µm,0.5s						
CAMT	Merkez	0.53	231	P	Pg	03 25 52.6	-0.4
CAMT				S	Sb	03 26 00.6	-0.5
CAMT				IAML		03 26 05.0	
	comp=N,1µm,1.2s						
BALB	Balikesir	0.56	4	Pg	Pb	03 25 53.4	-0.8
ZEDA	zmir-Bergama	0.60	259	P	Pb	03 25 54.2	-0.7
ZEDA				S	Sb	03 26 02.4	-0.9
ZEDA				IAML		03 26 03.0	
	comp=N,1µm,0.9s						
ZEDA				IAML		03 26 06.0	
	comp=E,3µm,0.4s						
BKES	Balkesir-Mer	0.65	6	P	Pb	03 25 55.5	-0.4
BALY	Balya	0.68	346	P	Pb	03 25 55.8	-0.5
BALY				S	Sg	03 26 04.6	-0.2
BALY				IAML		03 26 10.0	
	comp=N,6µm,0.5s						
DEMI	Demirci	0.69	93	P	Pb	03 25 56.3	-0.2
IZMD	zmir-Dikili-	0.71	262	P	Pb	03 25 56.5	-0.4
IZMD				P	Pg	03 25 56.7	+0.2
IZMD				S	Sg	03 26 05.6	-0.3
IZMD				S	Sb	03 26 06.0	-0.7
IZMD				IAML		03 26 06.0	
	comp=N,2µm,0.8s						
IZMD				IAML		03 26 06.0	
	comp=N,6µm,0.6s						
DURS	Dursunbey	0.72	44	P	Pb	03 25 56.4	-0.6
BUHA	Balikesir, Bur	0.72	306	P	Pb	03 25 56.5	-0.6
DKL	Dikili	0.72	269	Pg	Pb	03 25 56.9	-0.1
YAYO	Edremit-Balk	0.79	312	Pg	Pb	03 25 57.8	-0.4
BLKS	Balkesir-Sus	0.80	7	P	Pb	03 25 58.0	-0.3
BLKS				P	Pg	03 25 58.2	0.0
BLKS				S	Sg	03 26 07.9	-0.8
BLKS				IAML		03 26 13.0	
	comp=N,2µm,0.5s						
DST	Dursunbey	0.80	49	Pg	Pb	03 25 57.9	-0.5
MANT	Manisa	0.82	136	P	Pb	03 25 58.6	-0.2
MANT				S	Sg	03 26 09.3	0.0
MANT				IAML		03 26 14.0	
	comp=N,2µm,0.6s						
ODEM	Odemis-Izmir	0.83	167	Pg	Pb	03 25 58.7	-0.2
KULA	Kula-Manisa	0.86	131	Pg	Pg	03 25 58.9	-0.4
BAGT	Foa	0.88	241	P	Pg	03 25 59.2	-0.4
BAGT				S	Sb	03 26 11.1	-0.2
BAGT				IAML		03 26 14.0	
	comp=N,10µm,0.9s						
SMAA	Simav-Kutahya	0.89	89	Pg	Pb	03 25 59.8	-0.2
SIMA	Simav-Kutahya	0.89	90	Pg	Pb	03 25 59.9	-0.1
SUSR	Susurluk-Balik	0.90	12	Pg	Pb	03 25 59.9	-0.2
DUVT	Torbali	0.91	199	P	Pg	03 25 59.7	-0.6
AYVA	Ayvalik	0.92	285	P	Pb	03 26 00.2	-0.1
AYVA				IAML		03 26 13.0	
	comp=N,1µm,0.6s						
AYVA				S	Sb	03 26 13.2	+0.8
AYVA				IAML		03 26 15.0	
	comp=E,1µm,0.6s						
BLCB	Balcova	0.93	222	Pg	Pb	03 26 00.4	-0.2
BLCB	Balcova	0.93	222	P	Pb	03 26 00.5	-0.2
BLCB				S	Sb	03 26 13.5	+0.7
CMHT	Manyas	0.93	6	P	Pb	03 26 00.2	-0.4
FOCM	Foa	0.94	247	Pg	Pb	03 26 00.3	-0.4
IZMR	zmir-demi	0.95	174	P	Pg	03 26 00.5	-0.5
IZMR				P	Pb	03 26 01.0	+0.1
YENI	Yenice-Canakka	0.97	332	Pg	Pb	03 26 01.1	-0.1
GONE	Gonen-Balikesi	0.97	353	Pg	Pb	03 26 01.2	0.0
KIRA	zmir-Kiraz	0.99	153	P	Pb	03 26 02.0	+0.4
KIRA				S	Sb	03 26 15.1	+0.5
KIRA				IAML		03 26 16.0	
	comp=N,3µm,0.7s						
USAK	Uak-Merkez	0.99	111	P	Pb	03 26 01.6	-0.1
USAK				S	Sg	03 26 14.4	-0.4
USAK				IAML		03 26 17.0	
	comp=N,533nm,0.5s						
ATIT	Gnen	1.02	348	P	Pg	03 26 01.6	-0.7
ATIT				S	Sb	03 26 15.1	-0.3
ATIT				IAML		03 26 18.0	
	comp=N,2µm,0.6s						
SHAP	Saphane-Kutahy	1.08	93	Pn	Pb	03 26 03.4	+0.2
CANM	Can-anakkale	1.11	327	Pn	Pb	03 26 03.7	+0.1
KRBN	Karaburun	1.11	244	Pn	Pb	03 26 03.7	0.0
AYDB	Zeytinkoy-Aydi	1.14	178	Pn	Pg	03 26 03.8	-0.7
NAZL	Nazilli-Aydin	1.17	162	Pn	Pg	03 26 04.6	-0.6
KARB	zmir-Karabur	1.19	250	P	Pb	03 26 04.9	0.0
KARB				S	Sg	03 26 17.1	-3.9
KARB				IAML		03 26 22.0	
	comp=N,3µm,0.7s						
EMET	Ktahya-Emet	1.19	75	P	Pb	03 26 05.2	+0.1
EMET				S	Sg	03 26 19.6	-1.6
EMET				IAML		03 26 29.0	
	comp=N,3µm,1.2s						
BAYC	CANAKKALE_Bayr	1.20	304	P	Pb	03 26 04.9	-0.2
BAYC				S	Sg	03 26 19.8	-1.4
BAYC				IAML		03 26 23.0	
	comp=N,3µm,0.3s						
URLA	Izmir	1.21	234	Pn	Pg	03 26 04.9	-1.0
URLA	Izmir	1.21	234	P	Pg	03 26 04.9	-1.0
URLA				S	Sb	03 26 22.0	+1.1
URLA				IAML		03 26 24.0	
	comp=E,4µm,1.0s						
PRK	Paraskevi	1.23	278	P	Pn	03 26 05.7	+0.3
PRK				S	Sn	03 26 22.2	+0.5
PRK	Paraskevi	1.23	278	P	Pb	03 26 05.6	0.0
PRK				S	Sn	03 26 22.8	+1.1
GEDZ	Gediz	1.23	91	Pn	Pn	03 26 06.4	+0.9
GMLD	Gumuldur	1.24	216	Pn	Pg	03 26 05.6	-0.8
SULTU	Buldan	1.26	144	P	Pg	03 26 06.2	-0.7
DGB	zmir	1.27	216	P	Pn	03 26 06.6	+0.6
DGB				S	Sg	03 26 22.9	-0.7
DGB				IAML		03 26 25.0	
	comp=N,3µm,0.5s						
GDZ	Gediz	1.28	89	P	Pb	03 26 06.8	+0.2
GDZ				S	Sg	03 26 23.4	-0.6
GDZ				IAML		03 26 26.0	
	comp=N,3µm,0.9s						
BAND	Balkesir-Ban	1.29	9	⇑P	Pn	03 26 07.2	+1.0
BAND				⇓S	Sn	03 26 25.0	+1.6
KUSD	Kusadasi-Aydin	1.29	200	Pn	Pg	03 26 06.2	-1.3
ZEYE	Izmir, Urla-Ze	1.34	231	P	Pn	03 26 06.0	-0.9
ZEYE				S	Sg	03 26 23.7	-2.1
ESEN	Aydn-Nazilli	1.34	162	P	Pn	03 26 07.1	+0.1
ESEN				S	Sb	03 26 25.6	+0.9
ESEN				IAML		03 26 27.0	
	comp=N,544nm,0.9s						
ESEN				IAML		03 26 31.0	
	comp=E,750nm,0.9s						
EZN	Ezine	1.38	303	P	Pn	03 26 07.8	+0.2
EZN				S	Sb	03 26 26.3	+0.5
AYDN	Tasoluk	1.42	179	P	Pn	03 26 08.2	+0.1
AYDN				S	Sb	03 26 27.3	+0.3
AYDN				IAML		03 26 33.0	
	comp=N,2µm,0.6s						
EAG2	Marmaro, Chios	1.45	249	P	Pn	03 26 08.5	0.0
EAG2				S	Sg	03 26 30.3	+0.9
GCAM	G?zelcaml?	1.46	199	Pn	Pn	03 26 07.9	-0.7
GCAM	G?zelcaml?	1.46	199	P	Pn	03 26 08.2	-0.3
GCAM				S	Sb	03 26 27.8	-0.1
GCAM				IAML		03 26 32.0	
	comp=N,3µm,0.7s						
SIGR	SIGRI	1.54	275	P	Pb	03 26 11.2	+0.1
SIGR				S	Sg	03 26 31.2	-1.2
SIGR	SIGRI	1.54	275	P	Pg	03 26 11.3	-1.0
SIGR				S	Sg	03 26 33.3	+0.9
CHOS	Chios island	1.56	244	P	Pn	03 26 10.2	+0.2
CHOS				S	Sg	03 26 31.9	-0.9
CHOS	Chios island	1.56	244	P	Pb	03 26 10.9	-0.4
CHOS				S	Sg	03 26 33.6	+0.9
KRL1	Karlovasi Samo	1.56	215	P	Pn	03 26 11.0	+1.0
KRL1				S	Sg	03 26 32.8	-0.1
SMG	Samos	1.58	210	P	Pn	03 26 09.7	-0.6
SMG				S	Sn	03 26 31.9	+1.3
SMG	Samos	1.58	210	P	Pn	03 26 10.5	+0.3
SMG				S	Sg	03 26 32.9	-0.6
GADA	Gvkgeada	1.86	307	P	Pn	03 26 14.7	+0.6
GADA				S	Sn	03 26 38.4	+1.0
YER	Yerkesik	1.98	170	P	Pn	03 26 15.6	-0.1
CAVK	Edirne/Enez-Ca	2.06	322	⇑P	Pn	03 26 17.3	+0.5
CAVK				⇑S	Sn	03 26 43.4	+1.1
BODT	Bodrum	2.06	192	P	Pn	03 26 17.7	+0.8
ENEZ	Enez	2.10	322	P	Pn	03 26 18.5	+1.1
ENEZ				S	Sb	03 26 45.5	-0.9
LIA	Limnos Island	2.21	292	P	Pn	03 26 19.5	+0.6
LIA	Limnos Island	2.21	292	P	Pn	03 26 19.6	+0.7
LIA				S	Sb	03 26 49.6	+0.1
SMTH	Samothraki Isl	2.25	309	P	Pn	03 26 20.1	+0.6
SMTH				S	Sb	03 26 50.1	-0.8
ALN	Alexandroupoli	2.27	323	P	Pn	03 26 19.9	+0.1
ALN	Alexandroupoli	2.27	323	P	Pn	03 26 19.9	+0.1
ALN				S	Sn	03 26 49.2	+1.5
LMN1	MIRINA LIMNOU	2.29	291	P	Pn	03 26 20.2	+0.2
SFL1	Soufli	2.41	331	P	Pn	03 26 21.8	+0.2
SFL1				S	Sn	03 26 51.6	+0.7
ISP	Isparta	2.46	120	P	Pn	03 26 18.6	-3.8
RDO	Rodhopi	2.71	320	P	Pn	03 26 26.8	+1.0
RDO	Rodhopi	2.71	320	P	Pn	03 26 26.1	+0.3
THAS	Thassos island	2.84	303	P	Pn	03 26 27.6	0.0
THAS	Thassos island	2.84	303	P	Pn	03 26 27.7	0.0
KARY	Karystos	2.86	250	P	Pn	03 26 27.7	-0.2
KARY	Karystos	2.86	250	P	Pn	03 26 28.1	+0.2
ARG	Arkhangelos	2.87	175	P	Pn	03 26 28.7	+0.7
ARG	Arkhangelos	2.87	175	P	Pn	03 26 27.6	-0.4
KYMI	Kymi, Euboea I	2.95	262	P	Pn	03 26 29.9	+0.8
THS1	Thassos, Thass	3.00	304	P	Pn	03 26 30.3	+0.5
AOS	Alonnisos	3.08	273	P	Pn	03 26 31.9	+1.1
AOS2	Alonissos-2	3.10	272	P	Pn	03 26 32.1	+0.9
KAVA	Kavala	3.19	308	P	Pn	03 26 32.8	+0.5
KAVA	Kavala	3.19	308	P	Pn	03 26 32.8	+0.5
DION	Dionisos Attik	3.22	253	P	Pn	03 26 33.3	+0.5
DION	Dionisos Attik	3.22	253	P	Pn	03 26 33.0	+0.2
OUR	Ouranopolis	3.22	294	P	Pn	03 26 33.3	+0.5
OUR	Ouranopolis	3.22	294	P	Pn	03 26 33.5	+0.6
THERA	Ancient Thera,	3.29	215	P	Pn	03 26 33.2	-0.6
ATHU	Athens Univers	3.37	252	P	Pn	03 26 35.4	+0.5
VLY	Voula,Athens	3.40	250	P	Pn	03 26 36.3	+1.0
DIM	Dimitrovgrad	3.42	331	iP	Pn	03 26 36.5	+0.9
STFN	Stefani	3.48	256	P	Pn	03 26 37.3	+0.8
RZN	Rozhen	3.52	319	iP	Pn	03 26 38.3	+1.2
KARP	Karpathos	3.57	189	P	Pn	03 26 37.9	+0.2
NEO	Neokhori	3.59	275	P	Pn	03 26 38.7	+0.8
PLG	Polygyros	3.62	292	P	Pn	03 26 38.9	+0.5
VIL2	Platees	3.68	258	P	Pn	03 26 40.1	+1.0
LKR	Lokris	3.80	265	P	Pn	03 26 41.5	+0.8
MET5	Makryloggos,Me	3.81	249	P	Pn	03 26 42.3	+1.4
PLD	Plovdiv	3.86	323	iP	Pn	03 26 42.7	+1.1
MMB	Musomishta	3.98	310	iP	Pn	03 26 44.6	+1.4
AXAR	Agios Charalam	4.05	267	P	Pn	03 26 45.3	+1.0

ELND	Elena	4.12	340	⇑P	Pn	03 26 45.4	+0.3
ZKR	Zakros	4.17	199	P	Pn	03 26 46.1	+0.3
NPS	Neapolis	4.21	206	P	Pn	03 26 46.2	-0.1
LOZB	Loznitsa	4.38	348	⇓P	Pn	03 26 49.4	+0.6
SZH	Strazhitsa	4.41	342	*i* P	Pn	03 26 50.3	+1.2
PGB	Panagyurishte	4.41	322	*i* P	Pn	03 26 50.4	+1.2
MAKR	Makrakomi, Fth	4.44	271	P	Pn	03 26 50.8	+1.2
IDI	Anoyia	4.46	213	Pn	Pn	03 26 49.9	0.0
	6.0nm,0.6s,baz=26,slow=19,SNR=8.7						
IDI				Sn	Sn	03 27 37.9	-3.8
	2.2nm,0.3s,baz=348,slow=2.9,SNR=6.1						
IDI				Lg	Lg	03 28 05.2	
	3.1nm,0.3s,baz=113,slow=22,SNR=4.6						
IDI				LR	LR	03 28 46.0	
	comp=Z,290nm,19.3s,baz=316,slow=42						
IDI	Anoyia	4.46	213	P	Pn	03 26 49.9	0.0
KKB	Krupnik	4.53	309	*i* P	Pn	03 26 52.3	+1.5
VLI	Veliai	4.54	240	P	Pn	03 26 51.0	+0.1
THL	Klokotos Trika	4.54	278	P	Pn	03 26 51.9	+0.9
BRTR	Keskin Array B	4.54	80	Pn	Pn	03 26 53.0	+1.9
	0.7nm,0.3s,baz=253,slow=14,SNR=36						
BRTR				Pg	Pg	03 27 07.7	-2.0
	1.5nm,0.3s,baz=265,slow=17,SNR=30						
BRTR				Lg	Lg	03 28 08.4	
	0.4nm,0.3s,baz=259,slow=22,SNR=14						
	4.3nm,0.6s						
KLV	Kalavryta, Ach	4.57	259	P	Pn	03 26 52.4	+0.9
RAZG	Razgrad	4.59	348	⇑P	Pn	03 26 52.5	+0.9
VAY	Valandovo	4.61	301	*e*Pn	Pn	03 26 53.9	+2.0
VAY				*e*Sn	Sg	03 28 04.3	-6.3
ANX	Ano Chora	4.64	266	P	Pn	03 26 53.7	+1.2
EVR	Evrytania	4.70	270	P	Pn	03 26 54.5	+1.3
KIRS	Kirsehir-Merke	4.73	87	⇑P	Pn	03 26 55.5	+1.8
PLNA	Plana	4.76	317	*i* P	Pn	03 26 56.1	+2.0
PLVB	Pleven	4.94	332	⇓P	Pn	03 26 57.0	+0.7
VTS	Vitosha	4.96	317	*i* P	Pn	03 26 58.2	+1.3
ICOR	Ion Corvin	5.03	360	⇑P	Pn	03 26 58.3	+0.6
ITM	Ithomi	5.03	250	P	Pn	03 26 58.9	+1.2
RLS	Riolos of Patr	5.09	260	P	Pn	03 27 00.2	+1.6
TETR	Tetrakomo, Epi	5.10	275	P	Pn	03 27 00.1	+1.3
BLSH	Balsha	5.11	319	*i* P	Pn	03 27 00.9	+2.1
MPEP	Malo Peshtene	5.27	325	*i* P	Pn	03 27 02.2	+1.2
PYL	PYLOS	5.28	247	P	Pn	03 27 02.6	+1.4
TIRR	Tirgusor	5.39	4	⇑P	Pn	03 27 04.7	+2.1
COPA	Copaceanca	5.42	340	⇓P	Pn	03 27 03.8	+0.9
OHR	Ohrid	5.76	293	*e*Pn	Pn	03 27 05.9	-1.9
CFR	Carcaliu	6.09	2	⇓P	Pn	03 27 13.1	+0.8
TLCR		6.14	6	⇑P	Pn	03 27 14.3	+1.4
MTUR	Matau	6.47	342	⇓P	Pn	03 27 19.2	+1.6
BOVS	Bovan	6.47	317	⇑P	Pn	03 27 18.4	+0.9
TATR	Tatarca	6.51	1	⇑P	Pn	03 27 19.6	+1.6
MLR	Muntele Rosu	6.55	348	Pn	Pn	03 27 19.7	+1.0
	0.5nm,0.3s,baz=171,slow=4.2,SNR=8.0						
MLR				Sn	Sn	03 28 33.0	-0.4
	1.2nm,0.3s,baz=247,slow=20,SNR=5.6						
MLR				Lg	Lg	03 29 11.7	
	0.5nm,0.3s,baz=58,slow=14,SNR=3.0						
	3.8nm,0.5s						
MLR	Muntele Rosu	6.55	348	⇑P	Pn	03 27 21.0	+2.2
VOIR		6.68	343	⇓P	Pn	03 27 21.3	+0.9
ODBI	Odobesti	6.70	355	⇑P	Pn	03 27 22.8	+2.2
VLDR	Vladesti	6.76	1	⇑P	Pn	03 27 23.4	+2.0
VARL	Varlezi	6.81	0	⇓P	Pn	03 27 24.4	+2.2
PLOR	Plostina	6.82	353	⇓P	Pn	03 27 24.5	+2.2
VRI	Vrincioaia	6.83	353	⇓P	Pn	03 27 24.7	+2.3
COVR	Voineasa-Covas	6.87	350	⇑P	Pn	03 27 24.6	+1.7
SEV	Sevastopol'	6.98	37	*e*P	Pn	03 27 24.8	+0.3
SEV				pmax	pmax	03 27 30.7	
	comp=Z,3.0nm,0.4s						
SEV				*e*S	Sn	03 28 39.9	-3.7
SEV				smax	smax	03 28 44.2	
	comp=N,5.0nm,0.4s						
SEV				smax	smax	03 28 44.2	
	comp=E,7.0nm,0.6s						
LOT	Lotru	7.04	336	⇓P	Pn	03 27 25.9	+0.6
HERR	Herculane	7.06	327	⇑P	Pn	03 27 25.5	-0.1
TURR	Turia	7.10	350	⇑P	Pn	03 27 27.5	+1.4
DOPR	Dopca	7.11	346	⇑P	Pn	03 27 27.3	+1.0
BOSR	Bodos	7.17	348	⇓P	Pn	03 27 28.8	+1.7
YAL	Yalta	7.17	39	*e*P	Pn	03 27 28.2	+1.1
YAL				pmax	pmax	03 27 32.7	
	comp=Z,5.0nm,0.5s						
YAL				*e*S	Sn	03 28 46.1	-2.2
YAL				smax	smax	03 28 46.3	
	comp=N,8.0nm,0.6s						
YAL				smax	smax	03 28 46.3	
	comp=E,8.0nm,0.4s						
TARU	Tarkhankut	7.19	27	*e*P	Pn	03 27 27.4	+0.1
TARU				pmax	pmax	03 27 28.4	
	comp=Z,5.0nm,0.3s						
TARU				*e*S	Sn	03 28 45.2	-3.5
TARU				smax	smax	03 28 46.8	
	comp=N,13nm,0.7s						
TARU				smax	smax	03 28 46.8	
	comp=E,4.0nm,0.4s						
MDVR	Moldovita	7.29	323	⇑P	Pn	03 27 29.0	+0.2
GZR	Gura Zlata	7.34	331	⇓P	Pn	03 27 29.8	+0.4
DNZ2	Donuzlav2	7.45	31	*e*P	Pn	03 27 33.0	+2.2
DNZ2				pmax	pmax	03 27 33.2	
	comp=Z,5.0nm,0.5s						
DNZ2				*e*S	Sn	03 28 54.3	-0.7
DNZ2				smax	smax	03 28 56.3	
	comp=N,9.0nm,0.4s						
DNZ2				smax	smax	03 28 56.3	
	comp=E,7.0nm,0.4s						
TESR	Tescani	7.48	354	⇓P	Pn	03 27 32.4	+1.1
MDB	Medias	7.50	341	⇑P	Pn	03 27 31.9	+0.3
SUDU	Sudak	7.88	40	*e*P	Pn	03 27 41.0	+4.2
SUDU				pmax	pmax	03 27 50.2	
	comp=Z,5.0nm,0.5s						
SUDU				*e*S	Sn	03 29 06.0	+0.2
SUDU				smax	smax	03 29 08.0	
	comp=N,28nm,0.7s						
SUDU				smax	smax	03 29 08.0	
	comp=E,13nm,0.6s						
BIZ	Bicaz	7.95	351	⇓P	Pn	03 27 39.3	+1.5
BZS	Buzias	7.99	327	⇓P	Pn	03 27 38.3	0.0
DRGR		8.57	336	⇑P	Pn	03 27 47.9	+1.6
MMAI	Mount Meron Ar	8.61	132	Pn	Pn	03 27 49.5	+2.5
	comp=E,0.6nm,0.3s,baz=293,slow=12,SNR=1.7						
	comp=E,0.5nm,0.3s						
BURAR	Bucovina Array	8.74	348	⇑P	Pn	03 27 50.5	+1.9
MORH	Mrgy, Hungar	9.82	319	⇓P	Pn	03 28 03.6	+0.1
AKASG	Malin Array Be	11.66	4	LR	LR	03 32 44.4	
	comp=E,99nm,20.2s,baz=200,slow=36						
KBZ	Khabaz	12.22	63	LR	LR	03 34 28.5	
	comp=E,140nm,19.2s,baz=264,slow=43						
VRAC	Vranov	13.01	325	LR	LR	03 33 40.7	
	comp=E,64nm,19.6s,baz=280,slow=37						
GNI	Garni	13.08	80	LR	LR	03 33 57.0	
	comp=E,123nm,18.7s,baz=284,slow=38						
DAVOX	Davos/Dischmat	15.21	306	LR	LR	03 35 14.3	
	comp=E,76nm,19.6s,baz=275,slow=38						
FINES	FINESS Array B	22.41	358	P	P	03 30 42.5	+1.9
	comp=E,3.3nm,1.0s,baz=157,slow=10,SNR=4.1						
	comp=E,3.3nm,1.0s						
KIRV	Kirov	23.94	28	LR	LR	03 40 24.7	
	comp=E,76nm,19.0s,baz=268,slow=37						
AKTO	Aktyubinsk	24.08	52	P	P	03 30 59.0	+1.5
	comp=E,0.9nm,0.5s,baz=243,slow=4.5,SNR=2.3						
AKTO				LR	LR	03 42 24.9	
	comp=E,41nm,18.3s,baz=14,slow=42						
	comp=E,0.9nm,0.5s						
ESDC	Sonseca Array	24.52	282	P	P	03 31 00.5	-1.3
	comp=E,0.7nm,0.9s,baz=78,slow=10,SNR=5.9						
	comp=E,0.7nm,0.9s						
BVAR	Borovoye Array	32.14	50	LR	LR	03 47 01.7	
	comp=E,37nm,20.6s,baz=290,slow=40						
TORD	Torodi Ar. Bea	34.66	229	P	P	03 32 33.1	+1.2
	comp=E,0.5nm,0.7s,baz=45,slow=6.8,SNR=2.6						
	comp=E,0.5nm,0.7s						
KURBB	Kurchatov Arra	37.05	55	P	P	03 32 53.1	+1.1
	comp=E,0.5nm,0.8s,baz=274,slow=8.5,SNR=3.7						
	comp=E,0.5nm,0.8s						
MKAR	Makanchi Array	39.91	61	P	P	03 33 16.5	+0.4
	comp=E,0.4nm,0.7s,baz=276,slow=5.6,SNR=5.6						
	comp=E,0.4nm,0.7s						
YKA	Yellowknife Ar	74.36	343	P	P	03 37 19.2	-0.2
	comp=E,0.4nm,1.0s,baz=25,slow=6.3,SNR=4.3						
	comp=E,0.4nm,1.0s						

*SDD **02** 03:26:26.4±0.3, 19°.28N×67°.34W, h95^{km}±22^{km}, MD3.6, ML3.2, MW3.4, Presumed earthquake*

*RSPR **02** 03:26:30.4, 18°.91N×68°.11W, h7^{km}±26^{km}, MD3.0/8*

*NEIC **02** 03:26:31.2±1.6, 18°.77N±0°.09×67°.91W±0°.04, h10^{km}±2^{km}, ML3.1/17, Md3.0/8(RSPR), Error ellipse: s-maj=16.1km s-min=3.0km az=22.0*

ISC 02 03:26:31.7±1.6**, 19°.10N**±0°.09×**67°.73W**±0°.04**, h25**^{km}±14^{km}**, n26,** σ**1^{s}47**/40**, 16C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.75	161		Pb	03 26 44.8	-1.4
IDE	Isla Desecheo	0.75	161	⇑*e*P	Pb	03 26 44.8	-1.4
PCDR	Punta Cana, DR	0.85	227	⇑*e*Pg	Pn	03 26 48.3	+0.1
PCDR				IAML		03 27 17.1	
	comp=N,314nm,0.7s						
AGPR	Aguadilla, PR	0.86	137		Pb	03 26 46.7	-1.4
AGPR					Sb	03 26 57.4	-1.8
AGPR				IAML		03 26 57.6	
	comp=N,529nm,0.2s						
AGPR	Aguadilla, PR	0.86	137	⇑*e*P	Pb	03 26 46.7	-1.4
PRSN	Puerto Rico Se	1.04	148		Pn	03 26 50.2	-0.6
PRSN					Sn	03 27 05.2	+0.8
PRSN	Puerto Rico Se	1.04	148	⇑*e*Pg	Pn	03 26 48.4	-2.3
PRSN				⇑*e*Sg	Sn	03 27 05.3	+0.8
PRSN				IAML		03 27 10.5	
	comp=N,610nm,0.2s						
PRSN	Puerto Rico Se	1.04	148	⇑*e*P	Pn	03 26 50.2	-0.6
PRSN				*e*S	Sn	03 27 05.2	+0.7
HIDR	Higuey Centro	1.06	242	⇑*e*Pg	Pn	03 26 50.9	-0.1
HIDR				⇑*e*Sg	Sb	03 27 08.9	+3.9
HIDR				IAML		03 27 13.2	
	comp=N,336nm,0.2s						
LSP	Las Mesas	1.11	146		Pn	03 26 50.6	-1.1
LSP					Sn	03 27 05.9	-0.3
LSP	Las Mesas	1.11	146	⇑*e*P	Pn	03 26 50.6	-1.1
LSP				*e*S	Sn	03 27 05.9	-0.3
CRPR	Cabo Rojo, PR	1.24	152	⇑*e*Pg	Pn	03 26 48.7	-4.8
CRPR				IAML		03 27 14.5	
	comp=N,370nm,0.2s						
UUPR	Utuado, UPR, P	1.28	131		Pn	03 26 53.3	-0.7
EMPR	Esperanza - Ma	1.30	119		Pb	03 26 54.7	-0.7
EMPR					Sb	03 27 15.2	+3.6
EMPR	Esperanza - Ma	1.30	119	⇑*e*P	Pb	03 26 54.7	-0.7
EMPR				*e*S	Sb	03 27 15.2	+3.6
GBPR	Guanica, Bosqu	1.38	144		Pn	03 26 55.1	-0.4
GBPR					Sn	03 27 13.4	+0.5
GBPR	Guanica, Bosqu	1.38	144	⇑*e*P	Pn	03 26 55.1	-0.4
GBPR				*e*S	Sn	03 27 13.4	+0.5
SMDR	Samana, DR	1.39	278	⇓*e*Pg	Pn	03 26 54.2	-1.4
SMDR				IAML		03 27 24.1	
	comp=N,136nm,0.5s						
CELP	Cerrillos	1.50	133		Pn	03 26 56.8	-0.3
CELP				IAML		03 27 19.9	
	comp=N,181nm,0.3s						
OBIP	Obispado Ponce	1.50	135	Pn	Pn	03 26 56.8	-0.2
OBIP	Obispado Ponce	1.50	135	⇑*e*P	Pn	03 26 56.9	-0.2
OBIP				*e*S	Sb	03 27 18.2	+0.8
DR12	Loma Pena Alta	1.59	259	Pn	Pn	03 26 57.0	-1.5
HATOM	Hato Mayor del	1.59	259	⇓*e*Pg	Pn	03 26 57.3	-1.1
HATOM				IAML		03 27 28.0	
	comp=N,103nm,0.5s						
GCPR	Guaynabo City	1.75	117	⇑*e*P	Pb	03 27 02.9	-0.3
GCPR				*e*S	Sb	03 27 26.7	+2.0
SJG	San Juan	1.79	123	⇑*e*P	Pn	03 27 01.2	+0.1
SJG				*e*S	Sb	03 27 27.1	+1.2
HUMP	Col San Antoni	2.02	118	⇑*e*P	Pb	03 27 06.2	-1.6
HUMP				*e*S	Sb	03 27 33.1	+0.5

*BJI **02** 03:32:41.1, 13°.34N×93°.72W, h10^{km}, mB5.9/33, Ms5.5/46, Ms7 5.3/47*

*IDC **02** 03:32:41.4±0.4, 13°.72N×92°.80W, h0^{km}, mb5.3/29, mbtmp5.3/32, ML5.2/3, MS4.8/55, Error ellipse: s-maj=18.1km s-min=9.7km az=60.0*

*GFZ **02** 03:32:43.7, 13°.71N×92°.91W, h10^{km}, MW5.6, Moment Tensor Solution. s93 Moment tensor: M_{rr}-2.86; $M_{\theta\theta}$1.39; $M_{\phi\phi}$1.46; $M_{r\theta}$0.03; $M_{\theta\phi}$-1.16; $M_{\phi r}$-0.89; Fault plane solution: NP1:ϕ_s126.00000°, δ39.00000°, λ-105.00000°. NP2:ϕ_s326.00000°, δ53.00000°, λ-77.00000°. Principal axes: T 2.6700, Plg7.0000°, Azm48.0000°; N 0.3700, Plg10.0000°, Azm139.0000°; P -3.0400, Plg78.0000°, Azm283.0000°;*

*NEIC **02** 03:32:44.6, 13°.81N×92°.83W, h10^{km}*

*NEIC **02** 03:32:44.5±2.4, 13°.82N±0°.04×92°.86W±0°.05, h10^{km}±1^{km}, mb5.7/1007, Ms_20 5.0/336, Mwb5.5/23, Mww5.6/83, Md5.7/227(MEX), Error ellipse: s-maj=8.8km s-min=5.3km az=129.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.74; $M_{\theta\theta}$1.53; $M_{\phi\phi}$0.20; $M_{r\theta}$1.01; $M_{\theta\phi}$-1.06; $M_{\phi r}$-1.35; Fault plane solution: $M_0$2.58000×10^{17} NP1:ϕ_s99.62000°, δ28.44000°, λ-122.86000°. NP2: ϕ_s315.92000°, δ66.42000°, λ-73.62000°. Principal axes: T 2.6720, Plg20.0000°, Azm34.0000°; N -0.1924, Plg15.0000°, Azm129.0000°; P -2.4795, Plg65.0000°, Azm254.0000°;*

*NEIC **02** 03:32:44.7, 13°.82N×92°.82W, h12^{km}*

*NEIC **02** 03:32:44.7, 13°.82N×93°.03W, h12^{km}, Moment Tensor Solution. Duration: 3^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.51; $M_{\theta\theta}$2.00; $M_{\phi\phi}$1.50; $M_{r\theta}$-0.08; $M_{\theta\phi}$-1.48; $M_{\phi r}$0.00; Fault plane solution: $M_0$3.39000×10^{17} NP1: ϕ_s310.96000°, δ44.44000°, λ-88.87000°. NP2: ϕ_s129.37000°, δ45.57000°, λ-91.11000°. Principal axes: T 3.2515, Plg1.0000°, Azm220.0000°; N 0.2558, Plg1.0000°, Azm130.0000°; P -3.5073, Plg89.0000°, Azm346.0000°;*

*MOS **02** 03:32:44.0±1.0, 13°.86N×92°.83W, h19^{km}, mb5.8/39, MS5.1/15 Error ellipse: s-maj=7.4km s-min=5.2km az=90.2*

*MEX **02** 03:32:44.9±0.9, 13°.69N×93°.11W, h11^{km}±23^{km}, MD5.7*

*GCMT **02** 03:32:45.5±0.1, 13°.78N±0°.01×93°.19W±0°.01, h12^{km}, MW5.6/158, Moment Tensor Solution. s131,c236; s158,c337; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.36±.03; $M_{\theta\theta}$1.93±.03; $M_{\phi\phi}$1.43±.03; $M_{r\theta}$-0.34±.09; $M_{\theta\phi}$-1.60±.02; $M_{\phi r}$1.47±.09; Best double couple: $M_0$3.64900×10^{17} NP1:ϕ_s298.00000°, δ36.00000°, λ-111.00000°. NP2:ϕ_s144.00000°, δ56.00000°, λ-75.00000°. Principal axes: T 3.5220, Plg10.0000°, Azm223.0000°; N 0.2560, Plg12.0000°, Azm316.0000°; P -3.7770, Plg74.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*CATAC **02** 03:32:45.8±0.4, 14°N±2°×9°3W±°, h6^{km}±4^{km}, M5.7/35, mb5.8/7, mB6.0/6, MLv5.7/35, Mw(mB)5.7/6, MwMwp5.6/3, Mwp5.8/3 Error ellipse: s-maj=8.5km s-min=3.6km az=79.9, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-3.34; $M_{\theta\theta}$2.21; $M_{\phi\phi}$1.14; $M_{r\theta}$0.66; $M_{\theta\phi}$-1.13; $M_{\phi r}$-1.33; Fault plane solution: $M_0$3.48517×10^{17} NP1: ϕ_s113.49505°, δ34.68174°, λ-106.84747°. NP2: ϕ_s313.71133°, δ57.00300°, λ-78.65990°. Principal axes: T 3.1777, Plg11.3256°, Azm35.5592°; N 0.5497, Plg9.4923°, Azm127.4783°; P -3.7274, Plg75.1408°, Azm256.5437°; confirmed*

*GCG **02** 03:32:45.7±1.4, 13°.68N×92°.88W, h35^{km}±8^{km}, MD5.2, ML5.7, Presumed earthquake*

*PTWC **02** 03:32:45, 13°.70N×92°.90W, Mwp5.8/8*

*BGR **02** 03:32:49.5, 14°.04N×92°.86W, h33^{km}, mb5.6, Ms5.0*

*SNET **02** 03:32:51.2±5.1, 13°.93N×92°.47W, h15^{km}, ML5.5, Presumed earthquake*

ISC 02 03:32:44.4±0.8**, 13°.69N**±0°.03×**93°.03W**±0°.03**, h23**^{km}±5^{km}**, n1921,** σ**2^{s}29**/1589**, mb5.7**/578**, MS5.0**/249**, 62C-110D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.42	31		Pn	03 33 07.5	-1.2
THIG					Sn	03 33 25.0	-1.7
THIG		1.42	31	⇑*e*P	Pn	03 33 07.5	-1.2
THIG				*e*S	Sn	03 33 25.0	-1.7
THIG		1.42	31	*i* P	Pn	03 33 07.6	-1.2
SMCA	Catarina	1.48	38	*i* P	Pn	03 33 08.6	-1.1
SMCA				*i* S	Sn	03 33 26.7	-1.6
RTAL	Retalhuleu	1.54	57		Pn	03 33 09.7	-0.7
RTAL	Retalhuleu	1.54	57	⇑*e*P	Pn	03 33 09.7	-0.7
RTAL				*e*S	Sn	03 33 28.0	-1.6
RTAL	Retalhuleu	1.54	57	P	Pn	03 33 09.7	-0.7
RTAL				S	Sn	03 33 29.3	-0.4
RTAL	Retalhuleu	1.54	57	*e*P	Pn	03 33 09.5	-0.9
RTAL				*e*S	Sn	03 33 27.7	-2.0
PATR	El Naranjo	1.61	28		Pn	03 33 10.0	-1.6
PATR					Sn	03 33 29.6	-2.3
PATR	El Naranjo	1.61	28	⇑*e*P	Pn	03 33 10.0	-1.6
PATR				*e*S	Sn	03 33 29.6	-2.3
PATR	El Naranjo	1.61	28	P	Pn	03 33 10.1	-1.6
CHUJ	Union Juarez	1.66	32	⇑*e*P	Pn	03 33 10.8	-1.5
CHUJ				*e*S	Sn	03 33 31.6	-1.3
PAVE	Pavencul	1.71	29		Pn	03 33 11.5	-1.5
PAVE					Sn	03 33 33.1	-1.1
PAVE	Pavencul	1.71	29	⇑*e*P	Pn	03 33 11.5	-1.5
PAVE				*e*S	Sn	03 33 33.1	-1.1
STG2	El Palmar, Qui	1.77	65	*i* P	Pn	03 33 11.6	-2.1
STG2				*i* S	Sn	03 33 31.5	-4.0
STG5	El Palmar, Qui	1.78	66	*i* P	Pn	03 33 11.5	-2.3
STG8	El Palmar, Qui	1.79	65	*i* P	Pn	03 33 12.2	-2.0
STG8				IAML		03 33 34.8	
	comp=N,53μm,0.4s						
QUEO	Labor Ovalle	1.88	51	*i* P	Pn	03 33 14.9	-0.5
QUEO				*i* S	Sn	03 33 37.5	-1.0
QUEO				IAML		03 33 39.6	
	comp=E,144μm,0.5s						
SOKI	Kika Raxquin	1.94	54	*i* P	Pn	03 33 15.4	-0.9
SOKI				IAML		03 33 45.5	
	comp=E,45μm,0.8s						
PCIG		2.01	355		Pn	03 33 14.9	-2.0
PCIG					Sn	03 33 37.8	-3.6
PCIG		2.01	355	*e*P	Pn	03 33 14.9	-2.0
PCIG				*e*S	Sn	03 33 37.8	-3.6
PCIG		2.01	355	P	Pn	03 33 15.4	-1.5
HUEH	Huehuetenango	2.19	42		Pn	03 33 20.1	+0.4
HUEH	Huehuetenango	2.19	42		Sn	03 33 45.1	-1.1
HUEH	Huehuetenango	2.19	42	⇑*e*P	Pn	03 33 20.0	+0.4
HUEH				*e*S	Sn	03 33 45.1	-1.1
HUEH	Huehuetenango	2.19	42	P	Pn	03 33 20.3	+0.7
HUEH				S	Sn	03 33 48.0	+1.9
HUEH	Huehuetenango	2.19	42	P	Pn	03 33 20.1	+0.4
HUEH	Huehuetenango	2.19	42	*e*P	Pn	03 33 20.0	+0.4
HUEH				*e*S	Sn	03 33 47.0	+0.8
HUEH	Huehuetenango	2.19	42	*i* P	Pn	03 33 20.0	+0.4
HUEH				IAML		03 34 02.6	
	comp=E,111μm,0.7s						
ESSG	Sabana Grande	2.24	72	*i* P	Pn	03 33 18.4	-1.8
ESSJ	San Jos, E	2.46	93	*i* P	Pn	03 33 18.0	-5.1
FG16	Alotenango, Sa	2.51	76	*i* P	Pn	03 33 18.9	-5.1
FG16				IAML		03 33 52.8	
	comp=N,112μm,0.2s						
GCG4	OSOP	2.58	69	*i* P	Pn	03 33 24.6	-0.3
GCG4				*i* S	Sn	03 33 54.6	-1.0
PCG5	San Vicente Pa	2.63	78	*i* P	Pn	03 33 21.1	-4.5
PCG5				*i* S	Sn	03 33 50.2	-6.6
CARR	Arriaga	2.68	342	*e*P	Pn	03 33 25.7	-0.4
CARR				*e*S	Sn	03 33 56.7	-1.2
CCIG	Comitan	2.72	18		Pn	03 33 28.2	+1.4
CCIG	Comitan	2.72	18		Sn	03 34 02.2	+3.2
CCIG	Comitan	2.72	18	⇑*e*P	Pn	03 33 28.0	+1.2
CCIG				*e*S	Sn	03 34 02.2	+3.2
CCIG	Comitan	2.72	18	P	Pn	03 33 28.7	+1.9
CCIG	Comitan	2.72	18	*i* P	Pn	03 33 27.8	+1.0
CCIG				IAML		03 34 08.6	
	comp=N,38μm,0.8s						
APG	El Apazote	2.81	62	Pn	Pn	03 33 28.4	+0.3
	comp=N,22nm,0.3s,baz=202,slow=14,SNR=1012						
APG				Sn	Sn	03 34 03.4	+2.0
	comp=N,102nm,0.3s,baz=79,slow=18,SNR=7.8						
APG				LR	LR	03 34 31.2	
	comp=N,985nm,20.2s,baz=123,slow=42						
APG	El Apazote	2.81	62	*i* P	Pn	03 33 28.4	+0.3
FAME	Alcaldia de Sa	2.93	87	P	Pn	03 33 27.6	-2.0
FAME				S	Sn	03 34 01.6	-2.5
TGBT	Tuxtla Gutierr	3.07	359		Pn	03 33 32.5	+1.0
TGBT					Sn	03 34 06.0	-1.5
TGBT	Tuxtla Gutierr	3.07	359	*e*P	Pn	03 33 32.5	+1.0
TGBT				*e*S	Sn	03 34 06.0	-1.5
TGIG		3.07	358		Pn	03 33 32.2	+0.6
TGIG					Sn	03 34 04.7	-2.9
TGIG		3.07	358	⇑*e*P	Pn	03 33 32.2	+0.6
TGIG				*e*S	Sn	03 34 04.7	-2.9
TGIG		3.07	358	P	Pn	03 33 32.2	+0.6
TGIG		3.07	358	*i* P	Pn	03 33 32.1	+0.6
TGIG				*i* S	Sn	03 34 04.9	-2.7
AVCB	Coban	3.10	55	IAML		03 34 24.0	
	comp=E,68μm,0.6s						
NUBE	Las Nubes	3.16	86	P	Pn	03 33 31.8	-1.1
NUBE				S	Sn	03 34 07.5	-2.6
NUBE	Las Nubes	3.16	86	*e*P	Pn	03 33 31.3	-1.7
NUBE				*e*S	Sn	03 34 06.5	-3.6
NUBE	Las Nubes	3.16	86	*i* P	Pn	03 33 31.0	-1.9
LOAL	Lomas de Alarc	3.17	84	P	Pn	03 33 32.8	-0.1
LOAL				S	Sn	03 34 08.4	-1.7
RBDL	Robledal	3.27	82	*e*P	Pn	03 33 33.0	-1.5
RBDL				*e*S	Sn	03 34 11.3	-1.5
CEVE	Cerro Verde	3.31	87	P	Pn	03 33 35.0	0.0
CEVE				S	Sn	03 34 11.8	-2.1
CEVE	Cerro Verde	3.31	87	*e*P	Pn	03 33 34.1	-0.9
CEVE				*e*S	Sn	03 34 12.3	-1.5
SBLS	San Blas	3.31	87	*e*P	Pn	03 33 33.0	-2.1
SNJE	San Jose	3.33	87	*e*P	Pn	03 33 34.2	-1.1
UNIC	Universidad Ca	3.39	85	P	Pn	03 33 35.3	-0.7
UNIC				S	Sn	03 34 14.1	-1.5
UNIC	Universidad Ca	3.39	85	*e*P	Pn	03 33 34.8	-1.2
JAYA	Jayaque - finc	3.48	90	P	Pn	03 33 36.6	-0.7
JAYA				S	Sn	03 34 15.4	-2.5
JAYA	Jayaque - finc	3.48	90	*i* P	Pn	03 33 35.5	-1.8
JAYA				*i* S	Sn	03 34 14.1	-3.8
CEDA	San Andres	3.53	88	P	Pn	03 33 36.6	-1.4
CEDA				S	Sn	03 34 17.0	-2.1
CEDA	San Andres	3.53	88	*e*P	Pn	03 33 36.3	-1.6
PMON	Piamonte	3.61	89	P	Pn	03 33 38.2	-0.8
PMON				S	Sn	03 34 18.9	-2.1
PMON	Piamonte	3.61	89	*e*P	Pn	03 33 38.3	-0.8
LALI	Alcalda de L	3.61	93	P	Pn	03 33 38.0	-1.0
LALI				S	Sn	03 34 18.9	-1.9
LALI	Alcalda de L	3.61	93	*i* P	Pn	03 33 37.7	-1.2
LALI				*i* S	Sn	03 34 17.8	-3.0
HUIG	Huatulco	3.62	305		Pn	03 33 37.2	-2.0
HUIG					Sn	03 34 13.0	-8.3
HUIG	Huatulco	3.62	305	⇓*e*P	Pn	03 33 37.2	-2.0
HUIG				*e*S	Sn	03 34 13.0	-8.3
HUIG	Huatulco	3.62	305	*i* P	Pn	03 33 37.0	-2.2
HUIG				IAML		03 34 14.4	
	comp=N,4μm,0.4s						
MTO3	Montecristo	3.63	78		Pn	03 33 38.5	-0.9
MTO3	Montecristo	3.63	78	P	Pn	03 33 38.9	-0.5
MTO3				S	Sn	03 34 19.8	-1.9
MTO3	Montecristo	3.63	78	*i* P	Pn	03 33 38.4	-0.9
BOQS	Boqueron	3.64	89	*e*P	Pn	03 33 38.1	-1.5
BOQS				*e*S	Sn	03 34 19.8	-2.2
ZAFR2	Estanzuela, Za	3.68	76	*i* P	Pn	03 33 37.9	-1.9
ESQI	Esquipulas	3.68	76		Pn	03 33 39.5	-0.5
ESQI	Esquipulas	3.68	76	P	Pn	03 33 39.5	-0.5
ESQI				S	Sn	03 34 20.5	-2.2
UEES	Universidad Ev	3.68	89	P	Pn	03 33 39.5	-0.5
UEES				S	Sn	03 34 20.8	-2.0
SEMO	Seminario San	3.70	89	P	Pn	03 33 39.8	-0.4
SEMO				S	Sn	03 34 21.3	-1.9
UTEC	Universidad Te	3.72	89	P	Pn	03 33 40.1	-0.4
UTEC				S	Sn	03 34 21.6	-2.1
PANCS	Alcalda de	3.74	91	P	Pn	03 33 39.8	-1.0
PANCS				S	Sn	03 34 21.6	-2.7
IGN	Direccin Gen	3.75	89	S	Sn	03 34 22.4	-2.1
UXUV	UXUV	3.76	344		Pn	03 33 42.2	+1.2
UXUV					Sn	03 34 21.9	-2.8
UXUV	UXUV	3.76	344	⇑*e*P	Pn	03 33 42.2	+1.2
UXUV				*e*S	Sn	03 34 21.9	-2.8
UDBS	Universidad Do	3.77	89	P	Pn	03 33 41.1	0.0
UDBS				S	Sn	03 34 23.0	-1.8
CMIG	Matias Romero	3.83	332	Pn	Pn	03 33 41.2	-0.6
	comp=N,69nm,0.3s,baz=166,slow=14,SNR=542						
CMIG				Sn	Sn	03 34 23.5	-2.7
	comp=N,176nm,0.3s,baz=172,slow=22,SNR=13						
CMIG				LR	LR	03 34 60.0	
	comp=N,15μm,19.7s,baz=180,slow=36						
	comp=N,200nm,0.3s						
CMIG	Matias Romero	3.83	332		Pn	03 33 41.3	-0.6
CMIG					Sn	03 34 21.2	-4.9
CMIG	Matias Romero	3.83	332	⇓*e*P	Pn	03 33 41.3	-0.6
CMIG				*e*S	Sn	03 34 21.2	-4.9
LFRS	El Faro	3.86	91	*e*P	Pn	03 33 41.1	-1.3

PAVA Las Pavas 3.98 89 P Pn 03 33 43.5 -0.6
PAVA S Sn 03 34 28.3 -1.7
LLGN La Laguna 3.99 83 P Pn 03 33 43.4 -0.9
LLGN S Sn 03 34 28.5 -2.0
LLGN La Laguna 3.99 83 eP Pn 03 33 42.8 -1.5
UESV Universidad de 4.12 90 P Pn 03 33 45.6 -0.4
UESV S Sn 03 34 33.0 -0.6
TECO Alcaldia de Te 4.13 92 P Pn 03 33 45.4 -0.7
TECO S Sn 03 34 31.6 -2.3
TECO Alcaldia de Te 4.13 92 eP Pn 03 33 44.7 -1.5
SCLA Alcaldia de Sa 4.18 89 P Pn 03 33 46.4 -0.4
SCLA S Sn 03 34 33.4 -1.6
VHSA Villahermosa 4.27 1 Pn 03 33 49.7 +1.8
VHSA Sn 03 34 35.0 -2.1
VHSA Villahermosa 4.27 1 eP Pn 03 33 49.7 +1.8
VHSA eS Sn 03 34 35.0 -2.1
PETF Flores 4.43 43 Pn 03 33 50.9 +0.7
PETF Flores 4.43 43 Pn 03 34 41.4 +0.3
PETF Flores 4.43 43⇑ eP Pn 03 33 50.5 +0.3
PETF eS Sn 03 34 41.4 +0.3
PETF Flores 4.43 43 P Pn 03 33 50.8 +0.6
PETF Flores 4.43 43 P Pn 03 33 50.4 +0.3
PETF Flores 4.43 43 *i* P Pn 03 33 50.7 +0.6
MIHL Minatitlan 4.52 341 Pn 03 33 53.2 +1.8
MIHL Sn 03 34 42.3 -0.9
MIHL Minatitlan 4.52 341 eP Pn 03 33 53.2 +1.8
MIHL eS Sn 03 34 42.3 -0.9
TUIG Tuzandepetl 4.52 343 Pn 03 33 51.2 -0.3
TUIG Sn 03 34 35.3 -8.0
TUIG Tuzandepetl 4.52 343 eP Pn 03 33 51.2 -0.3
TUIG eS Sn 03 34 35.3 -8.0
TUIG Tuzandepetl 4.52 343 P Pn 03 33 52.4 +0.9
PACA Pacayal 4.58 92 P Pn 03 33 52.0 -0.4
PACA S Sn 03 34 43.1 -1.9
PEIG Puerto Escondi 4.60 300 Pn 03 33 51.0 -1.5
PEIG Sn 03 34 36.4 -8.9
PEIG Puerto Escondi 4.60 300⇓ eP Pn 03 33 51.0 -1.5
PEIG eS Sn 03 34 36.4 -8.9
RANC El Ranchito 4.62 93 P Pn 03 33 52.4 -0.5
RANC S Sn 03 34 43.8 -2.1
CNRM Centro Naciona 4.73 92 S Sn 03 34 46.5 -2.0
IZABA Izabal, Puerto 4.75 64 eP Pn 03 33 55.2 +0.5
IZABA eS Sn 03 34 52.0 +2.9
NEUV Arroyo Zacate 4.81 327 Pn 03 33 54.3 -1.1
NEUV Sn 03 34 42.4 -8.1
NEUV Arroyo Zacate 4.81 327 eP Pn 03 33 54.3 -1.1
NEUV eS Sn 03 34 42.4 -8.1
OXLC Oaxaca 4.88 314 Pn 03 33 57.3 +0.7
OXLC Sn 03 34 47.2 -5.2
OXLC Oaxaca 4.88 314 eP Pn 03 33 57.3 +0.7
OXLC eS Sn 03 34 47.2 -5.2
OXBJ Oaxaca 4.90 314 Pn 03 34 03.5 +6.7
OXBJ Sn 03 34 56.2 +3.3
OXBJ Oaxaca 4.90 314 eP Pn 03 34 03.5 +6.7
OXBJ eS Sn 03 34 56.2 +3.3
OXIG Oaxaca 4.91 314 Pn 03 33 57.8 +0.9
OXIG Sn 03 34 45.9 -7.2
VHO Vista Hermosa 4.91 314 eP Pn 03 33 57.8 +0.9
VHO eS Sn 03 34 45.9 -7.2
LCND La Caada 5.01 94 P Pn 03 33 57.8 -0.5
CNCH Conchagua 5.07 94 P Pn 03 33 58.6 -0.5
CNCH S Sn 03 34 54.5 -2.6
PMUV Sontecomapan 5.23 338 Pn 03 33 59.6 -1.7
PMUV Sn 03 34 59.1 -1.9
PMUV Sontecomapan 5.23 338 eP Pn 03 33 59.6 -1.7
PMUV eS Sn 03 34 59.1 -1.9
CSGN Cosiguina Volc 5.37 97 P Pn 03 33 58.4 -0.2
CSGN S Sn 03 35 00.3 -4.2
YOIG Yosondua 5.38 306 Pn 03 34 04.0 +0.5
YOIG Sn 03 34 56.1 -8.8
YOIG Yosondua 5.38 306⇓ eP Pn 03 34 04.0 +0.5
YOIG eS Sn 03 34 56.1 -8.8
SCIG Sabancuy 5.54 18 Pn 03 34 04.8 -0.6
SCIG Sn 03 35 02.4 -6.0
SCIG Sabancuy 5.54 18⇑ eP Pn 03 34 04.8 -0.6
SCIG eS Sn 03 35 02.4 -6.0
SCIG Sabancuy 5.54 18 P Pn 03 34 05.2 -0.2
TGUH Tegucigalpa,Un 5.60 86 Pn 03 34 05.6 -0.9
TGUH Tegucigalpa,Un 5.60 86⇑ eP Pn 03 34 05.2 -1.2
TGUH Tegucigalpa,Un 5.60 86 P Pn 03 34 05.5 -0.9
TGUH Tegucigalpa,Un 5.60 86 P Pn 03 34 05.5 -0.9
TGUH Tegucigalpa,Un 5.60 86 P Pn 03 34 05.0 -1.5
comp=N,32µmcomp=N,9µmcomp=N,700nm,0.8s
PNIG Pinotepa 5.61 299 Pn 03 34 05.9 -0.6
PNIG Sn 03 34 59.6 -11
PNIG Pinotepa 5.61 299⇓ eP Pn 03 34 05.9 -0.6
PNIG eS Sn 03 34 59.6 -11
PNIG Pinotepa 5.61 299 P Pn 03 34 05.0 -1.5
TXIG Tlaxiaco 5.78 308 Pn 03 34 10.2 +1.2
TXIG Sn 03 35 08.4 -6.4
TXIG Tlaxiaco 5.78 308⇓ eP Pn 03 34 10.2 +1.2
TXIG eS Sn 03 35 08.4 -6.4
TOIG Toxpalan 5.85 319 Pn 03 34 12.0 +2.1
TOIG Sn 03 35 14.3 -2.0
TOIG Toxpalan 5.85 319⇓ eP Pn 03 34 12.0 +2.1
TOIG eS Sn 03 35 14.3 -2.0
CRIN San Cristobal 5.91 99 Pn 03 34 10.8 +0.2
CRIN San Cristobal 5.91 99 P Pn 03 34 10.2 -0.4
CRIN San Cristobal 5.91 99 P Pn 03 34 10.4 -0.2
comp=N,20µmcomp=N,1µm,0.5s
CRIN S Sn 03 35 10.3 -7.3
comp=N,20µmcomp=N,1µm,0.5s
PKGN Cerro Pekin 5.98 99 P Pn 03 34 10.6 -0.9
HERN Volcan Telica 6.13 99 Pn 03 34 12.7 -1.0
HERN Volcan Telica 6.13 99 P Pn 03 34 12.5 -1.2
HERN S Sn 03 35 19.4 -3.8
POLN Al Sur del Vol 6.14 99 P Pn 03 34 13.1 -0.6
HLIG Huajuapan de L 6.17 312 Pn 03 34 16.0 +1.6
HLIG Sn 03 35 22.6 -1.7
HLIG Huajuapan de L 6.17 312⇓ eP Pn 03 34 16.0 +1.6
HLIG eS Sn 03 35 22.6 -1.7
CNGN Cerro Negro 6.28 100 Pn 03 34 14.7 -1.0
CNGN Cerro Negro 6.28 100 P Pn 03 34 14.9 -0.9
CNGN Cerro Negro 6.28 100 P Pn 03 34 14.8 -0.9
CNGN Cerro Negro 6.28 100 P Pn 03 34 15.1 -0.6
comp=N,72µmcomp=N,5µm,0.7s
TPIG Tehuac#an 6.28 319 Pn 03 34 18.0 +2.2
TPIG Sn 03 35 16.5 -10
TPIG Tehuac#an 6.28 319 eP Pn 03 34 18.0 +2.2
TPIG eS Sn 03 35 16.5 -10
TPIG Tehuac#an 6.28 319 P Pn 03 34 18.3 +2.5
MGIG Malinaltepec 6.45 304 Pn 03 34 19.4 +1.2
MGIG Sn 03 35 24.2 -7.0
MGIG Malinaltepec 6.45 304⇓ eP Pn 03 34 19.4 +1.2
MGIG eS Sn 03 35 24.2 -7.0
FTIG Fresnillo de T 6.46 311 Pn 03 34 20.0 +1.8
FTIG Sn 03 35 26.1 -5.2
FTIG Fresnillo de T 6.46 311⇓ eP Pn 03 34 20.0 +1.8
FTIG eS Sn 03 35 26.1 -5.2
TLIG Tlapa 6.58 307 Pn 03 34 22.1 +2.2
TLIG Tlapa 6.58 307 Sn 03 35 28.0 -6.3
TLIG Tlapa 6.58 307⇓ eP Pn 03 34 21.6 +1.7
TLIG eS Sn 03 35 28.0 -6.3
TLIG Tlapa 6.58 307 P Pn 03 34 21.7 +1.8
CRIG Cruz Grande 6.62 298 Pn 03 34 20.4 +0.1
CRIG Sn 03 35 24.8 -10
CRIG Cruz Grande 6.62 298 eP Pn 03 34 20.4 +0.1
CRIG eS Sn 03 35 24.8 -10
JAUV Jalcomulco 6.70 328 Pn 03 34 20.2 -1.4
JAUV Sn 03 35 28.8 -8.4
JAUV Jalcomulco 6.70 328⇓ eP Pn 03 34 20.2 -1.4
JAUV eS Sn 03 35 28.8 -8.4
MGAN Managua 6.79 102 Pn 03 34 21.8 -0.8
MGAN Managua 6.79 102 P Pn 03 34 21.9 -0.7
comp=N,10µmcomp=N,1µm,1.0s
LVIG Laguna Verde 6.82 332 Pn 03 34 21.1 -2.0
LVIG Sn 03 35 32.7 -7.3
LVIG Laguna Verde 6.82 332 eP Pn 03 34 21.1 -2.0
LVIG eS Sn 03 35 32.7 -7.3
DAIG Los Arroyos 7.19 298 Pn 03 34 28.6 +0.4
DAIG Sn 03 35 39.4 -10
DAIG Los Arroyos 7.19 298 eP Pn 03 34 28.6 +0.4
DAIG eS Sn 03 35 39.4 -10
PBCV Popocatepetl 7.48 316⇓ eP Pn 03 34 35.3 +3.0
PBCV eS Sn 03 35 46.1 -11
PPSX Xalitzintla 7.51 316 eP Pn 03 34 35.8 +3.0
PPSX eS Sn 03 35 54.8 -2.8
PBXN Popocatepetl 7.56 315⇓ eP Pn 03 34 36.5 +2.8
PBXN ⇓ eP Pn 03 34 36.7 +3.0
PBXN eS Sn 03 35 54.2 -4.7
PBXN eS Sn 03 35 56.7 -2.2
PBPN Popocatepetl 7.56 315 eP Pn 03 34 36.1 +2.4
PBPN eS Sn 03 35 54.0 -5.0
PPM Popocatepetl 7.58 316 eP Pn 03 34 38.0 +4.0
PPM eS Sn 03 35 52.4 -7.0
PPIG Popocatepetl 7.58 316 Pn 03 34 38.0 +4.0
PPIG Sn 03 35 52.4 -7.0
MEIG Mezcala 7.61 304 Pn 03 34 36.1 +2.1
MEIG Sn 03 35 59.3 -0.4
MEIG Mezcala 7.61 304⇓ eP Pn 03 34 36.1 +2.1
MEIG eS Sn 03 35 59.3 -0.4
AMVM AMECAMECA 7.73 315 Pn 03 34 39.5 +3.6
AMVM Sn 03 35 59.4 -3.5
AMVM AMECAMECA 7.73 315 eP Pn 03 34 39.5 +3.6
AMVM eS Sn 03 35 59.4 -3.5
CAIG El Cayaco 7.74 296 Pn 03 34 36.3 +0.6
CAIG Sn 03 35 58.6 -4.0
CAIG El Cayaco 7.74 296 eP Pn 03 34 36.3 +0.6
CAIG eS Sn 03 35 58.6 -4.0
YAIG Yautepec 7.75 312 Pn 03 34 39.1 +3.1
YAIG Sn 03 35 56.9 -6.2
YAIG Yautepec 7.75 312 eP Pn 03 34 39.1 +3.1
YAIG eS Sn 03 35 56.9 -6.2
PLIG Platanillo 7.78 308 Pn 03 34 39.0 +2.6
PLIG Sn 03 36 06.0 +2.1
PLIG Platanillo 7.78 308⇓ eP Pn 03 34 39.0 +2.6
PLIG eS Sn 03 36 06.0 +2.1
CXUV Coxquihui 7.79 327 Pn 03 34 34.1 -2.2
CXUV Sn 03 35 54.1 -10
CXUV Coxquihui 7.79 327 eP Pn 03 34 34.1 -2.2
CXUV eS Sn 03 35 54.1 -10
MYIG Merida 7.88 23 Pn 03 36 00.9 -5.2
MYIG Sn 03 34 36.4 -1.2
MYIG Merida 7.88 23 eP Pn 03 36 00.9 -5.2
MYIG eS Sn 03 34 36.4 -1.2
TEIG Tepich 7.93 34 Pn 03 34 37.9 -0.4
TEIG Tepich 7.93 34 Sn 03 36 02.3 -5.1
TEIG Tepich 7.93 34⇑ eP Pn 03 34 37.3 -1.1
TEIG eS Sn 03 36 02.3 -5.1
TEIG Tepich 7.93 34 P Pn 03 34 36.7 -1.6
comp=N,66µmcomp=N,59µmcomp=N,3µm,0.8s
MPVM San Francisco 7.93 314 Pn 03 34 41.7 +3.1
MPVM Sn 03 36 03.8 -4.0
MPVM San Francisco 7.93 314 eP Pn 03 34 41.7 +3.1
MPVM eS Sn 03 36 03.8 -4.0
THVM De Xico 7.98 315 Pn 03 34 42.1 +2.8
THVM Sn 03 36 00.7 -8.3
THVM De Xico 7.98 315 eP Pn 03 34 42.1 +2.8
THVM eS Sn 03 36 00.7 -8.3
SIUN Universidad Ur 8.02 89 Pn 03 34 39.1 -0.6
TXVM Universitario 8.03 316 Pn 03 34 44.0 +4.1
TXVM Universitario 8.03 316 eP Pn 03 34 44.0 +4.1
TLVM San Miguel Top 8.04 314 Pn 03 34 43.0 +2.8
TLVM Sn 03 36 07.4 -3.2
TLVM San Miguel Top 8.04 314 eP Pn 03 34 43.0 +2.8
TLVM eS Sn 03 36 07.4 -3.2
XCVM Xochimilco 8.04 314 Pn 03 34 43.4 +3.3
XCVM Sn 03 35 60.0 -11
XCVM Xochimilco 8.04 314 eP Pn 03 34 43.4 +3.3
XCVM eS Sn 03 35 60.0 -11
MZVM 8.08 313 Pn 03 34 43.4 +3.1
MZVM Sn 03 36 07.0 -4.0
MZVM 8.08 313 eP Pn 03 34 43.4 +3.1
MZVM eS Sn 03 36 07.0 -4.0
MAVM Malinalco, Edo 8.12 311 Pn 03 34 47.2 +2.6
MAVM Sn 03 36 08.0 -4.3
MAVM Malinalco, Edo 8.12 311 eP Pn 03 34 43.7 +2.6
MAVM eS Sn 03 36 08.0 -4.3
JUD3 Juan Diaz 3 8.12 115 Pn 03 34 42.6 +1.6
UNM Universidad Na 8.14 314 Pn 03 34 44.6 +3.2
UNM Universidad Na 8.14 314 P Pn 03 34 44.6 +3.2
UNM Universidad Na 8.14 314 eP Pn 03 34 44.3 +2.9
UNM eS Sn 03 36 10.2 -2.6
PBVM Pinon 8.15 315 Pn 03 34 43.3 +2.0
PBVM Sn 03 36 07.4 -5.3
PBVM Pinon 8.15 315 eP Pn 03 34 43.3 +2.0
PBVM eS Sn 03 36 07.4 -5.3
BJVM Benito Juarez 8.16 315 Pn 03 34 43.6 +1.9
BJVM Sn 03 36 13.2 -0.3
BJVM Benito Juarez 8.16 315 eP Pn 03 34 43.6 +1.9
BJVM eS Sn 03 36 13.2 -0.3
VTVM Tizayuca 8.18 318 Pn 03 34 45.0 +3.1
VTVM Sn 03 36 06.8 -7.0
VTVM Tizayuca 8.18 318 eP Pn 03 34 45.0 +3.1
VTVM eS Sn 03 36 06.8 -7.0
MCRU Las Cruces 8.18 314 eP Pn 03 34 50.5 +8.3
MCRU eS Sn 03 36 03.6 -11
AOVM Tlapan 8.20 313 Pn 03 34 45.7 +3.3
AOVM Sn 03 36 08.0 -6.5
AOVM Tlapan 8.20 313⇓ eP Pn 03 34 45.7 +3.3
AOVM eS Sn 03 36 08.0 -6.5
MHVM Bosque de Chap 8.21 315 Pn 03 34 45.5 +3.1
MHVM Sn 03 36 08.7 -6.0
MHVM Bosque de Chap 8.21 315 eP Pn 03 34 45.5 +3.1
MHVM eS Sn 03 36 08.7 -6.0
INVM La Marquesa 8.25 313 Pn 03 34 46.4 +3.2
INVM Sn 03 36 13.4 -2.5
INVM La Marquesa 8.25 313⇓ eP Pn 03 34 46.4 +3.2
INVM eS Sn 03 36 13.4 -2.5
APVM Azcapotzalco 8.27 315 Pn 03 34 45.6 +2.5
APVM Sn 03 36 09.8 -6.2
APVM Azcapotzalco 8.27 315 eP Pn 03 34 45.6 +2.5
APVM eS Sn 03 36 09.8 -6.2
PTVM Pico Tres Padr 8.27 316 Pn 03 34 46.2 +2.9
PTVM Sn 03 36 08.9 -7.2
PTVM Pico Tres Padr 8.27 316 eP Pn 03 34 46.2 +2.9
PTVM eS Sn 03 36 08.9 -7.2
AZVM Cuida Lopez Ma 8.38 315 Pn 03 34 47.6 +2.9
AZVM Sn 03 36 08.7 -10
AZVM Cuida Lopez Ma 8.38 315 eP Pn 03 34 47.6 +2.9
AZVM eS Sn 03 36 08.7 -10
ARIG Puente Sto Nin 8.39 304 Pn 03 34 47.2 +2.6
ARIG Sn 03 36 13.4 -5.3
ARIG Puente Sto Nin 8.39 304⇓ eP Pn 03 34 47.2 +2.6
ARIG eS Sn 03 36 13.4 -5.3
ZUVM ZUMPANGO 8.41 317 Pn 03 34 46.5 +1.3
ZUVM Sn 03 36 14.2 -5.4
ZUVM ZUMPANGO 8.41 317 eP Pn 03 34 46.5 +1.3
ZUVM eS Sn 03 36 14.2 -5.4
TOVM TOLUCA 8.46 312 Pn 03 34 49.4 +3.5
TOVM Sn 03 36 13.4 -7.5
TOVM TOLUCA 8.46 312⇓ eP Pn 03 34 49.4 +3.5
TOVM eS Sn 03 36 13.4 -7.5
JTS Las Juntas de 8.59 112 Pn Pn 03 34 49.7 +2.2
comp=N,16nm,0.3s,baz=301,slow=7.9,SNR=63
JTS Las Juntas de 8.59 112 Pn 03 34 49.0 +1.6
JTS Las Juntas de 8.59 112 *i* P Pn 03 34 48.3 +0.8
JTS Las Juntas de 8.59 112 P Pn 03 34 49.7 +2.2
comp=N,8µmcomp=N,4µmcomp=N,198nm,1.1s
DEIG Demacu 8.73 320 eP Pn 03 34 52.2 +2.7
DEIG eS Sn 03 36 28.5 +1.1
DHIG Demacu 8.73 320 Pn 03 36 28.5 +2.7
DHIG Sn 03 36 28.5 +1.1
ZIIG Zihuatanejo 9.01 297 Pn 03 34 54.8 +1.6
ZIIG Sn 03 36 35.4 +1.5
ZIIG Zihuatanejo 9.01 297⇓ eP Pn 03 34 54.8 +1.6
ZIIG eS Sn 03 36 35.4 +1.5
ZIIG Zihuatanejo 9.01 297 P Pn 03 34 54.9 +1.8
CTUV Llano Grande 9.26 327 Pn 03 34 56.5 0.0
CTUV Sn 03 36 32.0 -8.0
CTUV Llano Grande 9.26 327⇑ eP Pn 03 34 56.5 0.0
CTUV eS Sn 03 36 32.0 -8.0
BILN Bilwi Airport 9.38 87 Pn 03 34 57.2 -1.0
HDC Heredia 9.46 112 eP Pn 03 34 59.3 -0.2
MOIG Morelia 9.82 308 Pn 03 35 08.8 +4.2
MOIG Morelia 9.82 308 Sn 03 36 55.9 +1.6
MOIG Morelia 9.82 308⇓ eP Pn 03 35 08.5 +4.0
MOIG eS Sn 03 36 55.9 +1.6
JRQG Juriquilla Cam 9.94 316 Pn 03 35 09.8 +3.6
JRQG Sn 03 36 55.6 -1.6
JRQG Juriquilla Cam 9.94 316 eP Pn 03 35 09.8 +3.6
JRQG eS Sn 03 36 55.6 -1.6
IGIG Irapuato, Guan 10.59 313 Pn 03 35 18.1 +3.1
IGIG Sn 03 37 19.6 +6.6
IGIG Irapuato, Guan 10.59 313 eP Pn 03 35 18.1 +3.1
IGIG eS Sn 03 37 19.6 +6.6
PIRO Carate, Puerto 10.87 118 Pn 03 35 20.3 +1.7
MMIG Aquila 10.92 296 Pn 03 35 21.4 +2.0
MMIG Sn 03 37 24.2 +3.4
MMIG Aquila 10.92 296⇓ eP Pn 03 35 21.4 +2.0
MMIG eS Sn 03 37 24.2 +3.4
GTIG Gomez Farias 10.99 329 Pn 03 35 23.1 +2.8
GTIG Sn 03 37 16.9 -5.7
GTIG Gomez Farias 10.99 329⇑ eP Pn 03 35 23.1 +2.8
GTIG eS Sn 03 37 16.9 -5.7
BRU2 Volcan 11.25 115 Pn 03 35 25.8 +1.8
PRVC Isla de Provid 11.35 90 P Pn 03 35 23.8 -1.4
comp=N,8µmcomp=N,2µmcomp=N,142nm,0.9s
MNGA Volcan de Coli 11.66 301⇓ eP Pn 03 35 33.5 +3.8
MNGA eS Sn 03 37 38.4 -1.0
INCO Volcan de Coli 11.68 301⇓ eP Pn 03 35 33.8 +3.8
INCO eS Sn 03 37 43.1 +3.1
SOMAC Volcano de Col 11.70 301⇓ eP Pn 03 35 33.0 +2.7
SOMAC eS Sn 03 37 36.4 -4.0
CDAR Ciudad de Arme 11.76 298⇑ eP Pn 03 35 34.0 +3.1
CDAR eS Sn 03 37 35.1 -6.4
CEGR Campo Tres 11.83 300⇓ eP Pn 03 35 34.9 +3.0
CEGR eS Sn 03 37 39.7 -3.6
LNIG Linares 12.69 332 Pn 03 35 45.3 +1.7
LNIG Sn 03 37 57.0 -7.2
LNIG Linares 12.69 332⇑ eP Pn 03 35 45.3 +1.7
LNIG eS Sn 03 37 57.0 -7.2
ZAIG Zacatecas 12.79 316 Pn 03 35 48.1 +3.0
ZAIG Zacatecas 12.79 316 Sn 03 38 03.9 -3.0
ZAIG Zacatecas 12.79 316⇓ eP Pn 03 35 48.1 +3.0
ZAIG eS Sn 03 38 03.9 -3.0
CJM Chamela 12.88 298 eP Pn 03 35 46.6 +0.4
CJM eS Sn 03 38 13.4 +4.5
SOR Soroa 13.13 45 Pn 03 35 48.1 -1.4
SOR Soroa 13.13 45 P Pn 03 35 48.1 -1.4
SOR Soroa 13.13 45 eP Pn 03 35 46.1 -3.4
ANIG Ahuacatlan 13.18 305 Pn 03 35 53.3 +2.9
ANIG Sn 03 38 17.1 +0.6
ANIG Ahuacatlan 13.18 305⇓ eP Pn 03 35 53.3 +2.9
ANIG eS Sn 03 38 17.1 +0.6
BCIP Isla Barro Col 13.69 108 Pn 03 35 58.2 +1.1
BCIP Isla Barro Col 13.69 108 P Pn 03 35 58.3 +1.1
BCIP Isla Barro Col 13.69 108 P Pn 03 35 58.1 +0.9
comp=N,131nm,1.2s
LCCY Blossom Villag 13.75 63 eP Pn 03 35 59.8 +1.8
CBCY The Bluff, Cay 14.06 63 eP Pn 03 35 59.8 -2.4
HBVL Hebbronville 14.31 339 Pn 03 36 08.8 +3.1
HBVL Hebbronville 14.31 339 Sn 03 38 50.8 +7.0
CAMR Camaricoa 14.46 48 eP Pn 03 36 10.7 +3.0
PAYG Puerto Ayora 14.53 169 P P 03 36 12.6 -2.5
comp=N,71µmcomp=N,2µmcomp=N,81nm,1.5s
MGV Manicaragua 14.97 54 eP Pn 03 36 11.5 -3.1
MTDJ Mount Denham 15.56 71 Pn 03 36 20.9 -1.7
MTDJ Mount Denham 15.56 71 *i* P Pn 03 36 19.8 -2.8
MTDJ Mount Denham 15.56 71 *i* P P 03 36 25.9 -0.8
MTDJ Mount Denham 15.56 71 P P 03 36 25.3 -1.4
833A Chaparral WMA, 15.72 339 Pn 03 36 25.4 +1.0
833A IAmb IAmb 03 36 31.7
comp=Z,406nm,1.0s
MAIG Mazatlaan 15.82 309 Pn 03 36 27.6 +1.8
MAIG Sn 03 39 21.4 +0.8
MAIG Mazatlaan 15.82 309 eP Pn 03 36 27.6 +1.8
MAIG eS Sn 03 39 21.4 +0.8
EF02 Christine 15.86 342 IAmb IAmb 03 36 33.4
comp=Z,136nm,0.6s
EF04 Eagle Ford 04 16.06 345 Pn 03 36 28.5 -0.3
MCIG Muzquiz 16.17 332 Pn 03 36 31.0 +0.8
MCIG Sn 03 39 24.6 -4.4
MCIG Muzquiz 16.17 332⇓ eP Pn 03 36 31.0 +0.8
MCIG eS Sn 03 39 24.6 -4.4
STH Stony Hill 16.20 72 *i* P P 03 36 32.8 -0.9
PDIG Papasquiaro 16.22 316 P P 03 36 33.7 -0.4
PDIG Sn 03 39 23.9 -6.6
PDIG Papasquiaro 16.22 316⇓ eP P 03 36 33.7 -0.4
PDIG eS Sn 03 39 23.9 -6.6
PTAC Punta Ardita, 16.32 112 P Pn 03 36 33.8 +1.7
comp=Z,2µmcomp=Z,128nm,1.1s
CCCC Cccc 16.36 61 eP Pn 03 36 33.5 +0.8
HKT Hockley 16.39 351 Pn 03 36 33.3 +0.4
HKT Hockley 16.39 351 *i* P Pn 03 36 32.6 -0.3
MLDN Muldoon 16.45 348 IAmb IAmb 03 36 40.4
comp=Z,706nm,1.2s
LMGC Las Mercedes 16.59 65 eP Pn 03 36 36.8 +1.2
061Z Ochoppi 16.62 41 Pn 03 36 34.0 -2.0
061Z IAmb IAmb 03 36 40.0
comp=Z,506nm,1.0s
061Z Ochoppi 16.62 41 eP Pn 03 36 33.4 -2.6
HNDO Hondo 16.79 341 P Pn 03 36 35.4 -2.7
HNDO Hondo 16.79 341 Sn 03 39 39.5 -4.6
HNDO Hondo 16.79 341 IAmb IAmb 03 36 43.2
comp=Z,250nm,0.7s
441A DeRidder 16.98 360 IAmb IAmb 03 36 45.0
comp=Z,422nm,1.0s
SOLC Bahia Solano 17.07 114 P P 03 36 47.4 +4.1
APAC Apartado, Choc 17.15 108 P P 03 36 44.6 +0.4
comp=Z,10µmcomp=Z,4µmcomp=Z,209nm,1.1s
DRIO Del Rio 17.16 337 P Pn 03 36 42.9 +0.1
DRIO Del Rio 17.16 337 Sn 03 39 57.3 +4.2
DRIO Del Rio 17.16 337 IAmb IAmb 03 36 48.8
comp=Z,158nm,1.0s
SSIG Sanalona 17.30 312 P P 03 36 47.0 +1.2
SSIG Sn 03 39 48.4 -8.1
SSIG Sanalona 17.30 312⇓ eP P 03 36 47.0 +1.2
SSIG eS Sn 03 39 48.4 -8.1
HPIG 17.70 320 Sn 03 40 03.8 -2.7
HPIG 17.70 320 P P 03 36 51.9 +1.4
HPIG 17.70 320 eP Pn 03 36 49.2 -0.5
HPIG eS Sn 03 40 03.8 -2.7
HLGC Holguin 17.70 64 eP Pn 03 36 45.6 -4.0
RCC Rio Carpintero 17.73 67 eP Pn 03 36 47.3 -2.5
060A Indiantown 17.79 40 IAmb IAmb 03 36 52.3
comp=Z,468nm,0.8s
DBBC Dabeiba 17.82 110 P P 03 36 52.9 +1.2
SJCC San Jacinto, C 17.87 100 P Pn 03 36 48.0 -3.8
DWPF Disney Wildern 17.96 35 P Pn 03 36 51.0 -1.6
UREC San Jos de Ur 18.17 107 P Pn 03 36 54.7 -0.6
GTBY Guantanamo Bay 18.23 68 eP Pn 03 36 53.5 -2.5
GTBY Guantanamo Bay 18.23 68 P Pn 03 36 55.3 -0.8
comp=Z,10µmcomp=Z,4µmcomp=Z,144nm,0.9s
SAND Sanderson 18.24 334 P P 03 36 58.2 +2.0
SAND Sanderson 18.24 334 S 03 40 23.9 0.0
SAND Sanderson 18.24 334 IAmb IAmb 03 37 01.8
comp=Z,166nm,0.9s
656A Willston 18.39 30 IAmb IAmb 03 37 01.2
comp=Z,677nm,1.5s
TXAR Lajitas Array 18.43 329 P Pn 03 37 00.8 +2.3
comp=Z,2.2nm,0.3s,baz=153,slow=9.5,SNR=229
TXAR PcP PcP 03 41 28.7 +0.1
comp=Z,5.9nm,0.9s,baz=155,slow=4.1,SNR=4.5
TXAR P3KPbc 04 11 40.5
comp=Z,0.2nm,0.4s,baz=22,slow=3.6,SNR=3.6
comp=Z,57nm,0.8s
TXAR Lajitas Array 18.43 329 P Pn 03 37 00.9 +2.5
CBOC Ciudad Bolivar 18.47 113 P Pn 03 37 01.0 +1.8
comp=Z,6µmcomp=Z,146nm,1.0s
SMRC Santa Marta, M 18.54 96 P P 03 36 58.0 -1.5
comp=Z,5µmcomp=Z,37nm,1.0s
QMBU Quimbuelo 18.58 67 eP P 03 36 57.1 -2.9
WHTX Lake Whitney, 18.66 348 IAmb IAmb 03 37 06.3
comp=Z,760nm,2.0s
OZNA Ozona 18.70 338 Sn 03 40 20.5 -10
OZNA Ozona 18.70 338 P Pn 03 37 03.6 +1.9
OZNA Ozona 18.70 338 IAmb IAmb 03 37 06.8
comp=Z,247nm,0.9s
ARGC Ariguani, Magd 18.78 100 P P 03 37 02.0 -0.2
comp=Z,6µmcomp=Z,4µmcomp=Z,108nm,1.0s
SLBS Sierra La Lagu 18.84 304 P Pn 03 37 05.2 +1.7
SLBS Sierra La Lagu 18.84 304⇑ eP Pn 03 37 07.9 +4.4
143A Socs Landing, 18.98 4 IAmb IAmb 03 37 08.7
comp=Z,371nm,1.1s
YOTC Yotoco, Valle 19.08 119 P Pn 03 37 06.6 0.0
comp=Z,2µmcomp=Z,55nm,1.1s
TSIG Topolobambo 19.15 311 P Pn 03 37 09.0 +1.9
TSIG Sn 03 40 30.4 -11
TSIG Topolobambo 19.15 311⇓ eP Pn 03 37 09.0 +1.9
TSIG eS Sn 03 40 30.4 -11
352A Blakely 19.21 21 IAmb IAmb 03 37 08.6
comp=Z,276nm,0.8s
JAMC Jamundi, Valle 19.22 121 P Pn 03 37 08.8 +0.5
comp=Z,6µmcomp=Z,3µmcomp=Z,82nm,0.8s
250A Grady 19.23 18 IAmb IAmb 03 37 15.8
comp=Z,810nm,1.8s
CMAN1 Manizales, Cal 19.26 115 P Pn 03 37 10.4 +1.5
ALPN Alpine 19.28 331 Sn 03 40 43.8 -0.6
ALPN Alpine 19.28 331 P Pn 03 37 10.5 +1.7
ALPN Alpine 19.28 331 IAmb IAmb 03 37 11.8
comp=Z,235nm,0.8s

LPIG **La Paz** 19.33 305 P Pn 03 37 11.4 +2.1
comp=Z,15nm,0.3s,baz=275,slow=12,SNR=11
LPIG LR LR 03 44 04.2
comp=Z,940nm,21.6s,baz=120,slow=35
comp=Z,37nm,0.3s
LPIG **La Paz** 19.33 305 P Pn 03 37 09.8 +0.5
LPIG **La Paz** 19.33 305 eP Pn 03 37 09.8 +0.5
PAC1 **Pacto, Paraso** 19.41 132 P Pn 03 37 10.5 0.0
comp=Z,1µmcomp=Z,59nm,1.0s
PPLP **Puerto Lpez** 19.41 140 P Pn 03 37 12.6 +2.2
comp=Z,5µmcomp=Z,2µmcomp=Z,64nm,1.8s
CSIG **Choix** 19.41 315 P Pn 03 37 11.7 +1.4
CSIG S 03 40 42.5 -4.8
CSIG **Choix** 19.41 315‖ eP Pn 03 37 11.7 +1.4
CSIG eS S 03 40 42.5 -4.8
BBAC **Balboa, Cauca** 19.44 125 P Pn 03 37 11.1 +0.1
comp=Z,6µmcomp=Z,3µmcomp=Z,97nm,1.1s
Z38A **Mt. Pleasant** 19.56 355 IAmb IAmb 03 37 19.2
comp=Z,753nm,1.6s
TPB05 **Hovey Rd** 19.59 333 IAmb IAmb 03 37 17.6
comp=Z,131nm,0.9s
POPC **Popayan, Colom** 19.60 123 P Pn 03 37 13.3 +0.5
comp=Z,6µmcomp=Z,4µmcomp=Z,86nm,1.2s
SGCY **Sterling City** 19.60 339 IAmb IAmb 03 37 14.5
comp=Z,321nm,0.8s
PTBC **PUERTO BERRIO,** 19.61 109 P P 03 37 12.3 +1.0
comp=Z,6µmcomp=Z,4µmcomp=Z,256nm,0.9s
FW06 **Azle** 19.64 349 IAmb IAmb 03 37 19.3
comp=Z,436nm,1.4s
PLPT **Palo Pinto** 19.64 347 IAmb IAmb 03 37 14.1
comp=Z,273nm,0.7s
ANIL **Santa Ana** 19.64 116 P Pn 03 37 15.0 +1.6
comp=Z,80µmcomp=Z,3µmcomp=Z,191nm,0.7s
OTAV **Otavalo** 19.67 132 P Pn 03 37 14.7 +0.7
OTAV **Otavalo** 19.67 132 P Pn 03 37 14.7 +0.7
OTAV pmax pmax
comp=Z,28nm,1.0s
OTAV **Otavalo** 19.67 132 eP P 03 37 10.9 -1.5
OTAV **Otavalo** 19.67 132 P Pn 03 37 14.1 +0.1
comp=Z,4µmcomp=Z,2µmcomp=Z,47nm,1.1s
TIGA **Tifton** 19.68 25 P P 03 37 11.8 -0.1
TIGA IAmb IAmb 03 37 14.7
comp=Z,415nm,0.7s
MNHN **Monahans** 19.71 335 S 03 40 46.5 -7.1
MNHN **Monahans** 19.71 335 P Pn 03 37 15.0 +1.1
MNHN **Monahans** 19.71 335 IAmb IAmb 03 37 16.7
comp=Z,247nm,0.8s
TMB01 **Midkiff** 19.73 337 IAmb IAmb 03 37 16.9
comp=Z,182nm,1.0s
456A **Hilliard** 19.76 29 P P 03 37 13.0 +0.3
ABTX **Abilene, Hawle** 19.79 343 IAmb IAmb 03 37 17.3
comp=Z,479nm,0.9s
TPB01 **Permian Basin** 19.82 332 IAmb IAmb 03 37 20.6
comp=Z,282nm,1.4s
GCUF **Volcan Galeras** 19.86 127 P Pn 03 37 17.1 +0.9
comp=Z,3µmcomp=Z,160nm,2.1s
229A **Bryant Ranch,** 19.89 338 IAmb IAmb 03 37 18.3
comp=Z,215nm,1.0s
WLAR **White Oak Lake** 19.91 360 IAmb IAmb 03 37 21.5
comp=Z,285nm,0.9s
Z35A **Perchaven, San** 19.93 350 IAmb IAmb 03 37 23.6
comp=Z,437nm,0.9s
ORTC **Ortega, Tolima** 20.06 117 P Pn 03 37 18.0 -0.2
comp=Z,6µmcomp=Z,4µmcomp=Z,279nm,1.0s
OCAC **Ocana** 20.09 104 P P 03 37 17.5 +0.8
comp=Z,5µmcomp=Z,4µmcomp=Z,228nm,0.7s
BRJC **Barrancabermej** 20.10 107 P Pn 03 37 19.5 +0.9
comp=Z,5µmcomp=Z,320nm,0.8s
CCAR **Cane Creek** 20.17 3 IAmb IAmb 03 37 21.4
comp=Z,442nm,1.3s
TPB06 **Permian Basin** 20.17 334 IAmb IAmb 03 37 23.9
comp=Z,794nm,1.5s
BONI **La Bonita** 20.21 129 P Pn 03 37 21.4 +1.3
comp=Z,2µmcomp=Z,77nm,0.9s
VHRN **Van Horn** 20.27 329 S 03 40 55.1 -10
VHRN **Van Horn** 20.27 329 P Pn 03 37 20.7 +0.1
VHRN **Van Horn** 20.27 329 IAmb IAmb 03 37 25.9
comp=Z,365nm,1.2s
SPBC **San Pablo de B** 20.31 111 P Pn 03 37 20.9 -0.2
comp=Z,5µmcomp=Z,4µmcomp=Z,215nm,1.7s
ODSA **Odessa** 20.31 336 IAmb IAmb 03 37 23.5
comp=Z,485nm,0.9s
152A **Waverly Hall** 20.36 21 IAmb IAmb 03 37 20.8
comp=Z,319nm,1.1s
ROSC **El Rosal** 20.44 114 P Pn 03 37 24.7 +1.8
comp=Z,159nm,0.9s,baz=318,slow=3.3,SNR=24
ROSC **El Rosal** 20.44 114 P Pn 03 37 24.2 +1.3
ROSC IAmb IAmb 03 37 29.9
comp=Z,360nm,1.1s
ROSC **El Rosal** 20.44 114 P Pn 03 37 24.2 +1.3
ROSC pmax pmax
comp=Z,360nm,1.1s
ROSC **El Rosal** 20.44 114 P Pn 03 37 24.6 +1.7
PRAC **Prado** 20.47 117 P Pn 03 37 22.4 -0.6
comp=Z,6µmcomp=Z,4µmcomp=Z,153nm,1.0s
129A **Stewart Farms,** 20.51 338 IAmb IAmb 03 37 24.0
comp=Z,416nm,1.0s
CASC **Dorado de Casc** 20.56 130 P Pn 03 37 23.9 -0.2
comp=Z,3µmcomp=Z,110nm,1.1s
APMT **Aspermont** 20.59 343 IAmb IAmb 03 37 24.4
comp=Z,471nm,0.9s
WTFS **Witchita Falls** 20.59 347 IAmb IAmb 03 37 26.9
comp=Z,186nm,0.7s
SN07 **Snyder 07** 20.60 341 IAmb IAmb 03 37 25.0
comp=Z,959nm,1.4s
URIC **Uribia, Colomb** 20.62 93 P P 03 37 20.8 -1.5
comp=Z,6µmcomp=Z,2µmcomp=Z,73nm,0.9s
128A **Castleberry Fa** 20.73 337 IAmb IAmb 03 37 26.5
comp=Z,294nm,0.8s
BARC **Barichara** 20.76 108 P Pn 03 37 26.6 +0.1
comp=Z,3µmcomp=Z,312nm,1.0s
GARC **Garzon, Huila** 20.77 122 P P 03 37 25.3 +1.1
comp=Z,2µmcomp=Z,87nm,0.8s
MIAR **Mount Ida** 20.77 359 IAmb IAmb 03 37 40.2
comp=Z,250nm,0.9s
CVER **Cruz Verde, Cu** 20.80 114 P Pn 03 37 27.8 +0.6
154A **Montrose** 20.91 24 IAMs_20 IAMs_20 03 46 49.6
comp=Z,7µm,18.0s
PAMC **Pamplona, Colo** 20.95 105 P P 03 37 27.6 +1.2
comp=Z,2µmcomp=Z,261nm,1.0s
Y49A **Blount Mountai** 20.96 16 IAmb IAmb 03 37 28.0
comp=Z,634nm,1.8s
FLOC **Florencia** 20.98 124 P P 03 37 28.0 +1.8
comp=Z,4µmcomp=Z,4µmcomp=Z,293nm,0.9s
CHIC **Chingaza** 21.05 114 P P 03 37 29.6 +2.2
comp=Z,7µmcomp=Z,5µmcomp=Z,522nm,0.9s
RUSC **La Rusia** 21.11 110 P P 03 37 29.6 +1.4
comp=Z,6µmcomp=Z,5µmcomp=Z,623nm,0.9s
URMC **La Uribe, Meta** 21.14 118 P P 03 37 29.5 +1.5
comp=Z,2µmcomp=Z,141nm,1.1s
DKNS **Dickens** 21.14 341 IAmb IAmb 03 37 30.7
comp=Z,548nm,1.1s
MNTX **Cornudas Mount** 21.21 330 P P 03 37 30.1 +1.6
MNTX **Cornudas Mount** 21.21 330 IAmb IAmb 03 37 34.2
comp=Z,308nm,1.1s
MNTX **Cornudas Mount** 21.21 330‖ eP P 03 37 30.1 +1.6
257A **Skidaway Islan** 21.27 29 IAMs_20 IAMs_20 03 45 24.8
comp=Z,6µm,22.0s
X34A **Smith Ranch, M** 21.27 349 IAmb IAmb 03 37 35.3
comp=Z,370nm,1.1s
VILC **Villavicencio,** 21.32 115 P P 03 37 32.6 +2.6
comp=Z,2µmcomp=Z,276nm,0.8s
GOGA **Godfrey** 21.48 22 IAmb IAmb 03 37 32.3
comp=Z,235nm,1.0s
GOGA **Godfrey** 21.48 22 IAMs_20 IAMs_20 03 45 47.8
comp=Z,6µm,22.0s
SDDR **Presa de Saban** 21.51 73 P P 03 37 30.7 -1.3
SDDR IAMs_20 IAMs_20 03 46 26.7
comp=Z,4µm,19.0s
SDDR **Presa de Saban** 21.51 73 P P 03 37 30.6 -1.3
comp=Z,7µmcomp=Z,2µmcomp=Z,89nm,0.8s
WHAR **Wooly Hollow** 21.52 2 IAmb IAmb 03 37 37.5
comp=Z,818nm,1.9s
WMOK **Wichita Mounta** 21.59 347 IAmb IAmb 03 37 34.7
comp=Z,398nm,1.7s
Y52A **Lilburn** 21.67 21 IAmb IAmb 03 37 34.6
comp=Z,400nm,1.0s
Y52A IAMs_20 IAMs_20 03 46 07.1
comp=Z,4µm,22.0s
HBAR **Harrisburg** 21.88 5 IAmb IAmb 03 37 40.0
comp=Z,195nm,0.7s
MSTX **Muleshoe** 22.04 338 IAmb IAmb 03 37 41.5
comp=Z,319nm,0.9s
SC01 **Santiago de lo** 22.11 72 IAmb IAmb 03 37 42.0
comp=Z,329nm,0.8s
FCAR **Ozark Folk Cen** 22.12 2 IAmb IAmb 03 37 41.2
comp=Z,163nm,0.8s

MCRA **Macar, Loja** 22.14 143 P P 03 37 39.3 +0.6
MACC **Macarena, Meta** 22.16 120 P P 03 37 39.9 +0.9
comp=Z,3µmcomp=Z,250nm,1.0s
GRTK **Grand Turk** 22.25 66 P P 03 37 40.4 +0.5
GRTK **Grand Turk** 22.25 66 P P 03 37 39.9 +0.1
comp=Z,6µmcomp=Z,454nm,1.0s
TUL3 **Leonard** 22.27 354 IAmb IAmb 03 37 42.5
comp=Z,202nm,1.0s
GNAR **Gosnell** 22.34 6 IAmb IAmb 03 37 56.7
comp=Z,321nm,1.3s
OK029 **Liberty Lake** 22.37 351 IAmb IAmb 03 37 43.9
comp=Z,544nm,1.0s
SWET **Sewanee** 22.37 15 IAmb IAmb 03 37 41.3
comp=Z,134nm,0.6s
HALT **Halls** 22.37 8 IAmb IAmb 03 37 43.9
comp=Z,414nm,1.5s
RGRS **Roger Stewart** 22.43 29 IAmb IAmb 03 37 44.0
comp=Z,1µm,2.0s
RLO **Rose Lookout** 22.45 356 IAmb IAmb 03 37 45.1
comp=Z,617nm,1.3s
SDV **Santo Domingo** 22.47 100 P P 03 37 41.4 -1.1
comp=Z,238nm,1.0s,baz=302,slow=3.2,SNR=54
SDV LR LR 03 48 15.9
comp=Z,2µm,19.1s,baz=285,slow=42
comp=Z,238nm,1.0s
SDV **Santo Domingo** 22.47 100 P P 03 37 41.0 -1.4
SDV IAmb IAmb 03 37 47.2
comp=Z,366nm,1.0s
SDV **Santo Domingo** 22.47 100 eP P 03 37 40.6 -1.8
SDV **Santo Domingo** 22.47 100 P P 03 37 40.9 -1.5
comp=Z,4µmcomp=Z,4µmcomp=Z,376nm,1.1s
SRIG **Santa Rosalia** 22.49 310 P P 03 37 44.7 +2.4
SRIG **Santa Rosalia** 22.49 310 IAmb IAmb 03 37 46.8
comp=Z,772nm,1.6s
SRIG **Santa Rosalia** 22.49 310‖ eP P 03 37 44.7 +2.4
PTLC **Puerto Leguiza** 22.50 125 P P 03 37 45.2 +2.6
comp=Z,3µmcomp=Z,2µmcomp=Z,111nm,0.9s
HHAR **Hobbs** 22.51 358 IAmb IAmb 03 37 44.9
comp=Z,366nm,1.3s
W50A **Signal Mountai** 22.52 17 IAmb IAmb 03 38 05.2
comp=Z,563nm,2.0s
NZIG **Nacozari, Sono** 22.54 320 P P 03 37 45.2 +2.2
NZIG S 03 41 56.0 +6.8
NZIG **Nacozari, Sono** 22.54 320‖ eP P 03 37 45.2 +2.2
NZIG eS S 03 41 56.0 +6.8
LNXT **Lenox** 22.54 7 IAmb IAmb 03 37 46.1
comp=Z,140nm,0.7s
CSU **Charleston Sou** 22.55 29 IAmb IAmb 03 37 47.4
comp=Z,810nm,1.6s
HSIG 22.56 315 S 03 41 46.2 -3.1
HSIG 22.56 315 P P 03 37 45.0 +1.9
HSIG 22.56 315 IAmb IAmb 03 37 48.3
comp=Z,306nm,1.9s
HSIG 22.56 315‖ eP P 03 37 45.0 +1.9
HSIG eS S 03 41 46.2 -3.1
NHSC **New Hope** 22.60 29 IAmb IAmb 03 37 51.2
comp=Z,483nm,1.2s
HODGE **Hodges** 22.66 24 IAmb IAmb 03 37 46.8
comp=Z,186nm,0.9s
U38A **Gravette** 22.69 357 IAmb IAmb 03 37 47.1
comp=Z,219nm,0.8s
GLAT **Glass** 22.73 8 IAmb IAmb 03 37 46.8
comp=Z,158nm,0.6s
WVT **Waverly** 22.83 11 P P 03 37 44.4 -1.4
WVT **Waverly** 22.83 11 P P 03 37 44.4 -1.4
WVT pmax pmax
comp=Z,47nm,0.8s
UTMT **University of** 22.86 9 IAmb IAmb 03 38 01.9
comp=Z,144nm,0.8s
PH02 **Texas Public H** 23.05 341 IAmb IAmb 03 37 51.5
comp=Z,507nm,1.0s
PARMO **Parma** 23.07 7 IAmb IAmb 03 38 00.7
comp=Z,190nm,0.7s
BG3 **Lake Jocassee** 23.09 22 IAmb IAmb 03 37 50.4
comp=Z,773nm,1.7s
121A **Cookes Peak, D** 23.10 327 IAmb IAmb 03 37 55.1
comp=Z,230nm,0.9s
JSC **Jenkinsville** 23.11 25 IAmb IAmb 03 37 50.5
comp=Z,234nm,1.0s
Y57A **Sumter** 23.26 27 IAmb IAmb 03 37 52.5
comp=Z,314nm,0.7s
OK038 **West end E0370** 23.26 348 IAmb IAmb 03 37 52.8
comp=Z,489nm,1.1s
PAULI **Pauline** 23.36 24 IAmb IAmb 03 37 53.0
comp=Z,219nm,1.0s
TKL **Tuckaleechee C** 23.41 19 P P 03 37 51.0 -0.7
comp=Z,120nm,0.7s,baz=187,slow=9.2,SNR=68
TKL S S 03 42 11.1 +7.5
comp=Z,18nm,0.7s,baz=151,slow=8.9,SNR=4.5
TKL LR LR 03 47 35.5
comp=Z,3µm,21.1s,baz=210,slow=38
comp=Z,120nm,0.7s
TKL **Tuckaleechee C** 23.41 19 IAmb IAmb 03 37 54.1
comp=Z,377nm,1.1s
TKL **Tuckaleechee C** 23.41 19 P P 03 37 51.0 -0.7
TKL pmax pmax
comp=Z,377nm,1.1s
Y58A **Scranton** 23.50 29 IAmb IAmb 03 38 01.4
comp=Z,164nm,0.9s
U49A **Red Boiling Sp** 23.64 15 IAmb IAmb 03 37 54.0
comp=Z,134nm,0.6s
BIRD **Birdtown, Kers** 23.76 26 IAmb IAmb 03 37 55.7
comp=Z,524nm,1.5s
T47A **Sharon Grove** 23.80 12 IAmb IAmb 03 37 56.9
comp=Z,181nm,0.7s
Y22A **Socorro** 23.80 330 IAmb IAmb 03 38 07.5
comp=Z,261nm,1.1s
S44A **Carbondale** 24.14 7 IAmb IAmb 03 38 01.5
comp=Z,251nm,1.0s
S44A IAMs_20 IAMs_20 03 48 46.0
comp=Z,3µm,22.0s
SIUC **Southern Illin** 24.17 7 IAmb IAmb 03 38 00.7
comp=Z,169nm,0.7s
X58A **Rowland** 24.19 28 IAmb IAmb 03 37 59.6
comp=Z,126nm,0.8s
Y60A **Bolivia** 24.29 31 IAmb IAmb 03 38 02.0
comp=Z,635nm,1.7s
CCM **Cathedral Cave** 24.32 3 P P 03 37 58.8 -1.5
CCM IAmb IAmb 03 38 02.3
comp=Z,99nm,0.7s
CCM **Cathedral Cave** 24.32 3 P P 03 37 58.8 -1.5
CCM pmax pmax
comp=Z,99nm,0.7s
T50A **Nancy** 24.36 16 IAmb IAmb 03 38 01.6
comp=Z,150nm,0.9s
ANMO **Albuquerque** 24.39 332 P P 03 38 03.1 +1.9
ANMO **Albuquerque** 24.39 332 ceP P 03 38 02.8 +1.5
ANMO pmax pmax
comp=Z,96nm,1.7s
ANMO MLR MLR
comp=Z,1µm,16.0s
TASM **ASL Pad, Albuq** 24.39 332 IAmb IAmb 03 38 23.9
comp=Z,44nm,1.0s
W57A **Gilead** 24.39 27 IAmb IAmb 03 38 02.1
comp=Z,137nm,0.7s
V55A **Taylorsville** 24.49 24 IAmb IAmb 03 38 04.8
comp=Z,230nm,0.9s
R40A **Maddies Statio** 24.51 1 IAmb IAmb 03 38 04.3
comp=Z,123nm,0.7s
TUC **Tucson** 24.64 322 P P 03 38 05.5 +2.1
TUC IAmb IAmb 03 38 08.3
comp=Z,154nm,1.0s
TUC **Tucson** 24.64 322 IAMs_20 IAMs_20 03 49 22.1
comp=Z,6µm,20.0s
TUC **Tucson** 24.64 322 P P 03 38 05.5 +2.1
TUC pmax pmax
comp=Z,154nm,1.0s
TUC MLR MLR
comp=Z,6µm,20.0s
TUC **Tucson** 24.64 322‖ eP P 03 38 05.7 +2.3
USIN **University of** 24.64 10 IAmb IAmb 03 38 04.9
comp=Z,216nm,0.9s
SLM **Saint Louis** 24.97 5 IAmb IAmb 03 38 08.8
comp=Z,181nm,0.7s
WCI **Wyandotte Cave** 25.16 13 P P 03 38 06.4 -1.5
WCI **Wyandotte Cave** 25.16 13 P P 03 38 06.4 -1.5
WCI pmax pmax
comp=Z,384nm,0.8s
WCI MLR MLR
comp=Z,2µm,22.0s
ATAH **Atahualpa** 25.28 144 LR LR 03 45 56.8
comp=Z,2µm,21.5s,baz=309,slow=32
S51A **Beattyville** 25.29 18 IAmb IAmb 03 38 10.2
comp=Z,89nm,0.7s
OLIL **Olney** 25.32 9 IAmb IAmb 03 38 11.9
comp=Z,227nm,0.7s
Q44A **Meyer Farm, Va** 25.36 7 IAmb IAmb 03 38 22.4
comp=Z,97nm,0.8s
Q44A IAMs_20 IAMs_20 03 49 23.8
comp=Z,3µm,22.0s
T25A **Trinidad** 25.47 338 IAmb IAmb 03 38 15.2
comp=Z,316nm,1.1s
R49A **Shelbyville** 25.48 14 IAmb IAmb 03 38 11.6
comp=Z,99nm,0.6s
214A **Organ Pipe Nat** 25.67 318 IAmb IAmb 03 38 18.2
comp=Z,391nm,1.8s
R50A **Paris** 25.68 16 IAmb IAmb 03 38 14.2
comp=Z,101nm,0.8s
R50A IAMs_20 IAMs_20 03 48 49.6
comp=Z,3µm,22.0s
P40A **Paris** 25.75 2 IAmb IAmb 03 38 13.3
comp=Z,116nm,0.7s
X18A **Snowflake** 25.79 326 IAmb IAmb 03 38 17.9
comp=Z,419nm,1.9s
P38A **Dawn** 25.84 359 IAmb IAmb 03 38 16.4
comp=Z,80nm,0.7s
BLA **Blacksburg** 25.99 23 IAmb IAmb 03 38 18.8
comp=Z,106nm,0.8s
BLO **Bloomington** 26.02 12 IAmb IAmb 03 38 17.0
comp=Z,152nm,0.7s
P43A **Skaggs, Pawnee** 26.03 6 IAmb IAmb 03 38 19.2
comp=Z,141nm,1.3s
P43A IAMs_20 IAMs_20 03 49 55.6
comp=Z,3µm,22.0s
S54A **Dingess, Beckl** 26.18 21 IAmb IAmb 03 38 18.3
comp=Z,415nm,1.7s
SJG **San Juan** 26.21 77 P P 03 38 14.7 -3.0
comp=Z,20nm,0.8s,baz=268,slow=7.2,SNR=8.6
SJG PcP PcP 03 41 45.1 +0.7
comp=Z,16nm,0.7s,baz=330,slow=0.6,SNR=4.5
comp=Z,20nm,0.8s
SJG **San Juan** 26.21 77 IAmb IAmb 03 38 16.3
comp=Z,22nm,0.8s
SJG **San Juan** 26.21 77 P P 03 38 13.7 -4.0
PDPR **Patillas Dam,** 26.32 77 P P 03 38 16.5 -2.2
P46A **Rosedale** 26.33 10 IAmb IAmb 03 38 19.7
comp=Z,149nm,0.7s
SDCO **Great Sand Dun** 26.41 337 IAmb IAmb 03 38 23.4
comp=Z,295nm,1.4s
SFX **San Felipe** 26.47 314 IAmb IAmb 03 38 23.4
comp=Z,195nm,1.5s
V61A **Roper** 26.52 31 IAmb IAmb 03 38 22.7
comp=Z,131nm,0.9s
P48A **Milroy** 26.53 13 IAmb IAmb 03 38 21.0
comp=Z,120nm,0.8s
Q51A **Peebles** 26.65 17 IAmb IAmb 03 38 23.3
comp=Z,184nm,0.9s
Q51A IAMs_20 IAMs_20 03 49 18.7
comp=Z,4µm,22.0s
113A **Mohawk Valley,** 26.81 319 IAmb IAmb 03 38 26.6
comp=Z,332nm,1.8s
SPIG **San Pedro Mart** 26.91 314 P P 03 38 26.0 +1.7
SPIG **San Pedro Mart** 26.91 314‖ eP P 03 38 26.0 +1.7
Q52A **Bidwell** 26.91 19 IAmb IAmb 03 38 27.8
comp=Z,464nm,1.5s
Q52A IAMs_20 IAMs_20 03 50 52.9
comp=Z,4µm,18.0s
HDIL **Hopedale** 26.96 6 IAmb IAmb 03 38 26.0
comp=Z,105nm,1.0s
HDIL IAMs_20 IAMs_20 03 50 36.2
comp=Z,3µm,21.0s
T59A **Double "B" Far** 27.00 28 IAmb IAmb 03 38 26.3
comp=Z,158nm,0.9s
R55A **Marlinton** 27.04 23 IAmb IAmb 03 38 26.6
comp=Z,419nm,1.6s
S57A **Dark Hollow, R** 27.05 25 IAmb IAmb 03 38 26.2
comp=Z,79nm,0.7s
SFIN **Lafayette** 27.09 10 IAmb IAmb 03 38 26.4
comp=Z,87nm,0.7s
SFIN IAMs_20 IAMs_20 03 51 03.3
comp=Z,3µm,22.0s
MVCO **Mesa Verde** 27.19 332 IAmb IAmb 03 38 30.4
comp=Z,282nm,1.4s
WUAZ **Wupatki** 27.30 326 IAmb IAmb 03 38 31.3
comp=Z,109nm,0.9s
O48B **Farmland** 27.35 13 IAmb IAmb 03 38 29.2
comp=Z,89nm,0.8s
Q54A **Coxs Mills** 27.40 21 IAmb IAmb 03 38 28.8
comp=Z,314nm,1.5s
O49A **Covington** 27.48 15 IAmb IAmb 03 38 29.7
comp=Z,115nm,1.0s
O49A IAMs_20 IAMs_20 03 50 18.2
comp=Z,3µm,21.0s
CPBX **Cerro Prieto** 27.60 316 IAmb IAmb 03 38 51.8
comp=Z,204nm,1.3s
P53A **Whipple** 27.67 20 IAmb IAmb 03 38 32.9
comp=Z,458nm,1.8s
P53A IAMs_20 IAMs_20 03 51 05.9
comp=Z,4µm,19.0s
R58B **Mineral** 27.68 26 IAmb IAmb 03 38 31.8
comp=Z,254nm,1.4s
ESJX **Sierra Juarez** 27.80 315 IAmb IAmb 03 38 36.0
comp=Z,214nm,1.7s
N47A **Urbana** 27.84 12 IAmb IAmb 03 38 32.5
comp=Z,78nm,0.8s
ACSO **Alum Creek Sta** 27.87 17 IAMs_20 IAMs_20 03 50 19.5
comp=Z,3µm,21.0s
M44A **Midewin, Midew** 27.94 8 IAmb IAmb 03 38 35.3
comp=Z,220nm,1.7s
BGNE **Belgrade** 27.97 352 IAmb IAmb 03 38 55.2
comp=Z,190nm,0.8s
PV01 **Paradox Valley** 27.99 333 IAmb IAmb 03 38 37.9
comp=Z,152nm,1.1s
Q56A **Snyder Ridge,** 28.06 23 IAmb IAmb 03 38 35.9
comp=Z,110nm,0.6s
Q56A IAMs_20 IAMs_20 03 51 00.9
comp=Z,4µm,18.0s
O52A **Adamsville** 28.10 18 IAMs_20 IAMs_20 03 50 00.8
comp=Z,4µm,22.0s
SCIA **State Center** 28.11 360 IAmb IAmb 03 38 37.7
comp=Z,75nm,0.8s
PV13 **Radium Mtn., P** 28.12 333 IAmb IAmb 03 38 38.7
comp=Z,147nm,1.0s
PV15 **Paradox Valley** 28.12 334 IAmb IAmb 03 38 39.3
comp=Z,202nm,1.2s
YUH **Yuha Desert** 28.16 316 P P 03 38 37.1 +2.1
YUH IAmb IAmb 03 38 39.2
comp=Z,381nm,2.0s
PV05 **Paradox Valley** 28.18 332 IAmb IAmb 03 38 39.0
comp=Z,114nm,1.0s
PV03 **Paradox Valley** 28.21 333 IAmb IAmb 03 38 39.5
comp=Z,172nm,1.1s
ISCO **Idaho Springs** 28.27 339 IAmb IAmb 03 38 40.8
comp=Z,155nm,1.6s
PV07 **Paradox Valley** 28.27 333 IAmb IAmb 03 38 40.3
comp=Z,148nm,0.9s
PV17 **East Wray Mesa** 28.28 333 IAmb IAmb 03 38 40.0
comp=Z,110nm,1.1s
PV16 **Nyswonger Mesa** 28.29 333 IAmb IAmb 03 38 40.2
comp=Z,343nm,1.5s
L40A **Anamosa** 28.31 3 IAmb IAmb 03 38 39.5
comp=Z,54nm,0.6s
PV20 **West Nyswonger** 28.33 333 IAmb IAmb 03 38 40.5
comp=Z,340nm,1.3s
PV04 **Paradox Valley** 28.35 333 IAmb IAmb 03 38 40.8
comp=Z,209nm,1.0s
L42A **Oliver, Polo** 28.36 5 IAMs_20 IAMs_20 03 51 30.2
comp=Z,3µm,22.0s
PV14 **Lion Creek, Pa** 28.38 333 IAmb IAmb 03 38 40.9
comp=Z,148nm,1.2s
PV10 **Paradox Valley** 28.39 333 IAmb IAmb 03 38 40.3
comp=Z,195nm,1.1s
PV22 **Blue Mesa, Par** 28.41 333 IAmb IAmb 03 38 41.3
comp=Z,106nm,0.9s
W13A **Hualapai Mount** 28.43 322 IAmb IAmb 03 38 42.0
comp=Z,142nm,1.3s
BC3 **Big Chuckawall** 28.46 318 P P 03 38 40.5 +2.6
CBX **Cerro Bola** 28.47 315 P P 03 38 40.4 +2.5
CBX IAmb IAmb 03 38 42.1
comp=Z,426nm,1.9s
TJIG **Tijuana** 28.55 315 P P 03 38 40.9 +2.4
TJIG **Tijuana** 28.55 315 eP P 03 38 40.9 +2.4
IRM **Iron Mountain** 28.58 319 IAmb IAmb 03 38 42.8
comp=Z,180nm,1.4s
O54A **Avella** 28.63 20 IAmb IAmb 03 38 39.2
comp=Z,96nm,0.6s
NEE2 **Needles Airpor** 28.65 321 IAmb IAmb 03 38 43.2
comp=Z,322nm,1.9s
NEE2 IAMs_20 IAMs_20 03 51 43.4
comp=Z,3µm,21.0s
N51A **Ashland** 28.68 17 IAmb IAmb 03 38 41.5
comp=Z,258nm,1.8s
N51A IAMs_20 IAMs_20 03 50 31.8
comp=Z,4µm,22.0s
BAR **Barrett** 28.69 315 IAmb IAmb 03 38 43.6

L44A **Lake County Fo** 28.73 8 IAmb IAmb 03 38 41.7
comp=Z,172nm,1.9s
HMU **Henry Mountain** 28.83 330 IAmb IAmb 03 38 45.2
comp=Z,112nm,1.2s
BORC **Borrego Spring** 28.86 316 IAmb IAmb 03 38 45.2
comp=Z,322nm,1.5s
P57A **Homestead Farm** 28.90 25 IAmb IAmb 03 38 43.2
comp=Z,231nm,1.8s
M50A **Fremont** 28.95 16 IAMs_20 IAMs_20 03 50 40.0
comp=Z,279nm,1.2s
DANC **Danby, Needles** 29.04 320 IAMs_20 IAMs_20 03 50 06.8
comp=Z,3µm,21.0s
N53A **Lisbon** 29.04 19 IAmb IAmb 03 38 43.8
comp=Z,3µm,19.0s
PFO **Pinyon Flats O** 29.10 317 LR LR 03 51 32.3
comp=Z,296nm,1.6s
PFO **Pinyon Flats O** 29.10 317 P **P** **03 38 46.0 +2.5**
comp=Z,2µm,20.5s,baz=126,slow=39
PFO **Pinyon Flats O** 29.10 317 P **P** **03 38 46.0 +2.5**
PFO pmax pmax
comp=Z,55nm,1.1s
CPE **Camp Elliot** 29.10 315 IAmb IAmb 03 38 47.2
comp=Z,178nm,1.6s
KNB **Kanab** 29.19 326 IAmb IAmb 03 38 48.5
comp=Z,184nm,1.3s
JFWS **Jewell Farm** 29.22 4 IAmb IAmb 03 38 47.9
comp=Z,72nm,0.7s
SGC2 **Sao Gabriel da** 29.24 116 P **P** **03 38 44.2 -0.6**
PAMR **Moraine State** 29.41 20 IAmb IAmb 03 38 48.4
comp=Z,64nm,0.7s
K30B **Basset** 29.44 350 IAmb IAmb 03 38 49.5
comp=Z,188nm,0.8s
V12A **Nelson** 29.44 322 IAmb IAmb 03 38 50.4
comp=Z,426nm,1.7s
HAYD **Hayden** 29.49 338 IAmb IAmb 03 38 51.4
comp=Z,168nm,1.4s
O20A **White River Ci** 29.54 336 IAmb IAmb 03 39 16.9
comp=Z,214nm,1.7s
M52A **Chesterland** 29.55 18 IAmb IAmb 03 38 49.0
comp=Z,391nm,1.9s
M52A IAMs_20 IAMs_20 03 51 07.8
comp=Z,2µm,21.0s
MTPU **Mount Pierson** 29.63 328 IAmb IAmb 03 38 52.7
comp=Z,77nm,0.9s
SRU **San Rafael Swe** 29.66 332 IAmb IAmb 03 38 52.1
comp=Z,197nm,1.9s
MTPC **Mountain Pass** 29.70 321 IAmb IAmb 03 38 52.8
comp=Z,184nm,1.7s
SZCU **Shurtz Canyon** 29.76 327 IAmb IAmb 03 38 53.8
comp=Z,145nm,1.1s
Q16A **Castle Valley** 29.81 331 IAmb IAmb 03 38 53.8
comp=Z,103nm,0.9s
CCUT **Cedar City** 29.88 326 IAmb IAmb 03 38 55.0
comp=Z,95nm,1.0s
SSPA **Standing Stone** 29.94 23 P **P** **03 38 49.7 -1.0**
SSPA IAmb IAmb 03 38 51.8
comp=Z,82nm,0.8s
SSPA **Standing Stone** 29.94 23 IAMs_20 IAMs_20 03 51 49.7
comp=Z,4µm,19.0s
MVL **Millersville** 30.03 26 IAmb IAmb 03 38 52.8
comp=Z,297nm,1.5s
P17A **Butcher Ranch,** 30.05 332 IAmb IAmb 03 38 55.6
comp=Z,102nm,0.8s
PAGS **Pennsylvania G** 30.06 25 IAmb IAmb 03 38 52.7
comp=Z,121nm,1.1s
PAOC **Oil Creek Stat** 30.06 20 IAmb IAmb 03 38 54.2
comp=Z,217nm,1.9s
NNA **Nana** 30.14 147 LR LR 03 48 47.4
comp=Z,1µm,20.8s,baz=328,slow=32
NNA **Nana** 30.14 147 P **P** **03 38 55.7 +2.9**
NNA **Nana** 30.14 147 *ceP* **P** **03 38 55.1 +2.3**
NNA pmax pmax
comp=Z,45nm,1.3s
NNA **Nana** 30.14 147 P **P** **03 38 55.4 +2.6**
I37A **Lemond, Waseca** 30.22 359 IAmb IAmb 03 38 55.7
comp=Z,145nm,1.6s
J47A **Sunmer** 30.28 12 IAMs_20 IAMs_20 03 52 08.5
comp=Z,2µm,21.0s
GDHS **Morne Mazeau,** 30.30 81 IAMs_20 IAMs_20 03 51 15.3
comp=Z,3µm,19.0s
I42A **Draeger Farm,** 30.30 6 IAMs_20 IAMs_20 03 52 26.6
comp=Z,3µm,22.0s
ANWB **Willy Bob** 30.32 78 IAMs_20 IAMs_20 03 52 04.7
comp=Z,3µm,18.0s
K50A **Casco** 30.34 15 IAMs_20 IAMs_20 03 51 44.9
comp=Z,3µm,19.0s
GSC **Goldstone, Bar** 30.36 319 IAmb IAmb 03 38 58.9
comp=Z,144nm,1.9s
SHOC **Shoshone, Teco** 30.42 321 IAmb IAmb 03 38 59.0
comp=Z,145nm,1.6s
SHOC IAMs_20 IAMs_20 03 52 46.1
comp=Z,3µm,20.0s
CBE **Ff, Capester** 30.45 82 IAMs_20 IAMs_20 03 52 29.2
comp=Z,4µm,18.0s
P61A **Hammonton** 30.46 28 IAmb IAmb 03 38 56.5
comp=Z,195nm,1.1s
P61A IAMs_20 IAMs_20 03 51 07.2
comp=Z,4µm,20.0s
MWC **Mount Wilson** 30.53 316 IAmb IAmb 03 39 00.1
comp=Z,115nm,1.1s
MWC IAMs_20 IAMs_20 03 51 57.4
comp=Z,2µm,18.0s
ABD **La Joyeuse, An** 30.56 81 IAMs_20 IAMs_20 03 52 06.4
comp=Z,3µm,18.0s
N58A **Sunbury** 30.58 25 IAmb IAmb 03 38 57.2
comp=Z,72nm,0.9s
N58A IAMs_20 IAMs_20 03 51 04.6
comp=Z,3µm,21.0s
PASC **Pasadena Art C** 30.58 316 IAmb IAmb 03 39 00.5
comp=Z,151nm,1.4s
PASC IAMs_20 IAMs_20 03 51 59.9
comp=Z,2µm,19.0s
MAGL **Barre de l'ile** 30.76 82 IAMs_20 IAMs_20 03 52 38.6
comp=Z,4µm,18.0s
I45A **Fountain** 30.80 10 IAMs_20 IAMs_20 03 53 15.3
comp=Z,3µm,22.0s
QSM **Queen of Sheba** 30.83 320 IAmb IAmb 03 39 02.5
comp=Z,215nm,1.8s
GWY **Greenwater Val** 30.84 321 IAmb IAmb 03 39 02.8
comp=Z,272nm,1.9s
CCCA **Chr Cany lake** 30.86 319 IAmb IAmb 03 39 03.3
comp=Z,326nm,1.8s
PSUT **Pine Spring** 30.86 327 IAmb IAmb 03 39 03.3
comp=Z,80nm,0.9s
SVN **Savane Anatole** 30.89 84 IAMs_20 IAMs_20 03 51 10.2
comp=Z,2µm,19.0s
MPU **Maple Canyon** 30.90 332 IAmb IAmb 03 39 03.2
comp=Z,158nm,1.5s
BSUT **Blindstream Ca** 30.93 333 IAmb IAmb 03 39 04.0
comp=Z,95nm,1.3s
GDSD **La Dsirade Is** 30.97 81 IAMs_20 IAMs_20 03 52 10.1
comp=Z,3µm,18.0s
BIM **Bigot** 30.99 85 IAMs_20 IAMs_20 03 51 06.1
comp=Z,2µm,18.0s
TPO **Tropico Hills** 31.03 317 IAmb IAmb 03 39 04.2
comp=Z,222nm,1.5s
LRMC **Laurel Mtn Rad** 31.04 319 IAmb IAmb 03 39 04.7
comp=Z,220nm,1.8s
FURC **Furnace Creek,** 31.15 321 IAMs_20 IAMs_20 03 53 08.4
comp=Z,3µm,19.0s
CLC **China Lake** 31.19 319 IAmb IAmb 03 39 05.7
comp=Z,90nm,1.2s
MPOM **Morne Pois Mar** 31.20 85 IAMs_20 IAMs_20 03 51 03.5
comp=Z,3µm,19.0s
L56A **Greenwood** 31.36 22 IAmb IAmb 03 39 04.1
comp=Z,186nm,1.6s
BRNJ **Basking Ridge** 31.37 28 IAmb IAmb 03 39 04.4
comp=Z,126nm,0.8s
I49A **Point Hope** 31.39 14 IAMs_20 IAMs_20 03 52 40.4
comp=Z,2µm,20.0s
CTU **Camp Tracy** 31.49 332 IAmb IAmb 03 39 08.4
comp=Z,117nm,1.3s
DUG **Dugway, Tooele** 31.60 330 IAmb IAmb 03 39 09.8
comp=Z,128nm,1.6s
ISA **Isabella, Lake** 31.66 318 IAmb IAmb 03 39 10.4
comp=Z,177nm,1.9s
CPNY **Central Park** 31.73 28 IAmb IAmb 03 39 07.2
comp=Z,107nm,1.3s
MMNY **Mt. Morris Dam** 31.75 21 IAmb IAmb 03 39 07.4
comp=Z,182nm,1.4s
RSSD **Black Hills** 31.76 345 P **P** **03 39 08.7 +1.7**
RSSD IAmb IAmb 03 39 11.3
comp=Z,125nm,1.4s
RSSD **Black Hills** 31.76 345 P **P** **03 39 08.7 +1.7**
RSSD pmax pmax
comp=Z,125nm,1.5s
RSSD MLR MLR
comp=Z,600nm,21.0s

GRAC **Grapevine Rang** 31.80 321 IAmb IAmb 03 39 11.7
comp=Z,154nm,1.0s
GLMI **Grayling** 31.85 11 IAmb IAmb 03 39 08.5
comp=Z,88nm,0.8s
BBSR **BB Station** 31.87 50 P **P** **03 39 06.7 -1.2**
BBSR IAmb IAmb 03 39 07.7
comp=Z,75nm,0.7s
BBSR **BB Station** 31.87 50 IAMs_20 IAMs_20 03 52 02.9
comp=Z,2µm,19.0s
CWC **Cottonwood Cre** 31.88 320 IAMs_20 IAMs_20 03 51 36.0
comp=Z,2µm,20.0s
PAL **Palisades** 31.93 28 IAmb IAmb 03 39 08.9
comp=Z,182nm,1.2s
MEDO **Medina** 31.94 20 IAmb IAmb 03 39 10.5
comp=Z,46nm,0.7s
BINY **Binghamton** 32.02 24 IAMs_20 IAMs_20 03 53 02.4
comp=Z,3µm,19.0s
N62A **Caumsett State** 32.07 29 IAmb IAmb 03 39 10.1
comp=Z,250nm,1.4s
HWUT **Hardware Ranch** 32.15 333 IAmb IAmb 03 39 15.2
comp=Z,106nm,1.4s
F33A **5 Mile Ranch,** 32.16 356 IAmb IAmb 03 39 11.6
comp=Z,115nm,1.4s
J55A **Hilton** 32.25 21 IAMs_20 IAMs_20 03 53 25.7
comp=Z,3µm,19.0s
K57A **Scipio Center** 32.26 23 IAMs_20 IAMs_20 03 52 10.9
comp=Z,4µm,22.0s
BGU **Big Grassy Mou** 32.27 331 IAmb IAmb 03 39 15.3
comp=Z,106nm,1.4s
PDAR **Pinedale Array** 32.30 337 P **P** **03 39 13.1 +1.3**
comp=Z,23nm,0.8s,baz=136,slow=8.8,SNR=152
PDAR PcP **PcP** **03 41 58.8 -0.9**
comp=Z,6.2nm,0.9s,baz=158,slow=4.7,SNR=3.6
comp=Z,23nm,0.8s
PDAR **Pinedale Array** 32.30 337 P **P** **03 39 13.3 +1.5**
WSPT **Westport, CT** 32.32 28 IAmb IAmb 03 39 12.3
comp=Z,168nm,1.3s
WSPT IAMs_20 IAMs_20 03 53 00.3
comp=Z,3µm,19.0s
TIN **Tinemaha, Big** 32.36 320 IAmb IAmb 03 39 16.7
comp=Z,211nm,1.2s
L59A **Walton** 32.40 25 IAmb IAmb 03 39 13.4
comp=Z,193nm,1.1s
L59A IAMs_20 IAMs_20 03 52 20.3
comp=Z,3µm,21.0s
DSP **Deep Springs** 32.41 321 IAmb IAmb 03 39 16.8
comp=Z,114nm,1.4s
HVU **Hansel Valley** 32.83 332 IAmb IAmb 03 39 20.1
comp=Z,182nm,1.1s
AHID **Auburn Hatcher** 32.91 335 IAmb IAmb 03 39 21.2
comp=Z,284nm,1.6s
Q09A **Carvers** 32.91 324 IAmb IAmb 03 39 21.6
comp=Z,236nm,1.5s
TEFE **Tefe** 32.95 119 *eP* **P** **03 39 17.4 -0.2**
J57A **Williamstown** 33.04 23 IAmb IAmb 03 39 18.5
comp=Z,303nm,1.6s
J57A IAMs_20 IAMs_20 03 52 44.5
comp=Z,2µm,20.0s
M63A **Gales Ferry** 33.11 30 IAmb IAmb 03 39 20.0
comp=Z,167nm,1.1s
SADO **Sadowa** 33.16 18 P **P** **03 39 16.9 -2.1**
comp=Z,28nm,0.6s,baz=228,slow=9.1,SNR=37
SADO LR LR 03 54 20.7
comp=Z,2µm,18.9s,baz=219,slow=39
comp=Z,28nm,0.6s
SADO **Sadowa** 33.16 18 IAmb IAmb 03 39 19.4
comp=Z,124nm,1.5s
PKD **Bear Valley Ra** 33.18 317 IAmb IAmb 03 39 23.2
comp=Z,198nm,1.3s
NV11 **Mina Array Sit** 33.21 322 IAmb IAmb 03 39 24.1
comp=Z,179nm,1.1s
ELK **Elko** 33.22 328 LR LR 03 54 15.1
comp=Z,756nm,20.5s,baz=136,slow=39
ELK **Elko** 33.22 328 IAmb IAmb 03 39 23.9
comp=Z,91nm,1.1s
MDPB **Devils Postpil** 33.25 321 IAmb IAmb 03 39 24.4
comp=Z,110nm,1.0s
NVAR **Mina Array Bea** 33.29 322 P **P** **03 39 23.6 +3.1**
comp=Z,94nm,0.8s,baz=138,slow=8.8,SNR=590
NVAR PcP **PcP** **03 42 04.3 +1.8**
comp=Z,10nm,0.8s,baz=130,slow=3.4,SNR=7.0
NVAR LR LR 03 53 08.0
comp=Z,1µm,20.3s,baz=132,slow=37
comp=Z,94nm,0.8s
LHV **Little Huntoon** 33.30 322 IAmb IAmb 03 39 24.5
comp=Z,98nm,1.0s
E46A **Sault Ste Mari** 33.39 11 IAmb IAmb 03 39 23.4
comp=Z,109nm,1.6s
LOHW **Long Hollow** 33.42 337 IAmb IAmb 03 39 25.1
comp=Z,229nm,1.2s
LOHW IAMs_20 IAMs_20 03 55 12.1
comp=Z,2µm,19.0s
TRY **Troy** 33.42 26 IAmb IAmb 03 39 22.5
comp=Z,152nm,1.0s
TRY IAMs_20 IAMs_20 03 53 01.4
comp=Z,3µm,21.0s
MOOW **Moose Ponds** 33.59 337 IAmb IAmb 03 39 26.4
comp=Z,122nm,1.3s
MOOW IAMs_20 IAMs_20 03 55 19.6
comp=Z,2µm,19.0s
FXWY **Fox Creek** 33.61 336 IAmb IAmb 03 39 26.8
comp=Z,138nm,1.4s
L61B **Northampton** 33.63 28 IAmb IAmb 03 39 27.9
comp=Z,200nm,2.0s
L61B IAMs_20 IAMs_20 03 53 39.9
comp=Z,3µm,19.0s
J59A **Piesco** 33.67 25 IAmb IAmb 03 39 25.1
comp=Z,140nm,1.2s
J59A IAMs_20 IAMs_20 03 54 03.2
comp=Z,3µm,18.0s
BUKO **Buck Lake** 33.69 17 IAmb IAmb 03 39 26.1
comp=Z,94nm,1.4s
FLWY **Flagg Ranch** 33.85 337 IAmb IAmb 03 39 36.5
comp=Z,94nm,1.1s
FLWY IAMs_20 IAMs_20 03 55 26.6
comp=Z,2µm,18.0s
BBGB **Big Mountain B** 33.87 317 IAmb IAmb 03 39 28.8
comp=Z,163nm,1.5s
M65A **Busby, Falmout** 33.91 31 P **P** **03 39 26.8 +1.2**
baz=221
K62A **Royalston** 34.00 28 IAMs_20 IAMs_20 03 53 59.7
comp=Z,3µm,19.0s
BOAV **Boa Vista** 34.03 106 P **P** **03 39 27.1 0.0**
BOAV IAmb IAmb 03 39 30.7
comp=Z,100nm,1.1s
BOAV **Boa Vista** 34.03 106 *eP* **P** **03 39 27.2 +0.2**
BOAV **Boa Vista** 34.03 106 P **P** **03 39 26.9 -0.1**
H17A **Grant Village** 34.07 337 IAmb IAmb 03 39 37.1
comp=Z,180nm,1.4s
L64A **Middleborough** 34.10 30 IAmb IAmb 03 39 28.6
comp=Z,152nm,1.0s
HRV **Adam Dziewonsk** 34.19 29 P **P** **03 39 26.4 -1.6**
HRV IAmb IAmb 03 39 28.8
comp=Z,78nm,1.1s
HRV **Adam Dziewonsk** 34.19 29 IAMs_20 IAMs_20 03 54 12.7
comp=Z,3µm,19.0s
HRV **Adam Dziewonsk** 34.19 29 P **P** **03 39 26.4 -1.6**
HRV pmax pmax
comp=Z,78nm,1.1s
HRV MLR MLR
comp=Z,3µm,19.0s
NCB **Newcomb** 34.21 24 IAmb IAmb 03 39 28.8
comp=Z,104nm,0.7s
WES **Weston** 34.21 29 IAmb IAmb 03 39 29.2
comp=Z,150nm,1.5s
WES IAMs_20 IAMs_20 03 54 25.1
comp=Z,3µm,18.0s
YMP **Mirror Lake Pl** 34.22 338 IAmb IAmb 03 39 51.4
comp=Z,112nm,1.0s
YFT **Old Faithful** 34.22 337 IAmb IAmb 03 39 47.0
comp=Z,92nm,1.1s
BCX **Boston College** 34.24 29 IAmb IAmb 03 39 29.5
comp=Z,105nm,1.4s
SAO **San Andreas Ge** 34.25 317 IAmb IAmb 03 39 32.1
comp=Z,110nm,1.6s
SAO IAMs_20 IAMs_20 03 54 22.9
comp=Z,2µm,18.0s
YNR **Norris Junctio** 34.39 337 IAmb IAmb 03 39 37.1
comp=Z,165nm,1.5s
YNE **Yellowstone No** 34.39 338 IAmb IAmb 03 39 37.1
comp=Z,117nm,1.0s
PNTR **Pine Nut** 34.49 322 IAmb IAmb 03 39 34.7
comp=Z,105nm,1.0s
AGMN **Agassiz Nation** 34.59 357 IAmb IAmb 03 39 33.9
comp=Z,86nm,0.7s
LONY **Lake Ozonia** 34.61 23 IAmb IAmb 03 39 32.3
comp=Z,147nm,1.2s
LONY IAMs_20 IAMs_20 03 53 31.0

WBO **Williamsburg** 34.67 22 IAmb IAmb 03 39 32.7
comp=Z,113nm,1.3s
YHL **Hebgen Lake** 34.69 337 IAmb IAmb 03 39 37.7
comp=Z,178nm,1.2s
MHC **Mount Hamilton** 34.71 318 IAmb IAmb 03 39 36.7
comp=Z,242nm,1.6s
PAHR **Pah Rah Range** 34.76 323 IAmb IAmb 03 39 37.4
comp=Z,293nm,1.9s
MPK **Martis Peak** 34.88 322 IAmb IAmb 03 39 38.8
comp=Z,159nm,1.1s
HLID **Hailey** 34.98 332 IAmb IAmb 03 39 38.5
comp=Z,99nm,1.0s
HLID IAMs_20 IAMs_20 03 56 10.6
comp=Z,2µm,20.0s
VT1 **Waterbury** 35.11 26 IAMs_20 IAMs_20 03 53 52.9
comp=Z,3µm,20.0s
JRSC **Jasper Ridge** 35.13 318 IAmb IAmb 03 39 40.3
comp=Z,308nm,1.6s
BCYI **Bear Canyon** 35.13 334 IAmb IAmb 03 39 40.5
comp=Z,237nm,1.8s
I62A **Tamworth** 35.36 28 IAMs_20 IAMs_20 03 54 50.6
comp=Z,3µm,18.0s
BOZ **Bozeman (W)** 35.49 337 IAmb IAmb 03 39 46.0
comp=Z,140nm,1.4s
BOZ IAMs_20 IAMs_20 03 56 31.8
comp=Z,2µm,19.0s
MFID **Camas Ranch** 35.51 331 IAmb IAmb 03 39 45.4
comp=Z,190nm,1.6s
MNTQ **Montreal, Queb** 35.72 24 IAmb IAmb 03 39 41.9
comp=Z,240nm,1.4s
CVS **Carmenet Viney** 35.81 319 IAmb IAmb 03 39 45.9
comp=Z,398nm,1.9s
I63A **Otisfield** 35.84 28 IAmb IAmb 03 39 43.1
comp=Z,110nm,1.2s
I63A IAMs_20 IAMs_20 03 55 14.3
comp=Z,2µm,19.0s
EPLO **Experimental L** 35.89 359 IAmb IAmb 03 39 42.6
comp=Z,89nm,0.7s
DGMT **Dagmar** 35.89 347 IAmb IAmb 03 39 45.3
comp=Z,87nm,0.9s
DGMT **Dagmar** 35.89 347 IAMs_20 IAMs_20 03 56 44.0
comp=Z,2µm,19.0s
TRQ **Mont Tremblant** 35.97 22 IAmb IAmb 03 39 44.4
comp=Z,92nm,1.1s
MNRC **McLaughlin Min** 36.11 319 IAmb IAmb 03 39 49.1
comp=Z,160nm,1.4s
MACA **Manacapuru-AM** 36.19 115 IAmb IAmb 03 39 55.5
comp=Z,154nm,0.9s
MACA **Manacapuru-AM** 36.19 115 *eP* **P** **03 39 45.5 -0.1**
WVOR **Wild Horse Val** 36.20 327 IAmb IAmb 03 39 49.0
comp=Z,161nm,1.2s
ULM **Lac du Bonnet** 36.53 357 P **P** **03 39 46.7 -1.4**
comp=Z,70nm,0.7s,baz=173,slow=9.5,SNR=104
ULM PcP **PcP** **03 42 11.7 +0.3**
comp=Z,25nm,0.7s,baz=138,slow=1.9,SNR=6.4
ULM LR LR 03 58 33.9
comp=Z,1µm,18.0s,baz=165,slow=42
comp=Z,70nm,0.7s
ULM **Lac du Bonnet** 36.53 357 IAmb IAmb 03 39 47.9
comp=Z,74nm,0.7s
O03E **Paynes Creek** 36.57 322 IAMs_20 IAMs_20 03 54 18.9
comp=Z,2µm,21.0s
HOPS **Hopland Field** 36.58 319 IAmb IAmb 03 39 53.0
comp=Z,133nm,1.4s
WVL **Waterville** 36.66 28 IAMs_20 IAMs_20 03 54 36.9
comp=Z,2µm,21.0s
HATC **Hat Creek Radi** 36.69 323 IAmb IAmb 03 39 52.8
comp=Z,114nm,1.0s
G62A **West of Eustis** 36.77 27 IAMs_20 IAMs_20 03 55 37.0
comp=Z,3µm,18.0s
PLID **Pearl Lake** 36.88 333 IAmb IAmb 03 39 54.4
comp=Z,229nm,1.2s
PLID IAMs_20 IAMs_20 03 57 03.0
comp=Z,2µm,18.0s
DCMP **DeCamp, Califo** 37.02 320 IAmb IAmb 03 39 56.8
comp=Z,163nm,1.8s
KCPM **Cahto Peak** 37.30 320 IAmb IAmb 03 39 59.4
comp=Z,425nm,1.9s
PKME **Peaks-Kenny Pk** 37.36 28 IAMs_20 IAMs_20 03 54 57.6
comp=Z,3µm,22.0s
MSO **Missoula** 37.40 336 IAmb IAmb 03 39 58.6
comp=Z,140nm,1.2s
EMMW **East Machias** 37.81 30 IAmb IAmb 03 39 59.5
comp=Z,191nm,1.7s
M02C **Callahan** 37.88 322 IAMs_20 IAMs_20 03 55 25.3
comp=Z,2µm,22.0s
YBH **Yreka Blue Hor** 38.00 323 LR LR 03 55 30.1
comp=Z,76nm,18.1s,baz=130,slow=36
KMPM **Mount Pierce** 38.06 320 IAmb IAmb 03 40 04.6
comp=Z,99nm,0.9s
L04D **Klamath Falls** 38.07 324 IAmb IAmb 03 40 03.5
comp=Z,111nm,1.1s
KHMM **Horse Mountain** 38.09 321 IAmb IAmb 03 40 05.1
comp=Z,114nm,0.9s
F10A **Beach Ranch, E** 38.11 332 IAmb IAmb 03 40 04.2
comp=Z,126nm,0.9s
JCC **Jacoby Creek,** 38.24 321 IAmb IAmb 03 40 06.6
comp=Z,369nm,1.4s
F64A **Sherman** 38.24 28 IAMs_20 IAMs_20 03 56 47.0
comp=Z,2µm,20.0s
E62A **Clayton Lake** 38.30 26 IAmb IAmb 03 40 05.3
comp=Z,192nm,1.7s
KRMB **Red Mountain** 38.58 322 IAmb IAmb 03 40 09.1
comp=Z,287nm,1.7s
J04A **Umpqua Nationa** 38.62 325 IAmb IAmb 03 40 09.3
comp=Z,343nm,1.3s
LPAZ **La Paz** 38.64 140 P **P** **03 40 06.9 0.0**
comp=Z,14nm,0.9s,baz=332,slow=7.2,SNR=46
LPAZ PcP **PcP** **03 42 18.8 -0.3**
comp=Z,7.6nm,0.9s,baz=257,slow=4.8,SNR=3.5
LPAZ LR LR 03 56 32.8
comp=Z,646nm,18.1s,baz=314,slow=37
comp=Z,14nm,0.9s
LPAZ **La Paz** 38.64 140 *eP* **P** **03 40 06.6 -0.3**
LPAZ **La Paz** 38.64 140 P **P** **03 40 06.7 -0.3**
PB18 **Visviri** 38.81 143 P **P** **03 40 09.9 +1.6**
D62A **Allapoint, All** 38.87 26 IAmb IAmb 03 40 08.8
comp=Z,86nm,1.6s
WIFE **Three Sisters-** 39.01 327 IAmb IAmb 03 40 11.9
comp=Z,242nm,1.7s
I04A **Tendick Farm,** 39.15 326 IAmb IAmb 03 40 13.1
comp=Z,345nm,1.9s
PB16 **IPOC Station P** 39.38 143 P **P** **03 40 14.1 +1.0**
G05A **Wamic** 39.55 328 IAmb IAmb 03 40 17.6
comp=Z,227nm,1.2s
J01E **Myrtle Point** 39.60 324 IAmb IAmb 03 40 17.0
comp=Z,182nm,0.9s
I03D **Drain, OR** 39.61 325 IAmb IAmb 03 40 17.1
comp=Z,200nm,1.4s
H04A **Detroit Lake** 39.62 327 IAmb IAmb 03 40 17.0
comp=Z,188nm,0.9s
BUCK **Buck Mountain** 39.73 326 IAmb IAmb 03 40 17.8
comp=Z,249nm,1.4s
H04D **Lebanon** 39.81 326 IAmb IAmb 03 40 17.4
comp=Z,140nm,1.1s
NEW **Newport** 39.84 335 LR LR 03 59 34.9
comp=Z,1µm,20.8s,baz=133,slow=40
NEW **Newport** 39.84 335 IAMs_20 IAMs_20 03 59 26.1
comp=Z,2µm,21.0s
COR **Corvallis** 40.15 326 P **P** **03 40 21.2 +2.6**
COR IAmb IAmb 03 40 21.9
comp=Z,430nm,1.6s
COR **Corvallis** 40.15 326 P **P** **03 40 21.2 +2.6**
COR pmax pmax
comp=Z,430nm,1.7s
EPH **Ephrata** 40.22 332 IAmb IAmb 03 40 21.5
comp=Z,48nm,1.0s
BATG **Bathurst New B** 40.35 28 P **P** **03 40 19.1 -1.1**
G03D **McMinnville, O** 40.54 327 IAmb IAmb 03 40 25.1
comp=Z,184nm,1.0s
LTY **Liberty** 40.65 331 IAmb IAmb 03 40 26.1
comp=Z,340nm,1.9s
MDP **Montagnes des** 40.70 98 LR LR 03 59 38.4
comp=Z,1µm,18.5s,baz=312,slow=40
F04D **Rainier, OR** 40.99 328 IAmb IAmb 03 40 28.8
comp=Z,193nm,0.9s
ITTB **Ituituba** 41.13 113 *eP* **P** **03 40 25.6 -1.5**
D05A **Enumclaw** 41.23 330 P **P** **03 40 29.5 +2.0**
D05A IAmb IAmb 03 40 30.7
comp=Z,124nm,1.1s
ICQ **Pointe Anglais** 41.51 25 P **P** **03 40 27.8 -1.9**
FFC **Flin Flon** 41.54 352 P **P** **03 40 30.5 +0.6**
FFC **Flin Flon** 41.54 352 P **P** **03 40 30.5 +0.6**
FFC pmax pmax
comp=Z,118nm,1.5s
PB07 **IPOC Station P** 41.89 147 P **P** **03 40 34.4 +1.1**
VILB **Vilhena** 41.94 128 *eP* **P** **03 40 32.6 -1.1**

NLWA Neilton Lookou 42.31 329 IAmb IAmb 03 40 39.8
comp=Z,182nm,1.2s
A04D Lummi Island 42.66 331 IAmb IAmb 03 40 41.8
comp=Z,251nm,1.0s
NPGB Novo Progresso 42.70 117 *e*P **P** **03 40 37.6 -2.3**
PGC Sidney 42.96 330 IAmb IAmb 03 40 44.5
comp=Z,120nm,0.9s
SIV San Ignacio 43.22 132 P **P** **03 40 43.6 -0.5**
comp=Z,37nm,0.8s,baz=274,slow=5.5,SNR=174
SIV PcP **PcP** **03 42 34.3 +0.9**
comp=Z,21nm,0.8s,baz=232,slow=2.8,SNR=6.5
SIV LR LR 03 57 53.8
comp=Z,653nm,19.1s,baz=309,slow=35
comp=Z,37nm,0.8s
LLLB Lillooet 43.64 334 IAmb IAmb 03 40 50.2
comp=Z,144nm,1.2s
AF01 San Pedro de A 43.80 146 P **P** **03 40 50.8 +1.8**
AF01 IAmb IAmb 03 40 52.6
comp=Z,94nm,1.0s
PDRB Porto dos Gac 43.91 123 *e*P **P** **03 40 47.6 -2.1**
PB14 IPOC Station P 44.02 150 P **P** **03 40 51.3 +0.5**
CLDB Colider 44.27 122 *e*P **P** **03 40 50.8 -1.8**
PTLB Pontes e Lacer 44.29 130 *e*P **P** **03 40 52.0 -0.6**
FCC Fort Churchill 45.00 359 IAmb IAmb 03 40 59.4
comp=Z,108nm,1.3s
SCHQ Schefferville 45.86 21 P **P** **03 41 02.8 -2.0**
comp=Z,50nm,0.7s,baz=218,slow=7.8,SNR=71
SCHQ PcP **PcP** **03 42 42.3 +0.6**
comp=Z,23nm,0.7s,baz=217,slow=3.8,SNR=5.8
SCHQ LR LR 04 01 40.9
comp=Z,4µm,18.7s,baz=211,slow=38
comp=Z,50nm,0.7s
DRLN Deer Lake 45.90 32 IAmb IAmb 03 42 43.6
comp=Z,95nm,1.3s
AC02 Maricunga 46.50 150 IAmb IAmb 03 41 15.0
comp=Z,50nm,1.0s
SALV Santo Antonio 47.19 127 *e*P **P** **03 41 14.3 -1.4**
PRPB Parauapebas 47.22 112 *e*P **P** **03 41 14.8 -1.2**
BBB Bella Bella 47.55 331 LR LR 04 00 50.7
comp=Z,793nm,18.6s,baz=135,slow=36
LCO Las Campanas 47.62 153 P **P** **03 41 19.4 +0.3**
LCO Las Campanas 47.62 153 P **P** **03 41 19.4 +0.3**
LCO pmax pmax
comp=Z,26nm,1.0s
AC05 El Transito 47.66 153 IAmb IAmb 03 42 50.6
comp=Z,43nm,0.9s
SNDB Serra Nova Dou 48.60 120 *e*P **P** **03 41 25.3 -1.4**
PP1B Ponte de Pedra 48.83 128 *e*P **P** **03 41 27.5 -0.8**
BDQN Bodoquena, MS 49.23 133 *e*P **P** **03 41 30.0 -1.3**
MURT Porto Murtinho 49.42 135 *e*P **P** **03 41 31.1 -1.6**
MOBC Moresby Island 49.98 330 IAmb IAmb 03 41 41.4
comp=Z,134nm,1.1s
AQDB Aquidauana 50.00 132 *e*P **P** **03 41 36.1 -1.1**
ARAG Araguaiana, MT 50.14 124 *e*P **P** **03 41 37.1 -1.3**
CO04 Los Peladeros 50.14 155 IAMs_20 IAMs_20 03 57 46.3
comp=Z,921nm,19.0s
SMTB Santa Maria do 50.36 114 *e*P **P** **03 41 39.3 -0.8**
VA06 Catapilco 50.47 156 IAMs_20 IAMs_20 03 57 45.0
comp=Z,1µm,22.0s
BLKN Baker Lake 50.61 358 IAmb IAmb 03 41 45.4
comp=Z,347nm,2.0s
ZON Zonda 50.69 153 IAmb IAmb 03 41 47.9
comp=Z,131nm,1.9s
VA01 Torpederas 50.74 157 IAMs_20 IAMs_20 03 58 53.4
comp=Z,1µm,19.0s
U35K Hyder 50.85 334 P **P** **03 41 45.4 +2.3**
baz=131
VA03 San Esteban 50.95 155 IAMs_20 IAMs_20 03 58 10.5
comp=Z,992nm,20.0s
TOAD Toad River Com 51.07 339 P **P** **03 41 45.7 +0.9**
baz=138,SNR=16
C2SB Chapadao do Su 51.08 128 *e*P **P** **03 41 44.9 -0.5**
YKA Yellowknife Ar 51.10 347 P **P** **03 41 45.8 +0.9**
comp=Z,67nm,0.9s,baz=153,slow=6.9,SNR=406
YKA PcP **PcP** **03 43 00.9 +0.5**
comp=Z,11nm,0.8s,baz=155,slow=2.9,SNR=4.7
YKA S **S** **03 49 05.3 +4.1**
comp=Z,1.1nm,1.0s,baz=149,slow=12,SNR=4.3
YKA LR LR 04 08 13.4
comp=Z,513nm,18.4s,baz=173,slow=42
comp=Z,67nm,0.9s
YKA Yellowknife Ar 51.10 347 P **P** **03 41 46.1 +1.2**
MT02 Curacav 51.15 156 IAMs_20 IAMs_20 03 58 52.0
comp=Z,922nm,20.0s
V35K Ketchikan 51.16 333 IAmb IAmb 03 41 49.5
comp=Z,78nm,1.0s
V35K Ketchikan 51.16 333 P **P** **03 41 47.9 +2.5**
baz=129
T35M Bob Quinn 51.64 335 IAmb IAmb 03 41 53.7
comp=Z,192nm,1.6s
T35M Bob Quinn 51.64 335 P **P** **03 41 51.9 +2.8**
baz=131,SNR=13
KOTAN Kotaneelee Air 51.65 341 P **P** **03 41 50.7 +1.6**
baz=140,SNR=28
MT09 Talagante 51.66 157 IAmb IAmb 03 41 53.1
comp=Z,129nm,1.8s
MT09 IAMs_20 IAMs_20 03 58 28.6
comp=Z,1µm,21.0s
MT08 Bocatoma Ro 51.76 155 IAMs_20 IAMs_20 03 58 36.9
comp=Z,1µm,19.0s
TAOE Nuku Hiva Isla 51.85 247 *e*P **P** **03 41 47.7 -3.7**
comp=Z,269nm,29.1s
TAOE *e*S **S** **03 49 06.8 -6.3**
comp=Z,2µm,25.0s
TAOE *e*SS **SS** **03 52 49.8 -0.4**
comp=Z,422nm,25.9s
TAOE *e*LR LR 03 56 28.9
comp=Z,3µm,27.9s
MT13 San Alfonso 51.91 156 IAmb IAmb 03 41 55.4
comp=Z,119nm,1.6s
MT13 IAMs_20 IAMs_20 03 58 40.1
comp=Z,1µm,22.0s
CRAG Craig 51.92 332 IAmb IAmb 03 41 54.6
comp=Z,97nm,0.9s
CRAG Craig 51.92 332 P **P** **03 41 53.8 +2.7**
baz=127
BO04 La Punta 52.00 156 IAMs_20 IAMs_20 03 59 20.5
comp=Z,925nm,18.0s
AMBA Amambai (Brazi 52.07 134 *e*P **P** **03 41 51.7 -1.1**
WRAK Wrangell Islan 52.17 334 P **P** **03 41 55.3 +2.3**
baz=129
U33K Whale Pass 52.32 333 IAmb IAmb 03 41 57.3
comp=Z,87nm,1.0s
U33K Whale Pass 52.32 333 P **P** **03 41 56.7 +2.6**
baz=128,SNR=5.1
DLBC Dease Lake 52.53 336 LR LR 04 07 00.9
comp=Z,706nm,20.5s,baz=106,slow=39
DLBC Dease Lake 52.53 336 P **P** **03 41 58.8 +3.0**
baz=132,SNR=40
S34M Telegraph Cree 52.62 336 IAmb IAmb 03 42 00.5
comp=Z,113nm,1.2s
S34M Telegraph Cree 52.62 336 P **P** **03 41 59.3 +3.0**
baz=131,SNR=14
T33K Petersburg 52.67 334 P **P** **03 41 59.4 +2.7**
baz=128
CPUP Villa Florida 52.80 139 P **P** **03 41 56.6 -1.4**
comp=Z,15nm,0.9s,baz=329,slow=9.4,SNR=46
CPUP PcP **PcP** **03 43 08.1 +0.8**
comp=Z,6.6nm,0.8s,baz=326,slow=3.9,SNR=6.2
CPUP LR LR 04 04 53.0
comp=Z,334nm,18.9s,baz=325,slow=37
comp=Z,15nm,0.9s
CPUP Villa Florida 52.80 139 *e*P **P** **03 41 56.5 -1.6**
FRB Frobisher Bay 52.84 13 LR LR 04 07 02.8
comp=Z,2µm,18.0s,baz=208,slow=39
BDFB Brasilia 53.20 122 P **P** **03 42 00.9 -0.5**
comp=Z,21nm,0.8s,baz=283,slow=7.7,SNR=47
BDFB LR LR 04 05 01.3
comp=Z,626nm,18.0s,baz=319,slow=37
comp=Z,21nm,0.8s
WTLY Watson Lake, Y 53.24 339 P **P** **03 42 03.1 +2.2**
baz=135,SNR=6.5
ML02 Panimavida 53.27 158 IAmb IAmb 03 42 19.7
comp=Z,145nm,1.6s
ML02 IAMs_20 IAMs_20 03 59 05.2
comp=Z,941nm,21.0s
ITRB Iturama 53.52 127 *e*P **P** **03 42 02.2 -1.4**
R33M Jennings River 53.54 337 P **P** **03 42 05.9 +2.7**
baz=132
BI05 Punta Hualpn 53.54 160 IAMs_20 IAMs_20 04 01 59.7
comp=Z,1µm,18.0s
TRCB Terra Rica 53.66 132 *e*P **P** **03 42 03.1 -1.5**
Q32M Nakina River 53.76 336 IAmb IAmb 03 42 09.2
comp=Z,141nm,1.1s
Q32M Nakina River 53.76 336 P **P** **03 42 08.0 +3.0**
baz=130
S32K Killisnoo 53.78 334 IAmb IAmb 03 42 08.8
comp=Z,226nm,1.8s
S32K Killisnoo 53.78 334 P **P** **03 42 07.2 +2.4**
baz=127
SIT Sitka 53.86 333 P **P** **03 42 07.9 +2.4**
baz=126
WRGLY Wrigley 53.90 344 P **P** **03 42 07.1 +1.5**
baz=142,SNR=61
PCMB Pacaembu 53.95 130 *e*P **P** **03 42 05.0 -1.7**
BI02 San Fabin de 54.12 158 IAmb IAmb 03 42 11.3
comp=Z,102nm,1.8s
BI02 IAMs_20 IAMs_20 04 02 04.9
comp=Z,895nm,18.0s
R32K Eaglecrest 54.24 334 P **P** **03 42 10.6 +2.4**
baz=127
NBPS Pedro II - PI 54.25 106 *e*P **P** **03 42 08.8 -0.3**
IPMB Ipameri, GO 54.27 124 *e*P **P** **03 42 07.5 -1.6**
SDBA SAO DESIDERIO 54.30 116 *e*P **P** **03 42 08.4 -0.9**
BESE Bessie Mountai 54.57 335 IAmb IAmb 03 42 14.5
comp=Z,154nm,1.5s
P32M Atlin 54.73 336 IAmb IAmb 03 42 15.3
comp=Z,100nm,1.1s
P32M Atlin 54.73 336 P **P** **03 42 14.1 +2.2**
baz=129,SNR=17
P33M Teslin, Yukon 54.78 337 IAmb IAmb 03 42 15.7
comp=Z,163nm,1.6s
P33M Teslin, Yukon 54.78 337 P **P** **03 42 14.3 +2.1**
baz=130,SNR=14
S31K Pelican 54.79 333 IAmb IAmb 03 42 16.1
comp=Z,158nm,1.2s
S31K Pelican 54.79 333 P **P** **03 42 14.9 +2.7**
baz=125,SNR=6.0
PTGB Pitanga 55.27 133 *e*P **P** **03 42 14.4 -1.9**
SKAG Skagway 55.30 335 IAmb IAmb 03 42 19.5
comp=Z,124nm,1.6s
SKAG Skagway 55.30 335 P **P** **03 42 18.2 +2.3**
baz=127,SNR=7.4
N32M Quiet Lake 55.49 338 P **P** **03 42 19.6 +2.3**
baz=130
BB19B Bebedouro 55.71 128 *e*P **P** **03 42 18.4 -1.1**
WHY Whitehorse 55.86 337 IAmb IAmb 03 42 22.4
comp=Z,80nm,0.9s
WHY Whitehorse 55.86 337 P **P** **03 42 21.8 +1.8**
baz=128,SNR=14
PMNB Patos De Minas 55.99 124 *e*P **P** **03 42 20.6 -1.0**
JANB Januaria 56.03 119 *e*P **P** **03 42 21.1 -0.8**
PSAL Palomas, Salto 56.03 143 *e*P **P** **03 42 20.7 -0.8**
ILON Igloolik, Nuna 56.10 5 IAmb IAmb 03 42 23.4
comp=Z,118nm,1.0s
FRTB Fartura 56.24 130 *e*P **P** **03 42 21.9 -1.3**
P30M Million Dollar 56.35 335 P **P** **03 42 25.9 +2.4**
baz=126
O30N Mendenhall 56.40 336 IAmb IAmb 03 42 26.6
comp=Z,75nm,1.0s
O30N Mendenhall 56.40 336 P **P** **03 42 26.0 +2.2**
baz=127,SNR=24
M31M Drury Creek, Y 56.65 338 IAmb IAmb 03 42 28.9
comp=Z,145nm,1.6s
M31M Drury Creek, Y 56.65 338 P **P** **03 42 27.7 +2.2**
baz=130
GO06 Curarrehue 56.68 160 IAMs_20 IAMs_20 04 03 47.8
comp=Z,1µm,18.0s
N31M Braeburn, Yuko 56.72 337 IAmb IAmb 03 42 29.2
comp=Z,134nm,0.9s
N31M Braeburn, Yuko 56.72 337 P **P** **03 42 28.2 +2.2**
baz=128,SNR=27
ITAB Concordia 56.83 136 IAmb IAmb 03 42 29.4
comp=Z,251nm,2.0s
ITAB Concordia 56.83 136 P **P** **03 42 26.2 -1.1**
HYT Haines Junctio 56.99 336 P **P** **03 42 30.6 +2.5**
baz=126,SNR=17
O29M Mount Kennedy 57.12 335 IAmb IAmb 03 42 32.5
comp=Z,140nm,1.4s
O29M Mount Kennedy 57.12 335 P **P** **03 42 31.1 +2.0**
baz=124
N30M Aishikik Lake 57.20 337 P **P** **03 42 31.8 +2.3**
baz=126
RCLB Rio Claro- Sao 57.23 128 *e*P **P** **03 42 28.8 -1.6**
IVI Ivigtut 57.36 24 *i* P **P** **03 42 31.1 +0.5**
BCPM Bancas Point 57.37 334 IAmb IAmb 03 42 34.4
comp=Z,135nm,1.3s
YUK6 Outpost Mounta 57.40 336 P **P** **03 42 33.4 +2.3**
baz=125,SNR=21
PINM Pinnacle 57.70 334 P **P** **03 42 35.6 +2.5**
baz=122,SNR=10
YUK4 Talbot Arm 57.74 336 P **P** **03 42 36.0 +2.5**
baz=125,SNR=16
M30M Minto, Yukon 57.76 338 P **P** **03 42 35.1 +1.7**
baz=127,SNR=34
NUUK Nuuk 57.91 20 *i* P **P** **03 42 31.9 -2.4**
SPB Sao Paulo 57.97 129 IAMs_20 IAMs_20 04 07 05.8
comp=Z,686nm,19.0s
SPB Sao Paulo 57.97 129 *e*P **P** **03 42 34.5 -0.9**
VAO Valinhos 57.99 129 IAmb IAmb 03 42 45.5
comp=Z,47nm,0.9s
VAO Valinhos 57.99 129 *e*P **P** **03 42 34.4 -1.2**
PLCA Paso Flores 58.02 160 P **P** **03 42 35.5 +0.1**
comp=Z,11nm,1.0s,baz=324,slow=7.9,SNR=12
PLCA LR LR 04 02 32.2
comp=Z,365nm,21.0s,baz=350,slow=31
comp=Z,11nm,1.0s
PLCA Paso Flores 58.02 160 P **P** **03 42 35.6 +0.1**
PLCA Paso Flores 58.02 160 P **P** **03 42 35.6 +0.1**
PLCA pmax pmax
comp=Z,27nm,1.2s
PLCA Paso Flores 58.02 160 *e*P **P** **03 42 35.6 +0.1**
O28M Mount Upton 58.05 335 P **P** **03 42 37.9 +2.2**
baz=123
MAYO Mayo, Yukon 58.07 339 P **P** **03 42 37.7 +2.1**
baz=129,SNR=19
CPSB Cacapava Do Su 58.08 140 *e*P **P** **03 42 34.6 -1.4**
DIAM Diamantina, MG 58.12 122 *e*P **P** **03 42 36.1 -0.6**
YUK8 Steele Glacier 58.15 336 P **P** **03 42 38.8 +2.3**
baz=123,SNR=23
TABL Table Mountain 58.27 334 IAmb IAmb 03 42 40.8
comp=Z,92nm,1.0s
M29M Somme Creek 58.30 337 P **P** **03 42 39.5 +2.2**
baz=125
LOGN Logan Glacier 58.41 335 IAmb IAmb 03 42 41.9
comp=Z,196nm,1.5s
NRS Narsarsuaq 58.44 25 IAmb IAmb 03 44 09.3
comp=Z,125nm,1.7s
NRS Narsarsuaq 58.44 25 *i* P **P** **03 42 36.3 -1.7**
MESA MESA 58.47 334 P **P** **03 42 41.4 +2.8**
baz=120
PET01 Itanhaem-SP 58.49 130 *e*P **P** **03 42 38.0 -1.1**
L29M L29M 58.57 338 IAmb IAmb 03 42 42.0
comp=Z,124nm,1.1s
L29M L29M 58.57 338 P **P** **03 42 40.7 +1.6**
baz=126
BSCB Bom Sucesso 58.61 125 *e*P **P** **03 42 39.4 -0.6**
CTG Chitna Glacier 58.62 335 P **P** **03 42 42.0 +2.3**
baz=122,SNR=17
YUK3 Moose Creek 58.70 336 P **P** **03 42 41.9 +1.7**
baz=123,SNR=26
NBPA Parau_RN 58.76 105 *e*P **P** **03 42 41.4 +0.2**
K29M Barlow Dome 58.79 339 IAmb IAmb 03 42 48.2
comp=Z,206nm,1.8s
K29M IAMs_20 IAMs_20 04 12 32.4
comp=Z,1µm,19.0s
K29M Barlow Dome 58.79 339 P **P** **03 42 41.7 +0.9**
baz=127,SNR=25
J30M Hart River 58.84 340 IAMs_20 IAMs_20 04 09 10.4
comp=Z,960nm,22.0s
J30M Hart River 58.84 340 P **P** **03 42 42.4 +1.4**
baz=129,SNR=32
ISLE Juniper Island 58.85 334 IAmb IAmb 03 42 44.0
comp=Z,88nm,1.0s
PLTB Pedras Altas 58.91 141 *e*P **P** **03 42 40.6 -1.3**
C36M Paulatuk 58.98 348 IAmb IAmb 03 42 46.2
comp=Z,52nm,1.2s
C36M IAMs_20 IAMs_20 04 12 40.4
comp=Z,1µm,18.0s
C36M Paulatuk 58.98 348 P **P** **03 42 42.2 +0.5**
baz=144,SNR=23
H31M Peel River 58.99 341 IAmb IAmb 03 42 48.2
comp=Z,113nm,1.4s
H31M IAMs_20 IAMs_20 04 09 41.9
comp=Z,898nm,20.0s
H31M Peel River 58.99 341 P **P** **03 42 42.9 +1.0**
baz=131
BGLC Bering Glacier 59.02 333 P **P** **03 42 44.4 +2.2**
baz=119
CNLB Canela 59.03 137 *e*P **P** **03 42 42.0 -0.9**
TRQA Tornquist 59.14 152 P **P** **03 42 42.9 -0.4**
TRQA IAMs_20 IAMs_20 04 04 12.0
comp=Z,885nm,20.0s
TRQA Tornquist 59.14 152 P **P** **03 42 42.9 -0.4**
TRQA pmax pmax
comp=Z,16nm,1.0s
TGL Tana Glacier 59.14 334 IAmb IAmb 03 42 46.7
comp=Z,139nm,1.2s
PARB Paraibuna 59.20 128 *e*P **P** **03 42 44.3 +0.2**
BVCY Beaver Creek 59.21 336 P **P** **03 42 45.6 +2.1**
baz=123,SNR=22
CRQE Cirque 59.25 334 P **P** **03 42 45.9 +2.0**
baz=120,SNR=12
I30M Mount Dempster 59.26 340 IAMs_20 IAMs_20 04 10 39.1
comp=Z,2µm,22.0s
I30M Mount Dempster 59.26 340 P **P** **03 42 45.2 +1.2**
baz=129,SNR=73
CRQM Cirque 59.27 334 IAmb IAmb 03 42 47.4
comp=Z,120nm,1.2s
J29N Klondike Camp 59.41 339 IAmb IAmb 03 42 51.5
comp=Z,152nm,1.6s
J29N Klondike Camp 59.41 339 P **P** **03 42 46.0 +1.1**
baz=127,SNR=17
KAIM Kayak Island 59.43 333 P **P** **03 42 46.4 +1.4**
baz=118
MCARA McCarthy VSAT 59.54 335 P **P** **03 42 48.1 +2.3**
baz=120,SNR=29
M27K Edge Creek, AK 59.58 336 P **P** **03 42 48.0 +1.8**
baz=122,SNR=22
DAWY Dawson 59.59 338 IAmb IAmb 03 42 52.3
comp=Z,149nm,1.7s
DAWY Dawson 59.59 338 P **P** **03 42 46.7 +0.6**
baz=125,SNR=23
VRDI Verde Repeater 59.64 334 IAmb IAmb 03 42 49.4
comp=Z,63nm,0.9s
POIN Pond Inlet 59.66 5 IAmb IAmb 03 42 48.6
comp=Z,176nm,1.7s
G31M Satah River 59.72 342 IAMs_20 IAMs_20 04 13 20.1
comp=Z,1µm,19.0s
G31M Satah River 59.72 342 P **P** **03 42 47.9 +1.0**
baz=132
LL02 Futaleuf 59.84 162 P **P** **03 42 48.5 +0.5**
LL02 IAMs_20 IAMs_20 04 03 21.5
comp=Z,1µm,20.0s
GLB Gilahina Butte 59.90 335 IAmb IAmb 03 42 51.7
comp=Z,114nm,1.0s
F31M Tsiigehtchic 59.92 343 P **P** **03 42 49.3 +1.1**
baz=133,SNR=100
BCAR Beaver Creek A 59.92 337 P **P** **03 42 50.2 +1.7**
RCBR Riachuelo 59.92 105 P **P** **03 42 50.1 +0.9**
RCBR IAmb IAmb 03 43 02.3
comp=Z,80nm,0.9s
RCBR IAMs_20 IAMs_20 04 12 13.6
comp=Z,1µm,21.0s
RCBR Riachuelo 59.92 105 P **P** **03 42 50.1 +0.9**
RCBR pmax pmax
comp=Z,81nm,1.0s
RCBR MLR MLR
comp=Z,1µm,21.0s
RCBR Riachuelo 59.92 105 *e*P **P** **03 42 50.3 +1.1**
L27K Beaver Creek, 59.94 337 IAmb IAmb 03 42 51.6
comp=Z,117nm,1.2s
L27K Beaver Creek, 59.94 337 P **P** **03 42 50.2 +1.6**
baz=122,SNR=44
I29M Ogilvie Camp, 59.98 340 IAmb IAmb 03 42 55.0
comp=Z,96nm,1.1s
I29M Ogilvie Camp, 59.98 340 P **P** **03 42 49.5 +0.7**
baz=127,SNR=35
BMRM Bremner River 60.00 334 IAmb IAmb 03 42 51.9
comp=Z,66nm,0.8s
BMRM Bremner River 60.00 334 P **P** **03 42 51.2 +2.1**
baz=118,SNR=15
Q23K Middleton Isla 60.07 332 P **P** **03 42 51.0 +1.6**
baz=116
SFJD Kangerlussuaq 60.11 18 LR LR 04 10 19.5
comp=Z,2µm,18.4s,baz=222,slow=38
SFJD Kangerlussuaq 60.11 18 P **P** **03 42 49.0 -0.6**
SFJD Kangerlussuaq 60.11 18 P **P** **03 42 49.0 -0.6**
SFJD pmax pmax
comp=Z,27nm,1.1s
SFJD MLR MLR
comp=Z,2µm,18.0s
SFJD Kangerlussuaq 60.11 18 *i* P **P** **03 42 48.1 -1.5**
NBIT Itapeh - BA 60.17 116 *e*P **P** **03 42 50.9 +0.1**
CMC01 Camacan, BA 60.28 117 *e*P **P** **03 42 51.5 -0.1**
EYAK Cordova Ski Ar 60.30 333 P **P** **03 42 53.3 +2.3**
baz=117,SNR=8.2
N25K Chitina, Valde 60.31 334 P **P** **03 42 53.6 +2.4**
baz=119,SNR=32
SJMB Sao Joao De Ma 60.38 121 *e*P **P** **03 42 52.0 -0.3**
INK Inuvik 60.45 344 LR LR 04 12 02.2
comp=Z,1µm,19.5s,baz=124,slow=39
INK Inuvik 60.45 344 P **P** **03 42 53.1 +1.2**
baz=133,SNR=181
L26K Log Cabin Wild 60.51 336 IAmb IAmb 03 42 55.5
comp=Z,164nm,1.5s
L26K Log Cabin Wild 60.51 336 P **P** **03 42 54.2 +1.8**
baz=121,SNR=22
GUA01 Guaratinga, BA 60.58 118 *e*P **P** **03 42 53.5 0.0**
DIV Divide 60.58 334 IAmb IAmb 03 42 55.6
comp=Z,105nm,1.0s
I28M Miner Creek 60.59 339 IAmb IAmb 03 42 59.3
comp=Z,49nm,1.1s
I28M Miner Creek 60.59 339 P **P** **03 42 53.7 +0.7**
baz=125
MENT Mentasta 60.61 336 IAmb IAmb 03 42 56.2
comp=Z,179nm,1.6s
F30M Barrier River 60.62 343 IAMs_20 IAMs_20 04 13 40.8
comp=Z,1µm,18.0s
F30M Barrier River 60.62 343 P **P** **03 42 54.5 +1.4**
baz=131
NBPV Pedro Velho 60.69 105 *e*P **P** **03 42 54.2 -0.2**
BSFB Barra de Sao F 60.73 121 *e*P **P** **03 42 54.2 -0.3**
AY01 Puyuhuapi 60.74 163 P **P** **03 42 54.3 +0.2**
AY01 IAMs_20 IAMs_20 04 05 30.4
comp=Z,1µm,20.0s
P23K Montague Islan 60.80 332 P **P** **03 42 56.4 +1.9**
baz=115,SNR=6.4
KLU Klutina 60.81 334 IAMs_20 IAMs_20 04 11 43.8
comp=Z,1µm,20.0s
KLU Klutina 60.81 334 P **P** **03 42 56.6 +2.0**
baz=117,SNR=31
G29M Pine Creek 60.84 341 IAmb IAmb 03 43 01.1
comp=Z,97nm,1.1s
G29M Pine Creek 60.84 341 P **P** **03 42 55.9 +1.2**
baz=128
HARP HAARP 60.92 335 P **P** **03 42 57.3 +2.0**
baz=118,SNR=31
RES Resolute Bay 60.99 359 LR LR 04 11 43.8
comp=Z,97nm,21.9s,baz=170,slow=38
RES Resolute Bay 60.99 359 IAmb IAmb 03 42 57.1
comp=Z,84nm,0.9s
GLI Glacier Island 61.05 333 P **P** **03 42 57.5 +1.4**
baz=116
M24K Tolsona, Glenn 61.20 335 P **P** **03 42 59.1 +1.9**
baz=117,SNR=18
SCRK Sand Creek 61.24 337 IAmb IAmb 03 43 00.6
comp=Z,132nm,1.4s
SCRK Sand Creek 61.24 337 P **P** **03 42 58.9 +1.4**
baz=120,SNR=36
I27K Kandik River 61.25 339 IAmb IAmb 03 42 59.9
comp=Z,65nm,1.0s
I27K Kandik River 61.25 339 P **P** **03 42 58.9 +1.4**
baz=124,SNR=44
PAX Paxson 61.32 336 IAmb IAmb 03 43 00.0
comp=Z,82nm,0.9s
PAX Paxson 61.32 336 P **P** **03 42 59.3 +1.3**
baz=118,SNR=49
RIB01 Linhares ES 61.33 121 *e*P **P** **03 42 58.2 -0.4**
J26L Joseph Creek 61.35 338 P **P** **03 42 60.0 +1.8**
baz=121,SNR=44
A36M Sachs Harbour 61.36 349 P **P** **03 42 58.8 +0.8**
baz=144,SNR=24
RIDG Independent Ri 61.45 337 P **P** **03 43 00.6 +1.7**
baz=119,SNR=47
CAM01 Campos-RJ 61.52 124 *e*P **P** **03 42 59.6 -0.2**
SCM Sheep Creek Mo 61.57 334 IAmb IAmb 03 43 13.7
comp=Z,148nm,1.3s
SCM Sheep Creek Mo 61.57 334 P **P** **03 43 01.2 +1.5**
baz=116,SNR=9.9
H27K Steamboat Moun 61.57 340 IAMs_20 IAMs_20 04 14 29.3
comp=Z,809nm,20.0s
H27K Steamboat Moun 61.57 340 P **P** **03 43 01.0 +1.4**
baz=124
ALF01 Guarapari-ES 61.68 123 *e*P **P** **03 43 00.5 -0.4**
M23K Glacier View 61.72 334 P **P** **03 43 02.0 +1.4**
baz=116,SNR=10
E29M Blow River 61.73 343 P **P** **03 43 02.2 +1.6**
baz=129
SEW Seward 61.78 332 P **P** **03 43 02.2 +1.2**
baz=113,SNR=9.2

F28M Old Crow 61.84 342 IAMs_20 IAMs_20 04 12 45.3
comp=Z,942nm,18.0s
F28M Old Crow 61.84 342 P **P** **03 43 02.9 +1.5**
baz=126
K24K Donnelly Dome 61.84 336 P **P** **03 43 03.0 +1.6**
baz=118,SNR=37
KNK Knik Glacier 61.87 333 IAmb IAmb 03 43 04.4
comp=Z,90nm,0.8s
KNK Knik Glacier 61.87 333 P **P** **03 43 03.2 +1.5**
baz=115,SNR=18
NIAQ Niaqornat 61.92 14 *i* P **P** **03 43 02.8 +1.0**
G27K Doyon Strip 61.94 340 IAmb IAmb 03 43 08.6
comp=Z,150nm,1.6s
G27K IAMs_20 IAMs_20 04 09 54.0
comp=Z,912nm,21.0s
G27K Doyon Strip 61.94 340 P **P** **03 43 03.1 +1.0**
baz=124
COYC Coyhaique 61.95 163 P **P** **03 43 02.9 +0.6**
COYC IAmb IAmb 03 43 03.9
comp=Z,36nm,1.0s
COYC Coyhaique 61.95 163 IAMs_20 IAMs_20 04 02 59.7
comp=Z,1µm,20.0s
SML Sawmill 61.98 334 P **P** **03 43 03.8 +1.3**
baz=115,SNR=14
O22K Cooper Landing 62.06 332 P **P** **03 43 04.1 +1.2**
baz=113
WAT6 Susitna Watana 62.07 335 P **P** **03 43 04.5 +1.4**
baz=116,SNR=57
J25K Salcha River, 62.08 337 P **P** **03 43 04.5 +1.4**
baz=119,SNR=26
ABR01 Abrolhos, BA 62.14 119 *e*P P 03 42 57.3 -6.7
DHY Denali Highway 62.14 335 IAmb IAmb 03 43 05.7
comp=Z,36nm,1.0s
DHY Denali Highway 62.14 335 P **P** **03 43 04.3 +0.7**
baz=116,SNR=19
PMR Palmer 62.24 333 P **P** **03 43 05.3 +1.2**
baz=114,SNR=24
BRSE Bradley Lake S 62.24 331 P **P** **03 43 05.7 +1.5**
baz=112,SNR=12
RC01 Rabbit Creek A 62.30 333 P **P** **03 43 05.9 +1.4**
baz=113,SNR=34
E28M Babbage River 62.34 343 IAMs_20 IAMs_20 04 13 18.3
comp=Z,1µm,21.0s
E28M Babbage River 62.34 343 P **P** **03 43 05.9 +1.2**
baz=127
SAATT Saattut 62.42 14 *i* P **P** **03 43 04.5 -0.6**
SAATT IAmb IAmb 03 43 07.5
comp=Z,38nm,0.8s
KDAK Kodiak Island 62.46 329 P **P** **03 43 07.4 +1.8**
KDAK Kodiak Island 62.46 329 *i* P **P** **03 43 06.5 +0.9**
KDAK pmax pmax
comp=Z,90nm,1.0s
KDAK Kodiak Island 62.46 329 P **P** **03 43 07.0 +1.4**
baz=109
WAT1 Susitna Watana 62.52 335 P **P** **03 43 07.1 +1.1**
baz=115
D28M Stokes Point 62.56 343 P **P** **03 43 07.6 +1.6**
baz=128
NUUG Nuugaatsiaq 62.57 13 *i* P **P** **03 43 06.1 0.0**
NUUG IAmb IAmb 03 43 08.4
comp=Z,83nm,1.0s
HDA Harding Lake 62.59 337 P **P** **03 43 07.3 +0.9**
baz=118,SNR=50
PRP Porcupine Dome 62.59 338 P **P** **03 43 07.9 +1.3**
PRP Porcupine Dome 62.59 338 P **P** **03 43 07.8 +1.2**
baz=120,SNR=53
OHAK Old Harbor 62.64 328 P **P** **03 43 08.2 +1.4**
baz=108,SNR=9.6
Q20K Shuyak Island 62.64 330 P **P** **03 43 08.6 +1.8**
baz=110,SNR=6.5
HOM Homer 62.64 331 P **P** **03 43 08.6 +1.8**
baz=111
G26K Porcupine Rive 62.72 340 IAmb IAmb 03 43 09.8
comp=Z,174nm,1.8s
G26K IAMs_20 IAMs_20 04 09 50.7
comp=Z,1µm,20.0s
G26K Porcupine Rive 62.72 340 P **P** **03 43 08.5 +1.2**
baz=122
ILAR Eielson Array 62.73 337 P **P** **03 43 08.1 +0.7**
comp=Z,48nm,1.0s,baz=140,slow=4.3,SNR=256
ILAR LR LR 04 11 18.7
comp=Z,539nm,19.6s,baz=108,slow=37
ILAR PKP2bc P'P'bc 04 12 08.2 -12
comp=Z,0.5nm,0.9s,baz=289,slow=2.7,SNR=4.0
comp=Z,48nm,1.0s
ILAR Eielson Array 62.73 337 P **P** **03 43 08.2 +0.9**
M22K Willow 62.74 333 P **P** **03 43 08.7 +1.3**
baz=113,SNR=7.2
CAPN Captain Cook N 62.82 332 P **P** **03 43 10.8 +2.9**
baz=112,SNR=11
UPNV Upernavik 62.87 12 *i* P **P** **03 43 08.3 +0.2**
UPNV IAmb IAmb 03 43 09.4
comp=Z,81nm,1.2s
RND Reindeer 62.89 335 IAMs_20 IAMs_20 04 15 12.6
comp=Z,1µm,18.0s
SUA Susitna One 62.90 333 P **P** **03 43 10.1 +1.5**
baz=112,SNR=33
SII Sitkinak Islan 62.91 327 P **P** **03 43 10.3 +1.6**
baz=107,SNR=5.1
FYU Fort Yukon 63.01 339 IAmb IAmb 03 43 12.9
comp=Z,119nm,1.3s
FYU IAMs_20 IAMs_20 04 13 48.5
comp=Z,1µm,22.0s
CCB Clear Creek Bu 63.02 337 IAmb IAmb 03 43 15.9
comp=Z,118nm,1.6s
WRH Wood River Hil 63.05 337 IAmb IAmb 03 43 11.2
comp=Z,42nm,1.1s
CUT Chulitna 63.06 334 P **P** **03 43 11.0 +1.4**
baz=113,SNR=29
MCK McKinley 63.06 336 P **P** **03 43 10.9 +1.3**
baz=115,SNR=54
POKR Poker Plat Res 63.10 337 IAMs_20 IAMs_20 04 13 56.9
comp=Z,990nm,22.0s
POKR Poker Plat Res 63.10 337 P **P** **03 43 11.0 +1.2**
baz=117,SNR=12
D27M Malcolm River 63.14 343 P **P** **03 43 11.6 +1.5**
baz=126
COLA College 63.15 337 P **P** **03 43 10.9 +0.9**
COLA IAmb IAmb 03 43 49.2
comp=Z,52nm,0.9s
COLA College 63.15 337 *i* P **P** **03 43 10.7 +0.7**
COLA pmax pmax
comp=Z,67nm,1.0s
COLA College 63.15 337 P **P** **03 43 10.7 +0.7**
baz=117
F26K Sheenjek River 63.24 341 P **P** **03 43 12.3 +1.6**
baz=122
BMAR Burnt Mountain 63.24 340 P **P** **03 43 12.7 +1.9**
L22K Petersville 63.32 334 IAMs_20 IAMs_20 04 10 29.2
comp=Z,827nm,22.0s
Q19K Cape Douglas, 63.36 330 P **P** **03 43 13.2 +1.5**
baz=108,SNR=12
P19K Oil Pt 63.39 330 P **P** **03 43 13.1 +1.3**
baz=109,SNR=8.4
SKT Skwentna 63.44 333 IAMs_20 IAMs_20 04 15 01.4
comp=Z,958nm,18.0s
SKT Skwentna 63.44 333 P **P** **03 43 13.5 +1.3**
baz=112,SNR=46
SPCR Spurr Chakacha 63.45 332 P **P** **03 43 13.4 +1.0**
baz=111,SNR=27
CHIR Chirikof Islan 63.47 326 P **P** **03 43 13.8 +1.4**
baz=105
NEA2 Nenana 63.49 336 IAmb IAmb 03 43 14.5
comp=Z,79nm,1.2s
NEA2 Nenana 63.49 336 P **P** **03 43 13.1 +0.7**
baz=116,SNR=25
TRF Thorofare Moun 63.49 335 P **P** **03 43 13.8 +1.2**
baz=114,SNR=54
H24K Noodor Dome 63.60 338 IAMs_20 IAMs_20 04 14 22.0
comp=Z,1µm,20.0s
H24K Noodor Dome 63.60 338 P **P** **03 43 14.4 +1.2**
baz=117,SNR=64
F25K Christian Rive 63.67 340 IAMs_20 IAMs_20 04 12 27.9
comp=Z,944nm,20.0s
F25K Christian Rive 63.67 340 P **P** **03 43 15.5 +1.9**
baz=120
I23K Minto, Yukon-K 63.84 337 P **P** **03 43 16.0 +1.4**
baz=116,SNR=75
G24K Hadweenzic Riv 63.86 339 IAMs_20 IAMs_20 04 14 23.2
comp=Z,1µm,18.0s
G24K Hadweenzic Riv 63.86 339 P **P** **03 43 16.4 +1.6**
baz=118,SNR=38
PPT Papeete 63.86 242 LR LR 04 03 23.0
comp=Z,953nm,20.6s,baz=52,slow=29
PPT2 Papeete2 63.87 242 *e*P P 03 43 09.3 -6.4
PPT2 comp=Z,314nm,33.5s *e*S **S** **03 51 46.2 -4.1**
comp=Z,1µm,26.5s
PPT2 *e*SS SS 03 55 45.8 -13
comp=Z,547nm,31.0s
PPT2 *e*LQ LQ 03 59 33.1
comp=Z,995nm,26.0s
PPT2 *e*LR LR 04 01 58.6
comp=Z,3µm,26.2s
PPT2 *e*LR LR 04 02 06.0
comp=Z,1µm,23.8s
E25K Arctic Village 63.92 341 IAMs_20 IAMs_20 04 07 59.3
comp=Z,700nm,21.0s
E25K Arctic Village 63.92 341 P **P** **03 43 17.1 +1.9**
baz=121,SNR=88
Q18K Katmai Hardscr 63.95 329 P **P** **03 43 16.6 +1.0**
baz=107,SNR=21
BPAW Bear Paw Mtn. 64.04 336 IAmb IAmb 03 43 17.5
comp=Z,85nm,0.8s
BPAW IAMs_20 IAMs_20 04 13 12.0
comp=Z,1µm,19.0s
BPAW Bear Paw Mtn. 64.04 336 P **P** **03 43 16.9 +0.9**
baz=113,SNR=49
KULLO Kullorsuaq 64.06 10 *i* P **P** **03 43 15.5 -0.4**
KULLO IAmb IAmb 03 43 17.8
comp=Z,177nm,1.1s
PPLA Purkeypile 64.07 334 P **P** **03 43 17.3 +0.9**
baz=112,SNR=17
O19K Port Alsworth 64.09 331 IAMs_20 IAMs_20 04 15 08.8
comp=Z,1µm,18.0s
O19K Port Alsworth 64.09 331 P **P** **03 43 17.1 +0.8**
baz=108,SNR=21
M20K Styx River 64.11 333 P **P** **03 43 17.8 +1.1**
baz=110
TULEG Thule 64.13 6 IAmb IAmb 03 43 18.6
comp=Z,103nm,1.2s
TULEG Thule 64.13 6 *i* P **P** **03 43 16.3 -0.1**
TULEG IAmb IAmb 03 43 18.3
comp=Z,102nm,1.2s
C27K Jago River 64.15 342 P **P** **03 43 18.4 +1.7**
baz=123
H23K Yukon River 64.20 338 IAmb IAmb 03 43 25.1
comp=Z,137nm,1.6s
H23K IAMs_20 IAMs_20 04 14 42.1
comp=Z,1µm,19.0s
H23K Yukon River 64.20 338 P **P** **03 43 18.2 +1.1**
baz=116
P18K Big Mountain, 64.28 330 P **P** **03 43 18.6 +0.8**
baz=107,SNR=19
Q17K Contact Creek 64.28 329 P **P** **03 43 18.8 +1.0**
baz=106
MLY Manley 64.32 337 P **P** **03 43 19.0 +1.1**
baz=114,SNR=101
R17L Mt. Peulik Vol 64.35 328 P **P** **03 43 19.5 +1.3**
baz=105,SNR=16
N19K Bonanza Creek 64.36 331 P **P** **03 43 19.3 +1.0**
baz=108,SNR=46
CHUM Lake Minchumin 64.49 335 P **P** **03 43 19.5 +0.6**
baz=112,SNR=18
GO08 Villa O'Higgin 64.50 165 P **P** **03 43 20.3 +1.1**
GO08 IAMs_20 IAMs_20 04 05 03.1
comp=Z,828nm,19.0s
G23K Bananza Creek 64.77 338 IAmb IAmb 03 43 22.9
comp=Z,55nm,0.9s
G23K Bananza Creek 64.77 338 P **P** **03 43 22.2 +1.4**
baz=116
Q16K King Salmon 64.78 329 P **P** **03 43 22.2 +1.3**
baz=106,SNR=40
D25K Kavik River 64.79 342 IAMs_20 IAMs_20 04 14 14.2
comp=Z,1µm,21.0s
D25K Kavik River 64.79 342 P **P** **03 43 22.6 +1.7**
baz=120
P17K Kvichak River 64.81 329 P **P** **03 43 22.3 +1.1**
baz=106,SNR=22
E24K Your Creek 64.85 340 IAmb IAmb 03 43 24.6
comp=Z,139nm,1.6s
E24K IAMs_20 IAMs_20 04 14 39.0
comp=Z,1µm,19.0s
E24K Your Creek 64.85 340 P **P** **03 43 23.2 +1.8**
baz=118
I21K Tanana 64.86 336 IAmb IAmb 03 43 22.9
comp=Z,73nm,1.1s
I21K Tanana 64.86 336 P **P** **03 43 22.2 +0.8**
baz=113
H22K Ishtalitna Cre 64.92 337 IAmb IAmb 03 43 23.6
comp=Z,68nm,0.9s
H22K IAMs_20 IAMs_20 04 16 09.0
comp=Z,1µm,18.0s
H22K Ishtalitna Cre 64.92 337 P **P** **03 43 22.6 +0.8**
baz=114,SNR=53
R16K Pilot Point 64.96 328 P **P** **03 43 23.2 +1.1**
baz=104
L19K White Mountain 64.98 333 IAmb IAmb 03 43 23.6
comp=Z,69nm,1.0s
L19K White Mountain 64.98 333 P **P** **03 43 23.1 +0.9**
baz=109,SNR=24
N18K Kilae Creek 64.98 331 IAmb IAmb 03 43 23.8
comp=Z,82nm,0.9s
N18K Kilae Creek 64.98 331 P **P** **03 43 23.3 +1.0**
baz=107,SNR=26
K20K Telida 65.03 334 P **P** **03 43 23.4 +0.8**
baz=110
COLD Coldfoot 65.06 339 IAmb IAmb 03 43 26.0
comp=Z,129nm,1.3s
COLD IAMs_20 IAMs_20 04 15 17.5
comp=Z,798nm,18.0s
COLD Coldfoot 65.06 339 P **P** **03 43 24.6 +2.0**
baz=116,SNR=45
M18K Stony River 65.19 332 P **P** **03 43 24.3 +0.7**
baz=108
E23K Chandalar 65.22 340 IAMs_20 IAMs_20 04 16 27.2
comp=Z,837nm,20.0s
E23K Chandalar 65.22 340 P **P** **03 43 25.9 +2.1**
baz=116,SNR=99
O17K Koliganek Bris 65.30 330 P **P** **03 43 25.5 +1.2**
baz=106,SNR=39
J20K Nowinta River 65.35 335 P **P** **03 43 25.3 +0.7**
baz=110,SNR=35
H21K Melozitna Rive 65.37 337 IAmb IAmb 03 43 25.8
comp=Z,38nm,0.9s
H21K IAMs_20 IAMs_20 04 13 07.9
comp=Z,662nm,19.0s
H21K Melozitna Rive 65.37 337 P **P** **03 43 25.1 +0.4**
baz=112,SNR=27
CHNA Chernabura Isl 65.45 324 P **P** **03 43 25.9 +0.6**
baz=101
TOLK Toolik Lake Re 65.47 340 IAmb IAmb 03 43 27.5
comp=Z,63nm,0.7s
TOLK IAMs_20 IAMs_20 04 16 59.3
comp=Z,1µm,18.0s
TOLK Toolik Lake Re 65.47 340 P **P** **03 43 26.9 +1.5**
baz=117,SNR=60
P16K Nushagak River 65.54 329 P **P** **03 43 26.8 +1.0**
baz=104,SNR=15
N17K Nushagak Hills 65.55 331 P **P** **03 43 27.2 +1.3**
baz=106
I20K Naaghedeneel 65.70 336 P **P** **03 43 27.6 +0.8**
baz=110
O16K Kokwok River B 65.74 330 IAmb IAmb 03 43 28.6
comp=Z,79nm,0.8s
O16K Kokwok River B 65.74 330 P **P** **03 43 28.0 +0.9**
baz=105
L18K Granite Mounta 65.81 333 P **P** **03 43 28.3 +0.7**
baz=107
J19K Poorman 65.90 335 P **P** **03 43 28.7 +0.5**
baz=109,SNR=70
M17K Holitna River 65.91 332 P **P** **03 43 29.0 +0.8**
baz=106
G21K Allakaket 65.96 338 IAmb IAmb 03 43 30.7
comp=Z,63nm,0.8s
G21K Allakaket 65.96 338 P **P** **03 43 29.5 +1.0**
baz=112
D23K Nanushuk River 65.98 340 P **P** **03 43 30.5 +1.9**
baz=116
SDPT Sand Point 66.05 325 P **P** **03 43 29.6 +0.4**
baz=101
H20K Anotleneega Mo 66.11 336 P **P** **03 43 29.9 +0.5**
baz=110
J18K Innoko River 66.19 334 IAmb IAmb 03 43 31.9
comp=Z,70nm,1.1s
J18K Innoko River 66.19 334 P **P** **03 43 30.5 +0.5**
baz=108
F21K Alatna River 66.22 338 IAMs_20 IAMs_20 04 14 48.7
comp=Z,847nm,20.0s
F21K Alatna River 66.22 338 P **P** **03 43 32.1 +1.9**
baz=112,SNR=188
N16K Nishlik Lake 66.29 330 P **P** **03 43 32.0 +1.2**
baz=104
TBI Tubuai 66.34 237 *e*P P **03 43 28.7 -2.9**
comp=Z,447nm,26.2s
TBI *e*S **S** **03 52 21.5 +1.2**
comp=Z,3µm,26.8s
TBI *e*SS **SS** **03 56 28.4 -9.0**
comp=Z,2µm,42.2s
TBI *e*LQ LQ 04 00 32.9
comp=Z,1µm,28.0s
O15K Ungalikthiuk R 66.50 329 IAmb IAmb 03 43 33.2
comp=Z,96nm,1.1s
O15K Ungalikthiuk R 66.50 329 P **P** **03 43 32.1 0.0**
baz=103,SNR=18
L17K Donlin 66.50 332 P **P** **03 43 32.8 +0.8**
baz=106
M16K Timber Creek 66.52 331 IAmb IAmb 03 43 34.5
comp=Z,69nm,0.9s
M16K Timber Creek 66.52 331 P **P** **03 43 33.1 +1.0**
baz=104
D22K Ayikyak River 66.60 340 IAMs_20 IAMs_20 04 15 43.5
comp=Z,880nm,20.0s
D22K Ayikyak River 66.60 340 P **P** **03 43 34.4 +1.8**
baz=114,SNR=65
GCSA Galena City Sc 66.66 335 P **P** **03 43 33.5 +0.6**
baz=108
K17K Iditarod 66.67 333 P **P** **03 43 33.6 +0.6**
baz=106,SNR=26
H19K Roundabout Mou 66.74 336 IAmb IAmb 03 43 35.4
comp=Z,85nm,0.9s
H19K Roundabout Mou 66.74 336 P **P** **03 43 34.3 +0.9**
baz=109
SUMG Summit 66.80 15 P **P** **03 43 34.4 +0.2**
SUMG IAmb IAmb 03 43 36.1
comp=Z,114nm,1.1s
SUMG Summit 66.80 15 P **P** **03 43 34.4 +0.2**
SUMG pmax pmax
comp=Z,114nm,1.1s
SUMG MLR MLR
comp=Z,2µm,19.0s
SUMG Summit 66.80 15 *i* P **P** **03 43 34.0 -0.2**
SUMG IAmb IAmb 03 43 35.8
comp=Z,121nm,1.1s
N15K Kwethluk River 66.86 330 IAmb IAmb 03 43 55.7
comp=Z,52nm,1.1s
N15K Kwethluk River 66.86 330 P **P** **03 43 35.0 +0.7**
baz=103
L16K Owhat River 66.93 332 P **P** **03 43 36.0 +1.2**
baz=104
G19K Purcell Mounta 67.18 337 IAmb IAmb 03 43 38.5
comp=Z,87nm,1.0s
G19K IAMs_20 IAMs_20 04 14 22.9
comp=Z,756nm,20.0s
G19K Purcell Mounta 67.18 337 P **P** **03 43 37.2 +0.9**
baz=108
J17K VABM Dome 67.19 333 IAmb IAmb 03 43 37.8
comp=Z,34nm,0.9s
J17K VABM Dome 67.19 333 P **P** **03 43 37.3 +0.9**
baz=105
NEEM North Greenlan 67.20 9 *i* P **P** **03 43 36.9 +0.3**
NEEM IAmb IAmb 03 43 38.6
comp=Z,250nm,1.1s
O14K Tigyukauivet M 67.24 329 IAmb IAmb 03 43 38.1
comp=Z,131nm,1.6s
O14K Tigyukauivet M 67.24 329 P **P** **03 43 36.7 0.0**
baz=102
M15K Kasigluk River 67.26 330 P **P** **03 43 37.9 +1.0**
baz=103,SNR=12
H18K Honhosa River 67.39 335 IAmb IAmb 03 43 39.5
comp=Z,50nm,0.9s
H18K Honhosa River 67.39 335 P **P** **03 43 39.0 +1.4**
baz=107
C21K Knifeblade Rid 67.40 340 P **P** **03 43 39.4 +1.7**
baz=112
B22K Teshekpuk Lake 67.43 341 P **P** **03 43 39.1 +1.3**
baz=114
E20K Nigu River 67.56 339 P **P** **03 43 40.2 +1.5**
baz=110
N14K Kuskokwak Cree 67.58 330 P **P** **03 43 39.6 +0.7**
baz=102,SNR=6.3
FALS False Pass 67.64 324 P **P** **03 43 39.6 +0.3**
baz=98
E19K Redstone River 67.66 338 IAmb IAmb 03 43 41.0
comp=Z,34nm,1.0s
E19K IAMs_20 IAMs_20 04 16 58.4
comp=Z,850nm,20.0s
E19K Redstone River 67.66 338 P **P** **03 43 40.3 +1.0**
baz=109
F19K Shaleruckik Mo 67.66 337 IAmb IAmb 03 43 41.1
comp=Z,71nm,1.0s
F19K IAMs_20 IAMs_20 04 16 59.5
comp=Z,1µm,18.0s
F19K Shaleruckik Mo 67.66 337 P **P** **03 43 40.2 +1.0**
baz=108
G18K Tagagawik 67.72 336 IAmb IAmb 03 43 41.8
comp=Z,65nm,1.0s
G18K Tagagawik 67.72 336 P **P** **03 43 41.2 +1.5**
baz=107
J16K Anvik River 67.83 333 P **P** **03 43 42.1 +1.7**
baz=104
L15K Ungalak Mounta 67.86 331 P **P** **03 43 42.2 +1.6**
baz=102,SNR=60
D20K Etivluk River 67.86 339 P **P** **03 43 42.0 +1.4**
baz=110
M14K Bethel 67.89 330 P **P** **03 43 42.4 +1.6**
baz=102,SNR=73
H17K Granite Mounta 67.96 335 P **P** **03 43 42.7 +1.5**
baz=105
K15K Wolf Creek Mou 68.01 332 P **P** **03 43 43.3 +1.7**
baz=103
I17K Unalakleet 68.02 334 IAmb IAmb 03 43 44.2
comp=Z,69nm,0.9s
I17K Unalakleet 68.02 334 P **P** **03 43 43.4 +1.9**
baz=104,SNR=23
A22K Sinclair Lake 68.17 342 P **P** **03 43 44.0 +1.6**
baz=112
F18K Selawik 68.31 337 P **P** **03 43 44.7 +1.4**
baz=106,SNR=21
D19K Kuna River 68.31 339 IAmb IAmb 03 43 56.5
comp=Z,58nm,1.0s
D19K IAMs_20 IAMs_20 04 17 22.5
comp=Z,814nm,20.0s
D19K Kuna River 68.31 339 P **P** **03 43 44.6 +1.2**
baz=108
L14K Kuka Creek 68.35 331 IAmb IAmb 03 43 46.0
comp=Z,75nm,0.8s
L14K Kuka Creek 68.35 331 P **P** **03 43 44.8 +1.1**
baz=101
G17K Kiwalik Mounta 68.40 336 P **P** **03 43 45.6 +1.6**
baz=105
B20K Meade River 68.49 341 P **P** **03 43 46.0 +1.6**
baz=110
M13K Dall Lake 68.49 330 P **P** **03 43 46.4 +1.8**
baz=105,SNR=34
A21K Barrow 68.78 342 P **P** **03 43 47.5 +1.3**
baz=111,SNR=22
H16K Elim 68.85 334 P **P** **03 43 48.5 +1.7**
baz=103,SNR=86
F17K Baldwin Pennin 68.88 336 IAmb IAmb 03 43 54.5
comp=Z,53nm,1.2s
F17K Baldwin Pennin 68.88 336 P **P** **03 43 48.1 +1.2**
baz=104,SNR=8.0
E18K Tukpahlearik C 68.89 338 IAmb IAmb 03 43 48.6
comp=Z,47nm,1.1s
E18K Tukpahlearik C 68.89 338 P **P** **03 43 48.0 +1.0**
baz=105
C19K Lookout Ridge 69.01 339 IAMs_20 IAMs_20 04 12 49.9
comp=Z,907nm,22.0s
C19K Lookout Ridge 69.01 339 P **P** **03 43 49.5 +1.7**
baz=107,SNR=41
J14K Nanvaranak Lak 69.03 332 P **P** **03 43 50.0 +2.2**
baz=101,SNR=42
G16K Koyuk River 69.07 335 IAmb IAmb 03 43 50.4
comp=Z,54nm,1.0s
G16K Koyuk River 69.07 335 P **P** **03 43 49.8 +1.7**
baz=103,SNR=32
E17K Hotham Inlet 69.26 337 P **P** **03 43 50.5 +1.2**
baz=104,SNR=98
UNV Unalaska Valle 69.31 323 P **P** **03 43 50.5 +0.7**
baz=95
K13K Kusilvak Mount 69.38 331 IAmb IAmb 03 43 52.6
comp=Z,77nm,1.1s
K13K Kusilvak Mount 69.38 331 P **P** **03 43 51.5 +1.3**
baz=100
C18K Utukok River 69.44 339 IAmb IAmb 03 43 58.2
comp=Z,67nm,1.1s
C18K IAMs_20 IAMs_20 04 19 30.3
comp=Z,1µm,21.0s
C18K Utukok River 69.44 339 P **P** **03 43 51.4 +1.0**
baz=105
G15K Niukluk 69.68 335 P **P** **03 43 53.5 +1.6**
baz=101
D17K Noatak River 69.88 338 P **P** **03 43 54.2 +1.1**

baz=103,SNR=30
M11K Mekoryuk 69.89 330 P **P** 03 43 55.2 **+2.0**
baz=98,SNR=11
RDOG Red Dog Mine 69.90 338 IAmb IAmb 03 43 55.6
comp=Z,185nm,1.8s
RDOG Red Dog Mine 69.90 338 P **P** **03 43 54.2 +0.9**
baz=103,SNR=7.0
BORG Borgarnes 69.92 26 LR LR 04 14 11.8
comp=Z,587nm,18.1s,baz=269,slow=36
F15K North Star Dit 70.07 335 IAmb IAmb 03 43 57.3
comp=Z,97nm,1.0s
F15K North Star Dit 70.07 335 P **P** **03 43 56.1 +1.8**
baz=101,SNR=70
C17K DeLong Mountai 70.10 338 P **P** **03 43 55.5 +1.1**
baz=103,SNR=24
ANM Nome 70.16 334 IAmb IAmb 03 43 57.0
comp=Z,38nm,1.0s
ANM Nome 70.16 334 P **P** **03 43 56.2 +1.3**
baz=100,SNR=19
NIKH Nikolski High 70.66 322 P **P** **03 43 58.4 +0.3**
baz=93
F14K Arctic Creek 70.71 335 P **P** **03 43 59.9 +1.7**
baz=99
C16K Lisburne Hills 70.84 338 IAmb IAmb 03 44 07.3
comp=Z,121nm,1.4s
C16K Lisburne Hills 70.84 338 P **P** **03 44 00.4 +1.5**
baz=101
SCO Scoresbysund 70.89 20 P **P** **03 43 58.9 -0.3**
SCO IAmb IAmb 03 44 01.6
comp=Z,92nm,1.6s
SCO Scoresbysund 70.89 20 P **P** **03 43 58.9 -0.3**
SCO pmax pmax
comp=Z,92nm,1.6s
SCO Scoresbysund 70.89 20 *i* P **P** **03 43 58.6 -0.6**
SCO IAmb IAmb 03 44 01.3
comp=Z,91nm,1.6s
P08K Saint George I 71.26 325 P **P** **03 44 03.8 +2.2**
baz=93
TNA Tin City 71.38 335 IAmb IAmb 03 44 05.2
comp=Z,122nm,1.3s
TNA IAMs_20 IAMs_20 04 15 45.2
comp=Z,698nm,18.0s
TNA Tin City 71.38 335 P **P** **03 44 03.9 +1.6**
baz=98,SNR=35
SPIA Saint Paul Isl 71.68 326 P **P** **03 44 05.4 +1.2**
baz=93
DBG Daneborg 72.27 16 *i* P **P** **03 44 07.4 -0.1**
DBG IAmb IAmb 03 44 09.0
comp=Z,58nm,1.1s
GAMB Gambell 72.81 333 IAmb IAmb 03 44 13.8
comp=Z,85nm,1.2s
GAMB Gambell 72.81 333 P **P** **03 44 12.7 +1.9**
baz=94,SNR=11
MBO M'Bour 73.46 79 IAmb IAmb 03 44 17.9
comp=Z,110nm,1.2s
RAR Rarotonga 74.13 243 LR LR 04 08 16.7
comp=Z,328nm,20.7s,baz=79,slow=29
NOR Nord 74.55 9 *i* P **P** **03 44 21.4 +0.6**
NOR IAmb IAmb 03 44 22.8
comp=Z,123nm,1.2s
VAL Valentia 74.91 40 P **P** **03 44 23.1 -0.3**
IGLA Glengowla, Co 75.36 38 P **P** **03 44 26.5 +0.6**
JMIC Jan Mayen 75.37 20 LR LR 04 18 39.7
comp=Z,918nm,19.8s,baz=255,slow=37
ADK Adak 75.46 320 P **P** **03 44 27.1 +0.6**
ADK Adak 75.46 320 P **P** **03 44 27.1 +0.6**
ADK pmax pmax
comp=Z,695nm,1.8s
IDGL Inch Island, C 76.35 36 P **P** **03 44 31.5 0.0**
IWEX Carrickbyrne, 77.01 39 P **P** **03 44 34.9 -0.5**
PSBE So Bento 77.02 52 *eP* **P** **03 44 33.6 -2.2**
PSBE *i* IAmb IAmb 03 44 36.2
comp=Z,84nm,1.9s
ILTH Belurgan, Co L 77.12 37 P **P** **03 44 34.6 -1.3**
PGAV Gavieira, Arco 77.12 50 *eP* **P** **03 44 36.0 -0.4**
PGAV *i* IAmb IAmb 03 44 50.8
comp=Z,82nm,1.9s
PGAV *e*LR LR 04 08 41.5
PGAV *i* IAMs_20 IAMs_20 04 17 51.5
comp=Z,833nm,18.0s
DSB Dublin 77.17 38 P **P** **03 44 37.3 +1.1**
PCAS Casmilo, Conde 77.18 52 *eP* **P** **03 44 37.3 +0.7**
PCAS *i* IAmb IAmb 03 44 40.5
comp=Z,102nm,1.7s
KPL Plockton 77.19 34 *eP* **P** **03 44 35.8 -0.5**
KPL IAmb IAmb 03 44 37.4
comp=Z,33nm,0.8s
PFVI Vila Bisbo 77.30 55 IAmb IAmb 03 44 39.6
comp=Z,58nm,1.1s
PFVI Vila Bisbo 77.30 55 *eP* **P** **03 44 37.9 +0.5**
PFVI *i* IAmb IAmb 03 44 41.5
comp=Z,110nm,1.5s
PTEO Sao Teotonio 77.33 54 *eP* **P** **03 44 38.4 +0.9**
PTEO *i* IAmb IAmb 03 44 42.4
comp=Z,82nm,2.0s
PCAB Cabril 77.33 50 *eP* **P** **03 44 38.7 +1.3**
MORF Marmelete 77.42 54 *eP* **P** **03 44 37.9 -0.1**
MORF IAmb IAmb 03 44 40.6
comp=Z,33nm,1.1s
MORF Marmelete 77.42 54 *eP* **P** **03 44 38.1 +0.1**
MORF *i* IAmb IAmb 03 44 43.1
comp=Z,53nm,1.6s
MORF Marmelete 77.42 54 *eP* **P** **03 44 37.9 -0.1**
LAWE Loch Awe, Argy 77.43 35 *eP* **P** **03 44 37.2 -0.4**
LAWE IAmb IAmb 03 44 40.0
comp=Z,18nm,0.8s
MOE Montemor 77.49 53 *eP* **P** **03 44 38.6 +0.2**
MOE *i* IAmb IAmb 03 44 42.2
comp=Z,74nm,1.9s
PSARD Sardoal 77.50 52 *eP* **P** **03 44 38.5 +0.1**
PSARD *i* IAmb IAmb 03 44 40.8
comp=Z,41nm,2.1s
PMTG Montargil 77.52 53 *eP* **P** **03 44 38.5 0.0**
PMTG *i* IAmb IAmb 03 44 42.1
comp=Z,75nm,1.6s
POLO Lamas de Olo 77.55 50 *eP* **P** **03 44 38.6 -0.1**
POLO *i* IAmb IAmb 03 44 49.7
comp=Z,19nm,1.5s
PVIS Viseu 77.56 51 *eP* **P** **03 44 38.5 -0.2**
PVRL Vila Real 77.62 50 *eP* **P** **03 44 39.5 +0.4**
PVRL *i* IAmb IAmb 03 44 43.5
comp=Z,51nm,1.8s
MESJ Messejana 77.69 54 *eP* **P** **03 44 39.3 -0.2**
MESJ IAmb IAmb 03 44 42.8
comp=Z,24nm,1.2s
MESJ *e*S **S** **03 54 31.1 +0.7**
MESJ Messejana 77.69 54 *eP* **P** **03 44 39.8 +0.4**
MESJ *i* IAmb IAmb 03 44 44.4
comp=Z,28nm,1.4s
MESJ Messejana 77.69 54 *eP* **P** **03 44 39.3 -0.2**
MESJ *e*S **S** **03 54 31.1 +0.7**
PARRA Arraiolos 77.69 53 *eP* **P** **03 44 39.9 +0.4**
PARRA *i* IAmb IAmb 03 44 43.2
comp=Z,48nm,1.7s
EVO Evora 77.75 53 *eP* **P** **03 44 39.9 0.0**
EVO *i* IAmb IAmb 03 44 43.7
comp=Z,58nm,2.1s
PCVE Castro Verde 77.86 54 *eP* **P** **03 44 40.9 +0.5**
PCVE *i* IAmb IAmb 03 44 44.6
comp=Z,44nm,2.1s
MTE Manteigas 77.86 51 P **P** **03 44 40.3 -0.2**
MTE Manteigas 77.86 51 *eP* **P** **03 44 40.5 0.0**
MTE *i* IAmb IAmb 03 44 42.2
comp=Z,61nm,2.1s
PBEJ Beja 77.94 54 *eP* **P** **03 44 42.0 +1.1**
PBEJ *i* IAmb IAmb 03 44 44.6
comp=Z,51nm,1.9s
GAL1 Galloway 77.97 36 *eP* **P** **03 44 40.0 -0.7**
GAL1 IAmb IAmb 03 44 42.9
comp=Z,31nm,0.7s
PCBR Castelo Branco 77.99 52 *eP* **P** **03 44 41.2 +0.1**
PCBR *i* IAmb IAmb 03 44 42.5
comp=Z,46nm,1.3s
PGBU Glenifferbraes 77.99 35 *eP* **P** **03 44 40.4 -0.4**
PGBU IAmb IAmb 03 44 43.1
comp=Z,51nm,0.8s
PBDV Barranco-do-Ve 78.00 54 *eP* **P** **03 44 41.7 +0.4**
PBDV *i* IAmb IAmb 03 44 45.5
comp=Z,73nm,2.2s
PESTR Estremoz 78.03 53 *eP* **P** **03 44 41.5 +0.1**
PESTR *i* IAmb IAmb 03 44 43.3
comp=Z,50nm,1.4s
PMRV Marv??o 78.11 52 *eP* **P** **03 44 42.0 +0.1**
PMRV *i* IAmb IAmb 03 44 45.4
comp=Z,88nm,1.9s
PMRV *e*LR LR 04 09 08.1
PMRV *i* IAMs_20 IAMs_20 04 16 46.6
comp=Z,596nm,20.0s
IOMK Kirk Michael 78.13 37 *eP* **P** **03 44 41.3 -0.3**
IOMK IAmb IAmb 03 44 43.7
comp=Z,9.5nm,0.7s
PVAQ Vaqueiros 78.14 54 *eP* **P** **03 44 42.6 +0.6**
PVAQ *i* IAmb IAmb 03 44 44.4
comp=Z,51nm,1.2s
PVAQ *e*LR LR 04 09 27.8
PVAQ *i* IAMs_20 IAMs_20 04 17 00.9
comp=Z,563nm,22.0s
MVO Moncorvo 78.15 50 *eP* **P** **03 44 42.5 +0.5**
MVO *i* IAmb IAmb 03 44 44.0
comp=Z,65nm,2.2s
MVO *e*LR LR 04 09 14.3
MVO *i* IAMs_20 IAMs_20 04 19 39.3
comp=Z,620nm,20.0s
INVG Invergeldie, C 78.16 35 *eP* **P** **03 44 41.2 -0.5**
INVG IAmb IAmb 03 44 44.1
comp=Z,36nm,0.8s
NEWG New Galloway 78.22 36 *eP* **P** **03 44 41.8 -0.2**
NEWG IAmb IAmb 03 44 44.5
comp=Z,37nm,0.8s
MCD Coleburn Disti 78.45 33 *eP* **P** **03 44 43.2 -0.1**
MCD IAmb IAmb 03 44 46.4
comp=Z,38nm,1.0s
PBAR Barrancos 78.56 53 *eP* **P** **03 44 44.2 -0.1**
PBAR *i* IAmb IAmb 03 44 48.1
comp=Z,60nm,1.7s
EDI Edinburgh 78.70 35 *eP* **P** **03 44 44.3 -0.4**
EDI IAmb IAmb 03 44 46.7
comp=Z,24nm,0.8s
ESK Eskdalemuir 78.78 36 P **P** **03 44 44.8 -0.3**
ESK IAmb IAmb 03 44 47.2
comp=Z,118nm,1.1s
ESK Eskdalemuir 78.78 36 *eP* **P** **03 44 44.6 -0.5**
ESK IAmb IAmb 03 44 47.5
comp=Z,48nm,0.8s
ESK Eskdalemuir 78.78 36 P **P** **03 44 44.8 -0.3**
ESK pmax pmax
comp=Z,118nm,1.1s
EKA Eskdalemuir Ar 78.80 36 P **P** **03 44 45.0 -0.3**
comp=Z,47nm,0.8s,baz=276,slow=5.8,SNR=127
EKA LR LR 04 19 35.3
comp=Z,744nm,18.4s,baz=284,slow=36
comp=Z,47nm,0.8s
EKA Eskdalemuir Ar 78.80 36 P **P** **03 44 45.0 -0.3**
DRUM Mains of Drumt 78.95 34 *eP* **P** **03 44 45.8 -0.2**
DRUM IAmb IAmb 03 44 49.1
comp=Z,61nm,0.8s
AVE Averroes 79.00 58 P **P** **03 44 46.4 -0.4**
AVE IAmb IAmb 03 44 49.1
comp=Z,125nm,1.4s
AVE IAMs_20 IAMs_20 04 16 55.9
comp=Z,750nm,20.0s
HLM1 Long Mynd 79.36 38 *eP* **P** **03 44 47.8 -0.6**
HLM1 IAmb IAmb 03 44 49.0
comp=Z,13nm,0.7s
KBS Kingsbay 79.50 11 *i* P **P** **03 44 49.0 +0.3**
MONM Monmouth 79.51 39 *eP* **P** **03 44 48.7 -0.5**
MONM IAmb IAmb 03 44 52.5
comp=Z,21nm,0.8s
EDMD Edmundbyers 79.55 36 *eP* **P** **03 44 49.4 0.0**
EDMD IAmb IAmb 03 44 52.0
comp=Z,40nm,0.8s
LBWR Ladybower, Pea 79.92 37 *eP* **P** **03 44 51.6 +0.2**
LBWR IAmb IAmb 03 44 54.1
comp=Z,41nm,1.0s
CWF Charnwood Fore 80.27 38 *eP* **P** **03 44 52.8 -0.5**
CWF IAmb IAmb 03 44 55.7
comp=Z,14nm,0.8s
PAB San Pablo 80.42 52 P **P** **03 44 53.8 -0.8**
PAB San Pablo 80.42 52 P **P** **03 44 53.8 -0.8**
PAB pmax pmax
comp=Z,55nm,1.2s
SPITS Spitsbergen Ar 80.59 11 P **P** **03 44 56.1 +1.5**
comp=Z,28nm,0.8s,baz=204,slow=0.8,SNR=23
SPITS LR LR 04 24 28.7
comp=Z,1μm,18.1s,baz=272,slow=39
comp=Z,28nm,0.8s
SPITS Spitsbergen Ar 80.59 11 P **P** **03 44 56.2 +1.6**
SPITS pmax pmax
comp=Z,300nm,1.6s
SPB2 Spitsbergen Ar 80.59 11 IAmb IAmb 03 44 58.3
comp=Z,248nm,1.6s
ESDC Sonseca Array 80.69 51 P **P** **03 44 55.9 -0.1**
comp=Z,24nm,1.0s,baz=290,slow=6.0,SNR=66
ESDC LR LR 04 15 35.6
comp=Z,689nm,21.6s,baz=283,slow=32
comp=Z,24nm,1.0s
ESDC Sonseca Array 80.69 51 P **P** **03 44 55.9 -0.1**
HSPB Hornsund (broa 80.85 13 *eP* **P** **03 44 58.3 +2.4**
PMSA Palmer Station 81.26 168 LR LR 04 14 05.4
comp=Z,261nm,19.0s,baz=310,slow=31
MD01 Midelt array s 81.27 58 P **P** **03 44 60.0 +0.6**
BILL Bilibino 81.37 338 P **P** **03 45 00.6 +1.7**
BILL Bilibino 81.37 338 *ce*P **P** **03 45 00.3 +1.4**
BILL pmax pmax
comp=Z,160nm,0.9s
MDT Midelt 81.41 58 LR LR 04 17 57.4
comp=Z,516nm,18.9s,baz=300,slow=33
WACR West Acre 81.43 38 *eP* **P** **03 44 59.5 0.0**
WACR IAmb IAmb 03 45 03.8
comp=Z,64nm,0.8s
CEST Esterri de Car 83.97 48 IAmb IAmb 03 45 17.9
comp=Z,30nm,0.8s
UCC Uccle 84.12 39 *dP* **P** **03 45 13.2 -0.3**
DOU Dourbes 84.44 40 *dP* **P** **03 45 15.5 +0.3**
BMRD Maredsous 84.50 40 *dP* **P** **03 45 15.8 +0.3**
comp=Z,24nm,1.4s
KONO Kongsberg 84.57 30 P **P** **03 45 17.4 +1.8**
KONO Kongsberg 84.57 30 *ce*P **P** **03 45 17.5 +1.8**
KONO pmax pmax
comp=Z,189nm,1.6s
NC204 NORSAR Array S 84.61 28 IAmb IAmb 03 45 18.9
comp=Z,80nm,1.2s
BGES Gesves 84.67 40 *dP* **P** **03 45 16.9 +0.5**
comp=Z,41nm,1.0s
CORI Orista 84.69 48 IAmb IAmb 03 45 19.1
comp=Z,115nm,1.3s
BCLA Clavier 84.80 39 *dP* **P** **03 45 16.6 -0.4**
comp=Z,31nm,1.1s
RCHB Rochefort 84.82 40 *dP* **P** **03 45 17.3 +0.2**
comp=Z,22nm,1.3s
RCHB *d*PP **PP** **03 48 31.4 -1.8**
NB2 NORSAR Subarra 84.89 28 P **P** **03 45 18.8 +1.5**
comp=Z,172nm,1.1s,baz=290,slow=4.8
NB2 NORSAR Subarra 84.89 28 P **P** **03 45 18.8 +1.5**
NB2 AMP 03 45 18.8
comp=Z,172nm,1.1s
NOA NORSAR Array B 84.89 28 P **P** **03 45 18.8 +1.5**
comp=Z,53nm,0.9s,baz=291,slow=4.8,SNR=97
NOA LR LR 04 21 00.8
comp=Z,955nm,21.9s,baz=285,slow=34
comp=Z,53nm,0.9s
BSTI Sart Tilman 84.92 39 *dP* **P** **03 45 18.3 +0.7**
BEBN Eben Emael 84.93 39 *dP* **P** **03 45 18.1 +0.5**
comp=Z,41nm,1.0s
MEM Membach 85.18 39 *dP* **P** **03 45 19.3 +0.4**
BHOU Houvegnez 85.25 39 *dP* **P** **03 45 20.1 +0.8**
comp=Z,25nm,1.2s
BTNL Ternell 85.26 39 *dP* **P** **03 45 19.8 +0.5**
comp=Z,15nm,1.2s
BTNL *d*PcP **PcP** **03 45 22.3 -0.2**
WLF Walferdange 85.53 40 IAmb IAmb 03 45 23.5
comp=Z,94nm,1.3s
WLF Walferdange 85.53 40 *dP* **P** **03 45 21.6 +0.9**
comp=Z,29nm,1.2s
WLF Walferdange 85.53 40 *eP* **P** **03 45 21.8 +1.2**
comp=Z,96nm,1.3s,baz=290,slow=4.7
BUG Bochum--Univer 85.72 38 *eP* **P** **03 45 22.7 +1.2**
comp=Z,66nm,1.1s,baz=290,slow=4.7
IBBN Ibbenburen 85.76 37 *eP* **P** **03 45 23.2 +1.5**
comp=Z,70nm,1.0s,baz=290,slow=4.7
HFS Hagfors 86.35 29 P **P** **03 45 25.4 +0.9**
comp=Z,20nm,0.9s,baz=289,slow=4.5,SNR=20
HFS LR LR 04 21 42.9
comp=Z,1μm,21.4s,baz=280,slow=34
comp=Z,20nm,0.9s
KASTN Kahler Asten 86.48 38 *eP* **P** **03 45 26.5 +1.1**
comp=Z,50nm,1.0s,baz=290,slow=4.7
RETH Rethem/Aller, 86.57 37 *eP* **P** **03 45 27.3 +1.7**
comp=Z,76nm,1.0s,baz=290,slow=4.7
ECH Echery 86.57 41 IAmb IAmb 03 45 27.9
comp=Z,48nm,1.0s
DBIC Dimbokro 86.68 84 P **P** **03 45 27.2 +0.1**
comp=Z,21nm,0.9s,baz=314,slow=4.6,SNR=14
DBIC LR LR 04 22 45.6
comp=Z,352nm,19.4s,baz=314,slow=35
comp=Z,21nm,0.9s
DBIC Dimbokro 86.68 84 P **P** **03 45 27.1 +0.1**
DBIC Dimbokro 86.68 84 P **P** **03 45 27.1 +0.1**
DBIC pmax pmax
comp=Z,31nm,1.0s
BSEG Bad Segeberg 86.73 35 *eP* **P** **03 45 27.9 +1.4**
comp=Z,48nm,1.0s,baz=290,slow=4.7
BSEG *e*L L 04 22 22.8
comp=Z,272nm,21.7s
ARCES ARCESS Array B 86.74 18 P **P** **03 45 27.1 +0.8**
comp=Z,14nm,0.6s,baz=296,slow=4.4,SNR=30
ARCES LR LR 04 24 34.1
comp=Z,553nm,19.9s,baz=298,slow=36
comp=Z,14nm,0.6s
ARCES ARCESS Array B 86.74 18 P **P** **03 45 27.0 +0.8**
ARCES IAmb IAmb 03 45 30.1
comp=Z,77nm,1.2s
ARCES ARCESS Array B 86.74 18 P **P** **03 45 27.0 +0.8**
ARCES pmax pmax
comp=Z,77nm,1.2s
TNS Taunus Mts 86.79 39 *eP* **P** **03 45 28.1 +1.2**
comp=Z,84nm,0.9s,baz=290,slow=4.7
TNS *e*L L 04 19 57.2
comp=Z,517nm,21.4s
MAHO Mahon 86.83 50 IAmb IAmb 03 45 29.1
comp=Z,34nm,0.8s
KEV Kevo 87.07 18 P **P** **03 45 28.4 +0.6**
KEV Kevo 87.07 18 P **P** **03 45 28.4 +0.6**
KEV pmax pmax
comp=Z,250nm,2.0s
BNI Bardonecchia 87.15 44 IAmb IAmb 03 45 32.1
comp=Z,63nm,1.1s
SENIN Lac Senin/Sane 87.19 43 IAmb IAmb 03 45 32.8
comp=Z,56nm,0.9s
BFO Black Forest 87.28 41 P **P** **03 45 29.5 +0.1**
BFO IAmb IAmb 03 45 30.9
comp=Z,46nm,1.2s
BFO Black Forest 87.28 41 P **P** **03 45 29.5 +0.1**
BFO pmax pmax
comp=Z,46nm,1.2s
BFO MLR MLR
comp=Z,1μm,19.0s
BFO Black Forest 87.28 41 *eP* **P** **03 45 30.2 +0.8**
comp=Z,40nm,1.1s,baz=290,slow=4.7
BFO *e*L L 04 23 26.2
comp=Z,695nm,20.3s
GTTG Gottingen 87.29 38 *eP* **P** **03 45 30.6 +1.3**
comp=Z,69nm,1.0s,baz=290,slow=4.7
CLZ Clausthal 87.44 37 *eP* **P** **03 45 31.6 +1.5**
comp=Z,38nm,1.0s,baz=290,slow=4.7
ASSE Asse, Remlinge 87.52 37 *eP* **P** **03 45 31.6 +1.3**
comp=Z,66nm,1.1s,baz=290,slow=4.7
UBBA Unterbreizbach 87.55 38 *eP* **P** **03 45 31.6 +1.2**
comp=Z,66nm,1.6s,baz=290,slow=4.7
STU Stuttgart 87.70 40 IAmb IAmb 03 45 33.5
comp=Z,50nm,1.0s
STU Stuttgart 87.70 40 *eP* **P** **03 45 32.5 +1.2**
comp=Z,114nm,1.0s,baz=290,slow=4.7
FLTG Flechtingen 87.78 37 *eP* **P** **03 45 32.3 +0.7**
comp=Z,56nm,1.2s,baz=290,slow=4.7
NEUB Neuenburg 88.48 37 *eP* **P** **03 45 35.9 +0.9**
comp=Z,190nm,1.9s,baz=290,slow=4.7
TUE Stuetta 88.51 42 IAmb IAmb 03 45 40.6
comp=Z,60nm,1.1s
TUE IAMs_20 IAMs_20 04 24 12.5
comp=Z,631nm,21.0s
MOX Moxa 88.57 38 *eP* **P** **03 45 36.4 +0.9**
comp=Z,22nm,1.0s,baz=290,slow=4.7
MOX *e*L L 04 23 01.2
comp=Z,832nm,22.0s
DAVA Damuels 88.60 42 *eP* **P** **03 45 36.7 +0.9**
comp=Z,92nm,1.2s,SNR=23
DAVA *e*PP **PP** **03 49 00.9 -3.1**
comp=Z,13nm,1.6s
SEY Seymchan 88.62 335 LR LR 04 29 50.1
comp=Z,415nm,19.0s,baz=66,slow=39
SEY Seymchan 88.62 335 *ce*P **P** **03 45 36.7 +1.4**
SEY pmax pmax
comp=Z,62nm,0.9s
UBR Ueberruh 88.62 41 *eP* **P** **03 45 36.6 +0.8**
comp=Z,63nm,1.3s,baz=290,slow=4.7
GRA1 Grafenberg Arr 88.66 39 IAmb IAmb 03 45 39.3
comp=Z,84nm,1.3s
GRF Grafenberg Arr 88.66 39 *eP* **P** **03 45 37.4 +1.5**
comp=Z,133nm,1.6s,baz=290,slow=4.7
GRF *e*L L 04 21 04.3
comp=Z,807nm,20.9s
DAVOX Davos/Dischmat 88.76 42 LR LR 04 22 10.1
comp=Z,544nm,20.0s,baz=294,slow=34
PLN Plauen 88.95 39 *eP* **P** **03 45 38.2 +1.0**
comp=Z,10nm,1.0s,baz=290,slow=4.7
FUORN Ofenpass-Fuorn 89.06 42 IAmb IAmb 03 45 40.6
comp=Z,50nm,1.1s
MANZ Manzenberg 89.10 39 *eP* **P** **03 45 39.2 +1.2**
comp=Z,5.7nm,1.0s,baz=290,slow=4.7
RETA Reutte 89.10 41 *i* P **P** **03 45 39.0 +0.9**
comp=Z,76nm,1.6s,SNR=20
RETA PP **PP** **03 49 06.8 -1.1**
comp=Z,8.3nm,1.2s
TANN Tannenbergstha 89.16 38 *eP* **P** **03 45 39.3 +1.1**
comp=Z,32nm,1.0s,baz=290,slow=4.7
CLL Collm 89.16 37 IAmb IAmb 03 45 40.4
comp=Z,30nm,0.9s
CLL Collm 89.16 37 ↓↓ *i* P **P** **03 45 39.2 +1.0**
CLL *i* 03 45 41.8
CLL *e*S **ScS** **03 56 29.0 -1.9**
CLL pmax pmax
comp=Z,38nm,1.0s
CLL Collm 89.16 37 ↓↓ *i* P **P** **03 45 39.2 +1.0**
comp=Z,38nm,1.0s
CLL *i* x x 03 45 41.8
CLL *e*PP PP 03 49 24.0 +16
CLL *e*SKSac **SKSac** **03 56 06.0 -0.7**
CLL *e*S **ScS** **03 56 29.0 -1.9**
CLL *e*PS **PnS** **03 57 31.0 -1.1**
CLL *e*SS **SS** **04 02 24.0 +4.8**
CLL *e*SSS SSS 04 05 54.0
CLL *e*SSSS 04 09 06.0
CLL Collm 89.16 37 *eP* **P** **03 45 39.2 +1.0**
comp=Z,30nm,0.9s,baz=290,slow=4.7
CLL *e*L L 04 23 32.4
comp=Z,652nm,20.7s
RUE Ruedersdorf 89.19 36 *eP* **P** **03 45 38.8 +0.6**
comp=Z,42nm,1.0s,baz=290,slow=4.7
FUR Furstenfeldbru 89.20 40 *eP* **P** **03 45 39.6 +1.2**
comp=Z,25nm,0.9s,baz=290,slow=4.7
FUR *e*L L 04 24 55.4
comp=Z,727nm,21.4s
NKC Novy Kostel 89.22 38 *eP* **P** **03 45 40.1 +1.6**
NKC MLR MLR
comp=Z,800nm,15.8s
NKC Novy Kostel 89.22 38 *eP* **P** **03 45 40.1 +1.6**
NKC AMS AMS 04 28 00.0
comp=Z,800nm,15.8s
ROTZ Rotzenmuhle 89.23 39 *eP* **P** **03 45 39.6 +1.0**
comp=Z,6.3nm,1.1s,baz=290,slow=4.7
FETA Feichten 89.23 42 *eP* **P** **03 45 39.7 +0.8**
comp=Z,31nm,0.9s,SNR=12
MOTA Moosalm 89.37 41 *eP* **P** **03 45 40.2 +0.7**
comp=Z,33nm,1.0s,SNR=14
MOTA PP **PP** **03 49 08.8 -1.4**
comp=Z,11nm,1.2s
SQTA Sankt Quirin 89.48 41 *eP* **P** **03 45 40.7 +0.8**
comp=Z,28nm,1.3s,SNR=12
SQTA *e*PP **PP** **03 49 08.0 -3.0**
comp=Z,7.3nm,1.1s
HSKC Hora Svate Kat 89.67 38 *eP* **P** **03 45 41.2 +0.6**
HSKC AMS AMS 04 23 30.0
comp=Z,900nm,24.2s
WATA Walderalm 89.67 41 *eP* **P** **03 45 41.3 +0.5**
comp=Z,37nm,1.5s,SNR=12
WATA *e*PP **PP** **03 49 09.5 -3.1**
comp=Z,9.7nm,1.9s
WTTA Wattenberg 89.74 41 *eP* **P** **03 45 41.9 +0.7**
comp=Z,33nm,1.8s,SNR=8.7
WTTA *e*PP **PP** **03 49 11.1 -2.0**
comp=Z,7.3nm,1.3s
WET Wettzell 89.86 39 *eP* **P** **03 45 42.8 +1.3**
comp=Z,80nm,1.3s,baz=290,slow=4.7
WET *e*L L 04 21 48.7
comp=Z,830nm,21.2s
BRG Berggiesshubel 89.88 37 *eP* **P** **03 45 42.7 +1.2**
comp=Z,46nm,1.1s,baz=290,slow=4.7
BRG Berggiesshubel 89.88 37 *i* P **P** **03 45 43.0 +1.5**

BRG Amp 03 45 44.0
comp=Z,46nm,1.1s
BRG Berggiesshubel 89.88 37 P P 03 45 51.4 +10
BRG Amp 03 45 53.2
comp=Z,12nm,1.0s
BRG PP **PP 03 49 11.0 -2.9**
BRG Amp 03 49 18.6
comp=Z,8.4nm,1.1s
BRG Berggiesshubel 89.88 37 S **S 03 56 33.0 +0.4**
RICC Richard 90.09 38 *e*P **P 03 45 44.3 +1.8**
APA Apatity 90.25 18⇓*e*P **P 03 45 39.1 -3.8**
APA *e* 03 49 16.4
APA pmax pmax
comp=Z,11nm,1.2s
KHC Kasperske Hory 90.29 39 IAmb IAmb 03 45 46.0
comp=Z,39nm,1.1s
KHC Kasperske Hory 90.29 39*c*e**P P 03 45 44.5 +0.9**
KHC pmax pmax
comp=Z,46nm,1.2s
KHC Kasperske Hory 90.29 39 *e*P **P 03 45 45.0 +1.4**
KHC *e*SKS **SKSac 03 56 04.1 -9.5**
KHC AMS AMS 04 23 00.0
comp=Z,900nm,20.8s
RJOB Jochberg 90.31 40 *e*P **P 03 45 44.7 +1.0**
comp=Z,32nm,1.2s,baz=290,slow=4.7
PETK Petropavlovsk- 90.33 325 P **P 03 45 45.0 +1.4**
comp=Z,12nm,0.8s,baz=70,slow=12,SNR=4.8
comp=Z,12nm,0.8s
PETK Petropavlovsk- 90.33 325 P **P 03 45 45.0 +1.4**
LESA Schwarzleotal 90.34 41 *i* P **P 03 45 44.6 +0.6**
comp=Z,28nm,1.3s,SNR=9.7
LESA PP **PP 03 49 16.5 -1.3**
comp=Z,10.0nm,1.4s
TIXI Tiksi 90.35 348 LR LR 04 33 57.3
comp=Z,430nm,18.3s,baz=42,slow=41
TIXI Tiksi 90.35 348 P **P 03 45 43.4 +0.1**
TIXI IAmb IAmb 03 45 44.0
comp=Z,60nm,0.8s
TIXI Tiksi 90.35 348 IAMs_20 IAMs_20 04 34 17.3
comp=Z,567nm,21.0s
TIXI Tiksi 90.35 348*c*e**P P 03 45 43.2 -0.1**
TIXI pmax pmax
comp=Z,54nm,0.9s
PVCC Panska Ves 90.37 37 *e*P **P 03 45 45.3 +1.5**
PVCC Panska Ves 90.37 37 *e*P **P 03 45 45.3 +1.5**
TEOL Teolo 90.41 43 IAmb IAmb 03 45 46.2
comp=Z,92nm,1.1s
GEC2 GERESS Array S 90.47 39 IAmb IAmb 03 45 46.7
comp=Z,47nm,1.1s
GEC2 GERESS Array S 90.47 39 *e*P **P 03 45 45.4 +0.9**
comp=Z,47nm,1.1s,baz=290,slow=4.7
GEC2 *e*L L 04 21 55.4
comp=Z,795nm,21.9s
GERES GERESS Array B 90.47 39 P **P 03 45 45.8 +1.2**
comp=Z,13nm,0.9s,baz=298,slow=2.9,SNR=45
GERES LR LR 04 22 27.9
comp=Z,643nm,21.5s,baz=286,slow=33
comp=Z,13nm,0.9s
ABTA Abfaltersbach 90.48 41 *e*P **P 03 45 45.3 +0.8**
comp=Z,42nm,1.1s,SNR=25
ZVC Zvikov 90.56 39 *e*P **P 03 45 46.0 +1.3**
PRU Pruhonice 90.56 38 *e*P **P 03 45 45.9 +1.2**
PRU MLR MLR
comp=Z,700nm,18.3s
PRU Pruhonice 90.56 38 *e*P **P 03 45 45.9 +1.2**
PRU AMS AMS 04 27 00.0
comp=Z,700nm,18.3s
CIMO Cimolais 90.58 42 IAmb IAmb 03 45 46.7
comp=Z,40nm,1.0s
VSL Villasalto 90.72 49 IAMs_20 IAMs_20 04 24 18.5
comp=Z,464nm,20.0s
OSSC Osservatorio P 90.74 45 IAmb IAmb 03 45 46.5
comp=Z,32nm,1.0s
STAL STALIGIAL 90.78 42 IAmb IAmb 03 45 47.6
comp=Z,53nm,1.1s
GKP Gorka Klasztor 90.81 34 *e*P **P 03 45 47.4 +1.6**
BIOA Bad Ischl, Aus 90.86 40 *e*P **P 03 45 46.8 +0.6**
comp=Z,36nm,1.4s,SNR=14
CKRC Cesky Krumlov 90.86 39 *e*P **P 03 45 47.1 +0.9**
CKRC *e* 03 56 16.2
CKRC MLR MLR
comp=Z,700nm,20.8s
CKRC Cesky Krumlov 90.86 39 *e*P **P 03 45 47.1 +0.9**
CKRC *e*SKS **SKSac 03 56 16.2 -0.6**
CKRC AMS AMS 04 21 40.0
comp=Z,700nm,20.8s
KBA Koelnbreinsper 90.89 41 *e*PcP **P 03 45 47.3 +0.7**
comp=Z,38nm,1.3s,SNR=24
KBA *e*PP **PP 03 49 21.6 -0.7**
comp=Z,6.8nm,1.1s
MA2 Magadan 90.92 333 P **P 03 45 47.6 +1.4**
MA2 IAmb IAmb 03 45 48.6
comp=Z,42nm,0.9s
MA2 Magadan 90.92 333*c*e**P P 03 45 47.5 +1.4**
MA2 pmax pmax
comp=Z,48nm,0.9s
MOA Molln 91.19 40 *e*P **P 03 45 48.5 +0.7**
comp=Z,23nm,0.9s,SNR=9.4
MOA *e*PP **PP 03 49 22.3 -2.1**
comp=Z,10nm,2.0s
FINES FINESS Array B 91.20 25 P **P 03 45 47.9 +0.5**
comp=Z,22nm,1.0s,baz=317,slow=1.6,SNR=28
FINES LR LR 04 28 29.6
comp=Z,626nm,18.7s,baz=292,slow=37
comp=Z,22nm,1.0s
FINES FINESS Array B 91.20 25 P **P 03 45 48.1 +0.7**
CHVC Chvalec 91.22 37 *e*P **P 03 45 48.4 +0.5**
CHVC Chvalec 91.22 37 *e*P **P 03 45 48.4 +0.5**
UPC Upice 91.23 37 *e*P **P 03 45 49.2 +1.3**
UPC Upice 91.23 37 *e*P **P 03 45 49.2 +1.3**
MYKA Terra Mystica 91.25 41 *e*P **P 03 45 48.5 +0.4**
comp=Z,32nm,1.1s,SNR=15
KSP Ksiaz 91.26 37 *e*P **P 03 45 48.9 +0.9**
PRED Cave del Predi 91.26 42 IAmb IAmb 03 45 50.0
comp=Z,25nm,1.0s
ROBS Robic 91.30 42 *e*P **P 03 45 48.9 +0.6**
OSTC Ostas 91.33 37 *e*P **P 03 45 49.5 +1.2**
OSTC MLR MLR
comp=Z,1μm,21.0s
OSTC Ostas 91.33 37 *e*P **P 03 45 49.5 +1.2**
OSTC AMS AMS 04 26 40.0
comp=Z,1μm,21.3s
TREC Trest 91.39 38 AMS AMS 04 26 20.0
comp=Z,1μm,22.8s
TORD Torodi Ar. Bea 91.42 76 P **P 03 45 48.7 -0.7**
comp=Z,3.6nm,0.8s,baz=274,slow=6.4,SNR=20
TORD PKKP **PKKPdf 04 03 07.2 +0.1**
comp=Z,0.7nm,0.8s,baz=148,slow=2.6,SNR=4.8
TORD LR LR 04 22 51.8
comp=Z,540nm,21.9s,baz=284,slow=33
comp=Z,3.6nm,0.8s
CADS Cadrg 91.45 42 *i* P **P 03 45 49.7 +0.7**
DPC Dobruska-Polom 91.47 37 *e*P **P 03 45 50.5 +1.4**
DPC *e* 03 56 25.1
DPC MLR MLR
comp=Z,900nm,21.9s
DPC Dobruska-Polom 91.47 37 *e*P **P 03 45 50.5 +1.4**
DPC *e*SKS **SKSac 03 56 25.1 +4.8**
DPC AMS AMS 04 24 20.0
comp=Z,900nm,21.9s
VOJS Vojsko 91.62 42 *i* P **P 03 45 50.7 +0.9**
MURB Monte Urbino 91.71 45 IAmb IAmb 03 45 51.0
comp=Z,59nm,1.0s
OBKA Obir 91.87 41 *i* P **P 03 45 51.3 +0.3**
comp=Z,44nm,1.5s,SNR=8.4
KEST Kesra 91.88 53 P **P 03 45 52.4 +1.1**
comp=Z,63nm,1.0s,baz=278,slow=2.2,SNR=45
KEST LR LR 04 21 55.7
comp=Z,211nm,20.4s,baz=307,slow=32
comp=Z,63nm,1.0s
CESX Cesi 91.97 45 IAmb IAmb 03 45 52.9
comp=Z,77nm,1.1s
KRUC Moravsky 92.03 38 *e*P **P 03 45 52.4 +0.8**
VRAC Vranov 92.05 38 ⇑P **P 03 45 52.1 +0.4**
VRAC Vranov 92.05 38 ⇑P **P 03 45 52.1 +0.4**
VRAC Vranov 92.05 38 *e*P **P 03 45 52.8 +1.1**
SOKA Soboth 92.12 41 *i* P **P 03 45 52.2 0.0**
comp=Z,45nm,1.3s,SNR=16
CONA Conrad Observa 92.15 40 *e*PcP **PcP 03 45 53.4 +0.3**
comp=Z,61nm,1.7s,SNR=19
CONA PP **PP 03 49 28.3 -3.8**
comp=Z,13nm,1.7s
FDMO Fiordimonte 92.17 45 IAmb IAmb 03 45 53.8
comp=Z,72nm,1.1s
ARSA Arzberg 92.21 40 *e*P **P 03 45 53.1 +0.6**
comp=Z,24nm,1.3s,SNR=8.8
RAO Raoul Island 92.22 241 LR LR 04 17 07.2
comp=Z,259nm,20.3s,baz=61,slow=29
NRCA Norcia 92.26 45 IAmb IAmb 03 45 55.0
comp=Z,32nm,1.3s
GUMA Gualdo di Mace 92.33 45 IAmb IAmb 03 45 54.6
comp=Z,60nm,1.1s
MORC Moravsky Berou 92.43 37 IAmb IAmb 03 45 56.1
comp=Z,67nm,1.3s
MORC Moravsky Berou 92.43 37 ⇓P **P 03 45 54.6 +1.2**
MORC Moravsky Berou 92.43 37 ⇓P **P 03 45 54.6 +1.2**
MORC Moravsky Berou 92.43 37 *e*P **P 03 45 54.7 +1.2**
TAM Tamanrasset 92.45 66 IAMs_20 IAMs_20 04 28 42.8
comp=Z,532nm,19.0s
STEB Steborice 92.50 37 *e*P **P 03 45 55.1 +1.4**
RONA Rosalia, Austr 92.51 40 *e*PcP **PcP 03 45 55.0 +0.4**
comp=Z,36nm,1.1s,SNR=9.8
CAMP Campotosto 92.57 45 IAmb IAmb 03 45 55.8
comp=Z,27nm,1.0s
CRES Cresnjevec Ost 92.72 42 *i* P **P 03 45 55.8 +1.0**
OKC Ostrava-Krasne 92.76 37 *e*P **P 03 45 56.4 +1.5**
OKC MLR MLR
comp=Z,900nm,28.7s
OKC Ostrava-Krasne 92.76 37 *e*P **P 03 45 56.4 +1.5**
OKC AMS AMS 04 25 20.0
comp=Z,900nm,28.7s
MAUC Maruska 92.77 38 *e*P **P 03 45 56.9 +1.9**
ZST Bratislava 92.81 39 *e*P **P 03 45 57.1 +1.9**
ZST pmax pmax
comp=Z,15nm,1.3s
ZST Bratislava 92.81 39 *e*P **P 03 45 57.1 +1.9**
MODS Modra-Piesok 92.84 39 *e*P **P 03 45 57.2 +1.8**
MODS pmax pmax
comp=Z,208nm,1.4s
MODS Modra-Piesok 92.84 39 *e*P **P 03 45 57.2 +1.8**
MODS *e*PP **PP 03 49 38.3 +0.9**
SMOL Smolenice 92.88 39 *e*P **P 03 45 57.7 +2.2**
SMOL pmax pmax
comp=Z,51nm,1.6s
JAVC Velka Javorina 92.88 38 *e*P **P 03 45 57.8 +2.2**
VSU Vasula 93.07 27*c*e**P P 03 45 55.3 -0.8**
VSU pmax pmax
comp=Z,28nm,1.1s
INTR Introdacqua 93.11 46 IAmb IAmb 03 45 58.1
comp=Z,50nm,1.3s
PABE Paberze 93.30 31 IAmb IAmb 03 45 59.0
comp=Z,56nm,1.0s
BEHE Becsehely 93.31 41 IAmb IAmb 03 45 59.9
comp=Z,41nm,1.5s
BEL Belsk 93.39 35 *e*P **P 03 45 59.2 +1.4**
R9F13 Warsaw-Wawer 93.41 34 *e*P **P 03 45 59.2 +1.4**
comp=Z,1.8nm,0.7s
R9F13 *e*S **S 03 57 01.7 -2.7**
OJC Ojcow 93.55 36 *e*P **P 03 45 59.6 +1.0**
SUW Suwalki 93.64 32 *e*P **P 03 45 59.0 +0.1**
SRO Srobarova 93.71 39 *e*P **P 03 46 00.8 +1.5**
SRO pmax pmax
comp=Z,72nm,1.6s
SRO Srobarova 93.71 39 *e*P **P 03 46 00.8 +1.5**
SRO *e*PP **PP 03 49 43.4 -0.7**
PAOL Paolisi 93.93 46 IAmb IAmb 03 46 02.0
comp=Z,29nm,1.3s
ADZR Andozero 94.16 19 *e*P **P 03 45 59.6 -1.4**
ADZR pmax pmax
comp=Z,58nm,1.0s
NIE Niedzica 94.20 37 *e*P **P 03 46 03.3 +1.6**
BLY Banja Luka 94.26 42 ⇓P **P 03 46 02.6 +0.6**
MORH Mrgy. Hungar 94.59 40 ⇓P **P 03 46 04.1 +0.7**
PSZ Piszkesteto 94.62 38 IAMs_20 IAMs_20 04 25 09.1
comp=Z,591nm,21.0s
PSZ Piszkesteto 94.62 38 ⇑P **P 03 46 05.5 +1.8**
PSZ Piszkesteto 94.62 38 ⇑P **P 03 46 05.5 +1.8**
KECS Kecovo 94.73 38 *e*P **P 03 46 05.2 +1.2**
KECS pmax pmax
comp=Z,36nm,1.1s
KECS Kecovo 94.73 38 *e*P **P 03 46 05.2 +1.2**
ACER Acerenza 94.98 46 IAmb IAmb 03 46 06.4
comp=Z,24nm,1.1s
VAE Valguarnera 95.12 50 LR LR 04 23 58.9
comp=Z,1μm,20.5s,baz=284,slow=32
BSZH Besenyszg 95.12 39 ⇓P **P 03 46 07.5 +1.7**
KWP Kalwaria Pacla 95.50 36 *e*P **P 03 46 07.3 -0.3**
MATE Matera 95.57 46 ⇓P **P 03 46 08.3 +0.3**
UZHM Uzhgorod 95.73 37 P **P 03 46 09.4 +0.9**
MNK Minsk 95.75 30 *i* P **P 03 46 08.4 -0.1**
comp=E,40nm,1.1s
MNK *i* P **P 03 46 08.4 -0.1**
comp=N,37nm,1.1s
MNK *i* P **P 03 46 08.4 -0.1**
comp=Z,76nm,1.0s,baz=303
MNK *i* PP **PP 03 49 55.9 -3.9**
MNK *i* PPP PPP 03 52 01.3
MNK *i* S **SKSac 03 56 44.3 +0.9**
MNK *i* SS **SS 04 03 55.4 +2.1**
MNK *i* SSS SSS 04 07 38.5
MNK Minsk 95.75 30 *i* P **P 03 46 08.4 -0.1**
MNK *i* 03 49 55.8
MNK *i* PPP PPP 03 52 01.3
MNK *i* S **SKSac 03 56 44.3 +0.9**
MNK *i* SS **SS 04 03 55.4 +2.1**
MNK *i* SSS SSS 04 07 38.5
MNK pmax pmax
comp=Z,76nm,1.0s
MNK pmax pmax
comp=N,37nm,1.1s
MNK pmax pmax
comp=E,40nm,1.1s
WDD Wied Dalam 95.80 51 IAMs_20 IAMs_20 04 27 42.1
comp=Z,439nm,20.0s
BRY Bratogost 95.91 43⇓*i*P **P 03 46 09.7 0.0**
CEL Celeste 95.92 48 IAMs_20 IAMs_20 04 28 40.0
comp=Z,431nm,20.0s
UPM Unac-Piva 96.03 43⇓*i*P **P 03 46 11.1 +0.8**
HCY Herceg Novi 96.07 44⇓*i*P **P 03 46 11.2 +0.9**
TIP Timpagrande 96.19 47 IAmb IAmb 03 46 11.5
comp=Z,29nm,1.2s
TIP Timpagrande 96.19 47 ⇓P **P 03 46 09.7 -1.3**
NKME Niksic 96.25 43⇓*i*P **P 03 46 11.8 +0.7**
PLE Pljevlja 96.30 43⇓*i*P **P 03 46 12.4 +1.0**
CEME Cevo 96.31 44⇓*i*P **P 03 46 11.9 +0.4**
RNPP9 Sopachiv 96.37 33 P **P 03 46 12.0 +0.6**
RNPP8 Varash 96.39 34 P **P 03 46 12.1 +0.6**
BUM Brajici-Budva 96.40 44⇓*i*P **P 03 46 12.7 +0.8**
KORU Korolevo 96.45 37 P **P 03 46 12.3 +0.5**
RNPP5 Staryi Chortor 96.47 34 P **P 03 46 12.4 +0.6**
KOME Kolasin 96.58 43⇓*i*P **P 03 46 13.3 +0.6**
PDG Podgorica 96.59 44 IAmb IAmb 03 46 14.8
comp=Z,34nm,1.2s
PDG IAMs_20 IAMs_20 04 30 18.5
comp=Z,619nm,20.0s
PDG Podgorica 96.59 44 ⇓P **P 03 46 13.7 +1.1**
PDG Podgorica 96.59 44⇓*i*P **P 03 46 13.3 +0.7**
DRME Dracevica, Mon 96.65 44⇓*i*P **P 03 46 13.0 +0.1**
KLMR Klimovskoe 96.70 21 *e*P **P 03 46 12.2 -0.5**
KLMR *e* 03 50 04.0
KLMR pmax pmax
comp=Z,93nm,1.4s
BZS Buzias 96.72 40 ⇑P **P 03 46 14.0 +0.9**
BZS Buzias 96.72 40 ⇑P **P 03 46 14.0 +0.9**
ULC Ulcinj 96.78 44⇓*i*P **P 03 46 14.6 +1.0**
IVA Berane 96.83 43⇓*i*P **P 03 46 14.7 +0.9**
DRGR 96.84 39 ⇑P **P 03 46 14.4 +0.6**
DRGR 96.84 39 ⇑P **P 03 46 14.4 +0.6**
BMR Baia Mare 96.89 38 ⇓P **P 03 46 15.0 +1.1**
BMR Baia Mare 96.89 38 ⇓P **P 03 46 15.0 +1.1**
PVY Plav 96.99 43⇓*i*P **P 03 46 15.7 +1.1**
MARR Marisel-Cluj 97.14 39 ⇑P Pdif 03 46 16.1 +0.8
MDVR Moldovita 97.16 41 ⇓P Pdif 03 46 16.1 +0.8
NRIK Noril'sk 97.19 360 P **P 03 46 14.8 0.0**
comp=Z,5.0nm,0.8s,baz=24,slow=3.0,SNR=12
NRIK LR LR 04 35 43.6
comp=Z,727nm,18.2s,baz=9.5,slow=39
comp=Z,5.0nm,0.8s
NRIK Noril'sk 97.19 360 IAmb IAmb 03 46 16.4
comp=Z,71nm,1.9s
DEV Deva 97.39 39 ⇓P **P 03 46 16.4 +0.3**
DEV Deva 97.39 39 ⇓P **P 03 46 16.4 +0.3**
CJR Cluj-Napoca 97.42 38 ⇓P Pdif 03 46 16.9 +0.5
CJR Cluj-Napoca 97.42 38 ⇓P Pdif 03 46 16.9 +0.5
YAK Yakutsk 97.43 341 LR LR 04 36 52.5
comp=Z,234nm,18.1s,baz=33,slow=40
YAK Yakutsk 97.43 341 IAMs_20 IAMs_20 04 32 13.1
comp=Z,449nm,21.0s
YAK Yakutsk 97.43 341 *e*P Pdif 03 46 16.5 +0.5
YAK *e*PP pP 03 46 20.5 -1.2
YAK *e*PPP PPP 03 52 17.3
YAK *e*S **SKSac 03 56 53.7 +1.9**
YAK *e*SP **SP 03 58 59.0 -1.0**
YAK *e*SS **SS 04 04 25.5 +9.0**
YAK *e*SSS SSS 04 08 05.4
YAK pmax pmax
comp=Z,18nm,1.3s
YAK pmax pmax
comp=N,4.0nm,1.5s
YAK pmax pmax
comp=E,4.0nm,1.7s
YAK pmax pmax
comp=Z,364nm,6.8s
YAK pmax pmax
comp=N,256nm,4.7s
YAK pmax pmax
comp=E,243nm,5.7s
YAK smax smax
comp=N,167nm,4.8s
YAK smax smax
comp=E,101nm,4.8s
YAK MLR MLR
comp=Z,371nm,25.0s
YAK MLR MLR
comp=N,204nm,23.0s
YAK MLR MLR
comp=E,508nm,28.0s
GZR Gura Zlata 97.54 40 ⇓P Pdif 03 46 17.5 +0.4
GZR Gura Zlata 97.54 40 ⇓P Pdif 03 46 17.5 +0.5
HERR Herculane 97.56 40 ⇓P **P 03 46 17.3 +0.4**
BOVS Bovan 97.68 42 ⇓P Pdif 03 46 18.0 +0.4
HORU Horodok 97.81 35 P **P 03 46 18.4 +0.4**
BURAR Bucovina Array 97.93 37 P Pdif 03 46 20.0 +1.2
BURAR Bucovina Array 97.93 37 ⇓P Pdif 03 46 19.5 +0.7
BURAR Bucovina Array 97.93 37 ⇓P Pdif 03 46 19.5 +0.7
MI29 MI29, Kamyanyy 97.95 34 P **P 03 46 18.5 -0.1**
comp=E,225nm,1.1s
KMPD K-Podol'skiy 98.17 36 P **P 03 46 19.2 -0.4**
MDB Medias 98.17 39 ⇓P Pdif 03 46 20.8 +1.1
MDB Medias 98.17 39 P Pdif 03 46 21.2 +1.5
LUBAR Lubar, Ukraine 98.17 34 P **P 03 46 19.0 -0.6**
OHR Ohrid 98.20 44 *i* P Pdif 03 46 21.7 +1.7
URZ Urewera 98.23 233 LR LR 04 20 26.6
comp=E,456nm,21.1s,baz=80,slow=29
SKO Skopje 98.25 43 *i* P Pdif 03 46 23.9 +3.8
TNR Turnu Rosu 98.34 39 ⇑P **P 03 46 20.8 +0.3**
TNR Turnu Rosu 98.34 39 ⇑P **P 03 46 20.8 +0.3**
AK21 Malin Array Si 98.39 33 P **P 03 46 20.1 -0.4**
AK20 Malin Array Si 98.39 33 P **P 03 46 20.1 -0.5**
AK19 Malin Array Si 98.41 33 P **P 03 46 20.2 -0.4**
AK22 Malin Array Si 98.42 33 P **P 03 46 20.2 -0.5**
AK18 Malin Array Si 98.44 33 P **P 03 46 20.3 -0.4**
AK17 Malin Array Si 98.45 33 P **P 03 46 19.7 -1.1**
AK16 Malin Array Si 98.49 33 P **P 03 46 20.2 -0.8**
AK04 Malin Array Si 98.49 33 P **P 03 46 20.2 -0.8**
AK14 Malin Array Si 98.51 33 P **P 03 46 20.3 -0.8**
AK11 Malin Array Si 98.51 33 P **P 03 46 20.3 -0.8**
AK03 Malin Array Si 98.52 33 P **P 03 46 20.3 -0.8**
KIEV Kiev 98.53 33 P **P 03 46 21.1 0.0**
KIEV IAmb IAmb 03 46 21.4
comp=Z,17nm,1.2s
KIEV Kiev 98.53 33 ⇓P **P 03 46 20.3 -0.8**
KIEV Kiev 98.53 33 P **P 03 46 21.1 0.0**
KIEV pmax pmax
comp=Z,17nm,1.2s
KIEV Kiev 98.53 33 P **P 03 46 20.6 -0.5**
comp=Z,85nm,2.2s
AKASG Malin Array Be 98.53 33 P **P 03 46 20.4 -0.8**
comp=Z,2.6nm,0.7s,baz=290,slow=4.1,SNR=18
AKASG LR LR 04 30 58.6
comp=Z,547nm,20.2s,baz=299,slow=36
comp=Z,2.6nm,0.7s
AKASG Malin Array Be 98.53 33 IAmb IAmb 03 46 22.7
comp=Z,24nm,1.6s
AKASG Malin Array Be 98.53 33 P **P 03 46 20.4 -0.8**
AKASG pmax pmax
comp=Z,24nm,1.7s
AKBB Malin Array Si 98.53 33 IAmb IAmb 03 46 21.4
comp=Z,21nm,1.2s
AKBB Malin Array Si 98.53 33*c*e**P P 03 46 21.1 -0.1**
AKBB pmax pmax
comp=Z,10.0nm,1.1s
AKBB Malin Array Si 98.53 33 P **P 03 46 20.7 -0.5**
PRAR RASCA 98.65 37 ⇓P **P 03 46 20.2 -1.7**
ARR Arges 98.70 39 ⇑P Pdif 03 46 23.7 +1.5
DOPR Dopca 98.86 38 ⇑P **P 03 46 22.2 -0.6**
VOIR 98.92 39 ⇑P **P 03 46 23.5 +0.3**
VOIR 98.92 39 ⇑P **P 03 46 23.5 +0.3**
BOSR Bodos 98.97 38 ⇓P Pdif 03 46 24.0 +0.7
OZUR 99.04 38 ⇓P **Pdif 03 46 24.0 +0.3**
TURR Turia 99.20 38 ⇓P **Pdif 03 46 25.2 +0.9**
VAY Valandovo 99.30 43 *i* P **Pdif 03 46 24.1 -0.7**
OBN Obninsk 99.41 27 LR LR 04 29 42.3
comp=Z,782nm,21.5s,baz=238,slow=34
OBN Obninsk 99.41 27 ⇑P **Pdif 03 46 25.4 +0.5**
OBN Obninsk 99.41 27*de*P **Pdif 03 46 24.5 -0.5**
OBN *e* 03 50 28.6
OBN *e*S **SKSac 03 57 03.0 +1.0**
OBN *e*SS **SS 04 04 50.6 +6.0**
OBN pmax pmax
comp=Z,50nm,1.3s
OBN MLR MLR
comp=Z,801nm,22.0s
OBN Obninsk 99.41 27 P **Pdif 03 46 25.4 +0.5**
comp=Z,63nm,2.0s
COVR Voineasa-Covas 99.42 38 ⇑P **Pdif 03 46 26.0 +0.6**
MLR Muntele Rosu 99.44 39 LR LR 04 29 58.1
comp=Z,443nm,21.5s,baz=278,slow=35
MLR Muntele Rosu 99.44 39 ⇑P **Pdif 03 46 27.1 +1.5**
MLR Muntele Rosu 99.44 39 ⇑P **Pdif 03 46 27.1 +1.5**
MLR Muntele Rosu 99.44 39 P **Pdif 03 46 25.6 0.0**
comp=Z,743nmcomp=Z,44nm,1.4s
MOS Moscow 99.45 26 *e*P **Pdif 03 46 23.9 -1.2**
MOS *e* 03 50 27.3
MOS *e*PPP PPP 03 52 34.8
MOS *e*S **SKSac 03 56 59.5 -2.7**
MOS *e*SS **SS 04 04 48.1 +3.0**
MOS pmax pmax
comp=Z,111nm,1.7s
MOS pmax pmax
comp=Z,300nm,2.0s
SORM Soroca 99.46 35 ⇑P **Pdif 03 46 25.6 +0.2**
SORM Soroca 99.46 35 ⇑P **Pdif 03 46 25.6 +0.2**
SORM Soroca 99.46 35 P **Pdif 03 46 25.2 -0.2**
comp=Z,23nm,1.2s
TYV Tymovskoe 99.52 328 *e*P **Pdif 03 46 26.3 +0.7**
TYV pmax pmax
comp=Z,400nm,3.7s
TYV pmax pmax
comp=Z,10.0nm,1.0s
PLVB Pleven 99.66 41 ⇓P **Pdif 03 46 26.4 0.0**
COPA Copaceanca 99.67 40 ⇑P **Pdif 03 46 26.9 +0.5**
PLOR Plostina 99.68 38 ⇑P **Pdif 03 46 26.3 -0.2**
PLOR Plostina 99.68 38 ⇑P **Pdif 03 46 26.3 -0.2**
NEHR Nehoiu 99.69 39 ⇑P **Pdif 03 46 26.8 +0.3**
VRI Vrincioaia 99.72 38 ⇑P **Pdif 03 46 22.5 -4.1**
VRI Vrincioaia 99.72 38 ⇑P **Pdif 03 46 22.5 -4.1**
GHRR 100.02 38 ⇓P **Pdif 03 46 28.4 +0.5**
VLDR Vladesti 100.54 37 ⇓P **Pdif 03 46 18.9 -11**
ELND Elena 100.69 41 ⇓P **Pdif 03 46 30.7 -0.3**
CFR Carcaliu 100.92 38 ⇓P **Pdif 03 46 31.6 -0.3**
CFR Carcaliu 100.92 38 P **Pdif 03 46 31.8 -0.1**
TLCR 101.33 38 ⇓P **Pdif 03 46 33.8 +0.1**
TLCR 101.33 38 ⇓P **Pdif 03 46 33.8 +0.1**
TIRR Tirgusor 101.47 39 P **Pdif 03 46 34.4 0.0**
comp=Z,21nm,1.4s
YSS Yuzhno-Sakhali 101.72 325 *e*P **Pdif 03 46 40.3 +4.9**
YSS *e*SS SS 04 05 22.4 +5.2
LPSR Galich'ya Gora 102.12 28 *e*P **Pdif 03 46 37.8 +0.7**
LPSR pmax pmax
comp=Z,35nm,1.1s
VORR Voronezh 102.88 28 *e*P **Pdif 03 46 41.0 +0.5**
VORR pmax pmax
comp=Z,8.0nm,0.5s
VSR Storozhevoye 103.17 29 *e*P **Pdif 03 46 40.5 -1.3**
VSR pmax pmax
comp=Z,8.0nm,1.1s
VORD Divnogorie 103.39 29 *e*P **Pdif 03 46 40.1 -2.7**
VORD pmax pmax
comp=Z,6.0nm,1.1s
VRH Novokhopyorsk 104.34 27 *e*P **Pdif 03 46 47.3 +0.3**
VRH pmax pmax
comp=Z,12nm,1.0s
DZM Mont Dzumac 104.63 250 *e*LR LR 04 21 16.2

comp=Z,1μm,25.9s
KARP Karpathos 105.22 47 IAMs_20 IAMs_20 04 36 41.9
comp=Z,492nm,21.0s
ISP Isparta 106.37 43 IAMs_20 IAMs_20 04 37 16.6
comp=Z,409nm,19.0s
HEH HeiHe 107.13 334 Pdif Pdif 03 46 59.8 +0.3
HEH PP PP 03 51 29.8 +4.4
HEH AMB AMB
comp=Z,350nm,8.5s
HEH LR LR
comp=Z,450nm,21.5s
HEH LR LR
comp=Z,510nm,22.7s
HEH LR LR
comp=Z,670nm,18.3s
BRTR Keskin Array B 107.33 40 Pdiff Pdif 03 47 01.1 +0.2
comp=Z,0.4nm,0.8s,baz=336,slow=2.7,SNR=3.9
BRTR PKiKP PKiKP 03 51 09.3 -0.3
comp=Z,1.0nm,0.9s,baz=336,slow=2.7,SNR=4.2
BRTR PKKPbc PKKPbc 04 02 25.0 -1.2
comp=Z,0.6nm,0.8s,baz=163,slow=5.2,SNR=6.0
CSS Mathiatis 109.82 45 IAMs_20 IAMs_20 04 41 10.7
comp=Z,347nm,20.0s
KIV Kislovodsk 109.87 32 IAMs_20 IAMs_20 04 37 26.0
comp=Z,390nm,21.0s
ARPR Arapgir-MALATY 110.62 39 IAMs_20 IAMs_20 04 39 18.5
comp=Z,337nm,19.0s
HIA Hailar 110.96 338 IAMs_20 IAMs_20 04 46 07.9
comp=Z,548nm,22.0s
BVAR Borovoye Array 112.04 11 Pdiff Pdif 03 47 17.9 -3.3
comp=Z,0.7nm,0.9s,baz=316,slow=6.2,SNR=3.9
BVAR PKiKP PKiKP 03 51 18.5 +0.7
comp=Z,1.2nm,0.6s,baz=274,slow=2.4,SNR=4.5
BVAR PP PP 03 51 55.7 -5.0
comp=Z,0.6nm,0.6s,baz=344,slow=4.7,SNR=3.5
ZALV Zalesovo Beam 112.61 1 Pdiff Pdif 03 47 28.0 +4.2
comp=Z,0.5nm,0.6s,baz=333,slow=5.0,SNR=3.7
ZALV PKiKP PKiKP 03 51 18.0 -0.9
comp=Z,1.7nm,0.7s,baz=357,slow=2.0,SNR=6.7
ZALV PP PP 03 52 04.7 +0.1
comp=Z,3.5nm,0.7s,baz=345,slow=11,SNR=14
ZALV PKKPbc PKKPbc 04 02 01.3 -8.1
comp=Z,0.4nm,0.5s,baz=204,slow=3.2,SNR=3.9
ZALV Zalesovo Beam 112.61 1 *i* PKIKP PKiKP 03 51 18.0 -0.9
MAK Makhachkala 113.03 30 *i* P Pdif 03 47 18.8 -7.0
MAK *e* 03 52 05.0
MAK *e*PPP PPP 03 54 32.0
MAK *e* 03 57 54.8
MAK *e*PS PS 04 01 41.5 -2.4
MAK *e*SS SS 04 07 46.9 -3.3
MAK pmax pmax
comp=Z,16nm,0.3s
GNI Garni 113.61 34 IAMs_20 IAMs_20 04 40 29.4
comp=Z,374nm,18.0s
KURK Kurchatov 115.45 6 PKiKP PKiKP 03 51 24.8 +0.4
KURK Kurchatov 115.45 6*c* *i*PKIKP PKPdf 03 51 25.2 +0.8
KURK pmax pmax
comp=Z,13nm,2.5s
KURK Kurchatov 115.45 6 P PKiKP 03 51 24.4 0.0
KURBB Kurchatov Arra 115.54 6 PKP PKPdf 03 51 25.0 +0.4
comp=Z,3.5nm,0.8s,baz=348,slow=2.1,SNR=32
KURBB PP PP 03 52 23.0 -2.4
comp=Z,3.7nm,1.0s,baz=350,slow=6.4,SNR=9.5
KURBB PKKPbc PKKPbc 04 01 56.8 -2.6
comp=Z,1.5nm,0.8s,baz=188,slow=3.4,SNR=12
ULN Ulaanbaatar 116.16 345 IAMs_20 IAMs_20 04 49 09.9
comp=Z,435nm,20.0s
ULN Ulaanbaatar 116.16 345*c* *i*PKIKP PKPdf 03 51 27.2 +1.1
ULN pmax pmax
comp=Z,5.0nm,1.7s
KSRS Korea Array 116.22 324 PKP PKiKP 03 51 26.5 +0.2
comp=Z,4.0nm,0.8s,baz=355,slow=1.5,SNR=19
KSAR Wonju Array Be 116.25 324 PKiKP 03 51 26.2 -0.1
KSAR Wonju Array Be 116.25 324 PKIKP PKiKP 03 51 26.2 -0.1
SONM Songino Array 116.35 346 PKP PKiKP 03 51 26.7 +0.3
comp=Z,2.6nm,0.8s,baz=289,slow=0.6,SNR=14
SONM PP PP 03 52 31.9 +0.5
comp=Z,5.5nm,1.1s,baz=19,slow=5.3,SNR=8.1
SONM PKKPbc PKKPbc 04 01 54.3 -2.4
comp=Z,1.4nm,0.7s,baz=198,slow=3.5,SNR=9.9
XLT XiLinHaoTe 116.83 337 *e*PKP PKPdf 03 51 27.1 -0.3
XLT PP PP 03 52 37.1 +2.2
XLT LR LR
comp=Z,410nm,17.8s
XLT LR LR
comp=Z,220nm,19.3s
GRTLG Ghanzi 117.21 107 ||*i*P PKiKP 03 51 38.6 +10
DL2 Dalian 118.47 330 *e*PKP PKPdf 03 51 27.1 -3.5
DL2 *e*PP PP 03 52 45.4 -1.0
DL2 *e*SS SS 04 09 02.4 +0.8
DL2 AMB AMB
comp=Z,320nm,5.7s
DL2 LR LR
comp=Z,230nm,23.7s
DL2 LR LR
comp=Z,640nm,22.7s
DL2 LR LR
comp=Z,580nm,21.5s
ZSN Zaisan 119.11 2 *e*PKIKP PKiKP 03 51 32.3 +0.7
ZSN Zaisan 119.11 2 *e*PKP PKiKP 03 51 32.4 +0.7
MAKZ Makanchi 119.61 4 PKPdf 03 51 31.9 -0.7
MAKZ Makanchi 119.61 4 PKIKP PKPdf 03 51 31.9 -0.7
MKAR Makanchi Array 119.65 4 PKP PKPdf 03 51 32.3 -0.4
comp=Z,3.8nm,0.8s,baz=359,slow=2.1,SNR=32
MKAR PP PP 03 52 53.5 -0.6
comp=Z,5.4nm,0.9s,baz=23,slow=6.6,SNR=9.8
MKAR PKKPbc PKKPbc 04 01 42.4 -2.3
comp=Z,0.9nm,0.7s,baz=145,slow=5.4,SNR=9.2
MKAR Makanchi Array 119.65 4 PKPdf 03 51 32.5 -0.2
MKAR Makanchi Array 119.65 4 PKIKP PKPdf 03 51 32.5 -0.2
BJI2 Beijing 120.06 334 PKP PKPdf 03 51 32.7 -0.9
BJI2 PP PP 03 53 00.8 +3.6
BJI2 AMB AMB
comp=Z,170nm,7.2s
BJI2 LR LR
comp=Z,130nm,23.3s
BJI2 LR LR
comp=Z,170nm,22.6s
BJI2 LR LR
comp=Z,240nm,22.6s
BJT Baijiatuau 120.06 334 IAMs_20 IAMs_20 04 51 20.5
comp=Z,345nm,22.0s
BTLS Baital 120.38 11 *e*PKIKP PKiKP 03 51 34.6 +0.4
BTLS Baital 120.38 11 *e*PKP PKiKP 03 51 34.7 +0.4
TDK Taldyqorghan 121.07 7 *e*PKIKP PKiKP 03 51 36.1 +0.5
TDK Taldyqorghan 121.07 7 *e*PKP PKiKP 03 51 36.1 +0.5
BOSA Boshof 121.13 115 PKP PKPdf 03 51 36.3 +0.2
comp=Z,10nm,0.8s,baz=238,slow=0.6,SNR=12
BOSA Boshof 121.13 115 PKIKP PKPdf 03 51 36.4 +0.3
HHC Hu-ho-hao-te 121.14 338 *e*PKP PKiKP 03 51 36.4 +0.4
HHC PP PP 03 53 08.1 +3.4
HHC LR LR
comp=Z,410nm,23.7s
HHC LR LR
comp=Z,410nm,23.1s
HHC LR LR
comp=Z,450nm,23.7s
BRLS Borolday 121.41 15 *e*PKIKP PKiKP 03 51 36.9 +0.6
BRLS Borolday 121.41 15 *e*PKP PKiKP 03 51 37.0 +0.6
LPHEP Lephephe 121.62 109 *i* P PKiKP 03 51 47.1 +10
BTO2 Baotou 121.83 340 *e*PKP PKPdf 03 51 37.3 +0.1
BTO2 LR LR
comp=Z,960nm,18.8s
BTO2 LR LR
comp=Z,560nm,12.3s
BTO2 LR LR
comp=Z,2μm,19.8s
CHM Chimkent 122.02 15 *e*PKIKP PKPdf 03 51 37.7 +0.4
CHM Chimkent 122.02 15 *e*PKP PKPdf 03 51 37.8 +0.4
USP Ospenovka 122.18 11 P PKiKP 03 51 38.7 +0.9
SNR=12
IUG luzhnay 122.29 15 *e*PKIKP PKPdf 03 51 38.4 +0.4
IUG *e* 03 53 13.3
IUG luzhnay 122.29 15 *e*PKP PKPdf 03 51 38.5 +0.4
IUG *e*PP PP 03 53 13.4 +1.1
EKS2 Erkin-Say 122.63 12 P PKiKP 03 51 39.9 +1.0
SNR=6.9
AAA Alma-Ata 122.64 9 *e*PKIKP PKiKP 03 51 39.1 +0.3
AAA Alma-Ata 122.64 9 *e*PKP PKiKP 03 51 39.1 +0.3
MDOK Medeo 122.70 9 *e*PKIKP PKPdf 03 51 39.2 +0.4
MDOK *e* 03 53 16.0
MDOK Medeo 122.70 9 *e*PKP PKPdf 03 51 39.2 +0.4
MDOK *e*PP PP 03 53 16.1 +1.0
TKM2 Tokmak 2 122.71 10 P PKiKP 03 51 39.7 +0.6
SNR=6.0

WMQ Urumqi 122.77 359 PKP PKPdf 03 51 39.2 +0.4
WMQ sPKP sPKPdf 03 51 47.2 +0.6
WMQ AMB AMB
comp=Z,590nm,4.9s
WMQ LR LR
comp=Z,560nm,20.1s
WMQ LR LR
comp=Z,730nm,24.3s
WMQ LR LR
comp=Z,960nm,24.3s
TIA Tai'an 122.78 331 PKP PKPdf 03 51 37.2 -1.8
TIA LR LR
comp=Z,230nm,24.4s
TIA LR LR
comp=Z,330nm,24.5s
TIA LR LR
comp=Z,470nm,24.5s
AAK Ala-Archa 122.79 11 P PKiKP 03 51 40.1 +0.9
SNR=5.6
AAK Ala-Archa 122.79 11*c* *i*PKIKP PKiKP 03 51 40.4 +1.2
AAK pmax pmax
comp=Z,11nm,1.7s
AAK Ala-Archa 122.79 11 P PKiKP 03 51 39.7 +0.4
TNSS Tian-Shan 122.81 9 *e*PKIKP PKPdf 03 51 39.4 +0.1
TNSS Tian-Shan 122.81 9 *e*PKP PKPdf 03 51 39.4 +0.1
MBAR Mbarara 122.86 82*c* *i*PKIKP PKiKP 03 51 41.4 +1.3
MBAR pmax pmax
comp=Z,11nm,1.7s
MBAR Mbarara 122.86 82 P PKiKP 03 51 41.1 +1.0
HNS HongShan 122.88 334 ||PKP PKPdf 03 51 39.5 +0.4
HNS PP PP 03 53 20.3 +3.9
HNS AMB AMB
comp=Z,40nm,9.4s
HNS LR LR
comp=Z,470nm,21.6s
HNS LR LR
comp=Z,320nm,21.1s
HNS LR LR
comp=Z,410nm,24.1s
BROLN Tlhalogang 122.88 106 *i* P PKPdf 03 51 39.8 +0.2
UZB Uzynbulak 122.97 7 *e*PKIKP PKPdf 03 51 39.8 +0.5
UZB Uzynbulak 122.97 7 *e*PKP PKPdf 03 51 39.8 +0.5
SATY Saty 122.99 7 *e*PKIKP PKPdf 03 51 39.7 +0.4
SATY *e* 03 53 18.1
SATY Saty 122.99 7 *e*PKP PKPdf 03 51 39.8 +0.4
SATY *e*PP PP 03 53 18.1 +1.1
SHLS Shalkode 123.02 7 *e*PKIKP PKPdf 03 51 39.9 +0.5
SHLS *e* 03 53 18.5
SHLS Shalkode 123.02 7 *e*PKP PKPdf 03 51 39.9 +0.5
SHLS *e*PP PP 03 53 18.6 +1.4
CTAO Charters Tower 123.16 255 IAMs_20 IAMs_20 04 32 14.5
comp=Z,457nm,21.0s
UCH Uchtor 123.19 11 P PKiKP 03 51 41.6 +1.2
SNR=10
LSZ Lusaka 123.21 99 P PKiKP 03 51 41.3 +0.7
MAW Mawson 123.86 169 PKP PKPdf 03 51 40.1 +0.2
comp=Z,8.5nm,0.8s,baz=103,slow=5.0,SNR=3.1
RAYN Ar Rayn 125.11 48 IAMs_20 IAMs_20 04 45 42.0
comp=Z,356nm,22.0s
NJ2 Nanjing 125.21 327 *e*PKP PKiKP 03 51 44.9 +0.8
GTA2 Gaotai 125.77 348 *e*PKP PKPdf 03 51 45.2 +0.4
GTA2 LR LR
comp=Z,430nm,24.4s
GTA2 LR LR
comp=Z,380nm,24.3s
GTA2 LR LR
comp=Z,780nm,24.3s
LODK Lodwar 126.06 75 PKiKP 03 51 47.5 +1.1
LODK Lodwar 126.06 75 P PKiKP 03 51 47.4 +1.1
LYN LuoYang 126.25 334 *e*PKP PKPdf 03 51 45.7 0.0
LYN PP PP 03 53 40.8 +1.7
LYN AMB AMB
comp=Z,800nm,8.2s
LYN LR LR
comp=Z,440nm,22.7s
LYN LR LR
comp=Z,380nm,22.7s
LYN LR LR
comp=Z,750nm,25.4s
KSH2 Kashi 126.37 11 PKP PKiKP 03 51 47.1 +0.7
KSH2 PP PP 03 53 42.5 +2.8
KSH2 LR LR
comp=Z,550nm,22.3s
KSH2 LR LR
comp=Z,360nm,14.4s
KSH2 LR LR
comp=Z,1μm,22.3s
STKA Stephens Creek 127.04 240 PKP PKPdf 03 51 47.1 0.0
comp=Z,15nm,0.8s,baz=35,slow=2.1,SNR=19
LZH Lanzhou 127.99 343 *e*PKP PKiKP 03 51 50.0 +0.3
LZH AMB AMB
comp=Z,210nm,5.5s
LZH LR LR
comp=Z,520nm,21.3s
LZH LR LR
comp=Z,480nm,19.9s
LZH LR LR
comp=Z,840nm,22.0s
XAN Xi'an 128.14 337 ||PKP PKPdf 03 51 49.2 -0.1
XAN PP PP 03 53 54.1 +2.6
XAN SKS SKSdf 03 59 01.7 +1.7
XAN AMB AMB
comp=Z,430nm,10.0s
XAN LR LR
comp=Z,560nm,24.1s
XAN LR LR
comp=Z,600nm,24.0s
XAN LR LR
comp=Z,580nm,22.0s
LZDM Lanzhou Array 128.15 343 PKP PKiKP 03 51 50.6 +0.3
comp=Z,6.3nm,0.7s,baz=340,slow=2.2,SNR=18
WHN Wuhan 128.73 329 PKP PKPdf 03 51 50.9 +0.4
WHN PP PP 03 53 58.0 +2.4
WHN LR LR
comp=Z,990nm,19.3s
KBL Kabul 129.10 19 P PKPdf 03 51 52.1 +0.7
JRN Qarnain Island 129.19 41 P PKPdf 03 51 50.1 -1.4
ATD Arta Tunnel 129.58 62 IAMs_20 IAMs_20 04 48 05.8
comp=Z,401nm,20.0s
GOMU GeErMu 129.83 352 PKP PKPdf 03 51 52.6 -0.3
GOMU LR LR
comp=Z,400nm,21.1s
GOMU LR LR
comp=Z,190nm,20.9s
GOMU LR LR
comp=Z,620nm,23.2s
GHWR Ruwais 129.89 42 P PKPdf 03 51 51.9 -0.9
SHME Shamm 130.40 37 P PKPdf 03 51 51.7 -2.0
UMQ Umm Al-Quwin 130.50 38 P PKiKP 03 51 54.9 +0.1
BANOM Banah 130.59 37 P PKPdf 03 51 53.8 -0.4
MZWR Madinat Zayed 130.68 41 P PKPdf 03 51 54.6 +0.3
AJN Ajban 130.80 40 P PKPdf 03 51 55.0 +0.4
MASF Masafi 130.92 38 P PKiKP 03 51 55.0 +0.2
SNR=13
MZR Muzera 130.96 42 P PKiKP 03 51 55.9 0.0
SNR=5.9
ASUD Al Ashush, Dub 130.97 39 P PKiKP 03 51 55.8 0.0
SNR=8.1
MDH Madha 131.05 38 P PKPdf 03 51 54.7 -0.4
SNR=6.1
ENH Enshi 131.21 334 IAMs_20 IAMs_20 04 58 14.4
comp=Z,337nm,20.0s
UOSS Minazif 131.26 38 IAMs_20 IAMs_20 04 57 55.1
comp=Z,276nm,20.0s
UOSS Minazif 131.26 38 P PKPdf 03 51 55.7 +0.2
HATD Hatta, Dubai 131.31 38 P PKPdf 03 51 55.6 0.0
SNR=7.7
ASHO Ashiyiah 131.37 39 P PKPdf 03 51 56.1 +0.4
SNR=5.7
ALNE Al Ain 131.65 39 P PKPdf 03 51 57.0 +0.8
SNR=7.7
SOHO SOHO 132.07 39 P PKPdf 03 51 57.3 +0.4
SMDO Samad 133.79 38 P PKiKP 03 52 01.6 -0.1
SNR=6.1
WRAB Tennant Creek 134.34 255*c* *i*PKIKP PKPdf 03 52 01.9 +0.6
WRAB pmax pmax
comp=Z,26nm,1.7s
WRA Warramunga Arr 134.35 255 PKhKP PKPpre 03 51 49.8
comp=Z,1.0nm,0.7s,baz=92,slow=2.8,SNR=7.2
WRA PKP PKPdf 03 52 01.3 -0.1
comp=Z,4.9nm,0.7s,baz=90,slow=2.8,SNR=21
DOK Doka 134.41 46 P PKPdf 03 52 01.2 -0.3
SMLA Simla 134.45 12 *e*P PKPdf 03 52 01.8 +0.5
ASAR Alice Springs 134.62 250 PKhKP PKPpre 03 51 47.5
comp=Z,1.3nm,0.8s,baz=99,slow=3.0,SNR=7.9

ASAR PKP PKPdf 03 52 01.5 -0.3
comp=Z,4.4nm,0.8s,baz=111,slow=2.0,SNR=15
ABTO Aybut 134.65 48 P PKPdf 03 52 02.6 +0.5
GULI GuiLin 135.04 329 ||PKP PKiKP 03 52 09.7 +5.7
GULI PP PP 03 54 37.7 +1.5
GULI GuiLin 135.04 329 SS SS 04 12 35.9 +7.4
GULI LR LR
comp=N,220nm,23.9s
GULI LR LR
comp=E,340nm,23.9s
GULI LR LR
comp=Z,330nm,23.9s
MHTO MHTO 135.28 40 P PKPdf 03 52 03.5 +0.4
JLN Jalan Bani Buh 135.29 38 P PKPdf 03 52 03.2 +0.1
DDI Dehra Dun 135.41 11 *e*P PKPdf 03 52 02.1 -1.1
GYA Guiyang 135.74 334 ↑PKP PKPdf 03 52 04.5 +0.5
GYA PP PP 03 54 45.8 +5.2
GYA AMB AMB
comp=Z,400nm,8.8s
DQM DQM 135.79 42 P PKPdf 03 52 04.7 +0.6
LSA Lhasa 136.68 355 IAMs_20 IAMs_20 05 02 07.6
comp=Z,371nm,20.0s
PZH PanZhiHua 137.54 340 PKP PKPdf 03 52 05.4 -2.0
AAI Ambon 138.12 280 P PKiKP 03 52 15.1 +4.5
KMI2 Kunming 138.44 338 ||PKP PKPdf 03 52 09.9 +0.7
KMI2 PP PP 03 54 58.7 +1.1
KMI2 AMB AMB
comp=Z,340nm,7.2s
KMI2 LR LR
comp=Z,480nm,22.2s
KMI2 LR LR
comp=Z,200nm,14.5s
KMI2 LR LR
comp=Z,600nm,24.5s
BHUJ Bhuj 139.56 25 *e*P PKPdf 03 52 10.7 -0.2
SANI Sanana 139.73 283 P PKiKP 03 52 15.0 +1.1
TNCH TengChong 139.90 344 PKP PKPdf 03 52 12.4 +0.6
TNCH PP PP 03 55 07.5 +1.1
TNCH AMB AMB
comp=Z,450nm,5.7s
TNCH LR LR
comp=Z,350nm,25.8s
TNCH LR LR
comp=Z,320nm,26.2s
TNCH LR LR
comp=Z,720nm,26.4s
QIZ Qiongzhong 140.44 325 PKP PKPdf 03 52 10.3 -2.3
QIZ PP PP 03 55 10.7 +0.6
QIZ SS SS 04 13 36.9 +3.9
QIZ LR LR
comp=Z,200nm,13.9s
QIZ LR LR
comp=Z,260nm,19.8s
QIZ LR LR
comp=Z,350nm,28.4s
SHL Shillong 140.69 353 *e*P PKPdf 03 52 12.4 -0.8
VOI Vohitsoka 140.97 108 P PKPdf 03 52 13.4 -0.3
MORE Moreh 141.63 349 IAMs_20 IAMs_20 05 00 27.8
comp=Z,463nm,22.0s
SOEI Soe 143.30 272 PKP PKPdf 03 52 17.1 -0.9
SOEI Soe 143.30 272 P PKPbc 03 52 16.1 +1.0
APSI Ampana 143.41 287 PKP PKPbc 03 52 15.8 +0.6
SBV Sambava 144.01 94 P PKPdf 03 52 18.5 -0.5
MPSI Mapaga 144.53 290 PKP PKPab 03 52 18.8 +0.4
MMRI Maumere 145.06 274 P PKPbc 03 52 14.8 -5.5
MMRI Maumere 145.06 274 PKP PKPbc 03 52 19.1 -1.2
PCI Palu 145.08 289 P PKPbc 03 52 20.0 -0.5
POO Poona 145.47 22 *e*P PKPbc 03 52 19.4 -2.1
CHTO Chiang Mai 145.61 340 PKPbc 03 52 22.4 +0.4
CHTO IAMs_20 IAMs_20 05 05 27.2
comp=Z,292nm,21.0s
CHTO Chiang Mai 145.61 340 PKIKP PKPbc 03 52 22.4 +0.4
CHTO Chiang Mai 145.61 340 P PKPdf 03 52 22.2 +0.4
CHTO Chiang Mai 145.61 340 PKP PKPdf 03 52 22.0 +0.2
EDFI Ende, Flores 145.62 274 P PKPdf 03 52 17.8 -4.2
TTSI Tana Toraja 145.88 285 P PKPab 03 52 23.8 +0.4
TTSI Tana Toraja 145.88 285 PKP PKPab 03 52 24.0 +0.6
CMAR Chiang Mai Arr 145.94 339 PKPbc PKPab 03 52 24.1 +0.6
comp=Z,76nm,0.8s,baz=342,slow=4.0,SNR=332
CMAR Chiang Mai Arr 145.94 339 PKPab 03 52 23.9 +0.5
BSSI Bau Bau, Buton 146.17 279 PKP PKPbc 03 52 24.0 +0.1
BSSI Bau Bau, Buton 146.17 279 P PKPdf 03 52 16.5 -6.4
SPSI Sidrap Palu 146.22 284 P PKPdf 03 52 22.8 -0.1
SPSI Sidrap Palu 146.22 284 PKP PKPdf 03 52 23.5 +0.6
NWAO Narrogin (SRO) 146.44 230 PKPdf 03 52 23.7 +0.9
NWAO Narrogin (SRO) 146.44 230 PKIKP PKPdf 03 52 23.7 +0.9
NWAO Narrogin (SRO) 146.44 230 P PKPdf 03 52 23.3 +0.5
KAPI Kappang 146.56 282 PKPab 03 52 26.2 +0.2
KAPI Kappang 146.56 282 PKP2 PKPab 03 52 26.2 +0.2
KAPI Kappang 146.56 282 P PKPbc 03 52 25.5 +0.5
KAPI Kappang 146.56 282 P PKPbc 03 52 24.8 -0.2
KAPI Kappang 146.56 282 PKP PKPbc 03 52 25.3 +0.3
MMSI Mamuju 146.60 286 PKP PKPdf 03 52 23.9 +0.3
MMSI Mamuju 146.60 286 P PKiKP 03 52 31.1 +3.1
PMSI Majene 146.88 285 PKP PKPbc 03 52 25.8 -0.2
MKS Makassar 146.89 282 P PKPdf 03 52 23.3 -0.8
BASI Baing, Sumba 146.96 272 P PKPbc 03 52 27.2 +1.1
WSI Waingapu 147.14 273 P PKPbc 03 52 27.5 +0.9
MSEY Mahe Island 147.68 77 P PKPdf 03 52 25.2 -0.2
MSEY P PKPbc 03 52 25.7 -2.5
PSA00 Pilbara Seismi 147.75 251 PKPbc 03 52 27.8 +0.3
MBWA Marble Bar 147.92 252 PKPdf 03 52 26.9 +1.4
MBWA Marble Bar 147.92 252 P PKPdf 03 52 26.4 +0.9
HYB Hyderabad 147.99 15 *e*PKPbc PKPbc 03 52 29.0 +0.1
HYB *ep*PKPbc pPKPdf 03 52 32.6 +0.9
WBSI Waikabubak, Su 148.01 274 P PKPbc 03 52 29.2 +0.1
GOA Goa 148.22 25 *e*P PKPdf 03 52 25.1 -1.0
VIS Vishakhapatnam 148.58 7 *e*P PKPdf 03 52 26.5 -0.2
DBNI Kabupaten Domp 148.83 276 P PKPdf 03 52 26.9 -0.4
PLAI Plampang 149.42 276 P PKPbc 03 52 31.6 -1.0
KHKI Kahang-Kahang 151.41 278 PKP PKPdf 03 52 31.3 0.0
MDRS Chennai 152.59 14 *e*P PKPdf 03 52 32.7 -0.3
ABJI Asem Bagus 152.60 280 PKP PKPdf 03 52 33.5 +0.4
KMMI Kalianget 152.66 281 PKP PKPdf 03 52 33.5 +0.3
DGPR DIGLIPUR 152.66 347 *e*P PKPdf 03 52 31.6 -1.6
BLJI Banyuglugur 153.20 280 PKP PKPdf 03 52 34.2 +0.3
GMJI Gumukmas 153.47 279 PKP PKPdf 03 52 34.3 0.0
PBLA Port Blair 154.18 347 *e*P PKPdf 03 52 34.5 -0.9
TRD Trivandrum 155.81 25 *e*P PKPdf 03 52 34.8 -2.8
PDSI Padang 161.57 312 PKP PKPdf 03 52 43.8 -0.7
MASI Maura Aman, Be 161.63 303 PKP PKPdf 03 52 43.9 -0.7

CATAC ***02*** *03:53:19.8±0.8, 14°N±4°×9°3W±°, h6km±6km, M3.7/10, MLv3.7/10, Error ellipse: s-maj=8.6km s-min=5.4km az=27.0, confirmed*
MEX ***02*** *03:53:22.9±0.8, 13°.70N×93°.15W, h8km±35km, MD4.1*
GCG ***02*** *03:53:22.1±1.2, 13°.62N×92°.90W, h19km, MD4.1, ML4.2, Presumed earthquake*

ISC 02 03:53:17.4±2.0, 13°.70N±0°.08×93°.16W±0°.04, h12km±10km, n40, σ2s16/55, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
THIG		1.48	36	*e*S	Sg	03 54 06.9	+1.8
SMCA	Catarina	1.56	42	*e*P	Pg	03 53 47.3	0.0
RTAL	Retalhuleu	1.64	60	P	Pb	03 53 48.0	+0.5
RTAL				S	Sg	03 54 09.1	-1.0
PATR	El Naranjo	1.67	32	*e*P	Pb	03 53 48.4	+0.2
PATR				*e*S	Sg	03 54 09.2	-2.0
CHUJ	Union Juarez	1.72	36	*e*P	Pb	03 53 49.3	+0.2
CHUJ				*e*S	Sg	03 54 11.1	-1.7
PAVE	Pavencul	1.76	32	*e*P	Pb	03 53 49.9	+0.1
PAVE				*e*S	Sb	03 54 10.7	-1.3
STG2	El Palmar, Qui	1.88	67	*i* P	Pn	03 53 50.0	+0.6
STG5	El Palmar, Qui	1.89	68	*i* P	Pn	03 53 50.0	+0.4
STG8	El Palmar, Qui	1.90	67	*i* P	Pn	03 53 50.6	+0.7
QUEO	Labor Ovalle	1.97	54	*i* P	Pb	03 53 53.5	+0.1
PCIG		2.00	358	*e*P	Pb	03 53 53.8	+0.2
PCIG				*e*S	Sb	03 54 17.2	-1.3
HUEH	Huehuetenango	2.27	45	P	Pb	03 53 58.1	-0.4
ESSG	Sabana Grande	2.36	73	*i* P	Pn	03 53 57.0	+1.1
FG16	Alotenango, Sa	2.63	77	IAML		03 54 41.6	
	comp=N,4μm,0.5s						
CARR	Arriaga	2.64	344	*e*P	Pb	03 54 03.8	-0.8
CARR				*i* S	Sb	03 54 34.1	-2.9
CCIG	Comitan	2.75	21	*e*P	Pb	03 54 07.5	+0.8
CCIG				*e*S	Sb	03 54 39.9	-0.5
CCIG	Comitan	2.75	21	P	Pb	03 54 06.8	+0.2
CCIG	Comitan	2.75	21	*e*P	Pb	03 54 06.9	+0.3
APG	El Apazote	2.91	63	*e*P	Pn	03 54 06.4	+2.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FAME	Alcaldia de Sa	3.06	87	P	Pn	03 54 08.3	+2.8
FAME				S	Sn	03 54 40.5	-1.5
TGIG		3.06	1	eP	Pb	03 54 10.4	-1.4
TGIG				eS	Sn	03 54 44.5	+2.2
TGIG		3.06	1	i P	Pb	03 54 10.5	-1.4
NUBE	Las Nubes	3.29	86	P	Pn	03 54 10.3	+1.5
NUBE				S	Sn	03 54 46.4	-1.5
NUBE	Las Nubes	3.29	86	i P	Pn	03 54 09.9	+1.1
HUIG	Huatulco	3.52	306	eP	Pn	03 54 15.2	+3.3
HUIG				eS	Sn	03 54 51.4	-2.1
JAYA	Jayaque - finc	3.60	90	P	Pn	03 54 14.6	+1.4
JAYA				S	Sn	03 54 54.7	-1.0
UXUV	UXUV	3.72	345	eP	Pb	03 54 20.3	-2.8
UXUV				eS	Sb	03 55 03.4	-4.9
PMON	Piamonte	3.73	89	P	Pn	03 54 17.2	+2.3
CMIG	Matias Romero	3.76	334	eP	Pn	03 54 19.6	+4.3
CMIG				eS	Sn	03 55 00.2	+0.7
PEIG	Puerto Escondi	4.49	301	eP	Pn	03 54 28.9	+3.7
PEIG				eS	Sn	03 55 14.5	-2.9
NEUV	Arroyo Zacate	4.74	328	eP	Pn	03 54 29.9	+1.2
YOIG	Yosondua	5.27	307	eP	Pn	03 54 42.9	+6.6
YOIG				eS	Sn	03 55 36.9	-0.3
PNIG	Pinotepa	5.50	300	eP	Pn	03 54 44.5	+5.4
PNIG				eS	Sn	03 55 36.9	-5.4
TXIG	Tlaxiaco	5.68	309	eP	Pn	03 54 47.3	+5.4
TXIG				eS	Sn	03 55 47.0	-0.2
TOIG	Toxpalan	5.77	320	eP	Pn	03 54 43.8	+0.9
TOIG				eS	Sn	03 55 50.6	+1.5
HLIG	Huajuapan de L	6.08	313	eP	Pn	03 54 52.7	+5.5
HLIG				eS	Sn	03 55 57.6	+0.8
MGIG	Malinaltepec	6.34	304	eP	Pn	03 54 56.0	+5.1
FTIG	Fresnillo de T	6.36	312	eP	Pn	03 54 57.7	+6.6
FTIG				eS	Sn	03 55 59.7	-4.1
TLIG	Tlapa	6.48	307	eS	Sn	03 56 07.3	+0.7
CRIG	Cruz Grande	6.51	298	eP	Pn	03 54 56.5	+3.4
CRIG				eS	Sn	03 56 03.0	-4.3

MEX 02 04:19:55.7±0.4, 19°.53N×102°.12W, h25km±5km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.12	160	eP	Pb	04 19 59.1	-1.7
URUA				eS	Sb	04 20 02.2	-2.0
EZ5V		1.40	268	eP	Pn	04 20 17.5	-2.4
EZ5V				eS	Sn	04 20 34.6	-3.1
INCO	Volcan de Coli	1.40	270	eP	Pn	04 20 17.8	-2.3
INCO				eS	Sn	04 20 35.7	-2.3
MNGA	Volcan de Coli	1.42	268	eP	Pn	04 20 17.7	-2.5
MNGA				eS	Sn	04 20 35.2	-3.0
SOMAC	Volcano de Col	1.43	270	eP	Pn	04 20 18.3	-2.0
SOMAC				eS	Sn	04 20 35.2	-3.3
CEGR	Campo Tres	1.65	265	eP	Pn	04 20 21.4	-1.8
CEGR				eS	Sn	04 20 41.5	-2.1
MMIG	Aquila	1.70	223	eP	Pn	04 20 21.3	-2.4
MMIG				eS	Sn	04 20 42.0	-2.7
CDAR	Ciudad de Arme	1.88	252	eP	Pn	04 20 24.7	-1.5
CDAR				eS	Sn	04 20 46.6	-2.6
ZIIG	Zihuatanejo	2.01	162	eP	Pn	04 20 28.1	0.0
ZIIG				eS	Sn	04 20 53.5	+1.1
PLIG	Platanillo	2.72	114	eP	Pn	04 20 40.3	+2.4
PLIG				eS	Sb	04 21 18.7	+1.9
CJM	Chamela	2.76	270	eS	Sn	04 21 12.1	+1.2

*NEIC **02** 04:24:40.4±1.5, 16°.3S±0°.2×175°.5W±0°.1, h306km±7km, mb4.6/27, Error ellipse: s-maj=24.6km s-min=15.4km az=142.0*

*IDC **02** 04:24:42.0±5.0, 16°.42S×175°.57W, h324km±46km, mb3.6/7, mbtmp4.2/8, Error ellipse: s-maj=27.9km s-min=18.2km az=145.0*

*NOU **02** 04:24:43.3, 16°.53S×175°.44W, h341km, mb4.5/31, Tonga Islands*

ISC 02 04:24:42.7±0.4, 16°.47S±0°.06×175°.32W±0°.06, h350km, n115, σ1°.95/120, mb4.4/20, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	3.77	242	P	Pn	04 25 48.4	-1.0
AFI	Afiamalu	4.26	54		Pn	04 25 50.3	-4.3
AFI	Afiamalu	4.26	54	P	Pn	04 25 50.0	-4.5
AFI				S	S	04 26 46.2	-6.3
TAVE	Taveuni	4.41	266	P	Pn	04 25 55.0	-1.0
NIUE	Niue	5.75	118	Pn	Pn	04 26 09.6	-1.1
NIUE	Niue	5.75	118	P	Pn	04 26 11.6	+0.9
NIUE	Niue	5.75	118	P	Pn	04 26 10.7	0.0
NIUE				S	S	04 27 21.2	-0.8
MSVF	Nonsavu	6.47	258	P	Pn	04 26 18.0	-1.1
FUNA	Funafuti	9.54	325		Pn	04 26 53.4	-1.9
GLKZ	Green Lake	12.96	190	P	P	04 27 32.6	-2.2
GLKZ				S	S	04 29 49.8	-7.6
MARNC	Mare, Loyalty	16.52	250	P	P	04 28 13.2	-0.7
MARNC	Mare, Loyalty	16.52	250	P	P	04 28 13.5	-0.4
SANVU	Saraoutou	16.84	271	P	Pn	04 28 18.5	-2.5
SANVU				IAmb	IAmb	04 28 20.9	
	comp=Z,50nm,1.1s						
PINNC	Pines Island,	17.35	247	P	P	04 28 24.3	+1.4
DZM	Mont Dzumac	18.09	249	P	P	04 28 28.4	-2.5
	comp=Z,3.5nm,0.6s,baz=66,slow=20,SNR=7.8						
DZM	Mont Dzumac	18.09	249	P	P	04 28 29.1	-1.8
DZM				IAmb	IAmb	04 28 41.9	
	comp=Z,33nm,1.5s						
DZM	Mont Dzumac	18.09	249	P	P	04 28 29.7	-1.2
OUZ	Omahuta	21.14	206	P	P	04 29 04.3	+3.3
WCZ	Waipu Caves	21.47	203	P	P	04 29 07.0	+3.0
KUZ	Kuaotunu	21.70	200	P	P	04 29 09.6	+3.4
MXZ	Matakaoa Point	21.75	194	P	P	04 29 07.1	+0.5
MXZ	Matakaoa Point	21.75	194	P	P	04 29 09.4	+2.8
WMGZ	Waiomatatini S	21.97	193	P	P	04 29 11.0	+2.4
HAZ	Te Kaha	22.06	195	P	P	04 29 09.9	+0.5
PKGZ	Pakihiroa	22.09	194	P	P	04 29 12.2	+2.5
PUZ	Puketiti	22.25	193	P	P	04 29 17.1	+5.9
RUGZ	Raukumara Rang	22.28	195	P	P	04 29 15.3	+3.7
CNGZ	Carnagh Statio	22.66	193	P	P	04 29 22.8	+7.9
MWZ	Matawai	22.67	195	P	P	04 29 16.5	+1.5
URZ	Urewera	22.70	196	P	P	04 29 15.4	+0.1
URZ	Urewera	22.70	196	P	P	04 29 15.5	+0.3
NMHZ	Naumai	23.57	195	P	P	04 29 24.5	+1.3
BKZ	Black Stump Fm	23.72	196	P	P	04 29 25.8	+1.3
BKZ	Black Stump Fm	23.72	196	P	P	04 29 23.3	-1.2
SAVO	Savo Central	25.30	284	P	P	04 29 39.8	+0.8
TATA	Tatamba Isabel	25.57	285	P	P	04 29 40.9	-0.4
KHZ	Kahutara	27.57	198	P	P	04 29 58.9	+0.2
ARMA	Armidale	33.21	239		P	04 30 48.6	+0.3
ARMA				IAmb	IAmb	04 30 49.2	
	comp=Z,16nm,0.6s						
PATS	Pohnpei	34.89	310	P	P	04 31 03.5	+0.9
CTAO	Charters Tower	36.62	258	P	P	04 31 16.1	-1.0
CTAO	Charters Tower	36.62	258	P	P	04 31 16.0	-1.2
CAN	Canberra	36.92	233	P	P	04 31 19.7	+0.2
CAN				IAmb	IAmb	04 31 21.1	
	comp=Z,26nm,1.1s						
CAN	Canberra	36.92	233	P	P	04 31 19.6	0.0
CMSA	Cobar Meteorol	38.43	240	P	P	04 31 31.8	-0.2
QLP	Quilpie	38.81	248	P	P	04 31 35.2	-0.1
COEN	Coen	40.09	268	P	P	04 31 46.5	+0.7
COEN	Coen	40.09	268	P	P	04 31 46.6	+0.7
TOO	Toolangi	40.37	231	P	P	04 31 47.5	-0.3
STKA	Stephens Creek	41.91	240	P	P	04 32 01.0	+0.6
	comp=Z,14nm,0.6s,baz=96,slow=11,SNR=19						
STKA				PcP	PcP	04 33 50.1	+1.5
	comp=Z,2.2nm,0.6s,baz=354,slow=4.6,SNR=3.8						
	comp=Z,14nm,0.6s						
STKA	Stephens Creek	41.91	240		P	04 32 00.9	+0.6
STKA				IAmb	IAmb	04 32 01.6	
	comp=Z,76nm,0.8s						
STKA	Stephens Creek	41.91	240	P	P	04 32 00.8	+0.5
QIS	Mount Isa	42.84	257	P	P	04 32 08.5	+0.5
HTT	Hallett	44.42	239	P	P	04 32 20.6	+0.3
BBOO	Buckleboo	46.68	240	P	P	04 32 37.8	0.0
WR8	Warramunga Arr	47.66	258		P	04 32 44.6	-0.8
WB0	Warramunga Arr	47.78	258		P	04 32 45.5	-0.8
WRAB	Tennant Creek	47.80	258	P	P	04 32 45.5	-1.0
WRA	Warramunga Arr	47.81	258	P	P	04 32 45.8	-0.8
	comp=Z,4.1nm,0.4s,baz=93,slow=7.3,SNR=94						
WRA				PcP	PcP	04 34 10.6	+1.3
	comp=Z,1.4nm,0.4s,baz=90,slow=3.4,SNR=7.1						
	comp=Z,4.1nm,0.4s						
AS31	Alice Springs	48.03	253		P	04 32 48.2	-0.1
AS31				IAmb	IAmb	04 32 48.5	
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	48.03	253	P	P	04 32 48.1	-0.1
	comp=Z,41nm,0.5s,baz=88,slow=8.1,SNR=816						
ASAR				PcP	PcP	04 34 11.4	+1.3
	comp=Z,2.5nm,0.7s,baz=93,slow=4.9,SNR=6.4						
MTN	Manton Dam	51.82	266	P	P	04 33 16.2	-0.3
MTN				IAmb	IAmb	04 33 17.4	
	comp=Z,16nm,0.8s						
FORT	Forrest	53.29	244	P	P	04 33 26.6	-0.4
FORT				IAmb	IAmb	04 33 27.2	
	comp=Z,8.3nm,0.6s						
KNRA	Kununurra	53.59	262	P	P	04 33 29.6	+0.3
KNRA				IAmb	IAmb	04 33 30.1	
	comp=Z,13nm,0.7s						
SOEI	Soe	59.05	268		P	04 34 09.7	+1.9
SOEI	Soe	59.05	268	P	P	04 34 09.5	+1.8
PSA00	Pilbara Seismi	61.14	254	P	P	04 34 21.9	+0.3
PSA00	Pilbara Seismi	61.14	254		P	04 34 21.8	+0.3
PSA00				IAmb	IAmb	04 34 22.5	
	comp=Z,16nm,0.8s						
PSA00	Pilbara Seismi	61.14	254	P	P	04 34 21.7	+0.1
MBWA	Marble Bar	61.30	255		P	04 34 22.9	+0.3
MBWA				IAmb	IAmb	04 34 23.6	
	comp=Z,14nm,0.7s						
MBWA	Marble Bar	61.30	255	P	P	04 34 22.7	+0.1
MEEK	Meekatharra	61.71	248	P	P	04 34 25.4	+0.1
BLDU	Ballidu	63.07	244	P	P	04 34 34.0	-0.1
MUN	Mundaring	63.41	242	P	P	04 34 37.4	+1.1
GIRL	Giralia	66.14	252	P	P	04 34 55.9	+2.0
QSPA	South Pole Qui	73.58	180	P	P	04 35 40.7	+2.5
	comp=Z,4.5nm,0.6s,baz=7.8,slow=0.7,SNR=5.8						
	comp=Z,4.5nm,0.6s						
NVAR	Mina Array Bea	76.36	43	P	P	04 35 59.0	+4.6
	comp=Z,0.6nm,0.7s,baz=229,slow=8.7,SNR=5.2						
	comp=Z,0.6nm,0.7s						
O16K	Kokwok River B	77.08	9	P	P	04 35 58.0	+0.3
O16K				IAmb	IAmb	04 36 20.7	
	comp=Z,13nm,1.4s						
P18K	Big Mountain,	77.35	10	P	P	04 36 00.3	+1.1
P18K				IAmb	IAmb	04 36 06.1	
	comp=Z,16nm,1.4s						
PMR	Palmer	80.54	12	P	P	04 36 17.7	+1.4
PMR				IAmb	IAmb	04 36 40.4	
	comp=Z,14nm,1.4s						
TXAR	Lajitas Array	82.74	57	P	P	04 36 31.6	+3.0
	comp=Z,0.6nm,1.0s,baz=197,slow=3.9,SNR=3.7						
	comp=Z,0.6nm,1.0s						
TXAR	Lajitas Array	82.74	57	P	P	04 36 32.1	+3.5
WRH	Wood River Hil	83.35	12	P	P	04 36 31.7	+0.9
IL31		83.86	12	P	P	04 36 34.5	+1.2
IL31				IAmb	IAmb	04 36 35.6	
	comp=Z,15nm,1.5s						
ILAR	Eielson Array	83.86	12	P	P	04 36 34.3	+1.0
	comp=Z,1.2nm,0.5s,baz=218,slow=5.3,SNR=65						
	comp=Z,1.2nm,0.5s						
ILAR	Eielson Array	83.86	12	P	P	04 36 34.6	+1.3
PDAR	Pinedale Array	84.29	42	P	P	04 36 38.1	+1.8
	comp=Z,0.4nm,0.6s,baz=242,slow=3.2,SNR=5.1						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	84.29	42	P	P	04 36 38.5	+2.1
MTO3	Montecristo	90.23	75	P	P	04 37 06.2	+1.0
MKAR	Makanchi Array	110.26	314	PKiKP	PKiKP	04 42 34.2	+0.7
	comp=Z,0.5nm,0.6s,baz=67,slow=0.2,SNR=7.0						
KURBB	Kurchatov Arra	112.78	318	PKiKP	PKiKP	04 42 38.3	+0.2
	comp=Z,0.1nm,0.3s,baz=91,slow=1.6,SNR=4.6						
BVAR	Borovoye Array	117.58	322	PKP	PKiKP	04 42 48.4	+1.1
	comp=Z,1.7nm,0.6s,baz=107,slow=0.3,SNR=9.4						
ARCES	ARCESS Array B	125.39	351	PKP	PKiKP	04 43 02.2	0.0
	comp=Z,1.9nm,0.7s,baz=50,slow=1.4,SNR=3.9						
FINES	FINESS Array B	132.56	346	PKP	PKiKP	04 43 17.6	+0.9
	comp=Z,1.7nm,0.8s,baz=93,slow=3.8,SNR=4.5						
BR131	Keskin Array S	145.78	318		PKiKP	04 43 43.4	-1.3
BRTR	Keskin Array B	145.78	318	PKPbc	PKiKP	04 43 43.2	-1.5
	comp=Z,2.7nm,0.6s,baz=112,slow=3.7,SNR=20						
GERES	GERESS Array B	146.88	349	PKPbc	PKiKP	04 43 45.9	-0.8
	comp=Z,0.4nm,0.6s,baz=24,slow=4.0,SNR=2.0						
LODK	Lodwar	147.19	250		PKPab	04 43 48.4	-0.5
CONA	Conrad Observa	147.31	346	ePKP	PKPab	04 43 47.9	-0.4
	comp=Z,4.5nm,0.9s						
BORA	Eskisehir	147.66	321		PKPab	04 43 48.2	-1.9
MOA	Molln	147.73	348	ePKP	PKPab	04 43 48.4	-1.6
	comp=Z,5.7nm,1.5s						
MMAI	Mount Meron Ar	147.76	306	PKPbc	PKPab	04 43 49.5	-1.2
	comp=Z,3.2nm,0.6s,baz=57,slow=7.7,SNR=4.7						
LESA	Schwarzleotal	148.43	350	ePKP	PKPab	04 43 50.1	-2.9
	comp=Z,3.8nm,1.2s						
KBA	Koelnbreinsper	148.65	349	ePKP	PKiKP	04 43 50.4	0.0
	comp=Z,6.0nm,1.2s						
RETA	Reutte	148.67	352	ePKP	PKPab	04 43 51.0	-2.9
	comp=Z,4.1nm,1.3s						
WATA	Walderalm	148.70	351	ePKP	PKPab	04 43 51.0	-3.1
	comp=Z,2.3nm,0.6s						
WTTA	Wattenberg	148.76	351	ePKP	PKPab	04 43 51.3	-3.1
	comp=Z,5.3nm,0.6s						
SQTA	Sankt Quirin	148.87	351	ePKP	PKPab	04 43 51.5	-3.2
	comp=Z,3.6nm,0.7s						
MYKA	Terra Mystica	149.02	348	ePKP	PKiKP	04 43 51.2	+0.1
	comp=Z,3.0nm,0.4s						
ABTA	Abfaltersbach	149.12	349	ePKP	PKiKP	04 43 51.5	+0.2
	comp=Z,4.8nm,0.7s						
FETA	Feichten	149.13	352	ePKiKP	PKPab	04 43 52.3	-3.6
	comp=Z,7.3nm,1.3s						
CIMO	Cimolais	149.55	349		PKiKP	04 43 52.0	-0.1
FUORN	Ofenpass-Fuorn	149.58	352		PKPab	04 43 54.0	-3.9
PDG	Podgorica	151.27	337		PKiKP	04 43 56.4	+0.6
TORD	Torodi Ar. Bea	175.61	138	PKP	PKPdf	04 44 12.6	+0.5
	comp=Z,0.6nm,0.7s,baz=280,slow=1.6,SNR=6.7						
TORD				PKPab	PKPab	04 45 53.7	+1.8
	comp=Z,0.2nm,0.7s,baz=244,slow=5.7,SNR=4.1						
TORD	Torodi Ar. Bea	175.61	138		PKPdf	04 44 13.2	+1.1

*IDC **02** 04:35:40.5±0.7, 18°.81N×67°.67W, h0km, mb3.9/15, mbtmp3.9/15, MS3.7/1, Error ellipse: s-maj=22.1km s-min=13.7km az=38.0*

*NEIC **02** 04:35:42.9±1.9, 18°.93N±0°.04×67°.63W±0°.04, h10km±1km, mb4.3/29, ML4.4/47, ML4.1/9(RSPR), Error ellipse: s-maj=8.4km s-min=5.5km az=217.0*

*OSPL **02** 04:35:43.3±2.0, 19°.16N×67°.45W, h0km±11km, ML4.6, Presumed earthquake*

*RSPR **02** 04:35:45.1, 18°.92N×67°.65W, h10km±31km, MD3.5/9*

*PTWC **02** 04:35:45, 18°.80N×67°.60W, h20km, Ml4.4/19*

*SDD **02** 04:35:45.4±2.2, 18°.90N×67°.67W, h0km±12km, MD3.7, ML4.4, MW4.2, Presumed earthquake*

ISC 02 04:35:44.8±0.4, 18°.93N±0°.04×67°.69W±0°.02, h27km, n142, σ1°.63/177, mb4.2/28, 18C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.58	160		Pb	04 35 55.1	-1.3
IDE					Sb	04 36 03.7	-0.6
IDE	Isla Desecheo	0.58	160	⇓iP	Pb	04 35 55.1	-1.3
IDE				eS	Sb	04 36 03.7	-0.6
AGPR	Aguadilla, PR	0.71	130		Pb	04 35 56.9	-1.7
AGPR					Sb	04 36 06.9	-1.2
AGPR				IAML		04 36 08.3	
	15µm,0.5s						
AGPR	Aguadilla, PR	0.71	130	P	Pb	04 35 57.0	-1.7
AGPR	Aguadilla, PR	0.71	130	⇑iP	Pb	04 35 56.9	-1.7
AGPR				⇑iS	Sb	04 36 07.4	-0.7
AGPR				IAML		04 36 08.4	
	comp=N,13µm,0.3s						
AGPR	Aguadilla, PR	0.71	130	⇑iP	Pb	04 35 57.0	-1.7
AGPR				eS	Sb	04 36 07.2	-0.9
AGPR	Aguadilla, PR	0.71	130	i P	Pb	04 35 56.9	-1.7
AGPR				eS	Sb	04 36 07.1	-1.0
AGPR				IAML		04 36 08.8	
	comp=Z,5µm,0.3s						
PCDR	Punta Cana, DR	0.78	238	⇑iP	Pb	04 35 59.0	-0.7
PCDR				i S	Sn	04 36 10.1	-0.7
PCDR				IAML		04 36 11.5	
	comp=N,13µm,0.9s						
PCDR				IAML		04 36 11.5	
	comp=N,13µm,0.9s						
PRSN	Puerto Rico Se	0.88	144		Pn	04 35 59.6	-1.8
PRSN					Sb	04 36 12.5	-0.2
PRSN	Puerto Rico Se	0.88	144	P	Pn	04 35 59.5	-1.8
PRSN	Puerto Rico Se	0.88	144	⇑iP	Pn	04 36 00.0	-1.3
PRSN				⇑iS	Sn	04 36 13.4	+0.2
PRSN				IAML		04 36 17.8	
	comp=N,16µm,0.3s						
PRSN	Puerto Rico Se	0.88	144	⇑eP	Pn	04 35 59.6	-1.8
PRSN				eS	Sb	04 36 11.9	-0.9
LSP	Las Mesas	0.94	143		Pn	04 36 00.8	-1.5
LSP	Las Mesas	0.94	143	⇓iP	Pn	04 36 00.8	-1.5
HIDR	Higuey Centro	1.03	251	⇑iP	Pn	04 36 02.5	-0.9
HIDR				⇑iS	Sb	04 36 16.8	-0.4
HIDR				IAML		04 36 23.2	
	comp=N,6µm,0.3s						
HIDR	Higuey Centro	1.03	251	⇑iP	Pn	04 36 02.6	-0.9
HIDR				eS	Sb	04 36 16.9	-0.4
CRPR	Cabo Rojo, PR	1.07	149		Pn	04 36 02.3	-1.7
CRPR				IAML		04 36 22.2	
	comp=N,9µm,0.4s						
CRPR				IAML		04 36 28.0	
	comp=N,7µm,0.9s						
CRPR	Cabo Rojo, PR	1.07	149		Sn	04 36 17.0	-1.0
CRPR	Cabo Rojo, PR	1.07	149	P	Pn	04 36 03.0	-1.0
CRPR	Cabo Rojo, PR	1.07	149	⇓iP	Pn	04 36 03.3	-0.7
CRPR				⇑iS	Sb	04 36 18.6	+0.4
CRPR				IAML		04 36 27.2	
	comp=N,8µm,1.4s						
CRPR	Cabo Rojo, PR	1.07	149	⇑eP	Pn	04 36 02.5	-1.6
CRPR				eS	Sn	04 36 17.0	-1.0
CRPR	Cabo Rojo, PR	1.07	149	i P	Pn	04 36 03.2	-0.8
CRPR				eS	Sb	04 36 20.6	+2.4
CRPR				IAML		04 36 23.6	
	comp=Z,8µm,0.3s						
MLPR	Magueyes Islan	1.14	147		Pn	04 36 03.3	-1.6
MLPR				IAML		04 36 23.8	
	comp=Z,9µm,0.4s						
UUPR	Utuado, UPR, P	1.14	126		Pn	04 36 03.1	-1.9
EMPR	Esperanza - Ma	1.19	112		Pn	04 36 04.2	-1.4
EMPR					Sb	04 36 21.5	-0.1
EMPR	Esperanza - Ma	1.19	112	⇑iP	Pn	04 36 04.2	-1.4
EMPR				eS	Sb	04 36 21.5	-0.1
GBPR	Guanica, Bosqu	1.22	141		Pn	04 36 05.5	-0.6
GBPR					Sb	04 36 22.6	-0.1
GBPR	Guanica, Bosqu	1.22	141	⇑eP	Pn	04 36 05.5	-0.6
GBPR				eS	Sb	04 36 22.6	-0.1
MIDR	Miches	1.29	272	i P	Pb	04 36 08.0	-0.4
MIDR				⇑iS	Sb	04 36 26.8	+2.2
MIDR				IAML		04 36 28.1	
	comp=N,5µm,1.1s						
MIDR				IAML		04 36 28.1	
	comp=N,5µm,1.1s						
CELP	Cerrillos	1.35	129		Pn	04 36 06.7	-1.2
CELP				IAML		04 36 32.5	
	comp=N,5µm,0.2s						
CELP				IAML		04 36 32.7	
	comp=N,6µm,0.3s						
OBIP	Obispado Ponce	1.35	131		Pn	04 36 06.8	-1.2
OBIP	Obispado Ponce	1.35	131		Sn	04 36 24.5	-0.5
OBIP	Obispado Ponce	1.35	131	P	Pn	04 36 06.7	-1.2
OBIP	Obispado Ponce	1.35	131	⇑iP	Pn	04 36 06.9	-1.0
OBIP				eS	Sn	04 36 24.5	-0.5
OBIP	Obispado Ponce	1.35	131	i P	Pn	04 36 06.8	-1.2
OBIP				IAML		04 36 29.6	
	comp=Z,16µm,0.5s						
ECPR	Experimental S	1.40	116		Pn	04 36 06.8	-1.7
ECPR				IAML		04 36 30.0	
	comp=Z,8µm,0.5s						
ECPR	Experimental S	1.40	116	⇑iP	Pn	04 36 06.9	-1.7
ECPR				eS	Sn	04 36 24.7	-1.4
SMDR	Samana, DR	1.46	284		Pn	04 36 09.4	0.0
SMDR					Sb	04 36 30.3	+0.8
SMDR	Samana, DR	1.46	284	⇑iP	Pb	04 36 10.8	-0.6
SMDR				⇑iS	Sb	04 36 30.7	+1.2
SMDR				IAML		04 36 33.3	
	comp=N,4µm,0.8s						
SMDR	Samana, DR	1.46	284	⇓eP	Pn	04 36 09.4	0.0
SMDR				eS	Sb	04 36 30.3	+0.8
DR12	Loma Pena Alta	1.61	265		Pn	04 36 11.6	0.0
HATOM	Hato Mayor del	1.61	265	⇑iP	Pb	04 36 13.6	-0.3
HATOM				i S	Sb	04 36 34.2	+0.4
HATOM				IAML		04 36 36.7	
	comp=N,3µm,0.6s						
GCPR	Guaynabo City	1.64	112		Pn	04 36 10.4	-1.5
GCPR	Guaynabo City	1.64	112		Sn	04 36 32.5	+0.4
GCPR	Guaynabo City	1.64	112	⇑iP	Pn	04 36 10.5	-1.4
GCPR				eS	Sn	04 36 32.5	+0.4
SJG	San Juan	1.67	119	Pn	Pn	04 36 11.3	-1.0
	comp=N,158nm,0.3s,baz=309,slow=10,SNR=278						
SJG				Sn	Sn	04 36 33.5	+0.7
	comp=N,214nm,0.3s,baz=289,slow=15,SNR=12						
SJG				LR	LR	04 36 37.9	
	comp=N,373nm,19.9s,baz=108,slow=36						
SJG	San Juan	1.67	119		Pn	04 36 11.1	-1.1
SJG	San Juan	1.67	119	IAML		04 36 36.5	
	comp=N,3µm,0.5s						
SJG				IAML		04 36 41.7	
	comp=N,3µm,0.4s						
SJG	San Juan	1.67	119	⇑iP	Pn	04 36 10.9	-1.3
SJG				eS	Sn	04 36 33.0	+0.1
SJG	San Juan	1.67	119	i P	Pn	04 36 11.0	-1.3
SJG				eS	Sn	04 36 32.9	+0.1
SJG				IAML		04 36 38.5	
	comp=Z,35µm,0.6s						
PDPR	Patillas Dam,	1.82	120		Pn	04 36 13.3	-1.0
HUMP	Col San Antoni	1.91	114		Pn	04 36 14.4	-1.2
HUMP	Col San Antoni	1.91	114		Sn	04 36 39.9	+1.2
HUMP	Col San Antoni	1.91	114	P	Pn	04 36 16.9	+1.3
HUMP	Col San Antoni	1.91	114	⇑eP	Pn	04 36 14.4	-1.2
HUMP				eS	Sn	04 36 39.9	+1.2
NADR	Nagua	2.09	282	P	Pn	04 36 19.2	+1.1
SDD	Santo Domingo	2.16	258		Pb	04 36 22.5	-0.8
SDD	Santo Domingo	2.16	258	P	Pb	04 36 21.1	-2.2
SDD	Santo Domingo	2.16	258	i P	Pb	04 36 22.8	-0.5
SDD				eS	Sb	04 36 51.4	+1.7
DR08	Loma La Naviza	2.21	271	⇑iP	Pb	04 36 22.8	-1.3
DR08				⇑iS	Sb	04 36 50.0	-1.1
DR08				IAML		04 36 58.5	
	comp=N,43µm,0.2s						
CUPR	Culebra, Puert	2.36	105		Pn	04 36 19.9	-1.9
BANI	BANI	2.59	258		Pb	04 36 28.2	-2.4
SC01	Santiago de lo	2.92	280		Pn	04 36 31.6	+2.1
SC01	Santiago de lo	2.92	280	i P	Pb	04 36 32.7	-3.4
SC01				IAML		04 37 26.4	
	comp=Z,2µm,1.2s						
SDDR	Presa de Saban	3.41	271		Pn	04 36 39.2	+3.0
SDDR				IAML		04 37 41.4	
	comp=Z,1µm,0.8s						
SDDR	Presa de Saban	3.41	271	P	Pn	04 36 39.5	+3.2
SDDR	Presa de Saban	3.41	271	eP	Pb	04 36 41.0	-3.5
SDDR				eS	Sb	04 37 25.6	0.0
SDDR				IAML		04 37 35.5	
	comp=Z,740nm,0.6s						
SDDR				IAML		04 37 35.6	
	comp=Z,1µm,0.5s						
LOPP1	Punta Rusia, P	3.44	286	i P	Pn	04 36 37.5	+0.9
PODR	Polo	3.50	258	P	Pn	04 36 40.7	+3.1
LOVI	El Cajuil, Ovi	3.67	253	i P	Pn	04 36 43.2	+3.4
LOBH	Bahia de las A	3.90	255	i P	Pn	04 36 46.9	+4.0
GRTK	Grand Turk	4.13	309	eP	Pn	04 36 45.2	-0.9
GRTK				eS	Sn	04 37 30.4	-3.1
GRTK				IAML		04 37 35.5	
	comp=Z,216nm,0.2s						
GRTK				IAML		04 37 37.2	
	comp=Z,267nm,0.1s						
SABA	Saba	4.42	106		Pn	04 36 50.8	+0.7
SABA				IAML		04 37 50.3	
	comp=N,292nm,0.5s						
SABA				IAML		04 38 12.0	
	comp=E,482nm,0.5s						
SMRT	St. Maarten	4.46	101		Pn	04 36 49.7	-1.0
SMRT				IAML		04 37 53.4	
	comp=E,357nm,0.5s						
SMRT				IAML		04 37 54.6	
	comp=N,289nm,0.8s						
MBFL	Flemmings, Mon	5.65	112	eP	Pn	04 37 04.8	-2.2
MBWH	Windy Hill	5.67	112	eP	Pn	04 37 04.6	-2.7
MLYT	Lee's Yard	5.68	112	eP	Pn	04 37 08.3	+0.9
ANWB	Willy Bob	5.75	102	eP	Pn	04 37 11.1	+2.8
DHSZ	Broadband at M	6.24	114	eP	Pn	04 37 16.5	+1.5
GDHS	Morne Mazeau,	6.24	114	Pn	Pn	04 37 13.7	-1.4
ATGZ	Broadband at L	6.35	115	eP	Pn	04 37 16.9	+0.4
MMLZ	Guadeloupe Bro	6.42	116	eP	Pn	04 37 19.6	+2.0
CBE	Ff, Capester	6.46	115	Pn	Pn	04 37 18.4	+0.2
TBG	Guadaloupe-3	6.53	117	eP	Pn	04 37 18.4	-0.7
DSDZ	La Diserade, G	6.83	111	eP	Pn	04 37 19.3	-3.9
QMBU	Quimbuelo	6.84	282	eP	Pn	04 37 20.9	-2.4
QMBU				eS	Sn	04 38 37.0	-3.3
QMBU				IAML		04 38 40.5	
	comp=N,68nm,0.4s						
QMBU				IAML		04 38 43.0	
	comp=E,59nm,0.2s						
DSLB	Salisbury	6.92	119	eP	Pn	04 37 24.4	-0.2

MOAC	**Moa**	**7.06**	**285**	*e*P	**Pn**	**04 37 24.4**	**-2.0**
MOAC				*e*S	**Sn**	**04 38 40.7**	**-5.1**
MOAC				IAML		04 38 46.4	
	comp=N,30nm,0.3s						
MOAC				IAML		04 38 49.1	
	comp=E,14nm,0.3s						
GTBY	**Guantanamo Bay**	**7.08**	**279**	*e*P	**Pn**	**04 37 25.3**	**-1.3**
GTBY				*e*S	**Sn**	**04 38 42.7**	**-3.5**
GTBY				IAML		04 38 47.3	
	comp=E,22nm,0.4s						
GTBY				IAML		04 38 48.6	
	comp=E,17nm,0.3s						
BIM	**Bigot**	**7.71**	**124**	Pn	**Pn**	**04 37 34.7**	**-0.6**
BIM	**Bigot**	**7.71**	**124**	*e*P	**Pn**	**04 37 33.5**	**-1.9**
MARVS	**Santiago de Cu**	**7.82**	**279**	*e*P	**Pn**	**04 37 34.3**	**-2.5**
MARVS				*e*S	**Sn**	**04 39 00.9**	**-3.6**
MARVS				IAML		04 39 04.3	
	comp=N,18nm,0.4s						
MARVS				IAML		04 39 05.9	
	comp=E,27nm,0.5s						
HLGC	**Holguin**	**8.12**	**285**	*e*P	**Pn**	**04 37 40.0**	**-0.9**
HLGC				*e*S	**Sn**	**04 39 09.5**	**-2.3**
HLGC				IAML		04 39 15.9	
	comp=E,27nm,0.4s						
HLGC				IAML		04 39 17.9	
	comp=N,23nm,0.3s						
CCCC	**Cccc**	**9.74**	**285**	*e*P	Pn	04 37 54.6	-8.5
CCCC				*e*S	Sn	04 39 36.1	-16
CCCC				IAML		04 39 42.0	
	comp=E,12nm,0.3s						
CCCC				IAML		04 39 42.7	
	comp=N,10.0nm,0.3s						
SDV	**Santo Domingo**	**10.39**	**196**	Pn	**Pn**	**04 38 14.2**	**+1.9**
	comp=N,2.9nm,0.3s,baz=337,slow=9.4,SNR=14						
SDV				Sn	**Sn**	**04 40 05.7**	**-2.3**
	comp=N,1.0nm,0.3s,baz=330,slow=17,SNR=1.7						
SDV	**Santo Domingo**	**10.39**	**196**		**Pn**	**04 38 14.0**	**+1.8**
SDV	**Santo Domingo**	**10.39**	**196**	P	**Pn**	**04 38 14.5**	**+2.2**
ROSC	**El Rosal**	**15.43**	**206**	Pn	**P**	**04 39 24.2**	**-1.2**
	comp=N,2.2nm,0.3s,baz=80,slow=6.5,SNR=8.8						
Y60A	**Bolivia**	**17.71**	**330**		**P**	**04 39 50.8**	**+0.7**
BOAV	**Boa Vista**	**17.87**	**156**	P	**P**	**04 39 53.3**	**+1.2**
OTAV	**Otavalo**	**21.37**	**211**	P	**P**	**04 40 31.6**	**+0.8**
OTAV				IAmb	IAmb	04 40 39.6	
	comp=Z,19nm,1.1s						
TKL	**Tuckaleechee C**	**21.90**	**323**	P	**P**	**04 40 37.3**	**+1.4**
	comp=Z,2.3nm,0.8s,baz=194,slow=8.3,SNR=1.7						
TKL				S	**S**	**04 44 31.6**	**-4.9**
	comp=Z,2.8nm,0.4s,baz=46,slow=12,SNR=4.3						
	comp=Z,2.3nm,0.8s						
TKL	**Tuckaleechee C**	**21.90**	**323**	IAmb	IAmb	04 41 06.4	
	comp=Z,15nm,1.2s						
P43A	**Skaggs, Pawnee**	**27.95**	**322**	P	**P**	**04 41 33.0**	**+0.1**
TX31	**Lajitas Ar. Si**	**34.31**	**294**	IAmb	IAmb	04 42 44.1	
	comp=Z,3.4nm,1.1s						
TXAR	**Lajitas Array**	**34.31**	**294**	P	**P**	**04 42 30.2**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=121,slow=8.1,SNR=8.9						
TXAR				PcP	**PcP**	**04 45 06.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=122,slow=4.1,SNR=4.4						
	comp=Z,0.7nm,0.7s						
ECSD	**EROS Data Cent**	**34.64**	**322**		**P**	**04 42 31.8**	**-0.1**
ECSD				IAmb	IAmb	04 42 33.2	
	comp=Z,5.4nm,0.9s						
LPAZ	**La Paz**	**35.00**	**181**	P	**P**	**04 42 34.5**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=36,slow=8.9,SNR=2.5						
	comp=Z,0.9nm,0.8s						
VHRN	**Van Horn**	**35.68**	**297**		**P**	**04 42 42.4**	**+1.3**
VHRN				IAmb	IAmb	04 42 50.2	
	comp=Z,4.0nm,0.9s						
SCHQ	**Schefferville**	**35.84**	**1**	P	**P**	**04 42 42.9**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=194,slow=6.7,SNR=12						
	comp=Z,1.6nm,0.4s						
MNTX	**Cornudas Mount**	**36.19**	**298**		**P**	**04 42 46.9**	**+1.6**
SDCO	**Great Sand Dun**	**37.87**	**308**		**P**	**04 43 00.9**	**+1.0**
SDCO				IAmb	IAmb	04 43 01.8	
	comp=Z,3.8nm,0.9s						
ULM	**Lac du Bonnet**	**38.48**	**331**	P	**P**	**04 43 04.1**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=113,slow=7.7,SNR=3.1						
	comp=Z,1.7nm,0.6s						
PV18	**Skein Mesa, Pa**	**40.59**	**307**	P	**P**	**04 43 23.0**	**+0.5**
PV18				IAmb	IAmb	04 43 25.2	
	comp=Z,9.9nm,1.1s						
PDAR	**Pinedale Array**	**42.50**	**313**	P	**P**	**04 43 39.1**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=98,slow=8.8,SNR=3.1						
PDAR				PcP	**PcP**	**04 45 31.2**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=169,slow=1.5,SNR=3.6						
	comp=Z,0.2nm,0.6s						
V12A	**Nelson**	**44.67**	**302**	P	**P**	**04 43 57.7**	**+2.1**
V12A				IAmb	IAmb	04 43 58.1	
	comp=Z,2.4nm,0.8s						
IRM	**Iron Mountain**	**44.69**	**300**	IAmb	IAmb	04 43 58.8	
	comp=Z,3.5nm,0.8s						
CPUP	**Villa Florida**	**46.10**	**167**	P	**P**	**04 44 03.9**	**-2.8**
	comp=Z,1.6nm,0.7s,baz=358,slow=15,SNR=3.8						
	comp=Z,1.6nm,0.7s						
CPUP	**Villa Florida**	**46.10**	**167**	IAmb	IAmb	04 44 08.7	
	comp=Z,2.5nm,0.8s						
NV11	**Mina Array Sit**	**47.72**	**305**	P	**P**	**04 44 20.2**	**+0.7**
NV11				IAmb	IAmb	04 44 24.3	
	comp=Z,3.9nm,1.0s						
NVAR	**Mina Array Bea**	**47.83**	**305**	P	**P**	**04 44 21.8**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=101,slow=5.9,SNR=7.8						
	comp=Z,1.1nm,0.7s						
LHV	**Little Huntoon**	**47.96**	**305**	P	**P**	**04 44 23.0**	**+1.8**
LHV				IAmb	IAmb	04 44 44.0	
	comp=Z,5.8nm,1.4s						
ILON	**Igloolik, Nuna**	**51.18**	**354**	P	**P**	**04 44 44.8**	**-0.4**
ILON				IAmb	IAmb	04 44 56.4	
	comp=Z,4.2nm,1.4s						
YKA	**Yellowknife Ar**	**54.14**	**335**	P	**P**	**04 45 07.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=110,slow=7.0,SNR=17						
	comp=Z,0.8nm,0.5s						
YKAW3	**Yellowknife Wh**	**54.18**	**335**	P	**P**	**04 45 07.4**	**-0.1**
ESDC	**Sonseca Array**	**58.10**	**55**	P	**P**	**04 45 37.0**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=264,slow=6.4,SNR=8.3						
	comp=Z,0.9nm,0.8s						
ESDC	**Sonseca Array**	**58.10**	**55**	IAmb	IAmb	04 45 37.9	
	comp=Z,2.6nm,1.3s						
ESK	**Eskdalemuir**	**60.15**	**36**	P	**P**	**04 45 50.6**	**+0.7**
EKA	**Eskdalemuir Ar**	**60.18**	**36**	P	**P**	**04 45 50.4**	**+0.3**
	comp=Z,3.1nm,1.0s,baz=258,slow=5.9,SNR=5.2						
	comp=Z,3.1nm,1.0s						
DBIC	**Dimbokro**	**62.19**	**92**	P	**P**	**04 46 08.0**	**+3.6**
	comp=Z,5.7nm,1.0s,baz=346,slow=7.1,SNR=3.2						
INK	**Inuvik**	**63.68**	**338**	P	**P**	**04 46 13.3**	**-0.1**
INK				IAmb	IAmb	04 46 14.1	
	comp=Z,1.8nm,0.8s						
DAWY	**Dawson**	**65.14**	**333**	P	**P**	**04 46 23.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**66.57**	**84**	P	**P**	**04 46 33.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=263,slow=7.7,SNR=2.3						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**66.57**	**84**	IAmb	IAmb	04 46 40.1	
	comp=Z,1.4nm,1.4s						
SCRK	**Sand Creek**	**67.15**	**332**	P	**P**	**04 46 37.4**	**+1.3**
SCRK				IAmb	IAmb	04 46 38.0	
	comp=Z,4.7nm,0.9s						
ILAR	**Eielson Array**	**68.44**	**333**	P	**P**	**04 46 44.2**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=94,slow=4.6,SNR=25						
	comp=Z,1.2nm,0.8s						
KDAK	**Kodiak Island**	**71.49**	**326**	LR	LR	05 19 11.4	
	comp=Z,52nm,19.5s,baz=270,slow=36						
ARCES	**ARCESS Array B**	**73.54**	**21**	P	**P**	**04 47 15.6**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=287,slow=3.3,SNR=7.6						
	comp=Z,2.2nm,0.6s						
ARCES	**ARCESS Array B**	**73.54**	**21**	P	**P**	**04 47 15.7**	**+0.8**
FINES	**FINESS Array B**	**75.35**	**30**	P	**P**	**04 47 25.9**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=251,slow=5.8,SNR=4.2						
	comp=Z,3.1nm,0.9s						
HHC	**Hu-ho-hao-te**	**120.52**	**1**	*e*P	**PKPdf**	**04 54 32.8**	**-1.6**
PZH	**PanZhiHua**	**133.68**	**13**	P	**PKiKP**	**04 55 01.7**	**+0.5**

RSNC 02 04:37:24.4±0.0**, 7°N**±1°×**7°3W**±°**, h142**km±2km**, M2.1, ML2.1, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**178**	P	Pn	04 37 43.8	-0.3
BARC				S	Sn	04 37 57.7	-1.4
BRJC	**Barrancabermej**	**0.57**	**285**	P	Pn	04 37 45.2	0.0
BRJC				S	Sn	04 38 02.6	+1.6
PAMC	**Pamplona, Colo**	**0.70**	**44**	P	Pn	04 37 46.2	-0.4
RUSC	**La Rusia**	**0.94**	**173**	P	Pn	04 37 47.6	-0.9
RUSC				S	Sn	04 38 06.5	-0.2
PTBC	**PUERTO BERRIO,**	**1.29**	**257**	P	Pn	04 37 49.9	-1.3
PTBC				S	Sn	04 38 10.8	-0.8
OCAC	**Ocana**	**1.41**	**355**	P	Pn	04 37 51.9	-0.7
OCAC				S	Sn	04 38 13.6	-0.5
SPBC	**San Pablo de B**	**1.46**	**217**	P	Pn	04 37 52.6	-0.5
SPBC				S	Sn	04 38 15.1	+0.1
CHIC	**Chingaza**	**2.25**	**194**	P	Pn	04 38 02.0	-0.5
CHIC				S	Sn	04 38 31.6	-0.2
ROSC	**El Rosal**	**2.27**	**210**	P	Pn	04 38 03.9	+1.1
ROSC				S	Sn	04 38 34.8	+2.6
CVER	**Cruz Verde, Cu**	**2.46**	**201**	P	Pn	04 38 04.9	-0.2
UREC	**San Jos de Ur**	**2.50**	**292**	P	Pn	04 38 04.4	-0.7
UREC				S	Sn	04 38 35.2	-1.3
VILC	**Villavicencio,**	**2.75**	**191**	P	Pn	04 38 07.4	-1.0
CBOC	**Ciudad Bolivar**	**2.96**	**251**	P	Pn	04 38 07.0	-4.2
CBOC				S	Sn	04 38 47.6	+0.3
DBBC	**Dabeiba**	**3.00**	**274**	P	Pn	04 38 12.0	+0.4
DBBC				S	Sn	04 38 47.2	-0.8
ARGC	**Ariguani, Magd**	**3.19**	**341**	P	Pn	04 38 14.2	+0.3
PRAC	**Prado**	**3.53**	**209**	P	Pn	04 38 17.6	-0.7
PRAC				S	Sn	04 39 00.1	0.0
ORTC	**Ortega, Tolima**	**3.55**	**215**	P	Pn	04 38 18.1	-0.6
ORTC				S	Sn	04 39 01.4	+0.7
SJCC	**San Jacinto, C**	**3.63**	**327**	P	Pn	04 38 18.0	-1.7
SJCC				S	Sn	04 39 01.1	-1.4
URMC	**La Uribe, Meta**	**3.75**	**198**	P	Pn	04 38 20.9	-0.4
URMC				S	Sn	04 39 05.0	-0.4

*IDC **02** 04:41:34.8±2.3, 4°65N×124°44E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=279.6km s-min=24.9km az=63.0*

*NEIC **02** 04:42:26.0±1.5, 3°3N±0°1×122°7E±0°2, h531km±11km, mb4.4/11, Error ellipse: s-maj=23.7km s-min=16.6km az=61.0*

ISC 02 04:42:26.6±0.9**, 3°1N**±0°1×**122°5E**±0°2**, h550**km**, n21, σ1s14**/23**, mb4.3**/9**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**2.63**	**222**	P	**P**	**04 43 38.4**	**-1.1**
TOLI2				S	**S**	**04 44 38.0**	**-0.7**
LUWI	**Luwuk**	**4.11**	**177**	P	**P**	**04 43 47.2**	**-2.1**
LUWI				S	**S**	**04 44 55.1**	**-1.6**
KKM	**Kota Kinabalu**	**6.95**	**295**	P	**P**	**04 44 14.6**	**+0.3**
FAKI	**Fak Fak**	**11.40**	**121**	P	**P**	**04 44 57.9**	**-1.1**
MTN	**Manton Dam**	**17.99**	**152**	P	**P**	**04 46 04.2**	**-0.2**
MTN				IAmb	IAmb	04 46 20.4	
	comp=Z,12nm,1.1s						
KNRA	**Kununurra**	**19.64**	**162**	P	**P**	**04 46 20.5**	**+1.1**
KNRA				IAmb	IAmb	04 46 25.8	
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**25.66**	**154**	P	**P**	**04 47 13.2**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=337,slow=9.4,SNR=44						
	comp=Z,2.2nm,0.3s						
WRA	**Warramunga Arr**	**25.66**	**154**	P	**P**	**04 47 12.2**	**-1.1**
WR8	**Warramunga Arr**	**25.74**	**153**	P	**P**	**04 47 13.9**	**-0.1**
WR8				IAmb	IAmb	04 47 33.6	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	**28.81**	**158**	P	**P**	**04 47 41.6**	**+0.7**
AS31				IAmb	IAmb	04 47 43.5	
	comp=Z,3.3nm,1.5s						
ASAR	**Alice Springs**	**28.81**	**158**	P	**P**	**04 47 41.7**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=340,slow=8.0,SNR=26						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**28.81**	**158**	P	**P**	**04 47 41.5**	**+0.6**
FORT	**Forrest**	**34.09**	**171**	P	**P**	**04 48 27.5**	**+1.7**
FORT				IAmb	IAmb	04 48 44.0	
	comp=Z,6.8nm,0.9s						
BBOO	**Buckleboo**	**37.94**	**161**	P	**P**	**04 48 58.8**	**+1.3**
STKA	**Stephens Creek**	**39.21**	**154**	P	**P**	**04 49 09.2**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=337,slow=10,SNR=4.1						
	comp=Z,2.1nm,0.8s						
STKA	**Stephens Creek**	**39.21**	**154**	P	**P**	**04 49 09.0**	**+1.1**
CAN	**Canberra**	**45.56**	**149**	P	**P**	**04 49 59.5**	**+1.9**
CAN				IAmb	IAmb	04 50 03.1	
	comp=Z,18nm,1.2s						
MKAR	**Makanchi Array**	**55.76**	**328**	P	**P**	**04 51 11.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=124,slow=8.1,SNR=5.5						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**55.76**	**328**	P	**P**	**04 51 10.9**	**-0.8**
KURK	**Kurchatov**	**60.09**	**329**	P	**P**	**04 51 40.2**	**-0.6**
BKZ	**Black Stump Fm**	**64.97**	**136**	P	**P**	**04 52 13.0**	**+0.3**
BKZ				IAmb	IAmb	04 52 16.4	
	comp=Z,19nm,1.4s						

RSNC 02 04:47:09.9±0.0**, 3°N**±1°×**7°4W**±°**, h-2**km±3km**, M3.2, mb4.1, ML3.0, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.28**	**229**	P	Pg	04 47 16.2	+1.0
URMC				S	Sg	04 47 20.2	+1.4
PRAC	**Prado**	**0.77**	**292**	P	Pg	04 47 25.0	+0.3
PRAC				S	Sg	04 47 35.4	+0.8
VILC	**Villavicencio,**	**0.83**	**35**	P	Pg	04 47 26.3	+0.5
VILC				S	Sb	04 47 37.8	-1.2
CVER	**Cruz Verde, Cu**	**1.09**	**5**	P	Pg	04 47 30.6	-0.2
CVER				S	Sb	04 47 46.0	-0.9
ORTC	**Ortega, Tolima**	**1.18**	**294**	P	Pg	04 47 32.2	-0.2
ORTC				S	Sn	04 47 51.8	+1.4
CHIC	**Chingaza**	**1.27**	**20**	P	Pg	04 47 33.5	-0.8
CHIC				S	Sg	04 47 51.3	+0.5
MACC	**Macarena, Meta**	**1.32**	**166**	P	Pg	04 47 34.4	-0.8
MACC				S	Sg	04 47 52.0	-0.3
ROSC	**El Rosal**	**1.41**	**354**	P	Pb	04 47 37.6	+0.3
ROSC				S	Sn	04 47 57.1	+0.4
ANIL	**Santa Ana**	**1.62**	**311**	P	Pn	04 47 39.7	-0.3
ANIL				S	Sn	04 48 01.8	0.0
GARC	**Garzon, Huila**	**1.81**	**227**	P	Pn	04 47 43.1	+0.5
GARC				S	Sn	04 48 06.1	-0.3
RECRC	**Villamaria, Ca**	**1.92**	**322**	P	Pn	04 47 45.2	+0.8
RECRC				S	Sn	04 48 10.2	+0.6
NIZA	**Niza - Manizal**	**2.07**	**321**	P	Pn	04 47 47.4	+1.2
NIZA				S	Sb	04 48 14.8	-0.3
SPBC	**San Pablo de B**	**2.21**	**3**	P	Pb	04 47 50.2	-0.6
SPBC				S	Sg	04 48 20.3	-0.7
YOTC	**Yotoco, Valle**	**2.24**	**284**	P	Pn	04 47 48.9	+0.5
YOTC				S	Sb	04 48 19.3	-0.4
FLOC	**Florencia**	**2.36**	**219**	P	Pb	04 47 51.9	-1.4
FLOC				S	Sb	04 48 23.0	0.0
JAMC	**Jamundi, Valle**	**2.51**	**265**	P	Pb	04 47 54.7	-1.3
JAMC				S	Sb	04 48 26.8	-0.7
POPC	**Popayan, Colom**	**2.65**	**251**	P	Pb	04 47 56.6	-1.9
POPC				S	Sb	04 48 33.1	+1.4
RUSC	**La Rusia**	**2.67**	**24**	P	Pn	04 47 56.7	+2.0
RUSC				S	Sn	04 48 29.9	+1.8
CBOC	**Ciudad Bolivar**	**3.04**	**323**	P	Pn	04 48 02.0	+2.6
PTBC	**PUERTO BERRIO,**	**3.10**	**355**	P	Pn	04 48 01.3	+1.1
PTBC				S	Sn	04 48 39.0	+1.0
BARC	**Barichara**	**3.29**	**17**	P	Pb	04 48 06.9	-2.5
BBAC	**Balboa, Cauca**	**3.38**	**246**	P	Pn	04 48 07.1	+3.0
BBAC				S	Sb	04 48 55.4	+2.9
BRJC	**Barrancabermej**	**3.54**	**7**	P	Pb	04 48 11.3	-2.3
BRJC				S	Sb	04 48 55.5	-1.7
OCAC	**Ocana**	**4.85**	**10**	P	Pn	04 48 26.8	+2.4
OCAC				S	Sn	04 49 26.6	+5.2
SDV	**Santo Domingo**	**6.46**	**33**	P	Pn	04 48 47.7	+1.2
SDV				S	Sn	04 50 01.6	+0.5
SJCC	**San Jacinto, C**	**6.50**	**351**	P	Pn	04 48 49.0	+2.0
	6.9nm,0.5s						
SJCC				S	Sn	04 50 02.4	+0.4
	6.9nm,0.5s						
SGC2	**Sao Gabriel da**	**8.02**	**116**	P	Pn	04 49 07.3	-0.5
URIC	**Uribia, Colomb**	**8.50**	**15**	P	Pn	04 49 14.9	+0.6
	29nm,1.2s						
BOAV	**Boa Vista**	**13.67**	**94**	P	Pn	04 50 22.8	-2.4

*SSNC **02** 04:55:20.9±1.4, 19°24N×79°29W, h7km±22km, MD3.1, ML2.9, Presumed earthquake*

*JSN **02** 04:55:23.8±1.4, 19°41N×78°86W, h30km±999km, MD4.5, Presumed earthquake*

ISC 02 04:55:17.7±1.6**, 19°22N**±0°07×**79°31W**±0°05**, h24**km±17km**, n15, σ1s83**/24**, 3D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**0.67**	**320**	*e*P	**Pn**	**04 55 31.9**	**+0.2**
CBCY				*e*S	**Sb**	**04 55 40.0**	**+0.3**
CBCY				IAML		04 55 40.2	
	comp=N,1μm,0.1s						
CBCY				IAML		04 55 40.4	
	comp=E,2μm,0.2s						
LCCY	**Blossom Villag**	**0.86**	**301**	*e*P	**Pn**	**04 55 35.1**	**+0.9**
LCCY				*e*S	**Sn**	**04 55 45.3**	**-0.7**
LCCY				IAML		04 55 48.1	
	comp=N,699nm,0.1s						
LCCY				IAML		04 55 48.9	
	comp=E,515nm,0.2s						
MTDJ	**Mount Denham**	**1.95**	**120**	*e*P	**Pn**	**04 55 50.3**	**+0.9**
MTDJ				*e*S	**Sn**	**04 56 12.7**	**-0.4**
MTDJ				IAML		04 56 14.7	
	comp=E,80nm,0.1s						
MTDJ				IAML		04 56 15.5	
	comp=E,210nm,0.2s						
MTDJ	**Mount Denham**	**1.95**	**120**	⇓*i*P	**Pn**	**04 55 50.3**	**+0.9**
MTDJ				*i* P	**Pb**	**04 55 51.5**	**-1.1**
LMGC	**Las Mercedes**	**2.32**	**68**	*e*P	**Pn**	**04 55 55.6**	**+1.2**
LMGC				*e*S	**Sn**	**04 56 20.9**	**-1.3**
LMGC				IAML		04 56 22.1	
	comp=E,53nm,0.2s						
LMGC				IAML		04 56 24.4	
	comp=N,52nm,0.2s						
STH	**Stony Hill**	**2.63**	**115**	⇓*i*P	**Pn**	**04 55 59.6**	**+1.0**
HOJ	**Hope**	**2.71**	**116**	⇓*i*P	**Pn**	**04 56 02.2**	**+2.4**
CHIV	**Chivirico**	**2.83**	**74**	*e*P	**Pn**	**04 56 01.5**	**+0.2**
CHIV				*e*S	**Sn**	**04 56 31.4**	**-3.3**
CHIV				IAML		04 56 34.8	
	comp=N,14nm,0.2s						
CHIV				IAML		04 56 38.3	
	comp=E,22nm,0.2s						
MGV	**Manicaragua**	**2.94**	**348**	*e*P	**Pn**	**04 56 04.1**	**+1.2**
MGV				*e*S	**Sn**	**04 56 36.2**	**-1.3**
MGV				IAML		04 56 39.2	
	comp=E,92nm,0.1s						
MGV				IAML		04 56 40.5	
	comp=N,19nm,0.1s						
MARVS	**Santiago de Cu**	**3.30**	**76**	*e*P	**Pn**	**04 56 09.4**	**+1.5**
HLGC	**Holguin**	**3.47**	**61**	*e*P	**Pn**	**04 56 13.8**	**+3.6**
RCC	**Rio Carpintero**	**3.49**	**77**	*e*P	**Pn**	**04 56 11.8**	**+1.4**
RCC				*e*S	**Sn**	**04 56 49.0**	**-2.0**
RCC				IAML		04 56 53.2	
	comp=N,4.3nm,0.1s						
RCC				IAML		04 56 54.2	
	comp=E,4.9nm,0.2s						
GTBY	**Guantanamo Bay**	**4.02**	**79**	*e*P	**Pn**	**04 56 20.6**	**+2.9**
GTBY				*e*S	**Sn**	**04 57 03.5**	**-0.5**
GTBY				IAML		04 57 07.3	
	comp=E,18nm,0.3s						
GTBY				IAML		04 57 09.6	
	comp=E,10nm,0.4s						
QMBU	**Quimbuelo**	**4.34**	**76**	*e*P	**Pn**	**04 56 24.6**	**+2.3**
SOR	**Soroa**	**4.96**	**316**	*e*P	**Pn**	**04 56 32.6**	**+1.9**

*NEIC **02** 04:58:26.1±2.0, 19°01N±0°04×67°60W±0°03, h10km±1km, ML3.5/35, ML3.1(RSPR), Error ellipse: s-maj=7.8km s-min=3.1km az=219.0*

*SDD **02** 04:58:27.6±1.8, 19°00N×67°63W, h20km±71km, MD3.3, ML3.3, MW3.5, Presumed earthquake*

*RSPR **02** 04:58:29.0, 19°01N×67°69W, h25km±31km*

ISC 02 04:58:26.7±1.2**, 19°00N**±0°05×**67°62W**±0°03**, h33**km±10km**, n41, σ0s79**/64**, 10C-11D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.62**	**167**		**Pb**	**04 58 38.6**	**-0.7**
IDE					**Sb**	**04 58 47.8**	**-0.1**
IDE	**Isla Desecheo**	**0.62**	**167**	⇑*e*P	**Pb**	**04 58 38.6**	**-0.7**
IDE				*e*S	**Sb**	**04 58 47.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.71**	**137**		**Pb**	**04 58 40.4**	**-0.4**
AGPR					**Sb**	**04 58 50.2**	**-0.1**
AGPR	**Aguadilla, PR**	**0.71**	**137**	⇑*e*Pg	**Pb**	**04 58 40.4**	**-0.4**
AGPR				⇑*e*Sg	**Sn**	**04 58 50.6**	**+0.1**
AGPR				IAML		04 58 51.2	
	comp=N,661nm,0.2s						
AGPR	**Aguadilla, PR**	**0.71**	**137**	⇓*e*P	**Pb**	**04 58 40.5**	**-0.4**
AGPR				*e*S	**Sn**	**04 58 50.5**	**+0.1**
PCDR	**Punta Cana, DR**	**0.87**	**236**	*e*Pg	**Pn**	**04 58 43.0**	**+0.4**
PCDR				IAML		04 59 03.1	
	comp=N,422nm,0.9s						
PRSN	**Puerto Rico Se**	**0.90**	**150**		**Pb**	**04 58 43.8**	**-0.1**
PRSN					**Sb**	**04 58 56.0**	**+0.5**
PRSN	**Puerto Rico Se**	**0.90**	**150**	IAML		04 59 02.8	
	comp=N,2μm,0.3s						
PRSN				IAML		04 59 03.4	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.90**	**150**	⇑*e*P	**Pb**	**04 58 43.8**	**-0.1**
PRSN				*e*S	**Sb**	**04 58 56.0**	**+0.5**
LSP	**Las Mesas**	**0.96**	**148**		**Pb**	**04 58 44.7**	**-0.3**
LSP					**Sb**	**04 58 58.5**	**+1.1**
LSP	**Las Mesas**	**0.96**	**148**	⇓*e*P	**Pb**	**04 58 44.7**	**-0.3**
LSP				*e*S	**Sb**	**04 58 58.5**	**+1.1**
CRPR	**Cabo Rojo, PR**	**1.10**	**154**		**Pb**	**04 58 47.1**	**-0.1**
CRPR					**Sb**	**04 59 01.5**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.10**	**154**	IAML		04 59 07.4	
	comp=N,594nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.10**	**154**	⇓*e*Pg	**Pn**	**04 58 46.3**	**+0.5**
CRPR				⇓*e*Sg	**Sb**	**04 59 02.7**	**+1.4**
CRPR				IAML		04 59 36.4	
	comp=N,486nm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.10**	**154**	⇓*e*P	**Pb**	**04 58 47.1**	**-0.1**
CRPR				*e*S	**Sb**	**04 59 01.5**	**+0.3**
HIDR	**Higuey Centro**	**1.11**	**249**	⇑*e*Pg	**Pn**	**04 58 46.2**	**+0.1**
HIDR				⇑*e*Sg	**Sn**	**04 58 60.0**	**-0.4**
HIDR				IAML		04 59 07.1	
	comp=N,400nm,0.2s						
HIDR	**Higuey Centro**	**1.11**	**249**	⇑*e*P	**Pn**	**04 58 46.3**	**+0.3**
HIDR				*e*S	**Sn**	**04 58 59.2**	**-1.1**
UUPR	**Utuado, UPR, P**	**1.13**	**131**		**Pb**	**04 58 47.1**	**-0.7**
UUPR				IAML		04 59 04.0	
	comp=N,3μm,0.4s						
UUPR				IAML		04 59 05.7	
	comp=N,2μm,0.3s						
EMPR	**Esperanza - Ma**	**1.16**	**116**		**Pb**	**04 58 48.5**	**+0.3**
EMPR					**Sb**	**04 59 03.9**	**+1.1**
EMPR	**Esperanza - Ma**	**1.16**	**116**	⇓*e*P	**Pb**	**04 58 48.5**	**+0.3**
EMPR				*e*S	**Sb**	**04 59 03.9**	**+1.1**
MLPR	**Magueyes Islan**	**1.16**	**152**		**Pn**	**04 58 47.0**	**+0.3**
OBIP	**Obispado Ponce**	**1.35**	**134**		**Pb**	**04 58 50.9**	**-0.6**
OBIP					**Sb**	**04 59 08.1**	**-0.3**
OBIP	**Obispado Ponce**	**1.35**	**134**	IAML		04 59 30.1	
	comp=N,660nm,0.2s						
OBIP	**Obispado Ponce**	**1.35**	**134**	⇓*e*P	**Pb**	**04 58 50.9**	**-0.6**
OBIP				*e*S	**Sb**	**04 59 08.1**	**-0.3**
ECPR	**Experimental S**	**1.37**	**119**		**Pn**	**04 58 50.4**	**+0.8**
ECPR				IAML		04 59 40.2	
	comp=N,2μm,0.2s						
ECPR				IAML		04 59 40.6	
	comp=N,2μm,0.2s						
ECPR	**Experimental S**	**1.37**	**119**	⇓*e*P	**Pb**	**04 58 50.7**	**-1.1**
ECPR				*e*S	**Sb**	**04 59 08.3**	**-0.6**
SMDR	**Samana, DR**	**1.51**	**281**		**Pb**	**04 58 53.7**	**-0.5**
SMDR					**Sb**	**04 59 14.7**	**+1.7**
SMDR	**Samana, DR**	**1.51**	**281**	*e*Pg	**Pb**	**04 58 53.6**	**-0.6**
SMDR				⇓*e*Sg	**Sb**	**04 59 13.1**	**+0.2**
SMDR				IAML		04 59 17.7	
	comp=N,237nm,0.4s						
GCPR	**Guaynabo City**	**1.61**	**115**		**Pb**	**04 58 54.4**	**-1.5**
GCPR				IAML		04 59 45.4	
	comp=N,305nm,0.2s						
SJG	**San Juan**	**1.65**	**122**		**Pb**	**04 58 55.0**	**-1.6**
SJG				IAML		04 59 42.7	
	comp=N,341nm,0.2s						
SJG				IAML		04 59 43.8	
	comp=N,886nm,0.3s						
SJG	**San Juan**	**1.65**	**122**	*e*Pg	**Pb**	**04 58 54.9**	**-1.6**
SJG				⇑*e*Sg	**Sb**	**04 59 18.2**	**+1.2**
SJG	**San Juan**	**1.65**	**122**	⇑*e*P	**Pb**	**04 58 55.1**	**-1.4**
SJG				*e*S	**Sb**	**04 59 16.4**	**-0.6**
DR12	**Loma Pena Alta**	**1.68**	**263**		**Pb**	**04 58 56.3**	**-0.8**
HATOM	**Hato Mayor del**	**1.68**	**263**	*e*Pg	**Pb**	**04 58 56.6**	**-0.5**
HATOM				⇑*e*Sg	**Sb**	**04 59 18.4**	**+0.5**
HATOM				IAML		04 59 21.8	
	comp=N,171nm,0.5s						
PDPR	**Patillas Dam,**	**1.80**	**122**		**Pn**	**04 58 57.1**	**+1.6**
PDPR				IAML		04 59 46.7	
	comp=N,404nm,0.4s						
PDPR				IAML		04 59 46.0	
	comp=N,381nm,0.2s						
HUMP	**Col San Antoni**	**1.88**	**117**		**Pb**	**04 58 59.2**	**-1.3**
HUMP					**Sb**	**04 59 23.5**	**-0.1**
HUMP	**Col San Antoni**	**1.88**	**117**	IAML		04 59 51.7	
	comp=N,263nm,0.3s						
HUMP				IAML		04 59 56.1	
	comp=N,309nm,0.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HUMP	Col San Antoni	1.88	117⇓	eP	Pb	04 58 59.2	-1.3
HUMP				eS	Sb	04 59 23.5	-0.1
NADR	Nagua	2.14	280	ePg	Pb	04 59 04.9	0.0
NADR			⇓	eSg	Sb	04 59 31.5	+0.4
NADR				IAML		04 59 42.4	
	comp=N,906nm,0.4s						
DR08	Loma La Naviza	2.27	270	ePg	Pb	04 59 06.3	-0.8
DR08				IAML		04 59 41.7	
	comp=N,1μm,0.4s						
CUPR	Culebra, Puert	2.32	107	Pn	Pn	04 59 03.3	+0.6

MEX 02 05:01:30.3±0.4, 19°.50N×102°.10W, h26km±3km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.08	165	eP	Pb	05 01 33.5	-1.7
URUA				eS	Sb	05 01 36.4	-2.2
INCO	Volcan de Coli	1.42	271	eP	Pn	05 01 52.6	-2.3
INCO				eS	Sn	05 02 10.5	-2.4
MNGA	Volcan de Coli	1.44	269	eP	Pn	05 01 52.3	-2.6
MNGA				eS	Sn	05 02 09.5	-3.6
CEGR	Campo Tres	1.67	266	eP	Pn	05 01 55.9	-2.0
CEGR				eS	Sn	05 02 15.7	-2.9
MMIG	Aquila	1.69	225	eP	Pn	05 01 56.0	-2.1
MMIG				eS	Sn	05 02 16.0	-3.0
CDAR	Ciudad de Arme	1.89	253	eP	Pn	05 01 59.0	-2.0
CDAR				eS	Sn	05 02 21.4	-2.5
ARIG	Puente Sto Nin	2.05	126	eP	Pb	05 02 09.1	+2.1
ARIG				eS	Sb	05 02 34.6	+2.5
CJM	Chamela	2.78	270	eS	Sn	05 02 47.5	+1.7

IDC 02 05:04:14.6±6.4, 55°.93N×162°.35W, h129km±46km, mb3.2/5, mbtmp3.6/7, Error ellipse: s-maj=63.3km s-min=23.8km az=34.0
NEIC 02 05:04:17.7±1.7, 55°.76N±0°.08×161°.8W±0°.1, h175km±5km, ML3.2/41, ML3.2(AEIC), Error ellipse: s-maj=12.2km s-min=7.5km az=155.0
AEIC 02 05:04:19.3±2.7, 55°.66N±0°.08×161°.7W±0°.1, h171km±4km, Error ellipse: s-maj=12.5km s-min=7.6km az=156.0
ISC 02 05:04:18.9±0.8, 55°.88N±0°.07×161°.76W±0°.05, h163km±7km, n129, σ1s.30/141, mb3.5/5, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS1A	Pavlof South-1	0.46	179		Pn	05 04 41.3	-0.2
PS1A					Sn	05 04 58.5	-0.3
PN7A	Pavlof North-7	0.47	197		Pn	05 04 41.6	-0.1
PN7A					Sn	05 04 58.4	-0.6
PS4A	Pavlof South-4	0.54	186		Pn	05 04 41.5	-0.4
PS4A					Sn	05 04 59.1	-0.4
HAG	Hague Volcano	0.57	188		Pn	05 04 41.7	-0.4
DOL	Dolgoi Island	0.74	185		Pn	05 04 42.1	-0.9
DOL					Sn	05 05 00.4	-1.1
DTNA	Dutton South F	0.79	201		Pn	05 04 42.9	-0.4
DTNA					Sn	05 05 02.3	+0.2
DT1	Dutton Round H	0.83	201		Pn	05 04 42.8	-0.8
DT1					Sn	05 05 02.5	-0.1
SDPT	Sand Point	0.90	126		Pn	05 04 43.5	-0.6
SDPT				Sn	Sn	05 05 02.5	-0.9
SDPT				IAML		05 05 04.1	
	comp=E,340nm,0.5s						
VNFG	Fog Glacier, M	1.30	71		Pn	05 04 48.8	+1.2
VNSS	Veniaminof 8	1.34	74		Pn	05 04 49.0	+1.0
VNKR	Veniaminof 5	1.35	83		Pn	05 04 48.6	+0.6
FALS	False Pass	1.40	223	Pn	Pn	05 04 47.2	-1.2
FALS				Sn	Sn	05 05 09.8	-1.2
FALS	False Pass	1.40	223	P	Pn	05 04 47.2	-1.2
VNNF	Veniaminof 3	1.43	73		Pn	05 04 49.8	+1.1
VNHG	Veniaminof 1	1.49	76		Pn	05 04 50.2	+0.8
ISNN	Isanotski Nort	1.56	228		Pn	05 04 49.4	-0.7
ISNN					Sn	05 05 13.1	-0.9
CHNA	Chernabura Isl	1.63	130	P	Pn	05 04 49.4	-1.3
CNBA	Chernabura Isl	1.63	130		Pn	05 04 49.3	-1.4
CNBA				Sn	Sn	05 05 12.6	-2.7
CNBA				IAML		05 05 14.1	
	comp=N,386nm,0.3s						
ANPB	Aniakchak Plen	2.14	63		Pn	05 04 57.2	+0.8
R16K	Pilot Point	2.86	52	Pn	Pn	05 05 04.4	-0.4
R16K				IAML		05 05 42.9	
	comp=N,54nm,1.1s						
R16K				IAML		05 05 57.1	
	comp=E,34nm,1.2s						
ZRO	Akutan Zero	3.02	235		Pn	05 05 06.0	-1.0
PLBL	Peulik Blue Cr	3.27	54		Pn	05 05 11.3	+1.2
O14K	Tigyukauivet M	3.39	4	Pn	Pn	05 05 12.1	+0.6
PLK5	Peulik 5	3.41	50		Pn	05 05 13.5	+1.7
UNV	Unalaska Valle	3.42	235	Pn	Pn	05 05 10.1	-1.9
UNV				IAML		05 05 50.6	
	comp=E,46nm,1.1s						
UNV				IAML		05 05 52.7	
	comp=N,79nm,0.5s						
PLK1	Peulik 1	3.42	54		Pn	05 05 13.3	+1.4
PLK4	Peulik 4	3.45	57		Pn	05 05 13.7	+1.3
PLK4				IAML		05 06 05.5	
	comp=E,73nm,0.7s						
PLK4				IAML		05 06 09.2	
	comp=N,62nm,0.7s						
CHIR	Chirikof Islan	3.46	88	Pn	Pn	05 05 11.9	-0.6
CHIR	Chirikof Islan	3.46	88	P	Pn	05 05 11.8	-0.6
O15K	Ungalikthiuk R	3.46	17	Pn	Pn	05 05 13.2	+0.7
O15K				IAML		05 06 15.7	
	comp=E,16nm,1.0s						
PLK3	Peulik 3	3.52	57		Pn	05 05 14.7	+1.5
PLK2	Peulik 2	3.53	55		Pn	05 05 14.9	+1.6
MREP	Makushin Rep't	3.55	236		Pn	05 05 12.3	-1.4
P16K	Nushagak River	3.76	31		Pn	05 05 17.5	+1.3
P16K				IAML		05 06 20.4	
	comp=E,36nm,1.2s						
P16K				IAML		05 06 37.8	
	comp=N,29nm,1.1s						
CNTC	Contact Creek	4.00	51		Pn	05 05 20.7	+1.2
N14K	Kuskokwak Cree	4.05	1		Pn	05 05 20.4	+0.4
N14K				IAML		05 06 28.4	
	comp=N,22nm,1.2s						
N14K				IAML		05 06 56.2	
	comp=E,21nm,1.2s						
ANCK	Angle Creek	4.13	53		Pn	05 05 22.6	+1.4
O16K	Kokwok River B	4.21	26		Pn	05 05 23.0	+1.0
O16K				IAML		05 06 50.6	
	comp=N,7.9nm,1.1s						
ACHA	Angle Creek He	4.22	54	Pn	Pn	05 05 23.7	+1.5
KABU	Katmai Buttres	4.27	53		Pn	05 05 24.5	+1.6
SII	Sitkinak Islan	4.28	78		Pn	05 05 22.5	-0.6
SII	Sitkinak Islan	4.28	78	P	Pn	05 05 22.3	-0.7
KAKN	Katmai Knife C	4.38	54		Pn	05 05 25.6	+1.2
P17K	Kvichak River	4.39	39	Pn	Pn	05 05 24.6	+0.3
P17K				IAML		05 06 44.8	
	comp=E,39nm,0.9s						
P17K				IAML		05 06 52.2	
	comp=N,41nm,1.1s						
N15K	Kwethluk River	4.39	11		Pn	05 05 24.9	+0.5
N15K				IAML		05 06 16.1	
	comp=E,10nm,1.1s						
N15K				IAML		05 06 43.7	
	comp=N,8.7nm,0.8s						
KAWH	Katmai	4.54	54		Pn	05 05 27.4	+0.9
KAHC	Katmai Hardscr	4.59	50		Pn	05 05 28.2	+1.1
M13K	Dall Lake	4.62	350	Pn	Pn	05 05 27.9	+0.5
O17K	Koliganek Bris	4.63	31		Pn	05 05 28.3	+0.9
KARR	Katmai Rainbow	4.65	53		Pn	05 05 28.9	+1.2
KAHG	Katmai Hook Gl	4.72	53		Pn	05 05 30.0	+1.2
OHAK	Old Harbor	4.88	71		Pn	05 05 29.9	-0.8
OHAK	Old Harbor	4.88	71	P	Pn	05 05 29.6	-1.1
M14K	Bethel	4.88	359	Pn	Pn	05 05 31.1	+0.3
M14K				IAML		05 06 25.0	
	comp=E,8.1nm,1.2s						
P18K	Big Mountain,	4.97	42		Pn	05 05 33.6	+1.7
M11K	Mekoryuk	5.09	334	Pn	Pn	05 05 32.4	-1.1
M11K				IAML		05 06 21.5	
	comp=E,6.6nm,0.9s						
N17K	Nushagak Hills	5.25	26	Pn	Pn	05 05 36.5	+0.9
N17K				IAML		05 07 18.9	
	comp=E,4.5nm,1.1s						
Q19K	Cape Douglas,	5.34	52	Pn	Pn	05 05 38.3	+1.4
KDAK	Kodiak Island	5.39	66	P	Pn	05 05 36.6	-0.8
	comp=E,7.5nm,0.3s,baz=82,slow=2.3,SNR=231						
KDAK				S	Sn	05 06 35.1	-3.8
	comp=E,12nm,0.3s,baz=38,slow=17,SNR=15						
KDAK	Kodiak Island	5.39	66	Pn	Pn	05 05 36.9	-0.5
L14K	Kuka Creek	5.50	355		Pn	05 05 39.1	+0.3
N18K	Kilae Creek	5.72	30	Pn	Pn	05 05 42.2	+0.3
SYI	Shuyak Island	5.77	58	Pn	Pn	05 05 42.7	+0.2
L15K	Ungalak Mounta	5.81	1		Pn	05 05 43.0	-0.1
P19K	Oil Pt	5.92	47	Pn	Pn	05 05 44.4	-0.1
L16K	Owhat River	5.96	11	Pn	Pn	05 05 45.2	+0.2
M17K	Holitna River	5.98	20		Pn	05 05 45.5	+0.3
ILSW	Iliamna Southw	6.16	45	Pn	Pn	05 05 48.4	+0.6
K13K	Kusilvak Mount	6.25	347	Pn	Pn	05 05 47.6	-1.2
N19K	Bonanza Creek	6.25	35	Pn	Pn	05 05 50.6	+1.7
K15K	Wolf Creek Mou	6.43	1	Pn	Pn	05 05 51.8	+0.5
RED	Redoubt Volcan	6.58	43	Pn	Pn	05 05 54.7	+1.4
CNPM	China Poot	6.72	53	Pn	Pn	05 05 54.6	-0.5
RDT	Redoubt	6.82	43		Pn	05 05 57.7	+1.3
L18K	Granite Mounta	6.87	20	Pn	Pn	05 05 58.3	+1.2
J14K	Nanvaranak Lak	6.95	353	Pn	Pn	05 05 56.6	-1.4
BRLK	Bradley Lake	6.99	52	Pn	Pn	05 05 58.5	-0.1
BRSE	Bradley Lake S	7.04	52		Pn	05 05 58.5	-0.9
L19K	White Mountain	7.25	27	Pn	Pn	05 06 02.2	+0.1
SPU	Mount Spurr	7.34	40		Pn	05 06 04.4	+1.0
J16K	Anvik River	7.45	4	Pn	Pn	05 06 05.5	+0.8
SLKM	Skilak Lake	7.65	48	Pn	Pn	05 06 07.5	+0.1
J17K	VABM Dome	7.66	9	Pn	Pn	05 06 07.3	-0.2
SEW	Seward	7.78	52	Pn	Pn	05 06 08.6	-0.5
O22K	Cooper Landing	7.85	49		Pn	05 06 09.6	-0.4
SUA	Susitna One	8.01	41	Pn	Pn	05 06 12.8	+0.5
SKT	Skwentna	8.08	37	Pn	Pn	05 06 15.3	+2.2
RC01	Rabbit Creek A	8.17	45	Pn	Pn	05 06 14.3	0.0
K20K	Telida	8.44	24	Pn	Pn	05 06 19.2	+1.3
P23K	Montague Islan	8.67	56		Pn	05 06 18.8	-2.1
PMR	Palmer	8.70	44	P	Pn	05 06 22.9	+1.6
L22K	Petersville	8.72	36	Pn	Pn	05 06 22.8	+1.3
KNK	Knik Glacier	8.87	46	Pn	Pn	05 06 23.1	-0.5
GHO	Glory Hole Cre	8.89	43		Pn	05 06 21.3	-2.5
SML	Sawmill	9.14	44	Pn	Pn	05 06 26.4	-0.8
GLI	Glacier Island	9.18	51	Pn	Pn	05 06 26.1	-1.5
HIN	Hinchinbrook I	9.24	54	Pn	Pn	05 06 27.6	-0.8
M23K	Glacier View	9.37	45		Pn	05 06 27.8	-2.3
TRF	Thorofare Moun	9.54	33	Pn	Pn	05 06 33.2	+0.7
SCM	Sheep Creek Mo	9.55	45	Pn	Pn	05 06 31.8	-0.8
WAT7	Susitna Watana	9.58	38		Pn	05 06 31.4	-1.6
DIV	Divide	9.87	51	Pn	Pn	05 06 35.7	-1.1
RND	Reindeer	9.96	36	Pn	Pn	05 06 37.4	-0.5
KLU	Klutina	9.96	49	Pn	Pn	05 06 36.9	-1.2
M24K	Tolsona, Glenn	10.16	46	Pn	Pn	05 06 40.3	-0.3
DHY	Denali Highway	10.25	39	Pn	Pn	05 06 40.3	-1.6
BMRM	Bremner River	10.32	53	Pn	Pn	05 06 41.9	-0.8
BERG	Berg Lake	10.55	57	Pn	Pn	05 06 45.3	-0.3
N25K	Chitina, Valde	10.58	50	Pn	Pn	05 06 45.5	-0.7
GLB	Gilahina Butte	10.86	52	Pn	Pn	05 06 48.9	-0.8
CRQM	Cirque	10.92	56	Pn	Pn	05 06 50.1	-0.6
VRDI	Verde Repeater	10.94	53	Pn	Pn	05 06 50.2	-0.7
TGL	Tana Glacier	11.07	56	Pn	Pn	05 06 52.2	-0.3
MCARA	McCarthy VSAT	11.19	53	Pn	Pn	05 06 53.6	-0.4
ISLE	Juniper Island	11.25	57	Pn	Pn	05 06 54.6	-0.4
ILAR	Eielson Array	11.53	33	P	Pn	05 06 56.6	-1.8
	comp=E,0.4nm,1.0s,baz=224,slow=13,SNR=2.9						
ILAR				S	Sn	05 09 01.0	-4.9
	comp=E,0.2nm,0.4s,baz=140,slow=8.9,SNR=3.2						
GRNC	Granite Creek	11.57	57	Pn	Pn	05 06 59.1	-0.1
BARN	Barnard Glacie	11.71	55	Pn	Pn	05 07 01.6	+0.7
TABL	Table Mountain	11.78	59	Pn	Pn	05 07 02.8	+0.8
CTGM	Chitina Glacie	11.83	56	Pn	Pn	05 07 02.5	0.0
LOGN	Logan Glacier	11.95	57	Pn	Pn	05 07 03.6	-0.4
M27K	Edge Creek, AK	12.06	49	Pn	Pn	05 07 05.2	-0.3
M29M	Somme Creek	13.58	52	Pn	Pn	05 07 24.9	+0.1
JIS	Juneau Island	15.03	70	P	P	05 07 50.5	+6.3
YKA	Yellowknife Ar	24.55	55	P	P	05 09 23.9	+0.8
	comp=E,0.2nm,0.5s,baz=272,slow=10,SNR=7.5						
	comp=E,0.2nm,0.5s						
PDAR	Pinedale Array	35.59	89	P	P	05 11 02.4	+1.7
	comp=E,0.7nm,0.5s,baz=327,slow=3.1,SNR=12						
	comp=E,0.7nm,0.5s						
TXAR	Lajitas Array	48.49	98	P	P	05 12 46.5	+1.5
	comp=E,0.7nm,0.6s,baz=298,slow=6.3,SNR=13						
	comp=E,0.7nm,0.6s						
FINES	FINESS Array B	62.85	356	P	P	05 14 25.6	-1.0
	comp=E,2.4nm,0.9s,baz=358,slow=6.8,SNR=3.8						
	comp=E,2.4nm,0.9s						
MKAR	Makanchi Array	64.48	317	P	P	05 14 35.1	-2.5
	comp=E,0.1nm,0.4s,baz=49,slow=6.5,SNR=2.0						
	comp=E,0.1nm,0.4s						

SSNC 02 05:12:42.5±1.5, 19°.24N×79°.29W, h22km±109km, MD3.2, ML2.6, Presumed earthquake
JSN 02 05:12:43.4±1.2, 19°.27N×78°.93W, h0km±999km, MW3.7, Presumed earthquake
ISC 02 05:12:37.7±2.1, 19°.29N±0°.07×79°.23W±0°.04, h9km±15km, n14, σ2s.14/26, 2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBCY	The Bluff, Cay	0.67	311	eP	Pn	05 12 53.9	+0.5
CBCY				eS	Sb	05 13 02.0	+1.0
CBCY				IAML		05 13 02.3	
	comp=N,346nm,0.2s						
CBCY				IAML		05 13 02.4	
	comp=E,974nm,0.3s						
LCCY	Blossom Villag	0.89	295	eP	Pn	05 12 57.1	+0.7
LCCY				eS	Sb	05 13 07.3	-0.1
LCCY				IAML		05 13 08.5	
	comp=E,297nm,0.2s						
LCCY				IAML		05 13 09.2	
	comp=N,313nm,0.2s						
MTDJ	Mount Denham	1.92	123	eP	Pn	05 13 12.4	+1.6
MTDJ				eS	Sn	05 13 35.1	-0.1
MTDJ				IAML		05 13 36.2	
	comp=N,101nm,0.2s						
MTDJ				IAML		05 13 37.5	
	comp=N,137nm,0.2s						
MTDJ	Mount Denham	1.92	123⇓	iP	Pn	05 13 12.4	+1.6
MTDJ				i S	Sn	05 13 34.8	-0.4
LMGC	Las Mercedes	2.23	70	eP	Pb	05 13 17.4	-0.8
LMGC				eS	Sn	05 13 43.4	+0.8
LMGC				IAML		05 13 45.7	
	comp=N,38nm,0.1s						
LMGC				IAML		05 13 46.7	
	comp=E,34nm,0.1s						
CCCC	Cccc	2.34	36	eP	Pg	05 13 23.2	+0.7
STH	Stony Hill	2.59	117⇓	iP	Pn	05 13 21.6	+1.7
CHIV	Chivirico	2.73	75	eP	Pn	05 13 24.0	+2.1
CHIV				eS	Sn	05 13 54.2	-0.9
CHIV				IAML		05 13 56.2	
	comp=E,9.9nm,0.1s						
CHIV				IAML		05 13 56.8	
	comp=N,14nm,0.1s						
MARVS	Santiago de Cu	3.21	77	eP	Pn	05 13 30.3	+1.9
MARVS				eS	Sn	05 14 04.9	-2.0
MARVS				IAML		05 14 08.5	
	comp=E,9.5nm,0.1s						
MARVS				IAML		05 14 08.6	
	comp=N,8.1nm,0.1s						
HLGC	Holguin	3.37	61	eP	Pb	05 13 36.0	-1.7
HLGC				eS	Sb	05 14 15.6	-3.3
HLGC				IAML		05 14 19.1	
	comp=E,3.2nm,0.2s						
HLGC				IAML		05 14 19.8	
	comp=N,3.5nm,0.1s						
RCC	Rio Carpintero	3.40	78	eP	Pn	05 13 34.8	+3.8
RCC				IAML		05 14 12.9	
	comp=N,3.9nm,0.1s						
RCC				IAML		05 14 14.4	
	comp=E,1.2nm,0.1s						
PINC	Pinares de May	3.44	69	i P	Pn	05 13 35.4	+3.8
PINC				eP	Pb	05 13 35.6	-3.3
PINC				eS	Sn	05 14 15.2	+2.7
PINC				IAML		05 14 17.3	
	comp=N,7.4nm,0.1s						
PINC				IAML		05 14 18.2	
	comp=E,5.8nm,0.1s						
GTBY	Guantanamo Bay	3.93	80	eP	Pn	05 13 40.5	+2.2
GTBY				eS	Sn	05 14 22.4	-2.1
GTBY				IAML		05 14 29.3	
	comp=E,6.0nm,0.2s						
GTBY				IAML		05 14 29.3	
	comp=E,4.4nm,0.2s						
QMBU	Quimbuelo	4.25	77	eP	Pn	05 13 45.1	+2.4
QMBU				eS	Sn	05 14 32.2	-0.4
QMBU				IAML		05 14 37.7	
	comp=E,4.6nm,0.2s						
QMBU				IAML		05 14 38.4	
	comp=N,5.6nm,0.2s						

MOS 02 05:31:06.2±0.9, 43°.94N×147°.68E, h45km, mb4.4/1, Error ellipse: s-maj=10.8km s-min=8.3km az=56.4
MOS Felt (II-III) at Malokuril'skoye.
SKHL 02 05:31:07.9±0.3, 43°.90N×147°.60E, h65km±9km, mb5.1/4
NIED 02 05:31:08.2, 43°.87N×147°.44E, h25km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.18; $M_{\theta\theta}$-1.33; $M_{\phi\phi}$1.15; $M_{r\theta}$0.60; $M_{\theta\phi}$-0.44; $M_{\phi r}$-0.50; Fault plane solution: $M_0$1.53000×10^{15} NP1: ϕ_s217.00000°, δ59.00000°, λ6.00000°. NP2: ϕ_s123.00000°, δ85.00000°, λ149.00000°.
JMA 02 05:31:08.2±0.2, 43°.9N±0°.9×14°7E±°, h25km, MV4.3/32, E OFF HOKKAIDO
IDC 02 05:31:09.2±4.0, 43°.95N×147°.60E, h51km±43km, mb3.6/8, mbtmp3.9/11, ML3.2/3, MS2.9/5, Error ellipse: s-maj=66.9km s-min=16.1km az=125.0
ISC 02 05:31:08.6±1.1, 43°.95N±0°.06×147°.62E±0°.07, h50km±12km, n60, σ2s.02/70, mb3.7/8, 4C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.57	262	eP	Pn	05 31 29.5	+8.8
SHO				AMB	AMB	05 31 30.6	
	1μm,0.3s						
SHO				eS	Sn	05 31 36.5	+7.1
SHO				A	A	05 31 37.9	
	5μm,0.3s						
SHO				A	A	05 31 37.9	
	2μm,0.3s						
YUK	Yuzh-Kuril'sk	1.27	274c	iPN	Pn	05 31 28.3	-1.6
YUK				i S	Sn	05 31 42.4	-3.4
YUK				pmax	pmax		
	comp=N,428nm,0.1s						
YUK				pmax	pmax		
	comp=E,1μm,0.1s						
YUK				pmax	pmax		
	comp=Z,2μm,0.1s						
YUK				smax	smax		
	comp=E,3μm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.1s						
YUK	Yuzh-Kuril'sk	1.27	274	i P	Pn	05 31 27.7	-2.2
YUK				AMB	AMB	05 31 30.2	
	comp=N,1μm,0.2s						
YUK				i S	Sn	05 31 42.8	-3.0
YUK				A	A	05 31 45.1	
	comp=N,2μm,0.5s						
YUK				A	A	05 31 45.1	
	comp=N,4μm,0.5s						
KUR	Kuril'sk	1.29	8	ePN	Pn	05 31 28.2	-2.1
KUR				i S	Sn	05 31 43.3	-3.1
KUR				pmax	pmax		
	comp=Z,552nm,0.1s						
KUR				smax	smax		
	comp=N,2μm,0.2s						
KUR				smax	smax		
	comp=E,1μm,0.3s						
KUR	Kuril'sk	1.29	8	eP	Pn	05 31 29.6	-0.7
KUR				AMB	AMB	05 31 31.9	
	comp=E,240nm,0.2s						
KUR				i S	Sn	05 31 45.6	-0.8
KUR				A	A	05 31 46.4	
	comp=E,2μm,0.3s						
KUR				A	A	05 31 46.4	
	comp=E,1μm,0.3s						
NEM2	Nemuro 2	1.48	247	P	Pn	05 31 31.6	-1.2
NEM2				eS	Sn	05 31 48.4	-2.6
NMR	Nemuro--Hokkai	1.49	248	ePN	Pn	05 31 31.5	-1.5
NMR				i S	Sn	05 31 47.7	-3.5
NMR	Nemuro--Hokkai	1.49	248	eP	Pn	05 31 31.4	-1.5
NMR				i S	Sn	05 31 48.0	-3.2
GLVR	Golovnino	1.53	263⇑	iPN	Pn	05 31 32.5	-1.0
GLVR				i S	Sn	05 31 49.7	-2.5
GLVR				pmax	pmax		
	comp=Z,442nm,0.1s						
GLVR				smax	smax		
	comp=E,2μm,0.2s						
GLVR				smax	smax		
	comp=N,1μm,0.1s						
GLVR	Golovnino	1.53	263	i P	Pn	05 31 32.5	-1.0
GLVR				AMB	AMB	05 31 32.8	
	comp=N,440nm,0.3s						
GLVR				i S	Sn	05 31 49.7	-2.5
GLVR				A	A	05 31 55.1	
	comp=N,2μm,0.2s						
GLVR				A	A	05 31 55.1	
	comp=N,2μm,0.2s						
RUSJ	Misakicho	1.71	276⇑	iPN	Pn	05 31 35.6	-0.4
RUSJ				i S	Sn	05 31 55.6	-1.1
JRA	Rausu	1.80	270	P	Pn	05 31 36.6	-0.6
JRA				S	Sn	05 31 57.6	-1.2
JNSB	Nemuroshibetsu	1.90	266	P	Pn	05 31 37.9	-0.6
JNSB				S	Sn	05 31 59.0	-2.2
JKHN	Kushirohamanak	1.99	245	i P	Pn	05 31 38.8	-0.9
JKHN				eS	Sn	05 32 01.3	-2.1
JNK	Nakash	2.13	261	i P	Pn	05 31 41.0	-0.7
JNK				eS	Sn	05 32 05.0	-2.0
AKK	Akkeshi	2.23	246	eP	Pn	05 31 41.9	-1.1
JAK	Akkeshi	2.33	247	P	Pn	05 31 43.4	-1.1
JAK				eS	Sn	05 32 10.3	-1.6
JTKR	Abashiri--Toko	2.68	272	P	Pn	05 31 48.9	-0.3
JAR	Ashorobuto	2.87	258	P	Pn	05 31 51.8	0.0
JAR				eS	Sn	05 32 25.1	0.0
JOB	Onbets	2.95	250	P	Pn	05 31 52.6	-0.3
JOB				eS	Sn	05 32 25.6	-1.4
JMP	Maruseppu	3.07	272	P	Pn	05 31 54.6	-0.1
JCH	Churui	3.38	248	P	Pn	05 31 58.4	-0.5
JKK2	Kamakawa 2	3.52	270	P	Pn	05 32 01.4	+0.7
JKA	Kamikawa-asahi	3.62	274	eP	Pn	05 32 03.6	+1.5
ASAJ	Asahikawa	3.62	274	P	Pn	05 32 03.5	+1.4
	comp=N,3.6nm,0.3s,baz=124,slow=13,SNR=20						
ASAJ				S	Sn	05 32 51.2	+7.5
	comp=N,34nm,0.7s,baz=8.1,slow=32,SNR=3.6						
	comp=N,30nm,0.8s						
JFR	Furan	3.73	260	P	Pn	05 32 04.7	+1.0
JFR				eS	Sn	05 32 47.4	+1.0
YSS	Yuzhno-Sakhali	4.55	313⇑	ePN	Pn	05 32 14.7	-0.2
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS	Yuzhno-Sakhali	4.55	313	eP	Pn	05 32 14.4	-0.5
YSS				eS	Sn	05 33 02.1	-4.3
UGL	Uglegorsk	6.40	325	eP	Pn	05 32 40.8	+0.6
TYV	Tymovskoe	7.69	336	eP	Pn	05 32 56.9	-0.9
TEY	Ternei	7.95	282	ePN	Pn	05 33 03.4	+2.0
TEY	Ternei	7.95	282	eP	Pn	05 33 03.4	+2.0
PAU	Pauzhetka	9.74	36	eP	Pn	05 33 26.2	+0.3
NKL	Nikolayevsk	10.28	336	eP	Pn	05 33 33.9	+0.6
MJA0	Matsu Arr-Jizo	10.29	227	ePN	Pn	05 33 34.5	+0.9
MJAR	Matsushiro Arr	10.31	227	P	Pn	05 33 33.9	0.0
	baz=29,slow=12,SNR=8.8						
	comp=Z,1.8nm,0.7s						
MAJO	Matsushiro	10.31	227	i PN	Pn	05 33 33.5	-0.4
PEA0B	Petropavlovsk-	11.33	32	i PN	Pn	05 33 47.7	+0.1
PETK	Petropavlovsk-	11.33	32	P	Pn	05 33 48.0	+0.4
	comp=Z,0.6nm,0.3s,baz=212,slow=11,SNR=13						
PETK				LR	LR	05 38 38.7	
	comp=Z,63nm,19.0s,baz=234,slow=40						
	comp=Z,7.8nm,0.7s						
KLR	Kul'dur	12.12	301	eP	Pn	05 33 57.8	-0.6
JHJ	Hachijo jima 2	12.43	212	LR	LR	05 39 29.6	
	comp=Z,23nm,18.8s,baz=298,slow=40						
MA2	Magadan	15.76	6	LR	LR	05 40 41.8	
	comp=Z,64nm,19.7s,baz=239,slow=36						
KSRS	Korea Array	16.27	253	LR	LR	05 39 48.0	
	comp=Z,38nm,18.7s,baz=35,slow=32						
SEY	Seymchan	19.22	7	i P	Pn	05 35 28.7	-0.8
SEY				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOW	Kunigami	23.15	229	LR	LR	05 44 36.3	
	comp=Z,54nm,20.9s,baz=304,slow=35						
H11N2	WAKE ISLAND Hy	29.04	140	T	T	06 07 50.3	
	baz=331,slow=76,SNR=139						
H11N1	WAKE ISLAND Hy	29.05	140	T	T	06 07 48.5	
	baz=331,slow=76,SNR=140						
H11N3	WAKE ISLAND Hy	29.05	140	T	T	06 07 49.6	
	baz=331,slow=76,SNR=182						
H11S1	WAKE ISLAND Hy	30.01	142	T	T	06 08 58.2	
	baz=332,slow=76,SNR=594						
H11S3	WAKE ISLAND Hy	30.02	142	T	T	06 08 58.6	
	baz=332,slow=76,SNR=465						
H11S2	WAKE ISLAND Hy	30.03	142	T	T	06 08 57.2	
	baz=332,slow=76,SNR=428						
KDAK	Kodiak Island	38.86	48	P	P	05 38 28.5	-0.1

	comp=Z,12nm,0.9s,baz=51,slow=3.3,SNR=2.7						
	comp=Z,12nm,0.9s						
ILAR	**Eielson Array**	**41.12**	**36**	P	**P**	**05 38 47.5**	**+0.2**
	comp=Z,0.9nm,1.0s,baz=232,slow=6.8,SNR=5.2						
	comp=Z,0.9nm,1.0s						
INK	**Inuvik**	**46.06**	**30**	P	**P**	**05 39 25.6**	**-1.3**
	comp=Z,1.1nm,1.0s,baz=268,slow=6.3,SNR=3.2						
	comp=Z,1.1nm,1.0s						
WRA	**Warramunga Arr**	**64.74**	**194**	P	**P**	**05 41 41.8**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=12,slow=6.8,SNR=8.0						
	comp=Z,1.7nm,0.9s						
WRA	**Warramunga Arr**	**64.74**	**194**	*e*P	**P**	**05 41 42.7**	**+1.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NVAR	**Mina Array Bea**	**67.19**	**58**	P	**P**	**05 41 59.4**	**+1.8**
	comp=Z,0.9nm,1.0s,baz=304,slow=5.1,SNR=3.5						
	comp=Z,0.9nm,1.0s						
ASAR	**Alice Springs**	**68.45**	**194**	P	**P**	**05 42 05.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=14,slow=5.9,SNR=5.7						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**69.52**	**50**	P	**P**	**05 42 13.1**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=238,slow=2.8,SNR=4.2						
	comp=Z,0.6nm,0.9s						
TXAR	**Lajitas Array**	**82.26**	**57**	P	**P**	**05 43 25.7**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=299,slow=4.5,SNR=7.6						
	comp=Z,0.5nm,0.8s						

*MOS **02** 05:36:58.4±1.1, 38°.30N×75°.31E, h127km, mb4.0/15, Error ellipse: s-maj=7.6km s-min=4.4km az=93.8*

*IDC **02** 05:36:59.1±2.5, 38°.22N×75°.37E, h119km±21km, mb3.8/21, mbtmp4.2/26, Error ellipse: s-maj=18.3km s-min=10.9km az=19.0*

*NEIC **02** 05:37:00.7±2.1, 38°.32N±0°.04×75°.24E±0°.09, h121km±8km, mb4.2/17, Error ellipse: s-maj=9.9km s-min=6.3km az=104.0*

*NNC **02** 05:37:02.2±3.5, 38°.54N×75°.29E, h160km±35km, mb3.7, mpv4.6, Error ellipse: s-maj=34.3km s-min=14.3km az=179.0*

ISC 02 05:36:57.6±0.4**, 38°.19N**±0°.04×**75°.32E**±0°.04**, h100**km**, n144,** σ**1s72**/156**, mb4.1**/33**, 11C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH2	**Kashi**	**0.97**	**12**	Pg	**Pn**	**05 37 21.2**	**+3.3**
KSH2				Sg	**Sn**	**05 37 36.6**	**+3.5**
KSH2				smax	smax		
	comp=N,4μm,0.6s						
KSH2				smax	smax		
	comp=E,6μm,0.5s						
DRK	**Karamyk**	**3.03**	**296**		**Pn**	**05 37 46.4**	**+2.3**
DRK				Sn	**Sn**	**05 38 22.5**	**+2.7**
DRK	**Karamyk**	**3.03**	**296**	PN	**Pn**	**05 37 46.4**	**+2.3**
DRK						05 38 22.5	
ARSB	**Arslanbob**	**3.61**	**331**		**Pn**	**05 37 52.8**	**+1.2**
ARSB				Sn	**Sn**	**05 38 33.2**	**-0.1**
ARSB	**Arslanbob**	**3.61**	**331**	PN	**Pn**	**05 37 52.8**	**+1.2**
BTK	**Batken**	**3.96**	**299**		**Pn**	**05 37 58.2**	**+1.9**
BTK				Sn	**Sn**	**05 38 44.6**	**+2.7**
GAR	**Garm**	**4.00**	**283**		**Pn**	**05 37 57.9**	**+1.0**
TARG	**Taragay, Kyrgy**	**4.02**	**28**		**Pn**	**05 37 59.5**	**+2.1**
TARG	**Taragay, Kyrgy**	**4.02**	**28**	PN	**Pn**	**05 37 59.5**	**+2.1**
UCH	**Uchtor**	**4.08**	**352**	P	**Pn**	**05 38 00.0**	**+1.8**
	SNR=558						
ULHL	**Ulahol**	**4.11**	**10**	P	**Pn**	**05 38 00.4**	**+1.9**
	SNR=20						
ALCI	**Alchi Leh**	**4.25**	**159**	*e*P	**Pn**	**05 38 01.9**	**+1.4**
ALCI				*e*S	**Sn**	**05 38 47.5**	**-1.7**
ALCI				IAML		05 38 57.2	
	comp=N,245nm,0.2s						
ALCI				IAML		05 38 58.1	
	comp=E,357nm,0.2s						
WUS	**Wushi**	**4.25**	**44**		**Pn**	**05 38 02.3**	**+2.0**
BOOM	**Boomskoye usch**	**4.32**	**6**		**Pn**	**05 38 03.4**	**+2.2**
BOOM	**Boomskoye usch**	**4.32**	**6**	PN	**Pn**	**05 38 03.4**	**+2.2**
KBK	**Karagaybulak**	**4.47**	**357**	P	**Pn**	**05 38 05.3**	**+2.0**
	SNR=81						
AAK	**Ala-Archa**	**4.48**	**352**	P	**Pn**	**05 38 05.5**	**+2.1**
	comp=E,147nm,0.4s,baz=154,slow=7.5,SNR=276						
AAK				S	**Sn**	**05 38 55.5**	**+0.9**
	comp=E,66nm,0.5s,baz=44,slow=19,SNR=6.0						
AAK	**Ala-Archa**	**4.48**	**352**	P	**Pn**	**05 38 05.5**	**+2.1**
	SNR=214						
AAK	**Ala-Archa**	**4.48**	**352**		**Pn**	**05 38 05.6**	**+2.2**
AAK	**Ala-Archa**	**4.48**	**352**	⇓P	**Pn**	**05 38 05.3**	**+1.9**
	comp=E,54nm,0.5s						
AAK				⇑S	**Sn**	**05 38 54.7**	**+0.1**
	comp=E,32nm,0.5s						
EKS2	**Erkin-Say**	**4.62**	**346**	P	**Pn**	**05 38 07.0**	**+1.8**
	SNR=90						
FRU1	**Bishkek**	**4.64**	**354**		**Pn**	**05 38 07.9**	**+2.4**
FRU1	**Bishkek**	**4.64**	**354**	PN	**Pn**	**05 38 07.9**	**+2.4**
TKM2	**Tokmak 2**	**4.73**	**2**	P	**Pn**	**05 38 08.7**	**+1.9**
	SNR=245						
CHMS	**Chumysh**	**4.82**	**355**	P	**Pn**	**05 38 09.4**	**+1.5**
	SNR=59						
NIL	**Nilore**	**4.83**	**201**		Pn	05 38 13.4	+5.3
NIL	**Nilore**	**4.83**	**201**	PN	Pn	05 38 13.4	+5.3
CHGR	**Chuyangaron**	**4.86**	**277**		**Pn**	**05 38 09.2**	**+0.7**
CHGR	**Chuyangaron**	**4.86**	**277**	PN	**Pn**	**05 38 09.2**	**+0.7**
PRZ	**Przheval'sk**	**4.89**	**28**		**Pn**	**05 38 11.6**	**+2.6**
PRZ	**Przheval'sk**	**4.89**	**28**	PN	**Pn**	**05 38 11.6**	**+2.6**
USP	**Ospenovka**	**5.11**	**353**	P	**Pn**	**05 38 13.1**	**+1.4**
	SNR=58						
TSSA	**Tissa**	**5.39**	**173**	*e*P	**Pn**	**05 38 18.5**	**+2.7**
TSSA				*e*S	**Sn**	**05 39 17.2**	**+0.6**
TSSA				IAML		05 39 21.6	
	comp=N,325nm,0.3s						
TSSA				IAML		05 39 23.2	
	comp=E,462nm,0.3s						
JMU	**Jammu**	**5.41**	**184**	*e*P	**Pn**	**05 38 18.1**	**+2.1**
JMU				*e*S	**Sn**	**05 39 16.6**	**-0.4**
JMU				IAML		05 39 24.3	
	comp=N,463nm,0.7s						
JMU				IAML		05 39 24.4	
	comp=E,340nm,0.6s						
IUG	**Iuzhnay**	**5.66**	**316**	PN	**Pn**	**05 38 18.9**	**-0.3**
UZB	**Uzynbulak**	**5.69**	**28**	PN	**Pn**	**05 38 20.2**	**+0.4**
SHAA	**Shahritus**	**5.72**	**266**		**Pn**	**05 38 21.6**	**+1.4**
THN	**Thein Dam**	**5.75**	**176**	*e*P	**Pn**	**05 38 22.1**	**+1.5**
THN				*e*S	**Sn**	**05 39 25.2**	**-0.1**
THN				IAML		05 39 32.5	
	comp=N,286nm,0.3s						
THN				IAML		05 39 33.6	
	comp=E,178nm,0.5s						
SHLS	**Shalkode**	**5.88**	**31**	PN	**Pn**	**05 38 25.8**	**+3.6**
PDGK	**Podgornoye**	**6.03**	**30**	⇑P	**Pn**	**05 38 25.3**	**+1.0**
	comp=E,31nm,0.5s						
PDGK				⇓S	**Sn**	**05 39 30.4**	**-1.6**
	comp=E,141nm,0.9s						
PDGK	**Podgornoye**	**6.03**	**30**	PN	**Pn**	**05 38 25.3**	**+1.0**
KK31	**Karatay Array**	**6.12**	**325**		**Pn**	**05 38 26.2**	**+0.8**
KK31	**Karatay Array**	**6.12**	**325**	⇑P	**Pn**	**05 38 25.7**	**+0.2**
	comp=E,17nm,0.2s,baz=131,slow=12,SNR=592						
KK31				⇓S	**Sn**	**05 39 32.1**	**-1.9**
	comp=E,66nm,0.5s,baz=143,slow=25,SNR=6.0						
KK31	**Karatay Array**	**6.12**	**325**	*e*PN	**Pn**	**05 38 25.6**	**+0.2**
KKAR	**Karatay Array**	**6.12**	**325**		**Pn**	**05 38 26.1**	**+0.7**
KKAR	**Karatay Array**	**6.12**	**325**	PN	**Pn**	**05 38 26.1**	**+0.7**
KBL	**Kabul**	**6.24**	**236**		**Pn**	**05 38 30.6**	**+3.3**
KBL	**Kabul**	**6.24**	**236**	PN	**Pn**	**05 38 30.6**	**+3.3**
ARXS	**Arharly**	**6.30**	**17**	*e*PN	**Pn**	**05 38 27.4**	**-0.6**
BRLS	**Borolday**	**6.38**	**321**	PN	**Pn**	**05 38 26.8**	**-2.2**
BHK	**Bhakra**	**6.84**	**172**	*e*P	**Pn**	**05 38 38.3**	**+3.0**
BHK				*e*S	**Sn**	**05 39 52.6**	**+0.9**
BHK				IAML		05 39 54.9	
	comp=E,139nm,0.1s						
BHK				IAML		05 39 55.2	
	comp=N,127nm,0.5s						
BTLS	**Baital**	**6.91**	**352**	PN	**Pn**	**05 38 32.7**	**-3.5**
KLP	**Kalpa**	**7.07**	**159**	*e*P	**Pn**	**05 38 41.0**	**+2.3**
KLP				*e*S	**Sn**	**05 39 55.1**	**-2.6**
KLP				IAML		05 40 02.0	
	comp=E,276nm,0.4s						
KLP				IAML		05 40 02.3	
	comp=N,237nm,0.5s						
SMLA	**Simla**	**7.21**	**167**	*e*P	**Pn**	**05 38 42.8**	**+2.5**
SMLA				*e*S	**Sn**	**05 39 59.2**	**-1.4**
SMLA				IAML		05 40 04.9	
	comp=E,394nm,0.3s						
SMLA				IAML		05 40 06.1	
	comp=N,283nm,0.4s						
JOSI	**Joshimath**	**8.38**	**154**	*e*P	**Pn**	**05 39 00.3**	**+3.8**
JOSI				*e*S	**Sn**	**05 40 27.1**	**-2.5**
JOSI				IAML		05 40 31.3	
	comp=N,104nm,0.6s						
JOSI				IAML		05 40 33.1	
	comp=E,146nm,0.3s						
MAKZ	**Makanchi**	**9.91**	**28**		**Pn**	**05 39 18.0**	**+1.0**
MAKZ	**Makanchi**	**9.91**	**28**	P	**Pn**	**05 39 18.0**	**+1.0**
MK31	**Makanchi Array**	**10.02**	**29**	⇓P	**Pn**	**05 39 18.7**	**+0.2**
	comp=E,6.5nm,0.5s,baz=207,slow=12,SNR=88						
MK31	**Makanchi Array**	**10.02**	**29**	*e*P	**Pn**	**05 39 18.6**	**+0.2**
MKAR	**Makanchi Array**	**10.02**	**29**	P	**Pn**	**05 39 18.8**	**+0.3**
	comp=E,3.9nm,0.5s,baz=202,slow=15,SNR=75						
MKAR	**Makanchi Array**	**10.02**	**29**		**Pn**	**05 39 19.0**	**+0.6**
MKAR	**Makanchi Array**	**10.02**	**29**	P	**Pn**	**05 39 19.0**	**+0.6**
WMQ	**Urumqi**	**10.91**	**55**	*e*P	**Pn**	**05 39 33.4**	**+2.8**
KURBB	**Kurchatov Arra**	**12.64**	**9**	P	**Pn**	**05 39 51.3**	**-2.2**
	comp=E,4.6nm,0.8s,baz=196,slow=12,SNR=20						
KURBB	**Kurchatov Arra**	**12.64**	**9**	⇓P	Pn	05 39 50.1	-3.4
	comp=E,5.7nm,0.6s						
KURK	**Kurchatov**	**12.74**	**10**	Pn	**Pn**	**05 39 53.2**	**-1.7**
KURK	**Kurchatov**	**12.74**	**10**	*ce*P	**Pn**	**05 39 52.8**	**-2.1**
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
DGZ	**Jazzator, Alta**	**14.42**	**33**	*i* P	**Pn**	**05 40 15.7**	**-1.2**
BVA0	**Borovoye Array**	**15.22**	**349**	⇑P	**Pn**	**05 40 25.3**	**-1.6**
	comp=Z,8.8nm,0.5s						
BVA0	**Borovoye Array**	**15.22**	**349**	P	**Pn**	**05 40 25.9**	**-1.0**
BVAR	**Borovoye Array**	**15.22**	**349**	P	**Pn**	**05 40 25.9**	**-1.0**
	comp=Z,6.6nm,0.5s,baz=160,slow=13,SNR=26						
BORK	**Borovoye**	**15.25**	**348**		**Pn**	**05 40 26.1**	**-1.2**
BORK	**Borovoye**	**15.25**	**348**	*ce*P	**Pn**	**05 40 26.0**	**-1.3**
BORK				pmax	pmax		
	comp=Z,12nm,0.8s						
AB31	**Akbulak array**	**15.64**	**320**		**Pn**	**05 40 30.3**	**-1.9**
AB31	**Akbulak array**	**15.64**	**320**	⇓P	**Pn**	**05 40 29.9**	**-2.3**
	comp=Z,9.5nm,0.5s,baz=124,slow=12,SNR=266						
AB31	**Akbulak array**	**15.64**	**320**	*i* P	**Pn**	**05 40 29.9**	**-2.3**
ABKAR	**Akbulak array**	**15.64**	**320**		**Pn**	**05 40 30.4**	**-1.8**
GOMU	**GeErMu**	**15.67**	**91**	P	**Pn**	**05 40 34.3**	**+1.3**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA0	**Zalesovo Array**	**17.05**	**19**		**Pn**	**05 40 47.6**	**-2.0**
ZAA0	**Zalesovo Array**	**17.05**	**19**	⇑P	**Pn**	**05 40 47.3**	**-2.3**
	comp=Z,7.7nm,0.9s						
ZALV	**Zalesovo Beam**	**17.05**	**19**	P	**Pn**	**05 40 47.9**	**-1.7**
	comp=Z,5.1nm,0.5s,baz=209,slow=12,SNR=38						
ZALV	**Zalesovo Beam**	**17.05**	**19**		**Pn**	**05 40 47.5**	**-2.1**
AKTO	**Aktyubinsk**	**17.36**	**320**	P	**Pn**	**05 40 52.5**	**-0.9**
	comp=Z,16nm,0.6s,baz=119,slow=14,SNR=29						
AKTO	**Aktyubinsk**	**17.36**	**320**	⇑P	**Pn**	**05 40 52.1**	**-1.2**
	comp=Z,10nm,0.7s						
SHL	**Shillong**	**18.84**	**127**		**P**	**05 41 09.7**	**-0.2**
SHL				IAmb	IAmb	05 41 14.2	
	comp=Z,13nm,1.0s						
SHL	**Shillong**	**18.84**	**127**	P	**P**	**05 41 09.7**	**-0.2**
SHL				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA2	**Gaotai**	**19.07**	**78**	*e*P	**P**	**05 41 14.3**	**+2.0**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KNGR	**Kungurtug, Tuv**	**20.05**	**45**	*i* P	**P**	**05 41 23.2**	**+0.5**
KNGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SVE	**Sverdlovsk**	**21.03**	**337**	*e*P	**P**	**05 41 33.5**	**+0.4**
ARTI	**Arti**	**21.42**	**334**	P	**P**	**05 41 37.2**	**0.0**
	comp=Z,22nm,0.8s,baz=178,slow=4.7,SNR=26						
	comp=Z,22nm,0.8s						
ARTI	**Arti**	**21.42**	**334**		**P**	**05 41 37.1**	**0.0**
ARTI	**Arti**	**21.42**	**334**	*d i*P	**P**	**05 41 35.9**	**-1.3**
ARTI						05 42 07.7	
ARTI				S	**S**	**05 45 30.1**	**+1.1**
ARTI				pmax	pmax		
	comp=Z,14nm,1.8s						
LZDM	**Lanzhou Array**	**22.72**	**87**	P	**P**	**05 41 51.5**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=265,slow=12,SNR=4.6						
LZDM				PcP	**PcP**	**05 45 39.5**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=235,slow=5.2,SNR=4.6						
	comp=Z,0.8nm,0.3s						
LZH	**Lanzhou**	**22.80**	**86**	*e*P	**P**	**05 41 54.1**	**+2.0**
LZH				sP	sP	05 42 40.8	+16
LZH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BELG	**Belogornoye**	**23.92**	**315**	P	**P**	**05 42 02.2**	**+0.2**
	comp=Z,15nm,0.8s,baz=285,slow=2.4,SNR=8.6						
	comp=Z,15nm,0.8s						
BELG	**Belogornoye**	**23.92**	**315**	*i* P	**P**	**05 42 01.5**	**-0.5**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**24.54**	**57**	P	**P**	**05 42 08.5**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=257,slow=9.6,SNR=17						
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	**24.54**	**57**	P	**P**	**05 42 09.2**	**+1.3**
SONM	**Songino Array**	**24.54**	**57**	P	**P**	**05 42 09.2**	**+1.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**24.98**	**57**	*ce*P	**P**	**05 42 10.0**	**-1.9**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**25.00**	**293**	P	**P**	**05 42 13.8**	**+1.9**
	comp=Z,1.2nm,0.6s,baz=201,slow=3.0,SNR=5.1						
	comp=Z,1.2nm,0.6s						
HHC	**Hu-ho-hao-te**	**27.96**	**73**	*e*P	**P**	**05 42 39.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.48**	**127**	P	**P**	**05 42 43.8**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=301,slow=8.3,SNR=1.0						
	comp=Z,0.6nm,0.3s						
OBN	**Obninsk**	**31.01**	**316**	*e*P	P	05 43 01.4	-4.0
OBN				*e**PP	pP	05 43 29.8	+0.7
OBN				*e**SP	sP	05 43 44.8	+3.5
OBN				*e*		05 45 55.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	**Keskin Array S**	**32.24**	**286**	P	**P**	**05 43 14.8**	**-1.7**
BR131				IAmb	IAmb	05 43 18.4	
	comp=Z,3.3nm,0.9s						
BR131	**Keskin Array S**	**32.24**	**286**	P	**P**	**05 43 14.8**	**-1.7**
BR131				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	**32.24**	**286**	P	**P**	**05 43 17.4**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=96,slow=7.0,SNR=11						
	comp=Z,1.1nm,0.4s						
BRTR	**Keskin Array B**	**32.24**	**286**	P	**P**	**05 43 15.7**	**-0.8**
AKASG	**Malin Array Be**	**34.64**	**306**	P	**P**	**05 43 36.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=80,slow=7.7,SNR=5.4						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**34.64**	**306**	P	**P**	**05 43 37.6**	**+0.5**
AKASG				IAmb	IAmb	05 43 38.0	
	comp=Z,4.1nm,1.3s						
AKASG	**Malin Array Be**	**34.64**	**306**	*ce*P	**P**	**05 43 37.0**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	**Malin Array Si**	**34.64**	**306**	P	**P**	**05 43 37.1**	**0.0**
AKBB				IAmb	IAmb	05 43 47.1	
	comp=Z,4.1nm,1.2s						
AKBB	**Malin Array Si**	**34.64**	**306**	P	**P**	**05 43 37.1**	**0.0**
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KIEV	**Kiev**	**34.65**	**306**	P	**P**	**05 43 37.1**	**-0.1**
KIEV	**Kiev**	**34.65**	**306**	P	**P**	**05 43 37.1**	**-0.1**
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BUR08	**Bucovina Ar. S**	**37.32**	**301**	P	**P**	**05 44 00.5**	**+0.4**
BUR08				IAmb	IAmb	05 44 16.4	
	comp=Z,7.7nm,1.4s						
FINES	**FINESS Array B**	**38.08**	**324**	P	**P**	**05 44 06.2**	**0.0**
	comp=Z,3.0nm,0.8s,baz=107,slow=8.1,SNR=13						
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**38.08**	**324**	P	**P**	**05 44 06.4**	**+0.3**
IDI	**Anoyia**	**40.11**	**282**	P	**P**	**05 44 24.4**	**+0.8**
IDI				IAmb	IAmb	05 44 41.0	
	comp=Z,6.0nm,0.9s						
KLR	**Kul'dur**	**41.36**	**56**	*i* P	P	05 44 30.2	-3.3
KLR				pmax	pmax		
	comp=Z,16nm,4.1s						
TIXI	**Tiksi**	**42.92**	**22**	*i* P	**P**	**05 44 43.4**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.8s						
HFS	**Hagfors**	**43.90**	**321**	P	**P**	**05 44 54.0**	**+0.1**
	comp=Z,3.3nm,0.7s,baz=121,slow=11,SNR=11						
	comp=Z,3.3nm,0.7s						
KHC	**Kasperske Hory**	**44.82**	**305**	*i* P	**P**	**05 44 59.2**	**-2.2**
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	**Collm**	**44.84**	**308**	*e*P	**P**	**05 45 02.0**	**+0.5**
CLL				*e**SP	**sP**	**05 45 43.0**	**+4.8**
CLL	**Collm**	**44.84**	**308**	*e*P	**P**	**05 45 02.0**	**+0.5**
CLL				*e*sP	**sP**	**05 45 43.0**	**+4.8**
NC405	**NORSAR Array S**	**44.90**	**322**	P	**P**	**05 45 01.9**	**+0.1**
NC405				IAmb	IAmb	05 45 10.4	
	comp=Z,11nm,1.1s						
NC303	**NORSAR Array S**	**45.06**	**322**	P	**P**	**05 45 03.5**	**+0.4**
NB2	**NORSAR Subarra**	**45.14**	**322**	P	**P**	**05 45 03.2**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**45.14**	**322**	P	**P**	**05 45 03.1**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=91,slow=7.6,SNR=5.1						
	comp=Z,1.3nm,0.6s						
SPITS	**Spitsbergen Ar**	**46.66**	**346**	P	**P**	**05 45 16.3**	**+0.8**
	comp=Z,2.9nm,0.6s,baz=114,slow=14,SNR=9.8						
	comp=Z,2.9nm,0.6s						
EKA	**Eskdalemuir Ar**	**53.47**	**316**	P	**P**	**05 46 06.6**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=77,slow=6.6,SNR=7.5						
	comp=Z,1.2nm,0.6s						
ESDC	**Sonseca Array**	**59.69**	**299**	P	**P**	**05 46 51.0**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=54,slow=6.9,SNR=23						
	comp=Z,0.9nm,0.5s						
TOLK	**Toolik Lake Re**	**68.38**	**16**	P	**P**	**05 47 47.9**	**-0.1**
TOLK				IAmb	IAmb	05 47 48.1	
	comp=Z,2.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.17**	**271**	P	**P**	**05 47 52.3**	**-1.3**
	comp=Z,3.7nm,0.6s,baz=46,slow=3.7,SNR=44						
	comp=Z,3.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**69.17**	**271**	P	**P**	**05 47 52.5**	**-1.1**
TORD				IAmb	IAmb	05 47 53.1	
	comp=Z,2.2nm,0.6s						
INK	**Inuvik**	**71.64**	**11**	P	**P**	**05 48 07.3**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=322,slow=5.4,SNR=11						
	comp=Z,1.2nm,0.6s						
ILAR	**Eielson Array**	**72.17**	**18**	P	**P**	**05 48 09.1**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=307,slow=4.9,SNR=7.8						
	comp=Z,0.6nm,0.8s						
DBIC	**Dimbokro**	**78.19**	**269**	P	**P**	**05 48 45.4**	**-1.0**
	comp=Z,3.8nm,0.6s,baz=55,slow=6.6,SNR=8.6						
	comp=Z,3.8nm,0.6s						
YKA	**Yellowknife Ar**	**79.34**	**5**	P	**P**	**05 48 50.1**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=346,slow=5.9,SNR=15						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**79.34**	**5**	*ce*P	**P**	**05 48 51.0**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**80.05**	**125**	P	P	05 48 55.0	-1.4
	comp=Z,0.8nm,0.6s,baz=325,slow=5.0,SNR=8.4						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**80.05**	**125**	*i* P	**P**	**05 48 55.5**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**82.49**	**128**	P	P	05 49 08.0	-1.2
	comp=Z,1.0nm,0.6s,baz=317,slow=5.0,SNR=17						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**82.49**	**128**	P	P	05 49 08.0	-1.2

*IDC **02** 05:43:52.7±5.4, 27°.15N×106°.91E, h0km, mb3.7/6, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=93.4km s-min=34.8km az=2.0*

ISC 02 05:43:57.8±3.4**, 27°.2N**±0°.4×**106°.8E**±0°.1**, h35**km**, n8,** σ**1s31**/9**, mb3.9**/4**, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNSH	**ChangSha**	**5.50**	**79**	P	**Pn**	**05 45 16.3**	**-0.9**
CNSH				S	**Sn**	**05 46 21.0**	**+1.7**
CNSH				smax	smax		
	comp=N,93nm,0.9s						
CNSH				smax	smax		
	comp=E,59nm,0.8s						
LZDM	**Lanzhou Array**	**9.11**	**344**	Pn	**Pn**	**05 46 06.2**	**-0.8**
	baz=174,slow=18						
	comp=E,0.7nm,0.3s						
KSRS	**Korea Array**	**20.50**	**55**	P	**P**	**05 48 31.6**	**-1.1**
	comp=E,1.6nm,0.7s,baz=239,slow=9.4,SNR=6.2						
	comp=E,1.6nm,0.7s						
SONM	**Songino Array**	**20.58**	**359**	P	**P**	**05 48 34.8**	**+1.0**
	comp=E,1.9nm,0.8s,baz=175,slow=10,SNR=14						
	comp=E,1.9nm,0.8s						
HILR	**Hailar Array B**	**24.42**	**21**	P	**P**	**05 49 13.2**	**+0.1**
	comp=E,2.9nm,0.6s,baz=206,slow=9.9,SNR=5.2						
	comp=E,2.9nm,0.6s						
MKAR	**Makanchi Array**	**27.48**	**322**	P	**P**	**05 49 42.4**	**+1.7**
	comp=E,0.3nm,0.8s,baz=141,slow=9.3,SNR=2.3						
	comp=E,0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**31.24**	**335**	P	**P**	**05 50 13.9**	**0.0**
	comp=E,1.6nm,0.6s,baz=142,slow=9.1,SNR=6.7						
	comp=E,1.6nm,0.6s						
KURBB	**Kurchatov Arra**	**31.77**	**325**	P	**P**	**05 50 19.1**	**+0.5**
	comp=E,0.7nm,0.5s,baz=130,slow=9.4,SNR=5.8						
	comp=E,0.7nm,0.5s						

*DNK **02** 05:43:34.9±4.0, 50°.64N×36°.26W, h10km, mb4.8, Presumed earthquake*

*IDC **02** 05:43:58.0±0.5, 53°.23N×35°.25W, h0km, mb4.3/31, mbtmp4.3/34, ML3.6/3, MS3.9/62, Error ellipse: s-maj=14.7km s-min=10.0km az=174.0*

*NEIC **02** 05:44:00.1±1.2, 53°.39N±0°.09×35°.3W±0°.1, h10km±1km, mb4.7/203, Error ellipse: s-maj=16.3km s-min=14.0km az=206.0*

*GFZ **02** 05:44:01.0, 53°.32N×35°.15W, h10km, MW4.7, Moment Tensor Solution. s58 Moment tensor: Mrr-1.57; Mθθ0.42; Mφφ1.15; Mrθ0.10; Mθφ-0.13; Mφr-0.34; Fault plane solution: NP1:φs171.00000°, δ38.00000°, λ-87.00000°. NP2:φs349.00000°, δ52.00000°, λ-90.00000°. Principal axes: T 1.2200, Plg7.0000°, Azm80.0000°; N 0.3900, Plg1.0000°, Azm350.0000°; P -1.6100, Plg83.0000°, Azm251.0000°;*

*GCMT **02** 05:44:00.1±0.3, 53°.49N±0°.04×35°.19W±0°.03, h12km, MW4.8/92, Moment Tensor Solution. s11,c12; s92,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-1.29±.07; Mθθ-0.06±.09; Mφφ1.34±.05; Mrθ1.33±.32; Mθφ-0.45±.05; Mφr0.02±.25; Best double couple: M0 1.85000×10^{16} NP1:φs188.00000°, δ44.00000°, λ-42.00000°. NP2: φs311.00000°, δ63.00000°, λ-126.00000°. Principal axes: T 1.5410, Plg11.0000°, Azm66.0000°; N 0.6140, Plg31.0000°, Azm329.0000°; P -2.1590, Plg57.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*INMG **02** 05:44:01.0±3.6, 53°.38N×35°.21W, h10km, M4.3, mb4.5, Ms3.9, #DIST_RANGE: DISTANT*

ISC 02 05:44:00.4±0.3**, 53°.28N**±0°.06×**35°.28W**±0°.04**, h16**km**, n513,** σ**0s82**/410**, mb4.6**/164**, MS3.9**/64**, 17C-8D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**9.61**	**329**	Pn	**Pn**	**05 46 16.0**	**-1.9**
IVI	**Ivigtut**	**10.56**	**324**	Pn	**Pn**	**05 46 29.4**	**-1.4**
ANGG	**Ammassalik, Gr**	**12.43**	**355**	*e*P	**P**	**05 47 09.7**	**+1.4**
ANGG				IAmb	IAmb	05 47 11.2	
	comp=Z,11nm,1.0s						
BORG	**Borgarnes**	**13.52**	**26**	LR	LR	05 50 31.5	
	comp=Z,249nm,20.9s,baz=229,slow=29						
DRLN	**Deer Lake**	**14.46**	**263**	Pn	**Pn**	**05 47 24.8**	**+0.6**
SFJD	**Kangerlussuaq**	**15.66**	**337**	Pn	**Pn**	**05 47 41.3**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=144,slow=10,SNR=14						
SFJD				LR	LR	05 52 32.7	
	comp=Z,271nm,19.6s,baz=162,slow=33						
	comp=Z,32nm,0.9s						
SFJD	**Kangerlussuaq**	**15.66**	**337**		**Pn**	**05 47 38.9**	**-1.1**
SFJD				IAmb	IAmb	05 47 48.0	
	comp=Z,41nm,1.0s						
SFJD	**Kangerlussuaq**	**15.66**	**337**	*i* P	**P**	**05 47 43.7**	**-0.4**
SFJD				IAmb	IAmb	05 47 47.6	
	comp=Z,42nm,1.0s						
ILULI	**Ilulissat**	**17.60**	**341**	P	**Pn**	**05 48 04.0**	**-0.6**
ILULI				IAmb	IAmb	05 48 07.9	
	comp=Z,84nm,1.5s						
GDH	**Godhavn**	**18.13**	**339**	*i* P	**P**	**05 48 12.3**	**+1.0**
SCO	**Scoresbysund**	**18.29**	**14**	*i* P	**P**	**05 48 18.9**	**+5.8**
SCHQ	**Schefferville**	**18.51**	**288**	P	**P**	**05 48 14.8**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=97,slow=9.1,SNR=14						
SCHQ				LR	LR	05 54 11.2	
	comp=Z,442nm,21.9s,baz=87,slow=33						
	comp=Z,5.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**18.77**	**71**	P	**Pn**	**05 48 19.2**	**+0.2**
	baz=270,slow=10.0						
EKA				LR	LR	05 54 10.2	
	comp=Z,673nm,19.2s,baz=250,slow=33						
	comp=Z,3.9nm,0.8s						
SAATT	**Saattut**	**19.06**	**343**	*i* P	**P**	**05 48 20.6**	**-1.0**

SAATT IAmb IAmb 05 48 23.9
comp=Z,37nm,0.9s
KUQ Kuujjuuaa 19.16 298 P P 05 48 22.9 +0.2
NIAQ Niaqornat 19.41 342 *i* P P **05 48 25.4 +0.1**
NIAQ IAmb IAmb 05 48 28.2
comp=Z,51nm,1.0s
SUMG Summit 19.42 357 P 05 48 24.2 -1.7
SUMG IAmb IAmb 05 48 31.9
comp=Z,35nm,1.2s
SUMG Summit 19.42 357 *i* P **Pn 05 48 27.7 +0.6**
SUMG IAmb IAmb 05 48 31.6
comp=Z,23nm,1.0s
NUUG Nuugaatsiaq 19.95 343 *i* P P **05 48 31.4 +0.1**
NUUG IAmb IAmb 05 48 33.5
comp=Z,14nm,0.9s
FRB Frobisher Bay 20.03 315 P Pn 05 48 33.6 -0.4
comp=Z,4.3nm,0.8s,baz=102,slow=7.3,SNR=7.4
FRB LR LR 05 54 23.8
comp=Z,320nm,20.9s,baz=115,slow=31
comp=Z,4.3nm,0.8s
ICQ Pointe Anglais 20.21 272 P P **05 48 34.0 -0.3**
LMN Caledonia Moun 20.43 261 P P **05 48 35.8 -1.0**
BATG Bathurst New B 20.46 265 P P **05 48 36.4 -0.7**
PGAV Gavieira, Arco 21.30 111 *e*LR LR 05 54 02.9
PGAV *i* IAMs_20 IAMs_20 05 55 04.3
comp=Z,465nm,18.0s
JMIC Jan Mayen 21.38 24 LR LR 05 54 55.2
comp=Z,546nm,20.1s,baz=240,slow=31
UPNV Upernavik 21.49 343 *i* P P **05 48 47.6 -0.3**
UPNV IAmb IAmb 05 48 55.6
comp=Z,29nm,1.1s
DBG Daneborg 21.99 11 *i* P P **05 48 53.3 +0.1**
DBG *e*P **pP 05 48 53.9 -3.2**
DBG IAmb IAmb 05 48 56.9
comp=Z,57nm,1.7s
D62A Allapoint, All 22.35 268 P P **05 48 56.2 -1.1**
D62A IAmb IAmb 05 49 01.9
comp=Z,24nm,1.1s
PVIS Viseu 22.35 113 *e*P P **05 48 56.6 -0.9**
MVO Moncorvo 22.53 111 *e*P P **05 49 01.9 +2.5**
MVO *i* IAmb IAmb 05 49 03.5
comp=Z,27nm,1.5s
MVO *e*LR LR 05 54 55.0
MVO *i* IAMs_20 IAMs_20 05 55 51.6
comp=Z,398nm,20.0s
F64A Sherman 22.53 264 P P **05 48 58.4 -1.0**
F64A IAmb IAmb 05 49 11.9
comp=Z,30nm,1.3s
MTE Manteigas 22.76 113 *e*LR LR 05 54 49.7
MTE *i* IAMs_20 IAMs_20 05 55 57.1
comp=Z,434nm,20.0s
E62A Clayton Lake 22.85 267 P P **05 49 03.2 +0.5**
E62A IAmb IAmb 05 49 19.2
comp=Z,20nm,1.3s
LMQ La Malbaie 22.89 270 P P **05 49 04.3 +1.2**
PSARD Sardoal 22.98 116 *e*P P **05 49 05.2 +1.1**
PSARD *i* IAmb IAmb 05 49 18.6
comp=Z,40nm,1.9s
KULLO Kullorsuaq 23.15 345 *i* P P **05 49 04.9 -0.5**
KULLO IAmb IAmb 05 49 05.9
comp=Z,44nm,1.3s
PCBR Castelo Branco 23.19 114 *e*P P **05 49 06.9 +0.7**
PCBR *i* IAmb IAmb 05 49 09.2
comp=Z,40nm,1.5s
LDAQ Lac Daran 23.25 271 P **05 49 06.7 -0.2**
LDAQ IAmb IAmb 05 49 17.0
comp=Z,34nm,1.4s
PKME Peaks-Kenny Pk 23.41 264 P P **05 49 09.4 +1.0**
PKME IAmb IAmb 05 49 14.3
comp=Z,39nm,1.4s
PMRV Marv??o 23.52 115 *e*LR LR 05 55 15.1
PMRV *i* IAMs_20 IAMs_20 05 56 30.6
comp=Z,397nm,18.0s
PARRA Arraiolos 23.61 117 *e*P P **05 49 11.4 +1.0**
PARRA *i* IAmb IAmb 05 49 21.2
comp=Z,18nm,1.9s
MOE Montemor 23.66 118 *e*P P **05 49 10.5 -0.4**
MOE *i* IAmb IAmb 05 49 24.9
comp=Z,27nm,1.4s
PTEO Sao Teotonio 24.19 120 *e*P P **05 49 15.8 -0.1**
PTEO *i* IAmb IAmb 05 49 27.2
comp=Z,50nm,1.6s
MESJ Messejana 24.24 119 *e*P P **05 49 17.6 +1.3**
MESJ *i* IAmb IAmb 05 49 33.0
comp=Z,15nm,1.4s
MORF Marmelete 24.41 120 P P **05 49 18.6 +0.6**
MORF IAmb IAmb 05 49 19.4
comp=Z,39nm,1.5s
MORF Marmelete 24.41 120 *e*P P **05 49 18.5 +0.6**
MORF *i* IAmb IAmb 05 49 30.3
comp=Z,26nm,1.7s
PCVE Castro Verde 24.49 119 P P **05 49 20.2 +1.6**
PBAR Barrancos 24.62 116 *e*P P **05 49 20.9 +1.1**
PBAR *i* IAmb IAmb 05 49 27.3
comp=Z,29nm,1.9s
PVAQ Vaqueiros 24.83 119 *e*P P **05 49 23.6 +1.9**
PVAQ *i* IAmb IAmb 05 49 37.5
comp=Z,18nm,1.7s
NEEM North Greenlan 24.95 352 *i* P P **05 49 22.7 -0.1**
NEEM IAmb IAmb 05 49 25.5
comp=Z,302nm,2.5s
PAB San Pablo 25.13 111 P P **05 49 26.2 +1.7**
ESBB Sonseca Array 25.26 110 P P **05 49 25.8 +0.1**
ESBB IAmb IAmb 05 49 27.6
comp=Z,12nm,1.1s
ESDC Sonseca Array 25.26 110 P P **05 49 24.9 -0.7**
comp=Z,6.3nm,1.0s,baz=309,slow=7.1,SNR=20
ESDC LR LR 05 57 29.5
comp=Z,391nm,18.1s,baz=310,slow=32
comp=Z,6.3nm,1.0s
ESDC Sonseca Array 25.26 110 P P **05 49 25.6 0.0**
MEM Membach 25.34 79 *d*P P **05 49 25.6 -0.6**
NOA NORSAR Array B 25.88 54 P P **05 49 31.2 +0.2**
comp=Z,3.4nm,1.0s,baz=276,slow=9.4,SNR=3.4
NOA LR LR 05 58 23.2
comp=Z,265nm,18.7s,baz=270,slow=33
comp=Z,3.4nm,1.0s
TRQ Mont Tremblant 26.07 270 P P **05 49 34.1 +1.2**
M65A Busby, Falmout 26.36 258 P P **05 49 38.0 +2.4**
baz=51
CEST Esterri de Car 26.42 99 P **05 49 36.1 -0.1**
CEST IAmb IAmb 05 49 41.2
comp=Z,33nm,1.4s
POIN Pond Inlet 26.48 333 P **05 49 36.3 0.0**
TULEG Thule 26.54 343 P P **05 49 36.0 -0.8**
TULEG Thule 26.54 343 *i* P P **05 49 36.3 -0.5**
TULEG IAmb IAmb 05 49 42.1
comp=Z,20nm,1.0s
ILON Igloolik, Nuna 26.61 325 P **05 49 37.0 -0.5**
HFS Hagfors 27.18 56 LR LR 05 58 53.2
comp=Z,404nm,19.5s,baz=275,slow=33
NOR Nord 29.00 6 *i* P P **05 49 58.1 -0.7**
NOR IAmb IAmb 05 49 59.4
comp=Z,4.1nm,1.1s
CLL Collm 29.16 74 P P **05 49 59.9 -0.5**
CLL IAmb IAmb 05 50 02.1
comp=Z,24nm,1.4s
CLL Collm 29.16 74 *i* P P **05 50 00.1 -0.3**
comp=Z,12nm,1.1s
CLL *i* x x 05 50 04.8
CLL *e*PP **PP 05 51 04.0 -2.1**
CLL *e*S **S 05 54 54.0 +2.3**
TUE Stuetta 29.16 85 P P **05 50 00.8 0.0**
NKC Novy Kostel 29.27 76 AMS AMS 06 01 10.0
comp=Z,600nm,18.2s
DAVOX Davos/Dischmat 29.32 84 LR LR 06 01 15.6
comp=Z,329nm,18.2s,baz=268,slow=35
RETA Reutte 29.51 82 *e*P P **05 50 04.3 +0.6**
comp=Z,3.8nm,1.2s
SADO Sadowa 29.58 271 LR LR 06 00 53.2
comp=Z,461nm,21.6s,baz=82,slow=34
FETA Feichten 29.71 83 *e*P P **05 50 05.8 +0.2**
comp=Z,7.7nm,1.5s
MOTA Moosalm 29.78 82 *e*pP P **05 50 07.5 +1.3**
comp=Z,4.3nm,1.2s
MD01 Midelt array s 29.86 121 P P **05 50 07.0 -0.1**
MD31 MD31 29.86 121 P P **05 50 06.9 -0.1**
BRG Berggiesshubel 29.87 74 *e*P P **05 50 07.0 +0.2**
BRG Amp 05 50 07.9
comp=Z,4.4nm,0.9s
SQTA Sankt Quirin 29.90 83 *e*P P **05 50 07.9 +0.7**
comp=Z,8.1nm,1.3s
WATA Walderalm 30.06 82 *e*P P **05 50 09.0 +0.3**
comp=Z,7.2nm,1.3s
WTTA Wattenberg 30.13 82 *e*P P **05 50 10.0 +0.6**
comp=Z,6.0nm,0.8s
PRU Pruhonice 30.59 76 AMS AMS 06 01 40.0
comp=Z,500nm,16.4s
GEC2 GERESS Array S 30.61 78 P **05 50 13.6 +0.1**
GEC2 IAmb IAmb 05 50 15.4
comp=Z,9.4nm,1.1s
GERES GERESS Array B 30.61 78 P P **05 50 14.1 +0.6**
comp=Z,2.2nm,0.8s,baz=300,slow=11,SNR=4.7
GERES LR LR 06 02 03.7
comp=Z,211nm,18.2s,baz=259,slow=36
comp=Z,2.2nm,0.8s
ZVC Zvikov 30.63 77 *e*P P **05 50 14.2 +0.7**
ZVC AMS AMS 06 01 50.0
comp=Z,500nm,17.3s
LESA Schwarzleotal 30.68 81 *e*P P **05 50 14.8 +0.8**
comp=Z,7.5nm,1.1s
CKRC Cesky Krumlov 30.98 78 *e*P P **05 50 17.0 +0.4**
CIMO Cimolais 31.09 83 P P **05 50 17.3 -0.3**
TEOL Teolo 31.12 85 P P **05 50 18.3 +0.4**
TEOL IAmb IAmb 05 50 18.7
comp=Z,10nm,1.0s
R61A Willards 31.20 258 P P **05 50 20.1 +1.4**
KBA Koelnbreinsper 31.24 81 *e*P P **05 50 19.3 +0.2**
comp=Z,6.5nm,1.3s
STAL STALIGIAL 31.27 83 P P **05 50 19.6 +0.3**
MOA Molln 31.41 80 *e*P P **05 50 20.5 +0.1**
comp=Z,9.2nm,1.3s
TREC Trest 31.45 76 AMS AMS 06 02 00.0
comp=Z,500nm,15.7s
DPC Dobruska-Polom 31.47 74 *e*P P **05 50 19.9 -1.1**
ARCES ARCESS Array B 31.61 36 P P **05 50 21.6 -0.3**
comp=Z,4.6nm,0.9s,baz=269,slow=7.8,SNR=3.6
ARCES LR LR 06 00 05.2
comp=Z,226nm,21.4s,baz=266,slow=31
comp=Z,4.6nm,0.9s
RES Resolute Bay 31.62 334 LR LR 06 01 27.9
comp=Z,75nm,20.6s,baz=342,slow=33
RES Resolute Bay 31.62 334 P P **05 50 21.9 0.0**
RES IAmb IAmb 05 50 23.7
comp=Z,7.3nm,1.1s
MYKA Terra Mystica 31.64 82 *e*P P **05 50 23.2 +0.7**
comp=Z,7.3nm,1.1s
SABO M.te Sabotino 31.95 83 P P **05 50 25.9 +0.7**
BLKN Baker Lake 32.04 314 P P **05 50 26.3 +0.6**
KRUC Moravsky 32.09 76 *e*P P **05 50 26.5 +0.1**
VRAC Vranov 32.09 76 LR LR 06 02 44.4
comp=Z,429nm,18.9s,baz=315,slow=35
VRAC Vranov 32.09 76 *e*P P **05 50 26.6 +0.2**
TRI Trieste 32.19 83 P P **05 50 26.9 -0.3**
OBKA Obir 32.24 82 *e*P P **05 50 27.6 -0.2**
comp=Z,4.7nm,0.9s
CONA Conrad Observa 32.31 78 *e*P P **05 50 29.1 +0.7**
comp=Z,4.9nm,1.5s
FCC Fort Churchill 32.38 304 P P **05 50 28.6 -0.2**
FCC IAmb IAmb 05 50 35.5
comp=Z,7.8nm,1.2s
MORC Moravsky Berou 32.43 74 P **05 50 29.9 +0.5**
MORC Moravsky Berou 32.43 74 ⇑P P **05 50 30.0 +0.6**
MORC Moravsky Berou 32.43 74 *e*P P **05 50 29.9 +0.5**
SOKA Soboth 32.44 81 *e*P P **05 50 29.5 -0.1**
comp=Z,3.8nm,0.7s
ARSA Arzberg 32.45 80 P P **05 50 29.8 +0.2**
ARSA IAmb IAmb 05 50 30.8
comp=Z,15nm,1.5s
ARSA Arzberg 32.45 80 *e*P P **05 50 29.9 +0.4**
comp=Z,6.7nm,1.0s
STEB Steborice 32.49 74 *e*P P **05 50 29.8 -0.1**
RONA Rosalia, Austr 32.68 79 *e*P P **05 50 32.4 +0.8**
comp=Z,4.7nm,0.9s
MAUC Maruska 32.78 75 *e*P P **05 50 33.1 +0.6**
FINES FINESS Array B 32.91 51 P P **05 50 33.5 +0.1**
comp=Z,6.2nm,0.8s,baz=292,slow=10,SNR=9.4
FINES LR LR 06 02 14.1
comp=Z,479nm,21.5s,baz=266,slow=33
comp=Z,6.2nm,0.8s
FIA1 FINESS Array S 32.91 51 P P **05 50 33.6 +0.3**
MODS Modra-Piesok 32.93 77 *e*P P **05 50 34.2 +0.5**
FDMO Fiordimonte 33.25 88 P P **05 50 35.3 -1.4**
FDMO IAmb IAmb 05 50 37.6
comp=Z,13nm,1.2s
NRCA Norcia 33.39 88 P P **05 50 36.6 -1.3**
NRCA IAmb IAmb 05 50 40.1
comp=Z,13nm,1.5s
OJC Ojcow 33.53 72 P **05 50 37.9 -1.1**
PSZ Piszkesteto 34.68 76 IAmb IAmb 05 50 50.9
comp=Z,13nm,1.2s
PSZ Piszkesteto 34.68 76 ⇑P P **05 50 50.9 +1.8**
BLY Banja Luka 34.74 83 ⇑P P **05 50 50.7 +1.2**
MORH Mrgy, Hungar 34.82 79 ⇑P P **05 50 50.2 +0.1**
KEST Kesra 35.65 101 P P **05 50 57.5 0.0**
comp=Z,14nm,1.1s,baz=308,slow=2.6,SNR=7.1
KEST LR LR 06 03 20.9
comp=Z,140nm,18.9s,baz=349,slow=33
comp=Z,14nm,1.1s
KEST Kesra 35.65 101 P **05 50 57.9 +0.5**
MNK Minsk 36.13 62 *i* P P **05 51 01.3 -0.1**
comp=E,21nm,1.1s,baz=295
MNK *i* P P **05 51 01.3 -0.1**
comp=N,17nm,1.3s
MNK *i* P P **05 51 01.3 -0.1**
comp=Z,16nm,0.9s
MNK *i* PP **PnPn 05 52 20.6 -1.9**
MNK *i* PPP PPP 05 52 34.5
MNK *i* S **S 05 56 40.3 +0.3**
MNK *i* SS **SnSn 05 59 05.2 -0.2**
MNK *i* SSS SSS 05 59 22.1
MNK *i* LQ LQ 06 02 42.6
MNK *i* LR LR 06 05 24.1
MNK *i* LRM MLR 06 06 42.3
comp=Z,233nm,15.9s
MNK *i* LRM MLR 06 06 47.1
comp=E,1μm,19.2s
MNK *i* LRM MLR 06 06 49.6
comp=N,1μm,25.1s
SIRR Siria 36.57 77 ⇓P P **05 51 05.7 +0.6**
ULM Lac du Bonnet 36.64 290 P P **05 51 05.7 -0.1**
comp=N,2.3nm,0.7s,baz=64,slow=11,SNR=4.5
ULM LR LR 06 04 45.7
comp=N,220nm,18.7s,baz=34,slow=34
comp=N,2.3nm,0.7s
MATE Matera 36.84 89 ⇓P P **05 51 07.2 -0.3**
BZS Buzias 36.89 78 ⇑P P **05 51 08.4 +0.5**
DRGR 36.90 76 ⇑P P **05 51 09.2 +1.1**
MARR Marisel-Cluj 37.20 76 ⇓P P **05 51 11.5 +0.8**
PDG Podgorica 37.30 84 IAmb IAmb 05 51 12.4
comp=Z,12nm,1.2s
PDG Podgorica 37.30 84 ⇑P P **05 51 11.6 +0.2**
MDVR Moldovita 37.41 79 ⇓P P **05 51 12.4 0.0**
VAE Valguarnera 37.48 94 LR LR 06 04 06.1
comp=Z,160nm,19.4s,baz=314,slow=32
GZR Gura Zlata 37.70 78 ⇑P P **05 51 15.1 +0.3**
HERR Herculane 37.77 79 ⇑P P **05 51 15.3 -0.1**
BURAR Bucovina Array 37.92 73 P **05 51 16.8 0.0**
BURAR IAmb IAmb 05 51 19.1
comp=Z,9.2nm,1.1s
BURAR Bucovina Array 37.92 73 ⇑P P **05 51 17.8 +1.0**
BOVS Bovan 38.06 81 ⇑P P **05 51 18.2 +0.4**
MDB Medias 38.22 76 ⇓P P **05 51 18.8 -0.4**
KIEV Kiev 38.60 67 P P **05 51 21.6 -0.6**
KIEV IAmb IAmb 05 51 22.6
comp=Z,10nm,1.0s
KIEV Kiev 38.60 67 ⇑P P **05 51 22.0 -0.3**
AKASG Malin Array Be 38.60 67 P P **05 51 21.4 -1.0**
comp=Z,2.7nm,0.7s,baz=305,slow=8.2,SNR=9.3
AKASG LR LR 06 07 16.5
comp=Z,188nm,18.8s,baz=268,slow=36
comp=Z,2.7nm,0.7s
AKBB Malin Array Si 38.60 67 P P **05 51 21.6 -0.7**
AKBB IAmb IAmb 05 51 22.6
comp=Z,12nm,1.0s
VOIR 39.00 76 ⇑P P **05 51 25.9 0.0**
SORM Soroca 39.43 71 ⇓P P **05 51 28.6 -0.7**
VLAD Vladila 39.44 79 ⇑P P **05 51 29.3 -0.1**
MLR Muntele Rosu 39.49 76 LR LR 06 08 19.9
comp=Z,223nm,18.2s,baz=254,slow=37
NEHR Nehoiu 39.73 76 ⇑P P **05 51 32.8 +0.9**
OBN Obninsk 40.36 57 LR LR 06 07 32.3
comp=Z,213nm,18.6s,baz=216,slow=35
YKAW3 Yellowknife Wh 40.52 316 P **05 51 38.4 +0.2**
A36M Sachs Harbour 40.53 331 P P **05 51 38.4 +0.3**
baz=67
YKA Yellowknife Ar 40.55 315 P P **05 51 38.6 +0.3**
comp=Z,1.5nm,1.0s,baz=60,slow=8.7,SNR=4.3
YKA PcP **PcP 05 53 39.7 -0.6**
comp=Z,2.0nm,0.8s,baz=48,slow=3.3,SNR=23
YKA LR LR 06 07 01.0
comp=Z,139nm,18.6s,baz=86,slow=34
comp=Z,1.5nm,1.0s
YKA Yellowknife Ar 40.55 315 P P **05 51 38.2 -0.1**
CCM Cathedral Cave 40.87 271 P P **05 51 42.0 +0.7**
CCM IAmb IAmb 05 51 50.7
comp=Z,11nm,1.1s
C36M Paulatuk 41.23 327 P P **05 51 44.2 +0.4**
baz=66
SJG San Juan 42.50 226 LR LR 06 06 01.5
comp=Z,83nm,21.3s,baz=354,slow=31
TAM Tamanrasset 43.33 118 P **05 52 01.7 0.0**
KSU1 Kansas State U 43.41 277 IAmb IAmb 05 52 04.0
comp=Z,11nm,0.8s
HHAR Hobbs 43.66 271 IAmb IAmb 05 52 06.6
comp=Z,15nm,1.3s
WRGLY Wrigley 43.81 319 P P **05 52 05.2 +0.2**
baz=60
MIAR Mount Ida 44.61 269 IAmb IAmb 05 52 18.1
comp=Z,12nm,1.2s
INK Inuvik 44.74 328 P **05 52 12.3 0.0**
INK IAmb IAmb 05 52 15.4
comp=Z,18nm,1.4s
INK Inuvik 44.74 328 P P **05 52 12.1 -0.2**
baz=57,SNR=6.4
KIRV Kirov 44.75 48 P P **05 52 12.6 +0.1**
comp=Z,7.7nm,0.5s,baz=296,slow=13,SNR=3.6
KIRV LR LR 06 09 53.1
comp=Z,251nm,18.1s,baz=309,slow=35
comp=Z,7.7nm,0.5s
TUL3 Leonard 45.02 273 IAmb IAmb 05 52 16.9
comp=Z,6.5nm,0.8s
F31M Tsiigehtchic 45.28 328 P **05 52 17.0 +0.4**
F31M Tsiigehtchic 45.28 328 P P **05 52 16.5 -0.1**
baz=56,SNR=17
KOTAN Kotaneelee Air 45.68 316 P P **05 52 19.9 0.0**
baz=57
D28M Stokes Point 45.74 331 P P **05 52 20.4 +0.2**
baz=54
G31M Satah River 45.74 327 P P **05 52 20.4 +0.1**
baz=56
F30M Barrier River 45.84 328 P P **05 52 21.1 0.0**
baz=55
E29M Blow River 46.04 330 P P **05 52 22.9 +0.3**
baz=54
E28M Babbage River 46.40 331 P P **05 52 25.4 -0.1**
baz=53
H31M Peel River 46.40 326 P P **05 52 25.8 +0.2**
baz=55
FNO Franklin 46.42 273 IAmb IAmb 05 52 35.0
comp=Z,9.6nm,0.9s
D27M Malcolm River 46.43 332 IAmb IAmb 05 52 26.9
comp=Z,7.4nm,1.1s
D27M Malcolm River 46.43 332 P P **05 52 25.8 0.0**
baz=53
TOAD Toad River Com 46.89 315 P P **05 52 29.7 +0.2**
baz=55
G29M Pine Creek 46.95 328 P P **05 52 29.6 -0.2**
baz=53
C27K Jago River 46.96 333 P P **05 52 29.9 0.0**
baz=51
F28M Old Crow 47.10 330 P P **05 52 31.3 +0.3**
baz=52
BELG Belogornoye 47.36 56 LR LR 06 12 20.6
comp=Z,233nm,18.0s,baz=283,slow=36
I30M Mount Dempster 47.43 326 P P **05 52 34.2 +0.5**
baz=53
BR131 Keskin Array S 47.50 77 P **05 52 34.3 -0.3**
BRTR Keskin Array B 47.50 77 P P **05 52 35.6 +1.0**
comp=Z,7.1nm,0.8s,baz=311,slow=5.7,SNR=38
BRTR LR LR 06 14 03.7
comp=Z,178nm,18.3s,baz=294,slow=38
comp=Z,7.1nm,0.8s
BRTR Keskin Array B 47.50 77 P **05 52 35.5 +0.9**
WTLY Watson Lake, Y 47.65 317 P P **05 52 36.1 +0.8**
baz=54
J30M Hart River 47.81 325 P P **05 52 37.3 +0.6**
baz=52
D25K Kavik River 47.88 333 P P **05 52 37.3 +0.3**
baz=49
I29M Ogilvie Camp, 47.99 327 P P **05 52 38.2 +0.3**
baz=52,SNR=6.7
BOZ Bozeman (W) 48.02 293 IAmb IAmb 05 52 40.2
comp=Z,5.2nm,1.0s
G27K Doyon Strip 48.15 329 P P **05 52 39.9 +0.8**
baz=50
F26K Sheenjek River 48.32 331 P P **05 52 41.1 +0.7**
baz=49
E25K Arctic Village 48.45 332 IAmb IAmb 05 52 45.1
comp=Z,5.2nm,1.0s
E25K Arctic Village 48.45 332 P P **05 52 42.0 +0.6**
baz=49
I28M Miner Creek 48.47 327 P P **05 52 42.0 +0.3**
baz=51
H27K Steamboat Moun 48.48 329 P P **05 52 42.3 +0.6**
baz=50
J29N Klondike Camp 48.53 326 P P **05 52 42.8 +0.6**
baz=51
M31M Drury Creek, Y 48.57 322 P P **05 52 43.2 +0.8**
baz=52
PDAR Pinedale Array 48.64 289 P P **05 52 42.8 -0.7**
comp=Z,1.2nm,0.6s,baz=60,slow=8.2,SNR=17
PDAR LR LR 06 12 02.6
comp=Z,130nm,18.9s,baz=40,slow=35
comp=Z,1.2nm,0.6s
PDAR Pinedale Array 48.64 289 P P **05 52 43.3 -0.1**
K29M Barlow Dome 48.67 325 IAmb IAmb 05 52 45.7
comp=Z,8.7nm,1.1s
K29M Barlow Dome 48.67 325 P P **05 52 43.8 +0.5**
baz=51
G26K Porcupine Rive 48.70 330 P P **05 52 44.1 +0.8**
baz=49
N32M Quiet Lake 48.72 320 P P **05 52 44.5 +0.9**
baz=52
WHTX Lake Whitney, 48.72 270 IAmb IAmb 05 52 49.8
comp=Z,6.3nm,0.7s
F25K Christian Rive 48.82 331 P P **05 52 45.0 +0.7**
baz=48
A22K Sinclair Lake 48.84 338 P P **05 52 45.2 +0.8**
baz=44
I27K Kandik River 48.91 328 P P **05 52 45.8 +0.8**
baz=50
B22K Teshekpuk Lake 48.96 337 P P **05 52 46.2 +0.9**
baz=44
R33M Jennings River 48.96 318 P P **05 52 46.7 +1.1**
baz=52
A21K Barrow 48.98 339 P P **05 52 46.4 +1.0**
baz=43
DLBC Dease Lake 49.16 316 LR LR 06 12 30.5
comp=Z,96nm,18.6s,baz=24,slow=35
DLBC Dease Lake 49.16 316 P P **05 52 47.9 +0.9**
baz=52
DAWY Dawson 49.17 326 P **05 52 47.8 +0.7**
DAWY Dawson 49.17 326 P P **05 52 47.8 +0.7**
baz=50,SNR=7.1
TOLK Toolik Lake Re 49.19 334 P P **05 52 47.9 +0.7**
TOLK IAmb IAmb 05 52 48.4
comp=Z,7.6nm,0.8s
TOLK Toolik Lake Re 49.19 334 P P **05 52 47.9 +0.7**
baz=46
P33M Teslin, Yukon 49.20 319 P P **05 52 47.8 +0.4**
baz=52
M30M Minto, Yukon 49.21 323 P P **05 52 47.8 +0.4**
baz=51
D23K Nanushuk River 49.25 335 P P **05 52 48.4 +0.8**
baz=46
E24K Your Creek 49.29 333 P P **05 52 48.5 +0.6**
baz=47
NEW Newport 49.32 299 LR LR 06 12 06.9
comp=Z,220nm,19.5s,baz=47,slow=34
L29M L29M 49.35 324 P P **05 52 49.4 +1.0**
baz=50
FYU Fort Yukon 49.39 330 P **05 52 50.3 +1.7**
N31M Braeburn, Yuko 49.53 322 P P **05 52 50.0 +0.2**
baz=51
TORD Torodi Ar. Bea 49.61 130 P P **05 52 49.4 -1.4**
comp=Z,7.2nm,0.8s,baz=311,slow=7.2,SNR=16
TORD LR LR 06 11 46.6
comp=Z,108nm,19.6s,baz=346,slow=34
comp=Z,2.7nm,0.8s
TORD Torodi Ar. Bea 49.61 130 P P **05 52 49.4 -1.4**
E23K Chandalar 49.61 333 P P **05 52 50.4 0.0**
baz=46
WHY Whitehorse 49.71 320 P P **05 52 51.8 +0.5**
baz=51
Q32M Nakina River 49.76 318 P P **05 52 52.2 +0.5**
baz=51
D22K Ayikyak River 49.83 335 IAmb IAmb 05 52 55.8

comp=Z,11nm,1.1s
D22K Ayikyak River 49.83 335 P **P** **05 52 52.9 +1.0**
baz=44
M29M Somme Creek 49.89 324 IAmb IAmb 05 52 55.5
comp=Z,8.5nm,1.1s
M29M Somme Creek 49.89 324 P **P** **05 52 54.0 +1.3**
baz=50
P32M Atlin 49.94 319 P **P** **05 52 54.2 +1.3**
baz=51
S34M Telegraph Cree 49.95 316 P **P** **05 52 54.3 +1.4**
baz=51
G24K Hadweenzic Riv 49.95 331 IAmb IAmb 05 52 54.9
comp=Z,6.2nm,1.0s
G24K Hadweenzic Riv 49.95 331 P **P** **05 52 53.6 +0.7**
baz=46
ARTI Arti 49.97 46 P **P** **05 52 53.5 +0.3**
comp=Z,16nm,0.8s,baz=305,slow=4.4,SNR=20
comp=Z,16nm,0.8s
ARTI Arti 49.97 46 **P** **05 52 53.3 +0.1**
N30M Aishikik Lake 50.03 322 P **P** **05 52 54.7 +1.1**
baz=50
B20K Meade River 50.08 338 P **P** **05 52 54.8 +1.0**
baz=42
MDP Montagnes des 50.09 203 LR LR 06 10 54.7
comp=Z,60nm,18.4s,baz=348,slow=32
O30N Mendenhall 50.10 321 P **P** **05 52 54.9 +0.7**
baz=50
C21K Knifeblade Rid 50.15 336 P **P** **05 52 55.2 +0.9**
baz=43
T35M Bob Quinn 50.16 315 P **P** **05 52 55.6 +0.9**
baz=51
PRP Porcupine Dome 50.19 329 P **P** **05 52 55.6 +0.8**
baz=47
KBZ Khabaz 50.21 67 P **P** **05 52 54.7 -0.4**
comp=Z,2.4nm,0.9s,baz=347,slow=3.0,SNR=3.6
comp=Z,2.4nm,0.9s
J26L Joseph Creek 50.26 328 IAmb IAmb 05 52 57.4
comp=Z,5.6nm,0.8s
J26L Joseph Creek 50.26 328 P **P** **05 52 55.8 +0.4**
baz=48,SNR=6.0
COLD Coldfoot 50.35 333 P **P** **05 52 56.1 +0.2**
baz=45
B08A Colville Reser 50.41 301 IAmb IAmb 05 53 03.0
comp=Z,17nm,1.4s
HWUT Hardware Ranch 50.52 289 IAmb IAmb 05 52 60.0
comp=Z,9.1nm,0.8s
HYT Haines Junctio 50.60 322 P **P** **05 52 59.0 +1.0**
baz=49
SKAG Skagway 50.65 319 P **P** **05 52 58.8 +0.6**
baz=50
L27K Beaver Creek, 50.66 326 IAmb IAmb 05 53 00.3
comp=Z,7.5nm,1.1s
L27K Beaver Creek, 50.66 326 P **P** **05 52 58.9 +0.6**
baz=48
G23K Bananza Creek 50.67 332 P **P** **05 52 58.9 +0.5**
baz=45
H24K Noodor Dome 50.67 331 IAmb IAmb 05 53 00.1
comp=Z,9.4nm,1.2s
H24K Noodor Dome 50.67 331 P **P** **05 52 59.0 +0.5**
baz=46
YUK4 Talbot Arm 50.68 323 P **P** **05 52 58.1 -0.6**
baz=49
PLID Pearl Lake 50.73 295 **P** **05 52 59.7 +0.4**
U35K Hyder 50.74 314 P **P** **05 53 00.1 +1.2**
baz=50
SCRK Sand Creek 50.75 327 P **P** **05 53 00.1 +0.9**
baz=47,SNR=10
BVCY Beaver Creek 50.76 325 P **P** **05 52 59.9 +0.9**
baz=48
J25K Salcha River, 50.76 328 IAmb IAmb 05 53 01.3
comp=Z,10nm,1.0s
J25K Salcha River, 50.76 328 P **P** **05 52 59.7 +0.5**
baz=47
NRIK Noril'sk 50.80 23 P **P** **05 52 59.4 +0.1**
comp=Z,1.6nm,0.4s,baz=317,slow=5.3,SNR=6.1
comp=Z,1.6nm,0.4s
NRIK Noril'sk 50.80 23 **P** **05 52 59.8 +0.5**
NRIK IAmb IAmb 05 53 01.3
comp=Z,12nm,1.3s
YUK6 Outpost Mounta 50.84 322 P **P** **05 53 00.9 +1.0**
baz=49
HLID Hailey 50.84 293 **P** **05 53 00.8 +0.6**
D20K Etiviluk River 50.92 336 P **P** **05 53 01.4 +1.2**
baz=41
PV07 Paradox Valley 50.95 284 P **P** **05 53 01.8 +0.8**
PV07 IAmb IAmb 05 53 08.2
comp=Z,8.8nm,1.2s
DOT Dot Lake 51.00 327 P **P** **05 53 01.2 +0.3**
DOT IAmb IAmb 05 53 03.1
comp=Z,7.6nm,0.9s
YUK3 Moose Creek 51.04 324 P **P** **05 53 02.4 +1.0**
baz=48
POKR Poker Plat Res 51.04 330 P **P** **05 53 01.6 +0.4**
POKR Poker Plat Res 51.04 330 P **P** **05 53 02.4 +1.3**
baz=46
R32K Eaglecrest 51.10 318 P **P** **05 52 02.3 +0.7**
baz=49
PV12 Saucer Basin, 51.12 284 IAmb IAmb 05 53 06.0
comp=Z,14nm,1.1s
IL31 51.12 329 IAmb IAmb 05 53 03.8
comp=Z,12nm,1.2s
ILAR Eielson Array 51.12 329 P **P** **05 53 02.6 +0.9**
comp=Z,3.1nm,0.9s,baz=41,slow=5.7,SNR=35
ILAR PcP **PcP** **05 54 16.6 -0.5**
comp=Z,1.6nm,0.9s,baz=12,slow=3.3,SNR=9.0
comp=Z,3.1nm,0.9s
ILAR Eielson Array 51.12 329 **P** **05 53 01.9 +0.2**
PV04 Paradox Valley 51.13 284 IAmb IAmb 05 53 09.4
comp=Z,21nm,1.4s
M27K Edge Creek, AK 51.15 325 P **P** **05 53 01.5 -0.6**
baz=48
E20K Nigu River 51.16 336 P **P** **05 53 02.6 +0.5**
baz=41
H23K Yukon River 51.17 331 IAmb IAmb 05 53 05.7
comp=Z,11nm,1.2s
H23K Yukon River 51.17 331 P **P** **05 53 02.3 +0.2**
baz=44
PV11 David Mesa, Pa 51.17 284 IAmb IAmb 05 53 09.1
comp=Z,8.4nm,0.9s
PV16 Nyswonger Mesa 51.19 284 IAmb IAmb 05 53 04.9
comp=Z,6.9nm,1.0s
L26K Log Cabin Wild 51.19 326 IAmb IAmb 05 53 21.8
comp=Z,5.5nm,0.6s
L26K Log Cabin Wild 51.19 326 P **P** **05 53 03.1 +0.7**
baz=47
PV18 Skein Mesa, Pa 51.23 284 IAmb IAmb 05 53 05.1
comp=Z,11nm,1.0s
PV19 Morning Glory 51.23 284 IAmb IAmb 05 53 05.0
comp=Z,14nm,1.1s
PV13 Radium Mtn., P 51.23 284 IAmb IAmb 05 53 05.1
comp=Z,8.5nm,1.3s
F21K Alatna River 51.24 334 IAmb IAmb 05 53 04.5
comp=Z,9.0nm,1.0s
F21K Alatna River 51.24 334 P **P** **05 53 03.0 +0.3**
baz=43
C19K Lookout Ridge 51.32 338 P **P** **05 53 03.5 +0.2**
baz=39
COLA College 51.34 330 P **P** **05 53 03.9 +0.6**
baz=45
O29M Mount Kennedy 51.34 322 P **P** **05 53 04.0 +0.3**
baz=48
HDA Harding Lake 51.39 329 IAmb IAmb 05 53 05.7
comp=Z,11nm,0.8s
HDA Harding Lake 51.39 329 P **P** **05 53 03.8 0.0**
baz=45,SNR=5.5
WRAK Wrangell Islan 51.41 315 P **P** **05 53 04.4 +0.5**
baz=50
D19K Kuna River 51.45 337 P **P** **05 53 02.9 -1.3**
baz=40
K24K Donnelly Dome 51.45 328 P **P** **05 53 03.7 -0.5**
baz=46,SNR=7.6
PV05 Paradox Valley 51.45 284 IAmb IAmb 05 53 05.9
comp=Z,11nm,1.3s
CCB Clear Creek Bu 51.49 329 IAmb IAmb 05 53 07.6
comp=Z,12nm,1.4s
M26K Nabesna, AK 51.50 325 P **P** **05 53 04.8 +0.2**
baz=47
I23K Minto, Yukon-K 51.60 331 P **P** **05 53 05.9 +0.6**
baz=44
O28M Mount Upton 51.62 323 P **P** **05 53 05.3 -0.6**
baz=48
H22K Ishtalitna Cre 51.64 332 P **P** **05 53 05.7 0.0**
baz=43
MVCO Mesa Verde 51.69 283 IAmb IAmb 05 53 13.4
comp=Z,14nm,1.5s
TMB01 Midkiff 51.72 273 IAmb IAmb 05 53 08.7
comp=Z,5.3nm,0.8s
G21K Allakaket 51.77 333 P **P** **05 53 05.7 -0.9**
baz=42
V35K Ketchikan 51.80 314 P **P** **05 53 06.9 -0.1**
baz=49
LTY Liberty 51.81 300 IAmb IAmb 05 53 27.5
comp=Z,19nm,1.4s
NEA2 Nenana 51.91 330 P **P** **05 53 07.0 -0.6**
baz=44,SNR=5.3
PAX Paxson 51.93 327 IAmb IAmb 05 53 15.6
comp=Z,9.0nm,1.2s
PAX Paxson 51.93 327 P **P** **05 53 07.2 -0.8**
baz=46
U33K Whale Pass 51.94 315 P **P** **05 53 06.9 -1.0**
baz=49
S31K Pelican 51.99 318 P **P** **05 53 08.4 +0.1**
baz=48
E19K Redstone River 52.03 335 P **P** **05 53 07.3 -1.2**
baz=40
ANMO Albuquerque 52.04 280 LR LR 06 14 43.9
comp=Z,653nm,18.1s,baz=64,slow=36
ANMO Albuquerque 52.04 280 **P** **05 53 09.8 +0.5**
TASM ASL Pad, Albuq 52.04 280 IAmb IAmb 05 53 13.3
comp=Z,4.5nm,1.2s
TASM ASL Pad, Albuq 52.04 280 IAmb IAmb 05 53 14.0
comp=Z,5.7nm,1.4s
TASM ASL Pad, Albuq 52.04 280 IAmb IAmb 05 53 13.3
comp=Z,4.9nm,1.3s
C18K Utukok River 52.04 338 P **P** **05 53 08.3 -0.3**
baz=38
MLY Manley 52.09 331 P **P** **05 53 08.1 -0.9**
baz=43
PINM Pinnacle 52.10 322 P **P** **05 53 08.7 -0.5**
baz=47
DUG Dugway, Tooele 52.17 289 IAmb IAmb 05 53 14.3
comp=Z,10nm,1.4s
MCARA McCarthy VSAT 52.21 325 P **P** **05 53 09.7 -0.2**
baz=46
H21K Melozitna Rive 52.22 332 IAmb IAmb 05 53 13.6
comp=Z,10nm,1.2s
H21K Melozitna Rive 52.22 332 P **P** **05 53 09.6 -0.3**
baz=42
HARP HAARP 52.23 326 P **P** **05 53 09.6 -0.5**
baz=45
BBB Bella Bella 52.28 309 LR LR 06 14 10.6
comp=Z,104nm,18.3s,baz=36,slow=35
I21K Tanana 52.34 332 P **P** **05 53 10.6 -0.2**
baz=42
DHY Denali Highway 52.47 328 IAmb IAmb 05 53 14.1
comp=Z,13nm,1.0s
DHY Denali Highway 52.47 328 P **P** **05 53 10.6 -1.4**
baz=44
MCK McKinley 52.49 329 P **P** **05 53 11.4 -0.6**
baz=44,SNR=6.0
HMU Henry Mountain 52.50 285 IAmb IAmb 05 53 19.5
comp=Z,8.8nm,1.3s
N25K Chitina, Valde 52.60 325 P **P** **05 53 12.1 -0.8**
baz=45
C17K DeLong Mountai 52.62 339 P **P** **05 53 12.6 -0.3**
baz=36
F19K Shaleruckik Mo 52.65 335 P **P** **05 53 12.4 -0.6**
baz=39
DBIC Dimbokro 52.66 141 P **P** **05 53 11.8 -1.9**
comp=Z,5.0nm,1.0s,baz=320,slow=8.0,SNR=2.3
DBIC LR LR 06 13 46.3
comp=Z,90nm,18.1s,baz=11,slow=34
comp=Z,5.0nm,1.0s
CRQE Cirque 52.67 324 P **P** **05 53 12.6 -0.9**
baz=46
RND Reindeer 52.70 329 IAmb IAmb 05 53 15.1
comp=Z,12nm,1.0s
M24K Tolsona, Glenn 52.77 327 P **P** **05 53 15.2 +1.0**
baz=45
BPAW Bear Paw Mtn. 52.84 330 IAmb IAmb 05 53 16.5
comp=Z,16nm,1.2s
BPAW Bear Paw Mtn. 52.84 330 P **P** **05 53 15.2 +0.6**
baz=43
E18K Tukpahlearik C 52.88 337 P **P** **05 53 14.6 -0.1**
baz=38
RDOG Red Dog Mine 52.90 338 P **P** **05 53 14.1 -0.8**
baz=36
H20K Anotleneega Mo 52.91 333 P **P** **05 53 14.5 -0.6**
baz=41
WAT6 Susitna Watana 52.95 328 P **P** **05 53 15.3 -0.2**
baz=44
SAND Sanderson 52.97 272 IAmb IAmb 05 53 17.6
comp=Z,6.1nm,0.7s
G19K Purcell Mounta 53.00 334 P **P** **05 53 15.9 +0.2**
baz=40
WAT1 Susitna Watana 53.02 328 P **P** **05 53 15.8 -0.2**
baz=44
Y22A Socorro 53.04 279 IAmb IAmb 05 53 23.3
comp=Z,13nm,1.2s
MMAI Mount Meron Ar 53.09 83 P **P** **05 53 17.8 +0.9**
comp=Z,4.4nm,0.8s,baz=317,slow=9.8,SNR=3.8
MMAI LR LR 06 16 21.3
comp=Z,69nm,20.5s,baz=296,slow=37
comp=Z,4.4nm,0.8s
TRF Thorofare Moun 53.11 329 IAmb IAmb 05 53 26.8
comp=Z,10.0nm,1.0s
TRF Thorofare Moun 53.11 329 P **P** **05 53 16.7 0.0**
baz=43
KLU Klutina 53.13 326 P **P** **05 53 16.5 -0.3**
baz=44
D17K Noatak River 53.23 338 P **P** **05 53 17.3 0.0**
baz=36,SNR=5.7
C16K Lisburne Hills 53.26 339 P **P** **05 53 17.6 +0.1**
baz=35
TPB01 Permian Basin 53.26 274 IAmb IAmb 05 53 22.8
comp=Z,8nm,1.0s
F18K Selawik 53.30 336 P **P** **05 53 17.5 -0.3**
baz=38,SNR=6.4
H19K Roundabout Mou 53.31 334 IAmb IAmb 05 53 20.0
comp=Z,10.0nm,1.1s
H19K Roundabout Mou 53.31 334 P **P** **05 53 18.0 0.0**
baz=40
E17K Hotham Inlet 53.44 337 P **P** **05 53 18.9 +0.1**
baz=37,SNR=6.5
G18K Tagagawik 53.60 335 P **P** **05 53 20.0 -0.1**
baz=38
AKTO Aktyubinsk 53.65 52 LR LR 06 14 32.1
comp=Z,269nm,21.6s,baz=287,slow=34
MNTX Cornudas Mount 53.68 276 IAmb IAmb 05 53 27.1
comp=Z,7.9nm,1.4s
SML Sawmill 53.70 327 P **P** **05 53 20.0 -1.0**
baz=43
J20K Nowinta River 53.71 332 IAmb IAmb 05 53 42.2
comp=Z,7.7nm,1.3s
J20K Nowinta River 53.71 332 P **P** **05 53 20.9 -0.1**
baz=41
KAIM Kayak Island 53.73 324 P **P** **05 53 21.1 0.0**
baz=44
EYAK Cordova Ski Ar 53.74 325 P **P** **05 53 21.1 -0.1**
baz=44
F17K Baldwin Pennin 53.81 336 P **P** **05 53 21.3 -0.3**
baz=37
WVOR Wild Horse Val 53.91 295 IAmb IAmb 05 53 26.6
comp=Z,12nm,1.2s
GLI Glacier Island 53.97 326 P **P** **05 53 22.7 -0.1**
baz=43
KNK Knik Glacier 54.03 327 P **P** **05 53 23.1 -0.3**
baz=43
SZCU Shurtz Canyon 54.09 287 IAmb IAmb 05 53 30.4
comp=Z,11nm,1.5s
H18K Honhosa River 54.11 334 P **P** **05 53 23.7 -0.1**
baz=38
PMR Palmer 54.12 327 P **P** **05 53 24.0 +0.1**
baz=42
J19K Poorman 54.27 332 P **P** **05 53 25.0 0.0**
baz=40
K20K Telida 54.31 331 IAmb IAmb 05 53 27.0
comp=Z,9.7nm,1.0s
K20K Telida 54.31 331 P **P** **05 53 25.4 0.0**
baz=40
M22K Willow 54.31 328 P **P** **05 53 25.2 -0.1**
baz=42
TXAR Lajitas Array 54.35 273 P **P** **05 53 26.8 +0.6**
comp=Z,1.2nm,0.8s,baz=53,slow=9.1,SNR=14
TXAR PcP **PcP** **05 54 29.8 -0.2**
comp=Z,0.9nm,0.8s,baz=80,slow=3.1,SNR=6.1
comp=Z,1.2nm,0.8s
G17K Kiwalik Mounta 54.42 335 P **P** **05 53 25.4 -0.7**
baz=37
ASF Jabal al Asfar 54.58 82 LR LR 06 20 10.0
comp=Z,80nm,18.0s,baz=12,slow=40
SKT Skwentna 54.59 329 P **P** **05 53 26.8 -0.6**
baz=41,SNR=6.6
H17K Granite Mounta 54.68 335 P **P** **05 53 27.8 -0.2**
baz=37
RC01 Rabbit Creek A 54.69 327 P **P** **05 53 27.7 -0.3**
baz=42
P23K Montague Islan 54.71 325 P **P** **05 53 28.1 -0.2**
baz=43
SUA Susitna One 54.73 328 P **P** **05 53 27.6 -1.0**
baz=41
J05D Fort Rock, OR 54.74 297 IAmb IAmb 05 53 30.7
comp=Z,13nm,1.2s
Q23K Middleton Isla 54.76 324 P **P** **05 53 28.2 -0.4**
baz=43
TIXI Tiksi 54.87 6 **P** **05 53 30.1 +0.9**
G16K Koyuk River 54.93 336 IAmb IAmb 05 53 31.9
comp=Z,5.4nm,0.9s
G16K Koyuk River 54.93 336 P **P** **05 53 29.5 -0.2**
baz=36
J18K Innoko River 54.99 332 P **P** **05 53 30.1 -0.2**
baz=39
M20K Styx River 55.16 329 P **P** **05 53 30.5 -1.2**
baz=40
EIL Elat 55.21 86 LR LR 06 21 15.8
comp=Z,34nm,18.1s,baz=346,slow=40
F15K North Star Dit 55.22 337 IAmb IAmb 05 53 34.1
comp=Z,12nm,1.1s
F15K North Star Dit 55.22 337 P **P** **05 53 32.0 +0.1**
baz=34,SNR=6.2
AB31 Akbulak array 55.37 52 P **P** **05 53 32.7 -0.5**
AB31 IAmb IAmb 05 53 34.7
comp=Z,12nm,1.4s
ABKAR Akbulak array 55.37 52 **P** **05 53 33.1 -0.1**
SPCR Spurr Chakacha 55.39 328 P **P** **05 53 33.8 +0.5**
baz=40
L19K White Mountain 55.45 330 P **P** **05 53 32.6 -1.0**
baz=39
H16K Elim 55.52 335 P **P** **05 53 34.0 0.0**
baz=36
G15K Niukluk 55.67 336 P **P** **05 53 34.9 -0.2**
baz=34
J17K VABM Dome 55.69 333 P **P** **05 53 35.7 +0.3**
baz=37
F14K Arctic Creek 55.80 338 P **P** **05 53 35.6 -0.5**
baz=33,SNR=5.5
L18K Granite Mounta 55.96 331 P **P** **05 53 36.9 -0.3**
baz=38
K17K Iditarod 56.02 332 P **P** **05 53 37.4 -0.3**
baz=37
BRSE Bradley Lake S 56.03 327 P **P** **05 53 37.5 -0.3**
baz=41
TNA Tin City 56.09 338 P **P** **05 53 37.4 -0.7**
baz=32
PAHR Pah Rah Range 56.19 293 IAmb IAmb 05 53 43.1
comp=Z,7.3nm,1.0s
J16K Anvik River 56.20 334 P **P** **05 53 38.8 -0.1**
baz=36
M18K Stony River 56.28 330 P **P** **05 53 39.6 +0.1**
baz=38
ANM Nome 56.34 337 P **P** **05 53 40.2 +0.3**
baz=33
N19K Bonanza Creek 56.40 329 P **P** **05 53 39.5 -1.1**
baz=39
NVAR Mina Array Bea 56.48 291 P **P** **05 53 40.8 -0.8**
comp=Z,0.4nm,0.6s,baz=31,slow=7.6,SNR=5.1
NVAR LR LR 06 16 53.4
comp=Z,238nm,18.1s,baz=12,slow=35
comp=Z,0.4nm,0.6s
NVAR Mina Array Bea 56.48 291 P **P** **05 53 41.0 -0.5**
L17K Donlin 56.49 332 P **P** **05 53 39.9 -1.1**
baz=37
YBH Yreka Blue Hor 56.60 296 LR LR 06 17 40.1
comp=Z,11nm,18.1s,baz=52,slow=36
PNTR Pine Nut 56.74 292 IAmb IAmb 05 54 03.8
comp=Z,9.9nm,1.0s
M17K Holitna River 56.83 331 P **P** **05 53 42.4 -1.1**
baz=37
N18K Kilae Creek 56.94 330 P **P** **05 53 42.6 -1.6**
baz=38
L16K Owhat River 57.16 332 P **P** **05 53 44.5 -1.3**
baz=36
K15K Wolf Creek Mou 57.25 333 P **P** **05 53 45.7 -0.8**
baz=35
BORK Borovoye 57.32 44 **P** **05 53 46.8 -0.3**
BORK IAmb IAmb 05 53 48.8
comp=Z,10.0nm,0.8s
BVAR Borovoye Array 57.37 44 P **P** **05 53 48.4 +1.1**
comp=Z,8.4nm,0.8s,baz=309,slow=7.1,SNR=43
BVAR LR LR 06 16 30.6
comp=Z,260nm,21.5s,baz=306,slow=34
comp=Z,8.4nm,0.8s
Q20K Shuyak Island 57.45 326 P **P** **05 53 47.2 -0.6**
baz=39
L15K Ungalak Mounta 57.75 333 P **P** **05 53 48.9 -1.0**
baz=35
P18K Big Mountain, 57.75 328 P **P** **05 53 49.3 -0.7**
baz=38
ROSC El Rosal 57.87 228 P **P** **05 53 53.2 +1.4**
comp=Z,25nm,0.8s,baz=118,slow=6.6,SNR=18
ROSC LR LR 06 16 48.1
comp=Z,71nm,21.6s,baz=88,slow=34
comp=Z,25nm,0.8s
ROSC El Rosal 57.87 228 **P** **05 53 51.5 -0.3**
N16K Nishlik Lake 57.96 331 P **P** **05 53 50.8 -0.7**
baz=36
LRMC Laurel Mtn Rad 58.21 288 IAmb IAmb 05 53 55.6
comp=Z,7.7nm,1.3s
BC3 Big Chuckawall 58.23 285 IAmb IAmb 05 53 55.9
comp=Z,7.4nm,1.2s
Q18K Katmai Hardscr 58.27 328 P **P** **05 53 52.3 -1.5**
baz=38
M15K Kasigluk River 58.33 332 P **P** **05 53 53.0 -1.1**
baz=35
L14K Kuka Creek 58.35 333 P **P** **05 53 54.2 +0.1**
baz=34
JTS Las Juntas de 58.37 242 LR LR 06 15 27.4
comp=Z,152nm,21.9s,baz=34,slow=32
K13K Kusilvak Mount 58.38 335 P **P** **05 53 54.4 +0.1**
baz=33
CMIG Matias Romero 58.39 256 LR LR 06 20 15.5
comp=Z,74nm,18.9s,baz=7.5,slow=37
O16K Kokwok River B 58.47 330 P **P** **05 53 54.2 -0.8**
baz=36
N15K Kwethluk River 58.59 331 P **P** **05 53 54.7 -1.2**
baz=35
M14K Bethel 58.64 333 P **P** **05 53 55.7 -0.5**
baz=34
Q17K Contact Creek 58.85 328 P **P** **05 53 56.5 -1.4**
baz=37
BORC Borrego Spring 59.06 285 IAmb IAmb 05 54 05.6
comp=Z,7.1nm,1.3s
ZAA0 Zalesovo Array 62.16 35 **P** **05 54 20.2 -0.1**
ZAA0 IAmb IAmb 05 54 21.9
comp=Z,3.3nm,0.8s
ZALV Zalesovo Beam 62.16 35 P **P** **05 54 20.4 +0.1**
comp=Z,2.7nm,0.7s,baz=319,slow=7.9,SNR=13
ZALV LR LR 06 20 23.9
comp=Z,94nm,19.7s,baz=321,slow=35
comp=Z,2.7nm,0.7s
ZALV Zalesovo Beam 62.16 35 **P** **05 54 20.1 -0.2**
LPIG La Paz 62.19 274 LR LR 06 21 37.8
comp=Z,166nm,18.6s,baz=24,slow=36
KURK Kurchatov 62.45 41 **P** **05 54 21.5 -0.7**
KURBB Kurchatov Arra 62.48 41 P **P** **05 54 23.0 +0.5**
comp=Z,6.6nm,0.8s,baz=323,slow=7.2,SNR=43
KURBB LR LR 06 21 46.2
comp=Z,81nm,18.2s,baz=175,slow=36
comp=Z,6.6nm,0.8s
OTAV Otavalo 63.82 230 P **P** **05 54 32.7 +0.4**
OTAV IAmb IAmb 05 55 00.3
comp=Z,5.5nm,1.4s
YAK Yakutsk 64.42 8 LR LR 06 21 37.4
comp=Z,48nm,19.2s,baz=293,slow=35
YAK Yakutsk 64.42 8 P **P** **05 54 34.7 -0.4**
KK31 Karatay Array 64.87 51 **P** **05 54 38.6 +0.1**
KKAR Karatay Array 64.87 51 **P** **05 54 38.7 +0.3**
MAKZ Makanchi 66.91 42 **P** **05 54 51.6 +0.1**
MKAR Makanchi Array 67.04 41 P **P** **05 54 52.7 +0.3**
comp=Z,5.1nm,0.8s,baz=331,slow=6.2,SNR=49
MKAR LR LR 06 23 44.4
comp=Z,123nm,18.9s,baz=320,slow=36
comp=Z,5.1nm,0.8s
MKAR Makanchi Array 67.04 41 **P** **05 54 52.5 +0.1**
AAK Ala-Archa 67.06 49 LR LR 06 23 30.3
comp=Z,216nm,19.4s,baz=325,slow=35
AAK Ala-Archa 67.06 49 **P** **05 54 52.7 -0.1**
BTK Batken 67.37 53 IAmb IAmb 05 54 56.4
comp=Z,5.1nm,0.7s
MA2 Magadan 67.39 357 LR LR 06 23 27.2
comp=Z,65nm,20.2s,baz=12,slow=35
ARSB Arslanbob 67.40 51 IAmb IAmb 05 54 56.4
comp=Z,7.4nm,1.0s
WUS Wushi 70.32 47 IAmb IAmb 05 55 15.2
comp=Z,7.8nm,1.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KSH2	**Kashi**	**70.33**	**51**	P	**P**	**05 55 14.7**	**+1.5**
KSH2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ATAH	**Atahualpa**	**70.34**	**226**	LR	LR	06 26 36.6	
	comp=Z,34nm,19.5s,baz=13,slow=36						
WMQ	**Urumqi**	**71.63**	**40**	*e*P	**P**	**05 55 20.4**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				LR	LR		
	comp=Z,120nm,23.3s						
FURI	**Furi**	**73.33**	**98**	LR	LR	06 28 26.9	
	comp=Z,63nm,19.1s,baz=9.0,slow=36						
PETK	**Petropavlovsk-**	**73.43**	**352**	LR	LR	06 29 35.0	
	comp=Z,79nm,18.2s,baz=38,slow=37						
SONM	**Songino Array**	**74.13**	**26**	P	**P**	**05 55 36.4**	**+0.7**
	comp=Z,4.6nm,0.9s,baz=335,slow=6.2,SNR=22						
SONM				LR	LR	06 28 47.4	
	comp=Z,50nm,20.3s,baz=10,slow=36						
	comp=Z,4.6nm,0.9s						
SONM	**Songino Array**	**74.13**	**26**	P	**P**	**05 55 35.9**	**+0.2**
SONM				IAmb	IAmb	05 55 37.1	
	comp=Z,8.2nm,1.1s						
ULN	**Ulaanbaatar**	**74.27**	**25**		**P**	**05 55 36.7**	**+0.1**
ULN				IAmb	IAmb	05 55 38.5	
	comp=Z,11nm,1.1s						
LPAZ	**La Paz**	**74.83**	**213**	P	**P**	**05 55 41.9**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=13,slow=11,SNR=6.0						
	comp=Z,1.1nm,0.8s						
LODK	**Lodwar**	**75.75**	**104**	P	**P**	**05 55 46.0**	**+0.6**
MBAR	**Mbarara**	**76.37**	**110**	P	**P**	**05 55 49.2**	**+0.2**
MBAR				IAmb	IAmb	05 56 09.0	
	comp=Z,5.4nm,1.2s						
KLR	**Kul'dur**	**77.28**	**9**	LR	LR	06 28 47.4	
	comp=Z,14nm,18.5s,baz=20,slow=35						
GTA2	**Gaotai**	**79.77**	**34**	*e*P	**P**	**05 56 08.0**	**+0.4**
GTA2				pmax	pmax		
	comp=Z,11nm,1.0s						
BNX	**BinXian**	**80.25**	**12**	⇑P	**P**	**05 56 08.7**	**-1.2**
BNX				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOMU	**GeErMu**	**80.95**	**39**	P	**P**	**05 56 12.4**	**-1.9**
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CPUP	**Villa Florida**	**81.56**	**200**	P	**P**	**05 56 17.0**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=56,slow=7.4,SNR=3.1						
	comp=Z,1.4nm,0.9s						
HHC	**Hu-ho-hao-te**	**81.97**	**25**	*e*P	**P**	**05 56 17.8**	**-1.5**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAJ	**Asahikawa**	**82.96**	**2**	LR	LR	06 32 37.7	
	comp=Z,50nm,19.7s,baz=101,slow=35						
LZH	**Lanzhou**	**84.20**	**32**	*e*P	**P**	**05 56 31.5**	**+0.5**
LZH				sP	pwP	05 56 38.3	-0.4
LZH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZDM	**Lanzhou Array**	**84.27**	**32**	P	**P**	**05 56 32.0**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=322,slow=4.5,SNR=5.8						
	comp=Z,0.5nm,0.4s						
HNS	**HongShan**	**86.02**	**24**	⇑P	**P**	**05 56 41.0**	**+1.2**
HNS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	**Xi'an**	**87.64**	**29**	⇓P	**P**	**05 56 47.4**	**-0.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LYN	**LuoYang**	**88.15**	**26**	P	**P**	**05 56 50.7**	**+0.5**
LYN				pmax	pmax		
	comp=Z,13nm,1.0s						
BRDH	**Bariadhala**	**91.53**	**48**	LR	LR	06 40 57.8	
	comp=Z,110nm,19.4s,baz=320,slow=37						
NJ2	**Nanjing**	**92.09**	**22**	*e*P	**P**	**05 57 07.0**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PZH	**PanZhiHua**	**92.22**	**38**	P	**P**	**05 57 09.5**	**0.0**
SUR	**Sutherland**	**98.21**	**135**	LR	LR	06 39 21.4	
	comp=Z,34nm,18.1s,baz=306,slow=34						
CMAR	**Chiang Mai Arr**	**98.39**	**43**	LR	LR	06 44 44.5	
	comp=Z,24nm,21.6s,baz=315,slow=37						
PALK	**Pallekele**	**99.23**	**65**	LR	LR	06 44 15.5	
	comp=Z,43nm,22.0s,baz=338,slow=36						
TAOE	**Nuku Hiva Isla**	**105.94**	**277**	*e*LR	LR	06 33 00.6	
	comp=Z,117nm,25.1s						
PPT2	**Papeete2**	**118.41**	**279**	*e*LR	LR	06 39 01.0	
	comp=Z,123nm,26.5s						
TBI	**Tubuai**	**122.76**	**274**	*e*LR	LR	06 40 54.1	
	comp=Z,560nm,29.8s						
WRA	**Warramunga Arr**	**145.77**	**18**	PKPbc	**PKPdf**	**06 03 38.2**	**+0.1**
	comp=Z,6.7nm,1.0s,baz=342,slow=3.3,SNR=21						
ASAR	**Alice Springs**	**149.31**	**20**	PKPbc	**PKPbc**	**06 03 47.5**	**-0.6**
	comp=Z,5.0nm,0.9s,baz=345,slow=2.2,SNR=31						
ASAR				PKKP	**PKKPdf**	**06 12 30.5**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=95,slow=3.5,SNR=8.4						

IDC ***02*** *05:55:06.8±0.8, 19°.09N×80°.05W, h0km, mb4.1/12, mbtmp4.1/16, ML3.6/5, MS3.5/14, Error ellipse: s-maj=20.4km s-min=18.5km az=121.0*
NEIC ***02*** *05:55:07.9±1.5, 19°.19N±0°.07×80°.03W±0°.07, h10km±2km, mb4.4/78, Error ellipse: s-maj=12.7km s-min=10.5km az=181.0*
CATAC ***02*** *05:55:09.2±0.5, 19°N±2°×8°0W±°, h25km±4km, M4.7/10, mB5.4/5, mb4.8/6, MLv4.6/10, Mw(mB)4.9/5, Error ellipse: s-maj=5.6km s-min=2.9km az=147.0, confirmed*
JSN ***02*** *05:55:09.8±1.7, 19°.14N×79°.90W, h15km±93km, MD5.0, MW5.3, Presumed earthquake*
RSNC ***02*** *05:55:09.0±0.7, 19°N±7°×8°0W±°, h78km±71km, mb5.0, mB6.6, ML3.7, Mw(mB)6.4*
SSNC ***02*** *05:55:10.2±2.2, 19°.13N×80°.07W, h20km±44km, MB4.8, MD3.8, ML4.0, Presumed earthquake*
ISC 02 05:55:07.7±1.3**, 19°.05N**±0°.04×**80°.00W**±0°.04**, h15**km±8km**, n159, σ2.07**/152**, mb4.3**/33**, MS3.6**/11**, 1C-2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.62**	**353**	*e*P	**Pg**	**05 55 19.6**	**-0.3**
LCCY				*e*S	**Sg**	**05 55 27.0**	**-1.1**
LCCY				IAML		05 55 29.0	
	comp=E,23μm,0.5s						
LCCY				IAML		05 55 33.1	
	comp=N,11μm,0.5s						
CBCY	**The Bluff, Cay**	**0.72**	**19**	P	**Pg**	**05 55 21.5**	**-0.2**
CBCY				S	**Sg**	**05 55 30.3**	**-1.0**
CBCY	**The Bluff, Cay**	**0.72**	**19**	*e*P	**Pg**	**05 55 21.6**	**-0.2**
CBCY				*e*S	**Sg**	**05 55 30.6**	**-0.7**
CBCY				IAML		05 55 31.6	
	comp=N,9μm,0.2s						
CBCY				IAML		05 55 32.4	
	comp=E,4μm,0.3s						
MTDJ	**Mount Denham**	**2.48**	**109**		**Pn**	**05 55 47.8**	**+0.1**
MTDJ	**Mount Denham**	**2.48**	**109**	P	**Pn**	**05 55 47.7**	**+0.1**
MTDJ				S	**Sn**	**05 56 14.9**	**-2.8**
MTDJ	**Mount Denham**	**2.48**	**109**	*e*P	**Pn**	**05 55 47.7**	**+0.1**
MTDJ				*e*S	**Sn**	**05 56 16.0**	**-1.7**
MTDJ				IAML		05 56 17.7	
	comp=E,2μm,0.3s						
MTDJ				IAML		05 56 18.1	
	comp=E,2μm,0.4s						
MTDJ	**Mount Denham**	**2.48**	**109**	⇑*i*P	**Pn**	**05 55 47.8**	**+0.1**
MTDJ	**Mount Denham**	**2.48**	**109**	P	**Pn**	**05 55 47.4**	**-0.3**
MTDJ				S	**Sn**	**05 56 15.4**	**-2.3**
CCCC	**Cccc**	**3.00**	**44**	*e*P	**Pb**	**05 55 58.5**	**-2.3**
LMGC	**Las Mercedes**	**3.00**	**70**	*e*P	**Pn**	**05 55 55.5**	**+0.8**
LMGC				*e*S	**Sn**	**05 56 30.2**	**-0.2**
LMGC				IAML		05 56 32.2	
	comp=N,144nm,0.1s						
LMGC				IAML		05 56 32.7	
	comp=E,108nm,0.1s						
MGV	**Manicaragua**	**3.04**	**0**	*e*P	**Pn**	**05 55 53.6**	**-1.7**
MGV				*e*S	**Sn**	**05 56 26.7**	**-4.8**
MGV				IAML		05 56 33.1	
	comp=N,535nm,0.3s						
STH	**Stony Hill**	**3.18**	**107**	⇓*i*P	**Pn**	**05 55 57.6**	**+0.4**
HOJ	**Hope**	**3.26**	**108**	⇓*i*P	**Pn**	**05 55 59.1**	**+0.8**
CHIV	**Chivirico**	**3.51**	**74**		**Pn**	**05 56 01.5**	**-0.2**
CHIV	**Chivirico**	**3.51**	**74**	P	**Pn**	**05 56 01.3**	**-0.3**
CHIV				S	**Sn**	**05 56 39.8**	**-3.1**
CHIV	**Chivirico**	**3.51**	**74**	*e*P	**Pn**	**05 56 01.4**	**-0.3**
CHIV				*e*S	**Sn**	**05 56 39.1**	**-3.8**
CHIV				IAML		05 56 47.0	
	comp=N,197nm,0.2s						
CHIV				IAML		05 56 49.0	
	comp=E,68nm,0.1s						
MARVS	**Santiago de Cu**	**3.98**	**76**	*e*P	**Pn**	**05 56 08.0**	**-0.3**
MARVS				*e*S	**Sn**	**05 56 50.5**	**-4.2**
MARVS				IAML		05 57 00.2	
	comp=N,117nm,0.2s						
MARVS				IAML		05 57 00.6	
	comp=E,92nm,0.2s						
HLGC	**Holguin**	**4.13**	**63**	*e*P	**Pn**	**05 56 10.7**	**+0.4**
RCC	**Rio Carpintero**	**4.17**	**76**	*e*P	**Pn**	**05 56 11.6**	**+0.8**
RCC				*e*S	**Sn**	**05 56 55.9**	**-3.4**
RCC				IAML		05 57 00.6	
	comp=N,46nm,0.3s						
RCC				IAML		05 57 02.5	
	comp=E,27nm,0.2s						
CAMR	**Camarioca**	**4.19**	**342**	P	**Pn**	**05 56 15.1**	**+4.0**
CAMR				S	**Sn**	**05 56 58.7**	**-1.1**
CAMR	**Camarioca**	**4.19**	**342**	*e*P	**Pn**	**05 56 13.3**	**+2.2**
CAMR				*e*S	**Sn**	**05 56 58.4**	**-1.3**
CAMR				IAML		05 57 02.2	
	comp=N,139nm,0.5s						
CAMR				IAML		05 57 03.2	
	comp=E,199nm,0.4s						
PINC	**Pinares de May**	**4.21**	**69**	*e*P	**Pn**	**05 56 13.4**	**+2.0**
SOR	**Soroa**	**4.66**	**323**		**Pn**	**05 56 16.9**	**-0.7**
SOR	**Soroa**	**4.66**	**323**	*e*P	**Pn**	**05 56 17.5**	**-0.1**
SOR				*e*S	**Sn**	**05 57 05.9**	**-5.6**
SOR				IAML		05 57 11.8	
	comp=N,139nm,0.3s						
SOR				IAML		05 57 14.7	
	comp=E,206nm,0.2s						
GTBY	**Guantanamo Bay**	**4.70**	**79**		**Pn**	**05 56 19.2**	**+1.2**
GTBY	**Guantanamo Bay**	**4.70**	**79**	P	**Pn**	**05 56 19.5**	**+1.5**
GTBY				S	**Sn**	**05 57 08.8**	**-3.5**
GTBY	**Guantanamo Bay**	**4.70**	**79**	*e*P	**Pn**	**05 56 18.8**	**+0.7**
GTBY				*e*S	**Sn**	**05 57 10.6**	**-1.7**
GTBY				IAML		05 57 16.1	
	comp=E,99nm,0.3s						
GTBY				IAML		05 57 17.4	
	comp=E,100nm,0.5s						
GTBY	**Guantanamo Bay**	**4.70**	**79**	*i* P	**Pn**	**05 56 18.8**	**+0.7**
GTBY	**Guantanamo Bay**	**4.70**	**79**	P	**Pn**	**05 56 17.8**	**-0.2**
GTBY				S	**Sn**	**05 57 10.2**	**-2.1**
NMDO	**Nuevo Mundo**	**4.96**	**72**		**Pn**	**05 56 22.2**	**+0.5**
NMDO	**Nuevo Mundo**	**4.96**	**72**	P	**Pn**	**05 56 22.3**	**+0.7**
MOAC	**Moa**	**5.01**	**71**	*e*P	**Pn**	**05 56 24.2**	**+1.9**
QMBU	**Quimbuelo**	**5.02**	**76**	P	**Pn**	**05 56 23.1**	**+0.5**
QMBU				S	**Sn**	**05 57 18.8**	**-1.6**
QMBU	**Quimbuelo**	**5.02**	**76**	*e*P	**Pn**	**05 56 23.4**	**+0.8**
MASC	**Masc**	**5.55**	**77**	P	**Pn**	**05 56 31.8**	**+2.0**
MASC				S	**Sn**	**05 57 35.1**	**+1.7**
MASC	**Masc**	**5.55**	**77**	*e*P	**Pn**	**05 56 32.1**	**+2.3**
PRVC	**Isla de Provid**	**5.79**	**193**	S	**Sn**	**05 57 36.6**	**-2.7**
PRVC	**Isla de Provid**	**5.79**	**193**	P	**Pn**	**05 56 33.7**	**+0.6**
	comp=E,80nm,0.6s						
PRVC				S	**Sn**	**05 57 35.8**	**-3.6**
	comp=E,80nm,0.6s						
BILN	**Bilwi Airport**	**5.93**	**214**	Pn	**Pn**	**05 56 36.6**	**+1.5**
BILN	**Bilwi Airport**	**5.93**	**214**	P	**Pn**	**05 56 36.5**	**+1.4**
BILN				S	**Sn**	**05 57 40.0**	**-2.9**
SAIC	**Isla e San And**	**6.68**	**195**	P	**Pn**	**05 56 47.0**	**+1.6**
	comp=E,50nm,1.6s						
SAIC				S	**Sn**	**05 57 57.7**	**-3.6**
	comp=E,50nm,1.6s						
061Z	**Ochoppi**	**6.83**	**353**	Pn	**Pn**	**05 56 48.6**	**+1.2**
SIUN	**Universidad Ur**	**7.01**	**222**		**Pn**	**05 56 51.2**	**+1.3**
TEIG	**Tepich**	**7.89**	**280**		**Pn**	**05 57 00.8**	**-1.0**
TEIG	**Tepich**	**7.89**	**280**	P	**Pn**	**05 57 00.4**	**-1.5**
	comp=E,48μmcomp=E,2μm,0.5s						
TEIG				S	**Sn**	**05 58 23.0**	**-7.9**
	comp=E,48μmcomp=E,2μm,0.5s						
SDDR	**Presa de Saban**	**8.24**	**89**		**Pn**	**05 57 08.2**	**+1.3**
MATN	**Matagalpa**	**8.34**	**224**	P	**Pn**	**05 57 09.1**	**+1.0**
LIMN	**Finca el Limon**	**8.54**	**227**	P	**Pn**	**05 57 12.9**	**+2.0**
LIMN				S	**Sn**	**05 58 47.9**	**+0.8**
SC01	**Santiago de lo**	**8.77**	**86**		**Pn**	**05 57 14.9**	**+0.9**
DWPF	**Disney Wildern**	**9.11**	**352**	Pn	**Pn**	**05 57 17.4**	**-1.3**
BANI	**BANI**	**9.16**	**93**		**Pn**	**05 57 19.8**	**+0.3**
CNGN	**Cerro Negro**	**9.16**	**226**	Pn	**Pn**	**05 57 21.9**	**+2.4**
HERN	**Volcan Telica**	**9.18**	**227**	Pn	**Pn**	**05 57 21.2**	**+1.6**
TRT2	**Tortugero**	**9.18**	**204**	P	**Pn**	**05 57 21.1**	**+1.4**
PETF	**Flores**	**9.62**	**259**	Pn	**Pn**	**05 57 25.9**	**+0.2**
PETF	**Flores**	**9.62**	**259**	P	**Pn**	**05 57 26.1**	**+0.4**
PETF				S	**Sn**	**05 59 10.9**	**-2.8**
RAFA	**San Farael, Vo**	**9.76**	**203**	Pn	**Pn**	**05 57 29.7**	**+1.7**
BCIP	**Isla Barro Col**	**9.83**	**179**	P	**Pn**	**05 57 27.9**	**-0.7**
BCIP				S	Sn	05 59 10.6	-8.1
JTS	**Las Juntas de**	**9.94**	**209**	Pn	**Pn**	**05 57 32.6**	**+2.5**
	comp=E,0.9nm,0.3s,baz=107,slow=19,SNR=3.0						
JTS				LR	LR	06 01 26.2	
	comp=E,219nm,19.9s,baz=71,slow=38						
	comp=E,2.5nm,0.3s						
JTS	**Las Juntas de**	**9.94**	**209**	Pn	**Pn**	**05 57 31.1**	**+1.0**
ESQI	**Esquipulas**	**9.99**	**245**	Pn	**Pn**	**05 57 33.6**	**+2.7**
DR12	**Loma Pena Alta**	**10.06**	**90**	Pn	**Pn**	**05 57 34.6**	**+2.9**
DRK0	**Durika**	**10.22**	**198**	P	**Pn**	**05 57 34.5**	**+0.3**
SJCC	**San Jacinto, C**	**10.23**	**152**	P	**Pn**	**05 57 35.5**	**+1.4**
SJCC				S	**Sn**	**05 59 22.5**	**-6.1**
JUD3	**Juan Diaz 3**	**10.33**	**212**	Pn	**Pn**	**05 57 39.2**	**+3.7**
656A	**Willston**	**10.53**	**348**	Pn	**Pn**	**05 57 37.2**	**-0.9**
URIC	**Uribia, Colomb**	**10.63**	**132**	P	**Pn**	**05 57 41.0**	**+1.5**
URI	**Uribia**	**10.63**	**132**	P	**Pn**	**05 57 41.0**	**+1.4**
URI				S	Sn	05 59 31.3	-7.2
APG	**El Apazote**	**10.79**	**250**	Pn	**Pn**	**05 57 44.3**	**+2.4**
	comp=E,0.1nm,0.3s,baz=90,slow=12,SNR=2.6						
553A	**Crawfordville**	**11.80**	**341**	Pn	**Pn**	**05 57 53.6**	**-1.8**
CCIG	**Comitan**	**11.89**	**258**	Pn	**Pn**	**05 57 58.0**	**+1.0**
451A	**Vernon**	**12.64**	**337**	Pn	**Pn**	**05 58 05.0**	**-1.9**
352A	**Blakely**	**13.15**	**341**		**Pn**	**05 58 12.0**	**-2.0**
SDV	**Santo Domingo**	**13.59**	**137**	Pn	**Pn**	**05 58 20.9**	**+0.8**
	comp=E,2.1nm,0.3s,baz=353,slow=14,SNR=23						
SDV				Sn	**Sn**	**06 00 44.9**	**-6.2**
	comp=E,1.9nm,0.3s,baz=2.0,slow=20,SNR=6.3						
SDV				LR	LR	06 04 07.4	
	comp=E,82nm,19.3s,baz=328,slow=40						
	comp=E,12nm,0.6s						
SDV	**Santo Domingo**	**13.59**	**137**		**Pn**	**05 58 21.2**	**+1.0**
250A	**Grady**	**14.05**	**338**		**Pn**	**05 58 23.9**	**-2.5**
CMIG	**Matias Romero**	**14.29**	**265**	Pn	**Pn**	**05 58 28.7**	**-0.9**
	comp=E,1.0nm,0.3s,baz=78,slow=8.1,SNR=14						
CMIG				Sn	Sn	06 00 55.1	-13
	comp=E,0.8nm,0.3s,baz=226,slow=23,SNR=5.8						
	comp=E,2.8nm,0.4s						
346A	**Big Creek Wild**	**14.96**	**327**		**Pn**	**05 58 35.6**	**-3.1**
ROSC	**El Rosal**	**15.17**	**158**	LR	LR	06 05 04.9	
	comp=E,180nm,18.5s,baz=90,slow=39						
Y52A	**Lilburn**	**15.19**	**347**	Pn	**Pn**	**05 58 40.4**	**-1.4**
Y52A				IAmb	IAmb	05 58 53.5	
	comp=Z,15nm,1.0s						
146A	**Union**	**15.78**	**331**	Pn	**Pn**	**05 58 49.7**	**+0.2**
146A				IAmb	IAmb	05 59 00.8	
	comp=Z,26nm,0.9s						
Y49A	**Blount Mountai**	**15.82**	**340**	Pn	**Pn**	**05 58 48.0**	**-1.9**
Y49A				IAmb	IAmb	05 59 25.4	
	comp=Z,38nm,1.4s						
Z47A	**Carrollton**	**15.83**	**334**		**Pn**	**05 58 48.2**	**-1.9**
Z47A				IAmb	IAmb	05 59 17.8	
	comp=Z,26nm,1.2s						
BG3	**Lake Jocassee**	**16.09**	**351**	Pn	**Pn**	**05 58 52.9**	**-0.6**
X48A	**Hartselle**	**16.57**	**339**	Pn	**Pn**	**05 58 59.0**	**-0.5**
V58A	**Windy Hill, Pi**	**16.70**	**3**	Pn	**Pn**	**05 58 59.2**	**-2.0**
V58A				IAmb	IAmb	05 59 17.1	
	comp=Z,29nm,1.5s						
W50A	**Signal Mountai**	**16.76**	**345**	Pn	**Pn**	**05 59 01.0**	**-1.0**
CPCT	**Cooper Cave**	**16.82**	**347**	Pn	**Pn**	**05 59 01.9**	**-0.7**
TKL	**Tuckaleechee C**	**16.88**	**349**	Pn	**Pn**	**05 59 01.6**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=153,slow=6.2,SNR=8.0						
	comp=Z,1.9nm,0.4s						
TKL	**Tuckaleechee C**	**16.88**	**349**	Pn	**Pn**	**05 59 01.5**	**-1.9**
SWET	**Sewanee**	**16.94**	**343**	Pn	**Pn**	**05 59 02.6**	**-1.6**
143A	**Socs Landing,**	**17.01**	**325**		**Pn**	**05 59 03.8**	**-1.4**
Y45A	**Yeager Farm, C**	**17.03**	**332**	Pn	**Pn**	**05 59 03.5**	**-1.8**
Y45A				IAmb	IAmb	05 59 27.0	
	comp=Z,21nm,0.8s						
OXF	**Oxford**	**17.52**	**333**		**Pn**	**05 59 10.0**	**-1.5**
OXF				IAmb	IAmb	05 59 34.3	
	comp=Z,18nm,0.7s						
V48A	**Smith Brothers**	**17.68**	**341**		**Pn**	**05 59 12.6**	**-0.9**
TZTN	**Tazewell**	**17.70**	**351**	P	**Pn**	**05 59 13.0**	**-0.8**
TZTN				IAmb	IAmb	05 59 54.5	
	comp=Z,32nm,1.4s						
HKT	**Hockley**	**18.02**	**310**	P	**Pn**	**05 59 17.0**	**-0.5**
HNVL	**Huntsville, TX**	**18.21**	**313**	IAmb	IAmb	05 59 40.3	
	comp=Z,19nm,0.9s						
NATX	**Nacogdoches**	**18.29**	**317**		**Pn**	**05 59 19.2**	**-1.8**
WVT	**Waverly**	**18.36**	**340**		**Pn**	**05 59 20.2**	**-1.6**
WVT	**Waverly**	**18.36**	**340**	P	**Pn**	**05 59 20.3**	**-1.5**
WVT				IAmb	IAmb	05 59 36.1	
	comp=Z,13nm,1.1s						
WLAR	**White Oak Lake**	**18.69**	**324**	IAmb	IAmb	05 59 47.5	
	comp=Z,21nm,0.7s						
MLDN	**Muldoon**	**18.84**	**308**	IAmb	IAmb	05 59 45.5	
	comp=Z,31nm,0.9s						
HBVL	**Hebbronville**	**18.92**	**298**	IAmb	IAmb	05 59 44.8	
	comp=Z,21nm,0.8s						
237A	**Washetta, Mont**	**19.20**	**315**	IAmb	IAmb	05 59 46.9	
	comp=Z,26nm,0.8s						
WCI	**Wyandotte Cave**	**19.88**	**345**	P	**Pn**	**05 59 43.3**	**+3.2**
WCI				IAmb	IAmb	05 59 59.3	
	comp=Z,12nm,0.8s						
PBMO	**Poplar Bluff**	**19.89**	**335**	IAmb	IAmb	06 00 04.2	
	comp=Z,8.7nm,0.5s						
833A	**Chaparral WMA,**	**19.99**	**301**		**P**	**05 59 39.1**	**-0.7**
SIUC	**Southern Illin**	**20.26**	**338**	IAmb	IAmb	06 00 01.1	
	comp=Z,12nm,0.6s						
HNDO	**Hondo**	**20.41**	**304**	IAmb	IAmb	05 59 48.5	
	comp=Z,9.3nm,0.8s						
FVM	**French Village**	**20.94**	**336**	IAmb	IAmb	06 00 18.9	
	comp=Z,21nm,1.5s						
BRDY	**Brady**	**21.03**	**309**	IAmb	IAmb	05 59 56.6	
	comp=Z,17nm,0.8s						
HHAR	**Hobbs**	**21.10**	**327**	IAmb	IAmb	06 00 10.1	
	comp=Z,9.2nm,0.7s						
Q44A	**Meyer Farm, Va**	**21.27**	**340**	IAmb	IAmb	06 00 07.8	
	comp=Z,15nm,0.8s						
DRIO	**Del Rio**	**21.42**	**303**	IAmb	IAmb	06 00 17.5	
	comp=Z,12nm,0.7s						
TUL3	**Leonard**	**21.82**	**324**	IAmb	IAmb	06 00 04.5	
	comp=Z,14nm,0.8s						
W35A	**Tecumseh**	**21.92**	**320**	P	**P**	**05 59 59.6**	**-0.9**
R40A	**Maddies Statio**	**21.94**	**333**	IAmb	IAmb	06 00 14.7	
	comp=Z,13nm,0.7s						
WTFS	**Witchita Falls**	**22.04**	**315**	IAmb	IAmb	06 00 38.8	
	comp=Z,16nm,0.8s						
FNO	**Franklin**	**22.31**	**320**	IAmb	IAmb	06 00 29.1	
	comp=Z,28nm,1.3s						
SAND	**Sanderson**	**22.83**	**303**	IAmb	IAmb	06 00 11.9	
	comp=Z,14nm,1.1s						
TMB01	**Midkiff**	**23.52**	**307**	IAmb	IAmb	06 00 36.2	
	comp=Z,9.4nm,1.2s						
P38A	**Dawn**	**23.60**	**333**	P	**P**	**06 00 17.1**	**-0.9**
P38A				IAmb	IAmb	06 00 34.6	
	comp=Z,11nm,0.9s						
TXAR	**Lajitas Array**	**23.85**	**300**	P	**P**	**06 00 20.9**	**+0.3**
	comp=Z,5.7nm,0.9s,baz=117,slow=8.9,SNR=52						
	comp=Z,5.7nm,0.9s						
TXAR	**Lajitas Array**	**23.85**	**300**	P	**P**	**06 00 20.4**	**-0.2**
TX31	**Lajitas Ar. Si**	**23.85**	**300**	IAmb	IAmb	06 00 22.9	
	comp=Z,6.2nm,0.8s						
MNHN	**Monahans**	**23.90**	**305**	P	**P**	**06 00 20.4**	**-0.6**
MNHN				IAmb	IAmb	06 00 53.5	
	comp=Z,6.4nm,0.7s						
TPB05	**Hovey Rd**	**24.16**	**304**	IAmb	IAmb	06 00 37.9	
	comp=Z,9.9nm,0.7s						
ALPN	**Alpine**	**24.20**	**302**	IAmb	IAmb	06 00 44.8	
	comp=Z,7.1nm,0.9s						
TPB01	**Permian Basin**	**24.53**	**303**	IAmb	IAmb	06 00 41.7	
	comp=Z,13nm,0.7s						
VHRN	**Van Horn**	**25.43**	**302**	P	**P**	**06 00 36.1**	**+1.0**
VHRN				IAmb	IAmb	06 00 50.8	
	comp=Z,7.4nm,0.9s						
SADO	**Sadowa**	**25.65**	**1**	P	**P**	**06 00 38.4**	**+1.6**
	comp=Z,3.7nm,0.7s,baz=199,slow=13,SNR=4.2						
SADO				LR	LR	06 10 56.7	
	comp=Z,125nm,18.8s,baz=196,slow=37						
	comp=Z,3.7nm,0.7s						
WUAZ	**Wupatki**	**32.17**	**307**	IAmb	IAmb	06 01 51.2	
	comp=Z,5.1nm,1.0s						
ULM	**Lac du Bonnet**	**33.61**	**342**	P	**P**	**06 01 51.5**	**+4.1**
	comp=Z,1.1nm,0.4s,baz=106,slow=7.4,SNR=2.2						
PSUT	**Pine Spring**	**35.18**	**311**	IAmb	IAmb	06 02 20.5	
	comp=Z,3.4nm,0.8s						
ELK	**Elko**	**37.06**	**313**	P	**P**	**06 02 18.4**	**+0.9**
	comp=Z,1.8nm,0.9s,baz=116,slow=4.1,SNR=6.5						
	comp=Z,1.8nm,0.9s						
SCHQ	**Schefferville**	**37.11**	**13**	P	**P**	**06 02 19.8**	**+2.4**
	comp=Z,6.4nm,0.7s,baz=200,slow=7.3,SNR=19						
SCHQ				LR	LR	06 18 02.4	
	comp=Z,49nm,19.2s,baz=132,slow=37						
	comp=Z,6.4nm,0.7s						
CWC	**Cottonwood Cre**	**37.60**	**305**	IAmb	IAmb	06 02 21.9	
	comp=Z,2.0nm,0.4s						
NVAR	**Mina Array Bea**	**38.39**	**308**	P	**P**	**06 02 30.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=117,slow=7.3,SNR=3.0						
	comp=Z,0.5nm,0.7s						
PNTR	**Pine Nut**	**39.56**	**309**	IAmb	IAmb	06 02 56.2	
	comp=Z,8.5nm,0.9s						
FRB	**Frobisher Bay**	**45.34**	**7**	LR	LR	06 21 23.1	
	comp=Z,71nm,19.2s,baz=182,slow=35						
YKA	**Yellowknife Ar**	**49.55**	**340**	P	**P**	**06 03 58.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=135,slow=7.7,SNR=12						
	comp=Z,0.5nm,0.6s						
SFJD	**Kangerlussuaq**	**51.52**	**14**	LR	LR	06 28 12.3	
	comp=Z,40nm,18.7s,baz=188,slow=39						
PLCA	**Paso Flores**	**60.12**	**172**	P	**P**	**06 05 16.4**	**+1.8**
	comp=Z,2.9nm,1.2s,baz=340,slow=15,SNR=2.8						
	comp=Z,2.9nm,1.2s						
EKA	**Eskdalemuir Ar**	**67.09**	**37**	P	**P**	**06 06 01.6**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=275,slow=6.7,SNR=4.4						
	comp=Z,0.9nm,0.6s						
ESDC	**Sonseca Array**	**67.51**	**54**	P	**P**	**06 06 06.1**	**+2.6**
	comp=Z,0.8nm,0.9s,baz=285,slow=6.1,SNR=6.1						
ESDC				LR	LR	06 32 05.8	
	comp=Z,35nm,18.2s,baz=324,slow=33						
	comp=Z,0.8nm,0.9s						
MDT	**Midelt**	**67.92**	**62**	LR	LR	06 32 46.2	
	comp=Z,37nm,19.1s,baz=315,slow=33						
SPITS	**Spitsbergen Ar**	**72.79**	**12**	P	**P**	**06 06 35.8**	**+0.6**
	comp=Z,7.7nm,1.0s,baz=336,slow=6.6,SNR=6.0						
	comp=Z,7.7nm,1.0s						
NOA	**NORSAR Array B**	**74.12**	**30**	LR	LR	06 38 13.0	
	comp=Z,25nm,18.1s,baz=260,slow=35						
ARCES	**ARCESS Array B**	**77.60**	**20**	P	**P**	**06 07 04.5**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=269,slow=4.1,SNR=1.3						
ARCES				LR	LR	06 39 28.6	
	comp=Z,66nm,19.7s,baz=249,slow=34						
	comp=Z,2.3nm,0.8s						
FIA1	**FINESS Array S**	**80.87**	**28**	P	**P**	**06 07 21.3**	**+0.3**
FINES	**FINESS Array B**	**80.87**	**28**	P	**P**	**06 07 21.4**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=294,slow=10,SNR=1.6						
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**80.87**	**28**	P	**P**	**06 07 21.2**	**+0.3**
AKASG	**Malin Array Be**	**87.00**	**37**	LR	LR	06 47 46.4	
	comp=Z,31nm,18.1s,baz=242,slow=36						
MA2	**Magadan**	**91.44**	**337**	LR	LR	06 51 21.6	
	comp=Z,25nm,19.8s,baz=86,slow=37						
ARTI	**Arti**	**97.10**	**22**	LR	LR	06 52 23.6	
	comp=Z,46nm,18.2s,baz=350,slow=35						
HHC	**Hu-ho-hao-te**	**119.44**	**350**	*e*P	**PKPdf**	**06 13 52.4**	**-4.8**
PZH	**PanZhiHua**	**134.69**	**358**	PKP	**PKPdf**	**06 14 25.6**	**-1.0**
ASAR	**Alice Springs**	**148.14**	**256**	PKPbc	**PKPbc**	**06 14 54.5**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=92,slow=2.7,SNR=11						

IDC ***02*** *05:56:40.7±2.1, 37°.28N×144°.85E, h0km, mb4.0/2, mbtmp3.8/4, ML3.3/2, Error ellipse: s-maj=43.6km s-min=32.0km az=59.0*
NIED ***02*** *05:56:46.4, 37°.47N×144°.63E, h57km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.47; $M_{\theta\theta}$0.73; $M_{\phi\phi}$2.73; $M_{r\theta}$3.12; $M_{\theta\phi}$0.98; $M_{\phi r}$2.68; Fault plane solution: $M_0$5.25000×10^{14} NP1:ϕ_s11.00000°, δ22.00000°, λ-120.00000°. NP2:ϕ_s222.00000°, δ71.00000°, λ-79.00000°.*
JMA ***02*** *05:56:46.4±0.2, 37°.5N±0°.9×14°5E±°, h57km, MV3.9/27, FAR E OFF NORTH HONSHU*
ISC 02 05:56:44.0±1.4**, 37°.44N**±0°.06×**144°.89E**±0°.09**, h35**km**, n24, σ1.82**/31**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.85**	**289**	*e*P	**Pn**	**05 57 27.8**	**+0.9**
JIKH				S	**Sn**	**05 57 58.5**	**-1.5**
JIO	**Ouri**	**2.98**	**291**	*e*P	**Pn**	**05 57 29.8**	**+1.1**
JIO				*e*S	**Sn**	**05 58 02.2**	**-1.0**
OFUJ	**Ofunato**	**3.02**	**304**	P	**Pn**	**05 57 30.4**	**+1.1**
OFUJ				*e*S	**Sn**	**05 58 03.8**	**-0.5**
JKMT	**Kesennumamotoy**	**3.02**	**298**	*e*P	**Pn**	**05 57 30.3**	**+1.0**
JKMT				*e*S	**Sn**	**05 58 03.2**	**-1.1**
JMK	**Ichinoseki**	**3.26**	**299**	*e*P	**Pn**	**05 57 33.8**	**+1.2**
JMK				*e*S	**Sn**	**05 58 09.2**	**-1.1**
JOM	**Ohasama**	**3.48**	**307**	*e*P	**Pn**	**05 57 37.1**	**+1.5**
JOM				*e*S	**Sn**	**05 58 15.6**	**0.0**
JOT	**Ohata**	**4.94**	**324**	*e*S	**Sn**	**05 58 51.1**	**-0.3**
JRY	**Ryogami san**	**5.02**	**255**	*e*P	**Pn**	**05 57 57.5**	**+0.7**
JRY				*e*S	**Sn**	**05 58 50.9**	**-2.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOD2	Odawara 2	5.16	247	eP	Pn	05 58 00.7	+1.9
JOD2				eS	Sn	05 58 54.7	-2.5
JCH	Churui	5.30	348	eP	Pn	05 58 01.4	+0.8
JCH				eS	Sn	05 58 58.3	-2.1
MJAR	Matsushiro Arr	5.42	263	Pn	Pn	05 58 02.9	+0.5
	0.5nm,0.3s,baz=89,slow=15,SNR=16						
MJAR				Sn	Sn	05 59 04.4	+0.8
	0.3nm,0.3s,baz=186,slow=23,SNR=6.7						
	3.9nm,0.6s						
NEM2	Nemuro 2	5.95	6	eP	Pn	05 58 08.8	-0.8
NEM2				eS	Sn	05 59 11.6	-4.9
JHJ	Hachijo jima 2	6.00	226	Sn	Sn	05 59 13.5	-4.3
	22nm,0.3s,baz=91,slow=17,SNR=4.9						
JTKR	Abashiri--Toko	6.57	354	eP	Pn	05 58 18.8	+0.8
JTKR				eS	Sn	05 59 29.5	-2.1
JHR	Hokuryu	6.74	340	eS	Sn	05 59 36.0	0.0
ASAJ	Asahikawa	6.89	346	Pn	Pn	05 58 24.9	+2.4
	0.7nm,0.3s,baz=242,slow=19,SNR=4.7						
ASAJ				Sn	Sn	05 59 39.0	-0.7
	0.3nm,0.3s,baz=51,slow=31,SNR=3.7						
	1.8nm,0.4s						
H11N2	WAKE ISLAND Hy	26.06	127	T	T	06 29 08.2	
	baz=317,slow=74,SNR=15						
H11N1	WAKE ISLAND Hy	26.07	127	T	T	06 29 15.3	
	baz=317,slow=74,SNR=8.1						
H11N3	WAKE ISLAND Hy	26.08	127	T	T	06 29 11.3	
	baz=317,slow=74,SNR=10						
H11S1	WAKE ISLAND Hy	26.84	129	T	T	06 30 15.8	
	baz=319,SNR=4.1						
H11S3	WAKE ISLAND Hy	26.84	129	T	T	06 30 08.9	
	baz=319						
H11S2	WAKE ISLAND Hy	26.86	129	T	T	06 30 14.6	
	baz=319						
WRA	Warramunga Arr	57.93	192	P	P	06 06 33.2	+0.4
	1.6nm,0.5s,baz=10,slow=7.1,SNR=15						
	1.6nm,0.5s						
ASAR	Alice Springs	61.65	191	P	P	06 06 59.4	+1.1
	0.6nm,0.6s,baz=9.8,slow=6.8,SNR=7.6						
	0.6nm,0.6s						

IDC 02 06:10:25.4±1.3, 2.61S×138.65E, h0km, mb3.5/3, mbtmp3.6/5, ML3.6/2, MS3.3/6, Error ellipse: s-maj=26.8km s-min=16.9km az=112.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.05	88	Pn	Pn	06 11 01.5	+0.3
	9.9nm,0.3s,baz=247,slow=11,SNR=30						
JAY				Sn	Sn	06 11 26.6	-0.9
	10nm,0.3s,baz=162,slow=20,SNR=11						
JAY				LR	LR	06 12 08.2	
	comp=Z,515nm,19.4s,baz=340,slow=50						
	27nm,0.3s						
GUMO	Guam	17.23	21	LR	LR	06 21 50.4	
	comp=Z,14nm,18.7s,baz=46,slow=40						
WRA	Warramunga Arr	17.74	193	P	Pn	06 14 34.4	+0.4
	0.3nm,0.3s,baz=4.1,slow=13,SNR=16						
WRA				S	Sn	06 17 41.8	-11
	1.9nm,1.0s,baz=15,slow=22,SNR=3.7						
	2.2nm,0.8s						
CTA	Charters Tower	18.90	157	LR	LR	06 22 40.5	
	comp=Z,199nm,18.3s,baz=334,slow=39						
ASAR	Alice Springs	21.44	192	P	P	06 15 15.8	+0.5
	1.6nm,0.8s,baz=19,slow=11,SNR=8.4						
ASAR				S	S	06 19 14.9	+0.7
	0.4nm,0.5s,baz=19,slow=24,SNR=2.6						
	1.6nm,0.8s						
STKA	Stephens Creek	29.25	175	LR	LR	06 29 21.2	
	comp=Z,104nm,18.2s,baz=14,slow=39						
NWAO	Narrogin (SRO)	36.24	211	LR	LR	06 31 54.2	
	comp=Z,42nm,18.4s,baz=305,slow=36						
MJAR	Matsushiro Arr	38.95	359	LR	LR	06 31 19.9	
	comp=Z,51nm,19.4s,baz=24,slow=32						
MKAR	Makanchi Array	69.67	322	P	P	06 21 38.1	+1.2
	0.4nm,0.7s,baz=114,slow=6.9,SNR=4.2						
	0.4nm,0.7s						
ILAR	Eielson Array	85.76	24	P	P	06 23 04.8	-1.4
	0.5nm,0.9s,baz=257,slow=4.4,SNR=4.1						
	0.5nm,0.9s						

MEX 02 06:20:06.7±1.5, 16.87N×95.61W, h30km±23km, MD4.3, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.73	72	eP	Pb	06 20 16.9	-4.1
CMIG				eS	Sb	06 20 26.4	-4.3
NEUV	Arroyo Zacate	0.86	348	eP	Pn	06 20 19.9	-2.9
NEUV				eS	Sb	06 20 31.8	-2.5
OXLC	Oaxaca	1.06	281	eP	Pn	06 20 23.7	-2.1
OXLC				i S	Sn	06 20 37.3	-2.3
OXBJ	Oaxaca	1.08	281	eP	Pb	06 20 32.6	+5.6
OXBJ				i S	Sb	06 20 48.0	+7.2
VHO	Vista Hermosa	1.09	281	eP	Pn	06 20 23.9	-2.3
VHO				eS	Sb	06 20 40.8	-0.3
HUIG	Huatulco	1.19	204	eP	Pn	06 20 24.8	-2.5
HUIG				eS	Sn	06 20 40.2	-2.4
UXUV	UXUV	1.47	72	eP	Pn	06 20 29.9	-1.4
UXUV				eS	Sn	06 20 48.6	-0.9
PEIG	Puerto Escondi	1.71	240	eP	Pn	06 20 33.3	-1.2
PEIG				eS	Sn	06 20 56.9	+1.5
CARR	Arriaga	1.74	110	eP	Pn	06 20 33.2	-1.7
CARR				eS	Sn	06 20 55.9	-0.2
TOIG	Toxpalan	1.85	312	eP	Pn	06 20 37.9	+1.4
TOIG				eS	Sb	06 21 02.6	0.0
YOIG	Yosondua	1.85	270	eP	Pn	06 20 37.3	+0.6
YOIG				eS	Sb	06 21 02.6	-0.3
TXIG	Tlaxiaco	2.10	281	eP	Pn	06 20 41.5	+1.4
TXIG				i S	Sb	06 21 09.8	-0.2
TPIG	Tehuac#an	2.27	313	eP	Pn	06 20 44.4	+2.1
TPIG				eS	Sb	06 21 15.6	+0.6
HLIG	Huajuapan de L	2.30	295	eP	Pn	06 20 44.5	+1.6
HLIG				eS	Sb	06 21 15.4	-0.4
TGIG		2.39	92	eP	Pn	06 20 44.6	+0.8
TGIG				i S	Sn	06 21 13.6	+1.4
PNIG	Pinotepa	2.46	259	eP	Pn	06 20 44.4	-0.4
PNIG				eS	Sn	06 21 15.2	+1.4
PCIG		2.57	116	eP	Pn	06 20 45.8	-0.5
PCIG				i S	Sn	06 21 12.4	-4.3
FTIG	Fresnillo de T	2.62	294	eP	Pn	06 20 49.5	+2.4
FTIG				eS	Sb	06 21 23.4	-1.5
TLIG	Tlapa	2.91	284	eP	Pn	06 20 53.1	+2.0
TLIG				eS	Sb	06 21 30.2	-2.9
MGIG	Malinaltepec	2.91	278	eP	Pn	06 20 52.8	+1.6
MGIG				i S	Sb	06 21 31.3	-2.1
LVIG	Laguna Verde	2.94	345	eP	Pn	06 20 49.4	-2.0
LVIG				i S	Sn	06 21 22.8	-2.9
CRIG	Cruz Grande	3.37	268	eP	Pn	06 20 57.2	-0.1
CRIG				i S	Sb	06 21 45.1	-1.3
CCIG	Comitan	3.38	99	eP	Pn	06 20 58.4	+0.7
CCIG				i S	Sb	06 21 43.9	-3.0
PPM	Popocatepetl	3.61	308	eP	Pn	06 21 05.1	+4.0
PPM				i S	Sb	06 21 52.2	-1.4
PATR	El Naranjo	3.69	118	eP	Pn	06 21 01.7	-0.2
PAVE	Pavencul	3.70	116	eP	Pn	06 21 02.5	+0.4
CHUJ	Union Juarez	3.81	117	eP	Pn	06 21 03.4	-0.2

*SOF **02** 06:26:12.5, 39.24N±0.03×27.90E±0.02, h5km±2km, MD4.0/10*
*ISK **02** 06:26:12.7, 39.10N×27.82E, h8km, ML3.9/17*
*AFAD **02** 06:26:12.8, 39.09N×27.81E, h7km±2km, MW3.7*
*ATH **02** 06:26:13.6±0.8, 39.13N×27.86E, h14km±6km, ML3.3/19, Manual Solution by N.Liadopoulou First location: 2020/02/02 06:27:45, This location: 2020/02/02 09:29:06 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **02** 06:26:14.8, 39°N±2°×2°8E±°, h18km±17km, M3.4/15, MLh3.4/15*
*CFUSG **02** 06:26:16.3, 39.20N×28.10E, h10km, Mb2.8/1, MD3.3/1, MSH3.1/4*

ISC 02 06:26:13.0±0.8, 39.10N±0.01×27.84E±0.01, h15km±6km, n156, σ0.88/208, 11C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.22	186	P	Pg	06 26 18.0	0.0
AKHS				S	Sb	06 26 21.9	-0.7
AKS	Akhisar	0.22	186	Pg	Pg	06 26 17.6	-0.4
AKS				Sg	Sg	06 26 21.5	+0.2
SOMA	Soma-Manisa	0.25	284	Pg	Pg	06 26 17.9	-0.5
SOMA				Sg	Sg	06 26 21.7	-0.4
STEP	BALIKESIR_Sava	0.30	341	P	Pg	06 26 18.9	-0.4
STEP				S	Sg	06 26 23.3	-0.3
GORD	Gordes-Manisa	0.32	126	Pg	Pg	06 26 20.1	+0.4
GORD				Sg	Sb	06 26 25.4	-0.1
GOMA	Golmarmara-Man	0.39	172	Pg	Pg	06 26 20.7	-0.3
GOMA				Sg	Sb	06 26 27.1	-0.4
KTTT	Salihli	0.45	154	P	Pg	06 26 22.1	0.0
KTTT				S	Sg	06 26 28.4	+0.2
CAMT	Merkez	0.54	230	P	Pb	06 26 24.0	-0.3
CAMT				S	Sg	06 26 31.0	+0.1
BALB	Balikesir	0.54	3	Pg	Pg	06 26 23.9	+0.1
ZEDA	zmir-Bergama	0.61	258	P	Pg	06 26 25.1	0.0
ZEDA				S	Sg	06 26 32.9	-0.3
BKES	Balkesir-Mer	0.64	6	P	Pg	06 26 25.4	-0.1
BKES				S	Sg	06 26 34.0	-0.1
BALY	Balya	0.67	345	P	Pg	06 26 25.9	-0.2
BALY				S	Sg	06 26 33.9	-1.0
DEMI	Demirci	0.68	94	P	Pb	06 26 26.7	+0.1
DEMI				S	Sg	06 26 34.8	-0.5
DURS	Dursunbey	0.70	44	P	Pg	06 26 26.6	-0.2
DURS				S	Sg	06 26 35.7	-0.3
BUHA	Balikesir, Bur	0.72	304	P	Pg	06 26 26.6	-0.4
BUHA				S	Sb	06 26 38.0	+1.0
IZMD	zmir-Dikili-	0.72	261	P	Pg	06 26 27.1	0.0
IZMD				P	Pg	06 26 27.2	0.0
IZMD				S	Sg	06 26 36.3	-0.3
DKL	Dikili	0.73	268	Pg	Pb	06 26 27.5	+0.1
BLKS	Balkesir-Sus	0.78	7	P	Pg	06 26 27.8	-0.4
BLKS				P	Pb	06 26 28.0	-0.4
BLKS				S	Sg	06 26 38.2	-0.4
DST	Dursunbey	0.79	50	Pg	Pg	06 26 27.9	-0.4
YAYO	Edremit-Balk	0.79	311	Pg	Pg	06 26 27.9	-0.5
MANT	Manisa	0.82	137	P	Pg	06 26 29.0	0.0
MANT				S	Sg	06 26 39.2	-0.7
ODEM	Odemis-Izmir	0.84	168	Pg	Pb	06 26 29.3	0.0
KULA	Kula-Manisa	0.86	132	Pg	Pg	06 26 29.9	+0.1
SMAA	Simav-Kutahya	0.88	89	Pg	Pn	06 26 30.9	-0.1
SUSR	Susurluk-Balik	0.88	12	Pg	Pb	06 26 29.7	-0.4
SIMA	Simav-Kutahya	0.89	91	Pg	Pg	06 26 30.7	+0.5
BAGT	Foa	0.89	241	P	Pg	06 26 30.1	-0.1
BAGT				S	Sg	06 26 42.0	0.0
CMHT	Manyas	0.92	6	P	Pb	06 26 30.6	-0.1
CMHT				S	Sb	06 26 42.1	-0.5
AYVA	Ayvalik	0.92	284	P	Pb	06 26 30.7	0.0
DUVT	Torbali	0.93	200	P	Pg	06 26 30.8	-0.2
DUVT				S	Sn	06 26 43.7	-0.8
BLCB	Balcova	0.95	222	Pg	Pb	06 26 31.1	-0.1
BLCB	Balcova	0.95	222	P	Pb	06 26 31.0	-0.1
BLCB				S	Sn	06 26 45.0	0.0
FOCM	Foa	0.95	247	Pg	Pg	06 26 31.2	-0.2
GONE	Gonen-Balikesi	0.96	353	Pg	Pg	06 26 31.7	+0.2
YENI	Yenice-Canakka	0.96	331	Pg	Pb	06 26 31.3	-0.1
IZMR	zmir-demi	0.96	175	P	Pg	06 26 31.6	-0.1
IZMR				S	Sb	06 26 43.6	-0.3
USAK	Uak-Merkez	0.99	112	P	Pg	06 26 32.3	+0.1
USAK				S	Sb	06 26 44.5	-0.4
KIRA	zmir-Kiraz	1.00	154	P	Pg	06 26 32.4	0.0
KIRA				S	Sn	06 26 46.4	-0.1
ATIT	Gnen	1.01	348	P	Pb	06 26 32.2	0.0
ATIT				S	Sb	06 26 45.4	+0.2
SHAP	Saphane-Kutahy	1.07	94	Pn	Pg	06 26 34.3	+0.5
CANM	Can-anakkale	1.10	326	Pn	Pb	06 26 33.8	+0.1
KRBN	Karaburun	1.13	244	Pn	Pn	06 26 34.2	0.0
AYDB	Zeytinkoy-Aydi	1.15	178	Pn	Pn	06 26 34.7	0.0
EMET	Ktahya-Emet	1.18	76	P	Pg	06 26 35.8	0.0
EMET				S	Sn	06 26 51.0	0.0
NAZL	Nazilli-Aydin	1.18	163	Pn	Pg	06 26 36.0	+0.1
BAYC	CANAKKALE_Bayr	1.19	303	P	Pb	06 26 35.4	+0.1
BAYC				S	Sb	06 26 50.4	-0.2
KARB	zmir-Karabur	1.20	249	P	Pb	06 26 35.4	0.0
GEDZ	Gediz	1.22	92	Pn	Pg	06 26 37.2	+0.7
URLA	Izmir	1.22	233	Pn	Pb	06 26 35.7	-0.1
URLA	Izmir	1.22	233	P	Pb	06 26 35.8	0.0
URLA				S	Sg	06 26 52.2	-0.3
PRK	Paraskevi	1.23	277	P	Pg	06 26 36.5	-0.2
PRK				S	Sn	06 26 52.0	0.0
PRK	Paraskevi	1.23	277	P	Pb	06 26 36.3	+0.3
PRK				S	Sg	06 26 52.6	-0.2
ORLT	Orhaneli	1.25	40	P	Pb	06 26 36.9	+0.6
GMLD	Gumuldur	1.25	216	Pn	Pg	06 26 36.9	-0.2
SULTU	Buldan	1.27	145	P	Pb	06 26 36.9	+0.2
SULTU				S	Sg	06 26 54.6	+0.6
BAND	Balkesir-Ban	1.27	9	⇑P	Pb	06 26 37.1	+0.4
BAND				⇓S	Sg	06 26 54.3	+0.2
BAND	Balkesir-Ban	1.27	9	P	Pn	06 26 36.7	+0.4
GDZ	Gediz	1.27	90	P	Pg	06 26 37.6	0.0
GDZ				S	Sn	06 26 53.6	+0.3
DGB	zmir	1.29	216	P	Pn	06 26 36.3	-0.2
DGB				S	Sg	06 26 53.7	-0.8
KUSD	Kusadasi-Aydin	1.31	200	Pn	Pb	06 26 37.6	+0.3
ZEYE	Izmir, Urla-Ze	1.35	231	P	Pn	06 26 37.4	0.0
ESEN	Aydn-Nazilli	1.36	163	P	Pb	06 26 37.7	-0.4
EZN	Ezine	1.38	302	P	Pn	06 26 38.3	+0.5
EZN				S	Sb	06 26 56.6	+0.6
KOCA	Canakkale, Ayv	1.38	288	P	Pn	06 26 38.0	+0.3
LAPS	Lapseki, ANA	1.39	326	P	Pn	06 26 38.3	+0.4
CESE	eme	1.43	238	Pn	Pg	06 26 40.1	-0.4
AYDN	Tasoluk	1.43	179	P	Pn	06 26 38.5	0.0
AYDN				S	Sn	06 26 57.1	-0.1
ULDT	Uludag	1.44	43	P	Pn	06 26 39.4	+0.6
ULDT				S	Sn	06 26 58.2	+0.6
EAG2	Marmaro, Chios	1.47	248	P	Pb	06 26 40.2	+0.3
EAG2				S	Sb	06 26 59.0	+0.6
GCAM	G?zelcaml?	1.48	199	Pn	Pn	06 26 39.1	+0.1
GCAM	G?zelcaml?	1.48	199	P	Pn	06 26 38.9	-0.1
GCAM				S	Sb	06 26 58.3	-0.4
PASA	Karahalli, USA	1.49	120	P	Pb	06 26 40.8	+0.4
SIGR	SIGRI	1.55	275	P	Pb	06 26 41.8	+0.4
SIGR				S	Sb	06 27 01.4	+0.6
SIGR	SIGRI	1.55	275	P	Pb	06 26 41.4	0.0
SIGR				S	Sb	06 27 01.5	+0.6
CHOS	Chios island	1.57	244	P	Pn	06 26 40.8	+0.4
CHOS				S	Sn	06 27 00.4	-0.1
CHOS	Chios island	1.57	244	P	Pn	06 26 40.9	+0.4
CHOS				S	Sg	06 27 02.3	-1.2
KRL1	Karlovasi Samo	1.58	215	P	Pn	06 26 40.8	+0.4
KRL1				S	Sg	06 27 03.0	-0.8
SMG	Samos	1.60	210	P	Pn	06 26 40.8	+0.1
SMG	Samos	1.60	210	P	Pb	06 26 41.8	-0.4
SMG				S	Sg	06 27 03.6	-0.8
BNAZ	Uak-Banaz	1.64	104	P	Pb	06 26 43.1	+0.1
DDIM	Aydin, Didim	1.71	196	P	Pg	06 26 45.2	-0.5
DNIZ	Denizli-Tavas-	1.74	147	P	Pn	06 26 43.3	+0.5
TAVA	DENIZLI_Tavas	1.83	152	P	Pn	06 26 44.6	+0.6
GADA	Gvkgeada	1.86	307	P	Pn	06 26 45.0	+0.7
GADA				S	Sn	06 27 08.4	+0.9
YER	Yerkesik	1.99	170	P	Pn	06 26 46.5	+0.3
CAVK	Edirne/Enez-Ca	2.05	322	⇓P	Pn	06 26 48.1	+1.2
BODT	Bodrum	2.08	192	P	Pn	06 26 48.5	+1.2
ENEZ	Enez	2.09	322	P	Pn	06 26 48.7	+1.2
LIA	Limnos Island	2.21	292	P	Pn	06 26 49.9	+0.8
LIA				S	Sn	06 27 16.7	+0.5
LIA	Limnos Island	2.21	292	P	Pn	06 26 49.7	+0.6
LIA				S	Sn	06 27 17.2	+1.1
SMTH	Samothraki Isl	2.25	308	P	Pn	06 26 50.2	+0.5
SMTH	Samothraki Isl	2.25	308	P	Pn	06 26 50.3	+0.5
ALN	Alexandroupoli	2.27	323	P	Pn	06 26 50.7	+0.8
ALN	Alexandroupoli	2.27	323	P	Pn	06 26 50.5	+0.6
ALN				S	Sn	06 27 18.9	+1.2
SFL1	Soufli	2.40	331	P	Pn	06 26 51.6	-0.1
ISP	Isparta	2.46	120	P	Pn	06 26 53.4	+0.7
RDO	Rodhopi	2.71	320	P	Pn	06 26 56.9	+0.9
RDO	Rodhopi	2.71	320	P	Pn	06 26 56.7	+0.8
THAS	Thassos island	2.84	303	P	Pn	06 26 58.1	+0.4
THAS	Thassos island	2.84	303	P	Pn	06 26 57.9	+0.1
KARY	Karystos	2.88	249	P	Pn	06 26 59.1	+0.8
KARY	Karystos	2.88	249	P	Pn	06 26 59.0	+0.8
ARG	Arkhangelos	2.88	175	P	Pn	06 26 59.6	+1.2
ARG	Arkhangelos	2.88	175	P	Pn	06 26 59.4	+1.0
KYMI	Kymi, Euboea I	2.96	262	P	Pn	06 27 00.5	+1.1
THS1	Thassos, Thass	3.00	304	P	Pn	06 27 00.7	+0.7
AOS2	Alonissos-2	3.11	272	P	Pn	06 27 02.5	+1.0
KAVA	Kavala	3.18	308	P	Pn	06 27 03.3	+0.7
KAVA	Kavala	3.18	308	P	Pn	06 27 03.2	+0.7
OUR	Ouranopolis	3.23	294	P	Pn	06 27 03.8	+0.7
DION	Dionisos Attik	3.23	253	P	Pn	06 27 04.6	+1.4
PTL	Penteli	3.29	253	P	Pn	06 27 05.2	+1.1
VLY	Voula,Athens	3.41	250	P	Pn	06 27 07.4	+1.7
DIM	Dimitrovgrad	3.41	330	i P	Pn	06 27 06.9	+1.2
RZN	Rozhen	3.52	319	i P	Pn	06 27 08.6	+1.3
JMB	Yambol	3.53	344	eP	Pn	06 27 08.2	+0.9
KARP	Karpathos	3.58	189	P	Pn	06 27 08.8	+0.7
PLG	Polygyros	3.62	292	P	Pn	06 27 09.5	+0.9
VIL2	Platees	3.69	258	P	Pn	06 27 10.4	+0.9
PLD	Plovdiv	3.85	323	i P	Pn	06 27 13.0	+1.3
MMB	Musomishta	3.97	309	i P	Pn	06 27 14.8	+1.4
ELND	Elena	4.11	339	⇓P	Pn	06 27 16.1	+0.8
ZKR	Zakros	4.18	199	P	Pn	06 27 17.5	+1.2
NEF	NEVSHA	4.19	354	eP	Pn	06 27 17.0	+0.7
NPS	Neapolis	4.22	206	P	Pn	06 27 18.1	+1.3
PGB	Panagyurishte	4.41	322	i P	Pn	06 27 20.6	+1.2
IDI	Anoyia	4.47	213	P	Pn	06 27 20.9	+0.6
KKB	Krupnik	4.52	309	eP	Pn	06 27 22.6	+1.7
THL	Klokotos Trika	4.54	278	P	Pn	06 27 21.9	+0.7
VLI	Veliai	4.55	240	P	Pn	06 27 21.8	+0.5
KLV	Kalavryta, Ach	4.58	259	P	Pn	06 27 23.0	+1.1
VAY	Valandovo	4.61	300	ePn	Pn	06 27 25.1	+3.0
VAY				eSn	Sg	06 28 37.5	-3.4
ANX	Ano Chora	4.65	266	P	Pn	06 27 24.2	+1.4
PLNA	Plana	4.76	317	i P	Pn	06 27 26.1	+1.8
KZN	Kozani	4.84	286	P	Pn	06 27 26.0	+0.7
PLVB	Pleven	4.93	331	⇑P	Pn	06 27 27.6	+1.2
VTS	Vitosha	4.96	317	P	Pn	06 27 28.6	+1.5
MPEP	Malo Peshtene	5.26	325	P	Pn	06 27 32.3	+1.2
BOVS	Bovan	6.47	316	⇑P	Pn	06 27 49.4	+1.7
MLR	Muntele Rosu	6.54	348	⇑P	Pn	06 27 50.8	+2.0
VOIR		6.67	343	⇑P	Pn	06 27 51.6	+1.1
VRI	Vrincioaia	6.81	353	⇑P	Pn	06 27 54.3	+1.9
COVR	Voineasa-Covas	6.85	350	⇓P	Pn	06 27 54.6	+1.6
SEV	Sevastopol'	6.97	37	eP	Pn	06 27 55.2	+0.8
HERR	Herculane	7.05	327	⇓P	Pn	06 27 55.9	+0.3
TURR	Turia	7.08	350	⇑P	Pn	06 27 58.0	+1.9
DOPR	Dopca	7.10	346	⇓P	Pn	06 27 57.5	+1.1
TARU	Tarkhankut	7.17	27	eS	Sn	06 29 15.5	-3.0
TARU				smax	smax	06 29 16.4	
	comp=N,9.0nm,0.4s						
TARU				smax	smax	06 29 16.4	
	comp=E,10.0nm,0.8s						
MDVR	Moldovita	7.29	323	⇑P	Pn	06 27 59.8	+0.8
GZR	Gura Zlata	7.33	331	⇑P	Pn	06 27 59.7	+0.2
DNZ2	Donuzlav2	7.43	31	eS	Sn	06 29 20.5	-4.3
DNZ2				smax	smax	06 29 27.2	
	comp=N,9.0nm,0.4s						
DNZ2				smax	smax	06 29 27.2	
	comp=E,12nm,0.6s						
TESR	Tescani	7.46	354	⇑P	Pn	06 28 02.8	+1.6
SUDU	Sudak	7.87	40	eS	Sn	06 29 33.2	-2.3
SUDU				smax	smax	06 29 37.9	
	comp=N,14nm,0.3s						
SUDU				smax	smax	06 29 37.9	
	comp=E,10.0nm,0.4s						
BZS	Buzias	7.98	327	⇓P	Pn	06 28 08.7	+0.3
DRGR		8.56	336	⇑P	Pn	06 28 18.3	+1.9
MORH	Mrgy, Hungar	9.82	319	⇓P	Pn	06 28 34.4	+0.8

IDC 02 06:26:51.8±21.0, 27.83N×94.96E, h0km, mb3.3/4, mbtmp3.4/5, ML4.0/1, Error ellipse: s-maj=327.5km s-min=48.7km az=173.0, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	10.98	40	Pn	Pn	06 29 31.1	+0.5
	baz=220,slow=14						
	0.5nm,0.3s						
MKAR	Makanchi Array	21.39	336	P	P	06 31 41.1	+0.1
	0.7nm,0.6s,baz=142,slow=12,SNR=11						
	0.7nm,0.6s						
SONM	Songino Array	21.87	21	P	P	06 31 46.7	+0.4
	0.9nm,0.8s,baz=208,slow=12,SNR=5.7						
	0.9nm,0.8s						
KURBB	Kurchatov Arra	25.96	336	P	P	06 32 27.4	+1.5
	0.3nm,0.3s,baz=147,slow=9.6,SNR=4.0						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	27.14	347	P	P	06 32 34.6	-1.9
	0.3nm,0.4s,baz=149,slow=9.2,SNR=4.7						
	0.3nm,0.4s						

*BGR **02** 06:27:58.7, 36.88N×138.98E, h33km, mb4.9, Ms3.9*
*BJI **02** 06:28:03.4, 35.38N×139.10E, h182km, mB4.9/24, mb4.8/71*
*MOS **02** 06:28:06.0±1.1, 35.49N×138.92E, h180km, mb4.7/41, Error ellipse: s-maj=6.9km s-min=3.9km az=110.7*
*JMA **02** 06:28:08.8±0.2, 35.5N±0.9×138.9E±0.9, h181km±1km, MD4.5/39, MW4.6/39, EASTERN YAMANASHI PREF*
JMA Felt I J1 at EASTERN YAMANASHI PREF .
*NIED **02** 06:28:08.8, 35.52N×138.89E, h181km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.26; $M_{\theta\theta}$-4.30; $M_{\phi\phi}$4.56; $M_{r\theta}$3.40; $M_{\theta\phi}$-1.04; $M_{\phi r}$3.97; Fault plane solution: $M_0$6.93000×10^{15} NP1: ϕ_s310.00000°, δ41.00000°, λ-178.00000°. NP2: ϕ_s218.00000°, δ88.00000°, λ-49.00000°.*
*NEIC **02** 06:28:08.8±1.1, 35.53N±0.05×138.79E±0.09, h184km±5km, mb4.7/107 Error ellipse: s-maj=10.9km s-min=7.4km az=88.0*
*IDC **02** 06:28:08.4±0.6, 35.43N×138.70E, h181km±4km, mb4.3/33, mbtmp4.7/38, MS3.3/2, Error ellipse: s-maj=10.6km s-min=8.3km az=82.0*

ISC 02 06:28:07.8±0.4, 35.57N±0.04×138.86E±0.04, h178km±2km, h179km:pP-P, n448, σ1.64/440, mb4.6/156, 42C-40D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYN	Shimob	0.27	254	⇓P	Pn	06 28 33.1	+1.4
JYN				⇓eS	Sn	06 28 51.8	+1.7
JSGW	Sagamiharawaka	0.28	84	A	A	06 28 33.1	
	comp=N,27nm,1.3s,comp=E,14nm,1.3s						
JOD2	Odawara 2	0.36	149	P	Pn	06 28 33.0	+1.0
JOD2				A	A	06 28 33.0	
	comp=N,19nm,3.0s,comp=E,15nm,3.7s						
JOD2				eS	Sn	06 28 51.9	+1.4
JFNN	Fujinakano	0.41	201	A	A	06 28 33.3	
	comp=N,14nm,1.1s,comp=E,18nm,2.5s						
JRY	Ryogami san	0.44	4	⇓P	Pn	06 28 34.2	+2.0
JRY				A	A	06 28 34.2	
	comp=N,16nm,1.0s,comp=E,18nm,0.9s						
JHTM	Izuhatsuma	0.63	169	A	A	06 28 34.1	
	comp=N,30nm,1.6s,comp=E,35nm,1.1s						
JNT	Takato	0.66	297	A	A	06 28 34.9	
	comp=N,14nm,1.3s,comp=E,9.0nm,2.1s						
SHZ3	Shizuoka 3	0.74	227	A	A	06 28 34.9	
	comp=N,20nm,1.0s,comp=E,21nm,1.2s						
TOK	Tokyo	0.74	81	A	A	06 28 34.9	
	comp=N,42nm,1.4s,comp=E,52nm,0.8s						
JYO	Yokosk	0.74	118	A	A	06 28 34.8	
	comp=N,11nm,1.4s,comp=E,18nm,2.3s						
JNY	Yasuok	0.84	255	A	A	06 28 35.7	
	comp=N,13nm,1.2s,comp=E,7.0nm,0.8s						
JIZS	Izushimoda	0.85	179	A	A	06 28 35.3	
	comp=N,4.0nm,1.0s,comp=E,14nm,1.7s						
JIM2	Oshima 3	0.97	151	A	A	06 28 36.1	
	comp=N,11nm,1.2s,comp=E,17nm,3.2s						
JAG	Ashikaga	0.97	29	P	Pn	06 28 36.8	+1.6
JAG				A	A	06 28 36.8	
	comp=N,26nm,1.3s,comp=E,14nm,0.8s						
JGK	Kuni	1.00	350	A	A	06 28 37.2	
	comp=N,9.0nm,1.1s,comp=E,11nm,2.0s						
JSG	Sagara	1.05	212		Pn	06 28 37.1	+1.3
JSG				Sn	Sn	06 28 58.5	+1.2
JSG	Sagara	1.05	212	P	Pn	06 28 37.0	+1.2
JSG	Sagara	1.05	212	S	Sn	06 28 59.9	+2.6
MJAR	Matsushiro Arr	1.10	331	P	Pn	06 28 37.5	+1.3
	comp=E,2μm,0.8s,baz=171,slow=8.3,SNR=3599						
MJAR				S	Sn	06 28 59.8	+1.6
	comp=E,135nm,0.5s,baz=153,slow=16,SNR=4.4						
MJAR	Matsushiro Arr	1.10	331		Pn	06 28 37.7	+1.5
MAJO	Matsushiro	1.10	331		Pn	06 28 38.0	+1.8
MAJO	Matsushiro	1.10	331	P	Pn	06 28 37.3	+1.2
MAJO	Matsushiro	1.10	331	S	Sn	06 28 59.7	+1.5
MAJO	Matsushiro	1.10	331	d iP	Pn	06 28 36.8	+0.7
MAT	Matsushiro	1.10	331	P	Pn	06 28 37.7	+1.6
MAT				eS	Sn	06 28 59.6	+1.4
MJB9	Matsu-Tunnel	1.11	331		Pn	06 28 37.7	+1.5
MJB9				Sn	Sn	06 28 58.9	+0.6
JCCN	Chibachonan	1.14	99	A	A	06 28 37.6	
	comp=N,18nm,1.2s,comp=E,18nm,2.2s						

JGF **Kuroka** 1.23 272 Pn 06 28 38.3 +1.1
JGF **Kuroka** 1.23 272 P Pn 06 28 38.8 +1.6
JGF **Kuroka** 1.23 272 A A 06 28 38.8
comp=N,6.0nm,2.1s,comp=E,6.0nm,2.0s
JKT **Katashina** 1.23 15 A A 06 28 39.0
comp=N,15nm,0.7s,comp=E,18nm,0.3s
JYT **Yasato** 1.26 59 A A 06 28 38.9
comp=N,16nm,1.0s,comp=E,18nm,0.4s
JAO **Obara** 1.34 257 A A 06 28 39.7
comp=N,4.0nm,2.3s,comp=E,5.0nm,1.1s
JIHU **Itakohorinouch** 1.41 73 A A 06 28 40.1
comp=N,39nm,0.9s,comp=E,20nm,2.0s
INU **Inuyama** 1.52 262 Pn 06 28 40.7 +0.9
INU **Inuyama** 1.52 262 P Pn 06 28 40.6 +0.8
JHYU **Hitachinakayam** 1.59 61 A A 06 28 42.0
comp=N,12nm,1.6s,comp=E,9.0nm,1.1s
JTT **Ttatey** 1.61 310 A A 06 28 42.7
comp=N,4.0nm,3.2s,comp=E,10.0nm,2.9s
JSB **Shiboa** 1.63 31 A A 06 28 42.7
comp=N,20nm,4.4s,comp=E,15nm,4.3s
JUON **Uonuma** 1.64 5 A A 06 28 42.9
comp=N,11nm,1.9s,comp=E,6.0nm,2.2s
JICN **Ichinomiyachia** 1.67 261 A A 06 28 42.8
comp=N,8.0nm,2.0s,comp=E,12nm,2.8s
JYTA **Yamagatataniai** 1.73 271 ⇓P Pn 06 28 42.7 +0.8
TK02 **Tokai 2** 1.86 210 P Pn 06 28 43.9 +0.8
JFY **Yanaizu** 1.95 20 A A 06 28 46.1
comp=N,5.0nm,3.3s,comp=E,4.0nm,4.3s
JIZZ **Izumozaki** 1.96 356 A A 06 28 46.4
comp=N,12nm,5.0s,comp=E,8.0nm,1.2s
BSO1 **Boso 1** 1.96 117 *i* P Pn 06 28 45.0 +1.2
JIE **Ise** 2.13 237 P Pn 06 28 46.8 +0.7
JJH **Hakui** 2.15 309 A A 06 28 48.5
comp=N,4.0nm,2.4s,comp=E,6.0nm,2.6s
JKG **Kaga** 2.17 290 ⇓P Pn 06 28 48.4 +1.8
ONAJ **Iwakimizuishiy** 2.18 45 A A 06 28 48.5
comp=N,15nm,2.8s,comp=E,26nm,0.3s
JSZ **Suzu** 2.23 328 ⇓*i* P Pn 06 28 48.7 +1.5
JNS **Sasagawa** 2.27 9 ⇓*i* P Pn 06 28 49.7 +2.0
JOTO **OTAMA OYAMA** 2.31 30 *i* P Pn 06 28 50.5 +2.3
JOTO A A 06 28 50.5
comp=N,14nm,1.9s,comp=E,10.0nm,0.7s
JFK **Kawauchi** 2.42 42 A A 06 28 51.2
comp=N,10.0nm,2.3s,comp=E,6.0nm,0.8s
JHJ **Hachijo jima 2** 2.56 162 P Pn 06 28 51.8 +0.6
comp=E,211nm,0.3s,baz=90,slow=22,SNR=11
JHJ S Sn 06 29 14.5 -10
comp=E,458nm,0.3s,baz=221,slow=20,SNR=5.8
JHJ LR LR 06 29 51.2
comp=E,564nm,21.8s,baz=284,slow=41
JHJ2 **Mitsune** 2.58 162 Pn 06 28 51.6 +0.2
TTO1 **TONANKAI O.B.S** 2.59 222 P Pn 06 28 52.1 +0.9
JMST **Minamisoumatoc** 2.69 37 A A 06 28 54.5
comp=N,9.0nm,1.3s,comp=E,5.0nm,0.6s
JOU **Okura** 3.14 27 A A 06 28 60.0
comp=N,8.0nm,4.2s,comp=E,5.0nm,1.6s
JMIK **Miki** 3.21 257 A A 06 29 00.6
comp=N,3.0nm,2.2s,comp=E,4.0nm,3.4s
JMN **Monobe** 4.50 247 Pn 06 29 15.7 +0.4
JMN **Monobe** 4.50 247 P Pn 06 29 15.8 +0.4
JNU **Nakatsue** 7.04 252 P Pn 06 29 48.2 -0.3
comp=E,56nm,0.8s,baz=71,slow=10,SNR=34
JEM **Erimo** 7.25 26 P Pn 06 29 50.1 -1.0
comp=E,317nm,0.8s
JEM **Erimo** 7.25 26 S Sn 06 31 11.1 -1.7
comp=E,317nm,0.8s
JSU **Suzuyama** 8.11 242 Pn 06 30 03.1 +0.6
JSU **Suzuyama** 8.11 242 P Pn 06 30 03.8 +1.3
comp=E,46nm,1.1s
JCJ **Chichijima** 8.92 161 P Pn 06 29 55.4 -18
comp=E,212nm,0.3s,baz=291,slow=23,SNR=28
JCJ S Sn 06 31 28.4 -24
comp=E,175nm,0.4s,baz=248,slow=23,SNR=8.1
JCJ **Chichijima** 8.92 161 Pn 06 30 07.4 -5.8
ASAJ **Asahikawa** 9.00 17 P Pn 06 30 13.6 -0.6
comp=E,112nm,0.5s,baz=229,slow=12,SNR=94
ASAJ S Sn 06 31 50.6 -3.9
comp=E,23nm,0.6s,baz=300,slow=25,SNR=2.4
ASAJ **Asahikawa** 9.00 17 P Pn 06 30 12.8 -1.3
JKA **Kamikawa-asahi** 9.00 17 Pn 06 30 12.8 -1.4
KSRS **Korea Array** 9.00 285 P Pn 06 30 15.9 +1.7
comp=E,17nm,0.7s,baz=101,slow=13,SNR=38
KSRS **Korea Array** 9.00 285 P Pn 06 30 16.0 +1.7
KSAR **Wonju Array Be** 9.03 285 Pn 06 30 15.8 +1.2
KSAR **Wonju Array Be** 9.03 285 P Pn 06 30 15.8 +1.2
KS19 **Wonju Array Si** 9.06 285 Pn 06 30 15.6 +0.6
VLA **Vladivostok** 9.27 326 ⇓*e*P Pn 06 30 18.9 +1.3
TJN **Taejon** 9.36 278 Pn 06 30 19.2 +0.3
TJN **Taejon** 9.36 278 P Pn 06 30 20.6 +1.7
comp=E,309nm,0.9s
TJN **Taejon** 9.36 278 P Pn 06 30 19.2 +0.3
NMR **Nemuro--Hokkai** 9.42 32 *e*P Pn 06 30 17.5 -2.1
NMR *i* S Sn 06 31 56.1 -8.4
PSTR **Posyet** 9.44 321 ⇓*e*P Pn 06 30 21.4 +1.5
TEY **Ternei** 9.61 350 ⇑*e*P Pn 06 30 24.8 +2.7
TEY pmax pmax
comp=N,40nm,0.6s
TEY pmax pmax
comp=Z,50nm,0.5s
TEY pmax pmax
comp=E,10.0nm,0.7s
GLVR **Golovnino** 9.63 30 *e*P Pn 06 30 20.3 -2.1
GLVR *i* S Sn 06 32 01.8 -7.8
GLVR pmax pmax
comp=Z,257nm,0.7s
GLVR pmax pmax
comp=N,138nm,0.8s
GLVR pmax pmax
comp=E,101nm,0.4s
RUSJ **Misakicho** 9.83 28 *e*P Pn 06 30 23.4 -1.6
RUSJ *e*S Sn 06 32 06.4 -7.9
YUK **Yuzh-Kuril'sk** 10.02 30 *e*P Pn 06 30 25.7 -1.7
YUK *i* S Sn 06 32 10.2 -8.5
YUK pmax pmax
comp=Z,288nm,0.6s
YUK pmax pmax
comp=N,90nm,0.3s
YUK pmax pmax
comp=E,95nm,0.6s
INCN **Inchon** 10.03 285 Pn 06 30 27.3 -0.3
INCN **Inchon** 10.03 285 P Pn 06 30 29.7 +2.0
comp=E,47nm,0.9s
INCN **Inchon** 10.03 285 P Pn 06 30 27.3 -0.3
USRK **Ussuriysk Ar.** 10.10 331 P Pn 06 30 29.8 +1.3
comp=E,11nm,0.8s,baz=147,slow=12,SNR=13
MDJ **Mudanjiang** 11.48 325 Pn 06 30 46.7 +0.3
MDJ **Mudanjiang** 11.48 325 P Pn 06 30 47.5 +1.1
MDJ **Mudanjiang** 11.48 325 P Pn 06 30 47.7 +1.3
MDJ S Sn 06 32 54.8 +1.0
MDJ pmax pmax
comp=E,16nm,1.3s
YSS **Yuzhno-Sakhali** 11.74 13 Pn 06 30 48.4 -1.4
YSS **Yuzhno-Sakhali** 11.74 13 P Pn 06 30 48.5 -1.2
YSS **Yuzhno-Sakhali** 11.74 13⇳ *i*P Pn 06 30 48.3 -1.4
YSS *e*S Sn 06 32 55.2 -4.8
YSS pmax pmax
comp=Z,160nm,0.7s
YSS pmax pmax
comp=N,170nm,0.6s
YSS pmax pmax
comp=E,40nm,0.6s
YSS pmax pmax
comp=Z,400nm,3.8s
YSS pmax pmax
comp=E,200nm,3.6s
YSS smax smax
comp=N,60nm,1.0s
YSS smax smax
comp=E,20nm,0.9s
KUR **Kuril'sk** 11.83 33*c**e*P Pn 06 30 51.0 +0.1
KUR pmax pmax
comp=Z,353nm,1.3s
JOW **Kunigami** 12.56 229 P Pn 06 30 58.1 -2.4
comp=Z,18nm,0.5s,baz=357,slow=5.6,SNR=10
JOW **Kunigami** 12.56 229 P P 06 31 02.7 -2.4
CN2 **Changchun** 13.19 313 P Pn 06 31 08.9 +0.7
CN2 S Sn 06 33 32.0 -2.7
CN2 pmax pmax
comp=Z,20nm,0.6s
BNX **BinXian** 13.36 323 ⇓P Pn 06 31 09.9 -0.4
BNX pmax pmax
comp=Z,10.0nm,1.0s
UGL **Uglegorsk** 13.70 9 *e*P Pn 06 31 13.7 -0.9
UGL pmax pmax
comp=Z,100nm,0.8s

DL2 **Dalian** 14.13 289 P P 06 31 21.4 -0.9
DL2 S Sn 06 33 55.2 -2.1
DL2 pmax pmax
comp=Z,140nm,0.7s
DL2 pmax pmax
comp=Z,220nm,4.7s
KLR **Kul'dur** 14.61 341*d**i*P Pn 06 31 25.6 -0.4
KLR pmax pmax
comp=Z,6.0nm,0.8s
GRNR **Gornyy** 15.29 354 *e*P Pn 06 31 33.3 -1.0
TYV **Tymovskoe** 15.53 9 *e*P Pn 06 31 37.4 +0.2
TYV *e*S S 06 34 25.4 -5.0
TYV pmax pmax
comp=Z,300nm,2.8s
TYV pmax pmax
comp=Z,41nm,0.7s
TYV smax smax
comp=N,400nm,5.3s
TYV smax smax
comp=E,400nm,5.3s
TYV smax smax
comp=N,12nm,1.4s
TYV smax smax
comp=E,8.0nm,1.4s
HEH **HeiHe** 16.87 334 *e*P P 06 31 51.3 -1.2
HEH sP **sP** 06 32 41.4 -3.0
HEH S S 06 34 54.0 -5.0
HEH pmax pmax
comp=E,12nm,0.8s
HEH pmax pmax
comp=E,190nm,5.1s
NJ2 **Nanjing** 16.99 264 *e*P P 06 31 54.1 +0.1
NJ2 pmax pmax
comp=E,7.0nm,0.5s
YOJ **Yonaguni jima** 17.61 235 P P 06 31 59.3 -1.5
YOJ IAmb IAmb 06 32 30.5
comp=Z,26nm,0.8s
YOJ **Yonaguni jima** 17.61 235 P P 06 31 59.3 -1.5
YOJ pmax pmax
comp=Z,26nm,0.8s
TIA **Tai'an** 17.62 278 P P 06 31 59.4 -1.5
TIA pmax pmax
comp=Z,14nm,0.7s
BJI2 **Beijing** 18.46 291 P P 06 32 08.4 -1.6
BJI2 pP pP 06 32 30.2 -10
BJI2 sP **sP** 06 33 02.4 -0.2
BJI2 S S 06 35 32.9 +1.7
BJI2 pmax pmax
comp=Z,5.0nm,0.9s
BJI2 pmax pmax
comp=Z,59nm,5.5s
BJT **Baijiatuan** 18.46 291 P 06 32 08.1 -1.9
BJT **Baijiatuan** 18.46 291 P P 06 32 09.5 -0.5
comp=Z,11nm,0.5s
BJT **Baijiatuan** 18.46 291 P P 06 32 08.1 -1.9
BJT pmax pmax
comp=Z,10.0nm,0.8s
XLT **XiLinHaoTe** 19.35 302 *e*P P 06 32 17.4 -2.3
XLT pmax pmax
comp=Z,30nm,0.9s
SSLB **Suanglung** 19.46 238 P P 06 32 18.6 -2.4
SSLB IAmb IAmb 06 32 41.3
comp=Z,34nm,1.4s
HNS **HongShan** 19.50 282 ⇑P P 06 32 18.7 -2.5
HNS sP **sP** 06 33 18.7 +4.5
HNS pmax pmax
comp=Z,40nm,0.7s
HIA **Hailar** 19.58 320 P 06 32 20.6 -1.4
HIA IAmb IAmb 06 32 21.8
comp=Z,15nm,0.8s
HIA **Hailar** 19.58 320 P P 06 32 21.5 -0.6
comp=Z,24nm,0.9s
HIA **Hailar** 19.58 320*d**i*P P 06 32 20.8 -1.3
HIA pmax pmax
comp=Z,14nm,0.7s
HILR **Hailar Array B** 19.75 321 P P 06 32 23.1 -0.9
comp=Z,4.1nm,0.4s,baz=127,slow=10,SNR=13
ZEA **Zeya** 19.90 339 *e*P P 06 32 25.8 +0.4
ZEA *e* 06 35 56.8
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,0.8s
TPUB **Ta-pu** 20.00 237 P P 06 32 23.8 -3.0
TPUB IAmb IAmb 06 32 35.6
comp=Z,57nm,1.2s
WHN **Wuhan** 21.13 263 ⇓P P 06 32 38.5 -0.2
WHN pmax pmax
comp=Z,80nm,0.5s
PETK **Petropavlovsk-** 21.99 31 P P 06 32 50.7 +3.2
comp=Z,8.8nm,1.1s,baz=232,slow=7.1,SNR=3.6
comp=Z,8.8nm,1.1s
HHC **Hu-ho-hao-te** 22.04 292 ⇓*i*P P 06 32 44.9 -3.3
HHC pP pP 06 33 22.3 +2.8
HHC S S 06 36 28.0 -10
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,91nm,7.6s
GUMO **Guam** 22.55 165 P P 06 32 52.0 -1.0
GUMO **Guam** 22.55 165 P P 06 32 52.0 -1.0
GUMO pmax pmax
comp=Z,459nm,1.2s
BTO2 **Baotou** 23.31 292 *e*P P 06 32 58.1 -1.8
BTO2 pP **pP** 06 33 32.5 -0.9
BTO2 PP **PnPn** 06 33 39.9 +1.4
BTO2 S S 06 36 58.9 -0.1
BTO2 pmax pmax
comp=Z,30nm,0.8s
BTO2 pmax pmax
comp=Z,290nm,5.3s
BTO2 LR LR
comp=Z,400nm,5.2s
BTO2 LR LR
comp=Z,310nm,5.8s
BTO2 LR LR
comp=Z,320nm,7.9s
XAN **Xi'an** 24.59 275 ⇑P P 06 33 09.6 -1.9
XAN pP pP 06 33 43.1 -4.0
XAN pmax pmax
comp=Z,29nm,0.9s
ENH **Enshi** 25.17 266 P 06 33 15.6 -1.1
ENH **Enshi** 25.17 266 P P 06 33 15.4 -1.3
MA2 **Magadan** 25.24 14 P P 06 33 15.6 -1.4
comp=Z,11nm,0.7s
MA2 **Magadan** 25.24 14 ⇓*e*P P 06 33 17.2 +0.2
MA2 pmax pmax
comp=Z,24nm,1.9s
ULN **Ulaanbaatar** 26.53 307 P P 06 33 28.6 -0.4
ULN IAmb IAmb 06 33 31.5
comp=Z,16nm,1.1s
ULN **Ulaanbaatar** 26.53 307 ⇑*e*P P 06 33 29.0 0.0
ULN pmax pmax
comp=Z,16nm,1.2s
SONM **Songino Array** 26.95 307 P P 06 33 32.7 0.0
comp=Z,8.5nm,0.8s,baz=110,slow=9.1,SNR=53
SONM PcP **PcP** 06 36 49.7 0.0
comp=Z,0.8nm,0.6s,baz=117,slow=2.2,SNR=4.8
SONM ScP **ScP** 06 40 12.8 -0.1
comp=Z,1.0nm,0.9s,baz=119,slow=1.8,SNR=5.5
comp=Z,8.5nm,0.8s
SONM **Songino Array** 26.95 307 P P 06 33 32.9 +0.3
SONM IAmb IAmb 06 33 33.6
comp=Z,11nm,0.9s
YAK **Yakutsk** 27.11 350 P P 06 33 33.8 +0.1
YAK IAmb IAmb 06 33 36.7
comp=Z,12nm,0.7s
YAK **Yakutsk** 27.11 350 *e*P P 06 33 34.9 +1.2
YAK pmax pmax
comp=Z,9.0nm,0.8s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,350nm,5.3s
YAK pmax pmax
comp=E,179nm,6.0s
YAK pmax pmax
comp=N,287nm,5.7s
LZH **Lanzhou** 28.31 281 *e*P P 06 33 43.9 -1.0
LZH pP pP 06 34 20.7 -1.1
LZH pmax pmax
comp=N,17nm,1.3s

LZDM **Lanzhou Array** 28.45 281 P P 06 33 45.9 -0.5
comp=N,3.2nm,0.5s,baz=122,slow=7.7,SNR=12
comp=N,3.2nm,0.5s
SEY **Seymchan** 28.64 13 ⇑*e*P P 06 33 47.3 0.0
SEY pmax pmax
comp=Z,5.0nm,1.4s
GYA **Guiyang** 28.95 261 ⇑P P 06 33 48.6 -2.0
GYA pmax pmax
comp=Z,39nm,1.1s
ZAK **Zakamensk** 29.61 311 *e*P P 06 33 55.2 -1.0
ZAK pmax pmax
comp=Z,5.0nm,1.0s
TLY **Talaya** 29.79 314 P P 06 33 57.3 -0.3
TLY **Talaya** 29.79 314 ⇓*e*P P 06 33 57.5 -0.1
TLY pmax pmax
comp=Z,6.0nm,0.7s
GTA2 **Gaotai** 31.09 289 *e*P P 06 34 08.9 -0.5
GTA2 pmax pmax
comp=Z,13nm,0.8s
KMI2 **Kunming** 32.69 262 P P 06 34 21.9 -1.7
KMI2 pmax pmax
comp=Z,10.0nm,1.4s
PZH **PanZhiHua** 32.91 265 P P 06 34 23.5 -1.9
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,130nm,4.8s
KNGR **Kungurtug, Tuv** 33.24 310 ⇓*e*P P 06 34 28.4 +0.4
KNGR pmax pmax
comp=Z,10.0nm,0.8s
GOMU **GeErMu** 35.46 284 P P 06 34 46.7 -0.8
GOMU PcP **PcP** 06 37 11.4 -1.6
GOMU pmax pmax
comp=Z,27nm,1.1s
TNCH **TengChong** 36.16 264 ⇑P P 06 34 52.5 -0.9
TNCH pmax pmax
comp=Z,44nm,0.6s
TIXI **Tiksi** 36.52 355 P 06 34 55.9 +0.3
TIXI **Tiksi** 36.52 355 ⇑*e*P P 06 34 56.2 +0.6
TIXI pmax pmax
comp=Z,9.0nm,1.4s
CHTO **Chiang Mai** 38.93 255 P 06 35 15.2 -1.3
CHTO **Chiang Mai** 38.93 255 P P 06 35 15.6 -0.9
comp=Z,3.0nm,0.9s
CHTO **Chiang Mai** 38.93 255 P P 06 35 15.2 -1.3
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CMAR **Chiang Mai Arr** 39.13 255 P P 06 35 17.0 -1.1
comp=Z,1.4nm,0.3s,baz=44,slow=7.1,SNR=8.8
CMAR PcP **PcP** 06 37 24.9 +0.8
comp=Z,0.9nm,0.3s,baz=54,slow=2.3,SNR=4.4
comp=Z,1.4nm,0.3s
CMAR **Chiang Mai Arr** 39.13 255 P P 06 35 17.5 -0.6
DGZ **Jazzator, Alta** 39.60 307 ⇓*e*P P 06 35 21.9 0.0
DGZ pmax pmax
comp=Z,76nm,1.1s
WMQ **Urumqi** 39.68 298 ⇑P P 06 35 23.5 +1.0
WMQ S S 06 41 13.2 +0.8
WMQ pmax pmax
comp=E,81nm,0.9s
WMQ pmax pmax
comp=Z,190nm,3.6s
LSA **Lhasa** 40.29 276 P 06 35 27.7 -0.5
LSA IAmb IAmb 06 35 30.1
comp=Z,21nm,0.9s
LSA **Lhasa** 40.29 276 P P 06 35 27.7 -0.5
LSA pmax pmax
comp=Z,21nm,0.9s
SHL **Shillong** 41.33 269 P P 06 35 35.0 -1.4
SHL IAmb IAmb 06 35 35.2
comp=Z,12nm,0.6s
SHL **Shillong** 41.33 269 P P 06 35 35.0 -1.4
SHL pmax pmax
comp=Z,12nm,0.6s
ZAA0 **Zalesovo Array** 41.40 314 P 06 35 37.3 +1.0
ZAA0 IAmb IAmb 06 35 37.9
comp=Z,34nm,1.1s
ZALV **Zalesovo Beam** 41.40 314 P P 06 35 36.8 +0.5
comp=Z,11nm,0.4s,baz=112,slow=8.5,SNR=78
ZALV PcP **PcP** 06 37 30.6 -0.1
comp=Z,5.2nm,0.6s,baz=106,slow=2.8,SNR=10
ZALV ScP **ScP** 06 41 02.8 -1.1
comp=Z,0.5nm,0.6s,baz=90,slow=2.9,SNR=2.5
comp=Z,11nm,0.4s
MK31 **Makanchi Array** 43.16 303*c**i*P P 06 35 51.3 +0.6
MKAR **Makanchi Array** 43.16 303 P P 06 35 51.4 +0.6
comp=Z,17nm,0.7s,baz=91,slow=9.8,SNR=178
comp=Z,17nm,0.7s
MKAR **Makanchi Array** 43.16 303 P 06 35 51.7 +1.0
MAKZ **Makanchi** 43.38 303 P 06 35 52.8 +0.4
MAKZ IAmb IAmb 06 35 54.8
comp=Z,24nm,0.8s
MAKZ **Makanchi** 43.38 303 P P 06 35 52.8 +0.4
MAKZ pmax pmax
comp=Z,24nm,0.8s
NRIK **Noril'sk** 43.75 336 P P 06 35 56.0 +0.9
comp=Z,7.9nm,0.6s,baz=102,slow=8.9,SNR=15
comp=Z,7.9nm,0.6s
NRIK **Noril'sk** 43.75 336 P 06 35 56.3 +1.3
NRIK IAmb IAmb 06 35 56.9
comp=Z,23nm,1.2s
NRIK **Noril'sk** 43.75 336*c**i*P P 06 35 55.9 +0.9
NRIK pmax pmax
comp=Z,20nm,1.3s
C16K **Lisburne Hills** 44.91 26 P P 06 36 06.8 +2.6
KURK **Kurchatov** 45.23 309 P P 06 36 07.2 +0.3
KURK **Kurchatov** 45.23 309 P P 06 36 07.2 +0.3
KURK pmax pmax
comp=Z,55nm,0.7s
KURBB **Kurchatov Arra** 45.29 309 P P 06 36 07.8 +0.3
comp=Z,35nm,0.7s,baz=86,slow=7.9,SNR=104
KURBB PcP **PcP** 06 37 43.6 -0.4
comp=Z,2.4nm,0.7s,baz=89,slow=3.9,SNR=4.7
comp=Z,35nm,0.7s
PDGK **Podgornoye** 45.65 299 P P 06 36 10.6 0.0
WUS **Wushi** 46.30 296 IAmb IAmb 06 36 22.3
comp=Z,24nm,0.9s
IPM **Ipoh** 46.62 237 P P 06 36 16.4 -1.9
TARG **Taragay, Kyrgy** 47.21 297 IAmb IAmb 06 36 26.1
comp=Z,28nm,0.7s
D20K **Etivluk River** 48.15 26 IAmb IAmb 06 37 12.6
comp=Z,27nm,0.7s
TKM2 **Tokmak 2** 48.52 299 P P 06 36 34.3 +1.4
SNR=29
MTN **Manton Dam** 48.71 190 P P 06 36 32.6 -1.6
MTN IAmb IAmb 06 37 05.2
comp=Z,32nm,1.4s
KBK **Karagaybulak** 49.05 299 P P 06 36 37.9 +1.0
SNR=21
CHMS **Chumysh** 49.10 299 P P 06 36 37.9 +0.8
SNR=8.5
AAK **Ala-Archa** 49.38 299 LR LR 06 57 10.8
comp=Z,32nm,18.1s,baz=42,slow=35
AAK **Ala-Archa** 49.38 299 P P 06 36 40.1 +0.7
SNR=10
AAK **Ala-Archa** 49.38 299 P P 06 36 40.0 +0.7
AAK **Ala-Archa** 49.38 299*c**i*P P 06 36 39.9 +0.6
AAK pmax pmax
comp=Z,11nm,0.8s
COEN **Coen** 49.43 174 P P 06 36 39.3 -0.4
COEN IAmb IAmb 06 36 41.6
comp=Z,15nm,0.9s
COEN **Coen** 49.43 174 P P 06 36 39.4 -0.4
comp=Z,20nm,0.9s
UCH **Uchtor** 49.46 298 P P 06 36 41.6 +1.3
SNR=12
KSH2 **Kashi** 49.53 294 P P 06 36 41.6 +1.0
KSH2 pmax pmax
comp=Z,12nm,0.8s
EKS2 **Erkin-Say** 49.88 299 P P 06 36 43.8 +0.7
SNR=8.6
BVA0 **Borovoye Array** 50.04 313 P P 06 36 43.8 -0.2
BVAR **Borovoye Array** 50.04 313 P P 06 36 44.4 +0.4
comp=Z,5.7nm,0.5s,baz=100,slow=8.5,SNR=32
BVAR PcP **PcP** 06 38 00.8 -0.3
comp=Z,2.4nm,0.6s,baz=100,slow=3.5,SNR=3.7
comp=Z,5.7nm,0.5s
BORK **Borovoye** 50.08 313 P P 06 36 44.4 +0.2
BORK IAmb IAmb 06 36 46.7
comp=Z,14nm,1.0s
BORK **Borovoye** 50.08 313*de*P P 06 36 45.0 +0.7
BORK pmax pmax
comp=Z,14nm,1.0s
ARSB **Arsianbob** 50.81 298 IAmb IAmb 06 36 52.9
comp=Z,17nm,0.8s
GSI **Gunungsitoli** 51.28 238 P P 06 36 52.5 -1.2

ILAR Eielson Array 51.82 32 P **P** **06 36 58.5 +1.5**
comp=Z,4.1nm,1.3s,baz=260,slow=5.0,SNR=8.7
KNRA Kununurra 51.86 192 P **P** **06 36 56.2 -1.7**
KNRA IAmb IAmb 06 37 31.0
comp=Z,36nm,1.5s
D25K Kavik River 51.87 26 P **P** **06 37 00.2 +2.8**
KK31 Karatay Array 52.08 300 **P** **06 36 59.8 +0.4**
KK31 IAmb IAmb 06 37 00.8
comp=Z,28nm,1.1s
KK31 Karatay Array 52.08 300 P **P** **06 36 59.8 +0.4**
KK31 pmax pmax
comp=Z,28nm,1.1s
KKAR Karatay Array 52.08 300 **P** **06 36 59.8 +0.5**
KKAR Karatay Array 52.08 300 P **P** **06 36 59.8 +0.5**
DRK Karamyk 52.22 296 P **P** **06 37 00.8 +0.1**
DRK IAmb IAmb 06 37 02.3
comp=Z,14nm,0.7s
DRK Karamyk 52.22 296 P **P** **06 37 00.9 +0.1**
DRK pmax pmax
comp=Z,14nm,0.7s
NIL Nilore 53.11 288 **P** **06 37 05.9 -1.2**
NIL IAmb IAmb 06 37 08.8
comp=Z,17nm,0.8s
NIL Nilore 53.11 288 P **P** **06 37 05.9 -1.2**
NIL pmax pmax
comp=Z,17nm,0.8s
GAR Garm 53.46 295 P **P** **06 37 09.8 +0.1**
GAR IAmb IAmb 06 37 10.8
comp=Z,32nm,1.0s
CHGR Chuyangaron 54.43 295‖ *eP* **P** **06 37 17.0 +0.3**
SVE Sverdlovsk 54.88 319 *eP* **P** **06 37 21.0 +1.5**
WRAB Tennant Creek 55.37 185 P **P** **06 37 21.9 -1.4**
WRAB Tennant Creek 55.37 185 P **P** **06 37 22.1 -1.2**
comp=Z,31nm,0.8s
WRAB Tennant Creek 55.37 185*d* *i*P **P** **06 37 22.0 -1.4**
WRAB pmax pmax
comp=Z,39nm,0.8s
WRA Warramunga Arr 55.38 185 P **P** **06 37 21.9 -1.5**
comp=Z,37nm,0.5s,baz=0.6,slow=7.6,SNR=234
WRA Warramunga Arr 55.38 185 **P** **06 37 21.6 -1.8**
WRA Warramunga Arr 55.38 185 P **P** **06 37 21.6 -1.8**
WRA pmax pmax
comp=Z,3.0nm,0.7s
SHAA Shahritus 55.58 295 P **P** **06 37 23.6 -1.2**
SHAA IAmb IAmb 06 37 26.4
comp=Z,53nm,0.8s
CTAO Charters Tower 55.80 172 P **P** **06 37 26.2 -0.2**
CTAO Charters Tower 55.80 172 P **P** **06 37 26.2 -0.2**
CTAO pmax pmax
comp=Z,7.0nm,1.0s
EPYK Eagle Plains 55.81 29 IAmb IAmb 06 37 30.5
comp=Z,8.0nm,0.6s
QIS Mount Isa 55.83 179 P **P** **06 37 25.7 -0.9**
comp=Z,13nm,0.8s
KBL Kabul 56.01 291 **P** **06 37 26.8 -1.4**
KBL IAmb IAmb 06 37 32.0
comp=Z,6.3nm,0.7s
KBL Kabul 56.01 291 P **P** **06 37 26.8 -1.4**
KBL pmax pmax
comp=Z,6.0nm,0.7s
I30M Mount Dempster 56.18 30 P **P** **06 37 31.6 +2.9**
ARTI Arti 56.20 319 **P** **06 37 29.4 +0.5**
ARTI Arti 56.20 319*c* *i*P **P** **06 37 29.3 +0.5**
ARTI *PP **pP** **06 38 09.9 0.0**
ARTI 06 38 21.6
ARTI 06 39 32.4
ARTI S **S** **06 45 05.2 +1.2**
ARTI SS **SS** **06 48 52.4 -0.3**
ARTI pmax pmax
comp=Z,27nm,0.9s
INK Inuvik 56.61 26 P **P** **06 37 33.5 +2.0**
comp=Z,1.1nm,0.6s,baz=306,slow=6.3,SNR=13
comp=Z,1.1nm,0.6s
AB31 Akbulak array 57.30 310 **P** **06 37 36.6 -0.2**
AB31 Akbulak array 57.30 310 *i* P **P** **06 37 36.6 -0.2**
ABKAR Akbulak array 57.30 310 **P** **06 37 36.4 -0.4**
AKTO Aktyubinsk 58.12 312 P **P** **06 37 42.4 0.0**
AS31 Alice Springs 59.10 185 **P** **06 37 48.4 -1.1**
AS31 IAmb IAmb 06 37 51.1
comp=Z,6.1nm,0.6s
ASAR Alice Springs 59.10 185 P **P** **06 37 48.4 -1.1**
comp=Z,8.4nm,0.5s,baz=359,slow=4.9,SNR=51
comp=Z,8.4nm,0.5s
ASAR Alice Springs 59.10 185 **P** **06 37 48.3 -1.2**
AUNRC North Rockhamp 59.64 168 P **P** **06 37 52.5 -0.5**
comp=Z,30nm,0.9s
KIRV Kirov 60.16 323 P **P** **06 37 57.0 +0.8**
comp=Z,34nm,0.5s,baz=60,slow=1.5,SNR=11
comp=Z,34nm,0.5s
SPITS Spitsbergen Ar 61.55 349 P **P** **06 38 06.6 +1.2**
comp=Z,6.7nm,0.7s,baz=101,slow=4.3,SNR=15
comp=Z,6.7nm,0.7s
SPITS Spitsbergen Ar 61.55 349 P **P** **06 38 06.3 +0.9**
EIDS Eidsvold 61.71 167 P **P** **06 38 06.8 -0.2**
EIDS IAmb IAmb 06 38 07.6
comp=Z,9.1nm,0.7s
EIDS Eidsvold 61.71 167 P **P** **06 38 06.9 -0.1**
comp=Z,15nm,0.8s
QLP Quilpie 62.03 175 P **P** **06 38 08.5 -0.6**
comp=Z,17nm,1.3s
BELG Belogornoye 63.45 317 P **P** **06 38 18.5 +0.2**
comp=Z,16nm,0.5s,baz=342,slow=1.8,SNR=15
comp=Z,16nm,0.5s
KLMR Klimovskoe 63.88 327 *eP* **P** **06 38 20.3 -0.7**
KLMR *e* 06 40 42.9
KLMR pmax pmax
comp=Z,15nm,0.6s
RES Resolute Bay 64.52 14 P **P** **06 38 26.1 +1.3**
RES Resolute Bay 64.52 14 P **P** **06 38 26.2 +1.3**
RES pmax pmax
comp=Z,6.0nm,0.9s
ARCES ARCESS Array B 64.63 339 P **P** **06 38 26.8 +1.0**
comp=Z,3.7nm,0.6s,baz=53,slow=7.0,SNR=15
comp=Z,3.7nm,0.6s
ARCES ARCESS Array B 64.63 339 P **P** **06 38 26.4 +0.6**
ARCES ARCESS Array B 64.63 339 P **P** **06 38 26.4 +0.6**
ARCES pmax pmax
comp=Z,5.0nm,1.1s
HOLB Holberg 65.20 44 P **P** **06 38 30.3 +0.5**
YKA Yellowknife Ar 66.09 29 P **P** **06 38 36.8 +1.5**
comp=Z,0.6nm,0.8s,baz=301,slow=7.2,SNR=11
YKA Yellowknife Ar 66.09 29 **P** **06 38 36.0 +0.7**
ARMA Armidale 66.73 168 P **P** **06 38 39.6 -0.2**
FORT Forrest 66.78 190 **P** **06 38 39.5 -0.4**
FORT IAmb IAmb 06 38 40.5
comp=Z,14nm,0.8s
TULEG Thule 66.80 7 P **P** **06 38 40.6 +1.1**
NEEM North Greenlan 67.08 2 *i* P **P** **06 38 41.5 -0.1**
STKA Stephens Creek 67.15 177 P **P** **06 38 41.7 -0.5**
comp=Z,4.6nm,0.6s,baz=330,slow=5.5,SNR=9.6
comp=Z,4.6nm,0.6s
STKA Stephens Creek 67.15 177 P **P** **06 38 42.0 -0.2**
STKA Stephens Creek 67.15 177 P **P** **06 38 42.0 -0.2**
STKA pmax pmax
comp=Z,28nm,0.8s
VRH Novokhopyorsk 67.27 317 *eP* **P** **06 38 41.5 -1.4**
VRH pmax pmax
comp=Z,10.0nm,0.9s
OBN Obninsk 68.02 323 P **P** **06 38 47.7 +0.3**
comp=Z,14nm,0.4s,baz=48,slow=21,SNR=3.5
comp=Z,14nm,0.4s
OBN Obninsk 68.02 323 IAmb IAmb 06 38 49.1
comp=Z,50nm,0.4s
OBN Obninsk 68.02 323*c* *i*P **P** **06 38 47.7 +0.3**
OBN *e* 06 39 12.8
OBN *e*PP **pP** **06 39 30.3 +0.2**
OBN *e*SP **sP** **06 39 50.1 +0.7**
OBN *e* 06 41 20.6
OBN *e*PPP PPP 06 43 00.2
OBN pmax pmax
comp=Z,24nm,0.9s
BBOO Buckleboo 68.08 183 P **P** **06 38 47.5 -0.5**
BBOO IAmb IAmb 06 39 13.1
comp=Z,26nm,1.4s
LPSR Galich'ya Gora 68.09 320 *eP* **P** **06 38 46.0 -2.0**
LPSR pmax pmax
comp=Z,20nm,0.8s
VORR Voronezh 68.41 319 *eP* **P** **06 38 47.6 -2.4**
VSR Storozhevoye 68.66 318 *eP* **P** **06 38 50.0 -1.5**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 68.72 318 *eP* **P** **06 38 49.8 -2.1**
VORD pmax pmax
comp=Z,7.0nm,0.8s
FINES FINESS Array B 69.13 332 P **P** **06 38 54.8 +0.5**
comp=Z,8.9nm,0.3s,baz=62,slow=6.0,SNR=165
comp=Z,8.9nm,0.3s
FINES FINESS Array B 69.13 332 P **P** **06 38 54.9 +0.6**
NCK Nalchik 69.95 310‖ *eP* **P** **06 38 58.8 -0.9**
NCK pmax pmax
comp=Z,13nm,0.6s
KBZ Khabaz 70.27 310 P **P** **06 39 02.8 +1.2**
comp=Z,11nm,0.8s,baz=78,slow=4.9,SNR=19
comp=Z,11nm,0.8s
KBZ Khabaz 70.27 310*ce*P **P** **06 39 02.1 +0.5**
KBZ pmax pmax
comp=Z,15nm,0.9s
KVAR Kislovodsk Arr 70.28 310 P **P** **06 39 02.7 +0.9**
comp=Z,2.0nm,0.4s,baz=98,slow=23,SNR=2.5
comp=Z,2.0nm,0.4s
KIV Kislovodsk 70.29 310 **P** **06 39 02.1 +0.3**
KIV Kislovodsk 70.29 310 *eP* **P** **06 39 02.5 +0.7**
KIV pmax pmax
comp=Z,19nm,1.1s
SHA1 Shidzhatmaz 70.42 310*ce*P **P** **06 39 03.3 +0.5**
VSU Vasula 70.65 329*ce*P **P** **06 39 03.3 -0.3**
VSU pmax pmax
comp=Z,19nm,0.6s
GNI Garni 70.91 306‖ *eP* **P** **06 39 07.3 +1.6**
GNI pmax pmax
comp=Z,11nm,0.9s
SUMG Summit 72.12 359 **P** **06 39 14.8 +2.1**
SUMG IAmb IAmb 06 39 15.4
comp=Z,12nm,1.0s
SUMG Summit 72.12 359 P **P** **06 39 14.8 +2.1**
SUMG pmax pmax
comp=Z,12nm,1.0s
SUMG Summit 72.12 359 *i* P **P** **06 39 13.0 +0.3**
MNK Minsk 72.53 325 *i* P **P** **06 39 15.9 +1.0**
comp=E,26nm,1.0s
MNK *i* P **P** **06 39 15.9 +1.0**
comp=N,14nm,1.0s
MNK *i* P **P** **06 39 15.9 +1.0**
comp=Z,46nm,0.9s,baz=53
MNK *i* pP **pP** **06 39 58.1 +0.1**
MNK *i* PP **PP** **06 41 59.3 +1.3**
MNK *i* PPP PPP 06 43 43.2
MNK *i* S **S** **06 48 27.2 +2.8**
MNK *i* sS **sS** **06 49 42.5 +4.0**
MNK *i* SS **SS** **06 53 11.5 +5.5**
MNK *i* SSS SSS 06 56 31.0
MNK *i* LRM MLR 07 14 00.5
comp=E,149nm,29.9s
MNK *i* LRM MLR 07 14 00.5
comp=N,114nm,18.2s
MNK *i* LRM MLR 07 14 00.5
comp=Z,21nm,7.0s
MNK Minsk 72.53 325 *i* P **P** **06 39 15.9 +1.0**
MNK *i* *PP **pP** **06 39 58.0 +0.1**
MNK *i* 06 41 59.3
MNK *i* PPP PPP 06 43 43.2
MNK *i* S **S** **06 48 27.1 +2.8**
MNK *i* SS **SS** **06 53 11.4 +5.5**
MNK pmax pmax
comp=N,14nm,1.0s
MNK pmax pmax
comp=Z,46nm,0.9s
MNK pmax pmax
comp=E,26nm,1.0s
MNK MLR MLR
comp=E,149nm,30.0s
MNK MLR MLR
comp=Z,21nm,7.0s
MNK MLR MLR
comp=N,114nm,18.0s
GURO Guroymak-BITLI 73.53 306 IAmb IAmb 06 39 23.5
comp=Z,18nm,1.1s
AKASG Malin Array Be 74.17 321 P **P** **06 39 24.6 0.0**
comp=Z,14nm,0.5s,baz=50,slow=6.1,SNR=80
comp=Z,14nm,0.5s
AKASG Malin Array Be 74.17 321 P **P** **06 39 24.9 +0.4**
AKASG IAmb IAmb 06 39 25.7
comp=Z,14nm,1.2s
AKASG Malin Array Be 74.17 321 P **P** **06 39 24.9 +0.4**
AKASG pmax pmax
comp=Z,14nm,1.3s
AKBB Malin Array Si 74.17 321*ce*P **P** **06 39 24.6 0.0**
AKBB pmax pmax
comp=Z,21nm,0.6s
KIEV Kiev 74.18 321 **P** **06 39 24.8 +0.2**
KIEV Kiev 74.18 321 P **P** **06 39 24.8 +0.2**
KIEV pmax pmax
comp=Z,23nm,0.6s
HFS Hagfors 74.55 335 P **P** **06 39 27.1 +0.5**
comp=Z,5.2nm,0.6s,baz=58,slow=3.7,SNR=22
comp=Z,5.2nm,0.6s
NB2 NORSAR Subarra 74.72 336 P **P** **06 39 27.8 +0.2**
comp=Z,6.6nm,0.8s,baz=42,slow=5.9
NOA NORSAR Array B 74.72 336 P **P** **06 39 28.1 +0.5**
comp=Z,5.9nm,0.7s,baz=42,slow=5.8,SNR=16
comp=Z,5.9nm,0.7s
SORM Soroca 76.19 320 ⇑P **P** **06 39 34.7 -1.4**
SORM Soroca 76.19 320 ⇑P **P** **06 39 34.7 -1.4**
BNN Bunyan 77.38 309 IAmb IAmb 06 39 45.2
comp=Z,17nm,0.9s
GAZ Gaziantep 77.47 307 IAmb IAmb 06 39 45.9
comp=Z,14nm,0.7s
BEL Belsk 77.52 326 *eP* **P** **06 39 44.3 +0.8**
TESR Tescani 78.11 319 ⇓P **P** **06 39 46.6 -0.3**
BUR08 Bucovina Ar. S 78.14 321 IAmb IAmb 06 39 48.9
comp=Z,11nm,0.9s
CFR Carcaliu 78.15 317 ⇓P **P** **06 39 47.7 +0.6**
CFR Carcaliu 78.15 317 ⇓P **P** **06 39 47.7 +0.6**
BURAR Bucovina Array 78.15 321 **P** **06 39 48.1 +0.9**
BURAR IAmb IAmb 06 39 49.2
comp=Z,11nm,0.8s
BURAR Bucovina Array 78.15 321 ⇑P **P** **06 39 47.1 -0.2**
BURAR Bucovina Array 78.15 321 ⇑P **P** **06 39 47.1 -0.2**
PANC Panciu 78.25 318 ⇑P **P** **06 39 48.3 +0.7**
BR131 Keskin Array S 78.25 311 **P** **06 39 47.5 -0.5**
BR131 IAmb IAmb 06 39 49.7
comp=Z,12nm,1.1s
BR131 Keskin Array S 78.25 311 P **P** **06 39 47.5 -0.5**
BR131 pmax pmax
comp=Z,12nm,1.1s
BRTR Keskin Array B 78.25 311 P **P** **06 39 48.9 +0.9**
comp=Z,8.3nm,0.9s,baz=103,slow=3.9,SNR=32
comp=Z,8.3nm,0.9s
BRTR Keskin Array B 78.25 311 P **P** **06 39 47.5 -0.5**
ODBI Odobesti 78.37 318 ⇑P **P** **06 39 49.7 +1.4**
VRI Vrincioaia 78.48 319 ⇓P **P** **06 39 50.1 +1.1**
VRI Vrincioaia 78.48 319 ⇓P **P** **06 39 50.1 +1.1**
OZUR 78.84 319 ⇑P **P** **06 39 51.3 +0.4**
OJC Ojcow 79.08 325 *eP* **P** **06 39 53.1 +1.0**
DOPR Dopca 79.13 319 ⇑P **P** **06 39 53.5 +1.0**
RAYN Ar Rayn 79.28 291 **P** **06 39 53.3 -0.5**
RAYN IAmb IAmb 06 39 54.6
comp=Z,11nm,0.6s
RAYN Ar Rayn 79.28 291 P **P** **06 39 53.3 -0.5**
RAYN pmax pmax
comp=Z,11nm,0.6s
VOIR 79.66 319 ⇑P **P** **06 39 56.8 +1.4**
VOIR 79.66 319 ⇑P **P** **06 39 56.8 +1.4**
MARR Marisel-Cluj 79.85 321 ⇓P **P** **06 39 55.3 -1.1**
ARR Arges 79.92 319 ⇓P **P** **06 39 58.7 +1.8**
DRGR 79.98 321 ⇓P **P** **06 39 56.3 -0.9**
DRGR 79.98 321 ⇓P **P** **06 39 56.3 -0.9**
PDAR Pinedale Array 80.15 44 P **P** **06 39 60.0 +1.6**
comp=Z,0.3nm,0.6s,baz=307,slow=7.5,SNR=2.1
STEB Steborice 80.21 326 *eP* **P** **06 39 59.1 +0.9**
KSP Ksiaz 80.23 327 *eP* **P** **06 39 59.2 +0.9**
LOT Lotru 80.33 320 ⇑P **P** **06 40 00.5 +1.4**
MORC Moravsky Berou 80.43 326 ⇑P **P** **06 39 60.0 +0.5**
MORC Moravsky Berou 80.43 326 ⇑P **P** **06 40 00.0 +0.5**
MORC Moravsky Berou 80.43 326 *eP* **P** **06 40 00.3 +0.9**
DPC Dobruska-Polom 80.57 327 *eP* **P** **06 40 01.6 +1.4**
DPC Dobruska-Polom 80.57 327 *eP* **P** **06 40 01.6 +1.4**
ASF Jabal al Asfar 80.58 303 P **P** **06 40 01.3 +0.7**
comp=Z,6.0nm,0.8s,baz=106,slow=2.7,SNR=6.7
comp=Z,6.0nm,0.8s
UPC Upice 80.60 327 *eP* **P** **06 40 01.2 +0.9**
UPC Upice 80.60 327 *eP* **P** **06 40 01.2 +0.9**
PSZ Piszkesteto 80.62 323 IAmb IAmb 06 40 02.7
comp=Z,11nm,1.1s
ELND Elena 80.84 317 ⇑P **P** **06 40 02.7 +1.0**
SIRR Siria 80.87 321 ⇓P **P** **06 40 02.7 +0.9**
GZR Gura Zlata 80.89 320 ⇑P **P** **06 40 02.6 +0.6**
GZR Gura Zlata 80.89 320 ⇑P **P** **06 40 02.6 +0.6**
JAVC Velka Javorina 81.02 325 *eP* **P** **06 40 04.6 +2.0**
MMAI Mount Meron Ar 81.10 304 P **P** **06 40 03.3 0.0**
comp=Z,2.1nm,0.4s,baz=36,slow=7.5,SNR=5.3
comp=Z,2.1nm,0.4s
VRAC Vranov 81.20 326 P **P** **06 40 03.4 0.0**
comp=Z,5.8nm,0.7s,baz=29,slow=3.3,SNR=10
comp=Z,5.8nm,0.7s
VRAC Vranov 81.20 326 ⇑P **P** **06 40 04.6 +1.1**
VRAC Vranov 81.20 326 ⇑P **P** **06 40 04.6 +1.1**
VRAC Vranov 81.20 326 *eP* **P** **06 40 04.5 +1.0**
PVCC Panska Ves 81.22 328 *eP* **P** **06 40 04.8 +1.3**
PVCC Panska Ves 81.22 328 *eP* **P** **06 40 04.8 +1.3**
BRG Berggiesshubel 81.23 328 *eP* **P** **06 40 04.3 +0.7**
comp=Z,6.3nm,1.1s,baz=40,slow=5.2
FLTG Flechtingen 81.26 331 *eP* **P** **06 40 03.8 +0.1**
comp=Z,9.6nm,0.9s,baz=40,slow=5.2
CLL Collm 81.31 329 IAmb IAmb 06 40 05.3
comp=Z,13nm,0.8s
CLL Collm 81.31 329 *i* P **P** **06 40 04.5 +0.5**
CLL pmax pmax
comp=Z,15nm,0.8s
CLL Collm 81.31 329 *i* P **P** **06 40 04.5 +0.5**
comp=Z,15nm,0.8s
CLL *e*PP **PP** **06 43 13.0 +1.6**
CLL Collm 81.31 329 *eP* **P** **06 40 04.5 +0.5**
comp=Z,13nm,0.8s,baz=40,slow=5.2
CSS Mathiatis 81.31 307 IAmb IAmb 06 40 07.5
comp=Z,10nm,0.8s
BZS Buzias 81.34 321 ⇑P **P** **06 40 04.4 +0.1**
BZS Buzias 81.34 321 ⇑P **P** **06 40 04.4 +0.1**
SMOL Smolenice 81.38 325 *eP* **P** **06 40 06.1 +1.7**
HERR Herculane 81.42 320 ⇓P **P** **06 40 05.4 +0.7**
SRO Srobarova 81.46 324 *eP* **P** **06 40 06.5 +1.7**
SRO Srobarova 81.46 324 *eP* **P** **06 40 06.5 +1.7**
KRUC Moravsky 81.47 326 *eP* **P** **06 40 05.9 +1.0**
MODS Modra-Piesok 81.55 325 *eP* **P** **06 40 06.9 +1.5**
MODS Modra-Piesok 81.55 325 *eP* **P** **06 40 06.9 +1.5**
URZ Urewera 81.56 150 P **P** **06 40 03.8 -1.4**
comp=Z,18nm,1.2s
PRU Pruhonice 81.62 327 *eP* **P** **06 40 06.5 +0.8**
PRU Pruhonice 81.62 327 *eP* **P** **06 40 06.5 +0.8**
MDVR Moldovita 81.86 320 ⇓P **P** **06 40 07.4 +0.4**
CLZ Clausthal 81.98 331 *eP* **P** **06 40 08.3 +0.8**
comp=Z,13nm,0.9s,baz=40,slow=5.2
MOX Moxa 82.39 329 *eP* **P** **06 40 10.3 +0.7**
comp=Z,12nm,1.4s,baz=40,slow=5.2
MOX *e*L L 07 17 54.4
comp=Z,74nm,19.0s
MORH Mrgy, Hungar 82.42 323 ⇓P **P** **06 40 10.2 +0.3**
RONA Rosalia, Austr 82.49 325 *i* P **P** **06 40 11.6 +1.3**
comp=Z,5.0nm,0.6s
CONA Conrad Observa 82.53 325 *eP* **P** **06 40 11.8 +1.2**
comp=Z,4.1nm,0.6s,SNR=5.3
CKRC Cesky Krumlov 82.58 327 *eP* **P** **06 40 11.3 +0.6**
CKRC Cesky Krumlov 82.58 327 *eP* **P** **06 40 11.3 +0.6**
BOVS Bovan 82.64 319 ⇑P **P** **06 40 11.5 +0.4**
MANZ Manzenberg 82.68 329 *eP* **P** **06 40 11.9 +0.7**
comp=Z,1.0nm,0.7s,baz=40,slow=5.2
KHC Kasperske Hory 82.68 327 IAmb IAmb 06 40 13.1
comp=Z,15nm,1.3s
KHC Kasperske Hory 82.68 327 *eP* **P** **06 40 12.1 +0.8**
KHC Kasperske Hory 82.68 327 *eP* **P** **06 40 12.1 +0.8**
ROTZ Rotzenmuhle 82.80 328 *eP* **P** **06 40 12.6 +0.8**
comp=Z,7.5nm,1.6s,baz=40,slow=5.2
GEC2 GERESS Array S 82.84 327 *eP* **P** **06 40 12.6 +0.4**
comp=Z,3.0nm,0.7s,baz=40,slow=5.2
GERES GERESS Array B 82.84 327 P **P** **06 40 12.5 +0.4**
comp=Z,1.8nm,0.5s,baz=39,slow=7.1,SNR=11
comp=Z,1.8nm,0.5s
ARSA Arzberg 83.18 325 *eP* **P** **06 40 14.6 +0.7**
comp=Z,3.0nm,0.6s
GRF Grafenberg Arr 83.28 329 *eP* **P** **06 40 15.4 +1.1**
comp=Z,20nm,0.9s,baz=40,slow=5.2
GRF *e*L L 07 17 16.0
comp=Z,38nm,18.8s
PV10 Paradox Valley 83.28 47 P **P** **06 40 17.8 +3.0**
MOA Molln 83.32 326 *i* P **P** **06 40 15.9 +1.4**
comp=Z,4.9nm,0.8s
BIOA Bad Ischl, Aus 83.72 326 *i* P **P** **06 40 17.3 +0.7**
comp=Z,9.3nm,1.2s
GROS Grobnik 83.76 324 *i* P **P** **06 40 17.1 +0.2**
EKA Eskdalemuir Ar 83.79 339 P **P** **06 40 16.6 -0.1**
comp=Z,1.4nm,0.4s,baz=36,slow=5.4,SNR=17
comp=Z,1.4nm,0.4s
PERS Pernice 83.82 325 *i* P **P** **06 40 17.7 +0.5**
SOKA Soboth 83.83 325 *eP* **P** **06 40 17.8 +0.6**
comp=Z,7.5nm,0.5s,SNR=9.8
RJOB Jochberg 84.07 327 *eP* **P** **06 40 19.3 +0.9**
comp=Z,13nm,1.1s,baz=40,slow=5.2
OBKA Obir 84.18 325 *i* P **P** **06 40 19.4 +0.3**
comp=Z,5.6nm,0.8s
KBA Koelnbreinsper 84.31 326 *i* P **P** **06 40 19.8 0.0**
comp=Z,6.3nm,0.5s
LESA Schwarzleotal 84.35 327 *i* P **P** **06 40 20.4 +0.5**
comp=Z,8.4nm,0.6s,SNR=5.1
FUR Furstenfeldbru 84.41 328 *eP* **P** **06 40 20.9 +0.9**
comp=Z,23nm,0.7s,baz=40,slow=5.2
MYKA Terra Mystica 84.51 326 *i* P **P** **06 40 20.5 -0.2**
comp=Z,7.4nm,0.5s,SNR=5.8
VISS Visnje 84.56 324 *i* P **P** **06 40 20.9 +0.1**
MEM Membach 84.66 332 *dP* **P** **06 40 21.1 -0.1**
PDG Podgorica 84.77 320 IAmb IAmb 06 40 23.9
comp=Z,17nm,1.1s
STU Stuttgart 84.83 329 *eP* **P** **06 40 22.8 +0.7**
comp=Z,27nm,0.8s,baz=40,slow=5.2
WATA Walderalm 84.91 327 *i* P **P** **06 40 22.7 0.0**
comp=Z,2.8nm,0.6s
ABTA Abfaltersbach 84.94 326 *i* P **P** **06 40 22.7 -0.1**
comp=Z,5.1nm,0.6s
WTTA Wattenberg 84.94 327 *i* P **P** **06 40 22.8 -0.2**
comp=Z,3.5nm,0.7s
MOTA Moosalm 85.11 327 *i* P **P** **06 40 23.7 -0.1**
comp=Z,2.2nm,0.6s
SKDS Skadlanscina 85.14 325 *i* P **P** **06 40 23.4 -0.4**
RETA Reutte 85.16 328 *eP* **P** **06 40 24.1 +0.3**
comp=Z,3.4nm,0.5s
SQTA Sankt Quirin 85.16 327 *i* P **P** **06 40 24.1 +0.1**
comp=Z,4.4nm,0.6s
STAL STALIGIAL 85.21 326 IAmb IAmb 06 40 24.0
comp=Z,16nm,0.6s
IDGL Inch Island, C 85.21 341 P **P** **06 40 24.8 +0.9**
CIMO Cimolais 85.30 326 IAmb IAmb 06 40 24.4
comp=Z,6.7nm,0.6s
RCHB Rochefort 85.32 332 *dP* **P** **06 40 24.1 -0.4**
comp=Z,9.5nm,0.8s
BMRD Maredsous 85.37 332 *dP* **P** **06 40 25.1 +0.4**
comp=Z,10nm,0.9s
FETA Feichten 85.53 327 *i* P **P** **06 40 26.0 +0.2**
comp=Z,2.4nm,0.7s
BFO Black Forest 85.54 329 **P** **06 40 26.0 +0.3**
BFO Black Forest 85.54 329 P **P** **06 40 26.0 +0.3**
BFO pmax pmax
comp=Z,5.0nm,0.7s
DAVA Damuels 85.69 328 *i* PcP **P** **06 40 27.1 +0.5**
comp=Z,6.4nm,0.7s
FUORN Ofenpass-Fuorn 86.04 327 IAmb IAmb 06 40 29.9
comp=Z,13nm,0.6s
DAVOX Davos/Dischmat 86.08 328 P **P** **06 40 29.0 +0.4**
comp=Z,3.7nm,0.7s,baz=36,slow=5.9,SNR=9.9
comp=Z,3.7nm,0.7s
DAVOX Davos/Dischmat 86.08 328 P **P** **06 40 29.0 +0.4**
TEOL Teolo 86.37 326 IAmb IAmb 06 40 30.6
comp=Z,9.9nm,0.9s
IDI Anoyia 86.44 311 P **P** **06 40 30.9 +0.5**
comp=Z,5.3nm,0.5s,baz=99,slow=5.6,SNR=12
comp=Z,5.3nm,0.5s
IDI Anoyia 86.44 311 IAmb IAmb 06 40 59.0
comp=Z,18nm,1.4s
DSB Dublin 86.53 340 P **P** **06 40 30.9 +0.5**
TUE Stuetta 86.56 328 IAmb IAmb 06 40 33.6
comp=Z,12nm,1.4s
SCHQ Schefferville 87.28 15 P **P** **06 40 35.9 +1.9**
comp=Z,3.5nm,0.8s,baz=18,slow=8.7,SNR=6.2
comp=Z,3.5nm,0.8s
FDMO Fiordimonte 87.45 323 IAmb IAmb 06 40 36.5
comp=Z,13nm,0.9s
MURB Monte Urbino 87.56 324 IAmb IAmb 06 40 37.6
comp=Z,14nm,0.8s
NRCA Norcia 87.59 323 IAmb IAmb 06 40 36.7
comp=Z,9.1nm,0.7s
INTR Introdacqua 87.82 322 IAmb IAmb 06 40 38.5
comp=Z,8.6nm,0.8s
TXAR Lajitas Array 92.64 51 P **P** **06 41 01.2 +1.6**
comp=Z,0.4nm,0.7s,baz=293,slow=2.9,SNR=7.4
comp=Z,0.4nm,0.7s
TORD Torodi Ar. Bea 116.84 312 PKP **PKPdf** **06 46 30.6 -1.0**
comp=Z,0.4nm,0.6s,baz=294,slow=1.3,SNR=4.1
BOSA Boshof 124.26 257 PKP **PKPdf** **06 46 45.3 -0.3**
comp=Z,2.5nm,0.9s,baz=135,slow=1.4,SNR=3.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVL	**N'lazarevskaya**	**135.16**	**202**	*e*PKIKP	**PKiKP**	**06 47 13.7**	**+7.4**
NVL				pmax	pmax		
	comp=Z,11nm,1.0s						
LPAZ	**La Paz**	**149.21**	**58**	PKPbc	**PKiKP**	**06 47 38.5**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=309,slow=1.6,SNR=3.9						
SIV	**San Ignacio**	**153.59**	**47**	PKPbc	**PKPbc**	**06 47 45.8**	**0.0**
	comp=Z,0.8nm,0.8s,baz=286,slow=3.7,SNR=2.5						

*IDC **02** 06:31:58.7±2.8, 6°.75N×72°.96W, h165km±41km, mbtmp3.9/2, Error ellipse: s-maj=431.7km s-min=7.7km az=132.0*
*FUNV **02** 06:31:59.9, 6°.80N×73°.17W, h162km, MW3.8, Presumed earthquake*
*RSNC **02** 06:32:00.1±0.0, 7°N±1°×7°3W±°, h148km±2km, M3.4, mB4.9, mb3.7, ML3.1, Mw(mB)4.2*
ISC 02 06:31:58.5±1.0**, 6°.87N**±0°.03×**73°.12W**±0°.04**, h155**km±7km**, n49, σ1s.39**/89**, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**192**	P	**Pn**	**06 32 20.5**	**+0.6**
BARC				S	**Sn**	**06 32 35.6**	**-0.6**
BRJC	**Barrancabermej**	**0.62**	**280**	P	**Pn**	**06 32 22.1**	**+1.0**
BRJC				S	**Sn**	**06 32 38.9**	**+0.6**
PAMC	**Pamplona, Colo**	**0.63**	**42**	P	**Pn**	**06 32 23.1**	**+1.4**
PAMC				S	**Sn**	**06 32 40.1**	**+0.7**
RUSC	**La Rusia**	**0.97**	**178**	P	**Pn**	**06 32 24.4**	**+0.3**
RUSC				S	**Sn**	**06 32 42.5**	**-1.1**
RUSC	**La Rusia**	**0.97**	**178**⇓	*i*P	**Pn**	**06 32 24.5**	**+0.4**
RUSC				*e*S	**Sn**	**06 32 43.2**	**-0.5**
CAPV	**Capacho**	**1.28**	**39**⇑	*i*P	**Pn**	**06 32 28.4**	**+1.9**
CAPV				*e*S	**Sn**	**06 32 49.1**	**+1.2**
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	P	**Pn**	**06 32 27.1**	**0.0**
PTBC				S	**Sn**	**06 32 47.4**	**-1.6**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**06 32 28.4**	**+1.0**
OCAC				S	**Sn**	**06 32 50.0**	**+0.4**
SPBC	**San Pablo de B**	**1.53**	**218**	P	**Pn**	**06 32 29.4**	**+0.5**
SPBC				S	**Sn**	**06 32 51.0**	**-1.2**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**06 32 38.7**	**+0.8**
CHIC				S	**Sn**	**06 33 08.2**	**-0.1**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**06 32 40.6**	**+2.3**
	136nm,0.4s,baz=96,slow=19,SNR=80						
ROSC				S	**Sn**	**06 33 10.1**	**+1.1**
	250nm,0.5s,baz=121,slow=18,SNR=12						
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**06 32 40.4**	**+2.1**
ROSC				S	**Sn**	**06 33 09.8**	**+0.8**
BOG	**Bogota**	**2.42**	**203**	P	Pn	06 32 32.0	-7.2
BOG				S	**Sn**	**06 33 10.1**	**-0.5**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**06 32 42.2**	**+1.7**
CVER				S	**Sn**	**06 33 15.4**	**+2.5**
UREC	**San Jos de Ur**	**2.55**	**290**	P	**Pn**	**06 32 40.7**	**+0.3**
UREC				S	**Sn**	**06 33 10.7**	**-2.1**
SOCV	**Socops**	**2.65**	**58**	*e*P	**Pn**	**06 32 44.7**	**+2.9**
SOCV				*e*S	**Sn**	**06 33 15.9**	**+0.7**
VILC	**Villavicencio,**	**2.79**	**192**	P	**Pn**	**06 32 44.1**	**+0.5**
VILC				S	**Sn**	**06 33 18.5**	**-0.1**
RECRC	**Villamaria, Ca**	**2.92**	**230**	P	**Pn**	**06 32 48.0**	**+2.5**
RECRC				S	**Sn**	**06 33 22.6**	**+0.7**
NIZA	**Niza - Manizal**	**2.94**	**233**	P	**Pn**	**06 32 48.3**	**+2.6**
NIZA				S	**Sn**	**06 33 25.1**	**+3.0**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P	**Pn**	**06 32 48.2**	**+1.5**
CBOC				S	**Sn**	**06 33 24.4**	**+0.4**
DBBC	**Dabeiba**	**3.07**	**273**	P	**Pn**	**06 32 48.8**	**+1.8**
DBBC				S	**Sn**	**06 33 24.4**	**-0.1**
ARGC	**Ariguani, Magd**	**3.17**	**340**	P	**Pn**	**06 32 50.2**	**+1.9**
ARGC				S	**Sn**	**06 33 28.9**	**+2.0**
SDV	**Santo Domingo**	**3.18**	**51**	P	**Pn**	**06 32 50.2**	**+1.7**
	10nm,0.3s,baz=235,slow=12,SNR=36						
SDV				S	**Sn**	**06 33 27.2**	**-0.2**
	67nm,0.5s,baz=259,slow=22,SNR=36						
SDV	**Santo Domingo**	**3.18**	**51**	P	**Pn**	**06 32 49.7**	**+1.2**
SDV				S	**Sn**	**06 33 26.6**	**-0.8**
SDV	**Santo Domingo**	**3.18**	**51**	*e*P	**Pn**	**06 32 49.8**	**+1.3**
SDV				*e*S	**Sn**	**06 33 26.5**	**-0.8**
MCQV	**Machiques**	**3.22**	**10**	*e*P	**Pn**	**06 32 50.4**	**+1.6**
MCQV				*e*S	**Sn**	**06 33 27.7**	**-0.2**
ANIL	**Santa Ana**	**3.27**	**224**	P	**Pn**	**06 32 51.4**	**+1.6**
ANIL				S	**Sn**	**06 33 32.4**	**+2.8**
APAC	**Apartado, Choc**	**3.58**	**287**	P	**Pn**	**06 32 54.1**	**+0.7**
APAC				S	**Sn**	**06 33 37.5**	**+1.4**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**06 32 53.9**	**+0.3**
PRAC				S	**Sn**	**06 33 36.7**	**+0.2**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	**06 32 55.0**	**+1.0**
ORTC				S	**Sn**	**06 33 38.6**	**+1.5**
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	**06 32 54.4**	**+0.2**
SJCC				S	**Sn**	**06 33 35.6**	**-1.9**
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	**Pn**	**06 32 54.6**	**+0.4**
SJCC				*e*S	**Sn**	**06 33 35.8**	**-1.7**
URMC	**La Uribe, Meta**	**3.81**	**199**	P	**Pn**	**06 32 57.6**	**+1.1**
URMC				S	**Sn**	**06 33 41.7**	**+0.1**
YOTC	**Yotoco, Valle**	**4.30**	**228**	P	**Pn**	**06 33 03.3**	**+0.4**
YOTC				S	**Sn**	**06 33 54.9**	**+1.8**
PIZC	**Pizarro, Choco**	**4.62**	**246**	P	**Pn**	**06 33 09.1**	**+2.1**
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	**06 33 07.9**	**-0.8**
MACC				S	**Sn**	**06 34 00.4**	**-3.1**
URIC	**Uribia, Colomb**	**4.93**	**13**	P	**Pn**	**06 33 10.7**	**-0.4**
URIC				S	**Sn**	**06 34 06.6**	**-1.3**
TEPV	**Terepaima**	**4.96**	**51**	*e*P	**Pn**	**06 33 12.4**	**+0.9**
JAMC	**Jamundi, Valle**	**5.07**	**224**	P	**Pn**	**06 33 14.4**	**+1.3**
	6.7nm,0.5s						
JAMC				S	**Sn**	**06 34 12.3**	**+1.0**
	6.7nm,0.5s						
GARC	**Garzon, Huila**	**5.21**	**207**	P	**Pn**	**06 33 14.6**	**-0.5**
GARC				S	**Sn**	**06 34 13.7**	**-1.2**
MAPV	**Macapo**	**5.48**	**57**	*e*P	**Pn**	**06 33 18.4**	**0.0**
POPC	**Popayan, Colom**	**5.57**	**220**	P	**Pn**	**06 33 20.8**	**+1.0**
	5.1nm,0.6s						
POPC				S	**Sn**	**06 34 24.0**	**+0.7**
	5.1nm,0.6s						
FLOC	**Florencia**	**5.82**	**206**	P	**Pn**	**06 33 23.3**	**+0.3**
FLOC				S	**Sn**	**06 34 28.3**	**-0.8**
BENV	**Beln**	**6.27**	**60**	*e*P	**Pn**	**06 33 28.4**	**-0.6**
TURV	**Turiamo**	**6.32**	**55**	*e*P	**Pn**	**06 33 30.6**	**+1.0**
BBAC	**Balboa, Cauca**	**6.33**	**221**	P	**Pn**	**06 33 31.6**	**+1.7**
BBAC				S	**Sn**	**06 34 41.6**	**+0.2**
TACV	**Tcata**	**6.85**	**61**	*e*P	**Pn**	**06 33 36.4**	**-0.2**
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKiKP**	**06 51 27.6**	**-3.0**
	0.3nm,0.6s,baz=103,slow=3.0,SNR=5.7						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKiKP**	**06 51 31.4**	**-1.8**
	0.4nm,0.6s,baz=108,slow=2.7,SNR=7.7						

*MEX **02** 06:34:34.9±0.6, 13°.59N×93°.04W, h17km±69km, MD4.0*
*GCG **02** 06:34:39.6±2.5, 14°.04N×92°.77W, h13km±42km, MD4.0, Presumed earthquake*
ISC 02 06:34:29.1±2.5**, 13°.5N**±0°.1×**93°.05W**±0°.05**, h10**km**, n19, σ2s.32**/26**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMCA	**Catarina**	**1.65**	**35**	*i* P	**Pn**	**06 34 59.4**	**+1.3**
PATR	**El Naranjo**	**1.79**	**26**	*e*P	**Pn**	**06 35 00.6**	**+0.3**
PATR				*e*S	**Sn**	**06 35 20.8**	**-2.5**
CHUJ	**Union Juarez**	**1.83**	**30**	*e*P	**Pn**	**06 35 01.2**	**+0.4**
CHUJ				*e*S	**Sn**	**06 35 22.0**	**-2.2**
STG2	**El Palmar, Qui**	**1.87**	**60**	*i* P	**Pn**	**06 35 02.0**	**+0.7**
STG5	**El Palmar, Qui**	**1.88**	**61**	*i* P	**Pn**	**06 35 02.1**	**+0.8**
PAVE	**Pavencul**	**1.89**	**26**	*e*P	**Pn**	**06 35 02.3**	**+0.7**
PAVE				*e*S	**Sn**	**06 35 23.7**	**-1.9**
CCIG	**Comitan**	**2.91**	**17**	*e*P	**Pn**	**06 35 19.5**	**+3.9**
CCIG				*e*S	**Sn**	**06 35 52.8**	**+2.2**
CCIG	**Comitan**	**2.91**	**17**	*e*P	**Pn**	**06 35 19.5**	**+3.9**
TGIG		**3.27**	**359**	*e*P	**Pn**	**06 35 22.7**	**+2.3**
TGIG				*e*S	**Sn**	**06 35 58.0**	**-1.3**
TGIG		**3.27**	**359**	*i* P	**Pn**	**06 35 22.3**	**+1.9**
TGIG				*i* S	**Sn**	**06 35 56.9**	**-2.5**
JAYA	**Jayaque - finc**	**3.50**	**87**	*i* P	Pn	06 35 30.2	+6.4
HUIG	**Huatulco**	**3.73**	**308**	*e*P	Pn	06 35 27.0	+0.3
HUIG				*e*S	Sn	06 36 03.3	-7.4
UXUV	**UXUV**	**3.95**	**345**	*e*P	**Pn**	**06 35 31.8**	**+2.1**
UXUV				*e*S	**Sn**	**06 36 14.6**	**-1.5**
CMIG	**Matias Romero**	**3.99**	**334**	*e*P	**Pn**	**06 35 31.8**	**+1.5**
CMIG				*e*S	**Sn**	**06 36 12.3**	**-4.9**
PEIG	**Puerto Escondi**	**4.68**	**303**	*e*P	**Pn**	**06 35 40.4**	**+0.5**
PEIG				*e*S	Sn	06 36 26.9	-7.5
NEUV	**Arroyo Zacate**	**4.96**	**328**	*e*P	**Pn**	**06 35 46.0**	**+2.3**
NEUV				*e*S	**Sn**	**06 36 40.0**	**-1.2**
YOIG	**Yosondua**	**5.48**	**308**	*e*P	**Pn**	**06 35 52.2**	**+1.2**
SCIG	**Sabancuy**	**5.73**	**18**	*e*S	**Sn**	**06 36 57.0**	**-3.0**
FTIG	**Fresnillo de T**	**6.58**	**312**	*e*P	**Pn**	**06 36 07.8**	**+1.8**

*AEIC **02** 06:35:35.9±1.8, 65°.99N±0°.03×166°.19W±0°.07, h12km±1km, Error ellipse: s-maj=4.4km s-min=4.0km az=188.0*
*IDC **02** 06:35:36.9±0.7, 66°.23N×166°.50W, h0km, mb3.9/18, mbtmp3.9/22, ML3.6/4, MS3.2/2, Error ellipse: s-maj=22.6km s-min=10.1km az=29.0*
*NEIC **02** 06:35:36.8±1.8, 65°.99N±0°.03×166°.26W±0°.06, h10km±1km, mb4.0/6, mb_Lg3.7/39, ML4.1/48, Mwr3.8/19, ML3.9(AEIC), Error ellipse: s-maj=5.1km s-min=4.3km az=1.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-6.15; $M_{\theta\theta}$6.19; $M_{\phi\phi}$-0.04; $M_{r\theta}$-0.59; $M_{\theta\phi}$-0.89; $M_{\phi r}$2.76; Fault plane solution: $M_0$6.84000×10^{14} NP1: ϕ_s117.90000°, δ53.05000°, λ-64.27000°. NP2: ϕ_s259.18000°, δ43.95000°, λ-119.99000°. Principal axes: T 6.3945, Plg5.0000°, Azm190.0000°; N 0.8183, Plg20.0000°, Azm282.0000°; P -7.2128, Plg69.0000°, Azm87.0000°;*
*NEIC **02** 06:35:37.2, 66°.01N×166°.42W, h16km*
ISC 02 06:35:36.7±0.5**, 66°.04N**±0°.03×**166°.14W**±0°.03**, h10**km**, n171, σ1s.15**/182**, mb3.9**/21**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
F14K	**Arctic Creek**	**0.57**	**188**		**Pg**	**06 35 45.7**	**-2.1**
F14K					**Sg**	**06 35 53.2**	**-2.1**
F15K	**North Star Dit**	**0.70**	**118**		**Pg**	**06 35 49.1**	**-1.0**
F15K					**Sg**	**06 35 58.4**	**-0.8**
F15K				IAmb_Lg		06 36 00.2	
	comp=Z,1µm,0.8s						
TNA	**Tin City**	**0.88**	**238**	Pg	**Pg**	**06 35 51.2**	**-2.3**
TNA				Sg	**Sg**	**06 36 02.3**	**-2.7**
TNA				IAML		06 36 06.4	
	comp=E,7µm,0.9s						
TNA				IAML		06 36 07.0	
	comp=N,6µm,0.6s						
G15K	**Niukluk**	**1.37**	**139**		**Pb**	**06 36 00.6**	**-1.7**
G15K					**Pg**	**06 36 01.0**	**-1.9**
G15K					**Sg**	**06 36 19.2**	**-1.4**
G15K					**Sn**	**06 36 20.0**	**+0.1**
ANM	**Nome**	**1.52**	**167**	Pn	**Pb**	**06 36 03.0**	**-1.9**
ANM				Sn	**Sb**	**06 36 22.1**	**-2.0**
ANM				IAML		06 36 24.9	
	comp=E,2µm,0.4s						
G16K	**Koyuk River**	**1.70**	**111**		**Pn**	**06 36 05.5**	**-0.8**
G16K	**Koyuk River**	**1.70**	**111**	IAML		06 36 39.5	
	comp=E,1µm,0.7s						
E17K	**Hotham Inlet**	**2.02**	**57**		**Pn**	**06 36 09.8**	**-0.9**
E17K					**Pb**	**06 36 12.2**	**-1.2**
E17K					**Sb**	**06 36 37.3**	**-1.2**
E17K					**Sg**	**06 36 38.7**	**-2.8**
D17K	**Noatak River**	**2.06**	**35**		**Pn**	**06 36 11.1**	**-0.1**
H16K	**Elim**	**2.16**	**129**		**Pn**	**06 36 11.8**	**-0.9**
H16K					**Sn**	**06 36 39.4**	**0.0**
H16K					**Sb**	**06 36 42.4**	**-0.2**
C16K	**Lisburne Hills**	**2.27**	**8**	Pn	**Pn**	**06 36 14.9**	**+0.8**
C16K					**Sb**	**06 36 43.3**	**-2.3**
C16K				IAmb_Lg		06 36 55.0	
	comp=Z,281nm,0.7s						
C16K				IAML		06 36 55.7	
	comp=E,999nm,0.7s						
C16K				IAML		06 37 00.1	
	comp=N,787nm,0.9s						
G17K	**Kiwalik Mounta**	**2.33**	**101**		**Pn**	**06 36 14.3**	**-0.7**
RDOG	**Red Dog Mine**	**2.39**	**31**		**Pn**	**06 36 15.8**	**0.0**
RDOG					**Sb**	**06 36 46.7**	**-2.5**
RDOG				IAmb_Lg		06 36 58.1	
	comp=Z,361nm,0.8s						
E18K	**Tukpahlearik C**	**2.60**	**55**	Pn	**Pn**	**06 36 19.9**	**+1.2**
E18K				IAML		06 37 05.7	
	comp=N,895nm,0.7s						
E18K				IAML		06 37 13.0	
	comp=E,720nm,0.8s						
F18K	**Selawik**	**2.68**	**75**		**Pn**	**06 36 19.2**	**-0.6**
F18K					Pb	06 36 19.4	-5.2
C17K	**DeLong Mountai**	**2.70**	**24**		**Pn**	**06 36 20.1**	**-0.1**
H17K	**Granite Mounta**	**2.82**	**110**		**Pn**	**06 36 21.7**	**-0.1**
H17K				IAML		06 37 09.2	
	comp=N,491nm,0.8s						
H17K				IAmb_Lg		06 37 12.3	
	comp=Z,430nm,0.8s						
H17K				IAML		06 37 12.9	
	comp=E,571nm,0.7s						
G18K	**Tagagawik**	**3.07**	**89**	P	**Pn**	**06 36 24.8**	**-0.4**
G18K	**Tagagawik**	**3.07**	**89**		**Pn**	**06 36 24.6**	**-0.5**
G18K				IAML		06 37 21.1	
	comp=N,227nm,0.7s						
G18K				IAML		06 37 21.1	
	comp=E,238nm,1.0s						
G18K				IAmb_Lg		06 37 24.2	
	comp=Z,209nm,0.7s						
I17K	**Unalakleet**	**3.17**	**131**		**Pn**	**06 36 26.4**	**-0.1**
I17K				Sn	**Sn**	**06 37 03.7**	**-0.6**
C18K	**Utukok River**	**3.25**	**34**	IAmb_Lg		06 37 29.5	
	comp=Z,271nm,1.0s						
H18K	**Honhosa River**	**3.35**	**102**		**Pn**	**06 36 28.8**	**-0.2**
H18K				IAML		06 37 28.6	
	comp=E,389nm,0.5s						
H18K				IAML		06 37 32.8	
	comp=N,526nm,0.8s						
F19K	**Shaleruckik Mo**	**3.46**	**73**		**Pn**	**06 36 30.6**	**+0.2**
J14K	**Nanvaranak Lak**	**3.49**	**160**		**Pn**	**06 36 30.9**	**0.0**
J14K				IAML		06 37 29.6	
	comp=N,357nm,0.9s						
J14K				IAmb_Lg		06 37 30.2	
	comp=Z,287nm,0.8s						
J14K				IAML		06 37 31.5	
	comp=E,416nm,0.8s						
J16K	**Anvik River**	**3.65**	**137**		**Pn**	**06 36 32.9**	**-0.2**
G19K	**Purcell Mounta**	**3.69**	**84**		**Pn**	**06 36 33.2**	**-0.5**
G19K				IAML		06 37 37.1	
	comp=E,251nm,0.8s						
G19K				IAmb_Lg		06 37 38.5	
	comp=Z,266nm,1.0s						
G19K				IAML		06 37 42.4	
	comp=N,258nm,0.6s						
E19K	**Redstone River**	**3.81**	**64**	IAmb_Lg		06 37 46.7	
	comp=Z,174nm,0.7s						
D19K	**Kuna River**	**3.97**	**48**		**Pn**	**06 36 38.9**	**+1.3**
D19K				IAML		06 37 54.5	
	comp=N,272nm,1.1s						
D19K				IAML		06 37 56.4	
	comp=E,209nm,0.8s						
H19K	**Roundabout Mou**	**4.03**	**93**		**Pn**	**06 36 38.3**	**0.0**
H19K				IAML		06 37 49.8	
	comp=N,210nm,0.6s						
H19K				IAmb_Lg		06 37 52.8	
	comp=Z,141nm,0.7s						
J17K	**VABM Dome**	**4.03**	**128**		**Pn**	**06 36 39.1**	**+0.8**
J17K				IAML		06 37 47.7	
	comp=N,276nm,0.6s						
J17K				IAmb_Lg		06 37 49.3	
	comp=Z,237nm,0.8s						
GCSA	**Galena City Sc**	**4.09**	**104**		**Pn**	**06 36 39.2**	**+0.2**
K13K	**Kusilvak Mount**	**4.18**	**170**		**Pn**	**06 36 39.9**	**-0.4**
K13K				IAmb_Lg		06 37 50.2	
	comp=Z,310nm,0.7s						
K13K				IAML		06 37 51.1	
	comp=N,298nm,1.1s						
K15K	**Wolf Creek Mou**	**4.27**	**150**		**Pn**	**06 36 41.8**	**+0.2**
K15K				IAmb_Lg		06 37 58.4	
	comp=Z,257nm,0.8s						
E20K	**Nigu River**	**4.47**	**56**		**Pn**	**06 36 45.6**	**+1.1**
D20K	**Etivluk River**	**4.55**	**50**		**Pn**	**06 36 45.5**	**0.0**
D20K					Pb	06 36 45.8	-11
D20K	**Etivluk River**	**4.55**	**50**	IAML		06 38 08.9	
	comp=E,150nm,1.0s						
D20K				IAML		06 38 09.7	
	comp=N,148nm,0.8s						
D20K				IAmb_Lg		06 38 11.2	
	comp=Z,111nm,0.8s						
H20K	**Anotleneega Mo**	**4.67**	**92**		**Pn**	**06 36 47.0**	**-0.2**
K17K	**Iditarod**	**4.77**	**131**		**Pn**	**06 36 48.8**	**+0.4**
K17K				IAmb_Lg		06 38 20.9	
	comp=Z,119nm,0.9s						
J18K	**Innoko River**	**4.79**	**118**		**Pn**	**06 36 48.8**	**0.0**
J18K	**Innoko River**	**4.79**	**118**	IAmb_Lg		06 38 12.9	
	comp=Z,137nm,1.1s						
J18K				IAML		06 38 13.2	
	comp=N,117nm,1.1s						
L15K	**Ungalak Mounta**	**4.84**	**153**		**Pn**	**06 36 49.5**	**+0.1**
J19K	**Poorman**	**4.91**	**110**		**Pn**	**06 36 50.7**	**+0.3**
L14K	**Kuka Creek**	**4.96**	**160**		**Pn**	**06 36 51.1**	**+0.1**
L14K	**Kuka Creek**	**4.96**	**160**	IAmb_Lg		06 38 24.1	
	comp=Z,146nm,1.1s						
I20K	**Naaghedeneel**	**5.03**	**99**		**Pn**	**06 36 51.7**	**-0.3**
G21K	**Allakaket**	**5.13**	**79**		**Pn**	**06 36 53.0**	**-0.4**
L17K	**Donlin**	**5.21**	**135**		**Pn**	**06 36 54.7**	**+0.1**
B20K	**Meade River**	**5.22**	**36**		**Pn**	**06 36 55.8**	**+1.2**
L16K	**Owhat River**	**5.25**	**143**		**Pn**	**06 36 54.9**	**-0.2**
L16K				IAmb_Lg		06 38 28.8	
	comp=Z,97nm,1.0s						
C21K	**Knifeblade Rid**	**5.35**	**49**		**Pn**	**06 36 57.5**	**+1.1**
J20K	**Nowinta River**	**5.40**	**105**		**Pn**	**06 36 57.7**	**+0.5**
M14K	**Bethel**	**5.63**	**159**		**Pn**	**06 37 00.7**	**+0.4**
M14K				IAmb_Lg		06 38 49.3	
	comp=Z,83nm,0.9s						
L18K	**Granite Mounta**	**5.64**	**128**		**Pn**	**06 37 01.7**	**+1.3**
M11K	**Mekoryuk**	**5.68**	**180**		**Pn**	**06 37 00.6**	**-0.4**
M13K	**Dall Lake**	**5.79**	**166**	IAmb_Lg		06 38 52.0	
	comp=Z,101nm,0.8s						
K20K	**Telida**	**5.83**	**112**		**Pn**	**06 37 03.9**	**+0.8**
M15K	**Kasigluk River**	**5.90**	**153**		**Pn**	**06 37 03.9**	**0.0**
I21K	**Tanana**	**5.93**	**92**		**Pn**	**06 37 04.9**	**+0.5**
M16K	**Timber Creek**	**5.97**	**144**		**Pn**	**06 37 05.6**	**+0.6**
H22K	**Ishtalitna Cre**	**6.04**	**85**		**Pn**	**06 37 06.8**	**+0.9**
M17K	**Holitna River**	**6.05**	**136**		**Pn**	**06 37 07.2**	**+1.1**
CHUM	**Lake Minchumin**	**6.25**	**104**		**Pn**	**06 37 09.5**	**+0.7**
L19K	**White Mountain**	**6.28**	**123**		**Pn**	**06 37 09.8**	**+0.6**
A21K	**Barrow**	**6.33**	**29**		**Pn**	**06 37 10.0**	**+0.2**
A22K	**Sinclair Lake**	**6.44**	**34**		**Pn**	**06 37 11.8**	**+0.4**
M18K	**Stony River**	**6.46**	**130**		**Pn**	**06 37 12.1**	**+0.5**
N14K	**Kuskokwak Cree**	**6.47**	**160**		**Pn**	**06 37 12.3**	**+0.6**
N14K				IAmb_Lg		06 39 13.2	
	comp=Z,83nm,0.7s						
MLY	**Manley**	**6.48**	**92**		**Pn**	**06 37 11.9**	**0.0**
N15K	**Kwethluk River**	**6.50**	**152**		**Pn**	**06 37 12.7**	**+0.5**
N16K	**Nishlik Lake**	**6.50**	**146**		**Pn**	**06 37 12.7**	**+0.4**
D23K	**Nanushuk River**	**6.61**	**57**		**Pn**	**06 37 15.5**	**+1.8**
BPAW	**Bear Paw Mtn.**	**6.69**	**100**		**Pn**	**06 37 15.6**	**+0.7**
H23K	**Yukon River**	**6.79**	**84**		**Pn**	**06 37 16.6**	**+0.4**
PPLA	**Purkeypile**	**6.80**	**111**		**Pn**	**06 37 17.7**	**+1.2**
N17K	**Nushagak Hills**	**6.84**	**140**		**Pn**	**06 37 17.6**	**+0.7**
TOLK	**Toolik Lake Re**	**6.91**	**60**		**Pn**	**06 37 19.5**	**+1.7**
KTH	**Kantishna Hill**	**6.96**	**104**		**Pn**	**06 37 19.4**	**+0.8**
I23K	**Minto, Yukon-K**	**7.01**	**90**	Pn	**Pn**	**06 37 19.1**	**-0.1**
N18K	**Kilae Creek**	**7.08**	**135**		**Pn**	**06 37 21.8**	**+1.6**
M20K	**Styx River**	**7.08**	**120**		**Pn**	**06 37 21.8**	**+1.6**
O14K	**Tigyukauivet M**	**7.17**	**160**		**Pn**	**06 37 21.7**	**+0.3**
TRF	**Thorofare Moun**	**7.26**	**104**		**Pn**	**06 37 23.8**	**+1.0**
NEA2	**Nenana**	**7.29**	**94**		**Pn**	**06 37 23.7**	**+0.7**
N19K	**Bonanza Creek**	**7.40**	**130**		**Pn**	**06 37 25.8**	**+1.1**
O16K	**Kokwok River B**	**7.44**	**147**		**Pn**	**06 37 26.0**	**+0.9**
H24K	**Noodor Dome**	**7.46**	**83**		**Pn**	**06 37 25.9**	**+0.4**
O15K	**Ungalikthiuk R**	**7.48**	**154**		**Pn**	**06 37 25.7**	**+0.1**
O17K	**Koliganek Bris**	**7.52**	**143**		**Pn**	**06 37 26.1**	**-0.1**
MDM	**Murphy Dome**	**7.52**	**90**		**Pn**	**06 37 26.2**	**0.0**
L22K	**Petersville**	**7.55**	**111**		**Pn**	**06 37 28.9**	**+2.2**
SPNN	**North Nagishla**	**7.58**	**122**		**Pn**	**06 37 27.8**	**+0.5**
SKT	**Skwentna**	**7.59**	**116**		**Pn**	**06 37 29.0**	**+1.7**
MCK	**McKinley**	**7.67**	**100**		**Pn**	**06 37 29.3**	**+1.0**
COLA	**College**	**7.70**	**90**		**Pn**	**06 37 29.1**	**+0.4**
WRH	**Wood River Hil**	**7.73**	**93**		**Pn**	**06 37 29.2**	**+0.1**
CCB	**Clear Creek Bu**	**7.79**	**92**		**Pn**	**06 37 30.2**	**+0.3**
POKR	**Poker Plat Res**	**7.80**	**88**	Pn	**Pn**	**06 37 30.4**	**+0.3**
CUT	**Chulitna**	**7.81**	**110**		**Pn**	**06 37 32.1**	**+1.9**
SPCP	**Crater Peak Br**	**7.84**	**121**		**Pn**	**06 37 31.6**	**+0.9**
RND	**Reindeer**	**7.85**	**102**		**Pn**	**06 37 32.1**	**+1.3**
SPCN	**Chakachatna No**	**7.86**	**121**		**Pn**	**06 37 31.5**	**+0.5**
SPCG	**Spurr Capps Gl**	**7.87**	**121**		**Pn**	**06 37 31.8**	**+0.7**
O19K	**Port Alsworth**	**7.93**	**132**		**Pn**	**06 37 32.8**	**+1.0**
SPU	**Mount Spurr**	**7.94**	**121**		**Pn**	**06 37 33.6**	**+1.7**
P16K	**Nushagak River**	**7.97**	**148**	Pn	**Pn**	**06 37 32.6**	**+0.2**
NCT	**North Crescent**	**8.09**	**127**		**Pn**	**06 37 34.5**	**+0.5**
IL01		**8.13**	**90**		**Pn**	**06 37 34.8**	**+0.3**
IL31		**8.13**	**90**		**Pn**	**06 37 34.9**	**+0.5**
ILAR	**Eielson Array**	**8.13**	**90**	Pn	**Pn**	**06 37 34.6**	**+0.1**
	comp=Z,2.0nm,0.3s,baz=283,slow=13,SNR=114						
ILAR				Sn	**Sn**	**06 39 03.8**	**-2.5**
	comp=Z,1.1nm,0.3s,baz=285,slow=22,SNR=7.7						
ILAR				Lg	Lg	06 39 52.7	
	baz=293,slow=24						
	comp=Z,5.3nm,0.4s						
ILAR	**Eielson Array**	**8.13**	**90**		**Pn**	**06 37 34.4**	**-0.1**
WAT7	**Susitna Watana**	**8.13**	**105**		**Pn**	**06 37 34.9**	**+0.2**
DFR	**Drift River**	**8.14**	**126**		**Pn**	**06 37 35.0**	**+0.2**
SUA	**Susitna One**	**8.21**	**117**		**Pn**	**06 37 38.0**	**+2.1**
RDT	**Redoubt**	**8.25**	**125**		**Pn**	**06 37 36.1**	**-0.2**
E25K	**Arctic Village**	**8.28**	**66**		**Pn**	**06 37 38.2**	**+1.5**
P18K	**Big Mountain,**	**8.33**	**138**		**Pn**	**06 37 38.1**	**+0.7**
PRP	**Porcupine Dome**	**8.48**	**84**	Pn	**Pn**	**06 37 40.7**	**+1.1**
DHY	**Denali Highway**	**8.60**	**102**		**Pn**	**06 37 42.3**	**+1.2**
GHO	**Glory Hole Cre**	**8.70**	**111**	Pn	**Pn**	**06 37 43.9**	**+1.5**
P19K	**Oil Pt**	**8.70**	**131**	Pn	**Pn**	**06 37 43.4**	**+1.0**
WAT6	**Susitna Watana**	**8.70**	**105**		**Pn**	**06 37 42.2**	**-0.3**
PMR	**Palmer**	**8.73**	**113**		**Pn**	**06 37 44.6**	**+1.9**
J25K	**Salcha River,**	**8.79**	**90**		**Pn**	**06 37 43.9**	**+0.2**
RC01	**Rabbit Creek A**	**8.83**	**117**	Pn	**Pn**	**06 37 45.7**	**+1.6**
SML	**Sawmill**	**8.90**	**110**		**Pn**	**06 37 46.8**	**+1.6**
K24K	**Donnelly Dome**	**8.92**	**95**	Pn	**Pn**	**06 37 45.5**	**+0.1**
KNK	**Knik Glacier**	**9.09**	**112**		**Pn**	**06 37 50.3**	**+2.5**
Q19K	**Cape Douglas,**	**9.17**	**135**	Pn	**Pn**	**06 37 49.8**	**+1.0**
C27K	**Jago River**	**9.18**	**57**		**Pn**	**06 37 48.9**	**0.0**
SCM	**Sheep Creek Mo**	**9.27**	**108**		**Pn**	**06 37 53.3**	**+3.0**
BRLK	**Bradley Lake**	**9.36**	**125**	Pn	**Pn**	**06 37 52.9**	**+1.4**
PAX	**Paxson**	**9.41**	**99**	Pn	**Pn**	**06 37 53.5**	**+1.3**
CNPM	**China Poot**	**9.43**	**127**	Pn	**Pn**	**06 37 53.2**	**+0.8**
M24K	**Tolsona, Glenn**	**9.57**	**105**		**Pn**	**06 37 56.4**	**+2.1**
PLK4	**Peulik 4**	**9.61**	**147**	Pn	**Pn**	**06 37 55.3**	**+0.4**
KLU	**Klutina**	**10.02**	**108**	Pn	**Pn**	**06 38 01.9**	**+1.4**
D27M	**Malcolm River**	**10.07**	**60**		**Pn**	**06 38 02.0**	**+0.8**
MENT	**Mentasta**	**10.13**	**97**	Pn	**Pn**	**06 38 02.2**	**+0.2**
KDAK	**Kodiak Island**	**10.44**	**136**	Pn	**Pn**	**06 38 09.2**	**+3.1**
	comp=Z,1.7nm,0.3s,baz=12,slow=5.1,SNR=24						
KDAK				Sn	**Sn**	**06 40 03.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=279,slow=18,SNR=5.9						
	comp=Z,4.4nm,0.3s						
BCAR	**Beaver Creek A**	**10.86**	**95**	Pn	**Pn**	**06 38 11.7**	**-0.3**
INK	**Inuvik**	**12.77**	**65**	Pn	**Pn**	**06 38 38.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=268,slow=11,SNR=4.4						
INK				Sn	**Sn**	**06 40 56.2**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=311,slow=20,SNR=1.7						
	comp=Z,2.9nm,0.9s						
C36M	**Paulatuk**	**16.06**	**59**		**P**	**06 39 23.0**	**-2.5**
C36M				IAmb	IAmb	06 39 27.9	
	comp=Z,9.4nm,0.8s						
DLBC	**Dease Lake**	**18.22**	**97**	P	**P**	**06 39 51.3**	**+1.7**
	baz=275,slow=26,SNR=3.0						
	comp=Z,2.1nm,0.8s						
YKAW3	**Yellowknife Wh**	**22.08**	**75**		**P**	**06 40 31.8**	**+0.5**
YKAW3				IAmb	IAmb	06 40 38.3	
	comp=Z,7.6nm,0.8s						
YKA	**Yellowknife Ar**	**22.12**	**75**	P	**P**	**06 40 33.5**	**+1.7**
	comp=Z,3.8nm,0.8s,baz=302,slow=11,SNR=17						
YKA				PcP	**PcP**	**06 44 28.3**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=307,slow=2.2,SNR=3.0						
	comp=Z,3.8nm,0.8s						
YKA	**Yellowknife Ar**	**22.12**	**75**	P	**P**	**06 40 32.0**	**+0.2**
YKAW1	**Yellowknife Wh**	**22.17**	**75**		**P**	**06 40 32.8**	**+0.5**
YKAW1				IAmb	IAmb	06 40 38.9	
	comp=Z,9.3nm,0.9s						
RES	**Resolute Bay**	**23.81**	**39**	LR	LR	06 53 47.0	
	comp=Z,42nm,18.1s,baz=8.0,slow=46						
PDAR	**Pinedale Array**	**38.45**	**99**	P	**P**	**06 43 00.4**	**+1.9**
	comp=Z,0.7nm,0.9s,baz=335,slow=9.7,SNR=4.3						
	comp=Z,0.7nm,0.9s						
NVAR	**Mina Array Bea**	**38.71**	**111**	P	**P**	**06 43 03.5**	**+2.8**
	comp=Z,1.8nm,0.8s,baz=311,slow=7.7,SNR=8.3						
	comp=Z,1.8nm,0.8s						
SFJD	**Kangerlussuaq**	**39.63**	**34**	LR	LR	07 03 48.5	
	comp=Z,39nm,18.1s,baz=112,slow=43						
SONM	**Songino Array**	**46.63**	**292**	P	**P**	**06 44 05.9**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=44,slow=8.6,SNR=2.1						
SONM				PcP	**PcP**	**06 45 38.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=33,slow=3.4,SNR=1.6						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**46.63**	**292**	P	**P**	**06 44 05.2**	**+0.5**
ZALV	**Zalesovo Beam**	**48.89**	**312**	P	**P**	**06 44 21.9**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=21,slow=8.5,SNR=2.5						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**52.43**	**102**	P	**P**	**06 44 50.6**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=331,slow=7.4,SNR=5.7						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**52.43**	**102**	P	**P**	**06 44 49.2**	**0.0**
FINES	**FINESS Array B**	**52.50**	**353**	P	**P**	**06 44 49.8**	**+0.7**
	comp=Z,3.9nm,1.1s,baz=11,slow=5.7,SNR=3.6						
	comp=Z,3.9nm,1.1s						

KURBB	Kurchatov Arra	53.67	314	P	P	06 44 58.2	+0.3
	comp=Z,1.7nm,0.2s,baz=27,slow=6.7,SNR=1.7						
	comp=Z,1.7nm,0.2s						
BVAR	Borovoye Array	53.74	321	P	P	06 44 58.9	+0.5
	comp=Z,0.5nm,0.5s,baz=31,slow=8.8,SNR=3.5						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	55.94	310	P	P	06 45 13.9	-0.5
	comp=Z,0.4nm,0.8s,baz=43,slow=6.1,SNR=2.8						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	55.94	310	P	P	06 45 14.5	+0.1
MAKZ	Makanchi	56.02	310	P	P	06 45 15.5	+0.5
MAKZ				IAmb	IAmb	06 45 22.2	
	comp=Z,0.8nm,1.0s						
EKA	Eskdalemuir Ar	58.26	11	P	P	06 45 31.6	+0.9
	comp=Z,0.6nm,0.4s,baz=354,slow=6.9,SNR=7.9						
	comp=Z,0.6nm,0.4s						
AKTO	Aktyubinsk	59.04	329	P	P	06 45 36.9	+0.7
	comp=Z,1.8nm,0.8s,baz=28,slow=2.0,SNR=6.3						
	comp=Z,1.8nm,0.8s						
BELG	Belogornoye	59.12	337	P	P	06 45 36.3	-0.3
	comp=Z,5.6nm,0.7s,baz=326,slow=7.3,SNR=3.9						
	comp=Z,5.6nm,0.7s						
AKASG	Malin Array Be	62.99	349	P	P	06 46 03.6	+0.7
	comp=Z,0.4nm,0.3s,baz=10,slow=6.0,SNR=2.3						
	comp=Z,0.4nm,0.3s						
KBZ	Khabaz	68.29	338	P	P	06 46 37.3	0.0
	comp=Z,2.7nm,0.9s,baz=37,slow=5.1,SNR=4.2						
	comp=Z,2.7nm,0.9s						
BRTR	Keskin Array B	73.46	344	P	P	06 47 10.1	+1.1
	comp=Z,0.6nm,0.9s,baz=17,slow=5.3,SNR=2.5						
	comp=Z,0.6nm,0.9s						
ESDC	Sonseca Array	73.72	14	P	P	06 47 11.9	+1.6
	comp=Z,0.9nm,0.8s,baz=354,slow=5.4,SNR=6.9						
	comp=Z,0.9nm,0.8s						
CMAR	Chiang Mai Arr	75.28	282	P	P	06 47 20.1	+0.5
	comp=Z,1.1nm,0.3s,baz=28,slow=5.6,SNR=8.2						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	75.28	282	P	P	06 47 20.7	+1.0

*IDC **02** 06:35:48.6±0.9, 32.31N×105.21E, h0km, mb3.7/6, mbtmp3.7/9, ML4.7/2, Error ellipse: s-maj=37.8km s-min=17.9km az=54.0*

ISC 02 06:35:51.0±0.9**, 32.30N**±0.07×**105.2E**±0.1**, h15km, n9, σ1s12**/11**, mb3.8**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	3.84	342	Pn	Pn	06 36 50.1	+0.2
	baz=168,slow=15						
LZDM				Sn	Sn	06 37 34.1	-0.8
	baz=166,slow=19						
LZDM				Lg	Lg	06 37 47.5	
	baz=177,slow=31						
	25nm,0.3s						
CMAR	Chiang Mai Arr	14.88	204	Pn	Pn	06 39 22.6	+1.6
	1.2nm,0.3s,baz=22,slow=10,SNR=5.4						
CMAR				Sn	Sn	06 42 03.5	-2.1
	0.6nm,0.3s,baz=30,slow=46,SNR=1.5						
	1.2nm,0.3s						
KSRS	Korea Array	19.35	68	P	P	06 40 15.9	-0.1
	1.0nm,0.7s,baz=264,slow=9.7,SNR=4.1						
MKAR	Makanchi Array	22.70	316	P	P	06 40 51.6	-0.5
	1.0nm,0.7s,baz=115,slow=9.9,SNR=5.9						
	1.0nm,0.7s						
KURBB	Kurchatov Arra	26.85	321	P	P	06 41 31.2	+0.4
	0.5nm,0.2s,baz=129,slow=11,SNR=5.0						
	0.5nm,0.2s						
BRTR	Keskin Array B	56.94	299	P	P	06 45 36.8	+0.9
	0.4nm,0.6s,baz=101,slow=4.6,SNR=2.6						
	0.4nm,0.6s						
WRA	Warramunga Arr	58.99	148	P	P	06 45 49.5	-0.6
	0.8nm,0.7s,baz=339,slow=7.6,SNR=10						
	0.8nm,0.7s						
ASAR	Alice Springs	62.06	150	P	P	06 46 11.1	-0.1
	0.6nm,0.8s,baz=331,slow=6.3,SNR=5.3						
	0.6nm,0.8s						
NOA	NORSAR Array B	64.14	327	P	P	06 46 23.8	-0.7
	0.9nm,0.7s,baz=73,slow=6.5,SNR=3.3						
	0.9nm,0.7s						

*CNRM **02** 06:38:10.2, 35.69N×3.67W, h10km, ML2.4*
*SFS **02** 06:38:12.3, 35.41N×3.66W, h5km, ML3.1/13, ML3.3/14, MLv3.1/14*
*MDD **02** 06:38:12.4±1.1, 35.38N×3.68W, h8km±8km, mb_Lg2.6/9, Error ellipse: s-maj=8.7km s-min=6.7km az=170.0*
*INMG **02** 06:38:13.3±1.4, 35.41N×3.63W, h16km, ML1.9, Error ellipse: s-maj=6.4km s-min=3.7km az=14.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

ISC 02 06:38:12.5±1.5**, 35.46N**±0.02×**3.64W**±0.03**, h17km**±12km**, n45, σ1s37**/81**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.35	225	P	Pb	06 38 20.5	+0.2
PALE				S	Sb	06 38 27.5	+2.0
WMELI	Melilla	0.58	104	P	Pb	06 38 23.8	-0.4
WMELI				S	Sb	06 38 31.5	-0.8
EMEL	Melilla	0.58	106	Sg	Sb	06 38 31.4	-0.9
EMEL				*i* IVmb_Lg		06 38 32.7	
EMLI	Melilla	0.59	106	P	Pb	06 38 24.4	0.0
EMLI				S	Sb	06 38 31.1	-1.4
EALB	Alboran	0.69	46	P	Pb	06 38 26.2	+0.2
EALB				S	Sb	06 38 35.6	+0.4
EALB	Alboran	0.69	46	Pg	Pb	06 38 26.4	+0.4
EALB				Sg	Sb	06 38 36.0	+0.8
EALB				*i* IVmb_Lg		06 38 37.3	
AKLM	AKL	0.97	191	P	Pn	06 38 31.6	+0.2
AKLM				S	Sn	06 38 46.9	+2.0
ELGU	Los Guajares,	1.40	1	P	Pn	06 38 36.6	-0.8
ELGU				S	Sn	06 38 54.9	-0.6
ELGU	Los Guajares,	1.40	1	Pn	Pn	06 38 37.3	-0.1
ELGU				Sn	Sn	06 38 56.1	+0.5
ELGU				*i* IVmb_Lg		06 39 00.2	
JBK	JBK	1.43	142	P	Pg	06 38 39.1	-1.1
JBK				S	Sg	06 39 00.6	+1.8
CHEFC	Chefchaouen	1.43	256	P	Pn	06 38 37.2	-0.7
CHEFC				S	Sn	06 38 57.2	+0.8
SMIR	Smir Dam	1.43	279	P	Pn	06 38 36.4	-1.4
SMIR				S	Sn	06 38 55.9	-0.3
EMAL	Malaga-Limoner	1.44	334	P	Pn	06 38 37.0	-0.9
EMAL				S	Sn	06 38 55.9	-0.6
ECEU	Ceuta	1.48	288	P	Pn	06 38 37.5	-0.9
ECEU				S	Sn	06 38 55.3	-2.0
ECEU	Ceuta	1.48	288	Sn	Sn	06 38 55.2	-2.1
ECEU				*i* IVmb_Lg		06 38 56.6	
EBER	Berja	1.56	23	P	Pn	06 38 39.0	-0.6
EGOR	Sierra Gorda,	1.69	347	P	Pn	06 38 42.4	+1.0
EGOR				S	Sb	06 39 05.8	+1.7
EGOR	Sierra Gorda,	1.69	347	Pn	Pn	06 38 42.1	+0.7
EGOR				Sn	Sn	06 39 04.1	+1.4
EGOR				*i* IVmb_Lg		06 39 09.2	
EQTA	Presa de Quent	1.75	5	S	Sn	06 39 03.6	-0.6
RSA	Sarsar	1.88	253	P	Pn	06 38 43.4	-0.5
RSA				S	Sn	06 39 08.5	+1.2
IFR	Ifrane	2.30	213	P	Pn	06 38 49.2	-0.6
IFR				S	Sn	06 39 16.2	-1.6
EQES	Quesada	2.38	11	Pn	Pb	06 38 53.6	-1.3
EQES				Sn	Sb	06 39 22.9	-1.2
EQES				*i* IVmb_Lg		06 39 24.5	
MD31	MD31	2.75	200	P	Pn	06 38 57.3	+1.3
MD31				S	Sb	06 39 34.5	-0.4
MDT	Midelt	2.76	197	P	Pn	06 38 57.8	+1.7
MDT				S	Sb	06 39 34.5	-0.7
EADA	Adamuz	2.80	345	P	Pn	06 38 57.6	+1.0
EADA				S	Sn	06 39 32.9	+2.8
EADA	Adamuz	2.80	345	Pn	Pn	06 38 58.4	+1.8
EADA				Sn	Sn	06 39 30.6	+0.5
EADA				*i* IVmb_Lg		06 39 39.8	
ECAB	El Cabril	2.97	332	P	Pn	06 39 00.5	+1.5
ECAB				S	Sn	06 39 36.4	+2.1
EMUR	La Murta	3.06	38	S	Sn	06 39 35.4	-1.1
ETOB	Tobarra	3.59	27	P	Pn	06 39 09.0	+1.5
ETOB				S	Sn	06 39 50.8	+1.3
PVAQ	Vaqueiros	3.81	302	*e*P	Pn	06 39 11.0	+0.5
PVAQ				*e*S	Sn	06 39 54.5	-0.5
PVAQ				*i* IAML		06 39 57.4	
PVAQ				*i* IAML		06 40 01.4	
PVAQ				*i* IAML		06 40 01.6	
PVAQ	Vaqueiros	3.81	302	P	Pn	06 39 06.7	-3.8
PVAQ				S	Sn	06 39 51.4	-3.6
PBAR	Barrancos	3.84	316	P	Pn	06 39 10.8	0.0
PBAR				S	Sn	06 39 55.5	-0.1
PBAR	Barrancos	3.84	316	*e*P	Pn	06 39 11.7	+0.9
PBAR				*e*S	Sn	06 39 55.3	-0.3
PBAR				*i* IAML		06 40 00.5	
PBAR				*i* IAML		06 40 00.7	
PBAR				*i* IAML		06 40 00.8	
PBDV	Barranco-do-Ve	3.89	298	P	Pn	06 39 11.2	-0.3
PBDV				S	Sn	06 39 57.0	0.0
PBDV	Barranco-do-Ve	3.89	298	*e*P	Pn	06 39 12.4	+0.9
PBDV				*e*S	Sn	06 39 56.0	-0.9
PBDV				*i* IAML		06 39 58.5	
PBDV				*i* IAML		06 40 05.7	
PCVE	Castro Verde	4.15	303	P	Pn	06 39 12.8	-2.3
PCVE				S	Sn	06 40 04.0	+0.8
PCVE	Castro Verde	4.15	303	*e*S	Sn	06 40 05.1	+1.9
EBAD	Badajoz	4.25	322	P	Pn	06 39 16.4	-0.1
EBAD				S	Sn	06 40 05.6	-0.1
MESJ	Messejana	4.38	304	*e*P	Pn	06 39 20.1	+1.9
MORF	Marmelete	4.44	296	*e*S	Sn	06 40 10.7	+0.2
EVO	Evora	4.65	312	P	Pn	06 39 22.6	+0.6
EVO				S	Sn	06 40 14.6	-1.0
EVO	Evora	4.65	312	*e*P	Pn	06 39 23.5	+1.5
EVO				*e*S	Sn	06 40 14.2	-1.3
PARRA	Arraiolos	4.85	315	*e*P	Pn	06 39 27.2	+2.4
PARRA				*e*S	Sn	06 40 19.1	-1.5
PMRV	Marv??o	4.96	324	*e*P	Pn	06 39 28.9	+2.7
EIBI	Ibiza	5.33	47	P	Pn	06 39 31.3	-0.1
EIBI				S	Sn	06 40 30.5	-2.0

*IDC **02** 06:51:57.4±5.3, 4.76S×153.10E, h54km±45km, mb3.8/13, mbtmp4.1/14, ML1.6/1, MS2.8/5, Error ellipse: s-maj=35.1km s-min=21.3km az=107.0*

ISC 02 06:51:56.1±1.1**, 4.8S**±0.2×**153.2E**±0.2**, h43km, n20, σ1s30**/18**, mb4.0**/13**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.52	232	P	Pn	06 53 44.5	+1.3
	0.6nm,0.3s,baz=198,slow=14,SNR=2.0						
PMG				S	Sn	06 55 08.0	+0.8
	10.0nm,0.6s,baz=184,slow=23,SNR=1.4						
	14nm,0.8s						
HNR	Honiara	8.17	125	LR	LR	06 57 13.2	
	comp=Z,8.9nm,20.2s,baz=30,slow=38						
JAY	Jayapura	12.62	280	LR	LR	06 58 21.2	
	comp=Z,39nm,21.1s,baz=18,slow=30						
CTA	Charters Tower	16.63	203	LR	LR	07 01 06.2	
	comp=Z,46nm,22.0s,baz=0.5,slow=33						
SIJI	Sorong	22.20	279	LR	LR	07 07 02.7	
	comp=Z,111nm,18.1s,baz=97,slow=41						
WRA	Warramunga Arr	23.72	229	P	P	06 57 04.9	+0.5
	1.8nm,0.4s,baz=51,slow=9.8,SNR=29						
WRA				S	S	07 01 12.8	-4.1
	0.2nm,0.6s,baz=328,slow=16,SNR=1.9						
	1.8nm,0.4s						
ASAR	Alice Springs	26.40	223	P	P	06 57 29.4	+0.6
	0.2nm,0.5s,baz=52,slow=8.7,SNR=13						
ASAR				LR	LR	07 09 00.6	
	comp=Z,42nm,18.6s,baz=264,slow=39						
	0.2nm,0.5s						
FITZ	Fitzroy Crossi	29.98	242	P	P	06 57 59.6	-1.1
	2.7nm,0.5s,baz=57,slow=13,SNR=6.2						
	2.7nm,0.5s						
KSRS	Korea Array	48.14	333	P	P	07 00 31.8	-0.2
	1.2nm,0.8s,baz=151,slow=8.0,SNR=5.6						
	1.2nm,0.8s						
PETK	Petropavlovsk-	57.80	3	P	P	07 01 43.4	+0.5
	5.0nm,1.0s,baz=188,slow=6.6,SNR=4.4						
	5.0nm,1.0s						
CMAR	Chiang Mai Arr	58.19	295	P	P	07 01 47.0	+0.7
	1.2nm,0.3s,baz=108,slow=7.8,SNR=5.0						
	1.2nm,0.3s						
LZDM	Lanzhou Array	61.50	315	P	P	07 02 09.5	+0.3
	1.1nm,0.5s,baz=90,slow=7.4,SNR=5.1						
	1.1nm,0.5s						
MKAR	Makanchi Array	80.54	319	P	P	07 04 03.6	-0.4
	0.6nm,0.5s,baz=98,slow=7.0,SNR=11						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	81.33	326	P	P	07 04 07.0	-0.9
	0.6nm,0.4s,baz=112,slow=6.1,SNR=4.4						
	0.6nm,0.4s						
ILAR	Eielson Array	82.01	22	P	P	07 04 10.4	-0.9
	0.3nm,0.7s,baz=250,slow=5.0,SNR=7.5						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	84.00	322	P	P	07 04 21.5	-0.4
	0.8nm,0.2s,baz=100,slow=4.6,SNR=0.9						
	0.8nm,0.2s						
BVAR	Borovoye Array	89.44	323	P	P	07 04 47.6	-0.8
	2.9nm,0.6s,baz=101,slow=7.5,SNR=18						
	2.9nm,0.6s						
YKA	Yellowknife Ar	95.25	28	P	P	07 05 16.1	+1.1
	0.1nm,0.5s,baz=260,slow=4.8,SNR=5.2						
	0.1nm,0.5s						
TORD	Torodi Ar. Bea	150.63	288	PKPbc	PKPbc	07 11 44.3	-0.2
	2.7nm,0.6s,baz=73,slow=2.8,SNR=17						
BDFB	Brasilia	150.83	134	PKPbc	PKPbc	07 11 45.0	-0.1
	1.9nm,0.6s,baz=153,slow=2.3,SNR=5.8						

MEX 02 06:55:08.1±0.5**, 16.54N**×**95.03W, h6km**±9km**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.56	15	*e*P	Pg	06 55 18.3	-0.7
CMIG				*e*S	Sg	06 55 25.8	-0.6
UXUV	UXUV	1.15	48	*e*P	Pg	06 55 29.0	-1.2
UXUV				*e*S	Sg	06 55 44.1	-0.9
HUIG	Huatulco	1.29	233	*e*P	Pn	06 55 30.7	-1.9
HUIG				*e*S	Sb	06 55 48.1	-1.4
NEUV	Arroyo Zacate	1.38	328	*e*P	Pn	06 55 32.7	-1.2
NEUV				*e*S	Sb	06 55 50.1	-2.0
MGIG	Malinaltepec	3.51	282	*e*S	Sn	06 56 35.7	-10

*ISK **02** 06:55:34.3, 39.05N×27.75E, h8km, ML2.1/9*

AFAD 02 06:55:36.3, 38.98N×**27.86E, h7km**±4km**, ML1.6, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.10	199	P	Pg	06 55 39.5	+0.9
AKHS				S	Sg	06 55 41.8	+1.6
AKS	Akhisar	0.10	199	Pg	Pg	06 55 38.9	+0.3
AKS				Sg	Sg	06 55 41.4	+1.2
GORD	Gordes-Manisa	0.26	105	Pg	Pg	06 55 41.7	+0.3
GOMA	Golmarmara-Man	0.27	170	Pg	Pg	06 55 41.8	+0.1
GOMA				Sg	Sb	06 55 47.3	-1.0
KTTT	Salihli	0.34	147	P	Pg	06 55 43.5	+0.5
KTTT				S	Sg	06 55 47.9	+0.4
KTTT				IAML		06 55 49.0	
	comp=N,60nm,0.5s						
STEP	BALIKESIR_Sava	0.41	345	P	Pg	06 55 40.8	-3.6
STEP				S	Sg	06 55 50.1	+0.3
CAMT	Merkez	0.48	242	P	Pg	06 55 46.0	+0.4
CAMT				S	Sb	06 55 53.9	-0.5
ZEDA	zmir-Bergama	0.61	269	P	Pb	06 55 48.7	-0.5
ZEDA				S	Sg	06 55 56.9	+0.9
ZEDA				IAML		06 55 58.0	
	comp=E,52nm,0.4s						
ZEDA				IAML		06 56 01.0	
	comp=N,38nm,0.7s						
IZMD	zmir-Dikili-	0.72	271	P	Pb	06 55 51.7	+0.4
BALY	Balya	0.78	347	P	Pg	06 55 51.6	+0.2
BALY				S	Sg	06 56 01.1	-0.5
IZMR	zmir-demi	0.84	175	P	Pn	06 55 56.1	+1.6
IZMR				S	Sg	06 56 03.1	-0.3
BAGT	Foa	0.85	248	P	Pn	06 55 57.6	+3.0
BAGT				S	Sg	06 56 04.2	+0.6
BLCB	Balcova	0.87	227	Pg	Pg	06 55 51.5	-1.5
YAYO	Edremit-Balk	0.88	316	Pg	Pg	06 55 49.5	-3.7
BLKS	Balkesir-Sus	0.90	6	P	Pb	06 55 54.2	-0.1
BLKS				S	Sg	06 56 03.4	-1.9
BLKS				IAML		06 56 10.0	
	comp=E,15nm,0.4s						
FOCM	Foa	0.92	254	Pg	Pg	06 55 51.2	-2.7
USAK	Uak-Merkez	0.94	106	P	Pn	06 55 59.1	+3.1
AYDB	Zeytinkoy-Aydi	1.03	178	Pn	Pg	06 55 55.8	-0.2
GEDZ	Gediz	1.21	86	Pn	Pg	06 55 59.2	-0.4
TVSB	Tavsanli	1.33	69	Pn	Pn	06 56 00.5	-0.9

MEX 02 07:07:12.5±0.4**, 19.57N**×**102.06W, h28km**±7km**, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URUA	Uruapan	0.15	185	*i* P	Pb	07 07 16.6	-1.6
URUA				*e*S	Sb	07 07 19.8	-2.3
INCO	Volcan de Coli	1.46	268	*e*P	Pn	07 07 35.1	-2.3
INCO				*e*S	Sn	07 07 53.0	-2.9
MNGA	Volcan de Coli	1.48	266	*e*P	Pn	07 07 34.9	-2.6
MNGA				*e*S	Sn	07 07 52.8	-3.3
SOMAC	Volcano de Col	1.48	268	*e*P	Pn	07 07 38.1	+0.4
SOMAC				*e*S	Sn	07 07 54.1	-2.2
CEGR	Campo Tres	1.71	264	*e*P	Pn	07 07 39.4	-1.2
CEGR				*e*S	Sn	07 07 59.2	-2.4
MMIG	Aquila	1.77	224	*e*P	Pn	07 07 38.9	-2.4
MMIG				*e*S	Sn	07 07 58.4	-4.4
CDAR	Ciudad de Arme	1.95	251	*e*P	Pn	07 07 42.5	-1.2
CDAR				*e*S	Sn	07 08 04.8	-2.6
ARIG	Puente Sto Nin	2.07	128	*e*P	Pb	07 07 49.8	+0.4
ARIG				*e*S	Sb	07 08 15.9	+1.1

*RSPR **02** 07:14:26.8, 18.91N×65.15W, h25km±32km, MD3.3/8*

NEIC 02 07:14:26.3±1.0**, 18.9N**±0.1×**65.15W**±0.01**, h35km**±2km**, ML3.3**/45**, Md3.3**/8(RSPR)**, 2C-9D, Error ellipse: s-maj=19.7km s-min=3.1km az=177.0, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.55	193		Pn	07 14 37.9	+0.3
CUPR				IAML		07 14 47.9	
	1μm,0.3s						
CUPR				IAML		07 14 48.0	
	2μm,0.4s						
HUMP	Col San Antoni	0.96	223		Pn	07 14 43.1	-0.2
HUMP				IAML		07 15 02.1	
	570nm,0.2s						
HUMP				IAML		07 15 04.6	
	378nm,0.2s						
HUMP	Col San Antoni	0.96	223		Sn	07 14 55.2	-0.5
HUMP	Col San Antoni	0.96	223	⇓*i*P	Pn	07 14 43.1	-0.2
HUMP				*e*S	Sn	07 14 55.5	-0.3
GCPR	Guaynabo City	1.03	239		Pn	07 14 43.7	-0.6
GCPR					Sn	07 14 57.0	-0.5
GCPR				IAML		07 14 57.5	
	comp=E,253nm,0.5s						
GCPR				IAML		07 14 58.6	
	comp=N,205nm,0.5s						
GCPR	Guaynabo City	1.03	239	⇓*i*P	Pn	07 14 43.5	-0.8
GCPR				*e*S	Sn	07 14 56.4	-1.1
PDPR	Patillas Dam,	1.17	225		Pn	07 14 46.0	-0.1
PDPR				IAML		07 15 06.7	
	comp=N,281nm,0.1s						
PDPR				IAML		07 15 12.8	
	comp=N,203nm,0.2s						
SJG	San Juan	1.20	232		Pn	07 14 46.2	-0.3
SJG				IAML		07 15 02.7	
	comp=N,272nm,0.3s						
SJG				IAML		07 15 05.1	
	comp=N,286nm,0.3s						
SJG	San Juan	1.20	232		Sn	07 15 02.1	+0.6
SJG	San Juan	1.20	232	⇓*i*P	Pn	07 14 46.1	-0.4
SJG				*e*S	Sn	07 15 01.8	+0.3
ECPR	Experimental S	1.26	246		Pn	07 14 46.9	-0.5
ECPR				IAML		07 15 09.2	
	comp=N,875nm,0.2s						
ECPR				IAML		07 15 10.7	
	comp=N,1μm,0.2s						
ECPR	Experimental S	1.26	246	⇑*i*P	Pn	07 14 47.0	-0.5
ECPR				*e*S	Sn	07 15 03.2	+0.1
EMPR	Esperanza - Ma	1.35	254		Pn	07 14 48.3	-0.4
EMPR					Sn	07 15 04.5	-0.9
EMPR	Esperanza - Ma	1.35	254	⇓*i*P	Pn	07 14 48.3	-0.4
EMPR				*e*S	Sn	07 15 04.5	-0.9
CELP	Cerrillos	1.56	241	IAML		07 15 13.8	
	comp=N,330nm,0.4s						
CELP				IAML		07 15 14.0	
	comp=N,229nm,0.4s						
OBIP	Obispado Ponce	1.59	240		Pn	07 14 52.1	+0.1
OBIP					Sn	07 15 11.2	-0.2
OBIP				IAML		07 15 15.0	
	comp=N,82nm,0.5s						
OBIP	Obispado Ponce	1.59	240	⇓*i*P	Pn	07 14 52.0	0.0
OBIP				*e*S	Sn	07 15 11.8	+0.4
UUPR	Utuado, UPR, P	1.60	249		Pn	07 14 51.8	-0.3
UUPR				IAML		07 15 22.1	
	comp=N,3μm,0.4s						
UUPR				IAML		07 15 23.4	
	comp=N,3μm,0.4s						
GBPR	Guanica, Bosqu	1.85	242		Pn	07 14 57.2	+1.6
GBPR					Sn	07 15 19.9	+2.1
GBPR	Guanica, Bosqu	1.85	242	⇑*i*P	Pn	07 14 57.2	+1.6
GBPR				*e*S	Sn	07 15 19.9	+2.1
AGPR	Aguadilla, PR	1.89	259		Pn	07 14 55.4	-0.7
AGPR				IAML		07 15 24.8	
	comp=N,204nm,0.5s						
AGPR				IAML		07 15 27.3	
	comp=N,155nm,0.4s						
AGPR	Aguadilla, PR	1.89	259	⇑*i*P	Pn	07 14 55.4	-0.7
AGPR				*e*S	Sn	07 15 17.9	-0.9
LSP	Las Mesas	1.95	250		Pn	07 14 57.9	+0.9
LSP					Sn	07 15 22.9	+2.7
LSP	Las Mesas	1.95	250	⇑*i*P	Pn	07 14 57.9	+0.9
LSP				*e*S	Sn	07 15 22.9	+2.7
PRSN	Puerto Rico Se	1.99	252		Pn	07 14 57.4	0.0
PRSN				IAML		07 15 30.7	
	comp=N,450nm,0.3s						
PRSN				IAML		07 15 38.5	
	comp=N,444nm,0.3s						
PRSN	Puerto Rico Se	1.99	252		Sn	07 15 23.2	+2.0
PRSN	Puerto Rico Se	1.99	252	⇑*e*P	Pn	07 14 57.5	+0.1
PRSN				*e*S	Sn	07 15 23.2	+2.0
MLPR	Magueyes Islan	2.00	244		Pn	07 14 57.6	+0.1
MLPR				IAML		07 15 27.0	
	comp=N,131nm,0.4s						
MLPR				IAML		07 15 27.9	
	comp=N,88nm,0.6s						
CRPR	Cabo Rojo, PR	2.04	246		Pn	07 14 58.5	+0.5
CRPR				Sn	Sn	07 15 22.0	-0.3
CRPR	Cabo Rojo, PR	2.04	246	IAML		07 15 25.7	
	comp=N,120nm,0.9s						
CRPR				IAML		07 15 38.1	
	comp=N,94nm,0.5s						
CRPR	Cabo Rojo, PR	2.04	246	⇓*i*P	Pn	07 14 58.2	+0.1
CRPR				*e*S	Sn	07 15 21.6	-0.6
SMRT	St. Maarten	2.13	112		Pn	07 14 58.8	-0.5
SMRT				Sn	Sn	07 15 24.0	-0.6
SMRT				IAML		07 15 31.9	
	comp=E,402nm,0.3s						
SMRT				IAML		07 15 38.2	
	comp=N,271nm,0.3s						
SMRT	St. Maarten	2.13	112	⇓*i*P	Pn	07 14 58.8	-0.5
SMRT				*e*S	Sn	07 15 23.7	-0.9
SABA	Saba	2.19	124	Pn	Pn	07 14 59.8	-0.4
SABA				IAML		07 15 33.7	
	comp=N,241nm,0.4s						
SABA				IAML		07 15 42.5	
	comp=E,352nm,0.7s						
SABA	Saba	2.19	124	⇑*e*P	Pn	07 15 01.0	+0.8
SABA				*e*S	Sn	07 15 26.9	+0.8
IDE	Isla Desecheo	2.25	259		Pn	07 15 00.9	-0.1
IDE					Sn	07 15 26.6	-1.0
IDE	Isla Desecheo	2.25	259	⇓*i*P	Pn	07 15 00.9	-0.1
IDE				*e*S	Sn	07 15 26.6	-1.0
SEUS	St. Eustatius	2.47	123	Pn	Pn	07 15 03.6	-0.4
SEUS				IAML		07 16 00.3	
	comp=N,171nm,0.9s						
SEUS				IAML		07 16 02.4	
	comp=E,146nm,1.4s						
DR12	Loma Pena Alta	4.00	270	Pn	Pn	07 15 25.6	+0.4
GDHS	Morne Mazeau,	4.12	128	Pn	Pn	07 15 26.8	-0.1
GDHS				IAML		07 16 18.5	
	comp=N,116nm,0.5s						
GDHS				IAML		07 16 50.9	
	comp=E,108nm,0.6s						
CBE	Ff, Capester	4.37	129	⇓*e*P	Pn	07 15 31.8	+1.5
CBE				*e*S	Sn	07 16 18.1	-1.9
MASC	Masc	8.66	280	*e*P	Pn	07 16 24.0	-5.1
MASC				*e*		07 16 24.1	
	baz=74,slow=16						
MASC				*e*S	Sn	07 17 54.9	-11
MASC				IAML		07 18 02.5	
	comp=N,4.7nm,0.5s						
MASC				IAML		07 18 03.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,1.4nm,0.2s						
QMBU	Quimbuelo	9.21	280	eP	Pn	07 16 33.3	-3.4
QMBU				eS	Sn	07 18 10.8	-8.3
QMBU				IAML		07 18 13.0	
	comp=E,10nm,0.4s						
QMBU				IAML		07 18 18.2	
	comp=N,7.4nm,0.5s						

MEX 02 07:14:28.9±0.4, 19°.49N×102°.14W, h24km±5km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.09	137	i P	Pb	07 14 31.8	-1.8
URUA				eS	Sb	07 14 34.7	-2.1
INCO	Volcan de Coli	1.38	272	eP	Pn	07 14 50.5	-2.5
INCO				eS	Sn	07 15 08.2	-2.6
MNGA	Volcan de Coli	1.40	269	eP	Pn	07 14 50.6	-2.6
MNGA				eS	Sn	07 15 07.4	-3.5
SOMAC	Volcano de Col	1.40	272	eP	Pn	07 14 51.6	-1.7
SOMAC				eS	Sn	07 15 07.9	-3.5
CEGR	Campo Tres	1.62	267	eP	Pn	07 14 54.6	-1.6
CEGR				eS	Sn	07 15 13.8	-2.6
MMIG	Aquila	1.65	224	eP	Pn	07 14 53.8	-2.6
MMIG				eS	Sn	07 15 13.9	-3.0
CDAR	Ciudad de Arme	1.85	253	eP	Pn	07 14 57.2	-2.0
CDAR				eS	Sn	07 15 19.0	-2.8
ZIIG	Zihuatanejo	1.98	161	eP	Pn	07 15 01.2	+0.3
ZIIG				eS	Sn	07 15 25.0	0.0
ARIG	Puente Sto Nin	2.08	125	eP	Pb	07 15 05.0	-1.0
ARIG				eS	Sb	07 15 33.1	+1.6

MEX 02 07:16:07.4±0.4, 19°.46N×102°.17W, h20km±10km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.10	110	eS	Sb	07 16 12.4	-3.2
MOIG	Morelia	0.95	76	eS	Sb	07 16 37.7	0.0
INCO	Volcan de Coli	1.35	273	eP	Pn	07 16 28.3	-3.2
INCO				eS	Sn	07 16 45.5	-3.6
MNGA	Volcan de Coli	1.36	271	eP	Pn	07 16 29.5	-2.1
MNGA				eS	Sn	07 16 45.5	-3.7
SOMAC	Volcano de Col	1.38	273	eP	Pn	07 16 31.6	-0.2
SOMAC				eS	Sn	07 16 46.3	-3.3
CEGR	Campo Tres	1.59	268	eP	Pn	07 16 32.1	-2.5
CEGR				eS	Sn	07 16 51.8	-2.9
MMIG	Aquila	1.61	224	eP	Pn	07 16 31.8	-2.9
MMIG				eS	Sn	07 16 51.6	-3.2
CDAR	Ciudad de Arme	1.81	254	eP	Pn	07 16 34.9	-2.5
CDAR				eS	Sn	07 16 57.1	-2.7
ZIIG	Zihuatanejo	1.96	160	eS	Sn	07 16 52.7	-11
ARIG	Puente Sto Nin	2.09	124	eP	Pn	07 16 38.9	-2.4
ARIG				eS	Sb	07 17 10.2	0.0
CJM	Chamela	2.71	271	eS	Sn	07 17 21.7	-0.3

*IDC **02** 07:19:07.3±0.5, 1°.57S×133°.97E, h0km, mb4.7/20, mbtmp4.8/27, ML4.2/4, MS3.8/27, Error ellipse: s-maj=17.2km s-min=10.9km az=64.0*

*BJI **02** 07:19:09.1, 1°.99S×134°.39E, h52km, mB5.2/21, mb5.0/71, Ms4.6/7, Ms7 4.4/8*

*DJA **02** 07:19:10.2±0.3, 1°S±2°×13°4E±°, h13km±2km, M5.1/16, mB5.4/8, mb5.2/13, MLv5.3/16, Mw5.0/5, Mw(mB)4.9/8, MwMwp4.7/3, Mwp5.0/3*

*MOS **02** 07:19:10.6±0.7, 1°.56S×134°.06E, h36km, mb5.1/35, Error ellipse: s-maj=10.8km s-min=5.7km az=114.5*

*GCMT **02** 07:19:11.2±0.3, 1°.33S±0°.04×133°.95E±0°.03, h28km, MW4.9/58, Moment Tensor Solution. s30,c35; s58,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.83±.19; $M_{\theta\theta}$-0.76±.12; $M_{\phi\phi}$-2.07±.12; $M_{r\theta}$-0.85±.21; $M_{\theta\phi}$0.84±.08; $M_{\phi r}$-0.30±.17; Best double couple: $M_0$2.77300×10^{16} NP1:ϕ_s168.00000°, δ46.00000°, λ111.00000°. NP2: ϕ_s320.00000°, δ48.00000°, λ70.00000°. Principal axes: T 3.0670, Plg75.0000°, Azm158.0000°; N -0.5850, Plg15.0000°, Azm333.0000°; P -2.4790, Plg1.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 07:19:13.2±1.5, 1°.61S±0°.06×134°.01E±0°.08, h36km±6km, mb4.9/58 Error ellipse: s-maj=13.8km s-min=6.0km az=55.0*

ISC 02 07:19:11.1±0.3, 1°.59S±0°.03×134°.00E±0°.03, h25km±2km, h25km:pP-P, n298, σ1^s.58/327, mb5.0/106, MS3.8/26, 26C-8D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	0.20	65	P	Pb	07 19 14.2	-2.5
RKPI				S	Sb	07 19 20.7	+0.1
MWPI	Manokwari, Pap	0.66	4	P	Pb	07 19 20.7	-3.3
MWPI				S	Sb	07 19 30.6	-2.2
KMPI	Kaimana, Papua	2.08	188	P	Pb	07 19 47.6	-0.5
KMPI				S	Sb	07 20 14.0	+0.6
BAKI	Biak	2.15	79	P	Pn	07 19 45.0	-0.3
FAKI	Fak Fak	2.19	233		Pn	07 19 46.9	+1.0
FAKI	Fak Fak	2.19	233	P	Pn	07 19 47.2	+1.3
FAKI				S	Sb	07 20 15.3	-1.4
SRPI	Serui, Papua	2.26	97	P	Pb	07 19 49.3	-1.9
SRPI				S	Sn	07 20 15.7	+1.8
SIJI	Sorong	2.83	285	Pn	Pn	07 19 53.6	-1.1
	52nm,0.3s,baz=62,slow=14,SNR=121						
SIJI				Sn	Sn	07 20 27.4	-0.5
	171nm,0.3s,baz=112,slow=19,SNR=11						
SIJI				Lg	Lg	07 20 38.0	
	336nm,0.3s,baz=180,slow=20,SNR=15						
SIJI				LR	LR	07 20 58.7	
	comp=Z,2μm,20.6s,baz=315,slow=40						
	195nm,0.3s						
SIJI	Sorong	2.83	285	P	Pn	07 19 53.6	-1.1
SWI	Sorong	2.83	285	P	Pn	07 19 53.8	-0.9
SWI				S	Sn	07 20 28.3	+0.2
BNDI	Bandanaira	5.02	234	P	Pn	07 20 30.2	+5.4
BNDI	Bandanaira	5.02	234	P	Pn	07 20 26.4	+1.6
BNDI				S	Sn	07 21 24.4	+2.4
MSAI	Masohi	5.36	251	P	Pn	07 20 30.3	+0.8
	3.2nm512nm,0.7s						
MSAI				S	Sn	07 21 33.9	+3.5
	3.2nm512nm,0.7s						
KRAI	Karang Ratu	5.86	253	P	Pn	07 20 38.4	+2.1
	1.2nm5μm291nm,0.6s						
KRAI				S	Sn	07 21 45.2	+2.5
	1.2nm5μm291nm,0.6s						
AAI	Ambon	6.16	250	P	Pn	07 20 41.7	+1.2
AAI				S	Sn	07 21 53.5	+3.3
JAY	Jayapura	6.76	98	Pn	Pn	07 20 50.0	+1.1
	1.9nm,0.3s,baz=282,slow=18,SNR=5.7						
JAY				Sn	Sn	07 22 07.7	+2.5
	1.1nm,0.3s,baz=270,slow=20,SNR=1.5						
JAY				LR	LR	07 24 04.2	
	comp=Z,1μm,18.6s,baz=190,slow=44						
	9.5nm,0.6s						
JAY	Jayapura	6.76	98	P	Pn	07 20 50.7	+1.8
SAUI	Saumlaki	6.89	203	Pn	Pn	07 20 50.0	-0.6
NLAI	Namlea	7.08	257	P	Pn	07 20 54.2	+1.0
	0.8nm3μm2μm161nm,0.8s						
SANI	Sanana	8.02	267	P	Pn	07 21 04.6	-1.5
	54nm,0.8s						
KDU	Kakadu	11.12	188	P	Pn	07 21 48.9	+0.2
	comp=Z,87nm,0.9s						
DRS	Darwin Rock St	11.20	196	P	Pn	07 21 50.2	+0.6
LUWI	Luwuk	11.24	273	Pn	Pn	07 21 54.2	+4.0
MTN	Manton Dam	11.53	194	P	Pn	07 21 54.7	+0.5
	comp=Z,200nm,0.6s						
MTN	Manton Dam	11.53	194		Pn	07 21 54.3	+0.1
APSI	Ampana	12.37	273	P	Pn	07 22 05.2	-0.5
	comp=Z,1μmcomp=Z,94nm,0.9s						
SOEI	Soe	12.62	230		Pn	07 22 08.8	-0.5
SOEI	Soe	12.62	230	P	Pn	07 22 13.1	+3.8
SOEI	Soe	12.62	230	P	Pn	07 22 11.2	+1.9
	comp=Z,1μmcomp=Z,85nm,1.0s						
BATI	Baumata	13.37	230	Pn	Pn	07 22 18.3	-1.1
	comp=Z,3.5nm,0.3s,baz=48,slow=16,SNR=4.1						
BATI				Sn	Sn	07 24 45.0	-2.4
	comp=Z,1.9nm,0.3s,baz=288,slow=20,SNR=1.2						
BATI				LR	LR	07 28 06.5	
	comp=Z,366nm,21.7s,baz=54,slow=40						
	comp=Z,39nm,0.5s						
SPSI	Sidrap Palu	14.41	260	P	Pn	07 22 35.2	+1.6
KAPI	Kappang	14.62	256	Pn	Pn	07 22 35.4	-1.1
	comp=Z,4.0nm,0.3s,baz=76,slow=14,SNR=5.3						
KAPI	Kappang	14.62	256	⇓eP	P	07 22 39.8	-2.8
KNRA	Kununurra	14.92	200	P	Pn	07 22 38.3	-2.1
	comp=Z,230nm,0.7s						
KNRA	Kununurra	14.92	200		Pn	07 22 38.7	-1.7
PMG	Port Moresby	15.22	121	Pn	Pn	07 22 45.5	+1.0
	comp=Z,14nm,0.9s,baz=305,slow=22,SNR=4.3						
PMG				LR	LR	07 29 27.2	
	comp=Z,366nm,21.9s,baz=306,slow=41						
PMG	Port Moresby	15.22	121		Pn	07 22 45.7	+1.2
PMG	Port Moresby	15.22	121	ceP	Pn	07 22 44.6	+0.1
COEN	Coen	15.27	144	P	Pn	07 22 45.2	0.0
	comp=Z,25nm,1.0s						
COEN	Coen	15.27	144		Pn	07 22 45.9	+0.7
PLAI	Plampang	17.67	245	P	P	07 23 20.9	+4.4
PLAI	Plampang	17.67	245	S	S	07 26 37.7	-1.3
WB0	Warramunga Arr	18.07	179	P	Pn	07 23 19.3	-1.2
WB0				IAmb	IAmb	07 23 24.2	
	comp=Z,115nm,1.1s						
WRAB	Tennant Creek	18.23	179	P	Pn	07 23 22.1	-0.4
WRAB				IAmb	IAmb	07 23 29.6	
	comp=Z,87nm,0.8s						
WRAB	Tennant Creek	18.23	179	P	Pn	07 23 20.9	-1.6
WRAB	Tennant Creek	18.23	179	S	Sn	07 26 39.1	-6.4
WRAB	Tennant Creek	18.23	179	c iP	Pn	07 23 21.3	-1.2
WRAB				pmax	pmax		
	comp=Z,109nm,0.9s						
WRA	Warramunga Arr	18.24	179	P	Pn	07 23 22.1	-0.5
	comp=Z,0.6nm,0.3s,baz=360,slow=12,SNR=79						
WRA				S	Sn	07 26 36.2	-9.5
	comp=Z,15nm,1.0s,baz=352,slow=22,SNR=5.0						
	comp=Z,67nm,0.9s						
WRA	Warramunga Arr	18.24	179	P	Pn	07 23 20.6	-2.1
WR8	Warramunga Arr	18.26	178	P	Pn	07 23 22.1	-0.7
WR8				IAmb	IAmb	07 23 26.5	
	comp=Z,80nm,0.8s						
FITZ	Fitzroy Crossi	18.34	206	P	P	07 23 22.8	-1.0
	comp=Z,50nm,0.6s,baz=33,slow=10,SNR=91						
FITZ				S	Sn	07 26 36.7	-11
	comp=Z,58nm,0.8s,baz=103,slow=13,SNR=8.4						
MTSU	Mount Surprise	19.31	149	P	Pn	07 23 36.1	+0.5
	comp=Z,24nm,1.1s						
MTSU	Mount Surprise	19.31	149	P	Pn	07 23 36.8	+1.2
MTSU	Mount Surprise	19.31	149	S	Sn	07 27 04.9	-6.7
QIS	Mount Isa	19.63	164	P	Pn	07 23 39.0	-0.4
	comp=Z,88nm,0.8s						
QIS	Mount Isa	19.63	164	P	Pn	07 23 38.7	-0.7
AS31	Alice Springs	21.94	180		P	07 24 04.1	+1.1
AS31				IAmb	IAmb	07 24 21.7	
	comp=Z,36nm,0.8s						
CTA	Charters Tower	21.94	148	P	P	07 24 05.1	+2.2
	comp=Z,12nm,0.8s						
CTA	Charters Tower	21.94	148	P	P	07 24 04.4	+1.4
	comp=Z,14nm,0.6s,baz=321,slow=10.0,SNR=24						
	comp=Z,14nm,0.6s						
CTA	Charters Tower	21.94	148	P	P	07 24 07.2	+4.2
CTAO	Charters Tower	21.94	148		P	07 24 05.2	+2.2
CTAO	Charters Tower	21.94	148	P	P	07 24 07.2	+4.2
ASAR	Alice Springs	21.94	180	P	P	07 24 03.8	+0.8
	comp=Z,99nm,0.7s,baz=5.1,slow=11,SNR=378						
ASAR				S	S	07 28 01.4	-2.8
	comp=Z,24nm,1.1s,baz=6.3,slow=24,SNR=9.8						
ASAR				LR	LR	07 33 55.3	
	comp=Z,463nm,19.1s,baz=358,slow=40						
	comp=Z,99nm,0.7s						
SBUM	Sibu	22.14	280	P	P	07 24 10.0	+4.8
MBWA	Marble Bar	23.91	215	P	P	07 24 24.1	+0.9
	comp=Z,56nm,1.6s						
MBWA	Marble Bar	23.91	215		P	07 24 24.3	+1.2
MBWA				IAmb	IAmb	07 24 25.2	
	comp=Z,67nm,1.1s						
MBWA	Marble Bar	23.91	215	P	P	07 24 25.1	+2.0
WRKA	Warakurna	23.95	193	P	P	07 24 24.0	+0.5
	comp=Z,50nm,0.7s						
PSAC2	Pilbara Seismi	24.14	214	P	P	07 24 25.8	+0.5
	comp=Z,64nm,1.2s						
PSAC1	Pilbara Seismi	24.16	214	P	P	07 24 25.4	-0.1
	comp=Z,70nm,1.1s						
PSA00	Pilbara Seismi	24.18	214	P	P	07 24 25.7	+0.1
	comp=Z,64nm,1.3s						
PSA00	Pilbara Seismi	24.18	214	P	P	07 24 26.3	+0.7
PSA00	Pilbara Seismi	24.18	214	P	P	07 24 26.2	+0.6
PSA00				IAmb	IAmb	07 24 31.3	
	comp=Z,69nm,1.3s						
PSA00	Pilbara Seismi	24.18	214	P	P	07 24 27.2	+1.6
PSAB3	Pilbara Seismi	24.19	214	P	P	07 24 26.9	+1.1
	comp=Z,72nm,1.2s						
QLP	Quilpie	26.72	159	P	P	07 24 48.6	-0.1
	comp=Z,68nm,0.9s						
INKA	Innaminka	26.79	167	P	P	07 24 49.2	0.0
LEM	Lembang	26.81	258	LR	LR	07 36 44.6	
	comp=Z,158nm,18.8s,baz=162,slow=40						
BBJI	Bungbulang	26.89	257	P	P	07 24 50.2	-0.3
BBJI				IAmb	IAmb	07 24 58.5	
	comp=Z,24nm,0.9s						
JOW	Kunigami	28.80	349	LR	LR	07 34 08.9	
	comp=Z,259nm,21.8s,baz=154,slow=31						
EIDS	Eidsvold	28.81	147	P	P	07 25 08.2	+0.8
	comp=Z,15nm,1.0s						
EIDS	Eidsvold	28.81	147	P	P	07 25 07.5	+0.1
FORT	Forrest	29.57	190	P	P	07 25 14.1	+0.1
	comp=Z,21nm,0.9s						
FORT	Forrest	29.57	190	P	P	07 25 15.1	+1.1
FORT				IAmb	IAmb	07 25 42.3	
	comp=Z,13nm,0.8s						
BTDF	Bukit Timah Da	30.36	275	P	P	07 25 29.5	+8.2
STKA	Stephens Creek	30.96	167	P	P	07 25 25.5	-0.9
	comp=Z,173nm,0.8s						
STKA	Stephens Creek	30.96	167	P	P	07 25 26.0	-0.4
	comp=Z,28nm,0.8s,baz=341,slow=8.7,SNR=44						
STKA				LR	LR	07 41 12.4	
	comp=Z,224nm,18.0s,baz=347,slow=43						
	comp=Z,28nm,0.8s						
STKA	Stephens Creek	30.96	167	P	P	07 25 25.9	-0.4
STKA	Stephens Creek	30.96	167	P	P	07 25 26.1	-0.4
STKA	Stephens Creek	30.96	167	c iP	P	07 25 25.9	-0.4
BBOO	Buckleboo	31.11	177	P	P	07 25 26.0	-1.6
BBOO	Buckleboo	31.11	177	P	P	07 25 28.5	+0.9
MNAI	Manna	31.12	264	P	P	07 25 36.7	+8.7
QIZ	Qiongzhong	31.36	312		P	07 25 29.1	-0.9
KMBL	Kambalda	31.75	200	P	P	07 25 34.1	+0.8
	comp=Z,18nm,0.9s						
CMSA	Cobar Meteorol	31.77	161	P	P	07 25 32.8	-0.6
	comp=Z,12nm,1.6s						
HTT	Hallett	32.01	172	P	P	07 25 35.7	+0.2
	comp=Z,7.0nm,1.7s						
MORW	Morawa	32.24	210	P	P	07 25 36.0	-1.7
	comp=Z,22nm,1.6s						
MORW	Morawa	32.24	210	P	P	07 25 37.4	-0.2
MORW				IAmb	IAmb	07 25 44.3	
	comp=Z,21nm,1.0s						
ARMA	Armidale	33.19	151	P	P	07 25 46.8	+0.8
ARMA	Armidale	33.19	151	P	P	07 25 46.2	+0.2
ARMA				IAmb	IAmb	07 25 48.0	
	comp=Z,16nm,0.8s						
BLDU	Ballidu	33.19	208	P	P	07 25 47.2	+1.2
	comp=Z,42nm,1.1s						
BLDU	Ballidu	33.19	208	P	P	07 25 46.8	+0.9
KLBR	Kellerberrin	33.55	206	P	P	07 25 50.0	+0.9
	comp=Z,128nm,0.7s						
KLBR	Kellerberrin	33.55	206	P	P	07 25 50.4	+1.3
JNU	Nakatsue	34.66	355	LR	LR	07 36 54.0	
	comp=Z,99nm,21.6s,baz=185,slow=31						
SSE	Sheshan	34.72	340	P	P	07 25 59.9	+0.7
SSE				pP	sP	07 26 09.4	-1.1
NWAO	Narrogin (SRO)	34.92	205	P	P	07 26 01.7	+0.8
	comp=Z,47nm,1.0s						
NWAO	Narrogin (SRO)	34.92	205	P	P	07 26 01.8	+0.8
NWAO	Narrogin (SRO)	34.92	205	P	P	07 26 02.3	+1.4
NWAO	Narrogin (SRO)	34.92	205	P	P	07 26 02.4	+1.5
JHJ	Hachijo jima 2	34.96	8	LR	LR	07 37 43.0	
	comp=Z,171nm,18.9s,baz=160,slow=32						
ARPS	Mount Arapiles	35.74	169	P	P	07 26 08.1	+0.1
	comp=Z,48nm,0.7s						
CAN	Canberra	36.34	159	P	P	07 26 13.9	+0.8
CAN				IAmb	IAmb	07 26 24.1	
	comp=Z,24nm,1.1s						
NJ2	Nanjing	36.41	338	eP	P	07 26 15.9	+2.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RKGY	Rocky Gully	36.48	204	P	P	07 26 16.9	+2.5
	comp=Z,92nm,1.4s						
WHN	Wuhan	37.04	331	⇑P	P	07 26 19.9	+0.8
WHN				pmax	pmax		
	comp=Z,28nm,1.0s						
TOO	Toolangi	37.33	165	P	P	07 26 21.7	+0.1
DZM	Mont Dzumac	37.55	125	LR	LR	07 42 38.7	
	comp=Z,87nm,19.0s,baz=16,slow=38						
MJAR	Matsushiro Arr	38.14	5	P	P	07 26 27.4	-0.9
	comp=Z,2.1nm,0.7s,baz=192,slow=7.5,SNR=6.4						
MJAR				LR	LR	07 39 10.1	
	comp=Z,156nm,19.4s,baz=178,slow=32						
	comp=Z,2.1nm,0.7s						
MAJO	Matsushiro	38.14	5	⇑eP	P	07 26 27.8	-0.6
MAJO				pmax	pmax		
	comp=Z,15nm,1.6s						
KSRS	Korea Array	39.26	352	P	P	07 26 37.5	-0.2
	comp=Z,2.5nm,0.9s,baz=174,slow=9.6,SNR=7.6						
KSRS				PcP	PcP	07 28 47.5	+1.1
	comp=Z,1.5nm,0.7s,baz=160,slow=2.4,SNR=6.1						
KSRS				LR	LR	07 44 02.3	
	comp=Z,40nm,18.8s,baz=180,slow=38						
	comp=Z,2.5nm,0.9s						
ENH	Enshi	39.38	326		P	07 26 38.8	0.0
ENH	Enshi	39.38	326	P	P	07 26 38.5	-0.4
ENH				pP	sP	07 26 48.1	-1.7
ENH				PcP	PcP	07 28 47.8	+0.8
CM31	Chiang Mai Arr	39.83	302	P	P	07 26 43.1	+0.4
CMAR	Chiang Mai Arr	39.83	302	P	P	07 26 42.3	-0.4
	comp=Z,2.2nm,0.6s,baz=127,slow=6.6,SNR=14						
CMAR				PcP	PcP	07 28 50.1	+1.5
	comp=Z,0.7nm,0.3s,baz=114,slow=2.8,SNR=5.1						
CMAR				LR	LR	07 44 13.5	
	comp=Z,30nm,19.9s,baz=140,slow=38						
	comp=Z,2.2nm,0.6s						
CMAR	Chiang Mai Arr	39.83	302	P	P	07 26 42.7	0.0
CHTO	Chiang Mai	39.98	302	P	P	07 26 44.4	+0.4
KMI2	Kunming	40.29	313	P	P	07 26 47.2	+0.5
KMI2				pmax	pmax		
	comp=Z,37nm,1.3s						
TIA	Tai'an	40.77	339	P	P	07 26 49.8	-0.5
TIA				pmax	pmax		
	comp=Z,26nm,0.9s						
TIA				LR	LR		
	comp=Z,250nm,12.2s						
TIA				LR	LR		
	comp=Z,170nm,15.7s						
TIA				LR	LR		
	comp=Z,210nm,19.0s						
LYN	LuoYang	41.24	333	P	P	07 26 54.8	+0.6
LYN				pmax	pmax		
	comp=Z,41nm,1.0s						
LYN				pmax	pmax		
	comp=Z,250nm,6.3s						
PZH	PanZhiHua	41.82	314	P	P	07 26 58.9	-0.3
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,100nm,6.3s						
XAN	Xi'an	42.57	329	P	P	07 27 04.7	-0.4
XAN				pP	sP	07 27 15.0	-1.2
XAN				x	x	07 27 16.1	
HNS	HongShan	42.72	337	⇑P	P	07 27 06.3	+0.1
HNS				pmax	pmax		
	comp=Z,82nm,1.1s						
TNCH	TengChong	43.38	310	⇑P	P	07 27 11.4	-0.6
TNCH				pP	sP	07 27 24.6	+1.5
TNCH				pmax	pmax		
	comp=Z,33nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,180nm,2.6s						
TNCH				LR	LR		
	comp=Z,2μm,23.9s						
TNCH				LR	LR		
	comp=Z,2μm,18.0s						
TNCH				LR	LR		
	comp=Z,350nm,15.3s						
PSTR	Posyet	44.14	357	⇓eP	P	07 27 17.4	-0.1
BJI2	Beijing	44.51	340	P	P	07 27 20.7	+0.1
BJI2				pP	sP	07 27 30.6	-1.5
BJI2				pmax	pmax		
	comp=Z,38nm,0.8s						
BJI2				pmax	pmax		
	comp=Z,130nm,4.0s						
BJT	Baijiatuau	44.51	340		P	07 27 20.5	-0.1
BJT	Baijiatuau	44.51	340	P	P	07 27 20.8	+0.2
CN2	Changchun	45.84	351	P	P	07 27 33.2	+2.1
ASAJ	Asahikawa	46.15	9	LR	LR	07 43 51.7	
	comp=Z,51nm,21.4s,baz=184,slow=32						
MDJ	Mudanjiang	46.17	356	P	P	07 27 34.1	+0.4
MDJ				S	S	07 34 23.5	+5.1
MDJ				ScS	ScS	07 37 23.0	-4.7
MDJ				pmax	pmax		
	comp=Z,18nm,1.0s						
MDJ				LR	LR		
	comp=Z,250nm,5.6s						
MDJ				LR	LR		
	comp=Z,150nm,6.6s						
MDJ				LR	LR		
	comp=Z,190nm,6.4s						
MDJ	Mudanjiang	46.17	356	P	P	07 27 33.9	+0.2
LZDM	Lanzhou Array	46.84	326	P	P	07 27 39.7	+0.2
	comp=Z,10nm,0.9s,baz=157,slow=9.0,SNR=23						
	comp=Z,10nm,0.9s						
LZH	Lanzhou	46.85	326	eP	P	07 27 40.6	+1.2
LZH				pP	sP	07 27 51.5	+1.0
LZH				PcP	PcP	07 29 13.7	+1.5
LZH				pmax	pmax		
	comp=Z,61nm,1.4s						
LZH				pmax	pmax		
	comp=Z,250nm,3.4s						
HHC	Hu-ho-hao-te	46.93	337	⇑iP	P	07 27 40.7	+0.9
HHC				S	S	07 34 35.6	+6.0
HHC				pmax	pmax		
	comp=Z,33nm,1.3s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
BNX	BinXian	47.49	354	⇑P	P	07 27 43.6	-0.4
BNX				pmax	pmax		
	comp=Z,18nm,0.9s						
BTO2	Baotou	47.53	335	eP	P	07 27 44.4	-0.1
BTO2				pP	sP	07 27 59.9	+4.2
BTO2				S	S	07 34 36.2	-2.0
BTO2				pmax	pmax		
	comp=Z,21nm,0.8s						
BTO2				pmax	pmax		
	comp=Z,460nm,5.2s						
BTO2				LR	LR		
	comp=Z,260nm,5.6s						
BTO2				LR	LR		
	comp=Z,470nm,5.5s						
BTO2				LR	LR		
	comp=Z,430nm,6.7s						
XLT	XiLinHaoTe	48.05	343	eP	P	07 27 48.1	-0.4
XLT				pmax	pmax		
	comp=Z,14nm,1.0s						
SHL	Shillong	48.86	306		P	07 27 55.1	-0.1
SHL				IAmb	IAmb	07 28 02.2	
	comp=Z,20nm,1.0s						
YSS	Yuzhno-Sakhali	48.95	8	ceP	P	07 27 54.9	-0.3
YSS				pmax	pmax		
	comp=Z,12nm,0.7s						
KLR	Kul'dur	50.66	358	ceP	P	07 28 08.1	-0.1
KLR				pmax	pmax		
	comp=Z,14nm,0.8s						
LSA	Lhasa	51.39	311		P	07 28 14.4	-0.3
LSA				IAmb	IAmb	07 28 22.6	
	comp=Z,10nm,0.6s						
LSA	Lhasa	51.39	311	P	P	07 28 15.4	+0.8
GTA2	Gaotai	51.54	326	P	P	07 28 15.9	+0.7
GTA2				pmax	pmax		
	comp=Z,32nm,1.1s						
GOMU	GeErMu	52.38	320	P	P	07 28 22.4	+0.6
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HILR	Hailar Array B	52.41	348	P	P	07 28 21.4	0.0
	comp=Z,7.1nm,0.8s,baz=161,slow=9.4,SNR=6.8						
	comp=Z,7.1nm,0.8s						
TYV	Tymovskoe	52.78	7	eP	P	07 28 24.6	+0.6
TYV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,5.6s						
TUWZ	Tuamarina	53.52	143	P	P	07 28 30.4	+0.8
URZ	Urewera	53.73	138	LR	LR	07 50 26.9	
	comp=Z,211nm,21.4s,baz=320,slow=35						
ULN	Ulaanbaatar	54.58	338		P	07 28 38.4	+1.0
ULN				IAmb	IAmb	07 28 39.4	
	comp=Z,23nm,1.1s						
ULN	Ulaanbaatar	54.58	338	c iP	P	07 28 37.9	+0.4
ULN				pmax	pmax		

comp=Z,48nm,2.5s
ULN Ulaanbaatar 54.58 338 P P 07 28 38.0 +0.6
ULN pP **sP 07 28 48.8 +0.1**
ULN x x 07 28 58.0
SONM Songino Array 54.80 338 P P 07 28 39.6 +0.5
comp=Z,5.9nm,0.9s,baz=148,slow=7.3,SNR=31
SONM PcP **PcP 07 29 41.0 -0.2**
comp=Z,2.4nm,0.7s,baz=158,slow=3.6,SNR=4.6
SONM LR LR 07 52 44.5
comp=Z,69nm,18.6s,baz=128,slow=37
comp=Z,5.9nm,0.9s
SONM Songino Array 54.80 338 P P 07 28 39.8 +0.8
SONM IAmb IAmb 07 28 44.4
comp=Z,22nm,1.5s
ZEA Zeya 55.42 355 *eP* **P 07 28 42.9 -0.3**
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
PETK Petropavlovsk- 58.01 17 P P 07 29 02.4 +0.8
comp=Z,15nm,1.1s,baz=224,slow=4.1,SNR=4.0
PETK LR LR 07 51 22.7
comp=Z,41nm,21.8s,baz=173,slow=33
comp=Z,15nm,1.1s
PETK Petropavlovsk- 58.01 17 P P 07 28 59.8 -1.8
ZAK Zakamensk 58.07 337 *eP* **P 07 29 01.7 -0.5**
ZAK pmax pmax
comp=Z,20nm,1.5s
TLY Talaya 58.97 338 P P 07 29 08.9 +0.5
TLY Talaya 58.97 338 *ceP* **P 07 29 09.0 +0.5**
TLY pmax pmax
comp=Z,8.0nm,1.0s
IRK Irkutsk 59.20 339 *eP* **P 07 29 09.4 -0.6**
IRK pmax pmax
comp=Z,38nm,1.9s
MOY Mondy 59.97 337 *eP* **P 07 29 16.3 +0.9**
MOY pmax pmax
comp=Z,42nm,2.4s
KNGR Kungurtug, Tuv 60.60 334⇓ *iP* **P 07 29 21.8 +2.0**
KNGR pmax pmax
comp=Z,13nm,1.0s
WMQ Urumqi 61.26 323 *eP* **P 07 29 25.2 +0.9**
WMQ pP sP 07 29 37.1 +1.4
WMQ PcP **PcP 07 30 07.8 +1.0**
WMQ pmax pmax
comp=Z,38nm,1.3s
WMQ pmax pmax
comp=Z,130nm,3.7s
WMQ Urumqi 61.26 323 P P 07 29 25.3 +0.9
MA2 Magadan 62.40 10 P 07 29 31.8 +0.2
MA2 IAmb IAmb 07 29 35.7
comp=Z,14nm,1.0s
MA2 Magadan 62.40 10⇓ *eP* **P 07 29 31.4 -0.1**
MA2 pmax pmax
comp=Z,13nm,1.0s
MA2 Magadan 62.40 10 P P 07 29 31.3 -0.3
comp=Z,15nm,0.9s
MA2 Magadan 62.40 10 P P 07 29 31.5 -0.1
YAK Yakutsk 63.54 358 P P 07 29 40.1 +1.0
YAK Yakutsk 63.54 358 *eP* **P 07 29 38.6 -0.5**
YAK *e* 07 30 18.5
YAK *eS* **S 07 38 12.4 +1.5**
YAK *eSS* **SS 07 42 21.4 +2.9**
YAK pmax pmax
comp=Z,31nm,0.8s
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,245nm,6.9s
YAK pmax pmax
comp=N,165nm,5.0s
YAK pmax pmax
comp=E,245nm,5.1s
YAK smax smax
comp=E,188nm,4.3s
YAK smax smax
comp=N,332nm,5.9s
YAK Yakutsk 63.54 358 P P 07 29 38.6 -0.5
YAK x x 07 29 48.3
DGZ Jazzator, Alta 64.84 329⇑ *eP* **P 07 29 48.6 +0.5**
DGZ pmax pmax
comp=Z,24nm,1.1s
ZSN Zaisan 64.94 325 *eP* **P 07 29 48.8 +0.2**
ZSN pmax pmax
comp=Z,16nm,1.5s
ZSN Zaisan 64.94 325 *eP* **P 07 29 48.9 +0.3**
comp=Z,16nm,1.5s
WUS Wushi 65.36 317 IAmb IAmb 07 29 59.5
comp=Z,13nm,1.1s
WUS Wushi 65.36 317 P P 07 29 52.3 +0.7
SEY Seymchan 65.83 9⇑ *eP* **P 07 29 54.4 +0.3**
SEY pmax pmax
comp=Z,17nm,0.9s
SHLS Shalkode 66.07 319 *eP* **P 07 29 54.7 -1.5**
SHLS pmax pmax
comp=Z,12nm,0.8s
SHLS Shalkode 66.07 319 *eP* **P 07 29 54.7 -1.5**
comp=Z,12nm,0.8s
MK31 Makanchi Array 66.08 324 *c iP* **P 07 29 56.5 +0.5**
MKAR Makanchi Array 66.08 324 P P 07 29 56.5 +0.5
comp=Z,14nm,0.7s,baz=114,slow=7.9,SNR=155
MKAR LR LR 08 00 04.9
comp=Z,46nm,19.3s,baz=66,slow=37
comp=Z,14nm,0.7s
MKAR Makanchi Array 66.08 324 P P 07 29 56.8 +0.8
MKAR Makanchi Array 66.08 324 *i P* **P 07 29 56.5 +0.5**
MKAR pmax pmax
comp=Z,15nm,0.7s
PDGK Podgornoye 66.13 319 P P 07 29 56.3 -0.3
MAKZ Makanchi 66.27 324 P 07 29 57.5 +0.2
MAKZ Makanchi 66.27 324 P P 07 29 57.7 +0.5
MAKZ pP **sP 07 30 09.1 +0.5**
UZB Uzynbulak 66.36 319 *eP* **P 07 29 58.3 +0.3**
UZB pmax pmax
comp=Z,8.0nm,0.9s
UZB Uzynbulak 66.36 319 *eP* **P 07 29 58.3 +0.3**
comp=Z,8.3nm,0.9s
TARG Taragay, Kyrgy 66.55 317 P 07 29 59.2 -0.4
SATY Saty 66.72 319 *c iP* **P 07 30 00.6 +0.3**
SATY pmax pmax
comp=Z,12nm,0.9s
SATY Saty 66.72 319⇑ *iP* **P 07 30 00.6 +0.3**
comp=Z,12nm,0.9s
KSH2 Kashi 67.07 314 P P 07 30 03.5 +0.8
KSH2 pmax pmax
comp=Z,16nm,1.1s
TDK Taldyqorghan 67.59 321 *eP* **P 07 30 06.0 +0.4**
TDK pmax pmax
comp=Z,9.0nm,0.7s
TDK Taldyqorghan 67.59 321 *eP* **P 07 30 06.1 +0.4**
comp=Z,8.6nm,0.7s
MDOK Medeo 67.66 318 *eP* **P 07 30 06.6 +0.3**
MDOK Medeo 67.66 318 *eP* **P 07 30 06.7 +0.3**
TNSS Tian-Shan 67.68 318 *eP* **P 07 30 06.6 -0.1**
TNSS Tian-Shan 67.68 318 *eP* **P 07 30 06.7 -0.1**
AAA Alma-Ata 67.77 318 *eP* **P 07 30 07.3 +0.4**
AAA Alma-Ata 67.77 318 *eP* **P 07 30 07.3 +0.4**
BOOM Boomskoye usch 68.13 317 P P 07 30 09.1 -0.2
BOOM IAmb IAmb 07 30 10.5
comp=Z,9.1nm,0.8s
TKM2 Tokmak 2 68.53 318 P P 07 30 12.6 +0.7
SNR=8.9
ZAA0 Zalesovo Array 68.66 331 P P 07 30 11.4 -0.7
ZAA0 IAmb IAmb 07 30 12.4
comp=Z,15nm,1.1s
ZALV Zalesovo Beam 68.66 331 P P 07 30 11.4 -0.7
comp=Z,7.3nm,0.7s,baz=114,slow=6.1,SNR=35
comp=Z,7.3nm,0.7s
ZALV Zalesovo Beam 68.66 331 P P 07 30 11.9 -0.2
ZALV Zalesovo Beam 68.66 331 *i P* **P 07 30 11.3 -0.8**
ZALV pmax pmax
comp=Z,7.0nm,0.7s
UCH Uchtor 68.99 317 P P 07 30 16.3 +1.2
SNR=14
AAK Ala-Archa 69.17 317 P P 07 30 16.2 +0.4
comp=Z,2.4nm,0.7s,baz=127,slow=5.7,SNR=7.3
comp=Z,2.4nm,0.7s
AAK Ala-Archa 69.17 317 P P 07 30 16.6 +0.8
SNR=6.1
AAK Ala-Archa 69.17 317 P P 07 30 15.5 -0.3
AAK IAmb IAmb 07 30 29.2
comp=Z,10nm,1.4s
AAK Ala-Archa 69.17 317 P P 07 30 16.5 +0.8
AAK pP **sP 07 30 27.3 0.0**
USP Ospenovka 69.41 318 P P 07 30 17.6 +0.5
SNR=13
EKS2 Erkin-Say 69.66 317 P P 07 30 19.6 +0.8
SNR=8.8
ARSB Arslanbob 69.72 315 P P 07 30 19.0 -0.3
ARSB IAmb IAmb 07 30 21.0
comp=Z,17nm,1.0s
KURK Kurchatov 70.14 326 P P 07 30 22.1 +0.8
KURK Kurchatov 70.14 326 *c iP* **P 07 30 21.4 0.0**
KURK pmax pmax
comp=Z,60nm,1.7s
KURK Kurchatov 70.14 326 P P 07 30 21.5 +0.1
KURK pP **sP 07 30 32.6 -0.3**
KURBB Kurchatov Arra 70.14 326 P P 07 30 21.6 +0.2
comp=Z,21nm,0.9s,baz=120,slow=5.7,SNR=82
comp=Z,21nm,0.9s
KBL Kabul 70.50 307 P P 07 30 24.4 +0.1
KBL IAmb IAmb 07 30 24.7
comp=Z,7.9nm,0.8s
DZA Taraz 71.42 316 *eP* **P 07 30 29.7 +0.3**
DZA pmax pmax
comp=Z,8.0nm,0.8s
DZA Taraz 71.42 316 *eP* **P 07 30 29.8 +0.3**
comp=Z,8.0nm,0.8s
CHGR Chuyangaron 71.61 312 P P 07 30 31.3 +0.6
CHGR Chuyangaron 71.61 312⇑ *eP* **P 07 30 30.5 -0.2**
KK31 Karatay Array 72.06 316 P P 07 30 33.6 +0.4
KK31 IAmb IAmb 07 30 34.5
comp=Z,12nm,0.8s
KK31 Karatay Array 72.06 316 *i P* **P 07 30 33.2 -0.1**
KKAR Karatay Array 72.06 316 P P 07 30 33.5 +0.3
IUG luzhnay 72.08 315 *eP* **P 07 30 33.7 +0.3**
IUG pmax pmax
comp=Z,11nm,0.8s
IUG luzhnay 72.08 315 *eP* **P 07 30 33.8 +0.3**
comp=Z,11nm,0.8s
CHM Chimkent 72.43 315 *eP* **P 07 30 35.8 +0.3**
CHM pmax pmax
comp=Z,8.0nm,0.4s
CHM Chimkent 72.43 315 *eP* **P 07 30 35.9 +0.4**
comp=Z,8.1nm,0.4s
BRLS Boroldav 72.50 316 *c iP* **P 07 30 36.2 +0.3**
BRLS Boroldav 72.50 316⇑ *iP* **P 07 30 36.3 +0.3**
BILL Bilibino 73.00 12⇓ *eP* **P 07 30 37.8 -0.5**
BILL pmax pmax
comp=Z,4.0nm,0.7s
TIXI Tiksi 73.19 358 LR LR 08 01 10.7
comp=Z,51nm,20.4s,baz=206,slow=34
TIXI Tiksi 73.19 358 P P 07 30 38.9 -0.4
TIXI IAmb IAmb 07 30 40.0
comp=Z,14nm,1.4s
TIXI Tiksi 73.19 358⇓ *iP* **P 07 30 38.5 -0.8**
TIXI pmax pmax
comp=Z,9.0nm,1.1s
TIXI Tiksi 73.19 358 P P 07 30 38.7 -0.7
TIXI x x 07 30 51.0
CCD Concordia, Ant 73.70 183 P P 07 30 43.3 +0.5
CCD pP **sP 07 30 54.1 -0.1**
BVA0 Borovoye Array 75.74 326 P P 07 30 54.2 -0.3
BVAR Borovoye Array 75.74 326 P P 07 30 54.5 0.0
comp=Z,11nm,0.8s,baz=116,slow=6.8,SNR=52
comp=Z,11nm,0.8s
BORK Borovoye 75.78 326 P 07 30 54.9 0.0
BORK IAmb IAmb 07 30 55.8
comp=Z,17nm,0.8s
BORK Borovoye 75.78 326 *c iP* **P 07 30 54.8 0.0**
BORK pmax pmax
comp=Z,29nm,1.1s
BORK Borovoye 75.78 326 P P 07 30 54.7 -0.1
HRA Herat 75.92 306 P P 07 30 56.0 -0.2
VNDA Vanda 77.34 174 LR LR 08 04 52.2
comp=Z,113nm,18.2s,baz=337,slow=36
NRIK Noril'sk 77.37 345 P P 07 31 03.2 -0.2
comp=Z,5.3nm,0.7s,baz=118,slow=6.8,SNR=7.8
NRIK LR LR 08 05 15.5
comp=Z,88nm,21.3s,baz=148,slow=36
comp=Z,5.3nm,0.7s
NRIK Noril'sk 77.37 345 *c iP* **P 07 31 03.2 -0.2**
NRIK pmax pmax
comp=Z,8.0nm,0.8s
AB31 Akbulak array 80.85 320 P 07 31 22.4 -0.5
AB31 IAmb IAmb 07 31 25.4
comp=Z,11nm,0.8s
AB31 Akbulak array 80.85 320 *i P* **P 07 31 21.9 -1.0**
ABKAR Akbulak array 80.85 320 P 07 31 22.6 -0.3
MAW Mawson 81.41 202 LR LR 08 05 59.2
comp=Z,66nm,18.9s,baz=72,slow=34
AKTO Aktyubinsk 82.32 321 P P 07 31 30.6 0.0
comp=Z,8.0nm,0.9s,baz=109,slow=5.0,SNR=17
comp=Z,8.0nm,0.9s
ARTI Arti 83.39 327 P 07 31 35.8 -0.3
ARTI Arti 83.39 327 *c iP* **P 07 31 35.5 -0.5**
ARTI S **S 07 41 54.6 -1.0**
ARTI SS **SS 07 47 15.5 -5.7**
ARTI pmax pmax
comp=Z,26nm,1.3s
ARTI Arti 83.39 327 P P 07 31 35.6 -0.5
ARTI PcP **PcP 07 31 39.2 -1.2**
MCK McKinley 85.71 26 P P 07 31 47.6 -0.1
I23K Minto, Yukon-K 85.84 24 P P 07 31 48.8 +0.6
COLA College 86.41 25⇑ *iP* **P 07 31 49.4 -1.6**
COLA pmax pmax
comp=Z,23nm,2.3s
H24K Noodor Dome 86.59 24 P 07 31 52.4 +0.4
H24K IAmb IAmb 07 31 57.2
comp=Z,11nm,1.1s
ILAR Eielson Array 86.79 25 P P 07 31 52.0 -1.0
comp=Z,2.9nm,0.7s,baz=257,slow=4.4,SNR=33
ILAR LR LR 08 05 27.4
comp=Z,42nm,20.6s,baz=235,slow=32
comp=Z,2.9nm,0.7s
G24K Hadweenzic Riv 86.92 23 P P 07 31 54.0 +0.4
G24K IAmb IAmb 07 31 55.5
comp=Z,14nm,1.4s
QSPA South Pole Qui 88.34 180 P P 07 32 00.4 -0.2
comp=Z,4.2nm,0.6s,baz=319,slow=1.3,SNR=4.8
QSPA LR LR 08 11 55.1
comp=Z,144nm,19.4s,baz=5.5,slow=36
comp=Z,4.2nm,0.6s
QSPA South Pole Qui 88.34 180 P P 07 32 00.5 -0.2
QSPA South Pole Qui 88.34 180 P P 07 32 00.7 +0.1
QSPA pP **sP 07 32 11.8 -0.3**
BELG Belogornoye 89.03 322 P P 07 32 02.4 -1.5
comp=Z,16nm,1.0s,baz=112,slow=2.8,SNR=4.9
comp=Z,16nm,1.0s
BELG Belogornoye 89.03 322⇓ *iP* **P 07 32 02.2 -1.7**
BELG pmax pmax
comp=Z,9.0nm,3.0s
RAYN Ar Rayn 89.25 293 P 07 32 05.1 -0.5
RAYN IAmb IAmb 07 32 06.3
comp=Z,4.7nm,0.8s
RAYN Ar Rayn 89.25 293 P P 07 32 05.7 0.0
DAWY Dawson 89.93 26 P 07 32 08.3 +0.4
DAWY IAmb IAmb 07 32 11.0
comp=Z,7.5nm,1.1s
KLMR Klimovskoe 93.57 331 *eP* **P 07 32 22.0 -2.8**
KLMR *e* 07 36 08.2
KLMR pmax pmax
comp=Z,13nm,1.3s
FURI Furi 95.50 279 LR LR 08 15 16.4
comp=Z,27nm,20.1s,baz=147,slow=35
OBN Obninsk 95.56 325 *eP* **P 07 32 34.5 +0.5**
OBN *e*PP* **sP 07 32 45.5 -0.2**
OBN *e*SP* **pP 07 32 48.8 +6.2**
OBN *e* 07 36 23.2
OBN *ePPP* PPP 07 38 28.3
OBN pmax pmax
comp=Z,3.0nm,0.8s
SPITS Spitsbergen Ar 97.04 349 LR LR 08 20 57.9
comp=Z,29nm,18.7s,baz=330,slow=38
NVL N'lazarevskaya 98.64 196 *eP* **P 07 32 46.5 -1.2**
NVL *e* 07 36 47.7
NVL *ePPP* PPP 07 38 53.4
NVL *eS* **SKSac 07 43 20.6 -3.3**
NVL *eSS* **SS 07 50 59.7 -0.4**
NVL *eSSS* SSS 07 54 47.7
NVL pmax pmax
comp=Z,16nm,1.5s
NVL MLR MLR
comp=Z,368nm,23.0s
YKA Yellowknife Ar 101.17 26 P Pdif 07 32 58.7 -0.4
comp=Z,0.2nm,0.4s,baz=290,slow=5.3,SNR=7.2
MODS Modra-Piesok 108.68 321 *i P* **Pdif 07 33 36.0 +3.1**
MODS Modra-Piesok 108.68 321 *ePDIFF* **Pdif 07 33 36.0 +3.1**
ZST Bratislava 108.85 321 *i P* **Pdif 07 33 34.3 +0.7**
ZST Bratislava 108.85 321 *ePDIFF* **Pdif 07 33 34.3 +0.7**
MEM Membach 114.41 327 *dPKiKP* **PKiKP 07 37 47.3 -1.5**
TXAR Lajitas Array 118.71 57 PKP PKiKP 07 37 58.5 +0.5
comp=Z,0.5nm,0.8s,baz=258,slow=2.8,SNR=4.6
TORD Torodi Ar. Bea 131.43 286 PKP PKPdf 07 38 22.6 +0.2
comp=Z,1.6nm,0.9s,baz=70,slow=0.2,SNR=7.6
PLCA Paso Flores 132.30 155 PKP PKiKP 07 38 24.4 -0.3
comp=Z,1.4nm,0.8s,baz=216,slow=1.7,SNR=4.6
CPUP Villa Florida 150.16 159 PKPbc PKPbc 07 39 00.3 -0.3
comp=Z,5.9nm,0.9s,baz=232,slow=2.2,SNR=17
ROSC El Rosal 151.55 83 PKPbc PKPbc 07 39 04.3 -0.4
comp=Z,12nm,0.6s,baz=8.3,slow=21,SNR=8.4
LPAZ La Paz 151.83 130 PKPbc PKPbc 07 39 05.7 +0.1
comp=Z,3.2nm,0.6s,baz=256,slow=3.0,SNR=18

MEX 02 07:25:19.7±0.5, 19°47N×102°08W, h30km±6km, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URUA	**Uruapan**	**0.05**	**175**	*eP*	Pb	07 25 23.2	-1.8
URUA				*eS*	Sb	07 25 26.4	-2.3
INCO	**Volcan de Coli**	**1.44**	**272**	*eP*	Pn	07 25 41.6	-2.5
INCO				*eS*	Sn	07 25 59.8	-2.4
MNGA	**Volcan de Coli**	**1.45**	**270**	*eP*	Pn	07 25 41.3	-2.9
MNGA				*eS*	Sn	07 25 59.0	-3.4
CEGR	**Campo Tres**	**1.68**	**268**	*eP*	Pn	07 25 45.8	-1.5
CEGR				*eS*	Sn	07 26 06.8	-2.1
MMIG	**Aquila**	**1.68**	**226**	*eP*	Pb	07 25 48.7	-1.3
MMIG				*eS*	Sn	07 26 05.0	-2.6
CDAR	**Ciudad de Arme**	**1.90**	**254**	*eP*	Pn	07 25 49.0	-1.1
CDAR				*eS*	Sn	07 26 11.2	-1.8
ARIG	**Puente Sto Nin**	**2.02**	**126**	*eP*	Pb	07 25 55.4	-0.4
ARIG				*eS*	Sb	07 26 24.1	+3.4

*IDC **02** 07:43:07.7±5.2, 17°65S×178°84W, h606km±60km, mb3.1/9, mbtmp4.1/9, Error ellipse: s-maj=39.9km s-min=20.4km az=147.0*

ISC 02 07:43:01.8±1.2, 17°7S±0°3×178°8W±0°2, h539km, n24, σ0.95/26, mb3.5/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.34**	**259**	P	**P**	**07 50 25.2**	**+0.7**
	0.2nm,0.3s,baz=92,slow=7.9,SNR=5.6						
WRA				PcP	**PcP**	**07 51 55.9**	**-1.1**
	0.4nm,0.6s,baz=93,slow=3.5,SNR=2.6						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**44.53**	**254**	P	**P**	**07 50 26.9**	**+0.9**
	1.1nm,0.3s,baz=90,slow=7.7,SNR=45						
ASAR				PcP	**PcP**	**07 51 55.9**	**-1.7**
	0.7nm,0.6s,baz=95,slow=3.4,SNR=8.0						
	1.1nm,0.3s						
MJAR	**Matsushiro Arr**	**67.50**	**324**	P	**P**	**07 53 04.5**	**+0.1**
	0.7nm,0.5s,baz=162,slow=6.0,SNR=4.6						
	0.7nm,0.5s						
ASAJ	**Asahikawa**	**70.89**	**332**	P	**P**	**07 53 26.2**	**+1.7**
	3.2nm,0.7s,baz=82,slow=7.1,SNR=1.9						
	3.2nm,0.7s						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	**P**	**07 54 13.2**	**+0.3**
	0.9nm,0.7s,baz=248,slow=5.9,SNR=9.3						
	0.9nm,0.7s						
SEY	**Seymchan**	**83.45**	**347**	P	**P**	**07 54 32.1**	**-0.2**
	2.9nm,0.5s,baz=141,slow=6.2,SNR=15						
	2.9nm,0.5s						
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	**07 54 42.0**	**-1.4**
	0.5nm,0.4s,baz=226,slow=5.3,SNR=23						
	0.5nm,0.4s						
TXAR	**Lajitas Array**	**86.15**	**58**	P	**P**	**07 54 47.5**	**+1.1**
	1.0nm,0.8s,baz=215,slow=6.0,SNR=15						
	1.0nm,0.8s						
PDAR	**Pinedale Array**	**87.40**	**44**	P	**P**	**07 54 52.0**	**-0.3**
	0.5nm,0.5s,baz=218,slow=3.7,SNR=8.4						
	0.5nm,0.5s						
EKA	**Eskdalemuir Ar**	**142.24**	**4**	PKP	**PKPdf**	**08 01 32.7**	**0.0**
	1.1nm,0.7s,baz=9.1,slow=1.7,SNR=2.6						
BRTR	**Keskin Array B**	**144.36**	**315**	PKP	**PKPab**	**08 01 36.8**	**-0.6**
	1.5nm,0.8s,baz=88,slow=4.0,SNR=8.5						
MMAI	**Mount Meron Ar**	**145.71**	**303**	PKPbc	**PKPbc**	**08 01 40.0**	**-1.1**
	1.3nm,0.4s,baz=48,slow=2.1,SNR=2.1						
GERES	**GERESS Array B**	**147.27**	**345**	PKPbc	**PKPdf**	**08 01 43.0**	**+1.3**
	1.4nm,0.5s,baz=23,slow=3.6,SNR=4.1						
ARSA	**Arzberg**	**148.22**	**341**	*e*PKP	**PKiKP**	**08 01 49.7**	**+1.1**
	2.1nm,0.8s						
LESA	**Schwarzleotal**	**148.85**	**345**	*i* PKP	**PKPbc**	**08 01 48.5**	**-0.4**
	1.9nm,0.4s						
SOKA	**Soboth**	**148.88**	**341**	*i* PKP	**PKPbc**	**08 01 48.2**	**-0.8**
	0.9nm,0.5s						
KBA	**Koelnbreinsper**	**149.00**	**344**	*i* PKP	**PKPbc**	**08 01 48.5**	**-0.9**
	2.3nm,0.5s						
WATA	**Walderalm**	**149.19**	**346**	*e*PKP	**PKPbc**	**08 01 49.4**	**-0.5**
	2.5nm,0.7s						
WTTA	**Wattenberg**	**149.25**	**346**	*e*PKP	**PKPbc**	**08 01 49.8**	**-0.3**
	2.0nm,0.4s						
MOTA	**Moosalm**	**149.29**	**347**	*e*PKP	**PKPbc**	**08 01 49.6**	**-0.5**
	3.5nm,0.8s						
MYKA	**Terra Mystica**	**149.33**	**343**	*i* PKP	**PKPbc**	**08 01 49.0**	**-1.1**
	2.2nm,0.5s						
SQTA	**Sankt Quirin**	**149.39**	**347**	*e*PKP	**PKPbc**	**08 01 50.0**	**-0.3**
	4.1nm,0.6s						
ABTA	**Abfaltersbach**	**149.52**	**345**	*e*PKP	**PKPbc**	**08 01 49.6**	**-0.9**
	2.3nm,0.5s						
FETA	**Feichten**	**149.68**	**347**	*e*PKP	**PKPbc**	**08 01 50.6**	**-0.5**
	4.4nm,1.1s						

*AFAD **02** 07:43:39.2, 34°99N×27°93E, h9km±3km, ML2.2*
*ISK **02** 07:43:42.5, 35°13N×27°84E, h5km, ML2.5/14*
*ATH **02** 07:43:43.0, 35°20N×28°03E, h12km±3km, ML2.5/7, Manual Solution by N.Liadopoulou First location: 2020/02/02 07:45:33, This location: 2020/02/02 09:47:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 02 07:43:41.9±1.6, 35°10N±0°05×27°95E±0°03, h4km±12km, n38, σ1.05/47, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.78**	**305**	Pg	**Pg**	**07 43 56.3**	**-0.6**
KARP				Sg	**Sb**	**07 44 07.9**	**-1.3**
KARP	**Karpathos**	**0.78**	**305**	P	**Pg**	**07 43 55.9**	**-1.0**
KARP	**Karpathos**	**0.78**	**305**	P	**Pg**	**07 43 56.1**	**-0.8**
KARP				S	**Sb**	**07 44 08.8**	**-0.4**
KSS1	**Kassos Island**	**0.90**	**291**	P	**Pn**	**07 44 01.0**	**-0.3**
KSS1				S	**Sn**	**07 44 13.4**	**-1.4**
ARG	**Arkhangelos**	**1.12**	**7**	Pn	**Pn**	**07 44 05.3**	**+0.9**
ARG				Sn	**Sn**	**07 44 21.3**	**+1.0**
ARG	**Arkhangelos**	**1.12**	**7**	P	**Pn**	**07 44 04.0**	**-0.4**
ARG				S	**Sn**	**07 44 22.7**	**+2.4**
ARG	**Arkhangelos**	**1.12**	**7**	P	**Pg**	**07 44 02.5**	**-0.9**
ARG				S	**Sg**	**07 44 16.4**	**-1.5**
ZKR	**Zakros**	**1.42**	**271**	Pn	**Pg**	**07 44 09.3**	**+0.2**
ZKR	**Zakros**	**1.42**	**271**	P	**Pg**	**07 44 09.3**	**+0.2**
YAZI	**Mula-Dat§a-**	**1.63**	**346**	P	**Pn**	**07 44 11.3**	**-0.1**
YAZI				S	**Sg**	**07 44 35.8**	**+1.7**
YAZI				IAML		07 44 38.0	
	comp=N,34nm,0.7s						
YAZI				IAML		07 44 45.0	
	comp=E,28nm,0.6s						
DAT	**Datca**	**1.65**	**350**	Pn	**Pg**	**07 44 13.5**	**-0.1**
DAT	**Datca**	**1.65**	**350**	P	**Pb**	**07 44 13.0**	**0.0**
DAT				S	**Sg**	**07 44 36.7**	**+1.7**
DAT				IAML		07 44 44.0	
	comp=N,69nm,0.4s						
DAT				IAML		07 44 44.0	
	comp=E,54nm,0.6s						
TURN	**Turunc**	**1.69**	**8**	Pn	**Pg**	**07 44 14.3**	**+0.1**
TURN	**Turunc**	**1.69**	**8**	P	**Pg**	**07 44 14.6**	**+0.4**
TURN				S	**Sg**	**07 44 38.3**	**+2.2**
TURN				IAML		07 44 41.0	
	comp=N,40nm,0.5s						
TURN				IAML		07 44 45.0	
	comp=E,40nm,0.8s						
IZZE	**Mula-Seydike**	**1.69**	**38**	P	**Pn**	**07 44 12.2**	**-0.1**
IZZE				IAML		07 44 44.0	
	comp=E,31nm,0.4s						
IZZE				IAML		07 44 45.0	
	comp=N,46nm,0.4s						
AKAS	**Kas**	**1.76**	**50**	Pn	**Pg**	**07 44 15.9**	**+0.3**
FETY	**Fethiye**	**1.79**	**31**	P	Pn	07 44 04.0	-10
DALY	**Dalyan (Mula)**	**1.80**	**18**	Pn	**Pb**	**07 44 15.6**	**+0.1**
SABU	**Mula-Dalaman**	**1.91**	**25**	P	**Pb**	**07 44 16.2**	**-1.1**

SABU				S	Sg	07 44 44.0	+0.9
SABU				IAML		07 44 55.0	
	comp=E,23nm,0.7s						
SABU				IAML		07 44 59.0	
	comp=N,17nm,0.8s						
NPS	Neapolis	1.92	275	P	Pb	07 44 16.6	-0.9
BODT	Bodrum	2.02	345	Pn	Pb	07 44 18.4	-0.9
YER	Yerkesik	2.05	7	Pn	Pb	07 44 19.3	-0.4
CAME	Cameli-Denizli	2.14	30	Pn	Pb	07 44 20.9	-0.4
MLSB	Milas	2.19	356	Pn	Pb	07 44 20.9	-1.3
DNZT	Denizli-Tavas-	2.34	21	P	Pb	07 44 23.6	-1.1
THERA	Ancient Thera,	2.38	303	P	Pn	07 44 21.9	+0.2
SNT5	Nea Kammeni, S	2.45	303	P	Pn	07 44 22.7	0.0
TAVA	DENIZLI_Tavas	2.48	18	P	Pn	07 44 23.6	+0.3
TAVA				IAML		07 44 56.0	
	comp=N,7.9nm,1.3s						
IDI	Anoyia	2.51	275	Pn	Pn	07 44 24.6	+0.9
IDI	Anoyia	2.51	275	P	Pn	07 44 24.8	+1.1
AYDN	Tasoluk	2.55	359	P	Pn	07 44 24.4	+0.2
AYDN				IAML		07 44 58.0	
	comp=N,7.5nm,0.4s						
AYDN				IAML		07 44 58.0	
	comp=E,7.5nm,0.4s						
APMY	Acipayam-Deniz	2.60	24	Pn	Pb	07 44 27.7	-1.5
SMG	Samos	2.75	341	P	Pn	07 44 26.2	-0.7
VAM	Vamos	3.08	277	P	Pn	07 44 32.4	+1.0
GVD	Gavdhos	3.18	266	P	Pn	07 44 34.2	+1.4
IMMV	Iera Moni Meta	3.27	277	Pn	Pn	07 44 35.8	+1.8
IMMV	Iera Moni Meta	3.27	277	P	Pn	07 44 35.1	+1.2
AKMS	Akamas	3.60	90	P	Pn	07 44 37.8	-0.7

MEX 02 07:49:23.7±0.6, 19°.48N×102°.19W, h22km±9km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.12	117	iP	Pb	07 49 26.4	-2.7
URUA				iS	Sb	07 49 29.9	-3.0
INCO	Volcan de Coli	1.33	272	eP	Pn	07 49 44.9	-2.5
INCO				eS	Sn	07 50 01.3	-3.4
MNGA	Volcan de Coli	1.35	270	eP	Pn	07 49 44.9	-2.6
MNGA				eS	Sn	07 50 01.5	-3.3
CEGR	Campo Tres	1.58	267	eP	Pn	07 49 48.4	-2.1
CEGR				eS	Sn	07 50 07.8	-2.5
MMIG	Aquila	1.61	223	eS	Sn	07 50 07.7	-3.3
CDAR	Ciudad de Arme	1.80	253	eP	Pn	07 49 51.2	-2.2
CDAR				eS	Sn	07 50 12.7	-3.0
ARIG	Puente Sto Nin	2.11	124	eP	Pb	07 50 01.4	+0.1
ARIG				eS	Sb	07 50 27.6	+0.5

*NEIC **02** 07:55:54.9±1.5, 18°.00N±0°.03×66°.83W±0°.01, h10km±1km, ML2.9/35, Md2.8/8(RSPR), Error ellipse: s-maj=4.7km s-min=2.5km az=197.0*
*RSPR **02** 07:55:54.7, 17°.98N×66°.86W, h12km, MD2.8/8*
*SDD **02** 07:55:54.6±1.8, 17°.94N×66°.86W, h23km±12km, MD3.2, ML2.6, MW2.9, Presumed earthquake*
ISC 02 07:55:54.2±1.0, 17°.95N±0°.05×66°.84W±0°.02, h17km±5km, n50, σ0^{s}86/78, 24C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.04	309		Pg	07 55 57.1	-0.2
GBPR					Sg	07 55 58.9	-0.5
GBPR	Guanica, Bosqu	0.04	309	⇑iP	Pg	07 55 57.1	-0.2
GBPR				eS	Sg	07 55 58.9	-0.5
MLPR	Magueyes Islan	0.19	277		Pg	07 55 58.8	-0.2
MLPR				IAML		07 56 02.1	
	2μm,0.2s						
MLPR				IAML		07 56 02.4	
	3μm,0.2s						
OBIP	Obispado Ponce	0.24	67		Pg	07 55 59.9	+0.2
OBIP				IAML		07 56 04.2	
	comp=N,406nm,0.3s						
OBIP	Obispado Ponce	0.24	67	⇑iP	Pg	07 55 59.9	+0.2
OBIP				eS	Sg	07 56 03.8	+0.2
CRPR	Cabo Rojo, PR	0.26	283		Pg	07 55 59.6	-0.3
CRPR	Cabo Rojo, PR	0.26	283	Sg	Sg	07 56 03.3	-0.7
CRPR				IAML		07 56 03.6	
	comp=N,1μm,0.2s						
CRPR				IAML		07 56 03.8	
	comp=N,2μm,0.2s						
CRPR	Cabo Rojo, PR	0.26	283	⇑ePg	Pg	07 55 59.3	-0.6
CRPR				⇓eSg	Sg	07 56 03.5	-0.5
CRPR				IAML		07 56 03.8	
	comp=N,2μm,0.2s						
CRPR	Cabo Rojo, PR	0.26	283	⇑ePg	Pg	07 55 59.7	-0.3
CRPR				⇑eSg	Sg	07 56 02.2	-1.7
CRPR				IAML		07 56 03.8	
	comp=N,2μm,0.2s						
CRPR	Cabo Rojo, PR	0.26	283	⇑iP	Pg	07 55 59.7	-0.3
CRPR				eS	Sg	07 56 03.3	-0.7
CELP	Cerrillos	0.28	63		Pg	07 56 00.5	+0.1
CELP				IAML		07 56 05.3	
	comp=N,2μm,0.3s						
CELP				IAML		07 56 05.9	
	comp=N,1μm,0.2s						
LSP	Las Mesas	0.32	315		Pg	07 56 00.7	-0.4
LSP					Sg	07 56 05.1	-0.7
LSP	Las Mesas	0.32	315	⇓iP	Pg	07 56 00.7	-0.4
LSP				eS	Sg	07 56 05.1	-0.7
UUPR	Utuado, UPR, P	0.33	21		Pg	07 56 00.8	-0.3
UUPR				IAML		07 56 05.9	
	comp=N,9μm,0.3s						
UUPR				IAML		07 56 06.4	
	comp=N,6μm,0.4s						
PRSN	Puerto Rico Se	0.39	313		Pg	07 56 01.9	-0.4
PRSN				IAML		07 56 07.7	
	comp=N,2μm,0.2s						
PRSN				IAML		07 56 12.3	
	comp=N,2μm,0.3s						
PRSN	Puerto Rico Se	0.39	313		Sg	07 56 07.2	-0.6
PRSN	Puerto Rico Se	0.39	313	⇑ePg	Pg	07 56 01.9	-0.4
PRSN				⇑eSg	Sb	07 56 09.2	+0.9
PRSN				IAML		07 56 12.3	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	0.39	313	⇑ePg	Pg	07 56 01.7	-0.5
PRSN				⇑eSg	Sb	07 56 08.3	-0.1
PRSN				IAML		07 56 12.3	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	0.39	313	⇑iP	Pg	07 56 01.8	-0.5
PRSN				eS	Sg	07 56 07.2	-0.6
AGPR	Aguadilla, PR	0.58	334		Pg	07 56 04.9	-0.7
AGPR				IAML		07 56 13.1	
	comp=N,338nm,0.3s						
AGPR				IAML		07 56 15.0	
	comp=N,366nm,0.3s						
AGPR	Aguadilla, PR	0.58	334	⇑ePg	Pg	07 56 05.0	-0.7
AGPR				⇑eSg	Sg	07 56 12.9	-0.5
AGPR				IAML		07 56 14.9	
	comp=N,378nm,0.3s						
AGPR	Aguadilla, PR	0.58	334	⇑ePg	Pg	07 56 04.9	-0.7
AGPR				⇑eSg	Sg	07 56 12.7	-0.7
AGPR				IAML		07 56 14.9	
	comp=N,378nm,0.3s						
AGPR	Aguadilla, PR	0.58	334	⇑iP	Pg	07 56 04.9	-0.7
AGPR				eS	Sg	07 56 12.8	-0.5
ECPR	Experimental S	0.59	51		Pg	07 56 05.4	-0.5
ECPR				IAML		07 56 14.8	
	comp=N,1μm,0.2s						
ECPR				IAML		07 56 15.4	
	comp=N,2μm,0.2s						
ECPR	Experimental S	0.59	51	⇑eP	Pg	07 56 05.4	-0.5
ECPR				eS	Sg	07 56 13.0	-0.8
EMPR	Esperanza - Ma	0.60	30		Pg	07 56 06.4	+0.2
EMPR					Sg	07 56 13.7	-0.6
EMPR	Esperanza - Ma	0.60	30	⇑iP	Pg	07 56 06.4	+0.2
EMPR				eS	Sg	07 56 13.7	-0.6
SJG	San Juan	0.68	76		Pg	07 56 07.1	-0.4
SJG				IAML		07 56 18.3	
	comp=N,362nm,0.2s						
SJG				IAML		07 56 18.3	
	comp=N,232nm,0.3s						
SJG	San Juan	0.68	76	⇑ePg	Pg	07 56 07.2	-0.4
SJG				⇑eSg	Sg	07 56 15.1	-1.6
SJG	San Juan	0.68	76	⇑ePg	Pg	07 56 07.2	-0.4
SJG				⇑eSg	Sg	07 56 16.4	-0.2
SJG	San Juan	0.68	76	⇑iP	Pg	07 56 07.1	-0.4
SJG				eS	Sg	07 56 16.4	-0.2
IDE	Isla Desecheo	0.74	306		Pg	07 56 07.8	-0.9
IDE					Sg	07 56 17.6	-1.0
IDE	Isla Desecheo	0.74	306	⇑iP	Pg	07 56 07.8	-0.9
IDE				eS	Sg	07 56 17.6	-1.0
PDPR	Patillas Dam,	0.79	85		Pg	07 56 09.1	-0.4
PDPR				IAML		07 56 21.0	
	comp=N,263nm,0.3s						
PDPR				IAML		07 56 24.4	
	comp=N,160nm,0.2s						
GCPR	Guaynabo City	0.81	63		Pg	07 56 09.0	-0.9
GCPR				Sg	Sg	07 56 19.8	-0.9
GCPR				IAML		07 56 20.0	
	comp=E,152nm,0.3s						
GCPR				IAML		07 56 20.0	
	comp=N,212nm,0.3s						
GCPR	Guaynabo City	0.81	63	⇑iP	Pg	07 56 09.1	-0.9
GCPR				eS	Sg	07 56 19.4	-1.2
HUMP	Col San Antoni	0.96	78		Pg	07 56 11.7	-1.2
HUMP				IAML		07 56 28.7	
	comp=N,170nm,0.2s						
HUMP				IAML		07 56 29.1	
	comp=N,318nm,0.2s						
HUMP	Col San Antoni	0.96	78		Sg	07 56 24.7	-0.9
HUMP	Col San Antoni	0.96	78	⇓iP	Pg	07 56 11.9	-1.0
HUMP				eS	Sg	07 56 24.9	-0.8
CUPR	Culebra, Puert	1.53	76	Pn	Pn	07 56 21.2	+0.5
PCDR	Punta Cana, DR	1.57	291	⇑ePg	Pn	07 56 21.6	+0.4
PCDR				IAML		07 57 10.4	
	comp=N,129nm,1.2s						
PCDR	Punta Cana, DR	1.57	291	⇑ePg	Pn	07 56 21.7	+0.5
PCDR				IAML		07 57 10.4	
	comp=N,129nm,1.2s						
HIDR	Higuey Centro	1.89	290	⇑ePg	Pn	07 56 25.9	+0.2
HIDR				⇓eSg	Sn	07 56 48.0	-1.1
HIDR				IAML		07 57 08.0	
	comp=N,41nm,0.2s						
HIDR	Higuey Centro	1.89	290	⇑ePg	Pn	07 56 26.4	+0.7
HIDR				IAML		07 57 08.0	
	comp=N,41nm,0.2s						
MIDR	Miches	2.33	297	⇑ePg	Pn	07 56 32.8	+1.0
MIDR				IAML		07 57 09.1	
	comp=N,18nm,1.1s						
MIDR	Miches	2.33	297	⇑ePg	Pn	07 56 34.4	+2.7
MIDR				IAML		07 57 09.2	
	comp=N,15nm,1.1s						
DR12	Loma Pena Alta	2.55	290	Pn	Pn	07 56 35.3	+0.5
HATOM	Hato Mayor del	2.55	290	⇓ePg	Pn	07 56 37.1	+2.3
HATOM				⇑eSg	Sn	07 57 06.1	+0.6
HATOM				IAML		07 57 20.5	
	comp=N,15nm,1.1s						
HATOM	Hato Mayor del	2.55	290	ePg	Pn	07 56 37.8	+3.0
HATOM				⇑eSg	Sb	07 57 11.4	+0.8
HATOM				IAML		07 57 56.0	
	comp=N,19nm,2.1s						
BANI	BANI	3.37	278	Pn	Pn	07 56 46.4	+0.3

*NEIC **02** 08:00:08.8±1.0, 17°.94N±0°.04×66°.785W±0°.008, h10km±1km, ML2.7/31, Md2.9/7(RSPR), Error ellipse: s-maj=6.9km s-min=2.6km az=179.0*
RSPR 02 08:00:09.1, 17°.95N×66°.81W, h13km, MD2.9/7, 7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.07	291		Pg	08 00 11.8	+0.1
GBPR					Sg	08 00 14.0	+0.4
GBPR	Guanica, Bosqu	0.07	291	⇓iP	Pg	08 00 11.8	+0.1
GBPR				eS	Sg	08 00 14.0	+0.4
OBIP	Obispado Ponce	0.22	65		Pg	08 00 13.6	-0.2
OBIP					Sg	08 00 17.2	+0.2
OBIP				IAML		08 00 19.1	
	comp=N,116nm,0.2s						
OBIP	Obispado Ponce	0.22	65	⇓iP	Pg	08 00 13.7	-0.1
OBIP				eS	Sg	08 00 17.3	+0.3
MLPR	Magueyes Islan	0.22	275		Pg	08 00 13.7	-0.2
MLPR				IAML		08 00 18.1	
	comp=N,971nm,0.3s						
MLPR				IAML		08 00 18.2	
	comp=N,1μm,0.3s						
CRPR	Cabo Rojo, PR	0.29	281		Pg	08 00 14.9	-0.2
CRPR					Sg	08 00 19.1	0.0
CRPR	Cabo Rojo, PR	0.29	281	IAML		08 00 19.6	
	comp=N,1μm,0.2s						
CRPR				IAML		08 00 20.0	
	comp=N,1μm,0.2s						
CRPR	Cabo Rojo, PR	0.29	281	⇑iP	Pg	08 00 14.9	-0.1
CRPR				eS	Sg	08 00 19.1	+0.1
UUPR	Utuado, UPR, P	0.31	16		Pg	08 00 15.3	-0.2
UUPR				Sg	Sg	08 00 20.0	+0.2
UUPR				IAML		08 00 21.7	
	comp=N,8μm,0.4s						
UUPR				IAML		08 00 26.4	
	comp=N,3μm,0.4s						
LSP	Las Mesas	0.34	311		Pg	08 00 15.9	-0.1
LSP					Sg	08 00 21.1	+0.3
LSP	Las Mesas	0.34	311	⇓iP	Pg	08 00 15.9	-0.1
LSP				eS	Sg	08 00 21.1	+0.3
PRSN	Puerto Rico Se	0.41	310		Sg	08 00 23.1	+0.2
PRSN	Puerto Rico Se	0.41	310	Pg	Pg	08 00 16.8	-0.5
PRSN				IAML		08 00 23.4	
	comp=N,2μm,0.2s						
PRSN				IAML		08 00 25.3	
	comp=N,3μm,0.2s						
PRSN	Puerto Rico Se	0.41	310	⇑iP	Pg	08 00 17.0	-0.3
PRSN				eS	Sg	08 00 23.1	+0.2
ECPR	Experimental S	0.56	49		Pg	08 00 19.4	-0.7
ECPR				Sg	Sg	08 00 27.1	-0.5
ECPR				IAML		08 00 28.8	
	comp=N,2μm,0.2s						
ECPR				IAML		08 00 28.9	
	comp=N,1μm,0.2s						
ECPR	Experimental S	0.56	49	⇑iP	Pg	08 00 19.5	-0.6
ECPR				eS	Sg	08 00 27.2	-0.4
AGPR	Aguadilla, PR	0.59	331	Pg	Pg	08 00 20.0	-0.6
AGPR				IAML		08 00 33.9	
	comp=N,168nm,0.4s						
AGPR				IAML		08 00 35.7	
	comp=N,169nm,0.6s						
AGPR	Aguadilla, PR	0.59	331	⇑iP	Pg	08 00 20.0	-0.6
AGPR				eS	Sg	08 00 28.1	-0.3
EMPR	Esperanza - Ma	0.59	27		Pg	08 00 20.4	-0.2
EMPR					Sg	08 00 28.3	-0.2
EMPR	Esperanza - Ma	0.59	27	⇓iP	Pg	08 00 20.4	-0.2
EMPR				eS	Sg	08 00 28.3	-0.2
SJG	San Juan	0.65	76		Pg	08 00 20.7	-1.0
SJG				IAML		08 00 30.7	
	comp=N,202nm,0.2s						
SJG				IAML		08 00 30.8	
	comp=N,172nm,0.2s						
SJG	San Juan	0.65	76	⇓iP	Pg	08 00 20.8	-1.0
SJG				eS	Sg	08 00 28.9	-1.5
PDPR	Patillas Dam,	0.75	85		Pg	08 00 22.8	-0.9
PDPR				IAML		08 00 33.8	
	comp=N,102nm,0.3s						
PDPR				IAML		08 00 34.6	
	comp=N,84nm,0.2s						
IDE	Isla Desecheo	0.77	305		Pg	08 00 23.2	-0.7
IDE					Sg	08 00 33.5	-0.5
IDE	Isla Desecheo	0.77	305	⇓iP	Pg	08 00 23.2	-0.7
IDE				eS	Sg	08 00 33.5	-0.5
GCPR	Guaynabo City	0.78	63		Sg	08 00 33.4	-1.1
GCPR	Guaynabo City	0.78	63	⇓iP	Pg	08 00 23.0	-1.2
GCPR				eS	Sg	08 00 33.2	-1.2
HUMP	Col San Antoni	0.94	78		Pb	08 00 25.4	-1.7
HUMP					Sg	08 00 38.2	-1.1
HUMP	Col San Antoni	0.94	78	IAML		08 00 42.4	
	comp=N,159nm,0.2s						
HUMP				IAML		08 00 42.6	
	comp=N,120nm,0.2s						
HUMP	Col San Antoni	0.94	78	⇑iP	Pb	08 00 25.4	-1.7
HUMP				eS	Sg	08 00 38.2	-1.1
CUPR	Culebra, Puert	1.50	76	Pn	Pn	08 00 35.0	-0.6

SSNC 02 08:02:06.5±0.3, 20°.97N×75°.61W, h0km, ML0.3, Presumed earthquake, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINC	Pinares de May	0.51	199	eP	Pg	08 02 15.6	-0.6
PINC				e		08 02 15.7	
	baz=19,slow=28						
PINC				eS	Sg	08 02 22.4	-0.5
PINC				IAML		08 02 22.7	
	comp=N,1.5nm,0.1s						

*IDC **02** 08:04:36.1±5.2, 1°.56S×100°.30E, h0km, mb3.5/3, mbtmp3.5/3, MS3.5/1, Error ellipse: s-maj=275.0km s-min=27.3km az=53.0*
*DJA **02** 08:04:37.4±0.4, 2°S±2°×10°0E±°, h13km±5km, M3.8/6, MLv3.8/6*
ISC 02 08:04:37.1±1.8, 1°.73S±0°.04×99°.82E±0°.05, h14km±13km, n18, σ0^{s}96/15, mb3.3/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.83	299	P	Pb	08 04 52.2	-1.1
SISI				S	Sg	08 05 04.9	+0.8
PDSI	Padang	1.03	38	P	Pb	08 04 57.1	+0.3
PDSI				S	Sn	08 05 11.9	+0.3
PPSI	Pulau Pagai	1.05	169	P	Pb	08 04 57.2	+0.2
PPSI				S	Sn	08 05 13.1	+1.3
PPI	Padang Panjang	1.39	25	P	Pb	08 05 02.8	-0.1
PPI				S	Sg	08 05 21.7	-0.2
PBSI	Pulau Batu	2.26	317	P	Pn	08 05 14.3	+0.1
PBSI				S	Sn	08 05 42.9	+1.0
MNAI	Manna	4.08	130	P	Pn	08 05 39.1	-0.1
EGSI	Enggano, Bengk	4.36	146	P	Pn	08 05 42.8	-0.2
H08S2	Diego Garcia H	27.85	257	T	T	08 39 01.9	
	baz=79						
H08S3	Diego Garcia H	27.86	257	T	T	08 39 01.5	
	baz=79,SNR=6.8						
H08S1	Diego Carcia H	27.87	257	T	T	08 39 06.3	
	baz=79						
WRA	Warramunga Arr	38.29	121	P	P	08 11 56.0	-1.6
	0.3nm,0.5s,baz=299,slow=8.1,SNR=10						
	0.3nm,0.5s						
ASAR	Alice Springs	39.56	126	P	P	08 12 06.9	-1.3
	0.4nm,0.6s,baz=300,slow=8.0,SNR=11						
	0.4nm,0.6s						
MKAR	Makanchi Array	50.72	344	P	P	08 13 37.6	+1.1
	0.4nm,0.5s,baz=151,slow=8.8,SNR=6.2						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	55.24	344	LR	LR	08 43 07.6	
	comp=Z,38nm,18.5s,baz=164,slow=42						
H04N2	CROZET ISLANDS	60.91	216	T	T	09 20 27.9	
	baz=57,slow=75,SNR=51						
H04N1	CROZET ISLANDS	60.92	216	T	T	09 20 28.3	
	baz=57,slow=75,SNR=49						
H04N3	CROZET ISLANDS	60.92	216	T	T	09 20 27.0	
	baz=57,slow=75,SNR=40						
TXAR	Lajitas Array	144.59	37	PKP	PKPbc	08 24 13.1	+0.1
	0.2nm,0.6s,baz=303,slow=2.7,SNR=2.3						

MEX 02 08:05:53.8±0.5, 19°.51N×102°.16W, h21km±9km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.12	137	iP	Pb	08 05 56.5	-3.9
URUA				eS	Sb	08 05 59.6	-5.4
MOIG	Morelia	0.93	79	eP	Pn	08 06 11.8	0.0
MOIG				eS	Sn	08 06 25.1	+0.4
INCO	Volcan de Coli	1.36	271	eP	Pn	08 06 15.6	-2.4
INCO				eS	Sn	08 06 32.3	-3.3
MNGA	Volcan de Coli	1.38	269	eP	Pn	08 06 15.7	-2.4
MNGA				eS	Sn	08 06 32.2	-3.6
CEGR	Campo Tres	1.61	266	eP	Pn	08 06 19.2	-1.9
CEGR				eS	Sn	08 06 39.0	-2.3
MMIG	Aquila	1.65	223	eP	Pn	08 06 19.6	-2.0
MMIG				eS	Sn	08 06 38.9	-3.3
CDAR	Ciudad de Arme	1.84	252	eP	Pn	08 06 21.9	-2.2
CDAR				eS	Sn	08 06 43.9	-2.9
ARIG	Puente Sto Nin	2.10	125	eP	Pn	08 06 29.5	+1.6
ARIG				eS	Sb	08 06 57.0	0.0

*NNC **02** 08:12:04.9±3.3, 41°.36N×83°.47E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=27.7km s-min=20.1km az=8.0*
SOME 02 08:12:00.2, 40°.98N×83°.38E, h5km, 3C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	3.64	308	Pg	Pb	08 13 02.4	-2.7
	13nm,0.2s						
SHLS				Lg	Lg	08 13 47.6	
	66nm,0.3s						
SHLS	Shalkode	3.64	308	eP	Pb	08 13 02.4	-2.7
	13nm,0.2s						
SHLS				eS	Sb	08 13 47.6	-1.9
	66nm,0.3s						
PDGK	Podgornoye	3.72	310	⇓Pn	Pn	08 13 02.0	+3.5
	2.2nm,0.5s						
PDGK				⇑Pg	Pg	08 13 11.9	+0.4
	5.9nm,0.6s						
PDGK				⇓Sn	Sn	08 13 45.7	+2.9
	5.0nm,0.5s						
PDGK				⇓Lg	Lg	08 13 55.3	
	20nm,0.6s						
UZB	Uzynbulak	3.90	305	Pg	Pb	08 13 11.3	+1.8
	4.1nm,0.2s						
UZB				Lg	Lg	08 14 03.4	
	20nm,0.4s						
UZB	Uzynbulak	3.90	305	eP	Pb	08 13 11.6	+2.1
	4.1nm,0.2s						
UZB				eS	Sg	08 14 02.9	-2.5
	20nm,0.4s						
SATY	Saty	4.25	301	Pg	Pg	08 13 19.9	-1.7
	4.6nm,0.3s						
SATY				Lg	Lg	08 14 16.1	
	17nm,0.3s						
DJR	Jarkent	4.27	323	Pg	Pg	08 13 19.5	-2.5
	4.7nm,0.6s						
DJR				Lg	Lg	08 14 16.5	
	8.5nm,0.8s						
DJR	Jarkent	4.27	323	eP	Pg	08 13 19.4	-2.5
	4.7nm,0.6s						
DJR				eS	Sg	08 14 16.5	-0.8
	8.5nm,0.8s						
KPKS	Kokpek	4.28	307	eP	Pb	08 13 19.0	+3.0
	3.0nm,0.3s						
KPKS				eS	Sg	08 14 15.3	-2.3
	25nm,0.4s						
ARXS	Arharly	5.22	310	eP	Pg	08 13 36.5	-3.7
	1.6nm,0.4s						
ARXS				eS	Sg	08 14 45.8	-1.9
	8.8nm,0.5s						
MK31	Makanchi Array	5.86	353	⇓Pn	Pn	08 13 29.4	+1.6
	0.1nm,0.1s,baz=157,slow=11,SNR=5.7						
MK31				⇑Pg	Pb	08 13 47.4	+4.5
	0.3nm,0.2s,baz=177,slow=17,SNR=3.9						
MK31				⇑Sn	Sn	08 14 29.9	-5.4
	0.5nm,0.1s,baz=233,slow=37,SNR=5.3						
MK31				⇓Lg	Lg	08 14 53.3	
	1.1nm,0.2s,baz=163,slow=29,SNR=6.2						

MEX 02 08:14:43.7±0.5, 19°.53N×102°.11W, h28km±6km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.11	162	eP	Pb	08 14 47.6	-1.6
URUA				eS	Sb	08 14 50.6	-2.2
INCO	Volcan de Coli	1.41	270	eP	Pn	08 15 07.5	-0.4
INCO				eS	Sn	08 15 23.3	-2.4
MNGA	Volcan de Coli	1.43	268	eP	Pn	08 15 06.5	-1.4
MNGA				eS	Sn	08 15 23.1	-2.8
CEGR	Campo Tres	1.65	266	eP	Pn	08 15 08.2	-2.9
CEGR				eS	Sn	08 15 29.0	-2.4
MMIG	Aquila	1.70	224	eP	Pn	08 15 09.0	-2.4
MMIG				eS	Sn	08 15 30.0	-2.3
ZIIG	Zihuatanejo	2.01	162	eP	Pn	08 15 16.1	+0.3
ZIIG				eS	Sn	08 15 41.9	+2.0
ARIG	Puente Sto Nin	2.08	126	eP	Pn	08 15 18.5	+1.7
ARIG				eS	Sb	08 15 48.4	+2.1
CJM	Chamela	2.77	270	eS	Sn	08 16 01.0	+2.3

MEX 02 08:19:41.0±0.5, 19°.54N×102°.14W, h22km±8km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.13	154	eP	Pb	08 19 44.0	-2.8
URUA				eS	Sb	08 19 47.2	-3.5
INCO	Volcan de Coli	1.39	270	eP	Pn	08 20 02.9	-2.5
INCO				eS	Sn	08 20 20.3	-3.0
MNGA	Volcan de Coli	1.40	267	eP	Pn	08 20 02.7	-2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNGA				eS	Sn	08 20 19.6	-3.9
SOMAC	Volcano de Col	1.41	270	eP	Pn	08 20 03.3	-2.4
SOMAC				eS	Sn	08 20 19.1	-4.8
CEGR	Campo Tres	1.63	265	eP	Pn	08 20 06.3	-2.3
CEGR				eS	Sn	08 20 26.2	-2.9
MMIG	Aquila	1.69	223	eP	Pn	08 20 06.4	-2.8
MMIG				eS	Sn	08 20 26.3	-4.0
CDAR	Ciudad de Arme	1.87	252	eP	Pn	08 20 09.8	-1.9
CDAR				eS	Sn	08 20 31.9	-2.7
ZIIG	Zihuatanejo	2.03	162	eP	Pn	08 20 13.4	-0.5
ZIIG				eS	Sn	08 20 40.1	+1.6
ARIG	Puente Sto Nin	2.11	126	eP	Pb	08 20 16.8	-1.8
ARIG				eS	Sb	08 20 45.3	+1.1
AAIG	Aguscalientes	2.43	355	eP	Pb	08 20 23.9	-0.3
AAIG				eS	Sb	08 20 58.0	+4.3
PLIG	Platanillo	2.74	114	eP	Pb	08 20 29.9	+0.5
PLIG				eS	Sb	08 21 04.9	+2.3
CJM	Chamela	2.74	270	eP	Pn	08 20 24.1	+0.4
CJM				eS	Sn	08 20 58.7	+2.5
MEIG	Mezcala	2.87	124	eP	Pb	08 20 30.2	-1.5
MEIG				eS	Sb	08 21 07.2	+0.8
CRIG	Cruz Grande	3.99	134	eS	Sb	08 21 40.5	+1.9

*IDC **02** 08:26:49.9±3.6, 33.31°N×45.88°E, h0km, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=74.0km s-min=29.4km az=24.0*

*TEH **02** 08:26:52.0, 33.34°N×45.84°E, h25km±22km, ML3.5, Presumed earthquake*

ISC 02 08:26:52.9±1.1**, 33.36°N**±0.07°×**45.86°E**±0.09°**, h19km, n23,** σ0.47/25**, mb3.8**/9**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLG1	Gilan-e-Gharb	0.75	3	Pg	Pb	08 27 06.8	-0.7
IGHG	Ghaleghazi	1.13	31	Pg	Pb	08 27 13.7	-0.4
KCHF	Cheshme Sefid,	1.34	47	Pg	Pb	08 27 17.4	-0.2
KCHF				Sg	Sg	08 27 36.6	+0.1
IDHR	Dehrash	1.41	18	Pg	Pb	08 27 18.7	0.0
IDHR				Sg	Sg	08 27 38.7	+0.1
IDOB	Doab	1.98	77	Pn	Pn	08 27 26.0	+0.3
IBZA	Bozab	2.00	56	Pn	Pn	08 27 26.5	+0.5
BDRS	Dareh Seyedi	2.59	76	Pn	Pn	08 27 34.3	+0.2
HAGD	Aghdareh	3.09	61	Pn	Pn	08 27 41.1	+0.2
AMIS	Naft Sefid	3.35	119	Pn	Pn	08 27 44.8	+0.4
JHBN	Jahan bin	4.20	104	Pn	Pn	08 27 56.4	+0.1
IPIR	Pirpir	4.28	98	Pn	Pn	08 27 57.6	+0.2
QAMS	Qamsar	4.64	84	Pn	Pn	08 28 02.2	-0.1
IKLH	Kolahrood	4.79	89	Pn	Pn	08 28 04.7	+0.3
KLNJ	Kolanjah	5.40	114	Pn	Pn	08 28 13.0	+0.2
AKASG	Malin Array Be	21.20	330	P	P	08 31 37.9	+0.7
	0.3nm,0.4s,baz=142,slow=10,SNR=2.0						
	0.3nm,0.4s						
BVAR	Borovoye Array	26.35	34	P	P	08 32 27.4	-0.3
	0.7nm,0.7s,baz=293,slow=7.4,SNR=2.2						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	29.46	44	P	P	08 32 56.2	+0.7
	0.7nm,0.5s,baz=251,slow=9.0,SNR=4.5						
	0.7nm,0.5s						
MKAR	Makanchi Array	30.65	53	P	P	08 33 06.7	+0.6
	0.8nm,0.5s,baz=255,slow=9.8,SNR=15						
	0.8nm,0.5s						
HFS	Hagfors	34.06	332	P	P	08 33 35.8	+0.1
	5.2nm,1.0s,baz=134,slow=8.3,SNR=2.5						
	5.2nm,1.0s						
ZALV	Zalesovo Beam	34.30	41	P	P	08 33 36.6	-1.3
	0.6nm,0.5s,baz=253,slow=10,SNR=3.6						
	0.6nm,0.5s						
SONM	Songino Array	47.02	53	P	P	08 35 23.2	+0.1
	0.3nm,0.6s,baz=299,slow=5.9,SNR=1.9						
	0.3nm,0.6s						
CMAR	Chiang Mai Arr	49.51	94	P	P	08 35 42.1	-0.5
	1.0nm,0.4s,baz=298,slow=5.2,SNR=1.7						
	1.0nm,0.4s						
HILR	Hailar Array B	55.49	49	P	P	08 36 26.3	-0.2
	0.8nm,0.5s,baz=281,slow=6.9,SNR=4.9						
	0.8nm,0.5s						

MEX 02 08:27:17.5±0.8**, 15.11°N×94.40°W, h16km**±12km**, MD4.2, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.28	62	eP	Pn	08 27 37.1	-3.6
PCIG				eS	Sb	08 27 52.2	-5.3
HUIG	Huatulco	1.78	292	eP	Pn	08 27 44.6	-2.9
HUIG				eS	Sn	08 28 03.5	-6.4
CMIG	Matias Romero	2.03	347	eP	Pn	08 27 48.9	-2.1
CMIG				eS	Sn	08 28 13.3	-2.8
TGIG		2.06	36	eP	Pn	08 27 50.1	-1.5
TGIG				i S	Sn	08 28 14.9	-2.1
PATR	El Naranjo	2.09	89	eP	Pn	08 27 48.7	-3.4
PAVE	Pavencul	2.15	87	eP	Pn	08 27 49.5	-3.4
PAVE				eS	Sn	08 28 14.5	-4.8
CHUJ	Union Juarez	2.21	90	eP	Pn	08 27 50.6	-3.2
CHUJ				eS	Sn	08 28 15.2	-5.7
UXUV	UXUV	2.21	6	eP	Pn	08 27 53.0	-0.6
UXUV				eS	Sn	08 28 18.1	-2.5
CCIG	Comitan	2.47	61	eP	Pn	08 27 56.5	-0.8
CCIG				i S	Sn	08 28 26.1	-1.1
PEIG	Puerto Escondi	2.79	289	eP	Pn	08 27 59.2	-2.4
PEIG				i S	Sn	08 28 28.3	-6.7
NEUV	Arroyo Zacate	2.92	333	eP	Pn	08 28 01.9	-1.4
NEUV				i S	Sn	08 28 36.4	-1.7
VHO	Vista Hermosa	2.98	311	eP	Pn	08 28 04.2	-0.1
VHO				i S	Sn	08 28 36.7	-3.1
YOIG	Yosondua	3.49	300	eP	Pn	08 28 11.9	+0.5
YOIG				eS	Sn	08 28 50.8	-1.8
PNIG	Pinotepa	3.81	290	eP	Pn	08 28 13.9	-1.7
PNIG				i S	Sn	08 28 53.1	-7.0
TXIG	Tlaxiaco	3.88	304	eP	Pn	08 28 16.0	-0.7
TXIG				i S	Sn	08 29 00.8	-1.3
TOIG	Toxpalan	3.92	320	eP	Pn	08 28 18.0	+0.9
TOIG				i S	Sn	08 29 05.4	+2.4
HLIG	Huajuapan de L	4.24	310	eP	Pn	08 28 23.3	+1.6
HLIG				i S	Sn	08 29 08.6	-2.5
FTIG	Fresnillo de T	4.54	308	eP	Pn	08 28 27.4	+1.7
FTIG				i S	Sn	08 29 14.6	-3.6
MGIG	Malinaltepec	4.59	298	eP	Pn	08 28 25.0	-1.4
MGIG				i S	Sn	08 29 13.6	-5.9
TLIG	Tlapa	4.69	302	eP	Pn	08 28 29.5	+1.7
TLIG				i S	Sn	08 29 19.6	-2.3
CRIG	Cruz Grande	4.83	290	eP	Pn	08 28 29.1	-0.5
CRIG				i S	Sn	08 29 16.8	-8.5

*BJI **02** 08:37:41.8, 10.61°S×165.83°E, h25km, mB5.3/9, mb4.5/31, Ms4.9/6, Ms7 4.7/7*

*GCMT **02** 08:37:43.7±0.4, 10.73°S±0.03°×165.64°E±0.02°, h40km±1km, MW5.0/66, Moment Tensor Solution. s34,c35; s66,c87; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.80±.22; Mθθ2.66±.13; Mφφ0.14±.13; Mrθ1.01±.13; Mθφ-0.98±.09; Mφr-1.34±.10; Best double couple: Mo3.35300×10^16 NP1:φs93.00000°,δ34.00000°,λ-117.00000°. NP2: φs305.00000°,δ60.00000°,λ-73.00000°. Principal axes: T 3.3270, Plg13.0000°, Azm23.0000°; N 0.0540, Plg15.0000°, Azm116.0000°; P -3.3800, Plg70.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 08:37:43.7±1.0, 10.85°S±0.03°×165.7°E±0.1°, h35km±1km, mb4.7/39 Error ellipse: s-maj=17.7km s-min=6.0km az=277.0*

*IDC **02** 08:37:44.5±3.1, 10.93°S×165.67°E, h47km±29km, mb4.0/17, mbtmp4.3/19, ML4.5/2, MS4.1/47, Error ellipse: s-maj=23.7km s-min=18.0km az=133.0*

*NOU **02** 08:37:45.0, 10.96°S×165.67°E, h46km, mb5.0/34, Santa Cruz Islands*

ISC 02 08:37:43.7±0.4**, 10.94°S**±0.06°×**165.73°E**±0.07°**, h35km, n167,** σ1.17/128**, mb4.6**/54**, MS4.2**/45**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	3.79	277	P	Pn	08 38 38.7	-1.0
HURO	Huro Makira	3.79	277	S	Sn	08 39 23.8	+0.6
NGOA	Tingoa Renbel	5.60	263	P	Pn	08 39 03.0	-1.5
HNR	Honiara	5.89	284	P	Pn	08 39 08.7	+0.2
	5.3nm,0.3s,baz=298,slow=6.5,SNR=25						
HNR				LR	LR	08 41 33.0	
	comp=Z,254nm,20.6s,baz=278,slow=39						
	20nm,0.5s						
HNR	Honiara	5.89	284		Pn	08 39 09.7	+1.1
HNR	Honiara	5.89	284	P	Pn	08 39 09.8	+1.2
HNR	Honiara	5.89	284	S	Sn	08 40 15.6	+0.7
SAVO	Savo Central	6.10	286	P	Pn	08 39 12.7	+1.3
TATA	Tatamba Isabel	6.37	293	P	Pn	08 39 15.8	+0.6
DVP	Devils Point	7.15	161	P	Pn	08 39 28.2	+2.4
KOUNC	Koumac, New Ca	9.65	188	P	Pn	08 40 01.3	+1.1
KOUNC	Koumac, New Ca	9.65	188	S	Sn	08 41 48.7	+1.2
MARNC	Mare, Loyalty	10.71	168	Pn	Pn	08 40 15.5	+0.8
MARNC	Mare, Loyalty	10.71	168	P	Pn	08 40 15.6	+1.0
DZM	Mont Dzumac	11.09	177	P	Pn	08 40 21.3	+1.4
	6.7nm,0.3s,baz=315,slow=9.4,SNR=80						
	35nm,0.5s						
DZM	Mont Dzumac	11.09	177	eP	Pn	08 40 21.3	+1.4
	41nm,0.6s						
DZM				eLR	LR	08 42 51.9	
	3μm,23.6s						
DZM	Mont Dzumac	11.09	177		Pn	08 40 20.9	+1.0
DZM	Mont Dzumac	11.09	177	P	Pn	08 40 21.0	+1.0
YATNC	Mamie plateau,	11.11	174	P	Pn	08 40 21.1	+0.9
ONTNC	Ouen Toro	11.32	177		Pn	08 40 24.2	+1.2
ONTNC	Ouen Toro	11.32	177	P	Pn	08 40 24.7	+1.7
OUENC	Ouen Island, N	11.46	175	P	Pn	08 40 26.3	+1.4
PINNC	Pines Island,	11.72	172		Pn	08 40 30.0	+1.5
PMG	Port Moresby	18.35	273	LR	LR	08 48 48.9	
	comp=Z,2μm,19.2s,baz=114,slow=36						
EIDS	Eidsvold	19.96	222	P	P	08 42 13.9	+0.9
	comp=Z,20nm,1.1s,comp=Z,0.0nm						
EIDS	Eidsvold	19.96	222		P	08 42 14.6	+1.6
CTA	Charters Tower	20.84	242	LR	LR	08 49 47.3	
	comp=Z,1μm,18.1s,baz=62,slow=35						
CTAO	Charters Tower	20.84	242	P	P	08 42 23.1	+0.6
MTSU	Mount Surprise	21.91	248	P	P	08 42 35.3	+1.2
	comp=Z,14nm,1.3s						
MTSU	Mount Surprise	21.91	248	P	P	08 42 34.3	+0.1
COEN	Coen	22.23	260	P	P	08 42 37.8	+0.3
	comp=Z,14nm,1.5s						
COEN	Coen	22.23	260		P	08 42 37.4	-0.2
ARMA	Armidale	23.40	212	P	P	08 42 49.9	+0.3
ARMA				IAmb	IAmb	08 43 04.3	
	comp=Z,36nm,1.4s						
ARMA	Armidale	23.40	212	P	P	08 42 51.0	+1.3
QIS	Mount Isa	26.87	246	P	P	08 43 18.8	-2.6
QIS	Mount Isa	26.87	246	P	P	08 43 21.9	+0.5
CMSA	Cobar Meteorol	27.64	219	P	P	08 43 27.9	-0.3
CAN	Canberra	28.64	209	P	P	08 43 35.3	-1.9
CAN				IAmb	IAmb	08 43 44.9	
	comp=Z,40nm,1.5s						
INKA	Innaminka	28.80	231	P	P	08 43 37.2	-1.3
URZ	Urewera	29.05	161	LR	LR	08 53 19.4	
	comp=Z,595nm,21.9s,baz=337,slow=32						
URZ	Urewera	29.05	161	P	P	08 43 39.9	-0.7
H11S2	WAKE ISLAND Hy	29.26	2	T	T	09 14 09.6	
	baz=181,slow=76,SNR=543						
H11S3	WAKE ISLAND Hy	29.27	2	T	T	09 14 09.9	
	baz=181,slow=76,SNR=468						
H11S1	WAKE ISLAND Hy	29.28	2	T	T	09 14 10.9	
	baz=181,slow=76,SNR=500						
RTZ	Ruatahuna	29.33	162	P	P	08 43 42.7	-0.6
RTZ				IAmb	IAmb	08 43 59.2	
	comp=Z,22nm,1.0s						
BKZ	Black Stump Fm	29.70	163	P	P	08 43 45.7	-0.8
QRZ	Quartz Range	30.36	170	P	P	08 43 53.5	+1.2
H11N1	WAKE ISLAND Hy	30.48	2	T	T	09 15 41.2	
	baz=182,slow=76,SNR=264						
H11N3	WAKE ISLAND Hy	30.49	2	T	T	09 15 41.5	
	baz=182,slow=76,SNR=136						
H11N2	WAKE ISLAND Hy	30.50	2	T	T	09 15 42.5	
	baz=182,slow=76,SNR=151						
STKA	Stephens Creek	30.51	223	P	P	08 43 53.4	-0.2
	comp=Z,56nm,1.7s						
STKA	Stephens Creek	30.51	223	P	P	08 43 53.5	-0.2
	comp=Z,2.9nm,0.5s,baz=48,slow=9.1,SNR=17						
STKA				LR	LR	08 55 45.2	
	comp=Z,1μm,18.7s,baz=32,slow=36						
	comp=Z,2.9nm,0.5s						
STKA	Stephens Creek	30.51	223	P	P	08 43 54.3	+0.6
WR8	Warramunga Arr	31.36	250	P	P	08 44 00.3	-1.1
WR8				IAmb	IAmb	08 44 01.8	
	comp=Z,29nm,1.5s						
WB0	Warramunga Arr	31.42	250	P	P	08 44 00.7	-1.2
WB0				IAmb	IAmb	08 44 01.5	
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	31.50	250	P	P	08 44 01.5	-1.0
WRAB				IAmb	IAmb	08 44 03.7	
	comp=Z,14nm,1.2s						
WRAB	Tennant Creek	31.50	250	P	P	08 44 01.4	-1.2
WRA	Warramunga Arr	31.51	250	P	P	08 44 01.4	-1.3
	comp=Z,3.9nm,0.5s,baz=82,slow=9.2,SNR=86						
	comp=Z,3.9nm,0.5s						
WRA	Warramunga Arr	31.51	250	P	P	08 44 00.7	-2.0
GUMO	Guam	31.98	319	LR	LR	08 56 23.7	
	comp=Z,140nm,18.5s,baz=126,slow=35						
KHZ	Kahutara	32.09	169	P	P	08 44 06.9	-0.5
TOO	Toolangi	32.15	211	P	P	08 44 08.1	0.0
AS31	Alice Springs	32.83	243		P	08 44 12.9	-1.4
ASAR	Alice Springs	32.83	243	P	P	08 44 12.6	-1.7
	comp=Z,3.2nm,0.6s,baz=63,slow=10,SNR=87						
ASAR				PcP	PcP	08 46 57.9	-0.9
	comp=Z,1.0nm,0.9s,baz=71,slow=2.1,SNR=5.2						
	comp=Z,3.2nm,0.6s						
ASAR	Alice Springs	32.83	243		P	08 44 12.1	-2.2
HTT	Hallett	33.24	223	P	P	08 44 17.7	-0.1
MTN	Manton Dam	33.90	263	P	P	08 44 21.4	-2.2
MTN				IAmb	IAmb	08 44 48.9	
	comp=Z,17nm,1.1s						
RAR	Rarotonga	34.61	112	LR	LR	08 55 45.6	
	comp=Z,173nm,19.9s,baz=283,slow=31						
BBOO	Buckleboo	34.89	227	P	P	08 44 31.4	-0.6
BBOO	Buckleboo	34.89	227	P	P	08 44 31.3	-0.7
SIJI	Sorong	35.67	284	LR	LR	09 01 42.4	
	comp=Z,264nm,18.4s,baz=111,slow=40						
KNRA	Kununurra	36.25	258	P	P	08 44 42.6	-1.2
KNRA				IAmb	IAmb	08 44 45.3	
	comp=Z,15nm,1.1s						
WRKA	Warakurna	38.12	243	P	P	08 44 59.3	-0.4
FITZ	Fitzroy Crossi	39.40	255	P	P	08 45 09.3	-1.2
	comp=Z,6.7nm,0.6s,baz=91,slow=5.7,SNR=14						
FITZ				LR	LR	09 00 41.5	
	comp=Z,688nm,20.3s,baz=88,slow=35						
	comp=Z,6.7nm,0.6s						
FORT	Forrest	40.09	235	P	P	08 45 15.3	-0.8
BATI	Baumata	41.34	267	LR	LR	09 02 40.5	
	comp=Z,278nm,20.6s,baz=114,slow=36						
PPT	Papeete	43.73	104	LR	LR	08 59 47.9	
	comp=Z,319nm,19.7s,baz=237,slow=30						
PPT2	Papeete2	43.73	104	eS	S	08 52 06.7	-7.7
	comp=Z,70nm,28.8s						
PPT2				eLR	LR	08 57 56.5	
	comp=Z,560nm,22.2s						
PPT2				eLR	LR	08 58 02.4	
	comp=Z,490nm,23.5s						
DAV	Davao City (W)	43.79	292	LR	LR	09 03 51.5	
	comp=Z,90nm,20.4s,baz=326,slow=36						
JCJ	Chichijima	44.18	329	LR	LR	09 01 03.7	
	comp=Z,166nm,22.0s,baz=7.0,slow=32						
PSAC2	Pilbara Seismi	45.10	250	P	P	08 45 56.5	-0.4
	comp=Z,17nm,1.7s						
PSAB3	Pilbara Seismi	45.15	250	P	P	08 45 57.3	0.0
	comp=Z,18nm,1.7s						
PSA00	Pilbara Seismi	45.15	250	P	P	08 45 57.2	-0.1
	comp=Z,22nm,1.3s						
PSA00	Pilbara Seismi	45.15	250	P	P	08 45 56.4	-1.0
PSA00				IAmb	IAmb	08 45 59.4	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	45.15	250	P	P	08 45 57.0	-0.3
PSA00				IAmb	IAmb	08 45 58.5	
	comp=Z,23nm,1.2s						
PSAC1	Pilbara Seismi	45.18	251	P	P	08 45 57.8	+0.3
	comp=Z,24nm,1.9s						
MBWA	Marble Bar	45.22	251	P	P	08 45 57.6	-0.3
MBWA				IAmb	IAmb	08 46 09.1	
	comp=Z,19nm,1.4s						
KAPI	Kappang	45.88	274	P	P	08 46 02.0	-1.1
	comp=Z,8.4nm,0.4s,baz=122,slow=19,SNR=2.1						
KAPI				LR	LR	09 06 56.1	
	comp=Z,74nm,20.6s,baz=96,slow=38						
	comp=Z,8.4nm,0.4s						
KAPI	Kappang	45.88	274	P	P	08 46 02.5	-0.6
MEEK	Meekatharra	46.98	244	P	P	08 46 11.4	-0.3
	comp=Z,36nm,1.0s						
MEEK	Meekatharra	46.98	244	P	P	08 46 11.7	0.0
NWAO	Narrogin (SRO)	49.51	236	P	P	08 46 31.4	+0.3
	comp=Z,30nm,1.3s						
NWAO	Narrogin (SRO)	49.51	236	LR	LR	09 07 45.6	
	comp=Z,1μm,18.1s,baz=100,slow=36						
NWAO	Narrogin (SRO)	49.51	236	P	P	08 46 30.9	-0.2
MORW	Morawa	49.66	241	P	P	08 46 31.9	-0.4
MORW	Morawa	49.66	241	P	P	08 46 31.0	-1.3
JHJ	Hachijo jima 2	50.32	332	LR	LR	09 07 31.1	
	comp=Z,70nm,19.2s,baz=152,slow=36						
TGY	Tagaytay City	50.91	298	LR	LR	09 05 49.8	
	comp=Z,158nm,22.0s,baz=225,slow=33						
JOW	Kunigami	52.27	317	LR	LR	09 08 38.3	
	comp=Z,173nm,18.9s,baz=130,slow=36						
TAOE	Nuku Hiva Isla	53.30	93	eLR	LR	09 02 24.0	
	comp=Z,390nm,25.8s						
JGF	Kuroka	53.50	331	P	P	08 47 00.2	-0.7
JGF				IAmb	IAmb	08 47 17.6	
	comp=Z,8.2nm,1.2s						
JMN	Monobe	53.78	327	P	P	08 47 02.6	-0.3
MJAR	Matsushiro Arr	53.88	333	P	P	08 47 01.6	-1.9
	comp=Z,4.7nm,1.2s,baz=167,slow=8.0,SNR=7.4						
MJAR				LR	LR	09 10 13.8	
	comp=Z,50nm,18.6s,baz=158,slow=36						
	comp=Z,4.7nm,1.2s						
MJAR	Matsushiro Arr	53.88	333	P	P	08 47 02.2	-1.3
MJAR				IAmb	IAmb	08 47 03.7	
	comp=Z,7.2nm,1.2s						
ASAJ	Asahikawa	58.69	341	LR	LR	09 10 18.8	
	comp=Z,179nm,20.0s,baz=156,slow=33						
KSRS	Korea Array	59.79	326	P	P	08 47 45.1	-0.3
	comp=Z,1.2nm,0.9s,baz=152,slow=5.4,SNR=5.2						
	comp=Z,1.2nm,0.9s						
NJ2	Nanjing	61.94	315	eP	P	08 48 01.1	+0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PETK	Petropavlovsk-	64.17	355	P	P	08 48 14.9	+0.3
	comp=Z,1.9nm,0.9s,baz=139,slow=5.8,SNR=4.1						
PETK				LR	LR	09 10 36.3	
	comp=Z,196nm,21.7s,baz=156,slow=31						
	comp=Z,1.9nm,0.9s						
MDJ	Mudanjiang	64.25	332	P	P	08 48 17.6	+2.3
MDJ				PcP	PcP	08 48 51.5	+1.6
MDJ				S	S	08 56 53.4	+2.8
MDJ				sS	sS	08 57 09.7	+1.7
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDJ				LR	LR		
	comp=Z,240nm,5.6s						
MDJ				LR	LR		
	comp=Z,170nm,5.1s						
MDJ				LR	LR		
	comp=Z,330nm,5.7s						
BNX	BinXian	66.12	332	⇑P	P	08 48 26.7	-0.7
BNX				pmax	pmax		
	comp=Z,6.0nm,1.4s						
CASY	Casey	66.47	201	P	P	08 48 29.3	0.0
VNDA	Vanda	66.59	181	P	P	08 48 30.6	+0.6
VNDA				IAmb	IAmb	08 48 58.2	
	comp=Z,6.2nm,1.2s						
KLR	Kul'dur	66.96	337	LR	LR	09 16 52.2	
	comp=Z,24nm,19.1s,baz=134,slow=35						
HNS	HongShan	67.80	318	⇑P	P	08 48 38.4	+0.2
HNS				pP	pP	08 48 47.4	-1.2
HNS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XLT	XiLinHaoTe	70.78	324	eP	P	08 48 56.6	-0.1
XLT				pP	pP	08 49 06.8	-0.5
XLT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MA2	Magadan	71.31	352	LR	LR	09 14 58.2	
	comp=Z,204nm,21.7s,baz=170,slow=31						
HHC	Hu-ho-hao-te	71.75	320	eP	P	08 49 04.0	+1.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	Chiang Mai Arr	72.06	294	P	P	08 49 04.8	-0.1
	comp=Z,1.4nm,0.2s,baz=110,slow=4.5,SNR=5.8						
CMAR				LR	LR	09 22 42.4	
	comp=Z,29nm,18.5s,baz=100,slow=38						
	comp=Z,1.4nm,0.2s						
CMAR	Chiang Mai Arr	72.06	294	P	P	08 49 03.7	-1.2
PZH	PanZhiHua	72.41	302	P	P	08 49 08.3	+1.4
BTO2	Baotou	72.77	319	eP	P	08 49 10.2	+1.4
BTO2				S	S	08 58 34.9	+2.6
BTO2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BTO2				pmax	pmax		
	comp=Z,340nm,5.5s						
BTO2				LR	LR		
	comp=Z,200nm,7.4s						
BTO2				LR	LR		
	comp=Z,360nm,6.2s						
BTO2				LR	LR		
	comp=Z,370nm,6.6s						
SEY	Seymchan	74.37	354	LR	LR	09 17 33.7	
	comp=Z,236nm,20.6s,baz=142,slow=32						
LZH	Lanzhou	74.68	312	eP	P	08 49 20.9	+0.8
LZH				pP	pP	08 49 30.7	0.0
LZH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZH				pmax	pmax		
	comp=Z,200nm,5.1s						
KDAK	Kodiak Island	76.49	21	LR	LR	09 16 56.0	
	comp=Z,188nm,19.7s,baz=211,slow=31						
YAK	Yakutsk	78.00	344	LR	LR	09 25 33.1	
	comp=Z,164nm,18.0s,baz=114,slow=37						
ULN	Ulaanbaatar	78.21	324	P	P	08 49 39.1	-0.8
ULN				IAmb	IAmb	08 49 50.6	
	comp=Z,7.2nm,1.1s						
SONM	Songino Array	78.58	324	P	P	08 49 41.9	0.0
	comp=Z,1.9nm,1.0s,baz=128,slow=5.3,SNR=7.5						
	comp=Z,1.9nm,1.0s						
SONM	Songino Array	78.58	324	P	P	08 49 41.2	-0.7
BILL	Bilibino	78.78	0	P	P	08 49 41.8	-0.5
BILL				IAmb	IAmb	08 49 51.6	
	comp=Z,12nm,1.2s						
J17K	VABM Dome	78.88	15	P	P	08 49 42.3	-0.7
J17K				IAmb	IAmb	08 49 53.0	
	comp=Z,6.8nm,0.9s						
GTA2	Gaotai	79.05	314	eP	P	08 49 45.3	+0.6
GTA2				pP	PcP	08 49 54.2	+1.1
GTA2				pmax	pmax		
	comp=Z,7.0nm,1.2s						
G16K	Koyuk River	79.76	13	P	P	08 49 47.7	0.0
G16K				IAmb	IAmb	08 49 57.5	
	comp=Z,5.6nm,0.9s						
RPN	Rapa Nui	80.63	116	LR	LR	09 17 04.4	
	comp=Z,172nm,21.8s,baz=256,slow=29						
GOMU	GeErMu	81.44	309	P	P	08 49 58.3	+0.4
G19K	Purcell Mounta	81.61	14	P	P	08 49 57.0	-0.6
G19K				IAmb	IAmb	08 50 07.3	
	comp=Z,6.3nm,0.9s						
ILAR	Eielson Array	83.42	19	P	P	08 50 06.2	-0.9
	comp=Z,2.1nm,0.6s,baz=241,slow=4.8,SNR=25						
ILAR				LR	LR	09 20 30.6	
	comp=Z,120nm,20.2s,baz=257,slow=31						
	comp=Z,2.1nm,0.6s						
C19K	Lookout Ridge	83.47	12		P	08 50 07.0	-0.4
C19K				IAmb	IAmb	08 50 17.0	
	comp=Z,12nm,1.2s						
SCRK	Sand Creek	83.83	20	P	P	08 50 09.1	-0.3
YBH	Yreka Blue Hor	83.83	46	LR	LR	09 25 15.9	
	comp=Z,7.1nm,18.1s,baz=265,slow=34						
MAW	Mawson	84.81	202	LR	LR	09 22 04.1	
	comp=Z,71nm,19.8s,baz=132,slow=31						
NVAR	Mina Array Bea	85.97	50	P	P	08 50 21.2	+0.4
	comp=Z,1.2nm,0.9s,baz=246,slow=9.1,SNR=5.7						
NVAR				LR	LR	09 21 34.2	
	comp=Z,273nm,19.9s,baz=260,slow=30						
	comp=Z,1.2nm,0.9s						
TIXI	Tiksi	85.99	349	LR	LR	09 30 38.9	
	comp=Z,68nm,18.2s,baz=186,slow=37						
PFO	Pinyon Flats O	86.03	55	LR	LR	09 22 47.8	
	comp=Z,196nm,18.4s,baz=251,slow=31						
DLBC	Dease Lake	86.33	28	LR	LR	09 21 06.5	
	comp=Z,178nm,20.7s,baz=232,slow=30						
PALK	Pallekele	86.52	278	LR	LR	09 32 09.3	
	comp=Z,60nm,20.0s,baz=108,slow=38						
ELK	Elko	88.89	48	LR	LR	09 21 13.9	
	comp=Z,148nm,21.8s,baz=266,slow=29						
LPIG	La Paz	88.98	65	LR	LR	09 22 32.7	
	comp=Z,135nm,20.8s,baz=233,slow=30						
WMQ	Urumqi	89.02	315	eP	P	08 50 37.0	+1.8
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NEW	Newport	89.67	41	LR	LR	09 26 32.8	
	comp=Z,104nm,18.6s,baz=244,slow=33						
INK	Inuvik	89.81	19	LR	LR	09 23 59.7	
	comp=Z,261nm,21.9s,baz=284,slow=31						
MKAR	Makanchi Array	93.44	317	P	P	08 50 54.0	-1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.2nm,0.8s,baz=96,slow=6.1,SNR=13						
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**93.44**	**317**	P	**P**	**08 50 54.5**	**-1.1**
ZAA0	**Zalesovo Array**	**93.47**	**324**	P	**P**	**08 50 53.9**	**-1.6**
ZAA0				IAmb	IAmb	08 50 54.9	
	comp=Z,2.4nm,1.0s						
ZALV	**Zalesovo Beam**	**93.47**	**324**	P	**P**	**08 50 54.2**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=72,slow=6.5,SNR=4.6						
	comp=Z,0.6nm,0.4s						
PDAR	**Pinedale Array**	**93.49**	**47**	P	**P**	**08 50 54.7**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=267,slow=5.7,SNR=2.2						
PDAR				LR	LR	09 31 11.4	
	comp=Z,43nm,18.2s,baz=262,slow=34						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**93.49**	**47**	P	**P**	**08 50 54.5**	**-1.7**
MAKZ	**Makanchi**	**93.65**	**317**	P	**P**	**08 50 55.6**	**-1.0**
MAKZ				IAmb	IAmb	08 50 56.6	
	comp=Z,6.3nm,1.2s						
A36M	**Sachs Harbour**	**94.00**	**17**	P	**P**	**08 50 56.9**	**-0.8**
ANMO	**Albuquerque**	**94.40**	**55**	LR	LR	09 33 34.8	
	comp=Z,81nm,18.3s,baz=246,slow=36						
YKA	**Yellowknife Ar**	**94.89**	**27**	P	P	08 50 59.4	-2.5
	comp=Z,0.1nm,0.4s,baz=264,slow=4.7,SNR=4.9						
YKA				LR	LR	09 27 45.9	
	comp=Z,187nm,19.2s,baz=260,slow=32						
	comp=Z,0.1nm,0.4s						
TXAR	**Lajitas Array**	**95.79**	**61**	P	**P**	**08 51 06.3**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=241,slow=5.0,SNR=2.1						
TXAR				LR	LR	09 30 21.7	
	comp=Z,213nm,18.0s,baz=246,slow=33						
	comp=Z,0.2nm,0.8s						
NRIK	**Noril'sk**	**96.02**	**340**	LR	LR	09 35 28.4	
	comp=Z,99nm,18.8s,baz=88,slow=36						
SNAA	**Sanae**	**97.22**	**184**	LR	LR	09 33 53.8	
	comp=Z,214nm,18.9s,baz=178,slow=35						
AAK	**Ala-Archa**	**98.22**	**312**	LR	LR	09 36 41.0	
	comp=Z,61nm,19.9s,baz=76,slow=36						
FINES	**FINESS Array B**	**121.67**	**339**	PKP	**PKPdf**	**08 56 34.1**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=103,slow=3.1,SNR=5.1						
ESDC	**Sonseca Array**	**149.96**	**344**	PKPbc	**PKPdf**	**08 57 29.8**	**+3.8**
	comp=Z,1.2nm,1.1s,baz=310,slow=1.0,SNR=5.5						
TORD	**Torodi Ar. Bea**	**164.24**	**280**	PKP	**PKPdf**	**08 57 44.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=240,slow=2.8,SNR=1.8						

IDC 02 08:43:29.7±33.0**, 13°.85S**×**165°.88E, h0**km**, mb4.1**/3**, mbtmp4.0**/4**, ML3.7**/1**, Error ellipse: s-maj=562.1km s-min=52.3km az=72.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.28**	**306**	Pn	Pn	08 45 17.6	+0.1
	1.2nm,0.3s,baz=172,slow=19,SNR=2.9						
	2.9nm,0.3s						
STKA	**Stephens Creek**	**28.57**	**227**	P	P	08 49 27.5	-0.1
	1.5nm,0.4s,baz=68,slow=12,SNR=4.7						
	1.5nm,0.4s						
WRA	**Warramunga Arr**	**30.75**	**254**	P	P	08 49 47.2	+0.1
	0.8nm,0.7s,baz=83,slow=9.2,SNR=6.8						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**31.75**	**247**	P	P	08 49 55.7	-0.1
	1.6nm,0.5s,baz=72,slow=10,SNR=13						
	1.6nm,0.5s						

IDC 02 08:45:50.7±2.5**, 6°.65S**×**129°.83E, h134**km±35km**, mb3.7**/1**, mbtmp3.8**/5**, MS3.8**/2**, Error ellipse: s-maj=65.7km s-min=16.4km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.92**	**14**	P	Pn	08 47 17.8	+1.4
	10.0nm,0.4s,baz=187,slow=23,SNR=9.6						
SIJI				S	Sn	08 48 22.5	-0.6
	7.4nm,0.2s,baz=245,slow=23,SNR=1.9						
JAY	**Jayapura**	**11.59**	**70**	LR	LR	08 54 41.6	
	comp=Z,360nm,18.3s,baz=359,slow=46						
FITZ	**Fitzroy Crossi**	**12.09**	**199**	P	Pn	08 48 38.4	-0.3
	1.1nm,0.3s,baz=22,slow=12,SNR=12						
FITZ				S	Sn	08 50 43.9	-8.1
	2.9nm,0.5s,baz=187,slow=21,SNR=6.7						
WRA	**Warramunga Arr**	**13.92**	**162**	P	Pn	08 49 01.5	-0.9
	0.3nm,0.4s,baz=344,slow=13,SNR=11						
WRA				S	Sn	08 51 28.1	-8.1
	0.5nm,0.3s,baz=332,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**17.36**	**167**	P	Pn	08 49 44.9	-0.1
	0.8nm,0.6s,baz=344,slow=9.2,SNR=16						
MKAR	**Makanchi Array**	**67.85**	**327**	P	P	08 56 34.6	0.0
	1.0nm,0.4s,baz=122,slow=7.4,SNR=21						
	1.0nm,0.4s						
BVAR	**Borovoye Array**	**77.68**	**328**	LR	LR	09 37 13.1	
	comp=Z,58nm,18.2s,baz=86,slow=40						

SSNC 02 08:56:08.2±0.0**, 19°.23N**×**72°.74W, h15**km±154km**, ML2.7, 1C, Presumed earthquake, Haiti region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**1.69**	**304**	*i* P	Pn	08 56 34.2	-3.0
MASC				*i* S	Sn	08 56 55.0	-3.6
MASC				IAML		08 57 36.3	
	comp=Z,23nm,1.0s						
MASC	**Masc**	**1.69**	**304**	⇑*e*P	Pn	08 56 34.0	-3.2
MASC				*e*S	Sn	08 56 53.8	-4.8
MASC				IAML		08 56 57.5	
	comp=E,3.8nm,0.1s						
MASC				IAML		08 56 58.1	
	comp=N,2.2nm,0.1s						
QMBU	**Quimbuelo**	**2.18**	**297**	*i* P	Pn	08 56 42.1	-1.8
QMBU				IAML		08 56 46.8	
	comp=Z,28nm,1.0s						
QMBU				*i* S	Sn	08 57 08.6	-2.1
QMBU	**Quimbuelo**	**2.18**	**297**	*e*P	Pn	08 56 40.3	-3.7
QMBU				*e*S	Sn	08 57 04.4	-6.3
QMBU				IAML		08 57 10.8	
	comp=E,4.4nm,0.2s						
QMBU				IAML		08 57 12.5	
	comp=N,4.3nm,0.2s						
GTBY	**Guantanamo Bay**	**2.34**	**288**	*i* P	Pn	08 56 45.0	-1.1
GTBY				*i* S	Sn	08 57 09.9	-4.8
GTBY				IAML		08 58 00.5	
	comp=Z,61nm,1.0s						
GTBY	**Guantanamo Bay**	**2.34**	**288**	*e*P	Pn	08 56 43.2	-3.0
GTBY				*e*S	Sn	08 57 09.8	-4.9
GTBY				IAML		08 57 15.5	
	comp=Z,2.4nm,0.2s						
GTBY				IAML		08 57 15.6	
	comp=Z,3.0nm,0.2s						
RCC	**Rio Carpintero**	**2.89**	**286**	*i* P	Pn	08 56 50.8	-2.9
RCC				*i* S	Sn	08 57 25.1	-3.1
RCC				IAML		08 58 26.6	
	comp=Z,27nm,1.0s						
RCC	**Rio Carpintero**	**2.89**	**286**	*e*P	Pn	08 56 50.6	-3.1
RCC				*e*S	Sn	08 57 22.3	-5.9
RCC				IAML		08 57 29.9	
	comp=E,1.7nm,0.2s						
RCC				IAML		08 57 31.4	
	comp=N,0.7nm,0.1s						

MEX 02 09:02:53.9±0.6**, 19°.44N**×**102°.16W, h22**km±8km**, Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.08**	**101**	*i* P	Pb	09 02 56.3	-2.0
URUA				*e*S	Sb	09 02 59.3	-1.8
MOIG	**Morelia**	**0.94**	**75**	*e*P	Pb	09 03 10.7	-1.0
MOIG				*e*S	Sn	09 03 25.4	+0.4
INCO	**Volcan de Coli**	**1.37**	**274**	*e*P	Pn	09 03 15.7	-2.4
INCO				*e*S	Sn	09 03 32.2	-3.6
MNGA	**Volcan de Coli**	**1.38**	**271**	*e*P	Pn	09 03 15.3	-2.9
MNGA				*e*S	Sn	09 03 32.2	-3.7
SOMAC	**Volcano de Col**	**1.39**	**274**	*e*P	Pn	09 03 16.2	-2.2
SOMAC				*e*S	Sn	09 03 31.5	-4.8
MMIG	**Aquila**	**1.60**	**225**	*e*P	Pn	09 03 18.6	-2.3
MMIG				*e*S	Sn	09 03 37.6	-3.4
CEGR	**Campo Tres**	**1.61**	**269**	*e*P	Pn	09 03 18.9	-2.3
CEGR				*e*S	Sn	09 03 38.3	-3.0
CDAR	**Ciudad de Arme**	**1.82**	**255**	*e*P	Pn	09 03 21.9	-2.1
CDAR				*e*S	Sn	09 03 44.0	-2.3
ZIIG	**Zihuatanejo**	**1.94**	**160**	*e*P	Pn	09 03 26.3	+0.8
ZIIG				*e*S	Sb	09 03 51.9	-0.3
ARIG	**Puente Sto Nin**	**2.06**	**124**	*e*P	Pb	09 03 32.0	+1.3
ARIG				*e*S	Sb	09 03 57.6	+1.6
CJM	**Chamela**	**2.73**	**272**	*e*S	Sn	09 04 10.6	+1.9

MEX 02 09:06:13.7±0.4**, 19°.51N**×**102°.11W, h28**km±6km**, Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.09**	**158**	*e*P	Pb	09 06 17.1	-1.8
URUA				*e*S	Sb	09 06 20.3	-2.2
MOIG	**Morelia**	**0.89**	**79**	*e*P	Pb	09 06 33.6	+2.9
MOIG				*e*S	Sn	09 06 45.4	+2.8
INCO	**Volcan de Coli**	**1.41**	**271**	*e*P	Pn	09 06 36.0	-1.9
INCO				*e*S	Sn	09 06 53.3	-2.4
SOMAC	**Volcano de Col**	**1.43**	**271**	*e*P	Pn	09 06 37.1	-1.1
SOMAC				*e*S	Sn	09 06 53.6	-2.7
CEGR	**Campo Tres**	**1.65**	**266**	*e*P	Pn	09 06 40.2	-0.8
CEGR				*e*S	Sn	09 06 59.8	-1.7
MMIG	**Aquila**	**1.68**	**224**	*e*P	Pb	09 06 43.0	-1.0
MMIG				*e*S	Sn	09 06 59.3	-2.7
CDAR	**Ciudad de Arme**	**1.88**	**253**	*e*P	Pn	09 06 42.3	-1.7
CDAR				*e*S	Sn	09 07 04.6	-2.3
ARIG	**Puente Sto Nin**	**2.07**	**126**	*e*P	Pb	09 06 50.1	-0.5
ARIG				*e*S	Sb	09 07 18.1	+2.2

*ASRS **02** 09:07:38.8±0.3, 54°N±1°×8°1E±°, h9km, MLh3.3/12, Error ellipse: s-maj=3.6km s-min=2.2km az=95.2, confirmed*
*NNC **02** 09:07:49.7±3.4, 53°.00N×81°.74E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=26.3km s-min=20.6km az=24.0, Suspected Mining explosion.*
ISC 02 09:07:38.8±1.0**, 53°.58N**±0°.03×**81°.26E**±0°.04**, h0**km**, n23, σ1s.32**/40**, 3C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSTK	**Bystrovka, Nov**	**1.29**	**39**	Pg	**Pg**	**09 08 02.9**	**-0.5**
BSTK				Sg	**Sb**	**09 08 20.5**	**-0.4**
NHES	**Novosibirsk, N**	**1.64**	**38**	Pg	**Pn**	**09 08 09.2**	**+0.4**
NHES				Sg	**Sn**	**09 08 29.8**	**-0.7**
NVS	**Novosibirsk**	**1.72**	**42**	Pg	**Pn**	**09 08 10.1**	**+0.2**
NVS				Sg	**Sn**	**09 08 31.7**	**-0.8**
KHAR	**Kharino, NSO,**	**1.72**	**52**	Pg	**Pn**	**09 08 09.7**	**-0.3**
KHAR				Sg	**Sn**	**09 08 32.1**	**-0.5**
SALR	**Pechorkino, Sa**	**2.75**	**70**	Pg	**Pb**	**09 08 29.8**	**+1.0**
SALR				Sg	**Sb**	**09 09 04.0**	**+0.9**
ELT	**Eltsovka**	**3.00**	**94**	Pg	**Pg**	**09 08 36.5**	**+0.3**
ELT				Sg	**Sg**	**09 09 14.8**	**-0.1**
KURK	**Kurchatov**	**3.30**	**211**	⇓Pn	**Pb**	**09 08 38.7**	**+0.6**
	0.3nm,0.3s						
KURK				⇓Lg	Lg	09 09 25.4	
	3.4nm,0.5s						
KURK	**Kurchatov**	**3.30**	**211**	Pg	**Pb**	**09 08 39.5**	**+1.5**
KURK				Sg	**Sg**	**09 09 24.3**	**-0.3**
KURBB	**Kurchatov Arra**	**3.41**	**211**	⇑Pn	**Pb**	**09 08 40.1**	**+0.2**
	1.9nm,0.5s,baz=37,slow=18						
KURBB				⇓Lg	Lg	09 09 28.4	
	26nm,0.7s,baz=39,slow=30						
UKR	**Ust'-Kan**	**3.41**	**139**	Pn	**Pn**	**09 08 32.7**	**-0.6**
UKR				Pg	**Pg**	**09 08 44.0**	**-0.1**
UKR				Sg	**Sg**	**09 09 28.3**	**-0.1**
TASR	**Tashtagol**	**4.07**	**99**	Sg	**Sg**	**09 09 48.1**	**-1.2**
ARTR	**Artybash**	**4.07**	**114**	Pg	**Pb**	**09 08 51.3**	**0.0**
ARTR				Sg	**Sg**	**09 09 47.0**	**-2.5**
YALR	**Yailyu, Altay**	**4.27**	**113**	Sg	**Sg**	**09 09 55.0**	**-0.7**
LUZB	**Luzhba, Kemero**	**4.55**	**86**	Sg	**Sg**	**09 10 04.6**	**-0.2**
TUNR	**Tungur**	**4.64**	**135**	Pg	**Pg**	**09 09 05.7**	**-2.0**
TUNR				Sg	**Sg**	**09 10 07.8**	**0.0**
CHBI	**Chibit, Altay**	**5.06**	**128**	Pg	**Pg**	**09 09 14.6**	**-1.1**
CHBI				Sg	**Sg**	**09 10 22.3**	**+1.1**
ULGR	**Ulagan, Altay**	**5.08**	**123**	Pg	**Pg**	**09 09 16.1**	**0.0**
ULGR				Sg	**Sg**	**09 10 20.9**	**-0.9**
AKAR	**Aktash**	**5.11**	**127**	Pg	**Pg**	**09 09 17.2**	**+0.6**
AKAR				Sg	**Sg**	**09 10 24.3**	**+1.6**
DGZ	**Jazzator, Alta**	**5.46**	**133**	Sg	**Sg**	**09 10 34.4**	**+0.4**
CUR	**Chagan-Uzun**	**5.61**	**126**	Pg	**Pb**	**09 09 20.4**	**+2.9**
CUR				Sg	**Sg**	**09 10 40.1**	**+1.4**
TEL	**Teeli**	**6.05**	**111**	Sg	**Sg**	**09 10 51.0**	**-2.0**
MAKZ	**Makanchi**	**6.79**	**176**	Pn	**Pn**	**09 09 23.1**	**+3.5**
MAKZ				Sg	**Sg**	**09 11 15.7**	**-1.1**
MK31	**Makanchi Array**	**6.82**	**174**	⇑Pn	**Pn**	**09 09 19.7**	**-0.3**
	0.2nm,0.3s,baz=354,slow=12,SNR=8.7						
MK31				⇑Sn	**Sn**	**09 10 35.1**	**-3.3**
	0.1nm,0.2s,baz=357,slow=24						
MK31				⇓Lg	Lg	09 11 13.4	
	0.7nm,0.4s,baz=354,slow=28,SNR=4.7						

*NEIC **02** 09:15:50.9±1.4, 19°.02N±0°.04×67°.58W±0°.02, h10km±1km, ML3.4/39, Md3.1/8(RSPR), Error ellipse: s-maj=6.4km s-min=2.8km az=205.0*
*SDD **02** 09:15:51.1±1.3, 19°.09N×67°.60W, h18km±59km, MD3.4, ML3.6, MW3.7, Presumed earthquake*
*RSPR **02** 09:15:54.2, 18°.90N×67°.67W, h10km±31km, MD3.1/8*
ISC 02 09:15:49.3±1.2**, 19°.06N**±0°.05×**67°.61W**±0°.02**, h11**km±10km**, n52, σ0s.93**/79**, 18C-12D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.68**	**169**		**Pb**	**09 16 03.5**	**+0.4**
IDE					**Sb**	**09 16 12.2**	**-0.4**
IDE	**Isla Desecheo**	**0.68**	**169**	⇓*e*P	**Pb**	**09 16 03.5**	**+0.4**
IDE				*e*S	**Sb**	**09 16 12.2**	**-0.4**
AGPR	**Aguadilla, PR**	**0.75**	**141**		**Pn**	**09 16 05.1**	**-0.7**
AGPR				IAML		09 16 16.3	
	2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.75**	**141**	⇓*e*Pg	**Pn**	**09 16 05.3**	**-0.5**
AGPR				⇓*e*Sg	**Sb**	**09 16 15.1**	**+0.4**
AGPR				IAML		09 16 16.2	
	comp=N,1μm,0.6s						
AGPR	**Aguadilla, PR**	**0.75**	**141**	⇑*e*P	**Pn**	**09 16 05.5**	**-0.4**
AGPR				*e*S	**Sb**	**09 16 15.7**	**+1.0**
PCDR	**Punta Cana, DR**	**0.91**	**234**	⇓*e*Pg	**Pb**	**09 16 07.4**	**+0.3**
PCDR				IAML		09 16 28.1	
	comp=N,666nm,0.4s						
PRSN	**Puerto Rico Se**	**0.94**	**152**		**Pb**	**09 16 07.8**	**+0.2**
PRSN	**Puerto Rico Se**	**0.94**	**152**		**Sn**	**09 16 22.4**	**+0.4**
PRSN	**Puerto Rico Se**	**0.94**	**152**	⇓*e*Pg	**Pn**	**09 16 08.4**	**0.0**
PRSN				⇓*e*Sg	**Sn**	**09 16 22.1**	**+0.1**
PRSN				IAML		09 16 27.3	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.94**	**152**	⇓*e*P	**Pn**	**09 16 08.4**	**-0.1**
PRSN				*e*S	**Sn**	**09 16 22.4**	**+0.4**
LSP	**Las Mesas**	**1.00**	**150**		**Pn**	**09 16 09.5**	**+0.1**
LSP					**Sb**	**09 16 22.3**	**+0.3**
LSP	**Las Mesas**	**1.00**	**150**	⇑*e*P	**Pn**	**09 16 09.5**	**+0.1**
LSP				*e*S	**Sb**	**09 16 22.3**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.15**	**156**		**Pn**	**09 16 11.2**	**-0.1**
CRPR				IAML		09 16 30.2	
	comp=N,983nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.15**	**156**		**Sn**	**09 16 27.5**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.15**	**156**	⇑*e*Pg	**Pn**	**09 16 11.7**	**+0.4**
CRPR				⇑*e*Sg	**Sn**	**09 16 27.4**	**+0.5**
CRPR				IAML		09 16 30.4	
	comp=N,856nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.15**	**156**	⇑*e*P	**Pn**	**09 16 11.6**	**+0.3**
CRPR				*e*S	**Sn**	**09 16 27.5**	**+0.5**
HIDR	**Higuey Centro**	**1.15**	**246**	⇓*e*Pg	**Pg**	**09 16 10.9**	**-0.4**
HIDR				IAML		09 16 30.0	
	comp=N,815nm,0.2s						
HIDR	**Higuey Centro**	**1.15**	**246**	⇑*e*P	**Pg**	**09 16 10.9**	**-0.4**
HIDR				*e*S	**Sg**	**09 16 25.3**	**-1.0**
UUPR	**Utuado, UPR, P**	**1.16**	**133**		**Pn**	**09 16 11.5**	**0.0**
MLPR	**Magueyes Islan**	**1.21**	**154**		**Pb**	**09 16 12.0**	**-0.1**
MLPR				IAML		09 16 32.1	
	comp=N,920nm,0.4s						
MLPR				IAML		09 16 32.8	
	comp=N,591nm,0.4s						
GBPR	**Guanica, Bosqu**	**1.28**	**147**		**Pg**	**09 16 13.9**	**0.0**
GBPR					**Sb**	**09 16 29.1**	**-0.7**
GBPR	**Guanica, Bosqu**	**1.28**	**147**	⇓*e*P	**Pg**	**09 16 13.9**	**0.0**
GBPR				*e*S	**Sb**	**09 16 29.1**	**-0.7**
MIDR	**Miches**	**1.37**	**267**	⇑*e*Pg	**Pb**	**09 16 14.9**	**0.0**
MIDR				IAML		09 16 36.9	
	comp=N,434nm,0.3s						
OBIP	**Obispado Ponce**	**1.38**	**136**		**Pb**	**09 16 14.8**	**-0.4**
OBIP	**Obispado Ponce**	**1.38**	**136**		**Sg**	**09 16 33.7**	**-0.1**
OBIP	**Obispado Ponce**	**1.38**	**136**	⇑*e*P	**Pg**	**09 16 15.3**	**-0.5**
OBIP				*e*S	**Sg**	**09 16 33.7**	**-0.1**
ECPR	**Experimental S**	**1.39**	**122**		**Pb**	**09 16 15.2**	**-0.1**
ECPR	**Experimental S**	**1.39**	**122**	⇑*e*P	**Pg**	**09 16 15.5**	**-0.5**
ECPR				*e*S	**Sg**	**09 16 36.6**	**+2.6**
SMDR	**Samana, DR**	**1.51**	**279**		**Pg**	**09 16 18.4**	**+0.1**
SMDR					**Sg**	**09 16 39.2**	**+1.3**
SMDR	**Samana, DR**	**1.51**	**279**	⇑*i*P	**Pg**	**09 16 18.4**	**+0.1**
SMDR				*e*S	**Sg**	**09 16 39.2**	**+1.3**
GCPR	**Guaynabo City**	**1.62**	**117**		**Pn**	**09 16 18.2**	**+0.4**
GCPR	**Guaynabo City**	**1.62**	**117**		**Sg**	**09 16 40.8**	**-0.8**
GCPR	**Guaynabo City**	**1.62**	**117**	⇑*e*P	**Pb**	**09 16 19.0**	**-0.3**
GCPR				*e*S	**Sg**	**09 16 40.8**	**-0.8**
SJG	**San Juan**	**1.67**	**124**		**Pb**	**09 16 19.3**	**-0.8**
SJG				IAML		09 16 44.8	
	comp=N,343nm,0.5s						
SJG				IAML		09 16 50.0	
	comp=N,334nm,0.4s						
SJG	**San Juan**	**1.67**	**124**	⇓*e*Pg	**Pb**	**09 16 20.0**	**-0.1**
SJG				⇑*e*Sg	**Sb**	**09 16 41.4**	**+0.2**
SJG	**San Juan**	**1.67**	**124**	⇓*e*P	**Pb**	**09 16 19.7**	**-0.4**
SJG				*e*S	**Sb**	**09 16 41.4**	**+0.2**
DR12	**Loma Pena Alta**	**1.70**	**261**		**Pg**	**09 16 21.3**	**-0.6**
HATOM	**Hato Mayor del**	**1.70**	**261**	⇑*e*Pg	**Pg**	**09 16 21.5**	**-0.4**
HATOM				⇑*e*Sg	**Sg**	**09 16 43.1**	**-0.8**
HATOM				IAML		09 16 44.8	
	comp=N,226nm,0.8s						
PDPR	**Patillas Dam,**	**1.82**	**124**		**Pn**	**09 16 21.2**	**+0.6**
HUMP	**Col San Antoni**	**1.90**	**118**		**Pb**	**09 16 22.7**	**-1.3**
HUMP	**Col San Antoni**	**1.90**	**118**		**Sb**	**09 16 48.0**	**+0.3**
HUMP	**Col San Antoni**	**1.90**	**118**	⇓*e*P	**Pb**	**09 16 23.4**	**-0.6**
HUMP				*e*S	**Sb**	**09 16 48.0**	**+0.3**
NADR	**Nagua**	**2.15**	**278**	⇑*e*Pg	**Pb**	**09 16 27.8**	**-0.4**
NADR				⇑*e*Sg	**Sb**	**09 16 56.2**	**+1.4**
NADR				IAML		09 17 09.6	
	comp=N,1μm,0.3s						
SDD	**Santo Domingo**	**2.26**	**255**	Pn	**Pb**	**09 16 29.1**	**-1.1**
SDD				IAML		09 17 05.3	
	comp=N,379nm,1.0s						
SDD				IAML		09 17 08.2	
	comp=E,269nm,0.7s						
DR08	**Loma La Naviza**	**2.29**	**268**	*e*Pg	**Pb**	**09 16 31.0**	**+0.4**
DR08				⇑*e*Sg	**Sb**	**09 16 58.9**	**0.0**
DR08				IAML		09 17 01.7	
	comp=N,4μm,0.3s						
BANI	**BANI**	**2.69**	**256**		**Pb**	**09 16 36.6**	**-1.0**
BANI	**BANI**	**2.69**	**256**	⇑*e*Pg	**Pb**	**09 16 37.5**	**0.0**
BANI				⇑*e*Sg	**Sb**	**09 17 11.5**	**+0.9**
BANI				IAML		09 17 20.7	
	comp=N,224nm,0.3s						
SC01	**Santiago de lo**	**2.97**	**278**		**Pb**	**09 16 40.8**	**-1.5**
SDDR	**Presa de Saban**	**3.48**	**269**		**Pn**	**09 16 47.0**	**+3.5**
SDDR				IAML		09 17 42.0	
	comp=N,93nm,0.8s						
SDDR				IAML		09 17 47.7	
	comp=N,98nm,0.6s						
SMRT	**St. Maarten**	**4.42**	**102**	Pn	**Pn**	**09 16 58.4**	**+2.1**
SMRT				IAML		09 18 03.1	
	comp=N,43nm,1.2s						
SMRT				IAML		09 19 24.7	
	comp=E,67nm,0.1s						
MASC	**Masc**	**6.34**	**281**	*e*P	**Pn**	**09 17 21.9**	**-0.8**
MASC				*e*		09 17 21.9	
	baz=1.7,slow=16						
MASC				*e*S	**Sn**	**09 18 32.9**	**-2.3**
MASC				IAML		09 18 34.4	
	comp=E,3.2nm,0.2s						
MASC				IAML		09 18 39.0	
	comp=N,3.5nm,0.3s						
QMBU	**Quimbuelo**	**6.88**	**281**	*e*P	**Pn**	**09 17 29.1**	**-1.2**
QMBU				*e*S	**Sn**	**09 18 45.5**	**-3.1**
QMBU				IAML		09 18 49.0	
	comp=N,10nm,0.3s						
QMBU				IAML		09 18 51.1	
	comp=E,10.0nm,0.3s						

PGC 02 09:20:46.1±0.0**, 52°.72N**×**132°.26W, h22**km**, ML2.6**/12**, 61km south of Village of Queen Charlotte, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HG1B	**Mitchell Dam**	**0.23**	**19**	P	Pb	09 20 51.4	-0.6
HG1B				S	Sb	09 20 54.9	-1.2
BAIB	**Barry Inlet**	**0.34**	**115**	P	Pb	09 20 53.2	-0.2
BAIB				S	Sb	09 20 58.0	-0.5
MOBC	**Moresby Island**	**0.46**	**22**	P	Pb	09 20 55.4	-0.1
MOBC				S	Sb	09 21 02.0	0.0
DI2B	**Dawson Inlet**	**0.50**	**345**	P	Pb	09 20 56.0	-0.3
DI2B				S	Sb	09 21 02.8	-0.4
DIB	**Dawson Inlet,**	**0.50**	**345**	P	Pb	09 20 56.0	-0.3
DIB				S	Sb	09 21 02.8	-0.4
JEDB	**Jedway, Haida**	**0.77**	**123**	P	Pb	09 21 00.1	-0.7
JEDB				S	Sb	09 21 10.7	-0.2
PCLB	**Port Clements**	**1.01**	**351**	P	Pb	09 21 04.7	-0.2
PCLB				S	Sn	09 21 18.2	-0.4
BNAB	**Bonilla**	**1.25**	**51**	P	Pn	09 21 07.7	-0.5
BNAB				S	Sb	09 21 24.8	+0.4
NDB	**Naden**	**1.31**	**342**	P	Pn	09 21 08.7	-0.4
NDB				S	Sn	09 21 25.6	-0.3
MASB	**Masset**	**1.31**	**6**	P	Pb	09 21 09.5	-0.4
GRNB	**Grenville Isla**	**1.78**	**50**	Pn	Pn	09 21 15.3	-0.3
GRNB				Sg	Sb	09 21 40.5	+0.5
GRIB	**Gribbell Islan**	**1.98**	**70**	Pn	Pn	09 21 17.8	-0.5
GRIB				Sg	Sb	09 21 46.4	+0.7
KITB	**Kitimat**	**2.56**	**56**	Pn	Pn	09 21 26.2	+0.1
KITB				Sg	Sb	09 22 04.7	+2.5
BBB	**Bella Bella**	**2.59**	**100**	Pn	Pn	09 21 26.4	-0.2
BBB				Sn	Sn	09 21 56.1	-1.3
U35K	**Hyder**	**3.46**	**21**	Pn	Pn	09 21 40.1	+1.6
U35K				Sg	Sb	09 22 30.8	+2.7
WRAK	**Wrangell Islan**	**3.71**	**359**	Pn	Pn	09 21 43.4	+1.4
T35M	**Bob Quinn**	**4.43**	**14**	Pn	Pn	09 21 54.6	+2.7

*IDC **02** 09:23:35.1±1.6, 32°.17S×57°.51E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=58.1km s-min=27.4km az=33.0*
ISC 02 09:23:36.9±1.7**, 32°.2S**±0°.4×**57°.5E**±0°.3**, h11**km**, n18, σ0s.34**/9**, mb3.9**/7**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**14.65**	**196**	T	T	09 42 20.9	
	baz=20,slow=75,SNR=37						
H04N1	**CROZET ISLANDS**	**14.65**	**196**	T	T	09 42 20.2	
	baz=20,slow=75,SNR=47						
H04N3	**CROZET ISLANDS**	**14.66**	**196**	T	T	09 42 20.5	
	baz=20,slow=75,SNR=43						
H08S1	**Diego Carcia H**	**28.10**	**33**	T	T	09 58 39.1	
	baz=197,slow=76,SNR=4.5						
H08S2	**Diego Garcia H**	**28.11**	**33**	T	T	09 58 38.3	
	baz=197						
H08S3	**Diego Garcia H**	**28.12**	**33**	T	T	09 58 39.4	
	baz=197,slow=76,SNR=7.8						
H01W2	**Cape Leeuwin H**	**46.75**	**110**	T	T	10 22 03.8	
	baz=256,slow=75,SNR=9.3						
H01W3	**Cape Leeuwin H**	**46.76**	**110**	T	T	10 22 04.2	
	baz=256,slow=75,SNR=8.6						
H01W1	**Cape Leeuwin H**	**46.77**	**110**	T	T	10 22 05.0	
	baz=256,slow=75,SNR=9.7						
CMAR	**Chiang Mai Arr**	**64.11**	**44**	P	**P**	**09 34 11.4**	**+0.1**
	0.7nm,0.3s,baz=226,slow=6.9,SNR=5.5						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**66.78**	**104**	P	**P**	**09 34 28.4**	**-0.3**
	0.6nm,0.7s,baz=237,slow=6.0,SNR=12						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**68.82**	**101**	P	**P**	**09 34 42.1**	**+0.4**
	0.5nm,0.5s,baz=244,slow=6.4,SNR=3.0						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**69.85**	**301**	P	**P**	**09 34 48.2**	**+0.2**
	0.5nm,0.8s,baz=156,slow=7.2,SNR=2.7						
	0.5nm,0.8s						
BRTR	**Keskin Array B**	**74.88**	**341**	P	**P**	**09 35 17.6**	**-0.1**
	0.2nm,0.4s,baz=134,slow=4.2,SNR=4.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**81.72**	**17**	P	**P**	**09 35 55.4**	**+0.2**
	0.6nm,0.7s,baz=205,slow=5.4,SNR=6.4						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**84.51**	**13**	P	**P**	**09 36 08.9**	**-0.5**
	0.8nm,0.9s,baz=206,slow=5.8,SNR=5.1						
	0.8nm,0.9s						
BVAR	**Borovoye Array**	**85.58**	**8**	P	**P**	**09 36 14.8**	**0.0**
	0.2nm,0.5s,baz=165,slow=6.2,SNR=8.5						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**149.24**	**353**	PKPbc	**PKPbc**	**09 43 24.5**	**-0.3**
	0.5nm,0.7s,baz=354,slow=3.2,SNR=14						

*NEIC **02** 09:26:15.1±1.0, 17°.93N±0°.03×66°.91W±0°.01, h10km±1km,*

ML2.7/31,Md3.0/6(RSPR),Error ellipse: s-maj=5.5km s-min=2.2km az=193.0

RSPR 02 09:26:15.3,17°.93N×66°.93W,h9km,MD3.0/6,6D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.06	48		Pg	09 26 17.5	+0.2
GBPR					Sg	09 26 19.1	+0.3
GBPR	Guanica, Bosqu	0.06	48	⇑iP	Pg	09 26 17.5	+0.2
GBPR				eS	Sg	09 26 19.1	+0.3
MLPR	Magueyes Islan	0.12	288		Pg	09 26 18.1	0.0
MLPR				IAML		09 26 21.0	
	4µm,0.1s						
MLPR				IAML		09 26 21.3	
	4µm,0.1s						
CRPR	Cabo Rojo, PR	0.19	293		Pg	09 26 19.4	+0.1
CRPR				IAML		09 26 22.6	
	2µm,0.1s						
CRPR				IAML		09 26 22.6	
	1µm,0.2s						
CRPR	Cabo Rojo, PR	0.19	293		Sg	09 26 22.4	+0.5
CRPR	Cabo Rojo, PR	0.19	293	⇓iP	Pg	09 26 19.4	+0.2
CRPR				eS	Sg	09 26 22.4	+0.5
LSP	Las Mesas	0.28	328		Pg	09 26 21.2	+0.1
LSP					Sg	09 26 25.7	+0.8
LSP	Las Mesas	0.28	328	⇑iP	Pg	09 26 21.2	+0.1
LSP				eS	Sg	09 26 25.7	+0.8
OBIP	Obispado Ponce	0.33	70		Sg	09 26 27.1	+1.0
OBIP	Obispado Ponce	0.33	70		Pg	09 26 21.5	-0.3
OBIP				IAML		09 26 27.4	
	comp=N,123nm,0.4s						
OBIP	Obispado Ponce	0.33	70	⇓iP	Pg	09 26 21.7	-0.1
OBIP				eS	Sg	09 26 27.1	+1.0
PRSN	Puerto Rico Se	0.35	324		Pg	09 26 22.1	-0.1
PRSN					Sg	09 26 27.2	+0.3
PRSN	Puerto Rico Se	0.35	324	IAML		09 26 27.9	
	comp=N,2µm,0.2s						
PRSN				IAML		09 26 30.7	
	comp=N,2µm,0.2s						
PRSN	Puerto Rico Se	0.35	324	⇑iP	Pg	09 26 22.1	-0.1
PRSN				eS	Sg	09 26 27.2	+0.3
UUPR	Utuado, UPR, P	0.37	32		Pg	09 26 22.2	-0.5
UUPR				IAML		09 26 28.5	
	comp=N,3µm,0.4s						
UUPR				IAML		09 26 28.8	
	comp=N,3µm,0.3s						
AGPR	Aguadilla, PR	0.56	342		Pg	09 26 25.8	-0.4
AGPR				IAML		09 26 33.8	
	comp=N,916nm,0.4s						
AGPR				IAML		09 26 34.0	
	comp=N,514nm,0.3s						
AGPR	Aguadilla, PR	0.56	342	⇑iP	Pg	09 26 25.8	-0.4
AGPR				eS	Sg	09 26 33.6	+0.1
ECPR	Experimental S	0.66	54		Pg	09 26 27.4	-0.8
ECPR				IAML		09 26 38.0	
	comp=N,615nm,0.2s						
ECPR				IAML		09 26 38.1	
	comp=N,503nm,0.2s						
ECPR	Experimental S	0.66	54	⇓iP	Pg	09 26 27.4	-0.8
ECPR				eS	Sg	09 26 36.6	-0.2
IDE	Isla Desecheo	0.69	311		Pg	09 26 28.1	-0.6
IDE					Sg	09 26 37.8	+0.2
IDE	Isla Desecheo	0.69	311	⇑iP	Pg	09 26 28.1	-0.6
IDE				eS	Sg	09 26 37.8	+0.2
SJG	San Juan	0.76	76		Pg	09 26 29.0	-1.0
SJG				IAML		09 26 41.1	
	comp=N,274nm,0.4s						
SJG				IAML		09 26 42.7	
	comp=N,150nm,0.2s						
SJG	San Juan	0.76	76	⇓iP	Pg	09 26 29.1	-0.9
SJG				eS	Sg	09 26 39.5	-0.4
PDPR	Patillas Dam,	0.87	84		Pg	09 26 31.1	-0.9
PDPR				IAML		09 26 43.8	
	comp=N,121nm,0.4s						
PDPR				IAML		09 26 44.3	
	comp=N,90nm,0.1s						
GCPR	Guaynabo City	0.89	65		Pg	09 26 31.3	-1.1
GCPR					Sg	09 26 42.8	-1.1
GCPR	Guaynabo City	0.89	65	IAML		09 26 43.0	
	comp=N,54nm,0.4s						
GCPR				IAML		09 26 43.7	
	comp=E,62nm,0.3s						
GCPR	Guaynabo City	0.89	65	⇓iP	Pg	09 26 31.3	-1.1
GCPR				eS	Sg	09 26 42.8	-1.1
HUMP	Col San Antoni	1.05	78		Pg	09 26 33.6	-1.8
HUMP					Sg	09 26 47.8	-1.3
HUMP	Col San Antoni	1.05	78	IAML		09 26 49.4	
	comp=E,105nm,0.2s						
HUMP				IAML		09 26 51.6	
	comp=E,102nm,0.3s						
HUMP	Col San Antoni	1.05	78	⇓iP	Pg	09 26 33.6	-1.8
HUMP				eS	Sg	09 26 47.8	-1.3
CUPR	Culebra, Puert	1.61	76	Pn	Pn	09 26 43.7	-0.1
DR12	Loma Pena Alta	2.48	290	Pn	Pn	09 26 57.5	+1.5

*IDC **02** 09:27:13.6±0.8, 18°.23N×81°.93W, h0km, mb4.0/12, mbtmp4.0/13, ML3.6/1, MS3.4/13, Error ellipse: s-maj=26.8km s-min=17.7km az=56.0*
*NEIC **02** 09:27:15.7±1.5, 18°.40N±0°.06×81°.79W±0°.06, h10km±1km, mb4.1/25, Error ellipse: s-maj=11.6km s-min=8.6km az=225.0*
*JSN **02** 09:27:15.7±1.2, 18°.79N×81°.82W, h50km±999km, MW4.4, Presumed earthquake*
*SSNC **02** 09:27:16.9±1.9, 18°.47N×81°.61W, h0km±19km, MB4.7, MD3.7, ML3.7, Presumed earthquake*

ISC 02 09:27:15.4±0.5,18°.35N±0°.05×81°.68W±0°.05,h14km,n85, σ1§62/83,mb4.2/14,MS3.2/8,4D,North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	2.00	49	eP	Pn	09 27 47.2	-1.7
LCCY				eS	Sn	09 28 10.2	-3.5
LCCY				IAML		09 28 15.1	
	comp=N,148nm,0.2s						
LCCY				IAML		09 28 15.4	
	comp=E,386nm,0.3s						
CBCY	The Bluff, Cay	2.29	52	eP	Pn	09 27 50.8	-1.9
CBCY				eS	Sn	09 28 16.7	-4.0
CBCY				IAML		09 28 18.1	
	comp=N,191nm,0.2s						
CBCY				IAML		09 28 19.9	
	comp=E,118nm,0.2s						
MTDJ	Mount Denham	3.94	91		Pn	09 28 14.8	-0.9
MTDJ	Mount Denham	3.94	91	eP	Pn	09 28 14.9	-0.7
MTDJ				eS	Sn	09 28 59.3	-2.5
MTDJ				IAML		09 29 01.3	
	comp=E,166nm,0.5s						
MTDJ				IAML		09 29 03.1	
	comp=E,166nm,0.6s						
MTDJ	Mount Denham	3.94	91	⇓iP	Pn	09 28 14.9	-0.7
MTDJ				⇓iS	Sn	09 28 59.4	-2.4
MGV	Manicaragua	4.07	23	eP	Pn	09 28 15.9	-1.4
MGV				eS	Sn	09 29 00.9	-3.9
MGV				IAML		09 29 04.4	
	comp=N,196nm,0.4s						
MGV				IAML		09 29 06.7	
	comp=E,84nm,0.1s						
BILN	Bilwi Airport	4.58	201	Pn	Pn	09 28 23.9	-0.3
SOR	Soroa	4.59	345	Pn	Pn	09 28 24.1	-0.4
SOR				Sn	Sn	09 29 16.6	-1.1
SOR	Soroa	4.59	345	eP	Pn	09 28 25.0	+0.5
SOR				eS	Sn	09 29 17.3	-0.4
SOR				IAML		09 29 19.3	
	comp=N,33nm,0.4s						
SOR				IAML		09 29 19.8	
	comp=E,34nm,0.4s						
STH	Stony Hill	4.64	93	⇓iP	Pn	09 28 24.8	-0.4
CCCC	Cccc	4.65	52	eP	Pn	09 28 29.8	+4.5
CAMR	Camarioca	4.70	4	Pn	Pn	09 28 25.7	-0.2
HOJ	Hope	4.70	93	⇓iP	Pn	09 28 26.2	+0.2
LMGC	Las Mercedes	4.74	68	eP	Pn	09 28 26.7	+0.2
LMGC				eS	Sn	09 29 19.1	-2.2
LMGC				IAML		09 29 20.1	
	comp=N,6.6nm,0.1s						
LMGC				IAML		09 29 23.9	
	comp=E,10nm,0.1s						
CHIV	Chivirico	5.24	71	Pn	Pn	09 28 32.4	-0.9
CHIV	Chivirico	5.24	71	eP	Pn	09 28 33.1	-0.2
HLGC	Holguin	5.87	64	eP	Pn	09 28 45.5	+3.4
RCC	Rio Carpintero	5.89	73	eP	Pn	09 28 41.9	-0.5
PINC	Pinares de May	5.95	68	eP	Pn	09 28 44.3	+1.1
GTBY	Guantanamo Bay	6.41	75	eP	Pn	09 28 49.6	+0.1
TEIG	Tepich	6.50	288		Pn	09 28 48.1	-2.7
QMBU	Quimbuelo	6.75	73	eP	Pn	09 28 54.2	+0.1
MASC	Masc	7.27	74	eP	Pn	09 29 02.0	+0.7
061Z	Ochoppi	7.51	5	Pn	Pn	09 29 05.4	+0.8
JTS	Las Juntas de	8.61	202	LR	LR	09 32 31.2	
	comp=E,226nm,19.2s,baz=16,slow=38						
JTS	Las Juntas de	8.61	202	Pn	Pn	09 29 20.4	+0.6
JUD3	Juan Diaz 3	8.95	205	Pn	Pn	09 29 23.7	-0.8
SDDR	Presa de Saban	9.87	85		Pn	09 29 38.2	+1.1
CCIG	Comitan	10.20	260	Pn	Pn	09 29 39.4	-2.2
SC01	Santiago de lo	10.43	82		Pn	09 29 47.4	+2.8
BANI	BANI	10.75	88	Pn	Pn	09 29 51.8	+2.6
DR12	Loma Pena Alta	11.68	86		Pn	09 30 02.2	+0.4
CMIG	Matias Romero	12.64	266	LR	LR	09 34 60.0	
	comp=E,158nm,21.6s,baz=71,slow=38						
CRPR	Cabo Rojo, PR	13.86	89	Pn	Pn	09 30 32.3	+0.8
SDV	Santo Domingo	14.27	130	LR	LR	09 36 25.8	
	comp=E,151nm,20.0s,baz=337,slow=38						
SJG	San Juan	14.76	88	LR	LR	09 36 21.8	
	comp=E,131nm,19.4s,baz=240,slow=36						
GOGA	Godfrey	15.09	354	Pn	Pn	09 30 48.5	+0.3
ROSC	El Rosal	15.23	151	LR	LR	09 36 57.5	
	comp=E,154nm,19.5s,baz=53,slow=38						
LRAL	Lakeview Retre	15.38	343	Pn	Pn	09 30 51.5	-0.7
LRAL				IAmb	IAmb	09 31 12.4	
	comp=Z,12nm,1.4s						
Y49A	Blount Mountai	16.01	346	Pn	Pn	09 30 59.5	-0.9
Y49A				IAmb	IAmb	09 31 06.4	
	comp=Z,14nm,0.9s						
X48A	Hartselle	16.74	344	Pn	Pn	09 31 08.7	-0.9
W57A	Gilead	16.80	5	Pn	Pn	09 31 10.4	0.0
W57A				IAmb	IAmb	09 31 29.8	
	comp=Z,23nm,1.4s						
V53A	Saluda	17.28	357	P	Pn	09 31 15.3	-1.2
V53A				IAmb	IAmb	09 31 43.1	
	comp=Z,15nm,1.3s						
TKL	Tuckaleechee C	17.34	354	P	Pn	09 31 17.9	+0.8
	comp=Z,0.2nm,0.3s,baz=156,slow=15,SNR=1.3						
	comp=Z,2.3nm,0.8s						
TKL	Tuckaleechee C	17.34	354	P	Pn	09 31 15.8	-1.4
Z41A	Richland Creek	17.89	328	P	P	09 31 24.8	+0.3
Z41A				IAmb	IAmb	09 31 27.2	
	comp=Z,19nm,0.8s						
HBVL	Hebbronville	17.90	302		Pn	09 31 24.8	+0.7
HBVL				IAmb	IAmb	09 31 27.8	
	comp=Z,17nm,0.9s						
TZTN	Tazewell	18.20	355	P	Pn	09 31 27.7	0.0
TZTN				IAmb	IAmb	09 31 29.5	
	comp=Z,29nm,1.4s						
OTAV	Otavalo	18.28	170	P	P	09 31 30.7	+1.3
OTAV				IAmb	IAmb	09 31 54.7	
	comp=Z,16nm,1.4s						
WLAR	White Oak Lake	18.38	328		Pn	09 31 28.7	-1.3
U49A	Red Boiling Sp	18.45	350	P	P	09 31 29.2	-1.5
WVT	Waverly	18.53	344	P	P	09 31 30.5	-1.1
833A	Chaparral WMA,	19.03	305		P	09 31 36.1	-1.1
833A				IAmb	IAmb	09 31 40.9	
	comp=Z,9.6nm,0.9s						
HNDO	Hondo	19.53	308	P	P	09 31 42.0	-0.7
LCAR	Lake Charles	19.54	337	P	P	09 31 41.6	-1.0
WHTX	Lake Whitney,	19.67	317		P	09 31 43.8	-0.4
WHTX				IAmb	IAmb	09 31 47.4	
	comp=Z,6.9nm,0.7s						
DRIO	Del Rio	20.50	306	P	P	09 31 52.5	-0.6
DRIO				IAmb	IAmb	09 32 17.6	
	comp=Z,6.3nm,0.9s						
Q51A	Peebles	20.65	356	P	P	09 31 55.3	+0.5
TXAR	Lajitas Array	22.85	303	P	P	09 32 18.2	-0.3
	comp=Z,1.9nm,0.7s,baz=120,slow=9.5,SNR=20						
TXAR				LR	LR	09 42 05.8	
	comp=Z,64nm,19.0s,baz=108,slow=39						
	comp=Z,1.9nm,0.7s						
BOAV	Boa Vista	26.11	125	P	P	09 32 51.2	+2.1
BOAV				IAmb	IAmb	09 33 02.7	
	comp=Z,8.5nm,1.2s						
LPIG	La Paz	27.26	287	LR	LR	09 45 16.1	
	comp=Z,89nm,18.2s,baz=104,slow=40						
ANMO	Albuquerque	27.52	312	LR	LR	09 44 23.0	
	comp=Z,63nm,19.6s,baz=115,slow=38						
MDP	Montagnes des	31.27	111	LR	LR	09 47 19.3	
	comp=Z,56nm,20.2s,baz=262,slow=38						
ULM	Lac du Bonnet	33.79	344	P	P	09 33 56.8	-0.1
	comp=Z,2.0nm,0.6s,baz=126,slow=3.7,SNR=4.1						
ULM				LR	LR	09 47 48.2	
	comp=Z,92nm,18.5s,baz=306,slow=36						
	comp=Z,2.0nm,0.6s						
BW06	Boulder Array	33.91	322	P	P	09 33 57.4	-0.9
PD31	Pinedale Array	33.91	322	P	P	09 33 57.7	-0.6
PDAR	Pinedale Array	33.91	322	P	P	09 33 57.9	-0.4
	comp=Z,2.8nm,0.8s,baz=128,slow=10,SNR=24						
PDAR				LR	LR	09 49 52.5	
	comp=Z,29nm,18.1s,baz=14,slow=40						
	comp=Z,2.8nm,0.8s						
PDAR	Pinedale Array	33.91	322	P	P	09 33 57.7	-0.6
PFO	Pinyon Flats O	34.57	303	LR	LR	09 51 07.0	
	comp=Z,33nm,18.5s,baz=111,slow=42						
NVAR	Mina Array Bea	37.59	310	P	P	09 34 30.7	+0.7
	comp=Z,0.9nm,0.7s,baz=102,slow=9.0,SNR=6.1						
	comp=Z,0.9nm,0.7s						
SCHQ	Schefferville	38.15	14	P	P	09 34 35.5	+1.3
	comp=Z,2.6nm,1.0s,baz=229,slow=8.8,SNR=4.0						
	comp=Z,2.6nm,1.0s						
PTLB	Pontes e Lacer	40.26	145	P	P	09 34 52.0	-0.3
PTLB				IAmb	IAmb	09 34 52.9	
	comp=Z,3.7nm,1.0s						
BDFB	Brasilia	47.33	133	P	P	09 35 50.3	+1.0
	comp=Z,4.3nm,0.9s,baz=308,slow=5.1,SNR=7.1						
	comp=Z,4.3nm,0.9s						
BDFB	Brasilia	47.33	133	P	P	09 35 50.1	+0.9
YKA	Yellowknife Ar	49.66	341	P	P	09 36 06.0	-0.5
	comp=Z,0.5nm,0.8s,baz=134,slow=7.3,SNR=6.1						
	comp=Z,0.5nm,0.8s						
CPUP	Villa Florida	50.32	151	LR	LR	10 00 17.6	
	comp=Z,54nm,18.9s,baz=310,slow=39						
PLCA	Paso Flores	59.68	170	P	P	09 37 18.6	-0.9
	comp=Z,2.8nm,1.0s,baz=295,slow=4.9,SNR=3.5						
	comp=Z,2.8nm,1.0s						
ILAR	Eielson Array	63.04	334	P	P	09 37 41.8	-0.1
	comp=Z,1.9nm,0.7s,baz=106,slow=4.3,SNR=35						
	comp=Z,1.9nm,0.7s						
EKA	Eskdalemuir Ar	68.61	37	P	P	09 38 20.9	+3.0
	comp=Z,0.9nm,0.7s,baz=259,slow=5.5,SNR=1.5						
	comp=Z,0.9nm,0.7s						
ESDC	Sonseca Array	69.21	54	P	P	09 38 25.6	+3.5
	comp=Z,0.7nm,0.8s,baz=297,slow=8.5,SNR=2.6						
	comp=Z,0.7nm,0.8s						
FINES	FINESS Array B	82.23	28	P	P	09 39 37.0	+1.0
	comp=Z,2.6nm,0.9s,baz=324,slow=6.9,SNR=3.6						
	comp=Z,2.6nm,0.9s						
HHC	Hu-ho-hao-te	119.83	348	eP	PKPdf	09 46 01.1	-4.7
PZH	PanZhiHua	135.29	356	PKP	PKPdf	09 46 34.6	-1.1
WRA	Warramunga Arr	145.97	261	PKPbc	PKPdf	09 46 54.9	0.0
	comp=Z,1.1nm,0.6s,baz=86,slow=3.5,SNR=9.3						
ASAR	Alice Springs	146.42	255	PKPbc	PKPdf	09 46 55.1	-0.5
	comp=Z,1.0nm,0.8s,baz=106,slow=4.0,SNR=15						

*IDC **02** 09:31:12.1±0.8, 6°.76N×72°.91W, h156km±11km, mb3.2/6, mbtmp3.8/8, Error ellipse: s-maj=34.1km s-min=7.3km az=132.0*
*FUNV **02** 09:31:12.2, 6°.74N×73°.16W, h167km, MW4.2, Presumed earthquake*
*RSNC **02** 09:31:13.4±0.0, 7°N±1°×7°3W±°, h146km±2km, M3.8, mB5.0, mb4.4, ML3.4, Mw(mB)4.3*

ISC 02 09:31:12.4±0.7,6°.86N±0°.03×73°.12W±0°.03,h150km±5km, n58,σ1§40/96,mb3.5/6,5C-2D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	193	P	Pn	09 31 33.2	0.0
BARC				S	Sn	09 31 48.4	-0.6
BRJC	Barrancabermej	0.63	281	P	Pn	09 31 35.0	+0.5
BRJC				S	Sn	09 31 51.9	+0.6
PAMC	Pamplona, Colo	0.64	41	P	Pn	09 31 36.2	+1.1
PAMC				S	Sn	09 31 52.8	+0.4
RUSC	La Rusia	0.96	178	P	Pn	09 31 37.1	-0.3
RUSC				S	Sn	09 31 55.1	-1.4
RUSC	La Rusia	0.96	178	⇓eP	Pn	09 31 37.1	-0.3
RUSC				eS	Sn	09 31 55.6	-0.9
CAPV	Capacho	1.28	39	⇑iP	Pn	09 31 41.4	+1.3
CAPV				eS	Sn	09 32 02.9	+1.7
PTBC	PUERTO BERRIO,	1.36	257	P	Pn	09 31 39.7	-0.9
PTBC				S	Sn	09 32 00.0	-2.1
OCAC	Ocana	1.39	352	P	Pn	09 31 41.6	+0.6
OCAC				S	Sn	09 32 03.4	+0.5
SPBC	San Pablo de B	1.52	218	P	Pn	09 31 42.1	-0.2
SPBC				S	Sn	09 32 03.9	-1.4
CHIC	Chingaza	2.29	195	P	Pn	09 31 51.4	-0.1
CHIC				S	Sn	09 32 20.1	-1.4
ROSC	El Rosal	2.33	211	P	Pn	09 31 53.1	+1.2
	196nm,0.3s,baz=312,slow=2.8,SNR=168						
ROSC				S	Sn	09 32 23.6	+1.3
	447nm,0.3s,baz=11,slow=23,SNR=30						
ROSC	El Rosal	2.33	211	P	Pn	09 31 53.1	+1.2
ROSC				S	Sn	09 32 23.8	+1.6
CVER	Cruz Verde, Cu	2.51	202	P	Pn	09 31 54.8	+0.7
CVER				S	Sn	09 32 25.9	-0.3
MEDEC	Medelln, Ant	2.52	257	P	Pn	09 31 53.3	-0.6
MEDEC				S	Sn	09 32 26.2	+0.3
UREC	San Jos de Ur	2.55	291	P	Pn	09 31 53.6	-0.6
UREC				S	Sn	09 32 24.7	-1.7
SOCV	Socops	2.66	58	⇑iP	Pn	09 31 56.3	+0.8
SOCV				eS	Sn	09 32 28.6	-0.2
VILC	Villavicencio,	2.79	192	P	Pn	09 31 56.7	-0.5
VILC				S	Sn	09 32 30.6	-1.3
RECRC	Villamaria, Ca	2.91	230	P	Pn	09 32 01.1	+1.9
RECRC				S	Sn	09 32 38.4	+3.1
NIZA	Niza - Manizal	2.94	233	P	Pn	09 32 01.0	+1.7
NIZA				S	Sn	09 32 38.5	+3.0
CBOC	Ciudad Bolivar	3.04	251	P	Pn	09 32 01.3	+0.9
CBOC				S	Sn	09 32 39.0	+1.5
DBBC	Dabeiba	3.07	273	P	Pn	09 32 01.3	+0.6
DBBC				S	Sn	09 32 37.3	-0.8
ARGC	Ariguani, Magd	3.18	340	P	Pn	09 32 03.6	+1.5
ARGC				S	Sn	09 32 42.8	+2.1
SDV	Santo Domingo	3.18	51	P	Pn	09 32 02.6	+0.4
	97nm,0.3s,baz=145,slow=2.9,SNR=215						
SDV				S	Sn	09 32 38.8	-2.1
	75nm,0.4s,baz=259,slow=24,SNR=18						
SDV	Santo Domingo	3.18	51	P	Pn	09 32 02.7	+0.4
SDV				S	Sn	09 32 40.0	-0.9
SDV	Santo Domingo	3.18	51	⇑iP	Pn	09 32 03.0	+0.7
SDV				eS	Sn	09 32 40.4	-0.6
MCQV	Machiques	3.23	10	iP	Pn	09 32 03.8	+1.2
MCQV				eS	Sn	09 32 41.5	-0.1
ANIL	Santa Ana	3.27	224	P	Pn	09 32 04.1	+0.6
ANIL				S	Sn	09 32 42.7	-0.3
PRAC	Prado	3.58	209	P	Pn	09 32 06.9	-0.4
APAC	Apartado, Choc	3.58	287	P	Pn	09 32 07.7	+0.5
ORTC	Ortega, Tolima	3.61	216	P	Pn	09 32 07.4	-0.3
ORTC				S	Sn	09 32 50.0	-0.6
SJCC	San Jacinto, C	3.64	326	P	Pn	09 32 07.3	-0.8
SJCC				S	Sn	09 32 49.4	-1.9
SJCC	San Jacinto, C	3.64	326	⇓eP	Pn	09 32 07.7	-0.4
SJCC				eS	Sn	09 32 49.6	-1.7
URMC	La Uribe, Meta	3.80	199	P	Pn	09 32 09.8	-0.3
URMC				S	Sn	09 32 54.6	-0.4
YOTC	Yotoco, Valle	4.29	229	P	Pn	09 32 15.8	-0.8
YOTC				S	Sn	09 33 07.3	+0.7
SOLC	Bahia Solano	4.31	262	P	Pn	09 32 17.8	+1.2
CAPC	Capurgana	4.55	293	P	Pn	09 32 20.7	+0.8
CAPC				S	Sn	09 33 07.4	-5.0
PIZC	Pizarro, Choco	4.62	246	P	Pn	09 32 21.9	+1.2
PIZC				S	Sn	09 33 17.3	+3.3
PTAC	Punta Ardita,	4.66	274	P	Pn	09 32 18.5	-2.8
PTAC				S	Sn	09 33 13.4	-1.7
MACC	Macarena, Meta	4.74	189	P	Pn	09 32 20.1	-2.3
MACC				S	Sn	09 33 13.0	-4.0
URIC	Uribia, Colomb	4.94	13	P	Pn	09 32 23.7	-1.3
URIC				S	Sn	09 33 20.3	-1.4
URIC	Uribia, Colomb	4.94	13	eP	Pn	09 32 24.4	-0.7
URIC				eS	Sn	09 33 19.2	-2.5
TEPV	Terepaima	4.96	51	⇑iP	Pn	09 32 25.1	-0.3
JAMC	Jamundi, Valle	5.06	225	P	Pn	09 32 26.1	-0.7
	1µm31nm,0.6s						
JAMC				S	Sn	09 33 24.7	-0.2
	1µm31nm,0.6s						
GARC	Garzon, Huila	5.21	207	P	Pn	09 32 27.5	-1.3
MAPV	Macapo	5.48	57	⇑iP	Pn	09 32 31.6	-0.6
JACV	Jacura	5.97	45	eP	Pn	09 32 39.0	+0.2
BENV	Beln	6.27	60	eP	Pn	09 32 42.0	-0.8
TURV	Turiamo	6.33	55	eP	Pn	09 32 42.8	-0.6
CACV	CAICARA DEL OR	6.57	83	eP	Pn	09 32 51.7	+5.0
TACV	Tcata	6.85	61	eP	Pn	09 32 49.1	-1.5
TXAR	Lajitas Array	36.44	312	P	P	09 38 04.1	+1.2
	0.5nm,0.6s,baz=129,slow=9.0,SNR=8.0						
	0.5nm,0.6s						
ULM	Lac du Bonnet	47.25	340	P	P	09 39 30.1	-0.2
	2.0nm,0.5s,baz=116,slow=3.3,SNR=4.3						
	2.0nm,0.5s						
PDAR	Pinedale Array	48.05	324	P	P	09 39 37.7	+0.9
	0.4nm,0.6s,baz=126,slow=8.6,SNR=4.2						
	0.4nm,0.6s						
SCHQ	Schefferville	48.11	5	P	P	09 39 37.2	+0.5
	1.8nm,1.0s,baz=200,slow=8.2,SNR=4.0						
	1.8nm,1.0s						
NVAR	Mina Array Bea	51.46	315	P	P	09 40 03.4	+0.8
	0.2nm,0.6s,baz=103,slow=10.0,SNR=2.3						
	0.2nm,0.6s						
YKA	Yellowknife Ar	63.23	340	P	P	09 41 23.9	-0.6
	0.4nm,0.5s,baz=134,slow=5.9,SNR=12						
	0.4nm,0.5s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	09 50 42.5	-1.3
	0.2nm,0.5s,baz=120,slow=3.7,SNR=5.3						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	09 50 46.0	-0.9
	0.2nm,0.5s,baz=109,slow=2.2,SNR=1.5						

MEX 02 09:36:29.0±0.3,19°.60N×102°.07W,h31km±5km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URUA	Uruapan	0.18	180	eP	Pb	09 36 33.8	-1.6
URUA				eS	Sb	09 36 37.4	-2.3
MOIG	Morelia	0.84	85	eS	Sb	09 37 02.6	+6.3
INCO	Volcan de Coli	1.45	267	eS	Sn	09 37 09.2	-2.3
SOMAC	Volcano de Col	1.47	267	eS	Sn	09 37 10.0	-2.1
CEGR	Campo Tres	1.70	263	eP	Pn	09 36 53.9	-2.7
CEGR				eS	Sn	09 37 15.9	-1.5
MMIG	Aquila	1.78	223	eP	Pn	09 36 53.0	-4.6
MMIG				eS	Sn	09 37 16.8	-2.3
CDAR	Ciudad de Arme	1.94	251	eP	Pn	09 36 58.1	-1.8
CDAR				eS	Sn	09 37 21.1	-2.2
ZIIG	Zihuatanejo	2.07	164	eS	Sn	09 37 26.0	-0.3
ARIG	Puente Sto Nin	2.10	129	eP	Pb	09 37 06.4	0.0
ARIG				eS	Sb	09 37 34.0	+1.9

MEX 02 09:41:29.1±0.5,19°.51N×102°.16W,h21km±14km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URUA	Uruapan	0.12	136	eS	Sb	09 41 34.8	-5.4
URUA				eS	Sb	09 41 34.8	-5.4
CEGR	Campo Tres	1.60	266	eP	Pn	09 41 54.4	-2.0
CEGR				eS	Sn	09 42 14.0	-2.5
MMIG	Aquila	1.65	223	eP	Pn	09 41 52.8	-4.0
MMIG				eS	Sn	09 42 14.4	-3.0
CDAR	Ciudad de Arme	1.84	252	eP	Pn	09 41 57.3	-2.1
CDAR				eS	Sn	09 42 19.3	-2.7
ARIG	Puente Sto Nin	2.11	125	eP	Pb	09 42 05.5	-1.1
ARIG				eS	Sb	09 42 32.2	-0.2

MEX 02 09:49:20.2±0.6,19°.52N×102°.10W,h27km±7km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URUA	Uruapan	0.10	165	eP	Pb	09 49 23.6	-1.9
URUA				eS	Sb	09 49 26.9	-2.1
INCO	Volcan de Coli	1.42	270	eP	Pn	09 49 43.9	-0.7
INCO				eS	Sn	09 49 59.2	-3.3
CEGR	Campo Tres	1.66	266	eP	Pn	09 49 45.9	-1.8
CEGR				eS	Sn	09 50 05.7	-2.6
MMIG	Aquila	1.70	224	eP	Pn	09 49 45.8	-2.3
MMIG				eS	Sn	09 50 06.2	-2.8
CDAR	Ciudad de Arme	1.89	253	eP	Pn	09 49 49.2	-1.6
CDAR				eS	Sn	09 50 11.4	-2.3
CJM	Chamela	2.77	270	eS	Sn	09 50 36.8	+1.3

*IDC **02** 09:53:42.9±2.7, 6°.26S×129°.87E, h119km±36km, mb3.2/2, mbtmp3.7/6, Error ellipse: s-maj=68.1km s-min=16.2km*

az=92.0

ISC 02 09:53:41.5±0.9**, 6°.39S**±0°.06×**129°.9E**±0°.2**, h100**km**, n6,** σ**2s.21**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.65**	**14**	P	**Pn**	**09 55 04.7**	**+1.5**
	3.2nm,0.3s,baz=216,slow=22,SNR=6.3						
SIJI				S	**Sn**	**09 56 05.3**	**-1.4**
	14nm,0.2s,baz=231,slow=23,SNR=10						
FITZ	**Fitzroy Crossi**	**12.36**	**199**	P	**Pn**	**09 56 36.5**	**+2.5**
	1.3nm,0.3s,baz=32,slow=11,SNR=12						
FITZ				S	**Sn**	**09 58 48.0**	**-2.0**
	2.7nm,0.5s,baz=193,slow=19,SNR=6.6						
WRA	**Warramunga Arr**	**14.14**	**163**	P	**Pn**	**09 56 58.2**	**+0.9**
	0.4nm,0.3s,baz=345,slow=13,SNR=17						
WRA				S	Sn	09 59 28.1	-5.1
	1.1nm,0.5s,baz=337,slow=24,SNR=9.5						
ASAR	**Alice Springs**	**17.60**	**168**	P	**P**	**09 57 41.8**	**+1.7**
	0.8nm,0.7s,baz=342,slow=9.3,SNR=11						
ASAR				S	**Sn**	**10 00 54.1**	**-2.6**
	0.6nm,0.6s,baz=355,slow=25,SNR=7.7						
MKAR	**Makanchi Array**	**67.67**	**327**	P	**P**	**10 04 26.8**	**-1.2**
	0.1nm,0.3s,baz=112,slow=7.9,SNR=4.0						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**71.00**	**334**	P	**P**	**10 04 46.5**	**-1.8**
	0.3nm,0.4s,baz=116,slow=8.3,SNR=2.1						
	0.3nm,0.4s						

MEX 02 09:55:27.3±0.7**, 19°.47N**×**102°.19W, h20**km±15km**,**
Michoacan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.12**	**113**	*e*P	Pb	09 55 29.8	-1.2
URUA				*e*S	Sb	09 55 32.9	-0.6
MOIG	**Morelia**	**0.97**	**77**	*e*P	Pb	09 55 44.8	-0.7
MOIG				*e*S	Sb	09 55 58.5	+0.5
INCO	**Volcan de Coli**	**1.33**	**273**	*e*P	Pn	09 55 48.7	-2.5
INCO				*e*S	Sn	09 56 05.1	-3.5
CEGR	**Campo Tres**	**1.57**	**267**	*e*P	Pn	09 55 52.4	-1.9
CEGR				*e*S	Sn	09 56 11.9	-2.3
MMIG	**Aquila**	**1.60**	**223**	*e*P	Pn	09 55 52.1	-2.4
MMIG				*e*S	Sn	09 56 11.2	-3.4
CDAR	**Ciudad de Arme**	**1.80**	**253**	*e*P	Pn	09 55 55.4	-1.8
CDAR				*e*S	Sn	09 56 17.5	-1.9
ZIIG	**Zihuatanejo**	**1.98**	**160**	*e*P	Pn	09 55 59.3	-0.3
ZIIG				*e*S	Sn	09 56 25.1	+1.3
ARIG	**Puente Sto Nin**	**2.11**	**124**	*e*P	Pn	09 56 02.9	+1.4
ARIG				*e*S	Sb	09 56 31.0	+0.4
CJM	**Chamela**	**2.69**	**271**	*e*P	Pn	09 56 09.4	-0.1
CJM				*e*S	Sn	09 56 41.2	-0.3

MEX 02 09:56:37.2±0.5**, 19°.53N**×**102°.12W, h23**km±4km**,**
Michoacan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.11**	**158**	*e*P	Pb	09 56 40.2	-1.7
URUA				*e*S	Sb	09 56 43.2	-1.9
MOIG	**Morelia**	**0.89**	**80**	*e*P	Pn	09 56 55.7	+1.2
MOIG				*e*S	Sn	09 57 08.6	+1.7
INCO	**Volcan de Coli**	**1.40**	**270**	*e*P	Pn	09 56 59.2	-2.5
INCO				*e*S	Sn	09 57 17.0	-2.7
SOMAC	**Volcano de Col**	**1.43**	**270**	*e*S	Sn	09 57 17.0	-3.2
CEGR	**Campo Tres**	**1.65**	**266**	*e*P	Pn	09 57 03.1	-1.7
CEGR				*e*S	Sn	09 57 22.7	-2.7
MMIG	**Aquila**	**1.69**	**224**	*e*P	Pn	09 57 02.7	-2.6
MMIG				*e*S	Sn	09 57 23.1	-3.2
CDAR	**Ciudad de Arme**	**1.88**	**252**	*e*P	Pn	09 57 06.1	-1.8
CDAR				*e*S	Sn	09 57 28.4	-2.5
ZIIG	**Zihuatanejo**	**2.01**	**162**	*e*P	Pn	09 57 09.9	+0.3
ZIIG				*e*S	Sb	09 57 35.9	-1.6
ARIG	**Puente Sto Nin**	**2.08**	**126**	*e*P	Pb	09 57 15.0	+0.6

MEX 02 09:59:44.0±0.4**, 19°.43N**×**102°.02W, h31**km±2km**,**
Michoacan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.05**	**265**	*e*P	Pb	09 59 48.0	-1.6
URUA				*e*S	Sb	09 59 51.0	-2.4
INCO	**Volcan de Coli**	**1.50**	**274**	*e*P	Pn	10 00 07.0	-2.2
INCO				*e*S	Sn	10 00 25.7	-2.1
SOMAC	**Volcano de Col**	**1.52**	**274**	*e*P	Pn	10 00 07.4	-2.1
SOMAC				*e*S	Sn	10 00 26.7	-1.7
MMIG	**Aquila**	**1.69**	**228**	*e*P	Pn	10 00 08.0	-3.4
MMIG				*e*S	Sn	10 00 29.6	-2.4
CEGR	**Campo Tres**	**1.74**	**269**	*e*P	Pn	10 00 10.9	-1.3
CEGR				*e*S	Sn	10 00 30.8	-2.6
ZIIG	**Zihuatanejo**	**1.88**	**164**	*e*P	Pb	10 00 17.6	-0.2
ZIIG				*e*S	Sb	10 00 42.6	+1.7
CDAR	**Ciudad de Arme**	**1.94**	**256**	*e*P	Pn	10 00 13.7	-1.1
CDAR				*e*S	Sn	10 00 36.0	-2.2
ARIG	**Puente Sto Nin**	**1.95**	**126**	*e*P	Pb	10 00 17.9	-1.0
MEIG	**Mezcala**	**2.72**	**123**	*e*P	Pb	10 00 29.2	-2.8
MEIG				*e*S	Sn	10 00 51.1	-6.3

*RSNC **02** 10:08:45.8±1.0, 1°S±13°×9°2W±1°0, h0km, M4.4, mB5.1, mb4.5, ML3.6, Mw(mB)4.4*
*IDC **02** 10:08:47.1±2.8, 0°.19S×91°.49W, h0km, mb3.9/8, mbtmp3.9/8, MS3.7/22, Error ellipse: s-maj=89.6km s-min=11.6km az=32.0*
*NEIC **02** 10:08:48.5±1.9, 0°.53S±0°.04×91°.38W±0°.09, h10km±1km, mb4.6/20, Error ellipse: s-maj=15.5km s-min=5.6km az=285.0*
ISC 02 10:08:49.1±0.6**, 0°.48S**±0°.09×**91°.47W**±0°.08**, h23**km**, n72,** σ**1s.33**/48**, mb4.5**/18**, MS3.8**/19**, Galapagos Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I20EC	**Galapagos**	**1.10**	**96**	Pg	**Pn**	**10 09 08.3**	**-0.9**
	baz=298,slow=28						
I20EC				Lg	Lg	10 09 27.2	
	baz=296,slow=44						
PAYG	**Puerto Ayora**	**1.20**	**99**		**Pn**	**10 09 09.4**	**-1.2**
PAYG	**Puerto Ayora**	**1.20**	**99**	P	**Pn**	**10 09 07.6**	**-2.9**
JTS	**Las Juntas de**	**12.52**	**31**	LR	LR	10 15 24.0	
	comp=Z,727nm,19.3s,baz=189,slow=32						
HDC	**Heredia**	**12.73**	**35**	Pn	**Pn**	**10 11 50.0**	**+0.9**
SLOR	**San Lorenzo -**	**12.97**	**91**	Pn	**Pn**	**10 11 55.9**	**+3.2**
OTAV	**Otavalo**	**13.04**	**87**		**Pn**	**10 11 54.4**	**+0.8**
ATAH	**Atahualpa**	**14.62**	**117**	Pn	**P**	**10 12 20.4**	**-0.9**
	0.2nm,0.3s,baz=304,slow=12,SNR=5.7						
ATAH				LR	LR	10 17 06.5	
	comp=Z,171nm,18.7s,baz=326,slow=34						
POPC	**Popayan, Colom**	**15.09**	**78**	P	**Pn**	**10 12 20.2**	**-1.1**
	9.6nm,1.4s						
FLOC	**Florencia**	**15.95**	**83**	P	**P**	**10 12 34.8**	**-0.9**
	925nm70nm,1.5s						
GARC	**Garzon, Huila**	**16.19**	**81**	P	**P**	**10 12 41.3**	**+2.6**
	677nm20nm,1.3s						
PTLC	**Puerto Leguiza**	**16.68**	**88**	P	**P**	**10 12 42.9**	**-1.0**
	977nm47nm,1.3s						
DBBC	**Dabeiba**	**16.95**	**64**	P	**P**	**10 12 48.1**	**+1.2**
	47nm,1.4s						
APAC	**Apartado, Choc**	**17.02**	**60**	P	**P**	**10 12 48.9**	**+1.3**
	61nm,1.5s						
CMIG	**Matias Romero**	**17.79**	**349**	LR	LR	10 18 09.2	
	comp=Z,132nm,19.8s,baz=176,slow=32						
MACC	**Macarena, Meta**	**17.81**	**82**	P	**Pn**	**10 12 55.7**	**-0.1**
	420nm25nm,1.4s						
ROSC	**El Rosal**	**17.93**	**73**	LR	LR	10 19 00.6	
	comp=Z,432nm,19.2s,baz=244,slow=34						
ROSC	**El Rosal**	**17.93**	**73**	P	**P**	**10 12 57.8**	**-0.2**
SDV	**Santo Domingo**	**22.75**	**65**	LR	LR	10 21 40.0	
	comp=Z,371nm,21.9s,baz=252,slow=34						
SDV	**Santo Domingo**	**22.75**	**65**		**P**	**10 13 50.4**	**+0.2**
SDV				IAmb	IAmb	10 14 04.5	
	comp=Z,22nm,1.1s						
SDV	**Santo Domingo**	**22.75**	**65**	P	**P**	**10 13 49.6**	**-0.6**
PB18	**Visviri**	**27.51**	**129**	P	**P**	**10 14 33.5**	**-1.3**
PB18				IAmb	IAmb	10 15 10.9	
	comp=Z,14nm,0.8s						
PB16	**IPOC Station P**	**27.93**	**131**	P	**P**	**10 14 36.9**	**-1.7**
PB16				IAmb	IAmb	10 14 44.0	
	comp=Z,16nm,1.5s						
SJG	**San Juan**	**31.01**	**52**	LR	LR	10 25 46.9	
	comp=Z,104nm,19.1s,baz=214,slow=33						
RPN	**Rapa Nui**	**31.57**	**211**	LR	LR	10 24 23.8	
	comp=Z,274nm,19.9s,baz=34,slow=30						
TXAR	**Lajitas Array**	**31.86**	**340**	P	**P**	**10 15 12.2**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=148,slow=9.3,SNR=4.0						
	comp=Z,1.2nm,0.9s						
SIV	**San Ignacio**	**33.71**	**119**	LR	LR	10 29 11.7	
	comp=Z,95nm,18.5s,baz=294,slow=36						
ODSA	**Odessa**	**34.08**	**343**	P	**P**	**10 15 32.6**	**+0.5**
PTLB	**Pontes e Lacer**	**35.21**	**117**	P	**P**	**10 15 42.5**	**+0.5**
CO01	**Juntas del Tor**	**35.70**	**147**	P	**P**	**10 15 46.6**	**+0.4**
CO01				IAmb	IAmb	10 15 49.7	
	comp=Z,8.7nm,1.4s						
WMOK	**Wichita Mounta**	**35.70**	**350**	P	**P**	**10 15 47.2**	**+1.2**
WMOK				IAmb	IAmb	10 15 50.4	
	comp=Z,13nm,1.2s						
SMWD	**Samnorwood**	**36.34**	**348**		**P**	**10 15 52.7**	**+1.2**
SMWD				IAmb	IAmb	10 15 56.0	
	comp=Z,14nm,1.2s						
TKL	**Tuckaleechee C**	**36.67**	**11**	LR	LR	10 28 47.9	
	comp=Z,73nm,21.1s,baz=182,slow=33						
Y22A	**Socorro**	**37.21**	**338**	P	**P**	**10 15 60.0**	**+0.9**
VA03	**San Esteban**	**37.67**	**151**	P	**P**	**10 16 02.1**	**-0.8**
VA03				IAmb	IAmb	10 16 14.1	
	comp=Z,12nm,0.8s						
ANMO	**Albuquerque**	**37.93**	**340**	LR	LR	10 30 29.4	
	comp=Z,112nm,18.3s,baz=170,slow=35						
ANMO	**Albuquerque**	**37.93**	**340**		**P**	**10 16 06.0**	**+0.8**
RTBA	**Rita Blanca**	**38.20**	**345**	P	**P**	**10 16 08.6**	**+1.3**
RTBA				IAmb	IAmb	10 16 10.6	
	comp=Z,18nm,1.3s						
GO05	**Hualane**	**38.89**	**154**	P	**P**	**10 16 14.4**	**+1.3**
GO05				IAmb	IAmb	10 16 16.0	
	comp=Z,25nm,1.4s						
MDP	**Montagnes des**	**39.17**	**81**	LR	LR	10 32 10.2	
	comp=Z,154nm,19.0s,baz=278,slow=36						
T25A	**Trinidad**	**39.31**	**344**		**P**	**10 16 17.7**	**+0.9**
AQDB	**Aquidauana**	**40.22**	**122**	P	**P**	**10 16 24.6**	**+0.3**
PFO	**Pinyon Flats O**	**41.26**	**328**	LR	LR	10 29 19.6	
	comp=Z,14nm,19.7s,baz=168,slow=30						
PLCA	**Paso Flores**	**44.34**	**157**	LR	LR	10 30 47.5	
	comp=Z,58nm,21.8s,baz=228,slow=30						
BDFB	**Brasilia**	**45.45**	**112**	P	**P**	**10 17 09.5**	**+2.6**
	comp=Z,2.3nm,0.8s,baz=206,slow=6.0,SNR=4.2						
BDFB				LR	LR	10 35 01.0	
	comp=Z,57nm,19.0s,baz=315,slow=34						
	comp=Z,2.3nm,0.8s						
NVAR	**Mina Array Bea**	**45.92**	**330**	P	**P**	**10 17 10.3**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=158,slow=8.5,SNR=16						
	comp=Z,2.6nm,0.8s						
NVAR	**Mina Array Bea**	**45.92**	**330**	P	**P**	**10 17 11.6**	**+1.1**
PDAR	**Pinedale Array**	**46.03**	**341**	P	**P**	**10 17 11.5**	**+0.2**
	comp=Z,1.3nm,1.0s,baz=153,slow=7.8,SNR=6.5						
PDAR				LR	LR	10 34 46.6	
	comp=Z,11nm,21.9s,baz=74,slow=34						
	comp=Z,1.3nm,1.0s						
ULM	**Lac du Bonnet**	**50.68**	**356**	P	**P**	**10 17 45.2**	**-1.5**
	comp=Z,3.5nm,0.9s,baz=165,slow=8.7,SNR=4.2						
ULM				LR	LR	10 38 24.4	
	comp=Z,40nm,18.8s,baz=71,slow=35						
	comp=Z,3.5nm,0.9s						
SCHQ	**Schefferville**	**58.73**	**16**	LR	LR	10 42 16.1	
	comp=Z,82nm,19.4s,baz=172,slow=34						
PPT	**Papeete**	**59.57**	**250**	LR	LR	10 38 34.4	
	comp=Z,110nm,22.0s,baz=202,slow=30						
YKA	**Yellowknife Ar**	**65.20**	**348**	P	**P**	**10 19 27.3**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=154,slow=5.3,SNR=9.5						
	comp=Z,0.6nm,0.7s						
FRB	**Frobisher Bay**	**66.29**	**11**	LR	LR	10 48 04.8	
	comp=Z,90nm,18.4s,baz=275,slow=36						
ESPZ	**Base Esperanza**	**67.75**	**164**	P	**P**	**10 19 46.4**	**+1.8**
RAR	**Rarotonga**	**69.64**	**248**	LR	LR	10 45 03.9	
	comp=Z,86nm,18.3s,baz=147,slow=31						
SFJD	**Kangerlussuaq**	**73.17**	**16**	LR	LR	10 50 03.3	
	comp=Z,51nm,21.6s,baz=170,slow=34						
INK	**Inuvik**	**74.44**	**345**	P	**P**	**10 20 25.4**	**+0.3**
INK				IAmb	IAmb	10 20 27.1	
	comp=Z,10nm,1.4s						
G29M	**Pine Creek**	**74.72**	**343**	P	**P**	**10 20 26.6**	**-0.2**
ILAR	**Eielson Array**	**76.37**	**339**	P	**P**	**10 20 36.8**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=134,slow=3.9,SNR=7.4						
	comp=Z,0.8nm,0.9s						
NIUE	**Niue**	**78.93**	**251**	P	**P**	**10 20 52.2**	**+0.7**
ESDC	**Sonseca Array**	**88.38**	**50**	P	**P**	**10 21 40.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=235,slow=4.5,SNR=2.5						
	comp=Z,0.6nm,0.8s						
HFS	**Hagfors**	**97.94**	**29**	LR	LR	11 07 33.4	
	comp=Z,48nm,18.4s,baz=295,slow=36						
H11N3	**WAKE ISLAND Hy**	**101.10**	**290**	T	T	12 14 56.2	
	baz=87,slow=75,SNR=21						
H11N2	**WAKE ISLAND Hy**	**101.11**	**290**	T	T	12 14 57.0	
	baz=87,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**101.12**	**290**	T	T	12 15 01.1	
	baz=87,slow=75,SNR=25						
H11S2	**WAKE ISLAND Hy**	**101.37**	**289**	T	T	12 15 24.4	
	baz=85,slow=74,SNR=32						
H11S1	**WAKE ISLAND Hy**	**101.37**	**289**	T	T	12 15 18.6	
	baz=85,slow=74,SNR=23						
H11S3	**WAKE ISLAND Hy**	**101.39**	**289**	T	T	12 15 23.1	
	baz=85,slow=74,SNR=18						
HHC	**Hu-ho-hao-te**	**134.71**	**335**	*e*P	**PKPdf**	**10 28 03.4**	**-3.1**
WMQ	**Urumqi**	**136.85**	**1**	*e*PKP	**PKPdf**	**10 28 08.9**	**-1.5**
WMQ				LR	LR		
	comp=Z,170nm,21.9s						
NJ2	**Nanjing**	**137.51**	**321**	*e*P	**PKPdf**	**10 28 12.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PZH	**PanZhiHua**	**151.17**	**335**	PKPbc	**PKPdf**	**10 28 35.5**	**-0.2**

*IDC **02** 10:14:55.5±1.6, 7°.54S×128°.57E, h136km±21km, mb3.3/2, mbtmp3.9/7, Error ellipse: s-maj=22.6km s-min=14.1km az=114.0*
ISC 02 10:14:55.5±0.9**, 7°.68S**±0°.06×**128°.69E**±0°.09**, h151**km**, n7,** σ**2s.70**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.56**	**243**	P	**Pn**	**10 16 17.0**	**+0.5**
	51nm,0.4s,baz=101,slow=5.2,SNR=7.1						
BATI				S	**Sn**	**10 17 18.8**	**-1.0**
	28nm,0.4s,baz=316,slow=21,SNR=2.5						
SIJI	**Sorong**	**7.24**	**21**	P	**Pn**	**10 16 38.6**	**-0.2**
	7.7nm,0.5s,baz=82,slow=23,SNR=7.2						
SIJI				S	**Sn**	**10 17 57.1**	**-2.8**
	9.0nm,0.9s,baz=251,slow=23,SNR=1.7						
FITZ	**Fitzroy Crossi**	**10.77**	**196**	P	**Pn**	**10 17 25.4**	**-0.3**
	3.1nm,0.3s,baz=23,slow=8.4,SNR=26						
FITZ				S	**Sn**	**10 19 20.5**	**-4.4**
	1.3nm,0.3s,baz=305,slow=13,SNR=1.8						
WRA	**Warramunga Arr**	**13.36**	**156**	P	**Pn**	**10 18 00.3**	**+1.0**
	0.4nm,0.3s,baz=329,slow=13,SNR=20						
WRA				S	**Sn**	**10 20 24.7**	**-2.6**
	1.4nm,0.4s,baz=335,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**16.66**	**163**	P	**Pn**	**10 18 43.6**	**+3.3**
	0.6nm,0.5s,baz=344,slow=11,SNR=16						
ASAR				S	**S**	**10 21 44.1**	**-1.5**
	0.8nm,0.6s,baz=320,slow=23,SNR=6.7						
STKA	**Stephens Creek**	**26.91**	**155**	P	**P**	**10 20 26.6**	**+4.0**
	0.8nm,0.5s,baz=322,slow=7.1,SNR=2.8						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**68.09**	**328**	P	**P**	**10 25 39.0**	**0.0**
	0.1nm,0.3s,baz=128,slow=8.1,SNR=5.1						
	0.1nm,0.3s						

MEX 02 10:22:07.7±0.6**, 19°.51N**×**102°.16W, h20**km±7km**,**
Michoacan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.12**	**135**	*e*P	Pb	10 22 10.3	+0.2
URUA				*e*S	Sg	10 22 13.3	-1.6
INCO	**Volcan de Coli**	**1.36**	**271**	*e*P	Pn	10 22 29.3	-2.7
INCO				*e*S	Sn	10 22 46.5	-3.2
CEGR	**Campo Tres**	**1.60**	**266**	*e*P	Pn	10 22 32.6	-2.6
CEGR				*e*S	Sn	10 22 52.6	-2.7
MMIG	**Aquila**	**1.65**	**223**	*e*P	Pn	10 22 32.8	-2.8
MMIG				*e*S	Sn	10 22 52.7	-3.6
CDAR	**Ciudad de Arme**	**1.83**	**252**	*e*P	Pn	10 22 36.0	-2.2
CDAR				*e*S	Sn	10 22 58.4	-2.5
ZIIG	**Zihuatanejo**	**2.00**	**161**	*e*P	Pn	10 22 39.8	-0.7
ZIIG				*e*S	Sn	10 23 05.8	+0.8
ARIG	**Puente Sto Nin**	**2.11**	**125**	*e*P	Pn	10 22 43.1	+1.1
ARIG				*e*S	Sb	10 23 11.9	+0.8
PLIG	**Platanillo**	**2.75**	**113**	*e*P	Pb	10 22 54.9	-1.4
PLIG				*e*S	Sb	10 23 29.9	+0.2
CAIG	**El Cayaco**	**3.04**	**143**	*e*P	Pb	10 22 58.1	-3.0
CAIG				*e*S	Sb	10 23 36.9	-0.9
DAIG	**Los Arroyos**	**3.44**	**136**	*e*P	Pb	10 23 07.5	-0.5
DAIG				*e*S	Sb	10 23 49.1	-0.2
CRIG	**Cruz Grande**	**3.99**	**133**	*e*P	Pg	10 23 30.0	+5.8
CRIG				*e*S	Sb	10 24 05.9	+0.6

*SNET **02** 10:30:24.6±15.0, 12°.47N×89°.00W, h13km, ML3.6, Presumed earthquake*
*CATAC **02** 10:30:26.7±0.3, 12°N±2°×8°8W±°, h31km±2km, M3.7/30, MLv3.7/30, Error ellipse: s-maj=4.5km s-min=1.5km az=29.1, confirmed*
ISC 02 10:30:26.8±1.4**, 12°.43N**±0°.05×**87°.84W**±0°.03**, h29**km±12km**, n60,** σ**0s.38**/94**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.61**	**27**	P	**Pn**	**10 30 39.1**	**-0.4**
CSGN				S	**Sn**	**10 30 48.6**	**+0.2**
CRIN	**San Cristobal**	**0.81**	**71**	P	**Pb**	**10 30 42.9**	**+0.4**
CRIN				S	**Sn**	**10 30 54.4**	**+1.0**
CNCH	**Conchagua**	**0.84**	**0**	P	**Pb**	**10 30 42.8**	**-0.2**
CNCH	**Conchagua**	**0.84**	**0**	*e*P	**Pn**	**10 30 42.6**	**-0.2**
CNCH				*e*S	**Sb**	**10 30 54.4**	**+0.4**
LCND	**La Caada**	**0.88**	**357**	P	**Pn**	**10 30 43.1**	**-0.1**
LCND	**La Caada**	**0.88**	**357**	*e*P	**Pn**	**10 30 43.0**	**-0.1**
LCND				*e*S	**Sb**	**10 30 55.5**	**+0.6**
HERN	**Volcan Telica**	**1.00**	**80**	P	**Pn**	**10 30 44.3**	**-0.5**
HERN				S	**Sb**	**10 30 58.2**	**-0.2**
HOYN	**Al Sur del Vol**	**1.00**	**80**	P	**Pn**	**10 30 44.5**	**-0.4**
HOYN				S	**Sb**	**10 30 58.2**	**-0.3**
POLN	**Al Sur del Vol**	**1.02**	**78**	P	**Pn**	**10 30 45.0**	**-0.1**
POLN				S	**Sb**	**10 30 58.7**	**-0.4**
BLLM	**Bellamira**	**1.08**	**339**	*e*P	**Pn**	**10 30 45.7**	**-0.3**
BLLM				*e*S	**Sb**	**10 31 00.4**	**-0.3**
VSM	**San Miguel**	**1.08**	**337**	*e*P	**Pn**	**10 30 46.0**	**-0.2**
LCY	**Lacayo**	**1.08**	**336**	*e*P	**Pn**	**10 30 46.0**	**-0.1**
CNRM	**Centro Naciona**	**1.09**	**343**	P	**Pn**	**10 30 45.7**	**-0.4**
CNRM				S	**Sb**	**10 31 00.7**	**-0.2**
RANC	**El Ranchito**	**1.09**	**336**	P	**Pn**	**10 30 46.1**	**-0.1**
RANC	**El Ranchito**	**1.09**	**336**	*e*P	**Pn**	**10 30 45.9**	**-0.3**
RANC				*e*S	**Sn**	**10 31 00.3**	**-0.1**
CNGN	**Cerro Negro**	**1.11**	**86**	P	**Pn**	**10 30 45.9**	**-0.5**
CNGN				S	**Sn**	**10 31 00.8**	**-0.1**
PACA	**Pacayal**	**1.14**	**335**	P	**Pn**	**10 30 47.0**	**+0.1**
PACA				S	**Sb**	**10 31 01.9**	**-0.5**
PACA	**Pacayal**	**1.14**	**335**	*e*P	**Pn**	**10 30 46.9**	**+0.1**
LEVN	**Ruinas Leon Vi**	**1.19**	**91**	P	**Pn**	**10 30 47.3**	**-0.1**
LEVN				S	**Sn**	**10 31 02.9**	**+0.2**
TECA	**Tecapa**	**1.24**	**329**	*e*P	**Pn**	**10 30 48.0**	**-0.3**
TECA				*e*S	**Sn**	**10 31 03.5**	**-0.7**
COPN	**Copaltepe**	**1.24**	**101**	P	**Pn**	**10 30 47.7**	**-0.5**
MOM2	**El Cardon**	**1.32**	**90**	P	**Pn**	**10 30 49.1**	**-0.1**
MOM2				S	**Sn**	**10 31 06.0**	**+0.1**
AMTN	**Mateare**	**1.39**	**98**	P	**Pn**	**10 30 50.1**	**-0.1**
AMTN				S	**Sn**	**10 31 07.8**	**+0.3**
SAPS	**Ciudad Sandino**	**1.42**	**100**	P	**Pn**	**10 30 50.4**	**-0.2**
SAPS				S	**Sn**	**10 31 08.6**	**+0.2**
TECO	**Alcaldia de Te**	**1.44**	**320**	P	**Pn**	**10 30 50.6**	**-0.2**
TECO				S	**Sn**	**10 31 07.6**	**-1.2**
TECO	**Alcaldia de Te**	**1.44**	**320**	*e*P	**Pn**	**10 30 50.6**	**-0.2**
APYN	**Apoyeque**	**1.47**	**97**	P	**Pn**	**10 30 51.2**	**0.0**
APQ2	**Apoyeque**	**1.50**	**99**	P	**Pn**	**10 30 51.2**	**-0.4**
APQ2				S	**Sn**	**10 31 10.1**	**-0.1**
UESV	**Universidad de**	**1.52**	**322**	P	**Pn**	**10 30 52.0**	**0.0**
UESV				S	**Sn**	**10 31 10.3**	**-0.5**
UESV	**Universidad de**	**1.52**	**322**	*e*P	**Pn**	**10 30 51.8**	**-0.1**
ABCN	**Banco Central**	**1.52**	**101**	S	**Sn**	**10 31 10.8**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.53**	**326**	P	**Pn**	**10 30 52.7**	**+0.4**
SCLA				S	**Sn**	**10 31 11.9**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.53**	**326**	*e*P	**Pn**	**10 30 52.3**	**+0.1**
ALLN	**Telcor Managua**	**1.55**	**100**	S	**Sn**	**10 31 11.6**	**0.0**
TISN	**Laguna Tiscapa**	**1.56**	**100**	P	**Pn**	**10 30 52.4**	**-0.1**
UNAN	**Cigeo UNAN**	**1.56**	**101**	P	**Pn**	**10 30 52.6**	**0.0**
UNAN				S	**Sn**	**10 31 11.8**	**-0.1**
LIMN	**Finca el Limon**	**1.57**	**66**	P	**Pn**	**10 30 52.4**	**-0.3**
LIMN				S	**Sn**	**10 31 11.8**	**-0.3**
MGAN	**Managua**	**1.58**	**100**	P	**Pn**	**10 30 52.6**	**-0.2**
MGAN				S	**Sn**	**10 31 12.2**	**0.0**
AERN	**Aeropuerto Man**	**1.66**	**100**	S	**Sn**	**10 31 14.3**	**+0.1**
PAVA	**Las Pavas**	**1.67**	**320**	P	**Pn**	**10 30 54.3**	**+0.2**
PAVA				S	**Sn**	**10 31 15.1**	**+0.5**
PAVA	**Las Pavas**	**1.67**	**320**	*e*P	**Pn**	**10 30 54.3**	**+0.2**
MAS3	**Al N del Volca**	**1.67**	**104**	P	**Pn**	**10 30 53.7**	**-0.4**
MAS3				S	**Sn**	**10 31 13.7**	**-0.9**
MASN	**Masaya**	**1.71**	**105**	S	**Sn**	**10 31 15.5**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.71**	**19**	P	**Pn**	**10 30 54.4**	**-0.3**
TGUH				S	**Sn**	**10 31 15.6**	**0.0**
NANN	**Nandasmo**	**1.75**	**106**	P	**Pn**	**10 30 55.9**	**+0.7**
NANN				S	**Sn**	**10 31 17.2**	**+0.7**
OCON	**Estacion meteo**	**1.79**	**48**	P	**Pn**	**10 30 55.9**	**+0.2**
OCON				S	**Sn**	**10 31 17.7**	**+0.3**
UDBS	**Universidad Do**	**1.81**	**315**	S	**Sn**	**10 31 18.3**	**+0.2**
IGN	**Direccin Gen**	**1.82**	**315**	S	**Sn**	**10 31 18.6**	**+0.3**
UEES	**Universidad Ev**	**1.87**	**313**	S	**Sn**	**10 31 19.8**	**+0.2**
PMON	**Piamonte**	**1.92**	**312**	P	**Pn**	**10 30 58.1**	**+0.5**
PMON				S	**Sn**	**10 31 21.2**	**+0.3**
MATN	**Matagalpa**	**1.93**	**75**	P	**Pn**	**10 30 57.2**	**-0.5**
RCON	**San Juan de Ri**	**1.95**	**57**	P	**Pn**	**10 30 58.3**	**+0.3**
RCON				S	**Sn**	**10 31 21.8**	**+0.3**
RCVN	**Varillal2**	**1.97**	**54**	P	**Pn**	**10 30 58.4**	**+0.1**
RCVN				S	**Sn**	**10 31 22.4**	**+0.2**
JAYA	**Jayaque - finc**	**1.99**	**308**	S	**Sn**	**10 31 21.8**	**-0.7**
RCPN	**Sur Rio San Ju**	**2.02**	**57**	P	**Pn**	**10 30 59.5**	**+0.5**
RCPN				S	**Sn**	**10 31 23.2**	**-0.1**
CEDA	**San Andres**	**2.04**	**312**	S	**Sn**	**10 31 24.2**	**+0.4**
UNIC	**Universidad Ca**	**2.27**	**313**	S	**Sn**	**10 31 29.8**	**+0.3**
NUBE	**Las Nubes**	**2.39**	**308**	P	**Pn**	**10 31 04.6**	**+0.4**
NUBE				S	**Sn**	**10 31 32.7**	**+0.1**
NUBE	**Las Nubes**	**2.39**	**308**	*e*P	**Pn**	**10 31 04.2**	**+0.1**
FAME	**Alcaldia de Sa**	**2.54**	**304**	S	**Sn**	**10 31 35.7**	**-0.4**

*FUNV **02** 10:34:32.1, 6°.73N×73°.16W, h166km, MW3.7, Presumed earthquake*
*RSNC **02** 10:34:33.5±0.0, 7°N±1°×7°3W±°, h141km±2km, M2.7, mb3.1, ML2.5*
ISC 02 10:34:32.7±1.3**, 6°.85N**±0°.03×**73°.18W**±0°.04**, h145**km±9km**, n35,** σ**1s.46**/63**, 1C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**181**	P	**Pn**	**10 34 53.2**	**+0.3**
BARC				S	**Sn**	**10 35 07.3**	**-0.9**
RUSC	**La Rusia**	**0.96**	**174**⇑	*e*P	**Pn**	**10 34 57.0**	**-0.3**
RUSC				*e*S	**Sn**	**10 35 15.3**	**-0.6**
PTBC	**PUERTO BERRIO,**	**1.30**	**256**	P	**Pn**	**10 35 00.0**	**+0.1**
PTBC				S	**Sn**	**10 35 20.5**	**-0.1**
CAPV	**Capacho**	**1.32**	**40**⇓	*i*P	**Pn**	**10 35 01.3**	**+1.0**
CAPV				*e*S	**Sn**	**10 35 22.7**	**+1.3**
OCAC	**Ocana**	**1.38**	**354**	P	**Pn**	**10 35 01.9**	**+1.0**
OCAC				S	**Sn**	**10 35 22.9**	**+0.5**
SPBC	**San Pablo de B**	**1.49**	**217**	P	**Pn**	**10 35 02.2**	**+0.3**
SPBC				S	**Sn**	**10 35 23.4**	**-0.8**
CHIC	**Chingaza**	**2.28**	**194**	P	**Pn**	**10 35 11.3**	**0.0**
CHIC				S	**Sn**	**10 35 40.5**	**-0.4**
ROSC	**El Rosal**	**2.30**	**210**	P	**Pn**	**10 35 13.1**	**+1.5**
ROSC				S	**Sn**	**10 35 43.0**	**+1.6**
CVER	**Cruz Verde, Cu**	**2.48**	**201**	P	**Pn**	**10 35 13.8**	**-0.1**
CVER				S	**Sn**	**10 35 47.7**	**+2.2**
UREC	**San Jos de Ur**	**2.50**	**291**	P	**Pn**	**10 35 12.8**	**-0.8**
UREC				S	**Sn**	**10 35 44.3**	**-0.8**
SOCV	**Socops**	**2.71**	**58**	*e*P	**Pn**	**10 35 16.2**	**0.0**
SOCV				*e*S	**Sn**	**10 35 48.9**	**-0.9**
VILC	**Villavicencio,**	**2.77**	**191**	P	**Pn**	**10 35 17.0**	**-0.2**
VILC				S	**Sn**	**10 35 52.1**	**+0.7**
CBOC	**Ciudad Bolivar**	**2.98**	**251**	P	**Pn**	**10 35 21.2**	**+1.4**
CBOC				S	**Sn**	**10 35 56.7**	**+0.5**
DBBC	**Dabeiba**	**3.01**	**273**	P	**Pn**	**10 35 21.5**	**+1.4**
DBBC				S	**Sn**	**10 35 57.0**	**+0.2**
ARGC	**Ariguani, Magd**	**3.17**	**341**	P	**Pn**	**10 35 23.1**	**+1.0**
ARGC				S	**Sn**	**10 36 01.7**	**+1.5**
ANIL	**Santa Ana**	**3.23**	**223**	P	**Pn**	**10 35 24.3**	**+1.2**
ANIL				S	**Sn**	**10 36 04.3**	**+2.3**
SDV	**Santo Domingo**	**3.23**	**51**	P	**Pn**	**10 35 22.7**	**-0.4**
SDV				S	**Sn**	**10 36 06.7**	**+4.7**
SDV	**Santo Domingo**	**3.23**	**51**⇓	*i*P	**Pn**	**10 35 23.1**	**0.0**
SDV				*e*S	**Sn**	**10 36 00.3**	**-1.6**
MCQV	**Machiques**	**3.24**	**11**	*e*P	**Pn**	**10 35 23.4**	**+0.4**
MCQV				*e*S	**Sn**	**10 36 02.2**	**+0.3**
APAC	**Apartado, Choc**	**3.53**	**287**	P	**Pn**	**10 35 27.2**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
APAC				S	Sn	10 36 07.7	-0.8
PRAC	**Prado**	**3.55**	**209**	P	**Pn**	**10 35 26.5**	**-0.6**
PRAC				S	**Sn**	**10 36 08.6**	**-0.6**
ORTC	**Ortega, Tolima**	**3.58**	**215**	P	**Pn**	**10 35 28.3**	**+0.9**
ORTC				S	**Sn**	**10 36 10.5**	**+0.7**
SJCC	**San Jacinto, C**	**3.61**	**327**	P	**Pn**	**10 35 27.5**	**-0.4**
SJCC				S	**Sn**	**10 36 09.7**	**-1.0**
SJCC	**San Jacinto, C**	**3.61**	**327**	*e*P	**Pn**	**10 35 27.9**	**0.0**
SJCC				*e*S	**Sn**	**10 36 09.2**	**-1.4**
URMC	**La Uribe, Meta**	**3.78**	**198**	P	**Pn**	**10 35 29.9**	**-0.2**
URMC				S	**Sn**	**10 36 14.6**	**+0.1**
YOTC	**Yotoco, Valle**	**4.25**	**228**	P	**Pn**	**10 35 35.4**	**-0.9**
MACC	**Macarena, Meta**	**4.72**	**188**	P	**Pn**	**10 35 39.9**	**-2.6**
MACC				S	**Sn**	**10 36 32.5**	**-4.3**
URIC	**Uribia, Colomb**	**4.96**	**14**	P	**Pn**	**10 35 43.5**	**-2.0**
URIC				S	**Sn**	**10 36 40.1**	**-2.2**
TEPV	**Terepaima**	**5.01**	**52**	⇓*e*P	**Pn**	**10 35 45.2**	**-1.0**
POPC	**Popayan, Colom**	**5.52**	**219**	P	**Pn**	**10 35 53.1**	**-0.2**
	4.7nm,2.5s						
POPC				S	**Sn**	**10 36 56.1**	**0.0**
	4.7nm,2.5s						
MAPV	**Macapo**	**5.53**	**57**	⇓*e*P	**Pn**	**10 35 51.4**	**-1.8**
FLOC	**Florencia**	**5.79**	**205**	P	**Pn**	**10 35 55.5**	**-1.1**
BENV	**Beln**	**6.33**	**60**	*e*P	**Pn**	**10 36 02.0**	**-1.9**
TURV	**Turiamo**	**6.38**	**56**	*e*P	**Pn**	**10 36 03.0**	**-1.5**
CACV	**CAICARA DEL OR**	**6.63**	**83**	*e*P	**Pn**	**10 36 11.7**	**+3.9**

*NAO **02** 10:40:00.6, 35.°17N×28.°07E, h10km, MB3.9*
*AFAD **02** 10:40:01.6, 35.°14N×27.°91E, h19km±2km, MW4.2*
*IDC **02** 10:40:01.5±0.7, 35.°29N×27.°81E, h0km, mb4.0/21, mbtmp4.0/29, ML3.6/8, MS3.3/9, Error ellipse: s-maj=16.6km s-min=12.6km az=176.0*
*NIC **02** 10:40:02.6, 34.°93N×27.°74E, h32km±28km, Ml3.8/15*
*HLW **02** 10:40:03.1, 35.°16N×27.°99E, h3km±2km, Ml4.0*
*NEIC **02** 10:40:03.5±2.1, 35.°17N±0.°06×27.°95E±0.°06, h10km±2km, mb4.1/15, Error ellipse: s-maj=11.4km s-min=6.4km az=222.0*
*ISK **02** 10:40:03.7, 35.°33N×27.°89E, h5km, ML4.0/18*
*GII **02** 10:40:03.5±0.0, 35.°126N±0.°002×28.°049E±0.°001, h0km, Mws3.9, confirmed*
*ATH **02** 10:40:04.0, 35.°15N×28.°02E, h9km±3km, ML3.9/26, Manual Solution by N.Liadopoulou First location: 2020/02/02 10:41:26, This location: 2020/07/06 07:21:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*THE **02** 10:40:05.2, 35°N±4°×2°8E±°, h9km±13km, M3.7/19, MLh3.7/19*
ISC 02 10:40:03.3±1.1**, 35.°16N**±0.°03×**27.°95E**±0.°02**, h12**km±7km**, n281, **σ1s**57**/348**, mb4.1**/24**, MS3.4**/6**, 9C-9D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.75**	**301**		**Pg**	**10 40 16.8**	**-1.0**
KARP	**Karpathos**	**0.75**	**301**	Pg	**Pg**	**10 40 17.2**	**-0.6**
KARP				Sg	**Sg**	**10 40 27.1**	**-0.5**
KARP	**Karpathos**	**0.75**	**301**	P	**Pg**	**10 40 17.1**	**-0.7**
KARP				S	**Sb**	**10 40 29.7**	**+1.3**
KARP	**Karpathos**	**0.75**	**301**	P	**Pg**	**10 40 17.1**	**-0.7**
KARP				S	**Sg**	**10 40 28.1**	**+0.5**
KARP				AML	AML	10 40 42.0	
	22nm,0.7s						
KARP				AML	AML	10 40 43.9	
	14nm,0.5s						
KARP	**Karpathos**	**0.75**	**301**	P	**Pg**	**10 40 16.7**	**-1.1**
KARP				S	**Sb**	**10 40 30.3**	**+1.9**
ARG	**Arkhangelos**	**1.06**	**8**		**Pg**	**10 40 22.9**	**-0.8**
ARG	**Arkhangelos**	**1.06**	**8**	Pg	**Pg**	**10 40 22.0**	**-1.7**
ARG				Sg	**Sg**	**10 40 36.0**	**-1.6**
ARG	**Arkhangelos**	**1.06**	**8**	P	**Pg**	**10 40 23.3**	**-0.5**
ARG				S	**Sb**	**10 40 38.7**	**+1.3**
ARG	**Arkhangelos**	**1.06**	**8**	P	**Pg**	**10 40 23.1**	**-0.6**
ARG				S	**Sn**	**10 40 41.9**	**+3.3**
ARG				AML	AML	10 40 46.1	
	8.9nm,0.7s						
ARG				AML	AML	10 40 51.2	
	12nm,0.5s						
ARG	**Arkhangelos**	**1.06**	**8**	P	**Pg**	**10 40 23.4**	**-0.3**
ARG				S	**Sn**	**10 40 39.0**	**+0.3**
RODB	**Rodos**	**1.30**	**10**	P	**Pn**	**10 40 27.7**	**+0.5**
RODB				S	**Sg**	**10 40 45.6**	**+0.4**
RDI1	**Rhodes Town Ha**	**1.30**	**10**	P	**Pn**	**10 40 28.0**	**+0.7**
RDI1				S	**Sg**	**10 40 45.8**	**+0.4**
ZKR	**Zakros**	**1.42**	**269**	Pn	**Pg**	**10 40 31.5**	**+0.9**
ZKR	**Zakros**	**1.42**	**269**	P	**Pg**	**10 40 30.6**	**0.0**
ZKR	**Zakros**	**1.42**	**269**	P	**Pn**	**10 40 29.6**	**+0.7**
ZKR				S	**Sg**	**10 40 49.8**	**+0.8**
SIT2	**Siteia**	**1.51**	**272**	P	**Pg**	**10 40 32.3**	**0.0**
YAZI	**Mula-Dat§a-**	**1.57**	**345**	P	**Pn**	**10 40 31.2**	**+0.2**
YAZI				S	**Sb**	**10 40 52.9**	**+0.9**
YAZI				IAML		10 40 57.0	
	comp=E,944nm,0.9s						
YAZI				IAML		10 41 07.0	
	comp=N,961nm,0.6s						
DAT	**Datca**	**1.59**	**349**	Pn	**Pn**	**10 40 31.6**	**+0.2**
DAT	**Datca**	**1.59**	**349**	P	**Pn**	**10 40 31.9**	**+0.5**
DAT				S	**Sn**	**10 40 52.7**	**+0.8**
DAT				IAML		10 41 02.0	
	comp=E,2µm,1.1s						
DAT				IAML		10 41 04.0	
	comp=N,1µm,0.6s						
DATC	**Datca-Mugla**	**1.61**	**352**	Pn	**Pn**	**10 40 32.0**	**+0.5**
TURN	**Turunc**	**1.63**	**8**	Pn	**Pn**	**10 40 32.7**	**+1.0**
TURN	**Turunc**	**1.63**	**8**	P	**Pn**	**10 40 32.8**	**+1.1**
TURN				S	**Sg**	**10 40 55.5**	**-0.1**
TURN				IAML		10 41 04.0	
	comp=N,962nm,0.6s						
TURN				IAML		10 41 05.0	
	comp=E,1µm,0.6s						
IZZE	**Mula-Seydike**	**1.64**	**39**	P	**Pn**	**10 40 31.9**	**-0.1**
IZZE				S	**Sb**	**10 40 54.8**	**+0.7**
IZZE				IAML		10 41 23.0	
	comp=N,1µm,0.5s						
IZZE				IAML		10 41 26.0	
	comp=E,601nm,0.8s						
KSL	**Kastellorizon**	**1.66**	**53**	P	**Pn**	**10 40 32.8**	**+0.7**
KSL				S	**Sn**	**10 40 53.9**	**+0.6**
KSL	**Kastellorizon**	**1.66**	**53**	P	**Pn**	**10 40 33.1**	**+1.0**
KSL				S	**Sg**	**10 40 57.8**	**+1.2**
KSL				AML	AML	10 41 20.4	
	1.3nm,1.5s						
KSL				AML	AML	10 41 29.8	
	2.2nm,1.1s						
KSL	**Kastellorizon**	**1.66**	**53**	P	**Pn**	**10 40 32.6**	**+0.4**
KSL				S	**Sn**	**10 40 54.1**	**+0.8**
AKAS	**Kas**	**1.72**	**51**		**Pn**	**10 40 33.9**	**+0.7**
AKAS	**Kas**	**1.72**	**51**	Pn	**Pb**	**10 40 35.4**	**+0.5**
AKAS	**Kas**	**1.72**	**51**	P	**Pn**	**10 40 33.8**	**+0.7**
AKAS				IAML		10 41 09.0	
	comp=E,581nm,0.6s						
AKAS				IAML		10 41 13.0	
	comp=N,986nm,0.7s						
DALY	**Dalyan (Mula)**	**1.75**	**19**	Pn	**Pn**	**10 40 34.4**	**+1.0**
SABU	**Mula-Dalaman**	**1.85**	**26**	P	**Pn**	**10 40 35.4**	**+0.6**
SABU				S	**Sg**	**10 41 07.1**	**+4.2**
SABU				IAML		10 41 13.0	
	comp=E,447nm,0.6s						
SABU				IAML		10 41 21.0	
	comp=N,798nm,0.9s						
NPS	**Neapolis**	**1.92**	**274**	P	**Pb**	**10 40 38.6**	**+0.4**
NPS				S	**Sb**	**10 41 02.4**	**+0.4**
NPS	**Neapolis**	**1.92**	**274**	P	**Pb**	**10 40 38.1**	**-0.1**
NPS				S	**Sb**	**10 41 03.2**	**+1.2**
BDRM	**Kayabasi**	**1.94**	**348**	P	**Pn**	**10 40 36.1**	**0.0**
BDRM				S	**Sn**	**10 41 00.5**	**+0.1**
BDRM				IAML		10 41 07.0	
	comp=E,1µm,0.8s						
KLNA	**Kalymnos**	**1.96**	**336**	P	**Pb**	**10 40 38.2**	**-0.6**
BODT	**Bodrum**	**1.96**	**345**	Pn	**Pn**	**10 40 37.2**	**+0.8**
BODT	**Bodrum**	**1.96**	**345**	P	**Pn**	**10 40 37.5**	**+1.1**
BODT				S	**Sn**	**10 41 02.1**	**+1.2**
YER	**Yerkesik**	**1.99**	**8**	Pn	**Pn**	**10 40 37.7**	**+0.9**
YER	**Yerkesik**	**1.99**	**8**	P	**Pn**	**10 40 38.2**	**+1.5**
YER				S	**Sn**	**10 41 02.1**	**+0.5**
YKAV	**Yalikavak-Bodr**	**2.03**	**345**	Pn	**Pn**	**10 40 38.1**	**+0.8**
CAME	**Cameli-Denizli**	**2.09**	**31**	Pn	**Pn**	**10 40 39.4**	**+1.2**
MULA	**Mugla, Merkez-**	**2.11**	**8**	P	**Pb**	**10 40 40.6**	**-0.9**
MULA				S	**Sb**	**10 41 07.8**	**+0.1**
MULA				IAML		10 41 21.0	
	comp=E,558nm,0.6s						
MULA				IAML		10 41 26.0	
	comp=N,310nm,0.6s						
MLSB	**Milas**	**2.13**	**356**	Pn	**Pn**	**10 40 39.4**	**+0.7**
KNIK	**Mula-Seydike**	**2.13**	**38**	P	**Pn**	**10 40 39.2**	**+0.4**
KNIK				IAML		10 41 37.0	
	comp=N,241nm,0.9s						
KNIK				IAML		10 41 43.0	
	comp=E,220nm,1.0s						
ELL	**Elmali**	**2.24**	**45**		**Pn**	**10 40 41.4**	**+1.0**
ELL	**Elmali**	**2.24**	**45**	Pn	**Pn**	**10 40 42.4**	**+2.1**
ELL	**Elmali**	**2.24**	**45**	P	**Pn**	**10 40 42.1**	**+1.7**
ELL				S	**Sb**	**10 41 11.9**	**+0.3**
ELL				AML	AML	10 41 15.2	
	3.0nm,0.6s						
ELL				AML	AML	10 41 16.9	
	2.9nm,0.6s						
CAEL	**Denizli, Camel**	**2.25**	**29**	P	**Pn**	**10 40 41.8**	**+1.4**
CAEL				S	**Sb**	**10 41 13.7**	**+1.9**
CAEL				IAML		10 41 48.0	
	comp=E,914nm,1.1s						
CAEL				IAML		10 41 49.0	
	comp=N,930nm,0.9s						
DNZT	**Denizli-Tavas-**	**2.28**	**22**	P	**Pn**	**10 40 41.8**	**+0.9**
DNZT				S	**Sn**	**10 41 11.1**	**+2.1**
DNZT				IAML		10 41 25.0	
	comp=E,296nm,0.6s						
DNZT				IAML		10 41 26.0	
	comp=N,436nm,0.7s						
THERA	**Ancient Thera,**	**2.34**	**302**	P	**Pn**	**10 40 42.6**	**+1.0**
THERA				S	**Sn**	**10 41 12.4**	**+2.2**
THERA	**Ancient Thera,**	**2.34**	**302**	P	**Pn**	**10 40 43.5**	**+1.9**
THERA				S	**Sb**	**10 41 13.7**	**-0.6**
DDIM	**Aydin, Didim**	**2.36**	**346**	P	**Pb**	**10 40 44.4**	**-1.3**
DDIM				IAML		10 41 31.0	
	comp=E,905nm,0.7s						
DDIM				IAML		10 41 43.0	
	comp=N,1µm,1.6s						
SNT5	**Nea Kammeni, S**	**2.42**	**302**	P	**Pn**	**10 40 43.1**	**+0.5**
SNT5	**Nea Kammeni, S**	**2.42**	**302**	P	**Pn**	**10 40 43.9**	**+1.3**
TAVA	**DENIZLI_Tavas**	**2.43**	**18**	P	**Pn**	**10 40 43.5**	**+0.6**
TAVA				S	**Sb**	**10 41 15.6**	**-1.2**
TAVA				IAML		10 41 27.0	
	comp=E,466nm,0.7s						
TAVA				IAML		10 41 33.0	
	comp=N,480nm,0.7s						
GOLH	**Golhisar**	**2.45**	**32**	P	**Pn**	**10 40 45.1**	**+2.0**
GOLH				IAML		10 41 43.0	
	comp=N,588nm,0.8s						
GOLH				IAML		10 41 46.0	
	comp=E,527nm,1.2s						
SAP3	**Santorini-Thir**	**2.47**	**302**	P	**Pn**	**10 40 44.9**	**+1.6**
SAP3	**Santorini-Thir**	**2.47**	**302**	P	**Pn**	**10 40 44.8**	**+1.6**
AYDN	**Tasoluk**	**2.49**	**359**	P	**Pn**	**10 40 43.5**	**-0.3**
AYDN				IAML		10 41 25.0	
	comp=E,351nm,0.7s						
AYDN				IAML		10 41 29.0	
	comp=N,413nm,0.7s						
IDI	**Anoyia**	**2.51**	**274**	Pn	**Pn**	**10 40 45.9**	**+2.0**
	8.5nm,0.3s,baz=61,slow=18,SNR=60						
IDI				LR	LR	10 41 50.6	
	comp=Z,431nm,18.3s,baz=116,slow=46						
IDI	**Anoyia**	**2.51**	**274**		**Pn**	**10 40 46.1**	**+2.2**
IDI	**Anoyia**	**2.51**	**274**	Pn	**Pn**	**10 40 46.5**	**+2.6**
IDI	**Anoyia**	**2.51**	**274**	P	**Pb**	**10 40 46.8**	**-1.5**
IDI	**Anoyia**	**2.51**	**274**	P	**Pn**	**10 40 45.8**	**+2.0**
APMY	**Acipayam-Deniz**	**2.55**	**25**	Pn	**Pn**	**10 40 45.8**	**+1.3**
GCAM	**G?zelcaml?**	**2.60**	**347**	Pn	**Pn**	**10 40 45.9**	**+0.8**
GCAM	**G?zelcaml?**	**2.60**	**347**	P	**Pn**	**10 40 45.8**	**+0.8**
GCAM				IAML		10 41 18.0	
	comp=E,234nm,1.0s						
GCAM				IAML		10 42 18.0	
	comp=N,362nm,3.5s						
DNIZ	**Denizli-Tavas-**	**2.61**	**19**	P	**Pn**	**10 40 46.3**	**+0.9**
DNIZ				S	**Sn**	**10 41 16.1**	**-1.0**
DNIZ				IAML		10 41 43.0	
	comp=N,797nm,0.8s						
DNIZ				IAML		10 41 50.0	
	comp=E,763nm,0.8s						
ESEN	**Aydn-Nazilli**	**2.65**	**7**	P	**Pn**	**10 40 47.2**	**+1.5**
ESEN				S	**Sn**	**10 41 18.7**	**+0.8**
ESEN				IAML		10 41 35.0	
	comp=E,277nm,0.6s						
ESEN				IAML		10 41 44.0	
	comp=N,218nm,1.1s						
SMG	**Samos**	**2.69**	**341**	P	**Pn**	**10 40 46.8**	**+0.3**
SMG	**Samos**	**2.69**	**341**	P	**Pn**	**10 40 46.5**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**2.78**	**359**	Pn	**Pn**	**10 40 48.5**	**+0.8**
NAZL	**Nazilli-Aydin**	**2.81**	**6**	Pn	**Pn**	**10 40 49.3**	**+1.3**
INCE	**Denizli-Bozkur**	**2.86**	**27**	P	**Pn**	**10 40 48.9**	**+0.1**
INCE				S	**Sg**	**10 41 36.6**	**+1.4**
INCE				IAML		10 41 46.0	
	comp=E,276nm,1.0s						
INCE				IAML		10 41 48.0	
	comp=N,367nm,0.7s						
SULTU	**Buldan**	**2.96**	**13**	P	**Pn**	**10 40 50.5**	**+0.4**
SULTU				S	**Sn**	**10 41 29.3**	**+3.6**
SULTU				IAML		10 41 49.0	
	comp=E,412nm,1.1s						
SULTU				IAML		10 41 53.0	
	comp=N,371nm,0.9s						
IZMR	**zmir-demi**	**2.97**	**0**	P	**Pn**	**10 40 50.5**	**+0.4**
IZMR				S	**Sn**	**10 41 22.7**	**-3.0**
IZMR				IAML		10 41 45.0	
	comp=E,191nm,0.9s						
IZMR				IAML		10 41 51.0	
	comp=N,247nm,1.7s						
DGB	**zmir**	**3.01**	**344**	P	**Pn**	**10 40 50.8**	**+0.1**
DGB				IAML		10 41 48.0	
	comp=N,93nm,1.0s						
DGB				IAML		10 41 51.0	
	comp=E,106nm,1.1s						
KIRA	**zmir-Kiraz**	**3.05**	**7**	P	**Pn**	**10 40 51.5**	**+0.1**
KIRA				S	**Sn**	**10 41 29.5**	**+1.7**
KIRA				IAML		10 41 51.0	
	comp=E,181nm,0.7s						
KIRA				IAML		10 41 53.0	
	comp=N,152nm,0.6s						
VAM	**Vamos**	**3.08**	**276**	P	**Pn**	**10 40 54.3**	**+2.7**
VAM	**Vamos**	**3.08**	**276**	P	**Pn**	**10 40 53.9**	**+2.2**
DUVT	**Torbali**	**3.08**	**353**	P	**Pn**	**10 40 50.3**	**-1.4**
DUVT				IAML		10 41 54.0	
	comp=E,155nm,0.9s						
GVD	**Gavdhos**	**3.19**	**265**	Pn	**Pn**	**10 40 56.3**	**+3.1**
GVD	**Gavdhos**	**3.19**	**265**	P	**Pn**	**10 40 55.6**	**+2.4**
GVD	**Gavdhos**	**3.19**	**265**	P	**Pn**	**10 40 55.1**	**+1.9**
CHAN	**Chania**	**3.21**	**277**	P	**Pn**	**10 40 55.2**	**+1.7**
OSC1	**CSNet OBS 1**	**3.22**	**120**	P	**Pn**	**10 40 52.2**	**-1.4**
OSC1				AML	AML	10 41 43.2	
	0.3nm,0.4s						
OSC1				AML	AML	10 41 52.0	
	0.4nm,0.6s						
IMMV	**Iera Moni Meta**	**3.26**	**276**	Pn	**Pn**	**10 40 56.8**	**+2.6**
IMMV	**Iera Moni Meta**	**3.26**	**276**	P	**Pn**	**10 40 56.7**	**+2.6**
IMMV	**Iera Moni Meta**	**3.26**	**276**	P	**Pn**	**10 40 56.3**	**+2.2**
ZEYE	**Izmir, Urla-Ze**	**3.28**	**340**	P	**Pn**	**10 40 54.8**	**+0.3**
ZEYE				S	**Sn**	**10 41 32.6**	**-0.8**
ZEYE				IAML		10 41 54.0	
	comp=E,94nm,0.7s						
ZEYE				IAML		10 42 04.0	
	comp=N,131nm,0.7s						
MANT	**Manisa**	**3.36**	**8**		**Pn**	**10 40 55.7**	**-0.1**
MANT	**Manisa**	**3.36**	**8**	P	**Pn**	**10 40 54.8**	**-0.9**
MANT				S	**Sn**	**10 41 32.4**	**-3.3**
MANT				IAML		10 41 49.0	
	comp=N,90nm,0.7s						
MANT				IAML		10 42 24.0	
	comp=E,86nm,1.3s						
ISP	**Isparta**	**3.37**	**37**		**Pn**	**10 40 56.5**	**+0.7**
ISP	**Isparta**	**3.37**	**37**	P	**Pn**	**10 40 56.8**	**+1.0**
URLA	**Izmir**	**3.37**	**342**	P	**Pn**	**10 40 56.5**	**+0.7**
URLA				S	**Sn**	**10 41 39.5**	**+3.8**
URLA				IAML		10 42 13.0	
	comp=N,202nm,1.7s						
URLA				IAML		10 42 19.0	
	comp=E,177nm,1.2s						
KTTT	**Salihli**	**3.52**	**2**	P	**Pn**	**10 40 56.9**	**-0.9**
KTTT				S	**Sn**	**10 41 33.3**	**-6.1**
KTTT				IAML		10 42 22.0	
	comp=N,91nm,1.0s						
KNDR	**Palaiochora Ch**	**3.54**	**272**	P	**Pn**	**10 40 59.5**	**+1.4**
BAGT	**Foa**	**3.59**	**346**	P	**Pn**	**10 40 59.8**	**+1.0**
BAGT				S	**Sb**	**10 41 48.0**	**-2.3**
BAGT				IAML		10 42 22.0	
	comp=N,182nm,1.3s						
BAGT				IAML		10 42 24.0	
	comp=E,171nm,0.9s						
AKMS	**Akamas**	**3.60**	**91**	P	**Pn**	**10 40 58.9**	**0.0**
AKMS				S	**Sn**	**10 41 42.6**	**+1.2**
AKMS				AML	AML	10 41 46.0	
	0.7nm,0.4s						
AKMS				AML	AML	10 41 46.2	
	0.6nm,0.4s						
AKMS	**Akamas**	**3.60**	**91**	P	**Pn**	**10 40 59.1**	**+0.2**
CAMT	**Merkez**	**3.61**	**352**	P	**Pn**	**10 40 59.1**	**0.0**
CAMT				IAML		10 42 17.0	
	comp=E,224nm,1.0s						
CAMT				IAML		10 42 22.0	
	comp=N,207nm,1.0s						
ALFC	**Alefka**	**3.81**	**89**	P	**Pn**	**10 41 01.8**	**-0.1**
ALFC				S	**Sn**	**10 41 48.5**	**+1.9**
ALFC				AML	AML	10 41 53.1	
	0.6nm,0.7s						
ALFC				AML	AML	10 41 54.4	
	0.8nm,0.4s						
ALFC	**Alefka**	**3.81**	**89**	P	**Pn**	**10 41 01.5**	**-0.3**
NATA	**Nata**	**3.81**	**94**	P	**Pn**	**10 41 02.5**	**+0.6**
NATA				S	**Sn**	**10 41 47.9**	**+1.3**
NATA				AML	AML	10 41 55.7	
	1.7nm,0.5s						
NATA				AML	AML	10 41 57.1	
	1.5nm,1.1s						
NATA	**Nata**	**3.81**	**94**	P	**Pn**	**10 41 02.0**	**+0.2**
ANKY	**Antikythira Is**	**3.85**	**282**	P	**Pn**	**10 41 04.2**	**+1.9**
KARY	**Karystos**	**4.02**	**316**	P	**Pn**	**10 41 06.4**	**+1.8**
TROD	**Troodos**	**4.04**	**92**	P	**Pn**	**10 41 04.7**	**-0.4**
TROD				S	**Sn**	**10 41 53.7**	**+1.2**
TROD				AML	AML	10 42 02.6	
	0.4nm,0.6s						
TROD				AML	AML	10 42 03.5	
	0.5nm,0.5s						
APOL	**The Sanctuary**	**4.07**	**96**	P	**Pn**	**10 41 05.6**	**+0.3**
APOL				S	**Sn**	**10 41 54.4**	**+1.5**
APOL				AML	AML	10 41 56.7	
	0.8nm,0.8s						
APOL				AML	AML	10 41 58.1	
	0.8nm,0.6s						
KTHA	**Kythira Island**	**4.12**	**287**	P	**Pn**	**10 41 07.4**	**+1.3**
KTHA	**Kythira Island**	**4.12**	**287**	P	**Pn**	**10 41 07.6**	**+1.6**
XYLS	**Xyliatos**	**4.19**	**91**	P	**Pn**	**10 41 07.0**	**0.0**
XYLS				S	**Sn**	**10 41 57.7**	**+1.8**
XYLS				AML	AML	10 41 58.7	
	0.3nm,0.7s						
XYLS				AML	AML	10 42 01.5	
	0.5nm,0.6s						
PRK	**Paraskevi**	**4.29**	**342**	P	**Pn**	**10 41 09.8**	**+1.5**
VLY	**Voula,Athens**	**4.29**	**310**	P	**Pn**	**10 41 10.8**	**+2.5**
VLY	**Voula,Athens**	**4.29**	**310**	P	**Pn**	**10 41 09.9**	**+1.6**
SLUM	**Salum**	**4.32**	**213**	P	**Pn**	**10 41 10.3**	**+1.6**
SLUM				S	**Sn**	**10 41 57.6**	**-1.4**
DION	**Dionisos Attik**	**4.35**	**313**	P	**Pn**	**10 41 11.1**	**+1.9**
DION	**Dionisos Attik**	**4.35**	**313**	P	**Pn**	**10 41 10.7**	**+1.5**
VLI	**Veliai**	**4.35**	**292**	P	**Pn**	**10 41 10.4**	**+1.2**
VLI	**Veliai**	**4.35**	**292**	P	**Pn**	**10 41 10.6**	**+1.4**
ATHU	**Athens Univers**	**4.37**	**311**	P	**Pn**	**10 41 10.3**	**+0.9**
ATHU	**Athens Univers**	**4.37**	**311**	P	**Pn**	**10 41 11.0**	**+1.6**
ASGA	**Asgata**	**4.37**	**93**	P	**Pn**	**10 41 09.6**	**+0.1**
ASGA				S	**Sn**	**10 42 02.1**	**+1.9**
ASGA				AML	AML	10 42 04.3	
	0.6nm,0.9s						
ASGA				AML	AML	10 42 06.3	
	0.8nm,0.7s						
ASGA	**Asgata**	**4.37**	**93**	P	**Pn**	**10 41 09.8**	**+0.3**
PTL	**Penteli**	**4.37**	**312**	P	**Pn**	**10 41 11.6**	**+2.1**
PTL	**Penteli**	**4.37**	**312**	P	**Pn**	**10 41 11.5**	**+2.1**
SIGR	**SIGRI**	**4.37**	**338**	P	**Pn**	**10 41 10.7**	**+1.3**
CSS	**Mathiatis**	**4.42**	**91**		**Pn**	**10 41 09.6**	**-0.6**
CSS	**Mathiatis**	**4.42**	**91**	P	**Pn**	**10 41 10.7**	**+0.6**
CSS				S	**Sn**	**10 42 02.6**	**+1.0**
CSS				AML	AML	10 42 12.6	
	0.4nm,0.7s						
CSS				AML	AML	10 42 14.0	
	0.4nm,1.0s						
CSS	**Mathiatis**	**4.42**	**91**	P	**Pn**	**10 41 10.3**	**+0.1**
MET5	**Makryloggos,Me**	**4.44**	**305**	P	**Pn**	**10 41 12.3**	**+1.9**
BALB	**Balikesir**	**4.47**	**359**		**Pn**	**10 41 11.9**	**+1.1**
KYMI	**Kymi, Euboea I**	**4.64**	**319**	P	**Pn**	**10 41 14.9**	**+1.8**
STFN	**Stefani**	**4.64**	**312**	P	**Pn**	**10 41 14.8**	**+1.5**
MVOU	**Mavrovouni**	**4.66**	**90**	P	**Pn**	**10 41 14.0**	**+0.5**
MVOU				S	**Sn**	**10 42 09.6**	**+2.1**
MVOU				AML	AML	10 42 16.1	
	0.3nm,0.5s						
MVOU				AML	AML	10 42 17.8	
	0.3nm,0.8s						
MVOU	**Mavrovouni**	**4.66**	**90**	P	**Pn**	**10 41 13.9**	**+0.5**
VIL2	**Platees**	**4.84**	**310**	P	**Pn**	**10 41 16.9**	**+1.0**
LTK	**Loutraki**	**4.92**	**307**	P	**Pn**	**10 41 19.1**	**+2.1**
PARAL	**Paralimni**	**5.00**	**90**	P	**Pn**	**10 41 19.3**	**+1.2**
PARAL				AML	AML	10 42 35.0	
	0.3nm,1.4s						
PARAL				AML	AML	10 42 47.9	
	0.4nm,1.2s						
BORA	**Eskisehir**	**5.11**	**22**		**Pn**	**10 41 19.9**	**+0.2**
ITM	**Ithomi**	**5.27**	**294**		**Pn**	**10 41 23.3**	**+1.5**
GUR	**Goura**	**5.29**	**303**	P	**Pn**	**10 41 24.4**	**+2.1**
KLV	**Kalavryta, Ach**	**5.48**	**303**	P	**Pn**	**10 41 26.3**	**+1.6**
CAVK	**Edirne/Enez-Ca**	**5.70**	**346**	⇓P	**Pn**	**10 41 31.4**	**+3.7**
ALN	**Alexandroupoli**	**5.92**	**346**		**Pn**	**10 41 32.4**	**+1.7**
ANX	**Ano Chora**	**5.92**	**307**	P	**Pn**	**10 41 32.5**	**+1.7**
MAKR	**Makrakomi, Fth**	**6.03**	**311**	P	**Pn**	**10 41 34.5**	**+2.1**
AXS	**Araxos**	**6.09**	**302**	P	**Pn**	**10 41 34.7**	**+1.6**
KIRS	**Kirsehir-Merke**	**6.20**	**49**	⇑P	**Pn**	**10 41 37.2**	**+2.5**
RDO	**Rodhopi**	**6.27**	**343**		**Pn**	**10 41 36.1**	**+0.6**
RDO	**Rodhopi**	**6.27**	**343**	P	**Pn**	**10 41 36.9**	**+1.4**
SWA2		**6.27**	**200**	P	**Pn**	**10 41 36.8**	**+1.2**
HNTI	**Hanita**	**6.34**	**107**	P	**Pn**	**10 41 36.0**	**-0.6**
HNTI				S	**Sn**	**10 42 48.0**	**-0.9**
OFRI	**\`Ofer**	**6.38**	**111**	P	**Pn**	**10 41 36.7**	**-0.4**
OFRI				S	**Sn**	**10 42 48.5**	**-1.4**
BR131	**Keskin Array S**	**6.42**	**43**		**Pn**	**10 41 38.0**	**+0.2**
BRTR	**Keskin Array B**	**6.42**	**43**	Pn	**Pn**	**10 41 38.7**	**+0.9**
	0.6nm,0.3s,baz=218,slow=16,SNR=15						
BRTR				Sn	**Sn**	**10 42 50.1**	**-1.0**
	0.9nm,0.3s,baz=215,slow=27,SNR=5.9						
BRTR				LR	LR	10 44 11.0	
	comp=Z,47nm,21.1s,baz=226,slow=39						
	1.9nm,0.4s						
BRTR	**Keskin Array B**	**6.42**	**43**		**Pn**	**10 41 38.0**	**+0.2**
MMC7	**Mount Meron ar**	**6.54**	**107**	P	**Pn**	**10 41 38.8**	**-0.5**
MMA0B	**Mount Meron ar**	**6.55**	**107**	P	**Pn**	**10 41 39.2**	**-0.2**
MMA0B				S	**Sn**	**10 42 53.0**	**-1.0**
MMAI	**Mount Meron Ar**	**6.55**	**107**	Pn	**Pn**	**10 41 39.0**	**-0.5**
	7.3nm,0.3s,baz=300,slow=12,SNR=9.9						
MMAI				Sn	**Sn**	**10 42 54.4**	**+0.4**
	9.6nm,0.3s,baz=338,slow=28,SNR=6.3						
	2.8nm,0.3s						
LIT	**Litokhoron**	**6.56**	**320**		**Pn**	**10 41 39.2**	**-0.3**
SLTI	**Sal'it**	**6.59**	**114**	P	**Pn**	**10 41 39.7**	**-0.3**
SLTI				S	**Sn**	**10 42 54.1**	**-0.9**
SUZ	**Suez**	**6.72**	**141**	P	**Pn**	**10 41 42.5**	**+0.7**
NATI	**Neve Ativ**	**6.72**	**104**	P	**Pn**	**10 41 41.5**	**-0.3**
NATI				S	**Sn**	**10 42 56.4**	**-1.9**
KSHT	**Keshet**	**6.88**	**106**	P	**Pn**	**10 41 43.4**	**-0.6**
KSHT				S	**Sn**	**10 43 01.2**	**-1.0**
KZIT	**Kziot**	**6.88**	**126**	P	**Pn**	**10 41 43.6**	**-0.4**
KZIT				S	**Sn**	**10 43 01.4**	**-0.8**
HMDT	**Nahal Hemdat**	**6.95**	**113**	P	**Pn**	**10 41 44.4**	**-0.5**
YTIR	**Yattir**	**7.10**	**120**	P	**Pn**	**10 41 46.8**	**-0.2**
YTIR				S	**Sn**	**10 43 06.8**	**-0.9**
BALJ	**Balqa**	**7.11**	**113**		**Pn**	**10 41 46.6**	**-0.5**
ZNM	**Zenema**	**7.12**	**143**	P	**Pn**	**10 41 48.0**	**+0.7**
DSI	**Dead Sea**	**7.17**	**118**	P	**Pn**	**10 41 47.5**	**-0.5**
DSI				S	**Sn**	**10 43 08.2**	**-1.3**
MSBI	**Mazada**	**7.30**	**120**	P	**Pn**	**10 41 49.2**	**-0.4**
MSBI				S	**Sn**	**10 43 11.1**	**-1.3**
BNN	**Bunyan**	**7.31**	**57**		**Pn**	**10 41 52.2**	**+2.2**
GHAJ	**Ghor Haditha**	**7.45**	**119**		**Pn**	**10 41 51.8**	**0.0**
VAY	**Valandovo**	**7.46**	**327**	*i* P	**Pn**	**10 41 56.5**	**+4.6**
KRMI	**Paran Flat**	**7.61**	**129**	P	**Pn**	**10 41 53.6**	**-0.5**
KRMI				S	**Sn**	**10 43 19.3**	**-1.0**
PRNI	**Paran**	**7.64**	**127**	P	**Pn**	**10 41 53.7**	**-0.7**
PRNI				S	**Sn**	**10 43 19.7**	**-1.1**
HRFI	**Mount Harif**	**7.87**	**129**	P	**Pn**	**10 41 57.0**	**-0.5**
HRFI				S	**Sn**	**10 43 24.9**	**-1.6**
KEK	**Kerkira**	**7.91**	**307**	Pn	**Pn**	**10 41 58.7**	**+0.5**
MBRI	**Mt Berech**	**7.95**	**130**	P	**Pn**	**10 41 58.2**	**-0.5**

MBRI S Sn 10 43 27.4 -1.3
HFRF Wahat Farafira 8.00 178 P Pn 10 41 59.9 +0.6
ASF Jabal al Asfar 8.03 109 Pn Pn 10 42 00.4 +0.5
0.8nm,0.3s,baz=314,slow=3.6,SNR=4.3
ASF Sn Sn 10 43 37.7 +7.0
0.8nm,0.3s,baz=8.1,slow=13,SNR=5.9
3.0nm,0.4s
OHR Ohrid 8.18 319 *i* P Pn 10 42 07.6 +5.7
BOVS Bovan 9.74 332 ⇓P Pn 10 42 26.7 +3.6
TIP Timpagrande 9.79 297 Pn 10 42 22.5 -1.4
TIP Timpagrande 9.79 297 ⇓P Pn 10 42 22.9 -1.0
PDG Podgorica 9.93 320 ⇓P Pn 10 42 28.2 +2.5
CEL Celeste 10.16 291 Pn 10 42 27.6 -1.3
MLR Muntele Rosu 10.43 352 Pn Pn 10 42 32.4 -0.3
0.2nm,0.3s,baz=179,slow=10,SNR=4.6
1.6nm,0.4s
MLR Muntele Rosu 10.43 352 ⇑P Pn 10 42 36.9 +4.2
VOIR 10.50 349 ⇓P Pn 10 42 38.7 +5.1
MDVR Moldovita 10.73 335 ⇑P Pn 10 42 39.9 +3.1
VRI Vrincioaia 10.73 355 ⇑P Pn 10 42 39.6 +2.9
COVR Voineasa-Covas 10.75 353 ⇓P Pn 10 42 41.4 +4.4
GZR Gura Zlata 10.95 340 ⇓P Pn 10 42 43.7 +3.9
ACER Acerenza 11.01 304 Pn Pn 10 42 40.2 -0.4
RAFF Raffo Rosso 11.17 285 Pn 10 42 42.1 -0.7
BZS Buzias 11.50 337 ⇑P Pn 10 42 50.4 +3.2
DRGR 12.27 343 ⇑P Pn 10 43 02.1 +4.3
BURAR Bucovina Array 12.61 352 Pn Pn 10 43 04.0 +1.6
BURAR Bucovina Array 12.61 352 ⇓P Pn 10 43 07.4 +4.9
MORH Mrgy, Hungar 13.09 330 ⇓P Pn 10 43 12.6 +3.6
NRCA Norcia 13.83 308 Pn 10 43 19.7 +0.5
PSZ Piszkesteto 14.09 337 ⇑P Pn 10 43 26.5 +3.9
KBZ Khabaz 14.36 49 Pn P 10 43 31.3 -2.0
0.3nm,0.3s,baz=226,slow=7.3,SNR=16
3.0nm,0.7s
TRI Trieste 15.06 319 Pn 10 43 34.2 -1.7
TRI IAmb IAmb 10 43 45.3
comp=Z,8.0nm,0.8s
SOKA Soboth 15.06 324 *i* Pn Pn 10 43 35.7 -0.2
comp=Z,0.6nm,0.3s,SNR=4.4
KEST Kesra 15.18 278 Pn Pn 10 43 37.6 +0.1
OBKA Obir 15.18 322 *e*Pn Pn 10 43 37.7 +0.2
comp=Z,2.1nm,0.6s
ARSA Arzberg 15.25 326 Pn Pn 10 43 39.0 +0.7
SABO M.te Sabotino 15.32 319 Pn 10 43 38.6 -0.8
MODS Modra-Piesok 15.39 332 *e*P P 10 43 47.4 +2.6
KIEV Kiev 15.55 3 ⇑P P 10 43 47.0 +0.5
AKASG Malin Array Be 15.56 3 Pn Pn 10 43 40.0 -2.4
comp=Z,1.1nm,0.3s,baz=196,slow=11,SNR=8.2
comp=Z,0.7nm,0.6s
STAL STALIGIAL 15.98 319 Pn 10 43 47.0 -0.9
STAL IAmb IAmb 10 43 50.6
comp=Z,10nm,0.9s
MAUC Maruska 16.02 335 *e*P P 10 43 55.8 +3.9
KBA Koelnbreinsper 16.18 322 *e*Pn Pn 10 43 51.1 +0.6
comp=Z,2.4nm,0.5s,SNR=4.0
ABTA Abfaltersbach 16.39 320 *e*Pn Pn 10 43 52.1 -1.1
comp=Z,3.9nm,0.6s
VRAC Vranov 16.42 333 LR LR 10 50 10.1
comp=Z,97nm,18.2s,baz=156,slow=37
MORC Moravsky Berou 16.47 336 ⇑P P 10 43 56.9 +0.1
LESA Schwarzleotal 16.75 322 *e*Pn Pn 10 43 58.4 +0.7
comp=Z,4.0nm,0.5s,SNR=7.1
CKRC Cesky Krumlov 16.96 328 *e*P P 10 44 04.3 +2.1
WTTA Wattenberg 17.18 320 *e*Pn Pn 10 44 03.4 +0.1
comp=Z,0.9nm,0.3s
GEC2 GERESS Array S 17.25 327 Pn 10 44 03.9 -0.1
GEC2 IAmb IAmb 10 44 07.9
comp=Z,20nm,1.4s
GEC2 GERESS Array S 17.25 327 *e*P Pn 10 44 03.5 -0.5
comp=Z,22nm,1.4s,baz=133,slow=7.5
GERES GERESS Array B 17.25 327 P Pn 10 44 02.7 -1.3
baz=137,slow=12,SNR=9.2
comp=Z,2.3nm,0.8s
WATA Walderalm 17.26 320 *e*Pn Pn 10 44 03.9 -0.3
comp=Z,1.8nm,0.5s
DPC Dobruska-Polom 17.38 334 *e*P Pn 10 44 06.3 +0.7
SQTA Sankt Quirin 17.39 319 *e*Pn Pn 10 44 05.0 -0.8
comp=Z,2.1nm,0.5s
KHC Kasperske Hory 17.52 327 Pn 10 44 07.0 -0.2
KHC Kasperske Hory 17.52 327 *e*P Pn 10 44 07.1 -0.2
MOTA Moosalm 17.52 319 *e*Pn Pn 10 44 07.5 +0.1
comp=Z,0.7nm,0.3s
FETA Feichten 17.53 318 *e*Pn Pn 10 44 07.7 +0.2
comp=Z,7.3nm,0.8s,SNR=12
FUORN Ofenpass-Fuorn 17.55 316 Pn 10 44 08.9 +0.9
FUORN IAmb IAmb 10 44 21.7
comp=Z,19nm,1.4s
OSTC Ostas 17.59 335 *e*P Pn 10 44 08.2 +0.1
PRU Pruhonice 17.76 331 *e*P P 10 44 15.5 +4.5
WET Wettzell 17.84 326 *e*P Pn 10 44 10.5 -0.8
comp=Z,6.8nm,0.9s,baz=133,slow=7.5
DAVOX Davos/Dischmat 17.86 316 P Pn 10 44 09.4 -2.3
comp=Z,0.1nm,0.3s,baz=261,slow=12,SNR=3.3
comp=Z,0.4nm,0.3s
UBR Ueberruh 18.26 319 *e*P P 10 44 17.4 +0.8
comp=Z,214nm,2.8s,baz=133,slow=7.5
GRF Grafenberg Arr 19.00 325 *e*P Pn 10 44 29.7 +4.4
comp=Z,70nm,1.8s,baz=133,slow=7.5
GRF *e*L L 10 54 11.8
comp=Z,72nm,18.8s
PLN Plauen 19.14 328 *e*P P 10 44 27.3 +1.1
comp=Z,8.4nm,1.6s,baz=133,slow=7.5
SENIN Lac Senin/Sane 19.17 312 P 10 44 25.3 -1.5
SENIN IAmb IAmb 10 44 30.3
comp=Z,5.1nm,0.6s
MNK Minsk 19.34 360 *i* P P 10 44 26.9 -1.4
comp=E,17nm,0.9s
MNK *i* P P 10 44 26.9 -1.4
comp=N,18nm,0.9s
MNK *i* P P 10 44 26.9 -1.4
comp=Z,12nm,0.7s,baz=180
MNK *i* PP PnPn 10 44 40.8 -1.6
MNK *i* PPP PPP 10 44 48.3
MNK *i* S Sn 10 48 05.0 -1.0
MNK *i* SS SnSn 10 48 21.1 +1.0
MNK *i* SSS SSS 10 48 34.0
MNK *i* LQ LQ 10 50 17.6
MNK *i* LR LR 10 51 32.9
MNK *i* LRM MLR 10 53 01.4
comp=Z,80nm,16.0s
MNK *i* LRM MLR 10 53 27.6
comp=E,197nm,16.5s
MNK *i* LRM MLR 10 53 43.6
comp=N,160nm,18.2s
MOX Moxa 19.49 328 *e*P P 10 44 31.0 +1.0
comp=N,37nm,1.8s,baz=133,slow=7.5
MOX *e*L L 10 53 03.4
comp=N,117nm,20.0s
TNS Taunus Mts 20.69 323 *e*P Pn 10 44 45.3 -0.2
comp=N,37nm,1.6s,baz=133,slow=7.5
CORI Orista 21.31 296 P P 10 44 49.4 -0.5
BELG Belogornoye 22.21 33 P P 10 44 58.6 -0.7
comp=N,14nm,0.8s,baz=84,slow=1.9,SNR=8.0
comp=N,14nm,0.8s
ESBB Sonseca Array 25.66 290 P P 10 45 33.2 +0.2
ESBB IAmb IAmb 10 45 34.0
comp=Z,5.6nm,0.9s
ESDC Sonseca Array 25.66 290 P P 10 45 32.3 -0.7
comp=Z,3.2nm,0.6s,baz=79,slow=8.8,SNR=28
comp=Z,3.2nm,0.6s
PAB San Pablo 25.96 289 P P 10 45 35.9 +0.2
PAB IAmb IAmb 10 45 47.2
comp=Z,5.2nm,0.8s
FINES FINESS Array B 26.33 358 P P 10 45 37.1 -1.6
comp=Z,2.9nm,0.5s,baz=161,slow=11,SNR=31
FINES PcP PcP 10 49 04.8 +0.5
comp=Z,8.2nm,1.2s,baz=222,slow=2.6,SNR=4.2
comp=Z,2.9nm,0.5s
HFS Hagfors 26.65 344 P P 10 45 39.4 -2.2
comp=Z,2.3nm,0.5s,baz=170,slow=9.0,SNR=11
comp=Z,2.3nm,0.5s
AB31 Akbulak array 27.33 49 P 10 45 48.9 +1.0
AB31 IAmb IAmb 10 45 56.0
comp=Z,2.5nm,0.7s
ABKAR Akbulak array 27.33 49 P P 10 45 48.4 +0.6
FURI Furi 27.93 157 LR LR 10 57 57.6
comp=Z,82nm,19.5s,baz=11,slow=38
NB2 NORSAR Subarra 28.03 343 P P 10 45 52.0 -2.0
comp=Z,1.0nm,0.7s,baz=150,slow=9.3
NOA NORSAR Array B 28.03 343 P P 10 45 51.6 -2.5
comp=Z,0.6nm,0.6s,baz=144,slow=8.2,SNR=4.3
NOA LR LR 10 59 50.9
comp=Z,44nm,18.1s,baz=15,slow=43
comp=Z,0.6nm,0.6s
TORD Torodi Ar. Bea 32.29 234 P P 10 46 32.3 +0.3
comp=Z,3.1nm,0.8s,baz=28,slow=6.8,SNR=18
comp=Z,3.1nm,0.8s
KKAR Karatay Array 33.66 63 P P 10 46 45.3 +1.4
ARCES ARCESS Array B 34.45 358 P P 10 46 48.9 -1.5
comp=Z,2.6nm,0.8s,baz=170,slow=7.4,SNR=8.2
ARCES LR LR 11 00 19.6
comp=Z,82nm,18.6s,baz=176,slow=36
comp=Z,2.6nm,0.8s
BVAR Borovoye Array 34.70 46 P P 10 46 53.4 +0.7
comp=Z,0.4nm,0.5s,baz=256,slow=4.3,SNR=2.3
comp=Z,0.4nm,0.5s
MBAR Mbarara 35.68 175 LR LR 11 02 14.0
comp=Z,78nm,19.0s,baz=10.0,slow=37
AAK Ala-Archa 36.61 64 P P 10 47 11.2 +1.7
comp=Z,1.4nm,0.5s,baz=239,slow=13,SNR=4.5
comp=Z,1.4nm,0.5s
BOOM Boomskoye usch 37.68 64 P P 10 47 19.7 +1.1
BOOM IAmb IAmb 10 47 46.2
comp=Z,3.3nm,1.2s
KURBB Kurchatov Arra 39.34 51 P P 10 47 32.7 +0.5
comp=Z,0.7nm,0.3s,baz=275,slow=8.9,SNR=9.3
KURBB PP PnPn 10 49 05.7 +0.5
comp=Z,0.4nm,0.3s,baz=280,slow=12,SNR=4.9
comp=Z,0.7nm,0.3s
KURK Kurchatov 39.41 51 P P 10 47 33.0 +0.2
DBIC Dimbokro 41.39 234 LR LR 11 07 57.3
comp=Z,48nm,19.3s,baz=72,slow=40
MKAR Makanchi Array 41.86 57 P P 10 47 53.3 +0.1
comp=Z,0.9nm,0.5s,baz=273,slow=7.4,SNR=16
comp=Z,0.9nm,0.5s
MKAR Makanchi Array 41.86 57 P 10 47 53.5 +0.4
ZALV Zalesovo Beam 43.35 46 P P 10 48 05.2 +0.1
comp=Z,0.9nm,0.5s,baz=273,slow=10,SNR=6.0
comp=Z,0.9nm,0.5s
SPITS Spitsbergen Ar 43.41 357 P P 10 48 04.8 -0.5
comp=Z,21nm,1.2s,baz=134,slow=12,SNR=7.1
comp=Z,21nm,1.2s
SFJD Kangerlussuaq 53.77 331 LR LR 11 15 21.2
comp=Z,35nm,19.4s,baz=150,slow=40
SONM Songino Array 57.71 51 P P 10 49 54.5 +0.6
comp=Z,1.5nm,0.7s,baz=290,slow=7.2,SNR=14
comp=Z,1.5nm,0.7s
LZDM Lanzhou Array 60.08 65 P P 10 50 11.3 +0.6
comp=Z,0.6nm,0.4s,baz=262,slow=4.0,SNR=3.7
comp=Z,0.6nm,0.4s
CMAR Chiang Mai Arr 64.30 85 P P 10 50 39.3 +0.4
comp=Z,0.7nm,0.7s,baz=303,slow=8.3,SNR=5.4
comp=Z,0.7nm,0.7s
SCHQ Schefferville 64.65 320 P P 10 50 38.8 -1.9
comp=Z,1.7nm,0.5s,baz=48,slow=2.3,SNR=11
comp=Z,1.7nm,0.5s
KSRS Korea Array 76.45 54 P P 10 51 52.8 -0.1
comp=Z,0.8nm,0.6s,baz=316,slow=5.2,SNR=4.7
comp=Z,0.8nm,0.6s
YKA Yellowknife Ar 78.13 343 P P 10 52 00.9 -0.9
comp=Z,0.2nm,0.6s,baz=28,slow=4.9,SNR=4.9
comp=Z,0.2nm,0.6s
ILAR Eielson Array 80.31 358 P P 10 52 13.3 -0.4
comp=Z,0.5nm,0.7s,baz=340,slow=3.2,SNR=9.5
comp=Z,0.5nm,0.7s
BDFB Brasilia 87.83 249 P P 10 52 53.4 +0.5
comp=Z,2.1nm,0.8s,baz=108,slow=8.9,SNR=4.0
comp=Z,2.1nm,0.8s
ASAR Alice Springs 115.81 102 PKP PKPdf 10 58 45.1 -0.9
comp=Z,0.6nm,1.0s,baz=350,slow=2.5,SNR=4.1

IDC 02 10:45:24.6±8.8, 16°.49S×172°.35W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=383.5km s-min=41.0km az=139.0, Samoa Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 50.59 258 P P 10 54 25.9 +0.3
0.2nm,0.5s,baz=91,slow=6.6,SNR=9.7
0.2nm,0.5s
ASAR Alice Springs 50.74 253 P P 10 54 26.2 -0.5
0.4nm,0.6s,baz=95,slow=8.3,SNR=13
0.4nm,0.6s
ILAR Eielson Array 83.32 11 P P 10 57 53.0 +0.1
0.5nm,0.9s,baz=207,slow=7.7,SNR=2.8
0.5nm,0.9s

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*IDC **02** 10:53:59.0±1.2, 14°.69N×144°.46E, h0km, mb3.8/10, mbtmp3.8/10, MS3.2/2, Error ellipse: s-maj=51.0km s-min=13.1km az=72.0*

ISC 02 10:54:02.8±1.2, 14°.7N±0°.1×144°.5E±0°.3, h27km, n13, σ0s.73/12, mb3.9/10, Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 1.15 161 Pn Pn 10 54 22.5 -0.5
85nm,0.3s,baz=288,slow=3.0,SNR=17
GUMO Sn Sb 10 54 38.3 -0.1
118nm,0.3s,baz=347,slow=22,SNR=24
JHJ Hachijo jima 2 18.85 348 LR LR 11 03 45.1
comp=Z,90nm,19.4s,baz=93,slow=31
MJAR Matsushiro Arr 22.48 347 P P 10 59 01.3 +1.2
0.9nm,0.8s,baz=178,slow=10,SNR=2.9
0.9nm,0.8s
KSRS Korea Array 27.04 330 P P 10 59 42.6 -0.1
0.8nm,0.7s,baz=122,slow=12,SNR=4.3
0.8nm,0.7s
BATI Baumata 32.20 221 LR LR 11 12 17.9
comp=Z,41nm,20.5s,baz=110,slow=34
WRA Warramunga Arr 35.82 196 P P 11 01 01.1 +1.0
2.2nm,0.9s,baz=14,slow=9.5,SNR=9.3
2.2nm,0.9s
ASAR Alice Springs 39.49 195 P P 11 01 31.8 +0.6
0.3nm,0.7s,baz=16,slow=13,SNR=5.7
0.3nm,0.7s
CMAR Chiang Mai Arr 43.72 281 P P 11 02 05.8 -0.2
0.7nm,0.3s,baz=78,slow=6.3,SNR=7.8
0.7nm,0.3s
SONM Songino Array 45.63 324 P P 11 02 19.8 -1.2
0.7nm,0.8s,baz=149,slow=6.9,SNR=4.1
0.7nm,0.8s
MKAR Makanchi Array 60.45 316 P P 11 04 10.6 +0.4
1.2nm,0.8s,baz=90,slow=9.7,SNR=8.7
1.2nm,0.8s
ZALV Zalesovo Beam 60.52 324 P P 11 04 10.9 +0.4
0.5nm,0.6s,baz=116,slow=13,SNR=3.8
0.5nm,0.6s
KURBB Kurchatov Arra 63.56 319 P P 11 04 30.9 0.0
3.5nm,1.0s,baz=100,slow=6.9,SNR=14
3.5nm,1.0s
BVAR Borovoye Array 68.84 321 P P 11 05 05.0 +0.2
1.4nm,0.8s,baz=100,slow=6.2,SNR=3.8
1.4nm,0.8s

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*RSPR **02** 10:59:08.9, 18°.01N×66°.73W, h14km, MD3.2/6*
*NEIC **02** 10:59:08.9±1.8, 18°.05N±0°.03×66°.716W±0°.007, h10km±1km, ML2.9/35, Md3.2/6(RSPR), Error ellipse: s-maj=4.9km s-min=2.4km az=181.0*
*OSPL **02** 10:59:08.8±0.3, 18°.00N×66°.73W, h17km±2km, ML2.6, Presumed earthquake*
*SDD **02** 10:59:08.9±1.4, 17°.95N×66°.73W, h21km±16km, MD3.3, ML2.6, MW2.9, Presumed earthquake*

ISC 02 10:59:08.4±1.1, 18°.00N±0°.05×66°.72W±0°.02, h23km, n43, σ0s.95/69, 8C-10D, Puerto Rico region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OBIP Obispado Ponce 0.12 66 Pb 10 59 12.2 -0.7
OBIP Sb 10 59 14.8 -1.2
OBIP Obispado Ponce 0.12 66 ⇓*i*P Pb 10 59 12.4 -0.6
OBIP *e*S Sb 10 59 15.0 -1.0
OBIP Obispado Ponce 0.12 66 *i* P Pb 10 59 12.4 -0.6
OBIP *e*S Sb 10 59 14.9 -1.0
OBIP IAML 10 59 15.6
comp=Z,24μm,0.2s
OBIP IAML 10 59 15.8
comp=Z,941nm,0.1s
CELP Cerrillos 0.15 59 Pb 10 59 12.7 -0.7
CELP Sg Sb 10 59 15.7 -0.9
CELP IAML 10 59 16.1
comp=Z,4μm,0.5s
CELP IAML 10 59 16.9
comp=Z,3μm,0.2s
GBPR Guanica, Bosqu 0.15 263 Pb 10 59 12.7 -0.7
GBPR Sb 10 59 15.8 -0.8
GBPR Guanica, Bosqu 0.15 263 ⇓*i*P Pb 10 59 12.7 -0.7
GBPR *e*S Sb 10 59 15.8 -0.8
UUPR Utuado, UPR, P 0.26 360 Pb 10 59 13.8 -0.8
UUPR Sg Sb 10 59 17.6 -1.3
MLPR Magueyes Islan 0.31 265 Pb 10 59 14.6 -0.9
MLPR IAML 10 59 20.6
comp=Z,2μm,0.2s
CRPR Cabo Rojo, PR 0.37 272 Sb 10 59 21.1 -0.9
CRPR Cabo Rojo, PR 0.37 272 Pb 10 59 15.6 -0.8
CRPR IAML 10 59 21.6
comp=Z,1μm,0.2s
CRPR IAML 10 59 22.3
comp=Z,1μm,0.3s
CRPR Cabo Rojo, PR 0.37 272 ⇑*e*Pg Pb 10 59 15.9 -0.5
CRPR ⇑*e*Sg Sb 10 59 21.0 -0.9
CRPR IAML 10 59 21.8
comp=N,1μm,0.2s
CRPR Cabo Rojo, PR 0.37 272 ⇑*i*P Pb 10 59 15.9 -0.5
CRPR *e*S Sb 10 59 21.1 -0.9
CRPR Cabo Rojo, PR 0.37 272 *i* P Pb 10 59 15.7 -0.8
CRPR *e*S Sb 10 59 20.6 -1.2
CRPR IAML 10 59 22.1
comp=Z,1μm,0.1s
LSP Las Mesas 0.39 297 Pb 10 59 16.2 -0.6
LSP Sb 10 59 22.4 -0.2
LSP Las Mesas 0.39 297 ⇑*i*P Pb 10 59 16.2 -0.6
LSP *e*S Sb 10 59 22.4 -0.2
PRSN Puerto Rico Se 0.46 299 Pb 10 59 17.2 -0.7
PRSN Sb 10 59 23.9 -0.5
PRSN Puerto Rico Se 0.46 299 IAML 10 59 26.9
comp=Z,3μm,0.3s
PRSN IAML 10 59 27.2
comp=Z,3μm,0.2s
PRSN Puerto Rico Se 0.46 299 ⇑*e*Pg Pb 10 59 16.9 -1.0
PRSN ⇓*e*Sg Sb 10 59 24.4 0.0
PRSN IAML 10 59 26.9
comp=N,2μm,0.2s
PRSN Puerto Rico Se 0.46 299 ⇓*i*P Pb 10 59 17.2 -0.7
PRSN *e*S Sb 10 59 23.9 -0.5
ECPR Experimental S 0.47 46 Pb 10 59 17.5 -0.5
ECPR IAML 10 59 24.9
comp=N,1μm,0.2s
ECPR IAML 10 59 27.6
comp=N,955nm,0.2s
ECPR Experimental S 0.47 46 ⇓*i*P Pb 10 59 17.7 -0.4
ECPR *e*S Sb 10 59 24.3 -0.2
SJG San Juan 0.55 78 Pb 10 59 18.9 -0.6
SJG IAML 10 59 29.3
comp=N,676nm,0.3s
SJG San Juan 0.55 78 *e*Pg Pb 10 59 19.2 -0.2
SJG ⇑*e*Sg Sb 10 59 27.5 +0.5
SJG San Juan 0.55 78 ⇓*i*P Pb 10 59 19.1 -0.4
SJG *e*S Sb 10 59 27.1 +0.1
SJG San Juan 0.55 78 *i* P Pb 10 59 19.0 -0.4
SJG IAML 10 59 28.4
comp=Z,394nm,0.3s
AGPR Aguadilla, PR 0.60 322 Pb 10 59 19.3 -1.0
AGPR Aguadilla, PR 0.60 322 ⇓*e*Pg Pb 10 59 19.7 -0.6
AGPR ⇑*e*Sg Sb 10 59 28.6 +0.3
AGPR IAML 10 59 36.1
comp=N,303nm,0.3s
AGPR Aguadilla, PR 0.60 322 ⇑*i*P Pb 10 59 19.6 -0.6
AGPR *e*S Sb 10 59 27.5 -0.8
AGPR Aguadilla, PR 0.60 322 *i* P Pb 10 59 19.5 -0.8
AGPR *e*S Sb 10 59 27.3 -1.0
AGPR IAML 10 59 29.2
comp=Z,200nm,0.1s
PDPR Patillas Dam, 0.66 88 Pb 10 59 20.8 -0.5
GCPR Guaynabo City 0.68 63 Pb 10 59 21.2 -0.4
GCPR Sb 10 59 29.6 -1.0
GCPR Guaynabo City 0.68 63 IAML 10 59 30.9
comp=N,130nm,0.2s
GCPR IAML 10 59 30.9
comp=E,110nm,0.2s
GCPR Guaynabo City 0.68 63 ⇓*i*P Pb 10 59 21.2 -0.4
GCPR *e*S Sb 10 59 29.6 -1.0
IDE Isla Desecheo 0.82 299 Pb 10 59 23.1 -0.9
IDE Sb 10 59 33.4 -1.1
IDE Isla Desecheo 0.82 299 ⇑*i*P Pb 10 59 23.1 -0.9
IDE *e*S Sb 10 59 33.4 -1.1
HUMP Col San Antoni 0.84 80 Sb 10 59 35.2 0.0
HUMP Col San Antoni 0.84 80 Pb 10 59 23.5 -0.8
HUMP IAML 10 59 36.2
comp=E,362nm,0.2s
HUMP IAML 10 59 36.6
comp=E,358nm,0.3s
HUMP Col San Antoni 0.84 80 ⇓*e*P Pb 10 59 23.7 -0.6
HUMP *e*S Sb 10 59 35.2 0.0
CUPR Culebra, Puert 1.40 77 Pn 10 59 32.2 -0.4
HIDR Higuey Centro 1.99 288 ⇑*e*Pg Pn 10 59 41.2 +0.5
HIDR ⇑*e*Sg Sb 11 00 08.1 -0.2
HIDR IAML 11 00 38.4
comp=N,52nm,0.1s
MIDR Miches 2.42 294 *e*Pg Pn 10 59 49.6 +3.0
MIDR IAML 11 00 26.1
comp=N,18nm,1.2s
DR12 Loma Pena Alta 2.65 288 Pn Pn 10 59 51.5 +1.7
HATOM Hato Mayor del 2.65 288 ⇑*e*Pg Pn 10 59 53.0 +3.2
HATOM ⇓*e*Sg Sb 11 00 25.6 -1.7
HATOM IAML 11 00 35.8
comp=N,34nm,2.6s

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*IDC **02** 11:00:12.8±0.6, 31°.89S×57°.53E, h0km, mb4.2/16, mbtmp4.2/16, MS3.6/14, Error ellipse: s-maj=21.1km s-min=18.1km az=35.0*
*NEIC **02** 11:00:14.4±1.8, 31°.9S±0°.1×57°.6E±0°.1, h10km±1km, mb4.7/14, Error ellipse: s-maj=19.3km s-min=18.2km az=228.0*

ISC 02 11:00:14.5±0.6, 31°.9S±0°.1×57°.5E±0°.1, h11km, n64, σ0s.69/42, mb4.5/20, MS3.7/14, Southwest Indian Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FOMA Nahampoana Res 11.55 304 Pn Pn 11 02 59.2 -0.1
VOI Vohitsoka 13.79 313 Pn Pn 11 03 29.5 -0.6
H04N2 CROZET ISLANDS 14.94 196 T T 11 19 05.9
baz=20,slow=75,SNR=89
H04N1 CROZET ISLANDS 14.94 196 T T 11 19 02.9
baz=20,slow=75,SNR=86
H04N3 CROZET ISLANDS 14.95 196 T T 11 19 08.6
baz=20,slow=75,SNR=90
H08S1 Diego Carcia H 27.84 33 T T 11 35 13.1
baz=207,slow=76,SNR=10
H08S2 Diego Garcia H 27.85 33 T T 11 35 21.4
baz=207,slow=76,SNR=5.7
H08S3 Diego Garcia H 27.86 33 T T 11 35 21.1
baz=207,slow=76,SNR=17
BOSA Boshof 28.01 268 P P 11 06 05.0 -0.7
2.3nm,0.8s,baz=123,slow=7.8,SNR=4.5
BOSA LR LR 11 14 49.2
comp=Z,71nm,20.6s,baz=38,slow=31
2.3nm,0.8s
BOSA Boshof 28.01 268 P P 11 06 04.5 -1.2
BOSA IAmb IAmb 11 06 38.6
comp=Z,11nm,1.4s
SUR Sutherland 31.00 259 LR LR 11 17 08.5
comp=Z,35nm,19.7s,baz=28,slow=33
SUR Sutherland 31.00 259 P P 11 06 33.3 +1.0
SUR IAmb IAmb 11 06 35.0
comp=Z,24nm,1.4s
LSZ Lusaka 31.42 295 LR LR 11 17 45.8
comp=Z,81nm,20.4s,baz=140,slow=34
MAW Mawson 35.90 177 LR LR 11 17 45.9
comp=Z,135nm,21.1s,baz=302,slow=29
TSUM Tsumeb 37.98 280 LR LR 11 21 48.6
comp=Z,58nm,19.6s,baz=335,slow=34
MBAR Mbarara 40.10 316 LR LR 11 23 27.1
comp=Z,101nm,19.5s,baz=171,slow=35
FURI Furi 44.37 333 LR LR 11 23 38.9
comp=Z,48nm,19.2s,baz=166,slow=32
H01W2 Cape Leeuwin H 46.83 110 T T 11 58 41.7
baz=256,slow=75,SNR=34
H01W3 Cape Leeuwin H 46.83 110 T T 11 58 41.6
baz=256,slow=75,SNR=33
H01W1 Cape Leeuwin H 46.85 110 T T 11 58 42.5
baz=256,slow=75,SNR=26
SNAA Sanae 50.83 201 P P 11 09 15.1 +0.4
comp=Z,3.5nm,0.8s,baz=240,slow=15,SNR=2.3
comp=Z,3.5nm,0.8s
SNAA Sanae 50.83 201 P P 11 09 14.1 -0.6
SNAA IAmb IAmb 11 09 20.5
comp=Z,7.4nm,1.1s
QSPA South Pole Qui 58.29 180 P P 11 10 09.6 +0.6
comp=Z,5.9nm,0.7s,baz=241,slow=2.1,SNR=6.1
comp=Z,5.9nm,0.7s
QSPA South Pole Qui 58.29 180 P 11 10 08.9 -0.2
VNDA Vanda 62.15 166 LR LR 11 35 37.6
comp=Z,76nm,19.4s,baz=256,slow=34

FITZ Fitzroy Crossi 62.36 95 P P 11 10 37.2 -0.3
comp=Z,5.8nm,1.0s,baz=209,slow=11,SNR=3.8
comp=Z,5.8nm,1.0s
CMAR Chiang Mai Arr 63.88 44 P P 11 10 48.0 +0.5
comp=Z,2.2nm,0.7s,baz=230,slow=7.3,SNR=20
comp=Z,2.2nm,0.7s
CMAR Chiang Mai Arr 63.88 44 P P 11 10 46.9 -0.6
SHL Shillong 65.87 34 P 11 11 00.4 0.0
ASAR Alice Springs 66.83 104 P P 11 11 06.5 -0.1
comp=Z,2.3nm,0.7s,baz=236,slow=6.1,SNR=24
comp=Z,2.3nm,0.7s
ASAR Alice Springs 66.83 104 P P 11 11 06.1 -0.6
AS31 Alice Springs 66.83 104 P P 11 11 05.6 -1.1
WRA Warramunga Arr 68.85 101 P P 11 11 19.5 +0.1
comp=Z,1.6nm,0.6s,baz=240,slow=5.5,SNR=14
comp=Z,1.6nm,0.6s
WRA Warramunga Arr 68.85 101 P P 11 11 19.0 -0.4
STKA Stephens Creek 69.45 115 P P 11 11 23.1 +0.1
comp=Z,2.8nm,0.8s,baz=103,slow=5.6,SNR=3.7
comp=Z,2.8nm,0.8s
TORD Torodi Ar. Bea 69.72 301 P P 11 11 25.2 +0.5
comp=Z,1.6nm,0.8s,baz=171,slow=3.9,SNR=9.2
TORD LR LR 11 42 44.8
comp=Z,48nm,18.1s,baz=110,slow=37
comp=Z,1.6nm,0.8s
TORD Torodi Ar. Bea 69.72 301 P P 11 11 25.4 +0.7
MANEM Manem 70.32 12 P P 11 11 28.3 +0.1
DBIC Dimbokro 70.66 291 LR LR 11 39 09.1
comp=Z,23nm,21.9s,baz=87,slow=33
BRTR Keskin Array B 74.61 341 P P 11 11 53.8 +0.1
comp=Z,0.7nm,0.9s,baz=108,slow=2.9,SNR=4.0
comp=Z,0.7nm,0.9s
BRTR Keskin Array B 74.61 341 P P 11 11 53.5 -0.2
KK31 Karatay Array 75.56 10 P 11 11 60.0 +1.1
KK31 IAmb IAmb 11 12 08.4
comp=Z,9.4nm,1.1s
KKAR Karatay Array 75.56 10 P 11 11 59.8 +0.9
AAK Ala-Archa 75.77 13 P 11 12 02.0 +1.7
AAK IAmb IAmb 11 12 09.8
comp=Z,7.9nm,1.2s
KEST Kesra 81.03 322 LR LR 11 50 39.3
comp=Z,63nm,18.0s,baz=260,slow=37
MAKZ Makanchi 81.37 17 P 11 12 30.5 -0.4
MAKZ IAmb IAmb 11 12 43.0
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 81.44 17 P P 11 12 31.4 +0.2
comp=Z,1.9nm,0.8s,baz=208,slow=5.4,SNR=18
comp=Z,1.9nm,0.8s
MKAR Makanchi Array 81.44 17 P P 11 12 31.6 +0.4
KURBB Kurchatov Arra 84.22 13 P P 11 12 46.6 +1.1
comp=Z,3.2nm,0.9s,baz=206,slow=5.7,SNR=20
comp=Z,3.2nm,0.9s
KURK Kurchatov 84.32 13 P 11 12 46.3 +0.3
BELG Belogornoye 84.36 354 LR LR 11 51 03.9
comp=Z,122nm,20.9s,baz=128,slow=36
BVAR Borovoye Array 85.29 8 P P 11 12 51.9 +1.0
comp=Z,2.8nm,0.9s,baz=166,slow=6.9,SNR=10.0
comp=Z,2.8nm,0.9s
BORK Borovoye 85.30 8 P 11 12 51.2 +0.3
BORK IAmb IAmb 11 13 01.2
comp=Z,7.7nm,0.9s
AKASG Malin Array Be 85.94 342 P P 11 12 54.5 +0.3
comp=Z,0.2nm,0.3s,baz=156,slow=3.3,SNR=4.4
comp=Z,0.2nm,0.3s
MDT Midelt 87.05 312 LR LR 11 53 08.3
comp=Z,50nm,18.1s,baz=82,slow=36
ZALV Zalesovo Beam 88.68 16 P P 11 13 05.8 -1.5
comp=Z,0.7nm,0.7s,baz=242,slow=3.2,SNR=4.4
comp=Z,0.7nm,0.7s
ZALV Zalesovo Beam 88.68 16 P 11 13 06.8 -0.5
URZ Urewera 90.38 137 LR LR 11 47 36.4
comp=Z,50nm,18.8s,baz=154,slow=32
SONM Songino Array 90.65 30 P P 11 13 17.2 +0.3
comp=Z,0.6nm,0.8s,baz=193,slow=6.1,SNR=4.2
comp=Z,0.6nm,0.8s
SONM Songino Array 90.65 30 P P 11 13 16.6 -0.3
SONM IAmb IAmb 11 13 25.4
comp=Z,3.4nm,1.3s
ILAR Eielson Array 143.79 17 PKP PKPbc 11 19 46.0 -0.5
comp=Z,0.7nm,0.9s,baz=319,slow=3.4,SNR=7.0
YKA Yellowknife Ar 148.96 353 PKPbc PKPbc 11 20 01.7 +0.1
comp=Z,2.6nm,0.8s,baz=351,slow=3.1,SNR=42
YKA Yellowknife Ar 148.96 353 PKPbc 11 20 01.1 -0.6
ULM Lac du Bonnet 153.04 321 PKPbc PKPbc 11 20 10.7 -1.0
comp=Z,2.6nm,0.8s,baz=3.5,slow=3.9,SNR=4.5

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*IDC **02** 11:03:14.2±1.6, 1˚56S×134˚07E, h0km, mb3.6/3, mbtmp3.7/6, ML3.8/3, Error ellipse: s-maj=30.2km s-min=18.9km az=47.0*
*DJA **02** 11:03:16.5±0.2, 1˚S±2˚×13˚4E±˚, h10km, M3.9/8, MLv3.9/8*
ISC 02 11:03:17.0±1.3, **1˚51S**±0˚04×**134˚02E**±0˚04, **h18**km±4km, **n14**, σ1§**06**/21, **mb3.7**/3, **Irian Jaya region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RKPI Ransiki, Papua 0.16 92 P Pb 11 03 20.9 +0.2
RKPI S Sg 11 03 24.6 +0.2
MWPI Manokwari, Pap 0.57 2 P Pb 11 03 27.8 -0.7
MWPI S Sb 11 03 36.3 +0.1
BAKI Biak 2.11 82 P Pn 11 03 52.6 +1.2
BAKI S Sb 11 04 19.2 -1.5
KMPI Kaimana, Papua 2.16 188 P Pn 11 03 53.0 +0.9
KMPI S Sb 11 04 21.1 -1.1
SRPI Serui, Papua 2.25 99 P Pn 11 03 54.2 +0.9
SRPI S Sb 11 04 22.9 -1.8
FAKI Fak Fak 2.26 232 P Pn 11 03 54.2 +0.8
FAKI S Sn 11 04 22.5 +1.7
SIJI Sorong 2.82 283 Pn Pn 11 04 01.1 -0.2
8.4nm,0.3s,baz=172,slow=23,SNR=49
SIJI Lg Lg 11 04 46.5
66nm,0.3s,baz=198,slow=22,SNR=15
19nm,0.3s
SIJI Sorong 2.82 283 P Pn 11 04 00.8 -0.4
SWI Sorong 2.83 283 P Pn 11 04 01.9 +0.6
SWI S Sn 11 04 36.3 +1.3
WRA Warramunga Arr 18.33 179 P Pn 11 07 30.0 -0.4
0.2nm,0.3s,baz=360,slow=12,SNR=17
0.7nm,0.4s
FITZ Fitzroy Crossi 18.43 206 P P 11 07 30.1 -1.4
0.4nm,0.3s,baz=32,slow=12,SNR=8.5
1.6nm,0.5s
ASAR Alice Springs 22.03 180 P P 11 08 10.2 -0.5
1.6nm,0.7s,baz=354,slow=8.9,SNR=26
1.6nm,0.7s
MKAR Makanchi Array 66.02 324 P P 11 14 03.7 +1.2
0.4nm,0.6s,baz=111,slow=8.0,SNR=4.0
0.4nm,0.6s
KURBB Kurchatov Arra 70.08 326 P P 11 14 27.9 -0.1
0.5nm,0.8s,baz=116,slow=6.1,SNR=3.3
0.5nm,0.8s

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*IDC **02** 11:11:16.0±0.7, 28˚81N×129˚96E, h0km, mb3.9/17, mbtmp3.9/21, ML3.5/4, MS3.7/28, Error ellipse: s-maj=18.2km s-min=15.6km az=93.0*
*BJI **02** 11:11:18.2, 28˚54N×130˚29E, h33km, mB4.7/12, mb4.1/45, Ms4.1/33, Ms7 4.0/34*
*NEIC **02** 11:11:19.3±2.0, 28˚73N±0˚04×130˚07E±0˚07, h18km±4km, mb4.7/30, Error ellipse: s-maj=8.8km s-min=6.5km az=83.0*
*JMA **02** 11:11:21.0±0.2, 28˚8N±0˚6×13˚0E±˚, h26km, MD4.5/27, MV4.4/27, NEAR AMAMI-OSHIMA ISLAND*
JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.
*NIED **02** 11:11:21.0, 28˚83N×129˚92E, h26km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.82; $M_{\theta\theta}$4.00; $M_{\phi\phi}$-1.18; $M_{r\theta}$-1.18; $M_{\theta\phi}$-1.76; $M_{\phi r}$5.93; Fault plane solution: $M_0$7.04000×10^{15} NP1: ϕ_s261.00000°, δ32.00000°, λ-156.00000°. NP2: ϕ_s150.00000°, δ78.00000°, λ-61.00000°.*
ISC 02 11:11:19.1±0.7, **28˚76N**±0˚03×**130˚12E**±0˚04, **h18**km±3km, **n145**, σ1§**44**/131, **mb4.2**/38, **MS3.8**/28, **2C-2D, Ryukyu Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JZK Kikaishima 0.46 196 P Pb 11 11 31.3 +2.5
JZK A A 11 11 31.3
comp=N,312nm,0.9s,comp=E,185nm,0.7s
JAM Amami Oshima 0.57 233 P Pg 11 11 30.7 +0.2
JAM A A 11 11 30.7
comp=N,56nm,2.3s,comp=E,31nm,0.7s
JAM eS Sg 11 11 37.2 -1.0
JTAJ Takarajima 0.89 296 i P Pg 11 11 35.3 -1.3
JAMN Amaminishikomi 0.98 238 P Pb 11 11 37.2 -0.3
JAMN A A 11 11 37.2
comp=N,43nm,0.7s,comp=E,33nm,0.7s
JAMN eS Sb 11 11 49.6 -0.5
JNN Nakanoshima 1.10 349 P Pn 11 11 39.3 -0.4
JNN A A 11 11 39.3
comp=N,16nm,1.1s,comp=E,15nm,1.0s
JTK Tokunoshima 1.42 227 P Pn 11 11 44.1 +0.1
JTK A A 11 11 44.1
comp=N,13nm,1.6s,comp=E,16nm,1.9s
JYAK Yakushimahirau 1.51 13 P Pb 11 11 46.1 -0.5
JYAK eS Sn 11 12 04.4 -0.1
JKC Kuchinoerabu 1.70 2 P Pn 11 11 48.2 +0.4
JMTN Minamitane 1.77 22 P Pb 11 11 50.0 -1.0
JMTN A A 11 11 50.0
comp=N,13nm,3.2s,comp=E,9.0nm,2.4s
JOKE Okinoerabujima 1.95 225 P Pn 11 11 52.1 +0.7
JTN Tanegashima 3 2.03 21 P Pn 11 11 53.8 +1.3
JTN A A 11 11 53.8
comp=N,7.0nm,3.0s,comp=E,4.0nm,4.8s
JYRO Yoronjima 2.27 221 P Pn 11 11 56.4 +0.6
JYRO S Sn 11 12 22.3 -1.1
JOW Kunigami 2.52 221 Pn Pn 11 11 59.4 +0.1
comp=E,74nm,0.3s,baz=91,slow=15,SNR=183
JOW Sn Sn 11 12 32.1 +2.6
comp=E,149nm,0.3s,baz=154,slow=26,SNR=13
comp=E,366nm,0.5s
JOW Kunigami 2.52 221 Pn 11 11 59.0 -0.3
JOW Kunigami 2.52 221 P Pn 11 11 59.6 +0.4
JOW Kunigami 2.52 221 P Pn 11 11 59.3 +0.1
JOW A A 11 11 59.3
comp=N,6.0nm,2.6s,comp=E,7.0nm,2.5s
JIH Iheya 2.57 228 i P Pn 11 12 00.0 +0.2
JIH A A 11 12 00.0
comp=N,7.0nm,2.0s,comp=E,6.0nm,1.9s
JSU Suzuyama 2.75 6 Pn 11 12 03.0 +0.6
JSU Suzuyama 2.75 6 P Pn 11 12 03.8 +1.4
JNTH Nagotoyohara 2.91 220 P Pn 11 12 04.7 +0.2
JNTH S Sn 11 12 35.6 -3.4
JKDJ Kitadaitoujima 2.99 159 eP Pn 11 12 05.1 -0.5
JKDJ eS Sn 11 12 37.5 -3.5
JMZ Minamidaito 2 3.09 161 Pn 11 12 06.4 -0.7
JMZ Minamidaito 2 3.09 161 P Pn 11 12 07.7 +0.7
JMZ Minamidaito 2 3.09 161 P Pn 11 12 08.2 +1.1
JMZ eS Sn 11 12 40.8 -2.7
JJT3 Tamagusuku3 3.33 219 eP Pn 11 12 10.9 +0.6
JJT3 A A 11 12 10.9
comp=N,13nm,1.4s,comp=E,12nm,4.7s
JJT3 eS Sn 11 12 48.4 -1.1
JAGN Aguni-jima 3.35 230 P Pn 11 12 11.0 +0.4
JKE Kume jima 2 3.83 231 P Pn 11 12 17.3 +0.1
JNU Nakatsue 4.39 8 Pn Pn 11 12 26.7 +1.7
comp=E,5.3nm,0.3s,baz=205,slow=9.8,SNR=58
JTU Tsushima 5.78 354 P Pn 11 12 47.0 +3.0
JMJ Miyako jima 2 5.83 229 P Pn 11 12 44.6 -0.2
JMN Monobe 5.91 32 Pn 11 12 46.3 +0.6
JMN Monobe 5.91 32 P Pn 11 12 46.2 +0.4
YOJ Yonaguni jima 7.67 238 Pn 11 13 08.9 -1.0
YOJ Yonaguni jima 7.67 238 P Pn 11 13 09.4 -0.5
INU Inuyama 8.79 40 Pn 11 13 27.1 +1.7
INU Inuyama 8.79 40 P Pn 11 13 28.1 +2.7
YHNB Yeheng 8.81 244 Pn 11 13 26.4 +0.6
KSRS Korea Array 8.86 349 Pn Pn 11 13 25.9 -0.3
comp=E,0.2nm,0.3s,baz=163,slow=14,SNR=6.2
KSRS LR LR 11 17 09.5
comp=E,341nm,18.6s,baz=155,slow=40
comp=E,0.6nm,0.7s
NACB Ninganchiao 8.90 241 Pn 11 13 27.4 +0.6
NACB Ninganchiao 8.90 241 P Pn 11 13 27.6 +0.8
JGF Kuroka 9.17 40 Pn Pn 11 13 31.7 +1.2
JHJ Hachijo jima 2 9.37 60 LR LR 11 16 47.5
comp=E,692nm,21.4s,baz=280,slow=35
YULB Yu-li 9.56 238 Pn 11 13 31.6 -4.4
SSLB Suanglung 9.60 241 Pn 11 13 35.0 -1.5
TWG Pinlang 10.07 236 Pn Pn 11 13 38.2 -4.7
TPUB Ta-pu 10.12 240 Pn 11 13 41.2 -2.3
NJ2 Nanjing 10.26 291 eP Pn 11 13 45.8 +0.3
NJ2 pmax pmax
comp=E,4.0nm,0.5s
NJ2 LR LR
comp=E,410nm,15.4s
NJ2 LR LR
comp=E,890nm,16.4s
NJ2 LR LR
comp=E,810nm,15.0s
MAJO Matsushiro 10.32 39 Pn Pn 11 13 46.5 +0.1
MJAR Matsushiro Arr 10.32 39 Pn Pn 11 13 47.5 +1.1
comp=E,0.1nm,0.3s,baz=218,slow=14,SNR=5.5
MJAR LR LR 11 18 02.6
comp=E,248nm,19.4s,baz=214,slow=39
comp=E,0.5nm,0.4s
MJAR Matsushiro Arr 10.32 39 Pn Pn 11 13 46.5 +0.1
MJB9 Matsu-Tunnel 10.32 39 Pn Pn 11 13 48.1 +1.7
JCJ Chichijima 10.80 96 LR LR 11 17 16.9
comp=E,368nm,21.8s,baz=273,slow=33
KNMB Chin-men Tao 11.33 251 Pn Pn 11 14 03.1 +2.9
WHN Wuhan 13.83 281 P Pn 11 14 31.7 -2.6
WHN sP P 11 14 37.6 -5.0
WHN LR LR
comp=N,540nm,9.5s
WHN LR LR
comp=E,1µm,14.2s
WHN LR LR
comp=Z,1µm,15.0s
HNS HongShan 15.51 308 ⇑P P 11 15 03.2 +2.0
HNS sP sP 11 15 09.8 +1.7
HNS pmax pmax
comp=Z,12nm,1.4s
HNS LR LR
comp=Z,280nm,15.5s
HNS LR LR
comp=Z,310nm,18.8s
HNS LR LR
comp=Z,370nm,18.1s
BJI2 Beijing 16.06 318 P P 11 15 07.2 -0.1
BJI2 pP pP 11 15 10.9 -1.2
BJI2 sP sP 11 15 14.3 +0.1
BJI2 S Sn 11 18 05.0 +3.3
BJI2 pmax pmax
comp=Z,2.0nm,0.9s
BJI2 LR LR
comp=Z,140nm,13.8s
BJI2 LR LR
comp=Z,110nm,12.9s
BJI2 LR LR
comp=Z,210nm,13.7s
LYN LuoYang 16.09 295 P P 11 15 07.8 +0.1
LYN pP pP 11 15 11.2 -1.5
LYN sS S 11 18 14.0 -1.8
LYN pmax pmax
comp=Z,13nm,1.1s
LYN pmax pmax
comp=Z,280nm,5.6s
LYN LR LR
comp=Z,380nm,14.1s
LYN LR LR
comp=Z,350nm,15.1s
LYN LR LR
comp=Z,790nm,16.5s
BNX BinXian 17.08 354 ⇓P P 11 15 19.0 +0.4
BNX pmax pmax
comp=Z,3.0nm,1.2s
ASAJ Asahikawa 18.29 30 P P 11 15 33.1 +1.2
comp=Z,0.3nm,0.3s,baz=209,slow=11,SNR=4.9
ASAJ LR LR 11 22 53.5
comp=Z,277nm,19.8s,baz=120,slow=38
comp=Z,7.6nm,0.9s
JKA Kamikawa-asahi 18.29 30 P Pn 11 15 31.9 0.0
XLT XiLinHaoTe 18.83 327 eP Pn 11 15 40.8 +2.2
XLT pmax pmax
comp=Z,6.0nm,0.9s
XLT LR LR
comp=Z,27nm,16.8s
XLT LR LR
comp=Z,150nm,15.6s
XLT LR LR
comp=Z,270nm,11.3s
XAN Xi'an 18.84 292 ⇓P Pn 11 15 39.6 +0.9
XAN pmax pmax
comp=Z,13nm,0.7s
XAN LR LR
comp=Z,170nm,11.0s
XAN LR LR
comp=Z,310nm,13.4s
XAN LR LR
comp=Z,280nm,16.5s
GUMO Guam 20.39 135 LR LR 11 22 15.1
comp=Z,68nm,20.0s,baz=6.5,slow=32
BTO2 Baotou 20.43 311 eP Pn 11 15 57.7 0.0
BTO2 S Sn 11 19 48.2 +0.7
BTO2 pmax pmax
comp=Z,13nm,1.0s
BTO2 pmax pmax
comp=Z,340nm,5.2s
BTO2 LR LR
comp=Z,360nm,7.5s
BTO2 LR LR
comp=Z,420nm,5.2s
BTO2 LR LR
comp=Z,350nm,9.3s
QIZ Qiongzhong 20.89 247 P Pn 11 16 03.6 +0.5
QIZ LR LR
comp=Z,250nm,12.9s
QIZ LR LR
comp=Z,300nm,15.6s
QIZ LR LR
comp=Z,380nm,22.6s
GYA Guiyang 20.91 269 ⇑P Pn 11 16 04.4 +1.0
GYA pmax pmax
comp=Z,14nm,0.6s
DAV Davao City (W) 22.00 192 LR LR 11 26 06.4
comp=Z,216nm,18.6s,baz=332,slow=40
LZH Lanzhou 23.31 295 eP P 11 16 27.2 +0.9
LZH pP sP 11 16 32.6 -0.8
LZH pmax pmax
comp=Z,7.0nm,1.2s
LZH LR LR
comp=Z,260nm,13.4s
LZH LR LR
comp=Z,230nm,13.7s
LZH LR LR
comp=Z,330nm,14.1s
LZDM Lanzhou Array 23.40 295 P P 11 16 25.6 -1.9
comp=Z,1.8nm,0.5s,baz=140,slow=7.8,SNR=8.8
LZDM LR LR 11 26 24.2
comp=Z,158nm,20.1s,baz=175,slow=39
comp=Z,1.8nm,0.5s
KMI2 Kunming 24.64 268 P P 11 16 46.1 +7.0
KMI2 pmax pmax
comp=Z,9.0nm,0.9s
KMI2 LR LR
comp=N,270nm,15.5s
KMI2 LR LR
comp=E,270nm,18.3s
KMI2 LR LR
comp=Z,340nm,13.7s
PZH PanZhiHua 25.22 272 P P 11 16 44.7 +0.6
ULN Ulaanbaatar 26.13 323 P P 11 16 51.0 -1.2
SONM Songino Array 26.46 323 P P 11 16 53.9 -1.3
comp=Z,1.6nm,0.7s,baz=137,slow=10,SNR=13
SONM LR LR 11 28 15.3
comp=Z,201nm,19.8s,baz=127,slow=39
comp=Z,1.6nm,0.7s
SONM Songino Array 26.46 323 P P 11 16 55.1 0.0
GTA2 Gaotai 27.20 301 eP P 11 17 04.4 +2.5
GTA2 pmax pmax
comp=Z,4.0nm,1.1s
GTA2 LR LR
comp=Z,250nm,13.5s
GTA2 LR LR
comp=Z,410nm,16.7s
GTA2 LR LR
comp=Z,570nm,16.0s
CHTO Chiang Mai 30.12 258 P P 11 17 27.6 -0.4
CHTO IAmb IAmb 11 17 30.4
comp=Z,6.8nm,1.2s
CMAR Chiang Mai Arr 30.27 257 P P 11 17 27.6 -1.7
comp=Z,0.5nm,0.3s,baz=55,slow=6.9,SNR=7.5
CMAR LR LR 11 30 18.0
comp=Z,122nm,20.4s,baz=75,slow=38
comp=Z,0.5nm,0.3s
CMAR Chiang Mai Arr 30.27 257 P P 11 17 30.2 +0.8
PETK Petropavlovsk- 31.67 32 P P 11 17 42.3 +1.0
JAY Jayapura 32.72 160 LR LR 11 29 37.2
comp=Z,138nm,19.3s,baz=346,slow=34
YAK Yakutsk 33.27 360 LR LR 11 31 39.6
comp=Z,107nm,18.2s,baz=105,slow=37
MA2 Magadan 33.88 19 LR LR 11 33 32.3
comp=Z,107nm,18.1s,baz=155,slow=39
SHL Shillong 34.07 274 P P 11 18 03.5 +0.7
SHL IAmb IAmb 11 18 10.8
comp=Z,18nm,1.4s
H11N2 WAKE ISLAND Hy 34.60 97 T T 11 55 06.4
baz=290,slow=74,SNR=7.2
H11N1 WAKE ISLAND Hy 34.60 97 T T 11 55 00.5
baz=290,slow=74,SNR=8.7
H11N3 WAKE ISLAND Hy 34.62 97 T T 11 55 05.7
baz=290,slow=74,SNR=6.7
H11S3 WAKE ISLAND Hy 34.90 99 T T 11 55 38.1
baz=290,slow=75,SNR=10
H11S1 WAKE ISLAND Hy 34.91 99 T T 11 55 36.3
baz=290,slow=75,SNR=5.4
H11S2 WAKE ISLAND Hy 34.92 99 T T 11 55 34.6
baz=290,slow=75,SNR=6.1
KULM Kulim 36.39 236 P P 11 18 21.6 -1.0
KULM IAmb IAmb 11 18 47.1
comp=Z,20nm,1.3s
WMQ Urumqi 36.93 306 eP P 11 18 27.8 +0.7
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ LR LR
comp=Z,190nm,21.5s
MKAR Makanchi Array 41.17 309 P P 11 19 00.4 -2.1
comp=Z,0.6nm,0.6s,baz=96,slow=11,SNR=8.6
MKAR PcP PcP 11 21 01.2 -0.3
comp=Z,0.7nm,0.7s,baz=84,slow=2.7,SNR=5.4
MKAR LR LR 11 37 59.1
comp=Z,128nm,18.5s,baz=78,slow=39
comp=Z,0.6nm,0.6s
MKAR Makanchi Array 41.17 309 P P 11 19 01.0 -1.5
ZALV Zalesovo Beam 41.31 320 P P 11 19 02.5 -0.9
comp=Z,1.2nm,0.6s,baz=119,slow=9.9,SNR=4.8
comp=Z,1.2nm,0.6s
ZALV Zalesovo Beam 41.31 320 P P 11 19 02.0 -1.4
PMG Port Moresby 41.36 154 LR LR 11 34 02.8
comp=Z,128nm,20.8s,baz=329,slow=33
LEM Lembang 41.50 215 LR LR 11 35 57.8
comp=Z,46nm,21.7s,baz=6.0,slow=36
TARG Taragay, Kyrgy 44.01 302 P P 11 19 25.1 -1.0
KNRA Kununurra 44.20 182 P P 11 19 26.5 -0.7
KNRA IAmb IAmb 11 19 37.7
comp=Z,11nm,0.9s
KURBB Kurchatov Arra 44.24 314 P P 11 19 25.7 -1.6
comp=Z,0.5nm,0.5s,baz=98,slow=9.0,SNR=5.9
KURBB LR LR 11 39 30.1
comp=Z,216nm,19.4s,baz=174,slow=38
comp=Z,0.5nm,0.5s
KSH2 Kashi 45.82 298 P P 11 19 43.5 +3.3
KSH2 pmax pmax
comp=Z,1.0nm,1.0s
AAK Ala-Archa 46.46 303 LR LR 11 41 57.1
comp=Z,116nm,18.9s,baz=86,slow=40
WRA Warramunga Arr 48.59 175 P P 11 20 01.0 -0.7
comp=Z,1.3nm,0.8s,baz=350,slow=8.3,SNR=6.1
comp=Z,1.3nm,0.8s
WR8 Warramunga Arr 48.62 175 P P 11 20 00.9 -1.0
WR8 IAmb IAmb 11 20 14.3
comp=Z,11nm,1.3s
KKAR Karatay Array 49.37 304 P P 11 20 08.8 +1.2
BVAR Borovoye Array 49.55 317 P P 11 20 07.7 -1.1
comp=Z,1.4nm,0.7s,baz=94,slow=11,SNR=5.8
BVAR PcP PcP 11 21 30.4 0.0
comp=Z,1.8nm,0.6s,baz=90,slow=5.9,SNR=4.5
BVAR LR LR 11 42 50.3
comp=Z,132nm,21.3s,baz=97,slow=38
comp=Z,1.4nm,0.7s
BORK Borovoye 49.59 317 P P 11 20 09.7 +0.6
GAMB Gambell 50.62 29 P P 11 20 16.3 -0.3
PSA00 Pilbara Seismi 51.01 192 P P 11 20 19.9 -0.2
PSA00 IAmb IAmb 11 20 26.1
comp=Z,5.0nm,0.9s
PALK Pallekele 51.18 255 LR LR 11 43 10.9
comp=Z,128nm,20.9s,baz=60,slow=38
AS31 Alice Springs 52.25 176 P P 11 20 28.2 -1.1
ASAR Alice Springs 52.25 176 P P 11 20 29.6 +0.2
comp=Z,1.1nm,0.8s,baz=11,slow=13,SNR=19
ASAR LR LR 11 40 49.5
comp=Z,33nm,21.9s,baz=342,slow=34
comp=Z,1.1nm,0.8s
ASAR Alice Springs 52.25 176 P P 11 20 28.6 -0.7
AB31 Akbulak array 56.17 312 P P 11 20 56.5 -1.3
ABKAR Akbulak array 56.17 312 P P 11 20 56.0 -1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
M17K	Holitna River	56.83	33	P	P	11 21 03.5	+1.3
N17K	Nushagak Hills	56.96	34	P	P	11 21 03.6	+0.4
N17K				IAmb	IAmb	11 21 08.8	
	comp=Z,16nm,1.4s						
J20K	Nowinta River	58.33	30	P	P	11 21 13.1	+0.4
J20K				IAmb	IAmb	11 21 19.7	
	comp=Z,6.8nm,1.2s						
L22K	Petersville	59.93	32	P	P	11 21 23.9	0.0
L22K				IAmb	IAmb	11 21 25.2	
	comp=Z,7.1nm,0.9s						
SUA	Susitna One	60.04	33	P	P	11 21 24.3	-0.5
TRF	Thorofare Moun	60.07	31	P	P	11 21 26.6	+1.5
TRF				IAmb	IAmb	11 22 06.1	
	comp=Z,5.5nm,1.2s						
BRLK	Bradley Lake	60.15	35	P	P	11 21 26.4	+1.0
RND	Reindeer	60.72	31	P	P	11 21 28.9	-0.4
ILAR	Eielson Array	61.42	29	P	P	11 21 32.5	-1.5
	comp=Z,0.4nm,0.9s,baz=300,slow=8.2,SNR=4.6						
	comp=Z,0.4nm,0.9s						
DHY	Denali Highway	61.42	31	P	P	11 21 34.0	-0.3
DHY				IAmb	IAmb	11 22 11.0	
	comp=Z,8.9nm,1.4s						
SCRK	Sand Creek	62.79	30	P	P	11 21 42.8	-0.5
SCRK				IAmb	IAmb	11 22 11.8	
	comp=Z,6.3nm,1.2s						
DOT	Dot Lake	62.81	30	P	P	11 21 43.4	0.0
DOT				IAmb	IAmb	11 21 54.8	
	comp=Z,7.0nm,1.0s						
M26K	Nabesna, AK	63.52	31	P	P	11 21 48.4	+0.2
M26K				IAmb	IAmb	11 21 59.8	
	comp=Z,7.1nm,0.8s						
A36M	Sachs Harbour	67.30	19	P	P	11 22 12.7	+0.4
ARCES	ARCESS Array B	68.27	339	LR	LR	11 57 37.9	
	comp=Z,115nm,18.1s,baz=358,slow=41						
KBZ	Khabaz	68.86	309	P	P	11 22 21.4	-1.2
	comp=Z,2.9nm,0.8s,baz=201,slow=1.3,SNR=6.2						
	comp=Z,2.9nm,0.8s						
OBN	Obninsk	68.87	322	LR	LR	11 53 44.6	
	comp=Z,115nm,20.9s,baz=110,slow=37						
FINES	FINESS Array B	71.49	331	P	P	11 22 36.1	-2.3
	comp=Z,1.4nm,0.7s,baz=65,slow=6.1,SNR=10						
	comp=Z,1.4nm,0.7s						
RES	Resolute Bay	72.75	11	LR	LR	11 58 17.1	
	comp=Z,38nm,18.5s,baz=26,slow=39						
AKASG	Malin Array Be	74.70	320	P	P	11 22 56.4	-1.2
	comp=Z,0.8nm,0.5s,baz=59,slow=6.3,SNR=5.1						
	comp=Z,0.8nm,0.5s						
YKA	Yellowknife Ar	75.53	26	P	P	11 23 02.6	+0.4
	comp=Z,1.5nm,0.9s,baz=306,slow=6.3,SNR=14						
	comp=Z,1.5nm,0.9s						
RAO	Raoul Island	76.11	135	LR	LR	11 52 14.4	
	comp=Z,78nm,19.2s,baz=356,slow=32						
BRTR	Keskin Array B	76.80	308	P	P	11 23 09.0	-1.1
	comp=Z,1.4nm,0.8s,baz=96,slow=5.4,SNR=7.9						
	comp=Z,1.4nm,0.8s						
HFS	Hagfors	77.36	333	LR	LR	12 03 30.6	
	comp=Z,151nm,20.8s,baz=28,slow=41						
NOA	NORSAR Array B	77.78	334	LR	LR	12 02 13.2	
	comp=Z,38nm,18.6s,baz=350,slow=39						
ILON	Igloolik, Nuna	79.42	11	P	P	11 23 23.3	-0.5
ILON				IAmb	IAmb	11 23 34.4	
	comp=Z,6.0nm,1.0s						
J08A	Circle Bar Ran	84.62	43	P	P	11 23 52.2	+0.4
J08A				IAmb	IAmb	11 23 54.3	
	comp=Z,6.1nm,1.2s						
NVAR	Mina Array Bea	87.55	47	P	P	11 24 07.2	+0.7
	comp=Z,0.6nm,0.7s,baz=287,slow=4.6,SNR=5.7						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	90.15	39	P	P	11 24 18.6	-0.1
	comp=Z,0.6nm,0.8s,baz=337,slow=3.7,SNR=4.3						
	comp=Z,0.6nm,0.8s						
PFO	Pinyon Flats O	91.58	50	LR	LR	11 57 12.0	
	comp=Z,38nm,21.9s,baz=280,slow=30						

*IDC **02** 11:31:00.8±0.7, 18°.32N×81°.83W, h0km, mb3.9/12, mbtmp3.9/15, ML3.0/2, MS3.1/6, Error ellipse: s-maj=23.8km s-min=15.4km az=56.0*

*NEIC **02** 11:31:02.1±1.3, 18°.30N±0°.06×81°.73W±0°.07, h10km±1km, mb4.1/13, Error ellipse: s-maj=12.3km s-min=9.6km az=47.0*

*JSN **02** 11:31:02.6±2.4, 18°.23N×81°.76W, h15km±999km, MW4.4, Presumed earthquake*

*SSNC **02** 11:31:07.4±5.8, 18°.59N×81°.40W, h120km±47km, MB4.9, MD3.9, ML3.8, Presumed earthquake*

ISC 02 11:31:02.6±0.5, **18°.39N**±0°.05×**81°.62W**±0°.05, **h14**km, **n63**, σ**2s21**/72, **mb4.1**/16, **1D**, **North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	1.93	49	eP	Pn	11 31 34.7	-0.4
LCCY				e		11 31 34.7	
	baz=198,slow=18						
LCCY				eS	Sn	11 31 57.6	-1.6
LCCY				IAML		11 32 03.5	
	comp=E,350nm,0.4s						
LCCY				IAML		11 32 06.5	
	comp=N,348nm,0.6s						
CBCY	The Bluff, Cay	2.21	52	eP	Pn	11 31 38.2	-0.8
CBCY				eS	Sn	11 32 03.9	-2.2
CBCY				IAML		11 32 05.0	
	comp=E,240nm,0.5s						
CBCY				IAML		11 32 06.2	
	comp=N,325nm,0.5s						
MTDJ	Mount Denham	3.88	92		Pn	11 32 02.1	+0.1
MTDJ	Mount Denham	3.88	92	eP	Pn	11 32 02.3	+0.2
MTDJ				eS	Sn	11 32 46.8	-0.8
MTDJ				IAML		11 32 52.4	
	comp=N,200nm,0.7s						
MTDJ				IAML		11 32 52.5	
	comp=N,166nm,0.3s						
MGV	Manicaragua	4.01	22	eP	Pn	11 32 03.0	-0.7
MGV				eS	Sn	11 32 48.7	-1.7
MGV				IAML		11 32 52.0	
	comp=N,156nm,0.5s						
MGV				IAML		11 32 52.1	
	comp=E,258nm,0.2s						
SOR	Soroa	4.57	344	Pn	Pn	11 32 12.0	+0.6
SOR	Soroa	4.57	344	eP	Pn	11 32 11.8	+0.5
SOR				eS	Sn	11 33 02.4	-1.9
SOR				eS	Sb	11 33 02.5	-15
SOR				IAML		11 33 05.4	
	comp=E,40nm,0.8s						
SOR				IAML		11 33 07.7	
	comp=N,43nm,0.8s						
CCCC	Cccc	4.58	52	eP	Pn	11 32 16.3	+4.8
CCCC				eS	Sn	11 33 08.0	+3.4
CCCC				IAML		11 33 17.9	
	comp=N,16nm,1.0s						
CCCC				IAML		11 33 19.6	
	comp=E,16nm,0.4s						
STH	Stony Hill	4.58	93⇓	iP	Pn	11 32 12.3	+0.7
BILN	Bilwi Airport	4.63	202	Pn	Pn	11 32 10.2	-2.0
HOJ	Hope	4.65	94	i P	Pn	11 32 14.1	+1.7
CAMR	Camarioca	4.65	3	Pn	Pn	11 32 14.1	+1.5
CAMR	Camarioca	4.65	3	eP	Pn	11 32 13.7	+1.2
LMGC	Las Mercedes	4.67	68	eP	Pn	11 32 12.5	-0.2
LMGC				eS	Sn	11 33 04.6	-2.1
LMGC				IAML		11 33 10.4	
	comp=E,28nm,0.3s						
LMGC				IAML		11 33 11.4	
	comp=N,14nm,0.7s						
CHIV	Chivirico	5.17	71	Pn	Pn	11 32 19.5	-0.1
MARVS	Santiago de Cu	5.64	73	eP	Pn	11 32 26.6	+0.6
MARVS				eS	Sn	11 33 24.5	-6.1
MARVS				IAML		11 33 37.9	
	comp=N,15nm,1.5s						
MARVS				IAML		11 33 41.7	
	comp=E,15nm,1.0s						
HLGC	Holguin	5.80	64	eP	Pn	11 32 32.2	+3.9
RCC	Rio Carpintero	5.82	73	eP	Pn	11 32 28.8	+0.1
RCC				eS	Sn	11 33 28.1	-7.1
RCC				IAML		11 33 33.3	
	comp=E,13nm,2.6s						
RCC				IAML		11 33 44.7	
	comp=N,9.7nm,0.6s						
PINC	Pinares de May	5.88	68	eP	Pn	11 32 31.4	+2.0
GTBY	Guantanamo Bay	6.34	75	eP	Pn	11 32 36.0	+0.3
GTBY				eS	Sn	11 33 42.8	-5.2
GTBY				IAML		11 33 48.4	
	comp=N,29nm,1.5s						
GTBY				IAML		11 33 55.5	
	comp=N,23nm,0.9s						
TEIG	Tepich	6.54	287		Pn	11 32 34.6	-4.0
NMDO	Nuevo Mundo	6.62	70	Pn	Pn	11 32 42.3	+2.7
QMBU	Quimbuelo	6.68	73	eP	Pn	11 32 40.6	+0.2
QMBU				eS	Sn	11 33 52.1	-4.2
QMBU				IAML		11 33 57.1	
	comp=N,10nm,1.4s						
QMBU				IAML		11 33 59.0	
	comp=E,9.8nm,1.1s						
061Z	Ochoppi	7.47	5	Pn	Pn	11 32 51.9	+0.7
061Z	Ochoppi	7.47	5	eP	Pn	11 32 51.9	+0.7
061Z				eS	Sn	11 34 09.9	-5.8
CNGN	Cerro Negro	7.63	221	Pn	Pn	11 32 53.0	-0.6
060A	Indiantown	8.68	7	Pn	Pn	11 33 09.0	+1.2
DWPF	Disney Wildern	9.68	1	Pn	Pn	11 33 21.9	+0.4
CMIG	Matias Romero	12.70	266	LR	LR	11 38 47.4	
	comp=E,71nm,19.3s,baz=50,slow=37						
SDV	Santo Domingo	14.25	130	Pn	Pn	11 34 23.6	-0.7
	comp=E,0.1nm,0.3s,baz=15,slow=6.3,SNR=4.4						
SDV				LR	LR	11 40 13.1	
	comp=E,82nm,20.6s,baz=321,slow=38						
	comp=E,2.4nm,0.7s						
SJG	San Juan	14.70	89	Pn	Pn	11 34 32.5	+2.2
	comp=E,14nm,0.3s,baz=253,slow=23,SNR=14						
SJG				LR	LR	11 39 35.0	
	comp=E,89nm,21.2s,baz=241,slow=34						
TKL	Tuckaleechee C	17.31	354	P	P	11 35 05.3	0.0
	comp=E,0.3nm,0.3s,baz=181,slow=5.6,SNR=5.7						
TKL				LR	LR	11 42 06.5	
	comp=E,54nm,18.1s,baz=165,slow=38						
	comp=E,1.4nm,0.4s						
R49A	Shelbyville	20.07	352	P	P	11 35 36.2	+0.6
WCI	Wyandotte Cave	20.18	349	P	P	11 35 37.9	+1.1
WCI				IAmb	IAmb	11 35 39.8	
	comp=Z,11nm,0.9s						
BRDY	Brady	20.30	313		P	11 35 38.2	0.0
DRIO	Del Rio	20.52	306	P	P	11 35 39.5	-1.1
DRIO				IAmb	IAmb	11 35 42.5	
	comp=Z,7.7nm,0.9s						
HHAR	Hobbs	20.88	331		P	11 35 44.5	+0.1
HHAR				IAmb	IAmb	11 35 55.2	
	comp=Z,8.7nm,1.2s						
SAND	Sanderson	21.92	306		P	11 35 54.6	-1.2
SAND				IAmb	IAmb	11 36 03.9	
	comp=Z,8.6nm,1.0s						
APMT	Aspermont	22.27	315	P	P	11 35 59.1	-0.3
APMT				IAmb	IAmb	11 36 01.7	
	comp=Z,7.8nm,0.9s						
TXAR	Lajitas Array	22.88	303	P	P	11 36 05.5	-0.5
	comp=Z,1.8nm,0.8s,baz=121,slow=8.8,SNR=18						
	comp=Z,1.8nm,0.8s						
TX31	Lajitas Ar. Si	22.88	303	P	P	11 36 04.2	-1.8
BOAV	Boa Vista	26.08	125	P	P	11 36 35.1	-1.0
BOAV				IAmb	IAmb	11 36 41.7	
	comp=Z,5.5nm,1.1s						
ANMO	Albuquerque	27.54	312	LR	LR	11 48 09.5	
	comp=Z,33nm,20.7s,baz=84,slow=38						
SDCO	Great Sand Dun	28.42	318	P	P	11 36 57.6	+0.3
MDP	Montagnes des	31.23	111	LR	LR	11 51 06.6	
	comp=Z,25nm,18.6s,baz=286,slow=38						
PD31	Pinedale Array	33.91	322	P	P	11 37 45.3	-0.2
PDAR	Pinedale Array	33.91	322	P	P	11 37 45.8	+0.3
	comp=Z,2.0nm,0.8s,baz=128,slow=11,SNR=19						
	comp=Z,2.0nm,0.8s						
MOOW	Moose Ponds	35.19	322	P	P	11 37 55.7	-0.9
BOZ	Bozeman (W)	36.81	324	P	P	11 38 10.4	+0.1
BOZ				IAmb	IAmb	11 38 12.8	
	comp=Z,3.4nm,1.0s						
LPAZ	La Paz	36.93	158	P	P	11 38 13.6	+1.5
	comp=Z,1.1nm,0.9s,baz=18,slow=3.2,SNR=2.6						
	comp=Z,1.1nm,0.9s						
NVAR	Mina Array Bea	37.61	310	P	P	11 38 17.6	+0.3
	comp=Z,0.3nm,0.7s,baz=80,slow=8.6,SNR=2.5						
	comp=Z,0.3nm,0.7s						
SCHQ	Schefferville	38.10	14	P	P	11 38 22.9	+1.9
	comp=Z,3.7nm,0.8s,baz=220,slow=10.0,SNR=5.4						
	comp=Z,3.7nm,0.8s						
BDFB	Brasilia	47.32	134	P	P	11 39 38.0	+1.6
	comp=Z,1.6nm,0.8s,baz=308,slow=12,SNR=3.7						
	comp=Z,1.6nm,0.8s						
YKA	Yellowknife Ar	49.64	341	P	P	11 39 52.4	-1.1
	comp=Z,0.6nm,0.9s,baz=138,slow=7.3,SNR=8.0						
	comp=Z,0.6nm,0.9s						
PLCA	Paso Flores	59.71	170	P	P	11 41 06.5	-0.4
	comp=Z,2.2nm,1.0s,baz=52,slow=9.7,SNR=5.2						
	comp=Z,2.2nm,1.0s						
ILAR	Eielson Array	63.02	334	P	P	11 41 29.0	0.0
	comp=Z,1.5nm,0.6s,baz=112,slow=4.6,SNR=45						
	comp=Z,1.5nm,0.6s						
EKA	Eskdalemuir Ar	68.54	37	P	P	11 42 05.9	+1.2
	comp=Z,0.7nm,0.6s,baz=264,slow=8.0,SNR=4.6						
	comp=Z,0.7nm,0.6s						
ESDC	Sonseca Array	69.14	54	P	P	11 42 11.4	+2.6
	comp=Z,0.7nm,0.7s,baz=283,slow=7.2,SNR=5.2						
	comp=Z,0.7nm,0.7s						
NOA	NORSAR Array B	75.46	30	P	P	11 42 47.2	+1.1
	comp=Z,1.5nm,0.9s,baz=283,slow=5.9,SNR=3.4						
	comp=Z,1.5nm,0.9s						
HHC	Hu-ho-hao-te	119.80	348	eP	PKPdf	11 49 48.5	-4.5
PZH	PanZhiHua	135.25	356	PKP	PKPdf	11 50 21.7	-1.1
WRA	Warramunga Arr	146.04	261	PKPbc	PKPdf	11 50 41.9	-0.3
	comp=Z,1.5nm,0.7s,baz=85,slow=3.7,SNR=11						
ASAR	Alice Springs	146.49	255	PKPbc	PKPdf	11 50 42.9	0.0
	comp=Z,1.2nm,0.7s,baz=101,slow=3.9,SNR=19						

*NOU **02** 11:34:32.1, 23°.67S×178°.89W, h548km, mb4.2/13, South of Fiji Islands*

*IDC **02** 11:34:50.1±3.3, 25°.18S×178°.75E, h566km±35km, mb3.3/6, mbtmp4.2/8, Error ellipse: s-maj=33.6km s-min=28.4km az=171.0*

*NEIC **02** 11:34:51.8±1.3, 24°.9S±0°.1×178°.7E±0°.1, h579km±8km, mb4.5/13, Error ellipse: s-maj=18.0km s-min=17.6km az=89.0*

ISC 02 11:34:51.5±0.6, **24°.90S**±0°.09×**178°.7E**±0°.1, **h579**km, **n86**, σ**1s72**/77, **mb4.3**/13, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.30	146	P	P	11 36 27.5	+2.0
GLKZ	Green Lake	5.30	146	P	P	11 36 25.2	-0.2
MSVF	Nonsavu	7.15	355	P	P	11 36 41.2	-1.1
MARNC	Mare, Loyalty	10.36	287	P	P	11 37 13.2	-0.4
MARNC	Mare, Loyalty	10.36	287	P	P	11 37 14.2	+0.7
PINNC	Pines Island,	10.53	280	P	P	11 37 15.6	+0.3
OUZ	Omahuta	11.18	202	P	P	11 37 22.3	+0.7
OUZ	Omahuta	11.18	202	P	P	11 37 22.3	+0.7
DZM	Mont Dzumac	11.56	282	P	P	11 37 26.2	+0.3
	2.5nm,0.4s,baz=122,slow=7.3,SNR=6.9						
DZM	Mont Dzumac	11.56	282	P	P	11 37 25.7	-0.2
DZM	Mont Dzumac	11.56	282	P	P	11 37 27.0	+1.1
WCZ	Waipu Caves	11.62	198	P	P	11 37 26.8	+0.7
GRZ	Great Barrier	11.64	193	P	P	11 37 26.5	+0.2
KUZ	Kuaotunu	12.07	191	P	P	11 37 30.5	-0.2
KUZ	Kuaotunu	12.07	191	P	P	11 37 30.4	-0.4
WIAZ	Waiheke Island	12.24	193	P	P	11 37 32.5	+0.1
MBAZ	Motutapu North	12.26	194	P	P	11 37 33.0	+0.3
RVAZ	Riverhead Bore	12.34	196	P	P	11 37 33.6	+0.2
ETAZ	East Tamaki Re	12.44	194	P	P	11 37 34.6	+0.2
WTAZ	Waiatarua	12.50	195	P	P	11 37 35.2	+0.1
MKAZ	Moumakai	12.53	193	P	P	11 37 35.2	-0.2
AWAZ	Awhitu Peninsu	12.61	195	P	P	11 37 36.0	-0.1
MXZ	Matakaoa Point	12.63	181	P	P	11 37 32.0	-4.4
MXZ	Matakaoa Point	12.63	181	P	P	11 37 33.4	-2.9
HAZ	Te Kaha	12.84	183	P	P	11 37 34.4	-4.1
WMGZ	Waiomatatini S	12.88	181	P	P	11 37 34.6	-4.4
RUGZ	Raukumara Rang	13.05	183	P	P	11 37 38.1	-2.8
TOZ	Tahuroa Road	13.07	191		P	11 37 40.0	-1.0
TOZ	Tahuroa Road	13.07	191	P	P	11 37 40.4	-0.6
PUZ	Puketiti	13.14	181	P	P	11 37 36.9	-4.7
TWGZ	Tauwhareparae	13.25	182	P	P	11 37 40.1	-2.8
URZ	Urewera	13.38	185	P	P	11 37 39.4	-4.8
	11nm,0.5s,baz=274,slow=1.7,SNR=14						
URZ				S	S	11 39 56.4	-10
	7.8nm,0.8s,baz=84,slow=20,SNR=11						
URZ	Urewera	13.38	185	P	P	11 37 40.0	-4.2
URZ	Urewera	13.38	185	P	P	11 37 39.5	-4.6
MWZ	Matawai	13.43	184	P	P	11 37 40.0	-4.7
TKGZ	Te Karaka	13.52	183	P	P	11 37 42.4	-3.1
CNGZ	Carnagh Statio	13.55	182	P	P	11 37 42.7	-3.2
HIZ	Hauiti	13.95	192	P	P	11 37 49.2	-0.8
HIZ	Hauiti	13.95	192	P	P	11 37 49.4	-0.6
BKZ	Black Stump Fm	14.34	187	P	P	11 37 49.3	-4.5
BKZ	Black Stump Fm	14.34	187	P	P	11 37 49.3	-4.5
VRZ	Vera Road	14.56	192	P	P	11 37 56.2	+0.2
TSZ	Takapari Road	15.29	188	P	P	11 38 00.1	-2.8
MRZ	Mangatainoka R	15.93	189	P	P	11 38 04.7	-4.3
QRZ	Quartz Range	16.69	196	P	P	11 38 15.6	-0.3
QRZ	Quartz Range	16.69	196	P	P	11 38 15.5	-0.4
SNZO	South Karori	16.70	190	P	P	11 38 13.6	-2.3
NNZ	Nelson	16.86	194	P	P	11 38 15.6	-1.8
THZ	Tophouse	17.48	194	P	P	11 38 21.5	-1.7
THZ	Tophouse	17.48	194	P	P	11 38 22.0	-1.2
DSZ	Denniston Nort	17.74	197	P	P	11 38 25.5	-0.1
KHZ	Kahutara	17.98	192	P	P	11 38 25.7	-1.9
KHZ	Kahutara	17.98	192	P	P	11 38 25.9	-1.7
LTZ	Lake Taylor	18.60	195	P	P	11 38 31.3	-2.0
GVZ	Greta Valley S	18.61	193	P	P	11 38 31.4	-2.0
INZ	Inchbonnie	18.75	197	P	P	11 38 32.9	-1.7
NGOA	Tingoa Renbel	22.06	304	P	P	11 38 58.4	-6.5
COEN	Coen	35.09	281	P	P	11 40 57.9	+0.3
COEN				IAmb	IAmb	11 41 08.4	
	comp=Z,18nm,1.3s						
AS31	Alice Springs	40.68	262		P	11 41 42.4	-0.5
ASAR	Alice Springs	40.68	262	P	P	11 41 42.8	-0.1
	comp=Z,2.9nm,0.8s,baz=101,slow=8.1,SNR=57						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	40.68	262	P	P	11 41 42.5	-0.4
WB0	Warramunga Arr	41.13	268	P	P	11 41 45.7	-0.8
WB0				IAmb	IAmb	11 41 46.7	
	comp=Z,9.2nm,0.5s						
WRA	Warramunga Arr	41.14	268	P	P	11 41 45.9	-0.7
	comp=Z,6.6nm,0.6s,baz=104,slow=7.8,SNR=121						
	comp=Z,6.6nm,0.6s						
WRA	Warramunga Arr	41.14	268		P	11 41 46.1	-0.4
KNRA	Kununurra	47.48	271	P	P	11 42 35.8	+0.5
KNRA				IAmb	IAmb	11 42 36.1	
	comp=Z,7.6nm,0.7s						
VNDA	Vanda	53.29	185	P	P	11 43 17.6	+1.0
VNDA				IAmb	IAmb	11 43 51.9	
	comp=Z,23nm,1.4s						
QSPA	South Pole Qui	65.19	180	P	P	11 44 36.8	+0.6
QSPA				IAmb	IAmb	11 44 37.7	
	comp=Z,5.8nm,0.8s						
MJAR	Matsushiro Arr	72.05	327	P	P	11 45 17.9	+0.2
	comp=Z,1.2nm,0.7s,baz=158,slow=5.5,SNR=4.5						
	comp=Z,1.2nm,0.7s						
MJAR	Matsushiro Arr	72.05	327	P	P	11 45 18.0	+0.2
KSRS	Korea Array	78.24	321	P	P	11 45 53.6	+1.4
	comp=Z,1.0nm,0.7s,baz=140,slow=5.7,SNR=4.2						
	comp=Z,1.0nm,0.7s						
PET	Petropavlovsk	79.53	348	P	P	11 45 59.1	+0.6
PETK	Petropavlovsk-	79.79	347	P	P	11 46 01.7	+1.7
	comp=Z,3.5nm,0.9s,baz=156,slow=5.7,SNR=6.4						
	comp=Z,3.5nm,0.9s						
PETK	Petropavlovsk-	79.79	347	P	P	11 46 01.4	+1.4
KMPM	Mount Pierce	83.97	40	P	P	11 46 22.2	+0.7
N19K	Bonanza Creek	88.16	13	P	P	11 46 41.0	0.0
N19K				IAmb	IAmb	11 47 18.9	
	comp=Z,18nm,1.4s						
K15K	Wolf Creek Mou	88.33	9	P	P	11 46 42.1	+0.4
K15K				IAmb	IAmb	11 47 18.9	
	comp=Z,14nm,1.4s						
TXAR	Lajitas Array	91.99	59	P	P	11 47 01.4	+1.8
	comp=Z,0.3nm,0.9s,baz=301,slow=5.8,SNR=2.6						
	comp=Z,0.3nm,0.9s						
BVAR	Borovoye Array	120.38	318	PKP	PKPdf	11 52 37.6	+0.3
	comp=Z,0.8nm,0.4s,baz=109,slow=2.1,SNR=4.6						
FINES	FINESS Array B	138.99	340	PKhKP	PKPpre	11 53 04.6	
	comp=Z,1.4nm,0.8s,baz=63,slow=5.7,SNR=4.5						
FINES				PKP	PKPdf	11 53 13.3	+1.1
	comp=Z,2.8nm,0.9s,baz=157,slow=5.4,SNR=4.3						
NB2	NORSAR Subarra	142.86	350	PKP	PKPdf	11 53 17.6	-1.6
	comp=Z,1.2nm,0.5s,baz=15,slow=3.2						
NOA	NORSAR Array B	142.86	350	PKP	PKPdf	11 53 16.8	-2.4
	comp=Z,0.4nm,0.4s,baz=21,slow=1.0,SNR=8.8						
HFS	Hagfors	143.27	347	PKP	PKPab	11 53 18.7	+0.6
	comp=Z,6.1nm,0.5s,baz=72,slow=4.8,SNR=35						
AKASG	Malin Array Be	145.13	326	PKPbc	PKPdf	11 53 24.5	+1.1
	comp=Z,0.5nm,0.3s,baz=45,slow=4.4,SNR=6.5						
MMAI	Mount Meron Ar	146.98	293	PKPbc	PKPbc	11 53 31.5	+1.2
	comp=Z,1.2nm,0.5s,baz=64,slow=6.6,SNR=2.3						
BRTR	Keskin Array B	147.19	305	PKPbc	PKPbc	11 53 31.6	+1.0
	comp=Z,0.9nm,0.6s,baz=91,slow=2.2,SNR=5.3						
EKA	Eskdalemuir Ar	149.57	2	PKPbc	PKPbc	11 53 34.4	-1.4
	comp=Z,0.6nm,0.7s,baz=347,slow=2.4,SNR=6.0						

*IDC **02** 11:36:39.6±0.8, 39°.03N×27°.91E, h0km, mb3.8/12, mbtmp3.8/21, ML3.9/9, MS3.3/22, Error ellipse: s-maj=14.5km s-min=11.7km az=15.0*

*MOS **02** 11:36:40.5±1.1, 39°.16N×27°.97E, h19km, mb4.3/7, Error ellipse: s-maj=7.6km s-min=4.0km az=89.2*

*NEIC **02** 11:36:40.4±1.2, 39°.08N±0°.03×27°.89E±0°.06, h4km±6km, mb4.2/8, Error ellipse: s-maj=6.9km s-min=2.7km az=65.0*

*ISK **02** 11:36:40.1, 39°.09N×27°.87E, h14km, ML4.5/25*

*MED_RC **02** 11:36:40.0±1.5, 39°.08N×27°.84E, h14km, MW4.4/11, Moment Tensor Solution.Mantle waves: s11,c13; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr-2.05±.77; Mθθ1.39±.65; Mφφ0.65±.52; Mrθ-1.94±1.01; Mθφ-5.02±.35; Mφr0.27±1.11; Best double couple: Mo5.47000×10^15 NP1:φs357.00000°, δ63.00000°, λ-11.00000°. NP2:φs92.00000°, δ80.00000°, λ-153.00000°. Principal axes: T 6.3700, Plg11.0000°, Azm222.0000°; N -1.8100, Plg61.0000°, Azm111.0000°; P -4.5700, Plg26.0000°, Azm317.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MCSM **02** 11:36:40.3±0.5, 39°N±3°×2°8E±°, h6km±4km, mb4.7, mB5.1, MLv4.7, Mw(mB)4.5*

*AFAD **02** 11:36:40.3, 39°.09N×27°.86E, h7km±3km, MW4.4*

*ATH **02** 11:36:40.4±0.2, 39°.07N×27°.90E, h10km, ML4.0/33, Manual Solution by N.Liadopoulou First location: 2020/02/02 11:38:10, This location: 2020/02/02 11:48:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **02** 11:36:42.8, 39°N±2°×2°8E±°, h46km±12km, M4.1/28, MLh4.1/28*

*CFUSG **02** 11:36:43.1, 39°.30N×28°.30E, h10km, Mb3.6/7, MD3.6/7, MSH3.8/7*

ISC 02 11:36:40.5±0.9, **39°.09N**±0°.01×**27°.90E**±0°.01, **h7**km±6km, **n410**, σ**1s23**/466, **mb4.0**/19, **MS3.5**/14, **44C-20D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.23	197	P	Pg	11 36 45.1	+0.2
AKHS				S	Sg	11 36 49.5	+1.5
AKS	Akhisar	0.23	197	Pg	Pg	11 36 44.9	0.0
AKS				Sg	Sg	11 36 48.6	+0.7
GORD	Gordes-Manisa	0.28	130	Pg	Pg	11 36 46.8	+0.7
GORD				Sg	Sb	11 36 51.9	-1.1
SOMA	Soma-Manisa	0.29	283	Pg	Pg	11 36 46.2	0.0
SOMA				Sg	Sg	11 36 50.5	+0.5
STEP	BALIKESIR_Sava	0.32	334	P	Pg	11 36 46.9	+0.2
STEP				S	Sg	11 36 51.9	+1.1
GOMA	Golmarmara-Man	0.39	178	Pg	Pg	11 36 48.4	+0.4
GOMA				Sg	Sb	11 36 54.3	-1.6
KTTT	Salihli	0.43	159	P	Pg	11 36 49.3	+0.4
KTTT				S	Sg	11 36 55.1	+0.6
BALB	Balikesir	0.55	359		Pg	11 36 51.5	+0.5
BALB				Sg	Sg	11 36 58.8	+0.7
CAMT	Merkez	0.57	233	P	Pg	11 36 51.7	+0.2
BKES	Balkesir-Mer	0.64	2	P	Pg	11 36 53.1	+0.3
DEMI	Demirci	0.64	94	P	Pb	11 36 53.6	-0.5
DEMI				S	Sg	11 37 01.2	+0.1
ZEDA	zmir-Bergama	0.65	259	P	Pg	11 36 52.9	-0.1
ZEDA				S	Sg	11 37 01.6	+0.1
DURS	Dursunbey	0.68	41	P	Pg	11 36 53.5	0.0
BALY	Balya	0.68	342	P	Pg	11 36 53.9	+0.3
BALY				S	Sg	11 37 02.6	+0.1
BUHA	Balikesir, Bur	0.76	303	P	Pg	11 36 54.7	-0.3
DST	Dursunbey	0.76	47	Pg	Pb	11 36 55.7	-0.4
IZMD	zmir-Dikili-	0.76	262	P	Pg	11 36 55.0	-0.1
IZMD				P	Pg	11 36 55.1	-0.1
IZMD				S	Sg	11 37 04.6	-0.5
DKL	Dikili	0.77	269	Pg	Pg	11 36 55.5	+0.2
BLKS	Balkesir-Sus	0.78	4	P	Pg	11 36 55.5	0.0
BLKS				P	Pb	11 36 55.6	-0.8
BLKS				S	Sg	11 37 05.2	-0.5
MANT	Manisa	0.79	139		Pg	11 36 55.4	-0.3
MANT				Sg	Sg	11 37 06.5	+0.5
MANT	Manisa	0.79	139	P	Pb	11 36 56.0	-0.8
MANT				S	Sg	11 37 06.3	+0.3
YAYO	Edremit-Balk	0.82	309	Pg	Pg	11 36 56.1	-0.2
ODEM	Odemis-Izmir	0.83	170	Pg	Pb	11 36 56.8	-0.5
KULA	Kula-Manisa	0.83	134	Pg	Pb	11 36 56.8	-0.5

Sta	Name	Dist	Az	Phase	ID	Time	Res
SMAA	**Simav-Kutahya**	**0.84**	**89**	Pg	**Pb**	**11 36 57.6**	**+0.1**
SMAA				Sg	**Sb**	**11 37 09.3**	**+0.2**
SIMA	**Simav-Kutahya**	**0.84**	**90**	Pg	**Pb**	**11 36 57.3**	**-0.3**
SUSR	**Susurluk-Balik**	**0.88**	**9**	Pg	**Pg**	**11 36 57.4**	**0.0**
CMHT	**Manyas**	**0.92**	**3**	P	**Pg**	**11 36 57.9**	**-0.2**
BAGT	**Foa**	**0.93**	**242**	P	**Pg**	**11 36 58.0**	**-0.3**
DUVT	**Torbali**	**0.94**	**202**	P	**Pg**	**11 36 58.2**	**-0.4**
IZMR	**zmir-demi**	**0.96**	**177**	P	**Pg**	**11 36 58.8**	**-0.1**
IZMR				P	**Pg**	**11 36 58.8**	**-0.1**
IZMR				S	**Sg**	**11 37 09.6**	**-1.7**
AYVA	**Ayvalik**	**0.96**	**283**	S	**Sg**	**11 37 10.3**	**-1.1**
GONE	**Gonen-Balikesi**	**0.96**	**350**	Pg	**Pg**	**11 36 59.1**	**+0.1**
BLCB	**Balcova**	**0.97**	**224**	P	**Pg**	**11 36 58.6**	**-0.6**
BLCB				S	**Sb**	**11 37 12.8**	**0.0**
KIRA	**zmir-Kiraz**	**0.98**	**156**	P	**Pb**	**11 36 59.7**	**-0.2**
KIRA				S	**Sg**	**11 37 11.1**	**-0.8**
YENI	**Yenice-Canakka**	**0.98**	**329**	Pg	**Pg**	**11 36 59.4**	**0.0**
FOCM	**Foa**	**0.99**	**248**	Pg	**Pg**	**11 36 59.1**	**-0.3**
FOCM				Sg	**Sb**	**11 37 12.5**	**-0.7**
ATIT	**Gnen**	**1.02**	**345**	P	**Pg**	**11 36 60.0**	**-0.1**
ATIT				S	**Sg**	**11 37 13.2**	**-0.2**
SHAP	**Saphane-Kutahy**	**1.03**	**94**	Pg	**Pn**	**11 37 00.9**	**-0.7**
CANM	**Can-anakkale**	**1.12**	**325**	Pn	**Pb**	**11 37 01.6**	**-0.7**
EMET	**Ktahya-Emet**	**1.14**	**75**	P	**Pn**	**11 37 02.8**	**-0.2**
EMET				S	**Sg**	**11 37 17.3**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.15**	**180**	Pn	**Pg**	**11 37 02.3**	**-0.2**
AYDB				Sn	**Sn**	**11 37 18.1**	**-1.0**
KRBN	**Karaburun**	**1.16**	**245**	Pn	**Pb**	**11 37 02.4**	**-0.5**
NAZL	**Nazilli-Aydin**	**1.17**	**165**	Pn	**Pb**	**11 37 02.4**	**-0.7**
GEDZ	**Gediz**	**1.18**	**92**	Pn	**Pg**	**11 37 03.4**	**+0.3**
ORLT	**Orhaneli**	**1.22**	**39**	Pn	**Pb**	**11 37 03.8**	**-0.2**
ORLT	**Orhaneli**	**1.22**	**39**	P	**Pn**	**11 37 03.5**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**1.23**	**302**	P	**Pn**	**11 37 03.2**	**-1.0**
GDZ	**Gediz**	**1.23**	**90**	P	**Pn**	**11 37 03.8**	**-0.5**
KARB	**zmir-Karabur**	**1.24**	**250**	P	**Pn**	**11 37 02.9**	**-1.3**
KARB				S	**Sb**	**11 37 19.0**	**-1.4**
SULTU	**Buldan**	**1.24**	**146**	P	**Pn**	**11 37 03.5**	**-1.0**
EDC	**Edincik**	**1.25**	**359**	Pn	**Pn**	**11 37 03.3**	**-1.2**
URLA	**Izmir**	**1.25**	**235**	Pn	**Pn**	**11 37 03.7**	**-0.8**
URLA	**Izmir**	**1.25**	**235**	P	**Pn**	**11 37 02.8**	**-1.7**
URLA				S	**Sg**	**11 37 20.4**	**-0.4**
TVSB	**Tavsanli**	**1.26**	**73**	Pn	**Pn**	**11 37 04.3**	**-0.4**
BAND	**Balkesir-Ban**	**1.27**	**7**	⇑P	**Pb**	**11 37 04.6**	**-0.2**
BAND	**Balkesir-Ban**	**1.27**	**7**	P	**Pn**	**11 37 04.1**	**-0.7**
PRK	**Paraskevi**	**1.27**	**277**	P	**Pn**	**11 37 03.9**	**-0.8**
PRK				S	**Sb**	**11 37 20.3**	**-1.1**
PRK	**Paraskevi**	**1.27**	**277**	P	**Pn**	**11 37 04.1**	**-0.7**
PRK				S	**Sb**	**11 37 20.7**	**-0.7**
GMLD	**Gumuldur**	**1.27**	**217**	Pn	**Pn**	**11 37 04.0**	**-0.7**
DGB	**zmir**	**1.31**	**218**	P	**Pn**	**11 37 03.5**	**-1.7**
BIGA	**Biga-Canakkale**	**1.32**	**334**	Pn	**Pb**	**11 37 05.2**	**-0.4**
ESEN	**Aydn-Nazilli**	**1.34**	**165**	P	**Pn**	**11 37 04.5**	**-1.2**
ESEN				S	**Sb**	**11 37 22.0**	**-1.4**
EZNE	**Ezine-Canakkal**	**1.36**	**300**	Pn	**Pn**	**11 37 05.2**	**-0.7**
KRBG	**Karabiga-Canak**	**1.38**	**341**	Pn	**Pn**	**11 37 05.3**	**-0.9**
ZEYE	**Izmir, Urla-Ze**	**1.39**	**232**	P	**Pn**	**11 37 04.7**	**-1.6**
ZEYE				S	**Sb**	**11 37 23.9**	**-0.8**
LAPS	**Lapseki, ANA**	**1.42**	**325**	P	**Pn**	**11 37 05.7**	**-1.1**
EZN	**Ezine**	**1.42**	**301**	Pn	**Pn**	**11 37 05.9**	**-0.9**
EZN	**Ezine**	**1.42**	**301**	P	**Pn**	**11 37 05.9**	**-0.9**
EZN				S	**Sn**	**11 37 23.7**	**-2.0**
EZN	**Ezine**	**1.42**	**301**	P	**Pn**	**11 37 05.7**	**-1.1**
KOCA	**Canakkale, Ayv**	**1.43**	**287**	P	**Pn**	**11 37 05.8**	**-1.0**
AYDN	**Tasoluk**	**1.43**	**181**	P	**Pn**	**11 37 05.8**	**-1.2**
AYDN				S	**Sn**	**11 37 23.8**	**-2.3**
PASA	**Karahalli, USA**	**1.45**	**120**	P	**Pn**	**11 37 06.9**	**-0.3**
PASA				S	**Sb**	**11 37 26.2**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.48**	**31**	Pn	**Pn**	**11 37 06.9**	**-0.7**
GCAM	**G?zelcaml?**	**1.49**	**201**	Pn	**Pn**	**11 37 06.6**	**-1.1**
GCAM	**G?zelcaml?**	**1.49**	**201**	P	**Pn**	**11 37 05.9**	**-1.7**
COMU	**Canakkale**	**1.49**	**313**	Pn	**Pn**	**11 37 06.8**	**-1.0**
EAG2	**Marmaro, Chios**	**1.50**	**249**	P	**Pn**	**11 37 06.8**	**-1.1**
EAG2				S	**Sb**	**11 37 27.3**	**-0.7**
CNKL	**anakkale-Mer**	**1.52**	**310**	P	**Pn**	**11 37 07.3**	**-0.8**
LPK	**Lapseki**	**1.55**	**326**	Pn	**Pn**	**11 37 07.9**	**-0.7**
SIGR	**SIGRI**	**1.59**	**275**	Pn	**Pn**	**11 37 08.5**	**-0.6**
SIGR	**SIGRI**	**1.59**	**275**	P	**Pb**	**11 37 09.5**	**-0.8**
SIGR				S	**Sn**	**11 37 28.7**	**-1.3**
SIGR	**SIGRI**	**1.59**	**275**	P	**Pn**	**11 37 08.8**	**-0.3**
SIGR				S	**Sb**	**11 37 30.4**	**-0.2**
BNAZ	**Uak-Banaz**	**1.60**	**104**	P	**Pn**	**11 37 09.1**	**-0.3**
BOZC	**Bozcaada**	**1.61**	**298**	Pn	**Pn**	**11 37 08.5**	**-0.9**
SMG	**Samos**	**1.61**	**211**	P	**Pn**	**11 37 07.4**	**-2.1**
SMG				S	**Sn**	**11 37 28.5**	**-2.1**
SMG	**Samos**	**1.61**	**211**	P	**Pn**	**11 37 09.2**	**-0.3**
SMG				S	**Sb**	**11 37 30.1**	**-1.2**
DDIM	**Aydin, Didim**	**1.71**	**198**	P	**Pn**	**11 37 08.9**	**-1.9**
DNIZ	**Denizli-Tavas-**	**1.72**	**148**	P	**Pn**	**11 37 10.3**	**-0.7**
MLSB	**Milas**	**1.80**	**183**	Pn	**Pn**	**11 37 11.5**	**-0.5**
GADA	**Gvkgeada**	**1.89**	**306**	P	**Pn**	**11 37 12.7**	**-0.6**
GADA				S	**Sn**	**11 37 35.3**	**-2.2**
YER	**Yerkesik**	**1.98**	**171**	Pn	**Pn**	**11 37 13.7**	**-0.8**
YER	**Yerkesik**	**1.98**	**171**	P	**Pn**	**11 37 13.4**	**-1.2**
YER				S	**Sn**	**11 37 37.1**	**-2.5**
CAVK	**Edirne/Enez-Ca**	**2.08**	**321**	⇑P	**Pn**	**11 37 16.2**	**+0.4**
CAVK				⇑S	**Sb**	**11 37 44.4**	**-0.2**
BODT	**Bodrum**	**2.08**	**193**	P	**Pn**	**11 37 15.7**	**-0.2**
BODT				S	**Sn**	**11 37 40.8**	**-1.2**
ENEZ	**Enez**	**2.12**	**321**	P	**Pn**	**11 37 16.3**	**0.0**
ENEZ				S	**Sn**	**11 37 41.0**	**-2.0**
BORA	**Eskisehir**	**2.13**	**68**		**Pn**	**11 37 16.0**	**-0.6**
LIA	**Limnos Island**	**2.25**	**292**	P	**Pn**	**11 37 17.8**	**-0.4**
LIA				S	**Sn**	**11 37 43.4**	**-2.7**
LIA	**Limnos Island**	**2.25**	**292**	P	**Pn**	**11 37 17.2**	**-0.9**
LIA				S	**Sb**	**11 37 47.3**	**-2.2**
SMTH	**Samothraki Isl**	**2.29**	**308**	P	**Pn**	**11 37 18.0**	**-0.7**
SMTH	**Samothraki Isl**	**2.29**	**308**	P	**Pn**	**11 37 18.0**	**-0.7**
SMTH				S	**Sb**	**11 37 48.4**	**-2.2**
ALN	**Alexandroupoli**	**2.29**	**322**		**Pn**	**11 37 18.5**	**-0.3**
ALN	**Alexandroupoli**	**2.29**	**322**	P	**Pn**	**11 37 18.1**	**-0.7**
ALN	**Alexandroupoli**	**2.29**	**322**	P	**Pn**	**11 37 18.5**	**-0.3**
ALN	**Alexandroupoli**	**2.29**	**322**	P	**Pn**	**11 37 18.2**	**-0.6**
ALN				S	**Sn**	**11 37 47.2**	**-0.1**
KLYT	**Kilyos**	**2.33**	**22**	P	**Pn**	**11 37 18.3**	**-0.9**
CTYL	**Yalikoy Yolu**	**2.40**	**7**	P	**Pn**	**11 37 19.5**	**-0.7**
ISP	**Isparta**	**2.42**	**121**		**Pn**	**11 37 20.0**	**-0.7**
ISP	**Isparta**	**2.42**	**121**	*d i*P	**Pn**	**11 37 20.1**	**-0.5**
ISP	**Isparta**	**2.42**	**121**	P	**Pn**	**11 37 19.9**	**-0.7**
SKY	**Skiros Island**	**2.62**	**266**	P	**Pn**	**11 37 23.7**	**+0.5**
RDO	**Rodhopi**	**2.73**	**319**		**Pn**	**11 37 24.7**	**-0.2**
RDO	**Rodhopi**	**2.73**	**319**	P	**Pn**	**11 37 24.6**	**-0.2**
RDO	**Rodhopi**	**2.73**	**319**	P	**Pn**	**11 37 24.7**	**-0.2**
ELL	**Elmali**	**2.83**	**145**		**Pn**	**11 37 25.9**	**-0.4**
ELL	**Elmali**	**2.83**	**145**	P	**Pn**	**11 37 25.9**	**-0.4**
SAHE	**Sakarya_HENDEK**	**2.87**	**51**	⇑P	**Pn**	**11 37 26.7**	**0.0**
THAS	**Thassos island**	**2.88**	**303**	P	**Pn**	**11 37 25.7**	**-1.0**
THAS	**Thassos island**	**2.88**	**303**	P	**Pn**	**11 37 25.6**	**-1.2**
ARG	**Arkhangelos**	**2.88**	**176**		**Pn**	**11 37 26.3**	**-0.5**
ARG	**Arkhangelos**	**2.88**	**176**	P	**Pn**	**11 37 26.5**	**-0.3**
ARG	**Arkhangelos**	**2.88**	**176**	P	**Pn**	**11 37 26.3**	**-0.5**
ARG	**Arkhangelos**	**2.88**	**176**	P	**Pn**	**11 37 26.5**	**-0.3**
MDUB	**Mudurnu**	**2.89**	**61**		**Pn**	**11 37 26.8**	**-0.3**
KARY	**Karystos**	**2.91**	**250**	P	**Pn**	**11 37 25.8**	**-1.5**
KARY	**Karystos**	**2.91**	**250**	P	**Pn**	**11 37 25.8**	**-1.5**
XANC	**Avdira**	**2.94**	**311**	P	**Pn**	**11 37 27.1**	**-0.6**
KYMI	**Kymi, Euboea I**	**3.00**	**262**	P	**Pn**	**11 37 27.9**	**-0.6**
THS1	**Thassos, Thass**	**3.04**	**304**	P	**Pn**	**11 37 29.2**	**+0.2**
AOS	**Alonnisos**	**3.13**	**273**	P	**Pn**	**11 37 30.1**	**-0.1**
AOS2	**Alonissos-2**	**3.15**	**272**	P	**Pn**	**11 37 30.1**	**-0.5**
AKAS	**Kas**	**3.16**	**154**		**Pn**	**11 37 31.0**	**+0.2**
KAVA	**Kavala**	**3.22**	**307**	P	**Pn**	**11 37 30.8**	**-0.7**
KAVA	**Kavala**	**3.22**	**307**	P	**Pn**	**11 37 30.7**	**-0.8**
KSL	**Kastellorizon**	**3.23**	**155**	P	**Pn**	**11 37 31.5**	**-0.2**
OUR	**Ouranopolis**	**3.27**	**294**	P	**Pn**	**11 37 31.5**	**-0.6**
OUR	**Ouranopolis**	**3.27**	**294**	P	**Pn**	**11 37 31.7**	**-0.5**
DION	**Dionisos Attik**	**3.27**	**253**	P	**Pn**	**11 37 30.9**	**-1.4**
DION	**Dionisos Attik**	**3.27**	**253**	P	**Pn**	**11 37 31.1**	**-1.1**
PTL	**Penteli**	**3.33**	**253**	P	**Pn**	**11 37 32.2**	**-0.9**
PTL	**Penteli**	**3.33**	**253**	P	**Pn**	**11 37 31.8**	**-1.2**
THERA	**Ancient Thera,**	**3.33**	**216**	P	**Pn**	**11 37 31.5**	**-1.5**
THERA	**Ancient Thera,**	**3.33**	**216**	P	**Pn**	**11 37 32.1**	**-1.0**
SAP3	**Santorini-Thir**	**3.34**	**218**	P	**Pn**	**11 37 32.5**	**-0.6**
SNT5	**Nea Kammeni, S**	**3.34**	**217**	P	**Pn**	**11 37 32.8**	**-0.3**
ATHU	**Athens Univers**	**3.42**	**252**	P	**Pn**	**11 37 33.4**	**-0.8**
DIM	**Dimitrovgrad**	**3.44**	**330**	P	**Pn**	**11 37 34.2**	**-0.3**
DIM	**Dimitrovgrad**	**3.44**	**330**	*i* P	**Pn**	**11 37 34.5**	**0.0**
VLY	**Voula,Athens**	**3.45**	**250**	P	**Pn**	**11 37 34.5**	**-0.2**
STFN	**Stefani**	**3.53**	**256**	P	**Pn**	**11 37 35.1**	**-0.7**
RZN	**Rozhen**	**3.54**	**318**	P	**Pn**	**11 37 36.1**	**0.0**

Sta	Name	Dist	Az	Phase	ID	Time	Res
RZN	**Rozhen**	**3.54**	**318**	*i* P	**Pn**	**11 37 36.3**	**+0.1**
JMB	**Yambol**	**3.55**	**343**	P	**Pn**	**11 37 35.6**	**-0.4**
MAGU	**Magoula**	**3.58**	**255**	P	**Pn**	**11 37 36.1**	**-0.4**
KARP	**Karpathos**	**3.59**	**190**		**Pn**	**11 37 35.8**	**-0.9**
KARP	**Karpathos**	**3.59**	**190**	P	**Pn**	**11 37 36.1**	**-0.5**
KARP	**Karpathos**	**3.59**	**190**	P	**Pn**	**11 37 37.2**	**+0.6**
KARP	**Karpathos**	**3.59**	**190**	P	**Pn**	**11 37 35.8**	**-0.9**
NEO	**Neokhori**	**3.64**	**275**	P	**Pn**	**11 37 36.5**	**-0.8**
MHLO	**Agia Marina, M**	**3.66**	**230**	P	**Pn**	**11 37 37.4**	**-0.2**
PLG	**Polygyros**	**3.66**	**292**	P	**Pn**	**11 37 37.1**	**-0.5**
PLG	**Polygyros**	**3.66**	**292**	P	**Pn**	**11 37 37.2**	**-0.5**
VILL	**Villia**	**3.71**	**257**	P	**Pn**	**11 37 37.6**	**-0.7**
VIL2	**Platees**	**3.73**	**258**	P	**Pn**	**11 37 37.5**	**-1.0**
ATAL	**Atalanti**	**3.83**	**266**	P	**Pn**	**11 37 39.3**	**-0.6**
ATAL	**Atalanti**	**3.83**	**266**	P	**Pn**	**11 37 39.0**	**-0.8**
LKR	**Lokris**	**3.85**	**265**	P	**Pn**	**11 37 39.5**	**-0.7**
MET1	**Methana Town,**	**3.86**	**248**	P	**Pn**	**11 37 39.1**	**-1.1**
MET5	**Makryloggos,Me**	**3.86**	**249**	P	**Pn**	**11 37 40.2**	**-0.2**
SRS	**Serrai**	**3.87**	**303**	P	**Pn**	**11 37 40.0**	**-0.5**
SRS	**Serrai**	**3.87**	**303**	P	**Pn**	**11 37 39.6**	**-0.9**
PLD	**Plovdiv**	**3.88**	**323**	P	**Pn**	**11 37 40.5**	**-0.1**
PLD	**Plovdiv**	**3.88**	**323**	*i* P	**Pn**	**11 37 40.7**	**+0.1**
MET2	**Kameni Chora,**	**3.88**	**249**	P	**Pn**	**11 37 40.3**	**-0.4**
HORT	**Hortiatis**	**3.99**	**294**	P	**Pn**	**11 37 42.0**	**-0.2**
HORT	**Hortiatis**	**3.99**	**294**	P	**Pn**	**11 37 41.5**	**-0.6**
MMB	**Musomishta**	**4.01**	**309**	P	**Pn**	**11 37 42.3**	**-0.1**
MMB	**Musomishta**	**4.01**	**309**	*i* P	**Pn**	**11 37 42.6**	**+0.2**
LTK	**Loutraki**	**4.01**	**256**	P	**Pn**	**11 37 41.5**	**-0.9**
PRD	**Provadia**	**4.08**	**355**	*i* P	**Pn**	**11 37 43.6**	**+0.3**
ELND	**Elena**	**4.12**	**339**	⇑P	**Pn**	**11 37 43.8**	**-0.2**
NEF	**NEVSHA**	**4.19**	**354**	*i* P	**Pn**	**11 37 45.3**	**+0.4**
ZKR	**Zakros**	**4.19**	**199**	P	**Pn**	**11 37 44.9**	**0.0**
NPS	**Neapolis**	**4.24**	**206**	P	**Pn**	**11 37 44.0**	**-1.5**
LIT	**Litokhoron**	**4.30**	**285**		**Pn**	**11 37 46.8**	**+0.4**
LIT	**Litokhoron**	**4.30**	**285**	P	**Pn**	**11 37 46.8**	**+0.4**
LIT	**Litokhoron**	**4.30**	**285**	P	**Pn**	**11 37 46.4**	**+0.1**
AGG	**Agios Georgios**	**4.33**	**271**	P	**Pn**	**11 37 46.9**	**0.0**
AGG	**Agios Georgios**	**4.33**	**271**	P	**Pn**	**11 37 46.8**	**-0.1**
KNT	**Kendrikon**	**4.35**	**300**	P	**Pn**	**11 37 47.3**	**+0.2**
LOZB	**Loznitsa**	**4.38**	**347**	⇑P	**Pn**	**11 37 47.5**	**-0.1**
SZH	**Strazhitsa**	**4.41**	**341**	*e*P	**Pn**	**11 37 48.8**	**+0.9**
PGB	**Panagyurishte**	**4.43**	**322**	*i* P	**Pn**	**11 37 48.3**	**+0.1**
BR105	**Keskin Array S**	**4.47**	**80**	P	**Pn**	**11 37 49.5**	**+0.6**
BR106	**Keskin Array S**	**4.48**	**80**	P	**Pn**	**11 37 49.5**	**+0.6**
BR104	**Keskin Array S**	**4.49**	**80**	P	**Pn**	**11 37 49.7**	**+0.6**
BR131	**Keskin Array S**	**4.49**	**80**		**Pn**	**11 37 49.4**	**+0.3**
BR131	**Keskin Array S**	**4.49**	**80**	*de*P	**Pn**	**11 37 49.6**	**+0.5**
BRTR	**Keskin Array B**	**4.49**	**80**	Pn	**Pn**	**11 37 50.0**	**+0.9**
	3.6nm,0.3s,baz=252,slow=14,SNR=106						
BRTR				Pg	**Pg**	**11 38 04.2**	**-2.4**
	13nm,0.3s,baz=257,slow=16,SNR=51						
BRTR				Lg	Lg	11 39 04.9	
	7.8nm,0.3s,baz=261,slow=25,SNR=10						
	11nm,0.5s						
BRTR	**Keskin Array B**	**4.49**	**80**		**Pn**	**11 37 49.3**	**+0.2**
IDI	**Anoyia**	**4.49**	**213**	Pn	**Pn**	**11 37 47.8**	**-1.3**
	10.0nm,0.7s,baz=30,slow=13,SNR=12						
IDI	**Anoyia**	**4.49**	**213**		**Pn**	**11 37 48.0**	**-1.1**
IDI	**Anoyia**	**4.49**	**213**	P	**Pn**	**11 37 47.8**	**-1.3**
GUR	**Goura**	**4.51**	**257**	P	**Pn**	**11 37 49.3**	**-0.1**
KKB	**Krupnik**	**4.56**	**309**	*i* P	**Pn**	**11 37 50.3**	**+0.4**
VLI	**Veliai**	**4.58**	**240**	P	**Pn**	**11 37 48.8**	**-1.5**
THL	**Klokotos Trika**	**4.59**	**278**	P	**Pn**	**11 37 50.0**	**-0.3**
RAZG	**Razgrad**	**4.59**	**347**	⇓P	**Pn**	**11 37 50.5**	**+0.1**
KLV	**Kalavryta, Ach**	**4.62**	**259**	P	**Pn**	**11 37 50.3**	**-0.6**
VAY	**Valandovo**	**4.65**	**300**	*i* Pn	**Pn**	**11 37 52.4**	**+1.2**
KIRS	**Kirsehir-Merke**	**4.68**	**88**	⇑P	**Pn**	**11 37 52.4**	**+0.7**
ANX	**Ano Chora**	**4.69**	**266**	P	**Pn**	**11 37 51.8**	**0.0**
MANR	**Mangalia**	**4.75**	**6**	⇑P	**Pn**	**11 37 53.9**	**+1.4**
CIDE	**Kastamonu/Cide**	**4.75**	**53**	⇓P	**Pn**	**11 37 52.8**	**+0.3**
PLNA	**Plana**	**4.79**	**316**	*i* P	**Pn**	**11 37 53.9**	**+0.7**
ILGA	**Ilgaz**	**4.87**	**64**		**Pn**	**11 37 54.2**	**-0.3**
PLVB	**Pleven**	**4.95**	**331**	⇓P	**Pn**	**11 37 55.1**	**-0.2**
VTS	**Vitosha**	**4.99**	**316**	*i* P	**Pn**	**11 37 56.3**	**+0.3**
ITM	**Ithomi**	**5.08**	**250**		**Pn**	**11 37 57.1**	**0.0**
ITM	**Ithomi**	**5.08**	**250**	P	**Pn**	**11 37 56.3**	**-0.8**
MFTR	**Murfatlar**	**5.09**	**4**	⇑P	**Pn**	**11 37 57.3**	**+0.1**
TSCT	**Constanta Port**	**5.09**	**6**	⇑P	**Pn**	**11 37 58.7**	**+1.4**
BLSH	**Balsha**	**5.13**	**319**	*i* P	**Pn**	**11 37 59.3**	**+1.4**
TETR	**Tetrakomo, Epi**	**5.15**	**275**	P	**Pn**	**11 37 58.0**	**-0.2**
AXS	**Araxos**	**5.18**	**262**	P	**Pn**	**11 37 58.7**	**+0.2**
MPEP	**Malo Peshtene**	**5.29**	**325**	*i* P	**Pn**	**11 38 00.1**	**+0.2**
PYL	**PYLOS**	**5.33**	**248**	P	**Pn**	**11 38 00.3**	**-0.3**
TIRR	**Tirgusor**	**5.37**	**4**		**Pn**	**11 37 59.6**	**-1.5**
TIRR	**Tirgusor**	**5.37**	**4**	⇓P	**Pn**	**11 38 02.2**	**+1.0**
TIRR	**Tirgusor**	**5.37**	**4**	P	**Pn**	**11 38 02.1**	**+1.0**
AKMS	**Akamas**	**5.40**	**138**	P	**Pn**	**11 38 00.7**	**-0.8**
ALFC	**Alefka**	**5.44**	**135**	P	**Pn**	**11 38 00.5**	**-1.6**
BZK	**Bozkurt**	**5.46**	**56**	Pn	**Pn**	**11 38 01.9**	**-0.4**
BZK	**Bozkurt**	**5.46**	**56**	⇓P	**Pn**	**11 38 02.9**	**+0.5**
BZK	**Bozkurt**	**5.46**	**56**	P	**Pn**	**11 38 02.2**	**-0.1**
	0.8nm2µm177nm,0.8s						
TPGR	**Topolog**	**5.77**	**4**	⇑P	**Pn**	**11 38 06.6**	**0.0**
OHR	**Ohrid**	**5.80**	**293**	*i* Pn	**Pn**	**11 38 08.9**	**+1.8**
HUMR	**Humele**	**5.85**	**339**	⇓P	**Pn**	**11 38 07.6**	**-0.1**
CSS	**Mathiatis**	**5.99**	**132**		**Pn**	**11 38 08.7**	**-0.9**
CSS	**Mathiatis**	**5.99**	**132**	P	**Pn**	**11 38 10.2**	**+0.6**
	0.1nm49nm,0.8s						
CSS	**Mathiatis**	**5.99**	**132**	P	**Pn**	**11 38 08.7**	**-0.9**
ASGA	**Asgata**	**6.07**	**133**	P	**Pn**	**11 38 09.9**	**-0.8**
CFR	**Carcaliu**	**6.08**	**2**	⇑P	**Pn**	**11 38 10.7**	**-0.2**
CFR	**Carcaliu**	**6.08**	**2**	P	**Pn**	**11 38 10.6**	**-0.2**
ISR	**Istrita**	**6.10**	**351**	⇑P	**Pn**	**11 38 12.3**	**+1.0**
ISR	**Istrita**	**6.10**	**351**	P	**Pn**	**11 38 12.2**	**+1.0**
TLCR		**6.13**	**6**	⇑P	**Pn**	**11 38 12.5**	**+1.1**
TLCR		**6.13**	**6**	P	**Pn**	**11 38 12.5**	**+1.1**
MVOU	**Mavrovouni**	**6.13**	**130**	P	**Pn**	**11 38 10.6**	**-0.9**
BNN	**Bunyan**	**6.20**	**90**		**Pn**	**11 38 13.6**	**+1.0**
KEK	**Kerkira**	**6.30**	**278**	Pn	**Pn**	**11 38 15.9**	**+2.0**
GIUM	**Giurgiulesti**	**6.39**	**2**	⇓P	**Pn**	**11 38 15.6**	**+0.6**
NEHR	**Nehoiu**	**6.44**	**350**	⇑P	**Pn**	**11 38 17.2**	**+1.4**
BOVS	**Bovan**	**6.50**	**316**	⇑P	**Pn**	**11 38 16.8**	**+0.2**
MLR	**Muntele Rosu**	**6.55**	**348**	Pn	**Pn**	**11 38 19.3**	**+1.9**
	4.1nm,0.3s,baz=306,slow=6.1,SNR=13						
MLR				LR	LR	11 41 20.2	
	comp=Z,175nm,19.0s,baz=146,slow=42						
MLR	**Muntele Rosu**	**6.55**	**348**		**Pn**	**11 38 18.4**	**+0.9**
MLR	**Muntele Rosu**	**6.55**	**348**	⇑P	**Pn**	**11 38 18.3**	**+0.9**
MLR	**Muntele Rosu**	**6.55**	**348**	P	**Pn**	**11 38 18.4**	**+0.9**
SCTR	**Scanteiesti**	**6.58**	**1**	⇑P	**Pn**	**11 38 18.6**	**+1.0**
VOIR		**6.68**	**342**	⇓P	**Pn**	**11 38 19.3**	**+0.2**
VOIR		**6.68**	**342**	P	**Pn**	**11 38 19.3**	**+0.2**
ODBI	**Odobesti**	**6.69**	**355**	⇑P	**Pn**	**11 38 20.3**	**+1.1**
VLDR	**Vladesti**	**6.75**	**1**	⇑P	**Pn**	**11 38 20.7**	**+0.7**
PANC	**Panciu**	**6.80**	**356**	⇑P	**Pn**	**11 38 21.3**	**+0.7**
PLOR	**Plostina**	**6.82**	**353**	⇑P	**Pn**	**11 38 21.7**	**+0.8**
PLOR	**Plostina**	**6.82**	**353**	P	**Pn**	**11 38 21.7**	**+0.8**
VRI	**Vrincioaia**	**6.82**	**353**	⇑P	**Pn**	**11 38 22.2**	**+1.2**
VRI	**Vrincioaia**	**6.82**	**353**	P	**Pn**	**11 38 22.2**	**+1.2**
COVR	**Voineasa-Covas**	**6.86**	**350**	⇑P	**Pn**	**11 38 22.9**	**+1.3**
SEV	**Sevastopol'**	**6.94**	**36**	⇑*e*P	**Pn**	**11 38 22.0**	**-0.6**
SEV				*e*S	**Sn**	**11 39 36.6**	**-5.3**
SEV	**Sevastopol'**	**6.94**	**36**	smax	smax	11 37 40.9	
	comp=E,24nm,0.4s						
SEV				⇑*e*P	**Pn**	**11 38 22.0**	**-0.6**
SEV				pmax	pmax	11 38 32.7	
	comp=Z,24nm,0.5s						
SEV				*e*S	**Sn**	**11 39 36.6**	**-5.3**
SEV				smax	smax	11 39 40.9	
	comp=N,20nm,0.4s						
LOT	**Lotru**	**7.05**	**336**	⇑P	**Pn**	**11 38 24.8**	**+0.6**
HERR	**Herculane**	**7.08**	**327**	⇓P	**Pn**	**11 38 25.7**	**+1.2**
TURR	**Turia**	**7.09**	**349**	⇑P	**Pn**	**11 38 26.2**	**+1.5**
DOPR	**Dopca**	**7.11**	**346**	⇑P	**Pn**	**11 38 25.8**	**+0.8**
YAL	**Yalta**	**7.13**	**39**	*e*P	**Pn**	**11 38 24.5**	**-0.7**
YAL				*e*S	**Sn**	**11 39 41.6**	**-4.9**
YAL	**Yalta**	**7.13**	**39**	smax	smax	11 37 45.4	
	comp=E,21nm,0.2s						
YAL				*e*P	**Pn**	**11 38 24.5**	**-0.7**
YAL				pmax	pmax	11 38 32.9	
	comp=Z,18nm,0.3s						
YAL				*e*S	**Sn**	**11 39 41.6**	**-4.9**
YAL				smax	smax	11 39 45.4	
	comp=N,22nm,0.3s						
TARU	**Tarkhankut**	**7.16**	**27**	smax	smax	11 37 45.8	
	comp=E,34nm,0.6s						
TARU				*e*P	**Pn**	**11 38 24.8**	**-0.8**
TARU				pmax	pmax	11 38 28.9	
	comp=Z,28nm,0.3s						
TARU				*e*S	**Sn**	**11 39 43.6**	**-3.5**
TARU				smax	smax	11 39 45.8	

Sta	Name	Dist	Az	Phase	ID	Time	Res
	comp=N,59nm,0.5s						
OZUR		**7.17**	**348**	⇓P	**Pn**	**11 38 26.7**	**+0.9**
MDVR	**Moldovita**	**7.32**	**323**	⇓P	**Pn**	**11 38 27.3**	**-0.5**
GZR	**Gura Zlata**	**7.35**	**331**	⇑P	**Pn**	**11 38 28.2**	**-0.1**
GZR	**Gura Zlata**	**7.35**	**331**	P	**Pn**	**11 38 28.2**	**-0.1**
PDG	**Podgorica**	**7.36**	**300**		**Pn**	**11 38 30.3**	**+1.9**
PDG	**Podgorica**	**7.36**	**300**	⇓P	**Pn**	**11 38 28.6**	**+0.3**
ALU	**Alushta**	**7.40**	**39**	*e*P	**Pn**	**11 38 28.1**	**-0.7**
ALU				*e*S	**Sn**	**11 39 49.2**	**-3.8**
ALU	**Alushta**	**7.40**	**39**	smax	smax	11 37 53.6	
	comp=E,18nm,0.5s						
ALU				*e*P	**Pn**	**11 38 28.1**	**-0.7**
ALU				pmax	pmax	11 38 34.5	
	comp=Z,9.0nm,0.3s						
ALU				*e*S	**Sn**	**11 39 49.2**	**-3.8**
ALU				smax	smax	11 39 53.6	
	comp=N,25nm,0.3s						
DNZ2	**Donuzlav2**	**7.41**	**30**	smax	smax	11 37 50.2	
	comp=E,21nm,0.3s						
DNZ2				*e*P	**Pn**	**11 38 28.0**	**-1.0**
DNZ2				pmax	pmax	11 38 31.5	
	comp=Z,24nm,0.5s						
DNZ2				*e*S	**Sn**	**11 39 48.2**	**-5.2**
DNZ2				smax	smax	11 39 50.2	
	comp=N,22nm,0.4s						
SIM	**Simferopol'**	**7.46**	**36**	*e*P	**Pn**	**11 38 29.3**	**-0.4**
SIM				*e*		11 39 49.0	
SIM				pmax	pmax		
	comp=Z,33nm,0.6s						
SIM				smax	smax		
	comp=N,155nm,1.0s						
SIM				smax	smax		
	comp=E,281nm,1.3s						
SIM	**Simferopol'**	**7.46**	**36**	smax	smax	11 37 58.8	
	comp=E,283nm,1.5s						
SIM				*e*P	**Pn**	**11 38 29.5**	**-0.2**
SIM				pmax	pmax	11 38 38.0	
	comp=Z,70nm,0.4s						
SIM				*e*S	**Sn**	**11 39 51.5**	**-3.1**
SIM				smax	smax	11 39 58.8	
	comp=N,256nm,1.2s						
TESR	**Tescani**	**7.47**	**353**	⇓P	**Pn**	**11 38 30.2**	**+0.3**
TESR	**Tescani**	**7.47**	**353**	P	**Pn**	**11 38 29.7**	**-0.2**
	comp=N,0.2nmcomp=N,1µmcomp=N,52nm,0.7s						
DEV	**Deva**	**7.72**	**333**	⇑P	**Pn**	**11 38 34.1**	**+0.7**
DEV	**Deva**	**7.72**	**333**	P	**Pn**	**11 38 34.0**	**+0.7**
SUDU	**Sudak**	**7.84**	**40**	⇓*e*P	**Pn**	**11 38 34.3**	**-0.7**
SUDU				*e*S	**Sn**	**11 39 59.9**	**-4.0**
SUDU	**Sudak**	**7.84**	**40**	⇓*e*P	**Pn**	**11 38 34.3**	**-0.7**
SUDU				pmax	pmax	11 38 51.7	
	comp=Z,35nm,0.4s						
SUDU				*e*S	**Sn**	**11 39 59.9**	**-4.0**
SUDU				smax	smax	11 40 04.1	
	comp=N,63nm,0.4s						
SUDU				smax	smax	11 40 04.1	
	comp=E,28nm,0.3s						
BIZ	**Bicaz**	**7.95**	**351**	⇑P	**Pn**	**11 38 37.6**	**+1.1**
BZS	**Buzias**	**8.01**	**327**	⇑P	**Pn**	**11 38 36.9**	**-0.4**
BZS	**Buzias**	**8.01**	**327**	P	**Pn**	**11 38 36.8**	**-0.4**
MARR	**Marisel-Cluj**	**8.35**	**337**	⇑P	**Pn**	**11 38 42.8**	**+0.7**
DRGR		**8.58**	**335**	⇓P	**Pn**	**11 38 45.8**	**+0.5**
DRGR		**8.58**	**335**	P	**Pn**	**11 38 45.7**	**+0.5**
MMAI	**Mount Meron Ar**	**8.58**	**133**	Pn	**Pn**	**11 38 44.1**	**-1.2**
	comp=E,6.4nm,0.3s,baz=320,slow=15,SNR=9.9						
MMAI				LR	LR	11 42 32.1	
	comp=E,88nm,20.4s,baz=296,slow=41						
	comp=E,2.6nm,0.3s						
TIP	**Timpagrande**	**8.66**	**274**	Pn	**Pn**	**11 38 46.8**	**+0.5**
BURAR	**Bucovina Array**	**8.74**	**348**		**Pn**	**11 38 48.1**	**+0.7**
BURAR	**Bucovina Array**	**8.74**	**348**	⇑P	**Pn**	**11 38 49.1**	**+1.7**
BURAR	**Bucovina Array**	**8.74**	**348**	P	**Pn**	**11 38 49.0**	**+1.7**
BUR08	**Bucovina Ar. S**	**8.77**	**348**		**Pn**	**11 38 48.9**	**+1.1**
SORM	**Soroca**	**9.04**	**2**	P	**Pn**	**11 38 49.2**	**-2.2**
	comp=E,17nm,0.8s						
ACER	**Acerenza**	**9.34**	**284**		**Pn**	**11 38 56.4**	**+0.8**
CUC	**Castrocucco**	**9.38**	**279**		**Pn**	**11 38 57.6**	**+1.5**
MORH	**Mrgy, Hungar**	**9.85**	**319**	⇓P	**Pn**	**11 39 02.3**	**-0.2**
MORH	**Mrgy, Hungar**	**9.85**	**319**	P	**Pn**	**11 39 01.5**	**-1.0**
	comp=E,15nm,0.8s						
SOC	**Sochi**	**9.95**	**59**	*e*P	**Pn**	**11 39 03.3**	**-0.6**
SOC				*e*		11 40 56.6	
SOC				MLR	MLR		
	comp=Z,172nm,15.0s						
ASF	**Jabal al Asfar**	**10.06**	**131**	Pn	**Pn**	**11 39 04.7**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=154,slow=22,SNR=7.2						
ASF				LR	LR	11 43 32.0	
	comp=Z,98nm,21.9s,baz=0.8,slow=41						
	comp=Z,2.3nm,0.5s						
PAOL	**Paolisi**	**10.40**	**285**		**Pn**	**11 39 10.3**	**+0.1**
RAFF	**Raffo Rosso**	**10.82**	**264**	Pn	**Pn**	**11 39 14.9**	**-1.0**
LUBAR	**Lubar, Ukraine**	**10.83**	**360**	P	**Pn**	**11 39 15.1**	**-0.8**
EIL	**Elat**	**11.05**	**146**	Pn	**Pn**	**11 39 16.0**	**-3.1**
	comp=Z,1.5nm,0.3s,baz=290,slow=7.5,SNR=5.5						
	comp=Z,4.7nm,0.4s						
MPLH	**Magyarpolny**	**11.06**	**320**	P	**Pn**	**11 39 17.9**	**-1.1**
	comp=Z,47nm,1.1s						
AK07	**Malin Array Si**	**11.49**	**4**	P	**Pn**	**11 39 22.7**	**-2.3**
AK10	**Malin Array Si**	**11.54**	**4**	P	**Pn**	**11 39 23.9**	**-1.8**
AK09	**Malin Array Si**	**11.56**	**4**	P	**Pn**	**11 39 23.9**	**-2.0**
AK08	**Malin Array Si**	**11.58**	**4**	P	**Pn**	**11 39 24.5**	**-1.6**
AK17	**Malin Array Si**	**11.62**	**4**	P	**Pn**	**11 39 24.4**	**-2.3**
AK01	**Malin Array Si**	**11.63**	**4**	P	**Pn**	**11 39 24.7**	**-2.2**
KIEV	**Kiev**	**11.64**	**4**	Pn	**Pn**	**11 39 25.8**	**-1.1**
KIEV	**Kiev**	**11.64**	**4**	P	**Pn**	**11 39 25.8**	**-1.1**
AKASG	**Malin Array Be**	**11.64**	**4**	Pn	**Pn**	**11 39 25.0**	**-2.0**
	comp=Z,1.1nm,0.3s,baz=188,slow=12,SNR=5.6						
AKASG				Sn	**Sn**	**11 41 41.2**	**+3.9**
	comp=Z,1.0nm,0.3s,baz=192,slow=25,SNR=4.9						
AKASG				LR	LR	11 43 43.3	
	comp=Z,140nm,18.6s,baz=227,slow=36						
	comp=Z,0.4nm,0.3s						
AKASG	**Malin Array Be**	**11.64**	**4**	*i* P	**Pn**	**11 39 28.2**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**11.64**	**4**	Pn	**Pn**	**11 39 25.7**	**-1.3**
AKBB	**Malin Array Si**	**11.64**	**4**	⇑*e*P	**Pn**	**11 39 26.0**	**-1.0**
AK19	**Malin Array Si**	**11.65**	**4**	P	**Pn**	**11 39 25.1**	**-2.1**
AK18	**Malin Array Si**	**11.66**	**4**	P	**Pn**	**11 39 25.2**	**-2.0**
AK04	**Malin Array Si**	**11.66**	**4**	P	**Pn**	**11 39 25.7**	**-1.6**
AK03	**Malin Array Si**	**11.67**	**4**	P	**Pn**	**11 39 25.3**	**-2.1**
NRCA	**Norcia**	**11.78**	**293**	Pn	**Pn**	**11 39 28.4**	**-0.7**
MODS	**Modra-Piesok**	**12.03**	**324**	*e*PN	Pn	11 39 24.5	-7.9
MODS	**Modra-Piesok**	**12.03**	**324**	*e*P	Pn	11 39 43.2	+11
RONA	**Rosalia, Austr**	**12.04**	**319**	*e*Pn	**Pn**	**11 39 31.8**	**-0.7**
	comp=Z,1.9nm,0.5s						
KIV	**Kislovodsk**	**12.10**	**62**	*e*P	**Pn**	**11 39 34.7**	**+1.3**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,36nm,13.0s						
KBZ	**Khabaz**	**12.17**	**63**	LR	LR	11 44 13.0	
	comp=Z,122nm,21.7s,baz=253,slow=37						
KBZ	**Khabaz**	**12.17**	**63**	⇑*e*P	**Pn**	**11 39 34.9**	**+0.6**
OBKA	**Obir**	**12.28**	**311**	*e*P	**Pn**	**11 39 39.5**	**+3.6**
	comp=Z,0.1nm,0.1s						
MURB	**Monte Urbino**	**12.31**	**295**	Pn	**Pn**	**11 39 37.7**	**+1.5**
RNPP8	**Varash**	**12.33**	**354**	P	**Pn**	**11 39 37.4**	**+1.1**
CONA	**Conrad Observa**	**12.41**	**319**	*e*Pn	**Pn**	**11 39 37.4**	**-0.2**
	comp=Z,1.9nm,0.5s						
VRAC	**Vranov**	**13.02**	**325**	LR	LR	11 45 55.0	
	comp=Z,96nm,18.4s,baz=168,slow=42						
GNI	**Garni**	**13.03**	**80**	LR	LR	11 44 54.0	
	comp=Z,248nm,19.7s,baz=280,slow=38						
ABTA	**Abfaltersbach**	**13.61**	**309**	*e*P	P	11 39 58.2	-4.9
	comp=Z,2.5nm,0.8s						
GERES	**GERESS Array B**	**14.10**	**318**	Pn	**Pn**	**11 40 01.0**	**+0.3**
	baz=153,slow=12,SNR=4.8						
GERES				LR	LR	11 45 29.7	
	comp=Z,94nm,20.0s,baz=316,slow=37						
	comp=Z,0.8nm,0.6s						
PRMA	**PARMA**	**14.26**	**299**	Pn	**Pn**	**11 40 04.0**	**+1.3**
WTTA	**Wattenberg**	**14.38**	**310**	*e*P	**P**	**11 40 08.4**	**-3.4**
	comp=Z,1.5nm,0.4s						
SQTA	**Sankt Quirin**	**14.62**	**309**	*e*P	**P**	**11 40 12.1**	**-2.3**
	comp=Z,0.7nm,0.3s						
MOTA	**Moosalm**	**14.74**	**309**	*e*P	**P**	**11 40 14.7**	**-1.0**
	comp=Z,1.1nm,0.3s						
FETA	**Feichten**	**14.82**	**308**	*e*P	**P**	**11 40 15.3**	**-1.4**
	comp=Z,0.5nm,0.4s						
KEST	**Kesra**	**15.12**	**263**	Pn	**Pn**	**11 40 14.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=264,slow=1.1,SNR=5.8						
	comp=Z,1.0nm,0.4s						
DAVOX	**Davos/Dischmat**	**15.25**	**306**	Pn	**Pn**	**11 40 17.1**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=124,slow=12,SNR=8.2						
DAVOX				LR	LR	11 46 43.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,134nm,21.2s,baz=78,slow=40						
	comp=Z,0.4nm,0.4s						
MNK	**Minsk**	**15.41**	**360**	*i* P	**Pn**	**11 40 17.7**	**-0.6**
	comp=E,14nm,0.9s						
MNK				*i* P	**Pn**	**11 40 17.7**	**-0.6**
	comp=N,19nm,0.9s						
MNK				*i* P	**Pn**	**11 40 17.7**	**-0.6**
	comp=Z,8.0nm,0.9s,baz=180						
MNK				*i* PP	**PnPn**	**11 40 26.0**	**-0.5**
MNK				*i* PPP	PPP	11 40 34.3	
MNK				*i* S	**Sn**	**11 43 08.9**	**-0.3**
MNK				*i* SS	**S**	**11 43 23.3**	**-2.2**
MNK				*i* SSS	SSS	11 43 35.9	
MNK				*i* LQ	LQ	11 44 51.7	
MNK				*i* LR	LR	11 45 49.7	
MNK				*i* LRM	MLR	11 47 01.9	
	comp=N,335nm,24.6s						
MNK				*i* LRM	MLR	11 47 02.6	
	comp=E,225nm,18.3s						
MNK				*i* LRM	MLR	11 47 02.6	
	comp=Z,50nm,11.5s						
MNK	**Minsk**	**15.41**	**360**	*i* P	**Pn**	**11 40 17.6**	**-0.6**
MNK				*i* S	**Sn**	**11 43 08.9**	**-0.3**
MNK				pmax	pmax		
	comp=E,14nm,0.9s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				MLR	MLR		
	comp=N,335nm,25.0s						
MNK				MLR	MLR		
	comp=E,225nm,18.0s						
MNK				MLR	MLR		
	comp=Z,50nm,12.0s						
TUE	**Stuetta**	**15.47**	**304**	Pn	**Pn**	**11 40 18.5**	**-0.7**
CLL	**Collm**	**16.07**	**324**	*i* P	**P**	**11 40 29.8**	**-0.4**
CLL	**Collm**	**16.07**	**324**	*i* P	**P**	**11 40 29.8**	**-0.4**
SENIN	**Lac Senin/Sane**	**16.76**	**302**		**P**	**11 40 37.5**	**-0.7**
OBN	**Obninsk**	**17.06**	**17**	⇓*e*P	**Pn**	**11 40 39.0**	**-0.3**
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
OBN				MLR	MLR		
	comp=Z,75nm,17.0s						
MOS	**Moscow**	**17.88**	**18**	*e*P	**Pn**	**11 40 48.0**	**-1.5**
BELG	**Belogornoye**	**19.06**	**39**	⇑*e*P	**P**	**11 41 01.2**	**-2.0**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VSU	**Vasula**	**19.40**	**358**	⇑*e*P	**P**	**11 41 06.9**	**0.0**
VSU				pmax	pmax		
	comp=Z,51nm,1.4s						
FINES	**FINESS Array B**	**22.40**	**358**	P	**P**	**11 41 39.5**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=176,slow=6.8,SNR=6.2						
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**22.40**	**358**	P	**P**	**11 41 39.1**	**-0.2**
FINES	**FINESS Array B**	**22.40**	**358**	*i* P	**P**	**11 41 42.7**	**+3.3**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HFS	**Hagfors**	**22.89**	**342**	P	**P**	**11 41 44.0**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=119,slow=12,SNR=6.2						
	comp=Z,2.2nm,0.8s						
HFS	**Hagfors**	**22.89**	**342**	P	**P**	**11 41 44.0**	**-0.5**
KLMR	**Klimovskoe**	**22.96**	**15**	*e*P	**P**	**11 41 45.4**	**+0.2**
KLMR				*e*		11 45 34.4	
KLMR				S	**S**	**11 45 57.2**	**+1.6**
KLMR				pmax	pmax		
	comp=Z,19nm,1.0s						
NAO01	**NORSAR Array S**	**24.22**	**340**	P	**P**	**11 41 59.4**	**+1.7**
NOA	**NORSAR Array B**	**24.30**	**340**	P	**P**	**11 42 00.2**	**+1.8**
	comp=Z,1.6nm,0.9s,baz=146,slow=8.9,SNR=4.3						
NOA				LR	LR	11 52 09.9	
	comp=Z,71nm,18.5s,baz=155,slow=38						
	comp=Z,1.6nm,0.9s						
ESDC	**Sonseca Array**	**24.57**	**282**	P	**P**	**11 42 01.8**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=71,slow=12,SNR=7.4						
	comp=Z,0.6nm,0.9s						
AB31	**Akbulak array**	**24.96**	**55**	P	**P**	**11 42 06.4**	**+2.0**
AB31				IAmb	IAmb	11 42 35.1	
	comp=Z,2.5nm,0.8s						
ABKAR	**Akbulak array**	**24.96**	**55**	P	**P**	**11 42 05.6**	**+1.2**
ARTI	**Arti**	**26.50**	**39**	*c i*P	**P**	**11 42 17.3**	**-1.1**
ARTI				S	**S**	**11 46 51.6**	**-1.0**
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BORK	**Borovoye**	**32.06**	**50**	P	**P**	**11 43 07.7**	**-0.1**
BORK				IAmb	IAmb	11 43 19.5	
	comp=Z,1.6nm,0.7s						
BORK	**Borovoye**	**32.06**	**50**	⇑*e*P	**P**	**11 43 07.4**	**-0.4**
BORK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**32.10**	**50**	LR	LR	11 58 33.4	
	comp=Z,68nm,18.6s,baz=288,slow=41						
TORD	**Torodi Ar. Bea**	**34.71**	**229**	P	**P**	**11 43 30.2**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=34,slow=7.0,SNR=8.7						
	comp=Z,1.6nm,0.9s						
KURBB	**Kurchatov Arra**	**37.01**	**55**	P	**P**	**11 43 50.3**	**-0.2**
	comp=Z,2.4nm,0.2s,baz=266,slow=9.1,SNR=1.7						
	comp=Z,2.4nm,0.2s						
KURK	**Kurchatov**	**37.06**	**55**	⇑*e*P	**P**	**11 43 49.7**	**-1.3**
KURK				pmax	pmax		
	comp=Z,14nm,3.3s						
BORG	**Borgarnes**	**38.25**	**328**	LR	LR	12 00 14.6	
	comp=Z,29nm,20.7s,baz=66,slow=37						
MK31	**Makanchi Array**	**39.86**	**61**	⇑*e*P	**P**	**11 44 14.7**	**0.0**
MKAR	**Makanchi Array**	**39.86**	**61**	P	**P**	**11 44 14.0**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=282,slow=6.1,SNR=8.5						
MKAR				LR	LR	12 02 51.2	
	comp=Z,56nm,19.4s,baz=270,slow=39						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**39.86**	**61**	P	**P**	**11 44 14.3**	**-0.4**
ZALV	**Zalesovo Beam**	**40.74**	**49**	P	**P**	**11 44 20.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=274,slow=10,SNR=5.0						
ZALV				LR	LR	12 04 03.5	
	comp=Z,47nm,18.1s,baz=316,slow=40						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**40.74**	**49**	*i* P	**P**	**11 44 25.8**	**+4.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LSZ	**Lusaka**	**54.09**	**180**	LR	LR	12 09 17.3	
	comp=Z,70nm,18.6s,baz=141,slow=36						
SONM	**Songino Array**	**55.34**	**53**	P	**P**	**11 46 16.3**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=306,slow=5.2,SNR=2.6						
SONM				LR	LR	12 12 17.0	
	comp=Z,49nm,18.6s,baz=47,slow=39						
	comp=Z,0.2nm,0.5s						
KUQ	**Kuujjuuaa**	**60.87**	**323**	P	**P**	**11 46 55.7**	**+2.4**
KUQ				IAmb	IAmb	11 46 57.0	
	comp=Z,3.0nm,0.9s						
YAK	**Yakutsk**	**61.38**	**32**	⇑*e*P	**P**	**11 46 57.9**	**+1.1**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SCHQ	**Schefferville**	**61.63**	**319**	P	**P**	**11 47 00.3**	**+1.6**
	comp=Z,4.4nm,1.0s,baz=107,slow=1.4,SNR=4.0						
	comp=Z,4.4nm,1.0s						
HHC	**Hu-ho-hao-te**	**61.68**	**59**	*e*P	**P**	**11 46 59.3**	**-0.1**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PZH	**PanZhiHua**	**61.78**	**78**	P	**P**	**11 47 01.3**	**+1.0**
CMAR	**Chiang Mai Arr**	**64.05**	**87**	LR	LR	12 19 59.7	
	comp=Z,23nm,19.4s,baz=195,slow=41						
KLR	**Kul'dur**	**69.38**	**43**	LR	LR	12 22 52.3	
	comp=Z,10nm,18.1s,baz=330,slow=40						
MA2	**Magadan**	**70.99**	**27**	LR	LR	12 20 20.7	
	comp=Z,40nm,19.2s,baz=119,slow=37						
G31M	**Satah River**	**73.43**	**353**	P	**P**	**11 48 13.6**	**+0.7**
G31M				IAmb	IAmb	11 48 31.6	
	comp=Z,6.8nm,1.4s						
KSRS	**Korea Array**	**74.19**	**55**	P	**P**	**11 48 19.4**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=302,slow=5.8,SNR=5.9						
KSRS				LR	LR	12 24 57.9	
	comp=Z,38nm,18.0s,baz=330,slow=39						
	comp=Z,1.4nm,0.8s						
YKA	**Yellowknife Ar**	**74.36**	**343**	P	**P**	**11 48 20.6**	**+2.1**
	comp=Z,0.8nm,0.9s,baz=24,slow=6.3,SNR=11						
	comp=Z,0.8nm,0.9s						
YKA	**Yellowknife Ar**	**74.36**	**343**	P	**P**	**11 48 20.2**	**+1.7**
YKA	**Yellowknife Ar**	**74.36**	**343**	*i* P	**P**	**11 48 21.2**	**+2.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SDMD	**Soldier's Deli**	**75.89**	**309**	P	**P**	**11 48 28.4**	**+0.6**
JNU	**Nakatsue**	**78.76**	**56**	LR	LR	12 29 20.8	
	comp=Z,25nm,18.5s,baz=344,slow=40						
JOW	**Kunigami**	**80.98**	**63**	LR	LR	12 29 33.9	
	comp=Z,26nm,18.1s,baz=359,slow=39						
NVL	**N'lazarevskaya**	**110.17**	**186**	*i* PKIKP	**PKiKP**	**11 55 12.1**	**+0.3**
NVL				*e*		11 55 45.8	
NVL				*e*PPP	PPP	11 58 04.9	
NVL				*e*		12 02 23.7	
NVL				*e*SS	SS	12 11 13.2	+0.3
NVL				*e*SSS	SSS	12 15 19.9	
NVL				pmax	pmax		
	comp=Z,11nm,0.9s						
NVL				MLR	MLR		
	comp=Z,634nm,20.0s						

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*SDD **02** 11:45:04.0±2.3, 17°.81N×66°.96W, h20km±23km, MD3.5, ML3.1, MW3.6, Presumed earthquake*
*NEIC **02** 11:45:05.1±1.0, 17°.88N±0°.03×66°.91W±0°.01, h10km±1km, ML3.5/35, Md3.3/6(RSPR), Error ellipse: s-maj=4.9km s-min=2.8km az=3.0*
*RSPR **02** 11:45:05.7, 17°.93N×66°.91W, h9km, MD3.2/6*
ISC 02 11:45:04.9±1.0**, 17°.90N**±0°.06×**66°.90W**±0°.02**, h15**km±5km**, n44,** σ**0.81**/61**, 11C-10D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**16**		**Pg**	**11 45 07.8**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.07**	**16**	⇑*i*P	**Pg**	**11 45 07.8**	**-0.1**
MLPR	**Magueyes Islan**	**0.15**	**296**		**Pg**	**11 45 08.8**	**0.0**
MLPR				IAML		11 45 12.1	
	17μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.22**	**298**		**Pg**	**11 45 10.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.22**	**298**	IAML		11 45 13.9	
	7μm,0.4s						
CRPR				IAML		11 45 14.3	
	6μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.22**	**298**	⇑*e*Pg	**Pg**	**11 45 10.2**	**+0.2**
CRPR				⇑*e*Sg	**Sg**	**11 45 12.5**	**-0.8**
CRPR				IAML		11 45 14.2	
	comp=N,5μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.22**	**298**	⇑*i*P	**Pg**	**11 45 10.2**	**+0.2**
CRPR				*e*S	**Sg**	**11 45 13.6**	**+0.3**
OBIP	**Obispado Ponce**	**0.31**	**64**		**Pg**	**11 45 11.7**	**+0.2**
OBIP	**Obispado Ponce**	**0.31**	**64**		**Sb**	**11 45 17.1**	**-0.1**
OBIP	**Obispado Ponce**	**0.31**	**64**	⇓*i*P	**Pg**	**11 45 11.7**	**+0.2**
OBIP				*e*S	**Sb**	**11 45 17.1**	**-0.1**
LSP	**Las Mesas**	**0.32**	**327**		**Pg**	**11 45 11.9**	**+0.2**
LSP	**Las Mesas**	**0.32**	**327**	⇓*i*P	**Pg**	**11 45 11.9**	**+0.2**
CELP	**Cerrillos**	**0.35**	**61**		**Pg**	**11 45 12.3**	**+0.2**
CELP				IAML		11 45 18.7	
	comp=N,5μm,0.2s						
CELP				IAML		11 45 18.8	
	comp=N,5μm,0.2s						
PRSN	**Puerto Rico Se**	**0.39**	**324**		**Pg**	**11 45 12.9**	**+0.1**
PRSN				IAML		11 45 20.9	
	comp=N,9μm,0.3s						
PRSN				IAML		11 45 21.7	
	comp=N,6μm,0.4s						
PRSN	**Puerto Rico Se**	**0.39**	**324**		**Sg**	**11 45 18.8**	**+0.6**
PRSN	**Puerto Rico Se**	**0.39**	**324**	*e*Pg	**Pg**	**11 45 13.1**	**+0.2**
PRSN				⇑*e*Sg	**Sb**	**11 45 20.3**	**+1.0**
PRSN				IAML		11 45 20.9	
	comp=N,5μm,0.3s						
PRSN	**Puerto Rico Se**	**0.39**	**324**	⇑*i*P	**Pg**	**11 45 12.9**	**+0.1**
PRSN				*e*S	**Sg**	**11 45 18.8**	**+0.6**
UUPR	**Utuado, UPR, P**	**0.39**	**26**		**Pg**	**11 45 12.8**	**0.0**
AGPR	**Aguadilla, PR**	**0.60**	**340**		**Pg**	**11 45 16.5**	**-0.1**
AGPR				IAML		11 45 25.2	
	comp=N,3μm,0.4s						
AGPR	**Aguadilla, PR**	**0.60**	**340**	⇑*e*Pg	**Pg**	**11 45 16.6**	**-0.1**
AGPR				⇓*e*Sg	**Sg**	**11 45 25.1**	**+0.4**
AGPR				IAML		11 45 29.4	
	comp=N,1μm,0.3s						
AGPR	**Aguadilla, PR**	**0.60**	**340**	⇑*i*P	**Pg**	**11 45 16.5**	**-0.1**
AGPR				*e*S	**Sg**	**11 45 24.5**	**-0.1**
ECPR	**Experimental S**	**0.66**	**51**		**Pg**	**11 45 17.6**	**-0.3**
ECPR				IAML		11 45 28.3	
	comp=N,4μm,0.2s						
ECPR	**Experimental S**	**0.66**	**51**	⇓*i*P	**Pg**	**11 45 17.5**	**-0.3**
ECPR				*e*S	**Sg**	**11 45 26.7**	**+0.1**
IDE	**Isla Desecheo**	**0.73**	**312**		**Pg**	**11 45 18.5**	**-0.6**
IDE					**Sg**	**11 45 28.8**	**+0.1**
IDE	**Isla Desecheo**	**0.73**	**312**	⇓*e*P	**Pg**	**11 45 18.5**	**-0.6**
IDE				*e*S	**Sg**	**11 45 28.8**	**+0.1**
SJG	**San Juan**	**0.74**	**74**		**Pg**	**11 45 19.0**	**-0.4**
SJG				IAML		11 45 30.1	
	comp=N,2μm,0.5s						
SJG	**San Juan**	**0.74**	**74**	⇑*e*Pg	**Pg**	**11 45 19.3**	**-0.1**
SJG				⇑*e*Sg	**Sb**	**11 45 29.8**	**+0.3**
SJG	**San Juan**	**0.74**	**74**	⇓*i*P	**Pg**	**11 45 19.1**	**-0.4**
SJG				*e*S	**Sg**	**11 45 29.6**	**+0.4**
PDPR	**Patillas Dam,**	**0.84**	**82**		**Pg**	**11 45 20.9**	**-0.4**
PDPR				IAML		11 45 33.6	
	comp=N,1μm,0.4s						
GCPR	**Guaynabo City**	**0.88**	**62**		**Pb**	**11 45 21.1**	**-0.7**
GCPR	**Guaynabo City**	**0.88**	**62**		**Sb**	**11 45 32.8**	**-0.6**
GCPR	**Guaynabo City**	**0.88**	**62**	⇑*i*P	**Pb**	**11 45 21.2**	**-0.7**
GCPR				*e*S	**Sb**	**11 45 32.8**	**-0.6**
HUMP	**Col San Antoni**	**1.03**	**76**		**Pb**	**11 45 23.8**	**-0.6**
HUMP	**Col San Antoni**	**1.03**	**76**		**Sb**	**11 45 37.6**	**-0.1**
HUMP	**Col San Antoni**	**1.03**	**76**	⇓*e*P	**Pb**	**11 45 23.6**	**-0.8**
HUMP				*e*S	**Sb**	**11 45 37.6**	**-0.1**
PCDR	**Punta Cana, DR**	**1.53**	**294**	*e*Pg	**Pn**	**11 45 30.3**	**-1.5**
PCDR				⇑*e*Sg	**Sn**	**11 45 50.4**	**-1.0**
PCDR				IAML		11 46 05.6	
	comp=N,280nm,0.8s						
CUPR	**Culebra, Puert**	**1.59**	**75**		**Pb**	**11 45 33.6**	**-0.4**
HIDR	**Higuey Centro**	**1.86**	**292**	⇓*e*Pg	**Pn**	**11 45 35.9**	**-0.3**
HIDR				⇓*e*Sg	**Sn**	**11 45 59.4**	**0.0**
HIDR				IAML		11 46 09.6	
	comp=N,134nm,0.2s						
MIDR	**Miches**	**2.31**	**298**	*e*Pg	**Pn**	**11 45 41.7**	**-0.7**
MIDR				IAML		11 46 27.4	
	comp=N,52nm,0.5s						
DR12	**Loma Pena Alta**	**2.51**	**291**		**Pn**	**11 45 47.4**	**+2.0**
HATOM	**Hato Mayor del**	**2.52**	**291**	⇑*e*Pg	**Pn**	**11 45 47.2**	**+1.9**
HATOM				⇓*e*Sg	**Sb**	**11 46 19.4**	**-1.2**
HATOM				IAML		11 46 32.0	
	comp=N,68nm,0.6s						
SMDR	**Samana, DR**	**2.57**	**303**	⇑*e*Pg	**Pb**	**11 45 49.1**	**-1.6**
SMDR				⇑*e*Sg	**Sn**	**11 46 19.6**	**+2.5**
SMDR				IAML		11 46 33.9	
	comp=N,66nm,0.7s						
BANI	**BANI**	**3.32**	**279**	Pn	**Pn**	**11 45 58.6**	**+2.1**
BANI	**BANI**	**3.32**	**279**	⇑*e*Pg	**Pn**	**11 45 58.4**	**+1.9**
BANI				IAML		11 47 08.5	
	comp=N,66nm,1.1s						

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*NEIC **02** 11:48:04.4±1.6, 20°.9S±0°.1×178°.6W±0°.2, h585km±11km, mb4.2/14, Error ellipse: s-maj=28.4km s-min=6.9km az=133.0*
*IDC **02** 11:48:10.9±5.5, 20°.45S×179°.09W, h656km±65km, mb2.9/6, mbtmp3.9/6, Error ellipse: s-maj=104.7km s-min=26.1km az=155.0*
ISC 02 11:48:07.0±0.8**, 20°.9S**±0°.2×**178°.9W**±0°.1**, h619**km**, n26,** σ**1.17**/25**, mb3.9**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.29**	**317**	P	**P**	**11 49 33.2**	**-2.8**
MARNC	**Mare, Loyalty**	**12.23**	**265**	P	**P**	**11 50 47.0**	**-0.9**
BKZ	**Black Stump Fm**	**18.63**	**191**	P	**P**	**11 51 46.1**	**-1.3**
INKA	**Innaminka**	**37.30**	**251**	P	**P**	**11 54 29.9**	**+1.3**
INKA				IAmb	IAmb	11 54 39.2	
	comp=Z,4.1nm,1.3s						
BBOO	**Buckleboo**	**41.63**	**244**	P	**P**	**11 55 04.2**	**+1.1**
BBOO				IAmb	IAmb	11 55 23.8	
	comp=Z,21nm,1.4s						
ASAR	**Alice Springs**	**43.63**	**257**	P	**P**	**11 55 19.7**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=89,slow=8.0,SNR=15						
ASAR				PcP	**PcP**	**11 56 52.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=97,slow=4.3,SNR=4.7						
	comp=Z,2.0nm,0.5s						
WRAB	**Tennant Creek**	**43.73**	**263**	P	**P**	**11 55 20.0**	**+0.3**
WRAB				IAmb	IAmb	11 55 45.7	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**43.73**	**263**	P	**P**	**11 55 20.5**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=94,slow=4.6,SNR=7.7						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**43.73**	**263**	P	**P**	**11 55 19.8**	**+0.1**
JHJ2	**Mitsune**	**66.63**	**323**	P	**P**	**11 57 58.1**	**+0.4**
JMM	**Marumori**	**69.68**	**327**	P	**P**	**11 58 17.7**	**+1.7**
JSU	**Suzuyama**	**71.23**	**316**	P	**P**	**11 58 27.9**	**+2.6**
ATKA	**Atka Island**	**72.91**	**3**	P	**P**	**11 58 35.2**	**+0.8**
NVAR	**Mina Array Bea**	**81.88**	**44**	P	**P**	**11 59 23.5**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=222,slow=8.0,SNR=4.0						
	comp=Z,0.4nm,0.6s						
K05A	**Summer Lake**	**82.79**	**39**	P	**P**	**11 59 28.1**	**+0.2**
K05A				IAmb	IAmb	11 59 32.3	
	comp=Z,12nm,1.4s						
J05D	**Fort Rock, OR**	**82.93**	**38**	P	**P**	**11 59 28.1**	**-0.4**
K15K	**Wolf Creek Mou**	**84.06**	**8**	P	**P**	**11 59 32.7**	**-0.7**
K15K				IAmb	IAmb	11 59 36.4	
	comp=Z,13nm,1.4s						
L18K	**Granite Mounta**	**84.70**	**10**	P	**P**	**11 59 37.1**	**+0.5**
L18K				IAmb	IAmb	11 59 47.5	
	comp=Z,7.9nm,1.4s						
SUA	**Susitna One**	**85.13**	**13**	P	**P**	**11 59 37.9**	**-0.9**
SUA				IAmb	IAmb	11 59 52.8	
	comp=Z,6.7nm,1.2s						
TXAR	**Lajitas Array**	**87.96**	**58**	P	**P**	**11 59 53.6**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=205,slow=5.5,SNR=3.8						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**88.89**	**13**	P	**P**	**11 59 55.1**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=216,slow=5.6,SNR=6.4						
	comp=Z,0.7nm,0.9s						
PDAR	**Pinedale Array**	**89.82**	**44**	P	**P**	**12 00 01.1**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=202,slow=3.9,SNR=6.2						
	comp=Z,0.5nm,0.6s						
HFS	**Hagfors**	**139.80**	**350**	PKhKP	PKPpre	12 06 18.2	
	comp=Z,4.7nm,1.1s,baz=81,slow=9.2,SNR=5.0						
AKASG	**Malin Array Be**	**142.96**	**330**	PKP		12 06 28.2	
	comp=Z,1.3nm,0.4s,baz=44,slow=4.3,SNR=12						
BRTR	**Keskin Array B**	**146.50**	**311**	PKPbc	**PKPbc**	**12 06 39.5**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=162,slow=4.8,SNR=4.3						
GERES	**GERESS Array B**	**150.35**	**343**	PKPbc	**PKPbc**	**12 06 49.2**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=284,slow=5.4,SNR=4.8						

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*IDC **02** 11:51:16.3±2.2, 7°.00S×129°.51E, h136km±23km, mb3.5/3, mbtmp3.9/8, Error ellipse: s-maj=32.6km s-min=17.5km az=82.0*
ISC 02 11:51:14.9±0.8**, 7°.15S**±0°.06×**129°.69E**±0°.10**, h139**km**, n8,** σ**3.80**/13**, mb3.7**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.43**	**14**	P	**Pn**	**11 52 47.6**	**+0.2**
	4.2nm,0.4s,baz=199,slow=21,SNR=8.6						
SIJI				S	**Sn**	**11 53 54.8**	**-5.0**
	8.2nm,0.6s,baz=233,slow=23,SNR=5.5						
BATI	**Baumata**	**6.68**	**243**	P	**Pn**	**11 52 52.2**	**+1.4**
	15nm,0.4s,baz=97,slow=20,SNR=1.4						
BATI				S	**Sn**	**11 54 03.8**	**-2.0**
	26nm,0.5s,baz=143,slow=17,SNR=6.3						
FITZ	**Fitzroy Crossi**	**11.58**	**200**	P	**Pn**	**11 53 57.5**	**+1.4**
	2.1nm,0.5s,baz=21,slow=11,SNR=17						
FITZ				S	**Sn**	**11 55 57.3**	**-6.6**
	3.4nm,0.3s,baz=118,slow=21,SNR=8.4						
WRA	**Warramunga Arr**	**13.50**	**161**	P	**Pn**	**11 54 23.1**	**+2.1**
	1.6nm,0.8s,baz=339,slow=13,SNR=19						
WRA				S	**Sn**	**11 56 45.5**	**-4.7**
	2.6nm,0.4s,baz=333,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.92**	**167**	P	**Pn**	**11 55 07.5**	**+4.0**
	1.6nm,0.5s,baz=351,slow=11,SNR=44						
ASAR				S	**S**	**11 58 10.1**	**-2.4**
	0.7nm,0.5s,baz=353,slow=27,SNR=6.3						
STKA	**Stephens Creek**	**27.00**	**157**	P	**P**	**11 56 48.3**	**+4.4**
	0.9nm,0.5s,baz=339,slow=12,SNR=3.0						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**68.18**	**327**	P	**P**	**12 02 00.2**	**0.0**
	0.6nm,0.4s,baz=120,slow=8.1,SNR=19						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**72.47**	**329**	P	**P**	**12 02 27.0**	**+0.8**
	0.4nm,0.6s,baz=136,slow=4.0,SNR=4.3						
	0.4nm,0.6s						

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*ISK **02** 11:55:52.5, 38°.33N×38°.97E, h8km, ML2.5/9*
*AFAD **02** 11:55:53.4, 38°.29N×39°.06E, h7km±2km, ML2.4*
ISC 02 11:55:53.4±0.9**, 38°.32N**±0°.03×**39°.00E**±0°.03**, h12**km±8km**, n14,** σ**0.81**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.18**	**356**	P	**Pg**	**11 55 57.4**	**-0.2**
ELZG				IAML		11 56 00.0	
	comp=N,832nm,0.2s						
ELZG				S	**Sg**	**11 56 01.3**	**+0.8**
ELZG				IAML		11 56 02.0	
	comp=E,918nm,0.3s						
SVRC	**Sivrice-ELAZID**	**0.25**	**76**	Pg	**Pg**	**11 55 57.7**	**-1.0**
SVRC				Sg	**Sg**	**11 56 02.7**	**+0.4**
HANM	**anlurfa/Hi**	**0.74**	**187**	P	**Pg**	**11 56 07.6**	**-0.3**
AZEY	**Adyaman-Merk**	**0.78**	**230**	P	**Pb**	**11 56 09.1**	**+0.1**
AZEY				S	**Sn**	**11 56 21.6**	**-0.4**
AZEY				IAML		11 56 25.0	
	comp=N,68nm,0.7s						
AZEY				IAML		11 56 28.0	
	comp=E,57nm,0.6s						
AKCD	**Akcadag**	**0.85**	**269**	P	**Pg**	**11 56 08.4**	**-1.5**
AKCD				IAML		11 56 22.0	
	comp=N,298nm,0.6s						
AKCD				IAML		11 56 23.0	
	comp=E,257nm,0.4s						
AKCD				S	**Sb**	**11 56 23.2**	**+1.6**
URFA	**Urfa**	**0.89**	**189**	Pg	**Pg**	**11 56 09.5**	**-1.1**
URFA				Sg	**Sb**	**11 56 23.3**	**+0.7**
ARPR	**Arapgir-MALATY**	**0.93**	**326**	Pg	**Pg**	**11 56 10.3**	**-1.2**
ARPR				Sg	**Sg**	**11 56 23.7**	**0.0**
DYBB	**Diyarbakir**	**0.97**	**112**	Pg	**Pb**	**11 56 12.2**	**0.0**
DYBB				Sg	**Sn**	**11 56 26.4**	**-0.2**
SANL	**SANLIURFA_Merk**	**1.15**	**181**	P	**Pg**	**11 56 14.6**	**-0.9**
SANL				S	**Sn**	**11 56 31.0**	**+0.1**
SANL				IAML		11 56 34.0	
	comp=N,76nm,0.8s						
SANL				IAML		11 56 34.0	
	comp=E,67nm,0.5s						
ILIC	**ilic-Erzincan**	**1.18**	**343**	Pn	**Pg**	**11 56 15.1**	**-1.1**
ILIC				Sn	**Sb**	**11 56 31.7**	**+0.5**
ERZN	**Erzincan**	**1.39**	**24**	Pn	**Pn**	**11 56 18.8**	**+0.1**
GAZ	**Gaziantep**	**1.82**	**232**	Pn	**Pn**	**11 56 25.0**	**+0.3**
KMRS	**Kahramanmaras**	**1.85**	**245**	Pn	**Pn**	**11 56 25.0**	**0.0**
SARI	**SarD1z-Kayseri**	**2.03**	**273**	Pn	**Pn**	**11 56 28.0**	**+0.4**

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*IDC **02** 12:14:24.9±3.0, 5°.83S×154°.62E, h134km±30km, mb3.5/8, mbtmp4.0/10, MS3.4/1, Error ellipse: s-maj=22.6km s-min=19.3km az=151.0*
ISC 02 12:14:26.1±0.8**, 6°.0S**±0°.1×**154°.6E**±0°.1**, h150**km**, n12,** σ**1.16**/11**, mb3.9**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.29**	**124**	P	**Pn**	**12 15 57.1**	**+0.3**
	2.9nm,0.3s,baz=216,slow=18,SNR=9.1						
PMG	**Port Moresby**	**8.16**	**245**	P	**Pn**	**12 16 20.1**	**-1.6**
	64nm,0.7s,baz=56,slow=9.0,SNR=24						
DZM	**Mont Dzumac**	**19.67**	**146**	P	**Pn**	**12 18 45.3**	**-1.3**
	3.7nm,0.5s,baz=262,slow=10,SNR=8.9						
WRA	**Warramunga Arr**	**24.13**	**233**	P	**P**	**12 19 29.1**	**+0.7**
	2.7nm,0.6s,baz=54,slow=9.6,SNR=57						
	2.7nm,0.6s						
ASAR	**Alice Springs**	**26.60**	**226**	P	**P**	**12 19 51.3**	**+0.6**
	1.3nm,0.3s,baz=57,slow=9.1,SNR=87						
	1.3nm,0.3s						
STKA	**Stephens Creek**	**28.52**	**204**	P	**P**	**12 20 09.1**	**+1.5**
	0.8nm,0.3s,baz=10,slow=11,SNR=3.8						
	0.8nm,0.3s						
JCJ	**Chichijima**	**35.00**	**340**	LR	LR	12 33 25.8	
	comp=Z,59nm,20.2s,baz=31,slow=33						
CMAR	**Chiang Mai Arr**	**60.02**	**295**	P	**P**	**12 24 18.1**	**+0.5**
	0.6nm,0.4s,baz=128,slow=6.2,SNR=6.3						
	0.6nm,0.4s						
LZDM	**Lanzhou Array**	**63.37**	**315**	P	**P**	**12 24 40.8**	**+0.7**
	0.7nm,0.3s,baz=130,slow=4.6,SNR=3.7						
	0.7nm,0.3s						
SONM	**Songino Array**	**68.28**	**327**	P	**P**	**12 25 11.8**	**+0.8**
	0.5nm,0.7s,baz=143,slow=5.6,SNR=3.4						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**82.40**	**319**	P	**P**	**12 26 30.6**	**-0.9**
	0.2nm,0.5s,baz=88,slow=9.5,SNR=4.8						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**82.55**	**22**	P	**P**	**12 26 30.9**	**-1.0**
	0.5nm,0.7s,baz=254,slow=4.9,SNR=9.1						
	0.5nm,0.7s						

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*SSNC **02** 12:14:46.4±4.5, 19°.10N×80°.06W, h20km±48km, MD3.5, ML2.6, Presumed earthquake*
*JSN **02** 12:14:50.4±1.2, 18°.84N×79°.55W, h0km±739km, MW4.7, Presumed earthquake*
ISC 02 12:14:44.6±2.4**, 19°.13N**±0°.09×**80°.1W**±0°.1**, h34**km±4km**, n11,**

σ1^{s}97/19, Cuba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCCY	Blossom Villag	0.54	1	eP	Pb	12 14 55.9	0.0
LCCY				eS	Sb	12 15 03.1	-0.5
LCCY				IAML		12 15 03.8	
	comp=N,283nm,0.1s						
LCCY				IAML		12 15 05.0	
	comp=E,214nm,0.3s						
CBCY	The Bluff, Cay	0.68	27	eP	Pn	12 14 57.7	-0.2
CBCY				eS	Sb	12 15 06.4	-1.1
CBCY				IAML		12 15 06.9	
	comp=E,279nm,0.3s						
CBCY				IAML		12 15 09.8	
	comp=N,208nm,0.1s						
MTDJ	Mount Denham	2.58	110	eP	Pn	12 15 24.4	+0.3
MTDJ				eS	Sn	12 15 51.7	-2.7
MTDJ				IAML		12 15 53.5	
	comp=N,41nm,0.6s						
MTDJ				IAML		12 15 53.9	
	comp=N,39nm,0.4s						
MTDJ	Mount Denham	2.58	110	iP	Pn	12 15 24.6	+0.5
MGV	Manicaragua	2.97	2	eP	Pn	12 15 30.1	+0.7
MGV				eS	Sn	12 16 03.7	-0.2
MGV				IAML		12 16 04.6	
	comp=E,19nm,0.2s						
MGV				IAML		12 16 04.8	
	comp=N,6.6nm,0.2s						
CCCC	Cccc	3.00	46	eP	Pn	12 15 29.4	-0.4
LMGC	Las Mercedes	3.05	72	eP	Pn	12 15 31.5	+1.0
LMGC				eS	Sn	12 16 04.5	-1.4
LMGC				IAML		12 16 07.3	
	comp=E,8.0nm,0.0s						
LMGC				IAML		12 16 07.5	
	comp=N,6.5nm,0.0s						
HLGC	Holguin	4.17	64	eP	Pn	12 15 48.6	+2.6
RCC	Rio Carpintero	4.23	77	eP	Pn	12 15 48.1	+1.4
RCC				eS	Sn	12 16 32.0	-3.0
RCC				IAML		12 16 42.8	
	comp=E,11nm,1.9s						
RCC				IAML		12 16 52.9	
	comp=N,12nm,1.6s						
PINC	Pinares de May	4.27	71	eP	Pn	12 15 49.2	+2.0
PINC				eS	Sn	12 16 38.3	+2.4
PINC				IAML		12 16 38.8	
	comp=N,3.3nm,0.1s						
PINC				IAML		12 16 38.9	
	comp=E,2.5nm,0.1s						
QMBU	Quimbuelo	5.08	77	eP	Pn	12 16 02.4	+3.8
QMBU				eS	Sn	12 16 54.3	-1.8
QMBU				IAML		12 16 55.6	
	comp=E,12nm,2.0s						
QMBU				IAML		12 17 06.8	
	comp=N,7.8nm,0.9s						

IDC 02 12:17:34.5±5.6, 30°.22S×75°.81E, h0^{km}, mb3.6/4, mbtmp3.6/4, MS3.2/3, Error ellipse: s-maj=207.9km s-min=35.3km az=38.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	22.68	351	T	T	12 45 22.6	
	baz=174,slow=75,SNR=66						
H08S1	Diego Carcia H	22.68	351	T	T	12 45 25.1	
	baz=174,slow=75,SNR=54						
H08S3	Diego Garcia H	22.70	351	T	T	12 45 29.0	
	baz=174,slow=75,SNR=107						
H04N2	CROZET ISLANDS	24.55	223	T	T	12 48 25.9	
	baz=57,slow=74,SNR=458						
H04N1	CROZET ISLANDS	24.56	223	T	T	12 48 30.5	
	baz=57,slow=74,SNR=431						
H04N3	CROZET ISLANDS	24.57	223	T	T	12 48 25.4	
	baz=57,slow=74,SNR=369						
H04S1	CROZET ISLANDS	24.85	221	T	T	12 48 52.6	
	baz=53,slow=75,SNR=28						
H04S3	CROZET ISLANDS	24.86	221	T	T	12 48 52.7	
	baz=53,slow=75,SNR=32						
H04S2	CROZET ISLANDS	24.87	221	T	T	12 49 05.4	
	baz=53,slow=75,SNR=20						
H01W2	Cape Leeuwin H	32.50	108	T	T	12 58 52.7	
	baz=268,slow=74,SNR=4.4						
H01W3	Cape Leeuwin H	32.50	108	T	T	12 58 54.8	
	baz=268,slow=74,SNR=4.3						
H01W1	Cape Leeuwin H	32.51	108	T	T	12 58 56.5	
	baz=268,slow=74,SNR=4.1						
LEM	Lembang	37.85	59	LR	LR	12 37 14.2	
	comp=Z,39nm,18.1s,baz=24,slow=31						
SUR	Sutherland	46.61	253	LR	LR	12 42 47.7	
	comp=Z,25nm,18.7s,baz=265,slow=32						
KAPI	Kappang	48.36	68	LR	LR	12 42 33.7	
	comp=Z,16nm,21.6s,baz=182,slow=31						
ASAR	Alice Springs	51.73	98	P	P	12 26 44.5	+0.6
	0.5nm,0.8s,baz=250,slow=6.7,SNR=5.6						
	0.5nm,0.8s						
WRA	Warramunga Arr	53.49	93	P	P	12 26 56.4	-0.6
	0.9nm,0.8s,baz=248,slow=7.8,SNR=7.3						
	0.9nm,0.8s						
MKAR	Makanchi Array	76.88	5	P	P	12 29 28.4	+0.2
	0.3nm,0.7s,baz=192,slow=7.0,SNR=4.0						
	0.3nm,0.7s						
BVAR	Borovoye Array	83.03	357	P	P	12 30 02.0	+0.7
	0.3nm,0.5s,baz=164,slow=7.0,SNR=2.3						
	0.3nm,0.5s						
YKA	Yellowknife Ar	147.02	9	PKPbc	PKPdf	12 37 16.8	+0.4
	0.3nm,0.7s,baz=331,slow=4.0,SNR=6.0						

*RSPR **02** 12:17:42.7, 17°.99N×67°.06W, h8^{km}, MD3.1/6*
*NEIC **02** 12:17:42.3±1.0, 17°.98N±0°.02×67°.07W±0°.01, h10^{km}±1^{km}, ML3.2/35, Md3.1/6(RSPR), Error ellipse: s-maj=3.1km s-min=2.3km az=337.0*
*SDD **02** 12:17:42.4±2.4, 17°.95N×67°.06W, h10^{km}±11^{km}, MD3.4, ML2.8, MW2.9, Presumed earthquake*
ISC 02 12:17:42.0±1.0, 17°.97N±0°.05×67°.05W±0°.02, h12^{km}±5^{km}, n40, σ0^{s}68/62, 14C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLPR	Magueyes Islan	0.01	64		Pg	12 17 44.2	+0.1
MLPR				Sg	Sg	12 17 45.2	-0.3
MLPR				IAML		12 17 45.5	
	47μm,0.3s						
MLPR				IAML		12 17 45.6	
	15μm,0.1s						
CRPR	Cabo Rojo, PR	0.07	307		Pg	12 17 44.5	0.0
CRPR				Sg	Sg	12 17 45.6	-0.7
CRPR	Cabo Rojo, PR	0.07	307	IAML		12 17 45.8	
	26μm,0.4s						
CRPR				IAML		12 17 45.9	
	38μm,0.4s						
CRPR	Cabo Rojo, PR	0.07	307	⇑ePg	Pg	12 17 44.5	0.0
CRPR				⇑eSg	Sg	12 17 45.6	-0.7
CRPR				IAML		12 17 45.9	
	comp=N,19μm,0.2s						
CRPR	Cabo Rojo, PR	0.07	307	⇑iP	Pg	12 17 44.6	0.0
CRPR				eS	Sg	12 17 45.7	-0.6
GBPR	Guanica, Bosqu	0.17	87		Pg	12 17 46.7	+0.9
GBPR					Sg	12 17 49.8	+1.3
GBPR	Guanica, Bosqu	0.17	87	⇑iP	Pg	12 17 46.7	+0.9
GBPR				eS	Sg	12 17 49.8	+1.3
LSP	Las Mesas	0.21	351		Pg	12 17 46.8	+0.1
LSP					Sg	12 17 50.1	+0.4
LSP	Las Mesas	0.21	351	⇓iP	Pg	12 17 46.8	+0.1
LSP				eS	Sg	12 17 50.1	+0.4
PRSN	Puerto Rico Se	0.27	341		Pg	12 17 47.7	+0.1
PRSN				IAML		12 17 53.3	
	comp=N,8μm,0.3s						
PRSN				IAML		12 17 55.1	
	comp=N,7μm,0.2s						
PRSN	Puerto Rico Se	0.27	341	⇑ePg	Pg	12 17 47.8	+0.2
PRSN				⇑eSg	Sg	12 17 51.1	-0.2
PRSN				IAML		12 17 52.1	
	comp=N,4μm,0.3s						
PRSN	Puerto Rico Se	0.27	341	⇑iP	Pg	12 17 47.8	+0.2
PRSN				eS	Sg	12 17 52.0	+0.8
UUPR	Utuado, UPR, P	0.43	48		Pg	12 17 50.6	+0.1
UUPR				IAML		12 18 00.9	
	comp=N,4μm,0.3s						
UUPR				IAML		12 18 01.0	
	comp=N,4μm,0.3s						
OBIP	Obispado Ponce	0.43	80		Pg	12 17 51.1	+0.5
OBIP				IAML		12 17 57.9	
	comp=N,232nm,0.3s						
OBIP	Obispado Ponce	0.43	80		Sg	12 17 57.7	+1.4
OBIP	Obispado Ponce	0.43	80	⇓iP	Pg	12 17 51.2	+0.5
OBIP				eS	Sg	12 17 57.7	+1.4
CELP	Cerrillos	0.46	76		Pg	12 17 51.4	+0.2
CELP				IAML		12 17 59.8	
	comp=N,682nm,0.3s						
CELP				IAML		12 18 00.1	
	comp=N,791nm,0.3s						
AGPR	Aguadilla, PR	0.50	354		Pg	12 17 51.7	-0.2
AGPR				IAML		12 17 59.1	
	comp=N,1μm,0.5s						
AGPR				IAML		12 18 02.1	
	comp=N,1μm,0.5s						
AGPR	Aguadilla, PR	0.50	354	⇑ePg	Pg	12 17 52.1	+0.2
AGPR				⇑eSg	Sg	12 17 58.5	-0.1
AGPR				IAML		12 18 02.1	
	comp=N,1μm,0.2s						
AGPR	Aguadilla, PR	0.50	354	⇑iP	Pg	12 17 52.1	+0.2
AGPR				eS	Sg	12 17 59.0	+0.4
IDE	Isla Desecheo	0.58	316		Pg	12 17 53.2	-0.1
IDE					Sg	12 18 01.0	-0.1
IDE	Isla Desecheo	0.58	316	⇑iP	Pg	12 17 53.2	-0.1
IDE				eS	Sg	12 18 01.0	-0.1
EMPR	Esperanza - Ma	0.71	44		Pg	12 17 56.2	+0.4
EMPR					Sg	12 18 05.7	+0.4
EMPR	Esperanza - Ma	0.71	44	⇓iP	Pg	12 17 56.2	+0.4
EMPR				eS	Sg	12 18 05.7	+0.4
ECPR	Experimental S	0.74	62		Pg	12 17 56.1	-0.3
ECPR				IAML		12 18 08.3	
	comp=N,2μm,0.2s						
ECPR				IAML		12 18 12.3	
	comp=N,1μm,0.2s						
ECPR	Experimental S	0.74	62	⇓iP	Pg	12 17 56.3	-0.2
ECPR				eS	Sg	12 18 06.7	+0.4
SJG	San Juan	0.87	80		Pg	12 17 58.3	-0.6
SJG				IAML		12 18 13.1	
	comp=N,263nm,0.4s						
SJG				IAML		12 18 13.3	
	comp=N,285nm,0.2s						
SJG	San Juan	0.87	80	⇑ePg	Pg	12 17 58.5	-0.4
SJG				⇑eSg	Sg	12 18 10.3	0.0
SJG	San Juan	0.87	80	⇑eP	Pg	12 17 58.5	-0.4
SJG				eS	Sg	12 18 09.7	-0.5
PDPR	Patillas Dam,	0.98	87		Pg	12 18 00.3	-0.7
PDPR				IAML		12 18 15.2	
	comp=N,217nm,0.3s						
PDPR				IAML		12 18 18.6	
	comp=N,175nm,0.5s						
GCPR	Guaynabo City	0.98	70		Pg	12 18 00.2	-0.8
GCPR				IAML		12 18 14.8	
	comp=N,194nm,0.3s						
GCPR				IAML		12 18 17.9	
	comp=E,202nm,0.6s						
GCPR	Guaynabo City	0.98	70		Sg	12 18 13.3	-0.6
GCPR	Guaynabo City	0.98	70	⇓iP	Pg	12 18 00.5	-0.5
GCPR				eS	Sg	12 18 13.3	-0.6
HUMP	Col San Antoni	1.16	81		Pb	12 18 02.5	-1.5
HUMP				IAML		12 18 23.7	
	comp=E,307nm,0.2s						
HUMP				IAML		12 18 24.3	
	comp=E,274nm,0.3s						
HUMP	Col San Antoni	1.16	81		Sb	12 18 18.5	-0.5
HUMP	Col San Antoni	1.16	81	⇑eP	Pb	12 18 03.2	-0.8
HUMP				eS	Sb	12 18 18.5	-0.5
PCDR	Punta Cana, DR	1.38	294	⇑eSg	Sg	12 18 27.7	+1.3
PCDR				IAML		12 18 33.8	
	comp=N,121nm,2.2s						
CUPR	Culebra, Puert	1.72	78		Pn	12 18 12.4	+0.6
MIDR	Miches	2.15	298	⇑eSg	Sb	12 18 49.2	+1.7
MIDR				IAML		12 18 53.5	
	comp=N,24nm,0.5s						
HATOM	Hato Mayor del	2.36	291	⇑ePg	Pb	12 18 23.5	-1.0
HATOM				⇑eSg	Sb	12 18 54.9	+1.2
HATOM				IAML		12 19 00.7	
	comp=N,27nm,0.7s						

*IDC **02** 12:17:53.7±1.9, 17°.76N×145°.82E, h220^{km}±19^{km}, mb3.1/10, mbtmp3.7/13, Error ellipse: s-maj=24.5km s-min=13.7km az=83.0*
*NEIC **02** 12:17:54.4±2.1, 17°.8N±0°.1×145°.7E±0°.2, h218^{km}±7^{km}, mb3.7/11, Error ellipse: s-maj=20.8km s-min=14.9km az=97.0*
ISC 02 12:17:52.3±0.8, 17°.84N±0°.07×145°.8E±0°.2, h200^{km}, n29, σ1^{s}26/30, mb3.5/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DPSS	Saipan	2.59	180	Pn	Pn	12 18 39.8	+2.5
GUMO	Guam	4.33	192	P	Pn	12 18 58.2	0.0
	224nm,1.1s,baz=21,slow=19,SNR=2.3						
GUMO				S	Sn	12 19 51.9	+1.8
	113nm,1.0s,baz=248,slow=14,SNR=1.5						
GUMO	Guam	4.33	192		Pn	12 18 58.8	+0.5
JOW	Kunigami	18.51	302	P	P	12 21 54.2	+0.5
	3.9nm,0.5s,baz=128,slow=14,SNR=5.0						
JOW	Kunigami	18.51	302	P	P	12 21 54.6	+0.9
JMN	Monobe	19.09	328	P	P	12 21 59.5	-0.5
MJAR	Matsushiro Arr	19.80	342	P	P	12 22 07.7	+0.2
	0.2nm,0.4s,baz=168,slow=12,SNR=1.7						
MJAR	Matsushiro Arr	19.80	342	P	P	12 22 07.1	-0.5
KSRS	Korea Array	25.07	325	P	P	12 23 00.8	+2.4
	0.6nm,0.8s,baz=143,slow=4.3,SNR=2.5						
	0.6nm,0.8s						
WRA	Warramunga Arr	39.20	197	P	P	12 25 00.7	-0.6
	0.2nm,0.3s,baz=20,slow=7.7,SNR=4.9						
	0.2nm,0.3s						
WRA	Warramunga Arr	39.20	197	P	P	12 24 59.0	-2.3
LZDM	Lanzhou Array	41.30	304	P	P	12 25 19.0	+0.3
	0.7nm,0.3s,baz=96,slow=7.7,SNR=2.8						
	0.7nm,0.3s						
AS31	Alice Springs	42.86	196	P	P	12 25 28.9	-2.2
AS31				IAmb	IAmb	12 25 40.7	
	comp=Z,0.9nm,1.1s						
ASAR	Alice Springs	42.86	196	P	P	12 25 29.4	-1.7
	comp=Z,0.2nm,0.5s,baz=15,slow=7.0,SNR=8.4						
	comp=Z,0.2nm,0.5s						
SONM	Songino Array	43.88	322	P	P	12 25 39.5	+0.4
	comp=Z,0.3nm,0.5s,baz=141,slow=9.3,SNR=2.2						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	43.88	322	P	P	12 25 38.9	-0.1
SONM				IAmb	IAmb	12 26 02.2	
	comp=Z,0.8nm,1.1s						
CMAR	Chiang Mai Arr	44.44	278	P	P	12 25 43.5	-0.3
	comp=Z,0.2nm,0.4s,baz=86,slow=8.3,SNR=1.6						
	comp=Z,0.2nm,0.4s						
CMAR	Chiang Mai Arr	44.44	278	P	P	12 25 43.0	-0.8
DZM	Mont Dzumac	44.52	152	P	P	12 25 43.1	-1.2
DZM				IAmb	IAmb	12 25 59.5	
	comp=Z,14nm,1.1s						
N15K	Kwethluk River	57.11	29	P	P	12 27 16.9	-0.8
N15K				IAmb	IAmb	12 27 27.5	
	comp=Z,5.0nm,1.1s						
M16K	Timber Creek	57.96	28	P	P	12 27 24.9	+1.3
M16K				IAmb	IAmb	12 27 37.8	
	comp=Z,6.7nm,1.1s						
J16K	Anvik River	58.18	25	P	P	12 27 26.5	+1.4
N17K	Nushagak Hills	58.59	29	P	P	12 27 29.3	+1.4
N17K				IAmb	IAmb	12 27 56.4	
	comp=Z,4.4nm,1.1s						
MKAR	Makanchi Array	59.13	314	P	P	12 27 30.9	-1.1
	comp=Z,0.3nm,0.4s,baz=84,slow=8.9,SNR=6.9						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	59.13	314	P	P	12 27 31.4	-0.6
L18K	Granite Mounta	59.41	27	P	P	12 27 34.8	+1.2
L18K				IAmb	IAmb	12 27 57.8	
	comp=Z,0.3nm,0.7s						
KURBB	Kurchatov Arra	62.02	318	P	P	12 27 50.8	-0.6
	comp=Z,1.0nm,0.4s,baz=91,slow=7.1,SNR=11						
	comp=Z,1.0nm,0.4s						
ILAR	Eielson Array	64.36	26	P	P	12 28 06.3	-0.2
	comp=Z,0.4nm,0.5s,baz=249,slow=6.0,SNR=15						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	67.20	321	P	P	12 28 24.2	-0.6
	comp=Z,0.5nm,0.4s,baz=73,slow=6.5,SNR=5.1						
	comp=Z,0.5nm,0.4s						

IDC 02 12:18:02.1±0.9, 13°.70N×121°.11E, h128^{km}±9^{km}, mb3.1/6, mbtmp3.5/6, Error ellipse: s-maj=55.5km s-min=15.9km az=59.0, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.43	337	P	Pn	12 18 21.4	+0.7
	baz=180,slow=0.0						
CMAR	Chiang Mai Arr	21.81	285	P	P	12 22 44.0	-0.3
	0.6nm,0.3s,baz=98,slow=9.7,SNR=5.3						
	0.6nm,0.3s						
WRA	Warramunga Arr	35.88	158	P	P	12 24 49.3	-0.6
	0.3nm,0.4s,baz=340,slow=9.0,SNR=7.9						
	0.3nm,0.4s						
ASAR	Alice Springs	39.19	161	P	P	12 25 18.1	+0.3
	0.1nm,0.3s,baz=332,slow=7.7,SNR=10.0						
	0.1nm,0.3s						
MKAR	Makanchi Array	46.27	323	P	P	12 26 15.2	+0.5
	0.2nm,0.3s,baz=138,slow=8.1,SNR=5.9						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	49.24	332	P	P	12 26 36.4	-1.0
	0.3nm,0.4s,baz=120,slow=4.7,SNR=2.3						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	50.41	326	P	P	12 26 46.4	+0.1
	0.6nm,0.5s,baz=128,slow=7.6,SNR=4.8						
	0.6nm,0.5s						

*ROM **02** 12:21:09.8±0.2, 42°.42N±0°.01×15°.27E±0°.01, h10^{km}, ML2.6/56, Error ellipse: s-maj=1.6km s-min=0.9km az=33.0*
ISC 02 12:21:09.5±1.2, 42°.43N±0°.03×15°.27E±0°.03, h9^{km}±11^{km}, n45, σ0^{s}74/60, 1C, Adriatic Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FRES	Fresagrandinar	0.64	224	P	Pg	12 21 22.1	+0.3
FRES				S	Sg	12 21 31.0	+0.9
FRES				AML	AML		
	comp=E,452μm,0.7s						
FRES				AML	AML		
	comp=N,252μm,0.6s						
APRC	Apricena	0.70	163	P	Pg	12 21 22.9	-0.2
APRC				S	Sb	12 21 33.2	-0.6
APRC				AML	AML		
	comp=E,1275μm,0.3s						
APRC				AML	AML		
	comp=N,1395μm,0.5s						
MELA	Melanico ??? S	0.73	188	⇑P	Pg	12 21 23.8	+0.2
MELA				AML	AML		
	comp=E,886μm,0.4s						
MELA				AML	AML		
	comp=N,961μm,0.3s						
MELA				AML	AML		
	comp=N,971μm,0.3s						
MELA				AML	AML		
	comp=E,886μm,0.4s						
MELA				AML	AML		
	comp=N,960μm,0.3s						
MELA				AML	AML		
	comp=E,929μm,0.4s						
MELA				AML	AML		
	comp=E,886μm,0.4s						
MELA				AML	AML		
	comp=N,970μm,0.3s						
CIGN	Sant'Elia a Pi	0.82	199	P	Pg	12 21 25.1	-0.2
TRIV	Trivento	0.85	219	P	Pg	12 21 26.1	+0.2
TRIV				AML	AML		
	comp=E,297μm,0.4s						
TRIV				AML	AML		
	comp=N,290μm,0.5s						
TRIV				AML	AML		
	comp=E,303μm,0.4s						
TRIV				AML	AML		
	comp=N,300μm,0.5s						
MSAG	Monte S. Angel	0.86	146	P	Pb	12 21 26.5	-0.3
MSAG				AML	AML		
	comp=E,710μm,1.1s						
MSAG				AML	AML		
	comp=E,282μm,1.1s						
MSAG				AML	AML		
	comp=N,514μm,1.5s						
MSAG				AML	AML		
	comp=E,711μm,1.1s						
MSAG				AML	AML		
	comp=N,1210μm,1.5s						
MSAG				AML	AML		
	comp=E,711μm,0.9s						
MSAG				AML	AML		
	comp=E,282μm,0.9s						
MSAG				AML	AML		
	comp=N,514μm,0.5s						
MSAG				AML	AML		
	comp=N,1210μm,0.5s						
LPEL	Lama dei Pelig	0.89	245	P	Pg	12 21 26.1	-0.5
LPEL				AML	AML		
	comp=E,553μm,0.9s						
LPEL				AML	AML		
	comp=N,462μm,1.5s						
LPEL				AML	AML		
	comp=N,384μm,0.3s						
LPEL				AML	AML		
	comp=N,462μm,1.5s						
LPEL				AML	AML		
	comp=N,462μm,0.5s						
LPEL				AML	AML		
	comp=E,630μm,0.9s						
GATE	Gambatesa	0.95	196	P	Pn	12 21 29.3	+0.1
GATE				AML	AML		
	comp=E,421μm,1.3s						
GATE				AML	AML		
	comp=N,344μm,0.4s						
GATE				AML	AML		
	comp=E,421μm,1.3s						
GATE				AML	AML		
	comp=E,406μm,1.3s						
GATE				AML	AML		
	comp=N,388μm,0.6s						
SULP	Sulmona Polizi	1.05	251	P	Pg	12 21 28.4	-1.3
VCEL	Villa Celiera	1.06	269	P	Pg	12 21 29.5	-0.3
TRTR	Tortoreto Alta	1.07	291	P	Pn	12 21 31.4	+0.7
SULC	Sulmona Consor	1.07	251	P	Pb	12 21 30.5	+0.2
MIDA	Miranda	1.09	224	P	Pg	12 21 28.8	-1.6
MIDA				AML	AML		
	comp=N,292μm,0.5s						
MIDA				AML	AML		
	comp=E,288μm,0.5s						
MIDA				AML	AML		
	comp=E,284μm,0.5s						
MIDA				AML	AML		
	comp=N,274μm,0.5s						
INTR	Introdacqua	1.09	248	P	Pg	12 21 30.2	-0.3
INTR				AML	AML		
	comp=E,241μm,0.7s						
INTR				AML	AML		
	comp=N,361μm,0.4s						
RNI2	Rionero Sannit	1.10	229	P	Pg	12 21 29.8	-0.9
T0110	Collepietro	1.12	260	P	Pn	12 21 31.6	+0.1
T0110				AML	AML		
	comp=N,327μm,0.4s						
T0110				AML	AML		
	comp=E,314μm,0.5s						
HVAR	Hvar	1.15	49	ePg	Pb	12 21 30.9	-0.6
HVAR				Sg	Sn	12 21 48.6	+0.9
SGG	Gregorio Mates	1.24	213	P	Pg	12 21 33.7	+0.4
SGG				AML	AML		
	comp=N,116μm,0.6s						
SGG				AML	AML		
	comp=E,141μm,0.5s						
TERO	Teramo	1.24	279	P	Pn	12 21 32.3	-0.9
TERO				AML	AML		
	comp=E,137μm,0.6s						
TERO				AML	AML		
	comp=N,152μm,0.4s						
LSTV	Lastovo	1.25	74	ePn	Pn	12 21 32.3	-0.8
LSTV				Sg	Sn	12 21 51.6	+1.6
CERA	Filignano	1.25	229	P	Pg	12 21 33.5	0.0
ZIRJ	Zirje	1.25	13	ePg	Pn	12 21 32.1	-1.2
ZIRJ				Sg	Sg	12 21 50.5	+0.7
OFFI	Offida	1.27	294	P	Pn	12 21 33.5	+0.1
POFI	Posta Fibreno	1.36	239	P	Pn	12 21 33.2	-1.6
POFI				AML	AML		
	comp=E,56μm,1.0s						
POFI				AML	AML		
	comp=N,64μm,0.5s						
MNTT	Montottone	1.38	298	P	Pb	12 21 35.7	+0.1
MNTT				AML	AML		
	comp=E,904μm,0.6s						
MNTT				AML	AML		
	comp=E,903μm,0.6s						
MNTT				AML	AML		
	comp=E,903μm,1.4s						
MNTT				AML	AML		
	comp=N,1010μm,0.5s						
MORI	Morici	1.47	13	ePg	Pn	12 21 35.3	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MORI				Sg	Sn	12 21 55.3	-0.3
RM33	Pellescritta (	1.52	274	P	Pb	12 21 38.0	+0.1
RM33				AML	AML		
	comp=E,103µm,0.7s						
RM33				AML	AML		
	comp=N,125µm,1.3s						
RM33				AML	AML		
	comp=E,103µm,1.3s						
DUGI	Dugi Otok	1.57	354	ePn	Pn	12 21 36.2	-1.4
DUGI				Sn	Sn	12 21 57.6	-0.5
NRCA	Norcia	1.64	285	P	Pn	12 21 38.6	0.0
NRCA				AML	AML		
	comp=E,138µm,0.7s						
NRCA				AML	AML		
	comp=N,142µm,0.4s						
FDMO	Fiordimonte	1.72	291	P	Pn	12 21 39.4	-0.3
FDMO				AML	AML		
	comp=N,93µm,0.3s						
FDMO				AML	AML		
	comp=E,94µm,1.0s						
FDMO				AML	AML		
	comp=N,93µm,0.3s						
FDMO				AML	AML		
	comp=E,94µm,1.0s						
RICI	Ricice	1.73	52	ePn	Pn	12 21 39.4	-0.5
RICI				Sn	Sn	12 22 01.9	-0.3
GAVE	Gavelli	1.77	279	P	Pn	12 21 41.1	+0.6
GAVE				AML	AML		
	comp=E,145µm,0.3s						
GAVE				AML	AML		
	comp=N,152µm,0.4s						
GAVE				AML	AML		
	comp=E,145µm,1.7s						
KIJV	Kijevo	1.78	27	ePn	Pn	12 21 40.7	+0.2
KIJV				Sn	Sb	12 22 04.5	-0.3
AMUR	Altamura	1.82	146	P	Pn	12 21 40.7	-0.4
AMUR				AML	AML		
	comp=E,118µm,0.4s						
AMUR				AML	AML		
	comp=N,136µm,0.4s						
STON	Ston	1.85	75	ePn	Pn	12 21 41.3	-0.1
STON				Sn	Sb	12 22 06.5	-0.2
VIRC	Vir	1.87	355	ePn	Pn	12 21 41.0	-0.7
VIRC				Sn	Sn	12 22 05.2	-0.2
PTRP	Pietrapertosa	2.00	162	P	Pn	12 21 42.5	-1.1
UDBI	Udbina	2.13	10	ePn	Pn	12 21 46.0	+0.6
UDBI				Sn	Sn	12 22 13.2	+1.3
DBRK	Dubrovnik	2.14	83	ePn	Pn	12 21 46.4	+0.9
NVLJ	Novalja	2.15	352	i Pn	Pn	12 21 45.2	-0.4
NVLJ				Sn	Sn	12 22 13.3	+1.0
FRON	Frontone	2.16	301	P	Pn	12 21 45.8	+0.1
FRON				AML	AML		
	comp=E,79µm,0.8s						
FRON				AML	AML		
	comp=N,89µm,1.6s						
FRON				AML	AML		
	comp=N,89µm,0.4s						
FRON				AML	AML		
	comp=E,79µm,1.2s						
PIEI	Pieia	2.29	300	P	Pn	12 21 47.4	-0.2
PIEI				AML	AML		
	comp=E,31µm,0.6s						
PIEI				AML	AML		
	comp=N,26µm,1.4s						
RABC	Rab	2.35	352	ePn	Pn	12 21 47.4	-0.8
RABC				Sn	Sn	12 22 17.4	+0.2
PLIT	Plitvice	2.46	6	ePn	Pn	12 21 50.3	+0.4
PLIT				Sn	Sn	12 22 21.5	+1.4
BOJS	Bojanci	3.07	360	P	Pn	12 21 59.2	+0.9
BOJS				AML	AML		
	comp=E,112µm,1.5s						
BOJS				AML	AML		
	comp=N,77µm,0.6s						
BOJS				AML	AML		
	comp=E,112µm,0.5s						

*NEIC **02** 12:40:03.6±1.4, 19°.01N±0°.04×67°.60W±0°.02, h10km±1km, ML3.3/39, Md3.0/10(RSPR), Error ellipse: s-maj=7.8km s-min=2.7km az=202.0*
*SDD **02** 12:40:06.2±2.4, 18°.86N×67°.71W, h0km±22km, MD3.7, ML3.2, MW3.2, Presumed earthquake*
*RSPR **02** 12:40:07.5, 18°.83N×67°.67W, h10km±31km, MD3.0/10*
ISC 02 12:40:03.8±1.3**, 18°.96N**±0°.05×**67°.64W**±0°.03**, h12**km±10km**,**
n44, σ0.s71/69**, 14C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.59	165		Pb	12 40 16.2	+0.1
IDE					Sb	12 40 23.6	-0.9
IDE	Isla Desecheo	0.59	165	⇓iP	Pb	12 40 16.2	+0.1
IDE				eS	Sb	12 40 23.6	-0.9
AGPR	Aguadilla, PR	0.70	134		Pg	12 40 17.5	0.0
AGPR				IAML		12 40 29.4	
	1µm,0.5s						
AGPR				IAML		12 40 31.2	
	846nm,0.3s						
AGPR	Aguadilla, PR	0.70	134	⇑iP	Pb	12 40 18.1	+0.1
AGPR				⇑iS	Sb	12 40 27.3	-0.3
	comp=N,1µm,0.4s						
AGPR				IAML		12 40 29.5	
	comp=N,1µm,0.4s						
AGPR	Aguadilla, PR	0.70	134	⇓iP	Pb	12 40 18.2	+0.2
AGPR				eS	Sb	12 40 28.1	+0.5
PRSN	Puerto Rico Se	0.88	148		Pb	12 40 21.3	+0.3
PRSN					Sb	12 40 32.9	+0.3
PRSN	Puerto Rico Se	0.88	148	⇑iP	Pb	12 40 21.0	+0.1
PRSN				⇑iS	Sb	12 40 32.4	-0.2
	comp=N,2µm,0.2s						
PRSN				IAML		12 40 40.1	
	comp=N,2µm,0.2s						
PRSN	Puerto Rico Se	0.88	148	⇓iP	Pb	12 40 21.3	+0.3
PRSN				eS	Sb	12 40 32.9	+0.3
LSP	Las Mesas	0.94	146		Pn	12 40 22.4	-0.5
LSP					Sn	12 40 35.8	-0.5
LSP	Las Mesas	0.94	146	⇑eP	Pn	12 40 22.4	-0.5
LSP				eS	Sn	12 40 35.8	-0.5
CRPR	Cabo Rojo, PR	1.08	152		Pb	12 40 24.2	-0.1
CRPR					Sn	12 40 40.7	+1.2
CRPR	Cabo Rojo, PR	1.08	152	IAML		12 40 44.5	
	comp=N,716nm,0.4s						
CRPR				IAML		12 40 48.7	
	comp=N,504nm,0.8s						
CRPR	Cabo Rojo, PR	1.08	152	⇑iP	Pn	12 40 24.5	-0.1
CRPR				⇑iS	Sn	12 40 39.8	+0.3
	comp=N,765nm,0.6s						
CRPR				IAML		12 40 44.4	
	comp=N,765nm,0.6s						
CRPR	Cabo Rojo, PR	1.08	152	⇑iP	Pn	12 40 26.6	+1.9
HIDR	Higuey Centro	1.08	250	⇑iP	Pb	12 40 23.7	-0.8
HIDR				⇑iS	Sb	12 40 36.4	-2.2
	comp=N,636nm,0.3s						
HIDR				IAML		12 40 41.6	
	comp=N,636nm,0.3s						
HIDR	Higuey Centro	1.08	250	⇓iP	Pb	12 40 23.8	-0.7
HIDR				eS	Sb	12 40 38.2	-0.4
UUPR	Utuado, UPR, P	1.12	129		Pb	12 40 24.5	-0.6
MLPR	Magueyes Islan	1.14	150		Pb	12 40 24.1	-1.3
MLPR				IAML		12 40 44.3	
	comp=N,456nm,0.4s						
MLPR				IAML		12 40 44.9	
	comp=N,794nm,0.4s						
EMPR	Esperanza - Ma	1.16	114		Pb	12 40 25.5	-0.2
EMPR					Sn	12 40 42.2	+0.7
EMPR	Esperanza - Ma	1.16	114	⇓iP	Pb	12 40 25.5	-0.2
EMPR				eS	Sn	12 40 42.2	+0.7
GBPR	Guanica, Bosqu	1.22	144		Pb	12 40 26.8	0.0
GBPR					Sg	12 40 44.2	+1.0
GBPR	Guanica, Bosqu	1.22	144	⇓iP	Pb	12 40 26.8	0.0
GBPR				eS	Sg	12 40 44.2	+1.0
MIDR	Miches	1.33	271	⇑iP	Pn	12 40 28.2	0.0
MIDR				⇑iS	Sb	12 40 45.5	-0.3
MIDR				IAML		12 40 49.8	
	comp=N,374nm,0.4s						
MIDR				IAML		12 40 49.8	
	comp=N,388nm,0.4s						
CELP	Cerrillos	1.34	131		Pn	12 40 27.6	-0.7
CELP				IAML		12 40 53.5	
	comp=N,458nm,0.2s						
CELP				IAML		12 40 53.8	
	comp=N,451nm,0.2s						
OBIP	Obispado Ponce	1.34	133		Pn	12 40 27.4	-0.9
OBIP	Obispado Ponce	1.34	133		Sg	12 40 46.5	-0.6
OBIP	Obispado Ponce	1.34	133	⇓iP	Pn	12 40 28.1	-0.2
OBIP				eS	Sg	12 40 46.5	-0.6
ECPR	Experimental S	1.37	118		Pn	12 40 28.0	-0.7
ECPR	Experimental S	1.37	118	⇓iP	Pn	12 40 28.3	-0.4
ECPR				eS	Sb	12 40 46.7	-0.1
SMDR	Samana, DR	1.50	283		Pn	12 40 31.2	+0.8
SMDR					Sg	12 40 52.0	-0.2
SMDR	Samana, DR	1.50	283	⇑iP	Pn	12 40 31.3	+0.8
SMDR				⇑iS	Sg	12 40 52.9	+0.7
	comp=N,365nm,0.6s						
SMDR				IAML		12 40 54.8	
	comp=N,365nm,0.6s						
SMDR	Samana, DR	1.50	283	⇑iP	Pn	12 40 31.2	+0.8
SMDR				eS	Sg	12 40 52.0	-0.2
GCPR	Guaynabo City	1.61	114		Pn	12 40 32.2	+0.1
GCPR					Sb	12 40 53.5	-0.3
GCPR	Guaynabo City	1.61	114	⇑eP	Pn	12 40 32.2	+0.1
GCPR				eS	Sb	12 40 53.5	-0.3
SJG	San Juan	1.65	121		Pn	12 40 32.6	+0.1
SJG	San Juan	1.65	121	IAML		12 40 57.6	
	comp=N,271nm,0.5s						
SJG				IAML		12 41 02.8	
	comp=N,260nm,0.4s						
SJG	San Juan	1.65	121	⇑iP	Pn	12 40 32.6	+0.1
SJG				eS	Sb	12 40 55.0	+0.2
DR12	Loma Pena Alta	1.66	264		Pn	12 40 32.9	+0.2
PDPR	Patillas Dam,	1.80	121		Pn	12 40 34.2	-0.4
HUMP	Col San Antoni	1.88	115		Pn	12 40 35.8	0.0
HUMP	Col San Antoni	1.88	115		Sb	12 41 01.3	-0.3
HUMP	Col San Antoni	1.88	115	⇓iP	Pb	12 40 38.3	+0.2
HUMP				eS	Sb	12 41 01.3	-0.3
CUPR	Culebra, Puert	2.33	106	Pn	Pn	12 40 40.2	-1.7
SDDR	Presa de Saban	3.45	271		Pn	12 40 59.3	+1.8
SDDR				IAML		12 42 00.6	
	comp=N,76nm,0.7s						

*ROM **02** 13:07:33.9±0.2, 42°.48N±0°.01×15°.35E±0°.02, h10km, ML2.7/49, Error ellipse: s-maj=1.8km s-min=1.0km az=43.0*
ISC 02 13:07:33.5±1.2**, 42°.48N**±0°.02×**15°.31E**±0°.03**, h5**km±11km**,**
n45, σ0.s83/62**, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FRES	Fresagrandinar	0.69	223	P	Pb	13 07 48.1	+0.1
FRES				S	Sb	13 07 57.8	-0.1
APRC	Apricena	0.74	166	P	Pg	13 07 47.3	-0.4
APRC				S	Sb	13 07 58.6	-0.8
APRC				AML	AML		
	comp=E,1420µm,0.4s						
APRC				AML	AML		
	comp=N,1475µm,0.3s						
APRC				AML	AML		
	comp=E,1356µm,0.4s						
APRC				AML	AML		
	comp=N,958µm,0.6s						
MELA	Melanico ??? S	0.79	190	P	Pg	13 07 48.1	-0.4
MELA				S	Sb	13 08 00.0	-0.5
CIGN	Sant'Elia a Pi	0.88	200	P	Pg	13 07 49.6	-0.8
MSAG	Monte S. Angel	0.89	150	P	Pg	13 07 50.6	+0.1
TRIV	Trivento	0.91	219	P	Pg	13 07 51.1	+0.2
TRIV				AML	AML		
	comp=E,266µm,0.5s						
TRIV				AML	AML		
	comp=N,263µm,0.5s						
TRIV				AML	AML		
	comp=E,265µm,0.5s						
TRIV				AML	AML		
	comp=N,246µm,0.4s						
TRIV				AML	AML		
	comp=E,266µm,1.5s						
TRIV				AML	AML		
	comp=E,265µm,1.5s						
LPEL	Lama dei Pelig	0.94	243	P	Pb	13 07 52.8	+0.5
GATE	Gambatesa	1.01	197	P	Pb	13 07 53.8	+0.3
GATE				AML	AML		
	comp=N,312µm,0.4s						
GATE				AML	AML		
	comp=E,361µm,1.3s						
GATE				AML	AML		
	comp=E,395µm,1.4s						
GATE				AML	AML		
	comp=E,361µm,0.7s						
GATE				AML	AML		
	comp=N,312µm,0.4s						
GATE				AML	AML		
	comp=N,358µm,0.4s						
GATE				AML	AML		
	comp=E,395µm,0.6s						
TRTR	Tortoreto Alta	1.08	288	P	Pb	13 07 54.4	-0.2
HVAR	Hvar	1.09	50	i Pg	Pn	13 07 55.2	-0.2
HVAR				Sg	Sn	13 08 12.9	+2.0
VCEL	Villa Celiera	1.09	266	P	Pb	13 07 54.5	-0.4
SULP	Sulmona Polizi	1.10	249	P	Pb	13 07 55.5	+0.6
INTR	Introdacqua	1.14	246	P	Pb	13 07 55.6	-0.1
INTR				AML	AML		
	comp=E,233µm,0.7s						
INTR				AML	AML		
	comp=N,359µm,0.6s						
MIDA	Miranda	1.15	224	P	Pb	13 07 54.5	-1.4
RNI2	Rionero Sannit	1.16	228	P	Pb	13 07 56.2	+0.1
RNI2				AML	AML		
	comp=E,222µm,0.6s						
RNI2				AML	AML		
	comp=N,170µm,0.4s						
RNI2				AML	AML		
	comp=N,180µm,0.4s						
RNI2				AML	AML		
	comp=E,222µm,0.6s						
T0110	Collepietro	1.16	258	P	Pb	13 07 55.6	-0.4
T0110				AML	AML		
	comp=E,325µm,1.3s						
T0110				AML	AML		
	comp=N,342µm,0.4s						
T0110				AML	AML		
	comp=E,325µm,0.7s						
ZIRJ	Zirje	1.20	12	ePg	Pg	13 07 57.0	+0.5
ZIRJ				Sg	Sn	13 08 14.3	+0.9
LSTV	Lastovo	1.20	76	i Pg	Pg	13 07 57.3	+0.8
LSTV				Sg	Sn	13 08 15.8	+2.2
SGG	Gregorio Mates	1.29	213	P	Pb	13 07 58.7	+0.4
SGG				AML	AML		
	comp=N,116µm,0.4s						
SGG				AML	AML		
	comp=N,116µm,1.6s						
SGG				AML	AML		
	comp=E,148µm,0.5s						
SGG				AML	AML		
	comp=E,188µm,0.6s						
SGG				AML	AML		
	comp=E,188µm,1.4s						
FAGN	Fagnano	1.30	261	P	Pn	13 07 58.4	+0.1
FAGN				AML	AML		
	comp=E,426µm,0.4s						
FAGN				AML	AML		
	comp=N,380µm,0.5s						
FAGN				AML	AML		
	comp=N,380µm,1.5s						
FAGN				AML	AML		
	comp=E,426µm,1.6s						
CERA	Filignano	1.30	228	P	Pn	13 07 58.6	+0.2
VAGA	Valle Agricola	1.33	217	P	Pn	13 07 59.0	+0.3
VAGA				AML	AML		
	comp=E,137µm,0.7s						
VAGA				AML	AML		
	comp=N,228µm,1.1s						
VAGA				AML	AML		
	comp=N,228µm,0.9s						
VAGA				AML	AML		
	comp=N,198µm,0.4s						
VAGA				AML	AML		
	comp=E,122µm,0.9s						
VAGA				AML	AML		
	comp=E,137µm,1.3s						
VAGA				AML	AML		
	comp=E,137µm,0.7s						
MNTT	Montottone	1.39	295	P	Pg	13 08 01.1	+1.0
MNTT				AML	AML		
	comp=N,1105µm,0.5s						
MNTT				AML	AML		
	comp=E,1023µm,0.6s						
MNTT				AML	AML		
	comp=N,1105µm,1.5s						
MNTT				AML	AML		
	comp=N,1105µm,0.5s						
MORI	Morici	1.42	12	i Pn	Pn	13 07 59.6	-0.2
MORI				Sg	Sg	13 08 19.6	+0.7
MF5	Montefalcone A	1.45	291	P	Pn	13 08 00.9	+0.4
MF5				AML	AML		
	comp=E,250µm,0.6s						
MF5				AML	AML		
	comp=N,260µm,0.5s						
SMA1	SAN MARTINO	1.47	277	P	Pn	13 08 00.5	-0.2
SMA1				AML	AML		
	comp=E,203µm,0.4s						
SMA1				AML	AML		
	comp=N,196µm,0.8s						
SMA1				AML	AML		
	comp=N,196µm,1.2s						
DUGI	Dugi Otok	1.52	353	ePn	Pn	13 08 00.8	-0.6
DUGI				Sn	Sb	13 08 22.0	+0.2
LRP	Arpino	1.53	238	P	Pn	13 08 00.9	-0.5
LRP				AML	AML		
	comp=E,62µm,0.7s						
LRP				AML	AML		
	comp=N,20µm,1.5s						
NRCA	Norcia	1.66	283	P	Pn	13 08 03.2	-0.1
NRCA				AML	AML		
	comp=E,136µm,0.8s						
NRCA				AML	AML		
	comp=N,152µm,0.5s						
NRCA				AML	AML		
	comp=E,136µm,1.2s						
NRCA				AML	AML		
	comp=E,102µm,0.6s						
CSP1	Cessapalombo	1.67	292	P	Pn	13 08 03.3	-0.1
CSP1				AML	AML		
	comp=N,176µm,0.5s						
CSP1				AML	AML		
	comp=E,120µm,0.6s						
RICI	Ricice	1.68	52	ePn	Pb	13 08 03.7	-1.1
RICI				Sn	Sg	13 08 28.7	+1.3
KIJV	Kijevo	1.72	27	i Pn	Pb	13 08 04.9	-0.7
KIJV				Sn	Sg	13 08 28.9	+0.1
FDMO	Fiordimonte	1.73	290	P	Pn	13 08 04.1	-0.1
FDMO				AML	AML		
	comp=E,105µm,0.6s						
FDMO				AML	AML		
	comp=N,101µm,0.9s						
FDMO				AML	AML		
	comp=N,101µm,1.1s						
STON	Ston	1.81	77	ePn	Pn	13 08 05.4	+0.2
STON				Sn	Sg	13 08 30.6	-0.8
VIRC	Vir	1.82	354	i Pn	Pn	13 08 05.3	-0.1
VIRC				Sn	Sb	13 08 29.9	-0.4
FOSV	Fossato di Vic	2.04	294	P	Pn	13 08 08.5	0.0
FOSV				AML	AML		
	comp=E,112µm,0.7s						
FOSV				AML	AML		
	comp=N,83µm,0.5s						
UDBI	Udbina	2.07	9	ePn	Pb	13 08 10.4	-1.2
UDBI				Sn	Sb	13 08 38.3	+0.6
NVLJ	Novalja	2.11	351	i Pn	Pn	13 08 09.4	+0.1
NVLJ				Sn	Sb	13 08 37.4	-1.2
RABC	Rab	2.30	351	i Pn	Pn	13 08 12.5	+0.5
RABC				Sn	Sn	13 08 41.8	+1.1
PLIT	Plitvice	2.41	5	ePn	Pn	13 08 14.6	+1.1
PLIT				Sn	Sb	13 08 45.6	-1.7
BOJS	Bojanci	3.02	359	P	Pn	13 08 22.7	+0.8
BOJS				AML	AML		
	comp=N,93µm,0.7s						
BOJS				AML	AML		
	comp=E,131µm,0.9s						
BOJS				AML	AML		
	comp=N,93µm,1.3s						
OBKA	Obir	4.07	353	ePn	Pn	13 08 36.0	-0.4
	comp=N,0.9nm,0.3s						
SOKA	Soboth	4.20	357	ePn	Pn	13 08 37.4	-0.9
	comp=N,0.6nm,0.3s						
KBA	Koelnbreinsper	4.80	344	Pn	Pn	13 08 46.3	-0.3
	comp=N,0.1nm,0.2s						
MOA	Molln	5.42	353	ePn	Pn	13 08 53.6	-1.3
	comp=N,0.6nm,0.3s						
MOA				eSn	Sn	13 09 55.2	-2.4
	comp=N,2.7nm,0.4s						

SJA 02 13:34:42.8±0.7**, 32°.25S**×**67°.01W, h18**km±2km**, ML3.5, MW3.5, Mendoza Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACAN	Cantantal	0.16	259	eP	Pg	13 34 48.4	+1.1
ACAN				IAML		13 34 53.3	
	comp=Z,18µm,0.5s						
MRA	San Martin	1.10	99	eP	Pb	13 34 58.5	-4.9
MRA				eP	Pg	13 35 04.1	-0.1
MRA				eS	Sg	13 35 19.2	+0.5
MRA				IAML		13 35 21.4	
	comp=Z,1µm,0.2s						
ACHE	Chepes	1.12	15	eP	Pg	13 35 04.2	-0.4
ACHE				eS	Sb	13 35 04.3	-14
SJA	San Juan	1.50	298	eP	Pn	13 35 04.5	-4.4
SJA				eS	Sg	13 35 31.6	+0.2
SJA				IAML		13 35 34.5	
	comp=Z,521nm,0.4s						
RTLL	Cerro Villicun	1.55	306	eP	Pb	13 35 11.3	+0.4
RTLL				eS	Sg	13 35 32.8	-0.1
RTLL				IAML		13 35 35.2	
	comp=Z,249nm,0.3s						
ZON	Zonda	1.58	296	eP	Pb	13 35 12.1	+0.5
ZON				IAML		13 35 37.0	
	comp=Z,347nm,0.2s						
ASAL	Salagasta	1.59	257	eP	Pb	13 35 12.4	+0.8
ASAL				eS	Sn	13 35 29.5	-0.6
AVFE	Valle Fertil	1.63	346	eP	Pb	13 35 12.8	+0.5
AVFE				eS	Sg	13 35 34.8	-0.6
AVFE				IAML		13 35 35.2	
	comp=Z,628nm,0.4s						
ARCO	CERRO ARCO	1.73	249	eP	Pb	13 35 14.6	+0.4
AAGR	Agrelo	1.75	241	eP	Pb	13 35 14.3	-0.2
AUSP	Uspallata	2.02	270	eP	Pb	13 35 18.6	-0.5
AUSP				eS	Sg	13 35 47.2	-0.7
TCA	Tanti	2.24	67	eP	Pb	13 35 21.2	-1.6
TCA				eS	Sb	13 35 50.5	+0.2
TCA				IAML		13 36 03.4	
	comp=Z,402nm,0.5s						
ACCO	Cerro Coronel	2.42	313	eP	Pb	13 35 25.1	-0.8
ACCO				eS	Sg	13 35 58.5	-2.1
PIL	Pilar	2.71	79	eP	Pg	13 35 34.5	-0.4
ACDV	Cuesta del Vie	2.75	318	eP	Pg	13 35 35.1	-0.5
ACLC	CERRO LA CRUZ	2.81	1	eP	Pn	13 35 29.7	+2.7
ACLC				eS	Sb	13 36 07.0	+0.3
ACLC				IAML		13 36 15.0	
	comp=Z,77nm,0.2s						
AROD	Rodeo	2.96	314	eP	Pb	13 35 33.4	-1.8
AROD				eS	Sb	13 36 10.5	-0.6
PEL	Peldehue	3.23	253	eP	Pb	13 35 36.6	-3.0
PEL				eS	Sg	13 36 26.6	0.0
PEL				IAML		13 36 30.8	
	comp=Z,85nm,0.9s						
AANI	Anillaco	3.42	1	eP	Pg	13 35 46.0	-2.4
AANI				IAML		13 36 41.7	
	comp=Z,372nm,0.8s						
VCA	Vinchina	3.65	343	eP	Pb	13 35 43.7	-3.2
VCA				IAML		13 36 40.9	
	comp=Z,117nm,0.3s						
FSA	Cafayete	6.18	9	eP	Pn	13 36 17.4	+4.2

*NEIC **02** 13:45:06.7±0.7, 17°.93N±0°.03×66°.998W±0°.009, h10km±1km, ML2.5/33, Md2.9/7(RSPR), Error ellipse: s-maj=5.1km s-min=2.4km az=8.0*
RSPR 02 13:45:06.8, 17°.94N×**67°.00W, h9**km**, MD2.9**/7**, 2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLPR	Magueyes Islan	0.06	308		Pg	13 45 08.8	+0.1
MLPR				IAML		13 45 11.0	
	5µm,0.2s						
MLPR				IAML		13 45 11.0	
	4µm,0.2s						
GBPR	Guanica, Bosqu	0.12	71		Pg	13 45 09.9	+0.3
GBPR					Sg	13 45 12.2	+0.7
GBPR	Guanica, Bosqu	0.12	71	⇑iP	Pg	13 45 09.9	+0.3
GBPR				eS	Sg	13 45 12.2	+0.7
CRPR	Cabo Rojo, PR	0.13	304		Pg	13 45 09.9	+0.2
CRPR				IAML		13 45 12.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,3µm,0.1s						
CRPR				IAML		13 45 12.8	
	comp=N,2µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.13**	**304**		Sg	13 45 12.1	+0.4
CRPR	**Cabo Rojo, PR**	**0.13**	**304**	⇑*i*P	Pg	13 45 09.9	+0.2
CRPR				*e*S	Sg	13 45 12.1	+0.4
LSP	**Las Mesas**	**0.25**	**341**		Pg	13 45 12.0	+0.1
LSP					Sg	13 45 16.2	+0.8
LSP	**Las Mesas**	**0.25**	**341**	⇑*i*P	Pg	13 45 12.0	+0.1
LSP				*e*S	Sg	13 45 16.2	+0.8
PRSN	**Puerto Rico Se**	**0.31**	**334**		Pg	13 45 13.0	0.0
PRSN					Sg	13 45 18.1	+0.9
PRSN	**Puerto Rico Se**	**0.31**	**334**	IAML		13 45 18.5	
	comp=N,3µm,0.3s						
PRSN				IAML		13 45 20.8	
	comp=N,2µm,0.3s						
PRSN	**Puerto Rico Se**	**0.31**	**334**	⇑*i*P	Pg	13 45 13.0	0.0
PRSN				*e*S	Sg	13 45 18.1	+0.9
OBIP	**Obispado Ponce**	**0.39**	**74**		Pg	13 45 14.2	-0.2
OBIP				IAML		13 45 20.5	
	comp=N,75nm,0.5s						
OBIP	**Obispado Ponce**	**0.39**	**74**		Sg	13 45 20.2	+0.6
OBIP	**Obispado Ponce**	**0.39**	**74**	⇓*i*P	Pg	13 45 14.3	-0.2
OBIP				*e*S	Sg	13 45 20.2	+0.6
UUPR	**Utuado, UPR, P**	**0.41**	**40**		Pg	13 45 14.4	-0.5
UUPR				IAML		13 45 20.9	
	comp=N,2µm,0.4s						
UUPR				IAML		13 45 21.4	
	comp=N,2µm,0.3s						
AGPR	**Aguadilla, PR**	**0.54**	**349**		Pg	13 45 16.9	-0.4
AGPR				IAML		13 45 24.8	
	comp=N,315nm,0.4s						
AGPR				IAML		13 45 25.3	
	comp=N,195nm,0.3s						
AGPR	**Aguadilla, PR**	**0.54**	**349**	⇑*i*P	Pg	13 45 17.0	-0.3
AGPR				*e*S	Sg	13 45 24.5	+0.1
IDE	**Isla Desecheo**	**0.64**	**315**		Pg	13 45 18.6	-0.5
IDE					Sg	13 45 27.4	0.0
IDE	**Isla Desecheo**	**0.64**	**315**	⇑*i*P	Pg	13 45 18.6	-0.5
IDE				*e*S	Sg	13 45 27.4	0.0
EMPR	**Esperanza - Ma**	**0.70**	**40**		Pg	13 45 19.9	-0.4
EMPR					Sg	13 45 29.4	-0.1
EMPR	**Esperanza - Ma**	**0.70**	**40**	⇓*i*P	Pg	13 45 19.9	-0.4
EMPR				*e*S	Sg	13 45 29.4	-0.1
ECPR	**Experimental S**	**0.71**	**58**		Pg	13 45 19.7	-0.9
ECPR				IAML		13 45 31.6	
	comp=N,194nm,0.2s						
ECPR				IAML		13 45 32.3	
	comp=N,204nm,0.2s						
ECPR	**Experimental S**	**0.71**	**58**	⇑*i*P	Pg	13 45 19.7	-0.9
ECPR				*e*S	Sg	13 45 29.8	-0.2
SJG	**San Juan**	**0.83**	**78**		Pg	13 45 22.0	-0.7
SJG	**San Juan**	**0.83**	**78**	IAML		13 45 33.7	
	comp=N,84nm,0.3s						
SJG				IAML		13 45 33.9	
	comp=N,52nm,0.2s						
SJG	**San Juan**	**0.83**	**78**	⇑*i*P	Pg	13 45 22.0	-0.7
SJG				*e*S	Sg	13 45 33.2	-0.3
PDPR	**Patillas Dam,**	**0.93**	**85**	Pg	Pg	13 45 23.6	-1.1
PDPR				IAML		13 45 40.5	
	comp=N,58nm,0.5s						
PDPR				IAML		13 45 40.6	
	comp=N,40nm,0.2s						
GCPR	**Guaynabo City**	**0.95**	**67**		Pg	13 45 23.7	-1.3
GCPR					Sg	13 45 36.1	-1.2
GCPR	**Guaynabo City**	**0.95**	**67**	IAML		13 45 43.4	
	comp=E,26nm,0.5s						
GCPR				IAML		13 45 43.4	
	comp=N,29nm,0.6s						
GCPR	**Guaynabo City**	**0.95**	**67**	⇑*i*P	Pg	13 45 23.7	-1.3
GCPR				*e*S	Sg	13 45 36.1	-1.2
HUMP	**Col San Antoni**	**1.11**	**79**		Pg	13 45 26.4	-1.7
HUMP					Sg	13 45 41.2	-1.4
HUMP	**Col San Antoni**	**1.11**	**79**	IAML		13 45 44.8	
	comp=N,104nm,0.3s						
HUMP				IAML		13 45 44.8	
	comp=N,65nm,0.2s						
HUMP	**Col San Antoni**	**1.11**	**79**	⇑*i*P	Pg	13 45 26.4	-1.7
HUMP				*e*S	Sg	13 45 41.2	-1.4
CUPR	**Culebra, Puert**	**1.67**	**77**	Pn	Pn	13 45 36.1	-0.2

*NEIC **02** 14:03:26.5±1.1, 17°.93N±0°.03×66°.93W±0°.01, h10km±1km, ML2.7/35, Md2.4/9(RSPR), Error ellipse: s-maj=5.0km s-min=2.2km az=8.0*

RSPR 02 14:03:26.5, 17°.94N×66°.93W, h12km, MD2.4/9, 6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.06**	**53**		Pg	14 03 29.1	+0.2
GBPR					Sg	14 03 31.0	+0.4
GBPR	**Guanica, Bosqu**	**0.06**	**53**	⇑*i*P	Pg	14 03 29.1	+0.2
GBPR				*e*S	Sg	14 03 31.0	+0.4
MLPR	**Magueyes Islan**	**0.11**	**285**		Pg	14 03 29.6	+0.1
MLPR				IAML		14 03 32.3	
	6µm,0.2s						
MLPR				IAML		14 03 32.5	
	5µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.18**	**291**		Pg	14 03 30.5	-0.1
CRPR				IAML		14 03 34.0	
	comp=N,3µm,0.2s						
CRPR				IAML		14 03 34.1	
	comp=E,3µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.18**	**291**		Sg	14 03 33.7	+0.3
CRPR	**Cabo Rojo, PR**	**0.18**	**291**	⇑*i*P	Pg	14 03 30.7	+0.1
CRPR				*e*S	Sg	14 03 33.7	+0.3
LSP	**Las Mesas**	**0.28**	**327**		Pg	14 03 32.2	0.0
LSP					Sg	14 03 36.9	+0.7
LSP	**Las Mesas**	**0.28**	**327**	⇓*i*P	Pg	14 03 32.2	0.0
LSP				*e*S	Sg	14 03 36.9	+0.7
OBIP	**Obispado Ponce**	**0.32**	**72**		Pg	14 03 32.7	-0.4
OBIP				IAML		14 03 38.0	
	comp=N,142nm,0.5s						
OBIP	**Obispado Ponce**	**0.32**	**72**		Sg	14 03 37.7	+0.3
OBIP	**Obispado Ponce**	**0.32**	**72**	⇓*i*P	Pg	14 03 32.8	-0.3
OBIP				*e*S	Sg	14 03 37.7	+0.3
PRSN	**Puerto Rico Se**	**0.34**	**323**		Pg	14 03 33.3	-0.2
PRSN					Sg	14 03 38.6	+0.5
PRSN	**Puerto Rico Se**	**0.34**	**323**	IAML		14 03 39.3	
	comp=N,1µm,0.2s						
PRSN				IAML		14 03 43.9	
	comp=N,1µm,0.3s						
PRSN	**Puerto Rico Se**	**0.34**	**323**	⇑*i*P	Pg	14 03 33.3	-0.2
PRSN				*e*S	Sg	14 03 38.6	+0.5
CELP	**Cerrillos**	**0.36**	**68**	IAML		14 03 39.1	
	comp=N,825nm,0.3s						
CELP				IAML		14 03 39.5	
	comp=N,367nm,0.3s						
UUPR	**Utuado, UPR, P**	**0.37**	**32**		Pg	14 03 33.4	-0.5
UUPR				IAML		14 03 39.2	
	comp=N,3µm,0.4s						
UUPR				IAML		14 03 40.0	
	comp=N,1µm,0.3s						
AGPR	**Aguadilla, PR**	**0.55**	**342**		Pg	14 03 36.8	-0.6
AGPR				IAML		14 03 44.7	
	comp=N,564nm,0.4s						
AGPR				IAML		14 03 45.5	
	comp=N,275nm,0.2s						
AGPR	**Aguadilla, PR**	**0.55**	**342**	⇑*i*P	Pg	14 03 36.8	-0.5
AGPR				*e*S	Sg	14 03 44.3	-0.4
EMPR	**Esperanza - Ma**	**0.66**	**35**		Pg	14 03 38.6	-0.6
EMPR					Sg	14 03 48.1	+0.2
EMPR	**Esperanza - Ma**	**0.66**	**35**	⇑*i*P	Pg	14 03 38.6	-0.6
EMPR				*e*S	Sg	14 03 48.1	+0.2
ECPR	**Experimental S**	**0.66**	**55**		Pg	14 03 38.2	-1.1
ECPR				IAML		14 03 48.9	
	comp=N,350nm,0.2s						
ECPR				IAML		14 03 48.9	
	comp=N,224nm,0.2s						
ECPR	**Experimental S**	**0.66**	**55**	⇓*i*P	Pg	14 03 38.3	-1.0
ECPR				*e*S	Sg	14 03 47.5	-0.4
IDE	**Isla Desecheo**	**0.68**	**311**		Pg	14 03 39.1	-0.7
IDE					Sg	14 03 48.5	-0.3
IDE	**Isla Desecheo**	**0.68**	**311**	⇑*i*P	Pg	14 03 39.1	-0.7
IDE				*e*S	Sg	14 03 48.5	-0.3
SJG	**San Juan**	**0.76**	**77**		Pg	14 03 40.0	-1.2
SJG	**San Juan**	**0.76**	**77**	IAML		14 03 51.3	
	comp=N,155nm,0.5s						
SJG				IAML		14 03 51.9	
	comp=N,95nm,0.3s						
SJG	**San Juan**	**0.76**	**77**	⇓*i*P	Pg	14 03 40.0	-1.2
SJG				*e*S	Sg	14 03 50.2	-1.0
PDPR	**Patillas Dam,**	**0.87**	**85**		Pg	14 03 42.0	-1.3
PDPR				IAML		14 03 59.1	
	comp=N,54nm,0.3s						
PDPR				IAML		14 03 59.9	
	comp=N,45nm,0.2s						
GCPR	**Guaynabo City**	**0.88**	**65**		Sg	14 03 54.2	-0.9
GCPR	**Guaynabo City**	**0.88**	**65**		Pg	14 03 42.0	-1.6
GCPR				IAML		14 04 00.2	
	comp=E,35nm,0.3s						
GCPR				IAML		14 04 00.2	
	comp=N,37nm,0.3s						
GCPR	**Guaynabo City**	**0.88**	**65**	⇓*i*P	Pg	14 03 40.9	-2.7
GCPR				*e*S	Sg	14 03 54.2	-0.9
HUMP	**Col San Antoni**	**1.04**	**79**		Pb	14 03 45.0	-1.6
HUMP					Sb	14 03 58.6	-1.6
HUMP	**Col San Antoni**	**1.04**	**79**	IAML		14 04 02.2	
	comp=N,174nm,0.3s						
HUMP				IAML		14 04 02.3	
	comp=N,187nm,0.3s						
HUMP	**Col San Antoni**	**1.04**	**79**	⇓*i*P	Pb	14 03 45.0	-1.6
HUMP				*e*S	Sb	14 03 58.6	-1.6
CUPR	**Culebra, Puert**	**1.61**	**77**	Pn	Pn	14 03 54.6	-0.1

*IDC **02** 14:09:01.6±1.0, 14°.29N×143°.99E, h0km, mb3.4/6, mbtmp3.4/6, Error ellipse: s-maj=39.1km s-min=15.8km az=52.0*

ISC 02 14:09:06.6±1.0**, 14°.3N**±0°.2×**144°.0E**±0°.2**, h35km, n10, σ0.s60**/8**, mb3.5**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.08**	**130**	Pn	**Pn**	**14 09 24.6**	**-0.6**
	25nm,0.3s,baz=262,slow=7.1,SNR=5.8						
GUMO				Sn	**Sn**	**14 09 39.6**	**+0.6**
	72nm,0.3s,baz=342,slow=20,SNR=14						
H11S3	**WAKE ISLAND Hy**	**22.14**	**76**	T	T	14 36 51.0	
	baz=262,slow=75,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**22.15**	**76**	T	T	14 36 52.6	
	baz=262,slow=75,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**22.16**	**76**	T	T	14 36 56.2	
	baz=262,slow=75,SNR=4.5						
WRA	**Warramunga Arr**	**35.33**	**196**	P	**P**	**14 15 58.7**	**0.0**
	0.4nm,0.6s,baz=9.9,slow=8.8,SNR=5.0						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**39.00**	**195**	P	**P**	**14 16 30.1**	**+0.2**
	0.1nm,0.7s,baz=20,slow=8.3,SNR=1.5						
	0.1nm,0.7s						
SONM	**Songino Array**	**45.69**	**325**	P	**P**	**14 17 24.0**	**-0.2**
	0.3nm,0.7s,baz=141,slow=9.3,SNR=2.1						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**14 19 12.4**	**-0.2**
	0.3nm,0.7s,baz=98,slow=7.4,SNR=4.4						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**60.58**	**324**	P	**P**	**14 19 14.5**	**+0.9**
	0.4nm,0.4s,baz=111,slow=7.9,SNR=2.3						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.56**	**320**	P	**P**	**14 19 33.5**	**-0.1**
	0.6nm,0.8s,baz=96,slow=7.0,SNR=6.4						
	0.6nm,0.8s						

RSNC 02 14:17:30.3±0.0**, 3°N**±9°×**7°4W**±°**, h33km**±2km**, M1.0, ML1.0, MLv1.5, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.07**	**319**	P	Pb	14 17 36.2	+0.1
URMC				S	Sb	14 17 39.5	-0.5
URMC	**La Uribe, Meta**	**0.07**	**319**	P	Pb	14 17 36.1	0.0
URMC				S	Sb	14 17 39.7	-0.3
PRAC	**Prado**	**0.76**	**313**	P	Pn	14 17 44.1	-0.7
PRAC				S	Sb	14 17 55.5	+0.2
ORTC	**Ortega, Tolima**	**1.16**	**308**	P	Pb	14 17 52.8	+0.9
ORTC				S	Sb	14 18 08.8	+2.1
ORTC	**Ortega, Tolima**	**1.16**	**308**	P	Pn	14 17 50.8	+0.5
ORTC				S	Sb	14 18 07.8	+1.1

*KRNET **02** 14:20:44.2±0.1, 39°.71N×77°.05E, mb2.6*
*SOME **02** 14:21:10.7, 40°.83N×79°.88E, h0km*
*NNC **02** 14:21:13.6±2.6, 40°.87N×79°.94E, h0km, mb2.8, mpv2.7, Error ellipse: s-maj=29.9km s-min=17.6km az=74.0*

ISC 02 14:20:46.2±2.4**, 39°.6N**±0°.1×**77°.18E**±0°.07**, h33km**±8km**, n19, σ2.s01**/28**, 16C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.85**	**321**	⇑*i*P	**Pn**	**14 21 15.3**	**-0.6**
JNKS				⇑*i*S	**Sn**	**14 21 38.3**	**0.0**
NRN	**Naryn**	**2.01**	**334**	⇑*e*P	**Pn**	**14 21 18.1**	**-0.1**
NRN				⇑*i*S	**Sn**	**14 21 42.7**	**+0.3**
TARG	**Taragay, Kyrgy**	**2.15**	**13**	⇑*e*P	**Pn**	**14 21 20.7**	**+0.5**
TARG				⇑*i*S	**Sn**	**14 21 47.4**	**+1.4**
KDJ	**Kajisay**	**2.50**	**0**	⇓*e*P	**Pn**	**14 21 25.2**	**+0.4**
KDJ				⇓*e*S	**Sn**	**14 21 55.2**	**+1.0**
ULHL	**Ulahol**	**2.71**	**345**	⇑*i*P	**Pn**	**14 21 27.9**	**+0.2**
ULHL				⇑*i*S	**Sn**	**14 21 59.7**	**+0.3**
SFK	**Sufi-Kurgan**	**2.85**	**279**	⇓*e*P	**Pn**	**14 21 29.9**	**+0.2**
SFK				⇓*e*S	**Sn**	**14 22 03.4**	**+0.3**
SALK	**Salom-Alik**	**2.86**	**297**	⇑*e*P	**Pn**	**14 21 29.5**	**-0.2**
SALK				⇑*e*S	**Sn**	**14 22 02.3**	**-0.7**
PRZ	**Przheval'sk**	**3.00**	**18**	⇑*e*P	**Pn**	**14 21 32.7**	**+1.1**
PRZ				⇑*e*S	**Sn**	**14 22 08.3**	**+1.8**
BOOM	**Boomskoye usch**	**3.01**	**342**	⇑*e*P	**Pn**	**14 21 32.0**	**+0.2**
BOOM				⇑*e*S	**Sn**	**14 22 06.9**	**+0.2**
ARLS	**Aral**	**3.11**	**317**	⇑*e*P	**Pn**	**14 21 33.1**	**0.0**
ARLS				⇑*e*S	**Sn**	**14 22 08.7**	**-0.5**
SATY	**Saty**	**3.55**	**15**	Pg	Pb	14 21 57.6	+9.2
	0.8nm,0.1s						
SATY				Lg	Lg	14 22 31.5	
	2.7nm,0.2s						
KOTS	**Kotyrbulak**	**3.60**	**359**	*e*P	Pb	14 22 09.8	+21
	2.4nm,0.3s						
KOTS				*e*S	Sb	14 22 52.2	+20
	3.1nm,0.3s						
UZB	**Uzynbulak**	**3.78**	**21**	Pg	Pb	14 21 57.4	+5.1
	2.5nm,0.1s						
UZB				Lg	Lg	14 22 30.9	
	1.2nm,0.3s						
UZB	**Uzynbulak**	**3.78**	**21**	*e*P	**Pb**	**14 21 56.5**	**+4.1**
	1.9nm,0.1s						
UZB				*e*S	**Sn**	**14 22 29.5**	**+3.8**
	1.1nm,0.3s						
SHLS	**Shalkode**	**3.92**	**25**	Pg	**Pb**	**14 21 54.7**	**-0.1**
	2.4nm,0.2s						
SHLS				Lg	Lg	14 22 26.3	
	5.0nm,0.5s						
SHLS	**Shalkode**	**3.92**	**25**	*e*P	**Pb**	**14 21 54.7**	**-0.1**
	2.4nm,0.2s						
SHLS				*e*S	**Sn**	**14 22 26.3**	**-2.9**
	5.0nm,0.5s						
KPKS	**Kokpek**	**4.00**	**16**	Pg	Pb	14 22 03.5	+7.5
	0.4nm,0.1s						
KPKS				Lg	Lg	14 22 41.5	
	1.7nm,0.3s						
KPKS	**Kokpek**	**4.00**	**16**	*e*P	Pb	14 22 03.5	+7.5
	0.4nm,0.1s						
KPKS				*e*S	**Sb**	**14 22 41.5**	**-2.4**
	1.7nm,0.3s						
PDGK	**Podgornoye**	**4.08**	**24**	⇓Pn	**Pb**	**14 21 56.4**	**-1.1**
	0.2nm,0.3s						
PDGK				⇓Sn	**Sn**	**14 22 26.9**	**-6.4**
	0.4nm,0.3s						

*IDC **02** 14:21:47.9±1.3, 3°.09S×100°.89E, h0km, mb4.0/11, mbtmp4.0/11, MS2.8/1, Error ellipse: s-maj=53.1km s-min=16.2km az=56.0*
*NEIC **02** 14:21:55.2±0.8, 3°.02S±0°.04×100°.9E±0°.1, h42km±6km, mb4.3/20, Error ellipse: s-maj=15.4km s-min=2.8km az=67.0*
*DJA **02** 14:21:57.5±0.3, 3°S±3°×10°1E±°, h46km±8km, M4.2/18, mB5.6/1, mb4.2/12, MLv4.3/18, Mw(mB)5.1/1*

ISC 02 14:21:55.5±0.5**, 2°.97S**±0°.05×**101°.00E**±0°.05**, h46km, n88, σ1.s49**/85**, mb4.3**/21**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.98**	**28**	P	**Pn**	**14 22 13.4**	**+0.3**
KRJI				S	**Sn**	**14 22 26.7**	**+0.7**
PPSI	**Pulau Pagai**	**1.01**	**282**	P	**Pn**	**14 22 15.7**	**+2.3**
MASI	**Maura Aman, Be**	**1.25**	**98**	P	**Pn**	**14 22 16.7**	**+0.1**
MASI				S	**Sn**	**14 22 32.9**	**+0.7**
UBSI	**University, Be**	**1.49**	**122**	P	**Pn**	**14 22 20.7**	**+0.8**
KSI	**Kapahiang**	**1.73**	**113**	P	**Pn**	**14 22 24.5**	**+1.3**
PDSI	**Padang**	**2.11**	**345**	P	**Pn**	**14 22 29.0**	**+0.5**
MNAI	**Manna**	**2.39**	**125**		**Pn**	**14 22 32.6**	**+0.4**
MNAI	**Manna**	**2.39**	**125**	P	**Pn**	**14 22 34.9**	**+2.7**
MNAI	**Manna**	**2.39**	**125**	P	**Pn**	**14 22 34.2**	**+2.0**
MNAI				S	**Sn**	**14 23 01.1**	**+0.8**
PPI	**Padang Panjang**	**2.57**	**346**	P	**Pn**	**14 22 35.9**	**+1.2**
PPI				S	**Sn**	**14 23 06.6**	**+1.9**
EGSI	**Enggano, Bengk**	**2.69**	**152**	P	**Pn**	**14 22 37.5**	**+1.2**
MDSI	**Maura Dua**	**3.51**	**116**	P	**Pn**	**14 22 50.7**	**+3.1**
LWLI	**Liwa**	**3.66**	**124**	P	**Pn**	**14 22 51.5**	**+1.6**
PBSI	**Pulau Batu**	**3.97**	**317**	P	**Pn**	**14 22 56.8**	**+2.8**
MNSI	**Mandailing Nat**	**4.00**	**339**	P	**Pn**	**14 22 57.6**	**+3.2**
KASI	**Kota Agung**	**4.31**	**126**	P	**Pn**	**14 23 01.4**	**+2.8**
DSRI	**Dabo**	**4.34**	**55**	P	**Pn**	**14 22 59.6**	**+0.5**
TPRI	**Tanjung Pinang**	**5.23**	**42**	P	**Pn**	**14 23 13.6**	**+2.4**
GSI	**Gunungsitoli**	**5.46**	**321**	Pn	**Pn**	**14 23 13.4**	**-0.9**
GSI	**Gunungsitoli**	**5.46**	**321**	P	**Pn**	**14 23 16.7**	**+2.3**
GSI	**Gunungsitoli**	**5.46**	**321**	P	**Pn**	**14 23 16.3**	**+1.9**
	0.2nm19nm,0.5s						
MYKOM	**Kota Tinggi**	**5.52**	**31**	Pn	**Pn**	**14 23 15.8**	**+0.5**
MYKOM	**Kota Tinggi**	**5.52**	**31**	P	**Pn**	**14 23 19.1**	**+3.9**
MYKOM	**Kota Tinggi**	**5.52**	**31**	P	**Pn**	**14 23 16.6**	**+1.4**
	0.2nm36nm,1.2s						
TPI	**Tanjungpandan**	**6.64**	**88**	P	**Pn**	**14 23 30.6**	**-0.1**
	0.2nm23nm,1.1s						
KCSI	**Kotacane, Aceh**	**7.21**	**333**	P	**Pn**	**14 23 40.5**	**+2.0**
IPM	**Ipoh**	**7.40**	**0**	P	Pn	14 23 46.8	+5.7
IPM	**Ipoh**	**7.40**	**0**	P	**Pn**	**14 23 44.8**	**+3.7**
	0.1nm18nm,1.0s						
BBJI	**Bungbulang**	**7.98**	**124**	Pn	**Pn**	**14 23 48.9**	**-0.2**
BBJI	**Bungbulang**	**7.98**	**124**	P	**Pn**	**14 23 49.7**	**+0.6**
BBJI	**Bungbulang**	**7.98**	**124**	P	**Pn**	**14 23 48.7**	**-0.4**
KULM	**Kulim**	**8.21**	**358**	P	**Pn**	**14 23 55.9**	**+3.7**
KULM	**Kulim**	**8.21**	**358**	P	**Pn**	**14 23 55.1**	**+2.9**
	15nm,1.2s						
LHMI	**Lhok Sumawe**	**9.10**	**334**	Pn	**Pn**	**14 24 03.7**	**-0.6**
UGM	**Wanagama**	**10.67**	**118**	P	**Pn**	**14 24 27.5**	**+1.6**
SNJI	**Sawahan-Nganju**	**11.72**	**114**	P	**Pn**	**14 24 42.1**	**+1.6**
	13nm,1.5s						
TWSI	**Taliwang, Sumb**	**16.80**	**111**	P	**Pn**	**14 25 50.3**	**+2.6**
	14nm,2.1s						
PLAI	**Plampang**	**17.66**	**110**	P	**Pn**	**14 25 58.0**	**-0.4**
	14nm,1.7s						
KAPI	**Kappang**	**18.81**	**97**	Pn	**Pn**	**14 26 15.1**	**+2.7**
	0.6nm,0.3s,baz=278,slow=5.0,SNR=4.4						
WBSI	**Waikabubak, Su**	**19.43**	**111**	P	**P**	**14 26 18.3**	**-0.1**
TOLI2	**Tolitoli**	**20.18**	**79**	P	**P**	**14 26 27.0**	**+0.5**
TOLI2				IAmb	IAmb	14 26 50.2	
	comp=Z,14nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.39**	**355**	P	**P**	**14 26 36.8**	**-2.7**
	comp=Z,0.7nm,0.8s,baz=171,slow=8.7,SNR=7.0						
CMAR				LR	LR	14 34 33.5	
	comp=Z,26nm,19.4s,baz=170,slow=36						
	comp=Z,0.7nm,0.8s						
H08S2	**Diego Garcia H**	**28.76**	**260**	T	T	14 57 13.9	
	baz=82,slow=76,SNR=28						
H08S3	**Diego Garcia H**	**28.76**	**260**	T	T	14 57 19.9	
	baz=82,slow=76,SNR=32						
H08S1	**Diego Carcia H**	**28.78**	**260**	T	T	14 57 15.4	
	baz=82,slow=76,SNR=18						
ENH	**Enshi**	**34.03**	**13**	P	**P**	**14 28 35.4**	**0.0**
ENH				IAmb	IAmb	14 28 40.7	
	comp=Z,3.8nm,1.1s						
TATO	**Taipei**	**34.16**	**34**	P	**P**	**14 28 36.4**	**-0.1**
WB0	**Warramunga Arr**	**36.62**	**120**	P	**P**	**14 28 57.1**	**-0.7**
WB0				IAmb	IAmb	14 29 09.2	
	comp=Z,6.3nm,1.2s						
WRA	**Warramunga Arr**	**36.64**	**120**	P	**P**	**14 28 56.7**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=292,slow=8.3,SNR=18						
WRA				PcP	**PcP**	**14 31 20.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=305,slow=2.6,SNR=2.0						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**36.64**	**120**	P	**P**	**14 28 57.3**	**-0.7**
WR8	**Warramunga Arr**	**36.79**	**120**	P	**P**	**14 28 58.8**	**-0.4**
WR8				IAmb	IAmb	14 29 00.4	
	comp=Z,5.0nm,0.9s						
AS31	**Alice Springs**	**37.88**	**126**	P	**P**	**14 29 07.8**	**-0.6**
ASAR	**Alice Springs**	**37.88**	**126**	P	**P**	**14 29 06.7**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=299,slow=8.6,SNR=21						
ASAR				PcP	**PcP**	**14 31 24.5**	**+0.3**
	comp=Z,0.5nm,1.0s,baz=298,slow=3.0,SNR=2.7						
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**37.88**	**126**	P	**P**	**14 29 07.9**	**-0.5**
KSRS	**Korea Array**	**47.35**	**29**	P	**P**	**14 30 24.8**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=232,slow=8.8,SNR=4.7						
	comp=Z,0.7nm,0.7s						
TARG	**Taragay, Kyrgy**	**49.23**	**337**	P	**P**	**14 30 39.4**	**-0.6**
GAR	**Garm**	**50.44**	**329**	P	**P**	**14 30 48.7**	**-0.2**
BOOM	**Boomskoye usch**	**50.62**	**336**	P	**P**	**14 30 50.7**	**+0.5**
BOOM				IAmb	IAmb	14 31 06.2	
	comp=Z,4.8nm,1.3s						
SONM	**Songino Array**	**50.81**	**5**	P	**P**	**14 30 51.6**	**+0.1**
	comp=Z,3.3nm,0.9s,baz=190,slow=8.8,SNR=21						
SONM				PcP	**PcP**	**14 32 07.7**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=187,slow=3.0,SNR=1.8						
	comp=Z,3.3nm,0.9s						
SONM	**Songino Array**	**50.81**	**5**	P	**P**	**14 30 51.8**	**+0.3**
ULN	**Ulaanbaatar**	**50.90**	**5**	P	**P**	**14 30 52.8**	**+0.6**
ARSB	**Arslanbob**	**50.94**	**333**	P	**P**	**14 30 52.7**	**+0.1**
ARSB				IAmb	IAmb	14 30 55.3	
	comp=Z,3.9nm,0.9s						
MKAR	**Makanchi Array**	**52.23**	**344**	P	**P**	**14 31 01.8**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=154,slow=8.4,SNR=32						
	comp=Z,2.1nm,0.5s						
MKAR	**Makanchi Array**	**52.23**	**344**	P	**P**	**14 31 01.5**	**-0.5**
HILR	**Hailar Array B**	**54.77**	**15**	P	**P**	**14 31 19.8**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=184,slow=39,SNR=1.9						
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**56.76**	**343**	P	**P**	**14 31 34.1**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=162,slow=7.1,SNR=12						
	comp=Z,0.6nm,0.6s						
KURK	**Kurchatov**	**56.82**	**343**	P	**P**	**14 31 35.3**	**+0.1**
KURK				IAmb	IAmb	14 31 49.4	
	comp=Z,2.8nm,1.0s						
ZAA0	**Zalesovo Array**	**58.30**	**349**	P	**P**	**14 31 44.8**	**-0.8**
ZALV	**Zalesovo Beam**	**58.30**	**349**	P	**P**	**14 31 45.0**	**-0.5**
	comp=Z,6.9nm,0.8s,baz=162,slow=8.1,SNR=34						
	comp=Z,6.9nm,0.8s						
ZALV	**Zalesovo Beam**	**58.30**	**349**	P	**P**	**14 31 45.1**	**-0.5**
H04N2	**CROZET ISLANDS**	**60.63**	**217**	T	T	15 37 22.1	
	baz=59,slow=75,SNR=74						
H04N1	**CROZET ISLANDS**	**60.64**	**217**	T	T	15 37 26.2	
	baz=59,slow=75,SNR=68						
H04N3	**CROZET ISLANDS**	**60.64**	**217**	T	T	15 37 24.7	
	baz=59,slow=75,SNR=61						
H04S1	**CROZET ISLANDS**	**60.90**	**216**	T	T	15 37 41.5	
	baz=59,slow=75,SNR=5.7						
H04S3	**CROZET ISLANDS**	**60.91**	**216**	T	T	15 37 40.0	
	baz=59,slow=75,SNR=8.6						
H04S2	**CROZET ISLANDS**	**60.92**	**216**	T	T	15 37 35.1	
	baz=59,slow=75,SNR=7.6						
BVAR	**Borovoye Array**	**61.44**	**339**	P	**P**	**14 32 06.2**	**-0.9**
	comp=Z,3.0nm,0.6s,baz=139,slow=9.0,SNR=19						
	comp=Z,3.0nm,0.6s						
BORK	**Borovoye**	**61.48**	**339**	P	**P**	**14 32 06.8**	**-0.6**
BORK				IAmb	IAmb	14 32 07.7	
	comp=Z,2.3nm,1.1s						
AB31	**Akbulak array**	**62.97**	**331**	P	**P**	**14 32 17.2**	**-0.2**
AB31				IAmb	IAmb	14 32 18.4	
	comp=Z,2.0nm,0.7s						
ABKAR	**Akbulak array**	**62.97**	**331**	P	**P**	**14 32 17.0**	**-0.4**
PET	**Petropavlovsk**	**73.63**	**32**	P	**P**	**14 33 23.1**	**-1.0**
TIXI	**Tiksi**	**76.65**	**9**	P	**P**	**14 33 40.3**	**-0.9**
TIXI				IAmb	IAmb	14 33 42.8	
	comp=Z,3.5nm,1.1s						
SBA	**Scott Base**	**82.12**	**169**	P	**P**	**14 34 10.5**	**-0.4**
FINES	**FINESS Array B**	**85.43**	**332**	P	**P**	**14 34 28.2**	**+0.1**
	comp=Z,4.7nm,1.1s,baz=100,slow=8.0,SNR=4.6						
	comp=Z,4.7nm,1.1s						
FINES	**FINESS Array B**	**85.43**	**332**	P	**P**	**14 34 27.9**	**-0.1**
SPITS	**Spitsbergen Ar**	**91.78**	**348**	P	**P**	**14 34 57.6**	**-0.4**
	comp=Z,19nm,1.1s,baz=94,slow=12,SNR=2.1						
TXAR	**Lajitas Array**	**144.84**	**39**	PKPbc	**PKPab**	**14 41 27.5**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=316,slow=1.9,SNR=17						
TXAR	**Lajitas Array**	**144.84**	**39**		**PKPab**	**14 41 26.9**	**-0.5**

*RSPR **02** 14:22:27.6, 18°.84N×68°.01W, h8km±8km, MD2.4/5*
*NEIC **02** 14:22:27.1±0.9, 18°.88N±0°.07×67°.96W±0°.09, h30km±14km, ML2.6/25, Md2.4/5(RSPR), Error ellipse: s-maj=12.7km s-min=9.1km az=62.0*
*SDD **02** 14:22:29.9±2.4, 19°.05N×67°.60W, h20km±104km, MD3.5,*

ML2.5, MW3.1, Presumed earthquake
ISC 02 14:22:30.3±1.2**, 18°.91N**±0°.06×**67°.67W**±0°.03**, h32**km±11km**,**
n32, σ1s.17/48**, 24C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.55	161		Pb	14 22 40.5	-1.2
IDE					Sb	14 22 49.3	-0.2
IDE	Isla Desecheo	0.55	161	⇑eP	Pb	14 22 40.5	-1.2
IDE				eS	Sb	14 22 49.3	-0.2
AGPR	Aguadilla, PR	0.69	130	Pn	Pn	14 22 42.6	-1.2
AGPR				IAML		14 23 01.3	
	116nm,0.4s						
AGPR	Aguadilla, PR	0.69	130	⇓ePg	Pn	14 22 42.5	-1.2
AGPR				⇑eSg	Sn	14 22 53.4	0.0
AGPR				IAML		14 23 01.2	
	comp=N,109nm,0.3s						
AGPR	Aguadilla, PR	0.69	130	⇑eP	Pn	14 22 43.0	-0.8
PCDR	Punta Cana, DR	0.79	240	⇑ePg	Pn	14 22 45.4	+0.3
PCDR				⇑eSg	Sb	14 22 57.4	+1.5
PCDR				IAML		14 23 42.7	
	comp=N,90nm,1.6s						
PRSN	Puerto Rico Se	0.85	144		Pn	14 22 44.5	-1.5
PRSN					Sb	14 22 58.9	+1.2
PRSN	Puerto Rico Se	0.85	144	IAML		14 23 04.5	
	comp=N,196nm,0.3s						
PRSN	Puerto Rico Se	0.85	144	⇑ePg	Pn	14 22 46.1	+0.1
PRSN				⇑eSg	Sb	14 22 59.9	+2.2
PRSN				IAML		14 23 05.8	
	comp=N,143nm,0.2s						
PRSN	Puerto Rico Se	0.85	144	⇑eP	Pn	14 22 44.5	-1.5
PRSN				eS	Sb	14 22 58.9	+1.2
CRPR	Cabo Rojo, PR	1.04	150		Sn	14 23 02.4	+0.2
CRPR	Cabo Rojo, PR	1.04	150	⇑ePg	Pb	14 22 50.9	+1.0
CRPR				⇑eSg	Sb	14 23 04.8	+1.5
CRPR				IAML		14 23 09.0	
	comp=N,121nm,0.5s						
CRPR	Cabo Rojo, PR	1.04	150	eS	Sn	14 23 02.4	+0.2
UUPR	Utuado, UPR, P	1.11	126		Pn	14 22 49.0	-0.6
EMPR	Esperanza - Ma	1.16	112		Pb	14 22 50.9	-0.9
EMPR					Sb	14 23 08.8	+2.3
EMPR	Esperanza - Ma	1.16	112	⇑eP	Pb	14 22 50.9	-0.9
EMPR				eS	Sb	14 23 08.8	+2.3
MIDR	Miches	1.31	273	⇑ePg	Pb	14 22 53.9	-0.5
MIDR				⇑eSg	Sb	14 23 12.6	+1.7
MIDR				IAML		14 23 13.6	
	comp=N,39nm,0.5s						
CELP	Cerrillos	1.33	129		Pn	14 22 52.7	+0.1
CELP				IAML		14 23 18.2	
	comp=N,65nm,0.3s						
CELP				IAML		14 23 48.9	
	comp=N,103nm,1.9s						
OBIP	Obispado Ponce	1.33	131		Pn	14 22 52.6	0.0
OBIP					Sb	14 23 11.4	+0.1
OBIP	Obispado Ponce	1.33	131	⇑eP	Pn	14 22 52.9	+0.3
ECPR	Experimental S	1.37	115	Pn	Pn	14 22 52.8	-0.4
ECPR				IAML		14 23 18.7	
	comp=N,87nm,0.2s						
ECPR	Experimental S	1.37	115	⇑eP	Pn	14 22 53.4	+0.2
ECPR				eS	Sb	14 23 14.4	+1.9
SMDR	Samana, DR	1.49	285	⇑ePg	Pb	14 22 56.4	-1.0
SMDR				⇑eSg	Sb	14 23 17.1	+1.3
SMDR				IAML		14 23 22.0	
	comp=N,53nm,0.6s						
HATOM	Hato Mayor del	1.63	266	⇑ePg	Pb	14 22 59.0	-0.8
HATOM				eSg	Sb	14 23 22.2	+2.3
HATOM				IAML		14 23 25.7	
	comp=N,32nm,2.6s						
SJG	San Juan	1.64	119		Pn	14 22 56.8	-0.1
SJG				IAML		14 23 22.6	
	comp=N,33nm,0.6s						
SJG	San Juan	1.64	119	⇑ePg	Pn	14 22 57.8	+0.8
SJG				⇑eSg	Sb	14 23 21.0	+0.7
SJG	San Juan	1.64	119	⇑eP	Pb	14 22 58.4	-1.6
SJG				eS	Sb	14 23 21.0	+0.6
PDPR	Patillas Dam,	1.80	119	Pn	Pn	14 22 58.9	-0.1
HUMP	Col San Antoni	1.89	114		Pn	14 23 00.2	-0.1
HUMP	Col San Antoni	1.89	114	IAML		14 24 09.9	
	comp=N,22nm,1.5s						
HUMP	Col San Antoni	1.89	114	⇑eP	Pn	14 23 00.4	+0.1
DR08	Loma La Naviza	2.23	272	⇑ePg	Pb	14 23 08.0	-2.0
DR08				⇑eSg	Sb	14 23 37.2	0.0
DR08				IAML		14 23 38.9	
	comp=N,366nm,0.3s						

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*IDC **02** 14:39:57.0±6.3, 17°.62S×178°.66W, h559km±69km, mb2.9/9, mbtmp3.8/9, Error ellipse: s-maj=54.3km s-min=25.3km az=145.0*
*NEIC **02** 14:39:57.9±1.1, 17°.5S±0°.2×178°.7W±0°.1, h565km±11km, mb4.3/17, Error ellipse: s-maj=34.5km s-min=13.6km az=167.0*
*NOU **02** 14:39:58.9, 19°.32S×178°.25E, h415km, ML5.9/9, South of Fiji Islands*
ISC 02 14:39:56.0±0.8**, 17°.6S**±0°.2×**178°.6W**±0°.1**, h547**km**, n34,**
σ**0s.95**/36**, mb4.0**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.68	198	P	P	14 41 01.6	+0.3
TAVE	Taveuni	1.53	304	P	P	14 41 05.1	+1.5
DGTI	Dogotuki	2.05	308	P	P	14 41 06.7	+1.0
MSVF	Nonsavu	3.21	267	P	P	14 41 14.5	+2.3
DZM	Mont Dzumac	14.77	250	P	P	14 43 04.6	+1.3
ONTNC	Ouen Toro	14.82	249	P	P	14 43 05.4	+1.7
PMG	Port Moresby	34.23	279	P	P	14 45 55.9	-0.9
PMG				IAmb	IAmb	14 46 17.7	
	comp=Z,20nm,1.2s						
STKA	Stephens Creek	38.64	241	P	P	14 46 32.5	-0.4
	comp=Z,0.9nm,0.4s,baz=86,slow=13,SNR=1.6						
	comp=Z,0.9nm,0.4s						
MGBR	Mount Gambier	40.96	232	P	P	14 46 51.6	+0.2
BBOO	Buckleboo	43.41	241	P	P	14 47 10.2	-0.6
BBOO				IAmb	IAmb	14 47 32.6	
	comp=Z,25nm,1.4s						
WR8	Warramunga Arr	44.37	259	P	P	14 47 17.8	-0.6
WR8				IAmb	IAmb	14 48 00.8	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	44.49	259	P	P	14 47 18.7	-0.6
WB0				IAmb	IAmb	14 48 00.6	
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	44.52	259	P	P	14 47 18.5	-1.1
	comp=Z,0.4nm,0.5s,baz=96,slow=6.6,SNR=7.5						
WRA				PcP	PcP	14 48 50.3	-0.7
	comp=Z,0.1nm,0.4s,baz=94,slow=3.3,SNR=1.3						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	44.52	259	P	P	14 47 18.6	-0.9
AS31	Alice Springs	44.71	254	P	P	14 47 20.2	-0.8
ASAR	Alice Springs	44.71	254	P	P	14 47 20.2	-0.8
	comp=Z,5.7nm,0.6s,baz=93,slow=7.6,SNR=248						
ASAR				PcP	PcP	14 48 50.9	-0.7
	comp=Z,0.3nm,0.5s,baz=92,slow=3.7,SNR=7.1						
	comp=Z,5.7nm,0.6s						
ASAR	Alice Springs	44.71	254	P	P	14 47 19.8	-1.2
FAKI	Fak Fak	50.34	281	P	P	14 48 01.7	-1.6
KNRA	Kununurra	50.35	264	P	P	14 48 02.8	-0.4
KNRA				IAmb	IAmb	14 48 27.0	
	comp=Z,33nm,1.5s						
FITZ	Fitzroy Crossi	52.91	260	P	P	14 48 22.2	+0.5
	comp=Z,1.0nm,0.5s,baz=98,slow=7.1,SNR=1.3						
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	67.54	323	P	P	14 49 58.2	0.0
	comp=Z,0.5nm,0.5s,baz=150,slow=6.1,SNR=1.9						
	comp=Z,0.5nm,0.5s						
NVAR	Mina Array Bea	79.31	44	P	P	14 51 06.1	+0.6
	comp=Z,0.2nm,0.5s,baz=251,slow=3.8,SNR=2.0						
	comp=Z,0.2nm,0.5s						
GHO	Glory Hole Cre	82.53	14	P	P	14 51 21.1	-0.3
GHO				IAmb	IAmb	14 51 52.9	
	comp=Z,16nm,1.5s						
ILAR	Eielson Array	85.61	13	P	P	14 51 35.6	-0.7
	comp=Z,0.1nm,0.3s,baz=210,slow=4.9,SNR=7.1						
	comp=Z,0.1nm,0.3s						
TXAR	Lajitas Array	85.97	58	P	P	14 51 39.7	+0.7
	comp=Z,0.2nm,0.6s,baz=248,slow=5.3,SNR=3.5						
	comp=Z,0.2nm,0.6s						
J26L	Joseph Creek	86.13	14	P	P	14 51 39.8	+0.8
D19K	Kuna River	87.11	7	P	P	14 51 43.5	+0.1
E24K	Your Creek	88.19	11	P	P	14 51 48.9	+0.5
E24K				IAmb	IAmb	14 52 29.5	
	comp=Z,2.8nm,1.2s						
D22K	Ayikyak River	88.21	9	P	P	14 51 49.2	+0.6
D22K				IAmb	IAmb	14 52 06.6	
	comp=Z,5.0nm,1.4s						
CMAR	Chiang Mai Arr	88.61	290	P	P	14 51 52.3	+0.8
	comp=Z,0.3nm,0.4s,baz=98,slow=6.8,SNR=1.4						
	comp=Z,0.3nm,0.4s						
EF02	Christine	89.95	60	P	P	14 51 57.7	+0.2
EF02				IAmb	IAmb	14 52 10.6	
	comp=Z,31nm,0.6s						
F31M	Tsiigehtchic	90.92	16	P	P	14 52 01.1	+0.1
F31M				IAmb	IAmb	14 52 31.7	
	comp=Z,5.8nm,1.4s						
MKAR	Makanchi Array	108.78	314	PKiKP	PKiKP	14 57 22.0	-1.2
	comp=Z,0.1nm,0.5s,baz=96,slow=2.9,SNR=1.9						
BVAR	Borovoye Array	116.48	321	PKP	PKPdf	14 57 36.7	-1.0
	comp=Z,0.3nm,0.4s,baz=53,slow=2.0,SNR=2.0						

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*NEIC **02** 14:42:58.9±0.9, 17°.76N±0°.03×66°.87W±0°.01, h10km±1km, ML3.1/35, Md2.6/8(RSPR), Error ellipse: s-maj=4.6km s-min=2.8km az=8.0*
RSPR 02 14:43:00.3, 17°.85N×66°.87W, h10km**, MD2.6**/8**, 1C-1D,**
Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.13	356		Pg	14 43 03.7	+0.3
GBPR					Sg	14 43 06.1	+0.6
GBPR	Guanica, Bosqu	0.13	356	⇑iP	Pg	14 43 03.7	+0.3
GBPR				eS	Sg	14 43 06.1	+0.6
MLPR	Magueyes Islan	0.21	306		Pg	14 43 04.8	+0.2
MLPR				IAML		14 43 08.9	
	5µm,0.2s						
MLPR				IAML		14 43 09.3	
	2µm,0.3s						
CRPR	Cabo Rojo, PR	0.28	305		Pg	14 43 05.8	-0.1
CRPR	Cabo Rojo, PR	0.28	305	IAML		14 43 10.7	
	4µm,0.3s						
CRPR				IAML		14 43 11.3	
	3µm,0.3s						
CRPR	Cabo Rojo, PR	0.28	305	⇑iP	Pg	14 43 06.0	0.0
CRPR				eS	Sg	14 43 10.2	+0.5
OBIP	Obispado Ponce	0.32	52		Pg	14 43 06.3	-0.3
OBIP				IAML		14 43 11.9	
	comp=N,418nm,0.6s						
OBIP	Obispado Ponce	0.32	52		Sg	14 43 11.5	+0.5
OBIP	Obispado Ponce	0.32	52	⇓iP	Pg	14 43 06.5	-0.2
OBIP				eS	Sg	14 43 11.5	+0.5
CELP	Cerrillos	0.36	51		Pg	14 43 07.0	-0.4
CELP				IAML		14 43 13.5	
	comp=N,943nm,0.2s						
CELP				IAML		14 43 13.6	
	comp=N,1µm,0.2s						
LSP	Las Mesas	0.39	328		Pg	14 43 07.9	0.0
LSP					Sg	14 43 13.7	+0.6
LSP	Las Mesas	0.39	328	⇑iP	Pg	14 43 07.9	0.0
LSP				eS	Sg	14 43 13.7	+0.6
UUPR	Utuado, UPR, P	0.43	19		Pg	14 43 08.2	-0.5
UUPR					Sg	14 43 14.2	-0.2
UUPR				IAML		14 43 17.7	
	comp=N,13µm,0.4s						
UUPR				IAML		14 43 18.6	
	comp=N,11µm,0.4s						
PRSN	Puerto Rico Se	0.45	325		Pg	14 43 08.8	-0.4
PRSN				IAML		14 43 16.7	
	comp=N,2µm,0.2s						
PRSN				IAML		14 43 17.4	
	comp=N,2µm,0.2s						
PRSN	Puerto Rico Se	0.45	325		Sg	14 43 15.6	+0.5
PRSN	Puerto Rico Se	0.45	325	⇑iP	Pg	14 43 08.8	-0.3
PRSN				eS	Sg	14 43 15.6	+0.5
AGPR	Aguadilla, PR	0.66	340		Pg	14 43 12.3	-0.8
AGPR				IAML		14 43 22.3	
	comp=N,364nm,0.3s						
AGPR				IAML		14 43 24.8	
	comp=N,490nm,0.4s						
AGPR	Aguadilla, PR	0.66	340	⇑iP	Pg	14 43 12.4	-0.7
AGPR				eS	Sg	14 43 21.0	-0.8
ECPR	Experimental S	0.67	46		Pg	14 43 12.3	-1.0
ECPR				IAML		14 43 23.6	
	comp=N,2µm,0.2s						
ECPR				IAML		14 43 23.9	
	comp=N,2µm,0.2s						
ECPR	Experimental S	0.67	46	⇑iP	Pg	14 43 12.6	-0.8
ECPR				eS	Sg	14 43 21.6	-0.6
EMPR	Esperanza - Ma	0.71	27		Pg	14 43 13.7	-0.3
EMPR					Sg	14 43 22.6	-0.6
EMPR	Esperanza - Ma	0.71	27	⇑iP	Pg	14 43 13.7	-0.3
EMPR				eS	Sg	14 43 22.6	-0.6
SJG	San Juan	0.73	69		Pg	14 43 13.3	-1.2
SJG				IAML		14 43 26.9	
	comp=N,492nm,0.5s						
SJG				IAML		14 43 27.1	
	comp=N,414nm,0.6s						
SJG	San Juan	0.73	69	⇑iP	Pg	14 43 13.7	-0.8
SJG				eS	Sg	14 43 23.8	-0.3
IDE	Isla Desecheo	0.79	313		Pg	14 43 14.6	-0.9
IDE	Isla Desecheo	0.79	313	⇑iP	Pg	14 43 14.6	-0.9
PDPR	Patillas Dam,	0.82	78		Pg	14 43 15.1	-1.1
PDPR				IAML		14 43 29.7	
	comp=N,310nm,0.5s						
PDPR				IAML		14 43 29.8	
	comp=N,174nm,0.5s						
GCPR	Guaynabo City	0.88	58		Pg	14 43 15.7	-1.6
GCPR				IAML		14 43 29.1	
	comp=N,122nm,0.2s						
GCPR				IAML		14 43 31.9	
	comp=E,115nm,0.3s						
GCPR	Guaynabo City	0.88	58		Sg	14 43 27.6	-1.1
GCPR	Guaynabo City	0.88	58	⇑eP	Pg	14 43 16.2	-1.0
GCPR				eS	Sg	14 43 27.6	-1.1
HUMP	Col San Antoni	1.01	73		Pg	14 43 17.9	-1.9
HUMP				IAML		14 43 35.1	
	comp=E,309nm,0.3s						
HUMP				IAML		14 43 41.6	
	comp=E,165nm,0.2s						
HUMP	Col San Antoni	1.01	73		Sg	14 43 32.6	-0.4
HUMP	Col San Antoni	1.01	73	⇑iP	Pg	14 43 18.3	-1.5
HUMP				eS	Sg	14 43 32.6	-0.4
CUPR	Culebra, Puert	1.58	73	Pn	Pn	14 43 27.4	-0.8
DR12	Loma Pena Alta	2.56	292	Pn	Pn	14 43 41.7	-0.2

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*IDC **02** 14:46:37.1±4.4, 9°.43S×113°.17E, h0km, mb3.0/3, mbtmp3.3/4, ML3.1/1, Error ellipse: s-maj=265.4km s-min=28.3km az=47.0*
*DJA **02** 14:46:46.4±0.3, 9°S±5°×11°3E±°, h55km±25km, M4.0/18, mb4.3/7, MLv3.9/18*
ISC 02 14:46:45.8±1.4**, 9°.3S**±0°.1×**113°.31E**±0°.04**, h58**km±18km**,**
n26, σ**1s.20**/34**, mb3.2**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.04	7	P	Pn	14 47 03.3	-1.1
GMJI				S	Sn	14 47 15.7	-2.4
JAGI	Jajag, Banyuwa	1.18	45	P	Pn	14 47 06.3	+0.1
JAGI				S	Sn	14 47 20.6	-0.8
BLJI	Banyuglugur	1.58	10	P	Pn	14 47 12.2	+0.6
BLJI				S	Sn	14 47 31.6	+0.5
ABJI	Asem Bagus	1.76	31	P	Pn	14 47 15.3	+1.3
ABJI				S	Sn	14 47 37.8	+2.4
RTBI	Rangdo, Negare	1.82	62	P	Pn	14 47 15.8	+1.0
RTBI				S	Sn	14 47 38.2	+1.4
IGBI	Denpasar	1.88	75	P	Pn	14 47 16.4	+0.9
DNP	Denpasar	1.98	71	P	Pn	14 47 17.4	+0.5
SNJI	Sawahan-Nganju	2.17	315	P	Pn	14 47 21.2	+1.5
SNJI				S	Sn	14 47 46.9	+1.4
SJI	Sawahan	2.19	316	P	Pn	14 47 20.9	+0.9
SJI				S	Sn	14 47 46.9	+0.9
KMMI	Kalianget	2.34	16	P	Pn	14 47 22.8	+0.9
KMMI				S	Sn	14 47 50.1	+0.6
PCJI	Pacitan	2.39	298	P	Pn	14 47 23.0	+0.5
KHKI	Kahang-Kahang	2.46	68	P	Pn	14 47 25.0	+1.5
KHKI				S	Sn	14 47 52.5	+0.1
NGJI	Ngawi	2.67	316	P	Pn	14 47 28.4	+2.1
UGM	Wanagama	3.09	297	P	Pn	14 47 32.9	+0.7
TWSI	Taliwang, Sumb	3.57	81	P	Pn	14 47 40.1	+1.4
PLAI	Plampang	4.43	84	P	Pn	14 47 51.5	+0.9
KPJI	Karang Pucung	4.76	294	P	Pn	14 47 56.1	+1.0
DBNI	Kabupaten Domp	5.00	81	P	Pn	14 47 59.8	+1.4
	0.1nm14nm,0.7s						
BBJI	Bungbulang	5.90	288	P	Pn	14 48 10.6	-0.1
WBSI	Waikabubak, Su	6.00	94	P	Pn	14 48 12.9	+0.8
	0.1nm35nm,1.0s						
BSSI	Bau Bau, Buton	7.78	67	P	Pn	14 48 36.6	+0.2
	47nm,1.1s						
MNAI	Manna	11.40	295	P	Pn	14 49 24.9	-1.1
FITZ	Fitzroy Crossi	14.81	127	Pn	Pn	14 50 06.5	-5.5
	0.1nm,0.3s,baz=306,slow=8.7,SNR=2.9						
FITZ				Sn	Sn	14 52 40.7	-14
	0.1nm,0.3s,baz=292,slow=5.4,SNR=1.7						
	2.3nm,0.9s						
WRA	Warramunga Arr	22.89	120	P	P	14 51 43.8	-1.1
	0.8nm,0.8s,baz=301,slow=10,SNR=5.7						
	0.8nm,0.8s						
ASAR	Alice Springs	24.31	128	P	P	14 51 57.4	-0.7
	0.2nm,0.7s,baz=298,slow=9.5,SNR=5.6						
	0.2nm,0.7s						
MKAR	Makanchi Array	62.34	336	P	P	14 57 01.5	-0.7
	0.1nm,0.5s,baz=146,slow=7.9,SNR=1.5						
	0.1nm,0.5s						

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*NEIC **02** 14:52:18.3±1.1, 17°.75N±0°.03×66°.87W±0°.01, h10km±2km, ML3.2/35, Md2.6/7(RSPR), Error ellipse: s-maj=4.7km s-min=2.9km az=12.0*
*RSPR **02** 14:52:20.0, 17°.85N×66°.87W, h10km, MD2.6/7*
*SDD **02** 14:52:19.8±1.6, 17°.81N×66°.90W, h15km±19km, MD3.5, ML2.7, MW3.3, Presumed earthquake*
ISC 02 14:52:19.7±1.0**, 17°.91N**±0°.06×**66°.84W**±0°.02**, h18**km±4km**,**
n41, σ**0s.54**/60**, 9C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.08	332		Pg	14 52 23.2	+0.1
GBPR					Sg	14 52 25.7	+0.3
GBPR	Guanica, Bosqu	0.08	332	⇓iP	Pg	14 52 23.2	+0.1
GBPR				eS	Sg	14 52 25.7	+0.3
MLPR	Magueyes Islan	0.20	288		Pg	14 52 24.4	-0.2
MLPR				IAML		14 52 28.1	
	6µm,0.5s						
MLPR				IAML		14 52 28.2	
	4µm,0.5s						
OBIP	Obispado Ponce	0.26	59		Pb	14 52 26.0	+0.1
OBIP	Obispado Ponce	0.26	59	⇑iP	Pb	14 52 26.3	+0.4
OBIP				eS	Sb	14 52 30.9	+0.8
CRPR	Cabo Rojo, PR	0.27	291		Pg	14 52 25.5	-0.2
CRPR	Cabo Rojo, PR	0.27	291	IAML		14 52 30.3	
	6µm,0.4s						
CRPR				IAML		14 52 30.9	
	5µm,0.3s						
CRPR	Cabo Rojo, PR	0.27	291	⇑ePg	Pg	14 52 25.6	-0.2
CRPR				⇑eSg	Sg	14 52 29.3	-0.6
CRPR				IAML		14 52 30.9	
	comp=N,4µm,0.2s						
CRPR	Cabo Rojo, PR	0.27	291	⇑iP	Pg	14 52 25.6	-0.2
CRPR				eS	Sg	14 52 29.8	-0.1
CELP	Cerrillos	0.30	56		Pb	14 52 26.7	+0.1
CELP				IAML		14 52 33.0	
	comp=N,2µm,0.4s						
CELP				IAML		14 52 33.0	
	comp=N,1µm,0.4s						
LSP	Las Mesas	0.35	319		Pg	14 52 27.6	+0.4
LSP					Sb	14 52 33.2	+0.4
LSP	Las Mesas	0.35	319	⇑iP	Pg	14 52 27.6	+0.4
LSP				eS	Sb	14 52 33.2	+0.4
UUPR	Utuado, UPR, P	0.36	19		Pb	14 52 27.8	+0.2
PRSN	Puerto Rico Se	0.42	317		Pg	14 52 28.4	0.0
PRSN				IAML		14 52 36.3	
	comp=N,4µm,0.2s						
PRSN				IAML		14 52 38.3	
	comp=N,3µm,0.3s						
PRSN	Puerto Rico Se	0.42	317		Sb	14 52 35.1	+0.4
PRSN	Puerto Rico Se	0.42	317	⇑ePg	Pg	14 52 28.4	+0.1
PRSN				⇑eSg	Sb	14 52 35.5	+0.8
PRSN				IAML		14 52 36.3	
	comp=N,2µm,0.2s						
PRSN	Puerto Rico Se	0.42	317	⇓iP	Pg	14 52 28.6	+0.2
PRSN				eS	Sb	14 52 35.1	+0.4
ECPR	Experimental S	0.61	48		Pb	14 52 32.0	0.0
ECPR				IAML		14 52 43.5	
	comp=N,2µm,0.2s						
ECPR	Experimental S	0.61	48	⇑iP	Pb	14 52 32.2	+0.3
ECPR				eS	Sb	14 52 41.2	+1.0
AGPR	Aguadilla, PR	0.61	335		Pg	14 52 32.0	+0.1
AGPR				IAML		14 52 44.0	
	comp=N,627nm,0.3s						
AGPR	Aguadilla, PR	0.61	335	⇑ePg	Pg	14 52 32.0	+0.1
AGPR				⇑eSg	Sb	14 52 40.7	+0.5
AGPR				IAML		14 52 44.0	
	comp=N,486nm,0.2s						
AGPR	Aguadilla, PR	0.61	335	⇑iP	Pg	14 52 32.0	+0.1
AGPR				eS	Sg	14 52 40.2	+0.1
EMPR	Esperanza - Ma	0.64	28		Pn	14 52 33.2	-0.7
EMPR					Sn	14 52 43.0	-0.7
EMPR	Esperanza - Ma	0.64	28	⇓iP	Pn	14 52 33.2	-0.7
EMPR				eS	Sn	14 52 43.0	-0.7
SJG	San Juan	0.69	73		Pg	14 52 33.1	-0.1
SJG				IAML		14 52 46.6	
	comp=N,570nm,0.5s						
SJG	San Juan	0.69	73	⇓ePg	Pg	14 52 33.1	-0.1
SJG				⇑eSg	Sn	14 52 44.2	-0.6
SJG	San Juan	0.69	73	⇑iP	Pg	14 52 33.3	+0.1
SJG				eS	Sg	14 52 42.9	+0.5
IDE	Isla Desecheo	0.77	309		Pb	14 52 34.3	-0.2
IDE					Sb	14 52 45.0	+0.3
IDE	Isla Desecheo	0.77	309	⇓iP	Pb	14 52 34.3	-0.2
IDE				eS	Sb	14 52 45.0	+0.3
PDPR	Patillas Dam,	0.79	82	Pg	Pg	14 52 34.8	-0.3
GCPR	Guaynabo City	0.82	61		Pb	14 52 35.4	-0.2
GCPR	Guaynabo City	0.82	61		Sn	14 52 47.1	-1.2
GCPR	Guaynabo City	0.82	61	⇓iP	Pg	14 52 35.6	-0.2
GCPR				eS	Sn	14 52 47.1	-1.2
HUMP	Col San Antoni	0.97	76		Pb	14 52 37.8	-0.3
HUMP				IAML		14 52 54.7	
	comp=N,366nm,0.6s						
HUMP	Col San Antoni	0.97	76		Sn	14 52 52.2	+0.3
HUMP	Col San Antoni	0.97	76	⇓iP	Pb	14 52 38.0	0.0
HUMP				eS	Sn	14 52 52.2	+0.3
CUPR	Culebra, Puert	1.54	75		Pb	14 52 47.3	-0.4
PCDR	Punta Cana, DR	1.58	293	ePg	Pn	14 52 47.7	+0.8
PCDR				IAML		14 53 21.7	
	comp=N,86nm,1.4s						
MIDR	Miches	2.35	297	⇑ePg	Pb	14 53 00.5	-1.1
MIDR				IAML		14 53 46.8	
	comp=N,23nm,0.8s						
DR12	Loma Pena Alta	2.57	290	Pn	Pn	14 53 01.2	+0.7
HATOM	Hato Mayor del	2.57	290	⇑ePg	Pn	14 53 02.2	+1.8
HATOM				IAML		14 53 46.9	
	comp=N,20nm,0.8s						

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*IDC **02** 14:55:25.6±0.7, 35°.34N×27°.82E, h0km, mb3.9/17, mbtmp3.9/26, ML3.6/8, MS3.2/8, Error ellipse: s-maj=16.4km s-min=12.9km az=177.0*
*GII **02** 14:55:27.4±0.0, 35°.193N±0°.002×27°.927E±0°.001, h0km, Mws3.9, confirmed*
*ISK **02** 14:55:28.1, 35°.25N×27°.90E, h9km, ML3.8/26*
*NIC **02** 14:55:28.5, 35°.27N×27°.93E, h24km±1km, Ml3.6/15*
*THE **02** 14:55:28.8, 35°N±4°×2°8E±°, h0km±8km, M3.5/19, MLh3.5/19*
*NEIC **02** 14:55:28.2±1.0, 35°.27N±0°.04×27°.93E±0°.04, h13km±4km, mb4.4/41, Error ellipse: s-maj=6.6km s-min=4.6km az=154.0*
*AFAD **02** 14:55:29.9, 35°.33N×27°.93E, h44km±3km, MW3.9*
*ATH **02** 14:55:29.4, 35°.32N×28°.00E, h12km±4km, ML3.7/7, Manual Solution by A.Papageorgiou First location: 2020/02/02 14:56:50, This location: 2020/07/26 14:33:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
ISC 02 14:55:27.2±1.1**, 35°.21N**±0°.03×**27°.88E**±0°.02**, h13**km±7km**,**
n244, σ**1s.21**/296**, mb4.3**/29**, MS3.2**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.68	300		Pb	14 55 41.5	+0.6
KARP	Karpathos	0.68	300	Pg	Pb	14 55 41.7	+0.8
KARP	Karpathos	0.68	300	P	Pb	14 55 41.6	+0.6
KARP				S	Sn	14 55 52.0	-1.0
KARP	Karpathos	0.68	300	P	Pb	14 55 41.5	+0.6
KARP				S	Sn	14 55 52.6	-0.5
KARP				AML	AML	14 55 55.5	
	12nm,1.0s						
KARP				AML	AML	14 56 00.4	
	18nm,0.8s						
KARP	Karpathos	0.68	300	P	Pn	14 55 42.4	-0.1

KARP S Sn 14 55 53.1 +0.1
ARG Arkhangelos 1.02 11 Pg Pn 14 55 47.5 +0.3
ARG Arkhangelos 1.02 11 P Pg 14 55 46.8 -0.2
ARG S Sb 14 56 01.1 +0.9
ARG Arkhangelos 1.02 11 P Pg 14 55 46.6 -0.3
ARG S Sg 14 55 59.8 -0.6
ARG AML AML 14 56 05.9
7.8nm,0.8s
ARG AML AML 14 56 08.3
6.0nm,0.5s
ARG Arkhangelos 1.02 11 P Pg 14 55 46.9 -0.2
ARG S Sg 14 55 58.8 -1.6
ZKR Zakros 1.37 266 Pn Pg 14 55 54.1 +0.6
ZKR Zakros 1.37 266 P Pg 14 55 54.8 +1.3
ZKR Zakros 1.37 266 S Sg 14 56 11.5 +0.2
ZKR AML AML 14 56 27.0
3.8nm,0.5s
ZKR AML AML 14 56 27.1
1.5nm,1.1s
ZKR Zakros 1.37 266 P Pg 14 55 55.6 +2.1
ZKR S Sg 14 56 14.9 +3.6
YAZI Mula-Dat§a- 1.51 347 P Pb 14 55 54.9 -0.1
YAZI S Sb 14 56 14.5 +0.4
DAT Datca 1.54 351 Pn Pb 14 55 55.8 +0.2
DAT Datca 1.54 351 P Pb 14 55 55.7 +0.2
DAT S Sn 14 56 13.2 -1.1
DATC Datca-Mugla 1.56 353 Pn Pb 14 55 56.3 +0.4
TURN Turunc 1.59 11 Pn Pb 14 55 56.6 +0.2
TURN Turunc 1.59 11 P Pb 14 55 56.8 +0.4
TURN S Sg 14 56 18.1 -0.3
IZZE Mula-Seydike 1.64 41 P Pn 14 55 56.4 +0.7
KSL Kastellorizon 1.67 55 P Pn 14 55 57.0 +0.9
KSL S Sb 14 56 19.9 +1.2
KSL Kastellorizon 1.67 55 P Pn 14 55 55.9 -0.3
KSL S Sn 14 56 17.4 0.0
KSL AML AML 14 56 44.9
1.2nm,1.0s
KSL AML AML 14 56 58.0
1.6nm,1.5s
KSL Kastellorizon 1.67 55 P Pn 14 55 56.6 +0.5
KSL S Sn 14 56 16.3 -1.1
DALY Dalyan (Mula) 1.72 21 Pn Pb 14 55 58.4 -0.3
AKAS Kas 1.73 53 Pn 14 55 57.1 0.0
AKAS Kas 1.73 53 Pn Pn 14 55 58.2 +1.1
AKAS Kas 1.73 53 P Pn 14 55 57.9 +0.8
AKAS S Sn 14 56 17.5 -1.6
SABU Mula-Dalaman 1.83 28 P Pn 14 55 58.8 +0.3
SABU S Sg 14 56 27.4 +1.2
NPS Neapolis 1.86 272 P Pg 14 56 02.6 -0.2
NPS Neapolis 1.86 272 P Pg 14 56 02.7 -0.2
NPS S Sg 14 56 26.9 -0.1
BDRM Kayabasi 1.89 349 P Pn 14 55 59.7 +0.6
BDRM S Sn 14 56 22.8 0.0
BODT Bodrum 1.91 346 Pn Pb 14 56 01.3 -0.5
BODT Bodrum 1.91 346 P Pb 14 56 01.5 -0.3
BODT S Sb 14 56 27.2 +1.6
YER Yerkesik 1.95 9 Pn Pb 14 56 01.5 +1.5
YER Yerkesik 1.95 9 P Pb 14 56 02.0 -0.6
YER S Sb 14 56 27.5 +0.7
YKAV Yalikavak-Bodr 1.97 346 Pn Pb 14 56 02.3 -0.6
MULA Mugla, Merkez- 2.07 10 P Pb 14 56 05.1 +0.3
MULA S Sg 14 56 33.0 -0.8
CAME Cameli-Denizli 2.08 33 Pn Pn 14 56 02.8 +0.9
MLSB Milas 2.08 358 Pn Pb 14 56 04.1 -0.8
KNIK Mula-Seydike 2.13 40 P Pn 14 56 03.8 +1.2
DIDI Didim-Aydin 2.22 347 Pn Pb 14 56 05.9 -1.3
CAEL Denizli, Camel 2.23 31 P Pn 14 56 05.1 +1.0
ELL Elmali 2.25 46 Pn 14 56 05.3 +1.0
ELL Elmali 2.25 46 Pn Pn 14 56 06.1 +1.9
DNZT Denizli-Tavas- 2.26 24 P Pn 14 56 05.5 +1.1
THERA Ancient Thera, 2.27 301 P Pb 14 56 06.6 -1.4
THERA Ancient Thera, 2.27 301 P Pb 14 56 06.9 -1.2
DDIM Aydin, Didim 2.30 347 P Pn 14 56 04.5 -0.3
DDIM S Sb 14 56 33.6 -1.2
SNT5 Nea Kammeni, S 2.35 301 P Pb 14 56 08.0 -1.3
SAP3 Santorini-Thir 2.40 301 P Pb 14 56 08.8 -1.4
SAP3 Santorini-Thir 2.40 301 P Pb 14 56 08.7 -1.5
TAVA DENIZLI_Tavas 2.40 20 P Pn 14 56 07.0 +0.7
GOLH Golhisar 2.44 33 P Pn 14 56 08.5 +1.7
GOLH S Sn 14 56 35.4 -1.1
AYDN Tasoluk 2.44 360 S Sn 14 56 36.2 -0.5
IDI Anoyia 2.45 273 Pn Pb 14 56 10.5 -0.7
20nm,0.3s,baz=84,slow=16,SNR=70
IDI Anoyia 2.45 273 Pb 14 56 08.9 -2.2
IDI Anoyia 2.45 273 Pn Pb 14 56 09.9 -1.3
IDI Anoyia 2.45 273 P Pb 14 56 10.5 -0.7
IDI Anoyia 2.45 273 P Pb 14 56 10.8 -0.4
IDI S Sb 14 56 41.6 +0.3
APMY Acipayam-Deniz 2.53 27 Pn Pn 14 56 10.1 +2.0
GCAM G?zlcaml? 2.54 348 Pn Pn 14 56 10.4 +2.3
GCAM G?zlcaml? 2.54 348 P Pn 14 56 09.3 +1.2
KEMT Kemer-ANTALYA 2.58 57 Pn Pn 14 56 11.2 +2.6
DNIZ Denizli-Tavas- 2.58 21 P Pn 14 56 09.7 +0.9
DNIZ S Sn 14 56 42.2 +2.1
ESEN Aydn-Nazilli 2.61 8 P Pn 14 56 09.9 +0.8
SMG Samos 2.63 342 P Pn 14 56 10.8 +1.4
SMG Samos 2.63 342 P Pn 14 56 10.1 +0.7
KORT Korkueli 2.68 47 Pn Pn 14 56 12.2 +2.0
KUSD Kusadasi-Aydin 2.69 350 Pn Pn 14 56 12.6 +2.4
NAZL Nazilli-Aydin 2.77 7 Pn Pn 14 56 13.5 +2.2
ANTB Antalya 2.81 52 Pn Pn 14 56 14.3 +2.5
INCE Denizli-Bozkur 2.84 28 P Pn 14 56 13.2 +0.8
IZMR zmir-demi 2.92 1 P Pn 14 56 14.4 +1.0
IZMR S Sn 14 56 45.8 -2.5
SULTU Buldan 2.92 14 P Pn 14 56 13.8 +0.3
DGB zmir 2.95 344 P Pn 14 56 14.1 +0.4
DGB S Sn 14 56 45.4 -3.5
KIRA zmir-Kiraz 3.01 8 P Pn 14 56 14.1 -0.5
KIRA S Sn 14 56 50.2 -0.4
VAM Vamos 3.02 275 P Pb 14 56 18.8 -2.0
VAM Vamos 3.02 275 P Pb 14 56 18.4 -2.4
DUVT Torbali 3.02 354 P Pn 14 56 15.3 +0.6
ODEM Odemis-Izmir 3.06 3 Pn Pn 14 56 17.6 +2.2
GVD Gavdhos 3.14 264 Pn Pb 14 56 19.5 -3.3
GVD Gavdhos 3.14 264 P Pb 14 56 19.9 -3.0
GVD Gavdhos 3.14 264 P Pb 14 56 20.6 -2.2
CHAN Chania 3.15 277 P Pb 14 56 20.7 -2.4
IMMV Iera Moni Meta 3.20 276 P Pb 14 56 20.9 -3.0
IMMV Iera Moni Meta 3.20 276 P Pb 14 56 21.3 -2.6
BLCB Balcova 3.24 348 Pn Pn 14 56 20.1 +2.4
BLCB Balcova 3.24 348 P Pn 14 56 18.9 +1.2
OSC1 CSNet OBS 1 3.29 120 P Pn 14 56 18.8 +0.4
OSC1 S Sn 14 56 57.8 +0.5
OSC1 AML AML 14 57 08.2
0.3nm,0.4s
OSC1 AML AML 14 57 13.3
0.2nm,0.4s
URLA Izmir 3.31 342 Pn Pn 14 56 20.5 +1.8
URLA Izmir 3.31 342 P Pn 14 56 20.3 +1.6
MANT Manisa 3.32 9 Pn 14 56 19.3 +0.2
MANT Manisa 3.32 9 P Pn 14 56 19.5 +0.4
ISP Isparta 3.36 38 Pn 14 56 20.2 +0.7
ISP Isparta 3.36 38 P Pn 14 56 20.5 +1.0
KNDR Palaiochora Ch 3.49 272 Pn Pn 14 56 24.3 +3.2
CHOS Chios island 3.49 336 Pn Pn 14 56 24.1 +2.8
CHOS Chios island 3.49 336 P Pn 14 56 23.6 +2.3
CHOS Chios island 3.49 336 P Pn 14 56 22.7 +1.5
AKMS Akamas 3.66 92 P Pn 14 56 23.7 +0.3
AKMS S Sn 14 57 05.9 -0.5
AKMS AML AML 14 57 08.5
0.7nm,0.4s
AKMS AML AML 14 57 11.1
0.4nm,0.5s
AKMS Akamas 3.66 92 P Pn 14 56 23.8 +0.4
ANKY Antikythira Is 3.79 281 P Pn 14 56 29.5 +4.1
ANKY Antikythira Is 3.79 281 P Pn 14 56 28.7 +3.4
ALFC Alefka 3.86 89 P Pn 14 56 26.4 +0.1
ALFC S Sn 14 57 11.1 -0.5
ALFC AML AML 14 57 12.5
0.7nm,0.6s
ALFC AML AML 14 57 15.8
0.4nm,0.4s
ALFC Alefka 3.86 89 P Pn 14 56 26.6 +0.3
NATA Nata 3.87 95 P Pn 14 56 27.0 +0.5
NATA S Sn 14 57 11.3 -0.5
NATA AML AML 14 57 16.2
1.8nm,0.5s
NATA AML AML 14 57 18.1
1.3nm,0.6s
KARY Karystos 3.95 316 P Pn 14 56 30.0 +2.5

KTHA Kythira Island 4.06 286 P Pn 14 56 32.2 +3.2
TROD Troodos 4.09 92 P Pn 14 56 29.2 -0.5
TROD S Sn 14 57 17.9 +0.3
TROD AML AML 14 57 26.4
0.3nm,0.5s
TROD AML AML 14 57 29.4
0.3nm,0.8s
APOL The Sanctuary 4.13 96 P Pn 14 56 30.0 +0.1
APOL S Sn 14 57 17.7 -0.4
APOL AML AML 14 57 20.8
0.3nm,0.7s
APOL AML AML 14 57 22.0
0.3nm,0.8s
OSC2 CSNet OBS 4 4.21 119 P Pn 14 56 32.3 +1.2
OSC2 AML AML 14 57 32.4
0.2nm,0.6s
OSC2 AML AML 14 57 34.5
0.3nm,0.5s
XYLS Xyliatos 4.24 91 P Pn 14 56 31.6 +0.1
XYLS S Sn 14 57 21.7 +0.7
XYLS AML AML 14 57 27.2
0.3nm,0.6s
XYLS AML AML 14 57 35.6
0.3nm,0.4s
PTL Penteli 4.30 312 P Pn 14 56 34.4 +2.1
BALB Balikesir 4.42 360 Pn 14 56 34.1 +0.1
ASGA Asgata 4.42 94 P Pn 14 56 34.0 0.0
ASGA S Sn 14 57 25.9 +0.5
ASGA AML AML 14 57 29.6
0.5nm,0.5s
ASGA AML AML 14 57 31.9
0.7nm,0.5s
CSS Mathiatis 4.47 92 Pn 14 56 34.5 -0.2
CSS Mathiatis 4.47 92 P Pn 14 56 35.2 +0.4
CSS S Sn 14 57 25.7 -0.9
CSS AML AML 14 57 30.1
0.2nm,0.6s
CSS AML AML 14 57 32.1
0.3nm,0.6s
MVOU Mavrovouni 4.72 91 P Pn 14 56 38.5 +0.5
MVOU S Sn 14 57 31.8 -0.8
MVOU AML AML 14 57 43.7
0.2nm,0.5s
MVOU AML AML 14 57 46.3
0.2nm,0.6s
BORA Eskisehir 5.09 23 Pn 14 56 43.3 +0.1
RDO Rodhopi 6.21 343 Pn 14 56 59.3 +0.9
BRTR Keskin Array B 6.42 44 Pn Pn 14 57 02.2 +0.6
0.7nm,0.3s,baz=229,slow=11,SNR=15
BRTR Sn Sn 14 58 13.8 -1.0
0.7nm,0.3s,baz=211,slow=25,SNR=5.8
1.2nm,0.3s
BRTR Keskin Array B 6.42 44 Pn 14 57 01.7 +0.1
BR131 Keskin Array S 6.42 44 Pn 14 57 01.4 -0.2
OFRI `Ofer 6.44 112 P Pn 14 57 01.3 -0.5
OFRI S Sn 14 58 14.9 -0.3
LIT Litokhoron 6.49 320 Pn 14 57 03.5 +1.1
DQRL Deir Qamar 6.53 101 *e*P Pn 14 57 02.4 -0.6
BHL Bhannes 6.54 99 *e*P Pn 14 57 02.6 -0.6
MMC7 Mount Meron ar 6.60 107 P Pn 14 57 03.3 -0.6
MMA0B Mount Meron ar 6.61 107 P Pn 14 57 03.8 -0.3
MMA0B S Sn 14 58 18.6 -0.7
MMAI Mount Meron Ar 6.61 107 Pn Pn 14 57 04.6 +0.5
6.9nm,0.3s,baz=296,slow=17,SNR=16
MMAI Sn Sn 14 58 17.8 -1.6
11nm,0.3s,baz=311,slow=24,SNR=6.9
2.7nm,0.3s
SLTI Sal'it 6.66 114 P Pn 14 57 04.1 -0.6
SLTI S Sn 14 58 19.6 -0.8
QRWL Qaraoun 6.66 102 *e*P Pn 14 57 04.4 -0.4
HWQ Hawqa 6.70 96 *e*P Pn 14 57 05.2 -0.2
ZAHL Zahle 6.74 99 *e*P Pn 14 57 05.7 -0.2
NATI Neve Ativ 6.79 104 P Pn 14 57 05.8 -0.6
NATI S Sn 14 58 23.2 -0.5
RCY Rachaya 6.80 102 *e*P Pn 14 57 06.3 -0.4
BEIL Beino 6.86 93 *e*P Pn 14 57 06.1 -1.4
MMLI Mount Malkishu 6.86 112 P Pn 14 57 07.3 -0.1
MMLI S Sn 14 58 24.7 -0.7
KSHT Keshet 6.94 106 P Pn 14 57 07.8 -0.8
KSHT S Sn 14 58 26.7 -0.9
KZIT Kziot 6.95 126 P Pn 14 57 08.3 -0.4
KZIT S Sn 14 58 26.7 -1.0
HMDT Nahal Hemdat 7.02 113 P Pn 14 57 09.6 0.0
HMDT S Sn 14 58 28.7 -0.6
FKH Fakeheh 7.09 95 *e*P Pn 14 57 11.3 +0.6
YTIR Yattir 7.17 120 P Pn 14 57 11.8 0.0
YTIR S Sn 14 58 32.2 -1.0
BALJ Balqa 7.18 114 Pn 14 57 12.2 +0.3
DSI Dead Sea 7.24 118 P Pn 14 57 12.8 +0.1
DSI S Sn 14 58 33.7 -1.2
MSBI Mazada 7.37 120 P Pn 14 57 14.3 -0.1
MSBI S Sn 14 58 37.2 -0.7
KRMI Paran Flat 7.68 129 P Pn 14 57 18.9 0.0
KRMI S Sn 14 58 44.4 -1.4
PRNI Paran 7.71 127 P Pn 14 57 18.6 -0.6
PRNI S Sn 14 58 45.7 -0.7
KEK Kerkira 7.84 307 Pn 14 57 22.2 +1.3
HRFI Mount Harif 7.94 129 P Pn 14 57 22.1 -0.2
HRFI S Sn 14 58 51.2 -0.8
MBRI Mt Berech 8.03 130 P Pn 14 57 23.1 -0.5
MBRI S Sn 14 58 53.7 -0.6
ASF Jabal al Asfar 8.10 109 Pn Pn 14 57 25.5 +0.9
1.0nm,0.3s,baz=304,slow=4.6,SNR=5.3
ASF Sn Sn 14 58 55.2 -0.9
0.5nm,0.3s,baz=294,slow=20,SNR=1.8
ASF LR LR 15 00 55.1
comp=Z,59nm,21.7s,baz=210,slow=40
2.8nm,0.3s
EIL Elat 8.13 131 Pn Pn 14 57 25.5 +0.5
2.3nm,0.3s,baz=334,slow=4.2,SNR=16
EIL Sn Sn 14 58 52.3 -4.5
5.7nm,0.3s,baz=10.0,slow=17,SNR=6.1
6.0nm,0.3s
EIL Elat 8.13 131 P Pn 14 57 25.1 +0.1
TIP Timpagrande 9.72 297 Pn 14 57 46.6 -0.1
CEL Celeste 10.09 291 Pn 14 57 51.6 -0.3
MLR Muntele Rosu 10.37 352 LR LR 15 02 56.4
comp=Z,110nm,18.5s,baz=189,slow=44
CUC Castrocucco 10.70 300 Pn 14 58 00.9 +0.8
VAE Valguarnera 11.10 286 Pn Pn 14 58 05.5 -0.2
7.0nm,0.6s,baz=82,slow=16,SNR=1.4
VAE Sn Sn 15 00 00.5 -9.1
1.3nm,0.3s,baz=51,slow=13,SNR=1.9
RAFF Raffo Rosso 11.11 284 Pn 14 58 06.4 +0.7
GNI Garni 14.23 65 Pn P 14 58 52.7 -3.2
0.5nm,0.3s,baz=287,slow=19,SNR=2.0
3.6nm,0.5s
KBZ Khabaz 14.37 49 Pn P 14 58 57.4 +0.2
0.2nm,0.3s,baz=223,slow=8.2,SNR=8.6
SOKA Soboth 14.99 324 *e*Pn Pn 14 58 59.8 +1.0
3.0nm,1.1s,SNR=4.5
OBKA Obir 15.11 322 *e*Pn Pn 14 59 01.4 +1.0
1.6nm,0.6s
KEST Kesra 15.12 277 Pn P 14 59 03.2 -2.5
0.4nm,0.3s,baz=70,slow=5.2,SNR=7.8
KEST Kesra 15.12 277 Pn 14 59 01.8 +1.2
KEST IAmb IAmb 14 59 09.8
comp=Z,9.2nm,0.9s
SABO M.te Sabotino 15.25 319 Pn 14 59 02.6 +0.4
SABO IAmb IAmb 14 59 08.8
comp=Z,9.3nm,1.0s
AKASG Malin Array Be 15.51 3 Pn Pn 14 59 04.2 -1.3
comp=Z,0.9nm,0.3s,baz=191,slow=10,SNR=4.9
comp=Z,0.2nm,0.3s
KBA Koelnbreinsper 16.11 322 *e*Pn Pn 14 59 14.6 +1.2
comp=Z,3.4nm,0.8s
ABTA Abfaltersbach 16.32 320 *e*Pn Pn 14 59 16.2 +0.1
comp=Z,1.4nm,0.5s
VRAC Vranov 16.35 333 LR LR 15 05 37.4
comp=Z,60nm,20.5s,baz=170,slow=38
BIOA Bad Ischl, Aus 16.38 324 *e*Pn Pn 14 59 17.5 +0.7
comp=Z,2.9nm,0.9s
PRMA PARMA 16.47 311 Pn Pn 14 59 19.1 +1.2
PRMA IAmb IAmb 14 59 32.0
comp=Z,19nm,0.6s
LESA Schwarzleotal 16.68 322 *e*Pn Pn 14 59 22.0 +1.4
comp=Z,4.4nm,0.6s,SNR=5.2
CKRC Cesky Krumlov 16.89 328 *e*P P 14 59 24.9 -0.4
WTTA Wattenberg 17.11 320 *e*Pn P 14 59 27.8 -0.1
comp=Z,1.5nm,0.4s
GEC2 GERESS Array S 17.18 327 P 14 59 28.1 -0.5
GERES GERESS Array B 17.18 327 P Pn 14 59 26.2 -0.7
baz=131,slow=8.3,SNR=2.8
comp=Z,1.1nm,0.6s
WATA Walderalm 17.19 320 *e*Pn P 14 59 28.4 -0.3

comp=Z,1.2nm,0.4s
DPC Dobruska-Polom 17.31 334 *e*P P 14 59 30.7 +0.8
SQTA Sankt Quirin 17.32 319 *e*Pn P 14 59 29.7 -0.3
comp=Z,0.5nm,0.3s
KHC Kasperske Hory 17.45 327 Pn 14 59 31.0 +0.8
KHC Kasperske Hory 17.45 327 *e*P Pn 14 59 31.0 +0.8
FETA Feichten 17.46 318 *e*Pn P 14 59 32.1 +0.5
comp=Z,4.3nm,0.7s,SNR=9.7
FUORN Ofenpass-Fuorn 17.48 316 P 14 59 31.8 -0.3
RETA Reutte 17.72 319 *e*Pn Pn 14 59 33.8 +0.2
comp=Z,1.6nm,0.5s
DAVOX Davos/Dischmat 17.79 316 P Pn 14 59 35.2 +0.6
comp=Z,0.2nm,0.3s,baz=117,slow=16,SNR=5.8
DAVOX LR LR 15 08 08.6
comp=Z,64nm,19.0s,baz=96,slow=43
comp=Z,2.6nm,0.8s
SENIN Lac Senin/Sane 19.10 312 Pn 14 59 50.4 -0.2
SENIN IAmb IAmb 14 59 57.0
comp=Z,7.4nm,0.7s
SSB Saint Sauveur 20.39 307 P P 15 00 04.8 +1.1
SSB IAmb IAmb 15 00 16.3
comp=Z,12nm,1.3s
CORI Orista 21.24 296 P P 15 00 14.5 +1.6
CORI IAmb IAmb 15 00 29.3
comp=Z,17nm,1.3s
ESBB Sonseca Array 25.60 290 P P 15 00 56.6 +0.5
ESBB IAmb IAmb 15 00 57.6
comp=Z,7.3nm,0.8s
ESDC Sonseca Array 25.60 290 P P 15 00 56.3 +0.1
comp=Z,6.1nm,0.7s,baz=88,slow=9.0,SNR=60
comp=Z,6.1nm,0.7s
ESDC Sonseca Array 25.60 290 P P 15 00 56.6 +0.4
PAB San Pablo 25.90 289 P 15 00 59.6 +0.7
PAB IAmb IAmb 15 01 00.8
comp=Z,6.5nm,0.8s
FINES FINESS Array B 26.28 358 P P 15 01 00.8 -1.1
comp=Z,2.3nm,0.8s,baz=182,slow=9.5,SNR=9.1
comp=Z,2.3nm,0.8s
FINES FINESS Array B 26.28 358 P P 15 01 01.3 -0.7
FIA1 FINESS Array S 26.28 358 P P 15 01 01.2 -0.8
HFS Hagfors 26.59 344 P P 15 01 03.1 -1.7
comp=Z,6.1nm,0.9s,baz=146,slow=10,SNR=10
comp=Z,6.1nm,0.9s
MD01 Midelt array s 27.09 274 P P 15 01 10.0 +0.2
ABKAR Akbulak array 27.34 49 P P 15 01 12.4 +0.8
NOA NORSAR Array B 27.97 343 P P 15 01 16.2 -1.1
comp=Z,0.4nm,0.5s,baz=157,slow=10.0,SNR=1.4
NOA LR LR 15 14 16.2
comp=Z,32nm,20.5s,baz=10.0,slow=41
comp=Z,0.4nm,0.5s
FURI Furi 27.99 157 LR LR 15 14 37.1
comp=Z,62nm,19.6s,baz=314,slow=41
PVAQ Vaqueiros 28.67 285 P P 15 01 23.9 +0.2
TORD Torodi Ar. Bea 32.27 234 P P 15 01 55.9 +0.2
comp=Z,1.9nm,0.8s,baz=28,slow=6.8,SNR=12
comp=Z,1.9nm,0.8s
CHGR Chuyangaron 32.98 72 P P 15 02 02.0 +0.2
CHGR IAmb IAmb 15 02 13.5
comp=Z,4.3nm,0.8s
ARCES ARCESS Array B 34.40 359 P P 15 02 12.3 -1.5
comp=Z,2.9nm,0.7s,baz=176,slow=7.9,SNR=6.2
ARCES LR LR 15 16 46.8
comp=Z,131nm,18.8s,baz=122,slow=37
comp=Z,2.9nm,0.7s
ARCES ARCESS Array B 34.40 359 P P 15 02 12.6 -1.2
BVAR Borovoye Array 34.70 46 P P 15 02 16.9 +0.3
comp=Z,0.2nm,0.5s,baz=252,slow=7.4,SNR=1.7
BVAR LR LR 15 20 50.2
comp=Z,50nm,18.3s,baz=289,slow=44
comp=Z,0.2nm,0.5s
KURBB Kurchatov Arra 39.36 51 P P 15 02 56.6 +0.5
comp=Z,1.0nm,0.6s,baz=276,slow=8.7,SNR=9.7
comp=Z,1.0nm,0.6s
KURK Kurchatov 39.42 51 P P 15 02 56.8 +0.2
DBIC Dimbokro 41.38 234 P P 15 03 14.0 +0.9
comp=Z,3.1nm,0.8s,baz=54,slow=9.8,SNR=1.8
comp=Z,3.1nm,0.8s
DBIC Dimbokro 41.38 234 IAmb IAmb 15 03 20.4
comp=Z,15nm,1.3s
MKAR Makanchi Array 41.88 57 P P 15 03 17.7 +0.6
comp=Z,0.7nm,0.5s,baz=270,slow=7.7,SNR=23
comp=Z,0.7nm,0.5s
MKAR Makanchi Array 41.88 57 P P 15 03 17.4 +0.3
SPITS Spitsbergen Ar 43.35 357 P P 15 03 27.9 -0.8
comp=Z,5.8nm,0.8s,baz=142,slow=12,SNR=6.7
comp=Z,5.8nm,0.8s
ZALV Zalesovo Beam 43.36 46 P P 15 03 28.7 -0.2
comp=Z,0.5nm,0.3s,baz=270,slow=8.0,SNR=4.3
comp=Z,0.5nm,0.3s
SCO Scoresbysund 44.10 338 P P 15 03 35.2 +0.5
TULEG Thule 57.61 344 P P 15 05 15.4 -0.9
TULEG IAmb IAmb 15 05 42.7
comp=Z,2.5nm,0.8s
SONM Songino Array 57.72 51 P P 15 05 18.6 +0.9
comp=Z,0.6nm,0.5s,baz=287,slow=8.8,SNR=7.2
comp=Z,0.6nm,0.5s
SONM Songino Array 57.72 51 P P 15 05 18.5 +0.8
LZDM Lanzhou Array 60.11 65 P P 15 05 34.3 -0.4
comp=Z,0.2nm,0.3s,baz=292,slow=7.6,SNR=1.3
comp=Z,0.2nm,0.3s
BOSA Boshof 63.53 183 P P 15 05 59.4 +2.1
BOSA IAmb IAmb 15 06 16.9
comp=Z,5.0nm,1.1s
CMAR Chiang Mai Arr 64.35 85 P P 15 06 04.4 +1.5
comp=Z,0.5nm,0.3s,baz=307,slow=8.0,SNR=4.2
comp=Z,0.5nm,0.3s
LMQ La Malbaie 69.94 314 P P 15 06 38.4 +0.3
C27K Jago River 75.29 357 P P 15 07 10.8 +1.4
D23K Nanushuk River 76.13 359 P P 15 07 15.0 +0.7
D23K IAmb IAmb 15 07 19.8
comp=Z,6.6nm,1.4s
D22K Ayikyak River 76.22 0 P P 15 07 15.6 +0.7
D22K IAmb IAmb 15 07 30.4
comp=Z,7.6nm,1.4s
D19K Kuna River 76.51 2 P P 15 07 17.0 +0.5
E24K Your Creek 76.99 359 P P 15 07 19.5 +0.2
E19K Redstone River 77.58 2 P P 15 07 22.9 +0.4
E19K IAmb IAmb 15 07 33.9
comp=Z,3.3nm,1.1s
YKA Yellowknife Ar 78.06 343 P P 15 07 24.4 -0.9
comp=Z,0.1nm,0.5s,baz=27,slow=5.4,SNR=2.2
comp=Z,0.1nm,0.5s
H27K Steamboat Moun 78.55 356 P P 15 07 28.7 +0.7
H27K IAmb IAmb 15 07 56.6
comp=Z,5.1nm,1.4s
H21K Melozitna Rive 79.46 0 P P 15 07 33.8 +0.9
H21K IAmb IAmb 15 08 10.2
comp=Z,4.6nm,0.9s
ILAR Eielson Array 80.26 358 P P 15 07 36.7 -0.5
comp=Z,0.2nm,0.7s,baz=346,slow=5.7,SNR=4.5
comp=Z,0.2nm,0.7s
DAWY Dawson 80.54 354 P P 15 07 39.2 +0.4
DAWY IAmb IAmb 15 07 40.9
comp=Z,5.8nm,1.3s
K24K Donnelly Dome 81.19 357 P P 15 07 41.9 -0.4
M31M Drury Creek, Y 81.87 352 P P 15 07 47.2 +1.2
M29M Somme Creek 82.06 354 P P 15 07 47.8 +0.8
M29M IAmb IAmb 15 08 25.7
comp=Z,4.5nm,1.3s
PPLA Purkeypile 82.23 0 P P 15 07 48.4 +0.4
SKT Skwentna 83.15 360 P P 15 07 51.9 -0.7
SUA Susitna One 83.66 359 P P 15 07 55.8 +0.5
M16K Timber Creek 83.95 3 P P 15 07 57.5 +0.9
ASAR Alice Springs 115.87 102 PKP PKiKP 15 14 11.2 +1.3
comp=Z,0.3nm,0.9s,baz=293,slow=1.8,SNR=2.2

IDC ***02*** *14:57:51.8±1.0, 58.46N×156.08W, h133km±10km, mb3.8/28, mbtmp4.2/31, Error ellipse: s-maj=14.3km s-min=10.5km az=15.0*
NEIC ***02*** *14:57:53.2±1.0, 58.22N±0.05×155.96W±0.08, h154km±4km, mb4.2/23, ML3.9/120, ML3.9(AEIC), Error ellipse: s-maj=7.8km s-min=5.9km az=172.0*
AEIC ***02*** *14:57:54.7±2.0, 58.22N±0.05×155.97W±0.09, h147km±4km, Error ellipse: s-maj=7.7km s-min=7.1km az=184.0*
ISC 02 14:57:53.1±0.6, 58°25N±0.04×155°99W±0.03, h153km±5km, n260, σ1§11/256, mb4.2/37, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time ISC	h m s	Res ISC
CNTC	**Contact Creek**	**0.06**	**73**			**Pn**	**14 58 13.8**	**+0.1**
CNTC						**Sn**	**14 58 29.0**	**-0.4**
ANCK	**Angle Creek**	**0.27**	**100**			**Pn**	**14 58 14.3**	**+0.3**

Code	Station Name	Δ	AZ	Op	ISC	Time	Res
ACHA	Angle Creek He	0.35	96		Pn	14 58 14.3	0.0
ACHA	Angle Creek He	0.35	96		Sn	14 58 30.3	-0.1
KABU	Katmai Buttres	0.38	86		Pn	14 58 14.7	+0.3
KABU					Sn	14 58 30.5	-0.1
KAKN	Katmai Knife C	0.49	84		Pn	14 58 15.0	+0.2
KAKN					Sn	14 58 31.2	-0.3
PLK2	Peulik 2	0.52	200		Pn	14 58 15.2	+0.3
PLK5	Peulik 5	0.53	242		Pn	14 58 15.4	+0.5
PLK1	Peulik 1	0.56	217		Pn	14 58 15.1	0.0
PLK1					Sn	14 58 31.7	-0.1
Q16K	King Salmon	0.56	321		Pn	14 58 15.5	+0.5
Q16K					Sn	14 58 32.0	+0.2
PLK3	Peulik 3	0.58	195		Pn	14 58 15.6	+0.4
KAWH	Katmai	0.64	77		Pn	14 58 15.8	+0.2
KAWH					Sn	14 58 32.8	-0.1
PLK4	Peulik 4	0.65	198		Pn	14 58 15.9	+0.2
PLK4	Peulik 4	0.65	198	IAML		14 58 33.8	
	comp=N,1μm,0.7s						
PLK4				IAML		14 58 37.4	
	comp=E,1μm,0.6s						
KAHC	Katmai Hardscr	0.65	52		Pn	14 58 16.1	+0.3
KAHC					Sn	14 58 32.9	-0.3
PLBL	Peulik Blue Cr	0.70	219		Pn	14 58 16.1	+0.1
PLBL					Sn	14 58 32.7	-0.7
KARR	Katmai Rainbow	0.72	69		Sn	14 58 34.3	+0.6
KAHG	Katmai Hook Gl	0.80	71		Sn	14 58 34.9	+0.2
P17K	Kvichak River	0.98	346		Sn	14 58 37.1	+0.1
P17K	Kvichak River	0.98	346		Pn	14 58 18.3	+0.4
P17K				IAML		14 58 38.0	
	comp=N,2μm,0.8s						
P17K				IAML		14 58 38.2	
	comp=E,2μm,0.9s						
R16K	Pilot Point	1.09	232		Sn	14 58 38.6	+0.1
R16K	Pilot Point	1.09	232		Pn	14 58 19.0	+0.2
R16K				IAML		14 58 39.8	
	comp=E,2μm,1.1s						
P18K	Big Mountain,	1.21	19		Pn	14 58 20.2	+0.2
P18K	Big Mountain,	1.21	19		Sn	14 58 40.4	-0.4
P16K	Nushagak River	1.31	308		Sn	14 58 42.2	0.0
P16K	Nushagak River	1.31	308		Pn	14 58 21.2	+0.4
P16K				IAML		14 58 43.2	
	comp=N,1μm,0.9s						
P16K				IAML		14 58 43.2	
	comp=E,2μm,0.8s						
Q19K	Cape Douglas,	1.41	60		Pn	14 58 22.4	+0.5
Q19K				IAML		14 58 46.9	
	comp=E,2μm,0.9s						
Q19K				IAML		14 58 48.2	
	comp=N,2μm,0.9s						
O17K	Koliganek Bris	1.63	340		Pn	14 58 24.6	+0.4
O17K					Sn	14 58 48.1	-0.1
AUI	Augustine Isla	1.72	50		Sn	14 58 50.1	+0.2
O16K	Kokwok River B	1.74	322		Pn	14 58 25.5	+0.2
O16K					Sn	14 58 49.2	-1.0
O16K	Kokwok River B	1.74	322	IAML		14 58 50.3	
	comp=E,354nm,1.1s						
AUF	Augustine Flow	1.74	48		Pn	14 58 26.4	+1.0
ANNW	Aniakchak Nort	1.76	224		Pn	14 58 26.5	+0.8
OHAK	Old Harbor	1.78	124		Pn	14 58 25.3	-0.5
OHAK				IAML		14 58 50.1	
	comp=E,2μm,0.4s						
OHAK	Old Harbor	1.78	124		Sn	14 58 49.2	-1.7
OHAK	Old Harbor	1.78	124	P	Pn	14 58 25.5	-0.3
KDAK	Kodiak Island	1.87	103	P	Pn	14 58 26.7	-0.2
	comp=E,106nm,0.3s,baz=294,slow=13,SNR=777						
KDAK				S	Sn	14 58 51.6	-1.3
	comp=E,361nm,0.3s,baz=197,slow=19,SNR=12						
KDAK	Kodiak Island	1.87	103		Pn	14 58 26.6	-0.2
KDAK				IAML		14 58 53.6	
	comp=E,1μm,0.4s						
KDAK	Kodiak Island	1.87	103		Sn	14 58 51.0	-1.9
ANPB	Aniakchak Plen	1.91	221		Pn	14 58 26.9	-0.4
SYI	Shuyak Island	1.93	78		Sn	14 58 53.2	-0.8
SYI	Shuyak Island	1.93	78		Pn	14 58 27.5	+0.1
SYI				IAML		14 58 55.4	
	comp=N,983nm,0.4s						
SII	Sitkinak Islan	1.96	149		Sn	14 58 52.9	-1.7
SII	Sitkinak Islan	1.96	149		Pn	14 58 27.5	-0.3
SII	Sitkinak Islan	1.96	149	P	Pn	14 58 27.6	-0.3
P19K	Oil Pt	2.01	44		Pn	14 58 29.4	+0.9
P19K				IAML		14 58 57.5	
	comp=E,703nm,0.7s						
P19K				IAML		14 58 57.7	
	comp=N,618nm,0.6s						
O19K	Port Alsworth	2.13	23		Pn	14 58 30.5	+0.7
O19K				IAML		14 59 00.5	
	comp=N,631nm,0.5s						
O19K				IAML		14 59 00.6	
	comp=E,605nm,0.5s						
O15K	Ungalikthiuk R	2.21	297		Sn	14 58 58.9	-0.9
O15K	Ungalikthiuk R	2.21	297		Pn	14 58 31.1	+0.3
O15K				IAML		14 59 00.4	
	comp=E,212nm,0.9s						
ILSW	Iliamna Southw	2.28	39		Pn	14 58 32.2	+0.5
ILSW				IAML		14 59 02.9	
	comp=N,263nm,1.0s						
ILSW				IAML		14 59 05.1	
	comp=E,243nm,0.8s						
N17K	Nushagak Hills	2.37	346		Pn	14 58 33.5	+0.8
CHIR	Chirikof Islan	2.44	175		Sn	14 59 02.1	-2.7
CHIR	Chirikof Islan	2.44	175		Pn	14 58 32.6	-0.9
CHIR				IAML		14 59 03.6	
	comp=N,736nm,0.5s						
CHIR				IAML		14 59 03.8	
	comp=E,1μm,0.6s						
CHIR	Chirikof Islan	2.44	175	P	Pn	14 58 32.7	-0.9
N18K	Kilae Creek	2.44	1		Pn	14 58 34.5	+0.9
N16K	Nishlik Lake	2.65	329		Pn	14 58 36.8	+0.7
HOM	Homer	2.66	56		Pn	14 58 37.0	+0.8
N19K	Bonanza Creek	2.69	16		Pn	14 58 37.8	+1.1
N19K	Bonanza Creek	2.69	16	IAML		14 59 12.9	
	comp=E,157nm,0.8s						
VNSG	Veniaminof 6	2.71	220		Pn	14 58 37.1	+0.1
RED	Redoubt Volcan	2.73	36		Pn	14 58 37.8	+0.5
RED				IAML		14 59 13.8	
	comp=E,170nm,0.9s						
RED				IAML		14 59 14.8	
	comp=N,174nm,0.9s						
CNPM	China Poot	2.78	61		Pn	14 58 38.2	+0.4
CNPM				IAML		14 59 12.2	
	comp=N,452nm,0.5s						
CNPM				IAML		14 59 12.3	
	comp=E,450nm,0.7s						
N15K	Kwethluk River	2.86	314		Pn	14 58 39.2	+0.5
O14K	Tigyukauivet M	2.93	292		Pn	14 58 40.0	+0.5
O14K	Tigyukauivet M	2.93	292	IAML		14 59 17.3	
	comp=E,110nm,1.2s						
BRLK	Bradley Lake	3.05	58		Pn	14 58 41.1	+0.1
BRLK				IAML		14 59 17.7	
	comp=N,356nm,0.3s						
BRLK				IAML		14 59 19.3	
	comp=E,253nm,0.5s						
M16K	Timber Creek	3.17	333		Pn	14 58 43.5	+1.0
M17K	Holitna River	3.25	348		Pn	14 58 44.6	+1.0
M17K	Holitna River	3.25	348	IAML		15 00 24.4	
	comp=E,78nm,1.1s						
N14K	Kuskokwak Cree	3.38	302	IAML		14 59 27.7	
	comp=E,93nm,0.9s						
N14K				IAML		15 00 06.7	
	comp=N,92nm,0.8s						
M15K	Kasigluk River	3.43	318		Pn	14 58 46.4	+0.5
SPBG	Spurr Blockage	3.53	30		Pn	14 58 48.8	+1.4
SPCN	Chakachatna No	3.55	31		Pn	14 58 48.8	+1.3
SPU	Mount Spurr	3.56	32		Pn	14 58 48.3	+0.7
SLKM	Skilak Lake	3.72	50		Pn	14 58 49.6	-0.1
SLKM				IAML		14 59 34.8	
	comp=N,390nm,0.3s						
SLKM				IAML		14 59 35.7	
	comp=E,389nm,0.3s						
SDPT	Sand Point	3.81	222	Pn	Pn	14 58 50.0	-0.9
SDPT				IAML		14 59 35.5	
	comp=E,251nm,0.4s						
SDPT				IAML		14 59 37.5	
	comp=N,308nm,0.6s						
SEW	Seward	3.84	58		Pn	14 58 51.3	+0.1
SEW				IAML		14 59 38.8	
	comp=N,158nm,0.5s						
SEW				IAML		14 59 42.3	
	comp=E,225nm,0.8s						
L16K	Owhat River	3.89	335		Pn	14 58 52.4	+0.6
M20K	Styx River	3.92	20		Pn	14 58 53.8	+1.5
M20K	Styx River	3.92	20	IAML		14 59 41.5	
	comp=E,67nm,1.1s						
M20K				IAML		14 59 41.5	
	comp=N,56nm,0.9s						
M14K	Bethel	3.94	312		Pn	14 58 52.9	+0.4
CNBA	Chernabura Isl	3.97	212		Pn	14 58 51.3	-1.7
CNBA	Chernabura Isl	3.97	212	IAML		14 59 39.7	
	comp=E,306nm,0.5s						
CNBA				IAML		14 59 42.5	
	comp=N,317nm,0.5s						
L19K	White Mountain	3.99	8		Pn	14 58 54.3	+1.2
L18K	Granite Mounta	4.00	355		Pn	14 58 54.2	+0.9
L17K	Donlin	4.07	345		Pn	14 58 54.9	+0.8
SUA	Susitna One	4.17	37	IAML		14 59 47.0	
	comp=N,305nm,0.5s						
RC01	Rabbit Creek A	4.26	45		Pn	14 58 56.7	0.0
PS4A	Pavlof South-4	4.34	230		Pn	14 58 58.1	+0.2
M13K	Dall Lake	4.35	303		Pn	14 58 57.8	0.0
SKT	Skwentna	4.36	29		Pn	14 58 58.9	+0.9
SKT				IAML		14 59 51.7	
	comp=E,151nm,0.3s						
SKT				IAML		14 59 53.5	
	comp=N,114nm,0.5s						
L15K	Ungalak Mounta	4.41	324		Pn	14 58 59.5	+0.8
L14K	Kuka Creek	4.59	315		Pn	14 59 01.5	+0.6
L14K	Kuka Creek	4.59	315	IAML		15 00 01.1	
	comp=E,38nm,1.1s						
L14K				IAML		15 00 03.5	
	comp=N,35nm,1.0s						
K17K	Iditarod	4.63	347		Pn	14 59 03.0	+1.5
K17K				IAML		15 00 46.5	
	comp=E,36nm,1.0s						
K17K				IAML		15 00 48.0	
	comp=N,29nm,1.1s						
DTNA	Dutton South F	4.64	231		Pn	14 59 01.6	-0.1
P23K	Montague Islan	4.76	65		Pn	14 59 03.5	+0.2
PMR	Palmer	4.81	43	IAML		14 59 56.9	
	comp=E,127nm,0.4s						
PMR				IAML		14 59 57.4	
	comp=N,104nm,0.3s						
PMR	Palmer	4.81	43	P	Pn	14 59 03.2	-0.7
K15K	Wolf Creek Mou	4.91	328		Pn	14 59 06.7	+1.5
KNK	Knik Glacier	4.95	47		Pn	14 59 04.8	-1.0
GHO	Glory Hole Cre	5.00	42		Pn	14 59 05.5	-1.1
L22K	Petersville	5.01	29		Pn	14 59 07.0	+0.4
L22K				IAML		15 00 06.0	
	comp=N,111nm,0.5s						
L22K				IAML		15 00 06.2	
	comp=E,166nm,0.3s						
PPLA	Purkeypile	5.03	20		Pn	14 59 08.2	+1.3
PPLA	Purkeypile	5.03	20	IAML		15 00 12.8	
	comp=N,36nm,0.9s						
PPLA				IAML		15 00 28.6	
	comp=E,37nm,1.0s						
CUT	Chulitna	5.05	32		Pn	14 59 07.3	+0.3
K20K	Telida	5.21	10	IAML		15 00 10.2	
	comp=E,35nm,1.1s						
GLI	Glacier Island	5.24	56		Pn	14 59 08.7	-0.8
GLI	Glacier Island	5.24	56	IAML		15 00 12.1	
	comp=N,140nm,0.5s						
SML	Sawmill	5.24	44	IAML		15 00 10.6	
	comp=N,129nm,0.6s						
SML				IAML		15 00 12.4	
	comp=E,130nm,0.5s						
J18K	Innoko River	5.25	356		Pn	14 59 11.1	+1.5
FALS	False Pass	5.33	234		Pn	14 59 11.0	+0.2
J16K	Anvik River	5.54	338		Pn	14 59 14.6	+1.2
SCM	Sheep Creek Mo	5.63	47		Pn	14 59 13.8	-1.0
EYAK	Cordova Ski Ar	5.72	62	P	Pn	14 59 16.0	+0.1
J19K	Poorman	5.77	2		Pn	14 59 17.5	+0.9
WAT1	Susitna Watana	5.88	35		Pn	14 59 17.1	-1.0
WAT6	Susitna Watana	5.96	40		Pn	14 59 18.2	-1.1
J20K	Nowinta River	6.02	8		Pn	14 59 20.8	+0.9
KAIM	Kayak Island	6.20	69		Pn	14 59 23.2	+1.0
GOAT	Goat Mountain	6.21	63		Pn	14 59 22.6	+0.2
RND	Reindeer	6.24	31		Pn	14 59 21.8	-1.1
BPAW	Bear Paw Mtn.	6.35	20		Pn	14 59 23.2	-1.1
DHY	Denali Highway	6.43	38		Pn	14 59 24.4	-1.1
MCK	McKinley	6.48	29		Pn	14 59 25.0	-1.1
BERG	Berg Lake	6.65	66		Pn	14 59 28.5	+0.2
BGLC	Bering Glacier	6.79	69		Pn	14 59 31.6	+1.4
GRIN	Grindle Hills	6.81	67		Pn	14 59 31.1	+0.7
AKLV	Akutan Long Va	6.90	238		Pn	14 59 32.0	+0.3
WACK	Wrangell Chich	6.93	52		Pn	14 59 32.2	0.0
AKBBA	Akutan Broad B	6.93	237		Pn	14 59 31.9	-0.2
WASW	Wrangell South	6.96	53		Pn	14 59 33.0	+0.3
H17K	Granite Mounta	6.97	346		Pn	14 59 34.5	+2.0
AKMO	Akutan Morgan	6.97	238		Pn	14 59 32.9	+0.2
H18K	Honhosa River	7.02	352		Pn	14 59 34.1	+0.9
SNH	Sunshine Point	7.02	68		Pn	14 59 34.2	+0.9
H16K	Elim	7.07	338		Pn	14 59 35.3	+1.4
I21K	Tanana	7.21	14		Pn	14 59 35.9	+0.2
BARK	Barkley Ridge	7.24	67		Pn	14 59 37.1	+0.9
MCARA	McCarthy VSAT	7.25	59		Pn	14 59 36.5	+0.2
H20K	Anotleneega Mo	7.29	4		Pn	14 59 37.8	+1.0
WRH	Wood River Hil	7.30	28		Pn	14 59 35.2	-1.8
H19K	Roundabout Mou	7.31	358		Pn	14 59 37.5	+0.5
ISLE	Juniper Island	7.35	66		Pn	14 59 38.3	+0.5
UNV	Unalaska Valle	7.35	238		Pn	14 59 36.7	-1.0
MNAT	Makushin Natee	7.41	238		Pn	14 59 37.8	-0.7
KIAG	Kiagna River	7.42	63		Pn	14 59 39.1	+0.4
K24K	Donnelly Dome	7.45	37		Pn	14 59 39.4	+0.4
CCB	Clear Creek Bu	7.52	28		Pn	14 59 38.0	-1.8
G17K	Kiwalik Mounta	7.60	345		Pn	14 59 42.9	+1.9
I23K	Minto, Yukon-K	7.60	22		Pn	14 59 39.1	-1.8
MENT	Mentasta	7.65	47		Pn	14 59 40.8	-0.8
MENT	Mentasta	7.65	47	P	Pn	14 59 42.2	+0.6
COLA	College	7.69	27		Pn	14 59 40.0	-2.1
COLA	College	7.69	27	P	Pn	14 59 40.2	-1.9
ANM	Nome	7.76	329		Pn	14 59 44.3	+1.2
G15K	Niukluk	7.77	334		Pn	14 59 45.3	+2.1
G16K	Koyuk River	7.77	340		Pn	14 59 42.8	-0.4
G18K	Tagagawik	7.78	352		Pn	14 59 43.7	+0.5
RKAV	Rock Avalanche	7.78	68		Pn	14 59 44.6	+1.2
BARN	Barnard Glacie	7.78	63		Pn	14 59 44.2	+0.7
IM02	Indian Mountai	7.85	7		Pn	14 59 44.6	+0.4
ILAR	Eielson Array	7.85	30	P	Pn	14 59 41.6	-2.6
	comp=E,5.0nm,0.3s,baz=221,slow=13,SNR=73						
ILAR				S	Sn	15 01 04.5	-7.2
	comp=E,6.6nm,0.4s,baz=214,slow=20,SNR=5.1						
ILAR	Eielson Array	7.85	30		Pn	14 59 42.1	-2.2
TABL	Table Mountain	7.90	68		Pn	14 59 46.0	+0.8
CTGM	Chitina Glacie	7.92	64		Pn	14 59 46.2	+0.9
DOT	Dot Lake	7.93	42		Pn	14 59 44.9	-0.5
G19K	Purcell Mounta	7.94	357		Pn	14 59 45.5	0.0
J25K	Salcha River,	8.16	34		Pn	14 59 46.4	-2.0
SCRK	Sand Creek	8.16	40		Pn	14 59 46.8	-1.7
H23K	Yukon River	8.18	19		Pn	14 59 46.8	-1.9
OKFG	Magazine Ridge	8.27	239		Pn	14 59 48.6	-1.4
G21K	Allakaket	8.38	7		Pn	14 59 52.0	+0.7
O28M	Mount Upton	8.42	66		Pn	14 59 53.3	+1.1
BC01	Beaver Creek A	8.46	49		Pn	14 59 52.1	-0.3
L27K	Beaver Creek,	8.46	49		Pn	14 59 52.1	-0.3
BCAR	Beaver Creek A	8.48	49		Pn	14 59 52.2	-0.4
F17K	Baldwin Pennin	8.58	346		Pn	14 59 54.5	+0.6
BVCY	Beaver Creek	8.58	55		Pn	14 59 54.8	+0.8
BCPM	Bancas Point	8.59	72		Pn	14 59 54.9	+0.8
J26L	Joseph Creek	8.64	38		Pn	14 59 53.5	-1.4
PRP	Porcupine Dome	8.80	30		Pn	14 59 53.8	-3.2
F20K	Avaraart Lake	8.84	1		Pn	14 59 58.2	+0.9
F21K	Alatna River	9.08	6		Pn	15 00 01.4	+0.8
O29M	Mount Kennedy	9.15	70		Pn	15 00 03.1	+1.5
E19K	Redstone River	9.26	357		Pn	15 00 04.0	+1.0
YUK6	Outpost Mounta	9.33	66		Pn	15 00 05.2	+1.1
G24K	Hadweenzic Riv	9.34	21		Pn	15 00 01.4	-2.7
COLD	Coldfoot	9.39	14		Pn	15 00 03.0	-1.7
YUK5	Granite Creek	9.60	65		Pn	15 00 08.6	+0.9
M29M	Somme Creek	9.64	57		Pn	15 00 09.0	+0.9
DAWY	Dawson	9.90	47		Pn	15 00 11.8	+0.4
P30M	Million Dollar	9.94	71		Pn	15 00 13.2	+1.2
I27K	Kandik River	9.99	36		Pn	15 00 11.5	-1.2
L29M	L29M	10.01	53		Pn	15 00 13.5	+0.6
D19K	Kuna River	10.33	356		Pn	15 00 17.9	+0.8
M30M	Minto, Yukon	10.42	57		Pn	15 00 18.8	+0.5
S31K	Pelican	10.46	83		Pn	15 00 18.8	0.0
N31M	Braeburn, Yuko	10.65	64		Pn	15 00 21.6	+0.2
SKAG	Skagway	10.76	75	P	Pn	15 00 27.7	+4.9
D22K	Ayikyak River	10.77	6		Pn	15 00 23.4	+0.5
WHY	Whitehorse	11.00	68		Pn	15 00 26.6	+0.5
JIS	Juneau Island	11.37	81	P	Pn	15 00 34.0	+3.2
S34M	Telegraph Cree	13.14	81	Pn	Pn	15 00 53.1	-0.6
DLBC	Dease Lake	13.61	78	P	Pn	15 01 00.9	+1.2
	comp=E,3.6nm,0.4s,baz=256,slow=8.3,SNR=19						
DLBC				S	Sn	15 03 29.0	-1.3
	comp=E,1.2nm,0.4s,baz=281,slow=19,SNR=1.9						
INK	Inuvik	14.17	35	P	Pn	15 01 04.5	-2.0
	comp=E,3.0nm,0.4s,baz=227,slow=8.9,SNR=53						
INK				S	Sn	15 03 46.9	+3.6
	comp=E,5.2nm,0.7s,baz=204,slow=20,SNR=14						
C36M	Paulatuk	17.68	38	P	P	15 01 46.8	-1.3
A36M	Sachs Harbour	18.55	30	P	P	15 01 56.0	-1.6
BILL	Bilibino	19.32	316	P	P	15 02 03.6	-2.3
BILL				IAmb	IAmb	15 02 08.1	
	comp=Z,6.7nm,0.8s						
YKAW3	Yellowknife Wh	20.61	60	P	P	15 02 20.2	+0.3
YKAW3				IAmb	IAmb	15 02 22.8	
	comp=Z,7.4nm,0.9s						
YKA	Yellowknife Ar	20.62	61	P	P	15 02 19.2	-0.7
	comp=Z,1.7nm,0.4s,baz=282,slow=12,SNR=42						
YKA				PcP	PcP	15 06 24.1	+0.6
	comp=Z,0.5nm,0.6s,baz=291,slow=2.3,SNR=6.4						
	comp=Z,1.7nm,0.4s						
YKA	Yellowknife Ar	20.62	61	P	P	15 02 19.3	-0.6
PETK	Petropavlovsk-	26.19	279	P	P	15 03 13.3	+0.3
	comp=Z,2.4nm,0.5s,baz=60,slow=9.4,SNR=13						
	comp=Z,2.4nm,0.5s						
FCC	Fort Churchill	31.33	62		P	15 03 59.9	+1.5
FCC				IAmb	IAmb	15 04 01.1	
	comp=Z,3.6nm,0.6s						
NVAR	Mina Array Bea	31.35	113	P	P	15 04 00.2	+1.1
	comp=Z,0.2nm,0.3s,baz=338,slow=6.8,SNR=2.1						
NVAR				PcP	PcP	15 06 50.3	+1.3
	comp=Z,0.3nm,0.4s,baz=324,slow=3.3,SNR=2.3						
	comp=Z,0.2nm,0.3s						
TIXI	Tiksi	32.01	325		P	15 04 04.7	+0.5
TIXI				IAmb	IAmb	15 04 05.1	
	comp=Z,3.7nm,0.8s						
ILON	Igloolik, Nuna	32.35	40		P	15 04 07.2	-0.1
ILON				IAmb	IAmb	15 04 07.4	
	comp=Z,8.9nm,1.4s						
PDAR	Pinedale Array	32.58	98	P	P	15 04 09.9	0.0
	comp=Z,0.2nm,0.6s,baz=317,slow=7.7,SNR=2.7						
	comp=Z,0.2nm,0.6s						
ULM	Lac du Bonnet	34.92	76	P	P	15 04 31.2	+1.5
	comp=Z,2.0nm,0.4s,baz=301,slow=8.1,SNR=5.6						
	comp=Z,2.0nm,0.4s						
ULM	Lac du Bonnet	34.92	76	IAmb	IAmb	15 04 32.2	
	comp=Z,3.8nm,1.0s						
KUQ	Kuujjuuaa	43.02	51	P	P	15 05 37.2	+0.4
SPITS	Spitsbergen Ar	43.74	2	P	P	15 05 41.6	-0.8
	comp=Z,14nm,1.1s,baz=349,slow=15,SNR=8.2						
	comp=Z,14nm,1.1s						
NRIK	Noril'sk	44.77	333	P	P	15 05 50.7	+0.1
	comp=Z,15nm,0.5s,baz=49,slow=7.9,SNR=28						
	comp=Z,15nm,0.5s						
NRIK	Noril'sk	44.77	333	P	P	15 05 50.7	+0.1
USRK	Ussuriysk Ar.	45.00	285	P	P	15 05 51.0	-1.7
	comp=Z,4.0nm,0.7s,baz=56,slow=4.7,SNR=6.7						
	comp=Z,4.0nm,0.7s						
SCHQ	Schefferville	45.83	54	P	P	15 05 59.6	+0.4
	comp=Z,4.3nm,0.8s,baz=316,slow=8.6,SNR=12						
	comp=Z,4.3nm,0.8s						
TXAR	Lajitas Array	45.90	106	P	P	15 06 02.8	+2.6
	comp=Z,0.6nm,0.7s,baz=329,slow=7.7,SNR=10						
	comp=Z,0.6nm,0.7s						
MJAR	Matsushiro Arr	47.33	273	P	P	15 06 11.3	+0.2
	comp=Z,0.6nm,0.6s,baz=21,slow=6.3,SNR=2.6						
	comp=Z,0.6nm,0.6s						
146A	Union	50.92	90	P	P	15 06 38.5	+0.1
ARCES	ARCESS Array B	52.51	359	P	P	15 06 48.7	-0.9
	comp=Z,4.8nm,0.9s,baz=13,slow=8.4,SNR=4.5						
ARCES				PcP	PcP	15 07 58.6	+0.7
	comp=Z,8.9nm,1.1s,baz=4.5,slow=4.6,SNR=2.0						
	comp=Z,4.8nm,0.9s						
ARCES	ARCESS Array B	52.51	359	IAmb	IAmb	15 07 01.3	
	comp=Z,4.5nm,1.1s						
SONM	Songino Array	54.55	305	P	P	15 07 05.8	+0.8
	comp=Z,1.1nm,0.7s,baz=43,slow=5.6,SNR=6.2						
SONM				PcP	PcP	15 08 07.3	+1.2
	comp=Z,0.3nm,0.5s,baz=57,slow=5.3,SNR=2.2						
	comp=Z,1.1nm,0.7s						
SONM	Songino Array	54.55	305	IAmb	IAmb	15 07 06.6	
	comp=Z,1.3nm,1.0s						
HHC	Hu-ho-hao-te	57.60	296	*e*P	P	15 07 27.9	+1.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZALV	Zalesovo Beam	57.85	322	P	P	15 07 27.8	-0.2
	comp=Z,2.5nm,0.7s,baz=36,slow=7.3,SNR=12						
	comp=Z,2.5nm,0.7s						
ZALV	Zalesovo Beam	57.85	322	P	P	15 07 28.0	0.0
NOA	NORSAR Array B	60.63	7	P	P	15 07 46.3	-0.8
	comp=Z,0.8nm,0.7s,baz=342,slow=4.4,SNR=2.8						
	comp=Z,0.8nm,0.7s						
FINES	FINESS Array B	60.63	359	P	P	15 07 46.2	-0.8
	comp=Z,2.5nm,0.6s,baz=357,slow=6.1,SNR=12						
	comp=Z,2.5nm,0.6s						
HFS	Hagfors	61.68	6	P	P	15 07 53.6	-0.5
	comp=Z,3.2nm,0.5s,baz=11,slow=3.2,SNR=25						
	comp=Z,3.2nm,0.5s						
ARTI	Arti	62.44	339	P	P	15 07 58.7	-0.5
KURK	Kurchatov	62.58	324	P	P	15 08 00.8	+0.6
KURK	Kurchatov	62.58	324	IAmb	IAmb	15 08 00.9	
	comp=Z,2.2nm,0.8s						
KURBB	Kurchatov Arra	62.69	324	P	P	15 08 00.8	-0.1
	comp=Z,1.5nm,0.6s,baz=28,slow=6.4,SNR=8.9						
	comp=Z,1.5nm,0.6s						
BORK	Borovoye	62.87	331	P	P	15 08 02.0	-0.1
BORK				IAmb	IAmb	15 08 02.6	
	comp=Z,2.9nm,0.7s						
BVAR	Borovoye Array	62.87	331	P	P	15 08 01.7	-0.5
	comp=Z,4.7nm,0.6s,baz=18,slow=5.9,SNR=23						
	comp=Z,4.7nm,0.6s						
EKA	Eskdalemuir Ar	64.68	17	P	P	15 08 13.4	-0.5
	comp=Z,2.9nm,0.6s,baz=340,slow=6.6,SNR=17						
	comp=Z,2.9nm,0.6s						
MKAR	Makanchi Array	64.81	320	P	P	15 08 14.4	-0.6
	comp=Z,1.1nm,0.6s,baz=35,slow=6.2,SNR=18						
	comp=Z,1.1nm,0.6s						
AB31	Akbulak array	68.86	336	P	P	15 08 40.2	-0.2
AB31				IAmb	IAmb	15 08 40.7	
	comp=Z,2.4nm,0.7s						
BOOM	Boomskoye usch	70.73	322	IAmb	IAmb	15 08 53.8	
	comp=Z,3.9nm,0.6s						
AAK	Ala-Archa	71.06	323	P	P	15 08 54.9	+0.7
AAK				IAmb	IAmb	15 08 55.7	
	comp=Z,2.9nm,0.7s						
AKASG	Malin Array Be	71.33	357	P	P	15 08 54.3	-1.1
	comp=Z,2.4nm,0.4s,baz=6.5,slow=6.1,SNR=11						
	comp=Z,2.4nm,0.4s						
AKASG	Malin Array Be	71.33	357	IAmb	IAmb	15 08 59.5	
	comp=Z,5.2nm,1.4s						
GERES	GERESS Array B	72.93	7	P	P	15 09 04.9	-0.2
	comp=Z,0.7nm,0.6s,baz=345,slow=3.5,SNR=1.9						
	comp=Z,0.7nm,0.6s						
KSH2	Kashi	73.86	321	P	P	15 09 12.0	+1.2
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DAVOX	Davos/Dischmat	74.68	10	P	P	15 09 16.8	+1.3
	comp=Z,0.7nm,0.3s,baz=347,slow=4.4,SNR=6.1						
	comp=Z,0.7nm,0.3s						
KBZ	Khabaz	77.18	346	P	P	15 09 28.7	-0.7
	comp=Z,1.8nm,0.7s,baz=0.0,slow=3.0,SNR=5.5						
	comp=Z,1.8nm,0.7s						
ESDC	Sonseca Array	79.67	22	P	P	15 09 43.1	-0.2
	comp=Z,0.9nm,0.7s,baz=348,slow=4.9,SNR=8.9						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	82.06	353	P	P	15 09 56.0	0.0
	comp=Z,0.8nm,0.7s,baz=31,slow=1.6,SNR=5.0						
	comp=Z,0.8nm,0.7s						
CMAR	Chiang Mai Arr	82.15	292	P	P	15 09 56.2	-0.4
	comp=Z,0.7nm,0.4s,baz=33,slow=5.4,SNR=4.7						
	comp=Z,0.7nm,0.4s						
BOSA	Boshof	150.36	358	PKPbc	PKPbc	15 17 25.3	-0.6
	comp=Z,5.9nm,0.6s,baz=352,slow=3.3,SNR=20						

*IDC **02** 15:08:01.9±0.8, 31°.95S×57°.37E, h0km, mb4.0/14, mbtmp4.0/14, MS3.4/18, Error ellipse: s-maj=30.3km s-min=21.5km az=55.0*

*NEIC **02** 15:08:04.0±1.2, 31°.96S±0°.10×57°.27E±0°.08, h10km±1km, mb4.6/25, Error ellipse: s-maj=19.1km s-min=5.6km az=210.0*

ISC 02 15:08:03.4±0.7, **32°.0S**±0°.1×**57°.3E**±0°.1, **h11km, n72, σ0s.91**/46, **mb4.5**/25, **MS3.5**/18, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOMA	Nahampoana Res	11.45	305	Pn	Pn	15 10 46.4	-0.5
VOI	Vohitsoka	13.72	315	Pn	Pn	15 11 18.1	0.0
H04N2	CROZET ISLANDS	14.77	195	T	T	15 26 59.7	
	baz=19,slow=75,SNR=90						
H04N1	CROZET ISLANDS	14.77	195	T	T	15 27 05.0	
	baz=19,slow=75,SNR=111						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H04N3	CROZET ISLANDS	14.79	195	T	T	15 27 07.5	
	baz=19,slow=75,SNR=120						
BOSA	Boshof	27.81	269	LR	LR	15 23 15.7	
	comp=Z,33nm,18.4s,baz=194,slow=33						
H08S1	Diego Carcia H	28.05	34	T	T	15 43 03.1	
	baz=207,slow=76,SNR=10						
H08S2	Diego Garcia H	28.06	34	T	T	15 43 03.8	
	baz=207,slow=76,SNR=6.3						
H08S3	Diego Garcia H	28.07	34	T	T	15 43 04.6	
	baz=207,slow=76,SNR=10.0						
DGAR	Diego Garcia	28.25	33	P	P	15 13 57.1	+0.5
LBTB	Lobatse	28.64	276	LR	LR	15 24 16.1	
	comp=Z,26nm,18.1s,baz=151,slow=34						
SUR	Sutherland	30.78	259	LR	LR	15 25 36.1	
	comp=Z,30nm,19.1s,baz=135,slow=34						
MAW	Mawson	35.80	176	LR	LR	15 27 02.0	
	comp=Z,118nm,18.4s,baz=23,slow=32						
MBAR	Mbarara	40.05	316	LR	LR	15 30 45.8	
	comp=Z,104nm,20.2s,baz=57,slow=34						
COCO	West Island	41.30	71	P	P	15 15 50.1	+0.9
FURI	Furi	44.38	333	LR	LR	15 31 17.3	
	comp=Z,55nm,21.4s,baz=154,slow=31						
H01W2	Cape Leeuwin H	46.98	110	T	T	16 06 30.8	
	baz=256,slow=75,SNR=17						
H01W3	Cape Leeuwin H	46.98	110	T	T	16 06 31.1	
	baz=256,slow=75,SNR=20						
H01W1	Cape Leeuwin H	46.99	110	T	T	16 06 32.0	
	baz=256,slow=75,SNR=16						
SNAA	Sanae	50.65	201	LR	LR	15 35 06.3	
	comp=Z,57nm,20.3s,baz=46,slow=32						
UGM	Wanagama	54.83	76	P	P	15 17 33.9	-0.1
PSA00	Pilbara Seismi	56.13	96	P	P	15 17 43.4	+0.1
PSA00				IAmb	IAmb	15 17 56.3	
	comp=Z,8.1nm,1.4s						
MBWA	Marble Bar	56.21	95	P	P	15 17 42.5	-1.3
MBWA				IAmb	IAmb	15 18 19.3	
	comp=Z,9.8nm,1.1s						
QSPA	South Pole Qui	58.17	180	P	P	15 17 57.8	+0.6
	comp=Z,6.7nm,0.9s,baz=317,slow=3.5,SNR=6.3						
	comp=Z,6.7nm,0.9s						
QSPA	South Pole Qui	58.17	180	P	P	15 17 57.9	+0.7
QSPA				IAmb	IAmb	15 18 00.6	
	comp=Z,7.5nm,0.8s						
FORT	Forrest	59.38	109	P	P	15 18 06.0	+0.1
FORT				IAmb	IAmb	15 18 07.8	
	comp=Z,5.9nm,0.9s						
VNDA	Vanda	62.08	166	LR	LR	15 43 07.2	
	comp=Z,94nm,18.7s,baz=266,slow=34						
BRDH	Bariadhala	63.53	36	LR	LR	15 45 42.9	
	comp=Z,26nm,18.9s,baz=184,slow=36						
CM31	Chiang Mai Arr	64.11	45	P	P	15 18 37.6	-0.1
CM31				IAmb	IAmb	15 18 39.0	
	comp=Z,6.4nm,1.0s						
CMAR	Chiang Mai Arr	64.11	45	P	P	15 18 38.0	+0.2
	comp=Z,2.3nm,0.9s,baz=220,slow=6.5,SNR=21						
CMAR				LR	LR	15 43 02.9	
	comp=Z,14nm,19.2s,baz=250,slow=33						
	comp=Z,2.3nm,0.9s						
CHTO	Chiang Mai	64.38	44	P	P	15 18 40.5	+0.9
CHTO				IAmb	IAmb	15 18 40.6	
	comp=Z,3.0nm,1.1s						
ASF	Jabal al Asfar	66.67	341	LR	LR	15 44 19.5	
	comp=Z,22nm,21.4s,baz=192,slow=33						
BALJ	Balqa	66.94	340	P	P	15 18 55.7	-0.2
ASAR	Alice Springs	66.99	104	P	P	15 18 56.5	-0.1
	comp=Z,1.6nm,0.7s,baz=242,slow=6.4,SNR=28						
	comp=Z,1.6nm,0.7s						
ASAR	Alice Springs	66.99	104	P	P	15 18 55.7	-0.9
MMAI	Mount Meron Ar	67.88	340	P	P	15 19 02.6	+0.8
	comp=Z,0.3nm,0.3s,baz=171,slow=11,SNR=1.9						
MMAI				LR	LR	15 45 06.4	
	comp=Z,25nm,20.5s,baz=160,slow=33						
	comp=Z,0.3nm,0.3s						
WRA	Warramunga Arr	69.03	101	P	P	15 19 09.5	+0.1
	comp=Z,1.4nm,0.7s,baz=244,slow=5.6,SNR=7.4						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	69.03	101	P	P	15 19 09.3	-0.1
WRAB	Tennant Creek	69.04	101	P	P	15 19 09.6	+0.1
WRAB				IAmb	IAmb	15 19 18.9	
	comp=Z,8.3nm,1.3s						
WB0	Warramunga Arr	69.15	101	P	P	15 19 10.6	+0.4
WB0				IAmb	IAmb	15 19 42.9	
	comp=Z,5.8nm,1.1s						
TORD	Torodi Ar. Bea	69.61	301	P	P	15 19 13.1	+0.2
	comp=Z,0.6nm,0.7s,baz=137,slow=4.9,SNR=4.1						
TORD				LR	LR	15 50 31.5	
	comp=Z,61nm,18.1s,baz=153,slow=37						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	69.61	301	P	P	15 19 13.7	+0.8
DBIC	Dimbokro	70.52	291	LR	LR	15 46 35.1	
	comp=Z,28nm,20.1s,baz=175,slow=33						
INKA	Innaminka	70.73	111	P	P	15 19 18.5	-1.3
GNI	Garni	72.72	350	LR	LR	15 51 14.1	
	comp=Z,22nm,18.1s,baz=183,slow=36						
BRTR	Keskin Array B	74.66	341	P	P	15 19 43.7	+0.9
	comp=Z,0.8nm,0.9s,baz=160,slow=4.6,SNR=4.5						
	comp=Z,0.8nm,0.9s						
KK31	Karatay Array	75.71	10		P	15 19 49.6	+1.0
KK31				IAmb	IAmb	15 20 04.8	
	comp=Z,5.9nm,1.0s						
KKAR	Karatay Array	75.71	10	P	P	15 19 49.8	+1.1
AAK	Ala-Archa	75.93	13	P	P	15 19 51.3	+1.1
BOOM	Boomskoye usch	76.08	14	P	P	15 19 51.5	+0.6
BOOM				IAmb	IAmb	15 20 00.0	
	comp=Z,5.8nm,1.4s						
KBZ	Khabaz	76.50	349	LR	LR	15 51 40.8	
	comp=Z,27nm,21.3s,baz=166,slow=34						
LZDM	Lanzhou Array	80.38	37	P	P	15 20 13.4	-1.8
	comp=Z,0.2nm,0.3s,baz=217,slow=3.6,SNR=3.8						
	comp=Z,0.2nm,0.3s						
AB31	Akbulak array	80.92	2	P	P	15 20 16.8	-0.5
ABKAR	Akbulak array	80.92	2	P	P	15 20 16.8	-0.5
GTA2	Gaotai	81.31	32	eP	P	15 20 20.2	+0.4
GTA2				pP	pwP	15 20 28.3	+1.7
GTA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAKZ	Makanchi	81.54	17	P	P	15 20 21.4	+0.7
MKAR	Makanchi Array	81.61	17	P	P	15 20 21.3	+0.2
	comp=Z,1.1nm,0.7s,baz=207,slow=4.8,SNR=15						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	81.61	17	P	P	15 20 21.5	+0.5
KURBB	Kurchatov Arra	84.38	13	P	P	15 20 36.2	+0.9
	comp=Z,3.4nm,0.9s,baz=204,slow=6.6,SNR=18						
	comp=Z,3.4nm,0.9s						
KURK	Kurchatov	84.48	13		P	15 20 36.5	+0.7
BVAR	Borovoye Array	85.43	8	P	P	15 20 41.1	+0.6
	comp=Z,2.5nm,0.9s,baz=165,slow=6.9,SNR=10						
	comp=Z,2.5nm,0.9s						
BORK	Borovoye	85.44	8		P	15 20 41.7	+1.1
BORK				IAmb	IAmb	15 20 50.7	
	comp=Z,7.5nm,1.1s						
AKASG	Malin Array Be	86.00	343	P	P	15 20 41.6	-1.8
	comp=Z,0.7nm,0.6s,baz=151,slow=4.0,SNR=1.4						
	comp=Z,0.7nm,0.6s						
MDT	Midelt	86.98	312	LR	LR	16 00 58.0	
	comp=Z,41nm,18.5s,baz=242,slow=36						
ZAA0	Zalesovo Array	88.85	16	P	P	15 20 55.1	-1.9
ZAA0				IAmb	IAmb	15 21 22.9	
	comp=Z,3.4nm,1.3s						
ZALV	Zalesovo Beam	88.85	16	P	P	15 20 55.1	-1.9
	comp=Z,0.4nm,0.4s,baz=220,slow=3.8,SNR=3.5						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	88.85	16	P	P	15 20 55.2	-1.8
SONM	Songino Array	90.85	31	P	P	15 21 06.3	-0.4
	comp=Z,0.3nm,0.4s,baz=208,slow=2.5,SNR=2.7						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	90.85	31	IAmb	IAmb	15 21 17.1	
	comp=Z,4.9nm,1.4s						
ESDC	Sonseca Array	91.14	317	LR	LR	16 02 29.4	
	comp=Z,25nm,18.4s,baz=96,slow=36						
ILAR	Eielson Array	143.96	17	PKP	PKPbc	15 27 36.4	+0.4
	comp=Z,0.5nm,0.8s,baz=317,slow=3.8,SNR=4.7						
YKA	Yellowknife Ar	149.04	353	PKPbc	PKPbc	15 27 51.5	+0.7
	comp=Z,1.9nm,0.8s,baz=8.4,slow=2.7,SNR=36						

*TRN **02** 15:10:37.4, 15°00N×61°28W, h177km, MD4.1, South of Dominica.*

*IDC **02** 15:10:38.4±0.6, 15°00N×61°56W, h168km±4km, mb3.4/10, mbtmp3.9/12, Error ellipse: s-maj=16.0km s-min=8.1km az=79.0*

*NEIC **02** 15:10:39.1±1.4, 14°99N±0°05×61°50W±0°09, h171km±6km, mb4.0/4, Error ellipse: s-maj=13.2km s-min=6.0km az=71.0*

ISC 02 15:10:38.6±0.7**, 14°96N**±0°03×**61°49W**±0°07**, h173**km±5km**, n70, σ0.87**/93**, mb3.5**/10**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVN	Savane Anatole	0.33	110		Pn	15 11 02.5	+0.4
SVN	Savane Anatole	0.33	110	eP	Pn	15 11 02.5	+0.4
SVN				eS	Sn	15 11 20.5	+0.4
CXM	Morne La Croix	0.34	115		Pn	15 11 02.3	+0.1
DLPL	La Plaine	0.44	32	eP	Pn	15 11 01.1	-1.4
DLPL				eS	Sn	15 11 19.7	-1.2
DSLB	Salisbury	0.48	8	eP	Pn	15 11 03.1	+0.5
DSLB				eS	Sn	15 11 20.5	-0.7
BIM	Bigot	0.60	137		Pn	15 11 03.5	+0.3
BIM	Bigot	0.60	137	eP	Pn	15 11 03.4	+0.2
BIM				eS	Sn	15 11 22.0	0.0
ILAM	Ilet Lapin Mar	0.62	107		Pn	15 11 03.1	-0.1
DWS	Wesley	0.63	16	eP	Pn	15 11 03.6	+0.3
DWS				eS	Sn	15 11 22.4	0.0
MPOM	Morne Pois Mar	0.80	130		Pn	15 11 04.2	-0.1
H05S1	Guadeloupe/Mar	0.83	130	P	Pn	15 11 04.6	+0.2
	SNR=5012						
H05S1				S	Sn	15 11 24.2	-0.1
TDBA	Terre de Bas,	0.90	351		Pn	15 11 05.6	+0.7
TBG	Guadaloupe-3	0.90	351	eP	Pn	15 11 05.5	+0.6
TBG				eS	Sn	15 11 26.8	+1.4
MAGL	Barre de l'ile	1.00	12	Pn	Pn	15 11 06.1	+0.4
SLBI	Saint Lucia, B	1.06	152	eP	Pn	15 11 05.9	-0.2
SLBI				eS	Sn	15 11 26.2	-1.2
SLCP	Castries, St.	1.06	153	eP	Pn	15 11 05.8	-0.3
SLCP				eS	Sn	15 11 26.4	-1.0
MMLZ	Guadeloupe Bro	1.09	351	eP	Pn	15 11 07.2	+0.9
MMLZ				eS	Sn	15 11 27.5	-0.5
CBE	Ff, Capester	1.11	354		Pn	15 11 07.2	+0.6
ATGZ	Broadband at L	1.15	349	eP	Pn	15 11 07.9	+1.1
SLAC	Saint Lucia, A	1.20	151	eP	Pn	15 11 07.6	+0.3
SLAC				eS	Sn	15 11 28.8	-0.8
DHSZ	Broadband at M	1.33	349	eP	Pn	15 11 09.5	+1.0
DHSZ				eS	Sn	15 11 32.5	+0.9
GDHS	Morne Mazeau,	1.33	349		Pn	15 11 09.0	+0.5
MCLT	Moule a Chique	1.35	157	eP	Pn	15 11 08.8	+0.2
MCLT				eS	Sn	15 11 31.3	-0.6
DSDZ	La Diserade, G	1.41	17	eP	Pn	15 11 09.2	+0.1
DSDZ				eS	Sn	15 11 31.2	-1.6
GDSD	La Dsirade Is	1.41	17		Pn	15 11 09.1	-0.1
H05N1	Guadeloupe/Mar	1.41	17	P	Pn	15 11 09.2	0.0
H05N1				S	Sn	15 11 31.4	-1.6
	SNR=213						
ABD	La Joyeuse, An	1.51	0	Pn	Pn	15 11 10.3	+0.2
SVB	Belmont	1.69	172	eP	Pn	15 11 12.2	+0.2
SVB				eS	Sn	15 11 36.9	-1.0
MLYT	Lee's Yard	1.88	339	eP	Pn	15 11 14.6	+0.7
MLYT				eS	Sn	15 11 41.5	+0.2
MBWH	Windy Hill	1.90	339	eP	Pn	15 11 14.8	+0.6
MBWH				eS	Sn	15 11 41.2	-0.6
MBFL	Flemmings, Mon	1.91	339	eP	Pn	15 11 13.9	-0.3
MBFL				eS	Sn	15 11 41.5	-0.5
BBGH	Gun Hill	2.60	134		Pn	15 11 23.5	+1.3
GRSS	Sisters	2.65	183	eP	Pn	15 11 22.2	-0.5
GRSS				eS	Sn	15 11 57.0	-0.1
SKI	Saint Kitts	2.65	333	eP	Pn	15 11 23.3	+0.6
SKI				eS	Sn	15 11 57.6	+0.5
ANWB	Willy Bob	2.71	354		Pn	15 11 22.6	-0.8
ANWB	Willy Bob	2.71	354	eP	Pn	15 11 22.5	-0.9
ANWB				eS	Sn	15 11 55.7	-2.6
GRW	Mount Saint Ca	2.79	183	eP	Pn	15 11 25.8	+1.3
GRW				eS	Sn	15 12 00.7	+0.5
GRGR	Grenville	2.81	183	eP	Pn	15 11 25.6	+0.8
GRGR				eS	Sn	15 12 01.2	+0.5
SEUS	St. Eustatius	2.90	331	Pn	Pn	15 11 26.1	+0.5
GRFF	Grenada Fort F	2.90	185	eP	Pn	15 11 26.3	+0.5
GRFF				eS	Sn	15 12 03.2	+0.6
SABA	Saba	3.13	328		Pn	15 11 28.9	+0.3
SMRT	St. Maarten	3.43	334		Pn	15 11 31.7	-0.6
DMDM	Guralp CMG5TDE	4.24	181	eP	Pn	15 11 43.4	+0.8
DMDM				eS	Sn	15 12 31.2	-1.4
PSMG	Mucurapo Girls	4.26	181	eP	Pn	15 11 43.8	+0.9
PSMG				eS	Sn	15 12 31.1	-2.1
PSQC	Port of Spain	4.26	180	eP	Pn	15 11 43.0	0.0
PSQC				eS	Sn	15 12 31.8	-1.5
PSWS	West Secondary	4.27	180	eS	Sn	15 12 31.5	-2.0
TRN	Trinidad (W)	4.29	179	eP	Pn	15 11 43.7	+0.5
TRN				eS	Sn	15 12 31.6	-2.2
CUPR	Culebra, Puert	4.93	313		Pn	15 11 52.0	+0.4
HUMP	Col San Antoni	5.24	308		Pn	15 11 55.1	-0.5
SJG	San Juan	5.46	306	P	Pn	15 11 59.0	+0.6
	40nm,0.6s,baz=85,slow=13,SNR=25						
SJG	San Juan	5.46	306		Pn	15 11 58.1	-0.3
GCPR	Guaynabo City	5.52	308		Pn	15 11 59.2	0.0
SDDR	Presa de Saban	10.19	294		Pn	15 13 01.3	+0.5
MDP	Montagnes des	13.11	137	P	Pn	15 13 37.8	-0.7
	10nm,0.3s,baz=319,slow=16,SNR=42						
MDP				S	Sn	15 15 53.8	-10
	5.6nm,0.3s,baz=331,slow=4.1,SNR=6.9						
TXAR	Lajitas Array	41.37	297	P	P	15 18 07.1	-0.9
	0.2nm,0.4s,baz=94,slow=7.5,SNR=6.7						
	0.2nm,0.4s						
ULM	Lac du Bonnet	44.87	329	P	P	15 18 34.5	-1.0
	3.7nm,0.5s,baz=128,slow=8.5,SNR=7.9						
	3.7nm,0.5s						
ULM	Lac du Bonnet	44.87	329	IAmb	IAmb	15 18 35.2	
	comp=Z,9.5nm,1.4s						
PD31	Pinedale Array	49.52	314	IAmb	IAmb	15 19 12.4	
	comp=Z,1.5nm,0.5s						
PDAR	Pinedale Array	49.52	314	P	P	15 19 11.6	-0.4
	comp=Z,1.5nm,0.6s,baz=108,slow=7.0,SNR=19						
	comp=Z,1.5nm,0.6s						
H10N3	ASCENSION HYDR	51.80	113	T	T	16 14 37.4	
	baz=295,slow=75,SNR=5.2						
H10N2	ASCENSION HYDR	51.80	113	T	T	16 14 38.0	
	baz=295,slow=75,SNR=5.3						
H10N1	ASCENSION HYDR	51.82	113	T	T	16 14 39.0	
	baz=295,slow=75,SNR=6.5						
NVAR	Mina Array Bea	54.95	307	P	P	15 19 52.2	+0.2
	comp=Z,0.7nm,0.7s,baz=67,slow=6.8,SNR=2.6						
	comp=Z,0.7nm,0.7s						
ESDC	Sonseca Array	55.69	52	P	P	15 19 58.8	+1.6
	comp=Z,0.4nm,0.6s,baz=258,slow=5.7,SNR=5.2						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	60.23	335	P	P	15 20 27.7	-0.5
	comp=Z,0.4nm,0.7s,baz=112,slow=6.3,SNR=9.7						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	61.14	83	P	P	15 20 35.4	+0.3
	comp=Z,0.8nm,0.6s,baz=272,slow=7.7,SNR=4.7						
	comp=Z,0.8nm,0.6s						
TORD	Torodi Ar. Bea	61.14	83	IAmb	IAmb	15 20 36.4	
	comp=Z,3.9nm,1.4s						
ILAR	Eielson Array	74.63	334	P	P	15 21 58.1	-0.4
	comp=Z,0.3nm,0.5s,baz=80,slow=5.5,SNR=9.1						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	75.84	30	P	P	15 22 06.3	+0.9
	comp=Z,3.0nm,1.0s,baz=260,slow=5.1,SNR=1.3						
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	84.45	51	P	P	15 22 53.5	+1.3
	comp=Z,0.4nm,0.6s,baz=296,slow=7.1,SNR=2.2						
	comp=Z,0.4nm,0.6s						

*NEIC **02** 15:26:21.0±0.8, 18°10N±0°09×146°0E±0°1, h124km±8km, mb4.4/26, Error ellipse: s-maj=18.8km s-min=12.4km az=97.0*

*IDC **02** 15:26:22.6±2.3, 18°08N×145°97E, h145km±23km, mb3.4/13, mbtmp3.8/15, Error ellipse: s-maj=23.3km s-min=13.8km az=96.0*

ISC 02 15:26:21.5±0.6**, 18°06N**±0°06×**146°0E**±0°1**, h135**km**, n47, σ0.79**/43**, mb4.2**/24**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	Saipan	2.81	184	Pn	Pn	15 27 03.4	-2.5
DPSS				Sn	Sn	15 27 39.2	-0.9
GUMO	Guam	4.58	194	P	Pn	15 27 28.7	-0.3
	95nm,0.9s,baz=18,slow=20,SNR=1.7						
GUMO				S	Sn	15 28 24.6	+3.0
	24nm,0.3s,baz=16,slow=20,SNR=1.4						
JHJ2	Mitsune	15.97	341	P	Pn	15 29 58.8	+0.1
JSG	Sagara	17.94	339	P	P	15 30 20.7	-0.4
INU	Inuyama	18.97	337	P	P	15 30 32.0	-0.4
MJAR	Matsushiro Arr	19.64	341	P	Pn	15 30 41.6	-0.8
	0.5nm,0.6s,baz=158,slow=10,SNR=1.6						
H11S3	WAKE ISLAND Hy	19.67	86	T	T	15 51 47.4	
	baz=274,slow=75,SNR=8.0						
H11S1	WAKE ISLAND Hy	19.68	85	T	T	15 51 26.2	
	baz=274,slow=75,SNR=4.9						
H11S2	WAKE ISLAND Hy	19.69	86	T	T	15 51 35.1	
	baz=274,slow=75,SNR=7.0						
H11N1	WAKE ISLAND Hy	19.86	82	T	T	15 51 44.3	
	baz=267						
H11N2	WAKE ISLAND Hy	19.86	82	T	T	15 51 46.0	
	baz=267						
H11N3	WAKE ISLAND Hy	19.87	82	T	T	15 51 44.5	
	baz=267						
QIZ	Qiongzhong	34.24	277	P	P	15 32 54.2	-0.5
PETK	Petropavlovsk-	36.15	12	P	P	15 33 10.7	+0.1
	9.2nm,1.1s,baz=201,slow=7.7,SNR=2.7						
	9.2nm,1.1s						
KNRA	Kununurra	37.57	208	P	P	15 33 23.9	+0.9
WB0	Warramunga Arr	39.28	197	P	P	15 33 37.4	+0.1
WB0				IAmb	IAmb	15 34 14.2	
	comp=Z,7.0nm,1.4s						
WR8	Warramunga Arr	39.43	197	P	P	15 33 38.8	+0.4
WR8				IAmb	IAmb	15 34 17.7	
	comp=Z,7.7nm,1.5s						
WRA	Warramunga Arr	39.46	197	P	P	15 33 39.1	+0.4
	comp=Z,1.1nm,0.8s,baz=19,slow=8.5,SNR=8.0						
	comp=Z,1.1nm,0.8s						
AS31	Alice Springs	43.12	196	P	P	15 34 08.9	+0.3
ASAR	Alice Springs	43.12	196	P	P	15 34 08.5	-0.1
	comp=Z,0.2nm,0.4s,baz=17,slow=8.3,SNR=12						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	43.12	196	P	P	15 34 08.8	+0.2
CMAR	Chiang Mai Arr	44.57	278	P	P	15 34 20.6	+0.2
	comp=Z,0.2nm,0.3s,baz=62,slow=7.7,SNR=1.3						
	comp=Z,0.2nm,0.3s						
STKA	Stephens Creek	49.83	185	P	P	15 35 00.7	-0.1
	comp=Z,1.1nm,0.7s,baz=18,slow=20,SNR=1.7						
	comp=Z,1.1nm,0.7s						
BILL	Bilibino	51.60	10	P	P	15 35 14.1	+0.5
BILL				IAmb	IAmb	15 35 14.6	
	comp=Z,7.2nm,1.2s						
GAMB	Gambell	53.94	22	P	P	15 35 31.3	+0.4
F15K	North Star Dit	57.53	22	P	P	15 35 57.2	+0.8
F15K				IAmb	IAmb	15 36 03.6	
	comp=Z,4.8nm,1.4s						
ZALV	Zalesovo Beam	58.68	323	P	P	15 36 04.6	0.0
	comp=Z,0.4nm,0.5s,baz=96,slow=10,SNR=2.1						
	comp=Z,0.4nm,0.5s						
H17K	Granite Mounta	58.91	24	P	P	15 36 06.2	+0.1
MKAR	Makanchi Array	59.09	314	P	P	15 36 07.1	-0.5
	comp=Z,0.2nm,0.6s,baz=100,slow=6.0,SNR=2.8						
	comp=Z,0.2nm,0.6s						
H18K	Honhosa River	59.60	24	P	P	15 36 10.4	-0.3
H18K				IAmb	IAmb	15 36 45.2	
	comp=Z,6.6nm,1.4s						
G18K	Tagagawik	59.80	23	P	P	15 36 12.4	+0.2
G18K				IAmb	IAmb	15 36 13.9	
	comp=Z,2.7nm,0.9s						
K20K	Telida	60.67	27	P	P	15 36 18.5	+0.4
K20K				IAmb	IAmb	15 36 27.3	
	comp=Z,5.5nm,1.2s						
KURK	Kurchatov	61.92	318	P	P	15 36 26.6	-0.1
KURBB	Kurchatov Arra	61.97	318	P	P	15 36 26.6	-0.4
	comp=Z,0.5nm,0.2s,baz=96,slow=7.7,SNR=2.7						
	comp=Z,0.5nm,0.2s						
KTH	Kantishna Hill	62.08	27	P	P	15 36 27.9	+0.2
BPAW	Bear Paw Mtn.	62.20	26	P	P	15 36 28.7	+0.3
BPAW				IAmb	IAmb	15 36 30.1	
	comp=Z,4.8nm,0.9s						
HIN	Hinchinbrook I	63.38	31	P	P	15 36 36.7	+0.4
ILAR	Eielson Array	64.09	26	P	P	15 36 40.2	-0.7
	comp=Z,1.4nm,0.8s,baz=256,slow=5.3,SNR=13						
	comp=Z,1.4nm,0.8s						
FYU	Fort Yukon	65.16	24	P	P	15 36 48.1	+0.5
FYU				IAmb	IAmb	15 37 23.7	
	comp=Z,7.1nm,1.3s						
F26K	Sheenjek River	65.81	23	P	P	15 36 52.9	+1.0
BVAR	Borovoye Array	67.13	321	P	P	15 37 00.2	-0.4
	comp=Z,0.6nm,0.5s,baz=94,slow=7.0,SNR=5.4						
	comp=Z,0.6nm,0.5s						
F30M	Barrier River	68.96	24	P	P	15 37 12.2	+0.4
F30M				IAmb	IAmb	15 37 13.4	
	comp=Z,5.3nm,1.1s						
F31M	Tsiigehtchic	69.74	24	P	P	15 37 16.6	+0.1
F31M				IAmb	IAmb	15 37 35.9	
	comp=Z,6.4nm,1.4s						
YKA	Yellowknife Ar	78.42	28	P	P	15 38 06.5	-0.5
	comp=Z,0.4nm,0.6s,baz=293,slow=6.4,SNR=8.3						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	83.32	52	P	P	15 38 35.1	+1.2
	comp=Z,0.8nm,0.6s,baz=287,slow=4.5,SNR=4.6						
	comp=Z,0.8nm,0.6s						
PDAR	Pinedale Array	88.08	46	P	P	15 38 57.6	+0.4
	comp=Z,0.3nm,0.8s,baz=279,slow=7.5,SNR=2.6						
	comp=Z,0.3nm,0.8s						
TORD	Torodi Ar. Bea	133.06	309	PKP	PKPdf	15 45 22.1	+0.1
	comp=Z,0.1nm,0.4s,baz=34,slow=0.1,SNR=1.2						

*NEIC **02** 15:29:03.8±1.0, 17°9S±0°1×178°3W±0°1, h506km±8km, mb4.2/46, Error ellipse: s-maj=20.8km s-min=15.3km az=148.0*

*IDC **02** 15:29:06.8±4.5, 18°18S×178°37W, h547km±50km, mb3.4/13, mbtmp4.2/14, Error ellipse: s-maj=28.6km s-min=20.3km az=148.0*

ISC 02 15:29:02.8±0.5**, 18°0S**±0°1×**178°27W**±0°08**, h500**km**, n74, σ0.94**/74**, mb4.2**/34**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.52	274	P	P	15 30 20.9	+3.4
AFI	Afiamalu	7.46	58	P	P	15 30 52.0	-1.9
NIUE	Niue	7.99	99	P	P	15 30 58.4	-0.6
FUNA	Funafuti	9.75	345	P	P	15 31 17.9	+0.3
DZM	Mont Dzumac	14.92	252	P	P	15 32 14.3	+2.0
	12nm,1.1s,baz=63,slow=16,SNR=3.5						
LHI	Lord Howe Isla	24.52	232	P	P	15 33 42.5	+0.5
EIDS	Eidsvold	29.35	250	P	P	15 34 24.4	-0.2
EIDS				IAmb	IAmb	15 34 24.7	
	comp=Z,4.7nm,0.8s						
ARMA	Armidale	30.00	240	P	P	15 34 30.6	+0.3
CAN	Canberra	33.74	233	P	P	15 35 01.9	-0.3
TOO	Toolangi	37.20	231	P	P	15 35 31.8	+0.8
TOO				IAmb	IAmb	15 36 02.8	
	comp=Z,11nm,1.3s						
COEN	Coen	37.24	271	P	P	15 35 31.0	-0.5
COEN				IAmb	IAmb	15 35 32.8	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	38.69	241	P	P	15 35 43.3	+0.2
	comp=Z,3.9nm,0.5s,baz=86,slow=8.2,SNR=8.0						
	comp=Z,3.9nm,0.5s						
STKA	Stephens Creek	38.69	241	P	P	15 35 43.2	0.0
STKA				IAmb	IAmb	15 35 43.9	
	comp=Z,25nm,0.9s						
INKA	Innaminka	38.83	248	P	P	15 35 44.7	+0.4
JAY	Jayapura	43.06	286	P	P	15 36 18.9	+0.6
	comp=Z,13nm,0.8s,baz=129,slow=13,SNR=5.2						
	comp=Z,13nm,0.8s						
BBOO	Buckleboo	43.47	241	P	P	15 36 20.8	-0.4
WR8	Warramunga Arr	44.59	260	P	P	15 36 28.6	-1.5
WR8				IAmb	IAmb	15 37 08.4	
	comp=Z,9.5nm,1.3s						
WB0	Warramunga Arr	44.71	260	P	P	15 36 29.5	-1.5
WB0				IAmb	IAmb	15 36 30.5	
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	44.74	260	P	P	15 36 29.6	-1.6
	comp=Z,2.0nm,0.5s,baz=96,slow=6.6,SNR=35						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	44.74	260	P	P	15 36 29.6	-1.6
AS31	Alice Springs	44.89	254		P	15 36 31.7	-0.7
AS31				IAmb	IAmb	15 36 32.4	
	comp=Z,5.6nm,0.7s						
ASAR	Alice Springs	44.89	254	P	P	15 36 31.7	-0.7
	comp=Z,18nm,0.6s,baz=91,slow=7.9,SNR=539						
ASAR				PcP	PcP	15 38 02.9	-0.7
	comp=Z,0.5nm,0.7s,baz=88,slow=5.0,SNR=2.1						
	comp=Z,18nm,0.6s						
ASAR	Alice Springs	44.89	254		P	15 36 31.8	-0.6
MIDW	Midway	45.97	1	P	P	15 36 40.3	-0.1
MTN	Manton Dam	48.93	268	P	P	15 37 02.3	-0.7
FORT	Forrest	50.08	245	P	P	15 37 10.2	-1.1
FORT				IAmb	IAmb	15 37 36.4	
	comp=Z,9.1nm,1.0s						
KNRA	Kununurra	50.61	264	P	P	15 37 14.4	-1.0
SOEI	Soe	56.20	270	P	P	15 37 56.1	+0.7
PSA00	Pilbara Seismi	58.01	255	P	P	15 38 07.0	-0.5
MBWA	Marble Bar	58.17	256	P	P	15 38 07.5	-1.1
MBWA				IAmb	IAmb	15 38 31.2	
	comp=Z,17nm,1.3s						
NWAO	Narrogin (SRO)	59.27	242	P	P	15 38 14.6	-1.3
NWAO				IAmb	IAmb	15 38 36.2	
	comp=Z,19nm,1.1s						

MJAR	Matsushiro Arr	68.07	323	P	P	15 39 11.2	-0.9
	comp=Z,0.5nm,0.5s,baz=154,slow=6.0,SNR=5.0						
	comp=Z,0.5nm,0.5s						
MJAR	Matsushiro Arr	68.07	323	P	P	15 39 10.4	-1.7
KKM	Kota Kinabalu	68.90	284	P	P	15 39 16.6	-1.1
UGM	Wanagama	69.77	268	P	P	15 39 21.7	-1.2
PET	Petropavlovsk	73.51	346	P	P	15 39 44.1	+0.3
PEA0B	Petropavlovsk-	73.82	345	P	P	15 39 45.7	+0.2
PETK	Petropavlovsk-	73.82	345	P	P	15 39 45.8	+0.3
	comp=Z,4.4nm,0.8s,baz=163,slow=4.9,SNR=6.1						
	comp=Z,4.4nm,0.8s						
PETK	Petropavlovsk-	73.82	345	P	P	15 39 45.5	-0.1
O16K	Kokwok River B	79.07	10	P	P	15 40 14.3	0.0
O16K				IAmb	IAmb	15 40 54.2	
	comp=Z,23nm,1.5s						
NVAR	Mina Array Bea	79.41	44	P	P	15 40 17.7	+0.8
	comp=Z,0.9nm,0.7s,baz=243,slow=4.0,SNR=4.9						
	comp=Z,0.9nm,0.7s						
BRLK	Bradley Lake	80.65	14	P	P	15 40 23.0	+0.3
N19K	Bonanza Creek	80.86	12	P	P	15 40 24.3	+0.4
N19K				IAmb	IAmb	15 40 37.0	
	comp=Z,11nm,1.3s						
L18K	Granite Mounta	81.78	10	P	P	15 40 29.7	+1.3
L19K	White Mountain	82.06	11	P	P	15 40 31.1	+1.2
L19K				IAmb	IAmb	15 40 32.1	
	comp=Z,14nm,1.4s						
PMR	Palmer	82.68	14	P	P	15 40 33.0	0.0
L22K	Petersville	83.16	12	P	P	15 40 35.2	-0.2
K20K	Telida	83.29	11	P	P	15 40 36.6	+0.6
N25K	Chitina, Valde	83.77	15	P	P	15 40 39.1	+0.6
N25K				IAmb	IAmb	15 40 43.8	
	comp=Z,12nm,1.4s						
RND	Reindeer	84.35	13	P	P	15 40 41.8	+0.4
RND				IAmb	IAmb	15 40 55.9	
	comp=Z,6.3nm,1.4s						
PV12	Saucer Basin,	85.83	48	P	P	15 40 49.2	-0.1
PV12				IAmb	IAmb	15 41 10.9	
	comp=Z,11nm,1.4s						
TXAR	Lajitas Array	85.94	58	P	P	15 40 51.1	+1.1
	comp=Z,1.1nm,0.8s,baz=241,slow=4.9,SNR=10						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	85.94	58	P	P	15 40 50.4	+0.4
ILAR	Eielson Array	85.97	13	P	P	15 40 48.6	-0.5
	comp=Z,0.4nm,0.4s,baz=211,slow=4.6,SNR=17						
	comp=Z,0.4nm,0.4s						
ILAR	Eielson Array	85.97	13	P	P	15 40 49.0	-0.1
J26L	Joseph Creek	86.48	14	P	P	15 40 52.5	+0.9
E19K	Redstone River	86.63	8	P	P	15 40 52.5	+0.2
M30M	Minto, Yukon	86.70	18	P	P	15 40 53.4	+0.7
M30M				IAmb	IAmb	15 41 31.0	
	comp=Z,8.4nm,1.4s						
PDAR	Pinedale Array	87.34	43	P	P	15 40 56.1	-0.3
	comp=Z,0.5nm,0.6s,baz=248,slow=4.2,SNR=5.5						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	87.34	43	P	P	15 40 56.4	0.0
D19K	Kuna River	87.50	7	P	P	15 40 56.5	+0.2
D19K				IAmb	IAmb	15 41 16.2	
	comp=Z,4.3nm,1.2s						
D20K	Etivluk River	87.90	8	P	P	15 40 58.5	+0.3
D20K				IAmb	IAmb	15 41 09.5	
	comp=Z,5.7nm,1.4s						
D22K	Ayikyak River	88.60	9	P	P	15 41 02.2	+0.8
D22K				IAmb	IAmb	15 41 02.5	
	comp=Z,2.3nm,0.7s						
BMAR	Burnt Mountain	88.74	12	P	P	15 41 02.9	+0.7
CMAR	Chiang Mai Arr	89.05	290	P	P	15 41 04.7	0.0
	comp=Z,0.7nm,0.9s,baz=107,slow=3.7,SNR=5.3						
	comp=Z,0.7nm,0.9s						
G31M	Satah River	90.73	16	P	P	15 41 11.8	+0.5
G31M				IAmb	IAmb	15 41 35.1	
	comp=Z,4.3nm,1.4s						
PLCA	Paso Flores	91.16	134	P	P	15 41 15.1	+0.9
	comp=Z,2.6nm,1.0s,baz=243,slow=2.3,SNR=3.7						
	comp=Z,2.6nm,1.0s						
F31M	Tsiigehtchic	91.26	16	P	P	15 41 14.1	+0.4
F31M				IAmb	IAmb	15 41 39.0	
	comp=Z,5.0nm,1.4s						
YKA	Yellowknife Ar	94.38	25	P	P	15 41 30.1	+2.0
	comp=Z,0.1nm,0.5s,baz=228,slow=5.6,SNR=1.8						
	comp=Z,0.1nm,0.5s						
MKAR	Makanchi Array	109.31	314	PKiKP	PKiKP	15 46 34.3	-1.4
	comp=Z,0.1nm,0.5s,baz=108,slow=3.2,SNR=1.8						
BVAR	Borovoye Array	117.01	321	PKP	PKPdf	15 46 49.6	-0.6
	comp=Z,0.2nm,0.4s,baz=90,slow=2.9,SNR=1.8						
BNN	Bunyan	143.82	312		PKPab	15 47 40.7	+0.6
BRTR	Keskin Array B	144.95	315	PKPbc	PKPdf	15 47 43.2	+0.1
	comp=Z,0.8nm,0.8s,baz=75,slow=1.6,SNR=5.0						
GERES	GERESS Array B	147.75	345	PKPbc	PKPbc	15 47 51.2	+0.2
	comp=Z,0.5nm,0.3s,baz=32,slow=3.8,SNR=2.5						

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*SJA **02** 15:32:00.1±0.6, 24°.41S×68°.10W, h145km±7km, ML3.5, MW3.5*
*GUC **02** 15:32:01.5±0.7, 24°.36S×68°.12W, h126km±7km, ML3.4*
*IDC **02** 15:32:01.6±8.2, 24°.31S×67°.80W, h113km±62km, mb3.2/4, mbtmp3.6/5, MS3.0/1, Error ellipse: s-maj=65.9km s-min=28.6km az=24.0*
ISC 02 15:32:02.1±0.8**, 24°.36S**±0°.04×**68°.09W**±0°.04**, h122**km±8km**, n44, σ1s.12**/64**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.41	356	eP	Pn	15 32 29.5	+0.6
AF01				eS	Sn	15 32 50.2	+1.0
AF01				IAML		15 32 59.1	
	comp=E,746nm,0.3s						
AF01	San Pedro de A	1.41	356	eP	Pn	15 32 29.7	+0.8
AF01				eS	Sn	15 32 46.2	-3.0
AF01				IAML		15 33 17.1	
	comp=Z,444nm,0.4s						
SALTA		1.60	85	eP	Pn	15 32 31.9	+0.6
SALTA				eS	Sn	15 32 51.2	-2.2
PB14	IPOC Station P	2.13	262	⇑iP	Pn	15 32 37.6	+0.1
PB14				IAML		15 33 05.1	
	comp=E,120nm,0.5s						
PB14	IPOC Station P	2.13	262	eP	Pn	15 32 37.1	-0.4
PB14				eS	Sn	15 33 05.1	+0.5
PB14				IAML		15 33 09.5	
	comp=Z,205nm,0.4s						
PB06	IPOC Station P	2.14	320	iP	Pn	15 32 38.3	+0.7
PB06				eS	Sn	15 33 05.5	+0.8
PB06				IAML		15 33 06.6	
	comp=N,299nm,0.3s						
PB06	IPOC Station P	2.14	320	eP	Pn	15 32 37.8	+0.2
PB06				eS	Sn	15 33 06.0	+1.3
PB06				IAML		15 33 06.8	
	comp=Z,184nm,0.2s						
PB05	IPOC Station P	2.46	307	eP	Pn	15 32 41.8	+0.3
PB05				eS	Sn	15 33 11.3	-0.5
PB05				IAML		15 33 17.3	
	comp=E,144nm,0.4s						
PB05	IPOC Station P	2.46	307	eP	Pn	15 32 41.5	0.0
PB05				eS	Sn	15 33 12.1	+0.4
PB05				IAML		15 33 18.0	
	comp=Z,77nm,0.3s						
FSA	Cafayete	2.58	133	eP	Pn	15 32 44.2	+1.0
AC02	Maricunga	2.63	201	⇑iP	Pn	15 32 45.2	+1.0
AC02				IAML		15 33 21.1	
	comp=E,45nm,0.2s						
AC02	Maricunga	2.63	201	eP	Pn	15 32 44.7	+0.6
AZAP	Zapla	2.76	88	eP	Pn	15 32 45.9	+0.4
AZAP				eS	Sn	15 33 02.2	-17
PB03	IPOC Station P	2.77	326	iP	Pn	15 32 45.8	+0.2
PB03				eS	Sn	15 33 18.6	-0.5
PB03	IPOC Station P	2.77	326	eP	Pn	15 32 45.8	+0.2
PB03				eS	Sn	15 33 19.3	+0.3
PB03				IAML		15 33 19.6	
	comp=Z,232nm,0.2s						
PB09	IPOC Station P	2.77	337	iP	Pn	15 32 46.6	+1.0
PB09				eS	Sn	15 33 20.4	+1.3
PB09				IAML		15 33 28.5	
	comp=E,166nm,0.4s						
PB09	IPOC Station P	2.77	337	eP	Pn	15 32 46.3	+0.7
PB09				eS	Sn	15 33 20.2	+1.2
PB09				IAML		15 33 24.8	
	comp=Z,118nm,0.3s						
AC01	Pan de Azucar	2.89	232	eP	Pn	15 32 46.2	-0.8
AC01				IAML		15 33 27.3	
	comp=E,83nm,0.5s						
AC01	Pan de Azucar	2.89	232	eP	Pn	15 32 46.4	-0.6
AC01				eS	Sn	15 33 21.3	-0.2
PB07	IPOC Station P	3.10	327	⇓iP	Pn	15 32 49.8	-0.2
PB07				IAML		15 33 28.1	
	comp=E,243nm,0.1s						
PB07	IPOC Station P	3.10	327	eP	Pn	15 32 50.0	0.0
PB07				eS	Sn	15 33 27.3	+0.3
PB07				IAML		15 33 28.0	
	comp=Z,127nm,0.5s						
YJA	Yavi	3.21	48	eP	Pn	15 32 52.6	+0.9
PB02	IPOC Station P	3.46	331	eP	Pn	15 32 54.3	-0.3
PB02				eS	Sn	15 33 34.7	-0.5
PB02	IPOC Station P	3.46	331	eP	Pn	15 32 54.4	-0.2
PB02				eS	Sn	15 33 34.9	-0.3
PB02				IAML		15 33 42.3	
	comp=Z,302nm,0.3s						
PB01	IPOC Station P	3.55	338	eP	Pn	15 32 55.4	-0.4
PB01	IPOC Station P	3.55	338	eP	Pn	15 32 55.3	-0.5
PB01				eS	Sn	15 33 37.3	0.0
PB01				IAML		15 33 39.1	
	comp=Z,74nm,0.6s						
TINO	Tinogasta	3.71	173	eP	Pn	15 32 58.7	+0.8
GO03	Copiapo	3.75	211	⇑iP	Pn	15 32 57.3	-1.2
GO03	Copiapo	3.75	211	eP	Pn	15 32 57.5	-0.9
GO03				eS	Sn	15 33 43.8	+1.8
GO03				IAML		15 33 46.4	
	comp=Z,44nm,0.4s						
PATCX	Punta Patache	4.01	331	eP	Pn	15 33 00.4	-1.5
PATCX	Punta Patache	4.01	331	eP	Pn	15 33 00.9	-1.0
PATCX				eS	Sn	15 33 48.5	+0.3
PATCX				IAML		15 34 00.1	
	comp=Z,56nm,0.5s						
VCA	Vinchina	4.36	181	eP	Pn	15 33 07.1	+0.5
AC04	Llanos de Chal	4.67	214	eP	Pn	15 33 08.1	-2.5
AC04				IAML		15 34 13.2	
	comp=Z,17nm,0.6s						
AC05	El Transito	4.87	203	eP	Pn	15 33 12.1	-1.3
AC05				eS	Sn	15 34 07.7	-1.1
AC05				IAML		15 34 12.0	
	comp=Z,24nm,0.3s						
LPAZ	La Paz	8.04	360	P	Pn	15 33 57.1	+0.5
	comp=Z,1.4nm,0.4s,baz=214,slow=3.6,SNR=8.5						
LPAZ				S	Sn	15 35 23.0	-3.3
	comp=Z,0.6nm,0.4s,baz=153,slow=2.3,SNR=1.7						
SIV	San Ignacio	10.62	40	LR	LR	15 38 13.7	
	comp=Z,80nm,20.2s,baz=126,slow=36						
BDFB	Brasilia	20.74	69	P	P	15 36 30.2	-3.1
	comp=Z,2.9nm,0.4s,baz=238,slow=4.7,SNR=8.1						
	comp=Z,2.9nm,0.4s						
TXAR	Lajitas Array	63.41	325	P	P	15 42 19.8	+1.0
	comp=Z,0.2nm,0.6s,baz=135,slow=4.5,SNR=1.5						
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	76.96	330	P	P	15 43 42.8	+1.4
	comp=Z,0.1nm,0.4s,baz=144,slow=7.2,SNR=2.1						
	comp=Z,0.1nm,0.4s						
TORD	Torodi Ar. Bea	77.62	69	P	P	15 43 44.8	-0.6
	comp=Z,0.5nm,0.5s,baz=243,slow=8.2,SNR=2.7						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	127.71	206	PKP	PKPdf	15 50 53.0	-0.8
	comp=Z,0.2nm,0.9s,baz=132,slow=1.4,SNR=1.2						
KURBB	Kurchatov Arra	143.25	36	PKP	PKPdf	15 51 22.3	+0.7
	comp=Z,0.5nm,0.4s,baz=306,slow=3.2,SNR=2.0						
ZALV	Zalesovo Beam	144.17	27	PKP	PKPab	15 51 22.1	+1.0
	comp=Z,0.6nm,0.7s,baz=330,slow=5.0,SNR=2.4						
MKAR	Makanchi Array	147.43	39	PKPbc	PKPbc	15 51 32.1	+0.5
	comp=Z,0.1nm,0.5s,baz=299,slow=3.3,SNR=4.8						

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*JMA **02** 15:39:02.8±0.6, 22°N±3°×12°3E±°, h50km, MV2.7/13, FAR S OFF ISHIGAKIJIMA*
*TAP **02** 15:39:04.2, 22°.43N×122°.81E, h57km±1km, ML3.5, D*
ISC 02 15:38:59.2±1.6**, 22°.49N**±0°.03×**122°.84E**±0°.03**, h1**km±11km**, n100, σ1s.34**/171**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	1.26	247	iP	Pn	15 39 24.7	+0.7
LYUB				S	Sb	15 39 40.1	-0.6
LAY	Lan-yu	1.28	249	P	Pn	15 39 24.5	+0.2
LAY				S	Sb	15 39 40.3	-0.8
CHKT	Chengkung	1.49	294	P	Pb	15 39 27.9	+0.2
CHKT				S	Sn	15 39 45.5	-1.7
CHKH	Chenggong	1.50	298	iP	Pn	15 39 28.0	+0.6
CHKH				S	Sn	15 39 45.9	-1.8
ECBN	Changbin	1.52	303	eP	Pn	15 39 28.4	+0.7
ECBN				S	Sn	15 39 46.0	-2.1
FULB	Fuli	1.59	296	P	Pn	15 39 29.4	+0.8
FULB				eS	Sb	15 39 49.2	-0.9
ECS	Chishang	1.61	292	eP	Pb	15 39 30.3	+0.5
ECS				eS	Sg	15 39 50.9	-0.2
HGSD	Ruisui	1.64	308	iP	Pn	15 39 29.9	+0.6
HGSD				S	Sn	15 39 49.0	-2.1
TWGBT	Beinan	1.66	282	P	Pb	15 39 31.1	+0.5
TWGBT				S	Sb	15 39 50.9	-1.1
TWG	Pinlang	1.67	282	P	Pb	15 39 31.2	+0.4
TWG				eS	Sb	15 39 51.3	-1.0
YULB	Yu-li	1.68	302	P	Pb	15 39 31.0	0.0
YULB				S	Sb	15 39 51.9	-0.8
EOS4	EOS4	1.69	344	eS	Sb	15 39 52.6	0.0
EHY	Hungye	1.72	306	eP	Pb	15 39 32.0	+0.2
EHY				eS	Sb	15 39 53.1	-0.9
SHUL	Shoufeng	1.74	318	S	Sb	15 39 53.3	-1.2
ECL	Taimali	1.75	274	P	Pb	15 39 32.0	-0.2
ECL				S	Sn	15 39 53.0	-0.7
EGFH	Guangfu	1.75	312	eS	Sn	15 39 52.9	-0.9
TEYL	Yanliau Villag	1.78	320	eS	Sg	15 39 56.1	-0.5
HATJ	Hateruma jima	1.79	29	eP	Pn	15 39 32.3	+1.0
HATJ				S	Sn	15 39 53.5	-1.2
WARBT	Fenglin Townsh	1.81	313	P	Pn	15 39 32.8	+1.2
WARBT				S	Sb	15 39 54.6	-1.8
ELDTW	Lidau	1.82	293	P	Pb	15 39 33.1	-0.4
ELDTW				S	Sn	15 39 54.8	-0.8
ESL	Shilin	1.84	316	P	Pn	15 39 33.0	+0.9
ESL				S	Sn	15 39 54.7	-1.4
EAST	Anshuo	1.85	267	P	Pb	15 39 34.0	+0.1
EAST				eS	Sb	15 39 56.6	-1.0
EOS3	EOS3	1.85	345	eS	Sb	15 39 57.3	0.0
TSEB	Hengchuen, Pin	1.89	252	P	Pb	15 39 35.2	+0.6
TSEB				eS	Sb	15 39 57.6	-1.2
SLIU	Shizi	1.91	262	P	Pn	15 39 34.7	+1.7
SMST	Manzhou Townsh	1.92	256	iP	Pn	15 39 34.6	+1.6
SMST				S	Sn	15 39 57.1	-0.7
ETM	Tongmen	1.92	320	eP	Pb	15 39 34.8	-0.3
ETM				eS	Sn	15 39 56.9	-1.1
JYNG	Yonagunijimaku	1.95	3	eP	Pb	15 39 36.4	+0.8
JYNG				eS	Sn	15 39 59.3	+0.6
TWD	Chiawan	1.95	324	eP	Pn	15 39 34.8	+1.3
TWD				eS	Sn	15 39 55.2	-3.5
TWKBT	Hengchun	1.96	254	P	Pn	15 39 35.5	+1.9
TWKBT				S	Sn	15 39 59.0	+0.1
YOJ	Yonaguni jima	1.96	5	P	Pb	15 39 36.6	+0.8
YOJ				eS	Sb	15 40 00.6	-0.3
TWK1	Hengchun	1.96	254	eP	Pb	15 39 36.3	+0.4
TWK1				eS	Sn	15 39 59.1	+0.1
EOS2	EOS2	2.00	344	eS	Sb	15 40 01.8	+0.2
IRIF	Iriomote-Funau	2.00	24	P	Pn	15 39 35.6	+1.3
IRIF				eS	Sn	15 39 59.5	-0.5
VWDT	VWDT	2.00	309	P	Pb	15 39 36.5	0.0
VWDT				eS	Sb	15 39 59.8	-2.2
HEN	Hengchun	2.01	256	iP	Pb	15 39 36.8	+0.2
HEN				S	Sn	15 40 00.2	+0.1
LXIB	Xiulin Townshi	2.01	319	iP	Pb	15 39 36.4	-0.3
LXIB				S	Sn	15 39 59.9	-0.5
STYH	Taoyuan	2.02	290	P	Pb	15 39 36.6	-0.2
NACB	Ninganchiao	2.03	326	iP	Pn	15 39 35.9	+1.3
NACB				S	Sn	15 39 59.7	-0.9
JKRS	Kuro-shima	2.04	32	P	Pn	15 39 36.3	+1.5
MASBT	Mashibuluo	2.04	274	iP	Pb	15 39 36.8	-0.4
SSD	Sandimen	2.06	277	eP	Pb	15 39 37.4	-0.1
SSD				eS	Sb	15 40 02.4	-1.2
SCZT	Fangliau	2.06	267	eP	Pb	15 39 37.3	-0.2
SCZT				eS	Sn	15 39 59.1	-2.3
OWD	Renai	2.11	314	eP	Pn	15 39 37.6	+1.7
OWD				eS	Sn	15 40 02.5	-0.4
ETLH	Xiulin Townshi	2.11	324	eP	Pn	15 39 37.3	+1.5
ETLH				eS	Sn	15 40 01.0	-1.9
ALS	Alishan	2.13	299	P	Pb	15 39 39.2	+0.3
SSLB	Suanglung	2.16	307	P	Pb	15 39 38.6	-0.6
SSLB				S	Sn	15 40 03.8	-0.2
SGST	Jiashian	2.17	286	P	Pb	15 39 39.1	-0.2
SGST				S	Sb	15 40 06.2	-0.5
WUSB	Renai	2.18	314	P	Pb	15 39 39.0	-0.6
WUSB				S	Sn	15 40 04.2	-0.3
WTP	Ta-pu	2.19	290	P	Pb	15 39 40.4	+0.7
WTP				eS	Sg	15 40 08.9	-0.7
WHYT	Xinyi Township	2.19	304	P	Pb	15 39 39.6	0.0
WHYT				eS	Sb	15 40 05.8	-1.5
WHF	Hehuan Shan	2.19	319	eP	Pb	15 39 39.3	-0.7
WHF				eS	Sn	15 40 04.9	-0.3
TPUB	Ta-pu	2.19	292	P	Pb	15 39 40.4	+0.7
TPUB				eS	Sb	15 40 07.0	-0.4
JIJ	Ishigaki jima	2.21	32	P	Pn	15 39 37.7	+0.5
JIJ				S	Sn	15 40 03.2	-2.0
CHN1	Nanshi	2.24	288	P	Pb	15 39 41.5	+0.9
CHN1				S	Sb	15 40 09.5	+0.6
TWM1	Shoushan	2.26	279	eP	Pg	15 39 43.0	+0.4
SMLT	Sun Moon Lake	2.26	308	eP	Pb	15 39 42.0	+1.0
WCKO	Fanlu	2.27	295	P	Pb	15 39 40.0	-1.0
WCKO				eS	Sb	15 40 09.2	-0.3
CHN5	Tsauling	2.27	299	eP	Pb	15 39 42.4	+1.2
CHN5				eS	Sg	15 40 11.1	-1.3
FUSS	Fushou	2.28	320	P	Pb	15 39 40.5	-0.9
SNST	Tainan City	2.28	289	P	Pb	15 39 42.0	+0.8
SNST				eS	Sg	15 40 11.0	-1.5
TWK	Hsinying	2.30	290	P	Pb	15 39 42.3	+0.6
TWK				eS	Sb	15 40 10.6	-0.1
TYC	Yuchr	2.30	308	eP	Pb	15 39 42.3	+0.7
NNSB	Datong	2.34	325	P	Pn	15 39 41.2	+2.2
NNSB				eS	Sn	15 40 08.6	0.0
NNS	Nan Shan	2.36	325	P	Pn	15 39 41.5	+2.2
NNS				eS	Sn	15 40 09.5	+0.5
LATG	Datong	2.36	330	P	Pn	15 39 41.2	+1.9
LATG				eS	Sn	15 40 09.4	+0.3
NDS	Dongshan	2.37	334	eP	Pn	15 39 41.4	+2.1
NDS				S	Sn	15 40 09.7	+0.7
WGK	Gukeng	2.41	300	P	Pb	15 39 44.5	+1.0
WNT	Mingjian	2.42	305	eP	Pb	15 39 45.1	+1.6
WDLH	Douliu	2.43	300	P	Pb	15 39 44.7	+0.9
WDLH				eS	Sb	15 40 15.0	+0.7
ENTT	Nioudou	2.44	332	eS	Sb	15 40 12.0	-2.4
TWE	Neicheng	2.46	334	eS	Sn	15 40 11.3	0.0
JISG	Ishigakijimahi	2.48	33	eP	Pn	15 39 41.4	+0.6
JISG				S	Sn	15 40 09.9	-1.9
WHP	Taichung City	2.49	316	eP	Pb	15 39 45.5	+0.7
WHP				eS	Sb	15 40 12.9	-3.1
FUSB	Fushanzhiwuyua	2.53	333	eP	Pb	15 39 44.8	-0.8
FUSB				eS	Sn	15 40 13.3	+0.2
YHNB	Yeheng	2.55	328	P	Pn	15 39 44.4	+2.5
YHNB				S	Sn	15 40 14.3	+0.7
NSK	Sanguang	2.56	328	eP	Pn	15 39 44.6	+2.6
NSK				eS	Sn	15 40 14.3	+0.4
NWLT	Wulai	2.58	332	eS	Sn	15 40 15.1	+0.8
TCU	Taichung	2.58	310	eS	Sb	15 40 19.4	+0.7
WSL	Shuilin Townsh	2.62	294	eP	Pb	15 39 46.1	-0.9
WSL				eS	Sb	15 40 18.3	-1.4
TSCK	Chigu Township	2.62	285	eP	Pb	15 39 46.7	-0.3
TSCK				eS	Sb	15 40 18.7	-1.1
WCHH	Zhanghua	2.63	307	eP	Pb	15 39 47.6	+0.5
WCHH				eS	Sb	15 40 20.8	+0.9
WCH1	Changhua City	2.63	307	eS	Sb	15 40 18.0	-2.0
TIPB	Shuangxi	2.64	340	eP	Pn	15 39 45.3	+2.3
TIPB				eS	Sb	15 40 17.6	-2.6
TWQ1	Liyutan	2.65	315	eP	Pb	15 39 47.8	+0.3
TWQ1				eS	Sb	15 40 20.4	-0.2
NFF	Wufeng Townshi	2.65	324	eP	Pb	15 39 47.4	-0.2
NFF				eS	Sb	15 40 18.3	-2.4
NSTT	Nanjuang	2.72	322	eP	Pb	15 39 48.0	-0.6
NSTT				eS	Sb	15 40 20.4	-2.1
LIOB	Emei	2.72	322	P	Pb	15 39 48.2	-0.5
LIOB				eS	Sb	15 40 20.8	-1.8
TWA	Mucha	2.73	335	eS	Sb	15 40 20.7	-2.2
JTJ	Tarama	2.73	38	S	Sn	15 40 16.7	-1.4
SXI1	Grass Mountain	2.73	341	eP	Pn	15 39 47.0	+2.6
SXI1				eS	Sn	15 40 18.8	+0.6
KSHI	Guanxi Townshi	2.74	326	eS	Sb	15 40 21.3	-1.8
WFSB	Wu-fen Shan	2.74	339	eS	Sn	15 40 20.0	+1.7
YM01	YM01	2.88	336	eS	Sn	15 40 23.8	+2.0
ZUZH	Zhuzihu	2.91	336	eS	Sn	15 40 24.1	+1.7
WDGT	Dungji	3.03	285	eP	Pn	15 39 48.4	0.0
WDGT				eS	Sn	15 40 26.5	+1.2
PHUB	P'eng-hu	3.18	289	eP	Pn	15 39 53.8	+3.4
PHUB				eS	Sn	15 40 29.7	+0.7
PNG	Penghu	3.21	290	eP	Pn	15 39 54.1	+3.3
PNG				eS	Sb	15 40 32.1	-4.6
VWUC	VWUC	3.98	309	eP	Pn	15 40 04.4	+3.0
VWUC				eS	Sn	15 40 49.5	+0.7
AXDP	Jialang	5.07	299	P	Pn	15 40 19.1	+2.7

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*IDC **02** 15:40:22.4±0.9, 18°.12N×66°.78W, h0km, mb3.4/7, mbtmp3.5/8, ML2.6/1, MS2.9/2, Error ellipse: s-maj=26.7km s-min=8.5km az=6.0*
*RSPR **02** 15:40:23.3, 17°.98N×66°.73W, h7km, MD3.1/5*
*NEIC **02** 15:40:23.4±1.2, 18°.01N±0°.06×66°.713W±0°.005, h10km±1km, mb4.0/2, ML3.8/35, ML3.5/5(RSPR), Error ellipse: s-maj=10.9km s-min=2.7km az=1.0*
*SDD **02** 15:40:24.0±2.0, 17°.99N×66°.71W, h12km±26km, MD3.5, ML3.6, MW3.8, Presumed earthquake*
ISC 02 15:40:23.6±0.7**, 18°.01N**±0°.04×**66°.72W**±0°.02**, h12**km±4km**, n77, σ0s.77**/93**, mb3.4**/7**, 11C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBIP	Obispado Ponce	0.11	75		Pg	15 40 26.3	-0.3
OBIP				Sg	Sg	15 40 28.6	-0.2
OBIP				IAML		15 40 29.1	
	comp=N,21μm,0.5s						
OBIP	Obispado Ponce	0.11	75	⇓iP	Pg	15 40 26.3	-0.3
OBIP				eS	Sg	15 40 28.7	-0.1
CELP	Cerrillos	0.15	65		Pg	15 40 27.0	-0.2
CELP				IAML		15 40 30.5	
	comp=N,33μm,0.4s						
CELP				IAML		15 40 32.2	
	comp=N,23μm,0.4s						
GBPR	Guanica, Bosqu	0.16	256		Pg	15 40 26.7	-0.6
GBPR					Sg	15 40 30.3	+0.5
GBPR	Guanica, Bosqu	0.16	256	⇑iP	Pg	15 40 26.7	-0.6
GBPR				eS	Sg	15 40 30.3	+0.5
UUPR	Utuado, UPR, P	0.24	360		Pg	15 40 28.5	-0.2
MLPR	Magueyes Islan	0.31	262		Pg	15 40 29.3	-0.7
CRPR	Cabo Rojo, PR	0.37	269		Pg	15 40 30.4	-0.7
CRPR				IAML		15 40 41.2	
	comp=N,5μm,0.6s						
CRPR	Cabo Rojo, PR	0.37	269		Sg	15 40 36.0	0.0
CRPR	Cabo Rojo, PR	0.37	269	⇑ePg	Pg	15 40 30.5	-0.5
CRPR				⇑eSg	Sg	15 40 36.3	+0.2
CRPR				IAML		15 40 41.1	
	comp=N,5μm,0.5s						
CRPR	Cabo Rojo, PR	0.37	269	⇑iP	Pg	15 40 30.7	-0.4
CRPR				eS	Sg	15 40 36.0	0.0
LSP	Las Mesas	0.39	295		Pg	15 40 31.0	-0.3
LSP	Las Mesas	0.39	295	⇑iP	Pg	15 40 31.0	-0.3
PRSN	Puerto Rico Se	0.45	297		Pg	15 40 31.7	-0.9
PRSN				IAML		15 40 40.9	
	comp=N,10μm,0.3s						
PRSN				IAML		15 40 44.5	
	comp=N,8μm,0.4s						
PRSN	Puerto Rico Se	0.45	297		Sg	15 40 39.0	+0.4
PRSN	Puerto Rico Se	0.45	297	⇑ePg	Pg	15 40 31.9	-0.6
PRSN				⇑eSg	Sg	15 40 39.4	+0.8
PRSN				IAML		15 40 40.8	
	comp=N,6μm,0.3s						
PRSN	Puerto Rico Se	0.45	297	⇓iP	Pg	15 40 32.0	-0.6
PRSN				eS	Sg	15 40 39.0	+0.4
ECPR	Experimental S	0.46	48		Pb	15 40 33.2	-0.5
ECPR				IAML		15 40 40.7	
	comp=N,14μm,0.4s						
ECPR				IAML		15 40 40.9	
	comp=N,16μm,0.3s						
ECPR	Experimental S	0.46	48	⇓iP	Pg	15 40 32.5	-0.1
ECPR				eS	Sb	15 40 39.7	-0.8
EMPR	Esperanza - Ma	0.49	21		Pg	15 40 33.7	+0.3
EMPR					Sb	15 40 41.5	-0.1
EMPR	Esperanza - Ma	0.49	21	⇑iP	Pg	15 40 33.7	+0.3
EMPR				eS	Sb	15 40 41.5	-0.1
SJG	San Juan	0.55	80	Pg	Pg	15 40 33.9	-0.5
	comp=N,317nm,0.3s,baz=258,slow=15,SNR=558						
SJG				Lg	Lg	15 40 42.5	
	comp=N,613nm,0.3s,baz=9.0,slow=19,SNR=17						
SJG	San Juan	0.55	80		Pg	15 40 33.8	-0.5
SJG				IAML		15 40 47.0	
	comp=N,5μm,0.5s						
SJG	San Juan	0.55	80	eP	Pg	15 40 33.9	-0.5
SJG	San Juan	0.55	80	⇓ePg	Pg	15 40 33.9	-0.5
SJG				⇑eSg	Sg	15 40 42.3	+0.6
SJG	San Juan	0.55	80	⇓iP	Pg	15 40 34.0	-0.5
SJG				eS	Sb	15 40 42.6	-0.5

AGPR	Aguadilla, PR	0.59	321		Pg	15 40 34.6	-0.5
AGPR				IAML		15 40 46.9	
	comp=N,4µm,0.9s						
AGPR				IAML		15 40 48.9	
	comp=N,5µm,0.9s						
AGPR	Aguadilla, PR	0.59	321	⇑ePg	Pg	15 40 34.6	-0.5
AGPR				eSg	Sb	15 40 43.4	-0.8
AGPR				IAML		15 40 49.9	
	comp=N,4µm,0.5s						
AGPR	Aguadilla, PR	0.59	321	⇑iP	Pg	15 40 34.8	-0.3
AGPR				eS	Sb	15 40 44.0	-0.2
PDPR	Patillas Dam,	0.66	89		Pg	15 40 35.9	-0.7
GCPR	Guaynabo City	0.67	64		Pg	15 40 36.0	-0.7
GCPR				IAML		15 40 51.5	
	comp=E,2µm,0.7s						
GCPR	Guaynabo City	0.67	64		Sg	15 40 45.7	+0.2
GCPR	Guaynabo City	0.67	64	⇑iP	Pg	15 40 36.2	-0.5
GCPR				eS	Sg	15 40 45.7	+0.2
IDE	Isla Desecheo	0.81	297		Pg	15 40 38.2	-1.1
IDE					Sg	15 40 50.1	+0.2
IDE	Isla Desecheo	0.81	297	⇑iP	Pg	15 40 38.2	-1.1
IDE				eS	Sg	15 40 50.1	+0.2
HUMP	Col San Antoni	0.84	81		Pg	15 40 38.5	-1.3
HUMP				IAML		15 40 59.2	
	comp=E,2µm,0.8s						
HUMP	Col San Antoni	0.84	81		Sg	15 40 50.7	-0.1
HUMP	Col San Antoni	0.84	81	⇓iP	Pg	15 40 38.5	-1.3
HUMP				eS	Sg	15 40 50.7	-0.1
CUPR	Culebra, Puert	1.40	78		Pn	15 40 47.9	-1.1
PCDR	Punta Cana, DR	1.66	288	⇑ePg	Pb	15 40 53.7	-0.5
PCDR				IAML		15 41 32.0	
	comp=N,552nm,0.7s						
HIDR	Higuey Centro	1.98	287	ePg	Pb	15 40 59.7	0.0
HIDR				⇑eSg	Sg	15 41 28.4	+0.9
HIDR				IAML		15 41 36.1	
	comp=N,294nm,0.2s						
MIDR	Miches	2.41	294	⇑ePg	Pb	15 41 06.3	-0.7
MIDR				IAML		15 41 54.7	
	comp=N,133nm,0.6s						
DR12	Loma Pena Alta	2.64	287		Pn	15 41 06.9	+0.7
SMDR	Samana, DR	2.66	299	⇑ePg	Pb	15 41 12.0	+0.7
SMDR				IAML		15 41 59.5	
	comp=N,181nm,1.2s						
NADR	Nagua	3.26	295	⇑eSg	Sg	15 42 06.5	-2.0
NADR				IAML		15 42 17.6	
	comp=N,573nm,0.9s						
SABA	Saba	3.33	96		Pn	15 41 15.8	+0.1
SMRT	St. Maarten	3.47	89		Pn	15 41 17.4	-0.1
SKI	Saint Kitts	3.85	99	eP	Pn	15 41 25.5	+2.6
SC01	Santiago de lo	4.05	291	Pn	Pn	15 41 25.1	-0.5
SDDR	Presa de Saban	4.44	283	Pn	Pn	15 41 30.5	-0.4
MBFL	Flemmings, Mon	4.48	106	eP	Pn	15 41 32.3	+0.8
MBWH	Windy Hill	4.50	106	eP	Pn	15 41 31.5	-0.3
MLYT	Lee's Yard	4.51	106	eP	Pn	15 41 32.8	+0.9
ANWB	Willy Bob	4.71	93	eP	Pn	15 41 36.5	+1.9
DHSZ	Broadband at M	5.04	109	eP	Pn	15 41 40.2	+1.1
ATGZ	Broadband at L	5.14	111	eP	Pn	15 41 41.9	+1.4
MMLZ	Guadeloupe Bro	5.21	111	eP	Pn	15 41 42.9	+1.4
ABD	La Joyeuse, An	5.23	106	Pn	Pn	15 41 42.2	+0.5
CBE	Ff, Capester	5.26	111	Pn	Pn	15 41 42.7	+0.5
TBG	Guadaloupe-3	5.31	113	eP	Pn	15 41 43.3	+0.4
DSDZ	La Diserade, G	5.66	107	eP	Pn	15 41 47.9	+0.2
DSLB	Salisbury	5.69	116	eP	Pn	15 41 48.0	-0.1
DWS	Wesley	5.72	114	eP	Pn	15 41 55.4	+6.8
DLPL	La Plaine	5.88	116	eP	Pn	15 41 51.9	+1.2
BIM	Bigot	6.44	122	eP	Pn	15 41 58.5	0.0
SLBI	Saint Lucia, B	6.80	125	eP	Pn	15 42 01.7	-1.6
SDV	Santo Domingo	9.84	203	Pn	Pn	15 42 46.2	+1.0
	comp=N,0.6nm,0.3s,baz=18,slow=13,SNR=5.5						
SDV				LR	LR	15 46 06.8	
	comp=N,34nm,21.0s,baz=33,slow=35						
	comp=N,2.5nm,0.4s						
TXAR	Lajitas Array	35.53	295	P	P	15 47 21.0	+0.2
	comp=N,0.3nm,0.6s,baz=94,slow=8.6,SNR=5.6						
	comp=N,0.3nm,0.6s						
PDAR	Pinedale Array	43.80	314	P	P	15 48 29.8	+0.1
	comp=N,0.1nm,0.5s,baz=101,slow=5.4,SNR=1.5						
	comp=N,0.1nm,0.5s						
YKA	Yellowknife Ar	55.35	335	P	P	15 49 56.0	-1.3
	comp=N,0.2nm,0.8s,baz=118,slow=6.1,SNR=4.3						
	comp=N,0.2nm,0.8s						
ESDC	Sonseca Array	57.88	54	P	P	15 50 15.3	-0.5
	comp=N,1.1nm,0.9s,baz=271,slow=7.1,SNR=4.7						
	comp=N,1.1nm,0.9s						
ESDC	Sonseca Array	57.88	54	IAmb	IAmb	15 50 18.4	
	comp=Z,4.1nm,1.4s						
PLCA	Paso Flores	58.55	183	P	P	15 50 21.6	+1.4
	comp=Z,1.3nm,0.8s,baz=336,slow=10.0,SNR=3.1						
	comp=Z,1.3nm,0.8s						
TORD	Torodi Ar. Bea	65.76	83	P	P	15 51 08.8	-0.4
	comp=Z,0.5nm,0.9s,baz=290,slow=8.1,SNR=2.2						
	comp=Z,0.5nm,0.9s						
TORD	Torodi Ar. Bea	65.76	83	IAmb	IAmb	15 51 12.5	
	comp=Z,0.8nm,1.2s						
KEST	Kesra	68.58	58	LR	LR	16 16 46.7	
	comp=Z,22nm,21.3s,baz=283,slow=32						
ILAR	Eielson Array	69.67	333	P	P	15 51 34.0	+1.0
	comp=Z,0.1nm,0.6s,baz=88,slow=6.8,SNR=4.3						
	comp=Z,0.1nm,0.6s						

*IDC **02** 15:41:44.8±2.0, 17°.81N×66°.87W, h0km, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=55.8km s-min=11.0km az=167.0*
*NEIC **02** 15:41:45.3±0.3, 17°.96N±0°.03×66°.925W±0°.008, h10km±1km, ML3.6/33, Error ellipse: s-maj=4.3km s-min=2.5km az=178.0*
*SDD **02** 15:41:46.8±2.6, 17°.97N×66°.92W, h12km±21km, MD3.8, ML3.4, MW3.6, Presumed earthquake*
ISC 02 15:41:46.1±0.8**, 17°.96N**±0°.06×**66°.90W**±0°.02**, h10km, n29, σ1.08**/38**, mb3.3**/4**, 12C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	Magueyes Islan	0.14	276	Pg	Pg	15 41 48.1	-1.2
CRPR	Cabo Rojo, PR	0.21	284	Pg	Pg	15 41 49.4	-1.1
CRPR				IAML		15 41 52.7	
	24µm,0.2s						
CRPR	Cabo Rojo, PR	0.21	284	⇑ePg	Pg	15 41 49.4	-1.1
CRPR				⇑eSg	Sg	15 41 52.4	-1.0
CRPR				IAML		15 41 52.6	
	comp=N,15µm,0.2s						
OBIP	Obispado Ponce	0.29	73	Pg	Pg	15 41 51.5	-0.5
CELP	Cerrillos	0.33	69	Pg	Pg	15 41 52.2	-0.4
UUPR	Utuado, UPR, P	0.34	30	Pg	Pg	15 41 52.3	-0.7
UUPR					Sg	15 41 57.4	-0.1
PRSN	Puerto Rico Se	0.35	318		Pg	15 41 52.0	-1.1
PRSN					Sg	15 41 57.3	-0.5
PRSN				IAML		15 42 00.4	
	comp=N,11µm,0.3s						
PRSN	Puerto Rico Se	0.35	318	⇑ePg	Pg	15 41 52.1	-1.0
PRSN				⇑eSg	Sg	15 41 57.3	-0.5
PRSN				IAML		15 42 00.4	
	comp=N,10µm,0.3s						
AGPR	Aguadilla, PR	0.55	338		Pg	15 41 55.8	-1.1
AGPR				IAML		15 42 03.6	
	comp=N,4µm,0.4s						
AGPR				IAML		15 42 03.9	
	comp=N,4µm,0.4s						
AGPR	Aguadilla, PR	0.55	338	⇑ePg	Pg	15 41 55.6	-1.3
AGPR				eSg	Sg	15 42 03.4	-0.6
AGPR				IAML		15 42 03.8	
	comp=N,3µm,0.3s						
ECPR	Experimental S	0.62	55		Sb	15 42 07.1	-0.9
SJG	San Juan	0.73	78	Pg	Pg	15 41 58.9	-1.3
	comp=N,65nm,0.3s,baz=262,slow=15,SNR=1.2						
SJG				Lg	Lg	15 42 09.4	
	comp=N,772nm,0.3s,baz=0.0,slow=19,SNR=13						
SJG	San Juan	0.73	78		Pg	15 41 59.2	-1.1
SJG				IAML		15 42 10.9	
	comp=N,2µm,0.3s						
SJG				IAML		15 42 11.3	
	comp=N,3µm,0.6s						
SJG	San Juan	0.73	78	⇓ePg	Pg	15 41 59.2	-1.1
SJG				⇑eSg	Sb	15 42 10.2	-0.8
PDPR	Patillas Dam,	0.84	86	Pg	Pg	15 42 01.1	-1.2
GCPR	Guaynabo City	0.85	65	Pg	Pg	15 42 01.5	-1.1
GCPR					Sg	15 42 12.7	-1.0
HUMP	Col San Antoni	1.01	79	Pg	Pg	15 42 03.7	-1.9
HUMP					Sb	15 42 18.4	-0.8
HUMP				IAML		15 42 21.9	
	comp=N,1µm,0.3s						
PCDR	Punta Cana, DR	1.52	292	⇑ePg	Pb	15 42 13.0	-1.3
PCDR				IAML		15 42 36.1	
	comp=N,262nm,1.1s						
CUPR	Culebra, Puert	1.57	77	Pn	Pb	15 42 14.1	-1.3
HIDR	Higuey Centro	1.84	290	⇑eSg	Sb	15 42 42.1	-0.9
HIDR				IAML		15 42 44.1	
	comp=N,173nm,0.2s						
MIDR	Miches	2.28	297	⇑ePg	Pn	15 42 23.8	-0.1
MIDR				IAML		15 43 08.1	
	comp=N,87nm,0.6s						
DR12	Loma Pena Alta	2.50	290	Pn	Pn	15 42 27.3	+0.4
HATOM	Hato Mayor del	2.50	290	⇑ePg	Pb	15 42 30.9	-0.3
HATOM				IAML		15 43 08.5	
	comp=N,88nm,0.8s						
DR08	Loma La Naviza	3.13	289	⇑ePg	Pb	15 42 41.2	-0.7
DR08				⇑eSg	Sb	15 43 19.7	-0.5
DR08				IAML		15 43 24.4	
	comp=N,597nm,0.2s						
TXAR	Lajitas Array	35.40	296	P	P	15 48 42.3	-0.2
	comp=N,0.2nm,0.5s,baz=100,slow=8.7,SNR=4.6						
	comp=N,0.2nm,0.5s						
YKA	Yellowknife Ar	55.33	335	P	P	15 51 21.4	+1.5
	comp=N,0.2nm,0.7s,baz=111,slow=6.7,SNR=2.1						
	comp=N,0.2nm,0.7s						
ESDC	Sonseca Array	58.05	54	P	P	15 51 42.2	+2.5
	comp=N,0.6nm,0.9s,baz=271,slow=6.0,SNR=2.6						
	comp=N,0.6nm,0.9s						
TORD	Torodi Ar. Bea	65.94	83	P	P	15 52 32.6	-0.4
	comp=N,0.6nm,0.9s,baz=286,slow=7.3,SNR=2.6						
	comp=N,0.6nm,0.9s						
ILAR	Eielson Array	69.65	333	P	P	15 52 57.0	+1.4
	comp=N,0.2nm,0.8s,baz=87,slow=6.4,SNR=2.2						
	comp=N,0.2nm,0.8s						

*AFAD **02** 15:45:13.6, 37°.23N×45°.05E, h6km±4km, ML2.8*
*TEH **02** 15:45:14.6, 37°.26N×44°.89E, h10km±167km, ML2.9, Presumed earthquake*
ISC 02 15:45:13.9±1.9**, 37°.2N**±0°.1×**44°.98E**±0°.04**, h8km**±12km**, n11, σ1.14**/18**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOVA	Hakkari_Yksek	0.70	308	P	Pb	15 45 27.9	-0.5
YOVA				S	Sb	15 45 37.5	-0.8
YOVA				IAML		15 45 39.0	
	comp=N,302nm,0.8s						
YOVA				IAML		15 45 40.0	
	comp=E,402nm,0.4s						
IAZR	Azarshahr	0.95	56	Pg	Pn	15 45 34.1	+0.4
HAKT	HAKKARI	1.09	292	P	Pg	15 45 34.0	-0.9
HAKT				S	Sn	15 45 51.0	-0.1
CUKT	Cukurca	1.10	275	P	Pg	15 45 35.0	-0.1
CUKT				S	Sn	15 45 52.8	+1.7
CUKT				IAML		15 46 00.0	
	comp=N,202nm,0.7s						
ISHB	Shabestar	1.23	24	Pg	Pn	15 45 37.1	-0.5
ISHB				Sg	Sn	15 45 54.6	0.0
ITBZ	Tabriz	1.42	40	Pg	Pg	15 45 40.7	-0.4
IMRD	Marand	1.66	20	Pg	Pg	15 45 45.4	-0.3
GEVA	Gevas	1.91	308	P	Pg	15 45 51.2	+0.6
GEVA				S	Sg	15 46 18.1	+2.7
IHRS	Heris	2.00	54	Pn	Pg	15 45 52.4	+0.1
PERV	Siirt/Pervari-	2.10	293	P	Pg	15 45 53.3	-0.7
PERV				S	Sg	15 46 19.6	-1.6
PERV				IAML		15 46 26.0	
	comp=N,80nm,0.5s						
SRTM	Siirt_Merkez	2.57	290	P	Pb	15 45 60.0	-0.3
SRTM				S	Sg	15 46 37.9	+1.4

*IDC **02** 15:47:58.9±1.0, 24°.63N×121°.45E, h0km, mb3.3/7, mbtmp3.4/8, ML3.8/1, Error ellipse: s-maj=41.1km s-min=19.2km az=60.0*
*JMA **02** 15:48:09.9±0.2, 24°.8N±0°.9×121°.9E±0°.6, h94km±2km, MV3.5/15, TAIWAN REGION*
*TAP **02** 15:48:10.4, 24°.83N×121°.90E, h90km, ML4.4, B*
*NEIC **02** 15:48:10.0±1.4, 24°.81N±0°.06×121°.94E±0°.05, h96km±4km, mb4.0/9, Error ellipse: s-maj=8.4km s-min=6.8km az=171.0*
ISC 02 15:48:09.8±0.6**, 24°.87N**±0°.03×**121°.90E**±0°.02**, h97km**±4km**, n179, σ0.78**/286**, mb3.4**/12**, 39C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.04	128	iP	Pn	15 48 23.5	+0.2
NTC	Toucheng	0.07	257	eP	Pn	15 48 24.1	+0.8
TIPB	Shuangxi	0.12	327	⇑iP	Pn	15 48 23.5	+0.1
TIPB				eS	Sn	15 48 32.6	-1.0
TWB1	Santiao Chiao	0.16	30	⇓iP	Pn	15 48 23.5	+0.1
TWB1				iS	Sn	15 48 32.7	-0.9
ILA	Ilan	0.17	233	iP	Pn	15 48 22.5	-1.0
ILA				eS	Sn	15 48 32.8	-0.8
SXI1	Grass Mountain	0.23	355	⇑iP	Pn	15 48 23.6	-0.2
SXI1				eS	Sn	15 48 33.3	-0.9
NWF	Wu-fen Shan	0.23	332	⇑iP	Pn	15 48 23.9	+0.1
NWF				eS	Sn	15 48 33.6	-0.6
WFSB	Wu-fen Shan	0.23	332	⇑iP	Pn	15 48 23.9	+0.2
WFSB				eS	Sn	15 48 33.6	-0.4
TWE	Neicheng	0.26	235	⇑iP	Pn	15 48 24.1	+0.3
TWE				eS	Sn	15 48 34.0	-0.2
TWC	Suao	0.26	190	⇓iP	Pn	15 48 24.0	+0.1
TWC				iS	Sn	15 48 33.6	-0.7
NDS	Dongshan	0.29	215	⇑iP	Pn	15 48 23.7	-0.3
NDS				eS	Sn	15 48 34.6	+0.1
TNOU	National Taiwa	0.30	338	⇑iP	Pn	15 48 24.1	+0.1
TNOU				S	Sn	15 48 33.8	-0.8
FUSB	Fushanzhiwuyua	0.30	249	⇑iP	Pn	15 48 24.5	+0.4
FUSB				iS	Sn	15 48 34.5	-0.2
TWA	Mucha	0.31	291	⇑P	Pn	15 48 24.2	+0.2
TWA				eS	Sn	15 48 34.3	-0.4
NHY	Taipei	0.34	300	eP	Pn	15 48 24.4	+0.2
NHY				eS	Sn	15 48 35.2	+0.2
NHDH	Xindian Distri	0.35	286	eP	Pn	15 48 24.6	+0.4
NHDH				eS	Sn	15 48 35.2	+0.2
NWLT	Wulai	0.37	256	⇑iP	Pn	15 48 24.6	+0.2
NWLT				eS	Sn	15 48 34.8	-0.5
ENTT	Nioudou	0.38	233	⇑iP	Pn	15 48 25.1	+0.6
ENTT				eS	Sn	15 48 35.7	+0.3
TATO	Taipei	0.39	286		Pn	15 48 24.7	+0.3
TATO				Sn	Sn	15 48 35.6	+0.2
TAP	Taipei	0.40	296	eP	Pn	15 48 24.7	+0.2
TAP				S	Sn	15 48 35.5	0.0
YM01	YM01	0.41	313	⇑P	Pn	15 48 24.8	+0.2
YM01				eS	Sn	15 48 35.5	-0.2
YM08	YM08	0.42	319	eP	Pn	15 48 24.7	0.0
YM08				eS	Sn	15 48 35.0	-0.9
ZUZH	Zhuzihu	0.43	312	eP	Pn	15 48 24.9	+0.1
ZUZH				eS	Sn	15 48 36.2	+0.1
EWUT	Wuta	0.44	195	⇑iP	Pn	15 48 25.2	+0.5
EWUT				eS	Sn	15 48 36.1	+0.2
LATG	Datong	0.47	226	⇑iP	Pn	15 48 25.9	+0.7
LATG				eS	Sn	15 48 37.0	+0.4
TWY	Chenhua	0.49	326	⇑iP	Pn	15 48 25.5	+0.4
TWY				eS	Sn	15 48 36.5	-0.1
TWS1	Kuangyinshan	0.49	298	eP	Pn	15 48 25.8	+0.6
TWS1				eS	Sn	15 48 37.5	+0.8
NTST	Danshui	0.50	306	eP	Pn	15 48 25.6	+0.3
NTST				eS	Sn	15 48 37.1	+0.4
YHNB	Yeheng	0.52	247		Pn	15 48 25.3	-0.1
YHNB				Sn	Sn	15 48 37.1	0.0
YHNB	Yeheng	0.52	247	⇑iP	Pn	15 48 25.6	+0.2
YHNB				eS	Sn	15 48 36.0	-1.1
NSK	Sanguang	0.53	249	⇑iP	Pn	15 48 25.7	+0.2
NSK				eS	Sn	15 48 36.5	-0.8
EOS2	EOS2	0.54	146	iP	Pn	15 48 26.0	+0.7
EOS2				eS	Sn	15 48 37.8	+0.8
EAHA	Aohua	0.56	195	eP	Pn	15 48 25.8	+0.1
EAHA				eS	Sn	15 48 37.8	+0.3
NNS	Nan Shan	0.64	228	⇑iP	Pn	15 48 27.0	+0.5
NNS				eS	Sn	15 48 39.2	+0.2
NNSB	Datong	0.64	227	⇑iP	Pn	15 48 27.0	+0.5
NNSB				eS	Sn	15 48 38.4	-0.6
NCU	National Centr	0.65	279	⇓iP	Pn	15 48 25.3	-1.2
NCU				iS	Sn	15 48 37.9	-1.0
NCUH	Zhongli	0.66	279	P	Pn	15 48 27.2	+0.7
NCUH				S	Sn	15 48 39.9	+0.9
KSHI	Guanxi Townshi	0.66	262	eP	Pn	15 48 27.2	+0.7
KSHI				eS	Sn	15 48 39.6	+0.4
EOS3	EOS3	0.69	147	eP	Pn	15 48 27.5	+0.8
EOS3				eS	Sn	15 48 39.8	+0.5
NACB	Ninganchiao	0.74	202		Pn	15 48 26.7	-0.6
NACB	Ninganchiao	0.74	202	eP	Pn	15 48 26.7	-0.6
NFF	Wufeng Townshi	0.75	252	⇓P	Pn	15 48 27.7	+0.2
NFF				eS	Sn	15 48 40.1	-0.6
ETL	Fush Village	0.75	200	eP	Pn	15 48 26.9	-0.6
ETLH	Xiulin Townshi	0.76	210	eP	Pn	15 48 27.5	-0.1
ETLH				eS	Sn	15 48 40.2	-0.7
PCYT	Pengchaiyu	0.77	12	⇑iP	Pn	15 48 28.1	+0.5
LIOB	Emei	0.83	255	⇓iP	Pn	15 48 28.7	+0.5
LIOB				eS	Sn	15 48 41.9	-0.2
TWD	Chiawan	0.83	199	eP	Pn	15 48 27.6	-0.6
SBCB	Hsinchu	0.83	265	⇓P	Pn	15 48 28.8	+0.6
SBCB				eS	Sn	15 48 41.7	-0.3
EOS4	EOS4	0.84	153	eP	Pn	15 48 27.9	+0.1
EOS4				eS	Sn	15 48 40.3	-1.1
HSN	Hsinchu	0.85	266	eP	Pn	15 48 28.5	+0.2
HSN				eS	Sn	15 48 42.0	-0.2
NSTT	Nanjuang	0.85	254	⇓iP	Pn	15 48 28.7	+0.4
NSTT				eS	Sn	15 48 42.1	-0.2
FUSS	Fushou	0.86	224	⇑iP	Pn	15 48 29.5	+0.8
FUSS				eS	Sn	15 48 43.2	+0.2
TWT	Tachien	0.90	227	⇑P	Pn	15 48 30.2	+1.1
TWT				eS	Sn	15 48 44.3	+0.7
TDCB	Techi	0.91	228	⇑iP	Pn	15 48 30.1	+1.0
TDCB				eS	Sn	15 48 43.8	+0.1
WHF	Hehuan Shan	0.92	219	eP	Pn	15 48 30.0	+0.3
WHF				eS	Sn	15 48 43.9	-0.6
HWA	Hwalien	0.93	197	eP	Pn	15 48 29.0	-0.2
HWA				eS	Sn	15 48 43.9	+0.2
LXIB	Xiulin Townshi	0.95	208	⇑P	Pn	15 48 29.0	-0.7
LXIB				eS	Sn	15 48 44.4	-0.1
ETM	Tongmen	0.97	202	eP	Pn	15 48 28.8	-0.9
TEYL	Yanliau Villag	1.03	195	eP	Pn	15 48 30.1	-0.2
JYNG	Yonagunijimaku	1.04	113	iP	Pn	15 48 30.4	0.0
JYNG				eS	Sn	15 48 45.0	-0.9
WHP	Taichung City	1.05	236	⇑iP	Pn	15 48 31.5	+0.9
WHP				eS	Sn	15 48 46.3	0.0
NMLH	Miaoli	1.06	252	eP	Pn	15 48 31.4	+0.7
NMLH				eS	Sn	15 48 45.9	-0.4
YOJ	Yonaguni jima	1.09	112		Pn	15 48 30.7	-0.3
YOJ	Yonaguni jima	1.09	112	P	Pn	15 48 31.0	0.0
YOJ				S	Sn	15 48 45.6	-1.3
YOJ	Yonaguni jima	1.09	112	⇓iP	Pn	15 48 30.9	0.0
YOJ				eS	Sn	15 48 45.4	-1.5
SHUL	Shoufeng	1.12	196	eP	Pn	15 48 31.4	0.0
SHUL				eS	Sn	15 48 47.3	-0.2
OWD	Renai	1.12	216	⇑P	Pn	15 48 31.9	+0.3
OWD				eS	Sn	15 48 47.5	-0.4
WUSB	Renai	1.13	219	⇑iP	Pn	15 48 32.3	+0.7
ESL	Shilin	1.13	202	eP	Pn	15 48 30.4	-1.1
TWQ1	Liyutan	1.15	243	⇑iP	Pn	15 48 32.2	+0.6
TWQ1				eS	Sn	15 48 48.1	-0.1
TEGC	Jichi Village	1.20	196	eP	Pn	15 48 32.1	-0.1
TEGC				eS	Sn	15 48 50.3	+1.1
WARBT	Fenglin Townsh	1.24	202	⇑P	Pn	15 48 31.3	-1.4
WARBT				eS	Sn	15 48 48.1	-1.9
EGFH	Guangfu	1.27	200	eP	Pn	15 48 31.8	-1.3
VWDT	VWDT	1.31	212	⇑P	Pn	15 48 34.1	+0.5
TCU	Taichung	1.33	237	eP	Pn	15 48 34.5	+0.8
TCU				eS	Sn	15 48 51.5	-0.3
SMLT	Sun Moon Lake	1.34	223	⇑P	Pn	15 48 34.7	+0.7
SMLT				eS	Sn	15 48 52.4	+0.1
TYC	Yuchr	1.35	225	⇑iP	Pn	15 48 34.7	+0.6
TYC				eS	Sn	15 48 52.8	+0.4
SSLB	Suanglung	1.38	219		Pn	15 48 34.9	+0.4
SSLB	Suanglung	1.38	219	⇑P	Pn	15 48 35.1	+0.7
SSLB				eS	Sn	15 48 53.3	+0.2
HGSD	Ruisui	1.44	198	eP	Pn	15 48 34.6	-0.5
HGSD				eS	Sn	15 48 53.7	-0.6
EHY	Hungye	1.46	201	eP	Pn	15 48 33.9	-1.5
WCH1	Changhua City	1.47	237	eP	Pn	15 48 36.0	+0.6
WCH1				eS	Sn	15 48 55.2	+0.3
WNT	Mingjian	1.48	229	⇑P	Pn	15 48 36.4	+0.8
WNT				eS	Sn	15 48 55.6	+0.4
WHYT	Xinyi Township	1.51	219	eP	Pn	15 48 36.8	+0.8
WHYT				eS	Sn	15 48 57.0	+1.2
YULB	Yu-li	1.57	201		Pn	15 48 35.2	-1.6
YULB	Yu-li	1.57	201	eP	Pn	15 48 35.3	-1.4
ECBN	Changbin	1.60	195	⇑P	Pn	15 48 36.9	-0.2
ECBN				eS	Sn	15 48 56.8	-1.1
ALS	Alishan	1.68	217	eP	Pn	15 48 39.2	+0.7
ALS				eS	Sn	15 49 01.8	+1.6
CHN5	Tsauling	1.69	222	eP	Pn	15 48 38.8	+0.5
CHN5				eS	Sn	15 48 59.9	-0.1
WRL	Guolierlin Hig	1.69	236	eP	Pn	15 48 38.5	+0.2
WRL				eS	Sn	15 48 59.4	-0.5
WDL	Douliou City	1.69	227	eP	Pn	15 48 39.0	+0.7
WDL				eS	Sn	15 49 01.2	+1.3
WGK	Gukeng	1.70	226	eP	Pn	15 48 39.2	+0.9
WGK				eS	Sn	15 49 00.8	+0.8
WDLH	Douliu	1.71	227	eP	Pn	15 48 39.2	+0.7
WDLH				eS	Sn	15 49 00.4	+0.1
CHKH	Chenggong	1.73	196	eP	Pn	15 48 38.2	-0.6
CHKH				eS	Sn	15 48 59.6	-1.2
IRIF	Iriomote-Funau	1.75	107	iP	Pn	15 48 38.8	-0.2
IRIF				S	Sn	15 49 00.8	-0.4
FULB	Fuli	1.75	199	eP	Pn	15 48 40.0	+0.8
FULB				eS	Sn	15 49 01.8	+0.4
WTCT	Ta-ch'eng	1.78	236	eS	Sn	15 49 01.5	-0.5
CHKT	Chengkung	1.83	196	eP	Pn	15 48 39.4	-0.7
CHKT				eS	Sn	15 49 01.0	-2.0
ELDTW	Lidau	1.86	206	eP	Pn	15 48 40.7	+0.2
CHN2	Minshiung	1.86	225	eP	Pn	15 48 41.1	+0.7
CHN2				eS	Sn	15 49 04.8	+1.0
ECS	Chishang	1.87	200	eP	Pn	15 48 41.5	+0.9
HATJ	Hateruma jima	1.92	115	eP	Pn	15 48 41.4	+0.3
HATJ				eS	Sn	15 49 05.3	+0.3
CHY	Chiayi	1.92	225	eP	Pn	15 48 41.9	+0.8
CHY				eS	Sn	15 49 05.0	0.0
TPUB	Ta-pu	1.94	217	⇑iP	Pn	15 48 42.2	+0.6
TPUB				eS	Sn	15 49 05.9	+0.1
WSF	Szhu	1.96	232	eP	Pn	15 48 42.3	+0.5
WSF				eS	Sn	15 49 06.3	+0.2
STYH	Taoyuan	1.98	212	eP	Pn	15 48 43.0	+1.0
STYH				eS	Sn	15 49 07.3	+0.8
WTP	Ta-pu	2.00	216	⇑iP	Pn	15 48 42.9	+0.6
JKRS	Kuro-shima	2.02	108	P	Pn	15 48 42.8	+0.3
WSL	Shuilin Townsh	2.03	229	eP	Pn	15 48 43.2	+0.5
WSL				eS	Sn	15 49 07.8	+0.1
TWK	Hsinying	2.05	219	eP	Pn	15 48 43.5	+0.6
SNST	Tainan City	2.08	218	eP	Pn	15 48 43.8	+0.5
SNST				eS	Sn	15 49 09.0	+0.1
CHN1	Nanshi	2.09	217	eP	Pn	15 48 44.1	+0.6
CHN1				eS	Sn	15 49 09.2	0.0
JIJ	Ishigaki jima	2.10	103	P	Pn	15 48 43.3	-0.3
SGST	Jiashian	2.15	214	eP	Pn	15 48 44.2	0.0
SGST				eS	Sn	15 49 09.7	-0.8
CHN8	Yiju	2.16	226	eP	Pn	15 48 44.6	+0.2
CHN8				eS	Sn	15 49 11.1	+0.3
TWG	Pinlang	2.17	201	eP	Pn	15 48 43.3	-1.3
TWG				eS	Sn	15 49 10.2	-0.9
TWGBT	Beinan	2.17	200	eP	Pn	15 48 43.5	-1.1
MATB	Ma-tsu	2.18	306	⇓P	Pn	15 48 44.8	+0.3
MATB				eS	Sn	15 49 10.1	-1.0
JISG	Ishigakijimahi	2.21	97	eP	Pn	15 48 45.0	0.0
TTN	Taitung	2.21	198	eP	Pn	15 48 44.3	-0.8
TTN				eS	Sn	15 49 12.6	+0.6
VWUC	VWUC	2.23	274	⇓P	Pn	15 48 45.3	+0.1
VWUC				eS	Sn	15 49 10.8	-1.5
SSHA	Shanhua	2.27	221	eP	Pn	15 48 47.0	+1.2
CHN3	Shinhua	2.27	218	eP	Pn	15 48 47.0	+1.2
SCLT	Jiali	2.30	223	eP	Pn	15 48 46.9	+0.7
SCLT				eS	Sn	15 49 14.5	+0.6
TSCK	Chigu Township	2.38	224	eP	Pn	15 48 47.8	+0.5
TSCK				eS	Sn	15 49 16.0	0.0
SSD	Sandimen	2.41	209	eP	Pn	15 48 48.9	+1.2
ECL	Taimali	2.42	201	eP	Pn	15 48 47.0	-0.8
TWM1	Shoushan	2.44	214	eP	Pn	15 48 49.8	+1.7
SGLT	Jiouru	2.49	211	eP	Pn	15 48 50.9	+2.2
PNG	Penghu	2.50	239	eP	Pn	15 48 48.4	-0.4
PNG				eS	Sn	15 49 16.3	-2.4
PHUB	P'eng-hu	2.52	238	eP	Pn	15 48 48.5	-0.5
PHUB				eS	Sn	15 49 16.8	-2.4
MASBT	Mashibuluo	2.53	208	⇑P	Pn	15 48 50.1	+0.9
MASBT				eS	Sn	15 49 19.4	0.0
LYJJ	Jianjiangzhen	2.56	311	⇓P	Pn	15 48 49.9	+0.4
LYJJ				eS	Sn	15 49 19.6	-0.4
JTJ	Tarama	2.56	95	P	Pn	15 48 50.4	+0.9
XPSS	Dashiqiu	2.57	323	⇑iP	Pn	15 48 49.7	0.0
XPSS				eS	Sn	15 49 19.4	-0.8

WDGT	**Dungji**	**2.60**	**232**	*e*P	**Pn**	**15 48 50.3**	**+0.2**
EAST	**Anshuo**	**2.66**	**201**	*e*P	**Pn**	**15 48 50.5**	**-0.4**
TAW	**Tawu**	**2.66**	**200**	*e*P	**Pn**	**15 48 50.5**	**-0.5**
WSSB	**Gushan**	**2.68**	**214**	*e*P	**Pn**	**15 48 51.9**	**+0.7**
SCZT	**Fangliau**	**2.75**	**206**	*e*P	**Pn**	**15 48 53.0**	**+0.9**
VCHM	**Qimei**	**2.80**	**234**	*e*P	**Pn**	**15 48 52.6**	**-0.1**
VCHM				*e*S	**Sn**	**15 49 24.0**	**-1.8**
LAY	**Lan-yu**	**2.83**	**187**	*e*P	**Pn**	**15 48 52.1**	**-1.2**
MHZQ	**Yeshan**	**2.87**	**296**	*e*P	**Pn**	**15 48 53.8**	**+0.1**
LYUB	**Lan-yu**	**2.87**	**186**	*e*P	**Pn**	**15 48 52.0**	**-1.8**
JIRB	**Irabujima**	**2.97**	**90**	P	**Pn**	**15 48 56.3**	**+1.2**
SMST	**Manzhou Townsh**	**3.00**	**199**	*e*P	**Pn**	**15 48 55.7**	**+0.3**
SMST				*e*S	**Sn**	**15 49 30.5**	**-0.1**
HEN	**Hengchun**	**3.04**	**201**	*e*P	**Pn**	**15 48 57.5**	**+1.5**
TWK1	**Hengchun**	**3.08**	**199**	*e*P	**Pn**	**15 48 57.1**	**+0.5**
TWKBT	**Hengchun**	**3.08**	**199**	*e*P	**Pn**	**15 48 57.1**	**+0.6**
JMJ2	**Miyako jima3**	**3.12**	**92**	*e*P	**Pn**	**15 48 58.4**	**+1.4**
JMJ2				*e*S	**Sn**	**15 49 34.7**	**+1.2**
KNM	**Kinmen**	**3.19**	**263**	*e*P	**Pn**	**15 48 59.4**	**+1.5**
KNMB	**Chin-men Tao**	**3.22**	**264**		**Pn**	**15 48 58.1**	**-0.2**
KNMB	**Chin-men Tao**	**3.22**	**264**	⇓*e*P	**Pn**	**15 48 58.2**	**-0.2**
KNMB				*e*S	**Sn**	**15 49 32.9**	**-3.0**
AXDP	**Jialang**	**3.57**	**271**	⇓*e*P	**Pn**	**15 49 03.5**	**+0.4**
AXDP				*e*S	**Sn**	**15 49 42.3**	**-2.0**
ZPLA	**Ao Xicun**	**3.90**	**257**	*e*P	**Pn**	**15 49 07.6**	**+0.1**
SXFK	**Yanhouchang**	**4.13**	**293**	*e*P	**Pn**	**15 49 10.9**	**+0.2**
DSXP	**Dongshan**	**4.24**	**255**	*e*P	**Pn**	**15 49 12.4**	**+0.2**
JOW	**Kunigami**	**6.07**	**70**	Pn	**Pn**	**15 49 36.8**	**-0.2**
	4.0nm,0.3s,baz=273,slow=19,SNR=45						
JOW				Sn	**Sn**	**15 50 43.9**	**-1.1**
	1.2nm,0.3s,baz=294,slow=10.0,SNR=1.4						
	7.9nm,0.3s						
JOW	**Kunigami**	**6.07**	**70**		**Pn**	**15 49 36.4**	**-0.6**
KSRS	**Korea Array**	**13.56**	**21**	Pn	**P**	**15 51 21.9**	**-1.7**
	0.2nm,0.3s,baz=202,slow=11,SNR=10						
MJAR	**Matsushiro Arr**	**18.19**	**46**	P	**P**	**15 52 15.7**	**+0.7**
MJAR				IAmb	IAmb	15 52 20.4	
	comp=Z,4.7nm,1.5s						
LZDM	**Lanzhou Array**	**19.17**	**309**	P	**P**	**15 52 25.7**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=102,slow=19,SNR=1.3						
DPSS	**Saipan**	**24.36**	**109**	P	**P**	**15 53 18.7**	**-0.3**
DPSS				IAmb	IAmb	15 53 32.1	
	comp=Z,996nm,1.5s						
SONM	**Songino Array**	**26.00**	**336**	P	**P**	**15 53 32.6**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=148,slow=11,SNR=3.6						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**38.31**	**315**	P	**P**	**15 55 20.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=100,slow=11,SNR=4.5						
	comp=Z,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**40.03**	**326**	P	**P**	**15 55 35.3**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=113,slow=11,SNR=1.9						
	comp=Z,0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**40.03**	**326**	P	**P**	**15 55 34.4**	**-0.8**
KURK	**Kurchatov**	**41.99**	**319**	P	**P**	**15 55 52.0**	**+0.8**
KURK				IAmb	IAmb	15 55 56.9	
	comp=Z,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**42.01**	**319**	P	**P**	**15 55 52.7**	**+1.3**
	comp=Z,0.1nm,0.2s,baz=109,slow=11,SNR=1.7						
	comp=Z,0.1nm,0.2s						
WRA	**Warramunga Arr**	**46.16**	**164**	P	**P**	**15 56 23.9**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=344,slow=8.0,SNR=5.8						
	comp=Z,0.3nm,0.6s						
WR8	**Warramunga Arr**	**46.21**	**163**	P	**P**	**15 56 24.8**	**-0.5**
WR8				IAmb	IAmb	15 56 37.0	
	comp=Z,6.3nm,1.2s						
ASAR	**Alice Springs**	**49.63**	**166**	P	**P**	**15 56 51.9**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=344,slow=8.2,SNR=5.7						
	comp=Z,0.2nm,0.7s						
AB31	**Akbulak array**	**53.43**	**314**	P	**P**	**15 57 20.2**	**+0.5**
AB31				IAmb	IAmb	15 57 37.4	
	comp=Z,1.6nm,1.1s						
KDAK	**Kodiak Island**	**66.97**	**35**	P	**P**	**15 58 52.5**	**+0.6**
SEW	**Seward**	**68.12**	**33**	P	**P**	**15 58 59.5**	**+0.5**
SEW				IAmb	IAmb	15 59 43.5	
	comp=Z,23nm,1.3s						
BMAR	**Burnt Mountain**	**68.64**	**24**	P	**P**	**15 59 03.5**	**+1.2**
FINES	**FINESS Array B**	**71.19**	**330**	P	**P**	**15 59 19.4**	**+1.5**
	comp=Z,5.9nm,1.1s,baz=62,slow=5.5,SNR=4.2						
BRTR	**Keskin Array B**	**73.29**	**306**	P	**P**	**15 59 30.5**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=81,slow=9.3,SNR=5.0						
	comp=Z,0.4nm,0.8s						
S32K	**Killisnoo**	**76.28**	**33**	P	**P**	**15 59 48.2**	**+0.5**

IDC ***02*** *16:02:21.5±1.7, 7.°49S×128.°35E, h134km±16km, mb4.1/10, mbtmp4.5/12, Error ellipse: s-maj=19.4km s-min=13.1km az=121.0*
NEIC ***02*** *16:02:21.9±1.5, 7.°62S±0.°06×128.°47E±0.°07, h146km±9km, mb4.3/18, Error ellipse: s-maj=10.1km s-min=8.3km az=124.0*
DJA ***02*** *16:02:22.6±0.2, 8.°S±2.°×12.°8E±.°, h126km±6km, M4.5/18, mb4.2/18, mB5.1/5, MLv4.6/16, Mw(mB)4.5/5*
ISC 02 16:02:21.8±0.5**, 7.°74S**±0.°04×**128.°50E**±0.°05**, h151**km**, n71, σ1.§87**/74**, mb4.3**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.78**	**95**	Pn	**Pn**	**16 03 08.6**	**+2.2**
SAUI	**Saumlaki**	**2.78**	**95**	P	**Pn**	**16 03 08.3**	**+1.9**
BNDI	**Bandanaira**	**3.48**	**24**	P	**Pn**	**16 03 15.2**	**-0.2**
AAI	**Ambon**	**4.04**	**356**	P	**Pn**	**16 03 22.5**	**-0.1**
MSAI	**Masohi**	**4.38**	**6**	P	**Pn**	**16 03 27.7**	**+0.6**
KRAI	**Karang Ratu**	**4.39**	**359**	P	**Pn**	**16 03 28.1**	**+0.9**
SOEI	**Soe**	**4.64**	**244**		**Pn**	**16 03 31.7**	**+1.0**
SOEI	**Soe**	**4.64**	**244**	P	**Pn**	**16 03 32.3**	**+1.7**
SOEI				S	**Sn**	**16 04 22.5**	**-1.8**
BATI	**Baumata**	**5.37**	**242**	P	**Pn**	**16 03 41.4**	**+1.2**
	290nm,0.4s,baz=193,slow=2.4,SNR=143						
BATI				S	**Sn**	**16 04 39.4**	**-2.1**
	149nm,0.4s,baz=64,slow=4.7,SNR=10						
BATI	**Baumata**	**5.37**	**242**	P	**Pn**	**16 03 41.6**	**+1.4**
MTN	**Manton Dam**	**5.70**	**153**		**Pn**	**16 03 46.1**	**+1.6**
FAKI	**Fak Fak**	**6.07**	**38**	Pn	**Pn**	**16 03 47.8**	**-1.6**
FAKI	**Fak Fak**	**6.07**	**38**	P	**Pn**	**16 03 47.5**	**-2.0**
	0.2nm35nm,0.8s						
SANI	**Sanana**	**6.18**	**336**	P	**Pn**	**16 03 51.8**	**+0.8**
	8.8nm,0.6s						
MMRI	**Maumere**	**6.27**	**261**	Pn	**Pn**	**16 03 53.0**	**+0.8**
MMRI	**Maumere**	**6.27**	**261**	P	**Pn**	**16 03 52.5**	**+0.4**
	0.3nm2μm25nm,1.6s						
KMPI	**Kaimana, Papua**	**6.57**	**52**	P	**Pn**	**16 03 57.0**	**+0.9**
SIJI	**Sorong**	**7.36**	**22**	P	**Pn**	**16 04 05.0**	**-1.7**
	13nm,0.3s,baz=49,slow=18,SNR=37						
SIJI				S	**Sn**	**16 05 24.8**	**-4.3**
	6.0nm,0.2s,baz=239,slow=23,SNR=6.7						
SIJI	**Sorong**	**7.36**	**22**	P	**Pn**	**16 04 06.0**	**-0.7**
SWI	**Sorong**	**7.36**	**22**	P	**Pn**	**16 04 06.1**	**-0.6**
	0.2nm1μm39nm,0.7s						
KNRA	**Kununurra**	**7.90**	**178**		**Pn**	**16 04 15.4**	**+1.5**
BASI	**Baing, Sumba**	**8.21**	**252**	P	**Pn**	**16 04 19.6**	**+1.6**
WSI	**Waingapu**	**8.34**	**256**	P	**Pn**	**16 04 18.6**	**-1.1**
RKPI	**Ransiki, Papua**	**8.38**	**43**	P	**Pn**	**16 04 21.9**	**+1.6**
	96nm,0.8s						
MWPI	**Manokwari, Pap**	**8.73**	**39**	P	**Pn**	**16 04 26.1**	**+1.1**
	39nm,0.7s						
WBSI	**Waikabubak, Su**	**9.21**	**257**	P	**Pn**	**16 04 31.7**	**+0.4**
	45nm,1.2s						
DBNI	**Kabupaten Domp**	**10.12**	**265**	P	**Pn**	**16 04 46.0**	**+2.6**
	9.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**10.67**	**195**	P	**Pn**	**16 04 49.7**	**-0.9**
	26nm,0.3s,baz=21,slow=9.3,SNR=231						
FITZ				S	**Sn**	**16 06 42.4**	**-6.3**
	19nm,0.4s,baz=93,slow=12,SNR=6.0						
PLAI	**Plampang**	**10.67**	**263**	P	**Pn**	**16 04 53.0**	**+2.3**
	16nm,1.0s						
WB0	**Warramunga Arr**	**13.25**	**155**		**Pn**	**16 05 24.1**	**-0.1**
WRAB	**Tennant Creek**	**13.38**	**156**		**Pn**	**16 05 25.9**	**0.0**
WRA	**Warramunga Arr**	**13.39**	**156**	P	**Pn**	**16 05 25.0**	**-1.0**
	5.5nm,0.4s,baz=319,slow=14,SNR=71						
WRA				S	**Sn**	**16 07 48.8**	**-5.5**
	12nm,0.5s,baz=333,slow=22,SNR=14						
WRA	**Warramunga Arr**	**13.39**	**156**		**Pn**	**16 05 24.4**	**-1.6**
WR8	**Warramunga Arr**	**13.47**	**155**		**Pn**	**16 05 26.6**	**-0.3**
JAGI	**Jajag, Banyuwa**	**14.23**	**266**		**Pn**	**16 05 37.9**	**+1.3**
MBWA	**Marble Bar**	**15.81**	**212**		**Pn**	**16 05 56.9**	**+0.7**
MBWA				IAmb	IAmb	16 06 02.8	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**16.09**	**210**		**P**	**16 06 01.5**	**+1.4**
AS31	**Alice Springs**	**16.66**	**162**		**Pn**	**16 06 07.9**	**+1.2**
ASAR	**Alice Springs**	**16.67**	**162**	P	**Pn**	**16 06 07.9**	**+1.2**
	comp=Z,9.0nm,0.7s,baz=339,slow=9.9,SNR=126						
ASAR				S	**S**	**16 09 07.8**	**-4.1**
	comp=Z,3.3nm,0.6s,baz=341,slow=26,SNR=7.8						
ASAR	**Alice Springs**	**16.67**	**162**		**Pn**	**16 06 08.2**	**+1.5**
SBUM	**Sibu**	**19.14**	**301**	Pn	**P**	**16 06 35.0**	**+1.4**
SBUM				IAmb	IAmb	16 06 37.2	
	comp=Z,5.8nm,0.6s						
SBUM	**Sibu**	**19.14**	**301**	P	**P**	**16 06 35.2**	**+1.7**
BBJI	**Bungbulang**	**20.67**	**269**	P	**P**	**16 06 49.1**	**-1.1**
BBJI				IAmb	IAmb	16 06 55.6	
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	**26.94**	**155**	P	**P**	**16 07 52.7**	**+3.6**
	comp=Z,1.1nm,0.5s,baz=326,slow=11,SNR=3.6						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	**26.94**	**155**	IAmb	IAmb	16 08 33.1	
	comp=Z,16nm,0.8s						
TPUB	**Ta-pu**	**31.79**	**346**	P	**P**	**16 08 30.3**	**-1.8**
PZH	**PanZhiHua**	**42.81**	**324**	P	**P**	**16 10 06.8**	**+1.8**
MAJO	**Matsushiro**	**44.98**	**11**	P	**P**	**16 10 20.9**	**-1.1**
MAJO				IAmb	IAmb	16 10 21.5	
	comp=Z,9.2nm,1.5s						
MJAR	**Matsushiro Arr**	**44.98**	**11**	P	**P**	**16 10 20.2**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=185,slow=9.4,SNR=7.0						
	comp=Z,1.3nm,0.7s						
MJAR	**Matsushiro Arr**	**44.98**	**11**	IAmb	IAmb	16 10 22.9	
	comp=Z,3.5nm,1.4s						
LZDM	**Lanzhou Array**	**49.33**	**333**	P	**P**	**16 10 55.2**	**-0.9**
	comp=Z,59nm,1.0s,baz=99,slow=8.9,SNR=1.4						
	comp=Z,59nm,1.0s						
FUNA	**Funafuti**	**50.16**	**95**	P	**P**	**16 11 01.9**	**-0.5**
HHC	**Hu-ho-hao-te**	**50.80**	**343**	*e*P	**P**	**16 11 11.6**	**+4.8**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
ODZ	**Otahua Downs**	**52.03**	**143**	P	**P**	**16 11 16.4**	**+0.5**
URZ	**Urewera**	**53.25**	**133**	P	**P**	**16 11 28.7**	**+3.8**
	comp=Z,6.3nm,0.8s,baz=309,slow=13,SNR=2.5						
	comp=Z,6.3nm,0.8s						
SONM	**Songino Array**	**58.68**	**343**	P	**P**	**16 12 03.8**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=167,slow=8.6,SNR=1.6						
	comp=Z,3.6nm,0.9s						
SONM	**Songino Array**	**58.68**	**343**	IAmb	IAmb	16 12 11.4	
	comp=Z,16nm,1.4s						
PETK	**Petropavlovsk-**	**65.49**	**19**	P	**P**	**16 12 49.2**	**+0.6**
	comp=Z,3.0nm,0.6s,baz=155,slow=2.1,SNR=11						
	comp=Z,3.0nm,0.6s						
PETK	**Petropavlovsk-**	**65.49**	**19**	P	**P**	**16 12 49.3**	**+0.7**
MKAR	**Makanchi Array**	**68.04**	**328**	P	**P**	**16 13 05.2**	**+0.3**
	comp=Z,2.4nm,0.4s,baz=118,slow=8.1,SNR=11						
	comp=Z,2.4nm,0.4s						
MKAR	**Makanchi Array**	**68.04**	**328**	P	**P**	**16 13 04.9**	**-0.1**
MAKZ	**Makanchi**	**68.21**	**328**	P	**P**	**16 13 06.1**	**+0.1**
MAKZ				IAmb	IAmb	16 13 06.4	
	comp=Z,7.8nm,1.2s						
ZAA0	**Zalesovo Array**	**71.59**	**335**	P	**P**	**16 13 26.1**	**-0.4**
ZAA0				IAmb	IAmb	16 13 33.5	
	comp=Z,6.8nm,1.1s						
ZALV	**Zalesovo Beam**	**71.59**	**335**	P	**P**	**16 13 26.1**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=140,slow=5.6,SNR=6.6						
	comp=Z,2.2nm,0.4s						
ZALV	**Zalesovo Beam**	**71.59**	**335**	P	**P**	**16 13 26.0**	**-0.5**
KURBB	**Kurchatov Arra**	**72.37**	**329**	P	**P**	**16 13 31.3**	**+0.1**
	comp=Z,4.2nm,0.7s,baz=127,slow=5.2,SNR=12						
	comp=Z,4.2nm,0.7s						
KURK	**Kurchatov**	**72.38**	**329**	P	**P**	**16 13 31.2**	**0.0**
KURK				IAmb	IAmb	16 13 33.4	
	comp=Z,4.3nm,0.6s						
BVAR	**Borovoye Array**	**77.90**	**328**	P	**P**	**16 14 03.0**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=123,slow=10,SNR=9.5						
	comp=Z,1.3nm,0.4s						
BORK	**Borovoye**	**77.95**	**328**	P	**P**	**16 14 03.0**	**-0.1**
NRIK	**Noril'sk**	**81.92**	**346**	P	**P**	**16 14 24.1**	**0.0**
NRIK				IAmb	IAmb	16 14 51.9	
	comp=Z,12nm,1.2s						
E19K	**Redstone River**	**91.13**	**22**	P	**P**	**16 15 09.4**	**+0.4**
E19K				IAmb	IAmb	16 15 43.9	
	comp=Z,3.0nm,1.4s						

NEIC ***02*** *16:02:41.4±1.0, 17.°92N±0.°03×66.°92W±0.°01, h5km±3km, ML2.7/33, Md2.7/9(RSPR), Error ellipse: s-maj=4.8km s-min=1.3km az=191.0*
RSPR 02 16:02:41.2, 17.°93N×66.°92W, h6km**, MD2.7**/9**, 10C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**41**		Pg	16 02 43.1	+0.2
GBPR					Sg	16 02 44.5	+0.5
GBPR	**Guanica, Bosqu**	**0.07**	**41**	⇑*e*P	Pg	16 02 43.1	+0.2
GBPR				*e*S	Sg	16 02 44.5	+0.5
MLPR	**Magueyes Islan**	**0.12**	**291**		Pg	16 02 44.0	+0.2
MLPR				IAML		16 02 46.5	
	4μm,0.5s						
MLPR				IAML		16 02 47.1	
	2μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.19**	**295**		Pg	16 02 45.2	+0.1
CRPR					Sg	16 02 48.1	+0.4
CRPR				IAML		16 02 48.9	
	comp=E,2μm,0.3s						
CRPR				IAML		16 02 51.6	
	comp=N,971nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.19**	**295**	⇑*e*P	Pg	16 02 45.5	+0.4
CRPR				*e*S	Sg	16 02 49.1	+1.4
LSP	**Las Mesas**	**0.29**	**328**		Pg	16 02 47.2	+0.3
LSP					Sg	16 02 52.2	+1.3
LSP	**Las Mesas**	**0.29**	**328**	⇑*e*P	Pg	16 02 47.2	+0.3
LSP				*e*S	Sg	16 02 52.2	+1.3
OBIP	**Obispado Ponce**	**0.32**	**69**		Pg	16 02 47.7	+0.2
OBIP	**Obispado Ponce**	**0.32**	**69**		Sg	16 02 52.7	+0.9
OBIP				IAML		16 02 53.8	
	comp=N,111nm,0.2s						
OBIP	**Obispado Ponce**	**0.32**	**69**	⇓*e*P	Pg	16 02 47.7	+0.2
OBIP				*e*S	Sb	16 02 53.4	-1.5
PRSN	**Puerto Rico Se**	**0.36**	**324**		Pg	16 02 48.5	+0.3
PRSN					Sg	16 02 54.3	+1.4
PRSN	**Puerto Rico Se**	**0.36**	**324**	IAML		16 02 55.4	
	comp=N,2μm,0.2s						
PRSN				IAML		16 02 58.8	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.36**	**324**	⇑*e*P	Pg	16 02 48.5	+0.3
PRSN				*e*S	Sg	16 02 54.3	+1.4
UUPR	**Utuado, UPR, P**	**0.38**	**31**		Pg	16 02 48.5	-0.1
UUPR				IAML		16 02 54.8	
	comp=N,3μm,0.4s						
UUPR				IAML		16 02 57.0	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.57**	**342**		Pg	16 02 52.0	-0.2
AGPR				IAML		16 03 00.5	
	comp=N,464nm,0.5s						
AGPR				IAML		16 03 02.7	
	comp=N,366nm,0.3s						
AGPR	**Aguadilla, PR**	**0.57**	**342**	⇑*e*P	Pg	16 02 52.0	-0.2
AGPR				*e*S	Sg	16 03 00.3	+0.8
ECPR	**Experimental S**	**0.66**	**54**		Pg	16 02 53.7	-0.3
ECPR				IAML		16 03 04.3	
	comp=N,660nm,0.2s						
ECPR				IAML		16 03 04.8	
	comp=N,571nm,0.2s						
ECPR	**Experimental S**	**0.66**	**54**	*e*S	Sg	16 03 03.1	+0.5
EMPR	**Esperanza - Ma**	**0.67**	**34**		Pg	16 02 54.2	+0.2
EMPR					Sg	16 03 03.6	+0.9
EMPR	**Esperanza - Ma**	**0.67**	**34**	⇑*e*P	Pg	16 02 54.2	+0.2
EMPR				*e*S	Sg	16 03 03.6	+0.9
IDE	**Isla Desecheo**	**0.70**	**311**		Pg	16 02 54.1	-0.5
IDE					Sg	16 03 04.3	+0.6
IDE	**Isla Desecheo**	**0.70**	**311**	⇑*e*P	Pg	16 02 54.1	-0.5
IDE				*e*S	Sg	16 03 04.3	+0.6
SJG	**San Juan**	**0.76**	**76**		Pg	16 02 55.3	-0.6
SJG	**San Juan**	**0.76**	**76**	IAML		16 03 07.8	
	comp=N,131nm,0.3s						
SJG				IAML		16 03 09.2	
	comp=N,164nm,0.2s						
SJG	**San Juan**	**0.76**	**76**	⇑*e*P	Pg	16 02 55.3	-0.6
SJG				*e*S	Sg	16 03 06.0	+0.3
PDPR	**Patillas Dam,**	**0.86**	**84**		Pg	16 02 57.1	-0.7
PDPR				IAML		16 03 12.6	
	comp=N,54nm,0.2s						
PDPR				IAML		16 03 14.6	
	comp=N,91nm,0.2s						
GCPR	**Guaynabo City**	**0.89**	**64**		Pg	16 02 57.4	-0.8
GCPR					Sg	16 03 09.6	-0.2
GCPR	**Guaynabo City**	**0.89**	**64**	IAML		16 03 09.7	
	comp=E,61nm,0.4s						
GCPR				IAML		16 03 09.8	
	comp=N,93nm,0.4s						
GCPR	**Guaynabo City**	**0.89**	**64**	⇑*e*P	Pg	16 02 57.4	-0.8
GCPR				*e*S	Sg	16 03 09.6	-0.2
HUMP	**Col San Antoni**	**1.04**	**78**		Pg	16 03 00.1	-1.1
HUMP					Sg	16 03 14.4	-0.5
HUMP	**Col San Antoni**	**1.04**	**78**	IAML		16 03 19.2	
	comp=N,141nm,0.2s						
HUMP				IAML		16 03 20.9	
	comp=N,93nm,0.2s						
HUMP	**Col San Antoni**	**1.04**	**78**	⇑*e*P	Pg	16 03 00.1	-1.1
HUMP				*e*S	Sg	16 03 14.4	-0.5
CUPR	**Culebra, Puert**	**1.61**	**76**	Pn	Pn	16 03 10.3	+0.2

IDC ***02*** *16:05:40.1±0.4, 30.°70N×104.°53E, h0km, mb4.7/34, mbtmp4.7/37, ML3.8/3, MS4.0/54, Error ellipse: s-maj=12.6km s-min=9.4km az=50.0*
MOS ***02*** *16:05:41.1±1.0, 30.°69N×104.°60E, h17km, mb5.1/60, MS4.3/6, Error ellipse: s-maj=5.4km s-min=3.8km az=114.2*
NEIC ***02*** *16:05:42.5±1.1, 30.°76N±0.°06×104.°54E±0.°08, h10km±3km, mb5.2/233, Mww4.8/15, Error ellipse: s-maj=9.3km s-min=8.6km az=86.0*
GCMT ***02*** *16:05:42.5±0.3, 30.°57N±0.°03×104.°54E±0.°02, h12km±1km, MW4.7/72, Moment Tensor Solution. s12,c15; s72,c101; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}1.22±.10; $M_{\theta\theta}$-0.10±.06; $M_{\phi\phi}$-1.12±.07; $M_{r\theta}$0.17±.18; $M_{\theta\phi}$-0.35±.04; $M_{\phi r}$-0.72±.19; Best double couple: $M_0$1.42700×10^16 NP1:ϕ_s30.00000°, δ33.00000°, λ114.00000°. NP2: ϕ_s183.00000°, δ60.00000°, λ75.00000°. Principal axes: T 1.4650, Plg71.0000°, Azm60.0000°; N -0.0750, Plg13.0000°, Azm190.0000°; P -1.3890, Plg14.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***02*** *16:05:42.6, 30.°34N×104.°90E, h12km, Moment Tensor Solution. Duration: 1.§1 Moment tensor: Scale 10^16Nm; M_{rr}0.93; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-0.94; $M_{r\theta}$1.39; $M_{\theta\phi}$-0.23; $M_{\phi r}$1.07; Fault plane solution: $M_0$2.00000×10^16 NP1: ϕ_s174.96000°, δ19.42000°, λ41.15000°. NP2:ϕ_s45.47000°, δ77.36000°, λ104.87000°. Principal axes: T 2.1219, Plg55.0000°, Azm334.0000°; N -0.2651, Plg15.0000°, Azm222.0000°; P -1.8568, Plg31.0000°, Azm123.0000°;*
GFZ ***02*** *16:05:42.7, 30.°75N×104.°58E, h10km, MW4.6, Moment Tensor Solution. s28 Moment tensor: M_{rr}1.01; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.00; $M_{r\theta}$-0.02; $M_{\theta\phi}$-0.16; $M_{\phi r}$0.45; Fault plane solution: NP1:ϕ_s194.00000°, δ33.00000°, λ98.00000°. NP2:ϕ_s4.00000°, δ57.00000°, λ85.00000°. Principal axes: T 1.1100, Plg77.0000°, Azm257.0000°; N 0.0100, Plg4.0000°, Azm7.0000°; P -1.1200, Plg12.0000°, Azm98.0000°;*
NEIC ***02*** *16:05:42.6, 30.°74N×104.°55E, h12km*
BJI ***02*** *16:05:42.1, 30.°72N×104.°46E, h21km, mB5.1/24, mb4.7/50, ML5.0/24, Ms5.0/76, Ms7 4.6/74*
BGR ***02*** *16:06:01.6, 31.°66N×101.°76E, h33km, mb4.9, Ms4.4*
ISC 02 16:05:41.7±0.5**, 30.°74N**±0.°03×**104.°52E**±0.°03**, h9**km±2km**, h9**km**:pP-P, n811, σ1.§47**/751**, mb5.1**/236**, MS4.1**/62**, 16C-43D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.68**	**285**	⇓*i*Pg	**Pg**	**16 05 54.6**	**-0.2**
CD2				Sg	**Sb**	**16 06 05.9**	**+0.6**
CD2				smax	smax		
	comp=N,66μm,0.9s						
CD2				smax	smax		
	comp=E,104μm,0.9s						
ENH	**Enshi**	**4.31**	**95**		**Pn**	**16 06 48.7**	**+1.1**
ENH	**Enshi**	**4.31**	**95**	P	**Pn**	**16 06 49.6**	**+2.0**
GYA	**Guiyang**	**4.66**	**156**	⇑Pn	**Pn**	**16 06 52.7**	**+0.2**
GYA				Sn	**Sn**	**16 07 49.1**	**+2.2**
PZH	**PanZhiHua**	**4.88**	**211**	Pn	**Pn**	**16 06 57.5**	**+2.1**
PZH				Sn	**Sn**	**16 07 52.7**	**+0.6**
PZH				Sg	**Sg**	**16 08 13.9**	**-4.5**
PZH				smax	smax		
	comp=N,780nm,1.0s						
PZH				smax	smax		
	comp=E,1μm,1.0s						
PZH				LR	LR		
	comp=N,8μm,5.5s						
PZH				LR	LR		
	comp=E,6μm,5.2s						
PZH				LR	LR		
	comp=Z,10μm,5.7s						
XAN	**Xi'an**	**4.97**	**47**	⇑Pn	**Pn**	**16 06 55.7**	**-0.9**
XAN				Pg	**Pg**	**16 07 15.2**	**-1.7**
XAN				Sn	**Sn**	**16 07 51.7**	**-2.5**
XAN				Sg	**Sg**	**16 08 20.1**	**-1.2**
XAN				smax	smax		
	comp=N,4μm,1.1s						
XAN				smax	smax		
	comp=E,4μm,1.2s						
XAN				LR	LR		
	comp=N,7μm,13.1s						
XAN				LR	LR		
	comp=E,11μm,13.4s						
XAN				LR	LR		
	comp=Z,8μm,14.8s						
LZDM	**Lanzhou Array**	**5.25**	**353**	Pn	**Pn**	**16 07 02.5**	**+1.8**
	baz=172,slow=15						
LZDM				Lg	Lg	16 08 30.3	
	baz=171,slow=36						
LZDM				LR	LR	16 09 31.1	
	comp=Z,709nm,18.7s,baz=235,slow=44						
	17nm,0.4s						
LZH	**Lanzhou**	**5.36**	**354**	Pn	**Pn**	**16 07 03.5**	**+1.4**
LZH				Sn	**Sn**	**16 08 03.9**	**-0.2**
LZH				Sg	**Sg**	**16 08 31.5**	**-2.4**
LZH				smax	smax		
	comp=N,1μm,1.5s						
LZH				smax	smax		
	comp=E,2μm,1.5s						
LZH				LR	LR		
	comp=N,7μm,8.9s						
LZH				LR	LR		
	comp=E,20μm,9.6s						
LZH				LR	LR		
	comp=Z,8μm,9.3s						
KMI2	**Kunming**	**5.79**	**196**	⇑Pn	**Pn**	**16 07 09.4**	**+1.3**
KMI2				Sn	**Sn**	**16 08 13.8**	**-0.9**
KMI2				Sg	**Sg**	**16 08 49.7**	**+2.1**
KMI2				smax	smax		
	comp=N,390nm,1.2s						
KMI2				smax	smax		
	comp=E,490nm,1.0s						
KMI2				LR	LR		
	comp=N,5μm,9.1s						
KMI2				LR	LR		
	comp=E,7μm,8.3s						
GULI	**GuiLin**	**7.49**	**135**	Pn	Pn	16 07 26.0	-5.3
GULI				Sn	**Sn**	**16 08 49.1**	**-7.3**
GULI				LR	LR		
	comp=N,6μm,8.1s						
GULI				LR	LR		
	comp=E,7μm,9.2s						
GULI				LR	LR		
	comp=Z,4μm,7.6s						
LYN	**LuoYang**	**7.70**	**58**	*i* Pn	**Pn**	**16 07 33.3**	**-0.8**
LYN				Sn	**Sn**	**16 09 05.2**	**+3.7**
LYN				smax	smax		
	comp=N,1μm,1.1s						
LYN				smax	smax		
	comp=E,960nm,1.2s						
LYN				LR	LR		
	comp=N,6μm,4.0s						
LYN				LR	LR		
	comp=E,10μm,4.5s						
LYN				LR	LR		
	comp=Z,8μm,4.0s						
CNSH	**ChangSha**	**7.76**	**107**	Pn	**Pn**	**16 07 36.6**	**+1.6**
CNSH				Sn	**Sn**	**16 09 02.2**	**-0.8**
CNSH				smax	smax		
	comp=N,700nm,1.3s						
CNSH				smax	smax		
	comp=E,880nm,1.2s						
TNCH	**TengChong**	**7.78**	**224**	Pn	**Pn**	**16 07 36.9**	**+1.5**
TNCH				Sn	**Sn**	**16 09 02.6**	**-1.2**
TNCH				Sg	**Sg**	**16 09 51.1**	**-0.5**
TNCH				smax	smax		
	comp=N,860nm,2.3s						
TNCH				smax	smax		
	comp=E,960nm,1.9s						
TNCH				LR	LR		
	comp=N,7μm,5.9s						

TNCH LR LR
comp=E,9μm,5.4s
TNCH LR LR
comp=Z,4μm,9.7s
WHN Wuhan 8.47 89 ⇓P **Pn 16 07 44.5 -0.2**
WHN S **Sn 16 09 19.9 -0.5**
WHN LR LR
comp=Z,20μm,6.3s
TIY Taiyuan 9.55 41 *e*P **Pn 16 07 58.3 -1.2**
TIY pmax pmax
comp=Z,23nm,1.2s
TIY LR LR
comp=N,3μm,4.4s
TIY LR LR
comp=E,4μm,5.0s
TIY LR LR
comp=Z,1μm,6.3s
GTA2 Gaotai 9.55 337 *e*P **Pn 16 08 03.8 +4.2**
GTA2 pmax pmax
comp=Z,3.0nm,1.0s
GTA2 LR LR
comp=N,4μm,9.8s
GTA2 LR LR
comp=E,6μm,10.5s
GTA2 LR LR
comp=Z,2μm,9.1s
GOMU GeErMu 9.76 306 P **Pn 16 08 05.8 +3.1**
GOMU pmax pmax
comp=Z,4.0nm,1.0s
GOMU LR LR
comp=N,2μm,4.8s
GOMU LR LR
comp=E,2μm,4.9s
GOMU LR LR
comp=Z,2μm,5.0s
MOKO MOKOCHONG 9.84 246 *e*P **Pn 16 08 04.6 +1.1**
MOKO *e*S **Sn 16 09 45.7 -8.5**
MOKO IAML 16 11 15.9
comp=N,357nm,5.2s
MOKO IAML 16 11 19.8
comp=E,416nm,1.9s
ITAN ITANAGAR 10.11 252 *e*P **Pn 16 08 06.5 -0.7**
ITAN *e*S **Sn 16 09 53.0 -7.9**
ITAN IAML 16 11 50.5
comp=N,419nm,1.7s
ITAN IAML 16 14 10.4
comp=E,418nm,3.6s
KOHI KOHIMA 10.45 244 *e*P **Pn 16 08 12.7 +0.7**
KOHI *e*S **Sn 16 10 01.2 -8.1**
KOHI IAML 16 11 45.5
comp=N,370nm,3.7s
KOHI IAML 16 12 00.3
comp=E,584nm,2.5s
HNS HongShan 10.74 49 ⇓P **Pn 16 08 16.1 +0.4**
HNS pmax pmax
comp=E,14nm,0.9s
HNS LR LR
comp=E,6μm,7.8s
HNS LR LR
comp=E,4μm,8.4s
HNS LR LR
comp=E,2μm,6.9s
GZH2 Guangzhou 10.76 129 P **Pn 16 08 14.4 -1.7**
GZH2 S **Sn 16 10 14.2 -2.6**
GZH2 LR LR
comp=E,6μm,4.7s
GZH2 LR LR
comp=E,3μm,4.4s
BTO2 Baotou 10.89 22 *e*P **Pn 16 08 16.8 -1.1**
BTO2 S **Sn 16 10 19.0 -0.9**
BTO2 pmax pmax
comp=E,140nm,1.2s
BTO2 pmax pmax
comp=E,500nm,5.9s
BTO2 LR LR
comp=E,7μm,7.0s
BTO2 LR LR
comp=E,5μm,4.8s
BTO2 LR LR
comp=E,2μm,5.7s
IMP Imphal 11.05 240 *e*P **Pn 16 08 20.9 +0.7**
IMP *e*S **Sn 16 10 16.1 -8.0**
IMP IAML 16 12 27.2
comp=N,333nm,3.3s
IMP IAML 16 12 43.3
comp=E,642nm,1.7s
TEZP TEZPUR 11.08 251 *e*P **Pn 16 08 20.9 +0.5**
TEZP *e*S **Sn 16 10 16.4 -8.1**
TEZP IAML 16 11 58.5
comp=N,772nm,4.1s
TEZP IAML 16 12 10.9
comp=E,347nm,1.0s
MORE Moreh 11.14 237 **Pn 16 08 22.2 +0.9**
TAWA Tawang 11.49 257 *e*P **Pn 16 08 25.4 -1.1**
TAWA *e*S **Sn 16 10 26.8 -8.4**
TAWA IAML 16 12 14.5
comp=E,464nm,1.0s
TAWA IAML 16 12 19.0
comp=N,362nm,0.8s
HHC Hu-ho-hao-te 11.59 28 ⇓*i*P **Pn 16 08 26.0 -1.5**
HHC PP **PnPn 16 08 36.1 +0.8**
HHC S **Sn 16 10 34.4 -2.7**
HHC pmax pmax
comp=N,240nm,4.6s
HHC LR LR
comp=N,2μm,7.6s
HHC LR LR
comp=N,2μm,7.0s
HHC LR LR
comp=N,1μm,9.9s
LSA Lhasa 11.61 268 **Pn 16 08 28.3 +0.1**
LSA Lhasa 11.61 268 P **Pn 16 08 28.3 +0.1**
TIA Tai'an 11.85 59 P **Pn 16 08 31.6 +0.6**
TIA pmax pmax
comp=N,33nm,1.2s
TIA pmax pmax
comp=N,260nm,4.8s
TIA LR LR
comp=N,6μm,12.1s
TIA LR LR
comp=N,3μm,10.4s
TIA LR LR
comp=N,4μm,13.7s
SILR SILCHAR 11.95 243 *e*P **Pn 16 08 32.6 +0.2**
SILR *e*S **Sn 16 10 38.0 -7.8**
SILR IAML 16 12 52.2
comp=E,199nm,5.2s
SILR IAML 16 12 52.7
comp=N,171nm,6.2s
HKPS Hong Kong Po S 12.05 132 Pn **Pn 16 08 32.8 -0.9**
GUWA GUWAHATI 12.16 251 *e*P **Pn 16 08 37.1 +1.9**
GUWA *e*S Sn 16 10 39.9 -11
GUWA IAML 16 12 35.0
comp=N,540nm,3.0s
GUWA IAML 16 12 35.7
comp=E,328nm,0.8s
SHL Shillong 12.28 248 **Pn 16 08 36.5 -0.5**
SHL Shillong 12.28 248 *e*P **Pn 16 08 36.2 -0.8**
SHL *e*S **Sn 16 10 45.7 -8.5**
SHL IAML 16 12 33.0
comp=N,219nm,2.3s
SHL IAML 16 12 37.0
comp=E,226nm,1.8s
SHL Shillong 12.28 248 P **Pn 16 08 36.5 -0.5**
NJ2 Nanjing 12.32 80 ⇓P **Pn 16 08 36.2 -1.1**
NJ2 pmax pmax
comp=E,19nm,1.2s
NJ2 LR LR
comp=E,2μm,6.8s
NJ2 LR LR
comp=E,4μm,6.8s
NJ2 LR LR
comp=E,3μm,5.6s
QIZ Qiongzhong 12.62 156 P **Pn 16 08 40.9 -0.6**
QIZ S **Sn 16 11 01.9 -0.4**
QIZ LR LR
comp=E,1μm,11.3s
QIZ LR LR
comp=E,4μm,11.8s
QIZ LR LR
comp=E,2μm,6.8s
CHTO Chiang Mai 12.91 204 **Pn 16 08 45.1 -0.4**
CHTO Chiang Mai 12.91 204 P **Pn 16 08 48.9 +3.4**
CHTO Chiang Mai 12.91 204 P **Pn 16 08 45.1 -0.4**
CHTO Chiang Mai 12.91 204 P **Pn 16 08 47.6 +2.1**
SAIH SAIHA 13.18 234 *e*P **Pn 16 08 48.4 -0.9**

SAIH *e*S Sn 16 11 04.3 -12
SAIH IAML 16 12 16.5
comp=N,218nm,0.2s
SAIH IAML 16 12 19.0
comp=E,117nm,1.3s
CM31 Chiang Mai Arr 13.23 204 **Pn 16 08 48.8 -1.2**
CMAR Chiang Mai Arr 13.23 204 Pn **Pn 16 08 51.1 +1.1**
comp=E,0.1nm,0.3s,baz=15,slow=12,SNR=37
CMAR Lg Lg 16 12 42.1
baz=23,slow=30
comp=E,4.6nm,0.8s
BJT Baijiatuau 13.26 43 **Pn 16 08 49.7 -0.4**
BJT Baijiatuau 13.26 43 P **Pn 16 08 52.6 +2.5**
BJT Baijiatuau 13.26 43 P **Pn 16 08 49.7 -0.4**
BJI2 Beijing 13.26 43 P **Pn 16 08 49.8 -0.3**
BJI2 S **Sn 16 11 19.3 +1.6**
BJI2 pmax pmax
comp=E,20nm,1.0s
BJI2 pmax pmax
comp=E,120nm,5.2s
DHUB DHUBRI 13.62 253 *e*P **Pn 16 08 55.9 +0.8**
DHUB *e*S **Sn 16 11 28.5 +1.8**
DHUB IAML 16 13 32.3
comp=N,3μm,7.3s
DHUB IAML 16 13 57.8
comp=E,1μm,4.9s
QZH2 Quanzhou 13.72 111 ⇑*i*P **Pn 16 08 58.0 +1.4**
QZH2 S **Sn 16 11 31.5 +2.3**
QZH2 LR LR
comp=E,3μm,6.5s
QZH2 LR LR
comp=E,4μm,9.8s
QZH2 LR LR
comp=E,6μm,10.2s
KNMB Chin-men Tao 13.79 114 **Pn 16 08 57.8 +0.3**
BELO BELONIA 13.83 240 *e*P **Pn 16 09 00.5 +2.4**
BELO *e*S **Sn 16 11 34.1 +2.3**
BELO IAML 16 13 23.9
comp=N,777nm,0.5s
BRDH Bariadhala 14.03 238 LR LR 16 15 34.2
comp=N,793nm,18.9s,baz=15,slow=42
SSE Sheshan 14.31 84 P **Pn 16 09 03.8 -0.8**
SSE S **Sn 16 11 42.5 -1.1**
SSE pmax pmax
comp=N,3.0nm,1.1s
SSE pmax pmax
comp=N,100nm,4.8s
SSE LR LR
comp=N,840nm,8.8s
SSE LR LR
comp=N,2μm,8.9s
GTK Tadong 14.34 260 *e*P **Pn 16 09 05.6 +0.5**
GTK *e*S **Sn 16 11 45.8 +1.5**
GTK IAML 16 14 11.1
comp=N,335nm,3.5s
XLT XiLinHaoTe 16.01 32 *e*P **Pn 16 09 27.1 -0.1**
XLT LR LR
comp=N,87nm,6.1s
XLT LR LR
comp=N,780nm,4.1s
XLT LR LR
comp=N,620nm,7.3s
YHNB Yeheng 16.10 108 Pn **Pn 16 09 28.4 -0.1**
YHNB Yeheng 16.10 108 P **P 16 09 31.7 -0.1**
TPUB Ta-pu 16.14 113 **Pn 16 09 29.0 0.0**
TPUB Ta-pu 16.14 113 P **P 16 09 32.3 0.0**
SSLB Suanglung 16.16 111 **Pn 16 09 29.6 +0.4**
SSLB IAmb IAmb 16 09 37.2
comp=Z,288nm,1.4s
SSLB Suanglung 16.16 111 P **P 16 09 32.6 +0.1**
DL2 Dalian 16.22 55 P **Pn 16 09 31.0 +1.1**
DL2 S **Sn 16 12 34.2 +4.3**
DL2 pmax pmax
comp=Z,110nm,1.0s
DL2 pmax pmax
comp=Z,530nm,4.2s
DL2 LR LR
comp=Z,1μm,16.3s
DL2 LR LR
comp=Z,2μm,15.6s
DL2 LR LR
comp=Z,2μm,10.6s
NACB Ninganchiao 16.50 109 **Pn 16 09 32.5 -1.0**
NACB Ninganchiao 16.50 109 P **P 16 09 36.6 +0.4**
YULB Yu-li 16.63 112 **P 16 09 36.6 -1.1**
YULB Yu-li 16.63 112 P **P 16 09 38.7 +1.1**
TWG Pinlang 16.74 114 P **P 16 09 38.2 -0.7**
TWGBT Beinan 16.75 114 P **P 16 09 38.9 -0.1**
SONM Songino Array 17.13 4 P **Pn 16 09 42.1 +0.6**
comp=Z,0.3nm,0.3s,baz=186,slow=12,SNR=50
SONM Lg Lg 16 14 47.9
comp=Z,0.1nm,0.3s,baz=196,slow=21,SNR=1.0
SONM LR LR 16 17 24.5
comp=Z,193nm,18.7s,baz=316,slow=41
comp=Z,21nm,0.9s
SONM Songino Array 17.13 4 **Pn 16 09 40.7 -0.8**
SONM Songino Array 17.13 4 P **Pn 16 09 40.7 -0.8**
SONM pmax pmax
comp=Z,44nm,1.1s
ULN Ulaanbaatar 17.21 6 **Pn 16 09 41.7 -0.8**
ULN Ulaanbaatar 17.21 6*c*e**P Pn 16 09 42.5 0.0**
ULN pmax pmax
comp=Z,77nm,1.7s
ULN Ulaanbaatar 17.21 6 P **Pn 16 09 43.0 +0.5**
comp=Z,177nm,1.3s
WMQ Urumqi 18.65 319 *e*P **Pn 16 10 01.8 +1.6**
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ LR LR
comp=Z,2μm,9.3s
WMQ LR LR
comp=Z,1μm,10.5s
WMQ LR LR
comp=Z,620nm,15.5s
SNY Shenyang 18.89 49 ⇓P **Pn 16 10 02.8 -0.2**
SNY S **Sn 16 13 24.6 -10**
SNY pmax pmax
comp=Z,29nm,1.0s
SNY pmax pmax
comp=Z,190nm,3.3s
SNY LR LR
comp=Z,830nm,10.4s
SNY LR LR
comp=Z,690nm,12.8s
SNY LR LR
comp=Z,610nm,9.0s
INCN Inchon 19.48 64 Pn **Pn 16 10 10.4 +0.2**
INCN IAmb IAmb 16 10 13.1
comp=Z,145nm,1.3s
INCN Inchon 19.48 64 P **Pn 16 10 10.8 +0.5**
INCN Inchon 19.48 64 P **Pn 16 10 10.4 +0.2**
INCN pmax pmax
comp=Z,145nm,1.3s
ZAK Zakamensk 19.64 358 *e*P **P 16 10 11.1 +0.3**
ZAK pmax pmax
comp=Z,24nm,1.5s
TJN Taejon 19.83 67 P **P 16 10 13.5 +0.7**
TJN Taejon 19.83 67 P **Pn 16 10 14.2 -0.2**
TJN Taejon 19.83 67 P **P 16 10 13.5 +0.7**
TJN pmax pmax
comp=Z,238nm,0.6s
KS19 Wonju Array Si 20.44 64 P **P 16 10 20.1 +0.7**
KS19 IAmb IAmb 16 10 22.2
comp=Z,138nm,0.9s
KSAR Wonju Array Be 20.45 65 P **P 16 10 19.7 +0.2**
KSAR Wonju Array Be 20.45 65 P **P 16 10 19.7 +0.2**
KSRS Korea Array 20.48 65 P **P 16 10 20.2 +0.4**
comp=Z,172nm,1.1s,baz=253,slow=11,SNR=205
KSRS Lg Lg 16 16 33.7
comp=Z,0.1nm,0.3s,baz=260,slow=33,SNR=2.2
KSRS LR LR 16 18 55.8
comp=Z,822nm,19.1s,baz=260,slow=39
comp=Z,172nm,1.1s
KNGR Kungurtug, Tuv 20.52 347 ⇓*e*P **P 16 10 21.4 +1.0**
KNGR pmax pmax
comp=Z,50nm,1.2s
TLY Talaya 20.93 358 P **P 16 10 24.8 +0.1**
TLY Talaya 20.93 358*c*e**P** Pn 16 10 26.2 -1.0
TLY pmax pmax
comp=Z,38nm,2.0s
MOY Mondy 21.07 354 *e*P **P 16 10 27.7 +1.4**
MOY pmax pmax
comp=Z,82nm,2.4s
CN2 Changchun 21.08 46 P **P 16 10 27.0 +0.7**
CN2 S **S 16 14 15.4 -5.5**

CN2 pmax pmax
comp=Z,190nm,1.0s
CN2 LR LR
comp=Z,1μm,15.0s
CN2 LR LR
comp=Z,810nm,15.0s
CN2 LR LR
comp=Z,500nm,10.0s
JOW Kunigami 21.17 95 P **P 16 10 26.4 -1.0**
comp=Z,12nm,0.7s,baz=280,slow=8.6,SNR=6.9
JOW LR LR 16 19 23.9
comp=Z,692nm,18.7s,baz=294,slow=39
comp=Z,12nm,0.7s
JOW Kunigami 21.17 95 P **P 16 10 26.5 -1.0**
JOW Kunigami 21.17 95 P **P 16 10 30.0 +2.6**
IRK Irkutsk 21.49 360 *e*P **P 16 10 32.2 +1.6**
IRK *e*S **S 16 14 24.1 -4.8**
IRK pmax pmax
comp=Z,120nm,2.1s
HIA Hailar 21.80 28 P **P 16 10 33.8 -0.2**
HIA Hailar 21.80 28 P **P 16 10 34.5 +0.5**
HIA Hailar 21.80 28 P **P 16 10 33.8 -0.2**
HIA pmax pmax
comp=Z,37nm,0.9s
HILR Hailar Array B 22.03 27 P **P 16 10 37.2 +0.7**
comp=Z,34nm,1.0s,baz=194,slow=12,SNR=70
HILR PcP **PcP 16 14 34.9 +0.4**
comp=Z,1.7nm,0.6s,baz=124,slow=2.7,SNR=4.1
comp=Z,34nm,1.0s
JSU Suzuyama 22.20 81 P **P 16 10 38.1 -0.5**
JSU Suzuyama 22.20 81 P **P 16 10 39.0 +0.5**
CIT Chita 22.28 15 *e*P **P 16 10 40.2 +1.0**
CIT *e* 16 10 46.2
CIT *e* 16 11 01.4
CIT *e* 16 11 11.6
CIT pmax pmax
comp=Z,96nm,3.8s
JNU Nakatsue 22.48 77 P **P 16 10 41.1 -0.4**
comp=Z,112nm,1.1s,baz=299,slow=3.7,SNR=18
JNU LR LR 16 19 58.9
comp=Z,808nm,18.1s,baz=274,slow=38
comp=Z,112nm,1.1s
JNU Nakatsue 22.48 77 IAmb IAmb 16 11 00.4
comp=Z,38nm,0.6s
ZSN Zaisan 22.50 323 *e*P **P 16 10 43.2 +1.6**
ZSN *e*S **S 16 14 51.2 +2.6**
ZSN Zaisan 22.50 323 *e*P **P 16 10 43.2 +1.6**
ZSN *e*S **S 16 14 51.2 +2.6**
DGZ Jazzator, Alta 22.90 331 ⇓*e*P **P 16 10 47.9 +2.0**
DGZ pmax pmax
comp=Z,59nm,1.3s
BNX BinXian 23.28 44 ⇓P **P 16 10 50.3 +0.6**
BNX pmax pmax
comp=Z,180nm,1.0s
BNX pmax pmax
comp=Z,700nm,4.1s
BNX LR LR
comp=Z,1μm,12.8s
BNX LR LR
comp=Z,670nm,13.5s
BNX LR LR
comp=Z,870nm,11.6s
SHLS Shalkode 23.45 309 *e*P **P 16 10 50.3 -1.3**
SHLS pmax pmax
comp=Z,44nm,1.1s
SHLS Shalkode 23.45 309 *e*P **P 16 10 50.4 -1.3**
comp=Z,44nm,1.1s
MK31 Makanchi Array 23.49 319*d i*P **P 16 10 53.0 +1.2**
MKAR Makanchi Array 23.49 319 P **P 16 10 52.8 +1.0**
comp=Z,5.7nm,0.5s,baz=128,slow=9.9,SNR=48
MKAR ScP **ScP 16 18 15.4 -0.4**
comp=Z,1.9nm,1.0s,baz=134,slow=3.5,SNR=6.2
MKAR LR LR 16 20 59.6
comp=Z,927nm,19.5s,baz=120,slow=39
comp=Z,5.7nm,0.5s
MKAR Makanchi Array 23.49 319 P **P 16 10 51.3 -0.4**
MKAR **pP 16 10 52.3 -2.2**
PDGK Podgornoye 23.50 309 P **P 16 10 52.7 +0.6**
MAKZ Makanchi 23.67 319 P **P 16 10 53.7 +0.1**
MAKZ Makanchi 23.67 319 P **P 16 10 53.7 +0.1**
MAKZ pmax pmax
comp=Z,26nm,1.1s
UZB Uzynbulak 23.74 309*d i*P **P 16 10 55.9 +1.4**
UZB pmax pmax
comp=Z,64nm,1.5s
UZB Uzynbulak 23.74 309 ⇓*i*P **P 16 10 55.9 +1.4**
comp=Z,64nm,1.5s
PRZ Przheval'sk 23.92 307 IAmb IAmb 16 11 00.9
comp=Z,229nm,1.8s
MDJ Mudanjiang 24.08 48 IAmb IAmb 16 11 00.4
comp=Z,121nm,1.1s
MDJ Mudanjiang 24.08 48 P **P 16 10 58.7 +1.2**
MDJ Mudanjiang 24.08 48 P **P 16 10 58.2 +0.7**
MDJ pmax pmax
comp=Z,120nm,1.4s
MDJ pmax pmax
comp=Z,750nm,3.8s
MDJ LR LR
comp=Z,760nm,8.8s
MDJ LR LR
comp=Z,730nm,14.1s
TARG Taragay, Kyrgy 24.09 304 P **P 16 10 58.4 +0.3**
TARG IAmb IAmb 16 11 02.4
comp=Z,62nm,1.4s
TARG Taragay, Kyrgy 24.09 304 P **P 16 10 58.4 +0.3**
TARG pmax pmax
comp=Z,62nm,1.4s
PSTR Posyet 24.09 53 ⇓*e*P **P 16 10 58.5 +0.9**
SATY Saty 24.13 308*d i*P **P 16 10 59.6 +1.5**
SATY *e*S **S 16 15 18.6 +2.6**
SATY pmax pmax
comp=Z,23nm,0.9s
SATY Saty 24.13 308 ⇓*i*P **P 16 10 59.6 +1.5**
comp=Z,23nm,0.9s
SATY *e*S **S 16 15 18.7 +2.6**
TDK Taldyqorghan 24.92 312 *e*P **P 16 11 06.7 +1.6**
TDK pmax pmax
comp=Z,27nm,1.0s
TDK Taldyqorghan 24.92 312 *e*P **P 16 11 06.8 +1.6**
comp=Z,28nm,1.0s
JMN Monobe 24.98 75 P **P 16 11 05.1 -0.6**
JMN IAmb IAmb 16 11 09.5
comp=Z,34nm,0.9s
JMN Monobe 24.98 75 P **P 16 11 05.6 -0.2**
VLA Vladivostok 25.00 53 ⇓*i*P **P 16 11 06.7 +0.8**
VLA pmax pmax
comp=Z,105nm,1.5s
MDOK Medeo 25.09 307 *e*P **P 16 11 08.2 +1.4**
MDOK *e*S **S 16 15 33.9 +2.3**
MDOK Medeo 25.09 307 *e*P **P 16 11 08.3 +1.4**
MDOK *e*S **S 16 15 33.9 +2.3**
KSH2 Kashi 25.09 297 P **P 16 11 08.7 +1.8**
KSH2 S **S 16 15 31.4 -0.3**
KSH2 pmax pmax
comp=Z,20nm,1.1s
KSH2 LR LR
comp=Z,900nm,15.8s
KSH2 LR LR
comp=Z,950nm,13.4s
KSH2 LR LR
comp=Z,1μm,14.1s
TNSS Tian-Shan 25.12 307 *e*P **P 16 11 08.6 +1.2**
TNSS Tian-Shan 25.12 307 *e*P **P 16 11 08.7 +1.2**
AAA Alma-Ata 25.20 307 *e*P **P 16 11 09.2 +1.5**
AAA pmax pmax
comp=Z,17nm,0.6s
AAA Alma-Ata 25.20 307 *e*P **P 16 11 09.3 +1.5**
comp=Z,17nm,0.6s
ULHL Ulahol 25.35 305 P **P 16 11 13.2 +3.8**
SNR=14
USRK Ussuriysk Ar. 25.47 50 P **P 16 11 09.9 -0.2**
comp=Z,16nm,0.8s,baz=250,slow=10,SNR=14
comp=Z,16nm,0.8s
KULM Kulim 25.58 189 P **P 16 11 13.5 +2.2**
KULM Kulim 25.58 189 P **P 16 11 11.7 +0.4**
BOOM Boomskoye usch 25.64 305 P **P 16 11 12.4 +0.5**
BOOM Boomskoye usch 25.64 305 P **P 16 11 12.4 +0.5**
BOOM pmax pmax
comp=Z,17nm,0.7s
HEH HeiHe 25.95 35 *e*P **P 16 11 15.1 +0.7**
HEH pP **sP 16 11 22.3 +3.9**
HEH S **S 16 15 48.5 +3.7**
HEH pmax pmax
comp=Z,52nm,1.3s
HEH pmax pmax
comp=Z,390nm,5.4s

HEH LR LR
comp=Z,570nm,9.9s
HEH LR LR
comp=Z,880nm,8.7s
HEH LR LR
comp=Z,710nm,10.2s
TKM2 Tokmak 2 26.01 306 P **P** **16 11 17.0 +1.7**
SNR=11
KBK Karagaybulak 26.39 305 P **P** **16 11 20.7 +2.0**
SNR=17
NIL Nilore 26.57 285 P **P** **16 11 20.7 +0.5**
NIL IAmb IAmb 16 11 30.4
comp=Z,41nm,0.9s
NIL Nilore 26.57 285 P **P** **16 11 20.7 +0.5**
NIL pmax pmax
comp=Z,41nm,0.9s
UCH Uchtor 26.58 304 P **P** **16 11 22.9 +2.2**
SNR=20
AAK Ala-Archa 26.70 305 LR LR 16 23 40.7
comp=Z,1µm,21.2s,baz=96,slow=40
AAK Ala-Archa 26.70 305 P **P** **16 11 22.7 +1.2**
SNR=9.1
AAK Ala-Archa 26.70 305 P **P** **16 11 22.3 +0.7**
AAK Ala-Archa 26.70 305⇓*i* P **P** **16 11 23.2 +1.7**
AAK pmax pmax
comp=Z,18nm,1.5s
SGDS Sogindy 26.85 307 *e*P **P** **16 11 24.4 +1.7**
USP Ospenovka 26.89 306 P **P** **16 11 26.2 +3.2**
SNR=8.1
KKM Kota Kinabalu 26.91 154 P **P** **16 11 23.3 -0.2**
KKM IAmb IAmb 16 11 24.2
comp=Z,44nm,0.7s
KKM Kota Kinabalu 26.91 154 P **P** **16 11 23.5 0.0**
KKM Kota Kinabalu 26.91 154 P **P** **16 11 23.3 -0.2**
comp=Z,64nm,1.2s
ZALV Zalesovo Beam 27.20 334 P **P** **16 11 26.1 +0.5**
comp=Z,11nm,0.7s,baz=131,slow=9.3,SNR=60
ZALV LR LR 16 23 03.8
comp=Z,283nm,19.2s,baz=140,slow=38
comp=Z,11nm,0.7s
EKS2 Erkin-Say 27.22 304 P **P** **16 11 25.9 -0.2**
SNR=7.1
INU Inuyama 27.55 72 P **P** **16 11 28.6 -0.4**
KLR Kul'dur 27.63 40 LR LR 16 23 55.0
comp=Z,53nm,19.7s,baz=235,slow=40
KLR Kul'dur 27.63 40*c i* P **P** **16 11 29.4 -0.2**
KLR pmax pmax
comp=Z,26nm,1.1s
KURBB Kurchatov Arra 27.74 323 P **P** **16 11 30.9 +0.3**
comp=Z,4.3nm,0.8s,baz=129,slow=9.2,SNR=39
KURBB PcP **PcP** **16 14 46.4 -0.6**
comp=Z,1.5nm,0.7s,baz=118,slow=2.1,SNR=4.2
KURBB ScP **ScP** **16 18 27.3 -0.7**
comp=Z,1.3nm,0.9s,baz=131,slow=2.7,SNR=6.5
KURBB LR LR 16 23 26.7
comp=Z,453nm,19.6s,baz=149,slow=38
comp=Z,4.3nm,0.8s
KURK Kurchatov 27.75 323 P **P** **16 11 30.9 +0.3**
KURK Kurchatov 27.75 323 **PcP** **16 14 46.4 -0.6**
KURK **ScP** **16 18 27.3 -0.7**
KURK Kurchatov 27.75 323⇓*i* P **P** **16 11 31.5 +0.9**
KURK pmax pmax
comp=Z,32nm,1.9s
JGF Kuroka 27.83 71 P **P** **16 11 31.0 -0.6**
BOD Bodaibo 27.86 11 *e*P **P** **16 11 27.9 -3.6**
BOD pmax pmax
comp=Z,14nm,1.5s
DRK Karamyk 28.03 297 IAmb IAmb 16 11 38.5
comp=Z,54nm,1.4s
ZEA Zeya 28.25 29 *e*P **P** **16 11 36.1 +1.1**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=Z,10.0nm,1.2s
PSI Prapat 28.29 192 P **P** **16 11 34.9 -0.9**
MAJO Matsushiro 28.54 69 P **P** **16 11 37.1 -0.8**
MAJO Matsushiro 28.54 69 P **P** **16 11 38.0 +0.1**
MAJO Matsushiro 28.54 69⇓*i* P **P** **16 11 36.2 -1.7**
MAJO pmax pmax
comp=Z,17nm,1.3s
MJAR Matsushiro Arr 28.54 69 P **P** **16 11 37.0 -0.9**
comp=Z,10nm,1.1s,baz=270,slow=8.9,SNR=24
MJAR PcP **PcP** **16 14 48.8 -0.5**
comp=Z,1.8nm,0.8s,baz=207,slow=0.6,SNR=5.4
MJAR LR LR 16 22 26.0
comp=Z,331nm,20.6s,baz=282,slow=35
comp=Z,10nm,1.1s
MJAR Matsushiro Arr 28.54 69 P **P** **16 11 37.3 -0.6**
MJAR Matsushiro Arr 28.54 69 P **P** **16 11 37.3 -0.6**
MJAR 16 14 48.8
MJAR pmax pmax
comp=Z,17nm,1.4s
TEY Ternei 28.85 51⇑ *e*P **P** **16 11 40.4 0.0**
TEY pmax pmax
comp=Z,20nm,1.1s
DZA Taraz 29.02 304 *e*P **P** **16 11 43.6 +1.6**
DZA Taraz 29.02 304 *e*P **P** **16 11 43.6 +1.6**
SBUM Sibu 29.07 164 P **P** **16 11 42.9 +0.3**
SBUM Sibu 29.07 164 P **P** **16 11 43.7 +1.1**
SBUM Sibu 29.07 164 P **P** **16 11 41.6 -1.0**
comp=Z,8.3nm,0.8s
GAR Garm 29.12 296 IAmb IAmb 16 11 46.0
comp=Z,87nm,1.4s
KK31 Karatay Array 29.65 304 IAmb IAmb 16 11 50.8
comp=Z,50nm,1.7s
KK31 Karatay Array 29.65 304 *i* P **P** **16 11 48.2 +0.5**
KKAR Karatay Array 29.65 304 P **P** **16 11 47.9 +0.2**
KKAR Karatay Array 29.65 304 P **P** **16 11 47.9 +0.2**
IUG Iuzhnay 29.80 302*d i* P **P** **16 11 50.5 +1.5**
IUG pmax pmax
comp=Z,22nm,1.3s
IUG Iuzhnay 29.80 302⇓*i* P **P** **16 11 50.6 +1.5**
comp=Z,22nm,1.3s
CHGR Chuyangaron 29.98 295*de*P **P** **16 11 52.2 +1.4**
CHGR pmax pmax
comp=Z,62nm,1.6s
KBL Kabul 30.02 287 P **P** **16 11 51.4 +0.2**
KBL Kabul 30.02 287 P **P** **16 11 51.4 +0.2**
KBL pmax pmax
comp=Z,28nm,1.3s
BRLS Boroldoy 30.12 304 *e*P **P** **16 11 53.7 +1.9**
BRLS Boroldoy 30.12 304 *e*P **P** **16 11 53.8 +1.9**
CHM Chimkent 30.14 302 *e*P **P** **16 11 53.5 +1.5**
CHM Chimkent 30.14 302 *e*P **P** **16 11 53.5 +1.5**
DAV Davao City (W) 30.72 136 LR LR 16 25 54.2
comp=Z,396nm,19.2s,baz=310,slow=40
SHAA Shahritus 30.74 293 IAmb IAmb 16 12 27.4
comp=Z,32nm,1.2s
GRNR Gornyy 31.01 41⇑ *i* P **P** **16 11 59.7 +0.1**
GRNR pmax pmax
comp=Z,8.0nm,1.2s
GRNR MLR MLR
comp=E,350nm,17.0s
GRNR MLR MLR
comp=N,330nm,20.0s
GRNR MLR MLR
comp=Z,450nm,17.0s
PALK Pallekele 32.29 229 LR LR 16 27 55.7
comp=Z,174nm,18.5s,baz=34,slow=41
ASAJ Asahikawa 32.76 55 LR LR 16 25 27.1
comp=Z,172nm,18.6s,baz=18,slow=36
JCJ Chichijima 33.07 87 LR LR 16 26 24.4
comp=Z,188nm,18.5s,baz=292,slow=38
TOLI2 Tolitoli 33.26 149 P **P** **16 12 19.3 -0.3**
TOLI2 IAmb IAmb 16 12 21.9
comp=Z,26nm,0.8s
TOLI2 Tolitoli 33.26 149 P **P** **16 12 19.5 -0.1**
BVA0 Borovoye Array 33.30 322 P **P** **16 12 19.8 +0.2**
BVAR Borovoye Array 33.30 322 P **P** **16 12 20.5 +0.9**
comp=Z,1.8nm,0.5s,baz=124,slow=9.1,SNR=18
BVAR PcP **PcP** **16 15 01.5 -0.1**
comp=Z,1.9nm,0.6s,baz=132,slow=2.2,SNR=5.5
BVAR LR LR 16 27 42.7
comp=Z,272nm,18.2s,baz=107,slow=40
comp=Z,1.8nm,0.5s
BORK Borovoye 33.34 322 P **P** **16 12 20.3 +0.3**
BORK Borovoye 33.34 322⇓*i* P **P** **16 12 21.0 +1.0**
BORK pmax pmax
comp=Z,12nm,1.9s
YSS Yuzhno-Sakhali 33.51 50 P **P** **16 12 22.6 +1.1**
YSS Yuzhno-Sakhali 33.51 50⇑ *i* P **P** **16 12 21.8 +0.3**
YSS pmax pmax
comp=Z,28nm,1.1s
UGL Uglegorsk 33.69 46 *e*P **P** **16 12 23.8 +0.8**
UGL *e*S **S** **16 17 45.3 -0.8**
UGL pmax pmax
comp=Z,100nm,1.0s
MRSI Marisa 34.34 148 P **P** **16 12 28.4 -0.6**
comp=Z,29nm,0.8s
TYV Tymovskoe 34.65 43 *e*P **P** **16 12 32.8 +1.4**
TYV *e*S **S** **16 18 06.8 +5.8**
TYV pmax pmax
comp=Z,26nm,1.4s
TYV pmax pmax
comp=Z,100nm,2.5s
TYV smax smax
comp=N,200nm,4.0s
TYV smax smax
comp=E,100nm,4.0s
PCI Palu 34.68 152 P **P** **16 12 31.9 0.0**
comp=E,33nm,1.6s
MDSI Maura Dua 35.03 181 P **P** **16 12 34.0 -0.9**
comp=E,21nm,0.9s
MDSI pP **pP** **16 12 36.4 -1.3**
comp=E,21nm,0.9s
YAK Yakutsk 35.32 20 LR LR 16 28 46.3
comp=E,159nm,18.6s,baz=226,slow=39
YAK Yakutsk 35.32 20 P **P** **16 12 36.4 -0.6**
YAK IAmb IAmb 16 12 37.9
comp=Z,22nm,0.8s
YAK Yakutsk 35.32 20 *e*P **P** **16 12 36.0 -0.9**
YAK *e**PP **pP** **16 12 38.6 -1.2**
YAK *e*PPP PPP 16 13 57.6
YAK *e*S **S** **16 18 07.9 -3.0**
YAK *e**SS **sS** **16 18 16.0 +0.3**
YAK *e*SSS SSS 16 20 56.8
YAK pmax pmax
comp=Z,25nm,1.0s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=Z,396nm,5.7s
YAK pmax pmax
comp=E,410nm,6.8s
YAK pmax pmax
comp=N,284nm,6.4s
YAK smax smax
comp=E,271nm,5.3s
YAK smax smax
comp=N,220nm,6.8s
YAK MLR MLR
comp=Z,342nm,13.0s
YAK MLR MLR
comp=E,268nm,10.0s
YAK MLR MLR
comp=N,158nm,13.0s
APSI Ampana 35.45 149 P **P** **16 12 37.0 -1.5**
comp=N,61nm,0.9s
HRA Herat 35.63 287 IAmb IAmb 16 12 42.9
comp=Z,41nm,1.6s
MMSI Mamuju 35.97 155 P **P** **16 12 43.0 0.0**
comp=Z,41nm,0.8s
LUWI Luwuk 36.06 148 P **P** **16 12 43.4 -0.4**
LUWI Luwuk 36.06 148 P **P** **16 12 43.2 -0.6**
comp=Z,793nmcomp=Z,80nm,1.2s
TTSI Tana Toraja 36.63 154 P **P** **16 12 48.4 -0.3**
comp=Z,596nmcomp=Z,64nm,1.1s
SPSI Sidrap Palu 37.46 154 P **P** **16 12 55.6 -0.1**
comp=Z,471nmcomp=Z,45nm,1.3s
LEM Lembang 37.47 175 P **P** **16 12 56.7 +0.7**
comp=Z,41nm,0.7s,baz=59,slow=4.0,SNR=12
LEM LR LR 16 29 48.0
comp=Z,159nm,18.1s,baz=335,slow=39
comp=Z,41nm,0.7s
LEM Lembang 37.47 175 P **P** **16 12 56.4 +0.4**
comp=Z,49nm,0.9s
CTJI Waduk Cacaban 37.80 172 P **P** **16 12 59.1 +0.5**
comp=Z,48nm,0.9s
KPJI Karang Pucung 38.09 173 P **P** **16 13 02.0 +1.0**
AB31 Akbulak array 38.18 312 *i* P **P** **16 13 02.0 +0.5**
ABKAR Akbulak array 38.18 312 P **P** **16 13 01.7 +0.2**
KKSI Kolaka, Sulawe 38.38 152 P **P** **16 13 03.2 -0.3**
comp=Z,26nm,1.2s
KAPI Kappang 38.42 155 P **P** **16 13 03.8 0.0**
KAPI IAmb IAmb 16 13 04.5
comp=Z,37nm,0.9s
KAPI Kappang 38.42 155 P **P** **16 13 04.2 +0.4**
KAPI Kappang 38.42 155 P **P** **16 13 03.8 0.0**
KAPI pmax pmax
comp=Z,37nm,0.9s
KAPI Kappang 38.42 155 P **P** **16 13 03.0 -0.8**
comp=Z,25nm,1.0s
SJI Sawahan 38.88 169 P **P** **16 13 08.4 +0.6**
SNJI Sawahan-Nganju 38.92 169 P **P** **16 13 09.3 +1.1**
AKTO Aktyubinsk 39.65 313 P **P** **16 13 13.6 -0.2**
NRIK Noril'sk 39.84 351 P **P** **16 13 15.4 +0.2**
comp=Z,16nm,0.9s,baz=138,slow=7.7,SNR=31
comp=Z,16nm,0.9s
NRIK Noril'sk 39.84 351*c i* P **P** **16 13 15.6 +0.4**
NRIK pmax pmax
comp=Z,22nm,0.9s
SVE Sverdlovsk 40.00 324 *e*P **P** **16 13 18.2 +1.5**
JAGI Jajag, Banyuwa 40.07 165 P **P** **16 13 17.3 -0.3**
JAGI IAmb IAmb 16 13 18.2
comp=Z,42nm,0.9s
JAGI Jajag, Banyuwa 40.07 165 P **P** **16 13 17.8 +0.2**
JAGI Jajag, Banyuwa 40.07 165 P **P** **16 13 16.9 -0.7**
comp=Z,56nm,0.9s
KHKI Kahang-Kahang 40.31 163 P **P** **16 13 19.9 +0.3**
comp=Z,50nm,1.2s
SIJI Sorong 40.44 136 LR LR 16 31 02.9
comp=Z,113nm,19.9s,baz=336,slow=38
GUMO Guam 40.82 106 LR LR 16 30 33.6
comp=Z,98nm,19.3s,baz=8.5,slow=37
KRAI Karang Ratu 40.82 142 P **P** **16 13 23.6 -0.3**
comp=Z,823nmcomp=Z,27nm,1.5s
TWSI Taliwang, Sumb 41.01 161 P **P** **16 13 24.7 -0.6**
comp=Z,21nm,1.2s
ARTI Arti 41.02 322 LR LR 16 31 57.2
comp=Z,209nm,21.4s,baz=108,slow=38
ARTI Arti 41.02 322 P **P** **16 13 25.0 -0.1**
ARTI Arti 41.02 322*d* P **P** **16 13 25.6 +0.5**
ARTI S **S** **16 19 39.4 +2.1**
ARTI SS **SS** **16 22 32.9 -6.2**
ARTI pmax pmax
comp=Z,38nm,2.5s
DBNI Kabupaten Domp 41.20 159 P **P** **16 13 27.7 +0.7**
comp=Z,820nmcomp=Z,71nm,1.1s
MA2 Magadan 42.20 33 LR LR 16 33 38.1
comp=Z,174nm,18.5s,baz=228,slow=40
MA2 Magadan 42.20 33 P **P** **16 13 35.0 +0.4**
MA2 Magadan 42.20 33⇓*i* P **P** **16 13 34.6 -0.1**
MA2 pmax pmax
comp=Z,27nm,1.8s
MA2 Magadan 42.20 33 P **P** **16 13 33.9 -0.8**
comp=Z,10nm,1.0s
WBSI Waikabubak, Su 42.61 158 P **P** **16 13 36.7 -1.9**
MMRI Maumere 42.68 154 P **P** **16 13 37.5 -1.6**
MMRI Maumere 42.68 154 P **P** **16 13 38.4 -0.7**
MMRI Maumere 42.68 154 P **P** **16 13 37.8 -1.3**
WSI Waingapu 42.94 157 P **P** **16 13 39.3 -1.8**
TIXI Tiksi 43.04 11 LR LR 16 34 49.7
comp=Z,100nm,19.5s,baz=200,slow=41
TIXI Tiksi 43.04 11 P **P** **16 13 40.6 -0.7**
TIXI Tiksi 43.04 11⇓*i* P **P** **16 13 41.0 -0.3**
TIXI pmax pmax
comp=Z,20nm,1.0s
BAKI Biak 43.72 131 P **P** **16 13 47.7 +0.2**
comp=Z,38nm,1.4s
PETK Petropavlovsk- 44.20 44 P **P** **16 13 51.2 +0.2**
comp=Z,9.7nm,0.9s,baz=256,slow=5.8,SNR=8.3
PETK LR LR 16 32 14.6
comp=Z,181nm,18.9s,baz=256,slow=36
comp=Z,9.7nm,0.9s
SEY Seymchan 44.23 29⇓*i* P **P** **16 13 51.8 +0.7**
SEY pmax pmax
comp=Z,21nm,2.0s
SOEI Soe 44.51 152 P **P** **16 13 56.0 +2.1**
BATI Baumata 44.67 153 P **P** **16 13 53.2 -1.9**
comp=Z,999nmcomp=Z,79nm,1.2s
PET Petropavlovsk 44.76 44 P **P** **16 13 55.2 -0.2**
KIRV Kirov 46.27 324 LR LR 16 33 37.8
comp=Z,144nm,20.9s,baz=101,slow=36
KIRV Kirov 46.27 324⇓*i* P **P** **16 14 07.2 -0.1**
BELG Belogornoye 46.36 315 P **P** **16 14 08.0 -0.1**
comp=Z,18nm,1.0s,baz=152,slow=1.4,SNR=6.2
comp=Z,18nm,1.0s
BELG Belogornoye 46.36 315⇓*i* P **P** **16 14 08.3 +0.2**
BELG pmax pmax
comp=Z,7.0nm,1.4s
AKT Akhty 46.37 300 *e*P **P** **16 14 08.9 +0.3**
AKT *e* 16 15 43.4
AKT *e*S **S** **16 20 56.7 +0.4**
AKT pmax pmax
comp=Z,8.0nm,0.4s
MAK Makhachkala 46.41 302 *e*P **P** **16 14 05.8 -2.8**
MAK *e*S **S** **16 20 52.4 -4.1**
MAK pmax pmax
comp=Z,129nm,1.5s
MAK MLR MLR
comp=Z,408nm,15.0s
JAY Jayapura 47.77 127 LR LR 16 33 57.2
comp=Z,117nm,18.9s,baz=314,slow=36
GNI Garni 48.79 298 LR LR 16 38 26.6
comp=Z,162nm,19.9s,baz=88,slow=40
GNI Garni 48.79 298 P **P** **16 14 27.3 -0.1**
GNI IAmb IAmb 16 14 35.7
comp=Z,24nm,1.1s
GNI Garni 48.79 298*ce*P **P** **16 14 28.9 +1.5**
GNI pmax pmax
comp=Z,28nm,1.1s
NCK Nalchik 49.21 303⇑ *e*P **P** **16 14 31.4 +1.0**
NCK pmax pmax
comp=Z,9.0nm,0.5s
GOF Gofitskoye 49.44 305*ce*P **P** **16 14 34.5 +2.4**
KBZ Khabaz 49.68 303 P **P** **16 14 34.1 +0.2**
comp=Z,3.9nm,0.8s,baz=119,slow=7.1,SNR=9.0
KBZ LR LR 16 38 13.0
comp=Z,245nm,21.0s,baz=76,slow=39
comp=Z,3.9nm,0.8s
KBZ Khabaz 49.68 303⇓*i* P **P** **16 14 34.6 +0.6**
KBZ pmax pmax
comp=Z,21nm,2.2s
KIV Kislovodsk 49.81 304 P **P** **16 14 35.2 +0.1**
KIV IAmb IAmb 16 14 39.0
comp=Z,68nm,1.3s
KIV Kislovodsk 49.81 304 *e*P **P** **16 14 35.7 +0.6**
KIV pmax pmax
comp=Z,30nm,1.0s
KIV MLR MLR
comp=Z,117nm,16.0s
KIV Kislovodsk 49.81 304 P **P** **16 14 35.9 +0.8**
comp=Z,38nm,1.8s
SHA1 Shidzhatmaz 49.86 303⇓*i* P **P** **16 14 36.7 +1.1**
VRH Novokhopyorsk 49.99 313 *e*P **P** **16 14 35.7 -0.5**
VRH pmax pmax
comp=Z,30nm,1.3s
GURO Guroymak-BITLI 51.13 297 IAmb IAmb 16 14 49.7
comp=Z,32nm,1.2s
BILL Bilibino 51.35 25 P **P** **16 14 45.6 -0.6**
BILL Bilibino 51.35 25*d i* P **P** **16 14 46.3 +0.1**
BILL pmax pmax
comp=Z,23nm,1.2s
VORR Voronezh 51.54 314 *e*P **P** **16 14 49.3 +1.4**
KLMR Klimovskoe 51.56 326 *e*P **P** **16 14 47.2 -0.7**
KLMR pmax pmax
comp=Z,37nm,1.4s
VSR Storozhevoye 51.59 313 *e*P **P** **16 14 51.4 +3.1**
VSR pmax pmax
comp=Z,10.0nm,0.9s
LPSR Galich'ya Gora 51.68 315 *e*P **P** **16 14 47.8 -1.1**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
KNRA Kununurra 51.71 150 P **P** **16 14 49.4 -0.1**
comp=Z,31nm,0.9s
KNRA Kununurra 51.71 150 P **P** **16 14 48.5 -0.9**
KNRA IAmb IAmb 16 14 49.8
comp=Z,23nm,0.8s
MARD Mardin 52.36 295 IAmb IAmb 16 14 57.4
comp=Z,47nm,1.5s
MOS Moscow 52.37 319 *e*P **P** **16 14 52.2 -1.8**
MOS *e* 16 16 48.7
MOS pmax pmax
comp=Z,56nm,1.3s
RAYN Ar Rayn 52.51 277 P **P** **16 14 55.6 0.0**
RAYN Ar Rayn 52.51 277 P **P** **16 14 55.6 0.0**
RAYN pmax pmax
comp=Z,10.0nm,1.3s
FITZ Fitzroy Crossi 52.64 154 LR LR 16 39 28.0
comp=Z,55nm,18.7s,baz=332,slow=39
OBN Obninsk 52.99 318 LR LR 16 38 40.3
comp=Z,462nm,19.2s,baz=12,slow=37
OBN Obninsk 52.99 318*d i* P **P** **16 14 59.0 +0.5**
OBN *e* 16 16 04.9
OBN *e* 16 17 00.1
OBN *e*PPP PPP 16 18 01.1
OBN pmax pmax
comp=Z,93nm,3.1s
ARPR Arapgir-MALATY 53.84 298 IAmb IAmb 16 15 09.0
comp=Z,33nm,1.2s
PSA00 Pilbara Seismi 54.06 162 P **P** **16 15 06.3 -0.4**
comp=Z,20nm,0.9s
PSA00 Pilbara Seismi 54.06 162 P **P** **16 15 05.6 -1.1**
PSA00 Pilbara Seismi 54.06 162 P **P** **16 15 05.8 -0.9**
PSA00 IAmb IAmb 16 15 07.2
comp=Z,12nm,0.9s
PSAC2 Pilbara Seismi 54.06 162 P **P** **16 15 06.6 -0.1**
comp=Z,32nm,1.1s
PSAB3 Pilbara Seismi 54.08 162 P **P** **16 15 06.8 -0.1**
comp=Z,25nm,1.1s
GAZ Gaziantep 55.16 296 IAmb IAmb 16 15 18.1
comp=Z,27nm,1.1s
BNN Bunyan 55.79 298 IAmb IAmb 16 15 22.4
comp=Z,24nm,1.2s
ASF Jabal al Asfar 56.80 290 LR LR 16 43 22.5
comp=Z,185nm,21.9s,baz=45,slow=40
PMG Port Moresby 57.15 127 P **P** **16 15 28.9 -0.2**
comp=Z,12nm,0.8s,baz=353,slow=11,SNR=4.6
PMG LR LR 16 40 35.8
comp=Z,59nm,19.6s,baz=338,slow=37
comp=Z,12nm,0.8s
PMG Port Moresby 57.15 127 IAmb IAmb 16 16 06.5
comp=Z,19nm,1.0s
PMG Port Moresby 57.15 127*de*P **P** **16 15 29.9 +0.7**
PMG pmax pmax
comp=Z,21nm,1.1s
PMG Port Moresby 57.15 127 P **P** **16 15 29.0 -0.2**
comp=Z,19nm,0.8s
BR131 Keskin Array S 57.23 300 IAmb IAmb 16 15 32.2
comp=Z,20nm,1.1s
BR131 Keskin Array S 57.23 300*d i* P **P** **16 15 29.9 +0.2**
BRTR Keskin Array B 57.23 300 P **P** **16 15 30.1 +0.4**
comp=Z,8.4nm,0.9s,baz=97,slow=6.1,SNR=43
BRTR LR LR 16 42 14.8
comp=Z,78nm,21.6s,baz=64,slow=38
comp=Z,8.4nm,0.9s
BRTR Keskin Array B 57.23 300 P **P** **16 15 29.8 +0.1**
BR104 Keskin Array S 57.23 300 P **P** **16 15 30.0 +0.3**
comp=Z,103nmcomp=Z,12nm,1.0s
BR106 Keskin Array S 57.24 300 P **P** **16 15 30.1 +0.3**
comp=Z,107nmcomp=Z,12nm,1.0s
BR105 Keskin Array S 57.25 300 P **P** **16 15 30.1 +0.3**
comp=Z,120nmcomp=Z,13nm,1.0s
ARCES ARCESS Array B 57.74 336 P **P** **16 15 32.8 +0.2**
comp=Z,5.7nm,0.7s,baz=83,slow=6.3,SNR=18
ARCES PcP **PcP** **16 16 25.0 -0.3**
comp=Z,5.9nm,1.1s,baz=89,slow=3.8,SNR=4.5
ARCES LR LR 16 42 37.2
comp=Z,170nm,18.2s,baz=94,slow=38
comp=Z,5.7nm,0.7s
ARCES ARCESS Array B 57.74 336 P **P** **16 15 32.8 +0.2**
ARCES 16 16 25.0
ARCES pmax pmax
comp=Z,118nm,1.8s
MMAI Mount Meron Ar 57.74 292 P **P** **16 15 34.0 +0.7**
comp=Z,1.1nm,0.6s,baz=40,slow=4.7,SNR=4.0
MMAI LR LR 16 46 38.1
comp=Z,90nm,20.9s,baz=62,slow=43
comp=Z,1.1nm,0.6s
MMAI Mount Meron Ar 57.74 292 P **P** **16 15 34.0 +0.7**
BALJ Balqa 57.84 291 IAmb IAmb 16 15 37.1
comp=Z,38nm,1.2s
WB0 Warramunga Arr 57.85 146 IAmb IAmb 16 15 34.5
comp=Z,36nm,0.9s
AK09 Malin Array Si 57.87 313 P **P** **16 15 33.2 -0.6**
AK08 Malin Array Si 57.89 313 P **P** **16 15 33.8 -0.1**
AK03 Malin Array Si 57.89 313 P **P** **16 15 33.8 -0.1**
AKASG Malin Array Be 57.89 313 P **P** **16 15 34.0 0.0**
comp=Z,4.7nm,0.7s,baz=70,slow=6.7,SNR=11
AKASG LR LR 16 40 55.3
comp=Z,208nm,18.5s,baz=66,slow=36
comp=Z,4.7nm,0.7s
AKASG Malin Array Be 57.89 313 IAmb IAmb 16 15 36.3
comp=Z,10nm,1.2s
AKASG Malin Array Be 57.89 313 P **P** **16 15 34.0 0.0**
AKASG pmax pmax

comp=Z,10.0nm,1.3s
AKBB Malin Array Si 57.89 313 IAmb IAmb 16 15 37.0
comp=Z,34nm,1.6s
AKBB Malin Array Si 57.89 313 ||| *i* P **P** **16 15 33.9 -0.1**
AKBB pmax pmax
comp=Z,9.0nm,0.8s
AKBB Malin Array Si 57.89 313 P **P** **16 15 33.5 -0.5**
AK10 Malin Array Si 57.89 313 P **P** **16 15 33.5 -0.5**
AK01 Malin Array Si 57.90 313 P **P** **16 15 33.5 -0.5**
KIEV Kiev 57.90 313 P **P** **16 15 33.9 -0.1**
KIEV IAmb IAmb 16 15 37.0
comp=Z,30nm,1.6s
KIEV Kiev 57.90 313 P **P** **16 15 33.9 -0.1**
KIEV pmax pmax
comp=Z,30nm,1.7s
KIEV Kiev 57.90 313 P **P** **16 15 33.5 -0.5**
comp=Z,51nm,2.1s
AK02 Malin Array Si 57.91 313 P **P** **16 15 33.6 -0.5**
AK05 Malin Array Si 57.92 313 P **P** **16 15 33.9 -0.3**
AK04 Malin Array Si 57.92 313 P **P** **16 15 33.6 -0.6**
AK06 Malin Array Si 57.93 313 P **P** **16 15 34.1 -0.1**
COEN Coen 57.94 134 P **P** **16 15 35.3 +0.6**
comp=Z,33nm,1.0s
COEN Coen 57.94 134 IAmb IAmb 16 15 35.8
comp=Z,24nm,0.8s
COEN Coen 57.94 134 P **P** **16 15 35.0 +0.3**
AK16 Malin Array Si 57.97 313 P **P** **16 15 34.0 -0.5**
WRAB Tennant Creek 57.97 146 P **P** **16 15 34.2 -0.6**
WRAB Tennant Creek 57.97 146 P **P** **16 15 34.4 -0.4**
WRAB Tennant Creek 57.97 146 ||| *i* P **P** **16 15 34.5 -0.4**
WRAB pmax pmax
comp=Z,53nm,0.9s
WRA Warramunga Arr 57.97 147 P **P** **16 15 34.2 -0.6**
comp=Z,29nm,0.9s,baz=336,slow=7.5,SNR=83
comp=Z,29nm,0.9s
AK22 Malin Array Si 57.98 314 P **P** **16 15 34.1 -0.4**
AK14 Malin Array Si 57.98 313 P **P** **16 15 34.1 -0.5**
AK18 Malin Array Si 57.99 313 P **P** **16 15 33.8 -0.8**
AK21 Malin Array Si 57.99 314 P **P** **16 15 34.4 -0.3**
AK17 Malin Array Si 58.00 313 P **P** **16 15 34.2 -0.5**
AK13 Malin Array Si 58.01 313 P **P** **16 15 34.6 -0.2**
AK20 Malin Array Si 58.02 314 P **P** **16 15 34.4 -0.4**
AK19 Malin Array Si 58.02 313 P **P** **16 15 34.4 -0.5**
MNK Minsk 58.05 318 *i* P **P** **16 15 35.4 +0.4**
comp=E,16nm,0.9s
MNK *i* P **P** **16 15 35.4 +0.4**
comp=N,24nm,0.9s
MNK *i* P **P** **16 15 35.4 +0.4**
comp=Z,23nm,0.9s,baz=81
MNK *i* PP **PP** **16 17 44.8 +1.5**
MNK *i* PPP PPP 16 19 00.7
MNK *i* S **S** **16 23 37.4 +1.7**
MNK *i* SS **SS** **16 27 30.7 +4.2**
MNK *i* SSS SSS 16 30 02.3
MNK *i* LQ LQ 16 36 24.1
MNK *i* LR LR 16 39 52.3
MNK *i* LRM MLR 16 42 02.3
comp=Z,514nm,19.0s
MNK *i* LRM MLR 16 42 03.4
comp=N,506nm,17.8s
MNK *i* LRM MLR 16 43 07.6
comp=E,622nm,22.9s
MNK Minsk 58.05 318 *i* P **P** **16 15 35.3 +0.4**
MNK *i* 16 17 44.7
MNK *i* S **S** **16 23 37.4 +1.7**
MNK *i* SS **SS** **16 27 30.7 +4.2**
MNK pmax pmax
comp=N,24nm,0.9s
MNK pmax pmax
comp=E,16nm,0.9s
MNK pmax pmax
comp=Z,23nm,0.9s
MNK MLR MLR
comp=Z,514nm,19.0s
MNK MLR MLR
comp=N,506nm,18.0s
MNK MLR MLR
comp=E,622nm,23.0s
WR8 Warramunga Arr 58.06 146 IAmb IAmb 16 15 36.1
comp=Z,26nm,0.8s
FINES FINESS Array B 58.07 326 P **P** **16 15 34.8 -0.2**
comp=Z,3.9nm,0.7s,baz=98,slow=8.4,SNR=16
comp=Z,3.9nm,0.7s
CSS Mathiatis 58.79 295 IAmb IAmb 16 15 42.6
comp=Z,26nm,1.0s
CSS Mathiatis 58.79 295 P **P** **16 15 41.3 +0.8**
comp=Z,26nm,0.9s
LUBAR Lubar, Ukraine 58.97 313 P **P** **16 15 41.0 -0.5**
SORM Soroca 58.97 311 P **P** **16 15 40.9 -0.6**
comp=Z,11nm,2.1s
EIL Elat 59.20 288 LR LR 16 45 51.2
comp=Z,192nm,19.6s,baz=62,slow=41
BORA Eskisehir 59.55 301 IAmb IAmb 16 15 47.8
comp=Z,12nm,1.0s
SPITS Spitsbergen Ar 59.77 346 P **P** **16 15 46.6 0.0**
comp=Z,11nm,1.1s,baz=64,slow=3.4,SNR=4.5
SPITS LR LR 16 47 56.0
comp=Z,74nm,18.0s,baz=90,slow=42
comp=Z,11nm,1.1s
WRKA Warakurna 59.96 155 P **P** **16 15 49.2 +0.7**
comp=Z,20nm,1.3s
HORU Horodok 59.97 312 P **P** **16 15 48.7 +0.3**
ISP Isparta 60.10 299 *d* *i* P **P** **16 15 49.6 0.0**
ISP pmax pmax
comp=Z,38nm,1.1s
KMPD K-Podol'skiy 60.10 311 P **P** **16 15 48.4 -0.9**
GAMB Gambell 60.19 31 P **P** **16 15 49.5 -0.1**
baz=279
MORW Morawa 60.48 168 P **P** **16 15 52.9 +0.9**
comp=Z,31nm,1.6s
VRI Vrincioaia 60.59 308 P **P** **16 15 52.4 -0.4**
comp=Z,18nm,1.3s
ELL Elmali 60.89 298 IAmb IAmb 16 15 58.6
comp=Z,21nm,1.0s
AS31 Alice Springs 61.00 149 P **P** **16 15 54.8 -0.9**
ASAR Alice Springs 61.00 149 P **P** **16 15 55.4 -0.3**
comp=Z,13nm,0.8s,baz=330,slow=6.4,SNR=64
ASAR LR LR 16 45 52.7
comp=Z,33nm,18.2s,baz=311,slow=40
comp=Z,13nm,0.8s
ASAR Alice Springs 61.00 149 P **P** **16 15 55.1 -0.6**
QIS Mount Isa 61.14 142 P **P** **16 15 56.3 -0.4**
QIS Mount Isa 61.14 142 P **P** **16 15 56.5 -0.2**
TNA Tin City 61.46 28 P **P** **16 15 58.6 +0.4**
TNA IAmb IAmb 16 15 59.6
comp=Z,20nm,1.1s
TNA Tin City 61.46 28 P **P** **16 15 58.7 +0.4**
baz=282,SNR=5.8
MTSU Mount Surprise 61.85 136 P **P** **16 16 02.7 +1.1**
comp=Z,9.3nm,0.9s
MTSU Mount Surprise 61.85 136 P **P** **16 16 02.9 +1.3**
C16K Lisburne Hills 61.88 25 P **P** **16 16 01.2 +0.1**
baz=282
F14K Arctic Creek 62.13 28 P **P** **16 16 03.5 +0.7**
baz=283
C17K DeLong Mountai 62.62 25 P **P** **16 16 06.2 +0.1**
baz=284
ANM Nome 62.74 29 P **P** **16 16 07.4 +0.5**
ANM IAmb IAmb 16 16 08.7
comp=Z,23nm,1.0s
ANM Nome 62.74 29 P **P** **16 16 07.4 +0.5**
ANM pmax pmax
comp=Z,23nm,1.0s
ANM Nome 62.74 29 P **P** **16 16 07.9 +1.0**
baz=284,SNR=8.2
F15K North Star Dit 62.75 28 IAmb IAmb 16 16 08.7
comp=Z,19nm,1.0s
F15K North Star Dit 62.75 28 P **P** **16 16 07.3 +0.3**
baz=284
RDOG Red Dog Mine 62.82 25 P **P** **16 16 07.4 -0.1**
RDOG Red Dog Mine 62.82 25 P **P** **16 16 07.3 -0.1**
baz=285,SNR=5.7
D17K Noatak River 62.85 25 P **P** **16 16 08.0 +0.4**
baz=285,SNR=15
G15K Niukluk 63.18 28 P **P** **16 16 10.5 +0.7**
baz=285
KLBR Kellerberrin 63.25 167 P **P** **16 16 11.5 +0.9**
comp=Z,39nm,1.0s
C18K Utukok River 63.27 24 IAmb IAmb 16 16 11.8
comp=Z,20nm,0.8s
C18K Utukok River 63.27 24 P **P** **16 16 11.0 +0.5**
baz=286,SNR=15
KARP Karpathos 63.38 297 P **P** **16 16 11.9 +0.1**
M11K Mekoryuk 63.46 34 P **P** **16 16 12.5 +0.8**
baz=286
E17K Hotham Inlet 63.48 26 P **P** **16 16 12.2 +0.4**
baz=286,SNR=36
C19K Lookout Ridge 63.70 23 P **P** **16 16 14.0 +0.7**
baz=287
K13K Kusilvak Mount 63.75 32 P **P** **16 16 14.2 +0.6**
baz=286
G16K Koyuk River 63.75 28 P **P** **16 16 13.9 +0.3**
baz=287
E18K Tukpahlearik C 63.84 25 P **P** **16 16 14.7 +0.5**
baz=287
OJC Ojcow 63.85 315 P **P** **16 16 14.8 +0.3**
OJC Ojcow 63.85 315 P **P** **16 16 14.8 +0.3**
F17K Baldwin Pennin 63.88 27 P **P** **16 16 15.1 +0.6**
baz=287
A21K Barrow 63.98 21 P **P** **16 16 15.3 +0.4**
baz=289
J14K Nanvaranak Lak 64.01 31 IAmb IAmb 16 16 17.1
comp=Z,29nm,1.1s
J14K Nanvaranak Lak 64.01 31 P **P** **16 16 15.9 +0.6**
baz=287
H16K Elim 64.02 29 P **P** **16 16 15.5 +0.1**
baz=287,SNR=23
B20K Meade River 64.23 22 P **P** **16 16 17.4 +0.8**
baz=289
HFS Hagfors 64.27 326 P **P** **16 16 15.6 -1.5**
comp=Z,3.6nm,0.6s,baz=100,slow=8.1,SNR=11
comp=Z,3.6nm,0.6s
D19K Kuna River 64.40 24 P **P** **16 16 18.3 +0.4**
baz=289
G17K Kiwalik Mounta 64.40 27 P **P** **16 16 18.3 +0.5**
baz=288
F18K Selawik 64.45 26 P **P** **16 16 18.6 +0.5**
baz=288
M13K Dall Lake 64.81 33 P **P** **16 16 21.6 +1.0**
baz=288
L14K Kuka Creek 64.83 32 P **P** **16 16 21.9 +1.3**
baz=288
D20K Etivluk River 64.85 23 P **P** **16 16 21.3 +0.5**
baz=290,SNR=31
H17K Granite Mounta 64.88 28 P **P** **16 16 21.6 +0.6**
baz=289
I17K Unalakleet 64.89 29 P **P** **16 16 22.0 +0.9**
baz=289,SNR=12
K15K Wolf Creek Mou 65.04 31 P **P** **16 16 23.2 +1.1**
baz=289,SNR=8.1
G18K Tagagawik 65.06 27 IAmb IAmb 16 16 23.1
comp=Z,9.9nm,0.8s
G18K Tagagawik 65.06 27 P **P** **16 16 22.6 +0.4**
baz=290,SNR=6.3
E19K Redstone River 65.06 25 IAmb IAmb 16 16 23.5
comp=Z,22nm,1.1s
E19K Redstone River 65.06 25 P **P** **16 16 22.5 +0.4**
baz=290,SNR=11
F19K Shaleruckik Mo 65.08 26 P **P** **16 16 22.3 0.0**
baz=290
J16K Anvik River 65.13 30 P **P** **16 16 23.3 +0.7**
baz=289
FORT Forrest 65.14 158 P **P** **16 16 23.3 +0.3**
comp=Z,16nm,0.9s
E20K Nigu River 65.15 24 P **P** **16 16 23.5 +0.6**
baz=291
NB2 NORSAR Subarra 65.16 328 P **P** **16 16 22.1 -0.8**
comp=Z,4.5nm,0.9s,baz=73,slow=6.5
NOA NORSAR Array B 65.16 328 P **P** **16 16 21.4 -1.6**
comp=Z,3.1nm,0.9s,baz=77,slow=6.0,SNR=7.3
NOA LR LR 16 44 29.3
comp=Z,111nm,18.9s,baz=75,slow=36
comp=Z,3.1nm,0.9s
STEB Steborice 65.18 315 *eP* **P** **16 16 23.4 +0.2**
UNV Unalaska Valle 65.24 41 P **P** **16 16 23.9 +0.4**
baz=289
L15K Ungalak Mounta 65.26 32 P **P** **16 16 24.0 +0.4**
baz=289
LIT Litokhoron 65.30 303 IAmb IAmb 16 16 25.7
comp=Z,17nm,1.5s
C21K Knifeblade Rid 65.31 23 P **P** **16 16 24.2 +0.5**
baz=291
B22K Teshekpuk Lake 65.31 21 P **P** **16 16 24.4 +0.7**
baz=292
M14K Bethel 65.35 33 P **P** **16 16 25.2 +1.1**
baz=289,SNR=7.4
MORC Moravsky Berou 65.37 315 P **P** **16 16 24.8 +0.2**
MORC Moravsky Berou 65.37 315 P **P** **16 16 24.8 +0.2**
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 65.37 315 *eP* **P** **16 16 24.9 +0.3**
H18K Honhosa River 65.42 27 IAmb IAmb 16 16 25.8
comp=Z,18nm,0.8s
H18K Honhosa River 65.42 27 P **P** **16 16 25.1 +0.5**
baz=290
G19K Purcell Mounta 65.57 26 IAmb IAmb 16 16 26.7
comp=Z,12nm,0.9s
JAVC Velka Javorina 65.60 314 *eP* **P** **16 16 27.4 +1.4**
TATA Tatra Isabel 65.70 117 P **P** **16 16 28.7 +1.7**
N14K Kuskokwak Cree 65.75 33 P **P** **16 16 27.2 +0.5**
baz=290
F20K Avaraart Lake 65.75 25 P **P** **16 16 27.1 +0.5**
baz=292
SMOL Smolenice 65.86 313 *eP* **P** **16 16 29.4 +1.7**
OSTC Ostas 65.92 316 *eP* **P** **16 16 27.7 -0.4**
OSTC Ostas 65.92 316 *eP* **P** **16 16 27.7 -0.4**
DPC Dobruska-Polom 65.93 315 *eP* **P** **16 16 28.7 +0.6**
DPC Dobruska-Polom 65.93 315 *eP* **P** **16 16 28.7 +0.6**
M15K Kasigluk River 65.96 32 P **P** **16 16 29.0 +1.0**
baz=290
MODS Modra-Piesok 66.00 313 *eP* **P** **16 16 28.8 +0.2**
MODS pmax pmax
comp=Z,107nm,2.4s
MODS Modra-Piesok 66.00 313 *eP* **P** **16 16 28.8 +0.2**
CHVC Chvalec 66.01 316 *eP* **P** **16 16 29.3 +0.7**
CHVC Chvalec 66.01 316 *eP* **P** **16 16 29.3 +0.7**
H19K Roundabout Mou 66.04 27 P **P** **16 16 29.4 +0.9**
baz=292
UPC Upice 66.06 316 *eP* **P** **16 16 30.1 +1.2**
UPC Upice 66.06 316 *eP* **P** **16 16 30.1 +1.2**
VRAC Vranov 66.11 314 LR LR 16 47 11.5
comp=Z,194nm,19.4s,baz=58,slow=38
VRAC Vranov 66.11 314 *eP* **P** **16 16 29.0 -0.3**
D22K Ayikyak River 66.11 23 IAmb IAmb 16 16 30.8
comp=Z,22nm,0.8s
D22K Ayikyak River 66.11 23 P **P** **16 16 29.5 +0.6**
baz=293
L16K Owhat River 66.15 31 P **P** **16 16 30.0 +0.7**
baz=291
GCSA Galena City Sc 66.16 28 P **P** **16 16 29.8 +0.6**
baz=292,SNR=21
ZST Bratislava 66.17 313 *eP* **P** **16 16 32.7 +3.0**
ZST Bratislava 66.17 313 *eP* **P** **16 16 32.7 +3.0**
O14K Tigyukauivet M 66.18 34 P **P** **16 16 30.1 +0.7**
baz=290
K17K Iditarod 66.31 30 P **P** **16 16 31.3 +1.0**
baz=291
KRUC Moravsky 66.32 314 *eP* **P** **16 16 31.2 +0.6**
N15K Kwethluk River 66.42 33 P **P** **16 16 31.6 +0.6**
baz=291
F21K Alatna River 66.50 25 P **P** **16 16 31.8 +0.3**
baz=293
L17K Donlin 66.52 31 P **P** **16 16 32.6 +1.0**
baz=291
M16K Timber Creek 66.63 32 IAmb IAmb 16 16 34.7
comp=Z,32nm,1.1s
M16K Timber Creek 66.63 32 P **P** **16 16 33.1 +0.8**
baz=291,SNR=5.5
H20K Anotleneega Mo 66.66 27 P **P** **16 16 33.1 +0.6**
baz=293
J18K Innoko River 66.70 29 P **P** **16 16 33.3 +0.5**
baz=292
D23K Nanushuk River 66.74 22 P **P** **16 16 34.1 +1.1**
baz=295
PDG Podgorica 66.76 307 IAmb IAmb 16 16 35.5
comp=Z,14nm,1.0s
G21K Allakaket 66.77 25 P **P** **16 16 33.8 +0.6**
baz=294,SNR=27
O15K Ungalikthiuk R 66.90 34 P **P** **16 16 35.1 +0.9**
baz=291
N16K Nishlik Lake 66.92 32 P **P** **16 16 35.6 +1.4**
baz=292,SNR=5.6
J19K Poorman 66.95 28 IAmb IAmb 16 16 36.1
comp=Z,31nm,1.0s
J19K Poorman 66.95 28 P **P** **16 16 35.5 +1.2**
baz=293,SNR=14
CONA Conrad Observa 67.05 313 *eP* **P** **16 16 35.3 -0.1**
comp=Z,1.0nm,0.6s
I20K Naaghedeneel 67.09 27 P **P** **16 16 36.3 +1.2**
baz=293
BRG Berggiesshubel 67.17 317 *eP* **P** **16 16 35.9 -0.1**
comp=Z,4.4nm,0.8s,baz=68,slow=6.4
BRG Berggiesshubel 67.17 317 *i* P **P** **16 16 36.7 +0.7**
BRG Amp 16 16 37.4
comp=Z,6.1nm,1.0s
M17K Holitna River 67.18 31 P **P** **16 16 37.2 +1.4**
baz=292
L18K Granite Mounta 67.19 30 P **P** **16 16 37.0 +1.1**
baz=293
TOLK Toolik Lake Re 67.24 22 P **P** **16 16 36.8 +0.6**
baz=296
H21K Melozitna Rive 67.38 26 P **P** **16 16 38.0 +0.9**
baz=294
J20K Nowinta River 67.47 28 P **P** **16 16 38.8 +1.2**
baz=294,SNR=21
ARSA Arzberg 67.50 313 *eP* **P** **16 16 38.2 0.0**
comp=Z,0.4nm,0.3s
ZVC Zvikov 67.54 315 *eP* **P** **16 16 38.9 +0.6**
CLL Collm 67.56 317 *i* P **P** **16 16 38.9 +0.4**
CLL MLR MLR
comp=Z,300nm,20.3s
CLL Collm 67.56 317 *i* P **P** **16 16 38.9 +0.4**
CLL *e*SSS SSS 16 33 06.0
CLL AMS AMS 16 44 00.0
comp=N,200nm,19.8s
CLL AMS AMS 16 44 00.0
comp=E,200nm,18.7s
CLL AMS AMS 16 47 00.0
comp=N,100nm,21.6s
CLL AMS AMS 16 47 00.0
comp=E,200nm,20.5s
CLL AMS AMS 16 47 00.0
comp=Z,300nm,20.3s
CLL Collm 67.56 317 *eP* **P** **16 16 38.6 +0.2**
comp=Z,8.7nm,1.1s,baz=68,slow=6.4
CLL *e*L L 16 47 49.5
comp=Z,295nm,20.3s
O16K Kokwok River B 67.57 33 P **P** **16 16 39.5 +1.2**
baz=293,SNR=8.2
HSKC Hora Svate Kat 67.57 316 *eP* **P** **16 16 38.8 +0.2**
N17K Nushagak Hills 67.63 32 P **P** **16 16 39.3 +0.7**
baz=293
COLD Coldfoot 67.66 24 P **P** **16 16 39.5 +0.7**
baz=296,SNR=32
INKA Innaminka 67.66 146 P **P** **16 16 39.6 +0.3**
CKRC Cesky Krumlov 67.69 314 *eP* **P** **16 16 39.7 +0.3**
CKRC Cesky Krumlov 67.69 314 *eP* **P** **16 16 39.7 +0.3**
GROS Grobnik 67.81 312 *eP* **P** **16 16 40.5 +0.3**
H22K Ishtalitna Cre 67.82 25 P **P** **16 16 40.8 +1.0**
baz=296
P16K Nushagak River 67.83 34 P **P** **16 16 40.8 +0.8**
baz=293
K20K Telida 67.84 29 IAmb IAmb 16 16 42.2
comp=Z,20nm,1.0s
K20K Telida 67.84 29 P **P** **16 16 41.3 +1.3**
baz=294
M18K Stony River 67.85 31 P **P** **16 16 40.8 +0.7**
baz=294,SNR=6.7
E24K Your Creek 67.86 23 P **P** **16 16 41.1 +0.9**
baz=297
I21K Tanana 67.90 26 IAmb IAmb 16 16 42.4
comp=Z,26nm,0.9s
I21K Tanana 67.90 26 P **P** **16 16 41.3 +1.0**
baz=295,SNR=16
G23K Bananza Creek 67.95 24 P **P** **16 16 41.1 +0.5**
baz=296
D25K Kavik River 67.95 21 P **P** **16 16 41.3 +0.6**
baz=299
O17K Koliganek Bris 67.96 33 P **P** **16 16 41.5 +0.7**
baz=293
PERS Pernice 67.99 312 *eP* **P** **16 16 41.8 +0.5**
L19K White Mountain 68.00 30 IAmb IAmb 16 16 43.3
comp=Z,20nm,0.9s
L19K White Mountain 68.00 30 P **P** **16 16 41.6 +0.5**
baz=294,SNR=8.0
KHC Kasperske Hory 68.02 315 ||| *eP* **P** **16 16 43.8 +2.3**
KHC pmax pmax
comp=Z,23nm,3.2s
KHC Kasperske Hory 68.02 315 *eP* P 16 16 33.1 -8.4
SOKA Soboth 68.03 312 *eP* **P** **16 16 41.7 +0.1**
comp=Z,2.7nm,0.8s
GEC2 GERESS Array S 68.06 315 *eL* L 16 47 48.2
comp=Z,219nm,21.4s
GERES GERESS Array B 68.06 315 P **P** **16 16 41.1 -0.6**
comp=Z,1.1nm,0.7s,baz=87,slow=7.6,SNR=4.6
GERES LR LR 16 48 20.6
comp=Z,253nm,19.9s,baz=72,slow=38
comp=Z,1.1nm,0.7s
BSEG Bad Segeberg 68.11 321 *eP* **P** **16 16 42.8 +1.0**
comp=Z,7.6nm,0.9s,baz=68,slow=6.4
BSEG *e*L L 16 48 12.9
comp=Z,92nm,19.6s
FLTG Flechtingen 68.20 319 *eP* **P** **16 16 42.3 -0.1**
comp=Z,6.1nm,0.9s,baz=68,slow=6.4
PDKS Podkum 68.28 311 *eP* **P** **16 16 43.9 +0.7**
CHUM Lake Minchumin 68.33 28 P **P** **16 16 43.6 +0.6**
baz=296,SNR=11
WET Wettzell 68.44 315 *eL* L 16 48 20.2
comp=Z,330nm,19.7s
QLP Quilpie 68.49 142 P **P** **16 16 45.5 +1.0**
comp=Z,40nm,2.8s
QLP Quilpie 68.49 142 P **P** **16 16 44.9 +0.4**
P17K Kvichak River 68.50 33 P **P** **16 16 44.9 +0.7**
baz=294
ROTZ Rotzenmuhle 68.61 316 *eP* **P** **16 16 46.1 +1.0**
comp=Z,3.7nm,1.4s,baz=68,slow=6.4
C27K Jago River 68.62 20 P **P** **16 16 45.3 +0.5**
baz=301
MOX Moxa 68.63 317 *eL* L 16 48 23.4
comp=Z,278nm,18.8s
CHNA Chernabura Isl 68.67 38 P **P** **16 16 46.1 +0.8**
baz=293
N19K Bonanza Creek 68.73 31 P **P** **16 16 46.8 +1.0**
baz=295
BPAW Bear Paw Mtn. 68.76 27 IAmb IAmb 16 16 47.5
comp=Z,26nm,0.9s
BPAW Bear Paw Mtn. 68.76 27 P **P** **16 16 46.2 +0.4**
baz=297,SNR=18
E25K Arctic Village 68.80 22 P **P** **16 16 46.4 +0.4**
baz=300
PPLA Purkeypile 68.81 29 P **P** **16 16 47.0 +0.7**
baz=296,SNR=12
G24K Hadweenzic Riv 68.85 24 P **P** **16 16 46.9 +0.6**
baz=299
M20K Styx River 68.86 30 P **P** **16 16 47.5 +0.9**
baz=296
CLZ Clausthal 68.88 318 *eP* **P** **16 16 47.3 +0.5**
comp=Z,16nm,1.2s,baz=68,slow=6.4
I23K Minto, Yukon-K 68.90 26 IAmb IAmb 16 16 48.5
comp=Z,15nm,0.9s
I23K Minto, Yukon-K 68.90 26 P **P** **16 16 47.1 +0.5**
baz=298,SNR=10.0
KBA Koelnbreinsper 68.95 313 *eP* **P** **16 16 47.7 +0.3**
comp=Z,1.1nm,0.5s
P18K Big Mountain, 68.99 33 P **P** **16 16 47.7 +0.4**
baz=295
F25K Christian Rive 69.04 23 IAmb IAmb 16 16 49.7
comp=Z,22nm,0.9s
F25K Christian Rive 69.04 23 P **P** **16 16 48.4 +0.9**
baz=300
O19K Port Alsworth 69.06 32 IAmb IAmb 16 16 53.4
comp=Z,17nm,0.8s
O19K Port Alsworth 69.06 32 P **P** **16 16 48.6 +1.0**
baz=295
H24K Noodor Dome 69.12 25 IAmb IAmb 16 16 50.0
comp=Z,18nm,0.9s
H24K Noodor Dome 69.12 25 P **P** **16 16 48.8 +0.7**
baz=299,SNR=11
R17L Mt. Peulik Vol 69.19 35 P **P** **16 16 49.0 +0.4**
baz=295
SABO M.te Sabotino 69.21 312 IAmb IAmb 16 16 51.8
comp=Z,57nm,1.8s
GRF Grafenberg Arr 69.23 316 *eL* L 16 48 53.0
comp=Z,233nm,18.3s
LESA Schwarzleotal 69.23 313 *eP* **P** **16 16 49.7 +0.6**
comp=Z,4.6nm,0.7s
NEA2 Nenana 69.27 26 P **P** **16 16 49.5 +0.6**
baz=298,SNR=8.6
TRF Thorofare Moun 69.33 28 P **P** **16 16 49.7 +0.2**
baz=297
Q18K Katmai Hardscr 69.41 33 P **P** **16 16 49.9 -0.1**
baz=295
BMAR Burnt Mountain 69.47 23 P **P** **16 16 51.3 +1.1**
F26K Sheenjek River 69.48 22 P **P** **16 16 50.5 +0.3**
baz=301
SKT Skwentna 69.49 29 IAmb IAmb 16 16 51.6
comp=Z,29nm,1.2s
SKT Skwentna 69.49 29 P **P** **16 16 50.5 +0.1**
baz=297,SNR=6.1
SPCR Spurr Chakacha 69.56 30 P **P** **16 16 50.9 +0.1**
baz=297

COLA College 69.60 26 P P 16 16 50.9 0.0
COLA College 69.60 26 P P 16 16 51.1 +0.2
COLA College 69.60 26 *c* iP P 16 16 51.1 +0.2
COLA pmax pmax
comp=Z,60nm,0.9s
COLA College 69.60 26 P P 16 16 51.7 +0.8
baz=299
SPU Mount Spurr 69.63 30 IAmb IAmb 16 16 53.8
comp=Z,17nm,1.0s
POKR Poker Plat Res 69.64 25 P P 16 16 51.6 +0.5
baz=299,SNR=20
D27M Malcolm River 69.64 20 P P 16 16 52.1 +0.8
baz=303
ACER Acerenza 69.68 306 IAmb IAmb 16 16 53.3
comp=Z,21nm,1.0s
FYU Fort Yukon 69.70 24 IAmb IAmb 16 16 53.6
comp=Z,19nm,1.0s
WRH Wood River Hil 69.70 26 IAmb IAmb 16 16 54.0
comp=Z,27nm,1.4s
MCK McKinley 69.73 27 IAmb IAmb 16 16 53.5
comp=Z,17nm,0.9s
MCK McKinley 69.73 27 P P 16 16 52.2 +0.3
baz=298,SNR=8.1
TIP Timpagrande 69.75 304 IAmb IAmb 16 16 55.6
comp=Z,27nm,1.5s
P19K Oil Pt 69.79 32 P P 16 16 52.5 +0.2
baz=296
CUT Chulitna 69.82 29 P P 16 16 52.2 -0.1
baz=298,SNR=6.3
RND Reindeer 69.92 27 IAmb IAmb 16 16 53.8
comp=Z,20nm,1.0s
Q19K Cape Douglas, 69.92 33 P P 16 16 53.7 +0.6
baz=296
WTTA Wattenberg 69.95 314 *e*P P 16 16 53.6 0.0
comp=Z,1.1nm,0.3s
G26K Porcupine Rive 69.99 23 P P 16 16 53.9 +0.6
baz=302
IL31 70.01 26 IAmb IAmb 16 16 55.1
comp=Z,13nm,1.0s
ILAR Eielson Array 70.01 26 P P 16 16 53.0 -0.4
comp=Z,12nm,1.1s,baz=277,slow=5.6,SNR=47
ILAR LR LR 16 50 49.5
comp=Z,113nm,18.2s,baz=268,slow=39
comp=Z,12nm,1.1s
ILAR Eielson Array 70.01 26 P P 16 16 52.7 -0.8
SUA Susitna One 70.06 30 P P 16 16 53.9 -0.1
baz=298,SNR=22
PRP Porcupine Dome 70.13 25 P P 16 16 54.8 +0.4
baz=301,SNR=44
HDA Harding Lake 70.17 26 IAmb IAmb 16 16 54.7
comp=Z,18nm,1.2s
HDA Harding Lake 70.17 26 P P 16 16 54.2 -0.3
baz=300,SNR=5.3
M22K Willow 70.19 29 P P 16 16 54.3 -0.3
baz=298
CAPN Captain Cook N 70.21 30 P P 16 16 54.7 -0.1
baz=298
SQTA Sankt Quirin 70.23 314 *i* P P 16 16 55.1 -0.2
comp=Z,2.7nm,0.4s
MOTA Moosalm 70.24 314 *e*P P 16 16 55.6 +0.1
comp=Z,1.5nm,0.5s
D28M Stokes Point 70.25 20 P P 16 16 54.8 -0.1
baz=305
WAT1 Susitna Watana 70.32 28 P P 16 16 55.0 -0.5
baz=299
LODK Lodwar 70.37 262 P P 16 16 56.4 -0.2
E28M Babbage River 70.43 20 P P 16 16 55.9 -0.2
baz=305
HOM Homer 70.51 32 P P 16 16 56.4 -0.2
baz=298
FETA Feichten 70.61 314 *e*P P 16 16 57.6 -0.1
comp=Z,3.1nm,0.6s
Q20K Shuyak Island 70.65 33 P P 16 16 57.3 -0.2
baz=297
J25K Salcha River, 70.65 25 P P 16 16 57.2 -0.3
baz=301,SNR=8.4
TNS Taunus Mts 70.65 317 *e*L L 16 49 43.7
comp=Z,261nm,19.2s
DHY Denali Highway 70.67 27 IAmb IAmb 16 16 58.5
comp=Z,18nm,1.0s
DHY Denali Highway 70.67 27 P P 16 16 57.4 -0.3
baz=300,SNR=7.3
RC01 Rabbit Creek A 70.67 30 IAmb IAmb 16 16 58.6
comp=Z,24nm,0.6s
RC01 Rabbit Creek A 70.67 30 P P 16 16 57.5 0.0
baz=299,SNR=7.8
GHO Glory Hole Cre 70.68 29 IAmb IAmb 16 16 58.6
comp=Z,32nm,1.4s
PMR Palmer 70.68 29 P P 16 16 58.0 +0.4
PMR Palmer 70.68 29 P P 16 16 57.7 +0.1
baz=299,SNR=20
CAMP Campotosto 70.72 308 IAmb IAmb 16 17 01.0
comp=Z,22nm,1.4s
FDMO Fiordimonte 70.73 309 IAmb IAmb 16 17 00.1
comp=Z,13nm,0.9s
SLKM Skilak Lake 70.74 30 IAmb IAmb 16 16 59.7
comp=Z,12nm,0.9s
WAT6 Susitna Watana 70.77 28 P P 16 16 58.2 -0.1
baz=300,SNR=7.3
G27K Doyon Strip 70.78 23 P P 16 16 58.1 0.0
baz=304
OHAK Old Harbor 70.86 34 P P 16 16 58.7 -0.1
baz=297
BRSE Bradley Lake S 70.87 31 P P 16 16 58.8 0.0
baz=298
F28M Old Crow 70.90 21 P P 16 16 59.2 +0.3
baz=305
SML Sawmill 70.91 29 P P 16 16 59.4 +0.3
baz=300,SNR=17
K24K Donnelly Dome 70.92 26 P P 16 16 58.9 -0.2
baz=301,SNR=22
KDAK Kodiak Island 70.94 34 LR LR 16 49 52.8
comp=Z,137nm,20.3s,baz=234,slow=37
KDAK Kodiak Island 70.94 34 P P 16 16 59.4 +0.1
KDAK Kodiak Island 70.94 34 P P 16 16 59.4 +0.1
KDAK pmax pmax
comp=Z,39nm,0.8s
KDAK Kodiak Island 70.94 34 P P 16 16 59.2 0.0
baz=297
O22K Cooper Landing 70.97 30 P P 16 16 59.2 -0.2
baz=299
MURB Monte Urbino 71.01 309 IAmb IAmb 16 17 05.5
comp=Z,34nm,1.2s
NEEM North Greenlan 71.05 355 *i* P P 16 17 00.2 +0.2
E29M Blow River 71.05 20 P P 16 17 00.2 +0.4
baz=306
KNK Knik Glacier 71.05 29 P P 16 17 00.4 +0.5
baz=300,SNR=9.1
H27K Steamboat Moun 71.14 23 P P 16 17 00.7 +0.3
baz=304
M23K Glacier View 71.17 29 P P 16 17 00.6 -0.1
baz=300,SNR=9.5
KIBK Kibwezi 71.17 255 P P 16 17 00.9 -0.5
KIBK IAmb IAmb 16 17 04.8
comp=Z,21nm,1.2s
DAVOX Davos/Dischmat 71.24 314 LR LR 16 49 39.8
comp=Z,145nm,21.9s,baz=63,slow=37
CESX Cesi 71.24 309 IAmb IAmb 16 17 05.2
comp=Z,26nm,1.6s
SEW Seward 71.27 31 P P 16 17 01.3 +0.1
baz=299,SNR=8.2
RIDG Independent Ri 71.30 26 P P 16 17 01.2 -0.3
baz=302,SNR=14
SCM Sheep Creek Mo 71.31 28 P P 16 17 02.0 +0.4
baz=300,SNR=7.7
J26L Joseph Creek 71.37 25 P P 16 17 01.8 -0.1
baz=303
I27K Kandik River 71.46 24 P P 16 17 02.4 0.0
baz=304
PAX Paxson 71.47 27 IAmb IAmb 16 17 03.6
comp=Z,22nm,1.2s
PAX Paxson 71.47 27 P P 16 17 02.6 0.0
baz=302,SNR=6.5
SCRK Sand Creek 71.50 26 IAmb IAmb 16 17 03.7
comp=Z,41nm,1.0s
SCRK Sand Creek 71.50 26 P P 16 17 02.5 -0.3
baz=302,SNR=30
STKA Stephens Creek 71.51 147 P P 16 17 03.2 +0.3
comp=Z,44nm,1.2s
STKA Stephens Creek 71.51 147 P P 16 17 01.7 -1.3
comp=Z,6.2nm,0.9s,baz=331,slow=10,SNR=5.3
STKA LR LR 16 51 53.5
comp=Z,38nm,18.7s,baz=20,slow=39
comp=Z,6.2nm,0.9s
BFO Black Forest 71.53 316 *e*L L 16 50 11.7
comp=Z,252nm,20.3s
M24K Tolsona, Glenn 71.64 28 P P 16 17 04.1 +0.5
baz=301,SNR=16

DOT Dot Lake 71.65 26 IAmb IAmb 16 17 05.7
comp=Z,20nm,0.9s
OSSC Osservatorio P 71.75 310 IAmb IAmb 16 17 16.8
comp=Z,15nm,1.2s
G29M Pine Creek 71.89 22 P P 16 17 05.3 +0.4
baz=306
GLI Glacier Island 71.89 29 P P 16 17 05.2 +0.2
baz=301
HARP HAARP 71.89 27 P P 16 17 05.3 +0.3
baz=302
A36M Sachs Harbour 71.92 14 P P 16 17 04.9 0.0
baz=316
BHOU Houvegnez 72.01 318 *d*PcP PcP 16 17 24.4 0.0
KLU Klutina 72.06 28 P P 16 17 06.5 +0.4
baz=302,SNR=31
I28M Miner Creek 72.12 23 P P 16 17 06.7 +0.2
baz=305
F30M Barrier River 72.16 20 P P 16 17 07.0 +0.5
baz=308
MENT Mentasta 72.16 27 P P 16 17 07.6 +1.0
P23K Montague Islan 72.21 30 P P 16 17 07.1 +0.2
baz=301
WLF Walferdange 72.23 318 IAmb IAmb 16 17 09.2
comp=Z,24nm,1.1s
WLF Walferdange 72.23 318 *d*P P 16 17 08.2 +1.0
comp=Z,14nm,0.9s
WLF Walferdange 72.23 318 *e*P P 16 17 08.4 +1.2
comp=Z,28nm,1.1s,baz=68,slow=6.4
DIV Divide 72.31 29 IAmb IAmb 16 17 09.2
comp=Z,27nm,0.8s
INK Inuvik 72.38 19 IAmb IAmb 16 17 08.9
comp=Z,25nm,0.8s
INK Inuvik 72.38 19 P P 16 17 07.8 +0.1
baz=310,SNR=34
N25K Chitina, Valde 72.54 28 P P 16 17 09.4 +0.5
baz=302,SNR=16
EYAK Cordova Ski Ar 72.63 29 P P 16 17 10.5 +1.1
EYAK Cordova Ski Ar 72.63 29 P P 16 17 10.3 +0.9
baz=302,SNR=10
BMRD Maredsous 72.74 319 *d*P P 16 17 11.1 +0.9
UCC Uccle 72.74 319 *d*P P 16 17 09.7 -0.5
L27K Beaver Creek, 72.81 26 P P 16 17 10.9 +0.4
baz=304
BCAR Beaver Creek A 72.83 26 P P 16 17 11.2 +0.6
F31M Tsiigehtchic 72.87 20 IAmb IAmb 16 17 11.7
comp=Z,19nm,0.8s
F31M Tsiigehtchic 72.87 20 P P 16 17 10.9 +0.3
baz=310,SNR=12
BMRM Bremner River 72.88 28 P P 16 17 11.2 +0.2
baz=303,SNR=18
TULEG Thule 72.90 358 P P 16 17 10.4 -0.3
TULEG IAmb IAmb 16 17 12.0
comp=Z,14nm,1.0s
GLB Gilahina Butte 72.95 28 IAmb IAmb 16 17 13.1
comp=Z,27nm,0.8s
Q23K Middleton Isla 72.97 30 P P 16 17 11.3 -0.1
baz=302
G31M Satah River 73.05 21 P P 16 17 11.7 0.0
baz=310
DAWY Dawson 73.12 24 IAmb IAmb 16 17 13.4
comp=Z,15nm,0.9s
DAWY Dawson 73.12 24 P P 16 17 12.8 +0.4
baz=306,SNR=12
M27K Edge Creek, AK 73.19 27 IAmb IAmb 16 17 15.6
comp=Z,28nm,0.9s
M27K Edge Creek, AK 73.19 27 P P 16 17 12.9 0.0
baz=304,SNR=16
VRDI Verde Repeater 73.21 28 IAmb IAmb 16 17 14.8
comp=Z,19nm,0.8s
CMSA Cobar Meteorol 73.22 144 P P 16 17 14.3 +1.1
comp=Z,21nm,2.3s
CMSA Cobar Meteorol 73.22 144 P P 16 17 14.1 +0.9
MCARA McCarthy VSAT 73.29 28 IAmb IAmb 16 17 15.4
comp=Z,33nm,0.9s
MCARA McCarthy VSAT 73.29 28 P P 16 17 13.4 0.0
baz=304,SNR=8.4
J29N Klondike Camp 73.30 24 IAmb IAmb 16 17 15.3
comp=Z,19nm,0.8s
J29N Klondike Camp 73.30 24 P P 16 17 14.0 +0.6
baz=307,SNR=6.1
I30M Mount Dempster 73.45 23 P P 16 17 14.2 -0.1
baz=308
KAIM Kayak Island 73.53 29 P P 16 17 15.6 +0.9
baz=303
BVCY Beaver Creek 73.55 26 P P 16 17 15.5 +0.6
baz=305,SNR=14
CRQM Cirque 73.60 28 IAmb IAmb 16 17 28.2
comp=Z,21nm,0.9s
CRQE Cirque 73.62 28 P P 16 17 15.1 -0.3
baz=304
TGL Tana Glacier 73.72 28 IAmb IAmb 16 17 18.1
comp=Z,35nm,0.9s
H31M Peel River 73.74 22 P P 16 17 15.9 0.0
baz=310
SUMG Summit 73.86 349 P P 16 17 16.9 -0.1
SUMG IAmb IAmb 16 17 19.7
comp=Z,18nm,1.2s
SUMG Summit 73.86 349 P P 16 17 16.9 -0.1
SUMG pmax pmax
comp=Z,18nm,1.2s
SUMG Summit 73.86 349 *i* P P 16 17 17.0 0.0
J30M Hart River 73.87 23 P P 16 17 17.0 +0.2
baz=308
K29M Barlow Dome 73.92 24 P P 16 17 17.6 +0.5
baz=308
BARN Barnard Glacie 74.02 28 IAmb IAmb 16 17 19.9
comp=Z,13nm,0.7s
YUK3 Moose Creek 74.08 27 P P 16 17 18.7 +0.5
baz=306,SNR=6.3
C36M Paulatuk 74.13 16 IAmb IAmb 16 17 19.0
comp=Z,20nm,0.8s
C36M Paulatuk 74.13 16 P P 16 17 18.1 +0.1
baz=318,SNR=22
L29M L29M 74.15 25 P P 16 17 19.2 +0.8
baz=307
GRNC Granite Creek 74.17 28 IAmb IAmb 16 17 28.9
comp=Z,49nm,1.5s
CTG Chitna Glacier 74.20 28 P P 16 17 19.2 +0.3
baz=305,SNR=6.2
CTGM Chitina Glacie 74.21 28 IAmb IAmb 16 17 21.0
comp=Z,28nm,0.8s
MESA MESA 74.41 28 P P 16 17 20.4 +0.3
baz=305
M29M Somme Creek 74.43 25 P P 16 17 20.6 +0.4
baz=307
EKA Eskdalemuir Ar 74.45 326 P P 16 17 19.4 -0.8
comp=Z,4.8nm,0.9s,baz=54,slow=5.6,SNR=5.8
comp=Z,4.8nm,0.9s
YUK8 Steele Glacier 74.64 27 P P 16 17 22.0 +0.5
baz=306,SNR=7.0
MAYO Mayo, Yukon 74.64 24 IAmb IAmb 16 17 27.3
comp=Z,26nm,0.8s
MAYO Mayo, Yukon 74.64 24 P P 16 17 22.0 +0.9
baz=309
O28M Mount Upton 74.77 27 IAmb IAmb 16 17 29.6
comp=Z,16nm,0.9s
O28M Mount Upton 74.77 27 P P 16 17 22.6 +0.2
baz=306
M30M Minto, Yukon 74.96 25 P P 16 17 23.4 +0.3
baz=309,SNR=6.1
YUK4 Talbot Arm 75.03 26 P P 16 17 23.9 +0.2
baz=307
PINM Pinnacle 75.15 28 P P 16 17 25.0 +0.8
baz=306
YUK6 Outpost Mounta 75.39 27 P P 16 17 26.0 +0.2
baz=308
O29M Mount Kennedy 75.69 27 P P 16 17 27.6 +0.1
baz=308
HYT Haines Junctio 75.79 27 IAmb IAmb 16 17 29.9
comp=Z,16nm,0.9s
HYT Haines Junctio 75.79 27 P P 16 17 28.3 +0.3
baz=308,SNR=7.3
N31M Braeburn, Yuko 76.02 25 IAmb IAmb 16 17 31.4
comp=Z,30nm,0.9s
N31M Braeburn, Yuko 76.02 25 P P 16 17 29.6 +0.4
baz=310,SNR=8.3
M31M Drury Creek, Y 76.06 24 P P 16 17 29.7 +0.3
baz=311
O30N Mendenhall 76.36 26 IAmb IAmb 16 17 33.1
comp=Z,21nm,0.8s
O30N Mendenhall 76.36 26 P P 16 17 31.5 +0.3
baz=310,SNR=9.1
P30M Million Dollar 76.44 27 P P 16 17 31.8 +0.2
baz=309
KEST Kesra 76.55 304 P P 16 17 32.1 -0.6
comp=Z,6.8nm,0.8s,baz=61,slow=2.2,SNR=4.5
comp=Z,6.8nm,0.8s
KEST Kesra 76.55 304 IAmb IAmb 16 17 34.3
comp=Z,44nm,1.6s
WHY Whitehorse 76.89 26 P P 16 17 34.2 -0.1
baz=310
N32M Quiet Lake 77.23 25 P P 16 17 36.4 +0.3
baz=312
SKAG Skagway 77.50 27 P P 16 17 37.9 +0.4
baz=310
P33M Teslin, Yukon 77.96 25 P P 16 17 40.3 +0.2
baz=312
P32M Atlin 78.04 26 P P 16 17 40.9 +0.3
baz=312
S31K Pelican 78.11 28 P P 16 17 41.8 +0.9
baz=310
R32K Eaglecrest 78.59 28 P P 16 17 44.0 +0.3
baz=311
WRGLY Wrigley 78.90 20 P P 16 17 45.5 +0.3
baz=319
Q32M Nakina River 79.01 26 P P 16 17 46.4 +0.3
baz=313
SIT Sitka 79.07 29 P P 16 17 46.6 +0.4
baz=311
S32K Killisnoo 79.10 28 P P 16 17 46.7 +0.3
baz=311
R33M Jennings River 79.20 25 P P 16 17 47.2 +0.1
baz=314
DZM Mont Dzumac 79.29 124 *e*LR LR 16 42 26.1
comp=Z,170nm,22.7s
S34M Telegraph Cree 80.17 27 P P 16 17 52.4 +0.2
baz=314
DLBC Dease Lake 80.22 26 P P 16 17 52.9 +0.3
baz=315
U33K Whale Pass 80.61 29 P P 16 17 54.8 +0.3
baz=313
WRAK Wrangell Islan 80.72 28 P P 16 17 55.4 +0.3
baz=313
SFJD Kangerlussuaq 80.75 350 LR LR 16 55 32.3
comp=Z,68nm,20.2s,baz=22,slow=37
CRAG Craig 81.04 29 P P 16 17 57.6 +0.7
baz=313
KOTAN Kotaneelee Air 81.07 22 P P 16 17 57.8 +0.8
baz=319
T35M Bob Quinn 81.16 27 P P 16 17 57.7 +0.1
baz=315
TOAD Toad River Com 81.64 24 P P 16 18 00.7 +0.6
baz=318
V35K Ketchikan 81.77 29 P P 16 18 01.2 +0.4
baz=314
YKA Yellowknife Ar 81.93 17 P P 16 18 01.6 +0.2
comp=Z,4.9nm,0.9s,baz=331,slow=6.9,SNR=3.9
comp=Z,4.9nm,0.9s
YKA Yellowknife Ar 81.93 17 P P 16 18 01.4 -0.1
U35K Hyder 82.00 28 P P 16 18 03.0 +1.1
baz=315
ESDC Sonseca Array 83.53 313 P P 16 18 09.9 -0.4
comp=Z,1.5nm,0.9s,baz=46,slow=5.3,SNR=9.9
ESDC LR LR 16 58 17.2
comp=Z,105nm,18.2s,baz=30,slow=38
comp=Z,1.5nm,0.9s
ESDC Sonseca Array 83.53 313 P 16 18 10.4 +0.1
BBB Bella Bella 85.47 29 LR LR 17 02 26.2
comp=Z,72nm,18.4s,baz=288,slow=40
LSZ Lusaka 86.38 250 P P 16 18 24.4 -0.6
LSZ IAmb IAmb 16 18 27.3
comp=Z,20nm,1.1s
LSZ Lusaka 86.38 250 P P 16 18 24.4 -0.6
LSZ pmax pmax
comp=Z,20nm,1.2s
MD01 Midelt array s 87.97 307 P P 16 18 32.5 -0.1
EDM Edmonton 90.13 22 IAmb IAmb 16 18 44.2
comp=Z,23nm,0.9s
B08A Colville Reser 92.01 28 IAmb IAmb 16 20 40.8
comp=Z,10nm,0.6s
LTY Liberty 92.35 29 IAmb IAmb 16 18 57.4
comp=Z,7.6nm,0.9s
MXC Moxie City 93.04 29 IAmb IAmb 16 18 58.2
comp=Z,7.7nm,0.9s
LBTB Lobatse 93.66 243 LR LR 17 00 03.6
comp=Z,36nm,20.4s,baz=76,slow=35
TORD Torodi Ar. Bea 94.08 288 P P 16 19 00.6 -0.5
comp=Z,1.4nm,0.9s,baz=29,slow=2.2,SNR=5.4
TORD LR LR 17 07 46.0
comp=Z,83nm,18.4s,baz=354,slow=40
comp=Z,1.4nm,0.9s
TORD Torodi Ar. Bea 94.08 288 IAmb IAmb 16 19 04.6
comp=Z,2.2nm,1.1s
RAO Raoul Island 94.89 121 LR LR 17 02 22.5
comp=Z,55nm,18.1s,baz=321,slow=36
ULM Lac du Bonnet 97.36 13 LR LR 17 07 22.9
comp=Z,48nm,18.5s,baz=8.0,slow=38
PPT2 Papeete2 112.20 98 *e*LR LR 16 57 31.5
comp=Z,186nm,26.8s
PPT2 *e*LR LR 16 57 42.8
comp=Z,160nm,26.5s
TXAR Lajitas Array 114.50 27 PKP PKiKP 16 24 22.6 -0.2
comp=Z,0.6nm,0.8s,baz=213,slow=1.7,SNR=4.7
TBI Tubuai 114.76 103 *e*LR LR 16 58 48.6
comp=Z,429nm,33.0s
TAOE Nuku Hiva Isla 116.22 85 *e*LR LR 16 59 29.3
comp=Z,153nm,25.3s
ELIB Princess Elisa 116.24 200 *d*PKP PKiKP 16 24 28.4 +3.6
NVL N'lazarevskaya 119.55 202 *e*PKIKP PKiKP 16 24 31.8 +0.8
NVL *e* 16 25 54.1
NVL *e*PPP PPP 16 28 25.9
NVL *e* 16 31 43.9
NVL *e*SS SS 16 42 19.4 +2.5
NVL *e*SSS SSS 16 46 44.5
NVL pmax pmax
comp=Z,13nm,1.3s
NVL MLR MLR
comp=Z,465nm,23.0s
ROSC El Rosal 144.60 358 PKP PKPdf 16 25 19.5 -0.6
comp=Z,18nm,0.6s,baz=78,slow=3.9,SNR=9.2
BDFB Brasilia 150.73 295 PKPbc PKPbc 16 25 34.2 -1.0
comp=Z,3.3nm,0.7s,baz=34,slow=3.6,SNR=6.7
BDFB Brasilia 150.73 295 PKiKP PKiKP 16 25 35.8 -0.1
BDFB Brasilia 150.73 295 PKiKP PKiKP 16 25 35.8 -0.1

IDC ***02*** *16:14:06.6±8.6,30.˚51S×179.˚52W,h388km±92km, mb2.8/2, mbtmp3.9/3, Error ellipse: s-maj=91.6km s-min=36.8km az=12.0*
WEL ***02*** *16:14:13.6±0.9,31.˚5±21.˚1×18.˚0E±6.˚1, h329km±34km, M4.1/7, mB4.4/7, ML4.5/10, MLv4.6/7, Mw(mB)3.5/7, Error ellipse: s-maj=84.3km s-min=6.6km az=108.4*

ISC 02 16:14:08.8±0.9, 30.˚39S±0.˚09×179.˚5E±0.˚1, h350km, n34, σ1§57/42, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.53**	**64**	P	**Pn**	**16 15 06.3**	**+2.2**
GLKZ				S	S	**16 15 48.5**	**0.0**
WMGZ	**Waiomatatini S**	**7.46**	**186**	P	**Pn**	**16 15 57.1**	**+0.7**
WMGZ				S	**S**	**16 17 24.4**	**+0.3**
HAZ	**Te Kaha**	**7.48**	**190**	P	**Pn**	**16 15 59.1**	**+2.5**
HAZ				S	**S**	**16 17 25.2**	**+0.7**
PKGZ	**Pakihiroa**	**7.55**	**188**	P	**Pn**	**16 16 00.8**	**+3.3**
PKGZ				S	**S**	**16 17 25.4**	**-0.6**
RUGZ	**Raukumara Rang**	**7.70**	**191**	P	**Pn**	**16 16 01.0**	**+1.7**
RUGZ				S	**S**	**16 17 26.6**	**-2.9**
PUZ	**Puketiti**	**7.73**	**187**	P	**Pn**	**16 16 01.6**	**+2.0**
PUZ				S	**S**	**16 17 27.7**	**-2.3**
TWGZ	**Tauwhareparae**	**7.87**	**189**	P	Pn	16 16 06.0	+4.8
TWGZ				S	**S**	**16 17 32.7**	**-0.3**
MWZ	**Matawai**	**8.09**	**191**	P	**Pn**	**16 16 04.9**	**+1.1**
MWZ				S	**S**	**16 17 37.1**	**-0.7**
URZ	**Urewera**	**8.09**	**193**	P	**Pn**	**16 16 05.3**	**+1.5**
	8.7nm,0.3s,baz=265,slow=3.8,SNR=39						
URZ				S	**S**	**16 17 37.4**	**-0.3**
	6.7nm,0.4s,baz=78,slow=23,SNR=16						
URZ	**Urewera**	**8.09**	**193**	P	**Pn**	**16 16 05.4**	**+1.5**
CNGZ	**Carnagh Statio**	**8.14**	**187**	P	**Pn**	**16 16 04.7**	**+0.2**
RAGZ	**Rawiri**	**8.27**	**191**	P	**P**	**16 16 08.2**	**-0.7**
RIGZ	**Rimuhau**	**8.42**	**189**	P	**Pn**	**16 16 08.2**	**+0.4**
RTZ	**Ruatahuna**	**8.46**	**193**	P	**P**	**16 16 10.2**	**-0.8**
SNGZ	**Shannon Statio**	**8.56**	**191**	P	**P**	**16 16 10.9**	**-1.2**
PRGZ	**Paritu Road**	**8.62**	**188**	P	**P**	**16 16 13.1**	**+0.4**
MTHZ	**Maungataniwha**	**8.72**	**194**	P	**P**	**16 16 14.3**	**+0.4**
RAHZ	**Arahi**	**8.73**	**192**	P	**P**	**16 16 13.2**	**-0.8**
MHGZ	**Mahia Peninsul**	**8.84**	**188**	P	**P**	**16 16 14.5**	**-0.6**
NMHZ	**Naumai**	**8.96**	**193**	P	**P**	**16 16 17.8**	**+1.2**
ARHZ	**Aropaoanui**	**9.09**	**192**	P	**P**	**16 16 17.2**	**-0.7**
BKZ	**Black Stump Fm**	**9.09**	**195**	P	**P**	**16 16 17.3**	**-0.8**
MCHZ	**McNeill Hill**	**9.32**	**193**	P	**P**	**16 16 21.2**	**+0.7**
CKHZ	**Cape Kidnapper**	**9.46**	**191**	P	**Pn**	**16 16 20.3**	**+0.2**
PKVZ	**Pokaka**	**9.50**	**200**	P	**P**	**16 16 23.9**	**+1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KRHZ	**Kereru**	**9.58**	**195**	P	**Pn**	**16 16 22.2**	**+0.7**
KAHZ	**Kahuranaki**	**9.62**	**192**	P	**P**	**16 16 23.7**	**-0.2**
TSZ	**Takapari Road**	**10.07**	**196**	P	**Pn**	**16 16 28.0**	**+0.6**
MRZ	**Mangatainoka R**	**10.73**	**196**	P	**Pn**	**16 16 35.5**	**+0.3**
OGWZ	**Otaki Gorge**	**10.98**	**197**	P	**P**	**16 16 38.4**	**-0.4**
ASAR	**Alice Springs**	**40.93**	**268**	P	**P**	**16 21 19.9**	**+1.4**
	0.2nm,0.4s,baz=106,slow=7.5,SNR=13						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**41.92**	**274**	P	**P**	**16 21 28.4**	**+1.9**
	0.8nm,0.4s,baz=111,slow=8.0,SNR=28						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**144.36**	**338**	PKP	**PKPab**	**16 32 58.4**	**-3.7**
	2.6nm,0.7s,baz=70,slow=3.0,SNR=16						
NOA	**NORSAR Array B**	**148.37**	**349**	PKPbc	**PKPdf**	**16 33 05.5**	**-4.1**
	0.6nm,0.8s,baz=8.6,slow=3.9,SNR=1.4						

*NEIC **02** 16:23:48.5±1.0, 65°.39N±0°.02×149°.97W±0°.04, h10km±1km, ML3.9/204, ML3.8(AEIC), Mwr3.7/38(SLM), Error ellipse: s-maj=4.2km s-min=2.8km az=20.0*

*NEIC **02** 16:23:49, 65°.41N×150°.02W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.95; $M_{\theta\theta}$-1.46; $M_{\phi\phi}$0.51; $M_{r\theta}$-1.79; $M_{\theta\phi}$-4.10; $M_{\phi r}$1.12; Fault plane solution: $M_0$4.79000×10^{14} NP1:ϕ_s274.00000°, δ76.00000°, λ154.00000°. NP2:ϕ_s10.00000°, δ65.00000°, λ15.00000°. Principal axes: T 4.7866, Plg28.0000°, Azm230.0000°; N 0.0009, Plg61.0000°, Azm68.0000°; P -4.7876, Plg8.0000°, Azm324.0000°;*

*AEIC **02** 16:23:49.8±0.9, 65°.42N±0°.02×149°.98W±0°.04, h21km±7km Error ellipse: s-maj=4.2km s-min=1.2km az=214.0*

*IDC **02** 16:23:50.4±2.0, 65°.45N×149°.62W, h0km, mb3.6/2, mbtmp3.5/6, ML3.3/4, Error ellipse: s-maj=22.5km s-min=12.9km az=127.0*

ISC 02 16:23:49.0±0.7**, 65°.41N**±0°.02×**149°.98W**±0°.02**, h11**km**, n206,** σ**0**s**.93**/173**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23K	**Minto, Yukon-K**	**0.37**	**135**		**Sg**	**16 24 02.3**	**+1.0**
I23K	**Minto, Yukon-K**	**0.37**	**135**	Pg	**Pg**	**16 23 57.0**	**+0.7**
I23K				IAML		16 24 03.0	
	comp=N,13μm,0.5s						
I23K				IAML		16 24 03.0	
	comp=E,12μm,0.5s						
H22K	**Ishtalitna Cre**	**0.75**	**311**		**Sb**	**16 24 13.8**	**-0.6**
H22K	**Ishtalitna Cre**	**0.75**	**311**	Pg	**Pb**	**16 24 03.9**	**-0.3**
MDM	**Murphy Dome**	**0.87**	**121**		**Pg**	**16 24 06.1**	**+0.3**
MDM					**Sg**	**16 24 16.9**	**-0.2**
I21K	**Tanana**	**0.87**	**255**		**Pg**	**16 24 05.7**	**-0.1**
I21K				IAML		16 24 20.1	
	comp=N,4μm,0.7s						
I21K	**Tanana**	**0.87**	**255**		**Sg**	**16 24 17.1**	**0.0**
NEA2	**Nenana**	**0.91**	**154**	Pn	**Pg**	**16 24 06.9**	**+0.4**
NEA2	**Nenana**	**0.91**	**154**		**Sb**	**16 24 19.3**	**+0.4**
H24K	**Noodor Dome**	**0.97**	**63**		**Sb**	**16 24 21.4**	**+0.7**
H24K	**Noodor Dome**	**0.97**	**63**		**Pg**	**16 24 07.1**	**-0.6**
COLA	**College**	**1.05**	**120**	Pg	**Pb**	**16 24 08.8**	**-0.4**
COLA	**College**	**1.05**	**120**		**Sg**	**16 24 22.1**	**-0.7**
COLA					**Sb**	**16 24 22.6**	**-0.2**
POKR	**Poker Plat Res**	**1.11**	**104**		**Pb**	**16 24 09.8**	**-0.4**
POKR				IAML		16 24 25.9	
	comp=E,3μm,0.7s						
POKR	**Poker Plat Res**	**1.11**	**104**		**Sb**	**16 24 24.0**	**-0.7**
H21K	**Melozitna Rive**	**1.20**	**283**		**Sb**	**16 24 27.2**	**0.0**
H21K	**Melozitna Rive**	**1.20**	**283**		**Pb**	**16 24 11.0**	**-0.8**
H21K				IAML		16 24 28.1	
	comp=E,3μm,0.7s						
CCB	**Clear Creek Bu**	**1.20**	**129**		**Pn**	**16 24 10.9**	**-0.8**
CCB	**Clear Creek Bu**	**1.20**	**129**		**Sb**	**16 24 26.8**	**-0.4**
WRH	**Wood River Hil**	**1.24**	**139**		**Pn**	**16 24 11.6**	**-0.7**
WRH				IAML		16 24 29.7	
	comp=E,3μm,0.5s						
WRH	**Wood River Hil**	**1.24**	**139**		**Sb**	**16 24 29.0**	**+0.6**
WRH					**Sn**	**16 24 29.2**	**+0.2**
G23K	**Bananza Creek**	**1.30**	**359**		**Pn**	**16 24 12.9**	**-0.3**
G23K					**Pb**	**16 24 13.0**	**-0.5**
G23K					**Sb**	**16 24 30.2**	**-0.1**
G23K					**Sg**	**16 24 30.9**	**-0.1**
BPAW	**Bear Paw Mtn.**	**1.39**	**199**		**Pn**	**16 24 13.5**	**-0.8**
BPAW				IAML		16 24 34.1	
	comp=N,2μm,0.7s						
BPAW	**Bear Paw Mtn.**	**1.39**	**199**		**Sn**	**16 24 32.5**	**-0.1**
BPAW					**Sb**	**16 24 32.7**	**+0.1**
IL31		**1.46**	**115**		**Pn**	**16 24 14.5**	**-0.7**
ILAR	**Eielson Array**	**1.46**	**115**	Pg	**Pn**	**16 24 14.4**	**-0.8**
	comp=N,51nm,0.3s,baz=297,slow=14,SNR=333						
ILAR				Lg	Lg	16 24 35.5	
	comp=N,190nm,0.3s,baz=301,slow=30,SNR=16						
ILAR	**Eielson Array**	**1.46**	**115**		**Pn**	**16 24 14.3**	**-1.0**
HDA	**Harding Lake**	**1.64**	**127**		**Pn**	**16 24 16.9**	**-0.9**
HDA				IAML		16 24 40.6	
	comp=N,2μm,0.6s						
HDA				IAML		16 24 42.4	
	comp=E,990nm,0.5s						
G24K	**Hadweenzic Riv**	**1.65**	**37**		**Pn**	**16 24 17.6**	**-0.3**
G24K	**Hadweenzic Riv**	**1.65**	**37**	IAML		16 24 42.3	
	comp=E,1μm,1.0s						
G24K				IAML		16 24 42.7	
	comp=N,1μm,1.1s						
MCK	**McKinley**	**1.75**	**165**		**Pn**	**16 24 18.8**	**-0.5**
MCK				IAML		16 24 45.3	
	comp=N,886nm,0.4s						
G21K	**Allakaket**	**1.82**	**309**		**Pn**	**16 24 20.2**	**0.0**
G21K	**Allakaket**	**1.82**	**309**	IAML		16 24 46.5	
	comp=N,1μm,0.7s						
G21K				IAML		16 24 49.8	
	comp=E,1μm,0.6s						
COLD	**Coldfoot**	**1.82**	**357**		**Pn**	**16 24 20.2**	**-0.1**
COLD				IAML		16 24 48.9	
	comp=E,1μm,0.7s						
CHUM	**Lake Minchumin**	**1.83**	**214**		**Pn**	**16 24 20.0**	**-0.4**
CHUM					**Pb**	**16 24 20.1**	**-2.4**
PRP	**Porcupine Dome**	**1.86**	**85**		**Pn**	**16 24 20.2**	**-0.7**
PRP				IAML		16 24 52.8	
	comp=N,1μm,1.0s						
KTH	**Kantishna Hill**	**1.91**	**193**		**Pn**	**16 24 20.9**	**-0.7**
KTH				IAML		16 24 51.4	
	comp=E,1μm,0.6s						
KTH				IAML		16 24 52.3	
	comp=N,1μm,0.9s						
TRF	**Thorofare Moun**	**1.98**	**184**		**Pn**	**16 24 22.1**	**-0.4**
TRF				IAML		16 24 51.4	
	comp=E,893nm,0.8s						
I20K	**Naaghedeneel**	**2.00**	**254**		**Pn**	**16 24 22.1**	**-0.6**
H20K	**Anotleneega Mo**	**2.05**	**274**		**Pn**	**16 24 22.9**	**-0.5**
H20K					**Pb**	**16 24 23.0**	**-3.2**
RND	**Reindeer**	**2.07**	**166**		**Pn**	**16 24 23.4**	**-0.4**
J25K	**Salcha River,**	**2.12**	**110**		**Pn**	**16 24 23.8**	**-0.5**
J25K					**Pb**	**16 24 24.1**	**-3.3**
J25K	**Salcha River,**	**2.12**	**110**	IAML		16 24 56.2	
	comp=E,686nm,0.6s						
J25K				IAML		16 25 00.1	
	comp=N,685nm,0.7s						
J20K	**Nowinta River**	**2.17**	**237**		**Pn**	**16 24 24.4**	**-0.7**
FYU	**Fort Yukon**	**2.26**	**57**		**Pn**	**16 24 25.4**	**-0.8**
FYU				IAML		16 25 04.7	
	comp=E,633nm,1.1s						
FYU				IAML		16 25 05.8	
	comp=N,888nm,1.0s						
F21K	**Alatna River**	**2.30**	**324**		**Pn**	**16 24 27.1**	**+0.2**
K24K	**Donnelly Dome**	**2.43**	**130**		**Pn**	**16 24 27.5**	**-1.1**
K24K				IAML		16 25 10.7	
	comp=E,659nm,0.7s						
K24K				IAML		16 25 15.2	
	comp=N,732nm,0.7s						
H19K	**Roundabout Mou**	**2.70**	**275**		**Pn**	**16 24 31.8**	**-0.5**
PPLA	**Purkeypile**	**2.71**	**202**		**Pn**	**16 24 31.6**	**-0.9**
K20K	**Telida**	**2.72**	**223**		**Pn**	**16 24 31.9**	**-0.8**
K20K	**Telida**	**2.72**	**223**	IAML		16 25 18.8	
	comp=E,593nm,1.1s						
E24K	**Your Creek**	**2.74**	**12**		**Pn**	**16 24 33.1**	**+0.2**
E24K	**Your Creek**	**2.74**	**12**	IAML		16 25 20.3	
	comp=E,438nm,0.9s						
RIDG	**Independent Ri**	**2.78**	**125**		**Pn**	**16 24 33.4**	**-0.1**
RIDG	**Independent Ri**	**2.78**	**125**	IAML		16 25 22.5	
	comp=N,355nm,0.7s						
RIDG				IAML		16 25 27.2	
	comp=E,390nm,0.8s						
F25K	**Christian Rive**	**2.80**	**36**		**Pn**	**16 24 33.5**	**-0.2**
F25K				IAML		16 25 19.0	
	comp=E,322nm,0.7s						
J19K	**Poorman**	**2.81**	**242**		**Pn**	**16 24 32.9**	**-0.9**
J19K	**Poorman**	**2.81**	**242**	IAML		16 25 21.1	
	comp=N,504nm,0.4s						
J19K				IAML		16 25 28.1	
	comp=E,466nm,0.4s						
F20K	**Avaraart Lake**	**2.85**	**308**		**Pn**	**16 24 34.0**	**-0.2**
F20K	**Avaraart Lake**	**2.85**	**308**	IAML		16 25 22.6	
	comp=E,305nm,0.9s						
J26L	**Joseph Creek**	**2.88**	**106**		**Pn**	**16 24 34.3**	**-0.5**
J26L	**Joseph Creek**	**2.88**	**106**	IAML		16 25 21.9	
	comp=E,475nm,0.6s						
L22K	**Petersville**	**2.92**	**187**		**Pn**	**16 24 36.1**	**+0.7**
L22K	**Petersville**	**2.92**	**187**	IAML		16 25 21.6	
	comp=N,400nm,0.5s						
L22K				IAML		16 25 32.6	
	comp=E,289nm,0.8s						
G26K	**Porcupine Rive**	**2.95**	**56**		**Pn**	**16 24 34.8**	**-1.0**
G26K					Pb	16 24 34.9	-6.6
G26K	**Porcupine Rive**	**2.95**	**56**	IAML		16 25 34.8	
	comp=E,411nm,1.0s						
G26K				IAML		16 25 39.7	
	comp=N,376nm,0.8s						
SCRK	**Sand Creek**	**2.95**	**116**		**Pn**	**16 24 35.0**	**-0.9**
SCRK				IAML		16 25 20.8	
	comp=N,535nm,0.8s						
SCRK				IAML		16 25 21.4	
	comp=E,384nm,0.7s						
BM03	**Burnt Mountain**	**2.96**	**45**		**Pn**	**16 24 35.2**	**-0.6**
BMAR	**Burnt Mountain**	**2.97**	**45**		**Pn**	**16 24 35.5**	**-0.5**
GCSA	**Galena City Sc**	**3.00**	**260**		**Pn**	**16 24 35.6**	**-0.8**
BM01	**Burnt Mountain**	**3.00**	**44**		**Pn**	**16 24 36.0**	**-0.4**
G19K	**Purcell Mounta**	**3.02**	**287**		**Pn**	**16 24 36.1**	**-0.6**
G19K					Pb	16 24 36.5	-6.2
CUT	**Chulitna**	**3.02**	**183**		**Pn**	**16 24 37.2**	**+0.5**
DOT	**Dot Lake**	**3.11**	**122**	IAML		16 25 31.4	
	comp=E,322nm,0.7s						
DOT	**Dot Lake**	**3.11**	**122**		**Pn**	**16 24 36.7**	**-1.3**
DOT					Pb	16 24 38.2	-6.1
PAX	**Paxson**	**3.15**	**139**		**Pn**	**16 24 38.8**	**+0.3**
E25K	**Arctic Village**	**3.23**	**31**	IAML		16 25 38.1	
	comp=E,212nm,1.1s						
E25K	**Arctic Village**	**3.23**	**31**		**Pn**	**16 24 39.5**	**-0.2**
E25K					Pb	16 24 39.7	-6.6
TOLK	**Toolik Lake Re**	**3.25**	**3**		**Pn**	**16 24 40.8**	**+0.9**
TOLK	**Toolik Lake Re**	**3.25**	**3**	IAML		16 25 36.9	
	comp=E,222nm,0.8s						
TOLK				IAML		16 25 46.9	
	comp=N,234nm,1.0s						
F26K	**Sheenjek River**	**3.27**	**43**		**Pn**	**16 24 39.6**	**-0.5**
F19K	**Shaleruckik Mo**	**3.47**	**298**		**Pn**	**16 24 43.3**	**+0.4**
F19K	**Shaleruckik Mo**	**3.47**	**298**	IAML		16 25 39.2	
	comp=E,240nm,0.6s						
F19K				IAML		16 25 41.6	
	comp=N,246nm,1.1s						
I27K	**Kandik River**	**3.49**	**83**		**Pn**	**16 24 42.1**	**-1.2**
I27K					Pb	16 24 42.5	-8.2
J18K	**Innoko River**	**3.51**	**239**		**Pn**	**16 24 42.5**	**-1.0**
J18K					Pb	16 24 42.6	-8.5
J18K	**Innoko River**	**3.51**	**239**	IAML		16 25 47.9	
	comp=E,281nm,0.8s						
SKT	**Skwentna**	**3.52**	**192**		**Pn**	**16 24 44.0**	**+0.4**
SKT				IAML		16 25 43.2	
	comp=N,338nm,0.7s						
H18K	**Honhosa River**	**3.53**	**270**		**Pn**	**16 24 43.1**	**-0.7**
H18K	**Honhosa River**	**3.53**	**270**	IAML		16 25 44.2	
	comp=E,249nm,0.7s						
H18K				IAML		16 25 54.4	
	comp=N,221nm,1.0s						
E19K	**Redstone River**	**3.56**	**308**		**Pn**	**16 24 44.7**	**+0.5**
E19K				IAML		16 25 41.5	
	comp=N,293nm,0.6s						
E19K				IAML		16 25 44.0	
	comp=E,224nm,0.7s						
H27K	**Steamboat Moun**	**3.58**	**73**		**Pn**	**16 24 43.3**	**-1.1**
H27K					Pb	16 24 43.7	-8.5
H27K	**Steamboat Moun**	**3.58**	**73**	IAML		16 25 48.5	
	comp=N,164nm,0.8s						
H27K				IAML		16 25 55.9	
	comp=E,162nm,0.8s						
D23K	**Nanushuk River**	**3.58**	**356**		**Pn**	**16 24 44.9**	**+0.5**
D23K					Pb	16 24 45.8	-6.5
D23K	**Nanushuk River**	**3.58**	**356**	IAML		16 25 49.0	
	comp=N,190nm,1.0s						
D23K				IAML		16 25 54.1	
	comp=E,224nm,1.1s						
G18K	**Tagagawik**	**3.62**	**282**		**Pn**	**16 24 45.3**	**+0.3**
G18K				IAML		16 25 47.3	
	comp=N,208nm,0.8s						
D22K	**Ayikyak River**	**3.64**	**344**		**Pn**	**16 24 46.1**	**+0.9**
D22K				IAML		16 25 49.3	
	comp=N,272nm,1.0s						
G27K	**Doyon Strip**	**3.67**	**64**		**Pn**	**16 24 44.8**	**-0.8**
G27K					Pb	16 24 45.6	-8.2
M22K	**Willow**	**3.67**	**181**		**Pn**	**16 24 45.6**	**0.0**
GHO	**Glory Hole Cre**	**3.69**	**172**	IAML		16 25 56.6	
	comp=E,196nm,0.8s						
SML	**Sawmill**	**3.69**	**168**	IAML		16 25 54.9	
	comp=N,202nm,1.0s						
MENT	**Mentasta**	**3.70**	**129**	IAML		16 25 55.9	
	comp=E,243nm,0.9s						
MENT				IAML		16 25 57.4	
	comp=N,224nm,0.8s						
MENT	**Mentasta**	**3.70**	**129**		**Pn**	**16 24 46.0**	**-0.1**
MENT					Pb	16 24 46.2	-8.1
HARP	**HAARP**	**3.70**	**143**		**Pn**	**16 24 46.2**	**+0.2**
M24K	**Tolsona, Glenn**	**3.72**	**151**		**Pn**	**16 24 47.8**	**+1.3**
M24K	**Tolsona, Glenn**	**3.72**	**151**	IAML		16 26 01.4	
	comp=E,260nm,0.8s						
M24K				IAML		16 26 10.5	
	comp=N,181nm,1.0s						
L26K	**Log Cabin Wild**	**3.76**	**127**		**Pn**	**16 24 46.8**	**-0.1**
L26K	**Log Cabin Wild**	**3.76**	**127**	IAML		16 25 53.4	
	comp=E,236nm,0.5s						
L26K				IAML		16 25 58.2	
	comp=N,253nm,0.5s						
E20K	**Nigu River**	**3.76**	**322**		**Pn**	**16 24 47.4**	**+0.5**
E20K					Pb	16 24 47.9	-7.5
M23K	**Glacier View**	**3.77**	**163**		**Pn**	**16 24 47.0**	**0.0**
SCM	**Sheep Creek Mo**	**3.78**	**161**		**Pn**	**16 24 47.7**	**+0.4**
SCM	**Sheep Creek Mo**	**3.78**	**161**	IAML		16 25 57.1	
	comp=N,240nm,1.2s						
SCM				IAML		16 26 00.8	
	comp=E,252nm,1.1s						
M20K	**Styx River**	**3.81**	**203**		**Pn**	**16 24 47.8**	**+0.2**
M20K	**Styx River**	**3.81**	**203**	IAML		16 25 57.4	
	comp=N,202nm,0.6s						
PMR	**Palmer**	**3.85**	**174**		**Pn**	**16 24 48.4**	**+0.3**
PMR				IAML		16 25 51.6	
	comp=E,195nm,1.2s						
PMR				IAML		16 25 52.8	
	comp=N,160nm,1.0s						
L19K	**White Mountain**	**3.90**	**216**		**Pn**	**16 24 47.7**	**-1.1**
SUA	**Susitna One**	**3.98**	**185**		**Pn**	**16 24 50.4**	**+0.4**
SUA					Pb	16 24 50.5	-8.6
SUA	**Susitna One**	**3.98**	**185**	IAML		16 25 55.3	
	comp=N,171nm,0.7s						
SUA				IAML		16 26 06.4	
	comp=E,206nm,0.8s						
KNK	**Knik Glacier**	**4.07**	**170**	IAML		16 26 00.8	
	comp=E,216nm,0.6s						
KNK				IAML		16 26 08.6	
	comp=N,124nm,0.8s						
F18K	**Selawik**	**4.12**	**291**		**Pn**	**16 24 52.2**	**+0.4**
D25K	**Kavik River**	**4.17**	**18**		**Pn**	**16 24 53.2**	**+0.8**
C21K	**Knifeblade Rid**	**4.20**	**336**		**Pn**	**16 24 54.1**	**+1.2**
I28M	**Miner Creek**	**4.20**	**85**		**Pn**	**16 24 52.0**	**-1.0**
I28M					Pb	16 24 52.6	-10
I28M	**Miner Creek**	**4.20**	**85**	IAML		16 26 06.5	
	comp=N,139nm,1.1s						
I28M				IAML		16 26 12.7	
	comp=E,104nm,0.6s						
D20K	**Etivluk River**	**4.21**	**325**		**Pn**	**16 24 54.3**	**+1.3**
H17K	**Granite Mounta**	**4.21**	**268**		**Pn**	**16 24 52.6**	**-0.5**
H17K	**Granite Mounta**	**4.21**	**268**	IAML		16 26 06.1	
	comp=N,178nm,0.8s						
SPCG	**Spurr Capps Gl**	**4.24**	**193**		**Pn**	**16 24 54.2**	**+0.7**
WACK	**Wrangell Chich**	**4.26**	**141**		**Pn**	**16 24 53.7**	**-0.2**
L27K	**Beaver Creek,**	**4.27**	**120**		**Pn**	**16 24 52.4**	**-1.5**
L27K					Pb	16 24 53.2	-11
L27K	**Beaver Creek,**	**4.27**	**120**	IAML		16 26 08.2	
	comp=N,134nm,0.9s						
L27K				IAML		16 26 11.0	
	comp=E,126nm,1.1s						
BC04	**Beaver Creek A**	**4.28**	**119**		**Pn**	**16 24 52.6**	**-1.5**
BCAR	**Beaver Creek A**	**4.28**	**120**		**Pn**	**16 24 52.6**	**-1.5**
SPCN	**Chakachatna No**	**4.32**	**194**		**Pn**	**16 24 54.1**	**-0.5**
KLU	**Klutina**	**4.34**	**153**		**Pn**	**16 24 56.0**	**+1.2**
RC01	**Rabbit Creek A**	**4.34**	**178**		**Pn**	**16 24 56.0**	**+1.1**
RC01	**Rabbit Creek A**	**4.34**	**178**	IAML		16 26 10.9	
	comp=N,94nm,1.0s						
SPCR	**Spurr Chakacha**	**4.35**	**194**		**Pn**	**16 24 55.6**	**+0.7**
SPU	**Mount Spurr**	**4.35**	**193**		**Pn**	**16 24 55.5**	**+0.5**
L18K	**Granite Mounta**	**4.37**	**226**		**Pn**	**16 24 54.3**	**-0.9**
L18K					Pb	16 24 54.7	-11
L18K	**Granite Mounta**	**4.37**	**226**	IAML		16 26 11.6	
	comp=E,136nm,1.0s						
D19K	**Kuna River**	**4.45**	**318**		**Pn**	**16 24 56.8**	**+0.4**
D19K					Pb	16 24 57.0	-10
D19K	**Kuna River**	**4.45**	**318**	IAML		16 26 16.7	
	comp=E,124nm,0.8s						
D19K				IAML		16 26 19.7	
	comp=N,89nm,0.9s						
G17K	**Kiwalik Mounta**	**4.45**	**276**		**Pn**	**16 24 56.3**	**-0.1**
G17K					Pb	16 24 56.7	-10
N25K	**Chitina, Valde**	**4.52**	**145**		**Pn**	**16 24 58.5**	**+1.1**
K17K	**Iditarod**	**4.54**	**237**		**Pn**	**16 24 56.3**	**-1.3**
F28M	**Old Crow**	**4.61**	**57**		**Pn**	**16 24 57.4**	**-1.1**
F28M	**Old Crow**	**4.61**	**57**	IAML		16 26 22.3	
	comp=N,80nm,1.1s						
DIV	**Divide**	**4.70**	**154**	IAML		16 26 27.1	
	comp=N,82nm,1.1s						
M27K	**Edge Creek, AK**	**4.71**	**127**	IAML		16 26 24.4	
	comp=N,108nm,1.1s						
M27K				IAML		16 26 31.7	
	comp=E,93nm,0.9s						
M18K	**Stony River**	**4.73**	**216**		**Pn**	**16 24 58.9**	**-1.3**
F17K	**Baldwin Pennin**	**4.73**	**288**		**Pn**	**16 25 00.3**	**+0.2**
DAWY	**Dawson**	**4.74**	**102**		**Pn**	**16 24 59.7**	**-0.6**
I17K	**Unalakleet**	**4.85**	**257**		**Pn**	**16 25 01.0**	**-0.8**
I17K				IAML		16 26 27.4	
	comp=N,91nm,0.8s						
I17K				IAML		16 26 28.0	
	comp=E,106nm,0.7s						
I29M	**Ogilvie Camp,**	**4.88**	**85**	IAML		16 26 31.1	
	comp=N,90nm,0.7s						
I29M				IAML		16 26 45.3	
	comp=E,75nm,0.9s						
SLKM	**Skilak Lake**	**4.92**	**181**		**Pn**	**16 25 03.1**	**+0.3**
SLKM					Pb	16 25 03.8	-11
SLKM	**Skilak Lake**	**4.92**	**181**	IAML		16 26 27.1	
	comp=E,66nm,1.1s						
RDT	**Redoubt**	**4.98**	**194**		**Pn**	**16 25 04.3**	**+0.6**
DFR	**Drift River**	**4.99**	**196**		**Pn**	**16 25 04.4**	**+0.5**
BVCY	**Beaver Creek**	**5.03**	**123**		**Pn**	**16 25 03.2**	**-1.0**
N19K	**Bonanza Creek**	**5.05**	**206**		**Pn**	**16 25 03.4**	**-1.2**
N19K				IAML		16 26 30.8	
	comp=N,105nm,1.0s						
E17K	**Hotham Inlet**	**5.07**	**295**		**Pn**	**16 25 05.1**	**+0.3**
G29M	**Pine Creek**	**5.08**	**67**		**Pn**	**16 25 04.2**	**-0.8**
BMRM	**Bremner River**	**5.08**	**149**	IAML		16 26 34.8	
	comp=N,58nm,1.2s						
BMRM				IAML		16 26 42.7	
	comp=E,61nm,1.0s						
J16K	**Anvik River**	**5.08**	**250**		**Pn**	**16 25 04.0**	**-1.0**
J29N	**Klondike Camp**	**5.10**	**96**		**Pn**	**16 25 05.0**	**-0.3**
MCARA	**McCarthy VSAT**	**5.11**	**139**		**Pn**	**16 25 04.7**	**-0.7**
B22K	**Teshekpuk Lake**	**5.12**	**347**		**Pn**	**16 25 04.9**	**-0.5**
B22K	**Teshekpuk Lake**	**5.12**	**347**	IAML		16 26 51.1	
	comp=N,58nm,1.2s						
G16K	**Koyuk River**	**5.17**	**275**		**Pn**	**16 25 05.6**	**-0.6**
RED	**Redoubt Volcan**	**5.17**	**196**	IAML		16 26 32.0	
	comp=E,77nm,1.0s						
RED				IAML		16 26 42.9	
	comp=N,65nm,1.1s						
D27M	**Malcolm River**	**5.19**	**38**		**Pn**	**16 25 05.5**	**-1.0**
E28M	**Babbage River**	**5.20**	**47**		**Pn**	**16 25 04.8**	**-1.7**
M17K	**Holitna River**	**5.24**	**223**		**Pn**	**16 25 05.7**	**-1.4**
C19K	**Lookout Ridge**	**5.25**	**319**		**Pn**	**16 25 07.2**	**-0.2**
C19K	**Lookout Ridge**	**5.25**	**319**	IAML		16 26 44.8	
	comp=E,54nm,1.1s						
H16K	**Elim**	**5.25**	**267**		**Pn**	**16 25 05.8**	**-1.5**
B20K	**Meade River**	**5.36**	**333**		**Pn**	**16 25 09.0**	**+0.2**
B20K	**Meade River**	**5.36**	**333**	IAML		16 26 47.7	
	comp=N,51nm,1.0s						
B20K				IAML		16 27 08.4	
	comp=E,72nm,1.2s						
N18K	**Kilae Creek**	**5.46**	**212**		**Pn**	**16 25 09.5**	**-0.7**
C18K	**Utukok River**	**5.46**	**312**		**Pn**	**16 25 10.3**	**+0.1**
YUK2	**White River**	**5.46**	**128**		**Pn**	**16 25 10.4**	**0.0**
K29M	**Barlow Dome**	**5.58**	**101**		**Pn**	**16 25 11.9**	**-0.1**
YUK3	**Moose Creek**	**5.60**	**126**		**Pn**	**16 25 11.8**	**-0.5**
E29M	**Blow River**	**5.61**	**52**		**Pn**	**16 25 11.2**	**-1.1**
L29M	**L29M**	**5.66**	**109**		**Pn**	**16 25 12.6**	**-0.4**
I30M	**Mount Dempster**	**5.71**	**86**		**Pn**	**16 25 12.7**	**-1.0**
D17K	**Noatak River**	**5.71**	**300**		**Pn**	**16 25 12.7**	**-0.9**
D17K					Pb	16 25 13.7	-15
RDOG	**Red Dog Mine**	**5.76**	**303**		**Pn**	**16 25 13.9**	**-0.5**
J30M	**Hart River**	**5.85**	**92**		**Pn**	**16 25 15.2**	**-0.5**
A22K	**Sinclair Lake**	**5.91**	**344**		**Pn**	**16 25 16.2**	**-0.2**
G15K	**Niukluk**	**5.93**	**272**		**Pn**	**16 25 15.9**	**-0.7**
K15K	**Wolf Creek Mou**	**5.99**	**244**		**Pn**	**16 25 15.9**	**-1.5**
M16K	**Timber Creek**	**5.99**	**227**		**Pn**	**16 25 16.0**	**-1.4**
L15K	**Ungalak Mounta**	**6.36**	**239**		**Pn**	**16 25 20.7**	**-1.8**
J14K	**Nanvaranak Lak**	**6.52**	**252**		**Pn**	**16 25 24.0**	**-0.6**
G31M	**Satah River**	**6.54**	**70**		**Pn**	**16 25 23.3**	**-1.7**
ANM	**Nome**	**6.58**	**270**		**Pn**	**16 25 25.2**	**-0.3**
M15K	**Kasigluk River**	**6.78**	**231**		**Pn**	**16 25 27.0**	**-1.3**
INK	**Inuvik**	**7.10**	**58**	Pn	**Pn**	**16 25 32.8**	**+0.3**
	comp=E,0.4nm,0.3s,baz=249,slow=12,SNR=23						
INK				Sn	**Sn**	**16 26 50.1**	**-3.0**
	comp=E,0.4nm,0.3s,baz=318,slow=13,SNR=3.2						
	comp=E,2.8nm,0.7s						
INK	**Inuvik**	**7.10**	**58**		**Pn**	**16 25 32.3**	**-0.3**
M14K	**Bethel**	**7.16**	**235**		**Pn**	**16 25 32.8**	**-0.7**
KDAK	**Kodiak Island**	**7.76**	**190**	Pn	**Pn**	**16 25 41.2**	**-0.4**
	comp=E,0.3nm,0.3s,baz=49,slow=11,SNR=5.6						
KDAK				Sn	Sn	16 27 00.8	-8.6
	comp=E,0.2nm,0.3s,baz=123,slow=16,SNR=1.1						
	comp=E,10.0nm,0.9s						
DLBC	**Dease Lake**	**11.67**	**117**	Pn	**Pn**	**16 26 36.8**	**+1.5**
	comp=E,0.2nm,0.3s,baz=300,slow=14,SNR=5.0						
	comp=E,1.6nm,0.9s						
YKA	**Yellowknife Ar**	**15.67**	**84**	Pn	**Pn**	**16 27 27.1**	**-2.4**
	comp=E,0.1nm,0.3s,baz=298,slow=10,SNR=5.9						
	comp=E,0.2nm,0.6s						
PDAR	**Pinedale Array**	**31.89**	**115**	P	**P**	**16 30 17.1**	**+2.8**
	comp=E,1.0nm,0.8s,baz=339,slow=7.9,SNR=4.6						
	comp=E,1.0nm,0.8s						
TXAR	**Lajitas Array**	**45.97**	**119**	P	**P**	**16 32 14.2**	**+2.3**
	comp=E,0.6nm,0.8s,baz=339,slow=6.1,SNR=3.4						
	comp=E,0.6nm,0.8s						

IDC 02 16:34:11.2±4.8**, 26°.20S**×**28°.81E, h0**km**, mbtmp3.1**/3**, ML2.2**/3**, Error ellipse: s-maj=39.8km s-min=24.0km az=74.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.13**	**291**	Pn	Pn	16 35 02.6	+0.7
	0.6nm,0.3s,baz=108,slow=18,SNR=15						
LBTB				Pg	Pb	16 35 08.4	+0.6
	0.5nm,0.3s,baz=100,slow=15,SNR=6.2						
LBTB				Lg	Lg	16 35 50.6	
	1.3nm,0.3s,baz=191,slow=23,SNR=10.0						
	0.8nm,0.6s						
LBTB	**Lobatse**	**3.13**	**291**	*i* P	Pb	16 35 08.8	+1.0
LBTB				*i* S	Sn	16 35 34.9	-5.2
BOSA	**Boshof**	**3.97**	**232**	Pn	Pn	16 35 12.2	-1.4
	baz=51,slow=15,SNR=1.4						
BOSA				Pg	Pb	16 35 23.8	+1.6
	0.4nm,0.3s,baz=55,slow=14,SNR=9.3						
BOSA				Lg	Lg	16 36 17.3	
	0.9nm,0.3s,baz=146,slow=20,SNR=14						
	1.3nm,0.8s						
BOSA	**Boshof**	**3.97**	**232**	*i* P	Pb	16 35 24.5	+2.3
BOSA				*i* S	Sn	16 36 01.0	+0.1
I47ZA	**BOSHOF INFRASO**	**3.99**	**232**	I	I	16 59 30.0	
	baz=51,slow=316,SNR=3.2						
SUR	**Sutherland**	**9.31**	**227**	Pn	Pn	16 36 27.4	+0.5
	baz=55,slow=16,SNR=3.4						
SUR				Sn	Sn	16 38 08.9	-3.5
	0.1nm,0.3s,baz=138,slow=23,SNR=1.6						
	8.8nm,1.2s						
I35NA	**TSUMEB INFRASO**	**12.49**	**302**	I	I	17 51 40.0	
	baz=129,slow=304,SNR=1.9						

*IDC **02** 16:52:57.6±1.0, 34°.55N×46°.16E, h0km, mb3.8/14, mbtmp3.8/21, ML3.4/6, MS2.7/3, Error ellipse:*

s-maj=19.9km s-min=12.1km az=162.0
*NEIC **02** 16:52:59.4±1.0, 34°.58N±0°.05×46°.22E±0°.08, h10km±1km, mb4.2/20, Error ellipse: s-maj=13.2km s-min=3.1km az=54.0*
*TEH **02** 16:52:59.6, 34°.54N×46°.20E, h8km±16km, ML3.7, Presumed earthquake*
*DSN **02** 16:53:08.0±0.4, 33°.76N×46°.57E, h15km, Error ellipse: s-maj=8.8km s-min=3.9km az=65.0*
ISC 02 16:52:59.0±0.4**, 34°.60N**±0°.03×**46°.17E**±0°.03**, h10km, n88,** σ1s**64**/86**, mb3.9**/16**, 5C-4D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	0.21	60	Pg	Pg	16 53 04.4	+0.9
IGHG	Ghaleghazi	0.42	129	Pg	Pg	16 53 07.6	+0.2
GLG1	Gilan-e-Gharb	0.53	204	Pg	Pg	16 53 09.4	+0.1
GLG1				Sg	Sg	16 53 17.0	+0.7
KCHF	Cheshme Sefid,	0.79	114	Pg	Pb	16 53 14.4	-0.5
KCHF				Sg	Sb	16 53 25.7	0.0
SNQR	Sonqor, Kerman	1.23	77	Pg	Pn	16 53 22.7	+0.2
IBZA	Bozab	1.40	95	Pg	Pg	16 53 26.1	+0.2
IALM	Almabolaq	1.67	80	Pg	Pg	16 53 31.2	+0.2
HAGD	Aghdareh	2.46	84	Pn	Pb	16 53 42.0	-1.4
IHSH	Hashtrud	2.84	18	Pn	Pb	16 53 48.5	-1.5
ZNJK	Zanjan	2.91	44	Pn	Pb	16 53 49.0	-2.1
IAZR	Azarshahr	3.08	357	Pn	Pb	16 53 51.8	-2.3
JIR1	Jirandeh	3.63	53	Pn	Pn	16 53 58.7	+3.3
ISHB	Shabestar	3.71	353	Pn	Pn	16 53 59.9	+3.3
IHRS	Heris	3.78	10	Pn	Pn	16 54 01.4	+3.9
AMIS	Naft Sefid	3.92	137	Pn	Pn	16 54 01.2	+1.9
MAKU	Maku	4.90	346	Pn	Pn	16 54 16.9	+4.1
ISFB	Sefidab	5.02	91	Pn	Pn	16 54 17.0	+2.6
MARD	Mardin	5.15	303		Pn	16 54 17.4	+1.1
GURO	Guroymak-BITLI	5.16	321		Pn	16 54 17.3	+0.8
GNI	Garni	5.66	349	Pn	Pn	16 54 27.0	+3.7
	0.3nm,0.3s,baz=38,slow=19,SNR=1.7						
GNI				Lg	Lg	16 55 59.3	
	baz=184,slow=11						
GNI				LR	LR	16 56 57.8	
	comp=Z,54nm,18.8s,baz=232,slow=42						
	2.1nm,0.4s						
GNI	Garni	5.66	349	Pn	Pn	16 54 23.2	-0.1
GNI	Garni	5.66	349	P	Pg	16 54 44.1	-3.3
KARS	Kars	6.50	339	Pn	Pn	16 54 34.5	-0.3
ASF	Jabal al Asfar	8.12	255	Pn	Pn	16 54 57.6	+0.5
	1.2nm,0.3s,baz=79,slow=10,SNR=10						
ASF				Lg	Lg	16 57 15.8	
	0.7nm,0.3s,baz=253,slow=19,SNR=6.2						
	2.4nm,0.3s						
MMAI	Mount Meron Ar	9.10	263	Pn	Pn	16 55 11.3	+0.9
	1.2nm,0.3s,baz=61,slow=16,SNR=7.2						
MMAI				Lg	Lg	16 57 45.5	
	0.9nm,0.3s,baz=72,slow=40,SNR=2.3						
MMAI				LR	LR	16 58 52.4	
	comp=Z,22nm,21.8s,baz=92,slow=39						
	2.0nm,0.5s						
EIL	Elat	10.70	246	Pn	Pn	16 55 33.3	+0.9
	0.4nm,0.3s,baz=29,slow=11,SNR=1.5						
EIL				Lg	Lg	16 58 37.5	
	0.5nm,0.3s,baz=74,slow=19,SNR=2.5						
EIL				LR	LR	17 00 36.9	
	comp=Z,86nm,19.5s,baz=142,slow=43						
	1.3nm,0.4s						
RAYN	Ar Rayn	11.05	183		Pn	16 55 35.4	-1.8
RAYN	Ar Rayn	11.05	183	P	Pn	16 55 34.6	-2.6
BRTR	Keskin Array B	11.23	301	Pn	Pn	16 55 42.0	+2.3
	baz=116,slow=16,SNR=1.9						
	0.3nm,0.7s						
MSFE	Esma-Masafi	12.63	134	P	Pn	16 55 55.7	-3.1
UOSS	Minazif	12.97	135	Pn	Pn	16 56 02.0	-1.4
UOSS	Minazif	12.97	135	P	Pn	16 56 01.1	-2.3
HATD	Hatta, Dubai	13.02	136	P	Pn	16 56 01.2	-2.9
ASHO	Ashiyiah	13.09	136	P	Pn	16 56 01.5	-3.5
MZR	Muzera	13.20	149	P	Pn	16 56 03.6	-3.0
SOHO	SOHO	13.79	136	P	Pn	16 56 11.7	-2.8
IDI	Anoyia	17.46	278	P	Pn	16 57 03.5	+0.8
	3.5nm,0.8s,baz=77,slow=14,SNR=1.4						
IDI	Anoyia	17.46	278	Pn	Pn	16 57 03.0	+0.3
IDI				IAmb	IAmb	16 57 39.9	
	comp=Z,21nm,1.5s						
AB31	Akbulak array	17.83	31		P	16 57 07.9	0.0
ABKAR	Akbulak array	17.83	31		Pn	16 57 07.4	+0.3
AKTO	Aktyubinsk	18.04	25	P	P	16 57 10.7	+0.6
	comp=Z,0.2nm,0.3s,baz=201,slow=10,SNR=4.2						
	comp=Z,0.9nm,0.5s						
NEHR	Nehoiu	18.63	311	⇓P	Pn	16 57 19.6	+2.7
VOIR		19.41	310	⇓P	Pn	16 57 27.8	+1.4
LIT	Litokhoron	19.59	293	P	P	16 57 28.1	+0.9
LIT				IAmb	IAmb	16 57 29.5	
	comp=Z,4.4nm,0.7s						
ARR	Arges	19.64	310	⇑P	Pn	16 57 29.6	+0.4
ITM	Ithomi	19.80	284	P	P	16 57 29.7	+0.1
ITM				IAmb	IAmb	16 57 33.4	
	comp=Z,30nm,1.3s						
AKASG	Malin Array Be	20.28	328	P	P	16 57 34.8	+0.2
	comp=Z,0.4nm,0.3s,baz=140,slow=9.2,SNR=5.3						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	20.28	328	P	P	16 57 35.3	+0.7
AKBB	Malin Array Si	20.28	328	P	P	16 57 35.8	+1.2
AKBB				IAmb	IAmb	16 57 43.6	
	comp=Z,22nm,1.5s						
KIEV	Kiev	20.28	328	P	P	16 57 35.8	+1.2
KIEV				IAmb	IAmb	16 57 43.6	
	comp=Z,20nm,1.5s						
BURAR	Bucovina Array	20.38	316	P	P	16 57 36.6	+0.8
BURAR	Bucovina Array	20.38	316	⇑P	Pn	16 57 38.0	+0.1
BUR08	Bucovina Ar. S	20.40	316	P	P	16 57 36.8	+0.7
BUR08				IAmb	IAmb	16 58 11.7	
	comp=Z,8.3nm,1.5s						
GZR	Gura Zlata	20.84	308	⇑P	P	16 57 42.7	+1.9
BOVS	Bovan	20.96	303	⇑P	P	16 57 44.3	+2.3
MDVR	Moldovita	21.32	306	⇓P	P	16 57 47.9	+1.9
DRGR		21.47	312	⇑P	P	16 57 49.3	+1.7
KEK	Kerkira	21.59	291	P	P	16 57 49.4	+0.5
KEK				IAmb	IAmb	16 58 04.2	
	comp=Z,8.0nm,1.0s						
MORH	Mrgy, Hungar	23.84	307	⇓P	P	16 58 13.2	+1.0
BVAR	Borovoye Array	25.19	36	P	P	16 58 24.3	-0.2
	comp=Z,0.9nm,0.5s,baz=230,slow=9.3,SNR=5.4						
	comp=Z,0.9nm,0.5s						
MAUC	Maruska	25.53	314	eP	P	16 58 28.4	+0.7
STEB	Steborice	25.80	315	eP	P	16 58 30.6	+0.5
KURBB	Kurchatov Arra	28.41	46	P	P	16 58 55.2	+1.7
	comp=Z,0.7nm,0.7s,baz=253,slow=9.1,SNR=6.2						
	comp=Z,0.7nm,0.7s						
KURK	Kurchatov	28.50	46	P	P	16 58 55.2	+0.9
KURK	Kurchatov	28.50	46	IAmb	IAmb	16 58 57.8	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	29.71	55	P	P	16 59 06.7	+1.5
	comp=Z,0.6nm,0.8s,baz=252,slow=6.3,SNR=8.4						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	29.71	55	P	P	16 59 05.5	+0.3
FINES	FINESS Array B	29.78	341	P	P	16 59 05.6	+0.1
	comp=Z,5.0nm,1.1s,baz=134,slow=8.2,SNR=5.2						
	comp=Z,5.0nm,1.1s						
FINES	FINESS Array B	29.78	341	P	P	16 59 06.1	+0.6
SENIN	Lac Senin/Sane	31.51	304	P	P	16 59 20.9	-0.4
SENIN				IAmb	IAmb	16 59 60.0	
	comp=Z,7.2nm,1.4s						
BNI	Bardonecchia	31.79	301	P	P	16 59 23.7	0.0
HFS	Hagfors	33.11	331	P	P	16 59 35.3	+0.4
	comp=Z,2.7nm,0.6s,baz=134,slow=8.5,SNR=11						
	comp=Z,2.7nm,0.6s						
ZALV	Zalesovo Beam	33.20	42	P	P	16 59 36.6	+0.9
	comp=Z,0.4nm,0.4s,baz=236,slow=6.8,SNR=3.9						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	33.20	42	P	P	16 59 36.1	+0.4
NOA	NORSAR Array B	34.63	331	P	P	16 59 49.5	+1.3
	comp=Z,0.5nm,0.6s,baz=123,slow=8.7,SNR=1.8						
	comp=Z,0.5nm,0.6s						
EKA	Eskdalemuir Ar	39.55	317	P	P	17 00 29.1	-0.9
	comp=Z,4.6nm,1.0s,baz=104,slow=8.5,SNR=6.6						
	comp=Z,4.6nm,1.0s						
ESDC	Sonseca Array	39.87	292	P	P	17 00 32.8	-0.1
	comp=Z,0.8nm,0.8s,baz=68,slow=8.5,SNR=5.8						
	comp=Z,0.8nm,0.8s						
ESDC	Sonseca Array	39.87	292	IAmb	IAmb	17 00 34.3	
	comp=Z,1.3nm,1.1s						
PESTR	Estremoz	42.78	292	P	P	17 00 57.1	+0.3
PESTR				IAmb	IAmb	17 01 31.6	
	comp=Z,15nm,1.4s						
TORD	Torodi Ar. Bea	45.48	253	P	P	17 01 18.2	-0.4
	comp=Z,0.9nm,0.8s,baz=50,slow=5.2,SNR=4.8						
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	45.48	253	IAmb	IAmb	17 01 47.0	
	comp=Z,2.8nm,0.6s						
SPITS	Spitsbergen Ar	45.52	352	P	P	17 01 18.2	0.0
	comp=Z,13nm,1.1s,baz=133,slow=13,SNR=1.2						
	comp=Z,13nm,1.1s						
CMAR	Chiang Mai Arr	49.34	95	P	P	17 01 47.8	-0.9
	comp=Z,0.7nm,0.7s,baz=295,slow=8.4,SNR=9.2						
	comp=Z,0.7nm,0.7s						
DBIC	Dimbokro	54.51	252	P	P	17 02 27.0	-0.2
VOI	Vohitsoka	56.19	179	P	P	17 02 38.9	-0.4
WIN	Windhoek	63.20	210	P	P	17 03 27.3	-0.4
G31M	Satah River	78.80	0	P	P	17 05 02.0	+0.5
YKA	Yellowknife Ar	82.01	351	P	P	17 05 19.4	+0.5
	comp=Z,0.3nm,1.0s,baz=15,slow=6.1,SNR=5.5						
	comp=Z,0.3nm,1.0s						

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*MEX **02** 17:09:03.0±1.2, 13°.59N×92°.13W, h58km±68km, MD4.3*
*CATAC **02** 17:09:03.4±0.9, 14°N±4°×9°2W±°, h25km±9km, M4.0/13, MLv4.0/13, Error ellipse: s-maj=11.9km s-min=4.6km az=40.9, confirmed*
*GCG **02** 17:09:05.7±1.7, 13°.90N×91°.99W, h13km±24km, MD4.1, ML4.0, Presumed earthquake*
ISC 02 17:09:02.5±1.7**, 13°.67N**±0°.06×**92°.15W**±0°.03**, h30km**±14km**, n43,** σ**1s96**/64**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.96	28	eP	Pn	17 09 20.4	+0.5
RTAL				eS	Sb	17 09 32.7	-0.1
RTAL	Retalhuleu	0.96	28	P	Pn	17 09 20.4	+0.5
RTAL				S	Sn	17 09 34.9	+2.4
STG5	El Palmar, Qui	1.07	47	iP	Pn	17 09 22.3	+0.8
STG2	El Palmar, Qui	1.07	45	iP	Pb	17 09 22.7	+0.1
STG8	El Palmar, Qui	1.10	45	iP	Pb	17 09 23.6	+0.5
STG8				IAML		17 09 43.1	
	comp=E,6µm,0.2s						
SMCA	Catarina	1.18	4	iP	Pn	17 09 22.5	-0.5
SMCA				IAML		17 09 41.6	
	comp=N,1µm,0.2s						
THIG		1.23	355	eP	Pn	17 09 23.6	-0.1
THIG				eS	Sb	17 09 40.8	+0.1
THIG		1.23	355	iP	Pn	17 09 23.5	-0.1
QUEO	Labor Ovalle	1.34	27	iP	Pn	17 09 26.2	+0.7
SOKI	Kika Raxquin	1.35	32	iP	Pn	17 09 26.0	+0.2
CHUJ	Union Juarez	1.41	2	eP	Pn	17 09 25.6	-0.8
CHUJ				eS	Sn	17 09 40.0	-4.2
PATR	El Naranjo	1.44	357	eP	Pn	17 09 25.9	-0.8
PATR				eS	Sn	17 09 41.2	-3.5
ESSG	Sabana Grande	1.47	61	iP	Pn	17 09 27.1	+0.1
ESSG				iS	Sn	17 09 42.6	-2.6
PAVE	Pavencul	1.51	359	eP	Pn	17 09 26.7	-1.1
PAVE				eS	Sn	17 09 44.1	-2.5
ESSJ	San Jos, E	1.61	94	iP	Pn	17 09 26.0	-2.8
FG16	Alotenango, Sa	1.70	69	iP	Pn	17 09 28.1	-2.3
FG16				IAML		17 09 48.3	
	comp=E,16µm,0.2s						
HUEH	Huehuetenango	1.75	21	eP	Pn	17 09 31.1	0.0
HUEH				eS	Sn	17 09 54.5	+2.0
HUEH	Huehuetenango	1.75	21	P	Pn	17 09 32.8	+1.8
HUEH	Huehuetenango	1.75	21	iP	Pn	17 09 33.0	+1.9
HUEH				IAML		17 09 58.1	
	comp=N,1µm,0.6s						
QUIS	Sacapulas	1.91	32	iP	Pn	17 09 35.4	+2.3
QUIS				IAML		17 10 05.0	
	comp=E,1µm,0.4s						
FAME	Alcaldia de Sa	2.09	85	P	Pn	17 09 36.6	+1.1
FAME				S	Sn	17 09 59.8	-0.6
PCIG		2.27	333	eP	Pn	17 09 38.2	+0.3
PCIG				eS	Sn	17 10 03.2	-1.6
NUBE	Las Nubes	2.32	84	P	Pn	17 09 39.9	+1.1
NUBE				S	Sn	17 10 07.1	+0.8
LOAL	Lomas de Alarc	2.33	82	P	Pn	17 09 39.6	+0.8
AVCB	Coban	2.46	43	IAML		17 10 24.7	
	comp=E,3µm,0.7s						
CCIG	Comitan	2.59	0	eP	Pn	17 09 46.3	+3.8
CCIG				eS	Sb	17 10 18.8	-1.2
CCIG	Comitan	2.59	0	P	Pn	17 09 46.0	+3.4
CCIG	Comitan	2.59	0	iP	Pb	17 09 46.5	-1.9
PMON	Piamonte	2.76	89	P	Pn	17 09 46.5	+1.7
PMON				S	Sn	17 10 18.1	+0.8
MTO3	Montecristo	2.81	75	P	Pn	17 09 46.5	+0.9
ZAFR2	Estanzuela, Za	2.87	71	iP	Pn	17 09 47.2	+1.1
ESQI	Esquipulas	2.87	72	P	Pn	17 09 47.0	+0.7
CARR	Arriaga	3.07	327	eP	Pn	17 09 49.9	+0.9
CARR				eS	Sn	17 10 24.7	-0.1
TGIG		3.23	343	eP	Pn	17 09 52.5	+1.4
TGIG				eS	Sn	17 10 28.4	-0.3
TGIG		3.23	343	iP	Pn	17 09 52.7	+1.5
UXUV	UXUV	4.10	332	eP	Pn	17 10 04.5	+1.3
UXUV				eS	Sn	17 10 50.2	+0.1
CMIG	Matias Romero	4.30	323	eP	Pn	17 10 07.7	+1.8
CMIG				eS	Sn	17 10 55.5	+0.5
HUIG	Huatulco	4.36	299	eP	Pn	17 10 08.3	+1.6
HUIG				eS	Sn	17 10 53.1	-3.4
NEUV	Arroyo Zacate	5.34	319	eP	Pn	17 10 21.8	+1.7
NEUV				eS	Sn	17 11 22.8	+2.2
PEIG	Puerto Escondi	5.35	296	eP	Pn	17 10 17.0	-3.3
PEIG				eS	Sn	17 11 17.1	-4.0
YOIG	Yosondua	6.09	302	eP	Pn	17 10 34.7	+3.9
YOIG				eS	Sn	17 11 35.3	-4.3
TOIG	Toxpalan	6.45	314	eP	Pn	17 10 37.1	+1.5
TOIG				eS	Sn	17 11 50.1	+1.7
TXIG	Tlaxiaco	6.48	304	eP	Pn	17 10 40.1	+4.0
TXIG				eS	Sn	17 11 48.7	-0.5

SSNC 02 17:09:24.0±0.8**, 18°.90N**×**80°.59W, h19km**±12km**, MD2.8, ML2.2, MW2.7, Presumed earthquake, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	0.90	32	eP	Pb	17 09 39.0	-2.0
LCCY				eS	Sb	17 09 49.2	-3.5
LCCY				IAML		17 09 52.1	
	comp=N,132nm,0.7s						
LCCY				IAML		17 09 54.4	
	comp=E,77nm,0.1s						
LCCY	Blossom Villag	0.90	32	eP	Pb	17 09 39.1	-2.0
LCCY				eS	Sb	17 09 49.9	-2.8
LCCY				IAML		17 09 54.6	
	comp=E,75nm,0.2s						
LCCY				IAML		17 09 57.2	
	comp=N,76nm,0.3s						
CBCY	The Bluff, Cay	1.15	43	eP	Pn	17 09 42.7	-2.3
CBCY				eS	Sb	17 09 55.7	-4.0
CBCY				IAML		17 09 57.3	
	comp=E,39nm,0.1s						
CBCY				IAML		17 09 58.0	
	comp=N,56nm,0.4s						
CBCY	The Bluff, Cay	1.15	43	eP	Pn	17 09 43.0	-2.0
CBCY				eS	Sb	17 09 56.3	-3.4
CBCY				IAML		17 09 57.2	
	comp=E,37nm,0.2s						
CBCY				IAML		17 09 58.0	
	comp=N,60nm,0.3s						
MTDJ	Mount Denham	2.97	103	eS	Sn	17 10 41.3	-4.1
MGV	Manicaragua	3.25	10	eP	Pn	17 10 11.7	-2.2
MGV				eS	Sn	17 10 47.0	-4.9
MGV				IAML		17 10 48.5	
	comp=N,6.6nm,0.2s						
MGV	Manicaragua	3.25	10	eP	Pn	17 10 11.7	-2.2
MGV				eS	Sn	17 10 48.0	-4.0
MGV				IAML		17 10 49.9	
	comp=N,7.7nm,0.3s						

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*RSPR **02** 17:11:29.4, 19°.32N×67°.41W, h33km±13km, MD3.1/9*
*SDD **02** 17:11:31.2±2.3, 19°.12N×67°.15W, h10km±10km, MD3.7, ML3.2, MW3.3, Presumed earthquake*
*NEIC **02** 17:11:32.7±0.7, 19°.01N±0°.07×67°.22W±0°.04, h35km±2km, ML3.0/33, Md3.1/9(RSPR), Error ellipse: s-maj=11.6km s-min=6.5km az=357.0*
ISC 02 17:11:31.9±1.2**, 19°.08N**±0°.06×**67°.26W**±0°.03**, h29km, n43,** σ**0s96**/67**, 28C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.62	167		Pb	17 11 43.3	-1.0
AGPR				IAML		17 11 55.0	
	590nm,0.4s						
AGPR				IAML		17 11 57.8	
	726nm,0.4s						
AGPR	Aguadilla, PR	0.62	167	⇑iP	Pb	17 11 43.5	-0.8
AGPR				⇑iS	Sb	17 11 52.6	-0.2
AGPR				IAML		17 11 55.0	
	comp=N,614nm,0.2s						
AGPR	Aguadilla, PR	0.62	167	⇑eP	Pb	17 11 43.4	-0.8
AGPR				eS	Sn	17 11 55.4	+1.6
IDE	Isla Desecheo	0.72	197		Pb	17 11 45.1	-0.8
IDE					Sn	17 11 57.1	+0.9
IDE	Isla Desecheo	0.72	197	⇑eP	Pb	17 11 45.1	-0.8
IDE				eS	Sn	17 11 57.1	+0.9
PRSN	Puerto Rico Se	0.86	173		Pn	17 11 47.3	-0.8
PRSN					Sn	17 12 01.4	+1.7
PRSN	Puerto Rico Se	0.86	173	⇑iP	Pn	17 11 46.0	-2.1
PRSN				iS	Sb	17 11 59.0	-0.5
PRSN				IAML		17 12 04.7	
	comp=N,1µm,0.3s						
PRSN	Puerto Rico Se	0.86	173	⇑eP	Pn	17 11 47.3	-0.8
PRSN				eS	Sn	17 12 01.4	+1.7
EMPR	Esperanza - Ma	0.91	131		Pn	17 11 48.3	-0.4
EMPR					Sn	17 12 03.1	+2.2
EMPR	Esperanza - Ma	0.91	131	⇑eP	Pn	17 11 48.3	-0.4
EMPR				eS	Sn	17 12 03.1	+2.2
LSP	Las Mesas	0.91	170		Pn	17 11 48.0	-0.8
LSP	Las Mesas	0.91	170	⇑eP	Pn	17 11 48.0	-0.8
UUPR	Utuado, UPR, P	0.96	148		Pn	17 11 48.0	-1.5
CRPR	Cabo Rojo, PR	1.07	173		Pn	17 11 50.4	-0.5
CRPR					Sb	17 12 06.3	+0.8
CRPR	Cabo Rojo, PR	1.07	173	IAML		17 12 10.2	
	comp=N,244nm,0.4s						
CRPR	Cabo Rojo, PR	1.07	173	⇑iP	Pn	17 11 50.5	-0.5
CRPR				⇑iS	Sn	17 12 04.1	-0.8
CRPR				IAML		17 12 13.8	
	comp=N,240nm,0.3s						
CRPR	Cabo Rojo, PR	1.07	173	⇑eP	Pn	17 11 50.4	-0.5
CRPR				eS	Sb	17 12 06.3	+0.8
MLPR	Magueyes Islan	1.12	170		Pn	17 11 51.0	-0.7
ECPR	Experimental S	1.13	132		Pn	17 11 50.1	-1.7
ECPR	Experimental S	1.13	132	⇑eP	Pn	17 11 51.2	-0.6
ECPR				eS	Sb	17 12 08.1	+0.8
GBPR	Guanica, Bosqu	1.15	162		Pn	17 11 51.5	-0.6
GBPR					Sb	17 12 09.5	+1.7
GBPR	Guanica, Bosqu	1.15	162	⇑eP	Pn	17 11 51.5	-0.6
GBPR				eS	Sb	17 12 09.5	+1.7
OBIP	Obispado Ponce	1.20	149		Pn	17 11 52.1	-0.6
OBIP	Obispado Ponce	1.20	149		Sb	17 12 09.8	+0.7
OBIP	Obispado Ponce	1.20	149	IAML		17 12 09.8	
	comp=N,91nm,0.5s						
OBIP	Obispado Ponce	1.20	149	⇑eP	Pn	17 11 52.1	-0.6
OBIP				eS	Sb	17 12 09.8	+0.7
PCDR	Punta Cana, DR	1.21	242	⇑iP	Pn	17 11 52.3	-0.5
PCDR				⇑iS	Sb	17 12 09.7	+0.4
PCDR				IAML		17 12 12.8	
	comp=N,416nm,0.7s						
GCPR	Guaynabo City	1.35	124		Pn	17 11 54.0	-0.7
GCPR					Sb	17 12 13.4	+0.1
GCPR	Guaynabo City	1.35	124	⇑eP	Pn	17 11 54.0	-0.7
GCPR				eS	Sb	17 12 13.4	+0.1
SJG	San Juan	1.42	132		Pn	17 11 55.9	+0.1
SJG	San Juan	1.42	132	IAML		17 12 23.8	
	comp=N,187nm,0.4s						
SJG				IAML		17 12 24.8	
	comp=N,167nm,0.3s						
SJG	San Juan	1.42	132	⇑iP	Pn	17 11 55.4	-0.4
SJG				⇑iS	Sn	17 12 12.2	-1.3
SJG	San Juan	1.42	132	⇑eP	Pn	17 11 55.9	+0.1
SJG				eS	Sb	17 12 16.0	+0.5
HIDR	Higuey Centro	1.47	251	iP	Pn	17 11 56.1	-0.3
HIDR				⇑iS	Sb	17 12 16.8	0.0
HIDR				IAML		17 12 19.9	
	comp=N,372nm,0.2s						
PDPR	Patillas Dam,	1.57	132		Pn	17 11 57.5	-0.4
HUMP	Col San Antoni	1.62	125		Pn	17 11 58.1	-0.5
HUMP					Sb	17 12 21.6	+0.3
HUMP	Col San Antoni	1.62	125	IAML		17 12 25.7	
	comp=N,156nm,0.2s						
HUMP				IAML		17 12 27.3	
	comp=N,213nm,0.2s						
HUMP	Col San Antoni	1.62	125	⇑eP	Pn	17 11 58.1	-0.5
HUMP				eS	Sb	17 12 21.6	+0.3
MIDR	Miches	1.70	267	⇑iP	Pn	17 12 00.2	+0.6
MIDR				⇑iS	Sb	17 12 23.3	-0.1
MIDR				IAML		17 12 29.4	
	comp=N,90nm,0.4s						
SMDR	Samana, DR	1.84	277	⇑iP	Pn	17 12 02.1	+0.6
SMDR				⇑iS	Sb	17 12 26.6	-0.9
SMDR				IAML		17 12 38.5	
	comp=N,105nm,0.7s						
DR12	Loma Pena Alta	2.03	262		Pn	17 12 04.9	+0.7
HATOM	Hato Mayor del	2.03	262	iP	Pn	17 12 05.1	+0.9
HATOM				⇑iS	Sb	17 12 31.6	-1.5
HATOM				IAML		17 12 36.9	
	comp=N,95nm,0.6s						
DR08	Loma La Naviza	2.62	268	⇑iP	Pn	17 12 13.1	+0.7
DR08				iS	Sn	17 12 43.5	+0.2
DR08				IAML		17 12 56.1	
	comp=N,1µm,0.2s						

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*REN **02** 17:34:29.7±2.2, 37°.80N±0°.02×114°.30W±0°.02, h3km±5km, Error ellipse: s-maj=2.3km s-min=1.9km az=168.0*
NEIC 02 17:34:29.1±1.7**, 37°.81N**±0°.02×**114°.34W**±0°.01**, h5km**±1km**, ML3.4**/94**, ML3.7**/2(REN)**, Error ellipse: s-maj=3.0km s-min=2.8km az=0.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	Pahroc Range	0.70	235		Pb	17 34 43.4	-0.4
PRN					Sb	17 34 53.1	-0.7
ARUT	Antelope Range	0.71	92		Pg	17 34 43.1	+0.4
ICU	Indian Springs	0.74	153		Pg	17 34 43.4	+0.2
CCUT	Cedar City	0.81	108		Pg	17 34 44.7	0.0
CCUT					Sg	17 34 55.8	+0.5
CCUT	Cedar City	0.81	108	IAML		17 35 00.9	
	comp=E,928nm,0.4s						
PSUT	Pine Spring	0.82	28		Pg	17 34 45.3	+0.5
PSUT					Sg	17 34 55.8	+0.4
PSUT	Pine Spring	0.82	28	IAML		17 35 01.3	
	comp=E,1µm,0.4s						
PSUT				IAML		17 35 01.5	
	comp=N,2µm,0.4s						
SZCU	Shurtz Canyon	1.01	102		Pg	17 34 48.5	-0.1
SZCU					Sb	17 35 02.4	-0.6
R11B	Troy Canyon, C	1.12	299		Pb	17 34 51.4	+0.2
S11A	Rachel	1.13	262		Pn	17 34 51.8	0.0
S11A					Sn	17 35 07.2	-0.6
LCMT	Little Creek M	1.18	132		Pg	17 34 51.3	-0.4
LCMT	Little Creek M	1.18	132	IAML		17 35 10.1	
	comp=N,693nm,0.7s						
LCMT				IAML		17 35 10.1	
	comp=E,1µm,0.4s						
KNB	Kanab	1.44	123		Pb	17 34 56.5	-0.1
KNB	Kanab	1.44	123	IAML		17 35 17.1	
	comp=N,714nm,0.8s						
KNB				IAML		17 35 17.1	
	comp=E,510nm,0.5s						
SHPR	Sheep Range	1.46	207		Pn	17 34 56.2	-0.1
SHPR					Sg	17 35 16.5	+0.5
PKCU	Pink Cliffs	1.65	102		Pb	17 34 59.8	-0.4
PKCU				IAML		17 35 24.4	
	comp=N,844nm,0.6s						
PKCU				IAML		17 35 31.9	
	comp=E,987nm,0.3s						
TCRU	Three Creeks R	1.69	61		Pb	17 35 00.9	+0.1
TCRU				IAML		17 35 28.0	
	comp=N,320nm,0.4s						
TCRU				IAML		17 35 33.3	
	comp=E,407nm,0.8s						
MTPU	Mount Pierson	1.72	82		Pn	17 35 00.6	+0.6
MTPU				IAML		17 35 25.1	
	comp=N,323nm,0.6s						
MCY	Mercury	1.73	229		Pn	17 35 00.0	0.0
TPNV	Topopah Spring	1.75	241		Pn	17 35 00.4	+0.2
TPNV				IAML		17 35 29.5	
	comp=N,375nm,0.4s						
TPNV				IAML		17 35 30.5	
	comp=N,459nm,0.5s						
NSP	Numbskull Pass	1.85	235		Pn	17 35 01.7	+0.2
SDH	Striped Hills	1.98	235		Pn	17 35 03.6	+0.3
FSU	Fish Springs	2.05	21		Pn	17 35 05.0	+0.6
FSU					Sg	17 35 38.1	+3.2
AMDNV	Amargosa	2.06	230		Pn	17 35 05.1	+0.7
WCT	Wildcat Mounta	2.09	242		Pn	17 35 05.1	+0.2

V12A	**Nelson**	**2.12**	**191**		Pn	17 35 05.7	+0.4
V12A	**Nelson**	**2.12**	**191**	IAML		17 35 37.2	
	comp=E,269nm,0.8s						
V12A				IAML		17 35 37.4	
	comp=N,295nm,0.7s						
SGV	**South Grapevin**	**2.30**	**250**		Pn	17 35 08.3	+0.4
FURC	**Furnace Creek,**	**2.42**	**237**		Pn	17 35 09.8	+0.4
FURC				IAML		17 35 55.6	
	comp=N,426nm,0.5s						
Q09A	**Carvers**	**2.46**	**295**		Pn	17 35 10.9	+0.9
Q09A					Sg	17 35 49.9	+1.7
GWY	**Greenwater Val**	**2.47**	**230**		Pn	17 35 10.7	+0.5
GWY	**Greenwater Val**	**2.47**	**230**	IAML		17 35 50.6	
	comp=E,254nm,0.6s						
GWY				IAML		17 35 52.8	
	comp=N,235nm,0.5s						
MTPC	**Mountain Pass**	**2.52**	**203**		Pn	17 35 11.1	+0.3
MTPC				IAML		17 35 56.0	
	comp=E,153nm,0.6s						
DUG	**Dugway, Tooele**	**2.66**	**26**		Pb	17 35 15.8	-1.5
DUG				IAML		17 35 57.4	
	comp=E,119nm,0.8s						
DUG				IAML		17 35 58.3	
	comp=E,105nm,0.8s						
LCH	**Last Change Ra**	**2.69**	**259**		Pn	17 35 13.8	+0.5
W13A	**Hualapai Mount**	**2.73**	**172**		Pn	17 35 13.8	0.0
QSM	**Queen of Sheba**	**2.74**	**229**		Pn	17 35 14.1	+0.4
QSM	**Queen of Sheba**	**2.74**	**229**	IAML		17 36 00.9	
	comp=N,92nm,0.5s						
QSM				IAML		17 36 04.8	
	comp=E,109nm,0.8s						
DSP	**Deep Springs**	**2.92**	**262**		Pn	17 35 17.0	+0.8
DSP	**Deep Springs**	**2.92**	**262**	IAML		17 36 05.5	
	comp=E,122nm,0.6s						
DSP				IAML		17 36 06.8	
	comp=N,126nm,0.5s						
ELK	**Elko**	**3.01**	**347**		Pn	17 35 18.1	+0.4
NEE2	**Needles Airpor**	**3.04**	**184**		Pn	17 35 17.5	-0.4
NEE2				IAML		17 36 12.6	
	comp=E,227nm,0.8s						
NEE2				IAML		17 36 15.8	
	comp=N,213nm,0.6s						
MPMC	**Manual Prospec**	**3.07**	**236**		Pn	17 35 18.4	-0.1
MPMC				IAML		17 36 15.1	
	comp=E,72nm,0.7s						
NV11	**Mina Array Sit**	**3.08**	**283**		Pn	17 35 18.7	+0.2
NV11	**Mina Array Sit**	**3.08**	**283**	IAML		17 36 10.5	
	comp=E,134nm,0.4s						
NVAR	**Mina Array Bea**	**3.19**	**282**	Pn	Pn	17 35 19.7	-0.4
GSC	**Goldstone, Bar**	**3.20**	**219**	IAML		17 36 14.5	
	comp=N,70nm,0.3s						
GSC				IAML		17 36 15.7	
	comp=E,126nm,0.5s						
NV08	**Mina Array Sit**	**3.20**	**282**		Pn	17 35 20.5	+0.3
NV09	**Mina Array Sit**	**3.22**	**282**		Pn	17 35 20.8	+0.4
SRU	**San Rafael Swe**	**3.26**	**65**		Pn	17 35 23.7	+2.7
SRU				IAML		17 36 17.5	
	comp=N,69nm,1.2s						
SRU				IAML		17 36 23.7	
	comp=E,86nm,0.6s						
BGU	**Big Grassy Mou**	**3.27**	**18**		Pn	17 35 21.6	+0.4
BGU				IAML		17 36 24.2	
	comp=E,68nm,0.8s						
CLC	**China Lake**	**3.29**	**234**		Pn	17 35 21.8	+0.4
WUAZ	**Wupatki**	**3.30**	**133**		Pb	17 35 30.2	+1.9
LHV	**Little Huntoon**	**3.32**	**279**		Pn	17 35 23.0	+1.3
CCCA	**Chr Cany lake**	**3.34**	**228**	IAML		17 36 23.4	
	comp=N,145nm,1.1s						
CCCA				IAML		17 36 26.5	
	comp=E,100nm,1.1s						
IRM	**Iron Mountain**	**3.70**	**190**		Pn	17 35 26.9	-0.1
IRM				IAML		17 36 28.0	
	comp=E,75nm,0.8s						
BLYC	**Blythe**	**4.05**	**182**		Pn	17 35 31.1	-0.6
BLYC				IAML		17 36 46.3	
	comp=E,40nm,1.2s						
PMD	**Palm Desert**	**4.47**	**202**		Pn	17 35 38.0	+0.5
PFO	**Pinyon Flats O**	**4.53**	**203**		Pn	17 35 38.4	-0.1
GLA	**Glamis**	**4.76**	**185**	Pn	Pn	17 35 40.9	-0.7
GLA				IAML		17 37 03.8	
	comp=N,45nm,0.7s						
GLA				IAML		17 37 08.2	
	comp=E,50nm,0.7s						

*OSPL **02** 17:35:03.4±4.1, 18°.88N×69°.00W, h25km±26km, ML3.7, Presumed earthquake*
*SDD **02** 17:35:03.2±1.3, 19°.02N×69°.07W, h20km±12km, MD3.9, ML3.4, MW3.6, Presumed earthquake*
*RSPR **02** 17:35:05.9, 19°.59N×68°.98W, h36km±27km*
ISC 02 17:35:01.8±1.0**, 19°.01N**±0°.04×**69°.05W**±0°.02**, h25**km±9km**,**
n43, σ1**°.95**/75**, 15C-10D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMDR	**Samana, DR**	**0.31**	**336**	⇑ePg	**Pb**	**17 35 08.5**	**-0.4**
SMDR				⇓eSg	**Sb**	**17 35 13.9**	**+0.1**
SMDR				IAML		17 35 16.1	
	comp=N,5µm,0.3s						
HATOM	**Hato Mayor del**	**0.38**	**235**	⇓ePg	**Pb**	**17 35 10.6**	**+0.5**
HATOM				⇑eSg	**Sb**	**17 35 15.1**	**-0.6**
HATOM				IAML		17 35 16.6	
	comp=N,2µm,0.3s						
HIDR	**Higuey Centro**	**0.52**	**142**	⇑ePg	**Pn**	**17 35 13.2**	**-0.5**
HIDR				⇑eSg	**Sb**	**17 35 20.9**	**+1.3**
HIDR				IAML		17 35 24.9	
	comp=N,6µm,0.3s						
NADR	**Nagua**	**0.83**	**294**	ePg	**Pn**	**17 35 17.9**	**0.0**
NADR				IAML		17 35 33.9	
	comp=N,30µm,0.3s						
LONA1	**Toro Cenizo, N**	**0.85**	**296**	iP	Pn	17 35 23.7	+5.5
LONA1				eS	**Sn**	**17 35 37.2**	**+7.3**
DR08	**Loma La Naviza**	**0.92**	**267**	⇓ePg	**Pn**	**17 35 18.8**	**-0.4**
DR08				⇑eSg	**Sb**	**17 35 30.5**	**-0.4**
DR08				IAML		17 35 31.0	
	comp=N,20µm,0.3s						
SDD	**Santo Domingo**	**0.98**	**236**	⇓ePg	**Pb**	**17 35 20.5**	**+0.3**
SDD				⇑eSg	**Sb**	**17 35 33.2**	**+0.5**
SDD				IAML		17 35 39.3	
	comp=N,277nm,0.3s						
SDD	**Santo Domingo**	**0.98**	**236**	iP	**Pb**	**17 35 20.4**	**+0.3**
SDD				eS	**Sb**	**17 35 32.3**	**-0.4**
BANI	**BANI**	**1.38**	**244**	⇑ePg	**Pb**	**17 35 26.9**	**-0.1**
BANI				IAML		17 35 52.1	
	comp=N,1µm,0.6s						
ABDR	**Alto Bandera**	**1.50**	**263**	⇑ePg	**Pb**	**17 35 29.6**	**+0.4**
ABDR				IAML		17 36 30.1	
	comp=N,0.3nm,0.3s						
IDE	**Isla Desecheo**	**1.62**	**112**	eS	**Sb**	**17 35 54.3**	**+3.2**
SC01	**Santiago de lo**	**1.64**	**285**	iP	**Pb**	**17 35 32.6**	**+1.3**
SC01				eS	**Sb**	**17 35 54.9**	**+3.4**
SC01				IAML		17 36 04.0	
	comp=Z,778nm,0.3s						
AGPR	**Aguadilla, PR**	**1.92**	**106**	⇑ePg	**Pb**	**17 35 35.6**	**-0.5**
AGPR				IAML		17 36 08.3	
	comp=N,1µm,0.3s						
AGPR	**Aguadilla, PR**	**1.92**	**106**	⇑iP	**Pb**	**17 35 37.5**	**+1.4**
AGPR				eS	**Sb**	**17 36 02.3**	**+2.6**
AGPR	**Aguadilla, PR**	**1.92**	**106**	iP	**Pb**	**17 35 35.6**	**-0.5**
AGPR				IAML		17 36 07.3	
	comp=Z,711nm,0.4s						
PRSN	**Puerto Rico Se**	**1.97**	**113**	⇑ePg	**Pb**	**17 35 36.5**	**-0.6**
PRSN				IAML		17 36 11.7	
	comp=N,1µm,0.3s						
PRSN	**Puerto Rico Se**	**1.97**	**113**	⇑eP	**Pb**	**17 35 37.7**	**+0.6**
PRSN				eS	**Sb**	**17 36 02.9**	**+1.6**
LSP	**Las Mesas**	**2.04**	**114**	⇑eP	**Pb**	**17 35 38.5**	**+0.3**
LSP				eS	**Sb**	**17 36 07.3**	**+4.1**
CRPR	**Cabo Rojo, PR**	**2.10**	**118**	⇓ePg	**Pb**	**17 35 38.3**	**-0.9**
CRPR				IAML		17 36 13.8	
	comp=N,416nm,0.5s						
CRPR	**Cabo Rojo, PR**	**2.10**	**118**	⇓eP	**Pb**	**17 35 40.5**	**+1.4**
CRPR				eS	**Sb**	**17 36 09.4**	**+4.7**
SDDR	**Presa de Saban**	**2.11**	**270**	eP	**Pb**	**17 35 39.9**	**+0.4**
SDDR				eS	**Sb**	**17 36 08.8**	**+3.4**
SDDR				IAML		17 36 14.0	
	comp=N,656nm,0.7s						
SDDR				IAML		17 36 14.4	
	comp=N,452nm,0.8s						
SDDR	**Presa de Saban**	**2.11**	**270**	⇓iP	**Pb**	**17 35 39.9**	**+0.4**
SDDR				eS	**Sb**	**17 36 09.3**	**+3.9**
SDDR	**Presa de Saban**	**2.11**	**270**	iP	**Pb**	**17 35 39.8**	**+0.3**
SDDR				eS	**Sb**	**17 36 05.3**	**0.0**
SDDR				IAML		17 36 15.4	
	comp=Z,339nm,0.3s						
LOPP1	**Punta Rusia, P**	**2.19**	**293**	iP	**Pb**	**17 35 39.5**	**-1.3**
LOPP1				eS	**Sb**	**17 36 07.8**	**+0.3**
LOPP1				IAML		17 36 21.6	
	comp=Z,794nm,0.8s						
PODR	**Polo**	**2.27**	**249**	iP	**Pb**	**17 35 41.0**	**-1.3**
PODR				eS	**Sb**	**17 36 13.2**	**+3.2**
GBPR	**Guanica, Bosqu**	**2.31**	**116**	⇓eP	**Pb**	**17 35 44.0**	**+1.3**
GBPR				eS	**Sb**	**17 36 13.1**	**+2.3**
EMPR	**Esperanza - Ma**	**2.45**	**102**	⇓iP	**Pb**	**17 35 44.6**	**-0.6**
LOVI	**El Cajuil, Ovi**	**2.51**	**242**	iP	**Pb**	**17 35 43.9**	**-2.3**
OBIP	**Obispado Ponce**	**2.51**	**112**	⇓iP	**Pb**	**17 35 46.2**	**-0.1**
OBIP				eS	**Sb**	**17 36 18.9**	**+2.1**
ECPR	**Experimental S**	**2.64**	**105**	⇑eP	**Pb**	**17 35 47.9**	**-0.6**
ECPR				eS	**Sb**	**17 36 19.5**	**-1.0**
SJG	**San Juan**	**2.90**	**107**	⇑iP	**Pb**	**17 35 50.7**	**-2.0**
SJG				eS	**Sb**	**17 36 25.4**	**-2.4**
GCPR	**Guaynabo City**	**2.90**	**103**	⇑eP	**Pb**	**17 35 51.8**	**-1.1**
GCPR				eS	**Sb**	**17 36 27.6**	**-0.3**
HUMP	**Col San Antoni**	**3.16**	**105**	⇑eP	**Pb**	**17 35 54.4**	**-2.9**
HUMP				eS	**Sb**	**17 36 33.4**	**-2.0**
GRTK	**Grand Turk**	**3.16**	**322**	eP	**Pn**	**17 35 50.6**	**+0.5**
GRTK				eS	**Sn**	**17 36 28.1**	**+1.1**
GRTK				IAML		17 36 32.4	
	comp=Z,135nm,0.1s						
GRTK				IAML		17 36 36.5	
	comp=Z,157nm,0.2s						
MASC	**Masc**	**5.02**	**284**	eP	**Pn**	**17 36 14.7**	**-0.8**
MASC				eS	**Sn**	**17 37 13.6**	**+0.8**
QMBU	**Quimbuelo**	**5.56**	**283**	eP	**Pn**	**17 36 21.2**	**-1.7**
QMBU				eS	**Sn**	**17 37 24.5**	**-1.6**
GTBY	**Guantanamo Bay**	**5.79**	**280**	eP	**Pn**	**17 36 26.7**	**+0.6**
GTBY				eS	**Sn**	**17 37 31.7**	**-0.1**
NMDO	**Nuevo Mundo**	**5.79**	**286**	eP	**Pn**	**17 36 24.0**	**-2.2**
NMDO				eS	**Sn**	**17 37 30.6**	**-1.2**
MOAC	**Moa**	**5.80**	**287**	eP	**Pn**	**17 36 24.7**	**-1.6**
MOAC				eS	**Sn**	**17 37 29.3**	**-2.7**
RCC	**Rio Carpintero**	**6.34**	**280**	eP	**Pn**	**17 36 33.4**	**-0.3**
RCC				eS	**Sn**	**17 37 43.9**	**-1.5**
PINC	**Pinares de May**	**6.51**	**284**	eP	**Pn**	**17 36 35.1**	**-1.0**
PINC				eS	**Sn**	**17 37 46.9**	**-2.8**
HLGC	**Holguin**	**6.85**	**287**	eP	**Pn**	**17 36 38.6**	**-2.1**
HLGC				eS	**Sn**	**17 37 58.4**	**+0.4**
YAR	**Yar**	**7.01**	**282**	eP	**Pn**	**17 36 41.2**	**-1.9**
YAR				eS	**Sn**	**17 37 59.1**	**-2.9**

*REN **02** 17:39:10.0±1.7, 37°.80N±0°.02×114°.306W±0°.008, h6km±4km, Error ellipse: s-maj=2.4km s-min=1.0km az=177.0*
NEIC 02 17:39:09.5±1.8**, 37°.80N**±0°.02×**114°.33W**±0°.02**, h5**km±1km**,**
ML3.1/72**, ML3.6**/1(REN)**, Error ellipse: s-maj=3.0km s-min=2.6km az=349.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRN	**Pahroc Range**	**0.70**	**236**		Pb	17 39 23.6	-0.6
PRN					Sb	17 39 33.4	-0.8
ARUT	**Antelope Range**	**0.70**	**91**		Pg	17 39 23.3	+0.2
ICU	**Indian Springs**	**0.73**	**154**		Pg	17 39 23.6	+0.1
CCUT	**Cedar City**	**0.81**	**108**		Pg	17 39 24.9	-0.1
CCUT					Sg	17 39 35.4	-0.1
PSUT	**Pine Spring**	**0.82**	**27**		Pg	17 39 25.5	+0.2
PSUT					Sg	17 39 36.0	+0.1
PSUT	**Pine Spring**	**0.82**	**27**	IAML		17 39 41.4	
	comp=E,952nm,0.3s						
PSUT				IAML		17 39 41.7	
	comp=N,922nm,0.4s						
SZCU	**Shurtz Canyon**	**1.01**	**102**		Pg	17 39 28.9	0.0
SZCU					Sg	17 39 42.5	+0.5
R11B	**Troy Canyon, C**	**1.13**	**299**		Pb	17 39 31.6	-0.1
S11A	**Rachel**	**1.14**	**262**		Pn	17 39 32.1	-0.1
S11A					Sb	17 39 47.2	+0.4
LCMT	**Little Creek M**	**1.17**	**132**		Pg	17 39 31.5	-0.4
LCMT	**Little Creek M**	**1.17**	**132**	IAML		17 39 50.3	
	comp=E,358nm,0.8s						
LCMT				IAML		17 39 50.3	
	comp=N,258nm,0.8s						
KNB	**Kanab**	**1.44**	**123**		Pb	17 39 36.7	-0.2
KNB	**Kanab**	**1.44**	**123**	IAML		17 39 57.3	
	comp=N,250nm,0.7s						
KNB				IAML		17 39 57.7	
	comp=E,188nm,0.7s						
SHPR	**Sheep Range**	**1.46**	**207**		Pn	17 39 36.8	+0.2
SHPR					Sg	17 39 57.1	+0.8
PKCU	**Pink Cliffs**	**1.64**	**102**		Pb	17 39 40.2	-0.3
TCRU	**Three Creeks R**	**1.69**	**61**		Pb	17 39 41.4	+0.2
TCRU				IAML		17 40 08.7	
	comp=N,155nm,0.7s						
TCRU				IAML		17 40 13.2	
	comp=E,181nm,0.8s						
MTPU	**Mount Pierson**	**1.71**	**81**		Pn	17 39 41.0	+0.7
MTPU				IAML		17 40 05.3	
	comp=N,163nm,0.6s						
MCY	**Mercury**	**1.73**	**229**		Pn	17 39 40.2	-0.2
TPNV	**Topopah Spring**	**1.75**	**241**		Pn	17 39 40.8	0.0
TPNV	**Topopah Spring**	**1.75**	**241**	IAML		17 40 09.8	
	comp=N,157nm,0.4s						
TPNV				IAML		17 40 10.8	
	comp=N,161nm,0.5s						
NSP	**Numbskull Pass**	**1.85**	**235**		Pn	17 39 42.0	0.0
SDH	**Striped Hills**	**1.98**	**235**		Pn	17 39 44.1	+0.4
AMDNV	**Amargosa**	**2.06**	**230**		Pn	17 39 45.5	+0.7
WCT	**Wildcat Mounta**	**2.09**	**242**		Pn	17 39 46.0	+0.7
V12A	**Nelson**	**2.12**	**192**		Pn	17 39 46.0	+0.3
V12A	**Nelson**	**2.12**	**192**	IAML		17 40 17.4	
	comp=E,99nm,0.9s						
V12A				IAML		17 40 18.9	
	comp=N,90nm,1.0s						
U15A	**North Rim**	**2.13**	**130**		Pb	17 39 48.1	-0.6
U15A				IAML		17 40 17.6	
	comp=N,121nm,0.7s						
U15A				IAML		17 40 18.8	
	comp=E,117nm,0.7s						
SGV	**South Grapevin**	**2.30**	**250**		Pn	17 39 48.7	+0.4
FURC	**Furnace Creek,**	**2.42**	**237**		Pn	17 39 49.2	-0.6
FURC				IAML		17 40 35.6	
	comp=N,144nm,0.6s						
Q09A	**Carvers**	**2.47**	**296**		Pn	17 39 51.2	+0.6
GWY	**Greenwater Val**	**2.47**	**230**		Pn	17 39 51.0	+0.4
GWY				IAML		17 40 39.4	
	comp=N,81nm,0.9s						
GWY				IAML		17 40 46.5	
	comp=E,76nm,1.1s						
DUG	**Dugway, Tooele**	**2.66**	**26**		Pb	17 39 56.7	-1.1
DUG				IAML		17 40 42.2	
	comp=E,63nm,0.8s						
DUG				IAML		17 40 44.9	
	comp=E,63nm,1.0s						
W13A	**Hualapai Mount**	**2.72**	**172**		Pn	17 39 54.3	+0.2
QSM	**Queen of Sheba**	**2.74**	**229**		Pn	17 39 54.3	+0.1
DSP	**Deep Springs**	**2.92**	**263**		Pn	17 39 57.4	+0.7
DSP	**Deep Springs**	**2.92**	**263**	IAML		17 40 45.8	
	comp=E,48nm,0.7s						
DSP				IAML		17 40 47.2	
	comp=N,46nm,0.7s						
ELK	**Elko**	**3.02**	**347**		Pn	17 39 58.3	+0.1
NEE2	**Needles Airpor**	**3.04**	**184**		Pn	17 39 57.6	-0.7
NEE2				IAML		17 40 52.5	
	comp=E,86nm,0.7s						
NEE2				IAML		17 40 55.8	
	comp=N,72nm,0.7s						
MPMC	**Manual Prospec**	**3.07**	**236**		Pn	17 39 58.8	-0.2
NV11	**Mina Array Sit**	**3.08**	**283**		Pn	17 39 59.1	+0.1
NV11	**Mina Array Sit**	**3.08**	**283**	IAML		17 40 51.0	
	comp=E,59nm,1.3s						
NV08	**Mina Array Sit**	**3.20**	**282**		Pn	17 40 00.9	+0.2
SRU	**San Rafael Swe**	**3.26**	**65**		Pn	17 40 02.7	+1.2
SRU				IAML		17 40 57.7	
	comp=N,35nm,1.1s						
SRU				IAML		17 41 03.9	
	comp=E,38nm,0.6s						
WUAZ	**Wupatki**	**3.29**	**133**		Pn	17 40 01.6	-0.3
IRM	**Iron Mountain**	**3.70**	**191**		Pn	17 40 07.3	-0.1
IRM				IAML		17 41 08.3	
	comp=E,25nm,1.0s						

*IDC **02** 17:56:49.4±1.2, 41°.20N×138°.54E, h231km±11km, mb3.3/15, mbtmp4.0/21, Error ellipse: s-maj=15.8km s-min=10.9km az=163.0*
*JMA **02** 17:56:49.9±0.2, 41°.2N±0°.5×13°9E±°, h240km±2km, MV3.3/33, W OFF AOMORI PREF*
ISC 02 17:56:50.3±0.6**, 41°.15N**±0°.05×**138°.69E**±0°.07**, h250**km**, n40,**
σ1**°.37**/47**, mb3.5**/15**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOMM	**Oshimamatsumae**	**1.06**	**69**	P	**Pn**	**17 57 24.4**	**-1.2**
JOMM				eS	**S**	**17 57 51.0**	**-2.3**
JOSM	**Okushiri--Mats**	**1.10**	**32**	P	**Pn**	**17 57 24.2**	**-1.6**
JIW	**Iwasaki**	**1.14**	**119**	P	**Pn**	**17 57 25.1**	**-1.0**
JSR	**Shiriuchi**	**1.35**	**73**	eP	**Pn**	**17 57 26.5**	**-0.9**
JSR				eS	**S**	**17 57 55.0**	**-1.7**
JHST	**Hiyamasetana**	**1.55**	**34**	eP	**Pn**	**17 57 28.2**	**-0.7**
JYM2	**Yakumo 2**	**1.59**	**52**	iP	**Pn**	**17 57 28.5**	**-0.7**
JYM2				eS	**S**	**17 57 58.2**	**-1.6**
JOT	**Ohata**	**1.79**	**82**	P	**Pn**	**17 57 30.0**	**-0.8**
JANG	**Nango**	**2.28**	**109**	eP	**Pn**	**17 57 34.1**	**-1.3**
JYK	**Kaneyama**	**2.57**	**150**	iP	**Pn**	**17 57 37.7**	**-0.6**
JYK				eS	**S**	**17 58 14.9**	**-1.2**
JOM	**Ohasama**	**2.60**	**129**	P	**Pn**	**17 57 37.7**	**-0.8**
JEW	**Eniwo**	**2.66**	**50**	eP	**Pn**	**17 57 39.0**	**-0.1**
JAW	**Awa shima**	**2.72**	**171**	eP	**Pn**	**17 57 39.3**	**-0.5**
JMK	**Ichinoseki**	**2.93**	**138**	eP	**Pn**	**17 57 41.1**	**-0.9**
JNBK	**Urakawa-nobuka**	**3.24**	**68**	eP	**Pn**	**17 57 44.7**	**-0.6**
JHR	**Hokuryu**	**3.43**	**40**	P	**Pn**	**17 57 47.8**	**+0.4**
JCH	**Churui**	**3.78**	**66**	eP	**Pn**	**17 57 50.9**	**-0.5**
JCH				S	**S**	**17 58 36.5**	**-3.5**
JOTO	**OTAMA OYAMA**	**3.80**	**160**	P	**Pn**	**17 57 51.1**	**-0.7**
JSS	**Shosan**	**4.00**	**35**	P	**Pn**	**17 57 54.2**	**+0.3**
JKK2	**Kamakawa 2**	**4.05**	**46**	iP	**Pn**	**17 57 54.2**	**-0.3**
JKK2				eS	**S**	**17 58 42.5**	**-3.2**
ASAJ	**Asahikawa**	**4.13**	**43**	P	**Pn**	**17 57 55.8**	**+0.2**
	61nm,0.3s,baz=235,slow=12,SNR=295						
ASAJ				S	**S**	**17 58 45.3**	**-2.2**
	35nm,0.8s,baz=101,slow=34,SNR=3.5						
MJAR	**Matsushiro Arr**	**4.62**	**185**	P	**Pn**	**17 58 01.3**	**-0.1**
	3.4nm,0.4s,baz=8.5,slow=13,SNR=28						
USRK	**Ussuriysk Ar.**	**5.80**	**304**	P	**Pn**	**17 58 14.2**	**-1.6**
	55nm,0.8s,baz=114,slow=13,SNR=50						
HILR	**Hailar Array B**	**15.71**	**309**	P	**P**	**18 00 15.8**	**-2.0**
	5.6nm,0.4s,baz=112,slow=12,SNR=22						
PETK	**Petropavlovsk-**	**17.55**	**41**	P	**P**	**18 00 37.9**	**+0.2**
	3.9nm,0.9s,baz=234,slow=9.0,SNR=5.3						
MA2	**Magadan**	**19.93**	**18**	P	**P**	**18 01 02.6**	**-0.6**
	2.3nm,0.5s,baz=203,slow=9.6,SNR=5.3						
YAK	**Yakutsk**	**21.61**	**348**	P	**P**	**18 01 18.7**	**-1.5**
	2.4nm,0.3s,baz=120,slow=8.1,SNR=2.9						
	2.4nm,0.3s						
SONM	**Songino Array**	**23.87**	**297**	P	**P**	**18 01 40.4**	**-0.8**
	0.4nm,0.5s,baz=92,slow=9.9,SNR=3.8						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**37.63**	**309**	P	**P**	**18 03 40.8**	**-0.3**
	3.4nm,0.6s,baz=86,slow=8.7,SNR=18						
	3.4nm,0.6s						
MKAR	**Makanchi Array**	**40.23**	**298**	P	**P**	**18 04 02.9**	**+0.2**
	0.2nm,0.3s,baz=84,slow=13,SNR=12						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**41.87**	**304**	P	**P**	**18 04 15.2**	**-0.7**
	2.7nm,0.5s,baz=81,slow=8.7,SNR=7.6						
	2.7nm,0.5s						
BVAR	**Borovoye Array**	**46.29**	**309**	P	**P**	**18 04 51.3**	**+0.5**
	2.3nm,0.6s,baz=81,slow=7.3,SNR=13						
	2.3nm,0.6s						
ILAR	**Eielson Array**	**47.22**	**34**	P	**P**	**18 04 59.9**	**+2.1**
	1.4nm,0.6s,baz=275,slow=5.9,SNR=22						
	1.4nm,0.6s						
WRA	**Warramunga Arr**	**60.91**	**185**	P	**P**	**18 06 36.3**	**-0.6**
	0.3nm,1.0s,baz=3.8,slow=7.2,SNR=1.3						
	0.3nm,1.0s						
YKA	**Yellowknife Ar**	**61.33**	**30**	P	**P**	**18 06 40.1**	**+1.0**
	0.2nm,0.6s,baz=311,slow=7.4,SNR=4.8						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**64.19**	**330**	P	**P**	**18 06 58.3**	**+0.4**
	4.3nm,1.1s,baz=38,slow=6.7,SNR=1.7						
	4.3nm,1.1s						
HFS	**Hagfors**	**69.47**	**334**	P	**P**	**18 07 31.7**	**+0.6**
	3.6nm,1.1s,baz=39,slow=5.7,SNR=6.7						
	3.6nm,1.1s						
NOA	**NORSAR Array B**	**69.57**	**336**	P	**P**	**18 07 32.6**	**+0.7**
	0.8nm,0.9s,baz=60,slow=5.2,SNR=2.5						
	0.8nm,0.9s						
NVAR	**Mina Array Bea**	**74.20**	**53**	P	**P**	**18 08 02.5**	**+2.5**
	0.5nm,0.4s,baz=315,slow=6.3,SNR=2.6						
	0.5nm,0.4s						
PDAR	**Pinedale Array**	**76.27**	**45**	P	**P**	**18 08 13.6**	**+2.0**
	0.5nm,0.5s,baz=59,slow=1.0,SNR=6.7						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**89.22**	**51**	P	**P**	**18 09 19.5**	**+1.4**
	0.3nm,0.5s,baz=271,slow=2.2,SNR=4.7						
	0.3nm,0.5s						

*CATAC **02** 17:59:12.4±0.6, 14°N±3°×9°2W±°, h11km±4km, M4.5/13, MLv4.5/13, Error ellipse: s-maj=9.5km s-min=5.1km az=72.3, confirmed*
*GCG **02** 17:59:13.5±2.0, 13°.77N×92°.02W, h5km±13km, MD4.2, ML4.5, Presumed earthquake*
*NEIC **02** 17:59:17.2±2.1, 13°.78N±0°.06×91°.90W±0°.04, h65km±9km, mb4.1/35, Error ellipse: s-maj=9.7km s-min=5.2km az=205.0*
*IDC **02** 17:59:26.9±2.1, 14°.64N×91°.44W, h107km±12km, mb3.7/9, mbtmp4.0/10, MS3.5/7, Error ellipse: s-maj=36.8km s-min=21.0km az=30.0*
ISC 02 17:59:11.0±1.8**, 13°.57N**±0°.05×**92°.11W**±0°.04**, h16**km±11km**,**
n103, σ1**°.68**/109**, mb4.1**/20**, MS3.4**/7**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**1.03**	**23**		**Pb**	**17 59 30.5**	**0.0**
RTAL				Sn	**Sb**	**17 59 44.4**	**+0.6**
RTAL	**Retalhuleu**	**1.03**	**23**	P	**Pb**	**17 59 30.5**	**0.0**
RTAL				S	**Sb**	**17 59 43.3**	**-0.5**
STG5	**El Palmar, Qui**	**1.11**	**42**	iP	**Pb**	**17 59 32.4**	**+0.5**
STG2	**El Palmar, Qui**	**1.12**	**40**	iP	**Pb**	**17 59 32.8**	**+0.7**
STG8	**El Palmar, Qui**	**1.15**	**40**	iP	**Pg**	**17 59 33.4**	**+0.1**
STG8				IAML		17 59 50.6	
	comp=N,10µm,0.2s						
SMCA	**Catarina**	**1.28**	**2**	iP	**Pn**	**17 59 32.6**	**-1.7**
THIG		**1.34**	**354**	iP	**Pn**	**17 59 33.8**	**-1.2**
THIG				iS	**Sn**	**17 59 49.9**	**-2.6**
THIG				IAML		17 59 51.8	
	comp=E,7µm,0.5s						
QUEO	**Labor Ovalle**	**1.42**	**24**	iP	**Pn**	**17 59 36.0**	**-0.4**
SOKI	**Kika Raxquin**	**1.42**	**29**	iP	**Pn**	**17 59 36.1**	**-0.4**
SOKI				IAML		18 00 01.0	
	comp=N,5µm,0.5s						
ESSG	**Sabana Grande**	**1.48**	**57**	iP	**Pn**	**17 59 37.1**	**-0.1**
ESSG				iS	**Sn**	**17 59 54.8**	**-1.5**
ESSJ	**San Jos, E**	**1.57**	**90**	iP	**Pn**	**17 59 36.1**	**-2.0**
FG16	**Alotenango, Sa**	**1.71**	**66**	iP	**Pn**	**17 59 38.0**	**-2.3**
FG16				IAML		17 59 58.7	
	comp=E,41µm,0.2s						
PCG5	**San Vicente Pa**	**1.80**	**69**	iP	**Pn**	**17 59 39.8**	**-1.8**
HUEH	**Huehuetenango**	**1.83**	**19**		**Pn**	**17 59 42.7**	**+0.7**
HUEH	**Huehuetenango**	**1.83**	**19**	P	**Pn**	**17 59 42.6**	**+0.5**
HUEH				S	**Sn**	**18 00 06.1**	**+0.9**
HUEH	**Huehuetenango**	**1.83**	**19**	iP	**Pn**	**17 59 42.8**	**+0.7**
HUEH				iS	**Sn**	**18 00 05.9**	**+0.8**
HUEH				IAML		18 00 07.8	
	comp=N,6µm,0.6s						
GCG4	**OSOP**	**1.84**	**56**	iS	**Sn**	**18 00 05.4**	**+0.3**
GCG4				IAML		18 00 14.9	
	comp=N,7µm,0.6s						
QUIS	**Sacapulas**	**1.98**	**30**	iP	**Pn**	**17 59 45.2**	**+1.3**
QUIS				iS	**Sn**	**18 00 10.0**	**+1.5**
QUIS				IAML		18 00 15.1	
	comp=E,4µm,0.4s						
FAME	**Alcaldia de Sa**	**2.06**	**82**	P	**Pn**	**17 59 45.6**	**+0.7**
FAME				S	**Sn**	**18 00 10.0**	**-0.3**
APG	**El Apazote**	**2.14**	**48**	P	**Pn**	**17 59 48.2**	**+1.9**
	comp=E,16nm,0.3s,baz=195,slow=12,SNR=198						
APG				S	Sn	18 00 04.7	-8.0
	comp=E,25nm,0.5s,baz=222,slow=18,SNR=5.6						
APG	**El Apazote**	**2.14**	**48**	iP	**Pn**	**17 59 48.2**	**+1.9**
NUBE	**Las Nubes**	**2.29**	**81**	P	**Pn**	**17 59 49.4**	**+1.1**
NUBE				S	**Sn**	**18 00 16.8**	**+0.6**
NUBE	**Las Nubes**	**2.29**	**81**	iP	**Pn**	**17 59 49.5**	**+1.1**
LOAL	**Lomas de Alarc**	**2.31**	**79**	P	**Pb**	**17 59 51.3**	**-0.9**
LOAL				S	**Sn**	**18 00 18.9**	**+2.4**
AVCB	**Coban**	**2.51**	**41**	IAML		18 00 35.0	
	comp=E,12µm,0.6s						
CCIG	**Comitan**	**2.70**	**359**		**Pn**	**17 59 56.2**	**+2.3**
CCIG	**Comitan**	**2.70**	**359**	iP	**Pn**	**17 59 56.4**	**+2.5**
CCIG				iS	**Sn**	**18 00 28.7**	**+2.4**

CCIG IAML 18 00 38.4
comp=N,1μm,0.5s
PMON Piamonte 2.72 87 P **Pn 17 59 56.5 +2.3**
MTO3 Montecristo 2.79 73 Pn 17 59 56.2 +0.9
MTO3 Montecristo 2.79 73 P **Pn 17 59 56.6 +1.3**
MTO3 S **Sn 18 00 31.7 +2.9**
ESQI Esquipulas 2.86 70 Pn 17 59 57.1 +1.0
ESQI Esquipulas 2.86 70 P **Pn 17 59 57.9 +1.7**
PAVA Las Pavas 3.09 87 P **Pn 18 00 01.7 +2.4**
TGIG 3.33 343 *i* P **Pn 18 00 02.6 +0.1**
PACA Pacayal 3.69 91 P **Pn 18 00 10.3 +2.8**
PACA S **Sn 18 00 52.7 +2.0**
PETF Flores 3.97 33 Pn 18 00 11.1 -0.1
CMIG Matias Romero 4.41 323 P **Pn 18 00 17.9 +0.6**
comp=N,19nm,0.3s,baz=161,slow=14,SNR=15
CMIG S **Sn 18 01 10.6 +2.4**
comp=N,118nm,0.4s,baz=14,slow=7.9,SNR=6.7
TGUH Tegucigalpa,Un 4.73 84 Pn **Pn 18 00 23.5 +1.7**
CRIN San Cristobal 5.01 99 Pn **Pn 18 00 27.3 +1.7**
HERN Volcan Telica 5.23 100 Pn **Pn 18 00 29.9 +1.2**
CNGN Cerro Negro 5.38 101 Pn **Pn 18 00 32.2 +1.4**
SIUN Universidad Ur 7.13 88 Pn 18 00 57.5 +2.7
JUD3 Juan Diaz 3 7.27 117 Pn **Pn 18 00 59.7 +3.0**
TLIG Tlapa 7.38 303 Pn **Pn 18 01 00.4 +2.2**
TEIG Tepich 7.57 28 Pn 18 01 01.2 +0.5
JTS Las Juntas de 7.73 114 P Pn 18 01 09.2 +6.3
comp=N,4.5nm,0.5s,baz=284,slow=22,SNR=2.0
JTS S Sn 18 02 41.0 +11
comp=N,6.8nm,0.7s,baz=352,slow=21,SNR=1.3
PIRO Carate, Puerto 10.03 120 Pn **Pn 18 01 35.1 +0.6**
SOR Soroa 12.60 42 Pn **Pn 18 02 11.0 +1.3**
PAYG Puerto Ayora 14.27 173 Pn **P 18 02 39.8 0.0**
061Z Ochoppi 16.14 39 Pn **Pn 18 02 54.7 -2.5**
833A Chaparral WMA, 16.17 336 Pn **Pn 18 02 56.6 -1.1**
HNDO Hondo 17.21 338 Pn 18 03 08.5 -2.4
553A Crawfordville 18.00 22 P **Pn 18 03 20.9 +0.4**
SAND Sanderson 18.75 332 Pn 18 03 32.2 +2.3
TXAR Lajitas Array 19.00 327 P **Pn 18 03 34.6 +1.8**
comp=N,5.2nm,1.0s,baz=151,slow=9.1,SNR=26
TXAR Lajitas Array 19.00 327 P 18 03 30.4 -1.7
TX31 Lajitas Ar. Si 19.00 327 Pn 18 03 32.6 -0.3
ROSC El Rosal 19.57 115 P **P 18 03 37.2 -1.7**
ROSC IAmb IAmb 18 03 46.5
comp=Z,8.5nm,0.8s
Z47A Carrollton 19.88 10 P 18 03 42.2 +0.5
Z47A IAmb IAmb 18 03 45.3
comp=Z,12nm,0.7s
LRAL Lakeview Retre 19.93 13 P 18 03 42.7 +0.5
LRAL IAmb IAmb 18 03 49.4
comp=Z,8.4nm,0.9s
PLPT Palo Pinto 19.98 345 P **P 18 03 40.1 -2.6**
PLPT IAmb IAmb 18 03 47.2
comp=Z,7.0nm,0.8s
PECS Pecos 20.75 331 P **P 18 03 51.8 +0.5**
PECS IAmb IAmb 18 03 59.0
comp=Z,5.3nm,0.8s
MIAR Mount Ida 20.93 357 P **P 18 03 50.3 -2.7**
MIAR IAmb IAmb 18 04 20.2
comp=Z,11nm,1.4s
GOGA Godfrey 21.26 20 P **P 18 03 55.1 -1.6**
GOGA IAmb IAmb 18 04 04.0
comp=Z,10nm,1.1s
SDV Santo Domingo 21.57 100 P **P 18 04 02.8 +2.5**
comp=Z,1.8nm,0.5s,baz=311,slow=11,SNR=2.3
comp=Z,1.8nm,0.5s
FPAL Fort Paine 21.69 15 P **P 18 04 00.2 -1.1**
FPAL IAmb IAmb 18 04 22.3
comp=Z,7.3nm,1.1s
MNTX Cornudas Mount 21.77 328 P 18 04 02.3 +0.2
MNTX IAmb IAmb 18 04 06.2
comp=Z,7.0nm,0.9s
WMOK Wichita Mounta 21.92 345 P **P 18 04 01.8 -2.0**
WMOK IAmb IAmb 18 04 08.7
comp=Z,6.7nm,1.1s
LCAR Lake Charles 22.42 2 P **P 18 04 06.5 -2.5**
MSTX Muleshoe 22.50 336 P 18 04 09.1 -0.9
MSTX IAmb IAmb 18 04 13.6
comp=Z,6.2nm,0.8s
WVT Waverly 22.79 9 P **P 18 04 10.2 -2.8**
WVT IAmb IAmb 18 04 13.2
comp=Z,4.4nm,0.6s
CPCT Cooper Cave 22.84 16 P **P 18 04 12.2 -1.3**
CPCT IAmb IAmb 18 04 14.7
comp=Z,3.4nm,0.6s
AMTX Amarillo 22.92 339 P 18 04 13.5 -0.9
TKL Tuckaleechee C 23.24 17 P **P 18 04 12.4 -5.3**
comp=Z,1.2nm,0.5s,baz=182,slow=11,SNR=4.4
TKL LR LR 18 14 12.6
comp=Z,103nm,18.8s,baz=246,slow=40
comp=Z,1.2nm,0.5s
TKL Tuckaleechee C 23.24 17 P **P 18 04 16.6 -1.0**
TKL IAmb IAmb 18 04 32.3
comp=Z,12nm,1.1s
T47A Sharon Grove 23.75 10 P 18 04 21.2 -1.4
T47A IAmb IAmb 18 04 23.3
comp=Z,7.1nm,0.9s
TZTN Tazewell 24.13 17 P **P 18 04 23.8 -2.5**
TZTN IAmb IAmb 18 05 02.3
comp=Z,13nm,1.1s
S44A Carbondale 24.16 6 P **P 18 04 24.3 -2.2**
ATAH Atahualpa 24.67 146 LR LR 18 12 53.7
comp=Z,71nm,19.0s,baz=39,slow=32
ABQ Albuquerque 24.92 331 P **P 18 04 35.9 +2.2**
ANMO Albuquerque 24.92 331 P **P 18 04 35.7 +2.0**
SJG San Juan 25.37 76 LR LR 18 14 48.1
comp=Z,56nm,18.1s,baz=308,slow=38
MVCO Mesa Verde 27.72 331 P **P 18 04 59.5 +0.5**
MVCO IAmb IAmb 18 05 02.5
comp=Z,11nm,1.1s
PV12 Saucer Basin, 28.76 332 P **P 18 05 08.1 -0.2**
PDAR Pinedale Array 32.76 336 P **P 18 05 43.5 -0.1**
comp=Z,0.3nm,0.4s,baz=131,slow=9.2,SNR=4.4
comp=Z,0.3nm,0.4s
SADO Sadowa 33.00 17 LR LR 18 19 35.0
comp=Z,66nm,18.9s,baz=216,slow=38
NVAR Mina Array Bea 33.94 322 P **P 18 05 56.1 +2.2**
comp=Z,1.8nm,0.7s,baz=131,slow=9.2,SNR=7.0
comp=Z,1.8nm,0.7s
PLID Pearl Lake 37.40 332 P 18 06 24.4 +0.9
PLID IAmb IAmb 18 06 32.6
comp=Z,2.0nm,1.0s
F10A Beach Ranch, E 38.63 332 P **P 18 06 34.3 +0.6**
PB16 IPOC Station P 38.76 144 P **P 18 06 34.9 -0.6**
SCHQ Schefferville 45.66 20 P P 18 07 25.9 -5.0
comp=Z,4.4nm,0.9s,baz=218,slow=12,SNR=5.4
SCHQ PcP **PcP 18 09 09.3 +0.5**
comp=Z,1.4nm,0.6s,baz=217,slow=5.1,SNR=4.7
SCHQ LR LR 18 26 46.4
comp=Z,120nm,19.2s,baz=184,slow=37
comp=Z,4.4nm,0.9s
YKA Yellowknife Ar 51.42 347 P **P 18 08 13.9 -1.0**
comp=Z,0.4nm,0.4s,baz=150,slow=7.1,SNR=9.1
YKA PcP **PcP 18 09 30.2 +0.9**
comp=Z,0.5nm,0.7s,baz=153,slow=3.2,SNR=7.7
comp=Z,0.4nm,0.4s
FRB Frobisher Bay 52.75 13 LR LR 18 32 25.5
comp=Z,72nm,18.9s,baz=264,slow=38
SFJD Kangerlussuaq 59.95 18 LR LR 18 36 01.5
comp=Z,51nm,19.8s,baz=175,slow=37
ILAR Eielson Array 63.19 337 P **P 18 09 38.8 +0.6**
comp=Z,1.7nm,0.9s,baz=172,slow=4.4,SNR=15
comp=Z,1.7nm,0.9s
EKA Eskdalemuir Ar 78.38 36 P **P 18 11 08.7 -2.0**
comp=Z,2.5nm,0.6s,baz=276,slow=6.1,SNR=9.1
comp=Z,2.5nm,0.6s
SPITS Spitsbergen Ar 80.53 11 P **P 18 11 21.3 -0.7**
comp=Z,4.9nm,0.7s,baz=240,slow=5.8,SNR=6.1
comp=Z,4.9nm,0.7s
NRIK Noril'sk 97.30 0 P Pdif 18 12 42.9 -0.3
comp=Z,1.5nm,0.3s,baz=27,slow=3.3,SNR=6.1
HHC Hu-ho-hao-te 121.58 339 *e*P **PKiKP 18 18 06.7 +2.1**
WRA Warramunga Arr 135.18 255 PKhKP PKPpre 18 18 31.6
comp=Z,0.4nm,0.7s,baz=87,slow=3.4,SNR=5.5
WRA PKP sPKPdf 18 18 35.6 -0.9
comp=Z,0.2nm,0.4s,baz=90,slow=2.5,SNR=1.7
ASAR Alice Springs 135.42 250 PKP **PKiKP 18 18 34.4 +1.8**
comp=Z,0.2nm,0.7s,baz=88,slow=2.6,SNR=4.2
PZH PanZhiHua 137.95 341 PKP **PKPdf 18 18 35.3 -0.6**
CMAR Chiang Mai Arr 146.36 341 PKPbc **PKiKP 18 18 53.6 -1.5**
comp=Z,4.5nm,0.7s,baz=339,slow=3.5,SNR=36

SJA 02 18:00:03.6±1.1**, 24°.08S**×**66°.81W, h226**km±9km**, ML3.7, MW3.6, Salta Province**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SALTA 0.46 109 *i* P Pn 18 00 34.4 +0.1
SLA San Lorenzo 1.35 119 *i* P Pn 18 00 39.7 +1.0
SLA *i* S S 18 01 05.8 -0.3
SLA IAML 18 01 56.3
comp=Z,407nm,1.4s
AZAP Zapla 1.60 96 *i* P Pn 18 00 41.5 +0.7
AZAP *i* S S 18 01 08.8 -0.9
FSA Cafayete 2.16 160 *i* P Pn 18 00 47.0 +1.1
FSA *i* S S 18 01 17.3 -1.7
YJA Yavi 2.24 33 *i* P Pn 18 00 48.4 +1.4
YJA *i* S S 18 01 20.3 -0.5
PB06 IPOC Station P 2.88 298 *e*P Pn 18 00 54.6 +1.1
PB06 *e*S S 18 01 31.1 -1.4
PB06 IAML 18 01 35.3
comp=Z,163nm,0.1s
PB09 IPOC Station P 3.19 315 *e*P Pn 18 00 58.2 +1.2
PB09 *e*S S 18 01 38.2 -0.6
PB09 IAML 18 01 41.2
comp=Z,96nm,0.3s
PB14 IPOC Station P 3.32 260 *e*P Pn 18 00 59.4 +0.7
PB14 *e*S S 18 01 39.7 -2.1
PB14 IAML 18 01 42.8
comp=Z,61nm,0.3s
PB05 IPOC Station P 3.34 291 *e*P Pn 18 00 59.5 +0.8
PB05 *e*S S 18 01 38.9 -3.0
PB05 IAML 18 01 44.3
comp=Z,58nm,0.3s
PB03 IPOC Station P 3.38 306 *e*P Pn 18 00 59.5 +0.3
PB03 *e*S S 18 01 40.4 -2.4
PB03 IAML 18 01 40.9
comp=Z,244nm,0.3s
AC02 Maricunga 3.45 217 *e*P Pn 18 01 05.0 +4.7
AC02 *e*S S 18 01 50.2 +5.3
PB07 IPOC Station P 3.67 309 *e*P Pn 18 01 02.7 0.0
PB07 *e*S S 18 01 46.2 -2.9
PB07 IAML 18 01 51.7
comp=Z,129nm,0.5s
AC01 Pan de Azucar 4.00 238 *e*P Pn 18 01 06.3 -0.2
AC01 *e*S S 18 01 53.2 -2.7
AC01 IAML 18 01 54.5
comp=Z,42nm,0.3s
PATCX Punta Patache 4.48 316 *e*P Pn 18 01 12.4 0.0
PATCX *e*S S 18 02 00.2 -6.3
PATCX IAML 18 02 11.0
comp=Z,38nm,0.5s
GO03 Copiapo 4.67 221 *e*P Pn 18 01 15.7 +1.1
GO03 *e*S S 18 02 08.8 -1.9
GO03 IAML 18 02 10.8
comp=Z,32nm,0.2s
HMBC Humberstone 4.73 322 *e*P Pn 18 01 15.1 -0.5
HMBC *e*SA 18 02 08.8
HMBC IAML 18 02 13.9
comp=Z,91nm,0.3s
GO01 Chusmiza 4.91 333 *e*P Pn 18 01 20.5 +2.4
GO01 *e*S S 18 02 16.2 -0.8
GO01 IAML 18 02 20.6
comp=Z,72nm,0.8s
PB11 IPOC Station P 5.04 328 *e*P Pn 18 01 19.4 0.0
PB11 *e*S S 18 02 15.7 -3.7
PB11 IAML 18 02 20.1
comp=Z,52nm,0.6s

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*IDC **02** 18:03:54.1±0.7, 0°.31N×24°.91W, h0km, mb4.1/12, mbtmp4.1/12, MS3.7/38, Error ellipse: s-maj=27.5km s-min=17.5km az=141.0*
*NEIC **02** 18:03:54.7±1.8, 0°.5N±0°.1×25°.2W±0°.1, h10km±1km, mb4.6/17, Error ellipse: s-maj=24.7km s-min=18.7km az=298.0*
ISC 02 18:03:54.5±0.6**, 0°.3N**±0°.1×**25°.0W**±0°.1**, h10**km**, n70, σ1s55**/35**, mb4.4**/17**, MS3.7**/38**, Central Mid-Atlantic Ridge**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
H10N3 ASCENSION HYDR13.22 128 T T 18 20 32.8
baz=307,slow=74,SNR=1659
H10N2 ASCENSION HYDR13.22 128 T T 18 20 33.1
baz=307,slow=74,SNR=2227
H10N1 ASCENSION HYDR13.24 128 T T 18 20 34.3
baz=307,slow=74,SNR=1611
H10S3 ASCENSION HYDR13.80 132 T T 18 21 21.2
baz=271,slow=74,SNR=694
H10S2 ASCENSION HYDR13.82 132 T T 18 21 18.4
baz=309,slow=74,SNR=784
DBIC Dimbokro 21.03 72 P **P 18 08 37.8 -0.8**
20nm,1.0s,baz=281,slow=12,SNR=10
DBIC LR LR 18 15 08.6
comp=Z,105nm,19.7s,baz=262,slow=32
20nm,1.0s
DBIC Dimbokro 21.03 72 P 18 08 38.1 -0.5
DBIC IAmb IAmb 18 08 46.7
comp=Z,30nm,0.9s
BDFB Brasilia 27.75 234 P **P 18 09 44.6 +0.8**
comp=Z,0.7nm,0.4s,baz=69,slow=8.6,SNR=3.6
BDFB LR LR 18 20 06.4
comp=Z,119nm,18.5s,baz=119,slow=35
comp=Z,0.7nm,0.4s
MDP Montagnes des 28.04 280 LR LR 18 19 28.7
comp=Z,62nm,18.6s,baz=126,slow=33
TORD Torodi Ar. Bea 29.33 63 P **P 18 09 57.5 -0.1**
comp=Z,1.3nm,0.7s,baz=243,slow=12,SNR=8.7
TORD LR LR 18 20 33.2
comp=Z,187nm,19.4s,baz=222,slow=34
comp=Z,1.3nm,0.7s
TAM Tamanrasset 37.12 51 P **P 18 11 06.0 +0.3**
MD31 MD31 37.55 28 P **P 18 11 08.2 -0.9**
MD01 Midelt array s 37.55 28 P **P 18 11 07.9 -1.3**
MDT Midelt 37.58 29 LR LR 18 25 46.4
comp=Z,140nm,18.5s,baz=245,slow=35
SIV San Ignacio 39.15 244 LR LR 18 26 01.2
comp=Z,139nm,21.8s,baz=59,slow=34
ESDC Sonseca Array 43.60 24 P **P 18 12 00.3 +1.2**
comp=Z,2.1nm,0.9s,baz=207,slow=8.4,SNR=9.4
comp=Z,2.1nm,0.9s
ESDC Sonseca Array 43.60 24 P **P 18 11 57.7 -1.4**
SJG San Juan 44.15 296 LR LR 18 26 33.8
comp=Z,82nm,21.4s,baz=65,slow=31
LPAZ La Paz 45.66 247 P **P 18 12 17.2 +0.7**
comp=Z,2.5nm,0.8s,baz=47,slow=3.8,SNR=7.1
LPAZ LR LR 18 31 04.7
comp=Z,272nm,18.2s,baz=69,slow=36
comp=Z,2.5nm,0.8s
LPAZ La Paz 45.66 247 P **P 18 12 15.7 -0.8**
LPAZ IAmb IAmb 18 12 26.4
comp=Z,3.2nm,0.8s
TSUM Tsumeb 46.03 117 LR LR 18 27 31.0
comp=Z,242nm,19.8s,baz=300,slow=31
SDV Santo Domingo 46.26 282 LR LR 18 29 16.0
comp=Z,69nm,20.4s,baz=72,slow=33
KEST Kesra 47.52 38 LR LR 18 33 09.9
comp=Z,192nm,19.4s,baz=329,slow=37
SDDR Presa de Saban 49.05 295 P **P 18 12 41.4 -0.9**
ROSC El Rosal 49.49 276 LR LR 18 32 21.0
comp=Z,268nm,19.1s,baz=81,slow=34
KOOLE Kule 49.65 121 P **P 18 12 47.1 +0.2**
KOOLE IAmb IAmb 18 12 55.7
comp=Z,9.4nm,0.8s
KGCAE Kacgae 51.33 120 P **P 18 13 00.5 +0.9**
KGCAE IAmb IAmb 18 13 19.0
comp=Z,4.8nm,1.0s
CO01 Juntas del Tor 52.46 231 P **P 18 13 07.7 -0.4**
NNA Nana 52.92 255 LR LR 18 34 57.7
comp=Z,93nm,18.3s,baz=78,slow=35
GO04 Tololo Observa 53.09 231 P **P 18 13 11.5 -1.3**
ATAH Atahualpa 53.80 261 LR LR 18 36 36.3
comp=Z,107nm,18.7s,baz=69,slow=36
SUR Sutherland 54.05 131 LR LR 18 32 30.2
comp=Z,90nm,18.1s,baz=292,slow=32
VA03 San Esteban 54.09 228 P **P 18 13 16.7 -3.1**
VA03 IAmb IAmb 18 13 37.6
comp=Z,7.7nm,0.9s
FDMO Fiordimonte 54.46 34 P **P 18 13 21.4 -0.9**
FDMO IAmb IAmb 18 13 37.7
comp=Z,5.4nm,0.9s
LSZ Lusaka 54.74 109 LR LR 18 34 15.0
comp=Z,74nm,18.3s,baz=292,slow=33
LBTB Lobatse 54.98 121 LR LR 18 32 54.7
comp=Z,88nm,20.3s,baz=283,slow=32
LBTB Lobatse 54.98 121 P **P 18 13 28.0 +1.6**
LBTB IAmb IAmb 18 13 30.8
comp=Z,4.6nm,0.7s
MBAR Mbarara 55.71 91 LR LR 18 35 06.1
comp=Z,72nm,19.1s,baz=264,slow=34
BOSA Boshof 55.96 125 P **P 18 13 34.1 +0.6**
comp=Z,2.5nm,0.7s,baz=314,slow=4.3,SNR=7.6
BOSA LR LR 18 33 02.0
comp=Z,103nm,20.6s,baz=215,slow=31
comp=Z,2.5nm,0.7s
EKA Eskdalemuir Ar 57.64 15 LR LR 18 33 35.9
comp=Z,63nm,19.5s,baz=188,slow=31
LIT Litokhoron 58.51 42 P **P 18 13 53.2 +1.9**
LIT IAmb IAmb 18 14 01.1
comp=Z,4.1nm,0.7s
VRAC Vranov 60.39 30 LR LR 18 37 45.1
comp=Z,26nm,20.8s,baz=326,slow=34
FURI Furi 63.93 80 LR LR 18 40 13.1
comp=Z,22nm,18.7s,baz=165,slow=34
TKL Tuckaleechee C 64.84 310 LR LR 18 35 55.9
comp=Z,41nm,21.8s,baz=112,slow=30
SADO Sadowa 65.11 320 LR LR 18 37 27.4
comp=Z,65nm,18.6s,baz=121,slow=31
MMAI Mount Meron Ar 65.26 54 LR LR 18 45 28.3
comp=Z,20nm,18.1s,baz=308,slow=38
BRTR Keskin Array B 66.08 46 P **P 18 14 44.0 +1.9**
comp=Z,1.1nm,0.9s,baz=263,slow=5.0,SNR=3.6
comp=Z,1.1nm,0.9s
BRTR Keskin Array B 66.08 46 P **P 18 14 43.7 +1.5**
NOA NORSAR Array B 66.56 18 P **P 18 14 46.4 +1.9**
comp=Z,1.5nm,1.1s,baz=217,slow=6.5,SNR=2.1
NOA LR LR 18 40 23.7
comp=Z,19nm,21.7s,baz=5.0,slow=33
comp=Z,1.5nm,1.1s
AKASG Malin Array Be 67.89 34 P **P 18 14 54.0 +0.9**
comp=Z,2.5nm,0.7s,baz=243,slow=6.1,SNR=5.7
AKASG LR LR 18 44 23.2
comp=Z,24nm,18.0s,baz=260,slow=36
comp=Z,2.5nm,0.7s
AKASG Malin Array Be 67.89 34 P **P 18 14 53.3 +0.2**
AKASG IAmb IAmb 18 15 01.9
comp=Z,4.3nm,1.0s
AKBB Malin Array Si 67.89 34 P **P 18 14 52.9 -0.2**
CMIG Matias Romero 70.73 288 LR LR 18 44 40.6
comp=Z,28nm,21.9s,baz=9.5,slow=35
RAYN Ar Rayn 72.00 65 P **P 18 15 15.5 -3.6**
FINES FINESS Array B 72.11 23 P **P 18 15 19.9 +0.9**
comp=Z,7.5nm,1.1s,baz=270,slow=9.0,SNR=5.1
comp=Z,7.5nm,1.1s
FINES FINESS Array B 72.11 23 P **P 18 15 15.5 -3.4**
KBZ Khabaz 73.91 44 P **P 18 15 32.4 +2.4**
comp=Z,1.1nm,0.8s,baz=248,slow=5.8,SNR=4.1
comp=Z,1.1nm,0.8s
ULM Lac du Bonnet 77.62 322 LR LR 18 44 52.8
comp=Z,36nm,20.0s,baz=24,slow=32
TXAR Lajitas Array 79.99 300 P **P 18 16 06.3 +1.7**
comp=Z,0.3nm,0.8s,baz=120,slow=7.3,SNR=3.6
TXAR LR LR 18 49 16.4
comp=Z,28nm,20.8s,baz=44,slow=34
comp=Z,0.3nm,0.8s
ANMO Albuquerque 82.83 305 LR LR 18 48 34.9
comp=Z,43nm,21.7s,baz=87,slow=32
RPN Rapa Nui 85.13 243 LR LR 18 51 21.7
comp=Z,32nm,18.0s,baz=146,slow=33
LPIG La Paz 85.61 294 LR LR 18 51 28.0
comp=Z,33nm,20.9s,baz=134,slow=33
PDAR Pinedale Array 85.80 313 LR LR 18 53 51.3
comp=Z,16nm,19.1s,baz=62,slow=35
ELK Elko 89.99 311 LR LR 18 55 33.5
comp=Z,31nm,18.8s,baz=80,slow=34
NEW Newport 91.20 318 LR LR 18 52 09.7
comp=Z,50nm,21.4s,baz=76,slow=32
NVAR Mina Array Bea 92.42 308 LR LR 18 59 50.6
comp=Z,14nm,18.1s,baz=319,slow=36
BBB Bella Bella 97.79 323 LR LR 18 58 10.1
comp=Z,31nm,19.2s,baz=168,slow=33
STKA Stephens Creek 146.15 159 PKPbc **PKPab 18 23 37.7 +1.5**
comp=Z,3.1nm,0.7s,baz=270,slow=1.0,SNR=3.4
ASAR Alice Springs 149.04 140 PKPbc **PKiKP 18 23 45.4 +0.1**
comp=Z,2.9nm,0.7s,baz=216,slow=2.1,SNR=35
WRA Warramunga Arr 151.88 135 PKPbc **PKPbc 18 23 51.5 +0.8**
comp=Z,0.8nm,0.8s,baz=246,slow=2.5,SNR=6.5

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*IDC **02** 18:14:11.5±0.7, 6°.77N×72°.99W, h157km±9km, mb3.4/5, mbtmp4.0/7, Error ellipse: s-maj=29.4km s-min=7.5km az=130.0*
*RSNC **02** 18:14:12.5±0.0, 7°N±1°×7°3W±°, h150km±1km, M3.8, mB4.7, mb4.4, ML3.5, MLv4.1, Mw(mB)3.9*
*CATAC **02** 18:14:12.0±0.7, 7°N±2°×7°3W±°, h150km±6km, M4.0/7, mb3.6/1, mB4.2/1, MLv4.2/7, Mw(mB)3.3/1, Error ellipse: s-maj=11.1km s-min=5.1km az=89.7, confirmed*
*FUNV **02** 18:14:14.8, 6°.94N×73°.08W, h128km, MW4.2, Presumed earthquake*
ISC 02 18:14:11.4±0.8**, 6°.88N**±0°.03×**73°.10W**±0°.03**, h154**km±5km**, n61, σ1s49**/111**, mb3.8**/5**, Northern Colombia**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BARC Barichara 0.29 195 P **Pn 18 14 32.9 +0.2**
BARC S **Sn 18 14 48.1 -0.8**
PAMC Pamplona, Colo 0.61 41 P **Pn 18 14 35.5 +1.2**
PAMC S **Sn 18 14 52.5 +0.7**
BRJC Barrancabermej 0.64 279 P **Pn 18 14 34.5 +0.6**
BRJC S **Sn 18 14 51.7 +0.6**
RUSC La Rusia 0.98 179 P **Pn 18 14 36.8 -0.1**
RUSC S **Sn 18 14 55.6 -0.8**
RUSC La Rusia 0.98 179 P **Pn 18 14 36.8 -0.1**
RUSC S **Sn 18 14 55.6 -0.8**
RUSC La Rusia 0.98 179 *e*P **Pn 18 14 37.0 +0.1**
RUSC *e*S **Sn 18 14 54.3 -2.1**
CAPV Capacho 1.26 39 *e*P **Pn 18 14 40.1 +1.1**
CAPV *e*S **Sn 18 14 56.7 -3.5**
OCAC Ocana 1.37 351 P **Pn 18 14 40.8 +0.7**
OCAC S **Sn 18 15 02.6 +0.4**
PTBC PUERTO BERRIO, 1.38 256 P **Pn 18 14 39.4 -0.7**
PTBC S **Sn 18 15 00.6 -1.4**
SPBC San Pablo de B 1.55 218 P **Pn 18 14 41.8 -0.1**
SPBC S **Sn 18 15 04.0 -1.3**
NORC Norcasia 2.19 233 P **Pn 18 14 48.8 -0.2**
NORC S **Sn 18 15 16.4 -1.6**
CHIC Chingaza 2.32 196 P **Pn 18 14 50.8 -0.1**
CHIC S **Sn 18 15 20.6 -0.8**
ROSC El Rosal 2.36 211 P **Pn 18 14 52.8 +1.4**
142nm,0.3s,baz=347,slow=4.0,SNR=196
ROSC S **Sn 18 15 22.1 0.0**
335nm,0.4s,baz=86,slow=15,SNR=12
ROSC El Rosal 2.36 211 P **Pn 18 14 52.8 +1.4**
ROSC S **Sn 18 15 19.6 -2.6**
HELC Santa Helena 2.50 254 P **Pn 18 14 54.9 +1.8**
HELC S **Sn 18 15 23.7 -1.5**
HELC Santa Helena 2.50 254 P **Pn 18 14 52.9 -0.2**
HELC S **Sn 18 15 23.7 -1.5**
HELC Santa Helena 2.50 254 *e*P **Pn 18 14 55.0 +1.9**
HELC *e*S **Sn 18 15 25.5 +0.2**
CVER Cruz Verde, Cu 2.53 202 P **Pn 18 14 54.4 +0.8**
CVER S **Sn 18 15 25.0 -1.1**
UREC San Jos de Ur 2.56 290 P **Pn 18 14 52.5 -1.0**
UREC S **Sn 18 15 23.4 -2.5**
VILC Villavicencio, 2.81 192 P **Pn 18 14 56.4 -0.3**
VILC S **Sn 18 15 31.2 -0.5**
PTGC Puerto Gaitan, 2.83 160 P **Pn 18 14 56.1 -0.7**
PTGC S **Sn 18 15 29.4 -2.6**
RECRC Villamaria, Ca 2.94 230 P **Pn 18 14 59.5 +0.8**
RECRC S **Sn 18 15 35.8 +0.7**
NIZA Niza - Manizal 2.97 233 P **Pn 18 14 59.8 +1.0**
NIZA S **Sn 18 15 35.6 +0.2**
CBOC Ciudad Bolivar 3.06 251 P **Pn 18 15 00.2 +0.4**
CBOC S **Sn 18 15 38.2 +0.9**
DBBC Dabeiba 3.09 273 P **Pn 18 15 00.3 +0.2**
DBBC S **Sn 18 15 36.3 -1.5**
SDV Santo Domingo 3.16 51 P **Pn 18 15 02.5 +1.4**
98nm,0.3s,baz=186,slow=3.5,SNR=266
SDV S **Sn 18 15 39.4 -0.2**
136nm,0.4s,baz=64,slow=20,SNR=23
SDV Santo Domingo 3.16 51 P **Pn 18 15 02.3 +1.2**
SDV S **Sn 18 15 38.8 -0.8**
SDV Santo Domingo 3.16 51 *e*P **Pn 18 15 02.5 +1.4**
SDV *e*S **Sn 18 15 36.4 -3.2**
ARGC Ariguani, Magd 3.17 339 P **Pn 18 15 02.9 +1.8**
ARGC S **Sn 18 15 40.3 +0.7**
MCQV Machiques 3.20 10 *e*P **Pn 18 15 02.3 +0.8**
MCQV *e*S **Sn 18 15 37.5 -2.9**
ANIL Santa Ana 3.29 224 P **Pn 18 15 03.8 +0.9**
ANIL S **Sn 18 15 42.7 -0.2**
APAC Apartado, Choc 3.59 287 P **Pn 18 15 06.8 +0.3**
APAC S **Sn 18 15 48.5 -0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRAC	**Prado**	**3.61**	**210**	P	**Pn**	**18 15 06.6**	**-0.1**
PRAC				S	**Sn**	**18 15 48.3**	**-1.5**
PRAC	**Prado**	**3.61**	**210**	P	**Pn**	**18 15 06.4**	**-0.3**
PRAC				S	**Sn**	**18 15 48.0**	**-1.7**
SJCC	**San Jacinto, C**	**3.64**	**326**	P	**Pn**	**18 15 07.3**	**+0.2**
SJCC				S	**Sn**	**18 15 48.0**	**-2.3**
SJCC	**San Jacinto, C**	**3.64**	**326**	P	**Pn**	**18 15 06.8**	**-0.3**
SJCC				S	**Sn**	**18 15 47.6**	**-2.8**
SJCC	**San Jacinto, C**	**3.64**	**326**	*e*P	**Pn**	**18 15 07.3**	**+0.2**
SJCC				*e*S	**Sn**	**18 15 47.3**	**-3.1**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P	**Pn**	**18 15 07.2**	**+0.1**
ORTC				S	**Sn**	**18 15 50.6**	**+0.2**
URMC	**La Uribe, Meta**	**3.82**	**199**	P	**Pn**	**18 15 09.9**	**+0.3**
URMC				S	**Sn**	**18 15 53.3**	**-1.5**
YOTC	**Yotoco, Valle**	**4.32**	**228**	P	**Pn**	**18 15 15.7**	**-0.4**
YOTC				S	**Sn**	**18 16 04.0**	**-2.4**
GUVC	**San Jose del G**	**4.33**	**174**	P	**Pn**	**18 15 15.5**	**-0.6**
GUVC				S	**Sn**	**18 16 04.5**	**-2.0**
SMRC	**Santa Marta, M**	**4.40**	**346**	P	**Pn**	**18 15 17.9**	**+0.9**
SMRC				S	**Sn**	**18 16 05.5**	**-2.7**
CAPC	**Capurgana**	**4.56**	**293**	P	**Pn**	**18 15 17.9**	**-1.1**
CAPC				S	**Sn**	**18 16 08.3**	**-3.5**
PIZC	**Pizarro, Choco**	**4.64**	**246**	P	**Pn**	**18 15 21.2**	**+1.1**
PIZC				S	**Sn**	**18 16 13.0**	**-0.7**
PTAC	**Punta Ardita,**	**4.68**	**274**	P	**Pn**	**18 15 19.8**	**-0.8**
PTAC				S	**Sn**	**18 16 12.4**	**-2.2**
MACC	**Macarena, Meta**	**4.76**	**189**	P	**Pn**	**18 15 20.2**	**-1.5**
MACC				S	**Sn**	**18 16 12.3**	**-4.3**
URIC	**Uribia, Colomb**	**4.92**	**13**	P	**Pn**	**18 15 23.3**	**-0.5**
URIC				S	**Sn**	**18 16 17.3**	**-3.1**
URIC	**Uribia, Colomb**	**4.92**	**13**	*e*P	**Pn**	**18 15 23.9**	**+0.1**
URIC				*e*S	**Sn**	**18 16 15.8**	**-4.5**
TEPV	**Terepaima**	**4.94**	**51**	*e*P	**Pn**	**18 15 24.8**	**+0.7**
JAMC	**Jamundi, Valle**	**5.09**	**225**	P	**Pn**	**18 15 25.8**	**-0.5**
JAMC				S	**Sn**	**18 16 24.3**	**-0.4**
MAPV	**Macapo**	**5.46**	**57**	*e*P	**Pn**	**18 15 31.0**	**0.0**
FLOC	**Florencia**	**5.84**	**206**	P	**Pn**	**18 15 35.6**	**-0.5**
FLOC				S	**Sn**	**18 16 41.5**	**-0.8**
JACV	**Jacura**	**5.94**	**45**	*e*P	**Pn**	**18 15 37.9**	**+0.5**
BENV	**Beln**	**6.25**	**60**	*e*P	**Pn**	**18 15 41.8**	**+0.2**
TXAR	**Lajitas Array**	**36.44**	**312**	P	**P**	**18 21 03.0**	**+1.3**
	0.3nm,0.4s,baz=127,slow=9.0,SNR=10						
	0.3nm,0.4s						
ULM	**Lac du Bonnet**	**47.24**	**340**	P	**P**	**18 22 28.8**	**0.0**
	1.6nm,0.4s,baz=141,slow=6.8,SNR=4.9						
	1.6nm,0.4s						
PDAR	**Pinedale Array**	**48.04**	**324**	P	**P**	**18 22 36.0**	**+0.5**
	0.5nm,0.6s,baz=119,slow=7.9,SNR=4.0						
	0.5nm,0.6s						
SCHQ	**Schefferville**	**48.09**	**5**	P	**P**	**18 22 36.6**	**+1.3**
	1.8nm,0.6s,baz=191,slow=8.1,SNR=5.9						
	1.8nm,0.6s						
YKA	**Yellowknife Ar**	**63.22**	**340**	P	**P**	**18 24 23.7**	**+0.7**
	0.8nm,0.6s,baz=132,slow=6.1,SNR=21						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKiKP**	**18 33 41.9**	**-1.9**
	1.0nm,0.7s,baz=120,slow=3.3,SNR=24						
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc	**PKiKP**	**18 33 45.0**	**-1.3**
	0.8nm,0.4s,baz=107,slow=3.0,SNR=30						

*IDC **02** 18:15:01.6±1.3, 32.19N×105.19E, h0km, mb3.3/4, mbtmp3.3/6, ML3.7/2, MS3.2/2, Error ellipse: s-maj=66.7km s-min=16.9km az=67.0*

ISC 02 18:15:03.7±1.2**, 32.0N**±0.1×**104.7E**±0.3**, h15**km**, n8,** σ**0.73**/6**, mb3.5**/4**, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**4.07**	**348**	Pn	**Pn**	**18 16 06.0**	**+0.2**
	baz=173,slow=13						
LZDM				Lg	Lg	18 17 08.6	
	baz=213,slow=27						
	3.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**14.42**	**203**	Pn	**P**	**18 18 34.1**	**-0.1**
	0.1nm,0.3s,baz=18,slow=9.5,SNR=7.3						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**22.69**	**317**	P	**P**	**18 20 05.2**	**+0.5**
	0.2nm,0.6s,baz=116,slow=10,SNR=2.6						
	0.2nm,0.6s						
TGY	**Tagaytay City**	**23.16**	**136**	LR	LR	18 29 36.6	
	comp=Z,48nm,19.2s,baz=315,slow=38						
ZALV	**Zalesovo Beam**	**26.19**	**333**	P	**P**	**18 20 36.4**	**-1.1**
	0.5nm,0.4s,baz=132,slow=10,SNR=3.0						
	0.5nm,0.4s						
NRIK	**Noril'sk**	**38.67**	**350**	LR	LR	18 39 47.4	
	comp=Z,45nm,18.6s,baz=35,slow=39						
WRA	**Warramunga Arr**	**58.90**	**147**	P	**P**	**18 25 02.5**	**+0.2**
	0.4nm,0.7s,baz=322,slow=8.5,SNR=2.1						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**61.96**	**150**	P	**P**	**18 25 23.3**	**+0.2**
	0.2nm,0.6s,baz=337,slow=8.1,SNR=5.0						
	0.2nm,0.6s						

*IDC **02** 18:31:02.7±3.6, 27.09S×177.21W, h159km±32km, mb3.7/2, mbtmp4.3/3, Error ellipse: s-maj=47.0km s-min=27.9km az=3.0*

ISC 02 18:31:01.7±1.0**, 27.0S**±0.1×**177.3W**±0.3**, h150**km**, n16,** σ**1.23**/18**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.28**	**194**	P	**Pn**	**18 31 41.9**	**+1.7**
	381nm,0.3s,baz=165,slow=22,SNR=4.9						
RAO				S	**Sn**	**18 32 11.1**	**+1.3**
	844nm,0.3s,baz=75,slow=24,SNR=7.6						
URZ	**Urewera**	**12.15**	**201**	S	**Sn**	**18 36 01.1**	**-2.9**
	5.8nm,0.3s,baz=36,slow=22,SNR=11						
ASAR	**Alice Springs**	**44.02**	**263**	P	**P**	**18 38 55.7**	**+1.1**
	2.2nm,0.7s,baz=94,slow=7.0,SNR=79						
	2.2nm,0.7s						
WRA	**Warramunga Arr**	**44.70**	**268**	P	**P**	**18 39 00.0**	**-0.1**
	2.5nm,0.8s,baz=106,slow=6.1,SNR=21						
	2.5nm,0.8s						
MKAR	**Makanchi Array**	**116.05**	**311**	PKP	**PKPdf**	**18 49 26.6**	**-0.1**
	0.3nm,0.4s,baz=203,slow=0.9,SNR=8.4						
KURBB	**Kurchatov Arra**	**119.18**	**315**	PKP	**PKPdf**	**18 49 32.4**	**-0.2**
	0.4nm,0.5s,baz=92,slow=2.0,SNR=5.4						
BVAR	**Borovoye Array**	**124.39**	**317**	PKP	**PKPdf**	**18 49 42.9**	**+0.4**
	1.2nm,0.4s,baz=121,slow=0.8,SNR=9.6						
ARCES	**ARCESS Array B**	**135.43**	**349**	PKP	**PKPdf**	**18 50 02.2**	**-0.7**
	4.1nm,0.8s,baz=344,slow=3.0,SNR=3.6						
FINES	**FINESS Array B**	**142.17**	**342**	PKP	**PKPdf**	**18 50 13.2**	**-2.3**
	1.3nm,0.7s,baz=85,slow=3.2,SNR=5.8						
NB2	**NORSAR Subarra**	**145.51**	**353**	PKP	**PKPdf**	**18 50 21.3**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=16,slow=3.4						
NOA	**NORSAR Array B**	**145.51**	**353**	PKPbc	**PKPdf**	**18 50 21.5**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=7.9,slow=2.5,SNR=6.4						
HFS	**Hagfors**	**146.06**	**350**	PKPbc	**PKPdf**	**18 50 22.1**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=72,slow=4.8,SNR=19						
AKASG	**Malin Array Be**	**148.91**	**327**	PKPbc	**PKPbc**	**18 50 30.8**	**-0.7**
	comp=Z,2.3nm,0.6s,baz=43,slow=3.8,SNR=10						
MMAI	**Mount Meron Ar**	**151.14**	**290**	PKPbc	**PKPbc**	**18 50 38.4**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=45,slow=8.3,SNR=7.2						
BRTR	**Keskin Array B**	**151.38**	**304**	PKPbc	**PKPbc**	**18 50 37.6**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=134,slow=4.6,SNR=6.7						
TORD	**Torodi Ar. Bea**	**166.16**	**176**	PKP	**PKPdf**	**18 50 49.8**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=260,slow=3.4,SNR=2.0						
TORD				PKPab	**PKPab**	**18 51 49.6**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=209,slow=4.1,SNR=4.3						

*IDC **02** 18:47:34.0±1.4, 6.37S×154.56E, h0km, mb3.4/5, mbtmp3.4/6, ML2.6/1, MS3.4/1, Error ellipse: s-maj=31.3km s-min=27.2km az=45.0*

ISC 02 18:47:40.3±1.0**, 6.4S**±0.2×**154.6E**±0.1**, h48**km**, n7,** σ**1.00**/7**, mb3.2**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.07**	**120**	Pn	**Pn**	**18 49 08.1**	**+0.5**
	0.1nm,0.3s,baz=114,slow=1.8,SNR=2.5						
HNR				Sn	**Sn**	**18 50 15.4**	**-0.4**
	0.2nm,0.3s,baz=329,slow=12,SNR=1.7						
	6.5nm,1.1s						
WRA	**Warramunga Arr**	**23.83**	**234**	P	**P**	**18 52 48.7**	**-0.5**
	0.4nm,0.5s,baz=59,slow=9.6,SNR=12						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.27**	**227**	P	**P**	**18 53 10.9**	**-0.4**
	0.2nm,0.4s,baz=56,slow=9.5,SNR=11						
	0.2nm,0.4s						
PETK	**Petropavlovsk-**	**59.37**	**2**	LR	LR	19 20 30.3	
	comp=Z,34nm,20.9s,baz=275,slow=33						
CMAR	**Chiang Mai Arr**	**60.19**	**295**	P	**P**	**18 57 45.3**	**+1.5**
	0.6nm,0.7s,baz=128,slow=5.1,SNR=9.7						
	0.6nm,0.7s						
SONM	**Songino Array**	**68.65**	**327**	P	**P**	**18 58 37.9**	**-0.8**
	0.2nm,0.5s,baz=130,slow=4.5,SNR=1.9						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**82.72**	**319**	P	**P**	**18 59 58.6**	**-0.5**
	0.2nm,0.7s,baz=104,slow=3.6,SNR=1.5						
	0.2nm,0.7s						

MEX 02 18:52:03.6±0.7**, 19.55N**×**102.01W, h38**km±9km**, Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.14**	**206**	*e*P	Pn	18 52 09.1	-5.8
URUA				*e*S	Sn	18 52 12.5	-13
INCO	**Volcan de Coli**	**1.51**	**269**	*e*P	Pn	18 52 26.9	-1.6
INCO				*e*S	Sn	18 52 44.0	-3.0
MNGA	**Volcan de Coli**	**1.52**	**267**	*e*P	Pn	18 52 24.9	-3.6
MNGA				*e*S	Sn	18 52 45.7	-1.6
SOMAC	**Volcano de Col**	**1.53**	**269**	*e*P	Pn	18 52 26.3	-2.4
CEGR	**Campo Tres**	**1.75**	**265**	*e*P	Pn	18 52 29.5	-2.1
CEGR				*e*S	Sn	18 52 51.0	-1.8
MMIG	**Aquila**	**1.79**	**225**	*e*P	Pn	18 52 27.0	-4.9
MMIG				*e*S	Sn	18 52 51.3	-2.0
CDAR	**Ciudad de Arme**	**1.99**	**253**	*e*P	Pn	18 52 34.8	+0.1
CDAR				*e*S	Sn	18 52 57.6	-0.8
ARIG	**Puente Sto Nin**	**2.02**	**129**	*e*P	Pn	18 52 42.4	+7.3
ARIG				*e*S	Sn	18 53 10.4	+11

*IDC **02** 18:56:02.9±1.4, 1.94N×125.69E, h0km, mb3.8/3, mbtmp3.8/4, ML3.6/1, MS2.4/1, Error ellipse: s-maj=108.2km s-min=23.6km az=68.0*

*DJA **02** 18:56:14.5±1.2, 2°N±2°×12°6E±°, h23km±11km, M4.3/18, mB5.0/3, mb4.3/13, MLv4.2/18, Mw(mB)4.4/3*

ISC 02 18:56:14.0±0.9**, 1.93N**±0.07×**126.03E**±0.08**, h83**km**, n25,** σ**1.58**/28**, mb3.6**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.76**	**131**	P	**Pn**	**18 56 44.9**	**+2.0**
TNTI				S	**Sn**	**18 57 07.1**	**+2.3**
SGSI	**Sangihe**	**1.81**	**344**	P	**Pn**	**18 56 44.5**	**+0.9**
SGSI				S	**Sn**	**18 57 07.1**	**+1.1**
SANI	**Sanana**	**3.95**	**181**	P	**Pn**	**18 57 10.7**	**-1.7**
MRSI	**Marisa**	**4.34**	**251**	P	**Pn**	**18 57 18.1**	**+0.5**
LUWI	**Luwuk**	**4.40**	**228**	P	**Pn**	**18 57 19.6**	**+1.2**
APSI	**Ampana**	**5.21**	**237**	P	**Pn**	**18 57 30.0**	**+0.5**
NLAI	**Namlea**	**5.25**	**168**	P	**Pn**	**18 57 30.3**	**+0.3**
	0.4nm1μm25nm,1.0s						
KRAI	**Karang Ratu**	**5.72**	**156**	P	**Pn**	**18 57 38.3**	**+1.8**
AAI	**Ambon**	**5.99**	**159**	P	**Pn**	**18 57 41.4**	**+1.3**
	0.2nm21nm,0.5s						
MSAI	**Masohi**	**5.99**	**151**	P	**Pn**	**18 57 42.3**	**+2.2**
	0.2nm26nm,0.4s						
MPSI	**Mapaga**	**6.33**	**256**	P	**Pn**	**18 57 46.1**	**+1.3**
	0.1nm20nm,0.7s						
KDI	**Kendari**	**6.77**	**210**	P	**Pn**	**18 57 51.1**	**+0.3**
KKSI	**Kolaka, Sulawe**	**7.48**	**216**	P	**Pn**	**18 57 59.8**	**-0.6**
	0.1nm19nm,0.4s						
TTSI	**Tana Toraja**	**7.94**	**231**	P	**Pn**	**18 58 07.3**	**+0.6**
	0.1nm20nm,1.0s						
SPSI	**Sidrap Palu**	**8.57**	**227**	P	**Pn**	**18 58 15.7**	**+0.3**
	8.6nm,0.6s						
KAPI	**Kappang**	**9.32**	**222**	LR	LR	19 01 36.1	
	comp=Z,22nm,18.6s,baz=164,slow=37						
BSSI	**Bau Bau, Buton**	**9.74**	**215**	P	**Pn**	**18 58 32.3**	**+0.9**
KKM	**Kota Kinabalu**	**10.61**	**293**	P	**Pn**	**18 58 45.1**	**+1.8**
	18nm,1.8s						
WBSI	**Waikabubak, Su**	**13.26**	**210**	P	**Pn**	**18 59 21.4**	**+2.3**
	30nm,1.1s						
PLAI	**Plampang**	**13.49**	**217**	P	**Pn**	**18 59 25.1**	**+3.1**
	24nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.72**	**229**	P	**P**	**18 59 53.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.91**	**181**	P	**P**	**19 00 35.9**	**-3.2**
	0.1nm,0.3s,baz=19,slow=10,SNR=1.9						
	3.1nm,0.9s						
WRA	**Warramunga Arr**	**23.22**	**160**	P	**P**	**19 01 13.0**	**-1.1**
	3.8nm,0.4s,baz=338,slow=10,SNR=53						
WRA				PcP	**PcP**	**19 04 59.7**	**0.0**
	0.2nm,0.5s,baz=346,slow=2.4,SNR=1.8						
	3.8nm,0.4s						
ASAR	**Alice Springs**	**26.57**	**164**	P	**P**	**19 01 44.2**	**-0.3**
	0.6nm,0.4s,baz=340,slow=6.9,SNR=53						
ASAR				PcP	**PcP**	**19 05 07.4**	**+0.2**
	0.3nm,0.4s,baz=348,slow=2.1,SNR=7.0						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**58.64**	**326**	P	**P**	**19 06 00.8**	**-1.9**
	0.2nm,0.4s,baz=118,slow=7.1,SNR=6.2						
	0.2nm,0.4s						

MEX 02 19:03:32.1±0.4**, 19.85N**×**102.14W, h18**km±192km**, Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
INCO	**Volcan de Coli**	**1.42**	**257**	*e*P	Pn	19 03 54.3	-3.0
INCO				*e*S	Sn	19 04 12.2	-3.5
MNGA	**Volcan de Coli**	**1.45**	**255**	*e*P	Pn	19 03 54.1	-3.4
MNGA				*e*S	Sn	19 04 13.2	-3.0
CEGR	**Campo Tres**	**1.68**	**255**	*e*P	Pn	19 03 58.9	-1.8
CEGR				*e*S	Sn	19 04 18.9	-3.0
MMIG	**Aquila**	**1.93**	**217**	*e*P	Pn	19 03 57.6	-6.4
MMIG				*e*S	Sn	19 04 18.7	-9.0
CDAR	**Ciudad de Arme**	**1.98**	**243**	*e*P	Pn	19 04 02.0	-2.8
CDAR				*e*S	Sn	19 04 24.2	-4.9
ARIG	**Puente Sto Nin**	**2.30**	**132**	*e*P	Pn	19 04 06.5	-2.7
ARIG				*e*S	Sn	19 04 36.4	-0.6

*BJI **02** 19:35:11.2, 27.37N×140.24E, h478km, mB4.9/13, mb4.6/58*

*NEIC **02** 19:35:12.6±1.7, 27.6N±0.1×140.4E±0.1, h469km±9km, mb4.5/33, Error ellipse: s-maj=19.2km s-min=16.9km az=105.0*

*IDC **02** 19:35:13.7±1.2, 27.55N×140.15E, h473km±11km, mb3.6/25, mbtmp4.4/31, Error ellipse: s-maj=12.9km s-min=9.5km az=88.0*

*JMA **02** 19:35:13.2±0.1, 28°N±1°×14°0E±°, h472km, MV4.2/24, W OFF OGASAWARA*

ISC 02 19:35:13.1±0.6**, 27.54N**±0.06×**140.19E**±0.07**, h470**km±5km**, n159,** σ**1.24**/181**, mb4.3**/56**, 2C-5D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.83**	**104**	*e*P	**P**	**19 36 14.9**	**+0.4**
CBIJ				*e*S	**S**	**19 37 03.0**	**-1.4**
JCJ	**Chichijima**	**1.83**	**104**	P	P	19 36 03.3	-11
	481nm,0.3s,baz=276,slow=2.8,SNR=88						
JCJ				S	S	19 36 50.2	-14
	672nm,0.5s,baz=293,slow=22,SNR=10						
JCJ	**Chichijima**	**1.83**	**104**		**P**	**19 36 13.2**	**-1.3**
JCJ	**Chichijima**	**1.83**	**104**	P	**P**	**19 36 15.5**	**+1.0**
JCJ	**Chichijima**	**1.83**	**104**	S	**S**	**19 37 05.2**	**+0.8**
JHH2	**Haha-jima-NKT2**	**1.99**	**117**	P	**P**	**19 36 16.5**	**+1.1**
JHH2				A	A	19 36 16.5	
	comp=N,8.0nm,0.4s,comp=E,8.0nm,0.4s						
JHH2				*e*S	**S**	**19 37 06.5**	**+0.7**
JHJ2	**Mitsune**	**5.56**	**357**	P	**P**	**19 36 44.5**	**+0.9**
JHJ2	**Mitsune**	**5.56**	**357**	P	**P**	**19 36 44.8**	**+1.1**
JHJ2	**Mitsune**	**5.56**	**357**	*e*P	**P**	**19 36 44.5**	**+0.9**
JHJ	**Hachijo jima 2**	**5.57**	**356**	P	**P**	**19 36 44.8**	**+1.0**
	comp=E,101nm,0.3s,baz=161,slow=23,SNR=7.0						
BSO1	**Boso 1**	**7.12**	**5**	*e*P	**P**	**19 37 00.4**	**+1.6**
BSO1				*e*S	**S**	**19 38 26.1**	**+0.4**
JSG	**Sagara**	**7.31**	**347**	P	**P**	**19 37 02.8**	**+1.4**
JIE	**Ise**	**7.45**	**337**	*e*P	**P**	**19 37 06.2**	**+3.3**
JIE				*e*S	**S**	**19 38 33.9**	**+0.9**
JOD2	**Odawara 2**	**7.75**	**353**	*e*P	**P**	**19 37 06.1**	**0.0**
JOD2				*e*S	**S**	**19 38 36.5**	**-2.3**
JMZ	**Minamidaito 2**	**8.20**	**260**	P	**P**	**19 37 12.3**	**+1.4**
JMZ	**Minamidaito 2**	**8.20**	**260**	*e*P	**P**	**19 37 11.3**	**+0.3**
JMN	**Monobe**	**8.22**	**320**	P	**P**	**19 37 10.1**	**-0.9**
JMN	**Monobe**	**8.22**	**320**	P	**P**	**19 37 13.9**	**+2.9**
INU	**Inuyama**	**8.24**	**342**		**P**	**19 37 10.9**	**-0.3**
INU	**Inuyama**	**8.24**	**342**	P	**P**	**19 37 13.5**	**+2.3**
JTO	**Tosashimizu**	**8.30**	**311**	*e*P	**P**	**19 37 14.5**	**+2.6**
JGF	**Kuroka**	**8.39**	**344**	P	**P**	**19 37 11.6**	**-1.2**
JGF	**Kuroka**	**8.39**	**344**	P	**P**	**19 37 15.1**	**+2.3**
JRY	**Ryogami san**	**8.52**	**353**	*e*P	**P**	**19 37 14.8**	**+0.6**
JRY				*e*S	**S**	**19 38 50.4**	**-3.3**
MJAR	**Matsushiro Arr**	**9.13**	**350**	P	**P**	**19 37 20.5**	**-0.2**
	comp=E,3.0nm,0.4s,baz=172,slow=11,SNR=24						
MJAR				S	**S**	**19 39 01.6**	**-4.1**
	comp=E,2.7nm,0.7s,baz=180,slow=18,SNR=1.6						
MJAR	**Matsushiro Arr**	**9.13**	**350**		**P**	**19 37 18.8**	**-2.0**
MAJO	**Matsushiro**	**9.13**	**350**		**P**	**19 37 18.8**	**-1.9**
MAJO	**Matsushiro**	**9.13**	**350**	P	**P**	**19 37 21.9**	**+1.2**
MJB9	**Matsu-Tunnel**	**9.13**	**350**	P	**P**	**19 37 18.6**	**-2.2**
JSU	**Suzuyama**	**9.35**	**297**		**P**	**19 37 24.3**	**+1.1**
JSU	**Suzuyama**	**9.35**	**297**	P	**P**	**19 37 25.5**	**+2.3**
JAMN	**Amaminishikomi**	**9.77**	**277**	*e*P	**P**	**19 37 29.9**	**+2.1**
JNU	**Nakatsue**	**9.78**	**307**	P	**P**	**19 37 29.7**	**+1.9**
	comp=E,43nm,1.0s,baz=169,slow=8.6,SNR=17						
JSJ	**Shimokoshiki**	**10.00**	**297**	P	**P**	**19 37 31.8**	**+1.6**
JOW	**Kunigami**	**10.63**	**269**	P	**P**	**19 37 38.5**	**+1.5**
	comp=E,48nm,0.3s,baz=109,slow=18,SNR=123						
JOW	**Kunigami**	**10.63**	**269**		**P**	**19 37 37.2**	**+0.2**
JOW	**Kunigami**	**10.63**	**269**	P	**P**	**19 37 38.3**	**+1.2**
JOW	**Kunigami**	**10.63**	**269**	P	**P**	**19 37 38.9**	**+1.8**
JOW				*e*S	**S**	**19 39 35.3**	**-0.4**
JMK	**Ichinoseki**	**11.41**	**4**	*e*P	**P**	**19 37 47.1**	**+1.9**
JMK				*e*S	**S**	**19 39 50.4**	**-0.3**
JTU	**Tsushima**	**11.57**	**310**	P	**P**	**19 37 49.2**	**+2.1**
JKE	**Kume jima 2**	**12.02**	**267**	*e*P	**P**	**19 37 52.8**	**+0.8**
KSRS	**Korea Array**	**14.30**	**317**	P	**P**	**19 38 15.7**	**-0.5**
	comp=E,3.0nm,0.8s,baz=132,slow=10,SNR=9.0						
YHNB	**Yeheng**	**17.14**	**265**	P	**P**	**19 38 44.0**	**-2.5**
SSLB	**Suanglung**	**17.74**	**262**	P	**P**	**19 38 49.6**	**-2.9**
SSLB	**Suanglung**	**17.74**	**262**	P	**P**	**19 38 52.9**	**+0.4**
USRK	**Ussuriysk Ar.**	**17.89**	**340**	P	**P**	**19 38 54.3**	**+0.7**
	comp=E,13nm,0.6s,baz=167,slow=12,SNR=19						
MDJ	**Mudanjiang**	**19.04**	**336**	P	**P**	**19 39 06.3**	**+1.9**
MDJ				pmax	pmax		
	comp=E,13nm,1.0s						
NJ2	**Nanjing**	**19.05**	**289**	⇑*i*P	**P**	**19 39 03.8**	**-0.8**
NJ2				pmax	pmax		
	comp=E,12nm,0.7s						
DL2	**Dalian**	**19.19**	**311**	P	**P**	**19 39 05.6**	**-0.2**
DL2				pmax	pmax		
	comp=E,26nm,0.9s						
QZH2	**Quanzhou**	**19.54**	**267**	*e*P	**P**	**19 39 09.0**	**-0.2**
KNMB	**Chin-men Tao**	**19.83**	**266**	P	**P**	**19 39 08.4**	**-3.4**
BNX	**BinXian**	**20.81**	**334**	⇑P	**P**	**19 39 21.5**	**+1.0**
BNX				pmax	pmax		
	comp=E,38nm,0.8s						
WHN	**Wuhan**	**22.77**	**284**	⇓P	**P**	**19 39 38.5**	**+0.1**
WHN				pmax	pmax		
	comp=E,32nm,0.8s						
BJI2	**Beijing**	**23.44**	**308**	P	**P**	**19 39 43.1**	**-1.2**
BJI2				PcP	**PcP**	**19 43 15.8**	**+1.5**
BJI2				S	**S**	**19 43 24.5**	**+1.1**
BJI2				ScP	**ScP**	**19 46 09.6**	**+2.0**
BJI2				pmax	pmax		
	comp=E,3.0nm,0.9s						
BJI2				pmax	pmax		
	comp=E,52nm,5.8s						
HNS	**HongShan**	**23.58**	**301**	⇓P	**P**	**19 39 45.0**	**-0.5**
HNS				pmax	pmax		
	comp=E,16nm,0.9s						
HEH	**HeiHe**	**24.69**	**340**	*e*P	**P**	**19 39 56.1**	**+0.8**
HEH				pmax	pmax		
	comp=E,20nm,1.0s						
LYN	**LuoYang**	**24.71**	**293**	P	**P**	**19 39 55.7**	**0.0**
LYN				pmax	pmax		
	comp=E,12nm,1.2s						
ENH	**Enshi**	**26.98**	**283**		**P**	**19 40 15.3**	**-0.6**
ENH				IAmb	IAmb	19 40 16.4	
	comp=Z,18nm,0.9s						
HHC	**Hu-ho-hao-te**	**27.01**	**307**	⇓*i*P	**P**	**19 40 15.9**	**-0.2**
HHC				pmax	pmax		
	comp=Z,46nm,6.6s						
HILR	**Hailar Array B**	**27.01**	**330**	P	**P**	**19 40 16.4**	**+0.5**
	comp=Z,4.5nm,0.4s,baz=134,slow=11,SNR=12						
	comp=Z,4.5nm,0.4s						
XAN	**Xi'an**	**27.56**	**291**	⇓P	**P**	**19 40 20.3**	**-0.7**
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
GYA	**Guiyang**	**29.84**	**276**	⇓P	**P**	**19 40 40.9**	**-0.2**
GYA				pmax	pmax		
	comp=Z,13nm,0.6s						
LZH	**Lanzhou**	**31.89**	**295**	*e*P	**P**	**19 40 58.5**	**-0.2**
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
LZDM	**Lanzhou Array**	**32.00**	**294**	P	**P**	**19 40 59.3**	**-0.6**
	comp=Z,2.9nm,0.5s,baz=126,slow=7.5,SNR=19						
LZDM				PcP	**PcP**	**19 43 37.2**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=157,slow=1.1,SNR=7.3						
	comp=Z,2.9nm,0.5s						
ULN	**Ulaanbaatar**	**32.78**	**317**		**P**	**19 41 04.1**	**-2.1**
ULN				IAmb	IAmb	19 41 07.6	
	comp=Z,10nm,0.7s						
SONM	**Songino Array**	**33.17**	**317**	P	**P**	**19 41 09.1**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=130,slow=8.9,SNR=36						
SONM				PcP	**PcP**	**19 43 39.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=149,slow=3.1,SNR=4.3						
SONM				ScP	**ScP**	**19 46 38.4**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=147,slow=3.7,SNR=9.4						
	comp=Z,4.4nm,0.6s						
SONM	**Songino Array**	**33.17**	**317**		**P**	**19 41 09.4**	**0.0**
KMI2	**Kunming**	**33.56**	**275**	P	**P**	**19 41 13.4**	**+0.3**
KMI2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PZH	**PanZhiHua**	**34.18**	**277**	P	**P**	**19 41 17.4**	**-0.8**
GTA2	**Gaotai**	**35.48**	**300**	*e*P	**P**	**19 41 28.4**	**-0.6**
GTA2				ScP	**ScP**	**19 46 47.2**	**+0.5**
GTA2				pmax	pmax		
	comp=Z,16nm,0.9s						
TLY	**Talaya**	**36.48**	**321**		**P**	**19 41 37.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**38.88**	**266**	P	**P**	**19 41 57.2**	**0.0**
	comp=Z,1.7nm,0.6s,baz=60,slow=7.6,SNR=19						
CMAR				PcP	**PcP**	**19 43 58.1**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=113,slow=0.7,SNR=9.9						
	comp=Z,1.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**38.88**	**266**	P	**P**	**19 41 57.0**	**-0.1**
GOMU	**GeErMu**	**39.20**	**294**	P	**P**	**19 42 00.0**	**0.0**
GOMU				PcP	**PcP**	**19 43 58.3**	**+0.5**
GOMU				pmax	pmax		
	comp=Z,23nm,0.9s						
IPM	**Ipoh**	**43.77**	**246**	P	**P**	**19 42 35.6**	**-0.7**
IPM				IAmb	IAmb	19 43 04.4	
	comp=Z,12nm,1.1s						
WMQ	**Urumqi**	**44.87**	**306**	*e*P	**P**	**19 42 45.7**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WB0	**Warramunga Arr**	**47.36**	**187**	P	**P**	**19 43 02.8**	**-0.8**
WR8	**Warramunga Arr**	**47.54**	**187**	P	**P**	**19 43 04.8**	**-0.2**
WR8				IAmb	IAmb	19 43 33.9	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**47.54**	**187**	P	**P**	**19 43 04.8**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=4.7,slow=7.5,SNR=31						
WRA				PcP	**PcP**	**19 44 26.1**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=1.0,slow=4.0,SNR=6.2						
WRA				ScP	**ScP**	**19 47 33.0**	**-1.9**
	comp=Z,1.5nm,0.9s,baz=4.7,slow=4.9,SNR=8.8						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**47.54**	**187**	P	**P**	**19 43 04.4**	**-0.5**
WRA					**ScP**	**19 47 33.7**	**-1.1**
ZAA0	**Zalesovo Array**	**47.99**	**319**	P	**P**	**19 43 06.5**	**-1.4**
ZAA0				IAmb	IAmb	19 43 08.5	
	comp=Z,9.3nm,0.9s						
ZALV	**Zalesovo Beam**	**47.99**	**319**	P	**P**	**19 43 07.7**	**-0.2**
	comp=Z,5.8nm,0.4s,baz=103,slow=7.6,SNR=44						
ZALV				PcP	**PcP**	**19 44 26.9**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=109,slow=3.1,SNR=7.8						
	comp=Z,5.8nm,0.4s						
ZALV	**Zalesovo Beam**	**47.99**	**319**	P	**P**	**19 43 07.5**	**-0.4**
MKAR	**Makanchi Array**	**48.82**	**309**	P	**P**	**19 43 14.7**	**+0.3**
	comp=Z,5.5nm,0.4s,baz=89,slow=10,SNR=175						
MKAR				PcP	**PcP**	**19 44 30.7**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=94,slow=6.2,SNR=4.9						
MKAR				ScP	**ScP**	**19 47 39.1**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=81,slow=5.1,SNR=5.4						
	comp=Z,5.5nm,0.4s						
MKAR	**Makanchi Array**	**48.82**	**309**	P	**P**	**19 43 14.2**	**-0.1**
MAKZ	**Makanchi**	**49.04**	**309**	P	**P**	**19 43 16.4**	**+0.4**
MAKZ				IAmb	IAmb	19 43 17.9	
	comp=Z,10nm,0.8s						
ASAR	**Alice Springs**	**51.27**	**187**	P	**P**	**19 43 32.4**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=358,slow=4.5,SNR=22						
ASAR				PcP	**PcP**	**19 44 40.5**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=15,slow=3.8,SNR=4.8						
ASAR				ScP	**ScP**	**19 47 50.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=12,slow=4.8,SNR=4.7						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**51.27**	**187**	P	**P**	**19 43 31.9**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KURK	Kurchatov	51.41	314	P	P	19 43 33.2	0.0
KURK				IAmb	IAmb	19 43 34.0	
	comp=Z,27nm,0.7s						
KURBB	Kurchatov Arra	51.46	314	P	P	19 43 33.7	+0.1
	comp=Z,42nm,0.6s,baz=92,slow=8.0,SNR=352						
NRIK	Noril'sk	51.59	339	P	P	19 43 34.6	+0.4
	comp=Z,6.4nm,0.6s,baz=112,slow=9.5,SNR=11						
	comp=Z,6.4nm,0.6s						
ULHL	Ulahol	53.30	304	P	P	19 43 48.5	+1.2
	SNR=5.2						
BOOM	Boomskoye usch	53.50	304	IAmb	IAmb	19 43 50.2	
	comp=Z,18nm,0.6s						
TKM2	Tokmak 2	53.70	305	P	P	19 43 51.2	+1.0
	SNR=20						
KSH2	Kashi	54.19	300	P	P	19 43 54.9	+1.3
KSH2				pmax	pmax		
	comp=Z,21nm,0.6s						
KBK	Karagaybulak	54.21	304	P	P	19 43 54.6	+0.9
	SNR=19						
USP	Ospenovka	54.47	305	P	P	19 43 56.0	+0.6
	SNR=6.3						
AAK	Ala-Archa	54.54	304	P	P	19 43 56.7	+0.7
	SNR=6.0						
AAK	Ala-Archa	54.54	304	P	P	19 43 55.3	-0.8
AAK				IAmb	IAmb	19 43 57.0	
	comp=Z,9.6nm,0.5s						
UCH	Uchtor	54.58	304	P	P	19 43 58.0	+1.3
	SNR=26						
EKS2	Erkin-Say	55.06	304	P	P	19 44 00.4	+0.7
	SNR=10						
ARSB	Arslanbob	55.83	303	IAmb	IAmb	19 44 06.8	
	comp=Z,15nm,0.5s						
L22K	Petersville	56.30	31	P	P	19 44 07.4	-0.5
BVAR	Borovoye Array	56.51	317	P	P	19 44 09.8	+0.4
	comp=Z,30nm,0.4s,baz=87,slow=6.7,SNR=179						
BORK	Borovoye	56.55	317	P	P	19 44 10.0	+0.3
DRK	Karamyk	57.02	301	IAmb	IAmb	19 44 15.1	
	comp=Z,11nm,0.6s						
NIL	Nilore	57.06	294		P	19 44 14.4	+0.8
NIL				IAmb	IAmb	19 44 15.9	
	comp=Z,14nm,0.7s						
KK31	Karatay Array	57.38	305	P	P	19 44 16.2	+0.6
KK31				IAmb	IAmb	19 44 16.9	
	comp=Z,20nm,0.8s						
KKAR	Karatay Array	57.38	305	P	P	19 44 15.5	-0.1
DHY	Denali Highway	57.89	31	P	P	19 44 20.3	+1.4
ILAR	Eielson Array	58.17	29	P	P	19 44 21.1	+0.4
	comp=Z,0.4nm,0.3s,baz=254,slow=5.4,SNR=10						
	comp=Z,0.4nm,0.3s						
GAR	Garm	58.24	301	P	P	19 44 21.8	+0.1
SHAA	Shahritus	60.23	299	P	P	19 44 35.3	+0.3
SHAA				IAmb	IAmb	19 44 36.7	
	comp=Z,29nm,0.9s						
EPYK	Eagle Plains	62.35	27	P	P	19 44 49.0	+0.5
EPYK				IAmb	IAmb	19 45 16.3	
	comp=Z,13nm,0.5s						
ARTI	Arti	63.09	322	P	P	19 44 52.8	-0.5
ARTI				IAmb	IAmb	19 44 53.9	
	comp=Z,18nm,0.7s						
AB31	Akbulak array	63.51	314	P	P	19 44 55.7	-0.5
AB31				IAmb	IAmb	19 44 56.9	
	comp=Z,10nm,0.8s						
ABKAR	Akbulak array	63.51	314	P	P	19 44 55.9	-0.3
SPITS	Spitsbergen Ar	69.62	349	P	P	19 45 34.6	+0.9
	comp=Z,25nm,1.1s,baz=102,slow=7.8,SNR=12						
	comp=Z,25nm,1.1s						
ARCES	ARCESS Array B	72.53	340	P	P	19 45 51.5	+0.6
	comp=Z,5.0nm,0.7s,baz=58,slow=6.3,SNR=17						
	comp=Z,5.0nm,0.7s						
ARCES	ARCESS Array B	72.53	340	P	P	19 45 51.3	+0.3
ARCES				IAmb	IAmb	19 45 55.9	
	comp=Z,30nm,1.3s						
YKA	Yellowknife Ar	72.59	28	P	P	19 45 51.9	+0.5
	comp=Z,0.7nm,0.6s,baz=300,slow=6.3,SNR=12						
	comp=Z,0.7nm,0.6s						
KBZ	Khabaz	76.40	312	P	P	19 46 13.9	+0.6
	comp=Z,7.1nm,0.7s,baz=108,slow=4.0,SNR=19						
	comp=Z,7.1nm,0.7s						
FINES	FINESS Array B	76.76	333	P	P	19 46 14.9	0.0
	comp=Z,12nm,0.4s,baz=65,slow=5.2,SNR=175						
	comp=Z,12nm,0.4s						
AK03	Malin Array Si	81.19	323	P	P	19 46 37.8	-1.0
AKASG	Malin Array Be	81.20	323	P	P	19 46 38.1	-0.7
	comp=Z,1.1nm,0.3s,baz=52,slow=5.6,SNR=13						
	comp=Z,1.1nm,0.3s						
AKASG	Malin Array Be	81.20	323	P	P	19 46 38.3	-0.6
AKBB	Malin Array Si	81.20	323	P	P	19 46 37.7	-1.1
AK01	Malin Array Si	81.21	323	P	P	19 46 38.3	-0.6
KIEV	Kiev	81.22	323	P	P	19 46 37.6	-1.3
AK09	Malin Array Si	81.22	323	P	P	19 46 36.8	-2.1
AK04	Malin Array Si	81.22	323	P	P	19 46 37.7	-1.2
AK23	Malin Array Si	81.22	323	P	P	19 46 37.7	-1.2
AK08	Malin Array Si	81.22	323	P	P	19 46 37.9	-1.0
AK02	Malin Array Si	81.24	323	P	P	19 46 37.7	-1.3
AK10	Malin Array Si	81.24	323	P	P	19 46 37.9	-1.2
AK11	Malin Array Si	81.25	323	P	P	19 46 38.4	-0.7
AK22	Malin Array Si	81.25	323	P	P	19 46 38.3	-0.8
AK21	Malin Array Si	81.26	323	P	P	19 46 38.4	-0.7
AK12	Malin Array Si	81.27	323	P	P	19 46 38.4	-0.8
AK18	Malin Array Si	81.28	323	P	P	19 46 38.4	-0.8
AK16	Malin Array Si	81.28	323	P	P	19 46 37.9	-1.4
AK20	Malin Array Si	81.29	323	P	P	19 46 38.8	-0.5
AK07	Malin Array Si	81.30	323	P	P	19 46 38.5	-0.8
AK17	Malin Array Si	81.30	323	P	P	19 46 38.7	-0.6
AK19	Malin Array Si	81.31	323	P	P	19 46 38.1	-1.3
NVAR	Mina Array Bea	81.63	51	P	P	19 46 42.4	+0.8
	comp=Z,0.6nm,0.5s,baz=310,slow=5.2,SNR=1.7						
	comp=Z,0.6nm,0.5s						
HFS	Hagfors	82.31	336	P	P	19 46 43.3	-1.1
	comp=Z,3.0nm,0.4s,baz=108,slow=3.3,SNR=38						
	comp=Z,3.0nm,0.4s						
NB2	NORSAR Subarra	82.53	338	P	P	19 46 45.0	-0.5
	comp=Z,2.7nm,0.6s,baz=49,slow=4.6						
NOA	NORSAR Array B	82.53	338	P	P	19 46 44.8	-0.7
	comp=Z,4.1nm,0.6s,baz=46,slow=4.9,SNR=14						
	comp=Z,4.1nm,0.6s						
ELK	Elko	82.57	48	P	P	19 46 46.1	-0.3
	comp=Z,0.6nm,0.5s,baz=288,slow=2.9,SNR=4.0						
	comp=Z,0.6nm,0.5s						
RAYN	Ar Rayn	83.34	293	P	P	19 46 50.6	+0.3
BRTR	Keskin Array B	84.39	312	P	P	19 46 55.0	-0.4
	comp=Z,1.7nm,0.6s,baz=90,slow=4.0,SNR=11						
	comp=Z,1.7nm,0.6s						
BRTR	Keskin Array B	84.39	312	P	P	19 46 54.9	-0.4
PDAR	Pinedale Array	85.13	44	P	P	19 47 00.0	+0.9
	comp=Z,0.4nm,0.7s,baz=292,slow=6.4,SNR=2.9						
	comp=Z,0.4nm,0.7s						
MMAI	Mount Meron Ar	86.62	306	P	P	19 47 05.8	-0.3
	comp=Z,1.6nm,0.6s,baz=53,slow=9.9,SNR=5.8						
	comp=Z,1.6nm,0.6s						
MODS	Modra-Piesok	88.79	326	eP	P	19 47 14.6	-1.4
GERES	GERESS Array B	90.20	328	P	P	19 47 21.6	-1.0
	comp=Z,0.9nm,0.6s,baz=58,slow=2.6,SNR=3.8						
	comp=Z,0.9nm,0.6s						
PH02	Texas Public H	94.24	46	P	P	19 47 36.7	-4.7
PH02				IAmb	IAmb	19 47 38.6	
	comp=Z,45nm,0.4s						
TXAR	Lajitas Array	96.74	52	P	P	19 47 53.9	+1.0
	comp=Z,0.2nm,0.7s,baz=311,slow=4.5,SNR=2.7						
	comp=Z,0.2nm,0.7s						

*NEIC **02** 19:37:44.8±0.7, 19°.24N±0°.01×66°.08W±0°.05, h10^{km}±2^{km}, ML3.5/43, Md3.4/8(RSPR), Error ellipse: s-maj=7.3km s-min=3.0km az=95.0*
*SDD **02** 19:37:44.8±2.5, 19°.34N×65°.78W, h78^{km}±87^{km}, MD3.9, ML3.2, MW3.7, Presumed earthquake*
*RSPR **02** 19:37:46.9, 19°.30N×66°.01W, h10^{km}±31^{km}, MD3.4/8*
ISC 02 19:37:39.8±1.7**, 19°.46N**±0°.06×**66°.02W**±0°.03**, h1**^{km}±10^{km}**, n52,** σ1^s**47**/77**, 22C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EMPR	Esperanza - Ma	1.09	206		Pn	19 38 02.8	+0.5
EMPR					Sg	19 38 15.7	+0.8
EMPR	Esperanza - Ma	1.09	206	⇑iP	Pn	19 38 02.8	+0.5
EMPR				eS	Sg	19 38 15.7	+0.8
GCPR	Guaynabo City	1.15	183		Pg	19 38 02.4	+0.6
GCPR				Sn	Sb	19 38 19.2	+1.3
GCPR				IAML		19 38 22.9	
	comp=E,826nm,0.6s						
GCPR	Guaynabo City	1.15	183	⇓iP	Pn	19 38 03.3	+0.3
GCPR				eS	Sg	19 38 17.2	+0.4
ECPR	Experimental S	1.19	196		Pb	19 38 03.2	+0.1
ECPR				IAML		19 38 21.5	
	comp=E,1μm,0.3s						
ECPR				IAML		19 38 22.6	
	comp=E,2μm,0.3s						
ECPR	Experimental S	1.19	196	⇑eP	Pn	19 38 04.3	+0.8
ECPR				eS	Sg	19 38 17.5	-0.4
HUMP	Col San Antoni	1.32	173		Pb	19 38 05.5	+0.1
HUMP					Sg	19 38 20.2	-2.1
HUMP	Col San Antoni	1.32	173	IAML		19 38 23.6	
	comp=E,650nm,0.2s						
HUMP	Col San Antoni	1.32	173	⇑eP	Pb	19 38 05.5	+0.1
HUMP				eS	Sg	19 38 20.2	-2.1
CUPR	Culebra, Puert	1.34	149		Pn	19 38 05.5	-0.2
SJG	San Juan	1.35	185		Pn	19 38 05.8	+0.1
SJG	San Juan	1.35	185	IAML		19 38 25.6	
	comp=E,1μm,0.4s						
SJG				IAML		19 38 25.9	
	comp=E,801nm,0.8s						
SJG	San Juan	1.35	185	⇑ePg	Pn	19 38 05.8	+0.1
SJG				⇑eSg	Sb	19 38 23.4	-0.3
SJG	San Juan	1.35	185	⇓eP	Pb	19 38 06.0	+0.1
SJG				eS	Sb	19 38 21.4	-2.3
UUPR	Utuado, UPR, P	1.38	209		Pg	19 38 06.7	+0.5
AGPR	Aguadilla, PR	1.43	226		Pg	19 38 07.9	+0.7
AGPR				IAML		19 38 35.9	
	comp=E,480nm,0.6s						
AGPR	Aguadilla, PR	1.43	226	⇑ePg	Pg	19 38 07.8	+0.5
AGPR				⇑eSg	Sg	19 38 27.3	+1.4
AGPR				IAML		19 38 39.2	
	comp=N,360nm,1.1s						
AGPR	Aguadilla, PR	1.43	226	⇑eP	Pg	19 38 08.4	+1.1
AGPR				eS	Sb	19 38 25.8	-0.3
PDPR	Patillas Dam,	1.44	180		Pb	19 38 07.2	-0.1
PDPR				IAML		19 38 29.7	
	comp=N,581nm,0.5s						
CELP	Cerrillos	1.48	201		Pb	19 38 08.1	0.0
CELP				IAML		19 38 31.9	
	comp=N,572nm,0.8s						
CELP				IAML		19 38 32.2	
	comp=N,519nm,0.5s						
OBIP	Obispado Ponce	1.52	202		Pb	19 38 08.6	-0.2
OBIP	Obispado Ponce	1.52	202		Sn	19 38 26.2	-2.3
OBIP	Obispado Ponce	1.52	202	⇑eP	Pg	19 38 09.1	+0.2
OBIP				eS	Sn	19 38 26.2	-2.3
LSP	Las Mesas	1.63	219		Pb	19 38 10.9	+0.1
LSP					Sn	19 38 31.0	-0.4
LSP	Las Mesas	1.63	219	⇑eP	Pb	19 38 10.9	+0.1
LSP				eS	Sn	19 38 31.0	-0.4
PRSN	Puerto Rico Se	1.64	221		Pb	19 38 10.9	+0.1
PRSN				IAML		19 38 34.7	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	1.64	221		Sn	19 38 30.7	-0.8
PRSN	Puerto Rico Se	1.64	221	⇑ePg	Pb	19 38 10.5	-0.3
PRSN				⇑eSg	Sn	19 38 31.1	-0.3
PRSN				IAML		19 38 34.1	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	1.64	221	⇓eP	Pb	19 38 10.9	+0.1
PRSN				eS	Sn	19 38 30.7	-0.8
GBPR	Guanica, Bosqu	1.69	209		Pg	19 38 13.0	+0.8
GBPR					Sn	19 38 32.2	-0.5
GBPR	Guanica, Bosqu	1.69	209	⇑eP	Pg	19 38 13.0	+0.8
GBPR				eS	Sn	19 38 32.2	-0.5
IDE	Isla Desecheo	1.75	232		Pb	19 38 12.7	0.0
IDE					Sn	19 38 33.7	-0.5
IDE	Isla Desecheo	1.75	232	⇓eP	Pb	19 38 12.7	0.0
IDE				eS	Sn	19 38 33.7	-0.5
MLPR	Magueyes Islan	1.78	213		Pn	19 38 11.8	+0.1
MLPR				IAML		19 38 45.2	
	comp=N,353nm,0.5s						
CRPR	Cabo Rojo, PR	1.78	216		Pg	19 38 14.4	+0.5
CRPR					Sn	19 38 33.0	-2.0
CRPR	Cabo Rojo, PR	1.78	216	⇑ePg	Pb	19 38 12.7	-0.5
CRPR				⇑eSg	Sn	19 38 33.0	-2.0
CRPR				IAML		19 38 42.2	
	comp=N,235nm,0.4s						
CRPR	Cabo Rojo, PR	1.78	216	⇑eP	Pg	19 38 14.4	+0.5
CRPR				eS	Sn	19 38 33.0	-2.0
PCDR	Punta Cana, DR	2.43	248	⇑ePg	Pb	19 38 23.5	-0.8
PCDR				IAML		19 39 07.9	
	comp=N,191nm,0.6s						
MIDR	Miches	2.91	261	⇑ePg	Pb	19 38 31.6	-0.8
MIDR				IAML		19 39 25.4	
	comp=N,35nm,1.1s						
SMRT	St. Maarten	3.12	116		Pb	19 38 33.6	-2.5
SMRT					Sn	19 39 08.3	+0.2
SMRT	St. Maarten	3.12	116	IAML		19 39 23.9	
	comp=E,247nm,0.6s						
SMRT				IAML		19 39 31.3	
	comp=N,206nm,0.5s						
SMRT	St. Maarten	3.12	116	⇓eP	Pb	19 38 33.6	-2.5
SMRT				eS	Sn	19 39 08.3	+0.2
SABA	Saba	3.21	124		Pb	19 38 34.9	-2.7
SABA					Sn	19 39 12.0	+1.7
SABA	Saba	3.21	124	IAML		19 39 22.7	
	comp=N,244nm,0.5s						
SABA	Saba	3.21	124	⇑eP	Pb	19 38 34.9	-2.7
SABA				eS	Sn	19 39 12.0	+1.7
DR12	Loma Pena Alta	3.25	259		Pb	19 38 34.5	-3.8
HATOM	Hato Mayor del	3.25	259	⇑ePg	Pb	19 38 34.7	-3.7
HATOM				⇑eSg	Sn	19 39 12.8	+1.4
HATOM				IAML		19 39 50.9	
	comp=N,29nm,1.6s						
SDDR	Presa de Saban	5.00	265		Pn	19 39 00.1	+4.0
SDDR				IAML		19 40 23.5	
	comp=N,42nm,1.2s						
SDDR				IAML		19 40 41.8	
	comp=N,48nm,2.2s						
SDDR	Presa de Saban	5.00	265	⇑eP	Pn	19 39 00.4	+4.3
SDDR				eS	Sn	19 39 58.0	+3.3
GDHS	Morne Mazeau,	5.14	127		Pn	19 39 00.2	+2.1
CBE	Ff, Capester	5.39	128		Pn	19 39 05.1	+3.7
CBE					Sn	19 40 04.1	0.0
CBE	Ff, Capester	5.39	128	⇑eP	Pn	19 39 05.1	+3.7
CBE				eS	Sn	19 40 04.1	0.0

KRSC 02 19:58:47.4±0.7**, 55°.40N**×**162°.45E, h61**^{km}±19^{km}**, Ml3.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KBTR	Krutoberegovo	0.83	14	eP	Pn	19 59 04.1	+0.8
KBTR				eS	Sn	19 59 18.5	+3.5
KBG	Krutoberegovo	0.86	9	eP	Pn	19 59 04.8	+1.1
KBG				eS	Sn	19 59 18.0	+2.3
TUMD	Tumrok D	1.19	261	eP	Pn	19 59 08.6	+0.6
TUMD				eS	Sn	19 59 23.6	+0.2
BZP	Bezymyannyi-Pe	1.20	296	eP	Pn	19 59 09.1	+0.9
BZWR	Bezymyannyi-We	1.24	298	eP	Pn	19 59 10.1	+1.3
SMKR	Semkarok	1.30	335	eP	Pn	19 59 11.0	+1.5
KMNR	Kamenistaya	1.31	287	eP	Pn	19 59 11.1	+1.5
KIRR	Kirishev	1.32	296	eP	Pn	19 59 09.4	-0.4
KLY	Klyuchi	1.36	313	eP	Pn	19 59 10.3	0.0
KPT	Kopyto	1.38	295	eP	Pn	19 59 12.9	+2.3
KOZ	Kozyrevsk	1.60	295	eP	Pn	19 59 15.9	+2.5
SRDR	Sredinnyy	1.79	302	eP	Pn	19 59 18.7	+2.6
BKI	Bering	2.02	94	eS	Sn	19 59 44.3	+1.0
ESO	Esso	2.19	285	eP	Pn	19 59 22.5	+1.0
KII	Karymskiy	2.22	233	eP	Pn	19 59 23.7	+1.8
SDLR	Sedlovina	2.98	226	eP	Pn	19 59 35.2	+2.8
KRER	Koryakskii	3.02	227	eP	Pn	19 59 36.2	+3.3
KRX	Arik	3.02	229	eP	Pn	19 59 36.5	+3.5
SMAR	Somma	3.03	226	eP	Pn	19 59 35.4	+2.3
AVH	Avacha	3.05	227	eP	Pn	19 59 37.0	+3.8
UGLR	Uglovaya	3.06	226	eP	Pn	19 59 36.0	+2.6
KOK	Koryaka	3.08	228	eP	Pn	19 59 36.9	+3.2
GNL	Ganaly	3.14	239	eP	Pn	19 59 36.5	+2.0
DALK	Dalny	3.22	224	eP	Pn	19 59 37.6	+2.2
KRMR	Karymshinskiy	3.62	226	eP	Pn	19 59 44.2	+3.2
GRL	Gorelyy	3.85	224	eP	Pn	19 59 48.2	+3.9
MTVR	Mutnovka	3.86	223	eP	Pn	19 59 49.4	+4.9
OSSR	Ossora	3.87	5	eS	Sn	20 00 31.7	+3.3

*IDC **02** 20:00:33.4±2.7, 43°.19N×105°.05W, h0^{km}, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=54.7km s-min=10.1km az=156.0*
*NEIC **02** 20:00:34.6±2.1, 43°.61N±0°.06×105°.35W±0°.07, h0^{km}±1^{km}, ML3.0/20, Error ellipse: s-maj=9.5km s-min=9.1km az=188.0*
ISC 02 20:00:34.1±1.1**, 43°.60N**±0°.07×**105°.27W**±0°.06**, h0**^{km}**, n14,** σ1^s**98**/13**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RSSD	Black Hills	1.03	59		Pg	20 00 55.6	+1.9
RSSD				IAML		20 01 16.1	
	303nm,0.5s						
K22A	Casper	1.32	224		Pn	20 01 01.5	+1.5
LAO	LASA Array	3.16	348	Pn	Pn	20 01 23.7	-1.4
RLMT	Red Lodge	3.25	299	Pn	Pn	20 01 27.6	+1.2
RLMT				IAML		20 02 59.3	
	38nm,3.9s						
RLMT				IAML		20 03 11.8	
	42nm,3.1s						
BW06	Boulder Array	3.25	257		Pn	20 01 27.3	+0.8
BW06				IAML		20 02 22.9	
	25nm,0.3s						
PD31	Pinedale Array	3.25	257		Pn	20 01 26.9	+0.4
PDAR	Pinedale Array	3.25	257	Pn	Pb	20 01 29.8	-3.0
	2.4nm,0.3s,baz=69,slow=13,SNR=46						
PDAR				Lg	Lg	20 02 17.9	
	8.4nm,0.3s,baz=81,slow=28,SNR=9.1						
	3.7nm,0.4s						
PDAR	Pinedale Array	3.25	257		Pn	20 01 28.7	+2.2
OGNE	Ogallala	3.58	137	Pn	Pn	20 01 29.8	-1.1
YNE	Yellowstone No	3.68	294	Pn	Pn	20 01 33.7	+1.3
YNE				IAML		20 02 42.2	
	comp=N,40nm,0.7s						
ISCO	Idaho Springs	3.81	184		Pn	20 01 37.2	+2.9
ISCO				IAML		20 03 24.8	
	comp=N,19nm,3.5s						
ISCO				IAML		20 03 46.5	
	comp=N,32nm,3.6s						
LOHW	Long Hollow	3.88	272		Pn	20 01 37.1	+2.0
LOHW				IAML		20 02 57.2	
	comp=N,24nm,3.0s						
LOHW				IAML		20 03 07.8	
	comp=N,21nm,1.6s						
I10CA	LAC DU BONNET	9.14	41	I	I	20 52 00.0	
	comp=N,0.1nm,3.1s,baz=220,slow=234,SNR=5.4						
ULM	Lac du Bonnet	9.24	41	Pn	Pn	20 02 48.8	+0.3
	comp=N,0.7nm,0.3s,baz=226,slow=13,SNR=5.4						
ULM				Lg	Lg	20 05 23.1	
	comp=N,0.5nm,0.3s,baz=313,slow=15,SNR=4.7						
	comp=N,1.6nm,0.4s						

*FUNV **02** 20:04:10.4, 13°.69N×60°.42W, h3^{km}, MW3.7, Presumed earthquake*
*TRN **02** 20:04:11.3, 13°.71N×60°.44W, h40^{km}, MD3.2, East of Saint Lucia.*
ISC 02 20:04:10.4±3.3**, 13°.71N**±0°.03×**60°.41W**±0°.09**, h16**^{km}±24^{km}**, n20,** σ0^s**51**/36**, Windward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SLAC	Saint Lucia, A	0.51	292	eP	Pn	20 04 22.9	-0.2
SLAC				eS	Sn	20 04 31.8	+0.3
MCLT	Moule a Chique	0.52	271	eP	Pn	20 04 22.6	-0.5
MCLT				eS	Sn	20 04 31.7	+0.1
SLBI	Saint Lucia, B	0.64	300	eP	Pn	20 04 25.1	+0.4
SLBI				eS	Sn	20 04 33.7	-0.8
SLCP	Castries, St.	0.64	298	eP	Pn	20 04 25.3	+0.5
SLCP				eS	Sn	20 04 34.4	-0.2
SVB	Belmont	0.93	242	eP	Pb	20 04 27.7	-0.4
SVB				eS	Sb	20 04 40.3	+0.1
SVB	Belmont	0.93	242	eP	Pb	20 04 27.8	-0.4
SVB				eS	Sb	20 04 40.7	+0.5
BIM	Bigot	1.03	321	eP	Pb	20 04 29.8	-0.1
BIM				eS	Sb	20 04 44.0	+0.8
BIM	Bigot	1.03	321	eP	Pb	20 04 29.8	-0.1
BIM				eS	Sn	20 04 44.3	-0.1
ILAM	Ilet Lapin Mar	1.16	337	eP	Pn	20 04 31.5	-0.4
ILAM				eS	Sb	20 04 46.8	0.0
SVN	Savane Anatole	1.35	327	eP	Pn	20 04 34.9	+0.3
SVN				eS	Sn	20 04 52.6	+0.4
GRW	Mount Saint Ca	1.96	219	eP	Pn	20 04 42.7	-0.4
GRW				eS	Sn	20 05 07.5	+0.1
GRGR	Grenville	1.98	218	eP	Pn	20 04 43.6	+0.3
GRGR				eS	Sn	20 05 08.6	+0.8
GRGR	Grenville	1.98	218	eP	Pn	20 04 43.2	0.0
GRGR				eS	Sn	20 05 07.7	-0.1
DSLB	Salisbury	1.98	330	eP	Pn	20 04 43.6	+0.3
DSLB				eS	Sn	20 05 06.4	-1.4
DWS	Wesley	2.05	335	eP	Pn	20 04 44.4	+0.2
DWS				eS	Sn	20 05 08.6	-0.8
TBG	Guadaloupe-3	2.45	331	eP	Pn	20 04 50.2	+0.5
MMLZ	Guadeloupe Bro	2.63	332	eP	Pn	20 04 53.0	+0.9
ATGZ	Broadband at L	2.70	332	eP	Pn	20 04 53.3	+0.2
ATGZ				eS	Sn	20 05 25.0	-0.5
DHSZ	Broadband at M	2.87	333	eP	Pn	20 04 56.0	+0.6
TRN	Trinidad (W)	3.19	198	eS	Sn	20 05 37.4	-0.2

*NOU **02** 20:07:09.9, 34°.68S×178°.31W, h0^{km}, mb4.7/9, South of Kermadec Islands*
*IDC **02** 20:07:13.1±1.1, 34°.69S×178°.91W, h0^{km}, mb4.6/4, mbtmp4.6/5, ML4.3/1, MS3.6/16, Error ellipse: s-maj=41.5km s-min=26.6km az=141.0*
*NEIC **02** 20:07:13.0±1.4, 34°.69S±0°.09×178°.8W±0°.1, h10^{km}±2^{km}, mb4.5/7, Error ellipse: s-maj=21.3km s-min=5.4km az=132.0*
*WEL **02** 20:07:18.1±0.9, 35°S±8°×17°9W±1°1, h180^{km}±21^{km}, M4.5/19, ML4.4/18, MLv4.5/19, Error ellipse: s-maj=14.8km s-min=9.9km az=112.7*
ISC 02 20:07:17.3±0.8**, 34°.81S**±0°.07×**178°.74W**±0°.10**, h35**^{km}**, n86,** σ1^s**62**/92**, mb4.5**/9**, MS3.7**/14**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MXZ	Matakaoa Point	3.64	220		Pn	20 08 10.0	-1.2
MXZ	Matakaoa Point	3.64	220	P	Pn	20 08 11.8	+0.7
MXZ	Matakaoa Point	3.64	220	P	Pn	20 08 11.4	+0.3
MXZ				S	Sn	20 08 53.9	+1.0
WMGZ	Waiomatatini S	3.78	217	P	Pn	20 08 14.5	+1.4
WMGZ				S	Sn	20 08 59.9	+3.6
PKGZ	Pakihiroa	3.99	219	P	Pn	20 08 17.0	+1.1
PKGZ				S	Sn	20 09 04.1	+2.6
PUZ	Puketiti	4.06	216	P	Pn	20 08 17.5	+0.6
PUZ				S	Sn	20 09 03.5	+0.3
HAZ	Te Kaha	4.07	223	P	Pn	20 08 18.1	+1.2
HAZ				S	Sn	20 09 07.1	+3.7
WIZ	White Island	4.27	229	P	Pn	20 08 19.6	-0.1
TWGZ	Tauwhareparae	4.28	217	P	Pn	20 08 21.0	+1.1
TWGZ				S	Sn	20 09 11.0	+2.4
CNGZ	Carnagh Statio	4.41	213	P	Pn	20 08 23.2	+1.4
CNGZ				S	Sn	20 09 14.1	+2.1
TKGZ	Te Karaka	4.55	216	P	Pn	20 08 25.5	+1.9
TKGZ				S	Sn	20 09 16.6	+1.4
WHRZ	Whale Island	4.61	227	P	Pn	20 08 27.1	+2.6
WHRZ				S	Sn	20 09 19.7	+3.0
MWZ	Matawai	4.63	219	P	Pn	20 08 25.1	+0.4
MWZ				S	Sn	20 09 19.3	+2.0
MYRZ	Mayor Island	4.76	237	P	Pn	20 08 27.5	+1.0
RIGZ	Rimuhau	4.80	215	P	Pn	20 08 26.6	-0.4
RIGZ				S	Sn	20 09 23.1	+1.7
URZ	Urewera	4.80	223	Pn	Pn	20 08 27.2	+0.2
	12nm,0.3s,baz=44,slow=3.9,SNR=47						
URZ				Sn	Sn	20 09 21.8	+0.5
	10nm,0.3s,baz=27,slow=23,SNR=11						
	36nm,0.4s						
URZ	Urewera	4.80	223	P	Pn	20 08 27.9	+0.9
URZ	Urewera	4.80	223	P	Pn	20 08 27.6	+0.6
URZ				S	Sn	20 09 22.2	+0.8
RAGZ	Rawiri	4.81	219	P	Pn	20 08 27.7	+0.5
RAGZ				S	Sn	20 09 23.2	+1.5
OPRZ	Ohinepanea	4.86	230	P	Pn	20 08 28.8	+1.0
MARZ	Manawahe	4.87	228	P	Pn	20 08 29.4	+1.3
KUZ	Kuaotunu	4.90	245	P	Pn	20 08 29.8	+1.3
KUZ	Kuaotunu	4.90	245	P	Pn	20 08 29.5	+1.0
GRZ	Great Barrier	4.95	251	P	Pn	20 08 30.0	+0.9
SNGZ	Shannon Statio	5.06	217	P	Pn	20 08 32.3	+1.6
KNZ	Kokohu	5.09	213	P	Pn	20 08 31.8	+0.8
MHGZ	Mahia Peninsul	5.10	211	P	Pn	20 08 32.6	+1.5
RTZ	Ruatahuna	5.12	221		Pn	20 08 30.2	-1.4
RTZ	Ruatahuna	5.12	221	P	Pn	20 08 31.5	0.0
TOZ	Tahuroa Road	5.49	236		Pn	20 08 36.4	-0.1
TOZ	Tahuroa Road	5.49	236	P	Pn	20 08 38.1	+1.5
RAO	Raoul Island	5.58	7	LR	LR	20 10 57.1	
	comp=Z,468nm,18.2s,baz=168,slow=41						
WCZ	Waipu Caves	5.76	257	P	Pn	20 08 41.0	+0.7
BKZ	Black Stump Fm	5.79	220		Pn	20 08 39.8	-0.8
BKZ	Black Stump Fm	5.79	220	P	Pn	20 08 41.4	+0.7

BKZ	**Black Stump Fm**	**5.79**	**220**	P	**Pn**	**20 08 40.2**	**-0.5**
PXZ	**Pawanui**	**6.28**	**213**	P	**Pn**	**20 08 46.2**	**-1.1**
PXZ				S	**Sn**	**20 09 55.1**	**-2.7**
NGZ	**Ngauruhoe**	**6.29**	**224**	P	**Pn**	**20 08 48.8**	**+1.2**
NGZ				S	**Sn**	**20 09 59.4**	**+1.2**
OUZ	**Omahuta**	**6.31**	**264**	P	**Pn**	**20 08 49.1**	**+1.4**
OUZ	**Omahuta**	**6.31**	**264**	P	**Pn**	**20 08 48.7**	**+1.0**
HIZ	**Hauiti**	**6.34**	**232**	P	**Pn**	**20 08 49.7**	**+1.5**
HIZ	**Hauiti**	**6.34**	**232**	P	**Pn**	**20 08 49.4**	**+1.2**
TSZ	**Takapari Road**	**6.73**	**217**	P	**Pn**	**20 08 52.7**	**-0.9**
TSZ				S	**Sn**	**20 10 05.0**	**-3.9**
WAZ	**Wanganui**	**7.03**	**224**	P	**Pn**	**20 08 57.3**	**-0.4**
WAZ				S	**Sn**	**20 10 16.6**	**+0.3**
BFZ	**Birch Farm**	**7.08**	**213**	P	**Pn**	**20 08 57.2**	**-1.2**
BFZ				S	**Sn**	**20 10 14.2**	**-3.4**
KHEZ	**Kahui Hut**	**7.32**	**230**	P	**Pn**	**20 09 03.2**	**+1.4**
MRZ	**Mangatainoka R**	**7.37**	**216**	Pn	**Pn**	**20 09 00.2**	**-2.2**
CTZ	**Chatham Island**	**9.06**	**170**		**Pn**	**20 09 25.8**	**+0.3**
QRZ	**Quartz Range**	**9.15**	**226**	P	**Pn**	**20 09 27.4**	**+0.6**
KHZ	**Kahutara**	**9.70**	**216**	P	**Pn**	**20 09 35.1**	**+0.8**
DZM	**Mont Dzumac**	**18.16**	**310**	LR	LR	20 17 22.7	
	comp=Z,370nm,18.4s,baz=112,slow=34						
DZM	**Mont Dzumac**	**18.16**	**310**	*e*LR	LR	20 15 39.0	
	495nm,26.1s						
RAR	**Rarotonga**	**21.48**	**56**	LR	LR	20 19 39.3	
	comp=Z,88nm,18.9s,baz=315,slow=35						
TBI	**Tubuai**	**27.92**	**74**	*e*LR	LR	20 19 52.5	
	429nm,22.8s						
PPT2	**Papeete2**	**31.12**	**64**	*e*LR	LR	20 21 25.9	
	160nm,24.8s						
PPT2				*e*LR	LR	20 21 27.7	
	166nm,23.5s						
STKA	**Stephens Creek**	**33.12**	**264**	P	**P**	**20 13 51.4**	**+1.3**
	2.4nm,0.9s,baz=81,slow=9.8,SNR=2.9						
STKA				LR	LR	20 26 28.3	
	comp=Z,143nm,19.5s,baz=37,slow=35						
	2.4nm,0.9s						
BBOO	**Buckleboo**	**37.38**	**260**	P	**P**	**20 14 25.7**	**-1.0**
BBOO				IAmb	IAmb	20 14 54.9	
	comp=Z,25nm,1.4s						
COEN	**Coen**	**40.10**	**292**	P	**P**	**20 14 47.3**	**-2.4**
COEN				IAmb	IAmb	20 15 03.7	
	comp=Z,7.9nm,1.1s						
PMG	**Port Moresby**	**40.13**	**301**	LR	LR	20 29 09.2	
	comp=Z,165nm,19.2s,baz=144,slow=33						
AS31	**Alice Springs**	**42.45**	**272**	P	**P**	**20 15 07.9**	**-1.1**
AS31				IAmb	IAmb	20 15 09.2	
	comp=Z,3.6nm,0.6s						
ASAR	**Alice Springs**	**42.45**	**272**	P	**P**	**20 15 08.4**	**-0.5**
	comp=Z,8.1nm,0.6s,baz=116,slow=7.6,SNR=198						
ASAR				PcP	**PcP**	**20 17 02.0**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=116,slow=3.5,SNR=4.2						
ASAR				S	**S**	**20 21 25.0**	**-3.6**
	comp=Z,0.6nm,0.8s,baz=117,slow=16,SNR=4.5						
ASAR				LR	LR	20 32 59.0	
	comp=Z,113nm,18.5s,baz=119,slow=36						
	comp=Z,8.1nm,0.6s						
ASAR	**Alice Springs**	**42.45**	**272**	P	**P**	**20 15 06.9**	**-2.1**
WRA	**Warramunga Arr**	**43.83**	**277**	P	**P**	**20 15 19.3**	**-0.9**
	comp=Z,4.4nm,0.6s,baz=118,slow=7.7,SNR=71						
WRA				PcP	**PcP**	**20 17 06.4**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=132,slow=3.4,SNR=4.8						
	comp=Z,4.4nm,0.6s						
WRA	**Warramunga Arr**	**43.83**	**277**	P	**P**	**20 15 16.6**	**-3.5**
WB0	**Warramunga Arr**	**43.88**	**277**	P	**P**	**20 15 17.3**	**-3.2**
WB0				IAmb	IAmb	20 15 20.2	
	comp=Z,6.4nm,0.8s						
FORT	**Forrest**	**44.48**	**260**	P	**P**	**20 15 23.8**	**-1.4**
FORT				IAmb	IAmb	20 15 25.6	
	comp=Z,5.5nm,0.6s						
KNRA	**Kununurra**	**50.57**	**278**	P	**P**	**20 16 10.5**	**-2.2**
FITZ	**Fitzroy Crossi**	**51.88**	**274**	LR	LR	20 38 37.9	
	comp=Z,176nm,18.1s,baz=127,slow=36						
NWAO	**Narrogin (SRO)**	**52.38**	**253**	LR	LR	20 38 14.0	
	comp=Z,40nm,18.1s,baz=260,slow=36						
SIJI	**Sorong**	**57.49**	**295**	LR	LR	20 40 19.5	
	comp=Z,32nm,20.7s,baz=136,slow=35						
BATI	**Baumata**	**57.72**	**281**	LR	LR	20 43 26.2	
	comp=Z,142nm,18.6s,baz=150,slow=38						
RPN	**Rapa Nui**	**58.95**	**103**	LR	LR	20 39 08.8	
	comp=Z,46nm,18.1s,baz=176,slow=32						
LEM	**Lembang**	**72.71**	**274**	LR	LR	20 52 58.7	
	comp=Z,81nm,18.4s,baz=162,slow=38						
JNU	**Nakatsue**	**82.46**	**319**	LR	LR	20 54 38.3	
	comp=Z,27nm,19.1s,baz=38,slow=35						
KSRS	**Korea Array**	**87.31**	**320**	LR	LR	20 54 36.7	
	comp=Z,7.4nm,20.0s,baz=345,slow=33						
LPIG	**La Paz**	**87.38**	**58**	LR	LR	20 57 35.6	
	comp=Z,29nm,18.2s,baz=198,slow=35						
PETK	**Petropavlovsk-**	**89.92**	**346**	P	**P**	**20 20 14.1**	**+1.9**
	comp=Z,5.3nm,0.8s,baz=112,slow=9.4,SNR=6.9						
	comp=Z,5.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**94.27**	**289**	LR	LR	21 06 59.6	
	comp=Z,5.5nm,18.4s,baz=355,slow=38						
MKAR	**Makanchi Array**	**120.07**	**308**	PKP	**PKPdf**	**20 26 03.8**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=100,slow=2.3,SNR=2.5						
ZALV	**Zalesovo Beam**	**120.86**	**317**	PKP	**PKPdf**	**20 26 05.7**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=132,slow=2.1,SNR=2.1						
KURBB	**Kurchatov Arra**	**123.61**	**312**	PKP	**PKPdf**	**20 26 10.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=122,slow=1.7,SNR=5.8						
BVAR	**Borovoye Array**	**129.05**	**313**	PKP	**PKPdf**	**20 26 21.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=107,slow=1.5,SNR=3.5						
FINES	**FINESS Array B**	**149.01**	**337**	PKPbc	**PKPbc**	**20 27 01.6**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=62,slow=4.5,SNR=10						
MMAI	**Mount Meron Ar**	**151.69**	**276**	PKPbc	**PKiKP**	**20 27 10.3**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=106,slow=5.3,SNR=4.3						
BRTR	**Keskin Array B**	**153.86**	**290**	PKPbc	**PKPbc**	**20 27 13.1**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=72,slow=4.7,SNR=5.3						
BRTR				PKPab	**sPKPbc**	**20 27 25.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=104,slow=6.1,SNR=5.0						
TORD	**Torodi Ar. Bea**	**158.43**	**181**	PKPab	**PKPab**	**20 27 48.0**	**+2.1**
	comp=Z,0.7nm,0.8s,baz=174,slow=5.5,SNR=4.2						

*IDC **02** 20:20:45.5±1.0, 14°.06N×121°.15E, h0km, mb3.5/7, mbtmp3.5/7, MS3.3/14, Error ellipse: s-maj=24.3km s-min=11.9km az=16.0*
ISC 02 20:20:47.0±1.1**, 14°.0N**±0°.2×**121°.1E**±0°.2**, h10**km**, n20, σ1s.25**/8**, mb3.5**/7**, MS3.5**/11**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.15**	**298**	Pg	**Pg**	**20 20 49.4**	**-1.0**
TGY				Lg	Lg	20 20 59.5	
DAV	**Davao City (W)**	**8.21**	**147**	LR	LR	20 26 29.2	
	comp=Z,241nm,18.1s,baz=331,slow=42						
JOW	**Kunigami**	**14.41**	**27**	LR	LR	20 29 04.6	
	comp=Z,29nm,21.9s,baz=84,slow=35						
KAPI	**Kappang**	**18.97**	**184**	LR	LR	20 32 34.8	
	comp=Z,45nm,20.8s,baz=3.0,slow=37						
JNU	**Nakatsue**	**21.00**	**24**	LR	LR	20 33 26.6	
	comp=Z,51nm,19.2s,baz=205,slow=36						
CMAR	**Chiang Mai Arr**	**21.69**	**285**	P	**P**	**20 25 39.5**	**+1.1**
	1.0nm,0.8s,baz=94,slow=8.6,SNR=11						
CMAR				LR	LR	20 34 56.4	
	comp=Z,76nm,18.1s,baz=100,slow=39						
	1.0nm,0.8s						
JCJ	**Chichijima**	**23.61**	**53**	LR	LR	20 33 32.3	
	comp=Z,30nm,21.5s,baz=346,slow=33						
KSRS	**Korea Array**	**24.11**	**13**	LR	LR	20 35 53.6	
	comp=Z,42nm,21.7s,baz=205,slow=38						
SONM	**Songino Array**	**35.85**	**343**	P	**P**	**20 27 48.8**	**+1.8**
	0.8nm,0.9s,baz=164,slow=7.7,SNR=5.4						
SONM				LR	LR	20 42 52.8	
	comp=Z,84nm,18.3s,baz=167,slow=37						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**36.20**	**159**	P	**P**	**20 27 50.3**	**+0.2**
	0.5nm,0.9s,baz=334,slow=9.7,SNR=2.8						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**39.51**	**161**	P	**P**	**20 28 18.1**	**-0.1**
	0.2nm,0.5s,baz=337,slow=7.2,SNR=5.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**45.98**	**323**	P	**P**	**20 29 10.2**	**-0.3**
	0.8nm,1.0s,baz=111,slow=7.9,SNR=5.0						
	0.8nm,1.0s						
ZALV	**Zalesovo Beam**	**48.93**	**332**	LR	LR	20 50 49.1	
	comp=Z,29nm,20.6s,baz=98,slow=37						
AAK	**Ala-Archa**	**49.09**	**315**	LR	LR	20 51 28.0	
	comp=Z,89nm,21.3s,baz=74,slow=38						
KURBB	**Kurchatov Arra**	**50.12**	**326**	P	**P**	**20 29 42.3**	**-0.1**
	1.6nm,1.1s,baz=121,slow=8.0,SNR=5.6						
	1.6nm,1.1s						
TIXI	**Tiksi**	**57.79**	**3**	LR	LR	20 58 47.5	
	comp=Z,72nm,20.6s,baz=178,slow=40						
NRIK	**Noril'sk**	**59.18**	**347**	LR	LR	20 57 41.9	
	comp=Z,69nm,20.3s,baz=132,slow=38						
AKTO	**Aktyubinsk**	**62.20**	**320**	LR	LR	20 57 40.4	

	comp=Z,57nm,19.4s,baz=258,slow=36						
KBZ	**Khabaz**	**71.93**	**312**	LR	LR	21 06 50.1	
	comp=Z,24nm,18.4s,baz=196,slow=38						
ILAR	**Eielson Array**	**78.30**	**26**	P	**P**	**20 32 45.6**	**-1.4**
	0.5nm,1.0s,baz=282,slow=5.4,SNR=5.2						
	0.5nm,1.0s						

*IDC **02** 20:32:12.1±8.3, 37°.73N×72°.27E, h204km±52km, mb2.6/1, mbtmp3.4/6, MS3.2/1, Error ellipse: s-maj=75.4km s-min=58.1km az=33.0*
ISC 02 20:32:10.1±2.7**, 37°.7N**±0°.2×**71°.9E**±0°.2**, h200**km**, n9, σ0s.76**/11**, 3C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.32**	**21**	P	**Pn**	**20 33 28.8**	**+0.1**
	5.2nm,0.3s,baz=180,slow=5.2,SNR=48						
AAK				S	**Sn**	**20 34 29.9**	**-0.8**
	2.0nm,0.3s,baz=334,slow=21,SNR=25						
AAK	**Ala-Archa**	**5.32**	**21**	⇑Pn	**Pn**	**20 33 28.2**	**-0.5**
	1.3nm,0.4s						
AAK				⇑Sn	**Sn**	**20 34 31.4**	**+0.7**
	5.3nm,0.7s						
KK31	**Karatay Array**	**5.50**	**349**	Pn	**Pn**	**20 33 30.8**	**-0.1**
	0.6nm,0.2s,baz=159,slow=11,SNR=28						
KK31				⇑Sn	**Sn**	**20 34 33.8**	**-0.9**
	2.1nm,0.2s,baz=163,slow=17,SNR=12						
MKAR	**Makanchi Array**	**11.90**	**37**	P	**Pn**	**20 34 54.2**	**+0.6**
	0.1nm,0.4s,baz=216,slow=13,SNR=5.2						
KURBB	**Kurchatov Arra**	**13.76**	**18**	P	**P**	**20 35 19.1**	**+0.1**
	0.6nm,0.7s,baz=206,slow=11,SNR=7.1						
BVAR	**Borovoye Array**	**15.36**	**357**	P	**Pn**	**20 35 37.3**	**+0.8**
	0.4nm,0.4s,baz=160,slow=10,SNR=7.6						
ZALV	**Zalesovo Beam**	**18.53**	**25**	P	**P**	**20 36 11.5**	**+0.1**
	2.4nm,0.4s,baz=211,slow=10,SNR=25						
BELG	**Belogornoye**	**22.43**	**319**	LR	LR	20 48 14.9	
	comp=Z,60nm,18.6s,baz=305,slow=43						
SONM	**Songino Array**	**27.07**	**57**	P	**P**	**20 37 32.9**	**-1.2**
	0.2nm,0.7s,baz=263,slow=8.4,SNR=2.0						
	0.2nm,0.7s						

MEX 02 20:38:31.8±0.4**, 19°.49N**×**102°.13W, h22**km±3km**, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.09**	**141**	*e*P	Pb	20 38 34.5	-1.7
URUA				*e*S	Sb	20 38 37.3	-2.0
INCO	**Volcan de Coli**	**1.39**	**272**	*e*P	Pn	20 38 53.6	-2.6
INCO				*e*S	Sn	20 39 11.3	-2.8
MNGA	**Volcan de Coli**	**1.40**	**269**	*e*P	Pn	20 38 53.7	-2.6
MNGA				*e*S	Sn	20 39 11.0	-3.2
SOMAC	**Volcano de Col**	**1.41**	**272**	*e*P	Pn	20 38 55.1	-1.4
SOMAC				*e*S	Sn	20 39 11.5	-3.2
CEGR	**Campo Tres**	**1.63**	**267**	*e*P	Pn	20 38 56.9	-2.4
CEGR				*e*S	Sn	20 39 16.4	-3.4
MMIG	**Aquila**	**1.66**	**224**	*e*P	Pn	20 38 56.8	-2.7
MMIG				*e*S	Sn	20 39 17.1	-3.0
CDAR	**Ciudad de Arme**	**1.86**	**253**	*e*P	Pn	20 39 00.1	-2.1
CDAR				*e*S	Sn	20 39 22.6	-2.4
ZIIG	**Zihuatanejo**	**1.98**	**161**	*e*P	Pn	20 39 03.7	-0.3
ZIIG				*e*S	Sn	20 39 28.9	+0.9
ANIG	**Ahuacatlan**	**2.73**	**305**	*e*P	Pn	20 39 15.0	+0.6
ANIG				*e*S	Sb	20 40 07.4	+14
CJM	**Chamela**	**2.75**	**271**	*e*P	Pn	20 39 14.7	+0.2
CJM				*e*S	Sn	20 39 49.0	+2.0

*KRNET **02** 20:43:57.6±0.1, 41°.06N×72°.07E, h11km, mb2.1*
*ISU **02** 20:43:57, 41°.03N×72°.02E, h5km*
*SOME **02** 20:43:59.0, 41°.08N×72°.05E, h10km*
*NNC **02** 20:44:00.8±2.3, 41°.09N×72°.02E, h0km, mb2.8, mpv2.6, Error ellipse: s-maj=21.8km s-min=6.6km az=178.0*
ISC 02 20:43:58.1±1.2**, 41°.06N**±0°.03×**72°.05E**±0°.02**, h2**km±12km**, n24, σ0s.98**/43**, 21C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRG	**Fergana**	**0.71**	**196**	P	**Pg**	**20 44 11.5**	**-0.3**
FRG				S	**Sg**	**20 44 21.7**	**+0.7**
ARK	**Arkit**	**0.74**	**355**	⇑*i*P	**Pg**	**20 44 12.3**	**0.0**
ARK				⇑*i*S	**Sg**	**20 44 22.7**	**+0.8**
ARSB	**Arslanbob**	**0.75**	**69**	⇑*i*P	**Pg**	**20 44 12.0**	**-0.5**
ARSB				⇑*i*S	**Sg**	**20 44 22.4**	**+0.1**
TRKS	**Terek-Say**	**0.83**	**305**	⇑*i*P	**Pg**	**20 44 12.9**	**-1.1**
TRKS				⇑*i*S	**Sg**	**20 44 24.2**	**-0.5**
SALK	**Salom-Alik**	**1.35**	**97**	⇑*e*P	**Pn**	**20 44 23.0**	**-1.2**
SALK				⇑*i*S	**Sb**	**20 44 41.5**	**-0.6**
BTK	**Batken**	**1.37**	**223**	⇑*i*P	**Pn**	**20 44 23.8**	**-0.6**
BTK				⇑*i*S	**Sn**	**20 44 43.2**	**0.0**
MNAS	**Manas**	**1.47**	**13**	⇑*e*P	**Pn**	**20 44 25.3**	**-0.4**
MNAS				⇑*e*S	**Sg**	**20 44 46.0**	**+0.8**
SFK	**Sufi-Kurgan**	**1.52**	**133**	⇑*i*P	**Pn**	**20 44 26.3**	**-0.3**
SFK				⇑*e*S	**Sn**	**20 44 47.0**	**-0.2**
DRK	**Karamyk**	**1.59**	**187**	⇑*e*P	**Pn**	**20 44 27.7**	**+0.1**
DRK				⇑*e*S	**Sb**	**20 44 49.8**	**+0.7**
CHMG	**Chimgan**	**1.61**	**288**	S	**Sg**	**20 44 50.2**	**+0.4**
IUG	**Iuzhnay**	**1.86**	**306**	P	**Pb**	**20 44 33.4**	**+0.5**
	7.7nm,0.1s						
IUG				S	**Sg**	**20 44 58.1**	**+0.2**
	31nm,0.5s						
IUG	**Iuzhnay**	**1.86**	**306**	*e*P	**Pb**	**20 44 33.4**	**+0.5**
	7.7nm,0.1s						
IUG				*e*S	**Sg**	**20 44 58.1**	**+0.2**
	31nm,0.5s						
ARLS	**Aral**	**1.89**	**64**	⇑*e*P	**Pb**	**20 44 32.6**	**-0.8**
ARLS				⇑*e*S	**Sg**	**20 44 58.6**	**-0.1**
MRKS	**Merke**	**1.90**	**27**	Pg	**Pg**	**20 44 34.7**	**+0.2**
	1.8nm,0.3s						
MRKS				Lg	Lg	20 45 00.6	
	7.0nm,0.2s						
MRKS	**Merke**	**1.90**	**27**	*e*P	**Pg**	**20 44 34.7**	**+0.2**
	1.8nm,0.3s						
MRKS				*e*S	**Sg**	**20 45 00.6**	**+1.5**
	7.0nm,0.2s						
DZA	**Taraz**	**1.91**	**344**	*e*P	**Pb**	**20 44 33.2**	**-0.4**
	83nm,0.1s						
DZA				*e*S	**Sb**	**20 44 57.5**	**-0.4**
	55nm,0.1s						
KK31	**Karatay Array**	**2.34**	**331**	⇑Pn	**Pb**	**20 44 41.3**	**+0.3**
	0.7nm,0.3s,baz=142,slow=14,SNR=12						
KK31				⇑Sn	**Sb**	**20 45 11.3**	**+0.9**
	2.3nm,0.5s,baz=149,slow=27,SNR=6.2						
AAK	**Ala-Archa**	**2.41**	**48**	⇓Pn	**Pb**	**20 44 42.2**	**-0.1**
	0.3nm,0.4s						
AAK				⇑Sn	**Sg**	**20 45 15.0**	**-0.6**
	0.7nm,0.4s						
BRLS	**Borolday**	**2.57**	**321**	Pg	**Pb**	**20 44 44.6**	**-0.3**
	1.3nm,0.4s						
BRLS				Lg	Lg	20 45 17.2	
	3.4nm,0.2s						
BRLS	**Borolday**	**2.57**	**321**	*e*P	**Pb**	**20 44 44.6**	**-0.3**
	1.3nm,0.4s						
BRLS				*e*S	**Sb**	**20 45 17.2**	**+0.3**
	3.4nm,0.2s						
DGS	**Degeres**	**3.52**	**51**	Pg	**Pb**	**20 45 03.6**	**+2.3**
	1.0nm,0.5s						
DGS				Lg	Lg	20 45 49.7	
	1.4nm,0.7s						
DGS	**Degeres**	**3.52**	**51**	*e*P	**Pb**	**20 45 03.6**	**+2.3**
	1.0nm,0.5s						
DGS				*e*S	**Sg**	**20 45 49.7**	**-1.6**
	1.4nm,0.7s						
KST	**Kastek**	**3.52**	**55**	Pg	**Pb**	**20 45 03.3**	**+2.0**
	0.9nm,0.3s						
KST				Lg	Lg	20 45 49.4	
	1.2nm,0.2s						
KST	**Kastek**	**3.52**	**55**	*e*P	**Pb**	**20 45 03.3**	**+2.0**
	0.9nm,0.3s						
KST				*e*S	**Sg**	**20 45 49.4**	**-1.9**
	1.2nm,0.2s						

*NEIC **02** 20:47:07.2±1.2, 17°.94N±0°.05×66°.837W±0°.009, h10km±1km, ML3.0/35, Md2.7/6(RSPR), Error ellipse: s-maj=8.5km s-min=2.2km az=4.0*
RSPR 02 20:47:07.0, 17°.92N×**66°.84W, h12**km**, MD2.7**/6**, 7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**324**		Pg	20 47 09.7	+0.1
GBPR					Sg	20 47 11.6	+0.2
GBPR	**Guanica, Bosqu**	**0.07**	**324**	⇓*i*P	Pg	20 47 09.7	+0.1
GBPR				*e*S	Sg	20 47 11.6	+0.2
MLPR	**Magueyes Islan**	**0.20**	**284**		Pg	20 47 11.5	0.0
MLPR				Sg	Sg	20 47 15.0	+0.5
MLPR				IAML		20 47 15.3	
	5µm,0.5s						
MLPR				IAML		20 47 15.3	
	4µm,0.3s						
OBIP	**Obispado Ponce**	**0.25**	**61**		Pg	20 47 11.8	-0.5
OBIP				IAML		20 47 19.0	
	comp=N,324nm,0.5s						
OBIP	**Obispado Ponce**	**0.25**	**61**	⇓*i*P	Pg	20 47 12.2	-0.2
OBIP				*e*S	Sg	20 47 15.9	0.0
CRPR	**Cabo Rojo, PR**	**0.27**	**288**		Pg	20 47 12.4	-0.3
CRPR	**Cabo Rojo, PR**	**0.27**	**288**	IAML		20 47 17.0	
	comp=N,4µm,0.2s						
CRPR				IAML		20 47 17.1	
	comp=N,4µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.27**	**288**	⇑*i*P	Pg	20 47 12.6	-0.1
CRPR				*e*S	Sg	20 47 16.5	+0.1
CELP	**Cerrillos**	**0.29**	**58**		Pg	20 47 12.8	-0.2
CELP				IAML		20 47 18.2	
	comp=N,2µm,0.2s						
CELP				IAML		20 47 18.8	
	comp=N,927nm,0.2s						
LSP	**Las Mesas**	**0.35**	**317**		Pg	20 47 13.9	-0.1
LSP					Sg	20 47 19.5	+0.7
LSP	**Las Mesas**	**0.35**	**317**	⇓*i*P	Pg	20 47 13.9	-0.1
LSP				*e*S	Sg	20 47 19.5	+0.7
UUPR	**Utuado, UPR, P**	**0.35**	**19**		Pg	20 47 13.7	-0.4
UUPR				IAML		20 47 21.9	
	comp=N,10µm,0.4s						
UUPR				IAML		20 47 23.1	
	comp=N,8µm,0.3s						
PRSN	**Puerto Rico Se**	**0.41**	**315**		Pg	20 47 14.9	-0.4
PRSN				IAML		20 47 23.6	
	comp=N,2µm,0.3s						
PRSN				IAML		20 47 25.9	
	comp=N,2µm,0.2s						
PRSN	**Puerto Rico Se**	**0.41**	**315**		Sg	20 47 21.0	+0.1
PRSN	**Puerto Rico Se**	**0.41**	**315**	⇑*i*P	Pg	20 47 15.0	-0.3
PRSN				*e*S	Sg	20 47 21.0	+0.1
ECPR	**Experimental S**	**0.60**	**49**		Pg	20 47 17.9	-0.8
ECPR				IAML		20 47 27.9	
	comp=N,1µm,0.3s						
ECPR				IAML		20 47 29.9	
	comp=N,2µm,0.2s						
ECPR	**Experimental S**	**0.60**	**49**	⇓*i*P	Pg	20 47 18.0	-0.8
ECPR				*e*S	Sg	20 47 26.3	-0.5
AGPR	**Aguadilla, PR**	**0.60**	**335**		Pg	20 47 18.1	-0.7
AGPR				IAML		20 47 31.6	
	comp=N,466nm,0.4s						
AGPR				IAML		20 47 34.3	
	comp=N,457nm,0.4s						
AGPR	**Aguadilla, PR**	**0.60**	**335**	⇑*i*P	Pg	20 47 18.1	-0.7
AGPR				*e*S	Sg	20 47 26.6	-0.2
EMPR	**Esperanza - Ma**	**0.63**	**28**		Pg	20 47 18.9	-0.3
EMPR					Sg	20 47 27.2	-0.3
EMPR	**Esperanza - Ma**	**0.63**	**28**	⇓*i*P	Pg	20 47 18.9	-0.3
EMPR				*e*S	Sg	20 47 27.2	-0.3
SJG	**San Juan**	**0.68**	**74**	Pg	Pg	20 47 19.3	-1.0
SJG				IAML		20 47 30.0	
	comp=N,519nm,0.5s						
SJG				IAML		20 47 30.3	
	comp=N,288nm,0.2s						
SJG	**San Juan**	**0.68**	**74**	⇑*i*P	Pg	20 47 19.5	-0.8
SJG				*e*S	Sg	20 47 28.7	-0.6
IDE	**Isla Desecheo**	**0.76**	**308**		Pg	20 47 21.2	-0.6
IDE					Sg	20 47 31.3	-0.5
IDE	**Isla Desecheo**	**0.76**	**308**	⇓*i*P	Pg	20 47 21.2	-0.6
IDE				*e*S	Sg	20 47 31.3	-0.5
PDPR	**Patillas Dam,**	**0.78**	**83**		Pg	20 47 21.1	-1.1
PDPR				IAML		20 47 33.2	
	comp=N,154nm,0.2s						
PDPR				IAML		20 47 36.3	
	comp=N,266nm,0.2s						
GCPR	**Guaynabo City**	**0.81**	**62**		Pg	20 47 21.5	-1.3
GCPR				IAML		20 47 35.7	
	comp=E,125nm,0.3s						
GCPR				IAML		20 47 35.7	
	comp=N,159nm,0.5s						
GCPR	**Guaynabo City**	**0.81**	**62**		Sg	20 47 31.8	-1.7
GCPR	**Guaynabo City**	**0.81**	**62**	⇑*i*P	Pg	20 47 21.5	-1.3
GCPR				*e*S	Sg	20 47 31.8	-1.7
HUMP	**Col San Antoni**	**0.97**	**77**		Pg	20 47 23.8	-1.9
HUMP				IAML		20 47 40.8	
	comp=N,323nm,0.3s						
HUMP				IAML		20 47 40.9	
	comp=N,361nm,0.3s						
HUMP	**Col San Antoni**	**0.97**	**77**		Sg	20 47 36.4	-1.9
HUMP	**Col San Antoni**	**0.97**	**77**	⇓*i*P	Pg	20 47 24.1	-1.6
HUMP				*e*S	Sg	20 47 36.4	-1.9
CUPR	**Culebra, Puert**	**1.53**	**75**	Pn	Pn	20 47 33.5	-0.7

*NEIC **02** 21:00:14.2±1.8, 43°.80N±0°.05×105°.39W±0°.05, h0km±1km, ML3.3/58, Error ellipse: s-maj=9.0km s-min=7.0km az=349.0*
*IDC **02** 21:00:16.7±1.0, 44°.00N×105°.73W, h0km, mb3.8/1, mbtmp3.3/6, ML3.0/5, Error ellipse: s-maj=21.8km s-min=8.2km az=147.0*
ISC 02 21:00:15.0±0.8**, 43°.73N**±0°.05×**105°.35W**±0°.05**, h0**km**, n69, σ0s.89**/68**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.02**	**67**		**Pg**	**21 00 35.1**	**+0.4**
K22A	**Casper**	**1.38**	**219**		**Pg**	**21 00 41.1**	**-0.3**
K22A				IAML		21 01 01.8	
	421nm,0.3s						
K22A				IAML		21 01 04.7	
	390nm,0.3s						
LAO	**LASA Array**	**3.02**	**348**		**Pn**	**21 01 04.3**	**+0.1**
RLMT	**Red Lodge**	**3.13**	**298**		**Pn**	**21 01 07.0**	**+1.1**
RLMT				IAML		21 02 03.4	
	99nm,0.8s						
RLMT				IAML		21 02 04.5	
	82nm,0.7s						
BW06	**Boulder Array**	**3.22**	**254**		**Pn**	**21 01 08.4**	**+1.3**
BW06				IAML		21 02 01.9	
	56nm,0.7s						
BW06				IAML		21 02 01.0	
	60nm,0.8s						
PD31	**Pinedale Array**	**3.22**	**254**		**Pn**	**21 01 08.5**	**+1.4**
PDAR	**Pinedale Array**	**3.22**	**254**	Pn	**Pn**	**21 01 10.2**	**+3.1**
	2.0nm,0.3s,baz=72,slow=14,SNR=39						
PDAR				Pg	**Pb**	**21 01 14.2**	**+1.0**
	6.7nm,0.3s,baz=70,slow=19,SNR=35						
PDAR				Lg	Lg	21 01 52.3	
	13nm,0.3s,baz=67,slow=23,SNR=12						
	10nm,0.5s						
PDAR	**Pinedale Array**	**3.22**	**254**		**Pn**	**21 01 08.3**	**+1.2**
HAYD	**Hayden**	**3.51**	**205**		**Pn**	**21 01 13.0**	**+2.0**
HAYD				IAML		21 02 19.9	
	comp=N,56nm,1.0s						
HAYD				IAML		21 02 20.5	
	comp=E,56nm,0.9s						
YNE	**Yellowstone No**	**3.58**	**293**		**Pn**	**21 01 12.9**	**+0.9**
YNE				IAML		21 02 12.4	
	comp=E,61nm,0.4s						
YNE				IAML		21 02 16.8	
	comp=N,72nm,0.8s						
YMP	**Mirror Lake Pl**	**3.60**	**288**		**Pn**	**21 01 13.7**	**+1.4**
OGNE	**Ogallala**	**3.71**	**137**		**Pn**	**21 01 15.0**	**+1.4**
LOHW	**Long Hollow**	**3.82**	**270**		**Pn**	**21 01 14.8**	**-0.5**
LOHW				IAML		21 02 22.1	
	comp=N,34nm,0.7s						
FLWY	**Flagg Ranch**	**3.88**	**277**		**Pn**	**21 01 15.4**	**-0.8**
FLWY				IAML		21 02 32.8	
	comp=N,48nm,2.0s						
FLWY				IAML		21 02 40.0	
	comp=N,57nm,1.1s						
MOOW	**Moose Ponds**	**3.91**	**272**		**Pn**	**21 01 16.5**	**-0.1**
ISCO	**Idaho Springs**	**3.93**	**183**		**Pn**	**21 01 17.1**	**+0.2**
YPP	**Pitchstone Pla**	**3.98**	**280**		**Pn**	**21 01 16.5**	**-1.0**
YPP				IAML		21 02 35.4	
	comp=E,26nm,1.2s						
YHH	**Holmes Hill**	**4.09**	**287**		**Pn**	**21 01 18.2**	**-1.0**
FXWY	**Fox Creek**	**4.12**	**271**		**Pn**	**21 01 18.7**	**-0.7**
YMR	**Madison River**	**4.15**	**285**	Pn	**Pn**	**21 01 18.5**	**-1.3**
YMR				IAML		21 02 45.8	
	comp=E,46nm,0.9s						
O20A	**White River Ci**	**4.19**	**212**	Pn	**Pn**	**21 01 19.4**	**-1.0**
O20A				IAML		21 02 51.9	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,56nm,1.2s						
YHB	**Horse Butte**	**4.33**	**286**	Pn	**Pn**	**21 01 20.9**	**-1.3**
YHL	**Hebgen Lake**	**4.34**	**287**		**Pn**	**21 01 21.5**	**-0.9**
YHL				IAML		21 02 38.1	
	comp=E,41nm,1.0s						
YHL				IAML		21 02 41.7	
	comp=N,33nm,0.9s						
RDMU	**Red Mountain**	**4.45**	**226**		**Pn**	**21 01 24.8**	**+0.8**
RDMU				IAML		21 02 41.2	
	comp=E,49nm,0.9s						
RDMU				IAML		21 02 46.5	
	comp=N,49nm,1.0s						
DGMT	**Dagmar**	**4.81**	**9**		**Pn**	**21 01 28.4**	**-0.3**
BOZ	**Bozeman (W)**	**4.86**	**295**		**Pn**	**21 01 30.2**	**+0.7**
BOZ				IAML		21 02 51.1	
	comp=N,16nm,1.9s						
BOZ				IAML		21 02 51.7	
	comp=N,24nm,1.1s						
HWUT	**Hardware Ranch**	**5.05**	**247**		**Pn**	**21 01 31.7**	**-0.5**
HWUT				IAML		21 02 58.5	
	comp=N,30nm,0.7s						
HWUT				IAML		21 03 01.4	
	comp=N,27nm,1.1s						
BSUT	**Blindstream Ca**	**5.14**	**233**		**Pn**	**21 01 33.9**	**+0.3**
BSUT				IAML		21 03 23.0	
	comp=N,14nm,2.3s						
BSUT				IAML		21 03 26.8	
	comp=E,17nm,1.4s						
TCUT	**Toone Canyon**	**5.19**	**242**		**Pn**	**21 01 34.0**	**-0.2**
EGMT	**Eagleton**	**5.28**	**326**		**Pn**	**21 01 34.8**	**-0.4**
P18A	**Preston Nutter**	**5.50**	**223**		**Pn**	**21 01 39.9**	**+1.4**
SPUT	**South Promonto**	**5.78**	**248**		**Pn**	**21 01 42.4**	**+0.2**
PV22	**Blue Mesa, Par**	**5.80**	**208**		**Pn**	**21 01 42.5**	**0.0**
HVU	**Hansel Valley**	**5.81**	**253**		**Pn**	**21 01 42.3**	**-0.2**
PV07	**Paradox Valley**	**5.84**	**206**		**Pn**	**21 01 42.9**	**-0.2**
P17A	**Butcher Ranch,**	**5.87**	**225**		**Pn**	**21 01 43.8**	**+0.4**
LYMT	**Lyon Mountain**	**5.87**	**306**		**Pn**	**21 01 43.2**	**-0.2**
PV15	**Paradox Valley**	**5.88**	**205**		**Pn**	**21 01 44.1**	**+0.5**
PV04	**Paradox Valley**	**5.97**	**208**		**Pn**	**21 01 43.7**	**-1.1**
SDCO	**Great Sand Dun**	**5.98**	**181**		**Pn**	**21 01 45.2**	**+0.2**
PV12	**Saucer Basin,**	**6.00**	**207**		**Pn**	**21 01 46.3**	**+1.0**
SRU	**San Rafael Swe**	**6.04**	**222**		**Pn**	**21 01 45.4**	**-0.3**
PV20	**West Nyswonger**	**6.04**	**208**		**Pn**	**21 01 45.5**	**-0.2**
PV11	**David Mesa, Pa**	**6.04**	**207**		**Pn**	**21 01 46.0**	**+0.1**
PV16	**Nyswonger Mesa**	**6.05**	**208**		**Pn**	**21 01 45.7**	**-0.2**
PV03	**Paradox Valley**	**6.08**	**207**		**Pn**	**21 01 47.1**	**+0.8**
PV02	**Paradox Valley**	**6.08**	**206**		**Pn**	**21 01 46.8**	**+0.4**
PV01	**Paradox Valley**	**6.10**	**205**		**Pn**	**21 01 46.6**	**0.0**
PV18	**Skein Mesa, Pa**	**6.10**	**207**		**Pn**	**21 01 46.6**	**-0.1**
PV13	**Radium Mtn., P**	**6.16**	**206**		**Pn**	**21 01 47.7**	**+0.3**
TMUT	**Trail Mountain**	**6.24**	**227**		**Pn**	**21 01 48.8**	**+0.2**
PV05	**Paradox Valley**	**6.32**	**208**		**Pn**	**21 01 47.9**	**-1.7**
ECSD	**EROS Data Cent**	**6.33**	**87**		**Pn**	**21 01 49.8**	**+0.3**
Q16A	**Castle Valley**	**6.50**	**224**		**Pn**	**21 01 52.1**	**-0.1**
DUG	**Dugway, Tooele**	**6.59**	**240**		**Pn**	**21 01 53.2**	**0.0**
MSO	**Missoula**	**6.81**	**300**		**Pn**	**21 01 54.8**	**-1.4**
HMU	**Henry Mountain**	**7.08**	**217**		**Pn**	**21 01 59.6**	**-0.6**
RTBA	**Rita Blanca**	**7.55**	**164**		**Pn**	**21 02 06.5**	**+0.1**
ELK	**Elko**	**7.92**	**251**	Pn	**Pn**	**21 02 12.9**	**+1.3**
	comp=E,0.1nm,0.3s,baz=62,slow=17,SNR=4.6						
ELK				Lg	Lg	21 04 19.7	
	baz=132,slow=4.5,SNR=4.0						
	comp=E,0.7nm,0.5s						
ELK	**Elko**	**7.92**	**251**		**Pn**	**21 02 11.8**	**+0.1**
I10CA	**LAC DU BONNET**	**9.08**	**41**	I	I	21 51 50.0	
	baz=225,slow=277,SNR=2.6						
ULM	**Lac du Bonnet**	**9.18**	**41**	Pn	**Pn**	**21 02 27.8**	**-0.9**
	comp=E,0.3nm,0.3s,baz=224,slow=14,SNR=4.1						
ULM				Lg	Lg	21 05 01.0	
	comp=E,0.5nm,0.3s,baz=142,slow=21,SNR=3.4						
	comp=E,2.1nm,0.6s						
ULM	**Lac du Bonnet**	**9.18**	**41**		**Pn**	**21 02 27.4**	**-1.2**
NEW	**Newport**	**9.37**	**303**	Lg	Lg	21 04 57.1	
	comp=E,0.1nm,0.3s,baz=107,slow=15,SNR=2.3						
TXAR	**Lajitas Array**	**14.43**	**174**	Pn	**P**	**21 03 48.1**	**+0.4**
	baz=350,slow=13,SNR=2.7						
TXAR				Lg	Lg	21 07 51.1	
	baz=61,slow=25,SNR=2.2						
	comp=E,0.3nm,0.8s						
TXAR	**Lajitas Array**	**14.43**	**174**	P	**P**	**21 03 47.6**	**-0.1**
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**P**	**21 04 43.4**	**-0.7**
	baz=167,slow=12,SNR=5.7						
	comp=E,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**P**	**21 04 43.8**	**-0.3**
ZALV	**Zalesovo Beam**	**82.31**	**354**	P	**P**	**21 12 38.1**	**0.0**
	comp=E,0.4nm,0.5s,baz=358,slow=6.1,SNR=4.1						
	comp=E,0.4nm,0.5s						

*ISK **02** 21:02:32.4, 38.°99N×27.°85E, h11km, ML3.8/21*
*AFAD **02** 21:02:32.6, 39.°00N×27.°88E, h9km±1km, MW3.9*
*ATH **02** 21:02:33.4, 38.°99N×27.°87E, h12km±4km, ML3.6/10, Manual Solution by A.Agalos First location: 2020/02/02 21:04:04, This location: 2020/02/02 21:17:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*THE **02** 21:02:33.8, 39°N±2°×2°8E±°, h10km±11km, M3.6/16, MLh3.6/16*
*CFUSG **02** 21:02:35.0, 39.°20N×28.°10E, h10km, Mb2.8/3, MD3.3/3, MSH3.2/7*
*SOF **02** 21:02:36.2, 39.°34N±0.°08×27.°77E±0.°05, h10km±2km, MD3.8/10*

ISC 02 21:02:33.1±0.8**, 39.°00N**±0.°01×**27.°88E**±0.°01**, h11**km±6km**,**
n147, σ**0.°77**/201**, 14C-13D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.13**	**205**	P	**Pg**	**21 02 35.9**	**-0.3**
AKHS				S	**Sg**	**21 02 38.6**	**+0.2**
AKS	**Akhisar**	**0.13**	**206**	Pg	**Pg**	**21 02 35.5**	**-0.7**
GORD	**Gordes-Manisa**	**0.24**	**111**	Pg	**Pg**	**21 02 38.3**	**+0.1**
GOMA	**Golmarmara-Man**	**0.29**	**175**	Pg	**Pg**	**21 02 38.8**	**-0.1**
GOMA				Sg	**Sg**	**21 02 44.1**	**+1.3**
SOMA	**Soma-Manisa**	**0.32**	**301**	Pg	**Pg**	**21 02 38.9**	**-0.6**
KTTT	**Salihli**	**0.35**	**152**	P	**Pg**	**21 02 40.0**	**-0.1**
KTTT				S	**Sg**	**21 02 44.9**	**+0.3**
STEP	**BALIKESIR_Sava**	**0.40**	**341**	P	**Pg**	**21 02 40.3**	**-0.7**
STEP				S	**Sg**	**21 02 46.5**	**+0.1**
STEP				IAML		21 02 47.0	
	comp=N,2µm,0.3s						
CAMT	**Merkez**	**0.51**	**241**	P	**Pg**	**21 02 42.7**	**-0.3**
CAMT				S	**Sg**	**21 02 51.0**	**+1.3**
ZEDA	**zmir-Bergama**	**0.63**	**268**	P	**Pg**	**21 02 45.1**	**-0.2**
ZEDA				IAML		21 02 54.0	
	comp=E,3µm,0.3s						
ZEDA				S	**Sg**	**21 02 54.3**	**+0.7**
ZEDA				IAML		21 02 55.0	
	comp=N,4µm,0.3s						
BALB	**Balikesir**	**0.64**	**360**	Pg	**Pg**	**21 02 45.6**	**0.0**
DEMI	**Demirci**	**0.65**	**86**	P	**Pg**	**21 02 45.7**	**0.0**
DEMI				S	**Sg**	**21 02 54.9**	**+0.7**
DEMI				IAML		21 02 59.0	
	comp=N,5µm,0.4s						
MANT	**Manisa**	**0.73**	**133**	P	**Pg**	**21 02 47.0**	**-0.2**
MANT				S	**Sg**	**21 02 57.9**	**+1.1**
MANT				IAML		21 03 01.0	
	comp=E,3µm,0.8s						
MANT				IAML		21 03 01.0	
	comp=N,3µm,0.8s						
ODEM	**Odemis-Izmir**	**0.73**	**168**	Pg	**Pg**	**21 02 47.7**	**+0.4**
BKES	**Balkesir-Mer**	**0.74**	**3**	P	**Pg**	**21 02 46.5**	**-0.8**
BKES				S	**Sg**	**21 02 57.6**	**+0.6**
IZMD	**zmir-Dikili-**	**0.74**	**269**	P	**Pg**	**21 02 47.5**	**0.0**
IZMD				P	**Pg**	**21 02 47.5**	**0.0**
IZMD				S	**Sg**	**21 02 57.6**	**+0.4**
IZMD				IAML		21 03 00.0	
	comp=N,1µm,0.7s						
IZMD				IAML		21 03 07.0	
	comp=E,974nm,0.7s						
DURS	**Dursunbey**	**0.76**	**37**	P	**Pg**	**21 02 47.1**	**-0.7**
DURS				S	**Sg**	**21 02 58.0**	**+0.3**
DURS				IAML		21 03 04.0	
	comp=N,2µm,0.3s						
DURS				IAML		21 03 10.0	
	comp=E,2µm,0.4s						
DKL	**Dikili**	**0.77**	**276**	Pg	**Pg**	**21 02 47.2**	**-0.7**
BALY	**Balya**	**0.77**	**345**	P	**Pg**	**21 02 47.5**	**-0.6**
BALY				S	**Sg**	**21 02 57.7**	**-0.4**
BALY				IAML		21 03 04.0	
	comp=N,5µm,0.3s						
KULA	**Kula-Manisa**	**0.77**	**128**	Pg	**Pg**	**21 02 47.9**	**-0.1**
BUHA	**Balikesir, Bur**	**0.81**	**309**	P	**Pg**	**21 02 48.1**	**-0.6**
BUHA				S	**Sg**	**21 02 59.2**	**+0.1**
BUHA				IAML		21 03 03.0	
	comp=E,3µm,0.4s						
BUHA				IAML		21 03 05.0	
	comp=N,3µm,0.3s						
DST	**Dursunbey**	**0.83**	**43**	Pg	**Pg**	**21 02 49.3**	**+0.1**
DUVT	**Torbali**	**0.84**	**204**	P	**Pg**	**21 02 49.0**	**-0.4**
DUVT				S	**Sg**	**21 03 00.4**	**0.0**
DUVT				IAML		21 03 04.0	
	comp=E,2µm,0.4s						
IZMR	**zmir-demi**	**0.86**	**176**	P	**Pg**	**21 02 49.3**	**-0.4**
IZMR				S	**Sg**	**21 03 01.0**	**+0.2**
IZMR				IAML		21 03 04.0	
	comp=N,1µm,0.7s						
SIMA	**Simav-Kutahya**	**0.86**	**84**	Pg	**Pg**	**21 02 49.8**	**+0.1**
SMAA	**Simav-Kutahya**	**0.86**	**83**	Pg	**Pg**	**21 02 49.9**	**+0.2**
BAGT	**Foa**	**0.88**	**248**	P	**Pg**	**21 02 49.7**	**-0.3**
BAGT				S	**Sg**	**21 03 01.9**	**+0.6**
BAGT				IAML		21 03 05.0	
	comp=N,4µm,0.6s						
BAGT				IAML		21 03 05.0	
	comp=E,5µm,0.8s						
BLKS	**Balkesir-Sus**	**0.88**	**4**	P	**Pg**	**21 02 49.1**	**-1.0**
BLKS				P	**Pb**	**21 02 49.3**	**-1.1**
YAYO	**Edremit-Balk**	**0.88**	**315**	Pg	**Pg**	**21 02 49.5**	**-0.6**
KIRA	**zmir-Kiraz**	**0.89**	**153**	P	**Pg**	**21 02 50.3**	**0.0**
KIRA				S	**Sg**	**21 03 02.6**	**+0.6**
KIRA				IAML		21 03 04.0	
	comp=N,2µm,0.6s						
KIRA				IAML		21 03 05.0	
	comp=E,2µm,0.6s						
BLCB	**Balcova**	**0.90**	**228**	Pg	**Pg**	**21 02 49.8**	**-0.6**
BLCB	**Balcova**	**0.90**	**228**	P	**Pg**	**21 02 49.5**	**-0.9**
BLCB				S	**Sb**	**21 03 03.2**	**+0.6**
USAK	**Uak-Merkez**	**0.93**	**107**	P	**Pg**	**21 02 50.6**	**-0.4**
FOCM	**Foa**	**0.94**	**253**	Pg	**Pg**	**21 02 50.6**	**-0.6**
SUSR	**Susurluk-Balik**	**0.98**	**9**	Pg	**Pg**	**21 02 51.3**	**-0.6**
AYVA	**Ayvalik**	**0.98**	**289**	P	**Pg**	**21 02 51.6**	**-0.3**
AYVA				S	**Sb**	**21 03 05.5**	**+0.5**
AYVA				IAML		21 03 08.0	
	comp=N,6µm,0.5s						
AYVA				IAML		21 03 08.0	
	comp=E,2µm,0.4s						
CMHT	**Manyas**	**1.02**	**4**	P	**Pg**	**21 02 51.8**	**-0.9**
CMHT				S	**Sg**	**21 03 05.2**	**-0.7**
CMHT				IAML		21 03 09.0	
	comp=N,3µm,0.3s						
CMHT				IAML		21 03 09.0	
	comp=E,4µm,0.3s						
SHAP	**Saphane-Kutahy**	**1.04**	**88**	Pg	**Pg**	**21 02 53.4**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**180**	Pg	**Pg**	**21 02 52.6**	**-0.6**
GONE	**Gonen-Balikesi**	**1.06**	**352**	Pg	**Pg**	**21 02 53.7**	**+0.2**
YENI	**Yenice-Canakka**	**1.06**	**332**	Pg	**Pg**	**21 02 53.1**	**-0.5**
NAZL	**Nazilli-Aydin**	**1.08**	**163**	Pn	**Pg**	**21 02 53.6**	**-0.2**
KRBN	**Karaburun**	**1.11**	**249**	Pn	**Pb**	**21 02 53.6**	**-0.7**
ATIT	**Gnen**	**1.11**	**347**	P	**Pb**	**21 02 54.1**	**-0.3**
ATIT				S	**Sg**	**21 03 09.1**	**0.0**
SULTU	**Buldan**	**1.17**	**143**	P	**Pb**	**21 02 55.2**	**-0.1**
SULTU				S	**Sb**	**21 03 10.2**	**-0.3**
SULTU				IAML		21 03 16.0	
	comp=N,1µm,0.8s						
SULTU				IAML		21 03 20.0	
	comp=E,758nm,1.0s						
EMET	**Ktahya-Emet**	**1.18**	**71**	P	**Pb**	**21 02 55.8**	**+0.3**
EMET				S	**Sb**	**21 03 10.8**	**0.0**
EMET				IAML		21 03 14.0	
	comp=N,5µm,0.6s						
GEDZ	**Gediz**	**1.19**	**87**	Pn	**Pb**	**21 02 55.7**	**0.0**
GMLD	**Gumuldur**	**1.19**	**220**	Pn	**Pb**	**21 02 55.5**	**-0.1**
URLA	**Izmir**	**1.19**	**238**	Pn	**Pb**	**21 02 55.1**	**-0.6**
URLA	**Izmir**	**1.19**	**238**	P	**Pb**	**21 02 55.0**	**-0.6**
URLA				S	**Sb**	**21 03 11.2**	**+0.2**
KARB	**zmir-Karabur**	**1.20**	**254**	P	**Pb**	**21 02 55.1**	**-0.6**
KARB				S	**Sb**	**21 03 11.2**	**0.0**
KARB				IAML		21 03 14.0	
	comp=E,2µm,0.6s						
KARB				IAML		21 03 15.0	
	comp=N,2µm,0.3s						
CANM	**Can-anakkale**	**1.20**	**328**	Pn	**Pb**	**21 02 55.4**	**-0.4**
DGB	**zmir**	**1.23**	**220**	P	**Pn**	**21 02 55.3**	**-0.8**
DGB				S	**Sb**	**21 03 11.7**	**-0.3**
DGB				IAML		21 03 14.0	
	comp=E,1µm,0.5s						
DGB				IAML		21 03 17.0	
	comp=N,1µm,0.5s						
GDZ	**Gediz**	**1.25**	**85**	P	**Pn**	**21 02 56.5**	**-0.1**
GDZ				S	**Sb**	**21 03 13.4**	**+0.5**
GDZ				IAML		21 03 16.0	
	comp=E,1µm,0.7s						
GDZ				IAML		21 03 16.0	
	comp=N,2µm,0.4s						
ESEN	**Aydn-Nazilli**	**1.25**	**163**	P	**Pn**	**21 02 55.2**	**-1.2**
ESEN				S	**Sb**	**21 03 11.5**	**-1.2**
ESEN				IAML		21 03 15.0	
	comp=E,887nm,0.7s						
ESEN				IAML		21 03 17.0	
	comp=N,530nm,0.7s						
BAYC	**CANAKKALE_Bayr**	**1.28**	**306**	P	**Pg**	**21 02 57.9**	**+0.3**
BAYC				S	**Sb**	**21 03 13.2**	**-0.3**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**21 02 56.8**	**-0.1**
PRK				S	**Sb**	**21 03 13.8**	**+0.2**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**21 02 57.1**	**+0.3**
PRK				S	**Sb**	**21 03 13.8**	**+0.2**
ORLT	**Orhaneli**	**1.31**	**36**	P	**Pn**	**21 02 57.2**	**-0.1**
ORLT				S	**Sb**	**21 03 14.5**	**-0.1**
ORLT				IAML		21 03 19.0	
	comp=E,6µm,0.6s						
ORLT				IAML		21 03 21.0	
	comp=N,4µm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**1.32**	**236**	P	**Pn**	**21 02 56.4**	**-1.0**
ZEYE				S	**Sb**	**21 03 14.5**	**-0.2**
ZEYE				IAML		21 03 19.0	
	comp=E,728nm,0.4s						
ZEYE				IAML		21 03 24.0	
	comp=N,1µm,0.6s						
AYDN	**Tasoluk**	**1.33**	**180**	P	**Pn**	**21 02 57.0**	**-0.6**
AYDN				S	**Sb**	**21 03 15.1**	**-0.1**
AYDN				IAML		21 03 19.0	
	comp=N,1µm,0.4s						
AYDN				IAML		21 03 21.0	
	comp=E,2µm,0.6s						
BAND	**Balkesir-Ban**	**1.37**	**7**	⇓P	**Pn**	**21 02 58.1**	**0.0**
BAND				⇓S	**Sg**	**21 03 17.5**	**+0.3**
GCAM	**G?zelcaml?**	**1.39**	**202**	Pn	**Pn**	**21 02 58.2**	**-0.2**
GCAM	**G?zelcaml?**	**1.39**	**202**	P	**Pn**	**21 02 56.4**	**-2.0**
GCAM				S	**Sb**	**21 03 17.5**	**+0.8**
GCAM				IAML		21 03 20.0	
	comp=N,1µm,0.7s						
GCAM				IAML		21 03 23.0	
	comp=E,724nm,0.8s						
KOCA	**Canakkale, Ayv**	**1.45**	**291**	P	**Pn**	**21 02 58.8**	**-0.4**
KOCA				S	**Sn**	**21 03 18.1**	**-0.1**
KOCA				IAML		21 03 22.0	
	comp=E,1µm,0.4s						
KOCA				IAML		21 03 24.0	
	comp=N,1µm,0.3s						
EAG2	**Marmaro, Chios**	**1.46**	**253**	P	**Pn**	**21 02 58.9**	**-0.4**
EAG2				S	**Sn**	**21 03 18.4**	**0.0**
EZN	**Ezine**	**1.47**	**305**	P	**Pn**	**21 02 59.5**	**+0.1**
EZN				S	**Sg**	**21 03 20.1**	**-0.1**
KRL1	**Karlovasi Samo**	**1.51**	**218**	P	**Pn**	**21 03 00.1**	**+0.1**
KRL1				S	**Sb**	**21 03 21.1**	**+0.8**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**21 02 59.5**	**-0.8**
SMG				S	**Sn**	**21 03 20.4**	**+0.3**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**21 02 59.4**	**-0.8**
SMG				S	**Sn**	**21 03 20.6**	**+0.5**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**21 03 00.4**	**-0.3**
CHOS				S	**Sn**	**21 03 21.1**	**+0.2**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**21 03 00.6**	**-0.1**
CHOS				S	**Sn**	**21 03 21.2**	**+0.2**
SIGR	**SIGRI**	**1.59**	**278**	P	**Pn**	**21 03 02.3**	**+1.1**
SIGR				S	**Sb**	**21 03 23.3**	**+0.7**
SIGR	**SIGRI**	**1.59**	**278**	P	**Pn**	**21 03 01.4**	**+0.3**
DDIM	**Aydin, Didim**	**1.62**	**198**	P	**Pn**	**21 02 57.6**	**-3.8**
DDIM				S	**Sg**	**21 03 25.8**	**+0.7**
YER	**Yerkesik**	**1.88**	**170**	P	**Pn**	**21 03 05.1**	**-0.1**
YER				S	**Sn**	**21 03 29.8**	**+0.8**
GADA	**Gvkgeada**	**1.94**	**309**	P	**Pn**	**21 03 06.5**	**+0.5**
GADA				S	**Sn**	**21 03 31.4**	**+1.0**
BODT	**Bodrum**	**1.98**	**193**	P	**Pn**	**21 03 07.0**	**+0.4**
BODT				S	**Sn**	**21 03 31.6**	**+0.3**
CAVK	**Edirne/Enez-Ca**	**2.15**	**323**	⇓P	**Pn**	**21 03 09.5**	**+0.7**
ENEZ	**Enez**	**2.19**	**323**	P	**Pn**	**21 03 09.9**	**+0.6**
ENEZ				S	**Sn**	**21 03 37.4**	**+0.9**
LIA	**Limnos Island**	**2.28**	**294**	P	**Pn**	**21 03 10.8**	**+0.2**
LIA				S	**Sn**	**21 03 39.7**	**+1.1**
LIA	**Limnos Island**	**2.28**	**294**	P	**Pn**	**21 03 10.6**	**+0.1**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**21 03 11.6**	**+0.2**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**21 03 11.5**	**+0.1**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**21 03 12.0**	**+0.2**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**21 03 11.8**	**0.0**
ISP	**Isparta**	**2.38**	**119**	P	**Pn**	**21 03 12.3**	**+0.2**
ALEX	**Alexandroupoli**	**2.40**	**321**	P	**Pn**	**21 03 12.6**	**+0.3**
SFL1	**Soufli**	**2.50**	**332**	P	**Pn**	**21 03 14.2**	**+0.5**
RODB	**Rodos**	**2.56**	**174**	P	**Pn**	**21 03 14.8**	**+0.4**
ARG	**Arkhangelos**	**2.78**	**176**	P	**Pn**	**21 03 17.9**	**+0.4**
RDO	**Rodhopi**	**2.80**	**321**	P	**Pn**	**21 03 18.2**	**+0.4**
RDO	**Rodhopi**	**2.80**	**321**	P	**Pn**	**21 03 18.1**	**+0.3**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**21 03 18.4**	**-0.3**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**21 03 18.3**	**-0.4**
THAS	**Thassos island**	**2.92**	**304**	P	**Pn**	**21 03 19.0**	**-0.4**
THAS	**Thassos island**	**2.92**	**304**	P	**Pn**	**21 03 19.6**	**+0.1**
AOS	**Alonnisos**	**3.12**	**274**	P	**Pn**	**21 03 23.0**	**+0.9**
KSL	**Kastellorizon**	**3.14**	**154**	P	**Pn**	**21 03 23.3**	**+0.8**
AOS2	**Alonissos-2**	**3.15**	**274**	P	**Pn**	**21 03 23.1**	**+0.5**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**21 03 23.7**	**0.0**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**21 03 23.5**	**-0.2**
KAVA	**Kavala**	**3.27**	**309**	P	**Pn**	**21 03 24.2**	**-0.1**
OUR	**Ouranopolis**	**3.29**	**295**	P	**Pn**	**21 03 25.0**	**+0.5**
STFN	**Stefani**	**3.50**	**258**	P	**Pn**	**21 03 27.1**	**-0.3**
DIM	**Dimitrovgrad**	**3.52**	**331**	P	**Pn**	**21 03 28.1**	**+0.5**
RZN	**Rozhen**	**3.61**	**319**	P	**Pn**	**21 03 29.4**	**+0.3**
PLD	**Plovdiv**	**3.95**	**324**	P	**Pn**	**21 03 34.3**	**+0.7**
MMB	**Musomishta**	**4.06**	**310**	P	**Pn**	**21 03 36.1**	**+0.9**
ELND	**Elena**	**4.21**	**339**	⇓P	**Pn**	**21 03 37.6**	**+0.3**
PGB	**Panagyurishte**	**4.50**	**322**	P	**Pn**	**21 03 41.9**	**+0.7**
PVL	**Pavlikeni**	**4.61**	**334**	P	**Pn**	**21 03 43.3**	**+0.7**
KKB	**Krupnik**	**4.61**	**310**	P	**Pn**	**21 03 43.9**	**+1.2**
PSN	**Preselentsi**	**4.64**	**2**	*e*P	**Pn**	**21 03 43.6**	**+0.5**
VAY	**Valandovo**	**4.69**	**301**	*i* Pn	**Pn**	**21 03 45.6**	**+1.9**
KIRS	**Kirsehir-Merke**	**4.70**	**86**	⇑P	**Pn**	**21 03 44.9**	**+0.9**
PLNA	**Plana**	**4.85**	**317**	P	**Pn**	**21 03 47.3**	**+1.2**
PLVB	**Pleven**	**5.03**	**332**	⇑P	**Pn**	**21 03 49.2**	**+0.7**
VTS	**Vitosha**	**5.05**	**317**	P	**Pn**	**21 03 49.8**	**+0.9**
ICOR	**Ion Corvin**	**5.12**	**359**	⇑P	**Pn**	**21 03 50.1**	**+0.5**
MPEP	**Malo Peshtene**	**5.36**	**326**	P	**Pn**	**21 03 54.2**	**+1.2**
TLBR	**Topalu**	**5.55**	**1**	⇓P	**Pn**	**21 03 55.9**	**+0.4**
CFR	**Carcaliu**	**6.18**	**2**	⇑P	**Pn**	**21 04 04.5**	**+0.3**
TLCR		**6.22**	**6**	⇑P	**Pn**	**21 04 05.3**	**+0.5**
NEGRR	**Negrea**	**6.54**	**360**	⇓P	**Pn**	**21 04 09.7**	**+0.6**
BOVS	**Bovan**	**6.57**	**317**	⇑P	**Pn**	**21 04 10.8**	**+1.3**
MLR	**Muntele Rosu**	**6.65**	**348**	⇓P	**Pn**	**21 04 12.3**	**+1.5**
SCTR	**Scanteiesti**	**6.67**	**1**	⇓P	**Pn**	**21 04 12.0**	**+1.1**
ODBI	**Odobesti**	**6.79**	**355**	⇑P	**Pn**	**21 04 13.7**	**+1.1**
ARR	**Arges**	**6.81**	**340**	⇓P	**Pn**	**21 04 14.1**	**+1.2**
VARL	**Varlezi**	**6.90**	**360**	⇑P	**Pn**	**21 04 15.1**	**+1.0**
PLOR	**Plostina**	**6.91**	**353**	⇑P	**Pn**	**21 04 15.1**	**+0.8**
VRI	**Vrincioaia**	**6.92**	**353**	⇑P	**Pn**	**21 04 16.0**	**+1.7**
SEV	**Sevastopol'**	**7.03**	**36**	*e*P	**Pn**	**21 04 15.9**	**+0.1**
SEV				pmax	pmax	21 04 17.2	
	comp=Z,3.0nm,0.4s						
SEV				*e*S	**Sn**	**21 05 32.7**	**-3.0**
SEV				smax	smax	21 05 33.4	
	comp=N,7.0nm,0.4s						
SEV				smax	smax	21 05 33.4	
	comp=E,7.0nm,0.6s						
TURR	**Turia**	**7.19**	**350**	⇑P	**Pn**	**21 04 19.7**	**+1.6**
DOPR	**Dopca**	**7.21**	**346**	⇓P	**Pn**	**21 04 19.0**	**+0.7**
YAL	**Yalta**	**7.22**	**38**	*e*S	**Sn**	**21 05 38.1**	**-2.2**
YAL				smax	smax	21 05 40.5	
	comp=N,11nm,0.3s,comp=E,17nm,0.3s						
TARU	**Tarkhankut**	**7.25**	**27**	*e*x	x	21 05 39.6	
TARU				smax	smax	21 05 39.8	
	comp=N,19nm,0.6s,comp=E,15nm,0.6s						
MDVR	**Moldovita**	**7.39**	**323**	⇓P	**Pn**	**21 04 21.0**	**+0.2**
PDG	**Podgorica**	**7.40**	**300**	⇓P	**Pn**	**21 04 22.5**	**+1.6**
ONER	**Baraj Valea Uz**	**7.42**	**352**	⇓P	**Pn**	**21 04 22.9**	**+1.7**
GZR	**Gura Zlata**	**7.43**	**331**	⇑P	**Pn**	**21 04 21.9**	**+0.4**
ALU	**Alushta**	**7.48**	**38**	*e*S	**Sn**	**21 05 46.3**	**-0.5**
ALU				smax	smax	21 05 47.4	
	comp=N,12nm,0.5s						
ALU				smax	smax	21 05 47.4	
	comp=E,7.0nm,0.4s						
DNZ2	**Donuzlav2**	**7.50**	**30**	*e*x	x	21 05 46.1	
DNZ2				smax	smax	21 05 50.2	
	comp=N,5.0nm,0.3s						
DNZ2				smax	smax	21 05 50.2	
	comp=E,11nm,0.6s						
SIM	**Simferopol'**	**7.54**	**36**	*e*P	**Pn**	**21 04 23.3**	**+0.4**
SIM				pmax	pmax	21 04 23.9	
	comp=Z,13nm,0.3s						
SIM				*e*S	**Sn**	**21 05 46.7**	**-1.7**
SIM				smax	smax	21 05 49.8	
	comp=N,21nm,0.4s						
SIM				smax	smax	21 05 49.8	
	comp=E,10.0nm,0.4s						
TESR	**Tescani**	**7.57**	**354**	⇑P	**Pn**	**21 04 24.0**	**+0.8**
SUDU	**Sudak**	**7.92**	**40**	*e*P	**Pn**	**21 04 30.0**	**+1.9**
SUDU				pmax	pmax	21 04 31.7	
	comp=Z,3.0nm,0.8s						
SUDU				*e*S	**Sn**	**21 05 57.9**	**+0.2**
SUDU				smax	smax	21 05 58.9	
	comp=N,13nm,0.7s						
SUDU				smax	smax	21 05 58.9	
	comp=E,10.0nm,0.7s						
BZS	**Buzias**	**8.08**	**327**	⇑P	**Pn**	**21 04 31.5**	**+1.2**

SSNC 02 21:10:42.8±3.1**, 18.°41N**×**81.°66W, h25**km±30km**, MD3.6,**
ML3.2, Presumed earthquake, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.94**	**50**	*e*P	Pn	21 11 11.8	-2.5
LCCY				*e*S	Sn	21 11 34.5	-3.3
LCCY				IAML		21 11 35.0	
	comp=E,245nm,1.2s						
LCCY				IAML		21 11 37.1	
	comp=N,112nm,0.9s						
CBCY	**The Bluff, Cay**	**2.23**	**53**	*e*P	Pn	21 11 15.2	-3.0
CBCY				*e*S	Sn	21 11 41.1	-3.8
CBCY				IAML		21 11 43.0	
	comp=E,97nm,0.5s						
CBCY				IAML		21 11 43.2	
	comp=N,56nm,0.4s						
MTDJ	**Mount Denham**	**3.92**	**92**	*e*P	Pn	21 11 40.4	-1.1
MTDJ				*e*S	Sn	21 12 23.5	-3.4
MTDJ				IAML		21 12 26.6	
	comp=N,28nm,0.5s						
MTDJ				IAML		21 12 27.5	
	comp=N,21nm,0.8s						
MGV	**Manicaragua**	**4.00**	**23**	*e*P	Pn	21 11 40.4	-2.1
MGV				*e*S	Sn	21 12 26.4	-2.3
MGV				IAML		21 12 30.2	
	comp=N,13nm,0.2s						
MGV				IAML		21 12 30.5	
	comp=E,67nm,0.3s						
CAIB	**Caibarien**	**4.55**	**26**	*e*P	Pn	21 11 50.1	+0.1
CAIB				*e*S	Sn	21 12 42.8	+0.6
CCCC	**Cccc**	**4.59**	**52**	*e*P	Pn	21 11 55.0	+4.3
CCCC				*e*S	Sn	21 12 49.1	+5.8
LMGC	**Las Mercedes**	**4.69**	**69**	*e*P	Pb	21 12 32.9	+28
LMGC				*e*S	Sb	21 13 49.7	+49
YAR	**Yar**	**5.37**	**68**	*e*P	Pn	21 12 01.4	0.0

*RSNC **02** 21:25:10.0±0.0, 7°N±1°×7°3W±°, h141km±1km, M1.9, ML1.7, MLv2.2*
*FUNV **02** 21:25:11.1, 7.°12N×73.°45W, h5km, MW2.6, Presumed earthquake*

ISC 02 21:25:08.6±2.1**, 6.°83N**±0.°05×**73.°16W**±0.°06**, h146**km±14km**,**
n14, σ**1.°10**/28**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**186**	P	**Pn**	**21 25 29.1**	**+0.2**
BARC				S	**Sn**	**21 25 43.5**	**-0.7**
PAMC	**Pamplona, Colo**	**0.68**	**42**	P	**Pn**	**21 25 31.8**	**+0.7**
PAMC				S	**Sn**	**21 25 48.8**	**+0.5**
RUSC	**La Rusia**	**0.94**	**176**	P	**Pn**	**21 25 32.9**	**-0.2**
RUSC				S	**Sn**	**21 25 51.8**	**+0.1**
RUSC	**La Rusia**	**0.94**	**176**	*e*P	**Pn**	**21 25 33.1**	**+0.1**
RUSC				*e*S	**Sn**	**21 25 51.9**	**+0.2**
CAPV	**Capacho**	**1.32**	**39**	*e*P	**Pn**	**21 25 36.8**	**+0.5**

CAPV				eS	Sn	21 25 54.2	-3.2
PTBC	PUERTO BERRIO,	1.32	257	P	Pn	21 25 35.9	-0.2
PTBC				S	Sn	21 25 57.0	0.0
OCAC	Ocana	1.41	353	P	Pn	21 25 37.7	+0.6
OCAC				S	Sn	21 25 59.8	+0.9
SPBC	San Pablo de B	1.49	218	P	Pn	21 25 38.0	+0.2
SPBC				S	Sn	21 26 00.3	+0.1
NORC	Norcasia	2.12	234	P	Pn	21 25 45.3	+0.3
NORC				S	Sn	21 26 13.4	+0.5
CHIC	Chingaza	2.26	195	P	Pn	21 25 47.0	-0.1
CHIC				S	Sn	21 26 17.4	+0.8
HELC	Santa Helena	2.44	255	P	Pn	21 25 50.7	+1.5
HELC				S	Sn	21 26 20.8	+0.4
HELC	Santa Helena	2.44	255	eP	Pn	21 25 48.2	-1.0
HELC				eS	Sn	21 26 17.1	-3.3
UREC	San Jos de Ur	2.53	291	P	Pn	21 25 50.6	+0.7
UREC				S	Sn	21 26 21.3	-0.4
PRAC	Prado	3.55	209	P	Pn	21 26 02.9	0.0
PRAC				S	Sn	21 26 45.1	+0.1

IDC 02 21:33:17.6±2.1, 6°.82S×130°.10E, h146km±22km, mb3.4/3, mbtmp4.0/8, Error ellipse: s-maj=32.3km s-min=16.4km az=84.0
NEIC 02 21:33:18.6±1.9, 6°.66S±0°.06×129°.88E±0°.10, h151km±6km, mb4.1/11, Error ellipse: s-maj=14.5km s-min=8.4km az=80.0
DJA 02 21:33:19.3±0.2, 7°S±2°×13°0E±°, h176km±5km, M4.4/19, mB5.1/5, mb4.1/19, MLv4.5/17, Mw(mB)4.5/5
ISC 02 21:33:17.5±0.6, 6°.70S±0°.05×129°.90E±0°.05, h146km, n62, σ1s.95/68, mb4.0/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.88	133		Pn	21 33 54.0	+3.0
SAUI				Sn	Sn	21 34 18.6	+1.8
SAUI	Saumlaki	1.88	133	P	Pn	21 33 54.3	+3.2
SAUI	Saumlaki	1.88	133	P	Pn	21 33 54.2	+3.2
BNDI	Bandanaira	2.16	0	P	Pn	21 33 59.7	+5.4
AAI	Ambon	3.44	330	P	Pn	21 34 13.4	+3.0
MSAI	Masohi	3.47	344	P	Pn	21 34 14.9	+4.1
KRAI	Karang Ratu	3.68	336	P	Pn	21 34 18.0	+4.5
FAKI	Fak Fak	4.42	32		Pn	21 34 23.5	+0.2
FAKI				Sn	Sn	21 35 11.7	-2.7
FAKI	Fak Fak	4.42	32	P	Pn	21 34 23.7	+0.5
FAKI	Fak Fak	4.42	32	P	Pn	21 34 23.9	+0.7
KMPI	Kaimana, Papua	4.84	52	P	Pn	21 34 30.0	+1.2
DRS	Darwin Rock St	5.78	170	P	Pn	21 34 43.2	+1.9
SIJI	Sorong	5.95	13	P	Pn	21 34 44.3	+0.7
	4.7nm,0.3s,baz=52,slow=20,SNR=24						
SIJI				S	Sn	21 35 46.8	-4.0
	18nm,0.3s,baz=226,slow=23,SNR=12						
SIJI	Sorong	5.95	13	P	Pn	21 34 44.5	+1.0
SWI	Sorong	5.95	13	P	Pn	21 34 44.2	+0.6
	0.3nm18nm,0.8s						
SANI	Sanana	6.05	320	P	Pn	21 34 48.9	+4.1
	0.1nm7.4nm,0.8s						
MTN	Manton Dam	6.23	169		Pn	21 34 48.1	+0.9
MTN				Sn	Sn	21 35 55.3	-2.2
SOEI	Soe	6.35	241		Pn	21 34 50.6	+1.6
SOEI				Sn	Sn	21 35 59.4	-1.2
SOEI	Soe	6.35	241	P	Pn	21 34 51.1	+2.1
SOEI	Soe	6.35	241	S	Sn	21 36 03.7	+3.1
SOEI	Soe	6.35	241	P	Pn	21 34 51.1	+2.1
	0.4nm47nm,1.1s						
RKPI	Ransiki, Papua	6.69	40	P	Pn	21 34 54.6	+1.2
MWPI	Manokwari, Pap	7.06	36	P	Pn	21 35 00.7	+2.3
	79nm,0.8s						
BATI	Baumata	7.09	240	P	Pn	21 35 00.3	+1.5
	70nm,0.4s,baz=247,slow=0.7,SNR=30						
BATI				S	Sn	21 36 17.1	-1.1
	47nm,0.3s,baz=134,slow=7.5,SNR=11						
BATI	Baumata	7.09	240	P	Pn	21 34 59.6	+0.8
	0.4nm83nm,0.5s						
MMRI	Maumere	7.84	255	Pn	Pn	21 35 08.3	-0.5
BAKI	Biak	8.26	49	P	Pn	21 35 18.1	+3.7
KNRA	Kununurra	8.99	187	Pn	Pn	21 35 23.4	-0.8
BASI	Baing, Sumba	9.87	249	P	Pn	21 35 35.8	-0.1
WSI	Waingapu	9.96	252	P	Pn	21 35 36.1	-1.0
WBSI	Waikabubak, Su	10.81	254	P	Pn	21 35 48.0	-0.4
	24nm,0.7s						
DBNI	Kabupaten Domp	11.63	260	P	Pn	21 35 59.3	+0.1
	9.2nm,2.0s						
FITZ	Fitzroy Crossi	12.07	200	P	Pn	21 36 03.6	-1.2
	1.6nm,0.3s,baz=34,slow=12,SNR=15						
FITZ				S	Sn	21 38 06.9	-11
	6.9nm,0.4s,baz=261,slow=22,SNR=7.7						
PLAI	Plampang	12.20	259	P	Pn	21 36 06.1	-0.5
PLAI	Plampang	12.20	259	P	Pn	21 36 05.5	-1.1
	19nm,0.4s						
WB0	Warramunga Arr	13.70	162	Pn	Pn	21 36 23.1	-2.8
WRA	Warramunga Arr	13.85	162	P	Pn	21 36 25.2	-2.6
	1.5nm,0.6s,baz=337,slow=13,SNR=14						
WRA				S	Sn	21 38 51.1	-10
	3.3nm,0.6s,baz=335,slow=22,SNR=9.3						
WR8	Warramunga Arr	13.91	162	Pn	Pn	21 36 25.9	-2.7
COEN	Coen	14.91	120		Pn	21 36 42.0	+0.9
JAGI	Jajag, Banyuwa	15.71	263	P	Pn	21 36 50.1	-1.0
JAGI				IAmb	IAmb	21 37 04.0	
	comp=Z,16nm,1.0s						
JAGI	Jajag, Banyuwa	15.71	263	P	Pn	21 36 50.4	-0.7
JAGI	Jajag, Banyuwa	15.71	263	P	Pn	21 36 49.9	-1.2
	comp=Z,10nm,1.2s						
GMJI	Gumukmas	16.39	263	P	Pn	21 36 58.2	-1.2
	comp=Z,14nm,1.1s						
AS31	Alice Springs	17.30	168	P	P	21 37 10.0	+0.4
ASAR	Alice Springs	17.30	168	P	P	21 37 09.6	+0.1
	comp=Z,3.6nm,0.6s,baz=345,slow=10,SNR=38						
ASAR				S	S	21 40 19.4	-3.1
	comp=Z,0.7nm,0.6s,baz=0.5,slow=28,SNR=5.1						
ASAR	Alice Springs	17.30	168	P	P	21 37 09.9	+0.4
MBWA	Marble Bar	17.43	213		P	21 37 11.3	+0.4
MBWA				IAmb	IAmb	21 37 25.2	
	comp=Z,16nm,1.2s						
PSA00	Pilbara Seismi	17.70	212	P	P	21 37 14.0	+0.1
PSA00				IAmb	IAmb	21 37 41.8	
	comp=Z,25nm,1.4s						
PSA00	Pilbara Seismi	17.70	212	P	Pn	21 37 14.8	-0.2
PSA00				IAmb	IAmb	21 37 50.7	
	comp=Z,6.0nm,1.2s						
SNJI	Sawahan-Nganju	18.03	265	P	P	21 37 18.3	+0.6
	comp=Z,21nm,0.9s						
PCJI	Pacitan	18.63	264	P	P	21 37 22.3	-1.8
GIRL	Giralia	21.90	222	P	P	21 38 00.7	+1.6
BBJI	Bungbulang	22.10	267	P	P	21 38 01.5	+0.2
BBJI				IAmb	IAmb	21 38 28.4	
	comp=Z,10nm,1.2s						
INKA	Innaminka	23.32	155	P	P	21 38 12.3	-0.3
FORT	Forrest	24.02	184	P	P	21 38 18.9	0.0
FORT				IAmb	IAmb	21 38 59.2	
	comp=Z,6.1nm,0.9s						
BBOO	Buckleboo	26.61	168	P	P	21 38 44.3	+2.0
CMAR	Chiang Mai Arr	39.47	310	P	P	21 40 37.8	+3.9
	comp=Z,1.0nm,0.9s,baz=132,slow=8.4,SNR=6.8						
	comp=Z,1.0nm,0.9s						
CMAR	Chiang Mai Arr	39.47	310	P	P	21 40 34.1	+0.2
MKAR	Makanchi Array	67.92	327	P	P	21 44 01.5	+1.0
	comp=Z,1.4nm,0.5s,baz=124,slow=7.9,SNR=30						
	comp=Z,1.4nm,0.5s						
MAKZ	Makanchi	68.10	327	P	P	21 44 02.3	+0.7
MAKZ				IAmb	IAmb	21 44 03.0	
	comp=Z,1.4nm,0.6s						
KURBB	Kurchatov Arra	72.20	328	P	P	21 44 26.3	-0.1
	comp=Z,0.2nm,0.4s,baz=125,slow=5.1,SNR=2.4						
	comp=Z,0.2nm,0.4s						
ABKAR	Akbulak array	82.21	322	P	P	21 45 22.0	-0.3

OTT 02 21:39:07.4±0.3, 49°.35N×49°.01W, h18km, ML4.6/10, 310km east from Bonavista, NI Eastern Background Seismic Zone.
IDC 02 21:39:09.5±1.1, 49°.23N×49°.96W, h0km, mb3.6/5, mbtmp3.7/6, ML3.0/1, MS3.6/1, Error ellipse: s-maj=44.7km s-min=18.2km az=20.0
ISC 02 21:39:11.4±0.9, 49°.42N±0°.09×49°.92W±0°.07, h10km, n21, σ1s.85/35, mb3.6/4, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJNN	Saint John's	2.58	226	PN	Pn	21 39 54.4	+1.1
SJNN				SN	Sb	21 40 28.1	-1.5
SJNN				Trac		21 40 30.2	
	comp=Z,129nm,0.1s						
DRLN	Deer Lake	4.96	271	PN	Pn	21 40 28.8	+2.9
DRLN				SN	Sn	21 41 29.4	+6.1
DRLN				Trac		21 41 32.2	
	comp=Z,36nm,0.3s						
BJBQ	Baie Johan-Bee	8.38	281	PN	Pn	21 41 15.0	+2.2
BJBQ				SN	Sn	21 42 49.4	+2.1
BJBQ				Trac		21 42 55.3	
	comp=Z,16nm,0.4s						
GBN	Guysborough	8.82	247	PN	Pn	21 41 20.2	+1.3
GBN				SN	Sn	21 42 58.4	+0.1
GBN				Trac		21 43 06.2	
	comp=Z,14nm,0.2s						
PMAQ	Port Menier	9.36	278	PN	Pn	21 41 28.4	+2.1
PMAQ				SN	Sn	21 43 13.3	+1.8
PMAQ				Trac		21 43 32.8	
	comp=Z,61nm,0.8s						
HAL	Halifax	10.48	248	PN	Pn	21 41 43.4	+1.8
HAL				SN	Sn	21 43 38.6	-0.5
HAL				Trac		21 43 44.5	
	comp=Z,4.6nm,0.1s						
LMN	Caledonia Moun	10.66	256	PN	Pn	21 41 45.2	+1.1
LMN				SN	Sn	21 43 41.7	-1.7
LMN				Trac		21 43 49.1	
	comp=Z,53nm,0.8s						
HSNB	Heath Steele M	10.95	265	PN	Pn	21 41 49.6	+1.5
HSNB				SN	Sn	21 43 49.2	-1.5
HSNB				Trac		21 43 53.0	
	comp=Z,4.6nm,0.2s						
ICQ	Pointe Anglais	11.29	277	PN	Pn	21 41 53.9	+1.2
ICQ				SN	Sn	21 43 59.0	+0.2
ICQ				Trac		21 43 60.0	
	comp=Z,570nm,2.9s						
SNFQ	Sainte-Felicit	11.43	274	PN	Pn	21 41 34.9	-20
SNFQ				SN	Sn	21 44 01.7	-0.5
SNFQ				Trac		21 44 05.5	
	comp=Z,299nm,2.3s						
SCHQ	Schefferville	11.71	304	Pn	Pn	21 41 57.6	-0.8
	1.1nm,0.3s,baz=115,slow=14,SNR=21						
SCHQ				Sn	Sn	21 44 06.5	-2.6
	1.3nm,0.3s,baz=208,slow=17,SNR=6.4						
	2.6nm,0.3s						
SCHQ	Schefferville	11.71	304	PN	Pn	21 41 58.5	0.0
SCHQ				SN	Sn	21 44 07.2	-1.9
SCHQ				Trac		21 44 09.7	
	comp=Z,9.4nm,0.6s						
GGN	Saint George	12.27	256	PN	Pn	21 42 06.8	+0.8
GGN				SN	Sn	21 44 21.0	-1.7
GGN				Trac		21 44 23.6	
	comp=Z,119nm,1.0s						
MCNB	McAdam	12.37	259	PN	Pn	21 42 08.7	+1.3
MCNB				SN	Sn	21 44 22.9	-2.3
MCNB				Trac		21 44 27.0	
	comp=Z,188nm,1.3s						
CACQ	Cacouna	13.02	271	PN	Pn	21 42 16.9	+0.6
CACQ				SN	Sn	21 44 39.1	-2.0
CACQ				Trac		21 44 42.6	
	comp=Z,644nm,3.2s						
YKA	Yellowknife Ar	36.83	316	P	P	21 46 18.6	-0.6
	0.3nm,0.8s,baz=73,slow=7.9,SNR=3.4						
YKA				LR	LR	22 00 55.3	
	comp=Z,82nm,18.7s,baz=92,slow=35						
	0.3nm,0.8s						
PDAR	Pinedale Array	40.94	284	P	P	21 46 53.4	-0.8
	0.7nm,0.6s,baz=65,slow=9.6,SNR=8.1						
	0.7nm,0.6s						
TXAR	Lajitas Array	45.06	264	P	P	21 47 26.9	-0.6
	0.5nm,0.5s,baz=55,slow=7.8,SNR=6.1						
	0.5nm,0.5s						
AKASG	Malin Array Be	48.50	57	P	P	21 47 54.6	+0.6
	0.2nm,0.3s,baz=311,slow=8.5,SNR=1.5						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	55.52	112	P	P	21 48 46.4	-0.3
	0.8nm,0.7s,baz=304,slow=8.1,SNR=6.3						
	0.8nm,0.7s						
WRA	Warramunga Arr	150.40	352	PKPbc	PKPbc	21 59 02.8	-0.3
	0.3nm,0.5s,baz=4.5,slow=4.1,SNR=6.0						

IDC 02 21:42:12.1±1.6, 11°.46S×118°.23E, h0km, mb3.6/3, mbtmp3.6/7, ML3.6/4, MS3.3/1, Error ellipse: s-maj=72.8km s-min=21.6km az=51.0
DJA 02 21:42:15.5±0.4, 12°S±4°×11°8E±°, h10km, M4.1/13, mb4.2/7, MLv4.1/13
ISC 02 21:42:16.3±0.8, 11°.47S±0°.07×118°.48E±0°.07, h26km, n33, σ2s.06/34, mb3.7/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.02	26	P	Pn	21 42 50.5	+1.7
BASI	Baing, Sumba	2.41	59	P	Pn	21 42 56.6	+2.6
WSI	Waingapu	2.53	45	P	Pn	21 42 58.0	+2.3
PLAI	Plampang	2.71	345	P	Pn	21 42 59.2	+1.0
PLAI	Plampang	2.71	345	P	Pn	21 42 58.8	+0.6
DBNI	Kabupaten Domp	2.95	357	P	Pn	21 43 03.1	+1.6
KHKI	Kahang-Kahang	4.18	317	P	Pn	21 43 21.1	+2.6
IGBI	Denpasar	4.20	308	P	Pn	21 43 18.2	-0.6
MMRI	Maumere	4.65	53	P	Pn	21 43 26.4	+1.5
JAGI	Jajag, Banyuwa	5.20	305	P	Pn	21 43 31.8	-0.6
JAGI	Jajag, Banyuwa	5.20	305	P	Pn	21 43 31.4	-1.0
BATI	Baumata	5.25	77	P	Pn	21 43 35.6	+2.5
	0.1nm38nm,0.9s						
BSSI	Bau Bau, Buton	5.65	21	P	Pn	21 43 42.1	+3.4
	0.2nm41nm,1.2s						
GMJI	Gumukmas	5.89	302	P	Pn	21 43 42.8	+0.9
	0.2nm18nm,1.6s						
SOEI	Soe	5.94	74	P	Pn	21 43 46.0	+3.2
SOEI	Soe	5.94	74	P	Pn	21 43 46.2	+3.4
	0.1nm26nm,1.0s						
KAPI	Kappang	6.53	11	Pn	Pn	21 43 50.7	-0.1
	1.4nm,0.3s,baz=242,slow=21,SNR=1.7						
KAPI				Sn	Sn	21 45 01.6	-2.9
	4.0nm,0.3s,baz=273,slow=22,SNR=7.7						
	3.1nm,0.2s						
SNJI	Sawahan-Nganju	7.57	298	P	Pn	21 44 07.4	+2.2
PCJI	Pacitan	7.89	294	P	Pn	21 44 10.5	+1.0
	18nm,1.0s						
PMSI	Majene	7.92	3	P	Pn	21 44 13.1	+3.1
UGM	Wanagama	8.60	294	P	Pn	21 44 19.9	+0.7
UGM	Wanagama	8.60	294	P	Pn	21 44 19.1	-0.1
	34nm,2.0s						
FITZ	Fitzroy Crossi	9.56	134	Pn	Pn	21 44 32.5	+0.1
	0.6nm,0.3s,baz=323,slow=7.8,SNR=14						
FITZ				Sn	Sn	21 46 14.3	-4.7
	0.1nm,0.3s,baz=183,slow=22,SNR=1.1						
	1.6nm,0.3s						
MBWA	Marble Bar	9.71	173	P	Pn	21 44 34.8	+0.3
PSA00	Pilbara Seismi	10.14	173	P	Pn	21 44 40.6	+0.4
MEEK	Meekatharra	15.09	180	P	Pn	21 45 48.6	+0.6
WRA	Warramunga Arr	17.43	121	P	Pn	21 46 17.8	0.0
	0.1nm,0.3s,baz=293,slow=12,SNR=5.0						
WRA				S	Sn	21 49 21.1	-10
	0.2nm,0.6s,baz=289,slow=27,SNR=1.5						
	0.2nm,0.3s						
MORW	Morawa	17.66	187	P	Pn	21 46 21.2	+0.6
ASAR	Alice Springs	19.04	132	P	Pn	21 46 40.1	+2.5
	0.2nm,0.3s,baz=306,slow=11,SNR=10						
	1.3nm,0.8s						
ASAJ	Asahikawa	59.51	20	LR	LR	22 19 57.3	
	comp=Z,25nm,19.3s,baz=18,slow=38						
MKAR	Makanchi Array	66.42	334	P	P	21 53 03.6	+0.4
	0.4nm,0.6s,baz=156,slow=5.8,SNR=7.7						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	70.95	334	P	P	21 53 29.9	-1.4
	0.1nm,0.3s,baz=139,slow=6.0,SNR=2.0						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	71.15	340	P	P	21 53 30.5	-2.0
	0.5nm,0.5s,baz=150,slow=6.3,SNR=3.6						
	0.5nm,0.5s						

IDC 02 21:46:37.6±2.6, 48°.15N×153°.95E, h97km±25km, mb3.2/5, mbtmp3.6/8, Error ellipse: s-maj=32.2km s-min=17.1km az=131.0
ISC 02 21:46:34.8±1.1, 48°.0N±0°.1×154°.2E±0°.2, h64km, n17, σ1s.86/9, mb3.5/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.61	22	P	Pn	21 47 56.4	+0.8
	7.1nm,0.7s,baz=172,slow=11,SNR=20						
PETK				S	Sn	21 48 59.5	+0.9
	2.1nm,0.5s,baz=159,slow=13,SNR=0.9						
ASAJ	Asahikawa	8.92	249	P	Pn	21 48 43.5	+2.5
	6.7nm,0.5s,baz=76,slow=15,SNR=4.9						
MJAR	Matsushiro Arr	16.40	232	P	P	21 50 22.7	+0.2
	0.5nm,0.5s,baz=31,slow=10,SNR=1.9						
H11N2	WAKE ISLAND Hy	30.01	155	T	T	22 24 15.2	
	baz=344,slow=76,SNR=40						
H11N1	WAKE ISLAND Hy	30.02	156	T	T	22 24 43.6	
	baz=344,slow=76,SNR=75						
H11N3	WAKE ISLAND Hy	30.02	155	T	T	22 24 14.6	
	baz=344,slow=76,SNR=28						
H11S1	WAKE ISLAND Hy	31.12	157	T	T	22 25 33.3	
	baz=344,slow=76,SNR=297						
H11S3	WAKE ISLAND Hy	31.13	157	T	T	22 25 26.1	
	baz=344,slow=76,SNR=428						
H11S2	WAKE ISLAND Hy	31.14	157	T	T	22 25 34.8	
	baz=344,slow=76,SNR=319						
MKAR	Makanchi Array	47.02	297	P	P	21 54 56.8	-2.7
	0.3nm,0.7s,baz=79,slow=6.4,SNR=3.6						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	47.38	303	P	P	21 55 00.1	-2.1
	0.3nm,0.4s,baz=71,slow=8.4,SNR=2.7						
	0.3nm,0.4s						
WRA	Warramunga Arr	69.91	200	P	P	21 57 37.9	-1.0
	0.6nm,0.8s,baz=11,slow=6.0,SNR=3.1						
	0.6nm,0.8s						
ASAR	Alice Springs	73.60	199	P	P	21 58 00.9	-0.1
	0.6nm,0.7s,baz=11,slow=5.4,SNR=7.0						
	0.6nm,0.7s						
TXAR	Lajitas Array	76.27	61	P	P	21 58 16.9	+0.1
	0.4nm,0.7s,baz=293,slow=4.6,SNR=4.6						
	0.4nm,0.7s						
H03N2	Juan Fernandez	138.03	90	T	T	00 39 29.6	
	baz=309,slow=77,SNR=19						
H03N1	Juan Fernandez	138.05	90	T	T	00 39 19.9	
	baz=309,slow=77,SNR=23						
H03N3	Juan Fernandez	138.05	90	T	T	00 39 17.8	
	baz=309,slow=77,SNR=26						

IDC 02 21:52:33.6±2.0, 17°.68S×178°.74W, h524km±21km, mb3.7/14, mbtmp4.5/15, Error ellipse: s-maj=17.3km s-min=12.6km az=117.0
NEIC 02 21:52:36.3±2.0, 17°.7S±0°.1×178°.8W±0°.1, h543km±6km, mb4.9/36, Error ellipse: s-maj=17.7km s-min=14.5km az=132.0
NOU 02 21:52:37.2, 17°.72S×178°.80W, h566km, mb4.8/59, Fiji Islands Region
ISC 02 21:52:36.7±0.6, 17°.77S±0°.06×178°.75W±0°.06, h563km±6km, n204, σ1s.22/221, mb4.7/38, 2C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.47	188	P	P	21 53 44.5	+1.2
TAVE	Taveuni	1.53	313	P	P	21 53 46.7	+0.8
DGTI	Dogotuki	2.06	315	P	P	21 53 48.1	+0.1
MSVF	Nonsavu	3.05	270		P	21 53 52.8	-0.5
MSVF	Nonsavu	3.05	270	P	P	21 53 55.0	+1.8
AFI	Afiamalu	7.73	61	P	P	21 54 29.3	-3.0
AFI	Afiamalu	7.73	61	P	P	21 54 29.0	-3.4
NIUE	Niue	8.47	100	P	P	21 54 40.2	+0.8
NIUE	Niue	8.47	100	P	P	21 54 40.4	+0.9
NIUE	Niue	8.47	100	P	P	21 54 39.9	+0.4
FUNA	Funafuti	9.40	347	P	P	21 54 47.2	-1.7
GLKZ	Green Lake	11.47	176	P	P	21 55 08.7	-1.0
RTV	Rentapao	12.22	268	P	P	21 55 17.9	+0.3
DVP	Devils Point	12.45	268	P	P	21 55 20.1	+0.2
MARNC	Mare, Loyalty	12.99	251		P	21 55 24.6	-0.9
MARNC	Mare, Loyalty	12.99	251	P	P	21 55 24.4	-1.1
PINNC	Pines Island,	13.83	247	P	P	21 55 33.7	-0.4
YATNC	Mamie plateau,	14.16	250	P	P	21 55 36.5	-1.0
	37nm,0.8s						
OUENC	Ouen Island, N	14.30	249	P	P	21 55 38.3	-0.6
DZM	Mont Dzumac	14.57	250	P	P	21 55 41.0	-0.7
	58nm,0.5s,baz=134,slow=21,SNR=54						
DZM	Mont Dzumac	14.57	250		P	21 55 40.3	-1.4
DZM	Mont Dzumac	14.57	250	P	P	21 55 40.7	-1.0
ONTNC	Ouen Toro	14.62	250		P	21 55 41.6	-0.5
KOUNC	Koumac, New Ca	16.27	257	P	P	21 55 58.2	-0.1
OUZ	Omahuta	18.67	200	P	P	21 56 22.6	+2.7
OUZ	Omahuta	18.67	200	P	P	21 56 22.7	+2.8
WCZ	Waipu Caves	19.11	197	P	P	21 56 26.6	+2.7
GRZ	Great Barrier	19.11	194	P	P	21 56 25.8	+1.9
MXZ	Matakaoa Point	19.89	187	P	P	21 56 31.8	+0.9
MXZ	Matakaoa Point	19.89	187	P	P	21 56 31.7	+0.8
MXZ	Matakaoa Point	19.89	187	P	P	21 56 30.0	-0.9
WMGZ	Waiomatatini S	20.13	187	P	P	21 56 34.5	+1.4
HAZ	Te Kaha	20.15	188	P	P	21 56 34.8	+1.6
PKGZ	Pakihiroa	20.22	187	P	P	21 56 34.5	+0.5
RUGZ	Raukumara Rang	20.36	188	P	P	21 56 35.4	0.0
TOZ	Tahuroa Road	20.52	193	P	P	21 56 38.0	+1.4
TWGZ	Tauwhareparae	20.54	187	P	P	21 56 37.7	+0.9
URZ	Urewera	20.74	189	P	P	21 56 36.8	-1.8
	7.9nm,0.5s,baz=275,slow=1.8,SNR=11						
URZ				S	S	21 59 51.5	-2.6
	4.3nm,0.5s,baz=156,slow=21,SNR=7.2						
	7.9nm,0.5s						
URZ	Urewera	20.74	189	P	P	21 56 37.8	-0.8
URZ				S	S	21 59 48.6	-5.6
MWZ	Matawai	20.75	188	P	P	21 56 38.8	0.0
MWZ				S	S	21 59 49.7	-4.7
NGOA	Tingoa Renbel	21.40	284	P	P	21 56 45.0	+0.1
BKZ	Black Stump Fm	21.72	190	P	P	21 56 46.0	-1.5
BKZ	Black Stump Fm	21.72	190	P	P	21 56 47.0	-0.5
TATA	Tatamba Isabel	22.86	291	P	P	21 56 58.0	+0.1
BFZ	Birch Farm	23.24	190	P	P	21 57 02.6	+1.6
BFZ	Birch Farm	23.24	190	P	P	21 57 03.8	+2.9
TCW	Tory Channel	24.12	193	P	P	21 57 09.1	+0.3
QRZ	Quartz Range	24.18	196	P	P	21 57 10.8	+1.5
QRZ	Quartz Range	24.18	196	P	P	21 57 10.1	+0.8
QRZ	Quartz Range	24.18	196	P	P	21 57 11.4	+2.1
TKNZ	Takaka Hill	24.26	195	P	P	21 57 10.3	+0.2
TKNZ	Takaka Hill	24.26	195	P	P	21 57 10.2	+0.2
MRNZ	Matariki Terra	24.66	195	P	P	21 57 13.5	0.0
MRNZ	Matariki Terra	24.66	195	P	P	21 57 13.7	+0.2
THZ	Tophouse	24.96	195	P	P	21 57 17.3	+1.1
THZ	Tophouse	24.96	195	P	P	21 57 16.3	0.0
DSZ	Denniston Nort	25.23	197	P	P	21 57 19.2	+0.6
KHZ	Kahutara	25.43	193	P	P	21 57 19.6	-0.7
KHZ	Kahutara	25.43	193	P	P	21 57 19.6	-0.7
LBZ	Lake Benmore	28.12	197	P	P	21 57 42.9	-1.1
ODZ	Otahua Downs	28.61	196	P	P	21 57 48.0	-0.1
EIDS	Eidsvold	29.01	250		P	21 57 51.5	-0.4
EIDS	Eidsvold	29.01	250	P	P	21 57 51.9	-0.1
MLZ	Mavora Lakes	29.62	199	P	P	21 57 57.2	+0.2
MLZ				IAmb	IAmb	21 57 59.1	
	comp=Z,25nm,0.6s						
ARMA	Armidale	29.73	239		P	21 57 59.2	+1.0
ARMA				IAmb	IAmb	21 58 00.4	
	comp=Z,37nm,0.6s						
ARMA	Armidale	29.73	239	P	P	21 57 59.2	+1.0
WHZ	Wether Hill Ro	30.15	199	P	P	21 58 02.4	+1.0
MGCD	Mangrove Creek	31.11	235	P	P	21 58 11.6	+1.7
CAN	Canberra	33.53	232	P	P	21 58 31.6	+1.1
CAN				IAmb	IAmb	21 58 32.3	
	comp=Z,30nm,1.1s						
CAN	Canberra	33.53	232	P	P	21 58 31.4	+0.9
	comp=Z,79nm,1.6s						
PMG	Port Moresby	34.12	280		P	21 58 35.1	-0.4
PMG				IAmb	IAmb	21 58 37.4	
	comp=Z,31nm,0.9s						
CMSA	Cobar Meteorol	34.94	240	P	P	21 58 42.6	+0.4
MTSU	Mount Surprise	35.10	264	P	P	21 58 43.5	-0.3
QLP	Quilpie	35.28	249	P	P	21 58 45.3	+0.1
GLAD	Gladstone	36.73	224	P	P	21 58 57.5	+0.7
COEN	Coen	36.78	270		P	21 58 57.7	0.0
COEN				IAmb	IAmb	21 58 59.0	
	comp=Z,26nm,0.6s						
COEN	Coen	36.78	270	P	P	21 58 57.7	0.0
TOO	Toolangi	37.01	230	P	P	21 59 00.0	+0.8
TOO				IAmb	IAmb	21 59 02.0	
	comp=Z,37nm,1.3s						
MOO	Moorlands	37.98	222	P	P	21 59 07.7	+0.7
TAU	Tasmania Unive	38.13	222	P	P	21 59 09.1	+1.0
TAU	Tasmania Unive	38.13	222	P	P	21 59 09.2	+1.0
BRAT	Ballarat	38.15	231	P	P	21 59 10.1	+1.6
STKA	Stephens Creek	38.41	241	P	P	21 59 11.6	+0.8
	comp=Z,35nm,0.4s,baz=94,slow=9.5,SNR=156						
	comp=Z,35nm,0.4s						
STKA	Stephens Creek	38.41	241		P	21 59 11.7	+0.9
STKA	Stephens Creek	38.41	241	P	P	21 59 11.3	+0.5
INKA	Innaminka	38.50	248		P	21 59 12.2	+0.7
INKA				IAmb	IAmb	21 59 13.7	
	comp=Z,19nm,0.8s						
QIS	Mount Isa	39.36	259	P	P	21 59 18.0	-0.6
MGBR	Mount Gambier	40.73	232	P	P	21 59 30.4	+1.2

HTT	**Hallett**	**40.94**	**239**	P	**P**	**21 59 31.8**	**+0.8**
BBOO	**Buckleboo**	**43.19**	**241**		**P**	**21 59 48.6**	**0.0**
BBOO	**Buckleboo**	**43.19**	**241**	P	**P**	**21 59 48.8**	**+0.1**
WR8	**Warramunga Arr**	**44.19**	**259**		**P**	**21 59 55.4**	**-1.1**
WR8				IAmb	IAmb	21 59 57.0	
	comp=Z,14nm,0.5s						
WB0	**Warramunga Arr**	**44.31**	**260**		**P**	**21 59 56.6**	**-0.8**
WB0				IAmb	IAmb	21 59 57.8	
	comp=Z,22nm,0.9s						
WRAB	**Tennant Creek**	**44.33**	**259**	P	**P**	**21 59 57.0**	**-0.7**
WRAB				IAmb	IAmb	21 59 57.9	
	comp=Z,20nm,0.7s						
WRAB	**Tennant Creek**	**44.33**	**259**	P	**P**	**21 59 56.4**	**-1.3**
WRAB	**Tennant Creek**	**44.33**	**259**	P	**P**	**21 59 56.7**	**-0.9**
WB1	**Warramunga Ar.**	**44.33**	**259**	P	**P**	**21 59 56.6**	**-1.1**
WRA	**Warramunga Arr**	**44.34**	**259**	P	**P**	**21 59 56.9**	**-0.9**
	comp=Z,16nm,0.6s,baz=95,slow=7.2,SNR=280						
WRA				PcP	**PcP**	**22 01 30.1**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=91,slow=3.2,SNR=5.1						
WRA				ScP	**ScP**	**22 04 31.5**	**+3.3**
	comp=Z,0.3nm,0.4s,baz=29,slow=2.2,SNR=2.0						
	comp=Z,16nm,0.6s						
WRA	**Warramunga Arr**	**44.34**	**259**		**P**	**21 59 55.8**	**-2.0**
WRA					**PcP**	**22 01 29.9**	**+0.4**
WRA					**ScP**	**22 04 29.8**	**+1.6**
AS31	**Alice Springs**	**44.52**	**254**		**P**	**21 59 58.8**	**-0.3**
ASAR	**Alice Springs**	**44.52**	**254**	P	**P**	**21 59 58.9**	**-0.2**
	comp=Z,184nm,0.5s,baz=88,slow=8.1,SNR=2539						
ASAR				PcP	**PcP**	**22 01 30.2**	**+0.2**
	comp=Z,4.9nm,0.4s,baz=103,slow=3.4,SNR=5.3						
ASAR				ScP	**ScP**	**22 04 32.3**	**+3.4**
	comp=Z,1.4nm,0.8s,baz=92,slow=4.2,SNR=3.6						
ASAR				S	**S**	**22 05 51.8**	**-2.4**
	comp=Z,1.3nm,0.9s,baz=94,slow=15,SNR=6.4						
ASAR	**Alice Springs**	**44.52**	**254**		**P**	**21 59 59.1**	**0.0**
ASAR					**PcP**	**22 01 30.4**	**+0.3**
ASAR					**ScP**	**22 04 31.3**	**+2.3**
MTN	**Manton Dam**	**48.48**	**268**		**P**	**22 00 28.3**	**-0.8**
MTN				IAmb	IAmb	22 00 56.7	
	comp=Z,30nm,1.2s						
FORT	**Forrest**	**49.78**	**244**		**P**	**22 00 37.9**	**-0.5**
FORT				IAmb	IAmb	22 00 39.1	
	comp=Z,45nm,0.6s						
KNRA	**Kununurra**	**50.18**	**264**		**P**	**22 00 41.1**	**-0.5**
KNRA				IAmb	IAmb	22 00 42.3	
	comp=Z,41nm,0.6s						
FAKI	**Fak Fak**	**50.23**	**281**	P	**P**	**22 00 41.8**	**-0.2**
SOEI	**Soe**	**55.75**	**270**		**P**	**22 01 21.9**	**+0.6**
SOEI	**Soe**	**55.75**	**270**	P	**P**	**22 01 22.6**	**+1.3**
PSA00	**Pilbara Seismi**	**57.63**	**255**	P	**P**	**22 01 33.5**	**-0.5**
PSA00				IAmb	IAmb	22 01 34.8	
	comp=Z,32nm,0.6s						
PSA00	**Pilbara Seismi**	**57.63**	**255**		**P**	**22 01 33.4**	**-0.5**
PSA00				IAmb	IAmb	22 01 34.8	
	comp=Z,17nm,0.9s						
PSA00	**Pilbara Seismi**	**57.63**	**255**	P	**P**	**22 01 33.5**	**-0.5**
MBWA	**Marble Bar**	**57.80**	**256**		**P**	**22 01 34.5**	**-0.6**
MBWA	**Marble Bar**	**57.80**	**256**	P	**P**	**22 01 34.2**	**-0.9**
MBWA	**Marble Bar**	**57.80**	**256**	P	**P**	**22 01 34.5**	**-0.6**
MEEK	**Meekatharra**	**58.18**	**249**	P	**P**	**22 01 36.9**	**-0.8**
KLBR	**Kellerberrin**	**58.60**	**243**	P	**P**	**22 01 39.9**	**-0.5**
NWAO	**Narrogin (SRO)**	**58.99**	**242**	P	**P**	**22 01 43.1**	**+0.1**
BLDU	**Ballidu**	**59.55**	**245**	P	**P**	**22 01 46.2**	**-0.5**
MUN	**Mundaring**	**59.90**	**243**	P	**P**	**22 01 49.3**	**+0.3**
MORW	**Morawa**	**60.24**	**246**	P	**P**	**22 01 50.9**	**-0.5**
PLAI	**Plampang**	**62.17**	**269**	P	**P**	**22 02 03.6**	**-0.6**
TOLI2	**Tolitoli**	**62.37**	**281**	P	**P**	**22 02 05.9**	**+0.4**
CCD	**Concordia, Ant**	**64.93**	**194**	P	**P**	**22 02 22.1**	**+0.9**
CCD				PcP	**PcP**	**22 02 48.7**	**0.0**
JAGI	**Jajag, Banyuwa**	**65.72**	**269**		**P**	**22 02 25.5**	**-1.2**
JAGI				IAmb	IAmb	22 02 26.2	
	comp=Z,28nm,0.5s						
JAGI	**Jajag, Banyuwa**	**65.72**	**269**	P	**P**	**22 02 25.5**	**-1.2**
MJAR	**Matsushiro Arr**	**67.60**	**324**	P	**P**	**22 02 36.7**	**-1.2**
	comp=Z,3.2nm,0.6s,baz=153,slow=5.9,SNR=12						
	comp=Z,3.2nm,0.6s						
MJAR	**Matsushiro Arr**	**67.60**	**324**		**P**	**22 02 37.6**	**-0.2**
UGM	**Wanagama**	**69.33**	**268**		**P**	**22 02 48.5**	**-0.3**
UGM	**Wanagama**	**69.33**	**268**	P	**P**	**22 02 48.6**	**-0.3**
BBJI	**Bungbulang**	**72.19**	**268**		**P**	**22 03 04.9**	**-0.8**
BBJI				IAmb	IAmb	22 03 06.4	
	comp=Z,21nm,0.8s						
BBJI	**Bungbulang**	**72.19**	**268**	P	**P**	**22 03 04.9**	**-0.8**
QSPA	**South Pole Qui**	**72.29**	**180**	P	**P**	**22 03 06.4**	**+1.1**
	comp=Z,7.5nm,0.6s,baz=342,slow=0.8,SNR=9.0						
	comp=Z,7.5nm,0.6s						
QSPA	**South Pole Qui**	**72.29**	**180**	P	**P**	**22 03 06.7**	**+1.3**
QSPA	**South Pole Qui**	**72.29**	**180**	P	**P**	**22 03 06.5**	**+1.2**
PETK	**Petropavlovsk-**	**73.46**	**345**	P	**P**	**22 03 11.9**	**-0.1**
	comp=Z,7.2nm,0.7s,baz=116,slow=7.6,SNR=17						
	comp=Z,7.2nm,0.7s						
MNAI	**Manna**	**77.55**	**269**	P	**P**	**22 03 36.1**	**+0.5**
NJ2	**Nanjing**	**77.60**	**310**	*e*P	**P**	**22 03 37.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SLBS	**Sierra La Lagu**	**78.77**	**61**	P	**P**	**22 03 38.8**	**-3.2**
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**22 03 46.9**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=235,slow=8.9,SNR=5.0						
	comp=Z,1.6nm,0.7s						
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**22 03 46.2**	**+0.2**
BNX	**BinXian**	**79.80**	**325**	⇑P	**P**	**22 03 46.9**	**+0.1**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.7s						
IPM	**Ipoh**	**82.08**	**277**	P	**P**	**22 04 00.1**	**+0.7**
SEY	**Seymchan**	**83.57**	**347**	P	**P**	**22 04 05.0**	**-0.6**
	comp=Z,6.1nm,0.5s,baz=146,slow=6.5,SNR=27						
	comp=Z,6.1nm,0.5s						
ENH	**Enshi**	**83.93**	**304**	P	**P**	**22 04 08.9**	**+0.7**
ENH	**Enshi**	**83.93**	**304**	P	**P**	**22 04 08.9**	**+0.7**
TRF	**Thorofare Moun**	**83.94**	**12**		**P**	**22 04 06.8**	**-0.9**
TRF				IAmb	IAmb	22 04 09.9	
	comp=Z,44nm,1.6s						
U35K	**Hyder**	**84.07**	**25**	P	**P**	**22 04 09.5**	**+1.3**
GSI	**Gunungsitoli**	**84.37**	**273**	P	**P**	**22 04 11.7**	**+0.9**
IL31		**85.82**	**13**	P	**P**	**22 04 16.5**	**0.0**
IL31				IAmb	IAmb	22 05 17.4	
	comp=Z,24nm,1.7s						
ILAR	**Eielson Array**	**85.82**	**13**	P	**P**	**22 04 16.0**	**-0.5**
	comp=Z,1.4nm,0.4s,baz=224,slow=5.1,SNR=37						
	comp=Z,1.4nm,0.4s						
ILAR	**Eielson Array**	**85.82**	**13**	P	**P**	**22 04 16.4**	**-0.2**
XAN	**Xi'an**	**85.92**	**308**	⇑P	**P**	**22 04 18.9**	**+1.1**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TXAR	**Lajitas Array**	**86.19**	**58**	P	**P**	**22 04 20.9**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=218,slow=7.0,SNR=5.7						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**86.19**	**58**	P	**P**	**22 04 20.1**	**+0.8**
BILL	**Bilibino**	**86.26**	**354**	P	**P**	**22 04 18.6**	**0.0**
BILL				PcP	**PcP**	**22 04 21.5**	**+1.3**
J26L	**Joseph Creek**	**86.35**	**14**	P	**P**	**22 04 19.8**	**+0.6**
HHC	**Hu-ho-hao-te**	**86.94**	**315**	*e*P	**P**	**22 04 24.7**	**+2.1**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PD31	**Pinedale Array**	**87.47**	**44**	P	**P**	**22 04 25.7**	**+0.6**
PDAR	**Pinedale Array**	**87.47**	**44**	P	**P**	**22 04 25.8**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=211,slow=3.0,SNR=13						
	comp=Z,1.0nm,0.5s						
BTO2	**Baotou**	**88.05**	**314**	*e*P	**P**	**22 04 31.3**	**+3.5**
BTO2				PP	**PP**	**22 08 03.6**	**-1.7**
BTO2				S	**S**	**22 14 22.4**	**-2.4**
BTO2				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BTO2				pmax	pmax		
	comp=Z,460nm,8.3s						
BTO2				LR	LR		
	comp=N,370nm,4.3s						
BTO2				LR	LR		
	comp=E,330nm,5.9s						
BTO2				LR	LR		
	comp=Z,410nm,6.8s						
CMAR	**Chiang Mai Arr**	**88.53**	**290**	P	**P**	**22 04 31.7**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=122,slow=2.2,SNR=11						
	comp=Z,0.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**88.53**	**290**	P	**P**	**22 04 31.2**	**+0.8**
CHTO	**Chiang Mai**	**88.65**	**290**	P	**P**	**22 04 32.1**	**+1.2**
PZH	**PanZhiHua**	**88.81**	**298**	P	**P**	**22 04 31.8**	**+0.2**
ELIB	**Princess Elisa**	**89.26**	**187**	*d*P	**P**	**22 04 33.4**	**+0.5**
	comp=Z,8.6nm,0.7s						
SONM	**Songino Array**	**93.23**	**319**	P	**P**	**22 04 52.0**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=120,slow=5.0,SNR=1.7						
	comp=Z,0.2nm,0.5s						
SONM	**Songino Array**	**93.23**	**319**	P	**P**	**22 04 51.5**	**-0.1**
YKA	**Yellowknife Ar**	**94.34**	**25**	P	**P**	**22 04 55.9**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=254,slow=4.7,SNR=4.0						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**94.34**	**25**	P	**P**	**22 04 56.3**	**+0.3**
BVAR	**Borovoye Array**	**116.53**	**321**	PKP	**PKPdf**	**22 10 16.3**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=113,slow=3.0,SNR=10						
BOSA	**Boshof**	**128.38**	**207**	PKP	**PKiKP**	**22 10 41.1**	**-0.1**
	comp=Z,3.0nm,1.0s,baz=132,slow=5.3,SNR=3.8						
FINES	**FINESS Array B**	**132.97**	**344**	PKP	**PKiKP**	**22 10 48.5**	**-0.7**
	comp=Z,7.5nm,1.1s,baz=34,slow=0.5,SNR=4.2						
FINES	**FINESS Array B**	**132.97**	**344**		**PKiKP**	**22 10 49.0**	**-0.2**
BNN	**Bunyan**	**143.32**	**312**		**PKPdf**	**22 11 06.5**	**-1.2**
LODK	**Lodwar**	**143.66**	**251**		PKPbc	22 11 07.7	-0.3
BUR08	**Bucovina Ar. S**	**144.32**	**332**		**PKPab**	**22 11 09.4**	**-0.1**
BR131	**Keskin Array S**	**144.46**	**315**		**PKPab**	**22 11 09.9**	**-0.4**
BRTR	**Keskin Array B**	**144.46**	**315**	PKP	**PKPab**	**22 11 09.8**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=76,slow=4.1,SNR=15						
OSTC	**Ostas**	**145.16**	**343**	*e*PKP	**PKPab**	**22 11 11.9**	**-0.6**
CLL	**Collm**	**145.25**	**347**	*e*PKPbc	**PKPab**	**22 11 12.0**	**-0.8**
	comp=Z,5.0nm,0.6s						
CLL				*e*SKPbc	**SKiKP**	**22 13 59.0**	**+1.3**
STEB	**Steborice**	**145.27**	**341**	*e*PKP	**PKPbc**	**22 11 11.1**	**-0.6**
DPC	**Dobruska-Polom**	**145.32**	**343**	*e*PKP	**PKPbc**	**22 11 11.8**	**-0.1**
MBAR	**Mbarara**	**145.72**	**241**		**PKPbc**	**22 11 14.2**	**-0.1**
RICC	**Richard**	**145.72**	**345**	*e*PKP	**PKPbc**	**22 11 12.6**	**-0.4**
MMAI	**Mount Meron Ar**	**145.80**	**303**	PKPbc	**PKPab**	**22 11 14.4**	**-1.2**
	comp=Z,4.2nm,0.6s,baz=46,slow=7.0,SNR=15						
BORA	**Eskisehir**	**146.49**	**317**	PKPdf	**PKPdf**	**22 11 13.3**	**+0.3**
MODS	**Modra-Piesok**	**146.79**	**340**	*e*PKP	**PKPdf**	**22 11 13.7**	**+0.5**
KHC	**Kasperske Hory**	**147.16**	**345**	*e*PKP	**PKPdf**	**22 11 14.0**	**+0.2**
CKRC	**Cesky Krumlov**	**147.26**	**344**	*e*PKP	**PKPbc**	**22 11 16.3**	**-0.9**
GERES	**GERESS Array B**	**147.39**	**345**	PKPbc	**PKPbc**	**22 11 17.7**	**0.0**
	comp=Z,1.3nm,0.6s,baz=9.5,slow=4.1,SNR=7.2						
CONA	**Conrad Observa**	**147.63**	**342**	*e*PKP	**PKiKP**	**22 11 18.8**	**-1.0**
	comp=Z,1.0nm,0.4s						
RONA	**Rosalia, Austr**	**147.70**	**341**	*i* PKiKP	**PKiKP**	**22 11 19.2**	**-0.8**
	comp=Z,3.0nm,0.5s						
LESA	**Schwarzleotal**	**148.97**	**345**	*e*PKP	**PKiKP**	**22 11 21.6**	**-1.0**
	comp=Z,1.2nm,0.4s						
KBA	**Koelnbreinsper**	**149.12**	**344**	*e*PKP	**PKPbc**	**22 11 21.4**	**-0.8**
	comp=Z,1.2nm,0.4s						
WATA	**Walderalm**	**149.31**	**346**	*i* PKP	**PKPbc**	**22 11 22.3**	**-0.3**
	comp=Z,1.6nm,0.5s						
WTTA	**Wattenberg**	**149.37**	**346**	*i* PKP	**PKiKP**	**22 11 22.7**	**-0.9**
	comp=Z,1.9nm,0.4s						
MOTA	**Moosalm**	**149.41**	**347**	*e*PKP	**PKiKP**	**22 11 23.0**	**-0.6**
	comp=Z,1.4nm,0.4s						
MYKA	**Terra Mystica**	**149.45**	**343**	*i* PKP	**PKiKP**	**22 11 22.7**	**-0.9**
	comp=Z,1.3nm,0.4s						
SQTA	**Sankt Quirin**	**149.50**	**347**	*e*PKP	**PKiKP**	**22 11 22.8**	**-0.9**
	comp=Z,2.2nm,0.5s						
ABTA	**Abfaltersbach**	**149.64**	**345**	*e*PKP	**PKPbc**	**22 11 22.7**	**-0.6**
	comp=Z,2.7nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**150.28**	**347**		**PKiKP**	**22 11 24.9**	**-0.7**
ESDC	**Sonseca Array**	**157.71**	**11**	PKPab	**PKPab**	**22 12 04.1**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=340,slow=3.3,SNR=4.8						
ESDC	**Sonseca Array**	**157.71**	**11**		**PKPab**	**22 12 04.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**175.39**	**185**	PKP	**PKPdf**	**22 11 42.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=204,slow=1.3,SNR=5.0						
TORD				PKPab	**PKPab**	**22 13 24.6**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=190,slow=5.9,SNR=4.1						

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*JMA **02** 21:55:17.6±0.1, 25°N±1°×122°.5E±0°.4, h119km±1km, MV3.2/16, NW OFF ISHIGAKIJIMA IS*
*TAP **02** 21:55:17.3, 24°.78N×122°.49E, h119km, ML4.1, B*
ISC 02 21:55:17.0±1.2, **24°.76N**±0°.03×**122°.49E**±0°.02, **h123**km±5km, **n156**, σ0^{s}79/293, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.41**	**215**	*i* P	**Pn**	**21 55 35.0**	**+0.4**
EOS2				*e*S	**Sn**	**21 55 48.9**	**+1.0**
EOS3	**EOS3**	**0.49**	**198**	*i* P	**Pn**	**21 55 35.7**	**+0.6**
EOS3				*e*S	**Sn**	**21 55 50.0**	**+1.3**
JYNG	**Yonagunijimaku**	**0.52**	**126**	P	**Pn**	**21 55 35.4**	**+0.1**
JYNG				S	**Sn**	**21 55 48.8**	**-0.4**
TWB1	**Santiao Chiao**	**0.52**	**299**	*i* P	**Pn**	**21 55 35.6**	**+0.3**
TWB1				*i* S	**Sn**	**21 55 48.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.56**	**122**	P	**Pn**	**21 55 35.7**	**+0.1**
YOJ				*e*S	**Sn**	**21 55 49.2**	**-0.5**
YOJ	**Yonaguni jima**	**0.56**	**122**	*i* P	**Pn**	**21 55 35.7**	**+0.1**
YOJ				*i* S	**Sn**	**21 55 49.4**	**-0.3**
TWC	**Suao**	**0.60**	**256**	*i* P	**Pn**	**21 55 35.7**	**-0.1**
TWC				S	**Sn**	**21 55 49.1**	**-1.0**
ESAO	**Su ao**	**0.61**	**253**	*e*P	**Pn**	**21 55 36.6**	**+0.6**
ESAO				*e*S	**Sn**	**21 55 48.1**	**-2.2**
TIPB	**Shuangxi**	**0.64**	**290**	*i* P	**Pn**	**21 55 36.5**	**+0.3**
TIPB				*i* S	**Sn**	**21 55 50.1**	**-0.6**
SXI1	**Grass Mountain**	**0.65**	**301**	*e*P	**Pn**	**21 55 36.6**	**+0.3**
SXI1				*e*S	**Sn**	**21 55 50.7**	**-0.3**
EOS4	**EOS4**	**0.65**	**194**	P	**Pn**	**21 55 36.0**	**+0.1**
EOS4				S	**Sn**	**21 55 49.8**	**-0.3**
ILA	**Ilan**	**0.67**	**271**	*e*S	**Sn**	**21 55 49.8**	**-1.2**
NDS	**Dongshan**	**0.71**	**260**	*e*P	**Pn**	**21 55 37.1**	**+0.4**
NDS				*e*S	**Sn**	**21 55 51.0**	**-0.6**
NWF	**Wu-fen Shan**	**0.71**	**296**	*e*P	**Pn**	**21 55 37.2**	**+0.4**
NWF				*e*S	**Sn**	**21 55 51.7**	**-0.1**
WFSB	**Wu-fen Shan**	**0.71**	**296**	P	**Pn**	**21 55 37.0**	**+0.3**
WFSB				S	**Sn**	**21 55 51.7**	**+0.1**
EWUT	**Wuta**	**0.72**	**244**	*i* P	**Pn**	**21 55 37.1**	**+0.3**
EWUT				*e*S	**Sn**	**21 55 51.4**	**-0.3**
TWE	**Neicheng**	**0.75**	**267**	P	**Pn**	**21 55 37.4**	**+0.4**
TWE				S	**Sn**	**21 55 51.7**	**-0.3**
ENA	**Nanau**	**0.75**	**244**	*i* P	**Pn**	**21 55 37.5**	**+0.5**
ENA				S	**Sn**	**21 55 52.4**	**+0.2**
EAHA	**Aohua**	**0.80**	**238**	*i* P	**Pn**	**21 55 37.7**	**+0.2**
EAHA				*i* S	**Sn**	**21 55 53.0**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.82**	**270**	P	**Pn**	**21 55 37.9**	**+0.2**
FUSB				*e*S	**Sn**	**21 55 52.7**	**-0.6**
ENTT	**Nioudou**	**0.85**	**262**	P	**Pn**	**21 55 38.8**	**+1.0**
ENTT				*e*S	**Sn**	**21 55 54.1**	**+0.5**
TWA	**Mucha**	**0.85**	**285**	*e*P	**Pn**	**21 55 37.9**	**0.0**
TWA				S	**Sn**	**21 55 52.8**	**-0.9**
NWLT	**Wulai**	**0.90**	**271**	*e*P	**Pn**	**21 55 38.2**	**-0.1**
NWLT				*e*S	**Sn**	**21 55 53.6**	**-0.8**
NHDH	**Xindian Distri**	**0.90**	**283**	*e*P	**Pn**	**21 55 38.5**	**+0.2**
LATG	**Datong**	**0.90**	**256**	P	**Pn**	**21 55 39.2**	**+0.7**
LATG				S	**Sn**	**21 55 55.1**	**+0.4**
YM01	**YM01**	**0.92**	**295**	P	**Pn**	**21 55 38.7**	**+0.2**
YM01				S	**Sn**	**21 55 54.1**	**-0.7**
YM08	**YM08**	**0.92**	**298**	*e*P	**Pn**	**21 55 38.6**	**+0.1**
YM08				*e*S	**Sn**	**21 55 54.1**	**-0.8**
TATO	**Taipei**	**0.93**	**284**	P	**Pn**	**21 55 38.6**	**0.0**
TATO				*e*S	**Sn**	**21 55 54.4**	**-0.6**
ZUZH	**Zhuzihu**	**0.94**	**295**	*i* P	**Pn**	**21 55 38.9**	**+0.1**
ZUZH				*i* S	**Sn**	**21 55 54.4**	**-0.9**
PCYT	**Pengchaiyu**	**0.95**	**337**	*e*P	**Pn**	**21 55 39.6**	**+0.8**
TWY	**Chenhua**	**0.96**	**303**	*e*P	**Pn**	**21 55 39.3**	**+0.5**
TWY				*e*S	**Sn**	**21 55 55.5**	**+0.1**
ANP	**Anpu**	**0.98**	**296**	*e*P	**Pn**	**21 55 39.5**	**+0.4**
ANP				*e*S	**Sn**	**21 55 55.4**	**-0.5**
ETL	**Fush Village**	**0.99**	**233**	*e*P	**Pn**	**21 55 39.1**	**-0.1**
ETL				*e*S	**Sn**	**21 55 55.6**	**-0.4**
NACB	**Ninganchiao**	**1.00**	**235**	P	**Pn**	**21 55 39.2**	**-0.1**
NACB				S	**Sn**	**21 55 55.2**	**-0.9**
YHNB	**Yeheng**	**1.01**	**265**	*i* P	**Pn**	**21 55 39.9**	**+0.4**
YHNB				S	**Sn**	**21 55 56.3**	**-0.2**
NTST	**Danshui**	**1.02**	**293**	*i* P	**Pn**	**21 55 39.8**	**+0.3**
NTST				*i* S	**Sn**	**21 55 56.2**	**-0.3**
TWS1	**Kuangyinshan**	**1.03**	**290**	*i* P	**Pn**	**21 55 39.9**	**+0.4**
TWS1				*i* S	**Sn**	**21 55 56.3**	**-0.3**
NSK	**Sanguang**	**1.03**	**266**	*i* P	**Pn**	**21 55 40.0**	**+0.4**
NSK				*i* S	**Sn**	**21 55 56.5**	**-0.3**
TWD	**Chiawan**	**1.06**	**230**	P	**Pn**	**21 55 39.8**	**0.0**
TWD				*i* S	**Sn**	**21 55 56.8**	**-0.3**
NNSB	**Datong**	**1.06**	**252**	P	**Pn**	**21 55 40.4**	**+0.5**
NNSB				S	**Sn**	**21 55 57.3**	**-0.1**
NNSH	**Datong**	**1.06**	**252**	*e*P	**Pn**	**21 55 40.5**	**+0.6**
NNSH				*e*S	**Sn**	**21 55 57.1**	**-0.2**
NNS	**Nan Shan**	**1.06**	**253**	*i* P	**Pn**	**21 55 40.5**	**+0.5**
NNS				S	**Sn**	**21 55 57.4**	**-0.1**
ETLH	**Xiulin Townshi**	**1.07**	**239**	*e*P	**Pn**	**21 55 40.4**	**+0.4**
ETLH				*e*S	**Sn**	**21 55 57.3**	**-0.2**
NTY	**Taoyuan**	**1.11**	**283**	*e*P	**Pn**	**21 55 41.0**	**+0.7**
NTY				*e*S	**Sn**	**21 55 58.9**	**+0.9**
HWA	**Hwalien**	**1.12**	**226**	P	**Pn**	**21 55 40.8**	**+0.3**
HWA				*e*S	**Sn**	**21 55 58.4**	**+0.2**
KSHI	**Guanxi Townshi**	**1.19**	**271**	P	**Pn**	**21 55 41.9**	**+0.7**
KSHI				S	**Sn**	**21 56 00.3**	**+0.8**
NCU	**National Centr**	**1.20**	**280**	*e*P	**Pn**	**21 55 40.2**	**-1.0**
NCU				*e*S	**Sn**	**21 55 59.2**	**-0.5**
NCUH	**Zhongli**	**1.20**	**280**	P	**Pn**	**21 55 42.0**	**+0.7**
NCUH				S	**Sn**	**21 56 00.2**	**+0.5**
TEYL	**Yanliau Villag**	**1.20**	**223**	*i* P	**Pn**	**21 55 41.3**	**0.0**
TEYL				S	**Sn**	**21 55 59.4**	**-0.3**
ETM	**Tongmen**	**1.20**	**229**	P	**Pn**	**21 55 41.1**	**-0.2**
ETM				*e*S	**Sn**	**21 55 59.1**	**-0.7**
IRIF	**Iriomote-Funau**	**1.21**	**110**	P	**Pn**	**21 55 41.5**	**+0.2**
IRIF				S	**Sn**	**21 55 59.2**	**-0.7**
FUSS	**Fushou**	**1.24**	**246**	*i* P	**Pn**	**21 55 42.6**	**+0.6**
FUSS				S	**Sn**	**21 56 01.1**	**+0.2**
NFF	**Wufeng Townshi**	**1.25**	**265**	*i* P	**Pn**	**21 55 42.2**	**+0.3**
NFF				*i* S	**Sn**	**21 56 00.7**	**-0.2**
WHF	**Hehuan Shan**	**1.27**	**242**	P	**Pn**	**21 55 42.8**	**+0.3**
WHF				S	**Sn**	**21 56 01.2**	**-0.6**
NJD	**Zhudong**	**1.27**	**269**	*e*P	**Pn**	**21 55 42.7**	**+0.7**
NJD				*e*S	**Sn**	**21 56 01.4**	**+0.3**
SHUL	**Shoufeng**	**1.28**	**221**	P	**Pn**	**21 55 42.2**	**+0.1**
SHUL				S	**Sn**	**21 56 00.9**	**-0.3**
TWT	**Tachien**	**1.30**	**247**	*i* P	**Pn**	**21 55 43.6**	**+1.1**
TWT				*i* S	**Sn**	**21 56 02.4**	**+0.6**
TDCB	**Techi**	**1.31**	**248**	P	**Pn**	**21 55 43.5**	**+0.9**
TDCB				*i* S	**Sn**	**21 56 02.1**	**0.0**
HSN1	**Hsinchu**	**1.33**	**271**	P	**Pn**	**21 55 43.4**	**+0.6**
HSN1				S	**Sn**	**21 56 02.8**	**+0.5**
LIOB	**Emei**	**1.34**	**266**	*i* P	**Pn**	**21 55 43.3**	**+0.5**
LIOB				*i* S	**Sn**	**21 56 02.2**	**-0.2**
ESL	**Shilin**	**1.34**	**226**	*e*P	**Pn**	**21 55 42.4**	**-0.5**
ESL				*e*S	**Sn**	**21 56 01.5**	**-1.1**
TEGC	**Jichi Village**	**1.36**	**220**	P	**Pn**	**21 55 43.2**	**+0.3**
TEGC				*e*S	**Sn**	**21 56 02.8**	**+0.1**
NSTT	**Nanjuang**	**1.36**	**265**	*i* P	**Pn**	**21 55 43.4**	**+0.4**
NSTT				*i* S	**Sn**	**21 56 02.4**	**-0.4**
SBCB	**Hsinchu**	**1.36**	**272**	P	**Pn**	**21 55 43.8**	**+0.7**
SBCB				S	**Sn**	**21 56 02.9**	**+0.1**
HSN	**Hsinchu**	**1.38**	**272**	*i* P	**Pn**	**21 55 43.3**	**+0.1**
HSN				*i* S	**Sn**	**21 56 02.5**	**-0.7**
HATJ	**Hateruma jima**	**1.39**	**120**	S	**Sn**	**21 56 03.3**	**-0.1**
OWD	**Renai**	**1.44**	**236**	*i* P	**Pn**	**21 55 44.4**	**+0.4**
OWD				S	**Sn**	**21 56 04.0**	**-0.6**
WARBT	**Fenglin Townsh**	**1.44**	**224**	P	**Pn**	**21 55 43.5**	**-0.5**
WARBT				*e*S	**Sn**	**21 56 03.0**	**-1.5**
EGFH	**Guangfu**	**1.45**	**222**	*e*P	**Pn**	**21 55 44.7**	**+0.6**
EGFH				*e*S	**Sn**	**21 56 04.9**	**+0.2**
WUSB	**Renai**	**1.46**	**239**	*i* P	**Pn**	**21 55 45.0**	**+0.7**
WUSB				*i* S	**Sn**	**21 56 05.2**	**+0.1**
NJN	**Zhunan**	**1.47**	**267**	*e*S	**Sn**	**21 56 05.3**	**+0.3**
JKRS	**Kuro-shima**	**1.48**	**110**	P	**Pn**	**21 55 45.2**	**+0.9**
JKRS				S	**Sn**	**21 56 05.2**	**0.0**
WHP	**Taichung City**	**1.48**	**252**	*e*P	**Pn**	**21 55 45.6**	**+1.1**
WHP				*e*S	**Sn**	**21 56 06.5**	**+1.1**
JIJ	**Ishigaki jima**	**1.56**	**104**	P	**Pn**	**21 55 45.7**	**+0.4**
JIJ				S	**Sn**	**21 56 05.8**	**-1.0**
NMLH	**Miaoli**	**1.56**	**262**	*i* P	**Pn**	**21 55 46.1**	**+0.8**
NMLH				*i* S	**Sn**	**21 56 07.2**	**+0.4**
WPL	**Puli Township**	**1.58**	**242**	*e*P	**Pn**	**21 55 46.6**	**+1.1**
WPL				*e*S	**Sn**	**21 56 08.0**	**+0.7**
VWDT	**VWDT**	**1.58**	**231**	P	**Pn**	**21 55 46.0**	**+0.5**
VWDT				S	**Sn**	**21 56 07.0**	**-0.3**
HGSD	**Ruisui**	**1.59**	**218**	*e*P	**Pn**	**21 55 46.1**	**+0.5**
HGSD				S	**Sn**	**21 56 07.6**	**+0.1**
DPDB	**Guoxing**	**1.59**	**243**	*e*P	**Pn**	**21 55 46.9**	**+1.1**
DPDB				*e*S	**Sn**	**21 56 09.2**	**+1.5**
WCS	**Beigang Elemen**	**1.60**	**244**	*e*P	**Pn**	**21 55 46.9**	**+1.2**
WCS				S	**Sn**	**21 56 08.3**	**+0.7**
NSY	**Sanyi**	**1.61**	**258**	P	**Pn**	**21 55 46.9**	**+1.0**
NSY				S	**Sn**	**21 56 08.4**	**+0.5**
TWQ1	**Liyutan**	**1.61**	**256**	P	**Pn**	**21 55 46.8**	**+0.8**
TWQ1				S	**Sn**	**21 56 08.1**	**+0.1**
EHY	**Hungye**	**1.64**	**221**	*e*P	**Pn**	**21 55 46.1**	**-0.2**
EHY				*e*S	**Sn**	**21 56 07.5**	**-1.1**
JISG	**Ishigakijimahi**	**1.67**	**95**	*i* P	**Pn**	**21 55 46.9**	**+0.3**
JISG				S	**Sn**	**21 56 08.3**	**-0.7**
SMLT	**Sun Moon Lake**	**1.69**	**239**	*i* P	**Pn**	**21 55 48.4**	**+1.4**
SMLT				S	**Sn**	**21 56 11.3**	**+1.5**
SSLB	**Suanglung**	**1.70**	**236**	*i* P	**Pn**	**21 55 48.1**	**+1.1**
SSLB				S	**Sn**	**21 56 10.2**	**+0.3**
TYC	**Yuchr**	**1.71**	**241**	*e*P	**Pn**	**21 55 48.2**	**+1.1**
TYC				*e*S	**Sn**	**21 56 11.2**	**+1.1**
ECBN	**Changbin**	**1.72**	**214**	P	**Pn**	**21 55 47.3**	**+0.1**
ECBN				S	**Sn**	**21 56 09.4**	**-0.8**
YULB	**Yu-li**	**1.74**	**219**	*e*P	**Pn**	**21 55 46.8**	**-0.7**
YULB				*e*S	**Sn**	**21 56 09.1**	**-1.6**
TCU	**Taichung**	**1.76**	**250**	*e*P	**Pn**	**21 55 48.3**	**+0.7**
TCU				*e*S	**Sn**	**21 56 11.1**	**+0.1**
WWF	**Wufeng**	**1.78**	**247**	*e*P	**Pn**	**21 55 48.8**	**+0.8**
WWF				*e*S	**Sn**	**21 56 12.0**	**+0.5**
WHYT	**Xinyi Township**	**1.83**	**235**	*i* P	**Pn**	**21 55 49.9**	**+1.4**
WHYT				*i* S	**Sn**	**21 56 14.2**	**+1.6**
CHKH	**Chenggong**	**1.85**	**213**	*e*P	**Pn**	**21 55 49.0**	**+0.2**
CHKH				*e*S	**Sn**	**21 56 11.9**	**-1.1**
WNT1	**Nantou City**	**1.85**	**243**	*e*P	**Pn**	**21 55 49.8**	**+1.0**
WNT1				*e*S	**Sn**	**21 56 14.2**	**+1.1**
WNT	**Mingjian**	**1.86**	**242**	P	**Pn**	**21 55 50.1**	**+1.2**
WNT				S	**Sn**	**21 56 14.4**	**+1.1**
WCHH	**Zhanghua**	**1.88**	**249**	P	**Pn**	**21 55 49.8**	**+0.6**
WCHH				S	**Sn**	**21 56 14.0**	**+0.3**
YUS	**Yu-Shan**	**1.89**	**228**	P	**Pn**	**21 55 50.6**	**+0.9**
YUS				S	**Sn**	**21 56 14.8**	**+0.2**
WCH1	**Changhua City**	**1.90**	**249**	*e*P	**Pn**	**21 55 50.0**	**+0.7**
WCH1				*e*S	**Sn**	**21 56 14.5**	**+0.5**
FULB	**Fuli**	**1.90**	**215**	P	**Pn**	**21 55 49.7**	**+0.3**
FULB				S	**Sn**	**21 56 14.4**	**+0.3**
WYL	**Yuanlin Townsh**	**1.91**	**246**	*e*P	**Pn**	**21 55 50.4**	**+0.9**
WYL				*e*S	**Sn**	**21 56 15.5**	**+1.2**
CHKT	**Chengkung**	**1.94**	**212**	P	**Pn**	**21 55 49.6**	**-0.3**
CHKT				S	**Sn**	**21 56 13.6**	**-1.5**
ALS	**Alishan**	**1.98**	**231**	P	**Pn**	**21 55 51.9**	**+1.3**
ALS				*e*S	**Sn**	**21 56 18.0**	**+1.7**
EHD	**Haiduan**	**1.98**	**216**	*e*P	**Pn**	**21 55 51.4**	**+0.9**
JTJ	**Tarama**	**2.02**	**93**	P	**Pn**	**21 55 51.6**	**+0.8**
JTJ				S	**Sn**	**21 56 16.4**	**-0.2**
ECS	**Chishang**	**2.02**	**215**	*e*P	**Pn**	**21 55 51.8**	**+0.9**
ECS				*e*S	**Sn**	**21 56 17.2**	**+0.3**
WGK	**Gukeng**	**2.06**	**239**	*e*P	**Pn**	**21 55 52.5**	**+1.2**
ELDTW	**Lidau**	**2.06**	**221**	*e*P	**Pn**	**21 55 51.5**	**0.0**
ELDTW				*e*S	**Sn**	**21 56 17.3**	**-0.5**
WDLH	**Douliu**	**2.07**	**240**	P	**Pn**	**21 55 52.5**	**+1.0**
WDLH				*e*S	**Sn**	**21 56 19.0**	**+1.1**
WRL	**Guolierlin Hig**	**2.10**	**247**	*e*P	**Pn**	**21 55 52.3**	**+0.4**
WRL				*e*S	**Sn**	**21 56 18.4**	**-0.2**
RLNB	**Erlin**	**2.12**	**246**	*e*P	**Pn**	**21 55 52.7**	**+0.6**
RLNB				*e*S	**Sn**	**21 56 19.2**	**+0.2**
WCKO	**Fanlu**	**2.16**	**233**	P	**Pn**	**21 55 53.8**	**+1.1**
WCKO				*e*S	**Sn**	**21 56 21.7**	**+1.7**
STYH	**Taoyuan**	**2.22**	**225**	P	**Pn**	**21 55 54.6**	**+1.2**
STYH				S	**Sn**	**21 56 22.1**	**+0.9**
CHN4	**Tsaushan**	**2.23**	**231**	*e*P	**Pn**	**21 55 54.4**	**+0.9**
CHN4				*e*S	**Sn**	**21 56 22.3**	**+0.9**
TPUB	**Ta-pu**	**2.23**	**230**	P	**Pn**	**21 55 54.4**	**+0.8**
TPUB				*e*S	**Sn**	**21 56 22.7**	**+1.1**
STYT	**Tauyuan**	**2.24**	**225**	*e*P	**Pn**	**21 55 54.8**	**+1.1**
CHY	**Chiayi**	**2.26**	**237**	P	**Pn**	**21 55 54.7**	**+0.8**
CHY				S	**Sn**	**21 56 22.8**	**+0.7**
WTP	**Ta-pu**	**2.28**	**229**	P	**Pn**	**21 55 55.1**	**+0.9**
WTP				*e*S	**Sn**	**21 56 24.2**	**+1.6**
TWGBT	**Beinan**	**2.32**	**214**	*e*P	**Pn**	**21 55 54.2**	**-0.5**
TWGBT				*e*S	**Sn**	**21 56 22.0**	**-1.6**
TWG	**Pinlang**	**2.32**	**214**	*e*P	**Pn**	**21 55 54.1**	**-0.6**
TWG				*e*S	**Sn**	**21 56 21.9**	**-1.6**
TTN	**Taitung**	**2.34**	**212**	*e*P	**Pn**	**21 55 55.7**	**+0.8**
TTN				*e*S	**Sn**	**21 56 24.3**	**+0.4**
WSF	**Szhu**	**2.35**	**242**	P	**Pn**	**21 55 55.4**	**+0.4**
WSF				*e*S	**Sn**	**21 56 24.0**	**-0.1**
TWK	**Hsinying**	**2.35**	**231**	*e*S	**Sn**	**21 56 25.1**	**+0.8**
SNST	**Tainan City**	**2.38**	**230**	*i* P	**Pn**	**21 55 56.3**	**+0.9**
SNST				S	**Sn**	**21 56 25.1**	**+0.3**
CHN1	**Nanshi**	**2.38**	**229**	*i* P	**Pn**	**21 55 56.7**	**+1.3**
CHN1				*e*S	**Sn**	**21 56 25.9**	**+1.1**
WSL	**Shuilin Townsh**	**2.40**	**240**	*e*P	**Pn**	**21 55 55.8**	**+0.2**
WSL				*e*S	**Sn**	**21 56 25.4**	**+0.1**
SGST	**Jiashian**	**2.41**	**227**	*e*P	**Pn**	**21 55 56.2**	**+0.3**
SGST				*e*S	**Sn**	**21 56 25.7**	**+0.1**
JIRB	**Irabujima**	**2.44**	**88**	P	**Pn**	**21 55 57.3**	**+1.2**
CHN8	**Yiju**	**2.51**	**236**	*e*P	**Pn**	**21 55 57.7**	**+0.7**
CHN8				*e*S	**Sn**	**21 56 27.1**	**-0.6**
JIKM	**Ikemajima**	**2.51**	**86**	P	**Pn**	**21 55 58.0**	**+1.0**
JIKM				S	**Sn**	**21 56 27.8**	**-0.1**
JMJ	**Miyako jima 2**	**2.55**	**88**	*e*P	**Pn**	**21 55 59.0**	**+1.5**
JMJ				*e*S	**Sn**	**21 56 28.8**	**+0.1**
ECL	**Taimali**	**2.57**	**213**	*e*S	**Sn**	**21 56 27.2**	**-2.0**
JMJ2	**Miyako jima3**	**2.58**	**90**	P	**Pn**	**21 55 59.0**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JMJ2				eS	Sn	21 56 29.8	+0.4
SCLT	Jiali	2.62	234	eS	Sn	21 56 31.1	+0.7
SSD	Sandimen	2.63	221	eP	Pn	21 55 59.8	+1.3
SSD				eS	Sn	21 56 31.7	+1.2
MATB	Ma-tsu	2.68	302	eP	Pn	21 55 59.5	+0.3
TSCK	Chigu Township	2.72	234	i P	Pn	21 56 00.3	+0.6
TSCK				S	Sn	21 56 32.5	-0.1
MASBT	Mashibuluo	2.73	219	P	Pn	21 56 01.0	+1.1
MASBT				eS	Sn	21 56 34.1	+1.2
VWUC	VWUC	2.77	275	eP	Pn	21 56 00.1	-0.2
EAST	Anshuo	2.80	213	eP	Pn	21 56 01.1	+0.2
EAST				eS	Sn	21 56 34.2	-0.4
TAWH	Dawu Township	2.82	212	eP	Pn	21 56 02.1	+1.0
LAY	Lan-yu	2.84	198	eP	Pn	21 56 01.0	-0.4
LAY				eS	Sn	21 56 34.5	-1.0
LYUB	Lan-yu	2.87	197	eP	Pn	21 56 00.5	-1.2
LYUB				eS	Sn	21 56 33.3	-2.7
PNG	Penghu	2.93	247	eP	Pn	21 56 01.7	-0.7
PNG				eS	Sn	21 56 36.1	-1.3
SCZT	Fangliau	2.93	216	eP	Pn	21 56 03.3	+0.9
PHUB	P'eng-hu	2.94	246	i P	Pn	21 56 02.0	-0.6
PHUB				S	Sn	21 56 35.3	-2.3
WDGT	Dungji	2.98	241	eP	Pn	21 56 03.4	+0.3
WDGT				eS	Sn	21 56 37.9	-0.9
XPSS	Dashiqiu	2.99	317	eP	Pn	21 56 03.0	-0.3
XPSS				eS	Sn	21 56 38.1	-0.8
SMST	Manzhou Townsh	3.12	209	eP	Pn	21 56 05.8	+0.9
SMST				eS	Sn	21 56 41.9	0.0
VCHM	Qimei	3.19	242	eP	Pn	21 56 06.0	0.0
VCHM				eS	Sn	21 56 42.1	-1.6
MHZQ	Yeshan	3.40	294	eP	Pn	21 56 08.8	+0.2
KNM	Kinmen	3.71	266	eP	Pn	21 56 13.8	+1.1
KNM				eS	Sn	21 56 56.6	+0.8
KNMB	Chin-men Tao	3.74	266	eP	Pn	21 56 12.6	-0.5
KNMB				eS	Sn	21 56 55.7	-1.0
AXDP	Jialang	4.11	273	eP	Pn	21 56 18.2	+0.2
AXDP				eS	Sn	21 57 03.4	-1.9
ZPLA	Ao Xicun	4.40	260	eP	Pn	21 56 22.0	+0.1
ZPLA				eS	Sn	21 57 10.8	-1.5
DSXP	Dongshan	4.74	258	eP	Pn	21 56 26.6	+0.2
JOW	Kunigami	5.61	67	eP	Pn	21 56 37.3	-0.9

IDC 02 22:01:41.5±5.4, 15°.98S×176°.40W, h0^{km}, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=182.1km s-min=105.9km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.25	240	P	P	22 09 28.7	+0.1
	1.0nm,0.5s,baz=94,slow=9.0,SNR=5.0						
	1.0nm,0.5s						
WRA	Warramunga Arr	46.90	257	P	P	22 10 13.3	-0.9
	0.4nm,0.5s,baz=94,slow=7.7,SNR=5.6						
	0.4nm,0.5s						
ASAR	Alice Springs	47.19	252	P	P	22 10 16.6	+0.2
	5.4nm,0.6s,baz=88,slow=8.1,SNR=73						
ASAR				PcP	PcP	22 11 47.8	-0.2
	0.2nm,0.5s,baz=89,slow=3.2,SNR=1.6						
	5.4nm,0.6s						

*ISK **02** 22:04:59.4, 38°.25N×42°.80E, h5^{km}, ML3.3/15*
*AFAD **02** 22:05:00.5, 38°.32N×42°.83E, h7^{km}±1^{km}, ML3.1*
ISC 02 22:05:00.5±0.9, 38°.29N±0°.03×42°.85E±0°.03, h11^{km}±7^{km}, n24, σ0^{s}96/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.11	72	Pg	Pg	22 05 03.4	-0.2
AKDM				Sg	Sg	22 05 06.4	+0.6
GEVA	Gevas	0.17	84	P	Pg	22 05 04.4	0.0
GEVA				S	Sg	22 05 07.5	+0.3
GEVA				IAML		22 05 10.0	
	comp=N,6μm,0.3s						
GEVA				IAML		22 05 10.0	
	comp=E,1μm,0.3s						
PERV	Siirt/Pervari-	0.42	215	P	Pb	22 05 08.7	-1.4
PERV				S	Sb	22 05 16.4	-0.2
PERV				IAML		22 05 19.0	
	comp=E,3μm,0.6s						
PERV				IAML		22 05 20.0	
	comp=N,4μm,0.4s						
BLIS	Bitlis-Merkez	0.59	282	P	Pb	22 05 11.9	-1.1
GURO	Guroymak-BITLI	0.69	292	Pg	Pb	22 05 13.5	-1.2
SRTM	Siirt_Merkez	0.79	248	P	Pb	22 05 15.6	-0.7
SRTM				S	Sb	22 05 27.5	+0.4
SRTM				IAML		22 05 33.0	
	comp=N,690nm,0.6s						
ERCV	ERCIS-VAN	0.82	28	Pg	Pb	22 05 17.0	0.0
ERCV				Sg	Sn	22 05 30.5	0.0
MLAZ	Malazgirt-MUS	0.88	345	Pg	Pb	22 05 17.4	-0.5
MLAZ				Sg	Sn	22 05 31.8	-0.1
VMUR	Van-Muradiye	0.90	39	P	Pg	22 05 17.4	-0.5
VMUR				S	Sb	22 05 30.4	+0.1
VMUR				IAML		22 05 36.0	
	comp=E,458nm,0.5s						
HAKT	HAKKARI	1.00	137	P	Pg	22 05 19.1	-0.8
HAKT				S	Sn	22 05 36.4	+1.3
HAKT				IAML		22 05 39.0	
	comp=N,392nm,0.7s						
CUKT	Cukurca	1.21	150	Pn	Pn	22 05 23.5	0.0
CUKT				Sn	Sn	22 05 40.7	+0.8
BTMN	Batman	1.31	253	P	Pg	22 05 25.7	0.0
BTMN				S	Sn	22 05 43.1	+0.8
BTMN				IAML		22 05 46.0	
	comp=E,789nm,0.5s						
BTMN				IAML		22 05 47.0	
	comp=N,597nm,0.4s						
VRTB	Varto-Mus	1.39	309	Pn	Pg	22 05 26.7	-0.5
SLHN	Bingol, Solhan	1.57	295	P	Pg	22 05 29.7	-1.0
SLHN				S	Sg	22 05 53.1	+1.9
SLHN				IAML		22 05 55.0	
	comp=N,220nm,0.5s						
SLHN				IAML		22 05 57.0	
	comp=E,239nm,1.0s						
KARO	Karliova-Bingo	1.73	306	Pn	Pb	22 05 31.8	-0.7
KARO				Sn	Sg	22 05 55.5	-0.7
BNGB	Bingl	1.83	293	Pn	Pb	22 05 33.2	-1.0
KOPR	Koprukoy-ERZUR	1.86	336	Pn	Pb	22 05 34.2	-0.5
YEDI	Yedisu-Bingol	2.13	303	Pn	Pb	22 05 37.5	-1.7
DYBB	Diyarbakir	2.16	262	Pn	Pn	22 05 37.1	+0.5
SENK	Senkaya-Erzuru	2.30	351	Pn	Pb	22 05 40.9	-1.2
KARS	Kars	2.34	4	Pn	Pb	22 05 41.1	-1.7
GNI	Garni	2.37	38	Pn	Pb	22 05 41.9	-1.4
MDNT	Maden	2.49	273	P	Pn	22 05 42.0	+0.9
ERZN	Erzincan	2.76	299	Pn	Pn	22 05 46.3	+1.5

MEX 02 22:06:26.9±0.9, 16°.45N×95°.08W, h6^{km}±9^{km}, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.66	16	eP	Pg	22 06 38.2	-1.4
CMIG				eS	Sg	22 06 46.8	-1.4
CARR	Arriaga	1.14	100	eP	Pb	22 06 49.0	0.0
CARR				i S	Sg	22 07 03.5	+0.1
HUIG	Huatulco	1.20	236	eP	Pg	22 06 48.6	-1.4
HUIG				eS	Sg	22 07 04.7	-1.0
UXUV	UXUV	1.24	46	eP	Pg	22 06 48.9	-1.7
UXUV				eS	Sg	22 07 06.5	-0.2
NEUV	Arroyo Zacate	1.43	331	eP	Pn	22 06 51.9	-1.6
NEUV				eS	Sb	22 07 09.9	-2.7
OXLC	Oaxaca	1.67	292	i P	Pn	22 06 55.9	-1.1
OXLC				i S	Sn	22 07 17.7	-1.2
OXBJ	Oaxaca	1.69	291	eP	Pg	22 07 04.7	+5.3
OXBJ				i S	Sg	22 07 27.3	+5.9
VHO	Vista Hermosa	1.70	291	eP	Pn	22 06 56.7	-0.7
VHO				eS	Sn	22 07 19.7	+0.1
TGIG		1.90	80	eP	Pn	22 07 00.8	+0.8
TGIG				eS	Sn	22 07 25.0	+0.8
PCIG		1.93	112	eP	Pn	22 07 00.1	-0.3
PCIG				i S	Sb	22 07 26.9	-0.1
PEIG	Puerto Escondi	2.04	257	eP	Pn	22 07 01.3	-0.5
PEIG				i S	Sn	22 07 28.3	+0.6
YOIG	Yosondua	2.40	280	eP	Pn	22 07 08.3	+1.2
YOIG				i S	Sb	22 07 39.8	-1.0
TOIG	Toxpalan	2.51	311	eP	Pn	22 07 09.4	+1.1
TOIG				i S	Sb	22 07 41.6	-2.0
TXIG	Tlaxiaco	2.70	288	eP	Pb	22 07 13.7	-2.1
TXIG				i S	Sb	22 07 49.8	+0.5
CCIG	Comitan	2.83	93	eP	Pb	22 07 16.0	-1.9
CCIG				i S	Sb	22 07 53.0	+0.2
PNIG	Pinotepa	2.93	269	eP	Pn	22 07 13.1	-1.0
PNIG				i S	Sn	22 07 51.2	+1.6
HLIG	Huajuapan de L	2.95	298	eP	Pn	22 07 16.8	+2.3
HLIG				i S	Sb	22 07 55.6	-0.8
PATR	El Naranjo	3.04	116	eP	Pb	22 07 18.7	-2.9
PATR				eS	Sn	22 07 54.0	+1.4
PAVE	Pavencul	3.06	114	eP	Pb	22 07 20.2	-1.7
PAVE				i S	Sn	22 07 55.6	+2.5
CHUJ	Union Juarez	3.16	115	eP	Pn	22 07 18.5	+1.1
CHUJ				i S	Sn	22 07 56.6	+1.0
FTIG	Fresnillo de T	3.26	297	eP	Pb	22 07 24.1	-1.2
FTIG				i S	Sb	22 08 07.1	+1.7
MGIG	Malinaltepec	3.50	283	eP	Pn	22 07 25.2	+3.2
MGIG				i S	Sn	22 08 02.0	-1.9
TLIG	Tlapa	3.52	289	eP	Pb	22 07 29.7	0.0
TLIG				i S	Sb	22 08 14.8	+2.1
CXUV	Coxquihui	4.40	328	eP	Pn	22 07 33.9	-0.5
CXUV				i S	Sb	22 08 35.7	-2.5

*SOME **02** 22:29:05.7, 49°.33N×87°.60E, h20^{km}*
*ASRS **02** 22:29:06.7±0.6, 49°N±3°×8°8E±°, h19^{km}, MLh3.4/13, Error ellipse: s-maj=6.2km s-min=3.8km az=170.1, confirmed*
*NNC **02** 22:29:11.3±6.0, 48°.83N×87°.73E, h0^{km}, mb3.3, mpv3.3, Error ellipse: s-maj=45.0km s-min=25.8km az=83.0*
ISC 02 22:29:05.8±1.5, 49°.02N±0°.05×88°.41E±0°.04, h8^{km}±11^{km}, n26, σ2^{s}01/45, 7C-8D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	Jazzator, Alta	0.94	317	Pg	Pg	22 29 23.8	-0.1
DGZ				Sg	Sn	22 29 37.4	-1.8
CUR	Chagan-Uzun	1.09	358	⇓Pg	Pg	22 29 27.3	+0.6
CUR				Sg	Sn	22 29 44.4	+1.5
AKAR	Aktash	1.40	339	⇓Pg	Pg	22 29 33.0	+0.3
AKAR				Sg	Sg	22 29 53.3	+2.4
CHBI	Chibit, Altay	1.43	336	⇓Pg	Pg	22 29 33.4	+0.2
CHBI				Sg	Sg	22 29 53.7	+2.1
ULGR	Ulagan, Altay	1.64	350	⇓Pg	Pg	22 29 37.0	-0.2
ULGR				Sg	Sg	22 30 00.6	+2.2
TUNR	Tungur	1.77	311	Pg	Pg	22 29 39.1	-0.7
TUNR				Sg	Sg	22 30 03.5	+0.7
TEL	Teeli	2.31	29	Pg	Pg	22 29 49.5	-0.7
TEL				Sg	Sg	22 30 20.4	+0.2
YALR	Yailyu, Altay	2.80	350	Pg	Pg	22 29 58.0	-1.5
YALR				Sg	Sg	22 30 36.2	+0.4
ZSN	Zaisan	2.84	238	eP	Pn	22 29 52.9	+1.4
	12nm,0.3s						
ZSN				eS	Sn	22 30 27.5	+1.6
	115nm,0.4s						
ARTR	Artybash	2.88	346	Pg	Pg	22 29 59.8	-1.2
ARTR				Sg	Sg	22 30 38.7	+0.5
UKR	Ust'-Kan	3.04	311	Pg	Pg	22 30 02.2	-1.7
UKR				Sg	Sg	22 30 40.8	-2.4
GALT	Gorno-Altaysk,	3.34	333	Pg	Pg	22 30 08.3	-1.5
GALT				Sg	Sg	22 30 52.6	-0.5
TASR	Tashtagol	3.76	355	Pg	Pg	22 30 16.7	-1.2
TASR				Sg	Sg	22 31 07.0	+0.4
DJO	Djoy, Khakassi	4.17	24	Pg	Pg	22 30 23.3	-2.4
DJO				Sg	Sg	22 31 18.8	-0.8
CERR	Cheremushki	4.29	25	Pg	Pg	22 30 25.9	-2.0
CERR				Sg	Sg	22 31 23.1	-0.3
VEH	Verkhnyaya Baz	4.41	15	Pg	Pg	22 30 28.1	-2.1
VEH				Sg	Sg	22 31 26.4	-0.9
ELT	Eltsovka	4.47	343	Pn	Pn	22 30 15.5	+1.7
ELT				Pg	Pg	22 30 29.3	-2.0
ELT				Sg	Sg	22 31 27.6	-1.5
MK31	Makanchi Array	4.68	244	⇑Pn	Pn	22 30 18.4	+1.6
	0.1nm,0.2s,baz=58,slow=17,SNR=82						
MK31				Pg	Pb	22 30 27.4	-0.7
	1.7nm,0.3s,baz=73,slow=17,SNR=30						
MK31				⇓Sn	Sn	22 31 06.5	-4.7
	2.0nm,0.3s						
MK31				Lg	Lg	22 31 28.0	
	22nm,0.7s,baz=58,slow=34,SNR=8.4						
SEM	Semipalatinsk	5.47	288	Pg	Pg	22 30 49.1	-1.5
	1.4nm,0.1s						
SEM				Lg	Lg	22 32 03.6	
	21nm,0.3s						
SEM	Semipalatinsk	5.47	288	eP	Pn	22 30 34.2	+6.3
	2.5nm,0.1s						
SEM				eS	Sn	22 31 37.4	+6.3
	6.0nm,0.1s						
KURK	Kurchatov	6.55	289	⇑Pn	Pn	22 30 39.5	-3.0
	0.1nm,0.2s						
KURK				⇓Sn	Sn	22 31 55.8	-1.6
	1.2nm,0.6s						
KURK				⇑Lg	Lg	22 32 30.5	
	5.0nm,0.6s						
KURBB	Kurchatov Arra	6.59	288	⇑Pn	Pn	22 30 41.3	-1.7
	3.1nm,0.4s						
KURBB				⇓Sn	Sn	22 31 56.6	-1.8
	5.6nm,0.5s						
KURBB				⇑Lg	Lg	22 32 34.8	
	38nm,0.7s						
KAPS	Kapalarasan	7.21	242	Pg	Pb	22 31 14.7	+3.4
	0.9nm,0.1s						
KAPS				Lg	Lg	22 32 46.4	
	4.9nm,0.1s						
DJR	Jarkent	7.55	235	Pg	Pb	22 31 21.7	+4.6
	0.7nm,0.1s						
DJR				Lg	Lg	22 32 58.7	
	2.3nm,0.3s						
DJR	Jarkent	7.55	235	eP	Pb	22 31 21.7	+4.6
	0.7nm,0.1s						
DJR				eS	Sb	22 32 58.7	+11
	2.3nm,0.3s						
PDGK	Podgornoye	8.40	231	⇓Pn	Pn	22 31 14.7	+6.7
	0.2nm,0.3s						
PDGK				⇑Sn	Sn	22 32 33.9	-9.2
	1.8nm,0.7s						
PDGK				⇑Lg	Lg	22 33 20.5	
	7.2nm,0.9s						

*MOS **02** 22:53:03.7±1.1, 47°.57N×153°.01E, h122^{km}, mb4.1/22, Error ellipse: s-maj=8.8km s-min=5.8km az=73.0*
*NEIC **02** 22:53:04.1±1.1, 47°.64N±0°.06×152°.9E±0°.2, h105^{km}±6^{km}, mb4.5/49, Error ellipse: s-maj=17.8km s-min=1.5km az=117.0*
*SKHL **02** 22:53:04.7±0.6, 47°.60N×153°.10E, h123^{km}±9^{km}, mb5.9/5, mbv5.5/3, msh5.3/2, msha6.0/6*
*IDC **02** 22:53:06.2±0.8, 47°.66N×152°.92E, h127^{km}±6^{km}, mb3.7/30, mbtmp4.2/34, MS2.8/3, Error ellipse: s-maj=12.6km s-min=9.1km az=148.0*
*JMA **02** 22:53:07.4±0.9, 47°N±5°×15°3E±°, h134^{km}, MV4.5/15, KURILE ISLANDS REGION*
ISC 02 22:53:03.9±0.6, 47°.48N±0°.05×153°.09E±0°.06, h111^{km}±4^{km}, h111^{km}:pP-P, n210, σ1^{s}62/224, mb4.3/70, 7C-14D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.78	31	⇓iPN	Pn	22 54 00.0	0.0
SKR				i S	Sn	22 54 41.6	-2.1
SKR				smax	smax		
	comp=N,324nm,0.4s						
SKR				smax	smax		
	comp=E,387nm,0.2s						
SKR				MLR	MLR		
	comp=Z,400nm,18.0s						
SKR	Severo-Kuril's	3.78	31	eP	Pn	22 54 00.1	0.0
SKR				AMB	AMB	22 54 02.3	
	comp=Z,2μm,1.5s						
SKR				AMB	AMB	22 54 02.5	
	comp=Z,730nm,0.3s						
SKR				eS	Sn	22 54 41.5	-2.1
SKR				A	A	22 54 44.6	
	comp=Z,540nm,0.3s						
SKR				A	A	22 54 44.6	
	comp=Z,430nm,0.3s						
SKR				A	A	22 54 45.6	
	comp=Z,3μm,3.5s						
SKR				A	A	22 54 45.6	
	comp=Z,3μm,3.5s						
SKR				A	A	22 54 45.6	
	comp=Z,400nm,3.5s						
KUR	Kuril'sk	4.25	240	ePN	Pn	22 54 08.5	+2.0
KUR				eS	Sn	22 54 58.3	+3.1
KUR				pmax	pmax		
	comp=Z,324nm,0.4s						
KUR				pmax	pmax		
	comp=E,162nm,0.5s						
KUR				pmax	pmax		
	comp=N,156nm,0.4s						
KUR				smax	smax		
	comp=N,315nm,0.5s						
KUR				smax	smax		
	comp=E,296nm,0.6s						
KUR	Kuril'sk	4.25	240	eP	Pn	22 54 08.7	+2.2
KUR				AMB	AMB	22 54 11.5	
	comp=E,310nm,0.6s						
KUR				eS	Sn	22 54 57.3	+2.1
KUR				A	A	22 55 05.9	
	comp=E,230nm,0.6s						
KUR				A	A	22 55 05.9	
	comp=E,350nm,0.6s						
PAU	Pauzhetka	4.67	30	eP	Pn	22 54 11.9	-0.2
PAU				AMB	AMB	22 54 14.7	
	comp=E,240nm,0.3s						
PAU				AMB	AMB	22 54 15.3	
	comp=E,690nm,2.0s						
PAU				eS	Sn	22 55 01.9	-3.4
PAU				A	A	22 55 04.2	
	comp=E,690nm,0.3s						
PAU				A	A	22 55 04.2	
	comp=E,360nm,0.3s						
PAU				A	A	22 55 06.7	
	comp=E,2μm,4.0s						
PAU				A	A	22 55 06.7	
	comp=E,2μm,4.0s						
YUK	Yuzh-Kuril'sk	6.12	238c	iPN	Pn	22 54 32.8	+1.1
YUK				eS	Sn	22 55 36.8	-3.4
YUK				pmax	pmax		
	comp=N,64nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,156nm,0.4s						
YUK				smax	smax		
	comp=E,130nm,0.2s						
YUK				smax	smax		
	comp=N,223nm,0.3s						
YUK	Yuzh-Kuril'sk	6.12	238	eP	Pn	22 54 33.2	+1.5
YUK				AMB	AMB	22 54 33.5	
	comp=N,2μm,0.3s						
YUK				eS	Sn	22 55 41.8	+1.6
YUK				A	A	22 55 46.3	
	comp=N,280nm,0.4s						
YUK				A	A	22 55 46.3	
	comp=N,260nm,0.4s						
PEA0B	Petropavlovsk-	6.36	26	Pn	Pn	22 54 34.1	-0.9
PEA0B	Petropavlovsk-	6.36	26	dePN	Pn	22 54 35.4	+0.4
PETK	Petropavlovsk-	6.36	26	P	Pn	22 54 34.9	-0.1
	comp=N,33nm,0.5s,baz=183,slow=10,SNR=84						
PETK				S	Sn	22 55 47.9	+1.7
	comp=N,6.1nm,0.7s,baz=205,slow=22,SNR=0.8						
PETK	Petropavlovsk-	6.36	26		Pn	22 54 34.3	-0.7
RUSJ	Misakicho	6.43	241	ePN	Pn	22 54 38.4	+2.4
RUSJ				S	Sn	22 55 45.9	-2.1
GLVR	Golovnino	6.49	238	ePN	Pn	22 54 37.2	+0.4
GLVR				i S	Sn	22 55 48.6	-0.7
GLVR				pmax	pmax		
	comp=Z,392nm,0.4s						
GLVR				pmax	pmax		
	comp=N,66nm,0.5s						
GLVR				pmax	pmax		
	comp=E,37nm,0.1s						
GLVR				smax	smax		
	comp=N,291nm,0.3s						
GLVR				smax	smax		
	comp=E,245nm,0.4s						
GLVR	Golovnino	6.49	238	eP	Pn	22 54 37.2	+0.4
GLVR				AMB	AMB	22 54 37.6	
	comp=E,390nm,0.4s						
GLVR				i S	Sn	22 55 48.6	-0.7
GLVR				A	A	22 55 56.1	
	comp=E,290nm,0.4s						
GLVR				A	A	22 55 56.1	
	comp=E,250nm,0.4s						
PET	Petropavlovsk	6.60	31	Pn	Pn	22 54 37.5	-0.7
PET	Petropavlovsk	6.60	31	ePN	Pn	22 54 38.1	-0.1
PET				eS	Sn	22 55 49.6	-2.2
PET				smax	smax		
	comp=E,71nm,0.6s						
PET				smax	smax		
	comp=N,60nm,0.7s						
PET	Petropavlovsk	6.60	31	eP	Pn	22 54 38.3	+0.1
PET				eS	Sn	22 55 49.6	-2.2
PET				A	A	22 55 57.1	
	comp=N,60nm,0.6s						
PET				A	A	22 55 57.1	
	comp=N,70nm,0.6s						
NEM2	Nemuro 2	6.60	234	P	Pn	22 54 36.8	-1.5
NEM2				S	Sn	22 55 47.4	-4.7
JRA	Rausu	6.60	240	P	Pn	22 54 39.5	+1.2
NMR	Nemuro--Hokkai	6.61	234	ePN	Pn	22 54 36.9	-1.5
NMR	Nemuro--Hokkai	6.61	234	eP	Pn	22 54 36.9	-1.5
JNK	Nakash	7.05	240	P	Pn	22 54 44.7	+0.4
YSS	Yuzhno-Sakhali	7.06	270		Pn	22 54 45.5	+1.1
YSS	Yuzhno-Sakhali	7.06	270	ePN	Pn	22 54 47.8	+3.4
YSS				eS	Sn	22 56 07.8	+4.8
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				smax	smax		
	comp=N,30nm,0.7s						
YSS				smax	smax		
	comp=N,300nm,3.5s						
YSS	Yuzhno-Sakhali	7.06	270	eP	Pn	22 54 47.2	+2.8
JTKR	Abashiri--Toko	7.32	245	P	Pn	22 54 49.4	+1.4
JAK	Akkeshi	7.42	236	P	Pn	22 54 48.0	-1.5
JAK				S	Sn	22 56 07.4	-4.6
TYV	Tymovskoe	7.63	300	ePN	Pn	22 54 57.9	+5.8
TYV				pmax	pmax		
	comp=Z,23nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.7s						
TYV	Tymovskoe	7.63	300	eP	Pn	22 54 52.7	+0.6
TYV				AMB	AMB	22 55 00.1	
	comp=Z,200nm,3.0s						
TYV				eS	Sn	22 56 15.7	-1.1
TYV				A	A	22 56 24.6	
	comp=Z,340nm,3.0s						
TYV				A	A	22 56 24.6	
	comp=Z,410nm,3.0s						
JAR	Ashorobuto	7.78	241	P	Pn	22 54 55.0	+0.8
JOB	Onbets	7.97	238	P	Pn	22 54 56.0	-0.9
JOB				S	Sn	22 56 21.1	-4.2
JKA	Kamikawa-asahi	8.06	249		Pn	22 55 00.6	+2.6
ASAJ	Asahikawa	8.06	249	P	Pn	22 55 01.4	+3.3
	comp=Z,78nm,0.5s,baz=78,slow=13,SNR=56						
ASAJ	Asahikawa	8.06	249	PN	Pn	22 55 00.6	+2.5
JKK2	Kamakawa 2	8.09	247	P	Pn	22 55 00.5	+2.1
JCH	Churui	8.43	238	P	Pn	22 55 02.1	-0.9
JCH				eS	Sn	22 56 30.0	-6.3
JRBN	Rebuntou	8.55	261	eP	Pn	22 55 08.2	+3.5
JAB	Ashibetsu	8.60	246	eP	Pn	22 55 07.3	+1.9
JNBK	Urakawa-nobuka	8.99	238	P	Pn	22 55 08.0	-2.6
JNBK				eS	Sn	22 56 42.8	-7.2
NKL	Nikolayevsk	9.75	310	eP	Pn	22 55 19.7	-1.1
KBG	Krutoberegovo	10.60	30	eP	Pn	22 55 30.1	-2.2
JANG	Nango	10.95	234	P	Pn	22 55 32.4	-4.8
JTH	Tanohata	11.07	231	eP	Pn	22 55 33.5	-5.3
JTH				eS	Sn	22 57 28.0	-13
MA2	Magadan	12.20	354	P	Pn	22 55 56.0	+2.5
	comp=Z,5.8nm,0.5s,baz=168,slow=12,SNR=6.7						
MA2				LR	LR	22 59 52.1	
	comp=Z,56nm,20.2s,baz=118,slow=34						
MA2	Magadan	12.20	354	⇑ePN	Pn	22 55 54.7	+1.2
MA2	Magadan	12.20	354	eP	Pn	22 55 54.8	+1.2
KLR	Kul'dur	14.29	285	LR	LR	23 02 37.6	
	comp=Z,8.0nm,19.4s,baz=80,slow=40						
KLR	Kul'dur	14.29	285	⇓eP	P	22 56 22.3	-2.4
KLR	Kul'dur	14.29	285	eP	Pn	22 56 20.5	-0.3
USRK	Ussuriysk Ar.	15.06	265	P	Pn	22 56 31.4	+0.8
	comp=Z,6.6nm,0.5s,baz=68,slow=12,SNR=14						
SEY	Seymchan	15.49	359	P	Pn	22 56 35.0	-0.9
	comp=Z,2.7nm,0.5s,baz=165,slow=9.4,SNR=9.1						
SEY	Seymchan	15.49	359	eP	Pn	22 56 35.0	-0.9
MJA0	Matsu Arr-Jizo	15.50	231	eP	Pn	22 56 35.8	-0.4
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MJAR	Matsushiro Arr	15.52	231	P	Pn	22 56 35.5	-0.9
	comp=Z,4.8nm,0.6s,baz=28,slow=14,SNR=17						

MJAR Matsushiro Arr 15.52 231 Pn Pn 22 56 34.5 -1.9
MJAR Matsushiro Arr 15.52 231 P **Pn 22 56 34.5 -1.9**
MJAR pmax pmax
comp=Z,8.0nm,1.4s
MJB9 Matsu-Tunnel 15.52 231 Pn **Pn 22 56 36.5 +0.1**
MAJO Matsushiro 15.52 231 Pn 22 56 35.7 -0.8
MAJO Matsushiro 15.52 231 P **Pn 22 56 35.7 -0.8**
MAJO pmax pmax
comp=Z,12nm,0.8s
JGF Kuroka 16.68 230 Pn 22 56 50.4 -0.4
JGF IAmb IAmb 22 56 55.1
comp=Z,15nm,0.8s
INU Inuyama 17.05 231 Pn 22 56 55.4 +0.1
INU IAmb IAmb 22 56 58.5
comp=Z,22nm,0.8s
HEH HeiHe 17.09 289 *eP* **P 22 56 56.7 +1.1**
HEH pmax pmax
comp=Z,8.0nm,0.6s
YAK Yakutsk 19.70 326⇓ *eP* **P 22 57 23.8 -0.2**
YAK pmax pmax
comp=Z,9.0nm,0.7s
KSRS Korea Array 21.01 251 P **P 22 57 40.0 +1.7**
comp=Z,12nm,0.9s,baz=55,slow=10,SNR=21
comp=Z,12nm,0.9s
KSRS Korea Array 21.01 251 *eP* **P 22 57 40.0 +1.7**
BILL Bilibino 21.69 13⇓ *iP* **P 22 57 45.5 +0.2**
BILL pmax pmax
comp=Z,41nm,4.7s
BILL Bilibino 21.69 13 *eP* **P 22 57 45.5 +0.2**
HILR Hailar Array B 22.08 288 P **P 22 57 47.6 -2.1**
comp=Z,1.5nm,0.4s,baz=70,slow=8.7,SNR=4.1
HILR pP **pwP 22 58 12.6 -1.6**
comp=Z,3.8nm,0.6s,baz=96,slow=14,SNR=4.2
comp=Z,1.5nm,0.4s
TIXI Tiksi 26.76 343⇓ *eP* **P 22 58 31.9 -0.7**
TIXI pmax pmax
comp=Z,1.0nm,1.0s
TIXI Tiksi 26.76 343 *eP* **P 22 58 31.9 -0.7**
H11N2 WAKE ISLAND Hy 29.88 153 T T 23 30 49.8
baz=341,slow=76,SNR=460
H11N1 WAKE ISLAND Hy 29.89 153 T T 23 30 58.1
baz=341,slow=76,SNR=646
H11N3 WAKE ISLAND Hy 29.89 153 T T 23 30 58.4
baz=341,slow=76,SNR=420
F17K Baldwin Pennin 30.31 35 P 22 59 05.6 +1.5
F17K IAmb IAmb 22 59 06.6
comp=Z,8.6nm,0.9s
H11S1 WAKE ISLAND Hy 30.97 154 T T 23 32 08.8
baz=341,slow=76,SNR=891
H11S3 WAKE ISLAND Hy 30.98 154 T T 23 32 16.2
baz=341,slow=76,SNR=1125
H11S2 WAKE ISLAND Hy 30.99 154 T T 23 32 16.3
baz=341,slow=76,SNR=1359
SONM Songino Array 31.08 288 P **P 22 59 10.5 -0.8**
comp=Z,0.3nm,0.5s,baz=69,slow=6.2,SNR=4.9
comp=Z,0.3nm,0.5s
SONM Songino Array 31.08 288 P **P 22 59 10.2 -1.1**
SONM Songino Array 31.08 288 P **P 22 59 10.3 -1.1**
SONM pmax pmax
comp=Z,1.0nm,1.2s
G18K Tagagawik 31.20 36 P 22 59 13.0 +1.0
G18K IAmb IAmb 22 59 14.1
comp=Z,14nm,1.4s
H19K Roundabout Mou 32.02 37 P **P 22 59 19.6 +0.4**
H19K IAmb IAmb 22 59 22.4
comp=Z,7.0nm,0.9s
D19K Kuna River 32.03 32 P **P 22 59 19.9 +0.6**
D19K IAmb IAmb 22 59 21.9
comp=Z,9.9nm,1.0s
E19K Redstone River 32.09 34 P **P 22 59 20.9 +1.0**
E19K IAmb IAmb 22 59 22.2
comp=Z,9.8nm,1.1s
D20K Etivluk River 32.62 31 P **P 22 59 25.0 +0.5**
G21K Allakaket 33.36 36 P **P 22 59 31.3 +0.4**
G21K IAmb IAmb 22 59 35.0
comp=Z,12nm,1.2s
H21K Melozitna Rive 33.54 37 P **P 22 59 33.4 +0.9**
H21K IAmb IAmb 22 59 35.5
comp=Z,6.3nm,1.0s
COLD Coldfoot 34.74 35 P 22 59 43.3 +0.5
COLD IAmb IAmb 22 59 45.0
comp=Z,7.9nm,1.2s
E23K Chandalar 35.05 33 P **P 22 59 47.1 +1.5**
E23K IAmb IAmb 22 59 48.3
comp=Z,4.8nm,0.8s
NEA2 Nenana 35.05 39 P **P 22 59 46.1 +0.6**
KNK Knik Glacier 35.43 45 P **P 22 59 46.8 -2.0**
SML Sawmill 35.46 44 P **P 22 59 48.2 -0.9**
E24K Your Creek 35.48 33 P **P 22 59 50.2 +1.0**
E24K IAmb IAmb 22 59 52.0
comp=Z,4.8nm,0.7s
COLA College 35.58 39 P **P 22 59 50.0 +0.1**
COLA College 35.58 39*d iP* **P 22 59 51.3 +1.3**
COLA pmax pmax
comp=Z,51nm,4.6s
H24K Noodor Dome 35.58 37 P **P 22 59 51.7 +1.6**
CCB Clear Creek Bu 35.60 39 P **P 22 59 50.2 0.0**
G24K Hadweenzic Riv 35.77 36 P **P 22 59 52.0 +0.3**
DHY Denali Highway 35.83 42 P **P 22 59 51.4 -1.0**
DHY IAmb IAmb 23 00 02.8
comp=Z,8.7nm,1.4s
HDA Harding Lake 35.97 40 P **P 22 59 54.0 +0.6**
HDA IAmb IAmb 22 59 55.3
comp=Z,8.9nm,1.2s
IL31 35.99 39 P **P 22 59 54.4 +0.9**
IL31 IAmb IAmb 22 59 56.8
comp=Z,8.0nm,1.4s
ILAR Eielson Array 35.99 39 P **P 22 59 53.8 +0.2**
comp=Z,2.1nm,1.0s,baz=265,slow=6.1,SNR=22
comp=Z,2.1nm,1.0s
ILAR Eielson Array 35.99 39 P **P 22 59 54.5 +1.0**
ILAR Eielson Array 35.99 39 *eP* **P 22 59 54.2 +0.6**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
D25K Kavik River 36.36 31 P **P 22 59 56.9 +0.3**
PRP Porcupine Dome 36.56 38 P 22 59 58.5 0.0
PRP IAmb IAmb 23 00 02.3
comp=Z,4.8nm,0.6s
G26K Porcupine Rive 37.24 35 P **P 23 00 04.1 0.0**
G26K IAmb IAmb 23 00 07.9
comp=Z,5.0nm,0.8s
C27K Jago River 37.31 31 P **P 23 00 05.7 +1.0**
ENH Enshi 37.48 259 P **P 23 00 06.6 0.0**
ENH IAmb IAmb 23 00 07.6
comp=Z,3.4nm,0.8s
LZDM Lanzhou Array 38.02 271 P **P 23 00 12.0 +0.5**
comp=Z,0.8nm,0.4s,baz=39,slow=5.5,SNR=2.0
comp=Z,0.8nm,0.4s
NRIK Norilʹsk 38.13 328 LR LR 23 19 26.3
comp=Z,43nm,18.8s,baz=14,slow=42
D27M Malcolm River 38.28 32 P **P 23 00 13.6 +0.7**
D27M IAmb IAmb 23 00 15.5
comp=Z,6.0nm,1.1s
F28M Old Crow 38.73 34 P 23 00 17.8 +1.1
F28M IAmb IAmb 23 00 19.5
comp=Z,12nm,1.5s
L29M L29M 40.00 41 P **P 23 00 27.4 +0.1**
I30M Mount Dempster 40.40 38 P 23 00 30.9 +0.3
I30M IAmb IAmb 23 00 33.1
comp=Z,5.6nm,0.8s
ZALV Zalesovo Beam 42.17 305 P **P 23 00 43.5 -1.6**
comp=Z,2.0nm,0.4s,baz=66,slow=7.0,SNR=12
ZALV pP **pwP 23 01 13.0 -0.8**
comp=Z,1.1nm,0.7s,baz=60,slow=8.8,SNR=2.8
ZALV PcP **PcP 23 02 37.3 +0.1**
comp=Z,0.3nm,0.3s,baz=20,slow=1.7,SNR=2.7
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 42.17 305 P **P 23 00 43.3 -1.8**
ZALV Zalesovo Beam 42.17 305 *eP* **P 23 00 43.6 -1.5**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
DGZ Jazzator, Alta 42.24 298⇑ *iP* **P 23 00 45.6 -0.3**
DGZ pmax pmax
comp=Z,8.0nm,4.1s
C36M Paulatuk 44.20 30 P P 23 01 02.5 +1.4
C36M IAmb IAmb 23 01 30.3
comp=Z,10.0nm,1.4s
PZH PanZhiHua 45.10 261 P P 23 01 17.3 +8.3
KMI2 Kunming 45.34 259 P **P 23 01 12.4 +1.4**
KMI2 pmax pmax
comp=Z,6.0nm,0.7s
MK31 Makanchi Array 46.59 297⇑ *iP* **P 23 01 18.7 -1.7**
MKAR Makanchi Array 46.59 297 P **P 23 01 19.2 -1.2**
comp=Z,1.0nm,0.8s,baz=63,slow=7.3,SNR=11
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 46.59 297 P **P 23 01 19.3 -1.0**
MKAR Makanchi Array 46.59 297 P **P 23 01 19.3 -1.0**
MKAR Makanchi Array 46.59 297 *eP* **P 23 01 19.4 -1.0**
KURK Kurchatov 46.95 303 P 23 01 21.8 -1.2
KURK IAmb IAmb 23 01 22.9
comp=Z,6.9nm,0.8s
KURK Kurchatov 46.95 303 P **P 23 01 21.8 -1.2**
KURK pmax pmax
comp=Z,7.0nm,0.8s
KURK Kurchatov 46.95 303 *eP* **P 23 01 21.8 -1.2**
KURBB Kurchatov Arra 47.04 303 P **P 23 01 22.4 -1.4**
comp=Z,5.2nm,0.7s,baz=68,slow=8.2,SNR=23
comp=Z,5.2nm,0.7s
LSA Lhasa 50.22 273 P **P 23 01 48.1 -0.8**
LSA Lhasa 50.22 273 P **P 23 01 48.1 -0.8**
LSA pmax pmax
comp=Z,5.0nm,0.5s
YKA Yellowknife Ar 50.35 37 P **P**
comp=Z,1.2nm,0.7s,baz=302,slow=7.9,SNR=16
YKA PcP **PcP 23 03 05.6 -0.2**
comp=Z,0.1nm,0.3s,baz=304,slow=4.4,SNR=4.3
comp=Z,1.2nm,0.7s
YKA Yellowknife Ar 50.35 37 P **P 23 01 49.0 +0.1**
BVAR Borovoye Array 50.38 309 P **P 23 01 48.4 -0.9**
comp=Z,1.1nm,0.4s,baz=56,slow=7.6,SNR=12
BVAR pP **pwP 23 02 18.8 +0.1**
comp=Z,0.6nm,0.6s,baz=47,slow=11,SNR=2.8
comp=Z,1.1nm,0.4s
BORK Borovoye 50.41 309 P 23 01 48.9 -0.6
BORK IAmb IAmb 23 01 49.7
comp=Z,2.8nm,0.8s
BORK Borovoye 50.41 309*de*P **P 23 01 48.3 -1.2**
BORK pmax pmax
comp=Z,5.0nm,1.2s
SPITS Spitsbergen Ar 51.89 350 P **P 23 01 58.6 -1.6**
comp=Z,8.5nm,1.0s,baz=61,slow=9.6,SNR=5.1
comp=Z,8.5nm,1.0s
SHL Shillong 52.37 268 P 23 02 05.3 +0.6
SHL Shillong 52.37 268 P **P 23 02 05.3 +0.6**
SHL pmax pmax
comp=Z,9.0nm,0.5s
CMAR Chiang Mai Arr 52.53 256 P **P 23 02 07.4 +1.7**
comp=Z,0.8nm,0.4s,baz=34,slow=7.1,SNR=5.9
comp=Z,0.8nm,0.4s
CMAR Chiang Mai Arr 52.53 256 P **P 23 02 05.6 -0.1**
AAK Ala-Archa 53.49 296⇓ *iP* **P 23 02 12.2 -0.5**
AAK pmax pmax
comp=Z,3.0nm,1.1s
AAK Ala-Archa 53.49 296 *eP* **P 23 02 12.3 -0.5**
ARTI Arti 54.57 317*c iP* **P 23 02 19.1 -1.0**
ARTI S **S 23 09 48.8 -1.8**
ARTI pmax pmax
comp=Z,19nm,3.4s
ARCES ARCESS Array B 57.16 341 P **P 23 02 36.8 -1.5**
comp=Z,2.1nm,0.8s,baz=14,slow=5.4,SNR=5.0
comp=Z,2.1nm,0.8s
ARCES ARCESS Array B 57.16 341 *eP* **P 23 02 38.4 0.0**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
PLID Pearl Lake 59.27 55 P **P 23 02 53.8 0.0**
PLID IAmb IAmb 23 02 55.8
comp=Z,3.0nm,0.8s
SUMG Summit 59.97 4 P **P 23 02 58.6 +0.4**
SUMG Summit 59.97 4 P **P 23 02 58.7 +0.4**
SUMG pmax pmax
comp=Z,10.0nm,0.8s
BELG Belogornoye 61.98 318⇓ *eP* **P 23 03 10.5 -1.1**
BELG pmax pmax
comp=Z,2.0nm,1.1s
NVAR Mina Array Bea 62.11 63 P **P 23 03 14.1 +1.1**
comp=Z,0.7nm,0.3s,baz=282,slow=8.0,SNR=4.8
comp=Z,0.7nm,0.3s
NVAR Mina Array Bea 62.11 63 P **P 23 03 13.4 +0.3**
FINES FINESS Array B 63.37 335 P **P 23 03 19.4 -1.3**
comp=Z,3.4nm,0.5s,baz=30,slow=7.6,SNR=58
comp=Z,3.4nm,0.5s
FINES FINESS Array B 63.37 335 P **P 23 03 19.9 -0.8**
FINES FINESS Array B 63.37 335 P **P 23 03 19.9 -0.8**
PDAR Pinedale Array 64.33 54 P **P 23 03 28.6 +1.0**
comp=Z,0.7nm,0.7s,baz=264,slow=1.5,SNR=5.5
comp=Z,0.7nm,0.7s
PDAR Pinedale Array 64.33 54 P **P 23 03 28.2 +0.5**
OBN Obninsk 64.70 325 *eP* **P 23 03 31.0 +1.5**
OBN *e**PP **pwP 23 03 58.0 -1.8**
OBN *e* 23 04 02.2
OBN *e**SP **sP 23 04 11.0 +3.3**
OBN pmax pmax
comp=Z,3.0nm,0.9s
NB2 NORSAR Subarra 67.53 341 P **P 23 03 47.6 0.0**
comp=Z,1.4nm,0.6s,baz=29,slow=6.5
NOA NORSAR Array B 67.53 341 P **P 23 03 46.9 -0.7**
comp=Z,1.2nm,0.6s,baz=25,slow=6.4,SNR=9.0
comp=Z,1.2nm,0.6s
NOA NORSAR Array B 67.53 341 *eP* **P 23 03 47.8 +0.2**
NOA pmax pmax
comp=Z,1.0nm,0.6s
HFS Hagfors 67.77 339 P **P 23 03 48.1 -0.9**
comp=Z,2.8nm,0.4s,baz=59,slow=5.7,SNR=40
comp=Z,2.8nm,0.4s
WRAB Tennant Creek 69.19 199 P **P 23 03 59.3 +1.0**
WRAB Tennant Creek 69.19 199⇑ *iP* **P 23 04 00.6 +2.3**
WRAB pmax pmax
comp=Z,7.0nm,0.6s
WRA Warramunga Arr 69.20 199 P **P 23 03 58.7 +0.4**
comp=Z,1.0nm,0.6s,baz=18,slow=6.4,SNR=9.8
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 69.20 199 P **P 23 03 59.8 +1.4**
WRA Warramunga Arr 69.20 199 *eP* **P 23 04 00.0 +1.7**
WRA pmax pmax
comp=Z,1.0nm,0.6s
KIV Kislovodsk 70.28 314 *eP* **P 23 04 05.7 +0.8**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KBZ Khabaz 70.34 314 P **P 23 04 05.2 +0.1**
comp=Z,1.7nm,0.7s,baz=104,slow=4.8,SNR=6.3
comp=Z,1.7nm,0.7s
KBZ Khabaz 70.34 314 *eP* **P 23 04 05.7 +0.5**
KBZ pmax pmax
comp=Z,2.0nm,0.7s
KBZ Khabaz 70.34 314 *eP* **P 23 04 05.7 +0.5**
SHA1 Shidzhatmaz 70.45 314⇓ *eP* **P 23 04 06.4 +0.2**
AKASG Malin Array Be 70.93 326 P **P 23 04 07.1 -1.5**
comp=Z,1.5nm,0.5s,baz=35,slow=6.3,SNR=5.0
comp=Z,1.5nm,0.5s
AKASG Malin Array Be 70.93 326 P **P 23 04 08.4 -0.2**
AKASG Malin Array Be 70.93 326 *i* P **P 23 04 07.6 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
SCHQ Schefferville 72.64 23 P **P 23 04 19.0 +0.1**
comp=Z,3.3nm,0.8s,baz=336,slow=5.7,SNR=11
comp=Z,3.3nm,0.8s
AS31 Alice Springs 72.89 198 P **P 23 04 20.6 0.0**
ASAR Alice Springs 72.89 198 P **P 23 04 22.6 +1.9**
comp=Z,4.1nm,0.7s,baz=13,slow=5.5,SNR=38
comp=Z,4.1nm,0.7s
ASAR Alice Springs 72.89 198 P **P 23 04 22.2 +1.6**
EKA Eskdalemuir Ar 75.63 346 P **P 23 04 36.4 +0.2**
comp=Z,0.6nm,0.3s,baz=16,slow=5.1,SNR=8.3
comp=Z,0.6nm,0.3s
CLL Collm 75.79 335⇓ *iP* **P 23 04 37.1 -0.1**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 75.79 335⇓ *iP* **P 23 04 37.1 -0.1**
comp=Z,8.0nm,0.9s
CLL *ex* x 23 04 41.0
CLL *e*PP **PP 23 07 34.0 +6.2**
TXAR Lajitas Array 77.15 61 P **P 23 04 45.4 0.0**
comp=Z,2.2nm,0.7s,baz=301,slow=4.2,SNR=20
TXAR pP **pwP 23 05 16.6 +0.7**
comp=Z,0.8nm,0.6s,baz=304,slow=3.9,SNR=2.9
comp=Z,2.2nm,0.7s
TXAR Lajitas Array 77.15 61 P **P 23 04 45.8 +0.4**
KHC Kasperske Hory 77.57 334⇑ *iP* **P 23 04 47.8 +0.5**
KHC pmax pmax
comp=Z,19nm,3.6s
GERES GERESS Array B 77.79 334 P **P 23 04 48.2 -0.4**
comp=Z,0.8nm,0.5s,baz=36,slow=6.0,SNR=4.9
comp=Z,0.8nm,0.5s
BRTR Keskin Array B 77.85 317 P **P 23 04 49.0 -0.1**
comp=Z,1.0nm,0.8s,baz=102,slow=5.7,SNR=5.7
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 77.85 317 P **P 23 04 48.7 -0.4**
BRTR Keskin Array B 77.85 317 *eP* **P 23 04 49.3 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
CONA Conrad Observa 77.94 332 *eP* **P 23 04 50.3 +0.9**
comp=Z,2.4nm,0.6s
SOKA Soboth 79.31 332 *eP* **P 23 04 57.4 +0.5**
comp=Z,2.4nm,0.6s
LESA Schwarzleotal 79.37 334 *i* P **P 23 04 58.2 +0.9**
comp=Z,2.2nm,0.5s
KBA Koelnbreinsper 79.48 333 *eP* **P 23 04 59.1 +1.1**
comp=Z,4.9nm,0.5s
STKA Stephens Creek 79.67 190 P **P 23 04 59.7 +1.1**
comp=Z,1.5nm,0.7s,baz=334,slow=7.9,SNR=2.9
comp=Z,1.5nm,0.7s
STKA Stephens Creek 79.67 190 P **P 23 04 60.0 +1.3**
STKA Stephens Creek 79.67 190 P **P 23 05 00.0 +1.3**
STKA pmax pmax
comp=Z,32nm,1.5s
WATA Walderalm 79.78 335 *eP* **P 23 05 00.3 +0.8**
comp=Z,3.4nm,0.5s
WTTA Wattenberg 79.82 334 *i* P **P 23 05 00.9 +1.1**
comp=Z,5.2nm,0.5s
SQTA Sankt Quirin 79.99 335 *eP* **P 23 05 01.6 +1.0**
comp=Z,4.4nm,1.0s
MMAI Mount Meron Ar 82.32 311 P **P 23 05 14.1 +0.9**
comp=Z,0.7nm,0.5s,baz=21,slow=8.3,SNR=3.7
comp=Z,0.7nm,0.5s
ESDC Sonseca Array 90.85 342 P **P 23 05 55.8 +1.1**
comp=Z,0.3nm,0.8s,baz=28,slow=3.9,SNR=1.6
comp=Z,0.3nm,0.8s
ESDC Sonseca Array 90.85 342 P **P 23 05 53.6 -1.1**
H03N2 Juan Fernandez 138.77 89 T T 01 47 20.3
baz=308,slow=77,SNR=6.6
H03N1 Juan Fernandez 138.78 89 T T 01 47 24.8
baz=308,slow=77,SNR=7.6
H03N3 Juan Fernandez 138.78 89 T T 01 47 26.1
baz=308,slow=77,SNR=29
BDFB Brasilia 143.76 36 PKP PKPab 23 12 23.6 +0.4
comp=Z,2.1nm,0.6s,baz=52,slow=3.9,SNR=4.4
ELIB Princess Elisa 146.44 206 *d*PKPdf **PKPdf 23 12 31.1 +2.1**
PLCA Paso Flores 148.28 94 PKPbc **PKPbc 23 12 36.5 0.0**
comp=Z,1.1nm,0.6s,baz=336,slow=3.6,SNR=5.9

IDC ***02*** *23:00:24.4±3.0, 29.93°N×51.38°E, h0km, mb3.6/5, mbtmp3.6/5, MS2.7/1, Error ellipse: s-maj=72.7km s-min=30.4km az=146.0*
TEH ***02*** *23:00:25.5, 29.87°N×51.51°E, h8km±25km, ML3.1, Presumed earthquake*

ISC 02 23:00:26.6±0.8, 29.86N±0.05×51.43E±0.06, h15km, n17, σ1§40/16, mb3.4/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**0.97**	**103**	Pg	**Pb**	**23 00 44.1**	**-1.1**
KLNJ	**Kolanjah**	**1.15**	**7**	Pg	**Pg**	**23 00 48.3**	**-0.6**
DSBU	**Dashti - Bushe**	**1.50**	**186**	Pg	**Pg**	**23 00 55.5**	**0.0**
IBRJ	**Brojen**	**2.05**	**356**	Pn	**Pb**	**23 01 03.4**	**-0.2**
IRAM	**Ramesheh**	**2.11**	**23**	Pn	**Pb**	**23 01 04.1**	**-0.6**
ZNGN	**Zangian**	**2.30**	**348**	Pn	**Pb**	**23 01 06.9**	**-1.2**
JHRM	**Jahrom**	**2.31**	**125**	Pn	**Pn**	**23 01 05.7**	**+1.4**
JHBN	**Jahan bin**	**2.45**	**345**	Pn	**Pb**	**23 01 09.5**	**-1.1**
AMIS	**Naft Sefid**	**2.58**	**315**	Pn	**Pb**	**23 01 10.8**	**-1.7**
DOBD	**Dorbid, Yazd**	**3.40**	**51**	Pn	**Pn**	**23 01 21.4**	**+2.2**
IGHG	**Ghaleghazi**	**6.07**	**318**	Pn	**Pn**	**23 01 59.0**	**+3.0**
EIL	**Elat**	**14.31**	**273**	LR	LR	23 10 53.2	
	comp=Z,25nm,18.4s,baz=58,slow=44						
BVAR	**Borovoye Array**	**27.00**	**26**	P	**P**	**23 06 08.1**	**+0.4**
	0.6nm,0.8s,baz=224,slow=10.0,SNR=2.1						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**34.08**	**35**	P	**P**	**23 07 09.6**	**-0.7**
	0.2nm,0.3s,baz=252,slow=8.5,SNR=2.0						
	0.2nm,0.3s						
HFS	**Hagfors**	**39.40**	**331**	P	**P**	**23 07 55.2**	**-0.3**
	2.5nm,0.8s,baz=127,slow=7.8,SNR=5.2						
	2.5nm,0.8s						
NOA	**NORSAR Array B**	**40.92**	**331**	P	**P**	**23 08 06.9**	**-1.2**
	0.4nm,0.6s,baz=113,slow=6.8,SNR=1.2						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**48.78**	**261**	P	**P**	**23 09 11.2**	**-0.1**
	0.3nm,0.5s,baz=60,slow=6.7,SNR=6.7						
	0.3nm,0.5s						

UPP 02 23:11:37.4±0.0, 67.18N×20.64E, h0km, ML2.2, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.07**	**206**	P	Pg	23 11 39.0	+0.3
DUNU				S	Sg	23 11 40.0	+0.4
DUNU	**Dundret**	**0.07**	**206**	P	Pg	23 11 39.7	+1.1
	baz=17						
DUNU				S	Sg	23 11 40.8	+1.3
MASU	**Masugnsbyn**	**0.59**	**62**	P	Pg	23 11 48.7	0.0
MASU				S	Sg	23 11 56.6	+0.2
MASU	**Masugnsbyn**	**0.59**	**62**	P	Pg	23 11 49.5	+0.7
MASU				S	Sg	23 11 57.6	+1.2
RATU	**Laukkuluspa**	**0.76**	**328**	P	Pg	23 11 51.8	-0.2
RATU				S	Sg	23 12 02.2	+0.4
RATU	**Laukkuluspa**	**0.76**	**328**	P	Pg	23 11 52.5	+0.6
KUA	**Kurravaara**	**0.79**	**352**	P	Pg	23 11 52.1	-0.3
KUA	**Kurravaara**	**0.79**	**352**	P	Pg	23 11 53.1	+0.7
SALU	**Saltoluokta**	**0.85**	**284**	P	Pg	23 11 53.4	-0.3
SALU	**Saltoluokta**	**0.85**	**284**	P	Pb	23 11 54.4	-0.7
ERTU	**Ertsjaerv**	**0.88**	**135**	P	Pg	23 11 53.8	-0.4
NIKU	**Nikkaluokta**	**0.93**	**319**	P	Pg	23 11 54.7	-0.4
PAJU	**Pajala**	**0.98**	**98**	P	Pg	23 11 55.7	-0.4
LANU	**Lannavaara**	**1.01**	**30**	P	Pg	23 11 56.4	-0.4
HARU	**Harads**	**1.03**	**172**	P	Pg	23 11 56.5	-0.7

SJA ***02*** *23:30:25.9±0.6, 24.20S×67.23W, h193km±5km, ML3.6, MW3.5*
GUC ***02*** *23:30:26.1±0.7, 24.31S×67.24W, h203km±7km, ML3.8*
IDC ***02*** *23:30:31.5±2.4, 23.80S×66.93W, h200km±27km, mb3.1/1, mbtmp4.0/5, Error ellipse: s-maj=28.8km s-min=19.5km az=118.0*

ISC 02 23:30:26.0±0.8, 24.20S±0.04×67.23W±0.04, h189km±7km, n47, σ1§55/77, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.82**	**92**	*eP*	**Pn**	**23 30 54.0**	**0.0**
SALTA				*eP*	**Pn**	**23 30 54.0**	**0.0**
SALTA				*eP*		23 30 54.0	
AF01	**San Pedro de A**	**1.51**	**325**	*eP*	**Pn**	**23 31 01.2**	**+2.0**
AF01				*eS*	**Sn**	**23 31 26.9**	**+2.1**
AF01				IAML		23 31 41.4	
	comp=E,311nm,0.7s						
AF01	**San Pedro de A**	**1.51**	**325**	*eP*	**Pn**	**23 31 01.6**	**+2.5**
AF01				*eS*	**Sn**	**23 31 22.2**	**-2.7**
AF01				IAML		23 31 47.2	
	comp=Z,182nm,0.8s						
SLA	**San Lorenzo**	**1.66**	**109**	*eP*	**Pn**	**23 31 01.0**	**+0.6**
SLA	**San Lorenzo**	**1.66**	**109**	*eP*	**Pn**	**23 31 01.1**	**+0.8**
SLA				*eS*	**Sn**	**23 31 27.8**	**+0.7**
AZAP	**Zapla**	**1.98**	**91**	*eP*	**Pn**	**23 31 04.0**	**+0.2**
AZAP				*eS*	**Sn**	**23 31 33.3**	**+0.4**
AZAP				IAML		23 31 36.4	
	comp=Z,100nm,0.7s						
FSA	**Cafayete**	**2.22**	**149**	*eP*	**Pn**	**23 31 06.9**	**+0.7**
PB06	**IPOC Station P**	**2.61**	**304**	*eP*	**Pn**	**23 31 12.2**	**+1.5**
PB06				*eS*	**Sn**	**23 31 45.5**	**0.0**
PB06				IAML		23 31 48.1	
	comp=N,409nm,0.2s						
PB06	**IPOC Station P**	**2.61**	**304**	*eP*	**Pn**	**23 31 12.1**	**+1.4**
PB06				*eS*	**Sn**	**23 31 45.4**	**0.0**
PB06				IAML		23 31 47.1	
	comp=Z,257nm,0.1s						
PB14	**IPOC Station P**	**2.92**	**261**	*eP*	**Pn**	**23 31 15.3**	**+0.9**
PB14				*eS*	**Sn**	**23 31 51.3**	**-0.9**
PB14				IAML		23 31 52.7	
	comp=E,73nm,0.4s						
PB14	**IPOC Station P**	**2.92**	**261**	*eP*	**Pn**	**23 31 15.3**	**+0.9**
PB14				*eS*	**Sn**	**23 31 51.7**	**-0.4**
PB14				IAML		23 31 53.6	
	comp=Z,78nm,0.3s						
PB09	**IPOC Station P**	**3.02**	**322**	*eP*	**Pn**	**23 31 17.6**	**+2.0**
PB09				*eS*	**Sn**	**23 31 55.0**	**+0.8**
PB09				IAML		23 31 56.8	
	comp=N,137nm,0.4s						
PB09	**IPOC Station P**	**3.02**	**322**	*eP*	**Pn**	**23 31 17.6**	**+2.0**
PB09				*eS*	**Sn**	**23 31 55.1**	**+0.9**
PB09				IAML		23 31 58.9	
	comp=Z,118nm,0.4s						
PB05	**IPOC Station P**	**3.04**	**296**	*eP*	**Pn**	**23 31 16.8**	**+1.2**
PB05				*eS*	**Sn**	**23 31 52.9**	**-1.5**
PB05				IAML		23 31 57.0	
	comp=E,174nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PB05	**IPOC Station P**	**3.04**	**296**	eP	**Pn**	**23 31 16.6**	**+1.0**
PB05				eS	**Sn**	**23 31 53.7**	**-0.7**
PB05				IAML		23 31 58.1	
	comp=Z,102nm,0.4s						
AC02	**Maricunga**	**3.13**	**213**	eP	**Pn**	**23 31 18.4**	**+1.3**
AC02				eS	**Sn**	**23 31 59.1**	**+2.0**
PB07	**IPOC Station P**	**3.47**	**315**	eP	**Pn**	**23 31 22.0**	**+1.0**
PB07				eS	**Sn**	**23 32 02.4**	**-1.6**
PB07	**IPOC Station P**	**3.47**	**315**	eP	**Pn**	**23 31 21.9**	**+1.0**
PB07				eS	**Sn**	**23 32 02.6**	**-1.3**
PB07				IAML		23 32 04.1	
	comp=Z,174nm,0.3s						
AC01	**Pan de Azucar**	**3.61**	**237**	⇓eP	**Pn**	**23 31 22.5**	**0.0**
AC01				eS	**Sn**	**23 32 05.0**	**-1.9**
AC01	**Pan de Azucar**	**3.61**	**237**	eP	**Pn**	**23 31 22.5**	**0.0**
AC01				eS	**Sn**	**23 32 05.6**	**-1.2**
AC01				IAML		23 32 05.9	
	comp=Z,44nm,0.1s						
PB01	**IPOC Station P**	**3.77**	**326**	⇓eP	**Pn**	**23 31 25.2**	**+0.6**
PB01				eS	**Sn**	**23 32 09.2**	**-1.3**
PB01	**IPOC Station P**	**3.77**	**326**	eP	**Pn**	**23 31 25.3**	**+0.6**
PB01				eS	**Sn**	**23 32 09.1**	**-1.4**
PB01				IAML		23 32 20.0	
	comp=Z,71nm,0.2s						
PB02	**IPOC Station P**	**3.77**	**319**	⇑iP	**Pn**	**23 31 25.4**	**+0.7**
PB02				eS	**Sn**	**23 32 09.9**	**-0.7**
PB02	**IPOC Station P**	**3.77**	**319**	eP	**Pn**	**23 31 25.4**	**+0.7**
PB02				eS	**Sn**	**23 32 09.7**	**-1.0**
PB02				IAML		23 32 14.9	
	comp=Z,255nm,0.3s						
TINO	**Tinogasta**	**3.86**	**184**	eP	**Pn**	**23 31 27.4**	**+1.7**
PATCX	**Punta Patache**	**4.31**	**321**	eP	**Pn**	**23 31 31.8**	**+0.4**
PATCX	**Punta Patache**	**4.31**	**321**	eP	**Pn**	**23 31 32.0**	**+0.5**
PATCX				eS	**Sn**	**23 32 20.5**	**-2.3**
PATCX				IAML		23 32 39.0	
	comp=Z,53nm,0.5s						
GO03	**Copiapo**	**4.33**	**218**	eP	**Pn**	**23 31 31.4**	**-0.2**
GO03				eS	**Sn**	**23 32 21.7**	**-1.4**
GO03				IAML		23 32 24.1	
	comp=Z,56nm,0.6s						
PB08	**IPOC Station P**	**4.41**	**336**	eP	**Pn**	**23 31 34.3**	**+1.3**
PB08				eS	**Sn**	**23 32 25.1**	**-0.5**
PB08	**IPOC Station P**	**4.41**	**336**	eP	**Pn**	**23 31 34.4**	**+1.3**
PB08				eS	**Sn**	**23 32 26.1**	**+0.5**
PB08				IAML		23 32 31.4	
	comp=Z,33nm,0.5s						
VCA	**Vinchina**	**4.60**	**191**	eP	**Pn**	**23 31 38.2**	**+3.0**
VCA				eS	Sn	23 32 39.6	+10
HMBC	**Humberstone**	**4.61**	**327**	eP	**Pn**	**23 31 34.8**	**-0.6**
HMBC	**Humberstone**	**4.61**	**327**	eP	**Pn**	**23 31 34.8**	**-0.6**
HMBC				eS	**Sn**	**23 32 29.1**	**-0.6**
HMBC				IAML		23 32 35.3	
	comp=Z,61nm,0.6s						
TA02	**Huaiquique**	**4.74**	**325**	eP	**Pn**	**23 31 36.6**	**-0.2**
GO01	**Chusmiza**	**4.86**	**338**	eP	**Pn**	**23 31 40.3**	**+1.5**
PB11	**IPOC Station P**	**4.96**	**333**	eP	**Pn**	**23 31 39.1**	**-0.7**
PB11	**IPOC Station P**	**4.96**	**333**	eP	**Pn**	**23 31 39.2**	**-0.6**
PB11				eS	**Sn**	**23 32 35.8**	**-1.9**
PB11				IAML		23 32 36.8	
	comp=Z,48nm,0.5s						
ACLC	**CERRO LA CRUZ**	**5.21**	**177**	eP	**Pn**	**23 31 43.8**	**+0.8**
ACLC				eS	**Sn**	**23 32 43.2**	**-0.6**
AC04	**Llanos de Chal**	**5.27**	**220**	eS	**Sn**	**23 32 42.3**	**-2.5**
AC04				IAML		23 32 50.0	
	comp=Z,31nm,0.8s						
AC05	**El Transito**	**5.36**	**210**	eP	Pn	23 31 26.7	-18
AC05				eS	**Sn**	**23 32 44.9**	**-2.2**
AC05				IAML		23 32 45.7	
	comp=Z,14nm,0.9s						
LPAZ	**La Paz**	**7.92**	**354**	P	**Pn**	**23 32 19.7**	**+0.9**
	comp=Z,11nm,0.3s,baz=164,slow=8.8,SNR=92						
LPAZ				S	**Sn**	**23 33 46.5**	**-1.8**
	comp=Z,2.4nm,0.7s,baz=348,slow=18,SNR=2.4						
SIV	**San Ignacio**	**10.01**	**36**	P	**Pn**	**23 32 44.0**	**-1.6**
	comp=Z,1.7nm,0.4s,baz=211,slow=14,SNR=14						
SIV				S	**Sn**	**23 34 30.3**	**-7.0**
	comp=Z,0.4nm,0.4s,baz=307,slow=20,SNR=1.8						
PLCA	**Paso Flores**	**16.72**	**189**	P	Pn	23 34 18.3	+8.8
	comp=Z,2.4nm,0.8s,baz=6.7,slow=9.6,SNR=7.6						
BDFB	**Brasilia**	**19.96**	**68**	P	**P**	**23 34 44.7**	**+0.7**
	comp=Z,4.4nm,0.7s,baz=242,slow=14,SNR=9.5						
TORD	**Torodi Ar. Bea**	**76.84**	**69**	P	**P**	**23 41 59.2**	**+1.6**
	comp=Z,0.6nm,0.9s,baz=252,slow=6.9,SNR=3.2						
	comp=Z,0.6nm,0.9s						
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	**PKiKP**	**23 49 19.5**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=148,slow=2.0,SNR=4.7						
MKAR	**Makanchi Array**	**146.81**	**40**	PKPbc	**PKiKP**	**23 49 48.9**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=305,slow=2.6,SNR=2.6						

*ISK **02** 23:44:03.5, 37°.46N×37°.22E, h5km, ML3.5/13*
*AFAD **02** 23:44:04.9, 37°.47N×37°.14E, h7km±1km, MW3.8*
ISC 02 23:44:04.4±1.2**, 37°.47N**±0°.03×**37°.19E**±0°.02**, h2**km±12km**,**
n41, σ0.66/45**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHMN	**Narli-Kahraman**	**0.08**	**198**	Pg	**Pg**	**23 44 05.9**	**-0.2**
KMRS	**Kahramanmaras**	**0.23**	**279**	Pg	**Pg**	**23 44 09.1**	**+0.2**
GAZ	**Gaziantep**	**0.30**	**177**	Pg	**Pg**	**23 44 09.7**	**-0.5**
GZT	**Gaziantep**	**0.32**	**111**	P	**Pb**	**23 44 11.7**	**-1.3**
GZT				S	**Sg**	**23 44 15.9**	**+1.1**
GZT				IAML		23 44 16.0	
	comp=N,4μm,0.3s						
GZT				IAML		23 44 17.0	
	comp=E,6μm,0.3s						
KAMA	**Osmaniye**	**0.50**	**236**	P	**Pg**	**23 44 14.2**	**+0.1**
KAMA				S	**Sg**	**23 44 20.0**	**-0.5**
KAMA				IAML		23 44 22.0	
	comp=E,2μm,0.6s						
KAMA				IAML		23 44 23.0	
	comp=N,1μm,0.5s						
AKCA	**Adyaman/G¶l**	**0.51**	**51**	P	**Pb**	**23 44 15.4**	**-0.7**
NZIP	**Nizip/Gaziante**	**0.58**	**138**	P	**Pb**	**23 44 16.8**	**-0.5**
ANDN	**Andirin**	**0.68**	**279**	P	**Pg**	**23 44 17.6**	**+0.2**
KUZU	**Kuzuini**	**0.70**	**187**	P	**Pb**	**23 44 18.8**	**-0.6**
ATAB	**Bozova**	**0.88**	**90**	P	**Pb**	**23 44 22.5**	**+0.1**
AZEY	**Adyaman-Merk**	**0.91**	**68**	P	**Pn**	**23 44 23.3**	**-0.9**
HASA	**Hatay-Hassa-Ha**	**0.91**	**218**	P	**Pb**	**23 44 22.6**	**-0.3**
AKCD	**Akcadag**	**1.01**	**35**	P	**Pb**	**23 44 24.7**	**+0.1**
SAIM	**ADANA**	**1.01**	**300**	P	**Pg**	**23 44 23.8**	**0.0**
KOZT	**Kozan**	**1.08**	**271**	Pn	**Pg**	**23 44 24.8**	**-0.4**
KAHTU	**Kahta**	**1.18**	**73**	P	**Pn**	**23 44 27.8**	**-0.2**
CEYT	**Ceyhan**	**1.24**	**249**	Pn	**Pn**	**23 44 28.0**	**-0.7**
CEYT				Sn	**Sn**	**23 44 45.9**	**0.0**
SURC	**SANLIURFA_SURC**	**1.28**	**117**	P	**Pn**	**23 44 28.7**	**-0.6**
MAYA	**Malatya/Merkez**	**1.30**	**49**	P	**Pg**	**23 44 30.3**	**+1.0**
RHAN	**Hatay/Reyhanl**	**1.30**	**201**	P	**Pg**	**23 44 29.6**	**+0.4**
NARI	**Adyaman-Kaht**	**1.31**	**71**	P	**Pg**	**23 44 29.6**	**0.0**
HANM	**anlurfa/Hi**	**1.35**	**85**	P	**Pb**	**23 44 30.0**	**-0.4**
TAHT	**Tahtakopru-Hat**	**1.36**	**217**	Pn	**Pb**	**23 44 29.9**	**-0.6**
TAHT				Sn	**Sn**	**23 44 49.1**	**+0.2**
YURE	**YUREGIR**	**1.40**	**243**	P	**Pg**	**23 44 31.1**	**-0.2**
KARA	**Karaisali**	**1.71**	**264**	Pn	**Pn**	**23 44 35.1**	**-0.1**
BNN	**Bunyan**	**1.74**	**323**	Pn	**Pn**	**23 44 35.4**	**-0.3**
CMRD	**Camardi-Nigde**	**1.76**	**277**	Pn	**Pn**	**23 44 35.8**	**-0.2**
ARPR	**Arapgir-MALATY**	**1.85**	**29**	Pn	**Pn**	**23 44 36.6**	**-0.7**
ILIC	**ilic-Erzincan**	**2.25**	**28**	Pn	**Pn**	**23 44 42.9**	**+0.1**
DYBB	**Diyarbakir**	**2.39**	**77**	Pn	**Pn**	**23 44 44.1**	**-0.5**
GULA	**Gulagac**	**2.49**	**291**	Pn	**Pn**	**23 44 46.4**	**+0.3**
KOZK	**Kozakli-Nevseh**	**2.52**	**314**	Pn	**Pn**	**23 44 46.7**	**+0.3**
YOZ	**Yozgat**	**2.62**	**326**	Pn	**Pn**	**23 44 47.9**	**+0.1**
KIZK	**Mersin**	**2.63**	**249**	Pn	**Pn**	**23 44 48.2**	**+0.3**
BEIL	**Beino**	**3.03**	**196**	eP	**Pn**	**23 44 53.5**	**0.0**
HWQ	**Hawqa**	**3.34**	**198**	eP	**Pn**	**23 44 58.3**	**+0.6**
ZAHL	**Zahle**	**3.76**	**197**	eP	**Pn**	**23 45 04.0**	**+0.5**
BHL	**Bhannes**	**3.77**	**200**	eP	**Pn**	**23 45 04.6**	**+1.0**
DQRL	**Deir Qamar**	**3.98**	**200**	eP	**Pn**	**23 45 08.2**	**+1.7**
QRWL	**Qaraoun**	**4.10**	**198**	eP	**Pn**	**23 45 10.0**	**+1.8**
RCY	**Rachaya**	**4.12**	**196**	eP	**Pn**	**23 45 09.1**	**+0.7**

*IDC **02** 23:52:52.9±6.2, 16°.10N×98°.63W, h0km, mb3.2/3, mbtmp3.2/5, ML3.4/2, MS3.0/2, Error ellipse: s-maj=104.7km s-min=22.6km az=6.0*
*MEX **02** 23:52:59.5±1.0, 16°.49N×98°.65W, h12km±9km, MD4.4*
ISC 02 23:52:57.0±1.2**, 16°.47N**±0°.05×**98°.60W**±0°.02**, h9**km±9km**,**
n27, σ1.98/42**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.46**	**100**	eP	**Pb**	**23 53 08.2**	**+0.8**
PNIG				eS	**Sb**	**23 53 14.9**	**+0.5**
CRIG	**Cruz Grande**	**0.57**	**297**	eP	**Pg**	**23 53 08.9**	**+0.8**
CRIG				eS	**Sg**	**23 53 16.3**	**+0.7**
MGIG	**Malinaltepec**	**0.76**	**358**	eP	**Pg**	**23 53 11.6**	**0.0**
MGIG				eS	**Sg**	**23 53 20.9**	**-0.7**
YOIG	**Yosondua**	**1.08**	**69**	eP	**Pg**	**23 53 17.9**	**+0.1**
YOIG				eS	**Sg**	**23 53 32.1**	**+0.1**
TLIG	**Tlapa**	**1.08**	**2**	eP	**Pg**	**23 53 17.0**	**-0.9**
TLIG				eS	**Sg**	**23 53 30.1**	**-1.9**
TXIG	**Tlaxiaco**	**1.11**	**46**	eP	**Pg**	**23 53 17.9**	**-0.6**
TXIG				eS	**Sg**	**23 53 32.2**	**-0.8**
DAIG	**Los Arroyos**	**1.14**	**299**	eP	**Pg**	**23 53 17.7**	**-1.3**
DAIG				iS	**Sg**	**23 53 31.0**	**-2.8**
ACP2	**Acapulco**	**1.29**	**288**	eP	**Pn**	**23 53 20.1**	**-1.3**
ACP2				eS	**Sb**	**23 53 37.7**	**-0.6**
HMTT	**Tlapaneco**	**1.32**	**2**	eP	**Pn**	**23 53 20.7**	**-1.1**
HMTT				iS	**Sn**	**23 53 37.4**	**-2.1**
PEIG	**Puerto Escondi**	**1.48**	**108**	eP	**Pn**	**23 53 23.4**	**-0.5**
PEIG				iS	**Sn**	**23 53 41.5**	**-1.8**
FTIG	**Fresnillo de T**	**1.50**	**17**	eP	**Pn**	**23 53 23.7**	**-0.5**
FTIG				iS	**Sn**	**23 53 42.1**	**-1.9**
HLIG	**Huajuapan de L**	**1.55**	**29**	eP	**Pn**	**23 53 24.3**	**-0.8**
HLIG				iS	**Sn**	**23 53 43.9**	**-1.5**
CAIG	**El Cayaco**	**1.69**	**290**	eP	**Pn**	**23 53 25.2**	**-1.7**
CAIG				iS	**Sn**	**23 53 48.0**	**-0.7**
MEIG	**Mezcala**	**1.74**	**326**	eP	**Pn**	**23 53 27.5**	**-0.1**
MEIG				iS	**Sn**	**23 53 48.0**	**-2.0**
VHO	**Vista Hermosa**	**1.89**	**71**	eP	**Pn**	**23 53 29.6**	**-0.1**
VHO				iS	**Sn**	**23 53 54.7**	**+0.9**
TOIG	**Toxpalan**	**2.18**	**42**	eP	**Pn**	**23 53 33.8**	**+0.1**
TOIG				iS	**Sn**	**23 54 03.0**	**+2.1**
TPIG	**Tehuac#an**	**2.27**	**31**	eP	**Pn**	**23 53 32.4**	**-2.5**
TPIG				iS	**Sn**	**23 54 06.6**	**+3.5**
HUIG	**Huatulco**	**2.50**	**106**	eP	**Pn**	**23 53 37.5**	**-0.4**
CMIG	**Matias Romero**	**3.62**	**80**	Pn	**Pn**	**23 53 52.9**	**-0.4**
	4.3nm,0.3s,baz=254,slow=13,SNR=46						
CMIG				Sn	**Sn**	**23 54 33.7**	**-2.4**
	11nm,0.3s,baz=257,slow=6.6,SNR=4.7						
CMIG				Lg	Lg	23 54 50.3	
	21nm,0.3s,baz=198,slow=20,SNR=22						
CMIG				LR	LR	23 55 29.2	
	comp=Z,134nm,19.5s,baz=174,slow=42						
	11nm,0.3s						
APG	**El Apazote**	**7.97**	**99**	Sn	**Sn**	**23 56 16.4**	**-7.4**
	baz=220,slow=22,SNR=1.7						
APG				Lg	Lg	23 57 07.5	
	baz=218,slow=18,SNR=4.3						
TXAR	**Lajitas Array**	**13.62**	**341**	Pn	**Pn**	**23 56 14.9**	**+4.3**
	baz=154,slow=14,SNR=5.6						
	0.2nm,0.8s						
ANMO	**Albuquerque**	**19.70**	**341**	P	**P**	**23 57 28.3**	**+1.4**
	0.5nm,0.6s,baz=170,slow=11,SNR=2.3						
ANMO				LR	LR	00 05 45.2	
	comp=Z,57nm,21.4s,baz=149,slow=39						
	0.5nm,0.6s						
PDAR	**Pinedale Array**	**27.83**	**343**	P	**P**	**23 58 47.3**	**+0.2**
	0.3nm,0.7s,baz=142,slow=9.6,SNR=2.7						
	0.3nm,0.7s						
YKA	**Yellowknife Ar**	**47.33**	**350**	P	**P**	**00 01 30.1**	**-0.7**
	0.2nm,0.7s,baz=162,slow=7.0,SNR=4.9						
	0.2nm,0.7s						
H03N2	**Juan Fernandez**	**53.07**	**159**	T	T	00 59 13.6	
	baz=337,slow=77,SNR=29						
H03N1	**Juan Fernandez**	**53.08**	**159**	T	T	00 59 12.9	
	baz=337,slow=77,SNR=37						
H03N3	**Juan Fernandez**	**53.09**	**159**	T	T	00 59 10.9	
	baz=337,slow=77,SNR=39						

*IDC **03** 00:11:27.8±10.0, 7°.29S×128°.96E, h110km±107km, mb3.0/3, mbtmp3.7/7, ML3.9/4, Error ellipse: s-maj=112.0km s-min=31.7km az=46.0*
ISC 03 00:11:26.5±1.1**, 7°.4S**±0°.1×**129°.2E**±0°.2**, h100**km**, n7,**
σ3.28/8**, mb3.2**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.12**	**242**	P	**Pn**	**00 12 55.3**	**+0.8**
	13nm,0.3s,baz=146,slow=2.2,SNR=11						
BATI				S	Sn	00 13 46.0	-17
	28nm,0.4s,baz=117,slow=7.9,SNR=2.0						
	44nm,0.4s						
FITZ	**Fitzroy Crossi**	**11.21**	**197**	P	**Pn**	**00 14 03.1**	**-0.5**
	0.6nm,0.3s,baz=23,slow=7.6,SNR=16						
FITZ				S	Sn	00 15 57.0	-10
	4.4nm,0.3s,baz=97,slow=23,SNR=9.9						
	1.4nm,0.3s						
WRA	**Warramunga Arr**	**13.48**	**159**	P	**Pn**	**00 14 36.1**	**+2.3**
	0.4nm,0.3s,baz=323,slow=15,SNR=19						
WRA				S	Sn	00 16 56.3	-5.9
	1.9nm,0.5s,baz=333,slow=21,SNR=11						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**16.84**	**165**	P	**P**	**00 15 19.6**	**+2.9**
	0.3nm,0.3s,baz=341,slow=11,SNR=23						
ASAR				S	**Sn**	**00 18 17.6**	**-5.8**
	0.6nm,0.5s,baz=311,slow=20,SNR=6.6						
	1.4nm,0.5s						
SONM	**Songino Array**	**58.52**	**342**	P	**P**	**00 21 10.4**	**-2.1**
	0.2nm,0.3s,baz=133,slow=6.3,SNR=2.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**68.07**	**327**	P	**P**	**00 22 14.6**	**-0.9**
	0.1nm,0.4s,baz=111,slow=7.9,SNR=4.2						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**72.38**	**329**	P	**P**	**00 22 41.9**	**+0.3**
	0.2nm,0.5s,baz=129,slow=5.1,SNR=1.5						
	0.2nm,0.5s						

*NEIC **03** 00:19:43.7±1.2, 17°.92N±0°.03×66°.80W±0°.01, h10km±1km, ML2.6/35, Md2.4/8(RSPR), Error ellipse: s-maj=5.4km s-min=2.6km az=8.0*
*SDD **03** 00:19:43.8±1.7, 17°.86N×66°.82W, h18km±17km, MD3.5, ML2.5, MW3.0, Presumed earthquake*
*RSPR **03** 00:19:44.2, 17°.96N×66°.81W, h11km, MD2.4/8*
*OSPL **03** 00:19:44.1±0.4, 17°.93N×66°.81W, h16km±3km, ML2.0, Presumed earthquake*
ISC 03 00:19:43.1±1.0**, 17°.93N**±0°.05×**66°.80W**±0°.02**, h19**km±2km**,**
n44, σ0.38/71**, 10C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**301**		**Pg**	**00 19 46.9**	**+0.1**
GBPR					**Sg**	**00 19 49.0**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.09**	**301**	⇓iP	**Pg**	**00 19 46.9**	**+0.1**
GBPR				eS	**Sg**	**00 19 49.0**	**-0.3**
OBIP	**Obispado Ponce**	**0.22**	**59**		**Pg**	**00 19 48.7**	**+0.2**
OBIP					**Sg**	**00 19 52.4**	**+0.3**
OBIP	**Obispado Ponce**	**0.22**	**59**	IAML		00 19 53.1	
	comp=N,130nm,0.1s						
OBIP	**Obispado Ponce**	**0.22**	**59**	⇓iP	**Pg**	**00 19 48.7**	**+0.2**
OBIP				eS	**Sg**	**00 19 52.4**	**+0.3**
OBIP	**Obispado Ponce**	**0.22**	**59**	iP	**Pg**	**00 19 48.6**	**+0.2**
OBIP				eS	**Sg**	**00 19 52.4**	**+0.3**
OBIP				IAML		00 19 53.0	
	comp=Z,189nm,0.2s						
MLPR	**Magueyes Islan**	**0.23**	**279**		**Pg**	**00 19 48.7**	**+0.1**
MLPR				IAML		00 19 53.2	
	comp=Z,1μm,0.2s						
MLPR				IAML		00 19 53.2	
	comp=Z,1μm,0.3s						
CELP	**Cerrillos**	**0.26**	**56**		**Pb**	**00 19 48.6**	**-0.3**
CELP				IAML		00 19 53.9	
	comp=Z,750nm,0.2s						
CELP				IAML		00 19 54.1	
	comp=Z,721nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.30**	**284**		**Pb**	**00 19 49.9**	**+0.1**
CRPR					**Sg**	**00 19 54.0**	**-0.3**
CRPR				IAML		00 19 54.7	
	comp=N,1μm,0.2s						
CRPR				IAML		00 19 55.0	
	comp=E,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.30**	**284**	⇑ePg	**Pb**	**00 19 49.9**	**+0.1**
CRPR				⇑eSg	**Sg**	**00 19 54.2**	**-0.2**
CRPR				IAML		00 19 54.7	
	comp=N,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.30**	**284**	⇑iP	**Pb**	**00 19 50.0**	**+0.1**
CRPR				eS	**Sg**	**00 19 54.2**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.30**	**284**	iP	**Pb**	**00 19 49.9**	**+0.1**
CRPR				eS	**Sg**	**00 19 54.1**	**-0.2**
CRPR				IAML		00 19 54.6	
	comp=Z,943nm,0.1s						
UUPR	**Utuado, UPR, P**	**0.33**	**14**		**Pb**	**00 19 50.5**	**+0.1**
LSP	**Las Mesas**	**0.36**	**312**		**Pb**	**00 19 51.0**	**0.0**
LSP					**Sg**	**00 19 55.8**	**-0.3**
LSP	**Las Mesas**	**0.36**	**312**	⇑iP	**Pb**	**00 19 51.0**	**0.0**
LSP				eS	**Sg**	**00 19 55.8**	**-0.3**
PRSN	**Puerto Rico Se**	**0.43**	**311**		**Sg**	**00 19 57.9**	**-0.1**
PRSN	**Puerto Rico Se**	**0.43**	**311**	Pg	**Pb**	**00 19 52.1**	**0.0**
PRSN				IAML		00 19 58.3	
	comp=Z,1μm,0.2s						
PRSN				IAML		00 20 00.3	
	comp=Z,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.43**	**311**	⇑ePg	**Pg**	**00 19 51.9**	**-0.1**
PRSN				eSg	**Sb**	**00 19 58.2**	**-0.1**
PRSN				IAML		00 20 02.3	
	comp=N,984nm,0.2s						
PRSN	**Puerto Rico Se**	**0.43**	**311**	⇑iP	**Pg**	**00 19 52.0**	**-0.1**
PRSN				eS	**Sg**	**00 19 57.9**	**-0.1**
ECPR	**Experimental S**	**0.57**	**47**		**Pg**	**00 19 54.5**	**-0.1**
ECPR					**Sb**	**00 20 01.2**	**-0.8**
ECPR	**Experimental S**	**0.57**	**47**	⇑iP	**Pg**	**00 19 54.4**	**-0.1**
ECPR				eS	**Sg**	**00 20 02.2**	**0.0**
EMPR	**Esperanza - Ma**	**0.60**	**25**		**Pg**	**00 19 55.5**	**+0.4**
EMPR					**Sg**	**00 20 03.4**	**+0.2**
EMPR	**Esperanza - Ma**	**0.60**	**25**	⇓iP	**Pg**	**00 19 55.5**	**+0.4**
EMPR				eS	**Sg**	**00 20 03.4**	**+0.2**
AGPR	**Aguadilla, PR**	**0.61**	**331**		**Pb**	**00 19 54.7**	**-0.3**
AGPR	**Aguadilla, PR**	**0.61**	**331**	⇑ePg	**Pb**	**00 19 55.0**	**0.0**
AGPR				⇑eSg	**Sn**	**00 20 04.9**	**-1.0**
AGPR				IAML		00 20 08.6	
	comp=N,131nm,0.6s						
AGPR	**Aguadilla, PR**	**0.61**	**331**	⇑iP	**Pb**	**00 19 55.0**	**0.0**
AGPR				eS	**Sg**	**00 20 03.6**	**+0.1**
AGPR	**Aguadilla, PR**	**0.61**	**331**	iP	**Pb**	**00 19 55.0**	**0.0**
AGPR				IAML		00 20 06.2	
	comp=Z,69nm,0.2s						
SJG	**San Juan**	**0.65**	**74**		**Pb**	**00 19 55.7**	**+0.1**
SJG	**San Juan**	**0.65**	**74**	IAML		00 20 05.8	
	comp=Z,155nm,0.2s						
SJG	**San Juan**	**0.65**	**74**	⇓ePg	**Pg**	**00 19 55.8**	**-0.1**
SJG				⇑eSg	**Sg**	**00 20 05.2**	**+0.6**
SJG	**San Juan**	**0.65**	**74**	⇑iP	**Pb**	**00 19 55.7**	**+0.1**
SJG				eS	**Sb**	**00 20 03.8**	**-0.4**
SJG	**San Juan**	**0.65**	**74**	iP	**Pg**	**00 19 55.8**	**-0.1**
SJG				eS	**Sg**	**00 20 04.8**	**+0.2**
SJG				IAML		00 20 05.5	
	comp=Z,89nm,0.1s						
PDPR	**Patillas Dam,**	**0.75**	**83**		**Pg**	**00 19 57.8**	**0.0**
GCPR	**Guaynabo City**	**0.78**	**61**		**Pb**	**00 19 58.0**	**0.0**
GCPR					**Sb**	**00 20 08.1**	**-0.1**
GCPR	**Guaynabo City**	**0.78**	**61**	⇑iP	**Pb**	**00 19 58.0**	**0.0**
GCPR				eS	**Sb**	**00 20 08.1**	**-0.1**
IDE	**Isla Desecheo**	**0.78**	**305**		**Pb**	**00 19 58.1**	**+0.1**
IDE					**Sg**	**00 20 08.6**	**-0.4**
IDE	**Isla Desecheo**	**0.78**	**305**	⇑iP	**Pb**	**00 19 58.1**	**+0.1**
IDE				eS	**Sg**	**00 20 08.6**	**-0.4**
HUMP	**Col San Antoni**	**0.93**	**77**		**Pb**	**00 20 00.4**	**-0.1**
HUMP					**Sg**	**00 20 13.2**	**-0.4**
HUMP	**Col San Antoni**	**0.93**	**77**	IAML		00 20 17.3	
	comp=Z,139nm,0.2s						
HUMP				IAML		00 20 17.5	
	comp=Z,103nm,0.2s						
HUMP	**Col San Antoni**	**0.93**	**77**	⇑iP	**Pb**	**00 20 00.5**	**-0.1**
HUMP				eS	**Sb**	**00 20 13.1**	**+0.6**
CUPR	**Culebra, Puert**	**1.49**	**75**	Pn	**Pb**	**00 20 10.0**	**-0.2**
MIDR	**Miches**	**2.38**	**296**	⇑ePg	**Pb**	**00 20 26.3**	**+1.1**
MIDR				⇑eSg	**Sb**	**00 20 55.9**	**+1.7**
DR12	**Loma Pena Alta**	**2.59**	**290**	Pn	**Pn**	**00 20 24.2**	**+0.2**
HATOM	**Hato Mayor del**	**2.59**	**290**	⇑ePg	**Pb**	**00 20 28.1**	**-0.9**
HATOM				⇑eSg	**Sb**	**00 21 00.5**	**0.0**
HATOM				IAML		00 21 45.8	
	comp=N,17nm,2.9s						

*IDC **03** 00:33:18.0±1.1, 17°.95N×66°.72W, h0km, mb3.8/7, mbtmp3.9/9, ML2.8/2, MS3.2/7, Error ellipse: s-maj=28.4km s-min=8.7km az=171.0*
*NEIC **03** 00:33:18, 17°.91N×66°.70W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.57; $M_{\theta\theta}$3.72; $M_{\phi\phi}$-3.15; $M_{r\theta}$-1.25; $M_{\theta\phi}$8.61; $M_{\phi r}$1.88; Fault plane solution: $M_0$9.55000×10^{14} NP1:ϕ_s192.00000°, δ80.00000°, λ-170.00000°. NP2:ϕ_s100.00000°, δ80.00000°, λ-10.00000°. Principal axes: T 9.5540, Plg0.0000°, Azm326.0000°; N -0.0008, Plg76.0000°, Azm235.0000°; P -9.5531, Plg14.0000°, Azm56.0000°;*
*PTWC **03** 00:33:18, 18°.00N×66°.70W, Ml4.2/14*
*RSPR **03** 00:33:18.4, 17°.91N×66°.70W, h6km, MD3.0/6*
*NEIC **03** 00:33:18.5±0.5, 17°.93N±0°.03×66°.70W±0°.01, h11km±3km, ML4.2/39, ML3.8/6(RSPR), Mwr3.9/15(SLM), Error ellipse: s-maj=3.7km s-min=1.4km az=174.0*
*SDD **03** 00:33:19.1±1.8, 17°.94N×66°.68W, h23km±14km, MD3.6, ML4.1, MW4.3, Presumed earthquake*
*OSPL **03** 00:33:19.2±0.5, 17°.94N×66°.71W, h11km±3km, ML3.7, Presumed earthquake*
ISC 03 00:33:18.3±0.9**, 17°.91N**±0°.04×**66°.70W**±0°.02**, h10**km±6km**,**
n97, σ1.35/120**, mb3.8**/6**, MS3.1**/4**, 13C-9D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.16**	**34**		**Pg**	**00 33 22.0**	**+0.1**
OBIP	**Obispado Ponce**	**0.16**	**34**	P	**Pg**	**00 33 21.5**	**-0.4**
OBIP	**Obispado Ponce**	**0.16**	**34**	⇓iP	**Pg**	**00 33 22.0**	**+0.1**
OBIP				eS	**Sg**	**00 33 24.6**	**+0.3**
OBIP	**Obispado Ponce**	**0.16**	**34**	iP	**Pg**	**00 33 22.1**	**+0.1**
OBIP				eS	**Sg**	**00 33 24.7**	**+0.3**
OBIP				IAML		00 33 25.2	
	comp=Z,16μm,0.5s						
GBPR	**Guanica, Bosqu**	**0.18**	**292**		**Pg**	**00 33 22.6**	**+0.4**
GBPR	**Guanica, Bosqu**	**0.18**	**292**	⇓iP	**Pg**	**00 33 22.6**	**+0.4**
CELP	**Cerrillos**	**0.20**	**35**		**Pg**	**00 33 22.8**	**+0.2**
CELP				IAML		00 33 26.4	
	comp=Z,32μm,0.7s						
CELP				IAML		00 33 27.1	
	comp=Z,23μm,0.5s						
MLPR	**Magueyes Islan**	**0.33**	**281**		**Pg**	**00 33 25.0**	**+0.1**
MLPR				IAML		00 33 31.2	
	comp=Z,18μm,0.5s						
MLPR				IAML		00 33 32.1	
	comp=Z,35μm,0.3s						
UUPR	**Utuado, UPR, P**	**0.34**	**357**		**Pg**	**00 33 25.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.40**	**284**		**Pg**	**00 33 26.3**	**+0.1**
CRPR				Sg	**Sg**	**00 33 31.8**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.40**	**284**	IAML		00 33 34.8	
	comp=Z,16μm,0.4s						
CRPR				IAML		00 33 35.4	
	comp=Z,21μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.40**	**284**	P	**Pg**	**00 33 26.2**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.40**	**284**	⇑ePg	**Pg**	**00 33 26.3**	**+0.1**
CRPR				⇑eSg	**Sb**	**00 33 33.1**	**-0.5**
CRPR				IAML		00 33 35.1	
	comp=N,22μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.40**	**284**	⇑iP	**Pg**	**00 33 26.3**	**+0.1**
CRPR				eS	**Sg**	**00 33 31.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.40**	**284**	iP	**Pg**	**00 33 26.3**	**+0.1**
CRPR				eS	**Sg**	**00 33 32.0**	**+0.5**
CRPR				IAML		00 33 34.5	
	comp=Z,20μm,0.4s						
LSP	**Las Mesas**	**0.45**	**306**		**Pg**	**00 33 27.3**	**+0.1**
LSP	**Las Mesas**	**0.45**	**306**	⇑iP	**Pg**	**00 33 27.3**	**+0.1**
ECPR	**Experimental S**	**0.52**	**38**		**Pg**	**00 33 28.2**	**-0.2**
ECPR					**Sg**	**00 33 34.8**	**-0.5**
ECPR				IAML		00 33 38.6	
	comp=Z,12μm,0.5s						
ECPR				IAML		00 33 38.8	
	comp=Z,11μm,0.2s						
ECPR	**Experimental S**	**0.52**	**38**	⇓iP	**Pg**	**00 33 28.2**	**-0.2**
ECPR				eS	**Sg**	**00 33 35.4**	**0.0**
PRSN	**Puerto Rico Se**	**0.52**	**306**		**Pg**	**00 33 28.1**	**-0.3**
PRSN					**Sg**	**00 33 36.1**	**+0.8**
PRSN				IAML		00 33 36.9	
	comp=Z,25μm,0.4s						
PRSN	**Puerto Rico Se**	**0.52**	**306**	P	**Pg**	**00 33 28.2**	**-0.3**
PRSN	**Puerto Rico Se**	**0.52**	**306**	⇑ePg	**Pg**	**00 33 28.1**	**-0.3**
PRSN				⇑eSg	**Sb**	**00 33 36.6**	**-0.5**
PRSN				IAML		00 33 40.5	
	comp=N,25μm,0.3s						
PRSN	**Puerto Rico Se**	**0.52**	**306**	⇑iP	**Pg**	**00 33 28.2**	**-0.3**
PRSN				eS	**Sg**	**00 33 35.0**	**-0.3**
SJG	**San Juan**	**0.56**	**69**	Pg	**Pg**	**00 33 29.1**	**-0.1**
	comp=N,387nm,0.3s,baz=254,slow=14,SNR=1215						
SJG				Lg	Lg	00 33 37.1	
	comp=N,1μm,0.3s,baz=7.5,slow=12,SNR=40						
SJG	**San Juan**	**0.56**	**69**	Sg	**Sg**	**00 33 36.7**	**0.0**

SJG				IAML		00 33 38.3	
	comp=N,4µm,0.4s						
SJG				IAML		00 33 42.3	
	comp=N,6µm,0.6s						
SJG	**San Juan**	**0.56**	**69**	*e*P	**Pg**	**00 33 29.1**	**-0.1**
SJG	**San Juan**	**0.56**	**69**⇓	*e*Pg	**Pg**	**00 33 29.1**	**-0.1**
SJG			⇑	*e*Sg	**Sg**	**00 33 37.2**	**+0.5**
SJG	**San Juan**	**0.56**	**69**⇓	*i*P	**Pg**	**00 33 29.1**	**-0.1**
SJG				*e*S	**Sg**	**00 33 36.7**	**0.0**
SJG	**San Juan**	**0.56**	**69**	*i* P	**Pg**	**00 33 29.2**	**-0.1**
SJG				*e*S	**Sg**	**00 33 37.2**	**+0.5**
SJG				IAML		00 33 37.4	
	comp=Z,4µm,0.4s						
EMPR	**Esperanza - Ma**	**0.59**	**16**		**Pg**	**00 33 29.9**	**+0.2**
EMPR					**Sb**	**00 33 38.5**	**-0.7**
EMPR	**Esperanza - Ma**	**0.59**	**16**⇓	*i*P	**Pg**	**00 33 29.9**	**+0.2**
EMPR				*e*S	**Sb**	**00 33 38.5**	**-0.7**
PDPR	**Patillas Dam,**	**0.66**	**80**		**Pg**	**00 33 30.8**	**-0.2**
PDPR				Sg	**Sg**	**00 33 39.2**	**-0.4**
AGPR	**Aguadilla, PR**	**0.68**	**325**		**Pg**	**00 33 31.1**	**-0.4**
AGPR				IAML		00 33 44.8	
	comp=Z,10µm,0.7s						
AGPR				IAML		00 33 45.3	
	comp=Z,9µm,0.7s						
AGPR	**Aguadilla, PR**	**0.68**	**325**	P	**Pg**	**00 33 30.9**	**-0.5**
AGPR	**Aguadilla, PR**	**0.68**	**325**⇑	*e*Pg	**Pg**	**00 33 30.9**	**-0.4**
AGPR			⇑	*e*Sg	**Sg**	**00 33 39.6**	**-0.8**
AGPR				IAML		00 33 49.6	
	comp=N,7µm,0.6s						
AGPR	**Aguadilla, PR**	**0.68**	**325**⇑	*i*P	**Pg**	**00 33 31.0**	**-0.4**
AGPR				*e*S	**Sg**	**00 33 39.3**	**-1.1**
AGPR	**Aguadilla, PR**	**0.68**	**325**	*i* P	**Pg**	**00 33 31.0**	**-0.4**
AGPR				*e*S	**Sg**	**00 33 39.6**	**-0.8**
AGPR				IAML		00 33 41.9	
	comp=Z,5µm,0.2s						
GCPR	**Guaynabo City**	**0.71**	**56**		**Pg**	**00 33 31.6**	**-0.4**
GCPR					**Sg**	**00 33 40.7**	**-0.6**
GCPR	**Guaynabo City**	**0.71**	**56**	P	**Pg**	**00 33 31.6**	**-0.4**
GCPR	**Guaynabo City**	**0.71**	**56**⇑	*i*P	**Pg**	**00 33 31.6**	**-0.4**
GCPR				*e*S	**Sg**	**00 33 40.7**	**-0.6**
HUMP	**Col San Antoni**	**0.84**	**74**		**Pg**	**00 33 33.9**	**-0.7**
HUMP					**Sg**	**00 33 45.4**	**-0.2**
HUMP	**Col San Antoni**	**0.84**	**74**	P	**Pg**	**00 33 33.7**	**-0.9**
HUMP	**Col San Antoni**	**0.84**	**74**⇓	*i*P	**Pg**	**00 33 33.9**	**-0.7**
HUMP				*e*S	**Sg**	**00 33 45.4**	**-0.2**
IDE	**Isla Desecheo**	**0.88**	**303**		**Pg**	**00 33 34.4**	**-0.7**
IDE					**Sg**	**00 33 46.3**	**-0.3**
IDE	**Isla Desecheo**	**0.88**	**303**⇑	*i*P	**Pg**	**00 33 34.4**	**-0.7**
IDE				*e*S	**Sg**	**00 33 46.3**	**-0.3**
CUPR	**Culebra, Puert**	**1.41**	**73**		**Pn**	**00 33 43.3**	**-0.7**
PCDR	**Punta Cana, DR**	**1.71**	**291**⇑	*e*Pg	**Pn**	**00 33 48.5**	**+0.4**
PCDR				IAML		00 34 17.5	
	comp=N,2µm,0.8s						
HIDR	**Higuey Centro**	**2.03**	**290**⇑	*e*Pg	**Pn**	**00 33 52.5**	**-0.1**
HIDR				IAML		00 34 24.4	
	comp=N,824nm,0.7s						
MIDR	**Miches**	**2.47**	**296**⇑	*e*Pg	**Pb**	**00 34 01.3**	**-1.5**
MIDR				IAML		00 34 42.9	
	comp=N,415nm,0.8s						
DR12	**Loma Pena Alta**	**2.69**	**289**		**Pn**	**00 34 02.1**	**+0.4**
HATOM	**Hato Mayor del**	**2.69**	**289**⇓	*e*Pg	**Pn**	**00 34 03.5**	**+1.8**
HATOM			⇑	*e*Sg	**Sb**	**00 34 38.6**	**-1.0**
HATOM				IAML		00 34 44.8	
	comp=N,415nm,1.2s						
SMDR	**Samana, DR**	**2.73**	**301**		**Pb**	**00 34 05.4**	**-1.8**
SMDR					**Sb**	**00 34 43.0**	**+2.2**
SDD	**Santo Domingo**	**3.10**	**281**		**Pn**	**00 34 07.7**	**+0.4**
SABA	**Saba**	**3.31**	**94**		**Pn**	**00 34 10.4**	**+0.3**
SABA	**Saba**	**3.31**	**94**		**Sn**	**00 34 47.9**	**-1.7**
SABA	**Saba**	**3.31**	**94**	*e*S	**Sn**	**00 34 47.9**	**-1.7**
DR08	**Loma La Naviza**	**3.32**	**289**⇑	*e*Pg	**Pb**	**00 34 14.0**	**-3.4**
DR08				IAML		00 35 04.6	
	comp=N,3µm,0.3s						
SMRT	**St. Maarten**	**3.46**	**87**		**Pn**	**00 34 12.0**	**-0.2**
SMRT	**St. Maarten**	**3.46**	**87**		**Sn**	**00 34 53.8**	**+0.6**
SMRT	**St. Maarten**	**3.46**	**87**⇑	*e*P	**Pn**	**00 34 12.3**	**+0.1**
SMRT				*e*S	**Sn**	**00 34 53.8**	**+0.6**
BANI	**BANI**	**3.51**	**278**		**Pn**	**00 34 13.1**	**+0.1**
SKI	**Saint Kitts**	**3.82**	**98**	*e*P	**Pn**	**00 34 19.8**	**+2.6**
SC01	**Santiago de lo**	**4.11**	**292**	Pn	**Pb**	**00 34 26.4**	**-4.2**
MBFL	**Flemmings, Mon**	**4.44**	**104**	*e*P	**Pn**	**00 34 26.6**	**+0.9**
MBWH	**Windy Hill**	**4.46**	**104**	*e*P	**Pn**	**00 34 27.2**	**+1.1**
MLYT	**Lee's Yard**	**4.47**	**105**	*e*P	**Pn**	**00 34 27.8**	**+1.7**
SDDR	**Presa de Saban**	**4.48**	**285**	Pn	Pb	00 34 32.0	-5.2
ANWB	**Willy Bob**	**4.69**	**92**		**Pn**	**00 34 28.3**	**-0.9**
ANWB	**Willy Bob**	**4.69**	**92**	*e*P	**Pn**	**00 34 32.6**	**+3.4**
DHSZ	**Broadband at M**	**4.99**	**108**	*e*P	**Pn**	**00 34 34.1**	**+0.8**
GDHS	**Morne Mazeau,**	**4.99**	**108**	IAML		00 35 45.8	
	comp=E,309nm,0.5s						
ATGZ	**Broadband at L**	**5.09**	**110**	*e*P	**Pn**	**00 34 34.7**	**+0.1**
MMLZ	**Guadeloupe Bro**	**5.16**	**110**	*e*P	**Pn**	**00 34 36.6**	**+1.0**
ABD	**La Joyeuse, An**	**5.18**	**105**⇓	*e*P	**Pn**	**00 34 38.1**	**+2.2**
CBE	**Ff, Capester**	**5.21**	**110**		**Pn**	**00 34 40.9**	**+4.6**
CBE					**Sn**	**00 35 32.2**	**-4.3**
CBE	**Ff, Capester**	**5.21**	**110**	IAML		00 35 40.1	
	comp=E,181nm,0.5s						
CBE				IAML		00 36 21.9	
	comp=N,238nm,0.5s						
CBE	**Ff, Capester**	**5.21**	**110**	*e*S	**Sn**	**00 35 32.2**	**-4.3**
TBG	**Guadaloupe-3**	**5.25**	**112**	*e*P	**Pn**	**00 34 37.1**	**+0.2**
H05N1	**Guadeloupe/Mar**	**5.62**	**105**	Pn	**Pn**	**00 34 45.1**	**+3.1**
H05N1				Sn	**Sn**	**00 35 42.9**	**-3.9**
DSLB	**Salisbury**	**5.63**	**115**	*e*P	**Pn**	**00 34 43.5**	**+1.5**
BIM	**Bigot**	**6.37**	**121**	*e*P	**Pn**	**00 34 51.4**	**-0.9**
H05S1	**Guadeloupe/Mar**	**6.61**	**121**	Pn	**Pn**	**00 34 57.0**	**+1.5**
H05S1				Sn	**Sn**	**00 36 08.5**	**-2.6**
SLBI	**Saint Lucia, B**	**6.73**	**124**	*e*P	**Pn**	**00 34 55.9**	**-1.2**
SDV	**Santo Domingo**	**9.75**	**204**	Pn	**Pn**	**00 35 41.0**	**+2.2**
	comp=N,1.5nm,0.3s,baz=64,slow=11,SNR=9.6						
SDV				LR	LR	00 39 44.1	
	comp=N,90nm,18.5s,baz=80,slow=40						
	comp=N,4.1nm,0.4s						
ROSC	**El Rosal**	**14.97**	**211**	Pn	**P**	**00 36 53.8**	**-2.3**
	comp=N,0.6nm,0.3s,baz=115,slow=20,SNR=1.1						
ROSC				LR	LR	00 43 07.7	
	comp=N,94nm,18.1s,baz=283,slow=39						
	comp=N,3.2nm,0.4s						
MDP	**Montagnes des**	**18.73**	**131**	LR	LR	00 46 36.4	
	comp=N,41nm,20.4s,baz=336,slow=42						
TKL	**Tuckaleechee C**	**23.28**	**323**	LR	LR	00 48 56.7	
	comp=N,36nm,18.4s,baz=152,slow=40						
ATAH	**Atahualpa**	**27.43**	**206**	LR	LR	00 50 36.8	
	comp=N,55nm,18.8s,baz=44,slow=38						
TXAR	**Lajitas Array**	**35.59**	**296**	P	**P**	**00 40 17.4**	**+1.2**
	comp=N,0.4nm,0.6s,baz=112,slow=9.9,SNR=7.4						
	comp=N,0.4nm,0.6s						
SCHQ	**Schefferville**	**36.85**	**360**	P	**P**	**00 40 28.6**	**+1.9**
	comp=N,1.9nm,0.8s,baz=186,slow=10,SNR=1.3						
	comp=N,1.9nm,0.8s						
ANMO	**Albuquerque**	**39.14**	**304**	LR	LR	00 59 24.5	
	comp=N,20nm,19.1s,baz=106,slow=40						
NEW	**Newport**	**50.75**	**318**	LR	LR	01 04 14.6	
	comp=N,51nm,18.4s,baz=58,slow=37						
YKA	**Yellowknife Ar**	**55.46**	**335**	P	**P**	**00 42 53.2**	**+0.4**
	comp=N,0.3nm,0.5s,baz=110,slow=6.8,SNR=8.5						
	comp=N,0.3nm,0.5s						
ESDC	**Sonseca Array**	**57.93**	**54**	P	**P**	**00 43 12.2**	**+1.2**
	comp=N,1.6nm,0.8s,baz=265,slow=7.3,SNR=16						
	comp=N,1.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.76**	**83**	P	**P**	**00 44 04.1**	**+0.1**
	comp=N,0.6nm,0.8s,baz=273,slow=7.0,SNR=4.2						
	comp=N,0.6nm,0.8s						
ILAR	**Eielson Array**	**69.78**	**333**	P	**P**	**00 44 29.5**	**+1.0**
	comp=N,0.3nm,0.5s,baz=100,slow=4.6,SNR=7.4						
	comp=N,0.3nm,0.5s						
FINES	**FINESS Array B**	**75.77**	**30**	P	**P**	**00 45 05.4**	**+1.3**
	comp=N,4.3nm,1.1s,baz=291,slow=6.2,SNR=3.7						
	comp=N,4.3nm,1.1s						

NEIC ***03*** *00:34:55.9±0.8, 17°.90N±0°.04×66°.68W±0°.01, h8km±5km, ML3.7/37, Md3.4/8(RSPR), Error ellipse: s-maj=6.3km s-min=1.2km az=170.0*

RSPR ***03*** *00:34:55.8, 17°.91N×66°.70W, h7km, MD3.4/8*

SDD ***03*** *00:34:56.7±1.7, 17°.92N×66°.66W, h12km±28km, MD3.8, ML3.6, MW3.7, Presumed earthquake*

IDC ***03*** *00:34:56.5±1.3, 18°.16N×66°.71W, h0km, mb3.4/5, mbtmp3.5/6, ML2.4/1, MS3.2/1, Error ellipse: s-maj=38.0km s-min=9.3km az=12.0*

OSPL ***03*** *00:34:56.3±0.7, 17°.90N×66°.70W, h10km±4km, ML3.2, Presumed earthquake*

ISC 03 00:34:57.0±0.8**, 17°.96N**±0°.03×**66°.70W**±0°.01**, h11**km±4km**,**

n56, σ1.13/93, mb3.4/4, 14C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.12**	**47**		**Pg**	**00 34 59.4**	**-0.5**
OBIP				Sg	**Sg**	**00 35 01.8**	**-0.2**
OBIP	**Obispado Ponce**	**0.12**	**47**⇓	*i*P	**Pg**	**00 34 59.4**	**-0.5**
OBIP				*e*S	**Sg**	**00 35 02.0**	**+0.1**
OBIP	**Obispado Ponce**	**0.12**	**47**	*i* P	**Pg**	**00 34 59.4**	**-0.5**
OBIP				*e*S	**Sg**	**00 35 02.1**	**+0.1**
OBIP				IAML		00 35 02.3	
	comp=Z,11µm,0.6s						
CELP	**Cerrillos**	**0.16**	**45**		**Pg**	**00 35 00.1**	**-0.5**
CELP				Sg	**Sg**	**00 35 03.1**	**+0.1**
CELP				IAML		00 35 03.8	
	comp=Z,26µm,0.7s						
CELP				IAML		00 35 04.8	
	comp=Z,15µm,0.5s						
GBPR	**Guanica, Bosqu**	**0.18**	**274**		**Pg**	**00 34 59.8**	**-1.0**
GBPR					**Sg**	**00 35 02.9**	**-0.6**
GBPR	**Guanica, Bosqu**	**0.18**	**274**⇑	*i*P	**Pg**	**00 34 59.8**	**-1.0**
GBPR				*e*S	**Sg**	**00 35 02.9**	**-0.6**
UUPR	**Utuado, UPR, P**	**0.29**	**355**		**Pg**	**00 35 02.2**	**-0.7**
UUPR				Sg	**Sg**	**00 35 07.0**	**+0.1**
MLPR	**Magueyes Islan**	**0.33**	**271**	Pg	**Pg**	**00 35 02.8**	**-1.0**
MLPR				Sg	**Sg**	**00 35 07.9**	**-0.2**
MLPR				IAML		00 35 08.6	
	comp=Z,6µm,0.7s						
CRPR	**Cabo Rojo, PR**	**0.40**	**276**	Pg	**Pg**	**00 35 03.6**	**-1.3**
CRPR				Sg	**Sg**	**00 35 09.6**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.40**	**276**	IAML		00 35 11.6	
	comp=Z,4µm,0.7s						
CRPR				IAML		00 35 12.2	
	comp=Z,5µm,1.3s						
CRPR	**Cabo Rojo, PR**	**0.40**	**276**⇑	*e*Pg	**Pg**	**00 35 03.7**	**-1.2**
CRPR			⇑	*e*Sg	**Sg**	**00 35 09.7**	**-0.5**
CRPR				IAML		00 35 11.4	
	comp=N,6µm,0.9s						
CRPR	**Cabo Rojo, PR**	**0.40**	**276**⇑	*i*P	**Pg**	**00 35 03.7**	**-1.2**
CRPR				*e*S	**Sg**	**00 35 09.6**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.40**	**276**	*i* P	**Pg**	**00 35 03.7**	**-1.2**
CRPR				*e*S	**Sg**	**00 35 09.5**	**-0.6**
CRPR				IAML		00 35 11.9	
	comp=Z,3µm,0.2s						
LSP	**Las Mesas**	**0.43**	**300**		**Pg**	**00 35 04.6**	**-0.9**
LSP					**Sb**	**00 35 12.8**	**-0.4**
LSP	**Las Mesas**	**0.43**	**300**⇑	*e*P	**Pg**	**00 35 04.6**	**-0.9**
LSP				*e*S	**Sb**	**00 35 12.8**	**-0.4**
ECPR	**Experimental S**	**0.47**	**42**		**Pg**	**00 35 05.6**	**-0.7**
ECPR					**Sg**	**00 35 11.9**	**-0.7**
ECPR				IAML		00 35 15.6	
	comp=Z,6µm,0.2s						
ECPR				IAML		00 35 16.2	
	comp=Z,7µm,0.2s						
ECPR	**Experimental S**	**0.47**	**42**⇓	*i*P	**Pg**	**00 35 05.6**	**-0.7**
ECPR				*e*S	**Sg**	**00 35 12.2**	**-0.4**
PRSN	**Puerto Rico Se**	**0.50**	**301**		**Pg**	**00 35 05.5**	**-1.2**
PRSN					**Sg**	**00 35 13.5**	**+0.1**
PRSN	**Puerto Rico Se**	**0.50**	**301**	IAML		00 35 14.1	
	comp=Z,9µm,0.2s						
PRSN				IAML		00 35 16.6	
	comp=Z,11µm,0.3s						
PRSN	**Puerto Rico Se**	**0.50**	**301**⇑	*e*Pg	**Pg**	**00 35 05.4**	**-1.3**
PRSN			⇑	*e*Sg	**Sg**	**00 35 13.0**	**-0.3**
PRSN				IAML		00 35 16.6	
	comp=N,6µm,0.3s						
PRSN	**Puerto Rico Se**	**0.50**	**301**⇑	*e*P	**Pg**	**00 35 05.5**	**-1.2**
PRSN				*e*S	**Sg**	**00 35 13.5**	**+0.1**
EMPR	**Esperanza - Ma**	**0.53**	**17**		**Pg**	**00 35 07.5**	**0.0**
EMPR					**Sb**	**00 35 15.7**	**-0.5**
EMPR	**Esperanza - Ma**	**0.53**	**17**⇑	*e*P	**Pg**	**00 35 07.5**	**0.0**
EMPR				*e*S	**Sb**	**00 35 15.7**	**-0.5**
SJG	**San Juan**	**0.54**	**74**	Pg	**Pg**	**00 35 06.5**	**-1.0**
	comp=N,585nm,0.3s,baz=350,slow=17,SNR=7.7						
SJG				Lg	Lg	00 35 14.6	
	comp=N,587nm,0.3s,baz=17,slow=14,SNR=6.9						
SJG	**San Juan**	**0.54**	**74**	Pg	**Pg**	**00 35 06.5**	**-1.0**
SJG				Sg	**Sg**	**00 35 14.2**	**-0.5**
SJG				IAML		00 35 19.3	
	comp=N,3µm,0.8s						
SJG	**San Juan**	**0.54**	**74**⇓	*e*Pg	**Pg**	**00 35 06.5**	**-1.0**
SJG			⇑	*e*Sg	**Sg**	**00 35 13.3**	**-1.4**
SJG	**San Juan**	**0.54**	**74**⇓	*i*P	**Pg**	**00 35 06.5**	**-1.0**
SJG				*e*S	**Sg**	**00 35 14.3**	**-0.5**
SJG	**San Juan**	**0.54**	**74**	*i* P	**Pg**	**00 35 06.5**	**-1.0**
SJG				*e*S	**Sg**	**00 35 14.6**	**-0.1**
SJG				IAML		00 35 19.1	
	comp=Z,2µm,0.8s						
AGPR	**Aguadilla, PR**	**0.64**	**322**		**Pg**	**00 35 08.5**	**-1.0**
AGPR				IAML		00 35 23.8	
	comp=Z,3µm,0.7s						
AGPR				IAML		00 35 24.0	
	comp=Z,3µm,0.8s						
AGPR	**Aguadilla, PR**	**0.64**	**322**⇑	*e*Pg	**Pg**	**00 35 08.2**	**-1.2**
AGPR			⇑	*e*Sg	**Sg**	**00 35 18.0**	**+0.2**
AGPR				IAML		00 35 24.1	
	comp=N,3µm,0.8s						
AGPR	**Aguadilla, PR**	**0.64**	**322**⇓	*i*P	**Pg**	**00 35 08.4**	**-1.0**
AGPR				*e*S	**Sg**	**00 35 18.2**	**+0.3**
AGPR	**Aguadilla, PR**	**0.64**	**322**	*i* P	**Pg**	**00 35 08.3**	**-1.2**
AGPR				*e*S	**Sg**	**00 35 18.1**	**+0.2**
AGPR				IAML		00 35 20.0	
	comp=Z,870nm,1.4s						
PDPR	**Patillas Dam,**	**0.64**	**85**	Pg	**Pg**	**00 35 08.2**	**-1.3**
PDPR				Sg	**Sg**	**00 35 17.2**	**-0.7**
GCPR	**Guaynabo City**	**0.68**	**59**	Pg	**Pg**	**00 35 09.2**	**-0.9**
GCPR				Sg	**Sg**	**00 35 19.0**	**0.0**
GCPR				IAML		00 35 22.3	
	comp=N,2µm,0.8s						
GCPR	**Guaynabo City**	**0.68**	**59**⇑	*e*P	**Pg**	**00 35 08.9**	**-1.2**
GCPR				*e*S	**Sg**	**00 35 18.8**	**-0.2**
HUMP	**Col San Antoni**	**0.82**	**77**		**Pg**	**00 35 11.2**	**-1.7**
HUMP					**Sg**	**00 35 22.9**	**-0.9**
HUMP				IAML		00 35 24.7	
	comp=N,2µm,0.2s						
HUMP	**Col San Antoni**	**0.82**	**77**⇓	*i*P	**Pg**	**00 35 11.2**	**-1.7**
HUMP				*e*S	**Sg**	**00 35 22.2**	**-1.5**
IDE	**Isla Desecheo**	**0.85**	**300**		**Pg**	**00 35 11.7**	**-1.8**
IDE					**Sg**	**00 35 24.0**	**-0.6**
IDE	**Isla Desecheo**	**0.85**	**300**⇑	*i*P	**Pg**	**00 35 11.7**	**-1.8**
IDE				*e*S	**Sg**	**00 35 24.0**	**-0.6**
CUPR	**Culebra, Puert**	**1.39**	**75**	Pn	**Pn**	**00 35 21.4**	**-1.0**
CUPR				Sn	**Sn**	**00 35 40.0**	**-0.8**
PCDR	**Punta Cana, DR**	**1.69**	**289**⇑	*e*Pg	**Pn**	**00 35 26.8**	**+0.2**
PCDR			⇑	*e*Sg	**Sb**	**00 35 50.4**	**+0.8**
PCDR				IAML		00 35 54.6	
	comp=N,631nm,1.0s						
DR12	**Loma Pena Alta**	**2.68**	**288**	Pn	**Pn**	**00 35 39.6**	**-0.6**
HATOM	**Hato Mayor del**	**2.68**	**288**⇑	*e*Pg	**Pb**	**00 35 43.3**	**-1.8**
HATOM				IAML		00 36 24.6	
	comp=N,204nm,0.8s						
SMDR	**Samana, DR**	**2.71**	**300**		**Pb**	**00 35 45.4**	**-0.1**
SMDR					**Sb**	**00 36 20.6**	**+1.8**
SMRT	**St. Maarten**	**3.45**	**88**		**Pn**	**00 35 51.0**	**+0.2**
SMRT					**Sn**	**00 36 30.2**	**-1.5**
SMRT	**St. Maarten**	**3.45**	**88**⇓	*e*P	**Pn**	**00 35 51.0**	**+0.2**
SMRT				*e*S	**Sn**	**00 36 30.2**	**-1.5**
CBE	**Ff, Capester**	**5.22**	**110**		**Pn**	**00 36 18.8**	**+3.6**
CBE	**Ff, Capester**	**5.22**	**110**		**Sn**	**00 37 12.7**	**-2.8**
CBE	**Ff, Capester**	**5.22**	**110**	*e*S	**Sn**	**00 37 12.7**	**-2.8**
SDV	**Santo Domingo**	**9.80**	**203**	Pn	**Pn**	**00 37 22.1**	**+3.8**
	comp=N,0.4nm,0.3s,baz=330,slow=16,SNR=2.1						
	comp=N,2.3nm,0.4s						
TXAR	**Lajitas Array**	**35.57**	**295**	P	**P**	**00 41 55.0**	**+0.2**
	comp=N,0.4nm,0.7s,baz=114,slow=9.2,SNR=4.2						
	comp=N,0.4nm,0.7s						
PDAR	**Pinedale Array**	**43.85**	**314**	LR	LR	01 03 46.0	
	comp=N,25nm,18.1s,baz=70,slow=40						
YKA	**Yellowknife Ar**	**55.41**	**335**	P	**P**	**00 44 30.5**	**-0.7**
	comp=N,0.3nm,0.6s,baz=118,slow=6.3,SNR=7.3						
	comp=N,0.3nm,0.6s						
ESDC	**Sonseca Array**	**57.89**	**54**	P	**P**	**00 44 49.6**	**+0.2**
	comp=N,0.5nm,0.8s,baz=281,slow=9.0,SNR=2.4						
	comp=N,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.75**	**83**	P	**P**	**00 45 42.7**	**+0.1**
	comp=N,0.5nm,0.9s,baz=279,slow=6.5,SNR=2.7						
	comp=N,0.5nm,0.9s						
ILAR	**Eielson Array**	**69.73**	**333**	P	**P**	**00 46 08.1**	**+1.2**
	comp=N,0.1nm,0.5s,baz=94,slow=5.6,SNR=2.5						
	comp=N,0.1nm,0.5s						

NEIC ***03*** *00:37:20.7±0.4, 17°.90N±0°.04×66°.687W±0°.005, h12km±3km, ML3.0/31, Md2.9/8(RSPR), Error ellipse: s-maj=6.1km s-min=0.7km az=178.0*

SDD ***03*** *00:37:21.5±1.5, 17°.92N×66°.68W, h12km±24km, MD3.7, ML2.7, MW2.8, Presumed earthquake*

OSPL ***03*** *00:37:21.7±0.6, 17°.91N×66°.70W, h9km±3km, ML2.6, Presumed earthquake*

RSPR ***03*** *00:37:21.1, 17°.91N×66°.71W, h7km, MD2.9/8*

ISC 03 00:37:20.7±1.1**, 17°.91N**±0°.05×**66°.69W**±0°.02**, h15**km±6km**,**
n39, σ0.32/66, 6C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.15**	**31**		**Pg**	**00 37 24.4**	**-0.2**
OBIP				Sg	**Sg**	**00 37 26.9**	**-0.4**
OBIP	**Obispado Ponce**	**0.15**	**31**⇓	*i*P	**Pg**	**00 37 24.7**	**+0.1**
OBIP				*e*S	**Sg**	**00 37 27.3**	**0.0**
OBIP	**Obispado Ponce**	**0.15**	**31**	*i* P	**Pg**	**00 37 24.7**	**+0.1**
OBIP				*e*S	**Sg**	**00 37 27.3**	**0.0**
OBIP				IAML		00 37 28.1	
	comp=Z,2µm,0.1s						
GBPR	**Guanica, Bosqu**	**0.19**	**290**		**Pg**	**00 37 25.2**	**0.0**
GBPR					**Sg**	**00 37 28.3**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.19**	**290**⇓	*i*P	**Pg**	**00 37 25.2**	**0.0**
GBPR				*e*S	**Sg**	**00 37 28.3**	**+0.1**
CELP	**Cerrillos**	**0.20**	**33**		**Pg**	**00 37 25.1**	**-0.2**
CELP				IAML		00 37 29.0	
	comp=Z,3µm,0.5s						
UUPR	**Utuado, UPR, P**	**0.34**	**355**		**Pg**	**00 37 27.6**	**-0.2**
UUPR				Sg	**Sg**	**00 37 32.6**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.41**	**284**		**Pg**	**00 37 28.9**	**-0.1**
CRPR					**Sg**	**00 37 34.8**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.41**	**284**	IAML		00 37 37.2	
	comp=N,961nm,0.3s						
CRPR				IAML		00 37 38.4	
	comp=E,1µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.41**	**284**⇑	*e*Pg	**Pg**	**00 37 28.9**	**-0.1**
CRPR				*e*Sg	**Sb**	**00 37 35.4**	**-0.4**
CRPR				IAML		00 37 37.2	
	comp=N,1µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.41**	**284**⇑	*i*P	**Pg**	**00 37 28.9**	**-0.1**
CRPR				*e*S	**Sg**	**00 37 34.8**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.41**	**284**	*i* P	**Pg**	**00 37 28.9**	**-0.1**
CRPR				*e*S	**Sg**	**00 37 34.8**	**+0.2**
CRPR				IAML		00 37 37.0	
	comp=Z,983nm,0.3s						
LSP	**Las Mesas**	**0.46**	**305**		**Pg**	**00 37 29.9**	**0.0**
LSP					**Sb**	**00 37 37.4**	**+0.1**
LSP	**Las Mesas**	**0.46**	**305**⇑	*i*P	**Pg**	**00 37 29.9**	**0.0**
LSP				*e*S	**Sb**	**00 37 37.4**	**+0.1**
ECPR	**Experimental S**	**0.51**	**37**		**Pg**	**00 37 30.9**	**0.0**
ECPR				IAML		00 37 40.3	
	comp=Z,955nm,0.2s						
ECPR				IAML		00 37 41.1	
	comp=Z,2µm,0.2s						
ECPR	**Experimental S**	**0.51**	**37**⇓	*i*P	**Pg**	**00 37 30.9**	**0.0**
ECPR				*e*S	**Sg**	**00 37 38.2**	**+0.4**
PRSN	**Puerto Rico Se**	**0.53**	**305**		**Pg**	**00 37 30.9**	**-0.3**
PRSN					**Sg**	**00 37 38.8**	**+0.5**
PRSN	**Puerto Rico Se**	**0.53**	**305**	IAML		00 37 40.5	
	comp=Z,2µm,0.3s						
PRSN				IAML		00 37 42.9	
	comp=Z,3µm,0.3s						
PRSN	**Puerto Rico Se**	**0.53**	**305**⇑	*e*Pg	**Pg**	**00 37 30.9**	**-0.3**
PRSN				*e*Sg	**Sb**	**00 37 39.8**	**+0.6**
PRSN				IAML		00 37 42.8	
	comp=N,2µm,0.3s						
PRSN	**Puerto Rico Se**	**0.53**	**305**⇓	*i*P	**Pg**	**00 37 30.9**	**-0.3**
PRSN				*e*S	**Sg**	**00 37 38.8**	**+0.5**
SJG	**San Juan**	**0.55**	**68**		**Pg**	**00 37 31.8**	**+0.2**
SJG	**San Juan**	**0.55**	**68**⇓	*e*Pg	**Pg**	**00 37 31.8**	**+0.2**
SJG			⇑	*e*Sg	**Sg**	**00 37 38.6**	**-0.3**
SJG	**San Juan**	**0.55**	**68**⇑	*i*P	**Pg**	**00 37 31.8**	**+0.2**
SJG				*e*S	**Sb**	**00 37 39.9**	**0.0**
SJG	**San Juan**	**0.55**	**68**	*i* P	**Pg**	**00 37 31.8**	**+0.2**
SJG				*e*S	**Sb**	**00 37 39.8**	**0.0**
SJG				IAML		00 37 40.5	
	comp=Z,314nm,0.2s						
EMPR	**Esperanza - Ma**	**0.58**	**15**		**Pg**	**00 37 32.5**	**+0.3**
EMPR					**Sb**	**00 37 41.1**	**+0.3**
EMPR	**Esperanza - Ma**	**0.58**	**15**⇓	*i*P	**Pg**	**00 37 32.5**	**+0.3**
EMPR				*e*S	**Sb**	**00 37 41.1**	**+0.3**
AGPR	**Aguadilla, PR**	**0.69**	**324**		**Pg**	**00 37 33.7**	**-0.4**
AGPR				IAML		00 37 43.8	
	comp=Z,442nm,0.4s						
AGPR	**Aguadilla, PR**	**0.69**	**324**⇑	*e*Pg	**Pg**	**00 37 33.7**	**-0.4**
AGPR			⇑	*e*Sg	**Sg**	**00 37 43.3**	**+0.1**
AGPR				IAML		00 37 53.6	
	comp=N,348nm,0.6s						
AGPR	**Aguadilla, PR**	**0.69**	**324**⇑	*i*P	**Pg**	**00 37 33.6**	**-0.5**
AGPR				*e*S	**Sg**	**00 37 43.1**	**-0.1**
AGPR	**Aguadilla, PR**	**0.69**	**324**	*i* P	**Pg**	**00 37 33.8**	**-0.4**
AGPR				*e*S	**Sg**	**00 37 43.1**	**-0.1**
AGPR				IAML		00 37 45.0	
	comp=Z,259nm,0.6s						
GCPR	**Guaynabo City**	**0.70**	**55**		**Pg**	**00 37 34.3**	**-0.1**
GCPR					**Sg**	**00 37 43.6**	**-0.1**
GCPR	**Guaynabo City**	**0.70**	**55**⇑	*i*P	**Pg**	**00 37 34.3**	**-0.1**
GCPR				*e*S	**Sg**	**00 37 43.6**	**-0.1**
HUMP	**Col San Antoni**	**0.83**	**74**		**Pg**	**00 37 36.5**	**-0.4**
HUMP					**Sg**	**00 37 47.9**	**+0.1**
HUMP	**Col San Antoni**	**0.83**	**74**	IAML		00 37 49.8	
	comp=Z,334nm,0.3s						
HUMP				IAML		00 37 52.6	
	comp=Z,312nm,0.2s						
HUMP	**Col San Antoni**	**0.83**	**74**⇓	*i*P	**Pg**	**00 37 36.5**	**-0.4**
HUMP				*e*S	**Sg**	**00 37 47.9**	**+0.1**
IDE	**Isla Desecheo**	**0.88**	**303**		**Pb**	**00 37 37.0**	**-0.8**
IDE					**Sg**	**00 37 49.3**	**-0.2**
IDE	**Isla Desecheo**	**0.88**	**303**⇑	*i*P	**Pb**	**00 37 37.0**	**-0.8**
IDE				*e*S	**Sg**	**00 37 49.3**	**-0.2**
MIDR	**Miches**	**2.48**	**296**⇑	*e*Pg	**Pb**	**00 38 06.2**	**+1.2**
MIDR				IAML		00 38 49.6	
	comp=N,30nm,2.9s						
HATOM	**Hato Mayor del**	**2.70**	**289**	*e*Pg	**Pb**	**00 38 09.0**	**+0.2**
HATOM				IAML		00 38 53.3	
	comp=N,21nm,2.2s						

AFAD 03 00:55:38.7, 38°.50N×39°.41E, h7km±2km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDNT	**Maden**	**0.23**	**116**	P	Pg	00 55 44.0	+0.6
MDNT				S	Sg	00 55 48.5	+2.0
MDNT				IAML		00 55 50.0	
	comp=N,157nm,0.6s						
MDNT				IAML		00 55 50.0	
	comp=E,161nm,0.4s						
ELZ	**Elazig**	**0.25**	**320**	P	Pg	00 55 44.2	+0.5
ELZ				S	Sb	00 55 48.8	-1.5
ELZ				IAML		00 55 49.0	
	comp=N,114nm,0.3s						
ELZ				IAML		00 55 49.0	
	comp=E,150nm,0.6s						
ELZG	**Elazig**	**0.34**	**270**	P	Pg	00 55 45.8	+0.4
ELZG				S	Sg	00 55 50.8	+1.0
ELZG				IAML		00 55 53.0	
	comp=N,70nm,0.2s						
ELZG				IAML		00 55 55.0	
	comp=E,88nm,0.2s						
ELZG	**Elazig**	**0.34**	**270**	P	Pg	00 55 45.9	+0.5
ELZG				S	Sg	00 55 51.0	+1.2
ELZG				IAML		00 55 52.0	
	comp=N,84nm,0.2s						
ELZG				IAML		00 55 55.0	
	comp=E,88nm,0.2s						
KOVA	**Elazig, Kovanc**	**0.38**	**56**	P	Pb	00 55 47.0	-0.8
KOVA				S	Sb	00 55 53.3	-0.6
KOVA				IAML		00 55 57.0	
	comp=N,21nm,0.5s						
KOVA				IAML		00 55 57.0	
	comp=E,31nm,0.3s						
TNCL	**Tunceli-Merkez**	**0.63**	**9**	P	Pg	00 55 51.3	+0.5
TNCL				S	Sb	00 56 00.8	-0.3
TNCL				IAML		00 56 04.0	
	comp=N,18nm,0.6s						
TNCL				IAML		00 56 05.0	
	comp=E,17nm,0.6s						
MCKZ	**Bingol**	**0.71**	**331**	P	Pg	00 55 52.2	-0.2
MCKZ				S	Sb	00 56 02.7	-0.9
MCKZ				IAML		00 56 04.0	
	comp=E,11nm,0.3s						
MCKZ				IAML		00 56 06.0	
	comp=N,7.4nm,0.4s						
MCKZ	**Bingol**	**0.71**	**331**	P	Pg	00 55 52.3	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCKZ				S	Sb	00 56 03.0	-0.6
MCKZ				IAML		00 56 04.0	
	comp=E,11nm,0.3s						
MCKZ				IAML		00 56 08.0	
	comp=N,7.2nm,0.4s						
MAYA	Malatya/Merkez	0.80	258	P	Pg	00 55 53.2	-0.7
MAYA				S	Sg	00 56 04.6	+0.3
MAYA	Malatya/Merkez	0.80	258	P	Pg	00 55 53.7	-0.3
MAYA				S	Sb	00 56 05.8	-0.1
MAYA				IAML		00 56 08.0	
	comp=N,20nm,0.4s						
MAYA				IAML		00 56 08.0	
	comp=E,15nm,0.5s						
NARI	Adyaman-Kaht	0.80	220	P	Pb	00 55 54.6	-0.3
NARI				S	Sb	00 56 06.1	+0.1
NARI	Adyaman-Kaht	0.80	220	P	Pb	00 55 54.7	-0.2
AZEY	Adyaman-Merk	1.15	234	P	Pn	00 56 01.7	+0.5
AZEY				S	Sn	00 56 18.8	+1.6
AZEY				IAML		00 56 21.0	
	comp=N,12nm,0.7s						
AZEY				IAML		00 56 22.0	
	comp=E,9.6nm,0.4s						
AKCD	Akcadag	1.19	261	P	Pg	00 56 00.8	-0.8
AKCD				S	Sn	00 56 18.1	-0.3
AKCD				IAML		00 56 23.0	
	comp=E,18nm,0.5s						
AKCD				IAML		00 56 23.0	
	comp=N,11nm,0.5s						
ATAB	Bozova	1.35	221	P	Pg	00 56 04.9	+0.3
ATAB				S	Sn	00 56 23.9	+1.6
ATAB				IAML		00 56 30.0	
	comp=E,13nm,0.4s						
ATAB				IAML		00 56 30.0	
	comp=N,6.5nm,0.3s						
AKCA	Adyaman/G¶l	1.53	243	P	Pg	00 56 08.3	+0.3
AKCA				S	Sg	00 56 30.4	+2.5
AKCA				IAML		00 56 33.0	
	comp=N,13nm,1.1s						
AKCA				IAML		00 56 34.0	
	comp=E,12nm,0.8s						

*SJA **03** 00:56:27.9±0.7, 31.°96S×69.°80W, h134km±3km, ML3.4, MW3.5*
*GUC **03** 00:56:29.7±0.7, 31.°99S×70.°17W, h146km±5km, ML3.6*
ISC 03 00:56:28.1±1.3**, 31.°99S**±0.°03×**69.°85W**±0.°03**, h138**km±9km**, n58,** σ1**.s49**/86**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.51	68	eP	Pn	00 56 48.0	-0.5
RTLS				IAML		00 57 03.1	
	comp=Z,2μm,0.4s						
CO04	Los Peladeros	0.96	267	i P	Pn	00 56 51.0	-0.7
CO04				eS	Sn	00 57 07.2	-2.3
CO04				IAML		00 57 09.1	
	comp=N,2μm,0.2s						
VA03	San Esteban	0.97	217	eP	Pn	00 56 51.7	+0.2
VA03				eS	Sn	00 57 10.0	+0.6
VA03				IAML		00 57 11.7	
	comp=Z,939nm,0.6s						
ASAL	Salagasta	1.05	125	eP	Pn	00 56 52.8	+0.6
ASAL				eS	Sn	00 57 10.7	+0.1
ZON	Zonda	1.09	66	eP	Pn	00 56 52.5	-0.1
ZON				eS	Sn	00 57 10.0	-1.3
ZON				IAML		00 57 10.8	
	comp=Z,431nm,0.5s						
SJA	San Juan	1.19	68	eP	Pn	00 56 42.7	-11
SJA				eS	Sn	00 57 14.6	+1.6
SJA				eS		00 57 14.7	
SJA				IAML		00 57 15.2	
	comp=Z,420nm,0.2s						
CO02	Combarbal	1.26	308	i P	Pn	00 56 54.2	0.0
CO02				eS	Sn	00 57 13.3	-0.9
CO02	Combarbal	1.26	308	eP	Pn	00 56 54.2	0.0
CO02				IAML		00 57 14.8	
	comp=Z,1μm,0.2s						
RTLL	Cerro Villicun	1.35	61	eP	Pn	00 56 55.2	0.0
RTLL				eS	Sn	00 57 14.5	-1.2
RTLL				IAML		00 57 15.7	
	comp=Z,838nm,0.3s						
PEL	Peldehue	1.35	211	eP	Pn	00 56 55.2	+0.1
PEL				eS	Sn	00 57 10.5	-5.3
PEL				IAML		00 57 15.9	
	comp=Z,367nm,0.5s						
CO03	El Pedregal	1.35	328	i P	Pn	00 56 55.6	+0.4
CO03				eS	Sn	00 57 15.3	-0.6
CO03				IAML		00 57 17.6	
	comp=E,2μm,0.2s						
CO03	El Pedregal	1.35	328	eP	Pn	00 56 55.6	+0.4
CO03				IAML		00 57 17.3	
	comp=Z,548nm,0.4s						
ROCH	El Roble	1.39	225	i P	Pn	00 56 55.7	0.0
ROCH				eS	Sn	00 57 16.0	-0.8
ROCH				IAML		00 57 17.6	
	comp=N,2μm,0.4s						
MT10	Hacienda Santa	1.40	204	i P	Pn	00 56 56.6	+0.8
MT10				eS	Sn	00 57 17.9	+0.9
MT04	Ro Olivares	1.43	190	i P	Pn	00 56 57.5	+1.3
MT04	Ro Olivares	1.43	190	eP	Pn	00 56 57.9	+1.6
MT04				eS	Sn	00 57 24.8	+7.1
MT08	Bocatoma Ro	1.46	185	i P	Pn	00 56 58.1	+1.6
MT08	Bocatoma Ro	1.46	185	eP	Pn	00 56 58.1	+1.6
MT08				eS	Sn	00 57 14.6	-3.7
MT08				eS		00 57 30.6	
ACCO	Cerro Coronel	1.55	26	eP	Pn	00 56 58.2	+0.5
MT05	Renca	1.58	208	i P	Pn	00 56 58.3	+0.6
MT05				IAML		00 57 22.4	
	comp=E,1μm,0.1s						
MT05	Renca	1.58	208	eP	Pn	00 56 58.5	+0.8
MT05				eS	Sn	00 57 21.4	+1.0
MT05				IAML		00 57 21.5	
	comp=Z,314nm,0.2s						
MT03	Universidad Ad	1.60	200	i P	Pn	00 56 58.9	+0.9
MT03				IAML		00 57 22.5	
	comp=E,795nm,0.3s						
MT03	Universidad Ad	1.60	200	eP	Pn	00 56 58.9	+0.9
MT03				eS	Sn	00 57 21.9	+1.2
MT03				IAML		00 57 23.2	
	comp=Z,424nm,0.2s						
MT02	Curacav	1.67	220	i P	Pn	00 56 58.3	-0.3
MT02	Curacav	1.67	220	eP	Pn	00 56 58.2	-0.4
MT02				eS	Sn	00 57 21.4	-0.5
MT02				IAML		00 57 23.8	
	comp=Z,126nm,0.4s						
MT13	San Alfonso	1.79	192	eP	Pn	00 57 00.9	+0.8
MT13				eS	Sn	00 57 26.9	+2.3
MT13				IAML		00 57 27.9	
	comp=Z,124nm,0.2s						
VA01	Torpederas	1.83	235	eP	Pn	00 57 00.3	-0.2
VA01				eS	Sn	00 57 23.4	-1.9
VA01				IAML		00 57 24.1	
	comp=Z,140nm,0.3s						
AROD	Rodeo	1.85	10	eP	Pn	00 57 02.4	+1.4
ACDV	Cuesta del Vie	1.92	19	eP	Pn	00 57 03.0	+1.3
ACDV				eS	Sn	00 57 30.0	+2.5
GO04	Tololo Observa	1.99	336	i P	Pn	00 57 02.9	+0.3
GO04				eS	Sn	00 57 27.9	-1.0
GO04	Tololo Observa	1.99	336	eP	Pn	00 57 03.0	+0.5
GO04				IAML		00 57 34.5	
	comp=Z,697nm,0.4s						
CO06	Fray Jorge	2.01	310	i P	Pn	00 57 02.1	-0.5
CO06				IAML		00 57 31.7	
	comp=E,443nm,0.3s						
CO01	Juntas del Tor	2.02	354	i P	Pn	00 57 04.6	+1.6
CO01				eS	Sn	00 57 30.8	+1.1
CO01				IAML		00 57 32.9	
	comp=E,222nm,0.1s						
CO01	Juntas del Tor	2.02	354	eP	Pn	00 57 04.6	+1.6
CO01				IAML		00 57 34.0	
	comp=Z,117nm,0.2s						
MT09	Talagante	2.02	208	i P	Pn	00 57 02.8	-0.1
MT09				eS	Sn	00 57 29.1	-0.5
MT09				IAML		00 57 31.0	
	comp=N,432nm,0.5s						
BO04	La Punta	2.09	198	i P	Pn	00 57 04.4	+0.8
BO04				IAML		00 57 32.4	
	comp=E,302nm,0.2s						
MT01	Popeta	2.21	212	i P	Pn	00 57 04.7	-0.2
MT01				IAML		00 57 38.6	
	comp=E,208nm,0.2s						
MT01	Popeta	2.21	212	eP	Pn	00 57 04.6	-0.3
MT01				eS	Sn	00 57 32.6	-0.7
MT01				IAML		00 57 34.3	
	comp=Z,102nm,0.2s						
ACAN	Cantantal	2.28	98	eP	Pn	00 57 05.7	-0.1
ACAN				IAML		00 57 37.8	
	comp=Z,598nm,0.4s						
CO05	La Serena	2.38	330	i P	Pn	00 57 07.0	-0.1
AVFE	Valle Fertil	2.44	58	eP	Pn	00 57 08.2	+0.3
AVFE				IAML		00 57 43.3	
	comp=Z,95nm,0.3s						
BO01	Tunca	2.61	203	eP	Pn	00 57 09.8	-0.1
BO01				eS	Sn	00 57 42.4	+0.1
BO01				IAML		00 57 50.4	
	comp=Z,48nm,0.4s						
ACHE	Chepes	2.84	74	eP	Pn	00 57 13.5	+0.4
BO02	Sierra Bellavi	2.90	195	i P	Pn	00 57 14.4	+0.7
BO02				eS	Sn	00 57 48.7	-0.3
BO02				IAML		00 57 53.8	
	comp=N,220nm,0.4s						
BO02	Sierra Bellavi	2.90	195	eP	Pn	00 57 14.7	+0.9
BO02				eS	Sn	00 57 50.4	+1.4
BO02				IAML		00 57 55.4	
	comp=Z,139nm,0.1s						
RFA	San Rafael	3.00	158	eP	Pn	00 57 15.9	+0.8
RFA				eS	Sn	00 57 50.4	-1.0
RFA				IAML		00 57 51.9	
	comp=Z,83nm,0.7s						
LCO	Las Campanas	3.06	346	eP	Pn	00 57 16.3	+0.3
LCO				IAML		00 57 54.2	
	comp=Z,358nm,0.3s						
AC05	El Transito	3.17	353	eP	Pn	00 57 18.4	+1.2
AC05				IAML		00 57 58.8	
	comp=Z,78nm,0.4s						
GO05	Hualane	3.48	209	eS	Sn	00 58 02.1	-0.1
GO05				IAML		00 58 13.1	
	comp=Z,33nm,0.8s						
MRA	San Martin	3.53	98	eP	Pn	00 57 20.4	-1.5
MRA				eS	Sn	00 58 00.7	-2.9
MRA				IAML		00 58 23.0	
	comp=Z,62nm,0.5s						
VCA	Vinchina	3.54	24	eP	Pn	00 57 23.2	+1.0
VCA				IAML		00 58 16.5	
	comp=Z,65nm,0.2s						
ACLC	CERRO LA CRUZ	3.57	45	eP	Pn	00 57 23.1	+0.5
ACLC				IAML		00 58 07.5	
	comp=Z,30nm,0.2s						
AC04	Llanos de Chal	3.92	344	eP	Pn	00 57 27.6	+0.6
AC04				IAML		00 58 27.9	
	comp=Z,50nm,0.3s						
TINO	Tinogasta	4.39	27	eP	Pn	00 57 33.8	+0.6
GO03	Copiapo	4.39	356	eP	Pn	00 57 33.9	+0.6
GO03				IAML		00 58 26.1	
	comp=Z,40nm,0.2s						
TCA	Tanti	4.53	83	eP	Pn	00 57 35.1	0.0
TCA				eS	Sn	00 58 24.4	-2.8
TCA				IAML		00 58 25.3	
	comp=Z,67nm,0.7s						
BI02	San Fabin de	4.81	194	eP	Pn	00 57 38.7	0.0
BI02				IAML		00 58 35.5	
	comp=Z,13nm,0.4s						
AC02	Maricunga	5.18	7	eP	Pn	00 57 45.4	+1.2
AC02				IAML		00 59 10.2	
	comp=Z,9.3nm,0.8s						

NOU 03 01:21:32.0, 15.°23S×167.°04E, h0km**, mb4.0**/7**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.71	156	P	Pn	01 22 16.9	0.0
YATNC	Mamie plateau,	6.79	181	P	Pn	01 23 12.2	-0.8
DZM	Mont Dzumac	6.83	185	P	Pn	01 23 13.9	+0.3
PINNC	Pines Island,	7.35	177	P	Pn	01 23 20.9	+0.2

*CATAC **03** 01:25:26.1±0.5, 13°N±3°×8°9W±°, h37km±7km, M4.5/17, MLv4.5/17, Error ellipse: s-maj=8.0km s-min=3.0km az=24.9, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.40; $M_{\theta\theta}$-2.83; $M_{\phi\phi}$0.44; $M_{r\theta}$0.95; $M_{\theta\phi}$0.41; $M_{\phi r}$-1.27; Fault plane solution: $M_0$3.10755×10^{15} NP1: ϕ_s119.04254°, δ60.54101°, λ115.50127°. NP2: ϕ_s254.91762°, δ38.19787°, λ52.68414°. Principal axes: T 3.0966, Plg64.6162°, Azm74.2905°; N 0.0217, Plg22.0161°, Azm285.8402°; P -3.1183, Plg12.0020°, Azm190.9089°; confirmed*
*SNET **03** 01:25:26.0±0.8, 12.°76N×88.°66W, h37km±4km, ML4.2, Presumed earthquake*
*IDC **03** 01:25:27.6±1.6, 12.°69N×88.°65W, h80km±13km, mb3.5/7, mbtmp3.8/10, MS3.3/8, Error ellipse: s-maj=38.7km s-min=9.3km az=38.0*
*NEIC **03** 01:25:28.2±1.9, 12.°85N±0.°07×88.°58W±0.°06, h67km±9km, mb4.2/40, Error ellipse: s-maj=11.3km s-min=6.5km az=211.0*
*GCG **03** 01:25:29.0±1.0, 12.°85N×88.°85W, h50km±41km, MD4.5, ML4.3, Presumed earthquake*
ISC 03 01:25:26.4±1.0**, 12.°80N**±0.°06×**88.°63W**±0.°03**, h57**km±8km**, n138,** σ1**.s23**/152**, mb4.2**/27**, MS3.1**/7**, 3C-3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCY	Lacayo	0.70	27⇓	iP	Pn	01 25 40.9	+0.2
TECA	Tecapa	0.70	10⇓	iP	Pn	01 25 40.8	0.0
RANC	El Ranchito	0.71	27	P	Pn	01 25 41.1	+0.3
RANC				S	Sn	01 25 52.9	+1.6
RANC	El Ranchito	0.71	27⇑	eP	Pn	01 25 41.1	+0.3
PACA	Pacayal	0.73	24	P	Pn	01 25 41.4	+0.3
PACA	Pacayal	0.73	24⇓	iP	Pn	01 25 41.3	+0.2
PACA				eS	Sn	01 25 52.4	+0.7
BLLM	Bellamira	0.75	31⇑	iP	Pn	01 25 41.5	+0.3
TECO	Alcaldia de Te	0.75	349	P	Pn	01 25 41.0	-0.1
TECO	Alcaldia de Te	0.75	349	eP	Pn	01 25 40.9	-0.2
TECO				eS	Sn	01 25 51.8	-0.1
CNRM	Centro Naciona	0.81	33	P	Pn	01 25 42.4	+0.5
CNRM				S	Sn	01 25 54.9	+1.8
CNRM	Centro Naciona	0.81	33	eP	Pn	01 25 42.3	+0.5
UESV	Universidad de	0.85	349	P	Pn	01 25 42.6	+0.1
UESV				S	Sn	01 25 54.8	+0.6
UESV	Universidad de	0.85	349	eP	Pn	01 25 42.6	+0.1
LCND	La Caada	0.88	55	eP	Pn	01 25 42.9	+0.1
CNCH	Conchagua	0.91	58	P	Pn	01 25 43.6	+0.3
CNCH				S	Sn	01 25 58.2	+2.6
CNCH	Conchagua	0.91	58	eP	Pn	01 25 43.2	-0.1
LFRS	El Faro	0.92	333	eP	Pn	01 25 43.1	-0.3
PAVA	Las Pavas	0.96	342	P	Pn	01 25 44.1	+0.2
PAVA	Las Pavas	0.96	342	eP	Pn	01 25 44.2	+0.2
PAVA				eS	Sn	01 25 57.4	+0.5
LALI	Alcalda de L	0.96	316	eP	Pn	01 25 43.3	-0.5
LALI	Alcalda de L	0.96	316	i P	Pn	01 25 43.3	-0.5
LBRS	Las Brisas	1.02	337	eP	Pn	01 25 45.0	+0.3
UDBS	Universidad Do	1.05	331	P	Pn	01 25 45.1	+0.1
UDBS				S	Sn	01 25 59.4	+0.6
UDBS	Universidad Do	1.05	331	eP	Pn	01 25 45.2	+0.1
CAHU	Cacacuatique	1.05	23	eP	Pn	01 25 46.4	+1.2
IGN	Direccin Gen	1.05	330	P	Pn	01 25 45.3	+0.1
IGN				S	Sn	01 25 59.5	+0.5
IGN	Direccin Gen	1.05	330	eP	Pn	01 25 45.3	+0.1
CSGN	Cosiguina Volc	1.06	80	P	Pn	01 25 45.1	0.0
CSGN				S	Sn	01 25 59.3	+0.3
LFU	La Fuente	1.06	333	eP	Pn	01 25 45.5	+0.2
UTEC	Universidad Te	1.06	328	P	Pn	01 25 45.3	+0.1
UTEC				S	Sn	01 25 59.5	+0.4
SEMO	Seminario San	1.07	327	P	Pn	01 25 45.9	+0.5
SEMO				S	Sn	01 25 59.6	+0.1
UESS	Universidad de	1.07	329	eP	Pn	01 25 45.6	+0.2
UEES	Universidad Ev	1.09	327	P	Pn	01 25 45.8	+0.2
UEES				S	Sn	01 26 00.0	+0.1
UEES	Universidad Ev	1.09	327	eP	Pn	01 25 45.7	0.0
PIC2	El Picacho	1.12	327	eP	Pn	01 25 46.7	+0.4
BOQS	Boqueron	1.13	326	eP	Pn	01 25 46.4	+0.2
PMON	Piamonte	1.13	324	P	Pn	01 25 46.2	0.0
PMON				S	Sn	01 26 01.0	+0.1
PMON	Piamonte	1.13	324	eP	Pn	01 25 46.2	0.0
JAYA	Jayaque - finc	1.17	317	P	Pn	01 25 46.4	-0.3
JAYA	Jayaque - finc	1.17	317	eP	Pn	01 25 46.4	-0.3
JAYA	Jayaque - finc	1.17	317	i P	Pn	01 25 46.2	-0.5
JAYA				i S	Sn	01 26 00.9	-0.9
LLGN	La Laguna	1.39	347	P	Pn	01 25 50.3	+0.6
LLGN				S	Sn	01 26 08.3	+1.1
LLGN	La Laguna	1.39	347	eP	Pn	01 25 50.3	+0.6
SBLS	San Blas	1.42	317	eP	Pn	01 25 50.4	+0.3
RTR	El Retiro	1.48	318⇑	eP	Pn	01 25 51.5	+0.6
CRIN	San Cristobal	1.54	93		Pn	01 25 52.2	+0.5
CRIN				Sn	Sn	01 26 11.2	+0.5
NUBE	Las Nubes	1.57	315	eP	Pn	01 25 52.2	+0.1
NUBE	Las Nubes	1.57	315	i S	Sn	01 26 10.6	-0.9
RBDL	Robledal	1.67	322	eP	Pn	01 25 54.2	+0.7
MTO3	Montecristo	1.75	336		Pn	01 25 55.0	+0.4
MTO3	Montecristo	1.75	336	eP	Pn	01 25 55.2	+0.6
MTO3	Montecristo	1.75	336	i P	Pn	01 25 55.2	+0.6
HERN	Volcan Telica	1.76	96		Pn	01 25 54.7	0.0
TGUH	Tegucigalpa,Un	1.82	46		Pn	01 25 56.3	+0.8
TGUH	Tegucigalpa,Un	1.82	46	P	Pn	01 25 56.5	+1.1
TGUH				S	Sn	01 26 19.5	+2.0
ESQI	Esquipulas	1.89	338		Pn	01 25 57.4	+1.0
ESQI	Esquipulas	1.89	338	eP	Pn	01 25 57.5	+1.1
CNGN	Cerro Negro	1.91	99		Pn	01 25 56.6	0.0
ZAFR2	Estanzuela, Za	1.91	338	i P	Pn	01 26 03.8	+7.3
FG16	Alotenango, Sa	2.35	309	i S	Sn	01 26 39.1	+8.6
FG16				IAML		01 26 43.4	
	comp=N,4μm,0.2s						
USIM	UNAN	2.40	106	Pn	Pn	01 26 04.0	+0.8
MGAN	Managua	2.41	105		Pn	01 26 03.3	-0.2
MATN	Matagalpa	2.64	87	P	Pn	01 26 06.0	-0.7
MATN				S	Sn	01 26 36.6	-1.0
ESSG	Sabana Grande	2.66	307	i P	Pn	01 26 07.7	+0.8
ESSG				IAML		01 26 46.9	
	comp=N,706nm,0.4s						
APG	El Apazote	2.83	321	P	Pn	01 26 10.3	+1.0
	comp=N,0.6nm,0.3s,baz=138,slow=11,SNR=8.9						
APG				S	Sn	01 26 47.0	+4.6
	comp=N,1.9nm,0.4s,baz=220,slow=17,SNR=3.9						
APG	El Apazote	2.83	321	i P	Pn	01 26 10.3	+1.0
RTAL	Retalhuleu	3.44	300	Pn	Pn	01 26 19.5	+1.9
SIUN	Universidad Ur	3.86	76		Pn	01 26 24.4	+1.1
JUD3	Juan Diaz 3	4.00	131		Pn	01 26 27.2	+1.9
JTS	Las Juntas de	4.38	124	P	Pn	01 26 32.1	+1.6
	comp=N,6.0nm,0.4s,baz=106,slow=22,SNR=13						
JTS				S	Sn	01 27 20.6	+0.4
	comp=N,16nm,0.3s,baz=338,slow=22,SNR=1.3						
JTS	Las Juntas de	4.38	124		Pn	01 26 33.1	+2.7
CCIG	Comitan	4.85	316	Pn	Pn	01 26 40.1	+3.0
BILN	Bilwi Airport	5.26	76	Pn	Pn	01 26 43.6	+1.1
PIRO	Carate, Puerto	6.79	129		Pn	01 27 06.6	+3.1
BRU2	Volcan	7.06	124	Pn	Pn	01 27 09.0	+1.7
TEIG	Tepich	7.40	3	P	Pn	01 27 14.4	+2.7
	comp=N,0.1nm,0.6s,baz=207,slow=24,SNR=3.6						
TEIG	Tepich	7.40	3		Pn	01 27 13.4	+1.6
CMIG	Matias Romero	7.40	306	P	Pn	01 27 15.1	+3.2
	comp=N,2.2nm,0.4s,baz=154,slow=8.4,SNR=9.3						
CMIG				S	Sn	01 28 33.5	-1.0
	comp=N,5.6nm,0.5s,baz=273,slow=15,SNR=4.5						
SDV	Santo Domingo	18.09	101	P	P	01 29 32.9	-0.9
	comp=N,4.1nm,0.7s,baz=270,slow=14,SNR=6.4						
SDV				LR	LR	01 36 45.7	
	comp=N,57nm,21.0s,baz=265,slow=38						
SDV	Santo Domingo	18.09	101	P	Pn	01 29 34.0	-0.1
SDD	Santo Domingo	18.88	70	P	P	01 29 42.0	-0.2
HNDO	Hondo	19.37	331	P	Pn	01 29 49.0	-0.1
DRIO	Del Rio	19.94	328		Pn	01 29 55.6	-0.3
BRDY	Brady	20.74	334	P	P	01 30 03.5	+1.1
GOGA	Godfrey	21.05	12	P	P	01 30 07.9	+2.1
GOGA				IAmb	IAmb	01 30 36.6	
	comp=Z,18nm,1.4s						
TXAR	Lajitas Array	21.59	322	P	P	01 30 12.9	+1.4
	comp=Z,0.3nm,0.4s,baz=136,slow=10.0,SNR=16						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	21.59	322	P	P	01 30 12.2	+0.6
TX31	Lajitas Ar. Si	21.59	322	P	P	01 30 13.3	+1.7
PLPT	Palo Pinto	21.81	338	P	P	01 30 14.3	+0.4
PLPT				IAmb	IAmb	01 30 42.1	
	comp=Z,12nm,1.3s						
SJG	San Juan	22.29	73	P	P	01 30 19.8	+0.6
	comp=Z,3.3nm,0.4s,baz=30,slow=20,SNR=2.3						
SJG				LR	LR	01 40 13.3	
	comp=Z,61nm,18.0s,baz=274,slow=40						
	comp=Z,3.3nm,0.4s						
TKL	Tuckaleechee C	23.18	10	LR	LR	01 38 52.2	
	comp=Z,54nm,20.6s,baz=164,slow=35						
TKL	Tuckaleechee C	23.18	10	P	P	01 30 28.8	+0.5
TKL				IAmb	IAmb	01 31 06.5	
	comp=Z,8.9nm,1.1s						
V53A	Saluda	23.37	12	P	P	01 30 30.3	+0.2
V53A				IAmb	IAmb	01 30 37.4	
	comp=Z,16nm,1.3s						
LPIG	La Paz	23.40	302	LR	LR	01 40 23.9	
	comp=Z,29nm,18.1s,baz=66,slow=38						
DKNS	Dickens	23.61	334	P	P	01 30 32.1	-0.2
DKNS				IAmb	IAmb	01 30 35.0	
	comp=Z,6.7nm,0.9s						
Q51A	Peebles	26.54	9	P	P	01 30 59.0	+0.1
Q51A				IAmb	IAmb	01 31 18.1	
	comp=Z,5.8nm,1.0s						
Q54A	Coxs Mills	26.98	13	P	P	01 31 03.6	+0.8
Q54A				IAmb	IAmb	01 31 03.6	
	comp=Z,13nm,1.3s						
PV18	Skein Mesa, Pa	31.12	328	P	P	01 31 40.2	+0.4
PV18				IAmb	IAmb	01 31 42.4	
	comp=Z,11nm,1.5s						
SADO	Sadowa	32.88	12	P	P	01 31 54.5	-0.4
PDAR	Pinedale Array	34.93	333	P	P	01 32 13.6	+0.5
	comp=Z,0.4nm,0.7s,baz=143,slow=8.6,SNR=3.4						
	comp=Z,0.4nm,0.7s						
EYMN	Ely	35.12	357	P	P	01 32 13.2	-1.2
LPAZ	La Paz	35.30	144	LR	LR	01 46 58.4	
	comp=Z,37nm,19.1s,baz=274,slow=37						
MOOW	Moose Ponds	36.24	333	P	P	01 32 25.0	+0.8
NVAR	Mina Array Bea	36.69	319	P	P	01 32 26.9	-1.3
	comp=Z,0.9nm,0.3s,baz=100,slow=7.3,SNR=2.2						
NVAR				LR	LR	01 47 46.6	
	comp=Z,80nm,19.3s,baz=268,slow=36						
	comp=Z,0.9nm,0.3s						
YMP	Mirror Lake Pl	36.77	334	P	P	01 32 29.0	+0.2
YMP				IAmb	IAmb	01 32 29.1	
	comp=Z,3.5nm,0.7s						
YNE	Yellowstone No	36.92	334	P	P	01 32 30.4	+0.4
YNE				IAmb	IAmb	01 32 47.7	
	comp=Z,6.2nm,1.4s						
ULM	Lac du Bonnet	37.82	352	LR	LR	01 49 51.2	
	comp=Z,48nm,18.4s,baz=193,slow=39						
BOZ	Bozeman (W)	38.08	334	P	P	01 32 40.4	+0.6
LRM	Limekiln Ridge	38.62	333	P	P	01 32 44.4	+0.1
EGMT	Eagleton	39.29	338	P	P	01 32 50.5	+0.7
EGMT				IAmb	IAmb	01 32 51.2	
	comp=Z,3.3nm,0.7s						
LYMT	Lyon Mountain	39.44	334	P	P	01 32 52.1	+0.8
FFC	Flin Flon	43.13	349	P	P	01 33 21.1	0.0
EDM	Edmonton	44.88	339	P	P	01 33 35.2	0.0
EDM				IAmb	IAmb	01 33 36.0	
	comp=Z,3.9nm,0.8s						
SCHQ	Schefferville	45.29	18	P	P	01 33 36.5	-1.9
	comp=Z,3.2nm,0.9s,baz=288,slow=3.2,SNR=1.6						
	comp=Z,3.2nm,0.9s						
H03N2	Juan Fernandez	46.90	169	T	T	02 23 57.0	
	baz=347						
H03N1	Juan Fernandez	46.90	169	T	T	02 24 00.7	
	baz=347						
H03N3	Juan Fernandez	46.91	169	T	T	02 23 55.3	
	baz=347						
BDFB	Brasilia	49.12	124	P	P	01 34 09.5	+0.6
YKAW1	Yellowknife Wh	52.94	345	P	P	01 34 36.5	-0.1
YKAW1				IAmb	IAmb	01 34 36.8	
	comp=Z,1.9nm,0.8s						
YKA	Yellowknife Ar	52.98	345	P	P	01 34 36.3	-0.6
	comp=Z,0.5nm,0.4s,baz=146,slow=6.9,SNR=15						
YKA				LR	LR	01 58 04.9	
	comp=Z,60nm,18.5s,baz=102,slow=37						
	comp=Z,0.5nm,0.4s						
YKAW3	Yellowknife Wh	53.04	345	P	P	01 34 36.6	-0.8
YKAW3				IAmb	IAmb	01 34 52.6	
	comp=Z,3.8nm,1.2s						
ILON	Igloolik, Nuna	56.70	3	P	P	01 35 02.5	-1.2
ILON				IAmb	IAmb	01 35 09.3	
	comp=Z,5.7nm,1.4s						
G31M	Satah River	61.89	341	P	P	01 35 39.3	-0.3
INK	Inuvik	62.53	343	P	P	01 35 43.4	-0.4
INK				IAmb	IAmb	01 36 06.3	
	comp=Z,5.0nm,1.5s						
F30M	Barrier River	62.78	342	P	P	01 35 45.4	-0.1
G29M	Pine Creek	63.09	340	P	P	01 35 47.9	+0.2
H27K	Steamboat Moun	63.91	339	P	P	01 35 53.5	+0.3
H27K				IAmb	IAmb	01 36 22.3	
	comp=Z,3.9nm,1.4s						
F28M	Old Crow	64.08	341	P	P	01 35 54.6	+0.4
G27K	Doyon Strip	64.25	339	P	P	01 35 54.4	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**65.24**	**336**	P	**P**	**01 36 01.0**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=143,slow=4.6,SNR=5.9						
	comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	**65.24**	**336**	P	**P**	**01 36 01.7**	**-0.1**
D27M	**Malcolm River**	**65.28**	**342**	P	**P**	**01 36 01.5**	**-0.5**
D27M				IAmb	IAmb	01 36 33.8	
	comp=Z,2.6nm,1.2s						
BMAR	**Burnt Mountain**	**65.55**	**339**	P	**P**	**01 36 03.9**	**+0.1**
F25K	**Christian Rive**	**65.99**	**339**	P	**P**	**01 36 06.6**	**-0.1**
F25K				IAmb	IAmb	01 36 07.4	
	comp=Z,2.4nm,1.1s						
D25K	**Kavik River**	**67.01**	**341**	P	**P**	**01 36 12.7**	**-0.4**
D25K				IAmb	IAmb	01 36 14.0	
	comp=Z,3.9nm,1.0s						
TOLK	**Toolik Lake Re**	**67.77**	**340**	P	**P**	**01 36 17.9**	**0.0**
BEHE	**Becsehely**	**91.15**	**42**	P	**P**	**01 38 25.3**	**+0.1**
WRA	**Warramunga Arr**	**138.26**	**254**	PKP	**PKPdf**	**01 44 45.0**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=91,slow=3.1,SNR=2.2						

MEX 03 01:47:32.1±0.5**, 19°.46N×102°.16W, h24**km±5km**, Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.09**	**114**	*i* P	Pb	01 47 34.8	-2.0
URUA				*i* S	Sb	01 47 38.0	-1.9
INCO	**Volcan de Coli**	**1.37**	**273**	*e*P	Pn	01 47 53.6	-2.5
INCO				*e*S	Sn	01 48 10.8	-2.8
MNGA	**Volcan de Coli**	**1.38**	**271**	*e*P	Pn	01 47 53.5	-2.6
MNGA				*e*S	Sn	01 48 10.6	-3.2
SOMAC	**Volcano de Col**	**1.39**	**273**	*e*P	Pn	01 47 54.1	-2.3
SOMAC				*e*S	Sn	01 48 11.6	-2.6
CEGR	**Campo Tres**	**1.61**	**268**	*e*P	Pn	01 47 56.8	-2.3
CEGR				*e*S	Sn	01 48 17.0	-2.2
MMIG	**Aquila**	**1.62**	**224**	*e*P	Pn	01 47 56.9	-2.3
MMIG				*e*S	Sn	01 48 16.1	-3.2
CDAR	**Ciudad de Arme**	**1.82**	**254**	*e*P	Pn	01 48 00.3	-1.7
CDAR				*e*S	Sn	01 48 22.6	-1.8
ARIG	**Puente Sto Nin**	**2.08**	**124**	*e*P	Pn	01 48 07.0	+1.5
ARIG				*e*S	Sb	01 48 35.8	+1.3
CJM	**Chamela**	**2.72**	**271**	*e*P	Pn	01 48 15.0	+0.6

NOU 03 01:48:22.0, 16°.97S×168°.51E, h7km**, MLv4.3**/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.81**	**202**	P	Pg	01 48 37.9	+0.3
RTV	**Rentapao**	**0.82**	**186**	P	Pg	01 48 37.9	+0.1
MARNC	**Mare, Loyalty**	**4.51**	**186**	P	Pn	01 49 31.2	+0.4
YATNC	**Mamie plateau,**	**5.29**	**197**	P	Pn	01 49 41.4	-0.1
KOUNC	**Koumac, New Ca**	**5.36**	**228**	P	Pn	01 49 42.5	+0.1
DZM	**Mont Dzumac**	**5.43**	**201**	P	Pn	01 49 43.8	+0.2
OUENC	**Ouen Island, N**	**5.64**	**196**	P	Pn	01 49 46.7	+0.4
PINNC	**Pines Island,**	**5.70**	**190**	P	Pn	01 49 48.6	+1.5

*GII **03** 01:53:52.7±0.0, 35°.095N±0°.002×28°.015E±0°.001, h0km, Mws3.5, confirmed*
*ISK **03** 01:53:54.2, 35°.24N×27°.77E, h9km, ML3.3/13*
*ATH **03** 01:53:55.8, 35°.12N×27°.95E, h26km±10km, ML3.2/14, Manual Solution by I.Dede First location: 2020/02/03 01:55:17, This location: 2020/10/26 16:55:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*IDC **03** 01:53:56.6±1.1, 35°.01N×27°.98E, h50km±15km, mb3.6/7, mbtmp3.7/16, ML2.8/7, Error ellipse: s-maj=15.9km s-min=7.9km az=7.0*
*THE **03** 01:53:56.0, 35°N±7°×2°8E±°, h0km±14km, M2.8/7, MLh2.8/7*
ISC 03 01:53:51.4±2.2**, 35°.08N**±0°.04**×27°.92E**±0°.03**, h3**km±15km**, n86,** σ1s.72/113**, mb3.8**/6**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.78**	**307**	Pg	**Pb**	**01 54 05.9**	**-1.8**
KARP	**Karpathos**	**0.78**	**307**	P	**Pb**	**01 54 05.8**	**-1.8**
KARP				S	**Sg**	**01 54 14.0**	**-2.4**
KARP	**Karpathos**	**0.78**	**307**	P	**Pn**	**01 54 10.8**	**+1.5**
KSS1	**Kassos Island**	**0.88**	**293**	P	**Pn**	**01 54 12.6**	**+1.8**
ARG	**Arkhangelos**	**1.15**	**8**	Pg	**Pn**	**01 54 14.2**	**-0.2**
ARG	**Arkhangelos**	**1.15**	**8**	P	**Pn**	**01 54 15.1**	**+0.6**
ARG				S	**Sb**	**01 54 30.2**	**+1.0**
ARG	**Arkhangelos**	**1.15**	**8**	P	**Pn**	**01 54 14.3**	**-0.1**
ARG				S	**Sb**	**01 54 30.2**	**+1.0**
RDI1	**Rhodes Town Ha**	**1.39**	**10**	P	**Pn**	**01 54 19.0**	**+1.2**
ZKR	**Zakros**	**1.40**	**272**	Pn	**Pn**	**01 54 18.8**	**+0.9**
ZKR	**Zakros**	**1.40**	**272**	P	**Pn**	**01 54 19.6**	**+1.7**
ZKR	**Zakros**	**1.40**	**272**	P	**Pn**	**01 54 19.2**	**+1.3**
SIT2	**Siteia**	**1.49**	**275**	P	**Pn**	**01 54 21.3**	**+2.1**
DAT	**Datca**	**1.67**	**351**	Pn	**Pn**	**01 54 21.9**	**+0.2**
DAT	**Datca**	**1.67**	**351**	P	**Pn**	**01 54 22.6**	**+0.8**
DAT				S	**Sn**	**01 54 43.6**	**-0.1**
TURN	**Turunc**	**1.71**	**9**	Pn	**Pn**	**01 54 23.3**	**+1.1**
AKAS	**Kas**	**1.79**	**50**	Pn	**Pb**	**01 54 26.3**	**+1.3**
DALY	**Dalyan (Mula)**	**1.83**	**19**	Pn	**Pn**	**01 54 25.3**	**+1.4**
NPS	**Neapolis**	**1.90**	**276**	P	**Pn**	**01 54 26.7**	**+1.9**
NPS				S	**Sn**	**01 54 50.1**	**+0.9**
NPS	**Neapolis**	**1.90**	**276**	P	**Pn**	**01 54 27.0**	**+2.2**
KLNA	**Kalymnos**	**2.02**	**338**	P	**Pn**	**01 54 27.6**	**+1.1**
BODT	**Bodrum**	**2.04**	**346**	Pn	**Pn**	**01 54 27.3**	**+0.6**
BODT	**Bodrum**	**2.04**	**346**	P	**Pn**	**01 54 28.9**	**+2.1**
BODT				S	**Sn**	**01 54 53.1**	**+0.3**
YER	**Yerkesik**	**2.07**	**8**	Pn	**Pn**	**01 54 28.3**	**+1.1**
YER	**Yerkesik**	**2.07**	**8**	P	**Pn**	**01 54 29.0**	**+1.7**
CAME	**Cameli-Denizli**	**2.17**	**31**	Pn	**Pn**	**01 54 30.6**	**+1.9**
MLSB	**Milas**	**2.21**	**357**	Pn	**Pn**	**01 54 29.9**	**+0.7**
ELL	**Elmali**	**2.32**	**44**	Pn	**Pn**	**01 54 33.0**	**+2.3**
THERA	**Ancient Thera,**	**2.37**	**304**	P	**Pn**	**01 54 31.5**	**+0.3**
THERA	**Ancient Thera,**	**2.37**	**304**	P	**Pn**	**01 54 32.3**	**+1.1**
SNT5	**Nea Kammeni, S**	**2.44**	**303**	P	**Pn**	**01 54 33.6**	**+1.4**
IDI	**Anoyia**	**2.49**	**276**	P	**Pn**	**01 54 35.6**	**+2.6**
	21nm,0.4s,baz=78,slow=14,SNR=32						
IDI				S	**Sn**	**01 55 06.3**	**+2.4**
	38nm,0.8s,baz=345,slow=14,SNR=4.7						
IDI	**Anoyia**	**2.49**	**276**	Pn	**Pn**	**01 54 34.6**	**+1.6**
IDI	**Anoyia**	**2.49**	**276**	P	**Pn**	**01 54 35.1**	**+2.2**
APMY	**Acipayam-Deniz**	**2.64**	**25**	Pn	**Pn**	**01 54 36.8**	**+1.8**
GCAM	**G?zelcaml?**	**2.67**	**348**	Pn	**Pn**	**01 54 36.2**	**+0.8**
SMG	**Samos**	**2.77**	**342**	P	**Pn**	**01 54 38.7**	**+2.0**
AYDB	**Zeytinkoy-Aydi**	**2.86**	**360**	Pn	**Pn**	**01 54 38.8**	**+0.7**
NAZL	**Nazilli-Aydin**	**2.89**	**6**	Pn	**Pn**	**01 54 39.9**	**+1.4**
VAM	**Vamos**	**3.06**	**277**	P	**Pn**	**01 54 43.0**	**+2.2**
GVD	**Gavdhos**	**3.15**	**267**	Pn	**Pn**	**01 54 44.8**	**+2.7**
GVD	**Gavdhos**	**3.15**	**267**	P	**Pn**	**01 54 44.6**	**+2.6**
IMMV	**Iera Moni Meta**	**3.24**	**278**	Pn	**Pn**	**01 54 45.7**	**+2.4**
IMMV	**Iera Moni Meta**	**3.24**	**278**	P	**Pn**	**01 54 46.5**	**+3.2**
KNDR	**Palaiochora Ch**	**3.52**	**274**	P	**Pn**	**01 54 48.9**	**+1.8**
AKMS	**Akamas**	**3.62**	**90**	P	**Pn**	**01 54 50.4**	**+1.8**
CHOS	**Chios island**	**3.62**	**336**	P	**Pn**	**01 54 50.2**	**+1.6**
NATA	**Nata**	**3.83**	**93**	P	**Pn**	**01 54 52.4**	**+1.0**
ALFC	**Alefka**	**3.84**	**88**	P	**Pn**	**01 54 51.8**	**+0.3**
ANKY	**Antikythira Is**	**3.85**	**283**	P	**Pn**	**01 54 54.3**	**+2.7**
KARY	**Karystos**	**4.07**	**317**	P	**Pn**	**01 54 56.1**	**+1.5**
VLI	**Veliai**	**4.36**	**293**	P	**Pn**	**01 54 59.3**	**+0.7**
DION	**Dionisos Attik**	**4.39**	**314**	P	**Pn**	**01 55 00.3**	**+1.3**
ASGA	**Asgata**	**4.39**	**92**	P	**Pn**	**01 55 01.0**	**+2.0**
CSS	**Mathiatis**	**4.44**	**90**	P	**Pn**	**01 55 00.9**	**+1.1**
BRTR	**Keskin Array B**	**6.50**	**43**	P	**Pn**	**01 55 29.6**	**+1.5**
	0.2nm,0.3s,baz=217,slow=14,SNR=6.2						
BRTR				S	**Sn**	**01 56 44.6**	**+1.7**
	1.9nm,0.8s,baz=211,slow=26,SNR=6.5						
	0.6nm,0.5s						
MMC7	**Mount Meron ar**	**6.53**	**106**	P	**Pn**	**01 55 27.8**	**-0.8**
MMA0B	**Mount Meron ar**	**6.54**	**106**	P	**Pn**	**01 55 28.1**	**-0.7**
MMA0B				S	**Sn**	**01 56 42.1**	**-1.8**
MMAI	**Mount Meron Ar**	**6.54**	**106**	P	**Pn**	**01 55 28.9**	**+0.2**
	1.0nm,0.3s,baz=295,slow=14,SNR=9.8						
MMAI				S	**Sn**	**01 56 47.6**	**+3.7**
	2.1nm,0.5s,baz=285,slow=22,SNR=6.3						
NATI	**Neve Ativ**	**6.73**	**103**	P	**Pn**	**01 55 30.6**	**-0.6**
NATI				S	**Sn**	**01 56 46.6**	**-1.7**
MMLI	**Mount Malkishu**	**6.78**	**111**	P	**Pn**	**01 55 31.1**	**-0.9**
MMLI				S	**Sn**	**01 56 48.4**	**-1.4**
KZIT	**Kziot**	**6.85**	**126**	P	**Pn**	**01 55 32.6**	**-0.3**
KZIT				S	**Sn**	**01 56 49.6**	**-1.8**
KSHT	**Keshet**	**6.88**	**105**	P	**Pn**	**01 55 32.8**	**-0.5**
KSHT				S	**Sn**	**01 56 50.4**	**-1.8**
HMDT	**Nahal Hemdat**	**6.94**	**112**	P	**Pn**	**01 55 33.3**	**-0.8**
HMDT				S	**Sn**	**01 56 52.1**	**-1.4**
YTIR	**Yattir**	**7.08**	**120**	P	**Pn**	**01 55 35.6**	**-0.4**
YTIR				S	**Sn**	**01 56 55.6**	**-1.5**
DSI	**Dead Sea**	**7.16**	**117**	P	**Pn**	**01 55 36.6**	**-0.5**
DSI				S	**Sn**	**01 56 57.4**	**-1.6**
MSBI	**Mazada**	**7.28**	**119**	P	**Pn**	**01 55 38.4**	**-0.3**
MSBI				S	**Sn**	**01 57 00.4**	**-1.5**
GHAJ	**Ghor Haditha**	**7.43**	**118**	P	**Pn**	**01 55 40.6**	**-0.3**
GHAJ				S	**Sn**	**01 57 03.9**	**-1.8**
KRMI	**Paran Flat**	**7.58**	**129**	P	**Pn**	**01 55 42.8**	**-0.1**
KRMI				S	**Sn**	**01 57 08.1**	**-1.2**
ZFRI	**Zfri**	**7.59**	**124**	P	**Pn**	**01 55 42.8**	**-0.2**
ZFRI				S	**Sn**	**01 57 07.4**	**-2.3**
PRNI	**Paran**	**7.61**	**126**	P	**Pn**	**01 55 43.3**	**+0.1**
PRNI				S	**Sn**	**01 57 08.4**	**-1.6**
HRFI	**Mount Harif**	**7.83**	**128**	P	**Pn**	**01 55 46.1**	**-0.3**
HRFI				S	**Sn**	**01 57 14.6**	**-1.0**
MBRI	**Mt Berech**	**7.92**	**130**	P	**Pn**	**01 55 47.6**	**0.0**
MBRI				S	**Sn**	**01 57 16.6**	**-1.2**
EIL	**Elat**	**8.03**	**130**	P	**Pn**	**01 55 49.9**	**+0.9**
	0.9nm,0.3s,baz=352,slow=3.6,SNR=14						
EIL				S	**Sn**	**01 57 14.3**	**-6.1**
	5.9nm,0.6s,baz=1.3,slow=9.5,SNR=3.6						
	7.8nm,0.6s						
EIL	**Elat**	**8.03**	**130**	P	**Pn**	**01 55 48.8**	**-0.2**
EIL				S	**Sn**	**01 57 18.6**	**-1.7**
ASF	**Jabal al Asfar**	**8.03**	**109**	P	**Pn**	**01 55 48.8**	**-0.4**
	0.2nm,0.3s,baz=278,slow=12,SNR=2.4						
ASF				S	**Sn**	**01 57 14.2**	**-6.4**
	0.8nm,0.4s,baz=298,slow=21,SNR=1.7						
	0.6nm,0.3s						
VAE	**Valguarnera**	**11.16**	**286**	P	**Pn**	**01 56 33.3**	**+1.3**
	0.4nm,0.3s,baz=98,slow=15,SNR=2.5						
	3.8nm,0.4s						
KBZ	**Khabaz**	**14.43**	**49**	P	**Pn**	**01 57 18.8**	**+2.2**
	baz=17,slow=9.6,SNR=2.7						
	2.3nm,1.0s						
GERES	**GERESS Array B**	**17.31**	**327**	P	**Pn**	**01 57 54.3**	**+0.2**
	baz=134,slow=13,SNR=2.3						
	0.3nm,0.5s						
DAVOX	**Davos/Dischmat**	**17.91**	**316**	P	**P**	**01 58 04.4**	**+2.0**
	0.1nm,0.3s,baz=32,slow=22,SNR=1.9						
	1.0nm,0.6s						
ESDC	**Sonseca Array**	**25.67**	**290**	P	**P**	**01 59 21.8**	**-0.8**
	0.8nm,0.5s,baz=84,slow=9.3,SNR=27						
	0.8nm,0.5s						
FINES	**FINESS Array B**	**26.41**	**358**	P	**P**	**01 59 27.8**	**-1.2**
	2.9nm,0.9s,baz=176,slow=10,SNR=1.7						
	2.9nm,0.9s						
HFS	**Hagfors**	**26.72**	**344**	P	**P**	**01 59 31.8**	**0.0**
	3.9nm,1.0s,baz=150,slow=12,SNR=1.7						
	3.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**32.22**	**234**	P	**P**	**02 00 21.7**	**+0.6**
	1.3nm,0.6s,baz=33,slow=5.3,SNR=18						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**39.42**	**51**	P	**P**	**02 01 21.8**	**-0.7**
	0.4nm,0.6s,baz=275,slow=8.8,SNR=4.7						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**41.93**	**57**	P	**P**	**02 01 42.8**	**-0.6**
	0.3nm,0.7s,baz=274,slow=6.4,SNR=2.7						
	0.3nm,0.7s						
SCHQ	**Schefferville**	**64.70**	**320**	P	**P**	**02 04 28.6**	**-2.0**
	1.4nm,0.6s,baz=34,slow=7.3,SNR=5.5						
	1.4nm,0.6s						

*IDC **03** 01:59:21.1±1.1, 6°.55N×126°.88E, h0km, mb3.6/5, mbtmp3.6/5, MS4.1/1, Error ellipse: s-maj=38.1km s-min=18.7km az=49.0*
ISC 03 01:59:29.5±1.1**, 6°.4N**±0°.2**×126°.6E**±0°.2**, h68**km**, n13,** σ1s.85/8**, mb3.7**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.18**	**304**	Pn	**Pn**	**01 59 47.8**	**-2.3**
	121nm,0.3s,baz=10,slow=3.3,SNR=4.5						
DAV				Sn	**Sn**	**02 00 07.2**	**+1.6**
	78nm,0.3s,baz=71,slow=23,SNR=6.5						
WRA	**Warramunga Arr**	**27.29**	**164**	P	**P**	**02 05 09.0**	**+1.3**
	0.1nm,0.4s,baz=344,slow=9.3,SNR=4.8						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**30.74**	**167**	P	**P**	**02 05 37.6**	**-0.9**
	0.2nm,0.3s,baz=348,slow=9.4,SNR=2.2						
ASAR				PcP	**PcP**	**02 08 35.9**	**+1.1**
	0.3nm,0.5s,baz=344,slow=2.3,SNR=5.0						
	0.2nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**40.87**	**69**	T	T	02 51 04.0	
	baz=257,slow=75,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**40.89**	**69**	T	T	02 51 05.1	
	baz=257,slow=75,SNR=5.8						
H11S2	**WAKE ISLAND Hy**	**40.89**	**69**	T	T	02 51 04.6	
	baz=257,slow=75,SNR=9.9						
H11N1	**WAKE ISLAND Hy**	**41.32**	**67**	T	T	02 51 45.7	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**41.33**	**67**	T	T	02 51 44.8	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**41.34**	**67**	T	T	02 51 42.7	
	baz=265						
MKAR	**Makanchi Array**	**55.28**	**324**	P	**P**	**02 08 56.6**	**+0.6**
	0.4nm,0.5s,baz=120,slow=8.3,SNR=7.5						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**59.41**	**327**	P	**P**	**02 09 27.0**	**+2.1**
	0.5nm,0.8s,baz=127,slow=6.7,SNR=4.0						
	0.5nm,0.8s						
SHEM	**Shemya Is, Ala**	**60.26**	**31**	LR	LR	02 30 06.6	
	comp=Z,168nm,21.9s,baz=102,slow=31						
ILAR	**Eielson Array**	**82.77**	**26**	P	**P**	**02 11 44.9**	**-0.9**
	1.1nm,1.2s,baz=262,slow=3.5,SNR=2.4						
	1.1nm,1.2s						

*JMA **03** 02:03:08.8±0.3, 23°N±1°×122°.9E±0°.8, h65km, MV3.0/11, FAR S OFF ISHIGAKIJIMA*
*TAP **03** 02:03:09.1, 22°.42N×122°.89E, h53km±1km, ML3.6, D*
ISC 03 02:03:04.9±1.6**, 22°.48N**±0°.04**×122°.91E**±0°.03**, h8**km±12km**, n74,** σ0s.82/120**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**1.32**	**249**	⇑*i*P	**Pg**	**02 03 30.5**	**+0.3**
LYUB				*i* S	**Sb**	**02 03 46.2**	**-0.9**
LAY	**Lan-yu**	**1.33**	**251**	*i* P	**Pb**	**02 03 30.4**	**+0.1**
LAY				*e*S	**Sb**	**02 03 45.9**	**-1.7**
CHKT	**Chengkung**	**1.56**	**294**	P	**Pb**	**02 03 33.8**	**-0.2**
CHKT				S	**Sn**	**02 03 51.7**	**-1.6**
CHKH	**Chenggong**	**1.57**	**297**	*e*P	**Pb**	**02 03 34.4**	**+0.2**
CHKH				S	**Sn**	**02 03 51.8**	**-1.9**
ECBN	**Changbin**	**1.58**	**302**	*e*P	**Pg**	**02 03 35.4**	**+0.1**
ECBN				*e*S	**Sb**	**02 03 54.5**	**-0.2**
TTN	**Taitung**	**1.65**	**280**	*e*P	**Pb**	**02 03 36.0**	**+0.3**
TTN				S	**Sn**	**02 03 55.9**	**+0.1**
FULB	**Fuli**	**1.66**	**296**	*e*P	**Pb**	**02 03 35.5**	**-0.2**
FULB				*i* S	**Sn**	**02 03 54.8**	**-1.1**
ECS	**Chishang**	**1.68**	**292**	*e*P	**Pg**	**02 03 37.6**	**+0.5**
ECS				*e*S	**Sn**	**02 03 57.0**	**+0.6**
HGSD	**Ruisui**	**1.70**	**307**	*e*P	**Pn**	**02 03 35.7**	**+0.7**
EOS4	**EOS4**	**1.72**	**342**	*e*S	**Sb**	**02 03 58.2**	**-0.2**
TWGBT	**Beinan**	**1.73**	**282**	P	**Pb**	**02 03 37.0**	**+0.1**
TWGBT	**Beinan**	**1.73**	**282**	*i* P	**Pb**	**02 03 36.9**	**-0.1**
TWGBT				S	**Sn**	**02 03 57.4**	**-0.2**
TWG	**Pinlang**	**1.73**	**282**	P	**Pb**	**02 03 37.0**	**-0.1**
TWG				*i* S	**Sn**	**02 03 57.3**	**-0.5**
YULB	**Yu-li**	**1.74**	**302**	P	**Pb**	**02 03 36.9**	**-0.3**
YULB	**Yu-li**	**1.74**	**302**	P	**Pb**	**02 03 37.0**	**-0.3**
YULB				*e*S	**Sn**	**02 03 57.1**	**-0.9**
TEGC	**Jichi Village**	**1.76**	**314**	*e*S	**Sn**	**02 03 57.0**	**-1.4**
HATJ	**Hateruma jima**	**1.77**	**27**	*e*P	**Pb**	**02 03 37.8**	**0.0**
HATJ				*e*S	**Sn**	**02 03 58.6**	**-0.1**
EHY	**Hungye**	**1.79**	**305**	*i* P	**Pb**	**02 03 37.4**	**-0.5**
EHY				*e*S	**Sn**	**02 03 59.0**	**-0.1**
SHUL	**Shoufeng**	**1.80**	**317**	*e*S	**Sn**	**02 03 58.9**	**-0.5**
EGFH	**Guangfu**	**1.81**	**311**	*e*S	**Sn**	**02 03 57.9**	**-1.8**
ECL	**Taimali**	**1.81**	**274**	*e*P	**Pb**	**02 03 37.8**	**-0.6**
ECL				S	**Sn**	**02 03 59.2**	**-0.6**
TAW	**Tawu**	**1.87**	**267**	P	**Pb**	**02 03 39.0**	**-0.3**
WARBT	**Fenglin Townsh**	**1.87**	**312**	P	**Pb**	**02 03 38.7**	**-0.7**
WARBT				S	**Sn**	**02 04 00.6**	**-0.6**
EOS3	**EOS3**	**1.88**	**343**	P	**Pb**	**02 03 40.1**	**+0.6**
EOS3				*e*S	**Sb**	**02 04 02.8**	**-0.3**
ELDTW	**Lidau**	**1.89**	**292**	*e*P	**Pb**	**02 03 39.9**	**+0.2**
ELDTW				S	**Sn**	**02 04 01.4**	**-0.2**
ESL	**Shilin**	**1.90**	**315**	*e*S	**Sn**	**02 03 59.8**	**-2.1**
ETM	**Tongmen**	**1.97**	**319**	*e*P	**Pb**	**02 03 40.4**	**-0.7**
SLIU	**Shizi**	**1.97**	**263**	*e*P	**Pb**	**02 03 40.2**	**-1.0**
YOJ	**Yonaguni jima**	**1.98**	**3**	*e*S	**Sn**	**02 04 04.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.98**	**3**	*e*P	**Pg**	**02 03 42.2**	**-0.6**
YOJ				*e*S	**Sb**	**02 04 06.4**	**+0.4**
SMST	**Manzhou Townsh**	**1.98**	**257**	P	**Pb**	**02 03 40.5**	**-0.7**
SMST				*e*S	**Sn**	**02 04 02.9**	**-0.8**
IRIF	**Iriomote-Funau**	**1.99**	**22**	*e*P	**Pb**	**02 03 40.8**	**-0.7**
IRIF				*e*S	**Sn**	**02 04 04.5**	**+0.3**
TWKBT	**Hengchun**	**2.02**	**255**	*e*P	**Pb**	**02 03 42.9**	**+0.9**
TWKBT				*e*S	**Sn**	**02 04 04.6**	**-0.2**
JKRS	**Kuro-shima**	**2.02**	**30**	*e*P	**Pb**	**02 03 41.4**	**-0.6**
JKRS				*e*S	**Sn**	**02 04 04.8**	**-0.1**
TWK1	**Hengchun**	**2.02**	**255**	*i* P	**Pb**	**02 03 41.6**	**-0.4**
TWK1				*i* S	**Sn**	**02 04 04.4**	**-0.6**
EOS2	**EOS2**	**2.03**	**342**	*e*S	**Sb**	**02 04 07.0**	**-0.5**
LXIB	**Xiulin Townshi**	**2.06**	**318**	*i* P	**Pb**	**02 03 42.4**	**-0.4**
LXIB				*e*S	**Sn**	**02 04 06.8**	**+0.6**
VWDT	**VWDT**	**2.06**	**308**	*e*P	**Pb**	**02 03 42.4**	**-0.3**
VWDT				S	**Sn**	**02 04 06.8**	**+0.9**
HEN	**Hengchun**	**2.07**	**257**	*e*S	**Sn**	**02 04 06.5**	**+0.4**
NACB	**Ninganchiao**	**2.08**	**325**	P	**Pn**	**02 03 41.4**	**+1.2**
NACB	**Ninganchiao**	**2.08**	**325**	*e*P	**Pb**	**02 03 41.7**	**-1.2**
NACB				*i* S	**Sn**	**02 04 05.6**	**-0.6**
STYH	**Taoyuan**	**2.09**	**290**	*e*P	**Pb**	**02 03 42.9**	**-0.2**
STYH				*e*S	**Sn**	**02 04 07.5**	**+1.0**
MASBT	**Mashibuluo**	**2.11**	**274**	*e*P	**Pb**	**02 03 42.7**	**-0.8**
SCZT	**Fangliau**	**2.12**	**268**	*e*P	**Pb**	**02 03 43.3**	**-0.4**
SSD	**Sandimen**	**2.12**	**278**	*i* P	**Pb**	**02 03 43.8**	**+0.1**
EAHA	**Aohua**	**2.13**	**330**	*e*S	**Sn**	**02 04 08.4**	**+0.7**
ETLH	**Xiulin Townshi**	**2.16**	**323**	*i* P	**Pb**	**02 03 43.3**	**-1.1**
ETLH				S	**Sn**	**02 04 08.1**	**-0.4**
OWD	**Renai**	**2.17**	**313**	*e*S	**Sn**	**02 04 08.5**	**-0.3**
JIJ	**Ishigaki jima**	**2.19**	**31**	*e*P	**Pn**	**02 03 42.8**	**+1.1**
JIJ				*e*S	**Sn**	**02 04 08.3**	**-0.8**
ALS	**Alishan**	**2.20**	**298**	P	**Pb**	**02 03 45.3**	**+0.2**
ALS				*e*S	**Sn**	**02 04 11.1**	**+1.4**
EWUT	**Wuta**	**2.22**	**332**	*e*S	**Sn**	**02 04 11.1**	**+1.4**
SSLB	**Suanglung**	**2.22**	**306**	P	**Pb**	**02 03 44.4**	**-1.1**
SSLB	**Suanglung**	**2.22**	**306**	*e*P	**Pb**	**02 03 44.7**	**-0.8**
SSLB				S	**Sn**	**02 04 09.9**	**-0.1**
SGST	**Jiashian**	**2.23**	**286**	*e*P	**Pb**	**02 03 44.8**	**-0.8**
SGST				S	**Sb**	**02 04 12.0**	**-1.4**
WUSB	**Renai**	**2.23**	**313**	*e*P	**Pb**	**02 03 45.0**	**-0.7**
WHF	**Hehuan Shan**	**2.25**	**318**	*e*P	**Pb**	**02 03 45.4**	**-0.6**
WHF				*i* S	**Sn**	**02 04 10.8**	**-0.2**
WHYT	**Xinyi Township**	**2.25**	**303**	*e*P	**Pb**	**02 03 45.9**	**0.0**
WTP	**Ta-pu**	**2.25**	**290**	*e*P	**Pb**	**02 03 46.1**	**+0.2**
WTP				*e*S	**Sb**	**02 04 13.6**	**-0.5**
TPUB	**Ta-pu**	**2.26**	**292**	P	**Pb**	**02 03 46.7**	**+0.7**
TPUB	**Ta-pu**	**2.26**	**292**	*e*P	**Pb**	**02 03 46.7**	**+0.7**
TPUB				*e*S	**Sb**	**02 04 14.1**	**0.0**
CHN1	**Nanshi**	**2.31**	**288**	P	**Pb**	**02 03 47.4**	**+0.5**
CHN1				*i* S	**Sb**	**02 04 15.0**	**-0.6**
WCKO	**Fanlu**	**2.33**	**295**	*e*P	**Pb**	**02 03 46.6**	**-0.6**
WCKO				*i* S	**Sb**	**02 04 14.9**	**-1.4**
FUSS	**Fushou**	**2.33**	**319**	P	**Pb**	**02 03 46.3**	**-1.1**
FUSS				S	**Sn**	**02 04 13.7**	**+0.8**
CHN5	**Tsauling**	**2.34**	**299**	P	**Pb**	**02 03 48.5**	**+1.1**
CHN5				*e*S	**Sb**	**02 04 17.2**	**+0.7**
SNST	**Tainan City**	**2.35**	**289**	*e*P	**Pb**	**02 03 48.8**	**+1.2**
SNST				S	**Sb**	**02 04 17.2**	**+0.6**
TWK	**Hsinying**	**2.37**	**290**	*e*P	**Pb**	**02 03 49.0**	**+1.0**
TWK				*i* S	**Sb**	**02 04 17.6**	**+0.2**
TDCB	**Techi**	**2.39**	**318**	*e*P	**Pb**	**02 03 47.6**	**-0.8**
TDCB				*e*S	**Sn**	**02 04 14.7**	**+0.5**
SNJT	**Kaohsiung City**	**2.40**	**277**	*e*S	**Sb**	**02 04 18.3**	**+0.2**
LATG	**Datong**	**2.41**	**328**	*e*P	**Pb**	**02 03 47.5**	**-1.2**
LATG				*e*S	**Sn**	**02 04 15.7**	**+1.1**
JISG	**Ishigakijimahi**	**2.46**	**31**	*e*P	**Pn**	**02 03 45.3**	**-0.1**
JISG				*e*S	**Sn**	**02 04 14.9**	**-0.8**
WDLH	**Douliu**	**2.50**	**299**	*e*P	**Pb**	**02 03 48.1**	**-2.0**
YHNB	**Yeheng**	**2.60**	**327**	P	**Pb**	**02 03 50.5**	**-1.3**
YHNB	**Yeheng**	**2.60**	**327**	P	**Pb**	**02 03 50.8**	**-1.1**
YHNB				S	**Sn**	**02 04 20.4**	**+1.2**
JTJ	**Tarama**	**2.71**	**37**	*e*P	**Pn**	**02 03 50.0**	**+1.2**
JTJ				*e*S	**Sn**	**02 04 21.8**	**0.0**

*NOU **03** 02:04:22.9, 14°.33S×168°.12E, h0km, MLv4.9/13, Vanuatu Islands*
*IDC **03** 02:04:23.8±0.9, 14°.44S×167°.83E, h0km, mb4.4/16, mbtmp4.4/17, ML4.4/1, MS3.6/13, Error ellipse: s-maj=29.7km s-min=17.4km az=123.0*
*BJI **03** 02:04:24.1, 14°.15S×168°.09E, h10km, mB5.2/5, mb4.7/38, Ms7 4.5/2*
*NEIC **03** 02:04:25.6±1.9, 14°.4S±0°.1×168°.0E±0°.1, h10km±1km, mb4.7/28, Error ellipse: s-maj=23.9km s-min=17.2km az=93.0*
ISC 03 02:04:28.4±0.5**, 14°.46S**±0°.06**×167°.90E**±0°.09**, h30**km**, n101,** σ1s.20/84**, mb4.6**/40**, MS3.6**/14**, 1C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.26**	**175**	P	**Pn**	**02 05 18.3**	**+0.9**
RTV	**Rentapao**	**3.35**	**171**	P	**Pn**	**02 05 17.8**	**-0.9**
KOUNC	**Koumac, New Ca**	**6.97**	**209**	P	**Pn**	**02 06 10.7**	**+2.2**
	69nm,0.5s						
MARNC	**Mare, Loyalty**	**6.98**	**179**	Pn	**Pn**	**02 06 06.0**	**-2.7**
MARNC	**Mare, Loyalty**	**6.98**	**179**	P	**Pn**	**02 06 07.6**	**-1.0**
	138nm,1.2s						
YATNC	**Mamie plateau,**	**7.62**	**187**	P	**Pn**	**02 06 16.9**	**-0.5**
	44nm,0.7s						
DZM	**Mont Dzumac**	**7.70**	**190**	Pn	**Pn**	**02 06 19.3**	**+0.8**
	6.0nm,0.3s,baz=337,slow=16,SNR=34						
DZM				Sn	**Sn**	**02 07 45.7**	**+0.9**
	2.0nm,0.3s,baz=293,slow=5.0,SNR=3.2						
	18nm,0.4s						
DZM	**Mont Dzumac**	**7.70**	**190**	*e*Pn	**Pn**	**02 06 19.3**	**+0.8**
	39nm,0.8s						
DZM	**Mont Dzumac**	**7.70**	**190**	Pn	**Pn**	**02 06 18.8**	**+0.2**
DZM	**Mont Dzumac**	**7.70**	**190**	P	**Pn**	**02 06 18.9**	**+0.4**
	31nm,0.6s						
ONTNC	**Ouen Toro**	**7.92**	**190**	Pn	**Pn**	**02 06 19.7**	**-1.9**
OUENC	**Ouen Island, N**	**7.98**	**187**	P	**Pn**	**02 06 23.7**	**+1.4**
	40nm,0.8s						
PINNC	**Pines Island,**	**8.12**	**183**	Pn	**Pn**	**02 06 24.8**	**+0.5**
NGOA	**Tingoa Renbel**	**8.17**	**290**	P	**Pn**	**02 06 23.9**	**-1.0**
	206nm,1.5s						
HNR	**Honiara**	**9.25**	**302**	LR	LR	02 10 21.3	
	comp=Z,8.0nm,19.1s,baz=229,slow=39						
TATA	**Tatamba Isabel**	**9.97**	**306**	P	**Pn**	**02 06 49.4**	**-0.3**
	49nm,0.5s						
EIDS	**Eidsvold**	**19.16**	**233**	P	**Pn**	**02 08 51.2**	**+0.7**
PMG	**Port Moresby**	**20.90**	**282**	LR	LR	02 16 20.1	
	comp=Z,195nm,19.1s,baz=50,slow=34						
COEN	**Coen**	**23.98**	**268**	P	**P**	**02 09 40.2**	**-0.2**
COEN				IAmb	IAmb	02 09 45.5	
	comp=Z,27nm,1.3s						
URZ	**Urewera**	**25.07**	**163**	LR	LR	02 17 38.3	
	comp=Z,83nm,20.8s,baz=19,slow=32						
BKZ	**Black Stump Fm**	**25.75**	**164**	P	**P**	**02 09 57.0**	**+0.6**
BKZ				IAmb	IAmb	02 10 12.1	
	comp=Z,24nm,1.3s						
INKA	**Innaminka**	**28.49**	**238**	P	**P**	**02 10 22.1**	**+1.0**
STKA	**Stephens Creek**	**29.63**	**230**	P	**P**	**02 10 30.1**	**-1.2**
	comp=Z,14nm,0.6s,baz=56,slow=7.9,SNR=30						
STKA				LR	LR	02 22 38.1	
	comp=Z,117nm,18.2s,baz=35,slow=37						
	comp=Z,14nm,0.6s						
STKA	**Stephens Creek**	**29.63**	**230**	P	**P**	**02 10 31.4**	**+0.2**
RAR	**Rarotonga**	**31.45**	**107**	LR	LR	02 22 46.1	
	comp=Z,93nm,18.8s,baz=274,slow=35						
WR8	**Warramunga Arr**	**32.34**	**256**	P	**P**	**02 10 54.1**	**-1.2**
WR8				IAmb	IAmb	02 11 31.4	
	comp=Z,8.5nm,1.2s						
WB0	**Warramunga Arr**	**32.42**	**256**	P	**P**	**02 10 54.7**	**-1.3**
WB0				IAmb	IAmb	02 11 06.1	
	comp=Z,10nm,1.2s						
WRAB	**Tennant Creek**	**32.47**	**256**	P	**P**	**02 10 56.3**	**-0.2**
WRAB				IAmb	IAmb	02 11 27.7	
	comp=Z,8.8nm,0.9s						
WRA	**Warramunga Arr**	**32.48**	**256**	P	**P**	**02 10 55.1**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=85,slow=9.1,SNR=13						
	comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**32.48**	**256**	P	**P**	**02 10 54.7**	**-1.8**
AS31	**Alice Springs**	**33.34**	**249**	P	**P**	**02 11 02.2**	**-1.8**
ASAR	**Alice Springs**	**33.34**	**249**	P	**P**	**02 11 03.2**	**-0.8**
	comp=Z,2.9nm,0.5s,baz=78,slow=8.9,SNR=24						
ASAR				LR	LR	02 23 37.4	
	comp=Z,193nm,20.3s,baz=102,slow=35						
	comp=Z,2.9nm,0.5s						
ASAR	**Alice Springs**	**33.34**	**249**	P	**P**	**02 11 02.7**	**-1.3**
BBOO	**Buckleboo**	**34.23**	**232**	P	**P**	**02 11 11.0**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GUMO	**Guam**	**36.01**	**320**	LR	LR	02 24 16.5	
	comp=Z,31nm,20.1s,baz=75,slow=33						
KNRA	**Kununurra**	**37.78**	**263**	P	**P**	**02 11 41.2**	**-1.0**
KNRA				IAmb	IAmb	02 11 58.1	
	comp=Z,38nm,1.4s						
FORT	**Forrest**	**39.96**	**239**	P	**P**	**02 12 00.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**40.67**	**259**	LR	LR	02 28 16.2	
	comp=Z,120nm,19.0s,baz=70,slow=35						
PPT2	**Papeete2**	**40.93**	**100**	*e*LR	LR	02 23 18.0	
	comp=Z,172nm,27.2s						
PPT2				*e*LR	LR	02 23 22.5	
	comp=Z,204nm,27.2s						
TBI	**Tubuai**	**41.17**	**109**	*e*LR	LR	02 23 19.3	
	comp=Z,649nm,29.8s						
BATI	**Baumata**	**43.38**	**270**	LR	LR	02 30 01.9	
	comp=Z,101nm,20.9s,baz=261,slow=36						
PSA00	**Pilbara Seismi**	**46.10**	**254**	P	**P**	**02 12 50.7**	**+0.6**
PSA00				IAmb	IAmb	02 12 55.1	
	comp=Z,7.1nm,1.1s						
MBWA	**Marble Bar**	**46.21**	**254**	P	**P**	**02 12 50.0**	**-1.0**
MBWA				IAmb	IAmb	02 12 52.4	
	comp=Z,16nm,0.9s						
KAPI	**Kappang**	**48.29**	**276**	LR	LR	02 34 33.0	
	comp=Z,29nm,18.9s,baz=96,slow=38						
GIRL	**Giralia**	**51.30**	**252**	P	**P**	**02 13 30.7**	**+0.6**
JOW	**Kunigami**	**56.27**	**317**	P	**P**	**02 14 05.6**	**-0.7**
	comp=Z,9.7nm,0.8s,baz=124,slow=11,SNR=2.7						
	comp=Z,9.7nm,0.8s						
JOW	**Kunigami**	**56.27**	**317**	P	**P**	**02 14 05.7**	**-0.7**
UGM	**Wanagama**	**56.55**	**270**	P	**P**	**02 14 08.6**	**0.0**
JGF	**Kuroka**	**57.58**	**331**	P	**P**	**02 14 15.2**	**-0.3**
JGF				IAmb	IAmb	02 14 29.6	
	comp=Z,23nm,1.3s						
MJAR	**Matsushiro Arr**	**57.95**	**332**	P	**P**	**02 14 17.5**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=170,slow=8.8,SNR=4.9						
	comp=Z,1.3nm,0.4s						
MJAR	**Matsushiro Arr**	**57.95**	**332**	P	**P**	**02 14 16.8**	**-1.2**
BBJI	**Bungbulang**	**59.42**	**270**	P	**P**	**02 14 27.7**	**-1.1**
BBJI				IAmb	IAmb	02 14 29.7	
	comp=Z,7.9nm,0.8s						
NJ2	**Nanjing**	**65.91**	**315**	*e*P	**P**	**02 15 13.4**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**66.93**	**333**	P	**P**	**02 15 18.8**	**+0.9**
	comp=Z,3.7nm,0.9s,baz=126,slow=9.7,SNR=4.3						
	comp=Z,3.7nm,0.9s						
PETK	**Petropavlovsk-**	**67.86**	**353**	P	**P**	**02 15 23.0**	**-0.6**
	comp=Z,4.8nm,0.9s,baz=183,slow=6.8,SNR=2.3						
	comp=Z,4.8nm,0.9s						
PETK	**Petropavlovsk-**	**67.86**	**353**	P	**P**	**02 15 23.4**	**-0.2**
MDJ	**Mudanjiang**	**68.33**	**332**	P	**P**	**02 15 27.4**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,13nm,0.8s						
TIA	**Tai'an**	**69.55**	**318**	P	**P**	**02 15 34.2**	**-0.3**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BNX	**BinXian**	**70.20**	**331**	⇑P	**P**	**02 15 38.2**	**-0.1**
BNX				pmax	pmax		
	comp=Z,13nm,0.7s						
ENH	**Enshi**	**71.67**	**309**	P	**P**	**02 15 46.6**	**-1.0**
ENH				IAmb	IAmb	02 15 47.6	
	comp=Z,5.9nm,0.9s						
LYN	**LuoYang**	**71.73**	**314**	P	**P**	**02 15 48.0**	**+0.2**
LYN				pmax	pmax		
	comp=Z,15nm,0.8s						
HNS	**HongShan**	**71.81**	**318**	⇓P	**P**	**02 15 49.1**	**+0.8**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KMI2	**Kunming**	**74.69**	**301**	P	**P**	**02 16 05.4**	**-0.4**
KMI2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XLT	**XiLinHaoTe**	**74.85**	**324**	*e*P	**P**	**02 16 07.2**	**+1.0**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,110nm,3.9s						
CMAR	**Chiang Mai Arr**	**75.40**	**294**	P	**P**	**02 16 10.6**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=119,slow=4.2,SNR=6.6						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**75.40**	**294**	P	**P**	**02 16 09.7**	**-0.1**
CHTO	**Chiang Mai**	**75.53**	**294**	P	**P**	**02 16 09.6**	**-0.9**
CHTO				IAmb	IAmb	02 16 11.5	
	comp=Z,2.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**75.78**	**319**	*e*P	**P**	**02 16 13.4**	**+1.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PZH	**PanZhiHua**	**76.07**	**302**	P	**P**	**02 16 15.5**	**+1.9**
LZH	**Lanzhou**	**78.59**	**312**	*e*P	**P**	**02 16 29.1**	**+1.5**
LZH				sP	PcP	02 16 37.2	+0.6
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LZDM	**Lanzhou Array**	**78.64**	**312**	P	**P**	**02 16 29.2**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=96,slow=10,SNR=1.3						
	comp=Z,0.5nm,0.3s						
ULN	**Ulaanbaatar**	**82.28**	**324**	P	**P**	**02 16 47.1**	**0.0**
ULN				IAmb	IAmb	02 16 48.6	
	comp=Z,4.7nm,0.7s						
SONM	**Songino Array**	**82.65**	**323**	P	**P**	**02 16 49.4**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=139,slow=5.1,SNR=8.7						
	comp=Z,0.8nm,0.5s						
SONM	**Songino Array**	**82.65**	**323**	P	**P**	**02 16 49.1**	**+0.1**
GTA2	**Gaotai**	**83.00**	**314**	*e*P	**P**	**02 16 51.8**	**+0.8**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TABL	**Table Mountain**	**85.00**	**23**	P	**P**	**02 17 00.9**	**0.0**
IL31		**86.08**	**18**	P	**P**	**02 17 05.5**	**-0.3**
IL31				IAmb	IAmb	02 17 34.6	
	comp=Z,6.5nm,1.3s						
ILAR	**Eielson Array**	**86.08**	**18**	P	**P**	**02 17 05.5**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=240,slow=5.1,SNR=19						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**86.08**	**18**	P	**P**	**02 17 04.6**	**-1.3**
PFO	**Pinyon Flats O**	**86.34**	**54**	LR	LR	02 47 06.3	
	comp=Z,48nm,20.2s,baz=224,slow=30						
NVAR	**Mina Array Bea**	**86.63**	**49**	P	**P**	**02 17 10.2**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=235,slow=5.2,SNR=1.8						
	comp=Z,0.3nm,0.3s						
LPIG	**La Paz**	**88.53**	**65**	LR	LR	02 49 23.7	
	comp=Z,25nm,18.7s,baz=321,slow=30						
PALK	**Pallekele**	**89.10**	**278**	LR	LR	02 57 26.5	
	comp=Z,15nm,18.7s,baz=142,slow=36						
WMQ	**Urumqi**	**92.98**	**314**	*e*P	**P**	**02 17 41.9**	**+2.9**
WMQ				LR	LR		
	comp=Z,170nm,24.3s						
PDAR	**Pinedale Array**	**94.32**	**47**	LR	LR	02 58 41.0	
	comp=Z,20nm,18.1s,baz=342,slow=34						
TXAR	**Lajitas Array**	**95.61**	**61**	P	**P**	**02 17 53.2**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=248,slow=3.6,SNR=2.5						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**97.03**	**27**	P	**P**	**02 17 55.8**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=264,slow=5.0,SNR=5.3						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**97.03**	**27**	P	**P**	**02 17 57.8**	**+0.9**
MKAR	**Makanchi Array**	**97.43**	**316**	P	Pdif	02 17 59.5	+0.2
	comp=Z,3.2nm,0.7s,baz=96,slow=6.2,SNR=38						
	comp=Z,3.2nm,0.7s						
ZALV	**Zalesovo Beam**	**97.54**	**324**	P	**P**	**02 17 58.5**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=96,slow=6.0,SNR=9.0						
	comp=Z,1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**97.54**	**324**	P	**P**	**02 17 58.2**	**-1.2**
MAKZ	**Makanchi**	**97.65**	**316**	P	Pdif	02 18 00.3	0.0
BRTR	**Keskin Array B**	**132.80**	**311**	PKPdf	**PKPdf**	**02 23 40.0**	**-0.9**
WIN	**Windhoek**	**133.39**	**218**	PKPdf	**PKPdf**	**02 23 41.4**	**-1.3**
MODS	**Modra-Piesok**	**138.40**	**330**	*e*PDIFF	**Pdif**	**02 21 06.2**	**+4.7**
MODS	**Modra-Piesok**	**138.40**	**330**	*e*PKP	**PKiKP**	**02 23 53.9**	**+0.8**
NRCA	**Norcia**	**144.37**	**327**	PKPdf	PKPbc	02 24 00.3	0.0
INTR	**Introdacqua**	**144.52**	**326**	PKPdf	PKPbc	02 24 00.8	0.0
KEST	**Kesra**	**151.39**	**322**	PKPbc	**PKiKP**	**02 24 20.4**	**+0.2**
	comp=Z,9.6nm,1.1s,baz=304,slow=3.6,SNR=5.6						
ESDC	**Sonseca Array**	**153.88**	**346**	PKPab	**PKPab**	**02 24 36.3**	**-1.9**
	comp=Z,1.0nm,1.2s,baz=19,slow=3.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**166.54**	**266**	PKPab	**PKPab**	**02 25 33.3**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=112,slow=4.9,SNR=5.0						

IDC 03 02:04:54.6±4.1**,6°.25S**×**147°.99E,h0km,mb3.2**/2**, mbtmp3.2**/4**,ML3.4**/1**,Error ellipse: s-maj=117.0km s-min=28.5km az=97.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.25**	**195**	Pn	Pn	02 05 46.9	+0.1
	10nm,0.4s,baz=348,slow=14,SNR=4.7						
PMG				Sn	Sn	02 06 25.7	-0.5
	11nm,0.3s,baz=4.2,slow=14,SNR=8.3						
WRA	**Warramunga Arr**	**19.00**	**223**	P	P	02 09 17.3	-0.8
	0.1nm,0.3s,baz=47,slow=11,SNR=5.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**21.99**	**217**	P	P	02 09 51.1	+0.6
	0.4nm,0.5s,baz=44,slow=9.3,SNR=7.5						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**78.31**	**320**	P	P	02 16 56.8	+0.1
	0.2nm,0.6s,baz=101,slow=7.4,SNR=2.0						
	0.2nm,0.6s						

*SJA **03** 02:07:42.1±0.8,20°.54S×68°.97W,h102km±5km,ML3.4, MW3.5*
*GUC **03** 02:07:43.9±0.8,20°.53S×68°.99W,h97km±2km,ML3.4*
ISC 03 02:07:44.8±1.4**,20°.54S**±0°.03×**69°.06W**±0°.06**,h93**km±8km**, n30,**σ**0**s**89**/58**,12C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.41**	**347**	⇓*e*P	**Pn**	**02 07 59.2**	**-0.5**
PB08				*e*S	**Sn**	**02 08 10.8**	**+0.1**
PB08				IAML		02 08 11.4	
	comp=N,3μm,0.2s						
PB08	**IPOC Station P**	**0.41**	**347**	*e*P	**Pn**	**02 07 58.9**	**-0.7**
PB08				*e*S	**Sn**	**02 08 11.1**	**+0.4**
PB08				IAML		02 08 11.3	
	comp=Z,1μm,0.3s						
PX03	**IPOC Station P**	**0.55**	**284**	⇑*e*P	**Pn**	**02 07 59.3**	**-1.1**
PX03				*e*S	**Sn**	**02 08 12.4**	**+0.4**
PX03				IAML		02 08 13.1	
	comp=N,3μm,0.3s						
PB01	**IPOC Station P**	**0.64**	**219**	⇑*e*P	**Pn**	**02 08 00.6**	**-0.6**
PB01				*e*S	**Sn**	**02 08 13.8**	**+0.5**
PB01				IAML		02 08 15.7	
	comp=N,2μm,0.2s						
HMBC	**Humberstone**	**0.82**	**289**	⇑*e*P	**Pn**	**02 08 02.2**	**-0.7**
HMBC				*e*S	**Sn**	**02 08 17.1**	**+0.7**
HMBC				IAML		02 08 17.8	
	comp=N,2μm,0.2s						
HMBC	**Humberstone**	**0.82**	**289**	*e*P	**Pn**	**02 08 02.2**	**-0.7**
HMBC				*e*S	**Sn**	**02 08 17.5**	**+1.1**
HMBC				IAML		02 08 20.6	
	comp=Z,1μm,0.3s						
GO01	**Chusmiza**	**0.88**	**352**	⇓*i*P	**Pn**	**02 08 03.3**	**-0.6**
GO01				*i* S	**Sn**	**02 08 17.5**	**-0.6**
GO01				IAML		02 08 21.5	
	comp=N,3μm,0.1s						
GO01	**Chusmiza**	**0.88**	**352**	*e*P	**Pn**	**02 08 03.1**	**-0.7**
GO01				*e*S	**Sn**	**02 08 19.3**	**+1.2**
GO01				IAML		02 08 22.0	
	comp=Z,427nm,0.2s						
PB11	**IPOC Station P**	**0.96**	**324**	⇑*e*P	**Pn**	**02 08 03.7**	**-0.7**
PB11				*e*S	**Sn**	**02 08 18.8**	**-0.3**
PB11				IAML		02 08 20.1	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**0.96**	**324**	*e*P	**Pn**	**02 08 03.5**	**-0.9**
PB11				*e*S	**Sn**	**02 08 19.6**	**+0.5**
PB11				IAML		02 08 21.8	
	comp=Z,409nm,0.2s						
TA02	**Huaiquique**	**1.04**	**285**	⇑*e*P	**Pn**	**02 08 05.0**	**-0.1**
TA02				*e*S	**Sn**	**02 08 20.8**	**+0.3**
TA02	**Huaiquique**	**1.04**	**285**	*e*P	**Pn**	**02 08 05.2**	**+0.1**
TA02				*e*S	**Sn**	**02 08 23.0**	**+2.6**
TA02				IAML		02 08 27.9	
	comp=Z,1μm,0.1s						
PATCX	**Punta Patache**	**1.06**	**255**	⇑*e*P	**Pn**	**02 08 05.0**	**-0.5**
PATCX				*e*S	**Sn**	**02 08 21.7**	**+0.7**
PATCX				IAML		02 08 27.8	
	comp=E,750nm,0.2s						
PATCX	**Punta Patache**	**1.06**	**255**	*e*P	**Pn**	**02 08 05.1**	**-0.4**
PATCX				*e*S	**Sn**	**02 08 22.7**	**+1.7**
PATCX				IAML		02 08 30.3	
	comp=Z,439nm,0.5s						
PB02	**IPOC Station P**	**1.10**	**225**	⇑*i*P	**Pn**	**02 08 05.3**	**-0.6**
PB02				*e*S	**Sn**	**02 08 22.0**	**+0.2**
PB02				IAML		02 08 24.7	
	comp=N,2μm,0.3s						
PB02	**IPOC Station P**	**1.10**	**225**	*e*P	**Pn**	**02 08 05.1**	**-0.9**
PB02				*e*S	**Sn**	**02 08 23.3**	**+1.4**
PB02				IAML		02 08 26.2	
	comp=Z,2μm,0.2s						
PB09	**IPOC Station P**	**1.26**	**188**	⇑*e*P	**Pn**	**02 08 07.6**	**-0.3**
PB09				*e*S	**Sn**	**02 08 26.1**	**+0.8**
PB09				IAML		02 08 27.8	
	comp=E,404nm,0.3s						
PB07	**IPOC Station P**	**1.41**	**213**	⇑*e*P	**Pn**	**02 08 09.0**	**-0.7**
PB07				*e*S	**Sn**	**02 08 28.8**	**+0.3**
PB07				IAML		02 08 33.5	
	comp=E,415nm,0.2s						
PB07	**IPOC Station P**	**1.41**	**213**	*e*P	**Pn**	**02 08 09.0**	**-0.7**
PB07				*e*S	**Sn**	**02 08 29.1**	**+0.5**
PB07				IAML		02 08 35.3	
	comp=Z,322nm,0.1s						
PB03	**IPOC Station P**	**1.63**	**203**	*i* P	**Pn**	**02 08 11.6**	**-1.0**
PB03				*e*S	**Sn**	**02 08 34.1**	**+0.6**
PB03				IAML		02 08 40.0	
	comp=E,349nm,0.3s						
PB03	**IPOC Station P**	**1.63**	**203**	*e*P	**Pn**	**02 08 11.8**	**-0.7**
PB03				*e*S	**Sn**	**02 08 33.8**	**+0.2**
PB03				IAML		02 08 40.5	
	comp=Z,424nm,0.2s						
PX02	**IPOC Station P**	**1.90**	**325**	⇑*e*P	**Pn**	**02 08 14.6**	**-1.3**
PX02				*e*S	**Sn**	**02 08 39.3**	**-0.4**
PX02				IAML		02 08 47.8	
	comp=N,253nm,0.3s						
PB06	**IPOC Station P**	**2.21**	**192**	⇑*e*P	**Pn**	**02 08 19.2**	**-0.7**
PB06				*e*S	**Sn**	**02 08 46.2**	**-0.6**
PB06				IAML		02 08 54.7	
	comp=E,217nm,0.2s						
PB06	**IPOC Station P**	**2.21**	**192**	*e*P	**Pn**	**02 08 19.2**	**-0.7**
PB06				*e*P		02 08 19.3	
PB06				*e*S	**Sn**	**02 08 49.1**	**+2.3**
PB06				IAML		02 08 54.2	
	comp=Z,109nm,0.1s						
PB16	**IPOC Station P**	**2.24**	**349**	⇑*e*P	**Pn**	**02 08 20.9**	**+0.2**
PB16				*e*S	**Sn**	**02 08 48.9**	**+0.8**
PB16				IAML		02 08 52.4	
	comp=E,100nm,0.3s						
PB16	**IPOC Station P**	**2.24**	**349**	*e*P	**Pn**	**02 08 20.5**	**-0.2**
PB16				*e*S	**Sn**	**02 08 49.7**	**+1.5**
PB16				IAML		02 08 56.7	
	comp=Z,69nm,0.5s						
AP01	**Chacalluta**	**2.48**	**331**	*e*P	**Pn**	**02 08 22.3**	**-1.0**
AP01				*e*S	**Sn**	**02 08 52.0**	**-0.9**
AP01				IAML		02 09 03.8	
	comp=N,757nm,0.3s						
PB05	**IPOC Station P**	**2.53**	**205**	*e*P	**Pn**	**02 08 23.2**	**-1.0**
PB05				*e*S	**Sn**	**02 08 54.5**	**0.0**
PB05				IAML		02 09 04.1	
	comp=E,226nm,0.8s						
PB05	**IPOC Station P**	**2.53**	**205**	*e*P	**Pn**	**02 08 23.6**	**-0.7**
PB05				*e*S	Sn	02 08 42.9	-12
PB05				IAML		02 09 05.0	
	comp=Z,79nm,1.0s						
LPAZ	**La Paz**	**4.32**	**12**	*e*P	**Pn**	**02 08 49.5**	**+0.7**

VIE 03 02:08:59.6±0.4**,47°.21N**×**11°.30E,h3**km**,ml0.1**/3**,Error ellipse: s-maj=3.7km s-min=1.4km az=170.0 5 km SSE of Kematen in Tirol,Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SQTA	**Sankt Quirin**	**0.06**	**279**	*i* Pg	Pg	02 09 01.2	+0.2
	0.2nm,0.1s						
SQTA				*i* Sg	Sg	02 09 02.4	+0.5
	3.1nm,0.2s						
WATA	**Walderalm**	**0.23**	**57**	*e*Sg	Sg	02 09 07.5	+0.4
	0.2nm,0.1s						

*JMA **03** 02:20:57.0±0.2,25°N±3°×122°.8E±0°.8,h105km±2km, MV1.9/11,NW OFF ISHIGAKIJIMA IS*
*TAP **03** 02:20:56.9,24°.74N×122°.78E,h110km±1km,ML2.7,D*
ISC 03 02:20:56.9±1.7**,24°.73N**±0°.07×**122°.82E**±0°.03**, h110**km±10km**,n45,**σ**0**s**77**/71**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.30**	**157**	*e*P	**Pn**	**02 21 12.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.32**	**146**	*e*P	**Pn**	**02 21 12.6**	**-0.1**
YOJ				*e*S	**Sn**	**02 21 24.1**	**-0.4**
YOJ	**Yonaguni jima**	**0.32**	**146**	*e*P	**Pn**	**02 21 12.7**	**0.0**
YOJ				*e*S	**Sn**	**02 21 24.4**	**-0.1**
EOS2	**EOS2**	**0.61**	**240**	*e*P	**Pn**	**02 21 14.4**	**+0.1**
EOS2				*e*S	**Sn**	**02 21 28.2**	**+0.7**
EOS3	**EOS3**	**0.63**	**226**	*i* P	**Pn**	**02 21 14.9**	**+0.4**
EOS3				S	**Sn**	**02 21 28.4**	**+0.7**
EOS4	**EOS4**	**0.76**	**217**	*e*P	**Pn**	**02 21 16.4**	**+1.1**
EOS4				S	**Sn**	**02 21 30.7**	**+1.6**
TWC	**Suao**	**0.89**	**263**	*e*P	**Pn**	**02 21 15.8**	**-1.1**
TWC				S	**Sn**	**02 21 31.1**	**-0.8**
IRIF	**Iriomote-Funau**	**0.92**	**115**	P	**Pn**	**02 21 17.1**	**-0.1**
IRIF				*e*S	**Sn**	**02 21 32.6**	**0.0**
TIPB	**Shuangxi**	**0.93**	**285**	*i* P	**Pn**	**02 21 17.6**	**+0.2**
TIPB				*i* S	**Sn**	**02 21 32.3**	**-0.6**
EWUT	**Wuta**	**0.98**	**254**	*e*P	**Pn**	**02 21 18.4**	**+0.5**
EWUT				*e*S	**Sn**	**02 21 34.3**	**+0.6**
NDS	**Dongshan**	**1.00**	**265**	P	**Pn**	**02 21 18.2**	**+0.1**
NDS				S	**Sn**	**02 21 33.6**	**-0.5**
TWE	**Neicheng**	**1.04**	**270**	*e*P	**Pn**	**02 21 18.8**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.12**	**272**	P	**Pn**	**02 21 19.8**	**+0.5**
FUSB				*e*S	**Sn**	**02 21 35.5**	**-0.8**
HATJ	**Hateruma jima**	**1.12**	**126**	*e*P	**Pn**	**02 21 19.8**	**+0.4**
HATJ				*e*S	**Sn**	**02 21 36.7**	**+0.4**
ENTT	**Nioudou**	**1.14**	**266**	*e*P	**Pn**	**02 21 20.2**	**+0.6**
ENTT				*e*S	**Sn**	**02 21 36.5**	**-0.2**
LATG	**Datong**	**1.19**	**261**	P	**Pn**	**02 21 20.6**	**+0.4**
LATG				*i* S	**Sn**	**02 21 38.3**	**+0.5**
JKRS	**Kuro-shima**	**1.19**	**114**	*e*S	**Sn**	**02 21 38.2**	**+0.5**
NWLT	**Wulai**	**1.19**	**273**	*e*P	**Pn**	**02 21 22.0**	**+1.8**
NACB	**Ninganchiao**	**1.24**	**244**	*e*P	**Pn**	**02 21 20.3**	**-0.4**
NACB				*i* S	**Sn**	**02 21 37.5**	**-1.1**
JIJ	**Ishigaki jima**	**1.26**	**106**	*e*P	**Pn**	**02 21 20.9**	**0.0**
JIJ				*e*S	**Sn**	**02 21 38.2**	**-0.9**
TWD	**Chiawan**	**1.28**	**240**	*e*S	**Sn**	**02 21 38.9**	**-0.6**
YHNB	**Yeheng**	**1.31**	**268**	*e*P	**Pn**	**02 21 22.1**	**+0.5**
YHNB				*i* S	**Sn**	**02 21 39.8**	**-0.4**
ETLH	**Xiulin Townshi**	**1.32**	**247**	*e*P	**Pn**	**02 21 19.9**	**-1.8**
NSK	**Sanguang**	**1.33**	**268**	P	**Pn**	**02 21 21.4**	**-0.3**
NNSB	**Datong**	**1.34**	**257**	*e*P	**Pn**	**02 21 21.9**	**0.0**
NNSB				*e*S	**Sn**	**02 21 40.0**	**-0.8**
JISG	**Ishigakijimahi**	**1.37**	**96**	*e*S	**Sn**	**02 21 40.4**	**-0.8**
ETM	**Tongmen**	**1.43**	**238**	*e*P	**Pn**	**02 21 22.7**	**-0.2**
LXIB	**Xiulin Townshi**	**1.46**	**241**	P	**Pn**	**02 21 23.2**	**-0.2**
SHUL	**Shoufeng**	**1.48**	**231**	*e*P	**Pn**	**02 21 23.5**	**0.0**
SHUL				*i* S	**Sn**	**02 21 43.7**	**+0.2**
WHF	**Hehuan Shan**	**1.53**	**248**	*e*P	**Pn**	**02 21 24.5**	**+0.1**
WHF				*e*S	**Sn**	**02 21 44.2**	**-1.1**
NFF	**Wufeng Townshi**	**1.55**	**267**	*e*P	**Pn**	**02 21 25.0**	**+0.7**
TDCB	**Techi**	**1.58**	**253**	*e*P	**Pn**	**02 21 25.6**	**+0.8**
TDCB				S	**Sn**	**02 21 45.4**	**-0.6**
WARBT	**Fenglin Townsh**	**1.65**	**233**	*i* P	**Pn**	**02 21 24.9**	**-0.6**
WARBT				*i* S	**Sn**	**02 21 45.5**	**-1.7**
WUSB	**Renai**	**1.71**	**245**	*e*P	**Pn**	**02 21 27.0**	**+0.6**
WUSB				*e*S	**Sn**	**02 21 48.8**	**0.0**
JTJ	**Tarama**	**1.72**	**93**	*e*P	**Pn**	**02 21 26.8**	**+0.4**
JTJ				*e*S	**Sn**	**02 21 48.2**	**-0.6**
WHP	**Taichung City**	**1.76**	**256**	*e*P	**Pn**	**02 21 28.2**	**+1.2**
HGSD	**Ruisui**	**1.77**	**226**	*e*P	**Pn**	**02 21 27.1**	**+0.1**
VWDT	**VWDT**	**1.81**	**238**	*i* P	**Pn**	**02 21 27.9**	**+0.5**
VWDT				S	**Sn**	**02 21 50.0**	**-0.7**
EHY	**Hungye**	**1.83**	**229**	P	**Pn**	**02 21 27.6**	**-0.2**
ECBN	**Changbin**	**1.88**	**222**	*e*P	**Pn**	**02 21 29.0**	**+0.7**
YULB	**Yu-li**	**1.92**	**227**	*e*P	**Pn**	**02 21 28.5**	**-0.5**
YULB				*e*S	**Sn**	**02 21 51.8**	**-1.5**
SMLT	**Sun Moon Lake**	**1.94**	**245**	*e*P	**Pn**	**02 21 30.6**	**+1.4**
SSLB	**Suanglung**	**1.94**	**242**	*e*P	**Pn**	**02 21 30.6**	**+1.5**
TYC	**Yuchr**	**1.97**	**246**	*e*P	**Pn**	**02 21 30.2**	**+0.8**
FULB	**Fuli**	**2.06**	**223**	*e*P	**Pn**	**02 21 31.6**	**+0.9**

*IDC **03** 02:50:48.3±7.2,20°.40N×77°.37W,h0km,mb3.1/1, mbtmp3.1/1,Error ellipse: s-maj=558.5km s-min=63.5km az=37.0*
*SSNC **03** 02:50:55.0±0.6,19°.32N×78°.67W,h26km±8km,MD3.5, ML3.5,Presumed earthquake*
*JSN **03** 02:50:57.7±2.0,19°.16N×78°.29W,h0km±29km,MD3.7, MW4.0,Presumed earthquake*
ISC 03 02:50:50.8±1.6**,19°.34N**±0°.05×**78°.67W**±0°.03**,h9**km±12km**, n20,**σ**1**s**89**/34**,2C-1D,Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**1.10**	**291**	*e*P	**Pn**	**02 51 12.8**	**+0.4**
CBCY				*e*S	**Sg**	**02 51 25.4**	**-0.9**
CBCY				IAML		02 51 28.6	
	comp=E,344nm,0.2s						
CBCY				IAML		02 51 28.8	
	comp=N,411nm,0.3s						
LCCY	**Blossom Villag**	**1.37**	**284**	*e*P	**Pg**	**02 51 16.8**	**-0.5**
LCCY				*e*S	**Sb**	**02 51 32.5**	**-1.9**
LCCY				IAML		02 51 32.8	
	comp=E,344nm,0.2s						
LCCY				IAML		02 51 33.2	
	comp=N,499nm,0.2s						
MTDJ	**Mount Denham**	**1.54**	**136**	*e*P	**Pn**	**02 51 18.9**	**+0.4**
MTDJ				*e*S	**Sn**	**02 51 36.4**	**-2.4**
MTDJ				IAML		02 51 39.0	
	comp=N,630nm,0.3s						
MTDJ				IAML		02 51 39.9	
	comp=N,942nm,0.5s						
MTDJ	**Mount Denham**	**1.54**	**136**	*i* P	**Pn**	**02 51 19.2**	**+0.6**
LMGC	**Las Mercedes**	**1.73**	**65**	*e*P	**Pn**	**02 51 21.8**	**+0.8**
LMGC				*e*S	**Sn**	**02 51 41.6**	**-1.6**
LMGC				IAML		02 51 43.0	
	comp=N,27μm,0.1s						
LMGC				IAML		02 51 44.2	
	comp=E,362nm,0.1s						
CCCC	**Cccc**	**2.04**	**24**	*e*P	**Pb**	**02 51 28.3**	**+0.3**
CCCC				⇓*e*S	**Sb**	**02 51 52.6**	**-0.8**
CCCC				IAML		02 52 03.0	
	comp=E,50nm,0.4s						
CCCC				IAML		02 52 05.7	
	comp=N,57nm,0.5s						
STH	**Stony Hill**	**2.16**	**125**	*e*P	**Pn**	**02 51 27.6**	**+0.5**
STH				*e*S	**Sn**	**02 51 51.7**	**-2.3**
STH				IAML		02 51 56.3	
	comp=N,16μm,0.1s						
STH				IAML		02 51 56.4	
	comp=E,17μm,0.1s						
STH	**Stony Hill**	**2.16**	**125**	⇑*i*P	**Pn**	**02 51 27.6**	**+0.5**
CHIV	**Chivirico**	**2.22**	**73**	*e*P	**Pn**	**02 51 28.4**	**+0.6**
CHIV				*e*S	**Sn**	**02 51 53.0**	**-2.3**
CHIV				IAML		02 51 53.6	
	comp=E,119nm,0.2s						
CHIV				IAML		02 51 54.1	
	comp=N,151nm,0.2s						
HOJ	**Hope**	**2.25**	**126**	*i* P	**Pn**	**02 51 29.9**	**+1.6**
MARVS	**Santiago de Cu**	**2.69**	**75**	*e*P	**Pn**	**02 51 35.1**	**+0.9**
MARVS				*e*S	**Sn**	**02 52 04.2**	**-2.8**
MARVS				IAML		02 52 06.1	
	comp=N,96nm,0.3s						
MARVS				IAML		02 52 06.7	
	comp=E,59nm,0.1s						
RCC	**Rio Carpintero**	**2.88**	**76**	*e*P	**Pn**	**02 51 37.9**	**+1.0**
RCC				*e*S	**Sn**	**02 52 09.6**	**-2.0**
RCC				IAML		02 52 11.2	
	comp=N,25nm,0.2s						
RCC				IAML		02 52 11.2	
	comp=E,26nm,0.2s						
MGV	**Manicaragua**	**3.02**	**336**	*e*P	**Pn**	**02 51 40.0**	**+1.2**
MGV				*e*S	**Sn**	**02 52 13.2**	**-1.9**
GTBY	**Guantanamo Bay**	**3.40**	**79**	*e*P	**Pn**	**02 51 45.4**	**+1.3**
GTBY				*e*S	**Sn**	**02 52 22.2**	**-2.4**
GTBY				IAML		02 52 29.4	
	comp=E,50nm,0.5s						
GTBY				IAML		02 52 31.2	
	comp=E,43nm,0.2s						
QMBU	**Quimbuelo**	**3.73**	**76**	*e*P	**Pn**	**02 51 49.7**	**+1.0**
QMBU				*e*S	**Sn**	**02 52 30.1**	**-2.7**
QMBU				IAML		02 52 33.1	
	comp=E,39nm,0.4s						
QMBU				IAML		02 52 36.0	
	comp=N,74nm,0.3s						
MASC	**Masc**	**4.26**	**78**	*e*P	**Pn**	**02 51 57.3**	**+1.4**
MASC				*e*S	**Sn**	**02 52 43.0**	**-2.7**
MASC				IAML		02 52 51.7	
	comp=N,33nm,0.3s						
MASC				IAML		02 52 51.8	
	comp=E,33nm,0.3s						
SOR	**Soroa**	**5.31**	**311**	*e*P	**Pn**	**02 52 11.7**	**+1.3**
SOR				⇑*e*S	**Sn**	**02 53 08.3**	**-3.5**
SOR				IAML		02 53 14.5	
	comp=N,14nm,0.7s						
SOR				IAML		02 53 18.7	
	comp=E,15nm,0.5s						
TXAR	**Lajitas Array**	**24.81**	**298**	P	**P**	**02 56 17.9**	**+4.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,0.3nm,0.8s,baz=121,slow=8.4,SNR=4.1						
	comp=E,0.3nm,0.8s						
WRA	**Warramunga Arr**	**148.93**	**263**	PKPbc	**PKiKP**	**03 10 42.0**	**+0.7**
	comp=E,0.6nm,0.7s,baz=85,slow=2.6,SNR=6.9						
ASAR	**Alice Springs**	**149.43**	**256**	PKPbc	**PKiKP**	**03 10 43.2**	**+1.0**
	comp=E,0.6nm,0.4s,baz=85,slow=2.4,SNR=9.9						

IDC 03 02:51:58.1±1.2**, 21°.63N×144°.54E, h0**km**, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=66.9km s-min=24.9km az=100.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.50**	**194**	P	P	02 59 55.6	+0.3
	0.6nm,0.3s,baz=15,slow=8.8,SNR=15						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**46.19**	**194**	P	P	03 00 24.2	-0.7
	0.2nm,0.5s,baz=13,slow=8.1,SNR=4.6						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**61.53**	**27**	P	P	03 02 16.5	-0.1
	0.3nm,0.7s,baz=254,slow=5.2,SNR=6.3						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**63.54**	**320**	P	P	03 02 30.4	+0.1
	0.4nm,0.4s,baz=76,slow=6.1,SNR=0.8						
	0.4nm,0.4s						

*IDC **03** 02:52:00.6±1.1, 9°.86N×61°.58W, h0km, mb3.2/4, mbtmp3.5/6, ML3.1/2, MS3.1/1, Error ellipse: s-maj=36.4km s-min=21.7km az=20.0*
*TRN **03** 02:52:05.1, 10°.04N×61°.46W, h25km, MD3.8, South of Trinidad. Felt MMI IV in Trinidad.*
*FUNV **03** 02:52:08.8, 10°.69N×61°.82W, h1km, MW3.6, Presumed earthquake*
ISC 03 02:52:02.8±1.5**, 9°.96N**±0°.05×**61°.56W**±0°.06**, h15**km±9km**, n28, σ2**s**.09**/45**, mb3.2**/3**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.70**	**13**	eP	**Pg**	**02 52 16.7**	**+0.2**
TRN				eS	**Sg**	**02 52 22.9**	**-2.9**
TRN	**Trinidad (W)**	**0.70**	**13**	eP	**Pg**	**02 52 16.6**	**+0.1**
PSMG	**Mucurapo Girls**	**0.71**	**2**	eP	**Pn**	**02 52 18.2**	**0.0**
PSMG				eS	**Sb**	**02 52 27.6**	**+1.2**
DMDM	**Guralp CMG5TDE**	**0.73**	**1**	eP	**Pb**	**02 52 18.2**	**+1.0**
DMDM				eS	**Sb**	**02 52 27.8**	**+0.7**
GRFF	**Grenada Fort F**	**2.08**	**355**	eP	**Pn**	**02 52 38.1**	**+0.9**
GRFF				eS	**Sn**	**02 53 04.8**	**+1.8**
GRW	**Mount Saint Ca**	**2.19**	**357**	eP	**Pn**	**02 52 38.8**	**+0.1**
GRW				eS	**Sn**	**02 53 05.4**	**-0.2**
GRHS	**Sauteurs**	**2.25**	**358**	eS	**Sn**	**02 53 05.0**	**-2.0**
GRSS	**Sisters**	**2.32**	**359**	eP	**Pn**	**02 52 41.4**	**+0.9**
PCRV	**Puerto La Cruz**	**3.04**	**274**	eP	**Pn**	**02 52 53.6**	**+3.2**
PCRV				eS	**Sn**	**02 53 25.8**	**-0.8**
PCRV	**Puerto La Cruz**	**3.04**	**274**	eP	**Pn**	**02 52 53.2**	**+2.9**
SVB	**Belmont**	**3.30**	**5**	eP	**Pn**	**02 52 52.1**	**-1.9**
SVB				eS	Sn	02 53 22.6	-10
SVB	**Belmont**	**3.30**	**5**	eP	**Pn**	**02 52 54.7**	**+0.7**
SVB				eS	**Sn**	**02 53 32.0**	**-1.1**
MCLT	**Moule a Chique**	**3.77**	**9**	eP	**Pn**	**02 53 01.2**	**+0.7**
MCLT				eS	**Sn**	**02 53 41.9**	**-2.8**
SLAC	**Saint Lucia, A**	**3.97**	**9**	eP	**Pn**	**02 53 04.4**	**+1.3**
SLBI	**Saint Lucia, B**	**4.08**	**8**	eP	**Pn**	**02 53 05.9**	**+1.3**
SLBI				eS	**Sn**	**02 53 49.7**	**-2.4**
BIM	**Bigot**	**4.55**	**6**	eP	**Pn**	**02 53 12.1**	**+0.9**
BIM				eS	**Sn**	**02 54 00.4**	**-3.6**
TACV	**Tcata**	**5.39**	**272**	eP	**Pn**	**02 53 25.5**	**+2.8**
TACV				eS	**Sn**	**02 54 22.5**	**-2.0**
BENV	**Beln**	**5.95**	**271**	eP	**Pn**	**02 53 33.5**	**+3.0**
BENV				eS	**Sn**	**02 54 36.6**	**-1.9**
ATGZ	**Broadband at L**	**6.10**	**358**	eP	**Pn**	**02 53 34.6**	**+2.2**
TURV	**Turiamo**	**6.20**	**275**	eP	**Pn**	**02 53 35.5**	**+1.6**
TURV				eS	**Sn**	**02 54 40.3**	**-4.3**
MAPV	**Macapo**	**6.80**	**270**	eP	**Pn**	**02 53 44.0**	**+1.9**
MAPV				eS	**Sn**	**02 54 55.7**	**-3.6**
TEPV	**Terepaima**	**7.52**	**271**	eP	**Pn**	**02 53 54.0**	**+2.0**
TEPV				eS	**Sn**	**02 55 11.8**	**-5.3**
SDV	**Santo Domingo**	**9.02**	**264**	Pn	**Pn**	**02 54 13.6**	**+0.9**
	0.6nm,0.3s,baz=77,slow=6.8,SNR=8.3						
SDV				Sn	**Sn**	**02 55 52.8**	**-1.4**
	1.0nm,0.3s,baz=41,slow=19,SNR=2.4						
SDV				LR	LR	02 58 56.7	
	comp=Z,99nm,18.2s,baz=92,slow=46						
	5.6nm,0.8s						
MDP	**Montagnes des**	**10.07**	**118**	Pn	**Pn**	**02 54 26.0**	**-1.0**
	0.7nm,0.3s,baz=304,slow=15,SNR=13						
MDP				Sn	Sn	02 56 12.2	-7.6
	2.4nm,0.3s,baz=40,slow=21,SNR=16						
	3.6nm,0.5s						
SIV	**San Ignacio**	**25.79**	**179**	P	**P**	**02 57 32.5**	**-1.0**
	0.3nm,0.4s,baz=332,slow=15,SNR=1.9						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**43.79**	**302**	P	**P**	**03 00 08.2**	**-0.2**
	0.1nm,0.4s,baz=119,slow=9.1,SNR=5.6						
TXAR				PcP	**PcP**	**03 01 55.5**	**+0.6**
	0.1nm,0.5s,baz=85,slow=5.0,SNR=6.0						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**53.01**	**317**	P	**P**	**03 01 20.0**	**+0.6**
	0.1nm,0.3s,baz=106,slow=4.3,SNR=1.8						
	0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**61.92**	**80**	P	**P**	**03 02 23.0**	**+0.6**
	0.2nm,0.4s,baz=260,slow=8.5,SNR=4.8						
	0.2nm,0.4s						

*CATAC **03** 03:02:56.1±0.6, 13°N±3°×9°1W±°, h4km±3km, M3.8/20, MLv3.8/20, Error ellipse: s-maj=6.9km s-min=1.9km az=27.4, confirmed*
*GCG **03** 03:02:56.8±2.2, 13°.19N×91°.08W, h36km±687km, MD4.2, ML3.9, Presumed earthquake*
*SNET **03** 03:02:58.6±0.9, 13°.25N×90°.92W, h41km, ML3.7, Presumed earthquake*
ISC 03 03:02:56.9±1.8**, 13°.28N**±0°.06×**90°.87W**±0°.04**, h4**km±11km**, n46, σ1**s**.33**/67**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.46**	**52**	i P	**Pn**	**03 03 12.4**	**+2.1**
FAME	**Alcaldia de Sa**	**1.00**	**56**	P	**Pn**	**03 03 16.9**	**-0.8**
FG16	**Alotenango, Sa**	**1.05**	**19**	i P	**Pn**	**03 03 18.4**	**-0.2**
FG16				IAML		03 03 44.5	
	comp=N,6µm,0.2s						
ESSG	**Sabana Grande**	**1.10**	**2**	i P	**Pg**	**03 03 17.2**	**-0.9**
STG5	**El Palmar, Qui**	**1.21**	**337**	i P	**Pg**	**03 03 22.2**	**+2.0**
STG5				eS	**Sn**	**03 03 41.2**	**+3.5**
NUBE	**Las Nubes**	**1.23**	**59**	P	**Pb**	**03 03 20.1**	**-0.7**
NUBE				S	**Sn**	**03 03 38.7**	**+0.6**
NUBE	**Las Nubes**	**1.23**	**59**	eP	**Pb**	**03 03 20.0**	**-0.7**
NUBE	**Las Nubes**	**1.23**	**59**	i P	**Pb**	**03 03 20.0**	**-0.7**
STG8	**El Palmar, Qui**	**1.26**	**338**	i P	**Pg**	**03 03 23.2**	**+2.1**
STG8				IAML		03 03 50.6	
	comp=E,1µm,0.2s						
LOAL	**Lomas de Alarc**	**1.28**	**56**	P	**Pg**	**03 03 21.2**	**-0.3**
LOAL				S	**Sg**	**03 03 39.8**	**+1.7**
LOAL	**Lomas de Alarc**	**1.28**	**56**	eP	**Pg**	**03 03 21.6**	**+0.1**
CEVE	**Cerro Verde**	**1.33**	**66**	eP	**Pb**	**03 03 21.8**	**-0.7**
SBLS	**San Blas**	**1.33**	**65**	eP	**Pb**	**03 03 21.9**	**-0.7**
RTR	**El Retiro**	**1.34**	**62**	eP	**Pb**	**03 03 22.2**	**-0.5**
SNJE	**San Jose**	**1.36**	**64**	eP	**Pb**	**03 03 22.4**	**-0.7**
JAYA	**Jayaque - finc**	**1.43**	**75**	eP	**Pb**	**03 03 23.3**	**-0.9**
JAYA	**Jayaque - finc**	**1.43**	**75**	i P	**Pn**	**03 03 23.2**	**-0.7**
UNIC	**Universidad Ca**	**1.46**	**61**	P	**Pb**	**03 03 23.8**	**-0.9**
UNIC				S	**Sg**	**03 03 45.1**	**+1.1**
RTAL	**Retalhuleu**	**1.48**	**327**	P	**Pn**	**03 03 23.0**	**-1.3**
RTAL				S	**Sb**	**03 03 42.6**	**-1.4**
LALI	**Alcalda de L**	**1.52**	**82**	P	**Pb**	**03 03 24.8**	**-0.9**
LALI				S	**Sg**	**03 03 47.1**	**+1.2**
PMON	**Piamonte**	**1.57**	**74**	P	**Pb**	**03 03 25.4**	**-1.2**
PMON				S	**Sg**	**03 03 48.2**	**+0.7**
PMON	**Piamonte**	**1.57**	**74**	eP	**Pn**	**03 03 25.2**	**-0.5**
SOKI	**Kika Raxquin**	**1.62**	**341**	eP	**Pn**	**03 03 24.4**	**-2.2**
SEMO	**Seminario San**	**1.66**	**75**	S	**Sg**	**03 03 49.8**	**-0.4**
UTEC	**Universidad Te**	**1.68**	**75**	P	**Pb**	**03 03 27.8**	**-0.6**
UDBS	**Universidad Do**	**1.72**	**75**	P	**Pb**	**03 03 28.3**	**-0.9**
UDBS				S	**Sg**	**03 03 51.8**	**-0.5**
APG	**El Apazote**	**1.76**	**13**	i P	**Pb**	**03 03 28.3**	**-1.7**
MTO3	**Montecristo**	**1.84**	**53**	eP	**Pb**	**03 03 29.8**	**-1.5**
MTO3	**Montecristo**	**1.84**	**53**	i P	**Pb**	**03 03 29.8**	**-1.5**
ESQI	**Esquipulas**	**1.96**	**49**	P	**Pn**	**03 03 31.1**	**+0.1**
ESQI				S	**Sb**	**03 03 57.4**	**-0.6**
ZAFR2	**Estanzuela, Za**	**1.96**	**49**	i P	**Pb**	**03 03 33.3**	**+0.1**
TECO	**Alcaldia de Te**	**2.05**	**83**	P	**Pn**	**03 03 32.2**	**0.0**
TECO				S	**Sb**	**03 04 00.2**	**-0.4**
UESV	**Universidad de**	**2.06**	**80**	P	**Pb**	**03 03 33.1**	**-1.7**
UESV				S	**Sb**	**03 04 01.0**	**+0.2**
LLGN	**La Laguna**	**2.07**	**65**	P	**Pb**	**03 03 33.5**	**-1.6**
LLGN				S	**Sb**	**03 04 00.7**	**-0.4**
HUEH	**Huehuetenango**	**2.12**	**343**	P	**Pn**	**03 03 33.3**	**-0.1**
HUEH				S	**Sb**	**03 04 00.5**	**-2.3**
HUEH	**Huehuetenango**	**2.12**	**343**	i P	**Pn**	**03 03 33.3**	**-0.1**
CNRM	**Centro Naciona**	**2.63**	**85**	P	**Pn**	**03 03 40.6**	**+0.4**
CNRM				S	**Sb**	**03 04 14.4**	**-3.0**
LCND	**La Caada**	**2.90**	**89**	P	**Pn**	**03 03 44.1**	**+0.2**
LCND				S	**Sb**	**03 04 21.7**	**-3.4**
CCIG	**Comitan**	**3.23**	**338**	P	**Pn**	**03 03 49.6**	**+1.1**
CCIG				S	**Sn**	**03 04 27.7**	**+0.1**
CSGN	**Cosiguina Volc**	**3.24**	**95**	P	**Pn**	**03 03 49.1**	**+0.5**
CSGN				S	**Sn**	**03 04 29.7**	**+2.1**
IZABA	**Izabal, Puerto**	**3.29**	**42**	P	**Pn**	**03 03 49.6**	**+0.4**
PETF	**Flores**	**3.75**	**15**	P	**Pn**	**03 03 55.6**	**+0.1**
PETF				S	**Sn**	**03 04 40.6**	**+0.5**
CRIN	**San Cristobal**	**3.77**	**98**	P	**Pn**	**03 03 55.4**	**-0.5**
CRIN				S	**Sn**	**03 04 42.9**	**+2.2**
PKGN	**Cerro Pekin**	**3.84**	**99**	P	**Pn**	**03 03 57.7**	**+0.9**
PKGN				S	**Sn**	**03 04 44.4**	**+1.9**
COPN	**Copaltepe**	**4.31**	**104**	P	**Pn**	**03 04 02.8**	**-0.5**
LIMN	**Finca el Limon**	**4.39**	**92**	P	**Pn**	**03 04 03.5**	**-1.0**
LIMN				S	**Sn**	**03 04 58.1**	**+2.0**

AFAD 03 03:26:11.9, 37°.88N×37°.70E, h6km±7km**, ML1.7, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKCA	**Adyaman/G¶l**	**0.09**	**185**	P	Pg	03 26 13.9	-0.1
AKCA				S	Sg	03 26 16.4	+1.0
MAYA	**Malatya/Merkez**	**0.73**	**52**	P	Pn	03 26 31.3	+2.6
MAYA				S	Sg	03 26 35.9	+0.6
MAYA				IAML		03 26 36.0	
	comp=E,73nm,0.1s						
MAYA				IAML		03 26 37.0	
	comp=N,51nm,0.3s						
NARI	**Adyaman-Kaht**	**0.84**	**89**	P	Pn	03 26 30.1	-0.2
NARI				S	Sg	03 26 39.3	+0.3
NARI				IAML		03 26 40.0	
	comp=E,6.4nm,0.2s						
NARI	**Adyaman-Kaht**	**0.84**	**89**	P	Pn	03 26 30.1	-0.3
NARI				S	Sg	03 26 39.4	+0.4
NARI				IAML		03 26 40.0	
	comp=E,6.4nm,0.2s						
NARI				IAML		03 26 45.0	
	comp=N,14nm,1.1s						

AFAD 03 03:28:19.3, 38°.37N×38°.90E, h7km±2km**, ML1.5, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.14**	**27**	P	Pg	03 28 22.6	+0.2
ELZG				S	Sg	03 28 25.2	+0.7
ELZG				IAML		03 28 26.0	
	comp=E,469nm,0.3s						
ELZG				IAML		03 28 26.0	
	comp=N,532nm,0.2s						
MAYA	**Malatya/Merkez**	**0.38**	**263**	P	Pg	03 28 27.1	+0.5
MAYA				S	Sb	03 28 33.3	-1.2
MAYA				IAML		03 28 34.0	
	comp=E,86nm,0.1s						
MCKZ	**Bingol**	**0.75**	**4**	P	Pg	03 28 33.1	-0.6
MCKZ				S	Sb	03 28 44.8	-0.5
MCKZ				IAML		03 28 45.0	
	comp=E,13nm,0.4s						
MCKZ				IAML		03 28 48.0	
	comp=N,7.5nm,0.2s						
AKCD	**Akcadag**	**0.77**	**265**	P	Pg	03 28 34.3	+0.2
AKCD				S	Sb	03 28 46.0	0.0
AKCD				IAML		03 28 47.0	
	comp=E,50nm,0.5s						
ATAB	**Bozova**	**1.02**	**208**	P	Pb	03 28 39.5	+0.2
ATAB				S	Sb	03 28 53.4	+0.5
ATAB				IAML		03 28 55.0	
	comp=E,30nm,0.5s						
ATAB				IAML		03 28 55.0	
	comp=N,23nm,0.6s						

SSNC 03 03:28:36.5±11.0**, 18°.70N×80°.95W, h25**km±223km**, MD3.1, ML2.3, 1C, Presumed earthquake, North of Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.26**	**40**⇑	eP	Pn	03 28 56.7	-1.9
LCCY				eS	Sn	03 29 09.2	-5.5
LCCY				IAML		03 29 10.8	
	comp=N,24nm,0.6s						
LCCY				IAML		03 29 11.4	
	comp=E,84nm,0.4s						
LCCY	**Blossom Villag**	**1.26**	**40**	eP	Pn	03 28 57.4	-1.2
LCCY				e		03 28 57.5	
	baz=263,slow=22						
LCCY				eS	Sn	03 29 09.7	-5.0
LCCY				IAML		03 29 10.8	
	comp=N,24nm,0.6s						
LCCY				IAML		03 29 11.4	
	comp=E,84nm,0.4s						
CBCY	**The Bluff, Cay**	**1.53**	**47**	eP	Pn	03 29 01.0	-1.2
CBCY				e		03 29 01.2	
	baz=190,slow=16						
CBCY				eS	Sn	03 29 16.4	-4.9
CBCY				IAML		03 29 17.3	
	comp=N,28nm,0.0s						
CBCY				IAML		03 29 17.9	
	comp=E,48nm,0.5s						
MGV	**Manicaragua**	**3.51**	**15**	eP	Pn	03 29 29.1	-0.4
MGV				eS	Sn	03 30 05.6	-4.6
MGV				IAML		03 30 07.1	
	comp=N,2.0nm,0.1s						
MGV				IAML		03 30 08.0	
	comp=E,36nm,0.1s						
MGV	**Manicaragua**	**3.51**	**15**	eP	Pn	03 29 28.5	-1.0
MGV				eS	Sn	03 30 05.8	-4.5
MGV				IAML		03 30 06.7	
	comp=N,3.8nm,0.3s						
CCCC	**Cccc**	**3.89**	**50**	eP	Pn	03 29 37.9	+3.2
CCCC				eS	Sn	03 30 20.9	+1.2
CCCC	**Cccc**	**3.89**	**50**	i P	Pn	03 28 55.7	-39
SOR	**Soroa**	**4.50**	**335**	eP	Pn	03 29 44.9	+1.8
SOR				eS	Sn	03 30 32.9	-1.8
SOR				IAML		03 30 37.3	
	comp=E,1.2nm,0.1s						
SOR				IAML		03 30 37.4	
	comp=N,2.6nm,0.2s						
SOR	**Soroa**	**4.50**	**335**	eP	Pn	03 29 45.8	+2.7
SOR				eS	Sn	03 30 32.9	-1.8

*MEX **03** 03:32:04.6±0.9, 13°.66N×92°.23W, h11km±103km, MD4.4*
*NEIC **03** 03:32:05.6±1.6, 13°.67N±0°.06×91°.97W±0°.07, h24km±6km, mb4.4/86, Error ellipse: s-maj=11.0km s-min=8.1km az=56.0*
*GCG **03** 03:32:05.2±1.9, 13°.80N×92°.00W, h8km±21km, MD4.4, ML4.4, Presumed earthquake*
*CATAC **03** 03:32:06.4±0.5, 14°N±2°×9°2W±°, h20km±3km, M4.6/28, mb4.9/1, MLv4.4/28, Error ellipse: s-maj=5.4km s-min=2.7km az=44.8, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr1.22; Mθθ-1.08; Mφφ-0.14; Mrθ0.04; Mθφ0.48; Mφr2.30; Fault plane solution: M0 2.62284×10^15 NP1:φs109.66528°, δ19.50708°, λ33.10274°. NP2:φs348.09300°, δ79.49219°, λ106.52873°. Principal axes: T 2.9684, Plg52.7000°, Azm277.4813°; N -0.9641, Plg16.2438°, Azm164.9952°; P -2.0044, Plg32.5180°, Azm64.2907°; confirmed*
*IDC **03** 03:32:14.3±2.1, 14°.13N×91°.44W, h97km±15km, mb3.7/13, mbtmp4.1/16, MS3.5/11 Error ellipse: s-maj=31.1km s-min=13.3km az=48.0*
ISC 03 03:32:04.6±2.2**, 13°.72N**±0°.06×**92°.07W**±0°.04**, h26**km±14km**, n194, σ1**s**.96**/207**, mb4.3**/43**, MS3.5**/11**, 1C, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.88**	**24**		**Pn**	**03 32 21.3**	**+0.1**
RTAL				Sn	**Sn**	**03 32 35.0**	**+1.8**
RTAL	**Retalhuleu**	**0.88**	**24**	eP	**Pn**	**03 32 21.5**	**+0.1**
RTAL				eS	**Sn**	**03 32 33.9**	**+0.6**
RTAL	**Retalhuleu**	**0.88**	**24**	P	**Pn**	**03 32 21.4**	**+0.1**
RTAL				S	**Sb**	**03 32 29.1**	**-3.6**
STG5	**El Palmar, Qui**	**0.97**	**46**	i P	**Pn**	**03 32 23.4**	**+0.7**
STG2	**El Palmar, Qui**	**0.98**	**43**	i P	**Pn**	**03 32 23.6**	**+0.8**
STG8	**El Palmar, Qui**	**1.01**	**44**	i P	**Pn**	**03 32 24.1**	**+0.8**
SMCA	**Catarina**	**1.13**	**360**	i P	**Pn**	**03 32 23.7**	**-1.1**
SMCA				IAML		03 32 55.5	
	comp=N,2µm,0.5s						
THIG		**1.20**	**351**	eP	**Pn**	**03 32 24.7**	**-0.9**
THIG				eS	**Sn**	**03 32 39.0**	**-2.1**
THIG		**1.20**	**351**	i P	**Pn**	**03 32 24.5**	**-1.2**
THIG				IAML		03 32 42.7	
	comp=E,4µm,0.5s						
QUEO	**Labor Ovalle**	**1.27**	**25**	i P	**Pn**	**03 32 26.8**	**-0.1**
QUEO				IAML		03 32 49.2	
	comp=N,7µm,0.5s						
SOKI	**Kika Raxquin**	**1.27**	**30**	i P	**Pn**	**03 32 27.2**	**+0.1**
SOKI				IAML		03 32 51.6	
	comp=N,4µm,0.8s						
CHUJ	**Union Juarez**	**1.37**	**358**	eP	**Pn**	**03 32 26.5**	**-1.7**
CHUJ				eS	**Sn**	**03 32 45.7**	**0.0**
ESSG	**Sabana Grande**	**1.37**	**61**	i P	**Pn**	**03 32 28.0**	**-0.1**
ESSG				i S	**Sn**	**03 32 45.5**	**0.0**
PATR	**El Naranjo**	**1.40**	**353**	eP	**Pn**	**03 32 27.2**	**-1.5**
PATR				eS	**Sn**	**03 32 45.2**	**-1.2**
PAVE	**Pavencul**	**1.47**	**356**	eP	**Pn**	**03 32 28.1**	**-1.5**
PAVE				eS	**Sn**	**03 32 47.0**	**-1.2**
ESSJ	**San Jos, E**	**1.53**	**96**	i P	**Pn**	**03 32 27.1**	**-3.1**
FG16	**Alotenango, Sa**	**1.61**	**70**	i P	**Pn**	**03 32 28.8**	**-2.7**
FG16				i S	**Sn**	**03 32 47.8**	**-3.7**
FG16				IAML		03 32 49.8	
	comp=N,27µm,0.3s						
HUEH	**Huehuetenango**	**1.68**	**19**	Pn	**Pn**	**03 32 33.4**	**+0.8**
HUEH	**Huehuetenango**	**1.68**	**19**	P	**Pn**	**03 32 33.7**	**+1.2**
HUEH				S	**Sn**	**03 32 50.5**	**-2.9**
HUEH	**Huehuetenango**	**1.68**	**19**	i P	**Pn**	**03 32 33.7**	**+1.2**
HUEH				IAML		03 32 58.7	
	comp=N,6µm,0.6s						
PCG5	**San Vicente Pa**	**1.71**	**73**	i P	**Pn**	**03 32 31.2**	**-1.7**
GCG4	**OSOP**	**1.72**	**60**	i P	**Pn**	**03 32 34.7**	**+1.6**
GCG4				IAML		03 33 05.8	
	comp=N,5µm,0.7s						
APG	**El Apazote**	**2.01**	**50**	P	**Pn**	**03 32 39.1**	**+2.0**
	comp=N,39nm,0.7s,baz=192,slow=12,SNR=361						
APG				S	**Sb**	**03 33 06.0**	**+0.7**
	comp=N,102nm,0.8s,baz=63,slow=23,SNR=12						
APG	**El Apazote**	**2.01**	**50**	i P	**Pn**	**03 32 39.1**	**+2.0**
NUBE	**Las Nubes**	**2.23**	**85**	P	**Pn**	**03 32 41.3**	**+1.3**
NUBE				S	**Sn**	**03 33 10.0**	**+3.2**
NUBE	**Las Nubes**	**2.23**	**85**	i P	**Pn**	**03 32 40.3**	**+0.3**
PCIG		**2.27**	**331**	eP	**Pn**	**03 32 39.4**	**-1.0**
PCIG				eS	**Sn**	**03 33 04.5**	**-3.1**
AVCB	**Coban**	**2.37**	**43**	IAML		03 33 25.4	
	comp=N,9µm,0.6s						
JAYA	**Jayaque - finc**	**2.54**	**91**	i P	**Pn**	**03 32 45.3**	**+0.9**
CCIG	**Comitan**	**2.55**	**358**	Pn	**Pn**	**03 32 46.1**	**+1.6**
CCIG	**Comitan**	**2.55**	**358**	eP	**Pn**	**03 32 47.0**	**+2.6**
CCIG				i S	**Sb**	**03 33 19.6**	**-1.2**
CCIG	**Comitan**	**2.55**	**358**	S	**Sn**	**03 33 13.0**	**-1.8**
CCIG	**Comitan**	**2.55**	**358**	i P	**Pn**	**03 32 47.5**	**+3.0**
CEDA	**San Andres**	**2.60**	**88**	P	**Pn**	**03 32 46.3**	**+1.4**
CEDA				S	**Sn**	**03 33 19.3**	**+3.5**
PMON	**Piamonte**	**2.67**	**90**	P	**Pn**	**03 32 47.6**	**+1.5**
LALI	**Alcalda de L**	**2.68**	**95**	P	**Pn**	**03 32 49.4**	**+3.3**
MTO3	**Montecristo**	**2.71**	**75**	Pn	**Pn**	**03 32 47.4**	**+0.6**
MTO3	**Montecristo**	**2.71**	**75**	P	**Pn**	**03 32 47.6**	**+0.9**
MTO3				S	**Sn**	**03 33 20.2**	**+1.4**
MTO3	**Montecristo**	**2.71**	**75**	i P	**Pn**	**03 32 47.7**	**+0.9**
UEES	**Universidad Ev**	**2.75**	**90**	P	**Pn**	**03 32 49.2**	**+2.1**
UEES				S	**Sn**	**03 33 21.8**	**+2.3**
SEMO	**Seminario San**	**2.76**	**90**	P	**Pn**	**03 32 49.9**	**+2.6**
SEMO				S	**Sn**	**03 33 22.2**	**+2.3**
ZAFR2	**Estanzuela, Za**	**2.77**	**72**	i P	**Pn**	**03 32 48.0**	**+0.7**
ESQI	**Esquipulas**	**2.77**	**72**	Pn	**Pn**	**03 32 47.5**	**0.0**
ESQI				Sn	**Sn**	**03 33 19.0**	**-1.1**
ESQI	**Esquipulas**	**2.77**	**72**	P	**Pn**	**03 32 48.8**	**+1.3**
UTEC	**Universidad Te**	**2.78**	**90**	P	**Pn**	**03 32 49.6**	**+2.0**
UTEC				S	**Sn**	**03 33 24.0**	**+3.6**
UDBS	**Universidad Do**	**2.83**	**90**	P	**Pn**	**03 32 50.0**	**+1.8**
UDBS				S	**Sn**	**03 33 25.3**	**+3.8**
PAVA	**Las Pavas**	**3.04**	**90**	P	**Pn**	**03 32 52.5**	**+1.3**
LLGN	**La Laguna**	**3.06**	**81**	P	**Pn**	**03 32 52.0**	**+0.5**
LLGN				S	**Sn**	**03 33 29.4**	**+2.0**
UESV	**Universidad de**	**3.19**	**91**	P	**Pn**	**03 32 55.2**	**+2.1**
TECO	**Alcaldia de Te**	**3.20**	**93**	P	**Pn**	**03 32 54.9**	**+1.7**
TGIG		**3.21**	**342**	eP	**Pn**	**03 32 53.7**	**+0.3**
TGIG				eS	**Sn**	**03 33 31.6**	**+0.7**
TGIG		**3.21**	**342**	i P	**Pn**	**03 32 54.7**	**+1.3**
PACA	**Pacayal**	**3.65**	**93**	P	**Pn**	**03 33 01.7**	**+2.2**
RANC	**El Ranchito**	**3.68**	**94**	P	**Pn**	**03 33 02.7**	**+2.6**
PETF	**Flores**	**3.82**	**33**	Pn	**Pn**	**03 33 03.2**	**+1.4**
PETF	**Flores**	**3.82**	**33**	P	**Pn**	**03 33 01.1**	**-0.7**
PETF	**Flores**	**3.82**	**33**	i P	**Pn**	**03 33 03.6**	**+1.8**
LCND	**La Caada**	**4.08**	**95**	P	**Pn**	**03 33 07.1**	**+1.7**
UXUV	**UXUV**	**4.10**	**331**	eP	**Pn**	**03 33 06.4**	**+0.8**
UXUV				i S	**Sn**	**03 33 55.4**	**+2.6**
CNCH	**Conchagua**	**4.14**	**96**	P	**Pn**	**03 33 08.0**	**+1.8**
CNCH				S	**Sn**	**03 33 58.4**	**+4.5**
CMIG	**Matias Romero**	**4.32**	**321**	P	**Pn**	**03 33 08.6**	**0.0**
	comp=N,19nm,0.5s,baz=166,slow=9.7,SNR=16						
CMIG				S	**Sn**	**03 34 05.3**	**+7.2**
	comp=N,110nm,0.7s,baz=59,slow=18,SNR=6.4						
CMIG	**Matias Romero**	**4.32**	**321**	eP	**Pn**	**03 33 07.5**	**-1.1**
CMIG				i S	**Sn**	**03 33 59.5**	**+1.4**
HUIG	**Huatulco**	**4.41**	**298**	eP	**Pn**	**03 33 08.8**	**-1.0**
CSGN	**Cosiguina Volc**	**4.45**	**99**	P	**Pn**	**03 33 14.8**	**+4.3**
CSGN				S	**Sn**	**03 34 05.1**	**+3.6**
TGUH	**Tegucigalpa,Un**	**4.67**	**85**	Pn	**Pn**	**03 33 14.4**	**+0.9**
TGUH	**Tegucigalpa,Un**	**4.67**	**85**	P	**Pn**	**03 33 14.9**	**+1.4**
TGUH				S	**Sn**	**03 34 09.6**	**+2.7**
CRIN	**San Cristobal**	**4.99**	**101**	Pn	**Pn**	**03 33 19.7**	**+1.8**
HERN	**Volcan Telica**	**5.22**	**102**	Pn	**Pn**	**03 33 21.3**	**+0.2**
SCIG	**Sabancuy**	**5.29**	**9**	P	**Pn**	**03 33 21.2**	**-0.8**
SCIG				S	**Sn**	**03 34 19.1**	**-2.9**
NEUV	**Arroyo Zacate**	**5.36**	**318**	eP	**Pn**	**03 33 24.1**	**+1.2**
NEUV				i S	**Sn**	**03 34 21.9**	**-1.9**
CNGN	**Cerro Negro**	**5.37**	**102**	Pn	**Pn**	**03 33 22.9**	**-0.2**
PEIG	**Puerto Escondi**	**5.41**	**295**	eP	**Pn**	**03 33 23.3**	**-0.3**
PEIG				i S	Sn	03 34 17.2	-7.9
YOIG	**Yosondua**	**6.14**	**301**	eP	**Pn**	**03 33 35.8**	**+1.8**
YOIG				i S	**Sn**	**03 34 42.8**	**-0.7**
PNIG	**Pinotepa**	**6.43**	**295**	eP	**Pn**	**03 33 38.1**	**+0.4**
TOIG	**Toxpalan**	**6.49**	**313**	eP	**Pn**	**03 33 41.0**	**+2.5**
TOIG				eS	**Sn**	**03 34 56.7**	**+5.0**
TXIG	**Tlaxiaco**	**6.52**	**303**	eP	**Pn**	**03 33 41.4**	**+2.2**
TXIG				i S	**Sn**	**03 34 59.1**	**+6.2**
HLIG	**Huajuapan de L**	**6.87**	**307**	eP	**Pn**	**03 33 46.6**	**+2.7**
HLIG				i S	**Sn**	**03 35 05.1**	**+3.7**
FTIG	**Fresnillo de T**	**7.17**	**306**	eP	**Pn**	**03 33 51.3**	**+3.4**
FTIG				i S	**Sn**	**03 35 11.1**	**+2.4**
MGIG	**Malinaltepec**	**7.23**	**300**	eP	**Pn**	**03 33 51.2**	**+2.4**
MGIG				i S	**Sn**	**03 35 06.0**	**-4.2**
TLIG	**Tlapa**	**7.34**	**302**	Pn	**Pn**	**03 33 52.8**	**+2.6**
TLIG	**Tlapa**	**7.34**	**302**⇑	eP	**Pn**	**03 33 53.1**	**+2.9**
TEIG	**Tepich**	**7.42**	**29**	Pn	**Pn**	**03 33 52.6**	**+1.4**
CRIG	**Cruz Grande**	**7.45**	**295**	eP	**Pn**	**03 33 52.6**	**+0.9**
JTS	**Las Juntas de**	**7.75**	**115**	P	**Pn**	**03 33 58.0**	**+2.2**
	comp=N,4.7nm,0.4s,baz=324,slow=16,SNR=6.7						
JTS				S	**Sn**	**03 35 20.2**	**-2.6**
	comp=N,8.3nm,0.8s,baz=216,slow=23,SNR=1.0						
JTS	**Las Juntas de**	**7.75**	**115**	Pn	**Pn**	**03 33 56.0**	**+0.2**
PPM	**Popocatepetl**	**8.24**	**311**	eP	Pn	03 33 54.9	-8.1
SOR	**Soroa**	**12.46**	**42**	Pn	**Pn**	**03 35 01.6**	**+1.2**
MTDJ	**Mount Denham**	**14.67**	**70**	Pn	**Pn**	**03 35 30.3**	**-0.4**
553A	**Crawfordville**	**17.84**	**22**		**P**	**03 36 13.6**	**+2.0**
656A	**Willston**	**17.91**	**28**		**P**	**03 36 13.5**	**+1.2**
237A	**Washetta, Mont**	**18.52**	**350**	P	**Pn**	**03 36 21.1**	**+1.7**
SAND	**Sanderson**	**18.64**	**332**		**Pn**	**03 36 22.4**	**+1.5**
TXAR	**Lajitas Array**	**18.90**	**327**	P	**Pn**	**03 36 25.8**	**+1.7**
	comp=N,5.5nm,1.0s,baz=152,slow=8.0,SNR=29						
TXAR	**Lajitas Array**	**18.90**	**327**	P	**Pn**	**03 36 25.3**	**+1.3**
TX31	**Lajitas Ar. Si**	**18.90**	**327**	P	**Pn**	**03 36 25.3**	**+1.3**
OZNA	**Ozona**	**19.05**	**335**	P	**P**	**03 36 26.5**	**+1.5**
456A	**Hilliard**	**19.29**	**27**	P	**Pn**	**03 36 29.9**	**+1.2**
ROSC	**El Rosal**	**19.59**	**115**	P	**P**	**03 36 31.6**	**+0.2**
	comp=N,5.8nm,0.5s,baz=276,slow=17,SNR=5.0						
ROSC	**El Rosal**	**19.59**	**115**	P	**P**	**03 36 31.4**	**0.0**
ROSC				IAmb	IAmb	03 36 36.6	
	comp=Z,12nm,0.9s						

ALPN	Alpine	19.72	329	P	P	03 36 33.7	+1.3
Z47A	Carrollton	19.73	10	P	P	03 36 32.6	+0.3
Z47A				IAmb	IAmb	03 36 35.9	
	comp=Z,16nm,0.7s						
LRAL	Lakeview Retre	19.78	13	P	P	03 36 33.3	+0.4
LRAL				IAmb	IAmb	03 36 40.0	
	comp=Z,10.0nm,0.9s						
PLPT	Palo Pinto	19.85	344	P	P	03 36 34.2	+0.6
WLAR	White Oak Lake	19.90	357	P	P	03 36 34.3	+0.1
WLAR				IAmb	IAmb	03 36 41.8	
	comp=Z,16nm,0.9s						
TPB05	Hovey Rd	20.01	331	P	P	03 36 37.2	+1.7
TPB05				IAmb	IAmb	03 36 39.1	
	comp=Z,4.3nm,0.6s						
TMB01	Midkiff	20.09	334	P	P	03 36 37.7	+1.3
TMB01				IAmb	IAmb	03 36 39.2	
	comp=Z,5.3nm,0.6s						
MNHN	Monahans	20.11	332	P	P	03 36 38.4	+1.9
MNHN				IAmb	IAmb	03 36 40.0	
	comp=Z,17nm,0.6s						
TPB01	Permian Basin	20.25	330	P	P	03 36 40.0	+1.8
TPB01				IAmb	IAmb	03 36 43.3	
	comp=Z,5.8nm,0.8s						
TPB06	Permian Basin	20.57	332	P	P	03 36 42.3	+0.8
TPB06				IAmb	IAmb	03 36 48.8	
	comp=Z,11nm,0.6s						
PECS	Pecos	20.64	330	IAmb	IAmb	03 36 45.9	
	comp=Z,13nm,1.3s						
ODSA	Odessa	20.68	334	P	P	03 36 44.0	+1.3
ODSA				IAmb	IAmb	03 36 45.1	
	comp=Z,12nm,0.7s						
VHRN	Van Horn	20.74	327	P	P	03 36 45.0	+1.5
129A	Stewart Farms,	20.85	336	IAmb	IAmb	03 36 47.3	
	comp=Z,8.4nm,0.9s						
APMT	Aspermont	20.85	341	P	P	03 36 45.3	+0.8
APMT				IAmb	IAmb	03 36 46.3	
	comp=Z,9.2nm,0.7s						
128A	Castleberry Fa	21.09	335	IAmb	IAmb	03 36 51.5	
	comp=Z,8.4nm,0.6s						
POST	Post	21.09	338	IAmb	IAmb	03 36 48.9	
	comp=Z,15nm,0.8s						
X48A	Hartselle	21.14	12	P	P	03 36 49.9	+2.3
X48A				IAmb	IAmb	03 36 56.5	
	comp=Z,13nm,1.0s						
DKNS	Dickens	21.43	339	IAmb	IAmb	03 36 55.3	
	comp=Z,5.3nm,0.5s						
SDV	Santo Domingo	21.55	101	P	P	03 36 50.6	-1.9
	comp=Z,1.8nm,0.5s,baz=315,slow=14,SNR=3.0						
	comp=Z,1.8nm,0.5s						
MNTX	Cornudas Mount	21.67	328	IAmb	IAmb	03 36 56.8	
	comp=Z,6.6nm,0.8s						
W35A	Tecumseh	21.78	349	IAmb	IAmb	03 37 04.9	
	comp=Z,8.5nm,0.8s						
FNO	Franklin	21.98	348	P	P	03 36 56.9	+0.3
FNO				IAmb	IAmb	03 36 57.4	
	comp=Z,12nm,0.6s						
MSTX	Muleshoe	22.38	336	P	P	03 37 01.2	+0.1
MSTX				IAmb	IAmb	03 37 04.5	
	comp=Z,6.9nm,0.8s						
TKL	Tuckaleechee C	23.09	17	P	P	03 37 06.1	-2.3
	comp=Z,3.4nm,0.8s,baz=148,slow=11,SNR=4.5						
TKL				LR	LR	03 47 05.5	
	comp=Z,154nm,19.1s,baz=208,slow=40						
	comp=Z,3.4nm,0.8s						
T47A	Sharon Grove	23.59	10	P	P	03 37 12.1	-1.3
T47A				IAmb	IAmb	03 37 35.4	
	comp=Z,20nm,1.4s						
121A	Cookes Peak, D	23.60	325	P	P	03 37 13.8	+0.1
121A				IAmb	IAmb	03 37 19.2	
	comp=Z,5.8nm,0.9s						
CRNM	Carthage	24.15	329	P	P	03 37 22.0	+3.1
LENM	Lemitar	24.44	329	P	P	03 37 22.8	+1.3
RTBA	Rita Blanca	24.57	339	IAmb	IAmb	03 37 51.7	
	comp=Z,6.0nm,1.0s						
ATAH	Atahualpa	24.77	146	LR	LR	03 45 44.9	
	comp=Z,66nm,18.4s,baz=12,slow=33						
ANMO	Albuquerque	24.81	331	P	P	03 37 26.5	+1.6
TASM	ASL Pad, Albuq	24.82	331	IAmb	IAmb	03 37 29.4	
	comp=Z,2.9nm,0.7s						
TASM	ASL Pad, Albuq	24.82	331	IAmb	IAmb	03 37 29.4	
	comp=Z,3.1nm,0.7s						
WCI	Wyandotte Cave	24.95	11	P	P	03 37 25.1	-0.7
WCI				IAmb	IAmb	03 37 37.5	
	comp=Z,10nm,0.9s						
T25A	Trinidad	25.80	337	P	P	03 37 36.2	+2.3
MVCO	Mesa Verde	27.61	331	IAmb	IAmb	03 37 53.5	
	comp=Z,8.5nm,1.1s						
PV02	Paradox Valley	28.53	332	IAmb	IAmb	03 38 02.0	
	comp=Z,12nm,1.1s						
PV05	Paradox Valley	28.59	331	P	P	03 38 00.5	+1.5
PV05				IAmb	IAmb	03 38 02.2	
	comp=Z,9.4nm,1.0s						
PV03	Paradox Valley	28.62	332	IAmb	IAmb	03 38 02.5	
	comp=Z,8.8nm,1.2s						
PV12	Saucer Basin,	28.65	332	IAmb	IAmb	03 38 03.0	
	comp=Z,10nm,0.9s						
PV16	Nyswonger Mesa	28.70	332	P	P	03 38 02.0	+2.2
PV16				IAmb	IAmb	03 38 03.2	
	comp=Z,8.0nm,1.1s						
PV20	West Nyswonger	28.74	332	IAmb	IAmb	03 38 04.0	
	comp=Z,6.9nm,0.9s						
P17A	Butcher Ranch,	30.48	331	P	P	03 38 17.3	+1.8
P17A				IAmb	IAmb	03 38 18.8	
	comp=Z,4.2nm,0.8s						
PDAR	Pinedale Array	32.65	336	P	P	03 38 35.2	+0.5
	comp=Z,0.3nm,0.5s,baz=152,slow=7.0,SNR=4.1						
PDAR				PcP	PcP	03 41 22.8	+2.4
	comp=Z,0.3nm,0.5s,baz=165,slow=1.8,SNR=3.9						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	32.65	336	P	P	03 38 33.2	-1.5
SADO	Sadowa	32.85	17	LR	LR	03 52 38.6	
	comp=Z,97nm,18.1s,baz=217,slow=38						
SNOW	Snow King Moun	33.71	335	P	P	03 38 45.5	+1.5
NVAR	Mina Array Bea	33.85	321	P	P	03 38 48.2	+2.9
	comp=Z,1.3nm,0.6s,baz=127,slow=5.2,SNR=5.8						
	comp=Z,1.3nm,0.6s						
NVAR	Mina Array Bea	33.85	321	P	P	03 38 46.4	+1.1
HLID	Hailey	35.39	331	IAmb	IAmb	03 39 01.6	
	comp=Z,2.8nm,0.8s						
PLID	Pearl Lake	37.29	332	IAmb	IAmb	03 39 17.1	
	comp=Z,5.2nm,1.1s						
LPAZ	La Paz	38.06	141	P	P	03 39 25.2	+3.2
	comp=Z,1.3nm,0.8s,baz=317,slow=8.4,SNR=2.1						
	comp=Z,1.3nm,0.8s						
LPAZ	La Paz	38.06	141	P	P	03 39 21.5	-0.4
F10A	Beach Ranch, E	38.52	332	IAmb	IAmb	03 39 31.3	
	comp=Z,6.0nm,0.8s						
YBH	Yreka Blue Hor	38.55	322	LR	LR	03 57 44.1	
	comp=Z,7.5nm,19.3s,baz=148,slow=40						
NEW	Newport	40.22	334	LR	LR	03 58 22.5	
	comp=Z,52nm,18.6s,baz=205,slow=39						
RPN	Rapa Nui	43.93	202	LR	LR	03 54 42.8	
	comp=Z,43nm,18.7s,baz=69,slow=30						
SCHQ	Schefferville	45.51	20	P	P	03 40 18.8	-2.9
	comp=Z,5.0nm,0.8s,baz=219,slow=7.6,SNR=5.7						
SCHQ				PcP	PcP	03 41 59.8	-0.4
	comp=Z,2.0nm,0.7s,baz=211,slow=5.9,SNR=4.2						
SCHQ				LR	LR	04 00 23.1	
	comp=Z,135nm,19.8s,baz=202,slow=38						
	comp=Z,5.0nm,0.8s						
YKA	Yellowknife Ar	51.28	347	P	P	03 41 05.5	-0.6
	comp=Z,0.7nm,0.8s,baz=151,slow=7.2,SNR=10						
YKA				PcP	PcP	03 42 21.1	+0.3
	comp=Z,0.6nm,0.8s,baz=156,slow=2.7,SNR=6.4						
	comp=Z,0.7nm,0.8s						
YKA	Yellowknife Ar	51.28	347	P	P	03 41 05.7	-0.3
FRB	Frobisher Bay	52.60	13	LR	LR	04 04 13.5	
	comp=Z,68nm,18.1s,baz=320,slow=37						
S34M	Telegraph Cree	52.98	335	P	P	03 41 20.6	+1.8
S34M				IAmb	IAmb	03 41 33.4	
	comp=Z,9.2nm,1.4s						
M29M	Somme Creek	58.65	337	P	P	03 42 01.5	+2.0
J30M	Hart River	59.14	339	P	P	03 42 04.5	+1.6
J30M				IAmb	IAmb	03 42 04.5	
	comp=Z,4.0nm,1.2s						
SFJD	Kangerlussuaq	59.80	18	LR	LR	04 08 31.4	
	comp=Z,96nm,19.4s,baz=178,slow=37						
DAWY	Dawson	59.91	338	P	P	03 42 09.5	+1.4
DAWY				IAmb	IAmb	03 42 18.2	
	comp=Z,3.6nm,1.4s						
BCAR	Beaver Creek A	60.27	336	P	P	03 42 12.2	+1.6
INK	Inuvik	60.69	344	P	P	03 42 14.1	+0.8
RES	Resolute Bay	60.98	359	P	P	03 42 13.7	-1.5
A36M	Sachs Harbour	61.51	349	P	P	03 42 18.2	-0.6
A36M				IAmb	IAmb	03 42 37.8	
	comp=Z,3.1nm,1.1s						
F28M	Old Crow	62.12	341	P	P	03 42 24.2	+1.2
ILAR	Eielson Array	63.07	337	P	P	03 42 30.2	+0.8
	comp=Z,3.4nm,1.1s,baz=172,slow=4.5,SNR=18						
	comp=Z,3.4nm,1.1s						
ILAR	Eielson Array	63.07	337	P	P	03 42 30.1	+0.6
FYU	Fort Yukon	63.32	339	P	P	03 42 32.1	+1.2
BMAR	Burnt Mountain	63.53	340	P	P	03 42 32.6	+0.1
TRF	Thorofare Moun	63.86	335	P	P	03 42 35.8	+0.9
J19K	Poorman	66.28	334	P	P	03 42 50.7	+0.3
J19K				IAmb	IAmb	03 43 21.5	
	comp=Z,5.9nm,1.2s						
D22K	Ayikyak River	66.89	340	P	P	03 42 55.7	+1.5
F15K	North Star Dit	70.44	335	P	P	03 43 18.3	+1.9
F15K				IAmb	IAmb	03 43 21.6	
	comp=Z,2.3nm,0.9s						
EKA	Eskdalemuir Ar	78.23	36	P	P	03 43 59.0	-2.9
	comp=Z,1.3nm,0.4s,baz=276,slow=5.7,SNR=9.1						
	comp=Z,1.3nm,0.4s						
ESDC	Sonseca Array	79.94	52	P	P	03 44 08.7	-3.0
	comp=Z,0.6nm,0.9s,baz=284,slow=4.3,SNR=4.7						
	comp=Z,0.6nm,0.9s						
SPITS	Spitsbergen Ar	80.38	11	P	P	03 44 12.1	-1.1
	comp=Z,6.7nm,0.9s,baz=233,slow=1.4,SNR=4.4						
	comp=Z,6.7nm,0.9s						
HFS	Hagfors	85.88	29	P	P	03 44 39.9	-2.0
	comp=Z,1.4nm,0.7s,baz=225,slow=1.2,SNR=1.6						
HFS				LR	LR	04 22 49.0	
	comp=Z,22nm,18.0s,baz=256,slow=36						
	comp=Z,1.4nm,0.7s						
ARCES	ARCESS Array B	86.42	18	P	P	03 44 43.3	-1.2
	comp=Z,12nm,1.2s,baz=296,slow=9.0,SNR=2.1						
	comp=Z,12nm,1.2s						
ARCES	ARCESS Array B	86.42	18	P	P	03 44 43.3	-1.2
FUORN	Ofenpass-Fuorn	88.41	42	P	P	03 44 56.3	+1.5
FUORN				IAmb	IAmb	03 45 13.8	
	comp=Z,3.4nm,1.2s						
TIXI	Tiksi	90.52	348	LR	LR	04 32 29.7	
	comp=Z,31nm,18.2s,baz=1.5,slow=40						
MKAR	Makanchi Array	119.56	4	PKP	PKPdf	03 50 50.1	-2.2
	comp=Z,0.1nm,0.5s,baz=0.0,slow=1.4,SNR=2.0						
MKAR	Makanchi Array	119.56	4	PKPdf	PKPdf	03 50 53.1	+0.8
HHC	Hu-ho-hao-te	121.46	339	eP	PKPdf	03 50 55.7	-0.5
WRA	Warramunga Arr	135.26	255	PKP	PKPdf	03 51 22.0	-0.8
	comp=Z,0.5nm,0.8s,baz=86,slow=2.3,SNR=5.1						
PZH	PanZhiHua	137.82	341	PKP	PKPdf	03 51 28.5	+0.9
CMAR	Chiang Mai Arr	146.24	341	PKPbc	PKPdf	03 51 44.4	+1.8
	comp=Z,2.8nm,0.3s,baz=342,slow=4.1,SNR=25						
CMAR	Chiang Mai Arr	146.24	341	PKPdf	PKPdf	03 51 43.7	+1.0

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*CATAC **03** 03:38:01.7±0.2, 15°N±2°×9°0W±°, h10km±2km, M3.4/17, MLv3.4/17, Error ellipse: s-maj=4.8km s-min=1.9km az=34.5, confirmed*
*SNET **03** 03:38:01.0±1.4, 14°.54N×90°.21W, h14km±65km, ML3.4, Presumed earthquake*
*GCG **03** 03:38:01.3±2.2, 14°.55N×90°.20W, h10km±15km, MD3.7, ML3.6, Presumed earthquake*
ISC 03 03:38:00.8±1.0**, 14°.54N**±0°.03×**90°.19W**±0°.02**, h12**km±10km**, n40, σ0s.83**/56**, 1C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCG4	OSOP	0.33	278	*i* P	Pb	03 38 08.6	-0.2
GCG4				*i* S	Sb	03 38 13.6	-0.5
GCG4				IAML		03 38 14.1	
	comp=N,12µm,0.4s						
PCG5	San Vicente Pa	0.37	209	*i* P	Pb	03 38 10.6	+1.3
FG16	Alotenango, Sa	0.41	229	*i* P	Pn	03 38 13.9	+1.3
APG	El Apazote	0.53	331	*i* P	Pb	03 38 11.8	-0.4
APG				*i* S	Sg	03 38 18.9	+0.4
ESSG	Sabana Grande	0.64	256	*i* P	Pb	03 38 13.8	0.0
RBDL	Robledal	0.65	131	⇑*i*P	Pb	03 38 14.1	0.0
RBDL				*e*S	Sg	03 38 23.0	+0.9
LOAL	Lomas de Alarc	0.67	143	P	Pb	03 38 14.4	-0.1
LOAL				S	Sb	03 38 23.6	-0.1
LOAL	Lomas de Alarc	0.67	143	*e*P	Pb	03 38 14.4	-0.1
FAME	Alcaldia de Sa	0.71	166	P	Pb	03 38 15.0	-0.1
FAME				S	Sb	03 38 25.0	+0.2
NUBE	Las Nubes	0.75	148	P	Pb	03 38 15.8	0.0
NUBE	Las Nubes	0.75	148	*e*P	Pb	03 38 15.9	0.0
NUBE	Las Nubes	0.75	148	*i* P	Pb	03 38 15.9	0.0
NUBE				*i* S	Sb	03 38 26.0	0.0
ZAFR2	Estanzuela, Za	0.82	87	*i* P	Pg	03 38 15.4	-1.2
ZAFR2				*i* S	Sg	03 38 25.4	-1.9
MTO3	Montecristo	0.82	100	*e*P	Pg	03 38 16.9	+0.2
MTO3	Montecristo	0.82	100	*i* P	Pg	03 38 16.9	+0.2
ESQI	Esquipulas	0.83	88	P	Pg	03 38 17.1	+0.3
ESQI				S	Sb	03 38 29.5	+1.3
ESQI	Esquipulas	0.83	88	*e*P	Pg	03 38 17.1	+0.3
RTR	El Retiro	0.83	140	*e*P	Pb	03 38 17.4	+0.2
UNIC	Universidad Ca	0.84	131	P	Pg	03 38 17.1	+0.1
UNIC				S	Sg	03 38 28.4	+0.5
SNJE	San Jose	0.88	139	*e*P	Pb	03 38 18.2	+0.1
SBLS	San Blas	0.89	141	*e*P	Pb	03 38 19.2	+1.0
AVCB	Coban	0.95	348	IAML		03 38 41.7	
	comp=N,5µm,0.4s						
ESSJ	San Jos, E	1.02	197	*i* P	Pg	03 38 19.2	-1.1
JAYA	Jayaque - finc	1.14	140	*e*P	Pn	03 38 23.1	+0.4
PMON	Piamonte	1.18	134	P	Pg	03 38 23.6	-0.1
PMON				S	Sg	03 38 38.6	-0.5
PMON	Piamonte	1.18	134	*e*P	Pg	03 38 23.5	-0.1
SOKI	Kika Raxquin	1.20	284	*i* P	Pn	03 38 24.1	+0.3
UEES	Universidad Ev	1.23	131	P	Pb	03 38 23.9	-0.3
UEES				S	Sb	03 38 40.9	+0.8
LLGN	La Laguna	1.27	107	P	Pn	03 38 24.8	+0.4
LLGN				S	Sb	03 38 40.9	0.0
LLGN	La Laguna	1.27	107	*e*P	Pn	03 38 24.8	+0.4
UDBS	Universidad Do	1.30	129	S	Sb	03 38 41.2	-0.7
LALI	Alcalda de L	1.34	141	P	Pn	03 38 25.3	0.0
LALI				S	Sg	03 38 44.9	+0.7
PAVA	Las Pavas	1.47	124	*e*P	Pb	03 38 28.7	+0.6
HUEH	Huehuetenango	1.48	302	P	Pg	03 38 28.8	-0.6
HUEH				S	Sg	03 38 48.9	+0.2
UESV	Universidad de	1.63	123	P	Pn	03 38 29.3	0.0
UESV				S	Sn	03 38 50.8	+0.5
TECO	Alcaldia de Te	1.69	126	P	Pn	03 38 29.8	-0.4
TECO				S	Sb	03 38 54.8	+1.6
PQSS	Presa 15 de Se	1.83	120	P	Pn	03 38 27.5	-4.5
PQSS				S	Sn	03 38 52.7	-2.4
PETF	Flores	2.38	8	P	Pn	03 38 41.2	+1.6
PETF				S	Sg	03 39 16.7	-0.8
PETF	Flores	2.38	8	*i* P	Pn	03 38 41.5	+1.9
PETF				IAML		03 39 17.4	
	comp=E,357nm,0.4s						
LCND	La Caada	2.55	118	P	Pn	03 38 40.2	-1.7

NNC 03 03:40:23.5±6.1**, 37°.65N×71°.61E, h239**km±82km**, mb2.2, mpv3.5, 3C-2D, Error ellipse: s-maj=68.4km s-min=41.8km az=30.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.45	23	⇓P	Pn	03 41 44.1	-0.6
	1.7nm,0.4s						
AAK				⇑S	S	03 42 49.8	+0.6
	5.7nm,0.8s						
KK31	Karatay Array	5.51	352	P	Pn	03 41 44.8	-0.4
	3.2nm,0.3s,baz=180,slow=14,SNR=43						
KK31				⇑S	S	03 42 51.3	+0.9
	1.7nm,0.3s,baz=177,slow=21,SNR=6.1						
AB31	Akbulak array	14.35	328	⇑P	P	03 43 39.0	+2.5
	0.2nm,0.4s,baz=164,slow=9.5,SNR=16						
AB31				⇓S	S	03 46 12.5	-2.1
	1.6nm,0.8s,baz=145,slow=24,SNR=3.7						

TRN 03 03:43:22.9, 10°.66N×62°.55W, h72km**, MD3.6, Paria peninsula., Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	0.99	88	*e*P	Pn	03 43 42.2	+0.8
DMDM				*e*S	Sn	03 43 55.2	+0.1
PSGH	Port of Spain	1.03	90	*e*P	Pn	03 43 42.5	+0.6
PSGH				*e*S	Sn	03 43 55.8	-0.2
TRN	Trinidad (W)	1.13	90	*e*P	Pn	03 43 43.4	+0.2
TRN				*e*S	Sn	03 43 57.8	-0.6
GRFF	Grenada Fort F	1.60	30	*e*P	Pn	03 43 49.1	-0.2
GRFF				*e*S	Sn	03 44 09.1	-0.1
GRW	Mount Saint Ca	1.73	30	*e*P	Pn	03 43 52.2	+1.1
GRSS	Sisters	1.87	29	*e*P	Pn	03 43 53.5	+0.5
GRSS				*e*S	Sn	03 44 14.9	-0.8
PCRV	Puerto La Cruz	2.10	257	*e*P	Pn	03 43 56.1	+0.1
PCRV				*e*S	Sn	03 44 20.7	-0.6
SVB	Belmont	2.89	26	*e*P	Pn	03 44 07.2	+0.5
SVB				*e*S	Sn	03 44 40.5	0.0
SLBI	Saint Lucia, B	3.68	25	*e*P	Pn	03 44 17.3	-0.2
SLBI				*e*S	Sn	03 44 57.5	-2.3

IDC 03 03:45:43.8±1.4**, 15°.69N×119°.47E, h0**km**, mb3.3**/4**, mbtmp3.4**/5**, ML4.3**/1**, Error ellipse: s-maj=61.8km s-min=22.7km az=60.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	19.82	281	P	P	03 50 16.7	+0.5
	0.4nm,0.3s,baz=99,slow=9.9,SNR=4.9						
	1.3nm,0.3s						
SONM	Songino Array	33.83	344	P	P	03 52 28.1	+0.2
	0.5nm,0.7s,baz=161,slow=9.2,SNR=4.0						
	0.5nm,0.7s						
WRA	Warramunga Arr	38.31	157	P	P	03 53 05.9	-0.5
	0.3nm,0.6s,baz=337,slow=8.5,SNR=1.9						
	0.3nm,0.6s						
ASAR	Alice Springs	41.58	160	P	P	03 53 33.9	+0.3
	0.4nm,0.7s,baz=336,slow=6.9,SNR=4.5						
	0.4nm,0.7s						
MKAR	Makanchi Array	43.74	323	P	P	03 53 50.2	-0.7
	0.1nm,0.4s,baz=131,slow=9.8,SNR=2.0						
	0.1nm,0.4s						

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*CATAC **03** 03:48:19.7±0.4, 15°N±3°×9°0W±°, h69km±5km, M3.2/15, MLv3.2/15, Error ellipse: s-maj=6.9km s-min=3.2km az=31.4, confirmed*
*GCG **03** 03:48:25.9±1.1, 14°.54N×90°.20W, h6km±10km, MD3.5, Presumed earthquake*
ISC 03 03:48:17.1±1.9**, 14°.77N**±0°.08×**90°.43W**±0°.05**, h106**km±12km**, n25, σ2s.33**/40**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCG4	OSOP	0.21	209	*i* P	Pn	03 48 33.1	+0.9
GCG4				*i* S	Sn	03 48 38.3	-5.2
APG	El Apazote	0.23	351	*i* P	Pn	03 48 36.6	+4.2
FG16	Alotenango, Sa	0.51	189	*i* P	Pn	03 48 38.8	+5.0
ESSG	Sabana Grande	0.55	225	*i* P	Pn	03 48 38.5	+4.6
PCG5	San Vicente Pa	0.56	175	*i* P	Pn	03 48 35.3	+1.2
PCG5				*i* S	Sn	03 48 41.9	-4.9
STG5	El Palmar, Qui	0.97	248	*i* P	Sn	03 48 51.2	-2.0
LOAL	Lomas de Alarc	0.99	141	P	Pn	03 48 38.2	+0.3
FAME	Alcaldia de Sa	1.01	157	P	Pn	03 48 39.9	+1.9
FAME				S	Sn	03 48 54.3	+0.5
ZAFR2	Estanzuela, Za	1.06	100	*i* P	Pn	03 48 40.1	+1.6
ZAFR2				*i* S	Sn	03 48 50.2	-4.6
NUBE	Las Nubes	1.07	144	P	Pn	03 48 40.5	+1.6
NUBE				S	Sn	03 48 53.5	-1.7
NUBE	Las Nubes	1.07	144	*i* P	Pn	03 48 40.6	+1.8
ESQI	Esquipulas	1.07	101	P	Pn	03 48 42.1	+3.3
ESQI				S	Sn	03 48 53.9	-1.3
MTO3	Montecristo	1.10	110	P	Pn	03 48 42.1	+2.9
MTO3				S	Sn	03 48 53.0	-2.9
MTO3	Montecristo	1.10	110	*i* P	Pn	03 48 41.6	+2.5
UNIC	Universidad Ca	1.16	133	P	Pn	03 48 41.7	+1.9
HUEH	Huehuetenango	1.17	298	P	Pn	03 48 40.8	+0.7
HUEH				S	Sn	03 48 55.8	-1.6
CEDA	San Andres	1.39	134	P	Pn	03 48 43.7	+1.3
CEDA				S	Sn	03 49 01.1	-0.4
JAYA	Jayaque - finc	1.46	140	P	Pn	03 48 44.9	+1.6
JAYA				S	Sn	03 49 03.8	+0.6
PMON	Piamonte	1.51	134	P	Pn	03 48 44.9	+1.0
PMON				S	Sn	03 49 04.3	+0.2
LLGN	La Laguna	1.56	113	P	Pn	03 48 45.2	+0.8
LLGN				S	Sn	03 49 04.8	-0.4
UEES	Universidad Ev	1.56	132	P	Pn	03 48 45.8	+1.3
UEES				S	Sn	03 49 05.3	+0.1
PAVA	Las Pavas	1.79	126	P	Pn	03 48 48.6	+1.3
PAVA				S	Sn	03 49 10.9	+0.6
TECO	Alcaldia de Te	2.01	127	P	Pn	03 48 51.0	+0.9
TECO				S	Sn	03 49 17.0	+1.7
PQSS	Presa 15 de Se	2.14	122	P	Pn	03 48 52.0	+0.4
PQSS				S	Sn	03 49 17.1	-1.0
QUEN	Al S del Volca	4.09	122	P	Pn	03 49 15.3	-2.4

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*IDC **03** 03:52:15.0±1.6, 5°.09N×92°.62E, h0km, mb3.4/5, mbtmp3.6/7, ML4.4/2, MS3.2/5, Error ellipse: s-maj=44.4km s-min=24.6km az=60.0*
*DJA **03** 03:52:32.2±3.8, 4°N±8°×9°4E±3°3, h10km, M4.4/8, mb4.8/1, MLv4.1/8*
ISC 03 03:52:14.5±1.1**, 4°.4N**±0°.1×**92°.9E**±0°.1**, h50**km**, n25, σ3s.60**/12**, mb3.4**/5**, MS3.2**/4**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	3.50	92	P	Pn	03 53 09.3	+3.0
SNSI	Sinabang, Aceh	3.96	120	P	Pn	03 53 10.9	-1.9
LHMI	Lhok Sumawe	4.11	79	P	Pn	03 53 21.7	+6.9
KCSI	Kotacane, Aceh	4.94	100	P	Pn	03 53 27.0	+0.8
GSI	Gunungsitoli	5.60	123	P	Pn	03 53 33.8	-1.5
PSI	Prapat	6.22	105	P	Pn	03 53 43.8	-0.1
PBSI	Pulau Batu	6.98	130	P	Pn	03 53 53.2	-0.9
PALK	Pallekele	12.46	284	Pn	Pn	03 55 07.9	-1.3
	0.9nm,0.3s,baz=90,slow=3.3,SNR=2.2						
PALK				Sn	Sn	03 57 13.3	-13
	2.8nm,0.3s,baz=39,slow=24,SNR=7.3						
	2.9nm,0.3s						
CMAR	Chiang Mai Arr	15.14	22	Pn	Pn	03 55 44.7	-0.6
	0.9nm,0.3s,baz=219,slow=14,SNR=6.1						
CMAR				Sn	Sn	03 58 22.7	-9.3
	1.7nm,0.3s,baz=196,slow=20,SNR=4.9						
	1.2nm,0.3s						
LEM	Lembang	18.46	127	LR	LR	04 04 56.7	
	comp=Z,59nm,18.6s,baz=186,slow=40						
H08S3	Diego Garcia H	23.63	240	T	T	04 22 34.3	
	baz=59,slow=76,SNR=34						
H08S2	Diego Garcia H	23.63	240	T	T	04 22 35.9	
	baz=59,slow=76,SNR=35						
H08S1	Diego Carcia H	23.65	240	T	T	04 22 41.3	
	baz=59,slow=76,SNR=18						
LZDM	Lanzhou Array	32.92	16	P	P	03 58 46.1	+1.7
	0.9nm,0.4s,baz=185,slow=8.7,SNR=1.6						
	0.9nm,0.4s						
AAK	Ala-Archa	41.42	339	LR	LR	04 19 08.1	
	comp=Z,25nm,19.0s,baz=58,slow=40						
MKAR	Makanchi Array	43.19	349	P	P	04 00 12.4	+1.9
	0.1nm,0.5s,baz=170,slow=7.1,SNR=1.8						
	0.1nm,0.5s						
SONM	Songino Array	44.77	13	P	P	04 00 25.5	+2.2
	0.2nm,0.5s,baz=202,slow=11,SNR=2.3						
	0.2nm,0.5s						
JNU	Nakatsue	45.47	46	LR	LR	04 19 55.7	
	comp=Z,36nm,19.8s,baz=48,slow=37						
WRA	Warramunga Arr	47.37	122	P	P	04 00 55.4	+11
	0.4nm,0.8s,baz=297,slow=8.7,SNR=2.0						
	0.4nm,0.8s						
ASAR	Alice Springs	48.75	127	P	P	04 01 07.0	+12
	0.3nm,0.8s,baz=302,slow=10,SNR=5.9						
	0.3nm,0.8s						
JHJ	Hachijo jima 2	52.15	51	LR	LR	04 26 48.3	
	comp=Z,9.5nm,18.6s,baz=94,slow=40						
H04S1	CROZET ISLANDS	62.55	210	T	T	05 11 04.9	
	baz=47						
H04S3	CROZET ISLANDS	62.56	211	T	T	05 11 12.2	
	baz=47						
H04S2	CROZET ISLANDS	62.57	210	T	T	05 10 54.8	
	baz=47						
KIRV	Kirov	63.63	336	LR	LR	04 30 41.7	
	comp=Z,50nm,18.7s,baz=341,slow=37						

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*IDC **03** 03:59:22.4±1.5, 51°.49N×179°.63E, h0km, mb3.9/11, mbtmp4.0/12, ML4.3/1, MS3.4/7, Error ellipse: s-maj=42.7km s-min=17.4km az=175.0*
*AEIC **03** 03:59:25.9±1.8, 51°.10N±0°.06×179°.68E±0°.06, h17km±5km, Error ellipse: s-maj=9.7km s-min=5.0km az=196.0*
*NEIC **03** 03:59:26.3±1.4, 51°.10N±0°.04×179°.64E±0°.08, h30km±4km, mb4.1/70, ML4.1/10, ML3.7(AEIC), Error ellipse: s-maj=7.9km s-min=4.0km az=61.0*
ISC 03 03:59:25.5±1.5**, 51°.07N**±0°.09×**179°.63E**±0°.04**, h31**km±8km**, n135, σ0s.95**/127**, mb4.1**/29**, MS3.5**/6**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.38**	**326**		**Pb**	**03 59 34.0**	**-0.2**
AMKA					**Sb**	**03 59 39.6**	**-0.4**
CESW	**Semis' Southwe**	**0.84**	**357**		**Pn**	**03 59 41.3**	**+0.2**
CERB	**Semis' Cerberu**	**0.86**	**360**		**Pn**	**03 59 42.0**	**+0.4**
CERB					**Sn**	**03 59 53.1**	**-0.1**
CEPE	**Semis' Perret**	**0.90**	**1**		**Pn**	**03 59 42.1**	**+0.1**
GAKI	**Gareloi-Kavalg**	**1.09**	**63**		**Pn**	**03 59 44.5**	**-0.1**
GAKI					**Sn**	**03 59 58.7**	**+0.1**
LSSE	**Little Sitkin**	**1.09**	**323**		**Pn**	**03 59 45.5**	**+0.8**
LSPA	**Little Sitkin**	**1.11**	**324**		**Pn**	**03 59 45.8**	**+0.9**
LSPA					**Sb**	**04 00 02.1**	**+1.9**
LSNW	**Little Sitkin**	**1.14**	**323**		**Pn**	**03 59 46.4**	**+1.0**
GASW	**Gareloi Southw**	**1.18**	**52**		**Pn**	**03 59 46.6**	**+0.7**
GASW					**Sb**	**04 00 01.9**	**-0.5**
GANO	**Gareloi North**	**1.23**	**52**		**Pn**	**03 59 46.9**	**+0.2**
GANO					**Sb**	**04 00 03.1**	**-0.7**
GANE	**Gareloi Northe**	**1.25**	**52**		**Pn**	**03 59 47.5**	**+0.7**
GANE					**Sb**	**04 00 03.9**	**-0.3**
TASE	**Tanaga Southea**	**1.65**	**61**		**Pn**	**03 59 53.3**	**+0.9**
TASE					**Sb**	**04 00 15.1**	**-0.5**
TAPA	**Tanaga Point A**	**1.76**	**64**		**Pn**	**03 59 55.4**	**+1.4**
KIWB	**Kanaga Island**	**2.16**	**67**	Pn	**Pn**	**03 59 59.0**	**-0.4**
KIWB				IAML		04 00 38.5	
	comp=E,1μm,0.8s						
KIWB				IAML		04 00 39.5	
	comp=N,1μm,0.9s						
ADK	**Adak**	**2.44**	**69**	Pn	**Pn**	**04 00 03.4**	**+0.2**
ADK				IAML		04 00 42.5	
	comp=N,1μm,0.7s						
ADK				IAML		04 00 44.7	
	comp=N,931nm,0.5s						
ADK	**Adak**	**2.44**	**69**		**Sn**	**04 00 34.2**	**+2.2**
GSMY	**Great Sitkin M**	**2.86**	**68**		**Pn**	**04 00 10.7**	**+1.7**
GSTR	**Great Sitkin T**	**2.88**	**67**	Pn	**Pn**	**04 00 08.6**	**-0.6**
ATKA	**Atka Island**	**4.01**	**71**	Pn	**Pn**	**04 00 23.4**	**-1.3**
ATKA				IAML		04 01 32.2	
	comp=N,295nm,1.2s						
ATKA				IAML		04 01 33.6	
	comp=E,300nm,0.9s						
SPIA	**Saint Paul Isl**	**8.52**	**40**	Pn	**Pn**	**04 01 29.4**	**+2.8**
UNV	**Unalaska Valle**	**8.91**	**66**	Pn	**Pn**	**04 01 34.8**	**+2.9**
M11K	**Mekoryuk**	**12.25**	**35**	Pn	**Pn**	**04 02 17.0**	**-0.6**
PETK	**Petropavlovsk-**	**13.63**	**287**	LR	LR	04 07 19.8	
	comp=E,90nm,20.7s,baz=115,slow=35						
N14K	**Kuskokwak Cree**	**13.77**	**43**	Pn	**Pn**	**04 02 38.5**	**+0.3**
M14K	**Bethel**	**14.11**	**39**	Pn	**Pn**	**04 02 43.3**	**+0.3**
L14K	**Kuka Creek**	**14.18**	**37**	Pn	**Pn**	**04 02 44.1**	**+0.2**
O15K	**Ungalikthiuk R**	**14.23**	**47**	Pn	**Pn**	**04 02 45.1**	**+0.4**
N15K	**Kwethluk River**	**14.58**	**43**	Pn	**Pn**	**04 02 49.1**	**-0.3**
P16K	**Nushagak River**	**15.04**	**49**		**Pn**	**04 02 55.6**	**+0.1**
K15K	**Wolf Creek Mou**	**15.21**	**35**	P	**P**	**04 03 03.6**	**+1.2**
O16K	**Kokwok River B**	**15.21**	**47**	Pn	**Pn**	**04 02 58.0**	**+0.2**
O16K				IAmb	IAmb	04 03 04.5	
	comp=Z,10nm,1.1s						
M16K	**Timber Creek**	**15.49**	**42**	P	**P**	**04 03 06.1**	**+0.5**
M16K				IAmb	IAmb	04 03 40.3	
	comp=Z,14nm,1.4s						
J16K	**Anvik River**	**16.17**	**33**	P	**P**	**04 03 13.6**	**+0.5**
M17K	**Holitna River**	**16.32**	**42**	P	**P**	**04 03 14.9**	**+0.1**
M17K				IAmb	IAmb	04 03 18.8	
	comp=Z,25nm,1.2s						
K17K	**Iditarod**	**16.66**	**37**	P	**P**	**04 03 18.3**	**-0.3**
N18K	**Kilae Creek**	**16.67**	**45**	P	**P**	**04 03 19.0**	**+0.3**
N18K				IAmb	IAmb	04 03 23.1	
	comp=Z,11nm,1.0s						
L18K	**Granite Mounta**	**17.03**	**40**	P	**Pn**	**04 03 21.9**	**+0.9**
G16K	**Koyuk River**	**17.10**	**26**	P	**P**	**04 03 23.8**	**+0.4**
N19K	**Bonanza Creek**	**17.35**	**46**	P	**P**	**04 03 26.6**	**+0.3**
N19K				IAmb	IAmb	04 03 34.0	
	comp=Z,20nm,1.1s						
KDAK	**Kodiak Island**	**17.42**	**57**	P	**Pn**	**04 03 22.3**	**-3.6**
	comp=Z,1.0nm,0.3s,baz=203,slow=2.0,SNR=11						
	comp=Z,26nm,1.0s						
KDAK	**Kodiak Island**	**17.42**	**57**	Pn	**Pn**	**04 03 25.1**	**-0.8**
J18K	**Innoko River**	**17.68**	**36**	P	**P**	**04 03 31.2**	**+1.4**
L19K	**White Mountain**	**17.77**	**41**	P	**P**	**04 03 31.0**	**+0.2**
H18K	**Honhosa River**	**18.13**	**31**	P	**P**	**04 03 36.1**	**+1.4**
H18K				IAmb	IAmb	04 03 43.9	
	comp=Z,27nm,1.5s						
F17K	**Baldwin Pennin**	**18.19**	**25**	P	**P**	**04 03 36.3**	**+0.9**
M20K	**Styx River**	**18.38**	**43**	P	**Pn**	**04 03 38.9**	**+1.2**
M20K				IAmb	IAmb	04 03 54.3	
	comp=Z,17nm,1.5s						
J19K	**Poorman**	**18.38**	**36**	P	**Pn**	**04 03 38.1**	**+0.5**
CNPM	**China Poot**	**18.49**	**51**	P	**Pn**	**04 03 39.8**	**+0.8**
G18K	**Tagagawik**	**18.54**	**29**	P	**Pn**	**04 03 39.8**	**+0.2**
SPU	**Mount Spurr**	**18.59**	**46**	P	**P**	**04 03 40.5**	**+0.6**
C16K	**Lisburne Hills**	**18.75**	**17**	P	**Pn**	**04 03 43.2**	**+1.1**
J20K	**Nowinta River**	**19.03**	**36**	P	**P**	**04 03 45.2**	**+0.7**
SKT	**Skwentna**	**19.11**	**44**	P	**Pn**	**04 03 46.5**	**0.0**
SKT				IAmb	IAmb	04 03 48.7	
	comp=Z,14nm,0.8s						
G19K	**Purcell Mounta**	**19.18**	**29**	P	**Pn**	**04 03 47.4**	**+0.1**
G19K				IAmb	IAmb	04 03 52.7	
	comp=Z,9.3nm,0.8s						
PPLA	**Purkeypile**	**19.20**	**41**	P	**P**	**04 03 47.2**	**+0.7**
PPLA				IAmb	IAmb	04 04 14.3	
	comp=Z,16nm,1.2s						
SUA	**Susitna One**	**19.28**	**46**	P	**P**	**04 03 46.6**	**-0.9**
SUA				IAmb	IAmb	04 03 51.2	
	comp=Z,14nm,1.1s						
F19K	**Shaleruckik Mo**	**19.44**	**27**	P	**P**	**04 03 49.8**	**+0.7**
F19K				IAmb	IAmb	04 03 55.4	
	comp=Z,9.7nm,0.8s						
L22K	**Petersville**	**19.65**	**43**	P	**P**	**04 03 51.8**	**+0.3**
L22K				IAmb	IAmb	04 04 00.7	
	comp=Z,20nm,1.5s						
C18K	**Utukok River**	**19.92**	**21**	P	**Pn**	**04 03 55.7**	**-0.5**
C18K				IAmb	IAmb	04 03 56.7	
	comp=Z,9.3nm,0.9s						
KTH	**Kantishna Hill**	**19.99**	**40**	P	**P**	**04 03 55.8**	**+0.6**
KTH				IAmb	IAmb	04 03 57.3	
	comp=Z,11nm,0.9s						
E19K	**Redstone River**	**20.02**	**26**	P	**Pn**	**04 03 56.9**	**-0.5**
E19K				IAmb	IAmb	04 03 58.1	
	comp=Z,6.1nm,0.8s						
F20K	**Avaraart Lake**	**20.18**	**28**	P	**P**	**04 03 58.3**	**+1.1**
BPAW	**Bear Paw Mtn.**	**20.20**	**39**	P	**P**	**04 03 57.7**	**+0.2**
BPAW				IAmb	IAmb	04 04 02.6	
	comp=Z,16nm,1.2s						
H21K	**Melozitna Rive**	**20.30**	**34**	P	**P**	**04 03 59.3**	**+0.9**
D19K	**Kuna River**	**20.53**	**23**	P	**P**	**04 04 01.9**	**+0.9**
D19K				IAmb	IAmb	04 04 03.0	
	comp=Z,13nm,1.1s						
G21K	**Allakaket**	**20.55**	**31**	P	**P**	**04 04 01.8**	**+0.7**
G21K				IAmb	IAmb	04 04 03.0	
	comp=Z,9.1nm,0.8s						
H22K	**Ishtalitna Cre**	**20.93**	**34**	P	**P**	**04 04 06.7**	**+1.5**
DHY	**Denali Highway**	**21.30**	**43**	P	**P**	**04 04 08.9**	**-0.5**
DHY				IAmb	IAmb	04 04 12.1	
	comp=Z,5.4nm,0.7s						
G23K	**Bananza Creek**	**21.82**	**33**	P	**P**	**04 04 15.5**	**+0.7**
G23K				IAmb	IAmb	04 04 18.8	
	comp=Z,8.1nm,0.9s						
BMRM	**Bremner River**	**22.03**	**49**	P	**P**	**04 04 16.4**	**-0.7**
BMRM				IAmb	IAmb	04 04 44.6	
	comp=Z,15nm,1.1s						
PAX	**Paxson**	**22.10**	**44**	P	**P**	**04 04 17.0**	**-0.9**
PAX				IAmb	IAmb	04 04 45.0	
	comp=Z,8.5nm,1.3s						
ILAR	**Eielson Array**	**22.10**	**39**	P	**P**	**04 04 15.4**	**-2.4**
	comp=Z,0.9nm,0.9s,baz=256,slow=11,SNR=13						
	comp=Z,0.9nm,0.9s						
ILAR	**Eielson Array**	**22.10**	**39**	P	**P**	**04 04 17.5**	**-0.3**
H24K	**Noodor Dome**	**22.16**	**36**	P	**P**	**04 04 19.3**	**+0.8**
H24K				IAmb	IAmb	04 04 21.1	
	comp=Z,6.2nm,0.8s						
D22K	**Ayikyak River**	**22.25**	**26**	P	**P**	**04 04 20.3**	**+1.0**
VRDI	**Verde Repeater**	**22.62**	**49**	P	**P**	**04 04 23.2**	**-0.4**
VRDI				IAmb	IAmb	04 04 26.9	
	comp=Z,18nm,1.4s						
G24K	**Hadweenzic Riv**	**22.70**	**34**	P	**P**	**04 04 24.2**	**0.0**
G24K				IAmb	IAmb	04 04 59.1	
	comp=Z,7.8nm,1.2s						
D23K	**Nanushuk River**	**22.87**	**27**	P	**P**	**04 04 26.1**	**+0.1**
TOLK	**Toolik Lake Re**	**23.01**	**29**	P	**P**	**04 04 27.1**	**-0.4**
TOLK				IAmb	IAmb	04 04 28.5	
	comp=Z,4.6nm,0.7s						
E24K	**Your Creek**	**23.04**	**30**	P	**P**	**04 04 28.0**	**+0.2**
F25K	**Christian Rive**	**23.74**	**33**	P	**P**	**04 04 34.3**	**-0.3**
BCAR	**Beaver Creek A**	**23.75**	**45**	P	**P**	**04 04 34.3**	**-0.4**
E25K	**Arctic Village**	**24.01**	**32**	P	**P**	**04 04 36.8**	**-0.4**
E25K				IAmb	IAmb	04 04 39.8	
	comp=Z,15nm,1.4s						
G26K	**Porcupine Rive**	**24.13**	**35**	P	**P**	**04 04 38.4**	**+0.3**
D25K	**Kavik River**	**24.35**	**29**	P	**P**	**04 04 40.1**	**-0.2**
D25K				IAmb	IAmb	04 04 42.1	
	comp=Z,9.3nm,0.9s						
M29M	**Somme Creek**	**25.15**	**47**	P	**P**	**04 04 48.3**	**+0.7**
M29M				IAmb	IAmb	04 05 15.5	
	comp=Z,4.9nm,1.1s						
F28M	**Old Crow**	**25.78**	**35**	P	**P**	**04 04 53.3**	**+0.1**
F28M				IAmb	IAmb	04 04 55.4	
	comp=Z,5.6nm,1.1s						
D27M	**Malcolm River**	**26.02**	**31**	P	**P**	**04 04 55.7**	**+0.3**
D27M				IAmb	IAmb	04 04 58.9	
	comp=Z,4.0nm,0.9s						
G31M	**Satah River**	**27.69**	**38**	P	**P**	**04 05 09.7**	**-0.7**
G31M				IAmb	IAmb	04 05 26.8	
	comp=Z,6.3nm,1.4s						
INK	**Inuvik**	**28.28**	**35**	P	**P**	**04 05 14.2**	**-1.3**
	comp=Z,1.5nm,0.9s,baz=281,slow=10,SNR=2.7						
	comp=Z,1.5nm,0.9s						
YAK	**Yakutsk**	**28.89**	**312**	LR	LR	04 16 43.9	
	comp=Z,41nm,18.1s,baz=98,slow=36						
A36M	**Sachs Harbour**	**31.83**	**29**	P	**P**	**04 05 47.2**	**+0.3**
MJAR	**Matsushiro Arr**	**32.76**	**260**	LR	LR	04 17 49.4	
	comp=Z,19nm,19.3s,baz=336,slow=34						
H11N2	**WAKE ISLAND Hy**	**32.85**	**203**	T	T	04 41 02.8	
	baz=20,slow=75,SNR=8.2						
H11N3	**WAKE ISLAND Hy**	**32.86**	**202**	T	T	04 41 02.1	
	baz=20,slow=75,SNR=7.8						
H11N1	**WAKE ISLAND Hy**	**32.87**	**203**	T	T	04 41 02.8	
	baz=20,slow=75,SNR=7.3						
H11S1	**WAKE ISLAND Hy**	**34.07**	**202**	T	T	04 42 36.7	
	baz=14,slow=74,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**34.09**	**202**	T	T	04 42 33.3	
	baz=14,slow=74,SNR=5.6						
H11S3	**WAKE ISLAND Hy**	**34.09**	**202**	T	T	04 42 31.6	
	baz=14,SNR=4.8						
YKAW3	**Yellowknife Wh**	**36.14**	**46**	P	**P**	**04 06 23.6**	**-0.7**
YKAW3				IAmb	IAmb	04 06 24.9	
	comp=Z,4.6nm,1.0s						
YKA	**Yellowknife Ar**	**36.16**	**46**	P	**P**	**04 06 24.1**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=287,slow=8.8,SNR=17						
	comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**36.16**	**46**	P	**P**	**04 06 23.6**	**-1.0**
I07A	**Izee**	**40.60**	**75**	P	**P**	**04 07 03.5**	**+1.3**
LYMT	**Lyon Mountain**	**43.39**	**68**	P	**P**	**04 07 25.3**	**+0.1**
BCYI	**Bear Canyon**	**44.16**	**71**	P	**P**	**04 07 31.8**	**+0.4**
BCYI				IAmb	IAmb	04 07 33.4	
	comp=Z,4.5nm,0.8s						
BOZ	**Bozeman (W)**	**44.51**	**69**	P	**P**	**04 07 33.7**	**-0.3**
BOZ				IAmb	IAmb	04 07 35.4	
	comp=Z,2.8nm,0.9s						
POIN	**Pond Inlet**	**45.59**	**24**	P	**P**	**04 07 42.9**	**+0.9**
SONM	**Songino Array**	**45.90**	**296**	P	**P**	**04 07 46.0**	**+1.0**
	comp=Z,1.7nm,1.2s,baz=70,slow=8.3,SNR=6.7						
	comp=Z,1.7nm,1.2s						
ILON	**Igloolik, Nuna**	**46.19**	**29**	P	**P**	**04 07 45.8**	**-1.0**
DUG	**Dugway, Tooele**	**46.90**	**76**	P	**P**	**04 07 54.2**	**+1.2**
BW06	**Boulder Array**	**47.34**	**71**	P	**P**	**04 07 56.4**	**-0.1**
PD31	**Pinedale Array**	**47.34**	**71**	P	**P**	**04 07 56.9**	**+0.4**
PDAR	**Pinedale Array**	**47.34**	**71**	P	**P**	**04 07 57.1**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=306,slow=3.7,SNR=36						
	comp=Z,3.9nm,0.8s						
RDMU	**Red Mountain**	**48.65**	**73**	P	**P**	**04 08 07.3**	**+0.8**
PV18	**Skein Mesa, Pa**	**50.49**	**75**	P	**P**	**04 08 21.4**	**+0.8**
SPITS	**Spitsbergen Ar**	**50.61**	**356**	P	**P**	**04 08 18.6**	**-2.2**
	comp=Z,42nm,1.2s,baz=38,slow=6.9,SNR=5.5						
SFJD	**Kangerlussuaq**	**56.30**	**21**	LR	LR	04 37 00.4	
	comp=Z,27nm,18.1s,baz=47,slow=40						
KURK	**Kurchatov**	**58.52**	**313**	P	**P**	**04 09 18.2**	**-0.3**
KURBB	**Kurchatov Arra**	**58.62**	**313**	P	**P**	**04 09 19.1**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=43,slow=6.8,SNR=9.6						
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**59.45**	**308**	P	**P**	**04 09 24.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=59,slow=7.2,SNR=4.5						
	comp=Z,0.7nm,0.6s						
TXAR	**Lajitas Array**	**59.68**	**80**	P	**P**	**04 09 27.8**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=299,slow=4.7,SNR=5.2						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**59.68**	**80**	P	**P**	**04 09 28.7**	**+1.8**
BVAR	**Borovoye Array**	**60.48**	**319**	LR	LR	04 36 59.0	
	comp=Z,82nm,18.8s,baz=24,slow=38						
IVI	**Ivigtut**	**61.73**	**24**	P	**P**	**04 09 39.7**	**-0.5**
NB2	**NORSAR Subarra**	**67.86**	**354**	P	**P**	**04 10 19.2**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=7.1,slow=6.5						
NOA	**NORSAR Array B**	**67.86**	**354**	P	**P**	**04 10 19.3**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=8.0,slow=6.3,SNR=4.3						
	comp=Z,1.2nm,0.7s						
HFS	**Hagfors**	**68.57**	**352**	P	**P**	**04 10 23.3**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=348,slow=4.9,SNR=1.6						
	comp=Z,2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**70.06**	**275**	P	**P**	**04 10 35.5**	**+1.0**
	comp=Z,1.0nm,0.2s,baz=20,slow=6.8,SNR=4.4						
	comp=Z,1.0nm,0.2s						
CMAR	**Chiang Mai Arr**	**70.06**	**275**	P	**P**	**04 10 35.3**	**+0.8**
GAR	**Garm**	**71.12**	**309**	P	**P**	**04 10 41.3**	**+0.4**
DZM	**Mont Dzumac**	**73.74**	**193**	LR	LR	04 38 34.9	
	comp=Z,37nm,20.0s,baz=140,slow=32						
MDT	**Midelt**	**96.40**	**4**	LR	LR	04 57 17.2	
	comp=Z,29nm,19.1s,baz=200,slow=36						
H03N2	**Juan Fernandez**	**122.01**	**105**	T	T	06 32 32.9	
	baz=316						
H03N1	**Juan Fernandez**	**122.03**	**105**	T	T	06 32 32.7	
	baz=316						
H03N3	**Juan Fernandez**	**122.03**	**105**	T	T	06 32 28.4	
	baz=316						

*NEIC **03** 04:03:02.9±1.0, 17°.98N±0°.04×67°.05W±0°.02, h10km±2km, ML2.6/33, Md3.3/7(RSPR), Error ellipse: s-maj=6.1km s-min=1.5km az=193.0*

*OSPL **03** 04:03:02.9±0.5, 17°.95N×67°.09W, h8km±3km, ML2.1, Presumed earthquake*

*SDD **03** 04:03:02.9±0.7, 17°.95N×67°.08W, h9km±3km, MD2.9, ML2.3, MW2.8, Presumed earthquake*

*RSPR **03** 04:03:03.0, 17°.99N×67°.06W, h7km, MD3.2/7*

ISC 03 04:03:02.6±0.9**, 17°.97N**±0°.04×**67°.06W**±0°.02**, h11**km±4km**, n44, σ0s.65**/74**, 20C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.02**	**75**	Pg	**Pg**	**04 03 04.6**	**0.0**
MLPR				Sg	**Sg**	**04 03 05.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.06**	**312**	Pg	**Pg**	**04 03 04.7**	**-0.2**
CRPR				Sg	**Sg**	**04 03 05.8**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.06**	**312**	IAML		04 03 06.2	
	13μm,0.1s						
CRPR				IAML		04 03 06.2	
	12μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.06**	**312**	⇑*e*Pg	**Pg**	**04 03 04.7**	**-0.2**
CRPR				⇓*e*Sg	**Sg**	**04 03 06.0**	**-0.5**
CRPR				IAML		04 03 06.2	
	comp=N,8μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.06**	**312**	⇑*e*P	**Pg**	**04 03 04.8**	**-0.1**
CRPR				*e*S	**Sg**	**04 03 06.1**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.06**	**312**	*i* P	**Pg**	**04 03 04.8**	**-0.2**
CRPR				*e*S	**Sg**	**04 03 06.0**	**-0.5**
CRPR				IAML		04 03 06.2	
	comp=Z,10μm,0.1s						
GBPR	**Guanica, Bosqu**	**0.17**	**87**		**Pg**	**04 03 07.0**	**+0.5**
GBPR					**Sg**	**04 03 10.0**	**+0.9**
GBPR	**Guanica, Bosqu**	**0.17**	**87**	⇑*e*P	**Pg**	**04 03 07.0**	**+0.5**
GBPR				*e*S	**Sg**	**04 03 10.0**	**+0.9**
LSP	**Las Mesas**	**0.21**	**354**		**Pg**	**04 03 07.1**	**0.0**
LSP					**Sg**	**04 03 10.5**	**+0.3**
LSP	**Las Mesas**	**0.21**	**354**	⇑*e*P	**Pg**	**04 03 07.1**	**0.0**
LSP				*e*S	**Sg**	**04 03 10.5**	**+0.3**
PRSN	**Puerto Rico Se**	**0.26**	**343**		**Sg**	**04 03 12.2**	**+0.5**
PRSN	**Puerto Rico Se**	**0.26**	**343**	Pg	**Pg**	**04 03 08.1**	**+0.1**
PRSN				IAML		04 03 13.6	
	comp=Z,2μm,0.3s						
PRSN				IAML		04 03 15.3	
	comp=Z,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.26**	**343**	⇑*e*Pg	**Pg**	**04 03 05.9**	**-2.2**
PRSN				⇑*e*Sg	**Sg**	**04 03 11.6**	**-0.1**
PRSN				IAML		04 03 13.5	
	comp=E,1μm,0.2s						
PRSN				IAML		04 03 15.3	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.26**	**343**	⇑*e*P	**Pg**	**04 03 07.5**	**-0.6**
PRSN				*e*S	**Sg**	**04 03 12.2**	**+0.5**
UUPR	**Utuado, UPR, P**	**0.43**	**49**	Pg	**Pg**	**04 03 10.8**	**-0.3**
UUPR				IAML		04 03 18.5	
	comp=N,1μm,0.4s						
OBIP	**Obispado Ponce**	**0.44**	**80**	Pg	**Pg**	**04 03 11.3**	**+0.1**
OBIP				Sg	**Sg**	**04 03 17.7**	**+0.5**
OBIP	**Obispado Ponce**	**0.44**	**80**	⇓*e*P	**Pg**	**04 03 11.4**	**+0.1**
OBIP				*e*S	**Sg**	**04 03 18.0**	**+0.9**
OBIP	**Obispado Ponce**	**0.44**	**80**	*i* P	**Pg**	**04 03 11.4**	**+0.1**
OBIP				*e*S	**Sg**	**04 03 17.6**	**+0.5**
OBIP				IAML		04 03 18.3	
	comp=Z,86nm,0.6s						
CELP	**Cerrillos**	**0.47**	**77**	Pg	**Pg**	**04 03 11.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.50**	**355**	Pg	**Pg**	**04 03 12.2**	**-0.2**
AGPR	**Aguadilla, PR**	**0.50**	**355**	⇑*e*Pg	**Pg**	**04 03 12.3**	**-0.2**
AGPR				⇑*e*Sg	**Sg**	**04 03 19.4**	**+0.2**
AGPR				IAML		04 03 22.3	
	comp=N,230nm,0.4s						
AGPR	**Aguadilla, PR**	**0.50**	**355**	⇑*e*P	**Pg**	**04 03 12.3**	**-0.2**
AGPR				*e*S	**Sg**	**04 03 19.3**	**+0.2**
AGPR	**Aguadilla, PR**	**0.50**	**355**	*i* P	**Pg**	**04 03 12.3**	**-0.2**
AGPR				*e*S	**Sg**	**04 03 19.2**	**+0.1**
AGPR				IAML		04 03 21.1	
	comp=Z,182nm,0.2s						
IDE	**Isla Desecheo**	**0.57**	**317**		**Pg**	**04 03 13.6**	**-0.3**
IDE					**Sg**	**04 03 21.9**	**+0.5**
IDE	**Isla Desecheo**	**0.57**	**317**	⇑*e*P	**Pg**	**04 03 13.6**	**-0.3**
IDE				*e*S	**Sg**	**04 03 21.9**	**+0.5**
EMPR	**Esperanza - Ma**	**0.72**	**45**		**Pg**	**04 03 16.5**	**0.0**
EMPR					**Sg**	**04 03 26.5**	**+0.6**
EMPR	**Esperanza - Ma**	**0.72**	**45**	⇑*e*P	**Pg**	**04 03 16.5**	**0.0**
EMPR				*e*S	**Sg**	**04 03 26.5**	**+0.6**
ECPR	**Experimental S**	**0.75**	**62**	Pg	**Pg**	**04 03 16.5**	**-0.7**
ECPR				Sg	**Sg**	**04 03 26.7**	**-0.3**
ECPR				IAML		04 03 27.4	
	comp=Z,323nm,0.3s						
ECPR				IAML		04 03 28.4	
	comp=Z,455nm,0.2s						
ECPR	**Experimental S**	**0.75**	**62**	⇑*e*P	**Pg**	**04 03 16.6**	**-0.6**
ECPR				*e*S	**Sg**	**04 03 27.0**	**0.0**
SJG	**San Juan**	**0.88**	**80**	Pg	**Pg**	**04 03 18.6**	**-0.9**
SJG				Sg	**Sg**	**04 03 30.7**	**-0.4**
SJG	**San Juan**	**0.88**	**80**	IAML		04 03 37.2	
	comp=Z,103nm,0.2s						
SJG	**San Juan**	**0.88**	**80**	*e*Pg	**Pg**	**04 03 18.7**	**-0.9**
SJG				*e*Sg	**Sg**	**04 03 31.5**	**+0.4**
SJG	**San Juan**	**0.88**	**80**	⇑*e*P	**Pg**	**04 03 18.9**	**-0.7**
SJG				*e*S	**Sn**	**04 03 33.2**	**-0.5**
SJG	**San Juan**	**0.88**	**80**	*i* P	**Pg**	**04 03 18.9**	**-0.7**
SJG				*e*S	**Sg**	**04 03 31.5**	**+0.4**
SJG				IAML		04 03 33.2	
	comp=Z,41nm,0.3s						
GCPR	**Guaynabo City**	**0.99**	**70**	Sg	**Sg**	**04 03 33.5**	**-1.2**
GCPR	**Guaynabo City**	**0.99**	**70**	⇑*e*P	**Pg**	**04 03 20.8**	**-1.0**
GCPR				*e*S	**Sg**	**04 03 33.7**	**-0.9**
PDPR	**Patillas Dam,**	**0.99**	**87**	Pg	**Pg**	**04 03 20.7**	**-1.0**
HUMP	**Col San Antoni**	**1.17**	**81**		**Pg**	**04 03 25.2**	**+0.2**
HUMP				IAML		04 03 44.6	
	comp=Z,84nm,0.2s						
HUMP				IAML		04 03 45.4	
	comp=Z,96nm,0.2s						
HUMP	**Col San Antoni**	**1.17**	**81**	Pg	**Pn**	**04 03 25.0**	**+0.2**
HUMP				Sg	**Sb**	**04 03 40.2**	**+0.3**
HUMP	**Col San Antoni**	**1.17**	**81**	⇑*e*P	**Pb**	**04 03 23.5**	**-1.3**
HUMP				*e*S	**Sg**	**04 03 40.4**	**+0.2**
CUPR	**Culebra, Puert**	**1.73**	**78**	Pn	**Pn**	**04 03 32.8**	**+0.2**
MIDR	**Miches**	**2.14**	**299**	⇑*e*Pg	**Pb**	**04 03 41.6**	**+0.1**
MIDR				⇑*e*Sg	**Sb**	**04 04 09.4**	**+1.4**
MIDR				IAML		04 04 13.7	
	comp=N,11nm,1.4s						
MIDR				IAML		04 04 45.7	
	comp=N,10nm,1.0s						
DR12	**Loma Pena Alta**	**2.35**	**291**	Pn	**Pn**	**04 03 42.5**	**+1.2**
HATOM	**Hato Mayor del**	**2.35**	**291**	⇑*e*Pg	**Pb**	**04 03 44.7**	**-0.3**
HATOM				⇑*e*Sg	**Sg**	**04 04 16.4**	**-1.8**
HATOM				IAML		04 04 35.1	
	comp=N,17nm,2.5s						

*IDC **03** 04:05:09.2±4.1, 36°.33N×71°.31E, h193km±38km, mb3.6/11, mbtmp4.2/17, Error ellipse: s-maj=27.9km s-min=15.1km az=31.0*

*NNC **03** 04:05:13.2±4.8, 36°.69N×71°.04E, h151km±66km, mb3.6, mpv4.3, Error ellipse: s-maj=44.4km s-min=31.8km az=53.0*

ISC 03 04:05:09.3±1.0**, 36°.44N**±0°.09×**71°.25E**±0°.09**, h188**km**, n31, σ1s.48**/37**, mb4.0**/10**, 5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.31**	**23**	P	**Pn**	**04 06 42.9**	**+2.1**
	SNR=192						
EKS2	**Erkin-Say**	**6.51**	**17**	P	**Pn**	**04 06 45.1**	**+2.0**
	SNR=38						
AAK	**Ala-Archa**	**6.68**	**21**	P	**Pn**	**04 06 47.4**	**+2.1**
	80nm,0.4s,baz=194,slow=6.1,SNR=262						
AAK				S	**Sn**	**04 07 58.5**	**-2.8**
	8.5nm,0.5s,baz=331,slow=21,SNR=1.6						
AAK	**Ala-Archa**	**6.68**	**21**	P	**Pn**	**04 06 46.8**	**+1.5**
	SNR=96						
AAK	**Ala-Archa**	**6.68**	**21**	⇓P	**Pn**	**04 06 47.3**	**+2.0**
	7.9nm,0.3s						
AAK				⇓S	**Sn**	**04 08 00.4**	**-0.8**
	3.6nm,0.5s						
KK31	**Karatay Array**	**6.68**	**355**	⇓P	**Pn**	**04 06 46.6**	**+1.4**
	8.0nm,0.3s,baz=182,slow=13,SNR=140						
KK31				⇑S	**Sn**	**04 07 57.3**	**-3.8**
	42nm,0.5s,baz=177,slow=19,SNR=20						
KBK	**Karagaybulak**	**6.83**	**24**	P	**Pn**	**04 06 50.0**	**+2.7**
	SNR=13						
ULHL	**Ulahol**	**6.97**	**32**	P	**Pn**	**04 06 50.6**	**+1.4**
	SNR=28						
CHMS	**Chumysh**	**7.08**	**21**	P	**Pn**	**04 06 52.3**	**+1.8**
	SNR=22						
USP	**Ospenovka**	**7.26**	**19**	P	**Pn**	**04 06 54.5**	**+1.7**
	SNR=25						
TKM2	**Tokmak 2**	**7.29**	**26**	P	**Pn**	**04 06 55.2**	**+1.8**
	SNR=102						
MKAR	**Makanchi Array**	**13.22**	**35**	P	**Pn**	**04 08 09.6**	**-0.2**
	2.4nm,0.5s,baz=220,slow=14,SNR=42						
MKAR				S	**Sn**	**04 10 38.4**	**+1.4**
	0.5nm,0.7s,baz=225,slow=20,SNR=3.0						
WMQ	**Urumqi**	**14.57**	**55**	*e*P	**Pn**	**04 08 25.4**	**-1.3**
KURBB	**Kurchatov Arra**	**15.12**	**18**	P	**Pn**	**04 08 32.4**	**-0.8**
	1.2nm,0.6s,baz=204,slow=11,SNR=5.1						
AB31	**Akbulak array**	**15.23**	**331**	⇑P	**Pn**	**04 08 34.8**	**+0.1**
	5.4nm,0.7s,baz=143,slow=11,SNR=66						
AB31				⇑S	**S**	**04 11 23.1**	**-1.5**
	1.0nm,0.6s,baz=150,slow=23,SNR=3.6						
BVAR	**Borovoye Array**	**16.59**	**358**	P	**P**	**04 08 50.6**	**+0.2**
	1.0nm,0.4s,baz=156,slow=9.1,SNR=7.3						
AKTO	**Aktyubinsk**	**16.93**	**330**	P	**Pn**	**04 08 55.6**	**+0.4**
	6.7nm,0.3s,baz=143,slow=8.9,SNR=21						
AKTO	**Aktyubinsk**	**16.93**	**330**	⇑P	**P**	**04 08 54.4**	**+0.4**
	8.8nm,0.8s						
AKTO				⇑S	**Sn**	**04 12 06.3**	**+0.9**
	2.7nm,1.1s						
ZALV	**Zalesovo Beam**	**19.89**	**24**	P	**P**	**04 09 25.9**	**-0.1**
	3.1nm,0.4s,baz=214,slow=11,SNR=17						
ARTI	**Arti**	**21.77**	**340**	P	**P**	**04 09 46.0**	**+0.2**
	3.1nm,0.4s,baz=158,slow=9.1,SNR=7.0						
	3.1nm,0.4s						
BELG	**Belogornoye**	**23.06**	**321**	P	**P**	**04 09 58.9**	**+1.0**
	15nm,0.8s,baz=115,slow=3.9,SNR=10						
	15nm,0.8s						
AKASG	**Malin Array Be**	**33.14**	**309**	P	**P**	**04 11 27.4**	**-0.1**
	0.2nm,0.3s,baz=83,slow=7.6,SNR=1.9						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**37.65**	**326**	P	**P**	**04 12 06.3**	**+0.6**
	1.7nm,0.4s,baz=120,slow=9.3,SNR=21						
	1.7nm,0.4s						
ARCES	**ARCESS Array B**	**41.28**	**338**	P	**P**	**04 12 36.0**	**+0.4**
	2.1nm,0.4s,baz=112,slow=7.9,SNR=16						
	2.1nm,0.4s						
HFS	**Hagfors**	**43.24**	**322**	P	**P**	**04 12 52.0**	**+0.4**
	3.3nm,0.5s,baz=105,slow=11,SNR=20						
	3.3nm,0.5s						
NB2	**NORSAR Subarra**	**44.55**	**323**	P	**P**	**04 13 01.9**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.55**	**323**	P	**P**	**04 13 01.9**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=96,slow=7.7,SNR=9.0						
	comp=Z,1.9nm,0.7s						
SPITS	**Spitsbergen Ar**	**47.60**	**347**	P	**P**	**04 13 26.4**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=104,slow=11,SNR=7.9						
	comp=Z,1.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.92**	**269**	P	**P**	**04 15 34.8**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=51,slow=3.7,SNR=13						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.4nm,0.6s						
WRA	Warramunga Arr	81.79	122	P	P	04 17 06.4	-1.0
	comp=Z,0.6nm,0.7s,baz=321,slow=4.8,SNR=6.4						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	84.06	125	P	P	04 17 17.9	-1.1
	comp=Z,0.6nm,0.6s,baz=310,slow=5.3,SNR=8.8						
	comp=Z,0.6nm,0.6s						

IDC 03 04:14:01.1±1.4, 28°.26N×142°.14E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=53.9km s-min=27.8km az=86.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.16	178	Pn	Pg	04 14 13.8	-9.5
	25nm,0.3s,baz=92,slow=23,SNR=16						
JCJ				Sn	Sg	04 14 26.5	-12
	24nm,0.3s,baz=28,slow=23,SNR=10						
H11N2	WAKE ISLAND Hy	24.12	105	T	T	04 44 17.6	
	baz=297,slow=75,SNR=9.2						
H11N1	WAKE ISLAND Hy	24.13	105	T	T	04 44 16.7	
	baz=297,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	24.14	105	T	T	04 44 18.6	
	baz=297,slow=75,SNR=8.0						
WRA	Warramunga Arr	48.50	190	P	P	04 22 45.7	-0.2
	1.3nm,0.6s,baz=9.7,slow=8.2,SNR=17						
	1.3nm,0.6s						
KURBB	Kurchatov Arra	52.21	314	P	P	04 23 13.4	-0.2
	0.2nm,0.6s,baz=85,slow=7.4,SNR=1.7						
	0.2nm,0.6s						
ILAR	Eielson Array	56.72	29	P	P	04 23 46.0	-0.3
	0.2nm,0.7s,baz=274,slow=7.4,SNR=1.6						
	0.2nm,0.7s						
BVAR	Borovoye Array	57.17	317	P	P	04 23 49.4	-0.2
	0.8nm,0.6s,baz=90,slow=5.8,SNR=3.7						
	0.8nm,0.6s						
FINES	FINESS Array B	76.89	334	P	P	04 25 55.2	+0.4
	4.0nm,1.0s,baz=46,slow=5.2,SNR=4.4						
	4.0nm,1.0s						

*JMA **03** 04:38:01.5±0.2, 34°N±3°×13°7E±°, h368km, MV2.6/25, SE OFF KII PENINSULA*
*IDC **03** 04:38:02.1±1.3, 33°.95N×136°.83E, h362km±13km, mb2.9/9, mbtmp3.8/14, Error ellipse: s-maj=16.5km s-min=14.6km az=88.0*
ISC 03 04:38:01.5±0.8, 33°.91N±0°.10×136°.84E±0°.07, h350km, n27, σ1s.50/31, mb3.1/9, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	0.50	348	*e*P	Pn	04 38 48.1	+2.5
JIE				*e*S	S	04 39 23.8	+2.8
JKN2	Miekihoku	0.57	306	*e*P	Pn	04 38 48.0	+2.2
JKN2				*e*S	S	04 39 23.5	+2.2
JTNC	Tanabenakahech	1.02	265	*e*P	Pn	04 38 49.5	+2.2
JWT	Wachi	1.81	320	*e*P	Pn	04 38 53.0	+1.6
JAI	Aioi	1.99	267	*e*P	Pn	04 38 54.2	+1.6
JYN	Shimob	2.12	41	*e*P	Pn	04 38 55.5	+1.9
JOD2	Odawara 2	2.30	53	*e*P	Pn	04 38 57.1	+2.2
JKG	Kaga	2.40	350	*e*P	Pn	04 38 56.9	+1.3
JRY	Ryogami san	2.70	38	*e*P	Pn	04 39 00.1	+1.9
JRY				*e*S	S	04 39 45.9	+2.1
MAT	Matsushiro	2.86	23	*e*S	S	04 39 47.5	+1.3
MJAR	Matsushiro Arr	2.86	23	P	Pn	04 39 00.5	+1.0
	7.7nm,0.7s,baz=189,slow=8.9,SNR=16						
JAG	Ashikaga	3.30	40	*e*P	Pn	04 39 03.6	+0.1
BSO1	Boso 1	3.51	77	*e*P	Pn	04 39 04.8	-0.1
BSO1				*e*S	S	04 39 56.1	0.0
JNU	Nakatsue	5.04	263	P	Pn	04 39 22.3	+0.8
	15nm,0.6s,baz=102,slow=3.4,SNR=8.2						
KSRS	Korea Array	8.07	299	P	Pn	04 39 57.2	+0.9
	7.7nm,0.6s,baz=114,slow=12,SNR=18						
USRK	Ussuriysk Ar.	10.95	341	P	Pn	04 40 30.1	-0.3
	5.7nm,0.7s,baz=157,slow=8.9,SNR=5.6						
ASAJ	Asahikawa	11.13	22	P	Pn	04 40 33.0	+0.3
	5.1nm,0.3s,baz=209,slow=9.7,SNR=9.3						
HILR	Hailar Array B	20.10	326	P	P	04 42 10.3	+0.1
	1.2nm,0.4s,baz=132,slow=8.8,SNR=4.9						
	1.2nm,0.4s						
SONM	Songino Array	26.70	311	P	P	04 43 09.7	-0.1
	0.5nm,0.7s,baz=133,slow=11,SNR=4.2						
	0.5nm,0.7s						
MKAR	Makanchi Array	42.70	304	P	P	04 45 24.2	-0.9
	0.7nm,0.5s,baz=85,slow=11,SNR=16						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	45.06	310	P	P	04 45 41.9	-1.6
	0.8nm,0.6s,baz=90,slow=6.7,SNR=8.4						
	0.8nm,0.6s						
BVAR	Borovoye Array	49.97	314	P	P	04 46 20.3	-0.6
	0.3nm,0.3s,baz=87,slow=7.4,SNR=2.5						
	0.3nm,0.3s						
KDAK	Kodiak Island	51.90	40	P	P	04 46 34.2	-0.8
	39nm,1.3s,baz=185,slow=8.8,SNR=1.5						
WRA	Warramunga Arr	53.60	183	P	P	04 46 47.1	-0.6
	0.4nm,0.6s,baz=359,slow=7.7,SNR=6.5						
	0.4nm,0.6s						
ILAR	Eielson Array	54.11	31	P	P	04 46 49.5	-1.5
	0.8nm,1.1s,baz=264,slow=6.3,SNR=4.8						
	0.8nm,1.1s						
ASAR	Alice Springs	57.32	183	P	P	04 47 14.6	+0.5
	0.2nm,0.3s,baz=0.0,slow=5.4,SNR=4.4						
	0.2nm,0.3s						
INK	Inuvik	58.84	26	P	P	04 47 23.6	-0.3
	0.3nm,0.3s,baz=288,slow=6.4,SNR=2.7						
	0.3nm,0.3s						

SDD 03 04:48:44.8±0.4, 18°.07N×67°.98W, h12km±27km, MD3.7, ML1.9, MW3.2, 2C, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	0.83	94⇑	*e*Sg	Sg	04 49 11.6	-0.1
CRPR				IAML		04 49 11.8	
	comp=N,37nm,0.1s						
HIDR	Higuey Centro	0.87	307⇑	*e*Sg	Sg	04 49 12.3	-0.8
HIDR				IAML		04 49 34.8	
	comp=N,52nm,0.1s						
MIDR	Miches	1.36	312	*e*Sg	Sn	04 49 27.5	-0.2
MIDR				IAML		04 49 39.2	
	comp=N,12nm,1.6s						
HATOM	Hato Mayor del	1.51	298	*e*Pg	Pn	04 49 12.0	+0.2
HATOM				IAML		04 50 03.1	
	comp=N,22nm,3.0s						

*BJI **03** 04:49:04.5, 60°.29N×152°.64W, h108km, mB5.0/5, mb4.7/36*
*MOS **03** 04:49:05.7±1.0, 60°.62N×152°.45W, h105km, mb4.5/22, Error ellipse: s-maj=14.3km s-min=6.4km az=95.5*
*NEIC **03** 04:49:07.4±1.6, 60°.59N±0°.04×152°.41W±0°.06, h104km±3km, mb4.6/55, ML4.5/225, Mwr4.4/74, ML4.3(AEIC), Error ellipse: s-maj=5.3km s-min=4.2km az=184.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.50; $M_{\theta\theta}$-5.02; $M_{\phi\phi}$3.52; $M_{r\theta}$1.43; $M_{\theta\phi}$0.23; $M_{\phi r}$2.78; Fault plane solution: $M_0$5.45000×10^{15} NP1:ϕ_s51.54000°, δ75.15000°, λ36.16000°. NP2:ϕ_s310.94000°, δ55.23000°, λ161.83000°. Principal axes: T 5.5625, Plg36.0000°, Azm277.0000°; N -0.2291, Plg51.0000°, Azm71.0000°; P -5.3334, Plg13.0000°, Azm177.0000°;*
*NEIC **03** 04:49:07.5, 60°.60N×152°.38W, h103km*
*AEIC **03** 04:49:09.3±2.4, 60°.58N±0°.03×152°.36W±0°.06, h94km±3km, Error ellipse: s-maj=5.0km s-min=4.2km az=151.0*
*IDC **03** 04:49:09.3±0.7, 60°.82N×152°.36W, h115km±6km, mb3.9/25, mbtmp4.3/30, MS3.3/5, Error ellipse: s-maj=12.6km s-min=10.5km az=32.0*
ISC 03 04:49:07.9±0.4, 60°.55N±0°.03×152°.41W±0°.04, h111km±3km, h111km:pP-P, n408, σ1s.50/417, mb4.5/83, 11C-9D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDT	Redoubt	0.02	1		Pn	04 49 22.1	-1.2
RDT					Sn	04 49 32.2	-2.5
DFR	Drift River	0.14	287		Pn	04 49 22.1	-1.3
DFR					Sn	04 49 32.7	-2.3
RDSO	Redoubt South	0.19	240		Pn	04 49 22.4	-1.1
RDSO					Sn	04 49 33.1	-2.2
RDJH	Redoubt Jeurge	0.20	282		Pn	04 49 22.4	-1.2
RDJH					Sn	04 49 33.4	-1.9
RDWB	Redoubt West	0.22	254		Pn	04 49 22.2	-1.5
RDWB					Sn	04 49 33.8	-1.7
RED	Redoubt Volcan	0.22	234		Pn	04 49 22.4	-1.2
RED				Sn	Sn	04 49 32.9	-2.5
RED				IAML		04 49 34.1	
	comp=N,13µm,0.7s						
RED				IAML		04 49 35.7	
	comp=E,12µm,0.7s						
NCT	North Crescent	0.26	273		Pn	04 49 22.4	-1.3
NCT					Sn	04 49 33.7	-1.9
IVE	Iliamna Volcan	0.62	210		Pn	04 49 24.9	-0.9
IVE					Sn	04 49 38.1	-1.1
CKL	Chakachamna La	0.65	3		Pn	04 49 25.0	-1.1
CAPN	Captain Cook N	0.65	70		Pn	04 49 26.4	+0.5
SPU	Mount Spurr	0.66	15	Pn	Pn	04 49 24.8	-1.2
SPCR	Spurr Chakacha	0.66	8		Pn	04 49 25.0	-1.1
SPCR					Sn	04 49 37.7	-2.1
ILSW	Iliamna Southw	0.68	213	Pn	Pn	04 49 25.2	-1.1
ILSW				Sn	Sn	04 49 38.6	-1.5
ILSW				IAML		04 49 41.0	
	comp=E,7µm,0.8s						
ILS	Iliamna Low So	0.68	209		Pn	04 49 25.5	-0.8
ILS					Sn	04 49 39.1	-1.0
SPCG	Spurr Capps Gl	0.77	14		Sn	04 49 39.5	-2.0
HOM	Homer	0.97	157	Pn	Pn	04 49 28.8	-0.1
HOM				Sn	Sn	04 49 44.7	+0.1
P19K	Oil Pt	0.99	205	Pn	Pn	04 49 28.8	-0.3
P19K				Sn	Sn	04 49 44.3	-0.7
O19K	Port Alsworth	1.02	250	Pn	Pn	04 49 28.5	-0.8
O19K				Sn	Sn	04 49 44.1	-1.2
O19K				IAML		04 49 45.2	
	comp=E,10µm,0.4s						
O19K				IAML		04 49 45.6	
	comp=N,5µm,0.4s						
N19K	Bonanza Creek	1.06	285		Pn	04 49 28.5	-1.3
N19K				IAML		04 49 45.5	
	comp=N,4µm,0.7s						
SLKM	Skilak Lake	1.08	91	Pn	Pn	04 49 29.1	-0.9
SLKM				Sn	Sn	04 49 45.2	-1.5
SLKM				IAML		04 49 46.0	
	comp=N,13µm,0.3s						
SLKM				IAML		04 49 47.9	
	comp=E,7µm,0.2s						
BRLK	Bradley Lake	1.10	135	Pn	Pn	04 49 29.5	-0.7
BRLK				Sn	Sn	04 49 45.1	-1.9
BRLK				IAML		04 49 47.3	
	comp=N,13µm,0.9s						
BRLK				IAML		04 49 48.0	
	comp=E,10µm,1.0s						
CNPM	China Poot	1.19	150	Pn	Pn	04 49 30.6	-0.6
CNPM				Sn	Sn	04 49 47.1	-1.6
SUA	Susitna One	1.22	41	Pn	Pn	04 49 31.0	-0.6
AU22	Augustine Moun	1.28	202		Sn	04 49 49.9	-0.5
AUF	Augustine Flow	1.28	205		Pn	04 49 31.9	-0.3
AUF					Sn	04 49 50.1	-0.4
AUL	Augustine Lava	1.28	204		Pn	04 49 32.1	-0.1
AUL					Sn	04 49 50.5	-0.1
AUI	Augustine Isla	1.32	203		Pn	04 49 32.3	-0.3
AUI					Sn	04 49 50.6	-0.8
O22K	Cooper Landing	1.33	92	Pn	Pn	04 49 31.9	-0.8
M20K	Styx River	1.38	346		Pn	04 49 32.8	-0.6
RC01	Rabbit Creek A	1.42	66	Pn	Pn	04 49 33.0	-0.7
SKT	Skwentna	1.50	16	Pn	Pn	04 49 33.5	-1.2
SKT				IAML		04 49 57.6	
	comp=E,3µm,0.4s						
SKT				IAML		04 49 57.6	
	comp=N,4µm,0.5s						
SEW	Seward	1.54	106	Pn	Pn	04 49 33.9	-1.2
SEW				IAML		04 49 55.0	
	comp=N,5µm,0.4s						
SEW				IAML		04 49 55.5	
	comp=E,4µm,0.5s						
O18K	Koktuh Hills	1.56	245	Pn	Pn	04 49 34.7	-0.8
M22K	Willow	1.64	42		Pn	04 49 35.9	-0.5
N18K	Kilae Creek	1.72	276		Pn	04 49 36.6	-0.9
Q19K	Cape Douglas,	1.74	202	Pn	Pn	04 49 37.1	-0.6
Q19K				IAML		04 50 03.6	
	comp=N,3µm,0.8s						
Q19K				IAML		04 50 33.4	
	comp=E,3µm,1.1s						
P18K	Big Mountain,	1.83	232	Pn	Pn	04 49 37.6	-1.3
P18K				IAML		04 50 02.7	
	comp=E,2µm,1.2s						
PMR	Palmer	1.91	55	Pn	Pn	04 49 38.4	-1.2
PMR				IAML		04 50 02.2	
	comp=E,4µm,0.6s						
PMR				IAML		04 50 04.3	
	comp=N,5µm,0.3s						
PMR	Palmer	1.91	55	P	Pn	04 49 38.4	-1.2
PMR	Palmer	1.91	55	S	Sn	04 50 01.2	-2.7
PMR	Palmer	1.91	55	P	Pn	04 49 38.4	-1.2
M18K	Stony River	1.91	301		Pn	04 49 39.0	-0.8
SYI	Shuyak Island	1.95	180	Pn	Pn	04 49 39.9	-0.3
SYI				IAML		04 50 07.6	
	comp=N,3µm,0.5s						
SYI				IAML		04 50 07.6	
	comp=E,3µm,0.8s						
L19K	White Mountain	2.02	325	Pn	Pn	04 49 40.3	-0.8
L19K				IAML		04 50 08.0	
	comp=N,2µm,0.8s						
GHO	Glory Hole Cre	2.09	53	Pn	Pn	04 49 41.0	-1.0
KNK	Knik Glacier	2.11	64	Pn	Pn	04 49 41.2	-1.1
CUT	Chulitna	2.12	28	Pn	Pn	04 49 42.1	-0.3
L22K	Petersville	2.13	21	Pn	Pn	04 49 42.1	-0.5
L22K				IAML		04 50 11.3	
	comp=E,2µm,0.9s						
L22K				IAML		04 50 12.3	
	comp=N,3µm,0.8s						
SML	Sawmill	2.34	56	Pn	Pn	04 49 44.0	-1.3
PPLA	Purkeypile	2.36	2	IAML		04 50 38.5	
	comp=E,1µm,1.1s						
PPLA				IAML		04 50 44.8	
	comp=N,1µm,0.9s						
N17K	Nushagak Hills	2.36	271		Pn	04 49 44.9	-0.6
P17K	Kvichak River	2.45	238	Pn	Pn	04 49 46.4	-0.2
P17K				IAML		04 50 22.4	
	comp=E,3µm,1.2s						
O17K	Koliganek Bris	2.47	254		Pn	04 49 46.7	-0.2
P23K	Montague Islan	2.55	100	Pn	Pn	04 49 46.7	-1.3
P23K				IAML		04 50 18.5	
	comp=N,3µm,0.4s						
M17K	Holitna River	2.60	291	IAML		04 50 20.8	
	comp=E,2µm,0.8s						
M17K				IAML		04 50 21.1	
	comp=N,1µm,1.2s						
KVTA	Katmai Vly 10	2.63	215		Pn	04 49 50.3	+1.3
GLI	Glacier Island	2.63	81	IAML		04 50 21.0	
	comp=N,3µm,0.3s						
L18K	Granite Mounta	2.66	311		Pn	04 49 48.2	-1.1
SCM	Sheep Creek Mo	2.77	60	IAML		04 50 26.7	
	comp=E,3µm,0.3s						
KDAK	Kodiak Island	2.78	182	P	Pn	04 49 49.4	-1.5
	comp=E,223nm,0.4s,baz=32,slow=5.4,SNR=1010						
KDAK				S	Sn	04 50 20.9	-3.1
	comp=E,200nm,0.3s,baz=23,slow=14,SNR=6.3						
KDAK	Kodiak Island	2.78	182	Pn	Pn	04 49 49.4	-1.5
KDAK				IAML		04 50 33.9	
	comp=E,1µm,0.6s						
KDAK				IAML		04 50 34.6	
	comp=E,1µm,0.8s						
ACHA	Angle Creek He	2.78	214	Pn	Pn	04 49 50.7	-0.3
CNTC	Contact Creek	2.90	219		Pn	04 49 52.8	+0.1
K20K	Telida	2.92	345		Pn	04 49 52.1	-0.7
HIN	Hinchinbrook I	2.93	90	IAML		04 50 26.1	
	comp=E,3µm,0.5s						
HIN				IAML		04 50 27.3	
	comp=N,2µm,0.4s						
O16K	Kokwok River B	3.01	254		Pn	04 49 53.6	-0.4
TRF	Thorofare Moun	3.08	18	IAML		04 50 33.5	
	comp=N,2µm,0.6s						
TRF				IAML		04 50 54.2	
	comp=E,1µm,0.6s						
KTH	Kantishna Hill	3.09	12	IAML		04 50 54.7	
	comp=N,982nm,0.9s						
KTH				IAML		04 50 56.9	
	comp=E,1µm,0.8s						
N16K	Nishlik Lake	3.15	271		Pn	04 49 55.8	-0.1
P16K	Nushagak River	3.21	244	Pn	Pn	04 49 57.0	+0.5
P16K				IAML		04 50 49.5	
	comp=N,710nm,1.1s						
P16K				IAML		04 51 12.4	
	comp=E,752nm,0.8s						
M16K	Timber Creek	3.25	281		Pn	04 49 56.6	-0.5
MID	Middleton Isla	3.25	108	Pn	Pn	04 49 55.9	-1.2
MID				IAML		04 50 49.7	
	comp=E,1µm,1.3s						
MID				IAML		04 51 04.4	
	comp=N,876nm,0.9s						
L17K	Donlin	3.25	302		Pn	04 49 56.8	-0.4
EYAK	Cordova Ski Ar	3.29	87		Pn	04 49 54.9	-2.7
EYAK				IAML		04 50 35.3	
	comp=N,934nm,0.5s						
EYAK	Cordova Ski Ar	3.29	87	P	Pn	04 49 55.7	-1.9
EYAK	Cordova Ski Ar	3.29	87	S	Sn	04 50 34.8	-1.2
KLU	Klutina	3.29	71	IAML		04 50 35.4	
	comp=E,2µm,0.2s						
DIV	Divide	3.30	77	IAML		04 50 38.3	
	comp=E,1µm,0.7s						
DIV				IAML		04 50 43.6	
	comp=N,2µm,0.5s						
RND	Reindeer	3.32	29	IAML		04 50 53.0	
	comp=N,818nm,1.0s						
RND				IAML		04 51 05.2	
	comp=E,823nm,0.7s						
CHUM	Lake Minchumin	3.34	1		Pn	04 49 57.9	-0.5
OHAK	Old Harbor	3.37	188	Pn	Pn	04 49 56.9	-1.8
OHAK				IAML		04 50 50.2	
	comp=N,465nm,0.8s						
OHAK	Old Harbor	3.37	188	P	Pn	04 49 57.0	-1.8
OHAK	Old Harbor	3.37	188	S	Sn	04 50 36.1	-1.9
DHY	Denali Highway	3.48	41	IAML		04 50 50.9	
	comp=N,974nm,0.8s						
DHY				IAML		04 50 56.2	
	comp=E,1µm,1.1s						
K17K	Iditarod	3.55	310		Pn	04 50 00.3	-0.8
K17K				IAML		04 50 43.5	
	comp=N,645nm,1.1s						
K17K				IAML		04 50 44.0	
	comp=E,754nm,1.3s						
J18K	Innoko River	3.56	327	Pn	Pn	04 50 00.4	-0.8
PLK4	Peulik 4	3.57	217		Pn	04 50 02.1	+0.6
PLK4				IAML		04 50 45.2	
	comp=E,734nm,1.6s						
PLK4				IAML		04 50 46.6	
	comp=N,598nm,1.4s						
MCK	McKinley	3.58	26	IAML		04 50 47.1	
	comp=E,756nm,0.5s						
MCK				IAML		04 51 16.4	
	comp=N,794nm,1.2s						
L16K	Owhat River	3.62	292	Pn	Pn	04 50 01.5	-0.5
BPAW	Bear Paw Mtn.	3.62	10		Pn	04 50 00.1	-2.1
BPAW				IAML		04 50 41.9	
	comp=N,570nm,0.7s						
BPAW				IAML		04 50 42.9	
	comp=E,403nm,0.7s						
PLBL	Peulik Blue Cr	3.65	220		Pn	04 50 03.3	+0.7
J19K	Poorman	3.77	338	Pn	Pn	04 50 03.4	-0.7
RAGM	Ragged Mountai	3.83	89		Pn	04 50 01.5	-3.4
RAGM				IAML		04 50 47.8	
	comp=E,2µm,0.4s						
BMRM	Bremner River	3.85	80	IAML		04 50 50.3	
	comp=E,922nm,0.4s						
BMRM				IAML		04 51 01.1	
	comp=N,1µm,0.4s						
N25K	Chitina, Valde	3.94	71	IAML		04 50 50.5	
	comp=N,1µm,0.5s						
R16K	Pilot Point	4.01	224		Pn	04 50 07.1	-0.2
R16K				IAML		04 51 20.5	
	comp=E,479nm,2.7s						
R16K				IAML		04 52 01.1	
	comp=N,518nm,2.4s						
KAIM	Kayak Island	4.03	95	Pn	Pn	04 50 06.4	-1.2
KAIM				IAML		04 50 58.2	
	comp=N,503nm,0.6s						
KAIM				IAML		04 50 59.9	
	comp=E,546nm,0.6s						
M15K	Kasigluk River	4.08	276		Pn	04 50 08.0	-0.2
PAX	Paxson	4.09	51	IAML		04 51 08.1	
	comp=E,792nm,0.9s						
SII	Sitkinak Islan	4.11	194	Pn	Pn	04 50 07.0	-1.7
SII				IAML		04 50 56.7	
	comp=N,670nm,0.7s						
SII				IAML		04 51 10.9	
	comp=E,639nm,0.9s						
SII	Sitkinak Islan	4.11	194	P	Pn	04 50 08.6	-0.1
SII	Sitkinak Islan	4.11	194	S	Sn	04 50 54.0	-1.8
WASW	Wrangell South	4.21	67		Pn	04 50 09.0	-1.2
WAZA	Wrangell Mount	4.26	65		Pn	04 50 09.9	-1.0
GLB	Gilahina Butte	4.28	74	IAML		04 50 58.6	
	comp=E,452nm,0.4s						
GLB				IAML		04 51 07.8	
	comp=N,631nm,0.7s						
BERG	Berg Lake	4.31	88	IAML		04 50 58.4	
	comp=N,884nm,0.3s						
SUCK	Suckling Hills	4.32	93	Pn	Pn	04 50 11.0	-0.5
SUCK				IAML		04 51 32.8	
	comp=N,372nm,1.1s						
SUCK				IAML		04 51 57.4	
	comp=E,322nm,1.1s						
I20K	Naaghedeneel	4.37	348	Pn	Pn	04 50 11.2	-0.9
I20K				IAML		04 51 22.8	
	comp=N,757nm,0.8s						
I20K				IAML		04 51 46.3	
	comp=E,819nm,1.1s						
WRH	Wood River Hil	4.41	25	IAML		04 51 30.6	
	comp=E,257nm,0.8s						
WRH				IAML		04 51 32.9	
	comp=N,272nm,0.6s						
VRDI	Verde Repeater	4.43	77	IAML		04 51 02.3	
	comp=N,466nm,0.6s						
VRDI				IAML		04 51 02.5	
	comp=E,364nm,0.5s						
K24K	Donnelly Dome	4.50	41	Pn	Pn	04 50 14.7	+0.8
GRIN	Grindle Hills	4.51	89		Pn	04 50 11.4	-2.7
L15K	Ungalak Mounta	4.55	288		Pn	04 50 14.0	-0.5
CRQM	Cirque	4.57	83	IAML		04 51 38.1	
	comp=E,828nm,1.0s						
HDA	Harding Lake	4.62	31	IAML		04 51 28.7	
	comp=E,695nm,1.4s						
CCB	Clear Creek Bu	4.63	25	Pn	Pn	04 50 13.8	-1.7
CCB				IAML		04 51 40.9	
	comp=E,342nm,1.1s						
O14K	Tigyukauivet M	4.65	258	Pn	Pn	04 50 16.2	+0.4
MCARA	McCarthy VSAT	4.65	76	Pn	Pn	04 50 14.4	-1.4
I21K	Tanana	4.65	2	Pn	Pn	04 50 13.7	-2.2
N14K	Kuskokwak Cree	4.67	266	Pn	Pn	04 50 16.5	+0.4
N14K				IAML		04 51 56.6	
	comp=E,259nm,1.9s						
N14K				IAML		04 52 16.0	
	comp=N,338nm,1.6s						
ANNW	Aniakchak Nort	4.70	223		Pn	04 50 17.0	+0.4
K15K	Wolf Creek Mou	4.72	296	Pn	Pn	04 50 16.4	-0.4
TGL	Tana Glacier	4.72	83	Pn	Pn	04 50 15.0	-1.9
TGL				IAML		04 51 09.8	
	comp=N,539nm,0.4s						
TGL				IAML		04 51 13.0	
	comp=E,591nm,0.5s						
J16K	Anvik River	4.75	309	Pn	Pn	04 50 16.1	-1.1
SNH	Sunshine Point	4.77	90	Pn	Pn	04 50 16.6	-0.9
SNH				IAML		04 51 14.2	
	comp=E,400nm,1.0s						
SNH				IAML		04 51 16.0	
	comp=N,324nm,0.5s						
MENT	Mentasta	4.77	56	Pn	Pn	04 50 16.6	-0.9
MENT	Mentasta	4.77	56	P	Pn	04 50 16.9	-0.7
COLA	College	4.82	24	Pn	Pn	04 50 17.1	-1.0
COLA	College	4.82	24	P	Pn	04 50 17.3	-0.8
COLA	College	4.82	24⇑	*i*P	Pn	04 50 16.5	-1.6
COLA				pmax	pmax		
	comp=Z,234nm,0.6s						
I23K	Minto, Yukon-K	4.82	16	IAML		04 51 47.2	
	comp=N,262nm,0.7s						
I23K				IAML		04 51 58.8	
	comp=E,217nm,0.9s						
MDM	Murphy Dome	4.82	22		Pn	04 50 16.9	-1.3
ANPB	Aniakchak Plen	4.85	222		Pn	04 50 18.8	+0.1
M26K	Nabesna, AK	4.88	64	Pn	Pn	04 50 17.6	-1.4
M26K				IAML		04 51 13.7	
	comp=N,572nm,0.7s						
M26K				IAML		04 51 41.0	
	comp=E,394nm,0.7s						
BARK	Barkley Ridge	4.91	87		Pn	04 50 17.4	-2.0
ILAR	Eielson Array	4.94	29	P	Pn	04 50 18.4	-1.4
	comp=E,144nm,0.3s,baz=213,slow=13,SNR=795						
ILAR				S	Sn	04 51 10.3	-5.4
	comp=E,127nm,0.8s,baz=215,slow=23,SNR=5.8						
ILAR	Eielson Array	4.94	29	Pn	Pn	04 50 18.2	-1.5
CYK	Cape Yakataga	4.96	91		Pn	04 50 19.2	-0.8
ISLE	Juniper Island	4.97	85	Pn	Pn	04 50 19.4	-0.8
ISLE				IAML		04 51 16.8	
	comp=E,612nm,0.6s						

ISLE IAML 04 51 17.2
comp=N,526nm,0.6s
CHIR Chirikof Islan 5.04 201 Pn Pn 04 50 19.4 -1.7
CHIR IAML 04 51 45.3
comp=E,262nm,3.0s
CHIR IAML 04 51 48.1
comp=N,327nm,2.8s
L14K Kuka Creek 5.07 283 IAML 04 51 40.1
comp=E,207nm,1.4s
L14K IAML 04 51 57.5
comp=N,192nm,1.3s
H20K Anotleneega Mo 5.09 348 Pn 04 50 21.1 -0.7
POKR Poker Plat Res 5.12 24 Pn Pn 04 50 21.2 -0.9
POKR IAML 04 51 60.0
comp=N,163nm,0.8s
POKR IAML 04 52 00.6
comp=E,245nm,0.8s
I17K Unalakleet 5.12 314 Pn Pn 04 50 21.9 -0.3
I17K IAML 04 51 22.3
comp=E,155nm,2.0s
H21K Melozitna Rive 5.13 358 Pn Pn 04 50 21.0 -1.4
J25K Salcha River, 5.21 36 IAML 04 51 36.2
comp=N,465nm,0.6s
SCRK Sand Creek 5.22 45 IAML 04 51 35.2
comp=N,339nm,0.9s
SCRK IAML 04 51 43.9
comp=E,336nm,0.9s
GRNC Granite Creek 5.25 83 Pn Pn 04 50 23.6 -0.6
GRNC IAML 04 51 23.5
comp=E,288nm,0.7s
BARN Barnard Glacie 5.29 80 Pn Pn 04 50 23.5 -1.2
BARN IAML 04 51 23.8
comp=N,302nm,0.5s
BARN IAML 04 51 25.8
comp=E,373nm,0.5s
H18K Honhosa River 5.36 332 Pn Pn 04 50 24.9 -0.6
M27K Edge Creek, AK 5.37 66 Pn Pn 04 50 25.3 -0.4
M27K IAML 04 52 05.2
comp=N,271nm,1.3s
M27K IAML 04 52 06.8
comp=E,169nm,1.2s
M13K Dall Lake 5.42 273 Pn Pn 04 50 26.5 +0.3
CTGM Chitina Glacie 5.45 81 Pn Pn 04 50 26.3 -0.5
IM02 Indian Mountai 5.51 354 Pn 04 50 26.7 -0.7
H17K Granite Mounta 5.59 325 Pn Pn 04 50 27.7 -0.8
L27K Beaver Creek, 5.61 59 Pn Pn 04 50 28.0 -0.9
BCAR Beaver Creek A 5.63 59 Pn Pn 04 50 28.0 -1.2
VNSG Veniaminof 6 5.66 221 Pn 04 50 29.8 +0.1
H24K Noodor Dome 5.69 19 Pn Pn 04 50 29.3 -0.6
J14K Nanvaranak Lak 5.75 297 Pn 04 50 30.6 0.0
VNKR Veniaminof 5 5.83 222 Pn 04 50 32.3 +0.4
BVCY Beaver Creek 5.84 66 Pn 04 50 31.5 -0.5
G19K Purcell Mounta 5.99 341 Pn 04 50 33.1 -0.9
G21K Allakaket 6.01 356 Pn Pn 04 50 32.9 -1.3
D28M Mount Upton 6.01 85 Pn 04 50 34.1 -0.4
PCA Pinnacle 6.05 89 Pn Pn 04 50 34.0 -0.9
G18K Tagagawik 6.06 335 Pn 04 50 34.8 -0.1
G17K Kiwalik Mounta 6.22 327 Pn 04 50 36.5 -0.6
G23K Bananza Creek 6.27 9 Pn 04 50 36.6 -1.2
BCPM Bancas Point 6.39 90 Pn Pn 04 50 38.3 -1.1
G22K Bettles 6.41 3 Pn 04 50 39.4 -0.2
G24K Hadweenzic Riv 6.55 17 Pn 04 50 40.6 -0.9
G16K Koyuk River 6.64 321 Pn 04 50 42.2 -0.5
F19K Shaleruckik Mo 6.74 342 Pn 04 50 43.6 -0.4
SDPT Sand Point 6.75 223 Pn 04 50 43.4 -1.0
COLD Coldfoot 6.77 7 Pn Pn 04 50 43.5 -1.1
M11K Mekoryuk 6.82 275 Pn Pn 04 50 45.6 +0.4
FYU Fort Yukon 6.83 25 Pn Pn 04 50 43.7 -1.6
O29M Mount Kennedy 6.85 86 Pn Pn 04 50 44.1 -1.7
F18K Selawik 6.87 335 Pn 04 50 45.8 -0.1
YUK6 Outpost Mounta 6.90 81 Pn 04 50 45.6 -0.9
M29M Somme Creek 6.94 68 Pn 04 50 46.2 -0.7
G15K Niukluk 6.95 315 Pn Pn 04 50 46.5 -0.4
YUJ7 Dusty Glacier 7.04 84 Pn 04 50 47.8 -0.5
I27K Kandik River 7.04 39 Pn Pn 04 50 46.5 -1.8
F17K Baldwin Pennin 7.11 330 Pn 04 50 49.1 +0.1
PS1A Pavlof South-1 7.14 228 Pn 04 50 50.0 +0.4
ANM Nome 7.21 309 Pn Pn 04 50 49.9 -0.6
ANM Nome 7.21 309 P Pn 04 50 49.9 -0.6
L29M L29M 7.23 63 Pn 04 50 50.3 -0.4
E19K Redstone River 7.25 345 Pn 04 50 50.9 -0.1
HYT Haines Junctio 7.32 81 Pn Pn 04 50 50.8 -1.4
DOL Dolgoi Island 7.40 227 Pn 04 50 53.1 +0.1
G26K Porcupine Rive 7.47 27 Pn 04 50 52.2 -1.7
H27K Steamboat Moun 7.50 36 Pn 04 50 52.9 -1.5
I28M Miner Creek 7.50 44 Pn 04 50 53.5 -1.0
DTNA Dutton South F 7.54 228 Pn 04 50 55.4 +0.4
F15K North Star Dit 7.58 318 Pn Pn 04 50 54.7 -0.7
F25K Christian Rive 7.66 20 Pn 04 50 55.0 -1.6
K29M Barlow Dome 7.70 58 Pn 04 50 56.6 -0.6
BM05 Burnt Mountain 7.71 23 Pn 04 50 55.5 -1.7
BMAR Burnt Mountain 7.71 23 Pn Pn 04 50 55.1 -2.2
M30M Minto, Yukon 7.72 68 Pn 04 50 56.4 -1.1
E24K Your Creek 7.74 11 Pn 04 50 56.9 -0.8
E18K Tukpahlearik C 7.77 336 Pn 04 50 58.4 +0.4
G27K Doyon Strip 7.88 33 Pn Pn 04 50 57.5 -2.1
E20K Nigu River 7.91 350 Pn 04 50 59.8 -0.1
F14K Arctic Creek 8.02 314 Pn 04 51 01.0 -0.4
F26K Sheenjek River 8.02 23 Pn 04 50 59.5 -1.9
I29M Ogilvie Camp, 8.02 47 Pn Pn 04 50 59.9 -1.6
N31M Braeburn, Yuko 8.13 76 Pn 04 52 02.0 -1.0
E25K Arctic Village 8.15 18 Pn Pn 04 51 01.1 -2.1
MAYO Mayo, Yukon 8.32 61 Pn Pn 04 51 05.1 -0.5
D19K Kuna River 8.34 345 Pn Pn 04 51 04.8 -1.1
D22K Ayikyak River 8.37 359 Pn 04 51 05.9 -0.2
D20K Etivluk River 8.39 349 Pn 04 51 05.9 -0.6
J30M Hart River 8.44 55 Pn Pn 04 51 05.9 -1.3
D23K Nanushuk River 8.48 4 Pn 04 51 07.8 +0.1
D17K Noatak River 8.54 332 Pn 04 51 08.9 +0.4
WHY Whitehorse 8.62 82 Pn 04 51 08.6 -1.1
SKAG Skagway 8.62 90 P Pn 04 51 10.0 +0.4
SKAG Skagway 8.62 90 S Sn 04 52 45.1 +0.1
I30M Mount Dempster 8.68 50 Pn Pn 04 51 10.4 -0.1
S31K Pelican 8.68 100 Pn 04 51 09.8 -0.6
C21K Knifeblade Rid 8.70 354 Pn 04 51 10.7 +0.1
RDOG Red Dog Mine 8.79 333 Pn Pn 04 51 12.1 +0.3
C18K Utukok River 8.95 339 Pn 04 51 13.7 -0.4
G29M Pine Creek 9.00 39 Pn Pn 04 51 13.2 -1.5
C19K Lookout Ridge 9.11 344 Pn 04 51 16.1 -0.1
BESE Bessie Mountai 9.12 95 Pn Pn 04 51 16.2 -0.2
D25K Kavik River 9.16 14 Pn 04 51 16.4 -0.5
C17K DeLong Mountai 9.19 334 Pn 04 51 17.8 +0.5
P32M Atlin 9.39 88 Pn 04 51 18.8 -1.3
N32M Quiet Lake 9.45 78 Pn 04 51 17.8 -3.1
JIS Juneau Island 9.46 96 P Pn 04 51 21.3 +0.3
JIS Juneau Island 9.46 96 S Sn 04 53 05.6 +0.3
SIT Sitka 9.52 104 Pn 04 51 20.5 -1.3
SIT Sitka 9.52 104 P Pn 04 51 20.5 -1.3
C16K Lisburne Hills 9.54 330 Pn Pn 04 51 22.6 +0.7
H31M Peel River 9.69 49 Pn 04 51 22.9 -1.2
S32K Killisnoo 9.70 101 Pn Pn 04 51 24.5 +0.4
P33M Teslin, Yukon 9.70 83 Pn Pn 04 51 22.2 -2.1
C27K Jago River 9.81 18 Pn Pn 04 51 24.4 -1.2
E29M Blow River 10.02 32 Pn Pn 04 51 26.4 -2.1
F31M Tsiigehtchic 10.68 42 Pn Pn 04 51 34.8 -2.5
U33K Whale Pass 11.05 105 Pn Pn 04 51 41.5 -1.0
S34M Telegraph Cree 11.20 94 Pn Pn 04 51 42.4 -2.1
INK Inuvik 11.22 38 P Pn 04 51 42.4 -2.3
comp=E,17nm,0.8s,baz=241,slow=20,SNR=68
INK Inuvik 11.22 38 Pn Pn 04 51 41.7 -2.9
WRAK Wrangell Islan 11.27 103 Pn Pn 04 51 45.6 +0.3
DLBC Dease Lake 11.55 91 P Pn 04 51 49.4 +0.1
comp=E,7.4nm,0.6s,baz=252,slow=9.5,SNR=29
DLBC S Sn 04 53 51.6 -4.6
comp=E,2.6nm,0.5s,baz=194,slow=25,SNR=1.3
DLBC LR LR 04 56 25.7
comp=E,89nm,18.6s,baz=286,slow=38
C36M Paulatuk 14.73 41 Pn Pn 04 52 26.8 -3.5
A36M Sachs Harbour 15.63 32 Pn Pn 04 52 38.7 -2.9
BBB Bella Bella 15.77 111 P P 04 52 44.9 -0.2
comp=E,45nm,1.2s,baz=314,slow=9.5,SNR=4.8
BBB S Sn 04 55 36.0 -1.9
comp=E,12nm,1.0s,baz=296,slow=20,SNR=1.3
YKAW3 Yellowknife Wh 17.95 67 P P 04 53 08.1 -0.9
YKA Yellowknife Ar 17.96 67 P P 04 53 08.9 -0.1
comp=E,1.4nm,0.6s,baz=286,slow=12,SNR=29
YKA PcP PcP 04 57 39.2 +0.4
comp=E,0.3nm,0.4s,baz=62,slow=1.5,SNR=6.3
YKA ScP ScP 05 01 03.8 +0.3
comp=E,0.8nm,0.9s,baz=292,slow=2.8,SNR=5.8
YKA Yellowknife Ar 17.96 67 P P 04 53 08.2 -0.9
YKA Yellowknife Ar 17.96 67 P P 04 53 09.0 -0.1

YKAW1 Yellowknife Wh 18.02 67 P P 04 53 10.0 +0.3
BILL Bilibino 19.07 311 ⇓*i* P P **04 53 21.2 0.0**
EDM Edmonton 22.27 92 P P 04 53 57.1 +1.4
EDM IAmb IAmb 04 54 23.9
comp=E,266nm,1.2s
EDM Edmonton 22.27 92 P P 04 53 57.1 +1.4
EDM pmax pmax
comp=E,26nm,1.2s
NEW Newport 23.60 105 LR LR 05 03 51.3
comp=E,48nm,19.5s,baz=293,slow=37
RES Resolute Bay 24.68 32 P P 04 54 18.3 +0.4
RES Resolute Bay 24.68 32 P P 04 54 18.3 +0.4
RES pmax pmax
comp=E,6.0nm,0.8s
F10A Beach Ranch, E 25.21 109 P P 04 54 24.4 +1.3
SEY Seymchan 25.57 299 ⇓*i* P P **04 54 25.8 -0.2**
SEY pmax pmax
comp=E,8.0nm,1.0s
BLKN Baker Lake 25.62 57 P P 04 54 27.6 +1.2
BLKN IAmb IAmb 04 54 56.1
comp=E,22nm,1.1s
BMO Blue Mountains 26.02 111 P P 04 54 32.1 +1.7
BMO Blue Mountains 26.02 111 P P 04 54 32.1 +1.7
BMO pmax pmax
comp=E,7.0nm,1.1s
K05A Summer Lake 26.08 119 P P 04 54 34.0 +2.9
K05A IAmb IAmb 04 55 00.1
comp=E,43nm,1.5s
LYMT Lyon Mountain 26.84 102 P P 04 54 39.3 +1.4
MA2 Magadan 27.63 293 ⇓*i* P P **04 54 43.3 -1.2**
MA2 pmax pmax
comp=E,6.0nm,0.9s
FCC Fort Churchill 28.69 67 P P 04 54 54.9 +1.0
FCC Fort Churchill 28.69 67 P P 04 54 54.9 +1.0
FCC pmax pmax
comp=E,3.0nm,0.8s
POIN Pond Inlet 29.63 36 P P 04 55 01.8 -0.4
NVAR Mina Array Bea 30.74 121 P P 04 55 14.4 +1.9
comp=E,1.5nm,0.7s,baz=299,slow=9.0,SNR=6.0
NVAR pP pP **04 55 39.5 +2.4**
comp=E,2.8nm,0.7s,baz=324,slow=7.4,SNR=4.3
comp=E,1.5nm,0.7s
NVAR Mina Array Bea 30.74 121 P P 04 55 12.7 +0.1
PDAR Pinedale Array 31.24 105 P P 04 55 18.6 +1.6
comp=E,0.3nm,0.7s,baz=348,slow=4.4,SNR=4.0
PDAR pP pP **04 55 44.1 +2.7**
comp=E,1.8nm,0.6s,baz=315,slow=5.6,SNR=12
comp=E,0.3nm,0.7s
PDAR Pinedale Array 31.24 105 P P 04 55 17.4 +0.5
CCUT Cedar City 33.63 115 P P 04 55 36.8 -1.0
CCUT IAmb IAmb 04 56 16.4
comp=E,9.5nm,1.5s
PV03 Paradox Valley 35.12 109 P P 04 55 49.0 -1.7
PV03 IAmb IAmb 04 56 19.5
comp=E,7.1nm,0.9s
PV01 Paradox Valley 35.34 109 P P 04 55 53.8 +1.2
YAK Yakutsk 35.37 307 *eP* P **04 55 52.0 -0.2**
YAK pmax pmax
comp=E,16nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.4s
PFO Pinyon Flats O 35.62 123 ⇑ *eP* P **04 55 52.9 -2.0**
PFO pmax pmax
comp=E,6.0nm,0.9s
SUMG Summit 39.78 25 P P 04 56 29.4 -0.3
SUMG IAmb IAmb 04 56 31.0
comp=E,4.3nm,0.7s
SUMG Summit 39.78 25 P P 04 56 29.4 -0.3
SUMG pmax pmax
comp=E,4.0nm,0.7s
KUQ Kuujjuaa 40.16 55 P P 04 56 32.4 -0.2
KUQ IAmb IAmb 04 56 44.7
comp=E,8.9nm,1.3s
SPITS Spitsbergen Ar 41.34 3 P P 04 56 41.0 -1.0
comp=E,4.3nm,0.4s,baz=19,slow=5.3,SNR=24
comp=E,4.3nm,0.4s
SPB2 Spitsbergen Ar 41.35 3 P P 04 56 41.4 -0.7
KLR Kul'dur 42.63 290 *ce* P P **04 56 52.6 -0.2**
KLR pmax pmax
comp=E,4.0nm,2.5s
SCHQ Schefferville 43.02 58 P P 04 56 55.6 -0.3
comp=E,1.9nm,0.5s,baz=294,slow=7.5,SNR=8.2
comp=E,1.9nm,0.5s
VHRN Van Horn 43.07 112 P P 04 56 58.1 +1.3
VHRN IAmb IAmb 04 57 26.7
comp=E,11nm,1.0s
NRIK Noril'sk 43.53 334 P P 04 56 59.3 -0.5
comp=E,8.9nm,0.4s,baz=51,slow=5.9,SNR=18
comp=E,8.9nm,0.4s
NRIK Noril'sk 43.53 334 P P 04 56 59.5 -0.3
NRIK Noril'sk 43.53 334 ⇓*i* P P **04 56 59.7 -0.1**
NRIK pmax pmax
comp=E,5.0nm,0.8s
HEH HeiHe 43.89 294 *eP* P **04 57 01.4 -1.5**
HEH pmax pmax
comp=E,16nm,0.7s
TXAR Lajitas Array 44.90 112 P P 04 57 13.8 +2.4
comp=E,0.3nm,0.7s,baz=340,slow=5.8,SNR=4.0
TXAR pP pP **04 57 39.6 +2.7**
comp=E,3.8nm,0.9s,baz=330,slow=6.8,SNR=16
comp=E,0.3nm,0.7s
TXAR Lajitas Array 44.90 112 P P 04 57 12.9 +1.6
BNX BinXian 47.19 290 ⇑ P P **04 57 29.0 +0.1**
BNX pmax pmax
comp=E,5.0nm,1.3s
FRNY Flat Rock 47.23 72 P P 04 57 28.9 -0.4
O54A Avella 47.50 81 P P 04 57 32.1 +0.6
O54A IAmb IAmb 04 58 00.0
comp=E,16nm,0.9s
P53A Whipple 47.55 83 P P 04 57 31.6 -0.2
P53A IAmb IAmb 04 57 59.6
comp=E,12nm,0.8s
U49A Red Boiling Sp 47.70 89 P P 04 57 34.1 +1.1
U49A IAmb IAmb 04 58 01.1
comp=E,7.2nm,0.8s
HILR Hailar Array B 47.79 299 P P 04 57 32.6 -0.9
comp=E,3.0nm,0.4s,baz=50,slow=9.4,SNR=12
comp=E,3.0nm,0.4s
HIA Hailar 48.01 298 P P 04 57 35.9 +0.6
HIA IAmb IAmb 04 57 37.0
comp=E,7.4nm,0.7s
HIA Hailar 48.01 298 P P 04 57 35.9 +0.6
HIA pmax pmax
comp=E,7.0nm,0.7s
SSPA Standing Stone 48.37 79 P P 04 57 37.7 -0.4
SSPA IAmb IAmb 04 58 05.7
comp=E,23nm,1.4s
SWET Sewanee 48.66 90 P P 04 57 41.1 +0.7
SWET IAmb IAmb 04 58 08.2
comp=E,7.5nm,0.6s
TZTN Tazewell 48.78 87 P P 04 57 42.0 +0.7
BATG Bathurst New B 48.84 64 P P 04 57 42.2 +0.5
BATG IAmb IAmb 04 58 10.4
comp=E,8.9nm,0.8s
MAJO Matsushiro 49.04 274 ⇓ *eP* P **04 57 42.8 -0.5**
MAJO pmax pmax
comp=E,4.0nm,0.9s
TKL Tuckaleechee C 49.37 88 P P 04 57 46.4 +0.6
TKL IAmb IAmb 04 58 14.2
comp=E,6.4nm,0.6s
TKL Tuckaleechee C 49.37 88 P P 04 57 46.4 +0.6
TKL pmax pmax
comp=E,6.0nm,0.6s
Y49A Blount Mountai 49.50 92 P P 04 57 47.9 +1.0
CN2 Changchun 49.57 290 P P 04 57 46.7 -0.5
CN2 pP pP 04 58 12.4 -1.3
CN2 sP sP 04 58 25.5 -0.8
CN2 pmax pmax
comp=E,10.0nm,0.6s
BORG Borgarnes 49.76 25 LR LR 05 19 56.4
comp=E,77nm,18.3s,baz=95,slow=37
V53A Saluda 49.84 87 P P 04 57 48.2 -1.2
V53A IAmb IAmb 04 58 18.2
comp=E,8.8nm,0.8s
ARCES ARCESS Array B 50.20 1 P P 04 57 50.1 -1.4
comp=E,7.6nm,1.0s,baz=4.8,slow=7.3,SNR=7.3
comp=E,7.6nm,1.0s
ARCES ARCESS Array B 50.20 1 P P 04 57 50.2 -1.4
ARCES ARCESS Array B 50.20 1 P P 04 57 50.2 -1.4
ARCES pmax pmax
comp=E,38nm,1.4s
HODGE Hodges 51.26 88 P P 04 58 00.0 0.0
HODGE IAmb IAmb 04 58 28.5
comp=E,9.9nm,0.8s

KSRS Korea Array 53.35 283 P P 04 58 15.8 +0.4
comp=E,2.4nm,0.7s,baz=31,slow=5.9,SNR=6.2
comp=E,2.4nm,0.7s
XLT XiLinHaoTe 53.75 296 *eP* P **04 58 20.0 +1.6**
XLT pmax pmax
comp=E,6.0nm,0.5s
XLT pmax pmax
comp=E,93nm,5.0s
ULN Ulaanbaatar 54.42 306 P P 04 58 24.5 +1.3
ULN Ulaanbaatar 54.42 306 ⇓*i* P P **04 58 23.8 +0.5**
ULN pmax pmax
comp=E,4.0nm,0.9s
SONM Songino Array 54.71 306 P P 04 58 26.6 +1.3
comp=E,8.7nm,0.6s,baz=40,slow=7.1,SNR=70
comp=E,8.7nm,0.6s
SONM Songino Array 54.71 306 P P 04 58 26.3 +1.0
JCJ Chichijima 54.75 263 LR LR 05 19 35.6
comp=E,14nm,21.4s,baz=90,slow=33
KNGR Kungurtug, Tuv 55.81 314 ⇑ *i* P P **04 58 34.5 +1.3**
KNGR pmax pmax
comp=E,4.0nm,1.0s
ZAA0 Zalesovo Array 57.10 324 P P 04 58 42.0 -0.1
ZAA0 IAmb IAmb 04 58 42.8
comp=E,5.9nm,0.7s
ZALV Zalesovo Beam 57.10 324 P P 04 58 42.1 0.0
comp=E,5.5nm,0.5s,baz=33,slow=7.2,SNR=20
comp=E,5.5nm,0.5s
ZALV Zalesovo Beam 57.10 324 P P 04 58 41.5 -0.6
NB2 NORSAR Subarra 58.08 9 P P 04 58 47.9 -1.0
comp=E,0.9nm,0.6s,baz=351,slow=7.4
NOA NORSAR Array B 58.08 9 P P 04 58 47.9 -1.0
comp=E,0.5nm,0.5s,baz=359,slow=7.8,SNR=3.8
comp=E,0.5nm,0.5s
HHC Hu-ho-hao-te 58.19 297 *eP* P **04 58 54.0 +3.9**
HHC pmax pmax
comp=E,7.0nm,0.6s
FIA1 FINESS Array S 58.33 1 P P 04 58 50.1 -0.4
FINES FINESS Array B 58.33 1 P P 04 58 50.0 -0.6
comp=E,2.8nm,0.5s,baz=15,slow=6.8,SNR=23
comp=E,2.8nm,0.5s
FINES FINESS Array B 58.33 1 P P 04 58 49.5 -1.0
FINES FINESS Array B 58.33 1 P P 04 58 50.0 -0.6
HFS Hagfors 59.16 8 P P 04 58 55.5 -0.9
comp=E,1.6nm,0.4s,baz=16,slow=3.7,SNR=16
comp=E,1.6nm,0.4s
DGZ Jazzator, Alta 60.00 320 ⇑ *i* P P **04 59 01.3 -1.2**
DGZ pmax pmax
comp=E,3.0nm,1.1s
ARTI Arti 60.89 341 P P 04 59 07.5 -0.7
ARTI Arti 60.89 341 *c i* P P **04 59 07.3 -0.9**
ARTI 04 59 44.0
ARTI S S **05 07 16.4 -0.5**
ARTI SS SS **05 11 11.3 -5.4**
ARTI pmax pmax
comp=E,11nm,1.5s
BORK Borovoye 61.71 332 P P 04 59 13.3 -0.5
BORK IAmb IAmb 04 59 14.1
comp=E,2.9nm,0.7s
BORK Borovoye 61.71 332 ⇓*i* P P **04 59 13.3 -0.5**
BORK pmax pmax
comp=E,4.0nm,0.9s
BVAR Borovoye Array 61.72 332 P P 04 59 13.4 -0.4
comp=E,3.7nm,0.5s,baz=23,slow=6.2,SNR=19
comp=E,3.7nm,0.5s
KURK Kurchatov 61.74 326 P P 04 59 13.9 -0.1
KURK IAmb IAmb 04 59 14.4
comp=E,7.1nm,0.9s
KURK Kurchatov 61.74 326 ⇑ *i* P P **04 59 13.6 -0.4**
KURK pmax pmax
comp=E,5.0nm,0.9s
KURBB Kurchatov Arra 61.85 326 P P 04 59 14.4 -0.3
comp=E,3.5nm,0.4s,baz=30,slow=6.7,SNR=44
KURBB PcP PcP **04 59 53.7 -0.9**
comp=E,1.6nm,0.8s,baz=26,slow=5.0,SNR=6.7
comp=E,3.5nm,0.4s
EKA Eskdalemuir Ar 61.91 19 P P 04 59 14.4 -0.6
comp=E,0.6nm,0.3s,baz=333,slow=5.5,SNR=7.8
EKA pP pP **04 59 42.5 +0.4**
comp=E,1.7nm,0.6s,baz=344,slow=4.5,SNR=3.5
comp=E,0.6nm,0.3s
LYN LuoYang 62.98 293 P P 04 59 22.7 +0.2
LYN pP pP 04 59 50.9 +1.0
LYN pmax pmax
comp=E,13nm,0.6s
MK31 Makanchi Array 64.19 321 ⇓*i* P P **04 59 29.7 -0.6**
MKAR Makanchi Array 64.19 321 P P 04 59 29.8 -0.5
comp=E,3.0nm,0.6s,baz=41,slow=6.5,SNR=36
comp=E,3.0nm,0.6s
MKAR Makanchi Array 64.19 321 P P 04 59 29.4 -0.9
MKAR Makanchi Array 64.19 321 P P 04 59 29.4 -0.9
MAKZ Makanchi 64.27 322 P P 04 59 30.2 -0.6
MAKZ IAmb IAmb 04 59 31.1
comp=E,4.2nm,0.8s
MAKZ Makanchi 64.27 322 P P 04 59 30.2 -0.6
MAKZ pmax pmax
comp=E,4.0nm,0.8s
GTA2 Gaotai 64.31 305 *eP* P **04 59 31.5 +0.2**
GTA2 pmax pmax
comp=E,19nm,1.0s
WMQ Urumqi 65.07 316 *eP* P 04 59 41.7 +5.6
MNK Minsk 65.29 360 *i* P P **04 59 40.7 +3.4**
comp=E,20nm,0.8s
MNK *i* P P **04 59 40.7 +3.4**
comp=N,11nm,0.9s
MNK *i* P P **04 59 40.7 +3.4**
comp=E,9.0nm,0.6s,baz=0.2
MNK *i* pP pP **05 00 05.7 +0.9**
MNK *i* PP PP **05 02 05.5 +4.0**
MNK *i* PPP PPP 05 03 39.8
MNK *i* S S **05 08 17.4 +5.8**
MNK *i* sS sS **05 09 00.9 +1.8**
MNK *i* SS SS **05 12 33.4 +8.1**
MNK *i* SSS SSS 05 15 41.5
MNK *i* LQ LQ 05 20 54.1
MNK *i* LR LR 05 28 44.3
MNK *i* LRM MLR 05 29 54.2
comp=E,683nm,21.7s
MNK *i* LRM MLR 05 29 58.0
comp=N,685nm,22.2s
MNK *i* LRM MLR 05 30 17.0
comp=E,49nm,15.2s
MNK Minsk 65.29 360 *i* P P **04 59 40.7 +3.4**
MNK *i* *PP pP **05 00 05.7 +0.9**
MNK *i* 05 02 05.5
MNK *i* PPP PPP 05 03 39.7
MNK *i* S S **05 08 17.4 +5.8**
MNK *i* SS SS **05 12 33.3 +8.1**
MNK pmax pmax
comp=N,11nm,0.9s
MNK pmax pmax
comp=E,20nm,0.8s
MNK pmax pmax
comp=E,9.0nm,0.6s
MNK MLR MLR
comp=E,683nm,22.0s
MNK MLR MLR
comp=N,685nm,22.0s
MNK MLR MLR
comp=E,49nm,15.0s
LZH Lanzhou 65.50 300 *eP* P **04 59 39.0 -0.1**
LZH pP pP 05 00 05.7 -1.2
LZH pmax pmax
comp=E,17nm,1.3s
LZDM Lanzhou Array 65.67 300 P P 04 59 40.3 -0.2
comp=E,1.6nm,0.4s,baz=75,slow=1.7,SNR=8.7
comp=E,1.6nm,0.4s
BELG Belogornoye 66.27 347 ⇑ *i* P P **04 59 42.2 -1.3**
BELG pmax pmax
comp=E,2.0nm,1.4s
AB31 Akbulak array 67.47 338 IAmb IAmb 04 59 51.6
comp=E,4.9nm,0.6s
ABKAR Akbulak array 67.47 338 P P 04 59 50.4 -0.8
AKASG Malin Array Be 69.09 359 P P 05 00 00.4 -0.9
comp=E,2.1nm,0.3s,baz=7.0,slow=6.2,SNR=13
comp=E,2.1nm,0.3s
AKASG Malin Array Be 69.09 359 P P 05 00 00.5 -0.8
AKASG Malin Array Be 69.09 359 P P 05 00 00.5 -0.8
AKASG pmax pmax
comp=E,2.0nm,1.1s
AKBB Malin Array Si 69.09 359 ⇓*i* P P **05 00 00.7 -0.6**
AKBB pmax pmax
comp=E,3.0nm,0.8s
KIEV Kiev 69.10 359 P P 05 00 00.1 -1.2
KIEV IAmb IAmb 05 00 01.9
comp=E,19nm,1.4s
KIEV Kiev 69.10 359 P P 05 00 00.2 -1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KIEV				pmax	pmax		
	comp=Z,19nm,1.4s						
GOMU	**GeErMu**	**69.12**	**307**	P	**P**	**05 00 02.3**	**+0.1**
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WUS	**Wushi**	**70.19**	**321**	IAmb	IAmb	05 00 09.5	
	comp=Z,5.7nm,0.9s						
AAK	**Ala-Archa**	**70.27**	**325**	P	**P**	**05 00 09.1**	**+0.2**
AAK				IAmb	IAmb	05 00 09.8	
	comp=Z,4.0nm,0.7s						
AAK	**Ala-Archa**	**70.27**	**325**⇑	*i*P	**P**	**05 00 08.7**	**-0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GERES	**GERESS Array B**	**70.38**	**10**	P	**P**	**05 00 08.0**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=0.0,slow=5.9,SNR=3.8						
	comp=Z,0.5nm,0.6s						
GERES	**GERESS Array B**	**70.38**	**10**	P	**P**	**05 00 08.0**	**-1.4**
KK31	**Karatay Array**	**70.92**	**328**	IAmb	IAmb	05 00 13.2	
	comp=Z,3.8nm,0.6s						
KKAR	**Karatay Array**	**70.92**	**328**	P	**P**	**05 00 12.5**	**-0.2**
KKAR	**Karatay Array**	**70.92**	**328**	P	**P**	**05 00 12.5**	**-0.2**
KECS	**Kecovo**	**71.17**	**5**	*e*PP	PP	05 02 51.7	-0.7
CONA	**Conrad Observa**	**71.46**	**8**	*e*P	**P**	**05 00 16.6**	**+0.6**
	comp=Z,4.2nm,1.0s						
LESA	**Schwarzleotal**	**71.70**	**11**	*e*P	**P**	**05 00 20.4**	**+3.1**
	comp=Z,3.2nm,1.0s						
KBA	**Koelnbreinsper**	**72.10**	**10**	*i* P	**P**	**05 00 20.7**	**+0.8**
	comp=Z,2.1nm,0.5s						
TUE	**Stuetta**	**72.30**	**13**	P	**P**	**05 00 21.5**	**+0.4**
OBKA	**Obir**	**72.77**	**9**	*i* P	**P**	**05 00 23.4**	**-0.3**
	comp=Z,5.0nm,0.6s						
KSH2	**Kashi**	**73.18**	**323**	P	**P**	**05 00 26.9**	**+0.5**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GAR	**Garm**	**74.81**	**327**	P	**P**	**05 00 35.6**	**-0.2**
GAR				IAmb	IAmb	05 00 36.5	
	comp=Z,8.6nm,0.7s						
ESDC	**Sonseca Array**	**76.83**	**25**	P	**P**	**05 00 46.8**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=342,slow=5.2,SNR=9.5						
ESDC				pP	**pP**	**05 01 15.5**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=343,slow=6.9,SNR=1.8						
	comp=Z,0.8nm,0.6s						
ESDC	**Sonseca Array**	**76.83**	**25**	P	**P**	**05 00 47.5**	**+0.3**
SDV	**Santo Domingo**	**78.27**	**93**	LR	LR	05 37 27.0	
	comp=Z,32nm,18.1s,baz=312,slow=37						
BR131	**Keskin Array S**	**79.95**	**355**⇑	*i*P	**P**	**05 01 04.2**	**-0.3**
BRTR	**Keskin Array B**	**79.95**	**355**	P	**P**	**05 01 03.1**	**-1.3**
	comp=Z,1.6nm,1.0s,baz=10,slow=3.9,SNR=5.2						
	comp=Z,1.6nm,1.0s						
BRTR	**Keskin Array B**	**79.95**	**355**	*i* P	**P**	**05 01 05.4**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KEST	**Kesra**	**82.90**	**15**	P	**P**	**05 01 20.5**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=12,slow=1.1,SNR=5.2						
	comp=Z,2.7nm,0.6s						
KEST	**Kesra**	**82.90**	**15**	IAmb	IAmb	05 01 59.7	
	comp=Z,15nm,1.2s						
CMAR	**Chiang Mai Arr**	**82.90**	**295**	P	**P**	**05 01 19.9**	**-0.2**
	comp=Z,4.3nm,0.6s,baz=14,slow=6.0,SNR=13						
	comp=Z,4.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**82.90**	**295**	P	**P**	**05 01 19.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**82.90**	**295**	*i* P	**P**	**05 01 20.0**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MD31	**MD31**	**83.21**	**27**	P	**P**	**05 01 22.1**	**+0.4**
BOSA	**Boshof**	**148.03**	**4**	PKPbc	**PKPbc**	**05 08 39.7**	**-0.3**
	comp=Z,7.7nm,0.6s,baz=6.6,slow=2.5,SNR=34						
BOSA	**Boshof**	**148.03**	**4**		**PKPbc**	**05 08 39.4**	**-0.5**
QSPA	**South Pole Qui**	**150.35**	**180**	PKPbc	**PKPbc**	**05 08 44.8**	**+0.4**
	comp=Z,8.3nm,0.7s,baz=147,slow=0.8,SNR=9.4						
QSPA	**South Pole Qui**	**150.35**	**180**		**PKPbc**	**05 08 45.0**	**+0.5**
GRHM	**Grahamstown, E**	**152.70**	**2**	PKPdf	**PKPdf**	**05 08 43.8**	**0.0**
NVL	**N'lazarevskaya**	**167.92**	**155**	*e*PKP2	**PKPab**	**05 10 00.8**	**-6.5**
NVL				pmax	pmax		
	comp=Z,20nm,1.3s						

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*ASRS **03** 05:00:24.0±0.9, 53°.62N×87°.72E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 03 05:00:24.5±3.5**, 53°.72N×87°.89E, h0**km**, mbtmp2.9**/2**, ML2.4**/2**, Error ellipse: s-maj=32.7km s-min=18.5km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**278**	I	I	05 13 00.0	
	0.1nm,0.9s,baz=94,slow=336,SNR=8.7						
ZALV	**Zalesovo Beam**	**1.84**	**278**	Pg	Pn	05 00 58.0	+0.7
	0.8nm,0.3s,baz=99,slow=18,SNR=9.3						
ZALV				Lg	Lg	05 01 22.1	
	1.5nm,0.3s,baz=97,slow=31,SNR=12						
KURBB	**Kurchatov Arra**	**6.54**	**245**	Pn	Pn	05 02 02.9	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=6.6						
KURBB				Lg	Lg	05 03 47.5	
	baz=60,slow=32,SNR=4.3						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**7.81**	**210**	Pn	Pn	05 02 20.0	+0.7
	0.1nm,0.3s,baz=30,slow=13,SNR=3.0						
MKAR				Lg	Lg	05 04 26.7	
	0.1nm,0.3s,baz=24,slow=30,SNR=5.2						
	0.2nm,0.4s						

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*IDC **03** 05:02:09.4±0.9, 17°.80N×66°.90W, h0km, mb3.7/6, mbtmp3.7/7, ML2.8/1, MS2.8/1, Error ellipse: s-maj=21.6km s-min=10.1km az=161.0*
*PTWC **03** 05:02:11, 17°.90N×66°.90W, h14km, Ml4.0/13*
*NEIC **03** 05:02:12.1±1.5, 17°.85N±0°.03×66°.834W±0°.005, h10km±2km, ML4.0/41, Md3.8/5(RSPR), Mwr3.7/16(SLM), Error ellipse: s-maj=4.4km s-min=2.8km az=353.0*
*OSPL **03** 05:02:12.9±0.4, 17°.89N×66°.85W, h16km±3km, ML3.5, Presumed earthquake*
*NEIC **03** 05:02:13, 17°.92N×66°.85W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.75; $M_{\theta\theta}$3.76; $M_{\phi\phi}$0.99; $M_{r\theta}$1.10; $M_{\theta\phi}$2.35; $M_{\phi r}$-0.87; Fault plane solution: $M_0$5.13000×10^{14} NP1:ϕ_s255.00000°, δ50.00000°, λ-70.00000°. NP2:ϕ_s45.00000°, δ44.00000°, λ-112.00000°. Principal axes: T 5.1313, Plg3.0000°, Azm331.0000°; N 0.0006, Plg15.0000°, Azm62.0000°; P -5.1319, Plg74.0000°, Azm230.0000°;*
*RSPR **03** 05:02:13.0, 17°.92N×66°.85W, h11km, MD3.8/5*

ISC 03 05:02:10.7±1.1**, 17°.79N**±0°.05×**66°.86W**±0°.02**, h12**km±7km**, n80, σ1**§**41**/100**, mb3.7**/5**, 8C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.18**	**355**		**Pb**	**05 02 15.8**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.18**	**355**⇑	*e*P	**Pb**	**05 02 15.8**	**-0.2**
MLPR	**Magueyes Islan**	**0.25**	**316**	Pg	**Pb**	**05 02 17.3**	**+0.2**
MLPR				Sg	**Sb**	**05 02 20.6**	**+1.1**
MLPR				IAML		05 02 21.1	
	23μm,0.4s						
MLPR				IAML		05 02 21.4	
	20μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	Pg	**Pb**	**05 02 18.2**	**0.0**
CRPR				Sg	**Sg**	**05 02 22.2**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	IAML		05 02 23.0	
	12μm,0.5s						
CRPR				IAML		05 02 23.0	
	22μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	P	**Pb**	**05 02 18.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.32**	**312**⇑	*e*P	**Pb**	**05 02 18.3**	**0.0**
CRPR				*e*S	**Sg**	**05 02 22.4**	**+0.9**
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	*i* P	**Pb**	**05 02 18.4**	**+0.1**
CRPR				*e*S	**Sg**	**05 02 22.4**	**+0.9**
CRPR				IAML		05 02 22.8	
	comp=Z,13μm,0.1s						
OBIP	**Obispado Ponce**	**0.35**	**44**	Pg	**Pg**	**05 02 18.2**	**+0.5**
OBIP	**Obispado Ponce**	**0.35**	**44**	P	**Pg**	**05 02 17.9**	**+0.1**
OBIP	**Obispado Ponce**	**0.35**	**44**⇓	*e*P	**Pg**	**05 02 18.2**	**+0.5**
OBIP				*e*S	**Sg**	**05 02 22.5**	**-0.1**
OBIP	**Obispado Ponce**	**0.35**	**44**	*i* P	**Pg**	**05 02 18.2**	**+0.5**
OBIP				*e*S	**Sg**	**05 02 22.4**	**-0.1**
OBIP				IAML		05 02 24.5	
	comp=Z,4μm,0.3s						
CELP	**Cerrillos**	**0.39**	**44**	Pg	**Pg**	**05 02 18.8**	**+0.3**
CELP				Sg	**Sg**	**05 02 23.5**	**-0.3**
CELP				IAML		05 02 24.1	
	comp=Z,19μm,0.4s						
CELP				IAML		05 02 24.2	
	comp=Z,15μm,0.3s						
LSP	**Las Mesas**	**0.44**	**331**		**Pg**	**05 02 19.8**	**+0.4**
LSP	**Las Mesas**	**0.44**	**331**⇓	*e*P	**Pg**	**05 02 19.8**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.48**	**16**	Pg	**Pg**	**05 02 19.7**	**-0.4**
UUPR				Sg	**Sg**	**05 02 24.4**	**-2.1**
PRSN	**Puerto Rico Se**	**0.50**	**328**	Pg	**Pg**	**05 02 20.6**	**0.0**
PRSN				Sg	**Sg**	**05 02 27.1**	**-0.2**
PRSN				IAML		05 02 30.0	
	comp=Z,22μm,0.3s						
PRSN	**Puerto Rico Se**	**0.50**	**328**	P	**Pg**	**05 02 19.8**	**-0.8**
PRSN	**Puerto Rico Se**	**0.50**	**328**⇑	*e*P	**Pg**	**05 02 20.6**	**0.0**
PRSN				*e*S	**Sg**	**05 02 27.3**	**0.0**
ECPR	**Experimental S**	**0.71**	**42**	Pg	**Pg**	**05 02 23.7**	**-0.8**
ECPR				Sg	**Sg**	**05 02 32.2**	**-1.6**
ECPR				IAML		05 02 34.9	
	comp=Z,6μm,0.2s						
ECPR				IAML		05 02 35.1	
	comp=Z,6μm,0.2s						
ECPR	**Experimental S**	**0.71**	**42**⇓	*e*P	**Pg**	**05 02 23.9**	**-0.6**
ECPR				*e*S	**Sg**	**05 02 32.5**	**-1.3**
AGPR	**Aguadilla, PR**	**0.71**	**341**	Pg	**Pg**	**05 02 23.8**	**-0.8**
AGPR				IAML		05 02 35.4	
	comp=Z,7μm,0.6s						
AGPR	**Aguadilla, PR**	**0.71**	**341**	P	**Pg**	**05 02 23.7**	**-0.8**
AGPR	**Aguadilla, PR**	**0.71**	**341**⇑	*e*P	**Pg**	**05 02 23.9**	**-0.7**
AGPR				*e*S	**Sg**	**05 02 32.5**	**-1.4**
AGPR	**Aguadilla, PR**	**0.71**	**341**	*i* P	**Pg**	**05 02 23.9**	**-0.7**
AGPR				*e*S	**Sg**	**05 02 32.6**	**-1.4**
AGPR				IAML		05 02 33.3	
	comp=Z,3μm,0.2s						
SJG	**San Juan**	**0.75**	**65**	Pg	**Pg**	**05 02 25.1**	**-0.1**
	comp=Z,128nm,0.3s,baz=253,slow=14,SNR=256						
SJG				Lg	Lg	05 02 34.9	
SJG				LR	LR	05 02 39.7	
	comp=Z,58nm,19.6s,baz=252,slow=39						
SJG	**San Juan**	**0.75**	**65**	P	**Pg**	**05 02 25.3**	**0.0**
SJG	**San Juan**	**0.75**	**65**	*e*P	**Pg**	**05 02 25.2**	**-0.1**
SJG	**San Juan**	**0.75**	**65**	*e*	Pn	05 02 34.5	+7.4
SJG	**San Juan**	**0.75**	**65**⇓	*e*P	**Pg**	**05 02 25.2**	**0.0**
SJG				*e*S	**Sg**	**05 02 34.9**	**-0.3**
SJG	**San Juan**	**0.75**	**65**	*i* P	**Pg**	**05 02 25.5**	**+0.2**
SJG				*e*S	**Sg**	**05 02 34.8**	**-0.3**
SJG				IAML		05 02 39.1	
	comp=Z,2μm,0.7s						
EMPR	**Esperanza - Ma**	**0.75**	**25**		**Pg**	**05 02 24.9**	**-0.4**
EMPR					**Sg**	**05 02 33.9**	**-1.3**
EMPR	**Esperanza - Ma**	**0.75**	**25**⇑	*e*P	**Pg**	**05 02 24.9**	**-0.4**
EMPR				*e*S	**Sg**	**05 02 33.9**	**-1.3**
IDE	**Isla Desecheo**	**0.83**	**316**		**Pg**	**05 02 26.7**	**-0.1**
IDE	**Isla Desecheo**	**0.83**	**316**⇑	*e*P	**Pg**	**05 02 26.7**	**-0.1**
PDPR	**Patillas Dam,**	**0.83**	**74**	Pg	**Pg**	**05 02 26.9**	**+0.1**
GCPR	**Guaynabo City**	**0.90**	**55**	Pg	**Pg**	**05 02 27.5**	**-0.7**
GCPR	**Guaynabo City**	**0.90**	**55**		**Sg**	**05 02 38.7**	**-1.2**
GCPR	**Guaynabo City**	**0.90**	**55**	P	**Pg**	**05 02 27.5**	**-0.7**
GCPR				S	**Sg**	**05 02 39.2**	**-0.8**
GCPR	**Guaynabo City**	**0.90**	**55**⇑	*e*P	**Pg**	**05 02 27.4**	**-0.8**
GCPR				*e*S	**Sg**	**05 02 38.7**	**-1.2**
HUMP	**Col San Antoni**	**1.02**	**70**	Pg	**Pb**	**05 02 29.9**	**-0.4**
HUMP				IAML		05 02 46.5	
	comp=Z,4μm,0.3s						
HUMP	**Col San Antoni**	**1.02**	**70**		**Sb**	**05 02 43.2**	**-0.5**
HUMP	**Col San Antoni**	**1.02**	**70**	P	**Pb**	**05 02 29.9**	**-0.4**
HUMP	**Col San Antoni**	**1.02**	**70**⇑	*e*P	**Pb**	**05 02 30.0**	**-0.4**
HUMP				*e*S	**Sb**	**05 02 43.2**	**-0.5**
CUPR	**Culebra, Puert**	**1.59**	**71**	Pn	**Pb**	**05 02 39.7**	**-0.3**
MIDR	**Miches**	**2.39**	**300**	P	**Pn**	**05 02 51.1**	**+1.4**
DR12	**Loma Pena Alta**	**2.59**	**293**	Pn	**Pn**	**05 02 54.8**	**+2.3**
SDD	**Santo Domingo**	**2.98**	**283**	Pn	**Pn**	**05 03 00.6**	**+2.9**
SDD				IAML		05 03 55.4	
	comp=N,421nm,1.0s						
SDD				IAML		05 04 09.8	
	comp=E,363nm,1.2s						
BANI	**BANI**	**3.38**	**281**	Pn	**Pn**	**05 03 06.5**	**+3.1**
SABA	**Saba**	**3.45**	**92**	Pn	**Pn**	**05 03 05.8**	**+1.5**
SMRT	**St. Maarten**	**3.62**	**85**	Pn	**Pn**	**05 03 07.1**	**+0.6**
SKI	**Saint Kitts**	**3.96**	**96**	*e*P	**Pn**	**05 03 08.9**	**-2.4**
SC01	**Santiago de lo**	**4.01**	**295**	Pn	**Pb**	**05 03 16.9**	**-4.4**
SDDR	**Presa de Saban**	**4.37**	**286**	Pn	**Pn**	**05 03 21.1**	**+4.2**
SDDR	**Presa de Saban**	**4.37**	**286**	*e*P	**Pb**	**05 03 24.1**	**-3.3**
MBFL	**Flemmings, Mon**	**4.56**	**102**	*e*P	**Pn**	**05 03 20.9**	**+1.4**
MLYT	**Lee's Yard**	**4.59**	**103**	*e*P	**Pn**	**05 03 19.0**	**-0.9**
ANWB	**Willy Bob**	**4.84**	**91**	*e*P	**Pn**	**05 03 21.6**	**-1.7**
GDHS	**Morne Mazeau,**	**5.10**	**106**	Pn	**Pn**	**05 03 28.9**	**+1.9**
ATGZ	**Broadband at L**	**5.20**	**108**	*e*P	**Pn**	**05 03 29.6**	**+1.4**
MMLZ	**Guadeloupe Bro**	**5.26**	**108**	*e*P	**Pn**	**05 03 25.3**	**-3.9**
CBE	**Ff, Capester**	**5.31**	**108**	Pn	**Pn**	**05 03 30.5**	**+0.6**
CBE				IAML		05 04 37.3	
	comp=E,136nm,0.6s						
CBE				IAML		05 04 39.9	
	comp=N,133nm,0.5s						
MAGL	**Barre de l'ile**	**5.65**	**108**	Pn	**Pn**	**05 03 34.5**	**+0.1**
DSLB	**Salisbury**	**5.72**	**113**	*e*P	**Pn**	**05 03 35.0**	**-0.4**
GDSD	**La Dsirade Is**	**5.74**	**104**	Pn	**Pn**	**05 03 37.0**	**+1.3**
BIM	**Bigot**	**6.45**	**119**	Pn	**Pn**	**05 03 45.9**	**+0.4**
BIM	**Bigot**	**6.45**	**119**	*e*P	**Pn**	**05 03 45.4**	**-0.1**
MPOM	**Morne Pois Mar**	**6.66**	**119**	Pn	**Pn**	**05 03 50.3**	**+1.9**
H05S1	**Guadeloupe/Mar**	**6.69**	**119**	Pn	**Pn**	**05 03 51.3**	**+2.6**
SLBI	**Saint Lucia, B**	**6.79**	**123**	*e*P	**Pn**	**05 03 47.3**	**-2.9**
SVB	**Belmont**	**7.03**	**129**	*e*P	**Pn**	**05 03 51.9**	**-1.5**
SDV	**Santo Domingo**	**9.58**	**203**	Pn	**Pn**	**05 04 29.4**	**+0.8**
	comp=N,1.0nm,0.3s,baz=24,slow=8.8,SNR=9.1						
SDV				Sn	**Sn**	**05 06 12.4**	**-4.0**
	comp=N,0.2nm,0.3s,baz=11,slow=23,SNR=1.5						
SDV				LR	LR	05 08 39.6	
	comp=N,50nm,18.7s,baz=220,slow=41						
	comp=N,2.6nm,0.4s						
SDV	**Santo Domingo**	**9.58**	**203**	Pn	**Pn**	**05 04 30.9**	**+2.3**
TKL	**Tuckaleechee C**	**23.28**	**323**	S	**S**	**05 11 31.0**	**+0.6**
	comp=N,0.9nm,0.5s,baz=116,slow=23,SNR=1.2						
TXAR	**Lajitas Array**	**35.50**	**296**	P	**P**	**05 09 08.8**	**+1.2**
	comp=N,0.4nm,0.6s,baz=110,slow=10,SNR=7.5						
	comp=N,0.4nm,0.6s						
CPUP	**Villa Florida**	**44.83**	**168**	P	**P**	**05 10 24.4**	**-0.2**
	comp=N,1.9nm,0.8s,baz=360,slow=8.8,SNR=7.5						
	comp=N,1.9nm,0.8s						
YKA	**Yellowknife Ar**	**55.50**	**335**	P	**P**	**05 11 44.9**	**-0.3**
	comp=N,0.9nm,0.9s,baz=111,slow=6.5,SNR=7.7						
	comp=N,0.9nm,0.9s						
ESDC	**Sonseca Array**	**58.12**	**54**	P	**P**	**05 12 05.9**	**+1.6**
	comp=N,0.8nm,1.0s,baz=263,slow=7.2,SNR=5.1						
	comp=N,0.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**65.92**	**83**	P	**P**	**05 12 57.0**	**-0.1**
	comp=N,0.9nm,1.1s,baz=274,slow=8.4,SNR=2.8						
	comp=N,0.9nm,1.1s						
ILAR	**Eielson Array**	**69.81**	**333**	P	**P**	**05 13 20.9**	**+0.2**
	comp=N,0.3nm,0.7s,baz=103,slow=4.4,SNR=4.8						
	comp=N,0.3nm,0.7s						

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*IDC **03** 05:02:55.2±0.7, 4°.02S×152°.61E, h168km±5km, mb3.9/17, mbtmp4.4/17, MS3.2/2, Error ellipse: s-maj=17.5km s-min=12.2km az=92.0*
*BJI **03** 05:02:55.8, 3°.96S×152°.77E, h195km, mB4.9/9, mb4.6/48*
*NEIC **03** 05:02:58.2±1.8, 3°.99S±0°.10×152°.3E±0°.1, h175km±5km, mb4.8/50, Error ellipse: s-maj=17.0km s-min=12.7km az=52.0*
*DJA **03** 05:03:00.5±2.3, 4°S±10°×15°2E±1°4, h207km±16km, M4.9/21, mb4.8/21, mB5.2/5, MLv5.2/1, Mw(mB)4.5/5*

ISC 03 05:02:57.1±0.4**, 4°.03S**±0°.05×**152°.29E**±0°.06**, h177**km±3km**, h177**km**:pP-P, n171, σ1**§**19**/190**, mb4.8**/69**, 1C-4D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.20**	**217**		**Pn**	**05 03 22.1**	**+1.4**
MANU	**Manus Island**	**5.29**	**292**		**Pn**	**05 04 16.5**	**+1.6**
PMG	**Port Moresby**	**7.38**	**223**	P	**Pn**	**05 04 40.7**	**-1.6**
	15nm,0.5s,baz=14,slow=13,SNR=5.0						
PMG				S	**Sn**	**05 06 06.4**	**+1.0**
	152nm,0.9s,baz=344,slow=20,SNR=12						
PMG				LR	LR	05 07 25.6	
	comp=Z,198nm,18.2s,baz=324,slow=36						
PMG	**Port Moresby**	**7.38**	**223**	Pn	**Pn**	**05 04 44.6**	**+2.3**
PMG	**Port Moresby**	**7.38**	**223**	P	**Pn**	**05 04 44.5**	**+2.2**
	0.5nm51nm,0.8s						
JAY	**Jayapura**	**11.66**	**277**	P	Pn	05 05 31.1	-7.3
GENI	**Genyem**	**12.18**	**276**	P	Pn	05 05 34.8	-10
	66nm,0.7s						
GENI	**Genyem**	**12.18**	**276**	P	Pn	05 05 28.7	-16
COEN	**Coen**	**13.35**	**222**		**P**	**05 06 02.6**	**-0.7**
COEN	**Coen**	**13.35**	**222**	S	**Sn**	**05 08 23.5**	**-4.9**
RKPI	**Ransiki, Papua**	**18.26**	**277**	P	**Pn**	**05 06 59.8**	**+0.2**
	161nm,1.4s						
KMPI	**Kaimana, Papua**	**18.54**	**270**	P	**Pn**	**05 07 02.5**	**-0.4**
	2μm210nm,0.8s						
FAKI	**Fak Fak**	**20.03**	**273**		**P**	**05 07 17.9**	**+1.2**
FAKI	**Fak Fak**	**20.03**	**273**	P	**P**	**05 07 14.8**	**-1.9**
FAKI	**Fak Fak**	**20.03**	**273**	P	**P**	**05 07 16.5**	**-0.2**
	70nm,0.9s						
QIS	**Mount Isa**	**20.55**	**216**	P	**P**	**05 07 22.9**	**+0.7**
	34nm,0.9s						
SIJI	**Sorong**	**21.23**	**278**	P	**P**	**05 07 31.1**	**+1.7**
	131nm,1.0s,baz=66,slow=7.2,SNR=21						
	131nm,1.0s						
SIJI	**Sorong**	**21.23**	**278**	P	**P**	**05 07 31.0**	**+1.5**
	122nm,0.9s						
SWI	**Sorong**	**21.24**	**278**	P	**P**	**05 07 31.3**	**+1.8**
	170nm,0.9s						
EIDS	**Eidsvold**	**21.25**	**183**		**P**	**05 07 30.4**	**+0.9**
EIDS	**Eidsvold**	**21.25**	**183**	P	**P**	**05 07 30.3**	**+0.7**
	15nm,0.9s						
TARA	**Tarawa**	**21.30**	**76**	P	**P**	**05 07 28.8**	**-1.5**
	173nm,1.2s						
DZM	**Mont Dzumac**	**22.59**	**144**		**P**	**05 07 43.8**	**+0.9**
DZM	**Mont Dzumac**	**22.59**	**144**	P	**P**	**05 07 43.7**	**+0.7**
	67nm,1.0s						
MTN	**Manton Dam**	**22.66**	**246**		**P**	**05 07 44.4**	**+0.7**
MTN				IAmb	IAmb	05 07 45.1	
	comp=Z,18nm,0.7s						
ONTNC	**Ouen Toro**	**22.78**	**144**		**P**	**05 07 45.0**	**+0.4**
ONTNC				IAmb	IAmb	05 07 45.9	
	comp=Z,49nm,0.9s						
OUENC	**Ouen Island, N**	**23.09**	**144**	P	**P**	**05 07 48.7**	**+1.3**
	comp=Z,62nm,0.8s						
TW1H	**Toowoomba 1 Ha**	**23.39**	**181**	P	**P**	**05 07 52.1**	**+1.9**
WB0	**Warramunga Arr**	**23.44**	**227**		**P**	**05 07 51.3**	**+0.7**
WR8	**Warramunga Arr**	**23.48**	**226**		**P**	**05 07 51.8**	**+0.8**
WRAB	**Tennant Creek**	**23.57**	**226**	P	**P**	**05 07 52.5**	**+0.7**
WRAB	**Tennant Creek**	**23.57**	**226**	P	**P**	**05 07 52.7**	**+0.8**
	comp=Z,112nm,0.6s						
WRA	**Warramunga Arr**	**23.59**	**226**	P	**P**	**05 07 52.8**	**+0.7**
	comp=Z,107nm,0.6s,baz=51,slow=9.7,SNR=591						
WRA				PcP	**PcP**	**05 11 32.3**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=48,slow=2.1,SNR=5.3						
WRA				S	**S**	**05 11 51.2**	**-2.2**
	comp=Z,6.0nm,0.9s,baz=48,slow=16,SNR=8.0						
WRA				ScP	**ScP**	**05 14 53.0**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=52,slow=2.7,SNR=12						
WRA	**Warramunga Arr**	**23.59**	**226**		**P**	**05 07 51.5**	**-0.5**
WRA				PcP	**PcP**	**05 11 32.7**	**+0.5**
WB1	**Warramunga Ar.**	**23.59**	**226**	P	**P**	**05 07 53.0**	**+0.9**
QLP	**Quilpie**	**23.72**	**198**	P	**P**	**05 07 53.8**	**+0.7**
	comp=Z,75nm,0.8s						
KRAI	**Karang Ratu**	**23.85**	**271**	P	**P**	**05 07 55.7**	**+1.2**
AULRC	**Lightning Ridg**	**25.59**	**189**	P	**P**	**05 08 11.3**	**+1.2**
KNRA	**Kununurra**	**25.87**	**242**		**P**	**05 08 12.9**	**+0.2**
KNRA				IAmb	IAmb	05 08 13.3	
	comp=Z,52nm,1.4s						
INKA	**Innaminka**	**26.02**	**204**		**P**	**05 08 14.9**	**+1.0**
INKA				IAmb	IAmb	05 08 16.7	
	comp=Z,12nm,0.7s						
ARMA	**Armidale**	**26.26**	**181**	P	**P**	**05 08 17.8**	**+1.7**
ARMA				IAmb	IAmb	05 08 18.5	
	comp=Z,12nm,0.8s						
SANI	**Sanana**	**26.33**	**273**	P	**P**	**05 08 19.7**	**+2.8**
	comp=Z,26nm,0.8s						
AS31	**Alice Springs**	**26.38**	**221**		**P**	**05 08 17.8**	**+0.5**
ASAR	**Alice Springs**	**26.39**	**221**	P	**P**	**05 08 17.6**	**+0.2**
	comp=Z,6.9nm,0.6s,baz=52,slow=8.1,SNR=116						
ASAR				pP	**pP**	**05 08 53.7**	**0.0**
	comp=Z,6.5nm,0.7s,baz=53,slow=8.3,SNR=4.5						
ASAR				PcP	**PcP**	**05 11 38.5**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=67,slow=3.0,SNR=5.3						
ASAR				S	**S**	**05 12 35.6**	**-2.0**
	comp=Z,1.4nm,0.8s,baz=41,slow=16,SNR=4.4						
ASAR				ScP	**ScP**	**05 15 01.3**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=55,slow=3.4,SNR=5.7						
	comp=Z,6.9nm,0.6s						
ASAR	**Alice Springs**	**26.39**	**221**		**P**	**05 08 17.9**	**+0.6**
ASAR					**PcP**	**05 11 38.3**	**-0.2**
AUPHS	**Peel High Scho**	**26.96**	**183**	P	**P**	**05 08 24.3**	**+2.0**
	comp=Z,40nm,1.1s						
CMSA	**Cobar Meteorol**	**28.06**	**192**	P	**P**	**05 08 33.2**	**+1.1**
	comp=Z,9.6nm,0.8s						
STKA	**Stephens Creek**	**29.47**	**199**	P	**P**	**05 08 44.4**	**-0.1**
	comp=Z,6.2nm,0.6s,baz=358,slow=9.7,SNR=11						
STKA				LR	LR	05 20 01.9	
	comp=Z,32nm,18.6s,baz=24,slow=35						
	comp=Z,6.2nm,0.6s						
STKA	**Stephens Creek**	**29.47**	**199**		**P**	**05 08 44.9**	**+0.3**
STKA	**Stephens Creek**	**29.47**	**199**	P	**P**	**05 08 44.6**	**0.0**
MRSI	**Marisa**	**30.65**	**278**	P	**P**	**05 08 55.7**	**+0.5**
	comp=Z,20nm,0.7s						
CAN	**Canberra**	**31.29**	**185**	P	**P**	**05 09 02.3**	**+1.7**
CAN	**Canberra**	**31.29**	**185**	P	**P**	**05 08 59.4**	**-1.2**
CAN				x	x	05 09 28.5	
CAN				x	x	05 09 59.1	
HTT	**Hallett**	**31.80**	**202**	P	**P**	**05 09 05.9**	**+0.8**
	comp=Z,58nm,1.0s						
BBOO	**Buckleboo**	**32.41**	**206**	P	**P**	**05 09 10.7**	**+0.3**
BBOO				IAmb	IAmb	05 09 11.3	
	comp=Z,30nm,0.9s						
MPSI	**Mapaga**	**32.65**	**277**	P	**P**	**05 09 13.0**	**+0.3**
	comp=Z,40nm,0.8s						
AUMBR	**Murray Bridge**	**33.21**	**200**	P	**P**	**05 09 18.0**	**+0.7**
	comp=Z,49nm,0.9s						
FORT	**Forrest**	**35.07**	**218**	P	**P**	**05 09 33.6**	**+0.2**
FORT				IAmb	IAmb	05 09 34.7	
	comp=Z,30nm,0.8s						
MBWA	**Marble Bar**	**35.92**	**239**	P	**P**	**05 09 40.3**	**-0.5**
MBWA				IAmb	IAmb	05 09 40.8	
	comp=Z,16nm,0.8s						
PSA00	**Pilbara Seismi**	**35.99**	**238**	P	**P**	**05 09 40.9**	**-0.4**
PSA00				IAmb	IAmb	05 09 42.0	
	comp=Z,26nm,0.9s						
PSA00	**Pilbara Seismi**	**35.99**	**238**		**P**	**05 09 40.9**	**-0.4**
PSA00				IAmb	IAmb	05 09 42.1	
	comp=Z,22nm,1.0s						
PSA00	**Pilbara Seismi**	**35.99**	**238**	P	**P**	**05 09 40.9**	**-0.4**
	comp=Z,35nm,1.0s						
MEEK	**Meekatharra**	**39.27**	**232**	P	**P**	**05 10 08.4**	**-0.5**
	comp=Z,50nm,1.1s						
YULB	**Yu-li**	**40.70**	**313**	P	**P**	**05 10 21.1**	**+0.4**
YULB				IAmb	IAmb	05 10 22.7	
	comp=Z,19nm,0.9s						
RTZ	**Ruatahuna**	**41.12**	**150**	P	**P**	**05 10 25.4**	**+1.5**
RTZ				IAmb	IAmb	05 10 28.7	
	comp=Z,32nm,1.4s						
BKZ	**Black Stump Fm**	**41.31**	**151**	P	**P**	**05 10 26.7**	**+1.3**
BKZ				IAmb	IAmb	05 10 31.4	
	comp=Z,45nm,1.7s						
SNZO	**South Karori**	**42.22**	**155**	P	**P**	**05 10 36.6**	**+3.9**
SNZO				x	**pP**	**05 11 08.7**	**-1.9**
BBJI	**Bungbulang**	**44.53**	**263**		**P**	**05 10 50.6**	**-1.2**
BBJI				IAmb	IAmb	05 10 51.5	
	comp=Z,18nm,0.7s						
BBJI	**Bungbulang**	**44.53**	**263**	P	**P**	**05 10 50.9**	**-0.8**
	comp=Z,27nm,0.8s						
BBJI	**Bungbulang**	**44.53**	**263**	P	**P**	**05 10 50.1**	**-1.6**
	comp=Z,23nm,0.7s						
TJN	**Taejon**	**46.46**	**332**	P	**P**	**05 11 07.4**	**+1.0**
	comp=Z,165nm,1.3s						
KSRS	**Korea Array**	**47.08**	**333**	P	**P**	**05 11 11.6**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=152,slow=8.2,SNR=11						
	comp=Z,4.3nm,0.7s						
INCN	**Inchon**	**47.70**	**332**	P	**P**	**05 11 16.7**	**+0.7**
INCN				IAmb	IAmb	05 11 17.5	
	comp=Z,42nm,0.8s						
INCN	**Inchon**	**47.70**	**332**	P	**P**	**05 11 17.1**	**+1.1**
	comp=Z,54nm,0.8s						
NJ2	**Nanjing**	**47.92**	**321**	*e*P	**P**	**05 11 19.8**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIA	**Tai'an**	**51.79**	**324**	P	**P**	**05 11 46.8**	**-0.1**
TIA				pmax	pmax		
	comp=Z,16nm,0.7s						
MDJ	**Mudanjiang**	**52.52**	**340**	P	**P**	**05 11 52.3**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,16nm,1.9s						
MDJ	**Mudanjiang**	**52.52**	**340**	P	**P**	**05 11 51.8**	**-0.4**
MDJ				sP	**sP**	**05 12 50.5**	**-0.9**
ENH	**Enshi**	**53.26**	**313**		**P**	**05 11 57.8**	**0.0**
ENH				IAmb	IAmb	05 11 59.3	
	comp=Z,16nm,1.1s						
ENH	**Enshi**	**53.26**	**313**	P	**P**	**05 12 00.1**	**+2.2**
	comp=Z,15nm,1.0s						
ENH	**Enshi**	**53.26**	**313**	P	**P**	**05 11 57.8**	**0.0**
ENH				x	x	05 12 43.2	
ENH				PcP	**PcP**	**05 13 03.3**	**0.0**
HNS	**HongShan**	**54.03**	**323**	⇓P	**P**	**05 12 03.6**	**+0.4**
HNS				pmax	pmax		
	comp=Z,22nm,0.9s						

BNX	BinXian	54.27	339	⇑P	P	05 12 04.6	-0.2
BNX				pmax	pmax		
	comp=Z,19nm,0.7s						
XAN	Xi'an	55.71	316	⇓P	P	05 12 15.3	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN				pmax	pmax		
	comp=Z,200nm,5.5s						
XAN	Xi'an	55.71	316	P	P	05 12 15.1	-0.4
XAN				pP	pP	05 12 55.2	-0.5
XAN				PcP	PcP	05 13 12.1	-0.6
CM31	Chiang Mai Arr	57.09	295	P	P	05 12 26.6	+1.2
CMAR	Chiang Mai Arr	57.09	295	P	P	05 12 27.5	+2.1
	comp=Z,5.8nm,0.8s,baz=115,slow=5.3,SNR=25						
	comp=Z,5.8nm,0.8s						
CMAR	Chiang Mai Arr	57.09	295		P	05 12 27.0	+1.5
CHTO	Chiang Mai	57.20	295	P	P	05 12 27.4	+1.2
PZH	PanZhiHua	57.51	305	P	P	05 12 31.4	+3.0
XLT	XiLinHaoTe	57.75	330	*e*P	P	05 12 30.1	+0.4
XLT				pmax	pmax		
	comp=Z,12nm,0.5s						
XLT				pmax	pmax		
	comp=Z,130nm,6.3s						
HHC	Hu-ho-hao-te	58.12	324	*e*P	P	05 12 35.9	+3.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HEH	HeiHe	58.16	341	*e*P	P	05 12 31.5	-0.8
HEH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	Lanzhou	60.32	316	*e*P	P	05 12 49.1	+1.4
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
HILR	Hailar Array B	60.35	336	P	P	05 12 47.3	-0.1
	comp=Z,1.9nm,0.5s,baz=156,slow=7.1,SNR=2.8						
	comp=Z,1.9nm,0.5s						
LZDM	Lanzhou Array	60.36	316	P	P	05 12 49.6	+1.5
	comp=Z,7.2nm,0.7s,baz=164,slow=5.9,SNR=15						
	comp=Z,7.2nm,0.7s						
GTA2	Gaotai	64.82	317	*e*P	P	05 13 18.3	+0.9
GTA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	Ulaanbaatar	65.07	328	P	P	05 13 19.4	+0.5
SONM	Songino Array	65.40	328	P	P	05 13 21.1	+0.2
	comp=Z,2.2nm,0.8s,baz=150,slow=5.9,SNR=14						
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	65.40	328	P	P	05 13 21.8	+0.8
SHL	Shillong	65.48	300		P	05 13 22.5	+0.6
SHL				IAmb	IAmb	05 13 22.9	
	comp=Z,10nm,1.0s						
LSA	Lhasa	67.38	304	IAmb	IAmb	05 15 29.4	
	comp=Z,11nm,0.4s						
CASY	Casey	68.60	197	P	P	05 13 41.4	+0.8
PALK	Pallekele	72.31	279	P	P	05 14 04.6	+0.5
CCD	Concordia, Ant	72.96	188	P	P	05 14 07.7	+0.4
CCD				x	x	05 14 53.4	
CCD				x	x	05 15 12.3	
VNDA	Vanda	73.62	178	P	P	05 14 11.8	+1.2
SBA	Scott Base	74.17	177	P	P	05 14 16.1	+2.3
WMQ	Urumqi	74.83	317	*e*P	P	05 14 20.3	+2.0
MK31	Makanchi Array	79.41	319	P	P	05 14 43.9	+0.2
MKAR	Makanchi Array	79.41	319	P	P	05 14 43.7	-0.1
	comp=Z,1.4nm,0.6s,baz=95,slow=6.8,SNR=19						
	comp=Z,1.4nm,0.6s						
MAKZ	Makanchi	79.62	319	P	P	05 14 45.0	+0.1
MAKZ	Makanchi	79.62	319	P	P	05 14 44.5	-0.4
MAKZ				PcP	PcP	05 14 52.2	+0.1
MAKZ				pP	pP	05 15 26.8	-0.5
MAKZ				sP	sP	05 15 44.7	-1.1
WUS	Wushi	80.01	313	P	P	05 14 48.0	+0.8
WUS				pP	pP	05 15 30.2	+0.4
WUS				x	x	05 15 36.9	
ZALV	Zalesovo Beam	80.23	326	P	P	05 14 47.0	-0.9
	comp=Z,1.5nm,0.6s,baz=100,slow=6.5,SNR=7.9						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	80.23	326	P	P	05 14 46.7	-1.2
ILAR	Eielson Array	81.64	22	P	P	05 14 52.7	-2.5
	comp=Z,0.7nm,0.6s,baz=237,slow=5.0,SNR=5.5						
	comp=Z,0.7nm,0.6s						
D22K	Ayikyak River	81.83	17	P	P	05 14 57.4	+1.3
D22K				IAmb	IAmb	05 16 28.9	
	comp=Z,30nm,1.9s						
KSH2	Kashi	82.28	310	P	P	05 15 00.1	+0.8
KSH2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	Kurchatov	82.85	322		P	05 15 01.4	-0.3
KURK	Kurchatov	82.85	322	P	P	05 15 01.4	-0.3
KURBB	Kurchatov Arra	82.88	322	P	P	05 15 01.1	-0.7
	comp=Z,0.4nm,0.4s,baz=111,slow=4.7,SNR=5.0						
	comp=Z,0.4nm,0.4s						
TKM2	Tokmak 2	83.03	314	P	P	05 15 03.7	+0.6
	SNR=6.1						
NIL	Nilore	83.12	304		P	05 15 03.9	+0.3
NIL				IAmb	IAmb	05 15 04.4	
	comp=Z,19nm,0.8s						
UCH	Uchtor	83.67	313	P	P	05 15 07.5	+0.8
	SNR=8.0						
AAK	Ala-Archa	83.77	313	P	P	05 15 07.7	+0.9
	SNR=7.8						
AAK	Ala-Archa	83.77	313	P	P	05 15 07.0	+0.1
AAK	Ala-Archa	83.77	313	P	P	05 15 07.4	+0.6
AAK				PcP	PcP	05 15 12.2	+1.7
AAK				pP	pP	05 15 50.2	+0.4
AAK				sP	sP	05 16 08.5	+0.3
USP	Ospenovka	83.89	314	P	P	05 15 07.7	+0.4
	SNR=6.8						
EKS2	Erkin-Say	84.29	313	P	P	05 15 10.3	+0.8
	SNR=7.3						
DRK	Karamyk	85.21	310	IAmb	IAmb	05 15 16.0	
	comp=Z,18nm,1.1s						
QSPA	South Pole Qui	85.93	180	P	P	05 15 16.5	-0.6
	comp=Z,3.6nm,0.6s,baz=324,slow=3.1,SNR=5.2						
QSPA				pP	pP	05 15 59.7	-1.3
	comp=Z,1.9nm,0.3s,baz=292,slow=5.4,SNR=2.4						
	comp=Z,3.6nm,0.6s						
QSPA	South Pole Qui	85.93	180	P	P	05 15 17.1	0.0
QSPA				IAmb	IAmb	05 15 21.4	
	comp=Z,17nm,1.5s						
QSPA	South Pole Qui	85.93	180	P	P	05 15 14.2	-2.9
QSPA				PcP	P	05 15 17.1	0.0
BTK	Batken	86.05	310	P	P	05 15 18.4	+0.2
BTK				IAmb	IAmb	05 15 19.2	
	comp=Z,8.9nm,0.8s						
GAR	Garm	86.28	309	IAmb	IAmb	05 15 20.3	
	comp=Z,19nm,1.3s						
KBL	Kabul	86.70	305	P	P	05 15 20.9	-0.8
KK31	Karatay Array	86.73	313	P	P	05 15 21.3	-0.1
KKAR	Karatay Array	86.73	313	P	P	05 15 21.2	-0.2
BVAR	Borovoye Array	88.32	323	P	P	05 15 27.3	-1.3
	comp=Z,2.4nm,0.5s,baz=111,slow=5.3,SNR=16						
	comp=Z,2.4nm,0.5s						
BORK	Borovoye	88.36	323	P	P	05 15 27.8	-1.0
BORK				IAmb	IAmb	05 15 28.2	
	comp=Z,16nm,1.6s						
BORK	Borovoye	88.36	323	P	P	05 15 27.6	-1.3
BORK				PcP	PcP	05 15 28.7	-1.7
NVAR	Mina Array Bea	92.01	52	P	P	05 15 45.5	-1.0
	comp=Z,0.5nm,0.5s,baz=297,slow=5.7,SNR=2.0						
	comp=Z,0.5nm,0.5s						
YKA	Yellowknife Ar	94.98	28	P	P	05 15 58.4	-0.8
	comp=Z,0.2nm,0.7s,baz=288,slow=4.6,SNR=3.4						
	comp=Z,0.2nm,0.7s						
BELA	Belgrano 2	98.12	179	P	Pdif	05 16 16.2	+2.9
PDAR	Pinedale Array	98.71	48	P	P	05 16 14.3	-2.6
	comp=Z,0.3nm,0.6s,baz=291,slow=4.4,SNR=2.5						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	98.71	48	P	P	05 16 15.9	-1.0
AKASG	Malin Array Be	113.57	324	PKiKP	PKiKP	05 21 13.1	-1.3
	comp=Z,1.1nm,0.5s,baz=53,slow=2.7,SNR=5.7						
BRTR	Keskin Array B	114.41	312	PKP	PKPdf	05 21 15.6	-0.9
	comp=Z,0.7nm,0.6s,baz=82,slow=2.0,SNR=2.9						
NOA	NORSAR Array B	116.02	340	PKP	PKPdf	05 21 17.8	-1.0
	comp=Z,0.4nm,0.7s,baz=44,slow=1.8,SNR=2.2						
BOSA	Boshof	119.67	234	PKP	PKPdf	05 21 26.4	-0.6
	comp=Z,1.5nm,0.5s,baz=145,slow=4.1,SNR=6.1						
MODS	Modra-Piesok	121.49	326	*e*PKP	PKiKP	05 21 29.8	-0.1
CLL	Collm	121.93	331	*e*PKPdf	PKPdf	05 21 30.0	-0.4
	comp=Z,7.0nm,1.0s						
CONA	Conrad Observa	122.53	327	*i* PKP	PKiKP	05 21 31.7	-0.3
	comp=Z,1.9nm,0.5s						
GERES	GERESS Array B	123.13	329	PKP	PKPdf	05 21 32.1	-0.8
	comp=Z,1.8nm,0.5s,baz=68,slow=3.1,SNR=8.7						
LESA	Schwarzleotal	124.55	328	*e*PKP	PKPdf	05 21 34.8	-0.9
	comp=Z,1.7nm,0.3s						
ABTA	Abfaltersbach	125.06	327	*e*PKP	PKPdf	05 21 35.6	-1.1
	comp=Z,0.9nm,0.3s						
MOTA	Moosalm	125.43	328	*e*PKP	PKPdf	05 21 36.9	-0.6
	comp=Z,3.3nm,0.5s						
SQTA	Sankt Quirin	125.45	328	*e*PKP	PKPdf	05 21 37.4	-0.1
	comp=Z,1.0nm,0.3s						
MEM	Membach	125.62	334	*d*PKPdf	PKiKP	05 21 37.5	-0.5
FETA	Feichten	125.83	328	*e*PKP	PKPdf	05 21 37.9	-0.4
	comp=Z,2.3nm,0.6s						
BMRD	Maredsous	126.38	335	*d*PKPdf	PKPdf	05 21 38.7	-0.3
ROSC	El Rosal	133.53	87	SKPbc	SKPbc	05 25 07.0	+0.6
	comp=Z,8.3nm,0.7s,baz=177,slow=13,SNR=6.0						
LPAZ	La Paz	135.23	118	SKPbc	SKPbc	05 25 13.0	+1.0
	comp=Z,3.0nm,0.9s,baz=266,slow=3.6,SNR=9.8						
ESDC	Sonseca Array	138.51	332	PKP	PKPdf	05 22 02.1	-0.1
	comp=Z,0.3nm,0.6s,baz=46,slow=3.7,SNR=2.2						
MD01	Midelt array s	144.17	326	PKPdf	PKPbc	05 22 11.2	0.0
CBE	Ff, Capester	144.62	68	PKPdf	PKPdf	05 22 13.1	-0.6
AVE	Averroes	145.25	329	PKPab	PKPab	05 22 15.0	+0.3
MPOM	Morne Pois Mar	145.74	70	PKPbc	PKPab	05 22 16.2	-0.7
TORD	Torodi Ar. Bea	149.57	289	PKP	PKPdf	05 22 20.8	-1.2
	comp=Z,4.0nm,0.7s,baz=98,slow=2.0,SNR=4.7						
TORD				PKPbc	PKPbc	05 22 25.6	-1.1
	comp=Z,5.3nm,0.7s,baz=61,slow=0.4,SNR=55						
TORD				pPKPbc	pPKPdf	05 23 09.6	+1.7
	comp=Z,3.6nm,1.1s,baz=94,slow=3.7,SNR=3.6						
BDFB	Brasilia	151.97	135	PKPbc	PKPbc	05 22 32.0	-0.5
	comp=Z,4.0nm,0.7s,baz=288,slow=1.9,SNR=11						
BDFB				pPKPbc	pPKPdf	05 23 13.6	+1.6
	comp=Z,4.2nm,0.7s,baz=198,slow=3.3,SNR=2.2						
BDFB	Brasilia	151.97	135		PKPbc	05 22 32.3	-0.2

*AEIC **03** 05:04:09.0±1.5, 51°.19N±0°.07×179°.68E±0°.05, h19^{km}±4^{km}, Error ellipse: s-maj=10.1km s-min=3.7km az=199.0*

NEIC 03 05:04:06.1±1.9**, 51°.03N**±0°.04×**179°.74E**±0°.04**, h10**^{km}±1^{km}**, mb3.1**/3**, ML3.0**/6**, ML2.7**(AEIC)**, Error ellipse: s-maj=6.9km s-min=3.0km az=26.0, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.44	322		Pb	05 04 16.0	0.0
AMKA				IAML		05 04 22.3	
	comp=E,3μm,0.2s						
AMKA	Amchitka	0.44	322		Sb	05 04 21.8	-0.9
CERB	Semis' Cerberu	0.90	356		Pb	05 04 23.8	-0.1
CERB					Sg	05 04 33.8	-1.5
CEPE	Semis' Perret	0.94	357		Pg	05 04 24.0	-0.1
GAKI	Gareloi-Kavalg	1.05	60		Pb	05 04 26.6	+0.2
GAKI					Sg	05 04 39.9	0.0
GASW	Gareloi Southw	1.16	49		Pg	05 04 28.3	0.0
GASW					Sg	05 04 43.7	+0.4
LSSE	Little Sitkin	1.16	321		Pb	05 04 27.5	-0.8
LSPA	Little Sitkin	1.18	322		Pb	05 04 27.9	-0.7
LSPA					Sb	05 04 42.9	-1.0
GANO	Gareloi North	1.21	49		Pg	05 04 29.4	+0.1
GANE	Gareloi Northe	1.22	49		Pg	05 04 29.6	+0.1
GANE					Sn	05 04 45.6	-0.2
TASE	Tanaga Southea	1.61	59		Pb	05 04 35.5	-0.4
TASE					Sb	05 04 56.3	+0.1
KIMD	Kanaga Island	2.03	68		Pb	05 04 42.0	-1.0
KIWB	Kanaga Island	2.11	66	Pn	Pn	05 04 42.8	+1.3
KIWB				IAML		05 05 24.6	
	comp=E,103nm,0.8s						
ADK	Adak	2.39	68		Pn	05 04 46.4	+1.1
ADK	Adak	2.39	68	IAML		05 05 23.3	
	comp=E,62nm,1.0s						
ADK				IAML		05 05 23.6	
	comp=E,74nm,0.7s						
C18K	Utukok River	19.93	21	P	P	05 08 37.0	-0.8
C18K				IAmb	IAmb	05 08 46.6	
	comp=Z,1.1nm,0.8s						
D19K	Kuna River	20.54	23	P	P	05 08 44.3	-0.1
D19K				IAmb	IAmb	05 09 03.8	
	comp=Z,0.1nm,0.4s						
D20K	Etivluk River	21.08	24	P	P	05 08 49.7	-0.5
D22K	Ayikyak River	22.25	26	P	P	05 09 01.9	-0.8
D22K				IAmb	IAmb	05 09 06.5	
	comp=Z,1.5nm,0.9s						
D23K	Nanushuk River	22.87	27	P	P	05 09 08.4	-0.9
F25K	Christian Rive	23.74	33	P	P	05 09 16.5	-1.7

KRSC 03 05:09:02.5±0.7**, 53°.12N**×**159°.03E, h116**^{km}±5^{km}**, Ml3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGLR	Uglovaya	0.15	306	*e*P	Pn	05 09 19.9	+1.3
SDLR	Sedlovina	0.18	332	*e*P	Pn	05 09 19.6	+0.9
DALK	Dalny	0.19	242	*e*P	Pn	05 09 19.2	+0.7
DALK				*e*S	Sn	05 09 31.4	+0.9
NLC	Nalytchevo	0.20	74	*e*P	Pn	05 09 19.6	+1.0
NLC				*e*S	Sn	05 09 32.4	+1.8
SMAR	Somma	0.20	317	*e*P	Pn	05 09 19.9	+1.0
AVH	Avacha	0.23	310	*e*P	Pn	05 09 19.7	+1.0
PET	Petropavlovsk	0.24	247	*e*P	Pn	05 09 19.3	+0.6
PET				*e*S	Sn	05 09 31.7	+0.8
KRER	Koryakskii	0.25	318	*e*P	Pn	05 09 19.9	+0.9
INSR	Institute	0.26	259	*e*P	Pn	05 09 19.6	+0.9
INSR				*e*S	Sn	05 09 32.1	+1.1
KOK	Koryaka	0.29	307	*e*P	Pn	05 09 20.0	+1.0
KRX	Arik	0.33	317	*e*P	Pn	05 09 20.1	+0.9
SPN	Mys Shipunski	0.60	92	*e*P	Pn	05 09 21.2	+0.6
SPN				*e*S	Sn	05 09 35.2	+0.9
KRMR	Karymshinskiy	0.61	242	*i* P	Pn	05 09 21.5	+0.8
KRMR				*e*S	Sn	05 09 35.7	+1.3
RUS	Russkaya	0.76	205	*e*P	Pn	05 09 22.8	+1.0
RUS				*e*S	Sn	05 09 37.8	+1.4
GRL	Gorelyy	0.81	226	*e*P	Pn	05 09 24.1	+1.6
MTVR	Mutnovka	0.82	219	*e*P	Pn	05 09 24.2	+1.7
MTVR				*e*S	Sn	05 09 40.5	+2.8
GNL	Ganaly	0.87	312	*e*P	Pn	05 09 23.2	+0.2
KII	Karymskiy	0.95	15	*e*P	Pn	05 09 24.2	+0.5
ASAK	Asacha	1.01	223	*e*P	Pn	05 09 25.9	+1.7
APC	Apacha	1.15	261	*e*P	Pn	05 09 26.8	+1.3
APC				*e*S	Sn	05 09 45.1	+2.0
KDTR	Khodutka, Kamc	1.44	204	*e*P	Pn	05 09 29.9	+1.1
KDTR				*e*S	Sn	05 09 49.9	+1.1
MIPR	Malaya Ipel'ka	1.62	239	*e*P	Pn	05 09 32.6	+1.6
ESO	Esso	2.82	356	*e*P	Pn	05 09 46.7	+0.5

*IDC **03** 05:16:46.0±2.8, 35°.95N×141°.29E, h0^{km}, mb3.5/3, mbtmp3.6/5, ML3.0/2, MS2.8/5, Error ellipse: s-maj=64.5km s-min=27.5km az=70.0*

*JMA **03** 05:16:53.8±0.2, 35°.7N±0°.6×140°.7E±0°.9, h48^{km}±1^{km}, MV2.7/31, NEAR CHOSHI CITY*

ISC 03 05:16:54.4±1.4**, 35°.65N**±0°.05×**140°.7E**±0°.1**, h50**^{km}±8^{km}**, n14,** σ1^{s}**07**/16**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.23	268	*i* P	Pn	05 17 02.5	-0.3
JSMT				*e*S	Sn	05 17 09.3	+0.5
JIHU	Itakohorinouch	0.35	333	*e*P	Pn	05 17 03.8	-0.2
JIHU				S	Sn	05 17 11.4	+0.6
JCCN	Chibachonan	0.48	237	*i* P	Pn	05 17 05.5	+0.2
JYT	Yasato	0.72	323	P	Pn	05 17 07.4	-1.0
JYT				S	Sn	05 17 17.4	-1.1
BSO4	Boso 4	0.73	206	*e*P	Pn	05 17 08.4	0.0
BSO3	Boso 3	0.86	192	P	Pn	05 17 10.2	+0.2
MJAR	Matsushiro Arr	2.22	294	Pn	Pn	05 17 29.7	+0.9
	1.0nm,0.3s,baz=99,slow=14,SNR=28						
MJAR				Sn	Sn	05 17 54.8	-0.2
	0.7nm,0.3s,baz=94,slow=24,SNR=5.2						
MJAR				LR	LR	05 18 34.1	
	comp=Z,52nm,21.0s,baz=196,slow=42						
	10nm,0.4s						
JHJ	Hachijo jima 2	2.64	197	Pn	Pn	05 17 34.1	-0.4
	17nm,0.3s,baz=79,slow=22,SNR=5.1						
JHJ				Sn	Sn	05 18 03.0	-2.2
	11nm,0.3s,baz=257,slow=23,SNR=1.4						
	60nm,0.4s						
JNU	Nakatsue	8.52	256	LR	LR	05 22 11.8	
	comp=Z,34nm,18.2s,baz=126,slow=36						
KSRS	Korea Array	10.46	284	LR	LR	05 23 06.2	
	comp=Z,38nm,20.6s,baz=70,slow=35						
MKAR	Makanchi Array	44.40	303	P	P	05 24 58.7	-1.2
	0.3nm,0.4s,baz=86,slow=8.8,SNR=4.0						
MKAR				LR	LR	05 42 34.6	
	comp=Z,48nm,18.3s,baz=357,slow=35						
	0.3nm,0.4s						
PMG	Port Moresby	45.22	171	LR	LR	05 44 05.0	
	comp=Z,24nm,19.8s,baz=209,slow=36						
KURBB	Kurchatov Arra	46.42	309	P	P	05 25 15.7	-0.3
	0.5nm,0.4s,baz=83,slow=7.8,SNR=4.4						
	0.5nm,0.4s						
WRA	Warramunga Arr	55.62	187	P	P	05 26 26.9	+1.8
	0.1nm,0.4s,baz=1.8,slow=7.4,SNR=1.8						
	0.1nm,0.4s						

*IDC **03** 05:26:27.6±3.2, 36°.32N×71°.28E, h100^{km}±28^{km}, mb3.8/19, mbtmp4.2/25, Error ellipse: s-maj=20.3km s-min=13.3km az=10.0*

*NEIC **03** 05:26:29.9±1.7, 36°.53N±0°.06×71°.15E±0°.08, h108^{km}±7^{km}, mb4.4/25, Error ellipse: s-maj=9.6km s-min=8.0km az=110.0*

*NNC **03** 05:26:34.8±3.8, 36°.98N×70°.98E, h141^{km}±31^{km}, mb3.6, mpv4.3, Error ellipse: s-maj=30.1km s-min=17.6km az=17.0*

ISC 03 05:26:28.1±0.5**, 36°.49N**±0°.05×**71°.22E**±0°.05**, h100**^{km}**, n111,** σ**2^{s}21**/131**, mb4.3**/34**, 9C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	1.11	19	Pn	Pn	05 26 53.9	+3.8
MANEM				Sn	Sn	05 27 09.2	+2.7
GAR	Garm	2.60	344	Pn	Pn	05 27 09.8	+1.1
GAR				Sn	Sn	05 27 39.9	+0.1
KBL	Kabul	2.64	223	Pn	Pn	05 27 11.1	+1.8
SHAA	Shahritus	2.70	294	Pn	Pn	05 27 09.8	0.0
CHGR	Chuyangaron	2.71	323	Pn	Pn	05 27 10.3	+0.2
DRK	Karamyk	3.02	9	Pn	Pn	05 27 16.4	+2.1
NIL	Nilore	3.29	149		Pn	05 27 20.1	+2.4
BTK	Batken	3.57	355		Pn	05 27 24.0	+2.4
KSH2	Kashi	4.34	51	Pn	Pn	05 27 35.4	+3.4
KSH2				Sn	Sn	05 28 24.3	+2.7
KSH2				smax	smax		
	comp=N,620nm,0.5s						
KSH2				smax	smax		
	comp=E,550nm,0.5s						
JMU	Jammu	4.75	140	*e*P	Pn	05 27 38.0	+0.6
JMU				*e*S	Sn	05 28 27.4	-3.9
JMU				IAML		05 28 35.0	
	comp=E,1μm,0.5s						
JMU				IAML		05 28 35.2	
	comp=N,3μm,0.7s						
ALCI	Alchi Leh	5.38	113	*e*P	Pn	05 27 45.7	-0.5
ALCI				*e*S	Sn	05 28 44.5	-2.5
ALCI				IAML		05 28 48.0	
	comp=E,272nm,0.3s						
ALCI				IAML		05 28 49.3	
	comp=N,344nm,0.4s						
TSSA	Tissa	5.46	131	*e*P	Pn	05 27 47.7	+0.5
TSSA				*e*S	Sn	05 28 47.0	-1.8
TSSA				IAML		05 28 49.9	
	comp=N,854nm,0.3s						
TSSA				IAML		05 28 50.7	
	comp=E,635nm,0.4s						
THN	Thein Dam	5.51	136	*e*P	Pn	05 27 48.5	+0.8
THN				*e*S	Sn	05 28 48.6	-1.2
THN				IAML		05 28 50.5	
	comp=N,624nm,0.4s						
THN				IAML		05 28 53.0	
	comp=E,618nm,0.3s						
DHRM	DHARAMSHALA	5.96	134	*e*P	Pn	05 27 55.1	+1.0
DHRM				*e*S	Sn	05 28 58.8	-2.2
DHRM				IAML		05 29 01.3	
	comp=N,723nm,0.2s						
DHRM				IAML		05 29 01.6	
	comp=E,1μm,0.3s						
UCH	Uchtor	6.27	23	P	Pn	05 27 59.5	+1.1
	SNR=42						
EKS2	Erkin-Say	6.47	17	P	Pn	05 28 02.1	+1.3
	SNR=20						
KK31	Karatay Array	6.62	355		Pn	05 28 03.1	+0.3
KK31	Karatay Array	6.62	355	⇑P	Pn	05 28 03.4	+0.6
	comp=E,29nm,0.4s,baz=175,slow=12,SNR=356						
KK31				⇓S	Sn	05 29 13.4	-3.5
	comp=E,96nm,0.6s,baz=183,slow=21,SNR=11						
KKAR	Karatay Array	6.62	355		Pn	05 28 03.0	+0.2
AAK	Ala-Archa	6.64	21	P	Pn	05 28 04.8	+1.6
	comp=E,31nm,0.3s,baz=183,slow=7.2,SNR=133						
AAK				S	Sn	05 29 16.1	-1.2
	comp=E,18nm,0.4s,baz=249,slow=13,SNR=12						
AAK	Ala-Archa	6.64	21	P	Pn	05 28 04.8	+1.6
	SNR=47						
AAK	Ala-Archa	6.64	21	⇑P	Pn	05 28 04.7	+1.6
	comp=E,3.8nm,0.3s						
AAK				⇓S	Sn	05 29 15.8	-1.5
	comp=E,52nm,0.9s						
BHK	Bhakra	6.65	138	*e*P	Pn	05 28 06.6	+3.4
BHK				IAML		05 29 18.5	
	comp=N,377nm,0.2s						
BHK				IAML		05 29 20.1	
	comp=E,352nm,0.2s						
BHK				*e*S	Sn	05 29 20.6	+3.0
KBK	Karagaybulak	6.79	24	P	Pn	05 28 07.1	+1.8
	SNR=7.2						
BOOM	Boomskoye usch	7.01	30		Pn	05 28 09.6	+1.4
CHMS	Chumysh	7.04	22	P	Pn	05 28 10.5	+2.0
	SNR=23						
USP	Ospenovka	7.22	19	P	Pn	05 28 12.0	+1.1
	SNR=18						
TKM2	Tokmak 2	7.25	26	P	Pn	05 28 12.7	+1.2
	SNR=34						
SMLA	Simla	7.29	136	*e*P	Pn	05 28 12.0	+0.2
SMLA				*e*S	Sn	05 29 27.9	-5.0
SMLA				IAML		05 29 36.5	
	comp=N,346nm,0.3s						
SMLA				IAML		05 29 36.5	
	comp=E,299nm,0.3s						
TARG	Taragay, Kyrgy	7.32	42		Pn	05 28 14.0	+1.4
HNLY	HANLEY	7.38	118	*e*P	Pn	05 28 12.9	-0.7
HNLY				*e*S	Sn	05 29 32.0	-4.1
HNLY				IAML		05 29 35.1	
	comp=E,21nm,1.2s						
HNLY				IAML		05 29 40.7	
	comp=N,21nm,0.3s						
KLP	Kalpa	7.65	128	*e*P	Pn	05 28 16.3	-0.7
KLP				*e*S	Sn	05 29 37.0	-5.2
KLP				IAML		05 29 41.3	
	comp=E,350nm,0.4s						
KLP				IAML		05 29 43.6	
	comp=N,231nm,0.3s						
WUS	Wushi	7.81	51		Pn	05 28 20.3	+1.2
JOSI	Joshimath	9.13	128	*e*P	Pn	05 28 36.7	-0.5
JOSI				*e*S	Sn	05 30 13.0	-5.3
JOSI				IAML		05 30 19.8	
	comp=N,158nm,0.6s						
JOSI				IAML		05 30 20.0	
	comp=E,173nm,0.1s						
LGTI	Lohaghat	10.27	131	*e*P	Pn	05 28 51.5	-1.1
LGTI				*e*S	Sn	05 30 39.3	-6.6
LGTI				IAML		05 30 43.2	
	comp=E,469nm,0.4s						
LGTI				IAML		05 30 43.6	
	comp=N,534nm,0.4s						
MAKZ	Makanchi	13.06	35		Pn	05 29 28.7	-0.9
MAKZ	Makanchi	13.06	35	⇑P	Pn	05 29 29.1	-0.5
	comp=N,3.9nm,0.5s						
MK31	Makanchi Array	13.19	35	⇓P	Pn	05 29 31.3	-0.1
	comp=N,3.3nm,0.7s,baz=218,slow=15,SNR=55						
MKAR	Makanchi Array	13.19	35	P	Pn	05 29 31.2	-0.2
	comp=N,1.4nm,0.9s,baz=215,slow=15,SNR=10						
MKAR	Makanchi Array	13.19	35		Pn	05 29 30.8	-0.6
WMQ	Urumqi	14.55	55	*e*P	Pn	05 29 52.1	+3.0
KURBB	Kurchatov Arra	15.07	18	P	Pn	05 29 57.6	+2.1
	comp=N,1.7nm,0.5s,baz=206,slow=11,SNR=12						
KURBB	Kurchatov Arra	15.07	18	⇓P	Pn	05 29 57.7	+2.1
	comp=N,4.3nm,0.6s						
AB31	Akbulak array	15.18	331		Pn	05 29 54.9	-2.0
AB31				IAmb	IAmb	05 29 57.5	
	comp=Z,10nm,0.6s						
AB31	Akbulak array	15.18	331	⇑P	Pn	05 29 54.1	-2.7
	comp=Z,10nm,0.7s,baz=146,slow=11,SNR=190						
AB31				⇑S	Sn	05 32 36.2	-8.1
	comp=Z,9.3nm,0.6s,baz=151,slow=23,SNR=9.2						
ABKAR	Akbulak array	15.18	331		Pn	05 29 54.8	-2.1
KURK	Kurchatov	15.18	18		Pn	05 29 57.9	+1.1
KURK	Kurchatov	15.18	18	⇑P	Pn	05 29 57.9	+1.1
	comp=Z,2.1nm,1.2s						
BVA0	Borovoye Array	16.54	358	⇑P	Pn	05 30 14.3	+0.5
	comp=Z,2.6nm,0.6s						
BVAR	Borovoye Array	16.54	358	P	Pn	05 30 13.9	0.0
	comp=Z,1.5nm,0.3s,baz=164,slow=12,SNR=18						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVAR				S	Sn	05 33 05.8	-11
	comp=Z,2.3nm,0.5s,baz=161,slow=24,SNR=6.8						
BORK	Borovoye	16.57	358		Pn	05 30 14.4	+0.3
AKTO	Aktyubinsk	16.88	330	P	Pn	05 30 18.2	+0.3
	comp=Z,9.9nm,0.6s,baz=137,slow=13,SNR=14						
AKTO				S	Sn	05 33 12.9	-12
	comp=Z,5.5nm,0.5s,baz=216,slow=19,SNR=6.9						
AKTO	Aktyubinsk	16.88	330	⇑P	Pn	05 30 18.0	0.0
	comp=Z,6.9nm,0.7s						
AKTO				⇑S	Sn	05 33 15.7	-10
	comp=Z,7.2nm,0.6s						
LSA	Lhasa	18.00	106	P	P	05 30 28.8	-2.7
LSA				pmax	pmax		
	comp=Z,16nm,1.0s						
GOMU	GeErMu	19.00	84	P	P	05 30 44.4	+2.1
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZAA0	Zalesovo Array	19.85	24		P	05 30 50.7	-0.1
ZAA0				IAmb	IAmb	05 30 57.2	
	comp=Z,11nm,0.4s						
ZAA0	Zalesovo Array	19.85	24	⇓P	P	05 30 50.7	-0.1
	comp=Z,3.7nm,0.4s						
ZALV	Zalesovo Beam	19.85	24	P	P	05 30 50.5	-0.3
	comp=Z,11nm,0.3s,baz=222,slow=10.0,SNR=44						
ZALV				S	S	05 34 20.6	-8.1
	comp=Z,0.2nm,0.3s,baz=224,slow=20,SNR=1.2						
ZALV	Zalesovo Beam	19.85	24		P	05 30 50.7	-0.2
SHL	Shillong	20.74	116		P	05 31 01.1	+0.2
SHL				IAmb	IAmb	05 31 02.2	
	comp=Z,15nm,0.8s						
GNI	Garni	21.07	288	P	P	05 31 05.7	+1.4
	comp=Z,7.7nm,0.5s,baz=8.5,slow=5.2,SNR=6.2						
	comp=Z,7.7nm,0.5s						
ARTI	Arti	21.71	340	P	P	05 31 13.9	+3.1
	comp=Z,6.1nm,0.6s,baz=146,slow=4.1,SNR=8.9						
ARTI				S	S	05 35 00.3	-4.7
	comp=Z,0.6nm,0.3s,baz=130,slow=6.8,SNR=1.1						
	comp=Z,6.1nm,0.6s						
GTA2	Gaotai	22.65	74	eP	P	05 31 23.2	+2.2
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	22.76	297	P	P	05 31 23.1	+1.2
	comp=Z,4.0nm,1.1s,baz=108,slow=7.8,SNR=4.5						
	comp=Z,4.0nm,1.1s						
PZH	PanZhiHua	27.76	102	P	P	05 32 09.8	+2.2
SONM	Songino Array	28.19	55	P	P	05 32 12.3	+1.1
	comp=Z,0.4nm,0.4s,baz=256,slow=6.8,SNR=4.7						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	28.19	55	P	P	05 32 11.8	+0.6
BRTR	Keskin Array B	29.61	288	P	P	05 32 25.2	+1.3
	comp=Z,0.6nm,0.8s,baz=140,slow=9.7,SNR=4.3						
	comp=Z,0.6nm,0.8s						
CMAR	Chiang Mai Arr	30.29	119	P	P	05 32 28.0	-2.0
	comp=Z,0.9nm,0.3s,baz=309,slow=9.3,SNR=6.6						
	comp=Z,0.9nm,0.3s						
HHC	Hu-ho-hao-te	31.60	70	eP	P	05 32 43.4	+2.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKASG	Malin Array Be	33.09	309	P	P	05 32 55.0	+0.9
	comp=Z,3.6nm,0.6s,baz=83,slow=7.0,SNR=21						
	comp=Z,3.6nm,0.6s						
AKASG	Malin Array Be	33.09	309	P	P	05 32 55.6	+1.5
AKBB	Malin Array Si	33.09	309		P	05 32 55.4	+1.3
AKBB				IAmb	IAmb	05 32 57.5	
	comp=Z,5.3nm,0.7s						
KIEV	Kiev	33.10	309		P	05 32 55.4	+1.2
KIEV				IAmb	IAmb	05 32 56.1	
	comp=Z,4.8nm,0.7s						
NRIK	Noril'sk	34.10	10	P	P	05 33 03.6	+0.9
	comp=Z,3.9nm,0.6s,baz=208,slow=6.5,SNR=7.2						
	comp=Z,3.9nm,0.6s						
NRIK	Noril'sk	34.10	10		P	05 33 03.6	+0.9
NRIK				IAmb	IAmb	05 33 06.0	
	comp=Z,4.1nm,0.6s						
BURAR	Bucovina Array	35.44	303	P	P	05 33 14.8	+0.2
BURAR				IAmb	IAmb	05 33 17.4	
	comp=Z,2.6nm,0.7s						
BUR08	Bucovina Ar. S	35.45	303	P	P	05 33 15.1	+0.4
BUR08				IAmb	IAmb	05 33 29.8	
	comp=Z,5.8nm,1.4s						
FIA1	FINESS Array S	37.59	326	P	P	05 33 33.5	+1.0
FINES	FINESS Array B	37.59	326	P	P	05 33 33.3	+0.8
	comp=Z,2.3nm,0.5s,baz=115,slow=9.9,SNR=16						
	comp=Z,2.3nm,0.5s						
FINES	FINESS Array B	37.59	326	P	P	05 33 33.6	+1.1
ARCES	ARCESS Array B	41.22	338	P	P	05 34 03.5	+0.9
	comp=Z,5.4nm,0.8s,baz=114,slow=7.9,SNR=12						
	comp=Z,5.4nm,0.8s						
HFS	Hagfors	43.18	322	P	P	05 34 19.6	+1.0
	comp=Z,4.2nm,0.5s,baz=107,slow=10,SNR=28						
	comp=Z,4.2nm,0.5s						
LESA	Schwarzleotal	43.93	303	eP	P	05 34 26.0	+1.1
	comp=Z,2.4nm,0.4s						
ABTA	Abfaltersbach	44.13	302	eP	P	05 34 27.5	+0.9
	comp=Z,0.8nm,0.4s						
NC405	NORSAR Array S	44.26	323	P	P	05 34 27.7	+0.5
NC602	NORSAR Array S	44.31	323	P	P	05 34 28.3	+0.7
NC303	NORSAR Array S	44.44	323	P	P	05 34 29.9	+1.2
NB2	NORSAR Subarra	44.49	323	P	P	05 34 29.5	+0.3
	comp=Z,3.4nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.49	323	P	P	05 34 29.4	+0.3
	comp=Z,2.5nm,0.5s,baz=97,slow=7.7,SNR=23						
	comp=Z,2.5nm,0.5s						
SQTA	Sankt Quirin	44.95	303	eP	P	05 34 35.1	+2.1
	comp=Z,1.7nm,0.4s						
MOTA	Moosalm	45.00	303	eP	P	05 34 33.6	+0.1
	comp=Z,0.3nm,0.1s						
FETA	Feichten	45.30	303	eP	P	05 34 36.5	+0.5
	comp=Z,1.5nm,0.6s						
TIXI	Tiksi	45.71	22	P	P	05 34 39.2	+0.6
TIXI				IAmb	IAmb	05 34 40.0	
	comp=Z,3.5nm,0.8s						
SPITS	Spitsbergen Ar	47.54	347	P	P	05 34 53.9	+1.1
	comp=Z,3.1nm,0.6s,baz=116,slow=12,SNR=6.2						
	comp=Z,3.1nm,0.6s						
EKA	Eskdalemuir Ar	52.42	316	P	P	05 35 29.7	-0.3
	comp=Z,1.3nm,0.6s,baz=96,slow=7.3,SNR=5.6						
	comp=Z,1.3nm,0.6s						
ESDC	Sonseca Array	57.62	298	P	P	05 36 08.1	+0.3
	comp=Z,0.2nm,0.6s,baz=49,slow=7.2,SNR=4.7						
	comp=Z,0.2nm,0.6s						
SUMG	Summit	61.13	341	P	P	05 36 33.5	+1.7
TORD	Torodi Ar. Bea	65.90	269	P	P	05 37 02.2	-1.3
	comp=Z,3.0nm,0.5s,baz=50,slow=3.3,SNR=54						
	comp=Z,3.0nm,0.5s						
TORD	Torodi Ar. Bea	65.90	269	P	P	05 37 02.6	-0.9
TORD				IAmb	IAmb	05 37 03.7	
	comp=Z,2.3nm,0.5s						
D19K	Kuna River	69.10	17	P	P	05 37 23.7	+0.8
D19K				IAmb	IAmb	05 37 24.5	
	comp=Z,4.1nm,0.6s						
F15K	North Star Dit	69.39	21	P	P	05 37 25.5	+0.8
F15K				IAmb	IAmb	05 37 26.9	
	comp=Z,9.9nm,1.4s						
D22K	Ayikyak River	70.03	16	P	P	05 37 29.8	+1.2
G19K	Purcell Mounta	71.16	19	P	P	05 37 36.2	+0.7
BMAR	Burnt Mountain	72.91	14	P	P	05 37 47.2	+1.3
ILAR	Eielson Array	74.74	16	P	P	05 37 56.4	-0.2
	comp=Z,0.4nm,0.7s,baz=304,slow=4.9,SNR=8.0						
	comp=Z,0.4nm,0.7s						
BCAR	Beaver Creek A	77.32	15	P	P	05 38 12.4	+1.0
YKAW3	Yellowknife Wh	81.17	3	P	P	05 38 33.3	+1.1
YKAW3				IAmb	IAmb	05 38 33.5	
	comp=Z,3.5nm,0.8s						
YKA	Yellowknife Ar	81.24	3	P	P	05 38 33.1	+0.5
	comp=Z,1.0nm,0.5s,baz=348,slow=5.9,SNR=22						
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	81.24	3	P	P	05 38 33.3	+0.7
ASAR	Alice Springs	84.10	125	P	P	05 38 47.9	-0.1
	comp=Z,0.5nm,0.6s,baz=312,slow=5.0,SNR=6.0						
	comp=Z,0.5nm,0.6s						

*ASRS **03** 05:50:11.0±0.6, 54°.25N×87°.08E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 03 05:50:11.2±3.3**, 54°.33N×87°.20E, h0**km**, mbtmp2.7**/2**, ML2.2**/2**, Error ellipse: s-maj=29.5km s-min=18.9km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.45	256	I	I	06 00 09.5	
	baz=74,slow=339,SNR=6.5						
ZALV	Zalesovo Beam	1.45	256	Pg	Pn	05 50 37.3	-1.4
	1.2nm,0.3s,baz=72,slow=15,SNR=14						
ZALV				Lg	Lg	05 50 57.8	
	0.8nm,0.3s,baz=73,slow=26,SNR=6.8						
KURBB	Kurchatov Arra	6.47	238	Pn	Pn	05 51 48.1	+0.5
	baz=56,slow=14,SNR=5.5						
	0.9nm,0.7s						
MKAR	Makanchi Array	8.17	204	Pn	Pn	05 52 12.4	+1.5
	baz=22,slow=13,SNR=3.3						
MKAR				Lg	Lg	05 54 27.1	
	baz=21,slow=10,SNR=3.5						
	0.2nm,0.6s						

IDC 03 05:58:29.9±5.2**, 5°.70S×132°.97E, h0**km**, mb3.4**/1**, mbtmp3.7**/3**, ML3.7**/2**, Error ellipse: s-maj=308.9km s-min=33.1km az=76.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.22	175	Pn	Pn	06 01 52.1	-0.6
	0.2nm,0.3s,baz=352,slow=14,SNR=15						
WRA				Sn	Sn	06 04 25.5	-5.8
	baz=354,slow=23,SNR=1.5						
	0.4nm,0.3s						
ASAR	Alice Springs	17.89	177	P	Pn	06 02 40.6	+0.3
	0.4nm,0.3s,baz=3.6,slow=12,SNR=36						
	3.8nm,0.7s						
MKAR	Makanchi Array	68.81	325	P	P	06 09 36.1	0.0
	0.3nm,0.7s,baz=121,slow=7.3,SNR=3.3						
	0.3nm,0.7s						

*NEIC **03** 06:30:49.0±1.3, 17°.96N±0°.04×66°.75W±0°.01, h10km±1km, ML2.7/33, Md2.5/5(RSPR), Error ellipse: s-maj=7.0km s-min=2.4km az=356.0*
*SDD **03** 06:30:50.7±1.9, 18°.04N×66°.73W, h0km±8km, MD3.1, ML2.4, MW2.4, Presumed earthquake*
RSPR 03 06:30:49.1, 17°.97N×66°.75W, h14km**, MD2.5**/5**, 20C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.12	274		Pg	06 30 52.6	+0.1
GBPR					Sg	06 30 55.1	+0.4
GBPR	Guanica, Bosqu	0.12	274	⇑iP	Pg	06 30 52.6	+0.1
GBPR				eS	Sg	06 30 55.1	+0.4
OBIP	Obispado Ponce	0.16	62	Pg	Pg	06 30 53.0	0.0
OBIP					Sg	06 30 55.7	+0.1
OBIP				IAML		06 30 58.4	
	comp=N,182nm,0.2s						
OBIP	Obispado Ponce	0.16	62	⇑eP	Pg	06 30 52.9	-0.1
OBIP				eS	Sg	06 30 55.7	0.0
MLPR	Magueyes Islan	0.28	270	Pg	Pg	06 30 55.1	+0.1
MLPR				IAML		06 30 59.8	
	comp=N,748nm,0.2s						
MLPR				IAML		06 31 01.0	
	comp=N,517nm,0.1s						
UUPR	Utuado, UPR, P	0.28	6		Pg	06 30 54.9	-0.2
UUPR				IAML		06 30 59.4	
	comp=N,9µm,0.2s						
UUPR				IAML		06 31 01.2	
	comp=N,10µm,0.3s						
CRPR	Cabo Rojo, PR	0.34	277		Pg	06 30 55.6	-0.5
CRPR					Sg	06 31 00.9	+0.1
CRPR	Cabo Rojo, PR	0.34	277	IAML		06 31 02.7	
	comp=N,292nm,0.2s						
CRPR				IAML		06 31 03.3	
	comp=N,479nm,0.3s						
CRPR	Cabo Rojo, PR	0.34	277	⇑iP	Pg	06 30 56.1	0.0
CRPR				⇑iS	Sg	06 31 00.9	+0.1
	comp=N,438nm,0.3s						
CRPR				IAML		06 31 01.6	
	comp=N,438nm,0.3s						
CRPR	Cabo Rojo, PR	0.34	277	⇓eP	Pg	06 30 55.6	-0.5
CRPR				eS	Sg	06 31 00.9	+0.1
LSP	Las Mesas	0.38	303		Pg	06 30 56.6	-0.2
LSP					Sg	06 31 02.4	+0.4
LSP	Las Mesas	0.38	303	⇑eP	Pg	06 30 56.6	-0.2
LSP				eS	Sg	06 31 02.4	+0.4
PRSN	Puerto Rico Se	0.45	304		Pg	06 30 57.5	-0.5
PRSN					Sg	06 31 04.2	+0.1
PRSN	Puerto Rico Se	0.45	304	IAML		06 31 05.6	
	comp=N,2µm,0.3s						
PRSN				IAML		06 31 06.8	
	comp=N,1µm,0.3s						
PRSN	Puerto Rico Se	0.45	304	⇑iP	Pg	06 30 57.3	-0.8
PRSN				⇑iS	Sg	06 31 02.3	-1.7
	comp=N,944nm,0.2s						
PRSN				IAML		06 31 07.5	
	comp=N,944nm,0.2s						
PRSN	Puerto Rico Se	0.45	304	⇑eP	Pg	06 30 57.5	-0.5
PRSN				eS	Sg	06 31 04.2	+0.1
ECPR	Experimental S	0.51	47	IAML		06 31 06.7	
	comp=N,2µm,0.2s						
ECPR				IAML		06 31 07.2	
	comp=N,2µm,0.2s						
ECPR	Experimental S	0.51	47	⇑eP	Pg	06 30 58.6	-0.5
ECPR				eS	Sg	06 31 05.7	-0.3
EMPR	Esperanza - Ma	0.55	23		Pg	06 30 59.8	-0.1
EMPR					Sg	06 31 07.2	0.0
EMPR	Esperanza - Ma	0.55	23	⇑eP	Pg	06 30 59.8	-0.1
EMPR				eS	Sg	06 31 07.2	0.0
SJG	San Juan	0.59	76	Pg	Pg	06 31 00.0	-0.7
SJG				IAML		06 31 08.9	
	comp=N,371nm,0.3s						
SJG				IAML		06 31 10.0	
	comp=N,341nm,0.2s						
SJG	San Juan	0.59	76	⇑iP	Pg	06 31 00.3	-0.4
SJG				⇑iS	Sg	06 31 08.4	-0.1
SJG	San Juan	0.59	76	⇑eP	Pg	06 30 59.8	-0.9
SJG				eS	Sg	06 31 08.4	-0.1
AGPR	Aguadilla, PR	0.60	326	Pg	Pg	06 31 00.2	-0.7
AGPR				IAML		06 31 09.9	
	comp=N,248nm,0.3s						
AGPR				IAML		06 31 11.7	
	comp=N,246nm,0.3s						
AGPR	Aguadilla, PR	0.60	326	⇑iP	Pg	06 31 00.2	-0.7
AGPR				⇑iS	Sg	06 31 07.7	-1.2
	comp=N,237nm,0.3s						
AGPR				IAML		06 31 09.8	
	comp=N,237nm,0.3s						
AGPR	Aguadilla, PR	0.60	326	⇑eP	Pg	06 31 00.2	-0.7
AGPR				eS	Sg	06 31 08.3	-0.7
PDPR	Patillas Dam,	0.70	86	Pg	Pg	06 31 02.2	-0.5
PDPR				IAML		06 31 12.5	
	comp=N,208nm,0.2s						
PDPR				IAML		06 31 12.7	
	comp=N,128nm,0.2s						
GCPR	Guaynabo City	0.72	62		Pg	06 31 02.2	-0.9
GCPR					Sg	06 31 11.5	-1.2
GCPR	Guaynabo City	0.72	62	IAML		06 31 12.1	
	comp=E,76nm,0.7s						
GCPR				IAML		06 31 12.6	
	comp=N,115nm,0.1s						
GCPR	Guaynabo City	0.72	62	⇑eP	Pg	06 31 02.2	-0.9
GCPR				eS	Sg	06 31 11.5	-1.2
IDE	Isla Desecheo	0.80	301		Pg	06 31 03.6	-1.1
IDE					Sg	06 31 13.6	-1.6
IDE	Isla Desecheo	0.80	301	⇑eP	Pg	06 31 03.6	-1.1
IDE				eS	Sg	06 31 13.6	-1.6
HUMP	Col San Antoni	0.88	78		Pg	06 31 04.8	-1.3
HUMP					Sg	06 31 15.9	-1.7
HUMP	Col San Antoni	0.88	78	IAML		06 31 17.7	
	comp=N,178nm,0.2s						
HUMP				IAML		06 31 17.8	
	comp=N,164nm,0.2s						
HUMP	Col San Antoni	0.88	78	⇑eP	Pg	06 31 04.8	-1.3
HUMP				eS	Sg	06 31 15.9	-1.7
CUPR	Culebra, Puert	1.44	76		Pn	06 31 14.4	-0.4
MIDR	Miches	2.40	295	iP	Pn	06 31 29.6	+1.5
MIDR				⇑iS	Sn	06 31 57.4	+0.1
MIDR				IAML		06 32 07.5	
	comp=N,10nm,0.7s						
MIDR				IAML		06 32 11.9	
	comp=N,21nm,2.0s						
DR12	Loma Pena Alta	2.63	289	Pn	Pn	06 31 33.4	+2.2
HATOM	Hato Mayor del	2.63	289	iP	Pn	06 31 32.8	+1.7
HATOM				⇑iS	Sn	06 32 05.1	+2.2
HATOM				IAML		06 32 23.6	
	comp=N,17nm,2.5s						

IDC 03 06:32:20.8±2.4**, 7°.50S×130°.26E, h0**km**, mb3.2**/1**, mbtmp3.3**/4**, ML3.5**/3**, MS2.9**/1**, Error ellipse: s-maj=80.8km s-min=30.6km az=78.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	10.74	283	LR	LR	06 39 34.1	
	comp=Z,62nm,21.4s,baz=80,slow=40						
FITZ	Fitzroy Crossi	11.46	203	Pn	Pn	06 35 04.2	-1.7
	0.3nm,0.3s,baz=26,slow=14,SNR=10.0						
FITZ				Sn	Sn	06 37 03.7	-11
	0.1nm,0.3s,baz=346,slow=5.8,SNR=1.1						
	1.8nm,0.7s						
WRA	Warramunga Arr	12.98	163	Pn	Pn	06 35 27.7	+1.0
	0.3nm,0.3s,baz=348,slow=14,SNR=12						
WRA				Sn	Sn	06 37 47.5	-4.6
	0.4nm,0.3s,baz=340,slow=21,SNR=11						
	0.2nm,0.4s						
ASAR	Alice Springs	16.45	168	Pn	Pn	06 36 14.0	+0.8
	0.1nm,0.3s,baz=349,slow=12,SNR=5.3						
ASAR				Sn	Sn	06 39 11.2	-5.4
	0.1nm,0.3s,baz=348,slow=25,SNR=6.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	68.79	327	P	P	06 43 27.0	+0.1
	0.2nm,0.9s,baz=127,slow=5.7,SNR=1.6						
	0.2nm,0.9s						

*IDC **03** 06:37:11.0±1.6, 19°.60N×155°.35W, h0km, mb3.6/7, mbtmp3.6/7, MS3.6/1, Error ellipse: s-maj=51.8km s-min=30.3km az=151.0*
*NEIC **03** 06:37:10.5±1.1, 19°.36N±0°.01×155°.24W±0°.01, h11km±1km, mb4.3/4, ML4.2/48, ML4.2/53(HVO), Error ellipse: s-maj=2.0km s-min=1.3km az=133.0*
*HVO **03** 06:37:10.1±0.7, 19°.33N±0°.01×155°.20W±0°.01, h8km±1km, Error ellipse: s-maj=1.9km s-min=1.4km az=151.0*
ISC 03 06:37:10.5±0.7**, 19°.35N**±0°.03×**155°.22W**±0°.02**, h10**km±3km**, n81, σ1§05**/79**, mb3.9**/10**, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUH	Pauahi	0.03	14		Pg	06 37 12.1	-0.4
PUH				Sg	Sg	06 37 13.7	-0.2
PUH				IAML		06 37 14.3	
	comp=E,95µm,0.8s						
PUH				IAML		06 37 14.4	
	comp=N,122µm,0.7s						
AHA	Ahua	0.05	303		Pg	06 37 12.5	-0.2
AHA					Sg	06 37 14.2	0.0
AHA	Ahua	0.05	303		Pg	06 37 12.5	-0.2
AHA					Sg	06 37 14.6	+0.4
KNHH	Kane Nui o Ham	0.06	58		Pg	06 37 12.3	-0.5
KKO	Keanakako'i	0.06	321		Pg	06 37 12.8	-0.1
KKO					Sg	06 37 14.7	+0.1
PWH	Poliokeawe Pal	0.06	182		Pg	06 37 12.2	-0.5
ESR	Escape Road	0.07	346		Pg	06 37 12.8	-0.1
ESR					Sg	06 37 14.8	+0.3
KNH	Kipuka Nene	0.07	259	Pg	Pg	06 37 12.7	-0.1
RIM	Rim	0.07	314		Pg	06 37 12.9	0.0
RIM					Sg	06 37 14.8	+0.2
OUT	Outlet	0.07	307		Pg	06 37 12.8	-0.1
BYL	Byron's Ledge	0.07	331	Pg	Pg	06 37 12.8	-0.2
BYL				IAML		06 37 15.4	
	comp=N,86µm,1.0s						
SDHHI	Sand Hill	0.08	302		Pg	06 37 12.9	-0.1
HATHI	Halema‘uma‘u T	0.08	334	Pg	Pg	06 37 13.0	-0.1
HATHI				Sg	Sg	06 37 15.1	+0.3
HATHI				IAML		06 37 15.5	
	comp=N,69µm,1.1s						
HATHI				IAML		06 37 15.5	
	comp=E,70µm,0.8s						
OBL	Observatory Le	0.09	320		Pg	06 37 13.2	0.0
OBL					Sg	06 37 15.3	+0.3
SBLHI	Steaming Bluff	0.09	332		Pg	06 37 13.0	-0.1
SBLHI					Sg	06 37 15.1	+0.1
UWB	Uwekahuna Bluf	0.09	326		Pg	06 37 13.1	-0.1
UWB					Sg	06 37 15.1	0.0
WRMHI	West Rim	0.09	309		Pg	06 37 13.1	-0.1
WRMHI					Sg	06 37 15.4	+0.3
HLP	Hilina Pali	0.10	237	Pg	Pg	06 37 13.1	-0.1
HLP				Sg	Sg	06 37 15.3	+0.3
HLP				IAML		06 37 15.6	
	comp=N,152µm,0.7s						
HLP				IAML		06 37 17.5	
	comp=E,106µm,0.7s						
UWE	Uwekahuna	0.10	318	Pg	Pg	06 37 13.3	0.0
UWE				IAML		06 37 16.5	
	comp=E,114µm,0.9s						
UWE				IAML		06 37 16.5	
	comp=N,114µm,1.0s						
STCH	Steam Cracks	0.10	68		Pg	06 37 12.7	-0.5
STCH				IAML		06 37 15.4	
	comp=E,92µm,0.6s						
KAE	Kaena	0.10	124		Pg	06 37 12.7	-0.5
CPK	Cone Peak	0.11	295		Pg	06 37 13.3	-0.1
NPOC	North of Pu‘u	0.12	67		Pg	06 37 13.0	-0.5
NPOC					Sg	06 37 15.1	-0.4
JCUZ	Jacuzzi	0.12	72		Pg	06 37 13.0	-0.5
RSD	Rainshed	0.13	336	Pg	Pg	06 37 13.6	-0.1
RSD				IAML		06 37 16.9	
	comp=N,45µm,1.1s						
DES	Desert	0.16	266		Pg	06 37 13.9	-0.2
DES				IAML		06 37 17.0	
	comp=N,88µm,0.6s						
DES				IAML		06 37 17.2	
	comp=E,45µm,0.9s						
KLCH	Kalalua Cone	0.16	68		Pg	06 37 13.4	-0.7
HTC	Hot Caves	0.20	236		Pg	06 37 14.9	+0.1
MLH	Mauna Loa	0.21	313		Pg	06 37 15.3	+0.2
JOKA	Jonika Flow	0.22	67		Pg	06 37 14.4	-0.8
WOH	Wood Valley	0.28	250	Pg	Pg	06 37 16.2	-0.1
PLL	Puu Ulaula	0.29	309		Pg	06 37 16.4	-0.2
PPL	Puu Pili	0.30	230		Pg	06 37 16.6	+0.1
PKL	Puu Kaliu	0.30	69		Pg	06 37 15.9	-0.8
TRH	Trail	0.32	282		Pg	06 37 17.0	0.0
HMH	Humu‘ula Sheep	0.35	316		Pg	06 37 17.6	-0.1
HMH	Humu‘ula Sheep	0.35	316	IAML		06 37 25.0	
	comp=N,61µm,0.5s						
HMH				IAML		06 37 25.0	
	comp=E,47µm,0.4s						
WIH	Wilkes Camp	0.36	290		Pg	06 37 17.7	-0.3
SWH	Southwest Rift	0.38	286		Pg	06 37 17.7	-0.5
MWH	Mokuaweoweo	0.38	291		Pg	06 37 17.9	-0.3
MWH	Mokuaweoweo	0.38	291	IAML		06 37 25.6	
	comp=N,40µm,0.6s						
MWH				IAML		06 37 25.7	
	comp=E,83µm,0.6s						
MLOA	Mauna Loa Obse	0.38	299	IAML		06 37 26.0	
	comp=E,29µm,0.4s						
KHU	Kahuku	0.38	255		Pg	06 37 17.8	-0.5
HIL	Hilo	0.39	19		Pg	06 37 18.1	-0.2
HIL				IAML		06 37 25.8	
	comp=N,40µm,0.8s						
HIL				IAML		06 37 29.5	
	comp=E,13µm,0.8s						
HPO	Honuapo	0.41	231		Pg	06 37 18.1	-0.4
DAH	Dandelion	0.42	271	Pg	Pg	06 37 18.1	-0.8
POHA	Pohakuloa	0.50	324		Pg	06 37 19.5	-0.9
OVEH	Oceanview Est	0.55	249		Pg	06 37 20.0	-1.2
OVEH				IAML		06 37 32.7	
	comp=N,20µm,0.7s						
OVEH				IAML		06 37 32.9	
	comp=E,27µm,0.5s						
SPT	South Point	0.56	229	Pg	Pg	06 37 20.0	-1.4
SPT				IAML		06 37 34.3	
	comp=N,15µm,0.6s						
SPT				IAML		06 37 35.3	
	comp=E,12µm,0.7s						
KHLU	Kahalu`u	0.68	291	Pg	Pg	06 37 22.3	-1.4
KHLU				IAML		06 37 34.5	
	comp=E,18µm,0.4s						
HPAH	Hawaii Prepara	0.81	327	IAML		06 37 40.0	
	comp=N,8µm,0.5s						
HPAH				IAML		06 37 44.3	
	comp=E,8µm,0.7s						
DHH	Diamond Head	3.08	309	Pn	Pn	06 37 55.0	-4.3
HON	Honolulu	3.27	307	Pn	Pn	06 37 57.6	-4.2
KIP	Kipapa	3.33	309		Pn	06 37 58.4	-4.3
H11N3	WAKE ISLAND Hy	35.64	277	T	T	07 21 12.9	
	baz=84,slow=75,SNR=113						
H11N2	WAKE ISLAND Hy	35.65	277	T	T	07 21 21.7	
	baz=84,slow=75,SNR=90						
H11N1	WAKE ISLAND Hy	35.66	277	T	T	07 21 22.3	
	baz=84,slow=75,SNR=135						
H11S2	WAKE ISLAND Hy	35.98	275	T	T	07 21 49.0	
	baz=83,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	35.98	275	T	T	07 21 42.5	
	baz=83,slow=75,SNR=20						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	35.99	275	T	T	07 21 48.6	
	baz=83,slow=75,SNR=28						
H02S2	DAWSON INLET T	38.10	22	T	T	07 24 30.1	
	SNR=9.9						
PDAR	Pinedale Array	44.87	48	P	P	06 45 27.2	+1.7
	comp=E,0.4nm,0.7s,baz=255,slow=7.5,SNR=3.6						
	comp=E,0.4nm,0.7s						
ILAR	Eielson Array	45.74	5	P	P	06 45 32.0	+0.3
	comp=E,0.9nm,0.5s,baz=194,slow=7.2,SNR=20						
	comp=E,0.9nm,0.5s						
ILAR	Eielson Array	45.74	5	P	P	06 45 31.8	+0.1
H24K	Noodor Dome	46.72	4	P	P	06 45 39.9	+0.5
H24K				IAmb	IAmb	06 45 44.1	
	comp=Z,5.2nm,1.3s						
TX31	Lajitas Ar. Si	47.69	68	P	P	06 45 47.5	-0.2
TXAR	Lajitas Array	47.69	68	P	P	06 45 49.3	+1.6
	comp=Z,0.6nm,0.7s,baz=261,slow=7.8,SNR=3.6						
	comp=Z,0.6nm,0.7s						
TXAR	Lajitas Array	47.69	68	P	P	06 45 48.0	+0.3
G29M	Pine Creek	48.83	9	P	P	06 45 56.5	+0.7
PETK	Petropavlovsk-	49.43	324	LR	LR	07 06 02.9	
	comp=Z,62nm,19.3s,baz=181,slow=35						
F30M	Barrier River	49.81	10	P	P	06 46 04.0	+0.7
F30M				IAmb	IAmb	06 46 46.9	
	comp=Z,4.0nm,1.2s						
YKA	Yellowknife Ar	51.36	23	P	P	06 46 15.1	+0.1
	comp=Z,0.5nm,0.9s,baz=238,slow=7.8,SNR=3.8						
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	51.36	23	P	P	06 46 15.2	+0.2
HHC	Hu-ho-hao-te	79.95	310	eP	P	06 49 19.3	-1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAR	Alice Springs	81.25	241	P	P	06 49 29.8	+2.5
	comp=Z,0.1nm,0.6s,baz=57,slow=5.9,SNR=1.7						
	comp=Z,0.1nm,0.6s						
SONM	Songino Array	81.34	318	P	P	06 49 27.6	0.0
	comp=Z,0.4nm,0.3s,baz=79,slow=4.5,SNR=4.3						
	comp=Z,0.4nm,0.3s						
H03N2	Juan Fernandez	89.63	126	T	T	08 29 09.7	
	baz=298,slow=76,SNR=33						
H03N3	Juan Fernandez	89.64	126	T	T	08 29 10.8	
	baz=298,slow=76,SNR=172						
H03N1	Juan Fernandez	89.64	126	T	T	08 29 10.2	
	baz=298,slow=76,SNR=164						
WMQ	Urumqi	94.81	320	eP	P	06 50 33.6	+0.7
WMQ				LR	LR		
	comp=Z,150nm,24.2s						
MKAR	Makanchi Array	96.27	324	P	P	06 50 40.6	+1.2
	comp=Z,0.3nm,0.8s,baz=57,slow=5.3,SNR=2.1						
	comp=Z,0.3nm,0.8s						

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*IDC **03** 06:37:33.1±1.8, 4°.12S×122°.74E, h0km, mb3.3/2, mbtmp3.5/4, ML3.6/2, MS2.8/2, Error ellipse: s-maj=39.2km s-min=25.0km az=36.0*
*DJA **03** 06:37:34.8±0.3, 4°S±3°×12°3E±°, h10km, M4.0/13, mb4.3/3, MLv3.9/13*
ISC 03 06:37:34.1±1.0**, 4°.15S**±0°.05×**122°.74E**±0°.06**, h10km, n20, σ1s27**/20**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDI	Kendari	0.23	328	P	Pg	06 37 38.6	-0.3
KDI				S	Sg	06 37 41.7	-0.4
KKSI	Kolaka, Sulawe	1.09	269	P	Pg	06 37 52.6	-2.5
BKSI	Bulukumba	2.86	246	P	Pn	06 38 20.1	+0.3
SPSI	Sidrap Palu	2.97	274	P	Pn	06 38 22.1	+0.7
BSSI	Bau Bau, Buton	2.99	229	P	Pn	06 38 21.8	+0.1
LUWI	Luwuk	3.09	1	P	Pn	06 38 23.5	+0.5
KAPI	Kappang	3.10	254	Pn	Pn	06 38 23.8	+0.6
	14nm,0.3s,baz=76,slow=7.9,SNR=27						
KAPI				Sn	Sn	06 39 01.1	+0.8
	8.1nm,0.3s,baz=122,slow=12,SNR=3.7						
	55nm,0.4s						
KAPI	Kappang	3.10	254	P	Pn	06 38 23.9	+0.7
APSI	Ampana	3.40	341	P	Pn	06 38 29.6	+2.3
MKS	Makassar	3.43	252	P	Pn	06 38 29.4	+1.7
SANI	Sanana	3.86	57	P	Pn	06 38 33.7	+0.1
PMSI	Majene	3.87	280	P	Pn	06 38 35.2	+1.4
PCI	Palu	4.34	318	P	Pg	06 39 02.4	+5.0
MRSI	Marisa	4.67	350	P	Pg	06 39 01.1	-2.6
EDFI	Ende, Flores	4.69	193	P	Pn	06 38 45.8	+0.7
MPSI	Mapaga	5.29	327	P	Pn	06 38 53.7	+0.4
	0.1nm17nm,0.5s						
SIJI	Sorong	9.12	69	LR	LR	06 43 33.2	
	comp=Z,51nm,19.9s,baz=206,slow=40						
WRA	Warramunga Arr	19.34	145	P	P	06 42 00.6	+0.6
	0.1nm,0.3s,baz=321,slow=13,SNR=8.6						
	1.2nm,0.9s						
ASAR	Alice Springs	22.19	152	P	P	06 42 31.7	+0.9
	0.7nm,0.6s,baz=329,slow=10,SNR=14						
ASAR				LR	LR	06 51 09.7	
	comp=Z,27nm,20.9s,baz=350,slow=37						
	0.7nm,0.6s						
MKAR	Makanchi Array	62.02	330	P	P	06 47 55.0	+0.2
	0.1nm,0.4s,baz=116,slow=8.2,SNR=2.0						
	0.1nm,0.4s						

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*IDC **03** 06:48:06.2±1.1, 51°.80N×74°.21E, h0km, mbtmp2.4/2, ML1.6/2, Error ellipse: s-maj=33.4km s-min=8.3km az=28.0*
*NNC **03** 06:48:10.8±0.9, 52°.06N×74°.24E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=25.2km s-min=6.0km az=24.0, Suspected Mining explosion.*
ISC 03 06:48:09.7±1.2**, 52°.1N**±0°.2×**74°.42E**±0°.08**, h0km, n9, σ0s32**/6**, 2C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVA0	Borovoye Array	2.62	292	⇓Pg	Pb	06 48 57.2	-0.3
	1.6nm,0.7s						
BVA0				⇓Lg	Lg	06 49 31.0	
	5.6nm,0.9s						
BVAR	Borovoye Array	2.62	292	Pg	Pn	06 48 53.5	+0.3
	0.1nm,0.3s,baz=111,slow=16,SNR=9.7						
BVAR				Lg	Lg	06 49 28.8	
	0.1nm,0.3s,baz=120,slow=24,SNR=8.3						
KURBB	Kurchatov Arra	2.98	119	Pg	Pn	06 48 58.2	0.0
	baz=297,slow=14,SNR=4.1						
KURBB				Lg	Lg	06 49 39.9	
	0.1nm,0.3s,baz=294,slow=31,SNR=11						
KURBB	Kurchatov Arra	2.98	119	⇑Pg	Pg	06 49 07.2	+0.3
	2.2nm,0.8s,baz=305,slow=15						
KURBB				⇓Lg	Lg	06 49 46.0	
	14nm,0.7s,baz=298,slow=30						
KURK	Kurchatov	2.99	117	⇓Pg	Pg	06 49 06.7	-0.2
	0.6nm,0.9s						
KURK				⇑Lg	Lg	06 49 47.2	
	3.1nm,0.8s						
I46RU	ZALESOVO INFRA	6.53	70	I	I	07 28 38.9	
	baz=255,slow=313,SNR=3.0						
ZALV	Zalesovo Beam	6.53	70	Pn	Pn	06 49 47.0	+0.1
	baz=253,slow=13,SNR=4.3						
	0.8nm,0.7s						
MK31	Makanchi Array	7.40	133	⇓Lg	Lg	06 52 06.5	
	2.7nm,1.0s,baz=321,slow=28,SNR=4.7						
MKAR	Makanchi Array	7.40	133	Pn	Pn	06 49 54.0	-5.0
	baz=320,slow=12,SNR=2.0						
MKAR				Lg	Lg	06 51 56.2	
	0.1nm,0.3s,baz=318,slow=31,SNR=7.0						

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*ASRS **03** 06:55:08.0±1.4, 53°.54N×87°.42E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 03 06:55:11.6±3.2**, 53°.57N×87°.52E, h0km, mbtmp2.5**/2**, ML2.3**/2**, Error ellipse: s-maj=28.2km s-min=16.6km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.65	284	I	I	07 06 33.7	
	baz=100,slow=335,SNR=3.2						
ZALV	Zalesovo Beam	1.65	284	Pg	Pn	06 55 41.0	-0.8
	0.6nm,0.3s,baz=102,slow=20,SNR=8.1						
ZALV				Lg	Lg	06 56 03.6	
	0.6nm,0.3s,baz=104,slow=28,SNR=2.8						
KURBB	Kurchatov Arra	6.28	246	Pn	Pn	06 56 46.5	+1.2
	baz=60,slow=13,SNR=3.2						
KURBB				Lg	Lg	06 58 29.1	
	baz=62,slow=34						
	0.2nm,0.4s						
MKAR	Makanchi Array	7.57	208	Pn	Pn	06 57 04.3	+1.2
	0.1nm,0.3s,baz=28,slow=15,SNR=5.0						
MKAR				Lg	Lg	06 59 10.6	
	baz=30,slow=27,SNR=2.8						
	0.1nm,0.3s						

IDC 03 07:00:27.1±2.9**, 54°.20N×86°.69E, h0km, mbtmp2.5**/2**, ML2.8**/2**, Error ellipse: s-maj=25.9km s-min=14.8km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.13	258	I	I	07 08 20.0	
	baz=77,slow=334,SNR=1.3						
ZALV	Zalesovo Beam	1.13	258	Pg	Pg	07 00 47.0	-1.7
	0.3nm,0.3s,baz=78,slow=17,SNR=5.8						
ZALV				Lg	Lg	07 01 05.0	
	0.9nm,0.3s,baz=76,slow=30,SNR=5.7						
KURBB	Kurchatov Arra	6.14	238	Pn	Pn	07 01 59.6	+0.6
	0.1nm,0.3s,baz=55,slow=14,SNR=7.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	7.93	202	Pn	Pn	07 02 24.9	+1.3
	0.3nm,0.3s,baz=26,slow=14,SNR=12						
	0.1nm,0.3s						

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*NIED **03** 07:10:08.9, 40°.76N×142°.64E, h22km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr6.02; Mθθ0.00; Mϕϕ-6.02; Mrθ1.56; Mθϕ-1.79; Mϕr6.46; Fault plane solution: M0 9.13000×10^14 NP1: ϕs197.00000°, δ22.00000°, λ93.00000°. NP2:ϕs14.00000°, δ68.00000°, λ89.00000°.*
*JMA **03** 07:10:08.9±0.2, 40°.8N±0°.5×142°.6E±1°.0, h22km, MD3.8/37, MV4.0/37, E OFF AOMORI PREF*
*IDC **03** 07:10:11.5±2.2, 40°.83N×142°.71E, h55km±19km, mb3.7/14, mbtmp4.0/18, ML3.7/4, MS3.2/7, Error ellipse: s-maj=22.2km s-min=13.0km az=97.0*
*NEIC **03** 07:10:13.5±0.9, 40°.87N±0°.08×142°.6E±0°.2, h58km±9km, mb4.3/23, Error ellipse: s-maj=22.3km s-min=10.3km az=108.0*
ISC 03 07:10:08.9±0.7**, 40°.76N**±0°.05×**142°.60E**±0°.06**, h27km, n79, σ1s43**/70**, mb4.3**/26**, MS3.6**/4**, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.88	231	P	Pn	07 10 25.3	-0.2
JANG	Nango	0.91	246	⇓iP	Pb	07 10 26.4	+0.3
JANG				A	A	07 10 26.4	
	comp=N,4.0nm,2.0s,comp=E,4.0nm,0.2s						
JANG				⇓eS	Sn	07 10 38.7	+0.5
JARK	Aomorirokkasho	0.97	285	⇓iP	Pb	07 10 27.0	0.0
JARK				⇓S	Sb	07 10 38.8	-0.7
JAHD	Aomorihigashid	1.08	298	A	A	07 10 28.9	
	comp=N,6.0nm,1.0s,comp=E,6.0nm,0.7s						
JTM	Tenmabayashi	1.17	272	⇓iP	Pb	07 10 30.4	0.0
JEM	Erimo	1.32	18	P	Pn	07 10 32.3	+0.7
JEM				S	Sb	07 10 50.1	+0.4
JOT	Ohata	1.33	298	⇓iP	Pn	07 10 32.2	+0.5
JNBK	Urakawa-nobuka	1.53	4	P	Pn	07 10 35.5	+1.2
JNBK				A	A	07 10 35.5	
	comp=N,3.0nm,0.4s,comp=E,3.0nm,0.5s						
JAH	Hinai	1.60	250	⇓iP	Pb	07 10 37.5	-0.3
JOM	Ohasama	1.63	219	i P	Pb	07 10 37.2	-1.1
JOM				A	A	07 10 37.2	
	comp=N,3.0nm,1.0s,comp=E,3.0nm,0.3s						
JKB	Kayabe	1.64	314	P	Pn	07 10 36.6	+0.8
JSR	Shiriuchi	1.82	296	⇓iP	Pn	07 10 40.0	+1.6
JCH	Churui	1.94	17	P	Pn	07 10 40.8	+0.7
JCH				eS	Sn	07 11 04.1	+0.6
JIW	Iwasaki	1.98	266	P	Pb	07 10 43.0	-1.2
JBT2	Biratori 2	2.03	355	P	Pn	07 10 43.2	+1.9
JKA	Kamikawa-asahi	3.36	360		Pn	07 11 01.5	+1.9
ASAJ	Asahikawa	3.36	360	P	Pn	07 11 01.7	+2.2
	comp=E,5.8nm,0.3s,baz=214,slow=10.0,SNR=17						
ASAJ				S	Sn	07 11 38.4	-0.1
	comp=E,39nm,0.5s,baz=102,slow=4.2,SNR=4.7						
	comp=E,20nm,0.3s						
MJAR	Matsushiro Arr	5.43	221	P	Pn	07 11 31.9	+3.8
	comp=E,0.3nm,0.3s,baz=33,slow=13,SNR=13						
	comp=E,7.9nm,0.8s						
MJAR	Matsushiro Arr	5.43	221		Pn	07 11 32.3	+4.2
MJB9	Matsu-Tunnel	5.43	221		Pn	07 11 33.1	+4.9
MAJO	Matsushiro	5.43	221		Pn	07 11 32.5	+4.4
YSS	Yuzhno-Sakhali	6.20	1	Pn	Pn	07 11 40.6	+2.1
JGF	Kuroka	6.60	220	Pn	Pn	07 11 48.8	+4.6
USRK	Ussuriysk Ar.	8.56	297	P	Pn	07 12 13.9	+2.8
	comp=E,1.1nm,0.3s,baz=98,slow=15,SNR=8.8						
	comp=E,7.5nm,0.6s						
KLR	Kul'dur	11.43	321	LR	LR	07 17 41.8	
	comp=E,16nm,18.9s,baz=116,slow=39						
KSRS	Korea Array	11.87	259	LR	LR	07 17 07.1	
	comp=E,72nm,20.6s,baz=70,slow=35						
HILR	Hailar Array B	18.30	306	P	P	07 14 19.6	-1.1
	baz=112,slow=11						
	comp=E,2.5nm,0.5s						
MA2	Magadan	19.52	12	LR	LR	07 23 02.1	
	comp=E,63nm,20.4s,baz=110,slow=40						
SEY	Seymchan	22.96	11	P	P	07 15 08.6	-2.3
	comp=E,0.6nm,0.3s,baz=167,slow=4.2,SNR=4.1						
	comp=E,0.6nm,0.3s						
SONM	Songino Array	26.68	298	P	P	07 15 45.7	0.0
	comp=E,1.0nm,0.7s,baz=92,slow=10.0,SNR=6.8						
SONM				LR	LR	07 25 33.6	
	comp=E,46nm,20.9s,baz=48,slow=34						
	comp=E,1.0nm,0.7s						
SONM	Songino Array	26.68	298	P	P	07 15 46.2	+0.6
H11N2	WAKE ISLAND Hy	29.49	128	T	T	07 47 15.1	
	baz=318,slow=75,SNR=73						
H11N1	WAKE ISLAND Hy	29.50	128	T	T	07 47 14.9	
	baz=318,slow=75,SNR=56						
H11N3	WAKE ISLAND Hy	29.50	128	T	T	07 47 10.5	
	baz=318,slow=75,SNR=63						
H11S1	WAKE ISLAND Hy	30.32	130	T	T	07 48 13.7	
	baz=322,slow=74,SNR=18						
H11S3	WAKE ISLAND Hy	30.32	130	T	T	07 48 10.3	
	baz=322						
H11S2	WAKE ISLAND Hy	30.34	130	T	T	07 48 11.5	
	baz=322,slow=74,SNR=12						
C16K	Lisburne Hills	38.97	28	P	P	07 17 32.2	0.0
ZAA0	Zalesovo Array	40.19	309	P	P	07 17 42.6	0.0
ZAA0				IAmb	IAmb	07 17 43.1	
	comp=Z,4.0nm,0.5s						
ZALV	Zalesovo Beam	40.19	309	P	P	07 17 42.6	0.0
	comp=Z,4.5nm,0.6s,baz=92,slow=8.7,SNR=12						
	comp=Z,4.5nm,0.6s						
ZALV	Zalesovo Beam	40.19	309		P	07 17 42.5	-0.1
NRIK	Noril'sk	40.32	333	P	P	07 17 42.5	-0.9
	comp=Z,0.7nm,0.3s,baz=176,slow=15,SNR=1.9						
	comp=Z,0.7nm,0.3s						
NRIK	Noril'sk	40.32	333	P	P	07 17 43.9	+0.4
NRIK				IAmb	IAmb	07 17 57.0	
	comp=Z,3.1nm,0.8s						
G18K	Tagagawik	40.99	32	P	P	07 17 49.9	+0.8
G18K				IAmb	IAmb	07 18 09.6	
	comp=Z,2.7nm,1.1s						
H18K	Honhosa River	41.01	34	P	P	07 17 50.7	+1.4
MK31	Makanchi Array	43.03	299	P	P	07 18 06.3	+0.3
MKAR	Makanchi Array	43.03	299	P	P	07 18 06.0	0.0
	comp=Z,1.2nm,0.5s,baz=85,slow=9.3,SNR=19						
	comp=Z,1.2nm,0.5s						
MAKZ	Makanchi	43.23	299		P	07 18 07.8	+0.2
MAKZ				IAmb	IAmb	07 18 10.8	
	comp=Z,2.8nm,0.9s						
KDAK	Kodiak Island	43.75	45	LR	LR	07 37 15.3	
	comp=Z,88nm,18.3s,baz=219,slow=37						
KURK	Kurchatov	44.45	305		P	07 18 17.4	0.0
KURK				IAmb	IAmb	07 18 23.1	
	comp=Z,3.0nm,0.6s						
KURBB	Kurchatov Arra	44.53	305	P	P	07 18 17.6	-0.3
	comp=Z,2.8nm,0.7s,baz=80,slow=8.7,SNR=14						
	comp=Z,2.8nm,0.7s						
ILAR	Eielson Array	45.88	34	P	P	07 18 28.6	+0.2
	comp=Z,0.3nm,0.7s,baz=263,slow=5.8,SNR=6.6						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	45.88	34	P	P	07 18 28.1	-0.4
D25K	Kavik River	45.92	28	P	P	07 18 29.4	+0.5
D25K				IAmb	IAmb	07 18 50.9	
	comp=Z,8.8nm,1.4s						
BMAR	Burnt Mountain	46.64	30	P	P	07 18 36.1	+1.6
F26K	Sheenjek River	46.79	30	P	P	07 18 37.7	+2.0
F26K				IAmb	IAmb	07 18 38.3	
	comp=Z,3.0nm,0.8s						
SCRK	Sand Creek	47.21	35	P	P	07 18 39.4	+0.3
SCRK				IAmb	IAmb	07 19 01.4	
	comp=Z,5.5nm,1.2s						
BVAR	Borovoye Array	48.82	310	P	P	07 18 51.8	+0.3
	comp=Z,3.7nm,0.6s,baz=73,slow=9.7,SNR=10						
BVAR				LR	LR	07 39 18.6	
	comp=Z,53nm,18.8s,baz=21,slow=36						
	comp=Z,3.7nm,0.6s						
BORK	Borovoye	48.85	310	P	P	07 18 52.6	+0.8
BORK				IAmb	IAmb	07 19 05.7	
	comp=Z,2.3nm,0.6s						
INK	Inuvik	50.66	29	P	P	07 19 05.8	+0.5
INK				IAmb	IAmb	07 19 26.6	
	comp=Z,5.4nm,1.4s						
G31M	Satah River	50.69	30	P	P	07 19 06.5	+1.0
G31M				IAmb	IAmb	07 19 35.4	
	comp=Z,4.7nm,1.1s						
H31M	Peel River	50.92	32	P	P	07 19 09.0	+1.7
KK31	Karatay Array	52.13	298	P	P	07 19 16.4	-0.3
KK31				IAmb	IAmb	07 19 32.5	
	comp=Z,1.7nm,0.8s						
KKAR	Karatay Array	52.13	298	P	P	07 19 16.4	-0.3
ARTI	Arti	54.34	317	P	P	07 19 32.9	+0.2
AB31	Akbulak array	56.30	309	IAmb	IAmb	07 20 00.8	
	comp=Z,3.7nm,0.6s						
ABKAR	Akbulak array	56.30	309		P	07 19 47.1	+0.2
LEM	Lembang	57.23	223	LR	LR	07 44 56.5	
	comp=Z,54nm,20.9s,baz=148,slow=36						
WB0	Warramunga Arr	60.69	189	P	P	07 20 17.9	+0.1
WRA	Warramunga Arr	60.87	189	P	P	07 20 18.1	-1.0
	comp=Z,0.6nm,0.6s,baz=7.6,slow=6.8,SNR=8.7						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	60.87	189	P	P	07 20 18.7	-0.3
ASAR	Alice Springs	64.60	189	P	P	07 20 43.6	-0.2
	comp=Z,0.4nm,0.6s,baz=0.4,slow=5.3,SNR=8.5						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	64.60	189	P	P	07 20 44.6	+0.8
FIA1	FINESS Array S	65.96	332	P	P	07 20 52.3	+0.1
FINES	FINESS Array B	65.96	332	P	P	07 20 51.5	-0.7
	comp=Z,1.8nm,0.5s,baz=103,slow=4.1,SNR=11						
	comp=Z,1.8nm,0.5s						
FINES	FINESS Array B	65.96	332	P	P	07 20 52.1	-0.1
HFS	Hagfors	71.08	336	P	P	07 21 22.7	-1.6
	comp=Z,2.6nm,0.8s,baz=46,slow=8.5,SNR=4.7						
	comp=Z,2.6nm,0.8s						
NOA	NORSAR Array B	71.11	337	P	P	07 21 23.9	-0.6
	comp=Z,0.7nm,0.8s,baz=35,slow=6.6,SNR=1.9						
	comp=Z,0.7nm,0.8s						
AKASG	Malin Array Be	71.93	322	P	P	07 21 27.8	-1.7
	comp=Z,0.4nm,0.4s,baz=45,slow=6.5,SNR=4.3						
	comp=Z,0.4nm,0.4s						

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*IDC **03** 07:19:16.1±0.9, 24°.92N×126°.79E, h0km, mb3.9/13, mbtmp3.9/14, ML3.1/1, MS3.4/5, Error ellipse: s-maj=23.9km s-min=17.6km az=74.0*
*NEIC **03** 07:19:18.3±1.1, 24°.9N±0°.1×126°.77E±0°.08, h10km±1km, mb4.3/14, Error ellipse: s-maj=21.0km s-min=3.1km az=144.0*
*JMA **03** 07:19:20.1±0.2, 25°N±1°×12°7E±°, h77km, MV3.3/19, NEAR MIYAKOJIMA ISLAND*
ISC 03 07:19:20.2±0.7**, 24°.93N**±0°.08×**126°.82E**±0°.06**, h28km, n58, σ0s78**/57**, mb4.1**/21**, MS3.7**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.30	263	P	Pb	07 19 43.2	-0.7
JMJ2	Miyako jima3	1.37	263	P	Pb	07 19 44.2	-0.9
JKE	Kume jima 2	1.40	359	P	Pn	07 19 43.8	0.0
JKE				eS	Sn	07 20 01.4	+0.1
JIKM	Ikemajima	1.43	270	P	Pb	07 19 45.1	-1.1
JJT3	Tamagusuku3	1.49	35	eP	Pn	07 19 45.1	-0.1
JJT3				eS	Sn	07 20 03.5	-0.1
JIRB	Irabujima	1.50	267	P	Pn	07 19 45.6	+0.3
JAGN	Aguni-jima	1.70	13	P	Pn	07 19 48.3	+0.3
JNTH	Nagotoyohara	1.92	34	eS	Sn	07 20 13.5	-0.7
JTJ	Tarama	1.95	262	P	Pn	07 19 51.7	+0.3
JTJ				eS	Sn	07 20 15.0	+0.1
JOW	Kunigami	2.31	34	Pn	Pn	07 19 56.4	+0.1
	7.6nm,0.3s,baz=145,slow=7.4,SNR=9.3						
	37nm,0.2s						
JOW	Kunigami	2.31	34	eP	Pn	07 19 56.5	+0.1
JISG	Ishigakijimahi	2.31	262	P	Pn	07 19 56.4	0.0
JIH	Iheya	2.34	26	eS	Sn	07 20 24.0	-0.6
JIJ	Ishigaki jima	2.50	258	P	Pn	07 19 58.8	-0.2
JYRO	Yoronjima	2.55	35	P	Pn	07 19 59.9	+0.2
JYRO				eS	Sn	07 20 28.6	-1.2
IRIF	Iriomote-Funau	2.88	259	eP	Pn	07 20 05.5	+1.4
JTK	Tokunoshima	3.43	33	P	Pn	07 20 11.2	-0.5
YOJ	Yonaguni jima	3.50	263	Pn	Pn	07 20 11.4	-1.3
NACB	Ninganchiao	4.82	262	Pn	Pn	07 20 30.1	-0.8
MJAR	Matsushiro Arr	15.15	37	LR	LR	07 28 50.6	
	comp=Z,64nm,18.9s,baz=185,slow=38						
LZDM	Lanzhou Array	22.71	304	P	P	07 24 20.2	0.0
	2.4nm,0.6s,baz=139,slow=9.8,SNR=7.0						
	2.4nm,0.6s						
SIJI	Sorong	26.00	170	LR	LR	07 33 35.1	
	comp=Z,32nm,21.3s,baz=130,slow=33						
CMAR	Chiang Mai Arr	26.66	262	P	P	07 24 57.0	+0.1
	1.5nm,0.3s,baz=59,slow=8.5,SNR=5.5						
	1.5nm,0.3s						
SONM	Songino Array	28.00	330	P	P	07 25 09.2	+0.4
	2.4nm,0.7s,baz=147,slow=11,SNR=7.9						
	2.4nm,0.7s						
SONM	Songino Array	28.00	330	P	P	07 25 08.8	+0.1
MK31	Makanchi Array	41.48	313	P	P	07 27 04.5	-0.1
MK31				IAmb	IAmb	07 27 05.2	
	comp=Z,2.6nm,0.7s						
MKAR	Makanchi Array	41.48	313	P	P	07 27 04.6	-0.1
	comp=Z,2.7nm,0.6s,baz=98,slow=10,SNR=33						
	comp=Z,2.7nm,0.6s						
MKAR	Makanchi Array	41.48	313		P	07 27 04.4	-0.3
SEY	Seymchan	41.63	17	P	P	07 27 05.7	0.0
	comp=Z,0.8nm,0.5s,baz=120,slow=7.1,SNR=4.1						
	comp=Z,0.8nm,0.5s						
MAKZ	Makanchi	41.69	313		P	07 27 06.5	+0.1
MAKZ				IAmb	IAmb	07 27 07.2	
	comp=Z,4.2nm,0.8s						
ZAA0	Zalesovo Array	42.53	324	P	P	07 27 13.1	-0.1
ZALV	Zalesovo Beam	42.53	324	P	P	07 27 11.9	-1.3
	comp=Z,0.6nm,0.4s,baz=111,slow=8.1,SNR=4.6						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	42.53	324	P	P	07 27 12.3	-0.8
TARG	Taragay, Kyrgy	43.65	305	P	P	07 27 22.5	-0.3
TARG				IAmb	IAmb	07 27 26.5	
	comp=Z,4.7nm,1.2s						
KURK	Kurchatov	44.91	318	P	P	07 27 31.9	-0.4
KURK				IAmb	IAmb	07 27 33.3	
	comp=Z,2.1nm,0.8s						
KURBB	Kurchatov Arra	44.94	318	P	P	07 27 31.8	-0.8
	comp=Z,1.2nm,0.6s,baz=106,slow=8.5,SNR=9.7						
	comp=Z,1.2nm,0.6s						
WB0	Warramunga Arr	45.03	170	P	P	07 27 33.8	+0.3
WB0				IAmb	IAmb	07 27 39.0	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	45.19	170	P	P	07 27 34.4	-0.5
	comp=Z,0.6nm,0.6s,baz=350,slow=8.3,SNR=8.1						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	45.19	170	P	P	07 27 33.2	-1.7
ASAR	Alice Springs	48.79	171	P	P	07 28 03.4	+0.5
	comp=Z,0.4nm,0.8s,baz=356,slow=14,SNR=7.0						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	48.79	171	P	P	07 28 03.2	+0.2
NRIK	Noril'sk	50.11	343	LR	LR	07 52 03.2	
	comp=Z,78nm,18.2s,baz=6.5,slow=39						
BVAR	Borovoye Array	50.41	319	P	P	07 28 14.9	-0.1
	comp=Z,0.6nm,0.6s,baz=120,slow=8.7,SNR=2.8						
	comp=Z,0.6nm,0.6s						
AB31	Akbulak array	56.62	314	P	P	07 29 01.4	+0.8
AB31				IAmb	IAmb	07 29 15.8	
	comp=Z,2.4nm,1.0s						
ABKAR	Akbulak array	56.62	314	P	P	07 29 01.1	+0.5
D19K	Kuna River	61.58	24	P	P	07 29 36.8	+2.1
D19K				IAmb	IAmb	07 29 43.9	
	comp=Z,12nm,1.5s						
E24K	Your Creek	65.17	24	P	P	07 29 59.8	+1.4
E24K				IAmb	IAmb	07 30 05.2	
	comp=Z,6.2nm,1.4s						
ILAR	Eielson Array	66.18	28	P	P	07 30 05.4	+0.4
	comp=Z,0.4nm,0.8s,baz=264,slow=6.2,SNR=2.6						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	66.18	28	P	P	07 30 05.3	+0.3
BMAR	Burnt Mountain	66.72	25	P	P	07 30 09.9	+1.5
VRDI	Verde Repeater	68.35	31	P	P	07 30 17.5	-1.5
KBZ	Khabaz	69.00	309	P	P	07 30 24.4	+1.3
	comp=Z,2.9nm,0.9s,baz=68,slow=5.4,SNR=4.2						
	comp=Z,2.9nm,0.9s						
FIA1	FINESS Array S	73.37	330	P	P	07 30 48.0	-1.2
FINES	FINESS Array B	73.37	330	P	P	07 30 49.5	+0.3
	comp=Z,3.8nm,1.0s,baz=90,slow=8.4,SNR=4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.8nm,1.0s						
FINES	**FINESS Array B**	**73.37**	**330**	P	**P**	**07 30 48.3**	**-0.9**
NOA	**NORSAR Array B**	**79.91**	**334**	LR	LR	08 13 14.6	
	comp=Z,29nm,18.5s,baz=245,slow=40						
FRB	**Frobisher Bay**	**90.80**	**7**	LR	LR	08 17 01.9	
	comp=Z,44nm,18.0s,baz=48,slow=38						
LCMT	**Little Creek M**	**96.40**	**44**	P	**P**	**07 32 47.0**	**0.0**

IDC ***03*** *07:19:24.7±3.4, 53°.72N×88°.14E, h0km, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=34.9km s-min=16.7km az=45.0*
ASRS ***03*** *07:19:25.0±0.8, 53°.61N×87°.86E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC ***03*** *07:19:26.6±2.4, 53°.45N×87°.96E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=19.4km s-min=9.6km az=65.0, Suspected Mining explosion.*
ISC 03 07:19:26.5±3.2**, 53°.6N**±0°.1×**87°.8E**±0°.2**, h0km, n10, σ1s.88**/17**, 10C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.82**	**283**	I	I	07 32 35.3	
	0.1nm,0.9s,baz=93,slow=338,SNR=15						
ZAA0	**Zalesovo Array**	**1.82**	**283**	⇓Pn	**Pg**	**07 20 00.7**	**-0.7**
	3.5nm,0.6s						
ZAA0				⇓Sn	**Sg**	**07 20 26.8**	**+1.7**
	12nm,0.5s						
ZALV	**Zalesovo Beam**	**1.82**	**283**	Pg	**Pb**	**07 20 00.2**	**-0.5**
	2.7nm,0.3s,baz=96,slow=16,SNR=28						
ZALV				Lg	Lg	07 20 26.4	
	8.7nm,0.3s,baz=95,slow=32,SNR=33						
KURK	**Kurchatov**	**6.36**	**247**	⇓Pn	**Pn**	**07 21 02.9**	**+1.6**
	0.7nm,0.8s						
KURK				⇑Sn	**Sn**	**07 22 15.4**	**+0.8**
	0.6nm,0.7s						
KURK				⇑Lg	Lg	07 22 51.9	
	3.5nm,1.4s						
KURBB	**Kurchatov Arra**	**6.45**	**246**	Pn	**Pn**	**07 21 04.9**	**+2.2**
	0.2nm,0.3s,baz=62,slow=14,SNR=5.8						
KURBB				Sn	**Sn**	**07 22 14.5**	**-2.4**
	0.1nm,0.3s,baz=64,slow=26,SNR=4.1						
KURBB				Lg	Lg	07 22 51.4	
	0.1nm,0.3s,baz=62,slow=31,SNR=5.6						
	1.2nm,0.4s						
KURBB	**Kurchatov Arra**	**6.45**	**246**	⇑Pn	**Pn**	**07 21 04.7**	**+2.1**
	2.8nm,0.7s						
KURBB				⇑Sn	**Sn**	**07 22 16.0**	**-1.0**
	3.3nm,0.4s						
KURBB				⇑Lg	Lg	07 22 53.3	
	8.7nm,0.9s						
MK31	**Makanchi Array**	**7.67**	**210**	⇑Pn	**Pn**	**07 21 17.4**	**-2.0**
	0.3nm,0.6s,baz=26,slow=12,SNR=6.3						
MK31				⇑Sn	**Sn**	**07 22 47.3**	**+0.3**
	0.3nm,0.4s,baz=276,slow=14,SNR=4.4						
MK31				⇓Lg	Lg	07 23 30.8	
	1.1nm,0.6s,baz=31,slow=31,SNR=4.1						
MKAR	**Makanchi Array**	**7.67**	**210**	Pn	**Pn**	**07 21 21.0**	**+1.6**
	0.1nm,0.3s,baz=28,slow=14,SNR=6.2						
MKAR				Sn	**Sn**	**07 22 46.5**	**-0.5**
	0.2nm,0.3s,baz=27,slow=24,SNR=5.9						
MKAR				Lg	Lg	07 23 28.4	
	0.2nm,0.3s,baz=28,slow=30,SNR=5.9						
	0.2nm,0.3s						
MAKZ	**Makanchi**	**7.75**	**211**	⇑Pn	**Pn**	**07 21 17.1**	**-3.4**
	0.5nm,0.5s						
MAKZ				⇑Sn	**Sn**	**07 22 50.8**	**+1.8**
	1.3nm,0.8s						
MAKZ				⇑Lg	Lg	07 23 31.2	
	3.0nm,0.9s						
BVAR	**Borovoye Array**	**10.46**	**274**	Pn	**Pn**	**07 21 57.2**	**-0.3**
	baz=77,slow=12,SNR=2.6						
BVAR				Sn	**Sn**	**07 23 53.2**	**-2.1**
	0.1nm,0.3s,baz=81,slow=24,SNR=6.5						
	0.4nm,0.5s						

SNET ***03*** *07:22:15.0±0.8, 13°.20N×89°.29W, h57km±4km, ML3.8, Presumed earthquake*
CATAC ***03*** *07:22:16.0±0.4, 13°N±3°×8°9W±°, h32km±2km, M4.0/19, MLv4.0/19, Error ellipse: s-maj=6.7km s-min=3.2km az=25.5, confirmed*
GCG ***03*** *07:22:17.1±0.6, 13°.29N×89°.35W, h55km±6km, MD3.7, Presumed earthquake*
ISC 03 07:22:16.3±1.6**, 13°.18N**±0°.08×**89°.33W**±0°.05**, h53km**±9km**, n60, σ0s.39**/88**, 2C-9D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.31**	**1**	*e*P	**Pn**	**07 22 25.7**	**-0.1**
LALI				*e*S	**Sn**	**07 22 32.5**	**-0.1**
LALI	**Alcalda de L**	**0.31**	**1**	*i* P	**Pn**	**07 22 25.7**	**-0.1**
PANCS	**Alcalda de**	**0.45**	**18**	P	**Pn**	**07 22 27.6**	**+0.3**
PANCS				S	**Sn**	**07 22 34.8**	**-0.4**
JAYA	**Jayaque - finc**	**0.49**	**346**	P	**Pn**	**07 22 27.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.49**	**346**	*e*P	**Pn**	**07 22 27.6**	**-0.2**
JAYA				*e*S	**Sn**	**07 22 35.6**	**-0.5**
JAYA	**Jayaque - finc**	**0.49**	**346**	*i* P	**Pn**	**07 22 27.6**	**-0.2**
JAYA				*i* S	**Sn**	**07 22 35.5**	**-0.5**
LFRS	**El Faro**	**0.51**	**30**	⇑*i*P	**Pn**	**07 22 27.8**	**-0.2**
LFRS				*e*S	**Sn**	**07 22 36.1**	**-0.4**
PMON	**Piamonte**	**0.53**	**1**	P	**Pn**	**07 22 28.2**	**-0.1**
PMON				S	**Sn**	**07 22 37.3**	**+0.4**
PMON	**Piamonte**	**0.53**	**1**	*e*P	**Pn**	**07 22 28.1**	**-0.1**
SEMO	**Seminario San**	**0.53**	**11**	P	**Pn**	**07 22 28.0**	**-0.2**
SEMO				S	**Sn**	**07 22 37.1**	**+0.3**
SEMO	**Seminario San**	**0.53**	**11**	*e*P	**Pn**	**07 22 28.0**	**-0.2**
UTEC	**Universidad Te**	**0.53**	**13**	P	**Pn**	**07 22 28.2**	**0.0**
UTEC				S	**Sn**	**07 22 37.3**	**+0.5**
UEES	**Universidad Ev**	**0.54**	**9**	P	**Pn**	**07 22 28.2**	**-0.2**
UEES				S	**Sn**	**07 22 37.6**	**+0.6**
UEES	**Universidad Ev**	**0.54**	**9**	*e*P	**Pn**	**07 22 28.1**	**-0.2**
IGN	**Direccin Gen**	**0.55**	**16**	P	**Pn**	**07 22 28.6**	**+0.1**
IGN				S	**Sn**	**07 22 37.7**	**+0.5**
IGN	**Direccin Gen**	**0.55**	**16**	*e*P	**Pn**	**07 22 28.5**	**+0.1**
BOQS	**Boqueron**	**0.55**	**5**	⇓*e*P	**Pn**	**07 22 28.6**	**0.0**
BOQS				*e*S	**Sn**	**07 22 37.9**	**+0.4**
UDBS	**Universidad Do**	**0.56**	**17**	P	**Pn**	**07 22 28.4**	**-0.1**
UDBS				S	**Sn**	**07 22 37.8**	**+0.5**
UDBS	**Universidad Do**	**0.56**	**17**	*e*P	**Pn**	**07 22 28.4**	**-0.1**
PIC2	**El Picacho**	**0.56**	**7**	*e*P	**Pn**	**07 22 28.8**	**0.0**
LFU	**La Fuente**	**0.60**	**20**	⇓*i*P	**Pn**	**07 22 29.0**	**-0.1**
LBRS	**Las Brisas**	**0.62**	**26**	⇓*i*P	**Pn**	**07 22 29.3**	**0.0**
CEDA	**San Andres**	**0.62**	**354**	P	**Pn**	**07 22 29.3**	**0.0**
CEDA				S	**Sn**	**07 22 39.4**	**+0.7**
CEDA	**San Andres**	**0.62**	**354**	⇓*i*P	**Pn**	**07 22 29.3**	**0.0**
TECO	**Alcaldia de Te**	**0.64**	**56**	P	**Pn**	**07 22 28.8**	**-0.7**
TECO				S	**Sn**	**07 22 38.7**	**-0.3**
TECO	**Alcaldia de Te**	**0.64**	**56**	⇓*e*P	**Pn**	**07 22 28.8**	**-0.7**
PAVA	**Las Pavas**	**0.65**	**35**	P	**Pn**	**07 22 29.5**	**-0.2**
PAVA				S	**Sn**	**07 22 39.8**	**+0.4**
PAVA	**Las Pavas**	**0.65**	**35**	⇓*i*P	**Pn**	**07 22 29.6**	**-0.1**
UESV	**Universidad de**	**0.69**	**49**	P	**Pn**	**07 22 29.9**	**-0.2**
UESV				S	**Sn**	**07 22 40.2**	**0.0**
CEVE	**Cerro Verde**	**0.71**	**336**	P	**Pn**	**07 22 30.9**	**+0.3**
CEVE				S	**Sn**	**07 22 41.6**	**+0.8**
CEVE	**Cerro Verde**	**0.71**	**336**	*e*P	**Pn**	**07 22 30.6**	**+0.1**
SBLS	**San Blas**	**0.72**	**336**	*e*P	**Pn**	**07 22 30.6**	**0.0**
SNJE	**San Jose**	**0.74**	**338**	*e*P	**Pn**	**07 22 30.8**	**-0.1**
RTR	**El Retiro**	**0.78**	**336**	*e*P	**Pn**	**07 22 31.5**	**+0.1**
UNIC	**Universidad Ca**	**0.83**	**345**	P	**Pn**	**07 22 31.5**	**-0.4**
UNIC				S	**Sn**	**07 22 44.0**	**+0.7**
NUBE	**Las Nubes**	**0.84**	**328**	P	**Pn**	**07 22 32.0**	**-0.2**
NUBE	**Las Nubes**	**0.84**	**328**	⇑*e*P	**Pn**	**07 22 32.0**	**-0.2**
NUBE	**Las Nubes**	**0.84**	**328**	*i* P	**Pn**	**07 22 32.0**	**-0.2**
NUBE				*i* S	**Sn**	**07 22 43.6**	**-0.3**
TECA	**Tecapa**	**0.86**	**69**	*e*P	**Pn**	**07 22 31.9**	**-0.5**
LOAL	**Lomas de Alarc**	**0.93**	**332**	P	**Pn**	**07 22 33.2**	**0.0**
LOAL				S	**Sn**	**07 22 46.5**	**+0.9**
FAME	**Alcaldia de Sa**	**0.94**	**315**	P	**Pn**	**07 22 33.0**	**-0.4**
FAME				S	**Sn**	**07 22 45.2**	**-0.7**
RBDL	**Robledal**	**0.99**	**339**	*e*P	**Pn**	**07 22 33.9**	**-0.3**
PACA	**Pacayal**	**1.02**	**73**	P	**Pn**	**07 22 34.3**	**-0.1**
PACA				S	**Sn**	**07 22 48.5**	**+0.7**
PACA	**Pacayal**	**1.02**	**73**	*e*P	**Pn**	**07 22 34.1**	**-0.4**
LCY	**Lacayo**	**1.03**	**76**	*e*P	**Pn**	**07 22 34.8**	**+0.1**
RANC	**El Ranchito**	**1.04**	**76**	*e*P	**Pn**	**07 22 34.5**	**-0.3**
LLGN	**La Laguna**	**1.04**	**21**	P	**Pn**	**07 22 34.1**	**-0.7**
LLGN				S	**Sn**	**07 22 49.0**	**+0.5**
LLGN	**La Laguna**	**1.04**	**21**	*i* P	**Pn**	**07 22 34.1**	**-0.7**
BLLM	**Bellamira**	**1.09**	**76**	*e*P	**Pn**	**07 22 35.2**	**-0.2**
MTO3	**Montecristo**	**1.21**	**358**	P	**Pn**	**07 22 36.7**	**-0.5**
MTO3				S	**Sn**	**07 22 52.2**	**-0.5**
MTO3	**Montecristo**	**1.21**	**358**	⇓*i*P	**Pn**	**07 22 36.7**	**-0.5**
MTO3	**Montecristo**	**1.21**	**358**	*i* P	**Pn**	**07 22 36.7**	**-0.5**
ESQI	**Esquipulas**	**1.37**	**359**	P	**Pn**	**07 22 39.1**	**-0.1**
ESQI				S	**Sn**	**07 22 56.6**	**+0.2**
ESQI	**Esquipulas**	**1.37**	**359**	⇓*i*P	**Pn**	**07 22 39.1**	**-0.1**
LCND	**La Caada**	**1.40**	**85**	P	**Pn**	**07 22 39.3**	**-0.3**
LCND				S	**Sn**	**07 22 57.7**	**+0.7**
LCND	**La Caada**	**1.40**	**85**	⇓*i*P	**Pn**	**07 22 39.3**	**-0.3**
CNCH	**Conchagua**	**1.46**	**86**	P	**Pn**	**07 22 40.1**	**-0.3**
CNCH				S	**Sn**	**07 22 59.3**	**+0.9**
CNCH	**Conchagua**	**1.46**	**86**	*e*P	**Pn**	**07 22 40.1**	**-0.3**
CSGN	**Cosiguina Volc**	**1.73**	**97**	P	**Pn**	**07 22 44.2**	**+0.1**
CSGN				S	**Sn**	**07 23 05.0**	**-0.2**
APG	**El Apazote**	**2.12**	**329**	*i* P	**Pn**	**07 22 49.8**	**+0.2**

IDC 03 07:32:49.2±8.7**, 17°.60S**×**177°.14W, h0km, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=383.1km s-min=40.8km az=142.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.87**	**259**	P	P	07 41 13.0	-0.7
	0.5nm,0.5s,baz=96,slow=7.2,SNR=7.2						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**46.03**	**254**	P	P	07 41 15.3	+0.4
	1.0nm,0.4s,baz=91,slow=8.0,SNR=26						
	1.0nm,0.4s						
ILAR	**Eielson Array**	**85.33**	**13**	P	P	07 45 27.7	0.0
	0.9nm,1.2s,baz=225,slow=4.6,SNR=1.9						
	0.9nm,1.2s						

IDC 03 07:47:06.1±1.4**, 49°.84N**×**81°.59E, h0km, mbtmp2.3**/2**, ML2.0**/2**, Error ellipse: s-maj=19.0km s-min=10.8km az=48.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.12**	**293**	Pg	Pb	07 47 44.4	-1.0
	0.1nm,0.3s,baz=112,slow=19,SNR=12						
KURBB				Lg	Lg	07 48 12.9	
	0.3nm,0.3s,baz=113,slow=30,SNR=7.0						
MKAR	**Makanchi Array**	**3.08**	**171**	Pn	Pn	07 47 57.2	+1.1
	0.4nm,0.3s,baz=353,slow=15,SNR=16						
MKAR				Lg	Lg	07 48 37.0	
	0.6nm,0.3s,baz=358,slow=26,SNR=11						
	0.7nm,0.3s						
I46RU	**ZALESOVO INFRA**	**4.57**	**25**	I	I	08 16 59.7	
	baz=201,slow=308,SNR=2.4						
ZALV	**Zalesovo Beam**	**4.57**	**25**	Pn	Pn	07 48 17.9	+1.5
	0.1nm,0.3s,baz=204,slow=15,SNR=2.3						
ZALV				Lg	Lg	07 49 29.8	
	0.1nm,0.3s,baz=201,slow=27,SNR=2.1						
	0.2nm,0.3s						

NNC 03 07:47:34.0±4.2**, 49°.41N**×**81°.28E, h0km, mb2.8, mpv2.3, 2C-6D, Error ellipse: s-maj=73.8km s-min=16.7km az=55.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.15**	**305**	⇓Pn	Pg	07 48 14.5	-0.6
	3.9nm,0.7s						
KURBB				⇑Sn	Sn	07 48 38.2	-0.2
	22nm,0.7s						
KURK	**Kurchatov**	**2.15**	**308**	⇓Pn	Pb	07 48 13.4	-0.5
	1.8nm,0.6s						
KURK				⇓Sn	Sn	07 48 38.4	-0.1
	3.4nm,0.5s						
MAKZ	**Makanchi**	**2.65**	**170**	⇓Pg	Pb	07 48 20.8	-1.4
	0.5nm,0.6s						
MAKZ				⇑Lg	Lg	07 48 59.5	
	3.7nm,0.8s						
MK31	**Makanchi Array**	**2.71**	**165**	⇓Pg	Pb	07 48 21.3	-2.0
	0.8nm,0.6s,baz=345,slow=16,SNR=3.0						
MK31				⇓Lg	Lg	07 49 01.5	
	2.5nm,0.6s,baz=352,slow=28,SNR=5.8						

ISK ***03*** *07:58:04.4, 39°.00N×27°.85E, h8km, ML3.5/43*
AFAD ***03*** *07:58:04.7, 38°.98N×27°.86E, h7km±3km, ML3.5*
THE ***03*** *07:58:06.2, 39°N±3°×2°8E±°, h10km±13km, M3.1/8, MLh3.1/8*
ISC 03 07:58:05.0±0.8**, 38°.98N**±0°.02×**27°.85E**±0°.02**, h11km**±5km**, n71, σ0s.67**/96**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.11**	**196**	P	**Pg**	**07 58 07.6**	**-0.3**
AKHS				IAML		07 58 10.0	
	comp=E,2µm,0.5s						
AKHS				S	**Sg**	**07 58 10.4**	**+0.5**
AKS	**Akhisar**	**0.11**	**196**	Pg	**Pg**	**07 58 07.3**	**-0.6**
AKS				Sg	**Sg**	**07 58 10.2**	**+0.3**
GORD	**Gordes-Manisa**	**0.27**	**106**	Pg	**Pg**	**07 58 10.4**	**-0.1**
GORD				Sg	**Sg**	**07 58 14.4**	**+0.2**
GOMA	**Golmarmara-Man**	**0.28**	**169**	Pg	**Pg**	**07 58 10.7**	**0.0**
GOMA				Sg	**Sb**	**07 58 15.5**	**-1.2**
SOMA	**Soma-Manisa**	**0.30**	**305**	Pg	**Pg**	**07 58 10.8**	**-0.3**
KTTT	**Salihli**	**0.35**	**147**	P	**Pg**	**07 58 11.9**	**-0.1**
KTTT				S	**Sg**	**07 58 17.4**	**+0.8**
STEP	**BALIKESIR_Sava**	**0.41**	**345**	P	**Pg**	**07 58 12.8**	**-0.3**
STEP				IAML		07 58 19.0	
	comp=N,1µm,0.3s						
STEP				IAML		07 58 19.0	
	comp=E,1µm,0.3s						
STEP				S	**Sg**	**07 58 19.0**	**+0.5**
BALB	**Balikesir**	**0.66**	**2**	Pg	**Pg**	**07 58 17.6**	**-0.2**
BALB				Sg	**Sg**	**07 58 26.7**	**+0.3**
DEMI	**Demirci**	**0.68**	**85**	P	**Pg**	**07 58 17.5**	**-0.7**
DEMI				S	**Sn**	**07 58 30.0**	**-1.2**
DEMI				IAML		07 58 30.0	
	comp=N,4µm,0.2s						
DEMI				IAML		07 58 32.0	
	comp=E,4µm,0.2s						
ODEM	**Odemis-Izmir**	**0.73**	**166**	Pg	**Pb**	**07 58 19.9**	**+0.2**
MANT	**Manisa**	**0.74**	**131**	P	**Pg**	**07 58 18.8**	**-0.6**
MANT				S	**Sb**	**07 58 30.1**	**-0.1**
DKL	**Dikili**	**0.74**	**277**	Pg	**Pg**	**07 58 19.4**	**+0.1**
BKES	**Balkesir-Mer**	**0.75**	**5**	P	**Pg**	**07 58 18.5**	**-1.1**
BKES				S	**Sb**	**07 58 29.8**	**-0.6**
DURS	**Dursunbey**	**0.79**	**38**	P	**Pg**	**07 58 18.6**	**-1.6**
DURS				S	**Sb**	**07 58 32.2**	**+0.8**
KULA	**Kula-Manisa**	**0.79**	**126**	Pg	**Pg**	**07 58 19.9**	**-0.3**
DST	**Dursunbey**	**0.86**	**44**	Pg	**Pg**	**07 58 21.3**	**-0.3**
BLCB	**Balcova**	**0.87**	**227**	Pg	**Pb**	**07 58 21.8**	**-0.2**
BLCB	**Balcova**	**0.87**	**227**	P	**Pg**	**07 58 21.2**	**-0.5**
BLCB				S	**Sg**	**07 58 32.3**	**-0.8**
YAYO	**Edremit-Balk**	**0.87**	**316**	Pg	**Pg**	**07 58 21.3**	**-0.5**
SIMA	**Simav-Kutahya**	**0.89**	**83**	Pg	**Pg**	**07 58 21.9**	**-0.2**
SMAA	**Simav-Kutahya**	**0.89**	**82**	Pg	**Pg**	**07 58 21.6**	**-0.5**
KIRA	**zmir-Kiraz**	**0.90**	**151**	P	**Pb**	**07 58 22.5**	**-0.1**
KIRA				S	**Sb**	**07 58 34.6**	**+0.1**
FOCM	**Foa**	**0.92**	**253**	Pg	**Pg**	**07 58 22.4**	**-0.2**
USAK	**Uak-Merkez**	**0.95**	**106**	P	**Pg**	**07 58 22.4**	**-0.9**
USAK				S	**Sg**	**07 58 34.5**	**-1.2**
SUSR	**Susurluk-Balik**	**1.00**	**10**	Pg	**Pg**	**07 58 23.3**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**178**	Pg	**Pg**	**07 58 24.5**	**-0.4**
YENI	**Yenice-Canakka**	**1.06**	**334**	Pg	**Pg**	**07 58 24.9**	**-0.6**
SHAP	**Saphane-Kutahy**	**1.07**	**87**	Pg	**Pg**	**07 58 25.1**	**-0.5**
GONE	**Gonen-Balikesi**	**1.07**	**353**	Pg	**Pg**	**07 58 24.9**	**-0.7**
NAZL	**Nazilli-Aydin**	**1.07**	**161**	Pn	**Pb**	**07 58 25.6**	**0.0**
KRBN	**Karaburun**	**1.08**	**249**	Pn	**Pg**	**07 58 25.6**	**-0.3**
URLA	**Izmir**	**1.16**	**238**	Pn	**Pb**	**07 58 27.1**	**0.0**
GMLD	**Gumuldur**	**1.16**	**219**	Pn	**Pn**	**07 58 28.1**	**+1.0**
SULTU	**Buldan**	**1.17**	**142**	P	**Pg**	**07 58 26.1**	**-1.4**
CANM	**Can-anakkale**	**1.20**	**329**	Pn	**Pg**	**07 58 27.7**	**-0.3**
KUSD	**Kusadasi-Aydin**	**1.20**	**202**	Pn	**Pn**	**07 58 28.3**	**+0.6**
EMET	**Ktahya-Emet**	**1.21**	**71**	P	**Pg**	**07 58 27.4**	**-0.8**
EMET				IAML		07 58 45.0	
	comp=N,1µm,0.6s						
EMET				S	**Sn**	**07 58 45.1**	**+0.8**
EMET				IAML		07 58 46.0	
	comp=E,1µm,0.3s						
GEDZ	**Gediz**	**1.22**	**87**	Pn	**Pn**	**07 58 28.2**	**+0.2**
PRK	**Paraskevi**	**1.26**	**283**	P	**Pn**	**07 58 28.3**	**-0.1**
PRK				S	**Sg**	**07 58 45.2**	**-0.2**
GDZ	**Gediz**	**1.27**	**85**	P	**Pn**	**07 58 28.8**	**0.0**
GDZ				S	**Sb**	**07 58 45.6**	**+0.1**
GDZ				IAML		07 58 48.0	
	comp=N,645nm,0.5s						
GDZ				IAML		07 58 48.0	
	comp=E,551nm,0.3s						
ORLT	**Orhaneli**	**1.33**	**37**	Pn	**Pb**	**07 58 30.1**	**+0.1**
ORLT	**Orhaneli**	**1.33**	**37**	P	**Pn**	**07 58 28.5**	**-1.0**
ORLT				S	**Sn**	**07 58 49.5**	**+2.1**
ORLT				IAML		07 58 50.0	
	comp=N,1µm,0.3s						
ORLT				IAML		07 58 51.0	
	comp=E,1µm,0.4s						
TVSB	**Tavsanli**	**1.34**	**69**	Pn	**Pb**	**07 58 30.1**	**0.0**
KCTX	**Karacabey (Bur**	**1.34**	**17**	Pn	**Pg**	**07 58 31.9**	**+1.2**
EDC	**Edincik**	**1.36**	**0**	Pn	**Pn**	**07 58 29.5**	**-0.4**
GCAM	**G?zelcaml?**	**1.37**	**201**	Pn	**Pg**	**07 58 30.9**	**-0.4**
EZNE	**Ezine-Canakkal**	**1.39**	**304**	Pn	**Pn**	**07 58 30.4**	**+0.2**
BIGA	**Biga-Canakkale**	**1.41**	**338**	Pn	**Pb**	**07 58 31.2**	**0.0**
GPNR	**Gulpinar-Canak**	**1.42**	**290**	Pn	**Pn**	**07 58 30.4**	**-0.2**
PASA	**Karahalli, USA**	**1.43**	**116**	P	**Pb**	**07 58 31.5**	**-0.2**
PASA				S	**Sg**	**07 58 52.6**	**+1.6**
EZN	**Ezine**	**1.45**	**306**	Pn	**Pb**	**07 58 31.7**	**-0.3**
EZN	**Ezine**	**1.45**	**306**	P	**Pn**	**07 58 30.1**	**-1.0**
EZN				S	**Sb**	**07 58 50.9**	**+0.5**
KHL	**Karahalli**	**1.47**	**116**	Pn	**Pn**	**07 58 31.4**	**0.0**
KRBG	**Karabiga-Canak**	**1.47**	**343**	Pn	**Pn**	**07 58 31.3**	**-0.1**
SMG	**Samos**	**1.50**	**212**	P	**Pn**	**07 58 31.9**	**+0.1**
SMG				S	**Sn**	**07 58 50.7**	**-0.6**
CHOS	**Chios island**	**1.53**	**248**	Pn	**Pn**	**07 58 32.3**	**+0.1**
CHOS	**Chios island**	**1.53**	**248**	P	**Pn**	**07 58 31.7**	**-0.5**
CHOS				S	**Sb**	**07 58 52.8**	**+0.1**
COMU	**Canakkale**	**1.54**	**317**	Pn	**Pb**	**07 58 33.1**	**-0.5**
SIGR	**SIGRI**	**1.57**	**279**	Pn	**Pn**	**07 58 33.3**	**+0.6**
SIGR	**SIGRI**	**1.57**	**279**	P	**Pn**	**07 58 32.7**	**0.0**
SIGR				S	**Sn**	**07 58 53.3**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.60**	**30**	Pn	**Pn**	**07 58 32.4**	**-0.7**
BNAZ	**Uak-Banaz**	**1.61**	**100**	P	**Pg**	**07 58 35.5**	**-0.5**
BNAZ				S	**Sg**	**07 58 58.3**	**+1.4**
BNAZ				IAML		07 59 02.0	
	comp=E,526nm,0.5s						
BNAZ				IAML		07 59 03.0	
	comp=N,604nm,0.7s						
LPK	**Lapseki**	**1.62**	**329**	Pn	**Pn**	**07 58 33.2**	**-0.3**
MRMT	**Marmara Adasi**	**1.63**	**353**	Pn	**Pn**	**07 58 34.2**	**+0.5**
BOZC	**Bozcaada**	**1.64**	**302**	Pn	**Pn**	**07 58 33.2**	**-0.5**
MLSB	**Milas**	**1.69**	**182**	Pn	**Pb**	**07 58 35.4**	**-0.6**
YER	**Yerkesik**	**1.88**	**169**	Pn	**Pn**	**07 58 38.1**	**+1.1**
YER	**Yerkesik**	**1.88**	**169**	P	**Pn**	**07 58 36.5**	**-0.5**
YER				S	**Sn**	**07 59 00.7**	**0.0**
GADA	**Gvkgeada**	**1.93**	**309**	P	**Pn**	**07 58 38.2**	**+0.5**
BODT	**Bodrum**	**1.96**	**193**	S	**Sn**	**07 59 03.7**	**+0.9**
ENEZ	**Enez**	**2.19**	**324**	P	**Pn**	**07 58 42.3**	**+1.1**

SJA ***03*** *08:17:45.6±1.0, 24°.04S×66°.98W, h200km, ML3.9, MW3.8*
GUC ***03*** *08:17:45.9±0.6, 23°.99S×66°.94W, h207km±6km, ML4.2*
IDC ***03*** *08:17:52.5±7.1, 23°.37S×66°.63W, h245km±52km, mb2.9/3, mbtmp3.5/6, Error ellipse: s-maj=70.9km s-min=21.7km az=19.0*
ISC 03 08:17:44.9±0.8**, 24°.00S**±0°.04×**66°.95W**±0°.04**, h211km**±7km**, n38, σ1s.65**/61**, 6C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALTA		**0.60**	**112**	*e*P	Pn	08 18 08.8	-5.5
SALTA				*e*P		08 18 14.6	
SLA	**San Lorenzo**	**1.50**	**119**	⇓*e*P	**Pn**	**08 18 20.1**	**+0.3**
SLA				*e*S	**S**	**08 18 45.8**	**-0.9**
SLA	**San Lorenzo**	**1.50**	**119**	*e*P	**Pn**	**08 18 20.4**	**+0.6**
SLA				*e*S	**S**	**08 18 48.6**	**+1.9**
AF01	**San Pedro de A**	**1.54**	**312**	*e*P	**Pn**	**08 18 21.3**	**+0.9**
AF01				*e*S	**S**	**08 18 51.2**	**+3.6**
AF01				IAML		08 19 01.3	
	comp=Z,217nm,0.6s						
FSA	**Cafayete**	**2.28**	**158**	*e*P	**Pn**	**08 18 27.4**	**+0.1**
FSA				*e*S	**S**	**08 18 59.6**	**-0.6**
PB06	**IPOC Station P**	**2.73**	**298**	⇑*e*P	**Pn**	**08 18 33.3**	**+1.1**
PB06				*e*S	**S**	**08 19 08.5**	**-0.4**
PB06				IAML		08 19 09.9	
	comp=N,717nm,0.2s						
PB06	**IPOC Station P**	**2.73**	**298**	*e*P	**Pn**	**08 18 33.4**	**+1.1**
PB06				*e*S	**S**	**08 19 09.0**	**+0.1**
PB06				IAML		08 19 11.9	
	comp=Z,467nm,0.2s						
PB09	**IPOC Station P**	**3.05**	**316**	⇑*e*P	**Pn**	**08 18 37.4**	**+1.5**
PB09				*e*S	**S**	**08 19 15.6**	**+0.2**
PB09				IAML		08 19 18.8	
	comp=E,290nm,0.4s						
PB09	**IPOC Station P**	**3.05**	**316**	*e*P	**Pn**	**08 18 37.4**	**+1.5**
PB09				*e*S	**S**	**08 19 16.4**	**+1.0**
PB09				IAML		08 19 18.3	
	comp=Z,254nm,0.3s						
PB05	**IPOC Station P**	**3.20**	**290**	*e*P	**Pn**	**08 18 38.4**	**+0.7**
PB05	**IPOC Station P**	**3.20**	**290**	*e*P	**Pn**	**08 18 38.2**	**+0.5**
PB05				*e*S	**S**	**08 19 17.6**	**-0.9**
PB05				IAML		08 19 24.4	
	comp=Z,148nm,0.8s						
PB14	**IPOC Station P**	**3.21**	**258**	*e*P	**Pn**	**08 18 38.5**	**+0.5**
PB14				*e*S	**S**	**08 19 18.1**	**-1.0**
PB14				IAML		08 19 21.1	
	comp=Z,192nm,0.3s						
PB03	**IPOC Station P**	**3.23**	**306**	⇑*e*P	**Pn**	**08 18 38.8**	**+0.7**
PB03	**IPOC Station P**	**3.23**	**306**	*e*P	**Pn**	**08 18 38.7**	**+0.6**
PB03				*e*S	**S**	**08 19 18.3**	**-1.0**
PB03				IAML		08 19 21.2	
	comp=Z,583nm,0.4s						
AC02	**Maricunga**	**3.44**	**214**	*e*P	**Pn**	**08 18 41.3**	**+0.4**
AC02				*e*S	**S**	**08 19 23.0**	**-1.4**
AC02				IAML		08 19 44.1	
	comp=Z,294nm,0.8s						
PB07	**IPOC Station P**	**3.53**	**309**	⇑*e*P	**Pn**	**08 18 42.2**	**+0.5**
PB07				*e*S	**S**	**08 19 24.0**	**-1.7**
PB07	**IPOC Station P**	**3.53**	**309**	*e*P	**Pn**	**08 18 42.2**	**+0.5**
PB07				*e*S	**S**	**08 19 24.8**	**-0.9**
PB07				IAML		08 19 28.6	
	comp=Z,276nm,0.2s						
PB01	**IPOC Station P**	**3.76**	**321**	⇓*e*P	**Pn**	**08 18 44.9**	**+0.5**
PB01	**IPOC Station P**	**3.76**	**321**	*e*P	**Pn**	**08 18 45.0**	**+0.6**
PB01				*e*S	**S**	**08 19 30.8**	**+0.1**
PB01				IAML		08 19 33.4	
	comp=Z,141nm,0.1s						
PB02	**IPOC Station P**	**3.81**	**314**	⇑*e*P	**Pn**	**08 18 45.1**	**+0.1**
PB02	**IPOC Station P**	**3.81**	**314**	*e*P	**Pn**	**08 18 45.6**	**+0.6**
PB02				*e*S	**S**	**08 19 30.6**	**-1.1**
PB02				IAML		08 19 32.9	
	comp=Z,338nm,0.3s						
AC01	**Pan de Azucar**	**3.94**	**236**	⇑*e*P	**Pn**	**08 18 45.8**	**-0.6**
AC01	**Pan de Azucar**	**3.94**	**236**	*e*P	**Pn**	**08 18 45.9**	**-0.6**
AC01				*e*S	**S**	**08 19 31.6**	**-2.9**
AC01				IAML		08 19 35.4	
	comp=Z,66nm,0.8s						
TINO	**Tinogasta**	**4.09**	**188**	*e*P	**Pn**	**08 18 50.0**	**+1.7**
PATCX	**Punta Patache**	**4.34**	**316**	*e*P	**Pn**	**08 18 51.5**	**+0.1**
PATCX				*e*S	**S**	**08 19 42.0**	**-1.4**
PATCX				IAML		08 19 47.1	
	comp=Z,67nm,1.3s						
PB08	**IPOC Station P**	**4.35**	**332**	*e*P	**Pn**	**08 18 53.7**	**+1.8**
PB08	**IPOC Station P**	**4.35**	**332**	*e*P	**Pn**	**08 18 53.5**	**+1.6**
PB08				IAML		08 19 50.1	
	comp=Z,46nm,0.3s						
GO03	**Copiapo**	**4.65**	**219**	*e*P	**Pn**	**08 18 54.6**	**-0.5**
GO03				*e*S	**S**	**08 19 48.4**	**-2.0**
GO03				IAML		08 19 51.5	
	comp=Z,47nm,0.6s						
GO01	**Chusmiza**	**4.79**	**334**	*e*P	**Pn**	**08 18 58.9**	**+1.4**
GO01				*e*S	**S**	**08 19 55.7**	**+1.4**
GO01				IAML		08 20 00.2	
	comp=Z,35nm,0.5s						
PB11	**IPOC Station P**	**4.91**	**329**	*e*P	**Pn**	**08 18 58.2**	**-0.5**
PB11				*e*S	**S**	**08 19 54.1**	**-2.5**
PB11				IAML		08 19 55.7	
	comp=Z,60nm,0.2s						
ACLC	**CERRO LA CRUZ**	**5.41**	**180**	*e*P	**Pn**	**08 19 04.9**	**0.0**
ACLC				*e*S	**S**	**08 20 08.1**	**+0.2**
LPAZ	**La Paz**	**7.75**	**352**	P	**Pn**	**08 19 36.7**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=177,slow=4.8,SNR=3.8						
LPAZ				S	**S**	**08 20 59.2**	**-4.6**
	comp=Z,1.1nm,0.7s,baz=259,slow=16,SNR=3.5						
SIV	**San Ignacio**	**9.69**	**36**	P	**Pn**	**08 19 58.8**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=212,slow=7.6,SNR=13						
SIV				S	**S**	**08 21 42.0**	**-7.0**
	comp=Z,0.5nm,0.6s,baz=213,slow=13,SNR=1.9						
BDFB	**Brasilia**	**19.64**	**68**	P	**P**	**08 21 57.8**	**-0.2**
	comp=Z,3.5nm,0.7s,baz=254,slow=10,SNR=7.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	63.70	324	P	P	08 27 55.9	+1.7
	comp=Z,0.1nm,0.3s,baz=150,slow=6.9,SNR=2.4						
	comp=Z,0.1nm,0.3s						
TORD	Torodi Ar. Bea	76.52	69	P	P	08 29 13.3	+1.0
	comp=Z,0.3nm,0.5s,baz=252,slow=5.4,SNR=1.5						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	94.14	340	P	P	08 30 39.8	+0.9
	comp=Z,0.1nm,0.5s,baz=127,slow=3.5,SNR=2.9						
	comp=Z,0.1nm,0.5s						
MKAR	Makanchi Array	146.49	40	PKPbc	PKPbc	08 37 02.9	+1.7
	comp=Z,0.6nm,0.8s,baz=336,slow=2.9,SNR=4.2						

WEL 03 08:20:48.3±1.1, 35°S±13°×17°9W±1°5, h168km±35km, M3.8/8, mB4.4/1, ML3.8/10, MLv3.8/8, Mw(mB)3.5/1, Error ellipse: s-maj=20.7km s-min=15.6km az=111.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.61	214	P	Pn	08 21 43.3	-0.7
MXZ				S	Sn	08 22 26.3	-1.2
WMGZ	Waiomatatini S	3.78	210	P	Pn	08 21 46.3	+0.2
WMGZ				S	Sn	08 22 31.9	+0.6
PKGZ	Pakihiroa	3.96	213	P	Pn	08 21 48.3	-0.2
PKGZ				S	Sn	08 22 36.9	+1.3
HAZ	Te Kaha	4.01	217	P	Pn	08 21 49.1	0.0
HAZ				S	Sn	08 22 38.0	+1.3
PUZ	Puketiti	4.06	210	P	Pn	08 21 49.3	-0.5
PUZ				S	Sn	08 22 37.6	-0.2
RUGZ	Raukumara Rang	4.23	216	P	Pn	08 21 51.9	-0.2
RUGZ				S	Sn	08 22 43.0	+1.0
TWGZ	Tauwhareparae	4.26	212	P	Pn	08 21 53.5	+1.0
TKGZ	Te Karaka	4.54	211	P	Pn	08 21 56.4	+0.5
TKGZ				S	Sn	08 22 47.8	-1.1
MWZ	Matawai	4.59	214	P	Pn	08 21 57.3	+0.5
MWZ				S	Sn	08 22 49.9	-0.4
KUZ	Kuaotunu	4.68	241	P	Pn	08 21 56.8	-1.1
URZ	Urewera	4.74	218	P	Pn	08 21 58.4	-0.1
URZ				S	Sn	08 22 53.5	-0.1
RAGZ	Rawiri	4.78	214	P	Pn	08 21 59.6	+0.5
RAGZ				S	Sn	08 22 58.2	+3.6
RIGZ	Rimuhau	4.80	210	P	Pn	08 21 59.3	-0.1
RIGZ				S	Sn	08 22 56.2	+1.1
SNGZ	Shannon Statio	5.04	213	P	Pn	08 22 03.2	+0.7
SNGZ				S	Sn	08 23 00.7	-0.1
ARHZ	Aropaoanui	5.59	212	P	Pn	08 22 09.6	-0.2
ARHZ				S	Sn	08 23 12.6	-1.1
BKZ	Black Stump Fm	5.75	216	P	Pn	08 22 10.7	-1.1
BKZ				S	Sn	08 23 17.8	+0.4
OUZ	Omahuta	5.97	262	P	Pn	08 22 15.2	+0.4

IDC 03 08:30:06.5±3.4, 22°.77N×141°.86E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=393.3km s-min=30.9km az=108.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H11N1	WAKE ISLAND Hy	23.52	93	T	T	08 58 43.9	
	baz=282,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	23.52	93	T	T	08 58 45.9	
	baz=282,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	23.54	93	T	T	08 58 46.2	
	baz=282,slow=74,SNR=14						
WRA	Warramunga Arr	43.08	190	P	P	08 38 08.2	-0.3
	0.5nm,0.7s,baz=11,slow=8.6,SNR=5.3						
	0.5nm,0.7s						
ASAR	Alice Springs	46.80	190	P	P	08 38 38.1	0.0
	0.2nm,0.6s,baz=17,slow=9.3,SNR=5.7						
	0.2nm,0.6s						
ILAR	Eielson Array	61.65	27	P	P	08 40 25.9	0.0
	0.3nm,0.9s,baz=249,slow=7.4,SNR=1.4						
	0.3nm,0.9s						

NNC 03 08:30:51.5±3.1, 54°.45N×86°.43E, h6km±19km, mb3.0, mpv2.7, Error ellipse: s-maj=43.1km s-min=16.8km az=158.0, Suspected Mining explosion.
ASRS 03 08:30:53.0±0.7, 54°.64N×83°.65E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
IDC 03 08:30:54.8±1.4, 54°.64N×83°.78E, h0km, mbtmp3.1/3, ML2.7/3, Error ellipse: s-maj=13.3km s-min=9.4km az=11.0
ISC 03 08:30:54.3±1.9, 54°.6N±0°.1×83°.60E±0°.06, h0km, n10, σ1^{s}68/15, 5C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.98	133	I	I	08 36 30.0	
	0.1nm,0.8s,baz=318,slow=340,SNR=7.3						
ZAA0	Zalesovo Array	0.98	133	⇑P	Pg	08 31 11.9	-1.1
	0.7nm,0.3s						
ZAA0				⇑S	Sg	08 31 26.5	+0.9
	14nm,0.3s						
ZALV	Zalesovo Beam	0.98	133	Pg	Pg	08 31 11.9	-1.1
	2.3nm,0.3s,baz=322,slow=19,SNR=20						
ZALV				Lg	Lg	08 31 25.8	
	17nm,0.3s,baz=319,slow=30,SNR=15						
KURK	Kurchatov	4.94	220	⇑Pn	Pb	08 32 20.2	-1.4
	0.5nm,0.7s						
KURK				⇑Sn	Sg	08 33 35.4	+2.4
	1.8nm,0.9s						
KURBB	Kurchatov Arra	5.05	220	Pn	Pn	08 32 12.7	+1.5
	0.1nm,0.3s,baz=41,slow=14,SNR=9.3						
KURBB				Lg	Lg	08 33 36.4	
	0.1nm,0.3s,baz=36,slow=32,SNR=4.9						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	5.05	220	⇓Pn	Pb	08 32 20.6	-2.9
	0.8nm,0.3s,baz=38,slow=14						
KURBB				⇓Sn	Sg	08 33 34.4	-2.1
	3.3nm,0.5s,baz=43,slow=29						
MK31	Makanchi Array	7.88	187	Pn	Pn	08 32 51.5	+1.5
	0.2nm,0.5s,baz=15,slow=12,SNR=15						
MK31				⇓Sn	Sn	08 34 20.5	+0.7
	0.1nm,0.3s						
MK31				⇓Lg	Lg	08 35 09.6	
	0.2nm,0.5s						
MKAR	Makanchi Array	7.88	187	Pn	Pn	08 32 51.2	+1.2
	0.3nm,0.3s,baz=12,slow=12,SNR=13						
MKAR				Sn	Sn	08 34 20.5	+0.7
	0.1nm,0.3s,baz=11,slow=23,SNR=3.1						
MKAR				Lg	Lg	08 35 04.5	
	0.1nm,0.3s,baz=6.3,slow=33,SNR=1.8						
	0.3nm,0.3s						
MAKZ	Makanchi	7.88	188	⇓Pn	Pn	08 32 50.9	+0.7
	0.2nm,0.5s						
MAKZ				⇓Sn	Sn	08 34 21.2	+1.2
	0.5nm,0.8s						
MAKZ				⇑Lg	Lg	08 35 11.4	
	0.6nm,0.6s						
BVAR	Borovoye Array	7.98	264	Pn	Pn	08 32 52.7	+1.3
	0.1nm,0.3s,baz=70,slow=14,SNR=7.8						
	1.4nm,0.3s						

ASRS 03 08:37:58.0±0.9, 54°.67N×83°.69E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
IDC 03 08:37:59.9±2.3, 54°.57N×83°.77E, h0km, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=17.6km s-min=10.6km az=163.0
NNC 03 08:38:03.8±1.7, 54°.63N×85°.47E, h0km, mb3.4, mpv2.7, Error ellipse: s-maj=27.5km s-min=8.5km az=113.0, Suspected Mining explosion.
ISC 03 08:38:05.0±3.1, 54°.1N±0°.3×84°.02E±0°.08, h0km, n7, σ1^{s}12/9, 5C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.51	112	I	I	08 43 30.0	
	0.3nm,0.8s,baz=318,slow=340,SNR=32						
ZAA0	Zalesovo Array	0.51	112	⇑P	Pn	08 38 19.0	-0.5
	2.0nm,0.5s						
ZAA0				⇑S	Sn	08 38 30.0	+1.1
	56nm,1.1s						
ZALV	Zalesovo Beam	0.51	112	Pg	Pb	08 38 16.9	+0.1
	1.4nm,0.3s,baz=319,slow=19,SNR=16						
ZALV				Lg	Lg	08 38 29.4	
	5.5nm,0.3s,baz=315,slow=30,SNR=16						
KURK	Kurchatov	4.76	226	⇑Pn	Pb	08 39 31.2	+2.0
	0.8nm,0.8s						
KURK				⇑Sn	Sg	08 40 37.9	0.0
	4.5nm,1.0s						
KURBB	Kurchatov Arra	4.87	226	Pn	Pn	08 39 18.4	-1.0
	baz=40,slow=13,SNR=1.6						
KURBB				Lg	Lg	08 40 37.3	
	baz=41,slow=31,SNR=3.1						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	4.87	226	⇓Pn	Pb	08 39 31.0	-0.1
	2.5nm,0.8s,baz=42,slow=15						
KURBB				⇑Sn	Sg	08 40 40.4	-0.9
	9.6nm,0.7s,baz=41,slow=28						
MKAR	Makanchi Array	7.44	189	Pn	Pn	08 39 54.1	-0.6
	baz=9.7,slow=14,SNR=2.2						
MKAR				Lg	Lg	08 42 06.8	
	baz=11,slow=31,SNR=2.3						
	0.2nm,0.6s						

ISK 03 08:49:41.9, 37°.21N×27°.87E, h0km, ML1.5/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLSB	Milas	0.11	320	Pg	Pg	08 49 44.8	+0.8
MLSB				Sg	Sg	08 49 46.9	+1.4
TURN	Turunc	0.53	145	Pg	Pg	08 49 52.7	+0.6
TURN				Sg	Sb	08 50 00.6	-1.7
DAT	Datca	0.53	206	Pg	Pg	08 49 52.8	+0.7
DAT				Sg	Sg	08 50 00.6	+1.6
AYDB	Zeytinkoy-Aydi	0.73	2	Pg	Pg	08 49 56.6	+0.6
ODEM	Odemis-Izmir	1.08	9	Pg	Pg	08 50 02.9	+0.4
ODEM				Sg	Sb	08 50 18.3	+0.2
CAME	Cameli-Denizli	1.18	103	Pn	Pb	08 50 04.9	-0.4
CAME				Sn	Sb	08 50 21.7	+0.6

AFAD 03 08:49:41.3, 38°.58N×26°.68E, h7km±1km, ML1.2, Aegean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAGT	Foa	0.15	60	P	Pg	08 49 44.7	+0.3
BAGT				IAML		08 49 48.0	
	comp=N,61nm,0.5s						
BAGT				S	Sg	08 49 48.3	+1.7
BAGT				IAML		08 49 50.0	
	comp=E,52nm,0.5s						
KARB	zmir-Karabur	0.23	292	P	Pg	08 49 46.2	+0.3
KARB				S	Sg	08 49 50.0	+1.1
KARB				IAML		08 49 50.0	
	comp=N,97nm,0.2s						
KARB				IAML		08 49 50.0	
	comp=E,60nm,0.3s						
URLA	Izmir	0.23	197	P	Pg	08 49 45.5	-0.3
URLA				S	Sg	08 49 50.5	+1.7
ZEYE	Izmir, Urla-Ze	0.37	203	P	Pb	08 49 49.6	-0.5
ZEYE				S	Sg	08 49 54.6	+1.4
ZEYE				IAML		08 49 55.0	
	comp=N,50nm,0.4s						
ZEYE				IAML		08 49 56.0	
	comp=E,34nm,0.3s						
IZMD	zmir-Dikili-	0.45	25	P	Pg	08 49 50.3	+0.3
IZMD				S	Sg	08 49 57.0	+1.0
IZMD				IAML		08 49 59.0	
	comp=N,18nm,1.6s						
IZMD				IAML		08 50 12.0	
	comp=E,24nm,1.8s						
DGB	zmir	0.55	163	P	Pg	08 49 48.8	-3.0
DGB				S	Sg	08 49 60.0	+1.0

NOU 03 08:58:15.8, 14°.52S×167°.88E, h0km, MLv4.6/6, Vanuatu Islands
IDC 03 08:58:15.5±3.5, 14°.41S×167°.59E, h0km, mb4.2/4, mbtmp4.0/5, ML3.6/1, MS2.2/2, Error ellipse: s-maj=73.2km s-min=40.3km az=93.0
ISC 03 08:58:16.7±3.3, 14°.5S±0°.2×167°.8E±0°.3, h10km, n8, σ1^{s}22/7, mb3.9/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	Devils Point	3.19	172	P	Pn	08 59 06.8	-0.2
DZM	Mont Dzumac	7.59	189	Pn	Pn	09 00 07.8	+0.3
	0.8nm,0.3s,baz=39,slow=14,SNR=15						
DZM				Sn	Sn	09 01 32.7	-0.9
	baz=330,slow=7.1						
DZM				LR	LR	09 02 40.1	
	comp=Z,49nm,18.1s,baz=110,slow=34						
	2.9nm,0.6s						
DZM	Mont Dzumac	7.59	189	P	Pn	09 00 09.0	+1.5
HNR	Honiara	9.17	303	LR	LR	09 04 27.0	
	comp=Z,4.5nm,18.1s,baz=229,slow=41						
STKA	Stephens Creek	29.46	230	P	P	09 04 21.9	+1.0
	6.3nm,0.6s,baz=40,slow=8.5,SNR=14						
	6.3nm,0.6s						
WRA	Warramunga Arr	32.32	256	P	P	09 04 45.2	-1.1
	0.6nm,0.7s,baz=83,slow=8.0,SNR=9.6						
	0.6nm,0.7s						
ASAR	Alice Springs	33.17	249	P	P	09 04 53.1	-0.6
	1.2nm,0.7s,baz=74,slow=9.3,SNR=20						
	1.2nm,0.7s						
MKAR	Makanchi Array	97.39	316	P	Pdif	09 11 50.0	-0.6
	0.6nm,0.8s,baz=102,slow=5.5,SNR=5.5						
	0.6nm,0.8s						

IDC 03 09:04:46.4±1.8, 10°.22S×124°.28E, h0km, mb3.8/1, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=30.3km s-min=11.7km az=9.0
DJA 03 09:04:50.1±0.9, 10°S±10°×12°4E±°, h10km, M3.9/9, mb4.4/1, MLv3.6/9
ISC 03 09:04:48.9±1.0, 10°.4S±0°.1×124°.2E±0°.1, h27km, n11, σ2^{s}27/14, Timor region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	0.53	289	Pg	Pb	09 04 58.1	-1.6
	415nm,0.3s,baz=137,slow=3.9,SNR=67						
BATI				Lg	Lg	09 05 06.5	
	730nm,0.3s,baz=96,slow=18,SNR=15						
BATI				LR	LR	09 05 28.3	
	comp=Z,484nm,18.5s,baz=323,slow=69						
BATI	Baumata	0.53	289	P	Pb	09 04 58.1	-1.6
SOEI	Soe	0.63	9	P	Pn	09 05 01.8	-0.5
EDFI	Ende, Flores	2.94	303	P	Pn	09 05 34.2	+0.3
BASI	Baing, Sumba	3.54	272	P	Pn	09 05 41.8	-0.3
WSI	Waingapu	3.88	280	P	Pn	09 05 47.6	+0.8
PLAI	Plampang	6.49	283	P	Pn	09 06 23.9	+1.1
FITZ	Fitzroy Crossi	7.80	170	Pn	Pn	09 06 43.7	+2.9
	1.0nm,0.3s,baz=356,slow=13,SNR=15						
FITZ				Sn	Sn	09 08 10.2	+2.0
	1.6nm,0.3s,baz=117,slow=18,SNR=7.7						
	1.9nm,0.3s						
WRA	Warramunga Arr	13.65	135	Pn	Pn	09 08 01.5	+0.5
	0.1nm,0.3s,baz=311,slow=13,SNR=8.5						
WRA				Sn	Sn	09 10 28.6	-3.3
	0.3nm,0.3s,baz=303,slow=24,SNR=6.3						
	0.2nm,0.4s						
ASAR	Alice Springs	16.15	146	Pn	Pn	09 08 35.9	+1.7
	0.2nm,0.3s,baz=317,slow=12,SNR=18						
ASAR				Sn	Sn	09 11 27.9	-4.6
	0.3nm,0.3s,baz=319,slow=22,SNR=9.5						
	0.7nm,0.5s						
MKAR	Makanchi Array	68.09	330	P	P	09 15 47.2	+0.9
	0.7nm,0.7s,baz=139,slow=7.9,SNR=3.9						
	0.7nm,0.7s						

ASRS 03 09:05:00.0±1.0, 53°.68N×88°.00E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
IDC 03 09:05:02.3±3.0, 53°.70N×88°.00E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=24.4km s-min=16.7km az=56.0
NNC 03 09:05:02.8±2.4, 53°.58N×88°.10E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=19.7km s-min=9.9km az=60.0, Suspected Mining explosion.
ISC 03 09:05:02.6±3.3, 53°.7N±0°.1×88°.0E±0°.2, h0km, n9, σ1^{s}39/14, 6C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.90	279	I	I	09 18 00.0	
	baz=91,slow=342,SNR=7.3						
ZAA0	Zalesovo Array	1.90	279	⇑Pn	Pb	09 05 37.2	-0.9
	1.8nm,0.5s						
ZAA0				⇓Sn	Sg	09 06 04.4	+0.8
	4.4nm,0.5s						
ZALV	Zalesovo Beam	1.90	279	Pn	Pn	09 05 36.9	+0.7
	1.4nm,0.3s,baz=93,slow=12,SNR=21						
ZALV				Lg	Lg	09 06 02.8	
	2.4nm,0.3s,baz=95,slow=32,SNR=20						
KURK	Kurchatov	6.48	247	⇑Pn	Pn	09 06 40.6	+1.5
	0.4nm,0.2s						
KURK				⇓Lg	Lg	09 08 27.4	
	2.1nm,0.8s						
KURBB	Kurchatov Arra	6.58	246	Pn	Pn	09 06 41.2	+0.8
	0.1nm,0.3s,baz=58,slow=14,SNR=3.2						
KURBB				Sn	Sn	09 07 54.8	-1.3
	baz=62,slow=24						
KURBB				Lg	Lg	09 08 30.8	
	baz=57,slow=34,SNR=4.7						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	6.58	246	⇑Pn	Pn	09 06 40.5	0.0
	3.0nm,0.8s						
KURBB				⇑Sn	Sn	09 07 55.0	-1.2
	1.6nm,0.6s						
KURBB				⇓Lg	Lg	09 08 33.8	
	6.6nm,1.0s						
MK31	Makanchi Array	7.80	210	⇓Pn	Pn	09 06 58.2	+0.9
	0.2nm,0.6s,baz=28,slow=14,SNR=5.8						
MK31				⇑Sn	Sn	09 08 27.4	+1.1
	0.2nm,0.5s						
MK31				⇓Lg	Lg	09 09 07.9	
	2.4nm,1.1s,baz=33,slow=30,SNR=3.8						
MKAR	Makanchi Array	7.80	210	Pn	Pn	09 06 58.4	+1.1
	0.1nm,0.3s,baz=25,slow=13,SNR=6.0						
MKAR				Sn	Sn	09 08 25.1	-1.2
	0.1nm,0.3s,baz=30,slow=24,SNR=3.6						
MKAR				Lg	Lg	09 09 06.2	
	0.1nm,0.3s,baz=26,slow=31,SNR=5.1						
	0.1nm,0.3s						
MAKZ	Makanchi	7.89	212	⇓Pn	Pn	09 06 56.1	-2.3
	0.5nm,0.5s						
MAKZ				⇑Sn	Sn	09 08 30.2	+1.9
	1.1nm,1.1s						
MAKZ				⇓Lg	Lg	09 09 12.2	
	1.8nm,0.9s						

JMA 03 09:18:53.9±0.1, 36°.1N±0°.2×139°.8E±0°.3, h45km, MV2.8/37, SW IBARAKI PREF
IDC 03 09:18:54.3±3.0, 35°.96N×139°.74E, h61km±22km, mb3.0/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=43.1km s-min=9.7km az=61.0
ISC 03 09:18:53.0±1.0, 36°.06N±0°.05×139°.86E±0°.06, h52km±9km, n14, σ0^{s}68/20, mb3.4/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.32	58	P	Pn	09 19 02.9	+0.4
JYT				S	Sn	09 19 09.3	0.0
JAG	Ashikaga	0.49	318	P	Pn	09 19 04.6	+0.2
JAG				S	Sn	09 19 12.1	-0.4
JRY	Ryogami san	0.78	267	*i* P	Pn	09 19 08.2	+0.2
JRY				S	Sn	09 19 18.3	-0.5
JKT	Katashina	0.86	325	P	Pn	09 19 09.2	+0.1
JKT				*e*S	Sn	09 19 20.7	-0.1
JOD2	Odawara 2	1.01	219	*e*P	Pn	09 19 11.9	+0.9
JYN	Shimob	1.21	243	*e*P	Pn	09 19 15.0	+1.3
JUON	Uonuma	1.32	331	*e*P	Pn	09 19 15.7	+0.6
JFY	Yanaizu	1.35	355	P	Pn	09 19 16.5	+0.9
BSO3	Boso 3	1.36	157	*e*P	Pn	09 19 15.9	+0.4
MJAR	Matsushiro Arr	1.42	290	P	Pn	09 19 17.1	+0.6
	6.6nm,0.3s,baz=99,slow=15,SNR=46						
MJAR				S	Sn	09 19 33.5	-0.6
	7.1nm,0.4s,baz=120,slow=15,SNR=4.6						
JHJ	Hachijo jima 2	2.94	181	P	Pn	09 19 37.6	+0.4
	15nm,0.3s,baz=326,slow=21,SNR=7.3						
JHJ				S	Sn	09 20 10.3	-0.9
	270nm,1.1s,baz=68,slow=12,SNR=2.0						
	184nm,1.1s						
MKAR	Makanchi Array	43.59	303	P	P	09 26 51.0	-0.8
	0.2nm,0.8s,baz=81,slow=7.5,SNR=1.5						
	0.2nm,0.8s						
KURBB	Kurchatov Arra	45.62	309	P	P	09 27 08.5	+0.5
	0.3nm,0.3s,baz=88,slow=8.4,SNR=1.2						
	0.3nm,0.3s						
WRA	Warramunga Arr	55.94	186	P	P	09 28 25.7	-0.2
	0.3nm,0.8s,baz=1.7,slow=7.1,SNR=1.8						
	0.3nm,0.8s						

MEX 03 09:21:19.4±0.5, 14°.77N×92°.49W, h86km±5km, MD3.9
CATAC 03 09:21:19.2±0.6, 15°N±5°×9°3W±°, h54km±5km, M3.0/7, MLv3.0/7, Error ellipse: s-maj=13.7km s-min=4.1km az=40.9, confirmed
GCG 03 09:21:19.6±1.1, 14°.71N×92°.46W, h71km±10km, MD3.7, ML3.4, Presumed earthquake
ISC 03 09:21:16.9±1.3, 14°.60N±0°.06×92°.59W±0°.04, h76km±9km, n26, σ2^{s}24/46, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.44	46	*e*P	Pn	09 21 30.6	+0.9
THIG				*e*S	Sn	09 21 39.4	+0.2
THIG		0.44	46	*i* P	Pn	09 21 30.8	+1.1
SMCA	Catarina	0.56	63	*i* P	Pn	09 21 32.0	+1.2
SMCA				*i* S	Sn	09 21 41.0	-0.1
SMCA				IAML		09 21 42.3	
	comp=E,2µm,0.3s						
PATR	El Naranjo	0.61	34	*e*P	Pn	09 21 31.6	0.0
PATR				*i* S	Sn	09 21 41.8	-0.7
CHUJ	Union Juarez	0.67	44	*e*P	Pn	09 21 32.5	+0.2
CHUJ				*e*S	Sn	09 21 43.0	-0.5
PAVE	Pavencul	0.71	34	*e*P	Pn	09 21 32.9	+0.3
PAVE				*e*S	Sn	09 21 43.5	-0.6
RTAL	Retalhuleu	0.87	95	*e*S	Sn	09 21 48.1	+1.1
STG2	El Palmar, Qui	1.19	98	*i* P	Pn	09 21 36.2	-2.0
STG2				*i* S	Sn	09 21 48.4	-5.7
STG8	El Palmar, Qui	1.21	97	*i* P	Pn	09 21 36.9	-1.6
STG8				IAML		09 21 57.2	
	comp=N,714nm,0.1s						
STG5	El Palmar, Qui	1.22	99	*i* P	Pn	09 21 36.9	-1.7
STG5				*i* S	Sn	09 21 50.5	-4.2
PCIG		1.25	331	*e*P	Pn	09 21 39.5	+0.6
PCIG				*e*S	Sn	09 21 55.1	-0.2
HUEH	Huehuetenango	1.27	56	*e*P	Pn	09 21 40.8	+1.5
HUEH				*e*S	Sn	09 21 58.3	+2.2
HUEH	Huehuetenango	1.27	56	*i* P	Pn	09 21 40.8	+1.5
CCIG	Comitan	1.73	15	*e*P	Pn	09 21 46.7	+1.5
CCIG				*e*S	Sn	09 22 03.7	-2.9
CCIG	Comitan	1.73	15	P	Pn	09 21 47.2	+2.0
CCIG				S	Sn	09 22 07.3	+0.7
CCIG	Comitan	1.73	15	*e*P	Pn	09 21 47.1	+1.9
CARR	Arriaga	2.07	322	*e*P	Pn	09 21 51.9	+2.2
CARR				*e*S	Sn	09 22 16.8	+2.1
TGIG		2.22	347	*e*P	Pn	09 21 51.9	+0.2
TGIG				*e*S	Sn	09 22 15.8	-2.6
TGIG		2.22	347	*i* P	Pn	09 21 53.1	+1.3
FAME	Alcaldia de Sa	2.61	107	P	Pn	09 21 59.9	+3.0
FAME				S	Sn	09 22 29.2	+1.6
NUBE	Las Nubes	2.81	104	P	Pn	09 22 02.4	+2.6
NUBE				S	Sn	09 22 34.6	+1.8
UXUV	UXUV	3.08	331	*e*P	Pn	09 22 05.2	+1.8
UXUV				*e*S	Sn	09 22 39.0	-0.2
CMIG	Matias Romero	3.31	319	*e*P	Pn	09 22 08.0	+1.5
CMIG				*e*S	Sn	09 22 42.6	-2.1
NEUV	Arroyo Zacate	4.37	315	*e*P	Pn	09 22 22.4	+1.6
NEUV				*e*S	Sn	09 23 07.4	-3.1
SCIG	Sabancuy	4.54	17	*e*P	Pn	09 22 23.4	+0.3
SCIG				*e*S	Sn	09 23 09.2	-5.5
PEIG	Puerto Escondi	4.61	288	*e*P	Pn	09 22 25.9	+1.8
PEIG				*e*S	Sn	09 23 11.9	-4.6

ISK 03 09:25:07.0, 35°.17N×27°.89E, h3km, ML3.0/14
AFAD 03 09:25:07.7, 35°.12N×27°.82E, h11km±3km, ML2.8
ATH 03 09:25:12.1, 35°.41N×27°.75E, h11km±5km, ML2.8/8, Manual Solution by N.Liadopoulou First location: 2020/02/03 09:26:59, This location: 2020/02/03 09:34:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km
ISC 03 09:25:07.5±1.4, 35°.15N±0°.05×27°.92E±0°.03, h9km±11km, n39, σ1^{s}65/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.73	303	Pg	Pg	09 25 21.2	-0.5
KARP	Karpathos	0.73	303	P	Pg	09 25 21.2	-0.5
KARP				S	Sg	09 25 28.6	-2.7

ARG	**Arkhangelos**	**1.08**	**9**	Pg	**Pb**	**09 25 28.2**	**-0.1**
ARG	**Arkhangelos**	**1.08**	**9**	P	**Pn**	**09 25 28.7**	**-0.1**
ARG				S	**Sg**	**09 25 40.1**	**-2.1**
ZKR	**Zakros**	**1.39**	**269**	P	**Pg**	**09 25 34.4**	**+0.2**
ZKR				S	**Sg**	**09 25 53.5**	**+1.1**
DAT	**Datca**	**1.60**	**350**	Pn	**Pb**	**09 25 36.9**	**-0.4**
DAT				Sn	**Sg**	**09 25 58.7**	**-0.3**
TURN	**Turunc**	**1.64**	**9**	Pn	**Pb**	**09 25 37.5**	**-0.5**
TURN				Sn	**Sg**	**09 25 59.8**	**-0.6**
IZZE	**Mula-Seydike**	**1.67**	**39**	P	**Pn**	**09 25 37.0**	**+0.1**
IZZE				S	**Sg**	**09 26 00.4**	**-0.8**
IZZE				IAML		09 26 08.0	
	comp=N,118nm,0.5s						
KSL	**Kastellorizon**	**1.69**	**53**	P	**Pg**	**09 25 41.2**	**+1.4**
AKAS	**Kas**	**1.75**	**51**	Pn	**Pb**	**09 25 39.4**	**-0.4**
AKAS	**Kas**	**1.75**	**51**	P	**Pn**	**09 25 38.7**	**+0.6**
AKAS				S	**Sb**	**09 26 02.1**	**+0.1**
AKAS				IAML		09 26 11.0	
	comp=N,100nm,0.6s						
DALY	**Dalyan (Mula)**	**1.77**	**20**	Pn	**Pb**	**09 25 39.3**	**-0.8**
DALY				Sn	**Sb**	**09 26 02.9**	**+0.6**
SABU	**Mula-Dalaman**	**1.88**	**27**	P	**Pn**	**09 25 39.2**	**-0.6**
SABU				S	**Sg**	**09 26 12.9**	**+5.0**
NPS	**Neapolis**	**1.89**	**274**	P	**Pb**	**09 25 42.6**	**+0.4**
BODT	**Bodrum**	**1.97**	**346**	Pn	**Pn**	**09 25 42.2**	**+1.1**
YER	**Yerkesik**	**2.00**	**8**	Pn	**Pb**	**09 25 42.8**	**-1.3**
CAME	**Cameli-Denizli**	**2.11**	**32**	Pn	**Pn**	**09 25 44.5**	**+1.3**
MLSB	**Milas**	**2.14**	**357**	Pn	**Pn**	**09 25 44.6**	**+1.1**
KNIK	**Mula-Seydike**	**2.16**	**38**	P	**Pn**	**09 25 44.9**	**+1.1**
KNIK				S	**Sn**	**09 26 11.3**	**+0.6**
DNZT	**Denizli-Tavas-**	**2.31**	**23**	P	**Pn**	**09 25 47.1**	**+1.3**
DNZT				S	**Sg**	**09 26 22.8**	**+1.2**
THERA	**Ancient Thera,**	**2.33**	**302**	P	**Pn**	**09 25 46.9**	**+0.9**
THR3	**Thira Island,**	**2.40**	**302**	P	**Pn**	**09 25 47.8**	**+0.8**
SNT5	**Nea Kammeni, S**	**2.40**	**302**	P	**Pn**	**09 25 47.9**	**+0.9**
GOLH	**Golhisar**	**2.47**	**32**	P	**Pn**	**09 25 49.5**	**+1.5**
GOLH				S	**Sb**	**09 26 22.2**	**-0.5**
GOLH				IAML		09 26 25.0	
	comp=E,58nm,0.5s						
GOLH				IAML		09 26 55.0	
	comp=N,46nm,0.8s						
IDI	**Anoyia**	**2.48**	**274**	P	**Pb**	**09 25 50.7**	**-1.7**
APMY	**Acipayam-Deniz**	**2.57**	**25**	Pn	**Pn**	**09 25 50.6**	**+1.2**
GCAM	**G?zelcaml?**	**2.60**	**348**	Pn	**Pn**	**09 25 50.9**	**+1.1**
SMG	**Samos**	**2.70**	**341**	P	**Pn**	**09 25 51.4**	**+0.3**
KORT	**Korkueli**	**2.70**	**46**	P	**Pb**	**09 25 55.1**	**-1.0**
KORT				S	**Sb**	**09 26 28.4**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**2.79**	**360**	Pn	**Pn**	**09 25 53.9**	**+1.4**
VAM	**Vamos**	**3.05**	**276**	P	**Pn**	**09 25 58.4**	**+2.5**
ODEM	**Odemis-Izmir**	**3.12**	**2**	Pn	**Pn**	**09 25 58.9**	**+1.9**
IMMV	**Iera Moni Meta**	**3.23**	**277**	P	**Pn**	**09 26 01.0**	**+2.6**
ANKY	**Antikythira Is**	**3.83**	**282**	P	**Pn**	**09 26 08.6**	**+2.0**
SEDI	**Konya, Seydise**	**3.86**	**52**	P	**Pn**	**09 26 09.4**	**+2.2**
SEDI				S	**Sn**	**09 26 55.7**	**+3.0**
SEDI				IAML		09 26 59.0	
	comp=N,13nm,0.6s						
KTHA	**Kythira Island**	**4.10**	**287**	P	**Pn**	**09 26 11.1**	**+0.7**
KKBE	**Karaman, Kazim**	**4.56**	**62**	P	**Pn**	**09 26 18.1**	**+1.4**
KKBE				S	**Sn**	**09 27 09.1**	**-0.8**
GULN	**MERSIN_Gulnar**	**4.70**	**76**	P	**Pn**	**09 26 17.9**	**-0.6**
GULN				S	**Sn**	**09 27 08.3**	**-4.8**
KERG	**Konya-Eregli**	**5.50**	**64**	P	**Pn**	**09 26 30.7**	**+1.0**
KERG				S	**Sn**	**09 27 29.9**	**-3.2**

VIE 03 09:25:20.8±0.8**, 46°.65N**×**13°.86E, h0**km**, ml0.1**/1**, Error ellipse: s-maj=10.6km s-min=1.7km az=141.0 3 km NW of Maria Landskron Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYKA	**Terra Mystica**	**0.15**	**261**	*e*Pg	Pg	09 25 23.0	-0.6
	0.5nm,0.1s						
MYKA				*i* Sg	Sg	09 25 26.1	+0.6
	1.0nm,0.1s						

IDC 03 09:25:30.6±4.5**, 4°.08S**×**149°.04E, h0**km**, mb3.1**/2**, mbtmp3.4**/3**, ML1.8**/1**, MS2.7**/1**, Error ellipse: s-maj=157.2km s-min=46.6km az=104.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.61**	**199**	Pn	Pn	09 26 55.0	-0.4
	1.6nm,0.3s,baz=329,slow=7.2,SNR=2.5						
PMG				LR	LR	09 29 21.3	
	comp=Z,65nm,18.5s,baz=330,slow=41						
	7.2nm,0.5s						
WRA	**Warramunga Arr**	**21.30**	**221**	P	P	09 30 19.9	+0.8
	0.7nm,0.7s,baz=46,slow=12,SNR=8.5						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**24.34**	**216**	P	P	09 30 50.2	-0.2
	0.4nm,0.7s,baz=47,slow=8.5,SNR=5.3						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**146.52**	**288**	PKPbc	PKPdf	09 45 14.0	+0.3
	0.5nm,0.8s,baz=90,slow=2.0,SNR=2.9						

VIE 03 09:25:47.8±1.0**, 45°.18N**×**16°.03E, h2**km±4km**, mb1.9**/2**, ml1.9**/3**, 1D, Error ellipse: s-maj=5.8km s-min=5.5km az=176.0 51 km SE of Karlovac, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIT	**Plitvice**	**0.42**	**224**	*i* Pg	Pg	09 25 56.1	+0.3
PLIT				Sg	Sg	09 26 02.7	+1.5
OZLJ	**Ozalj**	**0.59**	**318**	*i* Pg	Pg	09 25 59.1	0.0
OZLJ				Sg	Sg	09 26 07.3	+0.6
BOJS	**Bojanci**	**0.64**	**301**	*i* Pg	Pg	09 26 00.2	+0.2
BOJS				*i* Sg	Sg	09 26 09.3	+1.0
BOJS				IAML		09 26 11.0	
	comp=Z,23nm,0.2s						
MOSL	**Moslavina**	**0.67**	**49**	*e*Pg	Pg	09 25 58.2	-2.4
MOSL				Sg	Sg	09 26 06.9	-2.5
UDBI	**Udbina**	**0.68**	**196**	*i* Pg	Pg	09 26 00.4	-0.4
UDBI				Sg	Sb	09 26 11.2	-1.0
PTJ	**Puntijarka**	**0.73**	**357**	*e*Pg	Pg	09 26 01.1	-0.7
PTJ				Sg	Sg	09 26 11.5	+0.3
CRES	**Cresnjevec Ost**	**0.76**	**328**	*i* Pg	Pg	09 26 02.0	-0.4
CRES				IAML		09 26 19.0	
	comp=Z,16nm,0.2s						
GBRS	**Gornja Briga**	**0.93**	**293**	⇓*i*Pg	Pg	09 26 05.7	+0.1
GBRS				IAML		09 26 23.8	
	comp=Z,7.0nm,0.1s						
LOBO	**Lobor**	**0.98**	**2**	*e*Pg	Pg	09 26 05.9	-0.7
LOBO				Sg	Sb	09 26 20.2	-0.6
RABC	**Rab**	**0.98**	**245**	*e*Pg	Pg	09 26 07.0	+0.3
RABC				Sg	Sn	09 26 22.3	-0.9
KALN	**Kalnik**	**1.00**	**17**	*e*Pg	Pg	09 26 04.9	-2.0
KALN				Sg	Sg	09 26 18.2	-1.7
NVLJ	**Novalja**	**1.03**	**234**	*e*Pg	Pg	09 26 07.6	+0.1
NVLJ				Sg	Sn	09 26 23.6	-0.6
VISS	**Visnje**	**1.04**	**307**	*e*Pg	Pb	09 26 08.6	0.0
VISS				IAML		09 26 25.7	
	comp=Z,18nm,0.2s						
VIRC	**Vir**	**1.13**	**218**	*e*Pg	Pg	09 26 09.3	-0.1
VIRC				Sn	Sn	09 26 28.3	+1.6
KIJV	**Kijevo**	**1.20**	**167**	*i* Pg	Pg	09 26 09.3	-1.5
KIJV				Sg	Sb	09 26 27.3	0.0
MORI	**Morici**	**1.33**	**190**	*e*Pn	Pg	09 26 11.9	-1.4
MORI				Sn	Sn	09 26 32.8	+1.0
DUGI	**Dugi Otok**	**1.38**	**211**	*e*Pn	Pn	09 26 13.2	-0.8
DUGI				Sn	Sn	09 26 35.0	+2.2
ZIRJ	**Zirje**	**1.55**	**190**	*e*Pn	Pn	09 26 16.0	-0.4
ZIRJ				Sn	Sg	09 26 39.4	+1.8
SOKA	**Soboth**	**1.65**	**335**	*i* Pn	Pn	09 26 17.5	-0.5
	comp=Z,1.2nm,0.2s						
SOKA				*e*Sn	Sg	09 26 40.8	-0.1
	comp=Z,1.8nm,0.2s						
OBKA	**Obir**	**1.69**	**323**	*e*Pn	Pn	09 26 18.6	+0.2
	comp=Z,3.2nm,0.3s						
OBKA				*i* Sn	Sg	09 26 42.4	+0.5
	comp=Z,6.4nm,0.4s						
RICI	**Ricice**	**1.86**	**154**	*e*Pn	Pn	09 26 21.5	+0.8
RICI				Sn	Sb	09 26 45.7	-0.6
HVAR	**Hvar**	**2.02**	**171**	*i* Pn	Pn	09 26 23.6	+0.7
HVAR				Sn	Sn	09 26 49.8	+1.0
ARSA	**Arzberg**	**2.10**	**351**	*i* Pn	Pn	09 26 24.2	+0.1
	comp=Z,1.3nm,0.2s						
ARSA				*e*Sn	Sn	09 26 50.6	-0.2
	comp=Z,1.4nm,0.4s						

LSTV	**Lastovo**	**2.49**	**165**	*e*Pn	Pn	09 26 27.8	-1.6
LSTV				Sn	Sn	09 26 59.8	-0.5
STON	**Ston**	**2.60**	**152**	*e*Pn	Pn	09 26 30.8	-0.1
STON				Sn	Sn	09 27 02.6	-0.4

*FUNV **03** 09:30:43.1, 6°.14N×73°.92W, h87km, MW3.5, Presumed earthquake*
*RSNC **03** 09:30:44.3±0.0, 6°N±1°×7°4W±°, h92km±2km, M2.4, ML2.1*
ISC 03 09:30:43.1±1.3**, 6°.26N**±0°.03×**73°.83W**±0°.03**, h98**km±8km**, n30, σ1s.21**/59**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.65**	**202**	P	**Pn**	**09 30 59.5**	**-0.5**
SPBC				S	**Sn**	**09 31 12.1**	**-0.6**
PTBC	**PUERTO BERRIO,**	**0.68**	**294**	P	**Pn**	**09 30 59.3**	**-0.9**
PTBC				S	**Sn**	**09 31 12.3**	**-0.7**
BRJC	**Barrancabermej**	**0.71**	**7**	P	**Pn**	**09 31 00.6**	**+0.1**
BRJC				S	**Sn**	**09 31 14.6**	**+1.1**
BARC	**Barichara**	**0.72**	**63**	P	**Pn**	**09 31 01.0**	**+0.2**
BARC				S	**Sn**	**09 31 14.1**	**0.0**
RUSC	**La Rusia**	**0.83**	**116**	P	**Pn**	**09 31 01.5**	**-0.6**
RUSC				S	**Sn**	**09 31 15.2**	**-1.1**
RUSC	**La Rusia**	**0.83**	**116**	*e*P	**Pn**	**09 31 01.6**	**-0.4**
RUSC				*e*S	**Sn**	**09 31 14.3**	**-2.0**
VMM09	**Lebrija**	**1.01**	**32**	P	**Pn**	**09 31 04.0**	**+0.3**
VMM09				S	**Sn**	**09 31 20.1**	**+0.9**
VMM07	**Puerto Wilches**	**1.09**	**359**	P	**Pn**	**09 31 04.9**	**+0.4**
VMM07				S	**Sn**	**09 31 21.1**	**+0.6**
EZNC	**La Esperanza**	**1.45**	**21**	P	**Pn**	**09 31 09.1**	**+0.4**
EZNC				S	**Sn**	**09 31 29.1**	**+1.0**
ROSC	**El Rosal**	**1.49**	**199**	P	**Pn**	**09 31 10.0**	**+0.4**
ROSC				S	**Sn**	**09 31 30.7**	**+1.1**
PAMC	**Pamplona, Colo**	**1.55**	**46**	P	**Pn**	**09 31 10.5**	**+0.1**
PAMC				S	**Sn**	**09 31 31.2**	**+0.2**
CHIC	**Chingaza**	**1.62**	**177**	P	**Pn**	**09 31 10.5**	**-0.7**
CHIC				S	**Sn**	**09 31 33.0**	**+0.5**
VMM05	**San Martn**	**1.66**	**9**	P	**Pn**	**09 31 13.3**	**+2.0**
VMM05				S	**Sn**	**09 31 36.1**	**+3.5**
CVER	**Cruz Verde, Cu**	**1.74**	**188**	P	**Pn**	**09 31 13.2**	**+0.4**
CVER				S	**Sn**	**09 31 37.4**	**+2.1**
NIZA	**Niza - Manizal**	**2.02**	**234**	P	**Pn**	**09 31 16.7**	**+0.5**
NIZA				S	**Sn**	**09 31 42.0**	**+0.6**
OCAC	**Ocana**	**2.03**	**14**	P	**Pn**	**09 31 16.3**	**+0.1**
OCAC				S	**Sn**	**09 31 43.6**	**+2.2**
VILC	**Villavicencio,**	**2.14**	**176**	P	**Pn**	**09 31 16.8**	**-0.8**
VILC				S	**Sn**	**09 31 43.8**	**-0.1**
CAPV	**Capacho**	**2.19**	**43**	*e*P	**Pn**	**09 31 19.5**	**+1.2**
CAPV				*e*S	**Sn**	**09 31 46.4**	**+1.1**
CBOC	**Ciudad Bolivar**	**2.21**	**260**	P	**Pn**	**09 31 19.2**	**+0.7**
CBOC				S	**Sn**	**09 31 46.0**	**+0.5**
UREC	**San Jos de Ur**	**2.25**	**311**	P	**Pn**	**09 31 17.9**	**-1.0**
UREC				S	**Sn**	**09 31 45.1**	**-1.2**
ANIL	**Santa Ana**	**2.35**	**222**	P	**Pn**	**09 31 20.7**	**+0.2**
ANIL				S	**Sn**	**09 31 49.8**	**+0.6**
DBBC	**Dabeiba**	**2.48**	**288**	P	**Pn**	**09 31 23.1**	**+1.1**
DBBC				S	**Sn**	**09 31 53.2**	**+1.4**
ORTC	**Ortega, Tolima**	**2.73**	**211**	P	**Pn**	**09 31 24.8**	**-0.5**
ORTC				S	**Sn**	**09 31 58.5**	**+0.8**
PRAC	**Prado**	**2.74**	**203**	P	**Pn**	**09 31 25.0**	**-0.4**
PRAC				S	**Sn**	**09 31 58.6**	**+0.7**
URMC	**La Uribe, Meta**	**3.04**	**190**	P	**Pn**	**09 31 29.0**	**-0.5**
URMC				S	**Sn**	**09 32 06.0**	**+0.8**
APAC	**Apartado, Choc**	**3.18**	**301**	P	**Pn**	**09 31 30.5**	**-0.7**
APAC				S	**Sn**	**09 32 08.4**	**0.0**
SOCV	**Socops**	**3.57**	**56**	*e*P	**Pn**	**09 31 36.7**	**+0.2**
SOCV				*e*S	**Sn**	**09 32 16.9**	**-0.9**
SJCC	**San Jacinto, C**	**3.85**	**340**	P	**Pn**	**09 31 38.8**	**-1.6**
SJCC				S	**Sn**	**09 32 20.8**	**-3.9**
SJCC	**San Jacinto, C**	**3.85**	**340**	*e*S	**Sn**	**09 32 22.3**	**-2.4**
SDV	**Santo Domingo**	**4.10**	**50**	P	**Pn**	**09 31 44.3**	**+0.4**
SDV				S	**Sn**	**09 32 29.3**	**-1.7**

IDC 03 09:31:06.8±6.4**, 3°.84S**×**148°.68E, h0**km**, mb3.3**/2**, mbtmp3.3**/2**, MS3.3**/4**, Error ellipse: s-maj=278.2km s-min=53.5km az=110.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**12.49**	**117**	LR	LR	09 38 33.6	
	comp=Z,5.9nm,18.1s,baz=260,slow=36						
GUMO	**Guam**	**17.73**	**348**	LR	LR	09 40 26.8	
	comp=Z,82nm,20.5s,baz=120,slow=32						
WRA	**Warramunga Arr**	**21.25**	**220**	P	P	09 35 55.8	+0.9
	1.2nm,0.8s,baz=42,slow=9.9,SNR=9.3						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**24.33**	**215**	P	P	09 36 25.9	-0.7
	0.6nm,0.8s,baz=46,slow=8.5,SNR=7.0						
ASAR				LR	LR	09 46 14.3	
	comp=Z,46nm,18.2s,baz=118,slow=37						
	0.6nm,0.8s						
BATI	**Baumata**	**25.61**	**254**	LR	LR	09 47 43.1	
	comp=Z,106nm,18.6s,baz=216,slow=39						
FITZ	**Fitzroy Crossi**	**26.64**	**236**	LR	LR	09 47 32.7	
	comp=Z,84nm,19.2s,baz=36,slow=37						
TORD	**Torodi Ar. Bea**	**146.10**	**288**	PKPbc	PKPdf	09 50 49.2	0.0
	0.5nm,0.9s,baz=84,slow=2.9,SNR=2.8						

IDC 03 09:48:22.9±3.4**, 36°.97N**×**70°.49E, h0**km**, mb3.4**/1**, mbtmp3.5**/5**, ML2.9**/4**, 2C-2D, Error ellipse: s-maj=77.0km s-min=34.8km az=130.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.13**	**0**	⇑Pn	Pn	09 49 51.0	-3.8
	0.3nm,0.3s,baz=193,slow=11,SNR=6.7						
KK31				Pg	Pb	09 50 09.8	-0.7
	2.1nm,0.6s,baz=196,slow=17,SNR=5.5						
KK31				⇑Lg	Lg	09 51 26.8	
	6.0nm,0.6s,baz=190,slow=30,SNR=5.5						
AAK	**Ala-Archa**	**6.45**	**27**	Pn	Pn	09 50 02.0	+2.8
	1.4nm,0.3s,baz=203,slow=14,SNR=14						
AAK				Lg	Lg	09 51 47.6	
	0.2nm,0.3s,baz=211,slow=5.9,SNR=1.7						
	3.1nm,0.5s						
AAK	**Ala-Archa**	**6.45**	**27**	⇓Pn	Pn	09 50 04.4	+5.1
	1.5nm,0.6s						
AAK				⇓Lg	Lg	09 51 52.0	
	10nm,1.3s						
MKAR	**Makanchi Array**	**13.16**	**38**	Pn	Pn	09 51 33.1	+2.0
	baz=233,slow=13,SNR=9.3						
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**16.05**	**360**	Pn	Pn	09 52 06.1	-3.9
	baz=184,slow=13,SNR=2.4						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**19.66**	**26**	P	P	09 52 52.7	-0.6
	0.1nm,0.3s,baz=217,slow=10,SNR=6.2						
	1.0nm,0.5s						
YKA	**Yellowknife Ar**	**80.80**	**2**	P	P	10 00 37.9	-0.1
	0.2nm,0.7s,baz=348,slow=6.1,SNR=4.6						
	0.2nm,0.7s						

IDC 03 09:49:56.4±9.1**, 30°.11S**×**60°.96E, h0**km**, mb3.8**/2**, mbtmp3.8**/2**, MS3.2**/1**, Error ellipse: s-maj=559.6km s-min=50.0km az=33.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**17.55**	**202**	T	T	10 12 49.9	
	baz=27,slow=75,SNR=7264						
H04N1	**CROZET ISLANDS**	**17.56**	**202**	T	T	10 12 50.9	
	baz=27,slow=75						
H04N3	**CROZET ISLANDS**	**17.57**	**202**	T	T	10 12 49.9	
	baz=27,slow=75,SNR=7154						
H08S1	**Diego Carcia H**	**24.82**	**28**	T	T	10 20 10.5	
	baz=204,slow=76,SNR=12						
H08S2	**Diego Garcia H**	**24.83**	**28**	T	T	10 20 12.3	
	baz=204,slow=76,SNR=9.4						
H08S3	**Diego Garcia H**	**24.84**	**28**	T	T	10 20 16.6	
	baz=204,slow=76,SNR=17						
BOSA	**Boshof**	**31.08**	**264**	LR	LR	10 06 10.0	
	comp=Z,42nm,20.5s,baz=196,slow=31						
H01W2	**Cape Leeuwin H**	**44.67**	**111**	T	T	10 45 40.8	
	baz=262,slow=75,SNR=65						
H01W3	**Cape Leeuwin H**	**44.67**	**111**	T	T	10 45 41.1	
	baz=262,slow=75,SNR=82						
H01W1	**Cape Leeuwin H**	**44.68**	**111**	T	T	10 45 42.2	
	baz=262,slow=75,SNR=72						
ASAR	**Alice Springs**	**64.39**	**104**	P	P	10 00 34.6	-0.1
	0.8nm,0.8s,baz=245,slow=6.4,SNR=7.2						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**66.27**	**100**	P	P	10 00 47.1	+0.2
	1.1nm,0.8s,baz=244,slow=6.6,SNR=5.3						
	1.1nm,0.8s						
YKA	**Yellowknife Ar**	**147.48**	**356**	PKPbc	PKPbc	10 09 40.8	-0.9
	0.9nm,0.8s,baz=345,slow=3.1,SNR=14						

*SSNC **03** 10:23:04.8±0.3, 19°.07N×80°.24W, h32km±3km, MD3.4, ML2.5, Presumed earthquake*
*JSN **03** 10:23:05.8±0.3, 19°.19N×79°.96W, h12km±16km, MW3.9, Presumed earthquake*
ISC 03 10:23:02.1±2.7**, 19°.01N**±0°.09×**80°.3W**±0°.1**, h31**km±15km**, n8, σ2s.15**/14**, 2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.69**	**18**	*e*P	**Pb**	**10 23 15.7**	**0.0**
LCCY				*e*S	**Sb**	**10 23 24.0**	**-0.8**
LCCY				IAML		10 23 24.5	
	comp=E,111nm,0.3s						
LCCY				IAML		10 23 24.7	
	comp=N,140nm,0.4s						
CBCY	**The Bluff, Cay**	**0.89**	**36**	*e*P	**Pn**	**10 23 18.6**	**+0.1**
CBCY				*e*S	**Sn**	**10 23 28.4**	**-2.0**
CBCY				IAML		10 23 29.3	
	comp=N,141nm,0.3s						
CBCY				IAML		10 23 29.5	
	comp=E,122nm,0.3s						
MTDJ	**Mount Denham**	**2.75**	**106**	*e*P	**Pn**	**10 23 45.0**	**+0.8**
MTDJ				*e*S	**Sn**	**10 24 14.7**	**-1.7**
MTDJ				IAML		10 24 16.6	
	comp=E,41nm,0.6s						
MTDJ				IAML		10 24 17.2	
	comp=E,41nm,0.0s						
MTDJ	**Mount Denham**	**2.75**	**106**	⇓*i*P	**Pn**	**10 23 45.1**	**+1.0**
MGV	**Manicaragua**	**3.10**	**6**	*e*P	**Pn**	**10 23 49.7**	**+0.8**
MGV				*e*S	**Sn**	**10 24 22.6**	**-2.2**
MGV				IAML		10 24 25.8	
	comp=E,14nm,0.3s						
MGV				IAML		10 24 25.9	
	comp=N,7.3nm,0.4s						
CCCC	**Cccc**	**3.23**	**47**	*e*P	**Pn**	**10 23 54.4**	**+3.7**
CCCC				*e*S	**Sn**	**10 24 31.2**	**+3.0**
LMGC	**Las Mercedes**	**3.29**	**71**	*e*P	**Pn**	**10 23 51.7**	**+0.2**
LMGC				*e*S	**Sn**	**10 24 26.9**	**-2.7**
LMGC				IAML		10 24 29.1	
	comp=N,5.4nm,0.0s						
LMGC				IAML		10 24 29.4	
	comp=E,5.5nm,0.1s						
STH	**Stony Hill**	**3.45**	**105**	⇓*i*P	**Pn**	**10 23 54.9**	**+1.1**

*NEIC **03** 10:25:45.2±1.2, 55°.5S±0°.2×26°.5W±0°.3, h10km±1km, mb4.6/10, Error ellipse: s-maj=33.4km s-min=17.5km az=44.0*
*IDC **03** 10:26:06.0±11.0, 55°.90S×28°.10W, h168km±104km, mb3.8/5, mbtmp4.2/5, Error ellipse: s-maj=42.3km s-min=24.2km az=80.0*
ISC 03 10:25:45.7±1.3**, 55°.4S**±0°.2×**26°.7W**±0°.2**, h10**km**, n21, σ1s.57**/18**, mb4.6**/8**, 2D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.78**	**277**	Pn	**Pn**	**10 27 12.6**	**+1.2**
VNA3	**Neumayer Olymp**	**17.53**	**162**	⇓P	**P**	**10 29 53.8**	**+2.8**
	comp=Z,1.2nm,0.5s						
VNA2	**Neumayer--Watz**	**17.71**	**159**	⇓P	**P**	**10 29 56.2**	**+3.3**
	comp=Z,1.7nm,0.3s,baz=315,slow=12						
BELA	**Belgrano 2**	**22.77**	**184**	P	**P**	**10 30 45.8**	**-2.0**
BELA				IAmb	IAmb	10 30 47.8	
	comp=Z,28nm,1.3s						
PLTB	**Pedras Altas**	**30.28**	**310**	P	**P**	**10 31 58.1**	**+1.4**
PLTB				IAmb	IAmb	10 32 32.6	
	comp=Z,14nm,1.2s						
QSPA	**South Pole Qui**	**34.87**	**180**	P	**P**	**10 32 36.3**	**-0.6**
	comp=Z,2.8nm,0.4s,baz=199,slow=3.9,SNR=5.6						
	comp=Z,2.8nm,0.4s						
QSPA	**South Pole Qui**	**34.87**	**180**	IAmb	IAmb	10 32 36.6	
	comp=Z,4.4nm,0.8s						
AC05	**El Transito**	**40.83**	**292**	P	**P**	**10 33 25.9**	**-1.6**
AC05				IAmb	IAmb	10 33 44.4	
	comp=Z,24nm,1.5s						
LCO	**Las Campanas**	**40.92**	**292**	P	**P**	**10 33 27.2**	**-1.2**
PB07	**IPOC Station P**	**46.45**	**299**	P	**P**	**10 34 11.8**	**-1.0**
PB01	**IPOC Station P**	**46.83**	**299**	P	**P**	**10 34 15.2**	**-0.5**
PB01				IAmb	IAmb	10 34 48.1	
	comp=Z,12nm,1.5s						
VNDA	**Vanda**	**47.26**	**183**	P	**P**	**10 34 17.3**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=180,slow=8.1,SNR=6.6						
	comp=Z,2.5nm,0.6s						
GO01	**Chusmiza**	**47.84**	**301**	P	**P**	**10 34 23.8**	**-0.2**
GO01				IAmb	IAmb	10 34 49.9	
	comp=Z,9.7nm,1.3s						
LPAZ	**La Paz**	**50.23**	**304**	P	**P**	**10 34 42.6**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=143,slow=7.5,SNR=4.3						
	comp=Z,0.9nm,0.3s						
LPAZ	**La Paz**	**50.23**	**304**	IAmb	IAmb	10 34 43.4	
	comp=Z,2.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**72.33**	**29**	P	P	10 37 18.2	+6.9
	comp=Z,0.6nm,0.4s,baz=193,slow=5.7,SNR=7.1						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**99.54**	**162**	P	**Pdif**	**10 39 27.8**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=182,slow=3.9,SNR=5.0						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**149.88**	**312**	PKPbc	**PKPbc**	**10 45 33.8**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=120,slow=2.3,SNR=16						
CCB	**Clear Creek Bu**	**150.25**	**312**	PKPbc	**PKPbc**	**10 45 34.1**	**-1.2**
TRF	**Thorofare Moun**	**151.11**	**309**	PKPbc	**PKPbc**	**10 45 37.1**	**-0.5**
SKT	**Skwentna**	**151.38**	**306**	PKPbc	**PKPbc**	**10 45 37.5**	**-0.7**

*SOME **03** 10:29:31.3, 51°.08N×73°.85E*
*NNC **03** 10:29:37.0±1.7, 50°.84N×73°.56E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=27.3km s-min=8.6km az=31.0, Suspected Mining explosion.*
*IDC **03** 10:29:39.1±0.8, 50°.84N×73°.65E, h0km, mb3.3/1, mbtmp3.1/7, ML2.4/6, Error ellipse: s-maj=13.3km s-min=8.6km az=34.0*
ISC 03 10:29:37.2±0.8**, 50°.91N**±0°.07×**73°.57E**±0°.06**, h0**km**, n14, σ1s.70**/17**, 8C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**2.89**	**318**	⇓Pg	**Pb**	**10 30 29.8**	**+0.2**
	3.2nm,0.6s						
BVA0				⇑Lg	Lg	10 31 10.9	
	16nm,0.6s						
BVAR	**Borovoye Array**	**2.89**	**318**	Pn	**Pb**	**10 30 28.1**	**-1.6**
	0.1nm,0.3s,baz=133,slow=15,SNR=17						
BVAR				Lg	Lg	10 31 06.7	
	0.2nm,0.3s,baz=116,slow=20,SNR=9.1						
	3.3nm,0.5s						
KURBB	**Kurchatov Arra**	**3.16**	**93**	Pn	**Pn**	**10 30 29.2**	**+1.0**
	0.2nm,0.3s,baz=278,slow=14,SNR=42						
KURBB				Lg	Lg	10 31 13.6	
	0.8nm,0.3s,baz=276,slow=30,SNR=12						
	9.1nm,0.8s						
KURBB	**Kurchatov Arra**	**3.16**	**93**	⇑Pn	**Pn**	**10 30 29.2**	**+1.0**
	12nm,0.5s,baz=277,slow=12						
KURBB				⇑Lg	Lg	10 31 17.3	
	175nm,0.7s,baz=276,slow=31						
KURK	**Kurchatov**	**3.21**	**92**	⇑Pn	**Pn**	**10 30 29.5**	**+0.6**
	3.5nm,0.7s						
KURK				⇑Lg	Lg	10 31 16.3	
	34nm,1.1s						
MAKZ	**Makanchi**	**6.90**	**123**	⇑Pg	**Pb**	**10 31 40.9**	**+3.0**
	1.4nm,0.7s						
MAKZ				⇑Lg	Lg	10 33 13.1	
	22nm,0.8s						
MK31	**Makanchi Array**	**7.08**	**122**	⇑Pg	**Pb**	**10 31 42.1**	**+1.1**
	1.3nm,0.7s,baz=304,slow=12,SNR=5.7						
MK31				⇓Lg	Lg	10 33 17.6	
	12nm,0.7s,baz=321,slow=27,SNR=6.7						
MKAR	**Makanchi Array**	**7.08**	**122**	Pn	**Pn**	**10 31 22.3**	**+0.3**
	0.1nm,0.3s,baz=305,slow=11,SNR=5.5						
MKAR				Pg	**Pb**	**10 31 40.2**	**-0.8**
	0.3nm,0.3s,baz=309,slow=14,SNR=9.3						
MKAR				Sn	**Sn**	**10 32 39.7**	**-3.4**
	0.2nm,0.3s,baz=315,slow=20,SNR=3.7						
MKAR				Lg	Lg	10 33 16.4	
	0.5nm,0.3s,baz=325,slow=25,SNR=7.8						
	0.5nm,0.7s						
I46RU	**ZALESOVO INFRA**	**7.52**	**62**	I	I	11 14 40.0	
	baz=249,slow=310,SNR=1.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV	Zalesovo Beam	7.52	62	Pn	Pn	10 31 29.6	+1.5
	0.1nm,0.3s,baz=255,slow=14,SNR=3.6						
ZALV				Sn	Sn	10 32 51.2	-2.8
	0.1nm,0.3s,baz=254,slow=23,SNR=1.7						
ZALV				Lg	Lg	10 33 35.3	
	0.2nm,0.3s,baz=245,slow=24,SNR=3.9						
	0.6nm,0.5s						
AAK	Ala-Archa	8.30	175	Pn	Pn	10 31 39.1	+0.1
	0.2nm,0.3s,baz=0.0,slow=13,SNR=2.1						
AAK				Sn	Sn	10 33 12.2	-1.3
	0.2nm,0.3s,baz=233,slow=16,SNR=3.8						
AAK				Lg	Lg	10 33 57.4	
	0.3nm,0.3s,baz=41,slow=19,SNR=7.6						
	0.5nm,0.3s						
AKTO	Aktyubinsk	9.89	273	Pn	Pn	10 32 01.3	+0.8
	0.3nm,0.3s,baz=88,slow=11,SNR=4.1						
AKTO				Lg	Lg	10 34 52.2	
	0.1nm,0.3s,baz=82,slow=7.8,SNR=4.5						
	1.1nm,0.5s						
ARTI	Arti	10.54	307	Sn	Sn	10 34 07.1	-0.9
	0.1nm,0.3s,baz=142,slow=22,SNR=1.5						
ARTI				Lg	Lg	10 35 09.8	
	0.2nm,0.3s,baz=132,slow=22,SNR=1.6						
ILAR	Eielson Array	60.47	19	P	P	10 39 48.9	+0.7
	0.2nm,0.5s,baz=338,slow=5.4,SNR=6.6						
	0.2nm,0.5s						

*IDC **03** 10:29:54.7±0.7, 11°33N×85°58W, h0km, mb4.0/7, mbtmp4.0/8, ML2.7/2, MS3.2/7, Error ellipse: s-maj=43.5km s-min=10.4km az=59.0*

*UCR **03** 10:29:54.4±0.8, 10°42N×86°26W, h22km±4km, MW4.8, Presumed earthquake*

*NEIC **03** 10:29:55.6±1.6, 10°65N±0°09×86°01W±0°10, h10km±2km, mb4.5/39, Error ellipse: s-maj=21.9km s-min=6.0km az=226.0*

*CATAC **03** 10:29:55.4±0.6, 10°N±4°×8°6W±°, h27km±6km, M4.2/25, MLv4.2/25, Error ellipse: s-maj=8.8km s-min=4.1km az=21.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.54; $M_{\theta\theta}$-0.55; $M_{\phi\phi}$0.01; $M_{r\theta}$0.85; $M_{\theta\phi}$0.93; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.39058×10^{15} NP1: ϕ_s344.27552°, δ45.44544°, λ157.56559°. NP2: ϕ_s90.43006°, δ74.22028°, λ46.80793°. Principal axes: T 1.3555, Plg43.5027°, Azm318.5758°; N 0.0677, Plg41.1972°, Azm104.7516°; P -1.4232, Plg17.6864°, Azm210.9599°; confirmed*

ISC 03 10:29:55.0±1.0**, 10°53N**±0°04×**86°18W**±0°04**, h13**km±6km**, n154,** σ1^{s}18/152**, mb4.4**/27**, MS3.2**/5**, 32C-4D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DELF	Filadelfia	0.62	97	⇓eP	Pb	10 30 08.0	+0.3
DELF				eS	Sn	10 30 17.9	-1.3
ALIBA	Liberia Airpor	0.62	84	⇓iP	Pn	10 30 09.1	-0.5
ALIBA				eS	Sn	10 30 20.9	+1.5
ELI1	Hacienda Flor	0.63	79	P	Pn	10 30 09.4	-0.2
ELI1				S	Sn	10 30 21.7	+2.3
ELI1	Hacienda Flor	0.63	79	⇓iP	Pn	10 30 09.6	0.0
SACU	Santa Cruz	0.64	114	⇑iP	Pg	10 30 07.6	+0.1
SACU				eS	Sb	10 30 17.2	+0.3
JUD3	Juan Diaz 3	0.72	120		Pg	10 30 08.6	-0.4
JUD3	Juan Diaz 3	0.72	120	⇑iP	Pg	10 30 08.7	-0.4
JUD3				eS	Sg	10 30 18.8	+0.1
ERIA	Liberia	0.73	81	eP	Pn	10 30 10.4	-0.7
LCRUZ	La Cruz	0.77	44	⇑iP	Pn	10 30 11.7	+0.1
LAPC	Finca la Perla	0.77	72	⇑iP	Pn	10 30 10.9	-0.7
GPS3	Bodega del ICE	0.83	74	⇑iP	Pn	10 30 13.4	+1.0
PLVR	Palo Verde	0.83	102	⇑eP	Pg	10 30 10.9	-0.3
VRLE	La Escondida,	0.84	72	⇑iP	Pn	10 30 12.1	-0.6
GPS2	Hotel Rincn d	0.84	74	⇑iP	Pn	10 30 12.1	-0.5
ELVJ	El Viejo (Barb	0.84	95	⇑eP	Pg	10 30 09.5	-1.8
GPS1	Guardaparques	0.85	73	⇑iP	Pn	10 30 12.2	-0.5
VORI	VORI	0.87	70	⇑iP	Pn	10 30 12.6	-0.5
CMARA	Lajas Hojancha	0.90	124	eP	Pg	10 30 10.8	-1.6
BUAI	Buenos Aires	0.90	67	⇑iP	Pn	10 30 13.4	0.0
PEJA	Penjamo Buenos	0.93	67	⇑eP	Pn	10 30 14.0	+0.3
MESS	Mesas	0.99	77	⇑iP	Pn	10 30 14.2	-0.5
HORNC	Hornillas	1.00	79	⇑iP	Pn	10 30 14.3	-0.5
CUI	Cuipilapa	1.00	82	⇑iP	Pn	10 30 14.4	-0.4
CLARA	Aguas Claras	1.02	75	⇑eP	Pn	10 30 14.8	-0.2
CNAS	Canas	1.07	95	⇑iP	Pn	10 30 16.2	+0.5
VMAR	Armenia, Volca	1.08	75	⇑iP	Pn	10 30 16.0	0.0
MORN	Al O del Volca	1.14	27	P	Pn	10 30 17.4	+0.7
MORN				S	Sn	10 30 35.4	+3.1
TIMP	Tierras Morena	1.14	87	⇑iP	Pb	10 30 16.1	-0.5
TENO	El Achiote	1.19	81	eP	Pb	10 30 16.6	-1.0
UPAL	Upala	1.20	72	P	Pn	10 30 17.8	+0.3
UPAL				S	Sn	10 30 36.5	+2.8
UPAL	Upala	1.20	72	⇑iP	Pn	10 30 17.5	0.0
JUNT	Juntas	1.22	101	⇑iP	Pb	10 30 16.3	-1.7
NADN	Granada	1.22	7	P	Pn	10 30 18.6	+0.8
NADN	Granada	1.22	7	eP	Pn	10 30 17.7	-0.1
JTS	Las Juntas de	1.23	101	Pg	Pb	10 30 16.8	-1.3
	68nm,0.3s,baz=304,slow=18,SNR=112						
JTS				Lg	Lg	10 30 35.4	
	111nm,0.3s,baz=189,slow=17,SNR=5.8						
JTS	Las Juntas de	1.23	101	P	Pb	10 30 16.9	-1.2
JTS				S	Sn	10 30 35.5	+1.1
JTS	Las Juntas de	1.23	101	⇑iP	Pb	10 30 16.7	-1.3
CHIK	Chiripa	1.25	94	eP	Pg	10 30 18.9	-0.3
QUEB	Quebradon, Cot	1.26	85	⇑iP	Pb	10 30 18.2	-0.5
TABAC	Tabacon	1.39	91	eP	Pn	10 30 20.1	-0.1
NANN	Nandasmo	1.41	2	P	Pg	10 30 22.1	0.0
NANN				S	Sg	10 30 42.7	+2.3
PAQE	Paquera	1.41	120	eP	Pn	10 30 21.5	+1.1
ENAS	Puntarenas	1.43	112	eP	Pg	10 30 23.5	+1.0
ARE1	Arenal 1	1.44	92	⇑iP	Pn	10 30 21.0	+0.2
VARE2	V. Arenal	1.44	92	⇑iP	Pn	10 30 21.0	+0.2
CEDE	Laguna Cedeo	1.45	91	⇑eP	Pn	10 30 21.2	+0.2
MASN	Masaya	1.45	1	P	Pg	10 30 22.1	-0.8
MASN	Masaya	1.45	1	eP	Pn	10 30 20.0	-1.1
REZ	Monterrey de S	1.45	90	eP	Pn	10 30 21.2	+0.2
VACR	Volcan Arenal	1.48	92	⇑eP	Pn	10 30 21.5	+0.1
FORC	Fortuna	1.48	92	⇓eP	Pn	10 30 21.8	+0.3
ARZA	Esparza	1.58	110	eP	Pn	10 30 21.5	-1.2
UNAN	Cigeo UNAN	1.58	357	P	Pb	10 30 23.5	-0.6
UNAN				S	Sg	10 30 46.5	+0.5
TISN	Laguna Tiscapa	1.61	357	P	Pb	10 30 23.9	-0.7
MGAN	Managua	1.61	358		Pn	10 30 23.3	+0.1
MGAN	Managua	1.61	358	P	Pb	10 30 24.0	-0.7
MGAN	Managua	1.61	358	⇑iP	Pn	10 30 23.6	+0.4
SAPS	Ciudad Sandino	1.65	352	P	Pn	10 30 24.4	+0.7
APQ2	Apoyeque	1.67	355	P	Pn	10 30 24.2	+0.3
COPN	Copaltepe	1.69	346	P	Pn	10 30 24.2	-0.1
COPN	Copaltepe	1.69	346	eP	Pn	10 30 23.9	-0.4
QUEU	Ciudad Quesada	1.73	97	⇑iP	Pn	10 30 24.9	+0.1
SRA1	San Ramn	1.73	105	eP	Pn	10 30 24.8	-0.1
RAMO	San Ramon	1.74	104	eP	Pb	10 30 26.7	-0.2
PALD	Palmares	1.78	105	eP	Pn	10 30 25.0	-0.6
ZARE	Zarcero	1.79	101	eP	Pn	10 30 26.4	+0.6
ATEO	Atenas	1.85	107	eP	Pn	10 30 24.9	-1.6
ITAL	Pital	1.88	92	eP	Pn	10 30 26.4	-0.4
GREC	Grecia	1.89	104	eP	Pb	10 30 29.8	+0.3
MOMN	Momotombo	1.91	349	P	Pn	10 30 27.8	+0.5
LEVN	Ruinas Leon Vi	1.91	347	P	Pn	10 30 28.1	+0.8
MOM2	El Cardon	1.92	351	P	Pn	10 30 27.6	+0.2
VPS8	V Poas	1.94	100	eP	Pg	10 30 31.1	-1.1
ARTO	Ro Cuarto	1.94	95	⇑iP	Pn	10 30 27.6	-0.1
VPS5	V. Poas	1.94	100	eP	Pn	10 30 28.5	+0.5
CNGN	Cerro Negro	2.03	345		Pn	10 30 29.0	+0.1
CNGN	Cerro Negro	2.03	345	P	Pb	10 30 30.8	-1.0
CNGN	Cerro Negro	2.03	345	eP	Pn	10 30 29.0	+0.1
BELE	Belen	2.03	105	eP	Pb	10 30 31.9	+0.1
SANTA	Santa Ana	2.05	107	⇑eP	Pb	10 30 32.4	+0.2
HEME	Heredia, Merce	2.08	105	eP	Pn	10 30 30.5	+0.8
HDC	Heredia	2.10	104		Pn	10 30 29.2	-0.8
HDC	Heredia	2.10	104	eP	Pn	10 30 29.9	0.0
ACOS	Acosta	2.11	110	eP	Pb	10 30 33.2	0.0
DOMI	Santo Domingo	2.12	105	eP	Pn	10 30 30.8	+0.5
MEXI	Barrio Mexico	2.14	106	eP	Pb	10 30 34.1	+0.4
PICV	PH. Pirrs	2.15	114	eP	Pn	10 30 30.0	-0.6
CENT	San Jose	2.15	106	eP	Pb	10 30 33.1	-0.8
LUJA	Lujan	2.16	106	eP	Pn	10 30 31.6	+0.8
HERN	Volcan Telica	2.17	343	Pn	Pn	10 30 31.1	+0.2
HERN	Volcan Telica	2.17	343	P	Pn	10 30 31.2	+0.3
ECI	Escuela Centro	2.17	105	eP	Pn	10 30 31.0	0.0
SJS3	Mercedes San J	2.17	105	eP	Pn	10 30 31.1	+0.1
POLN	Al Sur del Vol	2.20	344	P	Pn	10 30 32.0	+0.7
CRIN	San Cristobal	2.32	339		Pn	10 30 33.4	+0.4
CRIN	San Cristobal	2.32	339	P	Pn	10 30 34.2	+1.2
CRIN				S	Sn	10 31 02.7	+1.2
MATN	Matagalpa	2.40	6	P	Pn	10 30 34.1	0.0
MATN				S	Sb	10 31 04.3	-3.4
LIMN	Finca el Limon	2.53	356	P	Pn	10 30 36.4	+0.5
LIMN				S	Sn	10 31 07.8	+1.2
CSGN	Cosiguina Volc	2.79	331	P	Pn	10 30 39.9	+0.5
CSGN				S	Sn	10 31 12.4	-0.5
PIRO	Carate, Puerto	3.51	127		Pn	10 30 49.4	+0.1
TGUH	Tegucigalpa,Un	3.67	343		Pn	10 30 52.0	+0.4
APG	El Apazote	6.11	317	Pn	Pn	10 31 24.2	-1.0
	baz=146,slow=11,SNR=2.0						
CMIG	Matias Romero	10.68	309	Pn	Pn	10 32 29.3	+1.5
	0.5nm,0.3s,baz=144,slow=8.5,SNR=7.5						
	1.3nm,0.3s						
TLIG	Tlapa	13.90	302		Pn	10 33 15.9	+3.9
SDV	Santo Domingo	15.41	95	LR	LR	10 41 23.3	
	comp=Z,56nm,19.4s,baz=274,slow=46						
ATAH	Atahualpa	19.18	156	LR	LR	10 40 41.7	
	comp=Z,86nm,19.8s,baz=332,slow=33						
833A	Chaparral WMA,	21.62	327	P	P	10 34 46.0	+1.1
833A				IAmb	IAmb	10 34 48.1	
	comp=Z,9.1nm,0.6s						
152A	Waverly Hall	22.08	3	P	P	10 34 50.0	+0.1
152A				IAmb	IAmb	10 34 52.2	
	comp=Z,19nm,0.9s						
LRAL	Lakeview Retre	22.41	358		P	10 34 53.5	+0.1
LRAL				IAmb	IAmb	10 34 55.8	
	comp=Z,10nm,0.8s						
HNDO	Hondo	22.52	329	P	P	10 34 54.5	-0.2
DRIO	Del Rio	23.14	326	P	P	10 35 01.7	+0.5
Y49A	Blount Mountai	23.22	360		P	10 35 01.4	-0.5
Y49A				IAmb	IAmb	10 35 03.2	
	comp=Z,13nm,0.7s						
Y52A	Lilburn	23.31	4	IAmb	IAmb	10 35 03.7	
	comp=Z,9.9nm,0.8s						
Z41A	Richland Creek	23.43	346	IAmb	IAmb	10 35 04.4	
	comp=Z,11nm,0.7s						
BRDY	Brady	23.84	332		P	10 35 06.9	-1.1
BRDY				IAmb	IAmb	10 35 08.0	
	comp=Z,8.4nm,0.8s						
HODGE	Hodges	23.87	8	P	P	10 35 06.9	-1.3
HODGE				IAmb	IAmb	10 35 08.4	
	comp=Z,14nm,0.9s						
FPAL	Fort Paine	23.91	1	P	P	10 35 07.8	-0.9
X51A	Calhoun	23.96	3	IAmb	IAmb	10 35 08.8	
	comp=Z,13nm,0.7s						
OXF	Oxford	24.06	353		P	10 35 08.3	-1.7
OXF				IAmb	IAmb	10 35 10.0	
	comp=Z,19nm,0.9s						
W52A	Murphy	24.54	4	P	P	10 35 13.7	-0.8
W52A				IAmb	IAmb	10 35 14.6	
	comp=Z,9.5nm,0.7s						
SWET	Sewanee	24.58	0	IAmb	IAmb	10 35 14.6	
	comp=Z,9.1nm,0.6s						
TXAR	Lajitas Array	24.85	321	P	P	10 35 17.7	+0.3
	comp=Z,2.5nm,0.6s,baz=141,slow=9.1,SNR=30						
TXAR				PcP	PcP	10 38 55.1	+1.6
	comp=Z,0.7nm,0.7s,baz=138,slow=5.1,SNR=6.7						
	comp=Z,2.5nm,0.6s						
MIAR	Mount Ida	24.85	345	IAmb	IAmb	10 35 17.0	
	comp=Z,12nm,0.8s						
TX31	Lajitas Ar. Si	24.85	321		P	10 35 17.7	+0.3
TX31				IAmb	IAmb	10 35 19.4	
	comp=Z,9.6nm,1.2s						
TKL	Tuckaleechee C	25.11	5	LR	LR	10 44 51.9	
	comp=Z,52nm,21.2s,baz=293,slow=37						
WHAR	Wooly Hollow	25.27	348	IAmb	IAmb	10 35 50.9	
	comp=Z,20nm,1.4s						
TMB01	Midkiff	25.68	327	IAmb	IAmb	10 35 25.1	
	comp=Z,3.2nm,0.7s						
MNHN	Monahans	25.79	326	IAmb	IAmb	10 35 27.1	
	comp=Z,7.3nm,0.9s						
FCAR	Ozark Folk Cen	25.82	349	P	P	10 35 24.6	-1.4
APMT	Aspermont	26.06	333	IAmb	IAmb	10 35 30.3	
	comp=Z,6.0nm,0.8s						
WMOK	Wichita Mounta	26.71	336	IAmb	IAmb	10 35 36.5	
	comp=Z,8.0nm,0.8s						
T42A	Van Buren	26.76	351	IAmb	IAmb	10 35 33.2	
	comp=Z,5.4nm,0.8s						
WCI	Wyandotte Cave	27.59	360	P	P	10 35 40.6	-1.3
MSTX	Muleshoe	27.85	329		P	10 35 43.9	-0.6
MSTX				IAmb	IAmb	10 35 44.5	
	comp=Z,7.9nm,0.9s						
Q51A	Peebles	28.49	5	P	P	10 35 48.3	-1.7
ANMO	Albuquerque	30.54	326	P	P	10 36 09.4	+0.9
LPAZ	La Paz	32.07	146	LR	LR	10 50 02.3	
	comp=Z,47nm,20.1s,baz=197,slow=37						
SADO	Sadowa	34.66	9	LR	LR	10 50 49.8	
	comp=Z,96nm,18.9s,baz=40,slow=37						
PDAR	Pinedale Array	38.05	332	P	P	10 37 12.6	-0.9
	comp=Z,0.7nm,0.6s,baz=132,slow=10,SNR=8.8						
PDAR				PcP	PcP	10 39 28.9	+0.2
	comp=Z,0.2nm,0.5s,baz=129,slow=4.0,SNR=2.2						
	comp=Z,0.7nm,0.6s						
NVAR	Mina Array Bea	39.97	319	P	P	10 37 30.9	+1.3
	comp=Z,3.2nm,0.7s,baz=131,slow=7.4,SNR=22						
NVAR				PcP	PcP	10 39 35.5	+0.6
	comp=Z,1.1nm,0.7s,baz=137,slow=4.0,SNR=7.2						
	comp=Z,3.2nm,0.7s						
ULM	Lac du Bonnet	40.41	350	P	P	10 37 28.5	-4.3
	comp=Z,2.5nm,0.7s,baz=160,slow=10,SNR=4.5						
ULM				LR	LR	10 53 52.7	
	comp=Z,35nm,18.6s,baz=10.0,slow=36						
	comp=Z,2.5nm,0.7s						
ULM	Lac du Bonnet	40.41	350	IAmb	IAmb	10 37 30.0	
	comp=Z,7.3nm,1.1s						
HLID	Hailey	41.02	328		P	10 37 38.4	+0.2
YBH	Yreka Blue Hor	44.62	321	LR	LR	11 00 24.9	
	comp=Z,5.4nm,18.7s,baz=146,slow=41						
SCHQ	Schefferville	46.77	15	P	P	10 38 19.6	-4.4
	comp=Z,3.8nm,0.7s,baz=199,slow=5.5,SNR=6.1						
	comp=Z,3.8nm,0.7s						
YKA	Yellowknife Ar	55.79	344	P	P	10 39 28.8	-2.7
	comp=Z,0.5nm,0.9s,baz=143,slow=6.5,SNR=8.7						
YKA				PcP	PcP	10 40 28.7	-1.8
	comp=Z,0.2nm,0.4s,baz=156,slow=3.8,SNR=4.5						
	comp=Z,0.5nm,0.9s						
ILAR	Eielson Array	68.27	336	P	P	10 40 53.1	-2.3
	comp=Z,0.8nm,0.9s,baz=127,slow=4.4,SNR=9.5						
	comp=Z,0.8nm,0.9s						
WMQ	Urumqi	125.63	5	PKP	PKiKP	10 49 01.5	+4.5
WMQ				PP	PP	10 50 51.2	+4.4
HHC	Hu-ho-hao-te	126.32	343	eP	PKPdf	10 48 53.9	-4.2
NJ2	Nanjing	131.36	331	eP	PKPdf	10 49 07.4	-0.4
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ASAR	Alice Springs	139.67	246	PKhKP	PKPpre	10 49 19.9	
	comp=Z,0.3nm,0.8s,baz=114,slow=2.3,SNR=4.8						
WRA	Warramunga Arr	139.89	252	PKhKP	PKPpre	10 49 21.9	
	comp=Z,0.4nm,0.8s,baz=95,slow=2.2,SNR=5.3						
PZH	PanZhiHua	142.40	348	PKP	PKPdf	10 49 27.6	-0.9
CMAR	Chiang Mai Arr	150.76	350	PKP	PKPdf	10 49 42.1	-0.4
	comp=Z,1.8nm,0.3s,baz=1.0,slow=2.5,SNR=4.8						
CMAR				PKPbc	pPKPdf	10 49 46.7	-0.3
	comp=Z,1.2nm,0.3s,baz=22,slow=2.3,SNR=2.7						

IDC 03 10:30:39.4±2.3**, 2°25S**×**134°25E, h0**km**, mb3.3**/2**, mbtmp3.6**/5**, ML3.4**/3**, Error ellipse: s-maj=53.6km s-min=23.8km az=64.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SIJI	Sorong	3.28	295	Pn	Pn	10 31 33.0	+0.9
	7.0nm,0.3s,baz=52,slow=19,SNR=22						
SIJI				Sn	Sn	10 32 12.2	+0.2
	1.8nm,0.3s,baz=236,slow=22,SNR=1.4						
	19nm,0.3s						
WRA	Warramunga Arr	17.58	180	P	Pn	10 34 46.6	+0.5
	0.1nm,0.3s,baz=359,slow=12,SNR=5.1						
	0.6nm,0.8s						
FITZ	Fitzroy Crossi	17.87	208	P	Pn	10 34 48.6	-1.0
	0.1nm,0.3s,baz=31,slow=12,SNR=2.5						
	5.3nm,1.0s						
ASAR	Alice Springs	21.29	181	P	P	10 35 27.9	+0.1
	1.0nm,0.8s,baz=9.3,slow=10,SNR=8.6						
	1.0nm,0.8s						
MKAR	Makanchi Array	66.75	324	P	P	10 41 32.5	-0.2
	0.3nm,0.7s,baz=116,slow=7.2,SNR=4.0						
	0.3nm,0.7s						

*JMA **03** 10:42:54.3±0.2, 25°N±3°×122°5E±0°5, h131km±2km, MV2.2/10, NW OFF ISHIGAKIJIMA IS*

*TAP **03** 10:42:54.3, 24°92N×122°55E, h126km, ML3.4, D*

ISC 03 10:42:54.3±1.6**, 24°91N**±0°05×**122°54E**±0°03**, h130**km±9km**, n89,** σ0^{s}78/159**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TWB1	Santiao Chiao	0.51	282	P	Pn	10 43 13.6	+0.2
TWB1				S	Sn	10 43 27.6	-0.2
EOS2	EOS2	0.56	210	eP	Pn	10 43 14.1	+0.6
EOS2				eS	Sn	10 43 29.1	+1.0
JYNG	Yonagunijimaku	0.58	141	P	Pn	10 43 13.8	0.0
YOJ	Yonaguni jima	0.61	136	P	Pn	10 43 13.9	-0.1
YOJ	Yonaguni jima	0.61	136	S	Sn	10 43 30.6	+1.7
YOJ	Yonaguni jima	0.61	136	P	Pn	10 43 14.0	-0.1
YOJ	Yonaguni jima	0.61	136	iP	Pn	10 43 13.9	-0.1
YOJ				S	Sn	10 43 30.2	+1.3
SXI1	Grass Mountain	0.63	287	P	Pn	10 43 14.4	+0.1
SXI1				S	Sn	10 43 29.7	+0.4
EOS3	EOS3	0.65	198	eP	Pn	10 43 14.7	+0.6
EOS3				eS	Sn	10 43 30.5	+1.4
TIPB	Shuangxi	0.65	276	P	Pn	10 43 14.5	+0.2
TIPB				S	Sn	10 43 29.4	-0.1
TWC	Suao	0.70	245	P	Pn	10 43 14.3	-0.3
TWC				eS	Sn	10 43 28.9	-1.0
NDS	Dongshan	0.80	250	P	Pn	10 43 15.3	-0.1
NDS				eS	Sn	10 43 30.4	-0.9
EOS4	EOS4	0.81	195	eP	Pn	10 43 15.3	+0.2
EOS4				eS	Sn	10 43 30.7	-0.1
TWE	Neicheng	0.82	257	P	Pn	10 43 15.8	+0.2
TWE				S	Sn	10 43 31.0	-0.6
EWUT	Wuta	0.83	237	eS	Sn	10 43 31.4	-0.5
TWA	Mucha	0.87	275	eP	Pn	10 43 14.6	-1.5
TWA				eS	Sn	10 43 32.3	-0.2
FUSB	Fushanzhiwuyua	0.88	261	iP	Pn	10 43 16.2	0.0
YM08	YM08	0.91	288	eP	Pn	10 43 17.2	+0.8
YM08				eS	Sn	10 43 33.3	+0.2
YM01	YM01	0.92	285	eP	Pn	10 43 16.0	-0.5
YM01				eS	Sn	10 43 32.8	-0.4
ENTT	Nioudou	0.93	254	eP	Pn	10 43 17.0	+0.4
ENTT				eS	Sn	10 43 32.9	-0.4
EAHA	Aohua	0.93	232	eP	Pn	10 43 16.6	+0.1
EAHA				eS	Sn	10 43 33.2	-0.2
ZUZH	Zhuzihu	0.94	286	eP	Pn	10 43 16.9	+0.3
ZUZH				eS	Sn	10 43 33.0	-0.7
NWLT	Wulai	0.95	263	P	Pn	10 43 16.6	-0.2
NWLT				iS	Sn	10 43 32.4	-1.4
TATO	Taipei	0.96	274	P	Pn	10 43 17.0	+0.2
LATG	Datong	0.99	248	iP	Pn	10 43 17.8	+0.5
LATG				S	Sn	10 43 34.8	+0.2
YHNB	Yeheng	1.09	258	P	Pn	10 43 18.3	+0.2
YHNB	Yeheng	1.09	258	iP	Pn	10 43 18.5	+0.4
YHNB				S	Sn	10 43 36.0	-0.2
NSK	Sanguang	1.10	258	iP	Pn	10 43 18.5	+0.3
NSK				S	Sn	10 43 35.6	-0.7
ETL	Fush Village	1.12	229	P	Pn	10 43 18.5	+0.1
ETL				eS	Sn	10 43 36.1	-0.6
NACB	Ninganchiao	1.13	230	P	Pn	10 43 18.1	-0.3
NACB				S	Sn	10 43 35.8	-0.9
NNSB	Datong	1.16	246	P	Pn	10 43 19.2	+0.4
NNSB				S	Sn	10 43 37.2	-0.3
NNS	Nan Shan	1.16	247	P	Pn	10 43 19.2	+0.3
NNS				S	Sn	10 43 37.3	-0.2
ETLH	Xiulin Townshi	1.19	234	eP	Pn	10 43 19.4	+0.2
ETLH				eS	Sn	10 43 37.0	-1.0
TWD	Chiawan	1.19	227	eP	Pn	10 43 19.0	0.0
TWD				eS	Sn	10 43 37.1	-0.7
IRIF	Iriomote-Funau	1.22	117	P	Pn	10 43 19.3	0.0
KSHI	Guanxi Townshi	1.25	264	P	Pn	10 43 20.2	+0.6
KSHI				S	Sn	10 43 39.6	+0.7
HWA	Hwalien	1.26	223	eP	Pn	10 43 20.4	+0.6
HWA				eS	Sn	10 43 39.7	+0.6
NFF	Wufeng Townshi	1.32	258	iP	Pn	10 43 20.5	-0.1
NFF				iS	Sn	10 43 39.9	-0.5
ETM	Tongmen	1.34	226	P	Pn	10 43 20.1	-0.5
ETM				eS	Sn	10 43 38.9	-1.7
TEYL	Yanliau Villag	1.34	220	eP	Pn	10 43 20.4	-0.2
TEYL				eS	Sn	10 43 40.2	-0.5
FUSS	Fushou	1.35	241	eP	Pn	10 43 21.7	+0.7
FUSS				S	Sn	10 43 40.6	-0.7
WHF	Hehuan Shan	1.39	237	eP	Pn	10 43 22.3	+0.7
WHF				S	Sn	10 43 41.7	-0.6
TWT	Tachien	1.40	243	eP	Pn	10 43 22.8	+1.2
TWT				eS	Sn	10 43 42.3	+0.2
LIOB	Emei	1.41	260	P	Pn	10 43 21.8	+0.3
LIOB				iS	Sn	10 43 42.0	-0.1
TDCB	Techi	1.42	243	P	Pn	10 43 22.4	+0.8
TDCB				S	Sn	10 43 42.1	-0.3
SHUL	Shoufeng	1.43	219	P	Pn	10 43 22.1	+0.5
SHUL				eS	Sn	10 43 42.1	-0.2
NSTT	Nanjuang	1.43	259	iP	Pn	10 43 21.9	+0.4
NSTT				S	Sn	10 43 42.0	-0.4
HSN	Hsinchu	1.43	266	eP	Pn	10 43 21.6	0.0
HSN				eS	Sn	10 43 41.8	-0.6
ESL	Shilin	1.48	223	eP	Pn	10 43 21.3	-0.9
ESL				eS	Sn	10 43 41.5	-2.0
JKRS	Kuro-shima	1.49	116	P	Pn	10 43 22.8	+0.5
JKRS				S	Sn	10 43 43.7	+0.2
TEGC	Jichi Village	1.50	218	eP	Pn	10 43 23.2	+0.8
TEGC				eS	Sn	10 43 43.6	-0.2
JIJ	Ishigaki jima	1.55	110	P	Pn	10 43 23.0	0.0
JIJ				S	Sn	10 43 43.7	-1.1
OWD	Renai	1.56	233	P	Pn	10 43 23.5	+0.2
OWD				eS	Sn	10 43 44.4	-0.9
WHP	Taichung City	1.58	247	iP	Pn	10 43 24.4	+1.0
WHP				iS	Sn	10 43 45.6	0.0
WARBT	Fenglin Townsh	1.58	222	eP	Pn	10 43 22.6	-0.8
WARBT				S	Sn	10 43 43.4	-2.2
WUSB	Renai	1.58	235	P	Pn	10 43 24.1	+0.6
WUSB				S	Sn	10 43 45.3	-0.4
EGFH	Guangfu	1.60	220	eP	Pn	10 43 23.4	-0.2
EGFH				eS	Sn	10 43 43.9	-1.9
JISG	Ishigakijimahi	1.64	101	P	Pn	10 43 24.1	+0.1
JISG				S	Sn	10 43 45.6	-0.9
NSY	Sanyi	1.69	254	eP	Pn	10 43 25.1	+0.4
TWQ1	Liyutan	1.70	251	eP	Pn	10 43 24.9	+0.1
WCS	Beigang Elemen	1.71	241	P	Pn	10 43 25.6	+0.8
WCS				eS	Sn	10 43 48.5	+0.5
VWDT	VWDT	1.72	228	eP	Pn	10 43 25.6	+0.7
VWDT				S	Sn	10 43 47.5	-0.7
HGSD	Ruisui	1.74	216	eP	Pn	10 43 25.5	+0.3
HGSD				eS	Sn	10 43 47.9	-0.8
EHY	Hungye	1.78	219	eP	Pn	10 43 25.6	-0.1
EHY				eS	Sn	10 43 47.4	-2.3
SMLT	Sun Moon Lake	1.81	236	eP	Pn	10 43 27.0	+0.9
SMLT				eS	Sn	10 43 51.7	+1.3
SSLB	Suanglung	1.83	233	P	Pn	10 43 27.3	+1.1
SSLB	Suanglung	1.83	233	eP	Pn	10 43 27.2	+0.9
SSLB				eS	Sn	10 43 51.5	+0.8
TYC	Yuchr	1.83	237	eP	Pn	10 43 27.3	+1.0
TYC				eS	Sn	10 43 51.6	+1.0
YULB	Yu-li	1.89	217	P	Pn	10 43 28.4	+1.4
YULB	Yu-li	1.89	217	eP	Pn	10 43 26.2	-0.8
YULB				eS	Sn	10 43 49.6	-2.2
WHYT	Xinyi Township	1.96	232	P	Pn	10 43 28.8	+1.0
WHYT				S	Sn	10 43 54.7	+1.3
CHKH	Chenggong	2.00	212	eP	Pn	10 43 28.8	+0.5
FULB	Fuli	2.05	214	eP	Pn	10 43 30.2	+1.3
FULB				eS	Sn	10 43 55.4	0.0
CHKT	Chengkung	2.10	211	eP	Pn	10 43 29.2	-0.2
CHKT				eS	Sn	10 43 54.6	-1.8
ALS	Alishan	2.11	229	eP	Pn	10 43 30.9	+1.0
ALS				eS	Sn	10 43 58.8	+1.7
CHN5	Tsauling	2.14	233	P	Pn	10 43 30.6	+0.4
CHN5				eS	Sn	10 43 58.2	+0.7
ELDTW	Lidau	2.21	220	eP	Pn	10 43 30.7	-0.3
ELDTW				eS	Sn	10 43 58.1	-0.9
WCKO	Fanlu	2.29	231	eP	Pn	10 43 32.0	+0.1
WCKO				eS	Sn	10 44 00.6	-0.3
CHN4	Tsaushan	2.36	229	P	Pn	10 43 33.4	+0.6
CHN4				eS	Sn	10 44 02.8	+0.6
STYH	Taoyuan	2.37	223	eP	Pn	10 43 33.9	+1.1
STYH				eS	Sn	10 44 03.2	+0.9
TPUB	Ta-pu	2.37	228	P	Pn	10 43 33.5	+0.6
TPUB	Ta-pu	2.37	228	P	Pn	10 43 33.4	+0.6
TPUB				S	Sn	10 44 02.8	+0.3
WTP	Ta-pu	2.42	227	eP	Pn	10 43 33.8	+0.3
JIKM	Ikemajima	2.46	89	S	Sn	10 44 04.3	-0.1
TWK	Hsinying	2.49	229	eP	Pn	10 43 35.4	+1.0
TWK				eS	Sn	10 44 05.5	+0.3
SNST	Tainan City	2.51	229	eP	Pn	10 43 34.9	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNST				eS	Sn	10 44 04.6	-1.1
CHN1	Nanshi	2.52	228	eP	Pn	10 43 34.9	+0.1
CHN1				eS	Sn	10 44 05.5	-0.3
SGST	Jiashian	2.55	225	eP	Pn	10 43 35.2	0.0
VWUC	VWUC	2.81	272	eP	Pn	10 43 38.0	-0.4

MEX 03 11:11:44.5±0.4, 19.°42N×102.°33W, h20km±107km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INCO	Volcan de Coli	1.21	275	eP	Pn	11 12 03.6	-3.0
INCO				eS	Sb	11 12 18.3	-4.0
CEGR	Campo Tres	1.44	269	eP	Pn	11 12 07.7	-2.0
CEGR				eS	Sn	11 12 27.1	-1.0
MMIG	Aquila	1.48	221	eP	Pn	11 12 07.1	-3.0
MMIG				eS	Sn	11 12 25.6	-3.3
CDAR	Ciudad de Arme	1.66	253	eP	Pn	11 12 10.3	-2.2
CDAR				eS	Sn	11 12 32.7	-0.6

MEX 03 11:12:01.2±0.6, 16.°25N×98.°13W, h11km±2km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.14	360	eP	Pg	11 12 03.8	-0.7
PNIG				eS	Sg	11 12 06.4	-0.4
YOIG	Yosondua	0.82	43	eP	Pg	11 12 14.7	-2.4
YOIG				eS	Sg	11 12 25.1	-2.7
PEIG	Puerto Escondi	0.97	105	eP	Pg	11 12 16.8	-3.3
PEIG				eS	Sg	11 12 29.6	-3.1
TXIG	Tlaxiaco	1.05	19	eP	Pg	11 12 18.5	-3.0
TXIG				eS	Sg	11 12 31.1	-4.1
CRIG	Cruz Grande	1.08	297	eP	Pb	11 12 18.2	-3.7
CRIG				eS	Sg	11 12 31.4	-4.5
MGIG	Malinaltepec	1.09	334	eP	Pg	11 12 19.0	-3.2
MGIG				eS	Sg	11 12 32.7	-3.7
TLIG	Tlapa	1.37	342	eP	Pn	11 12 23.4	-3.0
TLIG				eS	Sb	11 12 38.1	-6.4
VHO	Vista Hermosa	1.56	58	eP	Pn	11 12 26.1	-3.1
VHO				eS	Sn	11 12 45.6	-3.9
HLIG	Huajuapan de L	1.60	11	eP	Pn	11 12 26.9	-2.8
HLIG				eS	Sn	11 12 46.5	-3.9
FTIG	Fresnillo de T	1.65	360	eP	Pn	11 12 27.7	-2.5
FTIG				eS	Sn	11 12 48.0	-3.5
DAIG	Los Arroyos	1.65	298	eP	Pn	11 12 26.5	-3.6
DAIG				eS	Sn	11 12 45.4	-5.9
HUIG	Huatulco	2.00	104	eP	Pn	11 12 30.6	-4.4
HUIG				eS	Sn	11 12 52.5	-7.5
TOIG	Toxpalan	2.09	29	eP	Pn	11 12 33.7	-2.7
TOIG				eS	Sn	11 12 59.4	-3.1
MEIG	Mezcala	2.19	320	eP	Pn	11 12 37.2	-0.5
MEIG				eS	Sn	11 13 01.4	-3.5
CAIG	El Cayaco	2.20	291	eP	Pn	11 12 35.4	-2.3
CAIG				eS	Sn	11 12 58.2	-6.7
CAIG	El Cayaco	2.20	291	eP	Pn	11 12 35.5	-2.2
CAIG				eS	Sn	11 12 58.2	-6.8
TPIG	Tehuac#an	2.27	19	eP	Pn	11 12 35.7	-3.2
TPIG				eS	Sn	11 13 01.6	-5.4
PLIG	Platanillo	2.50	328	eP	Pn	11 12 43.5	+1.6
PLIG				eS	Sn	11 13 12.2	-0.3
NEUV	Arroyo Zacate	2.66	57	eP	Pn	11 12 41.3	-2.7
NEUV				eS	Sn	11 13 14.3	-1.9
YAIG	Yautepec	2.74	341	eP	Pn	11 12 46.6	+1.2
YAIG				eS	Sn	11 13 13.1	-5.6
PPM	Popocatepetl	2.84	350	eP	Pn	11 12 47.9	+1.0
PPM				eS	Sn	11 13 20.5	-0.9
ARIG	Puente Sto Nin	2.93	314	eP	Pn	11 12 45.1	-2.7
ARIG				eS	Sn	11 13 18.6	-4.4
CMIG	Matias Romero	3.22	75	eP	Pn	11 12 48.2	-3.5
CMIG				eS	Sn	11 13 24.4	-5.7
LVIG	Laguna Verde	3.81	25	eP	Pn	11 13 00.5	+0.6
LVIG				eS	Sn	11 13 40.6	-4.3
UXUV	UXUV	3.96	74	eP	Pn	11 12 58.9	-3.0
UXUV				eS	Sn	11 13 47.0	-1.4
MOIG	Morelia	4.48	320	eP	Pn	11 13 09.4	+0.1

*NEIC **03** 11:12:53.6±0.6, 17.°95N±0.°06×66.°87W±0.°02, h19km±2km, ML3.3/35, Md3.2/7(RSPR), Error ellipse: s-maj=9.4km s-min=2.0km az=174.0*
*RSPR **03** 11:12:54.4, 17.°97N×66.°86W, h14km, MD3.2/7*
*OSPL **03** 11:12:54.4±0.3, 17.°95N×66.°87W, h17km±3km, ML2.7, Presumed earthquake*
*SDD **03** 11:12:54.2±0.6, 17.°95N×66.°86W, h20km±5km, MD3.5, ML2.9, MW3.1, Presumed earthquake*
ISC 03 11:12:52.9±1.0, 17.°99N±0.°06×66.°86W±0.°02, h25km±5km, n44, σ0.°65/66, 11C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.02	232		Pb	11 12 57.0	-0.1
GBPR					Sb	11 12 58.8	-1.1
GBPR	Guanica, Bosqu	0.02	232	⇑iP	Pb	11 12 57.0	-0.1
GBPR				eS	Sb	11 12 58.8	-1.1
MLPR	Magueyes Islan	0.17	264		Pb	11 12 58.5	+0.2
MLPR				IAML		11 13 01.8	
	5µm,0.3s						
MLPR				IAML		11 13 02.0	
	9µm,0.3s						
CRPR	Cabo Rojo, PR	0.23	275		Pb	11 12 59.4	+0.4
CRPR					Sb	11 13 03.0	-0.1
CRPR	Cabo Rojo, PR	0.23	275	IAML		11 13 03.4	
	6µm,0.2s						
CRPR				IAML		11 13 03.5	
	12µm,0.2s						
CRPR	Cabo Rojo, PR	0.23	275	⇑ePg	Pb	11 12 59.4	+0.4
CRPR				eSg	Sb	11 13 03.0	-0.1
CRPR				IAML		11 13 03.4	
	comp=N,9µm,0.2s						
CRPR	Cabo Rojo, PR	0.23	275	⇑iP	Pb	11 12 59.4	+0.4
CRPR				eS	Sb	11 13 03.0	-0.1
CRPR	Cabo Rojo, PR	0.23	275	i P	Pb	11 12 59.4	+0.4
CRPR				eS	Sb	11 13 03.1	-0.1
CRPR				IAML		11 13 03.3	
	comp=Z,5µm,0.1s						
OBIP	Obispado Ponce	0.25	77		Pb	11 12 59.7	+0.5
OBIP					Sb	11 13 03.8	+0.2
OBIP	Obispado Ponce	0.25	77	IAML		11 13 04.0	
	comp=N,498nm,0.4s						
OBIP	Obispado Ponce	0.25	77	⇑eP	Pb	11 12 59.7	+0.5
OBIP				eS	Sb	11 13 03.8	+0.2
OBIP	Obispado Ponce	0.25	77	i P	Pb	11 12 59.7	+0.5
OBIP				eS	Sb	11 13 03.8	+0.2
OBIP				IAML		11 13 03.9	
	comp=Z,726nm,0.3s						
LSP	Las Mesas	0.28	312		Pb	11 13 00.4	+0.7
LSP					Sb	11 13 05.0	+0.6
LSP	Las Mesas	0.28	312	⇓iP	Pb	11 13 00.4	+0.7
LSP				eS	Sb	11 13 05.0	+0.6
CELP	Cerrillos	0.28	72		Pb	11 13 00.4	+0.7
CELP				IAML		11 13 05.1	
	comp=Z,3µm,0.3s						
CELP				IAML		11 13 05.2	
	comp=Z,2µm,0.2s						
UUPR	Utuado, UPR, P	0.30	27		Pb	11 13 00.5	+0.6
PRSN	Puerto Rico Se	0.35	311		Pb	11 13 01.4	+0.7
PRSN					Sb	11 13 06.4	+0.4
PRSN	Puerto Rico Se	0.35	311	IAML		11 13 07.6	
	comp=Z,6µm,0.2s						
PRSN				IAML		11 13 09.4	
	comp=Z,7µm,0.3s						
PRSN	Puerto Rico Se	0.35	311	⇑ePg	Pb	11 13 01.3	+0.7
PRSN				⇑eSg	Sb	11 13 07.3	+1.2
PRSN				IAML		11 13 09.3	
	comp=N,4µm,0.2s						
PRSN	Puerto Rico Se	0.35	311	⇑iP	Pb	11 13 01.4	+0.7
PRSN				eS	Sb	11 13 06.4	+0.4
AGPR	Aguadilla, PR	0.53	334		Pn	11 13 04.5	-0.4
AGPR	Aguadilla, PR	0.53	334	⇑ePg	Pn	11 13 04.6	-0.4
AGPR				⇑eSg	Sn	11 13 12.3	-0.9
AGPR				IAML		11 13 14.4	
	comp=N,726nm,0.2s						
AGPR	Aguadilla, PR	0.53	334	⇑iP	Pn	11 13 04.5	-0.4
AGPR				eS	Sn	11 13 12.1	-1.1
AGPR	Aguadilla, PR	0.53	334	i P	Pn	11 13 04.6	-0.4
AGPR				eS	Sn	11 13 12.2	-1.1
AGPR				IAML		11 13 12.7	
	comp=Z,379nm,0.1s						
ECPR	Experimental S	0.58	55	Pg	Pn	11 13 05.1	-0.6
ECPR				IAML		11 13 14.8	
	comp=Z,2µm,0.2s						
ECPR				IAML		11 13 15.0	
	comp=Z,2µm,0.2s						
ECPR	Experimental S	0.58	55	⇓eP	Pn	11 13 05.1	-0.6
ECPR				eS	Sb	11 13 12.5	+0.1
SJG	San Juan	0.69	80		Pb	11 13 06.7	+0.3
SJG	San Juan	0.69	80	IAML		11 13 17.8	
	comp=Z,694nm,0.3s						
SJG	San Juan	0.69	80	⇓ePg	Pn	11 13 06.8	-0.3
SJG				eSg	Sb	11 13 15.5	+0.1
SJG	San Juan	0.69	80	⇑eP	Pb	11 13 06.7	+0.3
SJG				eS	Sb	11 13 15.6	+0.1
SJG	San Juan	0.69	80	i P	Pn	11 13 06.9	-0.3
SJG				eS	Sn	11 13 16.4	-0.6
SJG				IAML		11 13 17.7	
	comp=Z,458nm,0.2s						
IDE	Isla Desecheo	0.70	304		Pn	11 13 07.2	-0.2
IDE					Sn	11 13 17.2	-0.2
IDE	Isla Desecheo	0.70	304	⇓iP	Pn	11 13 07.2	-0.2
IDE				eS	Sn	11 13 17.2	-0.2
PDPR	Patillas Dam,	0.80	88		Pn	11 13 08.8	+0.1
GCPR	Guaynabo City	0.81	67		Pb	11 13 08.4	0.0
GCPR					Sb	11 13 19.1	+0.2
GCPR	Guaynabo City	0.81	67	⇑eP	Pb	11 13 08.4	0.0
GCPR				eS	Sb	11 13 19.1	+0.2
HUMP	Col San Antoni	0.98	81		Pb	11 13 11.3	+0.1
HUMP					Sn	11 13 24.9	+0.7
HUMP	Col San Antoni	0.98	81	IAML		11 13 25.6	
	comp=Z,359nm,0.2s						
HUMP				IAML		11 13 28.8	
	comp=Z,452nm,0.2s						
HUMP	Col San Antoni	0.98	81	⇑eP	Pb	11 13 11.3	+0.1
HUMP				eS	Sn	11 13 24.9	+0.7
CUPR	Culebra, Puert	1.54	78		Pb	11 13 20.5	-0.2
MIDR	Miches	2.30	296	⇑ePg	Pb	11 13 33.4	-0.4
MIDR				IAML		11 14 10.8	
	comp=N,24nm,0.3s						
DR12	Loma Pena Alta	2.52	289	Pn	Pb	11 13 36.4	-1.1
HATOM	Hato Mayor del	2.52	289	⇑ePg	Pb	11 13 36.2	-1.4
HATOM				IAML		11 14 19.4	
	comp=N,27nm,0.8s						
BANI	BANI	3.35	277	Pn	Pn	11 13 46.4	+2.5

*NOU **03** 11:14:46.0, 18.°14S×179.°24W, h640km, mb4.9/71, Fiji Islands Region*
*NEIC **03** 11:14:46.3±2.0, 18.°1S±0.°1×179.°3W±0.°1, h621km±6km, mb4.7/307, Error ellipse: s-maj=17.7km s-min=14.2km az=134.0*
*IDC **03** 11:14:50.8±1.8, 18.°06S×179.°50W, h684km±20km, mb4.1/17, mbtmp5.1/18, Error ellipse: s-maj=15.0km s-min=12.5km az=108.0*
ISC 03 11:14:45.9±0.3, 18.°07S±0.°06×179.°28W±0.°05, h622km, n680, σ1.°06/523, mb4.7/214, 15C-18D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.47	110	P	P	11 16 00.4	+2.0
LKBA	Tubou, Lakemba	0.47	110	S	S	11 17 00.1	+2.7
TAVE	Taveuni	1.48	336	P	P	11 16 02.9	+2.3
TAVE	Taveuni	1.48	336	S	S	11 17 06.6	+5.5
DGTI	Dogotuki	2.00	332	P	P	11 16 04.2	+1.9
DGTI	Dogotuki	2.00	332	P	P	11 16 04.1	+1.8
DGTI	Dogotuki	2.00	332	S	S	11 17 09.0	+4.7
MSVF	Nonsavu	2.57	277		P	11 16 07.3	+2.5
MSVF	Nonsavu	2.57	277	P	P	11 16 07.3	+2.5
MSVF	Nonsavu	2.57	277	S	S	11 17 15.0	+6.0
AFI	Afiamalu	8.31	61	P	P	11 16 47.7	-1.4
AFI	Afiamalu	8.31	61	P	P	11 16 48.8	-0.3
	98nm,0.7s						
AFI	Afiamalu	8.31	61	P	S	11 18 32.0	+2.0
	98nm,0.7s						
AFI	Afiamalu	8.31	61	P	P	11 16 48.6	-0.5
AFI	Afiamalu	8.31	61	P	S	11 18 31.3	+1.3
AFI	Afiamalu	8.31	61	P	P	11 16 47.4	-1.7
NIUE	Niue	8.92	98	P	P	11 16 55.0	+0.2
NIUE	Niue	8.92	98	P	P	11 16 55.3	+0.6
	182nm,0.9s						
NIUE	Niue	8.92	98	P	P	11 16 55.1	+0.4
NIUE				S	S	11 18 47.5	+7.1
GLKZ	Green Lake	11.21	174	P	P	11 17 15.4	-1.5
RTV	Rentapao	11.71	269	P	P	11 17 22.8	+0.9
	676nm,0.9s						
RTV	Rentapao	11.71	269	P	S	11 19 31.5	+1.8
	676nm,0.9s						
DVP	Devils Point	11.94	270	P	P	11 17 25.3	+1.2
	3µm,0.8s						
DVP	Devils Point	11.94	270	P	P	11 17 25.1	+1.0
DVP	Devils Point	11.94	270	P	S	11 19 36.4	+2.6
MARNC	Mare, Loyalty	12.42	252	P	P	11 17 27.8	-0.9
MARNC	Mare, Loyalty	12.42	252	P	P	11 17 27.8	-0.9
	123nm,1.5s						
MARNC	Mare, Loyalty	12.42	252	P	S	11 19 43.3	+1.1
	123nm,1.5s						
PINNC	Pines Island,	13.25	248	P	P	11 17 36.5	-0.2
PINNC	Pines Island,	13.25	248	P	P	11 17 36.6	-0.1
	22µm,0.9s						
OUENC	Ouen Island, N	13.73	249	P	P	11 17 41.3	-0.1
	62nm,0.9s						
DZM	Mont Dzumac	13.99	251	P	P	11 17 44.1	0.0
	32nm,0.6s,baz=76,slow=20,SNR=38						
DZM	Mont Dzumac	13.99	251	eP	P	11 17 44.4	+0.3
	101nm,1.2s						
DZM				eS	S	11 20 06.7	-2.9
	689nm,24.7s						
DZM	Mont Dzumac	13.99	251	P	P	11 17 43.9	-0.2
	51nm,1.3s						
DZM	Mont Dzumac	13.99	251	P	P	11 17 44.1	0.0
ONTNC	Ouen Toro	14.04	250	P	P	11 17 44.8	+0.4
ONTNC	Ouen Toro	14.04	250	P	P	11 17 44.8	+0.4
	47nm,0.5s						
KOUNC	Koumac, New Ca	15.71	258	P	P	11 17 59.5	-0.2
	180nm,1.3s						
KOUNC	Koumac, New Ca	15.71	258	P	P	11 18 01.8	+2.1
NFK	Norfolk Island	16.01	225	P	P	11 18 04.4	+2.1
OUZ	Omahuta	18.22	199	P	P	11 18 23.1	+0.8
	13nm,0.8s						
OUZ	Omahuta	18.22	199	P	P	11 18 24.3	+2.0
WCZ	Waipu Caves	18.68	196	P	P	11 18 28.7	+2.2
KUZ	Kuaotunu	19.12	192	P	P	11 18 30.1	-0.4
	17nm,1.5s						
KUZ	Kuaotunu	19.12	192	P	P	11 18 31.4	+0.9
ABAZ	Army Bay	19.18	195	P	P	11 18 32.9	+1.9
WIAZ	Waiheke Island	19.29	194	P	P	11 18 33.8	+1.7
MBAZ	Motutapu North	19.32	194	P	P	11 18 34.0	+1.7
ETAZ	East Tamaki Re	19.49	194	P	P	11 18 35.4	+1.6
WTAZ	Waiatarua	19.56	195	P	P	11 18 36.0	+1.5
MKAZ	Moumakai	19.59	193	P	P	11 18 32.1	-2.6
AWAZ	Awhitu Peninsu	19.66	195	P	P	11 18 36.7	+1.3
URZ	Urewera	20.36	188	P	P	11 18 39.2	-2.5
	6.0nm,0.7s,baz=350,slow=17,SNR=7.3						
URZ				S	S	11 21 54.3	+2.5
	3.4nm,0.5s,baz=147,slow=19,SNR=2.1						
URZ	Urewera	20.36	188	P	P	11 18 39.7	-2.0
	25nm,0.7s						
URZ	Urewera	20.36	188	P	P	11 18 39.4	-2.3
MWZ	Matawai	20.38	187	P	P	11 18 41.4	-0.5
BKZ	Black Stump Fm	21.34	189	P	P	11 18 49.5	-1.0
	17nm,1.8s						
BKZ	Black Stump Fm	21.34	189	P	P	11 18 49.3	-1.1
PNHZ	Pukenui	22.12	189	P	P	11 18 57.5	+0.1
TATA	Tatamba Isabel	22.50	293	P	P	11 19 00.6	-0.5
	79nm,0.9s						
TATA	Tatamba Isabel	22.50	293	P	P	11 19 00.5	-0.5
BFZ	Birch Farm	22.86	189	P	P	11 19 02.9	-1.0
	15nm,1.0s						
BFZ	Birch Farm	22.86	189	P	P	11 19 04.8	+0.9
MRZ	Mangatainoka R	22.95	190	P	P	11 19 03.0	-1.7
OGWZ	Otaki Gorge	23.17	191	P	P	11 19 05.4	-1.2
TCW	Tory Channel	23.72	192	P	P	11 19 10.8	-0.7
TCW	Tory Channel	23.72	192	P	P	11 19 11.0	-0.5
QRZ	Quartz Range	23.75	196	P	P	11 19 12.0	+0.3
	22nm,0.5s						
QRZ	Quartz Range	23.75	196	P	P	11 19 12.1	+0.3
QRZ	Quartz Range	23.75	196	P	P	11 19 11.8	0.0
TKNZ	Takaka Hill	23.84	195	P	P	11 19 12.2	-0.4
NNZ	Nelson	23.92	194	P	P	11 19 12.8	-0.4
TUWZ	Tuamarina	24.00	193	P	P	11 19 13.9	0.0
TUWZ	Tuamarina	24.00	193	P	P	11 19 13.9	0.0
MRNZ	Matariki Terra	24.23	195	P	P	11 19 15.1	-1.0
BSWZ	Blackbirch Sta	24.29	193	P	P	11 19 16.3	-0.2
THZ	Tophouse	24.54	194	P	P	11 19 18.1	-0.8
THZ	Tophouse	24.54	194	P	P	11 19 17.8	-1.1
DSZ	Denniston Nort	24.80	196	P	P	11 19 20.6	-0.5
KHZ	Kahutara	25.03	193	P	P	11 19 21.1	-1.9
KHZ	Kahutara	25.03	193	P	P	11 19 21.4	-1.6
KHZ	Kahutara	25.03	193	P	P	11 19 21.4	-1.6
GVZ	Greta Valley S	25.66	193	P	P	11 19 26.9	-1.6
GVZ	Greta Valley S	25.66	193	P	P	11 19 27.0	-1.6
INZ	Inchbonnie	25.81	196	P	P	11 19 28.6	-1.3
INZ	Inchbonnie	25.81	196	P	P	11 19 29.0	-0.9
OXZ	Oxford	26.23	194	P	P	11 19 31.6	-1.9
WVZ	Waitaha Valley	26.33	197	P	P	11 19 33.5	-0.9
MQZ	McQueen's Vall	26.45	193	P	P	11 19 34.3	-1.1
RPZ	Rata Peaks	26.84	196	P	P	11 19 37.9	-1.0
	43nm,1.7s						
RPZ	Rata Peaks	26.84	196	P	P	11 19 37.9	-1.0
FOZ	Fox Glacier	27.01	198	P	P	11 19 39.2	-1.1
AUWSH	Wavell State H	27.12	245	P	P	11 19 42.0	+0.4
TMZ	Timaru	27.48	195	P	P	11 19 42.6	-1.8
LBZ	Lake Benmore	27.69	196	P	P	11 19 44.3	-2.0
LBZ	Lake Benmore	27.69	196	P	P	11 19 43.8	-2.5
JCZ	Jackson Bay	27.80	199	P	P	11 19 46.7	-0.7
	69nm,0.8s						
JCZ	Jackson Bay	27.80	199	P	P	11 19 46.7	-0.7
TW1H	Toowoomba 1 Ha	28.07	245	P	P	11 19 50.8	+0.8
ODZ	Otahua Downs	28.18	195	P	P	11 19 49.2	-1.4
ODZ	Otahua Downs	28.18	195	P	P	11 19 49.4	-1.2
ODZ	Otahua Downs	28.18	195	P	P	11 19 49.1	-1.5
PPT2	Papeete2	28.27	94	esS	sS	11 26 53.5	-3.6
	72nm,25.8s						
WKZ	Wanaka	28.42	198	P	P	11 19 51.2	-1.5
EIDS	Eidsvold	28.44	250		P	11 19 52.9	-0.1
EIDS	Eidsvold	28.44	250	P	P	11 19 52.6	-0.5
	64nm,1.1s						
EIDS	Eidsvold	28.44	250	P	P	11 19 52.8	-0.3
AUNRC	North Rockhamp	28.70	254	P	P	11 19 55.0	-0.3
EAZ	Earnscleugh	28.71	197	P	P	11 19 54.1	-1.0
ARMA	Armidale	29.15	240		P	11 19 59.9	+0.6
ARMA	Armidale	29.15	240	P	P	11 19 59.6	+0.3
	76nm,0.7s						
ARMA	Armidale	29.15	240	P	P	11 20 00.1	+0.8
MLZ	Mavora Lakes	29.18	198		P	11 19 59.4	+0.2
TUZ	Tuapeka	29.29	196	P	P	11 19 59.7	-0.4
WHZ	Wether Hill Ro	29.70	198	P	P	11 20 03.6	0.0
WHZ	Wether Hill Ro	29.70	198	P	P	11 20 03.5	-0.2
SYZ	Scrubby Hill	29.96	196	P	P	11 20 05.3	-0.5
	62nm,2.4s						
SYZ	Scrubby Hill	29.96	196	P	P	11 20 05.5	-0.3
AUPHS	Peel High Scho	29.97	239	P	P	11 20 07.1	+0.9
MGCD	Mangrove Creek	30.53	235	P	P	11 20 11.7	+0.8
	89nm,0.7s						
APZ	The Paps	30.55	197	P	P	11 20 10.5	-0.4
SYDH	Sydney Hard Ro	31.02	234	P	P	11 20 14.9	-0.2
	71nm,0.7s						
AULRC	Lightning Ridg	31.93	243	P	P	11 20 22.6	-0.2
AUDCS	Dubbo College	32.15	238	P	P	11 20 25.2	+0.5
AUMHS	Melrose High S	32.90	232	P	P	11 20 31.3	+0.3
CAN	Canberra	32.95	232	P	P	11 20 31.3	-0.2
CAN	Canberra	32.95	232	P	P	11 20 31.8	+0.3
PMG	Port Moresby	33.67	280	P	P	11 20 38.4	+0.7
	119nm,0.8s,baz=71,slow=5.9,SNR=44						
	119nm,0.8s						
PMG	Port Moresby	33.67	280		P	11 20 38.0	+0.4
PMG	Port Moresby	33.67	280	P	P	11 20 38.1	+0.4
	167nm,0.9s						
PMG	Port Moresby	33.67	280	P	P	11 20 38.4	+0.7
	167nm,0.9s						
PMG	Port Moresby	33.67	280	P	P	11 20 38.4	+0.7
AUSMG	Snowy Mountain	33.68	231	P	P	11 20 38.3	+0.7
CMSA	Cobar Meteorol	34.35	240	P	P	11 20 43.2	+0.1
	101nm,0.7s						
MTSU	Mount Surprise	34.57	264	P	P	11 20 44.7	-0.5
	37nm,0.7s						
QLP	Quilpie	34.70	249	P	P	11 20 45.8	-0.4
	254nm,0.6s						
QLP	Quilpie	34.70	249	P	P	11 20 45.7	-0.4
GLAD	Gladstone	36.16	224	P	P	11 20 58.0	+0.1
	63nm,0.7s						
COEN	Coen	36.28	271	P	P	11 20 59.8	+0.5
	comp=Z,130nm,0.9s						
COEN	Coen	36.28	271		P	11 20 59.8	+0.5
COEN	Coen	36.28	271	P	P	11 20 59.5	+0.2
	comp=Z,130nm,0.9s						
COEN	Coen	36.28	271	P	P	11 20 59.4	+0.2
TOO	Toolangi	36.43	231		P	11 21 00.8	+0.6
TOO				IAmb	IAmb	11 21 01.6	
	comp=Z,31nm,0.9s						
MOO	Moorlands	37.42	222	P	P	11 21 08.3	+0.2
	comp=Z,80nm,2.8s						
TAU	Tasmania Unive	37.57	222	P	P	11 21 09.6	+0.2
TAU	Tasmania Unive	37.57	222	P	P	11 21 08.6	-0.7
	comp=Z,72nm,2.0s						
BRAT	Ballarat	37.57	231	P	P	11 21 09.0	-0.4
	comp=Z,84nm,0.8s						
BRAT	Ballarat	37.57	231	P	P	11 21 10.5	+1.1
STKA	Stephens Creek	37.83	241	P	P	11 21 12.2	+0.5
	comp=Z,56nm,0.5s,baz=90,slow=10,SNR=135						
	comp=Z,56nm,0.5s						
STKA	Stephens Creek	37.83	241		P	11 21 12.3	+0.7
STKA	Stephens Creek	37.83	241	P	P	11 21 12.0	+0.4
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	37.83	241	P	P	11 21 12.1	+0.5
INKA	Innaminka	37.92	248		P	11 21 13.3	+0.9
QIS	Mount Isa	38.81	259	P	P	11 21 18.7	-1.0
	comp=Z,17nm,0.6s						
HTT	Hallett	40.35	239	P	P	11 21 31.9	0.0
	comp=Z,109nm,0.7s						
HTT	Hallett	40.35	239	P	P	11 21 32.1	+0.2
AUMBR	Murray Bridge	40.44	237	P	P	11 21 32.7	+0.3
AUJCS	Jamestown Cent	40.56	240	P	P	11 21 34.1	+0.6
AUMAR	Marden Senior	40.89	237	P	P	11 21 36.3	+0.3
GHSS	Government Hou	40.93	237	P	P	11 21 36.5	+0.2
JAY	Jayapura	42.16	287	P	P	11 21 46.0	-0.4
	comp=Z,73nm,0.7s,baz=164,slow=7.4,SNR=3.6						
	comp=Z,73nm,0.7s						
BBOO	Buckleboo	42.61	241		P	11 21 49.6	+0.1
BBOO	Buckleboo	42.61	241	P	P	11 21 49.0	-0.4
	comp=Z,168nm,0.9s						
BBOO	Buckleboo	42.61	241	P	P	11 21 49.1	-0.4
WRA	Warramunga Arr	43.79	260	P	P	11 21 58.0	-0.8
	comp=Z,32nm,0.4s,baz=93,slow=7.9,SNR=20						
	comp=Z,32nm,0.4s						
ASAR	Alice Springs	43.95	254	P	P	11 21 59.7	-0.4
	comp=Z,396nm,0.6s,baz=89,slow=8.1,SNR=9356						
ASAR	Alice Springs	43.95	254		P	11 22 00.1	0.0
KNHH	Kane Nui o Ham	44.11	34		P	11 22 02.3	+1.0
HMH	Humu'ula Sheep	44.13	33	P	P	11 22 03.0	+1.3
POHA	Pohakuloa	44.23	33	P	P	11 22 02.6	+0.2
	comp=Z,71nm,1.7s						
FORT	Forrest	49.19	245		P	11 22 38.6	-0.6
SIJI	Sorong	51.47	284	P	P	11 22 55.9	-0.1
	comp=Z,84nm,0.6s,baz=92,slow=7.1,SNR=3.8						
	comp=Z,84nm,0.6s						
PSA00	Pilbara Seismi	57.07	256	P	P	11 23 34.2	-0.8
	comp=Z,87nm,0.7s						
MBWA	Marble Bar	57.23	256	P	P	11 23 35.0	-1.1
	comp=Z,26nm,1.1s						
MEEK	Meekatharra	57.60	250	P	P	11 23 37.6	-1.0
	comp=Z,37nm,0.9s						
MEEK	Meekatharra	57.60	250	P	P	11 23 37.4	-1.2
	comp=Z,37nm,0.9s						
KLBR	Kellerberrin	58.02	244	P	P	11 23 39.9	-1.3
	comp=Z,173nm,0.7s						
KLBR	Kellerberrin	58.02	244	P	P	11 23 40.1	-1.1
NWAO	Narrogin (SRO)	58.41	242	P	P	11 23 42.9	-0.9
	comp=Z,18nm,1.2s						
BLDU	Ballidu	58.97	245	P	P	11 23 46.3	-1.3
	comp=Z,29nm,0.9s						
MUN	Mundaring	59.31	243	P	P	11 23 49.3	-0.6
	comp=Z,40nm,1.1s						
MORW	Morawa	59.66	246		P	11 23 51.5	-0.7
MORW	Morawa	59.66	246	P	P	11 23 51.2	-1.0
	comp=Z,26nm,0.8s						
VNDA	Vanda	60.22	185	P	P	11 23 56.0	+1.0
	comp=Z,2.5nm,0.5s,baz=12,slow=8.8,SNR=8.3						
	comp=Z,2.5nm,0.5s						
VNDA	Vanda	60.22	185	IAmb	IAmb	11 23 57.5	
	comp=Z,29nm,1.5s						
KAPI	Kappang	60.88	274	P	P	11 23 59.7	-0.8
	comp=Z,7.0nm,0.5s,baz=90,slow=4.0,SNR=3.2						
	comp=Z,7.0nm,0.5s						
PLAI	Plampang	61.67	270	P	P	11 24 04.9	-0.7
	comp=Z,75nm,0.9s						
TOLI2	Tolitoli	61.94	281	P	P	11 24 06.9	-0.4
	comp=Z,50nm,1.1s						

TOLI2	Tolitoli	61.94	281	P	P	11 24 06.6	-0.7
JAGI	Jajag, Banyuwa	65.21	269		P	11 24 26.6	-1.5
JAGI	Jajag, Banyuwa	65.21	269	P	P	11 24 26.3	-1.8
MJAR	Matsushiro Arr	67.55	324	P	P	11 24 41.8	-0.2
	comp=Z,3.5nm,0.6s,baz=158,slow=5.8,SNR=11						
	comp=Z,3.5nm,0.6s						
MJAR	Matsushiro Arr	67.55	324	IAmb	IAmb	11 24 42.4	
	comp=Z,2.8nm,0.7s						
UGM	Wanagama	68.82	268		P	11 24 49.4	-0.8
UGM	Wanagama	68.82	268	P	P	11 24 49.6	-0.6
	comp=Z,73nm,0.7s						
YULB	Yu-li	71.16	303	P	P	11 25 02.3	-1.5
	comp=Z,15nm,2.0s						
NIKH	Nikolski High	71.32	7	P	P	11 25 03.0	-1.0
	baz=190						
SSLB	Suanglung	71.63	303	P	P	11 25 05.4	-1.1
	comp=Z,24nm,1.4s						
BBJI	Bungbulang	71.67	268		P	11 25 05.8	-1.2
BBJI	Bungbulang	71.67	268	P	P	11 25 06.0	-1.1
	comp=Z,41nm,0.8s						
BBJI	Bungbulang	71.67	268	P	P	11 25 05.7	-1.4
QSPA	South Pole Qui	71.98	180	P	P	11 25 08.1	+0.1
	comp=Z,5.6nm,0.5s,baz=50,slow=1.2,SNR=8.0						
	comp=Z,5.6nm,0.5s						
QSPA	South Pole Qui	71.98	180	P	P	11 25 08.2	+0.2
UNV	Unalaska Valle	72.46	8	P	P	11 25 09.6	-0.9
	baz=193						
PETK	Petropavlovsk-	73.63	346	P	P	11 25 17.2	0.0
	comp=Z,16nm,0.8s,baz=107,slow=7.7,SNR=24						
	comp=Z,16nm,0.8s						
KSRS	Korea Array	74.28	319	P	P	11 25 21.3	0.0
	comp=Z,0.5nm,0.5s,baz=132,slow=6.4,SNR=2.2						
P08K	Saint George I	74.83	6	P	P	11 25 23.3	-0.6
	baz=190						
SDPT	Sand Point	74.85	11	P	P	11 25 23.4	-0.5
	baz=198						
SPIA	Saint Paul Isl	75.34	5	P	P	11 25 26.2	-0.5
	baz=189						
SII	Sitkinak Islan	77.28	14	P	P	11 25 37.3	-0.1
	baz=204						
NJ2	Nanjing	77.41	310	eP	P	11 25 40.8	+2.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
R16K	Pilot Point	77.49	12	P	P	11 25 38.0	-0.4
	baz=201						
R17L	Mt. Peulik Vol	77.79	12	P	P	11 25 39.9	-0.2
	baz=202						
MDJ	Mudanjiang	77.85	325	P	P	11 25 41.5	+0.9
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
OHAK	Old Harbor	78.09	14	P	P	11 25 41.3	-0.3
	comp=Z,50nm,2.3s						
OHAK	Old Harbor	78.09	14	P	P	11 25 41.0	-0.6
	baz=205						
VES	Vestal, Richgr	78.20	46	IAmb	IAmb	11 25 43.7	
	comp=Z,22nm,0.6s						
O02D	Mt. Diablo Mer	78.21	41	IAmb	IAmb	11 25 45.3	
	comp=Z,34nm,1.4s						
Q17K	Contact Creek	78.47	12	P	P	11 25 42.9	-0.9
	baz=203						
CMB	Columbia Colle	78.52	44	IAmb	IAmb	11 25 46.1	
	comp=Z,16nm,0.8s						
ISA	Isabella, Lake	78.52	46	IAmb	IAmb	11 25 48.5	
	comp=Z,17nm,0.9s						
O15K	Ungalikthiuk R	78.60	10	P	P	11 25 44.2	-0.1
	baz=199						
AFDM	Forest Hills D	78.65	43	IAmb	IAmb	11 25 46.7	
	comp=Z,16nm,0.9s						
Q16K	King Salmon	78.70	12	P	P	11 25 44.3	-0.6
	baz=202						
N02D	Trinity Center	78.73	40	IAmb	IAmb	11 25 58.0	
	comp=Z,38nm,1.4s						
KDAK	Kodiak Island	78.76	14	P	P	11 25 45.1	-0.1
	baz=206						
P16K	Nushagak River	78.78	11	P	P	11 25 45.1	-0.1
	baz=201						
M02C	Callahan	78.88	40	IAmb	IAmb	11 25 51.4	
	comp=Z,37nm,1.4s						
M11K	Mekoryuk	78.89	7	P	P	11 25 45.3	-0.5
	baz=193						
O03E	Paynes Creek	78.89	41	IAmb	IAmb	11 25 48.0	
	comp=Z,27nm,1.1s						
Q18K	Katmai Hardscr	79.01	13	P	P	11 25 46.2	-0.4
	baz=203,SNR=6.1						
N14K	Kuskokwak Cree	79.02	9	P	P	11 25 47.1	+0.6
	baz=197,SNR=9.6						
MDPB	Devils Postpil	79.17	45	IAmb	IAmb	11 25 50.0	
	comp=Z,19nm,0.8s						
YBH	Yreka Blue Hor	79.17	39	IAmb	IAmb	11 25 49.9	
	comp=Z,15nm,0.7s						
P17K	Kvichak River	79.23	12	P	P	11 25 47.5	-0.1
	baz=202						
M13K	Dall Lake	79.26	8	P	P	11 25 48.1	+0.4
	baz=195						
O16K	Kokwok River B	79.30	11	P	P	11 25 47.0	-0.9
	baz=200						
HATC	Hat Creek Radi	79.41	41	IAmb	IAmb	11 25 51.2	
	comp=Z,31nm,0.9s						
TIN	Tinemaha, Big	79.43	45	IAmb	IAmb	11 25 50.9	
	comp=Z,28nm,0.7s						
MPK	Martis Peak	79.45	43	IAmb	IAmb	11 25 51.6	
	comp=Z,42nm,1.0s						
N15K	Kwethluk River	79.50	10	IAmb	IAmb	11 25 49.9	
	comp=Z,25nm,1.1s						
N15K	Kwethluk River	79.50	10	P	P	11 25 48.8	-0.3
	baz=198						
Q19K	Cape Douglas,	79.56	13	P	P	11 25 48.7	-0.7
	baz=205						
PNTR	Pine Nut	79.62	43	IAmb	IAmb	11 25 52.4	
	comp=Z,32nm,0.9s						
O17K	Koliganek Bris	79.64	11	P	P	11 25 49.5	-0.3
	baz=201						
P18K	Big Mountain,	79.65	12	P	P	11 25 49.6	-0.2
	baz=203						
L04D	Klamath Falls	79.70	39	IAmb	IAmb	11 25 52.4	
	comp=Z,31nm,0.8s						
BNX	BinXian	79.75	325	⇓P	P	11 25 51.1	+0.4
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
DSP	Deep Springs	79.77	45	IAmb	IAmb	11 25 53.2	
	comp=Z,21nm,1.2s						
M14K	Bethel	79.78	9	IAmb	IAmb	11 25 53.1	
	comp=Z,35nm,1.4s						
M14K	Bethel	79.78	9	P	P	11 25 51.0	+0.6
	baz=197						
GLA	Glamis	79.79	50	IAmb	IAmb	11 25 53.6	
	comp=Z,18nm,0.9s						
LHV	Little Huntoon	79.88	44	IAmb	IAmb	11 25 53.9	
	comp=Z,24nm,0.9s						
M15K	Kasigluk River	79.91	9	P	P	11 25 51.5	+0.3
	baz=198						
N16K	Nishlik Lake	80.01	10	P	P	11 25 52.4	+0.7
	baz=200						
O18K	Koktuh Hills	80.08	12	P	P	11 25 52.2	+0.1
	baz=203,SNR=7.8						
PAHR	Pah Rah Range	80.10	43	IAmb	IAmb	11 25 56.9	
	comp=Z,35nm,1.5s						
NVAR	Mina Array Bea	80.11	44	P	P	11 25 53.8	+0.8
	comp=Z,11nm,0.8s,baz=226,slow=9.2,SNR=57						
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	80.11	44		P	11 25 53.7	+0.6
NV11	Mina Array Sit	80.21	44	IAmb	IAmb	11 25 55.3	
	comp=Z,18nm,1.0s						
L14K	Kuka Creek	80.25	8	IAmb	IAmb	11 25 54.2	
	comp=Z,15nm,0.9s						
L14K	Kuka Creek	80.25	8	P	P	11 25 53.5	+0.7
	baz=196						
P19K	Oil Pt	80.31	13	P	P	11 25 53.2	0.0
	baz=205						
N17K	Nushagak Hills	80.33	11	P	P	11 25 53.8	+0.5
	baz=201						
M16K	Timber Creek	80.49	10	P	P	11 25 55.2	+1.1
	baz=200						
O19K	Port Alsworth	80.57	12	P	P	11 25 54.3	-0.3
	baz=204,SNR=6.3						
K13K	Kusilvak Mount	80.58	7	P	P	11 25 54.7	+0.1
	baz=194						
N18K	Kilae Creek	80.71	11	P	P	11 25 54.9	-0.5
	baz=202						
L15K	Ungalak Mounta	80.73	8	P	P	11 25 55.2	-0.1
	baz=197						
BRSE	Bradley Lake S	80.94	14	P	P	11 25 56.2	-0.3
	baz=207						
L16K	Owhat River	81.06	9	IAmb	IAmb	11 25 58.6	
	comp=Z,31nm,1.1s						
L16K	Owhat River	81.06	9	P	P	11 25 57.7	+0.7
	baz=199,SNR=8.7						
WIFE	Three Sisters-	81.07	38	IAmb	IAmb	11 25 59.6	
	comp=Z,19nm,0.9s						
M17K	Holitna River	81.11	10	P	P	11 25 58.5	+1.1
	baz=201						
N19K	Bonanza Creek	81.11	12	P	P	11 25 57.0	-0.5
	baz=204						
K15K	Wolf Creek Mou	81.32	8	P	P	11 25 59.6	+1.2
	baz=197						
S11A	Rachel	81.42	46	IAmb	IAmb	11 26 01.4	
	comp=Z,18nm,0.8s						
PINE	Pine Mountain	81.43	39	IAmb	IAmb	11 26 01.8	
	comp=Z,30nm,0.8s						
M18K	Stony River	81.48	11	P	P	11 25 59.4	+0.2
	baz=202						
J14K	Nanvaranak Lak	81.50	7	IAmb	IAmb	11 25 60.0	
	comp=Z,14nm,0.7s						
J14K	Nanvaranak Lak	81.50	7	P	P	11 25 59.7	+0.4
	baz=195						
I05D	Terrebonne, OR	81.51	38	IAmb	IAmb	11 26 02.0	
	comp=Z,30nm,1.2s						
SEW	Seward	81.57	15	P	P	11 25 59.5	-0.2
	baz=208						
L17K	Donlin	81.65	10	P	P	11 26 01.0	+0.9
	baz=200						
PRN	Pahroc Range	81.78	46	IAmb	IAmb	11 26 03.7	
	comp=Z,25nm,1.0s						
GAMB	Gambell	81.79	3	P	P	11 26 00.9	+0.2
	baz=187						
O22K	Cooper Landing	81.84	14	P	P	11 26 00.5	-0.5
	baz=208						
HOOD	Mount Hood Mea	81.90	37	IAmb	IAmb	11 26 03.8	
	comp=Z,25nm,0.9s						
SPCR	Spurr Chakacha	81.92	13	P	P	11 26 01.0	-0.6
	baz=206						
SPU	Mount Spurr	81.94	13	IAmb	IAmb	11 26 01.2	
	comp=Z,18nm,1.1s						
K17K	Iditarod	82.20	10	P	P	11 26 02.9	+0.1
	baz=200						
M20K	Styx River	82.35	12	P	P	11 26 03.1	-0.6
	baz=205						
RC01	Rabbit Creek A	82.37	14	IAmb	IAmb	11 26 04.2	
	comp=Z,33nm,1.0s						
RC01	Rabbit Creek A	82.37	14	P	P	11 26 03.5	-0.2
	baz=208						
J16K	Anvik River	82.40	8	IAmb	IAmb	11 26 04.8	
	comp=Z,15nm,0.7s						
J16K	Anvik River	82.40	8	P	P	11 26 04.1	+0.3
	baz=198						
G06A	Carlson Farm,	82.44	37	IAmb	IAmb	11 26 05.4	
	comp=Z,16nm,1.1s						
I07A	Izee	82.45	39	IAmb	IAmb	11 26 06.5	
	comp=Z,18nm,0.8s						
TUC	Tucson	82.45	53		P	11 26 06.4	+1.4
SUA	Susitna One	82.48	13	IAmb	IAmb	11 26 04.6	
	comp=Z,26nm,0.8s						
SUA	Susitna One	82.48	13	P	P	11 26 03.8	-0.6
	baz=207,SNR=6.8						
GNW	Green Mountain	82.58	35	IAmb	IAmb	11 26 06.6	
	comp=Z,17nm,0.8s						
J08A	Circle Bar Ran	82.67	40	IAmb	IAmb	11 26 07.5	
	comp=Z,36nm,1.2s						
J17K	VABM Dome	82.72	9	IAmb	IAmb	11 26 06.6	
	comp=Z,10.0nm,0.7s						
J17K	VABM Dome	82.72	9	P	P	11 26 05.6	+0.2
	baz=199						
SKT	Skwentna	82.77	13	P	P	11 26 04.4	-1.4
	baz=206						
D05A	Enumclaw	82.81	35	IAmb	IAmb	11 26 08.3	
	comp=Z,26nm,0.9s						
GLI	Glacier Island	82.82	15	P	P	11 26 05.4	-0.6
	baz=211						
M22K	Willow	82.87	14	P	P	11 26 06.0	-0.2
	baz=208						
EYAK	Cordova Ski Ar	82.88	16	P	P	11 26 04.8	-1.5
	comp=Z,22nm,1.0s						
EYAK	Cordova Ski Ar	82.88	16	P	P	11 26 06.0	-0.2
	baz=212						
X16A	Lo Mia Camp, P	82.92	50	IAmb	IAmb	11 26 10.3	
	comp=Z,15nm,0.9s						
KNK	Knik Glacier	82.95	14	IAmb	IAmb	11 26 07.0	
	comp=Z,22nm,0.8s						
KNK	Knik Glacier	82.95	14	P	P	11 26 06.4	-0.3
	baz=209						
PMR	Palmer	82.95	14	P	P	11 26 06.2	-0.4
PMR				IAmb	IAmb	11 26 07.0	
	comp=Z,31nm,1.3s						
PMR	Palmer	82.95	14	P	P	11 26 05.4	-1.2
	comp=Z,21nm,1.4s						
PMR	Palmer	82.95	14	P	P	11 26 06.2	-0.4
	baz=209,SNR=5.9						
I17K	Unalakleet	82.96	8	P	P	11 26 07.0	+0.5
	baz=198						
ANM	Nome	83.07	6	P	P	11 26 07.0	-0.1
	baz=193						
J18K	Innoko River	83.16	10	IAmb	IAmb	11 26 08.5	
	comp=Z,18nm,0.9s						
J18K	Innoko River	83.16	10	P	P	11 26 07.9	+0.3
	baz=202						
PSUT	Pine Spring	83.16	46	IAmb	IAmb	11 26 10.1	
	comp=Z,9.9nm,0.8s						
319A	Douglas	83.19	54	IAmb	IAmb	11 26 11.8	
	comp=Z,18nm,0.7s						
SIT	Sitka	83.34	22	P	P	11 26 10.9	+2.3
	baz=222						
CUT	Chulitna	83.42	13	P	P	11 26 08.1	-0.8
	baz=208,SNR=6.6						
L22K	Petersville	83.42	13	IAmb	IAmb	11 26 08.7	
	comp=Z,23nm,1.0s						
MAW	Mawson	83.43	200	P	P	11 26 09.2	+0.2
	comp=Z,9.4nm,0.6s,baz=133,slow=3.3,SNR=4.1						
	comp=Z,9.4nm,0.6s						
G08A	Pilot Rock	83.44	38	IAmb	IAmb	11 26 11.2	
	comp=Z,34nm,1.4s						
M23K	Glacier View	83.46	14	P	P	11 26 08.4	-0.8
	baz=210						
PPLA	Purkeypile	83.46	12	P	P	11 26 09.4	0.0
	baz=206						
U33K	Whale Pass	83.47	24	P	P	11 26 09.4	+0.1
	baz=224						
H16K	Elim	83.48	7	P	P	11 26 09.5	+0.3
	baz=196,SNR=7.9						
V35K	Ketchikan	83.50	25	P	P	11 26 09.4	-0.1
	baz=225						
K20K	Telida	83.52	11	IAmb	IAmb	11 26 10.1	
	comp=Z,21nm,0.9s						
K20K	Telida	83.52	11	P	P	11 26 09.4	0.0
	baz=204						
BMRM	Bremner River	83.54	16	P	P	11 26 09.1	-0.5
	baz=213						
SCM	Sheep Creek Mo	83.59	15	P	P	11 26 09.6	-0.2
	baz=210,SNR=5.7						
G15K	Niukluk	83.62	6	P	P	11 26 09.8	0.0
	baz=195,SNR=7.5						
MESA	MESA	83.62	18	P	P	11 26 10.2	0.0
	baz=215						
E07A	Sunnyside	83.64	37	IAmb	IAmb	11 26 12.1	
	comp=Z,25nm,1.0s						
KLU	Klutina	83.64	15	IAmb	IAmb	11 26 13.2	
	comp=Z,17nm,1.0s						
KLU	Klutina	83.64	15	P	P	11 26 09.9	-0.3
	baz=212						
S31K	Pelican	83.70	21	P	P	11 26 10.7	+0.4
	baz=221						
HAWA	Hanford	83.73	37	IAmb	IAmb	11 26 12.6	
	comp=Z,30nm,1.1s						
CRQM	Cirque	83.76	17	IAmb	IAmb	11 26 11.6	
	comp=Z,29nm,1.0s						
CRQE	Cirque	83.77	17	P	P	11 26 10.6	-0.3
	baz=214						
TNA	Tin City	83.82	5	IAmb	IAmb	11 26 12.1	
	comp=Z,11nm,0.9s						
TNA	Tin City	83.82	5	P	P	11 26 11.4	+0.6
	baz=191						
J19K	Poorman	83.83	10	P	P	11 26 11.3	+0.4
	baz=202						
F14K	Arctic Creek	83.87	5	P	P	11 26 10.9	-0.1
	baz=192						
WAH2	Wahluke Slope	83.91	37	IAmb	IAmb	11 26 12.7	
	comp=Z,12nm,0.6s						
WRAK	Wrangell Islan	83.99	24	P	P	11 26 12.3	+0.5
	baz=224						
E08A	Dider Farm, El	84.05	37	IAmb	IAmb	11 26 13.9	
	comp=Z,14nm,0.7s						
H17K	Granite Mounta	84.07	8	P	P	11 26 12.1	0.0
	baz=198						
VRDI	Verde Repeater	84.07	17	IAmb	IAmb	11 26 13.0	
	comp=Z,22nm,1.0s						
MTPU	Mount Pierson	84.08	47	IAmb	IAmb	11 26 17.6	
	comp=Z,11nm,0.9s						
N25K	Chitina, Valde	84.08	16	P	P	11 26 12.2	-0.1
	baz=213,SNR=8.0						
M24K	Tolsona, Glenn	84.11	15	P	P	11 26 12.8	+0.4
	baz=211						
WAT6	Susitna Watana	84.14	14	P	P	11 26 11.8	-0.9
	baz=210,SNR=9.9						
GLB	Gilahina Butte	84.15	16	IAmb	IAmb	11 26 13.1	
	comp=Z,19nm,0.7s						
WAT1	Susitna Watana	84.17	14	P	P	11 26 11.8	-0.9
	baz=209						
G16K	Koyuk River	84.20	7	P	P	11 26 12.4	-0.2
	baz=196						
EPH	Ephrata	84.23	36	IAmb	IAmb	11 26 14.7	
	comp=Z,19nm,1.0s						
F15K	North Star Dit	84.25	6	P	P	11 26 12.3	-0.6
	baz=194						
J20K	Nowinta River	84.26	11	P	P	11 26 12.7	-0.3
	baz=204						
KTH	Kantishna Hill	84.31	12	IAmb	IAmb	11 26 12.8	
	comp=Z,13nm,1.0s						
MCARA	McCarthy VSAT	84.31	17	IAmb	IAmb	11 26 14.2	
	comp=Z,25nm,1.1s						
MCARA	McCarthy VSAT	84.31	17	P	P	11 26 13.1	-0.2
	baz=214						
CHUM	Lake Minchumin	84.33	12	P	P	11 26 12.5	-0.8
	baz=206						
GCSA	Galena City Sc	84.33	9	P	P	11 26 13.0	-0.3
	baz=201						
TRF	Thorofare Moun	84.34	13	IAmb	IAmb	11 26 13.8	
	comp=Z,22nm,0.8s						
TRF	Thorofare Moun	84.34	13	P	P	11 26 12.9	-0.8
	baz=208,SNR=10.0						
CTG	Chitna Glacier	84.44	18	P	P	11 26 13.9	-0.2
	baz=216						
CTGM	Chitina Glacie	84.44	18	IAmb	IAmb	11 26 14.9	
	comp=Z,17nm,0.8s						
D08A	Wollman Farm,	84.45	37	IAmb	IAmb	11 26 15.9	
	comp=Z,20nm,0.9s						
H18K	Honhosa River	84.49	9	P	P	11 26 13.3	-0.8
	baz=200						
G17K	Kiwalik Mounta	84.51	8	P	P	11 26 14.0	-0.2
	baz=198						
E09A	Wood Farm, Sta	84.59	37	IAmb	IAmb	11 26 18.3	
	comp=Z,26nm,1.4s						
HARP	HAARP	84.61	15	P	P	11 26 14.6	-0.1
	baz=212						
O28M	Mount Upton	84.62	18	IAmb	IAmb	11 26 16.4	
	comp=Z,12nm,0.8s						
O28M	Mount Upton	84.62	18	P	P	11 26 14.8	-0.4
	baz=217						
DHY	Denali Highway	84.65	14	IAmb	IAmb	11 26 17.3	
	comp=Z,16nm,1.3s						
DHY	Denali Highway	84.65	14	P	P	11 26 14.8	-0.4
	baz=210						
BPAW	Bear Paw Mtn.	84.78	12	P	P	11 26 14.9	-0.7
	baz=207						
MCK	McKinley	84.88	13	IAmb	IAmb	11 26 16.8	
	comp=Z,15nm,0.8s						
MCK	McKinley	84.88	13	P	P	11 26 15.7	-0.4
	baz=209						
LLLB	Lillooet	84.89	33	IAmb	IAmb	11 26 17.1	
	comp=Z,11nm,0.9s						
B08A	Colville Reser	84.95	35	IAmb	IAmb	11 26 17.6	
	comp=Z,14nm,0.8s						
PAX	Paxson	85.01	15	P	P	11 26 16.1	-0.7
	baz=212						
PLID	Pearl Lake	85.10	39	IAmb	IAmb	11 26 19.0	
	comp=Z,18nm,1.4s						
P30M	Million Dollar	85.11	20	P	P	11 26 18.0	+0.7
	baz=220						
H19K	Roundabout Mou	85.13	9	P	P	11 26 18.3	+1.2
	baz=202						
SKAG	Skagway	85.14	21	P	P	11 26 17.6	+0.2
	baz=221						
G18K	Tagagawik	85.15	8	P	P	11 26 16.5	-0.8
	baz=200						
YUK8	Steele Glacier	85.15	18	P	P	11 26 18.1	+0.3
	baz=217,SNR=5.2						
M26K	Nabesna, AK	85.16	16	IAmb	IAmb	11 26 18.3	
	comp=Z,12nm,1.0s						
M26K	Nabesna, AK	85.16	16	P	P	11 26 17.4	-0.1
	baz=214						
C09A	Chrisman Ranch	85.23	36	IAmb	IAmb	11 26 19.3	
	comp=Z,13nm,0.7s						
HLID	Hailey	85.29	41	IAmb	IAmb	11 26 20.6	
	comp=Z,12nm,0.8s						
F17K	Baldwin Pennin	85.34	7	IAmb	IAmb	11 26 19.9	
	comp=Z,14nm,0.9s						
F17K	Baldwin Pennin	85.34	7	P	P	11 26 18.3	+0.2
	baz=197						
H20K	Anotleneega Mo	85.34	10	P	P	11 26 18.1	-0.2
	baz=203						
YUK3	Moose Creek	85.35	17	P	P	11 26 18.9	+0.3
	baz=217,SNR=13						
M27K	Edge Creek, AK	85.42	17	IAmb	IAmb	11 26 19.4	
	comp=Z,17nm,1.1s						
M27K	Edge Creek, AK	85.42	17	P	P	11 26 19.1	+0.2
	baz=215,SNR=6.6						
HYT	Haines Junctio	85.48	19	IAmb	IAmb	11 26 20.2	
	comp=Z,12nm,1.0s						
HYT	Haines Junctio	85.48	19	P	P	11 26 19.8	+0.7
	baz=219						
EPT	El Paso	85.50	55	IAmb	IAmb	11 26 23.3	
	comp=Z,16nm,0.9s						
S34M	Telegraph Cree	85.52	24	IAmb	IAmb	11 26 21.1	
	comp=Z,20nm,0.8s						
S34M	Telegraph Cree	85.52	24	P	P	11 26 20.2	+1.0
	baz=225,SNR=7.6						
YUK4	Talbot Arm	85.53	18	P	P	11 26 19.6	+0.1
	baz=218						
I21K	Tanana	85.56	11	IAmb	IAmb	11 26 22.2	
	comp=Z,15nm,1.0s						
I21K	Tanana	85.56	11	P	P	11 26 19.0	-0.3
	baz=206						
L26K	Log Cabin Wild	85.59	16	P	P	11 26 19.0	-0.4
	baz=214						
G19K	Purcell Mounta	85.61	9	P	P	11 26 20.4	+1.0
	baz=201						
NEA2	Nenana	85.61	13	P	P	11 26 19.3	-0.2
	baz=209						
K24K	Donnelly Dome	85.65	14	P	P	11 26 19.7	-0.1
	baz=212						
F18K	Selawik	85.69	8	P	P	11 26 19.3	-0.4
	baz=199						
WRH	Wood River Hil	85.71	13	IAmb	IAmb	11 26 19.4	
	comp=Z,20nm,1.3s						
SRU	San Rafael Swe	85.73	47	IAmb	IAmb	11 26 22.0	
	comp=Z,7.1nm,0.7s						
BVCY	Beaver Creek	85.75	17	P	P	11 26 20.5	+0.2
	baz=216						
P32M	Atlin	85.79	21	P	P	11 26 20.9	+0.4
	baz=223						
RIDG	Independent Ri	85.82	15	IAmb	IAmb	11 26 21.1	
	comp=Z,11nm,0.9s						
RIDG	Independent Ri	85.82	15	P	P	11 26 20.2	-0.4
	baz=213						
Q32M	Nakina River	85.84	22	P	P	11 26 21.6	+0.6
	baz=224						
H21K	Melozitna Rive	85.85	11	P	P	11 26 20.4	-0.2
	baz=205						
O30N	Mendenhall	85.88	20	P	P	11 26 20.6	-0.4
	baz=221						
E17K	Hotham Inlet	85.89	7	P	P	11 26 20.7	0.0
	baz=197,SNR=14						
HDA	Harding Lake	85.91	13	IAmb	IAmb	11 26 20.5	
	comp=Z,9.0nm,0.6s						
HDA	Harding Lake	85.91	13	P	P	11 26 20.2	-0.7
	baz=211,SNR=6.3						
CCB	Clear Creek Bu	85.92	13	IAmb	IAmb	11 26 20.2	
	comp=Z,9.7nm,0.6s						
DOT	Dot Lake	85.93	15	IAmb	IAmb	11 26 21.5	
	comp=Z,33nm,1.4s						
L27K	Beaver Creek,	86.01	16	P	P	11 26 21.1	-0.4
	baz=215						
I23K	Minto, Yukon-K	86.04	12	P	P	11 26 20.7	-0.8
	baz=208						
TCUT	Toone Canyon	86.05	45	IAmb	IAmb	11 26 24.2	
	comp=Z,14nm,0.7s						
COLA	College	86.11	13	P	P	11 26 20.9	-0.9
COLA				IAmb	IAmb	11 26 23.6	
	comp=Z,13nm,0.9s						
COLA	College	86.11	13	P	P	11 26 20.5	-1.3
COLA	College	86.11	13	P	P	11 26 21.3	-0.5
	baz=210						
NEW	Newport	86.13	36	IAmb	IAmb	11 26 22.8	
	comp=Z,6.3nm,0.7s						
F19K	Shaleruckik Mo	86.16	8	P	P	11 26 21.3	-0.7
	baz=200						

HILR	Hailar Array B	86.18	325	P	P	11 26 21.8	-0.8
	comp=Z,1.2nm,0.5s,baz=112,slow=6.4,SNR=2.5						
	comp=Z,1.2nm,0.5s						
WHY	Whitehorse	86.19	20	IAmb	IAmb	11 26 23.2	
	comp=Z,21nm,0.9s						
WHY	Whitehorse	86.19	20	P	P	11 26 22.4	-0.1
	baz=222						
SCRK	Sand Creek	86.22	15	P	P	11 26 22.6	0.0
	baz=213						
IL31		86.23	13	IAmb	IAmb	11 26 22.3	
	comp=Z,11nm,0.8s						
ILAR	Eielson Array	86.23	13	P	P	11 26 21.2	-1.2
	comp=Z,7.4nm,0.8s,baz=236,slow=5.5,SNR=89						
ILAR				PP	PP	11 29 50.2	-5.5
	comp=Z,0.8nm,1.0s,baz=197,slow=9.0,SNR=4.3						
	comp=Z,7.4nm,0.8s						
ILAR	Eielson Array	86.23	13	P	P	11 26 21.5	-1.0
DLBC	Dease Lake	86.31	24	P	P	11 26 23.3	+0.3
	baz=226						
MNTX	Cornudas Mount	86.34	55	IAmb	IAmb	11 26 25.3	
	comp=Z,7.4nm,0.7s						
D17K	Noatak River	86.35	6	P	P	11 26 23.6	+0.7
	baz=195,SNR=6.3						
E18K	Tukpahlearik C	86.35	7	P	P	11 26 23.0	+0.1
	baz=198						
POKR	Poker Plat Res	86.41	13	IAmb	IAmb	11 26 22.9	
	comp=Z,11nm,0.9s						
POKR	Poker Plat Res	86.41	13	P	P	11 26 22.2	-1.1
	baz=210						
J25K	Salcha River,	86.44	14	IAmb	IAmb	11 26 23.6	
	comp=Z,9.9nm,0.6s						
J25K	Salcha River,	86.44	14	P	P	11 26 23.0	-0.5
	baz=212,SNR=8.5						
PV19	Morning Glory	86.44	48	IAmb	IAmb	11 27 03.6	
	comp=Z,10.0nm,0.8s						
M29M	Somme Creek	86.45	18	IAmb	IAmb	11 27 01.4	
	comp=Z,13nm,1.4s						
M29M	Somme Creek	86.45	18	P	P	11 26 23.5	-0.2
	baz=218						
PV20	West Nyswonger	86.47	48	IAmb	IAmb	11 26 27.5	
	comp=Z,15nm,1.0s						
G21K	Allakaket	86.51	10	IAmb	IAmb	11 26 24.2	
	comp=Z,10nm,0.8s						
G21K	Allakaket	86.51	10	P	P	11 26 23.5	-0.2
	baz=204						
PV03	Paradox Valley	86.51	48	IAmb	IAmb	11 26 29.2	
	comp=Z,14nm,0.8s						
N31M	Braeburn, Yuko	86.52	19	IAmb	IAmb	11 26 25.1	
	comp=Z,17nm,0.9s						
N31M	Braeburn, Yuko	86.52	19	P	P	11 26 24.4	+0.4
	baz=221						
P33M	Teslin, Yukon	86.55	21	P	P	11 26 24.3	+0.1
	baz=224						
R33M	Jennings River	86.63	23	IAmb	IAmb	11 26 26.4	
	comp=Z,21nm,1.3s						
R33M	Jennings River	86.63	23	P	P	11 26 24.6	0.0
	baz=225						
F20K	Avaraart Lake	86.65	9	P	P	11 26 24.0	-0.4
	baz=202						
C16K	Lisburne Hills	86.70	5	P	P	11 26 24.6	+0.1
	baz=193						
J26L	Joseph Creek	86.77	15	P	P	11 26 25.2	+0.1
	baz=214						
TXAR	Lajitas Array	86.78	58	P	P	11 26 27.6	+1.6
	comp=Z,16nm,0.8s,baz=219,slow=5.6,SNR=156						
	comp=Z,16nm,0.8s						
TXAR	Lajitas Array	86.78	58		P	11 26 27.4	+1.4
HHC	Hu-ho-hao-te	86.80	315	eP	P	11 26 29.4	+3.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
E19K	Redstone River	86.82	8	IAmb	IAmb	11 26 25.6	
	comp=Z,10.0nm,0.7s						
E19K	Redstone River	86.82	8	P	P	11 26 24.8	-0.3
	baz=201						
TASM	ASL Pad, Albuq	86.84	52	IAmb	IAmb	11 26 27.8	
	comp=Z,6.7nm,1.0s						
TASM	ASL Pad, Albuq	86.84	52	IAmb	IAmb	11 26 27.8	
	comp=Z,7.0nm,1.0s						
ANMO	Albuquerque	86.84	52		P	11 26 26.3	0.0
H24K	Noodor Dome	86.95	12	P	P	11 26 24.5	-1.4
	baz=210						
AHID	Auburn Hatcher	87.03	43	IAmb	IAmb	11 26 31.4	
	comp=Z,11nm,1.1s						
M30M	Minto, Yukon	87.04	18	P	P	11 26 26.5	+0.1
	baz=220,SNR=14						
L29M	L29M	87.07	17	P	P	11 26 26.7	+0.2
	baz=219						
C17K	DeLong Mountai	87.09	6	P	P	11 26 26.5	0.0
	baz=195						
N32M	Quiet Lake	87.15	21	IAmb	IAmb	11 26 27.8	
	comp=Z,12nm,0.8s						
N32M	Quiet Lake	87.15	21	P	P	11 26 27.6	+0.7
	baz=223						
F21K	Alatna River	87.16	10	P	P	11 26 26.5	-0.3
	baz=204						
PRP	Porcupine Dome	87.17	13	IAmb	IAmb	11 26 27.8	
	comp=Z,11nm,1.1s						
PRP	Porcupine Dome	87.17	13	P	P	11 26 27.0	0.0
	baz=212						
ALPN	Alpine	87.20	57	IAmb	IAmb	11 26 30.2	
	comp=Z,14nm,1.0s						
G23K	Bananza Creek	87.30	11	P	P	11 26 28.1	+0.6
	baz=208						
TPB01	Permian Basin	87.31	56	IAmb	IAmb	11 26 30.4	
	comp=Z,16nm,1.0s						
DLMT	Dillon	87.31	40	IAmb	IAmb	11 26 29.9	
	comp=Z,12nm,1.0s						
C18K	Utukok River	87.46	7	P	P	11 26 29.8	+1.6
	baz=197						
DAWY	Dawson	87.47	16	IAmb	IAmb	11 26 29.1	
	comp=Z,7.0nm,0.7s						
DAWY	Dawson	87.47	16	P	P	11 26 28.6	+0.2
	baz=218,SNR=8.1						
M31M	Drury Creek, Y	87.50	19	IAmb	IAmb	11 26 28.9	
	comp=Z,8.5nm,0.9s						
M31M	Drury Creek, Y	87.50	19	P	P	11 26 27.6	-0.9
	baz=222,SNR=5.8						
TPB05	Hovey Rd	87.66	57	IAmb	IAmb	11 26 32.4	
	comp=Z,18nm,0.9s						
D19K	Kuna River	87.68	8	IAmb	IAmb	11 26 29.5	
	comp=Z,7.0nm,0.7s						
D19K	Kuna River	87.68	8	P	P	11 26 29.0	-0.2
	baz=200,SNR=5.3						
MOOW	Moose Ponds	87.71	42	IAmb	IAmb	11 26 34.0	
	comp=Z,8.8nm,1.0s						
COLD	Coldfoot	87.72	11	IAmb	IAmb	11 26 30.4	
	comp=Z,20nm,1.0s						
COLD	Coldfoot	87.72	11	P	P	11 26 29.6	+0.2
	baz=208,SNR=13						
S22A	4UR Ranch, Cre	87.74	49	IAmb	IAmb	11 26 32.5	
	comp=Z,16nm,1.4s						
O20A	White River Ci	87.76	47	IAmb	IAmb	11 26 32.1	
	comp=Z,17nm,1.0s						
G24K	Hadweenzic Riv	87.78	12	P	P	11 26 29.2	-0.5
	baz=210						
K29M	Barlow Dome	87.81	17	IAmb	IAmb	11 26 31.0	
	comp=Z,9.6nm,0.9s						
K29M	Barlow Dome	87.81	17	P	P	11 26 30.2	+0.1
	baz=219						
FARO	Faro, Yukon	87.85	20	P	P	11 26 30.2	+0.1
	baz=223						
YHB	Horse Butte	87.89	41	IAmb	IAmb	11 26 33.3	
	comp=Z,14nm,1.1s						
WTLY	Watson Lake, Y	87.92	23	P	P	11 26 31.4	+0.9
	baz=227,SNR=49						
YHL	Hebgen Lake	87.95	41	IAmb	IAmb	11 26 33.7	
	comp=Z,18nm,1.1s						
YMR	Madison River	88.00	42	IAmb	IAmb	11 26 33.9	
	comp=Z,22nm,1.3s						
BOZ	Bozeman (W)	88.02	41	IAmb	IAmb	11 26 33.4	
	comp=Z,12nm,1.2s						
BW06	Boulder Array	88.04	44	IAmb	IAmb	11 26 32.9	
	comp=Z,12nm,1.0s						
PD31	Pinedale Array	88.04	44	IAmb	IAmb	11 26 32.9	
	comp=Z,10nm,0.9s						
PDAR	Pinedale Array	88.04	44	P	P	11 26 31.9	+0.1
	comp=Z,6.0nm,0.8s,baz=218,slow=3.2,SNR=40						
	comp=Z,6.0nm,0.8s						
PDAR	Pinedale Array	88.04	44		P	11 26 32.1	+0.3
C19K	Lookout Ridge	88.08	7	P	P	11 26 31.4	+0.3
	baz=199						
D20K	Etivluk River	88.08	8	P	P	11 26 31.0	0.0
	baz=202						
MAYO	Mayo, Yukon	88.09	18	P	P	11 26 31.6	+0.4
	baz=221,SNR=15						
J29N	Klondike Camp	88.09	17	P	P	11 26 31.7	+0.4
	baz=219,SNR=13						
I27K	Kandik River	88.15	15	P	P	11 26 31.2	-0.3
	baz=216						
SAND	Sanderson	88.26	58	IAmb	IAmb	11 26 34.5	
	comp=Z,13nm,0.9s						
MNHN	Monahans	88.27	56	IAmb	IAmb	11 26 34.4	
	comp=Z,15nm,1.1s						
I28M	Miner Creek	88.44	15	IAmb	IAmb	11 26 33.1	
	comp=Z,8.7nm,0.9s						
I28M	Miner Creek	88.44	15	P	P	11 26 32.5	-0.4
	baz=217						
TOAD	Toad River Com	88.45	25	P	P	11 26 33.4	+0.3
	baz=230,SNR=8.5						
PZH	PanZhiHua	88.50	298	P	P	11 26 35.4	+1.3
HAYD	Hayden	88.60	46	IAmb	IAmb	11 26 36.2	
	comp=Z,13nm,0.9s						
H27K	Steamboat Moun	88.68	14	IAmb	IAmb	11 26 34.9	
	comp=Z,12nm,1.2s						
H27K	Steamboat Moun	88.68	14	P	P	11 26 34.7	+0.7
	baz=216						
J30M	Hart River	88.71	17	P	P	11 26 34.3	+0.1
	baz=220						
C21K	Knifeblade Rid	88.74	9	P	P	11 26 34.7	+0.6
	baz=203						
G26K	Porcupine Rive	88.76	13	IAmb	IAmb	11 26 35.3	
	comp=Z,19nm,1.1s						
G26K	Porcupine Rive	88.76	13	P	P	11 26 34.7	+0.5
	baz=214						
YNE	Yellowstone No	88.76	42	IAmb	IAmb	11 26 37.1	
	comp=Z,13nm,1.1s						
I29M	Ogilvie Camp,	88.78	16	IAmb	IAmb	11 26 34.6	
	comp=Z,13nm,1.1s						
I29M	Ogilvie Camp,	88.78	16	P	P	11 26 33.9	-0.5
	baz=219						
E24K	Your Creek	88.79	11	P	P	11 26 34.5	+0.1
	baz=209,SNR=6.2						
D22K	Ayikyak River	88.80	9	P	P	11 26 34.6	+0.2
	baz=205,SNR=11						
ELIB	Princess Elisa	88.90	187	dP	P	11 26 34.6	-0.5
	comp=Z,8.8nm,0.7s						
F25K	Christian Rive	88.92	12	P	P	11 26 35.0	0.0
	baz=212						
TMB01	Midkiff	88.93	56	IAmb	IAmb	11 26 37.5	
	comp=Z,5.4nm,0.9s						
128A	Castleberry Fa	88.97	55	IAmb	IAmb	11 26 37.6	
	comp=Z,7.7nm,0.8s						
BMAR	Burnt Mountain	89.00	13		P	11 26 35.9	+0.5
TOLK	Toolik Lake Re	89.09	10	P	P	11 26 35.8	0.0
	baz=208						
G27K	Doyon Strip	89.12	14	P	P	11 26 35.8	-0.2
	baz=216						
I30M	Mount Dempster	89.19	17	IAmb	IAmb	11 26 36.9	
	comp=Z,12nm,0.9s						
I30M	Mount Dempster	89.19	17	P	P	11 26 36.2	-0.2
	baz=220						
D23K	Nanushuk River	89.19	10	P	P	11 26 36.4	+0.2
	baz=207						
B20K	Meade River	89.22	7	P	P	11 26 36.6	+0.4
	baz=201						
RLMT	Red Lodge	89.28	42	IAmb	IAmb	11 26 38.8	
	comp=Z,8.4nm,1.1s						
F26K	Sheenjek River	89.31	13	P	P	11 26 37.5	+0.7
	baz=213						
E25K	Arctic Village	89.38	12	P	P	11 26 37.2	+0.1
	baz=212,SNR=6.2						
129A	Stewart Farms,	89.45	55	IAmb	IAmb	11 26 39.8	
	comp=Z,11nm,1.0s						
833A	Chaparral WMA,	89.89	60	IAmb	IAmb	11 26 42.2	
	comp=Z,11nm,0.8s						
EPYK	Eagle Plains	89.98	16	IAmb	IAmb	11 26 40.4	
	comp=Z,14nm,1.0s						
EPYK	Eagle Plains	89.98	16	P	P	11 26 39.8	-0.2
	baz=220,SNR=7.2						
B22K	Teshekpuk Lake	90.02	8	P	P	11 26 38.9	-1.0
	baz=204						
G29M	Pine Creek	90.07	15	P	P	11 26 40.2	-0.1
	baz=219						
F28M	Old Crow	90.19	14	P	P	11 26 40.8	-0.1
	baz=217						
H31M	Peel River	90.19	17	P	P	11 26 40.7	-0.2
	baz=222						
RTBA	Rita Blanca	90.21	52	IAmb	IAmb	11 26 43.1	
	comp=Z,6.4nm,0.9s						
D25K	Kavik River	90.26	11	IAmb	IAmb	11 26 41.2	
	comp=Z,5.4nm,0.9s						
D25K	Kavik River	90.26	11	P	P	11 26 41.0	-0.2
	baz=211						
A22K	Sinclair Lake	90.42	8	P	P	11 26 41.8	0.0
	baz=203						
A21K	Barrow	90.52	7	P	P	11 26 42.6	+0.4
	baz=202						
DKNS	Dickens	90.57	55	IAmb	IAmb	11 26 46.2	
	comp=Z,8.7nm,1.0s						
VNA3	Neumayer Olymp	90.63	177	⇓P	P	11 26 43.0	-0.1
	comp=Z,1.9nm,0.4s						
C27K	Jago River	91.02	12	IAmb	IAmb	11 26 45.5	
	comp=Z,13nm,1.4s						
C27K	Jago River	91.02	12	P	P	11 26 44.7	+0.1
	baz=214						
C26K	Camden Bay	91.04	11	P	P	11 26 45.3	+0.6
	baz=212						
G31M	Satah River	91.04	16		P	11 26 44.3	-0.5
G31M	Satah River	91.04	16	P	P	11 26 44.2	-0.5
	baz=222,SNR=14						
E28M	Babbage River	91.05	14	IAmb	IAmb	11 26 45.5	
	comp=Z,8.1nm,0.9s						
VNA2	Neumayer--Watz	91.06	177	⇓P	P	11 26 44.3	-0.6
	comp=Z,1.4nm,0.4s,baz=181,slow=4.0						
APMT	Aspermont	91.07	55	IAmb	IAmb	11 26 46.2	
	comp=Z,6.6nm,0.7s						
F30M	Barrier River	91.17	15	P	P	11 26 46.2	+0.8
	baz=221						
BRDY	Brady	91.25	58	IAmb	IAmb	11 26 47.9	
	comp=Z,6.4nm,1.2s						
E29M	Blow River	91.26	14	P	P	11 26 45.1	-0.6
	baz=219						
D27M	Malcolm River	91.26	13	IAmb	IAmb	11 26 48.3	
	comp=Z,11nm,1.4s						
D27M	Malcolm River	91.26	13	P	P	11 26 45.7	-0.1
	baz=216						
F31M	Tsiigehtchic	91.56	16	P	P	11 26 46.8	-0.4
	baz=223,SNR=12						
WRGLY	Wrigley	91.88	22	P	P	11 26 48.9	+0.2
	baz=232						
RSSD	Black Hills	92.25	44		P	11 26 51.5	+0.3
RSSD				IAmb	IAmb	11 26 54.1	
	comp=Z,11nm,1.1s						
INK	Inuvik	92.26	15	IAmb	IAmb	11 26 50.4	
	comp=Z,10.0nm,1.1s						
INK	Inuvik	92.26	15	P	P	11 26 49.7	-0.6
	baz=223,SNR=6.0						
YKA	Yellowknife Ar	94.82	25	P	P	11 27 01.7	-0.4
	comp=Z,0.9nm,0.7s,baz=254,slow=4.8,SNR=14						
YKA				PP	PP	11 31 00.0	-2.3
	comp=Z,0.6nm,1.0s,baz=243,slow=7.2,SNR=3.7						
	comp=Z,0.9nm,0.7s						
C36M	Paulatuk	95.49	17	P	P	11 27 05.2	+0.3
	baz=232						
A36M	Sachs Harbour	96.84	15	P	P	11 27 11.3	+0.4
	baz=231						
MKAR	Makanchi Array	108.66	314	PKiKP	PKiKP	11 32 04.0	-1.4
	comp=Z,0.5nm,0.5s,baz=124,slow=2.0,SNR=4.8						
KURBB	Kurchatov Arra	111.45	318	PKiKP	PKiKP	11 32 08.5	-2.0
	comp=Z,0.6nm,0.6s,baz=93,slow=2.2,SNR=5.1						
BVAR	Borovoye Array	116.45	321	PKP	PKPdf	11 32 18.8	-1.2
	comp=Z,1.6nm,0.5s,baz=124,slow=1.5,SNR=6.6						
ARCES	ARCESS Array B	126.32	349	PKP	PKPdf	11 32 38.0	-0.6
	comp=Z,4.4nm,0.6s,baz=28,slow=1.4,SNR=14						
FINES	FINESS Array B	133.11	344	PKP	PKPdf	11 32 49.7	-1.8
	comp=Z,3.3nm,0.8s,baz=88,slow=1.3,SNR=6.3						
FINES				SKP	SKPbc	11 35 21.9	-0.5
	comp=Z,3.4nm,0.7s,baz=66,slow=6.2,SNR=7.0						
NOA	NORSAR Array B	136.43	353	PKP	PKPdf	11 32 58.0	+0.1
	comp=Z,0.4nm,0.4s,baz=14,slow=3.8,SNR=2.5						
HFS	Hagfors	136.96	351	PKP	PKPdf	11 32 58.2	-0.6
	comp=Z,1.8nm,0.6s,baz=323,slow=0.7,SNR=1.9						
AKASG	Malin Array Be	140.31	332	PKhKP	PKPpre	11 32 55.1	
	comp=Z,0.8nm,0.3s,baz=322,slow=10,SNR=7.4						
AKASG				SKPbc	SKPbc	11 35 41.5	-2.4
	comp=Z,0.7nm,0.5s,baz=41,slow=3.7,SNR=4.3						
GKP	Gorka Klasztor	142.59	344	ePKP	PKPdf	11 33 09.7	+0.5
EKA	Eskdalemuir Ar	142.69	4	PKP	PKPdf	11 33 05.6	-3.6
	comp=Z,7.3nm,0.7s,baz=331,slow=2.6,SNR=14						
GAL1	Galloway	143.03	5	eP	PKPab	11 33 06.5	-1.3
LODK	Lodwar	143.09	251		PKPbc	11 33 09.8	0.0
BRTR	Keskin Array B	144.31	314	PKP	PKPdf	11 33 12.4	-0.4
	comp=Z,1.5nm,0.7s,baz=131,slow=1.2,SNR=7.1						
BUR08	Bucovina Ar. S	144.35	331		PKPbc	11 33 12.9	+0.2
BURAR	Bucovina Array	144.36	331	⇓P	PKPbc	11 33 12.7	0.0
KIRS	Kirsehir-Merke	144.38	313	⇑P	PKPbc	11 33 13.1	+0.1
TESR	Tescani	144.47	329	⇑P	PKPdf	11 33 02.9	-10
WLF1	Llynfaes	144.62	5	eP	PKPdf	11 33 11.3	-1.4
TPGR	Topolog	144.67	325	⇓P	PKPdf	11 33 05.1	-8.0
VRI	Vrincioaia	144.88	328	⇑P	PKPdf	11 33 13.1	-0.4
KSP	Ksiaz	145.03	343	ePKP	PKPbc	11 33 14.7	+0.2
FOEL	Foel Wylfa	145.12	4	eP	PKPdf	11 33 13.7	+0.1
IWEX	Carrickbyrne,	145.26	8	eP	PKPbc	11 33 14.6	-0.5
OSTC	Ostas	145.30	343	ePKP	PKPab	11 33 16.1	-0.7
UPC	Upice	145.41	343	ePKP	PKPbc	11 33 15.9	+0.3
CLL	Collm	145.43	346	⇑iPKPbc	PKPbc	11 33 15.4	-0.2
	comp=Z,25nm,0.8s						
CLL				i x	x	11 33 16.9	
	comp=Z,30nm,0.9s						
DPC	Dobruska-Polom	145.46	342	ePKP	PKPbc	11 33 16.3	+0.5
DOPR	Dopca	145.48	329	⇓P	PKPbc	11 33 16.7	+0.7
ISR	Istrita	145.49	327	⇑P	PKPdf	11 33 01.8	-13
LANS	Liptovska Anna	145.49	338	ePKP	PKPab	11 33 16.9	-0.7
HLM1	Long Mynd	145.51	4	eP	PKPdf	11 33 14.7	+0.4
MLR	Muntele Rosu	145.54	328	⇓P	PKPdf	11 33 06.1	-8.6
KALB	Balgarevo	145.59	323	⇓P	PKPdf	11 33 03.7	-11
MORC	Moravsky Berou	145.59	341	⇑P	PKPbc	11 33 16.7	+0.5
MORC	Moravsky Berou	145.59	341	ePKP	PKPdf	11 33 15.3	+0.7
BRG	Berggiesshubel	145.62	345	⇑iPKPb		11 33 16.2	
BRG				Amp		11 33 17.0	
	comp=Z,9.7nm,0.8s						
HSKC	Hora Svate Kat	145.99	345	ePKP	PKPbc	11 33 17.3	0.0
MARR	Marisel-Cluj	146.01	332	⇓P	PKPbc	11 33 17.2	-0.4
MCH1	Michaelchurch	146.02	4	eP	PKPdf	11 33 15.9	+0.8
VOIR		146.02	329	⇑P	PKPbc	11 33 17.6	0.0
DRGR		146.11	333	⇓P	PKPbc	11 33 17.5	-0.3
MONM	Monmouth	146.19	4	eP	PKPbc	11 33 16.9	-0.8
ARR	Arges	146.28	329	⇓P	PKPbc	11 33 19.0	+0.7
PRU	Pruhonice	146.28	344	ePKP	PKPbc	11 33 18.0	0.0
VRAC	Vranov	146.30	341	ePKP	PKPbc	11 33 17.5	-0.7
KRUC	Moravsky	146.58	341	ePKP	PKPbc	11 33 17.6	-1.3
LOT	Lotru	146.63	330	⇑P	PKPdf	11 33 03.6	-13
MODS	Modra-Piesok	146.90	340	ePKP	PKPbc	11 33 20.1	+0.3
SIRR	Siria	146.97	333	⇑P	PKPbc	11 33 19.1	-0.9
GZR	Gura Zlata	147.14	331	⇑P	PKPbc	11 33 19.9	-0.7
MEM	Membach	147.26	354	dPKP	PKPbc	11 33 20.1	-0.6
BTNL	Ternell	147.27	354	dPKP	PKPbc	11 33 20.3	-0.4
KHC	Kasperske Hory	147.31	344	ePKP	PKPbc	11 33 21.0	+0.1
CKRC	Cesky Krumlov	147.41	343	ePKP	PKPbc	11 33 21.1	0.0
BZS	Buzias	147.50	332	⇑P	PKPbc	11 33 20.3	-1.1
GERES	GERESS Array B	147.54	344	PKPbc	PKPbc	11 33 21.2	-0.4
	comp=Z,3.6nm,0.6s,baz=20,slow=4.3,SNR=11						
HERR	Herculane	147.70	331	⇓P	PKPbc	11 33 21.1	-0.9
CONA	Conrad Observa	147.75	341	i PKP	PKPbc	11 33 22.0	-0.1
	comp=Z,7.0nm,0.8s						
RCHB	Rochefort	147.79	355	dPKP	PKPbc	11 33 21.6	-0.3
RONA	Rosalia, Austr	147.81	340	ePKP	PKPbc	11 33 21.5	-0.7
	comp=Z,4.2nm,0.6s						
DOU	Dourbes	147.90	355	dPKP	PKPbc	11 33 21.9	-0.3
MDVR	Moldovita	148.10	331	⇑P	PKPbc	11 33 22.6	-0.4
MOA	Molln	148.30	343	ePKP	PKPbc	11 33 23.1	-0.3
	comp=Z,5.8nm,0.6s						
ARSA	Arzberg	148.46	341	ePKiKP	PKiKP	11 33 25.3	+0.4
	comp=Z,3.7nm,1.2s						
CAVK	Edirne/Enez-Ca	148.59	321	⇓P	PKPdf	11 33 19.9	+0.2
BIOA	Bad Ischl, Aus	148.62	343	ePKP	PKPbc	11 33 23.5	-0.7
	comp=Z,1.0nm,0.4s						
BOVS	Bovan	148.97	330	⇑P	PKPbc	11 33 24.5	-0.6
SOKA	Soboth	149.12	341	i PKP	PKPbc	11 33 24.2	-1.3
	comp=Z,6.0nm,0.9s						
LESA	Schwarzleotal	149.12	344	ePKP	PKPbc	11 33 24.9	-0.5
	comp=Z,9.2nm,1.1s						
KBA	Koelnbreinsper	149.26	343	ePKP	PKPbc	11 33 25.2	-0.7
	comp=Z,6.2nm,0.5s						
OBKA	Obir	149.42	341	ePKP	PKPbc	11 33 25.9	-0.3
	comp=Z,6.0nm,1.1s						
WATA	Walderalm	149.48	345	i PKP	PKPbc	11 33 25.7	-0.7
	comp=Z,11nm,0.9s						
RETA	Reutte	149.53	347	ePKP	PKPbc	11 33 25.9	-0.6
	comp=Z,6.4nm,0.9s						
WTTA	Wattenberg	149.53	345	i PKP	PKPbc	11 33 26.2	-0.3
	comp=Z,17nm,0.8s,SNR=5.2						
MOTA	Moosalm	149.58	346	ePKP	PKPbc	11 33 25.9	-0.8
	comp=Z,15nm,1.1s						
MYKA	Terra Mystica	149.59	342	i PKP	PKPbc	11 33 25.4	-1.2
	comp=Z,8.1nm,0.7s						
SQTA	Sankt Quirin	149.68	346	ePKP	PKPbc	11 33 26.2	-0.7
	comp=Z,13nm,0.8s						
ABTA	Abfaltersbach	149.79	344	ePKP	PKPbc	11 33 25.8	-1.3
	comp=Z,15nm,0.8s						
LJU	Ljubljana	149.84	341	i PKPbc	PKPbc	11 33 26.5	-0.6
CRNS	Crni Vrh	149.90	341	i PKPbc	PKPbc	11 33 26.2	-1.0
DAVA	Damuels	149.91	348	i PKP	PKPbc	11 33 27.5	+0.1
	comp=Z,4.5nm,0.6s						
FETA	Feichten	149.97	346	ePKP	PKPbc	11 33 27.1	-0.5
	comp=Z,10.0nm,0.8s,SNR=6.8						
BLY	Banja Luka	150.04	336	⇑P	PKPbc	11 33 27.5	-0.1
CEY	Cerknica	150.15	341	i PKPbc	PKPbc	11 33 27.1	-0.8
FUORN	Ofenpass-Fuorn	150.46	347		PKPbc	11 33 28.6	-0.3
TUE	Stuetta	150.79	348		PKPbc	11 33 29.3	-0.3
ESDC	Sonseca Array	158.09	10	PKPab	PKPab	11 34 09.4	-1.5
	comp=Z,2.4nm,0.9s,baz=348,slow=3.5,SNR=11						
DBIC	Dimbokro	167.43	154	PKPab	PKPab	11 34 52.2	-0.3
	comp=Z,3.5nm,0.9s,baz=214,slow=3.6,SNR=3.0						
TORD	Torodi Ar. Bea	175.02	191	PKP	PKPdf	11 33 43.9	-2.5
	comp=Z,1.0nm,1.0s,baz=290,slow=2.0,SNR=4.1						
TORD				PKPab	PKPab	11 35 24.9	-1.1
	comp=Z,0.3nm,0.6s,baz=168,slow=3.0,SNR=2.2						

*IDC **03** 11:18:03.8±0.6, 4.°99S×134.°19E, h0km, mb4.4/15, mbtmp4.5/20, ML4.6/3, MS3.9/29, Error ellipse: s-maj=21.8km s-min=13.5km az=56.0*

*MOS **03** 11:18:03.1±0.7, 5.°08S×134.°17E, h12km, mb4.9/25, Error ellipse: s-maj=11.5km s-min=6.7km az=115.2*

*NEIC **03** 11:18:07.5±2.1, 5.°11S±0.°05×134.°21E±0.°06, h27km±1km, mb5.0/76, Error ellipse: s-maj=8.4km s-min=7.9km az=89.0*

*DJA **03** 11:18:08.3±0.2, 5˚S±2˚×13˚4E±˚, h42km±7km, M5.1/40, mb5.3/40, mB5.5/25, MLv5.3/28, Mw(mB)5.0/25*

ISC 03 11:18:07.3±0.3**, 5.°11S**±0.°04×**134.°17E**±0.°04**, h28km, n247,** σ1^{s}53/215**, mb4.9**/100**, MS4.0**/28**, 16C-9D, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.51	342	P	Pn	11 18 31.8	-0.7
KMPI				S	Sn	11 18 51.4	+0.2
FAKI	Fak Fak	2.90	319		Pn	11 18 51.6	0.0
FAKI	Fak Fak	2.90	319	P	Pn	11 18 51.9	+0.3
FAKI	Fak Fak	2.90	319	S	Sn	11 19 25.5	-0.1
FAKI	Fak Fak	2.90	319	P	Pn	11 18 51.6	0.0
FAKI				S	Sn	11 19 25.2	-0.4
RKPI	Ransiki, Papua	3.57	0	P	Pn	11 19 00.0	-0.9
RKPI				S	Sn	11 19 41.3	-0.9
SRPI	Serui, Papua	3.82	33	P	Pn	11 19 05.4	+1.1
SAUI	Saumlaki	4.04	225		Pn	11 19 09.5	+2.2
SAUI	Saumlaki	4.04	225	P	Pn	11 19 10.0	+2.7
SAUI	Saumlaki	4.04	225	P	Pn	11 19 09.4	+2.2
MWPI	Manokwari, Pap	4.15	358	P	Pn	11 19 09.2	+0.3
BNDI	Bandanaira	4.29	278	P	Pn	11 19 12.4	+1.6
BNDI	Bandanaira	4.29	278	S	Sn	11 20 01.8	+1.9
BNDI	Bandanaira	4.29	278	P	Pn	11 19 13.2	+2.4
BAKI	Biak	4.34	26	P	Pn	11 19 11.8	+0.3
WAMI	Wamena	4.69	75	P	Pn	11 19 19.8	+3.6
SIJI	Sorong	5.11	325	Pn	Pn	11 19 21.8	-0.3
	32nm,0.3s,baz=189,slow=23,SNR=74						
SIJI				Sn	Sn	11 20 14.6	-5.7
	47nm,0.3s,baz=83,slow=20,SNR=11						
SIJI				LR	LR	11 21 42.0	
	comp=Z,595nm,18.8s,baz=98,slow=43						
	264nm,0.6s						
SIJI	Sorong	5.11	325	P	Pn	11 19 21.4	-0.7
	1.4nm9µm259nm,0.7s						
SWI	Sorong	5.12	325	P	Pn	11 19 22.1	-0.1
	2.4nm6µm482nm,0.7s						
MSAI	Masohi	5.51	288	P	Pn	11 19 28.6	+1.0
	3.3nm11µm494nm,0.7s						
KRAI	Karang Ratu	6.03	287	P	Pn	11 19 36.6	+1.9
	1.4nm170nm,0.8s						
AAI	Ambon	6.12	283	P	Pn	11 19 36.4	+0.4
	1.4nm4µm277nm,0.7s						
GENI	Genyem	6.49	68	P	Pn	11 19 41.9	+1.0
	252nm,1.1s						
GENI	Genyem	6.49	68	S	Sn	11 20 56.2	+2.1
	252nm,1.1s						
GENI	Genyem	6.49	68	P	Pn	11 19 41.0	+0.1
	1.7nm3µm250nm,1.1s						
JAY	Jayapura	7.01	69	Pn	Pn	11 19 47.7	-0.5

4.0nm,0.3s,baz=213,slow=14,SNR=8.5
JAY Sn **Sn** **11 21 03.2 -3.9**
3.2nm,0.3s,baz=134,slow=17,SNR=1.7
44nm,0.8s
JAY **Jayapura** **7.01 69** P **Pn** **11 19 47.3 -0.9**
0.4nm71nm,1.1s
NLAI **Namlea** **7.29 284** P **Pn** **11 19 54.4 +2.4**
1.2nm2um156nm,0.5s
KDU **Kakadu** **7.71 192** P **Pn** **11 19 56.8 -1.0**
comp=Z,49nm,1.0s
DRS **Darwin Rock St** **7.96 204** P **Pn** **11 20 02.7 +1.5**
comp=Z,392nm,0.9s
MTN **Manton Dam** **8.25 201** P **Pn** **11 20 05.2 0.0**
comp=Z,174nm,1.0s
MTN **Manton Dam** **8.25 201** **Pn** **11 20 05.1 -0.1**
SANI **Sanana** **8.71 290** P **Pn** **11 20 10.5 -1.0**
comp=Z,92nm,0.8s
SANI **Sanana** **8.71 290** P **Pn** **11 20 10.1 -1.4**
comp=Z,92nm,0.8s
TNTI **Ternate** **8.96 310** **Pn** **11 20 16.2 +1.3**
TNTI **Ternate** **8.96 310** P **Pn** **11 20 16.7 +1.8**
comp=Z,85nm,0.8s
SOEI **Soe** **10.85 244** **Pn** **11 20 40.4 -0.6**
SOEI **Soe** **10.85 244** P **Pn** **11 20 41.7 +0.7**
comp=Z,202nm,0.7s
SOEI **Soe** **10.85 244** P **Pn** **11 20 41.5 +0.5**
comp=Z,2µmcomp=Z,200nm,0.7s
BATI **Baumata** **11.58 243** Pn **Pn** **11 20 51.9 +1.1**
comp=Z,51nm,0.4s,baz=122,slow=4.0,SNR=8.7
BATI Sn **Sn** **11 22 53.3 -6.0**
comp=Z,13nm,0.3s,baz=340,slow=21,SNR=4.2
BATI **Baumata** **11.58 243** P **Pn** **11 20 52.0 +1.1**
comp=Z,109nm,0.6s
KNRA **Kununurra** **11.77 206** P **Pn** **11 20 51.7 -1.8**
comp=Z,358nm,0.8s
KNRA **Kununurra** **11.77 206** **Pn** **11 20 51.7 -1.8**
GTOI **Gorontalo** **12.52 297** P **Pn** **11 21 06.4 +2.7**
EDFI **Ende, Flores** **12.90 253** P **Pn** **11 21 09.4 +0.3**
APSI **Ampana** **13.18 288** P **Pn** **11 21 13.8 +1.1**
comp=Z,2µmcomp=Z,175nm,1.1s
MRSI **Marisa** **13.41 294** P **Pn** **11 21 17.2 +1.2**
comp=Z,36nm,0.6s
PMG **Port Moresby** **13.57 109** Pn **Pn** **11 21 16.4 -1.7**
comp=Z,28nm,0.8s,baz=297,slow=11,SNR=5.7
PMG LR LR 11 26 40.1
comp=Z,669nm,18.8s,baz=292,slow=38
PMG **Port Moresby** **13.57 109**c *iP* **Pn** **11 21 17.9 -0.2**
KAPI **Kappang** **14.36 270** LR LR 11 28 28.1
comp=Z,136nm,20.0s,baz=93,slow=43
SPSI **Sidrap Palu** **14.40 274** P **Pn** **11 21 29.8 +0.4**
comp=Z,65nm,1.0s
WRAB **Tennant Creek** **14.74 179** **Pn** **11 21 32.2 -1.8**
WRAB **Tennant Creek** **14.74 179** P **Pn** **11 21 34.2 +0.2**
comp=Z,110nm,0.9s
WRAB **Tennant Creek** **14.74 179** P **Pn** **11 21 32.2 -1.8**
WRA **Warramunga Arr** **14.75 179** Pn Pn 11 21 28.3 -5.9
comp=Z,1.3nm,0.3s,baz=355,slow=13,SNR=35
WRA Sn Sn 11 24 04.5 -12
comp=Z,1.8nm,0.3s,baz=357,slow=24,SNR=1.8
WRA **Warramunga Arr** **14.75 179** **Pn** **11 21 35.2 +1.1**
WR8 **Warramunga Arr** **14.76 179** **Pn** **11 21 31.1 -3.2**
MPSI **Mapaga** **15.25 290** P **Pn** **11 21 42.3 +1.5**
FITZ **Fitzroy Crossi** **15.37 212** Pn **Pn** **11 21 39.6 -2.8**
comp=Z,7.1nm,0.3s,baz=44,slow=12,SNR=103
FITZ Sn **Sn** **11 24 22.7 -9.2**
comp=Z,12nm,0.3s,baz=196,slow=17,SNR=11
FITZ LR LR 11 28 58.6
comp=Z,388nm,20.5s,baz=38,slow=42
DBNI **Kabupaten Domp** **16.10 257** P **Pn** **11 21 53.2 +1.3**
QIS **Mount Isa** **16.24 161** P **P** **11 21 56.9 +0.4**
comp=Z,32nm,0.8s
MTSU **Mount Surprise** **16.31 143** P **P** **11 21 57.8 +0.5**
comp=Z,83nm,0.8s
PLAI **Plampang** **16.68 256** P **Pn** **11 21 59.6 +0.3**
comp=Z,42nm,0.8s
ASAR **Alice Springs** **18.45 181** P **P** **11 22 21.4 +0.5**
comp=Z,4.7nm,0.3s,baz=1.7,slow=12,SNR=16
ASAR S Sn 11 25 36.2 -10
comp=Z,1.9nm,0.6s,baz=359,slow=27,SNR=1.5
ASAR LR LR 11 30 18.4
comp=Z,372nm,19.2s,baz=360,slow=40
comp=Z,30nm,0.7s
KMMI **Kalianget** **20.18 263** P Pn 11 22 42.0 +0.1
comp=Z,100nm,1.2s
MBWA **Marble Bar** **21.23 220** P **P** **11 22 52.1 +0.9**
comp=Z,57nm,1.0s
MBWA **Marble Bar** **21.23 220** **P** **11 22 51.3 +0.1**
MBWA IAmb IAmb 11 23 01.0
comp=Z,62nm,1.1s
MBWA **Marble Bar** **21.23 220** P **P** **11 22 52.1 +0.9**
comp=Z,33nm,1.0s
PSAC2 **Pilbara Seismi** **21.42 219** P **P** **11 22 55.2 +1.9**
comp=Z,50nm,1.0s
PSAC1 **Pilbara Seismi** **21.46 219** P **P** **11 22 54.5 +0.9**
comp=Z,59nm,1.3s
PSA00 **Pilbara Seismi** **21.46 219** P **P** **11 22 54.5 +0.8**
comp=Z,53nm,1.1s
PSA00 **Pilbara Seismi** **21.46 219** P **P** **11 22 53.5 -0.2**
PSA00 IAmb IAmb 11 23 03.0
comp=Z,39nm,0.8s
PSA00 **Pilbara Seismi** **21.46 219** **P** **11 22 53.2 -0.4**
PSA00 IAmb IAmb 11 23 03.0
comp=Z,37nm,1.1s
PSA00 **Pilbara Seismi** **21.46 219** P **P** **11 22 56.3 +2.6**
comp=Z,52nm,1.1s
PSAB3 **Pilbara Seismi** **21.47 219** P **P** **11 22 55.0 +1.2**
comp=Z,52nm,1.0s
QLP **Quilpie** **23.42 157** P **P** **11 23 14.3 +0.1**
comp=Z,311nm,0.9s
TATA **Tatamba Isabel** **25.66 99** P **P** **11 23 37.8 +2.8**
comp=Z,166nm,1.0s
EIDS **Eidsvold** **25.86 143** P **P** **11 23 36.0 -0.8**
comp=Z,13nm,1.0s
EIDS **Eidsvold** **25.86 143** **P** **11 23 35.4 -1.4**
HNR **Honiara** **25.92 101** P **P** **11 23 38.5 +1.1**
comp=Z,6.9nm,1.0s,baz=276,slow=5.2,SNR=5.1
HNR LR LR 11 33 40.7
comp=Z,16nm,21.1s,baz=48,slow=36
comp=Z,6.9nm,1.0s
HNR **Honiara** **25.92 101** IAmb IAmb 11 23 44.7
comp=Z,9.9nm,0.8s
HNR **Honiara** **25.92 101** P **P** **11 23 38.5 +1.1**
HNR pmax pmax
comp=Z,10.0nm,0.8s
FORT **Forrest** **26.18 192** P **P** **11 23 41.6 +2.1**
comp=Z,51nm,0.7s
FORT **Forrest** **26.18 192** **P** **11 23 39.4 -0.1**
FORT IAmb IAmb 11 23 48.0
comp=Z,35nm,0.8s
BBJI **Bungbulang** **26.46 264** **P** **11 23 41.1 -1.2**
BBJI IAmb IAmb 11 23 57.9
comp=Z,21nm,0.8s
BBJI **Bungbulang** **26.46 264** P **P** **11 23 44.5 +2.1**
comp=Z,28nm,0.8s
STKA **Stephens Creek** **27.53 166** P **P** **11 23 52.8 +1.1**
comp=Z,2.4nm,0.4s,baz=346,slow=11,SNR=7.7
STKA LR LR 11 35 17.6
comp=Z,419nm,18.4s,baz=336,slow=37
comp=Z,2.4nm,0.4s
STKA **Stephens Creek** **27.53 166** P **P** **11 23 52.8 +1.1**
STKA pmax pmax
comp=Z,133nm,1.0s
NWAO **Narrogin (SRO)** **31.87 208** LR LR 11 37 35.7
comp=Z,189nm,18.1s,baz=346,slow=37
JOW **Kunigami** **32.26 350** LR LR 11 36 36.4
comp=Z,436nm,19.9s,baz=128,slow=35
JCJ **Chichijima** **32.94 13** LR LR 11 36 39.4
comp=Z,147nm,18.6s,baz=224,slow=34
QIZ **Qiongzhong** **33.90 316** P **P** **11 24 49.6 +1.5**
QIZ S **S** **11 30 14.4 +3.2**
QIZ LR LR
comp=Z,190nm,15.7s
QIZ LR LR
comp=Z,140nm,16.1s
QIZ LR LR
comp=Z,170nm,16.7s
DZM **Mont Dzumac** **35.49 121** *e*LR LR 11 34 29.1
comp=Z,415nm,24.2s
JNU **Nakatsue** **38.15 356** LR LR 11 39 48.6
comp=Z,181nm,20.6s,baz=184,slow=34
NJ2 **Nanjing** **39.73 339**⇑ *iP* **P** **11 25 39.2 +1.7**
NJ2 pmax pmax
comp=Z,5.0nm,0.7s
WHN **Wuhan** **40.21 333** P **P** **11 25 42.8 +1.3**
WHN pmax pmax
comp=Z,44nm,0.9s
GYA **Guiyang** **41.17 321** ⇑P **P** **11 25 50.5 +0.9**
GYA pmax pmax
comp=Z,14nm,1.0s
MAJO **Matsushiro** **41.60 5**⇑ *iP* **P** **11 25 53.1 +0.1**
MAJO pmax pmax
comp=Z,10.0nm,0.9s
MJAR **Matsushiro Arr** **41.60 5** LR LR 11 40 25.6
comp=Z,188nm,19.0s,baz=172,slow=32
CMAR **Chiang Mai Arr** **41.88 305** P **P** **11 25 56.0 +0.5**
comp=Z,1.1nm,0.3s,baz=131,slow=7.1,SNR=15
comp=Z,1.1nm,0.3s
CMAR **Chiang Mai Arr** **41.88 305** P **P** **11 25 55.4 -0.1**
CMAR **Chiang Mai Arr** **41.88 305** *i* P **P** **11 25 56.5 +1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CHTO **Chiang Mai** **42.06 305** P **P** **11 25 56.3 -0.7**
CHTO **Chiang Mai** **42.06 305** P **P** **11 25 56.3 -0.7**
CHTO pmax pmax
comp=Z,7.0nm,1.0s
KSRS **Korea Array** **42.74 353** P **P** **11 26 02.5 +0.4**
comp=Z,3.6nm,0.9s,baz=176,slow=10,SNR=7.2
KSRS LR LR 11 42 30.7
comp=Z,130nm,21.1s,baz=165,slow=34
comp=Z,3.6nm,0.9s
KMI2 **Kunming** **42.86 316** P P 11 26 09.8 +6.1
KMI2 pmax pmax
comp=Z,13nm,1.4s
TIA **Tai'an** **44.10 340** P **P** **11 26 13.4 +0.2**
TIA pmax pmax
comp=Z,31nm,0.8s
LYN **LuoYang** **44.44 334** ⇑P P 11 26 25.2 +9.3
LYN pmax pmax
comp=Z,33nm,1.0s
LYN **LuoYang** **44.44 334** P **P** **11 26 15.7 -0.2**
LYN pmax pmax
comp=Z,16nm,0.7s
XAN **Xi'an** **45.67 330** ⇓P **P** **11 26 25.7 -0.1**
XAN pmax pmax
comp=Z,17nm,1.1s
HNS **HongShan** **46.02 338** ⇓P **P** **11 26 28.9 +0.5**
HNS pmax pmax
comp=Z,20nm,0.9s
CD2 **Chengdu** **46.12 323** P **P** **11 26 29.3 -0.1**
CD2 pP sP 11 26 38.9 -1.0
CD2 sP pwP 11 26 42.9 +1.9
CD2 pmax pmax
comp=Z,10.0nm,0.8s
SNY **Shenyang** **47.70 349** ⇓P **P** **11 26 43.0 +1.5**
SNY pmax pmax
comp=Z,9.0nm,1.2s
BJI2 **Beijing** **47.87 341** P **P** **11 26 43.3 +0.5**
BJI2 pP **sP** **11 26 53.1 -0.2**
BJI2 pmax pmax
comp=Z,11nm,1.2s
BJI2 pmax pmax
comp=Z,91nm,5.6s
USRK **Ussuriysk Ar.** **49.12 358** P **P** **11 26 52.2 -0.2**
comp=Z,3.5nm,0.6s,baz=189,slow=8.6,SNR=3.3
comp=Z,3.5nm,0.6s
CN2 **Changchun** **49.32 352** P **P** **11 26 54.4 +0.5**
CN2 pP sP 11 27 04.2 -0.2
CN2 S **S** **11 33 58.5 -0.1**
ASAJ **Asahikawa** **49.58 8** LR LR 11 46 02.6
comp=Z,99nm,21.4s,baz=182,slow=34
MDJ **Mudanjiang** **49.67 356** **P** **11 26 56.0 -0.6**
MDJ IAmb IAmb 11 27 12.8
comp=Z,19nm,1.0s
MDJ **Mudanjiang** **49.67 356** P **P** **11 26 56.9 +0.3**
MDJ pmax pmax
comp=Z,15nm,1.2s
LZDM **Lanzhou Array** **49.85 327** P **P** **11 26 60.0 +1.5**
comp=Z,0.8nm,0.4s,baz=161,slow=9.4,SNR=6.1
comp=Z,0.8nm,0.4s
LZH **Lanzhou** **49.87 328** *e*P **P** **11 26 59.6 +1.1**
LZH pP pP 11 27 07.4 +1.4
LZH pmax pmax
comp=Z,16nm,1.3s
HHC **Hu-ho-hao-te** **50.21 338**⇑ *iP* **P** **11 27 02.4 +1.5**
HHC pP sP 11 27 10.8 -0.6
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,140nm,7.6s
LTZ **Lake Taylor** **50.44 144** P **P** **11 27 00.9 -1.6**
BTO2 **Baotou** **50.78 336** *e*P **P** **11 27 08.2 +3.0**
BTO2 pmax pmax
comp=Z,11nm,0.8s
BTO2 pmax pmax
comp=Z,420nm,6.3s
BNX **BinXian** **50.98 354** ⇑P **P** **11 27 06.2 -0.3**
BNX pmax pmax
comp=Z,17nm,1.2s
SHL **Shillong** **51.13 309** P **P** **11 27 08.0 -0.2**
SHL IAmb IAmb 11 27 24.9
comp=Z,13nm,1.0s
SHL **Shillong** **51.13 309** P **P** **11 27 08.0 -0.2**
SHL pmax pmax
comp=Z,13nm,1.0s
XLT **XiLinHaoTe** **51.44 343** *e*P **P** **11 27 10.8 +0.7**
XLT pP sP 11 27 20.7 +0.1
XLT sP pwP 11 27 22.1 +0.4
XLT pmax pmax
comp=Z,7.0nm,0.6s
XLT pmax pmax
comp=Z,70nm,6.1s
YSS **Yuzhno-Sakhali** **52.39 7** *e*P **P** **11 27 16.0 -1.0**
YSS *e*S **S** **11 34 39.0 -2.0**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,300nm,14.0s
KLR **Kul'dur** **54.15 358** LR LR 11 48 03.8
comp=Z,24nm,20.7s,baz=164,slow=33
KLR **Kul'dur** **54.15 358**⇑ *iP* **P** **11 27 30.1 +0.2**
KLR pmax pmax
comp=Z,3.0nm,0.9s
GTA2 **Gaotai** **54.55 328** *e*P **P** **11 27 34.2 +1.0**
GTA2 pP sP 11 27 42.7 -1.1
GTA2 pmax pmax
comp=Z,12nm,1.1s
PALK **Pallekele** **54.75 283** LR LR 11 53 14.5
comp=Z,43nm,19.9s,baz=102,slow=39
GOMU **GeErMu** **55.18 321** P **P** **11 27 37.7 -0.4**
GOMU pP pP 11 27 47.0 +1.2
GOMU sP pwP 11 27 51.7 +1.9
GOMU pmax pmax
comp=Z,4.0nm,1.3s
HEH **HeiHe** **55.45 355** *e*P **P** **11 27 39.5 +0.2**
HEH pmax pmax
comp=Z,3.0nm,1.1s
HILR **Hailar Array B** **55.87 349** P **P** **11 27 42.1 -0.2**
comp=Z,2.9nm,0.6s,baz=157,slow=9.6,SNR=4.6
comp=Z,2.9nm,0.6s
ULN **Ulaanbaatar** **57.89 339** P **P** **11 27 57.1 +0.2**
ULN **Ulaanbaatar** **57.89 339**⇑ *iP* **P** **11 27 58.3 +1.4**
ULN pmax pmax
comp=Z,7.0nm,0.9s
SONM **Songino Array** **58.10 338** P **P** **11 27 59.3 +1.0**
comp=Z,3.4nm,0.8s,baz=154,slow=8.9,SNR=19
SONM LR LR 11 54 02.5
comp=Z,50nm,19.4s,baz=66,slow=37
comp=Z,3.4nm,0.8s
SONM **Songino Array** **58.10 338** P **P** **11 27 58.2 -0.1**
SONM **Songino Array** **58.10 338** P **P** **11 27 58.2 -0.1**
SONM pmax pmax
comp=Z,4.0nm,0.9s
ZEA **Zeya** **58.92 355** *e*P **P** **11 28 03.7 0.0**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
HYB **Hyderabad** **59.29 294** *e*P **P** **11 28 06.8 -0.2**
HYB *e*PcP **PcP** **11 28 54.5 -0.6**
HYB *e*PP **PP** **11 30 19.3 +1.0**
PETK **Petropavlovsk-** **61.31 16** P **P** **11 28 20.5 +0.3**
comp=Z,3.1nm,0.9s,baz=179,slow=4.8,SNR=5.1
comp=Z,3.1nm,0.9s
ZAK **Zakamensk** **61.36 338** *e*P **P** **11 28 20.3 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.4s
MOY **Mondy** **63.25 338** *e*P **P** **11 28 34.3 +0.9**
MOY pmax pmax
comp=Z,14nm,1.1s
WMQ **Urumqi** **64.18 324** *e*P **P** **11 28 41.1 +1.5**
WMQ pP sP 11 28 49.2 -1.1
WMQ pmax pmax
comp=Z,22nm,1.1s
MA2 **Magadan** **65.81 9** LR LR 11 56 49.8
comp=Z,56nm,18.7s,baz=135,slow=35
MA2 **Magadan** **65.81 9**⇑ *iP* **P** **11 28 50.8 +1.0**
MA2 pmax pmax
comp=Z,3.0nm,1.1s
YAK **Yakutsk** **67.03 358** LR LR 11 55 45.3
comp=Z,77nm,20.7s,baz=114,slow=34
YAK **Yakutsk** **67.03 358** *e*P **P** **11 28 57.4 -0.1**
YAK *e**PP **pP** **11 29 04.4 -0.8**
YAK *e* 11 29 24.6
YAK *e* 11 31 23.6
YAK *e*PPP PPP 11 33 01.2
YAK *e*S **S** **11 37 49.1 -0.1**
YAK *e**SS **sS** **11 38 06.3 +4.2**
YAK *e*SS **SS** **11 42 02.9 -5.6**
YAK pmax pmax
comp=Z,37nm,1.1s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=N,420nm,7.8s
YAK pmax pmax
comp=Z,651nm,7.7s
YAK pmax pmax
comp=E,397nm,6.3s
YAK smax smax
comp=E,189nm,5.9s
YAK smax smax
comp=N,273nm,5.4s
YAK MLR MLR
comp=N,171nm,24.0s
YAK MLR MLR
comp=Z,116nm,16.0s
YAK MLR MLR
comp=E,89nm,24.0s
DGZ **Jazzator, Alta** **67.91 329**⇓ *iP* **P** **11 29 04.3 +0.7**
DGZ pmax pmax
comp=Z,7.0nm,1.0s
WUS **Wushi** **68.06 318** IAmb IAmb 11 29 15.0
comp=Z,12nm,1.3s
MK31 **Makanchi Array** **69.01 325***d* *iP* **P** **11 29 10.7 +0.4**
MKAR **Makanchi Array** **69.01 325** P **P** **11 29 11.1 +0.7**
comp=Z,6.9nm,0.8s,baz=119,slow=7.8,SNR=79
comp=Z,6.9nm,0.8s
MKAR **Makanchi Array** **69.01 325** **P** **11 29 10.9 +0.6**
MAKZ **Makanchi** **69.20 325** **P** **11 29 11.4 -0.1**
MAKZ IAmb IAmb 11 29 13.2
comp=Z,10.0nm,0.8s
MAKZ **Makanchi** **69.20 325** P **P** **11 29 11.4 -0.1**
MAKZ pmax pmax
comp=Z,10.0nm,0.9s
NIL **Nilore** **69.20 309** P **P** **11 29 11.8 0.0**
NIL IAmb IAmb 11 29 13.6
comp=Z,12nm,0.9s
NIL **Nilore** **69.20 309** P **P** **11 29 11.8 0.0**
NIL pmax pmax
comp=Z,13nm,0.9s
TARG **Taragay, Kyrgy** **69.25 318** **P** **11 29 11.5 -0.9**
TARG **Taragay, Kyrgy** **69.25 318** P **P** **11 29 11.5 -0.9**
TARG pmax pmax
comp=Z,6.0nm,1.0s
SEY **Seymchan** **69.25 9**⇑ *iP* **P** **11 29 12.0 +0.6**
SEY pmax pmax
comp=Z,7.0nm,1.0s
KSH2 **Kashi** **69.64 315** P **P** **11 29 15.6 +1.0**
KSH2 pP pP 11 29 22.6 +0.2
KSH2 pmax pmax
comp=Z,8.0nm,0.9s
BOOM **Boomskoye usch** **70.83 318** IAmb IAmb 11 29 33.0
comp=Z,10nm,1.0s
ZALV **Zalesovo Beam** **71.81 332** P **P** **11 29 26.9 -0.3**
comp=Z,4.8nm,0.7s,baz=108,slow=5.1,SNR=26
comp=Z,4.8nm,0.7s
ZALV **Zalesovo Beam** **71.81 332** **P** **11 29 26.5 -0.7**
AAK **Ala-Archa** **71.86 318** LR LR 12 03 06.1
comp=Z,27nm,21.0s,baz=88,slow=38
AAK **Ala-Archa** **71.86 318** **P** **11 29 28.1 +0.1**
AAK **Ala-Archa** **71.86 318**⇑ *iP* **P** **11 29 29.4 +1.4**
AAK pmax pmax
comp=Z,4.0nm,1.0s
ARSB **Arslanbob** **72.34 316** IAmb IAmb 11 29 33.0
comp=Z,29nm,1.5s
KBL **Kabul** **72.79 308** **P** **11 29 34.0 +0.2**
KBL IAmb IAmb 11 29 35.1
comp=Z,9.2nm,0.8s
KBL **Kabul** **72.79 308** P **P** **11 29 34.0 +0.2**
KBL pmax pmax
comp=Z,9.0nm,0.9s
KURK **Kurchatov** **73.14 327** **P** **11 29 35.6 +0.4**
KURK **Kurchatov** **73.14 327**⇑ *iP* **P** **11 29 35.8 +0.5**
KURK pmax pmax
comp=Z,10.0nm,1.1s
KURBB **Kurchatov Arra** **73.15 327** P **P** **11 29 35.2 -0.1**
comp=Z,4.9nm,0.9s,baz=122,slow=5.0,SNR=26
comp=Z,4.9nm,0.9s
KURBB **Kurchatov Arra** **73.15 327** P **P** **11 29 34.2 -1.1**
GAR **Garm** **73.35 313** IAmb IAmb 11 29 39.9
comp=Z,15nm,0.8s
VNDA **Vanda** **73.85 174** LR LR 12 00 43.6
comp=Z,182nm,18.2s,baz=342,slow=35
KK31 **Karatay Array** **74.72 317** *i* P **P** **11 29 44.9 +0.2**
KKAR **Karatay Array** **74.72 317** **P** **11 29 45.0 +0.3**
KKAR **Karatay Array** **74.72 317** P **P** **11 29 45.0 +0.3**
PPT2 **Papeete2** **75.39 107** *e*LR LR 11 53 02.3
comp=Z,113nm,25.2s
TBI **Tubuai** **75.49 113** *e*LR LR 11 53 05.2
comp=Z,442nm,36.0s
TIXI **Tiksi** **76.69 358** LR LR 12 02 30.8
comp=Z,135nm,20.0s,baz=191,slow=35
TIXI **Tiksi** **76.69 358** **P** **11 29 54.4 -0.9**
TIXI **Tiksi** **76.69 358**⇑ *iP* **P** **11 29 55.1 -0.2**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
MAW **Mawson** **78.22 202** LR LR 12 03 00.9
comp=Z,23nm,18.9s,baz=72,slow=34
BVA0 **Borovoye Array** **78.73 326** P **P** **11 30 06.3 -0.8**
BVAR **Borovoye Array** **78.73 326** P **P** **11 30 07.0 -0.2**
comp=Z,6.2nm,0.9s,baz=116,slow=6.8,SNR=24
comp=Z,6.2nm,0.9s
BVAR **Borovoye Array** **78.73 326** P **P** **11 30 07.0 -0.2**
BORK **Borovoye** **78.78 326** **P** **11 30 07.4 0.0**
BORK IAmb IAmb 11 30 08.4
comp=Z,7.2nm,0.8s
BORK **Borovoye** **78.78 326***d* *iP* **P** **11 30 07.2 -0.2**
BORK pmax pmax
comp=Z,8.0nm,0.9s
NRIK **Noril'sk** **80.78 345** P **P** **11 30 17.4 -0.5**
comp=Z,2.4nm,0.8s,baz=149,slow=6.0,SNR=5.2
NRIK LR LR 12 07 58.9
comp=Z,110nm,19.6s,baz=144,slow=37
comp=Z,2.4nm,0.8s
NRIK **Noril'sk** **80.78 345**⇑ *iP* **P** **11 30 18.0 +0.1**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
K13K **Kusilvak Mount** **81.42 25** IAmb IAmb 11 30 30.3
comp=Z,14nm,0.8s
M14K **Bethel** **82.05 26** IAmb IAmb 11 30 33.2
comp=Z,16nm,0.8s
L16K **Owhat River** **83.54 26** P **P** **11 30 32.2 -0.2**
AB31 **Akbulak array** **83.65 321** *i* P **P** **11 30 32.6 -0.7**
ABKAR **Akbulak array** **83.65 321** **P** **11 30 33.2 -0.1**
G16K **Koyuk River** **83.92 22** IAmb IAmb 11 30 43.1
comp=Z,9.9nm,1.0s
J17K **VABM Dome** **84.37 25** IAmb IAmb 11 30 59.8
comp=Z,11nm,1.0s
F17K **Baldwin Pennin** **84.79 21** IAmb IAmb 11 30 47.5
comp=Z,6.7nm,0.8s
QSPA **South Pole Qui** **84.86 180** LR LR 12 08 41.8
comp=Z,117nm,19.8s,baz=5.0,slow=36
AKTO **Aktyubinsk** **85.16 321** P **P** **11 30 39.6 -1.3**
H18K **Honhosa River** **85.35 23** IAmb IAmb 11 30 49.8
comp=Z,12nm,1.0s
J18K **Innoko River** **85.38 25** IAmb IAmb 11 30 51.0
comp=Z,6.2nm,0.7s
E18K **Tukpahlearik C** **85.44 21** IAmb IAmb 11 30 51.2
comp=Z,12nm,0.8s
KDAK **Kodiak Island** **85.46 31** LR LR 12 08 29.3
comp=Z,98nm,19.3s,baz=226,slow=35
KDAK **Kodiak Island** **85.46 31**⇑ *iP* **P** **11 30 41.8 -0.5**
KDAK pmax pmax
comp=Z,40nm,1.2s
G18K **Tagagawik** **85.52 22** IAmb IAmb 11 30 50.5
comp=Z,7.5nm,0.8s
J19K **Poorman** **86.03 25** P **P** **11 30 45.2 +0.2**
J19K IAmb IAmb 11 30 46.2
comp=Z,8.9nm,0.9s

ARTI Arti 86.41 327 d iP P 11 30 46.3 -0.7
ARTI 11 34 10.9
ARTI S SKSac 11 41 11.7 +0.2
ARTI SS SS 11 47 00.0 -1.5
ARTI pmax pmax
comp=Z,4.0nm,0.8s
C19K Lookout Ridge 86.48 19 IAmb IAmb 11 30 56.0
comp=Z,7.4nm,0.7s
E19K Redstone River 86.64 21 IAmb IAmb 11 30 57.0
comp=Z,8.1nm,0.7s
SKT Skwentna 87.17 27 IAmb IAmb 11 30 59.2
comp=Z,13nm,0.9s
D20K Etivluk River 87.32 20 IAmb IAmb 11 31 00.8
comp=Z,8.3nm,0.8s
L22K Petersville 87.66 27 P 11 30 52.4 -0.7
H21K Melozitna Rive 87.70 23 IAmb IAmb 11 31 01.8
comp=Z,6.0nm,0.9s
KTH Kantishna Hill 87.88 26 IAmb IAmb 11 30 54.5
comp=Z,11nm,1.0s
G23K Bananza Creek 89.08 23 IAmb IAmb 11 31 09.1
comp=Z,6.1nm,0.8s
COLD Coldfoot 89.15 22 IAmb IAmb 11 31 09.4
comp=Z,6.8nm,0.8s
D23K Nanushuk River 89.44 20 IAmb IAmb 11 31 09.9
comp=Z,4.5nm,0.8s
CCB Clear Creek Bu 89.47 25 IAmb IAmb 11 31 08.4
comp=Z,7.4nm,1.0s
H24K Noodor Dome 89.71 24 IAmb IAmb 11 31 10.9
comp=Z,7.2nm,1.0s
IL31 89.89 25 P P 11 31 02.5 -0.9
ILAR Eielson Array 89.89 25 P P 11 31 02.4 -1.1
comp=Z,2.5nm,0.9s,baz=259,slow=4.6,SNR=18
ILAR LR LR 12 07 18.1
comp=Z,61nm,19.9s,baz=237,slow=33
comp=Z,2.5nm,0.9s
AKT Akhty 90.68 311 eP P 11 31 06.8 -1.0
AKT e 11 31 07.8
AKT pmax pmax
comp=Z,5.0nm,0.3s
RAYN Ar Rayn 90.79 293 P 11 31 08.1 -0.6
RAYN IAmb IAmb 11 31 09.7
comp=Z,4.6nm,0.9s
RAYN Ar Rayn 90.79 293 P P 11 31 08.1 -0.6
RAYN pmax pmax
comp=Z,5.0nm,0.9s
ELIB Princess Elisa 91.51 197 dP P 11 31 12.1 +1.0
F26K Sheenjek River 91.53 22 IAmb IAmb 11 31 18.9
comp=Z,4.5nm,1.1s
KIRV Kirov 91.58 329 LR LR 12 19 38.0
comp=Z,45nm,18.3s,baz=37,slow=40
KIRV Kirov 91.58 329 eP P 11 31 10.3 -1.1
PYA1 Pyatigorsk 94.29 314 ⇓iP P 11 31 24.3 0.0
NVL N'lazarevskaya 95.34 196 eP P 11 31 28.6 +0.1
NVL e 11 35 19.0
NVL ePPP PPP 11 37 21.3
NVL eS SKSac 11 42 02.0 -0.3
NVL eSS SS 11 49 11.2 +2.2
NVL eSSS SSS 11 52 54.5
NVL pmax pmax
comp=Z,6.0nm,0.8s
NVL MLR MLR
comp=Z,337nm,20.0s
KLMR Klimovskoe 96.70 331 eP P 11 31 31.5 -3.3
KLMR pmax pmax
comp=Z,17nm,1.3s
SNAA Sanae 98.43 193 LR LR 12 15 39.9
comp=Z,104nm,21.3s,baz=156,slow=35
ASF Jabal al Asfar 98.85 302 LR LR 12 23 03.2
comp=Z,8.3nm,20.0s,baz=37,slow=40
TXAR Lajitas Array 120.41 59 PKP PKPdf 11 36 56.6 -0.3
comp=Z,0.3nm,0.8s,baz=323,slow=3.8,SNR=2.0
TORD Torodi Ar. Bea 132.47 283 PKP PKPdf 11 37 20.6 +0.4
comp=Z,0.8nm,0.7s,baz=127,slow=1.0,SNR=5.8
ATAH Atahualpa 145.30 110 PKPbc PKPdf 11 37 46.0 +1.8
comp=Z,24nm,0.9s,baz=269,slow=1.8,SNR=10
CPUP Villa Florida 146.82 161 PKPbc PKPbc 11 37 48.5 +0.9
comp=Z,2.1nm,0.5s,baz=220,slow=5.1,SNR=7.1
LPAZ La Paz 149.36 134 PKPbc PKiKP 11 37 57.2 +0.6
comp=Z,3.1nm,1.0s,baz=100,slow=0.4,SNR=7.5
LPAZ La Paz 149.36 134 PKPbc 11 37 55.4 0.0
ROSC El Rosal 151.62 89 PKPbc PKiKP 11 38 01.1 0.0
comp=Z,9.5nm,0.5s,baz=104,slow=20,SNR=2.4
SIV San Ignacio 154.17 145 PKPbc PKiKP 11 38 08.5 +2.6
comp=Z,0.5nm,0.3s,baz=284,slow=4.2,SNR=4.2

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*IDC **03** 11:54:49.0±1.2, 16°.25N×119°.82E, h0km, mb3.5/6, mbtmp3.5/6, MS2.7/1, Error ellipse: s-maj=59.2km s-min=19.3km az=61.0*

ISC 03 11:54:54.9±1.2**, 16°.2N**±0°.2×**119°.6E**±0°.3**, h43**km**, n6,** σ**0s.20**/6**, mb3.5**/5**, Luzon**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMAR Chiang Mai Arr 19.86 280 P Pn 11 59 24.4 0.0
0.5nm,0.3s,baz=96,slow=9.1,SNR=6.4
CMAR LR LR 12 07 41.0
comp=Z,19nm,18.5s,baz=130,slow=38
0.5nm,0.3s
SONM Songino Array 33.41 344 P P 12 01 29.6 0.0
0.3nm,0.5s,baz=161,slow=9.2,SNR=4.4
0.3nm,0.5s
WRA Warramunga Arr 38.69 157 P P 12 02 14.6 -0.2
1.2nm,0.9s,baz=337,slow=9.3,SNR=7.4
1.2nm,0.9s
ASAR Alice Springs 41.98 160 P P 12 02 42.3 +0.2
0.8nm,0.7s,baz=336,slow=6.6,SNR=14
0.8nm,0.7s
MKAR Makanchi Array 43.44 323 P P 12 02 53.6 0.0
0.4nm,0.8s,baz=120,slow=8.8,SNR=2.8
0.4nm,0.8s
KURBB Kurchatov Arra 47.57 325 P P 12 03 26.3 0.0
0.6nm,0.8s,baz=121,slow=8.4,SNR=4.0
0.6nm,0.8s

DJA 03 11:57:53.9±0.3**, 8°S**±5°×**11°1E**±°**, h106**km±3km**, M3.7**/33**, mb4.0**/4**, MLv3.5**/33**, Jawa**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PCJI Pacitan 0.07 22 P Pn 11 58 09.7 +1.1
PCJI S Sn 11 58 21.6 +2.1
UGM Wanagama 0.71 299 P Pn 11 58 13.1 +1.1
UGM S Sn 11 58 27.3 +1.7
SNJI Sawahan-Nganju 0.77 52 P Pn 11 58 13.4 +0.7
SNJI S Sn 11 58 27.9 +1.1
SJI Sawahan 0.80 50 P Pn 11 58 12.7 -0.2
NGJI Ngawi 0.94 19 P Pn 11 58 15.0 +0.8
YOGI Yogyakarta 0.95 297 P Pn 11 58 15.5 +1.2
SMRI Semarang 1.39 330 P Pn 11 58 19.6 +0.3
GMJI Gumukmas 2.27 90 P Pn 11 58 30.2 0.0
CTJI Waduk Cacaban 2.31 302 P Pn 11 58 31.2 +0.4
KPJI Karang Pucung 2.38 293 P Pn 11 58 32.2 +0.5
BLJI Banyuglugur 2.48 78 P Pn 11 58 32.9 0.0
JAGI Jajag, Banyuwa 2.98 94 P Pn 11 58 38.9 -0.6
KMMI Kalianget 3.04 67 P Pn 11 58 39.4 -0.9
BBJI Bungbulang 3.56 283 P Pn 11 58 47.6 +0.3
RTBI Rangdo, Negare 3.76 93 P Pn 11 58 50.5 +0.5
IGBI Denpasar 3.99 98 P Pn 11 58 53.7 +0.6
CNJI Cibinong 4.09 283 P Pn 11 58 54.2 -0.3
KHKI Kahang-Kahang 4.41 92 P Pn 11 58 59.5 +0.7
TWSI Taliwang, Sumb 5.69 95 P Pn 11 59 16.4 +0.3
0.1nm15nm,1.1s
PLAI Plampang 6.58 95 P Pn 11 59 28.3 +0.2
19nm,1.2s
DBNI Kabupaten Domp 7.09 92 P Pn 11 59 34.6 -0.5

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*NEIC **03** 12:12:38.9±2.8, 0°.23S±0°.06×125°.21E±0°.03, h35km±1km, mb4.9/71, Error ellipse: s-maj=10.6km s-min=5.3km az=171.0*

*IDC **03** 12:12:41.2±1.5, 0°.23S×125°.14E, h66km±13km, mb4.3/26, mbtmp4.6/33, MS3.5/26, Error ellipse: s-maj=14.2km s-min=8.0km az=66.0*

*DJA **03** 12:12:41.3±0.1, 0°S±2°×12°5E±°, h55km±3km, M5.0/48, mB5.4/25, mb5.0/48, MLv5.3/42, Mw(mB)4.9/25*

ISC 03 12:12:40.3±0.3**, 0°.28S**±0°.03×**125°.18E**±0°.04**, h52**km**, n290,** σ**1s.43**/277**, mb4.8**/104**, MS3.4**/21**, 4D, Southern Molucca Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANI Sanana 1.93 155 P Pn 12 13 09.7 -1.0
SANI Sanana 1.93 155 S Sn 12 13 33.2 -0.7
SANI Sanana 1.93 155 P Pn 12 13 09.7 -1.0
TNTI Ternate 2.43 64 Pn 12 13 18.3 +0.8
TNTI Ternate 2.43 64 P Pn 12 13 18.8 +1.3
TNTI Ternate 2.43 64 S Sn 12 13 48.2 +2.2
TNTI Ternate 2.43 64 P Pn 12 13 18.3 +0.8
TNTI S Sn 12 13 47.3 +1.3
LUWI Luwuk 2.52 253 Pn 12 13 21.9 +3.1
LUWI Luwuk 2.52 253 P Pn 12 13 20.9 +2.2
LUWI Luwuk 2.52 253 S Sn 12 13 50.0 +1.7
LUWI Luwuk 2.52 253 P Pn 12 13 21.1 +2.4
MRSI Marisa 3.32 283 P Pn 12 13 28.5 -1.3
NLAI Namlea 3.51 147 P Pn 12 13 32.2 -0.1
APSI Ampana 3.58 260 P Pn 12 13 35.6 +2.3
SGSI Sangihe 3.96 5 P Pn 12 13 38.0 -0.5
KRAI Karang Ratu 4.41 133 P Pn 12 13 45.4 +0.7
AAI Ambon 4.53 138 P Pn 12 13 47.4 +1.0
TOLI2 Tolitoli 4.61 288 Pn 12 13 48.0 +0.6
TOLI2 Tolitoli 4.61 288 P Pn 12 13 48.7 +1.3
MSAI Masohi 4.83 129 P Pn 12 13 52.0 +1.6
MSAI S Sn 12 14 46.1 +1.0
KKSI Kolaka, Sulawe 5.23 222 P Pn 12 14 08.2 +12
MPSI Mapaga 5.31 277 P Pn 12 13 58.8 +1.7
1.7nm4μm308nm,0.9s
PCI Palu 5.38 263 P Pn 12 14 01.4 +3.4
TTSI Tana Toraja 6.02 243 P Pn 12 14 08.4 +1.7
SWI Sorong 6.11 95 P Pn 12 14 09.3 +1.3
78nm,0.7s
SIJI Sorong 6.12 95 P Pn 12 14 09.8 +1.7
20nm,0.3s,baz=311,slow=16,SNR=14
SIJI S Sn 12 15 19.3 +2.4
22nm,0.7s,baz=88,slow=22,SNR=1.1
SIJI Sorong 6.12 95 P Pn 12 14 09.1 +1.0
59nm,1.2s
BNDI Bandanaira 6.33 132 P Pn 12 14 11.6 +0.6
182nm,0.4s
BNDI Bandanaira 6.33 132 S Sn 12 15 21.9 -0.1
182nm,0.4s
BNDI Bandanaira 6.33 132 P Pn 12 14 11.6 +0.6
1.7nm177nm,0.4s
SPSI Sidrap Palu 6.52 236 P Pn 12 14 15.2 +1.5
1.1nm4μm229nm,0.5s
MMSI Mamuju 6.70 249 P Pn 12 14 18.4 +2.2
1.1nm2μm133nm,0.7s
PMSI Majene 7.03 243 P Pn 12 14 22.7 +2.1
1.4nm2μm150nm,0.8s
KAPI Kappang 7.17 229 P Pn 12 14 23.9 +1.3
36nm,0.3s,baz=32,slow=5.7,SNR=16
KAPI S Sn 12 15 38.9 -3.9
34nm,0.4s,baz=346,slow=22,SNR=1.0
KAPI LR LR 12 18 01.0
comp=Z,675nm,20.7s,baz=56,slow=45
KAPI Kappang 7.17 229 P Pn 12 14 24.9 +2.3
34nm,1.0s
KAPI Kappang 7.17 229 S Sn 12 15 43.7 +0.9
34nm,1.0s
KAPI Kappang 7.17 229 P Pn 12 14 23.9 +1.3
DAV Davao City (W) 7.32 3 P Pn 12 14 25.2 +0.6
230nm,0.3s,baz=151,slow=6.6,SNR=3.8
DAV LR LR 12 17 34.8
comp=Z,956nm,22.0s,baz=260,slow=40
BSSI Bau Bau, Buton 7.47 219 P Pn 12 14 28.2 +1.6
0.6nm2μm110nm,0.8s
MKS Makassar 7.52 229 P Pn 12 14 28.8 +1.5
0.6nm2μm204nm,0.7s
FAKI Fak Fak 7.54 110 Pn 12 14 26.2 -1.5
FAKI Fak Fak 7.54 110 P Pn 12 14 26.5 -1.1
46nm,0.7s
FAKI Fak Fak 7.54 110 P Pn 12 14 26.1 -1.5
MWPI Manokwari, Pap 8.89 94 P Pn 12 14 46.8 +0.7
134nm,0.9s
EDFI Ende, Flores 9.10 202 P Pn 12 14 50.4 +1.3
SOEI Soe 9.45 185 Pn 12 14 55.0 +1.0
SOEI Soe 9.45 185 P Pn 12 14 55.6 +1.6
1μm113nm,0.9s
BATI Baumata 9.97 189 P Pn 12 15 02.8 +1.8
62nm,0.7s,baz=33,slow=4.2,SNR=5.7
BATI LR LR 12 19 34.6
comp=Z,660nm,20.7s,baz=354,slow=41
BATI Baumata 9.97 189 P Pn 12 15 08.9 +7.9
MTKI Muara Teweh, K 10.30 266 P Pn 12 15 17.4 +12
KKM Kota Kinabalu 10.93 305 Pn 12 15 14.7 +0.5
KKM Kota Kinabalu 10.93 305 P Pn 12 15 16.5 +2.3
46nm,0.8s
KKM Kota Kinabalu 10.93 305 P Pn 12 15 15.7 +1.5
46nm,0.8s
PLAI Plampang 11.24 221 P Pn 12 15 19.7 +1.4
25nm,1.1s
SBUM Sibu 13.23 282 P P 12 15 58.4 +4.4
MTN Manton Dam 13.81 155 Pn 12 15 54.1 +0.7
GENI Genyem 15.16 99 P Pn 12 16 12.6 +1.3
68nm,1.1s
GENI Genyem 15.16 99 P Pn 12 16 12.1 +0.8
4μm79nm,1.1s
SJI Sawahan 15.28 241 P P 12 16 20.2 +3.4
SNJI Sawahan-Nganju 15.31 241 P P 12 16 16.0 -1.2
32nm,1.0s
JAY Jayapura 15.68 98 P Pn 12 16 18.5 +0.5
12nm,0.8s,baz=87,slow=12,SNR=6.4
JAY Jayapura 15.68 98 P Pn 12 16 18.9 +0.9
KNRA Kununurra 15.70 167 Pn 12 16 17.6 -0.5
PCJI Pacitan 16.01 240 P P 12 16 26.9 +2.1
KPJI Karang Pucung 17.65 246 P P 12 16 45.2 +2.2
42nm,0.8s
FITZ Fitzroy Crossi 17.71 179 P P 12 16 43.8 +0.2
12nm,0.7s,baz=12,slow=8.3,SNR=18
FITZ S Sn 12 19 55.1 -4.8
9.2nm,1.1s,baz=188,slow=14,SNR=2.6
FITZ LR LR 12 25 29.8
comp=Z,93nm,18.1s,baz=9.5,slow=43
SZP Santa 18.32 346 P Pn 12 16 53.3 +2.5
83nm,1.1s
LEM Lembang 18.68 249 P Pn 12 16 55.0 -0.4
30nm,0.8s,baz=42,slow=13,SNR=4.1
LEM LR LR 12 24 52.5
comp=Z,318nm,20.0s,baz=9.0,slow=39
BBJI Bungbulang 18.87 247 P P 12 16 55.9 -0.7
BBJI Bungbulang 18.87 247 P Pn 12 16 57.3 -0.3
33nm,0.9s
BBJI Bungbulang 18.87 247 P Pn 12 16 59.2 +1.6
32nm,0.9s
KLSI 20.89 258 P Pn 12 17 20.1 -1.3
25nm,1.0s
KASI Kota Agung 21.29 255 P P 12 17 24.1 +1.4
WB0 Warramunga Arr 21.36 156 P P 12 17 21.8 -1.7
MBWA Marble Bar 21.42 194 P P 12 17 23.8 -0.2
MBWA Marble Bar 21.42 194 P P 12 17 24.1 +0.1
15nm,1.1s
WRAB Tennant Creek 21.50 156 P P 12 17 23.2 -1.6
WRAB IAmb IAmb 12 17 44.1
comp=Z,49nm,1.5s
WRAB Tennant Creek 21.50 156 P P 12 17 24.0 -0.9
comp=Z,11nm,0.8s
WRA Warramunga Arr 21.50 156 P P 12 17 23.7 -1.2
comp=Z,8.8nm,0.6s,baz=333,slow=11,SNR=92
comp=Z,8.8nm,0.6s
WRA Warramunga Arr 21.50 156 P P 12 17 22.8 -2.1
WR8 Warramunga Arr 21.58 156 P P 12 17 24.3 -1.4
PSA00 Pilbara Seismi 21.79 193 P P 12 17 27.8 -0.2
PSA00 Pilbara Seismi 21.79 193 P P 12 17 27.8 -0.2
PSA00 Pilbara Seismi 21.79 193 P P 12 17 28.0 0.0
comp=Z,14nm,1.0s
XMI Christmas Isla 21.85 242 P P 12 17 29.7 +1.0
comp=Z,87nm,1.4s
COEN Coen 22.41 128 IAmb IAmb 12 17 41.7
comp=Z,58nm,1.2s
COEN Coen 22.41 128 P P 12 17 34.8 +0.1
comp=Z,32nm,0.8s
TWGBT Beinan 23.31 350 P P 12 17 44.8 +1.0
PMG Port Moresby 23.68 113 P P 12 17 46.8 -0.6
PMG IAmb IAmb 12 17 48.8
comp=Z,21nm,0.7s
PMG Port Moresby 23.68 113 P P 12 17 48.8 +1.3
comp=Z,35nm,1.4s
PMG Port Moresby 23.68 113 P P 12 17 49.3 +1.8
comp=Z,35nm,1.4s
PMG Port Moresby 23.68 113 P P 12 17 49.3 +1.8
comp=Z,35nm,1.4s
TPUB Ta-pu 23.86 350 P P 12 17 46.9 -2.1
TPUB IAmb IAmb 12 17 48.9
comp=Z,50nm,0.8s
SSLB Suanglung 24.28 351 P P 12 17 51.4 -1.4
SSLB IAmb IAmb 12 18 15.0
comp=Z,25nm,1.0s
SSLB Suanglung 24.28 351 P P 12 17 53.4 +0.6
comp=Z,26nm,0.8s
QIS Mount Isa 24.60 146 P P 12 17 56.8 +1.0
comp=Z,94nm,0.7s
ASAR Alice Springs 24.74 161 P P 12 17 57.0 -0.1
comp=Z,12nm,1.0s,baz=340,slow=8.5,SNR=113
ASAR PcP PcP 12 21 33.5 +0.4
comp=Z,4.2nm,0.4s,baz=350,slow=2.1,SNR=26
ASAR S S 12 22 15.2 -0.6
comp=Z,1.6nm,1.0s,baz=348,slow=22,SNR=4.4
comp=Z,12nm,1.0s
ASAR Alice Springs 24.74 161 P P 12 17 57.3 +0.2
MTSU Mount Surprise 25.86 134 P P 12 18 08.0 +0.7
comp=Z,23nm,0.8s
MEEK Meekatharra 26.95 193 P P 12 18 16.4 -0.7
comp=Z,16nm,1.0s
JOW Kunigami 27.12 6 LR LR 12 28 22.0
comp=Z,91nm,21.6s,baz=168,slow=35
JOW Kunigami 27.12 6 P P 12 18 19.9 +1.3
JOW Kunigami 27.12 6 P P 12 18 20.9 +2.4
comp=Z,48nm,0.9s
RABL Rabaul 27.24 99 P P 12 18 20.6 +0.8
FORT Forrest 30.45 175 IAmb IAmb 12 18 49.2
comp=Z,16nm,0.6s
INKA Innaminka 31.12 153 IAmb IAmb 12 18 56.1
comp=Z,8.6nm,0.8s
BLDU Ballidu 31.22 194 P P 12 18 54.3 -0.6
comp=Z,10nm,0.7s
CMAR Chiang Mai Arr 31.80 307 P P 12 19 00.1 -0.1
comp=Z,0.6nm,0.3s,baz=134,slow=7.6,SNR=9.4
CMAR PcP PcP 12 21 51.3 +0.8
comp=Z,1.0nm,0.8s,baz=168,slow=2.6,SNR=4.6
CMAR LR LR 12 32 04.8
comp=Z,30nm,21.7s,baz=115,slow=37
comp=Z,0.6nm,0.3s
CHTO Chiang Mai 32.00 308 P P 12 19 01.1 -0.8
CHTO Chiang Mai 32.00 308 P P 12 19 01.0 -0.8
comp=Z,8.8nm,0.9s
CHTO Chiang Mai 32.00 308 P P 12 19 00.8 -1.0
CHTO x x 12 19 10.0
GYA Guiyang 32.02 328 ⇓P P 12 19 02.9 +0.8
GYA pmax pmax
comp=Z,8.0nm,0.7s
MUN Mundaring 32.65 194 P P 12 19 07.7 +0.3
comp=Z,16nm,1.1s
NJ2 Nanjing 32.71 350 eP P 12 19 09.5 +1.6
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
KMI2 Kunming 33.32 321 P P 12 19 14.8 +1.2
KMI2 pmax pmax
comp=Z,6.0nm,1.0s
NWAO Narrogin (SRO) 33.32 192 LR LR 12 35 13.2
comp=Z,62nm,18.5s,baz=14,slow=40
NWAO Narrogin (SRO) 33.32 192 P P 12 19 13.6 +0.3
JNU Nakatsue 33.66 9 LR LR 12 33 10.6
comp=Z,27nm,19.4s,baz=212,slow=37
ENH Enshi 33.86 335 P P 12 19 16.7 -1.4
ENH x x 12 19 25.8
ENH sP pP 12 19 31.4 +0.7
BBOO Buckleboo 33.94 163 P P 12 19 18.7 +0.1
BBOO IAmb IAmb 12 19 34.4
comp=Z,27nm,1.4s
BBOO Buckleboo 33.94 163 P P 12 19 18.6 -0.1
comp=Z,15nm,1.9s
JMN Monobe 34.81 13 P P 12 19 29.0 +2.8
comp=Z,30nm,1.9s
PZH PanZhiHua 34.92 321 P P 12 19 30.5 +3.2
STKA Stephens Creek 35.05 155 P P 12 19 29.0 +0.7
comp=Z,24nm,0.6s,baz=331,slow=8.6,SNR=63
STKA LR LR 12 37 17.4
comp=Z,52nm,18.9s,baz=13,slow=42
comp=Z,24nm,0.6s
STKA Stephens Creek 35.05 155 P P 12 19 29.1 +0.8
comp=Z,10.0nm,0.7s
EIDS Eidsvold 35.33 137 P P 12 19 29.3 -1.5
HTT Hallett 35.41 160 P P 12 19 31.4 0.0
comp=Z,11nm,1.7s
LYN LuoYang 36.64 342 P P 12 19 41.0 -0.8
LYN pmax pmax
comp=Z,15nm,0.9s
CMSA Cobar Meteorol 36.65 150 P P 12 19 43.3 +1.3
comp=Z,29nm,1.0s
TIA Tai'an 37.07 349 P P 12 19 45.7 +0.2
TIA pmax pmax
comp=Z,4.0nm,0.7s
CD2 Chengdu 37.10 329 P P 12 19 45.5 -0.4
CD2 pmax pmax
comp=Z,10.0nm,0.8s
XAN Xi'an 37.40 337 ⇓P P 12 19 46.2 -2.1
XAN pmax pmax
comp=Z,14nm,0.9s
JGF Kuroka 37.46 16 P P 12 19 49.0 +0.1
JGF IAmb IAmb 12 20 14.2
comp=Z,17nm,1.0s
KSRS Korea Array 37.64 4 P P 12 19 50.6 +0.4
comp=Z,8.2nm,0.9s,baz=178,slow=9.7,SNR=21
KSRS LR LR 12 35 02.7
comp=Z,59nm,21.1s,baz=195,slow=36
comp=Z,8.2nm,0.9s
MAJO Matsushiro 38.59 17 P P 12 19 57.2 -1.1
MAJO IAmb IAmb 12 20 06.1
comp=Z,11nm,0.7s
MJAR Matsushiro Arr 38.59 17 P P 12 19 57.1 -1.2
comp=Z,3.6nm,0.7s,baz=190,slow=8.5,SNR=8.2
comp=Z,3.6nm,0.7s
HNS HongShan 38.73 347 ⇓P P 12 20 00.2 +0.8
HNS pmax pmax
comp=Z,8.0nm,0.7s
ARMA Armidale 39.12 142 P P 12 20 04.1 +1.2
ARMA IAmb IAmb 12 20 05.3
comp=Z,10.0nm,0.8s
ARMA Armidale 39.12 142 P P 12 20 04.5 +1.5
comp=Z,19nm,1.5s
BRDH Bariadhala 39.83 307 LR LR 12 38 02.8
comp=Z,45nm,18.9s,baz=152,slow=38
BJI2 Beijing 40.95 349 P P 12 20 17.8 0.0
BJI2 pmax pmax
comp=Z,2.0nm,1.1s
SHL Shillong 41.16 311 P P 12 20 18.5 -1.5
LZDM Lanzhou Array 41.23 333 P P 12 20 20.1 -0.5
comp=Z,0.6nm,0.3s,baz=156,slow=11,SNR=6.8
comp=Z,0.6nm,0.3s
LZH Lanzhou 41.27 333 eP P 12 20 21.1 +0.3
LZH pmax pmax
comp=Z,17nm,1.3s
CAN Canberra 41.33 150 P P 12 20 21.2 +0.1
comp=Z,53nm,1.4s
LUES Luesalemba Tem 41.78 106 P P 12 20 25.8 +0.7
comp=Z,62nm,0.7s
HHC Hu-ho-hao-te 42.77 345 eP P 12 20 36.9 +4.1
HHC pmax pmax
comp=Z,3.0nm,0.6s
BTO2 Baotou 43.14 343 eP P 12 20 39.0 +3.1
BTO2 pmax pmax
comp=Z,9.0nm,0.7s
BTO2 pmax pmax
comp=Z,260nm,4.9s
CN2 Changchun 43.89 0 P P 12 20 43.2 +1.5
LSA Lhasa 44.06 316 P P 12 20 43.8 0.0
USRK Ussuriysk Ar. 44.70 7 P P 12 20 47.6 -0.6
comp=Z,6.2nm,0.5s,baz=190,slow=6.7,SNR=3.4
comp=Z,6.2nm,0.5s
XLT XiLinHaoTe 44.73 351 eP P 12 20 49.9 +1.4
XLT pmax pmax
comp=Z,8.0nm,0.7s
XLT pmax pmax
comp=Z,43nm,6.4s
MDJ Mudanjiang 44.88 4 P P 12 20 50.0 +0.4
MDJ S S 12 27 26.0 +2.4
MDJ ScS ScS 12 30 43.0 +0.7
MDJ pmax pmax
comp=Z,19nm,1.0s
MDJ LR LR
comp=Z,310nm,4.8s
MDJ LR LR
comp=Z,280nm,5.0s
MDJ LR LR
comp=Z,240nm,6.5s
PALK Pallekele 44.99 281 LR LR 12 40 54.0
comp=Z,77nm,19.5s,baz=98,slow=38
NOUC Port Laguerre 45.54 121 P P 12 20 55.9 +0.7
NOUC x x 12 21 09.6
DZM Mont Dzumac 45.65 121 P P 12 20 56.2 0.0
comp=Z,6.7nm,0.8s,baz=270,slow=13,SNR=3.5
DZM LR LR 12 41 42.0
comp=Z,54nm,18.8s,baz=218,slow=38
comp=Z,6.7nm,0.8s
DZM Mont Dzumac 45.65 121 IAmb IAmb 12 21 09.6
comp=Z,11nm,1.1s
DZM Mont Dzumac 45.65 121 P P 12 20 56.9 +0.7

comp=Z,11nm,1.2s
BNX BinXian 45.87 2 ⇓P **P** **12 20 58.0 +0.6**
BNX pmax pmax
comp=Z,8.0nm,0.9s
GTA2 Gaotai 45.91 332 *eP* **P** **12 20 57.8 -0.2**
GTA2 S **S** **12 27 35.2 -3.7**
GTA2 pmax pmax
comp=Z,26nm,0.7s
GOMU GeErMu 45.97 325 P **P** **12 20 59.5 +0.7**
GOMU pmax pmax
comp=Z,4.0nm,0.8s
JKA Kamikawa-asahi 46.86 17 P **P** **12 21 05.4 +0.2**
JKA IAmb IAmb 12 21 13.8
comp=Z,17nm,1.0s
HILR Hailar Array B 49.87 355 P **P** **12 21 28.1 -0.2**
comp=Z,8.1nm,0.6s,baz=181,slow=9.4,SNR=15
comp=Z,8.1nm,0.6s
HEH HeiHe 50.38 2 *eP* **P** **12 21 31.7 -0.4**
HEH pmax pmax
comp=Z,24nm,0.9s
ULN Ulaanbaatar 50.48 344 P **P** **12 21 33.3 +0.1**
SONM Songino Array 50.64 344 P **P** **12 21 32.2 -2.1**
comp=Z,2.8nm,0.5s,baz=161,slow=8.2,SNR=15
SONM LR LR 12 44 50.0
comp=Z,19nm,18.7s,baz=140,slow=38
comp=Z,2.8nm,0.5s
SONM Songino Array 50.64 344 P **P** **12 21 33.6 -0.7**
TLY Talaya 54.88 344 P **P** **12 22 06.3 +0.9**
TLY sP **pwP** **12 22 21.0 -1.0**
WMQ Urumqi 55.18 328 *eP* **P** **12 22 09.3 +1.5**
WMQ pmax pmax
comp=Z,22nm,1.3s
OUZ Omahuta 56.89 133 P **P** **12 22 21.5 +1.4**
PYZ Puysegur Point 58.40 147 P **P** **12 22 31.1 +0.6**
WUS Wushi 58.58 321 P **P** **12 22 31.8 -0.2**
WUS x x 12 22 45.6
ZSN Zaisan 59.08 329 *eP* **P** **12 22 35.0 -0.2**
KUZ Kuaotunu 59.11 134 P **P** **12 22 36.4 +0.8**
KUZ Kuaotunu 59.11 134 P **P** **12 22 37.0 +1.4**
TOZ Tahuroa Road 59.39 135 P **P** **12 22 39.4 +1.9**
SHLS Shalkode 59.50 323 *eP* **P** **12 22 36.3 -2.0**
comp=Z,8.8nm,1.1s
THZ Tophouse 59.57 140 P **P** **12 22 39.7 +1.0**
PETK Petropavlovsk- 59.71 22 P **P** **12 22 38.0 -1.4**
comp=Z,5.4nm,0.8s,baz=215,slow=4.5,SNR=9.0
comp=Z,5.4nm,0.8s
PETK Petropavlovsk- 59.71 22 P **P** **12 22 41.4 +2.0**
TARG Taragay, Kyrgy 59.76 320 P **P** **12 22 39.8 -0.7**
TARG IAmb IAmb 12 23 02.7
comp=Z,9.0nm,1.2s
UZB Uzynbulak 59.76 322 *eP* **P** **12 22 39.8 -0.4**
comp=Z,9.3nm,1.2s
KSH2 Kashi 59.95 317 P **P** **12 22 41.8 +0.2**
KSH2 pmax pmax
comp=Z,5.0nm,1.1s
MKAR Makanchi Array 60.01 327 P **P** **12 22 39.4 -2.3**
comp=Z,8.6nm,0.5s,baz=127,slow=7.8,SNR=137
MKAR ScP **ScP** **12 27 22.1 -2.1**
comp=Z,0.4nm,0.7s,baz=140,slow=4.9,SNR=2.8
MKAR LR LR 12 50 18.5
comp=Z,45nm,19.6s,baz=36,slow=38
comp=Z,8.6nm,0.5s
MKAR Makanchi Array 60.01 327 P **P** **12 22 39.6 -2.1**
SATY Saty 60.09 322 *eP* **P** **12 22 42.3 -0.1**
comp=Z,5.9nm,0.7s
MAKZ Makanchi 60.19 327 P **P** **12 22 41.8 -1.1**
MAKZ Makanchi 60.19 327 P **P** **12 22 42.6 -0.3**
MAKZ pP **pP** **12 22 54.0 -2.3**
MAKZ x x 12 22 56.4
GVZ Greta Valley S 60.27 141 P **P** **12 22 44.0 +0.5**
GVZ Greta Valley S 60.27 141 P **P** **12 22 44.3 +0.7**
KHZ Kahutara 60.31 140 P **P** **12 22 44.6 +0.9**
KHZ Kahutara 60.31 140 P **P** **12 22 44.2 +0.4**
BKZ Black Stump Fm 60.73 136 P **P** **12 22 47.0 +0.3**
BKZ IAmb IAmb 12 22 48.0
comp=Z,9.8nm,0.5s
BKZ Black Stump Fm 60.73 136 P **P** **12 22 47.3 +0.6**
comp=Z,15nm,0.5s
BKZ Black Stump Fm 60.73 136 P **P** **12 22 47.1 +0.3**
URZ Urewera 60.76 135 P **P** **12 22 46.8 -0.1**
comp=Z,5.4nm,0.4s,baz=249,slow=5.0,SNR=17
comp=Z,5.4nm,0.4s
URZ Urewera 60.76 135 P **P** **12 22 47.7 +0.8**
comp=Z,12nm,0.8s
URZ Urewera 60.76 135 P **P** **12 22 47.0 +0.1**
TSZ Takapari Road 60.77 137 P **P** **12 22 47.2 +0.2**
RTZ Ruatahuna 60.83 135 P **P** **12 22 47.5 0.0**
RTZ IAmb IAmb 12 22 48.1
comp=Z,12nm,0.7s
RTZ Ruatahuna 60.83 135 P **P** **12 22 47.8 +0.4**
MTHZ Maungataniwha 60.83 135 P **P** **12 22 47.9 +0.5**
NMHZ Naumai 60.91 136 P **P** **12 22 49.2 +1.1**
TNSS Tian-Shan 60.98 321 *eP* **P** **12 22 48.5 -0.4**
MDOK Medeo 60.99 321 *eP* **P** **12 22 48.4 -0.1**
HAZ Te Kaha 61.03 134 P **P** **12 22 49.6 +0.8**
RUGZ Raukumara Rang 61.04 134 P **P** **12 22 48.4 -0.6**
RAGZ Rawiri 61.08 135 P **P** **12 22 50.0 +0.8**
MWZ Matawai 61.09 135 P **P** **12 22 49.5 +0.3**
SNGZ Shannon Statio 61.15 135 P **P** **12 22 50.1 +0.5**
TDK Taldyqorghan 61.15 324 *eP* **P** **12 22 49.6 +0.1**
comp=Z,7.1nm,0.9s
MXZ Matakaoa Point 61.33 134 P **P** **12 22 51.8 +1.0**
comp=Z,40nm,0.9s
MXZ Matakaoa Point 61.33 134 P **P** **12 22 51.5 +0.8**
TWGZ Tauwhareparae 61.35 134 P **P** **12 22 52.1 +1.2**
TKGZ Te Karaka 61.37 135 P **P** **12 22 51.8 +0.9**
PUZ Puketiti 61.50 134 P **P** **12 22 52.2 +0.2**
CNGZ Carnagh Statio 61.64 135 P **P** **12 22 53.8 +0.9**
YAK Yakutsk 62.25 2 LR LR 12 51 24.7
comp=Z,36nm,18.9s,baz=102,slow=37
YAK Yakutsk 62.25 2 P **P** **12 22 57.0 +0.5**
YAK Yakutsk 62.25 2 P **P** **12 22 56.2 -0.3**
YAK pP **pP** **12 23 06.8 -3.4**
YAK sP **pwP** **12 23 10.9 -2.1**
AAK Ala-Archa 62.34 320 P **P** **12 22 57.3 -0.4**
comp=Z,1.2nm,0.3s,baz=103,slow=7.1,SNR=7.5
AAK LR LR 12 50 03.0
comp=Z,29nm,21.5s,baz=78,slow=36
comp=Z,1.2nm,0.3s
AAK Ala-Archa 62.34 320 P **P** **12 22 55.9 -1.8**
AAK IAmb IAmb 12 23 09.7
comp=Z,15nm,1.4s
AAK Ala-Archa 62.34 320 P **P** **12 22 58.1 +0.4**
AAK x x 12 23 07.1
DRK Karamyk 62.70 316 IAmb IAmb 12 23 24.2
comp=Z,8.7nm,0.9s
ARSB Arslanbob 62.71 318 P **P** **12 22 58.2 -2.0**
ARSB IAmb IAmb 12 23 00.7
comp=Z,5.6nm,0.8s
KBL Kabul 62.79 310 P **P** **12 23 00.8 -0.2**
KBL IAmb IAmb 12 23 02.4
comp=Z,10nm,1.1s
MA2 Magadan 62.95 14 P **P** **12 23 01.8 +0.6**
MA2 IAmb IAmb 12 23 20.3
comp=Z,15nm,0.8s
MA2 Magadan 62.95 14 P **P** **12 23 02.0 +0.8**
MA2 pP **pP** **12 23 13.1 -1.8**
SEM Semipalatinsk 63.30 330 *eP* **P** **12 23 04.0 0.0**
ZALV Zalesovo Beam 63.48 335 P **P** **12 23 03.0 -1.8**
comp=Z,1.9nm,0.3s,baz=132,slow=6.7,SNR=9.4
ZALV LR LR 12 50 55.3
comp=Z,26nm,19.8s,baz=82,slow=36
comp=Z,1.9nm,0.3s
ZALV Zalesovo Beam 63.48 335 P **P** **12 23 04.3 -0.5**
BTK Batken 63.63 316 IAmb IAmb 12 23 07.7
comp=Z,17nm,1.4s
KURBB Kurchatov Arra 64.31 329 P **P** **12 23 09.2 -1.2**
comp=Z,4.7nm,0.5s,baz=136,slow=6.5,SNR=65
comp=Z,4.7nm,0.5s
KURK Kurchatov 64.32 329 P **P** **12 23 08.5 -1.9**
KURK Kurchatov 64.32 329 P **P** **12 23 08.1 -2.3**
DZA Taraz 64.52 319 *eP* **P** **12 23 11.7 -0.3**
comp=Z,5.9nm,0.5s
IUG luzhnay 65.06 318 *eP* **P** **12 23 15.4 -0.2**
comp=Z,5.2nm,0.5s
KKAR Karatay Array 65.15 319 P **P** **12 23 14.9 -1.1**
CHM Chimkent 65.42 318 *eP* **P** **12 23 17.9 +0.1**
comp=Z,4.9nm,0.6s
BRLS Borolday 65.56 319 *eP* **P** **12 23 18.3 -0.4**
NIUE Niue 66.24 111 P **P** **12 23 24.5 +1.0**
comp=Z,196nm,1.1s
BVAR Borovoye Array 69.86 328 P **P** **12 23 45.2 -0.3**
comp=Z,1.5nm,0.4s,baz=129,slow=8.9,SNR=16
comp=Z,1.5nm,0.4s
BORK Borovoye 69.90 328 P **P** **12 23 45.3 -0.5**
BORK IAmb IAmb 12 23 48.6
comp=Z,9.6nm,1.1s
BORK Borovoye 69.90 328 P **P** **12 23 43.2 -2.6**
TIXI Tiksi 71.86 1 LR LR 12 57 49.2
comp=Z,40nm,19.3s,baz=193,slow=38
TIXI Tiksi 71.86 1 P **P** **12 23 56.1 -1.1**
TIXI IAmb IAmb 12 24 08.3
comp=Z,5.5nm,0.7s
TIXI Tiksi 71.86 1 P **P** **12 23 56.3 -0.9**
TIXI pP **pP** **12 24 07.8 -3.4**
NRIK Noril'sk 73.95 347 P **P** **12 24 09.2 -0.5**
comp=Z,9.1nm,0.5s,baz=148,slow=5.5,SNR=13
NRIK LR LR 12 59 14.5
comp=Z,27nm,21.3s,baz=154,slow=38
comp=Z,9.1nm,0.5s
NRIK Noril'sk 73.95 347 IAmb IAmb 12 24 12.7
comp=Z,10nm,0.5s
AB31 Akbulak array 74.29 322 IAmb IAmb 12 24 13.3
comp=Z,10nm,1.2s
ABKAR Akbulak array 74.29 322 P **P** **12 24 10.0 -2.1**
CCD Concordia, Ant 74.74 181 P **P** **12 24 15.9 +1.2**
ARTI Arti 77.58 328 P **P** **12 24 29.4 -1.3**
ARTI IAmb IAmb 12 24 33.1
comp=Z,6.0nm,0.7s
SDPT Sand Point 81.37 34 P **P** **12 24 53.2 +1.9**
comp=Z,75nm,1.0s
ANM Nome 81.54 24 P **P** **12 24 52.9 +0.9**
C18K Utukok River 84.34 21 IAmb IAmb 12 25 08.6
comp=Z,7.9nm,0.8s
KBZ Khabaz 84.61 314 P **P** **12 25 07.3 -1.0**
comp=Z,4.3nm,0.9s,baz=144,slow=5.4,SNR=6.0
comp=Z,4.3nm,0.9s
OHAK Old Harbor 85.64 33 P **P** **12 25 15.2 +2.0**
comp=Z,58nm,2.6s
FURI Furi 86.58 279 LR LR 13 03 39.6
comp=Z,25nm,18.6s,baz=149,slow=35
COLD Coldfoot 88.17 23 IAmb IAmb 12 25 26.8
comp=Z,8.9nm,0.9s
I23K Minto, Yukon-K 88.34 25 IAmb IAmb 12 25 27.2
comp=Z,9.5nm,0.9s
CCB Clear Creek Bu 88.97 25 IAmb IAmb 12 25 29.3
comp=Z,5.4nm,1.0s
ILAR Eielson Array 89.37 25 P **P** **12 25 29.6 -1.4**
comp=Z,1.1nm,0.7s,baz=245,slow=4.9,SNR=20
comp=Z,1.1nm,0.7s
QSPA South Pole Qui 89.65 180 P **P** **12 25 30.7 -1.7**
comp=Z,4.6nm,0.6s,baz=323,slow=3.7,SNR=4.7
comp=Z,4.6nm,0.6s
QSPA South Pole Qui 89.65 180 P **P** **12 25 33.2 +0.8**
QSPA IAmb IAmb 12 25 33.8
comp=Z,6.9nm,0.7s
QSPA South Pole Qui 89.65 180 P **P** **12 25 32.8 +0.4**
E25K Arctic Village 89.98 22 IAmb IAmb 12 25 35.4
comp=Z,5.1nm,0.9s
BRTR Keskin Array B 91.36 310 P **P** **12 25 38.9 -2.2**
comp=Z,0.9nm,0.8s,baz=120,slow=8.8,SNR=5.1
BRTR LR LR 13 12 38.5
comp=Z,14nm,21.1s,baz=130,slow=39
comp=Z,0.9nm,0.8s
L27K Beaver Creek, 91.61 27 IAmb IAmb 12 25 43.1
comp=Z,6.7nm,0.8s
EPYK Eagle Plains 93.52 24 IAmb IAmb 12 25 51.6
comp=Z,7.3nm,0.9s
ARCES ARCESS Array B 93.65 340 P **P** **12 25 48.5 -2.3**
comp=Z,4.6nm,1.0s,baz=70,slow=4.0,SNR=4.6
comp=Z,4.6nm,1.0s
ARCES ARCESS Array B 93.65 340 IAmb IAmb 12 26 12.6
comp=Z,9.5nm,1.1s
AKASG Malin Array Be 94.00 321 P **P** **12 25 50.1 -2.6**
comp=Z,0.3nm,0.3s,baz=70,slow=4.2,SNR=1.9
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 94.00 321 IAmb IAmb 12 26 17.5
comp=Z,3.7nm,1.2s
SPITS Spitsbergen Ar 94.09 349 P **P** **12 25 49.7 -2.9**
comp=Z,16nm,0.9s,baz=91,slow=7.5,SNR=6.7
FINES FINESS Array B 94.61 332 P **P** **12 25 53.2 -2.1**
comp=Z,1.1nm,0.6s,baz=124,slow=5.1,SNR=6.5
comp=Z,1.1nm,0.6s
LSZ Lusaka 96.67 255 LR LR 13 06 25.7
comp=Z,48nm,19.0s,baz=150,slow=33
BUR08 Bucovina Ar. S 96.94 318 P **P** **12 26 05.5 -0.9**
LBTB Lobatse 98.56 245 LR LR 13 08 31.6
comp=Z,34nm,18.1s,baz=168,slow=34
BOSA Boshof 98.58 241 LR LR 13 04 10.2
comp=Z,58nm,21.5s,baz=186,slow=31
HFS Hagfors 100.81 332 P **Pdif** **12 26 21.7 -1.6**
comp=Z,1.4nm,0.7s,baz=55,slow=6.0,SNR=4.1
MODS Modra-Piesok 102.04 320 *e*PDIFF **Pdif** **12 26 28.1 -0.9**
TORD Torodi Ar. Bea 122.58 285 PKP **PKPdf** **12 31 30.6 -0.5**
comp=Z,1.6nm,0.6s,baz=234,slow=2.4,SNR=12
SCHQ Schefferville 124.74 8 PKP **PKPdf** **12 31 34.0 -0.2**
comp=Z,2.7nm,0.8s,baz=6.9,slow=3.7,SNR=5.3
TXAR Lajitas Array 125.24 54 PKP **PKiKP** **12 31 36.3 -0.1**
comp=Z,0.7nm,0.8s,baz=200,slow=1.2,SNR=7.4
LCO Las Campanas 147.15 154 **PKPab** **12 32 19.6 -0.8**
AC05 El Transito 147.49 154 **PKPab** **12 32 20.6 -0.9**
AC01 Pan de Azucar 149.63 151 **PKiKP** **12 32 26.1 +0.1**
CPUP Villa Florida 153.43 175 PKPbc **PKiKP** **12 32 33.8 0.0**
comp=Z,2.8nm,0.8s,baz=152,slow=3.9,SNR=3.1
LPAZ La Paz 158.94 142 PKPab **PKPab** **12 33 11.9 +1.4**
comp=Z,1.5nm,0.6s,baz=218,slow=5.9,SNR=5.6

IDC 03 12:15:14.1±3.1, 32°88S×178°40W, h0km, mb3.9/2, mbtmp3.9/3, ML3.5/1, Error ellipse: s-maj=74.0km s-min=45.9km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.49**	**213**	Pn	Pn	12 16 50.1	-0.8
	1.0nm,0.3s,baz=248,slow=4.1,SNR=18						
URZ				Sn	Sn	12 18 01.8	-3.9
	2.9nm,0.3s,baz=235,slow=6.2,SNR=12						
	4.4nm,0.5s						
ASAR	**Alice Springs**	**42.70**	**270**	P	P	12 23 13.0	0.0
	0.8nm,0.6s,baz=109,slow=7.9,SNR=4.0						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**43.91**	**275**	P	P	12 23 22.7	0.0
	0.8nm,0.4s,baz=114,slow=7.9,SNR=12						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**147.33**	**338**	PKPbc	PKPbc	12 34 58.0	-0.8
	1.5nm,0.8s,baz=58,slow=3.4,SNR=5.1						

*IDC **03** 12:25:49.3±1.4, 53°.34S×63°.68W, h0km, mb4.1/3, mbtmp4.1/5, ML4.2/2, MS3.6/2, Error ellipse: s-maj=34.4km s-min=18.0km az=141.0*
*NEIC **03** 12:25:52.4±1.2, 53°.09S±0°.08×64°.47W±0°.07, h10km±2km, mb4.5/15, Error ellipse: s-maj=13.1km s-min=7.0km az=193.0*

ISC 03 12:25:50.3±0.8, 53°.27S±0°.08×64°.35W±0°.07, h10km, n32, σ1°14/31, mb4.4/8, Falkland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MG01	**Puerto William**	**2.55**	**228**		**Pb**	**12 26 34.3**	**-1.7**
USHA	**Ushuaia**	**2.87**	**235**	Pn	**Pn**	**12 26 38.6**	**+2.5**
	31nm,0.3s,baz=66,slow=12,SNR=71						
USHA				Sn	**Sn**	**12 27 10.1**	**-0.5**
	63nm,0.3s,baz=335,slow=21,SNR=7.5						
USHA				Lg	Lg	12 27 31.7	
	32nm,0.3s,baz=313,slow=18,SNR=4.5						
	127nm,0.4s						
MG02	**Cerro Sombrero**	**2.98**	**278**		**Pn**	**12 26 38.2**	**+0.5**
MG03	**Isla Dawson**	**3.69**	**259**		**Pn**	**12 26 48.3**	**+1.0**
GO10	**Punta Arenas**	**4.03**	**269**		**Pn**	**12 26 53.0**	**+1.0**
EFI	**East Falkland**	**4.17**	**70**		**Pn**	**12 26 54.7**	**+0.9**
MG04	**Isla Riesco**	**4.37**	**273**		**Pn**	**12 26 57.7**	**+1.0**
MG05	**Puerto Natales**	**5.23**	**285**		**Pn**	**12 27 08.6**	**+0.1**
GO09	**Cerro Castillo**	**5.30**	**289**		**Pn**	**12 27 09.2**	**-0.3**
GO08	**Villa O'Higgin**	**7.08**	**310**	Pn	Pn	12 27 31.6	-2.2
PLCA	**Paso Flores**	**13.23**	**339**	Pn	**Pn**	**12 29 01.7**	**+3.5**
	0.3nm,0.3s,baz=170,slow=11,SNR=6.3						
PLCA				Lg	Lg	12 32 58.1	
	0.2nm,0.3s,baz=270,slow=5.4,SNR=3.7						
PLCA				LR	LR	12 34 37.6	
	comp=Z,254nm,18.2s,baz=170,slow=39						
	1.5nm,0.7s						
PLCA	**Paso Flores**	**13.23**	**339**	Pn	**Pn**	**12 28 57.8**	**-0.4**
TRQA	**Tornquist**	**15.31**	**7**	Pn	**Pn**	**12 29 25.8**	**-0.6**
BO02	**Sierra Bellavi**	**19.03**	**344**	P	**P**	**12 30 13.4**	**+1.0**
MT01	**Popeta**	**20.02**	**343**	P	**P**	**12 30 22.4**	**-0.7**
MT01				IAmb	IAmb	12 30 30.6	
	comp=Z,27nm,1.4s						
MT09	**Talagante**	**20.06**	**344**	P	**P**	**12 30 22.5**	**-1.2**
MT09				IAmb	IAmb	12 30 25.6	
	comp=Z,26nm,1.1s						
MT02	**Curacav**	**20.59**	**344**	P	**P**	**12 30 29.1**	**-0.2**
VA03	**San Esteban**	**20.98**	**345**	P	**P**	**12 30 33.9**	**+0.3**
VA03				IAmb	IAmb	12 30 36.0	
	comp=Z,38nm,1.1s						
CO04	**Los Peladeros**	**21.75**	**345**	P	**P**	**12 30 42.4**	**+0.3**
CO04				IAmb	IAmb	12 30 54.6	
	comp=Z,24nm,1.2s						
CO02	**Combarbal**	**22.58**	**345**	P	**P**	**12 30 50.4**	**-0.4**
CO02				IAmb	IAmb	12 30 53.3	
	comp=Z,18nm,0.7s						
CO03	**El Pedregal**	**22.89**	**346**	P	**P**	**12 30 54.6**	**+0.5**
CO03				IAmb	IAmb	12 30 56.5	
	comp=Z,13nm,0.8s						
CO01	**Juntas del Tor**	**23.65**	**348**	P	**P**	**12 31 03.2**	**+1.2**
CO01				IAmb	IAmb	12 31 04.2	
	comp=Z,9.1nm,0.8s						
LCO	**Las Campanas**	**24.69**	**347**	P	**P**	**12 31 12.1**	**+0.5**
LCO				IAmb	IAmb	12 31 22.6	
	comp=Z,12nm,1.3s						
AC04	**Llanos de Chal**	**25.53**	**346**	P	**P**	**12 31 19.0**	**+0.1**
CPUP	**Villa Florida**	**27.42**	**14**	P	**P**	**12 31 35.1**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=191,slow=5.2,SNR=4.9						
	comp=Z,1.7nm,0.7s						
GO01	**Chusmiza**	**33.75**	**352**	P	**P**	**12 32 32.1**	**-0.4**
LPAZ	**La Paz**	**37.02**	**354**	LR	LR	12 49 29.1	
	comp=Z,59nm,18.1s,baz=171,slow=38						
BDFB	**Brasilia**	**39.69**	**25**	P	**P**	**12 33 23.0**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=203,slow=13,SNR=3.6						
	comp=Z,1.3nm,0.3s						
VILB	**Vilhena**	**40.35**	**6**	P	**P**	**12 33 28.4**	**+0.3**
BOAV	**Boa Vista**	**55.56**	**5**	P	**P**	**12 35 26.3**	**+0.5**
BOAV				IAmb	IAmb	12 35 34.7	
	comp=Z,7.2nm,1.4s						
TORD	**Torodi Ar. Bea**	**86.74**	**63**	P	**P**	**12 38 34.2**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=220,slow=5.2,SNR=6.2						
	comp=Z,1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**161.76**	**75**	PKPab	**PKPab**	**12 46 34.4**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=250,slow=2.9,SNR=3.7						

IDC 03 12:32:34.7±3.8, 22°.89N×11°.80W, h0km, mb3.7/2, mbtmp3.6/4, ML3.6/2, MS3.4/2, Error ellipse: s-maj=126.6km s-min=34.5km az=78.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**16.06**	**125**	Pn	Pn	12 36 22.3	+0.2
	0.2nm,0.3s,baz=312,slow=12,SNR=5.6						
	0.4nm,0.3s						
DBIC	**Dimbokro**	**17.45**	**156**	P	Pn	12 36 38.1	-1.5
	0.3nm,0.3s,baz=344,slow=10,SNR=1.4						
	0.9nm,0.4s						
DAVOX	**Davos/Dischmat**	**29.56**	**31**	LR	LR	12 50 30.2	
	comp=Z,44nm,19.1s,baz=79,slow=36						
HFS	**Hagfors**	**41.29**	**19**	P	P	12 40 20.7	-0.9
	2.1nm,0.9s,baz=231,slow=9.1,SNR=4.2						
	2.1nm,0.9s						
MKAR	**Makanchi Array**	**76.36**	**45**	P	P	12 44 26.2	+0.4
	0.1nm,0.5s,baz=281,slow=5.5,SNR=4.9						
	0.1nm,0.5s						
LPIG	**La Paz**	**88.15**	**295**	LR	LR	13 25 12.2	
	comp=Z,26nm,18.2s,baz=281,slow=36						
ASAR	**Alice Springs**	**148.52**	**98**	PKPbc	PKPbc	12 52 24.2	+0.1
	0.2nm,0.7s,baz=281,slow=2.4,SNR=4.8						

IDC 03 12:41:46.0±6.0, 6°.08S×149°.30E, h108km±41km, mb3.0/3, mbtmp3.5/4, Error ellipse: s-maj=110.1km s-min=37.6km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.93**	**213**	P	Pn	12 42 46.3	+1.9
	5.3nm,0.3s,baz=16,slow=13,SNR=9.6						
PMG				S	Sn	12 43 29.5	-0.2
	72nm,0.4s,baz=186,slow=10,SNR=21						
WRA	**Warramunga Arr**	**20.04**	**225**	P	P	12 46 10.9	+0.3
	0.9nm,0.5s,baz=53,slow=10,SNR=13						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**22.92**	**219**	P	P	12 46 41.6	+0.6
	0.6nm,0.5s,baz=53,slow=9.1,SNR=23						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**79.02**	**320**	P	P	12 53 37.6	-0.7
	0.3nm,0.7s,baz=106,slow=5.2,SNR=2.3						
	0.3nm,0.7s						

*SSNC **03** 12:43:37.8±0.3, 19°.12N×80°.12W, h29km±4km, MD3.5, ML2.7, Presumed earthquake*
*JSN **03** 12:43:37.7±0.8, 19°.41N×79°.92W, h19km±49km, MD4.5, MW3.8, Presumed earthquake*

ISC 03 12:43:36.1±2.7, 19°.1N±0°.1×80°.2W±0°.1, h35km, n9, σ2°.04/14, 3D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCCY	**Blossom Villag**	**0.58**	**9**	*eP*	**Pn**	**12 43 47.7**	**-0.2**
LCCY				*eS*	**Sn**	**12 43 55.0**	**-1.3**
LCCY				IAML		12 44 04.8	
	comp=N,612nm,0.5s						
LCCY				IAML		12 44 07.9	
	comp=E,402nm,0.4s						
CBCY	**The Bluff, Cay**	**0.76**	**31**	*eP*	**Pn**	**12 43 50.0**	**-0.3**
CBCY				*eS*	**Sn**	**12 43 58.9**	**-1.6**
CBCY				IAML		12 44 01.4	
	comp=N,75nm,0.2s						
CBCY				IAML		12 44 02.8	
	comp=E,67nm,0.2s						
MTDJ	**Mount Denham**	**2.65**	**108**	*eP*	**Pn**	**12 44 16.8**	**+0.5**
MTDJ				IAML		12 44 47.3	
	comp=E,99nm,0.4s						
MTDJ				IAML		12 44 49.0	
	comp=E,69nm,0.3s						
MTDJ	**Mount Denham**	**2.65**	**108**	⇓*iP*	**Pn**	**12 44 17.5**	**+1.2**
MGV	**Manicaragua**	**3.01**	**3**	*eP*	**Pn**	**12 44 21.8**	**+0.5**
MGV				IAML		12 44 57.8	
	comp=N,28nm,0.3s						
MGV				IAML		12 44 58.3	
	comp=E,76nm,0.1s						
CCCC	**Cccc**	**3.09**	**47**	*eP*	**Pn**	**12 44 25.8**	**+3.4**
CCCC				*eS*	**Sn**	**12 45 01.5**	**+3.4**
CCCC				IAML		12 45 12.8	
	comp=E,5.9nm,0.5s						
CCCC				IAML		12 45 12.9	
	comp=N,5.0nm,0.4s						
LMGC	**Las Mercedes**	**3.14**	**71**	⇓*eP*	**Pn**	**12 44 23.3**	**+0.2**
LMGC				*eS*	**Sn**	**12 44 57.0**	**-2.4**
LMGC				IAML		12 45 07.9	
	comp=E,15nm,0.1s						
LMGC				IAML		12 45 09.2	
	comp=N,18nm,0.1s						
STH	**Stony Hill**	**3.35**	**107**	⇓*iP*	**Pn**	**12 44 26.8**	**+0.9**
RCC	**Rio Carpintero**	**4.32**	**77**	*eP*	**Pn**	**12 44 39.6**	**+0.3**
RCC				*eS*	**Sn**	**12 45 25.4**	**-3.0**

IDC 03 13:00:56.8±2.4, 6°.68S×146°.30E, h0km, mb2.9/2, mbtmp3.1/4, ML2.3/2, Error ellipse: s-maj=58.8km s-min=27.4km az=74.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.83**	**163**	Pn	Pn	13 01 43.3	-0.1
	5.2nm,0.3s,baz=335,slow=19,SNR=17						
PMG				Sn	Sn	13 02 20.7	+2.4
	3.2nm,0.3s,baz=328,slow=19,SNR=2.1						
	11nm,0.3s						
WRA	**Warramunga Arr**	**17.57**	**220**	P	Pn	13 05 03.3	0.0
	baz=42,slow=12,SNR=2.8						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**20.66**	**214**	P	P	13 05 37.5	-0.9
	0.2nm,0.8s,baz=54,slow=8.8,SNR=6.4						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**77.58**	**321**	P	P	13 12 55.4	+0.5
	0.1nm,0.6s,baz=126,slow=4.1,SNR=1.4						
	0.1nm,0.6s						

*IDC **03** 13:01:59.6±1.2, 1°.68N×126°.70E, h0km, mb3.8/6, mbtmp3.9/7, ML3.8/1, MS2.8/1, Error ellipse: s-maj=108.7km s-min=16.4km az=68.0*
*DJA **03** 13:02:05.6±1.0, 1°.3N±3°×12°.6E±°, h20km±9km, M4.0/13, mB5.3/2, mb4.3/5, MLv3.9/13, Mw(mB)4.7/2*
*NEIC **03** 13:02:06.2±0.9, 1°.6N±0°.1×126°.56E±0°.08, h39km±6km, mb4.4/14, Error ellipse: s-maj=18.0km s-min=9.9km az=207.0*

ISC 03 13:02:06.2±0.7**, 1°56N**±0°09×**126°53E**±0°08**, h47km, n32, σ0s73/32, mb4.1/12, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.15	133		Pn	13 02 25.0	-0.8
TNTI	Ternate	1.15	133	P	Pn	13 02 25.6	-0.2
SANI	Sanana	3.63	189	P	Pn	13 02 58.3	-1.6
GTOI	Gorontalo	3.64	255	P	Pn	13 03 00.9	+0.9
LUWI	Luwuk	4.56	235	Pn	Pn	13 03 12.1	-0.6
LUWI	Luwuk	4.56	235	P	Pn	13 03 13.6	+0.9
TOLI2	Tolitoli	5.76	266	Pn	Pn	13 03 30.1	+0.9
RKPI	Ransiki, Papua	8.23	112	P	Pn	13 04 04.5	+1.4
BATI	Baumata	12.04	194	LR	LR	13 10 25.1	
	comp=Z,45nm,19.2s,baz=256,slow=42						
MTN	Manton Dam	15.02	162	P	P	13 05 40.7	+0.6
MTN				IAmb	IAmb	13 06 16.5	
	comp=Z,20nm,1.1s						
KNRA	Kununurra	17.27	173		Pn	13 06 04.2	+0.1
KNRA				IAmb	IAmb	13 06 15.8	
	comp=Z,39nm,1.5s						
FITZ	Fitzroy Crossi	19.56	183	P	P	13 06 29.5	-0.6
	comp=Z,0.2nm,0.3s,baz=344,slow=8.0,SNR=2.3						
	comp=Z,2.1nm,0.6s						
WB0	Warramunga Arr	22.56	160	P	P	13 07 02.4	-0.2
WB0				IAmb	IAmb	13 07 04.0	
	comp=Z,7.4nm,1.2s						
WRA	Warramunga Arr	22.70	161	P	P	13 07 04.0	-0.1
	comp=Z,2.1nm,0.5s,baz=340,slow=11,SNR=17						
	comp=Z,2.1nm,0.5s						
WRA	Warramunga Arr	22.70	161	P	P	13 07 03.0	-1.1
WR8	Warramunga Arr	22.77	160	P	P	13 07 04.0	-0.8
AS31	Alice Springs	26.08	164	P	P	13 07 35.9	+0.2
ASAR	Alice Springs	26.08	164	P	P	13 07 36.0	+0.4
	comp=Z,0.8nm,0.4s,baz=345,slow=8.4,SNR=13						
ASAR				PcP	PcP	13 11 03.2	+0.6
	comp=Z,0.4nm,0.8s,baz=344,slow=2.4,SNR=2.6						
	comp=Z,0.8nm,0.4s						
ASAR	Alice Springs	26.08	164	P	P	13 07 35.9	+0.3
FORT	Forrest	32.19	178	P	P	13 08 30.3	+0.5
FORT				IAmb	IAmb	13 08 45.7	
	comp=Z,9.2nm,1.1s						
BBOO	Buckleboo	35.35	166	P	P	13 08 57.5	+0.2
BBOO				IAmb	IAmb	13 09 25.1	
	comp=Z,31nm,1.4s						
STKA	Stephens Creek	36.20	158	P	P	13 09 04.6	+0.1
	comp=Z,1.2nm,0.5s,baz=343,slow=11,SNR=2.9						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	36.20	158	P	P	13 09 04.8	+0.3
DZM	Mont Dzumac	45.48	123	P	P	13 10 21.0	-0.3
DZM				IAmb	IAmb	13 11 01.6	
	comp=Z,8.1nm,1.0s						
MKAR	Makanchi Array	59.22	326	P	P	13 12 03.1	+0.4
	comp=Z,0.4nm,0.4s,baz=120,slow=7.8,SNR=15						
	comp=Z,0.4nm,0.4s						
MAKZ	Makanchi	59.41	326	P	P	13 12 04.4	+0.5
MAKZ				IAmb	IAmb	13 12 06.1	
	comp=Z,2.7nm,1.4s						
ZALV	Zalesovo Beam	62.42	334	P	P	13 12 22.8	-1.4
	comp=Z,0.3nm,0.4s,baz=144,slow=5.4,SNR=1.8						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	63.45	328	P	P	13 12 31.5	+0.4
	comp=Z,0.7nm,0.5s,baz=128,slow=6.1,SNR=19						
	comp=Z,0.7nm,0.5s						
KURK	Kurchatov	63.46	328	P	P	13 12 31.4	+0.2
KURK				IAmb	IAmb	13 12 32.1	
	comp=Z,1.8nm,0.4s						
SHEM	Shemya Is, Ala	64.43	30	P	P	13 12 36.8	-0.7
SMY	Shemya	64.43	30	P	P	13 12 36.8	-0.7
ABKAR	Akbulak array	73.70	321	P	P	13 13 35.5	+0.3

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*NEIC **03** 13:02:51.7±1.2, 14°12N±0°07×91°30W±0°06, h90km±6km, mb4.2/28, Error ellipse: s-maj=11.5km s-min=6.7km az=213.0*

*CATAC **03** 13:02:52.6, 14°N±1°×9°1W±°, h79km±2km, M4.8/35, mb4.7/3, mB4.9/2, MLv4.8/35, Mw(mB)4.2/2, confirmed*

*SNET **03** 13:02:52.7±1.4, 14°20N×91°38W, h64km, ML5.1, Presumed earthquake*

*GCG **03** 13:02:52.1±1.8, 14°20N×91°36W, h73km±7km, MD4.8, ML5.0, Presumed earthquake*

*IDC **03** 13:02:54.3±1.4, 14°44N×91°01W, h107km±9km, mb3.6/9, mbtmp4.0/12, MS3.2/11, Error ellipse: s-maj=30.3km s-min=16.7km az=35.0*

ISC 03 13:02:51.1±0.7**, 14°14N**±0°05×**91°38W**±0°04**, h90km**±5km**, n133, σ1s46/163, mb4.2/15, 1C-9D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.26	6	*i* P	Pn	13 03 05.8	+1.3
STG5				*i* S	Sn	13 03 16.2	+1.8
STG2	El Palmar, Qui	0.30	0	*i* P	Pn	13 03 06.5	+1.8
STG2				*i* S	Sn	13 03 17.4	+2.7
STG8	El Palmar, Qui	0.31	4	*i* P	Pn	13 03 06.5	+1.6
STG8				*i* S	Sn	13 03 17.7	+2.6
STG8				IAML		13 03 19.6	
	comp=E,89µm,0.2s						
RTAL	Retalhuleu	0.49	321		Pn	13 03 05.5	-0.3
RTAL	Retalhuleu	0.49	321	⇑P	Pn	13 03 05.6	-0.3
RTAL				S	Sn	13 03 16.1	-0.6
SOKI	Kika Raxquin	0.68	358	*i* P	Pn	13 03 07.6	-0.3
SOKI				*i* S	Sn	13 03 19.0	-1.3
QUEO	Labor Ovalle	0.74	350	*i* P	Pn	13 03 08.9	+0.5
QUEO				*i* S	Sn	13 03 19.7	-1.4
FG16	Alotenango, Sa	0.85	81	*i* P	Pn	13 03 06.3	-3.1
FG16				IAML		13 03 21.9	
	comp=N,189µm,0.2s						
GCG4	OSOP	0.93	61	*i* P	Pn	13 03 10.3	0.0
GCG4				*i* S	Sn	13 03 25.3	+0.8
PCG5	San Vicente Pa	0.97	85	*i* P	Pn	13 03 07.9	-2.8
PCG5				*i* S	Sn	13 03 20.1	-5.2
SMCA	Catarina	0.98	317	*i* P	Pn	13 03 10.7	0.0
SMCA				*i* S	Sn	13 03 23.8	-1.5
SMCA				IAML		13 03 25.4	
	comp=N,25µm,0.2s						
ESSJ	San Jos, E	1.02	124	*i* P	Pn	13 03 07.3	-3.8
THIG		1.15	312	*i* P	Pn	13 03 13.3	+0.7
THIG				*i* S	Sn	13 03 28.4	-0.3
THIG				IAML		13 03 34.0	
	comp=N,25µm,0.5s						
HUEH	Huehuetenango	1.18	354		Pn	13 03 13.4	+0.2
HUEH	Huehuetenango	1.18	354	⇓P	Pn	13 03 13.6	+0.4
HUEH	Huehuetenango	1.18	354	*i* P	Pn	13 03 13.5	+0.4
HUEH				*e*S	Sn	13 03 29.6	-0.1
HUEH	Huehuetenango	1.18	354	*i* P	Pn	13 03 13.6	+0.4
HUEH				IAML		13 03 39.2	
	comp=E,15µm,0.6s						
APG	El Apazote	1.23	46	P	Pn	13 03 13.8	0.0
	comp=E,65nm,0.2s,baz=202,slow=14,SNR=2550						
APG				S	Sn	13 03 31.4	+0.6
	comp=E,260nm,0.6s,baz=161,slow=10.0,SNR=11						
APG	El Apazote	1.23	46	*i* P	Pn	13 03 13.8	0.0
FAME	Alcaldia de Sa	1.35	102	⇓P	Pn	13 03 15.7	+0.6
FAME				S	Sn	13 03 33.9	+0.8
LOAL	Lomas de Alarc	1.55	95	⇓P	Pn	13 03 18.4	+0.7
LOAL				S	Sn	13 03 39.9	+2.2
NUBE	Las Nubes	1.57	98	⇓P	Pn	13 03 18.5	+0.6
NUBE				S	Sn	13 03 38.9	+0.8
NUBE	Las Nubes	1.57	98	*e*P	Pn	13 03 18.4	+0.6
NUBE	Las Nubes	1.57	98	*i* P	Pn	13 03 18.5	+0.6
NUBE				*i* S	Sn	13 03 37.1	-1.0
AVCB	Coban	1.62	35	*i* P	Pn	13 03 19.5	+0.9
AVCB				IAML		13 03 28.9	
	comp=N,12µm,0.5s						
CEVE	Cerro Verde	1.73	100	P	Pn	13 03 21.0	+1.0
CEVE	Cerro Verde	1.73	100	*e*P	Pn	13 03 21.1	+1.0
CEVE				*e*S	Sn	13 03 45.8	+3.8
JAYA	Jayaque - finc	1.93	104	⇓P	Pn	13 03 23.4	+0.8
JAYA				S	Sn	13 03 47.8	+1.2
JAYA	Jayaque - finc	1.93	104	*e*P	Pn	13 03 23.6	+1.0
JAYA	Jayaque - finc	1.93	104	*i* P	Pn	13 03 23.4	+0.8
JAYA				*i* S	Sn	13 03 45.4	-1.2
CEDA	San Andres	1.95	100	P	Pn	13 03 23.6	+0.9
MTO3	Montecristo	1.97	82		Pn	13 03 23.1	-0.1
MTO3	Montecristo	1.97	82	⇓P	Pn	13 03 23.1	-0.1
MTO3	Montecristo	1.97	82	*i* P	Pn	13 03 23.1	-0.1
ESQI	Esquipulas	2.02	78		Pn	13 03 23.6	0.0
ESQI	Esquipulas	2.02	78	P	Pn	13 03 24.0	+0.4
PMON	Piamonte	2.05	102	⇓P	Pn	13 03 25.0	+1.0
PMON				S	Sn	13 03 51.0	+1.8
BOQS	Boqueron	2.07	101	*e*P	Pn	13 03 25.6	+1.1
LALI	Alcalda de L	2.10	108	P	Pn	13 03 25.9	+1.4
LALI	Alcalda de L	2.10	108	*e*P	Pn	13 03 26.0	+1.4
LALI	Alcalda de L	2.10	108	*i* P	Pn	13 03 26.0	+1.4
LALI				*i* S	Sn	13 03 51.0	+0.8
UEES	Universidad Ev	2.12	101	P	Pn	13 03 26.0	+1.0
SEMO	Seminario San	2.13	101	P	Pn	13 03 27.1	+1.9
UTEC	Universidad Te	2.16	101	P	Pn	13 03 28.0	+2.5
UTEC				S	Sn	13 03 53.4	+1.7
IGN	Direccin Gen	2.18	101	P	Pn	13 03 27.2	+1.4
IGN				S	Sn	13 03 54.2	+1.9
PANCS	Alcalda de	2.20	104	P	Pn	13 03 27.2	+1.2
PANCS				S	Sn	13 03 54.0	+1.4
UDBS	Universidad Do	2.20	101	P	Pn	13 03 27.1	+1.1
UDBS				S	Sn	13 03 54.4	+1.7
CCIG	Comitan	2.25	341		Pn	13 03 28.1	+1.2
CCIG	Comitan	2.25	341	⇓P	Pn	13 03 28.5	+1.5
CCIG				S	Sn	13 03 55.3	+1.1
CCIG	Comitan	2.25	341	*i* P	Pn	13 03 28.4	+1.5
LBRS	Las Brisas	2.30	100	*e*P	Pn	13 03 28.4	+1.0
LFRS	El Faro	2.31	103	*e*S	Sn	13 03 58.9	+3.6
PAVA	Las Pavas	2.41	100	⇓P	Pn	13 03 29.9	+1.0
PAVA				S	Sn	13 03 60.0	+2.3
UESV	Universidad de	2.56	101	P	Pn	13 03 31.8	+1.0
TECO	Alcaldia de Te	2.59	103	P	Pn	13 03 32.3	+1.1
TECO				S	Sn	13 04 03.7	+1.8
PACA	Pacayal	3.04	102	P	Pn	13 03 38.6	+1.3
PACA	Pacayal	3.04	102	*e*P	Pn	13 03 39.3	+2.0
RANC	El Ranchito	3.08	103	P	Pn	13 03 39.4	+1.5
TGIG		3.12	328	*i* P	Pn	13 03 38.7	+0.4
PETF	Flores	3.12	28		Pn	13 03 38.6	+0.3
PETF	Flores	3.12	28	P	Pn	13 03 38.9	+0.6
PETF	Flores	3.12	28	*i* P	Pn	13 03 38.9	+0.6
CNCH	Conchagua	3.55	104	P	Pn	13 03 45.2	+1.0
CNCH	Conchagua	3.55	104	*e*P	Pn	13 03 46.8	+2.6
CSGN	Cosiguina Volc	3.89	107	P	Pn	13 03 51.3	+2.6
TGUH	Tegucigalpa,Un	3.98	91		Pn	13 03 49.1	-1.0
CMIG	Matias Romero	4.48	311	P	Pn	13 03 59.5	+2.8
	comp=N,32nm,0.3s,baz=148,slow=9.2,SNR=58						
CMIG				S	Sn	13 04 47.9	+0.3
	comp=N,42nm,0.3s,baz=154,slow=14,SNR=8.1						
CMIG				LR	LR	13 06 10.4	
	comp=N,143nm,21.4s,baz=138,slow=43						
PKGN	Cerro Pekin	4.52	108	P	Pn	13 04 00.4	+3.1
PKGN				S	Sn	13 04 51.0	+2.2
HERN	Volcan Telica	4.68	108	P	Pn	13 04 01.4	+1.9
HERN				S	Sn	13 04 55.4	+2.7
POLN	Al Sur del Vol	4.68	108	P	Pn	13 04 01.2	+1.8
POLN				S	Sn	13 04 54.4	+1.7
SCIG	Sabancuy	4.80	2	*i* P	Pn	13 04 00.9	-0.3
CNGN	Cerro Negro	4.84	109		Pn	13 04 01.6	0.0
CNGN	Cerro Negro	4.84	109	P	Pn	13 04 03.4	+1.8
CNGN				S	Sn	13 04 59.0	+2.6
HUIG	Huatulco	4.85	290	*i* P	Pn	13 04 01.1	-0.7
LIMN	Finca el Limon	4.99	102	P	Pn	13 04 05.5	+1.8
MOMN	Momotombo	5.01	110	P	Pn	13 04 06.0	+2.0
COPN	Copaltepe	5.05	112	P	Pn	13 04 05.6	+1.1
TEIG	Tepich	6.74	26		Pn	13 04 27.6	+0.2
JTS	Las Juntas de	7.35	121	P	Pn	13 04 37.1	+1.2
	comp=N,10nm,0.3s,baz=24,slow=22,SNR=4.0						
JTS				S	Sn	13 05 55.3	-2.5
	comp=N,18nm,0.2s,baz=97,slow=22,SNR=4.7						
JTS				LR	LR	13 06 55.2	
	comp=N,31nm,21.4s,baz=232,slow=33						
TLIG	Tlapa	7.71	297		Pn	13 04 42.8	+1.9
CAIB	Caibarien	14.02	52	Pn	Pn	13 06 06.4	+0.6
833A	Chaparral WMA,	15.96	333	Pn	Pn	13 06 31.1	+0.6
833A				IAmb	IAmb	13 06 51.7	
	comp=Z,12nm,1.2s						
553A	Crawfordville	17.21	21		P	13 06 46.8	+0.7
BRDY	Brady	18.45	339	P	P	13 07 00.1	+0.4
TXAR	Lajitas Array	18.92	325	P	Pn	13 07 07.4	+0.8
	comp=Z,0.6nm,0.5s,baz=146,slow=11,SNR=28						
TXAR				PcP	PcP	13 11 29.8	+2.1
	comp=Z,0.6nm,1.0s,baz=158,slow=1.2,SNR=4.4						
TXAR	Lajitas Array	18.92	325	P	P	13 07 05.6	+0.5
TX31	Lajitas Ar. Si	18.92	325	P	P	13 07 05.7	+0.6
MNHN	Monahans	20.06	330	Pn	Pn	13 07 20.5	+0.7
MNHN				IAmb	IAmb	13 07 20.9	
	comp=Z,9.8nm,0.9s						
GOGA	Godfrey	20.49	19	P	P	13 07 22.4	+0.5
GOGA				IAmb	IAmb	13 07 57.9	
	comp=Z,19nm,1.4s						
APMT	Aspermont	20.69	339		P	13 07 24.5	+0.4
APMT				IAmb	IAmb	13 07 56.5	
	comp=Z,7.4nm,0.8s						
129A	Stewart Farms,	20.75	334	P	P	13 07 25.8	+1.0
129A				IAmb	IAmb	13 08 00.1	
	comp=Z,6.1nm,0.8s						
VHRN	Van Horn	20.77	325		P	13 07 25.7	+0.6
SDV	Santo Domingo	20.98	102	P	P	13 07 26.5	-1.0
	comp=Z,4.7nm,0.6s,baz=311,slow=6.5,SNR=6.1						
	comp=Z,4.7nm,0.6s						
MNTX	Cornudas Mount	21.68	326	P	P	13 07 35.6	+0.9
LCAR	Lake Charles	21.84	0		P	13 07 36.2	-0.1
LCAR				IAmb	IAmb	13 07 59.0	
	comp=Z,7.7nm,1.1s						
TKL	Tuckaleechee C	22.49	16	P	P	13 07 42.2	-1.1
	comp=Z,3.3nm,0.4s,baz=177,slow=7.4,SNR=6.3						
	comp=Z,3.3nm,0.4s						
TKL	Tuckaleechee C	22.49	16	P	P	13 07 43.6	+0.3
TKL				IAmb	IAmb	13 08 17.5	
	comp=Z,9.4nm,0.9s						
U49A	Red Boiling Sp	22.84	12	P	P	13 07 46.5	-0.3
U49A				IAmb	IAmb	13 07 56.0	
	comp=Z,6.5nm,0.9s						
CCM	Cathedral Cave	23.82	0	P	P	13 07 55.8	-0.1
CCM				IAmb	IAmb	13 07 56.7	
	comp=Z,12nm,0.8s						
S51A	Beattyville	24.41	15	P	P	13 08 01.0	-0.2
S51A				IAmb	IAmb	13 08 23.6	
	comp=Z,11nm,1.0s						
SJG	San Juan	24.55	77	LR	LR	13 17 54.8	
	comp=Z,32nm,18.7s,baz=266,slow=37						
ANMO	Albuquerque	24.79	329	LR	LR	13 20 41.5	
	comp=Z,25nm,18.7s,baz=166,slow=43						
PDAR	Pinedale Array	32.55	335	P	P	13 09 15.5	+1.5
	comp=Z,0.1nm,0.4s,baz=148,slow=8.0,SNR=1.8						
PDAR				PcP	PcP	13 11 58.9	+0.2
	comp=Z,0.2nm,0.4s,baz=109,slow=3.5,SNR=2.4						
PDAR				LR	LR	13 24 53.5	
	comp=Z,26nm,20.4s,baz=102,slow=41						
	comp=Z,0.1nm,0.4s						
NVAR	Mina Array Bea	33.95	320	P	P	13 09 27.6	+1.4
	comp=Z,3.2nm,0.7s,baz=133,slow=7.7,SNR=11						
NVAR				PcP	PcP	13 12 04.8	+2.1
	comp=Z,0.5nm,0.6s,baz=133,slow=0.3,SNR=4.0						
NVAR				LR	LR	13 23 53.9	
	comp=Z,38nm,18.8s,baz=164,slow=37						
	comp=Z,3.2nm,0.7s						
ULM	Lac du Bonnet	36.20	355	LR	LR	13 25 40.5	
	comp=Z,65nm,18.6s,baz=192,slow=38						
J08A	Circle Bar Ran	37.26	327	P	P	13 09 55.9	+1.6
F10A	Beach Ranch, E	38.48	331	P	P	13 10 05.9	+1.3
NEW	Newport	40.14	333	LR	LR	13 28 14.9	
	comp=Z,67nm,18.4s,baz=126,slow=38						
FCC	Fort Churchill	44.59	358	P	P	13 10 53.0	-1.1
DRLN	Deer Lake	44.67	31	P	P	13 10 53.4	-1.5
SCHQ	Schefferville	44.88	20	P	P	13 10 54.4	-2.1
	comp=Z,3.7nm,0.8s,baz=224,slow=4.8,SNR=6.8						
SCHQ				LR	LR	13 29 57.8	
	comp=Z,49nm,19.9s,baz=204,slow=36						
	comp=Z,3.7nm,0.8s						
YKAW1	Yellowknife Wh	50.99	346	P	P	13 11 43.9	+0.4
YKAW1				IAmb	IAmb	13 12 25.9	
	comp=Z,3.9nm,1.4s						
YKA	Yellowknife Ar	51.03	346	P	P	13 11 42.8	-1.0
	comp=Z,0.3nm,0.6s,baz=152,slow=6.9,SNR=8.3						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	51.03	346	P	P	13 11 44.0	+0.1
FRB	Frobisher Bay	52.05	13	LR	LR	13 34 16.6	
	comp=Z,73nm,18.6s,baz=250,slow=36						
SFJD	Kangerlussuaq	59.20	17	LR	LR	13 39 02.2	
	comp=Z,55nm,18.7s,baz=177,slow=37						
BCAR	Beaver Creek A	60.16	336	P	P	13 12 49.8	+0.6
J25K	Salcha River,	62.30	337	P	P	13 13 04.3	+0.6
KDAK	Kodiak Island	62.92	328	P	P	13 13 09.2	+1.4
ILAR	Eielson Array	62.95	337	P	P	13 13 07.8	-0.2
	comp=Z,0.2nm,0.4s,baz=132,slow=5.1,SNR=8.8						
	comp=Z,0.2nm,0.4s						
ILAR	Eielson Array	62.95	337	P	P	13 13 08.6	+0.6
BMAR	Burnt Mountain	63.37	340	P	P	13 13 11.0	+0.2
SKT	Skwentna	63.77	333	P	P	13 13 13.7	+0.3
PPLA	Purkeypile	64.38	334	P	P	13 13 17.5	0.0
D20K	Etivluk River	68.02	339	P	P	13 13 40.5	0.0
D20K				IAmb	IAmb	13 14 14.2	
	comp=Z,2.9nm,1.0s						
D19K	Kuna River	68.48	339	P	P	13 13 43.5	+0.1
D19K				IAmb	IAmb	13 14 26.0	
	comp=Z,7.0nm,1.4s						
EKA	Eskdalemuir Ar	77.50	36	P	P	13 14 34.6	-2.2
	comp=Z,0.4nm,0.3s,baz=275,slow=5.7,SNR=5.3						
	comp=Z,0.4nm,0.3s						
SPITS	Spitsbergen Ar	79.83	12	P	P	13 14 48.3	-1.0
	comp=Z,8.0nm,0.8s,baz=317,slow=6.1,SNR=1.5						
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	119.08	5	PKP	PKPdf	13 21 28.6	-1.2
	comp=Z,0.1nm,0.3s,baz=352,slow=3.5,SNR=4.6						
WRA	Warramunga Arr	136.01	256	PKP	PKiKP	13 22 04.3	-0.1
	comp=Z,0.3nm,0.7s,baz=88,slow=2.5,SNR=8.8						
ASAR	Alice Springs	136.28	251	PKP	PKiKP	13 22 03.6	-1.2
	comp=Z,0.3nm,0.8s,baz=107,slow=2.8,SNR=4.2						
CMAR	Chiang Mai Arr	146.05	342	PKPbc	PKPab	13 22 21.5	-0.8
	comp=Z,2.0nm,0.7s,baz=346,slow=4.1,SNR=17						
CMAR	Chiang Mai Arr	146.05	342		PKPab	13 22 21.9	-0.3

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*PRU **03** 13:14:06.9, 45°63N×15°69E, h0km*

*LJU **03** 13:14:06.9, 45°65N×15°82E, h16km, ML2.2*

*VIE **03** 13:14:07.5±0.4, 45°65N×15°80E, h7km±1km, mb2.1/7, ml2.4/7, Error ellipse: s-maj=2.4km s-min=1.5km az=132.0 23 km SW of Zagreb*

*ROM **03** 13:14:07.7±0.4, 45°59N±0°02×15°88E±0°02, h5km±2km, ML2.7/10, Error ellipse: s-maj=1.8km s-min=1.4km az=134.0*

ISC 03 13:14:07.5±0.9**, 45°66N**±0°01×**15°83E**±0°02**, h8km**±8km**, n59, σ0s95/99, 9C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAG	Zagreb	0.20	34	*i* Pg	Pg	13 14 11.8	+0.2
GCIS	Gornji Cirnik	0.25	327	⇑*i*Pg	Pg	13 14 12.6	+0.1
GCIS				*e*Sg	Sg	13 14 16.4	+0.4
GCIS				IAML		13 14 17.9	
	comp=Z,238nm,0.1s						
OZLJ	Ozalj	0.25	261	*i* Pg	Pg	13 14 12.7	+0.1
OZLJ				Sg	Sg	13 14 16.0	+0.1
PTJ	Puntijarka	0.27	22	*i* Pg	Pg	13 14 12.7	-0.2
PTJ				Sg	Sg	13 14 16.5	0.0
CRES	Cresnjevec Ost	0.31	303	⇑*i*Pg	Pg	13 14 13.5	-0.1
CRES				*e*Sg	Sg	13 14 18.1	+0.4
CRES				IAML		13 14 19.5	
	comp=Z,58nm,0.1s						
GOLS	Golise	0.38	338	⇓*i*Pg	Pg	13 14 14.9	0.0
GOLS				*e*Sg	Sg	13 14 21.1	+1.0
GOLS				IAML		13 14 22.0	
	comp=Z,328nm,0.3s						
CESS	Cesta pri Krsk	0.41	321	*i* Pg	Pg	13 14 15.3	-0.1
CESS				*e*Sg	Sg	13 14 21.4	+0.6
CESS				IAML		13 14 23.3	
	comp=Z,74nm,0.1s						
BOJS	Bojanci	0.43	249	⇑*i*Pg	Pg	13 14 15.7	-0.1
BOJS				*i*		13 14 16.1	
BOJS				*i* Sg	Sg	13 14 21.5	0.0
BOJS				IAML		13 14 22.2	
	comp=Z,128nm,0.1s						
LEGS	Legarje	0.46	310	⇑*i*Pg	Pg	13 14 16.3	-0.1
LEGS				*i*		13 14 16.8	
LEGS				*e*Sg	Sg	13 14 23.0	+0.5
LOBO	Lobor	0.53	19	*i* Pg	Pg	13 14 17.7	0.0
LOBO				Sg	Sg	13 14 25.2	+0.5
DOBS	Dobrina	0.55	333	*i* Pg	Pg	13 14 18.4	+0.2
DOBS				*e*Sg	Sg	13 14 25.8	+0.4
DOBS				IAML		13 14 27.0	
	comp=Z,45nm,0.1s						
KALN	Kalnik	0.65	43	*e*Pg	Pg	13 14 19.6	-0.5
KALN				Sg	Sg	13 14 28.6	+0.2
MOSL	Moslavina	0.65	93	*i* Pg	Pg	13 14 19.8	-0.3
MOSL				Sg	Sg	13 14 29.0	+0.3
PDKS	Podkum	0.70	305	⇑*i*Pg	Pg	13 14 21.2	0.0
PDKS				IAML		13 14 35.8	
	comp=Z,37nm,0.1s						
VISS	Visnje	0.71	282	⇑*i*Pg	Pg	13 14 21.0	-0.1
VISS				IAML		13 14 35.4	
	comp=Z,64nm,0.3s						
GBRS	Gornja Briga	0.72	260	⇑*i*Pg	Pg	13 14 21.3	-0.1
GBRS				IAML		13 14 34.9	
	comp=Z,25nm,0.1s						
PLIT	Plitvice	0.79	190	*i* Pg	Pg	13 14 22.3	-0.4
PLIT				Sg	Sg	13 14 32.5	-0.5
GROS	Grobnik	0.83	344	*e*Pg	Pg	13 14 23.6	0.0
GROS				*i*		13 14 24.9	
GROS				IAML		13 14 38.1	
	comp=Z,46nm,0.2s						
KOGS	Kog	0.84	20	*i* Pg	Pg	13 14 23.8	+0.1
KOGS				*i*		13 14 25.3	
KOGS				*e*Sg	Sn	13 14 38.5	+0.1
KOGS				IAML		13 14 43.1	
KOGS	Kog	0.84	20	P	Pb	13 14 25.0	+0.6
KOGS				S	Sn	13 14 38.5	+0.1
KOGS				AML	AML		
	comp=E,3190µm,0.9s						
KOGS				AML	AML		
	comp=N,2945µm,0.2s						
KOGS				AML	AML		
	comp=E,3124µm,0.9s						
KOGS				AML	AML		
	comp=N,2696µm,0.8s						
VNDS	Vrh nad Dolski	0.90	300	*e*Pg	Pg	13 14 24.6	-0.2
VNDS				IAML		13 14 40.9	
	comp=Z,40nm,0.3s						
ZAVS	Zavodnje	0.96	325	*i* Pg	Pg	13 14 26.0	+0.1
ZAVS				IAML		13 14 42.0	
	comp=Z,39nm,0.1s						
CEY	Cerknica	0.98	275	*e*Pg	Pg	13 14 26.4	0.0
CEY				*i*		13 14 27.0	
LJU	Ljubljana	0.99	294	P	Pn	13 14 27.8	+0.1
LJU				S	Sn	13 14 42.3	+0.4
LJU				AML	AML		
	comp=E,2550µm,0.6s						
LJU				AML	AML		
	comp=N,1785µm,0.8s						
LJU				AML	AML		
	comp=E,2550µm,1.4s						
RIY	Rijeka	1.00	251	*e*Pg	Pg	13 14 26.5	-0.3
RIY				Sg	Sb	13 14 40.8	+0.3
GBAS	Gorenja Brezov	1.01	287	*i* Pg	Pg	13 14 26.3	-0.5
GBAS				*e*Sg	Sn	13 14 42.1	-0.4
GBAS				IAML		13 14 45.3	
	comp=Z,30nm,0.3s						
PERS	Pernice	1.10	334	*i* Pg	Pg	13 14 28.4	-0.2
PERS				IAML		13 14 47.4	
	comp=Z,40nm,0.2s						
UDBI	Udbina	1.13	182	Sg	Sb	13 14 44.5	+0.3
SOKA	Soboth	1.16	332	*e*Pg	Pg	13 14 29.8	0.0
	comp=Z,6.3nm,0.3s						
SOKA				*e*Sg	Sg	13 14 44.1	-0.8
	comp=Z,9.1nm,0.3s,SNR=5.6						
RABC	Rab	1.17	219	*i* Pg	Pn	13 14 30.1	-0.1
RABC				Sg	Sn	13 14 46.1	-0.1
CRNS	Crni Vrh	1.17	292	⇑*i*Pg	Pg	13 14 29.4	-0.6
CRNS				*i*		13 14 30.0	
CRNS				*i*		13 14 30.5	
CRNS				IAML		13 14 48.7	
	comp=Z,39nm,0.3s						
OBKA	Obir	1.23	314	*i* Pg	Pg	13 14 30.9	-0.3
	comp=Z,8.0nm,0.2s,SNR=19						
OBKA				*e*Sg	Sn	13 14 48.4	+0.4
	comp=Z,88nm,0.7s						
SKDS	Skadanscina	1.28	266	*e*Pg	Pn	13 14 31.0	-0.7
NVLJ	Novalja	1.28	212	*e*Pg	Pb	13 14 31.8	-0.1
NVLJ				Sg	Sn	13 14 49.0	-0.2
VOJS	Vojsko	1.41	286	*e*Pg	Pn	13 14 33.5	-0.1
GORS	Gorjuse	1.44	298	*e*Pg	Pb	13 14 34.6	0.0
GORS				IAML		13 14 59.8	
	comp=Z,11nm,0.2s						
TRI	Trieste	1.45	273	P	Pg	13 14 35.8	+0.6
TRI				S	Sg	13 14 55.3	+1.3
TRI				AML	AML		
	comp=E,61µm,0.5s						
TRI				AML	AML		
	comp=N,36µm,2.8s						
TRI				AML	AML		
	comp=E,61µm,1.5s						
TRI				AML	AML		
	comp=N,39µm,0.4s						
VIRC	Vir	1.47	202	*e*Pn	Pb	13 14 34.8	-0.3
VIRC				Sg	Sg	13 14 55.6	+0.8
CADS	Cadrg	1.56	292	*e*Sn	Sb	13 14 57.1	+0.3
CADS				IAML		13 15 01.9	

	comp=Z,30nm,0.3s						
ARSA	Arzberg	1.61	353	i Pn	Pn	13 14 36.6	+0.3
	comp=Z,3.0nm,0.3s						
ARSA				eSn	Sb	13 14 58.5	+0.5
	comp=Z,3.9nm,0.3s						
DRE	Drenchia	1.61	290	⇑P	Pb	13 14 37.6	+0.1
DRE				S	Sg	13 14 59.9	+0.7
BRJN	Brijuni	1.65	244	⇓P	Pb	13 14 38.0	-0.1
BRJN				S	Sg	13 15 00.1	-0.3
KIJV	Kijevo	1.70	166	ePn	Pb	13 14 38.4	-0.7
KIJV				Sn	Sg	13 15 01.6	-0.6
DUGI	Dugi Otok	1.75	198	ePn	Pn	13 14 38.9	+0.7
DUGI				Sn	Sg	13 15 03.5	-0.3
MORI	Morici	1.79	183	ePn	Pb	13 14 39.8	-0.8
MORI				Sn	Sg	13 15 04.3	-0.8
MYKA	Terra Mystica	1.80	303	ePn	Pn	13 14 38.7	-0.3
	comp=Z,3.8nm,0.3s						
MYKA				eSn	Sn	13 15 02.6	+0.5
	comp=Z,6.9nm,0.4s						
ACOM	Acomizza, Ital	1.84	300	P	Pb	13 14 41.6	0.0
ACOM				S	Sg	13 15 06.7	+0.1
ACOM				AML	AML		
	comp=E,92µm,1.0s						
ACOM				AML	AML		
	comp=N,87µm,0.4s						
ACOM				AML	AML		
	comp=N,87µm,1.6s						
ACOM				AML	AML		
	comp=E,92µm,1.0s						
ACOM				AML	AML		
	comp=N,108µm,2.0s						
ACOM				AML	AML		
	comp=E,116µm,4.6s						
ACOM				AML	AML		
	comp=N,72µm,2.0s						
ZIRJ	Zirje	2.01	184	ePn	Pn	13 14 42.7	+1.0
ZIRJ				Sn	Sb	13 15 08.7	-0.7
RONA	Rosalia, Austr	2.07	9	i Pn	Pn	13 14 42.7	0.0
	comp=N,2.6nm,0.1s						
RONA				eSn	Sb	13 15 10.2	-1.1
	comp=N,7.5nm,0.5s						
RICI	Ricice	2.36	156	ePn	Pn	13 14 47.2	+0.6
RICI				Sn	Sb	13 15 17.6	-1.9
MOA	Molln	2.44	335	ePn	Pn	13 14 48.1	+0.3
	comp=N,2.7nm,0.3s						
MOA				eSn	Sn	13 15 18.4	+0.6
	comp=N,2.7nm,0.3s						
HVAR	Hvar	2.52	170	ePn	Pn	13 14 50.4	+1.6
HVAR				Sn	Sn	13 15 21.2	+1.5
MODS	Modra-Piesok	2.89	20	ePN	Pn	13 14 53.4	-0.6
MODS				ePG	Pg	13 15 02.5	-0.5
LSTV	Lastovo	2.99	165	i Pn	Pn	13 14 55.2	0.0
LSTV				Sn	Sn	13 15 32.9	+1.7
APEC	Apecchio	3.21	230	S	Sn	13 15 39.9	+3.1
KHC	Kasperske Hory	3.80	337	ePN	Pn	13 15 06.5	+0.1
KHC				eSN	Sn	13 15 49.0	-2.2
ORZI	Orzinuovi	4.15	269	S	Sb	13 16 06.0	-5.1
SF01	Poggio Pratacc	4.18	229	S	Sn	13 16 04.6	+3.9
KECS	Kecovo	4.26	47	ePN	Pn	13 15 13.7	+1.0

*IDC **03** 13:22:10.3±1.5, 2°.92N×129°.25E, h0km, mb3.5/5, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=84.6km s-min=17.6km az=68.0*

*DJA **03** 13:22:14.1±0.5, 3°N±4°×12°9E±°, h10km, M4.2/13, mb4.4/6, MLv4.1/13*

ISC 03 13:22:15.9±1.3**, 2°.8N**±0°.1×**129°.00E**±0°.08**, h35km, n11, σ0s.68**/13**, mb3.6**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.57	219	P	Pn	13 22 54.3	-0.7
TNTI				S	Sn	13 23 25.0	-0.1
SWI	Sorong	4.26	148	P	Pn	13 23 18.0	-0.3
SIJI	Sorong	4.27	148	Pn	Pn	13 23 17.3	-1.1
	2.1nm,0.3s,baz=330,slow=19,SNR=6.6						
SIJI				Sn	Sn	13 24 06.5	-0.6
	1.6nm,0.3s,baz=180,slow=23,SNR=1.8						
	4.8nm,0.4s						
SIJI	Sorong	4.27	148	P	Pn	13 23 18.8	+0.4
GTOI	Gorontalo	6.35	251	P	Pn	13 23 47.3	+0.3
	0.1nm23nm,0.6s						
FAKI	Fak Fak	6.52	150	P	Pn	13 23 50.0	+0.6
FITZ	Fitzroy Crossi	21.00	189	P	P	13 26 57.5	+1.1
	1.1nm,0.6s,baz=6.3,slow=9.2,SNR=1.0						
	1.1nm,0.6s						
WRA	Warramunga Arr	23.17	167	P	P	13 27 19.4	-0.1
	1.1nm,0.7s,baz=348,slow=10.0,SNR=11						
	1.1nm,0.7s						
ASAR	Alice Springs	26.71	170	P	P	13 27 52.5	+0.4
	0.4nm,0.7s,baz=351,slow=8.5,SNR=8.8						
	0.4nm,0.7s						
MKAR	Makanchi Array	59.64	325	P	P	13 32 17.0	+0.4
	0.4nm,0.6s,baz=113,slow=8.4,SNR=5.4						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	63.77	327	P	P	13 32 43.7	-0.6
	0.4nm,0.4s,baz=123,slow=5.8,SNR=9.2						
	0.4nm,0.4s						

IDC 03 14:03:47.9±10.0**, 50°.97S**×**142°.31W, h0km, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=1034.0km s-min=110.7km az=158.0, South Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	68.17	259	P	P	14 14 50.1	+0.2
	0.4nm,0.8s,baz=135,slow=6.5,SNR=4.6						
	0.4nm,0.8s						
WRA	Warramunga Arr	70.64	262	P	P	14 15 05.1	-0.2
	0.5nm,1.0s,baz=141,slow=5.6,SNR=2.0						
	0.5nm,1.0s						
MKAR	Makanchi Array	150.72	279	PKPbc	PKPbc	14 23 40.9	-0.3
	0.3nm,0.6s,baz=102,slow=3.2,SNR=4.3						

*IDC **03** 14:10:58.4±2.2, 42°.54S×172°.86E, h0km, mb3.3/2, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=56.1km s-min=31.0km az=151.0*

*NOU **03** 14:11:01.8, 42°.95S×173°.05E, h27km, MLv4.1/17, South Island, New Zealand*

*WEL **03** 14:11:01.8, 42°.78S×172°.82E, h6km, ML3.9, Mw3.7, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M_{rr}1.70; $M_{\theta\theta}$1.82; $M_{\phi\phi}$-3.53; $M_{r\theta}$1.78; $M_{\theta\phi}$-1.42; $M_{\phi r}$-2.55; Fault plane solution: $M_0$4.58000×10^{14} NP1: ϕ_s157.00000°, δ75.00000°, λ50.00000°. NP2: ϕ_s51.00000°, δ42.00000°, λ158.00000°. Principal axes: T 4.5310, Plg45.0000°, Azm28.0000°; N 0.1030, Plg38.0000°, Azm169.0000°; P -4.6340, Plg20.0000°, Azm276.0000°; Stations used: KHZ OXZ MQZ WVZ OBLIQUE FAULTING*

*WEL **03** 14:11:01.8±0.7, 43°S±2°×17°3E±°, h8km±4km, M3.9/53, ML3.8/5, MLv3.9/53 Error ellipse: s-maj=3.1km s-min=2.3km az=101.6*

ISC 03 14:11:01.4±0.8**, 42°.80S**±0°.02×**172°.84E**±0°.02**, h18km**±3km**, n130, σ1s.26**/142**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CULC	Culverden Airl	0.05	321	P	Pg	14 11 03.9	-0.8
CULC				S	Sg	14 11 05.8	-1.0
WIGC	Waiau Gorge	0.10	342	P	Pg	14 11 04.3	-0.7
WIGC				S	Sg	14 11 06.4	-1.1
SCAC	Scargill	0.15	158	P	Pg	14 11 06.1	+0.4
SCAC				S	Sg	14 11 09.5	+1.0
WAKC	Waikari	0.20	211	P	Pg	14 11 06.5	+0.2
WAKC				S	Sg	14 11 10.2	+0.6
GVZ	Greta Valley S	0.22	141	P	Pg	14 11 07.4	+0.7
GVZ				S	Sg	14 11 11.7	+1.4
LSRC	Lake Sumner Ro	0.23	252	P	Pg	14 11 07.2	+0.4
LSRC				S	Sg	14 11 11.3	+0.8
WTMC	Te Mara Farm W	0.23	41	P	Pg	14 11 06.9	0.0
WTMC				S	Sg	14 11 11.6	+1.1
HSES	Hanmer Springs	0.27	358	P	Pg	14 11 07.5	0.0
HSES				S	Sb	14 11 11.8	-0.2
CECS	Cheviot Emerge	0.32	93	P	Pb	14 11 09.3	+0.7
AMBC	Amberley HDC	0.37	193	P	Pg	14 11 10.1	+1.0
AMBC				S	Sb	14 11 16.5	+1.7
AMCZ	Amberley	0.41	200	P	Pg	14 11 10.8	+1.1
AMCZ				S	Sb	14 11 17.4	+1.5
LTZ	Lake Taylor	0.42	272	P	Pg	14 11 10.2	+0.2
LTZ				S	Sg	14 11 16.1	+0.2
ASHY	Ashley	0.51	201	P	Pb	14 11 12.8	+0.9
SMHS	Summerhill	0.60	218	P	Pb	14 11 14.4	+1.1
CSTC	Cust School	0.62	213	P	Pb	14 11 14.7	+1.1
SWNC	Swannanoa Scho	0.63	204	P	Pb	14 11 15.1	+1.3
KHZ	Kahutara	0.64	54	P	Pb	14 11 15.3	+1.3
KHZ	Kahutara	0.64	54	S	Sb	14 11 24.9	+2.3
KHZ	Kahutara	0.64	54	P	Pb	14 11 14.7	+0.7
KHZ				S	Sb	14 11 24.2	+1.7
SJFS	Springs Juncti	0.67	313	P	Pg	14 11 14.7	+0.1
KIKS	Kaikoura	0.72	59	P	Pb	14 11 16.8	+1.4
MOLW	Molesworth Sta	0.77	24	P	Pg	14 11 16.3	-0.2
OXZ	Oxford	0.79	228	P	Pg	14 11 17.2	+0.3
MQZ	McQueen's Vall	0.92	189	P	Pg	14 11 18.4	-0.9
OKCZ	Okains Bay	0.94	170	P	Pg	14 11 19.4	-0.3
INZ	Inchbonnie	1.03	274	P	Pg	14 11 21.1	-0.3
THZ	Tophouse	1.03	3	P	Pg	14 11 20.9	-0.6
RACZ	Rakaia	1.06	209	P	Pg	14 11 20.9	-1.1
AKCZ	Akaroa Harbour	1.08	177	P	Pg	14 11 21.2	-1.1
MHCZ	Mount Hutt	1.19	231	P	Pb	14 11 22.6	-0.8
DSZ	Denniston Nort	1.30	323	P	Pn	14 11 25.5	+0.7
BSWZ	Blackbirch Sta	1.32	36	P	Pn	14 11 26.1	+1.1
WACZ	Wakanui South	1.36	212	P	Pn	14 11 25.0	-0.5
MRNZ	Matariki Terra	1.40	357	P	Pn	14 11 27.1	+1.1
CMWZ	Cape Campbell	1.46	45	P	Pg	14 11 31.0	+1.5
TUWZ	Tuamarina	1.59	31	P	Pn	14 11 30.1	+1.5
RPZ	Rata Peaks	1.60	234	P	Pn	14 11 28.6	-0.2
RPZ	Rata Peaks	1.60	234	P	Pn	14 11 28.5	-0.2
NNZ	Nelson	1.63	14	P	Pn	14 11 30.8	+1.7
ARCZ	Arundel	1.67	226	P	Pn	14 11 29.4	-0.4
TKNZ	Takaka Hill	1.76	3	P	Pn	14 11 32.8	+1.7
TCW	Tory Channel	1.91	34	P	Pn	14 11 33.4	+0.3
QRZ	Quartz Range	1.98	353	P	Pn	14 11 35.3	+1.2
QRZ	Quartz Range	1.98	353	S	Sb	14 12 02.5	+1.2
QRZ	Quartz Range	1.98	353	P	Pn	14 11 35.0	+1.0
SNZO	South Karori	2.03	44	P	Pn	14 11 34.9	+0.2
SNZO	South Karori	2.03	44	S	Sn	14 11 59.8	+0.2
TMZ	Timaru	2.07	219	P	Pn	14 11 34.9	-0.5
WEL	Wellington	2.08	44	P	Pn	14 11 35.7	+0.3
DUWZ	D'Urville Isla	2.15	22	P	Pn	14 11 37.7	+1.3
MSWZ	Moikau Station	2.26	53	P	Pn	14 11 37.3	-0.6
FOZ	Fox Glacier	2.33	251	P	Pn	14 11 40.3	+1.4
CAW	Cannon Point	2.37	45	P	Pn	14 11 39.2	-0.1
KIW	Kapiti Island	2.48	39	P	Pn	14 11 41.1	+0.2
LBZ	Lake Benmore	2.50	230	P	Pn	14 11 41.1	-0.2
TRWZ	Traveller	2.54	58	P	Pn	14 11 41.6	-0.1
MTW	Mount Morrison	2.57	51	P	Pn	14 11 42.3	+0.1
OGWZ	Otaki Gorge	2.63	42	P	Pn	14 11 42.8	-0.3
ODZ	Otahua Downs	2.75	214	P	Pn	14 11 44.0	-0.6
ODZ	Otahua Downs	2.75	214	S	Sn	14 12 16.2	-1.2
ODZ	Otahua Downs	2.75	214	P	Pn	14 11 44.0	-0.6
HOWZ	Holdsworth Sta	2.75	47	P	Pn	14 11 43.9	-0.8
TMWZ	Te Maipa	2.83	54	P	Pn	14 11 44.5	-1.3
MRZ	Mangatainoka R	2.96	45	P	Pn	14 11 46.8	-0.7
OHWZ	Ohakea	3.19	36	P	Pn	14 11 51.5	+0.9
JCZ	Jackson Bay	3.22	245	P	Pn	14 11 51.0	-0.1
PRWZ	Pori Road	3.24	47	P	Pn	14 11 51.0	-0.4
BFZ	Birch Farm	3.31	51	P	Pn	14 11 52.4	+0.1
WKZ	Wanaka	3.43	232	P	Pn	14 11 54.3	+0.3
WAZ	Wanganui	3.44	29	P	Pn	14 11 56.0	+1.9
NMEZ	Namu Road	3.47	13	P	Pn	14 11 57.3	+2.9
HHSZ	Highcliff Hill	3.48	207	P	Pn	14 11 54.0	-0.7
EAZ	Earnscleugh	3.52	225	P	Pn	14 11 54.9	-0.4
DVHZ	Dannevirke	3.53	46	P	Pn	14 11 53.7	-1.6
LREZ	Lake Rotokare	3.54	20	P	Pn	14 11 58.5	+3.1
TSZ	Takapari Road	3.60	42	P	Pn	14 11 55.3	-1.1
KHEZ	Kahui Hut	3.61	15	P	Pn	14 11 59.0	+2.5
KHEZ	Kahui Hut	3.61	15	P	Pn	14 11 59.1	+2.6
NBEZ	Newall Road No	3.61	13	P	Pn	14 11 58.6	+2.2
PKE	Pukeiti	3.70	14	P	Pn	14 12 00.3	+2.6
PNHZ	Pukenui	3.83	42	P	Pn	14 11 58.2	-1.3
TUZ	Tuapeka	3.91	215	P	Pn	14 11 59.9	-0.6
VRZ	Vera Road	3.94	22	P	Pn	14 12 02.9	+1.9
PKVZ	Pokaka	3.98	29	P	Pn	14 12 02.9	+1.2
MOVZ	Moawhango	4.04	34	P	Pn	14 12 02.2	-0.2
WNVZ	Wahianoa	4.04	32	P	Pn	14 12 03.2	+0.6
TRVZ	Turoa	4.05	31	P	Pn	14 12 03.4	+0.7
FWVZ	Far West T-bar	4.09	31	P	Pb	14 12 09.9	-3.1
TUVZ	Tukino	4.12	32	P	Pn	14 12 04.2	+0.6
KRHZ	Kereru	4.12	41	P	Pn	14 12 02.1	-1.5
COVZ	Chateau Observ	4.13	31	P	Pn	14 12 04.6	+0.9
NGZ	Ngauruhoe	4.18	31	P	Pn	14 12 05.0	+0.7
SNVZ	South Ngauruho	4.18	31	P	Pn	14 12 05.2	+0.8
TWVZ	Taurewa	4.21	29	P	Pn	14 12 05.6	+0.8
OTVZ	Oturere	4.21	31	P	Pn	14 12 05.4	+0.5
NNVZ	North Ngauruho	4.22	31	P	Pn	14 12 05.5	+0.5
WTVZ	West Tongariro	4.22	30	P	Pn	14 12 05.5	+0.5
ETVZ	East Tongariro	4.25	32	P	Pn	14 12 05.7	+0.3
KRVZ	Karewarewa	4.26	31	P	Pn	14 12 06.1	+0.6
TMVZ	Te Maari	4.27	31	P	Pn	14 12 05.8	+0.2
NTVZ	North Tongarir	4.27	31	P	Pn	14 12 06.2	+0.6
HIZ	Hauiti	4.54	20	P	Pn	14 12 10.5	+1.2
HIZ	Hauiti	4.54	20	P	Pn	14 12 10.5	+1.2
BKZ	Black Stump Fm	4.56	39	P	Pn	14 12 09.1	-0.4
BKZ	Black Stump Fm	4.56	39	P	Pn	14 12 07.9	-1.6
SYZ	Scrubby Hill	4.58	214	P	Pn	14 12 09.0	-0.7
SYZ	Scrubby Hill	4.58	214	P	Pn	14 12 09.6	-0.1
WATZ	Wairara	4.64	29	P	Pn	14 12 16.3	+5.7
WHZ	Wether Hill Ro	4.68	227	P	Pn	14 12 10.5	-0.7
TLZ	Tolley Road	4.91	26	P	Pn	14 12 16.5	+2.1
MTHZ	Maungataniwha	4.97	39	P	Pn	14 12 14.1	-1.1
APZ	The Paps	5.31	219	P	Pn	14 12 19.2	-0.6
TOZ	Tahuroa Road	5.45	23	P	Pn	14 12 22.4	+0.7
URZ	Urewera	5.58	37	Pn	Pn	14 12 20.2	-3.3
	0.3nm,0.3s,baz=238,slow=9.5,SNR=1.7						
URZ				Sn	Sn	14 13 23.2	-3.9
	3.5nm,0.3s,baz=73,slow=20,SNR=6.5						
	3.9nm,0.9s						
URZ	Urewera	5.58	37	P	Pn	14 12 22.1	-1.4
AWAZ	Awhitu Peninsu	5.89	14	P	Pn	14 12 29.6	+1.9
MKAZ	Moumakai	5.96	18	P	Pn	14 12 29.6	+0.9
WTAZ	Waiatarua	6.01	13	P	Pn	14 12 31.8	+2.4
ETAZ	East Tamaki Re	6.05	16	P	Pn	14 12 32.0	+2.0
RUGZ	Raukumara Rang	6.08	39	P	Pn	14 12 29.7	-0.7
MBAZ	Motutapu North	6.22	15	P	Pn	14 12 34.3	+1.9
WIAZ	Waiheke Island	6.25	17	P	Pn	14 12 34.2	+1.5
ABAZ	Army Bay	6.38	15	P	Pn	14 12 36.4	+2.0
KUZ	Kuaotunu	6.44	21	P	Pn	14 12 35.3	0.0
KUZ	Kuaotunu	6.44	21	P	Pn	14 12 35.5	+0.2
WCZ	Waipu Caves	6.95	10	P	Pn	14 12 44.3	+2.0
OUZ	Omahuta	7.59	5	P	Pn	14 12 53.2	+2.1
ASAR	Alice Springs	37.33	288	P	P	14 18 12.8	-0.1
	0.2nm,0.7s,baz=122,slow=7.3,SNR=7.1						
	0.2nm,0.7s						
WRA	Warramunga Arr	39.52	293	P	P	14 18 28.9	-2.3
	1.3nm,1.3s,baz=141,slow=7.2,SNR=1.7						
	1.3nm,1.3s						
TORD	Torodi Ar. Bea	149.48	197	PKPbc	PKPbc	14 30 49.9	+0.1
	0.6nm,0.8s,baz=177,slow=4.4,SNR=2.7						

IDC 03 14:20:19.1±4.7**, 16°.82S**×**175°.78W, h0km, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=345.6km s-min=33.6km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.31	258	P	P	14 28 55.0	0.0
	0.2nm,0.4s,baz=94,slow=7.8,SNR=5.8						
	0.2nm,0.4s						
ASAR	Alice Springs	47.51	253	P	P	14 28 56.2	-0.2
	1.4nm,0.7s,baz=88,slow=8.4,SNR=31						
	1.4nm,0.7s						
NVAR	Mina Array Bea	76.91	43	P	P	14 32 13.8	0.0
	0.2nm,0.4s,baz=222,slow=12,SNR=1.6						
	0.2nm,0.4s						

*SFS **03** 14:45:17.9, 36°.82N×4°.46W, h66km, ML3.6/25, ML3.5/35, MLv3.4/35*

*MDD **03** 14:45:18.4±0.2, 36°.81N×4°.48W, h59km±4km, Mb4.2/84, Error ellipse: s-maj=1.8km s-min=1.4km az=165.0*

*IGIL **03** 14:45:18.7, 36°.81N×4°.48W, h58km, ML3.4*

*INMG **03** 14:45:18.1±1.8, 36°.82N×4°.50W, h31km±6km, ML3.3, Error ellipse: s-maj=3.1km s-min=2.3km az=17.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Malaga (ESP)*

*CNRM **03** 14:45:18.7, 36°.67N×4°.66W, h21km, ML3.0*

*LDG **03** 14:45:20.5±0.3, 36°.96N×4°.44W, h60km, Ml3.7/6, Error ellipse: s-maj=6.3km s-min=3.7km az=15.0*

ISC 03 14:45:16.1±1.0**, 36°.85N**±0°.02×**4°.46W**±0°.02**, h76km**±6km**, n143, σ1s.92**/267**, 43C-9D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAL	Malaga-Limoner	0.09	163	Pn	Pn	14 45 26.3	-0.8
EMIJ	Mijas	0.38	222	Pg	Pn	14 45 28.0	-0.5
EMIJ				Sg	Sn	14 45 35.7	-2.0
EGOR	Sierra Gorda,	0.39	47	⇑Pg	Pn	14 45 29.1	+0.4
EGOR				Sg	Sn	14 45 37.1	-1.0
EXAGR	Agron	0.54	70	Pg	Pn	14 45 30.7	+0.8
EXAGR				Sg	Sn	14 45 39.6	-0.5
ELGU	Los Guajares,	0.67	88	Pn	Pn	14 45 31.7	+0.5
ELGU	Los Guajares,	0.67	88	Pg	Pn	14 45 31.7	+0.5
ELGU				⇑iIVmb_VC		14 45 34.0	
	8µm,SNR=186						
ELGU				Sg	Sn	14 45 41.7	-0.7
E1302	La Puebla de C	0.69	295	Pg	Pn	14 45 32.9	+1.6
E1302				⇑iIVmb_VC		14 45 35.3	
	23µm,SNR=282						
E1302				Sg	Sn	14 45 42.7	+0.1
EQTA	Presa de Quent	0.89	66	Pn	Pn	14 45 35.3	+1.6
EQTA				Sn	Sn	14 45 47.9	+1.1
EQUE	Quentar	0.89	66	Pg	Pn	14 45 35.2	+1.5
EQUE				Sg	Sn	14 45 47.0	+0.1
EJIF	Jimena Fronter	0.90	244	Pg	Pn	14 45 34.9	+1.2
EJIF				Sg	Sn	14 45 46.6	-0.3
ESPR	Espera	1.12	272	Pn	Pn	14 45 37.9	+1.5
ESPR				Sn	Sn	14 45 52.5	+0.9
ESPR	Espera	1.12	272	Pg	Pn	14 45 37.7	+1.4
ESPR				⇑iIVmb_VC		14 45 38.8	
	881nm,SNR=10						
ESPR				Sg	Sn	14 45 49.9	-1.6
CEU	Ceuta	1.20	218	Pn	Pn	14 45 37.8	+0.5
CEU				Sn	Sn	14 45 51.8	-1.5
ECEU	Ceuta	1.20	218	Pn	Pn	14 45 38.6	+1.2
ECEU				Sn	Sn	14 45 53.7	+0.3
ECEU	Ceuta	1.20	218	Pg	Pn	14 45 38.6	+1.2
ECEU				⇑iIVmb_VC		14 45 40.0	
	2µm,SNR=12						
ECEU				Sg	Sn	14 45 52.2	-1.2
EADA	Adamuz	1.32	356	Pn	Pn	14 45 40.5	+1.5
EADA				⇑iIVmb_VC		14 45 43.3	
	1µm,SNR=26						
EADA				Sn	Sn	14 45 56.4	+0.2
CNIL	Conil	1.37	250	Pn	Pn	14 45 40.3	+0.9
SMIR	Smir Dam	1.38	213	P	Pn	14 45 40.1	+0.4
SMIR				S	Sn	14 45 55.1	-2.3
ECAB	El Cabril	1.44	328	Pn	Pn	14 45 41.6	+1.0
ECAB				Sn	Sn	14 45 57.9	-1.1
ECAB	El Cabril	1.44	328	Pn	Pn	14 45 41.6	+1.0
ECAB				⇑iIVmb_VC		14 45 42.4	
	2µm,SNR=30						
ECAB				Sn	Sn	14 45 58.3	-0.7
E0802	Ubeda,Jaen	1.46	36	Pn	Pn	14 45 42.2	+1.4
E0802				Sn	Sn	14 46 00.3	+0.9
EQES	Quesada	1.46	49	Pn	Pn	14 45 42.6	+1.8
EQES				⇑iIVmb_VC		14 45 43.5	
	3µm,SNR=15						
EQES				Sn	Sn	14 46 00.4	+0.8
EALB	Alboran	1.46	128	Pn	Pn	14 45 40.3	-0.5
EALB				Sn	Sn	14 45 57.8	-1.6
EALB	Alboran	1.46	128	Pn	Pn	14 45 40.7	-0.1
EALB				⇑iIVmb_VC		14 45 42.3	
	2µm,SNR=28						
EALB				Sn	Sn	14 45 58.2	-1.2
CPS	Cap Spartel	1.57	228	P	Pn	14 45 41.9	-0.4
CPS				S	Sn	14 45 59.7	-2.3
PALE	Palemas	1.68	165	P	Pn	14 45 45.3	+1.7
PALE				S	Sn	14 46 05.6	+1.1
ENIJ	Nijar	1.81	85	Pn	Pn	14 45 46.9	+1.6
ENIJ				Sn	Sn	14 46 07.5	-0.1
ENIJ	Nijar	1.81	85	Pn	Pn	14 45 47.0	+1.6
ENIJ				⇑iIVmb_VC		14 45 53.8	
	845nm,SNR=11						
ENIJ				Sn	Sn	14 46 06.3	-1.3
ARNO	Arenosillo	1.84	279	Pn	Pn	14 45 46.7	+1.0
ARNO				Sn	Sn	14 46 08.9	+0.7
CHEFC	Chefchaouen	1.88	203	P	Pn	14 45 48.7	+2.3
CHEFC				S	Sn	14 46 09.0	-0.3
WMELI	Melilla	1.96	141	Pn	Pn	14 45 47.5	+0.2
WMELI				Sn	Sn	14 46 11.3	+0.3
EMEL	Melilla	1.97	141	Pn	Pn	14 45 47.7	+0.3
EMEL				⇑iIVmb_VC		14 45 48.7	
	9µm,SNR=4.4						
EMEL				Sn	Sn	14 46 11.4	+0.2
EMLI	Melilla	1.97	141	Pn	Pn	14 45 47.6	+0.2
EMLI				Sn	Sn	14 46 09.1	-2.2
EMIN	Mina Concepcio	1.99	298	Pn	Pn	14 45 48.7	+1.0
EMIN				Sn	Sn	14 46 10.4	-1.4
EMIN	Mina Concepcio	1.99	298	⇓Pn	Pn	14 45 48.7	+1.0
EMIN				⇑iIVmb_VC		14 45 48.8	
	11µm,SNR=200						
EMIN				Sn	Sn	14 46 10.8	-1.0
PSIM	Granatula de C	2.05	16	Pn	Pn	14 45 50.5	+1.9
PSIM				Sn	Sn	14 46 12.8	-0.5
TLOR	Lorca, Murcia	2.35	69	Pn	Pn	14 45 53.7	+1.1
TLOR				Sn	Sn	14 46 20.9	+0.2
TLOR	Lorca, Murcia	2.35	69	Pn	Pn	14 45 53.8	+1.1
TLOR				Sn	Sn	14 46 21.1	+0.5
AKLM	AKL	2.38	168	P	Pn	14 45 55.1	+2.0
AKLM				S	Sn	14 46 19.7	-1.7
PBAR	Barrancos	2.44	304	Pn	Pn	14 45 54.8	+1.1
PBAR				Sn	Sn	14 46 22.2	-0.5
PBAR	Barrancos	2.44	304	⇓eP	Pn	14 45 54.8	+1.1
PBAR				eS	Sn	14 46 22.3	-0.4
PBAR				i IAML		14 46 26.1	
PBAR				i IAML		14 46 26.5	
PBAR				i IAML		14 46 26.7	
PVAQ	Vaqueiros	2.66	283	⇓iP	Pn	14 45 57.7	+1.0
PVAQ				eS	Sn	14 46 26.3	-1.7
PVAQ				i IAML		14 46 28.3	
PVAQ				i IAML		14 46 28.7	
PVAQ				i IAML		14 46 29.2	
PAB	San Pablo	2.70	2	Pn	Pn	14 45 59.4	+2.0
PAB				⇑iIVmb_VC		14 46 02.7	
	602nm,SNR=13						
PAB				Sn	Sn	14 46 27.9	-1.1
EMUR	La Murta	2.75	68	Pn	Pn	14 45 59.7	+1.7
EMUR				Sn	Sn	14 46 30.5	+0.3
EMUR	La Murta	2.75	68	Pn	Pn	14 45 59.7	+1.7
EMUR				⇑iIVmb_VC		14 46 00.7	
	275nm,SNR=5.8						
EMUR				Sn	Sn	14 46 30.6	+0.3
EBAD	Badajoz	2.78	314	Pn	Pn	14 45 59.9	+1.5
EBAD				Sn	Sn	14 46 29.9	-0.9
EBAD	Badajoz	2.78	314	⇓Pn	Pn	14 45 59.9	+1.5
EBAD				Sn	Sn	14 46 30.1	-0.8
PBDV	Barranco-do-Ve	2.80	279	Pn	Pn	14 45 59.8	+1.0
PBDV				Sn	Sn	14 46 29.6	-1.9
PBDV	Barranco-do-Ve	2.80	279	eP	Pn	14 45 59.7	+1.0
PBDV				eS	Sn	14 46 29.9	-1.6
PBDV				i IAML		14 46 31.6	
PBDV				i IAML		14 46 31.7	
PBDV				i IAML		14 46 31.7	
ESDC	Sonseca Array	2.85	8	Pn	Pn	14 46 01.2	+1.8
ESDC				⇑iIVmb_VC		14 46 02.4	
	2µm,SNR=27						
ESDC				Sn	Sn	14 46 31.8	-0.9
ESBB	Sonseca Array	2.85	8	Pn	Pn	14 46 01.9	+2.5
ESBB				⇑iIVmb_VC		14 46 02.5	
	1µm,SNR=23						
ESBB				Sn	Sn	14 46 31.6	-1.2
CART	Cartagena	2.86	74	Pn	Pn	14 46 00.3	+0.9
CART				Sn	Sn	14 46 30.8	-2.0
CIBOR	Castaar de Ib	2.89	345	Pn	Pn	14 46 01.5	+1.7
CIBOR				Sn	Sn	14 46 32.4	-1.1
ETOB	Tobarra	2.92	51	Pn	Pn	14 46 02.0	+1.7
ETOB				Sn	Sn	14 46 32.8	-1.7
ETOB	Tobarra	2.92	51	Pn	Pn	14 46 02.1	+1.7
ETOB				⇑iIVmb_VC		14 46 02.4	
	2µm,SNR=29						
ETOB				Sn	Sn	14 46 33.4	-1.1
JBK	JBK	2.94	148	P	Pn	14 46 01.5	+0.7
JBK				S	Sn	14 46 38.4	+3.2
PCVE	Castro Verde	2.96	286	Pn	Pn	14 46 01.9	+1.1
PCVE				Sn	Sn	14 46 34.3	-1.0
PCVE	Castro Verde	2.96	286	⇓eP	Pn	14 46 01.9	+1.1
PCVE				eS	Sn	14 46 34.0	-1.3
PCVE				i IAML		14 46 36.5	
PCVE				i IAML		14 46 37.5	
PCVE				i IAML		14 46 38.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MESJ	**Messejana**	**3.15**	**289**	eP	**Pn**	**14 46 04.7**	**+1.3**
MESJ				eS	**Sn**	**14 46 38.3**	**-1.7**
MESJ				IAML		14 46 40.0	
	comp=N,73nm,0.2s						
MESJ	**Messejana**	**3.15**	**289**	⇓eP	**Pn**	**14 46 04.7**	**+1.3**
MESJ				eS	**Sn**	**14 46 38.7**	**-1.3**
MESJ				i IAML		14 46 40.1	
MESJ				i IAML		14 46 40.9	
MESJ				i IAML		14 46 41.6	
PESTR	**Estremoz**	**3.19**	**310**	Pn	**Pn**	**14 46 05.5**	**+1.6**
PESTR				Sn	**Sn**	**14 46 39.1**	**-1.8**
PESTR	**Estremoz**	**3.19**	**310**	eP	**Pn**	**14 46 05.6**	**+1.6**
PESTR				eS	**Sn**	**14 46 39.9**	**-1.1**
PESTR				i IAML		14 46 42.2	
PESTR				i IAML		14 46 42.7	
PESTR				i IAML		14 46 44.3	
PESTR	**Estremoz**	**3.19**	**310**	P	**Pn**	**14 46 05.5**	**+1.6**
PESTR				S	**Sn**	**14 46 46.9**	**+5.9**
EVO	**Evora**	**3.28**	**302**	Pn	**Pn**	**14 46 06.7**	**+1.6**
EVO				Sn	**Sn**	**14 46 42.3**	**-0.8**
EVO	**Evora**	**3.28**	**302**	eP	**Pn**	**14 46 06.7**	**+1.6**
EVO				eS	**Sn**	**14 46 42.8**	**-0.3**
EVO				i IAML		14 46 44.0	
EVO				i IAML		14 46 44.0	
EVO				i IAML		14 46 44.1	
IFR	**Ifrane**	**3.37**	**190**	Pn	**Pn**	**14 46 07.3**	**+0.8**
IFR				Sn	**Sn**	**14 46 42.7**	**-2.7**
MORF	**Marmelete**	**3.38**	**279**	eP	**Pn**	**14 46 07.6**	**+1.0**
MORF				eS	**Sn**	**14 46 43.2**	**-2.4**
MORF				IAML		14 46 48.1	
	comp=N,186nm,0.4s						
MORF	**Marmelete**	**3.38**	**279**	eP	**Pn**	**14 46 07.7**	**+1.1**
MORF				eS	**Sn**	**14 46 44.6**	**-1.0**
MORF				i IAML		14 46 48.1	
MORF				i IAML		14 46 48.5	
MORF				i IAML		14 46 49.8	
PARRA	**Arraiolos**	**3.45**	**306**	⇓eP	**Pn**	**14 46 08.8**	**+1.4**
PARRA				eS	**Sn**	**14 46 45.5**	**-1.6**
PARRA				i IAML		14 46 48.2	
PARRA				i IAML		14 46 48.8	
PARRA				i IAML		14 46 48.9	
EPLA	**Plasencia**	**3.46**	**339**	Pn	**Pn**	**14 46 09.5**	**+1.9**
EPLA				⇑i IVmb_VC		14 46 11.0	
	comp=N,2μm,SNR=29						
EPLA				Sn	**Sn**	**14 46 46.2**	**-1.2**
RTC	**Rabat Centre**	**3.46**	**215**	Pn	**Pn**	**14 46 08.7**	**+1.1**
RTC				Sn	**Sn**	**14 46 45.9**	**-1.5**
PMRV	**Marv??o**	**3.46**	**319**	⇓eP	**Pn**	**14 46 09.3**	**+1.6**
PMRV				eS	**Sn**	**14 46 46.1**	**-1.3**
PMRV				i IAML		14 46 47.6	
PMRV				i IAML		14 46 48.4	
PMRV				i IAML		14 46 49.9	
PFVI	**Vila Bisbo**	**3.51**	**276**	Pn	**Pn**	**14 46 09.1**	**+0.9**
PFVI				Sn	**Sn**	**14 46 46.1**	**-2.5**
PFVI	**Vila Bisbo**	**3.51**	**276**	eP	**Pn**	**14 46 09.1**	**+0.9**
PFVI				eS	**Sn**	**14 46 45.8**	**-2.7**
PFVI				i IAML		14 46 50.7	
PFVI				i IAML		14 46 51.1	
PFVI				i IAML		14 46 52.9	
PFVI	**Vila Bisbo**	**3.51**	**276**	P	**Pn**	**14 46 09.1**	**+0.9**
PFVI				S	**Sn**	**14 46 50.1**	**+1.6**
MOE	**Montemor**	**3.51**	**300**	⇓eP	**Pn**	**14 46 09.7**	**+1.5**
MOE				eS	**Sn**	**14 46 47.1**	**-1.6**
MOE				i IAML		14 46 49.5	
MOE				i IAML		14 46 50.0	
MOE				i IAML		14 46 50.0	
EVIV	**Cofrentes, Val**	**3.58**	**47**	⇑Pn	**Pn**	**14 46 10.7**	**+1.4**
EVIV				⇑i IVmb_VC		14 46 11.1	
	comp=N,2μm,SNR=31						
EVIV				Sn	**Sn**	**14 46 49.1**	**-1.3**
UCM	**Universidad Co**	**3.59**	**15**	Pn	**Pn**	**14 46 12.1**	**+2.7**
UCM				Sn	**Sn**	**14 46 49.4**	**-1.1**
AFON	**Font Roja**	**3.60**	**59**	Pn	**Pn**	**14 46 11.2**	**+1.6**
AFON				⇑i IVmb_VC		14 46 11.8	
	comp=N,698nm,SNR=9.6						
AFON				Sn	**Sn**	**14 46 49.8**	**-1.2**
PMTG	**Montargil**	**3.71**	**308**	eP	**Pn**	**14 46 12.2**	**+1.3**
PMTG				eS	**Sn**	**14 46 52.0**	**-1.6**
PMTG				i IAML		14 46 54.0	
PMTG				i IAML		14 46 54.6	
PMTG				i IAML		14 46 54.8	
GUD	**Guadarrama**	**3.80**	**4**	Pn	**Pn**	**14 46 14.3**	**+2.0**
GUD				⇑i IVmb_VC		14 46 15.4	
	comp=N,599nm,SNR=14						
GUD				Sn	**Sn**	**14 46 54.6**	**-1.3**
PCBR	**Castelo Branco**	**3.81**	**322**	eP	**Pn**	**14 46 14.4**	**+2.0**
PCBR				eS	**Sn**	**14 46 54.5**	**-1.6**
PCBR				i IAML		14 46 56.7	
PCBR				i IAML		14 46 57.0	
PCBR				i IAML		14 46 57.7	
YEBES	**Yebes (Guadala**	**3.83**	**16**	Pn	**Pn**	**14 46 15.2**	**+2.5**
YEBES				⇑i IVmb_VC		14 46 15.8	
	comp=N,3μm,SNR=14						
YEBES				Sn	**Sn**	**14 46 56.4**	**-0.1**
EBEN2	**Beniarda presa**	**3.85**	**60**	Pn	**Pn**	**14 46 14.1**	**+1.2**
EBEN2				⇑i IVmb_VC		14 46 17.3	
	comp=N,500nm,SNR=7.0						
EBEN2				Sn	**Sn**	**14 46 55.1**	**-1.8**
ECHE	**Chera**	**3.88**	**44**	Pn	**Pn**	**14 46 15.0**	**+1.6**
ECHE				Sn	**Sn**	**14 46 55.4**	**-2.5**
ECHE	**Chera**	**3.88**	**44**	⇑Pn	**Pn**	**14 46 15.0**	**+1.6**
ECHE				⇑i IVmb_VC		14 46 15.2	
	comp=N,636nm,SNR=7.6						
ECHE				Sn	**Sn**	**14 46 56.0**	**-1.8**
MD31	**MD31**	**3.98**	**184**	P	**Pn**	**14 46 16.3**	**+1.5**
MD31				S	**Sn**	**14 47 00.7**	**+0.5**
PSARD	**Sardoal**	**4.01**	**314**	eP	**Pn**	**14 46 16.8**	**+1.7**
PSARD				i IAML		14 47 00.8	
PSARD				i IAML		14 47 01.6	
PSARD				i IAML		14 47 02.6	
MDT	**Midelt**	**4.02**	**182**	P	**Pn**	**14 46 16.8**	**+1.4**
MDT				S	**Sn**	**14 47 01.9**	**+0.5**
AVE	**Averroes**	**4.29**	**215**	Pn	**Pn**	**14 46 19.6**	**+0.7**
AVE				Sn	**Sn**	**14 47 05.8**	**-1.9**
MTE	**Manteigas**	**4.29**	**327**	eP	**Pn**	**14 46 21.6**	**+2.6**
MTE				eS	**Sn**	**14 47 07.2**	**-0.5**
MTE				i IAML		14 47 08.8	
MTE				i IAML		14 47 08.9	
MTE				i IAML		14 47 09.6	
PSBE	**So Bento**	**4.33**	**309**	eP	**Pn**	**14 46 21.5**	**+2.0**
PSBE				eS	**Sn**	**14 47 07.9**	**-0.8**
PMAFR	**Mafra**	**4.36**	**300**	Pn	**Pn**	**14 46 21.4**	**+1.6**
PMAFR				Sn	**Sn**	**14 47 07.6**	**-1.7**
PMAFR	**Mafra**	**4.36**	**300**	eP	**Pn**	**14 46 21.5**	**+1.6**
PMAFR				eS	**Sn**	**14 47 08.0**	**-1.3**
PMAFR				i IAML		14 47 09.7	
PMAFR				i IAML		14 47 10.0	
PMAFR				i IAML		14 47 10.8	
EJUZ	**Juzbado, Salam**	**4.38**	**346**	Pn	**Pn**	**14 46 22.5**	**+2.3**
EJUZ				Sn	**Sn**	**14 47 07.8**	**-2.1**
ETOR	**Torete**	**4.39**	**25**	Pn	**Pn**	**14 46 22.5**	**+2.1**
ETOR				⇑i IVmb_VC		14 46 23.2	
	comp=N,846nm,SNR=10.0						
ETOR				Sn	**Sn**	**14 47 08.3**	**-2.0**
E0901	**Celadas (Terue**	**4.47**	**35**	Pn	**Pn**	**14 46 24.1**	**+2.7**
E0901				⇑i IVmb_VC		14 46 25.0	
	comp=N,1μm,SNR=11						
E0901				Sn	**Sn**	**14 47 12.3**	**+0.1**
PCAS	**Casmilo, Conde**	**4.50**	**317**	eP	**Pn**	**14 46 24.1**	**+2.3**
PCAS				eS	**Sn**	**14 47 10.6**	**-2.3**
PCAS				i IAML		14 47 12.3	
PCAS				i IAML		14 47 13.3	
PCAS				i IAML		14 47 15.7	
EMOS	**Mosqueruela**	**4.70**	**40**	Pn	**Pn**	**14 46 26.8**	**+2.2**
EMOS				⇑i IVmb_VC		14 46 27.5	
	comp=N,319nm,SNR=4.7						
EMOS				Sn	**Sn**	**14 47 15.8**	**-2.2**
PVIS	**Viseu**	**4.70**	**326**	eP	**Pn**	**14 46 27.1**	**+2.5**
PVIS				eS	**Sn**	**14 47 15.9**	**-1.9**
MVO	**Moncorvo**	**4.75**	**336**	eP	**Pn**	**14 46 27.4**	**+2.2**
MVO				eS	**Sn**	**14 47 16.6**	**-2.4**
MVO				i IAML		14 47 18.8	
MVO				i IAML		14 47 20.3	
MVO				i IAML		14 47 20.4	
ECOL	**Islas Columbre**	**5.06**	**51**	Pn	**Pn**	**14 46 30.2**	**+0.8**
EIBI	**Ibiza**	**5.08**	**63**	Pn	**Pn**	**14 46 30.5**	**+0.9**
EIBI				Sn	**Sn**	**14 47 24.4**	**-2.5**
EIBI	**Ibiza**	**5.08**	**63**	Pn	**Pn**	**14 46 30.7**	**+1.1**
EIBI				⇑i IVmb_VC		14 46 31.5	
	comp=N,164nm,SNR=2.8						
EIBI				Sn	**Sn**	**14 47 25.1**	**-1.9**
PVRL	**Vila Real**	**5.10**	**331**	⇑eP	**Pn**	**14 46 32.8**	**+2.8**
PVRL				eS	**Sn**	**14 47 25.6**	**-1.8**
PVRL				i IAML		14 47 26.4	
PVRL				i IAML		14 47 28.0	
PVRL				i IAML		14 47 28.1	
POLO	**Lamas de Olo**	**5.21**	**331**	eP	**Pn**	**14 46 33.6**	**+2.1**
POLO				eS	**Sn**	**14 47 28.1**	**-2.2**
POLO				i IAML		14 47 28.6	
POLO				i IAML		14 47 28.8	
POLO				i IAML		14 47 30.1	
PTO	**Porto**	**5.36**	**324**	eP	**Pn**	**14 46 36.3**	**+2.8**
PTO				eS	**Sn**	**14 47 31.6**	**-2.2**
ERTA	**Horta de San J**	**5.55**	**41**	Pn	**Pn**	**14 46 38.3**	**+2.1**
ERTA				⇑i IVmb_VC		14 46 39.1	
	comp=N,166nm,SNR=2.5						
ERTA				Sn	**Sn**	**14 47 37.0**	**-1.6**
PCAB	**Cabril**	**5.59**	**331**	eS	**Sn**	**14 47 37.6**	**-1.9**
ELOB	**Lobios**	**5.74**	**332**	Pn	**Pn**	**14 46 40.6**	**+1.9**
ELOB				⇑i IVmb_VC		14 46 42.0	
	comp=N,518nm,SNR=3.8						
ELOB				Sn	**Sn**	**14 47 39.7**	**-3.4**
ESAC	**San Caprasio**	**5.77**	**31**	Pn	**Pn**	**14 46 41.3**	**+2.2**
ESAC				⇑i IVmb_VC		14 46 42.7	
	comp=N,756nm,SNR=5.4						
ESAC				Sn	**Sn**	**14 47 44.4**	**+0.5**
PGAV	**Gavieira, Arco**	**5.90**	**331**	eP	**Pn**	**14 46 43.2**	**+2.3**
PGAV				eS	**Sn**	**14 47 43.6**	**-3.6**
PGAV				i IAML		14 47 46.0	
PGAV				i IAML		14 47 46.0	
PGAV				i IAML		14 47 47.7	
EPOB	**Poblet**	**6.23**	**42**	Pn	**Pn**	**14 46 47.1**	**+1.6**
EPOB				⇑i IVmb_VC		14 46 47.8	
	comp=N,330nm,SNR=4.8						
EPOB				Sn	**Sn**	**14 47 53.1**	**-2.1**
ETOS	**Mallorca**	**6.42**	**61**	Pn	**Pn**	**14 46 49.0**	**+1.0**
ETOS				Sn	**Sn**	**14 47 56.5**	**-3.3**
ETOS	**Mallorca**	**6.42**	**61**	Pn	**Pn**	**14 46 48.5**	**+0.5**
ETOS				⇑i IVmb_VC		14 46 49.1	
	comp=N,115nm,SNR=1.3						
ETOS				Sn	**Sn**	**14 47 54.2**	**-5.6**
ELAN	**Lanestosa**	**6.43**	**7**	Pn	**Pn**	**14 46 50.3**	**+2.2**
ELAN				⇑i IVmb_VC		14 46 51.9	
	comp=N,174nm,SNR=1.3						
ELAN				Sn	**Sn**	**14 47 57.5**	**-2.5**
EARI	**Arriondas**	**6.47**	**355**	Pn	**Pn**	**14 46 51.6**	**+2.9**
EARI				⇑i IVmb_VC		14 46 53.1	
	comp=N,253nm,SNR=1.2						
EARI				Sn	**Sn**	**14 47 58.0**	**-3.1**
EORO	**Oroz-Betelu**	**6.51**	**21**	Pn	**Pn**	**14 46 51.7**	**+2.5**
EORO				Sn	**Sn**	**14 47 59.1**	**-2.8**
ALT04	**Santillana del**	**6.53**	**2**	⇑i IVmb_VC		14 46 47.1	
	comp=N,219nm,SNR=1.2						
ALT04				Pn	**Pn**	**14 46 51.9**	**+2.5**
ALT04				Sn	**Sn**	**14 47 59.0**	**-3.3**
ALT01	**Santillana del**	**6.53**	**2**	⇑i IVmb_VC		14 46 52.0	
	comp=N,179nm,SNR=0.6						
ALT01				Pn	**Pn**	**14 46 52.5**	**+3.1**
ALT01				Sn	**Sn**	**14 47 59.9**	**-2.4**
ALT02	**Santillana del**	**6.53**	**2**	Pn	**Pn**	**14 46 53.4**	**+4.0**
ALT02				⇑i IVmb_VC		14 46 53.7	
	comp=N,161nm,SNR=0.9						
ALT02				Sn	**Sn**	**14 47 59.0**	**-3.4**
EAGO	**Agolada(Pontev**	**6.57**	**336**	Pn	**Pn**	**14 46 52.4**	**+2.4**
EAGO				⇑i IVmb_VC		14 46 53.9	
	comp=N,450nm,SNR=2.9						
EAGO				Sn	**Sn**	**14 48 00.1**	**-3.4**
SJPF	**Ste Jean**	**6.73**	**21**	ePn	**Pn**	**14 46 54.9**	**+2.6**
SJPF				eSn	**Sn**	**14 48 06.4**	**-1.1**
	comp=N,6.6nm,0.3s						
ETSF	**Etsaut**	**6.75**	**25**	ePn	**Pn**	**14 46 54.7**	**+2.2**
ETSF				eSn	**Sn**	**14 48 06.0**	**-1.9**
	comp=N,4.5nm,0.3s						
EPON	**Pontenova**	**6.79**	**343**	Pn	**Pn**	**14 46 56.0**	**+2.9**
EPON				⇑i IVmb_VC		14 46 57.2	
	comp=N,190nm,SNR=0.8						
EPON				Sn	**Sn**	**14 48 05.6**	**-3.3**
STS	**Santiago**	**6.80**	**334**	Pn	**Pn**	**14 46 56.1**	**+3.0**
STS				Sn	**Sn**	**14 48 04.1**	**-5.0**
EMIR	**Miracle**	**6.86**	**41**	Pn	**Pn**	**14 46 56.4**	**+2.3**
EPF	**Esparros**	**7.19**	**29**	ePn	**Pn**	**14 47 00.8**	**+2.2**
EPF				eSn	**Sn**	**14 48 16.9**	**-1.8**
	comp=N,6.2nm,0.4s						
MTLF	**Montolieu**	**8.26**	**36**	ePn	**Pn**	**14 47 14.0**	**+0.9**
LFF	**La Frestale**	**8.99**	**24**	ePn	**Pn**	**14 47 25.4**	**+2.4**
CAF	**Calviac**	**9.46**	**29**	ePn	**Pn**	**14 47 31.4**	**+1.9**
RJF	**Les Rejaudoux**	**9.58**	**26**	ePn	**Pn**	**14 47 32.7**	**+1.7**
RJF				eSn	**Sn**	**14 49 09.7**	**-7.2**
	comp=N,2.3nm,0.2s						
LASF	**Ste Croix**	**9.60**	**39**	ePn	**Pn**	**14 47 32.5**	**+1.1**
TCF	**Toulx Ste Croi**	**10.67**	**26**	ePn	**Pn**	**14 47 48.4**	**+2.4**
QUIF	**Quistinic**	**11.11**	**5**	ePn	**Pn**	**14 47 54.1**	**+2.3**
QUIF				eSn	**Sn**	**14 49 48.5**	**-5.6**
	comp=N,8.9nm,0.5s						
BGF	**Bois d'Agland**	**11.13**	**27**	ePn	**Pn**	**14 47 54.0**	**+1.8**
SGMF	**Saint Gilles**	**11.49**	**6**	ePn	**Pn**	**14 47 58.1**	**+1.1**
AVF	**Avril sur Loir**	**11.51**	**28**	ePn	**Pn**	**14 47 58.9**	**+1.5**
ROSF	**Rostrenen**	**11.52**	**4**	ePn	**Pn**	**14 47 58.9**	**+1.5**
ROSF				eSn	**Sn**	**14 49 58.0**	**-6.1**
	comp=N,7.3nm,0.4s						
SMF	**Signal de Mont**	**11.58**	**30**	ePn	**Pn**	**14 47 59.9**	**+1.6**
SSF	**Saint Saulge**	**11.80**	**28**	ePn	**Pn**	**14 48 02.3**	**+1.0**
GRR	**Gorron**	**11.84**	**12**	ePn	**Pn**	**14 48 02.8**	**+1.1**
LDF	**La Druitiere**	**12.16**	**14**	ePn	**Pn**	**14 48 07.2**	**+1.0**

IDC 03 14:55:34.6±3.5**, 3°.88S**×**132°.10E, h0**km**, mb3.2**/1**, mbtmp3.1**/4**, ML3.1**/3**, Error ellipse: s-maj=255.2km s-min=25.3km az=77.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.10**	**344**	Pn	Pn	14 56 24.7	-0.2
	1.6nm,0.3s,baz=198,slow=20,SNR=42						
SIJI				Sn	Sn	14 56 57.5	-5.2
	2.0nm,0.3s,baz=211,slow=23,SNR=8.7						
	3.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.48**	**204**	Pn	Pn	14 59 07.9	-6.6
	0.1nm,0.3s,baz=30,slow=16,SNR=1.4						
FITZ				Sn	Sn	15 01 48.5	-18
	0.1nm,0.3s,baz=63,slow=16,SNR=2.1						
WRA	**Warramunga Arr**	**16.12**	**172**	Pn	Pn	14 59 21.3	-1.5
	0.1nm,0.3s,baz=352,slow=14,SNR=5.0						
WRA				Sn	Sn	15 02 13.2	-9.1
	0.1nm,0.3s,baz=356,slow=23,SNR=1.9						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**19.75**	**175**	P	P	15 00 06.8	+0.5
	0.1nm,0.3s,baz=351,slow=11,SNR=15						
ASAR				S	S	15 03 40.0	-10
	0.5nm,0.9s,baz=358,slow=31,SNR=2.0						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**66.82**	**325**	P	P	15 06 28.4	+0.1
	0.1nm,0.6s,baz=118,slow=5.2,SNR=1.8						
	0.1nm,0.6s						

IDC 03 15:04:29.4±2.0**, 21°.52N**×**92°.79E, h0**km**, mb3.4**/4**, mbtmp3.3**/5**, ML3.5**/1**, Error ellipse: s-maj=95.8km s-min=20.0km az=54.0, Myanmar-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.54**	**117**	Pn	Pn	15 06 07.4	+0.4
	0.3nm,0.3s,baz=305,slow=13,SNR=5.0						
CMAR				Pg	Pb	15 06 28.4	+4.3
	0.3nm,0.3s,baz=313,slow=17,SNR=4.4						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**26.62**	**344**	P	P	15 10 09.6	0.0
	0.2nm,0.4s,baz=154,slow=9.2,SNR=12						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**31.13**	**342**	P	P	15 10 49.6	0.0
	0.3nm,0.5s,baz=147,slow=10,SNR=4.4						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**57.87**	**133**	P	P	15 14 22.7	-0.7
	0.4nm,0.9s,baz=312,slow=7.8,SNR=5.3						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**60.16**	**136**	P	P	15 14 39.8	+0.5
	0.2nm,0.5s,baz=316,slow=6.6,SNR=4.7						
	0.2nm,0.5s						

*IDC **03** 15:13:45.3±0.9, 37°.86N×14°.88E, h0km, mb3.7/6, mbtmp3.8/8, ML1.1/1, MS3.3/3, Error ellipse: s-maj=35.9km s-min=7.5km az=136.0*

*ROM **03** 15:13:47.6±0.1, 37°.746N±0°.004×14°.652E±0°.006, h25km, ML3.6/146, Error ellipse: s-maj=0.6km s-min=0.3km az=317.0*

ISC 03 15:13:47.7±0.8**, 37°.74N**±0°.02×**14°.67E**±0°.02**, h27**km±4km**, n97, σ1**§**28**/109**, mb3.7**/6**, 11C-10D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALF	**Gagliano Caste**	**0.09**	**249**	⇓P	**Pb**	**15 13 51.4**	**-1.2**
GALF				S	**Sb**	**15 13 54.7**	**-1.3**
GALF				AML	AML		
	comp=E,17200μm,0.4s						
GALF				AML	AML		
	comp=N,15400μm,0.4s						
GALF				AML	AML		
GALF				AML	AML		
GALF				AML	AML		
	comp=N,15400μm,0.3s						
EPZF	**Pizzo Felice**	**0.17**	**61**	⇑P	**Pb**	**15 13 53.3**	**0.0**
EPZF				S	**Sb**	**15 13 57.9**	**+0.8**
EPZF				AML	AML		
	comp=E,39400μm,0.7s						
EPZF				AML	AML		
	comp=N,57050μm,1.6s						
EPZF				AML	AML		
	comp=N,57050μm,0.4s						
EPZF				AML	AML		
	comp=E,39450μm,0.7s						
CAGR	**Agira**	**0.18**	**229**	⇓P	**Pb**	**15 13 53.0**	**-0.4**
CAGR				S	**Sb**	**15 13 58.0**	**+0.7**
CAGR				AML	AML		
	comp=E,62800μm,0.7s						
CAGR				AML	AML		
	comp=N,69250μm,1.0s						
ECHR	**Santa Chiara**	**0.20**	**107**	⇑P	**Pb**	**15 13 53.8**	**+0.1**
ECHR				S	**Sb**	**15 13 57.4**	**-0.4**
ESML	**S. M. di Licod**	**0.20**	**128**	⇓P	**Pb**	**15 13 53.6**	**0.0**
ESML				AML	AML		
	comp=N,28550μm,0.8s						
ESML				AML	AML		
	comp=E,20850μm,1.0s						
EMSG	**Monte Spagnolo**	**0.23**	**71**	P	**Pb**	**15 13 54.2**	**+0.1**
EMSG				AML	AML		
	comp=N,35200μm,0.8s						
EMSG				AML	AML		
	comp=E,31700μm,0.6s						
EMSG				AML	AML		
	comp=E,28550μm,0.6s						
EMSG				AML	AML		
	comp=N,35200μm,1.2s						
EMSG				AML	AML		
	comp=E,28550μm,0.6s						
ESLN	**Serra La Nave**	**0.24**	**102**	P	**Pb**	**15 13 54.4**	**+0.1**
ESLN				AML	AML		
	comp=N,27450μm,0.8s						
ESLN				AML	AML		
	comp=E,29650μm,0.6s						
ESLN				AML	AML		
	comp=N,27450μm,1.2s						
EMCN	**Etna Monte Con**	**0.29**	**80**	P	**Pb**	**15 13 55.2**	**+0.2**
MSFR	**San Fratello**	**0.30**	**347**	⇑P	**Pb**	**15 13 54.2**	**-0.7**
MSFR				S	**Sb**	**15 13 59.5**	**-0.3**
MSFR				AML	AML		
	comp=N,8415μm,1.4s						
MSFR				AML	AML		
	comp=E,6995μm,0.7s						
MSFR				AML	AML		
	comp=N,8415μm,0.6s						
MSFR				AML	AML		
	comp=E,6995μm,1.3s						
ENIC	**Nicolosi**	**0.30**	**112**	P	**Pn**	**15 13 55.9**	**-0.5**
EPIT	**Pozzo Pitarron**	**0.31**	**77**	⇑P	**Pb**	**15 13 55.7**	**+0.5**
VAE	**Valguarnera**	**0.34**	**218**	Pg	**Pb**	**15 13 56.3**	**+0.8**
	comp=E,105nm,0.3s,baz=16,slow=4.2,SNR=41						
VAE				Lg	Lg	15 14 04.4	
	comp=E,441nm,0.3s,baz=16,slow=6.7,SNR=31						
MUCR	**Ucria**	**0.34**	**28**	⇑P	**Pb**	**15 13 55.2**	**-0.3**
MUCR				S	**Sb**	**15 14 01.1**	**+0.2**
MUCR				AML	AML		
	comp=E,16450μm,0.9s						
MUCR				AML	AML		
	comp=N,14700μm,0.5s						
MUCR				AML	AML		
	comp=E,13140μm,0.8s						
EVRN	**Santa Venerina**	**0.37**	**98**	P	**Pb**	**15 13 56.1**	**+0.1**
EPOZ	**Pozzillo**	**0.40**	**125**	⇑P	**Pb**	**15 13 57.1**	**+0.7**
EPOZ				AML	AML		
	comp=N,14150μm,0.4s						
EPOZ				AML	AML		
	comp=E,14950μm,0.5s						
HLNI	**Lentini**	**0.42**	**158**	⇓P	**Pb**	**15 13 56.3**	**-0.5**
HLNI				S	**Sb**	**15 14 03.5**	**+0.6**
HLNI				AML	AML		
	comp=E,7890μm,1.6s						
HLNI				AML	AML		
	comp=E,7890μm,0.4s						
HLNI				AML	AML		
	comp=N,8795μm,0.3s						
PETRA	**Petralia Sopra**	**0.45**	**282**	⇑P	**Pb**	**15 13 56.8**	**-0.6**
PETRA				S	**Sb**	**15 14 04.6**	**+0.7**
PETRA				AML	AML		
	comp=N,11300μm,0.6s						
PETRA				AML	AML		
	comp=E,9190μm,0.6s						
PLLN	**Pollina**	**0.49**	**301**	P	**Pb**	**15 13 57.1**	**-0.7**
AIO	**Antillo**	**0.50**	**63**	⇑P	**Pb**	**15 13 58.1**	**+0.1**
AIO				S	**Sn**	**15 14 06.9**	**-0.1**
AIO				AML	AML		
	comp=N,6945μm,0.7s						
AIO				AML	AML		
	comp=E,6420μm,0.7s						
RESU	**Resuttano**	**0.50**	**259**	⇑P	**Pb**	**15 13 58.4**	**+0.4**
RESU				AML	AML		
	comp=N,8180μm,1.1s						
RESU				AML	AML		
	comp=N,8180μm,0.9s						
RESU				AML	AML		
	comp=E,7940μm,0.6s						
CSLB	**Castelbuono**	**0.53**	**292**	⇓P	**Pb**	**15 13 57.6**	**-0.9**
CSLB				S	**Sb**	**15 14 05.7**	**0.0**
CSLB				AML	AML		
	comp=E,2445μm,0.7s						
CSLB				AML	AML		
	comp=N,3075μm,0.7s						
CSLB				AML	AML		
	comp=E,2445μm,1.3s						
CSLB				AML	AML		
	comp=N,3075μm,1.3s						
CPTP	**Pietraperzia**	**0.53**	**231**	P	**Pn**	**15 13 59.5**	**-0.1**
CPTP				AML	AML		
	comp=N,5880μm,0.6s						
CPTP				AML	AML		
	comp=E,6260μm,0.5s						
RAFF	**Raffo Rosso**	**0.58**	**206**	P	**Pb**	**15 13 59.0**	**-0.3**
RAFF				S	**Sb**	**15 14 08.4**	**+1.3**
RAFF				AML	AML		
	comp=E,21100μm,0.5s						
RAFF				AML	AML		
	comp=N,16350μm,0.9s						
RAFF				AML	AML		
	comp=N,16350μm,1.1s						
HAGA	**Augusta**	**0.60**	**140**	⇓P	**Pb**	**15 13 59.1**	**-0.5**
HAGA				S	**Sb**	**15 14 08.6**	**+0.9**
HAGA				AML	AML		
	comp=E,16050μm,0.4s						
HAGA				AML	AML		
	comp=N,14350μm,0.7s						
MPNC	**Port Mandanici**	**0.67**	**53**	P	**Pn**	**15 14 01.1**	**-0.4**
MPNC				S	**Sn**	**15 14 11.0**	**-0.1**
MPNC				AML	AML		
	comp=E,12950μm,0.7s						
MPNC				AML	AML		
	comp=N,7305μm,0.5s						
SSY	**Sortino**	**0.67**	**152**	⇓P	**Pb**	**15 14 00.4**	**-0.4**
SSY				S	**Sb**	**15 14 10.8**	**+1.0**
SSY				AML	AML		
	comp=E,26150μm,0.6s						
SSY				AML	AML		
	comp=N,57600μm,0.5s						
VPL	**Vulcano Piano**	**0.68**	**21**	P	**Pb**	**15 14 00.6**	**-0.5**
VPL				S	**Sn**	**15 14 10.8**	**-0.6**
VPL				AML	AML		
	comp=E,7135μm,0.7s						
VPL				AML	AML		
	comp=N,8140μm,0.9s						
VPL				AML	AML		

comp=E,7135μm,1.3s
MILZ Milazzo 0.69 40 P **Pb 15 14 00.7 -0.4**
MILZ AML AML
comp=E,20300μm,0.6s
MILZ AML AML
comp=N,15050μm,0.5s
ACATE Acate (RG) 0.73 191 P **Pb 15 14 01.1 -0.8**
ACATE AML AML
comp=N,22500μm,0.8s
ACATE AML AML
comp=E,20050μm,1.4s
ACATE AML AML
comp=E,18800μm,1.3s
ACATE AML AML
comp=N,22500μm,0.8s
ACATE AML AML
comp=E,20050μm,0.6s
ACATE AML AML
comp=E,18800μm,0.7s
ACATE AML AML
comp=N,22100μm,0.8s
CMDO Montedoro 0.73 248 P **Pn 15 14 03.1 +0.7**
CMDO AML AML
comp=E,1102μm,1.6s
CMDO AML AML
comp=N,2075μm,0.8s
CMDO AML AML
comp=N,2075μm,1.2s
CMDO AML AML
comp=E,1102μm,0.4s
LLI Lipari 0.73 17 P **Pn 15 14 02.2 -0.1**
LLI AML AML
comp=N,65550μm,0.6s
LLI AML AML
comp=N,65550μm,1.4s
LLI AML AML
comp=E,36900μm,0.7s
CLTA Licata 0.81 224 ⇑P **Pn 15 14 03.6 +0.2**
CLTA AML AML
comp=E,3750μm,1.4s
CLTA AML AML
comp=N,2165μm,0.6s
CLTA AML AML
comp=E,3750μm,0.6s
IFIL Filicudi I Eol 0.82 354 P **Pb 15 14 02.9 -0.6**
IFIL AML AML
comp=E,32750μm,0.8s
IFIL AML AML
comp=N,10600μm,0.6s
IACL Alicudi 0.83 343 ⇓P **Pb 15 14 02.6 -0.9**
IACL AML AML
comp=E,5275μm,1.0s
IACL AML AML
comp=E,5275μm,1.0s
IACL AML AML
comp=N,4520μm,0.9s
MSRU Castanea 0.84 52 P **Pn 15 14 04.0 +0.2**
MSRU S **Sn 15 14 16.8 +1.5**
MSRU AML AML
comp=E,8665μm,1.3s
MSRU AML AML
comp=N,5615μm,1.1s
MSRU AML AML
comp=E,8665μm,0.7s
MSRU AML AML
comp=N,5615μm,0.9s
MTTG Motta San Giov 0.85 72 P **Pn 15 14 04.0 0.0**
RCU Reggio Calabri 0.87 64 P **Pb 15 14 05.1 +0.8**
CROCE Santa Croce Ca 0.92 187 P **Pn 15 14 04.3 -0.5**
CROCE S **Sb 15 14 17.0 +0.3**
CROCE AML AML
comp=N,7955μm,0.3s
CROCE AML AML
comp=N,6500μm,0.3s
CROCE AML AML
comp=E,7775μm,0.4s
CROCE AML AML
comp=E,6385μm,0.4s
CROCE AML AML
comp=N,6500μm,1.7s
CROCE AML AML
comp=N,7955μm,1.7s
CROCE AML AML
comp=E,6385μm,1.6s
CROCE AML AML
comp=E,7775μm,1.6s
SOLUN Solunto 0.97 291 P **Pn 15 14 05.0 -0.5**
SOLUN AML AML
comp=N,3095μm,0.7s
SOLUN AML AML
comp=E,4255μm,0.7s
SOLUN AML AML
comp=E,4255μm,1.3s
SICLA Scilla 0.97 58 P **Pb 15 14 05.6 -0.3**
SICLA AML AML
comp=E,2625μm,0.9s
SICLA AML AML
comp=N,3040μm,1.2s
ISPIC ISPICA 0.98 169 P **Pn 15 14 05.5 -0.2**
GMB Gambarie 1.01 65 P **Pb 15 14 06.8 +0.2**
GMB AML AML
comp=E,7270μm,0.5s
GMB AML AML
comp=N,8775μm,0.7s
GMB AML AML
comp=N,8775μm,1.3s
GMB AML AML
comp=E,7270μm,1.5s
CEL Celeste 1.09 62 ⇓P **Pb 15 14 08.1 +0.1**
CEL S **Sb 15 14 24.6 +2.7**
CEL AML AML
comp=E,2170μm,1.1s
CEL AML AML
comp=E,2185μm,1.1s
CEL AML AML
comp=N,2385μm,0.9s
CEL AML AML
comp=E,2170μm,0.9s
CEL AML AML
comp=E,2185μm,0.9s
CEL AML AML
comp=N,2450μm,0.9s
HPAC Pachino 1.10 161 ⇓P **Pn 15 14 07.2 -0.2**
HPAC S **Sb 15 14 22.7 +0.6**
HPAC AML AML
comp=E,12200μm,0.4s
HPAC AML AML
comp=N,18000μm,0.7s
HPAC AML AML
comp=N,18000μm,1.3s
HPAC AML AML
comp=E,12200μm,1.6s
MPG Monte Pellegri 1.12 292 P **Pn 15 14 07.5 -0.2**
IST3 Stromboli F 1.14 22 P **Pb 15 14 08.4 -0.4**
IST3 AML AML
comp=E,844μm,0.9s
IST3 AML AML
comp=N,1232μm,0.6s
SOI Samo 1.14 73 ⇑P **Pb 15 14 08.5 -0.3**
SOI AML AML
comp=E,1465μm,0.7s
SOI AML AML
comp=N,1690μm,0.7s
CLTB Caltabellotta 1.17 262 P **Pb 15 14 10.1 +0.8**
CLTB AML AML
comp=E,17600μm,0.4s
CLTB AML AML
comp=N,29250μm,0.6s
SCIAC Sciacca 1.27 260 P **Pn 15 14 10.1 +0.4**
SCIAC AML AML
comp=N,1790μm,1.3s
SCIAC AML AML
comp=N,1790μm,0.7s
SCIAC AML AML
comp=E,1760μm,0.5s
JOPP Joppolo 1.29 48 P **Pb 15 14 10.4 -0.9**
JOPP AML AML
comp=N,1025μm,0.6s
JOPP AML AML
comp=E,1068μm,0.9s
JOPP AML AML
comp=N,1025μm,1.4s
CRJA Costa Raja 1.32 273 P **Pb 15 14 12.4 +0.5**
CRJA AML AML
comp=E,6370μm,1.3s
CRJA AML AML
comp=N,8055μm,0.7s
CRJA AML AML
comp=E,6370μm,0.7s
MBFT Monte Bonifato 1.38 279 P **Pb 15 14 12.4 -0.4**
MBFT AML AML
comp=E,218μm,1.0s
MBFT AML AML
comp=N,1830μm,0.5s
MBFT AML AML
comp=E,218μm,1.0s
MBFT AML AML
comp=N,282μm,0.5s
MBFT AML AML
comp=E,1370μm,0.7s
MFNL Monte Finestre 1.39 272 P **Pb 15 14 13.2 +0.1**
MFNL AML AML
comp=N,2050μm,0.5s
MFNL AML AML
comp=E,2400μm,0.6s
USI Ustica 1.52 310 P **Pn 15 14 12.2 -1.0**
PLAC Placanica 1.56 63 P **Pb 15 14 15.0 -1.0**
PLAC AML AML
comp=E,1520μm,1.0s
PLAC AML AML
comp=N,1430μm,0.7s
PLAC AML AML
comp=E,1470μm,0.7s
PLAC AML AML
comp=N,1560μm,1.0s
PLAC AML AML
comp=E,1470μm,1.3s
PLAC AML AML
comp=N,1430μm,1.3s
MARS Marsala (TP) I 1.67 271 P **Pb 15 14 16.8 -1.1**
MARS AML AML
comp=E,2780μm,0.4s
MARS AML AML
comp=N,2075μm,0.8s
MARS AML AML
comp=N,2075μm,1.2s
LEVAN Levanzo 1.86 278 P **Pn 15 14 18.8 +1.0**
LEVAN AML AML
comp=E,620μm,0.7s
LEVAN AML AML
comp=N,1089μm,0.5s
CAR1 CAROLEI 1.93 38 P **Pn 15 14 19.2 +0.3**
CAR1 AML AML
comp=E,1360μm,0.6s
CAR1 AML AML
comp=E,1460μm,0.6s
CAR1 AML AML
comp=N,1275μm,0.8s
CAR1 AML AML
comp=N,1220μm,0.8s
CAR1 AML AML
comp=E,1460μm,1.4s
CAR1 AML AML
comp=E,1360μm,1.4s
SPS2 Spezzano della 2.02 40 P **Pn 15 14 20.0 -0.2**
SPS2 AML AML
comp=E,132μm,0.6s
SPS2 AML AML
comp=N,256μm,0.9s
SPS2 AML AML
comp=N,256μm,1.1s
SPS2 AML AML
comp=E,132μm,1.4s
CET2 Cetraro 2.04 29 P **Pn 15 14 20.6 +0.1**
CET2 AML AML
comp=E,740μm,0.6s
CET2 AML AML
comp=N,786μm,0.6s
CET2 AML AML
comp=E,740μm,1.4s
TIP Timpagrande 2.17 48 P **Pn 15 14 23.3 +1.0**
TIP AML AML
comp=E,360μm,0.9s
TIP AML AML
comp=E,340μm,0.9s
TIP AML AML
comp=N,300μm,1.3s
TIP AML AML
comp=E,360μm,1.1s
TIP AML AML
comp=N,290μm,1.3s
CELI Celico 2.19 40 P **Pn 15 14 23.2 +0.6**
CELI AML AML
comp=N,311μm,0.9s
CELI AML AML
comp=E,271μm,0.7s
CELI AML AML
comp=E,281μm,0.7s
CELI AML AML
comp=E,271μm,1.3s
CELI AML AML
comp=N,304μm,0.9s
TDS Terranova Siba 2.31 34 P **Pn 15 14 24.8 +0.7**
TDS AML AML
comp=E,285μm,0.8s
TDS AML AML
comp=N,282μm,1.0s
LINA Linosa Island 2.37 218 P **Pn 15 14 25.0 +0.2**
LINA AML AML
comp=N,1635μm,0.4s
LINA AML AML
comp=E,1665μm,0.9s
BULG Bulgheria - Ca 2.40 13 P **Pn 15 14 25.5 +0.2**
BULG AML AML
comp=E,212μm,0.5s
BULG AML AML
comp=N,350μm,0.6s
BULG AML AML
comp=N,352μm,0.5s
BULG AML AML
comp=N,352μm,1.5s
BULG AML AML
comp=E,202μm,0.5s
PIPA Pietrapaola 2.42 43 P **Pb 15 14 28.0 -2.6**
MGR Morigerati 2.49 16 P **Pn 15 14 26.9 +0.4**
MGR AML AML
comp=E,320μm,0.8s
MGR AML AML
comp=E,138μm,0.7s
MGR AML AML
comp=N,142μm,0.5s
MGR AML AML
comp=N,384μm,0.8s
SALB San Lorenzo Be 2.50 31 P **Pn 15 14 27.7 +0.9**
SALB AML AML
comp=N,278μm,0.6s
SALB AML AML
comp=E,250μm,0.8s
SIRI Monte Sirino - 2.61 21 P **Pn 15 14 29.1 +0.9**
SIRI AML AML
comp=E,222μm,1.2s
SIRI AML AML
comp=E,207μm,1.2s
SIRI AML AML
comp=N,204μm,0.9s
SIRI AML AML
comp=N,215μm,0.9s
SIRI AML AML
comp=E,222μm,0.8s
SIRI AML AML
comp=E,207μm,0.8s
CMPR Campora 2.62 11 P **Pn 15 14 28.5 +0.1**
CMPR AML AML
comp=N,190μm,0.6s
CMPR AML AML
comp=E,91μm,0.5s
ORI Oriolo Calabro 2.70 30 P **Pn 15 14 30.3 +0.9**
CRAC Craco 2.96 27 P **Pb 15 14 36.5 -3.2**
CRAC AML AML
comp=E,276μm,0.9s
CRAC AML AML
comp=N,338μm,1.1s
CRAC AML AML
comp=E,276μm,1.1s
MRLC Muro Lucano 3.07 12 P **Pn 15 14 35.3 +0.7**
MRLC AML AML
comp=E,184μm,1.6s
MRLC AML AML
comp=N,303μm,1.6s
MRLC AML AML
comp=E,72μm,0.6s
MRLC AML AML
comp=E,72μm,1.4s
MRLC AML AML
comp=E,184μm,0.4s
MRLC AML AML
comp=N,109μm,0.5s
MRLC AML AML
comp=N,303μm,0.4s
LTRZ Laterza 3.31 30 P **Pn 15 14 38.6 +0.9**
VSL Villasalto 4.50 294 P **Pn 15 14 54.5 +0.4**
VSL AML AML
comp=N,106μm,1.6s
VSL AML AML
comp=E,172μm,0.3s
KEST Kesra 4.73 246 Pn **Pn 15 14 59.3 +2.0**
comp=E,30nm,0.7s,baz=54,slow=6.5,SNR=24
KEST Sn **Sn 15 15 51.5 +0.2**
comp=E,2.2nm,0.3s,baz=107,slow=10,SNR=5.4
IDI Anoyia 8.58 104 Pn **Pn 15 15 48.0 -2.3**
comp=E,0.1nm,0.3s,baz=292,slow=20,SNR=1.4
IDI Sn **Sn 15 17 19.9 -6.3**
comp=E,0.5nm,0.3s,baz=328,slow=14,SNR=1.4
comp=E,5.8nm,1.0s
OBKA Obir 8.76 359 *e*Pn **Pn 15 15 56.1 +3.5**
comp=E,18nm,2.4s
MYKA Terra Mystica 8.91 355 *e*Pn **Pn 15 15 58.9 +4.2**
comp=E,2.0nm,0.5s
SOKA Soboth 8.93 2 *e*Pn Pn 15 15 60.0 +4.9
comp=E,3.8nm,0.9s
ABTA Abfaltersbach 9.14 351 *i* Pn **Pn 15 16 01.3 +3.4**
comp=E,4.2nm,0.8s
FETA Feichten 9.72 344 *i* Pn Pn 15 16 10.2 +4.3
comp=E,4.8nm,1.7s
LESA Schwarzleotal 9.79 352 *i* Pn Pn 15 16 11.9 +5.2
comp=E,3.6nm,0.7s
SQTA Sankt Quirin 9.81 346 *e*Pn Pn 15 16 11.3 +4.2
comp=E,2.9nm,0.7s
MOTA Moosalm 9.95 346 *i* Pn **Pn 15 16 12.7 +3.7**
comp=E,10nm,1.3s
BIOA Bad Ischl, Aus 9.97 356 *i* Pn Pn 15 16 13.7 +4.5
comp=E,7.8nm,0.8s
MOA Molln 10.11 358 *i* Pn Pn 15 16 15.8 +4.7
comp=E,5.8nm,0.5s
CONA Conrad Observa 10.22 5 *i* Pn **Pn 15 16 15.7 +3.1**
comp=E,2.2nm,0.7s
VRAC Vranov 11.64 6 LR LR 15 21 52.0
comp=E,84nm,19.1s,baz=251,slow=42
HFS Hagfors 22.42 359 P **P 15 18 44.4 +0.3**
comp=E,1.5nm,0.7s,baz=169,slow=8.4,SNR=1.6
comp=E,1.5nm,0.7s
NOA NORSAR Array B 23.42 356 LR LR 15 29 36.4
comp=E,54nm,19.2s,baz=260,slow=41
FINES FINESS Array B 24.77 13 P **P 15 19 06.5 -0.5**
comp=E,4.9nm,0.9s,baz=207,slow=8.1,SNR=4.2
comp=E,4.9nm,0.9s
KURBB Kurchatov Arra 46.18 52 P **P 15 22 10.2 +0.2**
comp=E,0.4nm,0.6s,baz=276,slow=8.7,SNR=3.5
comp=E,0.4nm,0.6s
ZALV Zalesovo Beam 49.40 47 P **P 15 22 35.1 +0.3**
comp=E,0.9nm,0.6s,baz=282,slow=6.3,SNR=4.2
comp=E,0.9nm,0.6s
MKAR Makanchi Array 49.44 57 P **P 15 22 35.6 +0.3**
comp=E,0.5nm,0.5s,baz=283,slow=5.9,SNR=15
comp=E,0.5nm,0.5s
SONM Songino Array 64.25 48 P **P 15 24 20.8 +0.3**
comp=E,0.4nm,0.7s,baz=302,slow=8.3,SNR=2.0
comp=E,0.4nm,0.7s
NVAR Mina Array Bea 92.70 325 LR LR 16 07 18.6
comp=E,37nm,18.2s,baz=243,slow=35

ROM 03 15:14:11.5±0.1, 37.731N±0.006×14.639E±0.009, h18km±1km, ML3.1/6, Error ellipse: s-maj=0.8km s-min=0.2km az=104.0, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GALF	**Gagliano Caste**	**0.06**	**251**	P	Pg	15 14 14.4	-0.7
GALF				S	Sg	15 14 17.6	+0.2
GALF				AML	AML		
	comp=N,15450μm,0.4s						
GALF				AML	AML		
	comp=E,17200μm,0.4s						
GALF				AML	AML		
	comp=N,15400μm,0.3s						
GALF				AML	AML		
	comp=N,15400μm,0.4s						
GALF				AML	AML		
GALF				AML	AML		
CAGR	**Agira**	**0.15**	**226**	P	Pg	15 14 16.2	+0.3
CAGR				S	Sg	15 14 20.8	+1.9
CAGR				AML	AML		
	comp=E,62800μm,0.7s						
CAGR				AML	AML		
	comp=N,69250μm,1.0s						
EPZF	**Pizzo Felice**	**0.20**	**62**	P	Pg	15 14 16.4	-0.1
EPZF				S	Sg	15 14 22.1	+2.1
EPZF				AML	AML		
	comp=N,57050μm,1.6s						
EPZF				AML	AML		
	comp=E,39400μm,0.7s						
ESML	**S. M. di Licod**	**0.22**	**121**	P	Pg	15 14 17.4	+0.5
ESML				AML	AML		
	comp=E,19350μm,0.6s						
ESML				AML	AML		
	comp=N,28550μm,0.8s						
ESML				AML	AML		
	comp=E,19050μm,0.7s						
ESML				AML	AML		
	comp=N,14600μm,1.1s						
ECHR	**Santa Chiara**	**0.22**	**102**	P	Pg	15 14 17.7	+0.8
EMSG	**Monte Spagnolo**	**0.26**	**70**	P	Pb	15 14 17.8	+0.1
EMSG				AML	AML		
	comp=N,27400μm,0.6s						
EMSG				AML	AML		
	comp=E,28550μm,0.6s						
EMSG				AML	AML		
	comp=E,22000μm,0.7s						
ESLN	**Serra La Nave**	**0.27**	**98**	AML	AML		
	comp=N,27450μm,0.8s						
ESLN				AML	AML		
	comp=E,27400μm,0.6s						
MSFR	**San Fratello**	**0.30**	**353**	P	Pg	15 14 17.2	-1.0
MSFR				S	Sb	15 14 23.0	-0.1
MSFR				AML	AML		
	comp=E,6995μm,0.7s						
MSFR				AML	AML		
	comp=N,8415μm,1.4s						
MSFR				AML	AML		
	comp=E,2462μm,1.2s						
MSFR				AML	AML		
	comp=N,3870μm,1.1s						
MSFR				AML	AML		
	comp=E,2738μm,1.0s						
ENIC	**Nicolosi**	**0.32**	**108**	P	Pb	15 14 19.2	+0.4
ENIC				AML	AML		
	comp=E,26450μm,0.6s						
ENIC				AML	AML		
	comp=N,25250μm,0.4s						
ENIC				AML	AML		
	comp=E,25500μm,0.9s						
ENIC				AML	AML		
	comp=N,19250μm,0.5s						
EPIT	**Pozzo Pitarron**	**0.34**	**76**	P	Pb	15 14 19.8	+0.6
MUCR	**Ucria**	**0.36**	**31**	P	Pg	15 14 18.3	-0.9
MUCR				S	Sg	15 14 24.4	-0.1
MUCR				AML	AML		
	comp=E,16450μm,0.9s						
MUCR				AML	AML		
	comp=N,14700μm,0.5s						
MUCR				AML	AML		
	comp=N,3336μm,0.7s						
MUCR				AML	AML		
	comp=N,3240μm,0.8s						
MUCR				AML	AML		
	comp=E,7091μm,0.8s						
EPOZ	**Pozzillo**	**0.41**	**122**	P	Pb	15 14 20.4	0.0
EPOZ				AML	AML		
	comp=N,14150μm,0.4s						
EPOZ				AML	AML		
	comp=E,14950μm,0.5s						
HLNI	**Lentini**	**0.42**	**154**	P	Pg	15 14 19.6	-0.7
HLNI				S	Sb	15 14 26.7	+0.1
HLNI				AML	AML		
	comp=N,8795μm,0.3s						
HLNI				AML	AML		
	comp=E,7890μm,1.6s						
HLNI				AML	AML		
	comp=N,5858μm,0.9s						
HLNI				AML	AML		
	comp=E,5864μm,0.2s						

HLNI AML AML
comp=N,5514μm,0.2s
PETRA Petralia Sopra 0.43 284 P Pg 15 14 19.8 -0.6
PETRA AML AML
comp=E,9190μm,0.6s
PETRA AML AML
comp=N,11300μm,0.6s
RESU Resuttano 0.47 260 AML AML
comp=N,8180μm,1.1s
RESU AML AML
comp=E,7940μm,0.6s
PLLN Pollina 0.47 304 P Pg 15 14 20.7 -0.4
PLLN AML AML
comp=E,20200μm,0.7s
PLLN AML AML
comp=N,18450μm,0.7s
CPTP Pietraperzia 0.50 230 AML AML
comp=N,5880μm,0.6s
CPTP AML AML
comp=E,6260μm,0.5s
CSLB Castelbuono 0.50 294 P Pn 15 14 23.2 -0.6
CSLB AML AML
comp=E,2445μm,0.7s
CSLB AML AML
comp=N,3075μm,0.7s
AIO Antillo 0.53 63 P Pg 15 14 22.0 -0.2
AIO S Sb 15 14 30.9 +1.4
AIO AML AML
comp=E,6420μm,0.7s
AIO AML AML
comp=N,6945μm,0.7s
AIO AML AML
comp=E,3502μm,2.2s
AIO AML AML
comp=N,6404μm,0.5s
RAFF Raffo Rosso 0.55 204 P Pg 15 14 22.4 -0.3
RAFF S Sn 15 14 32.8 -0.4
RAFF AML AML
comp=E,21100μm,0.5s
RAFF AML AML
comp=N,16350μm,0.9s
RAFF AML AML
comp=E,10125μm,0.4s
RAFF AML AML
comp=N,10900μm,0.9s
HAGA Augusta 0.60 137 P Pb 15 14 22.3 -1.2
HAGA S Sb 15 14 31.6 0.0
HAGA AML AML
comp=E,16050μm,0.4s
HAGA AML AML
comp=N,14350μm,0.7s
HAGA AML AML
comp=E,13291μm,1.7s
HAGA AML AML
comp=N,5858μm,0.5s
MEU Monte Lauro 0.67 160 P Pb 15 14 23.2 -1.5
MEU S Sb 15 14 33.1 -0.5
MEU AML AML
comp=E,19500μm,0.7s
MEU AML AML
comp=N,31200μm,0.4s
MEU AML AML
comp=E,14410μm,0.4s
SSY Sortino 0.67 149 P Pb 15 14 23.8 -0.9
SSY S Sg 15 14 34.2 +0.4
SSY AML AML
comp=N,57600μm,0.5s
SSY AML AML
comp=E,26150μm,0.6s
SSY AML AML
comp=N,42924μm,0.3s
SSY AML AML
comp=E,19636μm,0.5s
MPNC Port Mandanici 0.70 54 P Pb 15 14 24.4 -0.8
MPNC S Sn 15 14 35.9 -1.0
MPNC AML AML
comp=N,7305μm,0.5s
MPNC AML AML
comp=E,12950μm,0.7s
CMDO Montedoro 0.70 248 AML AML
comp=E,1102μm,1.6s
CMDO AML AML
comp=N,2675μm,0.9s
VPL Vulcano Piano 0.70 23 P Pb 15 14 24.1 -1.1
VPL AML AML
comp=E,7135μm,0.7s
VPL AML AML
comp=N,8140μm,0.9s
ACATE Acate (RG) 0.71 189 P Pb 15 14 25.0 -0.4
ACATE S Sn 15 14 37.0 -0.2
ACATE AML AML
comp=N,22500μm,0.8s
ACATE AML AML
comp=N,22100μm,0.8s
ACATE AML AML
comp=E,20050μm,1.4s
ACATE AML AML
comp=N,22500μm,0.8s
ACATE AML AML
comp=E,18800μm,1.3s
MILZ Milazzo 0.71 41 P Pb 15 14 24.7 -0.7
MILZ S Sn 15 14 36.4 -0.8
MILZ AML AML
comp=N,15050μm,0.5s
MILZ AML AML
comp=E,20300μm,0.6s
MILZ AML AML
comp=E,13891μm,0.4s
LLI Lipari 0.75 19 P Pg 15 14 26.4 0.0
LLI AML AML
comp=E,36900μm,0.7s
LLI AML AML
comp=N,65550μm,0.6s
CLTA Licata 0.79 223 P Pg 15 14 26.9 0.0
CLTA AML AML
comp=E,3750μm,1.4s
CLTA AML AML
comp=N,2165μm,0.6s
IACL Alicudi 0.83 345 P Pb 15 14 27.4 -0.1
IACL S Sn 15 14 39.6 -0.5
IACL AML AML
comp=E,5275μm,1.0s
IACL AML AML
comp=N,4520μm,0.9s
IACL AML AML
comp=E,5062μm,0.6s
IACL AML AML
comp=N,4390μm,0.5s
IFIL Filicudi I Eol 0.83 356 P Pb 15 14 26.9 -0.6
IFIL S Sg 15 14 39.1 +0.2
IFIL AML AML
comp=E,32750μm,0.8s
IFIL AML AML
comp=N,10600μm,0.6s
MSRU Castanea 0.87 52 P Pb 15 14 27.6 -0.5
MSRU S Sn 15 14 40.9 -0.1
MSRU AML AML
comp=E,8665μm,1.3s
MSRU AML AML
comp=N,5615μm,1.1s
MTTG Motta San Giov 0.88 72 P Pb 15 14 28.1 -0.1
MTTG AML AML
comp=N,3585μm,0.8s
MTTG AML AML
comp=E,2675μm,1.1s
CROCE Santa Croce Ca 0.90 185 P Pb 15 14 28.2 -0.4
CROCE S Sn 15 14 41.6 -0.2
CROCE AML AML
comp=E,7775μm,0.4s
CROCE AML AML
comp=E,7775μm,0.4s
CROCE AML AML
comp=N,7955μm,0.3s
CROCE AML AML
comp=E,6385μm,0.4s
CROCE AML AML
comp=N,6500μm,0.3s
CROCE AML AML
comp=E,2790μm,0.2s
CROCE AML AML
comp=E,3350μm,0.2s
SOLUN Solunto 0.95 293 AML AML
comp=N,3095μm,0.7s
SOLUN AML AML
comp=E,4255μm,0.7s
ISPIC ISPICA 0.97 167 P Pb 15 14 28.9 -0.9
ISPIC S Sg 15 14 43.2 0.0

SICLA Scilla 1.00 58 AML AML
comp=N,3045μm,1.2s
SICLA AML AML
comp=E,2625μm,0.9s
GMB Gambarie 1.04 65 AML AML
comp=E,7270μm,0.5s
GMB AML AML
comp=N,8775μm,0.7s
HPAC Pachino 1.10 160 P Pn 15 14 30.5 -1.5
HPAC S Sb 15 14 46.0 +0.1
HPAC AML AML
comp=E,12200μm,0.4s
HPAC AML AML
comp=N,18000μm,0.7s
MPG Monte Pellegri 1.10 293 P Pb 15 14 31.7 -0.3
MPG AML AML
comp=E,870μm,0.4s
MPG AML AML
comp=N,940μm,1.0s
CEL Celeste 1.12 62 P Pn 15 14 32.3 -0.1
CEL S Sg 15 14 48.8 +0.7
CEL AML AML
comp=E,2170μm,1.1s
CEL AML AML
comp=N,2450μm,0.9s
CEL AML AML
comp=E,2185μm,1.1s
CEL AML AML
comp=N,2385μm,0.9s
CLTB Caltabellotta 1.14 263 AML AML
comp=E,17600μm,0.4s
CLTB AML AML
comp=N,29250μm,0.6s
IST3 Stromboli F 1.16 23 AML AML
comp=E,844μm,0.9s
IST3 AML AML
comp=N,1232μm,0.6s
SOI Samo 1.17 73 AML AML
comp=N,1690μm,0.7s
SOI AML AML
comp=E,1465μm,0.7s
SCIAC Sciacca 1.24 261 P Pn 15 14 34.0 +0.1
SCIAC S Sg 15 14 51.9 +0.2
SCIAC AML AML
comp=E,1760μm,0.5s
SCIAC AML AML
comp=N,1790μm,1.3s
CRJA Costa Raja 1.30 274 AML AML
comp=E,6370μm,1.3s
CRJA AML AML
comp=N,8055μm,0.7s
JOPP Joppolo 1.31 48 AML AML
comp=E,1068μm,0.9s
JOPP AML AML
comp=N,1025μm,0.6s
MBFT Monte Bonifato 1.35 280 AML AML
comp=E,218μm,1.0s
MBFT AML AML
comp=N,282μm,0.5s
MBFT AML AML
comp=E,1370μm,0.7s
MBFT AML AML
comp=N,1830μm,0.5s
MFNL Monte Finestre 1.36 273 AML AML
comp=N,2050μm,0.5s
MFNL AML AML
comp=E,2400μm,0.6s
CAVT Castelvetrano 1.50 269 AML AML
comp=E,3390μm,0.7s
CAVT AML AML
comp=N,3450μm,1.0s
USI Ustica 1.51 311 AML AML
comp=E,910μm,0.5s
USI AML AML
comp=N,4170μm,0.5s
PLAC Placanica 1.59 63 AML AML
comp=E,1470μm,0.7s
PLAC AML AML
comp=E,1520μm,1.0s
PLAC AML AML
comp=N,1430μm,0.7s
PLAC AML AML
comp=N,1560μm,1.0s
MARS Marsala (TP) I 1.65 271 AML AML
comp=N,2075μm,0.8s
MARS AML AML
comp=E,2780μm,0.4s
ERC Erice 1.65 281 AML AML
comp=E,1950μm,0.4s
ERC AML AML
comp=N,1905μm,0.6s
GRI Girifalco 1.77 52 AML AML
comp=N,1065μm,0.7s
GRI AML AML
comp=E,1004μm,0.8s
LEVAN Levanzo 1.83 279 AML AML
comp=E,620μm,0.7s
LEVAN AML AML
comp=N,1089μm,0.5s
CAR1 CAROLEI 1.96 39 AML AML
comp=E,1360μm,0.6s
CAR1 AML AML
comp=N,1220μm,0.7s
CAR1 AML AML
comp=E,1460μm,0.6s
CAR1 AML AML
comp=N,1275μm,0.8s
SPS2 Spezzano della 2.05 40 AML AML
comp=E,132μm,0.6s
SPS2 AML AML
comp=N,256μm,0.9s
CET2 Cetraro 2.07 29 AML AML
comp=E,740μm,0.6s
CET2 AML AML
comp=N,786μm,0.6s
TIP Timpagrande 2.20 48 AML AML
comp=N,290μm,1.3s
TIP AML AML
comp=E,360μm,0.9s
TIP AML AML
comp=N,300μm,1.3s
TIP AML AML
comp=E,340μm,0.9s
CELI Celico 2.22 41 AML AML
comp=E,271μm,0.7s
CELI AML AML
comp=E,281μm,0.7s
CELI AML AML
comp=N,311μm,0.9s
CELI AML AML
comp=N,304μm,0.9s
TDS Terranova Siba 2.34 34 AML AML
comp=E,285μm,0.8s
TDS AML AML
comp=N,282μm,1.0s
LINA Linosa Island 2.34 218 AML AML
comp=N,1360μm,0.4s
LINA AML AML
comp=E,1665μm,0.9s
MMN Mormanno 2.40 26 AML AML
comp=N,420μm,0.6s
MMN AML AML
comp=E,296μm,1.0s
BULG Bulgheria - Ca 2.41 14 AML AML
comp=E,212μm,0.5s
BULG AML AML
comp=N,350μm,0.6s
BULG AML AML
comp=E,202μm,0.5s
BULG AML AML
comp=N,352μm,0.5s
CUC Castrocucco 2.44 22 AML AML
comp=N,230μm,0.6s
CUC AML AML
comp=E,244μm,0.7s
MGR Morigerati 2.51 16 AML AML
comp=E,320μm,0.8s
MGR AML AML
comp=N,384μm,0.8s
MGR AML AML
comp=E,138μm,0.7s
MGR AML AML
comp=N,142μm,0.5s
SALB San Lorenzo Be 2.52 31 AML AML
comp=E,250μm,0.8s
SALB AML AML
comp=N,278μm,0.6s
SIRI Monte Sirino - 2.63 21 AML AML
comp=E,207μm,1.2s
SIRI AML AML
comp=E,222μm,1.2s
SIRI AML AML
comp=N,215μm,0.9s
SIRI AML AML
comp=N,204μm,0.9s
CMPR Campora 2.63 11 AML AML
comp=N,190μm,0.6s
CMPR AML AML
comp=E,91μm,0.5s
SLCN Sala Consilina 2.77 16 AML AML
comp=N,194μm,0.6s
SLCN AML AML
comp=E,332μm,0.6s
CRAC Craco 2.98 27 AML AML
comp=N,338μm,1.1s
CRAC AML AML
comp=E,276μm,0.9s

*IDC **03** 15:18:38.3±1.7,3.°50S×149.°79E,h0km,mb3.9/7, mbtmp3.9/8,ML2.0/1,MS3.5/14,Error ellipse: s-maj=57.4km s-min=21.3km az=111.0*

ISC 03 15:18:42.3±1.2,3.°4S±0.°1×149.°7E±0.°3,h20km,n33, σ1.965/15,mb3.6/7,MS3.4/11,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.50**	**202**	Pn	**Pn**	**15 20 15.1**	**-1.8**
	1.9nm,0.3s,baz=56,slow=12,SNR=10						
PMG				LR	LR	15 22 59.8	
	comp=Z,589nm,19.1s,baz=8.5,slow=41 11nm,0.8s						
JAY	**Jayapura**	**8.98**	**275**	LR	LR	15 23 33.2	
	comp=Z,334nm,19.3s,baz=22,slow=32						
COEN	**Coen**	**12.32**	**211**	P	**Pn**	**15 21 38.7**	**+1.9**
MTSU	**Mount Surprise**	**15.58**	**199**	P	**Pn**	**15 22 23.0**	**+1.9**
GUMO	**Guam**	**17.50**	**344**	LR	LR	15 27 19.6	
	comp=Z,103nm,21.9s,baz=96,slow=30						
QIS	**Mount Isa**	**19.70**	**209**	P	**P**	**15 23 11.3**	**+0.7**
AUNRC	**North Rockhamp**	**19.89**	**178**	P	**Pn**	**15 23 16.1**	**+1.8**
WRAB	**Tennant Creek**	**22.23**	**221**	P	**P**	**15 23 35.5**	**-2.5**
WRA	**Warramunga Arr**	**22.25**	**221**	P	**P**	**15 23 35.5**	**-2.6**
	8.1nm,0.9s,baz=40,slow=11,SNR=26 8.1nm,0.9s						
QLP	**Quilpie**	**23.67**	**192**	P	**P**	**15 23 53.0**	**+0.3**
ASAR	**Alice Springs**	**25.28**	**216**	P	**P**	**15 24 06.2**	**-1.5**
	7.1nm,0.9s,baz=50,slow=8.3,SNR=70						
ASAR				LR	LR	15 34 04.5	
	comp=Z,103nm,18.6s,baz=33,slow=37 7.1nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**27.45**	**37**	T	T	15 53 23.2	
	baz=220,slow=76,SNR=99						
H11S2	**WAKE ISLAND Hy**	**27.45**	**37**	T	T	15 53 21.6	
	baz=220,slow=76,SNR=27						
H11S1	**WAKE ISLAND Hy**	**27.46**	**37**	T	T	15 53 23.9	
	baz=220,slow=76,SNR=32						
FITZ	**Fitzroy Crossi**	**27.71**	**236**	P	**P**	**15 24 29.8**	**+0.2**
	16nm,1.0s,baz=39,slow=4.9,SNR=7.6 16nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**28.51**	**36**	T	T	15 54 44.0	
	baz=219,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.52**	**36**	T	T	15 54 44.8	
	baz=219,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**28.53**	**36**	T	T	15 54 44.9	
	baz=219,slow=76,SNR=19						
STKA	**Stephens Creek**	**29.36**	**194**	LR	LR	15 36 46.1	
	comp=Z,95nm,18.9s,baz=24,slow=37						
JCJ	**Chichijima**	**31.13**	**347**	LR	LR	15 35 47.1	
	comp=Z,38nm,21.0s,baz=184,slow=33						
JNU	**Nakatsue**	**40.40**	**335**	LR	LR	15 40 10.8	
	comp=Z,28nm,19.8s,baz=48,slow=32						
MJAR	**Matsushiro Arr**	**41.11**	**346**	LR	LR	15 42 32.4	
	comp=Z,50nm,21.6s,baz=149,slow=35						
LEM	**Lembang**	**42.00**	**264**	LR	LR	15 46 09.1	
	comp=Z,34nm,18.2s,baz=108,slow=39						
NWAO	**Narrogin (SRO)**	**42.25**	**222**	LR	LR	15 44 40.5	
	comp=Z,93nm,19.6s,baz=76,slow=37						
ASAJ	**Asahikawa**	**47.69**	**353**	LR	LR	15 45 30.0	
	comp=Z,59nm,20.6s,baz=60,slow=34						
CMAR	**Chiang Mai Arr**	**54.43**	**295**	P	**P**	**15 28 08.7**	**+0.1**
	0.2nm,0.3s,baz=114,slow=8.2,SNR=4.3 0.2nm,0.3s						
PETK	**Petropavlovsk-**	**56.67**	**6**	LR	LR	15 48 28.7	
	comp=Z,65nm,20.8s,baz=119,slow=32						
SONM	**Songino Array**	**63.46**	**329**	LR	LR	15 58 38.9	
	comp=Z,40nm,18.1s,baz=300,slow=38						
MKAR	**Makanchi Array**	**77.19**	**319**	P	**P**	**15 30 34.5**	**-0.4**
	0.3nm,0.9s,baz=97,slow=5.6,SNR=1.8 0.3nm,0.9s						
KURBB	**Kurchatov Arra**	**80.75**	**322**	P	**P**	**15 30 55.8**	**+1.4**
	0.3nm,0.7s,baz=95,slow=6.5,SNR=2.4 0.3nm,0.7s						
ILAR	**Eielson Array**	**82.04**	**23**	P	**P**	**15 31 00.3**	**-0.5**
	0.5nm,0.9s,baz=232,slow=4.4,SNR=5.1 0.5nm,0.9s						
NEW	**Newport**	**94.64**	**42**	LR	LR	16 08 54.4	
	comp=Z,24nm,19.9s,baz=338,slow=32						
TORD	**Torodi Ar. Bea**	**146.88**	**289**	PKPbc	**PKPbc**	**15 38 24.0**	**-0.4**
	1.0nm,0.7s,baz=128,slow=0.6,SNR=6.2						

*OSPL **03** 15:35:45.8±0.5, 17.°84N×66.°88W,h11km±2km, ML2.6, Presumed earthquake*
*NEIC **03** 15:35:45.1±0.9, 17.°84N±0.°03×66.°840W±0.°008, h10km±1km,ML3.0/35,Md3.1/7(RSPR),Error ellipse: s-maj=5.5km s-min=2.8km az=4.0*

RSPR 03 15:35:46.2, 17.°90N×66.°87W,h11km,MD3.0/7,2C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.08**	**353**		Pg	15 35 48.8	+0.1
GBPR					Sg	15 35 51.1	+0.6
GBPR	**Guanica, Bosqu**	**0.08**	**353**	↓↓*e*P	Pg	15 35 48.8	+0.1
GBPR				*e*S	Sg	15 35 51.1	+0.6
MLPR	**Magueyes Islan**	**0.18**	**294**		Pg	15 35 50.2	0.0
MLPR				IAML		15 35 53.9	
	3μm,0.6s						
MLPR				IAML		15 35 54.2	
	4μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.26**	**296**		Pg	15 35 51.4	-0.1
CRPR				IAML		15 35 56.0	
	comp=N,1μm,0.3s						
CRPR				IAML		15 35 56.0	
	comp=E,2μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.26**	**296**	↑↑*i*P	Pg	15 35 51.4	0.0
CRPR				*e*S	Sg	15 35 55.5	+0.5
CRPR	**Cabo Rojo, PR**	**0.26**	**296**	*i* P	Pg	15 35 51.4	-0.1
CRPR				*e*S	Sg	15 35 55.2	+0.2
CRPR				IAML		15 35 55.8	
	comp=Z,2μm,0.2s						
OBIP	**Obispado Ponce**	**0.29**	**59**		Pg	15 35 51.6	-0.5
OBIP				IAML		15 35 57.3	
	comp=N,475nm,0.5s						
OBIP	**Obispado Ponce**	**0.29**	**59**		Sg	15 35 56.7	+0.6
OBIP	**Obispado Ponce**	**0.29**	**59**	↓↓*e*P	Pg	15 35 51.7	-0.4
OBIP				*e*S	Sg	15 35 56.7	+0.6
OBIP	**Obispado Ponce**	**0.29**	**59**	*i* P	Pg	15 35 51.7	-0.4
OBIP				*e*S	Sg	15 35 56.5	+0.5
OBIP				IAML		15 35 56.8	
	comp=Z,703nm,0.4s						
CELP	**Cerrillos**	**0.33**	**57**	Pg	Pg	15 35 52.4	-0.5
CELP				IAML		15 35 58.7	
	comp=Z,1μm,0.2s						
CELP				IAML		15 35 58.9	
	comp=Z,2μm,0.2s						
LSP	**Las Mesas**	**0.35**	**324**		Pg	15 35 53.2	0.0
LSP					Sg	15 35 58.2	+0.4
LSP	**Las Mesas**	**0.35**	**324**	↓↓*i*P	Pg	15 35 53.2	0.0
LSP				*e*S	Sg	15 35 58.2	+0.4
UUPR	**Utuado, UPR, P**	**0.38**	**22**		Pg	15 35 53.2	-0.6
UUPR				IAML		15 36 02.2	
	comp=Z,8μm,0.4s						
UUPR				IAML		15 36 03.1	
	comp=Z,6μm,0.3s						
PRSN	**Puerto Rico Se**	**0.41**	**321**		Pg	15 35 54.1	-0.3
PRSN				IAML		15 36 03.6	
	comp=Z,2μm,0.2s						
PRSN				IAML		15 36 03.7	
	comp=Z,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.41**	**321**		Sg	15 36 00.4	+0.5
PRSN	**Puerto Rico Se**	**0.41**	**321**	↑↑*i*P	Pg	15 35 54.2	-0.2
PRSN				*e*S	Sg	15 36 00.4	+0.5
AGPR	**Aguadilla, PR**	**0.61**	**338**		Pg	15 35 57.5	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR				IAML		15 36 09.9	
	comp=Z,384nm,0.3s						
AGPR				IAML		15 36 11.9	
	comp=Z,336nm,0.3s						
AGPR	**Aguadilla, PR**	**0.61**	**338**	⇑iP	Pg	15 35 57.6	-0.5
AGPR				eS	Sg	15 36 05.8	-0.4
AGPR	**Aguadilla, PR**	**0.61**	**338**	iP	Pg	15 35 57.6	-0.6
AGPR				eS	Sg	15 36 06.6	+0.3
AGPR				IAML		15 36 08.6	
	comp=Z,252nm,0.2s						
ECPR	**Experimental S**	**0.64**	**49**		Pg	15 35 57.6	-1.0
ECPR					Sg	15 36 06.0	-1.0
ECPR				IAML		15 36 08.3	
	comp=Z,781nm,0.4s						
ECPR				IAML		15 36 08.4	
	comp=Z,1μm,0.2s						
ECPR	**Experimental S**	**0.64**	**49**	⇓iP	Pg	15 35 57.7	-0.9
ECPR				eS	Sg	15 36 06.0	-1.0
EMPR	**Esperanza - Ma**	**0.66**	**29**		Pg	15 35 58.8	-0.2
EMPR					Sb	15 36 08.4	-0.5
EMPR	**Esperanza - Ma**	**0.66**	**29**	⇓iP	Pg	15 35 58.8	-0.2
EMPR				eS	Sb	15 36 08.4	-0.5
SJG	**San Juan**	**0.72**	**72**		Pg	15 35 58.7	-1.4
SJG				IAML		15 36 13.1	
	comp=Z,267nm,0.3s						
SJG				IAML		15 36 13.9	
	comp=Z,230nm,0.3s						
SJG	**San Juan**	**0.72**	**72**	⇓iP	Pg	15 35 58.9	-1.2
SJG				eS	Sg	15 36 09.3	-0.2
SJG	**San Juan**	**0.72**	**72**	iP	Pg	15 35 58.9	-1.2
SJG				eS	Sg	15 36 09.2	-0.3
SJG				IAML		15 36 11.2	
	comp=Z,150nm,0.3s						
IDE	**Isla Desecheo**	**0.76**	**310**		Pg	15 36 00.1	-0.7
IDE					Sg	15 36 10.6	-0.1
IDE	**Isla Desecheo**	**0.76**	**310**	⇑iP	Pg	15 36 00.1	-0.7
IDE				eS	Sg	15 36 10.6	-0.1
PDPR	**Patillas Dam,**	**0.81**	**81**		Pg	15 36 00.4	-1.5
PDPR				IAML		15 36 15.5	
	comp=Z,137nm,0.5s						
PDPR				IAML		15 36 16.7	
	comp=Z,192nm,0.3s						
GCPR	**Guaynabo City**	**0.85**	**61**		Pg	15 36 01.2	-1.5
GCPR				IAML		15 36 13.3	
	comp=E,153nm,0.3s						
GCPR				IAML		15 36 13.3	
	comp=N,172nm,0.3s						
GCPR	**Guaynabo City**	**0.85**	**61**		Sg	15 36 11.4	-2.4
GCPR	**Guaynabo City**	**0.85**	**61**	⇑eP	Pg	15 36 00.9	-1.8
GCPR				eS	Sg	15 36 11.4	-2.4
HUMP	**Col San Antoni**	**1.00**	**76**		Pg	15 36 03.6	-1.9
HUMP				IAML		15 36 20.4	
	comp=N,400nm,0.3s						
HUMP				IAML		15 36 20.5	
	comp=N,238nm,0.3s						
HUMP	**Col San Antoni**	**1.00**	**76**		Sg	15 36 17.6	-0.9
HUMP	**Col San Antoni**	**1.00**	**76**	⇑eP	Pg	15 36 03.7	-1.8
HUMP				eS	Sg	15 36 17.6	-0.9
CUPR	**Culebra, Puert**	**1.56**	**75**		Pn	15 36 12.5	-1.4
DR12	**Loma Pena Alta**	**2.55**	**291**	Pn	Pn	15 36 26.8	-0.6

*NNC **03** 15:45:40.6±0.2, 43°34N×77°79E, h2km±3km, mpv3.1, Error ellipse: s-maj=2.6km s-min=1.4km az=178.0*
*KRNET **03** 15:45:41.1±0.1, 43°34N×77°80E, h20km, mb2.6*
*SOME **03** 15:45:41.4, 43°30N×77°77E, h10km*
ISC 03 15:45:41.8±0.8**, 43°35N**±0°03×**77°74E**±0°02**, h10**km**, n30,** σ**1s72**/60**, 4C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOTS	**Kotyrbulak**	**0.47**	**257**	P	**Pb**	**15 45 51.4**	**-0.9**
	26nm,0.1s						
KOTS				S	**Sb**	**15 45 58.8**	**-0.6**
	48nm,0.2s						
KOTS	**Kotyrbulak**	**0.47**	**257**	eP	**Pb**	**15 45 51.5**	**-0.9**
KOTS				eS	**Sb**	**15 45 58.9**	**-0.6**
KOTS	**Kotyrbulak**	**0.47**	**257**	eP	**Pb**	**15 45 51.5**	**-0.9**
	26nm,0.1s						
KOTS				eS	**Sb**	**15 45 58.8**	**-0.6**
	48nm,0.2s						
SATY	**Saty**	**0.56**	**120**	P	**Pg**	**15 45 51.2**	**-1.6**
	9.3nm,0.1s						
SATY				S	**Sg**	**15 45 58.6**	**-1.7**
	77nm,0.1s						
TNSS	**Tian-Shan**	**0.66**	**242**	P	**Pg**	**15 45 54.5**	**-0.2**
	0.8nm,0.1s						
TNSS				S	**Sb**	**15 46 03.8**	**-1.2**
	2.7nm,0.2s						
TNSS	**Tian-Shan**	**0.66**	**242**	eP	**Pg**	**15 45 54.5**	**-0.2**
	0.7nm,0.1s						
TNSS				eS	**Sb**	**15 46 04.0**	**-1.0**
	2.7nm,0.1s						
KPKS	**Kokpek**	**0.70**	**80**	P	**Pg**	**15 45 53.8**	**-1.5**
KPKS				S	**Sg**	**15 46 02.7**	**-1.7**
	11nm,0.2s						
KPKS	**Kokpek**	**0.70**	**80**	eP	**Pg**	**15 45 53.8**	**-1.5**
	5.6nm,0.1s						
KPKS				eS	**Sg**	**15 46 02.7**	**-1.7**
	11nm,0.2s						
KTBS	**Karatobe**	**0.85**	**296**	P	**Pb**	**15 45 58.1**	**-0.7**
	4.2nm,0.2s						
KTBS				S	**Sb**	**15 46 09.6**	**-0.7**
	0.2nm,0.2s						
KTBS	**Karatobe**	**0.85**	**296**	eP	**Pb**	**15 45 58.1**	**-0.7**
	4.2nm,0.2s						
KTBS				eS	**Sb**	**15 46 09.7**	**-0.7**
	0.2nm,0.3s						
ARXS	**Arharly**	**0.87**	**4**	P	**Pg**	**15 45 57.6**	**-1.0**
	3.3nm,0.1s						
ARXS				S	**Sg**	**15 46 09.5**	**-0.4**
	7.7nm,0.2s						
ARXS	**Arharly**	**0.87**	**4**	eP	**Pg**	**15 45 57.8**	**-0.8**
	3.3nm,0.1s						
ARXS				eS	**Sg**	**15 46 09.5**	**-0.4**
	7.7nm,0.2s						
IZV	**Izvestkoviy**	**0.88**	**250**	P	**Pg**	**15 45 58.0**	**-0.9**
	3.2nm,0.1s						
IZV				S	**Sg**	**15 46 09.9**	**-0.4**
	4.3nm,0.1s						
IZV	**Izvestkoviy**	**0.88**	**250**	eP	**Pg**	**15 45 58.0**	**-0.9**
	3.4nm,0.2s						
IZV				eS	**Sg**	**15 46 09.9**	**-0.4**
	7.3nm,0.2s						
BLB	**Baldybastay**	**0.92**	**35**	P	**Pg**	**15 45 58.2**	**-1.4**
	7.5nm,0.1s						
BLB				S	**Sg**	**15 46 10.6**	**-1.0**
	24nm,0.1s						
UZB	**Uzynbulak**	**0.96**	**102**	P	**Pg**	**15 45 58.2**	**-2.0**
UZB				S	**Sg**	**15 46 10.1**	**-2.6**
UZB	**Uzynbulak**	**0.96**	**102**	eP	**Pg**	**15 45 58.2**	**-2.0**
UZB				eS	**Sg**	**15 46 10.1**	**-2.6**
MTBS	**Maitube**	**0.98**	**258**	P	**Pg**	**15 46 00.3**	**-0.4**
	7.1nm,0.2s						
MTBS				S	**Sb**	**15 46 13.9**	**-0.2**
	6.0nm,0.2s						
MTBS	**Maitube**	**0.98**	**258**	eP	**Pg**	**15 46 00.3**	**-0.4**
	7.1nm,0.2s						
MTBS				eS	**Sb**	**15 46 13.9**	**-0.2**
	4.3nm,0.1s						
SHLS	**Shalkode**	**1.27**	**98**	P	**Pg**	**15 46 09.5**	**+3.3**
	2.8nm,0.1s						
SHLS				S	**Sn**	**15 46 29.3**	**+6.4**
	2.1nm,0.2s						
SHLS	**Shalkode**	**1.27**	**98**	eP	**Pg**	**15 46 09.5**	**+3.3**
	2.6nm,0.2s						
SHLS				eS	**Sn**	**15 46 29.3**	**+6.4**
	1.8nm,0.3s						
KST	**Kastek**	**1.34**	**257**	P	**Pb**	**15 46 06.5**	**-0.6**
	3.9nm,0.2s						
KST				S	**Sg**	**15 46 24.7**	**-0.1**
	6.6nm,0.3s						
KST	**Kastek**	**1.34**	**257**	eP	**Pb**	**15 46 06.5**	**-0.6**
	2.2nm,0.2s						
KST				eS	**Sg**	**15 46 24.7**	**-0.1**
	6.5nm,0.7s						
KRBS	**Karabastau**	**1.54**	**284**	P	**Pb**	**15 46 10.0**	**-0.5**
	0.7nm,0.1s						
KRBS				S	**Sg**	**15 46 30.8**	**-0.7**
	1.1nm,0.2s						
KRBS	**Karabastau**	**1.54**	**284**	eP	**Pb**	**15 46 10.1**	**-0.5**
KRBS				eS	**Sg**	**15 46 31.0**	**-0.5**
KRBS	**Karabastau**	**1.54**	**284**	eP	**Pb**	**15 46 10.1**	**-0.5**
	1.4nm,0.2s						
KRBS				eS	**Sg**	**15 46 30.9**	**-0.5**
	4.0nm,0.3s						
ULHL	**Ulahol**	**1.56**	**226**	⇑iP	**Pb**	**15 46 09.9**	**-1.0**
ULHL				⇑iS	**Sg**	**15 46 31.0**	**-1.0**
TARG	**Taragay, Kyrgy**	**1.62**	**178**	⇓iP	**Pn**	**15 46 10.7**	**-0.1**
TARG				⇓iS	**Sb**	**15 46 31.7**	**-0.9**
TKM2	**Tokmak 2**	**1.63**	**256**	⇓iP	**Pb**	**15 46 11.4**	**-0.7**
TKM2				⇓iS	**Sg**	**15 46 33.5**	**-0.7**
KBK	**Karagaybulak**	**2.16**	**252**	⇑iP	**Pb**	**15 46 19.4**	**-1.8**
KBK				⇑iS	**Sb**	**15 46 46.2**	**-1.9**

*SOME **03** 15:46:25.5, 39°08N×74°53E, h20km*
*IDC **03** 15:46:33.8±1.9, 39°32N×73°82E, h0km, mb3.7/4, mbtmp3.6/9, ML3.0/5, Error ellipse: s-maj=32.5km s-min=17.9km az=131.0*
*KRNET **03** 15:46:35.6±0.1, 39°52N×73°85E, h27km, mb4.0*
*NNC **03** 15:46:38.9±2.5, 39°61N×74°01E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=22.3km s-min=11.3km az=7.0*
ISC 03 15:46:35.5±1.7**, 39°53N**±0°05×**73°85E**±0°03**, h9**km±10km**, n57,** σ**2s05**/93**, mb3.8**/3**, 29C-32D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.55**	**331**	⇓eP	**Pb**	**15 46 47.0**	**-0.6**
SFK				⇓eS	**Sb**	**15 46 55.3**	**-0.4**
OHH	**Osh**	**1.29**	**321**	⇑eP	**Pn**	**15 46 59.4**	**-0.5**
OHH				⇑eS	**Sb**	**15 47 16.5**	**-0.2**
SALK	**Salom-Alik**	**1.35**	**359**	⇓eP	**Pn**	**15 47 00.4**	**-0.4**
SALK				⇓eS	**Sn**	**15 47 18.4**	**-0.7**
DRK	**Karamyk**	**1.59**	**269**	⇓eP	**Pn**	**15 47 04.0**	**-0.2**
DRK				⇓eS	**Sb**	**15 47 24.7**	**-0.9**
JNKS	**Jany-Kuch**	**2.04**	**41**	⇑eP	**Pn**	**15 47 10.5**	**+0.1**
JNKS				⇑eS	**Sn**	**15 47 36.1**	**0.0**
ARLS	**Aral**	**2.36**	**9**	⇓eP	**Pn**	**15 47 14.7**	**+0.1**
ARLS				⇓eS	**Sn**	**15 47 43.1**	**-0.7**
BTK	**Batken**	**2.40**	**284**	⇑eP	**Pn**	**15 47 15.1**	**0.0**
BTK				⇑eS	**Sn**	**15 47 43.9**	**-0.7**
NRN	**Naryn**	**2.51**	**40**	⇑eP	**Pn**	**15 47 16.5**	**-0.4**
NRN				⇑eS	**Sn**	**15 47 46.4**	**-1.4**
ARK	**Arkit**	**2.68**	**328**	⇑eP	**Pn**	**15 47 19.2**	**+0.1**
ARK				⇑eS	**Sn**	**15 47 51.0**	**-0.8**
UCH	**Uchtor**	**2.74**	**10**	P	**Pb**	**15 47 24.2**	**-0.9**
	SNR=67						
UCH	**Uchtor**	**2.74**	**10**	⇓eP	**Pn**	**15 47 20.3**	**+0.1**
UCH				⇓eS	**Sn**	**15 47 52.9**	**-0.8**
GAR	**Garm**	**2.79**	**260**	⇓eP	**Pn**	**15 47 20.6**	**0.0**
GAR				⇓eS	**Sn**	**15 47 53.3**	**-1.2**
TRKS	**Terek-Say**	**2.87**	**315**	⇓eP	**Pn**	**15 47 21.0**	**-0.7**
TRKS				⇓eS	**Sn**	**15 47 54.1**	**-2.5**
MNAS	**Manas**	**3.12**	**341**	⇑eP	**Pn**	**15 47 25.4**	**+0.2**
MNAS				⇑eS	**Sn**	**15 48 01.8**	**-0.9**
EKS2	**Erkin-Say**	**3.13**	**359**	P	**Pb**	**15 47 31.8**	**+0.4**
	SNR=24						
EKS2	**Erkin-Say**	**3.13**	**359**	⇓eP	**Pn**	**15 47 25.4**	**+0.2**
EKS2				⇓eS	**Sn**	**15 48 01.9**	**-0.9**
AAK	**Ala-Archa**	**3.14**	**9**	Pn	**Pb**	**15 47 30.8**	**-1.0**
	6.6nm,0.3s,baz=188,slow=16,SNR=100						
AAK				Sn	**Sb**	**15 48 12.7**	**+2.4**
	5.2nm,0.3s,baz=357,slow=18,SNR=14						
	24nm,0.5s						
AAK	**Ala-Archa**	**3.14**	**9**	P	**Pb**	**15 47 30.8**	**-1.0**
	SNR=16						
AAK	**Ala-Archa**	**3.14**	**9**	⇑Pn	**Pb**	**15 47 29.7**	**-2.0**
	8.9nm,0.5s						
AAK				⇑Lg	Lg	15 48 15.8	
	116nm,0.9s						
AAK	**Ala-Archa**	**3.14**	**9**	⇓eP	**Pn**	**15 47 25.7**	**+0.3**
AAK				⇓eS	**Sn**	**15 48 02.2**	**-1.0**
KBK	**Karagaybulak**	**3.23**	**15**	P	**Pb**	**15 47 31.2**	**-2.0**
	SNR=74						
KBK	**Karagaybulak**	**3.23**	**15**	⇑eP	**Pn**	**15 47 26.9**	**+0.2**
KBK				⇑eS	**Sn**	**15 48 04.3**	**-1.1**
MRKS	**Merke**	**3.25**	**352**	eP	**Pb**	**15 47 32.9**	**-0.6**
	32nm,0.4s						
MRKS				eS	**Sg**	**15 48 21.0**	**+1.1**
	171nm,0.5s						
ULHL	**Ulahol**	**3.26**	**33**	P	**Pb**	**15 47 30.9**	**-2.8**
	SNR=8.3						
ULHL	**Ulahol**	**3.26**	**33**	⇓eP	**Pn**	**15 47 27.4**	**+0.2**
ULHL				⇓eS	**Sn**	**15 48 05.1**	**-1.1**
FRU1	**Bishkek**	**3.33**	**10**	⇓eP	**Pn**	**15 47 28.4**	**+0.5**
FRU1				⇓eS	**Sn**	**15 48 07.1**	**-0.6**
BOOM	**Boomskoye usch**	**3.35**	**27**	⇓eP	**Pn**	**15 47 28.7**	**+0.3**
BOOM				⇓eS	**Sn**	**15 48 07.3**	**-1.1**
CHMS	**Chumysh**	**3.53**	**11**	P	**Pb**	**15 47 35.5**	**-2.8**
	SNR=15						
CHMS	**Chumysh**	**3.53**	**11**	⇓eP	**Pn**	**15 47 31.0**	**+0.3**
CHMS				⇓eS	**Sn**	**15 48 11.4**	**-1.2**
KDJ	**Kajisay**	**3.62**	**43**	⇑eP	**Pn**	**15 47 32.0**	**-0.1**
KDJ				⇑eS	**Sn**	**15 48 13.5**	**-1.6**
TKM2	**Tokmak 2**	**3.63**	**21**	P	**Pn**	**15 47 36.2**	**+3.9**
	SNR=28						
TKM2	**Tokmak 2**	**3.63**	**21**	⇑eP	**Pn**	**15 47 32.5**	**+0.2**
TKM2				⇑eS	**Sn**	**15 48 14.0**	**-1.4**
TARG	**Taragay, Kyrgy**	**3.73**	**53**	⇑eP	**Pn**	**15 47 33.8**	**+0.1**
TARG				⇑eS	**Sn**	**15 48 16.2**	**-1.7**
USP	**Ospenovka**	**3.77**	**7**	P	**Pb**	**15 47 39.8**	**-2.4**
	SNR=5.5						
USP	**Ospenovka**	**3.77**	**7**	⇑eP	**Pn**	**15 47 34.2**	**+0.3**
USP				⇑eS	**Sn**	**15 48 16.9**	**-1.5**
KST	**Kastek**	**3.85**	**24**	eP	Pb	15 47 40.0	-3.8
	12nm,0.3s						
KST				eS	**Sb**	**15 48 33.7**	**+3.1**
	100nm,0.6s						
IUG	**Iuzhnay**	**3.90**	**313**	eP	**Pb**	**15 47 47.4**	**+2.8**
	15nm,0.2s						
IUG				eS	**Sg**	**15 48 46.7**	**+5.9**
	68nm,0.3s						
DGS	**Degeres**	**3.98**	**21**	eP	**Pb**	**15 47 43.1**	**-2.9**
	17nm,0.9s						
DGS				eS	**Sb**	**15 48 38.6**	**+4.3**
	25nm,0.6s						
IZV	**Izvestkoviy**	**4.08**	**30**	eP	**Pn**	**15 47 41.8**	**+3.6**
	16nm,0.5s						
IZV				eS	**Sb**	**15 48 36.8**	**-0.2**
	65nm,0.6s						
MTBS	**Maitube**	**4.09**	**28**	eP	**Pn**	**15 47 41.8**	**+3.5**
	33nm,0.4s						
MTBS				eS	**Sb**	**15 48 36.8**	**-0.6**
	16nm,0.6s						
TNSS	**Tian-Shan**	**4.21**	**33**	eP	Pb	15 47 45.7	-4.4
	11nm,1.0s						
TNSS				eS	**Sb**	**15 48 43.6**	**+2.4**
	7.4nm,0.6s						
KK31	**Karatay Array**	**4.37**	**326**	⇓Pn	**Pn**	**15 47 45.9**	**+3.8**
	3.5nm,0.3s,baz=136,slow=14,SNR=41						
KK31				⇑Pg	**Pg**	**15 47 56.7**	**-2.5**
	5.0nm,0.4s,baz=145,slow=17,SNR=9.8						
KK31				⇑Sn	**Sb**	**15 48 39.9**	**-5.3**
	10nm,0.4s,baz=126,slow=23,SNR=5.7						
KK31				⇓Lg	Lg	15 48 55.2	
	15nm,0.5s,baz=141,slow=26,SNR=3.6						
KNDC	**Almaty**	**4.37**	**31**	⇓Pg	**Pb**	**15 47 55.2**	**+2.7**
	32nm,0.3s						
KNDC				⇑Lg	Lg	15 48 52.7	
	207nm,0.8s						
KRBS	**Karabastau**	**4.38**	**18**	eP	**Pb**	**15 47 52.1**	**-0.7**
	5.9nm,0.6s						
KRBS				eS	**Sg**	**15 48 54.5**	**-1.8**
	35nm,1.1s						
PRZ	**Przheval'sk**	**4.53**	**48**	⇓eP	**Pn**	**15 47 45.1**	**+0.5**
PRZ				⇓eS	**Sn**	**15 48 35.7**	**-1.8**
BRLS	**Borolday**	**4.62**	**320**	eP	**Pg**	**15 48 01.8**	**-2.3**
	12nm,0.3s						
BRLS				eS	**Sg**	**15 49 11.1**	**+7.1**
	13nm,0.4s						
KUU	**Kurty**	**4.74**	**22**	eP	**Pb**	**15 47 57.4**	**-1.5**
	4.5nm,0.1s						
KUU				eS	**Sg**	**15 49 03.9**	**-3.8**
	10nm,0.3s						
PDGK	**Podgornoye**	**5.69**	**46**	⇑Pn	**Pn**	**15 48 03.0**	**+2.6**
	4.4nm,0.8s						
PDGK				⇑Pg	**Pb**	**15 48 17.9**	**+2.8**
	9.8nm,0.6s						
PDGK				⇓Lg	Lg	15 49 34.6	
	32nm,0.8s						
MKAR	**Makanchi Array**	**9.52**	**38**	Pn	**Pn**	**15 48 57.0**	**+4.1**
	baz=224,slow=10,SNR=5.5						
MKAR				Lg	Lg	15 51 34.2	
	baz=226,slow=30,SNR=2.3						
	0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**11.57**	**15**	Lg	Lg	15 52 38.2	
	0.4nm,0.3s,baz=208,slow=35,SNR=5.1						
BVAR	**Borovoye Array**	**13.71**	**351**	Pn	**Pn**	**15 49 50.9**	**+0.9**
	baz=165,slow=12,SNR=4.4						
BVAR				Lg	Lg	15 53 43.4	
	baz=161,slow=27,SNR=2.5						
	0.7nm,0.6s						
AKTO	**Aktyubinsk**	**15.60**	**320**	Pn	**Pn**	**15 50 14.3**	**-1.2**
	0.2nm,0.3s,baz=132,slow=12,SNR=3.8						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**16.23**	**24**	Pn	**Pn**	**15 50 24.6**	**+0.9**
	0.2nm,0.3s,baz=210,slow=8.6,SNR=4.9						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**36.32**	**323**	P	**P**	**15 53 40.4**	**+1.1**
	2.5nm,0.7s,baz=103,slow=8.0,SNR=7.7						
	2.5nm,0.7s						
HFS	**Hagfors**	**42.15**	**320**	P	**P**	**15 54 29.3**	**+1.3**
	0.8nm,0.4s,baz=94,slow=12,SNR=4.9						
	0.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**68.03**	**269**	P	**P**	**15 57 34.9**	**-0.7**
	0.1nm,0.3s,baz=60,slow=5.8,SNR=4.3						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**71.24**	**17**	P	**P**	**15 57 54.5**	**-0.2**
	0.4nm,1.0s,baz=330,slow=6.7,SNR=2.6						
	0.4nm,1.0s						

*IDC **03** 15:46:57.1±2.3, 6°33S×130°77E, h108km±21km, mb3.7/8, mbtmp4.4/13, Error ellipse: s-maj=32.6km s-min=13.9km az=73.0*
*NEIC **03** 15:46:59.8±2.0, 6°21S±0°07×130°64E±0°10, h121km±6km, mb4.4/21, Error ellipse: s-maj=13.9km s-min=9.4km az=82.0*
*DJA **03** 15:46:59.5±0.1, 6°S±2°×13°1E±°, h147km±3km, M4.8/38, mb4.6/38, mB5.3/12, MLv5.0/31, Mw(mB)4.8/12*
ISC 03 15:47:00.3±0.4**, 6°28S**±0°04×**130°68E**±0°05**, h150**km**, n102,** σ**2s18**/102**, mb4.2**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.80**	**160**		**Pn**	**15 47 32.0**	**-1.1**
SAUI	**Saumlaki**	**1.80**	**160**	P	**Pn**	**15 47 32.3**	**-0.8**
SAUI	**Saumlaki**	**1.80**	**160**	P	**Pn**	**15 47 32.3**	**-0.8**
BNDI	**Bandanaira**	**1.91**	**336**	P	**Pn**	**15 47 32.9**	**-1.5**
BNDI	**Bandanaira**	**1.91**	**336**	P	**Pn**	**15 47 33.4**	**-1.0**
BNDI				S	**Sn**	**15 47 58.4**	**-2.3**
MSAI	**Masohi**	**3.40**	**329**	P	**Pn**	**15 47 51.0**	**-1.8**
AAI	**Ambon**	**3.58**	**316**	P	**Pn**	**15 47 54.1**	**-1.0**
FAKI	**Fak Fak**	**3.69**	**25**		**Pn**	**15 47 53.4**	**-3.2**
FAKI	**Fak Fak**	**3.69**	**25**	P	**Pn**	**15 47 53.5**	**-3.0**
FAKI	**Fak Fak**	**3.69**	**25**	P	**Pn**	**15 47 53.3**	**-3.2**
KRAI	**Karang Ratu**	**3.73**	**322**	P	**Pn**	**15 47 56.8**	**-0.2**
KMPI	**Kaimana, Papua**	**3.98**	**49**	P	**Pn**	**15 47 59.2**	**-1.1**
NLAI	**Namlea**	**4.68**	**310**	P	**Pn**	**15 48 07.9**	**-1.6**
SIJI	**Sorong**	**5.41**	**6**	P	**Pn**	**15 48 16.1**	**-3.1**
	168nm,0.2s,baz=125,slow=24,SNR=347						
SIJI				S	**Sn**	**15 49 13.0**	**-7.9**
	226nm,0.2s,baz=231,slow=23,SNR=18						
SIJI	**Sorong**	**5.41**	**6**	P	**Pn**	**15 48 16.0**	**-3.2**
	151nm,0.4s						
SWI	**Sorong**	**5.41**	**6**	P	**Pn**	**15 48 16.2**	**-3.0**
	177nm,0.6s						
RKPI	**Ransiki, Papua**	**5.88**	**36**	P	**Pn**	**15 48 23.9**	**-1.6**
DRS	**Darwin Rock St**	**6.11**	**178**	P	**Pn**	**15 48 27.0**	**-1.5**
DRS	**Darwin Rock St**	**6.11**	**178**	S	**Sn**	**15 49 37.8**	**+0.2**
MWPI	**Manokwari, Pap**	**6.28**	**32**	P	**Pn**	**15 48 30.3**	**-0.5**
	3μm182nm,0.7s						
SANI	**Sanana**	**6.29**	**312**	P	**Pn**	**15 48 30.5**	**-0.5**
SANI	**Sanana**	**6.29**	**312**	S	**Sn**	**15 49 39.9**	**-2.0**
SANI	**Sanana**	**6.29**	**312**	P	**Pn**	**15 48 29.9**	**-1.1**
	0.2nm35nm,0.7s						
MTN	**Manton Dam**	**6.53**	**176**		**Pn**	**15 48 32.4**	**-1.7**
SOEI	**Soe**	**7.23**	**241**		**Pn**	**15 48 43.2**	**-0.4**
SOEI	**Soe**	**7.23**	**241**	P	**Pn**	**15 48 43.6**	**0.0**
SOEI	**Soe**	**7.23**	**241**	S	**Sn**	**15 50 03.6**	**-1.0**
SOEI	**Soe**	**7.23**	**241**	P	**Pn**	**15 48 43.2**	**-0.4**
	1μm78nm,0.8s						
BAKI	**Biak**	**7.41**	**47**	P	**Pn**	**15 48 46.7**	**+0.9**
	0.8nm274nm,1.0s						
BATI	**Baumata**	**7.97**	**240**	P	**Pn**	**15 48 52.4**	**-0.9**
	47nm,0.4s,baz=164,slow=1.4,SNR=20						
BATI				S	**Sn**	**15 50 16.8**	**-5.4**
	154nm,0.5s,baz=273,slow=16,SNR=12						
BATI	**Baumata**	**7.97**	**240**	P	**Pn**	**15 48 53.0**	**-0.3**
	0.6nm1μm60nm,0.6s						
MMRI	**Maumere**	**8.70**	**254**	P	**Pn**	**15 49 03.1**	**+0.1**
	42nm,1.2s						
EDFI	**Ende, Flores**	**9.25**	**254**	P	**Pn**	**15 49 10.7**	**+0.2**
	17nm,0.9s						
KNRA	**Kununurra**	**9.52**	**191**		**Pn**	**15 49 11.7**	**-2.4**
GTOI	**Gorontalo**	**10.29**	**312**	P	**Pn**	**15 49 24.5**	**+0.3**
	23nm,0.9s						
BASI	**Baing, Sumba**	**10.74**	**248**	P	**Pn**	**15 49 29.4**	**-0.7**
	79nm,0.8s						
WSI	**Waingapu**	**10.82**	**251**	P	**Pn**	**15 49 30.0**	**-1.2**
LBFI	**Labuhan Bajo,**	**10.93**	**258**	P	**Pn**	**15 49 32.3**	**-0.3**
	20nm,0.8s						
WBSI	**Waikabubak, Su**	**11.67**	**253**	P	**Pn**	**15 49 40.4**	**-2.0**
DBNI	**Kabupaten Domp**	**12.47**	**259**	P	**Pn**	**15 49 51.7**	**-1.0**
	9.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.73**	**202**	P	**Pn**	**15 49 52.3**	**-3.8**
	15nm,0.3s,baz=36,slow=12,SNR=52						
FITZ				S	Sn	15 52 03.7	-13
	43nm,0.5s,baz=349,slow=23,SNR=10						
PLAI	**Plampang**	**13.04**	**258**	P	**Pn**	**15 49 58.8**	**-1.3**
PLAI	**Plampang**	**13.04**	**258**	P	**Pn**	**15 49 57.7**	**-2.4**
	26nm,0.7s						
WB0	**Warramunga Arr**	**13.88**	**165**		**Pn**	**15 50 06.5**	**-4.3**
TWSI	**Taliwang, Sumb**	**13.90**	**259**	P	**Pn**	**15 50 09.6**	**-1.4**
WRA	**Warramunga Arr**	**14.04**	**166**	P	**Pn**	**15 50 08.6**	**-4.1**
	14nm,0.6s,baz=346,slow=13,SNR=106						
WRA				S	Sn	15 52 32.8	-16
	8.4nm,0.5s,baz=332,slow=22,SNR=7.6						
WRA	**Warramunga Arr**	**14.04**	**166**		Pn	15 50 06.6	-6.1
WR8	**Warramunga Arr**	**14.09**	**165**		**Pn**	**15 50 09.0**	**-4.4**
COEN	**Coen**	**14.46**	**123**	Pn	**Pn**	**15 50 17.1**	**-1.0**
COEN	**Coen**	**14.46**	**123**	P	**Pn**	**15 50 18.2**	**+0.1**
KHKI	**Kahang-Kahang**	**15.10**	**261**	P	**Pn**	**15 50 25.7**	**-0.3**
	21nm,0.7s						
BBKI	**Banjar Baru**	**16.03**	**279**	P	**P**	**15 50 38.6**	**+0.6**
	3μm78nm,0.9s						
JAGI	**Jajag, Banyuwa**	**16.54**	**261**	P	**P**	**15 50 42.7**	**-0.9**
JAGI	**Jajag, Banyuwa**	**16.54**	**261**	P	**P**	**15 50 41.7**	**-1.9**
PMG	**Port Moresby**	**16.61**	**102**	P	**Pn**	**15 50 47.0**	**+2.4**
	12nm,1.0s,baz=163,slow=22,SNR=2.3						
PMG				S	**S**	**15 53 41.4**	**-8.0**
	8.0nm,0.8s,baz=158,slow=23,SNR=2.6						
PMG	**Port Moresby**	**16.61**	**102**	IAmb	IAmb	15 50 52.3	
	comp=Z,18nm,1.1s						
QIS	**Mount Isa**	**16.62**	**149**	P	**P**	**15 50 43.7**	**-0.8**
GMJI	**Gumukmas**	**17.21**	**262**	P	**P**	**15 50 50.1**	**-1.0**
AS31	**Alice Springs**	**17.56**	**170**	P	**P**	**15 50 54.8**	**0.0**
AS31				IAmb	IAmb	15 51 02.4	
	comp=Z,10nm,0.6s						
ASAR	**Alice Springs**	**17.56**	**170**	P	**P**	**15 50 54.0**	**-0.8**
	comp=Z,34nm,0.9s,baz=192,slow=17,SNR=9.7						
ASAR				S	S	15 53 59.2	-11
	comp=Z,3.7nm,0.7s,baz=355,slow=26,SNR=4.6						
ASAR	**Alice Springs**	**17.56**	**170**	P	**P**	**15 50 55.1**	**+0.3**
MTSU	**Mount Surprise**	**17.77**	**133**	P	**Pn**	**15 51 00.0**	**+1.5**
MBWA	**Marble Bar**	**18.20**	**215**	P	**Pn**	**15 51 03.0**	**-0.5**
MBWA				IAmb	IAmb	15 51 18.8	
	comp=Z,20nm,1.1s						
PSA00	**Pilbara Seismi**	**18.47**	**214**	P	**P**	**15 51 05.3**	**+0.5**
PSA00	**Pilbara Seismi**	**18.47**	**214**	P	**Pn**	**15 51 06.3**	**-0.4**
SJI	**Sawahan**	**18.83**	**264**	P	**P**	**15 51 08.7**	**-0.2**
	comp=Z,16nm,0.5s						
SNJI	**Sawahan-Nganju**	**18.84**	**264**	P	**P**	**15 51 09.3**	**+0.2**
	comp=Z,17nm,0.6s						
KKM	**Kota Kinabalu**	**18.93**	**310**	P	**Pn**	**15 51 10.7**	**-1.6**
KKM				IAmb	IAmb	15 51 51.2	
	comp=Z,27nm,1.1s						
PCJI	**Pacitan**	**19.45**	**263**	P	**P**	**15 51 12.6**	**-2.8**
	comp=Z,30nm,1.2s						
SBUM	**Sibu**	**20.38**	**295**	P	Pn	15 51 26.3	-2.9
BBJI	**Bungbulang**	**22.90**	**266**	P	**P**	**15 51 51.1**	**-0.3**
BBJI				IAmb	IAmb	15 51 52.7	
	comp=Z,16nm,0.8s						
BBJI	**Bungbulang**	**22.90**	**266**	P	**P**	**15 51 50.4**	**-1.0**
	comp=Z,27nm,1.2s						
INKA	**Innaminka**	**23.38**	**157**		**P**	**15 51 58.7**	**+3.2**
CNJI	**Cibinong**	**23.41**	**266**	P	**P**	**15 51 54.9**	**-1.1**
MORW	**Morawa**	**26.55**	**210**	P	**P**	**15 52 26.1**	**+1.8**
MORW				IAmb	IAmb	15 53 07.0	
	comp=Z,20nm,1.4s						
BBOO	**Buckleboo**	**26.86**	**170**	P	**P**	**15 52 28.4**	**+1.4**
BBOO				IAmb	IAmb	15 52 57.9	
	comp=Z,18nm,1.1s						

STKA Stephens Creek 27.43 160 P P 15 52 33.1 +1.0
comp=Z,3.2nm,0.9s,baz=327,slow=12,SNR=4.2
comp=Z,3.2nm,0.9s
STKA Stephens Creek 27.43 160 P P 15 52 33.7 +1.6
KULM Kulim 32.11 290 P P 15 53 13.5 -0.2
CMAR Chiang Mai Arr 39.80 309 P P 15 54 20.3 +1.2
comp=Z,1.0nm,0.6s,baz=127,slow=9.0,SNR=10
comp=Z,1.0nm,0.6s
CHTO Chiang Mai 40.01 309 P P 15 54 21.3 +0.5
PZH PanZhiHua 43.01 321 P P 15 54 48.7 +3.5
LZDM Lanzhou Array 49.07 331 P P 15 55 34.6 +1.9
comp=Z,0.3nm,0.3s,baz=152,slow=9.4,SNR=4.1
comp=Z,0.3nm,0.3s
HHC Hu-ho-hao-te 50.08 341 *e*P P 15 55 43.9 +3.8
HHC pmax pmax
comp=Z,3.0nm,0.6s
LBZ Lake Benmore 51.26 144 P P 15 55 51.1 +2.3
MKAR Makanchi Array 68.00 326 P P 15 57 45.6 +2.2
comp=Z,2.5nm,0.4s,baz=114,slow=8.2,SNR=84
comp=Z,2.5nm,0.4s
MKAR Makanchi Array 68.00 326 P 15 57 45.4 +2.0
KSH2 Kashi 68.06 317 P P 15 57 45.8 +1.8
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
MAKZ Makanchi 68.19 326 P 15 57 46.5 +2.0
MAKZ IAmb IAmb 15 57 47.4
comp=Z,6.6nm,1.2s
ARSB Arslanbob 70.82 318 P P 15 58 03.2 +2.3
ARSB IAmb IAmb 15 58 04.2
comp=Z,5.8nm,0.8s
KBL Kabul 70.83 310 P P 15 58 02.7 +1.5
KBL IAmb IAmb 15 58 04.2
comp=Z,3.6nm,1.0s
ZALV Zalesovo Beam 71.25 333 P P 15 58 04.9 +1.9
comp=Z,0.5nm,0.4s,baz=126,slow=7.3,SNR=2.7
comp=Z,0.5nm,0.4s
KURBB Kurchatov Arra 72.26 328 P P 15 58 11.0 +1.9
comp=Z,1.2nm,0.7s,baz=136,slow=4.9,SNR=11
comp=Z,1.2nm,0.7s
KURK Kurchatov 72.27 328 P P 15 58 11.0 +1.9
DES Desert 77.05 69 P P 15 58 39.4 +2.0
BVAR Borovoye Array 77.83 328 P P 15 58 42.6 +1.6
comp=Z,0.6nm,0.5s,baz=154,slow=4.0,SNR=4.6
comp=Z,0.6nm,0.5s
BORK Borovoye 77.87 328 P P 15 58 42.6 +1.3
QSPA South Pole Qui 83.69 180 P P 15 59 13.4 +1.3
comp=Z,2.9nm,0.7s,baz=306,slow=2.6,SNR=5.1
comp=Z,2.9nm,0.7s
QSPA South Pole Qui 83.69 180 P P 15 59 13.8 +1.7
QSPA IAmb IAmb 15 59 14.5
comp=Z,3.6nm,0.8s
P16K Nushagak River 85.90 29 P P 15 59 25.9 +2.9
CPUP Villa Florida 146.66 167 PKPbc PKiKP 16 06 26.8 -1.0
comp=Z,0.7nm,0.3s,baz=161,slow=2.6,SNR=3.5
LPAZ La Paz 150.85 141 PKPbc PKiKP 16 06 38.0 +0.6
comp=Z,0.7nm,0.5s,baz=224,slow=1.0,SNR=5.2

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*IDC **03** 15:55:49.9±0.8, 28.°39N×104.°77E, h0km, mb4.0/15, mbtmp4.0/17, ML4.1/2, MS3.3/4, Error ellipse: s-maj=23.7km s-min=14.7km az=59.0*
*BJI **03** 15:55:51.2, 28.°46N×104.°74E, h8km, mB4.5/5, mb4.1/21, ML4.0/20, Ms3.9/14, Ms7 3.7/16*
*MOS **03** 15:55:51.8±1.4, 28.°49N×104.°82E, h20km, mb4.3/13, Error ellipse: s-maj=14.3km s-min=7.7km az=97.9*
*NEIC **03** 15:55:53.4±2.2, 28.°54N±0.°04×104.°7E±0.°1, h10km±1km, mb4.3/14, Error ellipse: s-maj=16.1km s-min=7.5km az=83.0*
ISC 03 15:55:54.0±0.5, **28.°48N**±0.°04×**104.°75E**±0.°05, **h19km, n77, σ1.s48**/79, **mb4.1**/29, **MS3.3**/6, **7C-1D, Sichuan**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CD2 Chengdu 2.57 341 Pn Pn 15 56 35.4 +0.7
CD2 Pg Pg 15 56 41.3 -2.0
CD2 Sn Sb 15 57 07.4 -3.4
CD2 Sg Sg 15 57 19.2 +2.5
CD2 smax smax
comp=N,4μm,0.7s
CD2 smax smax
comp=E,3μm,0.7s
PZH PanZhiHua 3.32 234 Pn Pn 15 56 46.5 +1.4
PZH Sn Sn 15 57 25.0 +0.9
PZH Sg Sg 15 57 37.9 -2.9
PZH smax smax
comp=N,200nm,1.0s
PZH smax smax
comp=E,270nm,1.1s
PZH LR LR
comp=N,350nm,6.1s
PZH LR LR
comp=E,450nm,5.3s
PZH LR LR
comp=Z,530nm,6.6s
KMI2 Kunming 3.77 209 Pn Pn 15 56 52.9 +1.5
KMI2 Sn Sb 15 57 42.9 -2.7
KMI2 smax smax
comp=N,74nm,1.1s
KMI2 smax smax
comp=E,41nm,1.0s
KMI2 LR LR
comp=N,470nm,5.6s
KMI2 LR LR
comp=E,1μm,8.1s
KMI2 LR LR
comp=Z,570nm,6.3s
ENH Enshi 4.50 65 Pn 15 57 02.0 +0.8
GULI GuiLin 5.93 121 Pn Pn 15 57 21.9 +1.1
GULI Sn Sn 15 58 30.1 +1.8
GULI smax smax
comp=N,140nm,1.3s
GULI smax smax
comp=E,150nm,1.1s
TNCH TengChong 6.55 240 Pn Pn 15 57 30.7 +1.2
TNCH Sg Sg 15 59 24.1 -0.1
TNCH smax smax
comp=N,100nm,1.3s
TNCH smax smax
comp=E,73nm,1.5s
TNCH LR LR
comp=Z,190nm,7.2s
LZDM Lanzhou Array 7.51 353 Pn Pn 15 57 43.0 +0.3
baz=180,slow=15
LZDM Pg Pb 15 58 12.9 +9.2
baz=167,slow=16
LZDM Sn Sn 15 59 05.9 -1.6
baz=39,slow=50
LZDM Lg Lg 15 59 49.7
baz=184,slow=39
5.8nm,0.5s
LZH Lanzhou 7.62 354 Pn Pb 15 57 53.3 -12
LZH Pg Pn 15 58 18.4 +34
LZH Sn Sn 15 59 12.7 +2.6
LZH Sg Sb 15 59 53.1 +17
LZH smax smax
comp=N,93nm,1.5s
LZH smax smax
comp=E,130nm,1.4s
LZH LR LR
comp=N,750nm,8.9s
LZH LR LR
comp=E,740nm,9.6s
LZH LR LR
comp=Z,450nm,10.0s
WHN Wuhan 8.61 74 P Pn 15 57 57.5 -0.1
LYN LuoYang 8.94 45 P Pn 15 58 00.4 -1.7
LYN pmax pmax
comp=Z,13nm,0.9s
LYN LR LR
comp=Z,560nm,6.5s
LYN LR LR
comp=Z,380nm,6.9s
QIZ Qiongzhong 10.50 153 P Pn 15 58 33.6 +10
QIZ S Sn 16 00 37.0 +16
QIZ LR LR
comp=N,210nm,4.5s
QIZ LR LR
comp=E,290nm,4.2s
QIZ LR LR
comp=Z,330nm,9.3s
CMAR Chiang Mai Arr 11.31 209 Pn Pn 15 58 35.9 +1.3
comp=Z,0.3nm,0.3s,baz=17,slow=11,SNR=17
GTA2 Gaotai 11.73 341 *e*P Pn 15 58 42.3 +1.9
GTA2 pmax pmax
comp=Z,2.0nm,0.6s
GTA2 LR LR
comp=Z,180nm,12.0s
GTA2 LR LR
comp=Z,420nm,11.6s
GTA2 LR LR
comp=Z,220nm,13.5s
BTO2 Baotou 12.94 18 *e*P Pn 15 58 55.0 -1.9
BTO2 S Sn 16 01 16.0 -4.4
BTO2 pmax pmax
comp=Z,6.0nm,0.5s
BTO2 pmax pmax
comp=Z,370nm,5.2s
BTO2 LR LR
comp=Z,500nm,8.2s
BTO2 LR LR
comp=Z,420nm,5.9s
BTO2 LR LR
comp=Z,300nm,6.6s
HHC Hu-ho-hao-te 13.54 23 *e*P Pn 15 59 03.0 -2.2
HHC pmax pmax
comp=Z,6.0nm,0.7s
SONM Songino Array 19.36 3 P Pn 16 00 18.5 -1.2
comp=Z,0.5nm,0.3s,baz=186,slow=12,SNR=17
comp=Z,2.4nm,0.5s
ULN Ulaanbaatar 19.44 5 Pn 16 00 19.9 -0.7
ULN Ulaanbaatar 19.44 5 *i* P P 16 00 17.3 -2.1
WMQ Urumqi 20.53 323 *e*P Pn 16 00 32.5 -1.0
WMQ LR LR
comp=Z,87nm,21.9s
KSRS Korea Array 21.36 59 P P 16 00 38.8 -1.3
comp=Z,4.3nm,0.8s,baz=245,slow=11,SNR=12
comp=Z,4.3nm,0.8s
ZAK Zakamensk 21.90 357 *e*P P 16 00 46.1 +0.1
ZAK pmax pmax
comp=Z,8.0nm,1.3s
KNGR Kungurtug, Tuv 22.77 348 *i* P P 16 00 54.1 -1.1
KNGR pmax pmax
comp=Z,8.0nm,0.9s
HILR Hailar Array B 23.97 25 P P 16 01 08.2 +1.1
comp=Z,1.6nm,0.5s,baz=188,slow=11,SNR=7.5
comp=Z,1.6nm,0.5s
BNX BinXian 24.83 40 ⇓P P 16 01 14.1 -0.8
BNX pmax pmax
comp=Z,7.0nm,2.0s
DGZ Jazzator, Alta 24.98 333 *i* P P 16 01 17.1 +0.6
DGZ pmax pmax
comp=Z,7.0nm,0.9s
MK31 Makanchi Array 25.36 322 *ce*P P 16 01 20.1 +0.3
MKAR Makanchi Array 25.36 322 P P 16 01 19.3 -0.5
comp=Z,4.2nm,0.7s,baz=128,slow=11,SNR=26
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 25.36 322 P 16 01 19.6 -0.2
MAKZ Makanchi 25.54 322 P 16 01 20.8 -0.6
MAKZ IAmb IAmb 16 01 25.1
comp=Z,3.2nm,0.8s
MAKZ Makanchi 25.54 322 P P 16 01 20.8 -0.6
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
KSH2 Kashi 26.38 301 P P 16 01 30.8 +1.5
KSH2 pmax pmax
comp=Z,2.0nm,0.9s
USRK Ussuriysk Ar. 26.80 47 P P 16 01 31.7 -1.1
comp=Z,3.8nm,0.7s,baz=244,slow=12,SNR=4.2
comp=Z,3.8nm,0.7s
AAK Ala-Archa 28.21 308 LR LR 16 15 23.9
comp=Z,59nm,19.6s,baz=51,slow=42
MAJO Matsushiro 29.22 65 P P 16 01 55.2 +0.6
MAJO IAmb IAmb 16 02 33.3
comp=Z,18nm,1.2s
MAJO Matsushiro 29.22 65 P P 16 01 55.2 +0.6
MAJO pmax pmax
comp=Z,18nm,1.2s
ZAA0 Zalesovo Array 29.33 336 P P 16 01 55.3 0.0
ZALV Zalesovo Beam 29.33 336 P P 16 01 54.9 -0.4
comp=Z,2.2nm,0.7s,baz=143,slow=10,SNR=9.4
ZALV LR LR 16 14 31.7
comp=Z,70nm,19.2s,baz=110,slow=38
comp=Z,2.2nm,0.7s
ZALV Zalesovo Beam 29.33 336 P 16 01 55.2 -0.1
ZALV Zalesovo Beam 29.33 336 *i* P P 16 01 54.2 -1.1
ZALV pmax pmax
comp=Z,2.0nm,0.7s
KURBB Kurchatov Arra 29.69 325 P P 16 01 58.4 -0.1
comp=Z,1.7nm,0.7s,baz=132,slow=9.4,SNR=12
comp=Z,1.7nm,0.7s
KURK Kurchatov 29.70 326 P P 16 01 58.4 -0.2
KURK Kurchatov 29.70 326 IAmb IAmb 16 02 02.4
comp=Z,2.5nm,0.8s
KURK Kurchatov 29.70 326 *ce*P P 16 01 59.0 +0.4
KURK pmax pmax
comp=Z,2.0nm,1.0s
ZEA Zeya 30.14 27 *e*P P 16 02 03.2 +0.7
BVAR Borovoye Array 35.21 324 P P 16 02 46.6 -0.2
comp=Z,1.0nm,0.8s,baz=111,slow=7.9,SNR=5.5
BVAR LR LR 16 17 12.6
comp=Z,64nm,18.4s,baz=38,slow=36
comp=Z,1.0nm,0.8s
YAK Yakutsk 37.37 19 *ce*P P 16 03 06.3 +1.2
YAK pmax pmax
comp=Z,3.0nm,0.6s
AB31 Akbulak array 39.86 314 P 16 03 26.4 +0.2
AB31 IAmb IAmb 16 03 30.2
comp=Z,2.3nm,0.7s
ABKAR Akbulak array 39.86 314 P P 16 03 26.2 -0.1
NRIK Noril'sk 42.10 351 P P 16 03 43.9 -0.4
comp=Z,5.6nm,0.7s,baz=143,slow=8.2,SNR=14
comp=Z,5.6nm,0.7s
NRIK Noril'sk 42.10 351 P 16 03 44.0 -0.4
NRIK IAmb IAmb 16 03 46.8
comp=Z,6.1nm,0.8s
NRIK Noril'sk 42.10 351 P P 16 03 44.0 -0.4
NRIK pmax pmax
comp=Z,6.0nm,0.8s
TIXI Tiksi 45.21 11 P 16 04 08.2 -1.2
TIXI IAmb IAmb 16 04 10.4
comp=Z,3.0nm,0.7s
TIXI Tiksi 45.21 11 *ce*P P 16 04 07.9 -1.5
TIXI pmax pmax
comp=Z,10.0nm,2.5s
KIV Kislovodsk 51.25 305 *e*P P 16 04 59.1 +2.5
KIV pmax pmax
comp=Z,8.0nm,1.0s
BILL Bilibino 53.31 24 *i* P P 16 05 11.8 +0.4
BILL pmax pmax
comp=Z,2.0nm,1.2s
OBN Obninsk 54.81 319 ⇑*e*P P 16 05 22.4 -0.1
OBN *e* 16 07 22.6
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN MLR MLR
comp=Z,94nm,17.0s
WRA Warramunga Arr 55.99 146 P P 16 05 29.5 -1.9
comp=Z,2.0nm,0.9s,baz=336,slow=8.0,SNR=11
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 55.99 146 IAmb IAmb 16 05 32.9
comp=Z,0.2nm,0.8s
WRA Warramunga Arr 55.99 146 *ce*P P 16 05 40.4 +9.0
WRA pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 58.55 301 P P 16 05 50.6 +1.0
comp=Z,1.0nm,0.9s,baz=97,slow=7.4,SNR=3.6
comp=Z,1.0nm,0.9s
ASAR Alice Springs 58.97 149 P P 16 05 50.9 -1.5
comp=Z,1.4nm,0.8s,baz=329,slow=6.6,SNR=9.9
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 59.60 314 P P 16 05 54.4 -2.0
comp=Z,0.7nm,0.7s,baz=68,slow=6.9,SNR=2.3
comp=Z,0.7nm,0.7s
AKASG Malin Array Be 59.60 314 IAmb IAmb 16 06 37.5
comp=Z,3.2nm,1.1s
AKASG Malin Array Be 59.60 314 P P 16 05 54.5 -2.0
AKASG pmax pmax
comp=Z,3.0nm,1.2s
FINES FINESS Array B 60.06 327 P P 16 05 58.5 -0.9
comp=Z,1.8nm,0.8s,baz=101,slow=7.2,SNR=1.6
comp=Z,1.8nm,0.8s
HFS Hagfors 66.26 327 P P 16 06 40.1 -0.5
comp=Z,3.1nm,1.0s,baz=102,slow=6.1,SNR=1.9
comp=Z,3.1nm,1.0s
I17K Unalakleet 66.77 29 P P 16 06 45.1 +1.4
M14K Bethel 67.14 32 P P 16 06 46.5 +0.4
CLL Collm 69.36 318 *e*P P 16 07 03.0 +2.7
CLL Collm 69.36 318 *e*P P 16 07 03.0 +2.7
PPLA Purkeypile 70.69 28 P P 16 07 09.7 +1.3
BMAR Burnt Mountain 71.48 22 P P 16 07 13.4 +0.4
SML Sawmill 72.79 28 P P 16 07 22.0 +1.0
CTGM Chitina Glacie 76.11 27 P P 16 07 42.0 +1.6
BORG Borgarnes 78.10 339 LR LR 16 44 50.5
comp=Z,16nm,21.7s,baz=81,slow=38
YKA Yellowknife Ar 84.02 17 P P 16 08 22.0 -0.9
comp=Z,0.3nm,0.6s,baz=323,slow=5.7,SNR=4.5
comp=Z,0.3nm,0.6s
YKA Yellowknife Ar 84.02 17 *ce*P P 16 08 24.7 +1.8

IDC 03 15:56:44.5±1.1, **62.°10N**×**15.°22E, h0km, mbtmp3.0**/3, **ML1.9**/3, **Error ellipse: s-maj=16.0km s-min=9.1km az=151.0, Sweden**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HFS Hagfors 2.11 201 Pn Pn 15 57 21.3 +0.4
1.1nm,0.3s,baz=23,slow=15,SNR=31
HFS Sn Sb 15 57 50.2 0.0
1.6nm,0.3s,baz=22,slow=28,SNR=19
2.0nm,0.3s
NOA NORSAR Array B 2.19 243 Pn Pn 15 57 21.6 -0.5
0.1nm,0.3s,baz=56,slow=15,SNR=27
NOA Sn Sn 15 57 49.7 -0.3
0.2nm,0.3s,baz=20,slow=9.5,SNR=11
1.2nm,0.4s
FINES FINESS Array B 5.20 92 Pg Pb 15 58 12.1 -4.2
baz=283,slow=14,SNR=1.2
FINES Sn Sn 15 59 03.8 -0.3
0.2nm,0.3s,baz=281,slow=21,SNR=5.7
FINES Lg Lg 15 59 22.7
0.3nm,0.3s,baz=287,slow=26,SNR=3.9
ARCES ARCESS Array B 8.56 25 Pn Pn 15 58 48.9 -0.7
0.1nm,0.3s,baz=208,slow=13,SNR=2.1
5.7nm,1.1s

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*IDC **03** 16:11:14.6±3.9, 37.°23N×72.°38E, h191km±31km, mb3.4/8, mbtmp4.0/13, Error ellipse: s-maj=41.6km s-min=24.3km az=144.0*
*NEIC **03** 16:11:16.7±1.4, 37.°47N±0.°03×72.°18E±0.°10, h196km±7km, mb4.3/11, Error ellipse: s-maj=11.6km s-min=3.3km az=79.0*
*NNC **03** 16:11:21.2±2.2, 37.°87N×72.°00E, h200km±25km, mb3.1, mpv3.9, Error ellipse: s-maj=22.3km s-min=14.5km az=29.0*
ISC 03 16:11:16.1±0.5, **37.°43N**±0.°05×**72.°17E**±0.°06, **h200km, n67, σ2.s07**/78, **mb4.0**/12, **3C-5D, Tajikistan**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DRK Karamyk 2.06 352 Pn 16 11 55.5 -0.1
GAR Garm 2.14 317 Pn 16 11 55.8 -0.4
BTK Batken 2.83 338 Pn 16 12 04.3 +0.5
KSH2 Kashi 3.17 56 Pn Pn 16 12 08.5 +0.6
KSH2 Sn Sn 16 12 45.8 -2.6
KSH2 smax smax
comp=N,350nm,0.6s
KSH2 smax smax
comp=E,190nm,0.4s
SHAA Shahritus 3.22 274 Pn 16 12 07.9 -0.6
KBL Kabul 3.84 222 Pn 16 12 16.3 +0.1
NIL Nilore 3.88 167 Pn 16 12 17.5 +1.0
ARSB Arslanbob 3.94 9 Pn 16 12 16.2 -1.0
UCH Uchtor 5.12 20 P Pn 16 12 32.1 -0.3
SNR=34
JMU Jammu 5.13 154 *e*P Pn 16 12 31.6 -0.6
JMU *e*S Sn 16 13 28.1 -4.1
JMU IAML 16 13 33.5
comp=N,305nm,0.3s
JMU IAML 16 13 33.5
comp=E,226nm,0.1s
ALCI Alchi Leh 5.18 127 *e*P Pn 16 12 31.1 -2.2
ALCI *e*S Sn 16 13 29.1 -5.0
ALCI IAML 16 13 34.3
comp=N,285nm,0.4s
ALCI IAML 16 13 36.4
comp=E,394nm,0.3s
EKS2 Erkin-Say 5.37 13 P Pn 16 12 35.1 -0.1
SNR=26
AAK Ala-Archa 5.50 18 P Pn 16 12 37.1 +0.2
comp=E,6.6nm,0.3s,baz=182,slow=6.2,SNR=51
AAK S Sn 16 13 37.6 -3.2
comp=E,30nm,0.5s,baz=269,slow=9.8,SNR=6.3
AAK Ala-Archa 5.50 18 P Pn 16 12 37.2 +0.2
SNR=25
AAK Ala-Archa 5.50 18 Pn 16 12 36.8 -0.1
AAK Ala-Archa 5.50 18 ⇓P Pn 16 12 37.2 +0.2
comp=E,2.0nm,0.4s
AAK ⇑S Sn 16 13 37.9 -2.9
comp=E,27nm,0.6s
TSSA Tissa 5.62 143 *e*P Pn 16 12 38.5 -0.3
TSSA *e*S Sn 16 13 39.7 -4.3
TSSA IAML 16 13 41.7
comp=E,292nm,0.2s
TSSA IAML 16 13 43.7
comp=N,342nm,0.3s
KBK Karagaybulak 5.63 21 P Pn 16 12 39.4 +0.6
SNR=8.7
ULHL Ulahol 5.74 32 P Pn 16 12 39.4 -0.7
SNR=9.7
KK31 Karatay Array 5.80 348 Pn 16 12 40.3 -0.6
KK31 Karatay Array 5.80 348 ⇓P Pn 16 12 40.2 -0.6
comp=N,21nm,0.5s,baz=162,slow=12,SNR=120
KK31 ⇑S Sn 16 13 42.8 -5.0
comp=N,67nm,0.4s,baz=158,slow=16,SNR=22
KKAR Karatay Array 5.80 348 Pn 16 12 40.1 -0.6
BOOM Boomskoye usch 5.82 29 Pn 16 12 40.6 -0.5
CHMS Chumysh 5.90 19 P Pn 16 12 42.0 0.0
SNR=5.8
TKM2 Tokmak 2 6.08 24 P Pn 16 12 44.3 -0.2
SNR=18
USP Ospenovka 6.09 16 P Pn 16 12 43.6 -1.0
SNR=5.3
TARG Taragay, Kyrgy 6.11 44 Pn 16 12 44.8 -0.4
DHRM DHARAMSHALA 6.18 146 *e*P Pn 16 12 46.1 +0.1
DHRM *e*S Sn 16 13 52.8 -4.3
DHRM IAML 16 13 56.2
comp=E,203nm,0.3s
DHRM IAML 16 13 56.3
comp=N,207nm,0.3s
BHK Bhakra 6.95 149 *e*P Pn 16 12 58.6 +2.8
BHK *e*S Sn 16 14 13.7 -1.2
BHK IAML 16 14 13.8
comp=E,892nm,0.1s
BHK IAML 16 14 15.1
comp=N,847nm,0.2s
SMLA Simla 7.52 145 *e*P Pn 16 13 02.7 -0.4
SMLA *e*S Sn 16 14 22.1 -6.2
SMLA IAML 16 14 27.7
comp=E,229nm,0.4s
SMLA IAML 16 14 27.8
comp=N,320nm,0.1s
MAKZ Makanchi 11.85 35 Pn 16 13 57.7 -1.3
MKAR Makanchi Array 11.99 36 P Pn 16 14 01.0 +0.3
comp=N,0.7nm,0.7s,baz=213,slow=12,SNR=7.3
MKAR Makanchi Array 11.99 36 P P 16 14 05.7 +0.3
WMQ Urumqi 13.40 57 *e*P P 16 14 19.7 -1.5
KURBB Kurchatov Arra 13.95 17 P Pn 16 14 22.8 -2.4
comp=N,3.7nm,0.6s,baz=208,slow=12,SNR=29
KURK Kurchatov 14.05 17 P P 16 14 28.6 +0.3
KURK Kurchatov 14.05 17 Pn 16 14 22.8 -3.7
AB31 Akbulak array 14.77 327 Pn P 16 14 34.3 -1.9
AB31 Akbulak array 14.77 327 ⇓P Pn 16 14 34.1 -1.2
comp=N,5.7nm,0.4s,baz=136,slow=12,SNR=256
AB31 ⇑S S 16 17 13.3 -6.0
comp=N,2.5nm,0.5s,baz=152,slow=22,SNR=11
ABKAR Akbulak array 14.77 327 Pn P 16 14 34.3 -1.9
BVAR Borovoye Array 15.64 356 P Pn 16 14 45.6 -0.3
comp=N,1.5nm,0.4s
BORK Borovoye 15.67 356 P Pn 16 14 46.5 +0.3
BORK IAmb IAmb 16 14 47.6
comp=Z,6.2nm,0.8s
AKTO Aktyubinsk 16.48 327 P Pn 16 14 56.7 +0.7
comp=Z,7.7nm,0.3s,baz=127,slow=6.8,SNR=35
AKTO Aktyubinsk 16.48 327 ⇓P Pn 16 14 56.1 +0.1
comp=Z,3.2nm,0.4s
AKTO ⇓S S 16 17 54.7 -2.5
comp=Z,2.3nm,0.9s
ZAA0 Zalesovo Array 18.68 24 Pn 16 15 19.6 -2.2
ZAA0 IAmb IAmb 16 15 20.4
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 18.68 24 P Pn 16 15 19.6 -2.2
comp=Z,9.0nm,0.4s,baz=220,slow=10,SNR=68
ZALV Zalesovo Beam 18.68 24 Pn 16 15 19.7 -2.1
ARTI Arti 21.10 338 P P 16 15 45.2 +0.3
comp=Z,2.1nm,0.6s,baz=103,slow=7.8,SNR=4.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.1nm,0.6s						
ARTI	**Arti**	**21.10**	**338**		**P**	**16 15 45.0**	**+0.2**
ARTI				IAmb	IAmb	16 15 51.8	
	comp=Z,9.8nm,1.2s						
TNCH	**TengChong**	**25.61**	**111**	*e*P	**P**	**16 16 29.3**	**+2.0**
TNCH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
PZH	**PanZhiHua**	**27.24**	**105**	P	**P**	**16 16 44.5**	**+2.6**
BRTR	**Keskin Array B**	**30.06**	**286**	P	**P**	**16 17 08.4**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=111,slow=6.3,SNR=1.5						
	comp=Z,0.3nm,0.5s						
HHC	**Hu-ho-hao-te**	**30.57**	**71**	*e*P	**P**	**16 17 14.1**	**+3.0**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**16 18 09.7**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=109,slow=8.4,SNR=4.1						
	comp=Z,0.6nm,0.3s						
ARCES	**ARCESS Array B**	**40.65**	**337**	P	**P**	**16 18 38.1**	**+1.9**
	comp=Z,1.0nm,0.5s,baz=122,slow=9.0,SNR=6.1						
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**40.65**	**337**	P	**P**	**16 18 37.9**	**+1.6**
ARCES				IAmb	IAmb	16 18 55.0	
	comp=Z,14nm,1.4s						
HFS	**Hagfors**	**42.92**	**321**	P	**P**	**16 18 56.1**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=97,slow=12,SNR=5.6						
	comp=Z,1.1nm,0.5s						
NC204	**NORSAR Array S**	**44.44**	**323**	P	**P**	**16 19 07.9**	**+1.0**
NC204				IAmb	IAmb	16 19 44.4	
	comp=Z,32nm,1.4s						
TIXI	**Tiksi**	**44.56**	**22**	P	**P**	**16 19 08.8**	**+1.2**
SPITS	**Spitsbergen Ar**	**46.80**	**346**	P	**P**	**16 19 26.8**	**+1.6**
	comp=Z,11nm,1.0s,baz=105,slow=5.1,SNR=1.7						
	comp=Z,11nm,1.0s						
VOI	**Vohitsoka**	**63.68**	**206**	P	**P**	**16 21 27.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**66.68**	**269**	P	**P**	**16 21 45.9**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=46,slow=3.1,SNR=17						
	comp=Z,1.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**66.68**	**269**	IAmb	IAmb	16 21 46.6	
	comp=Z,1.1nm,0.5s						
D19K	**Kuna River**	**67.97**	**18**	P	**P**	**16 21 54.3**	**+1.3**
D19K				IAmb	IAmb	16 22 13.1	
	comp=Z,5.7nm,1.5s						
F15K	**North Star Dit**	**68.23**	**22**	P	**P**	**16 21 55.6**	**+0.9**
F15K				IAmb	IAmb	16 22 10.2	
	comp=Z,7.1nm,1.4s						
NRS	**Narsarsuaq**	**69.48**	**333**	P	**P**	**16 22 03.2**	**+0.8**
YKA	**Yellowknife Ar**	**80.27**	**3**	P	**P**	**16 23 04.0**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=354,slow=6.3,SNR=4.9						
	comp=Z,0.2nm,0.5s						

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*NEIC **03** 16:15:02.7±1.4, 18°93N±0°08×146°1E±0°1, h152km±7km, mb4.3/33, Error ellipse: s-maj=16.7km s-min=11.5km az=82.0*

*IDC **03** 16:15:04.2±2.6, 18°89N×145°92E, h170km±25km, mb3.5/19, mbtmp4.1/22, MS3.6/1, Error ellipse: s-maj=21.3km s-min=11.9km az=84.0*

ISC 03 16:15:01.8±0.6**, 18°90N**±0°06×**146°0E**±0°1**, h150**km**, n73, σ0s80**/67**, mb4.1**/32**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.65**	**184**	Pn	**Pn**	**16 15 56.7**	**-0.9**
GUMO	**Guam**	**5.40**	**192**	P	**Pn**	**16 16 22.1**	**+1.5**
	73nm,0.2s,baz=59,slow=3.0,SNR=22						
GUMO				S	**Sn**	**16 17 21.5**	**-0.6**
	61nm,0.3s,baz=33,slow=22,SNR=4.1						
GUMO	**Guam**	**5.40**	**192**		**Pn**	**16 16 21.9**	**+1.3**
JCJ	**Chichijima**	**8.90**	**337**	P	Pn	16 16 53.6	-14
	21nm,0.3s,baz=99,slow=23,SNR=8.7						
JCJ				S	Sn	16 18 27.7	-18
	22nm,0.5s,baz=304,slow=23,SNR=1.5						
JCJ	**Chichijima**	**8.90**	**337**	Pn	**Pn**	**16 17 07.7**	**+0.6**
INU	**Inuyama**	**18.23**	**336**	P	**Pn**	**16 19 03.9**	**-1.4**
INU				IAmb	IAmb	16 19 16.8	
	comp=Z,38nm,1.5s						
JGF	**Kuroka**	**18.32**	**337**	P	**Pn**	**16 19 05.5**	**-1.0**
JGF				IAmb	IAmb	16 19 27.4	
	comp=Z,43nm,1.4s						
JMN	**Monobe**	**18.33**	**326**	P	**Pn**	**16 19 05.6**	**-1.0**
MJAR	**Matsushiro Arr**	**18.88**	**340**	P	**P**	**16 19 10.9**	**+0.2**
	comp=Z,2.9nm,0.4s,baz=161,slow=8.7,SNR=26						
MJAR				LR	LR	16 24 49.2	
	comp=Z,186nm,20.2s,baz=356,slow=31						
MJAR	**Matsushiro Arr**	**18.88**	**340**	P	**P**	**16 19 10.5**	**-0.2**
MJAR				IAmb	IAmb	16 19 12.7	
	comp=Z,12nm,1.4s						
MAJO	**Matsushiro**	**18.88**	**340**		**P**	**16 19 11.0**	**+0.3**
MAJO				IAmb	IAmb	16 19 12.9	
	comp=Z,19nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**19.56**	**88**	T	T	16 40 31.9	
	baz=274,slow=75,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**19.58**	**88**	T	T	16 40 34.7	
	baz=274,slow=75,SNR=6.0						
H11S2	**WAKE ISLAND Hy**	**19.58**	**88**	T	T	16 40 34.4	
	baz=274,slow=75,SNR=6.5						
JNU	**Nakatsue**	**19.62**	**319**	P	**P**	**16 19 19.0**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=214,slow=18,SNR=2.1						
H11N1	**WAKE ISLAND Hy**	**19.70**	**84**	T	T	16 40 44.2	
	baz=269						
H11N2	**WAKE ISLAND Hy**	**19.70**	**84**	T	T	16 40 41.5	
	baz=269						
H11N3	**WAKE ISLAND Hy**	**19.71**	**84**	T	T	16 40 44.8	
	baz=269						
YOJ	**Yonaguni jima**	**22.09**	**289**	P	**P**	**16 19 45.9**	**+0.9**
NACB	**Ninganchiao**	**23.32**	**287**	P	**P**	**16 19 56.9**	**+0.2**
YHNB	**Yeheng**	**23.59**	**288**	P	**P**	**16 19 59.8**	**+0.5**
SSLB	**Suanglung**	**23.85**	**286**	P	**P**	**16 20 02.0**	**+0.5**
KSRS	**Korea Array**	**24.35**	**323**	P	**P**	**16 20 06.0**	**+0.1**
	comp=Z,5.9nm,0.7s,baz=147,slow=8.9,SNR=27						
	comp=Z,5.9nm,0.7s						
KSAR	**Wonju Array Be**	**24.36**	**323**	P	**P**	**16 20 06.0**	**+0.1**
KS19	**Wonju Array Si**	**24.42**	**323**	P	**P**	**16 20 06.0**	**-0.4**
KS19				IAmb	IAmb	16 20 06.2	
	comp=Z,11nm,0.8s						
USRK	**Ussuriysk Ar.**	**27.84**	**338**	P	**P**	**16 20 37.8**	**+0.7**
	comp=Z,2.1nm,0.6s,baz=150,slow=9.2,SNR=4.9						
	comp=Z,2.1nm,0.6s						
HEH	**HeiHe**	**34.64**	**339**	*e*P	**P**	**16 21 36.6**	**0.0**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HILR	**Hailar Array B**	**37.15**	**331**	P	**P**	**16 21 57.6**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=129,slow=8.4,SNR=6.5						
	comp=Z,0.7nm,0.3s						
WB0	**Warramunga Arr**	**40.09**	**197**	P	**P**	**16 22 23.0**	**+0.2**
WB0				IAmb	IAmb	16 22 25.0	
	comp=Z,6.4nm,1.2s						
WR8	**Warramunga Arr**	**40.24**	**197**	P	**P**	**16 22 24.3**	**+0.2**
WR8				IAmb	IAmb	16 22 49.0	
	comp=Z,7.6nm,1.4s						
WRA	**Warramunga Arr**	**40.27**	**197**	P	**P**	**16 22 24.3**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=19,slow=8.6,SNR=14						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**40.27**	**197**	P	**P**	**16 22 23.2**	**-1.1**
LZDM	**Lanzhou Array**	**40.89**	**303**	P	**P**	**16 22 30.1**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=165,slow=6.2,SNR=6.5						
	comp=Z,0.7nm,0.3s						
ULN	**Ulaanbaatar**	**42.82**	**321**	P	**P**	**16 22 45.0**	**0.0**
SONM	**Songino Array**	**43.19**	**321**	P	**P**	**16 22 48.2**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=135,slow=14,SNR=5.0						
	comp=Z,1.2nm,0.6s						
SONM	**Songino Array**	**43.19**	**321**	IAmb	IAmb	16 22 49.4	
	comp=Z,1.0nm,0.8s						
AS31	**Alice Springs**	**43.93**	**196**	P	**P**	**16 22 55.1**	**+1.1**
ASAR	**Alice Springs**	**43.93**	**196**	P	**P**	**16 22 54.5**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=17,slow=11,SNR=13						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**43.93**	**196**	P	**P**	**16 22 54.8**	**+0.8**
CM31	**Chiang Mai Arr**	**44.51**	**277**	P	**P**	**16 22 58.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**44.51**	**277**	P	**P**	**16 22 58.9**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=64,slow=6.9,SNR=5.9						
	comp=Z,0.5nm,0.7s						
YAK	**Yakutsk**	**44.59**	**349**	P	**P**	**16 22 58.9**	**+0.2**
YAK				IAmb	IAmb	16 23 00.2	
	comp=Z,11nm,0.6s						
TIXI	**Tiksi**	**53.71**	**353**	P	**P**	**16 24 08.5**	**+0.7**
TIXI				IAmb	IAmb	16 24 18.8	
	comp=Z,4.4nm,1.4s						
C16K	**Lisburne Hills**	**57.87**	**19**	P	**P**	**16 24 38.6**	**+1.1**
C16K				IAmb	IAmb	16 25 06.7	
	comp=Z,2.5nm,1.4s						
ZAA0	**Zalesovo Array**	**58.05**	**322**	P	**P**	**16 24 38.1**	**-0.9**
ZALV	**Zalesovo Beam**	**58.05**	**322**	P	**P**	**16 24 39.4**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=111,slow=8.7,SNR=3.8						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**58.05**	**322**	P	**P**	**16 24 38.2**	**-0.9**
MKAR	**Makanchi Array**	**58.56**	**314**	P	**P**	**16 24 42.0**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=86,slow=9.3,SNR=5.9						
MKAR				PcP	**PcP**	**16 25 29.9**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=66,slow=3.6,SNR=2.1						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**58.56**	**314**	P	**P**	**16 24 42.4**	**-0.4**
MAKZ	**Makanchi**	**58.77**	**314**	P	**P**	**16 24 44.4**	**+0.1**
L22K	**Petersville**	**61.10**	**28**	P	**P**	**16 25 00.4**	**+0.6**
L22K				IAmb	IAmb	16 25 41.2	
	comp=Z,10nm,1.5s						
KURK	**Kurchatov**	**61.34**	**318**	P	**P**	**16 25 01.4**	**-0.2**
KURBB	**Kurchatov Arra**	**61.39**	**318**	P	**P**	**16 25 01.6**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=92,slow=7.6,SNR=10						
	comp=Z,0.5nm,0.4s						
NRIK	**Noril'sk**	**61.53**	**340**	P	**P**	**16 25 03.0**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=94,slow=8.2,SNR=7.9						
	comp=Z,2.7nm,0.7s						
NRIK	**Noril'sk**	**61.53**	**340**		**P**	**16 25 02.3**	**-0.2**
NRIK				IAmb	IAmb	16 25 03.7	
	comp=Z,2.9nm,0.8s						
CCB	**Clear Creek Bu**	**62.91**	**26**	P	**P**	**16 25 12.4**	**+0.6**
CCB				IAmb	IAmb	16 25 13.3	
	comp=Z,5.3nm,1.3s						
IL31		**63.32**	**26**	P	**P**	**16 25 14.1**	**-0.4**
ILAR	**Eielson Array**	**63.32**	**26**	P	**P**	**16 25 15.3**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=255,slow=6.0,SNR=16						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**63.32**	**26**	P	**P**	**16 25 14.1**	**-0.4**
H27K	**Steamboat Moun**	**65.79**	**25**	P	**P**	**16 25 31.6**	**+1.0**
H27K				IAmb	IAmb	16 25 50.4	
	comp=Z,4.6nm,1.4s						
BVAR	**Borovoye Array**	**66.53**	**320**	P	**P**	**16 25 34.0**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=100,slow=8.4,SNR=1.8						
	comp=Z,0.4nm,0.4s						
ARTI	**Arti**	**73.19**	**325**	P	**P**	**16 26 16.5**	**+0.3**
ARTI				IAmb	IAmb	16 26 29.3	
	comp=Z,7.8nm,1.3s						
AB31	**Akbulak array**	**73.42**	**317**	P	**P**	**16 26 16.9**	**-0.6**
AB31				IAmb	IAmb	16 26 58.8	
	comp=Z,4.1nm,1.4s						
ABKAR	**Akbulak array**	**73.42**	**317**	P	**P**	**16 26 16.9**	**-0.7**
YKA	**Yellowknife Ar**	**77.66**	**28**	P	**P**	**16 26 42.7**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=294,slow=6.2,SNR=6.9						
	comp=Z,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**77.66**	**28**	P	**P**	**16 26 42.5**	**+1.0**
SPITS	**Spitsbergen Ar**	**79.02**	**351**	P	**P**	**16 26 49.9**	**+1.1**
	comp=Z,12nm,1.1s,baz=79,slow=7.5,SNR=4.2						
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**82.40**	**342**	P	**P**	**16 27 06.5**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=33,slow=6.4,SNR=4.3						
	comp=Z,3.5nm,0.7s						
ARCES	**ARCESS Array B**	**82.40**	**342**	P	**P**	**16 27 06.9**	**0.0**
BAR	**Barrett**	**85.89**	**57**	P	**P**	**16 27 24.3**	**-0.9**
RLMT	**Red Lodge**	**86.71**	**43**	P	**P**	**16 27 28.9**	**-0.4**
RLMT				IAmb	IAmb	16 28 09.3	
	comp=Z,5.3nm,1.4s						
FINES	**FINESS Array B**	**86.84**	**335**	P	**P**	**16 27 27.3**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=71,slow=4.6,SNR=15						
	comp=Z,0.9nm,0.3s						
HFS	**Hagfors**	**92.32**	**338**	P	**P**	**16 27 52.7**	**-2.2**
	comp=Z,2.4nm,0.9s,baz=46,slow=4.2,SNR=4.0						
	comp=Z,2.4nm,0.9s						

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*AFAD **03** 16:16:28.7, 38°42N×39°23E, h7km±4km, ML2.5*

*ISK **03** 16:16:29.2, 38°36N×39°26E, h5km, ML2.1/8*

ISC 03 16:16:29.0±0.9**, 38°40N**±0°03×**39°23E**±0°03**, h6**km±8km**, n16, σ0s66**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.07**	**110**	Pg	**Pg**	**16 16 30.8**	**0.0**
SVRC				Sg	**Sg**	**16 16 31.9**	**-0.2**
ELZG	**Elazig**	**0.21**	**297**	P	**Pg**	**16 16 33.6**	**+0.2**
ELZG				S	**Sg**	**16 16 36.8**	**+0.6**
ELZG				IAML		16 16 37.0	
	comp=E,977nm,0.4s						
ELZG				IAML		16 16 40.0	
	comp=N,821nm,0.8s						
ELZ	**Elazig**	**0.29**	**357**	P	**Pg**	**16 16 34.7**	**-0.1**
ELZ				S	**Sg**	**16 16 38.9**	**+0.3**
ELZ				IAML		16 16 39.0	
	comp=N,965nm,0.2s						
MDNT	**Maden**	**0.36**	**91**	P	**Pg**	**16 16 36.0**	**-0.1**
MDNT				S	**Sg**	**16 16 40.3**	**-0.5**
KOVA	**Elazig, Kovanc**	**0.55**	**56**	P	**Pg**	**16 16 39.4**	**-0.3**
KOVA				S	**Sb**	**16 16 49.4**	**0.0**
NARI	**Adyaman-Kaht**	**0.63**	**216**	P	**Pb**	**16 16 42.0**	**-0.6**
MAYA	**Malatya/Merkez**	**0.64**	**263**	P	**Pg**	**16 16 41.2**	**-0.1**
MAYA				S	**Sg**	**16 16 50.2**	**+0.6**
MCKZ	**Bingol**	**0.74**	**345**	P	**Pg**	**16 16 42.2**	**-1.2**
MCKZ				S	**Sg**	**16 16 51.8**	**-1.2**
DYBB	**Diyarbakir**	**0.85**	**122**	Pg	**Pg**	**16 16 45.2**	**-0.1**
URFA	**Urfa**	**1.01**	**199**	Pg	**Pg**	**16 16 47.9**	**-0.5**
URFA				Sg	**Sb**	**16 17 02.6**	**0.0**
ILIC	**ilic-Erzincan**	**1.17**	**334**	Pn	**Pn**	**16 16 52.8**	**+0.7**
ERZN	**Erzincan**	**1.25**	**18**	Pn	**Pn**	**16 16 53.9**	**+0.8**
BNGB	**Bingl**	**1.28**	**62**	Pn	**Pb**	**16 16 54.1**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.57**	**99**	Pn	**Pn**	**16 16 57.6**	**+0.1**
GAZ	**Gaziantep**	**2.01**	**233**	Pn	**Pn**	**16 17 04.8**	**+1.2**
KMRS	**Kahramanmaras**	**2.04**	**245**	Pn	**Pb**	**16 17 05.5**	**-1.1**

IDC 03 16:23:37.3±1.9**, 3°81N**×**122°38E, h0**km**, mb3.2**/3**, mbtmp3.2**/3**, MS3.0**/1**, Error ellipse: s-maj=239.8km s-min=27.9km az=62.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**13.98**	**175**	LR	LR	16 32 49.5	
	comp=Z,65nm,18.7s,baz=294,slow=40						
WRA	**Warramunga Arr**	**26.37**	**154**	P	P	16 29 15.1	-0.3
	0.3nm,0.8s,baz=330,slow=10.0,SNR=1.8						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**29.53**	**158**	P	P	16 29 44.0	+0.3
	0.2nm,0.8s,baz=343,slow=8.0,SNR=4.9						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**55.08**	**327**	P	P	16 33 11.0	-0.1
	0.1nm,0.4s,baz=128,slow=7.6,SNR=5.0						
	0.1nm,0.4s						

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*IDC **03** 16:27:13.6±6.0, 25°58N×126°51E, h0km, mb3.5/4, mbtmp3.5/6, ML3.0/2, MS3.0/3, Error ellipse: s-maj=113.5km s-min=32.0km az=168.0*

*JMA **03** 16:27:22.1±0.4, 27°3N±1°0×12°7E±°, h23km±4km, MV3.5/12, NW OFF OKINAWAJIMA IS*

ISC 03 16:27:24.0±1.8**, 27°18N**±0°06×**126°80E**±0°06**, h11**km±12km**, n18, σ1s37**/20**, mb3.4**/4**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.70**	**146**	P	**Pb**	**16 27 38.5**	**+0.2**
JAGN				*e*S	**Sn**	**16 27 50.3**	**-0.5**
JKE	**Kume jima 2**	**0.85**	**181**	P	**Pg**	**16 27 39.5**	**-0.9**
JIH	**Iheya**	**1.05**	**97**	P	**Pn**	**16 27 44.2**	**-0.4**
JIH				*e*S	**Sn**	**16 27 59.3**	**0.0**
JNTH	**Nagotoyohara**	**1.27**	**121**	P	**Pg**	**16 27 47.8**	**-0.7**
JNTH				S	**Sg**	**16 28 07.7**	**+2.7**
JJT3	**Tamagusuku3**	**1.35**	**139**	P	**Pg**	**16 27 49.3**	**-0.8**
JJT3				*e*S	**Sg**	**16 28 08.3**	**+0.7**
JOW	**Kunigami**	**1.36**	**104**	Pn	**Pg**	**16 27 49.2**	**-0.9**
	12nm,0.3s,baz=154,slow=15,SNR=66						
JOW				Sn	**Sg**	**16 28 08.6**	**+0.7**
	91nm,0.3s,baz=143,slow=26,SNR=8.6						
JOW				LR	LR	16 28 25.4	
	comp=Z,55nm,19.7s,baz=148,slow=36						
	41nm,0.3s						
JOW	**Kunigami**	**1.36**	**104**	P	**Pg**	**16 27 49.2**	**-0.9**
JOW				*e*S	**Sg**	**16 28 08.9**	**+1.0**
JYRO	**Yoronjima**	**1.48**	**95**	P	**Pb**	**16 27 51.0**	**-0.5**
JOKE	**Okinoerabujima**	**1.59**	**83**	*e*P	**Pb**	**16 27 52.3**	**-1.1**
JAMN	**Amaminishikomi**	**2.36**	**63**	*e*P	**Pb**	**16 28 06.8**	**+0.3**
JNU	**Nakatsue**	**6.90**	**30**	Pn	Pn	16 29 13.1	+8.0
	0.4nm,0.3s,baz=309,slow=23,SNR=8.5						
KSRS	**Korea Array**	**10.29**	**5**	Pn	Pn	16 30 04.2	+13
	baz=179,slow=12,SNR=2.3						
	0.6nm,0.6s						
HILR	**Hailar Array B**	**23.00**	**348**	LR	LR	16 42 59.1	
	comp=Z,104nm,20.7s,baz=85,slow=39						
SONM	**Songino Array**	**26.07**	**328**	P	**P**	**16 33 01.1**	**+3.4**
	1.9nm,1.2s,baz=120,slow=8.5,SNR=3.6						
	1.9nm,1.2s						
MKAR	**Makanchi Array**	**39.95**	**311**	P	**P**	**16 34 57.3**	**-1.1**
	0.2nm,0.5s,baz=104,slow=9.6,SNR=7.1						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**40.72**	**323**	P	**P**	**16 35 03.2**	**-1.3**
	0.7nm,0.7s,baz=99,slow=8.9,SNR=3.9						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**43.29**	**316**	P	**P**	**16 35 25.0**	**-0.6**
	0.3nm,0.6s,baz=110,slow=8.9,SNR=2.7						
	0.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**45.02**	**182**	LR	LR	16 57 15.2	
	comp=Z,28nm,18.2s,baz=239,slow=42						

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*IDC **03** 16:31:54.9±1.7, 32°91N×138°80E, h0km, mb3.4/2, mbtmp3.2/3, ML2.0/1, Error ellipse: s-maj=36.2km s-min=19.0km az=144.0*

*JMA **03** 16:31:56.7±0.3, 33°5N±0°9×14°1E±°, h47km, MV2.9/19, E OFF HACHIJOJIMA ISLAND*

ISC 03 16:31:57.0±1.6**, 33°52N**±0°06×**140°9E**±0°1**, h64**km±16km**, n13, σ1s09**/19**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.98**	**245**	P	**Pn**	**16 32 14.7**	**-0.2**
JHJ2				*e*S	**Sn**	**16 32 28.0**	**-0.1**
JHJ	**Hachijo jima 2**	**1.00**	**247**	Pn	**Pn**	**16 32 14.7**	**-0.5**
	68nm,0.3s,baz=270,slow=20,SNR=30						
JHJ				Sn	**Sn**	**16 32 28.4**	**-0.3**
	87nm,0.3s,baz=80,slow=21,SNR=16						
BSO1	**Boso 1**	**1.13**	**4**	P	**Pn**	**16 32 16.3**	**-0.1**
JMYK	**Miyake Tsubota**	**1.23**	**296**	P	**Pn**	**16 32 18.8**	**+0.6**
JMYK				*e*S	**Sn**	**16 32 35.2**	**+1.2**
BSO3	**Boso 3**	**1.31**	**347**	P	**Pn**	**16 32 19.4**	**+0.4**
BSO4	**Boso 4**	**1.53**	**343**	*e*P	**Pn**	**16 32 23.1**	**+1.0**
JIM2	**Oshima 3**	**1.69**	**315**	P	**Pn**	**16 32 24.3**	**0.0**
JIZS	**Izushimoda**	**2.04**	**306**	P	**Pn**	**16 32 30.0**	**+0.9**
KTJ3	**Kamata3**	**2.05**	**314**	P	**Pn**	**16 32 29.4**	**+0.1**
KTJ3				*e*S	**Sn**	**16 32 53.2**	**-0.6**
JOD2	**Odawara 2**	**2.28**	**320**	P	**Pn**	**16 32 32.6**	**+0.3**
JOD2				*e*S	**Sn**	**16 32 59.8**	**+0.4**
MJAR	**Matsushiro Arr**	**3.72**	**325**	Pn	**Pn**	**16 32 52.3**	**+0.3**
	0.1nm,0.3s,baz=166,slow=13,SNR=5.6						
MJAR				Sn	**Sn**	**16 33 31.1**	**-3.5**
	baz=317,slow=19						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**53.53**	**188**	P	**P**	**16 41 11.2**	**0.0**
	0.4nm,0.5s,baz=5.7,slow=7.7,SNR=5.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**57.26**	**188**	P	**P**	**16 41 38.5**	**+0.5**
	0.1nm,0.5s,baz=0.5,slow=8.9,SNR=4.0						
	0.1nm,0.5s						

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*NEIC **03** 16:33:33.7±0.6, 19°05N±0°06×67°84W±0°10, h23km±16km, ML3.1/33, Md3.4/5(RSPR), Error ellipse: s-maj=13.5km s-min=9.1km az=89.0*

*RSPR **03** 16:33:35.0, 19°10N×67°90W, h21km±28km, MD3.4/5*

*OSPL **03** 16:33:34.5±0.9, 19°11N×67°72W, h0km±5km, ML2.7, Presumed earthquake*

*SDD **03** 16:33:34.7±2.1, 19°28N×67°41W, h31km±89km, MD3.5, ML3.0, MW3.3, Presumed earthquake*

ISC 03 16:33:36.4±1.5**, 19°00N**±0°06×**67°57W**±0°03**, h8**km±10km**, n43, σ1s18**/67**, 6C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.62**	**171**		**Pg**	**16 33 48.2**	**-0.1**
IDE					**Sg**	**16 33 57.6**	**+1.2**
IDE	**Isla Desecheo**	**0.62**	**171**	⇓*i*P	**Pg**	**16 33 48.2**	**-0.1**
IDE				*e*S	**Sg**	**16 33 57.6**	**+1.2**
AGPR	**Aguadilla, PR**	**0.69**	**140**		**Pg**	**16 33 50.0**	**+0.4**
AGPR				IAML		16 34 01.1	
	575nm,0.4s						
AGPR				IAML		16 34 01.6	
	398nm,0.2s						
AGPR	**Aguadilla, PR**	**0.69**	**140**	⇑*e*Pg	**Pg**	**16 33 50.0**	**+0.4**
AGPR				*e*Sg	**Sg**	**16 34 00.5**	**+1.9**
AGPR				IAML		16 34 01.1	
	comp=E,557nm,0.1s						
AGPR				IAML		16 34 01.1	
	comp=N,428nm,0.2s						
AGPR	**Aguadilla, PR**	**0.69**	**140**	⇑*e*P	**Pg**	**16 33 50.0**	**+0.4**
AGPR				*e*S	**Sb**	**16 34 01.0**	**+0.7**
AGPR	**Aguadilla, PR**	**0.69**	**140**	*i* P	**Pg**	**16 33 50.0**	**+0.4**
AGPR				*e*S	**Sb**	**16 34 00.7**	**+0.4**
AGPR				IAML		16 34 06.2	
	comp=Z,216nm,0.2s						
PRSN	**Puerto Rico Se**	**0.88**	**152**		**Pg**	**16 33 52.6**	**-0.6**
LSP	**Las Mesas**	**0.94**	**150**		**Pg**	**16 33 54.3**	**-0.2**
LSP					**Sb**	**16 34 08.9**	**+1.3**
LSP	**Las Mesas**	**0.94**	**150**	⇑*i*P	**Pg**	**16 33 54.3**	**-0.2**
LSP				*e*S	**Sb**	**16 34 08.9**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.08**	**156**		**Pb**	**16 33 55.6**	**-1.7**
CRPR				IAML		16 34 16.6	
	comp=N,308nm,0.5s						
CRPR				IAML		16 34 17.2	
	comp=E,273nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.08**	**156**		**Sg**	**16 34 11.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.08**	**156**	*e*Pg	**Pb**	**16 33 56.1**	**-1.2**
CRPR				*e*Sg	**Sn**	**16 34 14.0**	**+1.0**
CRPR				IAML		16 34 16.5	
	comp=N,353nm,0.3s						
CRPR				IAML		16 34 17.0	
	comp=E,314nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.08**	**156**	⇓*e*P	**Pb**	**16 33 55.9**	**-1.5**
CRPR				*e*S	**Sg**	**16 34 11.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.08**	**156**	*i* P	**Pb**	**16 33 56.9**	**-0.5**
CRPR				*e*S	**Sn**	**16 34 13.4**	**+0.3**
CRPR				IAML		16 34 14.8	
	comp=Z,292nm,0.5s						
UUPR	**Utuado, UPR, P**	**1.10**	**132**		**Pb**	**16 33 56.5**	**-1.2**
EMPR	**Esperanza - Ma**	**1.12**	**118**		**Pb**	**16 33 57.5**	**-0.4**
EMPR					**Sn**	**16 34 14.8**	**+0.9**
EMPR	**Esperanza - Ma**	**1.12**	**118**	⇑*e*P	**Pb**	**16 33 57.5**	**-0.4**
EMPR				*e*S	**Sn**	**16 34 14.8**	**+0.9**
MLPR	**Magueyes Islan**	**1.14**	**154**		**Pb**	**16 33 56.6**	**-1.7**
MLPR				IAML		16 34 16.9	
	comp=Z,350nm,0.4s						
MLPR				IAML		16 34 20.6	
	comp=Z,176nm,0.3s						
HIDR	**Higuey Centro**	**1.16**	**250**	*e*Pg	**Pb**	**16 33 56.6**	**-2.0**
HIDR				IAML		16 34 16.1	
	comp=N,172nm,0.2s						
HIDR				IAML		16 34 16.9	
	comp=E,203nm,0.2s						
GBPR	**Guanica, Bosqu**	**1.21**	**147**		**Pn**	**16 33 58.0**	**-1.6**
GBPR					**Sb**	**16 34 15.6**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.21**	**147**	⇓*e*P	**Pn**	**16 33 58.0**	**-1.6**
GBPR				*e*S	**Sb**	**16 34 15.6**	**+0.2**
CELP	**Cerrillos**	**1.32**	**134**		**Pn**	**16 33 59.7**	**-1.4**
CELP				IAML		16 34 23.4	
	comp=E,188nm,0.2s						
CELP				IAML		16 34 25.5	
	comp=E,241nm,0.3s						
OBIP	**Obispado Ponce**	**1.32**	**136**		**Pn**	**16 33 59.5**	**-1.7**
OBIP	**Obispado Ponce**	**1.32**	**136**		**Sb**	**16 34 18.8**	**+0.2**
OBIP	**Obispado Ponce**	**1.32**	**136**	⇑*e*P	**Pn**	**16 33 59.8**	**-1.4**
OBIP				*e*S	**Sb**	**16 34 18.8**	**+0.2**
OBIP	**Obispado Ponce**	**1.32**	**136**	*i* P	**Pn**	**16 34 00.1**	**-1.0**
OBIP				*e*S	**Sn**	**16 34 19.8**	**+0.8**
OBIP				IAML		16 34 22.9	
	comp=Z,71nm,0.2s						
ECPR	**Experimental S**	**1.33**	**120**		**Pn**	**16 33 59.8**	**-1.5**
ECPR	**Experimental S**	**1.33**	**120**	⇓*e*P	**Pn**	**16 34 00.2**	**-1.1**
ECPR				*e*S	**Sb**	**16 34 18.6**	**-0.3**
MIDR	**Miches**	**1.40**	**270**	*e*Pg	**Pn**	**16 34 01.5**	**-0.7**
MIDR				*e*Sg	**Sn**	**16 34 20.5**	**-0.3**
MIDR				IAML		16 34 21.1	
	comp=E,76nm,0.5s						
MIDR				IAML		16 34 21.8	
	comp=N,100nm,0.4s						
MIDR				IAML		16 34 21.8	
	comp=N,100nm,0.4s						
SMDR	**Samana, DR**	**1.55**	**281**	*e*Pg	**Pn**	**16 34 03.2**	**-1.1**
SMDR				⇑*e*Sg	**Sn**	**16 34 24.3**	**-0.4**
SMDR				IAML		16 34 27.9	
	comp=N,90nm,0.2s						
SMDR				IAML		16 34 31.3	
	comp=E,85nm,0.5s						
GCPR	**Guaynabo City**	**1.57**	**116**		**Pn**	**16 34 02.9**	**-1.7**
GCPR	**Guaynabo City**	**1.57**	**116**		**Sn**	**16 34 26.0**	**+0.8**
GCPR	**Guaynabo City**	**1.57**	**116**	⇓*e*P	**Pn**	**16 34 03.2**	**-1.4**
GCPR				*e*S	**Sn**	**16 34 26.0**	**+0.8**
SJG	**San Juan**	**1.61**	**123**	*i* P	**Pn**	**16 34 04.6**	**-0.6**
SJG				*e*S	**Sn**	**16 34 27.6**	**+1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SJG				IAML		16 34 29.8	
	comp=Z,82nm,0.3s						
HATOM	**Hato Mayor del**	**1.72**	**263**	ePg	**Pn**	**16 34 06.9**	**+0.1**
HATOM				⇓eSg	**Sb**	**16 34 29.4**	**-0.8**
HATOM				IAML		16 34 31.3	
	comp=E,68nm,0.3s						
HATOM				IAML		16 34 34.3	
	comp=N,78nm,0.2s						
PDPR	**Patillas Dam,**	**1.77**	**123**		**Pn**	**16 34 06.3**	**-0.9**
HUMP	**Col San Antoni**	**1.84**	**117**		**Pn**	**16 34 07.2**	**-1.2**
HUMP				IAML		16 34 42.1	
	comp=N,88nm,0.2s						
HUMP	**Col San Antoni**	**1.84**	**117**		**Sn**	**16 34 33.5**	**+1.6**
HUMP	**Col San Antoni**	**1.84**	**117**	⇑eP	**Pn**	**16 34 07.4**	**-0.9**
HUMP				eS	**Sn**	**16 34 33.5**	**+1.6**
CUPR	**Culebra, Puert**	**2.28**	**107**	Pn	**Pn**	**16 34 13.1**	**-1.2**
DR08	**Loma La Naviza**	**2.32**	**269**	ePg	**Pn**	**16 34 15.8**	**+0.9**
DR08				eSg	**Sb**	**16 34 46.5**	**-0.8**
DR08				IAML		16 34 47.4	
	comp=E,620nm,0.2s						
DR08				IAML		16 34 47.6	
	comp=N,1μm,0.2s						
SDDR	**Presa de Saban**	**3.52**	**270**	ePg	**Pn**	**16 34 33.2**	**+1.8**
SDDR				eSg	**Sn**	**16 35 17.1**	**+3.8**
SDDR				IAML		16 35 30.2	
	comp=N,26nm,1.8s						
SDDR				IAML		16 35 33.8	
	comp=E,22nm,0.9s						
REDR	**Restauracion**	**3.62**	**273**	IAML		16 35 35.0	
	comp=N,26nm,0.1s						

*IDC **03** 16:47:51.7±1.0,24°.09N×143°.07E,h0km,mb3.8/8, mbtmp3.8/9,ML2.6/1,Error ellipse: s-maj=32.8km s-min=20.7km az=82.0*

*NEIC **03** 16:47:58.2±1.0,24°.2N±0°.1×142°.9E±0°.2,h34km±6km, mb4.5/18,Error ellipse: s-maj=22.3km s-min=14.9km az=89.0*

ISC 03 16:47:56.8±0.8**,24°.12N**±0°.09×**142°.9E**±0°.2**,h29**km**,n36,** σ0s.89/36**,mb4.3**/16**,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**9.36**	**344**	Pn	**Pn**	**16 50 09.9**	**+0.2**
MJAR	**Matsushiro Arr**	**13.03**	**343**	Pn	**Pn**	**16 50 59.6**	**-0.3**
	baz=141,slow=15,SNR=1.4						
	1.2nm,0.8s						
MAJO	**Matsushiro**	**13.03**	**343**	Pn	**Pn**	**16 50 59.9**	**-0.1**
NACB	**Ninganchiao**	**19.46**	**275**	P	**P**	**16 52 20.9**	**-0.5**
NACB				IAmb	IAmb	16 52 42.8	
	comp=Z,39nm,1.2s						
DAV	**Davao City (W)**	**23.75**	**227**	P	**P**	**16 53 06.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**41.24**	**271**	P	**P**	**16 55 40.0**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=75,slow=8.8,SNR=5.5						
	comp=Z,0.4nm,0.3s						
WB0	**Warramunga Arr**	**44.41**	**192**	P	**P**	**16 56 03.9**	**-1.2**
WB0				IAmb	IAmb	16 56 12.6	
	comp=Z,7.1nm,1.3s						
WR8	**Warramunga Arr**	**44.57**	**191**	P	**P**	**16 56 05.2**	**-1.1**
WR8				IAmb	IAmb	16 56 06.0	
	comp=Z,9.8nm,1.3s						
WRAB	**Tennant Creek**	**44.58**	**192**	P	**P**	**16 56 04.8**	**-1.6**
WRAB				IAmb	IAmb	16 56 05.5	
	comp=Z,6.3nm,1.0s						
WRA	**Warramunga Arr**	**44.59**	**192**	P	**P**	**16 56 04.7**	**-1.8**
	comp=Z,1.7nm,0.9s,baz=8.7,slow=8.1,SNR=8.8						
	comp=Z,1.7nm,0.9s						
WRA	**Warramunga Arr**	**44.59**	**192**	P	**P**	**16 56 04.0**	**-2.5**
AS31	**Alice Springs**	**48.30**	**191**	P	**P**	**16 56 36.4**	**+0.8**
ASAR	**Alice Springs**	**48.30**	**191**	P	**P**	**16 56 36.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=23,slow=9.8,SNR=4.1						
	comp=Z,0.3nm,0.7s						
MBWA	**Marble Bar**	**50.35**	**209**	P	**P**	**16 56 51.9**	**+0.6**
PSA00	**Pilbara Seismi**	**50.66**	**208**	P	**P**	**16 56 54.8**	**+1.1**
INKA	**Innaminka**	**51.60**	**182**	P	**P**	**16 57 01.2**	**+0.7**
L14K	**Kuka Creek**	**52.23**	**30**	P	**P**	**16 57 05.4**	**+0.5**
MKAR	**Makanchi Array**	**52.91**	**311**	P	**P**	**16 57 10.0**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=87,slow=9.8,SNR=7.8						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**52.91**	**311**	P	**P**	**16 57 10.1**	**-0.2**
KURK	**Kurchatov**	**55.56**	**316**	P	**P**	**16 57 29.0**	**-0.4**
KURK				IAmb	IAmb	16 57 39.7	
	comp=Z,2.5nm,1.1s						
KURBB	**Kurchatov Arra**	**55.61**	**316**	P	**P**	**16 57 29.5**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=92,slow=8.1,SNR=21						
	comp=Z,0.9nm,0.5s						
GHO	**Glory Hole Cre**	**58.72**	**31**	P	**P**	**16 57 52.0**	**+0.3**
IL31		**60.01**	**28**	P	**P**	**16 58 00.5**	**+0.1**
IL31				IAmb	IAmb	16 58 11.4	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**60.01**	**28**	P	**P**	**16 57 60.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=253,slow=5.7,SNR=4.9						
	comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**60.01**	**28**	P	**P**	**16 58 00.6**	**+0.2**
M24K	**Tolsona, Glenn**	**60.05**	**31**	P	**P**	**16 58 01.1**	**+0.3**
BVAR	**Borovoye Array**	**60.69**	**319**	P	**P**	**16 58 05.5**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=83,slow=6.2,SNR=11						
	comp=Z,1.4nm,0.5s						
BORK	**Borovoye**	**60.73**	**319**	P	**P**	**16 58 06.2**	**+0.6**
BORK				IAmb	IAmb	16 58 06.2	
	comp=Z,3.2nm,0.6s						
SCRK	**Sand Creek**	**61.19**	**29**	P	**P**	**16 58 09.0**	**+0.3**
J26L	**Joseph Creek**	**61.41**	**28**	P	**P**	**16 58 10.7**	**+0.6**
J26L				IAmb	IAmb	16 58 48.2	
	comp=Z,3.9nm,1.3s						
BCAR	**Beaver Creek A**	**62.13**	**30**	P	**P**	**16 58 15.0**	**+0.1**
H27K	**Steamboat Moun**	**62.36**	**26**	P	**P**	**16 58 16.8**	**+0.4**
H27K				IAmb	IAmb	16 58 51.5	
	comp=Z,6.9nm,1.5s						
ABKAR	**Akbulak array**	**67.66**	**315**	P	**P**	**16 58 50.0**	**-1.1**
FINES	**FINESS Array B**	**80.90**	**334**	P	**P**	**17 00 08.9**	**+0.9**
	comp=Z,2.3nm,0.9s,baz=101,slow=6.0,SNR=6.1						
	comp=Z,2.3nm,0.9s						
FINES	**FINESS Array B**	**80.90**	**334**	P	**P**	**17 00 08.8**	**+0.8**
LPAZ	**La Paz**	**149.88**	**81**	PKPbc	**PKPbc**	**17 07 43.9**	**-1.8**
	comp=Z,1.4nm,0.8s,baz=283,slow=4.9,SNR=4.6						

DJA 03 16:58:44.2±0.4**,8°S**±5°×**11°6E**±°**,h19**km±4km**,M3.7**/18**,** **mb3.9**/4**,MLv3.6**/18**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.50**	**265**	P	Pn	16 58 55.4	-0.9
KHKI				S	Sn	16 59 03.0	-1.4
TWSI	**Taliwang, Sumb**	**0.87**	**119**	P	Pb	16 58 59.8	-0.9
DNP	**Denpasar**	**0.96**	**248**	P	Pg	16 59 03.1	+0.2
IGBI	**Denpasar**	**1.07**	**243**	P	Pb	16 59 04.1	-0.1
IGBI				S	Sg	16 59 19.4	+0.2
RTBI	**Rangdo, Negare**	**1.16**	**263**	P	Pn	16 59 05.6	+0.1
RTBI				S	Sg	16 59 22.2	+0.1
PLAI	**Plampang**	**1.72**	**107**	P	Pn	16 59 13.9	+0.7
JAGI	**Jajag, Banyuwa**	**1.94**	**265**	P	Pn	16 59 15.6	-0.6
DBNI	**Kabupaten Domp**	**2.19**	**95**	P	Pn	16 59 19.9	+0.3
KMMI	**Kalianget**	**2.47**	**301**	P	Pn	16 59 25.6	+2.1
GMJI	**Gumukmas**	**2.64**	**271**	P	Pn	16 59 25.6	-0.2
WBSI	**Waikabubak, Su**	**3.50**	**112**	P	Pn	16 59 37.8	+0.1
SNJI	**Sawahan-Nganju**	**4.34**	**277**	P	Pn	16 59 49.8	+0.4
BSSI	**Bau Bau, Buton**	**4.85**	**64**	P	Pn	16 59 54.9	-1.4
PCJI	**Pacitan**	**4.88**	**271**	P	Pn	16 59 56.6	-0.1
EDFI	**Ende, Flores**	**5.54**	**95**	P	Pn	17 00 06.1	+0.3

*IDC **03** 16:59:14.8±9.7,29°.91S×179°.25W,h308km±95km,mb3.2/3, mbtmp4.0/4,Error ellipse: s-maj=109.3km s-min=32.2km az=7.0*

ISC 03 16:59:13.8±1.5**,30°.0S**±0°.1×**179°.2W**±0°.3**,h300**km**,n8,** σ1s.37/10**,mb3.5**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.76**	**199**	P	**Pn**	**17 01 18.8**	**+2.2**
	2.8nm,0.3s,baz=274,slow=3.9,SNR=32						
URZ				S	**S**	**17 02 53.9**	**-2.5**
	7.7nm,0.3s,baz=258,slow=23,SNR=12						
STKA	**Stephens Creek**	**33.54**	**257**	P	**P**	**17 05 26.6**	**+0.5**
	1.9nm,0.8s,baz=90,slow=15,SNR=1.9						
	1.9nm,0.8s						
ASAR	**Alice Springs**	**42.08**	**267**	P	**P**	**17 06 37.0**	**-0.2**
	0.4nm,0.3s,baz=110,slow=7.7,SNR=18						
ASAR				PcP	**PcP**	**17 08 25.3**	**-0.5**
	0.3nm,0.9s,baz=105,slow=3.2,SNR=2.3						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**43.03**	**272**	P	**P**	**17 06 44.8**	**-0.1**
	1.9nm,0.6s,baz=111,slow=7.6,SNR=26						
	1.9nm,0.6s						
KURBB	**Kurchatov Arra**	**120.08**	**314**	PKP	**PKPdf**	**17 17 27.7**	**-0.8**
	0.2nm,0.8s,baz=119,slow=3.3,SNR=1.7						
FINES	**FINESS Array B**	**144.43**	**339**	PKP	**PKPab**	**17 18 13.3**	**+0.4**
	2.1nm,0.5s,baz=62,slow=2.9,SNR=16						
HFS	**Hagfors**	**148.67**	**348**	PKPbc	**PKPbc**	**17 18 24.3**	**-0.7**
	2.0nm,0.8s,baz=43,slow=3.0,SNR=4.5						
AKASG	**Malin Array Be**	**150.37**	**322**	PKPbc	**PKPbc**	**17 18 29.2**	**-0.2**
	0.3nm,0.3s,baz=40,slow=2.6,SNR=2.4						

*NIED **03** 17:02:56.0,23°.55N×121°.51E,h44km,MW4.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr-0.11; Mθθ1.59; Mφφ-1.48; Mrθ0.90; Mθφ-0.64; Mφr0.19; Fault plane solution: M0 1.88000×10^16 NP1: φs148.00000°,δ64.00000°,λ5.00000°. NP2:φs56.00000°, δ85.00000°,λ154.00000°.*

*JMA **03** 17:02:56.0±0.2,23°.6N±0°.7×12°2E±°,h44km±2km, MD4.8/18,MV4.7/18,TAIWAN REGION*

*MOS **03** 17:02:55.0±1.3,23°.48N×121°.61E,h30km,mb4.6/29,Error ellipse: s-maj=9.2km s-min=6.0km az=100.0*

*ASIES **03** 17:02:56.5,23°.56N×121°.54E,h33km,Mw4.7,Fault plane solution: NP1:φs180.00000°,δ41.00000°,λ57.00000°. NP2:φs40.00000°,δ57.00000°,λ115.00000°.*

*TAP **03** 17:02:56.8,23°.57N×121°.53E,h33km,ML5.2,C*

*BJI **03** 17:02:56.9,23°.59N×121°.55E,h25km,mB4.7/25,mb4.2/65, ML4.7/10,Ms4.5/69,Ms7 4.3/64*

*NEIC **03** 17:02:57.0±2.8,23°.51N±0°.04×121°.53E±0°.04,h31km±5km, mb4.9/94,Error ellipse: s-maj=6.4km s-min=5.4km az=138.0*

*IDC **03** 17:02:58.6±3.0,23°.56N×121°.76E,h50km±28km,mb3.9/21, mbtmp4.2/24,ML3.8/3,MS3.9/44,Error ellipse: s-maj=15.8km s-min=12.3km az=63.0*

ISC 03 17:02:57.0±0.5**,23°.55N**±0°.02×**121°.57E**±0°.02**,h30**km±3km**,** **n600,**σ1s.27/670**,mb4.7**/104**,MS4.0**/53**,48C-62D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.14**	**246**	⇑iP	**Pb**	**17 03 03.1**	**+0.3**
HGSD				iS	**Sn**	**17 03 08.8**	**+2.0**
TEGC	**Jichi Village**	**0.16**	**351**	iP	**Pb**	**17 03 03.2**	**+0.3**
TEGC				iS	**Sn**	**17 03 08.3**	**+1.0**
EGFH	**Guangfu**	**0.17**	**312**	eP	**Pb**	**17 03 02.9**	**-0.1**
EHY	**Hungye**	**0.23**	**259**	⇓iP	**Pb**	**17 03 03.2**	**-0.5**
EHY				iS	**Sb**	**17 03 07.5**	**-0.7**
SHUL	**Shoufeng**	**0.24**	**359**	⇑iP	**Pb**	**17 03 04.0**	**+0.3**
SHUL				iS	**Sn**	**17 03 09.8**	**+0.6**
WARBT	**Fenglin Townsh**	**0.24**	**315**	⇓iP	**Pb**	**17 03 03.2**	**-0.6**
WARBT				iS	**Sb**	**17 03 07.3**	**-1.0**
ECBN	**Changbin**	**0.26**	**205**	⇑iP	**Pb**	**17 03 04.3**	**+0.3**
ECBN				iS	**Sn**	**17 03 09.9**	**+0.2**
ESL	**Shilin**	**0.29**	**335**	⇓iP	**Pb**	**17 03 03.9**	**-0.6**
ESL				iS	**Sb**	**17 03 08.8**	**-0.7**
YULB	**Yu-li**	**0.29**	**238**		**Pb**	**17 03 03.2**	**-1.3**
YULB	**Yu-li**	**0.29**	**238**	P	**Pb**	**17 03 04.1**	**-0.4**
YULB	**Yu-li**	**0.29**	**238**	⇑iP	**Pb**	**17 03 04.0**	**-0.4**
YULB				iS	**Sb**	**17 03 08.9**	**-0.6**
TEYL	**Yanliau Villag**	**0.32**	**5**	⇑iP	**Pn**	**17 03 05.5**	**0.0**
TEYL				iS	**Sn**	**17 03 12.4**	**+1.2**
CHKH	**Chenggong**	**0.39**	**204**	⇑iP	**Pb**	**17 03 05.8**	**0.0**
CHKH				iS	**Sn**	**17 03 13.2**	**+0.3**
ETM	**Tongmen**	**0.42**	**351**	⇓iP	**Pb**	**17 03 05.6**	**-0.7**
ETM				iS	**Sb**	**17 03 11.8**	**-0.8**
FULB	**Fuli**	**0.43**	**216**	⇑iP	**Pb**	**17 03 06.5**	**+0.1**
FULB				S	**Sn**	**17 03 14.4**	**+0.4**
VWDT	**VWDT**	**0.44**	**297**	⇓iP	**Pb**	**17 03 06.3**	**-0.3**
VWDT				S	**Sb**	**17 03 12.1**	**-1.0**
CHKT	**Chengkung**	**0.49**	**203**	⇑iP	**Pb**	**17 03 07.2**	**-0.1**
CHKT				S	**Sn**	**17 03 14.8**	**-0.5**
LXIB	**Xiulin Townshi**	**0.49**	**343**	⇓iP	**Pb**	**17 03 06.5**	**-1.0**
LXIB				S	**Sb**	**17 03 13.2**	**-1.4**
TWD	**Chiawan**	**0.53**	**3**	⇓P	**Pb**	**17 03 07.4**	**-0.5**
TWD				eS	**Sb**	**17 03 14.7**	**-0.7**
OWD	**Renai**	**0.54**	**318**	⇓iP	**Pb**	**17 03 07.4**	**-0.8**
OWD				eS	**Sb**	**17 03 14.3**	**-1.6**
ECS	**Chishang**	**0.56**	**215**	⇑P	**Pb**	**17 03 07.6**	**-0.8**
WUSB	**Renai**	**0.60**	**317**	⇓iP	**Pb**	**17 03 08.6**	**-0.7**
WUSB				S	**Sb**	**17 03 16.1**	**-1.5**
ETL	**Fush Village**	**0.61**	**5**	⇑P	**Pb**	**17 03 08.5**	**-0.8**
ETL				eS	**Sb**	**17 03 15.9**	**-1.8**
SSLB	**Suanglung**	**0.61**	**293**		**Pb**	**17 03 08.1**	**-1.3**
SSLB	**Suanglung**	**0.61**	**293**	P	**Pb**	**17 03 08.5**	**-0.9**
SSLB	**Suanglung**	**0.61**	**293**	S	**Sb**	**17 03 17.1**	**-0.6**
SSLB	**Suanglung**	**0.61**	**293**	⇓iP	**Pb**	**17 03 08.4**	**-0.9**
ELDTW	**Lidau**	**0.62**	**235**	⇑iP	**Pb**	**17 03 08.3**	**-1.3**
ELDTW				S	**Sb**	**17 03 16.2**	**-1.9**
NACB	**Ninganchiao**	**0.62**	**2**		**Pb**	**17 03 08.0**	**-1.5**
NACB	**Ninganchiao**	**0.62**	**2**	P	**Pb**	**17 03 08.7**	**-0.8**
NACB	**Ninganchiao**	**0.62**	**2**	S	**Sb**	**17 03 18.4**	**+0.4**
NACB	**Ninganchiao**	**0.62**	**2**	⇓P	**Pb**	**17 03 08.3**	**-1.2**
NACB				S	**Sb**	**17 03 16.4**	**-1.5**
WHF	**Hehuan Shan**	**0.65**	**335**	⇓iP	**Pb**	**17 03 09.2**	**-1.1**
WHF				S	**Sb**	**17 03 17.6**	**-1.7**
ETLH	**Xiulin Townshi**	**0.66**	**353**	⇓iP	**Pb**	**17 03 08.9**	**-1.3**
ETLH				S	**Sb**	**17 03 17.0**	**-2.1**
WHYT	**Xinyi Township**	**0.67**	**283**	⇓iP	**Pb**	**17 03 10.0**	**-0.4**
WHYT				S	**Sb**	**17 03 18.9**	**-0.5**
SMLT	**Sun Moon Lake**	**0.70**	**299**	⇓iP	**Pb**	**17 03 10.1**	**-0.7**
SMLT				eS	**Sb**	**17 03 19.7**	**-0.5**
ALS	**Alishan**	**0.70**	**267**	⇓iP	**Pb**	**17 03 10.7**	**-0.3**
ALS				S	**Sb**	**17 03 20.0**	**-0.5**
TYC	**Yuchr**	**0.74**	**299**	⇓iP	**Pn**	**17 03 10.7**	**-0.7**
TYC				eS	**Sb**	**17 03 20.2**	**-1.1**
FUSS	**Fushou**	**0.76**	**337**	⇓iP	**Pn**	**17 03 11.1**	**-0.8**
FUSS				S	**Sb**	**17 03 20.6**	**-1.4**
EHP	**Heping Village**	**0.77**	**12**	eP	**Pn**	**17 03 11.8**	**-0.1**
WCS	**Beigang Elemen**	**0.79**	**310**	⇓P	**Pn**	**17 03 11.6**	**-0.5**
WCS				eS	**Sb**	**17 03 21.1**	**-1.4**
TWT	**Tachien**	**0.79**	**333**	⇓iP	**Pn**	**17 03 11.8**	**-0.4**
TWT				eS	**Sb**	**17 03 21.2**	**-1.6**
EAHA	**Aohua**	**0.79**	**11**	eP	**Pn**	**17 03 11.2**	**-0.9**
EAHA				eS	**Sb**	**17 03 21.9**	**-0.9**
TDCB	**Techi**	**0.79**	**332**	⇓P	**Pn**	**17 03 11.8**	**-0.5**
TDCB				S	**Sb**	**17 03 20.9**	**-2.1**
CHN5	**Tsauling**	**0.82**	**273**	⇓iP	**Pn**	**17 03 12.7**	**+0.1**
CHN5				eS	**Sb**	**17 03 23.3**	**-0.3**
STYH	**Taoyuan**	**0.82**	**243**	⇑P	**Pn**	**17 03 12.1**	**-0.4**
STYH				eS	**Sb**	**17 03 22.1**	**-1.5**
TWGBT	**Beinan**	**0.86**	**212**	P	**Pn**	**17 03 11.4**	**-1.6**
TWGBT	**Beinan**	**0.86**	**212**	⇑iP	**Pn**	**17 03 11.0**	**-2.0**
TWG	**Pinlang**	**0.86**	**212**		**Pn**	**17 03 10.6**	**-2.4**
TWG	**Pinlang**	**0.86**	**212**	⇑P	**Pn**	**17 03 11.0**	**-2.0**
WNT	**Mingjian**	**0.87**	**292**	⇓P	**Pb**	**17 03 13.7**	**0.0**
WNT				eS	**Sb**	**17 03 25.8**	**+0.7**
TTN	**Taitung**	**0.88**	**206**	⇑P	**Pn**	**17 03 12.4**	**-0.9**
EOS4	**EOS4**	**0.89**	**50**	eP	**Pn**	**17 03 12.8**	**-0.3**
EOS4				eS	**Sn**	**17 03 24.6**	**-0.2**
NNSB	**Datong**	**0.89**	**349**	⇑P	**Pn**	**17 03 12.8**	**-0.7**
NNSB				eS	**Sn**	**17 03 23.4**	**-2.2**
TPUB	**Ta-pu**	**0.90**	**254**		**Pn**	**17 03 13.9**	**+0.3**
TPUB	**Ta-pu**	**0.90**	**254**	P	**Pb**	**17 03 14.1**	**0.0**
TPUB	**Ta-pu**	**0.90**	**254**	S	**Sn**	**17 03 25.5**	**0.0**
TPUB	**Ta-pu**	**0.90**	**254**	⇓P	**Pn**	**17 03 13.8**	**+0.3**
TPUB				S	**Sn**	**17 03 25.7**	**+0.2**
NNS	**Nan Shan**	**0.90**	**349**	⇓P	**Pn**	**17 03 13.1**	**-0.7**
NNS				eS	**Sn**	**17 03 23.8**	**-2.1**
EWUT	**Wuta**	**0.91**	**12**	P	**Pn**	**17 03 13.1**	**-0.7**
EWUT				eS	**Sn**	**17 03 24.2**	**-1.6**
WHP	**Taichung City**	**0.92**	**322**	⇓P	**Pn**	**17 03 13.8**	**-0.2**
WHP				eS	**Sn**	**17 03 26.1**	**-0.1**
WTP	**Ta-pu**	**0.93**	**251**	⇑iP	**Pn**	**17 03 14.3**	**+0.3**
WTP				eS	**Sn**	**17 03 26.4**	**0.0**
WGK	**Gukeng**	**0.93**	**279**	⇓iP	**Pn**	**17 03 14.4**	**+0.4**
WGK				S	**Sb**	**17 03 27.1**	**+0.4**
WDLH	**Douliu**	**0.95**	**279**	eP	**Pn**	**17 03 14.8**	**+0.5**
WDLH				eS	**Sb**	**17 03 27.9**	**+0.6**
WDL	**Douliou City**	**0.96**	**280**	⇓P	**Pb**	**17 03 14.9**	**-0.1**
WDL				eS	**Sb**	**17 03 28.2**	**+0.7**
LATG	**Datong**	**0.98**	**358**	⇑iP	**Pn**	**17 03 13.8**	**-1.1**
CHN2	**Minshiung**	**1.00**	**269**	eS	**Sb**	**17 03 30.1**	**+1.4**
EOS3	**EOS3**	**1.00**	**43**	eP	**Pn**	**17 03 14.9**	**0.0**
EOS3				eS	**Sn**	**17 03 28.4**	**+0.5**
TCU	**Taichung**	**1.01**	**306**	⇓iP	**Pb**	**17 03 16.0**	**0.0**
TCU				eS	**Sb**	**17 03 29.6**	**+0.7**
SGST	**Jiashian**	**1.02**	**243**	⇑P	**Pn**	**17 03 14.7**	**-0.6**
SGST				eS	**Sb**	**17 03 29.3**	**+0.1**
CHN1	**Nanshi**	**1.02**	**249**	⇑iP	**Pb**	**17 03 16.0**	**-0.2**
CHN1				eS	**Sb**	**17 03 30.1**	**+0.8**
TWK	**Hsinying**	**1.03**	**254**	⇓P	**Pn**	**17 03 15.8**	**+0.3**
TWK				eS	**Sb**	**17 03 30.0**	**+0.4**
SNST	**Tainan City**	**1.04**	**252**	⇓P	**Pn**	**17 03 16.0**	**+0.5**
SNST				eS	**Sb**	**17 03 30.1**	**+0.5**
CHY	**Chiayi**	**1.05**	**267**	⇓P	**Pb**	**17 03 16.4**	**-0.2**
CHY				eS	**Sb**	**17 03 30.4**	**+0.3**
EOS2	**EOS2**	**1.06**	**35**	eP	**Pn**	**17 03 16.2**	**+0.6**
WCHH	**Zhanghua**	**1.06**	**300**	⇓P	**Pb**	**17 03 16.7**	**-0.2**
WCHH				eS	**Sb**	**17 03 30.9**	**+0.4**
WCH1	**Changhua City**	**1.07**	**299**	⇓iP	**Pb**	**17 03 16.8**	**-0.2**
WCH1				eS	**Sb**	**17 03 32.2**	**+1.6**
TWQ1	**Liyutan**	**1.08**	**318**	⇓P	**Pb**	**17 03 17.1**	**0.0**
TWQ1				eS	**Sb**	**17 03 31.7**	**+0.9**
ENTT	**Nioudou**	**1.08**	**360**	⇑P	**Pn**	**17 03 15.5**	**-0.7**
TWC	**Suao**	**1.08**	**14**	eP	**Pn**	**17 03 15.9**	**-0.2**
TWC				eS	**Sn**	**17 03 30.0**	**-0.1**
NDS	**Dongshan**	**1.09**	**7**	eP	**Pn**	**17 03 15.5**	**-0.7**
ECL	**Taimali**	**1.10**	**211**	eP	**Pn**	**17 03 14.1**	**-2.3**
YHNB	**Yeheng**	**1.13**	**351**		**Pn**	**17 03 16.5**	**-0.3**
YHNB	**Yeheng**	**1.13**	**351**	P	**Pn**	**17 03 17.2**	**+0.4**
YHNB	**Yeheng**	**1.13**	**351**	⇑P	**Pn**	**17 03 16.6**	**-0.2**
YHNB				eS	**Sn**	**17 03 29.8**	**-1.5**
NSY	**Sanyi**	**1.14**	**320**	⇓P	**Pb**	**17 03 18.1**	**0.0**
NSY				eS	**Sb**	**17 03 33.5**	**+1.0**
NSK	**Sanguang**	**1.14**	**350**	⇑P	**Pn**	**17 03 16.8**	**-0.2**
NSK				eS	**Sn**	**17 03 30.4**	**-1.2**
WRL	**Guolierlin Hig**	**1.15**	**288**	⇓P	**Pn**	**17 03 17.2**	**+0.3**
WRL				eS	**Sb**	**17 03 33.4**	**+0.6**
NFF	**Wufeng Townshi**	**1.15**	**339**	eP	**Pn**	**17 03 17.7**	**+0.5**
NFF				eS	**Sn**	**17 03 31.9**	**0.0**
TWE	**Neicheng**	**1.17**	**4**	⇑eP	**Pn**	**17 03 16.7**	**-0.6**
SSD	**Sandimen**	**1.18**	**227**	⇑P	**Pn**	**17 03 16.8**	**-0.6**
SSD				eS	**Sb**	**17 03 33.1**	**-0.6**
NSTT	**Nanjuang**	**1.19**	**334**	⇓P	**Pn**	**17 03 18.6**	**+0.9**
NSTT				eS	**Sn**	**17 03 33.0**	**+0.2**
LIOB	**Emei**	**1.20**	**335**	⇓P	**Pb**	**17 03 18.9**	**-0.3**
LIOB				eS	**Sn**	**17 03 33.4**	**+0.3**
CHN3	**Shinhua**	**1.20**	**247**	⇓P	**Pb**	**17 03 19.6**	**+0.4**
CHN3				eS	**Sb**	**17 03 37.0**	**+2.6**
FUSB	**Fushanzhiwuyua**	**1.20**	**1**	⇑P	**Pn**	**17 03 17.3**	**-0.5**
NMLH	**Miaoli**	**1.21**	**324**	eP	**Pb**	**17 03 19.0**	**-0.4**
NMLH				eS	**Sb**	**17 03 34.7**	**0.0**
WTCT	**Ta-ch'eng**	**1.22**	**285**	eP	**Pn**	**17 03 18.7**	**+0.7**
WTCT				iS	**Sb**	**17 03 35.5**	**+0.6**
ILA	**Ilan**	**1.22**	**8**	eP	**Pn**	**17 03 16.8**	**-1.2**
NWLT	**Wulai**	**1.22**	**357**	⇑P	**Pn**	**17 03 17.7**	**-0.4**
NWLT				eS	**Sn**	**17 03 32.1**	**-1.5**
WSL	**Shuilin Townsh**	**1.23**	**269**	⇓P	**Pn**	**17 03 18.8**	**+0.7**
WSL				eS	**Sb**	**17 03 35.4**	**+0.2**
WSF	**Szhu**	**1.24**	**274**	⇓P	**Pn**	**17 03 18.7**	**+0.5**
WSF				eS	**Sn**	**17 03 34.8**	**+0.9**
SHHT	**Tainan City**	**1.24**	**245**	eP	**Pb**	**17 03 20.4**	**+0.6**
SHHT				eS	**Sb**	**17 03 38.6**	**+3.1**
CHN8	**Yiju**	**1.26**	**261**	⇓P	**Pn**	**17 03 19.2**	**+0.7**
CHN8				eS	**Sb**	**17 03 35.5**	**-0.6**
MASBT	**Mashibuluo**	**1.27**	**223**	⇑P	**Pn**	**17 03 18.1**	**-0.6**
MASBT				eS	**Sn**	**17 03 34.5**	**-0.2**
KSHI	**Guanxi Townshi**	**1.27**	**344**	eP	**Pb**	**17 03 20.2**	**-0.2**
KSHI				eS	**Sb**	**17 03 36.4**	**0.0**
TWM1	**Shoushan**	**1.28**	**236**	eP	**Pb**	**17 03 20.7**	**+0.2**
SGLT	**Jiouru**	**1.29**	**231**	eP	**Pb**	**17 03 20.5**	**-0.1**
SCLT	**Jiali**	**1.32**	**254**	eP	**Pn**	**17 03 19.7**	**+0.4**
SCLT				eS	**Sb**	**17 03 38.2**	**+0.6**
EGS		**1.33**	**14**	eP	**Pn**	**17 03 20.2**	**+0.7**
TAI1	**Yung-k'ang**	**1.33**	**248**	eP	**Pb**	**17 03 21.2**	**-0.2**
EAST	**Anshuo**	**1.34**	**210**	⇑P	**Pn**	**17 03 18.0**	**-1.6**
TAW	**Tawu**	**1.34**	**208**	⇑P	**Pn**	**17 03 17.8**	**-1.9**
SBCB	**Hsinchu**	**1.35**	**337**	eP	**Pn**	**17 03 20.9**	**+1.2**
SBCB				eS	**Sn**	**17 03 37.0**	**+0.4**
HSN	**Hsinchu**	**1.36**	**336**	eP	**Pb**	**17 03 21.5**	**-0.4**
HSN				eS	**Sn**	**17 03 38.3**	**+1.3**
NHDH	**Xindian Distri**	**1.41**	**358**	eP	**Pn**	**17 03 21.2**	**+0.7**
NHDH				eS	**Sn**	**17 03 37.8**	**-0.3**
TSCK	**Chigu Township**	**1.42**	**254**	⇓P	**Pn**	**17 03 21.6**	**+0.9**
TSCK				eS	**Sb**	**17 03 39.7**	**-0.9**
TATO	**Taipei**	**1.42**	**357**		**Pn**	**17 03 20.8**	**+0.1**
TATO	**Taipei**	**1.42**	**357**	P	**Pb**	**17 03 22.2**	**-0.7**
TWA	**Mucha**	**1.42**	**1**	eP	**Pn**	**17 03 21.0**	**+0.2**
TWA				eS	**Sn**	**17 03 38.5**	**0.0**
TIPB	**Shuangxi**	**1.44**	**9**	eP	**Pn**	**17 03 21.2**	**+0.2**
NCUH	**Zhongli**	**1.45**	**346**	eP	**Pn**	**17 03 22.5**	**+1.3**
NCUH				eS	**Sb**	**17 03 41.1**	**-0.5**
NCU	**National Centr**	**1.46**	**346**	eP	**Pn**	**17 03 20.7**	**-0.5**
NCU				eS	**Sn**	**17 03 39.2**	**-0.1**
SCZT	**Fangliau**	**1.46**	**217**	eP	**Pn**	**17 03 21.2**	**-0.2**
SCZT				eS	**Sb**	**17 03 42.1**	**+0.3**
NHY	**Taipei**	**1.48**	**0**	eP	**Pn**	**17 03 22.0**	**+0.4**
NHY				eS	**Sn**	**17 03 40.2**	**+0.2**
TAP	**Taipei**	**1.48**	**358**	eP	**Pn**	**17 03 22.0**	**+0.4**
TAP				eS	**Sn**	**17 03 40.4**	**+0.4**
TWB1	**Santiao Chiao**	**1.50**	**15**	eP	**Pn**	**17 03 22.7**	**+0.8**
TWB1				eS	**Sn**	**17 03 41.4**	**+1.0**
LAY	**Lan-yu**	**1.50**	**181**	eP	**Pn**	**17 03 20.5**	**-1.4**
LAY				eS	**Sn**	**17 03 39.6**	**-0.9**
SLIU	**Shizi**	**1.50**	**208**	eP	**Pn**	**17 03 22.1**	**+0.1**
WSSB	**Gushan**	**1.50**	**233**	eP	**Pb**	**17 03 23.8**	**-0.6**
NWF	**Wu-fen Shan**	**1.53**	**7**	eP	**Pn**	**17 03 22.8**	**+0.5**
NWF				eS	**Sn**	**17 03 41.8**	**+0.6**
WFSB	**Wu-fen Shan**	**1.53**	**7**	eP	**Pn**	**17 03 22.8**	**+0.6**
WFSB				eS	**Sn**	**17 03 41.3**	**+0.2**
LYUB	**Lan-yu**	**1.54**	**179**	⇑P	**Pn**	**17 03 20.4**	**-2.0**
LYUB				eS	**Sn**	**17 03 37.7**	**-3.7**
JYNG	**Yonagunijimaku**	**1.55**	**54**	P	**Pn**	**17 03 22.9**	**+0.4**
JYNG				A	A	17 03 22.9	
	comp=N,31nm,2.6s,comp=E,26nm,1.1s						
JYNG				eS	**Sn**	**17 03 41.8**	**+0.3**
TWS1	**Kuangyinshan**	**1.55**	**355**	⇑P	**Pn**	**17 03 22.9**	**+0.3**
TWS1				eS	**Sn**	**17 03 42.4**	**+0.8**
SXI1	**Grass Mountain**	**1.56**	**10**	⇓P	**Pn**	**17 03 23.4**	**+0.6**
YM01	**YM01**	**1.59**	**0**	eP	**Pn**	**17 03 23.2**	**0.0**
YOJ	**Yonaguni jima**	**1.60**	**55**		**Pn**	**17 03 23.8**	**+0.6**
YOJ	**Yonaguni jima**	**1.60**	**55**	P	**Pn**	**17 03 24.4**	**+1.2**
YOJ	**Yonaguni jima**	**1.60**	**55**	P	**Pn**	**17 03 23.8**	**+0.6**
YOJ	**Yonaguni jima**	**1.60**	**55**	eP	**Pn**	**17 03 23.8**	**+0.6**
YOJ				A	A	17 03 23.8	
	comp=N,33nm,2.8s,comp=E,26nm,1.4s						
YOJ				eS	**Sn**	**17 03 43.2**	**+0.3**
YOJ	**Yonaguni jima**	**1.60**	**55**	⇓P	**Pn**	**17 03 23.9**	**+0.6**
YOJ				S	**Sn**	**17 03 43.5**	**+0.7**
TNOU	**National Taiwa**	**1.60**	**7**	eP	**Pn**	**17 03 23.5**	**+0.3**
TNOU				eS	**Sn**	**17 03 42.5**	**-0.4**
ZUZH	**Zhuzihu**	**1.60**	**359**	eP	**Pn**	**17 03 23.4**	**0.0**
ZUZH				eS	**Sn**	**17 03 42.4**	**-0.6**
NTST	**Danshui**	**1.61**	**356**	eP	**Pn**	**17 03 23.8**	**+0.4**
NTST				eS	**Sn**	**17 03 44.1**	**+1.0**
WLCH	**Liuqiu**	**1.62**	**223**	eP	**Pb**	**17 03 26.4**	**+0.1**
ANP	**Anpu**	**1.63**	**358**	eP	**Pn**	**17 03 23.8**	**+0.1**
YM08	**YM08**	**1.63**	**1**	eP	**Pn**	**17 03 23.2**	**-0.4**
TWP	**Hsiaoliuchiu**	**1.63**	**223**	eP	**Pb**	**17 03 26.3**	**-0.2**
SMST	**Manzhou Townsh**	**1.67**	**204**	eP	**Pn**	**17 03 24.4**	**+0.3**
SMST				eS	**Sn**	**17 03 43.6**	**-0.9**
HEN	**Hengchun**	**1.72**	**207**	eP	**Pb**	**17 03 26.8**	**-1.2**
TWY	**Chenhua**	**1.72**	**1**	eP	**Pn**	**17 03 25.5**	**+0.6**
TWK1	**Hengchun**	**1.75**	**204**	eP	**Pn**	**17 03 25.8**	**+0.6**
TWKBT	**Hengchun**	**1.75**	**204**	eP	**Pn**	**17 03 25.8**	**+0.5**
TWKBT				eS	**Sn**	**17 03 47.9**	**+1.4**
TSEB	**Hengchuen, Pin**	**1.75**	**201**	eP	**Pn**	**17 03 25.5**	**+0.2**
TSEB				eS	**Sn**	**17 03 47.9**	**+1.2**
WDGT	**Dungji**	**1.78**	**261**	⇓eP	**Pn**	**17 03 25.7**	**+0.1**
WDGT				eS	**Sn**	**17 03 46.0**	**-1.2**
PHUB	**P'eng-hu**	**1.83**	**269**	⇓eP	**Pn**	**17 03 26.5**	**+0.1**
PHUB				eS	**Sn**	**17 03 47.6**	**-0.9**
PNG	**Penghu**	**1.85**	**271**	⇓eP	**Pn**	**17 03 26.8**	**+0.2**
PNG				eS	**Sn**	**17 03 48.4**	**-0.5**
VCHM	**Qimei**	**1.99**	**261**	⇓eP	**Pn**	**17 03 28.6**	**0.0**
HATJ	**Hateruma jima**	**2.11**	**76**	eP	**Pn**	**17 03 30.5**	**+0.3**
HATJ				A	A	17 03 30.5	
	comp=N,11nm,1.8s,comp=E,12nm,1.6s						
HATJ				eS	**Sn**	**17 03 54.9**	**-0.6**
PCYT	**Pengchaiyu**	**2.12**	**12**	eP	**Pn**	**17 03 31.4**	**+1.0**
IRIF	**Iriomote-Funau**	**2.13**	**68**	P	**Pn**	**17 03 30.9**	**+0.5**
IRIF				A	A	17 03 30.9	
	comp=N,33nm,1.4s,comp=E,13nm,1.5s						
IRIF				eS	**Sn**	**17 03 56.2**	**+0.3**
JKRS	**Kuro-shima**	**2.34**	**72**	eP	**Pn**	**17 03 33.8**	**+0.5**
JKRS				A	A	17 03 33.8	
	comp=N,16nm,3.3s,comp=E,10.0nm,2.1s						
JKRS				eS	**Sn**	**17 04 00.8**	**-0.3**
VWUC	**VWUC**	**2.41**	**307**	⇓eP	**Pn**	**17 03 33.8**	**-0.6**
VWUC				eS	**Sn**	**17 04 00.9**	**-1.9**

JIJ Ishigaki jima 2.49 71 P **Pn** **17 03 35.4 -0.1**
JIJ A A 17 03 35.4
comp=N,6.0nm,3.5s,comp=E,3.0nm,1.8s
JIJ *eS* **Sn** **17 04 04.1 -0.7**
JISG Ishigakijimahi 2.71 67 *eP* **Pn** **17 03 38.2 -0.3**
JISG *eS* **Sn** **17 04 09.7 -0.5**
MATB Ma-tsu 2.98 331 *eP* **Pn** **17 03 41.5 -0.7**
MATB *eS* **Sn** **17 04 14.3 -2.6**
KNM Kinmen 2.99 287⇓*eP* **Pn** **17 03 43.7 +1.3**
KNM *eS* **Sn** **17 04 18.1 +0.8**
QZH2 Quanzhou 3.05 298⇓*i*Pn **Pn** **17 03 42.8 -0.3**
QZH2 Sn **Sn** **17 04 16.3 -2.3**
QZH2 smax smax
comp=E,3μm,0.7s
QZH2 smax smax
comp=E,3μm,0.6s
QZH2 LR LR
comp=E,6μm,7.4s
KNMB Chin-men Tao 3.05 288 **Pn** **17 03 42.6 -0.5**
KNMB Chin-men Tao 3.05 288⇓*eP* **Pn** **17 03 42.8 -0.3**
KNMB *eS* **Sn** **17 04 16.4 -2.2**
JTJ Tarama 3.06 69 *eP* **Pn** **17 03 43.5 +0.2**
JTJ A A 17 03 43.5
comp=N,8.0nm,2.8s,comp=E,6.0nm,2.4s
LYJJ Jianjiangzhen 3.41 332 *eP* **Pn** **17 03 47.5 -0.6**
LYJJ *eS* **Sn** **17 04 25.7 -1.8**
MHZQ Yeshan 3.43 318⇑P **Pn** **17 03 48.2 -0.2**
MHZQ *eS* **Sn** **17 04 26.1 -1.9**
ZPLA Ao Xicun 3.52 277⇓*eP* **Pn** **17 03 49.4 -0.2**
ZPLA *eS* **Sn** **17 04 27.6 -2.6**
JIRB Irabujima 3.53 68 *eP* **Pn** **17 03 49.8 0.0**
JIRB *eS* **Sn** **17 04 29.4 -1.1**
AXDP Jialang 3.55 293⇓P **Pn** **17 03 50.0 -0.1**
AXDP *eS* **Sn** **17 04 28.8 -2.1**
XPSS Dashiqiu 3.59 340⇑*eP* **Pn** **17 03 50.0 -0.6**
XPSS *eS* **Sn** **17 04 29.5 -2.4**
JIKM Ikemajima 3.63 67 *eP* **Pn** **17 03 51.8 +0.8**
JIKM *eS* **Sn** **17 04 32.5 -0.4**
JMJ Miyako jima 2 3.63 69 P **Pn** **17 03 52.2 +1.1**
JMJ2 Miyako jima3 3.63 70 *eP* **Pn** **17 03 52.0 +0.8**
JMJ2 *eS* **Sn** **17 04 32.9 -0.1**
JOGS Gusukube 3.71 70 *eP* **Pn** **17 03 53.0 +0.8**
DSXP Dongshan 3.80 273⇓*eP* **Pn** **17 03 53.3 -0.2**
DSXP *eS* **Sn** **17 04 33.3 -3.9**
SXFK Yanhouchang 4.55 309⇓*eP* **Pn** **17 04 03.5 -0.3**
SXFK *eS* **Sn** **17 04 53.1 -2.7**
JOW Kunigami 6.90 60 P **Pn** **17 04 34.6 -1.5**
comp=E,14nm,0.3s,baz=150,slow=29,SNR=8.3
JOW S **Sn** **17 05 49.6 -3.9**
comp=E,19nm,0.2s,baz=5.6,slow=28,SNR=5.6
comp=E,24nm,0.3s
HKPS Hong Kong Po S 6.96 261 Pn **Pn** **17 04 37.0 0.0**
GZH2 Guangzhou 7.26 272 Pn **Pn** **17 04 41.5 +0.5**
GZH2 Sn **Sn** **17 06 03.5 +1.0**
GZH2 smax smax
comp=E,290nm,1.1s
GZH2 smax smax
comp=E,260nm,1.0s
SSE Sheshan 7.52 358 Pn **Pn** **17 04 44.5 -0.1**
SSE Sn **Sn** **17 06 11.4 +2.5**
SSE smax smax
comp=E,31nm,1.0s
SSE smax smax
comp=E,65nm,1.0s
SSE LR LR
comp=E,410nm,10.7s
SSE LR LR
comp=E,280nm,10.5s
NJ2 Nanjing 8.80 345 *eP* **Pn** **17 05 01.5 -0.7**
NJ2 S **Sn** **17 06 36.4 -4.0**
NJ2 pmax pmax
comp=E,10.0nm,0.5s
NJ2 smax smax
comp=E,130nm,1.1s
NJ2 smax smax
comp=E,150nm,1.1s
NJ2 LR LR
comp=E,820nm,7.0s
NJ2 LR LR
comp=E,2μm,6.3s
NJ2 LR LR
comp=E,910nm,13.6s
CNSH ChangSha 9.04 302 P **Pn** **17 05 06.1 +0.6**
CNSH S **Sn** **17 06 42.2 -4.1**
CNSH pmax pmax
comp=E,1.0nm,0.3s
CNSH smax smax
comp=E,470nm,0.9s
CNSH smax smax
comp=E,310nm,1.4s
TGY Tagaytay City 9.42 184 LR LR 17 09 29.4
comp=E,430nm,18.8s,baz=134,slow=41
WHN Wuhan 9.48 319 P **Pn** **17 05 10.4 -1.1**
WHN S **Sn** **17 06 52.0 -5.0**
WHN LR LR
comp=E,6μm,5.7s
WHN LR LR
comp=E,6μm,6.2s
WHN LR LR
comp=E,5μm,11.7s
QIZ Qiongzhong 11.82 250 P **Pn** **17 05 45.5 +1.9**
QIZ S **Sn** **17 07 54.2 -0.3**
QIZ LR LR
comp=E,920nm,14.3s
QIZ LR LR
comp=E,470nm,12.8s
QIZ LR LR
comp=E,860nm,14.6s
JNU Nakatsue 12.57 39 P **Pn** **17 05 56.1 +2.3**
comp=E,2.7nm,0.6s,baz=217,slow=1.9,SNR=1.8
JNU LR LR 17 11 18.4
comp=E,452nm,20.5s,baz=224,slow=40
ENH Enshi 12.68 304 **Pn** **17 05 53.4 -2.0**
TIA Tai'an 13.19 344 P Pn 17 06 06.8 +4.5
TIA pmax pmax
comp=E,6.0nm,1.1s
TIA LR LR
comp=E,660nm,4.5s
TIA LR LR
comp=E,1μm,4.5s
TIA LR LR
comp=E,870nm,12.4s
LYN LuoYang 13.54 326 P **Pn** **17 06 10.2 +3.2**
LYN PP P 17 06 21.0 +5.3
LYN pmax pmax
comp=E,5.0nm,0.7s
LYN LR LR
comp=E,1μm,6.0s
LYN LR LR
comp=E,1μm,6.4s
LYN LR LR
comp=E,2μm,10.1s
GYA Guiyang 13.82 285⇓P **Pn** **17 06 12.4 +1.4**
GYA S **Sn** **17 08 45.6 +2.0**
GYA pmax pmax
comp=E,20nm,1.6s
GYA pmax pmax
comp=E,220nm,4.0s
GYA LR LR
comp=E,820nm,8.8s
GYA LR LR
comp=E,2μm,13.6s
GYA LR LR
comp=E,2μm,13.5s
KSAR Wonju Array Be 14.87 20 **Pn** **17 06 22.9 -2.2**
KSAR Wonju Array Be 14.87 20 P **Pn** **17 06 22.9 -2.2**
KSRS Korea Array 14.89 20 P **Pn** **17 06 27.6 +2.2**
comp=E,17nm,0.8s,baz=198,slow=13,SNR=22
KSRS LR LR 17 13 07.4
comp=E,177nm,21.6s,baz=190,slow=41
KS19 Wonju Array Si 14.92 20 P **Pn** **17 06 23.6 -2.2**
HNS HongShan 15.01 338⇓P **P** **17 06 32.0 0.0**
HNS pmax pmax
comp=E,8.0nm,1.1s
HNS LR LR
comp=E,740nm,13.6s
HNS LR LR
comp=E,720nm,12.1s
HNS LR LR
comp=E,850nm,17.7s
XAN Xi'an 15.22 316⇑P **Pn** **17 06 27.7 -2.1**
XAN sP P 17 06 38.0 +3.5
XAN pmax pmax
comp=E,6.0nm,1.0s
XAN pmax pmax
comp=E,180nm,4.8s
XAN LR LR
comp=E,550nm,7.6s
XAN LR LR
comp=E,940nm,15.8s
XAN LR LR
comp=E,1μm,17.2s
BJI2 Beijing 17.04 346 P **Pn** **17 06 53.4 +0.4**
BJI2 pP **pP** **17 07 01.0 -1.6**
BJI2 sP **sP** **17 07 05.7 -0.8**
BJI2 S **Sn** **17 10 02.2 +0.7**
BJI2 pmax pmax
comp=E,150nm,5.6s
BJI2 LR LR
comp=E,230nm,16.3s
BJI2 LR LR
comp=E,300nm,16.9s
BJI2 LR LR
comp=E,180nm,15.2s
BJT Baijiatuau 17.04 346 **Pn** **17 06 53.5 +0.5**
BJT Baijiatuau 17.04 346 P **Pn** **17 06 53.5 +0.5**
BJT pmax pmax
comp=Z,33nm,1.7s
KMI2 Kunming 17.23 279 P **P** **17 07 00.1 +3.1**
KMI2 S **Sn** **17 10 09.7 +3.1**
KMI2 pmax pmax
comp=Z,5.0nm,1.7s
KMI2 LR LR
comp=Z,450nm,15.7s
KMI2 LR LR
comp=Z,1μm,13.5s
KMI2 LR LR
comp=Z,1μm,14.0s
CD2 Chengdu 17.44 299 P **Pn** **17 06 58.5 +0.4**
CD2 pP pP 17 07 04.9 -2.5
CD2 sP sP 17 07 07.8 -3.6
CD2 S **Sn** **17 10 11.8 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 pmax pmax
comp=Z,110nm,4.0s
CD2 LR LR
comp=Z,1μm,6.8s
CD2 LR LR
comp=Z,2μm,8.4s
CD2 LR LR
comp=Z,2μm,9.5s
PZH PanZhiHua 18.20 283 P **P** **17 07 08.3 +0.6**
SNY Shenyang 18.30 5⇑P **Pn** **17 07 09.9 +1.3**
SNY pmax pmax
comp=Z,11nm,1.2s
HHC Hu-ho-hao-te 19.19 336⇓*i*P **Pn** **17 07 21.0 +1.6**
HHC pP pP 17 07 27.0 +0.4
HHC S **Sn** **17 10 48.5 -5.1**
HHC pmax pmax
comp=Z,4.0nm,1.1s
HHC LR LR
comp=Z,360nm,15.3s
HHC LR LR
comp=Z,290nm,10.5s
HHC LR LR
comp=Z,470nm,17.2s
MJAR Matsushiro Arr 19.33 44 P **P** **17 07 18.6 -1.2**
comp=Z,0.1nm,0.3s,baz=229,slow=8.9,SNR=6.8
MJAR LR LR 17 16 05.4
comp=Z,139nm,18.6s,baz=219,slow=41
comp=Z,3.3nm,0.8s
BTO2 Baotou 19.76 333 *eP* **Pn** **17 07 26.5 +0.2**
BTO2 PP **PnPn** **17 07 46.2 +5.7**
BTO2 pmax pmax
comp=Z,10.0nm,1.2s
BTO2 pmax pmax
comp=Z,360nm,5.6s
BTO2 LR LR
comp=Z,2μm,10.0s
BTO2 LR LR
comp=Z,820nm,10.7s
BTO2 LR LR
comp=Z,2μm,10.1s
LZH Lanzhou 19.77 313 *eP* **Pn** **17 07 28.5 +2.0**
LZH sP sP 17 07 40.2 +3.2
LZH pmax pmax
comp=Z,18nm,1.4s
LZH LR LR
comp=Z,910nm,17.2s
LZH LR LR
comp=Z,880nm,14.4s
LZH LR LR
comp=Z,1μm,17.9s
LZDM Lanzhou Array 19.80 313 P **Pn** **17 07 27.5 +0.5**
baz=155,slow=8.2
comp=Z,1.7nm,0.6s
CN2 Changchun 20.45 8 P Pn 17 07 34.8 +0.6
CN2 S **S** **17 11 19.4 +0.1**
CN2 SS **SnSn** **17 11 50.0 +11**
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,180nm,16.0s
CN2 LR LR
comp=Z,320nm,14.0s
XLT XiLinHaoTe 20.79 349 *eP* **P** **17 07 35.8 0.0**
XLT pP Pn 17 07 41.3 +3.0
XLT sS Sn 17 11 42.2 +10
XLT pmax pmax
comp=Z,6.0nm,1.0s
XLT pmax pmax
comp=Z,100nm,6.9s
XLT LR LR
comp=Z,600nm,16.1s
XLT LR LR
comp=Z,310nm,17.8s
TNCH TengChong 21.06 279 P **P** **17 07 41.0 +2.1**
TNCH S **S** **17 11 28.9 -3.1**
TNCH pmax pmax
comp=Z,18nm,0.8s
TNCH pmax pmax
comp=Z,220nm,6.5s
TNCH LR LR
comp=Z,330nm,14.9s
TNCH LR LR
comp=Z,1μm,12.8s
TNCH LR LR
comp=Z,2μm,13.2s
CHTO Chiang Mai 21.61 262 **P** **17 07 43.8 -0.9**
CHTO Chiang Mai 21.61 262 P **P** **17 07 43.8 -0.9**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 21.61 262 P **P** **17 07 45.5 +0.8**
comp=Z,15nm,0.8s
CM31 Chiang Mai Arr 21.71 261 P **P** **17 07 44.9 -0.9**
CMAR Chiang Mai Arr 21.71 261 P **P** **17 07 47.9 +2.1**
comp=Z,2.6nm,0.7s,baz=65,slow=8.7,SNR=21
CMAR LR LR 17 17 01.3
comp=Z,317nm,18.2s,baz=75,slow=38
comp=Z,2.6nm,0.7s
CMAR Chiang Mai Arr 21.71 261 P **P** **17 07 45.4 -0.4**
CMAR Chiang Mai Arr 21.71 261 P **P** **17 07 45.4 -0.4**
MDJ Mudanjiang 22.02 15 P **P** **17 07 49.7 +0.9**
MDJ pP pP 17 07 58.4 +1.6
MDJ S **S** **17 11 52.1 +2.0**
MDJ PcS **PcS** **17 15 23.6 -1.1**
MDJ ScS **ScS** **17 19 05.0 -1.1**
MDJ pmax pmax
comp=Z,11nm,0.9s
MDJ LR LR
comp=Z,520nm,13.9s
MDJ LR LR
comp=Z,680nm,15.3s
USRK Ussuriysk Ar. 22.30 20 P **P** **17 07 50.8 -1.1**
comp=Z,1.4nm,0.5s,baz=222,slow=14,SNR=2.6
comp=Z,1.4nm,0.5s
BNX BinXian 22.64 11⇑P **P** **17 07 54.2 -1.2**
BNX pmax pmax
comp=Z,8.0nm,1.3s
SBUM Sibu 22.85 205 **P** **17 07 57.1 -0.8**
SBUM Sibu 22.85 205 P **P** **17 07 57.5 -0.4**
comp=Z,9.8nm,0.9s
MPSI Mapaga 23.13 184 P **P** **17 08 00.1 -0.7**
comp=Z,11nm,0.6s
GUMO Guam 24.17 110 LR LR 17 15 45.0
comp=Z,144nm,21.6s,baz=58,slow=32
GTA2 Gaotai 24.36 316 *eP* **P** **17 08 14.7 +2.2**
GTA2 pmax pmax
comp=Z,6.0nm,1.0s
GTA2 LR LR
comp=Z,450nm,13.8s
GTA2 LR LR
comp=Z,610nm,14.5s
GTA2 LR LR
comp=Z,890nm,14.9s
PCI Palu 24.37 184 P **P** **17 08 13.9 +1.3**
comp=Z,27nm,1.6s
MORE Moreh 24.93 277 P **P** **17 08 17.5 -0.2**
MORE IAmb IAmb 17 08 43.7
comp=Z,8.4nm,0.9s
HILR Hailar Array B 26.00 357 P **P** **17 08 27.1 0.0**
comp=Z,3.2nm,0.7s,baz=186,slow=12,SNR=4.2
comp=Z,3.2nm,0.7s
GOMU GeErMu 26.31 305 P **P** **17 08 32.8 +2.3**
GOMU pmax pmax
comp=Z,8.0nm,1.3s
GOMU LR LR
comp=Z,380nm,13.7s
GOMU LR LR
comp=Z,650nm,15.3s
ASAJ Asahikawa 26.80 35 LR LR 17 19 02.2
comp=Z,232nm,21.1s,baz=116,slow=36
KLR Kul'dur 26.86 15 LR LR 17 20 27.3
comp=Z,41nm,20.2s,baz=202,slow=39
KLR Kul'dur 26.86 15*ce*P **P** **17 08 35.3 +0.5**
KLR pmax pmax
comp=Z,7.0nm,0.9s
ULN Ulaanbaatar 26.88 338 **P** **17 08 35.5 +0.2**
ULN Ulaanbaatar 26.88 338*ce*P **P** **17 08 35.3 0.0**
ULN pmax pmax
comp=Z,3.0nm,0.7s
ULN Ulaanbaatar 26.88 338 P **P** **17 08 35.5 +0.2**
comp=Z,26nm,1.2s
HEH HeiHe 27.04 8 *eP* **P** **17 08 38.0 +1.5**
HEH pmax pmax
comp=Z,6.0nm,1.1s
HEH LR LR
comp=Z,280nm,10.7s
HEH LR LR
comp=Z,200nm,11.2s
HEH LR LR
comp=Z,520nm,14.1s
SHL Shillong 27.05 280 P **P** **17 08 35.1 -1.9**
SHL IAmb IAmb 17 08 56.2
comp=Z,30nm,1.3s
SHL Shillong 27.05 280 P **P** **17 08 35.1 -1.9**
SHL pmax pmax
comp=Z,30nm,1.3s
SONM Songino Array 27.09 337 P **P** **17 08 37.9 +0.9**
comp=Z,2.1nm,0.6s,baz=157,slow=8.9,SNR=10
SONM LR LR 17 20 31.3
comp=Z,443nm,18.7s,baz=147,slow=39
comp=Z,2.1nm,0.6s
SONM Songino Array 27.09 337 P **P** **17 08 33.9 -3.2**
SONM Songino Array 27.09 337 *eP* **P** **17 08 39.1 +2.0**
SONM pmax pmax
comp=Z,2.0nm,0.6s
LSA Lhasa 27.82 289 **P** **17 08 46.6 +2.3**
LSA Lhasa 27.82 289 P **P** **17 08 44.9 +0.6**
LSA pmax pmax
comp=Z,7.0nm,0.6s
LSA Lhasa 27.82 289 P **P** **17 08 46.6 +2.3**
LSA pmax pmax
comp=Z,16nm,1.5s
KAPI Kappang 28.45 184 LR LR 17 20 41.7
comp=Z,82nm,20.8s,baz=359,slow=37
YSS Yuzhno-Sakhali 28.89 31 P **P** **17 08 55.3 +2.3**
YSS IAmb IAmb 17 08 55.8
comp=Z,15nm,0.9s
YSS Yuzhno-Sakhali 28.89 31 *eP* **P** **17 08 54.2 +1.3**
YSS pmax pmax
comp=Z,10.0nm,0.9s
ZEA Zeya 30.45 7 *eP* **P** **17 09 06.9 +0.2**
ZEA *e* 17 19 34.2
ZEA pmax pmax
comp=Z,10.0nm,1.8s
ZEA MLR MLR
comp=Z,200nm,18.0s
TLY Talaya 31.29 338 P **P** **17 09 15.7 +1.4**
TLY Talaya 31.29 338 *i*P **P** **17 09 15.1 +0.8**
TLY pmax pmax
comp=Z,2.0nm,0.8s
TLY Talaya 31.29 338 P **P** **17 09 15.5 +1.2**
TYV Tymovskoe 31.79 26 *eP* P 17 09 24.4 +5.8
TYV pmax pmax
comp=Z,5.0nm,1.1s
TYV pmax pmax
comp=Z,300nm,5.9s
EDFI Ende, Flores 32.10 180 P **P** **17 09 19.7 -2.1**
SNJI Sawahan-Nganju 32.58 198 P **P** **17 09 27.4 +1.4**
comp=Z,24nm,0.9s
KNGR Kungurtug, Tuv 32.84 331 *i*P **P** **17 09 29.2 +1.2**
KNGR pmax pmax
comp=Z,3.0nm,1.2s
BATI Baumata 33.61 176 LR LR 17 23 31.7
comp=Z,54nm,20.6s,baz=4.0,slow=37
WMQ Urumqi 34.35 314 *eP* **P** **17 09 42.5 +1.4**
WMQ LR LR
comp=Z,210nm,19.3s
DGZ Jazzator, Alta 37.31 323 *i*P **P** **17 10 08.6 +2.0**
DGZ pmax pmax
comp=Z,2.0nm,0.6s
MTN Manton Dam 37.36 165 P **P** **17 10 03.2 -3.9**
MTN IAmb IAmb 17 11 22.6
comp=Z,25nm,1.3s
YAK Yakutsk 38.86 6 LR LR 17 27 55.9
comp=Z,123nm,18.1s,baz=123,slow=39
YAK Yakutsk 38.86 6 **P** **17 10 17.4 -1.8**
YAK IAmb IAmb 17 10 20.7
comp=Z,31nm,1.6s
YAK Yakutsk 38.86 6*ce*P **P** **17 10 18.2 -1.0**
YAK pmax pmax
comp=Z,14nm,1.3s
MK31 Makanchi Array 39.04 316 *i*P **P** **17 10 21.7 +0.7**
MKAR Makanchi Array 39.04 316 P **P** **17 10 21.8 +0.8**
comp=Z,3.7nm,0.6s,baz=107,slow=10,SNR=53
MKAR LR LR 17 27 49.0
comp=Z,298nm,19.9s,baz=76,slow=38
comp=Z,3.7nm,0.6s
MKAR Makanchi Array 39.04 316 **P** **17 10 20.7 -0.3**
MAKZ Makanchi 39.24 316 **P** **17 10 22.3 -0.4**
MAKZ Makanchi 39.24 316 P **P** **17 10 22.3 -0.4**
MAKZ pmax pmax
comp=Z,12nm,1.4s
MAKZ Makanchi 39.24 316 P **P** **17 10 23.3 +0.6**
WUS Wushi 39.42 307 **P** **17 10 23.6 -0.8**
PETK Petropavlovsk- 40.20 33 P **P** **17 10 29.9 -0.7**
comp=Z,6.7nm,1.0s,baz=228,slow=5.1,SNR=3.1
PETK LR LR 17 29 31.3
comp=Z,76nm,18.0s,baz=219,slow=40
comp=Z,6.7nm,1.0s
TARG Taragay, Kyrgy 40.58 307 P **P** **17 10 35.3 +1.0**
TARG Taragay, Kyrgy 40.58 307 P **P** **17 10 35.3 +1.0**
TARG pmax pmax
comp=Z,11nm,1.5s
ZAA0 Zalesovo Array 40.97 327 **P** **17 10 34.5 -2.3**
ZALV Zalesovo Beam 40.97 327 P **P** **17 10 35.9 -0.9**
comp=Z,1.3nm,0.3s,baz=114,slow=8.3,SNR=12
ZALV LR LR 17 29 50.7
comp=Z,41nm,18.7s,baz=126,slow=39
comp=Z,1.3nm,0.3s
ZALV Zalesovo Beam 40.97 327 **P** **17 10 34.1 -2.7**
ZALV Zalesovo Beam 40.97 327 *eP* **P** **17 10 36.8 0.0**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
MA2 Magadan 41.44 22 LR LR 17 28 12.4
comp=Z,84nm,19.9s,baz=216,slow=37
MA2 Magadan 41.44 22*ce*P **P** **17 10 41.1 +0.5**
MA2 pmax pmax
comp=Z,14nm,2.5s
KSH2 Kashi 41.80 303 P **P** **17 10 45.9 +1.8**
KSH2 pP sP 17 10 55.9 -1.0
KSH2 pmax pmax
comp=Z,3.0nm,1.0s
KSH2 LR LR
comp=Z,460nm,16.5s
KSH2 LR LR
comp=Z,400nm,16.8s
KSH2 LR LR
comp=Z,490nm,15.8s
H11N1 WAKE ISLAND Hy 42.17 86 T T 17 55 50.4
baz=283,slow=75,SNR=201
H11N2 WAKE ISLAND Hy 42.18 86 T T 17 55 51.6
baz=283,slow=75,SNR=186
H11N3 WAKE ISLAND Hy 42.19 86 T T 17 55 49.8
baz=283,slow=75,SNR=132

H11S3 WAKE ISLAND Hy 42.29 88 T T 17 56 03.7
baz=285,slow=75,SNR=357
H11S1 WAKE ISLAND Hy 42.30 88 T T 17 56 04.3
baz=285,slow=75,SNR=243
H11S2 WAKE ISLAND Hy 42.30 88 T T 17 56 05.0
baz=285,slow=75,SNR=360
PALK Pallekele 42.40 254 LR LR 17 28 49.1
comp=Z,44nm,21.3s,baz=58,slow=36
KURK Kurchatov 42.80 320 P **17 10 50.5 -1.4**
KURK Kurchatov 42.80 320 *ce*P P **17 10 53.5 +1.6**
KURK pmax pmax
comp=Z,5.0nm,0.9s
KURK Kurchatov 42.80 320 P P **17 10 51.7 -0.2**
KURK x x 17 11 00.6
KURBB Kurchatov Arra 42.82 320 P P **17 10 52.0 -0.1**
comp=Z,2.5nm,0.7s,baz=111,slow=9.6,SNR=27
KURBB LR LR 17 29 58.1
comp=Z,115nm,18.1s,baz=164,slow=38
comp=Z,2.5nm,0.7s
COEN Coen 42.85 148 P **17 10 52.0 -0.7**
AAK Ala-Archa 43.17 308 LR LR 17 30 03.5
comp=Z,181nm,18.6s,baz=92,slow=38
AAK Ala-Archa 43.17 308 P **17 10 55.7 +0.5**
AAK Ala-Archa 43.17 308 *ce*P P **17 10 57.2 +2.0**
AAK pmax pmax
comp=Z,6.0nm,2.5s
SEY Seymchan 44.45 20 *ce*P P **17 11 06.2 +1.2**
SEY pmax pmax
comp=Z,8.0nm,1.7s
PSA00 Pilbara Seismi 44.88 182 P P **17 11 06.5 -2.3**
WRAB Tennant Creek 44.98 163 P P **17 11 08.0 -1.6**
WRA Warramunga Arr 44.99 163 P P **17 11 08.2 -1.6**
comp=Z,5.0nm,0.5s,baz=344,slow=8.7,SNR=87
comp=Z,5.0nm,0.5s
WR8 Warramunga Arr 45.04 163 P P **17 11 08.3 -1.9**
WR8 IAmb IAmb 17 11 09.6
comp=Z,9.3nm,0.6s
KK31 Karatay Array 46.13 308 P P **17 11 17.8 -0.9**
KK31 Karatay Array 46.13 308 P P **17 11 17.8 -0.9**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 46.13 308 P **17 11 18.4 -0.3**
KKAR Karatay Array 46.13 308 P P **17 11 18.4 -0.3**
KBL Kabul 46.75 296 P **17 11 24.6 +0.7**
KBL Kabul 46.75 296 P P **17 11 24.6 +0.7**
KBL pmax pmax
comp=Z,7.0nm,1.0s
TIXI Tiksi 48.30 3 LR LR 17 35 39.4
comp=Z,111nm,18.6s,baz=190,slow=41
TIXI Tiksi 48.30 3 P **17 11 34.3 -0.8**
TIXI IAmb IAmb 17 11 34.9
comp=Z,6.0nm,0.8s
TIXI Tiksi 48.30 3 *ce*P P **17 11 34.6 -0.5**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
TIXI Tiksi 48.30 3 P P **17 11 34.4 -0.7**
BVAR Borovoye Array 48.38 321 P P **17 11 36.0 0.0**
comp=Z,1.0nm,0.5s,baz=102,slow=7.5,SNR=4.8
comp=Z,1.0nm,0.5s
BORK Borovoye 48.43 321 P P **17 11 33.6 -2.8**
BORK Borovoye 48.43 321 *ce*P P **17 11 37.4 +1.0**
BORK pmax pmax
comp=Z,2.0nm,1.0s
AS31 Alice Springs 48.44 165 P **17 11 34.5 -2.3**
ASAR Alice Springs 48.44 165 P P **17 11 36.1 -0.6**
comp=Z,1.4nm,0.5s,baz=355,slow=13,SNR=61
comp=Z,1.4nm,0.5s
ASAR Alice Springs 48.44 165 P P **17 11 33.7 -3.1**
NRIK Noril'sk 50.10 345 P P **17 11 48.8 -0.1**
comp=Z,0.7nm,0.4s,baz=124,slow=3.6,SNR=2.4
NRIK LR LR 17 34 38.2
comp=Z,79nm,19.1s,baz=146,slow=38
comp=Z,0.7nm,0.4s
NRIK Noril'sk 50.10 345 *i* P P **17 11 49.7 +0.8**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
BILL Bilibino 52.16 20 *ce*P P **17 12 04.8 +0.5**
BILL pmax pmax
comp=Z,9.0nm,1.3s
AB31 Akbulak array 54.13 315 P **17 12 18.9 -0.3**
AB31 IAmb IAmb 17 12 24.6
comp=Z,19nm,1.9s
ABKAR Akbulak array 54.13 315 P P **17 12 18.9 -0.3**
AKTO Aktyubinsk 55.47 316 LR LR 17 38 02.1
comp=Z,252nm,18.5s,baz=210,slow=38
ARTI Arti 55.91 323 LR LR 17 38 53.1
comp=Z,98nm,18.3s,baz=122,slow=38
ARTI Arti 55.91 323 *di* P **17 12 29.3 -2.6**
ARTI S **S** **17 20 13.8 -3.8**
ARTI pmax pmax
comp=Z,8.0nm,1.9s
STKA Stephens Creek 58.35 160 P P **17 12 48.1 -1.2**
comp=Z,4.9nm,0.5s,baz=334,slow=6.8,SNR=13
STKA LR LR 17 43 37.8
comp=Z,18nm,18.5s,baz=24,slow=42
comp=Z,4.9nm,0.5s
STKA Stephens Creek 58.35 160 *e*P P **17 12 49.2 -0.2**
STKA pmax pmax
comp=Z,5.0nm,0.5s
P08K Saint George I 59.08 37 P P **17 12 54.9 +0.8**
baz=266
NIKH Nikolski High 59.33 41 P P **17 12 57.2 +1.1**
baz=269
TNA Tin City 60.75 27 P P **17 13 07.3 +1.9**
baz=263
KIRV Kirov 60.94 325 LR LR 17 41 07.7
comp=Z,144nm,18.6s,baz=95,slow=38
F14K Arctic Creek 61.40 27 P P **17 13 11.5 +1.6**
baz=264
ANM Nome 61.72 28 P **17 13 13.1 +1.0**
ANM IAmb IAmb 17 13 14.3
comp=Z,13nm,1.0s
ANM Nome 61.72 28 P P **17 13 13.1 +1.0**
ANM pmax pmax
comp=Z,13nm,1.0s
ANM Nome 61.72 28 P P **17 13 13.2 +1.1**
baz=266
K13K Kusilvak Mount 61.88 31 IAmb IAmb 17 13 15.2
comp=Z,11nm,0.9s
K13K Kusilvak Mount 61.88 31 P P **17 13 14.4 +1.2**
baz=268
C16K Lisburne Hills 62.09 24 IAmb IAmb 17 13 16.2
comp=Z,8.4nm,1.0s
C16K Lisburne Hills 62.09 24 P P **17 13 15.9 +1.4**
baz=264,SNR=7.2
F15K North Star Dit 62.11 27 P P **17 13 15.7 +0.9**
baz=266
G15K Niukluk 62.32 28 P P **17 13 16.9 +0.7**
baz=266
J14K Nanvaranak Lak 62.42 30 P P **17 13 17.8 +1.0**
baz=268
M13K Dall Lake 62.47 33 P P **17 13 17.5 +0.3**
baz=270
FALS False Pass 62.52 39 P P **17 13 18.2 +0.6**
baz=272
L14K Kuka Creek 62.81 32 P P **17 13 20.1 +0.7**
baz=270
D17K Noatak River 62.88 25 P P **17 13 21.0 +1.1**
baz=266,SNR=13
C17K DeLong Mountai 62.91 24 P P **17 13 19.6 -0.4**
baz=266
DZM Mont Dzumac 62.95 133 LR LR 17 37 34.7
comp=Z,52nm,19.4s,baz=285,slow=33
DZM Mont Dzumac 62.95 133 *e*LR LR 17 32 00.2
comp=Z,110nm,23.3s
MAK Makhachkala 62.95 308 *e*P P **17 13 17.3 -3.4**
MAK *e* 17 15 49.1
MAK *e*PPP PPP 17 17 07.0
MAK *e*S **S** **17 21 46.5 -2.3**
MAK *e*SS **SS** **17 25 52.5 -1.7**
MAK *e*SSS SSS 17 28 45.6
MAK pmax pmax
comp=Z,415nm,1.4s
MAK MLR MLR
comp=Z,159nm,19.0s
RDOG Red Dog Mine 62.97 24 P P **17 13 21.3 +0.8**
baz=266
G16K Koyuk River 63.05 27 IAmb IAmb 17 13 23.3
comp=Z,14nm,1.1s
G16K Koyuk River 63.05 27 P P **17 13 21.4 +0.5**
baz=268
H16K Elim 63.07 28 P P **17 13 21.4 +0.3**
baz=268
M14K Bethel 63.16 32 P P **17 13 21.9 +0.1**
baz=270
N14K Kuskokwak Cree 63.31 33 P P **17 13 22.5 -0.2**
baz=271
E17K Hotham Inlet 63.33 25 P P **17 13 22.9 +0.1**
baz=267,SNR=6.6
K15K Wolf Creek Mou 63.36 31 P P **17 13 22.3 -0.8**
baz=270
L15K Ungalak Mounta 63.38 31 P P **17 13 22.8 -0.5**
baz=270
F17K Baldwin Pennin 63.54 26 P P **17 13 24.5 +0.3**
baz=268
O14K Tigyukauivet M 63.54 34 P P **17 13 24.6 +0.3**
baz=272
C18K Utukok River 63.64 23 IAmb IAmb 17 13 26.3
comp=Z,6.2nm,0.8s
C18K Utukok River 63.64 23 P P **17 13 25.3 +0.3**
baz=267
I17K Unalakleet 63.73 29 P P **17 13 25.8 +0.3**
baz=270
G17K Kiwalik Mounta 63.76 27 P P **17 13 25.9 +0.2**
baz=269
J16K Anvik River 63.78 30 P P **17 13 25.7 -0.1**
baz=270
M15K Kasigluk River 63.78 32 P P **17 13 26.1 +0.2**
baz=272
E18K Tukpahlearik C 63.82 25 IAmb IAmb 17 13 28.5
comp=Z,11nm,0.8s
E18K Tukpahlearik C 63.82 25 P P **17 13 26.4 +0.4**
baz=268,SNR=9.3
H17K Granite Mounta 64.07 28 P P **17 13 28.1 +0.3**
baz=270
N15K Kwethluk River 64.10 33 P P **17 13 27.7 -0.3**
baz=272
F18K Selawik 64.18 26 P P **17 13 28.8 +0.4**
baz=270,SNR=19
SDPT Sand Point 64.18 38 P P **17 13 29.4 +0.8**
baz=274
C19K Lookout Ridge 64.24 23 P P **17 13 29.6 +0.7**
baz=268
O15K Ungalikthiuk R 64.28 34 P P **17 13 29.9 +0.7**
baz=273
L16K Owhat River 64.34 31 P P **17 13 31.0 +1.5**
L16K IAmb IAmb 17 13 31.6
comp=Z,17nm,1.1s
L16K Owhat River 64.34 31 P P **17 13 30.8 +1.3**
baz=272
G18K Tagagawik 64.59 27 IAmb IAmb 17 13 33.2
comp=Z,10nm,1.0s
G18K Tagagawik 64.59 27 P P **17 13 32.4 +1.3**
baz=271
M16K Timber Creek 64.62 32 P P **17 13 32.8 +1.4**
baz=273
H18K Honhosa River 64.72 27 P P **17 13 33.2 +1.1**
baz=272
CHNA Chernabura Isl 64.74 39 P P **17 13 33.2 +0.9**
baz=275
N16K Nishlik Lake 64.74 33 P P **17 13 33.7 +1.5**
baz=273
D19K Kuna River 64.77 24 P P **17 13 34.1 +1.8**
baz=270
K17K Iditarod 64.84 30 P P **17 13 33.7 +0.9**
baz=273
L17K Donlin 64.88 31 P P **17 13 34.1 +1.1**
baz=273
F19K Shaleruckik Mo 64.92 26 P P **17 13 33.9 +0.6**
baz=271
B20K Mede River 65.11 22 P P **17 13 35.1 +0.8**
baz=270
E19K Redstone River 65.12 25 IAmb IAmb 17 13 36.5
comp=Z,12nm,0.8s
E19K Redstone River 65.12 25 P P **17 13 35.6 +1.0**
baz=272
O16K Kokwok River B 65.14 34 P P **17 13 35.2 +0.4**
baz=274
G19K Purcell Mounta 65.22 26 IAmb IAmb 17 13 36.9
comp=Z,9nm,1.4s
G19K Purcell Mounta 65.22 26 P P **17 13 36.3 +1.1**
baz=272
P16K Nushagak River 65.24 34 P P **17 13 35.8 +0.4**
baz=275
A21K Barrow 65.28 21 P P **17 13 36.8 +1.3**
baz=270
D20K Etivluk River 65.32 23 P P **17 13 37.2 +1.4**
baz=272
M17K Holitna River 65.33 32 P P **17 13 37.0 +1.0**
baz=274
GCSA Galena City Sc 65.37 28 P P **17 13 37.2 +1.1**
baz=273
GNI Garni 65.45 305 LR LR 17 46 28.1
comp=Z,94nm,18.5s,baz=74,slow=40
H19K Roundabout Mou 65.51 27 P P **17 13 38.8 +1.8**
baz=273
N17K Nushagak Hills 65.52 32 P P **17 13 38.2 +0.9**
baz=275
J18K Innoko River 65.52 29 IAmb IAmb 17 13 39.0
comp=Z,9.5nm,0.9s
J18K Innoko River 65.52 29 P P **17 13 38.5 +1.2**
baz=274
L18K Granite Mounta 65.62 31 IAmb IAmb 17 13 40.8
comp=Z,15nm,1.2s
L18K Granite Mounta 65.62 31 P P **17 13 39.3 +1.4**
baz=274
F20K Avaraart Lake 65.72 25 P P **17 13 39.0 +0.6**
baz=273
A22K Sinclair Lake 65.82 21 P P **17 13 40.1 +1.1**
baz=272
KLMR Klimovskoe 65.89 328 *e*P P **17 13 41.1 +1.5**
KLMR pmax pmax
comp=Z,26nm,1.6s
C21K Knifeblade Rid 65.96 23 P P **17 13 41.1 +1.1**
baz=273
J19K Poorman 65.97 29 P P **17 13 41.3 +1.2**
baz=275
P17K Kvichak River 66.02 34 P P **17 13 41.3 +0.8**
baz=276
M18K Stony River 66.09 31 P P **17 13 42.3 +1.3**
baz=276
N18K Kilae Creek 66.14 32 P P **17 13 42.4 +1.1**
baz=276
H20K Anotleneega Mo 66.17 27 P P **17 13 42.6 +1.2**
baz=274
KIV Kislovodsk 66.26 309 *e*P P **17 13 45.2 +2.7**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,88nm,17.0s
B22K Teshekpuk Lake 66.37 22 P P **17 13 43.9 +1.4**
baz=274
I20K Naaghedeneel 66.39 28 P P **17 13 43.9 +1.1**
baz=275
Q17K Contact Creek 66.41 35 P P **17 13 44.2 +1.1**
baz=277
L19K White Mountain 66.48 31 P P **17 13 43.9 +0.4**
baz=276
O18K Koktuh Hills 66.57 33 P P **17 13 44.8 +0.8**
baz=277
F21K Alatna River 66.58 25 P P **17 13 44.5 +0.5**
baz=275
J20K Nowinta River 66.60 28 P P **17 13 45.3 +1.1**
baz=276
P18K Big Mountain, 66.61 34 P P **17 13 45.5 +1.1**
baz=277
G21K Allakaket 66.64 26 P P **17 13 45.4 +1.1**
baz=275
K20K Telida 66.72 29 IAmb IAmb 17 13 47.5
comp=Z,8.7nm,0.8s
K20K Telida 66.72 29 P P **17 13 45.3 +0.4**
baz=276
D22K Ayikyak River 66.74 23 P P **17 13 45.5 +0.5**
baz=275
N19K Bonanza Creek 66.81 32 P P **17 13 46.2 +0.5**
baz=277
Q18K Katmai Hardscr 66.82 34 P P **17 13 45.8 0.0**
baz=277
H21K Melozitna Rive 67.01 27 P P **17 13 47.7 +1.0**
baz=276,SNR=12
M20K Styx River 67.33 31 P P **17 13 49.4 +0.4**
baz=278
I21K Tanana 67.41 27 IAmb IAmb 17 13 51.8
comp=Z,13nm,0.9s
I21K Tanana 67.41 27 P P **17 13 50.2 +1.0**
baz=277
CHUM Lake Minchumin 67.43 29 P P **17 13 50.3 +0.9**
baz=278,SNR=5.4
D23K Nanushuk River 67.45 23 P P **17 13 50.5 +1.0**
baz=277
Q19K Cape Douglas, 67.48 34 P P **17 13 49.9 0.0**
baz=278
SII Sitkinak Islan 67.56 37 P P **17 13 50.8 +0.4**
baz=279
H22K Ishtalitna Cre 67.57 26 P P **17 13 51.2 +0.9**
baz=278
P19K Oil Pt 67.59 33 P P **17 13 51.6 +1.0**
baz=278
PPLA Purkeypile 67.62 30 P P **17 13 51.6 +0.7**
baz=278
COLD Coldfoot 67.85 25 IAmb IAmb 17 14 20.4
comp=Z,8.3nm,1.2s
COLD Coldfoot 67.85 25 P P **17 13 53.4 +1.3**
baz=278
SPCR Spurr Chakacha 67.86 31 P P **17 13 52.9 +0.6**
baz=279
TOLK Toolik Lake Re 67.89 23 IAmb IAmb 17 13 54.7
comp=Z,11nm,0.8s
TOLK Toolik Lake Re 67.89 23 P P **17 13 53.4 +1.1**
baz=278
OHAK Old Harbor 67.94 36 P P **17 13 53.4 +0.7**
baz=279
BPAW Bear Paw Mtn. 67.98 28 IAmb IAmb 17 13 54.9
comp=Z,8.2nm,0.8s
BPAW Bear Paw Mtn. 67.98 28 P P **17 13 53.4 +0.5**
baz=279
G23K Bananza Creek 68.00 25 P P **17 13 53.8 +0.8**
baz=278
SKT Skwentna 68.06 31 P P **17 13 54.4 +0.9**
baz=279
OBN Obninsk 68.21 322 ⇑ *e*P P **17 13 55.7 +1.2**
OBN *e* 17 14 23.5
OBN *e* 17 16 29.7
OBN *e*SS SS 17 27 14.1 -1.3
OBN pmax pmax
comp=Z,3.0nm,0.9s
HOM Homer 68.38 33 P P **17 13 56.5 +1.1**
baz=280
TRF Thorofare Moun 68.39 29 P P **17 13 56.3 +0.6**
baz=279
CAPN Captain Cook N 68.44 32 P P **17 13 56.2 +0.4**
baz=280
I23K Minto, Yukon-K 68.51 27 P P **17 13 57.1 +1.0**
baz=280
SUA Susitna One 68.51 31 P P **17 13 56.1 -0.3**
baz=280
NEA2 Nenana 68.73 28 P P **17 13 58.9 +1.4**
baz=280,SNR=9.5
M22K Willow 68.76 31 P P **17 13 58.1 +0.3**
baz=280
BRSE Bradley Lake S 68.82 33 P P **17 13 58.8 +0.5**
baz=280
D25K Kavik River 68.92 22 P P **17 13 59.1 +0.3**
baz=281
MCK McKinley 68.94 28 P P **17 13 59.5 +0.6**
baz=280
H24K Noodor Dome 69.00 26 IAmb IAmb 17 14 02.3
comp=Z,13nm,1.2s
H24K Noodor Dome 69.00 26 P P **17 14 00.1 +0.8**
baz=281,SNR=5.6
G24K Hadweenzic Riv 69.00 25 IAmb IAmb 17 14 02.1
comp=Z,16nm,1.1s
G24K Hadweenzic Riv 69.00 25 P P **17 13 59.8 +0.6**
baz=281
PMR Palmer 69.25 31 P P **17 14 01.8 +1.0**
baz=281
WAT1 Susitna Watana 69.28 29 P P **17 14 01.7 +0.6**
baz=281
C26K Camden Bay 69.31 22 P P **17 14 02.1 +1.1**
baz=282
POKR Poker Plat Res 69.31 27 IAmb IAmb 17 14 03.6
comp=Z,16nm,1.1s
POKR Poker Plat Res 69.31 27 P P **17 14 02.3 +1.0**
baz=281
SEW Seward 69.39 32 P P **17 14 02.2 +0.5**
baz=281
E25K Arctic Village 69.44 24 IAmb IAmb 17 14 05.4
comp=Z,9.2nm,1.2s
E25K Arctic Village 69.44 24 P P **17 14 03.6 +1.6**
baz=282
F25K Christian Rive 69.52 24 P P **17 14 03.5 +1.0**
baz=282
SML Sawmill 69.58 30 P P **17 14 03.8 +0.8**
baz=282
KNK Knik Glacier 69.60 31 P P **17 14 04.1 +1.0**
baz=282
ILAR Eielson Array 69.61 27 P P **17 14 02.8 -0.3**
comp=Z,1.5nm,0.7s,baz=267,slow=6.3,SNR=23
comp=Z,1.5nm,0.7s
ILAR Eielson Array 69.61 27 *e*P P **17 14 04.9 +1.8**
ILAR pmax pmax
comp=Z,2.0nm,0.7s
HDA Harding Lake 69.66 28 IAmb IAmb 17 14 04.3
comp=Z,9.0nm,1.0s
HDA Harding Lake 69.66 28 P P **17 14 03.8 +0.5**
baz=282
WAT6 Susitna Watana 69.69 30 P P **17 14 04.6 +0.8**
baz=282
DHY Denali Highway 69.75 29 P P **17 14 04.6 +0.4**
baz=282
C27K Jago River 69.78 22 P P **17 14 04.8 +0.8**
baz=283
M23K Glacier View 69.87 30 P P **17 14 05.2 +0.5**
baz=282
BMAR Burnt Mountain 69.96 24 **P** **17 14 05.7 +0.5**
PRP Porcupine Dome 70.02 26 P P **17 14 06.1 +0.5**
baz=283
SCM Sheep Creek Mo 70.04 30 P P **17 14 06.2 +0.4**
baz=283
F26K Sheenjek River 70.06 24 P P **17 14 06.8 +1.0**
baz=283
SPITS Spitsbergen Ar 70.17 348 LR LR 17 49 40.1
comp=Z,86nm,18.2s,baz=48,slow=40
ARCES ARCESS Array B 70.25 338 LR LR 17 49 15.8
comp=Z,73nm,18.1s,baz=36,slow=40
J25K Salcha River, 70.28 27 P P **17 14 08.2 +0.9**
baz=283
K24K Donnelly Dome 70.30 28 P P **17 14 07.8 +0.5**
baz=283
GLI Glacier Island 70.36 31 P P **17 14 08.3 +0.6**
baz=283
G26K Porcupine Rive 70.37 25 P P **17 14 09.2 +1.6**
baz=284
P23K Montague Islan 70.42 32 P P **17 14 09.8 +1.7**
baz=283
M24K Tolsona, Glenn 70.51 30 P P **17 14 09.8 +1.1**
baz=283
PAX Paxson 70.62 29 P P **17 14 10.6 +1.2**
baz=284
RIDG Independent Ri 70.71 28 P P **17 14 10.8 +0.9**
baz=284
KLU Klutina 70.77 31 P P **17 14 10.9 +0.6**
baz=284
D27M Malcolm River 70.81 22 IAmb IAmb 17 14 12.6
comp=Z,6.8nm,0.7s
D27M Malcolm River 70.81 22 P P **17 14 11.4 +1.0**
baz=286
HARP HAARP 70.90 29 P P **17 14 12.1 +1.1**
baz=284
SCRK Sand Creek 71.02 28 P P **17 14 12.6 +0.8**
baz=285
J26L Joseph Creek 71.07 27 IAmb IAmb 17 14 13.4
comp=Z,7.3nm,0.9s
J26L Joseph Creek 71.07 27 P P **17 14 12.6 +0.5**
baz=285
DOT Dot Lake 71.07 28 IAmb IAmb 17 14 14.1
comp=Z,12nm,1.0s
G27K Doyon Strip 71.22 25 IAmb IAmb 17 14 16.3
comp=Z,8.0nm,1.1s
G27K Doyon Strip 71.22 25 P P **17 14 13.9 +1.0**
baz=286
MENT Mentasta 71.41 29 IAmb IAmb 17 14 17.8
comp=Z,11nm,1.1s
H27K Steamboat Moun 71.43 25 IAmb IAmb 17 14 17.8
comp=Z,20nm,1.4s
H27K Steamboat Moun 71.43 25 P P **17 14 15.8 +1.6**
baz=286
E28M Babbage River 71.49 22 IAmb IAmb 17 14 16.4
comp=Z,7.0nm,0.7s
E28M Babbage River 71.49 22 P P **17 14 15.3 +0.8**
baz=287
BMRM Bremner River 71.52 31 P P **17 14 15.4 +0.6**
baz=285
L26K Log Cabin Wild 71.55 29 P P **17 14 15.0 +0.1**
baz=286
I27K Kandik River 71.57 26 IAmb IAmb 17 14 17.8
comp=Z,10nm,1.0s
I27K Kandik River 71.57 26 P P **17 14 15.5 +0.4**
baz=286
F28M Old Crow 71.66 24 IAmb IAmb 17 14 18.1
comp=Z,11nm,1.0s
F28M Old Crow 71.66 24 P P **17 14 16.4 +0.9**
baz=287

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
M26K	Nabesna, AK	71.88	29	P	P	17 14 17.5	+0.6
	baz=286						
KAIM	Kayak Island	71.89	32	P	P	17 14 17.7	+0.8
	baz=286						
E29M	Blow River	72.13	22	IAmb	IAmb	17 14 25.3	
	comp=Z,17nm,1.7s						
E29M	Blow River	72.13	22	P	P	17 14 19.7	+1.4
	baz=289						
MCARA	McCarthy VSAT	72.15	30	P	P	17 14 19.6	+1.1
	baz=286						
FINES	FINESS Array B	72.17	330	P	P	17 14 17.9	-0.7
	comp=Z,3.7nm,0.9s,baz=46,slow=5.5,SNR=6.7						
FINES				LR	LR	17 49 34.7	
	comp=Z,167nm,18.3s,baz=67,slow=39						
	comp=Z,3.7nm,0.9s						
L27K	Beaver Creek,	72.20	28	IAmb	IAmb	17 14 31.1	
	comp=Z,20nm,1.5s						
L27K	Beaver Creek,	72.20	28	P	P	17 14 19.2	+0.3
	baz=287						
I28M	Miner Creek	72.28	26	IAmb	IAmb	17 14 24.5	
	comp=Z,6.2nm,0.8s						
I28M	Miner Creek	72.28	26	P	P	17 14 20.0	+0.6
	baz=288						
CRQE	Cirque	72.29	31	P	P	17 14 20.1	+0.5
	baz=286						
M27K	Edge Creek, AK	72.39	29	P	P	17 14 20.8	+0.7
	baz=287						
G29M	Pine Creek	72.56	24	P	P	17 14 21.4	+0.5
	baz=289						
BVCY	Beaver Creek	72.82	29	P	P	17 14 23.4	+0.8
	baz=288						
DAWY	Dawson	72.94	27	IAmb	IAmb	17 14 25.3	
	comp=Z,6.8nm,0.8s						
DAWY	Dawson	72.94	27	P	P	17 14 23.9	+0.7
	baz=289						
I29M	Ogilvie Camp,	72.96	26	P	P	17 14 24.1	+0.9
	baz=289						
CTG	Chitna Glacier	73.05	30	P	P	17 14 24.6	+0.6
	baz=288						
F30M	Barrier River	73.14	23	P	P	17 14 25.0	+0.7
	baz=291						
YUK3	Moose Creek	73.20	29	P	P	17 14 26.3	+1.2
	baz=288						
J29N	Klondike Camp	73.30	26	IAmb	IAmb	17 14 29.3	
	comp=Z,11nm,0.7s						
J29N	Klondike Camp	73.30	26	P	P	17 14 26.3	+1.0
	baz=290						
AKASG	Malin Array Be	73.58	319	P	P	17 14 25.7	-1.4
	comp=Z,0.3nm,0.4s,baz=64,slow=5.8,SNR=1.7						
AKASG				LR	LR	17 48 13.7	
	comp=Z,123nm,19.5s,baz=58,slow=37						
	comp=Z,0.3nm,0.4s						
O28M	Mount Upton	73.64	30	P	P	17 14 27.9	+0.1
	baz=289						
YUK8	Steele Glacier	73.67	30	P	P	17 14 28.3	+0.4
	baz=289						
INK	Inuvik	73.68	22	IAmb	IAmb	17 14 29.2	
	comp=Z,7.8nm,0.9s						
INK	Inuvik	73.68	22	P	P	17 14 28.3	+0.9
	baz=292						
I30M	Mount Dempster	73.77	25	P	P	17 14 29.7	+1.5
	baz=291						
L29M	L29M	73.79	28	P	P	17 14 29.5	+1.3
	baz=290						
K29M	Barlow Dome	73.79	27	P	P	17 14 29.5	+1.2
	baz=290						
BRTR	Keskin Array B	73.83	307	P	P	17 14 29.1	0.0
	comp=Z,0.8nm,0.5s,baz=105,slow=2.4,SNR=6.9						
BRTR				LR	LR	17 51 41.7	
	comp=Z,54nm,18.1s,baz=52,slow=40						
	comp=Z,0.8nm,0.5s						
BRTR	Keskin Array B	73.83	307	eP	P	17 14 30.7	+1.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PINM	Pinnacle	73.83	31	P	P	17 14 29.7	+1.1
	baz=289						
M29M	Somme Creek	73.87	28	IAmb	IAmb	17 14 31.9	
	comp=Z,16nm,1.2s						
M29M	Somme Creek	73.87	28	P	P	17 14 30.1	+1.3
	baz=290						
F31M	Tsiigehtchic	73.93	23	IAmb	IAmb	17 14 30.5	
	comp=Z,8.4nm,0.8s						
F31M	Tsiigehtchic	73.93	23	P	P	17 14 29.6	+0.7
	baz=293						
G31M	Satah River	73.94	23	P	P	17 14 29.1	+0.2
	baz=292						
H31M	Peel River	74.34	25	P	P	17 14 31.5	+0.1
	baz=292						
YUK6	Outpost Mounta	74.43	30	P	P	17 14 31.7	-0.6
	baz=290						
MMAI	Mount Meron Ar	74.51	300	LR	LR	17 52 40.6	
	comp=Z,60nm,18.4s,baz=41,slow=40						
M30M	Minto, Yukon	74.55	28	P	P	17 14 33.2	+0.6
	baz=291						
O29M	Mount Kennedy	74.55	31	P	P	17 14 33.7	+0.8
	baz=290						
A36M	Sachs Harbour	74.62	17	IAmb	IAmb	17 14 34.7	
	comp=Z,8.5nm,1.1s						
A36M	Sachs Harbour	74.62	17	P	P	17 14 33.8	+0.9
	baz=299						
HYT	Haines Junctio	74.86	30	P	P	17 14 34.8	+0.1
	baz=291						
O30N	Mendenhall	75.53	30	P	P	17 14 39.4	+1.0
	baz=292						
M31M	Drury Creek, Y	75.73	28	P	P	17 14 40.6	+1.1
	baz=293						
WHY	Whitehorse	76.12	30	P	P	17 14 42.5	+0.6
	baz=293						
FARO	Faro, Yukon	76.16	28	P	P	17 14 42.9	+0.9
	baz=294						
C36M	Paulatuk	76.28	19	IAmb	IAmb	17 14 43.6	
	comp=Z,12nm,1.1s						
C36M	Paulatuk	76.28	19	P	P	17 14 42.9	+0.5
	baz=301						
SKAG	Skagway	76.39	31	P	P	17 14 44.1	+0.9
	baz=293						
P33M	Teslin, Yukon	77.24	30	P	P	17 14 49.4	+1.3
	baz=295						
MLR	Muntele Rosu	77.34	314	LR	LR	17 53 44.4	
	comp=Z,131nm,19.3s,baz=69,slow=39						
SIT	Sitka	77.35	33	P	P	17 14 49.7	+1.1
	baz=294						
HFS	Hagfors	78.29	331	P	P	17 14 52.5	-1.4
	comp=Z,2.4nm,0.8s,baz=86,slow=4.8,SNR=5.1						
HFS				LR	LR	17 52 57.6	
	comp=Z,258nm,19.4s,baz=64,slow=38						
	comp=Z,2.4nm,0.8s						
R33M	Jennings River	78.44	30	P	P	17 14 55.8	+0.9
	baz=297						
NB2	NORSAR Subarra	78.95	332	P	P	17 14 55.8	-1.7
	comp=Z,1.0nm,0.7s,baz=56,slow=5.6						
NOA	NORSAR Array B	78.95	332	P	P	17 14 56.0	-1.5
	comp=Z,1.5nm,0.8s,baz=60,slow=5.3,SNR=4.6						
NOA				LR	LR	17 52 10.2	
	comp=Z,118nm,20.3s,baz=260,slow=37						
	comp=Z,1.5nm,0.8s						
WRAK	Wrangell Islan	79.10	33	P	P	17 14 58.9	+0.5
	baz=296						
RES	Resolute Bay	79.23	9	LR	LR	17 54 21.5	
	comp=Z,57nm,18.1s,baz=4.5,slow=39						
DLBC	Dease Lake	79.31	31	P	P	17 14 59.3	-0.3
	baz=298						
TOAD	Toad River Com	81.29	29	P	P	17 15 11.4	+1.2
	baz=302						
VRAC	Vranov	81.65	320	LR	LR	17 55 33.2	
	comp=Z,126nm,18.9s,baz=38,slow=39						
YKA	Yellowknife Ar	83.41	23	P	P	17 15 19.9	-1.3
	comp=Z,2.6nm,0.7s,baz=309,slow=5.7,SNR=32						
	comp=Z,2.6nm,0.7s						
YKA	Yellowknife Ar	83.41	23	eP	P	17 15 22.3	+1.1
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GERES	GERESS Array B	83.55	321	P	P	17 15 22.4	0.0
	comp=Z,1.9nm,0.8s,baz=359,slow=6.7,SNR=4.8						
GERES				LR	LR	17 55 08.8	
	comp=Z,138nm,18.4s,baz=2.0,slow=37						
	comp=Z,1.9nm,0.8s						
DAVOX	Davos/Dischmat	86.82	320	LR	LR	17 59 11.5	
	comp=Z,152nm,18.6s,baz=81,slow=39						
BORG	Borgarnes	87.42	345	LR	LR	17 58 52.1	
	comp=Z,64nm,18.2s,baz=48,slow=38						
MBAR	Mbarara	91.00	270	LR	LR	17 59 33.4	
	comp=Z,39nm,18.1s,baz=66,slow=37						
PPT2	Papeete2	95.85	107	eLR	LR	17 47 20.3	
	comp=Z,66nm,26.2s						
LSZ	Lusaka	98.99	257	LR	LR	17 59 29.6	
	comp=Z,56nm,19.2s,baz=122,slow=34						
ESDC	Sonseca Array	99.15	320	LR	LR	18 07 42.6	
	comp=Z,154nm,19.3s,baz=32,slow=39						
NVL	N'lazarevskaya	118.53	201	ePKIKP	PKiKP	17 21 41.3	+0.3
NVL				e		17 22 58.3	
NVL				ePPP	PPP	17 25 28.6	
NVL				e		17 28 52.2	
NVL				eSS	SS	17 39 16.1	+2.7
NVL				eSSS	SSS	17 43 38.9	
NVL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,390nm,18.0s						

MEX 03 17:08:38.6±0.5**, 19°.46N**×**102°.07W, h28**km±5km**,**
Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.04	189	eP	Pb	17 08 41.6	-1.9
URUA				eS	Sb	17 08 44.7	-2.2
MMIG	Aquila	1.68	226	eP	Pn	17 09 04.3	-1.8
MMIG				eS	Sn	17 09 23.5	-3.2
CEGR	Campo Tres	1.69	268	eP	Pn	17 09 04.5	-2.0
CEGR				eS	Sn	17 09 24.1	-3.2
CDAR	Ciudad de Arme	1.91	255	eP	Pn	17 09 07.3	-2.0
CDAR				eS	Sn	17 09 29.5	-2.9
ZIIG	Zihuatanejo	1.93	163	eP	Pb	17 09 11.7	-1.4
ZIIG				eS	Sb	17 09 37.7	+1.0
ARIG	Puente Sto Nin	2.00	125	eP	Pb	17 09 13.8	-0.7
CJM	Chamela	2.81	271	eS	Sn	17 09 54.4	-0.3

*OSPL **03** 17:12:47.1±1.2, 19°.17N×67°.62W, h0km±7km, ML2.7, Presumed earthquake*
*RSPR **03** 17:12:48.6, 18°.91N×67°.93W, h7km±31km*
*SDD **03** 17:12:50.7±2.6, 18°.87N×67°.65W, h0km±12km, MD3.2, ML3.1, MW3.4, Presumed earthquake*
NEIC 03 17:12:47.0±1.9**, 19°.12N**±0°.02×**67°.55W**±0°.04**, h10**km±1km**,**
ML3.1/35**, ML2.2**(RSPR)**, 24C-1D, Error ellipse:**
s-maj=7.3km s-min=3.4km az=251.0, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.73	174		Pg	17 13 00.8	-0.4
IDE					Sg	17 13 10.1	-0.7
IDE	Isla Desecheo	0.73	174	⇑eP	Pg	17 13 00.8	-0.4
IDE				eS	Sg	17 13 10.1	-0.7
AGPR	Aguadilla, PR	0.77	147		Pb	17 13 02.4	-0.2
AGPR				IAML		17 13 13.7	
	611nm,0.4s						
AGPR				IAML		17 13 20.7	
	524nm,0.3s						
AGPR	Aguadilla, PR	0.77	147	⇓iP	Pb	17 13 02.6	+0.1
AGPR				⇑iS	Sg	17 13 10.5	-1.5
AGPR				IAML		17 13 16.3	
	comp=N,407nm,0.1s						
AGPR	Aguadilla, PR	0.77	147	⇑eP	Pb	17 13 02.7	+0.2
AGPR				eS	Sb	17 13 14.1	+1.0
AGPR	Aguadilla, PR	0.77	147	i P	Pb	17 13 02.5	-0.1
AGPR				eS	Sb	17 13 13.4	+0.3
AGPR				IAML		17 13 18.7	
	comp=Z,242nm,0.2s						
AGPR	Aguadilla, PR	0.77	147	i P	Pb	17 13 02.5	-0.1
AGPR				eS	Sb	17 13 12.9	-0.2
AGPR				IAML		17 13 18.7	
	comp=Z,242nm,0.2s						
PRSN	Puerto Rico Se	0.98	157		Pg	17 13 04.9	-1.0
PCDR	Punta Cana, DR	0.99	233	⇑iP	Pg	17 13 03.9	-2.1
PCDR				⇑iS	Sg	17 13 15.6	-3.3
PCDR				IAML		17 13 19.6	
	comp=N,293nm,0.6s						
PCDR				IAML		17 13 22.7	
	comp=N,477nm,0.4s						
LSP	Las Mesas	1.04	155		Pg	17 13 06.8	-0.2
LSP					Sn	17 13 22.1	-0.1
LSP	Las Mesas	1.04	155	⇑eP	Pg	17 13 06.8	-0.2
LSP				eS	Sn	17 13 22.1	-0.1
EMPR	Esperanza - Ma	1.16	123		Pg	17 13 11.7	+2.4
EMPR					Sn	17 13 27.6	+2.4
EMPR	Esperanza - Ma	1.16	123	⇑eP	Pg	17 13 11.7	+2.4
EMPR				eS	Sn	17 13 27.6	+2.4
UUPR	Utuado, UPR, P	1.17	137		Pb	17 13 08.8	-0.6
CRPR	Cabo Rojo, PR	1.19	159		Pb	17 13 08.6	-1.0
CRPR					Sn	17 13 26.8	+1.0
CRPR				IAML		17 13 27.2	
	comp=E,354nm,0.5s						
CRPR				IAML		17 13 28.9	
	comp=N,424nm,0.5s						
CRPR	Cabo Rojo, PR	1.19	159	⇑iP	Pb	17 13 08.6	-0.9
CRPR				⇑iS	Sb	17 13 23.4	-1.6
CRPR				IAML		17 13 28.8	
	comp=N,478nm,0.4s						
CRPR	Cabo Rojo, PR	1.19	159	⇑eP	Pb	17 13 09.3	-0.2
CRPR				eS	Sn	17 13 27.1	+1.3
CRPR	Cabo Rojo, PR	1.19	159	i P	Pb	17 13 09.1	-0.4
CRPR				eS	Sn	17 13 26.8	+1.0
CRPR				IAML		17 13 27.3	
	comp=Z,422nm,0.5s						
CRPR	Cabo Rojo, PR	1.19	159	i P	Pb	17 13 09.1	-0.4
CRPR				eS	Sn	17 13 26.7	+0.9
CRPR				IAML		17 13 27.3	
	comp=Z,422nm,0.5s						
HIDR	Higuey Centro	1.22	245	⇑iP	Pn	17 13 08.2	-2.0
HIDR				⇑iS	Sb	17 13 21.9	-4.1
HIDR				IAML		17 13 30.9	
	comp=N,444nm,0.2s						
MLPR	Magueyes Islan	1.24	157		Pn	17 13 09.7	-0.7
MLPR				IAML		17 13 29.3	
	comp=N,483nm,0.4s						
MLPR				IAML		17 13 30.4	
	comp=N,264nm,0.2s						
GBPR	Guanica, Bosqu	1.31	151		Pn	17 13 11.4	+0.1
GBPR	Guanica, Bosqu	1.31	151	⇑eP	Pn	17 13 11.4	+0.1
ECPR	Experimental S	1.38	125		Pn	17 13 12.4	0.0
ECPR	Experimental S	1.38	125	⇑eP	Pg	17 13 15.1	+1.6
ECPR				eS	Sg	17 13 34.7	+3.3
OBIP	Obispado Ponce	1.40	140		Pn	17 13 12.4	-0.2
OBIP	Obispado Ponce	1.40	140		Sg	17 13 32.4	+0.4
OBIP	Obispado Ponce	1.40	140	⇑eP	Pn	17 13 12.7	+0.1
OBIP				eS	Sg	17 13 32.4	+0.4
OBIP	Obispado Ponce	1.40	140	i P	Pn	17 13 12.6	0.0
OBIP				eS	Sg	17 13 32.4	+0.4
OBIP				IAML		17 13 37.0	
	comp=Z,90nm,0.5s						
OBIP	Obispado Ponce	1.40	140	i P	Pn	17 13 12.6	0.0
OBIP				eS	Sg	17 13 32.4	+0.4
OBIP				IAML		17 13 37.0	
	comp=Z,90nm,0.5s						
MIDR	Miches	1.42	265	i P	Pn	17 13 13.2	+0.3
MIDR				⇑iS	Sb	17 13 32.1	+0.3
MIDR				IAML		17 13 34.3	
	comp=N,262nm,0.3s						
MIDR				IAML		17 13 34.3	
	comp=N,262nm,0.3s						
SMDR	Samana, DR	1.55	276	⇑iP	Pb	17 13 15.8	0.0
SMDR				i S	Sg	17 13 37.2	+0.1
SMDR				IAML		17 13 39.3	
	comp=N,225nm,0.8s						
GCPR	Guaynabo City	1.61	120		Pb	17 13 16.9	+0.1
SJG	San Juan	1.67	127		Pb	17 13 17.1	-0.7
SJG				IAML		17 13 43.9	
	comp=N,166nm,0.5s						
SJG				IAML		17 13 47.2	
	comp=N,156nm,0.4s						
SJG	San Juan	1.67	127	⇑iP	Pb	17 13 17.9	+0.2
SJG				⇑iS	Sb	17 13 39.1	+0.3
SJG	San Juan	1.67	127	⇑eP	Pb	17 13 18.1	+0.3
SJG				eS	Sg	17 13 41.8	+1.2
SJG	San Juan	1.67	127	i P	Pb	17 13 17.1	-0.7
SJG				IAML		17 13 44.2	
	comp=Z,96nm,0.3s						
SJG	San Juan	1.67	127	i P	Pb	17 13 17.1	-0.7
SJG				IAML		17 13 44.1	
	comp=Z,96nm,0.3s						
DR12	Loma Pena Alta	1.76	259		Pb	17 13 19.0	-0.5
HATOM	Hato Mayor del	1.76	259	⇑iP	Pb	17 13 19.6	+0.1
HATOM				⇑iS	Sb	17 13 41.5	-0.1
HATOM				IAML		17 13 46.5	
	comp=N,134nm,0.5s						
PDPR	Patillas Dam,	1.82	127		Pn	17 13 19.1	+0.7
HUMP	Col San Antoni	1.89	121		Pn	17 13 20.1	+0.8
HUMP	Col San Antoni	1.89	121		Sg	17 13 47.6	0.0
HUMP	Col San Antoni	1.89	121		Pn	17 13 20.3	+1.0
HUMP				IAML		17 13 48.8	
	comp=N,84nm,0.4s						
HUMP				IAML		17 13 54.8	
	comp=N,95nm,0.2s						
HUMP	Col San Antoni	1.89	121	⇑eP	Pb	17 13 21.3	-0.2
HUMP				eS	Sg	17 13 47.6	0.0
CUPR	Culebra, Puert	2.30	110	Pn	Pn	17 13 25.4	+0.4
DR08	Loma La Naviza	2.34	267	⇑iP	Pb	17 13 28.4	-0.9
DR08				i S	Sn	17 13 55.5	+1.0
DR08				IAML		17 14 00.1	
	comp=N,2µm,0.2s						

*DJA **03** 17:14:14.6±0.7, 8°S±4°×12°3E±°, h124km±9km, M3.3/13, mb3.4/2, MLv3.3/13*
*IDC **03** 17:14:19.8±1.7, 9°.25S×124°.78E, h0km, mb3.3/1, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=28.8km s-min=22.6km az=88.0*
ISC 03 17:14:12.9±2.0**, 8°.5S**±0°.1×**123°.5E**±0°.1**, h133**km**, n15,**
σ**2.67**/18**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.30	263	P	Pn	17 14 40.2	+1.1
SOEI	Soe	1.45	151	P	Pn	17 14 43.3	+2.4
BATI	Baumata	1.72	176	Pn	Pn	17 14 46.5	+2.7
	60nm,0.3s,baz=68,slow=3.6,SNR=88						
BATI				Sn	Sn	17 15 10.1	+2.7
	20nm,0.3s,baz=129,slow=9.1,SNR=7.6						
BATI	Baumata	1.72	176	P	Pn	17 14 46.1	+2.3
BATI				S	Sn	17 15 11.5	+4.1
EDFI	Ende, Flores	1.85	262	P	Pn	17 14 46.7	+1.3
BASI	Baing, Sumba	3.40	239	P	Pn	17 15 06.5	+1.6
WSI	Waingapu	3.42	250	P	Pn	17 15 05.6	+0.5
WSI				S	Sn	17 15 45.6	+0.2
LBFI	Labuhan Bajo,	3.61	270	P	Pn	17 15 09.5	+1.8
WBSI	Waikabubak, Su	4.26	254	P	Pn	17 15 18.3	+2.0
DBNI	Kabupaten Domp	5.17	269	P	Pn	17 15 28.6	+0.1
	0.0nm6.6nm,1.7s						
PLAI	Plampang	5.71	266	P	Pn	17 15 35.0	-0.7
FITZ	Fitzroy Crossi	9.77	168	Pn	Pn	17 16 28.0	-2.2
	0.3nm,0.3s,baz=355,slow=10.0,SNR=11						
FITZ				Sn	Sn	17 18 12.0	-6.3
	0.6nm,0.3s,baz=258,slow=21,SNR=6.8						
	1.0nm,0.4s						
WRA	Warramunga Arr	15.46	139	Pn	Pn	17 17 41.5	-2.5
	0.2nm,0.3s,baz=321,slow=13,SNR=7.0						
WRA				Sn	Sn	17 20 21.9	-14
	0.2nm,0.3s,baz=320,slow=18,SNR=4.7						
	0.5nm,0.6s						
ASAR	Alice Springs	18.07	148	Pn	Pn	17 18 16.1	+0.5
	0.1nm,0.3s,baz=323,slow=12,SNR=9.1						
	0.6nm,0.6s						
MKAR	Makanchi Array	66.14	330	P	P	17 25 17.5	+31
	0.1nm,0.3s,baz=116,slow=6.6,SNR=5.9						
	0.1nm,0.3s						

*IDC **03** 17:16:16.1±8.9, 31°.25S×179°.61W, h366km±102km, mb2.7/2, mbtmp3.4/2, Error ellipse: s-maj=107.5km s-min=42.0km az=2.0*
*WEL **03** 17:16:16.1±1.2, 31°S±11°×17°8W±2°9, h228km±22km, M4.6/8, mB5.0/7, ML4.6/8, MLv5.0/8, Mw(mB)4.3/7, Error ellipse: s-maj=39.6km s-min=7.3km az=108.1*
ISC 03 17:16:10.7±1.6**, 31°.2S**±0°.1×**178°.4W**±0°.2**, h300**km**, n23,**
σ**2.04**/26**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.99	13	P	Pn	17 16 59.1	+1.5
MXZ	Matakaoa Point	6.88	202	P	Pn	17 17 51.2	+0.6
MXZ				S	S	17 19 09.5	-1.8
WMGZ	Waiomatatini S	7.09	201	P	Pn	17 17 54.2	+1.1
WMGZ				S	S	17 19 14.2	-1.6
GRZ	Great Barrier	7.15	224	P	Pn	17 17 55.5	+1.7
PKGZ	Pakihiroa	7.24	202	P	Pn	17 17 57.5	+2.7
PKGZ				S	S	17 19 17.3	-1.8
HAZ	Te Kaha	7.24	204	P	Pn	17 17 56.1	+1.2
HAZ				S	S	17 19 17.3	-1.8
WIZ	White Island	7.26	209	P	Pn	17 18 00.0	+4.8
KUZ	Kuaotunu	7.35	220	P	Pn	17 17 57.9	+1.6
PUZ	Puketiti	7.37	201	P	Pn	17 17 59.9	+3.4
PUZ				S	S	17 19 22.5	+0.4
RUGZ	Raukumara Rang	7.46	204	P	Pn	17 17 58.5	+0.8
TWGZ	Tauwhareparae	7.55	202	P	Pn	17 18 03.6	+4.8
TWGZ				S	S	17 19 26.2	0.0
WHRZ	Whale Island	7.63	208	P	Pn	17 18 05.4	+5.7
WCZ	Waipu Caves	7.65	230	P	Pn	17 18 00.5	+0.5
CNGZ	Carnagh Statio	7.76	200	P	Pn	17 18 02.9	+1.6
OPRZ	Ohinepanea	7.80	211	P	Pn	17 18 06.3	+4.5
TKGZ	Te Karaka	7.83	202	P	Pn	17 18 01.9	-0.2
MWZ	Matawai	7.84	204	P	Pn	17 18 02.1	-0.2
MWZ				S	S	17 19 32.1	-0.7
MARZ	Manawahe	7.87	209	P	Pn	17 18 05.8	+3.2
URZ	Urewera	7.93	206	P	Pn	17 18 04.7	+1.4
	41nm,0.3s,baz=317,slow=2.5,SNR=78						
URZ				S	S	17 19 32.9	-1.7
	24nm,0.3s,baz=70,slow=22,SNR=14						
RAGZ	Rawiri	8.03	204	P	Pn	17 18 07.3	+2.7
ASAR	Alice Springs	42.70	268	P	P	17 23 30.7	-8.3
	0.4nm,0.8s,baz=105,slow=6.8,SNR=5.5						
	0.4nm,0.8s						
WRA	Warramunga Arr	43.76	273	P	P	17 23 38.8	-8.7
	0.3nm,0.3s,baz=111,slow=8.1,SNR=6.5						
	0.3nm,0.3s						
FINES	FINESS Array B	145.77	339	PKPbc	PKPdf	17 35 10.1	-2.8
	7.2nm,1.0s,baz=45,slow=4.1,SNR=13						

*IDC **03** 17:25:34.0±1.0, 2°.65S×139°.04E, h0km, mb3.6/5, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=22.9km s-min=13.6km az=180.0*
ISC 03 17:25:39.1±1.0**, 2°.7S**±0°.1×**139°.0E**±0°.2**, h37**km**, n7,** σ**0.63**/7**,**
mb3.6/5**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.67	83	Pg	Pn	17 26 06.0	+0.1
	8.0nm,0.3s,baz=258,slow=9.3,SNR=46						
JAY				Lg	Lg	17 26 25.6	
	10nm,0.3s,baz=261,slow=22,SNR=5.6						
WRA	Warramunga Arr	17.71	195	P	Pn	17 29 42.4	-0.6
	0.3nm,0.3s,baz=18,slow=12,SNR=9.1						
	1.0nm,0.6s						
ASAR	Alice Springs	21.40	193	P	P	17 30 24.4	+0.7
	0.7nm,0.8s,baz=21,slow=9.5,SNR=14						
	0.7nm,0.8s						
MKAR	Makanchi Array	70.01	322	P	P	17 36 47.8	+0.6
	0.6nm,0.5s,baz=110,slow=7.8,SNR=13						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	73.94	325	P	P	17 37 10.7	+0.1
	0.7nm,0.9s,baz=122,slow=7.0,SNR=4.0						
	0.7nm,0.9s						
BVAR	Borovoye Array	79.52	325	P	P	17 37 41.7	-0.4
	0.3nm,0.4s,baz=107,slow=7.7,SNR=2.9						
	0.3nm,0.4s						
ILAR	Eielson Array	85.72	24	P	P	17 38 13.6	-0.5
	0.5nm,0.7s,baz=261,slow=3.5,SNR=7.0						
	0.5nm,0.7s						

IDC 03 17:34:54.9±18.0**, 21°.41N**×**142°.94E, h438**km±212km**,**
mb3.0/8**, mbtmp3.8**/8**, Error ellipse: s-maj=67.5km**
s-min=29.2km az=62.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.95	192	P	P	17 42 05.0	-1.0
	0.3nm,0.9s,baz=7.3,slow=8.5,SNR=5.0						
	0.3nm,0.9s						
ASAR	Alice Springs	45.66	192	P	P	17 42 35.7	+0.8
	0.3nm,1.0s,baz=12,slow=6.5,SNR=4.0						
	0.3nm,1.0s						
KURBB	Kurchatov Arra	57.57	317	P	P	17 44 00.8	-0.4
	0.4nm,0.6s,baz=92,slow=7.5,SNR=3.8						
	0.4nm,0.6s						
BVAR	Borovoye Array	62.74	320	P	P	17 44 36.0	+0.2
	0.6nm,0.3s,baz=89,slow=7.6,SNR=7.8						
	0.6nm,0.3s						
YKA	Yellowknife Ar	76.81	28	P	P	17 45 59.8	-0.3
	0.2nm,0.4s,baz=296,slow=5.8,SNR=2.4						
	0.2nm,0.4s						
ARCES	ARCESS Array B	79.12	341	P	P	17 46 13.6	+1.1
	6.4nm,1.0s,baz=67,slow=3.7,SNR=2.0						
	6.4nm,1.0s						
FINES	FINESS Array B	83.34	334	P	P	17 46 33.8	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.1nm,0.6s,baz=69,slow=5.5,SNR=6.0						
	1.1nm,0.6s						
HFS	Hagfors	88.90	337	P	P	17 47 00.7	-0.5
	3.2nm,1.0s,baz=57,slow=5.3,SNR=2.5						
	3.2nm,1.0s						

ISK 03 17:37:06.1, 38.38N×39.10E, h5km, ML2.3/11
AFAD 03 17:37:07.0, 38.37N×39.09E, h7km±2km, ML2.5
ISC 03 17:37:06.9±0.9, 38.37N±0.03×39.10E±0.03, h8km±9km, n18, σ0.49/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.16	325	P	Pg	17 37 10.7	+0.4
ELZG				S	Sg	17 37 12.9	+0.2
ELZG				IAML		17 37 13.0	
	comp=E,2μm,0.3s						
ELZG				IAML		17 37 14.0	
	comp=N,2μm,0.3s						
SVRC	Sivrice-ELAZID	0.16	87	Pg	Pg	17 37 10.0	-0.4
SVRC				Sg	Sg	17 37 12.3	-0.6
ELZ	Elazig	0.33	15	P	Pg	17 37 13.4	0.0
ELZ				S	Sg	17 37 18.4	+0.5
ELZ				IAML		17 37 20.0	
	comp=E,554nm,0.3s						
ELZ				IAML		17 37 22.0	
	comp=N,433nm,0.8s						
MDNT	Maden	0.46	87	P	Pg	17 37 16.2	+0.4
MDNT				S	Sg	17 37 22.5	+0.6
MDNT				IAML		17 37 24.0	
	comp=N,225nm,0.3s						
MAYA	Malatya/Merkez	0.53	265	P	Pg	17 37 17.5	+0.3
MAYA				S	Sb	17 37 25.5	-0.9
MAYA				IAML		17 37 27.0	
	comp=E,398nm,0.3s						
NARI	Adyaman-Kaht	0.55	209	P	Pb	17 37 18.6	-0.2
NARI				S	Sb	17 37 26.2	-0.7
KOVA	Elazig, Kovanc	0.65	59	P	Pb	17 37 19.9	-0.6
MCKZ	Bingol	0.75	353	P	Pg	17 37 21.3	-0.1
MCKZ				S	Sg	17 37 31.3	0.0
DYBB	Diyarbakir	0.92	117	Pg	Pb	17 37 25.4	+0.3
URFA	Urfa	0.95	193	Pg	Pg	17 37 24.6	-0.6
URFA				Sg	Sb	17 37 38.8	+0.4
ILIC	ilic-Erzincan	1.16	339	Pn	Pg	17 37 28.5	-0.6
ILIC				Sn	Sb	17 37 44.7	+0.3
ERZN	Erzincan	1.31	22	Pn	Pn	17 37 31.4	-0.2
BNGB	Bingl	1.38	63	Pn	Pb	17 37 32.7	-0.3
SVAN	Silvan-Diyarba	1.67	97	Pn	Pn	17 37 36.7	+0.3
KARO	Karliova-Bingo	1.79	58	Pn	Pn	17 37 38.7	+0.5
GAZ	Gaziantep	1.91	232	Pn	Pn	17 37 40.3	+0.5
KMRS	Kahramanmaras	1.94	244	Pn	Pn	17 37 40.6	+0.5
GURO	Guroymak-BITLI	2.31	85	Pn	Pn	17 37 45.8	+0.5

AFAD 03 17:48:18.4, 38.43N×39.16E, h7km±1km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.15	295	P	Pg	17 48 22.1	+0.4
ELZG				S	Sg	17 48 24.4	+0.5
ELZG				IAML		17 48 25.0	
	comp=N,104nm,0.3s						
ELZG				IAML		17 48 25.0	
	comp=E,108nm,0.2s						
MDNT	Maden	0.41	95	P	Pg	17 48 26.7	+0.2
MDNT				S	Sg	17 48 32.6	+0.7
MCKZ	Bingol	0.70	348	P	Pg	17 48 32.0	+0.1
MCKZ				S	Sb	17 48 42.4	-0.6

ISK 03 17:48:40.0, 37.36N×38.60E, h2km, ML1.6/6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	Urfa	0.19	66	Pg	Pg	17 48 44.6	+0.9
URFA				Sg	Sg	17 48 48.3	+2.0
NARI	Adyaman-Kaht	0.54	14	P	Pn	17 48 53.5	-1.2
NARI				S	Sb	17 49 01.6	+1.2
GAZ	Gaziantep	1.12	261	Pn	Pb	17 49 02.5	+0.3
GAZ				Sn	Sn	17 49 18.9	-0.1
DYBB	Diyarbakir	1.36	64	Pn	Pb	17 49 06.7	+0.5
KMRS	Kahramanmaras	1.36	276	Pn	Pb	17 49 06.8	+0.6
SARI	SarD1z-Kayseri	2.02	302	Pn	Pn	17 49 16.2	+1.0
SVAN	Silvan-Diyarba	2.20	68	Pn	Pn	17 49 18.9	+1.2

IDC 03 17:51:53.7±0.7, 6.96N×126.40E, h0km, mb3.7/13, mbtmp3.8/14, ML3.0/1, MS3.2/15, Error ellipse: s-maj=16.3km s-min=10.0km az=17.0
NEIC 03 17:51:55.7±1.7, 6.92N±0.03×126.28E±0.06, h10km±1km, mb4.4/26, Error ellipse: s-maj=10.7km s-min=4.2km az=69.0
DJA 03 17:51:58.9±0.6, 7°N±5°×12°5E±°, h27km±9km, M4.7/17, mB5.1/6, mb4.8/17, MLv4.8/12, Mw(mB)4.5/6
ISC 03 17:51:55.2±0.5, 6.78N±0.06×126.11E±0.08, h10km, n71, σ1.55/56, mb4.3/28, MS3.2/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.60	299	Pg	Pg	17 52 09.8	+3.0
	732nm,0.3s,baz=206,slow=1.7,SNR=126						
DAV				Lg	Lg	17 52 21.5	
	1μm,0.3s,baz=291,slow=21,SNR=7.5						
DAV	Davao City (W)	0.60	299		Pg	17 52 09.6	+2.8
DAV	Davao City (W)	0.60	299	P	Pg	17 52 09.4	+2.5
SGSI	Sangihe	3.12	191	P	Pn	17 52 42.6	-2.0
SGSI				S	Sn	17 53 19.3	-2.7
TNTI	Ternate	6.10	168	Pn	Pn	17 53 27.1	+1.6
TNTI	Ternate	6.10	168	P	Pn	17 53 30.0	+4.5
	0.2nm56nm,1.4s						
GTOI	Gorontalo	6.84	207	P	Pn	17 53 29.4	-6.2
	0.5nm2μm126nm,0.7s						
MRSI	Marisa	7.51	214	P	Pn	17 53 38.9	-6.0
	1μm113nm,0.8s						
LUWI	Luwuk	8.45	203		Pn	17 53 57.7	-0.1
LUWI	Luwuk	8.45	203	P	Pn	17 53 56.0	-1.8
	1μm115nm,0.8s						
SANI	Sanana	8.77	181	P	Pn	17 54 01.3	-0.9
	35nm,1.7s						
APSI	Ampana	8.84	210	P	Pn	17 53 59.7	-3.4
	93nm,1.0s						
SIJI	Sorong	9.18	146	Pn	Pn	17 54 08.2	+0.4
	0.1nm,0.3s,baz=319,slow=20,SNR=2.5						
SIJI				LR	LR	17 57 07.4	
	comp=Z,39nm,21.4s,baz=266,slow=34						
	8.8nm,1.0s						
KAPI	Kappang	13.32	209	LR	LR	18 00 18.0	
	comp=Z,95nm,18.8s,baz=51,slow=37						
BATI	Baumata	17.05	188	LR	LR	18 04 13.9	
	comp=Z,106nm,18.8s,baz=324,slow=43						
QIZ	Qiongzhong	19.96	309	P	P	17 56 28.2	+0.4
QIZ				S	S	18 00 10.7	-1.8
QIZ				LR	LR		
	comp=N,230nm,17.5s						
QIZ				LR	LR		
	comp=E,270nm,10.6s						
QIZ				LR	LR		
	comp=Z,170nm,15.7s						
JOW	Kunigami	20.05	6	LR	LR	18 03 59.4	
	comp=Z,50nm,20.6s,baz=254,slow=37						
MTN	Manton Dam	20.12	166	P	P	17 56 30.7	+1.2
MTN				IAmb	IAmb	17 56 52.2	
	comp=Z,10nm,0.8s						
SNJI	Sawahan-Nganju	20.34	225	P	P	17 56 28.6	-3.5
KNRA	Kununurra	22.46	173		P	17 56 55.5	+0.7
KNRA				IAmb	IAmb	17 57 04.1	
	comp=Z,18nm,0.7s						
JNU	Nakatsue	26.59	9	LR	LR	18 09 39.7	
	comp=Z,27nm,18.3s,baz=210,slow=40						
COEN	Coen	26.67	141		P	17 57 34.8	+0.1
COEN				IAmb	IAmb	17 57 44.5	
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	27.61	163	P	P	17 57 43.8	+0.7
WB0				IAmb	IAmb	17 57 56.1	
	comp=Z,7.4nm,0.8s						
WRAB	Tennant Creek	27.75	163	P	P	17 57 44.6	+0.2
WRAB				IAmb	IAmb	17 58 15.3	
	comp=Z,5.8nm,0.9s						
WRA	Warramunga Arr	27.76	163	P	P	17 57 44.2	-0.2
	comp=Z,1.1nm,0.8s,baz=336,slow=9.6,SNR=5.6						
	comp=Z,1.1nm,0.8s						
WR8	Warramunga Arr	27.82	163	P	P	17 57 45.1	+0.1
WR8				IAmb	IAmb	17 58 09.6	
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	28.89	296	P	P	17 57 56.4	+1.9
	comp=Z,0.6nm,0.8s,baz=104,slow=9.3,SNR=9.2						
CMAR				LR	LR	18 08 48.9	
	comp=Z,30nm,21.4s,baz=105,slow=35						
	comp=Z,0.6nm,0.8s						
CMAR	Chiang Mai Arr	28.89	296	P	P	17 57 53.8	-0.7
LYN	LuoYang	30.37	337	P	P	17 58 15.0	+7.6
LYN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KSRS	Korea Array	30.58	3	P	P	17 58 07.7	-1.6
	comp=Z,0.4nm,0.5s,baz=186,slow=7.8,SNR=1.6						
KSRS				LR	LR	18 09 13.5	
	comp=Z,30nm,21.2s,baz=155,slow=34						
	comp=Z,0.4nm,0.5s						
AS31	Alice Springs	31.20	166		P	17 58 15.1	+0.2
ASAR	Alice Springs	31.20	166	P	P	17 58 15.8	+0.8
	comp=Z,0.9nm,0.6s,baz=345,slow=6.9,SNR=33						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	31.20	166	P	P	17 58 14.4	-0.5
MJAR	Matsushiro Arr	31.63	19	LR	LR	18 09 05.1	
	comp=Z,37nm,20.8s,baz=188,slow=33						
BJT	Baijiatuau	34.28	346	P	P	17 58 42.0	+0.4
BJT				IAmb	IAmb	17 58 51.1	
	comp=Z,4.7nm,0.7s						
LZDM	Lanzhou Array	35.57	328	P	P	17 58 53.0	-0.3
	comp=Z,0.3nm,0.4s,baz=146,slow=11,SNR=5.4						
	comp=Z,0.3nm,0.4s						
LZH	Lanzhou	35.59	328	eP	P	17 58 57.5	+4.3
LZH				pP	sP	17 59 05.6	+8.3
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
INKA	Innaminka	37.12	158	P	P	17 59 05.5	-0.7
FORT	Forrest	37.39	177	P	P	17 59 09.7	+1.3
FORT				IAmb	IAmb	17 59 12.6	
	comp=Z,8.1nm,1.0s						
ASAJ	Asahikawa	39.90	19	LR	LR	18 14 40.5	
	comp=Z,40nm,20.7s,baz=19,slow=34						
LSA	Lhasa	40.01	309	P	P	17 59 30.6	-0.4
GTA2	Gaotai	40.27	328	eP	P	17 59 34.0	+1.3
BBOO	Buckleboo	40.49	167	P	P	17 59 35.5	+1.1
STKA	Stephens Creek	41.18	160	P	P	17 59 41.1	+1.0
	comp=Z,2.7nm,0.6s,baz=339,slow=10,SNR=4.2						
STKA				LR	LR	18 20 39.5	
	comp=Z,47nm,18.0s,baz=210,slow=42						
	comp=Z,2.7nm,0.6s						
STKA	Stephens Creek	41.18	160		P	17 59 42.0	+1.8
ULN	Ulaanbaatar	44.05	342	P	P	18 00 02.7	-0.7
SONM	Songino Array	44.23	341	P	P	18 00 05.4	+0.5
	comp=Z,0.2nm,0.4s,baz=154,slow=7.8,SNR=4.7						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	44.23	341	IAmb	IAmb	18 00 12.6	
	comp=Z,3.7nm,1.4s						
PALK	Pallekele	45.05	274	LR	LR	18 19 35.6	
	comp=Z,26nm,18.6s,baz=91,slow=37						
PETK	Petropavlovsk-	52.88	23	P	P	18 01 10.4	-0.8
	comp=Z,3.8nm,1.0s,baz=239,slow=5.8,SNR=2.2						
	comp=Z,3.8nm,1.0s						
WUS	Wushi	53.91	317	P	P	18 01 17.7	-1.5
WUS				IAmb	IAmb	18 01 27.9	
	comp=Z,7.3nm,1.4s						
MKAR	Makanchi Array	54.72	324	P	P	18 01 24.7	-0.2
	comp=Z,0.5nm,0.6s,baz=124,slow=8.9,SNR=9.3						
MKAR				LR	LR	18 24 36.0	
	comp=Z,39nm,18.7s,baz=98,slow=36						
	comp=Z,0.5nm,0.6s						
MAKZ	Makanchi	54.91	324	P	P	18 01 25.0	-1.2
MAKZ				IAmb	IAmb	18 01 33.9	
	comp=Z,3.2nm,1.1s						
PRZ	Przheval'sk	55.02	318	P	P	18 01 27.8	+0.5
YAK	Yakutsk	55.20	2	P	P	18 01 26.6	-1.4
NIL	Nilore	55.61	306	P	P	18 01 30.7	-0.8
MA2	Magadan	55.93	15	LR	LR	18 24 53.4	
	comp=Z,26nm,20.2s,baz=112,slow=36						
ZALV	Zalesovo Beam	57.61	332	P	P	18 01 44.1	-1.3
	comp=Z,0.4nm,0.5s,baz=111,slow=7.9,SNR=4.0						
	comp=Z,0.4nm,0.5s						
AAK	Ala-Archa	57.71	317	LR	LR	18 28 39.3	
	comp=Z,74nm,19.4s,baz=71,slow=38						
DRK	Karamyk	58.49	313	P	P	18 01 51.1	-1.1
DRK				IAmb	IAmb	18 01 57.9	
	comp=Z,5.6nm,1.0s						
KURK	Kurchatov	58.86	327		P	18 01 53.0	-1.1
KURBB	Kurchatov Arra	58.86	327	P	P	18 01 53.2	-1.0
	comp=Z,1.7nm,0.9s,baz=122,slow=5.2,SNR=14						
	comp=Z,1.7nm,0.9s						
GAR	Garm	59.43	312		P	18 01 57.7	-0.9
KK31	Karatay Array	60.61	316	P	P	18 02 07.8	+1.4
KK31				IAmb	IAmb	18 02 11.7	
	comp=Z,3.0nm,0.9s						
KKAR	Karatay Array	60.61	316	P	P	18 02 05.2	-1.1
BVAR	Borovoye Array	64.45	326	P	P	18 02 30.8	-1.1
	comp=Z,0.8nm,0.9s,baz=137,slow=7.2,SNR=6.1						
	comp=Z,0.8nm,0.9s						
BORK	Borovoye	64.50	326	P	P	18 02 32.2	+0.1
BORK				IAmb	IAmb	18 02 36.5	
	comp=Z,2.8nm,0.9s						
AB31	Akbulak array	69.42	320	P	P	18 03 03.0	-0.5
AB31				IAmb	IAmb	18 03 09.5	
	comp=Z,3.3nm,1.1s						
ABKAR	Akbulak array	69.42	320	P	P	18 03 03.0	-0.5
ILAR	Eielson Array	82.64	26	P	P	18 04 18.5	-0.1
	comp=Z,0.2nm,0.8s,baz=238,slow=4.5,SNR=7.1						
	comp=Z,0.2nm,0.8s						
NOA	NORSAR Array B	95.80	334	LR	LR	18 54 42.7	
	comp=Z,25nm,18.5s,baz=290,slow=39						

GCG 03 17:56:00.3±1.1, 12.89N×91.17W, h27km±999km, MD4.3, Presumed earthquake
SNET 03 17:56:10.4±3.6, 13.66N×90.68W, h26km, ML3.5, Presumed earthquake
ISC 03 17:56:04.4±3.0, 13.1N±0.2×90.8W±0.1, h33km, n16, σ0.72/16, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG16	Alotenango, Sa	1.15	12	*i* P	Pb	17 56 26.8	+0.9
NUBE	Las Nubes	1.22	52	*e*P	Pb	17 56 27.6	+0.5
NUBE	Las Nubes	1.22	52	*e*P	Pb	17 56 27.6	+0.5
ESSG	Sabana Grande	1.24	357	*i* P	Pn	17 56 25.6	+0.1
CEVE	Cerro Verde	1.30	58	*e*P	Pb	17 56 28.7	+0.2
STG5	El Palmar, Qui	1.38	336	*i* P	Pb	17 56 30.1	+0.5
JAYA	Jayaque - finc	1.38	68	*e*P	Pb	17 56 30.4	+0.6
JAYA	Jayaque - finc	1.38	68	*i* P	Pb	17 56 30.0	+0.2
BOQS	Boqueron	1.56	68	*e*P	Pb	17 56 34.1	+1.2
LFRS	El Faro	1.73	74	*e*P	Pb	17 56 34.5	-1.1
LBRS	Las Brisas	1.78	70	*e*P	Pb	17 56 36.3	-0.1
SOKI	Kika Raxquin	1.78	340	*i* P	Pn	17 56 32.9	-0.4
MTO3	Montecristo	1.85	47	*e*P	Pb	17 56 37.5	-0.3
MTO3	Montecristo	1.85	47	*i* P	Pb	17 56 37.3	-0.4
APG	El Apazote	1.88	9	*i* P	Pb	17 56 37.0	-1.2
ESQI	Esquipulas	1.98	44	*e*P	Pb	17 56 40.1	+0.3

ISK 03 17:57:55.1, 38.39N×39.18E, h3km, ML3.0/10
AFAD 03 17:57:55.9, 38.43N×39.23E, h7km±3km, ML3.1
ISC 03 17:57:56.1±1.0, 38.41N±0.03×39.21E±0.02, h5km±8km, n21, σ0.56/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.09	112	Pg	Pg	17 57 57.8	-0.2
SVRC				Sg	Sg	17 57 59.6	+0.2
ELZG	Elazig	0.19	297	P	Pg	17 58 00.5	+0.5
ELZG				IAML		17 58 07.0	
	comp=N,3μm,0.3s						
ELZ	Elazig	0.28	0	P	Pg	17 58 01.5	0.0
ELZ				S	Sg	17 58 05.6	+0.4
ELZ				IAML		17 58 06.0	
	comp=N,5μm,0.4s						
MDNT	Maden	0.38	93	P	Pg	17 58 03.1	-0.2
MDNT				S	Sg	17 58 07.9	-0.3
KOVA	Elazig, Kovanc	0.56	58	P	Pg	17 58 06.7	-0.2
KOVA				S	Sg	17 58 14.1	0.0
MAYA	Malatya/Merkez	0.62	262	P	Pg	17 58 08.2	+0.2
MAYA				S	Sg	17 58 16.5	+0.4
MAYA				IAML		17 58 20.0	
	comp=N,577nm,0.7s						
NARI	Adyaman-Kaht	0.63	214	P	Pb	17 58 09.5	-0.2
MCKZ	Bingol	0.73	346	P	Pg	17 58 09.0	-1.1
MCKZ				S	Sg	17 58 19.0	-0.6
TNCL	Tunceli-Merkez	0.75	20	P	Pg	17 58 09.8	-0.7
TNCL				S	Sg	17 58 20.5	+0.2
DYBB	Diyarbakir	0.87	122	Pg	Pg	17 58 12.7	0.0
DYBB				Sg	Sb	17 58 25.4	-0.2
AZEY	Adyaman-Merk	0.96	232	P	Pb	17 58 15.6	+0.3
AZEY				S	Sn	17 58 30.6	+0.2
AKCD	Akcadag	1.01	264	P	Pg	17 58 15.4	-0.1
AKCD				S	Sg	17 58 29.2	+0.5
AKCD				IAML		17 58 32.0	
	comp=E,482nm,0.5s						
AKCD				IAML		17 58 33.0	
	comp=N,531nm,0.5s						
URFA	Urfa	1.01	198	Pg	Pg	17 58 14.3	-1.2
URFA				Sg	Sb	17 58 29.5	-0.4
ILIC	ilic-Erzincan	1.15	335	Pn	Pb	17 58 17.7	-0.9
BNGB	Bingl	1.29	63	Pn	Pb	17 58 21.1	+0.2
BNGB				Sn	Sn	17 58 39.8	+1.2
YEDI	Yedisu-Bingol	1.46	45	Pn	Pb	17 58 23.9	0.0
SVAN	Silvan-Diyarba	1.59	99	Pn	Pn	17 58 24.1	-0.8
KARO	Karliova-Bingo	1.70	58	Pn	Pn	17 58 27.2	+0.6
GAZ	Gaziantep	2.01	233	Pn	Pn	17 58 30.8	+0.1
KMRS	Kahramanmaras	2.03	244	Pn	Pn	17 58 31.0	-0.1
GURO	Guroymak-BITLI	2.22	86	Pn	Pn	17 58 34.6	+0.9

IDC 03 17:58:50.0±0.6, 54.66N×59.65W, h0km, mb3.9/15, mbtmp4.0/18, ML3.9/3, MS3.5/3, Error ellipse: s-maj=13.3km s-min=9.1km az=175.0
NEIC 03 17:58:50.9±2.0, 54.71N±0.05×59.9W±0.1, h11km±5km, mb4.3/30, Error ellipse: s-maj=10.3km s-min=6.8km az=94.0
OTT 03 17:58:51.0±0.3, 54.85N×59.59W, h18km, MN4.2/23
OTT Labrador Coast. Felt 14km east from Postville, Nl Felt in Postville, Nl.
ISC 03 17:58:50.6±0.4, 54.73N±0.05×60.07W±0.05, h10km, n102, σ2.40/129, mb4.2/26, MS3.7/3, Labrador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	3.92	274	Pn	Pn	17 59 54.1	+3.3
	32nm,0.3s,baz=82,slow=9.3,SNR=188						
SCHQ				Sn	Sn	18 00 42.1	+5.3
	77nm,0.3s,baz=19,slow=14,SNR=19						
SCHQ				Lg	Lg	18 00 55.5	
	42nm,0.3s,baz=234,slow=19,SNR=5.5						
SCHQ				LR	LR	18 01 37.9	
	comp=Z,232nm,19.3s,baz=78,slow=40						
	88nm,0.4s						
SCHQ	Schefferville	3.92	274		Pn	17 59 54.0	+3.3
SCHQ				Sn	Sn	18 00 41.7	+4.9
SCHQ	Schefferville	3.92	274	PN	Pn	17 59 54.2	+3.4
SCHQ				SN	Sn	18 00 41.8	+4.9
SCHQ				LG	Lg	18 01 00.6	
SCHQ				Trac		18 01 03.9	
	comp=Z,391nm,0.4s						
BJBQ	Baie Johan-Bee	4.75	202	PN	Pn	18 00 04.3	+2.1
BJBQ				SN	Sn	18 01 00.2	+2.8
BJBQ				LG	Lg	18 01 24.6	
BJBQ				Trac		18 01 25.4	
	comp=Z,250nm,0.4s						
PMAQ	Port Menier	5.56	210	PN	Pn	18 00 16.1	+2.8
PMAQ				SN	Sn	18 01 17.9	+0.7
PMAQ				LG	Lg	18 01 50.0	
PMAQ				Trac		18 01 55.2	
	comp=Z,534nm,0.5s						
DRLN	Deer Lake	5.71	163	Pn	Pn	18 00 15.2	-0.1
DRLN				Sn	Sn	18 01 13.0	-7.8
DRLN	Deer Lake	5.71	163	PN	Pn	18 00 15.1	-0.3
DRLN				SN	Sn	18 01 18.6	-2.3
DRLN				LG	Lg	18 01 50.2	
DRLN				Trac		18 01 52.1	
	comp=Z,246nm,0.5s						
KUQ	Kuujjuuaa	5.74	310		Pn	18 00 16.2	+0.5
KUQ				Sn	Sn	18 01 18.6	-2.9
KUQ	Kuujjuuaa	5.74	310	PN	Pn	18 00 16.4	+0.7
KUQ				SN	Sn	18 01 20.2	-1.2
KUQ				LG	Lg	18 01 53.1	
KUQ				Trac		18 01 54.8	
	comp=Z,198nm,0.4s						
ICQ	Pointe Anglais	6.84	223		Pn	18 00 32.4	+1.5
ICQ	Pointe Anglais	6.84	223	PN	Pn	18 00 32.4	+1.5
ICQ				SN	Sn	18 01 49.3	+0.5
ICQ				LG	Lg	18 02 29.5	
ICQ				Trac		18 02 41.8	
	comp=Z,172nm,0.5s						
SNFQ	Sainte-Felicit	7.39	221	PN	Pn	18 00 40.7	+2.4
SNFQ				SN	Sn	18 02 03.0	+0.8
SNFQ				LG	Lg	18 02 45.6	
SNFQ				Trac		18 02 47.7	
	comp=Z,229nm,0.6s						
BATG	Bathurst New B	8.36	209	Pn	Pn	18 00 52.3	+0.5
HSNB	Heath Steele M	8.36	209	PN	Pn	18 00 52.7	+1.0
HSNB				SN	Sn	18 02 24.9	-1.3
HSNB				LG	Lg	18 03 19.6	
HSNB				Trac		18 03 34.6	
	comp=Z,72nm,0.5s						
CACQ	Cacouna	8.99	225	PN	Pn	18 01 02.3	+2.0
CACQ				SN	Sn	18 02 41.0	-0.6
CACQ				LG	Lg	18 03 38.5	
CACQ				Trac		18 03 53.4	
	comp=Z,471nm,1.9s						
IVI	Ivigtut	9.05	39		Pn	18 00 59.4	-1.7
A64	Saint Simeon	9.25	226	PN	Pn	18 01 06.4	+2.5
A64				SN	Sn	18 02 46.4	-1.5
A64				LG	Lg	18 03 47.6	
A64				Trac		18 04 11.7	
	comp=Z,61nm,0.6s						
A21	Saint Andre	9.26	225	PN	Pn	18 01 05.4	+1.3
A21				SN	Sn	18 02 47.6	-0.7
A21				LG	Lg	18 03 46.9	
A21				Trac		18 03 53.4	
	comp=Z,157nm,0.8s						
GBN	Guysborough	9.38	186	Pn	Pn	18 01 05.7	+0.1
GBN	Guysborough	9.38	186	PN	Pn	18 01 05.8	+0.1
GBN				SN	Sn	18 02 47.8	-3.3
GBN				LG	Lg	18 03 46.7	
GBN				Trac		18 03 49.0	
	comp=Z,989nm,2.7s						
LMN	Caledonia Moun	9.39	201	Pn	Pn	18 01 06.4	+0.6
LMN	Caledonia Moun	9.39	201	PN	Pn	18 01 07.0	+1.2
LMN				SN	Sn	18 02 49.4	-2.0
LMN				LG	Lg	18 03 51.2	
LMN				Trac		18 03 57.2	
	comp=Z,151nm,0.9s						
A61	Sainte Mathild	9.44	226	PN	Pn	18 01 07.2	+0.7
A61				SN	Sn	18 02 52.0	-0.6
A61				LG	Lg	18 03 53.3	
A61				Trac		18 03 58.0	
	comp=Z,99nm,0.6s						
D62A	Allapoint, All	9.52	220		Pn	18 01 09.2	+1.5
A16	Riviere Ouelle	9.58	225	PN	Pn	18 01 09.7	+1.3
A16				SN	Sn	18 02 55.4	-0.6
A16				LG	Lg	18 04 02.0	
A16				Trac		18 04 02.1	
	comp=Z,105nm,0.5s						
LMQ	La Malbaie	9.65	226		Pn	18 01 10.2	+0.8
LMQ	La Malbaie	9.65	226	PN	Pn	18 01 10.6	+1.2
LMQ				SN	Sn	18 02 56.9	-0.9
LMQ				LG	Lg	18 04 00.4	
LMQ				Trac		18 04 10.5	
	comp=Z,92nm,0.7s						
LDAQ	Lac Daran	9.73	230		Pn	18 01 10.0	-0.5
LDAQ	Lac Daran	9.73	230	PN	Pn	18 01 10.8	+0.2
LDAQ				SN	Sn	18 02 57.7	-2.1
LDAQ				LG	Lg	18 04 02.2	
LDAQ				Trac		18 04 08.5	
	comp=Z,121nm,0.6s						
A54	Misere	9.76	226	PN	Pn	18 01 12.0	+1.1
A54				SN	Sn	18 02 57.7	-2.7
A54				LG	Lg	18 04 00.6	
A54				Trac		18 04 14.7	
	comp=Z,132nm,1.0s						
A11	Saint Roch-des	9.84	225	PN	Pn	18 01 12.7	+0.7
A11				SN	Sn	18 03 00.3	-2.1
A11				LG	Lg	18 04 06.4	
A11				Trac		18 04 12.6	
	comp=Z,89nm,0.5s						
FRB	Frobisher Bay	10.02	338	Pn	Pn	18 01 14.9	+0.5
	2.2nm,0.3s,baz=160,slow=12,SNR=20						
FRB				Sn	Sn	18 03 03.1	-3.6
	2.4nm,0.3s,baz=248,slow=7.5,SNR=5.1						
FRB				Lg	Lg	18 03 56.3	
	5.8nm,0.3s,baz=232,slow=20,SNR=9.8						
	5.1nm,0.4s						
FRB	Frobisher Bay	10.02	338	PN	Pn	18 01 13.1	-1.2
FRB				SN	Sn	18 03 00.3	-6.4

FRB				LG	Lg	18 04 01.9	
FRB				Trac		18 04 31.0	
	comp=Z,29nm,0.4s						
E62A	Clayton Lake	10.09	220	Pn	Pn	18 01 16.8	+1.4
NRS	Narsarsuaq	10.09	44	Pn	Pn	18 01 13.8	-1.5
MCNB	McAdam	10.25	210	PN	Pn	18 01 18.9	+1.2
MCNB				SN	Sn	18 03 08.4	-4.1
MCNB				LG	Lg	18 04 16.2	
MCNB				Trac		18 04 32.0	
	comp=Z,0.5nm,0.0s						
F64A	Sherman	10.33	214	Pn	Pn	18 01 19.1	+0.4
GGN	Saint George	10.56	207	Pn	Pn	18 01 21.5	-0.3
GGN	Saint George	10.56	207	PN	Pn	18 01 21.7	-0.2
GGN				SN	Sn	18 03 16.9	-3.1
GGN				LG	Lg	18 04 27.9	
GGN				Trac		18 04 42.5	
	comp=Z,53nm,0.6s						
PKME	Peaks-Kenny Pk	11.17	216	Pn	Pn	18 01 30.2	+0.1
DPQ	Saint Jean	11.38	230	PN	Pn	18 01 33.4	+0.4
DPQ				SN	Sn	18 03 37.5	-2.7
DPQ				LG	Lg	18 04 52.5	
DPQ				Trac		18 05 03.8	
	comp=Z,93nm,0.9s						
G62A	West of Eustis	11.65	219	Pn	Pn	18 01 36.4	-0.4
TRQ	Mont Tremblant	12.54	233		Pn	18 01 47.2	-1.8
TRQ	Mont Tremblant	12.54	233	PN	Pn	18 01 47.8	-1.1
TRQ				SN	Sn	18 04 04.0	-4.5
TRQ				LG	Lg	18 05 29.9	
TRQ				Trac		18 05 45.2	
	comp=Z,1.5nm,0.0s						
VLDQ	Val d'Or	12.69	246		Pn	18 01 50.6	-0.4
VLDQ	Val d'Or	12.69	246	PN	Pn	18 01 51.5	+0.5
VLDQ				SN	Sn	18 04 08.5	-3.7
VLDQ				LG	Lg	18 05 34.5	
VLDQ				Trac		18 05 49.5	
	comp=Z,150nm,1.2s						
GRQ	Grand Remous	12.88	237	SN	Sn	18 04 13.6	-3.3
GRQ				LG	Lg	18 05 38.9	
GRQ				Trac		18 05 54.0	
	comp=Z,65nm,0.7s						
I62A	Tamworth	13.10	219	Pn	Pn	18 01 56.9	+0.3
SFJD	Kangerlussuaq	13.11	17	Pn	Pn	18 01 53.8	-2.8
	0.1nm,0.3s,baz=59,slow=22,SNR=1.5						
SFJD				Sn	Sn	18 04 09.4	-13
	0.2nm,0.3s,baz=215,slow=6.7,SNR=1.6						
FRNY	Flat Rock	13.18	227	Pn	Pn	18 01 55.3	-2.3
NCB	Newcomb	14.15	226	Pn	Pn	18 02 10.2	-0.7
J59A	Piesco	14.68	226	Pn	Pn	18 02 17.9	-0.3
BUKO	Buck Lake	15.46	241	Pn	Pn	18 02 29.6	+1.1
BUKO				IAmb	IAmb	18 02 43.9	
	comp=Z,21nm,1.2s						
SADO	Sadowa	15.80	239	Pn	Pn	18 02 31.0	-2.0
	comp=Z,1.1nm,0.3s,baz=60,slow=11,SNR=6.6						
SADO				Sn	Sn	18 05 18.4	-10
	comp=Z,1.5nm,0.3s,baz=209,slow=3.4,SNR=4.8						
SADO				Lg	Lg	18 06 57.2	
	comp=Z,1.1nm,0.3s,baz=343,slow=21,SNR=3.2						
	comp=Z,3.6nm,0.5s						
SADO	Sadowa	15.80	239	Pn	Pn	18 02 31.6	-1.4
SADO				IAmb	IAmb	18 02 37.0	
	comp=Z,22nm,1.4s						
L59A	Walton	15.96	224	Pn	Pn	18 02 35.9	+0.8
L59A				IAmb	IAmb	18 03 06.5	
	comp=Z,37nm,1.5s						
ILON	Igloolik, Nuna	17.70	334		Pn	18 02 54.5	-2.3
FCC	Fort Churchill	18.95	296		P	18 03 08.2	-3.4
TBO	Thunder Bay	19.09	264	P	Pn	18 03 18.1	+4.1
TBO				IAmb	IAmb	18 03 42.3	
	comp=Z,30nm,1.3s						
POIN	Pond Inlet	19.54	344		P	18 03 17.8	0.0
SUMG	Summit	20.08	19	P	P	18 03 24.1	-0.1
EYMN	Ely	20.65	264	P	P	18 03 31.4	+1.2
EYMN				IAmb	IAmb	18 03 35.0	
	comp=Z,10nm,1.0s						
EPLO	Experimental L	21.10	270	P	P	18 03 35.5	+0.5
EPLO				IAmb	IAmb	18 03 36.1	
	comp=Z,18nm,1.3s						
R55A	Marlinton	21.35	228	P	P	18 03 36.5	-1.3
R55A				IAmb	IAmb	18 04 01.7	
	comp=Z,21nm,1.4s						
E38A	The Farm, Brul	21.40	261	P	P	18 03 39.6	+1.4
G40A	Rib Lake	21.41	256	P	P	18 03 39.6	+1.3
ULM	Lac du Bonnet	22.10	273	P	P	18 03 45.7	0.0
	comp=Z,5.5nm,0.4s,baz=68,slow=8.8,SNR=9.4						
ULM				S	S	18 07 39.8	-9.2
	comp=Z,2.9nm,0.5s,baz=323,slow=12,SNR=4.5						
ULM	Lac du Bonnet	22.10	273		P	18 03 45.7	0.0
ULM				IAmb	IAmb	18 03 49.1	
	comp=Z,7.3nm,0.7s						
AGMN	Agassiz Nation	23.00	269		P	18 03 55.9	+0.7
AGMN				IAmb	IAmb	18 03 56.9	
	comp=Z,10.0nm,1.0s						
CCM	Cathedral Cave	26.90	245		P	18 04 33.6	+2.0
CCM				IAmb	IAmb	18 04 34.8	
	comp=Z,5.7nm,0.6s						
YKA	Yellowknife Ar	28.63	308	P	P	18 04 48.5	+1.8
	comp=Z,0.5nm,0.7s,baz=82,slow=9.4,SNR=7.9						
YKA				S	S	18 09 48.2	+13
	comp=Z,0.1nm,0.6s,baz=123,slow=31,SNR=1.1						
	comp=Z,0.5nm,0.7s						
EKA	Eskdalemuir Ar	31.84	65	P	P	18 05 14.9	-0.4
	comp=Z,2.7nm,0.8s,baz=295,slow=8.4,SNR=2.7						
	comp=Z,2.7nm,0.8s						
ISCO	Idaho Springs	33.66	263	IAmb	IAmb	18 05 59.4	
	comp=Z,2.6nm,1.0s						
PDAR	Pinedale Array	34.05	270	P	P	18 05 37.0	+2.1
	comp=Z,1.7nm,0.6s,baz=68,slow=8.0,SNR=14						
	comp=Z,1.7nm,0.6s						
NOA	NORSAR Array B	36.66	51	P	P	18 05 57.1	+0.2
	comp=Z,0.7nm,0.7s,baz=293,slow=8.1,SNR=2.0						
	comp=Z,0.7nm,0.7s						
DLBC	Dease Lake	37.12	305	LR	LR	18 21 52.5	
	comp=Z,113nm,19.0s,baz=280,slow=37						
SAND	Sanderson	38.88	248	IAmb	IAmb	18 06 20.0	
	comp=Z,6.5nm,0.6s						
BBB	Bella Bella	39.16	295	LR	LR	18 23 00.1	
	comp=Z,79nm,20.0s,baz=188,slow=37						
D25K	Kavik River	39.22	326	P	P	18 06 20.3	+1.9
D25K				IAmb	IAmb	18 06 20.9	
	comp=Z,4.2nm,0.6s						
MNTX	Cornudas Mount	39.32	253	P	P	18 06 21.7	+2.0
MNTX				IAmb	IAmb	18 06 23.1	
	comp=Z,7.0nm,1.5s						
BMAR	Burnt Mountain	39.39	323	P	P	18 06 22.2	+2.4
E25K	Arctic Village	39.44	324	P	P	18 06 22.0	+1.6
TX31	Lajitas Ar. Si	40.20	249		P	18 06 27.2	+0.1
TX31				IAmb	IAmb	18 06 30.4	
	comp=Z,8.1nm,1.4s						
TXAR	Lajitas Array	40.20	249	P	P	18 06 29.5	+2.4
	comp=Z,0.9nm,0.6s,baz=65,slow=7.7,SNR=12						
	comp=Z,0.9nm,0.6s						
TXAR	Lajitas Array	40.20	249	P	P	18 06 28.8	+1.7
ILAR	Eielson Array	41.43	320	P	P	18 06 38.8	+2.0
	comp=Z,1.5nm,0.6s,baz=64,slow=7.5,SNR=15						
	comp=Z,1.5nm,0.6s						
AKASG	Malin Array Be	50.71	55	P	P	18 07 49.4	-0.5
	comp=Z,0.7nm,0.5s,baz=322,slow=7.5,SNR=2.8						
	comp=Z,0.7nm,0.5s						
BRTR	Keskin Array B	60.68	62	P	P	18 09 03.0	+1.1
	comp=Z,0.8nm,0.8s,baz=324,slow=4.7,SNR=3.0						
	comp=Z,0.8nm,0.8s						
TORD	Torodi Ar. Bea	63.16	106	P	P	18 09 18.2	-0.4
	comp=Z,6.8nm,0.7s,baz=299,slow=8.5,SNR=54						
	comp=Z,6.8nm,0.7s						
TORD	Torodi Ar. Bea	63.16	106	P	P	18 09 18.1	-0.6
AB31	Akbulak array	64.83	39		P	18 09 29.9	+0.7
DBIC	Dimbokro	65.00	116	P	P	18 09 30.4	-0.2
	comp=Z,2.9nm,0.7s,baz=307,slow=5.1,SNR=3.1						
	comp=Z,2.9nm,0.7s						
BVAR	Borovoye Array	65.05	30	P	P	18 09 31.2	+0.6
	comp=Z,1.8nm,0.8s,baz=335,slow=5.1,SNR=4.5						
	comp=Z,1.8nm,0.8s						
ZALV	Zalesovo Beam	67.88	22	P	P	18 09 48.7	+0.1
	comp=Z,0.2nm,0.3s,baz=351,slow=8.0,SNR=1.9						
	comp=Z,0.2nm,0.3s						
KURBB	Kurchatov Arra	69.46	27	P	P	18 09 58.2	-0.4
	comp=Z,0.8nm,0.7s,baz=335,slow=6.9,SNR=9.1						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	73.96	26	P	P	18 10 26.0	+0.3
	comp=Z,0.5nm,0.6s,baz=332,slow=5.9,SNR=6.6						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	77.17	9	P	P	18 10 45.7	+1.4
	comp=Z,0.4nm,0.6s,baz=340,slow=6.8,SNR=2.8						
	comp=Z,0.4nm,0.6s						
WMQ	Urumqi	78.06	23	eP	P	18 10 51.7	+2.5
WMQ				LR	LR		
	comp=Z,110nm,24.0s						
KSH2	Kashi	79.06	34	P	P	18 10 56.8	+1.9
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC	Hu-ho-hao-te	84.52	6	eP	P	18 11 22.2	-1.4
HHC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	143.58	337	PKhKP	PKPpre	18 18 23.6	
	comp=Z,0.7nm,0.3s,baz=356,slow=2.0,SNR=40						
ASAR	Alice Springs	147.27	336	PKPbc	PKPbc	18 18 35.0	+1.0
	comp=Z,0.8nm,0.6s,baz=38,slow=2.2,SNR=15						

*IDC **03** 18:40:48.5±1.7, 15°.44S×173°.50W, h0km, mb3.8/8, mbtmp3.8/8, MS3.7/23, Error ellipse: s-maj=104.8km s-min=20.1km az=147.0*

ISC 03 18:40:54.6±1.5**, 15°.4S**±0°.5×**173°.6W**±0°.4**, h42**km**, n36, σ0s.43**/13**, mb3.7**/8**, MS3.8**/23**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	24.21	198	LR	LR	18 54 06.6	
	comp=Z,269nm,21.6s,baz=20,slow=33						
H11S2	WAKE ISLAND Hy	38.88	329	T	T	19 29 00.7	
	baz=147,slow=76,SNR=6.4						
H11S3	WAKE ISLAND Hy	38.89	329	T	T	19 29 02.9	
	baz=147,slow=76,SNR=8.8						
H11S1	WAKE ISLAND Hy	38.90	329	T	T	19 29 05.6	
	baz=147,slow=76,SNR=6.5						
H11N3	WAKE ISLAND Hy	39.83	331	T	T	19 30 39.7	
	baz=149,slow=76,SNR=8.1						
H11N1	WAKE ISLAND Hy	39.83	331	T	T	19 30 35.8	
	baz=149,slow=76,SNR=7.4						
H11N2	WAKE ISLAND Hy	39.85	331	T	T	19 30 35.2	
	baz=149,slow=76,SNR=7.5						
STKA	Stephens Creek	43.89	240	P	P	18 48 57.2	0.0
	2.0nm,1.0s,baz=256,slow=16,SNR=1.4						
STKA				LR	LR	19 04 45.7	
	comp=Z,63nm,18.1s,baz=32,slow=33						
	2.0nm,1.0s						
WRA	Warramunga Arr	49.68	257	P	P	18 49 42.9	+0.1
	0.8nm,0.7s,baz=95,slow=7.5,SNR=20						
	0.8nm,0.7s						
ASAR	Alice Springs	49.95	252	P	P	18 49 44.7	-0.1
	3.1nm,0.7s,baz=89,slow=7.8,SNR=58						
ASAR				LR	LR	19 09 01.2	
	comp=Z,108nm,21.5s,baz=109,slow=34						
	3.1nm,0.7s						
MJAR	Matsushiro Arr	68.83	320	LR	LR	19 14 04.0	
	comp=Z,47nm,21.9s,baz=138,slow=29						
ASAJ	Asahikawa	71.45	328	LR	LR	19 16 42.5	
	comp=Z,36nm,21.9s,baz=161,slow=30						
PFO	Pinyon Flats O	73.04	47	LR	LR	19 15 45.3	
	comp=Z,93nm,19.4s,baz=249,slow=29						
YBH	Yreka Blue Hor	73.70	37	LR	LR	19 17 20.0	
	comp=Z,6.5nm,19.9s,baz=260,slow=30						
NVAR	Mina Array Bea	74.44	42	P	P	18 52 29.2	+0.5
	2.2nm,0.8s,baz=225,slow=9.0,SNR=6.0						
NVAR				LR	LR	19 17 02.1	
	comp=Z,72nm,19.8s,baz=229,slow=29						
	2.2nm,0.8s						
KDAK	Kodiak Island	74.95	11	LR	LR	19 18 10.3	
	comp=Z,48nm,20.4s,baz=218,slow=30						
KSRS	Korea Array	76.04	316	LR	LR	19 19 36.6	
	comp=Z,12nm,21.3s,baz=105,slow=31						
BBB	Bella Bella	77.96	27	LR	LR	19 22 45.1	
	comp=Z,65nm,18.7s,baz=250,slow=32						
MA2	Magadan	80.11	342	LR	LR	19 24 01.6	
	comp=Z,29nm,21.5s,baz=120,slow=32						
KLR	Kul'dur	80.43	327	LR	LR	19 25 52.2	
	comp=Z,6.0nm,21.1s,baz=84,slow=34						
TXAR	Lajitas Array	80.75	56	P	P	18 53 03.5	-0.6
	0.3nm,0.8s,baz=240,slow=3.9,SNR=2.7						
	0.3nm,0.8s						
ANMO	Albuquerque	80.93	50	LR	LR	19 20 01.4	
	comp=Z,60nm,19.7s,baz=272,slow=29						
DLBC	Dease Lake	81.76	21	LR	LR	19 23 58.7	
	comp=Z,45nm,18.5s,baz=242,slow=32						
PDAR	Pinedale Array	82.38	42	P	P	18 53 13.2	+0.6
	0.4nm,0.6s,baz=182,slow=4.5,SNR=4.3						
PDAR				LR	LR	19 21 15.3	
	comp=Z,30nm,20.3s,baz=23,slow=30						
	0.4nm,0.6s						
ILAR	Eielson Array	82.48	11	P	P	18 53 11.8	-0.4
	0.6nm,1.0s,baz=202,slow=4.4,SNR=5.4						
ILAR				LR	LR	19 22 44.9	
	comp=Z,45nm,20.9s,baz=212,slow=30						
	0.6nm,1.0s						
CMIG	Matias Romero	84.04	71	LR	LR	19 22 31.4	
	comp=Z,18nm,20.4s,baz=187,slow=30						
MAW	Mawson	87.74	199	LR	LR	19 31 55.7	
	comp=Z,79nm,18.6s,baz=129,slow=35						
YKA	Yellowknife Ar	90.16	23	P	P	18 53 50.2	+0.2
	0.3nm,0.8s,baz=241,slow=5.3,SNR=3.6						
YKA				LR	LR	19 27 24.8	
	comp=Z,72nm,19.5s,baz=318,slow=31						
	0.3nm,0.8s						
ULM	Lac du Bonnet	94.04	39	LR	LR	19 28 35.3	
	comp=Z,70nm,19.4s,baz=4.5,slow=30						
TIXI	Tiksi	94.96	344	LR	LR	19 32 27.7	
	comp=Z,33nm,20.4s,baz=192,slow=33						
TKL	Tuckaleechee C	98.65	55	LR	LR	19 32 14.6	
	comp=Z,56nm,18.7s,baz=316,slow=31						
BRTR	Keskin Array B	146.05	321	PKPbc	PKPab	19 00 31.1	0.0
	0.9nm,0.8s,baz=72,slow=1.8,SNR=4.4						
GERES	GERESS Array B	146.12	351	PKPbc	PKPbc	19 00 30.6	+0.4
	0.7nm,0.6s,baz=11,slow=4.4,SNR=2.5						
MOTA	Moosalm	147.91	354	ePKP	PKPbc	19 00 36.1	+0.6
	3.6nm,1.0s						
SOKA	Soboth	148.00	349	ePKP	PKPbc	19 00 35.6	0.0
	4.2nm,1.2s						
FETA	Feichten	148.27	354	ePKiKP	PKPab	19 00 39.1	-0.4
	6.3nm,1.5s						

MEX 03 18:45:11.3±0.7**, 20°.16N**×**105°.32W, h5**km±999km**, MD3.6, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEGR	Campo Tres	1.58	119	eP	Pn	18 45 36.2	-3.9
CEGR				eS	Sn	18 45 55.8	-5.2
CDAR	Ciudad de Arme	1.73	134	eP	Pn	18 45 38.5	-3.5
CDAR				eS	Sn	18 45 59.2	-5.3
MMIG	Aquila	2.64	135	eP	Pb	18 45 57.2	-1.8
MMIG				eS	Sn	18 46 23.4	-3.5

IDC 03 19:12:08.7±1.9**, 3°.92S**×**140°.29E, h0**km**, mb3.1**/2**, mbtmp3.2**/3**, ML3.2**/1**, Error ellipse: s-maj=86.4km s-min=14.9km az=108.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.45	17	Pg	Pn	19 12 35.8	-0.5
	6.1nm,0.3s,baz=153,slow=10,SNR=34						
JAY				Lg	Lg	19 12 55.0	
	18nm,0.3s,baz=166,slow=17,SNR=11						
WRA	Warramunga Arr	16.95	200	Pn	P	19 16 08.9	-0.6
	0.1nm,0.3s,baz=26,slow=12,SNR=7.1						
	0.3nm,0.5s						
ASAR	Alice Springs	20.58	197	P	P	19 16 49.0	-0.4
	0.4nm,0.8s,baz=26,slow=11,SNR=6.6						
	0.4nm,0.8s						
MKAR	Makanchi Array	71.70	322	P	P	19 23 32.3	-0.4
	0.3nm,0.8s,baz=115,slow=5.8,SNR=3.1						
	0.3nm,0.8s						

*SJA **03** 19:13:23.7±0.7, 24°.19S×67°.27W, h190km, ML3.4, MW3.5*
*GUC **03** 19:13:25.3±0.7, 24°.08S×67°.59W, h205km±5km, ML3.4*

ISC 03 19:13:25.0±1.2**, 24°.19S**±0°.04×**67°.31W**±0°.05**, h178**km**, n30, σ1s.10**/39**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.89	93	eP	Pn	19 13 46.5	-5.8
SALTA				eP		19 13 52.1	
AF01	San Pedro de A	1.47	327	eP	Pn	19 13 58.5	+1.6
AF01				i S	Sn	19 14 24.2	+2.9
AF01				IAML		19 14 26.6	
	comp=N,230nm,0.6s						
AF01	San Pedro de A	1.47	327	eP	Pn	19 13 58.8	+2.0
AF01				IAML		19 14 44.3	
	comp=Z,120nm,0.2s						
SLA	San Lorenzo	1.73	108⇓	eP	Pn	19 13 59.3	+0.1
SLA	San Lorenzo	1.73	108	eP	Pn	19 13 59.4	+0.2
AZAP	Zapla	2.05	91	eP	Pn	19 14 02.0	-0.7
AZAP				eS	Sn	19 14 31.8	0.0
AZAP				IAML		19 14 32.1	
	comp=Z,55nm,0.8s						
FSA	Cafayete	2.26	148	eP	Pn	19 14 05.0	0.0
PB14	IPOC Station P	2.85	261	eP	Pn	19 14 12.7	+0.7
PB14				eS	Sn	19 14 47.2	-1.5
PB14				IAML		19 14 49.2	
	comp=E,53nm,0.3s						
PB14	IPOC Station P	2.85	261	eP	Pn	19 14 12.8	+0.8
PB14				IAML		19 14 53.0	
	comp=Z,89nm,0.3s						
PB05	IPOC Station P	2.97	296⇑	i P	Pn	19 14 13.9	+0.6
PB05				i S	Sn	19 14 49.8	-1.1
PB05				IAML		19 14 52.9	
	comp=N,58nm,0.4s						
PB05	IPOC Station P	2.97	296	eP	Pn	19 14 14.0	+0.7
PB05				IAML		19 14 55.5	
	comp=Z,30nm,0.3s						
PB09	IPOC Station P	2.97	323	eP	Pn	19 14 14.6	+1.2
PB09				i S	Sn	19 14 51.1	+0.1
PB09				IAML		19 14 52.2	
	comp=N,110nm,0.5s						
PB09	IPOC Station P	2.97	323	eP	Pn	19 14 14.6	+1.2
PB09				IAML		19 14 57.2	
	comp=Z,76nm,0.6s						
AC02	Maricunga	3.11	212⇑	eP	Pn	19 14 16.4	+1.1
AC02	Maricunga	3.11	212	eP	Pn	19 14 16.9	+1.6
AC02				eS	Sn	19 14 57.0	+2.4
PB07	IPOC Station P	3.41	315⇑	eP	Pn	19 14 19.1	+0.3
PB07	IPOC Station P	3.41	315	eP	Pn	19 14 19.1	+0.3
PB07				IAML		19 15 03.1	
	comp=Z,99nm,0.2s						
AC01	Pan de Azucar	3.56	236	eP	Pn	19 14 20.2	-0.3
AC01	Pan de Azucar	3.56	236	eP	Pn	19 14 20.2	-0.3
AC01				eS	Sn	19 15 03.2	-0.7
AC01				IAML		19 15 04.3	
	comp=Z,63nm,0.2s						
PB01	IPOC Station P	3.72	327⇑	eP	Pn	19 14 22.3	-0.3
PB01	IPOC Station P	3.72	327	eP	Pn	19 14 22.4	-0.3
PB01				IAML		19 15 10.5	
	comp=Z,46nm,0.2s						
PB02	IPOC Station P	3.72	320⇑	eP	Pn	19 14 22.4	-0.2
PB02	IPOC Station P	3.72	320	eP	Pn	19 14 22.6	-0.1
PB02				IAML		19 15 11.9	
	comp=Z,175nm,0.2s						
PATCX	Punta Patache	4.26	321⇑	eP	Pn	19 14 29.0	-0.4
PATCX	Punta Patache	4.26	321	eP	Pn	19 14 29.1	-0.4
PATCX				IAML		19 15 29.8	
	comp=Z,28nm,0.4s						
GO03	Copiapo	4.29	217	eP	Pn	19 14 29.1	-0.7
GO03	Copiapo	4.29	217	eP	Pn	19 14 29.9	+0.1
GO03				eS	Sn	19 15 20.9	+0.3
GO03				IAML		19 15 22.9	
	comp=Z,37nm,0.1s						
HMBC	Humberstone	4.57	328	eP	Pn	19 14 32.0	-1.5
HMBC	Humberstone	4.57	328	eP	Pn	19 14 32.9	-0.6
HMBC				eS	Sn	19 15 25.3	-1.8
HMBC				IAML		19 15 30.2	
	comp=Z,42nm,0.3s						
AC04	Llanos de Chal	5.24	219	eP	Pn	19 14 41.4	-0.5
AC04				eS	Sn	19 15 40.8	-1.7
AC04				IAML		19 15 41.9	
	comp=Z,13nm,0.3s						

IDC 03 19:18:04.9±9.5**, 14°.53S**×**165°.81E, h98**km±151km**, mb3.7**/4**, mbtmp4.0**/5**, ML3.4**/1**, Error ellipse: s-maj=300.3km s-min=57.6km az=77.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.53	176	P	Pn	19 19 52.1	+0.1
	0.6nm,0.3s,baz=12,slow=13,SNR=11						
DZM				S	Sn	19 21 16.2	+0.4
	2.7nm,0.6s,baz=128,slow=23,SNR=6.9						
	2.0nm,0.4s						
STKA	Stephens Creek	28.06	228	P	P	19 23 47.2	0.0
	1.7nm,0.5s,baz=48,slow=8.7,SNR=6.7						
	1.7nm,0.5s						
WRA	Warramunga Arr	30.50	255	P	P	19 24 09.3	+0.3
	0.5nm,0.4s,baz=86,slow=9.1,SNR=12						
	0.5nm,0.4s						
ASAR	Alice Springs	31.43	248	P	P	19 24 16.8	-0.4
	0.9nm,0.3s,baz=74,slow=9.4,SNR=39						
	0.9nm,0.3s						
FITZ	Fitzroy Crossi	38.66	259	P	P	19 25 19.2	0.0
	1.9nm,0.7s,baz=76,slow=14,SNR=1.5						
	1.9nm,0.7s						

MEX 03 19:27:02.6±0.5**, 18°.08N**×**98°.16W, h54**km±3km**, MD3.5, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FTIG	Fresnillo de T	0.17	171	eP	Pn	19 27 10.2	-1.3
FTIG				eS	Sn	19 27 15.9	-1.9
HLIG	Huajuapan de L	0.42	126	i P	Pn	19 27 12.3	-1.3
HLIG				i S	Sn	19 27 19.6	-1.8
TLIG	Tlapa	0.64	217	eP	Pn	19 27 14.4	-1.6
TLIG				eS	Sn	19 27 23.6	-2.1
TXIG	Tlaxiaco	0.90	155	eP	Pn	19 27 17.7	-1.7
TXIG				eS	Sn	19 27 29.4	-2.4
MGIG	Malinaltepec	0.95	208	eP	Pn	19 27 18.4	-1.7
MGIG				eS	Sn	19 27 31.3	-1.6
TOIG	Toxpalan	1.04	89	eP	Pn	19 27 20.4	-0.7
TOIG				eS	Sn	19 27 32.6	-2.2
YOIG	Yosondua	1.35	154	eP	Pn	19 27 24.5	-1.0
YOIG				eS	Sn	19 27 40.5	-2.0
PNIG	Pinotepa	1.68	179	eP	Pn	19 27 29.0	-0.6
PNIG				eS	Sn	19 27 46.5	-3.6

*MOS **03** 19:54:00.4±1.3, 42°.68N×145°.50E, h24km, mb4.3/4, Error ellipse: s-maj=14.8km s-min=7.7km az=89.5*
*SKHL **03** 19:54:03.3±0.2, 42°.80N×145°.70E, h57km±7km, mb4.9/2*
*NEIC **03** 19:54:04.6±1.9, 42°.79N±0°.09×145°.5E±0°.1, h35km±2km, mb4.0/12, Error ellipse: s-maj=17.3km s-min=14.3km az=108.0*
*NIED **03** 19:54:04.6, 42°.90N×145°.48E, h45km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.66; $M_{\theta\theta}$-1.68; $M_{\phi\phi}$-1.98; $M_{r\theta}$1.01; $M_{\theta\phi}$-2.10; $M_{\phi r}$4.31; Fault plane solution: $M_0$5.83000×10^{14} NP1: ϕ_s241.00000°, δ25.00000°, λ127.00000°. NP2: ϕ_s22.00000°, δ71.00000°, λ74.00000°.*
*JMA **03** 19:54:04.6±0.1, 42°.9N±0°.4×145°.5E±0°.5, h45km, MD3.7/38, MV3.9/38, OFF NEMURO PENINSULA*
JMA Felt I J1 at OFF NEMURO PENINSULA .
*IDC **03** 19:54:06.7±3.0, 42°.76N×145°.41E, h63km±23km, mb3.7/13, mbtmp3.9/16, ML4.2/2, MS2.8/4, Error ellipse: s-maj=23.0km s-min=16.1km az=93.0*

ISC 03 19:54:03.5±1.3**, 42°.86N**±0°.05×**145°.43E**±0°.04**, h30**km±8km**, n78, σ1s.24**/85**, mb4.0**/18**, 2C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.30	319	i P	Pn	19 54 13.3	+1.5
JKHN				A	A	19 54 13.3	
	comp=N,14nm,1.2s,comp=E,23nm,0.7s						
JKHN				eS	Sn	19 54 19.5	+2.3
AKK	Akkeshi	0.46	290	eP	Pn	19 54 15.2	+1.2
JAK	Akkeshi	0.55	285	P	Pn	19 54 16.6	+1.3
JAK				A	A	19 54 16.6	
	comp=N,10.0nm,0.3s,comp=E,8.0nm,0.4s						
JAK				eS	Sn	19 54 25.3	+1.9
NEM2	Nemuro 2	0.56	24	i P	Pn	19 54 15.4	+0.1
NEM2				A	A	19 54 15.4	
	comp=N,8.0nm,0.8s,comp=E,8.0nm,0.8s						
NEM2				S	Sb	19 54 23.1	+0.5
NMR	Nemuro--Hokkai	0.56	23⇑	i PN	Pn	19 54 15.4	+0.1
NMR				eS	Sb	19 54 23.0	+0.5
NMR	Nemuro--Hokkai	0.56	23	eP	Pn	19 54 15.5	+0.1
NMR				eS	Sb	19 54 23.0	+0.5
GLVR	Golovnino	0.88	4	ePN	Pb	19 54 19.4	-0.8
GLVR				eS	Sb	19 54 31.3	-0.4
GLVR				pmax	pmax		
	comp=E,78nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,583nm,0.3s						
GLVR				smax	smax		
	comp=N,5µm,0.3s						
GLVR				smax	smax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,3μm,0.3s						
GLVR	**Golovnino**	**0.88**	**4**	*e*P	**Pb**	**19 54 19.4**	**-0.8**
GLVR				AMB	AMB	19 54 20.4	
	comp=E,580nm,0.2s						
GLVR				*e*S	**Sb**	**19 54 31.3**	**-0.4**
GLVR				A	A	19 54 32.0	
	comp=E,5μm,0.5s						
GLVR				A	A	19 54 32.0	
	comp=E,3μm,0.5s						
JNK	**Nakash**	**0.89**	**325**	*i* P	**Pn**	**19 54 20.6**	**+0.6**
JNK				S	**Sb**	**19 54 31.6**	**-0.3**
JNSB	**Nemuroshibetsu**	**0.97**	**342**	*i* P	**Pn**	**19 54 21.6**	**+0.6**
JNSB				*e*S	**Sb**	**19 54 34.1**	**0.0**
JRA	**Rausu**	**1.10**	**348**	*i* P	**Pb**	**19 54 23.4**	**-0.5**
JRA				S	**Sb**	**19 54 37.5**	**-0.4**
JOB	**Onbets**	**1.17**	**273**	*i* P	**Pb**	**19 54 25.0**	**-0.1**
JOB				*e*S	**Sn**	**19 54 40.6**	**+1.8**
YUK	**Yuzh-Kuril'sk**	**1.22**	**15**	*e*PN	**Pn**	**19 54 24.9**	**+0.5**
YUK				*e*S	**Sn**	**19 54 38.9**	**-1.0**
YUK				pmax	pmax		
	comp=E,45nm,0.2s						
YUK				pmax	pmax		
	comp=Z,348nm,0.2s						
YUK				smax	smax		
	comp=E,3μm,0.5s						
YUK				smax	smax		
	comp=N,2μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.22**	**15**	*e*P	**Pn**	**19 54 24.6**	**+0.2**
YUK				AMB	AMB	19 54 26.1	
	comp=N,250nm,0.2s						
YUK				*e*S	**Sn**	**19 54 39.4**	**-0.5**
YUK				A	A	19 54 39.7	
	comp=N,4μm,0.5s						
YUK				A	A	19 54 39.7	
	comp=N,3μm,0.5s						
RUSJ	**Misakicho**	**1.25**	**354**⇓	*i*PN	**Pb**	**19 54 25.9**	**-0.6**
RUSJ				*e*S	**Sn**	**19 54 41.1**	**+0.4**
JAR	**Ashorobuto**	**1.29**	**290**	*i* P	**Pb**	**19 54 26.7**	**-0.5**
JAR				*e*S	**Sb**	**19 54 43.4**	**+0.1**
SHO	**Shikotan**	**1.44**	**45**	*e*P	Pb	19 54 38.7	+9.1
SHO				AMB	AMB	19 54 41.9	
	comp=N,90nm,0.5s						
SHO				*e*S	**Sb**	**19 54 52.3**	**+4.8**
SHO				A	A	19 54 56.6	
	comp=N,1μm,0.4s						
SHO				A	A	19 54 56.6	
	comp=N,620nm,0.4s						
JCH	**Churui**	**1.54**	**262**	P	**Pb**	**19 54 30.0**	**-1.4**
JTKR	**Abashiri--Toko**	**1.57**	**316**	*i* P	**Pb**	**19 54 30.8**	**-1.0**
JKA	**Kamikawa-asahi**	**2.41**	**302**		**Pb**	**19 54 43.2**	**-2.9**
JKA	**Kamikawa-asahi**	**2.41**	**302**		**Sb**	**19 55 14.2**	**-1.2**
JKA	**Kamikawa-asahi**	**2.41**	**302**	*e*P	**Pb**	**19 54 43.6**	**-2.5**
ASAJ	**Asahikawa**	**2.41**	**302**	P	**Pb**	**19 54 43.6**	**-2.6**
	comp=N,26nm,0.3s,baz=132,slow=12,SNR=179						
ASAJ				S	**Sb**	**19 55 14.2**	**-1.3**
	comp=N,94nm,0.8s,baz=13,slow=25,SNR=5.8						
ASAJ				LR	LR	19 55 49.0	
	comp=N,193nm,20.1s,baz=147,slow=42						
	comp=N,64nm,0.3s						
KUR	**Kuril'sk**	**2.95**	**36**⇑	*i*PN	**Pn**	**19 54 50.3**	**+2.0**
KUR	**Kuril'sk**	**2.95**	**36**	*e*P	**Pn**	**19 54 48.2**	**-0.1**
KUR				AMB	AMB	19 54 52.7	
	comp=N,60nm,0.5s						
KUR				*e*S	**Sn**	**19 55 20.7**	**-2.0**
YSS	**Yuzhno-Sakhali**	**4.51**	**336**	*e*PN	**Pn**	**19 55 12.7**	**+3.0**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS	**Yuzhno-Sakhali**	**4.51**	**336**	*e*P	**Pn**	**19 55 12.7**	**+3.0**
MJB9	**Matsu-Tunnel**	**8.41**	**224**	Pn	**Pn**	**19 56 04.0**	**+0.8**
MAJO	**Matsushiro**	**8.41**	**224**	Pn	**Pn**	**19 56 03.8**	**+0.5**
MAJO	**Matsushiro**	**8.41**	**224**	PN	**Pn**	**19 56 03.8**	**+0.5**
MJAR	**Matsushiro Arr**	**8.41**	**224**	P	**Pn**	**19 56 04.2**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=30,slow=15,SNR=6.0						
MJAR				S	**Sn**	**19 57 38.6**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=284,slow=30,SNR=1.1						
KLR	**Kul'dur**	**11.43**	**309**	LR	LR	20 01 26.5	
	comp=Z,16nm,19.2s,baz=122,slow=38						
KSRS	**Korea Array**	**14.43**	**254**	LR	LR	20 02 00.1	
	comp=Z,30nm,18.4s,baz=60,slow=33						
HILR	**Hailar Array B**	**18.93**	**300**	P	**Pn**	**19 58 23.2**	**+0.5**
	baz=94,slow=9.9						
	comp=Z,1.6nm,0.4s						
SONM	**Songino Array**	**27.67**	**294**	P	**P**	**19 59 49.5**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=90,slow=8.1,SNR=14						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**27.67**	**294**	P	**P**	**19 59 49.5**	**+0.8**
SONM				IAmb	IAmb	19 59 49.9	
	comp=Z,4.4nm,1.4s						
SONM	**Songino Array**	**27.67**	**294**	P	**P**	**19 59 49.5**	**+0.8**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**29.30**	**135**	T	T	20 31 05.9	
	baz=327,slow=75,SNR=147						
H11N1	**WAKE ISLAND Hy**	**29.31**	**135**	T	T	20 31 06.5	
	baz=327,slow=75,SNR=137						
H11N3	**WAKE ISLAND Hy**	**29.32**	**135**	T	T	20 31 09.1	
	baz=327,slow=75,SNR=144						
H11S1	**WAKE ISLAND Hy**	**30.23**	**137**	T	T	20 31 59.4	
	baz=329,slow=76,SNR=163						
H11S3	**WAKE ISLAND Hy**	**30.23**	**137**	T	T	20 32 12.0	
	baz=329,slow=76,SNR=161						
H11S2	**WAKE ISLAND Hy**	**30.24**	**137**	T	T	20 32 09.8	
	baz=329,slow=76,SNR=152						
ENH	**Enshi**	**31.24**	**258**	P	**P**	**20 00 18.0**	**-2.4**
ENH				IAmb	IAmb	20 00 22.4	
	comp=Z,3.1nm,0.9s						
C18K	**Utukok River**	**37.69**	**29**	P	**P**	**20 01 15.0**	**-0.8**
G18K	**Tagagawik**	**38.08**	**33**	P	**P**	**20 01 19.2**	**+0.2**
H18K	**Honhosa River**	**38.09**	**35**	P	**P**	**20 01 19.6**	**+0.5**
H19K	**Roundabout Mou**	**38.93**	**34**	P	**P**	**20 01 26.9**	**+0.8**
H19K				IAmb	IAmb	20 01 39.1	
	comp=Z,3.8nm,1.1s						
ZALV	**Zalesovo Beam**	**40.54**	**308**	P	**P**	**20 01 40.0**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=83,slow=12,SNR=2.4						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**40.54**	**308**	P	**P**	**20 01 40.0**	**+0.4**
ILAR	**Eielson Array**	**42.95**	**36**	P	**P**	**20 01 59.7**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=273,slow=8.2,SNR=4.7						
	comp=Z,0.3nm,0.7s						
E25K	**Arctic Village**	**43.36**	**31**	P	**P**	**20 02 03.0**	**+0.5**
E25K				IAmb	IAmb	20 02 45.7	
	comp=Z,4.0nm,1.3s						
BMAR	**Burnt Mountain**	**43.75**	**32**	P	**P**	**20 02 06.7**	**+1.0**
MKAR	**Makanchi Array**	**43.89**	**298**	P	**P**	**20 02 07.3**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=76,slow=9.1,SNR=25						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**43.89**	**298**	P	**P**	**20 02 07.1**	**+0.1**
F26K	**Sheenjek River**	**43.91**	**31**	P	**P**	**20 02 08.0**	**+1.1**
MAKZ	**Makanchi**	**44.09**	**298**	P	**P**	**20 02 08.7**	**+0.1**
MAKZ				IAmb	IAmb	20 02 09.7	
	comp=Z,2.5nm,1.1s						
MAKZ	**Makanchi**	**44.09**	**298**	P	**P**	**20 02 08.7**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK	**Kurchatov**	**44.99**	**304**	P	**P**	**20 02 15.9**	**+0.2**
KURK	**Kurchatov**	**44.99**	**304**	IAmb	IAmb	20 02 18.8	
	comp=Z,1.3nm,0.9s						
KURK	**Kurchatov**	**44.99**	**304**	P	**P**	**20 02 15.9**	**+0.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**44.99**	**304**	*e*P	**P**	**20 02 15.9**	**+0.2**
KURBB	**Kurchatov Arra**	**45.07**	**304**	P	**P**	**20 02 15.9**	**-0.5**
	comp=Z,1.1nm,0.2s,baz=73,slow=8.9,SNR=4.8						
	comp=Z,1.1nm,0.2s						
MCARA	**McCarthy VSAT**	**45.08**	**40**	P	**P**	**20 02 17.5**	**+1.1**
SIJI	**Sorong**	**45.36**	**200**	P	**P**	**20 02 17.7**	**-1.3**
	comp=Z,3.4nm,0.5s,baz=19,slow=18,SNR=1.6						
	comp=Z,3.4nm,0.5s						
BCAR	**Beaver Creek A**	**45.38**	**38**	P	**P**	**20 02 19.1**	**+0.3**
I28M	**Miner Creek**	**45.80**	**34**	P	**P**	**20 02 23.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**46.06**	**253**	P	**P**	**20 02 24.0**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=53,slow=8.8,SNR=2.4						
	comp=Z,0.4nm,0.6s						
BVAR	**Borovoye Array**	**49.10**	**309**	P	**P**	**20 02 48.2**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=82,slow=8.2,SNR=7.1						
	comp=Z,0.6nm,0.4s						
YKA	**Yellowknife Ar**	**57.24**	**33**	P	**P**	**20 03 49.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=282,slow=8.8,SNR=2.3						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**65.09**	**332**	P	**P**	**20 04 40.3**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=46,slow=6.9,SNR=32						
	comp=Z,2.5nm,0.5s						
NB2	**NORSAR Subarra**	**69.97**	**338**	P	**P**	**20 05 11.0**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=33,slow=6.5						
NOA	**NORSAR Array B**	**69.97**	**338**	P	**P**	**20 05 11.3**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=34,slow=6.3,SNR=6.4						
	comp=Z,1.4nm,0.8s						
HFS	**Hagfors**	**70.02**	**337**	P	**P**	**20 05 11.4**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=46,slow=6.4,SNR=14						
	comp=Z,2.6nm,0.5s						
GNI	**Garni**	**70.68**	**307**	LR	LR	20 42 16.1	
	comp=Z,29nm,18.1s,baz=352,slow=41						
AKASG	**Malin Array Be**	**71.54**	**323**	P	**P**	**20 05 21.0**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=44,slow=6.4,SNR=8.7						
	comp=Z,1.1nm,0.4s						
AKASG	**Malin Array Be**	**71.54**	**323**	IAmb	IAmb	20 05 59.8	
	comp=Z,2.8nm,1.1s						
AKASG	**Malin Array Be**	**71.54**	**323**	P	**P**	**20 05 21.0**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.1s						

*NEIC **03** 20:20:36.8±0.7, 17°.89N±0°.03×67°.01W±0°.01, h2km±9km, ML2.2/23, ML2.6(RSPR), Error ellipse: s-maj=5.2km s-min=1.1km az=193.0*

RSPR 03 20:20:36.6, 17°.91N×67°.02W, h5km, 5C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.07**	**335**		Pg	20 20 38.4	+0.3
MLPR				IAML		20 20 39.6	
	2μm,0.2s						
MLPR				IAML		20 20 39.6	
	2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.13**	**317**		Pg	20 20 39.7	+0.4
CRPR					Sg	20 20 41.6	+0.5
CRPR	**Cabo Rojo, PR**	**0.13**	**317**	IAML		20 20 42.1	
	997nm,0.3s						
CRPR				IAML		20 20 43.2	
	467nm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.13**	**317**⇓	*e*P	Pg	20 20 39.8	+0.5
CRPR				*e*S	Sg	20 20 41.8	+0.7
GBPR	**Guanica, Bosqu**	**0.14**	**64**		Pg	20 20 39.9	+0.4
GBPR					Sg	20 20 42.4	+0.9
GBPR	**Guanica, Bosqu**	**0.14**	**64**⇑	*e*P	Pg	20 20 39.9	+0.4
GBPR				*e*S	Sg	20 20 42.4	+0.9
LSP	**Las Mesas**	**0.27**	**346**		Pg	20 20 42.4	+0.4
LSP					Sg	20 20 47.1	+1.6
LSP	**Las Mesas**	**0.27**	**346**⇑	*e*P	Pg	20 20 42.4	+0.4
LSP				*e*S	Sg	20 20 47.1	+1.6
PRSN	**Puerto Rico Se**	**0.33**	**338**		Pg	20 20 43.3	+0.3
PRSN				IAML		20 20 49.0	
	555nm,0.3s						
PRSN				IAML		20 20 51.0	
	449nm,0.3s						
OBIP	**Obispado Ponce**	**0.41**	**71**		Pg	20 20 44.7	+0.2
OBIP					Sg	20 20 50.5	+0.5
OBIP				IAML		20 20 54.4	
	comp=N,11nm,0.7s						
OBIP	**Obispado Ponce**	**0.41**	**71**⇑	*e*P	Pg	20 20 44.8	+0.2
OBIP				*e*S	Sg	20 20 51.3	+1.4
AGPR	**Aguadilla, PR**	**0.56**	**351**⇑	*e*P	Pg	20 20 47.5	0.0
IDE	**Isla Desecheo**	**0.64**	**317**		Pb	20 20 49.9	-0.5
IDE					Sg	20 20 58.3	+0.9
IDE	**Isla Desecheo**	**0.64**	**317**⇓	*e*P	Pb	20 20 49.9	-0.5
IDE				*e*S	Sg	20 20 58.3	+0.9
EMPR	**Esperanza - Ma**	**0.73**	**39**		Pg	20 20 50.8	+0.1
EMPR	**Esperanza - Ma**	**0.73**	**39**⇓	*e*P	Pg	20 20 50.8	+0.1
ECPR	**Experimental S**	**0.74**	**57**	Pg	Pg	20 20 50.3	-0.6
ECPR				IAML		20 21 03.5	
	comp=N,118nm,0.2s						
ECPR				IAML		20 21 14.4	
	comp=N,99nm,0.2s						
ECPR	**Experimental S**	**0.74**	**57**⇑	*e*P	Pg	20 20 50.5	-0.4
PDPR	**Patillas Dam,**	**0.95**	**83**	Pg	Pg	20 20 54.8	-0.1
PDPR				IAML		20 21 22.3	
	comp=N,28nm,0.3s						
PDPR				IAML		20 21 22.7	
	comp=N,29nm,0.1s						
CUPR	**Culebra, Puert**	**1.69**	**76**	Pn	Pn	20 21 06.8	-0.1

*IDC **03** 20:32:35.9±2.0, 29°.84N×51°.88E, h0km, mb3.7/12, mbtmp3.7/16, ML3.4/4, MS3.3/9, Error ellipse: s-maj=42.3km s-min=19.1km az=161.0*
*TEH **03** 20:32:35.3, 29°.61N×52°.11E, h5km, ML3.7, Presumed earthquake*
*OMAN **03** 20:32:40.0±1.0, 29°.49N×52°.16E, h26km±24km, mb3.7/13, ml3.6/2, ms2.4/3, Error ellipse: s-maj=19.5km s-min=4.2km az=168.0*
*DSN **03** 20:32:41.3±1.6, 29°.27N×52°.14E, h15km, ML3.5/16, Error ellipse: s-maj=20.1km s-min=7.3km az=0.0*

ISC 03 20:32:37.6±0.5**, 29°.63N**±0°.04×**52°.07E**±0°.04**, h25km, n87, σ1s.51**/103**, mb3.6**/11**, MS3.2**/6**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ2	**Kazeron-Fars-I**	**0.35**	**267**	Pg	**Pb**	**20 32 43.3**	**-2.3**
SHI	**Shiraz**	**0.39**	**89**	Pg	Pb	20 32 42.1	-4.0
SHI				Sg	**Sb**	**20 32 47.8**	**-4.2**
KLNJ	**Kolanjah**	**1.43**	**343**	Pg	**Pn**	**20 33 02.6**	**+0.2**
DSBU	**Dashti - Bushe**	**1.45**	**209**	Pg	**Pb**	**20 33 05.1**	**+1.1**
JHRM	**Jahrom**	**1.73**	**130**	Pg	**Pb**	**20 33 10.1**	**+1.2**
IRAM	**Ramesheh**	**2.19**	**7**	Pn	**Pn**	**20 33 15.6**	**+2.9**
KHL1	**Khalili_Fars**	**2.26**	**151**	Pn	**Pb**	**20 33 16.1**	**-1.8**
IBRJ	**Brojen**	**2.37**	**343**	Pn	**Pn**	**20 33 17.8**	**+2.6**
ZNGN	**Zangian**	**2.69**	**337**	Pn	**Pn**	**20 33 22.5**	**+2.9**
IMEH	**Mehriz**	**2.81**	**51**	Pn	**Pn**	**20 33 23.6**	**+2.4**
JHBN	**Jahan bin**	**2.86**	**335**	Pn	**Pn**	**20 33 24.8**	**+2.9**
AMIS	**Naft Sefid**	**3.14**	**311**	Pn	**Pn**	**20 33 28.5**	**+2.9**
DOBD	**Dorbid, Yazd**	**3.15**	**41**	Pn	**Pn**	**20 33 28.7**	**+2.8**
ICHK	**Chekchek**	**3.29**	**37**	Pn	**Pn**	**20 33 30.6**	**+2.8**
ANAR	**Anarak**	**3.82**	**21**	Pn	**Pn**	**20 33 37.3**	**+2.3**
SAKB	**Bahrain**	**3.88**	**201**	P	**Pn**	**20 33 36.3**	**+0.6**
SAKB				S	**Sn**	**20 34 22.9**	**+2.3**
SHMA	**Al-Shehemyia**	**3.89**	**195**	P	**Pn**	**20 33 36.5**	**+0.7**
SHMA				S	**Sn**	**20 34 22.6**	**+2.0**
KHGB	**Koh Gabri**	**3.90**	**78**	Pn	**Pn**	**20 33 38.6**	**+2.5**
NGRK	**Negar Kerman**	**4.06**	**89**	Pn	**Pn**	**20 33 40.4**	**+1.9**
TRNA	**Turayna**	**4.94**	**189**	P	**Pn**	**20 33 49.9**	**-0.4**
TRNA				S	**Sn**	**20 34 46.4**	**-0.1**
SMRA	**Abu-Samra**	**4.99**	**193**	P	**Pn**	**20 33 52.5**	**+1.6**
SMRA				S	**Sn**	**20 34 48.8**	**+0.9**
SHME	**Shamm**	**5.07**	**134**	P	**Pn**	**20 33 52.7**	**+0.6**
SHME	**Shamm**	**5.07**	**134**	P	**Pn**	**20 33 53.7**	**+1.5**
KHNJ	**Kahnooj**	**5.22**	**107**	Pn	**Pn**	**20 33 56.1**	**+1.9**
BANOM	**Banah**	**5.26**	**134**	*i* P	**Pn**	**20 33 55.0**	**+0.3**
	SNR=14						
BANOM				S	**Sn**	**20 34 52.7**	**-2.0**
BANOM	**Banah**	**5.26**	**134**	P	**Pn**	**20 33 55.6**	**+0.9**
BANOM				S	**Sn**	**20 34 53.5**	**-1.2**
SLWR	**Sila**	**5.55**	**184**	P	**Pn**	**20 33 59.6**	**+1.0**
SLWR				S	**Sn**	**20 35 01.1**	**-0.6**
MASF	**Masafi**	**5.59**	**138**	P	**Pn**	**20 34 00.1**	**+0.9**
MASF				S	**Sn**	**20 35 03.2**	**+0.6**
KBAM	**BAM**	**5.59**	**94**	Pn	**Pn**	**20 34 01.8**	**+2.4**
MSFE	**Esma-Masafi**	**5.60**	**139**	P	**Pn**	**20 34 00.0**	**+0.7**
NAZ	**Nazwa, Dubai**	**5.62**	**145**	P	**Pn**	**20 34 01.1**	**+1.4**
NAZ	**Nazwa, Dubai**	**5.62**	**145**	P	**Pn**	**20 34 01.3**	**+1.7**
NAZ				S	**Sn**	**20 35 03.5**	**0.0**
GHWR	**Ruwais**	**5.69**	**173**	P	**Pn**	**20 34 02.2**	**+1.6**
GHWR				S	**Sn**	**20 35 04.7**	**-0.5**
MDH	**Madha**	**5.72**	**138**	P	**Pn**	**20 34 01.5**	**+0.5**
MDH	**Madha**	**5.72**	**138**	P	**Pn**	**20 34 01.5**	**+0.5**
MDH				S	**Sn**	**20 35 05.6**	**-0.3**
ASUD	**Al Ashush, Dub**	**5.77**	**149**	*i* P	**Pn**	**20 34 03.3**	**+1.6**
	SNR=6.6						
ASUD	**Al Ashush, Dub**	**5.77**	**149**	P	**Pn**	**20 34 02.9**	**+1.2**
	SNR=6.7						
ASUD				S	**Sn**	**20 35 07.6**	**+0.4**
UOSS	**Minazif**	**5.95**	**141**	P	**Pn**	**20 34 04.8**	**+0.7**
UOSS	**Minazif**	**5.95**	**141**	P	**Pn**	**20 34 05.2**	**+1.1**
UOSS				S	**Sn**	**20 35 09.6**	**-1.8**
HATD	**Hatta, Dubai**	**6.00**	**142**	P	**Pn**	**20 34 05.6**	**+0.7**
HATD	**Hatta, Dubai**	**6.00**	**142**	P	**Pn**	**20 34 06.0**	**+1.1**
HATD				S	**Sn**	**20 35 12.7**	**-0.1**
MZWR	**Madinat Zayed**	**6.07**	**164**	P	**Pn**	**20 34 06.7**	**+0.9**
ASHO	**Ashiyiah**	**6.08**	**143**	*i* P	**Pn**	**20 34 06.4**	**+0.5**
	SNR=13						
ASHO	**Ashiyiah**	**6.08**	**143**	P	**Pn**	**20 34 06.7**	**+0.8**
	SNR=13						
ASHO				S	**Sn**	**20 35 14.2**	**-0.5**
SNQR	**Sonqor, Kerman**	**6.42**	**325**	Pn	**Pn**	**20 34 13.6**	**+2.7**
ALNE	**Al Ain**	**6.46**	**149**	*i* P	**Pn**	**20 34 11.9**	**+0.8**
	SNR=5.4						
ALNE	**Al Ain**	**6.46**	**149**	P	**Pn**	**20 34 12.4**	**+1.3**
	SNR=5.6						
ALNE				S	**Sn**	**20 35 24.2**	**+0.2**
MZR	**Muzera**	**6.72**	**169**	*i* P	**Pn**	**20 34 15.8**	**+0.9**
	SNR=8.6						
MZR	**Muzera**	**6.72**	**169**	P	**Pn**	**20 34 15.7**	**+0.9**
	SNR=8.6						
SOHO	**SOHO**	**6.77**	**143**	P	**Pn**	**20 34 15.3**	**-0.1**
SOHO	**SOHO**	**6.77**	**143**	P	**Pn**	**20 34 15.9**	**+0.5**
SOHO				S	**Sn**	**20 35 31.1**	**-0.7**
UMZA	**Um Al Zommool**	**7.43**	**157**	P	**Pn**	**20 34 24.9**	**+0.5**
UMZA				P	**Pn**	**20 34 24.9**	**+0.5**
UMZA				S	**Sn**	**20 35 47.4**	**-0.6**
UMZA				S	**Sn**	**20 35 47.4**	**-0.6**
HOQ	**Hoqain**	**7.64**	**141**	P	**Pn**	**20 34 28.4**	**+1.1**
BSY	**Bisya**	**8.26**	**145**	P	**Pn**	**20 34 36.0**	**+0.1**
BSY				S	**Sn**	**20 36 05.9**	**-2.7**
RAYN	**Ar Rayn**	**8.46**	**226**	*i* P	**Pn**	**20 34 38.3**	**-0.3**
	SNR=9.9						
RAYN	**Ar Rayn**	**8.46**	**226**	P	**Pn**	**20 34 39.1**	**+0.5**
SMDO	**Samad**	**8.46**	**139**	P	**Pn**	**20 34 38.6**	**-0.2**
SMDO				S	**Sn**	**20 36 11.2**	**-2.4**
JMDO	**Jabal Madar**	**9.04**	**142**	P	**Pn**	**20 34 46.4**	**-0.2**
JMDO				S	**Sn**	**20 36 26.8**	**-0.9**
WBK	**Wadi Bani Khal**	**9.35**	**137**	P	**Pn**	**20 34 49.9**	**-1.0**
JLN	**Jalan Bani Buh**	**9.96**	**137**	P	**Pn**	**20 34 60.0**	**+0.8**
MHTO	**MHTO**	**10.13**	**147**	P	**Pn**	**20 35 01.1**	**-0.4**
DOK	**Doka**	**11.12**	**170**	P	**Pn**	**20 35 13.9**	**-1.3**
GNI	**Garni**	**12.09**	**332**	Pn	Pn	20 35 24.2	-4.2
	0.4nm,0.3s,baz=43,slow=21,SNR=1.3						
DMTO	**DMTO**	**12.15**	**167**	P	**Pn**	**20 35 27.9**	**-1.3**
	SNR=8.3						
ABTO	**Aybut**	**12.28**	**174**	P	**Pn**	**20 35 30.3**	**-0.7**
ASF	**Jabal al Asfar**	**13.27**	**285**	Pn	**Pn**	**20 35 42.3**	**-2.2**
	0.2nm,0.3s,baz=102,slow=24,SNR=1.6						
	1.2nm,0.4s						
MMAI	**Mount Meron Ar**	**14.64**	**288**	Pn	**Pn**	**20 36 00.1**	**-3.1**
	0.3nm,0.3s,baz=134,slow=56,SNR=1.3						
MMAI				LR	LR	20 43 04.6	
	comp=Z,82nm,18.0s,baz=84,slow=44						
	0.2nm,0.4s						
EIL	**Elat**	**14.89**	**274**	LR	LR	20 42 25.1	
	comp=Z,56nm,21.2s,baz=61,slow=40						
KBZ	**Khabaz**	**15.86**	**335**	Pn	**Pn**	**20 36 17.6**	**-1.5**
	baz=258,slow=15,SNR=1.2						
	1.2nm,0.9s						
BRTR	**Keskin Array B**	**18.16**	**309**	P	**Pn**	**20 36 45.8**	**-2.5**
	0.1nm,0.3s,baz=128,slow=12,SNR=9.8						
BRTR				LR	LR	20 45 47.7	
	comp=Z,30nm,18.3s,baz=95,slow=44						
	0.3nm,0.5s						
AKTO	**Aktyubinsk**	**21.26**	**11**	P	**P**	**20 37 21.7**	**-0.2**
	1.7nm,0.6s,baz=187,slow=8.5,SNR=6.3						
	1.7nm,0.6s						
BVAR	**Borovoye Array**	**26.96**	**25**	P	**P**	**20 38 18.1**	**+1.0**
	0.2nm,0.3s,baz=218,slow=9.4,SNR=4.9						
	0.2nm,0.3s						
ARTI	**Arti**	**27.11**	**8**	LR	LR	20 51 02.5	
	comp=Z,61nm,18.5s,baz=190,slow=41						
KURBB	**Kurchatov Arra**	**28.87**	**36**	P	**P**	**20 38 35.0**	**+0.9**
	0.1nm,0.2s,baz=227,slow=7.1,SNR=1.7						
	0.1nm,0.2s						
MKAR	**Makanchi Array**	**29.04**	**45**	P	**P**	**20 38 37.3**	**+1.7**
	0.2nm,0.6s,baz=243,slow=8.9,SNR=5.4						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**33.94**	**35**	P	**P**	**20 39 19.6**	**+1.0**
	0.3nm,0.4s,baz=246,slow=11,SNR=3.7						
	0.3nm,0.4s						
PALK	**Pallekele**	**34.92**	**124**	LR	LR	20 52 46.4	
	comp=Z,28nm,18.2s,baz=252,slow=34						
FINES	**FINESS Array B**	**36.15**	**339**	P	**P**	**20 39 37.6**	**0.0**
	5.1nm,1.0s,baz=156,slow=9.8,SNR=4.7						
	5.1nm,1.0s						
HFS	**Hagfors**	**39.87**	**331**	P	**P**	**20 40 09.6**	**+0.6**
	1.0nm,0.5s,baz=148,slow=6.7,SNR=6.0						
	1.0nm,0.5s						
NOA	**NORSAR Array B**	**41.39**	**331**	P	**P**	**20 40 22.1**	**+0.6**
	0.8nm,0.9s,baz=182,slow=2.8,SNR=1.6						
NOA				LR	LR	21 00 28.8	
	comp=Z,26nm,18.1s,baz=260,slow=41						
	0.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**43.97**	**94**	LR	LR	21 03 55.6	
	comp=Z,25nm,18.3s,baz=290,slow=43						
ESDC	**Sonseca Array**	**46.51**	**298**	P	**P**	**20 41 03.1**	**+0.1**
	0.2nm,0.6s,baz=52,slow=8.3,SNR=2.5						
	0.2nm,0.6s						
EKA	**Eskdalemuir Ar**	**46.57**	**320**	P	**P**	**20 41 03.6**	**+0.4**
	1.3nm,0.8s,baz=126,slow=8.6,SNR=1.3						
	1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**49.30**	**262**	P	**P**	**20 41 25.7**	**+0.9**
	1.2nm,0.6s,baz=62,slow=4.6,SNR=9.0						
	1.2nm,0.6s						
SPITS	**Spitsbergen Ar**	**51.16**	**351**	P	**P**	**20 41 38.0**	**-0.2**
	10nm,0.9s,baz=157,slow=4.4,SNR=1.8						
	10nm,0.9s						
SFJD	**Kangerlussuaq**	**67.84**	**336**	LR	LR	21 11 28.7	
	comp=Z,34nm,19.8s,baz=108,slow=34						
SHEM	**Shemya Is, Ala**	**83.70**	**31**	LR	LR	21 24 34.0	
	comp=Z,91nm,18.1s,baz=118,slow=37						

IDC 03 20:39:01.8±2.6**, 8°.94N×126°.62E, h0km, mb3.6**/6**, mbtmp3.6**/6**, MS3.4**/3**, Error ellipse: s-maj=242.5km s-min=20.8km az=67.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**26.96**	**25**	LR	LR	20 55 10.6	
	comp=Z,24nm,18.4s,baz=119,slow=36						
WRA	**Warramunga Arr**	**29.69**	**165**	P	P	20 45 09.5	-0.2
	0.2nm,0.5s,baz=344,slow=9.2,SNR=1.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**33.18**	**168**	P	P	20 45 40.5	+0.1
	0.2nm,0.5s,baz=351,slow=7.2,SNR=5.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**53.29**	**323**	P	P	20 48 22.9	+0.4
	1.1nm,0.7s,baz=122,slow=8.0,SNR=14						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**55.95**	**332**	P	P	20 48 40.1	-1.6
	0.2nm,0.3s,baz=123,slow=7.5,SNR=2.1						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**57.35**	**326**	P	P	20 48 51.9	+0.2
	0.9nm,0.5s,baz=125,slow=7.0,SNR=11						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**62.95**	**326**	P	P	20 49 30.4	+0.3
	0.5nm,0.6s,baz=131,slow=6.8,SNR=4.8						
	0.5nm,0.6s						
MMAI	**Mount Meron Ar**	**86.21**	**303**	LR	LR	21 34 24.6	
	comp=Z,96nm,19.7s,baz=284,slow=38						
MLR	**Muntele Rosu**	**91.09**	**316**	LR	LR	21 35 28.0	
	comp=Z,17nm,22.0s,baz=246,slow=37						

*IDC **03** 20:41:57.6±3.5, 56°.37N×157°.74W, h0km, mb3.2/2, mbtmp3.2/4, ML3.1/2, Error ellipse: s-maj=69.7km s-min=26.5km az=165.0*
*AEIC **03** 20:42:02.2±1.4, 57°.04N±0°.03×157°.76W±0°.06, h12km±5km, Error ellipse: s-maj=6.5km s-min=2.6km az=134.0*
*NEIC **03** 20:42:03.1±1.7, 57°.04N±0°.03×157°.78W±0°.03, h16km±6km, ML3.7/54, ML3.3(AEIC), Error ellipse: s-maj=4.9km s-min=1.3km az=156.0*

ISC 03 20:42:01.9±1.2**, 57°.04N**±0°.04×**157°.78W**±0°.03**, h10km**±10km**, n73, σ0s.69**/83**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANNE	**Aniakchak Nort**	**0.20**	**232**		**Pg**	**20 42 06.0**	**0.0**
ANNW	**Aniakchak Nort**	**0.25**	**254**		**Pg**	**20 42 07.9**	**+0.8**
AZAC	**Aniakchak**	**0.29**	**241**		**Pg**	**20 42 08.2**	**+0.5**
ANPB	**Aniakchak Plen**	**0.36**	**230**		**Pg**	**20 42 09.2**	**+0.1**
R16K	**Pilot Point**	**0.54**	**11**		**Pg**	**20 42 12.8**	**+0.3**
R16K				IAML		20 42 21.9	
	comp=E,3μm,0.4s						
R16K				IAML		20 42 22.2	
	comp=N,3μm,0.1s						
R16K	**Pilot Point**	**0.54**	**11**		**Sb**	**20 42 21.1**	**-0.3**
BPBCA	**Veniaminof**	**0.58**	**220**		**Pg**	**20 42 13.1**	**-0.1**
PLBL	**Peulik Blue Cr**	**0.84**	**37**		**Pg**	**20 42 17.9**	**-0.2**
PLBL					**Sb**	**20 42 30.9**	**+0.8**
PLK4	**Peulik 4**	**0.97**	**52**		**Pg**	**20 42 19.6**	**-1.0**
PLK4					**Pb**	**20 42 19.9**	**-1.0**
PLK4					**Sb**	**20 42 34.2**	**+0.4**
PLK4	**Peulik 4**	**0.97**	**52**	IAML		20 42 36.4	
	comp=N,2μm,0.6s						
PLK4				IAML		20 42 41.8	
	comp=E,1μm,0.8s						
PLK1	**Peulik 1**	**0.99**	**39**		**Pb**	**20 42 20.9**	**-0.3**
PLK1					**Sn**	**20 42 35.5**	**-0.5**

PLK1					Sb	20 42 36.0	+1.7
PLK3	Peulik 3	1.05	51		Pb	20 42 21.0	-1.2
PLK3					Sn	20 42 36.5	-0.9
PLK2	Peulik 2	1.07	46		Pb	20 42 22.0	-0.5
PLK2					Pg	20 42 22.8	+0.3
PLK5	Peulik 5	1.08	26		Pb	20 42 22.2	-0.4
PLK5					Sn	20 42 37.9	-0.2
VNSG	Veniaminof 6	1.17	219		Pb	20 42 22.8	-1.4
VNSG					Sn	20 42 40.6	+0.3
VNSS	Veniaminof 8	1.23	230		Pn	20 42 24.7	-0.6
VNFG	Fog Glacier, M	1.24	233		Pn	20 42 24.9	-0.4
CNTC	Contact Creek	1.60	39		Pn	20 42 29.5	-0.8
CNTC					Pb	20 42 31.4	-0.2
ANCK	Angle Creek	1.69	46		Pn	20 42 31.0	-0.6
CHIR	Chirikof Islan	1.71	135		Pn	20 42 32.3	+0.6
CHIR				IAML		20 42 58.1	
	comp=E,995nm,0.9s						
CHIR				IAML		20 43 01.5	
	comp=N,898nm,1.1s						
Q16K	King Salmon	1.75	20		Pb	20 42 33.5	-0.6
Q16K					Sb	20 42 55.4	-0.7
ACHA	Angle Creek He	1.77	47		Pb	20 42 33.7	-0.8
KABU	Katmai Buttres	1.82	46		Pn	20 42 32.9	-0.5
KABU					Pb	20 42 34.6	-0.8
KAKN	Katmai Knife C	1.93	48		Pn	20 42 34.8	-0.1
KAKN					Pb	20 42 37.6	+0.4
P16K	Nushagak River	2.00	357		Pb	20 42 37.5	-1.0
P16K				IAML		20 43 09.8	
	comp=E,727nm,0.8s						
SII	Sitkinak Islan	2.03	102		Pn	20 42 37.3	+1.1
SII				IAML		20 43 11.1	
	comp=N,458nm,0.9s						
KAWH	Katmai	2.09	49		Pn	20 42 37.0	0.0
KAHC	Katmai Hardscr	2.19	41		Pn	20 42 39.6	+1.1
P17K	Kvichak River	2.28	18		Pn	20 42 39.8	+0.3
O15K	Ungalikthiuk R	2.41	334		Pn	20 42 41.0	-0.3
CNBA	Chernabura Isl	2.44	205		Pn	20 42 42.4	+0.5
CNBA				IAML		20 43 17.7	
	comp=E,496nm,0.8s						
CNBA				IAML		20 43 22.6	
	comp=N,412nm,0.8s						
OHAK	Old Harbor	2.45	84		Pn	20 42 42.6	+0.7
O16K	Kokwok River B	2.57	356		Pn	20 42 44.5	+1.0
O16K				IAML		20 43 34.7	
	comp=E,186nm,0.6s						
P18K	Big Mountain,	2.72	29		Pn	20 42 46.4	+0.7
O17K	Koliganek Bris	2.77	7		Pn	20 42 46.4	+0.1
PN7A	Pavlof North-7	2.85	237		Pn	20 42 48.0	+0.4
HAG	Hague Volcano	2.88	235		Pn	20 42 48.3	+0.4
O14K	Tigyukauivet M	2.89	322		Pn	20 42 48.1	+0.2
O14K				IAML		20 43 49.9	
	comp=N,173nm,0.9s						
O14K				IAML		20 43 52.6	
	comp=E,157nm,0.8s						
KDAK	Kodiak Island	2.91	73	Pn	Pn	20 42 49.1	+0.9
	comp=E,6.1nm,0.3s,baz=259,slow=7.7,SNR=119						
KDAK				Sn	Sn	20 43 25.3	+2.2
	comp=E,4.7nm,0.3s,baz=166,slow=10,SNR=5.7						
	comp=E,17nm,0.3s						
KDAK	Kodiak Island	2.91	73	IAML		20 43 43.9	
	comp=E,141nm,3.5s						
O18K	Koktuh Hills	3.13	24		Pn	20 42 51.1	-0.2
DTNA	Dutton South F	3.14	235		Pn	20 42 51.5	0.0
DT1	Dutton Round H	3.18	234		Pn	20 42 52.0	+0.1
N15K	Kwethluk River	3.37	340		Pn	20 42 54.9	+0.4
N15K				IAML		20 43 58.2	
	comp=N,217nm,0.9s						
N15K				IAML		20 44 06.2	
	comp=E,195nm,0.9s						
N17K	Nushagak Hills	3.52	5		Pn	20 42 57.0	+0.4
N17K				IAML		20 44 05.7	
	comp=E,104nm,1.2s						
N14K	Kuskokwak Cree	3.55	326		Pn	20 42 57.3	+0.3
N14K				IAML		20 44 33.8	
	comp=N,206nm,1.4s						
O19K	Port Alsworth	3.65	28		Pn	20 42 58.7	+0.4
O19K				IAML		20 44 04.5	
	comp=N,201nm,0.5s						
N18K	Kilae Creek	3.78	14		Pn	20 43 00.2	-0.1
N18K				IAML		20 44 10.7	
	comp=E,84nm,1.3s						
N18K				IAML		20 45 01.8	
	comp=N,67nm,4.2s						
IVE	Iliamna Volcan	3.89	38		Pn	20 43 02.1	+0.2
M15K	Kasigluk River	3.97	339		Pn	20 43 03.0	+0.2
M16K	Timber Creek	4.04	352		Pn	20 43 04.4	+0.6
M16K				IAML		20 44 33.3	
	comp=E,83nm,2.0s						
M16K				IAML		20 44 53.2	
	comp=N,69nm,3.9s						
N19K	Bonanza Creek	4.15	23		Pn	20 43 06.2	+0.8
N19K				IAML		20 44 16.4	
	comp=N,83nm,2.5s						
N19K				IAML		20 44 18.1	
	comp=E,74nm,1.2s						
RED	Redoubt Volcan	4.28	35		Pn	20 43 07.7	+0.6
RED	Redoubt Volcan	4.28	35	IAML		20 43 39.1	
	comp=E,93nm,4.5s						
RED				IAML		20 44 31.7	
	comp=N,74nm,4.3s						
M14K	Bethel	4.31	332		Pn	20 43 07.9	+0.5
M17K	Holitna River	4.38	2		Pn	20 43 08.3	-0.1
M13K	Dall Lake	4.46	322		Pn	20 43 10.3	+0.8
L14K	Kuka Creek	5.00	332		Pn	20 43 17.2	+0.4
L14K	Kuka Creek	5.00	332	IAML		20 45 17.5	
	comp=E,70nm,4.2s						
L15K	Ungalak Mounta	5.03	339		Pn	20 43 17.2	-0.1
SPNN	North Nagishla	5.07	29		Pn	20 43 18.7	+0.7
L17K	Donlin	5.12	357		Pn	20 43 18.6	0.0
L19K	White Mountain	5.37	15		Pn	20 43 22.1	0.0
M20K	Styx River	5.41	24		Pn	20 43 22.9	+0.3
K15K	Wolf Creek Mou	5.61	342		Pn	20 43 26.3	+1.1
K17K	Iditarod	5.71	358		Pn	20 43 26.7	+0.1
J14K	Nanvaranak Lak	6.42	336		Pn	20 43 36.8	+0.4
J16K	Anvik River	6.42	349		Pn	20 43 36.1	-0.4
ANM	Nome	8.41	337		Pn	20 44 04.1	+0.4
ILAR	Eielson Array	9.38	30	Pn	Pn	20 44 15.8	-1.3
	comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=5.2						
	comp=E,0.2nm,0.5s						
G23K	Bananza Creek	10.36	17		Pn	20 44 32.1	+1.6
YKA	Yellowknife Ar	22.07	58	P	P	20 46 56.0	-0.5
	comp=E,0.6nm,0.9s,baz=274,slow=10,SNR=5.1						
	comp=E,0.6nm,0.9s						
SONM	Songino Array	54.45	305	P	P	20 51 29.5	+0.3
	comp=E,0.3nm,0.6s,baz=35,slow=6.0,SNR=3.8						
	comp=E,0.3nm,0.6s						

*JMA **03** 21:01:46.7±0.2, 24.°6N±0.°4×121.°7E±0.°7, h74km±1km, MV2.9/14, TAIWAN REGION*
*TAP **03** 21:01:46.8, 24.°68N×121.°71E, h76km, ML3.8, B*
ISC 03 21:01:46.7±1.2**, 24.°71N**±0.°02×**121.°70E**±0.°02**, h78**km±4km**, n144, σ0.°78**/257**, 3C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWE	Neicheng	0.03	293⇑	iP	Pn	21 01 58.1	+0.3
TWE				iS	Sn	21 02 06.2	+0.3
ILA	Ilan	0.07	39	eP	Pn	21 01 56.9	-0.9
ILA				eS	Sn	21 02 07.0	+0.9
NDS	Dongshan	0.08	168	iP	Pn	21 01 58.1	+0.2
NDS				S	Sn	21 02 06.2	+0.1
FUSB	Fushanzhiwuyua	0.11	296⇑	iP	Pn	21 01 58.1	+0.1
FUSB				iS	Sn	21 02 05.8	-0.6
ENTT	Nioudou	0.14	240	iP	Pn	21 01 58.2	+0.2
ENTT				S	Sn	21 02 06.4	0.0
TWC	Suao	0.17	126	iP	Pn	21 01 58.5	+0.5
TWC				eS	Sn	21 02 07.1	+0.6
ESAO	Su ao	0.19	135	eP	Pn	21 01 58.4	+0.2
ESAO				eS	Sn	21 02 06.6	0.0
NWLT	Wulai	0.19	291	iP	Pn	21 01 58.1	-0.1
NWLT				iS	Sn	21 02 05.9	-0.9
LATG	Datong	0.23	222	iP	Pn	21 01 58.7	+0.2
LATG				S	Sn	21 02 07.3	+0.1
EGS		0.25	57	eP	Pn	21 01 59.4	+1.0
EGS				S	Sn	21 02 08.7	+1.6
EWUT	Wuta	0.27	165	eP	Pn	21 01 58.6	0.0
EWUT				eS	Sn	21 02 07.0	-0.3
ENA	Nanau	0.28	172	eP	Pn	21 01 58.6	-0.1
TIPB	Shuangxi	0.29	24	iP	Pn	21 01 59.1	+0.4
TIPB				iS	Sn	21 02 07.7	+0.1
TWA	Mucha	0.29	339	iP	Pn	21 01 58.9	+0.2
TWA				iS	Sn	21 02 07.2	-0.4
YHNB	Yeheng	0.30	262	P	Pn	21 01 58.6	-0.2
YHNB				S	Sn	21 02 06.9	-0.8
NHDH	Xindian Distri	0.30	328	iP	Pn	21 01 58.9	+0.2
NHDH				iS	Sn	21 02 07.7	+0.1
NSK	Sanguang	0.31	264	iP	Pn	21 01 58.7	-0.2
NSK				eS	Sn	21 02 06.8	-1.1
NHY	Taipei	0.35	340	eP	Pn	21 01 59.4	+0.3
NHY				S	Sn	21 02 08.3	+0.1
NWF	Wu-fen Shan	0.37	12	P	Pn	21 01 59.5	+0.2
NWF				iS	Sn	21 02 08.7	+0.1
WFSB	Wu-fen Shan	0.37	12	P	Pn	21 01 59.6	+0.4
WFSB				eS	Sn	21 02 08.6	+0.2
TAP	Taipei	0.37	332	iP	Pn	21 01 59.5	+0.3
TAP				eS	Sn	21 02 08.4	0.0
EAHA	Aohua	0.38	174	iP	Pn	21 01 59.4	+0.1
TWB1	Santiao Chiao	0.40	41	iP	Pn	21 01 60.0	+0.6
TWB1				eS	Sn	21 02 09.1	+0.3
NNS	Nan Shan	0.40	228	iP	Pn	21 01 59.7	+0.1
NNS				iS	Sn	21 02 09.2	+0.1
NNSB	Datong	0.40	226⇑	iP	Pn	21 01 59.7	+0.1
NNSB				S	Sn	21 02 08.9	-0.2
SXI1	Grass Mountain	0.42	23	eP	Pn	21 01 60.0	+0.3
SXI1				iS	Sn	21 02 09.9	+0.7
TNOU	National Taiwa	0.44	9	P	Pn	21 01 60.0	+0.2
TNOU				S	Sn	21 02 09.3	-0.1
YM01	YM01	0.45	345	iP	Pn	21 02 00.1	+0.2
YM01				S	Sn	21 02 09.3	-0.3
TWS1	Kuangyinshan	0.47	327	iP	Pn	21 02 00.4	+0.5
TWS1				S	Sn	21 02 10.3	+0.6
ZUZH	Zhuzihu	0.47	343	iP	Pn	21 02 00.2	+0.1
ZUZH				iS	Sn	21 02 09.5	-0.4
KSHI	Guanxi Townshi	0.48	278	iP	Pn	21 02 00.5	+0.4
KSHI				eS	Sn	21 02 10.4	+0.5
YM08	YM08	0.49	348	eP	Pn	21 02 00.2	0.0
YM08				eS	Sn	21 02 09.0	-1.1
ANP	Anpu	0.50	341	eP	Pn	21 02 00.4	0.0
ANP				eS	Sn	21 02 09.8	-0.6
NTST	Danshui	0.51	334	eP	Pn	21 02 00.7	+0.4
NTST				eS	Sn	21 02 10.8	+0.5
NCU	National Centr	0.53	299	eP	Pn	21 01 59.0	-1.5
NCU				eS	Sn	21 02 09.4	-1.4
NCUH	Zhongli	0.53	299	iP	Pn	21 02 00.8	+0.3
NCUH				S	Sn	21 02 11.1	+0.3
NFF	Wufeng Townshi	0.53	262	iP	Pn	21 02 00.7	+0.1
NFF				iS	Sn	21 02 10.7	-0.2
ETLH	Xiulin Townshi	0.54	202	eP	Pn	21 02 00.5	-0.2
ETLH				eS	Sn	21 02 09.9	-1.1
NACB	Ninganchiao	0.54	190	eP	Pn	21 01 59.9	-0.8
NACB				S	Sn	21 02 09.6	-1.3
ETL	Fush Village	0.55	187	eP	Pn	21 01 59.9	-0.8
ETL				eS	Sn	21 02 09.8	-1.3
EOS2	EOS2	0.56	121	eP	Pn	21 02 02.0	+1.4
FUSS	Fushou	0.62	222	iP	Pn	21 02 02.2	+0.6
FUSS				S	Sn	21 02 12.8	+0.1
LIOB	Emei	0.62	264	iP	Pn	21 02 01.7	+0.3
LIOB				iS	Sn	21 02 12.2	-0.1
TWD	Chiawan	0.63	189	iP	Pn	21 02 00.5	-1.0
TWD				eS	Sn	21 02 10.7	-1.8
NSTT	Nanjuang	0.64	263	iP	Pn	21 02 01.7	+0.2
NSTT				iS	Sn	21 02 12.4	-0.2
SBCB	Hsinchu	0.65	277	P	Pn	21 02 02.2	+0.5
SBCB				S	Sn	21 02 13.1	+0.3
TWT	Tachien	0.66	227	iP	Pn	21 02 02.8	+0.9
TWT				iS	Sn	21 02 13.7	+0.5
HSN	Hsinchu	0.67	278	P	Pn	21 02 01.6	-0.2
HSN				eS	Sn	21 02 12.5	-0.6
TDCB	Techi	0.67	227	iP	Pn	21 02 02.7	+0.6
TDCB				iS	Sn	21 02 13.7	+0.3
WHF	Hehuan Shan	0.69	215	P	Pn	21 02 02.7	+0.2
WHF				S	Sn	21 02 14.0	-0.2
EOS3	EOS3	0.70	127	iP	Pn	21 02 02.9	+0.9
LXIB	Xiulin Townshi	0.73	201	P	Pn	21 02 01.9	-0.8
LXIB				S	Sn	21 02 13.8	-0.8
HWA	Hwalien	0.73	187	P	Pn	21 02 02.0	-0.6
HWA				eS	Sn	21 02 13.5	-0.8
ETM	Tongmen	0.76	194	eP	Pn	21 02 01.8	-1.1
ETM				eS	Sn	21 02 13.2	-1.7
WHP	Taichung City	0.81	238	iP	Pn	21 02 04.2	+0.7
WHP				iS	Sn	21 02 16.3	+0.4
EOS4	EOS4	0.81	136	P	Pn	21 02 03.2	+0.2
EOS4				S	Sn	21 02 15.4	+0.2
TEYL	Yanliau Villag	0.84	186	eP	Pn	21 02 03.5	-0.3
NMLH	Miaoli	0.84	258	iP	Pn	21 02 04.2	+0.4
NMLH				eS	Sn	21 02 16.3	-0.2
WUSB	Renai	0.89	217	iP	Pn	21 02 05.2	+0.7
WUSB				S	Sn	21 02 17.8	+0.2
OWD	Renai	0.89	213	P	Pn	21 02 04.7	+0.3
OWD				S	Sn	21 02 17.9	+0.2
NSY	Sanyi	0.90	251	iP	Pn	21 02 05.2	+0.7
NSY				S	Sn	21 02 18.4	+0.7
TWQ1	Liyutan	0.92	247	eP	Pn	21 02 05.0	+0.3
TWQ1				eS	Sn	21 02 18.1	+0.1
ESL	Shilin	0.92	195	eP	Pn	21 02 03.2	-1.5
ESL				eS	Sn	21 02 15.9	-2.2
SHUL	Shoufeng	0.93	188	P	Pn	21 02 04.4	-0.3
SHUL				iS	Sn	21 02 17.9	-0.2
WCS	Beigang Elemen	0.97	228	iP	Pn	21 02 05.8	+0.6
WCS				S	Sn	21 02 19.5	+0.5
PCYT	Pengchaiyu	0.98	20	P	Pn	21 02 06.0	+0.6
PCYT				eS	Sn	21 02 19.6	+0.3
TEGC	Jichi Village	1.01	188	eP	Pn	21 02 06.6	+0.9
WARBT	Fenglin Townsh	1.03	196	eP	Pn	21 02 04.6	-1.4
WARBT				eS	Sn	21 02 18.8	-1.6
EGFH	Guangfu	1.06	194	eP	Pn	21 02 05.7	-0.8
VWDT	VWDT	1.08	208	P	Pn	21 02 07.1	+0.5
VWDT				S	Sn	21 02 22.0	+0.5
TCU	Taichung	1.09	239	eP	Pn	21 02 07.3	+0.6
TCU				eS	Sn	21 02 21.6	0.0
SMLT	Sun Moon Lake	1.10	222	eP	Pn	21 02 07.5	+0.6
SMLT				S	Sn	21 02 23.3	+1.2
TYC	Yuchr	1.11	224	eP	Pn	21 02 07.5	+0.5
TYC				iS	Sn	21 02 22.9	+0.8
SSLB	Suanglung	1.14	217	P	Pn	21 02 07.8	+0.4
SSLB				S	Sn	21 02 23.4	+0.6
JYNG	Yonagunijimaku	1.16	102	P	Pn	21 02 07.6	0.0
JYNG				eS	Sn	21 02 22.6	-0.7
WCHH	Zhanghua	1.21	239	P	Pn	21 02 08.5	+0.2
WCHH				iS	Sn	21 02 24.4	-0.1
YOJ	Yonaguni jima	1.22	101	eS	Sn	21 02 24.3	-0.3
YOJ	Yonaguni jima	1.22	101	eP	Pn	21 02 08.4	+0.1
YOJ				eS	Sn	21 02 23.9	-0.6
WCH1	Changhua City	1.23	239	P	Pn	21 02 08.8	+0.4
WCH1				S	Sn	21 02 25.0	+0.3
HGSD	Ruisui	1.24	192	eP	Pn	21 02 08.5	-0.1
HGSD				eS	Sn	21 02 24.2	-0.8
WNT	Mingjian	1.24	228	eP	Pn	21 02 09.3	+0.7
WNT				S	Sn	21 02 25.9	+0.8
EHY	Hungye	1.25	196	eP	Pn	21 02 07.8	-0.9
WHYT	Xinyi Township	1.27	218	P	Pn	21 02 09.7	+0.7
WHYT				iS	Sn	21 02 26.9	+1.1
YULB	Yu-li	1.36	196	eP	Pn	21 02 09.1	-1.1
YULB				eS	Sn	21 02 26.8	-1.0
ECBN	Changbin	1.41	189	eP	Pn	21 02 10.8	+0.1
ECBN				eS	Sn	21 02 29.3	+0.5
ALS	Alishan	1.45	215	eP	Pn	21 02 12.5	+0.9
ALS				eS	Sn	21 02 31.7	+1.5
CHN5	Tsauling	1.45	220	eP	Pn	21 02 12.0	+0.6
CHN5				iS	Sn	21 02 30.8	+0.8
WDL	Douliou City	1.45	227	eP	Pn	21 02 12.0	+0.7
WDL				eS	Sn	21 02 31.2	+1.4
WRL	Guolierlin Hig	1.45	237	iP	Pn	21 02 11.2	0.0
WRL				S	Sn	21 02 29.2	-0.6
WGK	Gukeng	1.45	226	P	Pn	21 02 12.1	+0.8
WGK				eS	Sn	21 02 30.8	+0.9
WDLH	Douliu	1.47	226	eP	Pn	21 02 12.2	+0.7
WDLH				eS	Sn	21 02 30.9	+0.7
CHKH	Chenggong	1.54	190	eP	Pn	21 02 12.3	-0.1
CHKH				eS	Sn	21 02 31.8	0.0
WTCT	Ta-ch'eng	1.54	237	eP	Pn	21 02 12.6	+0.1
WTCT				eS	Sn	21 02 32.2	+0.2
FULB	Fuli	1.55	194	eP	Pn	21 02 12.8	+0.2
FULB				eS	Sn	21 02 32.1	-0.1
WCKO	Fanlu	1.61	219	eP	Pn	21 02 14.0	+0.6
WCKO				eS	Sn	21 02 34.5	+0.8
CHN2	Minshiung	1.62	224	eP	Pn	21 02 13.4	-0.1
CHN2				eS	Sn	21 02 35.3	+1.6
CHKT	Chengkung	1.63	191	eP	Pn	21 02 13.7	0.0
CHKT				S	Sn	21 02 33.5	-0.6
ELDTW	Lidau	1.64	203	eP	Pn	21 02 14.6	+0.8
ELDTW				iS	Sn	21 02 34.4	0.0
ECS	Chishang	1.67	195	eP	Pn	21 02 15.0	+0.9
CHY	Chiayi	1.68	224	eP	Pn	21 02 14.8	+0.6
CHY				iS	Sn	21 02 35.6	+0.5
TPUB	Ta-pu	1.71	215	P	Pn	21 02 15.2	+0.5
TPUB				eS	Sn	21 02 37.2	+1.2
WSF	Szhu	1.72	232	eP	Pn	21 02 14.2	-0.6
WSF				iS	Sn	21 02 36.5	+0.4
STYH	Taoyuan	1.75	209	eP	Pn	21 02 16.0	+0.8
STYH				S	Sn	21 02 39.6	+2.8
WTP	Ta-pu	1.76	214	eP	Pn	21 02 15.8	+0.4
WTP				eS	Sn	21 02 37.8	+0.6
WSL	Shuilin Townsh	1.79	229	eP	Pn	21 02 15.8	+0.1
WSL				eS	Sn	21 02 37.8	0.0
TWK	Hsinying	1.81	218	P	Pn	21 02 16.5	+0.4
TWK				eS	Sn	21 02 39.7	+1.2
SNST	Tainan City	1.85	217	eP	Pn	21 02 16.7	+0.2
SNST				eS	Sn	21 02 39.9	+0.7
CHN1	Nanshi	1.86	215	eP	Pn	21 02 16.9	+0.2
CHN1				eS	Sn	21 02 39.3	-0.1
IRIF	Iriomote-Funau	1.89	101	P	Pn	21 02 16.9	-0.1
IRIF				S	Sn	21 02 39.4	-0.7
SGST	Jiashian	1.92	212	eP	Pn	21 02 16.9	-0.5
SGST				eS	Sn	21 02 41.9	+1.1
CHN8	Yiju	1.92	225	eP	Pn	21 02 17.8	+0.3
CHN8				eS	Sn	21 02 42.0	+1.1
TWG	Pinlang	1.97	197	eP	Pn	21 02 17.7	-0.4
TWGBT	Beinan	1.97	197	eP	Pn	21 02 18.2	+0.1
TTN	Taitung	2.01	195	eP	Pn	21 02 20.0	+1.3
HATJ	Hateruma jima	2.03	108	eS	Sn	21 02 43.3	-0.2
VWUC	VWUC	2.06	278	eP	Pn	21 02 19.1	-0.2
MATB	Ma-tsu	2.14	313	eP	Pn	21 02 20.1	-0.3
TSCK	Chigu Township	2.14	224	eP	Pn	21 02 20.9	+0.4
TSCK				S	Sn	21 02 46.0	-0.2
JKRS	Kuro-shima	2.16	102	P	Pn	21 02 21.0	+0.4
JKRS				eS	Sn	21 02 46.0	-0.5
SSD	Sandimen	2.19	207	eP	Pn	21 02 22.9	+1.8
ECL	Taimali	2.21	198	eP	Pn	21 02 21.9	+0.6
ECL				eS	Sn	21 02 46.8	-1.0
JIJ	Ishigaki jima	2.25	98	P	Pn	21 02 22.1	+0.2
JIJ				S	Sn	21 02 47.5	-1.3
PNG	Penghu	2.26	240	eP	Pn	21 02 20.6	-1.4
PNG				eS	Sn	21 02 47.0	-2.1
PHUB	P'eng-hu	2.28	239	eP	Pn	21 02 21.1	-1.2
PHUB				S	Sn	21 02 47.5	-2.0
MASBT	Mashibuluo	2.31	205	eP	Pn	21 02 23.4	+0.8
MASBT				eS	Sn	21 02 51.4	+1.3
JISG	Ishigakijimahi	2.38	92	P	Pn	21 02 23.8	+0.2
JISG				eS	Sn	21 02 51.1	-0.8
EAST	Anshuo	2.44	199	eP	Pn	21 02 25.7	+1.2
EAST				eS	Sn	21 02 54.6	+1.1
SCZT	Fangliau	2.53	203	eP	Pn	21 02 26.7	+1.1
LYJJ	Jianjiangzhen	2.53	317	eP	Pn	21 02 25.1	-0.6
VCHM	Qimei	2.56	235	eP	Pn	21 02 26.1	0.0
XPSS	Dashiqiu	2.60	329	eP	Pn	21 02 25.9	-0.6
SLIU	Shizi	2.62	199	eP	Pn	21 02 28.0	+1.1
LAY	Lan-yu	2.66	183	eP	Pn	21 02 26.3	-1.2
LYUB	Lan-yu	2.70	182	eP	Pn	21 02 27.4	-0.5
LYUB				eS	Sn	21 02 56.8	-2.8
JTJ	Tarama	2.73	91	eP	Pn	21 02 29.2	+0.8
JTJ				eS	Sn	21 03 00.9	+0.5
MHZQ	Yeshan	2.78	300	eP	Pn	21 02 28.7	-0.3
SMST	Manzhou Townsh	2.79	197	eP	Pn	21 02 30.7	+1.5
SMST				eS	Sn	21 03 02.3	+0.4
HEN	Hengchun	2.83	198	eP	Pn	21 02 32.3	+2.6
TWKBT	Hengchun	2.87	197	eP	Pn	21 02 31.2	+0.9
KNMB	Chin-men Tao	3.02	266	eP	Pn	21 02 31.3	-1.0
JIRB	Irabujima	3.16	87	eP	Pn	21 02 35.1	+1.0
AXDP	Jialang	3.39	274	eP	Pn	21 02 37.0	-0.3
ZPLA	Ao Xicun	3.69	259	eP	Pn	21 02 40.9	-0.4
DSXP	Dongshan	4.03	257	eP	Pn	21 02 45.4	-0.5

*IDC **03** 21:16:39.4±0.8, 9.°25S×113.°99E, h0km, mb4.4/17, mbtmp4.4/22, ML3.8/5, MS3.1/6, Error ellipse: s-maj=24.6km s-min=13.0km az=38.0*
*NEIC **03** 21:16:47.5±1.2, 9.°37S±0.°08×114.°08E±0.°07, h61km±7km, mb4.6/32, Error ellipse: s-maj=11.4km s-min=10.0km az=208.0*
*DJA **03** 21:16:48.1±0.2, 9°S±3°×11°4E±°, h52km±9km, M4.6/51, mB5.1/8, mb4.7/31, MLv4.8/51, Mw(mB)4.5/8*
ISC 03 21:16:42.9±0.4**, 9.°55S**±0.°05×**113.°84E**±0.°04**, h31**km**, n114, σ1.°78**/112**, mb4.5**/29**, MS3.0**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.11	16		Pn	21 17 03.8	+1.4
JAGI	Jajag, Banyuwa	1.11	16	P	Pb	21 17 04.2	+0.5
GMJI	Gumukmas	1.32	343	P	Pb	21 17 08.8	+1.6
GMJI				S	Sb	21 17 24.5	+0.7
IGBI	Denpasar	1.48	61	P	Pn	21 17 08.2	+0.7
IGBI				S	Sn	21 17 23.8	-2.0
RTBI	Rangdo, Negare	1.54	45	P	Pn	21 17 10.0	+1.8
RTBI				S	Sn	21 17 26.2	-1.0
DNP	Denpasar	1.61	58	P	Pn	21 17 10.9	+1.7
ABJI	Asem Bagus	1.78	13	P	Pb	21 17 15.4	+0.4
BLJI	Banyuglugur	1.81	352	P	Pb	21 17 16.4	+1.0
BLJI				S	Sb	21 17 38.3	+0.7
KHKI	Kahang-Kahang	2.11	56	P	Pn	21 17 18.8	+2.7
KMMI	Kalianget	2.48	3	P	Pb	21 17 26.0	-0.9
SNJI	Sawahan-Nganju	2.70	310	P	Pb	21 17 30.7	0.0
SJI	Sawahan	2.73	311	P	Pb	21 17 30.6	-0.5
PCJI	Pacitan	2.95	297	P	Pb	21 17 33.0	-1.9
NGJI	Ngawi	3.19	312	P	Pb	21 17 37.3	-1.7
UGM	Wanagama	3.66	296	Pn	Pb	21 17 43.4	-3.5
UGM	Wanagama	3.66	296	P	Pb	21 17 44.9	-2.0
YOGI	Yogyakarta	3.90	296	P	Pb	21 17 47.4	-3.6
PLAI	Plampang	3.96	80	P	Pn	21 17 44.0	+2.5
SMRI	Semarang	4.18	306	Pn	Pb	21 17 51.5	-4.3
SMRI	Semarang	4.18	306	P	Pb	21 17 52.8	-3.0
DBNI	Kabupaten Domp	4.54	77	P	Pn	21 17 52.6	+3.0
CTJI	Waduk Cacaban	5.25	298	P	Pb	21 18 07.7	-6.3
	0.4nm71nm,0.7s						
KPJI	Karang Pucung	5.33	294	P	Pn	21 18 06.8	+6.4
	0.5nm61nm,0.5s						
WBSI	Waikabubak, Su	5.48	91	P	Pn	21 18 05.9	+3.4
	0.8nm1μm110nm,0.8s						
LBFI	Labuhan Bajo,	6.07	80	P	Pn	21 18 12.4	+1.8
BBKI	Banjar Baru	6.13	9	P	Pn	21 18 15.1	+3.7
	0.3nm3μm66nm,0.9s						
WSI	Waingapu	6.37	92	P	Pn	21 18 18.5	+3.7
	185nm,1.5s						
BBJI	Bungbulang	6.46	288	Pn	Pn	21 18 22.2	+6.2
BBJI	Bungbulang	6.46	288	P	Pn	21 18 22.1	+6.1
	0.3nm32nm,0.6s						
BASI	Baing, Sumba	6.68	96	P	Pn	21 18 23.2	+4.3
	0.7nm89nm,1.1s						
LEM	Lembang	6.72	293	Pn	Pn	21 18 19.7	0.0
	1.1nm,0.3s,baz=152,slow=24,SNR=1.1						
LEM				Sn	Sn	21 19 40.0	+4.6
	5.1nm,0.3s,baz=134,slow=16,SNR=4.7						
	6.0nm,0.4s						
KAPI	Kappang	7.40	53	Pn	Pn	21 18 26.6	-2.3
	3.8nm,0.3s,baz=200,slow=6.3,SNR=6.2						
KAPI				Sn	Sn	21 19 48.9	-2.9
	1.5nm,0.3s,baz=42,slow=21,SNR=6.0						
KAPI				LR	LR	21 21 41.9	
	comp=Z,175nm,19.0s,baz=243,slow=43						
	13nm,0.8s						
KAPI	Kappang	7.40	53	Pn	Pn	21 18 29.0	+0.2
KAPI	Kappang	7.40	53	P	Pn	21 18 29.7	+0.9
BSSI	Bau Bau, Buton	7.41	63	P	Pn	21 18 30.5	+1.5
EDFI	Ende, Flores	7.80	85	P	Pn	21 18 36.5	+2.1
	0.2nm552nm31nm,0.6s						
PMSI	Majene	7.84	40	P	Pn	21 18 37.2	+2.2
MMSI	Mamuju	8.47	37	P	Pn	21 18 45.8	+2.1
TTSI	Tana Toraja	8.78	43	P	Pn	21 18 50.5	+2.7
	16nm,0.7s						
TPI	Tanjungpandan	9.12	317	P	Pn	21 18 58.5	+5.9
BATI	Baumata	9.71	95	Pn	Pn	21 18 59.3	-1.2
	1.5nm,0.3s,baz=325,slow=22,SNR=0.9						
BATI				Sn	Sn	21 20 48.2	-0.4
	1.7nm,0.3s,baz=151,slow=23,SNR=1.2						
	18nm,0.8s						
KASI	Kota Agung	10.08	293	P	Pn	21 19 11.6	+5.9
	17nm,0.5s						
LWLI	Liwa	10.69	294	P	Pn	21 19 21.5	+7.4
MNAI	Manna	11.96	295	Pn	Pn	21 19 36.9	+5.4
MNAI	Manna	11.96	295	P	Pn	21 19 35.6	+4.1
EGSI	Enggano, Bengk	12.19	289	P	Pn	21 19 37.7	+3.1
MBWA	Marble Bar	12.87	154	Pn	Pn	21 19 41.8	-2.0

GIRL	Giralia	13.03	178	Pn	Pn	21 19 46.8	+0.8
PSA00	Pilbara Seismi	13.28	155	Pn	Pn	21 19 50.1	+0.7
SANI	Sanana	14.19	59	P	Pn	21 20 04.2	+2.3
	28nm,1.8s						
FITZ	Fitzroy Crossi	14.26	128	Pn	Pn	21 20 02.5	-0.3
	0.1nm,0.3s,baz=288,slow=9.2,SNR=2.5						
FITZ				Sn	Sn	21 22 32.0	-8.1
	0.4nm,0.3s,baz=0.9,slow=20,SNR=1.2						
FITZ				LR	LR	21 25 46.0	
	comp=Z,58nm,21.6s,baz=296,slow=38						
	3.1nm,0.7s						
KNRA	Kununurra	15.78	114	P	P	21 20 27.1	+0.4
SIJI	Sorong	19.37	65	P	P	21 21 03.7	-2.6
	0.5nm,0.3s,baz=194,slow=12,SNR=2.8						
	15nm,0.9s						
FAKI	Fak Fak	19.44	71	P	P	21 21 06.0	-1.1
FAKI				IAmb	IAmb	21 21 10.8	
	comp=Z,22nm,0.8s						
MORW	Morawa	19.53	174	P	Pn	21 21 11.9	+2.5
DAV	Davao City (W)	20.23	36	LR	LR	21 30 38.3	
	comp=Z,39nm,19.3s,baz=327,slow=42						
WB0	Warramunga Arr	22.31	119	P	P	21 21 39.6	+1.5
WRA	Warramunga Arr	22.33	120	P	P	21 21 39.6	+1.2
	comp=Z,0.5nm,0.4s,baz=292,slow=16,SNR=4.7						
WR8	Warramunga Arr	22.48	120	P	P	21 21 40.0	+0.2
AS31	Alice Springs	23.76	129	P	P	21 21 53.1	+0.2
ASAR	Alice Springs	23.76	129	P	P	21 21 54.7	+1.8
	comp=Z,1.4nm,0.6s,baz=303,slow=9.4,SNR=19						
ASAR				PcP	PcP	21 25 38.6	+2.3
	comp=Z,0.8nm,0.6s,baz=312,slow=1.9,SNR=8.6						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	23.76	129	P	P	21 21 55.5	+2.6
COEN	Coen	29.04	102	P	P	21 22 40.7	+0.1
CMAR	Chiang Mai Arr	31.47	332	P	P	21 23 01.4	-0.6
	comp=Z,0.9nm,0.3s,baz=163,slow=8.8,SNR=9.8						
CMAR				LR	LR	21 37 50.8	
	comp=Z,21nm,18.7s,baz=250,slow=41						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	31.47	332	P	P	21 23 00.5	-1.5
STKA	Stephens Creek	33.99	135	P	P	21 23 25.3	+1.4
	comp=Z,1.2nm,0.4s,baz=314,slow=12,SNR=4.7						
STKA				LR	LR	21 38 20.7	
	comp=Z,57nm,20.0s,baz=218,slow=38						
	comp=Z,1.2nm,0.4s						
STKA	Stephens Creek	33.99	135	P	P	21 23 24.2	+0.2
MORE	Moreh	38.62	331	P	P	21 24 04.2	+0.6
MORE				IAmb	IAmb	21 24 06.5	
	comp=Z,9.2nm,0.8s						
BRDH	Bariadhala	38.71	326	LR	LR	21 43 52.7	
	comp=Z,30nm,18.3s,baz=331,slow=42						
ENH	Enshi	39.81	354	P	P	21 24 13.7	+0.2
ENH				IAmb	IAmb	21 24 14.0	
	comp=Z,11nm,1.3s						
SHL	Shillong	40.93	329	P	P	21 24 23.9	+0.9
SHL				IAmb	IAmb	21 24 24.8	
	comp=Z,6.3nm,0.7s						
LSA	Lhasa	44.72	332	P	P	21 24 54.6	+0.6
LZDM	Lanzhou Array	46.26	349	P	P	21 25 04.5	-1.4
	comp=Z,2.1nm,0.6s,baz=134,slow=10,SNR=7.7						
	comp=Z,2.1nm,0.6s						
BJT	Baijiatuau	49.36	2	P	P	21 25 29.6	+0.1
BJT				IAmb	IAmb	21 25 30.6	
	comp=Z,12nm,1.5s						
MJAR	Matsushiro Arr	51.26	25	P	P	21 25 41.0	-2.9
	comp=Z,1.0nm,0.5s,baz=201,slow=7.8,SNR=2.8						
	comp=Z,1.0nm,0.5s						
USRK	Ussuriysk Ar.	55.97	16	P	P	21 26 17.4	-0.9
	comp=Z,3.5nm,0.6s,baz=164,slow=37,SNR=3.6						
	comp=Z,3.5nm,0.6s						
ULN	Ulaanbaatar	57.47	355	P	P	21 26 29.5	+0.4
ULN				IAmb	IAmb	21 26 29.7	
	comp=Z,2.9nm,0.6s						
SONM	Songino Array	57.51	354	P	P	21 26 29.0	-0.3
	comp=Z,2.6nm,0.5s,baz=178,slow=8.1,SNR=31						
SONM				PcP	PcP	21 27 22.7	+0.1
	comp=Z,1.4nm,0.8s,baz=160,slow=3.9,SNR=4.7						
	comp=Z,2.6nm,0.5s						
SONM	Songino Array	57.51	354	P	P	21 26 29.1	-0.3
SONM				IAmb	IAmb	21 26 30.3	
	comp=Z,2.6nm,0.6s						
WUS	Wushi	59.71	330	P	P	21 26 45.5	+0.7
TARG	Taragay, Kyrgy	60.80	330	P	P	21 26 55.2	+2.6
TARG				IAmb	IAmb	21 26 55.6	
	comp=Z,3.2nm,0.9s						
PRZ	Przheval'sk	61.08	331	P	P	21 26 54.8	+0.6
MKAR	Makanchi Array	62.75	336	P	P	21 27 05.6	+0.4
	comp=Z,3.6nm,0.5s,baz=152,slow=7.2,SNR=72						
	comp=Z,3.6nm,0.5s						
MKAR	Makanchi Array	62.75	336	P	P	21 27 05.8	+0.6
MAKZ	Makanchi	62.89	336	P	P	21 27 06.5	+0.4
MAKZ				IAmb	IAmb	21 27 07.2	
	comp=Z,2.3nm,0.7s						
ARSB	Arslanbob	63.03	326	P	P	21 27 08.0	+0.7
AAK	Ala-Archa	63.15	328	P	P	21 27 08.9	+0.8
AAK				IAmb	IAmb	21 27 10.1	
	comp=Z,4.7nm,0.8s						
KKAR	Karatay Array	65.58	327	P	P	21 27 24.0	+0.2
KURBB	Kurchatov Arra	67.31	336	P	P	21 27 34.9	+0.2
	comp=Z,1.0nm,0.5s,baz=148,slow=5.3,SNR=15						
KURBB				PcP	PcP	21 28 03.5	+1.2
	comp=Z,0.4nm,0.5s,baz=146,slow=3.6,SNR=6.0						
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	67.35	337	P	P	21 27 35.0	+0.1
ZAA0	Zalesovo Array	67.86	342	P	P	21 27 37.1	-1.0
ZAA0				IAmb	IAmb	21 27 37.9	
	comp=Z,2.6nm,0.6s						
ZALV	Zalesovo Beam	67.86	342	P	P	21 27 37.5	-0.6
	comp=Z,2.4nm,0.5s,baz=143,slow=4.9,SNR=15						
	comp=Z,2.4nm,0.5s						
ZALV	Zalesovo Beam	67.86	342	P	P	21 27 37.3	-0.7
YAK	Yakutsk	72.42	8	P	P	21 28 05.1	-0.7
	comp=Z,7.9nm,0.6s,baz=342,slow=1.4,SNR=4.3						
	comp=Z,7.9nm,0.6s						
YAK	Yakutsk	72.42	8	P	P	21 28 04.2	-1.6
YAK				IAmb	IAmb	21 28 05.6	
	comp=Z,9.8nm,0.7s						
BVAR	Borovoye Array	72.47	334	P	P	21 28 06.8	+0.4
	comp=Z,3.0nm,0.7s,baz=145,slow=7.6,SNR=17						
	comp=Z,3.0nm,0.7s						
BORK	Borovoye	72.51	334	P	P	21 28 06.8	+0.2
BORK				IAmb	IAmb	21 28 08.3	
	comp=Z,8.9nm,1.4s						
PETK	Petropavlovsk-	72.71	26	P	P	21 28 07.2	-0.6
	comp=Z,3.6nm,1.0s,baz=230,slow=6.5,SNR=1.4						
	comp=Z,3.6nm,1.0s						
PETK	Petropavlovsk-	72.71	26	P	P	21 28 06.9	-0.9
AB31	Akbulak array	75.15	327	P	P	21 28 23.0	+0.9
ABKAR	Akbulak array	75.15	327	P	P	21 28 22.9	+0.8
ARTI	Arti	79.97	332	P	P	21 28 49.1	+0.2
TIXI	Tiksi	81.64	5	P	P	21 28 56.3	-1.2
	comp=Z,5.2nm,0.6s,baz=183,slow=2.9,SNR=30						
	comp=Z,5.2nm,0.6s						
TIXI	Tiksi	81.64	5	P	P	21 28 56.0	-1.5
TIXI				IAmb	IAmb	21 28 57.2	
	comp=Z,6.7nm,0.8s						
BELG	Belogornoye	83.48	326	P	P	21 29 07.4	-0.1
	comp=Z,5.0nm,0.5s,baz=38,slow=8.2,SNR=1.9						
	comp=Z,5.0nm,0.5s						
BNN	Bunyan	86.72	310	P	P	21 29 22.3	-2.0
J16K	Anvik River	96.46	27	P	P	21 30 08.9	+0.1
J16K				IAmb	IAmb	21 30 30.8	
	comp=Z,1.9nm,1.0s						
O16K	Kokwok River B	97.18	31	P	P	21 30 10.1	-2.1
FINES	FINESS Array B	97.24	331	P	Pdif	21 30 12.8	+0.3
	comp=Z,1.4nm,0.8s,baz=115,slow=3.2,SNR=5.2						
	comp=Z,1.4nm,0.8s						
FINES	FINESS Array B	97.24	331	P	Pdif	21 30 12.9	+0.5
J18K	Innoko River	98.22	27	P	P	21 30 16.9	+0.1
J18K				IAmb	IAmb	21 30 17.3	
	comp=Z,1.9nm,0.8s						
ARCES	ARCESS Array B	98.29	339	P	P	21 30 17.0	0.0
	comp=Z,3.9nm,1.0s,baz=51,slow=3.9,SNR=1.6						
	comp=Z,3.9nm,1.0s						
SPITS	Spitsbergen Ar	100.82	348	P	Pdif	21 30 28.4	+0.2
	comp=Z,21nm,1.2s,baz=33,slow=5.5,SNR=5.1						
YKA	Yellowknife Ar	116.73	23	PKhKP	PKPpre	21 35 18.8	
	comp=Z,0.3nm,0.6s,baz=312,slow=2.7,SNR=5.6						
YKA				PKP	PKPdf	21 35 23.4	-0.4
	comp=Z,0.1nm,0.5s,baz=312,slow=2.7,SNR=3.9						

*ISK **03** 21:18:03.9, 39°00N×27°85E, h10km, ML3.9/19*
*AFAD **03** 21:18:04.1, 39°01N×27°86E, h7km±3km, MW3.8*
*ATH **03** 21:18:04.3, 38°94N×27°80E, h6km±3km, ML3.7/10, Manual Solution by F.Xalaris First location: 2020/02/03 21:19:33, This location: 2020/02/03 22:30:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **03** 21:18:05.5, 39°N±2°×2°8E±°, h16km±15km, M3.6/18, MLh3.6/18*
*CFUSG **03** 21:18:05.2, 39°00N×27°90E, h10km, Mb2.9/3, MD3.5/2, MSH3.0/6*

ISC 03 21:18:04.4±0.8**, 39°00N**±0°02×**27°86E**±0°02**, h14**km±5km**,**
n119, σ0°98/157**, 19C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.13	198	P	Pg	21 18 07.6	-0.2
AKHS				S	Sg	21 18 10.0	-0.1
AKS	Akhisar	0.13	198	Pg	Pg	21 18 07.1	-0.7
AKS				Sg	Sg	21 18 09.6	-0.6
GORD	Gordes-Manisa	0.26	110	Pg	Pg	21 18 09.9	0.0
GORD				Sg	Sg	21 18 14.2	+0.5
GOMA	Golmarmara-Man	0.29	172	Pg	Pg	21 18 10.3	-0.2
GOMA				Sg	Sg	21 18 15.1	+0.5
SOMA	Soma-Manisa	0.30	302	Pg	Pg	21 18 10.3	-0.3
SOMA				Sg	Sg	21 18 15.4	+0.6
KTTT	Salihli	0.36	150	P	Pg	21 18 11.7	0.0
KTTT				S	Sg	21 18 16.5	-0.1
STEP	BALIKESIR_Sava	0.39	343	P	Pg	21 18 12.2	-0.1
STEP				S	Sg	21 18 18.0	+0.4
CAMT	Merkez	0.50	240	P	Pg	21 18 14.4	+0.2
CAMT				S	Sb	21 18 22.3	+0.2
ZEDA	zmir-Bergama	0.61	267	P	Pg	21 18 16.5	+0.1
ZEDA				S	Sb	21 18 24.9	-0.6
BALB	Balikesir	0.64	1	Pg	Pg	21 18 16.9	0.0
BALB				Sg	Sb	21 18 26.0	-0.2
DEMI	Demirci	0.67	86	P	Pg	21 18 17.4	0.0
DEMI				S	Sg	21 18 26.1	-0.1
IZMD	zmir-Dikili-	0.73	269	P	Pb	21 18 18.6	-0.3
IZMD				S	Sg	21 18 28.2	0.0
BKES	Balkesir-Mer	0.73	4	P	Pg	21 18 18.3	-0.3
BKES				S	Sg	21 18 27.9	-0.5
ODEM	Odemis-Izmir	0.74	167	Pg	Pg	21 18 18.6	-0.2
MANT	Manisa	0.74	133	P	Pg	21 18 18.7	-0.2
MANT				S	Sg	21 18 28.2	-0.5
DKL	Dikili	0.75	276	Pg	Pg	21 18 18.9	-0.1
BALY	Balya	0.76	346	P	Pg	21 18 19.1	-0.2
BALY				S	Sg	21 18 29.0	-0.3
DURS	Dursunbey	0.77	38	P	Pg	21 18 18.7	-0.6
DURS				S	Sb	21 18 31.7	+1.8
KULA	Kula-Manisa	0.79	128	Pg	Pg	21 18 19.0	-0.7
BUHA	Balikesir, Bur	0.79	310	P	Pg	21 18 19.4	-0.3
BUHA				S	Sg	21 18 30.1	0.0
DST	Dursunbey	0.84	44	Pg	Pb	21 18 20.9	0.0
DUVT	Torbali	0.84	203	P	Pg	21 18 20.3	-0.4
DUVT				S	Sg	21 18 31.3	-0.5
BAGT	Foa	0.86	247	P	Pb	21 18 21.1	0.0
BAGT				S	Sb	21 18 33.4	+0.8
IZMR	zmir-demi	0.86	175	P	Pg	21 18 21.0	-0.1
IZMR				S	Sg	21 18 32.0	-0.4
YAYO	Edremit-Balk	0.87	315	Pg	Pg	21 18 20.8	-0.4
SIMA	Simav-Kutahya	0.88	84	Pg	Pg	21 18 21.4	+0.1
SMAA	Simav-Kutahya	0.88	83	Pg	Pb	21 18 21.6	+0.2
BLCB	Balcova	0.89	227	Pg	Pg	21 18 21.3	-0.3
BLCB	Balcova	0.89	227	P	Pg	21 18 21.2	-0.4
BLCB				S	Sb	21 18 33.9	+0.6
KIRA	zmir-Kiraz	0.91	152	P	Pb	21 18 22.3	+0.3
KIRA				S	Sg	21 18 33.8	0.0
FOCM	Foa	0.93	252	Pg	Pg	21 18 22.0	-0.4
AYVA	Ayvalik	0.96	289	P	Pb	21 18 22.9	+0.1
AYVA				S	Sb	21 18 35.8	+0.3
SUSR	Susurluk-Balik	0.98	10	Pg	Pg	21 18 22.9	-0.4
AYDB	Zeytinkoy-Aydi	1.05	179	Pg	Pg	21 18 24.6	-0.1
YENI	Yenice-Canakka	1.05	333	Pg	Pg	21 18 24.3	-0.4
GONE	Gonen-Balikesi	1.05	353	Pg	Pb	21 18 24.8	+0.3
SHAP	Saphane-Kutahy	1.06	88	Pg	Pb	21 18 24.9	+0.3
NAZL	Nazilli-Aydin	1.09	162	Pn	Pg	21 18 25.1	-0.2
KRBN	Karaburun	1.10	249	Pn	Pb	21 18 25.2	0.0
URLA	Izmir	1.18	238	Pn	Pg	21 18 26.9	-0.2
GMLD	Gumuldur	1.18	219	Pn	Pg	21 18 27.3	+0.1
CANM	Can-anakkale	1.19	328	Pn	Pb	21 18 26.9	+0.1
GEDZ	Gediz	1.21	87	Pn	Pg	21 18 27.7	+0.1
PRK	Paraskevi	1.26	282	P	Pn	21 18 27.8	+0.1
PRK				S	Sn	21 18 45.3	+0.8
PRK	Paraskevi	1.26	282	P	Pn	21 18 27.8	+0.1
PRK				S	Sb	21 18 43.9	-0.3
GCAM	G?zelcaml?	1.39	201	Pn	Pn	21 18 29.7	+0.3
EAG2	Marmaro, Chios	1.45	252	P	Pn	21 18 30.0	-0.2
EAG2				S	Sn	21 18 48.3	-0.6
EZN	Ezine	1.45	305	P	Pn	21 18 30.6	+0.3
EZN				S	Sg	21 18 50.4	-0.7
KRL1	Karlovasi Samo	1.51	217	P	Pn	21 18 31.3	+0.3
KRL1				S	Sn	21 18 49.6	-0.9
SMG	Samos	1.52	212	P	Pn	21 18 30.7	-0.5
SMG				S	Sn	21 18 50.2	-0.6
SMG	Samos	1.52	212	P	Pn	21 18 30.9	-0.4
SMG				S	Sn	21 18 50.4	-0.4
CHOS	Chios island	1.54	247	P	Pn	21 18 31.4	-0.2
CHOS				S	Sn	21 18 51.4	-0.1
CHOS	Chios island	1.54	247	P	Pn	21 18 31.6	0.0
CHOS				S	Sn	21 18 51.2	-0.3
SIGR	SIGRI	1.58	278	P	Pn	21 18 32.1	+0.1
SIGR	SIGRI	1.58	278	P	Pn	21 18 32.1	+0.1
SIGR				S	Sn	21 18 52.4	+0.2
YER	Yerkesik	1.89	170	P	Pn	21 18 36.1	-0.3
GADA	Gvkgeada	1.93	309	P	Pn	21 18 37.2	+0.4
BODT	Bodrum	1.98	193	P	Pn	21 18 38.1	+0.5
CAVK	Edirne/Enez-Ca	2.14	323	⇑P	Pb	21 18 41.6	-1.3
ENEZ	Enez	2.18	323	P	Pn	21 18 41.3	+1.1
LIA	Limnos Island	2.26	294	P	Pn	21 18 41.9	+0.6
LIA	Limnos Island	2.26	294	P	Pn	21 18 42.0	+0.6
LIA				S	Sn	21 19 10.2	+1.1
SMTH	Samothraki Isl	2.32	310	P	Pn	21 18 42.8	+0.5
ALN	Alexandroupoli	2.35	324	P	Pn	21 18 43.4	+0.7
ALN	Alexandroupoli	2.35	324	P	Pn	21 18 43.4	+0.7
ALN				S	Sn	21 19 12.9	+1.5
ALEX	Alexandroupoli	2.39	321	P	Pn	21 18 44.3	+1.1
ISP	Isparta	2.40	119	P	Pn	21 18 44.4	+1.1
ARG	Arkhangelos	2.79	176	P	Pn	21 18 48.3	-0.4
RDO	Rodhopi	2.79	321	P	Pn	21 18 49.5	+0.8
RDO	Rodhopi	2.79	321	P	Pn	21 18 49.4	+0.8
KARY	Karystos	2.86	251	P	Pn	21 18 49.2	-0.4
KARY	Karystos	2.86	251	P	Pn	21 18 49.8	+0.2
THAS	Thassos island	2.91	305	P	Pn	21 18 50.9	+0.7
KYMI	Kymi, Euboea I	2.96	264	P	Pn	21 18 50.6	-0.5
AOS	Alonnisos	3.10	274	P	Pn	21 18 53.8	+0.8
AOS2	Alonissos-2	3.13	274	P	Pn	21 18 52.8	-0.6
KSL	Kastellorizon	3.15	154	P	Pn	21 18 54.5	+0.8
DION	Dionisos Attik	3.22	255	P	Pn	21 18 54.3	-0.3
THERA	Ancient Thera,	3.24	217	P	Pn	21 18 53.9	-1.0
KAVA	Kavala	3.26	309	P	Pn	21 18 55.5	+0.5
OUR	Ouranopolis	3.28	295	P	Pn	21 18 56.3	+0.9
KARP	Karpathos	3.49	189	P	Pn	21 18 58.6	+0.2
RZN	Rozhen	3.60	319	P	Pn	21 19 00.9	+1.0
ELND	Elena	4.20	340	⇑P	Pn	21 19 09.5	+1.3
KNT	Kendrikon	4.38	301	P	Pn	21 19 11.7	+1.2
LOZB	Loznitsa	4.47	348	⇑P	Pn	21 19 14.0	+2.2
KIRS	Kirsehir-Merke	4.71	86	⇓P	Pn	21 19 17.1	+1.9
PLVB	Pleven	5.02	332	⇑P	Pn	21 19 20.9	+1.6
ICOR	Ion Corvin	5.11	359	⇑P	Pn	21 19 21.5	+0.9
TIRR	Tirgusor	5.47	4	⇑P	Pn	21 19 26.0	+0.5
TLBR	Topalu	5.54	1	⇑P	Pn	21 19 27.1	+0.7
CFR	Carcaliu	6.18	2	⇑P	Pn	21 19 35.7	+0.5
TLCR		6.22	6	⇑P	Pn	21 19 37.5	+1.7
BOVS	Bovan	6.55	317	⇓P	Pn	21 19 41.7	+1.4
MLR	Muntele Rosu	6.64	348	⇓P	Pn	21 19 42.7	+1.0
VOIR		6.76	343	⇓P	Pn	21 19 45.4	+2.0
ODBI	Odobesti	6.79	355	⇓P	Pn	21 19 45.7	+2.2
VLDR	Vladesti	6.84	1	⇑P	Pn	21 19 46.0	+1.7
PLOR	Plostina	6.91	353	⇑P	Pn	21 19 47.3	+2.0
VRI	Vrincioaia	6.91	353	⇓P	Pn	21 19 46.9	+1.6
COVR	Voineasa-Covas	6.95	350	⇓P	Pn	21 19 48.0	+2.1
SEV	Sevastopol'	7.04	36	eP	Pn	21 19 46.9	-0.1
SEV				pmax	pmax	21 20 07.2	
	comp=Z,4.0nm,0.6s						
SEV				eS	Sn	21 21 03.5	-3.2
SEV				smax	smax	21 21 07.4	
	comp=N,3.0nm,0.3s,comp=E,3.0nm,0.3s						
TURR	Turia	7.18	350	⇑P	Pn	21 19 51.3	+2.2
DOPR	Dopca	7.20	346	⇓P	Pn	21 19 50.5	+1.2
YAL	Yalta	7.22	39	eS	Sn	21 21 09.4	-1.9
YAL				smax	smax	21 21 09.6	
	comp=N,8.0nm,0.4s						
YAL				smax	smax	21 21 09.6	
	comp=E,15nm,0.4s						
TARU	Tarkhankut	7.25	27	eS	Sn	21 21 10.2	-1.9
TARU				smax	smax	21 21 11.5	
	comp=N,15nm,0.6s						
TARU				smax	smax	21 21 11.5	
	comp=E,7.0nm,0.3s						
OZUR		7.26	348	⇓P	Pn	21 19 51.2	+1.1
MDVR	Moldovita	7.38	324	⇑P	Pn	21 19 52.2	+0.5
PDG	Podgorica	7.38	300	⇓P	Pn	21 19 53.2	+1.5
ONER	Baraj Valea Uz	7.41	352	⇑P	Pn	21 19 54.0	+1.9
ALU	Alushta	7.49	39	eP	Pn	21 19 50.8	-2.3
ALU				pmax	pmax	21 20 52.1	
	comp=Z,2.0nm,0.3s						
ALU				eS	Sn	21 21 13.5	-4.3
ALU				smax	smax	21 21 19.4	
	comp=N,9.0nm,0.4s						
ALU				smax	smax	21 21 19.4	
	comp=E,5.0nm,0.3s						
DNZ2	Donuzlav2	7.51	30	eP	Pn	21 19 54.4	+1.0
DNZ2				pmax	pmax	21 20 01.9	
	comp=Z,10.0nm,0.6s						
DNZ2				eS	Sn	21 21 18.1	-0.2
DNZ2				smax	smax	21 21 21.8	
	comp=N,4.0nm,0.3s,comp=E,6.0nm,0.3s						
TESR	Tescani	7.56	354	⇑P	Pn	21 19 55.2	+1.0
SUDU	Sudak	7.93	40	eS	Sn	21 21 27.0	-1.7
SUDU				smax	smax	21 21 28.9	
	comp=N,6.0nm,0.6s						
SUDU				smax	smax	21 21 28.9	
	comp=E,2.0nm,0.3s						
BZS	Buzias	8.07	327	⇑P	Pn	21 20 02.0	+0.8
DRGR		8.65	336	⇓P	Pn	21 20 10.6	+1.3
BURAR	Bucovina Array	8.82	348	⇑P	Pn	21 20 13.6	+2.0
SORM	Soroca	9.14	2	⇑P	Pn	21 20 16.6	+0.8
MORH	Mrgy, Hungar	9.90	320	⇑P	Pn	21 20 28.0	+1.7

*NIC **03** 21:27:29.9, 34°89N×27°64E, h24km±4km, Ml3.4/12*
*NEIC **03** 21:27:31.8±2.7, 35°17N±0°04×27°90E±0°06, h8km±5km, mb4.0/11, Error ellipse: s-maj=7.9km s-min=3.9km az=56.0*
*ISK **03** 21:27:31.4, 35°11N×27°89E, h3km, ML3.5/25*
*IDC **03** 21:27:31.0±0.8, 35°26N×27°87E, h0km, mb3.8/12, mbtmp3.8/20, ML2.6/6, MS3.2/4, Error ellipse: s-maj=18.4km s-min=12.0km az=167.0*
*AFAD **03** 21:27:31.1, 35°09N×27°75E, h16km±4km, ML3.2*
*GII **03** 21:27:33.0±0.0, 35°064N±0°002×28°003E±0°001, h0km, Mws3.5, confirmed*
*ATH **03** 21:27:32.5, 35°11N×28°00E, h7km±3km, ML3.5/8, Manual Solution by F.Xalaris First location: 2020/02/03 21:28:58, This location: 2020/02/03 22:06:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **03** 21:27:37.2, 35°N±13°×2°8E±1°9, h42km±24km, M3.4/15, MLh3.4/15*

ISC 03 21:27:31.2±1.2**, 35°10N**±0°03×**27°88E**±0°02**, h6**km±8km**,**
n175, σ1°38/221**, mb3.9**/16**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.74	307		Pg	21 27 44.8	-0.7
KARP	Karpathos	0.74	307	Pg	Pg	21 27 45.7	+0.2
KARP				Sg	Sb	21 27 57.7	+0.8
KARP	Karpathos	0.74	307	P	Pg	21 27 45.7	+0.2
KARP				S	Sg	21 27 52.3	-2.8
KARP	Karpathos	0.74	307	P	Pg	21 27 45.4	-0.1
KARP				S	Sb	21 27 56.6	-0.3
KARP				AML	AML	21 28 06.6	
	7.0nm,0.5s						
KARP				AML	AML	21 28 06.7	
	6.5nm,0.4s						
KARP	Karpathos	0.74	307	P	Pg	21 27 45.7	+0.2
KARP				S	Sn	21 27 59.0	-0.8
ARG	Arkhangelos	1.13	10	Pg	Pg	21 27 52.8	-0.1
ARG	Arkhangelos	1.13	10	Pn	Pn	21 27 53.6	0.0
ARG	Arkhangelos	1.13	10	P	Pn	21 27 53.4	-0.2
ARG				S	Sg	21 28 06.3	-1.3
ARG	Arkhangelos	1.13	10	P	Pb	21 27 53.2	+0.1
ARG				S	Sn	21 28 11.6	+2.2
ARG				AML	AML	21 28 18.1	
	4.3nm,0.6s						
ARG				AML	AML	21 28 21.4	
	3.8nm,0.6s						
ARG	Arkhangelos	1.13	10	P	Pn	21 27 53.6	0.0
ARG				S	Sb	21 28 08.3	+0.2
ZKR	Zakros	1.37	271	Pn	Pg	21 27 58.2	+0.8
ZKR	Zakros	1.37	271	P	Pg	21 28 00.2	+2.8
ZKR	Zakros	1.37	271	P	Pg	21 27 58.8	+1.4
ZKR				S	Sg	21 28 18.5	+3.4
YAZI	Mula-Dat§a-	1.61	348	P	Pb	21 28 01.5	+0.1
YAZI				S	Sg	21 28 23.3	+0.2
YAZI				IAML		21 28 29.0	
	comp=N,317nm,0.6s						
YAZI				IAML		21 28 38.0	
	comp=E,213nm,0.5s						
DAT	Datca	1.64	351	Pn	Pb	21 28 01.9	-0.1
DAT				Sn	Sg	21 28 24.4	+0.3
TURN	Turunc	1.70	10	Pn	Pb	21 28 02.8	0.0
TURN	Turunc	1.70	10	P	Pb	21 28 02.8	0.0
TURN				S	Sg	21 28 26.9	+1.2
TURN				IAML		21 28 34.0	
	comp=N,355nm,0.5s						
TURN				IAML		21 28 41.0	
	comp=E,374nm,0.6s						
KSL	Kastellorizon	1.74	52	P	Pb	21 28 02.7	-0.8
KSL	Kastellorizon	1.74	52	P	Pb	21 28 02.8	-0.7
KSL				S	Sg	21 28 27.7	+0.7
KSL				AML	AML	21 29 01.5	
	0.6nm,1.7s						
KSL				AML	AML	21 29 04.2	
	0.8nm,1.5s						
KSL	Kastellorizon	1.74	52	P	Pn	21 28 02.1	+0.2
KSL				S	Sn	21 28 23.7	-0.6
AKAS	Kas	1.80	51		Pn	21 28 03.5	+0.6
AKAS	Kas	1.80	51	Pn	Pb	21 28 04.2	-0.5
FETY	Fethiye	1.81	32	P	Pn	21 27 53.8	-9.2
DALY	Dalyan (Mula)	1.82	20	Pn	Pb	21 28 04.4	-0.6
NPS	Neapolis	1.87	276	P	Pg	21 28 07.0	0.0
SABU	Mula-Dalaman	1.93	27	P	Pb	21 28 05.9	-1.0
SABU				IAML		21 28 51.0	
	comp=E,195nm,0.8s						
SABU				IAML		21 28 52.0	
	comp=N,199nm,0.6s						
BDRM	Kayabasi	1.99	350	P	Pb	21 28 07.4	-0.5
BDRM				S	Sb	21 28 33.3	+0.4
BDRM				IAML		21 28 49.0	
	comp=E,236nm,0.7s						
BODT	Bodrum	2.01	347	Pn	Pb	21 28 07.4	-0.8
YER	Yerkesik	2.06	9	Pn	Pb	21 28 08.2	-0.8
YER	Yerkesik	2.06	9	P	Pn	21 28 07.0	+0.6
YKAV	Yalikavak-Bodr	2.08	347	Pn	Pb	21 28 08.3	-1.0
CAME	Cameli-Denizli	2.17	32	Pn	Pb	21 28 09.5	-1.5
MULA	Mugla, Merkez-	2.18	9	P	Pb	21 28 11.4	+0.2
MULA				S	Sg	21 28 42.8	+1.5
MULA				IAML		21 28 55.0	
	comp=E,205nm,0.7s						
MULA				IAML		21 28 59.0	
	comp=N,119nm,1.3s						
MLSB	Milas	2.19	358	Pn	Pb	21 28 09.9	-1.4
ELL	Elmali	2.32	44	Pn	Pn	21 28 11.4	+1.3
ELL	Elmali	2.32	44	Pn	Pn	21 28 11.7	+1.6
ELL	Elmali	2.32	44	P	Pn	21 28 11.7	+1.6
ELL				AML	AML	21 28 51.7	
	0.9nm,0.8s						
ELL				AML	AML	21 29 25.8	
	1.0nm,1.1s						
THERA	Ancient Thera,	2.33	304	P	Pb	21 28 12.4	-1.3
THR8	Santorini-Mono	2.35	304	P	Pn	21 28 12.2	+1.9
THR8	Santorini-Mono	2.35	304	P	Pn	21 28 12.2	+1.9
DNZT	Denizli-Tavas-	2.36	23	P	Pb	21 28 12.4	-1.8
THR3	Thira Island,	2.40	304	P	Pn	21 28 12.6	+1.6
THR3	Thira Island,	2.40	304	P	Pb	21 28 13.4	-1.4
THR9	Santorini-Faro	2.41	302	P	Pn	21 28 13.1	+1.9
IDI	Anoyia	2.46	275	Pn	Pn	21 28 14.1	+2.1
	10nm,0.3s,baz=83,slow=12,SNR=50						
IDI				Sn	Sn	21 28 41.6	-0.7
	7.4nm,0.3s,baz=318,slow=23,SNR=3.7						
	28nm,0.4s						
IDI	Anoyia	2.46	275	Pn	Pn	21 28 13.8	+1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IDI	**Anoyia**	**2.46**	**275**	Pn	**Pn**	**21 28 14.0**	**+2.1**
IDI	**Anoyia**	**2.46**	**275**	P	**Pb**	**21 28 15.1**	**-0.8**
IDI	**Anoyia**	**2.46**	**275**	P	**Pb**	**21 28 14.3**	**-1.5**
TAVA	**DENIZLI_Tavas**	**2.50**	**19**	P	**Pb**	**21 28 14.8**	**-1.8**
TAVA				S	**Sb**	**21 28 49.2**	**+1.5**
TAVA				IAML		21 29 05.0	
	comp=N,165nm,1.1s						
TAVA				IAML		21 29 05.0	
	comp=E,169nm,1.2s						
AYDN	**Tasoluk**	**2.55**	**360**	P	**Pn**	**21 28 13.9**	**+0.7**
AYDN				IAML		21 29 03.0	
	comp=N,171nm,0.7s						
AYDN				IAML		21 29 04.0	
	comp=E,121nm,0.8s						
APMY	**Acipayam-Deniz**	**2.63**	**25**	Pn	**Pn**	**21 28 15.8**	**+1.5**
GCAM	**G?zelcaml?**	**2.65**	**349**	Pn	**Pn**	**21 28 16.4**	**+2.0**
ESEN	**Aydn-Nazilli**	**2.72**	**8**	P	**Pn**	**21 28 17.6**	**+2.2**
ESEN				S	**Sn**	**21 28 50.7**	**+2.2**
ESEN				IAML		21 29 09.0	
	comp=N,88nm,0.9s						
ESEN				IAML		21 29 10.0	
	comp=E,97nm,0.6s						
SMG	**Samos**	**2.74**	**342**	P	**Pn**	**21 28 16.4**	**+0.7**
SMG	**Samos**	**2.74**	**342**	P	**Pn**	**21 28 16.9**	**+1.3**
KORT	**Korkueli**	**2.75**	**46**	Pn	**Pn**	**21 28 17.9**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**2.84**	**0**	Pn	**Pn**	**21 28 18.0**	**+0.8**
ANTB	**Antalya**	**2.88**	**51**	Pn	**Pn**	**21 28 19.0**	**+1.4**
NAZL	**Nazilli-Aydin**	**2.88**	**6**	Pn	**Pn**	**21 28 19.5**	**+1.9**
VAM	**Vamos**	**3.03**	**277**	P	**Pb**	**21 28 23.2**	**-2.4**
VAM	**Vamos**	**3.03**	**277**	P	**Pn**	**21 28 22.4**	**+2.6**
ODEM	**Odemis-Izmir**	**3.17**	**3**	Pn	**Pn**	**21 28 23.9**	**+2.2**
IMMV	**Iera Moni Meta**	**3.21**	**278**	P	**Pn**	**21 28 25.5**	**+3.3**
IMMV	**Iera Moni Meta**	**3.21**	**278**	P	**Pn**	**21 28 25.1**	**+2.9**
BASM	**Basmaki-Afyon**	**3.31**	**31**	Pn	**Pn**	**21 28 25.6**	**+2.0**
BLCB	**Balcova**	**3.35**	**349**	Pn	**Pn**	**21 28 25.9**	**+1.8**
MANT	**Manisa**	**3.43**	**9**	Pn	**Pn**	**21 28 23.8**	**-1.6**
KULA	**Kula-Manisa**	**3.46**	**10**	Pn	**Pn**	**21 28 26.4**	**+0.6**
KNDR	**Palaiochora Ch**	**3.49**	**273**	P	**Pn**	**21 28 28.7**	**+2.7**
AKMS	**Akamas**	**3.65**	**90**	P	**Pn**	**21 28 28.0**	**-0.3**
AKMS				S	**Sn**	**21 29 13.4**	**+1.7**
AKMS				AML	AML	21 29 15.9	
	0.3nm,0.7s						
AKMS				AML	AML	21 29 21.1	
	0.3nm,0.4s						
AKMS	**Akamas**	**3.65**	**90**	P	**Pn**	**21 28 28.0**	**-0.3**
AKMS				S	**Sn**	**21 29 11.1**	**-0.6**
ANKY	**Antikythira Is**	**3.82**	**283**	P	**Pn**	**21 28 33.5**	**+3.0**
NATA	**Nata**	**3.86**	**93**	P	**Pn**	**21 28 31.3**	**+0.2**
NATA				S	**Sn**	**21 29 18.1**	**+1.2**
NATA				AML	AML	21 29 28.3	
	0.4nm,0.9s						
NATA				AML	AML	21 29 38.8	
	0.5nm,0.5s						
NATA	**Nata**	**3.86**	**93**	P	**Pn**	**21 28 31.4**	**+0.2**
NATA				S	**Sn**	**21 29 15.6**	**-1.3**
ALFC	**Alefka**	**3.87**	**88**	P	**Pn**	**21 28 31.0**	**-0.2**
ALFC				S	**Sn**	**21 29 19.0**	**+2.0**
ALFC				AML	AML	21 29 21.7	
	0.3nm,0.6s						
ALFC				AML	AML	21 29 22.7	
	0.2nm,0.7s						
ALFC	**Alefka**	**3.87**	**88**	P	**Pn**	**21 28 31.3**	**+0.1**
SHUT	**Suhut-Afyon**	**4.06**	**31**	Pn	**Pn**	**21 28 36.3**	**+2.4**
KTHA	**Kythira Island**	**4.09**	**288**	P	**Pn**	**21 28 36.7**	**+2.4**
TROD	**Troodos**	**4.09**	**91**	P	**Pn**	**21 28 33.9**	**-0.6**
TROD				S	**Sn**	**21 29 24.4**	**+1.6**
TROD				AML	AML	21 29 29.8	
	0.1nm,0.5s						
TROD				AML	AML	21 29 37.4	
	0.1nm,0.7s						
GEDZ	**Gediz**	**4.12**	**17**	Pn	**Pn**	**21 28 37.3**	**+2.5**
XYLS	**Xyliatos**	**4.24**	**90**	P	**Pn**	**21 28 36.6**	**+0.2**
XYLS				S	**Sn**	**21 29 28.8**	**+2.6**
XYLS				AML	AML	21 29 31.1	
	0.1nm,0.6s						
XYLS				AML	AML	21 29 35.6	
	0.1nm,0.7s						
DION	**Dionisos Attik**	**4.35**	**314**	P	**Pn**	**21 28 39.4**	**+1.5**
ASGA	**Asgata**	**4.42**	**93**	P	**Pn**	**21 28 38.6**	**-0.2**
ASGA				S	**Sn**	**21 29 32.3**	**+1.8**
ASGA				AML	AML	21 29 38.0	
	0.3nm,0.9s						
ASGA				AML	AML	21 29 42.1	
	0.2nm,0.6s						
CSS	**Mathiatis**	**4.47**	**90**	Pn	**Pn**	**21 28 38.1**	**-1.5**
CSS	**Mathiatis**	**4.47**	**90**	P	**Pn**	**21 28 39.5**	**0.0**
CSS				S	**Sn**	**21 29 34.7**	**+2.8**
CSS				AML	AML	21 29 37.0	
	0.1nm,0.8s						
CSS				AML	AML	21 29 44.7	
	0.1nm,0.6s						
CSS	**Mathiatis**	**4.47**	**90**	P	**Pn**	**21 28 39.5**	**0.0**
CSS				S	**Sn**	**21 29 31.2**	**-0.7**
BALB	**Balikesir**	**4.53**	**360**	Pn	**Pn**	**21 28 40.7**	**+0.3**
STFN	**Stefani**	**4.65**	**313**	P	**Pn**	**21 28 44.2**	**+2.2**
KYMI	**Kymi, Euboea I**	**4.65**	**320**	P	**Pn**	**21 28 43.9**	**+1.9**
MVOU	**Mavrovouni**	**4.72**	**89**	P	**Pn**	**21 28 43.1**	**+0.3**
MVOU				S	**Sn**	**21 29 40.6**	**+2.8**
MVOU				AML	AML	21 29 46.8	
	0.1nm,0.8s						
MVOU				AML	AML	21 29 53.0	
	0.1nm,0.6s						
BORA	**Eskisehir**	**5.19**	**22**	Pn	**Pn**	**21 28 51.1**	**+1.6**
ITM	**Ithomi**	**5.25**	**295**	Pn	**Pn**	**21 28 51.9**	**+1.7**
ITM	**Ithomi**	**5.25**	**295**	P	**Pn**	**21 28 52.6**	**+2.4**
GUR	**Goura**	**5.28**	**304**	P	**Pn**	**21 28 53.4**	**+2.6**
PYL	**PYLOS**	**5.29**	**292**	P	**Pn**	**21 28 52.3**	**+1.5**
AMT	**Artemida-Makis**	**5.54**	**298**	P	**Pn**	**21 28 56.9**	**+2.6**
ALN	**Alexandroupoli**	**5.96**	**346**	Pn	**Pn**	**21 29 01.3**	**+1.3**
RDO	**Rodhopi**	**6.31**	**344**	Pn	**Pn**	**21 29 06.5**	**+1.7**
BRTR	**Keskin Array B**	**6.50**	**43**	Pn	**Pn**	**21 29 07.7**	**+0.1**
	0.2nm,0.3s,baz=216,slow=14,SNR=6.4						
BRTR				Sn	**Sn**	**21 30 23.6**	**+1.5**
	0.2nm,0.3s,baz=214,slow=26,SNR=4.5						
	1.3nm,0.8s						
BRTR	**Keskin Array B**	**6.50**	**43**	Pn	**Pn**	**21 29 06.7**	**-0.9**
DQRL	**Deir Qamar**	**6.50**	**100**	*e*P	**Pn**	**21 29 06.1**	**-1.5**
MMC7	**Mount Meron ar**	**6.57**	**106**	P	**Pn**	**21 29 08.2**	**-0.2**
LIT	**Litokhoron**	**6.57**	**321**	Pn	**Pn**	**21 29 09.3**	**+0.9**
MMA0B	**Mount Meron ar**	**6.58**	**106**	P	**Pn**	**21 29 08.4**	**-0.1**
MMA0B				S	**Sn**	**21 30 23.1**	**-0.8**
MMAI	**Mount Meron Ar**	**6.58**	**106**	Pn	**Pn**	**21 29 08.9**	**+0.3**
	2.8nm,0.4s,baz=309,slow=15,SNR=16						
MMAI				Sn	**Sn**	**21 30 27.1**	**+3.2**
	3.7nm,0.3s,baz=303,slow=30,SNR=5.3						
QRWL	**Qaraoun**	**6.64**	**101**	*e*P	**Pn**	**21 29 07.7**	**-1.7**
HWQ	**Hawqa**	**6.69**	**95**	*e*P	**Pn**	**21 29 10.1**	**-0.1**
NATI	**Neve Ativ**	**6.76**	**104**	P	**Pn**	**21 29 10.9**	**0.0**
NATI				S	**Sn**	**21 30 26.9**	**-1.4**
RCY	**Rachaya**	**6.77**	**101**	*e*P	**Pn**	**21 29 11.3**	**0.0**
MMLI	**Mount Malkishu**	**6.82**	**111**	P	**Pn**	**21 29 12.0**	**+0.2**
MMLI				S	**Sn**	**21 30 28.1**	**-1.6**
BEIL	**Beino**	**6.85**	**92**	*e*P	**Pn**	**21 29 11.3**	**-0.9**
KZIT	**Kziot**	**6.89**	**126**	P	**Pn**	**21 29 12.8**	**+0.1**
KZIT				S	**Sn**	**21 30 30.4**	**-1.0**
KSHT	**Keshet**	**6.91**	**106**	P	**Pn**	**21 29 13.7**	**+0.5**
KSHT				S	**Sn**	**21 30 31.4**	**-0.7**
HMDT	**Nahal Hemdat**	**6.97**	**112**	P	**Pn**	**21 29 14.5**	**+0.6**
HMDT				S	**Sn**	**21 30 32.5**	**-1.1**
YTIR	**Yattir**	**7.11**	**120**	P	**Pn**	**21 29 16.4**	**+0.4**
YTIR				S	**Sn**	**21 30 36.0**	**-1.1**
BALJ	**Balqa**	**7.13**	**113**	Pn	**Pn**	**21 29 15.9**	**-0.3**
DSI	**Dead Sea**	**7.19**	**117**	P	**Pn**	**21 29 17.0**	**+0.1**
DSI				S	**Sn**	**21 30 37.3**	**-1.7**
MSBI	**Mazada**	**7.31**	**119**	P	**Pn**	**21 29 18.5**	**-0.1**
MSBI				S	**Sn**	**21 30 40.4**	**-1.4**
RMNI	**Mount Ramon**	**7.33**	**126**	P	**Pn**	**21 29 18.9**	**0.0**
RMNI				S	**Sn**	**21 30 41.7**	**-0.7**
GHAJ	**Ghor Haditha**	**7.47**	**118**	Pn	**Pn**	**21 29 20.9**	**+0.2**
GHAJ	**Ghor Haditha**	**7.47**	**118**	P	**Pn**	**21 29 20.8**	**+0.1**
GHAJ				S	**Sn**	**21 30 44.2**	**-1.5**
KRMI	**Paran Flat**	**7.62**	**129**	P	**Pn**	**21 29 23.0**	**+0.3**
KRMI				S	**Sn**	**21 30 48.8**	**-0.6**
ZFRI	**Zfri**	**7.63**	**124**	P	**Pn**	**21 29 22.8**	**-0.1**
ZFRI				S	**Sn**	**21 30 48.8**	**-0.9**
PRNI	**Paran**	**7.64**	**126**	P	**Pn**	**21 29 23.5**	**+0.3**
PRNI				S	**Sn**	**21 30 49.0**	**-1.1**
HRFI	**Mount Harif**	**7.87**	**128**	P	**Pn**	**21 29 26.4**	**+0.1**
HRFI				S	**Sn**	**21 30 55.0**	**-0.6**
KEK	**Kerkira**	**7.91**	**308**	Pn	**Pn**	**21 29 29.1**	**+2.4**
MBRI	**Mt Berech**	**7.96**	**130**	P	**Pn**	**21 29 27.8**	**+0.4**
MBRI				S	**Sn**	**21 30 56.9**	**-0.9**
ASF	**Jabal al Asfar**	**8.06**	**109**	Pn	**Pn**	**21 29 29.2**	**+0.3**
	0.2nm,0.3s,baz=293,slow=19,SNR=4.2						
ASF				Sn	**Sn**	**21 31 01.1**	**+0.5**
	0.2nm,0.3s,baz=301,slow=5.9,SNR=1.0						
	1.4nm,0.4s						
EIL	**Elat**	**8.06**	**130**	Pn	**Pn**	**21 29 29.5**	**+0.6**
	7.9nm,0.5s,baz=299,slow=16,SNR=9.9						
EIL				Sn	**Sn**	**21 30 59.6**	**-0.7**
	1.8nm,0.3s,baz=63,slow=19,SNR=6.6						
EIL	**Elat**	**8.06**	**130**	P	**Pn**	**21 29 29.3**	**+0.4**
EIL				S	**Sn**	**21 30 59.0**	**-1.4**
TIP	**Timpagrande**	**9.77**	**298**	Pn	**Pn**	**21 29 50.5**	**-1.8**
CEL	**Celeste**	**10.13**	**292**	Pn	**Pn**	**21 29 55.4**	**-1.8**
CUC	**Castrocucco**	**10.75**	**301**	Pn	**Pn**	**21 30 05.4**	**-0.3**
VAE	**Valguarnera**	**11.13**	**286**	Pn	**Pn**	**21 30 11.6**	**+0.7**
	0.4nm,0.3s,baz=81,slow=19,SNR=1.2						
	7.7nm,0.7s						
RAFF	**Raffo Rosso**	**11.13**	**285**	Pn	**Pn**	**21 30 09.8**	**-1.1**
KBZ	**Khabaz**	**14.44**	**49**	Pn	**P**	**21 31 00.1**	**-2.9**
	0.1nm,0.3s,baz=233,slow=7.7,SNR=4.8						
	2.2nm,1.0s						
AKASG	**Malin Array Be**	**15.62**	**3**	Pn	**Pn**	**21 31 13.7**	**+1.9**
	0.5nm,0.3s,baz=190,slow=10,SNR=4.6						
KBA	**Koelnbreinsper**	**16.19**	**322**	*i* Pn	**P**	**21 31 22.4**	**-0.2**
	11nm,1.1s						
ABTA	**Abfaltersbach**	**16.41**	**320**	*i* Pn	**P**	**21 31 24.5**	**-0.5**
	4.3nm,1.1s						
VRAC	**Vranov**	**16.45**	**333**	LR	LR	21 38 00.3	
	comp=Z,64nm,20.2s,baz=152,slow=39						
LESA	**Schwarzleotal**	**16.76**	**322**	*i* Pn	**P**	**21 31 29.0**	**+0.1**
	2.0nm,0.5s						
GERES	**GERESS Array B**	**17.27**	**327**	P	**Pn**	**21 31 31.9**	**-1.2**
	baz=152,slow=17,SNR=4.0						
	1.0nm,0.8s						
WATA	**Walderalm**	**17.27**	**320**	*e*Pn	**P**	**21 31 36.7**	**+2.1**
	7.4nm,1.3s						
SQTA	**Sankt Quirin**	**17.40**	**319**	*e*Pn	**P**	**21 31 37.5**	**+1.6**
	8.6nm,1.2s						
MOTA	**Moosalm**	**17.53**	**319**	*i* Pn	**P**	**21 31 39.5**	**+2.0**
	8.3nm,1.6s						
FETA	**Feichten**	**17.54**	**318**	*i* Pn	**P**	**21 31 37.8**	**+0.3**
	12nm,1.4s						
DAVOX	**Davos/Dischmat**	**17.87**	**316**	LR	LR	21 41 05.5	
	comp=Z,101nm,20.0s,baz=79,slow=46						
TUE	**Stuetta**	**18.01**	**315**	P	**P**	**21 31 44.3**	**+1.5**
SENIN	**Lac Senin/Sane**	**19.17**	**312**	P	**P**	**21 31 53.7**	**-1.9**
SENIN				IAmb	IAmb	21 32 01.4	
	comp=Z,3.9nm,0.7s						
ESBB	**Sonseca Array**	**25.63**	**290**	P	**P**	**21 33 00.3**	**-1.3**
ESBB				IAmb	IAmb	21 33 15.3	
	comp=Z,9.8nm,1.5s						
ESDC	**Sonseca Array**	**25.64**	**290**	P	**P**	**21 33 01.2**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=85,slow=9.3,SNR=20						
	comp=Z,0.6nm,0.5s						
ESDC	**Sonseca Array**	**25.64**	**290**	P	**P**	**21 33 00.7**	**-0.9**
FINES	**FINESS Array B**	**26.39**	**358**	P	**P**	**21 33 07.2**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=176,slow=10,SNR=6.0						
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**26.39**	**358**	P	**P**	**21 33 06.8**	**-1.2**
HFS	**Hagfors**	**26.69**	**344**	P	**P**	**21 33 08.2**	**-2.7**
	comp=Z,1.5nm,0.6s,baz=153,slow=7.6,SNR=5.6						
	comp=Z,1.5nm,0.6s						
AB31	**Akbulak array**	**27.41**	**49**	P	**P**	**21 33 18.1**	**+0.7**
AB31				IAmb	IAmb	21 34 00.5	
	comp=Z,2.2nm,1.1s						
ABKAR	**Akbulak array**	**27.41**	**49**	P	**P**	**21 33 17.1**	**-0.3**
FURI	**Furi**	**27.89**	**157**	LR	LR	21 45 57.7	
	comp=Z,76nm,18.9s,baz=19,slow=40						
NOA	**NORSAR Array B**	**28.07**	**343**	P	**P**	**21 33 22.5**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=151,slow=8.3,SNR=1.4						
NOA				LR	LR	21 46 20.1	
	comp=Z,32nm,18.3s,baz=60,slow=40						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**32.21**	**234**	P	**P**	**21 34 01.2**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=30,slow=6.0,SNR=16						
	comp=Z,1.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**32.21**	**234**	P	**P**	**21 34 00.6**	**+0.4**
TORD				IAmb	IAmb	21 34 02.5	
	comp=Z,1.7nm,0.9s						
BVAR	**Borovoye Array**	**34.78**	**46**	P	**P**	**21 34 22.8**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=264,slow=10,SNR=2.6						
	comp=Z,0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**39.42**	**51**	P	**P**	**21 35 01.8**	**0.0**
	comp=Z,0.6nm,0.5s,baz=276,slow=9.0,SNR=6.8						
	comp=Z,0.6nm,0.5s						
KURK	**Kurchatov**	**39.49**	**51**	P	**P**	**21 35 02.1**	**-0.2**
KURK				IAmb	IAmb	21 35 06.3	
	comp=Z,4.5nm,1.3s						
DBIC	**Dimbokro**	**41.31**	**234**	P	**P**	**21 35 20.3**	**+2.6**
	comp=Z,2.2nm,0.7s,baz=72,slow=6.4,SNR=3.5						
	comp=Z,2.2nm,0.7s						
MKAR	**Makanchi Array**	**41.94**	**57**	P	**P**	**21 35 22.8**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=268,slow=9.6,SNR=9.2						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**41.94**	**57**	P	**P**	**21 35 23.5**	**+0.8**
ZALV	**Zalesovo Beam**	**43.44**	**46**	P	**P**	**21 35 34.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=265,slow=10.0,SNR=1.9						
	comp=Z,0.4nm,0.4s						
SPITS	**Spitsbergen Ar**	**43.46**	**357**	P	**P**	**21 35 34.0**	**-0.6**
	comp=Z,4.8nm,0.8s,baz=152,slow=5.4,SNR=1.2						
	comp=Z,4.8nm,0.8s						
SONM	**Songino Array**	**57.79**	**51**	P	**P**	**21 37 24.7**	**+1.4**
	comp=Z,1.0nm,1.1s,baz=293,slow=7.7,SNR=5.9						
	comp=Z,1.0nm,1.1s						
SONM	**Songino Array**	**57.79**	**51**	P	**P**	**21 37 24.0**	**+0.7**
SONM				IAmb	IAmb	21 37 30.3	
	comp=Z,1.2nm,0.9s						
TOLK	**Toolik Lake Re**	**76.55**	**359**	P	**P**	**21 39 22.8**	**+0.9**
E19K	**Redstone River**	**77.69**	**2**	P	**P**	**21 39 27.4**	**-0.9**
J30M	**Hart River**	**79.88**	**353**	P	**P**	**21 39 40.0**	**-0.6**
J30M				IAmb	IAmb	21 39 59.9	
	comp=Z,4.2nm,1.4s						

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*IDC **03** 21:31:35.8±0.8, 16.°00N×119.°82E, h0km, mb3.7/10, mbtmp3.7/10, Error ellipse: s-maj=38.5km s-min=16.5km az=69.0*

ISC 03 21:31:40.7±0.9**, 16.°0N**±0.°1×**119.°8E**±0.°2**, h33**km**, n11,** σ1§**01**/12**, mb3.7**/10**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.08**	**280**	P	**P**	**21 36 10.4**	**-1.1**
	0.3nm,0.3s,baz=101,slow=8.5,SNR=4.3						
	0.3nm,0.3s						
KSRS	**Korea Array**	**22.54**	**17**	P	**P**	**21 36 36.3**	**-1.5**
	0.4nm,0.4s,baz=213,slow=10.0,SNR=1.9						
	0.4nm,0.4s						
SONM	**Songino Array**	**33.62**	**344**	P	**P**	**21 38 19.0**	**+0.8**
	0.9nm,0.6s,baz=164,slow=9.0,SNR=6.9						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**38.47**	**158**	P	**P**	**21 38 58.8**	**-1.0**
	0.7nm,0.7s,baz=340,slow=8.9,SNR=7.7						
WRA				PcP	**PcP**	**21 41 14.4**	**+1.8**
	0.3nm,0.5s,baz=342,slow=3.0,SNR=4.6						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**41.77**	**160**	P	**P**	**21 39 26.9**	**-0.2**
	0.8nm,0.7s,baz=339,slow=7.1,SNR=11						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**43.68**	**323**	P	**P**	**21 39 42.5**	**+0.1**
	0.6nm,0.8s,baz=119,slow=7.3,SNR=3.9						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**46.63**	**332**	P	**P**	**21 40 05.3**	**-0.3**
	0.3nm,0.4s,baz=138,slow=6.7,SNR=1.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**47.81**	**325**	P	**P**	**21 40 15.4**	**+0.5**
	0.3nm,0.3s,baz=121,slow=8.2,SNR=5.4						
	0.3nm,0.3s						
TIXI	**Tiksi**	**55.90**	**3**	P	**P**	**21 41 14.7**	**-0.1**
	3.1nm,0.3s,baz=158,slow=7.4,SNR=5.7						
	3.1nm,0.3s						
SPITS	**Spitsbergen Ar**	**77.17**	**348**	P	**P**	**21 43 31.2**	**+0.5**
	11nm,1.0s,baz=93,slow=9.1,SNR=2.2						
FINES	**FINESS Array B**	**77.86**	**331**	P	**P**	**21 43 34.8**	**0.0**
	3.4nm,0.9s,baz=27,slow=6.1,SNR=3.7						
	3.4nm,0.9s						

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*IDC **03** 21:44:55.4±0.6, 15.°74N×119.°37E, h0km, mb4.2/20, mbtmp4.1/21, ML3.6/1, MS3.0/2, Error ellipse: s-maj=28.4km s-min=13.1km az=67.0*

*NEIC **03** 21:44:57.5±2.0, 15.°73N±0.°07×119.°3E±0.°1, h10km±1km, mb4.5/53, Error ellipse: s-maj=19.8km s-min=11.5km az=91.0*

*DJA **03** 21:44:57.8±0.5, 16°N±6°×11°9E±°, h10km, M4.7/12, mb4.7/12, mB5.1/1, Mw(mB)4.4/1*

ISC 03 21:44:60.0±0.4**, 15.°71N**±0.°05×**119.°30E**±0.°09**, h31**km**, n99,** σ1§**13**/99**, mb4.4**/51**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**7.26**	**13**	Pn	**Pn**	**21 46 41.8**	**-2.3**
TPUB	**Ta-pu**	**7.65**	**9**	Pn	**Pn**	**21 46 49.5**	**+0.1**
YULB	**Yu-li**	**7.87**	**14**	Pn	**Pn**	**21 46 53.5**	**+1.2**
SSLB	**Suanglung**	**8.18**	**11**	Pn	**Pn**	**21 46 56.2**	**-0.5**
KNMB	**Chin-men Tao**	**8.75**	**355**	Pn	**Pn**	**21 47 01.7**	**-2.7**
QIZ	**Qiongzhong**	**9.61**	**291**	Pn	Pn	21 47 09.5	-6.8
KKM	**Kota Kinabalu**	**10.07**	**198**	Pn	**Pn**	**21 47 20.7**	**-2.0**
KKM	**Kota Kinabalu**	**10.07**	**198**	P	**Pn**	**21 47 22.8**	**+0.1**
	22nm,0.8s						
SANI	**Sanana**	**18.85**	**159**	P	**P**	**21 49 17.3**	**-0.3**
CM31	**Chiang Mai Arr**	**19.65**	**281**	P	**P**	**21 49 24.7**	**-1.7**
CMAR	**Chiang Mai Arr**	**19.65**	**281**	P	**P**	**21 49 26.3**	**-0.1**
	0.1nm,0.3s,baz=93,slow=10,SNR=17						
CMAR				LR	LR	21 56 51.0	
	comp=Z,63nm,20.2s,baz=95,slow=36						
	3.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**19.65**	**281**	P	**P**	**21 49 26.0**	**-0.4**
CHTO	**Chiang Mai**	**19.68**	**282**	P	**P**	**21 49 25.8**	**-0.9**
CHTO	**Chiang Mai**	**19.68**	**282**	P	**P**	**21 49 26.6**	**-0.2**
LYN	**LuoYang**	**19.74**	**343**	P	**Pn**	**21 49 31.9**	**+3.0**
LYN				pmax	pmax		
	comp=Z,16nm,0.5s						
LYN				LR	LR		
	comp=N,340nm,10.7s						
LYN				LR	LR		
	comp=E,210nm,8.5s						
LYN				LR	LR		
	comp=Z,330nm,9.1s						
KSRS	**Korea Array**	**22.96**	**18**	P	**P**	**21 50 00.2**	**-1.6**
	comp=Z,1.1nm,0.7s,baz=205,slow=9.4,SNR=6.3						
	comp=Z,1.1nm,0.7s						
DBNI	**Kabupaten Domp**	**24.08**	**182**	P	**P**	**21 50 13.3**	**+0.5**
	comp=Z,24nm,1.7s						
JCJ	**Chichijima**	**24.08**	**58**	LR	LR	21 58 36.8	
	comp=Z,6.6nm,22.0s,baz=65,slow=34						
EDFI	**Ende, Flores**	**24.42**	**174**	P	**P**	**21 50 19.3**	**+3.2**
	comp=Z,43nm,0.8s						
PLAI	**Plampang**	**24.43**	**184**	P	**P**	**21 50 16.6**	**+0.5**
LZDM	**Lanzhou Array**	**24.50**	**328**	P	**P**	**21 50 15.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=132,slow=8.0,SNR=6.0						
	comp=Z,0.3nm,0.3s						
SNJI	**Sawahan-Nganju**	**24.51**	**198**	P	**P**	**21 50 19.9**	**+2.9**
	comp=Z,21nm,1.6s						
LZH	**Lanzhou**	**24.53**	**329**	*e*P	**P**	**21 50 18.3**	**+1.2**
LZH				sP	sP	21 50 26.8	-1.0
LZH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GUMO	**Guam**	**24.82**	**92**	LR	LR	22 00 34.5	
	comp=Z,22nm,18.2s,baz=100,slow=38						
MORE	**Moreh**	**24.95**	**294**	P	**P**	**21 50 19.1**	**-1.7**
MORE				IAmb	IAmb	21 50 21.4	
	comp=Z,5.9nm,0.9s						
UGM	**Wanagama**	**25.03**	**201**	P	**P**	**21 50 22.5**	**+0.9**
SHL	**Shillong**	**27.42**	**295**	P	**P**	**21 50 41.8**	**-1.5**
SHL				IAmb	IAmb	21 50 49.1	
	comp=Z,6.8nm,0.8s						
GTA2	**Gaotai**	**29.21**	**328**	*e*P	**P**	**21 50 59.0**	**0.0**
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.3s						
LSA	**Lhasa**	**29.37**	**303**	P	**P**	**21 51 00.9**	**-0.1**
SONM	**Songino Array**	**33.76**	**344**	P	**P**	**21 51 39.6**	**+0.7**
	comp=Z,2.9nm,0.9s,baz=168,slow=9.5,SNR=18						
	comp=Z,2.9nm,0.9s						
SONM	**Songino Array**	**33.76**	**344**	P	**P**	**21 51 38.5**	**-0.5**
PSA00	**Pilbara Seismi**	**37.06**	**179**	P	**P**	**21 52 06.6**	**-0.8**
PSA00				IAmb	IAmb	21 52 12.7	
	comp=Z,8.0nm,1.1s						
COEN	**Coen**	**37.77**	**140**	P	**P**	**21 52 13.1**	**-0.4**
COEN				IAmb	IAmb	21 52 14.1	
	comp=Z,9.0nm,0.8s						
WB0	**Warramunga Arr**	**38.25**	**157**	P	**P**	**21 52 16.4**	**-1.1**
WB0				IAmb	IAmb	21 52 20.1	
	comp=Z,6.1nm,0.8s						
WRAB	**Tennant Creek**	**38.39**	**157**	P	**P**	**21 52 18.0**	**-0.6**
WRAB				IAmb	IAmb	21 52 21.3	
	comp=Z,5.7nm,0.9s						
WRA	**Warramunga Arr**	**38.39**	**157**	P	**P**	**21 52 18.2**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=336,slow=9.3,SNR=47						
WRA				PcP	**PcP**	**21 54 32.8**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=339,slow=3.2,SNR=9.1						
	comp=Z,3.4nm,0.7s						
WRA	**Warramunga Arr**	**38.39**	**157**	P	**P**	**21 52 17.2**	**-1.5**
WR8	**Warramunga Arr**	**38.47**	**157**	P	**P**	**21 52 18.4**	**-0.9**
WR8				IAmb	IAmb	21 52 20.0	
	comp=Z,15nm,1.4s						
AS31	**Alice Springs**	**41.66**	**160**	P	**P**	**21 52 45.7**	**-0.1**
ASAR	**Alice Springs**	**41.66**	**160**	P	**P**	**21 52 46.0**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=339,slow=7.0,SNR=60						
ASAR				PcP	**PcP**	**21 54 43.6**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=349,slow=3.0,SNR=7.8						
	comp=Z,4.4nm,0.7s						
ASAR	**Alice Springs**	**41.66**	**160**	P	**P**	**21 52 45.3**	**-0.6**
ASAR					**PcP**	**21 54 43.2**	**+0.8**
MKAR	**Makanchi Array**	**43.62**	**323**	P	**P**	**21 53 02.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=119,slow=8.8,SNR=11						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**43.62**	**323**	P	**P**	**21 53 01.4**	**-0.1**
MORW	**Morawa**	**44.63**	**184**	P	**P**	**21 53 09.5**	**-0.2**
MORW				IAmb	IAmb	21 53 14.6	
	comp=Z,16nm,1.4s						
ZALV	**Zalesovo Beam**	**46.66**	**333**	P	**P**	**21 53 26.2**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=116,slow=6.9,SNR=6.6						
	comp=Z,0.8nm,0.5s						
FORT	**Forrest**	**46.98**	**170**	P	**P**	**21 53 28.4**	**+0.1**
KURBB	**Kurchatov Arra**	**47.77**	**326**	P	**P**	**21 53 34.0**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=120,slow=8.3,SNR=15						
	comp=Z,3.7nm,0.9s						
KURK	**Kurchatov**	**47.77**	**326**	P	**P**	**21 53 33.2**	**-1.0**
PETK	**Petropavlovsk-**	**47.95**	**30**	P	**P**	**21 53 34.0**	**-1.6**
	comp=Z,6.6nm,1.1s,baz=246,slow=7.4,SNR=3.7						
	comp=Z,6.6nm,1.1s						
NWAO	**Narrogin (SRO)**	**48.41**	**182**	P	**P**	**21 53 39.9**	**+0.6**
KKAR	**Karatay Array**	**49.61**	**314**	P	**P**	**21 53 48.2**	**-0.3**
BBOO	**Buckleboo**	**50.84**	**162**	P	**P**	**21 53 57.2**	**-0.7**
EIDS	**Eidsvold**	**51.25**	**142**	P	**P**	**21 54 01.4**	**+0.4**
EIDS				IAmb	IAmb	21 54 04.3	
	comp=Z,7.3nm,0.9s						
STKA	**Stephens Creek**	**51.93**	**156**	P	**P**	**21 54 05.3**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=305,slow=3.3,SNR=3.7						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**51.93**	**156**	P	**P**	**21 54 05.5**	**-0.5**
TIXI	**Tiksi**	**56.21**	**4**	P	**P**	**21 54 36.6**	**-0.2**
TIXI				IAmb	IAmb	21 54 39.5	
	comp=Z,6.7nm,1.1s						
NRIK	**Noril'sk**	**57.16**	**347**	P	**P**	**21 54 44.3**	**+0.9**
	comp=Z,5.9nm,0.8s,baz=120,slow=7.5,SNR=11						
	comp=Z,5.9nm,0.8s						
NRIK	**Noril'sk**	**57.16**	**347**	P	**P**	**21 54 44.4**	**+0.9**
AB31	**Akbulak array**	**58.34**	**319**	P	**P**	**21 54 51.7**	**-0.4**
AB31				IAmb	IAmb	21 54 54.8	
	comp=Z,4.4nm,1.2s						
ABKAR	**Akbulak array**	**58.34**	**319**	P	**P**	**21 54 51.5**	**-0.7**
RAYN	**Ar Rayn**	**69.30**	**290**	P	**P**	**21 56 05.4**	**+0.5**
RAYN				IAmb	IAmb	21 56 12.4	
	comp=Z,3.4nm,0.8s						
F15K	**North Star Dit**	**70.06**	**25**	P	**P**	**21 56 10.3**	**+1.6**
F15K				IAmb	IAmb	21 56 23.1	
	comp=Z,5.9nm,1.4s						
C16K	**Lisburne Hills**	**70.10**	**23**	P	**P**	**21 56 09.7**	**+0.8**
C16K				IAmb	IAmb	21 56 13.7	
	comp=Z,4.4nm,0.9s						
F17K	**Baldwin Pennin**	**71.50**	**25**	P	**P**	**21 56 19.0**	**+1.6**
F17K				IAmb	IAmb	21 56 22.5	
	comp=Z,3.7nm,0.8s						
J17K	**VABM Dome**	**72.33**	**28**	P	**P**	**21 56 24.2**	**+1.7**
K17K	**Iditarod**	**72.69**	**29**	P	**P**	**21 56 26.3**	**+1.7**
D19K	**Kuna River**	**72.78**	**23**	P	**P**	**21 56 25.2**	**+0.1**
D20K	**Etivluk River**	**73.33**	**22**	P	**P**	**21 56 28.3**	**-0.1**
D20K				IAmb	IAmb	21 56 38.0	
	comp=Z,7.3nm,1.2s						
F20K	**Avaraart Lake**	**73.70**	**24**	P	**P**	**21 56 32.1**	**+1.6**
J20K	**Nowinta River**	**74.50**	**27**	P	**P**	**21 56 36.1**	**+0.8**
J20K				IAmb	IAmb	21 56 41.6	
	comp=Z,4.2nm,1.4s						
BPAW	**Bear Paw Mtn.**	**75.88**	**27**	P	**P**	**21 56 42.7**	**-0.6**
BPAW				IAmb	IAmb	21 57 01.2	
	comp=Z,11nm,1.5s						
L22K	**Petersville**	**76.17**	**29**	P	**P**	**21 56 45.0**	**0.0**
E24K	**Your Creek**	**76.38**	**23**	P	**P**	**21 56 47.4**	**+1.4**
E24K				IAmb	IAmb	21 56 48.6	
	comp=Z,4.3nm,1.3s						
ARCES	**ARCESS Array B**	**76.73**	**339**	P	**P**	**21 56 48.1**	**+0.1**
	comp=Z,6.4nm,1.0s,baz=74,slow=5.8,SNR=2.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,6.4nm,1.0s						
D25K	Kavik River	76.95	21	P	P	21 56 49.0	-0.2
D25K				IAmb	IAmb	21 56 53.7	
	comp=Z,4.0nm,0.7s						
G24K	Hadweenzic Riv	76.97	24	P	P	21 56 50.6	+1.3
G24K				IAmb	IAmb	21 56 51.8	
	comp=Z,3.5nm,1.1s						
SPITS	Spitsbergen Ar	77.35	348	P	P	21 56 51.2	-0.1
	comp=Z,12nm,1.0s,baz=134,slow=2.4,SNR=4.8						
	comp=Z,12nm,1.0s						
F25K	Christian Rive	77.52	23	P	P	21 56 54.0	+1.5
ILAR	Eielson Array	77.54	26	P	P	21 56 53.4	+0.8
	comp=Z,0.8nm,1.1s,baz=270,slow=7.5,SNR=4.1						
	comp=Z,0.8nm,1.1s						
FINES	FINESS Array B	77.88	331	P	P	21 56 54.2	-0.2
	comp=Z,3.6nm,0.9s,baz=50,slow=2.4,SNR=7.6						
	comp=Z,3.6nm,0.9s						
FINES	FINESS Array B	77.88	331	P	P	21 56 53.5	-0.9
CSS	Mathiatis	77.93	303	P	P	21 56 55.8	+0.4
BMAR	Burnt Mountain	77.96	23	P	P	21 56 56.5	+1.6
AKASG	Malin Array Be	78.06	319	P	P	21 56 56.3	+0.6
	comp=Z,0.6nm,0.5s,baz=64,slow=6.0,SNR=4.2						
	comp=Z,0.6nm,0.5s						
M24K	Tolsona, Glenn	78.36	29	P	P	21 56 58.8	+1.5
F28M	Old Crow	79.67	22	P	P	21 57 05.7	+1.4
BCAR	Beaver Creek A	80.12	27	P	P	21 57 08.6	+1.8
G29M	Pine Creek	80.56	23	P	P	21 57 10.2	+1.1
F30M	Barrier River	81.16	22	P	P	21 57 13.2	+0.9
F30M				IAmb	IAmb	21 57 35.9	
	comp=Z,3.8nm,1.2s						
G30M	tAoh Zraii Nji	81.21	23	P	P	21 57 10.7	-1.9
G30M				IAmb	IAmb	21 57 28.0	
	comp=Z,5.3nm,1.2s						
BURAR	Bucovina Array	81.27	317	P	P	21 57 13.3	0.0
BURAR				IAmb	IAmb	21 57 16.9	
	comp=Z,3.1nm,0.8s						
BUR08	Bucovina Ar. S	81.27	317	P	P	21 57 12.8	-0.6
BUR08				IAmb	IAmb	21 57 16.8	
	comp=Z,3.9nm,0.8s						
M29M	Somme Creek	81.76	27	P	P	21 57 17.1	+1.4
G31M	Satah River	81.95	22	P	P	21 57 16.4	-0.1
G31M				IAmb	IAmb	21 57 34.3	
	comp=Z,9.3nm,1.4s						
H31M	Peel River	82.33	24	P	P	21 57 19.1	+0.6
H31M				IAmb	IAmb	21 57 53.5	
	comp=Z,6.6nm,1.5s						
HFS	Hagfors	84.07	331	P	P	21 57 28.0	+0.5
	comp=Z,2.8nm,0.9s,baz=195,slow=4.5,SNR=2.0						
	comp=Z,2.8nm,0.9s						
NOA	NORSAR Array B	84.86	332	P	P	21 57 31.9	+0.3
	comp=Z,1.1nm,1.0s,baz=64,slow=5.1,SNR=2.2						
	comp=Z,1.1nm,1.0s						
YKA	Yellowknife Ar	91.44	22	P	P	21 58 03.1	+0.1
	comp=Z,0.4nm,0.8s,baz=313,slow=4.9,SNR=5.6						
	comp=Z,0.4nm,0.8s						
EKA	Eskdalemuir Ar	94.27	331	P	P	21 58 16.6	+0.4
	comp=Z,1.2nm,0.8s,baz=357,slow=5.8,SNR=2.0						
	comp=Z,1.2nm,0.8s						

*IDC **03** 21:45:49.1±1.0, 15.°74N×119.°36E, h0km, mb4.0/10, mbtmp4.0/10, MS2.8/1, Error ellipse: s-maj=46.3km s-min=20.3km az=71.0*

ISC 03 21:45:54.3±1.0**, 15.°8N**±0.°2×**119.°4E**±0.°3**, h35km, n11, σ0.s53**/10**, mb3.9**/10**, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	20.24	144	LR	LR	21 58 10.8	
	comp=Z,31nm,21.6s,baz=143,slow=37						
KSRS	Korea Array	22.88	18	P	P	21 50 54.4	-0.4
	1.6nm,0.7s,baz=202,slow=11,SNR=2.9						
	1.6nm,0.7s						
SONM	Songino Array	33.75	344	P	P	21 52 33.2	+0.5
	1.8nm,0.7s,baz=167,slow=9.9,SNR=7.9						
	1.8nm,0.7s						
WRA	Warramunga Arr	38.38	157	P	P	21 53 11.9	-0.5
	0.8nm,0.7s,baz=337,slow=9.1,SNR=2.1						
	0.8nm,0.7s						
ASAR	Alice Springs	41.66	160	P	P	21 53 40.0	+0.5
	0.8nm,0.6s,baz=338,slow=6.9,SNR=1.5						
	0.8nm,0.6s						
MKAR	Makanchi Array	43.66	323	P	P	21 53 55.6	0.0
	0.7nm,0.8s,baz=133,slow=8.4,SNR=3.8						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	46.68	333	P	P	21 54 18.5	-0.8
	0.4nm,0.4s,baz=126,slow=8.0,SNR=3.1						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	47.81	326	P	P	21 54 28.0	-0.2
	1.0nm,0.6s,baz=132,slow=8.5,SNR=1.8						
	1.0nm,0.6s						
PETK	Petropavlovsk-	47.85	30	P	P	21 54 28.8	+0.3
	4.0nm,0.8s,baz=37,slow=7.6,SNR=2.2						
	4.0nm,0.8s						
SPITS	Spitsbergen Ar	77.34	348	P	P	21 57 45.4	+0.4
	12nm,1.0s,baz=69,slow=6.7,SNR=2.0						
	12nm,1.0s						
FINES	FINESS Array B	77.90	331	P	P	21 57 48.1	-0.2
	4.7nm,1.0s,baz=85,slow=5.5,SNR=3.6						
	4.7nm,1.0s						

*TRN **03** 21:46:16.8, 11.°19N×61.°91W, h61km, MD3.0, North of the Paria peninsula.*
*FUNV **03** 21:46:17.4, 11.°18N×61.°93W, h48km, MW3.3, Presumed earthquake*

ISC 03 21:46:17.3±4.4**, 11.°21N**±0.°09×**61.°8W**±0.°4**, h63km**±41km**, n10, σ0.s52**/18**, Windward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	0.58	151	eP	Pn	21 46 30.6	+0.3
DMDM				eS	Sn	21 46 39.5	-0.3
PSGH	Port of Spain	0.63	149	eP	Pn	21 46 31.3	+0.5
PSGH				eS	Sn	21 46 40.4	-0.4
TRN	Trinidad (W)	0.70	142	eP	Pn	21 46 31.6	0.0
TRN				eS	Sn	21 46 41.6	-0.7
TRN	Trinidad (W)	0.70	142	eP	Pn	21 46 32.1	+0.5
TRN				eS	Sn	21 46 42.0	-0.2
GRFF	Grenada Fort F	0.84	7	eP	Pn	21 46 33.1	-0.4
GRFF				eS	Sn	21 46 45.6	+0.2
GRGR	Grenville	0.94	11	eP	Pn	21 46 34.5	-0.2
GRGR				eS	Sn	21 46 47.5	0.0
GRGR	Grenville	0.94	11	eP	Pn	21 46 34.1	-0.5
GRGR				eS	Sn	21 46 47.8	+0.3
GRW	Mount Saint Ca	0.96	10	eP	Pn	21 46 34.5	-0.5
GRW				eS	Sn	21 46 49.4	+1.2
GRSS	Sisters	1.11	11	eP	Pn	21 46 36.7	-0.2
GRSS				eS	Sn	21 46 51.9	+0.5
CACV	CAICARA DEL OR	5.88	232	eP	Pn	21 47 33.9	-8.0
CACV				eS	Sn	21 48 30.7	-17

*IDC **03** 21:55:33.4±2.7, 43.°67N×105.°48W, h0km, mb3.5/1, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=80.0km s-min=8.4km az=151.0*
*NEIC **03** 21:55:33.7±0.9, 43.°70N±0.°06×105.°4W±0.°1, h0km±1km, ML3.0/56, Error ellipse: s-maj=13.2km s-min=9.6km az=64.0*

ISC 03 21:55:34.2±0.9**, 43.°70N**±0.°05×**105.°33W**±0.°05**, h0km, n36, σ1.s03**/36**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	65	Pg	Pg	21 55 54.1	+0.2
K22A	Casper	1.36	220	Pg	Pg	21 55 59.7	-0.6
K22A				IAML		21 56 23.2	
	334nm,0.3s						
K22A				IAML		21 56 25.6	
	273nm,0.3s						
LAO	LASA Array	3.06	348	Pn	Pn	21 56 24.5	+0.7
RLMT	Red Lodge	3.16	298	Pn	Pn	21 56 25.8	+0.5
RLMT				IAML		21 57 14.7	
	55nm,0.3s						
RLMT				IAML		21 57 15.3	
	57nm,0.3s						
BW06	Boulder Array	3.23	255	Pn	Pn	21 56 26.2	-0.1
BW06				IAML		21 57 16.2	
	45nm,0.3s						
BW06				IAML		21 57 20.6	
	30nm,0.3s						
PD31	Pinedale Array	3.23	255	Pn	Pn	21 56 27.7	+1.4
PDAR	Pinedale Array	3.23	255	Pn	Pn	21 56 27.4	+1.1
	4.3nm,0.3s,baz=66,slow=15,SNR=30						
PDAR				Pg	Pb	21 56 33.0	+0.6
	6.7nm,0.3s,baz=64,slow=18,SNR=21						
PDAR				Lg	Lg	21 57 09.9	
	7.8nm,0.3s,baz=68,slow=33,SNR=9.4						
	4.0nm,0.4s						
HAYD	Hayden	3.48	205	Pn	Pn	21 56 29.5	-0.4
HAYD				IAML		21 57 28.9	
	comp=N,23nm,0.3s						
HAYD				IAML		21 57 29.7	
	comp=E,29nm,0.5s						
YNE	Yellowstone No	3.60	293	Pn	Pn	21 56 32.1	+0.6
YMP	Mirror Lake Pl	3.62	288	Pn	Pn	21 56 32.9	+1.1
OGNE	Ogallala	3.68	137	Pn	Pn	21 56 33.7	+1.3
LOHW	Long Hollow	3.83	271	Pn	Pn	21 56 35.4	+0.8
H17A	Grant Village	3.84	282	Pn	Pn	21 56 36.5	+1.7
H17A				IAML		21 57 38.5	
	comp=N,22nm,0.4s						
H17A				IAML		21 57 43.1	
	comp=E,21nm,0.3s						
FLWY	Flagg Ranch	3.90	278	Pn	Pn	21 56 35.7	+0.2
FLWY				IAML		21 57 56.0	
	comp=E,26nm,4.0s						
FLWY				IAML		21 57 57.9	
	comp=E,24nm,2.9s						
ISCO	Idaho Springs	3.90	183	Pn	Pn	21 56 36.7	+1.1
MOOW	Moose Ponds	3.92	273	Pn	Pn	21 56 37.1	+1.2
SNOW	Snow King Moun	3.95	268	Pn	Pn	21 56 38.0	+1.8
SNOW				IAML		21 57 32.4	
	comp=E,29nm,4.9s						
YPP	Pitchstone Pla	3.99	280	Pn	Pn	21 56 37.4	+0.6
YPP				IAML		21 57 45.2	
	comp=E,17nm,3.8s						
YPP				IAML		21 57 53.0	
	comp=N,20nm,4.8s						
YHH	Holmes Hill	4.11	287	Pn	Pn	21 56 39.0	+0.5
FXWY	Fox Creek	4.13	271	Pn	Pn	21 56 39.0	+0.2
YMR	Madison River	4.17	285	Pn	Pn	21 56 40.8	+1.6
YMR				IAML		21 57 52.1	
	comp=E,25nm,4.2s						
YMR				IAML		21 58 02.9	
	comp=N,24nm,1.2s						
O20A	White River Ci	4.17	212	Pn	Pn	21 56 40.2	+0.9
YHL	Hebgen Lake	4.36	287	Pn	Pn	21 56 42.9	+1.0
YHL				IAML		21 58 14.5	
	comp=E,22nm,4.7s						
YHL				IAML		21 58 37.6	
	comp=N,20nm,4.9s						
DGMT	Dagmar	4.84	9	Pn	Pn	21 56 49.3	+1.1
BOZ	Bozeman (W)	4.88	295	Pn	Pn	21 56 48.5	-0.4
BOZ				IAML		21 58 38.1	
	comp=N,11nm,3.7s						
KSCO	Kaye Shedlock'	5.11	156	Pn	Pn	21 56 52.4	+0.4
BSUT	Blindstream Ca	5.13	234	Pn	Pn	21 56 52.7	+0.2
BSUT				IAML		21 57 29.0	
	comp=E,11nm,4.6s						
BSUT				IAML		21 59 11.2	
	comp=N,12nm,4.3s						
EGMT	Eagleton	5.32	326	Pn	Pn	21 56 55.2	+0.4
P18A	Preston Nutter	5.48	224	Pn	Pn	21 56 59.0	+1.6
LYMT	Lyon Mountain	5.89	306	Pn	Pn	21 57 03.6	+0.6
SRU	San Rafael Swe	6.02	222	Pn	Pn	21 57 05.4	+0.8
TMUT	Trail Mountain	6.23	227	Pn	Pn	21 57 09.3	+1.7
HMU	Henry Mountain	7.07	217	Pn	Pn	21 57 19.3	+0.3
I10CA	LAC DU BONNET	9.10	41	I	I	22 48 20.0	
	baz=224,slow=288,SNR=3.3						
ULM	Lac du Bonnet	9.20	41	Pn	Pn	21 57 46.2	-1.8
	comp=N,0.8nm,0.3s,baz=221,slow=10,SNR=8.1						
ULM				Lg	Lg	22 00 19.3	
	comp=N,0.3nm,0.3s,baz=343,slow=20,SNR=1.3						
	comp=N,1.4nm,0.3s						
MKAR	Makanchi Array	89.64	355	P	P	22 08 33.1	-0.7
	comp=N,0.2nm,0.7s,baz=15,slow=4.5,SNR=2.5						
	comp=N,0.2nm,0.7s						

*IDC **03** 22:00:32.3±2.9, 9.°86N×126.°31E, h0km, mb3.2/4, mbtmp3.2/4, MS2.5/1, Error ellipse: s-maj=296.7km s-min=23.7km az=67.0*

ISC 03 22:00:38.0±1.3**, 9.°9N**±0.°1×**126.°5E**±0.°3**, h42km, n12, σ0.s20**/6**, mb3.2**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.96	198	Sn	Sn	22 01 56.9	0.0
	46nm,0.3s,baz=74,slow=19,SNR=2.5						
DAV				LR	LR	22 02 46.5	
	comp=Z,82nm,21.5s,baz=330,slow=47						
WRA	Warramunga Arr	30.65	165	P	P	22 06 48.8	+0.2
	0.2nm,0.6s,baz=342,slow=7.8,SNR=2.0						
	0.2nm,0.6s						
ASAR	Alice Springs	34.14	168	P	P	22 07 19.0	-0.3
	0.1nm,0.4s,baz=348,slow=8.5,SNR=4.0						
	0.1nm,0.4s						
H11S3	WAKE ISLAND Hy	39.81	73	T	T	22 51 11.4	
	baz=266,slow=74						
H11S1	WAKE ISLAND Hy	39.83	73	T	T	22 51 12.5	
	baz=266						
H11S2	WAKE ISLAND Hy	39.83	73	T	T	22 51 16.4	
	baz=266,slow=74						
H11N1	WAKE ISLAND Hy	40.16	71	T	T	22 51 27.0	
	baz=262,slow=74,SNR=8.5						
H11N2	WAKE ISLAND Hy	40.17	71	T	T	22 51 23.2	
	baz=262,slow=74,SNR=7.6						
H11N3	WAKE ISLAND Hy	40.18	71	T	T	22 51 24.5	
	baz=262,slow=74,SNR=11						
MKAR	Makanchi Array	52.45	323	P	P	22 09 46.6	0.0
	0.1nm,0.4s,baz=118,slow=8.5,SNR=4.1						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	56.50	325	P	P	22 10 15.8	-0.1
	0.1nm,0.4s,baz=124,slow=7.9,SNR=1.9						
	0.1nm,0.4s						
FINES	FINESS Array B	86.32	332	P	P	22 13 15.4	+0.1
	3.4nm,0.9s,baz=57,slow=5.1,SNR=6.4						

*IDC **03** 22:10:11.8±0.8, 58.°59S×139.°92W, h0km, mb4.1/3, mbtmp4.1/3, MS3.9/15, Error ellipse: s-maj=83.4km s-min=24.5km az=177.0*

ISC 03 22:10:13.1±0.9**, 58.°7S**±0.°7×**139.°9W**±0.°2**, h10km, n35, σ1.s25**/9**, mb4.3**/3**, MS3.9**/15**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	26.87	204	LR	LR	22 23 32.2	
	comp=Z,141nm,21.7s,baz=60,slow=30						
QSPA	South Pole Qui	31.49	180	LR	LR	22 27 31.6	
	comp=Z,219nm,18.8s,baz=60,slow=33						
PMSA	Palmer Station	34.41	133	LR	LR	22 26 50.4	
	comp=Z,258nm,21.4s,baz=303,slow=29						
TBI	Tubuai	35.94	345	eLR	LR	22 26 22.7	
	2μm,27.8s						
PPT2	Papeete2	41.63	346	eLR	LR	22 28 56.8	
	401nm,27.2s						
PPT2				eLR	LR	22 29 04.9	
	299nm,27.8s						
PLCA	Paso Flores	46.04	99	LR	LR	22 33 15.3	
	comp=Z,166nm,18.1s,baz=218,slow=30						
SNAA	Sanae	46.55	163	LR	LR	22 35 46.3	
	comp=Z,101nm,20.4s,baz=186,slow=33						
H03S2	Juan Fernandez	46.88	86	T	T	23 08 53.5	
	baz=217,slow=74,SNR=6.9						
H03S1	Juan Fernandez	46.89	86	T	T	23 08 59.9	
	baz=217,slow=74,SNR=7.9						
H03S3	Juan Fernandez	46.90	86	T	T	23 08 56.8	
	baz=217,slow=74,SNR=9.2						
H03N3	Juan Fernandez	47.18	85	T	T	23 09 16.0	
	baz=220,slow=72,SNR=31						
H03N2	Juan Fernandez	47.19	85	T	T	23 09 15.8	
	baz=220,slow=72,SNR=28						
H03N1	Juan Fernandez	47.20	85	T	T	23 09 14.5	
	baz=220,slow=72,SNR=31						
TAOE	Nuku Hiva Isla	49.70	360	eLR	LR	22 32 34.4	
	231nm,31.0s						
DZM	Mont Dzumac	52.71	290	LR	LR	22 39 05.0	
	comp=Z,99nm,18.1s,baz=182,slow=33						
DZM	Mont Dzumac	52.71	290	eLR	LR	22 34 44.1	
	258nm,26.1s						
MAW	Mawson	52.92	191	LR	LR	22 39 15.9	
	comp=Z,99nm,18.1s,baz=127,slow=33						
STKA	Stephens Creek	57.54	261	LR	LR	22 39 19.0	
	comp=Z,54nm,20.7s,baz=202,slow=30						
CPUP	Villa Florida	64.11	98	LR	LR	22 44 05.0	
	comp=Z,74nm,21.6s,baz=222,slow=32						
LPAZ	La Paz	66.76	83	P	P	22 21 06.0	+0.8
	4.0nm,1.1s,baz=200,slow=8.7,SNR=11						
LPAZ				LR	LR	22 43 15.6	
	comp=Z,42nm,21.0s,baz=191,slow=30						
	4.0nm,1.1s						
ASAR	Alice Springs	68.15	260	P	P	22 21 14.6	+1.3
	2.2nm,0.9s,baz=144,slow=6.7,SNR=12						
ASAR				LR	LR	22 46 37.8	
	comp=Z,52nm,21.1s,baz=115,slow=32						
	2.2nm,0.9s						
ATAH	Atahualpa	69.36	69	LR	LR	22 44 11.5	
	comp=Z,116nm,20.6s,baz=222,slow=29						
WRA	Warramunga Arr	71.00	263	P	P	22 21 31.6	+0.7
	0.9nm,0.8s,baz=147,slow=5.9,SNR=6.0						
	0.9nm,0.8s						
BDFB	Brasilia	77.77	100	LR	LR	22 54 07.8	
	comp=Z,146nm,18.1s,baz=157,slow=34						
BATI	Baumata	84.69	259	LR	LR	22 58 32.5	
	comp=Z,93nm,18.0s,baz=266,slow=34						
RCBR	Riachuelo	92.29	105	LR	LR	23 01 01.8	
	comp=Z,35nm,21.2s,baz=254,slow=33						
H10N3	ASCENSION HYDR	100.63	125	T	T	00 16 50.5	
	baz=207						
H10N1	ASCENSION HYDR	100.63	125	T	T	00 16 51.9	
	baz=207						
H10N2	ASCENSION HYDR	100.65	125	T	T	00 16 54.5	
	baz=207						
ILAR	Eielson Array	123.23	356	PKP	PKPdf	22 29 08.2	-0.1
	2.7nm,1.0s,baz=196,slow=2.5,SNR=15						
TORD	Torodi Ar. Bea	126.28	131	PKP	PKPdf	22 29 14.8	-0.9
	0.6nm,0.9s,baz=229,slow=1.9,SNR=2.7						
ESDC	Sonseca Array	146.31	105	PKPbc	PKPab	22 29 54.0	0.0
	0.7nm,0.9s,baz=236,slow=2.2,SNR=3.9						
MKAR	Makanchi Array	152.31	263	PKPbc	PKiKP	22 30 09.0	+0.6
	0.6nm,0.8s,baz=153,slow=0.6,SNR=4.0						
ZALV	Zalesovo Beam	155.11	279	PKPab	PKPab	22 30 27.6	-2.3
	0.7nm,0.6s,baz=149,slow=3.1,SNR=4.7						
AKASG	Malin Array Be	169.85	137	PKPab	PKPab	22 31 33.8	-0.6
	0.2nm,0.4s,baz=231,slow=4.4,SNR=5.4						

IDC 03 22:13:52.6±1.3**, 2.°47S×138.°90E, h0km, mb3.3**/3**, mbtmp3.3**/4**, ML3.5**/1**, Error ellipse: s-maj=27.5km s-min=16.6km az=178.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.80	91	Pn	Pb	22 14 25.9	-0.6
	4.4nm,0.3s,baz=248,slow=11,SNR=10						
JAY				Lg	Lg	22 14 49.5	
	3.9nm,0.3s,baz=246,slow=20,SNR=3.6						
WRA	Warramunga Arr	17.93	194	P	Pn	22 18 02.9	-0.7
	0.2nm,0.3s,baz=16,slow=12,SNR=8.6						
	0.5nm,0.7s						
ASAR	Alice Springs	21.62	193	P	P	22 18 44.4	-0.2
	0.4nm,0.6s,baz=26,slow=11,SNR=8.8						
	0.4nm,0.6s						
MKAR	Makanchi Array	69.72	322	P	P	22 25 05.0	+0.4
	0.1nm,0.4s,baz=107,slow=7.7,SNR=4.0						
	0.1nm,0.4s						
ILAR	Eielson Array	85.54	24	P	P	22 26 31.8	-0.7
	0.4nm,0.7s,baz=275,slow=5.3,SNR=2.9						
	0.4nm,0.7s						

AFAD 03 22:14:18.1, 39.°31N×27.°76E, h7km±3km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.07	335	P	Pg	22 14 19.7	-0.3
STEP				S	Sg	22 14 21.7	+0.4
STEP				IAML		22 14 22.0	
	comp=N,305nm,0.4s						
STEP				IAML		22 14 22.0	
	comp=E,214nm,0.2s						
CAMT	Merkez	0.66	212	P	Pb	22 14 32.1	+0.2
CAMT				S	Sb	22 14 41.2	-0.2
CAMT				IAML		22 14 47.0	
	comp=N,19nm,1.3s						
KTTT	Salihli	0.68	157	P	Pg	22 14 31.5	+0.4
KTTT				S	Sg	22 14 40.5	+0.7
DEMI	Demirci	0.79	110	P	Pg	22 14 32.6	-0.8
DEMI				S	Sb	22 14 45.6	+0.4
DEMI				IAML		22 14 46.0	
	comp=E,23nm,0.2s						
DEMI				IAML		22 14 59.0	
	comp=N,28nm,0.8s						

ISK 03 22:15:17.6, 38.°99N×27.°90E, h12km±1km, ML1.3/7**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.13	211	Pg	Pg	22 15 21.2	+0.4
AKS				Sg	Sg	22 15 23.9	+0.7
GORD	Gordes-Manisa	0.23	110	Pg	Pg	22 15 22.3	-0.3
GORD				Sg	Sg	22 15 26.8	+0.9
SOMA	Soma-Manisa	0.33	301	Pg	Pg	22 15 24.7	+0.4
SOMA				Sg	Sg	22 15 29.7	+0.9
KULA	Kula-Manisa	0.76	128	Pg	Pg	22 15 32.3	0.0
KULA				Sg	Sb	22 15 43.9	+0.8
SIMA	Simav-Kutahya	0.85	83	Pg	Pn	22 15 35.1	-0.4
YAYO	Edremit-Balk	0.89	314	Pg	Pb	22 15 35.4	+0.4
BLCB	Balcova	0.90	228	Pg	Pn	22 15 35.7	-0.3
BLCB				Sg	Sn	22 15 48.1	-0.8
AYDB	Zeytinkoy-Aydi	1.04	180	Pg	Pn	22 15 38.2	+0.1

*ISK **03** 22:19:39.5, 38.°37N×39.°08E, h5km, ML4.6/14*
*AFAD **03** 22:19:40.9, 38.°40N×39.°15E, h7km±3km, MW4.5*
*IDC **03** 22:19:41.8±0.6, 38.°41N×39.°15E, h0km, mb4.0/19, mbtmp3.9/30, ML3.6/10, MS3.8/53, Error ellipse: s-maj=12.8km s-min=8.1km az=161.0*
*MED_RC **03** 22:19:41.0±0.8, 38.°37N×39.°10E, h10km, MW4.6/27, Moment Tensor Solution.Mantle waves: s27,c37; Duration: 1.s0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.03±.03; $M_{\theta\theta}$-0.70±.04; $M_{\phi\phi}$0.67±.03; $M_{r\theta}$0.23±.10; $M_{\theta\phi}$0.61±.03; $M_{\phi r}$0.55±.12; Best double couple: $M_0$1.07000×10^{16} NP1:ϕ_s332.00000°, δ70.00000°, λ161.00000°. NP2:ϕ_s69.00000°, δ72.00000°, λ21.00000°. Principal axes: T 1.2100, Plg27.0000°, Azm291.0000°; N -0.2700, Plg63.0000°, Azm108.0000°; P -0.9300, Plg1.0000°, Azm200.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MOS **03** 22:19:42.2±1.1, 38.°25N×39.°11E, h14km, mb4.5/21 Error ellipse: s-maj=5.8km s-min=4.3km az=94.2*
*GII **03** 22:19:43.0±0.0, 38.°476N±0.°003×39.°229E±0.°001, h0km, Mws4.2, confirmed*
*MCSM **03** 22:19:43.1±2.4, 38.°N±5.°×3.°9E±.°, h9km±17km, mb4.2, mB6.0, MLv4.3, Mw(mB)5.6*
*NEIC **03** 22:19:44.2±2.1, 38.°49N±0.°05×39.°14E±0.°03, h10km±1km, mb4.3/41, Error ellipse: s-maj=8.5km s-min=4.0km az=174.0*
*GFZ **03** 22:19:44.5, 38.°39N×39.°10E, h10km, MW4.5, Moment Tensor Solution. s28 Moment tensor: M_{rr}-0.77; $M_{\theta\theta}$-4.87; $M_{\phi\phi}$5.64; $M_{r\theta}$2.04; $M_{\theta\phi}$4.79; $M_{\phi r}$0.93; Fault plane solution: NP1:ϕ_s336.00000°, δ72.00000°, λ-177.00000°. NP2:ϕ_s246.00000°, δ88.00000°, λ-17.00000°. Principal axes: T 7.8100, Plg11.0000°, Azm292.0000°; N -0.6900, Plg72.0000°, Azm58.0000°; P -7.1200, Plg14.0000°, Azm200.0000°;*

ISC 03 22:19:42.7±1.0**, 38.°42N**±0.°02×**39.°14E**±0.°02**, h3km**±6km**, n361, σ1.s73**/371**, mb4.3**/57**, MS3.8**/44**, 20C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.14	107	Pg	Pg	22 19 43.6	-1.9
ELZG	Elazig	0.14	303	P	Pg	22 19 45.1	-0.5
ELZG				S	Sg	22 19 47.2	-0.4
ELZ	Elazig	0.27	11	P	Pg	22 19 47.3	-0.8
ELZ				S	Sg	22 19 51.3	-0.4
MDNT	Maden	0.43	93	P	Pg	22 19 49.0	-1.9
MDNT				S	Sg	22 19 54.5	-2.0
MAYA	Malatya/Merkez	0.57	261	P	Pg	22 19 52.5	-1.2
MAYA				S	Sg	22 20 00.2	-0.8
KOVA	Elazig, Kovanc	0.60	61	P	Pg	22 19 53.1	-1.1
NARI	Adyaman-Kaht	0.61	209	P	Pg	22 19 53.4	-1.1
MCKZ	Bingol	0.71	350	P	Pg	22 19 54.8	-1.5
MCKZ				S	Sg	22 20 03.7	-1.9
KAHTU	Kahta	0.74	214	P	Pg	22 19 55.9	-1.0
KAHTU				S	Sg	22 20 05.8	-0.8
TNCL	Tunceli-Merkez	0.76	24	P	Pg	22 19 55.9	-1.5
TNCL				S	Sb	22 20 08.4	-1.1
HANM	anlurfa/Hi	0.86	194	P	Pg	22 19 58.0	-1.2
DYBB	Diyarbakir	0.92	120	Pg	Pg	22 19 59.0	-1.3

DIYA Diyarbakir 0.92 122 P **Pg** **22 19 58.8 -1.5**
ARPR Arapgir-MALATY 0.92 317 Pg **Pg** **22 19 58.6 -1.7**
ARPR Sg **Sg** **22 20 12.6 +0.2**
ARPR Arapgir-MALATY 0.92 317 Pg **Pg** **22 19 58.7 -1.7**
ARPR Sg **Sg** **22 20 12.5 +0.2**
AZEY Adyaman-Merk 0.93 229 P **Pg** **22 19 59.5 -1.0**
AKCD Akcadag 0.96 263 P **Pg** **22 19 59.4 -1.8**
AKCD S **Sg** **22 20 12.6 -1.1**
MAYK 1.01 72 P **Pg** **22 20 00.5 -1.5**
URFA Urfa 1.01 195 Pg **Pg** **22 19 58.1 -3.9**
URFA Sg **Sg** **22 20 13.3 -1.8**
ILIC ilic-Erzincan 1.12 337 Pn **Pg** **22 20 02.6 -1.6**
ILIC Sn **Sb** **22 20 19.9 0.0**
ATAB Bozova 1.16 215 P **Pg** **22 20 03.6 -1.3**
ATAB S **Sb** **22 20 20.5 -0.3**
MDIV 1.24 317 P **Pg** **22 20 04.4 -2.1**
MDIV S **Sg** **22 20 21.4 -1.2**
ERZN Erzincan 1.25 21 Pn **Pg** **22 20 05.2 -1.5**
ERZN Sn **Sn** **22 20 25.3 +0.7**
SANL SANLIURFA_Merk 1.25 185 P **Pg** **22 20 05.1 -1.6**
SANL S **Sg** **22 20 21.2 -1.7**
AKCA Adyaman/G¶l 1.30 242 P **Pg** **22 20 06.4 -1.3**
AKCA S **Sg** **22 20 23.8 -0.8**
BNGB Bingl 1.33 64 Pn **Pg** **22 20 07.3 -1.0**
BNGB Sn **Sn** **22 20 27.5 +0.9**
EUZM Uzumlu 1.36 19 P **Pn** **22 20 06.6 -2.0**
EUZM S **Sg** **22 20 25.4 -0.9**
SLHN Bingol, Solhan 1.57 69 P **Pn** **22 20 11.4 -0.1**
SLHN S **Sg** **22 20 33.9 +0.7**
SURC SANLIURFA_SURC 1.59 195 P **Pn** **22 20 10.4 -1.4**
GZT Gaziantep 1.64 230 P **Pn** **22 20 11.3 -1.2**
GZT S **Sn** **22 20 33.7 -0.5**
SVAN Silvan-Diyarba 1.64 99 Pn **Pn** **22 20 09.3 -3.2**
SVAN Silvan-Diyarba 1.64 99 P **Pn** **22 20 09.7 -2.8**
SVAN S **Sn** **22 20 32.6 -1.5**
MBOZ 1.68 347 P **Pn** **22 20 12.8 -0.2**
MBOZ S **Sg** **22 20 37.2 +0.6**
MARD Mardin 1.70 130 Pn **Pn** **22 20 11.1 -2.3**
KELT Kelkit 1.73 3 P **Pn** **22 20 13.7 -0.1**
KARO Karliova-Bingo 1.74 59 Pn **Pn** **22 20 13.0 -0.9**
NZIP Nizip/Gaziante 1.80 221 P **Pn** **22 20 13.3 -1.3**
NZIP S **Sn** **22 20 36.9 -1.1**
KHMN Narli-Kahraman 1.87 237 Pn **Pn** **22 20 13.0 -2.6**
KHMN Narli-Kahraman 1.87 237 P **Pn** **22 20 14.4 -1.2**
KOPT Kop Dagi 1.91 33 Pn **Pn** **22 20 16.2 -0.2**
GAZ Gaziantep 1.97 231 Pn **Pn** **22 20 15.7 -1.4**
GAZ Gaziantep 1.97 231 Pn **Pn** **22 20 14.4 -2.6**
KMRS Kahramanmaras 1.99 243 Pn **Pn** **22 20 14.7 -2.6**
GUMT Gumushane 2.06 7 Pn **Pn** **22 20 17.5 -0.7**
BAYT Aydntepe-Bayb 2.12 21 Pn **Pn** **22 20 18.4 -0.8**
SARI SarD1z-Kayseri 2.14 271 Pn **Pn** **22 20 17.1 -2.3**
EDAM Erzurum-Paland 2.22 48 Pn **Pn** **22 20 19.8 -0.7**
GURO Guroymak-BITLI 2.27 86 Pn **Pn** **22 20 20.3 -0.9**
GURO Guroymak-BITLI 2.27 86 Pn **Pn** **22 20 20.3 -0.9**
BNN Bunyan 2.62 281 Pn **Pn** **22 20 25.4 -0.5**
KOPR Koprukoy-ERZUR 2.63 52 Pn **Pn** **22 20 25.7 -0.5**
MLAZ Malazgirt-MUS 2.76 74 Pn **Pn** **22 20 27.5 -0.5**
TOKA Tokat 2.80 314 Pn **Pn** **22 20 29.1 +0.7**
GEVA Gevas 3.08 91 Pn **Pn** **22 20 31.6 -0.8**
BCA Borcka 3.57 32 ⇓P **Pn** **22 20 39.5 +0.5**
KARS Kars 3.76 53 Pn **Pn** **22 20 42.3 +0.6**
KARS Kars 3.76 53 P **Pn** **22 20 42.3 +0.6**
BR104 Keskin Array S 4.47 288 P **Pn** **22 20 50.8 -0.6**
BR131 Keskin Array S 4.47 289 Pn **Pn** **22 20 51.4 -0.1**
BR131 Keskin Array S 4.47 289 *i* P **Pn** **22 20 52.0 +0.5**
BRTR Keskin Array B 4.47 289 Pn **Pn** **22 20 52.2 +0.8**
9.1nm,0.3s,baz=113,slow=13,SNR=130
BRTR Lg Lg 22 22 07.8
baz=114,slow=30
BRTR LR LR 22 22 53.9
comp=Z,3µm,19.2s,baz=100,slow=43
31nm,0.5s
BRTR Keskin Array B 4.47 289 Pn **Pn** **22 20 51.1 -0.4**
BRTR Keskin Array B 4.47 289 P **Pn** **22 20 51.1 -0.4**
BR105 Keskin Array S 4.49 289 P **Pn** **22 20 51.2 -0.5**
BR106 Keskin Array S 4.49 289 P **Pn** **22 20 51.4 -0.3**
BEIL Beino 4.54 212 *eP* **Pn** **22 20 51.5 -0.8**
GNI Garni 4.68 67 Pn **Pn** **22 20 54.5 +0.2**
2.5nm,0.3s,baz=281,slow=6.3,SNR=12
GNI LR LR 22 22 34.7
comp=Z,314nm,20.8s,baz=258,slow=37
6.3nm,0.4s
GNI Garni 4.68 67 Pn **Pn** **22 20 54.8 +0.5**
GNI Garni 4.68 67 *i* P **Pn** **22 20 55.2 +0.9**
SNOP Sinop 4.69 321 Pn **Pn** **22 20 57.5 +3.2**
HWQ Hawqa 4.87 213 *eP* **Pn** **22 20 56.1 -0.8**
ILGA Ilgaz 4.94 304 Pn **Pn** **22 21 00.6 +2.6**
VSLR Vesyoloye 5.08 7 *i* P **Pn** **22 21 02.1 +2.4**
SOC Sochi 5.18 5 *eP* Pn **Pn** **22 21 07.3 +6.3**
SOC *e* **22 22 12.1**
SOC MLR MLR
comp=Z,641nm,12.0s
ZAHL Zahle 5.26 211 *eP* **Pn** **22 21 01.6 -0.7**
BZK Bozkurt 5.29 314 Pn **Pn** **22 21 05.3 +2.8**
BZK Bozkurt 5.29 314 P **Pn** **22 21 02.8 +0.3**
comp=Z,217nm,1.2s
BHL Bhannes 5.32 213 *eP* **Pn** **22 21 02.2 -0.8**
DQRL Deir Qamar 5.52 213 *eP* **Pn** **22 21 05.2 -0.7**
RCY Rachaya 5.59 210 *eP* **Pn** **22 21 06.8 -0.1**
QRWL Qaraoun 5.61 211 *eP* **Pn** **22 21 07.0 0.0**
CSS Mathiatis 5.80 235 Pn **Pn** **22 21 09.9 +0.2**
CSS Mathiatis 5.80 235 P **Pn** **22 21 08.8 -0.8**
comp=Z,0.2nmcomp=Z,466nmcomp=Z,55nm,1.0s
CSS Mathiatis 5.80 235 P **Pn** **22 21 10.1 +0.5**
CSS S **Sn** **22 22 19.7 +3.0**
NATI Neve Ativ 5.84 209 P **Pn** **22 21 10.7 +0.6**
NATI S **Sn** **22 22 20.3 +2.7**
GEM Giv'at Ha'Em 5.92 210 P **Pn** **22 21 13.4 +2.3**
GEM S **Sn** **22 22 22.0 +2.6**
SHA1 Shidzhatmaz 5.94 25 *i* P **Pn** **22 21 13.8 +2.1**
KBZ Khabaz 6.02 27 Pn **Pn** **22 21 14.1 +1.6**
comp=Z,0.2nm,0.3s,baz=218,slow=17,SNR=5.1
KBZ LR LR 22 23 58.1
comp=Z,1µm,19.5s,baz=221,slow=43
comp=Z,0.7nm,0.4s
KBZ Khabaz 6.02 27 *i* P **Pn** **22 21 14.0 +1.5**
KSHT Keshet 6.06 208 P **Pn** **22 21 13.8 +0.5**
KSHT S **Sn** **22 22 25.8 +2.6**
KIV Kislovodsk 6.14 25 *eP* **Pn** **22 21 16.6 +2.2**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,307nm,11.0s
KIV Kislovodsk 6.14 25 P **Pn** **22 21 14.8 +0.4**
comp=Z,0.1nmcomp=Z,22nm,1.4s
KVAR Kislovodsk Arr 6.15 25 Pn **Sn** **22 21 16.5 +2.1**
baz=180,slow=5.1
KVAR Sn **Sn** **22 22 23.9 -1.4**
baz=180,slow=15
KVAR LR LR 22 24 06.7
comp=Z,874nm,18.8s,baz=112,slow=43
comp=Z,2.3nm,0.5s
MMC7 Mount Meron ar 6.19 211 P **Pn** **22 21 17.0 +2.0**
MMA0B Mount Meron ar 6.19 211 P **Pn** **22 21 16.2 +1.2**
MMA0B S **Sn** **22 22 28.7 +2.4**
MMAI Mount Meron Ar 6.19 211 Pn **Pn** **22 21 14.7 -0.3**
comp=Z,6.6nm,0.3s,baz=23,slow=15,SNR=31
MMAI Lg Lg 22 22 59.4
comp=Z,13nm,0.3s,baz=15,slow=22,SNR=4.9
MMAI LR LR 22 23 42.7
comp=Z,1µm,21.7s,baz=17,slow=39
comp=Z,6.3nm,0.4s
HNTI Hanita 6.22 212 P **Pn** **22 21 17.2 +1.8**
HNTI S **Sn** **22 22 29.3 +2.2**
MDUB Mudurnu 6.48 291 Pn **Pn** **22 21 20.6 +1.6**
ASF Jabal al Asfar 6.50 197 Pn **Pn** **22 21 18.2 -1.0**
comp=Z,1.4nm,0.3s,baz=6.1,slow=11,SNR=32
ASF Lg Lg 22 23 03.1
comp=Z,4.9nm,0.3s,baz=360,slow=19,SNR=1.7
comp=Z,16nm,0.9s
BLGI Bet Lehem HaGe 6.52 211 P **Pn** **22 21 21.5 +2.0**
BLGI S **Sn** **22 22 37.2 +2.8**
MMLI Mount Malkishu 6.70 208 P **Pn** **22 21 22.9 +1.0**
MMLI S **Sn** **22 22 41.6 +2.9**
OFRI `Ofer 6.70 212 P **Pn** **22 21 23.6 +1.6**
OFRI S **Sn** **22 22 41.9 +2.9**
ISP Isparta 6.82 268 P **Pn** **22 21 25.7 +2.0**
ISP S **Sn** **22 22 44.5 +2.6**
HMDT Nahal Hemdat 6.82 207 P **Pn** **22 21 24.2 +0.5**
HMDT S **Sn** **22 22 44.5 +2.7**
BORA Eskisehir 6.91 285 Pn **Pn** **22 21 25.9 +1.1**
BALJ Balqa 6.94 205 Pn **Pn** **22 21 25.0 -0.2**

SLTI Sal'it 7.01 210 P **Pn** **22 21 28.3 +2.0**
SLTI S **Sn** **22 22 49.2 +2.6**
SALP Salfit 7.11 208 P **Pn** **22 21 29.4 +1.7**
SALP S **Sn** **22 22 51.8 +2.8**
UJAP Al Uja 7.12 206 P **Pn** **22 21 29.6 +2.0**
UJAP *S* **Sn** **22 22 51.8 +2.8**
AKT Akhty 7.27 62 *eP* **Pn** **22 21 31.6 +1.7**
AKT *eS* **Sn** **22 22 55.0 +2.0**
AKT pmax pmax
comp=Z,48nm,1.9s
AKT MLR MLR
comp=Z,372nm,7.0s
DSI Dead Sea 7.50 205 P **Pn** **22 21 34.5 +1.7**
DSI S **Sn** **22 22 60.0 +1.6**
ELL Elmali 7.52 260 Pn **Pn** **22 21 33.0 -0.3**
ELL Elmali 7.52 260 P **Pn** **22 21 33.0 -0.3**
GHAJ Ghor Haditha 7.68 204 Pn **Pn** **22 21 33.7 -1.7**
GHAJ Ghor Haditha 7.68 204 P **Pn** **22 21 36.9 +1.5**
GHAJ S **Sn** **22 23 05.5 +2.6**
AMAZ Amatzia 7.70 208 P **Pn** **22 21 37.7 +2.0**
AMAZ S **Sn** **22 23 05.8 +2.5**
MSBI Mazada 7.74 205 P **Pn** **22 21 38.1 +1.9**
MSBI S **Sn** **22 23 07.0 +2.7**
YTIR Yattir 7.78 206 P **Pn** **22 21 38.5 +1.7**
YTIR S **Sn** **22 23 08.4 +3.0**
MAK Makhachkala 7.81 52 *eP* **Pn** **22 21 35.0 -2.1**
MAK *eS* **Sn** **22 23 03.5 -2.4**
MAK pmax pmax
comp=Z,301nm,1.8s
MAK MLR MLR
comp=Z,852nm,7.0s
AKAS Kas 7.90 257 Pn **Pn** **22 21 39.3 +0.7**
KZIT Kziot 8.45 209 P **Pn** **22 21 47.6 +1.6**
KZIT S **Sn** **22 23 24.5 +2.6**
PRNI Paran 8.74 204 P **Pn** **22 21 51.9 +1.9**
PRNI S **Sn** **22 23 31.8 +2.7**
HRFI Mount Harif 9.02 203 P **Pn** **22 21 55.8 +2.0**
HRFI S **Sn** **22 23 38.5 +2.5**
KRMI Paran Flat 9.05 205 P **Pn** **22 21 56.1 +1.9**
KRMI S **Sn** **22 23 39.1 +2.4**
MBRI Mt Berech 9.29 203 P **Pn** **22 21 57.9 +0.4**
MBRI S **Sn** **22 23 45.2 +2.6**
EIL Elat 9.39 203 Pn **Pn** **22 21 58.9 0.0**
comp=Z,0.3nm,0.3s,baz=22,slow=11,SNR=4.5
EIL Lg Lg 22 24 37.7
comp=Z,0.6nm,0.3s,baz=291,slow=22,SNR=1.9
EIL LR LR 22 25 55.6
comp=Z,1µm,19.7s,baz=61,slow=40
comp=Z,3.4nm,0.6s
EIL Elat 9.39 203 P **Pn** **22 22 00.4 +1.5**
EIL S **Sn** **22 23 47.5 +2.5**
KARP Karpathos 10.00 257 Pn **Pn** **22 22 06.0 -1.3**
EZN Ezine 10.06 282 P **Pn** **22 22 07.7 -0.2**
CFR Carcaliu 10.63 313 ⇑P **Pn** **22 22 18.9 +3.1**
CFR Carcaliu 10.63 313 P **Pn** **22 22 18.8 +3.1**
RDO Rodhopi 10.82 289 Pn **Pn** **22 22 19.5 +1.2**
ISR Istrita 11.54 309 ⇓P **Pn** **22 22 31.6 +3.4**
ISR Istrita 11.54 309 P **Pn** **22 22 31.6 +3.4**
BISRR Bisoca 11.66 312 P **Pn** **22 22 30.1 +0.1**
comp=Z,22µmcomp=Z,3µm,1.0s
IDI Anoyia 11.84 259 Pn **Pn** **22 22 32.7 +0.3**
comp=Z,8.6nm,0.7s,baz=80,slow=15,SNR=6.2
IDI LR LR 22 27 46.5
comp=Z,294nm,21.5s,baz=85,slow=41
IDI Anoyia 11.84 259 Pn **Pn** **22 22 32.8 +0.5**
PLOR Plostina 11.87 313 ⇑P **Pn** **22 22 36.8 +4.0**
PLOR Plostina 11.87 313 P **Pn** **22 22 36.8 +4.0**
MLR Muntele Rosu 12.09 310 LR LR 22 28 28.7
comp=Z,561nm,20.2s,baz=79,slow=44
MLR Muntele Rosu 12.09 310 P **Pn** **22 22 35.9 0.0**
comp=Z,10nm,1.5s
COVR Voineasa-Covas 12.12 312 ⇓P **Pn** **22 22 38.6 +2.3**
ONER Baraj Valea Uz 12.29 314 ⇑P **Pn** **22 22 41.5 +2.9**
VORD Divnogorie 12.55 0 *eP* **Pn** **22 22 45.4 +3.5**
VORD pmax pmax
comp=Z,6.0nm,0.6s
VOIR 12.61 308 ⇑P **Pn** **22 22 46.1 +3.1**
VOIR 12.61 308 P **Pn** **22 22 46.0 +3.1**
VOIR 12.61 308 P **Pn** **22 22 43.0 +0.1**
comp=Z,12nm,1.2s
DOPR Dopca 12.67 311 ⇑P **Pn** **22 22 47.2 +3.4**
VSR Storozhevoye 12.80 0 *eP* Pn **22 22 50.4 +5.0**
VSR pmax pmax
comp=Z,20nm,2.3s
ARR Arges 12.83 307 ⇑P **Pn** **22 22 48.9 +2.9**
VRH Novokhopyorsk 12.91 7 *eP* **Pn** **22 22 49.9 +3.0**
VRH pmax pmax
comp=Z,69nm,4.0s
VORR Voronezh 13.25 0 *eP* **P** **22 22 57.8 -3.8**
VORR pmax pmax
comp=Z,18nm,0.4s
ITM Ithomi 13.67 270 Pn **Pn** **22 22 59.5 +2.1**
BURAR Bucovina Array 13.70 317 Pn **Pn** **22 22 59.1 +1.3**
BUR08 Bucovina Ar. S 13.73 317 Pn **Pn** **22 23 00.2 +2.0**
GZR Gura Zlata 14.02 305 ⇓P **Pn** **22 23 05.6 +3.3**
GZR Gura Zlata 14.02 305 P **Pn** **22 23 05.5 +3.3**
AK09 Malin Array Si 14.06 333 P **Pn** **22 23 03.0 +0.4**
AK06 Malin Array Si 14.06 333 P **Pn** **22 23 03.1 +0.4**
AK08 Malin Array Si 14.08 333 P **Pn** **22 23 03.4 +0.5**
AK14 Malin Array Si 14.13 333 P **Pn** **22 23 04.0 +0.4**
BOVS Bovan 14.15 297 ⇓P **Pn** **22 23 07.2 +3.3**
AKASG Malin Array Be 14.15 333 Pn **Pn** **22 23 02.6 -1.2**
comp=Z,0.3nm,0.3s,baz=145,slow=12,SNR=7.3
comp=Z,0.4nm,0.4s
AKBB Malin Array Si 14.15 333 *i* P **Pn** **22 23 06.3 +2.5**
AK11 Malin Array Si 14.15 333 P **Pn** **22 23 04.3 +0.4**
AK16 Malin Array Si 14.17 333 P **Pn** **22 23 04.5 +0.4**
LPSR Galich'ya Gora 14.18 359 *eP* **P** **22 23 12.0 0.0**
LPSR pmax pmax
comp=Z,31nm,1.0s
KSV Kosov 14.21 319 P **Pn** **22 23 05.0 +0.3**
MDVR Moldovita 14.49 302 ⇓P **Pn** **22 23 11.1 +2.5**
BELG Belogornoye 15.18 20 LR LR 22 29 53.3
comp=Z,266nm,21.7s,baz=156,slow=40
BELG Belogornoye 15.18 20 *i* P **Pn** **22 23 20.1 +2.4**
BELG pmax pmax
comp=Z,5.0nm,0.8s
PDG Podgorica 15.66 291 **P** **22 23 26.9 -1.5**
PDG IAmb IAmb 22 23 31.7
comp=Z,19nm,1.3s
RNPP8 Varash 15.95 328 P **Pn** **22 23 28.2 +0.3**
RNPP1 Kostyukhnivka 15.99 328 P **Pn** **22 23 28.8 +0.3**
KWP Kalwaria Pacla 16.25 319 P **Pn** **22 23 31.9 +0.1**
comp=Z,26nm,1.9s
OBN Obninsk 16.79 355 ⇑*eP* **P** **22 23 41.0 +0.2**
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,175nm,15.0s
PSZ Piszkesteto 16.91 310 **Pn** **22 23 41.0 +0.8**
PSZ Piszkesteto 16.91 310 ⇓P **P** **22 23 42.5 +0.2**
PSZ Piszkesteto 16.91 310 P **Pn** **22 23 41.1 +0.8**
PSZ pmax pmax
comp=Z,16nm,1.4s
MORH Mrgy, Hungar 17.01 304 ⇑P **P** **22 23 43.4 0.0**
MOS Moscow 17.36 357 *eP* **Pn** **22 23 42.6 -3.1**
MOS *e* **22 27 02.0**
MOS pmax pmax
comp=Z,27nm,0.9s
TIP Timpagrande 17.46 279 **Pn** **22 23 47.3 +0.1**
TIP IAmb IAmb 22 23 51.4
comp=Z,20nm,1.0s
TIP Timpagrande 17.46 279 ⇑P **P** **22 23 49.0 +0.5**
TIP Timpagrande 17.46 279 P **Pn** **22 23 46.8 -0.4**
comp=Z,17nm,1.6s
AKTO Aktyubinsk 18.00 42 P **Pn** **22 23 53.1 -0.6**
comp=Z,0.2nm,0.3s,baz=224,slow=15,SNR=5.5
AKTO LR LR 22 32 17.7
comp=Z,296nm,18.1s,baz=262,slow=42
comp=Z,2.4nm,0.6s
MPLH Magyarpolny 18.06 306 P **Pn** **22 23 54.5 0.0**
comp=Z,22nm,1.2s
CUC Castrocucco 18.14 282 **P** **22 23 56.9 +1.0**
CUC IAmb IAmb 22 24 01.2
comp=Z,21nm,1.0s
CEL Celeste 18.23 277 P **Pn** **22 23 56.2 -0.5**
comp=Z,11nm,0.9s
BEHE Becsehely 18.32 303 P **Pn** **22 23 57.6 0.0**
AB31 Akbulak array 18.45 47 P **P** **22 23 58.3 -0.9**
ABKAR Akbulak array 18.45 47 P **P** **22 23 58.0 -1.2**
MODS Modra-Piesok 18.68 309 *eP* **Pn** **22 24 04.1 +1.9**
MODS Modra-Piesok 18.68 309 *eP* **Pn** **22 24 04.1 +1.9**
ZST Bratislava 18.72 309 *eP* **Pn** **22 24 03.0 +0.4**

ZST Bratislava 18.72 309 *eP* **Pn** **22 24 03.0 +0.4**
HRA Herat 19.02 95 P **P** **22 24 05.3 -0.5**
RONA Rosalia, Austr 19.04 306 *i* Pn **Pn** **22 24 07.2 +0.8**
comp=Z,7.2nm,1.2s
MORC Moravsky Berou 19.15 313 P **Pn** **22 24 07.6 -0.1**
MORC Moravsky Berou 19.15 313 P **Pn** **22 24 07.6 -0.1**
MORC pmax pmax
comp=Z,10.0nm,1.3s
MORC Moravsky Berou 19.15 313 *eP* **Pn** **22 24 07.7 -0.1**
ARSA Arzberg 19.38 305 *e*Pn **P** **22 24 09.4 -0.1**
comp=Z,3.4nm,1.0s
CONA Conrad Observa 19.39 307 *i* Pn **Pn** **22 24 11.0 +0.3**
comp=Z,14nm,1.4s
VRAC Vranov 19.49 311 P **P** **22 24 10.1 -0.5**
comp=Z,0.1nm,0.3s,baz=101,slow=14,SNR=3.2
VRAC LR LR 22 33 06.0
comp=Z,247nm,19.9s,baz=110,slow=41
comp=Z,0.8nm,0.5s
VRAC Vranov 19.49 311 *eP* **P** **22 24 10.5 -0.2**
KRUC Moravsky 19.50 310 *eP* **Pn** **22 24 12.1 +0.1**
SOKA Soboth 19.53 303 *i* Pn **Pn** **22 24 12.1 -0.3**
comp=Z,3.8nm,1.3s
OBKA Obir 19.80 302 *i* Pn **P** **22 24 14.6 +0.4**
comp=Z,7.4nm,1.3s
AQU L'Aquila 19.97 290 P **P** **22 24 15.6 -0.4**
comp=Z,20nm,1.0s
CAMP Campotosto 19.97 290 P **P** **22 24 16.2 0.0**
DPC Dobruska-Polom 20.11 314 *eP* Pn **22 24 18.5 -0.8**
DPC Dobruska-Polom 20.11 314 *eP* Pn **22 24 18.5 -0.8**
TREC Trest 20.14 310 *eP* **P** **22 24 17.8 0.0**
TREC Trest 20.14 310 *eP* **P** **22 24 17.8 0.0**
NRCA Norcia 20.21 291 P **P** **22 24 17.6 -1.0**
NRCA IAmb IAmb 22 24 30.0
comp=Z,17nm,1.2s
FDMO Fiordimonte 20.24 291 P **P** **22 24 19.1 +0.2**
FDMO IAmb IAmb 22 24 20.4
comp=Z,27nm,1.1s
OSTC Ostas 20.27 314 *eP* Pn **22 24 21.0 -0.1**
OSTC Ostas 20.27 314 *eP* Pn **22 24 21.0 -0.1**
SABO M.te Sabotino 20.32 300 P **P** **22 24 19.6 -0.1**
SABO IAmb IAmb 22 24 43.9
comp=Z,20nm,1.2s
UPC Upice 20.36 314 *eP* Pn **22 24 22.0 -0.2**
UPC Upice 20.36 314 *eP* Pn **22 24 22.0 -0.2**
KSP Ksiaz 20.36 315 P **P** **22 24 20.1 0.0**
CHVC Chvalec 20.37 314 *eP* Pn **22 24 23.8 +1.5**
CHVC Chvalec 20.37 314 *eP* Pn **22 24 23.8 +1.5**
MOA Molln 20.38 306 *i* Pn Pn **22 24 21.8 -0.6**
comp=Z,8.8nm,0.9s
MYKA Terra Mystica 20.44 302 *i* Pn **P** **22 24 21.5 +0.4**
comp=Z,6.7nm,1.0s
CESX Cesi 20.59 290 P **P** **22 24 22.5 -0.2**
CESX IAmb IAmb 22 24 25.9
comp=Z,14nm,1.1s
MURB Monte Urbino 20.67 292 P **P** **22 24 24.2 +0.5**
CKRC Cesky Krumlov 20.68 308 *eP* Pn **22 24 24.9 -1.0**
CKRC Cesky Krumlov 20.68 308 *eP* Pn **22 24 24.9 -1.0**
BIOA Bad Ischl, Aus 20.73 305 *i* Pn Pn **22 24 25.5 -1.1**
comp=Z,12nm,1.0s
KBA Koelnbreinsper 20.75 303 *i* Pn Pn **22 24 25.9 -1.1**
comp=Z,7.7nm,1.1s
ZVC Zvikov 20.98 310 *eP* **P** **22 24 27.1 +0.3**
STAL STALIGIAL 20.98 300 P **P** **22 24 26.8 -0.1**
PRU Pruhonice 20.98 311 *eP* Pn **22 24 28.3 -1.1**
PRU Pruhonice 20.98 311 *eP* Pn **22 24 28.3 -1.1**
GEC2 GERESS Array S 21.06 308 P **P** **22 24 28.2 +0.4**
GEC2 IAmb IAmb 22 24 37.5
comp=Z,18nm,1.2s
GERES GERESS Array B 21.06 308 P **P** **22 24 27.4 -0.5**
comp=Z,2.4nm,0.8s,baz=125,slow=12,SNR=14
GERES LR LR 22 33 47.8
comp=Z,160nm,18.8s,baz=96,slow=40
comp=Z,2.4nm,0.8s
PVCC Panska Ves 21.19 313 *eP* **P** **22 24 29.4 +0.2**
PVCC Panska Ves 21.19 313 *eP* **P** **22 24 29.4 +0.2**
ABTA Abfaltersbach 21.22 302 *i* Pn **P** **22 24 30.5 +0.9**
comp=Z,7.9nm,1.3s
KIRV Kirov 21.25 15 P **P** **22 24 28.6 -1.0**
comp=Z,8.7nm,0.7s,baz=218,slow=12,SNR=5.1
KIRV LR LR 22 33 54.1
comp=Z,290nm,19.3s,baz=205,slow=40
comp=Z,8.7nm,0.7s
KIRV Kirov 21.25 15 *c*e**P** **P** **22 24 29.4 -0.2**
LESA Schwarzleotal 21.28 304 *i* Pn **P** **22 24 31.4 +1.2**
comp=Z,8.4nm,1.1s
TEOL Teolo 21.53 298 P **P** **22 24 31.4 -1.4**
BRG Berggiesshubel 21.70 313 *eP* **P** **22 24 37.1 +2.5**
BRG Amp 22 24 39.1
comp=Z,5.8nm,1.2s
WTTA Wattenberg 21.93 303 *i* Pn **P** **22 24 39.3 +2.1**
comp=Z,16nm,1.1s
WATA Walderalm 21.98 303 *i* Pn **P** **22 24 40.0 +2.2**
comp=Z,6.9nm,0.8s
ARTI Arti 22.07 29 P **P** **22 24 37.8 -0.6**
comp=Z,8.6nm,1.0s,baz=224,slow=5.4,SNR=9.7
ARTI LR LR 22 34 19.2
comp=Z,232nm,21.7s,baz=220,slow=40
comp=Z,8.6nm,1.0s
ARTI Arti 22.07 29 P **P** **22 24 36.7 -1.8**
ARTI IAmb IAmb 22 24 40.3
comp=Z,18nm,1.1s
ARTI Arti 22.07 29 *c* P **P** **22 24 37.9 -0.6**
ARTI 22 25 01.0
ARTI S **S** **22 28 42.9 +0.7**
ARTI pmax pmax
comp=Z,28nm,1.5s
SQTA Sankt Quirin 22.20 302 *e*Pn **P** **22 24 40.5 +0.4**
comp=Z,13nm,1.1s
MOTA Moosalm 22.30 303 *i* Pn **P** **22 24 41.3 0.0**
comp=Z,17nm,1.0s
CLL Collm 22.42 314 *i* P **P** **22 24 48.1 +5.8**
CLL *e*S **S** **22 28 41.0 -8.1**
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 22.42 314 *i* P **P** **22 24 48.1 +5.8**
comp=Z,8.0nm,1.0s
CLL *ex* x 22 24 57.0
CLL *e*PPP PPP 22 25 11.0
CLL *e*S **S** **22 28 41.0 -8.1**
KLMR Klimovskoe 22.46 0 *e*P **P** **22 24 45.3 +2.7**
KLMR *e* 22 28 38.2
KLMR pmax pmax
comp=Z,60nm,1.4s
FETA Feichten 22.48 302 *i* Pn **P** **22 24 46.1 +3.0**
comp=Z,7.2nm,0.9s
RETA Reutte 22.56 303 *i* Pn **P** **22 24 45.1 +1.2**
comp=Z,12nm,1.6s
FUORN Ofenpass-Fuorn 22.71 300 P **P** **22 24 45.3 -0.4**
FUORN IAmb IAmb 22 25 03.8
comp=Z,10nm,1.1s
SHAA Shahritus 22.82 83 P **P** **22 24 46.8 0.0**
SHAA IAmb IAmb 22 25 12.2
comp=Z,30nm,1.1s
GRA1 Grafenberg Arr 22.88 309 P **P** **22 24 46.0 -1.2**
GRA1 IAmb IAmb 22 24 49.8
comp=Z,22nm,1.0s
GRF Grafenberg Arr 22.88 309 P **P** **22 24 46.0 -1.2**
GRF pmax pmax
comp=Z,22nm,1.0s
DAVOX Davos/Dischmat 23.00 301 P **P** **22 24 47.9 -0.8**
comp=Z,4.1nm,0.8s,baz=70,slow=7.6,SNR=7.1
DAVOX LR LR 22 35 20.0
comp=Z,229nm,19.4s,baz=79,slow=41
comp=Z,4.1nm,0.8s
DAVA Damuels 23.10 302 *i* Pn **P** **22 24 49.4 -0.3**
comp=Z,9.8nm,0.8s
SVE Sverdlovsk 23.26 31 *eP* **P** **22 24 50.8 -0.2**
TUE Stuetta 23.31 300 P **P** **22 24 50.7 -1.1**
TUE IAmb IAmb 22 25 02.9
comp=Z,19nm,1.4s
KEST Kesra 23.88 273 P **P** **22 24 57.6 +0.1**
comp=Z,7.5nm,0.8s,baz=16,slow=1.4,SNR=4.9
KEST LR LR 22 35 49.9
comp=Z,221nm,20.2s,baz=34,slow=40
comp=Z,7.5nm,0.8s
KEST Kesra 23.88 273 P **P** **22 24 56.0 -1.5**
KK31 Karatay Array 24.14 69 P **P** **22 24 59.4 -0.4**
KK31 IAmb IAmb 22 25 02.7
comp=Z,12nm,1.1s
KK31 Karatay Array 24.14 69 P **P** **22 24 59.4 -0.4**
KK31 pmax pmax
comp=Z,12nm,1.1s
KKAR Karatay Array 24.14 69 P **P** **22 24 59.5 -0.3**
KKAR Karatay Array 24.14 69 P **P** **22 24 59.5 -0.3**
FINES FINESS Array B 24.44 345 P **P** **22 25 04.5 +2.1**

comp=Z,6.1nm,1.0s,baz=137,slow=9.9,SNR=5.6
FINES LR LR 22 36 47.7
comp=Z,275nm,19.1s,baz=157,slow=42
FINES FINESS Array B 24.44 345 *ce*P **P 22 25 06.3 +4.0**
FINES pmax pmax
comp=Z,6.0nm,1.0s
BTK Batken 24.53 76 P **P 22 25 04.1 +0.6**
BTK Batken 24.53 76 P **P 22 25 04.1 +0.6**
BTK pmax pmax
comp=Z,7.0nm,1.2s
BNI Bardonecchia 25.00 296 P **P 22 25 07.4 -0.3**
BNI IAmb IAmb 22 25 18.6
comp=Z,13nm,1.2s
BNI Bardonecchia 25.00 296 P **P 22 25 07.4 -0.3**
BNI pmax pmax
comp=Z,13nm,1.2s
ECH Echery 25.08 303 P **P 22 25 08.2 -0.1**
ECH Echery 25.08 303 P **P 22 25 08.2 -0.1**
ECH pmax pmax
comp=Z,17nm,1.0s
DRK Karamyk 25.35 77 P **P 22 25 10.0 -1.2**
DRK IAmb IAmb 22 25 43.2
comp=Z,12nm,1.3s
DRK Karamyk 25.35 77 P **P 22 25 10.0 -1.2**
DRK pmax pmax
comp=Z,12nm,1.3s
BORK Borovoye 25.96 46 P **P 22 25 16.3 0.0**
BORK Borovoye 25.96 46 *ce*P **P 22 25 17.7 +1.5**
BORK pmax pmax
comp=Z,10.0nm,1.7s
BVAR Borovoye Array 25.99 46 P **P 22 25 17.2 +0.7**
comp=Z,1.3nm,0.8s,baz=243,slow=6.5,SNR=8.1
BVAR LR LR 22 36 49.2
comp=Z,224nm,21.2s,baz=251,slow=40
comp=Z,1.3nm,0.8s
ATD Arta Tunnel 26.98 172 LR LR 22 36 12.0
comp=Z,13nm,19.4s,baz=4.5,slow=37
HFS Hagfors 27.03 332 P **P 22 25 27.8 +2.0**
comp=Z,0.6nm,0.4s,baz=146,slow=10,SNR=1.6
AAK Ala-Archa 27.08 70 LR LR 22 38 58.2
comp=Z,149nm,18.2s,baz=283,slow=43
AAK Ala-Archa 27.08 70 P **P 22 25 26.0 -0.6**
AAK IAmb IAmb 22 25 36.9
comp=Z,5.9nm,1.1s
AAK Ala-Archa 27.08 70 *ce*P **P 22 25 28.9 +2.3**
AAK pmax pmax
comp=Z,10.0nm,2.5s
FURI Furi 29.40 181 LR LR 22 36 16.2
comp=Z,150nm,18.7s,baz=8.0,slow=34
KURBB Kurchatov Arra 30.26 53 P **P 22 25 55.5 +0.9**
comp=Z,2.6nm,0.7s,baz=270,slow=9.3,SNR=18
KURBB PcP **PcP 22 28 54.4 -0.7**
comp=Z,0.8nm,0.9s,baz=263,slow=3.3,SNR=5.2
comp=Z,2.6nm,0.7s
KURK Kurchatov 30.33 53 P **P 22 25 55.8 +0.6**
KURK IAmb IAmb 22 25 59.7
comp=Z,4.7nm,0.9s
KURK Kurchatov 30.33 53 *ce*P **P 22 25 57.1 +1.9**
KURK pmax pmax
comp=Z,12nm,1.3s
WUS Wushi 30.73 72 IAmb IAmb 22 26 04.0
comp=Z,4.7nm,1.0s
ARCES ARCESS Array B 32.03 351 LR LR 22 40 20.4
comp=Z,159nm,19.6s,baz=154,slow=39
MAKZ Makanchi 32.28 61 P **P 22 26 13.3 +0.7**
MAKZ IAmb IAmb 22 26 16.0
comp=Z,2.9nm,1.0s
MAKZ Makanchi 32.28 61 P **P 22 26 13.3 +0.7**
MAKZ pmax pmax
comp=Z,3.0nm,1.0s
MK31 Makanchi Array 32.50 61 *ce*P **P 22 26 15.8 +1.3**
MKAR Makanchi Array 32.50 61 P **P 22 26 15.4 +0.9**
comp=Z,3.0nm,1.0s,baz=268,slow=7.0,SNR=16
MKAR PcP **PcP 22 29 00.8 -0.4**
comp=Z,0.2nm,0.7s,baz=266,slow=2.0,SNR=1.3
MKAR LR LR 22 40 30.5
comp=Z,119nm,21.9s,baz=294,slow=38
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 32.50 61 P **P 22 26 15.0 +0.6**
ESDC Sonseca Array 33.26 286 P **P 22 26 19.7 -1.5**
comp=Z,1.0nm,0.7s,baz=69,slow=9.1,SNR=9.8
ESDC LR LR 22 41 33.4
comp=Z,52nm,20.3s,baz=110,slow=39
comp=Z,1.0nm,0.7s
ESDC Sonseca Array 33.26 286 **P 22 26 20.9 -0.3**
ZALV Zalesovo Beam 34.56 48 P **P 22 26 31.4 -0.8**
comp=Z,0.5nm,0.5s,baz=262,slow=10,SNR=4.2
ZALV LR LR 22 41 47.7
comp=Z,134nm,19.8s,baz=260,slow=38
comp=Z,0.5nm,0.5s
MDT Midelt 35.74 275 LR LR 22 42 02.1
comp=Z,72nm,19.5s,baz=76,slow=38
DGZ Jazzator, Alta 35.91 56 *i* P **P 22 26 45.4 +1.3**
DGZ pmax pmax
comp=Z,6.0nm,1.3s
WMQ Urumqi 36.55 66 *e*P **P 22 26 52.7 +3.1**
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ LR LR
comp=Z,120nm,24.1s
MBAR Mbarara 39.59 193 LR LR 22 43 49.9
comp=Z,125nm,18.2s,baz=9.0,slow=37
NRIK Noril'sk 40.22 24 P **P 22 27 20.0 0.0**
comp=Z,2.8nm,0.9s,baz=272,slow=1.3,SNR=3.9
NRIK LR LR 22 46 24.6
comp=Z,120nm,19.1s,baz=238,slow=40
comp=Z,2.8nm,0.9s
NRIK Noril'sk 40.22 24 P **P 22 27 18.6 -1.4**
NRIK IAmb IAmb 22 27 23.8
comp=Z,5.8nm,1.1s
NRIK Noril'sk 40.22 24 *i* P **P 22 27 22.0 +2.0**
NRIK pmax pmax
comp=Z,7.0nm,1.1s
TORD Torodi Ar. Bea 41.64 243 P **P 22 27 31.6 -0.7**
comp=Z,1.0nm,0.9s,baz=20,slow=3.9,SNR=5.8
comp=Z,1.0nm,0.9s
TORD Torodi Ar. Bea 41.64 243 P **P 22 27 30.3 -2.1**
KNGR Kungurtug, Tuv 42.32 54 *i* P **P 22 27 39.1 +1.4**
KNGR pmax pmax
comp=Z,10.0nm,1.6s
TLY Talaya 45.99 51 *i* P **P 22 28 06.8 -0.2**
TLY pmax pmax
comp=Z,5.0nm,0.9s
GTA2 Gaotai 46.36 69 *e*P **P 22 28 11.2 +1.0**
GTA2 pmax pmax
comp=Z,3.0nm,1.1s
SONM Songino Array 48.55 56 P **P 22 28 27.3 +0.1**
comp=Z,0.6nm,0.7s,baz=266,slow=8.1,SNR=5.9
SONM PcP **PcP 22 29 52.1 -0.8**
comp=Z,0.2nm,0.4s,baz=277,slow=3.2,SNR=1.8
SONM LR LR 22 51 26.8
comp=Z,227nm,18.1s,baz=258,slow=39
comp=Z,0.6nm,0.7s
PALK Pallekele 48.63 119 LR LR 22 50 43.8
comp=Z,80nm,18.4s,baz=320,slow=38
ULN Ulaanbaatar 48.97 56 P **P 22 28 30.7 +0.3**
ULN Ulaanbaatar 48.97 56 *ce*P **P 22 28 31.5 +1.1**
ULN pmax pmax
comp=Z,10.0nm,1.3s
LZDM Lanzhou Array 50.54 72 P **P 22 28 43.2 +0.5**
comp=Z,0.4nm,0.3s,baz=282,slow=7.0,SNR=6.2
LZDM LR LR 22 52 48.9
comp=Z,111nm,21.2s,baz=260,slow=39
comp=Z,0.4nm,0.3s
LZH Lanzhou 50.60 71 *e*P **P 22 28 44.0 +1.0**
LZH sP sP 22 28 51.8 +6.8
LZH pmax pmax
comp=Z,10.0nm,1.3s
DBIC Dimbokro 50.75 243 LR LR 22 55 13.2
comp=Z,55nm,21.6s,baz=88,slow=42
PZH PanZhiHua 53.23 83 P **P 22 29 03.4 +0.7**
TIXI Tiksi 53.97 23 LR LR 22 55 35.8
comp=Z,86nm,18.7s,baz=8.0,slow=40
TIXI Tiksi 53.97 23 P **P 22 29 07.2 -0.1**
TIXI Tiksi 53.97 23 *ce*P **P 22 29 08.6 +1.3**
TIXI pmax pmax
comp=Z,12nm,2.5s
HHC Hu-ho-hao-te 54.33 63 *e*P **P 22 29 10.2 -0.3**
HHC pmax pmax
comp=Z,4.0nm,0.7s
LSZ Lusaka 54.39 193 LR LR 22 52 27.2
comp=Z,177nm,19.3s,baz=102,slow=36
CMAR Chiang Mai Arr 55.27 93 P **P 22 29 16.6 -0.8**
comp=Z,0.6nm,0.3s,baz=295,slow=9.4,SNR=4.2
CMAR LR LR 22 56 45.9
comp=Z,37nm,21.9s,baz=300,slow=40
comp=Z,0.6nm,0.3s

OPO Ambohidratompo 57.19 171 LR LR 22 54 54.8
comp=Z,68nm,18.5s,baz=198,slow=37
TSUM Tsumeb 60.78 203 LR LR 22 56 38.9
comp=Z,189nm,20.2s,baz=8.5,slow=36
FRB Frobisher Bay 63.37 332 LR LR 22 58 07.9
comp=Z,62nm,19.0s,baz=86,slow=36
KLR Kul'dur 63.65 47 LR LR 22 59 30.0
comp=Z,22nm,18.9s,baz=304,slow=38
KLR Kul'dur 63.65 47 *ce*P **P 22 30 15.9 +1.0**
KLR pmax pmax
comp=Z,2.0nm,1.7s
LBTB Lobatse 64.37 194 LR LR 22 59 13.3
comp=Z,129nm,18.2s,baz=22,slow=37
SEY Seymchan 65.89 27 P **P 22 30 30.6 +1.4**
comp=Z,2.2nm,0.6s,baz=292,slow=6.3,SNR=4.4
comp=Z,2.2nm,0.6s
SEY Seymchan 65.89 27 *ce*P **P 22 30 31.3 +2.0**
SEY pmax pmax
comp=Z,8.0nm,1.3s
BILL Bilibino 66.73 19 *i* P **P 22 30 36.8 +2.2**
BILL pmax pmax
comp=Z,3.0nm,1.4s
KSAR Wonju Array Be 67.15 60 P **P 22 30 38.0 +0.2**
KSAR Wonju Array Be 67.15 60 P **P 22 30 38.0 +0.2**
KSRS Korea Array 67.17 60 P **P 22 30 35.9 -2.0**
comp=Z,3.5nm,0.9s,baz=292,slow=6.7,SNR=7.0
KSRS LR LR 23 03 14.5
comp=Z,75nm,19.2s,baz=295,slow=39
comp=Z,3.5nm,0.9s
MA2 Magadan 67.33 31 LR LR 23 02 59.4
comp=Z,117nm,22.0s,baz=303,slow=39
SCHQ Schefferville 67.69 323 P **P 22 30 40.4 -0.5**
comp=Z,6.4nm,1.2s,baz=45,slow=1.4,SNR=1.9
comp=Z,6.4nm,1.2s
BOSA Boshof 67.94 193 P **P 22 30 42.6 -0.2**
BOSA Boshof 67.94 193 P **P 22 30 42.6 -0.2**
BOSA pmax pmax
comp=Z,10.0nm,1.4s
A36M Sachs Harbour 69.34 355 P **P 22 30 51.8 +0.9**
SUR Sutherland 72.48 196 LR LR 23 04 14.8
comp=Z,99nm,18.4s,baz=12,slow=37
ASAJ Asahikawa 72.69 47 LR LR 23 08 27.0
comp=Z,85nm,18.5s,baz=336,slow=40
E25K Arctic Village 73.72 2 P **P 22 31 17.4 -0.1**
E25K IAmb IAmb 22 31 59.4
comp=Z,3.5nm,1.3s
MJAR Matsushiro Arr 74.50 56 LR LR 23 06 06.5
comp=Z,84nm,19.2s,baz=311,slow=37
ILAR Eielson Array 77.03 3 LR LR 23 10 52.2
comp=Z,30nm,19.1s,baz=282,slow=40
YKA Yellowknife Ar 77.23 348 P **P 22 31 37.6 0.0**
comp=Z,0.3nm,0.8s,baz=12,slow=7.2,SNR=4.5
comp=Z,0.3nm,0.8s
YKA Yellowknife Ar 77.23 348 P **P 22 31 35.9 -1.7**
LEM Lembang 77.70 109 LR LR 23 09 14.3
comp=Z,36nm,19.3s,baz=3.5,slow=38
SADO Sadowa 80.25 320 LR LR 23 10 09.0
comp=Z,38nm,18.9s,baz=63,slow=38
ULM Lac du Bonnet 83.23 333 LR LR 23 09 45.1
comp=Z,84nm,18.3s,baz=9.0,slow=36
TKL Tuckaleechee C 89.34 317 LR LR 23 12 32.6
comp=Z,39nm,21.4s,baz=32,slow=36
NEW Newport 91.15 344 LR LR 23 13 57.5
comp=Z,56nm,18.2s,baz=32,slow=36
PDAR Pinedale Array 94.33 337 LR LR 23 15 30.7
comp=Z,50nm,19.2s,baz=358,slow=36
BDFB Brasilia 97.37 256 LR LR 23 20 32.8
comp=Z,49nm,18.3s,baz=85,slow=38
SDV Santo Domingo 99.65 289 LR LR 23 16 06.3
comp=Z,24nm,19.1s,baz=88,slow=34

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*KRNET **03** 22:34:18.1±0.1, 40°.52N×77°.35E, h19km, mb2.4*
*NNC **03** 22:34:20.0±0.9, 40°.50N×77°.45E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=6.3km s-min=4.8km az=173.0*
*SOME **03** 22:34:19.3, 40°.50N×77°.43E, h5km*
ISC 03 22:34:15.2±2.3**, 40°.36N**±0°.09×**77°.41E**±0°.05**, h6**km±14km**, n28,** σ0s.69/42**, 9C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.40**	**12**	⇑*e*P	**Pb**	**22 34 42.1**	**+0.1**
TARG				⇑*e*S	**Sn**	**22 34 59.6**	**-1.0**
NRN	**Naryn**	**1.51**	**316**	⇑*e*P	**Pg**	**22 34 44.4**	**+0.2**
NRN				⇑*e*S	**Sb**	**22 35 03.4**	**0.0**
JNKS	**Jany-Kuch**	**1.52**	**298**	⇑*i*P	**Pg**	**22 34 44.6**	**+0.3**
JNKS				⇑*e*S	**Sb**	**22 35 04.0**	**+0.5**
ULHL	**Ulahol**	**2.08**	**335**	⇓*e*P	**Pb**	**22 34 53.8**	**+0.4**
ULHL				⇓*e*S	**Sb**	**22 35 19.8**	**+0.3**
TNSS	**Tian-Shan** 0.2nm,0.0s	**2.70**	**353**	Pg	**Pg**	**22 35 07.4**	**+0.6**
TNSS	1.8nm,0.4s			Lg	Lg	22 35 41.8	
TNSS	**Tian-Shan** 0.5nm,0.2s	**2.70**	**353**	*e*P	**Pg**	**22 35 07.4**	**+0.6**
TNSS	1.9nm,0.5s			*e*S	**Sg**	**22 35 41.8**	**0.0**
IZV	**Izvestkoviy** 0.5nm,0.1s	**2.74**	**348**	Pg	**Pg**	**22 35 06.8**	**-0.9**
IZV	9.1nm,0.4s			Lg	Lg	22 35 41.6	
IZV	**Izvestkoviy** 0.5nm,0.2s	**2.74**	**348**	*e*P	**Pg**	**22 35 07.2**	**-0.5**
IZV	3.4nm,0.4s			*e*S	**Sg**	**22 35 41.5**	**-1.7**
SALK	**Salom-Alik**	**2.78**	**282**	⇓*e*P	**Pb**	**22 35 05.1**	**-0.2**
SALK				⇓*e*S	**Sb**	**22 35 39.5**	**-0.2**
SATY	**Saty** 0.2nm,0.1s	**2.80**	**15**	Pg	**Pg**	**22 35 08.3**	**-0.5**
SATY	6.8nm,0.5s			Lg	Lg	22 35 44.2	
MDOK	**Medeo** 1.4nm,0.2s	**2.81**	**355**	Pg	**Pg**	**22 35 09.3**	**+0.2**
MDOK	13nm,0.6s			Lg	Lg	22 35 46.0	
MTBS	**Maitube** 0.3nm,0.1s	**2.86**	**346**	Pg	**Pg**	**22 35 10.7**	**+0.7**
MTBS	6.3nm,0.1s			Lg	Lg	22 35 47.6	
MTBS	**Maitube** 0.9nm,0.4s	**2.86**	**346**	*e*P	**Pg**	**22 35 10.7**	**+0.7**
MTBS	3.5nm,0.2s			*e*S	**Sg**	**22 35 47.6**	**+0.5**
KOTS	**Kotyrbulak** 1.3nm,0.2s	**2.88**	**356**	Pg	**Pg**	**22 35 11.0**	**+0.6**
KOTS	23nm,0.5s			Lg	Lg	22 35 48.2	
KOTS	**Kotyrbulak** 1.9nm,0.4s	**2.88**	**356**	*e*P	**Pg**	**22 35 11.0**	**+0.6**
KOTS	20nm,0.5s			*e*S	**Sg**	**22 35 48.2**	**+0.5**
KST	**Kastek** 1.4nm,0.3s	**2.89**	**339**	Pg	**Pg**	**22 35 10.6**	**+0.1**
KST	8.8nm,0.3s			Lg	Lg	22 35 47.3	
KST	**Kastek** 0.8nm,0.2s	**2.89**	**339**	*e*P	**Pg**	**22 35 10.6**	**+0.1**
KST	8.8nm,0.3s			*e*S	**Sg**	**22 35 47.3**	**-0.7**
UZB	**Uzynbulak** 1.7nm,0.1s	**3.04**	**23**	Pg	**Pg**	**22 35 12.6**	**-0.7**
UZB	5.2nm,0.8s			Lg	Lg	22 35 51.4	
UZB	**Uzynbulak** 2.3nm,0.3s	**3.04**	**23**	*e*P	**Pg**	**22 35 13.1**	**-0.2**
UZB	2.8nm,0.5s			*e*S	**Sg**	**22 35 51.5**	**-1.2**
DGS	**Degeres** 1.4nm,0.3s	**3.13**	**338**	Pg	**Pg**	**22 35 15.1**	**0.0**
DGS	9.6nm,0.5s			Lg	Lg	22 35 55.3	
DGS	**Degeres** 1.4nm,0.3s	**3.13**	**338**	*e*P	**Pg**	**22 35 15.1**	**0.0**
DGS	9.6nm,0.5s			*e*S	**Sg**	**22 35 55.3**	**-0.4**
AAK	**Ala-Archa** 0.7nm,0.6s	**3.16**	**317**	⇑Pg	**Pg**	**22 35 15.6**	**-0.1**
AAK	7.5nm,1.1s			⇑Lg	Lg	22 35 57.7	
KURS	**Kuram** 0.6nm,0.3s	**3.18**	**10**	Pg	**Pg**	**22 35 15.6**	**-0.4**
KURS	3.8nm,0.6s			Lg	Lg	22 35 56.1	
KPKS	**Kokpek** 0.1nm,0.1s	**3.25**	**17**	Pg	**Pg**	**22 35 16.8**	**-0.6**
KPKS	1.7nm,0.0s			Lg	Lg	22 35 58.5	
KPKS	**Kokpek** 0.3nm,0.3s	**3.25**	**17**	*e*P	**Pg**	**22 35 17.2**	**-0.1**
KPKS	0.8nm,0.2s			*e*S	**Sg**	**22 35 58.5**	**-0.9**
PDGK	**Podgornoye** 0.4nm,0.4s	**3.35**	**27**	⇓Pg	**Pb**	**22 35 17.3**	**+2.3**
PDGK	12nm,0.8s			⇑Lg	Lg	22 36 02.0	
KRBS	**Karabastau** 0.2nm,0.2s	**3.58**	**339**	Pg	**Pg**	**22 35 23.6**	**-0.1**
KRBS	2.3nm,0.4s			Lg	Lg	22 36 09.8	
KRBS	**Karabastau** 0.4nm,0.2s	**3.58**	**339**	*e*P	**Pg**	**22 35 23.6**	**-0.1**
KRBS	0.6nm,0.6s			*e*S	**Sg**	**22 36 09.8**	**-0.2**

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*AEIC **03** 22:39:39.9±1.0, 53°.22N±0°.05×166°.02W±0°.07, h21km±5km, Error ellipse: s-maj=7.7km s-min=5.6km az=156.0*
NEIC 03 22:39:39.6±1.0**, 53°.24N**±0°.08×**166°.08W**±0°.07**, h21**km±14km**, mb3.6**/4**, ML3.2**/8**, ML3.1**(AEIC)**, Error ellipse: s-maj=12.6km s-min=5.5km az=163.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.66**	**338**		Pb	22 39 52.9	+0.5
UNV					Sn	22 40 03.3	-0.1
MGOD	**Makushin Gods**	**0.73**	**320**		Pn	22 39 54.7	0.0
MNAT	**Makushin Natee**	**0.74**	**331**		Pn	22 39 54.8	0.0
MNAT					Sn	22 40 06.3	+0.8
MAPS	**Pakushin South**	**0.77**	**319**		Pn	22 39 55.3	+0.1
AKMO	**Akutan Morgan**	**0.86**	**3**		Pn	22 39 56.2	-0.3
AKMO					Sn	22 40 08.6	+0.3
ZRO	**Akutan Zero**	**0.86**	**4**		Pn	22 39 56.2	-0.3
ZRO					Sn	22 40 09.1	+0.7
AKBBA	**Akutan Broad B**	**0.87**	**6**		Pb	22 39 56.2	+0.2
AKBBA					Sn	22 40 09.4	+0.8
AHB	**Akutan Harbor**	**0.90**	**10**		Pb	22 39 56.5	+0.1
AKV	**Akutan Volcano**	**0.90**	**5**		Pb	22 39 56.7	+0.2
AKV					Sn	22 40 09.4	+0.1
AKRB	**Akutan Reef Bi**	**0.90**	**1**		Pn	22 39 56.9	0.0
AKRB					Sn	22 40 08.9	-0.4
AKUT	**Akutan**	**0.92**	**11**	Pn	Pb	22 39 56.6	-0.2
AKUT				IAML		22 40 14.6	
	comp=N,473nm,0.4s						
AKUT				IAML		22 40 18.1	
	comp=E,515nm,0.6s						
LVA	**Lava Point**	**0.93**	**2**	Pn	Pb	22 39 56.8	-0.2
LVA				IAML		22 40 15.2	
	comp=E,934nm,0.5s						
LVA				IAML		22 40 22.3	
	comp=N,1µm,0.6s						
AKSA	**Akutan Strait**	**0.93**	**14**		Pb	22 39 56.6	-0.5
AKLV	**Akutan Long Va**	**0.93**	**5**		Pb	22 39 57.0	-0.1
AKLV					Sn	22 40 10.3	+0.1
AKGG	**Akutan Green G**	**0.97**	**3**		Pb	22 39 57.8	+0.1
AKGG					Sn	22 40 11.8	+0.8
OKFG	**Magazine Ridge**	**1.11**	**280**		Pb	22 40 00.1	0.0
OKFG					Pn	22 40 00.9	+1.0
OKER	**Okmok East Rim**	**1.20**	**281**		Pn	22 40 01.2	0.0
OKCE	**Okmok Cone E**	**1.26**	**280**		Pn	22 40 02.3	+0.3
OKCE					Pb	22 40 02.7	+0.1
ISNN	**Isanotski Nort**	**2.10**	**39**		Pn	22 40 14.7	+1.2
FALS	**False Pass**	**2.26**	**43**	Pn	Pn	22 40 15.8	+0.2
DTNA	**Dutton South F**	**2.96**	**48**		Pn	22 40 25.7	+0.4
HAG	**Hague Volcano**	**3.22**	**48**		Pn	22 40 29.6	+0.8
SDPT	**Sand Point**	**3.91**	**55**	Pn	Pn	22 40 37.3	-1.0
CNBA	**Chernabura Isl**	**4.14**	**65**	Pn	Pn	22 40 39.8	-1.8
O14K	**Tigyukauivet M**	**6.60**	**22**	Pn	Pn	22 41 18.4	+3.1
ADK	**Adak**	**6.61**	**262**	Pn	Pn	22 41 17.3	+2.0
O15K	**Ungalikthiuk R**	**6.90**	**28**	Pn	Pn	22 41 21.2	+1.8
N14K	**Kuskokwak Cree**	**7.13**	**18**	Pn	Pn	22 41 25.1	+2.7
M11K	**Mekoryuk**	**7.17**	**360**	Pn	Pn	22 41 25.4	+2.4
M13K	**Dall Lake**	**7.35**	**11**	Pn	Pn	22 41 27.8	+2.3
N15K	**Kwethluk River**	**7.69**	**23**	Pn	Pn	22 41 32.8	+2.6
M14K	**Bethel**	**7.86**	**15**	Pn	Pn	22 41 35.1	+2.6
L14K	**Kuka Creek**	**8.33**	**11**	Pn	Pn	22 41 41.5	+2.6
M16K	**Timber Creek**	**8.71**	**24**	Pn	Pn	22 41 46.5	+2.3
N17K	**Nushagak Hills**	**8.78**	**30**	Pn	Pn	22 41 47.5	+2.4
O18K	**Koktuh Hills**	**8.94**	**38**	Pn	Pn	22 41 48.9	+1.6
K15K	**Wolf Creek Mou**	**9.40**	**13**	Pn	Pn	22 41 56.4	+2.8
M17K	**Holitna River**	**9.42**	**26**	Pn	Pn	22 41 55.8	+2.0
N19K	**Bonanza Creek**	**9.87**	**35**	Pn	Pn	22 42 03.4	+3.2
J17K	**VABM Dome**	**10.83**	**17**	Pn	Pn	22 42 16.4	+3.2
SUA	**Susitna One**	**11.66**	**39**	Pn	Pn	22 42 22.9	-1.7
J20K	**Nowinta River**	**12.57**	**25**	Pn	Pn	22 42 37.7	+0.7
SCM	**Sheep Creek Mo**	**13.21**	**42**	Pn	Pn	22 42 42.5	-3.2
M24K	**Tolsona, Glenn**	**13.81**	**42**	Pn	Pn	22 42 52.4	-1.6
N25K	**Chitina, Valde**	**14.23**	**45**	Pn	Pn	22 42 56.8	-2.8
SCRK	**Sand Creek**	**15.66**	**38**	P	P	22 43 21.8	-1.0
BCAR	**Beaver Creek A**	**16.06**	**43**	Pn	Pn	22 43 23.4	-0.5
J26L	**Joseph Creek**	**16.10**	**37**	P	P	22 43 26.6	-1.1
J26L				IAmb	IAmb	22 43 38.5	
	comp=Z,5.8nm,1.4s						
M29M	**Somme Creek**	**17.22**	**47**	P	P	22 43 40.5	+0.5
K29M	**Barlow Dome**	**18.12**	**43**		Pn	22 43 49.7	-0.1
K29M				IAmb	IAmb	22 44 00.5	
	comp=Z,8.5nm,1.5s						
MMPY	**Sheldon Lake,**	**20.48**	**49**	P	P	22 44 16.6	+0.9

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*IDC **03** 22:48:58.9±1.2, 4°.30N×126°.75E, h0km, mb3.7/7, mbtmp3.7/7, MS3.1/4, Error ellipse: s-maj=90.5km s-min=17.3km az=71.0*
*DJA **03** 22:49:06.4±0.6, 4°N±8°×12°6E±°, h19km±4km, M4.5/15, mB5.3/3, mb4.5/13, MLv4.5/15, Mw(mB)4.7/3*
ISC 03 22:49:05.5±0.8**, 4°.21N**±0°.07×**126°.41E**±0°.09**, h45**km**, n22,** σ**1s.32**/19**, mb3.6**/7**, MS2.9**/4**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.02**	**239**	P	**Pn**	**22 49 22.8**	**-0.6**
SGSI				S	**Sn**	**22 49 35.0**	**-1.6**
GAMI	**Galela, Maluku**	**2.73**	**150**	P	**Pn**	**22 49 46.1**	**-0.8**
DAV	**Davao City (W)** 56nm,0.3s,baz=164,slow=20,SNR=2.5	**2.96**	**344**	Sn	**Sn**	**22 50 24.0**	**-0.2**
MRSI	**Marisa**	**5.80**	**230**	P	**Pn**	**22 50 29.9**	**+0.8**
SANI	**Sanana** 0.2nm17nm,0.6s	**6.23**	**184**	P	**Pn**	**22 50 34.8**	**-0.2**
LUWI	**Luwuk** 0.5nm5µm111nm,1.3s	**6.36**	**215**	P	**Pn**	**22 50 38.3**	**+1.6**
APSI	**Ampana** 0.2nm73nm,0.9s	**6.96**	**223**	P	**Pn**	**22 50 48.3**	**+3.3**
MPSI	**Mapaga**	**7.56**	**240**	P	**Pn**	**22 50 54.8**	**+1.7**
FAKI	**Fak Fak** 40nm,1.5s	**9.18**	**140**	P	**Pn**	**22 51 16.9**	**+1.5**
TTSI	**Tana Toraja** 17nm,0.9s	**9.76**	**223**	P	**Pn**	**22 51 24.3**	**+0.9**
SNJI	**Sawahan-Nganju**	**18.85**	**231**	P	**Pn**	**22 53 23.4**	**+0.3**
FITZ	**Fitzroy Crossi** 2.9nm,0.4s,baz=353,slow=12,SNR=15 2.9nm,0.4s	**22.18**	**182**	P	**P**	**22 53 58.6**	**+0.7**
PMG	**Port Moresby** comp=Z,46nm,18.6s,baz=6.5,slow=37	**24.71**	**123**	LR	LR	23 04 05.9	
WRA	**Warramunga Arr** 1.2nm,0.6s,baz=342,slow=10,SNR=17 1.2nm,0.6s	**25.24**	**162**	P	**P**	**22 54 26.5**	**-1.0**
ASAR	**Alice Springs** 0.4nm,0.5s,baz=345,slow=7.6,SNR=7.5 0.4nm,0.5s	**28.66**	**166**	P	**P**	**22 54 57.4**	**-0.8**
JNU	**Nakatsue** comp=Z,26nm,19.7s,baz=358,slow=36	**29.07**	**8**	LR	LR	23 06 10.0	
STKA	**Stephens Creek** 0.9nm,0.4s,baz=344,slow=7.4,SNR=3.8 0.9nm,0.4s	**38.69**	**159**	P	**P**	**22 56 23.9**	**-1.2**
KLR	**Kul'dur** comp=Z,9.5nm,20.3s,baz=42,slow=37	**45.09**	**5**	LR	LR	23 16 33.6	
SONM	**Songino Array** 0.3nm,0.6s,baz=155,slow=7.8,SNR=2.9 0.3nm,0.6s	**46.74**	**342**	P	**P**	**22 57 30.0**	**-0.3**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=134,slow=6.7,SNR=2.1 0.2nm,0.6s	**56.98**	**325**	P	**P**	**22 58 47.3**	**+0.8**
KURBB	**Kurchatov Arra** 0.4nm,0.6s,baz=130,slow=6.4,SNR=7.1 0.4nm,0.6s	**61.16**	**327**	P	**P**	**22 59 15.9**	**+0.5**
ARCES	**ARCESS Array B** comp=Z,28nm,18.3s,baz=300,slow=38	**89.89**	**340**	LR	LR	23 45 16.9	

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*SOME **03** 23:21:35.0, 40°.48N×77°.43E, h10km*

NNC **03** *23:21:36.4±0.8, 40°.55N×77°.48E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=5.1km s-min=4.1km az=15.0*
KRNET **03** *23:21:36.5±0.1, 40°.64N×77°.53E, h17km, mb2.2*
ISC 03 23:21:37.6±2.5**, 40°.61N**±0°.10×**77°.44E**±0°.05**, h1**km±21km**,**
n18, $\sigma 1^{s}25$/28**, 2C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.15	14	⇓eP	Pb	23 21 57.8	-2.7
TARG				⇓eS	Sg	23 22 13.4	-1.1
NRN	Naryn	1.36	307	⇑eP	Pb	23 22 03.4	-0.7
NRN				⇑eS	Sg	23 22 23.2	+1.9
JNKS	Jany-Kuch	1.44	288	⇓iP	Pb	23 22 04.7	-0.7
JNKS				⇓eS	Sg	23 22 25.2	+1.2
ULHL	Ulahol	1.86	332	⇓eP	Pb	23 22 11.6	-0.9
ULHL				⇓eS	Sb	23 22 37.1	+0.7
TNSS	Tian-Shan	2.45	352	Pg	Pb	23 22 22.7	0.0
	2.2nm,0.3s						
TNSS				Lg	Lg	23 22 57.2	
	2.4nm,0.5s						
TNSS	Tian-Shan	2.45	352	eP	Pb	23 22 22.7	0.0
	2.2nm,0.3s						
TNSS				eS	Sg	23 22 57.2	+1.0
	0.9nm,0.3s						
IZV	Izvestkoviy	2.50	346	Pg	Pb	23 22 23.0	-0.3
	1.7nm,0.2s						
IZV				Lg	Lg	23 22 57.5	
	5.7nm,0.4s						
IZV	Izvestkoviy	2.50	346	eP	Pb	23 22 23.0	-0.3
	1.6nm,0.2s						
IZV				eS	Sg	23 22 57.5	-0.3
	4.3nm,0.1s						
SATY	Saty	2.55	16	Pg	Pb	23 22 23.5	-0.7
	0.8nm,0.1s						
SATY				Lg	Lg	23 22 58.4	
	3.7nm,0.3s						
MDOK	Medeo	2.56	354	Pg	Pb	23 22 24.3	-0.2
	5.3nm,0.3s						
MDOK				Lg	Lg	23 23 00.2	
	6.8nm,0.5s						
KOTS	Kotyrbulak	2.63	355	Pg	Pb	23 22 25.7	+0.1
	2.5nm,0.2s						
KOTS				Lg	Lg	23 23 02.5	
	5.1nm,0.4s						
KOTS	Kotyrbulak	2.63	355	eP	Pb	23 22 25.7	+0.1
	2.5nm,0.2s						
KOTS				eS	Sg	23 23 02.1	+0.1
	5.1nm,0.4s						
UZB	Uzynbulak	2.79	25	Pg	Pb	23 22 28.7	+0.3
	2.9nm,0.2s						
UZB				Lg	Lg	23 23 07.4	
	4.4nm,0.7s						
UZB	Uzynbulak	2.79	25	eP	Pb	23 22 28.7	+0.3
	1.9nm,0.3s						
UZB				eS	Sg	23 23 07.4	+0.1
	3.2nm,0.5s						
DGS	Degeres	2.91	335	Pg	Pb	23 22 30.7	+0.5
	0.5nm,0.2s						
DGS				Lg	Lg	23 23 11.3	
	2.5nm,0.6s						
DGS	Degeres	2.91	335	eP	Pg	23 22 31.8	-1.5
	0.5nm,0.2s						
DGS				eS	Sg	23 23 12.6	+1.7
	2.5nm,0.6s						
SHLS	Shalkode	2.96	30	Pg	Pg	23 22 34.1	-0.2
	1.2nm,0.3s						
SHLS				Lg	Lg	23 23 16.4	
	6.9nm,0.7s						
SHLS	Shalkode	2.96	30	eP	Pg	23 22 34.0	-0.2
	2.0nm,0.7s						
SHLS				eS	Sg	23 23 16.4	+3.9
	6.9nm,0.7s						

IDC **03** *23:37:48.7±0.7, 27°.25N×142°.95E, h0km, mb3.9/20, mbtmp3.9/21, ML3.0/1, MS3.0/3, Error ellipse: s-maj=21.4km s-min=16.2km az=81.0*
NEIC **03** *23:37:50.8±1.2, 27°.3N±0°.1×142°.99E±0°.10, h10km±1km, mb4.4/11, Error ellipse: s-maj=18.5km s-min=14.5km az=180.0*
ISC 03 23:37:53.4±0.6**, 27°.24N**±0°.09×**143°.0E**±0°.1**, h32**km**, n47,**
$\sigma 0^{s}78$/45**, mb4.0**/26**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	0.69	258	Pn	Pn	23 37 54.4	-13
	464nm,0.3s,baz=53,slow=4.7,SNR=168						
JCJ				Sn	Sb	23 38 05.1	-11
	305nm,0.3s,baz=261,slow=22,SNR=8.8						
JCJ				LR	LR	23 38 15.5	
	comp=Z,179nm,19.4s,baz=121,slow=38						
JCJ	Chichijima	0.69	258	Pn	Pn	23 38 07.1	+0.2
MJAR	Matsushiro Arr	10.11	338	Pn	Pn	23 40 13.7	-2.5
	0.1nm,0.3s,baz=144,slow=13,SNR=4.3						
	1.0nm,0.3s						
JNU	Nakatsue	11.97	302	LR	LR	23 44 30.6	
	comp=Z,68nm,18.5s,baz=132,slow=34						
DPSS	Saipan	12.23	167	Pn	Pn	23 40 44.1	-1.3
KSRS	Korea Array	16.25	313	Pn	P	23 41 41.3	-0.7
	0.2nm,0.3s,baz=119,slow=13,SNR=4.5						
KSRS				LR	LR	23 46 26.5	
	comp=Z,23nm,18.6s,baz=125,slow=32						
HILR	Hailar Array B	28.54	328	P	P	23 43 46.6	+0.5
	1.5nm,0.5s,baz=116,slow=10,SNR=4.5						
	1.5nm,0.5s						
LZDM	Lanzhou Array	34.36	295	P	P	23 44 37.2	-0.5
	0.9nm,0.5s,baz=145,slow=11,SNR=4.2						
	0.9nm,0.5s						
SONM	Songino Array	35.08	316	P	P	23 44 42.7	-0.9
	0.6nm,0.6s,baz=113,slow=8.5,SNR=5.8						
	0.6nm,0.6s						
SONM	Songino Array	35.08	316	P	P	23 44 44.3	+0.7
WR8	Warramunga Arr	47.63	191	P	P	23 46 26.7	+0.2
WR8				IAmb	IAmb	23 46 28.5	
	comp=Z,3.9nm,0.7s						
WRAB	Tennant Creek	47.63	191	P	P	23 46 27.0	+0.5
WRA	Warramunga Arr	47.64	191	P	P	23 46 26.2	-0.5
	comp=Z,4.1nm,0.6s,baz=11,slow=8.6,SNR=48						
	comp=Z,4.1nm,0.6s						
WRA	Warramunga Arr	47.64	191	P	P	23 46 26.1	-0.5
FITZ	Fitzroy Crossi	48.09	202	P	P	23 46 30.6	+0.5
	comp=Z,4.7nm,0.8s,baz=166,slow=18,SNR=2.7						
	comp=Z,4.7nm,0.8s						
ZALV	Zalesovo Beam	49.82	319	P	P	23 46 42.9	-0.2
	comp=Z,0.5nm,0.5s,baz=119,slow=6.4,SNR=2.8						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	50.91	309	P	P	23 46 51.7	+0.2
	comp=Z,0.3nm,0.4s,baz=86,slow=9.8,SNR=10						
MKAR				PcP	PcP	23 48 07.8	+0.2
	comp=Z,0.1nm,0.5s,baz=92,slow=4.6,SNR=1.5						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	50.91	309	P	P	23 46 51.5	+0.1
J16K	Anvik River	51.06	29	P	P	23 46 53.9	+1.7
ASAR	Alice Springs	51.36	191	P	P	23 46 55.0	+0.1
	comp=Z,0.5nm,0.5s,baz=10,slow=7.3,SNR=8.3						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	53.37	314	P	P	23 47 10.4	+0.7
KURK				IAmb	IAmb	23 47 12.5	
	comp=Z,1.2nm,0.7s						
KURBB	Kurchatov Arra	53.42	314	P	P	23 47 10.5	+0.5
	comp=Z,1.0nm,0.5s,baz=89,slow=7.9,SNR=29						
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	57.26	29	P	P	23 47 37.3	-0.1
	comp=Z,0.4nm,0.8s,baz=255,slow=5.7,SNR=2.9						
	comp=Z,0.4nm,0.8s						
BVAR	Borovoye Array	58.40	317	P	P	23 47 46.4	+0.8
	comp=Z,5.7nm,0.6s,baz=98,slow=7.5,SNR=19						
	comp=Z,5.7nm,0.6s						
BORK	Borovoye	58.44	317	P	P	23 47 46.6	+0.8
BORK				IAmb	IAmb	23 47 47.4	
	comp=Z,5.7nm,0.8s						
NIL	Nilore	59.41	295	P	P	23 47 53.5	+0.4
H27K	Steamboat Moun	59.57	27	P	P	23 47 55.0	+1.3
H27K				IAmb	IAmb	23 48 23.8	
	comp=Z,1.1nm,1.0s						
INK	Inuvik	62.61	25	P	P	23 48 14.3	+0.2
	comp=Z,0.9nm,0.5s,baz=297,slow=7.6,SNR=5.6						
	comp=Z,0.9nm,0.5s						
INK	Inuvik	62.61	25	P	P	23 48 14.1	0.0
INK				IAmb	IAmb	23 48 42.0	
	comp=Z,3.3nm,1.1s						
AB31	Akbulak array	65.48	314	P	P	23 48 33.6	+0.4
AB31				IAmb	IAmb	23 48 34.6	
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	71.69	29	P	P	23 49 12.0	+0.2
	comp=Z,0.4nm,0.7s,baz=297,slow=6.6,SNR=7.7						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	71.69	29	P	P	23 49 12.0	+0.2
FINES	FINESS Array B	78.11	334	P	P	23 49 49.4	+0.5
	comp=Z,1.1nm,0.5s,baz=75,slow=5.0,SNR=10						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	78.11	334	P	P	23 49 49.2	+0.3
JTMT	Jette	78.28	42	P	P	23 49 50.4	+0.1
KBZ	Khabaz	78.41	313	P	P	23 49 52.1	+1.2
	comp=Z,2.8nm,0.8s,baz=94,slow=5.5,SNR=5.2						
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	79.89	52	P	P	23 49 59.8	+0.4
	comp=Z,0.2nm,0.2s,baz=306,slow=4.8,SNR=2.0						
	comp=Z,0.2nm,0.2s						
LRM	Limekiln Ridge	80.30	43	P	P	23 49 59.7	-1.8
HFS	Hagfors	83.56	337	P	P	23 50 17.8	-0.2
	comp=Z,2.5nm,0.9s,baz=74,slow=6.8,SNR=4.6						
	comp=Z,2.5nm,0.9s						
PDAR	Pinedale Array	83.63	45	P	P	23 50 19.8	+0.7
	comp=Z,0.2nm,0.6s,baz=320,slow=7.9,SNR=2.3						
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	83.63	45	P	P	23 50 19.2	+0.1
NOA	NORSAR Array B	83.72	339	P	P	23 50 19.3	+0.4
	comp=Z,0.4nm,0.7s,baz=43,slow=4.6,SNR=1.2						
	comp=Z,0.4nm,0.7s						
RAYN	Ar Rayn	85.71	294	P	P	23 50 30.6	+1.0
RAYN				IAmb	IAmb	23 50 32.4	
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	86.40	313	P	P	23 50 32.7	-0.2
	comp=Z,0.6nm,0.6s,baz=46,slow=4.2,SNR=2.1						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	86.40	313	P	P	23 50 32.5	-0.4
SCHQ	Schefferville	94.34	17	LR	LR	00 44 46.6	
	comp=Z,18nm,18.1s,baz=202,slow=43						
LPAZ	La Paz	149.23	76	PKPbc	PKiKP	23 57 41.0	-0.3
	comp=Z,0.5nm,0.5s,baz=260,slow=6.1,SNR=2.1						

NEIC **03** *23:39:42.8±1.2, 13°.04N±0°.07×145°.02E±0°.09, h39km±9km, mb4.2/4, Error ellipse: s-maj=13.4km s-min=8.6km az=55.0*
IDC **03** *23:39:44.4±3.0, 13°.30N×144°.66E, h41km±40km, mb3.3/2, mbtmp3.5/2, Error ellipse: s-maj=102.3km s-min=45.4km az=100.0*
ISC 03 23:39:43.8±0.9**, 13°.12N**±0°.09×**145°.0E**±0°.1**, h57**km**, n21,**
$\sigma 1^{s}18$/18**, mb3.9**/4**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.50	340	P	Pn	23 39 54.6	-0.9
	3µm,0.3s,baz=163,slow=13,SNR=83						
GUMO				S	Sn	23 40 02.2	-1.8
	6µm,0.3s,baz=336,slow=20,SNR=14						
GUMO	Guam	0.50	340		Pn	23 39 54.8	-0.7
GUMO				Sn	Sn	23 40 01.7	-2.2
DPSS	Saipan	2.23	19	Pn	Pn	23 40 18.9	+0.5
DPSS				Sn	Sn	23 40 43.3	-1.5
JCJ	Chichijima	14.16	350	Pn	Pn	23 43 02.2	+0.8
PATS	Pohnpei	14.48	114	Pn	Pn	23 43 04.4	-1.3
H11S3	WAKE ISLAND Hy	21.49	73	T	T	00 07 08.8	
	baz=260,slow=75						
H11S1	WAKE ISLAND Hy	21.51	73	T	T	00 07 02.1	
	baz=260,slow=75						
H11S2	WAKE ISLAND Hy	21.51	73	T	T	00 07 13.6	
	baz=260,slow=75						
H11N1	WAKE ISLAND Hy	21.95	70	T	T	00 07 31.8	
	baz=257,slow=75,SNR=31						
H11N2	WAKE ISLAND Hy	21.96	70	T	T	00 07 28.8	
	baz=257,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	21.97	70	T	T	00 07 29.3	
	baz=257,slow=75,SNR=28						
NWAO	Narrogin (SRO)	52.94	209	P	P	23 48 53.9	-0.5
MKAR	Makanchi Array	61.94	316	P	P	23 49 56.8	-0.9
	0.2nm,0.5s,baz=95,slow=7.6,SNR=6.9						
	0.2nm,0.5s						
MKAR	Makanchi Array	61.94	316	P	P	23 49 57.5	-0.3
MAKZ	Makanchi	62.16	316	P	P	23 50 00.1	+1.0
MAKZ				IAmb	IAmb	23 50 14.6	
	comp=Z,3.2nm,1.5s						
KURK	Kurchatov	65.05	320	P	P	23 50 18.9	+0.8
KURK				IAmb	IAmb	23 50 37.1	
	comp=Z,2.9nm,1.3s						
KURBB	Kurchatov Arra	65.09	320	P	P	23 50 19.1	+0.7
	comp=Z,0.4nm,0.5s,baz=99,slow=7.0,SNR=5.9						
	comp=Z,0.4nm,0.5s						
KKAR	Karatay Array	69.89	311	P	P	23 50 49.8	+0.9
G31M	Satah River	74.37	24	P	P	23 51 16.4	+1.3
TORD	Torodi Ar. Bea	135.27	304	PKP	PKiKP	23 59 00.6	+1.0
	comp=Z,0.3nm,0.5s,baz=60,slow=2.2,SNR=2.2						
DBIC	Dimbokro	144.21	302	PKP	PKPdf	23 59 14.0	-0.3
	comp=Z,2.9nm,0.6s,baz=33,slow=3.4,SNR=6.7						

AZER **03** *23:40:27.9, 41°.21N×45°.83E, h9km, ml3.1*
TIF **03** *23:40:29.8, 41°.19N×45°.80E, h35km±1km*
NORS **03** *23:40:29.6, 41°.28N×45°.95E, h10km, MPVA3.9*
MOS **03** *23:40:29.1, 41°.26N×45°.97E, h10km, MPVA3.9*
DRS **03** *23:40:30.8, 41°.30N×45°.88E, h30km*
AFAD **03** *23:40:32.7, 41°.01N×45°.62E, h7km±2km, ML2.6*
ISC 03 23:40:29.5±1.0**, 41°.24N**±0°.01×**45°.87E**±0°.01**, h7**km±9km**,**
n119, $\sigma 1^{s}14$/210**, 1C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDFL	Dedoflistskaro	0.28	43	P	Pn	23 40 40.1	0.0
DDFL	Dedoflistskaro	0.28	43	PG	Pn	23 40 40.1	0.0
VSHL	Vashlovani	0.40	92	P	Pb	23 40 40.1	+1.1
VSHL				S	Sb	23 40 47.9	+2.6
QZX	Qazax, Azerbai	0.42	244	P	Pg	23 40 38.4	+0.8
QZX				S	Sg	23 40 45.0	+1.9
DGRG	David-gareji	0.43	299	P	Pb	23 40 40.2	+0.8
DGRG				S	Sb	23 40 48.6	+2.5
DGRG	David-gareji	0.43	299	PG	Pb	23 40 40.2	+0.8
DGRG				S	Sb	23 40 48.6	+2.5
GDB	GEDABAY	0.53	189	P	Pg	23 40 39.6	-0.1
GDB				S	Sg	23 40 46.7	+0.1
LGD	Lagodekhi	0.66	25	P	Pb	23 40 43.6	+0.3
LGD	Lagodekhi	0.66	25	PG	Pb	23 40 43.6	+0.3
GANJ	Ganja	0.69	150	P	Pg	23 40 42.4	-0.3
GANJ				S	Sg	23 40 51.5	-0.2
ZKTA	Zakatala	0.69	55	P	Pb	23 40 43.9	0.0
ZKTA				S	Sn	23 40 54.7	-2.1
BTNK	Botanikuri	0.92	299	PG	Pg	23 40 46.8	-0.3
TLTR	Tlyarata	0.94	23	iPG	Pb	23 40 48.0	-0.2
TLTR				eS	Sn	23 41 01.6	-1.4
TLTR	Tlyarata	0.94	23	iPg	Pb	23 40 48.0	-0.2
	95nm,0.2s						
TLTR				eSg	Sn	23 41 01.6	-1.4
	658nm,0.2s						
SEAG	Tbilisi Sea	0.95	303	P	Pg	23 40 47.8	0.0
SEAG				S	Sb	23 41 01.3	+0.1
SEAG	Tbilisi Sea	0.95	303	PG	Pg	23 40 47.8	0.0
SEAG				S	Sb	23 41 01.3	+0.1
TBLG	Delisi	0.98	300	P	Pg	23 40 47.8	-0.5
TBLG				S	Sg	23 41 01.4	+0.4
TBLG	Delisi	0.98	300	ePG	Pg	23 40 47.8	-0.5
SEKA	Sheki	1.00	91	Pg	Pg	23 40 48.3	-0.5
SEKA				Sg	Sb	23 41 02.6	-0.1
MNGR	Mingechevir, A	1.03	117	P	Pg	23 40 49.6	+0.3
MNGR				S	Sn	23 41 05.5	+0.4
KZRT	Kazreti	1.12	278	P	Pb	23 40 46.5	-4.7
KZRT				S	Sg	23 41 00.8	-4.6
KZRT	Kazreti	1.12	278	PG	Pb	23 40 46.5	-4.7
KMKR	Kumukh	1.28	46	iPG	Pb	23 40 53.9	-0.2
KMKR				eS	Sn	23 41 11.9	+0.4
CHRG	Chargali	1.29	327	P	Pn	23 40 53.9	-0.2
CHRG				S	Sn	23 41 11.6	-0.2
TRLG	Trialeti	1.36	283	P	Pn	23 40 53.2	-1.9
TRLG				S	Sb	23 41 11.2	-1.9
TRLG	Trialeti	1.36	283	PG	Pn	23 40 53.2	-1.9
GNI	Garni	1.39	218	iPG	Pn	23 40 54.7	-0.7
GNI				iS	Sb	23 41 13.0	-0.8
GNI				pmax	pmax		
	comp=Z,139nm,0.6s						
GNI	Garni	1.39	218	iPg	Pn	23 40 55.1	-0.3
GNI				eSg	Sb	23 41 13.4	-0.4
BRDA	Brd	1.40	134	Pn	Pn	23 40 55.3	-0.1
BRDA				Sn	Sg	23 41 15.9	+1.6
AKT	Akhty	1.42	80	⇑iPG	Pn	23 40 55.1	-0.8
AKT				eS	Sb	23 41 14.4	-0.4
AKT				pmax	pmax		
	comp=Z,50nm,0.2s						
AKT				smax	smax		
	comp=E,263nm,0.3s						
AKT				smax	smax		
	comp=N,258nm,0.4s						
AKT				smax	smax		
	comp=N,290nm,0.4s						
AKT	Akhty	1.42	80	iPg	Pn	23 40 55.3	-0.5
	comp=N,50nm,0.2s						
AKT				eSg	Sb	23 41 14.6	-0.2
	comp=N,290nm,0.4s						
XNZR	Khunzakh	1.44	25	iPg	Pg	23 40 57.4	+0.2
	comp=N,45nm,0.3s						
XNZR				eSg	Sg	23 41 17.8	+2.0
	comp=N,119nm,0.4s						
BTLR	Botlikh	1.45	10	ePN	Pg	23 40 57.2	-0.1
BTLR	Botlikh	1.45	10	iPg	Pg	23 40 57.1	-0.1
	comp=N,67nm,0.2s						
BTLR				eSg	Sg	23 41 17.2	+1.2
	comp=N,131nm,0.4s						
HNZR	Khunzah	1.46	25	iPN	Pg	23 40 57.4	-0.1
AGDM	Agdam	1.47	140	Pn	Pn	23 40 55.9	-0.6
AGDM				Sn	Sn	23 41 16.1	0.0
SHTL	Shatili	1.51	340	P	Pn	23 40 57.2	+0.1
SHTL				S	Sb	23 41 17.4	+0.1
SHTL	Shatili	1.51	340	PN	Pn	23 40 57.2	+0.1
QBL	Gabala	1.52	101	Pn	Pn	23 40 56.6	-0.5
QBL				Sn	Sb	23 41 17.7	+0.2
ARKR	Arakani	1.60	31	ePN	Pb	23 40 59.6	+0.2
GUDG	Gudauri	1.60	320	P	Pn	23 40 58.6	+0.1
GUDG	Gudauri	1.60	320	PN	Pn	23 40 58.6	+0.1
URKR	Urkarakh	1.61	55	ePN	Pg	23 41 00.0	-0.4
URKR				eS	Sg	23 41 22.2	+0.9
URKR	Urkarakh	1.61	55	ePg	Pg	23 40 60.0	-0.4
	comp=N,32nm,0.5s						
URKR				eSg	Sg	23 41 22.2	+0.9
	comp=N,148nm,0.6s						
UNCR	Uncukul	1.62	25	ePN	Pb	23 41 00.0	+0.2
UNCR	Uncukul	1.62	25	ePg	Pb	23 41 00.0	+0.2
	comp=N,36nm,0.2s						
UNCR				eSg	Sg	23 41 22.7	+0.9
	comp=N,168nm,0.5s						
ZRD	Zardab	1.68	124	Pn	Pn	23 40 59.2	-0.1
ZRD				Sn	Sb	23 41 22.7	+0.6
HYR	Heyderabad	1.71	207	Pn	Pn	23 40 59.7	-0.1
HYR				Sn	Sb	23 41 23.2	+0.2
XNQ	Khinaliq	1.72	92	Pn	Pn	23 40 59.6	-0.4
XNQ				Sn	Sb	23 41 23.5	+0.2
DVE	Vedeno	1.72	6	ePN	Pb	23 41 00.9	-0.6
DVE				pmax	pmax		
	comp=Z,62nm,0.3s						
DVE	Vedeno	1.72	6	iPg	Pb	23 41 01.1	-0.5
	comp=Z,119nm,0.5s						
DVE				eSg	Sg	23 41 24.8	-0.1
	comp=Z,67nm,0.8s						
KSMR	Kasumkent	1.74	77	ePN	Pb	23 41 01.2	-0.6
KSMR				eS	Sg	23 41 24.5	-0.8
KRNR	Karanay	1.76	26	ePN	Pb	23 41 01.8	-0.4
KRNR	Karanay	1.76	26	ePg	Pb	23 41 01.8	-0.4
	comp=Z,14nm,0.2s						
KRNR				eSg	Sg	23 41 26.2	+0.1
	comp=Z,67nm,0.4s						
AKH	Akhalkalaki	1.80	276	P	Pn	23 41 01.2	+0.1
AKH				S	Sn	23 41 24.0	-0.2
AKH	Akhalkalaki	1.80	276	PN	Pn	23 41 01.2	+0.1
EAK	Akyaka	1.80	253	P	Pn	23 41 01.8	+0.7
EAK				S	Sn	23 41 24.5	+0.3
EAK				IAML		23 41 38.0	
	comp=Z,82nm,0.4s						
EAK				IAML		23 41 39.0	
	comp=Z,139nm,0.7s						
IML	Ismayilli	1.81	104	Pn	Pn	23 41 01.0	-0.1
IML				Sn	Sb	23 41 26.2	+0.3
SGKR	Sergokala	1.81	47	ePN	Pb	23 41 03.3	+0.4
QSAR	Qusar	1.82	81	Pn	Pb	23 41 03.0	-0.2
QSAR				Sn	Sg	23 41 27.7	-0.4
BUJR	Buynaksk	1.83	30	ePN	Pb	23 41 03.4	0.0
BUJR	Buynaksk	1.83	30	ePg	Pb	23 41 03.4	0.0
	comp=Z,33nm,0.4s						
BUJR				eSg	Sg	23 41 28.6	+0.2
	comp=Z,173nm,0.6s						
SBZ	Shahbuz	1.86	188	Pn	Pn	23 41 02.9	+1.0
SBZ				Sn	Sb	23 41 26.9	-0.4
DBC	Dubki	1.92	22	ePN	Pb	23 41 04.2	-0.6
DBC	Dubki	1.92	22	ePg	Pb	23 41 04.2	-0.6
	comp=Z,20nm,0.4s						
DBC				eSg	Sg	23 41 30.4	-0.6
	comp=Z,159nm,0.4s						
IGDI	IGDIR	1.94	225	P	Pn	23 41 02.9	0.0
IGDI				S	Sn	23 41 26.8	-0.7
IGDI	IGDIR	1.94	225	Pn	Pn	23 41 02.7	-0.1
IGDI				Sn	Sn	23 41 27.9	+0.4
GROC	Groznyy	1.96	358	ePN	Pb	23 41 06.1	+0.6
GROC				eS	Sg	23 41 35.4	+2.9
GROC				pmax	pmax		
	comp=Z,45nm,0.6s						
GROC	Groznyy	1.96	358	ePg	Pb	23 41 05.5	0.0
	comp=Z,26nm,0.3s						
GROC				eSg	Sg	23 41 32.4	-0.1
	comp=Z,121nm,0.5s						
KDMR	Kurdemir	1.96	115	Pn	Pn	23 41 03.3	+0.2
KDMR				Sn	Sb	23 41 30.2	+0.1
KMGR	Komgaron	1.96	338	ePN	Pg	23 41 07.8	+0.7
KMGR				eS	Sg	23 41 34.5	+2.0
KMGR	Komgaron	1.96	338	ePg	Pg	23 41 07.8	+0.7
KMGR				eSg	Sg	23 41 34.5	+2.0
LACR	Lac	1.97	324	ePN	Pb	23 41 05.3	-0.5
LACR	Lac	1.97	324	ePg	Pb	23 41 05.3	-0.5
LACR				eSg	Sb	23 41 31.4	+0.9
QUBA	Quba, Azerbaij	1.98	86	Pn	Pb	23 41 04.7	-1.2
QUBA				Sn	Sb	23 41 31.0	+0.2
BLQ	Beylaqan	1.99	139	Pn	Pn	23 41 03.5	-0.1
BLQ				Sn	Sn	23 41 29.8	+1.0
DRN	Derbent	2.01	66	ePN	Pb	23 41 06.2	-0.1
DRN				eS	Sb	23 41 32.2	+0.8
DRN	Derbent	2.01	66	ePg	Pb	23 41 06.0	-0.3
	comp=Z,185nm,0.6s						
DRN				eSg	Sg	23 41 32.9	-1.1
	comp=Z,185nm,0.6s						
VLKR	Vladikavkaz	2.01	334	ePN	Pg	23 41 07.5	-0.5
VLKR				eS	Sg	23 41 35.3	+1.3
VLKR	Vladikavkaz	2.01	334	ePg	Pg	23 41 07.5	-0.5
VLKR				eSg	Sg	23 41 35.3	+1.3
DIGO	Kars	2.06	247	P	Pb	23 41 08.4	+0.9
DIGO				S	Sb	23 41 32.6	-0.9
DIGO				IAML		23 41 40.0	
	comp=Z,138nm,0.6s						
NAX	Nakhchivan	2.08	188	Pn	Pb	23 41 07.1	-0.6
NAX				Sn	Sn	23 41 31.5	+0.3
QRD	Qoradiz	2.10	148	Pn	Pn	23 41 05.2	+0.1
QRD				Sn	Sn	23 41 32.1	+0.8
MAK	Makhachkala	2.11	35	⇓iPN	Pb	23 41 06.4	-1.5
MAK				eS	Sb	23 41 35.0	+0.7
MAK				pmax	pmax		
	comp=Z,83nm,0.5s						
MAK				smax	smax		
	comp=N,218nm,0.5s						
MAK				smax	smax		
	comp=N,219nm,0.5s						
MAK				MLR	MLR		
	comp=Z,58nm,5.0s						
MAK	Makhachkala	2.11	35	ePg	Pb	23 41 06.5	-1.5
	comp=Z,83nm,0.5s						
MAK				eSg	Sb	23 41 34.9	+0.5
	comp=Z,207nm,0.5s						
PQL	Pirkuli	2.11	101	Pn	Pn	23 41 06.2	+0.8
PQL				Sn	Sb	23 41 35.1	+0.4
ARNR	Ardon	2.27	329	ePN	Pb	23 41 11.0	+0.3
ARNR				eS	Sb	23 41 39.2	+0.2
KORR	Kora	2.28	325	ePN	Pb	23 41 10.8	-0.1
KORR				eS	Sg	23 41 41.6	-1.1
KORR	Kora	2.28	325	ePn	Pb	23 41 10.8	-0.1
KORR				eSn	Sg	23 41 41.6	-1.1
BOZK	Kars-Merkez-Bo	2.29	254	P	Pb	23 41 11.7	+0.5
BOZK				S	Sb	23 41 39.4	-0.3
SIZA	Siyzn	2.29	93	Pn	Pn	23 41 09.1	+1.3
SIZA				Sn	Sb	23 41 40.2	+0.3
ORD	Ordubad	2.31	178	Pg	Pb	23 41 11.0	-0.6
ORD				Sg	Sb	23 41 40.4	0.0
BTKR	Batakoyurt	2.34	336	ePN	Pb	23 41 12.7	+0.6
BTKR				eS	Sg	23 41 43.0	-1.8
BTKR	Batakoyurt	2.34	336	ePn	Pb	23 41 12.7	+0.6
BTKR				eSn	Sg	23 41 43.0	-1.8
ATGJ	Altiaghaj	2.35	98	Pn	Pb	23 41 11.0	-1.3
ATGJ				Sn	Sb	23 41 40.9	-0.7
DIGR	Digorskoe uzhe	2.38	315	ePN	Pb	23 41 12.2	-0.5
DIGR				eS	Sb	23 41 42.8	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EPOS	**Posof**	**2.38**	**277**	P	**Pb**	**23 41 11.5**	**-1.3**
EPOS				S	**Sb**	**23 41 42.4**	**+0.1**
EPOS				IAML		23 41 47.0	
	comp=Z,45nm,0.8s						
SAAT	**Saatly**	**2.39**	**124**	Pg	**Pn**	**23 41 09.5**	**+0.5**
SAAT				Sg	**Sb**	**23 41 40.6**	**-1.8**
GBS	**Qobustan**	**2.44**	**106**	Pn	**Pn**	**23 41 09.6**	**-0.1**
GBS				Sn	**Sb**	**23 41 43.2**	**-0.7**
AHAN	**Ardahan-Merkez**	**2.45**	**269**	P	**Pb**	**23 41 14.2**	**+0.3**
AHAN				S	**Sb**	**23 41 44.5**	**+0.1**
AHAN				IAML		23 42 01.0	
	comp=Z,41nm,1.1s						
KOTA	**Agri, Merkez-K**	**2.49**	**236**	P	**Pn**	**23 41 12.5**	**+1.9**
STDR	**Stavd-Durt**	**2.51**	**328**	*e*PN	**Pg**	**23 41 17.6**	**0.0**
STDR				*e*S	**Sb**	**23 41 47.8**	**+1.8**
STDR	**Stavd-Durt**	**2.51**	**328**	*e*Pn	**Pg**	**23 41 17.6**	**0.0**
STDR				*e*Sn	**Sb**	**23 41 47.8**	**+1.8**
LSNR	**Lesken**	**2.54**	**324**	*e*PN	**Pn**	**23 41 13.1**	**+2.0**
LSNR				*e*S	**Sb**	**23 41 45.0**	**-1.8**
LSNR	**Lesken**	**2.54**	**324**	*e*Pn	**Pn**	**23 41 13.1**	**+2.0**
LSNR				*e*Sn	**Sb**	**23 41 45.0**	**-1.8**
GLBA	**Clilabad**	**2.78**	**135**	Pn	**Pn**	**23 41 13.9**	**-0.5**
GLBA				Sn	**Sn**	**23 41 49.7**	**+1.5**
YRD	**Yardimli**	**2.95**	**141**	Pn	**Pn**	**23 41 16.4**	**-0.6**
YRD				Sn	**Sn**	**23 41 53.6**	**+0.9**
KBTC	**Kuba-Taba**	**3.15**	**326**	*e*PN	**Pn**	**23 41 21.3**	**+1.7**
KBTC				*e*S	**Sb**	**23 42 02.2**	**-2.2**
KBTC	**Kuba-Taba**	**3.15**	**326**	*e*Pn	**Pn**	**23 41 21.3**	**+1.7**
KBTC				*e*Sn	**Sb**	**23 42 02.2**	**-2.2**
DBAD	**Bademkaya**	**3.16**	**267**	P	**Pb**	**23 41 27.0**	**+0.9**
DBAD				S	**Sb**	**23 42 05.8**	**+1.0**
DBAD				IAML		23 42 11.0	
	comp=Z,18nm,0.5s						
DBAD				IAML		23 42 26.0	
	comp=Z,16nm,1.1s						
KBZ	**Khabaz**	**3.32**	**320**	*i* PN	**Pb**	**23 41 26.1**	**-2.5**
KBZ				*e*S	**Sb**	**23 42 05.2**	**-4.0**
KBZ	**Khabaz**	**3.32**	**320**	*i* Pn	**Pb**	**23 41 26.1**	**-2.5**
KBZ				*e*Sn	**Sb**	**23 42 05.2**	**-4.0**
LKRN	**Lenkeran, Azer**	**3.38**	**138**	Pn	**Pn**	**23 41 21.8**	**-0.8**
LKRN				Sn	**Sn**	**23 42 05.8**	**+2.9**
SHA1	**Shidzhatmaz**	**3.44**	**317**	*e*PN	**Pb**	**23 41 30.3**	**-0.6**
SHA1				*e*S	**Sn**	**23 42 08.0**	**+3.1**
SHA1	**Shidzhatmaz**	**3.44**	**317**	*e*Pn	**Pb**	**23 41 30.3**	**-0.6**
SHA1				*e*Sn	**Sn**	**23 42 08.0**	**+3.1**
PYA1	**Pyatigorsk**	**3.48**	**325**	*i* PN	**Pn**	**23 41 24.8**	**+0.7**
ASTR	**Astara**	**3.50**	**139**	Pn	**Pn**	**23 41 24.3**	**0.0**
ASTR				Sn	**Sn**	**23 42 07.9**	**+2.0**
SOC	**Sochi**	**5.12**	**299**	*e*PN	**Pn**	**23 41 46.9**	**+0.3**
SOC				*e*PPP	PPP	23 42 06.4	
SOC				*e*		23 42 45.9	
SOC						23 43 06.4	
SOC				MLR	MLR		
	comp=Z,493nm,18.0s						
KURK	**Kurchatov**	**24.48**	**56**	*i* P	**P**	**23 45 48.0**	**-1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						

IDC 03 23:43:21.3±494.0**, 54°.65N×5°.08E, h0km, Error ellipse: s-maj=208.2km s-min=147.1km az=107.0, North Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**7.89**	**134**	I	I	00 31 10.0	
	baz=320,slow=313,SNR=1.0						
I37NO	**I37NO**	**15.75**	**18**	I	I	01 17 10.0	
	baz=210,slow=332,SNR=1.2						
I43RU	**DUBNA INFRASON**	**18.15**	**70**	I	I	01 31 10.0	
	baz=276,slow=317,SNR=1.3						

IDC 03 23:46:53.6±1.8**, 1°.40N×126°.31E, h0km, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=185.2km s-min=21.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.63**	**160**	P	P	23 51 56.5	+0.2
	1.0nm,0.4s,baz=339,slow=11,SNR=23						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**25.99**	**164**	P	P	23 52 28.1	-0.3
	0.2nm,0.3s,baz=344,slow=11,SNR=5.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	P	23 56 56.7	-0.1
	0.2nm,0.5s,baz=121,slow=7.8,SNR=7.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.47**	**328**	P	P	23 57 25.6	+0.2
	0.5nm,0.5s,baz=127,slow=6.5,SNR=6.5						
	0.5nm,0.5s						

*NEIC **03** 23:57:27.3±1.4, 17°.86N±0°.04×66°.829W±0°.007, h10km±1km, ML2.7/37, Md2.9/7(RSPR), Error ellipse: s-maj=6.9km s-min=2.9km az=4.0*
*SDD **03** 23:57:29.7±1.9, 17°.97N×66°.86W, h15km±17km, MD3.1, ML2.5, MW2.7, Presumed earthquake*
RSPR 03 23:57:28.2, 17°.94N×66°.85W, h16km, MD2.9/7**, 17C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.04**	**319**		Pg	23 57 31.2	+0.1
GBPR					Sg	23 57 33.5	+0.3
GBPR	**Guanica, Bosqu**	**0.04**	**319**	⇑*e*P	Pg	23 57 31.2	+0.1
GBPR				*e*S	Sg	23 57 33.5	+0.3
MLPR	**Magueyes Islan**	**0.19**	**279**		Pg	23 57 32.9	+0.1
MLPR				IAML		23 57 36.7	
	1μm,0.5s						
MLPR				IAML		23 57 37.6	
	1μm,0.5s						
OBIP	**Obispado Ponce**	**0.25**	**66**		Pg	23 57 33.2	-0.6
OBIP				IAML		23 57 37.3	
	comp=N,248nm,0.6s						
OBIP					Sg	23 57 37.0	-0.6
OBIP	**Obispado Ponce**	**0.25**	**66**	⇑*e*P	Pg	23 57 33.3	-0.5
OBIP				*e*S	Sg	23 57 37.2	-0.4
CRPR	**Cabo Rojo, PR**	**0.26**	**285**		Pg	23 57 34.0	0.0
CRPR				Sg	Sg	23 57 37.9	+0.1
CRPR				IAML		23 57 38.1	
	comp=N,674nm,0.6s						
CRPR				IAML		23 57 38.4	
	comp=E,1μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.26**	**285**	⇑*e*Pg	Pg	23 57 33.9	0.0
CRPR				⇓*e*Sg	Sg	23 57 37.9	+0.1
CRPR				IAML		23 57 38.0	
	comp=N,715nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.26**	**285**	⇓*e*P	Pg	23 57 34.0	+0.1
CRPR				*e*S	Sg	23 57 37.8	+0.1
CELP	**Cerrillos**	**0.29**	**63**		Pg	23 57 34.0	-0.5
CELP				Sg	Sg	23 57 37.6	-1.1
CELP				IAML		23 57 38.2	
	comp=N,675nm,0.3s						
CELP				IAML		23 57 38.3	
	comp=N,764nm,0.3s						
LSP	**Las Mesas**	**0.33**	**316**		Pg	23 57 34.8	-0.3
LSP					Sg	23 57 40.0	+0.2
LSP	**Las Mesas**	**0.33**	**316**	⇓*e*P	Pg	23 57 34.8	-0.3
LSP				*e*S	Sg	23 57 40.0	+0.2
UUPR	**Utuado, UPR, P**	**0.33**	**21**		Pg	23 57 34.2	-1.0
UUPR				IAML		23 57 40.7	
	comp=N,4μm,0.4s						
UUPR				IAML		23 57 42.1	
	comp=N,3μm,0.4s						
PRSN	**Puerto Rico Se**	**0.39**	**314**	Pg	Pg	23 57 35.8	-0.5
PRSN				Sg	Sg	23 57 41.2	-0.5
PRSN				IAML		23 57 44.1	
	comp=N,4μm,0.3s						
PRSN				IAML		23 57 44.1	
	comp=N,3μm,0.3s						
PRSN	**Puerto Rico Se**	**0.39**	**314**	⇑*e*Pg	Pg	23 57 35.9	-0.4
PRSN				⇓*e*Sg	Sg	23 57 41.3	-0.5
PRSN				IAML		23 57 44.1	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.39**	**314**	⇑*e*P	Pg	23 57 35.8	-0.5
PRSN				*e*S	Sg	23 57 41.6	-0.2
AGPR	**Aguadilla, PR**	**0.58**	**335**		Pg	23 57 38.7	-1.0
AGPR				IAML		23 57 49.4	
	comp=N,391nm,0.5s						
AGPR				IAML		23 57 50.0	
	comp=N,292nm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**335**	⇑*e*Pg	Pg	23 57 38.7	-1.1
AGPR				⇓*e*Sg	Sg	23 57 47.7	+0.2
AGPR				IAML		23 57 49.3	
	comp=N,400nm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**335**	⇑*e*P	Pg	23 57 38.7	-1.1
AGPR				*e*S	Sg	23 57 46.9	-0.6
ECPR	**Experimental S**	**0.59**	**51**	IAML		23 57 48.2	
	comp=N,643nm,0.2s						
ECPR				IAML		23 57 48.5	
	comp=N,612nm,0.3s						
ECPR	**Experimental S**	**0.59**	**51**	⇑*e*P	Pg	23 57 38.7	-1.3
ECPR				*e*S	Sg	23 57 47.2	-0.7
EMPR	**Esperanza - Ma**	**0.61**	**30**		Pg	23 57 39.6	-0.7
EMPR					Sg	23 57 47.9	-0.6
EMPR	**Esperanza - Ma**	**0.61**	**30**	⇑*e*P	Pg	23 57 39.6	-0.7
EMPR				*e*S	Sg	23 57 47.9	-0.6
SJG	**San Juan**	**0.69**	**76**		Pg	23 57 40.3	-1.4
SJG				IAML		23 57 50.7	
	comp=N,280nm,0.4s						
SJG				IAML		23 57 51.0	
	comp=N,265nm,0.2s						
SJG	**San Juan**	**0.69**	**76**	⇑*e*P	Pg	23 57 40.4	-1.3
SJG				*e*S	Sg	23 57 49.6	-1.2
IDE	**Isla Desecheo**	**0.74**	**307**		Pg	23 57 41.8	-1.0
IDE					Sg	23 57 52.2	-0.4
IDE	**Isla Desecheo**	**0.74**	**307**	⇑*e*P	Pg	23 57 41.8	-1.0
IDE				*e*S	Sg	23 57 52.2	-0.4
PDPR	**Patillas Dam,**	**0.79**	**84**		Pb	23 57 42.4	-1.2
PDPR				IAML		23 57 53.4	
	comp=N,191nm,0.4s						
PDPR				IAML		23 57 54.1	
	comp=N,126nm,0.2s						
GCPR	**Guaynabo City**	**0.81**	**63**		Pb	23 57 42.5	-1.5
GCPR					Sb	23 57 52.5	-2.3
GCPR	**Guaynabo City**	**0.81**	**63**	IAML		23 57 53.1	
	comp=N,90nm,0.2s						
GCPR				IAML		23 57 55.8	
	comp=E,77nm,0.4s						
GCPR	**Guaynabo City**	**0.81**	**63**	⇓*e*P	Pb	23 57 42.5	-1.5
GCPR				*e*S	Sb	23 57 52.5	-2.3
HUMP	**Col San Antoni**	**0.97**	**78**		Pb	23 57 45.0	-1.7
HUMP				IAML		23 57 59.0	
	comp=E,126nm,0.3s						
HUMP				IAML		23 58 06.7	
	comp=E,139nm,0.2s						
HUMP	**Col San Antoni**	**0.97**	**78**		Sb	23 57 58.2	-1.1
HUMP	**Col San Antoni**	**0.97**	**78**	⇑*e*P	Pb	23 57 45.0	-1.7
HUMP				*e*S	Sb	23 57 58.5	-0.8
CUPR	**Culebra, Puert**	**1.53**	**76**		Pn	23 57 53.5	-1.5
CUPR				IAML		23 58 19.0	
	comp=E,41nm,0.8s						
CUPR				IAML		23 58 21.2	
	comp=E,36nm,0.5s						
PCDR	**Punta Cana, DR**	**1.56**	**292**	⇑*e*Pg	Pn	23 57 56.0	+0.6
PCDR				*e*Sg	Sb	23 58 16.9	+0.6
PCDR				IAML		23 58 25.2	
	comp=N,100nm,1.4s						
PCDR				IAML		23 58 25.2	
	comp=N,100nm,1.4s						
MIDR	**Miches**	**2.33**	**297**	⇑*e*Pg	Pb	23 58 10.0	+0.1
MIDR				⇑*e*Sg	Sb	23 58 37.5	-1.0
MIDR				IAML		23 58 43.3	
	comp=N,15nm,1.1s						
MIDR				IAML		23 58 58.9	
	comp=N,28nm,2.1s						
DR12	**Loma Pena Alta**	**2.55**	**290**	Pn	Pn	23 58 10.6	+1.6
HATOM	**Hato Mayor del**	**2.55**	**290**	⇑*e*Pg	Pb	23 58 14.1	+0.5
HATOM				⇑*e*Sg	Sb	23 58 44.6	-0.2
HATOM				IAML		23 58 50.0	
	comp=N,12nm,0.5s						

*IDC **04** 00:06:20.8±2.8, 19°.31N×78°.03W, h0km, mb3.1/1, mbtmp3.4/2, ML3.5/1, Error ellipse: s-maj=105.4km s-min=51.3km az=66.0*
*SSNC **04** 00:06:25.7±0.4, 19°.38N×78°.73W, h19km±9km, MD3.5, ML3.2, Presumed earthquake*
*JSN **04** 00:06:28.7±2.4, 19°.37N×78°.45W, h28km±104km, MD4.0, Presumed earthquake*
ISC 04 00:06:24.2±0.9**, 19°.38N**±0°.06×**78°.71W**±0°.05**, h14km, n22, σ2s.28**/23**, 2C-2D, Cuba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**1.05**	**290**	*e*P	Pb	00 06 42.6	-1.6
CBCY				*e*S	**Sb**	**00 06 55.1**	**-2.7**
CBCY				IAML		00 06 58.9	
	comp=N,567nm,0.5s						
CBCY				IAML		00 06 58.9	
	comp=E,484nm,0.4s						
LCCY	**Blossom Villag**	**1.33**	**283**	*e*P	Pn	00 06 46.8	-1.5
LCCY				*e*S	**Sn**	**00 07 02.1**	**-3.7**
LCCY				IAML		00 07 02.4	
	comp=E,425nm,0.2s						
LCCY				IAML		00 07 02.8	
	comp=N,526nm,0.3s						
MTDJ	**Mount Denham**	**1.60**	**136**	*e*P	**Pn**	**00 06 51.1**	**-1.0**
MTDJ	**Mount Denham**	**1.60**	**136**	⇓*i*P	**Pn**	**00 06 51.2**	**-1.0**
MTDJ				*i* S	**Sn**	**00 07 08.9**	**-3.7**
LMGC	**Las Mercedes**	**1.74**	**67**	*e*P	**Pn**	**00 06 53.2**	**-0.9**
CCCC	**Cccc**	**2.02**	**26**	*e*P	**Pb**	**00 07 00.0**	**-0.6**
STH	**Stony Hill**	**2.22**	**125**	⇑*i*P	**Pn**	**00 06 59.6**	**-1.0**
CHIV	**Chivirico**	**2.24**	**74**	*e*P	**Pn**	**00 06 59.5**	**-1.4**
YAR	**Yar**	**2.42**	**66**	*e*P	**Pn**	**00 07 02.7**	**-0.7**
MARVS	**Santiago de Cu**	**2.72**	**76**	*e*P	**Pn**	**00 07 06.2**	**-1.3**
RCC	**Rio Carpintero**	**2.90**	**77**	*e*P	**Pn**	**00 07 09.0**	**-1.0**
HLGC	**Holguin**	**2.91**	**58**	*e*P	**Pn**	**00 07 07.8**	**-2.3**
PINC	**Pinares de May**	**2.96**	**68**	*e*P	**Pn**	**00 07 10.5**	**-0.3**
MGV	**Manicaragua**	**2.97**	**337**	*e*P	**Pn**	**00 07 09.9**	**-1.0**
GTBY	**Guantanamo Bay**	**3.43**	**80**	⇓*e*P	**Pn**	**00 07 16.9**	**-0.4**
GTBY	**Guantanamo Bay**	**3.43**	**80**	⇑*i*P	**Pn**	**00 07 16.6**	**-0.7**
CAMR	**Camarioca**	**4.42**	**326**	*e*P	**Pn**	**00 07 30.1**	**-0.8**
SOR	**Soroa**	**5.26**	**311**	*e*P	**Pn**	**00 07 41.5**	**-0.9**
TKL	**Tuckaleechee C**	**16.82**	**346**	Pn	**Pn**	**00 10 19.7**	**+0.3**
	comp=N,0.2nm,0.3s,baz=185,slow=11,SNR=2.3						
	comp=N,1.1nm,0.5s						
TXAR	**Lajitas Array**	**24.76**	**298**	P	**P**	**00 11 49.4**	**+3.7**
	comp=N,0.3nm,0.7s,baz=116,slow=10,SNR=3.7						
	comp=N,0.3nm,0.7s						
WRA	**Warramunga Arr**	**148.90**	**263**	PKPbc	**PKPdf**	**00 26 12.6**	**+4.1**
	comp=N,0.6nm,0.8s,baz=84,slow=2.2,SNR=6.7						
ASAR	**Alice Springs**	**149.40**	**256**	PKPbc	**PKPdf**	**00 26 13.7**	**+4.5**
	comp=N,0.5nm,0.5s,baz=88,slow=2.0,SNR=6.7						

*ISK **04** 00:06:39.6, 38°.99N×27°.86E, h11km, ML3.5/17*
*ATH **04** 00:06:39.7, 38°.98N×27°.91E, h9km±4km, ML3.2/10, Manual Solution by F.Xalaris First location: 2020/02/04 00:08:12, This location: 2020/02/04 01:05:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **04** 00:06:40.0, 39°N±3°×2°8E±°, h7km±13km, M3.2/14, MLh3.2/14*
*AFAD **04** 00:06:40.0, 38°.98N×27°.88E, h7km±2km, MW3.5*
ISC 04 00:06:40.2±0.8**, 38°.98N**±0°.02×**27°.89E**±0°.02**, h12km**±5km**, n76, σ0s.51**/109**, 9C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.12**	**210**	P	**Pg**	**00 06 43.3**	**+0.1**
AKHS				S	**Sg**	**00 06 45.6**	**+0.2**
AKS	**Akhisar**	**0.12**	**210**	Pg	**Pg**	**00 06 42.8**	**-0.4**
AKS				Sg	**Sg**	**00 06 45.2**	**-0.2**
GORD	**Gordes-Manisa**	**0.24**	**107**	Pg	**Pg**	**00 06 45.5**	**+0.3**
GORD				Sg	**Sg**	**00 06 49.7**	**+1.1**
GOMA	**Golmarmara-Man**	**0.27**	**175**	Pg	**Pb**	**00 06 46.3**	**-0.8**
GOMA				Sg	**Sb**	**00 06 50.7**	**-0.9**
SOMA	**Soma-Manisa**	**0.33**	**303**	Pg	**Pg**	**00 06 46.2**	**-0.6**
SOMA				Sg	**Sg**	**00 06 50.9**	**-0.3**
KTTT	**Salihli**	**0.33**	**151**	P	**Pb**	**00 06 47.3**	**-0.8**
KTTT				S	**Sg**	**00 06 51.9**	**+0.5**
STEP	**BALIKESIR_Sava**	**0.42**	**342**	P	**Pg**	**00 06 48.0**	**-0.5**
STEP				S	**Sg**	**00 06 54.1**	**0.0**
CAMT	**Merkez**	**0.50**	**243**	P	**Pg**	**00 06 50.1**	**0.0**
CAMT				S	**Sb**	**00 06 58.1**	**-0.3**
ZEDA	**zmir-Bergama**	**0.63**	**269**	P	**Pg**	**00 06 52.5**	**0.0**
ZEDA				S	**Sg**	**00 07 00.8**	**-0.1**
DEMI	**Demirci**	**0.65**	**84**	P	**Pb**	**00 06 53.0**	**-0.6**
DEMI				S	**Sb**	**00 07 01.9**	**-0.7**
BALB	**Balikesir**	**0.66**	**360**	Pg	**Pg**	**00 06 52.9**	**-0.1**
BALB				Sg	**Sb**	**00 07 02.4**	**-0.5**
MANT	**Manisa**	**0.72**	**133**	P	**Pb**	**00 06 54.3**	**-0.5**
MANT				S	**Sb**	**00 07 04.1**	**-0.6**
ODEM	**Odemis-Izmir**	**0.72**	**168**	Pg	**Pb**	**00 06 54.5**	**-0.2**
IZMD	**zmir-Dikili-**	**0.75**	**271**	P	**Pg**	**00 06 54.7**	**0.0**
IZMD				S	**Sg**	**00 07 04.5**	**0.0**
KULA	**Kula-Manisa**	**0.76**	**127**	Pg	**Pb**	**00 06 55.0**	**-0.5**
DKL	**Dikili**	**0.77**	**277**	Pg	**Pg**	**00 06 54.5**	**-0.6**
DUVT	**Torbali**	**0.83**	**204**	P	**Pg**	**00 06 56.2**	**-0.1**
DUVT				S	**Sb**	**00 07 08.0**	**+0.3**
IZMR	**zmir-demi**	**0.84**	**176**	P	**Pb**	**00 06 56.9**	**+0.1**
IZMR				S	**Sg**	**00 07 07.3**	**-0.2**
DST	**Dursunbey**	**0.84**	**42**	Pg	**Pg**	**00 06 56.3**	**-0.2**
SIMA	**Simav-Kutahya**	**0.86**	**83**	Pg	**Pb**	**00 06 57.1**	**-0.1**
SMAA	**Simav-Kutahya**	**0.86**	**82**	Pg	**Pb**	**00 06 57.3**	**+0.1**
BAGT	**Foa**	**0.87**	**249**	P	**Pg**	**00 06 57.0**	**0.0**
BAGT				S	**Sb**	**00 07 09.1**	**+0.2**
BLCB	**Balcova**	**0.89**	**228**	Pg	**Pg**	**00 06 56.9**	**-0.4**
BLCB	**Balcova**	**0.89**	**228**	P	**Pg**	**00 06 56.7**	**-0.6**
BLCB				S	**Sb**	**00 07 10.5**	**+1.1**
YAYO	**Edremit-Balk**	**0.89**	**315**	Pg	**Pg**	**00 06 56.8**	**-0.7**
FOCM	**Foa**	**0.94**	**254**	Pg	**Pg**	**00 06 57.9**	**-0.4**
SUSR	**Susurluk-Balik**	**0.99**	**9**	Pg	**Pg**	**00 06 58.4**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**180**	Pg	**Pg**	**00 06 59.8**	**-0.3**
SHAP	**Saphane-Kutahy**	**1.04**	**87**	Pg	**Pn**	**00 07 00.6**	**-0.2**
NAZL	**Nazilli-Aydin**	**1.06**	**162**	Pn	**Pb**	**00 07 00.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.08**	**352**	Pg	**Pg**	**00 07 00.2**	**-0.8**
YENI	**Yenice-Canakka**	**1.08**	**333**	Pg	**Pg**	**00 07 00.3**	**-0.7**
KRBN	**Karaburun**	**1.11**	**250**	Pn	**Pg**	**00 07 01.1**	**-0.5**
GMLD	**Gumuldur**	**1.18**	**221**	Pn	**Pb**	**00 07 02.0**	**-0.5**
GEDZ	**Gediz**	**1.19**	**86**	Pn	**Pn**	**00 07 03.5**	**+0.7**
CANM	**Can-anakkale**	**1.22**	**328**	Pn	**Pn**	**00 07 03.0**	**-0.1**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**00 07 03.7**	**-0.2**
PRK				S	**Sn**	**00 07 22.0**	**+0.8**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**00 07 04.1**	**+0.1**
PRK				S	**Sb**	**00 07 21.3**	**+0.5**
GCAM	**G?zelcaml?**	**1.38**	**202**	Pn	**Pn**	**00 07 04.2**	**-1.0**
BAND	**Balkesir-Ban**	**1.38**	**7**	⇑P	**Pn**	**00 07 05.6**	**+0.2**
BAND				⇑S	**Sg**	**00 07 24.9**	**+0.1**
EAG2	**Marmaro, Chios**	**1.46**	**253**	P	**Pn**	**00 07 06.6**	**+0.2**
EAG2				S	**Sn**	**00 07 25.8**	**+0.4**
EZN	**Ezine**	**1.48**	**305**	P	**Pn**	**00 07 06.2**	**-0.4**
EZN				S	**Sg**	**00 07 27.7**	**0.0**
SMG	**Samos**	**1.51**	**213**	P	**Pn**	**00 07 06.6**	**-0.6**
SMG	**Samos**	**1.51**	**213**	P	**Pn**	**00 07 07.5**	**+0.3**
SMG				S	**Sn**	**00 07 27.2**	**+0.4**
CHOS	**Chios island**	**1.55**	**248**	P	**Pn**	**00 07 07.5**	**-0.2**
CHOS				S	**Sg**	**00 07 29.8**	**-0.3**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**00 07 08.1**	**-0.2**
SIGR				S	**Sb**	**00 07 30.4**	**+0.6**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**00 07 08.5**	**+0.2**
SIGR				S	**Sn**	**00 07 29.5**	**+0.7**
YER	**Yerkesik**	**1.87**	**170**	P	**Pn**	**00 07 11.9**	**-0.2**
GADA	**Gvkgeada**	**1.96**	**309**	P	**Pn**	**00 07 13.2**	**-0.1**
GADA				S	**Sn**	**00 07 38.5**	**+0.8**
BODT	**Bodrum**	**1.97**	**194**	P	**Pn**	**00 07 14.2**	**+0.8**
ENEZ	**Enez**	**2.21**	**323**	P	**Pn**	**00 07 17.2**	**+0.5**
LIA	**Limnos Island**	**2.29**	**295**	P	**Pn**	**00 07 17.9**	**+0.1**
LIA				S	**Sn**	**00 07 46.6**	**+0.8**
LIA	**Limnos Island**	**2.29**	**295**	P	**Pn**	**00 07 17.8**	**0.0**
LIA				S	**Sn**	**00 07 46.2**	**+0.3**
SMTH	**Samothraki Isl**	**2.35**	**310**	P	**Pn**	**00 07 18.6**	**-0.1**
SMTH	**Samothraki Isl**	**2.35**	**310**	P	**Pn**	**00 07 18.6**	**-0.1**
SMTH				S	**Sn**	**00 07 48.1**	**+0.6**
ISP	**Isparta**	**2.37**	**118**	P	**Pn**	**00 07 18.6**	**-0.4**
ISP				S	**Sn**	**00 07 48.0**	**-0.2**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**00 07 19.2**	**+0.1**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**00 07 24.2**	**-0.2**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**00 07 24.3**	**0.0**
ARG				S	**Sn**	**00 07 58.1**	**+0.4**
RDO	**Rodhopi**	**2.82**	**321**	P	**Pn**	**00 07 25.4**	**+0.3**
RDO	**Rodhopi**	**2.82**	**321**	P	**Pn**	**00 07 25.2**	**+0.1**
RDO				S	**Sn**	**00 07 59.4**	**+0.5**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**00 07 25.4**	**-0.4**
KYMI	**Kymi, Euboea I**	**2.98**	**265**	P	**Pn**	**00 07 27.9**	**+0.6**
KSL	**Kastellorizon**	**3.13**	**154**	P	**Pn**	**00 07 29.3**	**-0.1**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**00 07 30.7**	**0.0**
KARP	**Karpathos**	**3.47**	**190**	P	**Pn**	**00 07 34.6**	**+0.4**
ICOR	**Ion Corvin**	**5.13**	**359**	⇑P	**Pn**	**00 07 57.2**	**+0.3**
BOVS	**Bovan**	**6.58**	**317**	⇑P	**Pn**	**00 08 17.7**	**+0.9**
MLR	**Muntele Rosu**	**6.67**	**348**	⇑P	**Pn**	**00 08 18.9**	**+0.8**
ODBI	**Odobesti**	**6.81**	**355**	⇓P	**Pn**	**00 08 21.4**	**+1.5**
PLOR	**Plostina**	**6.93**	**353**	⇑P	**Pn**	**00 08 22.3**	**+0.7**
VRI	**Vrincioaia**	**6.94**	**353**	⇓P	**Pn**	**00 08 21.7**	**0.0**
TURR	**Turia**	**7.21**	**350**	⇑P	**Pn**	**00 08 26.2**	**+0.8**
MDVR	**Moldovita**	**7.40**	**324**	⇑P	**Pn**	**00 08 28.7**	**+0.6**
ONER	**Baraj Valea Uz**	**7.43**	**352**	⇓P	**Pn**	**00 08 29.2**	**+0.7**
BZS	**Buzias**	**8.10**	**327**	⇑P	**Pn**	**00 08 37.7**	**+0.1**

*IDC **04** 00:06:57.7±1.3, 1°.33N×91°.57E, h0km, mb3.6/8, mbtmp3.7/10, ML4.2/2, MS3.0/5, Error ellipse: s-maj=43.2km s-min=19.6km az=55.0*
*DJA **04** 00:07:14.7±1.0, 2°N±5°×9°2E±°, h10km, M4.5/13, mB5.1/3, mb4.5/6, MLv4.5/13, Mw(mB)4.4/3*
ISC 04 00:06:59.4±1.2**, 1°.3N**±0°.2×**91°.55E**±0°.09**, h10km, n24, σ2s.02**/16**, mb3.6**/8**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**4.89**	**77**	P	**Pn**	**00 08 16.1**	**+3.1**
SNSI				S	**Sn**	**00 09 05.7**	**-4.0**
MLSI	**Meulaboh, Aceh**	**5.65**	**59**	P	**Pn**	**00 08 25.4**	**+1.9**
KCSI	**Kotacane, Aceh**	**6.58**	**71**	P	**Pn**	**00 08 39.4**	**+3.1**
LHMI	**Lhok Sumawe**	**6.63**	**54**	P	**Pn**	**00 08 39.8**	**+2.9**
	0.3nm49nm,1.4s						
PBSI	**Pulau Batu**	**6.87**	**102**	P	Pn	00 08 48.8	+8.6
PALK	**Pallekele**	**12.32**	**299**	Pn	**Pn**	**00 09 54.6**	**-0.5**
	1.0nm,0.3s,baz=110,slow=12,SNR=5.0						
PALK				Sn	Sn	00 11 56.1	-16
	2.7nm,0.3s,baz=5.3,slow=21,SNR=7.9						
PALK				LR	LR	00 13 56.8	
	comp=Z,62nm,19.6s,baz=116,slow=34						
	3.7nm,0.6s						
LEM	**Lembang**	**17.97**	**117**	LR	LR	00 18 04.1	
	comp=Z,26nm,18.3s,baz=62,slow=37						
CMAR	**Chiang Mai Arr**	**18.49**	**23**	P	**Pn**	**00 11 16.1**	**+0.1**
	0.4nm,0.3s,baz=215,slow=12,SNR=7.6						
CMAR				LR	LR	00 18 40.9	
	comp=Z,17nm,18.9s,baz=200,slow=38						
	0.8nm,0.4s						
H08S2	**Diego Garcia H**	**21.00**	**245**	T	T	00 33 29.2	
	baz=65,slow=75,SNR=4.9						
H08S3	**Diego Garcia H**	**21.00**	**245**	T	T	00 33 30.3	
	baz=65,slow=75,SNR=6.6						
H08S1	**Diego Carcia H**	**21.02**	**245**	T	T	00 33 31.6	
	baz=65,slow=75,SNR=4.0						
LZDM	**Lanzhou Array**	**36.24**	**17**	P	**P**	**00 14 01.6**	**-1.5**
	0.3nm,0.3s,baz=190,slow=7.2,SNR=1.6						
	0.3nm,0.3s						
AAK	**Ala-Archa**	**43.87**	**342**	LR	LR	00 34 09.9	
	comp=Z,36nm,19.9s,baz=204,slow=37						
MKAR	**Makanchi Array**	**45.99**	**351**	P	**P**	**00 15 22.7**	**-0.2**
	0.6nm,0.9s,baz=171,slow=8.0,SNR=5.2						
	0.6nm,0.9s						
WRA	**Warramunga Arr**	**46.97**	**119**	P	**P**	**00 15 30.4**	**-0.6**
	1.1nm,0.6s,baz=295,slow=8.8,SNR=17						
	1.1nm,0.6s						
SONM	**Songino Array**	**48.07**	**13**	P	**P**	**00 15 40.3**	**+1.1**
	1.5nm,0.7s,baz=192,slow=9.6,SNR=12						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**48.08**	**124**	P	**P**	**00 15 39.1**	**-0.5**
	0.4nm,0.5s,baz=298,slow=7.7,SNR=6.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**50.33**	**349**	P	**P**	**00 15 55.8**	**-0.6**
	0.4nm,0.7s,baz=170,slow=7.7,SNR=7.9						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**52.73**	**355**	P	**P**	**00 16 13.5**	**-0.7**
	0.4nm,0.4s,baz=173,slow=7.8,SNR=7.1						
ZALV				LR	LR	00 40 31.0	
	comp=Z,28nm,18.3s,baz=18,slow=38						
	0.4nm,0.4s						
H04N2	**CROZET ISLANDS**	**58.84**	**211**	T	T	01 21 02.1	
	baz=49,slow=74						
H04N1	**CROZET ISLANDS**	**58.84**	**211**	T	T	01 20 49.8	
	baz=49,slow=74						
H04N3	**CROZET ISLANDS**	**58.85**	**211**	T	T	01 21 01.5	
	baz=49						
GERES	**GERESS Array B**	**81.00**	**319**	P	**P**	**00 19 15.3**	**+0.7**
	0.2nm,0.5s,baz=97,slow=8.1,SNR=3.4						
	0.2nm,0.5s						
TXAR	**Lajitas Array**	**146.20**	**24**	PKPbc	**PKPbc**	**00 26 40.1**	**-0.8**
	0.2nm,0.5s,baz=24,slow=1.8,SNR=6.6						

*RSPR **04** 00:10:56.4, 19°.31N×68°.58W, h12km±31km, MD3.9/8*

NEIC ***04*** *00:10:59.0±1.4, 18.°88N±0.°06×68.°21W±0.°04, h10km±1km, mb4.6/131, ML4.7/51, Mwr4.4/55, ML4.5/8(RSPR), Error ellipse: s-maj=10.3km s-min=5.3km az=24.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-3.51; Mθθ2.98; Mφφ0.52; Mrθ1.77; Mθφ1.98; Mφr0.72; Fault plane solution: M0 4.28000×10^15 NP1:φs56.67000°, δ31.85000°, λ-96.67000°. NP2:φs244.51000°, δ58.39000°, λ-85.87000°. Principal axes: T 4.5348, Plg13.0000°, Azm332.0000°; N -0.5644, Plg4.0000°, Azm62.0000°; P -3.9704, Plg76.0000°, Azm167.0000°;*

NEIC ***04*** *00:10:59, 18.°88N×68.°21W, h10km*

SDD ***04*** *00:11:00.1±1.9, 19.°01N×68.°24W, h15km±68km, MD3.6, ML4.6, MW4.4, Presumed earthquake*

OSPL ***04*** *00:11:01.3±3.2, 19.°20N×68.°08W, h12km±28km, ML4.3, Presumed earthquake*

IDC ***04*** *00:11:03.8±1.7, 18.°89N×68.°23W, h50km±17km, mb3.8/18, mbtmp4.1/21, ML3.7/3, MS3.7/36, Error ellipse: s-maj=14.3km s-min=10.5km az=21.0*

ISC 04 00:10:59.4±1.0**, 18.°96N**±0.°03×**68.°24W**±0.°02**, h17**km±6km**, n304,** σ1.°79/310**, mb4.6**/76**, MS3.7**/33**, 21C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.47	197	⇑ePg	Pb	00 11 09.4	+0.3
PCDR				⇑eSg	Sb	00 11 16.5	+0.8
PCDR				IAML		00 11 17.2	
	comp=N,34µm,0.8s						
HIDR	Higuey Centro	0.58	231	⇓ePg	Pb	00 11 10.8	-0.4
HIDR				⇑eSg	Sb	00 11 19.0	-0.3
HIDR				IAML		00 11 19.4	
	comp=N,41µm,0.2s						
HIDR				IAML		00 11 19.4	
	comp=N,40µm,0.2s						
HIDR	Higuey Centro	0.58	231	⇓eP	Pb	00 11 10.9	-0.3
HIDR				eS	Sb	00 11 18.9	-0.3
MIDR	Miches	0.77	272	⇑ePg	Pg	00 11 13.5	-1.0
MIDR				⇑eSg	Sg	00 11 24.3	-0.4
MIDR				IAML		00 11 26.6	
	comp=N,9µm,0.2s						
IDE	Isla Desecheo	0.92	128		Pb	00 11 16.2	-0.7
IDE					Sn	00 11 29.7	-0.8
IDE	Isla Desecheo	0.92	128	⇑eP	Pb	00 11 16.2	-0.7
IDE				eS	Sn	00 11 29.7	-0.8
SMDR	Samana, DR	0.96	290	⇑ePg	Pg	00 11 16.5	-1.5
SMDR				IAML		00 11 34.2	
	comp=N,17µm,0.3s						
DR12	Loma Pena Alta	1.10	261		Pb	00 11 18.5	-1.5
DR12					Sg	00 11 32.5	-2.6
HATOM	Hato Mayor del	1.10	261	⇑ePg	Pb	00 11 18.9	-1.1
HATOM				⇑eSg	Sg	00 11 34.2	-0.8
HATOM				IAML		00 11 38.8	
	comp=N,4µm,0.5s						
HATOM				IAML		00 11 41.4	
	comp=N,3µm,0.5s						
AGPR	Aguadilla, PR	1.17	115		Pb	00 11 19.7	-1.5
AGPR				IAML		00 11 44.1	
	comp=N,20µm,0.3s						
AGPR				IAML		00 11 44.4	
	comp=N,16µm,0.3s						
AGPR	Aguadilla, PR	1.17	115	⇑ePg	Pb	00 11 19.9	-1.4
AGPR				⇑eSg	Sn	00 11 37.9	+1.2
AGPR				IAML		00 11 43.0	
	comp=N,15µm,0.3s						
AGPR				IAML		00 11 43.0	
	comp=N,15µm,0.3s						
AGPR	Aguadilla, PR	1.17	115	⇑eP	Pn	00 11 21.3	+0.2
AGPR				eS	Sn	00 11 42.2	+5.5
AGPR	Aguadilla, PR	1.17	115	i P	Pn	00 11 21.3	+0.2
AGPR				IAML		00 11 45.2	
	comp=Z,9µm,0.2s						
PRSN	Puerto Rico Se	1.27	125		Pn	00 11 21.4	-1.0
PRSN	Puerto Rico Se	1.27	125		Sn	00 11 45.1	+6.0
PRSN	Puerto Rico Se	1.27	125	⇑eP	Pn	00 11 21.6	-0.8
PRSN				eS	Sn	00 11 45.1	+6.0
LSP	Las Mesas	1.34	125		Pg	00 11 23.5	-1.8
LSP	Las Mesas	1.34	125	⇓eP	Pg	00 11 23.5	-1.8
CRPR	Cabo Rojo, PR	1.43	131		Pn	00 11 23.2	-1.4
CRPR	Cabo Rojo, PR	1.43	131	⇑ePg	Pb	00 11 24.6	-1.0
CRPR				⇑eSg	Sg	00 11 45.6	0.0
CRPR				IAML		00 11 54.0	
	comp=N,5µm,0.4s						
CRPR				IAML		00 11 54.2	
	comp=N,6µm,0.4s						
CRPR	Cabo Rojo, PR	1.43	131	⇑eP	Pn	00 11 23.8	-0.8
CRPR				eS	Sg	00 11 48.9	+3.3
CRPR	Cabo Rojo, PR	1.43	131	i P	Pb	00 11 24.8	-0.8
CRPR				IAML		00 11 54.3	
	comp=Z,4µm,0.3s						
MLPR	Magueyes Islan	1.50	131		Pn	00 11 24.5	-1.0
NADR	Nagua	1.58	285	⇑ePg	Pn	00 11 28.1	+1.4
NADR				IAML		00 11 56.8	
	comp=N,33µm,0.4s						
NADR				IAML		00 11 57.5	
	comp=N,50µm,0.4s						
LONA1	Toro Cenizo, N	1.59	285	i P	Pg	00 11 33.6	+3.5
LONA1				eS	Sg	00 11 56.3	+5.4
UUPR	Utuado, UPR, P	1.60	116		Pn	00 11 26.0	-0.9
UUPR					Sg	00 11 51.2	+0.2
GBPR	Guanica, Bosqu	1.62	127		Pb	00 11 28.3	-0.6
GBPR					Sg	00 11 54.1	+2.5
GBPR	Guanica, Bosqu	1.62	127	⇑eP	Pb	00 11 28.3	-0.6
GBPR				eS	Sg	00 11 54.1	+2.5
SDD	Santo Domingo	1.67	253		Pn	00 11 28.5	+0.7
SDD				IAML		00 11 56.3	
	comp=E,9µm,0.9s						
SDD				IAML		00 12 04.5	
	comp=N,8µm,0.9s						
SDD	Santo Domingo	1.67	253	i P	Pb	00 11 29.2	-0.5
EMPR	Esperanza - Ma	1.69	106		Pg	00 11 30.2	-1.6
EMPR					Sg	00 11 54.7	+0.9
EMPR	Esperanza - Ma	1.69	106	⇓eP	Pg	00 11 30.2	-1.6
EMPR				eS	Sg	00 11 54.7	+0.9
OBIP	Obispado Ponce	1.80	120		Pn	00 11 29.4	-0.2
OBIP	Obispado Ponce	1.80	120		Sg	00 11 58.0	+0.7
OBIP	Obispado Ponce	1.80	120	⇓eP	Pb	00 11 30.7	-1.2
OBIP				eS	Sg	00 11 58.0	+0.7
OBIP	Obispado Ponce	1.80	120	i P	Pb	00 11 30.6	-1.2
OBIP				IAML		00 12 00.9	
	comp=Z,3µm,1.4s						
CELP	Cerrillos	1.80	119		Pn	00 11 29.1	-0.6
CELP				IAML		00 11 58.1	
	comp=Z,5µm,0.7s						
CELP				IAML		00 11 59.2	
	comp=Z,8µm,1.3s						
ECPR	Experimental S	1.89	109		Pn	00 11 30.6	-0.3
ECPR				IAML		00 12 06.1	
	comp=Z,9µm,0.2s						
ECPR	Experimental S	1.89	109	⇓eP	Pb	00 11 32.4	-1.0
ECPR				eS	Sg	00 11 58.8	-1.4
BANI	BANI	2.09	255		Pn	00 11 35.2	+1.4
GCPR	Guaynabo City	2.14	107		Pn	00 11 34.6	+0.3
GCPR	Guaynabo City	2.14	107		Sg	00 12 05.3	-3.0
GCPR	Guaynabo City	2.14	107	⇓eP	Pb	00 11 36.4	-1.3
GCPR				eS	Sg	00 12 05.3	-3.0
SJG	San Juan	2.15	113	P	Pn	00 11 35.6	+1.1
	comp=Z,212nm,0.3s,baz=313,slow=10,SNR=314						
SJG				S	Sb	00 12 02.8	-1.5
	comp=Z,2µm,0.3s,baz=262,slow=22,SNR=8.9						
SJG				LR	LR	00 12 51.7	
	comp=Z,735nm,18.2s,baz=282,slow=51						
	comp=Z,538nm,0.3s						
SJG	San Juan	2.15	113		Pn	00 11 34.6	+0.1
SJG	San Juan	2.15	113	IAML		00 12 08.3	
	comp=Z,5µm,0.3s						
SJG				IAML		00 12 08.6	
	comp=Z,4µm,0.4s						
SJG	San Juan	2.15	113	P	Pb	00 11 35.8	-2.1
SJG				S	Sb	00 12 03.8	-0.6
SJG	San Juan	2.15	113	eP	Pn	00 11 35.7	+1.1
SJG	San Juan	2.15	113	⇓eP	Pb	00 11 36.1	-1.8
SJG				eS	Sg	00 12 05.8	-2.9
SJG	San Juan	2.15	113	i P	Pb	00 11 36.1	-1.8
SJG				IAML		00 12 10.6	
	comp=Z,2µm,0.5s						
PDPR	Patillas Dam,	2.30	114		Pn	00 11 36.4	-0.1
PDPR				IAML		00 12 13.8	
	comp=Z,4µm,1.4s						
SC01	Santiago de lo	2.40	282		Pn	00 11 39.8	+1.8
SC01	Santiago de lo	2.40	282	i P	Pb	00 11 41.7	-0.4
HUMP	Col San Antoni	2.41	109		Sb	00 12 11.5	-0.2
HUMP	Col San Antoni	2.41	109		Pn	00 11 37.9	-0.2
HUMP				IAML		00 12 15.6	
	comp=Z,3µm,0.2s						
HUMP	Col San Antoni	2.41	109	⇑eP	Pb	00 11 40.3	-1.9
HUMP				eS	Sb	00 12 11.5	-0.2
CUPR	Culebra, Puert	2.88	103		Pn	00 11 44.2	-0.3
SDDR	Presa de Saban	2.89	271		Pn	00 11 46.6	+1.9
SDDR	Presa de Saban	2.89	271	eP	Pn	00 11 46.8	+2.1
SDDR				eS	Sn	00 12 16.1	-3.0
SDDR				IAML		00 12 30.4	
	comp=Z,5µm,1.0s						
SDDR				IAML		00 12 34.4	
	comp=Z,4µm,0.7s						
SDDR	Presa de Saban	2.89	271	P	Pn	00 11 47.9	+3.2
SDDR				S	Sb	00 12 24.8	-0.8
SDDR	Presa de Saban	2.89	271	eP	Pn	00 11 47.6	+2.9
SDDR	Presa de Saban	2.89	271	i P	Pn	00 11 48.1	+3.4
SDDR				IAML		00 12 34.2	
	comp=Z,2µm,0.9s						
LOPP1	Punta Rusia, P	2.93	288	i P	Pn	00 11 46.4	+1.1
LOPP1				IAML		00 12 40.9	
	comp=Z,4µm,0.5s						
LONE3	El Aguacate, B	3.07	264	i P	Pb	00 11 52.0	-1.8
LONE3				IAML		00 12 41.6	
	comp=Z,924nm,1.8s						
LODU1	El Espartillar	3.13	259	i P	Pb	00 11 52.3	-2.3
LODU1				IAML		00 12 36.0	
	comp=Z,3µm,0.8s						
LOVI	El Cajuil, Ovi	3.19	249	i P	Pb	00 11 52.8	-2.9
LOVI				eS	Sn	00 12 30.5	+4.0
LOVI				IAML		00 12 31.9	
	comp=Z,463nm,1.1s						
LOBH	Bahia de las A	3.41	252	i P	Pb	00 11 56.7	-2.7
LOBH				IAML		00 12 43.7	
	comp=Z,528nm,0.9s						
GRTK	Grand Turk	3.72	314		Pn	00 11 55.3	-0.8
GRTK				IAML		00 12 39.5	
	comp=Z,762nm,0.6s						
GRTK				IAML		00 13 07.3	
	comp=Z,1µm,1.2s						
GRTK	Grand Turk	3.72	314	eP	Pn	00 11 55.0	-1.0
GRTK				eS	Sn	00 12 30.8	-8.7
GRTK				IAML		00 12 39.4	
	comp=Z,620nm,0.3s						
GRTK				IAML		00 12 40.3	
	comp=Z,588nm,0.3s						
GRTK	Grand Turk	3.72	314	P	Pn	00 11 55.1	-1.0
GRTK				S	Sn	00 12 36.6	-2.9
GRTK	Grand Turk	3.72	314	i P	Pn	00 11 55.2	-0.8
GRTK				eS	Sn	00 12 37.4	-2.2
GRTK				IAML		00 12 39.9	
	comp=Z,247nm,0.5s						
SABA	Saba	4.93	105		Pn	00 12 17.7	+5.0
SABA	Saba	4.93	105		Pn	00 12 11.0	-1.7
SABA				IAML		00 13 49.5	
	comp=N,397nm,1.0s						
SABA				IAML		00 13 50.8	
	comp=E,913nm,0.9s						
SABA	Saba	4.93	105	⇑eP	Pn	00 12 17.7	+5.0
SMRT	St. Maarten	4.98	100		Pn	00 12 13.5	0.0
SMRT				IAML		00 13 18.6	
	comp=E,388nm,0.2s						
SMRT				IAML		00 13 23.2	
	comp=N,421nm,0.4s						
SEUS	St. Eustatius	5.20	105	Pn	Pn	00 12 15.9	-0.5
SEUS				IAML		00 13 47.7	
	comp=E,338nm,1.5s						
SEUS				IAML		00 15 12.1	
	comp=N,685nm,0.1s						
SKI	Saint Kitts	5.47	106	eP	Pb	00 12 27.3	-7.3
MBFL	Flemmings, Mon	6.14	110	eP	Pn	00 12 31.7	+2.2
ANWB	Willy Bob	6.26	101	P	Pn	00 12 32.9	+1.9
	comp=N,173nm,1.0s						
ANWB				S	Sn	00 13 39.7	-2.6
	comp=N,173nm,1.0s						
ANWB	Willy Bob	6.26	101	eP	Pn	00 12 32.8	+1.8
QMBU	Quimbuelo	6.32	282	eP	Pn	00 12 33.1	+1.2
QMBU				eS	Sn	00 13 36.9	-6.9
NMDO	Nuevo Mundo	6.55	285		Pn	00 12 37.1	+2.1
MOAC	Moa	6.55	286	eP	Pn	00 12 35.8	+0.8
MOAC				eS	Sn	00 13 41.7	-7.7
GTBY	Guantanamo Bay	6.56	280	P	Pn	00 12 40.1	+5.0
	comp=N,113nm,1.0s						
GTBY				S	Sn	00 13 45.3	-4.3
	comp=N,113nm,1.0s						
DHSZ	Broadband at M	6.72	112	eP	Pn	00 12 39.5	+2.1
GDHS	Morne Mazeau,	6.72	112		Pn	00 12 36.3	-1.2
ATGZ	Broadband at L	6.83	114	eP	Pn	00 12 41.2	+2.3
MMLZ	Guadeloupe Bro	6.91	114	eP	Pn	00 12 44.0	+4.1
CBE	Ff, Capester	6.95	113		Pb	00 12 49.8	-10
CBE					Sn	00 14 05.9	+6.7
CBE	Ff, Capester	6.95	113	Pn	Pn	00 12 39.8	-0.7
CBE	Ff, Capester	6.95	113	⇑eP	Pb	00 12 49.8	-10
CBE				eS	Sn	00 14 05.9	+6.7
TBG	Guadaloupe-3	7.01	115	eP	Pn	00 12 43.3	+1.9
RCC	Rio Carpintero	7.11	280	eP	Pn	00 12 44.2	+1.5
RCC				eS	Sn	00 13 56.3	-6.9
MAGL	Barre de l'ile	7.28	113		Pn	00 12 44.7	-0.4
MARVS	Santiago de Cu	7.30	279	eP	Pn	00 12 46.9	+1.5
MARVS				⇓eS	Sn	00 14 00.9	-7.0
DSDZ	La Diserade, G	7.33	110	eP	Pn	00 12 49.5	+3.8
GDSD	La Dsirade Is	7.33	110		Pn	00 12 45.7	0.0
DSLB	Salisbury	7.39	117	eP	Pn	00 12 48.6	+1.9
CHIV	Chivirico	7.78	279	Pn	Pn	00 12 53.5	+1.6
CXM	Morne La Croix	7.92	120	Pn	Pn	00 12 53.4	-0.6
URIC	Uribia, Colomb	8.07	207	P	Pn	00 12 55.0	-1.0
	comp=N,21nm,1.4s						
URIC				S	Sn	00 14 12.7	-14
	comp=N,21nm,1.4s						
BIM	Bigot	8.16	122	Pn	Pn	00 12 57.7	+0.4
BIM	Bigot	8.16	122	eP	Pn	00 12 57.6	+0.4
MPOM	Morne Pois Mar	8.37	121	Pn	Pn	00 12 59.4	-0.7
SLBI	Saint Lucia, B	8.52	124	eP	Pn	00 13 02.7	+0.6
SVB	Belmont	8.78	129	eP	Pn	00 13 07.8	+2.2
SDV	Santo Domingo	10.28	193	P	Pn	00 13 27.5	+1.0
	comp=N,3.3nm,0.3s,baz=44,slow=7.0,SNR=11						
SDV				S	Sn	00 15 17.7	-3.8
	comp=N,13nm,0.6s,baz=90,slow=19,SNR=2.2						
SDV				LR	LR	00 17 45.2	
	comp=N,425nm,20.9s,baz=42,slow=39						
	comp=N,7.0nm,0.3s						
SDV	Santo Domingo	10.28	193		Pn	00 13 25.2	-1.2
SDV	Santo Domingo	10.28	193	eP	Pn	00 13 27.7	+1.3
SDV	Santo Domingo	10.28	193	P	Pn	00 13 20.6	-5.8
	comp=N,488nmcomp=N,34nm,0.7s						
TRN	Trinidad (W)	10.58	140	eP	Pn	00 13 34.5	+4.2
PAMC	Pamplona, Colo	12.34	201	P	Pn	00 13 53.6	-1.3
	comp=N,309nmcomp=N,27nm,1.0s						
ROSC	El Rosal	15.24	204	P	P	00 14 36.6	-2.5
	comp=N,2.7nm,0.3s,baz=3.2,slow=17,SNR=9.6						
ROSC				LR	LR	00 21 12.0	
	comp=N,204nm,19.6s,baz=317,slow=40						
	comp=N,7.3nm,0.5s						
ROSC	El Rosal	15.24	204		Pn	00 14 31.6	-2.7
ORTC	Ortega, Tolima	16.45	205	P	Pn	00 14 50.4	+0.7
	comp=N,573nmcomp=N,83nm,1.0s						
SIUN	Universidad Ur	16.70	254		Pn	00 14 53.9	+1.1
SIUN				IAmb	IAmb	00 15 04.5	
	comp=Z,8.3nm,1.0s						
456A	Hilliard	17.12	316		Pn	00 14 57.7	-0.2
456A				IAmb	IAmb	00 15 01.8	
	comp=Z,37nm,0.8s						
BRU2	Volcan	17.28	236		Pn	00 15 00.5	+0.3
BRU2				IAmb	IAmb	00 15 13.0	
	comp=Z,35nm,1.0s						
Y58A	Scranton	18.04	328		Pn	00 15 10.7	+1.3
Y58A				IAmb	IAmb	00 15 34.4	
	comp=Z,25nm,0.6s						
BOAV	Boa Vista	18.11	154		Pn	00 15 09.1	-1.3
BOAV	Boa Vista	18.11	154	eP	P	00 15 10.7	+0.1
POPC	Popayan, Colom	18.29	208	P	P	00 15 14.2	+1.3
	comp=Z,11nm,1.2s						
JTS	Las Juntas de	18.31	244	LR	LR	00 22 02.2	
	comp=Z,104nm,20.7s,baz=29,slow=36						
V61A	Roper	18.31	338	P	P	00 15 12.9	+0.3
X58A	Rowland	18.40	330	P	P	00 15 12.9	-0.8
TIGA	Tifton	18.61	315	P	P	00 15 17.2	+1.2
BIRD	Birdtown, Kers	19.03	328	P	P	00 15 20.4	-0.2
SGC2	Sao Gabriel da	19.03	176	P	Pn	00 15 21.3	-0.2
	comp=Z,582nmcomp=Z,30nm,1.1s						
154A	Montrose	19.05	318	P	P	00 15 21.4	+0.5
JSC	Jenkinsville	19.16	325	P	P	00 15 21.8	-0.3
W57A	Gilead	19.20	329	P	P	00 15 23.5	+1.1
V58A	Windy Hill, Pi	19.33	332	P	P	00 15 24.6	+0.8
352A	Blakely	19.55	313	P	P	00 15 27.5	+1.2
352A				IAmb	IAmb	00 16 07.0	
	comp=Z,35nm,1.3s						
HODGE	Hodges	19.68	323	P	P	00 15 28.3	+0.6
T59A	Double "B" Far	19.72	337		P	00 15 29.1	+1.0
T59A				IAmb	IAmb	00 15 30.2	
	comp=Z,40nm,1.4s						
GOGA	Godfrey	19.81	320		P	00 15 30.6	+1.4
KMSC	Kings Mountain	19.86	327	P	P	00 15 30.0	+0.3
PAULI	Pauline	19.87	325	P	P	00 15 30.4	+0.6
152A	Waverly Hall	20.12	316	P	P	00 15 34.4	+1.8
152A				IAmb	IAmb	00 15 37.5	
	comp=Z,19nm,0.9s						
U56A	King	20.36	331	P	P	00 15 36.0	+0.9
V55A	Taylorsville	20.36	328	P	P	00 15 35.8	+0.7
Y52A	Lilburn	20.48	320	P	P	00 15 37.3	+0.8
BG3	Lake Jocassee	20.61	324	P	P	00 15 38.6	+0.7
R58B	Mineral	20.72	338	P	P	00 15 39.8	+0.8
R58B				IAmb	IAmb	00 15 41.5	
	comp=Z,22nm,1.0s						
CBN	Corbin Frederi	20.76	339	P	P	00 15 39.7	+0.2
CBN				IAmb	IAmb	00 16 08.9	
	comp=Z,24nm,0.8s						
250A	Grady	20.77	312		P	00 15 41.0	+1.4
250A				IAmb	IAmb	00 15 44.7	
	comp=Z,34nm,0.9s						
BRAL	Brewton	20.89	309	P	P	00 15 42.2	+1.3
V53A	Saluda	21.05	325	IAmb	IAmb	00 15 45.5	
	comp=Z,31nm,1.1s						
BLA	Blacksburg	21.09	332		P	00 15 43.5	+0.4
BLA				IAmb	IAmb	00 15 45.5	
	comp=Z,28nm,1.1s						
OTAV	Otavalo	21.14	209		P	00 15 43.7	-0.4
OTAV				IAmb	IAmb	00 15 54.8	
	comp=Z,42nm,1.2s						
OTAV	Otavalo	21.14	209	eP	P	00 15 46.6	+2.5
OTAV	Otavalo	21.14	209	P	P	00 15 45.6	+1.5
U54A	Nelsons Funny	21.18	328	P	P	00 15 44.1	-0.1
U54A				IAmb	IAmb	00 15 57.0	
	comp=Z,22nm,1.0s						
W52A	Murphy	21.25	322	P	P	00 15 46.3	+1.5
P61A	Hammonton	21.40	346	P	P	00 15 48.0	+1.7
X51A	Calhoun	21.44	320	P	P	00 15 48.5	+1.7
X51A				IAmb	IAmb	00 16 10.2	
	comp=Z,20nm,1.1s						
TKL	Tuckaleechee C	21.57	324	P	P	00 15 49.4	+1.2
	comp=Z,18nm,1.0s,baz=147,slow=11,SNR=15						
TKL				S	S	00 19 36.1	-11
	comp=Z,3.7nm,0.5s,baz=36,slow=18,SNR=4.6						
TKL				LR	LR	00 23 51.5	
	comp=Z,194nm,20.6s,baz=127,slow=36						
	comp=Z,18nm,1.0s						
TKL	Tuckaleechee C	21.57	324		P	00 15 48.9	+0.7
TKL				IAmb	IAmb	00 15 50.6	
	comp=Z,20nm,0.9s						
APG	El Apazote	21.61	263	P	P	00 15 50.5	+1.4
	comp=Z,0.8nm,0.9s,baz=156,slow=11,SNR=4.0						
APG				LR	LR	00 23 57.7	
	comp=Z,9.7nm,20.9s,baz=68,slow=36						
SDMD	Soldier's Deli	21.70	342	P	P	00 15 50.9	+1.4
WUPA	West Chester U	21.84	345	P	P	00 15 51.0	-0.1
CPCT	Cooper Cave	21.85	322		P	00 15 52.0	+0.8
CPCT				IAmb	IAmb	00 15 53.6	
	comp=Z,20nm,0.8s						
R55A	Marlinton	21.86	334		P	00 15 51.2	-0.1
R55A				IAmb	IAmb	00 15 54.0	
	comp=Z,19nm,0.9s						
LRAL	Lakeview Retre	21.88	314		P	00 15 51.6	+0.1
FPAL	Fort Paine	21.89	319		P	00 15 51.4	-0.3
S54A	Dingess, Beckl	21.97	331	P	P	00 15 53.0	+0.5
S54A				IAmb	IAmb	00 15 54.5	
	comp=Z,30nm,0.9s						
Y49A	Blount Mountai	21.97	316		P	00 15 52.9	+0.3
Y49A				IAmb	IAmb	00 15 58.5	
	comp=Z,19nm,0.9s						
SLOR	San Lorenzo -	22.01	208	P	P	00 15 52.7	-0.9
TZTN	Tazewell	22.09	326		P	00 15 54.3	+0.4
MVL	Millersville	22.10	343		P	00 15 55.2	+1.3
P57A	Homestead Farm	22.13	340	P	P	00 15 54.3	+0.1
W50A	Signal Mountai	22.14	320	P	P	00 15 54.6	+0.2
W50A				IAmb	IAmb	00 15 57.1	
	comp=Z,25nm,1.0s						
Q56A	Snyder Ridge,	22.15	337	P	P	00 15 54.8	+0.4
Q56A				IAmb	IAmb	00 16 07.6	
	comp=Z,30nm,1.2s						
CPNY	Central Park	22.30	348	P	P	00 15 56.5	+0.5
CPNY				IAmb	IAmb	00 16 08.5	
	comp=Z,44nm,1.4s						
BRNJ	Basking Ridge	22.32	347	P	P	00 15 58.4	+2.2
N62A	Caumsett State	22.35	350	P	P	00 15 58.1	+1.6
PAGS	Pennsylvania G	22.42	343	P	P	00 15 57.8	+0.6
PAL	Palisades	22.50	349	P	P	00 15 59.3	+1.2
PAL				IAmb	IAmb	00 16 05.1	
	comp=Z,30nm,1.1s						
SWET	Sewanee	22.53	319	P	P	00 15 58.9	+0.3
SWET				IAmb	IAmb	00 16 00.9	
	comp=Z,12nm,0.8s						
TEFE	Tefe	22.61	171	eP	P	00 16 00.5	+1.1
Z47A	Carrollton	22.71	313	P	P	00 16 01.1	+0.7
Z47A				IAmb	IAmb	00 16 06.7	
	comp=Z,20nm,1.0s						
Q54A	Coxs Mills	22.75	334	P	P	00 16 01.1	+0.4
Q54A				IAmb	IAmb	00 16 04.4	
	comp=Z,29nm,1.0s						
X48A	Hartselle	22.75	316		P	00 16 00.4	-0.4
S51A	Beattyville	22.94	327	P	P	00 16 02.4	-0.4
S51A				IAmb	IAmb	00 16 28.4	
	comp=Z,12nm,0.9s						
N58A	Sunbury	22.99	343	P	P	00 16 04.8	+1.6
N58A				IAmb	IAmb	00 16 12.3	
	comp=Z,22nm,1.1s						
146A	Union	23.11	310	P	P	00 16 05.6	+1.0
SSPA	Standing Stone	23.14	341	P	P	00 16 05.8	+1.1
SSPA				IAmb	IAmb	00 16 38.1	
	comp=Z,19nm,0.9s						
T50A	Nancy	23.14	324		P	00 16 05.2	+0.3
T50A				IAmb	IAmb	00 16 21.2	
	comp=Z,13nm,1.0s						
MACA	Manacapuru-AM	23.21	161	eP	P	00 16 06.8	+1.1
U49A	Red Boiling Sp	23.32	322		P	00 16 07.2	+0.5
Q52A	Bidwell	23.35	332	P	P	00 16 07.8	+0.8
V48A	Smith Brothers	23.42	319	P	P	00 16 08.4	+0.7
V48A				IAmb	IAmb	00 16 44.0	
	comp=Z,28nm,1.5s						
R50A	Paris	23.81	327		P	00 16 12.0	+0.6
R50A				IAmb	IAmb	00 16 16.4	
	comp=Z,9.6nm,0.8s						
P52A	Corning	23.84	333	P	P	00 16 12.5	+0.8
P52A				IAmb	IAmb	00 16 13.6	
	comp=Z,16nm,0.9s						
Y45A	Yeager Farm, C	24.11	312	P	P	00 16 15.3	+1.0
O52A	Adamsville	24.12	334	P	P	00 16 15.0	+0.7
WVT	Waverly	24.30	319		P	00 16 16.6	+0.5
N53A	Lisbon	24.31	336	P	P	00 16 16.5	+0.4
N53A				IAmb	IAmb	00 16 35.9	
	comp=Z,16nm,1.0s						
OXF	Oxford	24.37	314	P	P	00 16 18.2	+1.5
ACSO	Alum Creek Sta	24.71	332	P	P	00 16 20.2	+0.5
WCI	Wyandotte Cave	24.82	324	P	P	00 16 21.2	+0.5
WCI				IAmb	IAmb	00 16 59.0	
	comp=Z,26nm,1.4s						
N51A	Ashland	25.01	334	P	P	00 16 22.8	+0.3
MMNY	Mt. Morris Dam	25.07	343	P	P	00 16 23.5	+0.5
O49A	Covington	25.29	330	P	P	00 16 26.2	+1.3
O49A				IAmb	IAmb	00 16 28.6	
	comp=Z,11nm,0.8s						
USIN	University of	25.41	322	P	P	00 16 26.8	+0.8
M50A	Fremont	25.70	334	P	P	00 16 30.5	+1.9
O48B	Farmland	25.73	329	P	P	00 16 30.0	+1.0
O48B				IAmb	IAmb	00 16 33.4	
	comp=Z,11nm,0.8s						
SIUC	Southern Illin	26.16	320	P	P	00 16 34.3	+1.4
SIUC				IAmb	IAmb	00 16 38.1	
	comp=Z,20nm,0.9s						
S44A	Carbondale	26.18	320	P	P	00 16 33.2	+0.1
OLIL	Olney	26.18	323	P	P	00 16 33.2	+0.2
OLIL				IAmb	IAmb	00 16 42.0	
	comp=Z,12nm,0.9s						
ITTB	Itaituba	26.25	151	eP	P	00 16 34.4	+0.5
P46A	Rosedale	26.31	325	P	P	00 16 35.6	+1.4
P46A				IAmb	IAmb	00 16 46.2	
	comp=Z,15nm,0.8s						
N47A	Urbana	26.48	329	IAmb	IAmb	00 16 41.0	
	comp=Z,20nm,1.0s						

AAM	**Ann Arbor**	**26.70**	**334**	P	**P**	**00 16 39.6**	**+1.9**
X40A	**Basin Creek Fa**	**26.77**	**310**	P	**P**	**00 16 40.5**	**+2.0**
X40A				IAmb	IAmb	00 17 00.7	
	comp=Z,12nm,1.2s						
WHAR	**Wooly Hollow**	**26.78**	**312**		**P**	**00 16 40.0**	**+1.5**
WHAR				IAmb	IAmb	00 16 60.0	
	comp=Z,16nm,1.0s						
SFIN	**Lafayette**	**26.80**	**327**		**P**	**00 16 39.6**	**+0.9**
SFIN				IAmb	IAmb	00 16 44.0	
	comp=Z,15nm,0.9s						
SADO	**Sadowa**	**27.30**	**343**	LR	LR	00 27 47.0	
	comp=Z,165nm,19.2s,baz=172,slow=37						
P43A	**Skaggs, Pawnee**	**27.61**	**323**	P	**P**	**00 16 46.5**	**+0.6**
MGMO	**Mountain Grove**	**27.77**	**316**	P	**P**	**00 16 48.8**	**+1.3**
MGMO				IAmb	IAmb	00 16 53.7	
	comp=Z,7.4nm,0.9s						
ATAH	**Atahualpa**	**27.80**	**202**	LR	LR	00 29 14.6	
	comp=Z,259nm,21.2s,baz=36,slow=39						
NNA	**Nana**	**31.90**	**196**	LR	LR	00 31 45.4	
	comp=Z,86nm,21.0s,baz=340,slow=39						
TXAR	**Lajitas Array**	**33.82**	**295**	P	**P**	**00 17 42.0**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=110,slow=8.6,SNR=12						
TXAR				PcP	**PcP**	**00 20 20.0**	**0.0**
	comp=Z,0.4nm,0.8s,baz=119,slow=2.9,SNR=3.3						
TXAR				LR	LR	00 35 00.1	
	comp=Z,82nm,19.5s,baz=58,slow=42						
	comp=Z,1.0nm,0.8s						
TX31	**Lajitas Ar. Si**	**33.82**	**295**		**P**	**00 17 41.6**	**+0.6**
TX31				IAmb	IAmb	00 18 15.3	
	comp=Z,8.5nm,1.3s						
ECSD	**EROS Data Cent**	**34.30**	**322**		**P**	**00 17 47.3**	**+2.3**
ECSD				IAmb	IAmb	00 17 54.9	
	comp=Z,7.8nm,0.8s						
SMTB	**Santa Maria do**	**34.34**	**142**	*e*P	**P**	**00 17 44.9**	**-0.6**
LPAZ	**La Paz**	**35.03**	**180**	P	**P**	**00 17 53.0**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=353,slow=3.4,SNR=6.1						
LPAZ				LR	LR	00 32 39.1	
	comp=Z,90nm,19.9s,baz=22,slow=37						
	comp=Z,1.8nm,0.7s						
LPAZ	**La Paz**	**35.03**	**180**		**P**	**00 17 53.7**	**+1.7**
LPAZ				IAmb	IAmb	00 18 05.5	
	comp=Z,5.2nm,0.8s						
LPAZ	**La Paz**	**35.03**	**180**	*e*P	**P**	**00 17 52.9**	**+0.8**
VHRN	**Van Horn**	**35.20**	**297**		**P**	**00 17 55.1**	**+2.0**
VHRN				IAmb	IAmb	00 18 02.4	
	comp=Z,4.9nm,0.8s						
SIV	**San Ignacio**	**35.44**	**168**	LR	LR	00 33 04.6	
	comp=Z,101nm,18.9s,baz=296,slow=37						
K30B	**Basset**	**35.51**	**319**	P	**P**	**00 17 56.9**	**+1.5**
MNTX	**Cornudas Mount**	**35.72**	**298**	P	**P**	**00 17 58.0**	**+0.7**
MNTX				IAmb	IAmb	00 18 36.0	
	comp=Z,8.9nm,1.2s						
SCHQ	**Schefferville**	**35.82**	**1**	P	**P**	**00 17 59.2**	**+1.4**
	comp=Z,6.1nm,0.9s,baz=157,slow=6.9,SNR=8.3						
SCHQ				LR	LR	00 31 23.3	
	comp=Z,85nm,19.9s,baz=194,slow=34						
	comp=Z,6.1nm,0.9s						
EPLO	**Experimental L**	**36.82**	**332**		**P**	**00 18 07.6**	**+1.2**
EPLO				IAmb	IAmb	00 18 15.3	
	comp=Z,17nm,1.1s						
AGMN	**Agassiz Nation**	**36.84**	**329**		**P**	**00 18 07.3**	**+0.7**
AGMN				IAmb	IAmb	00 18 15.2	
	comp=Z,6.6nm,0.8s						
PB16	**IPOC Station P**	**37.08**	**182**	P	**P**	**00 18 07.5**	**-2.1**
ANMO	**Albuquerque**	**37.35**	**303**	P	**P**	**00 18 12.3**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=120,slow=11,SNR=1.6						
ANMO				LR	LR	00 34 58.9	
	comp=Z,92nm,21.3s,baz=128,slow=38						
	comp=Z,0.4nm,0.4s						
SDCO	**Great Sand Dun**	**37.44**	**308**	P	**P**	**00 18 13.9**	**+1.6**
H07S1	**FLORES T-PHASE**	**37.85**	**50**	T	T	00 58 23.1	
	SNR=7.1						
H07N1	**FLORES T-PHASE**	**38.02**	**49**	T	T	00 58 26.6	
	SNR=26						
ULM	**Lac du Bonnet**	**38.20**	**331**	P	**P**	**00 18 18.8**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=138,slow=9.3,SNR=5.9						
ULM				LR	LR	00 33 39.4	
	comp=Z,120nm,19.7s,baz=159,slow=35						
	comp=Z,2.0nm,0.8s						
GO01	**Chusmiza**	**38.40**	**181**	P	**P**	**00 18 18.2**	**-2.5**
GO01				IAmb	IAmb	00 18 28.6	
	comp=Z,10nm,0.8s						
HMBC	**Humberstone**	**39.03**	**182**	IAmb	IAmb	00 18 38.0	
	comp=Z,11nm,0.7s						
LPIG	**La Paz**	**39.36**	**285**	LR	LR	00 36 32.8	
	comp=Z,56nm,18.2s,baz=139,slow=39						
PB01	**IPOC Station P**	**39.78**	**182**	IAmb	IAmb	00 18 37.6	
	comp=Z,9.7nm,0.8s						
PV07	**Paradox Valley**	**40.02**	**308**	P	**P**	**00 18 34.3**	**+0.5**
PV13	**Radium Mtn., P**	**40.06**	**307**	P	**P**	**00 18 35.5**	**+1.3**
PV13				IAmb	IAmb	00 18 45.2	
	comp=Z,14nm,1.3s						
PV12	**Saucer Basin,**	**40.10**	**307**	P	**P**	**00 18 35.7**	**+1.2**
PV12				IAmb	IAmb	00 18 44.3	
	comp=Z,11nm,0.8s						
PV03	**Paradox Valley**	**40.11**	**307**	P	**P**	**00 18 34.9**	**+0.3**
PV20	**West Nyswonger**	**40.23**	**307**	P	**P**	**00 18 36.2**	**+0.7**
PV20				IAmb	IAmb	00 18 45.5	
	comp=Z,18nm,1.1s						
PB07	**IPOC Station P**	**40.47**	**182**	P	**P**	**00 18 34.9**	**-2.6**
PB07				IAmb	IAmb	00 18 45.3	
	comp=Z,8.3nm,0.8s						
PDAR	**Pinedale Array**	**42.10**	**314**	P	**P**	**00 18 53.5**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=108,slow=9.5,SNR=4.4						
PDAR				PcP	**PcP**	**00 20 45.5**	**0.0**
	comp=Z,1.1nm,0.8s,baz=120,slow=3.9,SNR=5.6						
PDAR				LR	LR	00 37 50.4	
	comp=Z,54nm,18.8s,baz=92,slow=38						
	comp=Z,0.4nm,0.8s						
PB14	**IPOC Station P**	**43.38**	**183**	P	**P**	**00 18 59.9**	**-1.5**
PB14				IAmb	IAmb	00 19 09.5	
	comp=Z,11nm,0.9s						
PSUT	**Pine Spring**	**43.98**	**306**	P	**P**	**00 19 06.6**	**+0.4**
PSUT				IAmb	IAmb	00 19 22.2	
	comp=Z,10nm,1.4s						
FCC	**Fort Churchill**	**43.99**	**341**		**P**	**00 19 05.6**	**0.0**
FCC				IAmb	IAmb	00 19 15.6	
	comp=Z,12nm,0.8s						
QLMT	**Earthquake Lak**	**44.12**	**316**	P	**P**	**00 19 07.8**	**+0.6**
FRB	**Frobisher Bay**	**44.75**	**360**	LR	LR	00 36 33.9	
	comp=Z,154nm,19.7s,baz=170,slow=34						
PFO	**Pinyon Flats O**	**45.24**	**299**	LR	LR	00 40 36.5	
	comp=Z,49nm,20.5s,baz=88,slow=39						
CPUP	**Villa Florida**	**46.25**	**166**	P	**P**	**00 19 22.6**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=0.0,slow=5.1,SNR=3.3						
CPUP				LR	LR	00 38 42.9	
	comp=Z,59nm,21.4s,baz=340,slow=36						
	comp=Z,0.7nm,0.3s						
NVAR	**Mina Array Bea**	**47.39**	**305**	P	**P**	**00 19 33.7**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=75,slow=9.3,SNR=1.2						
	comp=Z,0.3nm,0.5s						
NEW	**Newport**	**49.00**	**318**	LR	LR	00 41 26.0	
	comp=Z,130nm,18.0s,baz=132,slow=37						
SFJD	**Kangerlussuaq**	**49.34**	**9**	LR	LR	00 39 07.2	
	comp=Z,93nm,19.4s,baz=172,slow=34						
ZON	**Zonda**	**50.22**	**180**		**P**	**00 19 53.5**	**-1.1**
ZON				IAmb	IAmb	00 19 56.8	
	comp=Z,9.2nm,0.8s						
YKA	**Yellowknife Ar**	**53.90**	**335**	P	**P**	**00 20 20.9**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=116,slow=6.4,SNR=7.3						
YKA				LR	LR	00 43 07.9	
	comp=Z,139nm,19.8s,baz=106,slow=36						
	comp=Z,1.1nm,0.9s						
SUMG	**Summit**	**56.26**	**10**		**P**	**00 20 40.2**	**+1.2**
SUMG				IAmb	IAmb	00 20 46.6	
	comp=Z,9.3nm,1.0s						
SUMG	**Summit**	**56.26**	**10**	*i* P	**P**	**00 20 40.0**	**+1.0**
BBB	**Bella Bella**	**56.84**	**320**	LR	LR	00 45 12.9	
	comp=Z,98nm,19.6s,baz=250,slow=36						
RES	**Resolute Bay**	**57.58**	**352**	LR	LR	00 45 14.8	
	comp=Z,62nm,19.5s,baz=16,slow=36						
ESDC	**Sonseca Array**	**58.50**	**55**	P	**P**	**00 20 55.7**	**+0.8**
	comp=Z,3.1nm,0.9s,baz=271,slow=7.2,SNR=24						
ESDC				LR	LR	00 43 26.7	
	comp=Z,45nm,19.2s,baz=266,slow=33						
	comp=Z,3.1nm,0.9s						
ESDC	**Sonseca Array**	**58.50**	**55**		**P**	**00 20 56.3**	**+1.3**
PLCA	**Paso Flores**	**59.42**	**182**	P	**P**	**00 21 01.2**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=337,slow=7.7,SNR=2.2						
PLCA				LR	LR	00 51 26.1	
	comp=Z,61nm,18.7s,baz=244,slow=41						
	comp=Z,2.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**60.47**	**37**	P	**P**	**00 21 09.1**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=263,slow=7.1,SNR=4.3						
	comp=Z,3.0nm,0.8s						
A36M	**Sachs Harbour**	**62.14**	**343**		**P**	**00 21 18.9**	**-0.3**
DBIC	**Dimbokro**	**62.71**	**92**	P	**P**	**00 21 24.5**	**+0.5**
	comp=Z,5.9nm,0.7s,baz=324,slow=8.0,SNR=7.7						
DBIC				LR	LR	00 44 26.9	
	comp=Z,34nm,21.4s,baz=328,slow=32						
	comp=Z,5.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**67.09**	**83**	P	**P**	**00 21 52.3**	**-0.2**
	comp=Z,4.1nm,0.9s,baz=273,slow=6.5,SNR=18						
	comp=Z,4.1nm,0.9s						
ILAR	**Eielson Array**	**68.18**	**333**	P	**P**	**00 21 58.4**	**-0.2**
	comp=Z,1.3nm,1.0s,baz=92,slow=5.1,SNR=6.2						
ILAR				LR	LR	00 52 14.9	
	comp=Z,179nm,19.1s,baz=90,slow=36						
	comp=Z,1.3nm,1.0s						
DAVA	**Damuels**	**68.33**	**46**	*i* pP	**P**	**00 22 01.5**	**+1.4**
	comp=Z,12nm,1.5s						
TAM	**Tamanrasset**	**68.37**	**72**		**P**	**00 22 00.8**	**+0.2**
NOA	**NORSAR Array B**	**68.50**	**31**	P	**P**	**00 22 02.0**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=273,slow=6.5,SNR=3.5						
	comp=Z,1.2nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**68.65**	**46**		**P**	**00 22 02.4**	**+0.2**
RETA	**Reutte**	**68.91**	**46**	*i* pP	**P**	**00 22 04.0**	**+0.5**
	comp=Z,6.8nm,1.2s						
FETA	**Feichten**	**68.93**	**46**	*i* pP	**P**	**00 22 04.6**	**+0.8**
	comp=Z,6.2nm,0.9s						
MOTA	**Moosalm**	**69.16**	**46**	*e*P	**P**	**00 22 02.5**	**-2.7**
	comp=Z,6.6nm,1.2s						
SQTA	**Sankt Quirin**	**69.24**	**46**	*i* pP	**P**	**00 22 06.4**	**+0.8**
	comp=Z,6.4nm,1.2s						
HFS	**Hagfors**	**69.75**	**32**	LR	LR	00 48 53.9	
	comp=Z,57nm,20.3s,baz=254,slow=32						
CESX	**Cesi**	**70.77**	**51**		**P**	**00 22 14.2**	**-0.8**
SABO	**M.te Sabotino**	**71.02**	**47**	P	**P**	**00 22 16.9**	**+0.4**
FDMO	**Fiordimonte**	**71.08**	**50**	P	**P**	**00 22 16.2**	**-0.7**
GUMA	**Gualdo di Mace**	**71.25**	**50**	P	**P**	**00 22 18.1**	**+0.2**
VRAC	**Vranov**	**72.54**	**43**	LR	LR	00 54 16.9	
	comp=Z,28nm,18.0s,baz=326,slow=36						
MODS	**Modra-Piesok**	**73.14**	**44**	*e*P	**P**	**00 22 30.4**	**+1.3**
ARCES	**ARCESS Array B**	**73.70**	**21**	P	**P**	**00 22 31.9**	**-0.1**
	comp=Z,9.7nm,1.2s,baz=268,slow=4.5,SNR=2.1						
	comp=Z,9.7nm,1.2s						
AKASG	**Malin Array Be**	**80.15**	**40**	LR	LR	00 56 03.0	
	comp=Z,36nm,19.7s,baz=268,slow=34						
TIXI	**Tiksi**	**88.86**	**355**	LR	LR	01 01 59.7	
	comp=Z,42nm,21.6s,baz=11,slow=34						
MA2	**Magadan**	**95.53**	**341**	LR	LR	01 09 26.7	
	comp=Z,42nm,20.8s,baz=92,slow=37						
YAK	**Yakutsk**	**98.03**	**352**	LR	LR	01 11 38.1	
	comp=Z,34nm,19.1s,baz=294,slow=37						
MBAR	**Mbarara**	**98.69**	**88**	LR	LR	01 08 58.4	
	comp=Z,40nm,18.7s,baz=210,slow=35						
SUR	**Sutherland**	**99.14**	**121**	LR	LR	01 05 58.1	
	comp=Z,27nm,19.4s,baz=196,slow=33						
HHC	**Hu-ho-hao-te**	**120.50**	**0**	*e*P	PKPdf	00 29 43.0	-7.6
NJ2	**Nanjing**	**128.82**	**352**	*e*P	**PKPdf**	**00 30 01.4**	**-5.2**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
STKA	**Stephens Creek**	**150.25**	**239**	PKPbc	**PKPbc**	**00 30 48.9**	**-1.2**
	comp=Z,6.5nm,1.1s,baz=48,slow=5.0,SNR=4.8						
WRA	**Warramunga Arr**	**158.69**	**264**	PKP	**PKPdf**	**00 30 55.6**	**-1.4**
	comp=Z,1.4nm,1.0s,baz=101,slow=0.5,SNR=7.0						
ASAR	**Alice Springs**	**158.86**	**253**	PKP	**PKPdf**	**00 30 55.6**	**-1.6**
	comp=Z,0.5nm,0.8s,baz=158,slow=1.9,SNR=5.4						
ASAR				PKPab	**PKPab**	**00 31 31.2**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=97,slow=4.1,SNR=9.9						

*OSPL **04** 00:24:32.6±1.6, 19°.03N×68°.26W, h0km±19km, ML3.0, Presumed earthquake*

*NEIC **04** 00:24:32.6±1.3, 18°.86N±0°.06×68°.29W±0°.03, h10km±2km, ML3.3/43, Md2.8/8(RSPR), Error ellipse: s-maj=10.3km s-min=3.2km az=200.0*

*SDD **04** 00:24:33.3±2.0, 18°.95N×68°.21W, h11km±76km, MD3.4, ML3.4, MW3.5, Presumed earthquake*

*RSPR **04** 00:24:33.7, 19°.02N×68°.39W, h10km±31km, MD2.8/8*

ISC 04 00:24:32.3±1.1**, 18°.96N**±0°.04×**68°.25W**±0°.02**, h12**km±9km**,**
n53, σ**0s.78**/92**, 18C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.47**	**196**	*e*Pg	**Pb**	**00 24 42.3**	**-0.1**
PCDR				⇑*e*Pg	**Pg**	**00 24 42.6**	**+1.1**
PCDR				IAML		00 24 50.4	
	comp=N,1µm,0.6s						
HIDR	**Higuey Centro**	**0.58**	**230**	⇓*e*Pg	**Pg**	**00 24 43.9**	**+0.3**
HIDR				⇑*e*Sg	**Sg**	**00 24 51.8**	**+0.4**
HIDR				IAML		00 24 52.0	
	comp=N,2µm,0.2s						
HIDR	**Higuey Centro**	**0.58**	**230**	⇓*e*P	**Pg**	**00 24 43.9**	**+0.3**
HIDR				*e*S	**Sg**	**00 24 51.7**	**+0.4**
MIDR	**Miches**	**0.76**	**272**	⇓*e*Pg	**Pg**	**00 24 47.0**	**0.0**
MIDR				⇑*e*Sg	**Sb**	**00 24 58.7**	**+0.9**
MIDR				IAML		00 25 00.1	
	comp=N,342nm,0.5s						
IDE	**Isla Desecheo**	**0.93**	**128**		**Pg**	**00 24 49.7**	**-0.6**
IDE					**Sg**	**00 25 02.4**	**-0.1**
IDE	**Isla Desecheo**	**0.93**	**128**	⇑*i*P	**Pg**	**00 24 49.7**	**-0.6**
IDE				*e*S	**Sg**	**00 25 02.4**	**-0.1**
SMDR	**Samana, DR**	**0.95**	**290**		**Pg**	**00 24 50.0**	**-0.6**
SMDR					**Sn**	**00 25 05.1**	**+0.2**
SMDR	**Samana, DR**	**0.95**	**290**	⇑*e*Sg	**Sn**	**00 25 05.4**	**+0.5**
SMDR				IAML		00 25 07.1	
	comp=N,1µm,0.2s						
SMDR	**Samana, DR**	**0.95**	**290**	⇑*e*P	**Pg**	**00 24 50.0**	**-0.6**
DR12	**Loma Pena Alta**	**1.09**	**261**		**Pb**	**00 24 51.6**	**-1.5**
DR12				Sn	**Sg**	**00 25 07.7**	**+0.2**
HATOM	**Hato Mayor del**	**1.09**	**261**	⇓*e*Pg	**Pb**	**00 24 52.9**	**-0.3**
HATOM				⇓*e*Sg	**Sn**	**00 25 08.5**	**0.0**
HATOM				IAML		00 25 09.2	
	comp=N,234nm,0.2s						
AGPR	**Aguadilla, PR**	**1.19**	**114**		**Pb**	**00 24 54.6**	**-0.2**
AGPR					**Sn**	**00 25 11.6**	**+0.8**
AGPR				IAML		00 25 16.0	
	comp=N,716nm,0.5s						
AGPR				IAML		00 25 16.0	
	comp=N,734nm,0.3s						
AGPR	**Aguadilla, PR**	**1.19**	**114**	⇑*e*Pg	**Pb**	**00 24 54.4**	**-0.3**
AGPR				IAML		00 25 17.1	
	comp=N,592nm,0.5s						
AGPR	**Aguadilla, PR**	**1.19**	**114**	⇑*e*P	**Pb**	**00 24 54.4**	**-0.3**
AGPR				*e*S	**Sn**	**00 25 11.6**	**+0.8**
AGPR	**Aguadilla, PR**	**1.19**	**114**	*i* P	**Pb**	**00 24 54.2**	**-0.5**
AGPR				IAML		00 25 16.1	
	comp=Z,252nm,0.3s						
PRSN	**Puerto Rico Se**	**1.28**	**125**		**Pn**	**00 24 55.4**	**-0.7**
LSP	**Las Mesas**	**1.35**	**125**		**Pn**	**00 24 56.6**	**-0.5**
LSP					**Sb**	**00 25 14.4**	**-0.6**
LSP	**Las Mesas**	**1.35**	**125**	⇓*e*P	**Pn**	**00 24 56.6**	**-0.5**
LSP				*e*S	**Sb**	**00 25 14.4**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.44**	**131**		**Pn**	**00 24 57.3**	**-0.9**
CRPR				Sn	**Sn**	**00 25 15.0**	**-2.1**
CRPR	**Cabo Rojo, PR**	**1.44**	**131**	⇑*e*Pg	**Pn**	**00 24 57.9**	**-0.3**
CRPR				⇑*e*Sg	**Sg**	**00 25 18.1**	**-0.6**
CRPR				IAML		00 25 25.9	
	comp=N,285nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.44**	**131**	⇑*e*P	**Pb**	**00 24 59.4**	**+0.3**
CRPR				*e*S	**Sg**	**00 25 18.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.44**	**131**	*i* P	**Pn**	**00 24 57.8**	**-0.4**
CRPR				*e*S	**Sb**	**00 25 17.9**	**+0.5**
CRPR				IAML		00 25 24.4	
	comp=Z,226nm,0.6s						
MLPR	**Magueyes Islan**	**1.51**	**131**		**Pn**	**00 24 58.2**	**-1.0**
MLPR				Sn	**Sn**	**00 25 18.6**	**-0.2**
MLPR				IAML		00 25 20.8	
	comp=Z,299nm,0.4s						
NADR	**Nagua**	**1.57**	**285**	⇑*e*Pg	**Pb**	**00 25 01.1**	**-0.2**
NADR				⇑*e*Sg	**Sg**	**00 25 24.8**	**+1.9**
NADR				IAML		00 25 30.5	
	comp=N,2µm,0.4s						
UUPR	**Utuado, UPR, P**	**1.61**	**116**		**Pn**	**00 25 01.3**	**+0.7**
UUPR					**Sg**	**00 25 23.7**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.63**	**127**		**Pb**	**00 25 01.9**	**-0.4**
GBPR					**Sg**	**00 25 24.5**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.63**	**127**	⇑*e*P	**Pb**	**00 25 01.9**	**-0.4**
GBPR				*e*S	**Sg**	**00 25 24.5**	**-0.3**
SDD	**Santo Domingo**	**1.66**	**253**	Pn	**Pn**	**00 25 00.6**	**-0.6**
SDD				Sn	**Sn**	**00 25 20.9**	**-1.5**
SDD				IAML		00 25 25.9	
	comp=E,393nm,0.7s						
SDD				IAML		00 25 31.0	
	comp=N,346nm,0.6s						
SDD	**Santo Domingo**	**1.66**	**253**	*i* P	**Pn**	**00 25 00.5**	**-0.7**
SDD				*e*S	**Sn**	**00 25 22.7**	**+0.2**
DR08	**Loma La Naviza**	**1.68**	**270**	⇑*e*Pg	**Pb**	**00 25 03.4**	**+0.2**
DR08				⇑*e*Sg	**Sg**	**00 25 26.2**	**-0.2**
DR08				IAML		00 25 31.6	
	comp=N,9µm,0.2s						
EMPR	**Esperanza - Ma**	**1.70**	**106**		**Pb**	**00 25 03.1**	**-0.4**
EMPR					**Sg**	**00 25 27.8**	**+0.8**
EMPR	**Esperanza - Ma**	**1.70**	**106**	⇑*e*P	**Pb**	**00 25 03.1**	**-0.4**
EMPR				*e*S	**Sg**	**00 25 27.8**	**+0.8**
OBIP	**Obispado Ponce**	**1.81**	**120**		**Pn**	**00 25 03.6**	**+0.3**
OBIP					**Sb**	**00 25 28.0**	**0.0**
OBIP	**Obispado Ponce**	**1.81**	**120**	⇑*e*P	**Pn**	**00 25 04.2**	**+1.0**
OBIP				*e*S	**Sg**	**00 25 29.5**	**-1.0**
OBIP	**Obispado Ponce**	**1.81**	**120**	*i* P	**Pn**	**00 25 04.3**	**+1.0**
OBIP				IAML		00 25 32.8	
	comp=Z,132nm,0.5s						
CELP	**Cerrillos**	**1.81**	**119**		**Pn**	**00 25 03.8**	**+0.4**
CELP					**Sn**	**00 25 26.9**	**+0.5**
CELP				IAML		00 25 32.1	
	comp=Z,385nm,0.7s						
CELP				IAML		00 25 32.2	
	comp=Z,257nm,0.5s						
ECPR	**Experimental S**	**1.90**	**109**		**Pn**	**00 25 04.9**	**+0.3**
ECPR					**Sn**	**00 25 28.7**	**+0.2**
ECPR	**Experimental S**	**1.90**	**109**	⇑*i*P	**Pn**	**00 25 05.7**	**+1.1**
ECPR				*e*S	**Sb**	**00 25 31.4**	**+0.8**
BANI	**BANI**	**2.08**	**254**		**Pn**	**00 25 07.4**	**+0.2**
BANI				Sn	**Sn**	**00 25 32.8**	**-0.3**
GCPR	**Guaynabo City**	**2.15**	**107**		**Pn**	**00 25 08.9**	**+0.9**
GCPR					**Sn**	**00 25 35.8**	**+1.1**
GCPR	**Guaynabo City**	**2.15**	**107**	⇑*e*P	**Pb**	**00 25 10.2**	**-1.0**
GCPR				*e*S	**Sb**	**00 25 38.0**	**0.0**
SJG	**San Juan**	**2.16**	**113**		**Pn**	**00 25 09.0**	**+0.8**
SJG					**Sn**	**00 25 35.5**	**+0.6**
SJG	**San Juan**	**2.16**	**113**		**Pn**	**00 25 09.1**	**+0.9**
SJG				IAML		00 25 41.4	
	comp=Z,236nm,0.5s						
SJG				IAML		00 25 43.6	
	comp=Z,223nm,0.3s						
SJG	**San Juan**	**2.16**	**113**	⇑*i*P	**Pn**	**00 25 09.4**	**+1.2**
SJG				*e*S	**Sb**	**00 25 36.9**	**-1.3**
SJG	**San Juan**	**2.16**	**113**	*i* P	**Pn**	**00 25 09.4**	**+1.2**
SJG				IAML		00 25 40.4	
	comp=Z,110nm,0.4s						
PDPR	**Patillas Dam,**	**2.31**	**114**		**Pn**	**00 25 10.9**	**+0.6**
PDPR				Sn	**Sn**	**00 25 39.6**	**+1.0**
PDPR				IAML		00 25 45.3	
	comp=Z,127nm,0.7s						
PDPR				IAML		00 25 48.7	
	comp=Z,121nm,0.7s						
SC01	**Santiago de lo**	**2.39**	**282**	Pn	**Pn**	**00 25 11.4**	**+0.1**
HUMP	**Col San Antoni**	**2.42**	**109**		**Pn**	**00 25 12.3**	**+0.6**
HUMP				IAML		00 25 52.0	
	comp=Z,108nm,0.3s						
HUMP	**Col San Antoni**	**2.42**	**109**		**Sn**	**00 25 42.9**	**+1.7**
HUMP	**Col San Antoni**	**2.42**	**109**	⇓*i*P	**Pn**	**00 25 13.3**	**+1.6**
HUMP				*e*S	**Sn**	**00 25 42.9**	**+1.7**
SDDR	**Presa de Saban**	**2.88**	**271**		**Pn**	**00 25 18.7**	**+0.6**
SDDR				IAML		00 26 06.2	
	comp=Z,182nm,0.5s						
SDDR				IAML		00 26 07.2	
	comp=Z,163nm,0.6s						
CUPR	**Culebra, Puert**	**2.89**	**103**	Pn	**Pn**	**00 25 18.5**	**+0.3**
GRTK	**Grand Turk**	**3.71**	**314**	*i* P	**Pn**	**00 25 28.4**	**-1.1**
GRTK				IAML		00 26 15.5	
	comp=Z,62nm,2.9s						

*IDC **04** 00:41:45.0±2.2, 23°.51N×121°.74E, h0km, mb3.4/3, mbtmp3.4/3, MS2.6/1, Error ellipse: s-maj=173.9km s-min=26.8km az=64.0*

*JMA **04** 00:41:50.0±0.1, 23°.5N±0°.3×121°.6E±0°.8, h37km, MV3.3/13, TAIWAN REGION*

*TAP **04** 00:41:50.6, 23°.57N×121°.52E, h31km, ML3.8, C*

ISC 04 00:41:50.1±0.8**, 23°.54N**±0°.01×**121°.57E**±0°.02**, h31**km±5km**,**
n154, σ**0s.92**/244**, mb3.4**/3**, 1C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.14**	**249**	⇑*i*P	**Pn**	**00 41 56.6**	**+0.4**
HGSD				S	**Sb**	**00 42 02.4**	**+2.7**
TEGC	**Jichi Village**	**0.17**	**351**	*i* P	**Pn**	**00 41 56.6**	**0.0**
TEGC				S	**Sn**	**00 42 01.4**	**+0.9**
EGFH	**Guangfu**	**0.18**	**314**	*i* P	**Pb**	**00 41 56.4**	**+0.2**
EGFH				S	**Sb**	**00 42 00.5**	**+0.2**
EHY	**Hungye**	**0.23**	**261**	⇓*i*P	**Pn**	**00 41 56.7**	**-0.7**
EHY				S	**Sb**	**00 42 00.6**	**-0.7**
WARBT	**Fenglin Townsh**	**0.24**	**316**	⇓*i*P	**Pb**	**00 41 56.6**	**-0.3**
WARBT				*i* S	**Sb**	**00 42 00.8**	**-0.8**
SHUL	**Shoufeng**	**0.24**	**359**	*i* P	**Pb**	**00 41 57.4**	**+0.5**
SHUL				*i* S	**Sn**	**00 42 02.8**	**+0.3**
ECBN	**Changbin**	**0.25**	**206**	*i* P	**Pn**	**00 41 57.9**	**+0.2**
ECBN				*i* S	**Sn**	**00 42 03.5**	**+1.0**
YULB	**Yu-li**	**0.29**	**239**	P	**Pn**	**00 41 57.5**	**-0.8**
YULB	**Yu-li**	**0.29**	**239**	S	**Sb**	**00 42 02.1**	**-0.4**
YULB	**Yu-li**	**0.29**	**239**	*i* P	**Pn**	**00 41 57.5**	**-0.8**
YULB				S	**Sb**	**00 42 01.9**	**-0.6**
ESL	**Shilin**	**0.30**	**335**	⇓*i*P	**Pb**	**00 41 57.3**	**-0.3**
ESL				*i* S	**Sb**	**00 42 02.1**	**-0.6**
TEYL	**Yanliau Villag**	**0.33**	**5**	P	**Pn**	**00 41 59.0**	**+0.3**
TEYL				*i* S	**Sn**	**00 42 05.9**	**+1.5**
CHKH	**Chenggong**	**0.38**	**205**	P	**Pn**	**00 41 59.7**	**+0.2**
CHKH				S	**Sn**	**00 42 06.5**	**+0.7**
FULB	**Fuli**	**0.43**	**217**	P	**Pn**	**00 42 00.2**	**0.0**
FULB				S	**Sn**	**00 42 07.9**	**+1.0**
ETM	**Tongmen**	**0.43**	**351**	P	**Pb**	**00 41 59.1**	**-0.3**
ETM				S	**Sb**	**00 42 05.1**	**-0.7**
HWA	**Hwalien**	**0.43**	**4**	*i* P	**Pn**	**00 42 00.3**	**+0.1**
HWA				S	**Sn**	**00 42 07.5**	**+0.3**
VWDT	**VWDT**	**0.45**	**298**	P	**Pb**	**00 41 59.7**	**0.0**
VWDT				S	**Sb**	**00 42 06.0**	**-0.3**
CHKT	**Chengkung**	**0.48**	**203**	*i* P	**Pn**	**00 42 00.8**	**0.0**
CHKT				S	**Sn**	**00 42 08.5**	**+0.3**
TWD	**Chiawan**	**0.54**	**3**	*i* P	**Pb**	**00 42 00.9**	**-0.2**
TWD				S	**Sb**	**00 42 09.7**	**+1.0**
OWD	**Renai**	**0.55**	**319**	P	**Pb**	**00 42 00.8**	**-0.6**
OWD				S	**Sb**	**00 42 07.7**	**-1.4**
ECS	**Chishang**	**0.55**	**216**	P	**Pn**	**00 42 01.3**	**-0.5**
WUSB	**Renai**	**0.61**	**317**	⇓*i*P	**Pb**	**00 42 02.0**	**-0.4**
WUSB				S	**Sb**	**00 42 09.5**	**-1.4**
SSLB	**Suanglung**	**0.61**	**294**	P	**Pb**	**00 42 02.0**	**-0.4**
SSLB	**Suanglung**	**0.61**	**294**	⇓*i*P	**Pb**	**00 42 01.9**	**-0.6**
SSLB				*e*S	**Sb**	**00 42 09.2**	**-1.6**
ETL	**Fush Village**	**0.62**	**5**	P	**Pb**	**00 42 02.2**	**-0.3**
ETL				S	**Sb**	**00 42 11.4**	**+0.5**
ELDTW	**Lidau**	**0.62**	**235**	*i* P	**Pb**	**00 42 01.9**	**-0.7**
ELDTW				S	**Sb**	**00 42 09.6**	**-1.5**
NACB	**Ninganchiao**	**0.63**	**2**	P	**Pn**	**00 42 03.1**	**+0.2**
NACB	**Ninganchiao**	**0.63**	**2**	S	**Sn**	**00 42 12.5**	**+0.5**
NACB	**Ninganchiao**	**0.63**	**2**	*i* P	**Pb**	**00 42 02.0**	**-0.6**
NACB				S	**Sb**	**00 42 10.0**	**-1.2**
WHF	**Hehuan Shan**	**0.66**	**335**	*i* P	**Pb**	**00 42 02.6**	**-0.8**
WHF				*e*S	**Sb**	**00 42 11.1**	**-1.6**
ETLH	**Xiulin Townshi**	**0.67**	**353**	P	**Pb**	**00 42 02.4**	**-1.0**
ETLH				S	**Sb**	**00 42 10.6**	**-1.8**
WHYT	**Xinyi Township**	**0.67**	**283**	*i* P	**Pn**	**00 42 03.5**	**-0.1**
WHYT				S	**Sb**	**00 42 12.0**	**-0.5**
SMLT	**Sun Moon Lake**	**0.70**	**299**	*i* P	**Pb**	**00 42 03.5**	**-0.4**
SMLT				S	**Sb**	**00 42 13.3**	**-0.1**
ALS	**Alishan**	**0.70**	**268**	⇓*i*P	**Pn**	**00 42 04.2**	**0.0**
ALS				S	**Sn**	**00 42 13.8**	**-0.3**
TYC	**Yuchr**	**0.74**	**299**	*e*P	**Pn**	**00 42 04.2**	**-0.3**
FUSS	**Fushou**	**0.76**	**337**	P	**Pn**	**00 42 04.6**	**-0.4**
FUSS				S	**Sb**	**00 42 13.9**	**-1.3**
EHP	**Heping Village**	**0.78**	**12**	*e*P	**Pn**	**00 42 04.8**	**-0.2**
WCS	**Beigang Elemen**	**0.79**	**311**	*i* P	**Pn**	**00 42 05.0**	**-0.1**
WCS				S	**Sb**	**00 42 14.6**	**-1.1**
TWT	**Tachien**	**0.79**	**333**	P	**Pn**	**00 42 05.5**	**+0.1**
TWT				S	**Sb**	**00 42 14.7**	**-1.4**
EAHA	**Aohua**	**0.80**	**11**	*e*P	**Pn**	**00 42 05.3**	**0.0**
EAHA				*e*S	**Sn**	**00 42 15.8**	**-0.4**
TDCB	**Techi**	**0.80**	**332**	P	**Pn**	**00 42 05.4**	**-0.1**
TDCB				S	**Sb**	**00 42 14.7**	**-1.5**
STYH	**Taoyuan**	**0.82**	**243**	*i* P	**Pb**	**00 42 05.7**	**-0.1**
STYH				*e*S	**Sn**	**00 42 16.1**	**-0.4**
CHN5	**Tsauling**	**0.82**	**274**	*i* P	**Pb**	**00 42 06.2**	**+0.3**
CHN5				S	**Sn**	**00 42 17.1**	**+0.3**
TWGBT	**Beinan**	**0.85**	**212**	P	**Pb**	**00 42 06.6**	**+0.2**
TWGBT	**Beinan**	**0.85**	**212**	P	**Pn**	**00 42 04.9**	**-1.1**
TWG	**Pinlang**	**0.85**	**213**	*e*P	**Pn**	**00 42 05.0**	**-1.0**
TWG				*e*S	**Sn**	**00 42 15.3**	**-2.1**
TTN	**Taitung**	**0.88**	**206**	*e*P	**Pb**	**00 42 06.8**	**0.0**
WNT	**Mingjian**	**0.88**	**293**	P	**Pb**	**00 42 07.3**	**+0.4**
WNT				S	**Sb**	**00 42 19.2**	**+1.0**

WCKO	**Fanlu**	**0.89**	**264**	*e*P	**Pb**	**00 42 07.6**	**+0.5**
WCKO				*e*S	**Sb**	**00 42 20.0**	**+1.3**
EOS4	**EOS4**	**0.90**	**50**	*i* P	**Pn**	**00 42 06.4**	**+0.1**
EOS4				S	**Sn**	**00 42 18.3**	**+0.3**
TPUB	**Ta-pu**	**0.90**	**255**	P	**Pb**	**00 42 07.8**	**+0.7**
TPUB	**Ta-pu**	**0.90**	**255**	S	**Sb**	**00 42 19.4**	**+0.6**
TPUB	**Ta-pu**	**0.90**	**255**	*i* P	**Pb**	**00 42 07.4**	**+0.3**
TPUB				S	**Sb**	**00 42 19.7**	**+0.9**
NNSB	**Datong**	**0.90**	**349**	P	**Pn**	**00 42 06.5**	**-0.3**
NNSB				S	**Sn**	**00 42 17.1**	**-1.7**
NNS	**Nan Shan**	**0.91**	**349**	P	**Pn**	**00 42 06.8**	**-0.1**
NNS				S	**Sn**	**00 42 17.5**	**-1.7**
WTP	**Ta-pu**	**0.93**	**252**	*i* P	**Pb**	**00 42 07.8**	**+0.2**
WTP				S	**Sb**	**00 42 20.4**	**+0.8**
WHP	**Taichung City**	**0.93**	**322**	*e*P	**Pb**	**00 42 07.5**	**-0.2**
WHP				*e*S	**Sn**	**00 42 19.1**	**-0.3**
WGK	**Gukeng**	**0.94**	**279**	*e*P	**Pb**	**00 42 08.0**	**+0.3**
WGK				S	**Sb**	**00 42 20.3**	**+0.5**
WDLH	**Douliu**	**0.96**	**279**	*i* P	**Pb**	**00 42 08.3**	**+0.2**
WDLH				S	**Sb**	**00 42 22.4**	**+2.0**
LATG	**Datong**	**0.99**	**358**	P	**Pn**	**00 42 07.6**	**-0.4**
LATG				S	**Sn**	**00 42 19.7**	**-1.4**
CHN2	**Minshiung**	**1.00**	**270**	P	**Pb**	**00 42 09.9**	**+1.0**
CHN2				S	**Sb**	**00 42 24.1**	**+2.3**
EOS3	**EOS3**	**1.01**	**43**	P	**Pn**	**00 42 08.4**	**+0.4**
EOS3				S	**Sn**	**00 42 21.9**	**+0.8**
SGST	**Jiashian**	**1.02**	**243**	P	**Pb**	**00 42 08.4**	**-0.7**
SGST				S	**Sb**	**00 42 23.1**	**+1.0**
TCU	**Taichung**	**1.02**	**307**	P	**Pb**	**00 42 09.7**	**+0.5**
TCU				S	**Sb**	**00 42 23.0**	**+0.9**
CHN1	**Nanshi**	**1.02**	**250**	*i* P	**Pb**	**00 42 09.6**	**+0.3**
CHN1				S	**Sb**	**00 42 24.4**	**+2.1**
TWK	**Hsinying**	**1.03**	**255**	*e*P	**Pb**	**00 42 09.4**	**0.0**
TWK				S	**Sb**	**00 42 23.3**	**+0.7**
SNST	**Tainan City**	**1.04**	**252**	P	**Pb**	**00 42 09.6**	**+0.1**
SNST				*i* S	**Sb**	**00 42 23.8**	**+1.1**
CHY	**Chiayi**	**1.05**	**268**	P	**Pb**	**00 42 09.9**	**+0.2**
CHY				S	**Sb**	**00 42 24.5**	**+1.4**
EOS2	**EOS2**	**1.06**	**35**	*e*P	**Pb**	**00 42 09.7**	**-0.1**
EOS2				*e*S	**Sb**	**00 42 24.3**	**+1.0**
WCHH	**Zhanghua**	**1.07**	**300**	P	**Pb**	**00 42 10.4**	**+0.4**
WCHH				S	**Sb**	**00 42 24.7**	**+1.1**
TWQ1	**Liyutan**	**1.08**	**318**	*e*P	**Pb**	**00 42 10.7**	**+0.4**
TWQ1				S	**Sb**	**00 42 25.0**	**+0.9**
TWC	**Suao**	**1.09**	**13**	*e*P	**Pn**	**00 42 10.2**	**+0.9**
ENTT	**Nioudou**	**1.09**	**360**	*e*P	**Pn**	**00 42 09.8**	**+0.5**
ENTT				S	**Sn**	**00 42 22.6**	**-0.8**
NDS	**Dongshan**	**1.09**	**7**	*e*P	**Pn**	**00 42 10.1**	**+0.8**
NDS				*e*S	**Sn**	**00 42 22.6**	**-0.8**
ECL	**Taimali**	**1.10**	**211**	*e*P	**Pn**	**00 42 08.3**	**-1.1**
YHNB	**Yeheng**	**1.14**	**351**	P	**Pn**	**00 42 10.7**	**+0.7**
YHNB	**Yeheng**	**1.14**	**351**	*e*P	**Pn**	**00 42 10.4**	**+0.4**
YHNB				S	**Sn**	**00 42 24.1**	**-0.5**
NSY	**Sanyi**	**1.14**	**320**	P	**Pb**	**00 42 11.6**	**+0.3**
NSY				S	**Sb**	**00 42 27.2**	**+1.4**
NSK	**Sanguang**	**1.15**	**350**	P	**Pn**	**00 42 10.5**	**+0.4**
NSK				S	**Sn**	**00 42 24.1**	**-0.7**
WRL	**Guolierlin Hig**	**1.15**	**288**	P	**Pb**	**00 42 11.2**	**-0.2**
WRL				*e*S	**Sb**	**00 42 26.9**	**+0.9**
NFF	**Wufeng Townshi**	**1.16**	**339**	*e*P	**Pb**	**00 42 12.1**	**+0.5**
NFF				S	**Sn**	**00 42 25.3**	**+0.2**
SSD	**Sandimen**	**1.17**	**228**	*e*P	**Pb**	**00 42 11.5**	**-0.2**
SSD				*e*S	**Sb**	**00 42 27.3**	**+0.7**
TWE	**Neicheng**	**1.18**	**4**	*e*P	**Pn**	**00 42 10.8**	**+0.3**
NSTT	**Nanjuang**	**1.20**	**335**	*e*P	**Pb**	**00 42 12.4**	**+0.1**
NSTT				*e*S	**Sn**	**00 42 26.5**	**+0.4**
LIOB	**Emei**	**1.21**	**335**	P	**Pb**	**00 42 12.6**	**+0.2**
LIOB				*e*S	**Sn**	**00 42 25.9**	**-0.4**
FUSB	**Fushanzhiwuyua**	**1.21**	**1**	*e*P	**Pn**	**00 42 11.0**	**0.0**
FUSB				*e*S	**Sn**	**00 42 25.7**	**-0.8**
NMLH	**Miaoli**	**1.22**	**324**	*e*P	**Pb**	**00 42 12.5**	**-0.1**
NMLH				S	**Sb**	**00 42 28.4**	**+0.4**
WTCT	**Ta-ch'eng**	**1.22**	**285**	*e*P	**Pn**	**00 42 10.0**	**-1.1**
WTCT				*e*S	**Sb**	**00 42 27.4**	**-0.6**
NWLT	**Wulai**	**1.23**	**357**	*e*P	**Pn**	**00 42 12.2**	**+1.0**
WSL	**Shuilin Townsh**	**1.23**	**269**	*i* P	**Pb**	**00 42 12.3**	**-0.4**
WSL				S	**Sb**	**00 42 29.1**	**+0.8**
SHHT	**Tainan City**	**1.24**	**245**	P	**Pb**	**00 42 14.6**	**+1.7**
SHHT				*e*S	**Sb**	**00 42 32.9**	**+4.4**
MASBT	**Mashibuluo**	**1.27**	**223**	*e*P	**Pn**	**00 42 11.8**	**+0.1**
TWM1	**Shoushan**	**1.27**	**236**	*e*P	**Pb**	**00 42 14.0**	**+0.5**
TWM1				*e*S	**Sb**	**00 42 32.9**	**+3.3**
KSHI	**Guanxi Townshi**	**1.28**	**344**	P	**Pb**	**00 42 13.8**	**+0.2**
KSHI				S	**Sb**	**00 42 29.6**	**-0.2**
SCLT	**Jiali**	**1.32**	**254**	*e*P	**Pn**	**00 42 12.1**	**-0.2**
SCLT				*e*S	**Sb**	**00 42 32.1**	**+1.4**
EAST	**Anshuo**	**1.33**	**210**	*e*P	**Pb**	**00 42 14.6**	**+0.1**
TAW	**Tawu**	**1.33**	**208**	*e*P	**Pb**	**00 42 14.3**	**-0.2**
SBCB	**Hsinchu**	**1.35**	**337**	*e*P	**Pn**	**00 42 13.6**	**+0.7**
HSN	**Hsinchu**	**1.37**	**337**	*e*P	**Pb**	**00 42 14.6**	**-0.5**
TSCK	**Chigu Township**	**1.42**	**254**	P	**Pb**	**00 42 15.2**	**-0.8**
TSCK				S	**Sb**	**00 42 33.8**	**+0.2**
TWA	**Mucha**	**1.43**	**1**	*e*P	**Pn**	**00 42 14.5**	**+0.5**
TWA				S	**Sn**	**00 42 31.7**	**-0.1**
TIPB	**Shuangxi**	**1.44**	**9**	*e*P	**Pn**	**00 42 15.5**	**+1.3**
SCZT	**Fangliau**	**1.46**	**217**	*e*P	**Pb**	**00 42 16.8**	**+0.2**
SCZT				*e*S	**Sb**	**00 42 35.1**	**+0.4**
NCU	**National Centr**	**1.46**	**346**	*e*P	**Pn**	**00 42 15.5**	**+1.1**
NCU				*e*S	**Sn**	**00 42 33.4**	**+0.8**
LAY	**Lan-yu**	**1.50**	**181**	*e*P	**Pn**	**00 42 14.5**	**-0.4**
LAY				*e*S	**Sn**	**00 42 32.6**	**-0.8**
TWB1	**Santiao Chiao**	**1.51**	**15**	*e*P	**Pn**	**00 42 16.2**	**+1.2**
LYUB	**Lan-yu**	**1.53**	**179**	*e*P	**Pn**	**00 42 13.9**	**-1.4**
NWF	**Wu-fen Shan**	**1.53**	**7**	*e*P	**Pn**	**00 42 16.4**	**+1.0**
WFSB	**Wu-fen Shan**	**1.53**	**7**	*e*P	**Pn**	**00 42 16.4**	**+1.0**
JYNG	**Yonagunijimaku**	**1.55**	**54**	*e*P	**Pn**	**00 42 16.6**	**+1.0**
JYNG				*e*S	**Sn**	**00 42 35.6**	**+0.9**
TWS1	**Kuangyinshan**	**1.56**	**355**	*e*P	**Pn**	**00 42 16.6**	**+0.9**
SXI1	**Grass Mountain**	**1.57**	**10**	*e*P	**Pn**	**00 42 17.2**	**+1.3**
SXI1				*e*S	**Sn**	**00 42 36.0**	**+0.7**
YM01	**YM01**	**1.60**	**0**	*e*P	**Pn**	**00 42 17.1**	**+0.8**
YOJ	**Yonaguni jima**	**1.60**	**55**	*e*P	**Pn**	**00 42 17.2**	**+0.8**
YOJ				*e*S	**Sn**	**00 42 36.8**	**+0.8**
YOJ	**Yonaguni jima**	**1.60**	**55**	P	**Pn**	**00 42 17.2**	**+0.8**
YOJ				*e*S	**Sn**	**00 42 37.0**	**+1.0**
TNOU	**National Taiwa**	**1.61**	**7**	*e*P	**Pn**	**00 42 17.9**	**+1.4**
ZUZH	**Zhuzihu**	**1.61**	**359**	*e*P	**Pn**	**00 42 16.6**	**+0.1**
ZUZH				S	**Sn**	**00 42 36.2**	**-0.1**
ANP	**Anpu**	**1.64**	**358**	*e*P	**Pn**	**00 42 17.3**	**+0.4**
YM08	**YM08**	**1.64**	**1**	*e*P	**Pn**	**00 42 17.9**	**+1.0**
YM08				*e*S	**Sn**	**00 42 35.5**	**-1.4**
SMST	**Manzhou Townsh**	**1.66**	**204**	*e*P	**Pb**	**00 42 18.0**	**-2.0**
TWY	**Chenhua**	**1.73**	**1**	*e*P	**Pn**	**00 42 18.0**	**0.0**
TWK1	**Hengchun**	**1.74**	**204**	*e*P	**Pn**	**00 42 18.9**	**+0.7**
TWK1				*e*S	**Sb**	**00 42 40.2**	**-2.7**
TWKBT	**Hengchun**	**1.74**	**204**	*e*P	**Pn**	**00 42 19.1**	**+0.9**
TSEB	**Hengchuen, Pin**	**1.75**	**201**	*e*P	**Pb**	**00 42 19.9**	**-1.6**
TSEB				*e*S	**Sb**	**00 42 41.6**	**-1.5**
WDGT	**Dungji**	**1.78**	**261**	P	**Pn**	**00 42 19.4**	**+0.7**
WDGT				*e*S	**Sn**	**00 42 40.1**	**-0.1**
PHUB	**P'eng-hu**	**1.83**	**269**	P	**Pn**	**00 42 20.3**	**+0.9**
PHUB				S	**Sn**	**00 42 41.7**	**+0.1**
PNG	**Penghu**	**1.85**	**271**	P	**Pn**	**00 42 20.4**	**+0.7**
PNG				*e*S	**Sn**	**00 42 42.2**	**+0.2**
VCHM	**Qimei**	**1.99**	**261**	*e*P	**Pn**	**00 42 22.4**	**+0.8**
VCHM				S	**Sn**	**00 42 45.3**	**-0.4**
HATJ	**Hateruma jima**	**2.11**	**76**	*e*P	**Pn**	**00 42 23.9**	**+0.6**
HATJ				*e*S	**Sn**	**00 42 49.3**	**+0.8**
IRIF	**Iriomote-Funau**	**2.13**	**68**	*e*P	**Pn**	**00 42 24.5**	**+1.0**
IRIF				*e*S	**Sn**	**00 42 50.3**	**+1.4**
JKRS	**Kuro-shima**	**2.34**	**72**	*e*P	**Pn**	**00 42 27.4**	**+0.9**
VWUC	**VWUC**	**2.41**	**307**	*e*P	**Pn**	**00 42 28.5**	**+1.1**
JIJ	**Ishigaki jima**	**2.49**	**70**	*e*P	**Pn**	**00 42 28.9**	**+0.4**
JIJ				*e*S	**Sn**	**00 42 57.8**	**-0.1**
JISG	**Ishigakijimahi**	**2.71**	**67**	*e*P	**Pn**	**00 42 31.9**	**+0.3**
JISG				*e*S	**Sn**	**00 43 03.2**	**-0.1**
MATB	**Ma-tsu**	**2.99**	**331**	*e*P	**Pn**	**00 42 34.8**	**-0.6**
KNM	**Kinmen**	**3.00**	**288**	*e*P	**Pn**	**00 42 37.2**	**+1.7**
KNMB	**Chin-men Tao**	**3.05**	**288**	*e*P	**Pn**	**00 42 36.3**	**0.0**
LYJJ	**Jianjiangzhen**	**3.42**	**332**	*e*P	**Pn**	**00 42 40.6**	**-0.6**
MHZQ	**Yeshan**	**3.44**	**318**	*e*P	**Pn**	**00 42 41.8**	**+0.3**
ZPLA	**Ao Xicun**	**3.52**	**277**	*e*P	**Pn**	**00 42 42.8**	**+0.1**
AXDP	**Jialang**	**3.55**	**293**	*e*P	**Pn**	**00 42 43.6**	**+0.5**
XPSS	**Dashiqiu**	**3.60**	**340**	*e*P	**Pn**	**00 42 43.3**	**-0.4**
DSXP	**Dongshan**	**3.80**	**273**	*e*P	**Pn**	**00 42 46.9**	**+0.3**
SXFK	**Yanhouchang**	**4.56**	**309**	*e*P	**Pn**	**00 42 57.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**21.71**	**261**	LR	LR	00 55 44.8	
	comp=Z,14nm,19.0s,baz=205,slow=38						
SONM	**Songino Array**	**27.09**	**337**	P	**P**	**00 47 30.3**	**+0.2**
	0.2nm,0.7s,baz=157,slow=7.8,SNR=2.3						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**39.04**	**316**	P	**P**	**00 49 14.6**	**+0.5**
	0.5nm,0.6s,baz=108,slow=10.0,SNR=8.0						
	0.5nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**42.17**	**86**	T	T	01 34 47.6	
	baz=283,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**42.17**	**86**	T	T	01 34 44.6	
	baz=283,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**42.19**	**86**	T	T	01 34 55.9	
	baz=283,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	**42.28**	**88**	T	T	01 34 56.5	
	baz=285,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**42.29**	**88**	T	T	01 34 56.7	
	baz=285,slow=75,SNR=9.2						
H11S2	**WAKE ISLAND Hy**	**42.30**	**88**	T	T	01 34 56.2	
	baz=285,slow=75,SNR=13						
WRA	**Warramunga Arr**	**44.98**	**163**	P	**P**	**00 50 01.5**	**-1.2**
	0.4nm,0.5s,baz=343,slow=7.9,SNR=6.4						
	0.4nm,0.5s						

HEL 04 00:50:47.2±0.2**, 67°.83N**×**20°.18E, h0km, ML1.0,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.72**	**72**	PG	Pg	00 51 00.3	-0.6
	baz=250						
LANU				SG	Sg	00 51 09.4	-0.8
KIF	**Kilpisjarvi**	**1.20**	**11**	PG	Pg	00 51 09.6	-0.6
KIF				smax	smax	00 51 24.8	
	comp=Z,1.7nm,0.2s						
KIF				SG	Sg	00 51 25.2	-0.5
PAJU	**Pajala**	**1.39**	**124**	PG	Pg	00 51 12.1	-1.7
	baz=304						
PAJU				SB	Sg	00 51 30.8	-1.1
HEF	**Hetta**	**1.43**	**64**	PG	Pn	00 51 12.7	-1.6
HEF				smax	smax	00 51 30.2	
	comp=Z,0.7nm,0.2s						
HEF				SN	Sn	00 51 35.0	+1.2
ERTU	**Ertsjaerv**	**1.50**	**148**	PN	Pn	00 51 15.1	-0.3
ERTU				SN	Sb	00 51 35.5	0.0
KLF	**Kolari**	**1.57**	**111**	PN	Pn	00 51 16.1	-0.2
KLF				smax	smax	00 51 34.4	
	comp=Z,0.6nm,0.2s						
KLF				SN	Sn	00 51 37.1	-0.2
TRO	**Tromso**	**1.87**	**346**	SG	Sb	00 51 46.1	+0.1
TOF	**Tornio**	**2.40**	**135**	PB	Pn	00 51 28.9	+1.3
TOF				smax	smax	00 51 58.2	
	comp=Z,0.4nm,0.2s						
TOF				SG	Sb	00 52 01.4	+0.2
RNF	**Rovaniemi**	**2.58**	**116**	PB	Pn	00 51 31.9	+1.7
RNF				SG	Sb	00 52 05.6	-0.8
ARA0	**ARCESS Array S**	**2.59**	**46**	PG	Pn	00 51 32.2	+1.9
ARA0				SG	Sb	00 52 05.4	-1.4
KEV	**Kevo**	**3.14**	**49**	SG	Sb	00 52 21.0	-1.7

UPP 04 00:51:37.2±0.2**, 67°.84N**×**20°.27E, h0km, ML2.0,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**13**	P	Pg	00 51 39.7	+0.2
KUA				S	Sg	00 51 41.4	+0.3
RATU	**Laukkuluspa**	**0.26**	**267**	P	Pg	00 51 42.2	+0.2
RATU				S	Sg	00 51 46.1	+0.7
KOVU	**Salmi**	**0.39**	**354**	P	Pg	00 51 44.8	+0.1
KOVU				S	Sg	00 51 50.1	+0.4
NIKU	**Nikkaluokta**	**0.47**	**274**	P	Pg	00 51 46.1	0.0
NIKU				S	Sg	00 51 52.2	+0.1

DJA 04 01:08:14.6±0.2**, 8°S**±3°×**12°8E**±°**, h80**km±11km**, M4.4**/12**,**
mB5.2/2**, mb4.4**/8**, MLv4.4**/12**, Mw(mB)4.5**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.84**	**30**	P	Pn	01 09 10.3	-1.1
SOEI	**Soe**	**4.11**	**243**	P	Pn	01 09 15.9	+0.7
SOEI				S	Sn	01 10 01.6	-0.6
BATI	**Baumata**	**4.85**	**241**	P	Pn	01 09 25.7	+0.6
BATI				S	Sn	01 10 20.4	+0.4
EDFI	**Ende, Flores**	**6.28**	**262**	P	Pn	01 09 46.3	+1.6
	14nm,1.2s						
FAKI	**Fak Fak**	**6.51**	**41**	P	Pn	01 09 46.9	-0.9
	0.2nm32nm,0.9s						
LUWI	**Luwuk**	**8.54**	**322**	P	Pn	01 10 15.4	-0.1

*UPA **04** 01:09:20.9±1.3, 8°.69N×83°.23W, h16km±3km, MW3.0,*
Presumed earthquake
*UCR **04** 01:09:21.1±1.1, 8°.60N×83°.24W, h28km±2km, MW3.5,*
Presumed earthquake
ISC 04 01:09:21.1±0.9**, 8°.64N**±0°.03×**83°.23W**±0°.03**, h25**km±5km**,**
n53, σ0s.66/94**, 5D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDAD	**Golfito**	**0.06**	**76**	*e*P	**Pb**	**01 09 25.4**	**-0.3**
EDAD				*e*S	**Sb**	**01 09 29.0**	**+0.3**
FITO	**Golfito**	**0.07**	**99**	*e*P	**Pb**	**01 09 25.3**	**-0.4**
FITO				*e*S	**Sb**	**01 09 28.8**	**+0.1**
PTJ1	**Puerto Jimnez**	**0.12**	**216**	*e*P	**Pb**	**01 09 25.4**	**-0.7**
PTJ1				*e*P	**Pb**	**01 09 25.4**	**-0.7**
PTJ1	**Puerto Jimnez**	**0.12**	**216**	*e*P	**Pb**	**01 09 25.7**	**-0.3**
PTJ1				*e*S	**Sb**	**01 09 30.4**	**+1.1**
JIME	**Puerto Jimenez**	**0.14**	**224**	*e*P	**Pb**	**01 09 25.8**	**-0.3**
JIME				*e*S	**Sb**	**01 09 30.5**	**+1.0**
PIRO	**Carate, Puerto**	**0.26**	**205**	*e*P	**Pb**	**01 09 27.0**	**-0.6**
NELY	**Ciudad Neily**	**0.28**	**87**	*e*P	**Pb**	**01 09 28.3**	**+0.4**
NELY				*e*S	**Sn**	**01 09 34.2**	**-0.8**
EDP2	**Potrero Grande**	**0.38**	**8**	*e*P	**Pb**	**01 09 30.0**	**+0.6**
PANP	**Palmar Norte**	**0.39**	**325**	*e*P	**Pb**	**01 09 28.6**	**-1.0**
LPPC	**Paso Canoas**	**0.40**	**105**	*e*P	**Pb**	**01 09 29.6**	**-0.1**
LPPC				*e*S	**Sb**	**01 09 36.5**	**+1.0**
RSRNO	**Rio Sereno**	**0.41**	**64**	*e*S	**Sn**	**01 09 39.5**	**+1.2**
MLIR3	**Monte Lirio, C**	**0.43**	**69**	*e*P	**Pb**	**01 09 29.2**	**-1.1**
MLIR3				*e*P	**Pb**	**01 09 29.2**	**-1.1**
MLIR3				*e*S	**Sb**	**01 09 36.6**	**+0.1**
MLIR3				*e*S	**Sb**	**01 09 36.6**	**+0.1**
SCLRA	**Santa Clara, W**	**0.48**	**66**	*e*S	**Sn**	**01 09 40.8**	**+0.5**
ALCO	**Alturas Coton,**	**0.50**	**51**	*e*P	**Pb**	**01 09 31.7**	**+0.2**
ALCO				*e*S	**Sn**	**01 09 40.3**	**-0.4**
BURE	**Buenos Aires**	**0.54**	**348**	*e*P	**Pb**	**01 09 32.6**	**+0.4**
PTPM	**Petroterminale**	**0.55**	**141**	*e*P	**Pb**	**01 09 32.3**	**0.0**
PTPM				*e*P	**Pb**	**01 09 32.3**	**0.0**
PTPM				*e*S	**Sn**	**01 09 42.5**	**+0.7**
PTPM				*e*S	**Sn**	**01 09 42.5**	**+0.7**
BRU2	**Volcan**	**0.55**	**74**	⇓*i*P	**Pb**	**01 09 32.7**	**+0.3**
BRU2				⇓*i*P	**Pb**	**01 09 32.7**	**+0.3**
BRU2				⇓*i*P	**Pb**	**01 09 32.7**	**+0.3**
BRU2				*e*S	**Sn**	**01 09 41.3**	**-0.7**
BRU2				*e*S	**Sb**	**01 09 42.0**	**+1.9**
BRU2				*e*S	**Sb**	**01 09 42.0**	**+1.9**
BRU2	**Volcan**	**0.55**	**74**	*e*P	**Pb**	**01 09 32.6**	**+0.3**
PTPA	**Petro Terminal**	**0.56**	**141**	*e*P	**Pb**	**01 09 32.2**	**-0.2**
PTPA				*e*S	**Sn**	**01 09 42.2**	**+0.2**
CLLRA	**Cordillera,**	**0.62**	**80**	⇓*i*P	**Pb**	**01 09 33.6**	**+0.2**
CLLRA	**Cordillera,**	**0.62**	**80**	*e*P	**Pb**	**01 09 33.6**	**+0.2**
EDPE	**Pejibaye, P**	**0.62**	**327**	*e*P	**Pb**	**01 09 33.3**	**-0.2**
DRK0	**Durika**	**0.62**	**358**	*i* P	**Pb**	**01 09 32.5**	**-1.1**
DRK0				*i* P	**Pb**	**01 09 32.5**	**-1.1**
DRK0				*e*S	**Sb**	**01 09 42.7**	**+0.7**
DRK0				*e*S	**Sb**	**01 09 42.7**	**+0.7**
DRK0	**Durika**	**0.62**	**358**	*e*P	**Pb**	**01 09 32.5**	**-1.1**
JEFFS	**S de V. Baru**	**0.69**	**87**	⇓*i*P	**Pb**	**01 09 34.7**	**+0.1**
JEFFS				*e*S	**Sn**	**01 09 44.6**	**-0.7**
JEFFS	**S de V. Baru**	**0.69**	**87**	*e*P	**Pb**	**01 09 34.6**	**+0.1**
BAGA3	**Bagala, Chiriq**	**0.71**	**104**	*e*P	**Pb**	**01 09 34.6**	**-0.4**
BAGA3				*e*P	**Pb**	**01 09 34.6**	**-0.4**
PTAR3	**Potrerillos Ar**	**0.73**	**86**	*e*P	**Pb**	**01 09 35.3**	**+0.1**
PTAR3				*e*P	**Pb**	**01 09 35.3**	**+0.1**
PTAR3				*e*S	**Sn**	**01 09 46.4**	**+0.1**
PTAR3				*e*S	**Sn**	**01 09 46.4**	**+0.1**
SAJE	**San Jernim**	**0.76**	**339**	*e*P	**Pb**	**01 09 35.4**	**-0.4**
BQTLY	**Boquete Panama**	**0.77**	**81**	*e*P	**Pb**	**01 09 35.3**	**-0.7**
BQTLY				*e*S	**Sb**	**01 09 46.4**	**+0.3**
BQTLY	**Boquete Panama**	**0.77**	**81**	*e*P	**Pb**	**01 09 35.4**	**-0.5**
BQSF3	**Alto Boquete,**	**0.79**	**82**	*e*P	**Pb**	**01 09 35.8**	**-0.6**
BQSF3				*e*P	**Pb**	**01 09 35.8**	**-0.6**
BQSF3				*e*S	**Sb**	**01 09 47.2**	**+0.4**
BQSF3				*e*S	**Sb**	**01 09 47.2**	**+0.4**
LNBQ3	**Los Naranjos,**	**0.79**	**79**	*e*P	**Pb**	**01 09 35.6**	**-0.8**
LNBQ3				*e*P	**Pb**	**01 09 35.6**	**-0.8**
LNBQ3				*e*S	**Sb**	**01 09 47.4**	**+0.6**
LNBQ3				*e*S	**Sb**	**01 09 47.4**	**+0.6**
DAP26	**falda E V. Bar**	**0.81**	**79**	*e*P	**Pb**	**01 09 35.9**	**-0.9**
DAP26				*e*S	**Sb**	**01 09 47.4**	**+0.1**
DAP26	**falda E V. Bar**	**0.81**	**79**	*e*P	**Pb**	**01 09 35.8**	**-0.9**
BGUAL	**Bijagual, Pana**	**0.89**	**98**	*e*S	**Sn**	**01 09 50.4**	**+0.2**
PSOM3	**Paja de Sombre**	**0.90**	**87**	*e*P	**Pb**	**01 09 37.5**	**-0.6**
PSOM3				*e*P	**Pb**	**01 09 37.5**	**-0.6**
PSOM3				*e*S	**Sn**	**01 09 50.2**	**-0.2**
PSOM3				*e*S	**Sn**	**01 09 50.2**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**1.05**	**76**	*e*P	**Pn**	**01 09 39.2**	**-1.1**
RBALA	**Bur**	**1.09**	**77**	*e*S	**Sb**	**01 09 55.6**	**+0.4**
RBALA	**Bur**	**1.09**	**77**	*e*P	**Pn**	**01 09 40.2**	**-0.6**
CHGR2	**Aguacate**	**1.11**	**74**	*e*P	**Pn**	**01 09 40.5**	**-0.6**
CHGR2				*e*P	**Pn**	**01 09 40.5**	**-0.6**
LAES	**El Progreso Va**	**1.13**	**9**	*e*P	**Pb**	**01 09 42.2**	**+0.1**
PIEC	**Cerro El Cedra**	**1.22**	**324**	*e*P	**Pn**	**01 09 43.0**	**+0.2**
PICV	**PH. Pirrs**	**1.37**	**316**	*e*P	**Pn**	**01 09 44.8**	**+0.1**
VTCV	**VTCV, Calle Va**	**1.43**	**340**	*e*P	**Pn**	**01 09 46.0**	**+0.4**
ABRB	**Las Abras (San**	**1.44**	**341**	*e*P	**Pn**	**01 09 46.4**	**+0.5**
CVTV	**Tajo**	**1.45**	**339**	*e*P	**Pn**	**01 09 46.6**	**+0.5**
CVTQ	**Turrialba Volc**	**1.46**	**339**	*e*P	**Pb**	**01 09 47.6**	**-0.2**
CVTR	**Volcan Turrial**	**1.47**	**339**	*e*P	**Pn**	**01 09 47.1**	**+0.7**
LCOCO	**El Coco**	**1.47**	**347**	*e*P	**Pb**	**01 09 47.5**	**-0.4**
RVLA	**Villa Bonita**	**1.51**	**346**	*e*P	**Pb**	**01 09 47.6**	**-0.9**
CVTG	**V. Turrialba,**	**1.59**	**340**	*e*P	**Pb**	**01 09 50.1**	**+0.1**
JTS	**Las Juntas de**	**2.37**	**314**	*e*P	**Pn**	**01 09 57.5**	**-0.8**
JTS				*e*P	**Pn**	**01 09 57.5**	**-0.8**

*IDC **04** 01:27:27.7±0.9, 38°.98N×27°.94E, h0km, mb3.5/6, mbtmp3.5/12, ML3.6/5, MS3.1/10, Error ellipse: s-maj=14.1km s-min=12.4km az=102.0*
*ISK **04** 01:27:28.8, 39°.00N×27°.86E, h7km, ML4.2/26*
*ATH **04** 01:27:28.6, 39°.06N×28°.01E, h9km±4km, ML3.9/10, Manual Solution by F.Xalaris First location: 2020/02/04 01:29:00, This location: 2020/02/04 03:02:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*AFAD **04** 01:27:28.9, 38°.99N×27°.87E, h7km±3km, MW3.9*
*THE **04** 01:27:29.0, 39°N±2°×2°8E±°, h0km±6km, M3.7/15, MLh3.7/15*
*MCSM **04** 01:27:30.1±0.3, 39°N±3°×2°8E±°, h10km, mb4.2, mB4.9, MLv4.3, Mw(mB)4.2*
*CFUSG **04** 01:27:30.6, 39°.10N×28°.20E, h10km, Mb3.1/5, MD3.5/2, MSH3.0/6*
*NEIC **04** 01:27:30.1±1.5, 38°.99N±0°.02×27°.87E±0°.02, h10km±2km, mb4.2/3, Error ellipse: s-maj=3.7km s-min=3.2km az=10.0*
ISC 04 01:27:29.4±0.8**, 38°.99N**±0°.02×**27°.89E**±0°.02**, h12**km±5km**,**
n196, σ1s.28/231**, mb3.8**/7**, MS3.4**/4**, 25C-18D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.12**	**209**	P	**Pg**	**01 27 32.2**	**-0.3**
AKHS				S	**Sg**	**01 27 34.6**	**-0.1**
AKS	**Akhisar**	**0.12**	**210**	Pg	**Pg**	**01 27 31.8**	**-0.7**
AKS				Sg	**Sg**	**01 27 34.2**	**-0.5**
GORD	**Gordes-Manisa**	**0.24**	**109**	Pg	**Pg**	**01 27 34.6**	**+0.3**
GORD				Sg	**Sg**	**01 27 38.9**	**+1.2**
GOMA	**Golmarmara-Man**	**0.28**	**176**	Pg	**Pg**	**01 27 35.2**	**+0.1**
GOMA				Sg	**Sb**	**01 27 40.2**	**-0.8**
SOMA	**Soma-Manisa**	**0.33**	**302**	Pg	**Pg**	**01 27 35.1**	**-0.9**
SOMA				Sg	**Sg**	**01 27 40.5**	**+0.1**
KTTT	**Salihli**	**0.34**	**152**	P	**Pg**	**01 27 36.3**	**+0.2**
KTTT				S	**Sg**	**01 27 40.8**	**+0.2**
STEP	**BALIKESIR_Sava**	**0.41**	**341**	P	**Pg**	**01 27 37.2**	**-0.4**
STEP				S	**Sg**	**01 27 42.6**	**-0.4**
CAMT	**Merkez**	**0.51**	**242**	P	**Pg**	**01 27 39.2**	**-0.1**
CAMT				S	**Sb**	**01 27 46.8**	**-0.9**
ZEDA	**zmir-Bergama**	**0.64**	**268**	P	**Pg**	**01 27 41.4**	**-0.3**
ZEDA				S	**Sg**	**01 27 49.7**	**-0.3**
DEMI	**Demirci**	**0.65**	**85**	P	**Pg**	**01 27 42.1**	**+0.2**
DEMI				S	**Sg**	**01 27 50.8**	**+0.4**
BALB	**Balikesir**	**0.65**	**359**	Pg	**Pg**	**01 27 41.9**	**-0.2**
BALB				Sg	**Sb**	**01 27 51.1**	**-0.7**
BALB	**Balikesir**	**0.65**	**359**	Pg	**Pg**	**01 27 41.9**	**-0.2**
MANT	**Manisa**	**0.72**	**133**		**Pg**	**01 27 43.1**	**-0.2**
MANT				Sg	**Sb**	**01 27 53.8**	**-0.2**
MANT	**Manisa**	**0.72**	**133**	P	**Pg**	**01 27 43.3**	**-0.1**
MANT				S	**Sg**	**01 27 53.2**	**+0.4**
ODEM	**Odemis-Izmir**	**0.72**	**168**	Pg	**Pg**	**01 27 43.2**	**-0.2**
IZMD	**zmir-Dikili-**	**0.75**	**270**	P	**Pb**	**01 27 43.9**	**-0.6**
IZMD				S	**Sg**	**01 27 53.1**	**-0.7**
KULA	**Kula-Manisa**	**0.76**	**128**	Pg	**Pg**	**01 27 44.1**	**-0.1**
DKL	**Dikili**	**0.77**	**277**	Pg	**Pg**	**01 27 44.0**	**-0.3**
DST	**Dursunbey**	**0.84**	**42**	Pg	**Pg**	**01 27 45.0**	**-0.5**
DUVT	**Torbali**	**0.84**	**204**	P	**Pg**	**01 27 45.2**	**-0.4**
DUVT				S	**Sg**	**01 27 55.9**	**-0.6**
IZMR	**zmir-demi**	**0.85**	**177**	P	**Pb**	**01 27 45.9**	**-0.2**
IZMR				S	**Sg**	**01 27 55.6**	**-1.3**
SIMA	**Simav-Kutahya**	**0.85**	**83**	Pg	**Pb**	**01 27 46.2**	**0.0**
SMAA	**Simav-Kutahya**	**0.86**	**82**	Pg	**Pb**	**01 27 46.4**	**+0.2**
BAGT	**Foa**	**0.88**	**248**	P	**Pg**	**01 27 45.3**	**-0.9**
BAGT				S	**Sg**	**01 27 57.5**	**-0.2**
YAYO	**Edremit-Balk**	**0.89**	**315**	Pg	**Pg**	**01 27 45.6**	**-0.9**
BLCB	**Balcova**	**0.90**	**228**	Pg	**Pg**	**01 27 46.2**	**-0.4**
BLCB	**Balcova**	**0.90**	**228**	P	**Pg**	**01 27 46.2**	**-0.4**
BLCB				S	**Sg**	**01 27 58.0**	**-0.3**
FOCM	**Foa**	**0.95**	**254**	Pg	**Pb**	**01 27 47.5**	**-0.2**
SUSR	**Susurluk-Balik**	**0.99**	**9**	Pg	**Pg**	**01 27 47.5**	**-0.9**
SHAP	**Saphane-Kutahy**	**1.04**	**88**	Pg	**Pn**	**01 27 49.7**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.04**	**180**	Pg	**Pg**	**01 27 48.7**	**-0.7**
NAZL	**Nazilli-Aydin**	**1.07**	**163**	Pn	**Pg**	**01 27 49.6**	**-0.3**
GONE	**Gonen-Balikesi**	**1.07**	**352**	Pg	**Pb**	**01 27 49.7**	**-0.2**
YENI	**Yenice-Canakka**	**1.07**	**332**	Pg	**Pg**	**01 27 49.2**	**-0.8**
KRBN	**Karaburun**	**1.12**	**250**	Pn	**Pg**	**01 27 50.3**	**-0.5**
GEDZ	**Gediz**	**1.19**	**87**	Pn	**Pn**	**01 27 52.5**	**+0.6**
GMLD	**Gumuldur**	**1.19**	**220**	Pn	**Pb**	**01 27 51.5**	**-0.3**
CANM	**Can-anakkale**	**1.21**	**328**	Pn	**Pb**	**01 27 51.7**	**-0.6**
KUSD	**Kusadasi-Aydin**	**1.22**	**203**	Pn	**Pn**	**01 27 52.3**	**0.0**
PRK	**Paraskevi**	**1.29**	**282**	P	**Pn**	**01 27 52.9**	**-0.3**
PRK				S	**Sn**	**01 28 10.3**	**-0.1**
PRK	**Paraskevi**	**1.29**	**282**	P	**Pg**	**01 27 53.8**	**-0.3**
PRK				S	**Sn**	**01 28 12.0**	**+1.7**
BAND	**Balkesir-Ban**	**1.38**	**7**	⇑P	**Pn**	**01 27 54.3**	**-0.2**
GCAM	**G?zelcaml?**	**1.38**	**202**	Pn	**Pb**	**01 27 55.1**	**-0.1**
EAG2	**Marmaro, Chios**	**1.46**	**253**	P	**Pg**	**01 27 56.9**	**-0.5**
EAG2				S	**Sg**	**01 28 17.2**	**+0.8**
EZN	**Ezine**	**1.48**	**305**	P	**Pn**	**01 27 55.4**	**-0.4**
EZN				S	**Sb**	**01 28 15.4**	**-0.1**
EZN	**Ezine**	**1.48**	**305**	P	**Pn**	**01 27 54.9**	**-0.9**
KRL1	**Karlovasi Samo**	**1.51**	**218**	P	**Pb**	**01 27 57.5**	**+0.2**
KRL1				S	**Sg**	**01 28 18.5**	**+0.6**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**01 27 55.6**	**-0.8**
SMG				S	**Sg**	**01 28 18.1**	**-0.3**
SMG	**Samos**	**1.52**	**213**	P	**Pb**	**01 27 57.5**	**0.0**
SMG				S	**Sg**	**01 28 19.1**	**+0.8**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**01 27 56.6**	**-0.4**
CHOS				S	**Sg**	**01 28 19.2**	**-0.3**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**01 27 57.0**	**-0.5**
SIGR				S	**Sg**	**01 28 19.7**	**-1.2**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pb**	**01 27 58.0**	**-0.8**
SIGR				S	**Sg**	**01 28 19.9**	**-0.9**
YER	**Yerkesik**	**1.87**	**170**	P	**Pn**	**01 28 01.0**	**-0.4**
GADA	**Gvkgeada**	**1.95**	**309**	P	**Pn**	**01 28 02.2**	**-0.1**
GADA				S	**Sb**	**01 28 28.7**	**-0.6**
BODT	**Bodrum**	**1.98**	**194**	P	**Pn**	**01 28 03.5**	**+0.9**
BODT				S	**Sb**	**01 28 30.7**	**+0.8**
CAVK	**Edirne/Enez-Ca**	**2.16**	**323**	⇑P	**Pn**	**01 28 06.5**	**+1.3**
BORA	**Eskisehir**	**2.18**	**65**		**Pb**	**01 28 08.9**	**+0.2**
ENEZ	**Enez**	**2.20**	**323**	P	**Pn**	**01 28 06.1**	**+0.3**
ENEZ				S	**Sb**	**01 28 35.2**	**-1.2**
LIA	**Limnos Island**	**2.29**	**294**	P	**Pn**	**01 28 06.8**	**-0.2**
LIA				S	**Sn**	**01 28 35.8**	**+0.8**
LIA	**Limnos Island**	**2.29**	**294**	P	**Pn**	**01 28 07.2**	**+0.2**
LIA				S	**Sn**	**01 28 36.0**	**+1.0**
SMTH	**Samothraki Isl**	**2.35**	**310**	P	**Pn**	**01 28 07.5**	**-0.3**
SMTH	**Samothraki Isl**	**2.35**	**310**	P	**Pn**	**01 28 08.1**	**+0.3**
SMTH				S	**Sn**	**01 28 37.0**	**+0.3**
ISP	**Isparta**	**2.37**	**119**	Pn	**Pn**	**01 28 08.4**	**+0.2**
ISP	**Isparta**	**2.37**	**119**	P	**Pn**	**01 28 07.0**	**-1.2**
ISP				S	**Sn**	**01 28 35.9**	**-1.4**
ALN	**Alexandroupoli**	**2.38**	**324**		**Pn**	**01 28 08.8**	**+0.6**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**01 28 08.1**	**-0.1**

CTYL Yalikoy Yolu 2.50 7 P Pn 01 28 09.3 -0.6
SILT Sile 2.55 31 ⇑P Pb 01 28 14.6 -0.4
ELL Elmali 2.75 144 Pn 01 28 14.1 +0.7
ARG Arkhangelos 2.77 176 Pn 01 28 13.6 0.0
ARG Arkhangelos 2.77 176 P Pn 01 28 13.6 0.0
ARG Arkhangelos 2.77 176 P Pn 01 28 14.4 +0.8
ARG S Sn 01 28 49.2 +2.1
RDO Rodhopi 2.81 321 Pn 01 28 14.5 +0.3
RDO Rodhopi 2.81 321 P Pn 01 28 14.3 +0.2
RDO Rodhopi 2.81 321 P Pn 01 28 14.2 0.0
KARY Karystos 2.87 252 P Pn 01 28 16.2 +1.2
THAS Thassos island 2.93 305 P Pn 01 28 15.2 -0.6
MDUB Mudurnu 2.95 59 Pn 01 28 16.9 +0.7
AKAS Kas 3.07 153 Pn 01 28 18.4 +0.6
AOS Alonnisos 3.13 275 P Pn 01 28 19.4 +0.9
KSL Kastellorizon 3.13 154 P Pn 01 28 20.0 +1.4
KDZ Kurdzhali 3.28 324 P Pn 01 28 18.7 -2.0
KARP Karpathos 3.48 190 Pn 01 28 23.7 +0.3
KARP Karpathos 3.48 190 P Pn 01 28 23.7 +0.3
KARP Karpathos 3.48 190 P Pn 01 28 24.8 +1.3
DIM Dimitrovgrad 3.53 331 P Pn 01 28 23.7 -0.3
RZN Rozhen 3.62 319 P Pn 01 28 25.7 +0.2
JMB Yambol 3.65 344 P Pn 01 28 25.9 +0.2
PLG Polygyros 3.70 293 P Pn 01 28 26.8 +0.4
VIL2 Platees 3.70 259 P Pn 01 28 27.1 +0.6
LKR Lokris 3.84 267 P Pn 01 28 29.4 +1.1
PLD Plovdiv 3.96 324 P Pn 01 28 30.3 +0.3
MMB Musomishta 4.07 310 P Pn 01 28 32.1 +0.6
ELND Elena 4.22 339 ⇓P Pn 01 28 34.9 +1.3
LIT Litokhoron 4.32 287 Pn 01 28 36.2 +1.2
IDI Anoyia 4.40 214 Pn Pn 01 28 35.7 -0.4
6.6nm,0.8s,baz=49,slow=9.3,SNR=6.4
IDI Sn Sn 01 29 24.6 -2.8
1.2nm,0.3s,baz=345,slow=19,SNR=2.3
IDI Lg Lg 01 29 46.6
1.5nm,0.3s,baz=313,slow=19,SNR=5.2
IDI Anoyia 4.40 214 Pn Pn 01 28 37.4 +1.3
BR105 Keskin Array S 4.50 79 P Pn 01 28 38.5 +1.0
BR106 Keskin Array S 4.50 79 P Pn 01 28 38.4 +0.9
BR104 Keskin Array S 4.52 79 P Pn 01 28 38.6 +0.9
BR131 Keskin Array S 4.52 79 Pn 01 28 39.0 +1.3
BRTR Keskin Array B 4.52 79 Pn Pn 01 28 39.1 +1.4
1.7nm,0.3s,baz=252,slow=13,SNR=52
BRTR Sn Sn 01 29 29.6 -0.7
1.1nm,0.3s,baz=259,slow=24,SNR=3.8
BRTR Lg Lg 01 29 51.0
1.3nm,0.3s,baz=259,slow=27,SNR=16
BRTR LR LR 01 29 56.2
comp=Z,13nm,21.8s,baz=282,slow=33
5.8nm,0.5s
VLI Veliai 4.53 242 P Pn 01 28 38.6 +0.9
KIRS Kirsehir-Merke 4.69 86 ⇓P Pn 01 28 41.8 +1.7
VAY Valandovo 4.70 301 *i* Pn Pg 01 29 00.8 +1.5
PLNA Plana 4.86 317 P Pn 01 28 43.4 +0.9
ITM Ithomi 5.04 251 Pn Pn 01 28 45.8 +1.0
PLVB Pleven 5.04 332 ⇓P Pn 01 28 48.7 +3.9
SGRR Singureni 5.43 345 ⇓P Pb 01 28 57.0 -7.1
TIRR Tirgusor 5.48 4 Pn Pn 01 28 50.1 -0.7
TLBR Topalu 5.55 1 ⇑P Pn 01 28 52.3 +0.4
VLAD Vladila 5.65 334 ⇑P Pn 01 28 55.0 +1.9
OHR Ohrid 5.84 294 *i* Pn Pn 01 28 57.8 +2.0
TPGR Topolog 5.88 4 ⇓P Pn 01 28 56.4 +0.1
CSS Mathiatis 5.92 131 Pn 01 28 57.6 +0.7
CSS Mathiatis 5.92 131 P Pn 01 28 58.3 +1.3
0.0nm11nm,0.9s
HUMR Humele 5.95 339 ⇓P Pn 01 29 00.7 +3.4
CFR Carcaliu 6.19 2 ⇓P Pn 01 29 00.6 0.0
BNN Bunyan 6.21 89 Pn Pn 01 29 02.8 +1.8
ISR Istrita 6.21 351 ⇑P Pn 01 29 05.1 +4.2
ISR Istrita 6.21 351 P Pn 01 29 01.8 +0.9
0.3nm22nm,1.4s
TLCR 6.23 6 ⇑P Pn 01 29 02.1 +1.0
NEHR Nehoiu 6.54 350 ⇓P Pn 01 29 10.3 +4.8
BOVS Bovan 6.58 317 ⇑P Pn 01 29 06.8 +0.9
BISRR Bisoca 6.62 353 P Pn 01 29 07.3 +0.8
1.3nm246nm,0.8s
MLR Muntele Rosu 6.66 348 Pn Pn 01 29 08.8 +1.7
0.7nm,0.3s,baz=150,slow=8.1,SNR=9.5
MLR Sn Sn 01 30 22.2 -0.8
0.6nm,0.3s,baz=174,slow=23,SNR=3.1
MLR Lg Lg 01 31 01.8
baz=270,slow=20
MLR LR LR 01 31 43.2
comp=Z,111nm,20.8s,baz=250,slow=38
4.6nm,0.5s
MLR Muntele Rosu 6.66 348 ⇓P Pn 01 29 09.3 +2.2
MLR Muntele Rosu 6.66 348 P Pn 01 29 08.8 +1.7
0.2nm31nm,0.9s
SCTR Scanteiesti 6.68 1 ⇓P Pn 01 29 08.5 +1.1
TOKA Tokat 6.76 76 Pn 01 29 09.5 +1.0
VOIR 6.78 343 P Pn 01 29 09.7 +0.9
0.1nm6.2nm,1.0s
ODBI Odobesti 6.80 355 ⇓P Pn 01 29 10.7 +1.8
ARR Arges 6.82 340 ⇓P Pn 01 29 11.7 +2.4
VLDR Vladesti 6.86 1 ⇑P Pn 01 29 10.7 +1.0
PLOR Plostina 6.92 353 ⇓P Pn 01 29 13.4 +2.8
VRI Vrincioaia 6.93 353 ⇓P Pn 01 29 12.1 +1.4
VRI Vrincioaia 6.93 353 P Pn 01 29 11.6 +0.9
0.2nm28nm,0.8s
COVR Voineasa-Covas 6.97 350 ⇑P Pn 01 29 13.4 +2.1
SEV Sevastopol' 7.03 36 *e*P Pn 01 29 11.5 -0.6
SEV pmax pmax 01 29 18.5
comp=Z,2.0nm,0.4s
SEV smax smax 01 30 16.7
comp=N,10.0nm,0.5s
SEV *e*S Sn 01 30 29.4 -2.6
SEV smax smax 01 30 31.9
comp=N,5.0nm,0.6s
SEV smax smax 01 30 31.9
comp=E,5.0nm,0.5s
GHRR 7.08 357 ⇑P Pn 01 29 14.8 +2.0
GHRR 7.08 357 P Pn 01 29 13.7 +0.9
LOT Lotru 7.14 336 ⇑P Pn 01 29 16.9 +3.1
HERR Herculane 7.16 327 ⇑P Pn 01 29 15.7 +1.7
TURR Turia 7.20 350 ⇑P Pn 01 29 16.3 +1.8
DOPR Dopca 7.22 346 ⇓P Pn 01 29 17.7 +3.0
YAL Yalta 7.22 38 *e*P Pn 01 29 15.2 +0.5
YAL pmax pmax 01 29 16.7
comp=Z,4.0nm,0.3s
YAL *e*S Sn 01 30 33.9 -2.7
YAL smax smax 01 30 37.1
comp=N,4.0nm,0.3s
YAL smax smax 01 30 37.1
comp=E,13nm,0.4s
TARU Tarkhankut 7.25 27 *e*P Pn 01 29 15.6 +0.4
TARU pmax pmax 01 29 16.9
comp=Z,33nm,0.7s
TARU smax smax 01 30 21.7
comp=E,14nm,0.6s
TARU *e*S Sn 01 30 36.5 -0.9
TARU smax smax 01 30 38.2
comp=N,11nm,0.5s
TARU smax smax 01 30 38.2
comp=E,12nm,0.6s
BOSR Bodos 7.27 348 ⇑P Pn 01 29 18.1 +2.6
MDVR Moldovita 7.40 323 ⇓P Pn 01 29 17.7 +0.4
PDG Podgorica 7.41 300 Pn 01 29 18.5 +1.2
PDG Podgorica 7.41 300 ⇑P Pn 01 29 19.5 +2.3
GZR Gura Zlata 7.44 331 ⇑P Pn 01 29 19.8 +2.0
DNZ2 Donuzlav2 7.51 30 *e*P Pn 01 29 19.2 +0.6
DNZ2 pmax pmax 01 29 21.6
comp=Z,11nm,0.7s
DNZ2 *e*S Sn 01 30 42.8 -0.8
DNZ2 smax smax 01 30 43.0
comp=N,9.0nm,0.6s
DNZ2 smax smax 01 30 43.0
comp=E,7.0nm,0.4s
SIM Simferopol' 7.55 36 *e*P Pn 01 29 19.4 +0.2
SIM pmax pmax 01 29 19.6
comp=Z,19nm,0.5s
SIM *e*S Sn 01 30 43.7 -1.0
SIM smax smax 01 30 44.3
comp=N,21nm,0.6s
SIM smax smax 01 30 44.3
comp=E,9.0nm,0.5s
TESR Tescani 7.58 353 ⇑P Pn 01 29 20.2 +0.6
TESR Tescani 7.58 353 P Pn 01 29 19.7 +0.1
comp=E,0.1nmcomp=E,19nm,0.7s
MDB Medias 7.61 341 ⇑P Pn 01 29 23.1 +3.1
PURM Purcari 7.68 10 ⇑P Pn 01 29 21.5 +0.6
DEV Deva 7.81 333 ⇑P Pn 01 29 25.7 +2.9
SUDU Sudak 7.93 40 *e*S Sn 01 30 50.7 -3.3
SUDU smax smax 01 30 51.2
comp=N,4.0nm,0.5s
SUDU smax smax 01 30 51.2
comp=E,2.0nm,0.3s
BZS Buzias 8.09 327 ⇑P Pn 01 29 27.8 +1.1
MARR Marisel-Cluj 8.45 337 ⇑P Pn 01 29 24.9 -6.7
MMAI Mount Meron Ar 8.52 132 Pn Pn 01 29 31.6 -1.0
comp=E,1.3nm,0.3s,baz=317,slow=16,SNR=7.4
MMAI Sn Sn 01 31 06.2 -2.5
comp=E,1.0nm,0.3s,baz=310,slow=26,SNR=2.9
MMAI LR LR 01 33 28.9
comp=E,40nm,20.9s,baz=302,slow=43
comp=E,1.1nm,0.4s
SIRR Siria 8.60 330 ⇑P Pn 01 29 39.0 +5.3
TIP Timpagrande 8.66 275 ⇑P Pn 01 29 37.6 +3.0
TIP Timpagrande 8.66 275 P Pn 01 29 35.8 +1.2
comp=E,5.4nm,1.0s
BURAR Bucovina Array 8.84 348 Pn Pn 01 29 37.4 +0.4
BURAR Bucovina Array 8.84 348 ⇓P Pn 01 29 40.8 +3.8
BUR08 Bucovina Ar. S 8.87 348 Pn 01 29 38.6 +1.1
CEL Celeste 9.42 269 P Pn 01 29 46.5 +1.5
comp=E,15nm,1.6s
KMPD K-Podol'skiy 9.63 354 P Pn 01 29 48.8 +1.1
MORH Mrgy, Hungar 9.93 320 ⇓P Pn 01 29 52.1 +0.3
MORH Mrgy, Hungar 9.93 320 P Pn 01 29 51.9 +0.1
comp=E,4.0nm,0.8s
HORU Horodok 10.28 355 P Pn 01 29 57.4 +0.8
EIL Elat 10.97 146 Pn Pn 01 30 04.3 -1.9
comp=E,0.5nm,0.3s,baz=352,slow=23,SNR=4.2
EIL Sn Sn 01 32 03.8 -5.0
comp=E,0.3nm,0.3s,baz=221,slow=20,SNR=1.7
comp=E,2.2nm,0.5s
MPLH Magyarpolny 11.14 321 P Pn 01 30 09.3 +0.9
AKASG Malin Array Be 11.75 4 Pn Pn 01 30 14.7 -2.1
comp=E,0.4nm,0.3s,baz=184,slow=11,SNR=1.6
AKASG LR LR 01 34 37.8
comp=E,65nm,19.6s,baz=251,slow=37
comp=E,0.2nm,0.3s
KBZ Khabaz 12.23 62 LR LR 01 36 35.8
comp=E,98nm,18.0s,baz=281,slow=45
RNPP5 Staryi Chortor 12.32 354 P Pn 01 30 25.6 +1.0
GNI Garni 13.06 80 LR LR 01 35 42.7
comp=E,88nm,20.3s,baz=306,slow=38
DAVOX Davos/Dischmat 15.31 306 LR LR 01 37 56.8
comp=E,70nm,19.3s,baz=77,slow=41
OBN Obninsk 17.16 17 Pn Pn 01 31 27.5 -1.4
OBN IAmb IAmb 01 31 30.9
comp=Z,19nm,1.1s
FINES FINESS Array B 22.51 358 P P 01 32 29.4 +0.7
comp=Z,2.5nm,0.8s,baz=178,slow=11,SNR=3.6
comp=Z,2.5nm,0.8s
FINES FINESS Array B 22.51 358 P P 01 32 29.0 +0.3
ESDC Sonseca Array 24.59 282 P P 01 32 48.5 -0.8
comp=Z,0.2nm,0.7s,baz=82,slow=9.4,SNR=1.9
comp=Z,0.2nm,0.7s
AB31 Akbulak array 25.02 55 P P 01 32 54.3 +1.2
AB31 IAmb IAmb 01 32 55.6
comp=Z,4.8nm,1.3s
ABKAR Akbulak array 25.02 55 P P 01 32 54.4 +1.3
ESK Eskdalemuir 26.41 318 P P 01 33 09.0 +3.3
ESK IAmb IAmb 01 33 15.6
comp=Z,29nm,1.3s
ARTI Arti 26.59 39 P P 01 33 07.1 -0.1
comp=Z,1.3nm,0.4s,baz=272,slow=7.6,SNR=4.0
comp=Z,1.3nm,0.4s
ARCES ARCESS Array B 30.64 358 LR LR 01 46 44.2
comp=Z,68nm,19.4s,baz=318,slow=38
TORD Torodi Ar. Bea 34.63 229 P P 01 34 20.6 +2.0
comp=Z,0.3nm,0.6s,baz=31,slow=6.2,SNR=2.6
comp=Z,0.3nm,0.6s
KURBB Kurchatov Arra 37.07 55 P P 01 34 39.2 0.0
comp=Z,0.2nm,0.3s,baz=277,slow=8.9,SNR=1.6
comp=Z,0.2nm,0.3s
MKAR Makanchi Array 39.92 61 P P 01 35 03.2 0.0
comp=Z,0.4nm,0.4s,baz=263,slow=8.8,SNR=6.3
comp=Z,0.4nm,0.4s
CMAR Chiang Mai Arr 64.06 87 LR LR 02 09 37.8
comp=Z,18nm,18.2s,baz=60,slow=40
SADO Sadowa 73.91 315 LR LR 02 09 10.0
comp=Z,24nm,19.1s,baz=32,slow=34
KSRS Korea Array 74.25 55 LR LR 02 15 29.0
comp=Z,25nm,18.1s,baz=135,slow=39

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*ISK **04** 01:30:09.3, 39.°00N×27.°87E, h9km, ML3.5/24*
*AFAD **04** 01:30:09.6, 38.°99N×27.°85E, h7km±2km, MW3.4*
*THE **04** 01:30:10.1, 39°N±2°×2°8E±°, h3km±10km, M3.2/11, MLh3.2/11*
ISC 04 01:30:09.8±0.9, **38.°99N**±0.°02×**27.°87E**±0.°02, **h11**km±6km, **n45**, σ0.s43/64, **Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AKHS Akhisar 0.12 200 P Pg 01 30 12.8 0.0
AKHS IAML 01 30 15.0
comp=E,2μm,0.3s
AKHS S Sg 01 30 15.3 +0.4
AKS Akhisar 0.12 200 Pg Pg 01 30 12.4 -0.4
AKS Sg Sg 01 30 14.9 0.0
GORD Gordes-Manisa 0.26 109 Pg Pg 01 30 15.1 0.0
GORD Sg Sg 01 30 19.1 +0.5
GOMA Golmarmara-Man 0.29 172 Pg Pg 01 30 15.8 +0.2
GOMA Sg Sb 01 30 20.9 -0.9
SOMA Soma-Manisa 0.30 302 Pg Pg 01 30 15.7 -0.2
SOMA Sg Sg 01 30 20.7 +0.6
KTTT Salihli 0.35 150 P Pg 01 30 16.9 +0.1
KTTT S Sg 01 30 21.4 -0.1
STEP BALIKESIR_Sava 0.40 343 P Pg 01 30 17.5 -0.2
STEP S Sg 01 30 23.6 +0.6
STEP IAML 01 30 24.0
comp=N,1μm,0.6s
STEP IAML 01 30 24.0
comp=E,1μm,0.7s
CAMT Merkez 0.50 241 P Pg 01 30 19.8 +0.3
CAMT S Sb 01 30 27.4 -0.4
CAMT IAML 01 30 28.0
comp=N,3μm,0.3s
CAMT IAML 01 30 28.0
comp=E,3μm,0.3s
ZEDA zmir-Bergama 0.62 268 P Pb 01 30 22.2 -0.3
ZEDA S Sb 01 30 30.2 -1.0
ZEDA IAML 01 30 31.0
comp=N,1μm,0.2s
ZEDA IAML 01 30 31.0
comp=E,936nm,0.3s
BALB Balikesir 0.65 1 Pg Pb 01 30 22.7 -0.4
IZMD zmir-Dikili- 0.73 270 P Pb 01 30 24.3 -0.3
IZMD S Sb 01 30 34.0 -0.7
IZMD IAML 01 30 38.0
comp=N,436nm,1.0s
IZMD IAML 01 30 39.0
comp=E,424nm,1.1s
ODEM Odemis-Izmir 0.73 167 Pg Pb 01 30 24.5 -0.1
MANT Manisa 0.74 133 P Pg 01 30 23.9 -0.2
MANT S Sg 01 30 33.3 -0.4
MANT IAML 01 30 38.0
comp=E,871nm,0.4s
MANT IAML 01 30 39.0
comp=N,492nm,0.3s
DKL Dikili 0.75 276 Pg Pb 01 30 24.4 -0.5
KULA Kula-Manisa 0.78 127 Pg Pg 01 30 24.8 -0.1
DST Dursunbey 0.84 44 Pg Pg 01 30 25.5 -0.6
YAYO Edremit-Balk 0.87 315 Pg Pb 01 30 26.6 -0.3
SIMA Simav-Kutahya 0.87 84 Pg Pg 01 30 26.6 0.0
SMAA Simav-Kutahya 0.87 83 Pg Pg 01 30 26.9 +0.3
BLCB Balcova 0.89 227 Pg Pb 01 30 26.9 -0.3
BLCB Balcova 0.89 227 P Pg 01 30 26.6 -0.3
BLCB S Sb 01 30 39.4 +0.4
FOCM Foa 0.93 253 Pg Pg 01 30 27.5 -0.2
SUSR Susurluk-Balik 0.98 10 Pg Pg 01 30 28.2 -0.5
AYDB Zeytinkoy-Aydi 1.05 179 Pg Pg 01 30 29.6 -0.3
SHAP Saphane-Kutahy 1.06 88 Pg Pg 01 30 30.1 0.0
YENI Yenice-Canakka 1.06 333 Pg Pg 01 30 29.7 -0.4
GONE Gonen-Balikesi 1.06 352 Pg Pb 01 30 30.1 -0.1
NAZL Nazilli-Aydin 1.08 162 Pn Pg 01 30 30.1 -0.5
KRBN Karaburun 1.10 249 Pn Pb 01 30 30.8 0.0
GMLD Gumuldur 1.18 219 Pn Pn 01 30 32.6 +0.4
CANM Can-anakkale 1.20 328 Pn Pb 01 30 32.4 -0.1
GEDZ Gediz 1.20 87 Pn Pg 01 30 32.9 0.0
KUSD Kusadasi-Aydin 1.22 202 Pn Pb 01 30 32.3 -0.6
PRK Paraskevi 1.27 282 P Pn 01 30 33.4 0.0
PRK S Sn 01 30 50.6 +0.2
GCAM G?zelcaml? 1.39 201 Pn Pn 01 30 35.2 +0.2
EZN Ezine 1.46 305 P Pn 01 30 35.9 -0.1
EZN S Sg 01 30 56.4 -0.1
SMG Samos 1.52 213 P Pb 01 30 37.9 -0.1
SMG S Sg 01 30 58.6 0.0
CHOS Chios island 1.54 247 P Pn 01 30 37.0 -0.3
CHOS S Sg 01 30 59.8 +0.5
SIGR SIGRI 1.58 279 P Pn 01 30 37.5 -0.2
SIGR S Sb 01 30 58.9 -0.1
YER Yerkesik 1.89 170 P Pn 01 30 41.8 -0.2
GADA Gvkgeada 1.93 309 P Pn 01 30 42.7 +0.1
GADA S Sn 01 31 07.6 +0.7
BODT Bodrum 1.98 193 P Pn 01 30 44.0 +0.7
ENEZ Enez 2.18 323 P Pn 01 30 46.5 +0.4
LIA Limnos Island 2.27 294 P Pn 01 30 47.5 +0.3
LIA S Sn 01 31 16.6 +1.5
SMTH Samothraki Isl 2.33 310 P Pn 01 30 48.1 +0.1

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*NEIC **04** 01:31:59.9±1.5, 17.°86N±0.°04×66.°877W±0.°008, h10km±1km, ML3.2/35, Md3.0/6(RSPR), Error ellipse: s-maj=6.8km s-min=2.8km az=7.0*
*RSPR **04** 01:32:01.0, 17.°94N×66.°90W, h12km, MD3.0/6*
*SDD **04** 01:32:02.6±1.7, 17.°98N×66.°86W, h0km±8km, MD3.1, ML2.9, MW3.1, Presumed earthquake*
ISC 04 01:32:00.5±0.9, **17.°92N**±0.°05×**66.°89W**±0.°02, **h16**km±4km, **n51**, σ0.s65/90, **9C-9D**, **Puerto Rico region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GBPR Guanica, Bosqu 0.06 10 Pg 01 32 03.5 0.0
GBPR Sg 01 32 05.5 0.0
GBPR Guanica, Bosqu 0.06 10 ⇑*i*P Pg 01 32 03.5 0.0
GBPR *e*S Sg 01 32 05.5 0.0
GBPR Guanica, Bosqu 0.06 10 ⇑*i*P Pg 01 32 03.5 0.0
GBPR *e*S Sg 01 32 05.5 0.0
MLPR Magueyes Islan 0.16 288 Pg 01 32 04.3 -0.2
MLPR Sg Sg 01 32 07.1 -0.2
MLPR IAML 01 32 07.5
13μm,0.5s
MLPR IAML 01 32 07.8
5μm,0.2s
CRPR Cabo Rojo, PR 0.23 292 Pg 01 32 05.4 -0.2
CRPR Sg Sg 01 32 08.8 -0.3
CRPR Cabo Rojo, PR 0.23 292 IAML 01 32 09.1
6μm,0.3s
CRPR IAML 01 32 09.3
7μm,0.6s
CRPR Cabo Rojo, PR 0.23 292 ⇑*i*P Pg 01 32 05.5 -0.1
CRPR *i* S Sg 01 32 09.1 0.0
CRPR IAML 01 32 09.3
comp=N,4μm,0.3s
CRPR Cabo Rojo, PR 0.23 292 ⇑*i*P Pg 01 32 05.5 -0.1
CRPR *e*S Sg 01 32 08.6 -0.5
CRPR Cabo Rojo, PR 0.23 292 ⇑*i*P Pg 01 32 05.5 -0.1
CRPR *e*S Sg 01 32 08.7 -0.5
OBIP Obispado Ponce 0.29 66 Pg 01 32 06.9 +0.1
OBIP Sg Sg 01 32 11.3 +0.2
OBIP IAML 01 32 12.1
comp=N,370nm,0.7s
OBIP Obispado Ponce 0.29 66 ⇓*i*P Pg 01 32 06.9 +0.1
OBIP *e*S Sb 01 32 12.0 -0.1
OBIP Obispado Ponce 0.29 66 ⇓*i*P Pg 01 32 06.9 +0.1
OBIP *e*S Sb 01 32 11.8 -0.3
LSP Las Mesas 0.32 324 Pg 01 32 07.1 0.0
LSP Sg 01 32 11.5 -0.3
LSP Las Mesas 0.32 324 ⇓*i*P Pg 01 32 07.1 0.0
LSP *e*S Sg 01 32 11.2 -0.5
LSP Las Mesas 0.32 324 ⇓*i*P Pg 01 32 07.1 0.0
LSP *e*S Sg 01 32 11.5 -0.3
CELP Cerrillos 0.33 62 Pg 01 32 07.5 +0.1
CELP Sg Sg 01 32 12.6 +0.4
CELP IAML 01 32 13.5
comp=N,2μm,0.3s
CELP IAML 01 32 13.9
comp=N,2μm,0.3s
UUPR Utuado, UPR, P 0.37 26 Pg Pg 01 32 07.8 -0.2
UUPR Sg Sg 01 32 12.9 -0.3
UUPR IAML 01 32 13.8
comp=N,31μm,0.4s
UUPR IAML 01 32 15.3
comp=N,15μm,0.3s
PRSN Puerto Rico Se 0.38 321 Pg 01 32 08.1 -0.2
PRSN IAML 01 32 10.7
comp=N,3μm,0.3s
PRSN Sg Sg 01 32 13.8 +0.2
PRSN IAML 01 32 16.3
comp=N,3μm,0.3s
PRSN Puerto Rico Se 0.38 321 ⇑*i*P Pg 01 32 08.1 -0.2
PRSN ⇑*i*S Sg 01 32 11.3 -2.3
PRSN IAML 01 32 16.6
comp=N,2μm,0.4s
PRSN Puerto Rico Se 0.38 321 ⇑*i*P Pg 01 32 08.1 -0.2
PRSN *e*S Sg 01 32 13.7 0.0
PRSN Puerto Rico Se 0.38 321 ⇑*i*P Pg 01 32 08.1 -0.2
PRSN *e*S Sg 01 32 13.7 0.0
AGPR Aguadilla, PR 0.58 339 Pg 01 32 11.6 -0.5
AGPR Sg Sg 01 32 19.5 -0.4
AGPR IAML 01 32 19.8
comp=N,1μm,0.4s
AGPR IAML 01 32 22.1
comp=N,1μm,0.2s
AGPR Aguadilla, PR 0.58 339 ⇑*i*P Pg 01 32 11.5 -0.5
AGPR ⇑*i*S Sg 01 32 19.8 -0.1
AGPR IAML 01 32 24.1
comp=N,999nm,0.3s
AGPR Aguadilla, PR 0.58 339 ⇑*i*P Pg 01 32 11.6 -0.5
AGPR *e*S Sg 01 32 19.6 -0.3
AGPR Aguadilla, PR 0.58 339 ⇑*i*P Pg 01 32 11.6 -0.5
AGPR *e*S Sg 01 32 19.5 -0.4
ECPR Experimental S 0.64 52 Pg 01 32 12.2 -0.8
ECPR IAML 01 32 23.4
comp=N,2μm,0.2s
ECPR IAML 01 32 24.3
comp=N,1μm,0.3s
ECPR Experimental S 0.64 52 ⇓*i*P Pg 01 32 12.5 -0.6
ECPR *e*S Sg 01 32 21.4 -0.1
ECPR Experimental S 0.64 52 ⇓*i*P Pg 01 32 12.5 -0.6
ECPR *e*S Sg 01 32 21.4 -0.1
EMPR Esperanza - Ma 0.65 32 Pb 01 32 13.5 +0.1
EMPR Sb 01 32 22.9 +0.6
EMPR Esperanza - Ma 0.65 32 ⇑*i*P Pg 01 32 13.3 +0.1
EMPR *e*S Sb 01 32 22.6 +0.2
EMPR Esperanza - Ma 0.65 32 ⇓*i*P Pb 01 32 13.5 +0.1
EMPR *e*S Sb 01 32 22.9 +0.6
IDE Isla Desecheo 0.72 310 Pb 01 32 13.9 -0.8
IDE Sb 01 32 23.4 -1.0
IDE Isla Desecheo 0.72 310 ⇑*i*P Pb 01 32 13.9 -0.8
IDE *e*S Sb 01 32 23.3 -1.1
IDE Isla Desecheo 0.72 310 ⇑*i*P Pb 01 32 13.9 -0.8
IDE *e*S Sb 01 32 23.4 -1.0
SJG San Juan 0.73 75 Pg Pb 01 32 14.0 -0.7
SJG IAML 01 32 25.1
comp=N,933nm,0.6s
SJG IAML 01 32 25.7
comp=N,503nm,0.3s
SJG San Juan 0.73 75 ⇓*i*P Pb 01 32 14.1 -0.7
SJG *e*S Sb 01 32 23.9 -0.6
SJG San Juan 0.73 75 ⇓*i*P Pb 01 32 14.1 -0.7
SJG *e*S Sb 01 32 23.9 -0.6
PDPR Patillas Dam, 0.83 83 Pg Pb 01 32 15.8 -0.7
PDPR IAML 01 32 31.2
comp=N,386nm,0.5s
PDPR IAML 01 32 31.8
comp=N,265nm,0.5s
GCPR Guaynabo City 0.86 63 Pb 01 32 16.0 -1.0
GCPR IAML 01 32 32.5
comp=N,202nm,0.3s
GCPR IAML 01 32 38.8
comp=E,157nm,0.7s
GCPR Guaynabo City 0.86 63 Sb 01 32 27.8 -0.5
GCPR Guaynabo City 0.86 63 ⇑*e*P Pb 01 32 16.2 -0.9
GCPR *e*S Sb 01 32 27.8 -0.5
GCPR Guaynabo City 0.86 63 ⇑*e*P Pb 01 32 16.2 -0.9
GCPR *e*S Sb 01 32 27.8 -0.5
HUMP Col San Antoni 1.01 77 Pb 01 32 18.8 -0.9
HUMP IAML 01 32 36.0
comp=E,468nm,0.3s
HUMP IAML 01 32 36.0
comp=E,619nm,0.4s
HUMP Col San Antoni 1.01 77 Sb 01 32 31.4 -1.3
HUMP Col San Antoni 1.01 77 ⇑*i*P Pb 01 32 19.0 -0.6
HUMP *e*S Sb 01 32 32.7 0.0
HUMP Col San Antoni 1.01 77 ⇑*i*P Pb 01 32 19.0 -0.6
HUMP *e*S Sb 01 32 31.4 -1.3
CUPR Culebra, Puert 1.58 76 Pn 01 32 28.3 +0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HIDR	**Higuey Centro**	**1.86**	**291**	⇑iP	**Pb**	**01 32 33.9**	**-0.2**
HIDR				iS	**Sb**	**01 32 57.5**	**+0.4**
HIDR				IAML		01 33 04.8	
	comp=N,102nm,0.2s						
MIDR	**Miches**	**2.31**	**298**	iP	**Pb**	**01 32 41.0**	**-0.7**
MIDR				iS	**Sn**	**01 33 07.6**	**+1.7**
MIDR				IAML		01 33 15.8	
	comp=N,44nm,0.5s						
MIDR				IAML		01 33 16.1	
	comp=N,43nm,0.5s						
DR12	**Loma Pena Alta**	**2.52**	**290**		**Pn**	**01 32 41.5**	**+0.6**
HATOM	**Hato Mayor del**	**2.52**	**290**	⇑iP	**Pn**	**01 32 43.0**	**+2.2**
HATOM				IAML		01 33 21.4	
	comp=N,45nm,0.6s						

*NEIC **04** 01:50:28.2±1.6, 11°.36S±0°.10×166°.7E±0°.1, h94km±5km, mb4.6/37, Error ellipse: s-maj=16.4km s-min=12.9km az=58.0*
*IDC **04** 01:50:37.4±1.0, 11°.38S×166°.55E, h179km±8km, mb3.9/22, mbtmp4.3/23, Error ellipse: s-maj=15.8km s-min=11.7km az=117.0*
*NOU **04** 01:50:38.5, 11°.30S×166°.48E, h192km, mb4.5/10, Santa Cruz Islands*
ISC 04 01:50:39.5±0.4**, 11°.40S**±0°.06×**166°.39E**±0°.07**, h200**km**, n98, σ1s30**/106**, mb4.3**/41**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NGOA	**Tingoa Renbel**	**6.21**	**268**	P	**Pn**	**01 52 09.2**	**-0.3**
NGOA	**Tingoa Renbel**	**6.21**	**268**	S	**Sn**	**01 53 21.9**	**+1.2**
HNR	**Honiara**	**6.63**	**287**	P	**Pn**	**01 52 15.4**	**+0.3**
	9.1nm,0.6s,baz=154,slow=7.8,SNR=2.5						
HNR				S	**Sn**	**01 53 28.0**	**-2.7**
	4.0nm,0.4s,baz=43,slow=19,SNR=1.3						
HNR	**Honiara**	**6.63**	**287**		Pn	01 52 07.3	-7.7
HNR					**Sn**	**01 53 23.1**	**-7.7**
TATA	**Tatamba Isabel**	**7.15**	**294**	P	**Pn**	**01 52 21.6**	**-0.1**
MARNC	**Mare, Loyalty**	**10.15**	**171**	Pn	Pn	01 52 50.7	-10
YATNC	**Mamie plateau,**	**10.62**	**177**	P	**Pn**	**01 53 05.9**	**-0.8**
DZM	**Mont Dzumac**	**10.62**	**180**	P	**Pn**	**01 53 06.8**	**0.0**
	6.0nm,0.3s,baz=322,slow=18,SNR=27						
DZM				S	**Sn**	**01 55 01.1**	**-4.3**
	5.7nm,0.7s,baz=346,slow=23,SNR=1.5						
DZM	**Mont Dzumac**	**10.62**	**180**	P	**Pn**	**01 53 07.4**	**+0.6**
OUENC	**Ouen Island, N**	**10.97**	**178**	P	**Pn**	**01 53 12.5**	**+1.2**
EIDS	**Eidsvold**	**20.08**	**224**	P	**P**	**01 54 57.9**	**+0.1**
CTA	**Charters Tower**	**21.20**	**243**	P	**P**	**01 55 10.3**	**+0.5**
	6.2nm,0.7s,baz=67,slow=10,SNR=20						
	6.2nm,0.7s						
COEN	**Coen**	**22.79**	**261**	P	**P**	**01 55 26.1**	**+0.9**
TOZ	**Tahuroa Road**	**27.47**	**164**	P	**P**	**01 56 07.3**	**+0.2**
TOZ				IAmb	IAmb	01 56 34.6	
	comp=Z,12nm,1.1s						
URZ	**Urewera**	**28.42**	**162**	P	**P**	**01 56 15.4**	**-0.1**
RTZ	**Ruatahuna**	**28.71**	**163**		**P**	**01 56 17.6**	**-0.5**
BKZ	**Black Stump Fm**	**29.08**	**164**	P	**P**	**01 56 21.2**	**-0.2**
BKZ	**Black Stump Fm**	**29.08**	**164**	P	**P**	**01 56 21.5**	**+0.1**
H11S2	**WAKE ISLAND Hy**	**29.70**	**1**	T	T	02 27 27.9	
	baz=180						
H11S3	**WAKE ISLAND Hy**	**29.70**	**1**	T	T	02 27 23.5	
	baz=180						
H11S1	**WAKE ISLAND Hy**	**29.71**	**1**	T	T	02 27 35.7	
	baz=180						
MRZ	**Mangatainoka R**	**30.26**	**166**	P	**P**	**01 56 32.0**	**+0.3**
MRZ				IAmb	IAmb	01 56 34.3	
	comp=Z,32nm,1.3s						
MRNZ	**Matariki Terra**	**30.41**	**171**	P	**P**	**01 56 33.4**	**+0.4**
BFZ	**Birch Farm**	**30.44**	**165**	P	**P**	**01 56 31.5**	**-1.8**
STKA	**Stephens Creek**	**30.63**	**224**	P	**P**	**01 56 36.6**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=66,slow=9.9,SNR=3.0						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**30.63**	**224**	P	**P**	**01 56 36.8**	**+1.6**
STKA				IAmb	IAmb	01 57 09.2	
	comp=Z,18nm,1.1s						
TUWZ	**Tuamarina**	**30.64**	**169**	P	**P**	**01 56 35.4**	**+0.3**
WRA	**Warramunga Arr**	**31.96**	**251**	P	**P**	**01 56 47.3**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=84,slow=9.0,SNR=27						
WRA				pP	**pP**	**01 57 26.7**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=81,slow=9.1,SNR=3.5						
WRA				PcP	**PcP**	**01 59 33.2**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=81,slow=2.9,SNR=9.2						
	comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**31.96**	**251**	P	**P**	**01 56 47.5**	**+0.5**
WRA					**PcP**	**01 59 33.0**	**+0.7**
ASAR	**Alice Springs**	**33.21**	**244**	P	**P**	**01 56 58.0**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=66,slow=10,SNR=11						
ASAR				pP	**pP**	**01 57 35.3**	**-2.2**
	comp=Z,0.7nm,0.6s,baz=78,slow=9.3,SNR=2.5						
ASAR				PcP	**PcP**	**01 59 36.0**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=67,slow=2.5,SNR=12						
ASAR				ScP	**ScP**	**02 03 04.4**	**+3.2**
	comp=Z,1.1nm,1.0s,baz=67,slow=3.0,SNR=5.8						
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**33.21**	**244**	P	**P**	**01 56 59.1**	**+1.3**
ASAR					**PcP**	**01 59 36.2**	**+0.5**
JHJ	**Hachijo jima 2**	**51.03**	**331**	P	**P**	**01 59 20.3**	**-1.0**
	comp=Z,144nm,0.6s,baz=76,slow=19,SNR=5.4						
JOW	**Kunigami**	**53.05**	**316**	P	**P**	**01 59 37.2**	**+0.9**
	comp=Z,11nm,0.6s,baz=211,slow=6.0,SNR=4.2						
	comp=Z,11nm,0.6s						
JOW	**Kunigami**	**53.05**	**316**	P	**P**	**01 59 36.9**	**+0.6**
JNU	**Nakatsue**	**55.73**	**324**	P	**P**	**01 59 55.4**	**-0.3**
	comp=Z,4.5nm,0.6s,baz=131,slow=11,SNR=2.3						
	comp=Z,4.5nm,0.6s						
JKA	**Kamikawa-asahi**	**59.33**	**340**	P	**P**	**02 00 21.4**	**+0.9**
ASAJ	**Asahikawa**	**59.33**	**340**	P	**P**	**02 00 21.9**	**+1.5**
	comp=Z,8.9nm,0.6s,baz=150,slow=20,SNR=4.4						
	comp=Z,8.9nm,0.6s						
KSRS	**Korea Array**	**60.52**	**325**	P	**P**	**02 00 29.1**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=136,slow=7.0,SNR=7.6						
	comp=Z,1.7nm,0.6s						
USRK	**Ussuriysk Ar.**	**63.54**	**333**	P	**P**	**02 00 49.9**	**+1.2**
	comp=Z,4.4nm,0.8s,baz=88,slow=4.4,SNR=4.4						
	comp=Z,4.4nm,0.8s						
PETK	**Petropavlovsk-**	**64.67**	**354**	P	**P**	**02 00 56.1**	**+0.3**
	comp=Z,4.1nm,0.8s,baz=161,slow=5.3,SNR=3.2						
	comp=Z,4.1nm,0.8s						
PETK	**Petropavlovsk-**	**64.67**	**354**	P	**P**	**02 00 56.8**	**+1.0**
VNDA	**Vanda**	**66.16**	**181**	P	**P**	**02 01 05.0**	**0.0**
	comp=Z,5.4nm,1.1s,baz=350,slow=4.7,SNR=5.5						
	comp=Z,5.4nm,1.1s						
VNDA	**Vanda**	**66.16**	**181**	P	**P**	**02 01 05.3**	**+0.3**
VNDA				IAmb	IAmb	02 01 29.3	
	comp=Z,14nm,1.4s						
ENH	**Enshi**	**68.61**	**309**		**P**	**02 01 21.9**	**+0.7**
ENH				IAmb	IAmb	02 01 22.6	
	comp=Z,9.8nm,0.8s						
LVA	**Lava Point**	**69.37**	**17**	P	**P**	**02 01 24.1**	**-1.2**
CMAR	**Chiang Mai Arr**	**72.83**	**293**	P	**P**	**02 01 48.7**	**+1.8**
	comp=Z,4.9nm,0.7s,baz=126,slow=4.5,SNR=24						
	comp=Z,4.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**72.83**	**293**		**P**	**02 01 47.5**	**+0.6**
CHTO	**Chiang Mai**	**72.95**	**294**	P	**P**	**02 01 47.7**	**+0.1**
CHTO				IAmb	IAmb	02 01 49.5	
	comp=Z,5.5nm,0.7s						
HILR	**Hailar Array B**	**73.18**	**330**	P	**P**	**02 01 48.7**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=127,slow=6.4,SNR=4.4						
	comp=Z,1.3nm,0.5s						
LZDM	**Lanzhou Array**	**75.51**	**312**	P	**P**	**02 02 04.2**	**+1.7**
	comp=Z,4.1nm,0.7s,baz=187,slow=6.0,SNR=12						
	comp=Z,4.1nm,0.7s						
M16K	**Timber Creek**	**77.21**	**16**	P	**P**	**02 02 11.6**	**+0.5**
M16K				IAmb	IAmb	02 02 13.2	
	comp=Z,14nm,0.8s						
QSPA	**South Pole Qui**	**78.61**	**180**	P	**P**	**02 02 19.7**	**+0.8**
QSPA				IAmb	IAmb	02 02 24.4	
	comp=Z,6.1nm,1.1s						
J16K	**Anvik River**	**78.66**	**15**		**P**	**02 02 19.7**	**+0.7**
J16K				IAmb	IAmb	02 02 21.4	
	comp=Z,12nm,0.9s						
L18K	**Granite Mounta**	**78.82**	**17**	P	**P**	**02 02 20.7**	**+0.8**
L18K				IAmb	IAmb	02 02 22.1	
	comp=Z,8.3nm,0.8s						
ULN	**Ulaanbaatar**	**78.96**	**324**		**P**	**02 02 21.9**	**+0.7**
ULN				IAmb	IAmb	02 02 23.2	
	comp=Z,5.7nm,0.9s						
TNA	**Tin City**	**79.10**	**11**	P	**P**	**02 02 21.7**	**+0.5**
TNA				IAmb	IAmb	02 03 02.4	
	comp=Z,6.2nm,1.0s						
BILL	**Bilibino**	**79.23**	**360**		**P**	**02 02 22.1**	**+0.2**
BILL				IAmb	IAmb	02 02 23.0	
	comp=Z,8.7nm,1.2s						
SONM	**Songino Array**	**79.32**	**324**	P	**P**	**02 02 23.6**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=145,slow=6.1,SNR=9.7						
	comp=Z,1.5nm,0.5s						
SONM	**Songino Array**	**79.32**	**324**	P	**P**	**02 02 24.0**	**+0.9**
G19K	**Purcell Mounta**	**81.88**	**14**	P	**P**	**02 02 36.4**	**+0.3**
E18K	**Tukpahlearik C**	**82.16**	**12**	P	**P**	**02 02 37.7**	**+0.2**
E19K	**Redstone River**	**82.92**	**13**	P	**P**	**02 02 42.2**	**+0.8**
C18K	**Utukok River**	**83.08**	**11**	P	**P**	**02 02 42.5**	**+0.1**
HDA	**Harding Lake**	**83.37**	**19**	P	**P**	**02 02 43.6**	**-0.2**
HDA				IAmb	IAmb	02 02 44.8	
	comp=Z,12nm,0.8s						
D19K	**Kuna River**	**83.58**	**12**	P	**P**	**02 02 45.0**	**+0.2**
D19K				IAmb	IAmb	02 02 46.0	
	comp=Z,8.6nm,1.1s						
ILAR	**Eielson Array**	**83.64**	**18**	P	**P**	**02 02 44.5**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=260,slow=5.0,SNR=38						
ILAR				pP	**pP**	**02 03 28.7**	**-4.5**
	comp=Z,0.5nm,0.6s,baz=236,slow=4.6,SNR=2.8						
	comp=Z,2.4nm,0.7s						
ILAR	**Eielson Array**	**83.64**	**18**	P	**P**	**02 02 44.3**	**-0.9**
M27K	**Edge Creek, AK**	**83.71**	**22**	P	**P**	**02 02 45.5**	**-0.3**
M27K				IAmb	IAmb	02 03 13.6	
	comp=Z,16nm,1.4s						
J25K	**Salcha River,**	**84.01**	**19**		**P**	**02 02 47.0**	**-0.2**
SCRK	**Sand Creek**	**84.03**	**20**		**P**	**02 02 47.1**	**-0.2**
SCRK				IAmb	IAmb	02 02 48.4	
	comp=Z,7.6nm,1.0s						
D20K	**Etivluk River**	**84.08**	**13**	P	**P**	**02 02 47.9**	**+0.5**
D20K				IAmb	IAmb	02 02 48.9	
	comp=Z,4.2nm,0.9s						
NVAR	**Mina Array Bea**	**85.76**	**50**	P	**P**	**02 02 57.0**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=236,slow=8.8,SNR=9.4						
	comp=Z,1.5nm,0.7s						
NVAR	**Mina Array Bea**	**85.76**	**50**	P	**P**	**02 02 56.2**	**-0.5**
PDAR	**Pinedale Array**	**93.32**	**47**	P	**P**	**02 03 32.9**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=258,slow=2.7,SNR=4.2						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**93.32**	**47**	P	**P**	**02 03 31.9**	**-0.2**
MK31	**Makanchi Array**	**94.21**	**317**	P	**P**	**02 03 35.8**	**0.0**
MKAR	**Makanchi Array**	**94.21**	**317**	P	**P**	**02 03 36.3**	**+0.5**
	comp=Z,7.9nm,0.5s,baz=86,slow=6.2,SNR=130						
MKAR	**Makanchi Array**	**94.21**	**317**		**P**	**02 03 36.4**	**+0.6**
ZALV	**Zalesovo Beam**	**94.21**	**324**	P	**P**	**02 03 34.8**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=111,slow=4.1,SNR=8.6						
	comp=Z,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**94.21**	**324**	P	**P**	**02 03 35.3**	**-0.3**
MAKZ	**Makanchi**	**94.42**	**317**	P	**P**	**02 03 37.7**	**+0.9**
YKA	**Yellowknife Ar**	**94.99**	**27**	P	**P**	**02 03 37.3**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=263,slow=5.2,SNR=6.3						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**95.44**	**61**	P	**P**	**02 03 40.9**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=227,slow=5.4,SNR=4.8						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**95.44**	**61**	P	**P**	**02 03 40.4**	**-1.5**
KURK	**Kurchatov**	**97.31**	**320**	P	**P**	**02 03 49.4**	**-0.3**
KURK				IAmb	IAmb	02 03 59.0	
	comp=Z,1.9nm,1.1s						
KURBB	**Kurchatov Arra**	**97.36**	**320**	P	**P**	**02 03 49.0**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=98,slow=4.4,SNR=5.8						
	comp=Z,0.4nm,0.6s						
BVAR	**Borovoye Array**	**102.61**	**322**	P	**Pdif**	**02 04 13.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=97,slow=4.9,SNR=2.8						
ARCES	**ARCESS Array B**	**116.83**	**346**	PKP	**PKPdf**	**02 08 59.3**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=63,slow=1.6,SNR=7.0						
FINES	**FINESS Array B**	**122.33**	**339**	PKP	**PKPdf**	**02 09 10.1**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=93,slow=3.8,SNR=9.0						
FINES	**FINESS Array B**	**122.33**	**339**		**PKPdf**	**02 09 09.7**	**-0.7**
BOSA	**Boshof**	**125.29**	**223**	PKP	**PKiKP**	**02 09 17.5**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=41,slow=4.0,SNR=3.9						
BOSA	**Boshof**	**125.29**	**223**		**PKPdf**	**02 09 17.1**	**-0.2**
NB2	**NORSAR Subarra**	**127.20**	**345**	PKP	**PKiKP**	**02 09 20.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=43,slow=2.8						
NOA	**NORSAR Array B**	**127.20**	**345**	PKP	**PKPdf**	**02 09 19.6**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=33,slow=1.9,SNR=3.8						
KEST	**Kesra**	**148.08**	**323**	PKPbc	**PKPbc**	**02 10 02.6**	**+0.6**
	comp=Z,4.3nm,0.7s,baz=86,slow=4.5,SNR=5.7						
KEST	**Kesra**	**148.08**	**323**		**PKPbc**	**02 10 01.4**	**-0.6**
ESDC	**Sonseca Array**	**150.56**	**345**	PKPbc	**PKPbc**	**02 10 08.2**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=15,slow=2.8,SNR=13						
ESDC				PKPab	**PKPab**	**02 10 15.6**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=13,slow=3.7,SNR=11						
TORD	**Torodi Ar. Bea**	**164.94**	**278**	PKP	**PKPdf**	**02 10 20.2**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=272,slow=2.1,SNR=6.5						
TORD				PKPab	**PKPab**	**02 11 18.5**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=100,slow=2.8,SNR=3.3						

*IDC **04** 01:53:16.6±3.6, 0°.71N×92°.05E, h0km, mb3.8/4, mbtmp3.7/5, ML4.4/1, MS3.8/1, Error ellipse: s-maj=92.4km s-min=72.4km az=85.0*
*NEIC **04** 01:53:21.1±1.4, 1°.0N±0°.1×91°.8E±0°.1, h10km±1km, mb4.9/14, Error ellipse: s-maj=23.0km s-min=19.8km az=267.0*
ISC 04 01:53:20.3±0.6**, 1°.07N**±0°.07×**91°.90E**±0°.10**, h10**km**, n32, σ1s81**/36**, mb4.7**/14**, 1D, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**10.55**	**4**	eP	**Pn**	**01 55 51.5**	**-0.1**
PBA				eS	**Sn**	**01 57 43.5**	**-6.5**
PBA				IAML		01 57 54.3	
	comp=N,260nm,0.3s						
PBA				IAML		01 57 55.7	
	comp=E,278nm,0.2s						
DGPR	**DIGLIPUR**	**12.07**	**5**	IAML		01 54 49.0	
	comp=E,279nm,0.1s						
DGPR				IAML		01 54 49.0	
	comp=N,176nm,0.1s						
DGPR				eP	**Pn**	**01 56 13.4**	**+0.9**
DGPR				eS	Sn	01 58 18.8	-8.6
MDRS	**Chennai**	**16.60**	**316**	eP	**Pn**	**01 57 12.4**	**-0.9**
MDRS				eS	**Sn**	**02 00 19.6**	**+1.8**
MDRS				IAML		02 02 00.0	
	comp=E,353nm,0.1s						
MDRS				IAML		02 02 13.1	
	comp=N,181nm,2.5s						
CMAR	**Chiang Mai Arr**	**18.61**	**21**	P	**P**	**01 57 38.8**	**+0.8**
	comp=N,0.5nm,0.3s,baz=201,slow=10,SNR=1.4						
	comp=N,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**18.61**	**21**	P	**P**	**01 57 36.3**	**-1.7**
IMP	**Imphal**	**23.71**	**5**	eP	**P**	**01 58 36.5**	**+3.9**
IMP				IAmb	IAmb	02 01 04.5	
	comp=Z,13nm,0.6s						
IMP				⇓eS	**S**	**02 02 50.8**	**+3.0**
SHL	**Shillong**	**24.36**	**360**	eP	**P**	**01 58 40.6**	**+1.8**
SHL				IAmb	IAmb	01 58 49.4	
	comp=Z,5.4nm,0.5s						
SHL				eS	**S**	**02 03 00.5**	**+2.1**
KOHI	**KOHIMA**	**24.60**	**5**	eP	**P**	**01 58 42.5**	**+1.5**
KOHI				IAmb	IAmb	01 59 58.4	
	comp=Z,18nm,0.3s						
KOHI				eS	**S**	**02 03 04.6**	**+2.3**
LUWI	**Luwuk**	**30.94**	**94**	P	**P**	**01 59 37.3**	**-0.5**
MBWA	**Marble Bar**	**35.05**	**131**	P	**P**	**02 00 14.5**	**+0.9**
MBWA				IAmb	IAmb	02 00 28.7	
	comp=Z,66nm,1.6s						
PSA00	**Pilbara Seismi**	**35.38**	**131**	P	**P**	**02 00 15.7**	**-0.7**
PSA00				IAmb	IAmb	02 00 25.8	
	comp=Z,29nm,1.6s						
SSLB	**Suanglung**	**36.09**	**49**	P	**P**	**02 00 23.1**	**+0.6**
SSLB				IAmb	IAmb	02 00 35.4	
	comp=Z,62nm,1.6s						
MKAR	**Makanchi Array**	**46.31**	**351**	P	**P**	**02 01 47.2**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=174,slow=8.9,SNR=8.1						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**46.31**	**351**	P	**P**	**02 01 46.9**	**+0.6**
WB0	**Warramunga Arr**	**46.52**	**119**	P	**P**	**02 01 47.2**	**-1.1**
WB0				IAmb	IAmb	02 01 56.7	
	comp=Z,10nm,1.6s						
WR8	**Warramunga Arr**	**46.68**	**119**	P	**P**	**02 01 50.0**	**+0.3**
WR8				IAmb	IAmb	02 01 51.4	
	comp=Z,8.5nm,1.5s						
ABPO	**Ambohimpanom**	**48.19**	**243**	P	**P**	**02 02 00.4**	**-1.2**
SONM	**Songino Array**	**48.25**	**13**	P	**P**	**02 02 01.7**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=192,slow=9.4,SNR=4.8						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**48.25**	**13**	P	**P**	**02 02 01.8**	**+0.2**
ULN	**Ulaanbaatar**	**48.43**	**14**	P	**P**	**02 02 03.6**	**+0.7**
KS19	**Wonju Array Si**	**49.09**	**38**	P	**P**	**02 02 09.0**	**+1.0**
KS19				IAmb	IAmb	02 02 20.4	
	comp=Z,30nm,1.5s						
KURBB	**Kurchatov Arra**	**50.66**	**349**	P	**P**	**02 02 20.0**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=169,slow=7.1,SNR=5.6						
	comp=Z,0.4nm,0.7s						
KURK	**Kurchatov**	**50.74**	**349**	P	**P**	**02 02 20.4**	**+0.1**
ZALV	**Zalesovo Beam**	**53.03**	**355**	P	**P**	**02 02 37.6**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=167,slow=7.5,SNR=4.9						
	comp=Z,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**53.03**	**355**	P	**P**	**02 02 37.9**	**+0.6**
ABKAR	**Akbulak array**	**55.27**	**335**	P	**P**	**02 02 54.2**	**+0.5**
AKTO	**Aktyubinsk**	**56.98**	**335**	LR	LR	02 28 43.5	
	comp=Z,94nm,21.4s,baz=300,slow=37						
CASY	**Casey**	**68.51**	**172**	P	**P**	**02 04 23.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**89.97**	**283**	P	**P**	**02 06 21.5**	**+0.8**
TORD				IAmb	IAmb	02 06 22.3	
	comp=Z,2.9nm,0.6s						
DBIC	**Dimbokro**	**96.59**	**277**	P	**P**	**02 06 48.8**	**-2.5**
TX31	**Lajitas Ar. Si**	**146.30**	**25**	PKPdf	**PKPdf**	**02 13 00.1**	**-1.0**
TXAR	**Lajitas Array**	**146.30**	**25**	PKPbc	**PKPdf**	**02 13 00.2**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=348,slow=2.7,SNR=6.1						

*IDC **04** 02:06:06.7±2.1, 10°.08S×118°.04E, h0km, mb3.5/2, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=72.1km s-min=24.3km az=57.0*
*DJA **04** 02:06:11.0±0.4, 10°S±4°×11°8E±°, h10km, M4.0/11, mB4.6/1, mb4.2/2, MLv3.9/11, Mw(mB)3.8/1*
ISC 04 02:06:12.9±0.9**, 10°.02S**±0°.07×**118°.23E**±0°.04**, h38**km**, n16, σ1s42**/22**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.21**	**72**	P	**Pn**	**02 06 32.0**	**-1.3**
WBSI				S	**Sn**	**02 06 50.5**	**+2.0**
PLAI	**Plampang**	**1.27**	**340**	P	**Pn**	**02 06 32.9**	**-1.1**
DBNI	**Kabupaten Domp**	**1.51**	**3**	P	**Pn**	**02 06 37.1**	**-0.3**
DBNI				S	**Sn**	**02 06 57.4**	**+1.5**
TWSI	**Taliwang, Sumb**	**1.84**	**314**	P	**Pn**	**02 06 40.8**	**-1.1**
TWSI				S	**Sn**	**02 07 05.4**	**+1.4**
WSI	**Waingapu**	**2.07**	**80**	P	**Pn**	**02 06 46.3**	**+1.2**
BASI	**Baing, Sumba**	**2.33**	**95**	P	**Pn**	**02 06 50.4**	**+1.8**
KHKI	**Kahang-Kahang**	**3.06**	**302**	P	**Pn**	**02 07 01.2**	**+2.5**
RTBI	**Rangdo, Negare**	**3.59**	**295**	P	**Pn**	**02 07 06.2**	**+0.1**
RTBI				S	**Sn**	**02 07 49.0**	**+1.7**
JAGI	**Jajag, Banyuwa**	**4.31**	**291**	P	**Pn**	**02 07 16.3**	**+0.4**
JAGI				S	**Sn**	**02 08 06.5**	**+1.6**
BSSI	**Bau Bau, Buton**	**4.46**	**30**	P	**Pn**	**02 07 19.1**	**+1.1**
KAPI	**Kappang**	**5.20**	**17**	Pn	**Pn**	**02 07 27.9**	**-0.2**
	1.2nm,0.3s,baz=228,slow=15,SNR=1.7						
KAPI				Sn	**Sn**	**02 08 28.1**	**+1.2**
	3.9nm,0.3s,baz=110,slow=22,SNR=7.2						
	4.5nm,0.4s						
KAPI	**Kappang**	**5.20**	**17**	P	**Pn**	**02 07 28.7**	**+0.5**
	0.1nm6.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**10.78**	**139**	Pn	**Pn**	**02 08 42.8**	**-1.8**
	0.2nm,0.3s,baz=324,slow=7.2,SNR=1.4						
FITZ				Sn	Sn	02 10 35.0	-9.1
	0.6nm,0.3s,baz=178,slow=22,SNR=8.4						
	3.2nm,0.8s						
WRA	**Warramunga Arr**	**18.41**	**124**	P	**P**	**02 10 23.9**	**-1.1**
	0.1nm,0.3s,baz=303,slow=13,SNR=6.9						
WRA				S	Sn	02 13 37.2	-13
	0.2nm,0.5s,baz=299,slow=20,SNR=1.3						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**20.20**	**134**	P	**P**	**02 10 45.4**	**+0.8**
	2.0nm,0.5s,baz=310,slow=11,SNR=23						
	2.0nm,0.5s						
MKAR	**Makanchi Array**	**65.02**	**334**	P	**P**	**02 16 48.3**	**-0.9**
	0.2nm,0.4s,baz=145,slow=6.9,SNR=4.2						
	0.2nm,0.4s						

*AFAD **04** 02:10:49.2, 35°.04N×27°.93E, h12km±2km, MW4.4*
*IDC **04** 02:10:50.7±0.5, 35°.26N×27°.89E, h0km, mb4.2/27, mbtmp4.3/33, ML4.0/5, MS3.8/35, Error ellipse: s-maj=14.0km s-min=11.4km az=158.0*
*NIC **04** 02:10:50.8, 35°.13N×27°.97E, h3km±1km, Ml4.0/17*
*THE **04** 02:10:52.8, 35°N±7°×2°8E±°, h0km±17km, M4.0/14, MLh4.0/14*
*GII **04** 02:10:52.2±0.0, 35°.087N±0°.002×28°.033E±0°.001, h0km, Mws4.5, confirmed*
*NEIC **04** 02:10:52.7±1.8, 35°.18N±0°.05×27°.98E±0°.05, h10km±1km, mb4.4/45, Error ellipse: s-maj=9.7km s-min=6.5km az=209.0*
*ISK **04** 02:10:52.9, 35°.28N×27°.93E, h7km, ML4.3/21*
*HLW **04** 02:10:53.5, 35°.17N×28°.12E, h16km±3km, Ml4.3*
*ATH **04** 02:10:53.3, 35°.20N×28°.06E, h9km±3km, ML4.2/6, Manual Solution by F.Xalaris First location: 2020/02/04 02:12:16, This location: 2020/02/04 02:24:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*MED_RC **04** 02:10:53.0±0.3, 35°.13N×28°.03E, h16km±1km, MW4.7/33, Moment Tensor Solution.Mantle waves: s33,c44; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.69±.12; $M_{\theta\theta}$-0.35±.08; $M_{\phi\phi}$1.04±.07; $M_{r\theta}$-0.03±.15; $M_{\theta\phi}$0.37±.06; $M_{\phi r}$-0.96±.14; Best double couple: $M_0$1.34000×10^{16} NP1:ϕ_s215.00000°, δ25.00000°, λ-58.00000°. NP2:ϕ_s1.00000°, δ69.00000°, λ-104.00000°. Principal axes: T 1.5400, Plg23.0000°, Azm101.0000°; N -0.4000, Plg13.0000°, Azm6.0000°; P -1.1400, Plg63.0000°, Azm249.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NAO **04** 02:11:07.3, 37°.50N×29°.11E, h10km, MB3.8*
ISC 04 02:10:52.2±1.2**, 35°.16N**±0°.03×**27°.99E**±0°.02**, h8**km±7km**, n452, σ1s39**/497**, mb4.4**/54**, MS3.9**/30**, 29C-13D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.78**	**300**		**Pg**	**02 11 06.2**	**-1.1**
KARP				Sg	**Sg**	**02 11 17.8**	**+0.4**
KARP	**Karpathos**	**0.78**	**300**	Pg	**Pg**	**02 11 06.2**	**-1.1**
KARP				Sg	**Sg**	**02 11 18.0**	**+0.5**
KARP	**Karpathos**	**0.78**	**300**	P	**Pg**	**02 11 06.7**	**-0.6**
KARP				S	**Sb**	**02 11 18.2**	**-0.7**
KARP	**Karpathos**	**0.78**	**300**	P	**Pg**	**02 11 06.5**	**-0.7**
KARP				S	**Sb**	**02 11 18.2**	**-0.7**
KARP				AML	AML	02 11 27.3	
	41nm,0.5s						
KARP				AML	AML	02 11 31.1	
	39nm,0.7s						
KARP	**Karpathos**	**0.78**	**300**	P	**Pg**	**02 11 06.7**	**-0.6**
KARP				S	**Sb**	**02 11 19.7**	**+0.8**
ARG	**Arkhangelos**	**1.06**	**6**		**Pg**	**02 11 12.2**	**-0.4**
ARG	**Arkhangelos**	**1.06**	**6**	Pg	**Pg**	**02 11 11.9**	**-0.7**
ARG				Sg	**Sg**	**02 11 25.2**	**-1.3**
ARG	**Arkhangelos**	**1.06**	**6**	P	**Pg**	**02 11 12.1**	**-0.6**
ARG				S	**Sb**	**02 11 26.8**	**-0.2**
ARG	**Arkhangelos**	**1.06**	**6**	P	**Pg**	**02 11 11.6**	**-1.0**
ARG				S	**Sn**	**02 11 28.5**	**+0.1**
ARG				AML	AML	02 11 37.3	
	18nm,1.2s						
ARG				AML	AML	02 11 44.9	
	13nm,0.6s						
ARG	**Arkhangelos**	**1.06**	**6**	P	**Pg**	**02 11 12.0**	**-0.7**
ARG				S	**Sg**	**02 11 26.4**	**0.0**
ZKR	**Zakros**	**1.45**	**269**	Pn	**Pb**	**02 11 19.6**	**+0.1**
ZKR	**Zakros**	**1.45**	**269**	P	**Pn**	**02 11 18.9**	**+0.2**
ZKR	**Zakros**	**1.45**	**269**	P	**Pn**	**02 11 18.4**	**-0.4**
ZKR				AML	AML	02 11 47.6	
	6.8nm,1.1s						
ZKR				AML	AML	02 11 52.6	
	12nm,1.0s						
ZKR	**Zakros**	**1.45**	**269**	P	**Pb**	**02 11 19.6**	**+0.1**
ZKR				S	**Sg**	**02 11 39.5**	**+0.5**
YAZI	**Mula-Dat§a-**	**1.58**	**344**	P	**Pn**	**02 11 21.0**	**+0.5**
YAZI				S	**Sn**	**02 11 41.0**	**-0.3**
IZZE	**Mula-Seydike**	**1.63**	**38**	P	**Pn**	**02 11 21.2**	**+0.1**
TURN	**Turunc**	**1.63**	**7**	Pn	**Pn**	**02 11 20.9**	**-0.3**
TURN	**Turunc**	**1.63**	**7**	P	**Pb**	**02 11 22.7**	**+0.2**
TURN				S	**Sg**	**02 11 45.8**	**+1.2**
KSL	**Kastellorizon**	**1.63**	**52**	P	**Pn**	**02 11 21.5**	**+0.3**
KSL	**Kastellorizon**	**1.63**	**52**	P	**Pn**	**02 11 21.0**	**-0.3**
KSL				S	**Sb**	**02 11 43.0**	**-0.3**
KSL				AML	AML	02 12 20.7	
	6.0nm,1.7s						
KSL				AML	AML	02 12 24.1	
	3.4nm,1.5s						
KSL	**Kastellorizon**	**1.63**	**52**	P	**Pn**	**02 11 21.0**	**-0.3**
AKAS	**Kas**	**1.70**	**50**		**Pn**	**02 11 22.7**	**+0.5**
AKAS	**Kas**	**1.70**	**50**	Pn	**Pn**	**02 11 22.8**	**+0.5**
AKAS	**Kas**	**1.70**	**50**	P	**Pn**	**02 11 22.7**	**+0.5**
FETY	**Fethiye**	**1.72**	**31**	P	Pn	02 11 15.0	-7.5
DALY	**Dalyan (Mula)**	**1.74**	**18**	Pn	**Pn**	**02 11 23.3**	**+0.6**
SABU	**Mula-Dalaman**	**1.84**	**25**	P	**Pn**	**02 11 24.7**	**+0.5**
DEMR	**Demre-Antalya**	**1.90**	**55**	Pn	**Pn**	**02 11 25.9**	**+1.0**

NPS Neapolis 1.95 274 P **Pb** **02 11 27.7 -0.3**
NPS Neapolis 1.95 274 P **Pb** **02 11 27.4 -0.6**
BDRM Kayabasi 1.96 347 P **Pn** **02 11 25.9 +0.2**
BDRM S **Sg** **02 11 54.2 -0.9**
BODT Bodrum 1.98 344 Pn **Pn** **02 11 25.9 -0.2**
BODT Bodrum 1.98 344 P **Pb** **02 11 27.3 -1.2**
YER Yerkesik 1.99 7 Pn **Pn** **02 11 26.2 0.0**
YER Yerkesik 1.99 7 P **Pn** **02 11 27.0 +0.8**
YER S **Sb** **02 11 53.9 +0.2**
CAME Cameli-Denizli 2.08 30 Pn **Pn** **02 11 27.8 +0.3**
MULA Mugla, Merkez- 2.11 7 P **Pb** **02 11 30.8 0.0**
MULA S **Sg** **02 11 59.5 -0.6**
KNIK Mula-Seydike 2.12 37 P **Pn** **02 11 28.9 +0.9**
MLSB Milas 2.14 355 Pn **Pn** **02 11 28.2 -0.1**
ELL Elmali 2.23 44 **02 11 30.3 +0.8**
ELL Elmali 2.23 44 Pn **Pn** **02 11 30.5 +1.0**
CAEL Denizli, Camel 2.24 28 P **Pn** **02 11 30.9 +1.2**
DNZT Denizli-Tavas- 2.28 21 P **Pn** **02 11 31.2 +1.0**
THERA Ancient Thera, 2.38 301 P **Pn** **02 11 32.0 +0.5**
THERA Ancient Thera, 2.38 301 P **Pn** **02 11 32.4 +0.9**
THR8 Santorini-Mono 2.39 302 P **Pn** **02 11 32.2 +0.5**
TAVA DENIZLI_Tavas 2.42 18 P **Pn** **02 11 33.3 +1.1**
THR6 Thira Island, 2.43 300 P **Pn** **02 11 33.1 +1.0**
GOLH Golhisar 2.44 31 P **Pn** **02 11 34.2 +1.9**
THR3 Thira Island, 2.45 301 P **Pn** **02 11 33.0 +0.6**
SNT5 Nea Kammeni, S 2.45 301 P **Pn** **02 11 33.1 +0.6**
THR9 Santorini-Faro 2.46 300 P **Pn** **02 11 32.7 +0.2**
AYDN Tasoluk 2.50 358 P **Pn** **02 11 34.0 +0.7**
KEMT Kemer-ANTALYA 2.54 55 Pn **Pn** **02 11 34.9 +1.3**
IDI Anoyia 2.54 274 Pn **Pn** **02 11 34.9 +1.1**
36nm,0.3s,baz=107,slow=11,SNR=171
IDI Sn **Sn** **02 12 05.8 +0.8**
40nm,0.3s,baz=128,slow=23,SNR=3.6
IDI LR LR 02 12 53.1
comp=Z,2µm,21.3s,baz=60,slow=50
IDI Anoyia 2.54 274 **Pn** **02 11 35.6 +1.8**
IDI Anoyia 2.54 274 Pn **Pn** **02 11 34.9 +1.1**
IDI Anoyia 2.54 274 P **Pn** **02 11 34.4 +0.7**
IDI Anoyia 2.54 274 P **Pn** **02 11 35.6 +1.8**
IDI S **Sb** **02 12 08.0 -1.5**
APMY Acipayam-Deniz 2.54 24 Pn **Pn** **02 11 34.6 +0.8**
DNIZ Denizli-Tavas- 2.61 19 P **Pn** **02 11 35.7 +1.0**
GCAM G?zelcami? 2.61 347 Pn **Pn** **02 11 34.9 +0.2**
GCAM G?zelcami? 2.61 347 P **Pn** **02 11 35.0 +0.3**
ESEN Aydn-Nazilli 2.65 6 P **Pn** **02 11 36.5 +1.2**
KORT Korkueli 2.66 45 Pn **Pn** **02 11 36.4 +1.0**
SMG Samos 2.71 340 P **Pn** **02 11 36.0 -0.1**
SMG Samos 2.71 340 P **Pn** **02 11 36.1 -0.1**
SMG S **Sn** **02 12 09.6 +0.4**
KUSD Kusadasi-Aydin 2.76 348 Pn **Pn** **02 11 36.9 +0.2**
ANTB Antalya 2.77 50 Pn **Pn** **02 11 39.1 +2.2**
AYDB Zeytinkoy-Aydi 2.79 358 Pn **Pn** **02 11 37.5 +0.3**
NAZL Nazilli-Aydin 2.81 5 Pn **Pn** **02 11 37.8 +0.3**
SULTU Buldan 2.96 12 P **Pn** **02 11 40.3 +0.7**
BCK Bucak 3.11 42 Pn **Pn** **02 11 43.2 +1.5**
ODEM Odemis-Izmir 3.12 1 Pn **Pn** **02 11 41.6 -0.1**
OSC1 CSNet OBS 1 3.18 120 P **Pn** **02 11 42.0 -0.5**
OSC1 S **Sn** **02 12 22.0 +1.4**
OSC1 AML AML 02 12 32.1
0.6nm,0.6s
OSC1 AML AML 02 12 45.0
0.7nm,1.0s
BASM Basmaki-Afyon 3.22 30 Pn **Pn** **02 11 44.6 +1.5**
GVD Gavdhos 3.22 266 Pn **Pn** **02 11 44.6 +1.5**
GVD Gavdhos 3.22 266 P **Pn** **02 11 44.5 +1.5**
GVD Gavdhos 3.22 266 P **Pn** **02 11 44.9 +1.9**
IMMV Iera Moni Meta 3.29 276 Pn **Pn** **02 11 45.9 +1.8**
IMMV Iera Moni Meta 3.29 276 P **Pn** **02 11 45.9 +1.8**
BLCB Balcova 3.31 347 Pn **Pn** **02 11 44.9 +0.6**
BLCB Balcova 3.31 347 P **Pn** **02 11 44.1 -0.2**
ISP Isparta 3.35 37 **Pn** **02 11 44.9 -0.1**
ISP Isparta 3.35 37 Pn **Pn** **02 11 46.5 +1.5**
ISP Isparta 3.35 37 P **Pn** **02 11 44.4 -0.6**
ISP Isparta 3.35 37 P **Pn** **02 11 45.1 +0.1**
MANT Manisa 3.36 8 **Pn** **02 11 44.4 -0.8**
KULA Kula-Manisa 3.40 9 Pn **Pn** **02 11 45.9 +0.3**
GOMA Golmarmara-Man 3.55 359 Pn **Pn** **02 11 48.6 +1.1**
AKMS Akamas 3.56 91 P **Pn** **02 11 47.6 -0.2**
AKMS S **Sn** **02 12 31.2 +1.0**
AKMS AML AML 02 12 34.9
1.5nm,0.3s
AKMS AML AML 02 12 37.3
0.8nm,0.5s
AKMS Akamas 3.56 91 P **Pn** **02 11 47.9 0.0**
AKMS S **Sn** **02 12 30.1 -0.1**
KNDR Palaiochora Ch 3.58 273 Pn **Pn** **02 11 49.6 +1.7**
KNDR Palaiochora Ch 3.58 273 P **Pn** **02 11 49.7 +1.8**
KNDR S **Sn** **02 12 32.7 +2.4**
CHOS Chios island 3.58 335 Pn **Pn** **02 11 48.5 +0.4**
CHOS Chios island 3.58 335 P **Pn** **02 11 48.4 +0.3**
GORD Gordes-Manisa 3.75 2 Pn **Pn** **02 11 50.8 +0.4**
ALFC Alefka 3.78 89 P **Pn** **02 11 50.4 -0.3**
ALFC S **Sn** **02 12 36.5 +1.1**
ALFC AML AML 02 12 39.9
1.1nm,0.6s
ALFC AML AML 02 12 41.5
0.8nm,0.4s
ALFC Alefka 3.78 89 P **Pn** **02 11 50.6 -0.1**
ALFC S **Sn** **02 12 35.4 +0.1**
NATA Nata 3.78 94 P **Pn** **02 11 50.7 -0.1**
NATA S **Sn** **02 12 36.2 +0.8**
NATA AML AML 02 12 42.2
2.8nm,0.4s
NATA AML AML 02 12 42.6
3.0nm,0.4s
NATA Nata 3.78 94 P **Pn** **02 11 51.2 +0.4**
MATC Matruh 3.85 190 P **Pn** **02 11 53.4 +1.7**
ANKY Antikythira Is 3.89 282 P **Pn** **02 11 53.8 +1.6**
DKL Dikili 4.00 348 Pn **Pn** **02 11 54.4 +0.6**
TROD Troodos 4.00 92 P **Pn** **02 11 53.3 -0.7**
TROD S **Sn** **02 12 42.8 +1.5**
TROD AML AML 02 12 52.4
0.8nm,0.9s
TROD AML AML 02 12 55.9
0.8nm,0.6s
APOL The Sanctuary 4.03 95 P **Pn** **02 11 54.1 -0.2**
APOL S **Sn** **02 12 44.0 +2.3**
APOL AML AML 02 12 47.7
1.2nm,0.4s
APOL AML AML 02 12 47.9
1.1nm,0.4s
KARY Karystos 4.05 316 P **Pn** **02 11 55.7 +1.2**
OSC2 CSNet OBS 4 4.11 119 P **Pn** **02 11 55.4 +0.1**
OSC2 AML AML 02 12 57.5
1.0nm,1.1s
OSC2 AML AML 02 13 00.9
0.7nm,0.8s
XYLS Xyliatos 4.15 90 P **Pn** **02 11 55.6 -0.3**
XYLS S **Sn** **02 12 46.4 +1.7**
XYLS AML AML 02 12 51.8
0.8nm,0.4s
XYLS AML AML 02 12 55.2
0.7nm,0.3s
PRK Paraskevi 4.31 342 P **Pn** **02 11 58.3 +0.4**
SLUM Salum 4.33 213 P **Pn** **02 11 59.6 +1.3**
ASGA Asgata 4.33 93 P **Pn** **02 11 58.2 -0.1**
ASGA S **Sn** **02 12 51.2 +2.2**
ASGA AML AML 02 12 57.4
1.3nm,0.5s
ASGA AML AML 02 12 58.3
1.3nm,0.4s
ASGA Asgata 4.33 93 P **Pn** **02 11 58.7 +0.3**
CSS Mathiatis 4.38 91 **Pn** **02 11 59.2 +0.1**
CSS Mathiatis 4.38 91 P **Pn** **02 11 58.8 -0.3**
CSS S **Sn** **02 12 52.0 +1.6**
CSS AML AML 02 13 05.1
0.8nm,0.9s
CSS AML AML 02 13 11.6
0.6nm,0.9s
CSS Mathiatis 4.38 91 P **Pn** **02 11 58.7 -0.3**
CSS S **Sn** **02 12 49.1 -1.3**
VLI Veliai 4.39 292 P **Pn** **02 11 59.6 +0.5**
SIGR SIGRI 4.39 338 P **Pn** **02 11 59.8 +0.6**
ATHU Athens Univers 4.40 311 P **Pn** **02 11 59.4 +0.2**
ATHAL Athalassa 4.43 89 P **Pn** **02 11 59.7 0.0**
ATHAL S **Sn** **02 12 53.4 +2.0**
ATHAL AML AML 02 13 17.6
1.9nm,1.1s
ATHAL AML AML 02 13 18.4
1.4nm,1.0s
BALB Balikesir 4.48 359 **Pn** **02 11 60.0 -0.4**
MVOU Mavrovouni 4.63 90 P **Pn** **02 12 02.0 -0.4**
MVOU S **Sn** **02 12 58.6 +2.2**
MVOU AML AML 02 13 05.1
0.5nm,0.5s
MVOU AML AML 02 13 11.4
0.4nm,0.7s
KYMI Kymi, Euboea I 4.67 319 P **Pn** **02 12 04.1 +1.2**
STFN Stefani 4.68 311 P **Pn** **02 12 04.9 +1.8**
PARAL Paralimni 4.96 90 P **Pn** **02 12 07.5 +0.5**
PARAL AML AML 02 13 23.3
0.6nm,1.1s
PARAL AML AML 02 13 28.2
0.6nm,1.2s
BORA Eskisehir 5.11 22 **Pn** **02 12 09.2 +0.1**
BAND Balkesir-Ban 5.19 1 ⇑P **Pn** **02 12 12.9 +2.7**
ITM Ithomi 5.30 294 **Pn** **02 12 13.3 +1.6**
CAVK Edirne/Enez-Ca 5.71 346 ⇑P **Pn** **02 12 19.0 +1.7**
ALN Alexandroupoli 5.94 346 **Pn** **02 12 20.2 -0.1**
KOT Kottamia 6.14 147 P **Pn** **02 12 22.8 -0.4**
KIRS Kirsehir-Merke 6.18 48 ⇑P **Pn** **02 12 25.6 +1.8**
SWA2 6.27 201 P **Pn** **02 12 25.9 +0.9**
RDO Rodhopi 6.29 343 **Pn** **02 12 25.4 +0.3**
HNTI Hanita 6.31 107 P **Pn** **02 12 24.3 -1.2**
HNTI S **Sn** **02 13 36.1 -1.6**
OFRI `Ofer 6.34 112 P **Pn** **02 12 25.2 -0.9**
OFRI S **Sn** **02 13 37.4 -1.3**
RYAN Fayoum 6.36 162 P **Pn** **02 12 26.9 +0.7**
RYAN S **Sn** **02 13 34.1 -4.9**
BRTR Keskin Array B 6.40 43 Pn **Pn** **02 12 27.1 +0.2**
1.0nm,0.3s,baz=217,slow=17,SNR=16
BRTR Sn **Sn** **02 13 40.6 +0.3**
1.1nm,0.3s,baz=215,slow=22,SNR=6.5
BRTR LR LR 02 15 41.3
comp=Z,507nm,20.6s,baz=217,slow=46
3.1nm,0.4s
BRTR Keskin Array B 6.40 43 **Pn** **02 12 27.4 +0.4**
BR131 Keskin Array S 6.40 43 **Pn** **02 12 27.3 +0.4**
DQRL Deir Qamar 6.43 101 *e*P **Pn** **02 12 26.9 -0.3**
BHL Bhannes 6.45 99 *e*P **Pn** **02 12 27.4 -0.1**
BLGI Bet Lehem HaGe 6.45 110 P **Pn** **02 12 26.6 -0.9**
BLGI S **Sn** **02 13 40.1 -1.2**
MMC7 Mount Meron ar 6.50 107 P **Pn** **02 12 27.1 -1.1**
MMA0B Mount Meron ar 6.51 107 P **Pn** **02 12 27.8 -0.5**
MMA0B S **Sn** **02 13 41.9 -1.0**
MMAI Mount Meron Ar 6.51 107 Pn **Pn** **02 12 27.2 -1.2**
17nm,0.3s,baz=298,slow=14,SNR=105
MMAI Sn **Sn** **02 13 39.8 -3.1**
30nm,0.3s,baz=302,slow=32,SNR=9.1
6.7nm,0.3s
SLTI Sal'it 6.55 114 P **Pn** **02 12 28.2 -0.7**
SLTI S **Sn** **02 13 42.4 -1.5**
QRWL Qaraoun 6.56 102 *e*P **Pn** **02 12 28.6 -0.4**
LIT Litokhoron 6.59 320 **Pn** **02 12 30.6 +1.2**
HWQ Hawqa 6.61 95 *e*P **Pn** **02 12 30.5 +0.7**
ZAHL Zahle 6.64 99 *e*P **Pn** **02 12 30.0 -0.2**
NATI Neve Ativ 6.69 104 P **Pn** **02 12 29.9 -0.8**
NATI S **Sn** **02 13 45.9 -1.2**
SUZ Suez 6.69 141 P **Pn** **02 12 30.6 -0.3**
RCY Rachaya 6.70 102 *e*P **Pn** **02 12 30.4 -0.6**
MMLI Mount Malkishu 6.75 112 P **Pn** **02 12 30.9 -0.8**
MMLI S **Sn** **02 13 47.4 -1.4**
BEIL Beino 6.76 93 *e*P **Pn** **02 12 31.0 -0.8**
AMAZ Amatzia 6.83 120 P **Pn** **02 12 32.0 -0.7**
AMAZ S **Sn** **02 13 48.9 -1.7**
KSHT Keshet 6.84 106 P **Pn** **02 12 32.1 -0.8**
KSHT S **Sn** **02 13 49.9 -1.1**
KZIT Kziot 6.85 126 P **Pn** **02 12 32.3 -0.6**
UJAP Al Uja 7.01 115 P **Pn** **02 12 34.3 -0.8**
UJAP S **Sn** **02 13 53.1 -1.8**
ZAF Zafarana 7.01 145 P **Pn** **02 12 35.5 +0.3**
ZAF S **Sn** **02 13 53.0 -2.2**
YTIR Yattir 7.06 120 P **Pn** **02 12 35.3 -0.7**
YTIR S **Sn** **02 13 55.4 -1.1**
BALJ Balqa 7.08 113 **Pn** **02 12 35.8 -0.2**
NBNS Bani Suef 7.09 156 P **Pn** **02 12 36.5 +0.2**
ZNM Zenema 7.09 143 P **Pn** **02 12 36.1 -0.2**
DSI Dead Sea 7.14 118 P **Pn** **02 12 36.0 -0.9**
DSI S **Sn** **02 13 56.7 -1.6**
MSBI Mazada 7.26 120 P **Pn** **02 12 37.6 -1.0**
MSBI S **Sn** **02 13 59.9 -1.3**
RMNI Mount Ramon 7.29 127 P **Pn** **02 12 38.2 -0.8**
RMNI S **Sn** **02 14 00.9 -1.1**
GHAJ Ghor Haditha 7.42 119 **Pn** **02 12 41.3 +0.6**
GHAJ Ghor Haditha 7.42 119 P **Pn** **02 12 41.0 +0.3**
GHAJ S **Sn** **02 14 03.7 -1.4**
IDAN Idan 7.48 123 P **Pn** **02 12 40.6 -1.0**
IDAN S **Sn** **02 14 05.2 -1.5**
VAY Valandovo 7.49 327 *i* P Pn 02 12 49.8 +8.1
KRMI Paran Flat 7.58 130 P **Pn** **02 12 42.3 -0.7**
KRMI S **Sn** **02 14 06.4 -2.8**
ZFRI Zfri 7.59 125 P **Pn** **02 12 42.2 -0.9**
ZFRI S **Sn** **02 14 07.9 -1.4**
PRNI Paran 7.60 127 P **Pn** **02 12 42.0 -1.4**
PRNI S **Sn** **02 14 08.4 -1.3**
GAZ Gaziantep 7.72 72 **Pn** **02 12 44.0 -1.0**
HRFI Mount Harif 7.83 129 P **Pn** **02 12 45.8 -0.7**
HRFI S **Sn** **02 14 12.7 -2.7**
HRDS Abu Rudays 7.85 143 P **Pn** **02 12 46.4 -0.3**
TAMRE El Minia 7.86 161 P **Pn** **02 12 47.8 +1.0**
MBRI Mt Berech 7.92 131 P **Pn** **02 12 47.0 -0.7**
MBRI S **Sn** **02 14 14.9 -2.7**
ELND Elena 7.94 349 ⇑P **Pn** **02 12 50.8 +3.0**
KEK Kerkira 7.95 307 **Pn** **02 12 48.3 +0.3**
GRB Gharib 7.99 148 P **Pn** **02 12 48.6 0.0**
ASF Jabal al Asfar 8.00 109 Pn **Pn** **02 12 49.0 +0.2**
4.2nm,0.3s,baz=279,slow=6.4,SNR=26
ASF Sn **Sn** **02 14 17.9 -1.6**
0.7nm,0.3s,baz=4.3,slow=19,SNR=1.3
9.4nm,0.4s
EIL Elat 8.03 131 Pn **Pn** **02 12 48.5 -0.7**
8.4nm,0.3s,baz=330,slow=3.0,SNR=76
EIL Sn **Sn** **02 14 15.9 -4.3**
10nm,0.3s,baz=18,slow=19,SNR=5.6
21nm,0.3s
EIL Elat 8.03 131 P **Pn** **02 12 48.4 -0.8**
EIL S **Sn** **02 14 17.4 -2.8**
OHR Ohrid 8.21 319 *i* P **Pn** **02 12 55.6 +4.0**
HBST Basata 8.23 134 P **Pn** **02 12 51.6 -0.3**
LOZB Loznitsa 8.28 353 ⇑P **Pn** **02 12 54.8 +2.3**
ASUT 8.31 157 P **Pn** **02 12 53.5 +0.4**
NUB Nuweibaa 8.32 135 P **Pn** **02 12 54.1 +1.1**
TR2 Tor 2 8.33 143 P **Pn** **02 12 52.5 -0.7**
HKAT Jabal Katrina 8.35 141 P **Pn** **02 12 53.9 +0.1**
HDHB Dhahab 8.53 137 P **Pn** **02 12 56.1 +0.1**
PLVE Pleven 8.62 343 ⇑P **Pn** **02 12 59.3 +2.1**
ICOR Ion Corvin 8.95 359 ⇓P **Pn** **02 13 03.9 +2.2**
HHRG Al Ghardaqah 9.24 147 P **Pn** **02 13 07.6 +1.8**
TIRR Tirgusor 9.30 2 Pn **Pn** **02 13 07.2 +0.7**
HUMR Humele 9.64 347 ⇑P **Pn** **02 13 13.0 +1.8**
HDK1 Dakhla 9.66 172 P **Pn** **02 13 12.6 +1.1**
BOVS Bovan 9.76 332 ⇓P **Pn** **02 13 15.5 +2.7**
TIP Timpagrande 9.82 297 **Pn** **02 13 11.8 -2.0**
TIP Timpagrande 9.82 297 ⇑P **Pn** **02 13 12.1 -1.6**
AKRG Al Kharijah 9.86 167 P **Pn** **02 13 15.5 +1.2**
GTR Jabal at Tayr 9.87 166 P **Pn** **02 13 15.5 +1.1**
PDG Podgorica 9.96 319 **Pn** **02 13 16.6 +1.0**
PDG Podgorica 9.96 319 ⇓P **Pn** **02 13 17.3 +1.8**
CEL Celeste 10.19 291 **Pn** **02 13 16.8 -2.0**
NEHR Nehoiu 10.34 353 ⇑P **Pn** **02 13 23.7 +2.9**
MLR Muntele Rosu 10.44 352 Pn **Pn** **02 13 24.7 +2.5**
0.3nm,0.3s,baz=151,slow=6.7,SNR=9.2
MLR LR LR 02 17 55.3
comp=Z,178nm,18.3s,baz=183,slow=41
MLR Muntele Rosu 10.44 352 **Pn** **02 13 22.8 +0.5**
MLR Muntele Rosu 10.44 352 ⇓P **Pn** **02 13 25.8 +3.6**
MATE Matera 10.46 305 ⇑P **Pn** **02 13 23.1 +0.6**
ARR Arges 10.52 347 ⇓P **Pn** **02 13 25.9 +2.7**
HERR Herculane 10.61 338 ⇑P **Pn** **02 13 26.9 +2.4**
PLOR Plostina 10.73 355 ⇑P **Pn** **02 13 29.4 +3.2**
VRI Vrincioaia 10.74 355 ⇑P **Pn** **02 13 29.0 +2.7**
MDVR Moldovita 10.75 335 ⇑P **Pn** **02 13 28.8 +2.4**
COVR Voineasa-Covas 10.77 353 ⇑P **Pn** **02 13 29.2 +2.6**
LOT Lotru 10.77 344 ⇓P **Pn** **02 13 28.7 +1.9**
CUC Castrocucco 10.80 300 **Pn** **02 13 26.1 -1.0**
GZR Gura Zlata 10.97 340 ⇓P **Pn** **02 13 32.3 +2.8**
DOPR Dopca 10.98 350 ⇑P **Pn** **02 13 32.2 +2.6**
TURR Turia 10.99 353 ⇓P **Pn** **02 13 33.3 +3.6**
APRS Wahet Paris 11.00 167 P **Pn** **02 13 31.3 +1.4**
ACER Acerenza 11.04 304 **Pn** **02 13 29.6 -0.8**
VAE Valguarnera 11.20 286 Pn **Pn** **02 13 33.4 +0.8**
5.4nm,0.5s,baz=170,slow=21,SNR=11
VAE Sn Sn 02 15 28.5 -10
1.2nm,0.3s,baz=196,slow=23,SNR=1.8
RAFF Raffo Rosso 11.21 285 **Pn** **02 13 31.2 -1.5**
ONER Baraj Valea Uz 11.23 354 ⇑P **Pn** **02 13 36.5 +3.5**
TESR Tescani 11.39 355 ⇑P **Pn** **02 13 38.9 +3.8**
BZS Buzias 11.52 337 ⇑P **Pn** **02 13 38.4 +1.5**
MARR Marisel-Cluj 12.08 344 ⇑P **Pn** **02 13 46.7 +2.0**
SIRR Siria 12.09 339 ⇑P **Pn** **02 13 46.5 +1.8**
BURAR Bucovina Array 12.62 351 ⇑P **Pn** **02 13 55.7 +3.6**
BUR08 Bucovina Ar. S 12.65 351 **Pn** **02 13 52.3 -0.1**
BLY Banja Luka 12.66 322 ⇑P **Pn** **02 13 53.2 +0.7**
INTR Introdacqua 12.96 306 **Pn** **02 13 56.2 -0.5**
SORM Soroca 12.97 1 ⇑P **Pn** **02 13 59.0 +2.2**
MORH Mrgy, Hungar 13.12 330 ⇓P **Pn** **02 14 01.1 +2.4**
NRCA Norcia 13.87 308 **Pn** **02 14 08.0 -1.1**
PSZ Piszkesteto 14.11 337 **Pn** **02 14 13.4 +1.1**
PSZ Piszkesteto 14.11 337 ⇑P **P** **02 14 18.3 -1.9**
KIV Kislovodsk 14.33 48 Pn **Pn** **02 14 15.2 -0.2**
KIV Kislovodsk 14.33 48 ⇓P **P** **02 14 25.0 +2.4**
KVAR Kislovodsk Arr 14.33 48 Pn **P** **02 14 23.8 +1.1**
baz=255,slow=20
KBZ Khabaz 14.34 49 Pn **P** **02 14 23.9 +1.3**
0.4nm,0.3s,baz=227,slow=7.1,SNR=22
KBZ LR LR 02 20 44.9
comp=Z,224nm,18.2s,baz=215,slow=42
SRO Srobarova 14.56 333 *e*P **P** **02 14 23.3 -1.8**
PDKS Podkum 14.68 322 *e*Pn **Pn** **02 14 19.3 -0.8**
JAVS Javornik 15.05 320 *e*Pn **Pn** **02 14 23.9 -1.3**
CRNS Crni Vrh 15.07 321 *e*Pn **Pn** **02 14 23.2 -2.2**
SOKA Soboth 15.09 324 *i* Pn **Pn** **02 14 25.7 0.0**
8.2nm,0.9s,SNR=7.3
TRI Trieste 15.09 319 **Pn** **02 14 24.5 -1.1**
TRI IAmb IAmb 02 14 28.4
comp=Z,16nm,0.9s
OBKA Obir 15.21 322 *i* Pn **Pn** **02 14 27.4 +0.1**
comp=Z,6.8nm,0.8s
KEST Kesra 15.21 278 Pn **Pn** **02 14 29.5 +2.1**
comp=Z,0.9nm,0.3s,baz=65,slow=6.3,SNR=9.8
KEST Kesra 15.21 278 Pn **Pn** **02 14 27.8 +0.4**
KEST IAmb IAmb 02 14 45.7
comp=Z,18nm,0.9s
ARSA Arzberg 15.27 326 Pn **Pn** **02 14 26.7 -1.4**
ARSA Arzberg 15.27 326 *i* Pn **Pn** **02 14 28.0 -0.1**
comp=Z,5.3nm,1.1s
RONA Rosalia, Austr 15.27 329 *i* Pn **Pn** **02 14 29.0 +0.9**
comp=Z,5.6nm,1.1s
LANS Liptovska Anna 15.33 338 *e*P **P** **02 14 35.2 +1.5**
SABO M.te Sabotino 15.35 319 **Pn** **02 14 27.2 -2.0**
SABO IAmb IAmb 02 14 40.9
comp=Z,49nm,1.3s
MODS Modra-Piesok 15.42 332 *e*P **P** **02 14 36.4 +1.8**
KIEV Kiev 15.56 3 Pn **Pn** **02 14 33.0 +1.3**
KIEV Kiev 15.56 3 ⇑P **P** **02 14 34.7 -1.4**
AKASG Malin Array Be 15.56 3 Pn **Pn** **02 14 33.9 +2.1**
comp=Z,2.0nm,0.3s,baz=192,slow=10,SNR=11
AKASG LR LR 02 21 09.7
comp=Z,200nm,18.7s,baz=188,slow=40
AKBB Malin Array Si 15.56 3 Pn **Pn** **02 14 33.2 +1.4**
CONA Conrad Observa 15.64 328 *i* Pn **Pn** **02 14 32.8 -0.1**
comp=Z,2.9nm,1.0s
PRED Cave del Predi 15.67 320 **Pn** **02 14 32.4 -0.9**
JAVC Velka Javorina 15.67 334 *e*PN **P** **02 14 36.7 -0.8**
MYKA Terra Mystica 15.75 321 *i* Pn **Pn** **02 14 33.9 -0.5**
comp=Z,8.5nm,0.6s
STAL STALIGIAL 16.01 318 **Pn** **02 14 35.4 -2.3**
STAL IAmb IAmb 02 14 47.0
comp=Z,45nm,1.2s
MAUC Maruska 16.05 335 *e*P **P** **02 14 41.0 -0.6**
TEOL Teolo 16.07 314 Pn **Pn** **02 14 35.7 -2.7**
TEOL IAmb IAmb 02 14 53.6
comp=Z,24nm,0.7s
OJC Ojcow 16.20 341 Pn **Pn** **02 14 39.3 -0.8**
KBA Koelnbreinsper 16.20 322 *i* Pn **Pn** **02 14 39.8 -0.6**
comp=Z,29nm,1.2s
MOA Molln 16.29 325 *e*Pn **Pn** **02 14 41.7 +0.4**
comp=Z,4.5nm,1.0s
KRUC Moravsky 16.32 332 *e*PN **Pn** **02 14 43.0 +1.5**
ABTA Abfaltersbach 16.42 320 *i* Pn **Pn** **02 14 41.3 -1.7**
comp=Z,6.6nm,0.9s,SNR=6.9
VRAC Vranov 16.44 333 Pn **P** **02 14 44.8 -1.2**
comp=Z,0.4nm,0.3s,baz=149,slow=11,SNR=10
VRAC Vranov 16.44 333 ⇑P **P** **02 14 45.2 -0.7**
VRAC Vranov 16.44 333 *e*PN **Pn** **02 14 44.5 +1.3**
BIOA Bad Ischl, Aus 16.48 324 *i* Pn **Pn** **02 14 44.4 +0.7**
comp=Z,4.6nm,0.5s
MORC Moravsky Berou 16.50 336 Pn **Pn** **02 14 43.8 -0.1**
MORC Moravsky Berou 16.50 336 ⇑P **P** **02 14 46.1 -0.4**
MORC Moravsky Berou 16.50 336 *e*PN **P** **02 14 45.7 -0.9**
STEB Steborice 16.55 336 *e*P **Pn** **02 14 44.6 0.0**
CRHA Rehia 16.59 278 P **P** **02 14 51.2 +3.4**
LESA Schwarzleotal 16.77 322 *i* Pn **Pn** **02 14 46.8 -0.7**
comp=Z,5.6nm,0.6s,SNR=8.9
CNGR Negrine 16.84 274 P **P** **02 14 50.7 +0.3**
CBBAR Babar 17.01 276 P **P** **02 14 57.1 +4.6**
WTTA Wattenberg 17.21 320 *i* Pn **Pn** **02 14 53.3 +0.2**
comp=Z,13nm,1.1s
GEC2 GERESS Array S 17.28 327 Pn **Pn** **02 14 53.5 -0.3**
GEC2 IAmb IAmb 02 15 18.9
comp=Z,32nm,1.4s
GEC2 GERESS Array S 17.28 327 *e*P **Pn** **02 14 53.6 -0.2**
comp=Z,12nm,1.0s,baz=133,slow=12
GEC2 *e*L L 02 21 54.8
comp=Z,260nm,18.8s
GERES GERESS Array B 17.28 327 P **Pn** **02 14 53.4 -0.3**
comp=Z,0.1nm,0.3s,baz=138,slow=12,SNR=7.6
GERES LR LR 02 22 04.7
comp=Z,251nm,20.2s,baz=266,slow=39
comp=Z,6.0nm,0.9s
WATA Walderalm 17.29 320 *i* Pn **Pn** **02 14 53.8 -0.3**
comp=Z,25nm,1.3s
DPC Dobruska-Polom 17.40 334 *e*P **P** **02 14 56.4 -0.2**
SQTA Sankt Quirin 17.41 319 *i* Pn **Pn** **02 14 54.8 -0.8**
comp=Z,14nm,1.2s
CTGD Timgad 17.51 277 P **P** **02 15 01.1 +3.1**
KHC Kasperske Hory 17.54 327 *e*P **Pn** **02 14 55.0 -2.0**
MOTA Moosalm 17.55 319 *i* Pn **P** **02 14 58.8 +0.4**
comp=Z,7.7nm,0.9s
FETA Feichten 17.56 318 *e*Pn **P** **02 14 58.0 -0.5**
comp=Z,28nm,1.0s,SNR=22
CTEI Djebel Teioual 17.57 279 P **P** **02 15 04.6 +5.9**
FUORN Ofenpass-Fuorn 17.59 316 **Pn** **02 14 57.8 -0.1**
FUORN IAmb IAmb 02 15 16.4
comp=Z,35nm,1.3s
OSTC Ostas 17.61 335 *e*P **P** **02 14 59.4 +0.5**
PRU Pruhonice 17.79 331 *e*P **P** **02 15 01.0 +0.2**
RETA Reutte 17.82 319 *i* Pn **Pn** **02 14 59.2 -1.4**
comp=Z,13nm,0.7s
WET Wettzell 17.87 326 *e*P **Pn** **02 15 00.0 -1.0**
comp=Z,20nm,1.2s,baz=133,slow=12
WET *e*L L 02 22 01.4
comp=Z,294nm,20.5s
DAVOX Davos/Dischmat 17.89 316 P **Pn** **02 15 01.8 +0.3**
comp=Z,5.1nm,0.5s,baz=56,slow=7.5,SNR=10
DAVOX LR LR 02 22 17.7
comp=Z,322nm,21.1s,baz=88,slow=39
CJSR Ain Djasser 17.96 279 P **P** **02 15 04.9 +2.0**
TUE Stuetta 18.03 314 **Pn** **02 15 02.8 -0.5**
DAVA Damuels 18.18 317 *i* Pn **Pn** **02 15 04.2 -0.9**
comp=Z,27nm,1.1s
PVCC Panska Ves 18.20 332 *e*P **P** **02 15 05.9 +0.6**
CAZD Ain Tagrout 18.58 280 P **Pn** **02 15 11.1 +1.2**
HSKC Hora Svate Kat 18.71 330 *e*P **Pn** **02 15 12.4 +1.0**
BRG Berggiesshubel 18.72 331 *e*P **Pn** **02 15 12.1 +0.7**
BRG Amp 02 15 15.5
comp=Z,5.1nm,0.9s
MANZ Manzenberg 18.82 327 *e*P **P** **02 15 11.4 -0.9**
comp=Z,7.1nm,1.3s,baz=133,slow=12
NKC Novy Kostel 18.85 328 *e*P **Pn** **02 15 13.0 -0.1**
GRF Grafenberg Arr 19.02 325 *e*P **P** **02 15 12.7 -1.7**
comp=Z,8.9nm,0.6s,baz=133,slow=12
GRF *e*L L 02 23 08.9
comp=Z,324nm,18.4s
RAYN Ar Rayn 19.14 123 **P** **02 15 15.7 -0.2**
SUW Suwalki 19.16 351 **P** **02 15 15.6 -0.2**
PLN Plauen 19.16 328 *e*P **Pn** **02 15 17.0 +0.2**
comp=Z,11nm,1.4s,baz=133,slow=12
SENIN Lac Senin/Sane 19.20 312 **P** **02 15 15.1 -1.6**
SENIN IAmb IAmb 02 15 28.9
comp=Z,16nm,0.7s
AFRS Ain Fares 19.30 276 P **P** **02 15 16.5 -1.1**
MNK Minsk 19.35 360 *i* P **P** **02 15 17.5 -0.4**
comp=E,10.0nm,0.8s
MNK *i* P **P** **02 15 17.5 -0.4**
comp=N,10.0nm,0.7s
MNK *i* P **P** **02 15 17.5 -0.4**
comp=Z,17nm,0.8s,baz=180

MNK *i* PP **PnPn** **02 15 31.6 -0.4**
MNK *i* PPP PPP 02 15 39.4
MNK *i* S **Sn** **02 18 55.9 0.0**
MNK *i* SS **SnSn** **02 19 11.8 +1.8**
MNK *i* LQ LQ 02 21 06.1
MNK *i* LR LR 02 22 11.2
MNK *i* LRM MLR 02 22 32.8
comp=N,259nm,17.1s
MNK *i* LRM MLR 02 22 46.7
comp=Z,179nm,17.2s
MNK *i* LRM MLR 02 22 49.7
comp=E,209nm,13.3s
ABSD Ouled Sidi Bra 19.42 278 P **P** **02 15 19.3 +0.4**
CLL Collm 19.43 331 **P** **02 15 18.5 -0.3**
CLL Collm 19.43 331 *e*P **P** **02 15 19.0 +0.2**
comp=Z,7.0nm,0.8s
CLL *i* x x 02 15 22.0
comp=Z,7.0nm,0.8s
CLL *i* x x 02 15 25.0
CLL *e*x x 02 15 31.0
CLL *i* x x 02 15 35.6
CLL *e*S **S** **02 19 00.0 +1.5**
CLL AMS AMS 02 22 00.0
comp=N,400nm,19.9s
CLL AMS AMS 02 22 00.0
comp=E,500nm,18.1s
CLL Collm 19.43 331 *e*L L 02 23 17.0
comp=E,164nm,19.5s
MOX Moxa 19.52 328 *e*P **Pn** **02 15 20.4 -0.6**
comp=E,26nm,1.1s,baz=133,slow=12
MOX *e*L L 02 23 02.2
comp=E,248nm,21.3s
AKET Djebel Ketaf 19.62 280 P **Pn** **02 15 23.6 +1.1**
BFO Black Forest 19.64 318 **P** **02 15 21.1 0.0**
BFO IAmb IAmb 02 15 40.4
comp=Z,29nm,1.3s
BFO Black Forest 19.64 318 *e*L L 02 21 57.2
comp=Z,171nm,22.0s
NACGM Naroch 19.77 358 *e*P **Pn** **02 15 25.6 +1.6**
comp=Z,19nm,1.0s,baz=177
ABRIN Birine 20.27 279 P Pn 02 15 29.8 -0.4
TNS Taunus Mts 20.72 323 *e*P Pn 02 15 34.3 -1.0
comp=Z,45nm,1.4s,baz=133,slow=12
TNS *e*L L 02 23 39.2
comp=Z,187nm,18.6s
OBN Obninsk 20.82 14 P **P** **02 15 32.2 -1.7**
comp=Z,15nm,0.5s,baz=42,slow=13,SNR=4.8
comp=Z,15nm,0.5s
OBN Obninsk 20.82 14 P **P** **02 15 32.2 -1.7**
EDDR Deurdeur 20.97 280 P **P** **02 15 36.0 +0.2**
EARB Arib 21.11 281 P **P** **02 15 36.5 -0.8**
WLF Walferdange 21.57 319 *d*P **P** **02 15 44.1 +2.0**
BSD Bornholm Skovb 21.92 340 *i*P **P** **02 15 44.4 -1.3**
CEST Esterri de Car 22.04 298 **P** **02 15 46.3 -1.1**
CEST IAmb IAmb 02 16 07.7
comp=Z,20nm,1.0s
MEM Membach 22.19 321 *d*P **P** **02 15 50.9 +2.2**
comp=Z,11nm,1.0s
BELG Belogornoye 22.19 33 P **P** **02 15 48.9 +0.2**
comp=Z,27nm,0.9s,baz=319,slow=3.6,SNR=16
comp=Z,27nm,0.9s
DOU Dourbes 22.66 318 *d*P **P** **02 15 55.2 +1.6**
LUNU Lund 22.79 338 *i*P **P** **02 15 52.8 -2.2**
TAM Tamanrasset 23.14 244 **P** **02 15 59.1 0.0**
TAM IAmb IAmb 02 16 08.0
comp=Z,13nm,0.7s
BJUU Bjuv 23.29 339 *i*P **P** **02 15 57.6 -2.7**
DEL Delary 23.39 340 *i*P **P** **02 15 57.4 -3.8**
BORU Boraas 24.70 340 *i*P **P** **02 16 10.6 -2.9**
ESBB Sonseca Array 25.70 290 **P** **02 16 22.4 -0.4**
ESBB IAmb IAmb 02 16 29.9
comp=Z,9.6nm,0.8s
ESDC Sonseca Array 25.70 290 P **P** **02 16 21.7 -1.2**
comp=Z,4.7nm,0.5s,baz=80,slow=9.3,SNR=61
comp=Z,4.7nm,0.5s
PAB San Pablo 26.00 289 **P** **02 16 24.4 -1.2**
PAB IAmb IAmb 02 16 33.1
comp=Z,10nm,0.9s
FINES FINESS Array B 26.34 358 P **P** **02 16 26.3 -2.0**
comp=Z,2.3nm,0.4s,baz=158,slow=11,SNR=20
FINES PcP **PcP** **02 19 53.2 -0.7**
comp=Z,2.4nm,0.8s,baz=134,slow=4.0,SNR=6.0
comp=Z,2.3nm,0.4s
HFS Hagfors 26.66 344 P **P** **02 16 28.5 -2.8**
comp=Z,2.8nm,0.5s,baz=154,slow=11,SNR=22
HFS LR LR 02 27 48.0
comp=Z,356nm,18.3s,baz=172,slow=38
comp=Z,2.8nm,0.5s
MDT Midelt 27.07 274 LR LR 02 30 10.5
comp=Z,78nm,19.2s,baz=107,slow=43
ATD Arta Tunnel 27.12 147 LR LR 02 27 15.8
comp=Z,6.5nm,21.6s,baz=328,slow=36
MD01 Midelt array s 27.18 275 **P** **02 16 36.6 +0.2**
MD31 MD31 27.18 275 **P** **02 16 36.1 -0.2**
AB31 Akbulak array 27.31 49 **P** **02 16 37.2 0.0**
AB31 IAmb IAmb 02 16 50.5
comp=Z,6.6nm,1.0s
ABKAR Akbulak array 27.31 49 **P** **02 16 37.6 +0.4**
FURI Furi 27.91 157 LR LR 02 29 28.6
comp=Z,313nm,19.2s,baz=342,slow=40
NB2 NORSAR Subarra 28.05 343 P **P** **02 16 40.5 -3.2**
comp=Z,1.1nm,0.5s,baz=146,slow=9.3
NOA NORSAR Array B 28.05 343 P **P** **02 16 39.6 -4.2**
comp=Z,0.5nm,0.5s,baz=124,slow=15,SNR=5.9
NOA LR LR 02 28 41.7
comp=Z,156nm,18.8s,baz=150,slow=38
PBAR Barrancos 28.16 287 *e*P **P** **02 16 44.4 -0.5**
PBAR *i* IAmb IAmb 02 16 56.5
comp=Z,17nm,1.4s
PMRV Marv??o 28.36 289 *e*P **P** **02 16 45.7 -1.0**
PMRV *i* IAmb IAmb 02 16 55.3
comp=Z,17nm,1.3s
PCBR Castelo Branco 28.41 290 *e*P **P** **02 16 48.1 +1.0**
MTE Manteigas 28.44 291 *e*P **P** **02 16 49.0 +1.5**
MTE *i* IAmb IAmb 02 17 25.1
comp=Z,35nm,1.7s
PESTR Estremoz 28.54 288 *e*P **P** **02 16 49.4 +1.0**
PESTR *i* IAmb IAmb 02 16 54.4
comp=Z,19nm,1.3s
PVRL Vila Real 28.57 293 *e*P **P** **02 16 50.0 +1.3**
POLO Lamas de Olo 28.63 293 *e*P **P** **02 16 50.8 +1.5**
PVIS Viseu 28.71 292 *e*P **P** **02 16 50.7 +0.8**
PVAQ Vaqueiros 28.77 285 *e*P **P** **02 16 51.2 +0.8**
PVAQ *i* IAmb IAmb 02 17 01.0
comp=Z,28nm,1.7s
EVO Evora 28.89 287 *e*P **P** **02 16 53.9 +2.5**
PARRA Arraiolos 28.89 288 *e*P **P** **02 16 52.4 +0.9**
PARRA *i* IAmb IAmb 02 17 24.5
comp=Z,18nm,1.6s
PBDV Barranco-do-Ve 28.96 285 *e*P **P** **02 16 53.2 +1.1**
PBDV *i* IAmb IAmb 02 16 56.5
comp=Z,39nm,1.7s
PMTG Montargil 29.02 289 *e*P **P** **02 16 54.5 +1.9**
MESJ Messejana 29.12 286 *e*P **P** **02 16 54.8 +1.3**
MESJ IAmb IAmb 02 16 59.9
comp=Z,6.2nm,0.8s
EKA Eskdalemuir Ar 29.41 323 P **P** **02 16 53.6 -2.2**
comp=Z,1.3nm,0.6s,baz=126,slow=10,SNR=1.9
comp=Z,1.3nm,0.6s
ARTI Arti 29.60 35 LR LR 02 32 00.4
comp=Z,122nm,18.9s,baz=221,slow=43
ARTI Arti 29.60 35 **P** **02 16 57.2 -0.3**
SHAA Shahritus 32.24 74 **P** **02 17 20.8 -0.3**
SHAA IAmb IAmb 02 17 44.6
comp=Z,15nm,0.9s
LODK Lodwar 32.31 166 **P** **02 17 22.9 +1.1**
LODK IAmb IAmb 02 17 28.9
comp=Z,4.6nm,1.0s
TORD Torodi Ar. Bea 32.31 234 P **P** **02 17 21.8 -0.1**
comp=Z,10nm,0.7s,baz=21,slow=6.9,SNR=70
comp=Z,10nm,0.7s
TORD Torodi Ar. Bea 32.31 234 P **P** **02 17 21.7 -0.1**
TORD IAmb IAmb 02 17 27.0
comp=Z,5.7nm,0.8s
KK31 Karatay Array 33.63 63 **P** **02 17 33.3 +0.1**
KK31 IAmb IAmb 02 17 51.8
comp=Z,7.6nm,1.2s
KKAR Karatay Array 33.63 63 P **P** **02 17 32.3 -0.9**
ARCES ARCESS Array B 34.46 358 P **P** **02 17 37.9 -2.2**
comp=Z,0.8nm,0.3s,baz=172,slow=8.5,SNR=10
comp=Z,0.8nm,0.3s
BVAR Borovoye Array 34.68 46 P **P** **02 17 42.0 -0.1**
comp=Z,0.6nm,0.6s,baz=248,slow=7.8,SNR=3.5
BVAR LR LR 02 35 37.0
comp=Z,100nm,19.2s,baz=265,slow=43
comp=Z,0.6nm,0.6s
MBAR Mbarara 35.66 175 LR LR 02 33 59.3
comp=Z,126nm,18.7s,baz=360,slow=39
AAK Ala-Archa 36.58 64 LR LR 02 36 14.5
comp=Z,108nm,18.5s,baz=284,slow=42
AAK Ala-Archa 36.58 64 **P** **02 17 59.0 +0.3**
AAK IAmb IAmb 02 18 10.8
comp=Z,6.3nm,1.1s
KSH2 Kashi 37.79 70 P **P** **02 18 12.2 +3.1**
KSH2 sP sP 02 18 22.5 +11
KSH2 pmax pmax
comp=Z,1.0nm,0.8s
KURBB Kurchatov Arra 39.32 51 P **P** **02 18 21.7 +0.1**
comp=Z,1.7nm,0.6s,baz=279,slow=9.2,SNR=17
KURBB PcP **PcP** **02 20 30.3 +0.2**
comp=Z,1.5nm,0.8s,baz=264,slow=3.9,SNR=4.9
comp=Z,1.7nm,0.6s
KURK Kurchatov 39.38 51 P **P** **02 18 22.0 -0.1**
WUS Wushi 40.24 66 P **P** **02 18 29.6 0.0**
WUS IAmb IAmb 02 18 51.2
comp=Z,6.1nm,0.9s
DBIC Dimbokro 41.41 235 P **P** **02 18 38.8 -0.5**
comp=Z,3.5nm,0.6s,baz=54,slow=9.5,SNR=8.1
DBIC LR LR 02 37 58.1
comp=Z,204nm,18.4s,baz=44,slow=39
comp=Z,3.5nm,0.6s
DBIC Dimbokro 41.41 235 P **P** **02 18 39.0 -0.3**
DBIC IAmb IAmb 02 18 50.0
comp=Z,9.0nm,1.0s
MAKZ Makanchi 41.62 57 **P** **02 18 40.7 -0.1**
BORG Borgarnes 41.68 331 LR LR 02 39 43.2
comp=Z,110nm,18.6s,baz=112,slow=42
MKAR Makanchi Array 41.84 57 P **P** **02 18 42.6 +0.1**
comp=Z,1.4nm,0.5s,baz=274,slow=7.2,SNR=28
MKAR LR LR 02 38 04.0
comp=Z,73nm,19.0s,baz=128,slow=39
comp=Z,1.4nm,0.5s
ZALV Zalesovo Beam 43.34 46 P **P** **02 18 54.1 -0.4**
comp=Z,0.7nm,0.4s,baz=276,slow=7.3,SNR=4.7
ZALV LR LR 02 38 40.8
comp=Z,63nm,18.9s,baz=240,slow=39
comp=Z,0.7nm,0.4s
ZALV Zalesovo Beam 43.34 46 P **P** **02 18 53.8 -0.7**
SPITS Spitsbergen Ar 43.42 357 P **P** **02 18 54.8 -0.1**
comp=Z,1.1nm,0.3s,baz=157,slow=11,SNR=13
SPITS PcP **PcP** **02 20 43.1 0.0**
comp=Z,5.1nm,0.9s,baz=131,slow=3.7,SNR=1.1
comp=Z,1.1nm,0.3s
WMQ Urumqi 46.00 60 *e*P **P** **02 19 18.5 +2.5**
WMQ LR LR
comp=Z,90nm,16.1s
NRIK Noril'sk 46.91 25 P **P** **02 19 23.2 +0.5**
comp=Z,2.1nm,0.4s,baz=254,slow=3.0,SNR=3.6
comp=Z,2.1nm,0.4s
NRIK Noril'sk 46.91 25 P **P** **02 19 22.3 -0.3**
GOMU GeErMu 53.28 68 P **P** **02 20 13.7 +1.7**
GOMU pmax pmax
comp=Z,3.0nm,1.1s
SFJD Kangerlussuaq 53.80 331 LR LR 02 43 53.2
comp=Z,91nm,19.0s,baz=95,slow=37
TLY Talaya 54.90 47 **P** **02 20 21.9 -1.3**
TLY IAmb IAmb 02 20 36.4
comp=Z,3.9nm,1.0s
GTA2 Gaotai 55.85 63 *e*P **P** **02 20 30.8 +0.5**
GTA2 pmax pmax
comp=Z,4.0nm,0.7s
GRTLG Ghanzi 56.57 188 P **P** **02 20 36.0 +0.5**
SONM Songino Array 57.69 51 P **P** **02 20 44.0 +0.8**
comp=Z,2.5nm,0.6s,baz=288,slow=7.7,SNR=18
comp=Z,2.5nm,0.6s
SONM Songino Array 57.69 51 **P** **02 20 42.9 -0.3**
SONM IAmb IAmb 02 20 48.9
comp=Z,5.5nm,1.2s
ULN Ulaanbaatar 58.10 51 P **P** **02 20 45.6 -0.6**
ULN IAmb IAmb 02 20 47.9
comp=Z,3.8nm,0.7s
LPHEP Lephephe 58.23 182 **P** **02 20 47.9 +0.7**
KOOLE Kule 58.30 188 **P** **02 20 49.0 +1.3**
LBTB Lobatse 59.88 183 P **P** **02 20 59.8 +1.2**
LZDM Lanzhou Array 60.05 65 P **P** **02 21 00.7 +0.5**
comp=Z,0.8nm,0.4s,baz=304,slow=3.4,SNR=4.7
comp=Z,0.8nm,0.4s
LZH Lanzhou 60.11 65 *e*P **P** **02 21 00.3 0.0**
LZH pP pwP 02 21 07.8 +3.2
LZH pmax pmax
comp=Z,19nm,1.4s
FRB Frobisher Bay 61.84 330 LR LR 02 49 50.6
comp=Z,81nm,18.0s,baz=70,slow=38
PZH PanZhiHua 62.62 76 P **P** **02 21 19.8 +2.4**
BOSA Boshof 63.48 183 P **P** **02 21 23.1 +0.3**
comp=Z,2.5nm,0.8s,baz=18,slow=7.1,SNR=4.8
comp=Z,2.5nm,0.8s
BOSA Boshof 63.48 183 P **P** **02 21 23.8 +1.0**
HHC Hu-ho-hao-te 63.70 57 *i*P **P** **02 21 25.8 +1.4**
HHC pP pwP 02 21 30.3 +1.8
HHC pmax pmax
comp=Z,8.0nm,1.0s
KMI2 Kunming 64.06 77 P **P** **02 21 30.9 +3.8**
KMI2 pmax pmax
comp=Z,7.0nm,1.9s
CMAR Chiang Mai Arr 64.27 85 P **P** **02 21 27.6 -0.6**
comp=Z,1.0nm,0.3s,baz=307,slow=5.2,SNR=4.6
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 64.27 85 P **P** **02 21 28.4 +0.1**
SCHQ Schefferville 64.68 320 P **P** **02 21 28.6 -1.8**
comp=Z,3.8nm,0.5s,baz=54,slow=4.8,SNR=13
SCHQ LR LR 02 48 21.1
comp=Z,64nm,18.8s,baz=74,slow=35
comp=Z,3.8nm,0.5s
SUR Sutherland 67.52 187 LR LR 02 51 23.8
comp=Z,118nm,20.5s,baz=17,slow=36
HEH HeiHe 69.31 43 *e*P **P** **02 22 00.7 +0.8**
HEH pmax pmax
comp=Z,7.0nm,0.8s
KLR Kul'dur 72.24 42 LR LR 02 57 11.1
comp=Z,13nm,19.1s,baz=338,slow=38
SEY Seymchan 72.66 23 P **P** **02 22 20.0 -0.1**
comp=Z,1.7nm,0.9s,baz=9.5,slow=6.1,SNR=2.5
comp=Z,1.7nm,0.9s
USRK Ussuriysk Ar. 75.19 46 P **P** **02 22 35.2 +0.1**
comp=Z,2.2nm,0.6s,baz=290,slow=4.8,SNR=4.7
comp=Z,2.2nm,0.6s
KSRS Korea Array 76.43 54 P **P** **02 22 41.9 -0.5**
comp=Z,1.0nm,0.6s,baz=307,slow=4.9,SNR=4.6
KSRS LR LR 03 00 06.0
comp=Z,56nm,20.0s,baz=280,slow=39
comp=Z,1.0nm,0.6s
SADO Sadowa 76.68 316 LR LR 02 54 55.7
comp=Z,49nm,21.1s,baz=62,slow=35
YKA Yellowknife Ar 78.14 343 P **P** **02 22 49.5 -2.0**
comp=Z,0.1nm,0.3s,baz=28,slow=5.7,SNR=6.1
comp=Z,0.1nm,0.3s
MDP Montagnes des 79.43 269 LR LR 02 59 00.2
comp=Z,37nm,18.6s,baz=70,slow=36
ILAR Eielson Array 80.32 358 P **P** **02 23 02.9 -0.5**
comp=Z,0.5nm,0.7s,baz=341,slow=3.5,SNR=8.3
comp=Z,0.5nm,0.7s
ILAR Eielson Array 80.32 358 P **P** **02 23 03.4 -0.1**
JNU Nakatsue 80.89 56 LR LR 03 05 41.4
comp=Z,61nm,19.1s,baz=9.5,slow=41
ULM Lac du Bonnet 81.58 327 P **P** **02 23 08.2 -2.2**
comp=Z,1.0nm,0.4s,baz=68,slow=4.9,SNR=3.7
ULM LR LR 03 01 13.7
comp=Z,77nm,18.2s,baz=18,slow=37
comp=Z,1.0nm,0.4s
ULM Lac du Bonnet 81.58 327 P **P** **02 23 08.2 -2.2**
PETK Petropavlovsk- 81.85 28 LR LR 03 02 46.1
comp=Z,67nm,18.2s,baz=88,slow=38
TKL Tuckaleechee C 85.11 311 LR LR 03 02 09.3
comp=Z,59nm,18.1s,baz=30,slow=36
BDFB Brasilia 87.86 249 P **P** **02 23 43.8 +1.2**
comp=Z,3.2nm,0.6s,baz=64,slow=5.6,SNR=6.7
comp=Z,3.2nm,0.6s
BDFB Brasilia 87.86 249 P **P** **02 23 42.7 0.0**
NEW Newport 91.30 338 LR LR 03 09 59.2
comp=Z,80nm,19.5s,baz=334,slow=39
PDAR Pinedale Array 93.29 330 LR LR 03 10 29.7
comp=Z,36nm,18.6s,baz=351,slow=38
ELK Elko 97.24 333 LR LR 03 12 36.8
comp=Z,71nm,18.9s,baz=351,slow=38
SIV San Ignacio 98.28 256 LR LR 03 11 59.4
comp=Z,64nm,18.8s,baz=107,slow=37
ASAR Alice Springs 115.77 102 PKP **PKPdf** **02 29 35.0 -0.6**
comp=Z,0.4nm,0.7s,baz=293,slow=2.3,SNR=2.9
ASAR Alice Springs 115.77 102 **PKPdf** **02 29 34.0 -1.6**

*IDC **04** 02:13:37.7±5.7,51°.87N×179°.96W,h56km±53km,mb3.5/8,*
mbtmp3.9/10,ML3.3/2,Error ellipse: s-maj=38.8km
s-min=19.5km az=173.0
*NEIC **04** 02:13:42.0±0.8,51°.8N±0°.1×179°.96W±0°.05,h97km±2km,*
mb4.2/37,ML4.1/10,ML3.7(AEIC),Error ellipse:
s-maj=19.9km s-min=4.6km az=182.0
*AEIC **04** 02:13:42.8±0.9,51°.8N±0°.1×179°.98W±0°.05,h93km±4km,*
Error ellipse: s-maj=21.3km s-min=4.6km az=181.0

ISC 04 02:13:41.5±0.7,51.74N±0°.10×179.96W±0°.03,h97km±5km,
n89,σ0s71/105,mb4.1/19,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
CERB	**Semis' Cerberu**	**0.32**	**307**		**Pn**	**02 13 56.2**	**+0.3**
CERB					**Sn**	**02 14 07.0**	**+0.4**
CEPE	**Semis' Perret**	**0.33**	**313**		**Pn**	**02 13 56.0**	**+0.1**
CESW	**Semis' Southwe**	**0.34**	**298**		**Pn**	**02 13 56.0**	**0.0**
CEAP	**Semis' Anvil P**	**0.39**	**312**		**Pn**	**02 13 56.4**	**+0.1**
AMKA	**Amchitka**	**0.59**	**232**		**Pn**	**02 13 57.7**	**0.0**
AMKA					**Sn**	**02 14 09.3**	**-0.5**
GASW	**Gareloi Southw**	**0.69**	**87**		**Pn**	**02 13 58.6**	**+0.1**
GASW					**Sn**	**02 14 11.5**	**+0.2**
GANO	**Gareloi North**	**0.72**	**83**		**Pn**	**02 13 59.0**	**+0.1**
GANO					**Sn**	**02 14 11.9**	**0.0**
GAKI	**Gareloi-Kavalg**	**0.74**	**104**		**Pn**	**02 13 59.3**	**+0.3**
GAKI					**Sn**	**02 14 12.4**	**+0.2**
GALAA	**Gareloi Lava P**	**0.74**	**88**		**Pn**	**02 13 59.6**	**+0.5**
GALAA					**Sn**	**02 14 12.8**	**+0.6**
GANE	**Gareloi Northe**	**0.74**	**84**		**Pn**	**02 13 58.9**	**-0.2**
GANE					**Sn**	**02 14 12.3**	**+0.1**
GAEA	**Gareloi East**	**0.76**	**86**		**Pn**	**02 13 59.8**	**+0.6**
GAEA					**Sn**	**02 14 13.1**	**+0.6**
LSSE	**Little Sitkin**	**0.93**	**282**		**Pn**	**02 14 01.5**	**+0.5**
LSPA	**Little Sitkin**	**0.93**	**284**		**Pn**	**02 14 01.5**	**+0.5**
LSPA					**Sn**	**02 14 16.8**	**+1.1**
LSNW	**Little Sitkin**	**0.97**	**284**		**Pn**	**02 14 01.6**	**+0.2**
TASE	**Tanaga Southea**	**1.20**	**85**		**Pn**	**02 14 04.4**	**+0.3**
TASE					**Sn**	**02 14 21.1**	**+0.1**
TAFP	**Tanaga Falls P**	**1.24**	**82**		**Pn**	**02 14 04.8**	**+0.3**
TAFL	**Tanaga Flats**	**1.28**	**89**		**Pn**	**02 14 05.5**	**+0.6**
TAPA	**Tanaga Point A**	**1.34**	**86**		**Pn**	**02 14 06.0**	**+0.3**
KIMD	**Kanaga Island**	**1.69**	**88**		**Pn**	**02 14 10.4**	**+0.4**
KIMD					**Sn**	**02 14 31.7**	**0.0**
KIKV	**Kanaga Island**	**1.74**	**84**		**Pn**	**02 14 10.9**	**+0.3**
KIKV					**Sn**	**02 14 32.8**	**+0.1**
KIWB	**Kanaga Island**	**1.75**	**85**		**Pn**	**02 14 10.9**	**+0.2**
KIWB				IAML		02 14 39.3	
	comp=N,2μm,0.5s						
KIWB				IAML		02 14 39.6	
	comp=E,1μm,0.5s						
KIWB	**Kanaga Island**	**1.75**	**85**		**Sn**	**02 14 32.6**	**-0.3**
KINC	**Kanaga Island**	**1.77**	**83**		**Pn**	**02 14 11.3**	**+0.3**
KIRH	**Kanaga Island**	**1.79**	**84**		**Pn**	**02 14 11.6**	**+0.4**
ADK	**Adak**	**2.04**	**85**		**Pn**	**02 14 14.5**	**0.0**
ADK				IAML		02 14 42.4	
	comp=E,1μm,0.3s						
ADK				IAML		02 14 42.8	
	comp=E,1μm,0.3s						
ADAG	**Mount Adagdak**	**2.10**	**82**		**Pn**	**02 14 15.4**	**+0.2**
ADAG					**Sn**	**02 14 41.7**	**+0.8**
ETKA	**Kagalaska Isla**	**2.21**	**86**		**Pn**	**02 14 16.1**	**0.0**
GSCK	**Great Sitkin C**	**2.37**	**82**		**Pn**	**02 14 18.9**	**+0.1**
GSCK					**Sn**	**02 14 47.6**	**+0.2**
GSTD	**Great Sitkin T**	**2.38**	**81**		**Pn**	**02 14 18.9**	**-0.1**
GSMY	**Great Sitkin M**	**2.44**	**81**		**Pn**	**02 14 19.7**	**+0.1**
GSMY					**Sn**	**02 14 49.3**	**+0.3**
GSTR	**Great Sitkin T**	**2.44**	**80**	Pn	**Pn**	**02 14 19.4**	**-0.3**
GSTR				IAML		02 15 04.0	
	comp=E,721nm,0.4s						
GSTR				IAML		02 15 08.8	
	comp=N,968nm,0.8s						
GSIG	**Igitkin Island**	**2.51**	**83**		**Pn**	**02 14 20.8**	**+0.1**
KOWE	**Korovin West**	**3.58**	**78**		**Pn**	**02 14 35.0**	**+0.1**
ATKA	**Atka Island**	**3.59**	**80**		**Pn**	**02 14 35.6**	**+0.5**
ATKA					**Sn**	**02 15 16.7**	**+0.1**
KOKL	**Mount Kliuchef**	**3.60**	**78**		**Pn**	**02 14 35.3**	**0.0**
KOKV	**Korovin Volcan**	**3.63**	**78**		**Pn**	**02 14 35.8**	**+0.1**
KOFP	**Korovin Flat P**	**3.66**	**79**		**Pn**	**02 14 36.2**	**+0.1**
O15K	**Ungalikthiuk R**	**13.59**	**49**	Pn	**Pn**	**02 16 50.5**	**+0.5**
PETK	**Petropavlovsk-**	**13.69**	**285**	P	**Pn**	**02 16 48.3**	**-3.0**
	comp=N,0.1nm,0.3s,baz=79,slow=12,SNR=1.0						
	comp=N,2.6nm,1.0s						
PETK	**Petropavlovsk-**	**13.69**	**285**	Pn	**Pn**	**02 16 50.5**	**-0.8**
O16K	**Kokwok River B**	**14.57**	**49**	Pn	**Pn**	**02 17 01.7**	**-0.9**
KDAK	**Kodiak Island**	**16.84**	**58**	P	**Pn**	**02 17 29.1**	**-1.8**
	comp=N,1.0nm,0.3s,baz=257,slow=4.9,SNR=13						
	comp=N,11nm,0.7s						
KDAK	**Kodiak Island**	**16.84**	**58**	Pn	**Pn**	**02 17 29.9**	**-1.0**
SKT	**Skwentna**	**18.45**	**45**		**Pn**	**02 17 50.7**	**+0.2**
SKT				IAmb	IAmb	02 17 52.9	
	comp=Z,5.3nm,0.6s						
L22K	**Petersville**	**18.98**	**44**		**P**	**02 17 55.6**	**+0.6**
L22K				IAmb	IAmb	02 17 56.5	
	comp=Z,11nm,0.7s						
KTH	**Kantishna Hill**	**19.32**	**41**		**P**	**02 17 59.9**	**+1.3**
TRF	**Thorofare Moun**	**19.53**	**42**		**P**	**02 18 01.9**	**+0.8**
TRF				IAmb	IAmb	02 18 09.4	
	comp=Z,12nm,1.0s						
H21K	**Melozitna Rive**	**19.60**	**34**	P	**P**	**02 18 02.6**	**+0.9**
H21K				IAmb	IAmb	02 18 07.2	
	comp=Z,6.6nm,0.7s						
D20K	**Etivluk River**	**20.35**	**25**	P	**P**	**02 18 10.6**	**+0.8**
NEA2	**Nenana**	**20.49**	**39**	P	**P**	**02 18 11.4**	**+0.2**
NEA2				IAmb	IAmb	02 18 12.9	
	comp=Z,11nm,0.8s						
DHY	**Denali Highway**	**20.64**	**44**	P	**P**	**02 18 13.1**	**+0.1**
DHY				IAmb	IAmb	02 18 16.4	
	comp=Z,7.2nm,0.7s						
G23K	**Bananza Creek**	**21.11**	**33**	P	**P**	**02 18 19.3**	**+1.4**
G23K				IAmb	IAmb	02 18 21.2	
	comp=Z,7.5nm,0.8s						
ILAR	**Eielson Array**	**21.42**	**40**	P	**P**	**02 18 18.9**	**-2.3**
	comp=Z,0.6nm,0.5s,baz=245,slow=9.7,SNR=18						
	comp=Z,0.6nm,0.5s						
H24K	**Noodor Dome**	**21.47**	**37**	P	**P**	**02 18 22.4**	**+0.6**
H24K				IAmb	IAmb	02 18 24.9	
	comp=Z,6.3nm,0.8s						
D22K	**Ayikyak River**	**21.53**	**27**		**P**	**02 18 23.8**	**+1.5**
G24K	**Hadweenzic Riv**	**22.00**	**35**	P	**P**	**02 18 28.0**	**+0.7**
G24K				IAmb	IAmb	02 18 30.3	
	comp=Z,9.2nm,0.8s						
D23K	**Nanushuk River**	**22.15**	**28**	P	**P**	**02 18 29.6**	**+0.6**
SCRK	**Sand Creek**	**22.35**	**43**	P	**P**	**02 18 29.8**	**-1.5**
SCRK				IAmb	IAmb	02 18 31.7	
	comp=Z,11nm,1.2s						
J26L	**Joseph Creek**	**22.68**	**42**	P	**P**	**02 18 32.8**	**-1.7**
J26L				IAmb	IAmb	02 18 34.2	
	comp=Z,6.6nm,0.7s						
F25K	**Christian Rive**	**23.04**	**34**	P	**P**	**02 18 38.3**	**+0.3**
E25K	**Arctic Village**	**23.30**	**32**	P	**P**	**02 18 40.9**	**+0.4**
G26K	**Porcupine Rive**	**23.43**	**36**	P	**P**	**02 18 41.9**	**+0.4**
G26K				IAmb	IAmb	02 18 43.9	
	comp=Z,8.8nm,0.8s						
I28M	**Miner Creek**	**24.43**	**41**	P	**P**	**02 18 50.2**	**-0.5**
F28M	**Old Crow**	**25.09**	**36**	P	**P**	**02 18 57.3**	**+0.7**
A36M	**Sachs Harbour**	**31.12**	**29**		**P**	**02 19 51.4**	**+1.2**
YKA	**Yellowknife Ar**	**35.51**	**47**	P	**P**	**02 20 27.6**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=283,slow=8.7,SNR=5.9						
	comp=Z,0.4nm,0.7s						
PAHR	**Pah Rah Range**	**42.78**	**82**	P	**P**	**02 21 29.9**	**+0.5**
PAHR				IAmb	IAmb	02 21 31.4	
	comp=Z,7.6nm,1.2s						
NVAR	**Mina Array Bea**	**44.22**	**82**	P	**P**	**02 21 41.9**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=298,slow=8.4,SNR=6.6						
	comp=Z,1.4nm,0.7s						
NVAR	**Mina Array Bea**	**44.22**	**82**	P	**P**	**02 21 41.2**	**+0.1**
ELK	**Elko**	**44.69**	**78**		**P**	**02 21 45.3**	**+0.5**
ELK				IAmb	IAmb	02 21 46.3	
	comp=Z,4.7nm,1.0s						
SONM	**Songino Array**	**45.84**	**296**	P	**P**	**02 21 53.7**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=57,slow=9.2,SNR=1.5						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**45.84**	**296**	P	**P**	**02 21 54.1**	**+0.5**
SONM				IAmb	IAmb	02 21 54.6	
	comp=Z,3.9nm,1.4s						
DUG	**Dugway, Tooele**	**46.49**	**77**		**P**	**02 21 59.0**	**+0.2**
DUG				IAmb	IAmb	02 22 00.4	
	comp=Z,3.7nm,0.7s						
PD31	**Pinedale Array**	**46.89**	**72**		**P**	**02 22 01.5**	**-0.5**
PDAR	**Pinedale Array**	**46.89**	**72**	P	**P**	**02 22 01.5**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=305,slow=3.9,SNR=17						
	comp=Z,1.4nm,0.7s						
PDAR	**Pinedale Array**	**46.89**	**72**	P	**P**	**02 22 01.1**	**-0.9**
PSUT	**Pine Spring**	**46.89**	**79**	P	**P**	**02 22 02.3**	**+0.3**

PSUT				IAmb	IAmb	02 22 03.5	
	comp=Z,3.9nm,0.7s						
HMU	**Henry Mountain**	**49.16**	**78**	P	**P**	**02 22 19.8**	**+0.2**
U15A	**North Rim**	**49.19**	**80**		**P**	**02 22 20.6**	**+0.7**
U15A				IAmb	IAmb	02 22 21.9	
	comp=Z,4.7nm,0.9s						
PV10	**Paradox Valley**	**49.91**	**76**	P	**P**	**02 22 25.7**	**+0.3**
SPITS	**Spitsbergen Ar**	**49.96**	**356**	P	**P**	**02 22 24.4**	**-0.4**
	comp=Z,6.9nm,0.9s,baz=32,slow=8.5,SNR=4.3						
	comp=Z,6.9nm,0.9s						
PV11	**David Mesa, Pa**	**50.06**	**76**	P	**P**	**02 22 26.5**	**+0.1**
PV18	**Skein Mesa, Pa**	**50.07**	**76**		**P**	**02 22 26.5**	**0.0**
PV03	**Paradox Valley**	**50.11**	**76**	P	**P**	**02 22 26.6**	**-0.2**
PV02	**Paradox Valley**	**50.20**	**76**	P	**P**	**02 22 27.7**	**+0.2**
TXAR	**Lajitas Array**	**59.31**	**81**	P	**P**	**02 23 33.4**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=301,slow=4.7,SNR=22						
	comp=Z,1.7nm,0.7s						
PZH	**PanZhiHua**	**62.57**	**279**	P	**P**	**02 23 56.2**	**+0.9**
WRA	**Warramunga Arr**	**81.78**	**223**	P	**P**	**02 25 50.5**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=23,slow=5.2,SNR=1.7						
	comp=Z,0.2nm,0.7s						
WRA	**Warramunga Arr**	**81.78**	**223**	P	**P**	**02 25 49.9**	**+0.5**

*IDC **04** 02:27:41.4±2.2, 32°.64N×47°.87E, h0km, mb3.7/9, mbtmp3.7/9, MS4.1/1, Error ellipse: s-maj=49.6km s-min=22.3km az=163.0*
*TEH **04** 02:27:41.7, 32°.20N×47°.92E, h18km±17km, ML3.4, Presumed earthquake*
ISC 04 02:27:39.6±1.0**, 32°.11N**±0°.07×**47°.74E**±0°.07**, h10km, n32, σ1s.00**/31**, mb3.6**/8**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHWZ	**Ahwaz**	**1.10**	**135**	Pg	**Pn**	**02 28 02.0**	**+1.0**
AMIS	**Naft Sefid**	**1.39**	**108**	Pg	**Pn**	**02 28 05.8**	**+0.8**
AMIS				Sg	**Sn**	**02 28 24.0**	**+0.5**
IDOB	**Doab**	**1.71**	**12**	Pg	**Pb**	**02 28 11.4**	**+0.1**
KCHF	**Cheshme Sefid,**	**2.24**	**345**	Pn	**Pb**	**02 28 19.3**	**-0.9**
IBZA	**Bozab**	**2.35**	**2**	Pn	**Pn**	**02 28 20.3**	**+1.7**
IGHG	**Ghaleghazi**	**2.42**	**336**	Pn	**Pb**	**02 28 22.7**	**-0.6**
JHBN	**Jahan bin**	**2.49**	**86**	Pn	**Pn**	**02 28 21.2**	**+0.8**
GLG1	**Gilan-e-Gharb**	**2.52**	**323**	Pn	**Pb**	**02 28 23.7**	**-1.3**
ZNGN	**Zangian**	**2.64**	**89**	Pn	**Pn**	**02 28 23.5**	**+0.9**
IPIR	**Pirpir**	**2.73**	**77**	Pn	**Pn**	**02 28 24.3**	**+0.6**
IALM	**Almabolaq**	**2.77**	**7**	Pn	**Pn**	**02 28 26.0**	**+1.7**
HAGD	**Aghdareh**	**2.95**	**23**	Pn	**Pn**	**02 28 27.1**	**+0.4**
IBRJ	**Brojen**	**3.00**	**93**	Pn	**Pn**	**02 28 28.2**	**+0.7**
IKLH	**Kolahrood**	**3.45**	**69**	Pn	**Pn**	**02 28 34.6**	**+0.9**
KLNJ	**Kolanjah**	**3.47**	**107**	Pn	**Pn**	**02 28 35.0**	**+1.1**
QAMS	**Qamsar**	**3.48**	**61**	Pn	**Pn**	**02 28 34.9**	**+0.9**
IQOM	**Qom**	**3.90**	**45**	Pn	**Pn**	**02 28 40.3**	**+0.6**
QABG	**Abgarm-Qazvin**	**3.90**	**23**	Pn	**Pn**	**02 28 41.0**	**+1.2**
IVRN	**Varamin**	**4.40**	**48**	Pn	**Pn**	**02 28 47.2**	**+0.7**
IGZV	**Ghazvin**	**4.73**	**25**	Pn	**Pn**	**02 28 52.5**	**+1.3**
MZPU	**Pul - Mazandar**	**5.36**	**35**	Pn	**Pn**	**02 29 01.0**	**+1.2**
ILAS	**Lasjerd**	**5.44**	**52**	Pn	**Pn**	**02 29 00.8**	**-0.1**
BVAR	**Borovoye Array**	**26.54**	**31**	P	**P**	**02 33 16.4**	**-0.9**
	0.4nm,0.4s,baz=226,slow=7.9,SNR=4.2						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**29.29**	**42**	P	**P**	**02 33 41.6**	**-0.4**
	0.6nm,0.7s,baz=245,slow=9.6,SNR=4.0						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**30.16**	**51**	P	**P**	**02 33 49.1**	**-0.7**
	0.3nm,0.3s,baz=245,slow=9.5,SNR=4.8						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**32.55**	**341**	P	**P**	**02 34 10.2**	**-0.4**
	2.6nm,1.0s,baz=141,slow=8.4,SNR=8.6						
	2.6nm,1.0s						
ZALV	**Zalesovo Beam**	**34.22**	**39**	P	**P**	**02 34 23.9**	**-1.3**
	0.6nm,0.3s,baz=243,slow=8.2,SNR=4.0						
	0.6nm,0.3s						
KMBO	**Kilima Mbogo**	**34.52**	**199**	LR	LR	02 50 07.9	
	comp=Z,325nm,21.7s,baz=124,slow=38						
HFS	**Hagfors**	**35.91**	**331**	P	**P**	**02 34 39.9**	**+0.1**
	2.2nm,0.9s,baz=123,slow=9.1,SNR=8.5						
	2.2nm,0.9s						
ARCES	**ARCESS Array B**	**39.51**	**348**	P	**P**	**02 35 08.9**	**-1.2**
	1.5nm,0.8s,baz=147,slow=8.2,SNR=1.2						
	1.5nm,0.8s						
ESDC	**Sonseca Array**	**42.07**	**295**	P	**P**	**02 35 33.0**	**+1.3**
	0.2nm,0.6s,baz=77,slow=8.5,SNR=4.4						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**46.10**	**257**	P	P	02 36 09.8	+5.6
	0.3nm,0.7s,baz=48,slow=6.3,SNR=2.2						
	0.3nm,0.7s						

*MOS **04** 02:31:51.1±2.8, 62°.30N×171°.30E, h10km, mb4.4/7, Error ellipse: s-maj=16.5km s-min=11.1km az=90.9*
*KRSC **04** 02:31:51.2±1.6, 62°.31N×171°.26E, h3km±19km, Ml4.9*
*NERS **04** 02:31:55.5, 62°.32N×170°.24E, h0km*
*IDC **04** 02:32:02.0±2.1, 62°.97N×170°.15E, h0km, mb3.7/7, mbtmp3.7/10, ML3.4/3, MS3.4/10, Error ellipse: s-maj=68.5km s-min=16.1km az=3.0*
ISC 04 02:31:48.3±1.1**, 61°.79N**±0°.08×**171°.83E**±0°.08**, h10km, n45, σ1s.92**/29**, mb4.2**/13**, MS3.6**/6**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSK	**Kamenskaya**	**2.73**	**287**	P	**Pn**	**02 32 31.9**	**-0.1**
KMSK				S	**Sn**	**02 33 02.9**	**-2.1**
KMSK	**Kamenskaya**	**2.73**	**287**	*e*P	**Pn**	**02 32 32.0**	**-0.1**
KMSK				*e*S	**Sn**	**02 33 02.9**	**-2.1**
TILK	**Tilichiki**	**3.07**	**247**	P	**Pb**	**02 32 44.1**	**+1.3**
TILK	**Tilichiki**	**3.07**	**247**	*e*P	**Pb**	**02 32 44.2**	**+1.3**
BILL	**Bilibino**	**6.71**	**342**	P	**Pn**	**02 33 27.3**	**+0.7**
BILL	**Bilibino**	**6.71**	**342**	*e*P	**Pn**	**02 33 27.5**	**+0.9**
BILL				*e*Pg	**Pb**	**02 33 45.0**	**+0.2**
BILL				Pgmax		02 33 51.3	
	20nm,0.5s						
BILL				*e*Sg	**Sb**	**02 35 08.7**	**+3.9**
BILL				Sgmax		02 35 19.8	
	120nm,0.8s						
BILL	**Bilibino**	**6.71**	**342**	*e*P	**Pn**	**02 33 27.3**	**+0.7**
KBTR	**Krutoberegovo**	**7.27**	**224**	P	Pb	02 33 45.2	-9.2
KBTR	**Krutoberegovo**	**7.27**	**224**	*e*P	Pb	02 33 45.2	-9.2
SMKR	**Semkarok**	**7.45**	**230**	P	Pb	02 33 48.3	-9.2
SMKR	**Semkarok**	**7.45**	**230**	*e*P	Pb	02 33 48.3	-9.2
OMS	**Omsukchan**	**7.55**	**283**	*e*P	**Pn**	**02 33 39.3**	**+1.0**
OMS				*e*Sg	**Sb**	**02 35 30.6**	**+1.4**
OMS				Sgmax		02 35 45.2	
	100nm,0.8s						
OMS				Sgmax		02 35 45.2	
	70nm,0.6s						
SEY	**Seymchan**	**9.11**	**286**	Pn	**Pn**	**02 34 00.4**	**+0.9**
	0.2nm,0.3s,baz=83,slow=14,SNR=3.6						
SEY				Lg	Lg	02 36 19.4	
	0.8nm,0.3s,baz=14,slow=22,SNR=5.0						
	0.7nm,0.3s						
SEY	**Seymchan**	**9.11**	**286**	*e*P	**Pn**	**02 34 02.8**	**+3.3**
SEY				pmax	pmax		
	comp=Z,4.0nm,1.5s						
SEY	**Seymchan**	**9.11**	**286**	*e*	Pn	02 34 04.8	+5.3
SEY				*e*Sg	Sn	02 36 19.9	+38
SEY				Sgmax		02 36 42.6	
	comp=Z,30nm,0.8s						
SEY				Sgmax		02 36 42.6	
	comp=Z,50nm,0.9s						
TLAR	**Talaya**	**9.32**	**275**	*e*Sg	Sn	02 36 27.7	+40
MA2	**Magadan**	**10.55**	**267**	Lg	Lg	02 37 13.4	
	comp=Z,0.8nm,0.3s,baz=183,slow=21,SNR=1.3						
MA2				LR	LR	02 38 42.4	
	comp=Z,134nm,18.4s,baz=59,slow=40						
MA2	**Magadan**	**10.55**	**267**	*i* P	**Pn**	**02 34 18.3**	**-1.0**
SUUS	**Susuman**	**11.04**	**286**	*e*	Pn	02 34 50.7	+25
SUUS				*e*Sg	Sn	02 37 23.7	+54
SUUS				Sgmax		02 37 38.5	
	comp=Z,40nm,1.0s						
SUUS				Sgmax		02 37 38.5	
	comp=Z,20nm,0.7s						
PETK	**Petropavlovsk-**	**11.53**	**227**	LR	LR	02 38 39.1	
	comp=Z,85nm,20.9s,baz=38,slow=34						
COLA	**College**	**18.13**	**63**	*i* P	**P**	**02 36 00.9**	**+0.8**
COLA				pmax	pmax		
	comp=Z,53nm,4.5s						
KDAK	**Kodiak Island**	**18.20**	**87**	LR	LR	02 43 29.3	
	comp=Z,240nm,20.0s,baz=235,slow=36						
ILAR	**Eielson Array**	**18.56**	**63**	P	Pn	02 36 22.7	+18
	comp=Z,0.1nm,0.3s,baz=263,slow=6.8,SNR=9.6						
ILAR				LR	LR	02 43 13.4	
	comp=Z,103nm,18.5s,baz=296,slow=36						
	comp=Z,1.6nm,1.0s						
TIXI	**Tiksi**	**19.14**	**319**	P	**P**	**02 36 09.0**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=96,slow=7.7,SNR=1.3						
	comp=Z,5.5nm,0.4s						
TIXI	**Tiksi**	**19.14**	**319**	*i* P	**P**	**02 36 07.9**	**-3.2**
TIXI				pmax	pmax		
	comp=Z,23nm,4.6s						
YAK	**Yakutsk**	**19.60**	**289**	*i* P	**P**	**02 36 15.5**	**-0.7**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZEA	**Zeya**	**24.65**	**271**	P	**P**	**02 37 08.9**	**+0.2**
KLR	**Kul'dur**	**25.47**	**259**	*i* P	**P**	**02 37 17.7**	**+1.6**
KLR				pmax	pmax		
	comp=Z,14nm,2.8s						
YKA	**Yellowknife Ar**	**32.68**	**56**	P	P	02 38 33.8	+14
	comp=Z,0.6nm,0.8s,baz=304,slow=9.1,SNR=9.3						
	comp=Z,0.6nm,0.8s						
DGZ	**Jazzator, Alta**	**45.63**	**295**	*i* P	**P**	**02 40 09.4**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,14nm,4.0s						
PDAR	**Pinedale Array**	**48.37**	**75**	P	P	02 40 50.4	+20
	comp=Z,0.6nm,0.9s,baz=324,slow=6.2,SNR=4.5						
	comp=Z,0.6nm,0.9s						
KURK	**Kurchatov**	**48.53**	**302**	*i* P	**P**	**02 40 32.0**	**+1.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURBB	**Kurchatov Arra**	**48.63**	**302**	P	**P**	**02 40 36.2**	**+4.5**
	comp=Z,1.6nm,0.7s,baz=44,slow=7.8,SNR=15						
KURBB				LR	LR	03 01 30.9	
	comp=Z,86nm,19.7s,baz=170,slow=37						
	comp=Z,1.6nm,0.7s						
BVAR	**Borovoye Array**	**49.89**	**309**	P	P	02 40 47.1	+5.8
	comp=Z,0.6nm,0.5s,baz=39,slow=7.4,SNR=3.1						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**50.06**	**296**	P	P	02 40 48.7	+5.9
	comp=Z,0.3nm,0.5s,baz=47,slow=6.9,SNR=6.3						
	comp=Z,0.3nm,0.5s						
ARTI	**Arti**	**51.24**	**319**	*i* P	**P**	**02 40 50.3**	**-1.1**
ARTI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
FINES	**FINESS Array B**	**54.35**	**341**	P	P	02 41 20.0	+5.7
	comp=Z,3.3nm,1.0s,baz=27,slow=7.1,SNR=4.6						
	comp=Z,3.3nm,1.0s						
NOA	**NORSAR Array B**	**56.60**	**349**	LR	LR	03 06 52.7	
	comp=Z,16nm,19.3s,baz=295,slow=38						
AAK	**Ala-Archa**	**56.70**	**299**	LR	LR	03 09 32.2	
	comp=Z,43nm,19.2s,baz=20,slow=41						
AAK	**Ala-Archa**	**56.70**	**299**	*i* P	**P**	**02 41 32.0**	**+0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	**Obninsk**	**58.25**	**332**	*e*P	**P**	**02 41 39.2**	**-3.0**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TXAR	**Lajitas Array**	**62.06**	**80**	P	P	02 42 26.7	+18
	comp=Z,0.3nm,0.7s,baz=325,slow=7.0,SNR=2.8						
TXAR				LR	LR	03 13 21.1	
	comp=Z,50nm,18.2s,baz=41,slow=40						
	comp=Z,0.3nm,0.7s						
KIV	**Kislovodsk**	**66.93**	**322**	*e*P	**P**	**02 42 39.8**	**-0.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VRAC	**Vranov**	**67.49**	**343**	LR	LR	03 13 25.7	
	comp=Z,29nm,18.5s,baz=346,slow=38						
JTS	**Las Juntas de**	**87.18**	**74**	LR	LR	03 28 09.9	
	comp=Z,24nm,18.1s,baz=39,slow=38						

*ATH **04** 02:38:19.5, 39°.04N×28°.17E, h16km±4km, ML3.4/6, Manual Solution by I.Dede First location: 2020/02/04 02:39:51, This location: 2020/02/04 05:37:28 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 4 km*
*AFAD **04** 02:38:21.8, 38°.98N×27°.87E, h7km±3km, MW3.3*
*ISK **04** 02:38:21.4, 38°.99N×27°.85E, h12km, ML3.5/25*
*THE **04** 02:38:23.4, 39°N±2°×2°8E±°, h7km±11km, M3.2/8, MLh3.2/8*
ISC 04 02:38:22.0±0.8**, 38°.98N**±0°.02×**27°.87E**±0°.02**, h12km**±6km**, n66, σ0s.83**/91**, 7C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.11**	**203**	P	**Pg**	**02 38 25.0**	**0.0**
AKHS				S	**Sg**	**02 38 27.4**	**+0.2**
AKHS				IAML		02 38 28.0	
	comp=E,2μm,0.4s						
AKS	**Akhisar**	**0.11**	**203**	Pg	**Pg**	**02 38 24.5**	**-0.5**
AKS				Sg	**Sg**	**02 38 26.9**	**-0.2**
GORD	**Gordes-Manisa**	**0.25**	**107**	Pg	**Pg**	**02 38 27.4**	**+0.1**
GORD				Sg	**Sg**	**02 38 31.8**	**+1.0**
GOMA	**Golmarmara-Man**	**0.28**	**172**	Pg	**Pg**	**02 38 27.7**	**0.0**
GOMA				Sg	**Sg**	**02 38 32.2**	**+0.7**
SOMA	**Soma-Manisa**	**0.31**	**304**	Pg	**Pg**	**02 38 27.9**	**-0.5**
SOMA				Sg	**Sg**	**02 38 32.9**	**+0.3**
KTTT	**Salihli**	**0.34**	**149**	P	**Pg**	**02 38 29.0**	**+0.1**
KTTT				S	**Sg**	**02 38 33.7**	**+0.3**
KTTT				IAML		02 38 35.0	
	comp=N,2μm,0.3s						
STEP	**BALIKESIR_Sava**	**0.41**	**343**	P	**Pg**	**02 38 30.0**	**-0.2**
STEP				IAML		02 38 36.0	
	comp=N,1μm,0.6s						
STEP				IAML		02 38 36.0	
	comp=E,2μm,0.3s						
STEP				S	**Sb**	**02 38 36.1**	**-1.4**
CAMT	**Merkez**	**0.49**	**242**	P	**Pg**	**02 38 31.9**	**+0.3**
CAMT				S	**Sb**	**02 38 39.7**	**-0.1**
CAMT				IAML		02 38 40.0	
	comp=N,4μm,0.3s						
CAMT				IAML		02 38 40.0	
	comp=E,4μm,0.5s						
ZEDA	**zmir-Bergama**	**0.62**	**269**	P	**Pb**	**02 38 34.4**	**-0.3**
ZEDA				S	**Sb**	**02 38 42.7**	**-0.7**
ZEDA				IAML		02 38 44.0	
	comp=N,1μm,0.3s						
ZEDA				IAML		02 38 44.0	
	comp=E,575nm,0.4s						
BALB	**Balikesir**	**0.66**	**1**	Pg	**Pg**	**02 38 34.5**	**-0.2**
DEMI	**Demirci**	**0.66**	**85**	P	**Pb**	**02 38 35.1**	**-0.4**
DEMI				S	**Sg**	**02 38 43.5**	**-0.2**
DEMI				IAML		02 38 47.0	
	comp=N,3μm,0.3s						
DEMI				IAML		02 38 48.0	
	comp=E,3μm,0.3s						
ODEM	**Odemis-Izmir**	**0.72**	**167**	Pg	**Pg**	**02 38 36.1**	**+0.1**
MANT	**Manisa**	**0.73**	**132**	P	**Pg**	**02 38 36.2**	**+0.1**
MANT				S	**Sg**	**02 38 45.8**	**0.0**
MANT				IAML		02 38 49.0	
	comp=N,2μm,0.3s						
MANT				IAML		02 38 49.0	
	comp=E,1μm,0.3s						
IZMD	**zmir-Dikili-**	**0.73**	**270**	P	**Pg**	**02 38 36.2**	**0.0**
IZMD				S	**Sb**	**02 38 46.4**	**-0.4**
IZMD				IAML		02 38 49.0	
	comp=N,356nm,0.7s						
IZMD				IAML		02 38 51.0	
	comp=E,263nm,0.3s						
DKL	**Dikili**	**0.76**	**277**	Pg	**Pg**	**02 38 36.4**	**-0.2**
KULA	**Kula-Manisa**	**0.78**	**127**	Pg	**Pg**	**02 38 36.9**	**-0.1**
DUVT	**Torbali**	**0.83**	**204**	P	**Pg**	**02 38 37.8**	**-0.3**
DUVT				S	**Sg**	**02 38 48.8**	**-0.1**
DUVT				IAML		02 38 52.0	
	comp=E,1μm,0.2s						
DST	**Dursunbey**	**0.85**	**43**	Pg	**Pg**	**02 38 38.1**	**-0.3**
SIMA	**Simav-Kutahya**	**0.87**	**83**	Pg	**Pb**	**02 38 39.1**	**-0.1**
SMAA	**Simav-Kutahya**	**0.87**	**82**	Pg	**Pb**	**02 38 39.1**	**-0.1**
BLCB	**Balcova**	**0.88**	**228**	Pg	**Pg**	**02 38 38.7**	**-0.3**
BLCB	**Balcova**	**0.88**	**228**	P	**Pg**	**02 38 38.6**	**-0.3**
BLCB				S	**Sb**	**02 38 50.9**	**0.0**
YAYO	**Edremit-Balk**	**0.88**	**316**	Pg	**Pg**	**02 38 38.6**	**-0.4**
FOCM	**Foa**	**0.93**	**253**	Pg	**Pg**	**02 38 39.3**	**-0.6**
SUSR	**Susurluk-Balik**	**0.99**	**10**	Pg	**Pg**	**02 38 40.3**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**179**	Pg	**Pb**	**02 38 41.5**	**-0.4**
SHAP	**Saphane-Kutahy**	**1.05**	**87**	Pg	**Pn**	**02 38 42.6**	**-0.1**
YENI	**Yenice-Canakka**	**1.07**	**333**	Pg	**Pg**	**02 38 42.1**	**-0.5**
NAZL	**Nazilli-Aydin**	**1.07**	**162**	Pg	**Pb**	**02 38 42.5**	**0.0**
GONE	**Gonen-Balikesi**	**1.07**	**352**	Pg	**Pn**	**02 38 42.4**	**-0.5**
KRBN	**Karaburun**	**1.10**	**250**	Pn	**Pb**	**02 38 42.6**	**-0.4**
GMLD	**Gumuldur**	**1.17**	**220**	Pn	**Pb**	**02 38 44.3**	**+0.1**
GEDZ	**Gediz**	**1.20**	**87**	Pn	**Pg**	**02 38 44.8**	**-0.3**
CANM	**Can-anakkale**	**1.21**	**329**	Pn	**Pb**	**02 38 44.5**	**-0.3**
KUSD	**Kusadasi-Aydin**	**1.21**	**202**	Pn	**Pn**	**02 38 44.4**	**-0.4**
PRK	**Paraskevi**	**1.27**	**282**	P	**Pb**	**02 38 45.6**	**-0.3**
PRK				S	**Sb**	**02 39 01.9**	**-0.3**
PRK	**Paraskevi**	**1.27**	**282**	P	**Pb**	**02 38 45.8**	**-0.1**
PRK				S	**Sg**	**02 39 04.8**	**+1.9**
GCAM	**G?zelcaml?**	**1.38**	**202**	Pn	**Pn**	**02 38 46.4**	**-0.6**
BAND	**Balkesir-Ban**	**1.38**	**7**	⇑P	**Pn**	**02 38 46.9**	**-0.3**
EAG2	**Marmaro, Chios**	**1.45**	**253**	P	**Pn**	**02 38 48.1**	**+0.2**
EAG2				S	**Sg**	**02 39 09.5**	**+1.0**
EZN	**Ezine**	**1.46**	**306**	P	**Pn**	**02 38 48.0**	**-0.2**
EZN				S	**Sn**	**02 39 07.0**	**-0.4**
SMG	**Samos**	**1.51**	**213**	P	**Pb**	**02 38 49.9**	**-0.1**
SMG				S	**Sg**	**02 39 10.4**	**-0.2**
SMG	**Samos**	**1.51**	**213**	P	**Pb**	**02 38 49.8**	**-0.1**
SMG				S	**Sg**	**02 39 10.2**	**-0.3**
CHOS	**Chios island**	**1.54**	**248**	P	**Pn**	**02 38 49.1**	**-0.3**
CHOS				S	**Sb**	**02 39 09.9**	**-0.1**
CHOS	**Chios island**	**1.54**	**248**	P	**Pn**	**02 38 49.6**	**+0.2**
CHOS				S	**Sg**	**02 39 12.3**	**+0.7**
SIGR	**SIGRI**	**1.58**	**279**	P	**Pn**	**02 38 49.6**	**-0.3**
SIGR				S	**Sn**	**02 39 10.2**	**-0.1**
SIGR	**SIGRI**	**1.58**	**279**	P	**Pn**	**02 38 50.1**	**+0.2**
SIGR				S	**Sg**	**02 39 12.8**	**-0.1**
GADA	**Gvkgeada**	**1.94**	**309**	P	**Pn**	**02 38 54.7**	**-0.1**
GADA				S	**Sb**	**02 39 19.9**	**-1.6**
BODT	**Bodrum**	**1.97**	**193**	P	**Pn**	**02 38 56.0**	**+0.8**
CAVK	**Edirne/Enez-Ca**	**2.15**	**323**	⇓P	**Pg**	**02 39 02.6**	**-0.6**
ENEZ	**Enez**	**2.19**	**324**	P	**Pn**	**02 38 58.9**	**+0.6**
ENEZ				S	**Sn**	**02 39 25.7**	**+0.4**
LIA	**Limnos Island**	**2.27**	**295**	P	**Pn**	**02 38 59.7**	**+0.3**
LIA	**Limnos Island**	**2.27**	**295**	P	**Pn**	**02 38 59.2**	**-0.1**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**02 39 00.3**	**+0.1**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**02 38 59.9**	**-0.4**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**02 39 00.9**	**+0.1**
ALN				S	**Sn**	**02 39 30.7**	**+1.0**
RDO	**Rodhopi**	**2.81**	**321**	P	**Pn**	**02 39 07.0**	**+0.3**
KARY	**Karystos**	**2.85**	**252**	P	**Pn**	**02 39 07.0**	**-0.4**
KIRS	**Kirsehir-Merke**	**4.71**	**86**	⇑P	**Pb**	**02 39 42.7**	**-1.9**
PLVB	**Pleven**	**5.04**	**332**	⇑P	**Pn**	**02 39 39.7**	**+2.4**
BOVS	**Bovan**	**6.57**	**317**	⇑P	**Pn**	**02 39 59.3**	**+0.9**
MLR	**Muntele Rosu**	**6.66**	**348**	⇑P	Pn	02 40 08.3	+8.5
PLOR	**Plostina**	**6.92**	**353**	⇓P	**Pn**	**02 40 07.4**	**+4.1**
COVR	**Voineasa-Covas**	**6.97**	**350**	⇑P	Pn	02 40 08.6	+4.7
MDVR	**Moldovita**	**7.39**	**324**	⇑P	**Pn**	**02 40 09.4**	**-0.3**
ONER	**Baraj Valea Uz**	**7.43**	**352**	⇓P	**Pn**	**02 40 13.8**	**+3.6**

*GRAL **04** 02:46:14.4±0.3, 33°.85N×35°.17E, h16km±7km, MD3.1*
*GII **04** 02:46:14.2±0.0, 33°.707N±0°.002×35°.234E±0°.001, h0km, Mws2.6, confirmed*
ISC 04 02:46:12.8±1.6**, 33°.84N**±0°.04×**35°.13E**±0°.06**, h10km**±9km**, n25, σ0s.80**/44**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEYL	**Beirut**	**0.30**	**84**	*e*P	**Pg**	**02 46 19.8**	**+1.0**
DQRL	**Deir Qamar**	**0.39**	**110**	*e*P	**Pg**	**02 46 21.4**	**+0.9**
DQRL				*e*S	**Sb**	**02 46 26.5**	**-1.4**
BHL	**Bhannes**	**0.44**	**81**	*e*P	**Pg**	**02 46 21.8**	**+0.4**
BHL				*e*S	**Sg**	**02 46 27.6**	**+0.4**
QRWL	**Qaraoun**	**0.54**	**122**	*e*P	**Pg**	**02 46 23.9**	**+0.6**
ZAHL	**Zahle**	**0.63**	**88**	*e*P	**Pg**	**02 46 25.1**	**+0.1**
RCY	**Rachaya**	**0.68**	**120**	*e*P	**Pg**	**02 46 26.2**	**+0.2**
HNTI	**Hanita**	**0.76**	**177**	P	**Pg**	**02 46 27.7**	**+0.3**
HNTI				S	**Sg**	**02 46 37.3**	**+0.1**
NATI	**Neve Ativ**	**0.77**	**139**	P	**Pg**	**02 46 27.4**	**-0.1**
NATI				S	**Sg**	**02 46 36.7**	**-0.8**
HWQ	**Hawqa**	**0.80**	**57**	*e*P	**Pg**	**02 46 27.9**	**-0.4**
HWQ				*e*S	**Sg**	**02 46 38.1**	**-0.7**
MMC7	**Mount Meron ar**	**0.84**	**165**	P	**Pg**	**02 46 29.0**	**0.0**
MMA0B	**Mount Meron ar**	**0.85**	**165**	P	**Pg**	**02 46 29.2**	**-0.1**
MMA0B				S	**Sg**	**02 46 40.0**	**-0.3**
KSHT	**Keshet**	**1.03**	**146**	P	**Pg**	**02 46 31.4**	**-1.1**
KSHT				S	**Sg**	**02 46 45.1**	**-0.8**
BLGI	**Bet Lehem HaGe**	**1.10**	**177**	P	**Pg**	**02 46 33.6**	**-0.4**
BLGI				S	**Sg**	**02 46 47.8**	**-0.5**
BEIL	**Beino**	**1.12**	**51**	*e*P	**Pg**	**02 46 33.0**	**-1.2**
OFRI	**`Ofer**	**1.22**	**186**	P	**Pg**	**02 46 35.2**	**-1.1**
OFRI				S	**Sg**	**02 46 51.5**	**-0.6**
MMLI	**Mount Malkishu**	**1.42**	**170**	P	**Pn**	**02 46 38.2**	**-0.4**
MMLI				S	**Sb**	**02 46 56.3**	**-1.1**
SLTI	**Sal'it**	**1.60**	**183**	P	**Pn**	**02 46 41.1**	**+0.1**
SLTI				S	**Sn**	**02 47 01.4**	**-0.3**
DSI	**Dead Sea**	**2.27**	**175**	P	**Pn**	**02 46 50.1**	**-0.2**
DSI				S	**Sn**	**02 47 18.0**	**-0.4**
AMAZ	**Amatzia**	**2.31**	**185**	P	**Pn**	**02 46 52.0**	**+1.2**
AMAZ				S	**Sn**	**02 47 20.3**	**+1.1**
YTIR	**Yattir**	**2.47**	**180**	P	**Pn**	**02 46 54.2**	**+1.1**
YTIR				S	**Sn**	**02 47 24.1**	**+0.7**
MSBI	**Mazada**	**2.53**	**176**	P	**Pn**	**02 46 54.3**	**+0.6**
MSBI				S	**Sn**	**02 47 24.9**	**+0.3**
KZIT	**Kziot**	**2.99**	**192**	P	**Pn**	**02 47 01.5**	**+1.3**
KZIT				S	**Sn**	**02 47 37.1**	**+1.0**
PRNI	**Paran**	**3.48**	**182**	P	**Pn**	**02 47 07.9**	**+1.0**
PRNI				S	**Sn**	**02 47 48.7**	**+0.5**
KRMI	**Paran Flat**	**3.73**	**185**	P	**Pn**	**02 47 11.3**	**+1.0**
KRMI				S	**Sn**	**02 47 55.3**	**+1.0**
MBRI	**Mt Berech**	**4.04**	**183**	P	**Pn**	**02 47 15.9**	**+1.2**
MBRI				S	**Sn**	**02 48 02.9**	**+0.9**

*NEIC **04** 03:02:01.7±0.7, 17°.91N±0°.02×66°.81W±0°.01, h17km±2km, ML2.8/37, Md3.1/7(RSPR), Error ellipse: s-maj=2.4km s-min=1.6km az=156.0*
*RSPR **04** 03:02:02.7, 17°.95N×66°.81W, h13km, MD3.1/7*
*SDD **04** 03:02:04.5±1.8, 18°.00N×66°.89W, h20km±14km, MD3.5, ML2.4, MW2.8, Presumed earthquake*
ISC 04 03:02:02.1±0.9**, 17°.94N**±0°.04×**66°.80W**±0°.02**, h17km**±5km**, n39, σ0s.47**/69**, 10C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.08**	**296**		**Pg**	**03 02 05.5**	**0.0**
GBPR					**Sg**	**03 02 07.8**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.08**	**296**	⇑*i*P	**Pg**	**03 02 05.5**	**0.0**
GBPR				*e*S	**Sg**	**03 02 07.8**	**-0.1**
OBIP	**Obispado Ponce**	**0.21**	**60**		**Pg**	**03 02 07.3**	**+0.2**
OBIP					**Sb**	**03 02 10.9**	**-0.2**
OBIP	**Obispado Ponce**	**0.21**	**60**	⇓*i*P	**Pg**	**03 02 07.4**	**+0.2**
OBIP				*e*S	**Sb**	**03 02 11.0**	**-0.2**
MLPR	**Magueyes Islan**	**0.23**	**278**		**Pg**	**03 02 07.3**	**-0.2**
MLPR				Sg	**Sg**	**03 02 10.7**	**-0.6**
MLPR				IAML		03 02 12.4	
	1μm,0.3s						
MLPR				IAML		03 02 13.3	
	1μm,0.4s						
CELP	**Cerrillos**	**0.25**	**57**	Pg	**Pg**	**03 02 08.0**	**+0.2**
CELP				Sg	**Sg**	**03 02 11.9**	**+0.3**
CELP				IAML		03 02 12.6	
	2μm,0.3s						
CELP				IAML		03 02 12.9	
	2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.30**	**283**		**Pg**	**03 02 08.7**	**0.0**
CRPR					**Sg**	**03 02 12.8**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.30**	**283**	IAML		03 02 13.2	
	938nm,0.2s						
CRPR				IAML		03 02 13.7	
	1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.30**	**283**	⇓*e*Pg	**Pg**	**03 02 08.6**	**0.0**
CRPR				⇑*e*Sg	**Sg**	**03 02 13.0**	**-0.2**
CRPR				IAML		03 02 13.6	
	comp=N,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.30**	**283**	⇑*i*P	**Pg**	**03 02 08.7**	**0.0**
CRPR				*e*S	**Sg**	**03 02 12.8**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.32**	**14**		**Pg**	**03 02 08.9**	**-0.1**
UUPR				Sg	**Sg**	**03 02 13.3**	**-0.4**
LSP	**Las Mesas**	**0.36**	**311**		**Pg**	**03 02 09.6**	**-0.1**
LSP					**Sg**	**03 02 14.3**	**-0.5**
LSP	**Las Mesas**	**0.36**	**311**	⇓*i*P	**Pg**	**03 02 09.6**	**-0.1**
LSP				*e*S	**Sg**	**03 02 14.3**	**-0.5**
PRSN	**Puerto Rico Se**	**0.43**	**310**		**Pg**	**03 02 10.7**	**-0.2**
PRSN					**Sg**	**03 02 16.7**	**-0.2**
PRSN	**Puerto Rico Se**	**0.43**	**310**	IAML		03 02 16.9	
	comp=N,2μm,0.3s						
PRSN				IAML		03 02 18.1	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.43**	**310**	⇑*e*Pg	**Pg**	**03 02 10.7**	**-0.2**
PRSN				⇑*e*Sg	**Sg**	**03 02 16.7**	**-0.2**
PRSN				IAML		03 02 20.6	
	comp=N,1μm,0.3s						
PRSN	**Puerto Rico Se**	**0.43**	**310**	⇑*i*P	**Pg**	**03 02 10.7**	**-0.2**
PRSN				*e*S	**Sg**	**03 02 16.7**	**-0.2**
ECPR	**Experimental S**	**0.56**	**48**		**Pg**	**03 02 13.0**	**-0.3**
ECPR				Sg	**Sg**	**03 02 20.8**	**-0.1**
ECPR				IAML		03 02 22.6	
	comp=N,877nm,0.2s						

ECPR	Experimental S	0.56	48	⇓iP	Pg	03 02 13.1	-0.3
ECPR				eS	Sg	03 02 20.8	-0.1
EMPR	Esperanza - Ma	0.59	26		Pb	03 02 14.1	+0.1
EMPR					Sb	03 02 22.8	+0.6
EMPR	Esperanza - Ma	0.59	26	⇓iP	Pb	03 02 14.1	+0.1
EMPR				eS	Sb	03 02 22.8	+0.6
AGPR	Aguadilla, PR	0.60	331		Pg	03 02 13.7	-0.5
AGPR				Sg	Sg	03 02 22.1	-0.1
AGPR	Aguadilla, PR	0.60	331	⇑ePg	Pg	03 02 13.6	-0.5
AGPR				⇑eSg	Sg	03 02 21.5	-0.7
AGPR				IAML		03 02 30.9	
	comp=N,183nm,0.6s						
AGPR	Aguadilla, PR	0.60	331	⇑iP	Pg	03 02 13.6	-0.5
AGPR				eS	Sg	03 02 22.1	-0.1
SJG	San Juan	0.64	74		Pg	03 02 14.4	-0.4
SJG				Sg	Sb	03 02 23.9	+0.4
SJG				IAML		03 02 24.3	
	comp=N,247nm,0.4s						
SJG				IAML		03 02 24.4	
	comp=N,205nm,0.2s						
SJG	San Juan	0.64	74	⇓iP	Pg	03 02 14.5	-0.4
SJG				eS	Sg	03 02 22.6	-0.8
PDPR	Patillas Dam,	0.74	84		Pb	03 02 16.4	-0.2
PDPR				Sg	Sb	03 02 26.6	+0.1
GCPR	Guaynabo City	0.77	61		Pb	03 02 16.5	-0.6
GCPR					Sb	03 02 26.9	-0.5
GCPR	Guaynabo City	0.77	61	⇑iP	Pb	03 02 16.7	-0.4
GCPR				eS	Sb	03 02 26.9	-0.5
IDE	Isla Desecheo	0.78	305		Pb	03 02 16.7	-0.5
IDE					Sb	03 02 27.3	-0.2
IDE	Isla Desecheo	0.78	305	⇑iP	Pb	03 02 16.7	-0.5
IDE				eS	Sb	03 02 27.3	-0.2
HUMP	Col San Antoni	0.93	77		Pb	03 02 19.2	-0.6
HUMP					Sb	03 02 31.5	-0.2
HUMP	Col San Antoni	0.93	77	IAML		03 02 36.0	
	comp=N,116nm,0.2s						
HUMP				IAML		03 02 36.5	
	comp=N,110nm,0.2s						
HUMP	Col San Antoni	0.93	77	⇓iP	Pb	03 02 19.2	-0.6
HUMP				eS	Sb	03 02 31.5	-0.2
CUPR	Culebra, Puert	1.49	75		Pn	03 02 28.1	+0.1
HIDR	Higuey Centro	1.94	290	⇑ePg	Pn	03 02 35.5	+1.3
HIDR				⇑eSg	Sn	03 02 59.1	+1.0
HIDR				IAML		03 03 02.0	
	comp=N,29nm,0.3s						
MIDR	Miches	2.38	296	⇑ePg	Pb	03 02 44.1	-0.3
MIDR				IAML		03 03 27.2	
	comp=N,32nm,2.4s						
DR12	Loma Pena Alta	2.59	289	Pn	Pn	03 02 44.2	+0.9
HATOM	Hato Mayor del	2.59	289	⇑ePg	Pb	03 02 48.4	+0.2
HATOM				⇑eSg	Sb	03 03 18.0	-1.8
HATOM				IAML		03 03 18.6	
	comp=N,16nm,2.3s						

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*ISK **04** 03:14:45.1, 39°08N×27°83E, h9km, ML3.5/19*
*AFAD **04** 03:14:45.2, 39°08N×27°84E, h7km±2km, MW3.1*
*ATH **04** 03:14:45.8, 39°14N×27°89E, h10km±4km, ML3.2/6, Manual Solution by I.Dede First location: 2020/02/04 03:16:34, This location: 2020/02/04 05:52:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 5 km*
*THE **04** 03:14:48.1, 39°N±2°×2°8E±°, h31km±14km, M3.1/10, MLh3.1/10*
ISC 04 03:14:45.7±0.9**, 39°08N**±0°02×**27°83E**±0°02**, h12**km±6km**, n63, σ0s57**/91**, 6C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.20	185	P	Pg	03 14 49.9	-0.1
AKHS				S	Sg	03 14 53.3	+0.3
AKS	Akhisar	0.20	185	Pg	Pg	03 14 49.5	-0.5
AKS				Sg	Sg	03 14 53.1	+0.2
SOMA	Soma-Manisa	0.25	289	Pg	Pg	03 14 50.3	-0.6
SOMA				Sg	Sg	03 14 54.4	+0.1
STEP	BALIKESIR_Sava	0.31	343	P	Pg	03 14 51.8	-0.3
STEP				S	Sg	03 14 56.2	-0.2
GORD	Gordes-Manisa	0.32	122	Pg	Pg	03 14 51.9	-0.2
GORD				Sg	Sg	03 14 56.9	+0.5
GOMA	Golmarmara-Man	0.37	170	Pg	Pg	03 14 53.2	0.0
GOMA				Sg	Sg	03 14 58.7	+0.6
KTTT	Salihli	0.44	152	P	Pg	03 14 54.2	-0.1
KTTT				S	Sg	03 15 00.3	+0.2
CAMT	Merkez	0.52	231	P	Pg	03 14 56.1	+0.2
CAMT				S	Sb	03 15 04.0	-0.4
BALB	Balikesir	0.56	4	Pg	Pg	03 14 56.7	0.0
ZEDA	zmir-Bergama	0.60	260	P	Pg	03 14 57.6	+0.3
ZEDA				S	Sg	03 15 05.3	0.0
IZMD	zmir-Dikili-	0.71	263	P	Pg	03 14 59.2	-0.3
IZMD				S	Sg	03 15 08.4	-0.4
DKL	Dikili	0.72	270	Pg	Pg	03 14 59.6	-0.1
YAYO	Edremit-Balk	0.80	312	Pg	Pg	03 15 00.7	-0.4
DST	Dursunbey	0.81	49	Pg	Pg	03 15 01.4	+0.1
MANT	Manisa	0.81	136	P	Pg	03 15 01.4	0.0
MANT				S	Sg	03 15 12.4	+0.2
ODEM	Odemis-Izmir	0.82	167	Pg	Pg	03 15 01.4	-0.2
KULA	Kula-Manisa	0.86	131	Pg	Pg	03 15 01.9	-0.3
SMAA	Simav-Kutahya	0.89	88	Pg	Pg	03 15 02.7	-0.2
SIMA	Simav-Kutahya	0.89	89	Pg	Pg	03 15 02.8	-0.2
SUSR	Susurluk-Balik	0.91	12	Pg	Pg	03 15 02.8	-0.4
BLCB	Balcova	0.93	222	Pg	Pg	03 15 03.3	-0.3
BLCB	Balcova	0.93	222	P	Pg	03 15 03.0	-0.6
BLCB				S	Sb	03 15 16.3	+0.3
FOCM	Foa	0.93	247	Pg	Pg	03 15 03.5	-0.2
YENI	Yenice-Canakka	0.97	332	Pg	Pg	03 15 04.2	-0.3
GONE	Gonen-Balikesi	0.98	353	Pg	Pg	03 15 04.1	-0.4
SHAP	Saphane-Kutahy	1.08	92	Pn	Pg	03 15 06.2	-0.3
KRBN	Karaburun	1.11	245	Pn	Pb	03 15 06.9	0.0
CANM	Can-anakkale	1.11	327	Pn	Pb	03 15 06.9	0.0
AYDB	Zeytinkoy-Aydi	1.13	178	Pn	Pb	03 15 07.1	-0.2
NAZL	Nazilli-Aydin	1.17	162	Pn	Pb	03 15 07.7	-0.2
PRK	Paraskevi	1.23	278	P	Pn	03 15 08.6	-0.1
PRK				S	Sb	03 15 24.4	-0.3
PRK	Paraskevi	1.23	278	P	Pg	03 15 09.6	+0.3
PRK				S	Sb	03 15 25.2	+0.5
GEDZ	Gediz	1.23	91	Pn	Pb	03 15 09.1	+0.2
BAND	Balkesir-Ban	1.29	9	⇓P	Pn	03 15 09.5	-0.1
EZN	Ezine	1.39	303	P	Pn	03 15 10.6	-0.3
EZN				S	Sn	03 15 28.3	-0.9
EAG2	Marmaro, Chios	1.45	249	P	Pb	03 15 13.0	+0.4
EAG2				S	Sg	03 15 32.9	+0.5
GCAM	G?zelcaml?	1.45	199	Pn	Pn	03 15 12.1	+0.3
SIGR	SIGRI	1.54	276	P	Pn	03 15 12.8	-0.3
SIGR				S	Sn	03 15 31.5	-1.6
SIGR	SIGRI	1.54	276	P	Pn	03 15 13.5	+0.4
SIGR				S	Sg	03 15 35.6	+0.2
CHOS	Chios island	1.55	244	P	Pn	03 15 12.9	-0.4
CHOS				S	Sn	03 15 32.3	-1.1
CHOS	Chios island	1.55	244	P	Pb	03 15 14.9	+0.4
CHOS				S	Sg	03 15 36.0	+0.3
SMG	Samos	1.57	210	P	Pn	03 15 12.6	-0.9
SMG				S	Sn	03 15 33.6	-0.3
SMG	Samos	1.57	210	P	Pb	03 15 15.0	+0.2
SMG				S	Sg	03 15 36.5	+0.2
GADA	Gvkgeada	1.86	307	P	Pn	03 15 17.5	0.0
GADA				S	Sn	03 15 39.7	-1.3
YER	Yerkesik	1.97	170	P	Pn	03 15 18.8	-0.2
CAVK	Edirne/Enez-Ca	2.06	322	⇑P	Pn	03 15 21.5	+1.4
ENEZ	Enez	2.10	323	P	Pn	03 15 21.2	+0.5
ENEZ				S	Sn	03 15 46.9	+0.1
LIA	Limnos Island	2.21	293	P	Pn	03 15 22.4	+0.2
LIA				S	Sn	03 15 48.5	-0.9
LIA	Limnos Island	2.21	293	P	Pn	03 15 22.1	-0.1
LIA				S	Sn	03 15 51.3	+1.9
SMTH	Samothraki Isl	2.26	309	P	Pn	03 15 22.8	-0.1
SMTH	Samothraki Isl	2.26	309	P	Pn	03 15 22.9	0.0
ALN	Alexandroupoli	2.28	323	P	Pn	03 15 23.1	-0.1
ALN				S	Sn	03 15 50.5	-0.7
ALN	Alexandroupoli	2.28	323	P	Pn	03 15 23.1	-0.1
ALN				S	Sn	03 15 51.4	+0.2
RDO	Rodhopi	2.72	320	P	Pn	03 15 29.3	+0.1
AOS2	Alonissos-2	3.10	273	P	Pn	03 15 36.9	+2.3
OUR	Ouranopolis	3.23	294	P	Pn	03 15 36.3	+0.1
ELND	Elena	4.12	340	⇓P	Pn	03 15 49.1	+0.6
BOVS	Bovan	6.48	317	⇑P	Pn	03 16 22.0	+1.1
MLR	Muntele Rosu	6.56	348	⇑P	Pn	03 16 22.3	+0.1
PLOR	Plostina	6.83	353	⇑P	Pn	03 16 26.2	+0.4
HERR	Herculane	7.07	327	⇑P	Pn	03 16 28.7	-0.3
MDVR	Moldovita	7.30	323	⇑P	Pn	03 16 32.2	0.0
GZR	Gura Zlata	7.34	331	⇓P	Pn	03 16 34.0	+1.2

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*IDC **04** 03:17:03.3±0.5, 10°00N×125°96E, h0km, mb4.3/20, mbtmp4.2/20, MS3.1/11, Error ellipse: s-maj=28.9km s-min=13.3km az=68.0*
*NEIC **04** 03:17:12.5±1.8, 10°11N±0°08×125°94E±0°06, h54km±5km, mb4.6/40, Error ellipse: s-maj=12.1km s-min=7.3km az=156.0*
ISC 04 03:17:06.9±1.2**, 10°02N**±0°08×**126°0E**±0°1**, h20**km±10km**, n91, σ0s95**/86**, mb4.5**/39**, MS2.9**/6**, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.96	188	Lg	Lg	03 18 34.3	
	44nm,0.3s,baz=194,slow=21,SNR=1.5						
DAV				LR	LR	03 19 31.8	
	comp=Z,480nm,18.4s,baz=333,slow=51						
DAV	Davao City (W)	2.96	188	Pn	Pb	03 17 58.9	-0.1
DAV				Sn	Sb	03 18 34.2	-0.4
TGY	Tagaytay City	6.40	310	LR	LR	03 21 51.8	
	comp=Z,153nm,18.8s,baz=135,slow=45						
FAKI	Fak Fak	14.28	154	Pn	P	03 20 33.0	-2.2
KAPI	Kappang	16.18	203	LR	LR	03 28 00.3	
	comp=Z,37nm,18.5s,baz=355,slow=41						
JOW	Kunigami	16.86	7	LR	LR	03 26 58.7	
	comp=Z,41nm,20.3s,baz=214,slow=35						
GUMO	Guam	18.81	77	LR	LR	03 27 14.8	
	comp=Z,53nm,20.4s,baz=98,slow=32						
JCJ	Chichijima	22.85	40	LR	LR	03 28 54.4	
	comp=Z,22nm,20.6s,baz=208,slow=31						
JMN	Monobe	24.69	16	P	P	03 22 26.6	0.0
JMN				IAmb	IAmb	03 22 28.6	
	comp=Z,30nm,1.3s						
KNRA	Kununurra	25.68	174	P	P	03 22 37.0	+1.3
KNRA				IAmb	IAmb	03 23 03.9	
	comp=Z,26nm,1.3s						
KSRS	Korea Array	27.37	3	LR	LR	03 35 39.0	
	comp=Z,17nm,18.6s,baz=130,slow=41						
CM31	Chiang Mai Arr	27.50	291	P	P	03 22 54.2	+2.0
CMAR	Chiang Mai Arr	27.50	291	P	P	03 22 53.4	+1.2
	comp=Z,1.5nm,0.3s,baz=106,slow=9.2,SNR=7.4						
CMAR				LR	LR	03 33 46.3	
	comp=Z,23nm,19.1s,baz=85,slow=36						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Arr	27.50	291	P	P	03 22 53.8	+1.5
CHTO	Chiang Mai	27.59	292	P	P	03 22 53.4	+0.4
MJAR	Matsushiro Arr	28.63	21	LR	LR	03 35 08.5	
	comp=Z,33nm,18.2s,baz=202,slow=38						
COEN	Coen	29.29	144	P	P	03 23 08.6	+0.4
WB0	Warramunga Arr	30.73	164	P	P	03 23 20.5	-0.4
WB0				IAmb	IAmb	03 23 46.5	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	30.88	165	P	P	03 23 21.3	-0.9
	comp=Z,1.3nm,0.7s,baz=343,slow=9.4,SNR=16						
	comp=Z,1.3nm,0.7s						
WRA	Warramunga Arr	30.88	165	P	P	03 23 21.5	-0.7
WR8	Warramunga Arr	30.94	164	P	P	03 23 22.4	-0.3
WR8				IAmb	IAmb	03 23 41.0	
	comp=Z,13nm,1.4s						
MBWA	Marble Bar	31.59	191	P	P	03 23 30.8	+2.4
LZDM	Lanzhou Array	32.82	325	P	P	03 23 39.5	0.0
	comp=Z,0.3nm,0.3s,baz=184,slow=10,SNR=3.9						
	comp=Z,0.3nm,0.3s						
AS31	Alice Springs	34.36	167		P	03 23 53.4	+0.8
ASAR	Alice Springs	34.36	167	P	P	03 23 52.5	-0.2
	comp=Z,0.9nm,0.5s,baz=357,slow=7.6,SNR=17						
ASAR				PcP	PcP	03 26 28.2	-0.2
	comp=Z,0.3nm,0.6s,baz=349,slow=3.2,SNR=5.2						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	34.36	167	P	P	03 23 52.6	0.0
ASAR					PcP	03 26 28.8	+0.4
HILR	Hailar Array B	39.76	354	P	P	03 24 39.2	+0.9
	comp=Z,3.8nm,0.7s,baz=169,slow=11,SNR=5.4						
	comp=Z,3.8nm,0.7s						
H11N1	WAKE ISLAND Hy	40.59	71	T	T	04 08 02.1	
	baz=265,slow=74,SNR=121						
H11N2	WAKE ISLAND Hy	40.60	71	T	T	04 08 02.5	
	baz=265,slow=74,SNR=114						
H11N3	WAKE ISLAND Hy	40.61	71	T	T	04 08 03.7	
	baz=265,slow=74,SNR=124						
FORT	Forrest	40.61	177	P	P	03 24 46.8	+1.4
ULN	Ulaanbaatar	40.97	341		P	03 24 48.7	+0.3
ULN				IAmb	IAmb	03 24 49.8	
	comp=Z,4.9nm,0.6s						
SONM	Songino Array	41.16	340	P	P	03 24 50.5	+0.5
	comp=Z,1.4nm,0.6s,baz=158,slow=9.7,SNR=8.6						
SONM				PcP	PcP	03 26 49.1	0.0
	comp=Z,0.7nm,0.7s,baz=167,slow=4.4,SNR=4.2						
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	41.16	340	P	P	03 24 50.7	+0.7
STKA	Stephens Creek	44.25	161	P	P	03 25 15.3	+0.2
	comp=Z,2.0nm,0.4s,baz=344,slow=7.9,SNR=7.7						
	comp=Z,2.0nm,0.4s						
STKA	Stephens Creek	44.25	161	P	P	03 25 15.6	+0.5
PETK	Petropavlovsk-	49.98	24	P	P	03 26 00.8	+1.3
	comp=Z,2.6nm,0.7s,baz=208,slow=3.9,SNR=5.2						
	comp=Z,2.6nm,0.7s						
PETK	Petropavlovsk-	49.98	24	P	P	03 26 00.6	+1.0
MKAR	Makanchi Array	52.06	323	P	P	03 26 14.9	-0.5
	comp=Z,3.6nm,0.7s,baz=122,slow=8.4,SNR=55						
MKAR				PcP	PcP	03 27 26.7	-0.7
	comp=Z,0.9nm,0.6s,baz=112,slow=4.5,SNR=4.5						
MKAR				LR	LR	03 50 59.8	
	comp=Z,31nm,19.1s,baz=39,slow=39						
	comp=Z,3.6nm,0.7s						
MKAR	Makanchi Array	52.06	323		P	03 26 15.0	-0.4
MKAR					PcP	03 27 27.0	-0.3
MAKZ	Makanchi	52.26	323		P	03 26 16.8	0.0
ZALV	Zalesovo Beam	54.72	332	P	P	03 26 33.7	-1.0
	comp=Z,1.9nm,0.6s,baz=101,slow=8.0,SNR=8.6						
	comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	54.72	332	P	P	03 26 33.9	-0.8
AAK	Ala-Archa	55.31	315	LR	LR	03 51 30.6	
	comp=Z,67nm,18.6s,baz=54,slow=37						
KURK	Kurchatov	56.12	326		P	03 26 44.2	-0.7
KURK				IAmb	IAmb	03 26 45.8	
	comp=Z,6.2nm,0.8s						
KURBB	Kurchatov Arra	56.13	326	P	P	03 26 44.4	-0.5
	comp=Z,3.2nm,0.7s,baz=127,slow=6.8,SNR=34						
	comp=Z,3.2nm,0.7s						
TIXI	Tiksi	61.61	1		P	03 27 22.8	+0.2
BVAR	Borovoye Array	61.72	326	P	P	03 27 22.8	-1.0
	comp=Z,1.6nm,0.7s,baz=120,slow=8.8,SNR=8.8						
BVAR				PcP	PcP	03 28 03.9	-1.1
	comp=Z,1.4nm,0.7s,baz=108,slow=4.7,SNR=5.5						
	comp=Z,1.6nm,0.7s						
BORK	Borovoye	61.77	326	P	P	03 27 24.4	+0.3
BORK				IAmb	IAmb	03 27 24.7	
	comp=Z,2.4nm,0.7s						
E18K	Tukpahlearik C	74.45	23	P	P	03 28 44.8	+1.4
E18K				IAmb	IAmb	03 28 45.8	
	comp=Z,5.7nm,0.7s						
C18K	Utukok River	74.49	21		P	03 28 44.4	+0.7
C18K				IAmb	IAmb	03 28 45.6	
	comp=Z,4.6nm,0.7s						
C19K	Lookout Ridge	75.15	21	P	P	03 28 48.7	+1.2
D19K	Kuna River	75.57	22	P	P	03 28 50.9	+1.0
D19K				IAmb	IAmb	03 28 52.0	
	comp=Z,4.9nm,0.7s						
E19K	Redstone River	75.74	23	P	P	03 28 51.9	+1.0
E19K				IAmb	IAmb	03 28 54.1	
	comp=Z,4.2nm,0.8s						
D20K	Etivluk River	76.15	22	P	P	03 28 53.9	+0.7
D20K				IAmb	IAmb	03 28 55.1	
	comp=Z,5.7nm,0.8s						
F20K	Avaraart Lake	76.27	23	P	P	03 28 55.0	+1.2
G21K	Allakaket	77.09	24	P	P	03 28 59.3	+0.8
D23K	Nanushuk River	78.32	21	P	P	03 29 06.7	+1.3
E23K	Chandalar	78.68	22	P	P	03 29 08.9	+1.5
E23K				IAmb	IAmb	03 29 20.5	
	comp=Z,14nm,1.4s						
I23K	Minto, Yukon-K	78.73	25	P	P	03 29 08.6	+1.0
I23K				IAmb	IAmb	03 29 26.1	
	comp=Z,7.9nm,1.4s						
MCK	McKinley	78.91	27	P	P	03 29 09.1	+0.4
MCK				IAmb	IAmb	03 29 09.4	
	comp=Z,5.8nm,0.7s						
D24K	Happy Valley	78.99	21	P	P	03 29 10.4	+1.4
GURO	Guroymak-BITLI	79.14	307	P	P	03 29 11.2	+0.6
GURO				IAmb	IAmb	03 29 12.6	
	comp=Z,7.0nm,0.7s						
ILAR	Eielson Array	79.78	26	P	P	03 29 12.3	-1.1
	comp=Z,1.3nm,0.7s,baz=236,slow=5.0,SNR=20						
	comp=Z,1.3nm,0.7s						
ILAR	Eielson Array	79.78	26	P	P	03 29 13.0	-0.5
D25K	Kavik River	79.86	21	P	P	03 29 14.9	+1.1
I27K	Kandik River	81.94	25	P	P	03 29 26.8	+1.8
I27K				IAmb	IAmb	03 29 27.1	
	comp=Z,11nm,1.2s						
F28M	Old Crow	82.39	23	P	P	03 29 28.6	+1.3
F28M				IAmb	IAmb	03 29 29.7	
	comp=Z,7.3nm,1.1s						
I28M	Miner Creek	82.66	25	P	P	03 29 29.8	+1.0
I28M				IAmb	IAmb	03 29 32.3	
	comp=Z,6.3nm,0.8s						
SPITS	Spitsbergen Ar	84.21	349	P	P	03 29 36.3	-0.2
	comp=Z,8.5nm,0.9s,baz=97,slow=6.8,SNR=14						
	comp=Z,8.5nm,0.9s						
ARCES	ARCESS Array B	84.34	340	P	P	03 29 37.4	+0.2
	comp=Z,2.0nm,0.7s,baz=80,slow=5.9,SNR=8.0						
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	84.34	340	P	P	03 29 37.2	-0.1
ARCES				IAmb	IAmb	03 29 54.8	
	comp=Z,5.9nm,1.1s						
BRTR	Keskin Array B	85.48	309	P	P	03 29 42.7	-1.1
	comp=Z,1.3nm,0.8s,baz=108,slow=4.0,SNR=8.0						
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	85.48	309	P	P	03 29 42.4	-1.4
FINES	FINESS Array B	85.98	332	P	P	03 29 44.7	-0.9
	comp=Z,2.5nm,0.7s,baz=214,slow=9.2,SNR=19						
	comp=Z,2.5nm,0.7s						
FINES	FINESS Array B	85.98	332	P	P	03 29 45.1	-0.5
A36M	Sachs Harbour	86.23	17		P	03 29 47.3	+0.6
CSS	Mathiatis	86.50	305		P	03 29 47.7	-1.2
AKASG	Malin Array Be	86.59	321	P	P	03 29 47.5	-1.3
	comp=Z,1.4nm,0.7s,baz=67,slow=3.6,SNR=4.7						
	comp=Z,1.4nm,0.7s						
C36M	Paulatuk	87.57	20		P	03 29 53.2	+0.1
HFS	Hagfors	92.15	332	P	P	03 30 13.0	-1.9
	comp=Z,1.6nm,0.7s,baz=209,slow=2.7,SNR=6.1						
	comp=Z,1.6nm,0.7s						
YKA	Yellowknife Ar	94.10	24	P	P	03 30 23.9	+0.2
	comp=Z,1.0nm,0.7s,baz=304,slow=5.3,SNR=22						
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	94.10	24	P	P	03 30 24.1	+0.3
TXAR	Lajitas Array	118.19	49	PKP	PKPdf	03 35 53.3	-0.2
	comp=Z,0.1nm,0.6s,baz=22,slow=3.6,SNR=2.2						
TXAR	Lajitas Array	118.19	49	PKPdf	PKPdf	03 35 53.2	-0.3
TORD	Torodi Ar. Bea	120.11	292	PKP	PKPdf	03 35 56.1	-1.3
	comp=Z,0.9nm,0.9s,baz=222,slow=0.5,SNR=5.5						
MG03	Isla Dawson	134.34	166	PKPdf	PKiKP	03 36 24.2	-0.5
PLCA	Paso Flores	146.08	157	PKPbc	PKPdf	03 36 44.9	-0.2
	comp=Z,2.4nm,0.9s,baz=231,slow=4.6,SNR=3.5						
PLCA	Paso Flores	146.08	157	PKPdf	PKPdf	03 36 44.2	-0.9
DR12	Loma Pena Alta	147.61	28	PKPbc	PKPbc	03 36 51.3	+0.5
SABA	Saba	151.06	18	PKPdf	PKPdf	03 36 53.1	-0.6

IDC 04 03:29:04.8±12.0**, 49°54S×125°47E, h0**km**, mb3.5**/2**, mbtmp3.5**/2**, MS3.1**/1**, Error ellipse: s-maj=855.5km s-min=68.2km az=93.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.83	326	T	T	03 50 43.6	
	baz=158,slow=74						
H01W2	Cape Leeuwin H	16.84	326	T	T	03 50 45.4	
	baz=158						
H01W3	Cape Leeuwin H	16.85	326	T	T	03 50 45.7	
	baz=158,slow=74						
ASAR	Alice Springs	26.66	17	P	P	03 34 44.7	-0.6
	0.6nm,0.8s,baz=196,slow=8.7,SNR=8.8						
ASAR				LR	LR	03 45 25.4	
	comp=Z,38nm,18.5s,baz=132,slow=37						
	0.6nm,0.8s						
WRA	Warramunga Arr	30.37	17	P	P	03 35 19.2	+0.9
	0.6nm,1.1s,baz=191,slow=8.8,SNR=1.8						
	0.6nm,1.1s						
YKA	Yellowknife Ar	145.37	45	PKPbc	PKPbc	03 48 42.3	-0.9
	1.2nm,0.9s,baz=270,slow=3.8,SNR=16						

IDC 04 03:30:31.0±1.2**, 13°21N×120°06E, h0**km**, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=25.9km s-min=14.0km az=117.0, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.23	44	Pg	Pg	03 30 54.6	+0.1
	baz=0.0,slow=0.0						
TGY				Lg	Lg	03 31 11.2	
	baz=0.0,slow=0.0						
WRA	Warramunga Arr	35.81	157	P	P	03 37 31.8	-0.6
	1.1nm,0.8s,baz=335,slow=8.9,SNR=9.2						
	1.1nm,0.8s						
SONM	Songino Array	36.36	344	P	P	03 37 35.5	-1.4
	0.2nm,0.3s,baz=152,slow=9.0,SNR=1.8						
	0.2nm,0.3s						
ASAR	Alice Springs	39.07	160	P	P	03 38 00.2	+0.3
	0.9nm,0.7s,baz=338,slow=7.0,SNR=9.7						
	0.9nm,0.7s						
MKAR	Makanchi Array	46.06	324	P	P	03 38 57.6	+1.0
	0.5nm,0.9s,baz=116,slow=6.6,SNR=3.7						
	0.5nm,0.9s						

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*ISK **04** 03:40:43.9, 38°38N×39°09E, h5km, ML3.5/17*
*AFAD **04** 03:40:45.1, 38°40N×39°12E, h7km±3km, MW3.3*
*IDC **04** 03:40:46.2±1.3, 38°34N×39°03E, h0km, mb3.4/3, mbtmp3.4/5, ML3.3/2, MS2.3/1, Error ellipse: s-maj=23.2km s-min=16.1km az=170.0*
ISC 04 03:40:46.4±0.6**, 38°41N**±0°02×**39°11E**±0°02**, h10**km**, n41, σ1s16**/53**, mb3.5**/3**, 4C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.13	310	P	Pg	03 40 48.8	-0.8
ELZG				S	Sg	03 40 51.0	-0.9
SVRC	Sivrice-ELAZID	0.15	102	Pg	Pg	03 40 48.1	-1.9
SVRC				Sg	Sg	03 40 50.7	-1.8
ELZ	Elazig	0.29	15	P	Pg	03 40 51.3	-1.0
ELZ				S	Sg	03 40 56.0	-0.2
MDNT	Maden	0.45	92	P	Pg	03 40 54.0	-1.2
MDNT				S	Sg	03 41 00.4	-0.7
MAYA	Malatya/Merkez	0.55	261	P	Pg	03 40 56.1	-1.0
MAYA				S	Sg	03 41 03.8	-0.5
NARI	Adyaman-Kaht	0.60	208	P	Pg	03 40 57.3	-0.7
KOVA	Elazig, Kovanc	0.62	62	P	Pg	03 40 56.9	-1.6
MCKZ	Bingol	0.71	351	P	Pg	03 40 58.9	-1.4
MCKZ				S	Sg	03 41 08.8	-0.8
KAHTU	Kahta	0.72	213	P	Pg	03 40 60.0	-0.4
TNCL	Tunceli-Merkez	0.78	25	P	Pg	03 40 60.0	-1.5
AZEY	Adyaman-Merk	0.91	229	P	Pb	03 41 03.9	-0.4
ARPR	Arapgir-MALATY	0.91	318	Pg	Pg	03 41 02.8	-1.2
ARPR				Sg	Sn	03 41 16.8	-2.0
DYBB	Diyarbakir	0.93	119	Pg	Pg	03 41 03.1	-1.2
DYBB				Sg	Sb	03 41 16.8	-0.3
AKCD	Akcadag	0.94	263	P	Pg	03 41 03.3	-1.3
AKCD				S	Sb	03 41 16.7	-0.9
ILIC	ilic-Erzincan	1.12	338	Pn	Pg	03 41 06.6	-1.4
ILIC				Sn	Sn	03 41 23.4	-0.5
ERZN	Erzincan	1.27	22	Pn	Pg	03 41 10.3	-0.4
ERZN				Sn	Sn	03 41 28.7	+1.3
BNGB	Bingl	1.35	64	Pn	Pg	03 41 11.7	-0.7
YEDI	Yedisu-Bingol	1.51	47	Pn	Pb	03 41 14.1	-0.6
SVAN	Silvan-Diyarba	1.66	98	Pn	Pn	03 41 14.3	-1.3
KARO	Karliova-Bingo	1.76	59	Pn	Pb	03 41 17.6	-1.2
KHMN	Narli-Kahraman	1.85	237	Pn	Pn	03 41 17.5	-0.8
GAZ	Gaziantep	1.95	231	Pn	Pn	03 41 18.8	-0.9
KMRS	Kahramanmaras	1.97	243	Pn	Pn	03 41 19.6	-0.3
SARI	SarD1z-Kayseri	2.12	271	Pn	Pn	03 41 22.2	+0.1
BAYT	Aydıntepe-Bayb	2.13	22	Pn	Pb	03 41 23.4	-1.9
GURO	Guroymak-BITLI	2.29	86	Pn	Pn	03 41 24.7	+0.3
KOPR	Koprukoy-ERZUR	2.65	53	Pn	Pn	03 41 30.5	+1.1
MLAZ	Malazgirt-MUS	2.78	74	Pn	Pn	03 41 31.8	+0.6
BRTR	Keskin Array B	4.46	289	Pn	Pn	03 41 56.3	+2.1
	1.3nm,0.3s,baz=114,slow=13,SNR=47						
BRTR				Lg	Lg	03 43 08.3	
	0.3nm,0.3s,baz=118,slow=27,SNR=3.6						
BRTR				LR	LR	03 43 55.9	
	comp=Z,44nm,21.9s,baz=64,slow=43						
	3.5nm,0.3s						
BEIL	Beino	4.53	212	eP	Pn	03 41 55.9	+0.8
HWQ	Hawqa	4.85	213	eP	Pn	03 42 00.0	+0.4
BHL	Bhannes	5.30	213	eP	Pn	03 42 05.9	+0.2
DQRL	Deir Qamar	5.50	212	eP	Pn	03 42 08.8	+0.3
MMAI	Mount Meron Ar	6.17	210	Pn	Pn	03 42 18.1	+0.4
	1.0nm,0.3s,baz=32,slow=14,SNR=5.9						
MMAI				Sn	Sn	03 43 27.2	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.3nm,0.3s,baz=40,slow=21,SNR=1.3						
MMAI				Lg	Lg	03 44 00.5	
	baz=24,slow=34						
	0.8nm,0.4s						
PLVB	**Pleven**	**12.04**	**299**	⇑P	**Pn**	**03 43 36.9**	**-1.0**
LOT	**Lotru**	**13.40**	**307**	⇑P	**P**	**03 44 07.7**	**+1.4**
DEV	**Deva**	**14.14**	**307**	⇑P	**P**	**03 44 15.2**	**+0.9**
BZS	**Buzias**	**14.85**	**305**	⇑P	**Pn**	**03 44 15.7**	**-0.6**
KURBB	**Kurchatov Arra**	**30.28**	**53**	P	**P**	**03 46 59.5**	**+2.0**
	0.8nm,0.7s,baz=267,slow=9.2,SNR=6.7						
	0.8nm,0.7s						
ESDC	**Sonseca Array**	**33.25**	**286**	P	**P**	**03 47 23.9**	**+0.1**
	0.2nm,0.5s,baz=78,slow=7.9,SNR=7.0						
	0.2nm,0.5s						
SONM	**Songino Array**	**48.57**	**56**	P	**P**	**03 49 32.7**	**+2.7**
	0.3nm,0.7s,baz=282,slow=7.1,SNR=1.8						
	0.3nm,0.7s						

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*ISK **04** 03:42:19.2, 38.°41N×25.°34E, h9km, ML3.6/34*
*ATH **04** 03:42:21.8, 38.°42N×25.°56E, h23km±1km, ML3.2/25, Manual Solution by I.Dede First location: 2020/02/04 03:43:27, This location: 2020/02/04 07:13:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*AFAD **04** 03:42:22.5, 38.°62N×25.°52E, h7km±5km, MW3.5*
*THE **04** 03:42:22.1, 38°N±1°×2°6E±°, h17km±3km, M3.3/16, MLh3.3/16*
ISC 04 03:42:22.0±1.0**, 38.°42N**±0.°02×**25.°51E**±0.°02**, h17**km±8km**, n133,** σ**0.s77**/162**, 11C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.43**	**94**	Pg	**Pg**	**03 42 30.7**	**0.0**
CHOS	**Chios island**	**0.43**	**94**	P	**Pg**	**03 42 30.6**	**-0.1**
CHOS				S	**Sg**	**03 42 36.5**	**0.0**
CHOS	**Chios island**	**0.43**	**94**	P	**Pg**	**03 42 30.4**	**-0.3**
CHOS				S	**Sg**	**03 42 36.6**	**0.0**
EAG2	**Marmaro, Chios**	**0.48**	**75**	P	**Pg**	**03 42 31.5**	**-0.1**
EAG2				S	**Sg**	**03 42 38.0**	**-0.2**
CESE	**eme**	**0.62**	**98**	Pg	**Pb**	**03 42 34.5**	**+0.1**
CESE				Sg	**Sn**	**03 42 45.4**	**-0.3**
KARB	**zmir-Karabur**	**0.75**	**71**	P	**Pb**	**03 42 36.3**	**-0.2**
KARB				S	**Sg**	**03 42 46.5**	**0.0**
KRBN	**Karaburun**	**0.83**	**78**	Pg	**Pg**	**03 42 38.2**	**0.0**
SIGR	**SIGRI**	**0.84**	**19**	Pg	**Pb**	**03 42 37.0**	**-1.0**
SIGR				Sg	**Sg**	**03 42 49.7**	**+0.4**
SIGR	**SIGRI**	**0.84**	**19**	P	**Pb**	**03 42 37.8**	**-0.3**
SIGR				S	**Sg**	**03 42 49.8**	**+0.5**
SIGR	**SIGRI**	**0.84**	**19**	P	**Pb**	**03 42 37.4**	**-0.6**
SKY	**Skiros Island**	**0.88**	**302**	P	**Pb**	**03 42 39.1**	**+0.3**
SKY				S	**Sn**	**03 42 52.0**	**-0.1**
SKY	**Skiros Island**	**0.88**	**302**	P	**Pb**	**03 42 39.2**	**+0.3**
SKY				S	**Sn**	**03 42 52.0**	**-0.1**
KARY	**Karystos**	**0.93**	**246**	P	**Pb**	**03 42 39.0**	**-0.6**
KARY				S	**Sb**	**03 42 51.8**	**0.0**
KARY	**Karystos**	**0.93**	**246**	P	**Pb**	**03 42 38.6**	**-1.0**
KARY				S	**Sb**	**03 42 51.6**	**-0.1**
FOCM	**Foa**	**1.00**	**73**	Pn	**Pg**	**03 42 41.2**	**-0.1**
PRK	**Paraskevi**	**1.02**	**35**	P	**Pb**	**03 42 41.1**	**0.0**
PRK				S	**Sn**	**03 42 55.3**	**-0.1**
PRK	**Paraskevi**	**1.02**	**35**	P	**Pb**	**03 42 41.1**	**0.0**
BAGT	**Foa**	**1.08**	**77**	P	**Pg**	**03 42 42.6**	**-0.2**
BAGT				S	**Sg**	**03 42 58.2**	**+1.3**
KYMI	**Kymi, Euboea I**	**1.13**	**281**	P	**Pn**	**03 42 42.4**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.13**	**281**	P	**Pn**	**03 42 42.2**	**-0.8**
GPNR	**Gulpinar-Canak**	**1.14**	**25**	Pn	**Pn**	**03 42 42.9**	**-0.3**
GPNR				Sn	**Sg**	**03 42 59.9**	**+0.9**
GMLD	**Gumuldur**	**1.16**	**107**	Pn	**Pb**	**03 42 43.5**	**0.0**
KOCA	**Canakkale, Ayv**	**1.19**	**24**	P	**Pn**	**03 42 43.6**	**-0.3**
KOCA				S	**Sg**	**03 43 01.4**	**+1.0**
BLCB	**Balcova**	**1.20**	**91**	Pn	**Pb**	**03 42 44.3**	**0.0**
IZMD	**zmir-Dikili-**	**1.24**	**63**	P	**Pn**	**03 42 44.2**	**-0.5**
IZMD				S	**Sb**	**03 42 59.9**	**-1.0**
SMG	**Samos**	**1.26**	**124**	P	**Pn**	**03 42 44.5**	**-0.3**
SMG	**Samos**	**1.26**	**124**	P	**Pn**	**03 42 44.5**	**-0.3**
DKL	**Dikili**	**1.27**	**59**	Pn	**Pb**	**03 42 45.3**	**-0.1**
AYVA	**Ayvalik**	**1.28**	**46**	P	**Pn**	**03 42 45.0**	**-0.1**
AYVA				S	**Sb**	**03 42 59.8**	**-2.0**
ZEDA	**zmir-Bergama**	**1.34**	**65**	P	**Pn**	**03 42 46.1**	**+0.2**
PTL	**Penteli**	**1.35**	**255**	P	**Pn**	**03 42 45.5**	**-0.6**
PTL				S	**Sn**	**03 43 03.5**	**-0.2**
PTL	**Penteli**	**1.35**	**255**	P	**Pn**	**03 42 45.5**	**-0.6**
PTL				S	**Sb**	**03 43 04.5**	**+0.6**
ATHU	**Athens Univers**	**1.43**	**252**	P	**Pn**	**03 42 45.5**	**-1.8**
ATHU	**Athens Univers**	**1.43**	**252**	P	**Pn**	**03 42 45.3**	**-1.9**
ATHU				S	**Sb**	**03 43 06.5**	**+0.3**
CAMT	**Merkez**	**1.45**	**76**	P	**Pn**	**03 42 47.6**	**+0.2**
CAMT				S	**Sg**	**03 43 09.3**	**+0.6**
VLY	**Voula,Athens**	**1.47**	**248**	P	**Pn**	**03 42 47.1**	**-0.6**
VLY				S	**Sn**	**03 43 06.1**	**-0.4**
VLY	**Voula,Athens**	**1.47**	**248**	P	**Pn**	**03 42 46.9**	**-0.8**
AOS	**Alonnisos**	**1.48**	**301**	P	**Pn**	**03 42 47.7**	**-0.1**
BOZC	**Bozcaada**	**1.48**	**16**	Pn	**Pn**	**03 42 47.3**	**-0.6**
BOZC	**Bozcaada**	**1.48**	**16**	P	**Pn**	**03 42 47.5**	**-0.4**
BOZC				S	**Sg**	**03 43 09.2**	**-0.6**
ATH	**Athens Observa**	**1.48**	**253**	P	**Pb**	**03 42 49.2**	**+0.1**
EZNE	**Ezine-Canakkal**	**1.49**	**26**	Pn	**Pn**	**03 42 47.9**	**-0.1**
AOS2	**Alonissos-2**	**1.49**	**300**	P	**Pn**	**03 42 47.6**	**-0.4**
LIA	**Limnos Island**	**1.50**	**350**	P	**Pn**	**03 42 47.5**	**-0.6**
LIA				S	**Sb**	**03 43 08.1**	**0.0**
LIA	**Limnos Island**	**1.50**	**350**	P	**Pn**	**03 42 47.9**	**-0.2**
GCAM	**G?zelcaml?**	**1.54**	**117**	Pn	**Pb**	**03 42 49.5**	**-0.5**
EZN	**Ezine**	**1.54**	**24**	Pn	**Pn**	**03 42 48.1**	**-0.6**
EZN	**Ezine**	**1.54**	**24**	P	**Pn**	**03 42 48.0**	**-0.7**
EZN				S	**Sn**	**03 43 08.1**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.55**	**31**	P	**Pn**	**03 42 48.3**	**-0.5**
BAYC				S	**Sn**	**03 43 08.4**	**-0.1**
STFN	**Stefani**	**1.57**	**262**	P	**Pn**	**03 42 48.9**	**-0.2**
STFN				S	**Sn**	**03 43 09.3**	**+0.3**
STFN	**Stefani**	**1.57**	**262**	P	**Pn**	**03 42 48.9**	**-0.2**
MAGU	**Magoula**	**1.61**	**258**	P	**Pn**	**03 42 49.0**	**-0.6**
BUHA	**Balikesir, Bur**	**1.63**	**48**	P	**Pn**	**03 42 49.7**	**-0.2**
BUHA				S	**Sb**	**03 43 12.4**	**+0.5**
YAYO	**Edremit-Balk**	**1.70**	**45**	Pn	**Pn**	**03 42 51.4**	**+0.5**
SOMA	**Soma-Manisa**	**1.74**	**64**	Pn	**Pn**	**03 42 52.1**	**+0.6**
VILL	**Villia**	**1.75**	**262**	P	**Pn**	**03 42 51.4**	**-0.2**
VIL2	**Platees**	**1.78**	**264**	P	**Pn**	**03 42 51.4**	**-0.5**
CNKL	**anakkale-Mer**	**1.78**	**22**	P	**Pn**	**03 42 50.6**	**-1.3**
CNKL				S	**Sg**	**03 43 18.3**	**-1.0**
GADA	**Gvkgeada**	**1.79**	**9**	Pn	**Pn**	**03 42 51.8**	**-0.4**
GADA	**Gvkgeada**	**1.79**	**9**	P	**Pn**	**03 42 51.8**	**-0.4**
COMU	**Canakkale**	**1.84**	**24**	Pn	**Pn**	**03 42 52.7**	**-0.1**
AKS	**Akhisar**	**1.86**	**75**	Pn	**Pn**	**03 42 53.9**	**+0.8**
MET5	**Makryloggos,Me**	**1.88**	**246**	P	**Pn**	**03 42 53.1**	**-0.2**
MET6	**Megalochori,Me**	**1.89**	**245**	P	**Pn**	**03 42 53.1**	**-0.4**
GOMA	**Golmarmara-Man**	**1.91**	**81**	Pn	**Pn**	**03 42 54.4**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.93**	**103**	Pn	**Pn**	**03 42 55.2**	**+1.0**
BODT	**Bodrum**	**1.97**	**133**	Pn	**Pn**	**03 42 55.3**	**+0.8**
STEP	**BALIKESIR_Sava**	**1.97**	**60**	P	**Pb**	**03 42 56.3**	**-1.1**
ATAL	**Atalanti**	**1.97**	**279**	P	**Pn**	**03 42 54.4**	**-0.2**
LKR	**Lokris**	**1.98**	**277**	P	**Pn**	**03 42 54.7**	**-0.1**
LKR	**Lokris**	**1.98**	**277**	P	**Pn**	**03 42 54.4**	**-0.4**
CANM	**Can-anakkale**	**1.99**	**36**	Pn	**Pn**	**03 42 55.2**	**+0.3**
NEO	**Neokhori**	**2.00**	**297**	P	**Pn**	**03 42 54.7**	**-0.2**
NEO	**Neokhori**	**2.00**	**297**	P	**Pn**	**03 42 54.6**	**-0.4**
THR3	**Thira Island,**	**2.01**	**183**	P	**Pn**	**03 42 54.3**	**-0.8**
THR8	**Santorini-Mono**	**2.01**	**181**	P	**Pn**	**03 42 54.2**	**-0.9**
ODEM	**Odemis-Izmir**	**2.02**	**93**	Pn	**Pb**	**03 42 56.9**	**-1.4**
YENI	**Yenice-Canakka**	**2.03**	**41**	Pn	**Pn**	**03 42 56.2**	**+0.8**
LTK	**Loutraki**	**2.04**	**260**	P	**Pn**	**03 42 55.5**	**-0.1**
THERA	**Ancient Thera,**	**2.05**	**181**	P	**Pn**	**03 42 54.5**	**-1.1**
THERA	**Ancient Thera,**	**2.05**	**181**	P	**Pn**	**03 42 54.6**	**-1.1**
SMTH	**Samothraki Isl**	**2.05**	**0**	P	**Pn**	**03 42 55.1**	**-0.6**
GELI	**Tayfur-Gelibol**	**2.11**	**20**	Pn	**Pn**	**03 42 56.9**	**+0.4**
MLSB	**Milas**	**2.11**	**121**	Pn	**Pn**	**03 42 56.9**	**+0.3**
GORD	**Gordes-Manisa**	**2.14**	**76**	Pn	**Pb**	**03 42 58.7**	**-1.7**
LPK	**Lapseki**	**2.18**	**26**	Pn	**Pn**	**03 42 58.0**	**+0.6**
BALB	**Balikesir**	**2.21**	**56**	Pn	**Pn**	**03 42 58.9**	**+1.0**
NAZL	**Nazilli-Aydin**	**2.24**	**101**	Pn	**Pn**	**03 42 59.9**	**+1.6**
ENZZ	**Sultanice-Enez**	**2.24**	**12**	Pn	**Pn**	**03 42 58.1**	**-0.2**
BIGA	**Biga-Canakkale**	**2.25**	**34**	Pn	**Pn**	**03 42 57.7**	**-0.7**
AXAR	**Agios Charalam**	**2.26**	**280**	P	**Pn**	**03 42 58.9**	**+0.2**
CAVK	**Edirne/Enez-Ca**	**2.33**	**12**	⇑P	**Pn**	**03 43 00.8**	**+1.3**
GONE	**Gonen-Balikesi**	**2.34**	**45**	Pn	**Pn**	**03 43 00.2**	**+0.5**
DAT	**Datca**	**2.35**	**135**	Pn	**Pn**	**03 42 59.6**	**-0.4**
KRBG	**Karabiga-Canak**	**2.41**	**34**	Pn	**Pn**	**03 43 00.7**	**+0.1**
KULA	**Kula-Manisa**	**2.47**	**87**	Pn	**Pn**	**03 43 03.4**	**+1.8**
SUSR	**Susurluk-Balik**	**2.52**	**52**	Pn	**Pn**	**03 43 03.0**	**+0.8**
PLG	**Polygyros**	**2.52**	**321**	P	**Pn**	**03 43 02.2**	**0.0**
YER	**Yerkesik**	**2.54**	**119**	Pn	**Pn**	**03 43 03.1**	**+0.6**
KALE	**Kalithea**	**2.65**	**270**	P	**Pn**	**03 43 04.1**	**+0.1**
VLI	**Veliai**	**2.66**	**231**	P	**Pn**	**03 43 04.0**	**0.0**
KLV	**Kalavryta, Ach**	**2.67**	**263**	P	**Pn**	**03 43 04.3**	**0.0**
MAKR	**Makrakomi, Fth**	**2.71**	**284**	P	**Pn**	**03 43 05.8**	**+1.0**
RDO	**Rodhopi**	**2.72**	**0**	P	**Pn**	**03 43 04.4**	**-0.5**
BAND	**Balkesir-Ban**	**2.79**	**45**	⇓P	**Pn**	**03 43 07.2**	**+1.4**
ANX	**Ano Chora**	**2.82**	**275**	P	**Pn**	**03 43 06.9**	**+0.5**
EFP	**Efpalio**	**2.83**	**271**	P	**Pn**	**03 43 07.2**	**+0.7**
EVR	**Evrytania**	**2.94**	**281**	P	**Pn**	**03 43 08.9**	**+0.9**
THL	**Klokotos Trika**	**2.96**	**294**	P	**Pn**	**03 43 08.6**	**+0.5**
ARG	**Arkhangelos**	**3.03**	**136**	P	**Pn**	**03 43 09.6**	**+0.5**
ITM	**Ithomi**	**3.10**	**248**	P	**Pn**	**03 43 10.7**	**+0.6**
NPS	**Neapolis**	**3.15**	**179**	P	**Pn**	**03 43 10.1**	**-0.8**
KARP	**Karpathos**	**3.15**	**155**	P	**Pn**	**03 43 10.3**	**-0.6**
IDI	**Anoyia**	**3.16**	**189**	P	**Pn**	**03 43 10.5**	**-0.6**
IMMV	**Iera Moni Meta**	**3.20**	**203**	P	**Pn**	**03 43 12.0**	**+0.5**
RLS	**Riolos of Patr**	**3.21**	**265**	P	**Pn**	**03 43 12.3**	**+0.7**
AXS	**Araxos**	**3.26**	**267**	P	**Pn**	**03 43 13.5**	**+1.2**
ZKR	**Zakros**	**3.35**	**170**	P	**Pn**	**03 43 14.2**	**+0.7**
PYL	**PYLOS**	**3.36**	**244**	P	**Pn**	**03 43 15.0**	**+1.3**
TETR	**Tetrakomo, Epi**	**3.43**	**287**	P	**Pn**	**03 43 16.1**	**+1.3**
ELND	**Elena**	**4.51**	**3**	⇓P	**Pn**	**03 43 30.5**	**+1.0**
BOVS	**Bovan**	**5.95**	**332**	⇑P	**Pn**	**03 43 49.7**	**+0.4**
HERR	**Herculane**	**6.86**	**341**	⇑P	**Pn**	**03 44 01.9**	**+0.1**
TIP	**Timpagrande**	**6.88**	**279**	⇑P	**Pn**	**03 44 02.7**	**+0.6**
MDVR	**Moldovita**	**6.96**	**337**	⇑P	**Pn**	**03 44 05.1**	**+1.9**
ARR	**Arges**	**6.97**	**355**	⇑P	**Pn**	**03 44 05.1**	**+1.7**
VOIR		**7.02**	**357**	⇑P	**Pn**	**03 44 04.7**	**+0.6**
NEHR	**Nehoiu**	**7.03**	**5**	⇑P	**Pn**	**03 44 06.3**	**+2.2**
MLR	**Muntele Rosu**	**7.07**	**2**	⇓P	**Pn**	**03 44 06.0**	**+1.2**
GZR	**Gura Zlata**	**7.26**	**345**	⇓P	**Pn**	**03 44 07.9**	**+0.6**
PLOR	**Plostina**	**7.47**	**6**	⇑P	**Pn**	**03 44 12.4**	**+2.2**
VRI	**Vrincioaia**	**7.50**	**7**	⇑P	**Pn**	**03 44 11.3**	**+0.8**
DOPR	**Dopca**	**7.54**	**359**	⇑P	**Pn**	**03 44 13.2**	**+2.1**

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*IDC **04** 03:48:40.1±1.1, 54.°04N×127.°17E, h0km, mb3.5/6, mbtmp3.8/11, ML4.2/5, MS3.8/2, Error ellipse: s-maj=24.6km s-min=14.6km az=119.0*
*MOS **04** 03:48:40.0±1.0, 54.°04N×127.°22E, h12km, mb4.2/7, Error ellipse: s-maj=14.0km s-min=8.7km az=98.2*
MOS Felt (IV) at Beregovoy; (III) at Zeya, Zolotaya Gora, Snezhnogorskiy.
*SKHL **04** 03:48:41.0±0.5, 54.°20N×127.°30E, h12km±2km, mb5.1/3*
*NEIC **04** 03:48:41.6±1.9, 54.°07N±0.°08×127.°2E±0.°1, h10km±1km, mb4.2/9, Error ellipse: s-maj=13.6km s-min=12.4km az=125.0*
ISC 04 03:48:40.9±0.4**, 54.°09N**±0.°03×**127.°27E**±0.°03**, h10**km**, n69,** σ**1.s83**/78**, mb4.0**/15**, 1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEA	**Zeya**	**0.35**	**182**	*e*P	**Pb**	**03 48 48.9**	**-0.3**
ZEA				*e*		03 48 54.5	
ZEA				pmax	pmax		
	comp=N,200nm,0.1s						
ZEA				pmax	pmax		
	comp=Z,400nm,0.2s						
ZEA				pmax	pmax		
	comp=E,100nm,0.2s						
ZEA				pmax	pmax		
	comp=N,160nm,0.3s						
ZEA				pmax	pmax		
	comp=Z,350nm,0.3s						
ZEA				smax	smax		
	comp=N,11µm,0.4s						
ZEA				smax	smax		
	comp=E,11µm,0.5s						
ZEA				smax	smax		
	comp=E,10µm,0.2s						
ZEA	**Zeya**	**0.35**	**182**	*e*Pg	**Pb**	**03 48 48.9**	**-0.3**
ZEA				AMB	AMB	03 48 49.8	
	comp=E,660nm,0.2s						
ZEA				*e*Sg	**Sb**	**03 48 54.3**	**-0.5**
ZEA				A	A	03 48 54.6	
	comp=E,9µm,0.3s						
ZEA				A	A	03 48 54.6	
	comp=E,11µm,0.3s						
BMKR	**Bomnak**	**1.11**	**55**	*e*Pg	**Pb**	**03 48 59.3**	**-3.0**
BMKR				AMB	AMB	03 49 00.3	
	comp=E,790nm,0.2s						
BMKR				*e*Sg	**Sb**	**03 49 13.0**	**-3.8**
BMKR				A	A	03 49 14.6	
	comp=E,5µm,0.3s						
BMKR				A	A	03 49 14.6	
	comp=E,1µm,0.3s						
OCTB	**Oktyabr'skiy**	**1.35**	**142**	*e*Pg	**Pn**	**03 49 06.2**	**+0.4**
OCTB				AMB	AMB	03 49 07.8	
	comp=E,510nm,0.3s						
OCTB				*e*Sg	**Sg**	**03 49 24.6**	**+0.3**
OCTB				A	A	03 49 49.0	
	comp=E,2µm,0.4s						
OCTB				A	A	03 49 49.0	
	comp=E,1µm,0.4s						
EKMR	**Ekimchan**	**3.54**	**104**	*e*P	**Pn**	**03 49 36.1**	**+0.2**
EKMR				*e*Pg	**Pb**	**03 49 45.2**	**+1.7**
EKMR				*e*Sg	**Sg**	**03 50 31.5**	**-2.9**
EKMR				A	A	03 50 36.8	
	comp=E,450nm,0.6s						
EKMR				A	A	03 50 36.8	
	comp=E,610nm,0.6s						
HEH	**HeiHe**	**3.84**	**179**	Pn	**Pn**	**03 49 40.3**	**+0.3**
HEH				Pg	**Pg**	**03 49 54.1**	**-0.3**
HEH				Sn	**Sn**	**03 50 25.0**	**-0.2**
HEH				Sg	**Sg**	**03 50 40.3**	**-3.8**
HEH				smax	smax		
	comp=N,530nm,0.6s						
HEH				smax	smax		
	comp=E,910nm,0.7s						
TUP	**Tupik**	**4.30**	**277**	*e*Pg	**Pb**	**03 49 58.5**	**+1.9**
TUP				*e*Sg	**Sg**	**03 50 55.3**	**-3.7**
CHMR	**Chegdomyn**	**4.59**	**128**	P	**Pn**	**03 49 51.2**	**+0.8**
KLR	**Kul'dur**	**5.61**	**148**	*i* P	**Pn**	**03 50 05.5**	**+1.2**
KLR				MLR	MLR		
	comp=Z,100nm,10.0s						
KLR	**Kul'dur**	**5.61**	**148**	*e*Pn	**Pn**	**03 50 05.5**	**+1.2**
KLR				*e*Sg	**Sg**	**03 51 38.1**	**-2.6**
CRS	**Chara**	**5.84**	**302**	*e*Sg	**Sg**	**03 51 43.1**	**-5.2**
HILR	**Hailar Array B**	**6.50**	**229**	Pn	**Pn**	**03 50 15.0**	**-1.7**
	baz=42,slow=15						
HILR				Lg	Lg	03 52 03.7	
	baz=55,slow=30						
	comp=Z,5.1nm,0.4s						
GRNR	**Gornyy**	**6.51**	**117**	*e*P	**Pn**	**03 50 17.1**	**+0.4**
GRNR				MLR	MLR		
	comp=E,420nm,16.0s						
GRNR				MLR	MLR		
	comp=N,360nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,180nm,10.0s						
GRNR	**Gornyy**	**6.51**	**117**	*e*Sg	**Sg**	**03 52 04.6**	**-5.1**
HIA	**Hailar**	**6.72**	**227**	Pn	**Pn**	**03 50 20.3**	**+0.6**
HIA	**Hailar**	**6.72**	**227**	*i* P	**Pn**	**03 50 20.2**	**+0.6**
HIA				pmax	pmax		
	comp=Z,1.0nm,0.2s						
NKL	**Nikolayevsk**	**8.03**	**91**	*e*Sg	Sg	03 52 50.3	-8.1
YAK	**Yakutsk**	**8.07**	**8**	Pn	**Pn**	**03 50 37.9**	**-0.1**
	comp=Z,7.6nm,0.3s,baz=195,slow=5.6,SNR=2.9						
YAK				Lg	Lg	03 52 40.4	
	comp=Z,27nm,0.3s,baz=212,slow=21,SNR=15						
	comp=Z,22nm,0.3s						
YAK	**Yakutsk**	**8.07**	**8**		**Pn**	**03 50 38.9**	**+0.9**
YAK	**Yakutsk**	**8.07**	**8**	*e*P	**Pn**	**03 50 35.2**	**-2.8**
YAK				pmax	pmax		
	comp=Z,38nm,0.6s						
YAK				pmax	pmax		
	comp=Z,26nm,0.5s						
YAK	**Yakutsk**	**8.07**	**8**	*e*P	**Pn**	**03 50 39.1**	**+1.1**
BNX	**BinXian**	**8.36**	**179**	⇑Pn	**Pn**	**03 50 43.6**	**+1.6**
BNX				Pg	**Pg**	**03 51 16.7**	**-4.1**
BNX				Sg	**Sg**	**03 53 04.2**	**-4.7**
BNX				smax	smax		
	comp=N,51nm,0.9s						
BNX				smax	smax		
	comp=E,92nm,0.6s						
MDJ	**Mudanjiang**	**9.60**	**170**		**Pn**	**03 50 59.2**	**+0.2**
USRK	**Ussuriysk Ar.**	**10.36**	**161**	Pn	**Pn**	**03 51 10.4**	**+0.9**
	comp=E,0.6nm,0.3s,baz=350,slow=14,SNR=15						
USRK				Lg	Lg	03 54 10.8	
	comp=E,0.4nm,0.3s,baz=343,slow=30,SNR=2.2						
	comp=E,1.5nm,0.3s						
SONM	**Songino Array**	**14.54**	**253**	Pn	**Pn**	**03 52 06.1**	**-0.6**
	comp=E,0.3nm,0.3s,baz=59,slow=12,SNR=4.1						
SONM				Lg	Lg	03 56 10.8	
	comp=E,0.4nm,0.3s,baz=59,slow=26,SNR=7.6						
	comp=E,0.4nm,0.4s						
SONM	**Songino Array**	**14.54**	**253**		**Pn**	**03 52 05.1**	**-1.5**
SEY	**Seymchan**	**15.73**	**46**	Lg	Lg	03 56 51.9	
	comp=E,0.8nm,0.3s,baz=198,slow=20,SNR=4.3						
SEY	**Seymchan**	**15.73**	**46**	*i* P	**Pn**	**03 52 22.9**	**+0.6**
SEY	**Seymchan**	**15.73**	**46**	*e*P	**Pn**	**03 52 22.9**	**+0.6**
TIXI	**Tiksi**	**17.64**	**2**	P	**Pn**	**03 52 47.1**	**+0.7**
	comp=E,0.5nm,0.3s,baz=202,slow=7.4,SNR=16						
TIXI				Lg	Lg	03 57 48.9	
	comp=E,0.1nm,0.3s,baz=94,slow=19,SNR=1.4						
	comp=E,2.6nm,0.3s						
TIXI	**Tiksi**	**17.64**	**2**	P	**P**	**03 52 48.6**	**+1.2**
TIXI	**Tiksi**	**17.64**	**2**	*i* P	**P**	**03 52 47.7**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	**Tiksi**	**17.64**	**2**	*e*P	**P**	**03 52 47.8**	**+0.4**
PETK	**Petropavlovsk-**	**18.02**	**81**		**Pn**	**03 52 51.8**	**+0.5**
PETK	**Petropavlovsk-**	**18.02**	**81**	P	**Pn**	**03 52 51.8**	**+0.5**
BILL	**Bilibino**	**22.94**	**37**	*i* P	**P**	**03 53 46.3**	**+1.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL	**Bilibino**	**22.94**	**37**	*e*P	**P**	**03 53 46.4**	**+1.5**
NRIK	**Noril'sk**	**23.61**	**326**	P	**P**	**03 53 53.5**	**+1.9**
	comp=Z,1.2nm,0.6s,baz=94,slow=12,SNR=3.6						
	comp=Z,1.2nm,0.6s						
NRIK	**Noril'sk**	**23.61**	**326**	P	**P**	**03 53 53.1**	**+1.5**
NRIK				IAmb	IAmb	03 54 01.4	
	comp=Z,5.1nm,1.1s						
NRIK	**Noril'sk**	**23.61**	**326**	P	**P**	**03 53 53.1**	**+1.5**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LZDM	**Lanzhou Array**	**24.43**	**232**	P	**P**	**03 54 01.1**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=26,slow=10,SNR=1.4						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**24.67**	**287**	P	**P**	**03 54 01.1**	**-0.5**
ZALV	**Zalesovo Beam**	**24.67**	**287**	P	**P**	**03 54 01.1**	**-0.5**
DGZ	**Jazzator, Alta**	**24.73**	**276**	*i* P	**P**	**03 54 03.2**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,7.0nm,3.3s						
SHEM	**Shemya Is, Ala**	**27.56**	**73**	P	**P**	**03 54 28.1**	**+0.4**
SMY	**Shemya**	**27.56**	**73**	P	**P**	**03 54 27.6**	**0.0**
SMY	**Shemya**	**27.56**	**73**	P	**P**	**03 54 27.6**	**0.0**
SMY				pmax	pmax		
	comp=Z,190nm,1.1s						
MKAR	**Makanchi Array**	**29.14**	**274**	P	**P**	**03 54 41.6**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=66,slow=8.5,SNR=2.5						
	comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**29.41**	**284**	P	**P**	**03 54 42.1**	**-2.0**
KURK				IAmb	IAmb	03 54 49.0	
	comp=Z,3.2nm,1.3s						
KURK	**Kurchatov**	**29.41**	**284**	*i* P	**P**	**03 54 45.2**	**+1.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KURK	**Kurchatov**	**29.41**	**284**	*e*P	**P**	**03 54 45.2**	**+1.1**
YHNB	**Yeheng**	**29.71**	**191**	P	**P**	**03 54 47.4**	**+0.3**
YHNB				IAmb	IAmb	03 54 48.0	
	comp=Z,20nm,1.1s						
BORK	**Borovoye**	**33.06**	**292**	*i* P	**P**	**03 55 18.6**	**+2.3**
BORK				pmax	pmax		
	comp=Z,8.0nm,2.6s						
C16K	**Lisburne Hills**	**33.46**	**39**	P	**P**	**03 55 21.7**	**+2.1**
C16K				IAmb	IAmb	03 55 37.8	
	comp=Z,5.3nm,1.4s						
C19K	**Lookout Ridge**	**35.36**	**36**	P	**P**	**03 55 37.2**	**+1.1**
C19K				IAmb	IAmb	03 55 50.6	
	comp=Z,3.9nm,1.4s						
ARTI	**Arti**	**37.85**	**302**	*i* P	**P**	**03 55 57.5**	**+0.1**
ARTI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
AB31	**Akbulak array**	**40.60**	**292**	P	**P**	**03 56 20.3**	**-0.2**
ABKAR	**Akbulak array**	**40.60**	**292**	P	**P**	**03 56 20.8**	**+0.3**
ILAR	**Eielson Array**	**41.55**	**40**	P	**P**	**03 56 27.4**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=291,slow=7.5,SNR=8.1						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**41.55**	**40**	P	**P**	**03 56 29.5**	**+1.4**
ILAR	**Eielson Array**	**41.55**	**40**	P	**P**	**03 56 29.5**	**+1.4**
BELG	**Belogornoye**	**45.30**	**302**	LR	LR	04 17 23.1	
	comp=Z,171nm,19.0s,baz=91,slow=38						
OBN	**Obninsk**	**48.91**	**310**	*e*P	**P**	**03 57 26.2**	**-0.4**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**49.18**	**321**	P	**P**	**03 57 28.1**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=45,slow=0.5,SNR=4.1						
FINES				LR	LR	04 19 09.6	
	comp=Z,58nm,20.6s,baz=281,slow=37						
	comp=Z,2.5nm,0.9s						
FINES	**FINESS Array B**	**49.18**	**321**	*i* P	**P**	**03 57 28.5**	**0.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**54.08**	**30**	P	**P**	**03 58 07.3**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=317,slow=7.9,SNR=5.0						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**54.08**	**30**	P	**P**	**03 58 05.6**	**+0.5**
YKA	**Yellowknife Ar**	**54.08**	**30**	*e*P	**P**	**03 58 07.9**	**+2.8**
NVL	**N'lazarevskaya**	**147.80**	**214**	*e*PKP2	**PKPab**	**04 08 29.5**	**+2.6**
NVL				pmax	pmax		
	comp=Z,12nm,1.1s						

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*IDC **04** 03:54:53.6±2.3, 2.°83S×139.°62E, h33km±20km, mb3.8/13, mbtmp4.0/15, ML4.2/2, MS3.5/22, Error ellipse: s-maj=22.2km s-min=14.5km az=97.0*
*NEIC **04** 03:54:55.0±2.0, 2.°90S±0.°09×139.°61E±0.°07, h43km±7km, mb4.6/23, Error ellipse: s-maj=12.4km s-min=9.6km az=167.0*
*DJA **04** 03:54:55.6±0.3, 3°S±3°×14°0E±°, h57km±8km, M4.9/13, mB5.8/2, mb5.0/7, MLv4.9/13, Mw(mB)5.3/2*
ISC 04 03:54:55.2±0.5**, 2.°78S**±0.°05×**139.°52E**±0.°04**, h46**km**, n84,** σ**1.s95**/77**, mb4.1**/18**, MS3.4**/18**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.67**	**74**	P	**Pn**	**03 55 09.6**	**+1.2**
GENI	**Genyem**	**0.67**	**74**	S	**Sn**	**03 55 20.9**	**+3.0**
GENI	**Genyem**	**0.67**	**74**	P	**Pn**	**03 55 09.4**	**+1.0**
GENI				S	**Sn**	**03 55 20.8**	**+2.9**
SMPI	**Sarmi**	**1.13**	**314**	P	**Pn**	**03 55 14.6**	**0.0**
JAY	**Jayapura**	**1.21**	**77**	Pg	**Pn**	**03 55 15.6**	**-0.2**
	155nm,0.3s,baz=237,slow=12,SNR=277						
JAY				Lg	Lg	03 55 29.9	
	380nm,0.3s,baz=56,slow=18,SNR=13						
JAY	**Jayapura**	**1.21**	**77**	P	**Pn**	**03 55 15.7**	**0.0**
JAY				S	**Sn**	**03 55 31.4**	**+0.4**
WAMI	**Wamena**	**1.36**	**216**	P	**Pn**	**03 55 21.8**	**+4.0**
WAMI				S	**Sn**	**03 55 40.5**	**+5.7**
SRPI	**Serui, Papua**	**3.40**	**285**	P	**Pn**	**03 55 46.8**	**+1.0**
BAKI	**Biak**	**3.76**	**295**	P	**Pn**	**03 55 52.5**	**+1.8**
BAKI				S	**Sn**	**03 56 34.8**	**+1.0**
RKPI	**Ransiki, Papua**	**5.49**	**283**	P	**Pn**	**03 56 15.2**	**+0.7**
	0.8nm82nm,0.6s						
MMPI	**Merauke**	**5.71**	**171**	P	**Pn**	**03 56 20.7**	**+3.1**
FAKI	**Fak Fak**	**7.27**	**269**		**Pn**	**03 56 39.2**	**+0.4**
FAKI	**Fak Fak**	**7.27**	**269**	P	**Pn**	**03 56 39.3**	**+0.4**
FAKI	**Fak Fak**	**7.27**	**269**	P	**Pn**	**03 56 39.6**	**+0.7**
	0.2nm55nm,0.7s						
SIJI	**Sorong**	**8.47**	**283**	Pn	**Pn**	**03 56 57.2**	**+1.8**
	4.1nm,0.3s,baz=34,slow=14,SNR=6.2						
SIJI				Sn	**Sn**	**03 58 26.5**	**-3.2**
	1.2nm,0.3s,baz=262,slow=23,SNR=2.9						
SIJI				LR	LR	04 01 21.9	
	comp=Z,177nm,18.0s,baz=167,slow=45						
	19nm,0.6s						
PMG	**Port Moresby**	**10.05**	**131**	LR	LR	04 02 38.4	
	comp=Z,128nm,18.4s,baz=329,slow=47						
COEN	**Coen**	**11.68**	**162**		**Pn**	**03 57 36.6**	**-2.7**
COEN	**Coen**	**11.68**	**162**	P	**Pn**	**03 57 40.0**	**+0.7**
MTN	**Manton Dam**	**13.00**	**219**		**Pn**	**03 57 54.7**	**-2.6**
SANI	**Sanana**	**13.54**	**273**	P	**Pn**	**03 58 04.9**	**+0.1**
MTSU	**Mount Surprise**	**15.97**	**163**	P	**P**	**03 58 38.6**	**-1.1**
KNRA	**Kununurra**	**16.63**	**219**	Pn	**Pn**	**03 58 42.9**	**-2.3**
KNRA				IAmb	IAmb	03 59 01.4	
	comp=Z,56nm,0.9s						
SOEI	**Soe**	**16.67**	**245**	Pn	**Pn**	**03 58 44.6**	**-1.2**
SOEI	**Soe**	**16.67**	**245**	P	**P**	**03 58 48.4**	**+0.8**
GUMO	**Guam**	**17.11**	**18**	LR	LR	04 04 06.6	
	comp=Z,145nm,19.7s,baz=134,slow=32						
BATI	**Baumata**	**17.39**	**244**	P	**P**	**03 58 57.1**	**+1.6**
	comp=Z,72nm,0.6s,baz=22,slow=5.4,SNR=6.3						
WB0	**Warramunga Arr**	**17.61**	**196**		**Pn**	**03 58 54.2**	**-3.2**

WB0				IAmb	IAmb	03 59 18.1	
	comp=Z,35nm,1.2s						
QIS	Mount Isa	17.67	180	P	Pn	03 58 57.4	-0.7
WR8	Warramunga Arr	17.76	196		Pn	03 58 56.2	-3.0
WR8				IAmb	IAmb	03 59 13.1	
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	17.78	196	P	Pn	03 58 58.8	-0.7
WRAB				IAmb	IAmb	03 59 13.9	
	comp=Z,36nm,0.8s						
WRAB	Tennant Creek	17.78	196	P	P	03 58 59.5	-0.3
WRA	Warramunga Arr	17.80	196	P	Pn	03 58 55.9	-3.7
	comp=Z,6.5nm,0.8s,baz=16,slow=13,SNR=20						
WRA				S	Sn	04 02 04.2	-13
	comp=Z,4.4nm,0.8s,baz=7.7,slow=21,SNR=5.5						
WRA				Lg	Lg	04 04 15.8	
	baz=14,slow=30,SNR=2.2						
WRA	Warramunga Arr	17.80	196	P	Pn	03 58 55.7	-4.0
WB1	Warramunga Ar.	17.81	196	P	P	03 59 00.6	+0.5
CTA	Charters Tower	18.42	160	P	Pn	03 59 07.2	0.0
	comp=Z,0.4nm,0.3s,baz=338,slow=10,SNR=4.5						
CTA				Lg	Lg	04 04 34.6	
	comp=Z,0.1nm,0.3s,baz=232,slow=19,SNR=3.4						
CTA				LR	LR	04 06 33.1	
	comp=Z,175nm,19.7s,baz=9.5,slow=38						
	comp=Z,1.3nm,0.5s						
TOLI2	Tolitoli	19.13	281	P	P	03 59 15.6	+0.9
KAPI	Kappang	19.85	263		P	03 59 22.9	+0.4
KAPI	Kappang	19.85	263	P	Pn	03 59 25.3	+0.9
FITZ	Fitzroy Crossi	20.42	221	P	P	03 59 26.7	-2.0
	comp=Z,7.8nm,0.8s,baz=48,slow=7.4,SNR=9.7						
FITZ				S	S	04 03 08.9	-6.1
	comp=Z,14nm,0.8s,baz=305,slow=18,SNR=5.0						
FITZ				LR	LR	04 07 57.1	
	comp=Z,173nm,18.6s,baz=36,slow=38						
	comp=Z,7.8nm,0.8s						
AS31	Alice Springs	21.46	194	P	P	03 59 37.8	-2.1
ASAR	Alice Springs	21.46	194	P	P	03 59 38.6	-1.3
	comp=Z,2.5nm,0.7s,baz=24,slow=9.9,SNR=29						
ASAR				S	S	04 03 31.9	-3.8
	comp=Z,1.5nm,0.8s,baz=16,slow=24,SNR=3.5						
ASAR				LR	LR	04 08 29.6	
	comp=Z,262nm,20.9s,baz=6.5,slow=38						
	comp=Z,2.5nm,0.7s						
QLP	Quilpie	24.10	170	P	P	04 00 10.0	+3.4
EIDS	Eidsvold	25.07	155		P	04 00 14.5	-1.0
EIDS				IAmb	IAmb	04 00 19.3	
	comp=Z,19nm,0.9s						
EIDS	Eidsvold	25.07	155	P	P	04 00 18.8	+3.3
MBWA	Marble Bar	26.55	225	P	P	04 00 28.1	-0.8
MBWA				IAmb	IAmb	04 01 01.6	
	comp=Z,33nm,1.3s						
PSA00	Pilbara Seismi	26.75	224	P	P	04 00 29.8	-0.9
PSA00				IAmb	IAmb	04 01 07.7	
	comp=Z,22nm,1.4s						
PSA00	Pilbara Seismi	26.75	224	P	P	04 00 31.0	+0.3
PSA00				IAmb	IAmb	04 00 42.0	
	comp=Z,45nm,1.5s						
STKA	Stephens Creek	29.01	176	P	P	04 00 50.9	+0.1
	comp=Z,0.7nm,0.4s,baz=352,slow=13,SNR=2.8						
STKA				LR	LR	04 13 21.9	
	comp=Z,235nm,19.0s,baz=20,slow=38						
	comp=Z,0.7nm,0.4s						
STKA	Stephens Creek	29.01	176	P	P	04 00 49.7	-1.1
JCJ	Chichijima	29.81	5	LR	LR	04 10 09.5	
	comp=Z,58nm,21.5s,baz=339,slow=31						
FORT	Forrest	29.89	200	P	P	04 00 56.9	-1.7
FORT				IAmb	IAmb	04 01 37.0	
	comp=Z,9.5nm,0.8s						
BBOO	Buckleboo	30.05	186	P	P	04 00 59.3	-0.8
BBOO				IAmb	IAmb	04 01 35.2	
	comp=Z,27nm,1.4s						
JOW	Kunigami	31.38	340	LR	LR	04 12 05.6	
	comp=Z,45nm,20.4s,baz=131,slow=33						
JNU	Nakatsue	36.63	348	LR	LR	04 13 59.9	
	comp=Z,60nm,20.3s,baz=206,slow=31						
MJAR	Matsushiro Arr	39.14	358	LR	LR	04 16 56.0	
	comp=Z,59nm,18.8s,baz=160,slow=34						
KSRS	Korea Array	41.45	346	LR	LR	04 17 12.5	
	comp=Z,24nm,21.3s,baz=170,slow=32						
CMAR	Chiang Mai Arr	45.18	299	P	P	04 03 08.6	+0.6
	comp=Z,1.3nm,0.3s,baz=112,slow=7.2,SNR=1.6						
CMAR				LR	LR	04 21 55.5	
	comp=Z,9.1nm,20.4s,baz=115,slow=36						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	45.18	299	P	P	04 03 08.3	+0.4
PZH	PanZhiHua	46.68	311	P	P	04 03 28.8	+9.0
ASAJ	Asahikawa	46.77	3	LR	LR	04 21 45.1	
	comp=Z,39nm,19.2s,baz=132,slow=34						
LZDM	Lanzhou Array	51.03	322	P	P	04 03 54.8	+1.6
	comp=Z,0.4nm,0.3s,baz=139,slow=9.0,SNR=2.1						
	comp=Z,0.4nm,0.3s						
KLR	Kul'dur	52.24	354	LR	LR	04 23 37.9	
	comp=Z,8.4nm,19.2s,baz=211,slow=33						
PETK	Petropavlovsk-	57.74	13	P	P	04 04 42.8	+1.5
	comp=Z,4.3nm,0.8s,baz=238,slow=14,SNR=2.8						
PETK				LR	LR	04 27 59.4	
	comp=Z,30nm,20.5s,baz=197,slow=34						
	comp=Z,4.3nm,0.8s						
PETK	Petropavlovsk-	57.74	13	P	P	04 04 42.5	+1.2
SONM	Songino Array	58.13	334	P	P	04 04 45.9	+1.5
	comp=Z,0.4nm,0.6s,baz=151,slow=9.4,SNR=2.0						
SONM				LR	LR	04 27 53.2	
	comp=Z,33nm,21.7s,baz=76,slow=34						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	58.13	334	P	P	04 04 44.6	+0.3
CASY	Casey	66.58	192	P	P	04 05 40.7	+0.4
MKAR	Makanchi Array	70.34	322	P	P	04 06 04.8	+0.6
	comp=Z,1.6nm,0.9s,baz=114,slow=7.3,SNR=12						
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	70.34	322	P	P	04 06 04.4	+0.2
MAKZ	Makanchi	70.54	322		P	04 06 06.0	+0.6
MAKZ				IAmb	IAmb	04 06 07.5	
	comp=Z,2.5nm,0.9s						
ZALV	Zalesovo Beam	72.41	330	P	P	04 06 16.5	0.0
	comp=Z,0.4nm,0.3s,baz=109,slow=7.8,SNR=2.3						
	comp=Z,0.4nm,0.3s						
ZALV	Zalesovo Beam	72.41	330	P	P	04 06 16.2	-0.3
AAK	Ala-Archa	73.82	316	LR	LR	04 40 06.4	
	comp=Z,20nm,20.5s,baz=36,slow=37						
KURK	Kurchatov	74.24	325	P	P	04 06 28.0	+0.6
KURBB	Kurchatov Arra	74.25	325	P	P	04 06 26.9	-0.6
	comp=Z,0.9nm,0.8s,baz=117,slow=5.7,SNR=7.5						
	comp=Z,0.9nm,0.8s						
DRK	Karamyk	74.78	312	P	P	04 06 31.3	+0.2
VNDA	Vanda	75.64	175	P	P	04 06 34.8	-0.2
	comp=Z,1.5nm,0.7s,baz=325,slow=5.8,SNR=6.1						
VNDA				LR	LR	04 38 15.9	
	comp=Z,70nm,18.5s,baz=302,slow=34						
	comp=Z,1.5nm,0.7s						
VNDA	Vanda	75.64	175	P	P	04 06 34.5	-0.5
VNDA				IAmb	IAmb	04 06 55.8	
	comp=Z,10nm,1.4s						
BVAR	Borovoye Array	79.83	325	P	P	04 06 58.3	-0.5
	comp=Z,0.6nm,0.5s,baz=120,slow=8.8,SNR=3.5						
	comp=Z,0.6nm,0.5s						
KDAK	Kodiak Island	80.75	30	LR	LR	04 46 47.7	
	comp=Z,49nm,18.6s,baz=185,slow=39						
MAW	Mawson	82.37	202	LR	LR	04 39 52.7	
	comp=Z,75nm,19.9s,baz=96,slow=33						
ILAR	Eielson Array	85.56	24	P	P	04 07 27.9	-0.4
	comp=Z,0.8nm,0.8s,baz=262,slow=4.2,SNR=10						
	comp=Z,0.8nm,0.8s						
ILAR	Eielson Array	85.56	24	P	P	04 07 28.2	0.0
DLBC	Dease Lake	92.58	32	LR	LR	04 47 18.6	
	comp=Z,73nm,18.9s,baz=189,slow=34						

*NEIC **04** 04:03:33.8±1.3, 18°.7S±0°.1×169°.7E±0°.2, h247km±9km, mb4.5/15, Error ellipse: s-maj=23.3km s-min=16.0km az=124.0*

*IDC **04** 04:03:34.7±3.5, 18°.65S×169°.52E, h247km±28km, mb3.9/7, mbtmp4.5/8, Error ellipse: s-maj=36.8km s-min=22.9km az=14.0*

ISC 04 04:03:33.0±0.8**, 18°.6S**±0°.1×**169°.7E**±0°.1**, h240**km**, n36,** σ**0s.85**/37**, mb4.4**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.23	208		Pn	04 04 27.7	+0.3
MARNC	Mare, Loyalty	3.23	208	P	Pn	04 04 27.9	+0.5
YATNC	Mamie plateau,	4.29	217	P	Pn	04 04 39.4	-0.4
PINNC	Pines Island,	4.48	207		Pn	04 04 42.3	+0.3
DZM	Mont Dzumac	4.57	221	P	Pn	04 04 44.1	+0.9
	17nm,0.4s,baz=42,slow=18,SNR=37						
DZM				S	S	04 05 39.3	+0.3
	baz=75,slow=20						
DZM	Mont Dzumac	4.57	221		Pn	04 04 43.9	+0.6
DZM	Mont Dzumac	4.57	221	P	Pn	04 04 44.4	+1.2
OUENC	Ouen Island, N	4.61	214	P	Pn	04 04 44.6	+1.0
ONTNC	Ouen Toro	4.74	219		Pn	04 04 46.0	+0.7
ONTNC	Ouen Toro	4.74	219	P	Pn	04 04 46.5	+1.3
LHI	Lord Howe Isla	16.02	215	P	P	04 07 02.5	-2.0
LHI				IAmb	IAmb	04 07 10.4	
	comp=Z,41nm,1.1s						
EIDS	Eidsvold	18.47	245	P	P	04 07 32.1	+0.7
EIDS				IAmb	IAmb	04 07 33.0	
	comp=Z,22nm,1.4s						
ARMA	Armidale	20.14	231	P	P	04 07 49.6	+0.3
ARMA				IAmb	IAmb	04 07 57.7	
	comp=Z,6.9nm,1.1s						
URZ	Urewera	20.62	163	P	P	04 07 55.7	+1.5
	comp=Z,6.0nm,0.8s,baz=331,slow=13,SNR=2.6						
	comp=Z,6.0nm,0.8s						
RTZ	Ruatahuna	20.92	164	P	P	04 07 58.1	+0.6
RTZ				IAmb	IAmb	04 08 04.9	
	comp=Z,18nm,1.3s						
CTA	Charters Tower	22.12	262	P	P	04 08 09.9	+0.8
	comp=Z,3.1nm,0.4s,baz=82,slow=12,SNR=9.3						
	comp=Z,3.1nm,0.4s						
STKA	Stephens Creek	28.51	237	P	P	04 09 06.2	-0.1
	comp=Z,6.2nm,0.6s,baz=54,slow=8.5,SNR=16						
	comp=Z,6.2nm,0.6s						
STKA	Stephens Creek	28.51	237	P	P	04 09 06.3	-0.1
WR8	Warramunga Arr	33.17	262	P	P	04 09 46.8	-0.6
WR8				IAmb	IAmb	04 09 47.8	
	comp=Z,4.2nm,0.8s						
WB0	Warramunga Arr	33.28	262		P	04 09 47.6	-0.7
WB0				IAmb	IAmb	04 09 48.4	
	comp=Z,5.9nm,0.6s						
WRA	Warramunga Arr	33.32	262	P	P	04 09 47.6	-1.1
	comp=Z,3.0nm,0.5s,baz=93,slow=9.5,SNR=76						
	comp=Z,3.0nm,0.5s						
WRA	Warramunga Arr	33.32	262	P	P	04 09 47.9	-0.8
AS31	Alice Springs	33.66	255		P	04 09 51.4	-0.2
ASAR	Alice Springs	33.66	255	P	P	04 09 51.2	-0.4
	comp=Z,25nm,0.5s,baz=82,slow=9.0,SNR=272						
	comp=Z,25nm,0.5s						
ASAR	Alice Springs	33.66	255		P	04 09 50.9	-0.6
FITZ	Fitzroy Crossi	41.69	263	P	P	04 10 59.4	+0.7
	comp=Z,12nm,0.8s,baz=79,slow=7.0,SNR=20						
	comp=Z,12nm,0.8s						
SMY	Shemya	71.15	3	P	P	04 14 25.9	+0.6
QSPA	South Pole Qui	71.43	180	P	P	04 14 26.2	-0.9
QSPA				IAmb	IAmb	04 14 26.6	
	comp=Z,3.1nm,0.6s						
BMRM	Bremner River	87.38	20	P	P	04 15 50.9	-1.7
BMRM				IAmb	IAmb	04 15 55.4	
	comp=Z,26nm,1.3s						
G19K	Purcell Mounta	88.13	13	P	P	04 15 56.5	+0.4
GRNC	Granite Creek	88.18	22	P	P	04 15 57.5	+0.8
GRNC				IAmb	IAmb	04 16 00.1	
	comp=Z,22nm,1.3s						
SIT	Sitka	88.21	27	P	P	04 15 56.9	+0.4
WRH	Wood River Hil	88.96	17	P	P	04 16 00.8	+0.8
ILAR	Eielson Array	89.53	17	P	P	04 16 03.5	+0.9
	comp=Z,0.5nm,0.9s,baz=232,slow=5.0,SNR=4.3						
	comp=Z,0.5nm,0.9s						
WVOR	Wild Horse Val	89.60	45	P	P	04 16 03.3	-0.4
BCAR	Beaver Creek A	89.81	20	P	P	04 16 03.7	-0.3

*ISK **04** 04:06:54.3, 38°.38N×39°.19E, h6km, ML3.4/14*

*AFAD **04** 04:06:54.0, 38°.44N×39°.23E, h7km±3km, MW3.5*

ISC 04 04:06:54.3±1.2**, 38°.43N**±0°.03×**39°.21E**±0°.02**, h1**km±11km**, n27,** σ**0s.82**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.09	122	Pg	Pg	04 06 56.3	+0.3
SVRC				Sg	Sg	04 06 57.6	+0.4
ELZG	Elazig	0.19	292	P	Pg	04 06 58.8	+0.8
ELZG				S	Sg	04 07 01.7	+1.2
ELZ	Elazig	0.26	359	P	Pg	04 06 59.7	+0.3
ELZ				S	Sg	04 07 03.6	+0.8
MDNT	Maden	0.37	95	P	Pg	04 07 00.9	-0.5
MDNT				S	Sg	04 07 06.2	+0.1
KOVA	Elazig, Kovanc	0.55	59	P	Pg	04 07 04.4	-0.4
KOVA				S	Sb	04 07 13.6	-1.6
MAYA	Malatya/Merkez	0.63	261	P	Pg	04 07 06.4	+0.2
MAYA				S	Sb	04 07 15.6	-1.8
NARI	Adyaman-Kaht	0.65	214	P	Pb	04 07 07.7	-0.7
MCKZ	Bingol	0.72	345	P	Pg	04 07 07.2	-0.8
MCKZ				S	Sg	04 07 17.1	-0.3
KAHTU	Kahta	0.78	218	P	Pb	04 07 10.0	-0.7
KAHTU				S	Sb	04 07 21.5	-0.3
DYBB	Diyarbakir	0.87	123	Pg	Pb	04 07 11.4	-0.8
DYBB				Sg	Sb	04 07 23.8	-0.6
ERZN	Erzincan	1.23	19	Pn	Pn	04 07 18.7	0.0
ERZN				Sn	Sn	04 07 37.3	+1.3
BNGB	Bingl	1.28	63	Pn	Pg	04 07 19.4	+0.6
BNGB				Sn	Sn	04 07 38.4	+1.1
YEDI	Yedisu-Bingol	1.45	45	Pn	Pg	04 07 22.2	+0.1
KARO	Karliova-Bingo	1.68	58	Pn	Pb	04 07 25.2	-1.0
KHMN	Narli-Kahraman	1.93	238	Pn	Pn	04 07 27.8	-0.4
GAZ	Gaziantep	2.02	232	Pn	Pn	04 07 29.4	-0.1
KMRS	Kahramanmaras	2.05	244	Pn	Pn	04 07 29.9	0.0
BAYT	Aydıntepe-Bayb	2.09	20	Pn	Pn	04 07 31.3	+0.6
SARI	SarD1z-Kayseri	2.20	270	Pn	Pn	04 07 32.2	+0.1
GURO	Guroymak-BITLI	2.22	86	Pn	Pn	04 07 32.8	+0.5
KOPR	Koprukoy-ERZUR	2.58	52	Pn	Pn	04 07 38.4	+1.0
MLAZ	Malazgirt-MUS	2.70	74	Pn	Pn	04 07 39.9	+0.8
BEIL	Beino	4.58	213	eP	Pn	04 08 04.8	+0.1
HWQ	Hawqa	4.91	213	eP	Pn	04 08 09.8	+0.5
ZAHL	Zahle	5.29	212	eP	Pn	04 08 16.4	+1.8
DQRL	Deir Qamar	5.56	213	eP	Pn	04 08 18.3	+0.1
QRWL	Qaraoun	5.65	212	eP	Pn	04 08 19.9	+0.5

*IDC **04** 04:13:09.3±0.7, 5°.90N×126°.02E, h160km±7km, mb3.5/7, mbtmp4.1/8, Error ellipse: s-maj=34.9km s-min=12.2km az=82.0*

*NEIC **04** 04:13:09.6±1.2, 5°.95N±0°.07×126°.2E±0°.1, h154km±7km, mb4.8/19, Error ellipse: s-maj=19.7km s-min=10.0km az=75.0*

*DJA **04** 04:13:11.6±0.3, 6°N±2°×12°6E±°, h103km±4km, M4.9/21, mb4.8/21, mB5.6/10, MLv4.8/17, Mw(mB)5.0/10*

ISC 04 04:13:08.9±0.5**, 5°.86N**±0°.05×**126°.18E**±0°.08**, h150**km**, n51,** σ**1s.33**/57**, mb4.4**/15**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.34	334	P	Pn	04 13 37.1	+0.2
	260nm,0.3s,baz=84,slow=10,SNR=3.9						
DAV				S	Sn	04 13 58.6	+0.3
	560nm,0.3s,baz=270,slow=20,SNR=28						
DAV	Davao City (W)	1.34	334		Pn	04 13 36.6	-0.2
DAV					Sn	04 13 58.2	-0.1
DAV	Davao City (W)	1.34	334	P	Pn	04 13 37.8	+1.0
DAV				S	Sn	04 13 59.0	+0.7
SGSI	Sangihe	2.25	197	P	Pn	04 13 44.0	-3.0
SGSI				S	Sn	04 14 06.6	-10
GAMI	Galela, Maluku	4.31	158	P	Pn	04 14 13.1	-0.1
TNTI	Ternate	5.19	167	Pn	Pn	04 14 26.1	+1.3
TNTI	Ternate	5.19	167	P	Pn	04 14 23.7	-1.2
	0.6nm92nm,0.8s						
TNTI				S	Sn	04 15 23.4	-0.8
	0.6nm92nm,0.8s						
GTOI	Gorontalo	6.07	211	P	Pn	04 14 36.9	+0.3
	0.3nm84nm,0.9s						
MRSI	Marisa	6.81	218	P	Pn	04 14 48.2	+1.7
	0.3nm1μm62nm,0.5s						
MRSI				S	Sn	04 16 03.1	+0.1
	0.3nm1μm62nm,0.5s						
TOLI2	Tolitoli	7.16	229	Pn	Pn	04 14 52.1	+1.0
LUWI	Luwuk	7.65	206	Pn	Pn	04 14 59.8	+2.1
LUWI	Luwuk	7.65	206	P	Pn	04 14 59.2	+1.5
	2μm142nm,0.8s						
SANI	Sanana	7.86	181	P	Pn	04 14 57.8	-2.6
	10μm281nm,0.7s						
KRAI	Karang Ratu	9.38	166	P	Pn	04 15 22.1	+1.3
	49nm,0.8s						
RKPI	Ransiki, Papua	10.84	132	P	Pn	04 15 41.2	+1.2
TTSI	Tana Toraja	10.89	216	P	Pn	04 15 43.1	+2.4
	123nm,1.1s						
KAPI	Kappang	12.56	211	P	Pn	04 16 02.7	+0.2
	25nm,0.7s,baz=32,slow=8.7,SNR=8.8						
KAPI	Kappang	12.56	211	Pn	Pn	04 16 03.9	+1.3
BATI	Baumata	16.15	189	P	P	04 16 49.2	+1.3
	62nm,0.4s,baz=52,slow=2.1,SNR=5.5						
PLAI	Plampang	16.82	210	P	P	04 16 51.1	-4.2
KLNI	Mataram	17.39	215	P	Pn	04 17 05.6	+3.1
	44nm,0.6s						
JAGI	Jajag, Banyuwa	18.61	220	P	P	04 17 16.0	+1.0
JAGI				IAmb	IAmb	04 17 19.2	
	comp=Z,35nm,1.3s						
MTN	Manton Dam	19.22	165	P	P	04 17 21.9	+0.3
MTN				IAmb	IAmb	04 17 24.9	
	comp=Z,20nm,1.0s						
KNRA	Kununurra	21.55	173	P	P	04 17 47.2	+0.7
KNRA				IAmb	IAmb	04 17 48.8	
	comp=Z,30nm,0.6s						
COEN	Coen	25.93	140	P	P	04 18 28.1	+0.7
COEN				IAmb	IAmb	04 18 32.9	
	comp=Z,8.9nm,0.9s						
WB0	Warramunga Arr	26.72	163	P	P	04 18 34.0	-0.4
WRA	Warramunga Arr	26.87	163	P	P	04 18 35.3	-0.5
	comp=Z,0.6nm,0.4s,baz=335,slow=10,SNR=14						
WRA				ScP	ScP	04 25 19.1	-1.8
	comp=Z,0.5nm,0.8s,baz=340,slow=2.7,SNR=4.6						
	comp=Z,0.6nm,0.4s						
WRA	Warramunga Arr	26.87	163	P	P	04 18 34.6	-1.2
WRA					ScP	04 25 19.2	-1.7
WR8	Warramunga Arr	26.93	162	P	P	04 18 36.2	-0.1
MBWA	Marble Bar	27.59	193	P	P	04 18 41.7	-0.4
MBWA				IAmb	IAmb	04 18 41.9	
	comp=Z,60nm,1.4s						
PSA00	Pilbara Seismi	27.96	193	P	P	04 18 44.9	-0.6
PSA00				IAmb	IAmb	04 18 45.6	
	comp=Z,6.1nm,0.7s						
AS31	Alice Springs	30.30	166	P	P	04 19 06.2	0.0
ASAR	Alice Springs	30.30	166	P	P	04 19 06.3	+0.1
	comp=Z,3.0nm,0.5s,baz=340,slow=6.9,SNR=42						
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	30.30	166	P	P	04 19 06.6	+0.4
GIRL	Giralia	30.64	202	P	P	04 19 09.9	+0.7
GIRL				IAmb	IAmb	04 19 11.9	
	comp=Z,67nm,1.6s						
STKA	Stephens Creek	40.30	160	P	P	04 20 32.1	+0.6
	comp=Z,2.7nm,0.6s,baz=340,slow=8.4,SNR=5.7						
	comp=Z,2.7nm,0.6s						
STKA	Stephens Creek	40.30	160	IAmb	IAmb	04 20 33.1	
	comp=Z,15nm,0.8s						
PEA0B	Petropavlovsk-	53.69	23	P	P	04 22 14.4	-0.6
PEA0B				IAmb	IAmb	04 22 22.4	
	comp=Z,32nm,1.2s						
PETK	Petropavlovsk-	53.69	23	P	P	04 22 15.7	+0.7
	comp=Z,3.4nm,0.7s,baz=150,slow=1.7,SNR=7.0						
	comp=Z,3.4nm,0.7s						
PETK	Petropavlovsk-	53.69	23	P	P	04 22 14.6	-0.5
MKAR	Makanchi Array	55.51	325	P	P	04 22 26.1	-2.2
	comp=Z,0.2nm,0.5s,baz=116,slow=7.8,SNR=5.3						
	comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	55.51	325	P	P	04 22 27.1	-1.2
KURBB	Kurchatov Arra	59.66	327	P	P	04 22 56.6	-0.7
	comp=Z,0.3nm,0.6s,baz=132,slow=4.3,SNR=2.8						
	comp=Z,0.3nm,0.6s						
KURK	Kurchatov	59.66	327	P	P	04 22 56.7	-0.6
KURK				IAmb	IAmb	04 22 57.7	
	comp=Z,10nm,1.9s						
ODZ	Otahua Downs	64.42	147	P	P	04 23 29.4	+0.4
ADK	Adak	65.53	35	P	P	04 23 35.6	-0.6
ATKA	Atka Island	67.08	35	P	P	04 23 45.9	-0.1
ABKAR	Akbulak array	70.17	320	P	P	04 24 04.7	-0.5
ILAR	Eielson Array	83.43	26	P	P	04 25 17.9	-1.3
	comp=Z,0.5nm,0.6s,baz=247,slow=5.2,SNR=15						
	comp=Z,0.5nm,0.6s						
N31M	Braeburn, Yuko	88.73	28	P	P	04 25 45.3	0.0
N31M				IAmb	IAmb	04 25 52.1	
	comp=Z,35nm,1.5s						
U33K	Whale Pass	91.12	33	P	P	04 25 55.4	-1.1

*SSNC **04** 05:01:15.8±0.6, 19°.27N×79°.25W, h20km±9km, MD3.6, ML3.1, Presumed earthquake*

*JSN **04** 05:01:17.0±1.9, 19°.52N×78°.95W, h30km±999km, MD3.8, Presumed earthquake*

ISC 04 05:01:14.9±1.5**, 19°.30N**±0°.09×**79°.26W**±0°.06**, h35**km**, n16,** σ**0s.82**/17**, 1C, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBCY	The Bluff, Cay	0.64	313	eP	Pn	05 01 27.2	-0.4
CBCY				eS	Sn	05 01 35.7	-0.8
CBCY				IAML		05 01 35.9	
	comp=E,929nm,0.3s						
CBCY				IAML		05 01 36.0	
	comp=N,732nm,0.1s						
LCCY	Blossom Villag	0.86	295	eP	Pn	05 01 30.5	0.0
LCCY				eS	Sn	05 01 40.9	-1.0
LCCY				IAML		05 01 41.6	
	comp=E,674nm,0.4s						
LCCY				IAML		05 01 41.7	
	comp=N,877nm,0.2s						
MTDJ	Mount Denham	1.95	123	eP	Pn	05 01 45.6	-0.1
LMGC	Las Mercedes	2.26	70	eP	Pn	05 01 50.2	+0.4
CCCC	Cccc	2.35	36	eP	Pn	05 01 54.5	+3.4
STH	Stony Hill	2.62	117	i P	Pn	05 01 54.7	-0.1
HOJ	Hope	2.71	118	i P	Pn	05 01 57.1	+1.1
CHIV	Chivirico	2.77	75	eP	Pn	05 01 56.9	+0.1
MGV	Manicaragua	2.88	347	eP	Pn	05 01 59.1	+0.8
MARVS	Santiago de Cu	3.24	77	eP	Pn	05 02 03.6	+0.3
HLGC	Holguin	3.40	62⇑	eP	Pn	05 02 04.3	-1.2
RCC	Rio Carpintero	3.43	78	eP	Pn	05 02 06.4	+0.5
PINC	Pinares de May	3.47	70	eP	Pn	05 02 07.2	+0.8
GTBY	Guantanamo Bay	3.96	80	eP	Pn	05 02 13.7	+0.5
QMBU	Quimbuelo	4.28	77	eP	Pn	05 02 17.9	+0.2
SOR	Soroa	4.93	315	eP	Pn	05 02 28.3	+1.7

MEX 04 05:02:17.9±0.6**, 19°.29N**×**102°.25W, h16**km**, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	1.44	226	eP	Pn	05 02 40.5	-2.8
CEGR	Campo Tres	1.52	274	eP	Pn	05 02 41.0	-3.6
CEGR				eS	Sn	05 03 00.9	-3.3
CDAR	Ciudad de Arme	1.70	259	eP	Pn	05 02 44.0	-2.9
CDAR				eS	Sn	05 03 06.2	-2.1
ZIIG	Zihuatanejo	1.83	156	eP	Pn	05 02 47.9	-0.8
ZIIG				eS	Sb	05 03 13.4	-0.3
ARIG	Puente Sto Nin	2.06	119	eP	Pn	05 02 53.1	+1.1
ARIG				eS	Sb	05 03 19.1	-1.3

*IDC **04** 05:05:32.2±0.7, 34°.64N×70°.67E, h0km, mb4.2/19, mbtmp4.2/24, ML4.1/5, MS3.2/6, Error ellipse: s-maj=17.3km s-min=13.9km az=24.0*

*NEIC **04** 05:05:34.4±2.3, 34°.55N±0°.06×70°.58E±0°.06, h10km±1km, mb4.4/22, Error ellipse: s-maj=10.6km s-min=7.8km az=179.0*

*MOS **04** 05:05:37.9±1.2, 34°.77N×70°.73E, h51km, mb4.4/16, Error ellipse: s-maj=9.3km s-min=5.1km az=88.7*

*NDI **04** 05:05:38.6±1.9, 34°.60N×70°.59E, h10km, ML4.3, MW4.3*

*NNC **04** 05:05:41.3±3.6, 35°.28N×70°.11E, h0km, mb4.7, mpv4.5, Error ellipse: s-maj=28.0km s-min=20.8km az=4.0*

ISC 04 05:05:34.4±0.4**, 34°.72N**±0°.05×**70°.65E**±0°.04**, h10**km**, n129,** σ**2s.47**/143**, mb4.2**/31**, MS3.1**/4**, 11C-8D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	1.33	263		Pg	05 05 60.0	0.0
KBL	Kabul	1.33	263	P	Pg	05 06 00.0	0.0
NIL	Nilore	2.41	116	Pn	Pn	05 06 16.1	+2.2
NIL	Nilore	2.41	116	P	Pn	05 06 16.1	+2.2
MANEM	Manem	2.94	16		Pb	05 06 26.8	-0.2
SHAA	Shahritus	3.49	325		Pn	05 06 33.6	+4.8
SRNI	Srinagar	3.50	100	eP	Pn	05 06 33.5	+4.4
SRNI				i P	Pn	05 06 33.5	+4.4
SRNI				eS	Sn	05 07 13.8	+3.2
SRNI				IAML		05 07 32.8	
	comp=E,3μm,0.9s						
SRNI				IAML		05 07 36.9	
	comp=N,5μm,0.7s						
JMU	Jammu	3.99	118	eP	Pn	05 06 37.5	+2.0
JMU				eS	Sn	05 07 24.5	+2.1
JMU				IAML		05 07 34.9	
	comp=E,819nm,0.2s						
JMU				IAML		05 07 41.1	
	comp=N,838nm,0.3s						
THN	Thein Dam	4.83	117	eP	Pn	05 06 52.7	+5.4
THN				eS	Sn	05 07 45.2	+1.9

THN IAML 05 07 47.1
comp=N,523nm,0.1s
THN IAML 05 07 47.4
comp=E,402nm,0.4s
DRK Karamyk 4.84 11 Pn 05 06 51.5 +4.0
DRK Karamyk 4.84 11 P Pn 05 06 51.5 +4.0
TSSA Tissa 4.95 111 *eP* Pn 05 06 54.3 +5.2
TSSA *eS* **Sn 05 07 47.9 +1.4**
TSSA IAML 05 07 52.0
comp=N,594nm,0.3s
TSSA IAML 05 07 52.9
comp=E,430nm,0.4s
DHRM DHARAMSHALA 5.33 116 *eP* **Pn 05 06 58.3 +4.1**
DHRM *eS* **Sn 05 07 56.1 +0.3**
DHRM IAML 05 07 58.6
comp=N,534nm,0.5s
DHRM IAML 05 07 59.6
comp=E,561nm,0.2s
BTK Batken 5.33 1 Pn 05 06 58.5 +4.4
BTK Batken 5.33 1 P Pn 05 06 58.5 +4.4
ALCI Alchi Leh 5.42 93 *eP* **Pn 05 06 59.8 +4.2**
ALCI *eS* **Sn 05 08 00.1 +1.8**
ALCI IAML 05 08 02.1
comp=N,910nm,0.3s
ALCI IAML 05 08 02.7
comp=E,1µm,0.6s
KSH2 Kashi 5.92 40 Pn Pn 05 07 07.2 +5.0
KSH2 Sn **Sn 05 08 15.8 +5.6**
KSH2 smax smax
comp=N,180nm,0.5s
KSH2 smax smax
comp=E,90nm,0.5s
SMLA Simla 6.55 121 *eP* **Pn 05 07 14.8 +4.1**
SMLA *eS* **Sn 05 08 24.2 -1.3**
SMLA IAML 05 08 25.4
comp=E,300nm,0.6s
SMLA IAML 05 08 26.1
comp=N,282nm,0.5s
ARSB Arslanbob 6.84 15 Pn 05 07 17.5 +2.6
ARSB Arslanbob 6.84 15 P Pn 05 07 17.5 +2.6
KLP Kalpa 7.13 114 *eP* **Pn 05 07 23.0 +4.0**
KLP *eS* **Sn 05 08 39.1 -1.1**
KLP IAML 05 08 42.3
comp=N,153nm,0.6s
KLP IAML 05 08 43.6
comp=E,179nm,0.4s
HNLY HANLEY 7.20 103 *eP* **Pn 05 07 24.2 +4.0**
HNLY *eS* **Sn 05 08 39.4 -2.9**
HNLY IAML 05 08 46.5
comp=N,217nm,0.8s
HNLY IAML 05 08 47.8
comp=E,312nm,1.0s
DDI Dehra Dun 7.64 123 *eP* **Pn 05 07 30.2 +4.4**
DDI *eS* **Sn 05 08 50.6 -1.8**
DDI IAML 05 09 48.2
comp=E,313nm,0.7s
DDI IAML 05 09 51.7
comp=N,432nm,0.9s
UCH Uchtor 8.08 21 P **Pn 05 07 35.0 +2.7**
SNR=53
EKS2 Erkin-Say 8.30 16 P **Pn 05 07 37.9 +3.1**
SNR=26
KK31 Karatay Array 8.37 359 Pn 05 07 38.1 +2.3
KK31 Karatay Array 8.37 359 P **Pn 05 07 38.0 +2.2**
comp=N,11nm,0.3s,baz=189,slow=15,SNR=198
KK31 ⇑S **Sn 05 09 08.3 -2.1**
comp=N,24nm,0.7s,baz=231,slow=23,SNR=4.9
KK31 Karatay Array 8.37 359 P **Pn 05 07 38.1 +2.3**
KKAR Karatay Array 8.37 359 Pn 05 07 38.0 +2.2
KKAR Karatay Array 8.37 359 P **Pn 05 07 38.0 +2.2**
AAK Ala-Archa 8.46 20 Pn **Pn 05 07 40.1 +3.0**
comp=N,8.6nm,0.3s,baz=195,slow=6.4,SNR=82
AAK Sn **Sn 05 09 08.8 -3.8**
baz=150,slow=14
AAK LR LR 05 11 02.7
comp=N,157nm,18.2s,baz=219,slow=39
comp=N,20nm,0.4s
AAK Ala-Archa 8.46 20 P **Pn 05 07 40.2 +3.1**
SNR=40
AAK Ala-Archa 8.46 20 Pn 05 07 39.3 +2.2
AAK Ala-Archa 8.46 20 ⇓P **Pn 05 07 39.4 +2.4**
comp=N,9.1nm,0.5s
AAK ⇑S **Sn 05 09 12.9 +0.3**
comp=N,9.2nm,0.7s
AAK Ala-Archa 8.46 20*c* *iP* **Pn 05 07 39.9 +2.8**
AAK pmax pmax
comp=Z,20nm,0.4s
JOSI Joshimath 8.59 116 *eP* **Pn 05 07 41.0 +2.1**
JOSI *eS* **Sn 05 09 11.5 -4.5**
JOSI IAML 05 09 18.6
comp=N,155nm,0.4s
JOSI IAML 05 09 19.5
comp=E,124nm,0.3s
KBK Karagaybulak 8.61 22 P **Pn 05 07 42.5 +3.4**
SNR=15
ULHL Ulahol 8.70 29 P **Pn 05 07 43.2 +2.8**
SNR=5.5
BOOM Boomskoye usch 8.79 27 Pn **Pn 05 07 44.0 +2.3**
BOOM Boomskoye usch 8.79 27 P **Pn 05 07 44.0 +2.3**
CHMS Chumysh 8.86 20 P **Pn 05 07 45.2 +2.7**
SNR=15
TARG Taragay, Kyrgy 8.98 37 Pn 05 07 47.0 +2.5
TARG Taragay, Kyrgy 8.98 37 P **Pn 05 07 47.0 +2.5**
USP Ospenovka 9.04 18 P **Pn 05 07 47.5 +2.5**
SNR=18
TKM2 Tokmak 2 9.05 24 P **Pn 05 07 48.5 +3.2**
SNR=18
WUS Wushi 9.36 44 Pn 05 07 51.0 +1.6
LGTI Lohaghat 9.61 121 *eP* **Pn 05 07 54.9 +2.0**
LGTI *eS* **Sn 05 09 35.7 -5.4**
LGTI IAML 05 09 42.8
comp=E,128nm,0.4s
LGTI IAML 05 09 43.5
comp=N,139nm,0.5s
MAKZ Makanchi 14.79 32 Pn 05 09 02.5 -1.1
MAKZ Makanchi 14.79 32 P **Pn 05 09 02.5 -1.1**
MK31 Makanchi Array 14.92 33*d* *iP* **Pn 05 09 03.9 -1.4**
MKAR Makanchi Array 14.92 33 Pn **Pn 05 09 04.1 -1.2**
comp=N,1.1nm,0.3s,baz=215,slow=14,SNR=24
MKAR LR LR 05 15 31.3
comp=N,57nm,19.5s,baz=256,slow=40
comp=N,0.9nm,0.5s
MKAR Makanchi Array 14.92 33 Pn 05 09 05.0 -0.4
MKAR Makanchi Array 14.92 33 *eP* **Pn 05 09 07.8 +2.5**
MKAR pmax pmax
comp=Z,1.0nm,0.3s
AB31 Akbulak array 16.53 335 Pn 05 09 26.3 +0.1
AB31 IAmb IAmb 05 09 31.2
comp=Z,12nm,0.6s
AB31 Akbulak array 16.53 335 ⇓P **Pn 05 09 25.2 -1.0**
comp=Z,11nm,0.7s,baz=146,slow=11,SNR=162
AB31 ⇑S **Sn 05 12 21.4 -8.3**
comp=Z,3.1nm,0.6s,baz=154,slow=22,SNR=5.5
ABKAR Akbulak array 16.53 335 Pn 05 09 25.9 -0.3
KURBB Kurchatov Arra 16.90 17 Pn **Pn 05 09 28.7 -2.1**
comp=Z,0.4nm,0.3s,baz=210,slow=11,SNR=11
comp=Z,1.4nm,0.3s
KURK Kurchatov 17.01 18 Pn 05 09 34.3 +2.1
KURK Kurchatov 17.01 18 ⇑*iP* **Pn 05 09 33.9 +1.7**
KURK pmax pmax
comp=Z,5.0nm,1.0s
AKTO Aktyubinsk 18.21 333 P **Pn 05 09 47.7 +0.6**
comp=Z,1.0nm,0.3s,baz=145,slow=11,SNR=22
AKTO S **Sn 05 13 03.4 -7.0**
comp=Z,3.5nm,0.6s,baz=258,slow=15,SNR=3.7
comp=Z,10nm,0.7s
AKTO Aktyubinsk 18.21 333 ⇑P **Pn 05 09 46.7 -0.5**
comp=Z,11nm,0.9s
AKTO ⇓S **Sn 05 13 03.0 -7.3**
comp=Z,6.0nm,1.2s
BVAR Borovoye Array 18.30 360 P **Pn 05 09 47.8 -0.4**
comp=Z,0.2nm,0.3s,baz=161,slow=9.4,SNR=14
comp=Z,2.3nm,0.4s
BORK Borovoye 18.32 359 P 05 09 49.4 +0.8
BORK Borovoye 18.32 359 P **P 05 09 49.4 +0.8**
BORK pmax pmax
comp=Z,8.0nm,0.9s
DGZ Jazzator, Alta 19.39 34 ⇓*iP* **P 05 09 59.9 -0.6**
DGZ pmax pmax
comp=Z,9.0nm,0.8s
GOMU GeErMu 19.73 79 P **P 05 10 04.7 +0.1**
GOMU pmax pmax
comp=Z,2.0nm,0.7s
SHL Shillong 20.48 111 P 05 10 11.3 -1.2
SHL IAmb IAmb 05 10 15.3
comp=Z,11nm,0.7s
SHL Shillong 20.48 111 P **P 05 10 11.3 -1.2**
SHL pmax pmax
comp=Z,11nm,0.7s
ZAA0 Zalesovo Array 21.66 23 P 05 10 24.2 -0.6
ZAA0 IAmb IAmb 05 10 41.6
comp=Z,10nm,0.7s
ZALV Zalesovo Beam 21.66 23 P **P 05 10 24.2 -0.6**
comp=Z,9.1nm,0.3s,baz=220,slow=11,SNR=55
ZALV LR LR 05 19 37.0
comp=Z,62nm,18.4s,baz=265,slow=39
comp=Z,9.1nm,0.3s
ZALV Zalesovo Beam 21.66 23 *eP* **P 05 10 23.9 -0.9**
ZALV pmax pmax
comp=Z,9.0nm,0.3s
KBZ Khabaz 23.21 301 P **P 05 10 42.4 +1.0**
comp=Z,3.4nm,0.9s,baz=73,slow=20,SNR=3.1
comp=Z,3.4nm,0.9s
ARTI Arti 23.24 343 P 05 10 42.1 +0.5
ARTI IAmb IAmb 05 10 44.2
comp=Z,11nm,0.6s
ARTI Arti 23.24 343*c* *iP* **P 05 10 43.4 +1.9**
ARTI *PP sP 05 10 59.4 +12
ARTI 05 11 13.9
ARTI S **S 05 14 52.5 -1.0**
ARTI SS **SnSn 05 15 34.1 +6.9**
ARTI pmax pmax
comp=Z,9.0nm,0.8s
GTA2 Gaotai 23.65 70 *eP* **P 05 10 46.8 +0.8**
GTA2 pmax pmax
comp=Z,8.0nm,0.9s
BELG Belogornoye 24.13 324 ⇓*iP* **P 05 10 50.6 +0.4**
BELG pmax pmax
comp=Z,1.0nm,0.8s
LZDM Lanzhou Array 26.92 78 P **P 05 11 17.1 +1.0**
comp=Z,0.5nm,0.4s,baz=280,slow=10,SNR=4.2
comp=Z,0.5nm,0.4s
PALK Pallekele 28.84 159 LR LR 05 23 49.2
comp=Z,49nm,19.4s,baz=38,slow=38
SONM Songino Array 29.61 53 P **P 05 11 40.0 +0.2**
comp=Z,1.5nm,0.7s,baz=252,slow=9.7,SNR=6.3
comp=Z,1.5nm,0.7s
SONM Songino Array 29.61 53 *eP* **P 05 11 41.4 +1.6**
SONM pmax pmax
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 29.90 116 P **P 05 11 43.0 +0.6**
comp=Z,1.0nm,0.4s,baz=304,slow=9.2,SNR=7.1
CMAR LR LR 05 26 17.3
comp=Z,13nm,20.1s,baz=285,slow=42
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 29.90 116 *eP* **P 05 11 44.3 +1.8**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
OBN Obninsk 31.12 321 *eP* **P 05 11 53.9 +1.1**
OBN pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 33.86 311 P **P 05 12 17.5 +0.6**
comp=Z,1.6nm,0.6s,baz=87,slow=7.3,SNR=15
AKASG LR LR 05 28 33.9
comp=Z,76nm,18.1s,baz=356,slow=41
comp=Z,1.6nm,0.6s
AKASG Malin Array Be 33.86 311 IAmb IAmb 05 12 47.5
comp=Z,2.6nm,1.1s
AKASG Malin Array Be 33.86 311 P **P 05 12 17.5 +0.6**
AKASG pmax pmax
comp=Z,3.0nm,1.1s
AKBB Malin Array Si 33.86 311 P **P 05 12 18.0 +1.1**
AKBB IAmb IAmb 05 12 31.4
comp=Z,3.2nm,0.8s
AKBB Malin Array Si 33.86 311 ⇓*iP* **P 05 12 16.7 -0.2**
AKBB pmax pmax
comp=Z,3.0nm,0.9s
KIEV Kiev 33.87 311 P **P 05 12 17.5 +0.5**
KIEV IAmb IAmb 05 12 31.4
comp=Z,3.0nm,0.8s
KIEV Kiev 33.87 311 P **P 05 12 17.5 +0.5**
KIEV pmax pmax
comp=Z,3.0nm,0.8s
MLR Muntele Rosu 35.43 301 P **P 05 12 32.9 +2.2**
MLR IAmb IAmb 05 12 34.7
comp=Z,7.8nm,0.8s
MLR Muntele Rosu 35.43 301 P **P 05 12 32.9 +2.2**
MLR pmax pmax
comp=Z,8.0nm,0.8s
NRIK Noril'sk 35.92 10 P **P 05 12 34.4 0.0**
comp=Z,4.4nm,0.6s,baz=204,slow=6.1,SNR=7.6
comp=Z,4.4nm,0.6s
NRIK Noril'sk 35.92 10 P **P 05 12 35.0 +0.5**
NRIK IAmb IAmb 05 12 36.4
comp=Z,4.5nm,0.6s
NRIK Noril'sk 35.92 10 ⇑*iP* **P 05 12 34.5 0.0**
NRIK pmax pmax
comp=Z,4.0nm,0.9s
NRIK pmax pmax
comp=Z,4.0nm,0.6s
BURAR Bucovina Array 36.04 305 P **P 05 12 37.4 +1.6**
BUR08 Bucovina Ar. S 36.05 305 P **P 05 12 37.4 +1.4**
BUR08 IAmb IAmb 05 12 49.7
comp=Z,6.7nm,1.3s
FIA1 FINESS Array S 38.81 327 P **P 05 12 59.9 +0.9**
FINES FINESS Array B 38.81 327 P **P 05 12 59.1 0.0**
comp=Z,2.2nm,0.7s,baz=116,slow=8.7,SNR=6.2
comp=Z,2.2nm,0.7s
FINES FINESS Array B 38.81 327 P **P 05 12 59.3 +0.2**
FINES FINESS Array B 38.81 327 *iP* **P 05 12 59.4 +0.4**
FINES pmax pmax
comp=Z,2.0nm,0.7s
MODS Modra-Piesok 41.39 306 *eP* **P 05 13 21.9 +1.3**
MODS Modra-Piesok 41.39 306 *eP* **P 05 13 21.9 +1.3**
ARCES ARCESS Array B 42.68 338 P **P 05 13 31.6 +0.6**
comp=Z,2.3nm,0.5s,baz=109,slow=8.1,SNR=20
comp=Z,2.3nm,0.5s
ARCES ARCESS Array B 42.68 338 *eP* **P 05 13 31.8 +0.9**
ARCES pmax pmax
comp=Z,2.0nm,0.3s
HFS Hagfors 44.30 323 P **P 05 13 44.1 0.0**
comp=Z,4.9nm,0.5s,baz=98,slow=11,SNR=4.6
comp=Z,4.9nm,0.5s
NC405 NORSAR Array S 45.41 324 P **P 05 13 53.1 +0.2**
NB2 NORSAR Subarra 45.64 324 P **P 05 13 54.3 -0.5**
comp=Z,1.3nm,0.4s,baz=99,slow=7.9
NOA NORSAR Array B 45.64 324 P **P 05 13 54.1 -0.6**
comp=Z,1.9nm,0.6s,baz=164,slow=9.5,SNR=12
comp=Z,1.9nm,0.6s
NC204 NORSAR Array S 45.88 324 P **P 05 13 56.9 +0.2**
TIXI Tiksi 47.53 21 ⇓*iP* **P 05 14 08.5 -0.9**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
SPITS Spitsbergen Ar 49.16 347 P **P 05 14 22.6 +0.7**
comp=Z,5.4nm,0.8s,baz=108,slow=14,SNR=12
comp=Z,5.4nm,0.8s
SPITS Spitsbergen Ar 49.16 347 P **P 05 14 22.8 +0.9**
SPITS pmax pmax
comp=Z,53nm,1.5s
MA2 Magadan 55.95 37 ⇑*iP* **P 05 15 09.8 -2.6**
MA2 pmax pmax
comp=Z,2.0nm,1.1s
SEY Seymchan 56.06 33 ⇑*iP* **P 05 15 14.2 +1.1**
SEY pmax pmax
comp=Z,2.0nm,1.2s
ESDC Sonseca Array 58.04 299 P **P 05 15 28.5 +0.8**
comp=Z,2.1nm,0.7s,baz=62,slow=7.1,SNR=23
comp=Z,2.1nm,0.7s
ESDC Sonseca Array 58.04 299 IAmb IAmb 05 15 28.9
comp=Z,1.5nm,1.0s
BILL Bilibino 60.33 26 ⇑*iP* **P 05 15 41.0 -2.0**
BILL pmax pmax
comp=Z,2.0nm,1.1s
TORD Toroll Ar. Bea 65.40 269 P **P 05 16 16.6 -0.8**
comp=Z,2.6nm,0.7s,baz=46,slow=3.4,SNR=15
comp=Z,2.6nm,0.7s
DBIC Dimbokro 74.32 267 P **P 05 17 11.2 -1.2**
comp=Z,3.2nm,0.7s,baz=72,slow=5.4,SNR=2.3
comp=Z,3.2nm,0.7s
DBIC Dimbokro 74.32 267 IAmb IAmb 05 17 21.4
comp=Z,12nm,1.4s
DBIC Dimbokro 74.32 267 P **P 05 17 11.2 -1.2**
DBIC pmax pmax
comp=Z,12nm,1.4s
ILAR Eielson Array 76.57 16 P **P 05 17 22.8 -1.7**
comp=Z,0.7nm,0.8s,baz=296,slow=4.8,SNR=9.9
comp=Z,0.7nm,0.8s
ILAR Eielson Array 76.57 16 *eP* **P 05 17 22.6 -1.9**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 81.31 121 P **P 05 17 49.7 -1.5**
comp=Z,0.8nm,0.8s,baz=324,slow=4.8,SNR=12
comp=Z,0.8nm,0.8s
WRA Warramunga Arr 81.31 121 *iP* **P 05 17 51.5 +0.3**
WRA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 83.03 2 P **P 05 17 58.7 -0.9**
comp=Z,1.6nm,0.6s,baz=352,slow=5.9,SNR=28
comp=Z,1.6nm,0.6s
YKA Yellowknife Ar 83.03 2 *eP* **P 05 17 58.6 -0.9**
YKA pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 83.48 124 P **P 05 18 01.4 -1.1**
comp=Z,0.7nm,0.6s,baz=311,slow=5.2,SNR=8.6
comp=Z,0.7nm,0.6s

IDC 04 05:22:27.1±2.8, 6°.82S×130°.13E, h80km±38km, mb3.4/1, mbtmp3.8/5, Error ellipse: s-maj=74.4km s-min=22.9km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.02**	**11**	P	Pn	05 23 53.5	-0.1
	16nm,0.2s,baz=249,slow=23,SNR=14						
SIJI				S	Sn	05 24 51.9	-9.3
	23nm,0.3s,baz=354,slow=24,SNR=4.8						
FITZ	**Fitzroy Crossi**	**12.04**	**201**	P	Pn	05 25 16.5	+0.8
	2.3nm,0.3s,baz=22,slow=9.5,SNR=18						
FITZ				S	Sn	05 27 24.8	-3.4
	3.0nm,0.4s,baz=144,slow=19,SNR=2.4						
WRA	**Warramunga Arr**	**13.67**	**163**	P	Pn	05 25 36.5	-1.1
	0.2nm,0.3s,baz=343,slow=13,SNR=17						
WRA				S	Sn	05 27 56.2	-12
	1.4nm,0.4s,baz=351,slow=21,SNR=5.1						
ASAR	**Alice Springs**	**17.14**	**168**	P	Pn	05 26 21.8	+0.1
	0.3nm,0.4s,baz=337,slow=9.4,SNR=6.4						
ASAR				S	Sn	05 29 19.4	-13
	0.6nm,0.6s,baz=336,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**68.14**	**327**	P	P	05 33 18.8	0.0
	0.4nm,0.4s,baz=123,slow=7.6,SNR=9.4						
	0.4nm,0.4s						

*IDC **04** 05:22:39.0±1.4, 6°.54S×129°.33E, h0km, mb3.8/4, mbtmp4.0/8, ML4.3/4, Error ellipse: s-maj=53.0km s-min=23.1km az=80.0*
ISC 04 05:22:40.7±0.9, 6°.95S±0°.07×129°.6E±0°.2, h35km, n8, σ1§06/9, mb3.8/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.28**	**16**	P	**Pn**	**05 24 09.9**	**-1.0**
	9.0nm,0.3s,baz=159,slow=23,SNR=7.9						
	18nm,0.2s						
FITZ	**Fitzroy Crossi**	**11.72**	**199**	Pn	Pn	05 25 32.6	+7.0
	1.2nm,0.3s,baz=25,slow=12,SNR=5.4						
FITZ				Sn	**Sn**	**05 27 34.2**	**-0.9**
	2.2nm,0.3s,baz=291,slow=24,SNR=5.1						
	2.2nm,0.3s						
WRA	**Warramunga Arr**	**13.72**	**161**	Pn	**P**	**05 26 01.2**	**+0.1**
	1.8nm,0.3s,baz=335,slow=14,SNR=32						
WRA				Sn	**Sn**	**05 28 25.4**	**+1.2**
	2.6nm,0.3s,baz=331,slow=22,SNR=12						
	1.2nm,0.2s						
ASAR	**Alice Springs**	**17.14**	**166**	P	P	05 26 46.0	+7.0
	0.9nm,0.3s,baz=345,slow=11,SNR=33						
ASAR				S	**Sn**	**05 29 46.4**	**-0.9**
	1.7nm,0.7s,baz=345,slow=25,SNR=6.2						
	4.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.37**	**310**	P	**P**	**05 30 08.1**	**+0.9**
	0.7nm,0.3s,baz=122,slow=6.8,SNR=4.2						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**67.95**	**327**	P	**P**	**05 33 36.0**	**-0.1**
	0.3nm,0.3s,baz=116,slow=8.0,SNR=5.8						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**71.35**	**334**	P	**P**	**05 33 56.4**	**-0.4**
	0.5nm,0.5s,baz=142,slow=5.4,SNR=2.4						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**72.24**	**329**	P	**P**	**05 34 03.6**	**+1.2**
	0.3nm,0.3s,baz=129,slow=4.7,SNR=1.6						
	0.3nm,0.3s						

*AFAD **04** 05:31:11.9, 35°.09N×27°.99E, h7km±6km, ML2.4*
*ATH **04** 05:31:20.4, 35°.56N×27°.50E, h1 km±2km, ML2.5/6, Manual Solution by F.Xalaris First location: 2020/02/04 05:32:58, This location: 2021/11/18 10:33:50 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 7 km; Longitude uncertainty: 5 km*
ISC 04 05:31:16.7±2.5, 35°.33N±0°.10×27°.73E±0°.09, h11km±17km, n12, σ1§96/18, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.52**	**296**	P	**Pg**	**05 31 26.2**	**-0.6**
KARP				S	**Sg**	**05 31 30.1**	**-3.6**
ARG	**Arkhangelos**	**0.94**	**20**	P	**Pn**	**05 31 36.1**	**+0.2**
ARG				S	**Sb**	**05 31 47.3**	**-0.4**
ZKR	**Zakros**	**1.26**	**261**	P	**Pg**	**05 31 42.3**	**+1.3**
ZKR				S	**Sg**	**05 31 56.9**	**-0.4**
YAZI	**Mula-Dat§a-**	**1.37**	**351**	P	**Pn**	**05 31 41.5**	**-0.3**
YAZI				S	**Sg**	**05 32 05.5**	**+4.6**
YAZI				IAML		05 32 13.0	
	comp=E,53nm,0.6s						
YAZI				IAML		05 32 14.0	
	comp=N,42nm,0.7s						
TURN	**Turunc**	**1.50**	**16**	P	**Pn**	**05 31 43.7**	**0.0**
TURN				S	**Sg**	**05 32 08.0**	**+2.8**
TURN				IAML		05 32 14.0	
	comp=E,47nm,0.6s						
TURN				IAML		05 32 19.0	
	comp=N,53nm,0.5s						
NPS	**Neapolis**	**1.74**	**269**	P	**Pb**	**05 31 48.4**	**-0.3**
BDRM	**Kayabasi**	**1.75**	**352**	P	**Pg**	**05 31 50.1**	**-0.3**
BDRM				S	**Sg**	**05 32 14.3**	**+1.2**
BDRM				IAML		05 32 19.0	
	comp=E,47nm,1.0s						
SABU	**Mula-Dalaman**	**1.80**	**33**	P	**Pn**	**05 31 47.0**	**-0.8**
SABU				IAML		05 32 30.0	
	comp=N,30nm,0.8s						
SABU				IAML		05 32 33.0	
	comp=E,36nm,0.7s						
DNZT	**Denizli-Tavas-**	**2.21**	**28**	P	**Pn**	**05 31 52.2**	**-1.3**
IDI	**Anoyia**	**2.33**	**270**	P	**Pn**	**05 31 56.5**	**+1.5**
ESEN	**Aydn-Nazilli**	**2.52**	**11**	P	**Pb**	**05 32 00.4**	**-1.5**
ESEN				IAML		05 32 44.0	
	comp=E,19nm,1.4s						
ESEN				IAML		05 32 59.0	
	comp=N,19nm,1.0s						
IMMV	**Iera Moni Meta**	**3.07**	**274**	P	**Pn**	**05 32 05.8**	**+0.7**

*UPA **04** 05:31:16.3±5.0, 8°.22N×85°.13W, h10km±157km, MW3.7, Presumed earthquake*
*CATAC **04** 05:31:22.1±0.3, 9°.N±2°.×8°.5W±°, h5km±1km, M3.8/18, MLv3.8/18, Error ellipse: s-maj=4.7km s-min=2.0km az=38.8, confirmed*
*UCR **04** 05:31:23.4±0.8, 9°.41N×84°.57W, h17km±3km, MW4.0, Presumed earthquake*
ISC 04 05:31:22.5±1.1, 9°.35N±0°.03×84°.59W±0°.02, h9km±9km, n157, σ1§11/181, 17C-60D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BITO	**Garabito Jaco**	**0.27**	**352**	*eP*	**Pb**	**05 31 28.8**	**-0.7**
BITO				⇓*iP*	**Pb**	**05 31 28.8**	**-0.7**
BITO				*eS*	**Sb**	**05 31 33.2**	**-0.9**
SVQ2	**Quepos**	**0.42**	**79**	*eP*	**Pb**	**05 31 31.3**	**-0.8**
QUEP	**Quepos**	**0.42**	**79**	P	**Pg**	**05 31 30.6**	**-0.1**
QUEP				S	**Sg**	**05 31 36.7**	**+0.4**
QUEP	**Quepos**	**0.42**	**79**	*eP*	**Pb**	**05 31 31.4**	**-0.7**
PICV	**PH. Pirrs**	**0.47**	**55**	⇓*iP*	**Pb**	**05 31 32.2**	**-0.8**
PURI	**Puriscal**	**0.56**	**29**	⇓*iP*	**Pg**	**05 31 33.4**	**0.0**
PAQE	**Paquera**	**0.58**	**323**	*eP*	**Pb**	**05 31 34.1**	**-0.7**
ACOS	**Acosta**	**0.61**	**43**	⇓*eP*	**Pg**	**05 31 33.8**	**-0.4**
PITB	**Pirrs, San**	**0.63**	**61**	⇑*iP*	**Pb**	**05 31 35.0**	**-0.8**
RAZU	**San Marcos de**	**0.63**	**61**	*eP*	**Pg**	**05 31 34.6**	**-0.1**
ARZA	**Esparza**	**0.64**	**353**	⇓*iP*	**Pg**	**05 31 34.7**	**-0.2**
ROBF	**Roble, Puntare**	**0.64**	**346**	⇓*iP*	**Pg**	**05 31 34.9**	**0.0**
ATEO	**Atenas**	**0.65**	**18**	⇓*iP*	**Pg**	**05 31 34.8**	**-0.4**
PIEC	**Cerro El Cedra**	**0.68**	**66**	⇓*iP*	**Pb**	**05 31 35.9**	**-0.7**
LCR2	**La Lucha 2**	**0.69**	**56**	P	**Pg**	**05 31 35.6**	**-0.3**
LCR2				S	**Sg**	**05 31 45.0**	**+0.1**
SANTA	**Santa Ana**	**0.70**	**34**	⇓*iP*	**Pg**	**05 31 35.4**	**-0.6**
PALD	**Palmares**	**0.71**	**12**	⇓*iP*	**Pg**	**05 31 35.8**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BELE	Belen	0.73	32	⇓iP	Pg	05 31 36.0	-0.7
RAMO	San Ramon	0.74	9	⇓iP	Pg	05 31 36.5	-0.3
PAVB	Pavas, San Jos	0.74	38	⇓iP	Pg	05 31 36.2	-0.7
AMPA	Desamparados	0.75	44	⇓eP	Pg	05 31 36.1	-0.8
UELA	Alajuela	0.76	29	⇓iP	Pg	05 31 34.5	-2.7
CENT	San Jose	0.76	41	eP	Pb	05 31 37.7	-0.3
LUJA	Lujan	0.76	41	⇓iP	Pg	05 31 36.7	-0.5
MEXI	Barrio Mexico	0.77	40	⇓iP	Pg	05 31 36.8	-0.5
GREC	Grecia	0.77	21	⇑iP	Pb	05 31 37.3	-0.7
NARAN	Naranjo de Ala	0.77	15	⇓iP	Pg	05 31 37.3	-0.1
SARCI	Sarchi	0.77	18	eP	Pb	05 31 37.5	-0.6
HEME	Heredia, Merce	0.78	35	⇓iP	Pb	05 31 38.1	-0.2
SJS	Escuela Geolog	0.78	42	eP	Pg	05 31 37.0	-0.6
SJS3	Mercedes San J	0.78	42	⇑iP	Pg	05 31 37.3	-0.4
ECI	Escuela Centro	0.79	42	⇓iP	Pg	05 31 37.0	-0.6
LUPE	Guadalupe	0.79	41	eP	Pg	05 31 37.3	-0.4
TIBA	Tibas	0.79	40	⇓eP	Pg	05 31 37.3	-0.4
DOMI	Santo Domingo	0.79	38	⇑iP	Pg	05 31 37.5	-0.3
HDC	Heredia	0.80	36	⇓iP	Pg	05 31 37.4	-0.4
POAS	San Pedro de P	0.80	25	⇓iP	Pg	05 31 37.7	-0.1
TRIO	Tres Rios	0.80	47	⇓iP	Pg	05 31 37.1	-0.8
TAGO	Cartago	0.83	52	⇓eP	Pg	05 31 37.9	-0.6
CORON	Coronado	0.84	43	eP	Pg	05 31 38.5	-0.3
ZARE	Zarcero	0.85	13	⇓iP	Pg	05 31 38.8	-0.1
REPA	Paraso	0.85	56	⇓eP	Pg	05 31 38.2	-0.7
VPS8	V Poas	0.89	22	⇓iP	Pg	05 31 39.3	-0.4
ZEDO	Perez Zeledon	0.89	90	eP	Pb	05 31 39.7	-0.4
VPS5	V. Poas	0.90	23	eP	Pg	05 31 39.2	-0.7
NYURE	Nandayure	0.92	314	⇑iP	Pg	05 31 39.9	-0.2
PCAYA	Pacayas	0.95	54	⇓iP	Pg	05 31 40.1	-0.6
OCHAL	Ojochal	0.96	105	P	Pb	05 31 40.6	-0.6
OCHAL				S	Sb	05 31 53.7	-0.4
VICA	Volcano Irazu	0.96	49	⇓iP	Pg	05 31 40.3	-0.8
RAFA	San Farael, Vo	0.97	52	⇓eP	Pg	05 31 40.6	-0.7
QUEU	Ciudad Quesada	0.98	9	⇓iP	Pb	05 31 41.2	-0.4
VINA	Juan Vinas	0.99	57	⇓iP	Pg	05 31 40.7	-0.8
JUNT	Juntas	1.00	338	⇓eP	Pg	05 31 40.6	-1.1
JTS	Las Juntas de	1.00	339	P	Pg	05 31 40.6	-1.2
JTS				S	Sg	05 31 54.3	-0.5
JTS	Las Juntas de	1.00	339	⇓iP	Pg	05 31 40.6	-1.2
EDPE	Pejibaye, P	1.02	101	eP	Pg	05 31 41.6	-0.5
CVTQ	Turrialba Volc	1.03	51	⇑eP	Pg	05 31 41.9	-0.6
INDI	Punta indio, G	1.04	300	P	Pg	05 31 42.0	-0.5
INDI				S	Sn	05 31 57.2	-0.7
TURIB	Turrialba	1.04	58	⇓iP	Pg	05 31 41.5	-1.1
CVTV	Tajo	1.05	52	eP	Pg	05 31 42.0	-0.7
VTR0	Volcan Turrial	1.05	51	eP	Pg	05 31 42.2	-0.5
ARTO	Ro Cuarto	1.05	20	eP	Pg	05 31 41.5	-1.2
CVTR	Volcan Turrial	1.05	51	⇓iP	Pg	05 31 42.0	-0.7
VTCV	VTCV, Calle Va	1.05	53	⇓iP	Pg	05 31 41.9	-0.9
VERB	Verbena	1.06	56	⇓iP	Pg	05 31 41.9	-0.9
CMARA	Lajas Hojancha	1.06	309	P	Pg	05 31 41.7	-1.2
CMARA				S	Sn	05 31 57.8	-0.6
CMARA	Lajas Hojancha	1.06	309	⇑iP	Pg	05 31 41.7	-1.2
SAJE	San Jernim	1.06	90	eP	Pb	05 31 42.6	-0.5
ABRB	Las Abras (San	1.07	53	⇓iP	Pg	05 31 42.5	-0.7
ARE1	Arenal 1	1.11	353	⇓iP	Pb	05 31 43.1	-0.8
VARE2	V. Arenal	1.11	353	⇓iP	Pb	05 31 43.2	-0.7
FORC	Fortuna	1.11	356	⇓eP	Pb	05 31 43.1	-0.8
VACR	Volcan Arenal	1.12	355	⇓iP	Pb	05 31 43.1	-0.9
CVTG	V. Turrialba,	1.12	45	⇓eP	Pb	05 31 43.3	-0.8
CHIK	Chiripa	1.13	344	eP	Pb	05 31 42.1	-2.2
CEDE	Laguna Cedeo	1.13	354	⇓iP	Pb	05 31 43.8	-0.5
ITAL	Pital	1.14	16	⇑iP	Pb	05 31 43.4	-0.9
TABAC	Tabacon	1.15	351	⇓iP	Pb	05 31 44.0	-0.7
PILE	Guapiles	1.16	42	⇓iP	Pb	05 31 43.9	-0.8
REZ	Monterrey de S	1.17	355	eP	Pn	05 31 44.7	-0.4
TILA	Tilaran	1.17	341	eP	Pb	05 31 43.6	-1.4
PANP	Palmar Norte	1.18	109	⇑iP	Pb	05 31 44.2	-0.8
CNAS	Canas	1.18	335	eP	Pg	05 31 45.3	+0.1
RVLA	Villa Bonita	1.24	52	eP	Pn	05 31 45.2	-0.7
JUD3	Juan Diaz 3	1.24	311	eP	Pn	05 31 44.9	-1.2
BURE	Buenos Aires	1.24	98	eP	Pb	05 31 45.6	-0.5
PLVR	Palo Verde	1.25	323	eP	Pn	05 31 44.9	-1.3
LCOCO	El Coco	1.25	54	⇓eP	Pn	05 31 45.2	-0.8
IRES	Siquirres	1.30	55	eP	Pn	05 31 45.3	-1.4
TIMP	Tierras Morena	1.30	341	⇓iP	Pn	05 31 45.7	-1.1
QUEB	Quebradon, Cot	1.30	346	⇓iP	Pn	05 31 46.0	-0.9
CARI	Cariari	1.31	40	⇑iP	Pn	05 31 46.5	-0.4
ELVJ	El Viejo (Barb	1.31	326	eP	Pn	05 31 46.1	-0.8
DRK0	Durika	1.32	94	P	Pn	05 31 45.5	-1.9
DRK0				S	Sb	05 32 03.3	-1.4
DRK0	Durika	1.32	94	⇑eP	Pn	05 31 45.4	-1.9
COVE	Coope Vega, Sa	1.37	8	P	Pn	05 31 46.8	-1.0
COVE				S	Sn	05 32 05.9	-0.1
TENO	El Achiote	1.40	344	eP	Pn	05 31 47.2	-1.0
CUI	Cuipilapa	1.42	336	⇓iP	Pn	05 31 47.9	-0.6
TAAN	Batan	1.42	59	⇑iP	Pb	05 31 48.6	-0.5
EDP2	Potrero Grande	1.43	103	⇑iP	Pn	05 31 48.3	-0.3
DELF	Filadelfia	1.45	319	eP	Pb	05 31 49.3	-0.3
TRT2	Tortugero	1.46	35	P	Pn	05 31 48.4	-0.7
TRT2				S	Sb	05 32 08.0	-0.5
TRT2	Tortugero	1.46	35	⇓iP	Pn	05 31 48.3	-0.7
HORNC	Hornillas	1.47	337	⇓iP	Pn	05 31 48.7	-0.6
JIME	Puerto Jimenez	1.48	123	eP	Pn	05 31 48.9	-0.4
PTJ1	Puerto Jimnez	1.50	122	P	Pn	05 31 49.1	-0.5
PTJ1				S	Sg	05 32 09.7	-1.2
MESS	Mesas	1.50	337	⇓iP	Pn	05 31 49.3	-0.4
CLARA	Aguas Claras	1.54	338	⇓eP	Pn	05 31 49.8	-0.3
VMAR	Armenia, Volca	1.54	340	eP	Pn	05 31 50.1	-0.1
PIRO	Carate, Puerto	1.55	127	P	Pb	05 31 50.8	-0.6
PIRO				S	Sb	05 32 10.5	-0.6
ALIBA	Liberia Airpor	1.56	323	eP	Pn	05 31 49.9	-0.4
EDAD	Golfito	1.56	116	eP	Pn	05 31 49.2	-1.3
LAES	El Progreso Va	1.57	75	⇑iP	Pb	05 31 51.1	-0.6
GPS2	Hotel Rincn d	1.58	332	eP	Pn	05 31 50.8	0.0
FITO	Golfito	1.59	117	eP	Pn	05 31 49.0	-1.7
GPS3	Bodega del ICE	1.59	331	⇑iP	Pg	05 31 54.4	+1.4
UPAL	Upala	1.59	345	P	Pn	05 31 50.4	-0.5
UPAL				S	Sb	05 32 12.7	+0.4
UPAL	Upala	1.59	345	⇓eP	Pn	05 31 50.7	-0.1
ELI1	Hacienda Flor	1.60	324	P	Pb	05 31 51.6	-0.6
ELI1				S	Sb	05 32 12.9	+0.4
ELI1	Hacienda Flor	1.60	324	eP	Pn	05 31 50.5	-0.4
GPS1	Guardaparques	1.60	332	eP	Pn	05 31 50.7	-0.4
VRLE	La Escondida,	1.62	332	eP	Pn	05 31 51.2	-0.2
LAPC	Finca la Perla	1.64	329	⇑eP	Pn	05 31 50.6	-0.8
VORI	VORI	1.64	333	eP	Pn	05 31 51.1	-0.6
LCHIL	Los Chiles	1.68	356	⇓iP	Pn	05 31 51.7	-0.3
BUAI	Buenos Aires	1.69	334	eP	Pn	05 31 52.0	-0.1
PEJA	Penjamo Buenos	1.69	335	eP	Pn	05 31 52.5	+0.3
NELY	Ciudad Neily	1.76	113	eP	Pn	05 31 52.6	-0.5
BRIBI	Bribri	1.76	81	eP	Pb	05 31 54.6	-0.4
ALCO	Alturas Coton,	1.77	103	⇑eP	Pn	05 31 52.6	-0.9
RSRNO	Rio Sereno	1.78	107	eS	Sg	05 32 25.3	+5.4
MLIR3	Monte Lirio, C	1.82	108	eS	Sg	05 32 29.3	+8.1
SCLRA	Santa Clara, W	1.85	106	eP	Pb	05 31 55.8	-0.8
SCLRA				eS	Sg	05 32 24.8	+2.7
CDITO	Canoas	1.86	114	P	Pn	05 31 53.8	-0.7
CDITO				S	Sn	05 32 18.1	0.0
BRU2	Volcan	1.95	106	P	Pn	05 31 55.4	-0.5
BRU2				S	Sn	05 32 20.9	+0.3
BRU2	Volcan	1.95	106	eP	Pn	05 31 55.2	-0.6
BRU2				eS	Sg	05 32 24.9	-0.4
BRU2	Volcan	1.95	106	eP	Pn	05 31 55.3	-0.5
CLLRA	Cordillera,	2.04	107	eP	Pn	05 31 56.6	-0.5
CLLRA	Cordillera,	2.04	107	eP	Pn	05 31 56.5	-0.6
PTPA	Petro Terminal	2.04	124	eP	Pn	05 31 56.8	-0.2
JEFFS	S de V. Baru	2.14	108	eP	Pn	05 31 57.8	-0.6
JEFFS	S de V. Baru	2.14	108	eP	Pn	05 31 58.0	-0.4
BQTLY	Boquete Panama	2.18	106	eP	Pn	05 31 58.8	-0.2
DAP26	falda E V. Bar	2.21	105	eP	Pn	05 31 58.7	-0.8
DAP26	falda E V. Bar	2.21	105	⇓eP	Pn	05 31 58.6	-0.8
DVD	David	2.30	113	eS	Sb	05 32 30.8	-1.8
BGUAL	Bijagual, Pana	2.38	110	eP	Pn	05 32 01.9	+0.3
PBNVO	Pueblo Nuevo,	2.41	101	eP	Pn	05 32 01.4	-0.6
MORN	Al O del Volca	2.42	334	S	Sn	05 32 33.2	+1.2
RBALA	Bur	2.45	101	⇓iP	Pn	05 32 02.4	-0.2
RBALA	Bur	2.45	101	eP	Pn	05 32 02.4	-0.2
NANN	Nandasmo	2.98	330	P	Pn	05 32 10.3	+0.4
NANN				S	Sn	05 32 48.0	+2.1
SABN	Sabanita	3.02	329	P	Pn	05 32 10.8	+0.3
BOAB	BOACO BROADBAN	3.26	341	P	Pn	05 32 13.9	+0.2
BOAB				S	Sn	05 32 54.7	+2.1
CNGN	Cerro Negro	3.75	327	P	Pn	05 32 21.0	+0.3
CNGN				S	Sn	05 33 07.0	+2.0
MATN	Matagalpa	3.79	340	P	Pn	05 32 21.2	0.0
MATN				S	Sn	05 33 07.2	+1.3
SIUN	Universidad Ur	4.34	358	P	Pn	05 32 29.0	+0.3
SIUN				S	Sn	05 33 21.3	+1.9

IDC 04 05:42:59.0±3.5, 4°.29S×152°.69E, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=151.2km s-min=47.2km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.70	227	P	P	05 48 12.9	+0.1
	0.8nm,0.4s,baz=54,slow=10.0,SNR=17						
	0.8nm,0.4s						
ASAR	Alice Springs	26.45	222	P	P	05 48 38.2	+0.2
	0.3nm,0.6s,baz=39,slow=11,SNR=3.3						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	150.05	289	PKPbc	PKPbc	06 02 52.0	-0.8
	0.6nm,0.8s,baz=110,slow=2.6,SNR=4.9						

IDC 04 06:07:39.2±2.4, 23°.81S×66°.71W, h192km±20km, mb3.3/5, mbtmp3.8/10, Error ellipse: s-maj=25.8km s-min=16.7km az=51.0

NEIC 04 06:07:39.7±1.4, 23°.89S±0°.07×66°.73W±0°.09, h197km±7km, mb4.2/12, ML4.3(GUC), Error ellipse: s-maj=11.6km s-min=10.0km az=84.0

SJA 04 06:07:39.7±1.0, 23°.93S×66°.83W, h200km, ML4.2, MW3.9

GUC 04 06:07:40.5±0.6, 23°.85S×67°.14W, h229km±10km, ML4.3

VAO 04 06:07:41.6±1.9, 23°.61S×66°.62W, h204km±13km, mb3.9, Presumed earthquake

ISC 04 06:07:39.2±0.5, 23°.89S±0°.04×66°.83W±0°.05, h200km, n100, σ1s19/118, mb4.1/8, 5C, Jujuy Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALTA		0.56	127	eP	Pn	06 08 08.8	+1.7
SLA	San Lorenzo	1.47	125	iP	Pn	06 08 14.4	+1.6
SLA	San Lorenzo	1.47	125	eP	Pn	06 08 14.3	+1.6
AF01	San Pedro de A	1.55	307		Pn	06 08 16.4	+2.7
AF01	San Pedro de A	1.55	307	iP	Pn	06 08 16.4	+2.7
AF01	San Pedro de A	1.55	307	eP	Pn	06 08 15.9	+2.2
FSA	Cafayete	2.34	161	eP	Pn	06 08 22.4	+0.9
FSA				eS	Sn	06 08 54.4	-0.3
PB06	IPOC Station P	2.78	294		Pn	06 08 28.2	+1.7
PB06	IPOC Station P	2.78	294	iP	Pn	06 08 28.2	+1.7
PB06				eS	Sn	06 09 04.0	+0.7
PB06				IAML		06 09 06.4	
	comp=N,902nm,0.1s						
PB06	IPOC Station P	2.78	294	eP	Pn	06 08 27.5	+1.0
PB06				eS	Sn	06 09 04.2	+0.8
PB06				IAML		06 09 06.6	
	comp=Z,357nm,0.3s						
PB09	IPOC Station P	3.05	313		Pn	06 08 31.5	+1.9
PB09	IPOC Station P	3.05	313	iP	Pn	06 08 31.5	+1.9
PB09				eS	Sn	06 09 10.0	+1.0
PB09				IAML		06 09 13.1	
	comp=E,319nm,0.3s						
PB09				IAML		06 09 15.1	
	comp=E,326nm,0.3s						
PB09	IPOC Station P	3.05	313	eP	Pn	06 08 31.5	+1.9
PB09				eS	Sn	06 09 11.8	+2.8
PB09				IAML		06 09 13.0	
	comp=Z,341nm,0.3s						
PB03	IPOC Station P	3.26	304		Pn	06 08 33.4	+1.3
PB03	IPOC Station P	3.26	304	⇑iP	Pn	06 08 33.3	+1.3
PB03	IPOC Station P	3.26	304	eP	Pn	06 08 33.4	+1.3
PB03				eS	Sn	06 09 14.0	+0.6
PB03				IAML		06 09 15.3	
	comp=Z,566nm,0.3s						
PB05	IPOC Station P	3.27	288		Pn	06 08 33.1	+1.0
PB05	IPOC Station P	3.27	288	iP	Pn	06 08 33.1	+1.0
PB05	IPOC Station P	3.27	288	eP	Pn	06 08 33.3	+1.2
PB05				eS	Sn	06 09 12.8	-0.8
PB14	IPOC Station P	3.35	257		Pn	06 08 34.2	+0.9
PB14	IPOC Station P	3.35	257	⇑iP	Pn	06 08 34.1	+0.9
PB14	IPOC Station P	3.35	257	eP	Pn	06 08 34.2	+0.9
PB14				eS	Sn	06 09 15.2	-0.3
PB14				IAML		06 09 18.1	
	comp=Z,462nm,0.2s						
PB07	IPOC Station P	3.55	307		Pn	06 08 36.5	+0.9
PB07	IPOC Station P	3.55	307	⇑iP	Pn	06 08 36.6	+0.9
PB07	IPOC Station P	3.55	307	eP	Pn	06 08 36.6	+0.9
PB07				eS	Sn	06 09 19.9	+0.2
PB07				IAML		06 09 21.4	
	comp=Z,366nm,0.2s						
AC02	Maricunga	3.60	215		Pn	06 08 38.0	+1.4
AC02	Maricunga	3.60	215	eP	Pn	06 08 37.9	+1.4
AC02	Maricunga	3.60	215	eP	Pn	06 08 37.3	+0.8
AC02				eS	Sn	06 09 08.4	-13
AC02				IAML		06 10 06.1	
	comp=Z,293nm,0.8s						
PB01	IPOC Station P	3.75	318		Pn	06 08 38.8	+0.8
PB01	IPOC Station P	3.75	318	⇑iP	Pn	06 08 38.7	+0.8
PB01	IPOC Station P	3.75	318	eP	Pn	06 08 38.8	+0.8
PB01				eS	Sn	06 09 23.7	-0.4
PB01				IAML		06 09 26.0	
	comp=Z,322nm,0.2s						
PB02	IPOC Station P	3.82	311		Pn	06 08 39.5	+0.6
PB02	IPOC Station P	3.82	311	iP	Pn	06 08 39.5	+0.6
PB02				eS	Sn	06 09 23.9	-1.7
PB02	IPOC Station P	3.82	311	eP	Pn	06 08 39.5	+0.6
PB02				eS	Sn	06 09 24.8	-0.8
PB02				IAML		06 09 28.5	
	comp=Z,696nm,0.2s						
AC01	Pan de Azucar	4.10	236		Pn	06 08 42.0	-0.2
AC01	Pan de Azucar	4.10	236	⇑eP	Pn	06 08 41.9	-0.2
AC01	Pan de Azucar	4.10	236	eP	Pn	06 08 42.0	-0.2
AC01				eS	Sn	06 09 30.0	-1.7
AC01				IAML		06 09 30.5	
	comp=Z,226nm,0.4s						
TINO	Tinogasta	4.21	189	eP	Pn	06 08 45.2	+1.5
TINO				eS	Sn	06 09 36.4	+1.8
PB08	IPOC Station P	4.31	329		Pn	06 08 46.6	+1.4
PB08	IPOC Station P	4.31	329	iP	Pn	06 08 46.7	+1.4
PB08				eS	Sn	06 09 37.2	+0.1
PB08	IPOC Station P	4.31	329	eP	Pn	06 08 46.6	+1.4
PB08				eS	Sn	06 09 37.8	+0.7
PB08				IAML		06 09 43.6	
	comp=Z,138nm,0.4s						
PATCX	Punta Patache	4.33	314		Pn	06 08 45.2	-0.1
TA02	Huaiquique	4.73	319	eP	Pn	06 08 48.9	-1.2
TA02	Huaiquique	4.73	319	eP	Pn	06 08 50.3	+0.2
TA02				eS	Sn	06 09 37.9	-8.1
TA02				IAML		06 09 47.9	
	comp=Z,253nm,0.1s						
GO01	Chusmiza	4.74	332		Pn	06 08 51.5	+0.7
GO01	Chusmiza	4.74	332	eP	Pn	06 08 51.5	+0.7
GO01				eS	Sn	06 09 47.2	+0.2
GO01				IAML		06 09 50.2	
	comp=Z,112nm,0.1s						
GO03	Copiapo	4.80	219	eP	Pn	06 08 50.5	-0.7
GO03	Copiapo	4.80	219	eP	Pn	06 08 50.8	-0.3
GO03				eS	Sn	06 09 45.1	-2.7
GO03				IAML		06 09 51.7	
	comp=Z,160nm,0.5s						
PB11	IPOC Station P	4.87	327		Pn	06 08 52.0	-0.2
PB11	IPOC Station P	4.87	327	eP	Pn	06 08 51.3	-0.9
PB11				eS	Sn	06 09 48.0	-1.7
PB11				IAML		06 09 52.0	
	comp=Z,131nm,0.3s						
VCA	Vinchina	4.99	194	eP	Pn	06 08 54.9	+1.3
VCA				IAML		06 10 10.2	
	comp=Z,115nm,0.8s						
AC05	El Transito	5.82	211	Pn	Pn	06 09 03.8	-0.4
PB16	IPOC Station P	6.06	335		Pn	06 09 08.2	+0.3
LCO	Las Campanas	6.17	213	Pn	Pn	06 09 07.5	-1.4
CO01	Juntas del Tor	6.73	205	Pn	Pn	06 09 17.0	+0.9
LPAZ	La Paz	7.66	351	P	Pn	06 09 29.2	+0.6
	comp=Z,1.3nm,0.3s,baz=148,slow=7.1,SNR=22						
LPAZ				S	Sn	06 10 52.4	-3.2
	comp=Z,1.7nm,0.5s,baz=65,slow=14,SNR=1.8						
LPAZ	La Paz	7.66	351		Pn	06 09 29.6	+1.0
CO03	El Pedregal	7.73	206	Pn	Pn	06 09 27.8	-1.1
CO04	Los Peladeros	8.91	203	Pn	Pn	06 09 42.5	-2.1
CPUP	Villa Florida	8.95	108	P	Pn	06 09 43.3	-1.4
	comp=Z,4.3nm,0.7s,baz=287,slow=12,SNR=14						
CPUP	Villa Florida	8.95	108		Pn	06 09 43.4	-1.3
SIV	San Ignacio	9.54	36	P	Pn	06 09 51.0	-1.5
	comp=Z,1.8nm,0.6s,baz=206,slow=12,SNR=12						
VILB	Vilhena	12.56	31	eP	Pn	06 10 29.5	-1.8
PTGB	Pitanga	13.49	97	eP	P	06 10 44.7	-0.7
CPSB	Cacapava Do Su	13.57	121	eP	P	06 10 45.6	-0.6
ITAB	Concordia	13.68	107	Pn	Pn	06 10 44.3	-0.8
TRQA	Tornquist	14.72	165		Pn	06 10 57.7	-0.2
FRTB	Fartura	15.83	92	eP	Pn	06 11 11.5	-0.1
ARAG	Araguaiana, MT	16.29	63	eP	P	06 11 16.2	-0.2
CLDB	Colider	16.67	41	eP	P	06 11 19.4	-1.2
PLCA	Paso Flores	17.09	190	P	Pn	06 11 27.1	+0.7
	comp=Z,1.1nm,1.0s,baz=17,slow=14,SNR=6.9						
PLCA	Paso Flores	17.09	190	Pn	Pn	06 11 27.1	+0.7
PLCA				IAmb	IAmb	06 11 44.0	
	comp=Z,9.5nm,1.4s						
VAO	Valinhos	18.25	91	P	P	06 11 37.2	-0.7
IPMB	Ipameri, GO	18.34	75	eP	P	06 11 38.5	-0.5
SNDB	Serra Nova Dou	18.92	54	eP	P	06 11 44.0	-1.1
BDFB	Brasilia	19.50	69	P	P	06 11 51.1	-0.4
	comp=Z,8.6nm,0.8s,baz=244,slow=12,SNR=14						
BDFB	Brasilia	19.50	69	P	P	06 11 51.4	0.0
BDFB				IAmb	IAmb	06 11 52.2	
	comp=Z,8.5nm,0.8s						
TEFE	Tefe	20.37	6	eP	P	06 11 59.8	-0.9
JANB	Januaria	22.95	72	eP	P	06 12 24.9	-1.4
SDBA	SAO DESIDERIO	23.72	65	eP	P	06 12 31.8	-1.4
BOAV	Boa Vista	26.83	14	P	P	06 13 01.2	0.0
BOAV				IAmb	IAmb	06 13 44.8	
	comp=Z,6.7nm,1.3s						
SJG	San Juan	41.75	1	P	P	06 15 08.7	-0.1
SJG				IAmb	IAmb	06 15 11.1	
	comp=Z,7.1nm,0.6s						
BANI	BANI	42.16	355	P	P	06 15 12.2	-0.1
MTO3	Montecristo	43.97	328	P	P	06 15 27.5	+0.5
TEIG	Tepich	48.57	333	P	P	06 16 03.3	+0.8
833A	Chaparral WMA,	60.66	327	P	P	06 17 30.8	+1.5
TXAR	Lajitas Array	63.68	324	P	P	06 17 50.2	+0.8
	comp=Z,0.5nm,0.8s,baz=112,slow=7.1,SNR=3.9						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	63.68	324	P	P	06 17 50.5	+1.0
TX31	Lajitas Ar. Si	63.68	324	P	P	06 17 49.9	+0.5
PBMO	Poplar Bluff	64.32	339	P	P	06 17 54.1	+0.8
PBMO				IAmb	IAmb	06 17 54.6	
	comp=Z,4.0nm,0.8s						
TPB05	Hovey Rd	64.75	326	P	P	06 17 57.8	+1.4
TPB05				IAmb	IAmb	06 18 30.6	
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	76.38	69	P	P	06 19 06.3	-0.6
	comp=Z,0.6nm,0.7s,baz=241,slow=9.3,SNR=4.1						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	76.38	69	IAmb	IAmb	06 19 38.9	
	comp=Z,4.4nm,0.8s						
PDAR	Pinedale Array	77.13	329	P	P	06 19 12.1	+1.3
	comp=Z,0.2nm,0.5s,baz=130,slow=8.6,SNR=4.5						
	comp=Z,0.2nm,0.5s						
ULM	Lac du Bonnet	78.17	341	P	P	06 19 16.5	+0.5
	comp=Z,1.3nm,0.5s,baz=180,slow=5.1,SNR=4.1						
	comp=Z,1.3nm,0.5s						
YKA	Yellowknife Ar	94.07	340	P	P	06 20 34.8	+0.6
	comp=Z,0.3nm,0.6s,baz=135,slow=4.0,SNR=7.7						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	128.62	205	PKP	PKPdf	06 26 23.3	+0.1
	comp=Z,0.3nm,0.5s,baz=145,slow=2.3,SNR=4.1						
WRA	Warramunga Arr	131.80	207	PKP	PKPdf	06 26 29.8	+0.5
	comp=Z,0.2nm,0.5s,baz=167,slow=1.7,SNR=5.5						
ZALV	Zalesovo Beam	143.22	28	PKhKP	PKPpre	06 26 46.1	
	comp=Z,0.5nm,0.4s,baz=316,slow=4.0,SNR=4.0						
MKAR	Makanchi Array	146.34	40	PKPbc	PKPab	06 26 57.1	-0.4
	comp=Z,1.3nm,0.6s,baz=304,slow=3.5,SNR=13						

AFAD 04 06:13:26.9, 38°.50N×25°.36E, h7km±6km, ML3.3

THE 04 06:13:29.8, 38°N±1°×2°6E±°, h15km±5km, M3.3/17, MLh3.3/17

ISK 04 06:13:29.1, 38°.44N×25°.51E, h18km, ML3.5/43

ATH 04 06:13:29.2, 38°.41N×25°.52E, h18km±1km, ML3.3/19, Manual Solution by K.Orfanogiannaki First location: 2020/02/04 06:14:38, This location: 2020/02/04 06:25:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km

ISC 04 06:13:29.4±1.1, 38°.43N±0°.02×25°.50E±0°.02, h19km±3km, n125, σ0s69/159, 7C-5D, Aegean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.44	96	Pg	Pb	06 13 38.3	-0.3
CHOS				Sg	Sb	06 13 44.3	-0.5
CHOS	Chios island	0.44	96	P	Pb	06 13 38.3	-0.3
CHOS				S	Sb	06 13 44.4	-0.5
CHOS	Chios island	0.44	96	P	Pb	06 13 38.3	-0.3
CHOS				S	Sg	06 13 44.1	-0.5
EAG2	Marmaro, Chios	0.49	77	P	Pg	06 13 38.8	-0.6
EAG2				S	Sg	06 13 45.5	-0.6
CESE	eme	0.64	99	Pg	Pb	06 13 41.9	+0.1
CESE				Sg	Sb	06 13 51.2	+0.9
KARB	zmir-Karabur	0.75	72	P	Pg	06 13 44.1	-0.1
KARB				S	Sn	06 13 55.4	-0.4
ZEYE	Izmir, Urla-Ze	0.81	103	P	Pb	06 13 44.7	-0.1
ZEYE				S	Sg	06 13 55.8	-0.3
ZEYE				IAML		06 13 58.0	
	comp=E,1μm,0.5s						
ZEYE				IAML		06 13 58.0	
	comp=N,2μm,0.4s						
SIGR	SIGRI	0.82	20	Pg	Pn	06 13 45.5	-0.5
SIGR				Sg	Sn	06 13 57.3	-0.3
SIGR	SIGRI	0.82	20	P	Pn	06 13 45.5	-0.5
SIGR				S	Sn	06 13 57.6	0.0
SIGR	SIGRI	0.82	20	P	Pn	06 13 45.5	-0.5
SIGR				S	Sn	06 13 57.2	-0.3
KRBN	Karaburun	0.84	79	Pg	Pn	06 13 45.8	-0.4
KRBN				Sg	Sn	06 13 57.8	-0.2
SKY	Skiros Island	0.87	301	P	Pn	06 13 46.8	+0.2
SKY				S	Sn	06 13 58.7	0.0
SKY	Skiros Island	0.87	301	P	Pg	06 13 46.3	0.0
SKY				S	Sb	06 13 57.3	+0.3
KARY	Karystos	0.93	245	P	Pb	06 13 46.8	-0.1
KARY				S	Sg	06 13 59.9	+0.1
KARY	Karystos	0.93	245	P	Pb	06 13 46.4	-0.4
KARY				S	Sb	06 13 59.1	+0.4
TNSA	Tinos	0.93	197	P	Pb	06 13 46.5	-0.3
TNSA				S	Sb	06 13 57.9	-0.9
FOCM	Foa	1.00	73	Pg	Pg	06 13 48.7	-0.2
PRK	Paraskevi	1.01	36	P	Pg	06 13 48.8	-0.3
PRK				S	Sn	06 14 03.0	+0.8
PRK	Paraskevi	1.01	36	P	Pg	06 13 48.5	-0.6
PRK				S	Sg	06 14 01.5	-0.9
BAGT	Foa	1.08	78	P	Pg	06 13 49.9	-0.6
KYMI	Kymi, Euboea I	1.12	281	P	Pb	06 13 50.3	+0.2
KYMI	Kymi, Euboea I	1.12	281	P	Pn	06 13 49.9	-0.1
KYMI				S	Sb	06 14 04.0	-0.2
GPNR	Gulpinar-Canak	1.14	26	Pn	Pn	06 13 49.9	-0.3
DGB	zmir	1.15	109	P	Pb	06 13 50.6	-0.1
DGB				S	Sb	06 14 05.2	-0.1
DGB				IAML		06 14 07.0	
	comp=N,595nm,0.9s						
DGB				IAML		06 14 09.0	
	comp=E,418nm,0.3s						
GMLD	Gumuldur	1.17	107	Pn	Pb	06 13 51.1	+0.1
KOCA	Canakkale, Ayv	1.18	25	P	Pn	06 13 50.4	-0.5
KOCA				S	Sg	06 14 10.0	+2.3
KOCA				IAML		06 14 12.0	
	comp=N,2μm,0.3s						
KOCA				IAML		06 14 13.0	
	comp=E,1μm,0.6s						
BLCB	Balcova	1.21	92	Pn	Pb	06 13 51.4	-0.3
BLCB	Balcova	1.21	92	P	Pb	06 13 51.6	-0.1
IZMD	zmir-Dikili-	1.25	63	P	Pn	06 13 51.8	0.0
IZMD				S	Sb	06 14 07.7	-0.3
DKL	Dikili	1.27	59	Pn	Pb	06 13 52.2	-0.5
AYVA	Ayvalik	1.28	46	P	Pn	06 13 51.9	-0.2
AYVA				S	Sn	06 14 08.8	+0.1
AYVA				IAML		06 14 14.0	
	comp=N,629nm,0.6s						
AYVA				IAML		06 14 16.0	
	comp=E,449nm,0.5s						
SMG	Samos	1.28	124	P	Pn	06 13 52.4	+0.2
SMG	Samos	1.28	124	P	Pn	06 13 52.1	-0.1
SMG				S	Sb	06 14 08.4	-0.5
PTL	Penteli	1.34	254	P	Pn	06 13 53.4	+0.3
PTL	Penteli	1.34	254	P	Pn	06 13 52.5	-0.6
ZEDA	zmir-Bergama	1.34	66	P	Pn	06 13 53.2	+0.1
ZEDA				S	Sg	06 14 14.6	+1.6
ZEDA				IAML		06 14 17.0	
	comp=N,233nm,0.4s						
ATHU	Athens Univers	1.43	252	P	Pn	06 13 52.9	-1.4
CAMT	Merkez	1.46	77	P	Pb	06 13 55.3	-0.6
CAMT				S	Sg	06 14 18.1	+1.6

CAMT				IAML		06 14 20.0	
	comp=E,759nm,0.6s						
CAMT				IAML		06 14 20.0	
	comp=N,738nm,0.7s						
VLY	Voula,Athens	1.47	247	P	Pn	06 13 55.0	+0.3
VLY	Voula,Athens	1.47	247	P	Pn	06 13 54.4	-0.4
BOZC	Bozcaada	1.47	17	Pn	Pn	06 13 54.9	0.0
ATH	Athens Observa	1.48	252	P	Pn	06 13 55.0	+0.1
LIA	Limnos Island	1.48	351	P	Pb	06 13 55.5	-0.8
LIA				S	Sb	06 14 14.7	-0.1
LIA	Limnos Island	1.48	351	P	Pn	06 13 55.4	+0.4
EZN	Ezine	1.53	24	Pn	Pn	06 13 55.9	+0.2
EZN	Ezine	1.53	24	P	Pn	06 13 55.9	+0.2
EZN				S	Sb	06 14 15.6	-0.5
BAYC	CANAKKALE_Bayr	1.54	32	P	Pn	06 13 55.5	-0.3
BAYC				S	Sb	06 14 15.9	-0.5
BAYC				IAML		06 14 24.0	
	comp=E,211nm,0.3s						
BAYC				IAML		06 14 24.0	
	comp=N,196nm,0.7s						
GCAM	G?zelcaml?	1.55	118	Pn	Pn	06 13 56.2	+0.3
GCAM	G?zelcaml?	1.55	118	P	Pb	06 13 57.0	-0.5
GCAM				S	Sb	06 14 17.8	+1.1
GCAM				IAML		06 14 19.0	
	comp=N,995nm,0.6s						
GCAM				IAML		06 14 21.0	
	comp=E,488nm,0.7s						
STFN	Stefani	1.56	261	P	Pn	06 13 56.8	+0.7
STFN	Stefani	1.56	261	P	Pn	06 13 56.6	+0.5
MAGU	Magoula	1.60	258	P	Pn	06 13 55.8	-0.9
BUHA	Balikesir, Bur	1.63	49	P	Pn	06 13 56.3	-0.7
BUHA				S	Sg	06 14 19.9	-2.1
BUHA				IAML		06 14 27.0	
	comp=E,402nm,0.4s						
BUHA				IAML		06 14 28.0	
	comp=N,279nm,0.4s						
ECEA	Canakkale, Ece	1.69	18	P	Pn	06 13 57.9	0.0
ECEA				S	Sg	06 14 25.3	+1.2
ECEA				IAML		06 14 27.0	
	comp=N,888nm,0.4s						
YAYO	Edremit-Balk	1.70	46	Pn	Pn	06 13 58.3	+0.3
VILL	Villia	1.74	262	P	Pn	06 13 59.3	+0.7
GOAD	anakkale-G¶	1.75	10	P	Pn	06 13 59.2	+0.5
GOAD				S	Sg	06 14 26.7	+0.6
GOAD				IAML		06 14 30.0	
	comp=E,516nm,0.7s						
GOAD				IAML		06 14 32.0	
	comp=N,409nm,0.6s						
VIL2	Platees	1.77	264	P	Pn	06 13 59.0	0.0
CNKL	anakkale-Mer	1.77	23	P	Pn	06 13 57.6	-1.4
GADA	Gvkgeada	1.78	10	Pn	Pn	06 13 59.4	+0.3
GADA	Gvkgeada	1.78	10	P	Pn	06 13 59.4	+0.3
COMU	Canakkale	1.83	24	Pn	Pn	06 14 00.4	+0.6
MET5	Makryloggos,Me	1.88	245	P	Pn	06 14 00.5	+0.1
MET6	Megalochori,Me	1.89	244	P	Pn	06 14 00.8	+0.2
AYDB	Zeytinkoy-Aydi	1.94	104	Pn	Pn	06 14 02.3	+0.8
IZMR	zmir-demi	1.95	98	P	Pb	06 14 04.6	+0.3
STEP	BALIKESIR_Sava	1.97	61	P	Pg	06 14 06.1	-1.2
STEP				S	Sg	06 14 32.1	-0.8
LKR	Lokris	1.97	277	P	Pn	06 14 02.3	+0.5
NEO	Neokhori	1.98	297	P	Pn	06 14 02.3	+0.4
BODT	Bodrum	1.98	133	Pn	Pn	06 14 02.9	+1.0
CANM	Can-anakkale	1.98	37	Pn	Pn	06 14 02.6	+0.7
YENI	Yenice-Canakka	2.02	41	Pn	Pn	06 14 03.1	+0.7
SNT5	Nea Kammeni, S	2.03	182	P	Pn	06 14 02.0	-0.5
ODEM	Odemis-Izmir	2.03	94	Pn	Pn	06 14 03.6	+1.0
SMTH	Samothraki Isl	2.04	1	P	Pn	06 14 02.6	0.0
SMTH	Samothraki Isl	2.04	1	P	Pn	06 14 02.5	-0.2
LTK	Loutraki	2.04	259	P	Pn	06 14 03.0	+0.4
THERA	Ancient Thera,	2.06	181	P	Pn	06 14 02.0	-1.0
GELI	Tayfur-Gelibol	2.10	21	Pn	Pn	06 14 04.5	+1.0
MLSB	Milas	2.13	122	Pn	Pn	06 14 04.7	+0.8
GORD	Gordes-Manisa	2.15	76	Pn	Pn	06 14 05.1	+0.9
LPK	Lapseki	2.17	26	Pn	Pn	06 14 05.1	+0.7
BALB	Balikesir	2.21	56	Pn	Pn	06 14 05.9	+0.9
ENZZ	Sultanice-Enez	2.23	13	Pn	Pn	06 14 05.9	+0.7
OUR	Ouranopolis	2.23	329	Pn	Pn	06 14 06.1	+0.8
BIGA	Biga-Canakkale	2.25	34	Pn	Pn	06 14 06.2	+0.7
NAZL	Nazilli-Aydin	2.25	101	Pn	Pn	06 14 06.6	+1.0
AXAR	Agios Charalam	2.25	279	P	Pn	06 14 06.4	+0.8
THAS	Thassos island	2.25	345	P	Pn	06 14 05.8	+0.2
CAVK	Edirne/Enez-Ca	2.31	13	⇑P	Pn	06 14 06.5	+0.1
GONE	Gonen-Balikesi	2.34	46	Pn	Pn	06 14 07.9	+1.1
ENEZ	Enez	2.35	12	Pn	Pn	06 14 08.1	+1.1
ERIK	Erikli-Kesan	2.37	19	Pn	Pn	06 14 07.8	+0.6
DAT	Datca	2.37	135	Pn	Pn	06 14 07.9	+0.6
DATC	Datca-Mugla	2.40	134	Pn	Pn	06 14 08.4	+0.9
KRBG	Karabiga-Canak	2.40	35	Pn	Pn	06 14 08.3	+0.7
KULA	Kula-Manisa	2.48	87	Pn	Pn	06 14 09.9	+1.1
ALN	Alexandroupoli	2.50	10	Pn	Pn	06 14 09.6	+0.7
PLG	Polygyros	2.51	321	P	Pn	06 14 08.2	-0.9
SUSR	Susurluk-Balik	2.52	52	Pn	Pn	06 14 09.9	+0.6
GUR	Goura	2.54	260	P	Pn	06 14 10.1	+0.4
YER	Yerkesik	2.56	120	Pn	Pn	06 14 11.1	+1.3
KALE	Kalithea	2.64	270	P	Pn	06 14 12.1	+1.1
EDC	Edincik	2.65	43	Pn	Pn	06 14 11.9	+0.9
VLI	Veliai	2.66	231	P	Pn	06 14 10.7	-0.5
KLV	Kalavryta, Ach	2.67	263	P	Pn	06 14 12.0	+0.6
GAZK	Gazikoy-TEKIRD	2.71	31	Pn	Pn	06 14 12.9	+1.1
RDO	Rodhopi	2.71	1	P	Pn	06 14 12.4	+0.5
RDO	Rodhopi	2.71	1	P	Pn	06 14 12.0	+0.2
TURN	Turunc	2.74	126	Pn	Pn	06 14 12.9	+0.7
BAND	Balkesir-Ban	2.78	46	⇓P	Pn	06 14 13.9	+1.0
SIMA	Simav-Kutahya	2.80	75	Pn	Pn	06 14 14.5	+1.3
KCTX	Karacabey (Bur	2.87	50	Pn	Pn	06 14 15.2	+1.1
DALY	Dalyan (Mula)	2.98	122	Pn	Pn	06 14 17.3	+1.8
KARP	Karpathos	3.17	155	P	Pn	06 14 18.1	-0.2
BOVS	Bovan	5.94	332	⇓P	Pn	06 14 56.5	+0.3
HERR	Herculane	6.84	341	⇑P	Pn	06 15 09.3	+0.6
MDVR	Moldovita	6.95	337	⇑P	Pn	06 15 10.3	+0.2
ARR	Arges	6.96	355	⇑P	Pn	06 15 10.8	+0.5
VOIR		7.01	357	⇑P	Pn	06 15 11.2	+0.2
MLR	Muntele Rosu	7.06	3	⇑P	Pn	06 15 12.7	+1.0
GZR	Gura Zlata	7.25	345	⇓P	Pn	06 15 14.9	+0.7
PLOR	Plostina	7.46	6	⇓P	Pn	06 15 17.6	+0.4
VRI	Vrincioaia	7.48	7	⇑P	Pn	06 15 17.5	+0.1
BURAR	Bucovina Array	9.18	359	⇓P	Pn	06 15 41.2	+0.4

*GCMT **04** 06:21:14.0±0.3, 56°.70S±0°.02×141°.85W±0°.03, h23km±1km, MW5.0/84, Moment Tensor Solution. s30,c38; s84,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.03±.17; $M_{\theta\theta}$2.36±.15; $M_{\phi\phi}$-2.40±.14; $M_{r\theta}$0.44±.21; $M_{\theta\phi}$2.47±.12; $M_{\phi r}$-0.01±.20; Best double couple: $M_0$3.45800×10^{16} NP1:ϕ_s22.00000°,δ83.00000°,λ177.00000°. NP2: ϕ_s112.00000°,δ87.00000°,λ7.00000°. Principal axes: T 3.4570, Plg7.0000°, Azm337.0000°; N -0.0030, Plg83.0000°, Azm133.0000°; P -3.4600, Plg3.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 04 06:21:15.8±2.0**, 54°.99S×144°.68W, h0km, mb3.6**/2**, mbtmp3.6**/2**, MS3.8**/23 **Error ellipse: s-maj=440.0km s-min=47.2km az=179.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	29.27	201	LR	LR	06 36 33.7	
	comp=Z,60nm,18.9s,baz=50,slow=31						
URZ	Urewera	30.64	287	LR	LR	06 36 25.4	
	comp=Z,148nm,21.6s,baz=126,slow=30						
TBI	Tubuai	31.80	352	eLR	LR	06 36 29.2	
	3μm,28.2s						
TBI				eT	T	07 03 14.5	
	10nm,0.2s						
QSPA	South Pole Qui	35.16	180	LR	LR	06 38 37.7	
	comp=Z,275nm,21.4s,baz=67,slow=30						
RAR	Rarotonga	35.60	335	LR	LR	06 39 16.1	
	comp=Z,164nm,21.1s,baz=137,slow=30						
PAE	Paea	37.45	352	eT	T	07 10 17.1	
	1.4nm,0.2s						
PPT2	Papeete2	37.52	352	eLR	LR	06 39 02.4	
	430nm,28.2s						
PPT2				eLR	LR	06 39 03.9	
	669nm,28.2s						
PPT2				eT	T	07 10 18.0	
	1.6nm,0.2s						
RPN	Rapa Nui	37.85	57	LR	LR	06 40 04.0	
	comp=Z,160nm,18.4s,baz=194,slow=30						
VAH	Vaihoa	39.74	356	eT	T	07 13 02.9	
	14nm,0.1s						
TAOE	Nuku Hiva Isla	46.16	6	eLR	LR	06 43 05.7	
	414nm,28.0s						
DZM	Mont Dzumac	48.94	292	LR	LR	06 48 23.6	
	comp=Z,80nm,18.4s,baz=151,slow=33						
DZM	Mont Dzumac	48.94	292	eLR	LR	06 44 25.9	
	251nm,25.1s						
H03S2	Juan Fernandez	49.46	93	T	T	07 21 40.3	
	baz=220,slow=74,SNR=8.9						
H03S1	Juan Fernandez	49.47	93	T	T	07 21 40.6	
	baz=220,slow=74,SNR=8.0						
H03S3	Juan Fernandez	49.48	93	T	T	07 21 37.5	
	baz=220,slow=74,SNR=7.8						
H03N3	Juan Fernandez	49.74	93	T	T	07 21 44.3	
	baz=222,slow=72,SNR=25						
H03N2	Juan Fernandez	49.74	93	T	T	07 21 42.4	
	baz=222,slow=72,SNR=22						
H03N1	Juan Fernandez	49.75	93	T	T	07 21 48.1	
	baz=222,slow=72,SNR=25						
SNAA	Sanae	50.81	165	LR	LR	06 49 16.8	
	comp=Z,76nm,18.3s,baz=188,slow=33						
STKA	Stephens Creek	55.47	262	LR	LR	06 50 46.1	
	comp=Z,96nm,21.2s,baz=192,slow=32						
MAW	Mawson	56.01	192	LR	LR	06 51 30.9	
	comp=Z,121nm,19.5s,baz=150,slow=32						
ASAR	Alice Springs	66.11	263	P	P	06 32 05.1	+0.4
	0.6nm,0.8s,baz=142,slow=5.7,SNR=5.0						
ASAR				LR	LR	06 56 53.4	
	comp=Z,87nm,21.6s,baz=123,slow=32						
	0.6nm,0.8s						
H01W1	Cape Leeuwin H	68.06	240	T	T	07 47 30.0	
	baz=144,slow=76,SNR=33						
H01W2	Cape Leeuwin H	68.06	240	T	T	07 47 30.4	
	baz=144,slow=76,SNR=33						
H01W3	Cape Leeuwin H	68.08	240	T	T	07 47 29.5	
	baz=144,slow=76,SNR=27						
WRA	Warramunga Arr	68.77	265	P	P	06 32 20.9	-0.6
	0.5nm,0.8s,baz=147,slow=5.9,SNR=3.3						
	0.5nm,0.8s						
LPAZ	La Paz	69.11	89	LR	LR	06 56 52.2	
	comp=Z,34nm,19.1s,baz=158,slow=31						
PMG	Port Moresby	69.87	283	LR	LR	07 00 35.1	
	comp=Z,55nm,18.7s,baz=213,slow=34						
ATAH	Atahualpa	70.68	74	LR	LR	06 55 55.5	
	comp=Z,95nm,19.6s,baz=215,slow=29						
FITZ	Fitzroy Crossi	75.20	260	LR	LR	07 02 00.9	
	comp=Z,176nm,21.4s,baz=164,slow=32						
JAY	Jayapura	79.14	281	LR	LR	07 04 33.8	
	comp=Z,77nm,19.8s,baz=1.0,slow=33						
JTS	Las Juntas de	81.90	59	LR	LR	07 02 06.1	
	comp=Z,79nm,18.2s,baz=208,slow=30						
ROSC	El Rosal	82.85	71	LR	LR	07 03 20.2	
	comp=Z,74nm,18.9s,baz=221,slow=30						
CMIG	Matias Romero	83.28	47	LR	LR	07 02 45.5	
	comp=Z,30nm,19.1s,baz=198,slow=30						
KAPI	Kappang	89.13	263	LR	LR	07 11 40.7	
	comp=Z,71nm,21.0s,baz=155,slow=34						
PFO	Pinyon Flats O	91.52	23	LR	LR	07 05 42.7	
	comp=Z,48nm,20.4s,baz=207,slow=29						
SUR	Sutherland	92.09	168	LR	LR	07 12 26.8	
	comp=Z,40nm,18.6s,baz=170,slow=33						
MDP	Montagnes des	95.31	89	LR	LR	07 10 56.8	
	comp=Z,56nm,19.4s,baz=158,slow=31						
ANMO	Albuquerque	95.40	31	LR	LR	07 07 52.9	
	comp=Z,70nm,22.0s,baz=196,slow=29						
H10S3	ASCENSION HYDR	103.87	129	T	T	08 29 17.4	
	baz=12,slow=74,SNR=6.6						
H10S2	ASCENSION HYDR	103.87	129	T	T	08 29 14.9	
	baz=208,slow=74,SNR=9.1						
H10N3	ASCENSION HYDR	104.92	128	T	T	08 30 28.1	
	baz=206,slow=75,SNR=13						
H10N1	ASCENSION HYDR	104.93	128	T	T	08 30 28.2	
	baz=206,slow=75,SNR=27						
H10N2	ASCENSION HYDR	104.94	128	T	T	08 30 28.9	
	baz=206,slow=75,SNR=18						
ESDC	Sonseca Array	149.76	104	PKPbc	PKPbc	06 41 06.4	-0.5
	0.7nm,0.7s,baz=241,slow=2.1,SNR=6.1						
MKAR	Makanchi Array	149.77	274	PKPbc	PKPbc	06 41 06.4	-0.3
	0.4nm,0.6s,baz=108,slow=4.7,SNR=4.7						

*NEIC **04** 06:28:35.9±0.9, 17°.801N±0°.006×66°.84W±0°.01, h10km±1km, ML2.0/27, ML2.5(RSPR), Error ellipse: s-maj=3.1km s-min=2.1km az=3.0*

RSPR 04 06:28:37.1, 17°.89N×66°.86W, h16km±1km**, 1C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.09	345		Pg	06 28 40.5	+0.2
GBPR					Sg	06 28 42.7	+0.2
GBPR	Guanica, Bosqu	0.09	345	⇓iP	Pg	06 28 40.5	+0.2
GBPR				eS	Sg	06 28 42.7	+0.2
MLPR	Magueyes Islan	0.20	293		Pg	06 28 41.1	-0.7
MLPR				IAML		06 28 42.4	
	777nm,0.1s						
MLPR				IAML		06 28 42.7	
	1μm,0.1s						
CRPR	Cabo Rojo, PR	0.27	295		Pg	06 28 42.4	-0.6
CRPR	Cabo Rojo, PR	0.27	295	IAML		06 28 44.6	
	269nm,0.3s						
CRPR				IAML		06 28 44.8	
	200nm,0.2s						
CRPR	Cabo Rojo, PR	0.27	295	⇑iP	Pg	06 28 42.3	-0.6
OBIP	Obispado Ponce	0.28	58		Pg	06 28 42.8	-0.3
OBIP					Sg	06 28 47.0	-0.3
OBIP				IAML		06 28 47.6	
	comp=N,12nm,0.1s						
OBIP	Obispado Ponce	0.28	58	⇓iP	Pg	06 28 42.8	-0.3
OBIP				eS	Sg	06 28 47.0	-0.2
LSP	Las Mesas	0.36	322		Pg	06 28 44.5	0.0
LSP					Sg	06 28 49.0	-0.6
LSP	Las Mesas	0.36	322	⇓iP	Pg	06 28 44.5	0.0
LSP				eS	Sg	06 28 49.0	-0.6
UUPR	Utuado, UPR, P	0.38	20	Pg	Pg	06 28 44.1	-0.8
UUPR				IAML		06 28 55.4	
	comp=N,245nm,0.3s						
UUPR				IAML		06 28 55.8	
	comp=N,254nm,0.4s						
PRSN	Puerto Rico Se	0.42	320		Sg	06 28 51.5	-0.1
PRSN	Puerto Rico Se	0.42	320	Pg	Pg	06 28 45.8	+0.1
PRSN				IAML		06 28 51.7	
	comp=N,244nm,0.3s						
PRSN				IAML		06 28 52.8	
	comp=N,165nm,0.2s						
PRSN	Puerto Rico Se	0.42	320	⇓eP	Pb	06 28 46.0	-0.3
PRSN				eS	Sg	06 28 51.5	-0.1
AGPR	Aguadilla, PR	0.62	337	Pg	Pb	06 28 49.9	+0.2
AGPR				IAML		06 29 11.6	
	comp=N,60nm,1.6s						
AGPR				IAML		06 29 13.9	
	comp=N,74nm,3.1s						
AGPR	Aguadilla, PR	0.62	337	⇓iP	Pb	06 28 50.1	+0.5
AGPR				eS	Sg	06 28 56.8	-0.9
ECPR	Experimental S	0.63	48	Pg	Pg	06 28 48.4	-1.2
ECPR				IAML		06 28 57.9	
	comp=N,48nm,0.2s						
ECPR				IAML		06 28 58.4	
	comp=N,33nm,0.2s						
ECPR	Experimental S	0.63	48	⇑iP	Pg	06 28 48.5	-1.1
ECPR				eS	Sg	06 28 57.3	-0.7
IDE	Isla Desecheo	0.77	310		Pg	06 28 51.5	-0.6
IDE					Sg	06 29 00.7	-1.6
IDE	Isla Desecheo	0.77	310	⇑eP	Pg	06 28 51.5	-0.6
IDE				eS	Sg	06 29 00.7	-1.6
HUMP	Col San Antoni	0.99	75		Pb	06 28 55.4	-0.5
HUMP				IAML		06 29 07.9	
	comp=N,23nm,1.5s						
HUMP				IAML		06 29 24.8	
	comp=N,21nm,2.4s						
CUPR	Culebra, Puert	1.55	74	Pn	Pn	06 29 04.0	-0.1

IDC 04 06:33:09.5±9.2**, 37°.24N×70°.36E, h88km**±70km**, mb3.0**/1**, mbtmp3.4**/5**, ML3.0**/4**, 5C-2D, Error ellipse: s-maj=186.5km s-min=69.1km az=119.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.86	1	⇑Pn	Pn	06 34 26.0	-7.8
	0.5nm,0.3s,baz=202,slow=14,SNR=16						
KK31				⇑Pg		06 34 44.2	
	1.0nm,0.3s,baz=193,slow=20,SNR=6.4						
KK31				⇓Sn	Sn	06 35 28.8	-11
	1.5nm,0.3s,baz=188,slow=17,SNR=4.1						
KK31				⇓Lg	Lg	06 35 53.8	
	12nm,0.7s,baz=182,slow=24,SNR=4.5						
AAK	Ala-Archa	6.26	29	P	Pn	06 34 39.6	+0.2
	1.8nm,0.3s,baz=216,slow=5.8,SNR=22						
AAK				S	Sn	06 35 49.8	+0.2
	2.2nm,0.5s,baz=74,slow=19,SNR=1.3						
	4.6nm,0.4s						
AAK	Ala-Archa	6.26	29	⇑Pn	Pn	06 34 39.2	-0.2
	1.5nm,0.5s						
AAK				⇑Sn	Sn	06 35 48.5	-1.0
	0.7nm,0.5s						
AAK				⇑Lg	Lg	06 36 19.2	
	8.5nm,1.0s						
MKAR	Makanchi Array	13.02	39	P	Pn	06 36 09.6	-1.4
	0.1nm,0.3s,baz=234,slow=14,SNR=6.6						
	0.6nm,0.8s						
KURBB	Kurchatov Arra	14.61	21	P	Pn	06 36 33.1	+1.6
	baz=213,slow=9.8,SNR=4.5						
	0.1nm,0.5s						
ZALV	Zalesovo Beam	19.47	26	P	P	06 37 30.0	+0.9
	0.1nm,0.3s,baz=224,slow=11,SNR=4.2						
	0.7nm,0.5s						
YKA	Yellowknife Ar	80.53	2	P	P	06 45 11.4	-0.2
	0.2nm,0.7s,baz=352,slow=5.9,SNR=4.7						
	0.2nm,0.7s						

*IDC **04** 06:34:57.4±1.1, 1°.97N×126°.38E, h0km, mb3.9/7, mbtmp3.9/8, ML4.0/1, MS3.6/3, Error ellipse: s-maj=109.0km s-min=16.5km az=72.0*
*DJA **04** 06:35:00.8±0.9, 2°N±4°×12°7E±°, h11km±9km, M3.8/8, MLv3.8/8*
*NEIC **04** 06:35:03.1±1.4, 2°.1N±0°.1×126°.62E±0°.07, h38km±11km, mb4.2/9, Error ellipse: s-maj=19.0km s-min=3.5km az=211.0*

ISC 04 06:35:03.5±0.8**, 2°.08N**±0°.07×**126°.72E**±0°.10**, h47km, n28, σ1s11**/22**, mb4.0**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.45	153		Pn	06 35 27.8	+0.5
TNTI	Ternate	1.45	153	P	Pn	06 35 27.5	+0.2
SGSI	Sangihe	1.99	323	P	Pn	06 35 34.4	-0.3
LUWI	Luwuk	5.02	232	Pn	Pn	06 36 15.4	-0.9
MRSI	Marisa	5.04	252	P	Pn	06 36 19.0	+2.5
SIJI	Sorong	5.41	123	LR	LR	06 38 57.7	
	comp=Z,203nm,20.5s,baz=182,slow=43						
TOLI2	Tolitoli	6.01	261	Pn	Pn	06 36 28.2	-1.7
SOEI	Soe	12.01	192	Pn	Pn	06 37 53.5	+1.3
KNRA	Kununurra	17.76	174	P	Pn	06 39 06.9	-0.5
KNRA				IAmb	IAmb	06 39 10.6	
	comp=Z,24nm,1.3s						
FITZ	Fitzroy Crossi	20.08	183	P	P	06 39 32.7	-0.4
	comp=Z,0.3nm,0.3s,baz=351,slow=10,SNR=6.5						
	comp=Z,2.6nm,0.7s						
WB0	Warramunga Arr	22.98	161	P	P	06 40 03.4	-0.8
WB0				IAmb	IAmb	06 40 06.4	
	comp=Z,5.2nm,0.8s						
WRA	Warramunga Arr	23.13	161	P	P	06 40 04.5	-1.2
	comp=Z,2.9nm,0.7s,baz=339,slow=11,SNR=21						
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	23.13	161	IAmb	IAmb	06 40 09.8	
	comp=Z,0.4nm,1.1s						
WR8	Warramunga Arr	23.19	161	P	P	06 40 05.7	-0.7
WR8				IAmb	IAmb	06 40 10.5	
	comp=Z,5.1nm,0.9s						
ASAR	Alice Springs	26.53	165	P	P	06 40 36.9	-0.1
	comp=Z,0.8nm,0.6s,baz=344,slow=10.0,SNR=9.5						
	comp=Z,0.8nm,0.6s						
FORT	Forrest	32.70	178	P	P	06 41 30.5	-1.0
SONM	Songino Array	48.85	342	P	P	06 43 44.5	+0.1
	comp=Z,0.7nm,0.7s,baz=141,slow=9.6,SNR=4.5						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	48.85	342	IAmb	IAmb	06 43 47.7	
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	58.90	326	P	P	06 44 57.4	-0.4
	comp=Z,1.2nm,0.6s,baz=121,slow=8.4,SNR=16						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	58.90	326	P	P	06 44 57.2	-0.5
MAKZ	Makanchi	59.08	326	P	P	06 44 58.7	-0.3
MAKZ				IAmb	IAmb	06 44 59.4	
	comp=Z,6.3nm,1.4s						
ZALV	Zalesovo Beam	62.05	333	P	P	06 45 18.6	-0.5
	comp=Z,0.4nm,0.4s,baz=145,slow=10,SNR=1.9						
	comp=Z,0.4nm,0.4s						
KURBB	Kurchatov Arra	63.12	328	P	P	06 45 25.9	-0.4
	comp=Z,2.0nm,0.6s,baz=130,slow=6.2,SNR=32						
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	63.12	328		P	06 45 26.0	-0.3
NRIK	Noril'sk	72.02	346	P	P	06 46 24.6	+2.5
	comp=Z,1.9nm,0.5s,baz=113,slow=7.1,SNR=3.8						
	comp=Z,1.9nm,0.5s						
NRIK	Noril'sk	72.02	346	IAmb	IAmb	06 46 25.3	
	comp=Z,2.2nm,0.6s						
ILAR	Eielson Array	86.59	25	LR	LR	07 20 23.1	
	comp=Z,55nm,21.9s,baz=186,slow=31						
MBAR	Mbarara	96.00	270	LR	LR	07 31 13.3	
	comp=Z,61nm,19.4s,baz=198,slow=35						

*SJA **04** 06:35:32.4±0.8, 21°.30S×70°.55W, h53km±12km, ML3.6, MW3.7*
*GUC **04** 06:35:35.3±0.6, 21°.31S×70°.48W, h58km±5km, ML3.7*

ISC 04 06:35:33.1±1.9**, 21°.31S**±0°.04×**70°.65W**±0°.07**, h34km**±3km**, n26, σ0s73**/37**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.70	91	i P	Pb	06 35 47.3	+0.2
PB02				eS	Sb	06 35 56.1	-0.5
PB02				IAML		06 35 56.7	
	comp=E,11μm,0.2s						
PB02	IPOC Station P	0.70	91	eP	Pn	06 35 46.5	-0.1
PB02				eS	Sb	06 35 56.0	-0.6
PB02				IAML		06 35 57.4	
	comp=Z,12μm,0.3s						
PB07	IPOC Station P	0.82	121	i P	Pb	06 35 49.3	+0.1
PB07				eS	Sn	06 35 59.4	-0.1
PB07				IAML		06 35 59.6	
	comp=N,7μm,0.2s						
PB07	IPOC Station P	0.82	121	eP	Pn	06 35 48.4	0.0
PB07				eS	Sn	06 35 59.5	+0.1
PB07				IAML		06 36 01.4	
	comp=Z,3μm,0.2s						
PB03	IPOC Station P	1.11	132	i P	Pn	06 35 53.1	+0.8
PB03				eS	Sn	06 36 06.2	-0.4
PB03				IAML		06 36 06.8	
	comp=E,3μm,0.2s						
PB03	IPOC Station P	1.11	132	eP	Pn	06 35 52.4	0.0
PB03				eS	Sn	06 36 06.6	0.0
PB03				IAML		06 36 08.7	
	comp=Z,2μm,0.2s						
PB01	IPOC Station P	1.11	77	i P	Pn	06 35 52.6	+0.3
PB01				eS	Sn	06 36 05.2	-1.3
PB01				IAML		06 36 05.9	
	comp=E,4μm,0.2s						
PB01	IPOC Station P	1.11	77	eP	Pn	06 35 51.8	-0.5
PB01				eS	Sn	06 36 05.4	-1.1
PB01				IAML		06 36 07.5	
	comp=Z,1μm,0.2s						
TA02	Huaiquique	1.14	25	IAML		06 36 08.1	
	comp=N,3μm,0.2s						
TA02	Huaiquique	1.14	25	eP	Pn	06 35 53.0	+0.4
TA02				IAML		06 36 09.9	
	comp=Z,866nm,0.1s						
PB09	IPOC Station P	1.40	111	i P	Pn	06 35 57.4	+1.1
PB09				eS	Sn	06 36 13.4	-0.2
PB09				IAML		06 36 14.6	
	comp=E,4μm,0.2s						
PB09	IPOC Station P	1.40	111	eP	Pn	06 35 56.6	+0.4
PB09				eS	Sn	06 36 13.7	+0.1
PB09				IAML		06 36 14.6	
	comp=Z,2μm,0.2s						
PB05	IPOC Station P	1.59	165	i P	Pn	06 36 00.1	+1.1
PB05	IPOC Station P	1.59	165	eP	Pn	06 35 59.4	+0.4
PB05				IAML		06 36 25.0	
	comp=Z,301nm,0.4s						
PB06	IPOC Station P	1.71	145	i P	Pn	06 36 01.4	+0.7
PB06				eS	Sn	06 36 21.0	-0.5
PB06				IAML		06 36 22.4	
	comp=E,814nm,0.4s						
PB06	IPOC Station P	1.71	145	eP	Pn	06 36 00.6	0.0
PB06				IAML		06 36 24.2	
	comp=Z,664nm,0.2s						
PB11	IPOC Station P	1.80	31	i P	Pn	06 36 02.4	+0.6
PB11				IAML		06 36 25.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,1µm,0.1s						
PB11	IPOC Station P	1.80	31	eP	Pn	06 36 01.9	+0.1
PB11				IAML		06 36 25.9	
	comp=Z,453nm,0.2s						
PB08	IPOC Station P	1.82	51	i P	Pn	06 36 03.1	+0.8
PB08				IAML		06 36 25.1	
	comp=N,1µm,0.1s						
PB08	IPOC Station P	1.82	51	eP	Pn	06 36 02.4	+0.1
PB08				eS	Sn	06 36 23.9	-0.4
PB08				IAML		06 36 25.0	
	comp=Z,471nm,0.2s						
GO01	Chusmiza	2.12	40	i P	Pn	06 36 07.5	+0.9
GO01				IAML		06 36 32.5	
	comp=N,2µm,0.2s						
AF01	San Pedro de A	2.81	126	eP	Pn	06 36 18.1	+2.2
AF01				IAML		06 37 04.4	
	comp=Z,423nm,0.3s						
AP01	Chacalluta	2.93	6	eP	Pn	06 36 17.6	+0.3
AP01				IAML		06 37 11.6	
	comp=Z,109nm,0.7s						
PB16	IPOC Station P	3.14	20	eP	Pn	06 36 21.7	+1.0
PB16				IAML		06 37 04.9	
	comp=Z,47nm,0.3s						
PB14	IPOC Station P	3.31	176	eP	Pn	06 36 22.9	+0.1
PB14				IAML		06 37 04.5	
	comp=Z,49nm,0.6s						
AC01	Pan de Azucar	4.82	179	eP	Pn	06 36 42.1	-1.1
AC01				IAML		06 37 38.0	
	comp=Z,21nm,0.1s						

*NNC **04** 07:10:28.0±0.5, 50°02N×79°20E, h0^{km}, mb2.5, mpv1.9, Error ellipse: s-maj=12.8km s-min=2.6km az=57.0, Suspected Mining explosion.*
*IDC **04** 07:10:31.4±1.4, 50°01N×78°73E, h0^{km}, mbtmp2.2/2, ML1.3/2, Error ellipse: s-maj=15.6km s-min=8.3km az=65.0*
ISC 04 07:10:26.0±1.2**, 50°10N**±0°07×**79°41E**±0°07**, h0^{km}, n16, σ0^{s}48**/24**, 13C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR14	Kurchatov Arra	0.73	315	⇑P	Pb	07 10 42.2	+0.6
KUR14				⇓S	Sb	07 10 53.0	+0.8
KUR07	Kurchatov Arra	0.75	310	⇑P	Pb	07 10 41.9	+0.1
KUR07				⇓S	Sb	07 10 52.8	+0.2
KUR15	Kurchatov Arra	0.75	314	⇓P	Pb	07 10 42.3	+0.4
KUR15				⇓S	Sb	07 10 52.9	+0.2
KUR06	Kurchatov Arra	0.76	312	⇓P	Pb	07 10 42.0	0.0
KUR06				⇑S	Sb	07 10 52.7	-0.2
KURBB	Kurchatov Arra	0.77	313	Pg	Pb	07 10 42.7	+0.5
	0.2nm,0.3s,baz=167,slow=18,SNR=16						
KURBB				Lg	Lg	07 10 53.6	
	0.4nm,0.3s,baz=168,slow=31,SNR=15						
KURBB	Kurchatov Arra	0.77	313	⇑P	Pb	07 10 42.2	0.0
	3.4nm,0.6s						
KURBB				⇑S	Sb	07 10 52.9	-0.3
	9.3nm,0.5s						
KUR05	Kurchatov Arra	0.78	314	⇓P	Pb	07 10 42.7	+0.3
KUR05				⇓S	Sb	07 10 52.7	-0.8
KUR16	Kurchatov Arra	0.79	312	⇓P	Pb	07 10 42.6	+0.1
KUR16				⇑S	Sb	07 10 53.5	-0.2
KUR04	Kurchatov Arra	0.79	316	⇑P	Pb	07 10 43.1	+0.5
KUR04				⇑S	Sb	07 10 53.1	-0.7
KURK	Kurchatov	0.80	321	⇑P	Pb	07 10 43.2	+0.6
	0.3nm,0.4s						
KURK				⇑S	Sb	07 10 54.5	+0.5
	2.1nm,0.7s						
KUR17	Kurchatov Arra	0.80	312	⇑P	Pb	07 10 42.7	-0.1
KUR17				⇓S	Sb	07 10 53.4	-0.8
MAKZ	Makanchi	3.71	152	⇑Lg	Lg	07 12 28.1	
	2.1nm,0.7s						
MK31	Makanchi Array	3.83	149	⇓Pg	Pg	07 11 38.9	-0.3
	0.1nm,0.2s,baz=323,slow=12,SNR=4.0						
MK31				⇑Lg	Lg	07 12 31.1	
	0.7nm,0.5s,baz=325,slow=27,SNR=10						
MKAR	Makanchi Array	3.83	149	Pn	Pb	07 11 34.8	+0.4
	baz=321,slow=10,SNR=5.7						
MKAR				Lg	Lg	07 12 37.7	
	0.3nm,0.3s,baz=317,slow=26,SNR=11						
	0.1nm,0.6s						
I46RU	ZALESOVO INFRA	5.10	39	I	I	07 44 48.9	
	baz=220,slow=317,SNR=3.7						
ZALV	Zalesovo Beam	5.10	39	Pn	Pb	07 11 56.0	+0.1
	0.1nm,0.3s,baz=214,slow=10,SNR=1.8						
	0.3nm,0.4s						

KRSC 04 07:53:02.6±1.5**, 49°56N**×**158°18E, h41^{km}**±25^{km}**, Ml4.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.75	311	i P	Pn	07 53 30.5	+0.1
SKR				eS	Sn	07 53 51.5	+0.2
KDTR	Khodutka, Kamc	2.26	358	eP	Pn	07 53 40.0	+2.6
KDTR				eS	Sn	07 54 07.2	+3.2
ASAK	Asacha	2.84	356	eP	Pn	07 53 48.6	+3.2
MIPR	Malaya Ipel'ka	2.87	342	eP	Pn	07 53 49.5	+3.7
RUS	Russkaya	2.89	4	eP	Pn	07 53 49.3	+3.2
RUS				eS	Sn	07 54 23.4	+3.9
MTVR	Mutnovka	2.93	360	eP	Pn	07 53 50.3	+3.5
MTVR				eS	Sn	07 54 25.2	+4.4
GRL	Gorelyy	3.00	359	eP	Pn	07 53 51.5	+3.7
GRL				eS	Sn	07 54 27.0	+4.5
KRMR	Karymshinskiy	3.28	359	eP	Pn	07 53 55.4	+4.0
KRMR				eS	Sn	07 54 34.8	+5.6
PET	Petropavlovsk	3.49	5	eP	Pn	07 53 58.0	+3.8
PET				eS	Sn	07 54 39.1	+4.9
DALK	Dalny	3.50	6	eP	Pn	07 53 58.0	+3.6
DALK				eS	Sn	07 54 39.2	+4.7
UGLR	Uglovaya	3.68	6	eP	Pn	07 54 01.1	+4.1
SPN	Mys Shipunski	3.73	17	eP	Pn	07 54 01.4	+3.8
SPN				eS	Sn	07 54 44.8	+4.6
AVH	Avacha	3.73	5	eP	Pn	07 54 02.8	+5.1
SMAR	Somma	3.73	6	eP	Pn	07 54 02.4	+4.5
KOK	Koryaka	3.75	4	eP	Pn	07 54 03.0	+4.9
SDLR	Sedlovina	3.75	6	eP	Pn	07 54 02.0	+3.9
KRER	Koryakskii	3.77	5	eP	Pn	07 54 02.9	+4.5
KRX	Arik	3.82	4	eP	Pn	07 54 03.5	+4.5
GNL	Ganaly	4.15	358	eP	Pn	07 54 08.3	+4.8
KBTR	Krutoberegovo	7.23	21	eP	Pn	07 54 49.7	+4.1

*IDC **04** 07:55:57.8±1.2, 19°09N×79°39W, h0^{km}, mb3.9/4, mbtmp3.9/5, ML2.8/1, MS2.9/1, Error ellipse: s-maj=41.6km s-min=35.1km az=171.0*
*SSNC **04** 07:56:00.4±0.9, 19°25N×79°38W, h20^{km}±10^{km}, MD3.6, ML3.1, Presumed earthquake*
*JSN **04** 07:56:01.5±1.5, 19°50N×79°11W, h30^{km}±999^{km}, MD3.9, Presumed earthquake*
ISC 04 07:56:00.8±0.9**, 19°20N**±0°08×**79°44W**±0°06**, h35^{km}, n24, σ1^{s}96**/24**, mb4.1**/4**, 2C, Cuba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBCY	The Bluff, Cay	0.61	330	eP	Pn	07 56 10.9	-2.1
CBCY				eS	Sn	07 56 18.6	-3.0
CBCY				IAML		07 56 19.7	
	comp=N,2µm,0.5s						
CBCY				IAML		07 56 19.9	
	comp=E,1µm,0.6s						
LCCY	Blossom Villag	0.76	307	eP	Pn	07 56 13.5	-1.5
LCCY				eS	Sn	07 56 22.9	-2.4
LCCY				IAML		07 56 24.6	
	comp=E,679nm,0.3s						
LCCY				IAML		07 56 28.1	
	comp=N,752nm,0.3s						
MTDJ	Mount Denham	2.05	118	eP	Pn	07 56 31.7	-1.2
MTDJ				IAML		07 56 55.8	
	comp=N,204nm,0.4s						
MTDJ				IAML		07 56 55.9	
	comp=N,201nm,0.6s						
MTDJ	Mount Denham	2.05	118	⇑iP	Pn	07 56 31.6	-1.2
LMGC	Las Mercedes	2.45	69	eP	Pn	07 56 36.7	-1.5
LMGC				IAML		07 57 09.6	
	comp=N,116nm,0.2s						
LMGC				IAML		07 57 10.0	
	comp=E,85nm,0.3s						
CCCC	Cccc	2.53	38	eP	Pn	07 56 40.4	+1.0
CCCC				IAML		07 57 18.7	
	comp=E,35nm,0.6s						
CCCC				IAML		07 57 19.5	
	comp=N,31nm,0.6s						
STH	Stony Hill	2.73	114	⇑iP	Pn	07 56 41.1	-1.1
MGV	Manicaragua	2.94	350	eP	Pn	07 56 43.4	-1.5
MGV				IAML		07 57 20.2	
	comp=E,52nm,0.1s						
MGV				IAML		07 57 20.4	
	comp=N,15nm,0.2s						
CHIV	Chivirico	2.95	74	eP	Pn	07 56 43.1	-2.0
CHIV				IAML		07 57 21.3	
	comp=N,61nm,0.3s						
CHIV				IAML		07 57 21.5	
	comp=E,36nm,0.2s						
MARVS	Santiago de Cu	3.43	76	eP	Pn	07 56 49.7	-2.0
MARVS				IAML		07 57 33.4	
	comp=E,38nm,0.2s						
MARVS				IAML		07 57 33.6	
	comp=N,45nm,0.2s						
RCC	Rio Carpintero	3.61	77	eP	Pn	07 56 52.3	-2.0
RCC				IAML		07 57 37.8	
	comp=E,11nm,0.3s						
RCC				IAML		07 57 38.8	
	comp=N,16nm,0.3s						
PINC	Pinares de May	3.66	69	eP	Pn	07 56 54.0	-0.9
PINC				IAML		07 57 42.0	
	comp=N,20nm,0.2s						
PINC				IAML		07 57 42.2	
	comp=E,25nm,0.3s						
GTBY	Guantanamo Bay	4.14	79	eP	Pn	07 57 00.0	-1.5
GTBY				IAML		07 57 51.6	
	comp=E,14nm,0.4s						
GTBY				IAML		07 57 51.8	
	comp=E,21nm,0.4s						
CAMR	Camarioca	4.24	335	eP	Pn	07 57 02.4	-0.5
QMBU	Quimbuelo	4.47	76	eP	Pn	07 57 04.0	-2.1
QMBU				IAML		07 58 00.4	
	comp=N,13nm,0.2s						
QMBU				IAML		07 58 00.5	
	comp=E,16nm,0.3s						
SOR	Soroa	4.89	318	eP	Pn	07 57 11.6	-0.2
SDV	Santo Domingo	13.34	139	Pn	Pn	07 59 07.5	-0.4
	comp=E,0.5nm,0.3s,baz=4.8,slow=12,SNR=2.1						
	comp=E,1.0nm,0.3s						
CMIG	Matias Romero	14.83	264	LR	LR	08 05 18.7	
	comp=E,42nm,18.1s,baz=100,slow=38						
TXAR	Lajitas Array	24.24	299	P	P	08 01 17.8	+3.2
	comp=E,0.3nm,0.9s,baz=116,slow=8.0,SNR=3.6						
	comp=E,0.3nm,0.9s						
EKA	Eskdalemuir Ar	66.65	37	P	P	08 06 51.1	+3.4
	comp=E,0.7nm,0.4s,baz=273,slow=5.7,SNR=3.4						
	comp=E,0.7nm,0.4s						
ARCES	ARCESS Array B	77.27	20	P	P	08 07 53.5	+2.3
	comp=E,3.8nm,1.0s,baz=319,slow=9.5,SNR=3.6						
	comp=E,3.8nm,1.0s						
FINES	FINESS Array B	80.49	28	P	P	08 08 12.1	+3.2
	comp=E,1.3nm,0.6s,baz=304,slow=1.4,SNR=5.4						
	comp=E,1.3nm,0.6s						
WRA	Warramunga Arr	148.20	263	PKPbc	PKPab	08 15 45.9	-1.0
	comp=E,0.4nm,0.7s,baz=88,slow=2.8,SNR=4.6						
ASAR	Alice Springs	148.69	256	PKPbc	PKPab	08 15 47.2	-1.6
	comp=E,0.4nm,0.7s,baz=105,slow=2.6,SNR=6.8						

*INMG **04** 07:56:16.4±1.2, 37°04N×13°60W, h35^{km}, ML2.3, Error ellipse: s-maj=9.3km s-min=6.7km az=14.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*
*MDD **04** 07:56:16.8±1.6, 37°31N×13°31W, h19^{km}, Mb3.6/3, M_mb2.8/3, Error ellipse: s-maj=12.3km s-min=7.5km az=49.0*
ISC 04 07:56:13.1±3.6**, 37°3N**±0°1×**13°3W**±0°2**, h10^{km}, n33, σ1^{s}89**/50**, 3C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.56	91	Pn	Pn	07 57 09.0	+0.7
PFVI				Sn	Sn	07 57 48.6	-1.8
PFVI	Vila Bisbo	3.56	91	eP	Pn	07 57 09.0	+0.7
PFVI				eS	Sn	07 57 48.6	-1.8
PFVI				i IAML		07 57 50.7	
PFVI				i IAML		07 57 52.6	
PFVI				i IAML		07 57 54.0	
PMAFR	Mafra	3.57	61	Pn	Pn	07 57 10.4	+1.9
PMAFR				Sn	Sn	07 57 51.1	+0.3
PMAFR	Mafra	3.57	61	eP	Pn	07 57 10.9	+2.4
PMAFR				eS	Sn	07 57 51.2	+0.3
PMAFR				i IAML		07 58 00.1	
PMAFR				i IAML		07 58 01.3	
PTEO	Sao Teotonio	3.64	84	eS	Sn	07 57 51.6	-0.7
PTEO				i IAML		07 57 56.9	
PTEO				i IAML		07 57 59.1	
PTEO				i IAML		07 57 59.6	
MORF	Marmelete	3.69	88	eP	Pn	07 57 11.1	+0.9
MORF				eS	Sn	07 57 53.1	-0.6
MORF				i IAML		07 57 59.1	
MORF				i IAML		07 58 00.2	
MORF				i IAML		07 58 00.2	
MESJ	Messejana	4.06	80	eP	Pn	07 57 16.7	+1.5
MESJ				eS	Sn	07 58 02.5	-0.3
MESJ				i IAML		07 58 05.3	
MESJ				i IAML		07 58 06.3	
MESJ				i IAML		07 58 06.5	
MOE	Montemor	4.09	71	eP	Pn	07 57 17.2	+1.5
MOE				eS	Sn	07 58 02.8	-0.9
MOE				i IAML		07 58 05.6	
MOE				i IAML		07 58 06.1	
MOE				i IAML		07 58 07.0	
PSBE	So Bento	4.17	56	eP	Pn	07 57 19.6	+2.7
PCVE	Castro Verde	4.18	83	Sn	Sn	07 58 03.1	-2.8
PCVE	Castro Verde	4.18	83	eS	Sn	07 58 04.4	-1.5
PCVE				i IAML		07 58 11.0	
PCVE				i IAML		07 58 11.4	
PCVE				i IAML		07 58 12.5	
PBDV	Barranco-do-Ve	4.27	89	Pn	Pn	07 57 17.9	-0.2
PBDV				Sn	Sn	07 58 06.1	-1.8
PBDV	Barranco-do-Ve	4.27	89	eS	Sn	07 58 06.3	-1.7
PBDV				i IAML		07 58 10.2	
PBDV				i IAML		07 58 10.3	
PBDV				i IAML		07 58 11.2	
EVO	Evora	4.35	72	Pn	Pn	07 57 19.8	+0.6
EVO				Sn	Sn	07 58 07.9	-2.1
EVO	Evora	4.35	72	eP	Pn	07 57 21.7	+2.5
EVO				eS	Sn	07 58 09.1	-0.9
EVO				i IAML		07 58 13.5	
EVO				i IAML		07 58 14.2	
EVO				i IAML		07 58 14.4	
PMTG	Montargil	4.37	64	eP	Pn	07 57 21.4	+1.9
PMTG				eS	Sn	07 58 10.5	+0.1
PMTG				i IAML		07 58 15.9	
PMTG				i IAML		07 58 16.7	
PMTG				i IAML		07 58 17.5	
PARRA	Arraiolos	4.41	68	eP	Pn	07 57 21.8	+1.7
PARRA				eS	Sn	07 58 10.7	-0.8
PARRA				i IAML		07 58 13.5	
PARRA				i IAML		07 58 13.8	
PARRA				i IAML		07 58 15.2	
PVAQ	Vaqueiros	4.43	87	eP	Pn	07 57 22.0	+1.7
PVAQ				eS	Sn	07 58 10.3	-1.7
PVAQ				i IAML		07 58 14.5	
PVAQ				i IAML		07 58 14.9	
PVAQ				i IAML		07 58 14.9	
PSARD	Sardoal	4.64	58	eP	Pn	07 57 26.0	+2.7
PCAS	Casmilo, Conde	4.66	52	eP	Pn	07 57 25.6	+2.0
PESTR	Estremoz	4.76	69	Sn	Sn	07 58 20.2	0.0
PESTR	Estremoz	4.76	69	eS	Sn	07 58 19.9	-0.3
PESTR				i IAML		07 58 23.7	
PESTR				i IAML		07 58 24.1	
PESTR				i IAML		07 58 24.9	
PBAR	Barrancos	5.03	78	Sn	Sn	07 58 24.8	-1.9
PBAR	Barrancos	5.03	78	eS	Sn	07 58 25.8	-0.9
PBAR				i IAML		07 58 28.7	
PBAR				i IAML		07 58 30.4	
PBAR				i IAML		07 58 32.1	
PMRV	Marv??o	5.11	63	eP	Pn	07 57 31.5	+1.9
PMRV				eS	Sn	07 58 28.3	-0.3
PMRV				i IAML		07 58 30.2	
PMRV				i IAML		07 58 30.7	
PMRV				i IAML		07 58 33.4	
EBAD	Badajoz	5.17	71	Sn	Sn	07 58 27.5	-2.5
EBAD	Badajoz	5.17	71	S	Sn	07 58 28.8	-1.3
EMIN	Mina Concepcio	5.28	83	P	Pn	07 57 34.8	+2.9
EMIN				⇑iIVmb_VC		07 57 35.5	
	22nm,SNR=1.6						
EMIN				S	Sn	07 58 31.1	-1.7
POLO	Lamas de Olo	5.91	44	eP	Pn	07 57 42.7	+2.0
ESPR	Espera	5.95	92	Sn	Sn	07 58 46.7	-2.7
EMAZ	Mazaricos	6.56	29	P	Pn	07 57 50.6	+1.0
EMAZ				⇑iIVmb_VC		07 57 52.0	
	33nm,SNR=2.6						
EMAZ				S	Sn	07 59 00.0	-4.5
EAGO	Agolada(Pontev	6.81	34	P	Pn	07 57 54.2	+1.1
EAGO				⇑iIVmb_VC		07 57 55.3	
	38nm,SNR=3.2						
EAGO				S	Sn	07 59 06.2	-4.4
EADA	Adamuz	6.96	80	S	Sn	07 59 12.4	-1.9

*IDC **04** 08:03:19.2±1.0, 24°01N×142°97E, h0^{km}, mb3.7/7, mbtmp3.7/7, MS3.0/5, Error ellipse: s-maj=39.5km s-min=21.1km az=83.0*
ISC 04 08:03:23.5±1.1**, 24°0N**±0°2×**142°9E**±0°3**, h29^{km}, n13, σ0^{s}94**/8**, mb3.7**/7**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	13.15	343	LR	LR	08 11 35.2	
	comp=Z,46nm,18.8s,baz=114,slow=38						
JOW	Kunigami	13.54	285	LR	LR	08 11 09.5	
	comp=Z,78nm,20.2s,baz=184,slow=35						
KSRS	Korea Array	18.58	320	LR	LR	08 14 31.1	
	comp=Z,25nm,18.5s,baz=100,slow=36						
MA2	Magadan	35.99	7	LR	LR	08 27 54.9	
	comp=Z,21nm,18.1s,baz=24,slow=41						
YAK	Yakutsk	39.08	350	LR	LR	08 25 42.9	
	comp=Z,46nm,20.0s,baz=102,slow=34						
WRA	Warramunga Arr	44.46	192	P	P	08 11 33.0	+0.7
	0.5nm,0.4s,baz=6.6,slow=8.6,SNR=10						
	0.5nm,0.4s						
ASAR	Alice Springs	48.17	191	P	P	08 12 01.3	-0.1
	0.1nm,0.4s,baz=11,slow=7.6,SNR=3.9						
	0.1nm,0.4s						
MKAR	Makanchi Array	52.99	311	P	P	08 12 36.9	-0.8
	0.3nm,0.6s,baz=91,slow=8.7,SNR=3.7						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	55.71	316	P	P	08 12 57.5	+0.2
	0.9nm,0.5s,baz=92,slow=7.6,SNR=11						
	0.9nm,0.5s						
ILAR	Eielson Array	60.12	28	P	P	08 13 28.6	+0.6
	0.3nm,0.6s,baz=257,slow=6.3,SNR=5.8						
	0.3nm,0.6s						
BVAR	Borovoye Array	60.79	319	P	P	08 13 33.6	+0.8
	1.4nm,0.6s,baz=91,slow=7.2,SNR=7.9						
	1.4nm,0.6s						
FINES	FINESS Array B	81.02	334	P	P	08 15 35.2	-0.2
	2.7nm,0.9s,baz=77,slow=4.1,SNR=4.5						
	2.7nm,0.9s						
LPAZ	La Paz	149.90	81	PKPbc	PKPbc	08 23 11.1	-1.5
	1.1nm,0.8s,baz=288,slow=6.1,SNR=4.1						

*RSNC **04** 08:05:03.7±0.0, 6°N±1°×7°2W±°, h-2^{km}±2^{km}, M3.5, mB4.9, mb4.1, ML3.2, Mw(mB)4.2*
*FUNV **04** 08:05:03.6, 5°95N×72°15W, h2^{km}, MW4.0, Presumed earthquake*
*IDC **04** 08:05:09.4±1.1, 6°50N×72°56W, h68^{km}±12^{km}, mb2.9/3, mbtmp3.3/4, MS3.2/1, Error ellipse: s-maj=31.8km s-min=7.8km az=131.0*
ISC 04 08:05:01.0±1.3**, 6°29N**±0°03×**72°31W**±0°03**, h3^{km}**±9^{km}**, n44, σ2^{s}47**/75**, mb3.3**/3**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUSC	La Rusia	0.86	243	P	Pg	08 05 17.9	+0.3
RUSC				S	Sg	08 05 28.7	-0.1
BARC	Barichara	0.92	289	P	Pg	08 05 19.6	+1.0
BARC				S	Sg	08 05 30.9	+0.3
PAMC	Pamplona, Colo	1.11	340	P	Pn	08 05 23.9	0.0
PAMC				S	Sn	08 05 39.4	-0.6
BRJC	Barrancabermej	1.58	296	P	Pg	08 05 32.1	+0.8
BRJC				S	Sn	08 05 50.8	0.0
SPBC	San Pablo de B	1.86	250	P	Pn	08 05 34.8	+1.0
SPBC				S	Sn	08 05 58.4	+0.5
PTBC	PUERTO BERRIO,	2.15	277	P	Pn	08 05 39.3	+1.6
PTBC				S	Sb	08 06 08.2	+0.6
CHIC	Chingaza	2.17	221	P	Pb	08 05 40.3	-0.9
CHIC				S	Sb	08 06 08.3	-0.3
OCAC	Ocana	2.18	333	P	Pb	08 05 42.4	+1.2
OCAC				S	Sg	08 06 12.8	+1.6
SOCV	Socops	2.45	36	eP	Pb	08 05 45.6	-0.1
ROSC	El Rosal	2.46	234	P	Pb	08 05 46.7	+0.6
	504nm,0.5s,baz=91,slow=16,SNR=110						
ROSC				S	Sb	08 06 16.5	-0.6
	160nm,0.4s,baz=20,slow=23,SNR=8.5						
ROSC	El Rosal	2.46	234	P	Pb	08 05 47.2	+1.1
ROSC				S	Sg	08 06 19.8	-0.4
CVER	Cruz Verde, Cu	2.48	225	P	Pb	08 05 46.4	-0.1
CVER				S	Sg	08 06 22.4	+1.6
VILC	Villavicencio,	2.56	213	P	Pb	08 05 48.9	+1.2
VILC				S	Sg	08 06 22.7	-0.7
SDV	Santo Domingo	3.07	33	P	Pb	08 05 53.8	-2.6
	12nm,0.3s,baz=218,slow=3.3,SNR=39						
SDV				S	Sb	08 06 31.9	-2.4
	65nm,0.5s,baz=266,slow=22,SNR=5.8						
SDV	Santo Domingo	3.07	33	P	Pb	08 05 53.8	-2.6
SDV				S	Sb	08 06 32.1	-2.2
NIZA	Niza - Manizal	3.38	249	P	Pb	08 06 00.3	-1.3
NIZA				S	Sb	08 06 40.2	-3.0
UREC	San Jos de Ur	3.52	295	P	Pn	08 06 00.4	+3.9
UREC				S	Sn	08 06 42.3	+3.7
ANIL	Santa Ana	3.56	240	P	Pn	08 06 00.3	+2.9
ANIL				S	Sb	08 06 44.2	-4.3
PRAC	Prado	3.62	225	P	Pn	08 06 00.2	+2.2
PRAC				S	Sg	08 06 54.4	-3.1
URMC	La Uribe, Meta	3.66	214	P	Pn	08 06 01.3	+2.8
URMC				S	Sn	08 06 45.3	+3.1
CBOC	Ciudad Bolivar	3.71	264	P	Pb	08 06 04.0	-3.2
CBOC				S	Sb	08 06 48.7	-3.9
MCQV	Machiques	3.75	357	eS	Sb	08 06 52.1	-1.4
ORTC	Ortega, Tolima	3.76	231	P	Pn	08 06 01.9	+2.0
ORTC				S	Sb	08 06 57.0	+3.0
DBBC	Dabeiba	3.94	281	P	Pb	08 06 07.6	-3.6
DBBC				S	Sn	08 06 52.5	+3.2
ARGC	Ariguani, Magd	4.03	332	P	Pn	08 06 08.3	+4.7
ARGC				S	Sb	08 07 01.1	-0.8
APAC	Apartado, Choc	4.53	291	P	Pn	08 06 13.8	+3.3
APAC				S	Sn	08 07 02.1	-1.6
SJCC	San Jacinto, C	4.58	322	P	Pn	08 06 14.9	+3.8
SJCC				S	Sn	08 07 09.2	+4.3
YOTC	Yotoco, Valle	4.62	241	P	Pn	08 06 14.2	+2.3
TEPV	Terepaima	4.78	40	eP	Pn	08 06 17.0	+3.1
TEPV				eS	Sn	08 07 12.4	+2.4
GARC	Garzon, Huila	5.16	218	P	Pn	08 06 21.7	+2.3
GARC				S	Sg	08 07 42.4	-4.6
MAPV	Macapo	5.19	47	eP	Pn	08 06 21.5	+1.9
MAPV				eS	Sn	08 07 20.3	+0.3
JAMC	Jamundi, Valle	5.31	235	P	Pn	08 06 23.6	+2.2
	10nm,0.8s						
PTAC	Punta Ardita,	5.53	279	P	Pn	08 06 26.9	+2.7
	17nm,0.5s						
POPC	Popayan, Colom	5.73	230	P	Pn	08 06 30.0	+2.9
	10nm,0.7s						
FLOC	Florencia	5.74	216	P	Pn	08 06 28.6	+1.4
CACV	CAICARA DEL OR	5.87	77	eP	Pb	08 06 37.0	-7.0
CACV				eS	Sn	08 07 42.8	+6.1
BENV	Beln	5.92	52	eP	Pn	08 06 32.0	+2.3
BENV				⇓eS	Sn	08 07 37.6	-0.6
TURV	Turiamo	6.05	47	eP	Pn	08 06 34.5	+3.1
TURV				eS	Sn	08 07 41.3	0.0
TACV	Tcata	6.48	53	eP	Pn	08 06 39.1	+1.8
TACV				eS	Sn	08 07 49.6	-2.2
LPAZ	La Paz	22.81	170	P	P	08 10 08.8	+3.0
	0.8nm,0.7s,baz=350,slow=11,SNR=3.0						
LPAZ				LR	LR	08 20 39.9	
	comp=Z,56nm,20.7s,baz=156,slow=40						
	0.8nm,0.7s						
TXAR	Lajitas Array	37.42	312	P	P	08 12 11.7	-3.9
	0.2nm,0.8s,baz=121,slow=7.9,SNR=1.2						
	0.2nm,0.8s						
YKA	Yellowknife Ar	64.04	340	P	P	08 15 34.5	-1.3
	0.2nm,0.7s,baz=134,slow=5.8,SNR=2.9						
	0.2nm,0.7s						
ASAR	Alice Springs	149.44	233	PKPbc	PKPbc	08 24 51.8	-0.8
	0.5nm,1.0s,baz=130,slow=2.9,SNR=3.4						
WRA	Warramunga Arr	150.78	240	PKPbc	PKPbc	08 24 55.1	-0.7
	0.3nm,0.7s,baz=117,slow=1.8,SNR=2.0						

ASRS 04 08:05:03.0±0.9,53°.63N×87°.84E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.

IDC 04 08:05:07.3±3.4**,53°.54N×87°.77E,h0km,mbtmp2.8**/2**,ML2.5**/2**,Error ellipse: s-maj=34.5km s-min=17.9km az=53.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.80	284	I	I	08 15 30.0	
	baz=104,slow=274,SNR=3.4						
ZALV	Zalesovo Beam	1.80	284	Pn	Pn	08 05 39.5	-0.1
	1.2nm,0.3s,baz=101,slow=13,SNR=16						
ZALV				Lg	Lg	08 06 04.0	
	1.7nm,0.3s,baz=99,slow=27,SNR=12						
KURBB	Kurchatov Arra	6.40	247	Pn	Pn	08 06 43.9	+1.2
	0.1nm,0.3s,baz=55,slow=14,SNR=1.7						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.61	210	Pn	Pn	08 07 00.2	+0.8
	0.1nm,0.3s,baz=27,slow=13,SNR=5.5						
	0.2nm,0.3s						

ISU 04 08:07:06,39°.85N×69°.71E,h5km

KRNET 04 08:07:09.0±0.1,39°.77N×69°.77E,h21km,mb2.6

ISC 04 08:07:07.9±1.8**,39°.80N**±0°.04×**69°.78E**±0°.08**,h12**km±15km**,n7,σ0.66**/14**,8C,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.84	72	⇑eP	Pn	08 07 25.2	-0.4
BTK				⇑eS	Sb	08 07 36.9	+1.3
GAR	Garm	0.90	153	⇑eP	Pb	08 07 25.5	0.0
GAR				⇑eS	Sg	08 07 37.5	+0.4
CHDK	Chadak	1.38	32	P	Pg	08 07 34.2	-0.3
CHDK				S	Sg	08 07 53.7	+1.2
DRK	Karamyk	1.59	101	⇑eP	Pg	08 07 38.1	-0.4
DRK				⇑eS	Sg	08 07 59.1	0.0
CHMG	Chimgan	1.75	6	P	Pn	08 07 38.3	0.0
CHMG				S	Sb	08 08 02.4	+0.3
TVKS	Tavaksay	1.77	357	P	Pn	08 07 38.6	+0.2
TVKS				S	Sb	08 08 03.0	+0.4
TRKS	Terek-Say	2.01	30	⇑iP	Pb	08 07 43.8	-0.7
TRKS				⇑eS	Sb	08 08 09.2	-0.3

SSNC 04 08:38:38.8±0.3**,19°.09N×80°.68W,h23**km±4km**,MD3.8,ML2.1,Presumed earthquake,Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	0.81	44	eP	Pb	08 38 52.6	-1.5
LCCY				eS	Sb	08 39 02.3	-2.3
LCCY				IAML		08 39 05.1	
	comp=E,78nm,0.3s						
LCCY				IAML		08 39 05.3	
	comp=N,49nm,0.2s						
LCCY	Blossom Villag	0.81	44	eP	Pb	08 38 52.6	-1.5
LCCY				eS	Sb	08 39 02.6	-2.0
LCCY				IAML		08 39 05.1	
	comp=E,78nm,0.3s						
LCCY				IAML		08 39 05.3	
	comp=N,49nm,0.2s						
CBCY	The Bluff, Cay	1.08	53	eP	Pn	08 38 56.3	-2.3
CBCY				eS	Sb	08 39 09.3	-3.2
CBCY				IAML		08 39 13.1	
	comp=N,48nm,0.2s						
CBCY				IAML		08 39 13.4	
	comp=E,52nm,0.3s						
CBCY	The Bluff, Cay	1.08	53	eP	Pn	08 38 56.3	-2.3
CBCY				eS	Sb	08 39 09.1	-3.5
CBCY				IAML		08 39 13.1	
	comp=N,48nm,0.2s						
CBCY				IAML		08 39 13.4	
	comp=E,52nm,0.3s						
MGV	Manicaragua	3.08	12	eP	Pn	08 39 24.3	-1.7
MGV				eS	Sn	08 39 58.3	-3.9
MGV	Manicaragua	3.08	12	eP	Pn	08 39 23.9	-2.1
MTDJ	Mount Denham	3.10	106	eP	Pn	08 39 24.8	-1.6
MTDJ	Mount Denham	3.10	106	eP	Pn	08 39 21.8	-4.6
CCCC	Cccc	3.45	52	eP	Pn	08 39 33.2	+2.1
CCCC	Cccc	3.45	52	eP	Pn	08 39 33.2	+2.1
LMGC	Las Mercedes	3.59	74	eP	Pn	08 39 31.6	-1.5
LMGC	Las Mercedes	3.59	74	eP	Pn	08 39 30.5	-2.6
SOR	Soroa	4.28	330	eP	Pn	08 39 41.1	-1.5
SOR	Soroa	4.28	330	eP	Pn	08 39 35.3	-7.3

IDC 04 08:40:08.2±2.8,22°.85S×179°.35W,h473km±28km,mb3.7/13,mbtmp4.5/13,Error ellipse: s-maj=18.4km s-min=15.9km az=66.0

NOU 04 08:40:09.1,22°.87S×178°.98W,h526km,mb4.3/42,South of Fiji Islands

NEIC 04 08:40:10.8±2.2,22°.76S±0°.09×179°.4W±0°.1,h500km±7km,mb4.5/27,Error ellipse: s-maj=18.0km s-min=13.1km az=95.0

ISC 04 08:40:07.4±0.5**,22°.78S**±0°.08×**179°.23W**±0°.08**,h500**km**,n122,σ2.39**/50**,mb4.4**/40**,2C-1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.54	5	P	P	08 41 34.1	+3.6
MSVF	Nonsavu	5.63	333		P	08 41 42.6	+2.1
MSVF	Nonsavu	5.63	333	P	P	08 41 44.1	+3.6
	48nm,0.8s						
TAVE	Taveuni	6.08	354	P	P	08 41 49.3	+4.7
	46nm,0.7s						
DGTI	Dogotuki	6.52	351	P	P	08 41 53.0	+4.0
	19nm,0.9s						
DGTI	Dogotuki	6.52	351	P	S	08 43 19.0	+7.0
	19nm,0.9s						
NIUE	Niue	9.44	69	P	P	08 42 20.0	+1.0
NIUE	Niue	9.44	69	S	S	08 44 07.8	+0.7
AFI	Afiamalu	11.31	40	P	P	08 42 39.0	+0.1
AFI	Afiamalu	11.31	40	P	P	08 42 39.1	+0.2
	41nm,0.8s						
AFI	Afiamalu	11.31	40	S	S	08 44 42.9	-0.6
	41nm,0.8s						
MARNC	Mare, Loyalty	11.88	274	P	P	08 42 47.1	+2.4
MARNC	Mare, Loyalty	11.88	274	P	P	08 42 47.2	+2.5
	76nm,1.6s						
MARNC	Mare, Loyalty	11.88	274	S	S	08 45 01.5	+7.2
	76nm,1.6s						
DZM	Mont Dzumac	13.27	270	P	P	08 43 01.6	+2.1
OUZ	Omahuta	13.88	205	P	P	08 43 07.9	+2.2
	24nm,1.5s						
OUZ	Omahuta	13.88	205	S	S	08 45 34.7	+1.9
	24nm,1.5s						
MXZ	Matakaoa Point	14.88	188	P	P	08 43 17.5	+1.3
	43nm,1.4s						
TOZ	Tahuroa Road	15.57	196	P	P	08 43 27.8	+4.4
TOZ				IAmb	IAmb	08 43 28.0	
	comp=Z,14nm,0.7s						
URZ	Urewera	15.74	191	P	P	08 43 22.6	-2.6
	comp=Z,8.8nm,0.4s,baz=350,slow=6.1,SNR=24						
URZ				S	S	08 46 02.6	-5.7
	comp=Z,21nm,0.7s,baz=189,slow=23,SNR=15						
URZ	Urewera	15.74	191	P	P	08 43 24.4	-0.8
	comp=Z,22nm,0.8s						
URZ	Urewera	15.74	191	S	S	08 46 08.5	+0.2
	comp=Z,22nm,0.8s						
HIZ	Hauiti	16.48	197	P	P	08 43 37.0	+4.1
BKZ	Black Stump Fm	16.73	192	P	P	08 43 34.6	-1.0
	comp=Z,24nm,1.6s						
BKZ	Black Stump Fm	16.73	192	S	S	08 46 24.7	-1.7
	comp=Z,24nm,1.6s						
QRZ	Quartz Range	19.29	199	P	P	08 44 00.4	+1.0
	comp=Z,117nm,1.7s						
KHZ	Kahutara	20.49	195	P	P	08 44 11.0	+0.8
	comp=Z,111nm,2.4s						
KHZ	Kahutara	20.49	195	S	S	08 47 27.1	-0.3
	comp=Z,111nm,2.4s						
GVZ	Greta Valley S	21.13	196	P	P	08 44 19.3	+3.2
TATA	Tatamba Isabel	24.70	302	P	P	08 44 49.9	+1.5
	comp=Z,30nm,1.2s						
ARMA	Armidale	27.09	247	P	P	08 45 12.2	+2.6
ARMA				IAmb	IAmb	08 45 50.7	
	comp=Z,23nm,1.2s						
EIDS	Eidsvold	27.20	259	P	P	08 45 12.4	+2.0
EIDS				IAmb	IAmb	08 45 47.7	
	comp=Z,19nm,1.4s						
EIDS	Eidsvold	27.20	259	P	P	08 45 12.5	+2.0
	comp=Z,11nm,0.7s						
CAN	Canberra	30.32	239	P	P	08 45 39.9	+2.3
CAN				IAmb	IAmb	08 45 59.4	
	comp=Z,29nm,1.4s						
CAN	Canberra	30.32	239	P	P	08 45 39.5	+1.9
	comp=Z,32nm,2.4s						
CTA	Charters Tower	32.20	268	P	P	08 45 55.7	+1.9
	comp=Z,1.2nm,0.6s						
CMSA	Cobar Meteorol	32.29	247	P	P	08 45 56.3	+1.8
	comp=Z,16nm,0.9s						
TOO	Toolangi	33.65	236	P	P	08 46 07.8	+1.8
MTSU	Mount Surprise	34.41	271	P	P	08 46 14.4	+1.8
	comp=Z,18nm,0.7s						
PMG	Port Moresby	34.82	287	P	P	08 46 18.5	+2.4
	comp=Z,26nm,0.7s,baz=80,slow=7.3,SNR=6.9						
	comp=Z,26nm,0.7s						
PMG	Port Moresby	34.82	287		P	08 46 17.0	+0.9
STKA	Stephens Creek	35.80	247	P	P	08 46 26.0	+2.0
	comp=Z,6.7nm,0.6s,baz=95,slow=10,SNR=21						
STKA				PcP	sP	08 48 41.7	-5.8
	comp=Z,3.2nm,0.6s,baz=98,slow=6.8,SNR=8.7						
	comp=Z,6.7nm,0.6s						
STKA	Stephens Creek	35.80	247		P	08 46 25.8	+1.7
STKA	Stephens Creek	35.80	247	P	P	08 46 25.6	+1.6
	comp=Z,2.2nm,0.8s						
INKA	Innaminka	36.42	254		P	08 46 31.3	+2.1
COEN	Coen	36.66	277	P	P	08 46 33.4	+2.1
COEN				IAmb	IAmb	08 46 57.7	
	comp=Z,15nm,1.4s						
QIS	Mount Isa	38.23	265	P	P	08 46 45.3	+1.0
	comp=Z,2.9nm,0.9s						
BBOO	Buckleboo	40.54	246	P	P	08 47 03.7	+1.0
BBOO				IAmb	IAmb	08 47 10.3	
	comp=Z,12nm,1.2s						
BBOO	Buckleboo	40.54	246	P	P	08 47 03.4	+0.7
	comp=Z,21nm,2.1s						
AS31	Alice Springs	42.92	259		P	08 47 23.1	+1.3
ASAR	Alice Springs	42.92	259	P	P	08 47 23.3	+1.5
	comp=Z,13nm,0.8s,baz=93,slow=8.1,SNR=106						
ASAR				PcP	PP	08 49 04.0	-8.8
	comp=Z,3.2nm,0.7s,baz=106,slow=4.3,SNR=12						
ASAR				S	S	08 53 10.5	+0.3
	comp=Z,0.5nm,0.8s,baz=98,slow=13,SNR=3.9						
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	42.92	259	P	P	08 47 23.2	+1.4
WR8	Warramunga Arr	43.05	265		P	08 47 23.6	+0.9
WR8				IAmb	IAmb	08 47 24.3	
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	43.19	265		P	08 47 24.8	+0.9
WB0				IAmb	IAmb	08 47 25.4	
	comp=Z,18nm,0.6s						
WRAB	Tennant Creek	43.19	265	P	P	08 47 24.5	+0.6
WRA	Warramunga Arr	43.20	265	P	P	08 47 24.4	+0.5
	comp=Z,12nm,0.6s,baz=89,slow=5.7,SNR=182						
WRA				PcP	PP	08 49 05.3	-10
	comp=Z,2.4nm,0.8s,baz=102,slow=3.3,SNR=6.0						
WRA				ScP	ScP	08 52 11.5	+5.7
	comp=Z,1.7nm,0.9s,baz=103,slow=3.6,SNR=7.6						
WRA				S	S	08 53 12.1	-2.1
	comp=Z,0.8nm,0.7s,baz=103,slow=14,SNR=5.3						
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	43.20	265		P	08 47 23.6	-0.4
JAY	Jayapura	43.74	292	P	P	08 47 29.6	+1.3
	comp=Z,12nm,0.7s,baz=187,slow=8.3,SNR=5.0						
	comp=Z,12nm,0.7s						
FORT	Forrest	47.37	249		P	08 47 56.7	+1.0
FORT				IAmb	IAmb	08 47 57.3	
	comp=Z,16nm,0.6s						
MTN	Manton Dam	48.09	273	P	P	08 48 02.6	+1.3
MTN				IAmb	IAmb	08 48 14.8	
	comp=Z,15nm,1.1s						
KNRA	Kununurra	49.41	269		P	08 48 12.6	+1.4
FITZ	Fitzroy Crossi	51.63	264	P	P	08 48 29.2	+1.8
	comp=Z,7.4nm,0.5s,baz=96,slow=6.5,SNR=30						
	comp=Z,7.4nm,0.5s						
VNDA	Vanda	55.55	185	P	P	08 48 57.0	+2.7
	comp=Z,2.3nm,0.7s,baz=1.0,slow=7.1,SNR=7.7						
	comp=Z,2.3nm,0.7s						
VNDA	Vanda	55.55	185	P	P	08 48 57.7	+3.4
PSA00	Pilbara Seismi	56.07	259	P	P	08 48 58.7	-0.2
KLBR	Kellerberrin	56.08	246	P	P	08 48 59.9	+1.1
	comp=Z,51nm,0.7s						
MEEK	Meekatharra	56.12	252	P	P	08 49 00.5	+1.3
	comp=Z,9.5nm,1.7s						
MBWA	Marble Bar	56.27	259	P	P	08 49 01.4	+1.2
MBWA				IAmb	IAmb	08 49 32.2	
	comp=Z,72nm,1.5s						
MBWA	Marble Bar	56.27	259	P	P	08 49 01.3	+1.1
	comp=Z,11nm,0.6s						
NWAO	Narrogin (SRO)	56.34	245	P	P	08 49 01.6	+1.0
NWAO				IAmb	IAmb	08 49 23.6	
	comp=Z,15nm,0.9s						
NWAO	Narrogin (SRO)	56.34	245	P	P	08 49 01.6	+1.0
	comp=Z,9.6nm,1.1s						
BLDU	Ballidu	57.10	247	P	P	08 49 06.9	+1.0
	comp=Z,14nm,0.7s						
MUN	Mundaring	57.33	246	P	P	08 49 08.9	+1.5
	comp=Z,25nm,2.3s						
MORW	Morawa	57.93	249	P	P	08 49 12.4	+0.9
MORW				IAmb	IAmb	08 49 13.4	
	comp=Z,8.9nm,0.9s						
MORW	Morawa	57.93	249	P	P	08 49 12.6	+1.1
	comp=Z,14nm,0.7s						
GIRL	Giralia	60.86	256	P	P	08 49 32.7	+1.4
CASY	Casey	61.42	206	P	P	08 49 35.8	+1.7
CASY				IAmb	IAmb	08 49 43.2	
	comp=Z,46nm,1.2s						
PLAI	Plampang	61.78	272	P	P	08 49 38.8	+1.4
	comp=Z,31nm,0.7s						
QSPA	South Pole Qui	67.30	180	P	P	08 50 14.5	+2.8
	comp=Z,11nm,0.8s,baz=26,slow=2.0,SNR=11						
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	67.30	180		P	08 50 14.2	+2.5
QSPA				IAmb	IAmb	08 50 15.6	
	comp=Z,13nm,0.8s						
PETK	Petropavlovsk-	78.19	346	P	P	08 51 18.1	+3.8
	comp=Z,5.2nm,0.8s,baz=105,slow=10.0,SNR=5.3						
	comp=Z,5.2nm,0.8s						
NJ2	Nanjing	80.47	311	eP	P	08 51 26.9	0.0
NJ2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIA	Tai'an	83.98	313	P	P	08 51 47.9	+3.2
TIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELIB	Princess Elisa	84.25	187	dP	P	08 51 47.6	+2.0
XAN	Xi'an	88.61	308	⇑P	P	08 52 02.5	-4.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.8s						
TXAR	Lajitas Array	89.24	58	P	P	08 52 14.3	+4.3
	comp=Z,0.3nm,0.8s,baz=258,slow=4.7,SNR=3.6						
	comp=Z,0.3nm,0.8s						
CMAR	Chiang Mai Arr	89.81	290	P	P	08 52 17.4	+4.7
	comp=Z,1.2nm,0.3s,baz=124,slow=3.2,SNR=14						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	89.81	290	P	P	08 52 16.6	+3.9
HHC	Hu-ho-hao-te	90.13	315	eP	P	08 52 14.6	+0.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	PanZhiHua	90.77	298	P	P	08 52 17.5	+0.3
ILAR	Eielson Array	90.79	13	P	P	08 52 20.7	+4.5
	comp=Z,0.4nm,0.9s,baz=252,slow=5.1,SNR=5.3						
	comp=Z,0.4nm,0.9s						
PDAR	Pinedale Array	91.40	44	P	P	08 52 23.4	+3.5
	comp=Z,0.4nm,0.8s,baz=256,slow=4.1,SNR=4.0						
	comp=Z,0.4nm,0.8s						
ZALV	Zalesovo Beam	111.54	321	PKiKP	PKiKP	08 57 46.0	+1.8
	comp=Z,0.4nm,0.5s,baz=353,slow=6.0,SNR=3.7						
MKAR	Makanchi Array	111.92	313	PKiKP	PKiKP	08 57 46.9	+1.6
	comp=Z,0.4nm,0.5s,baz=211,slow=0.7,SNR=9.7						
KURK	Kurchatov	114.88	317		PKiKP	08 57 52.1	+1.5
KURBB	Kurchatov Arra	114.92	317	PKP	PKiKP	08 57 52.1	+1.4
	comp=Z,0.7nm,0.4s,baz=105,slow=1.8,SNR=6.0						
KK31	Karatay Array	119.75	308		PKiKP	08 58 02.6	+2.1
KBL	Kabul	119.96	298		PKiKP	08 58 03.9	+2.5
BVAR	Borovoye Array	120.07	319	PKP	PKiKP	08 58 03.0	+2.2
	comp=Z,1.7nm,0.5s,baz=106,slow=0.8,SNR=8.4						
FINES	FINESS Array B	137.61	342	PKP	PKiKP	08 58 36.5	+0.8
	comp=Z,1.3nm,0.4s,baz=113,slow=4.4,SNR=8.2						
NB2	NORSAR Subarra	141.09	352	PKP	PKPpre	08 58 37.2	
	comp=Z,0.8nm,0.6s,baz=20,slow=3.0						
NOA	NORSAR Array B	141.09	352	PKhKP	PKPpre	08 58 37.4	
	comp=Z,1.3nm,0.7s,baz=16,slow=4.6,SNR=4.1						
HFS	Hagfors	141.59	350	PKhKP	PKPpre	08 58 38.3	
	comp=Z,1.6nm,0.4s,baz=69,slow=4.9,SNR=11						
MBAR	Mbarara	142.70	236		PKPpre	08 58 41.3	
AKASG	Malin Array Be	144.40	329	PKP	PKiKP	08 58 48.2	-1.7
	comp=Z,4.4nm,0.4s,baz=45,slow=4.1,SNR=46						
AKASG	Malin Array Be	144.40	329		PKiKP	08 58 48.3	-1.6
KIEV	Kiev	144.42	329		PKiKP	08 58 48.1	-1.8
ILGA	Ilgaz	146.89	311		PKPab	08 58 57.5	+0.8
EKA	Eskdalemuir Ar	147.36	4	PKPbc	PKPab	08 58 57.2	-0.4
	comp=Z,2.3nm,0.8s,baz=9.8,slow=3.5,SNR=4.0						
BRTR	Keskin Array B	147.45	309	PKPbc	PKPab	08 58 57.8	-1.1
	comp=Z,3.3nm,0.6s,baz=138,slow=5.2,SNR=17						
BALJ	Balqa	147.81	294		PKPab	08 58 59.7	-0.7
MMAI	Mount Meron Ar	147.87	296	PKPbc	PKPab	08 58 59.8	-0.8
	comp=Z,6.4nm,0.4s,baz=32,slow=5.4,SNR=17						
BUR08	Bucovina Ar. S	148.41	328		PKPab	08 59 01.2	-1.2
LANS	Liptovska Anna	149.81	335	ePKP	PKPab	08 59 04.9	-3.2
CLL	Collm	149.98	345	i Px	Px	08 58 43.5	
CLL	Collm	149.98	345	i PKPbc	PKPab	08 59 03.9	-4.7
	comp=Z,12nm,0.9s						
MORC	Moravsky Berou	150.00	338	ePKP	PKPab	08 59 04.6	-4.2
BRG	Berggiesshubel	150.14	343	⇑iPKPb		08 59 04.6	
BRG				Amp		08 59 05.2	
	comp=Z,6.4nm,0.7s						
BRG	Berggiesshubel	150.14	343	P	PKPab	08 59 12.9	+3.6
BRG				Amp		08 59 14.2	
	comp=Z,3.7nm,0.7s						
KRUC	Moravsky	151.00	339	ePKP	PKPab	08 59 06.5	-6.5
MODS	Modra-Piesok	151.28	337	ePKP	PKiKP	08 59 02.3	-1.9
MODS				e		08 59 12.4	
TORD	Torodi Ar. Bea	170.38	185	PKPab	PKPab	09 00 39.7	+1.5
	comp=Z,1.0nm,0.6s,baz=195,slow=5.2,SNR=7.0						

IDC 04 08:43:14.4±1.1,39°.00N×27°.97E,h0km,mb3.4/4,mbtmp3.6/9,ML3.6/4,MS3.0/13,Error ellipse: s-maj=23.6km s-min=18.5km az=151.0

ISK 04 08:43:15.5,38°.98N×27°.87E,h10km,ML4.3/37

AFAD 04 08:43:15.5,38°.99N×27°.88E,h9km±1km,MW3.9

THE 04 08:43:16.9,39°N±4°×2°8E±°,h4km±29km,M3.8/11,MLh3.8/11

ISC 04 08:43:15.8±0.8**,39°.00N**±0°.01×**27°.88E**±0°.02**,h11**km±5km**,n128,σ1.04**/159**,mb3.4**/3**,MS2.9**/6**,13C-16D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.13	202	P	Pg	08 43 18.7	-0.2
AKHS				IAML		08 43 21.0	
	comp=E,7μm,0.2s						
AKHS				S	Sg	08 43 21.3	+0.2
AKS	Akhisar	0.13	202	Pg	Pg	08 43 18.3	-0.6
AKS				Sg	Sg	08 43 20.9	-0.3
GORD	Gordes-Manisa	0.25	110	Pg	Pg	08 43 21.2	+0.2
GORD				Sg	Sg	08 43 25.2	+0.7
GOMA	Golmarmara-Man	0.29	173	Pg	Pg	08 43 21.5	-0.2
GOMA				Sg	Sg	08 43 26.0	+0.4
SOMA	Soma-Manisa	0.31	301	Pg	Pg	08 43 22.1	0.0
SOMA				Sg	Sb	08 43 27.2	-1.2
KTTT	Salihli	0.35	151	P	Pg	08 43 22.8	-0.1
KTTT				S	Sg	08 43 27.5	0.0
KTTT				IAML		08 43 29.0	
	comp=N,2μm,0.6s						
STEP	BALIKESIR_Sava	0.40	342	P	Pg	08 43 23.5	-0.2
STEP				S	Sb	08 43 30.3	-0.8
STEP				IAML		08 43 31.0	
	comp=E,3μm,0.3s						
STEP				IAML		08 43 32.0	
	comp=N,3μm,0.6s						
CAMT	Merkez	0.50	241	P	Pb	08 43 26.2	-0.5
CAMT				S	Sb	08 43 33.8	-0.2
CAMT				IAML		08 43 35.0	
	comp=N,2μm,0.3s						
CAMT				IAML		08 43 37.0	
	comp=E,2μm,0.4s						
ZEDA	zmir-Bergama	0.62	267	P	Pb	08 43 28.1	-0.6
ZEDA				S	Sb	08 43 37.3	-0.1
ZEDA				IAML		08 43 38.0	
	comp=N,6μm,0.6s						
ZEDA				IAML		08 43 38.0	
	comp=E,3μm,0.2s						
BALB	Balikesir	0.64	0	Pg	Pb	08 43 28.5	-0.5
BALB				Sg	Sb	08 43 38.8	+0.8
DEMI	Demirci	0.66	86	P	Pb	08 43 28.7	-0.6
DEMI				S	Sb	08 43 37.9	-0.6
DEMI				IAML		08 43 42.0	
	comp=N,9μm,0.3s						
DEMI				IAML		08 43 43.0	
	comp=E,1μm,0.3s						
MANT	Manisa	0.73	133	P	Pg	08 43 29.7	-0.4
MANT				S	Sg	08 43 39.7	0.0
MANT				IAML		08 43 43.0	
	comp=E,7μm,0.3s						
MANT				IAML		08 43 44.0	
	comp=N,5μm,0.6s						
BKES	Balkesir-Mer	0.74	3	P	Pg	08 43 29.9	-0.2
BKES				S	Sb	08 43 40.1	-0.6
ODEM	Odemis-Izmir	0.74	168	Pg	Pg	08 43 29.9	-0.2
ODEM				Sg	Sb	08 43 40.3	-0.4
IZMD	zmir-Dikili-	0.74	269	P	Pb	08 43 30.5	-0.2
IZMD				P	Pb	08 43 30.5	-0.2
IZMD				S	Sb	08 43 40.8	0.0
IZMD				S	Sb	08 43 40.9	0.0
IZMD				IAML		08 43 44.0	
	comp=E,1μm,0.4s						
IZMD				IAML		08 43 44.0	
	comp=E,1μm,0.4s						
IZMD				IAML		08 43 45.0	
	comp=N,2μm,0.8s						
IZMD				IAML		08 43 45.0	
	comp=N,2μm,0.8s						
DKL	Dikili	0.76	276	Pg	Pg	08 43 30.5	0.0
DURS	Dursunbey	0.76	37	P	Pg	08 43 30.2	-0.4
DURS				S	Sn	08 43 43.3	-0.8
BALY	Balya	0.77	345	P	Pg	08 43 30.6	-0.1
KULA	Kula-Manisa	0.78	128	Pg	Pg	08 43 30.7	-0.2
KULA				Sg	Sb	08 43 42.1	+0.1
BUHA	Balikesir, Bur	0.80	309	P	Pb	08 43 31.3	-0.4
BUHA				S	Sb	08 43 42.3	-0.2
DST	Dursunbey	0.84	43	Pg	Pb	08 43 32.4	0.0
DUVT	Torbali	0.84	203	P	Pg	08 43 31.6	-0.5
DUVT				IAML		08 43 45.0	
	comp=E,4μm,0.5s						
IZMR	zmir-demi	0.86	176	P	Pg	08 43 32.0	-0.4
IZMR				P	Pb	08 43 32.3	-0.4
IZMR				S	Sg	08 43 42.8	-0.8
IZMR				S	Sb	08 43 43.1	-1.1
IZMR				IAML		08 43 46.0	
	comp=N,4μm,0.6s						
IZMR				IAML		08 43 46.0	
	comp=E,10μm,0.5s						
IZMR				IAML		08 43 46.0	
	comp=N,4μm,0.6s						
IZMR				IAML		08 43 46.0	
	comp=E,10μm,0.5s						
SIMA	Simav-Kutahya	0.87	84	Pg	Pb	08 43 32.9	0.0
SMAA	Simav-Kutahya	0.87	83	Pg	Pb	08 43 32.8	-0.1
BAGT	Foa	0.87	247	P	Pg	08 43 32.1	-0.5
BAGT				S	Sb	08 43 45.1	+0.7
YAYO	Edremit-Balk	0.87	315	Pg	Pb	08 43 32.9	-0.1
BLKS	Balkesir-Sus	0.88	5	P	Pg	08 43 32.3	-0.5
BLKS				P	Pb	08 43 32.4	-0.7
BLKS				S	Sg	08 43 43.7	-0.6
BLCB	Balcova	0.89	227	Pg	Pg	08 43 32.8	-0.2
KIRA	zmir-Kiraz	0.90	153	P	Pg	08 43 33.0	-0.2
KIRA				S	Sg	08 43 44.2	-0.6
FOCM	Foa	0.94	253	Pg	Pb	08 43 34.0	0.0
AYVA	Ayvalik	0.97	289	P	Pg	08 43 34.0	-0.5
AYVA				S	Sb	08 43 47.8	+0.3
SUSR	Susurluk-Balik	0.98	9	Pg	Pb	08 43 34.8	0.0
AYDB	Zeytinkoy-Aydi	1.05	179	Pg	Pg	08 43 35.6	-0.4
SHAP	Saphane-Kutahy	1.05	88	Pg	Pn	08 43 36.4	-0.1
GONE	Gonen-Balikesi	1.06	352	Pg	Pn	08 43 36.6	0.0
YENI	Yenice-Canakka	1.06	333	Pg	Pn	08 43 36.4	-0.2
NAZL	Nazilli-Aydin	1.08	162	Pg	Pb	08 43 36.5	0.0
KRBN	Karaburun	1.11	249	Pn	Pn	08 43 37.4	+0.2
SULTU	Buldan	1.17	143	P	Pb	08 43 38.1	0.0
SULTU				S	Sb	08 43 53.8	+0.4
GMLD	Gumuldur	1.19	220	Pn	Pg	08 43 39.0	+0.4
KARB	zmir-Karabur	1.19	254	S	Sn	08 43 55.6	+1.1
CANM	Can-anakkale	1.20	328	Pn	Pg	08 43 39.1	+0.3
GEDZ	Gediz	1.20	87	Pn	Pn	08 43 38.9	+0.4
DGB	zmir	1.22	220	P	Pn	08 43 38.3	-0.5
DGB				S	Sn	08 43 55.6	+0.3
PRK	Paraskevi	1.27	282	P	Pg	08 43 39.9	-0.3
PRK				S	Sn	08 43 57.1	+0.6
ORLT	Orhaneli	1.31	37	Pn	Pg	08 43 40.6	-0.4
TVSB	Tavsanli	1.31	69	Pn	Pg	08 43 40.8	-0.2
KCTX	Karacabey (Bur	1.32	16	Pn	Pg	08 43 40.7	-0.5
EDC	Edincik	1.35	360	Pn	Pb	08 43 41.0	-0.1
GCAM	G?zelcaml?	1.39	201	Pn	Pn	08 43 41.1	0.0
EZNE	Ezine-Canakkal	1.39	303	Pn	Pn	08 43 41.3	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BIGA	**Biga-Canakkale**	**1.40**	**337**	Pn	**Pb**	**08 43 41.6**	**-0.3**
BIGA				Sn	**Sg**	**08 44 01.1**	**+0.2**
EZN	**Ezine**	**1.46**	**305**	Pn	**Pb**	**08 43 42.5**	**-0.5**
EZN	**Ezine**	**1.46**	**305**	P	**Pb**	**08 43 42.4**	**-0.5**
EZN				S	**Sg**	**08 44 02.3**	**-0.4**
KRBG	**Karabiga-Canak**	**1.46**	**342**	Pn	**Pn**	**08 43 41.9**	**-0.2**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**08 43 43.0**	**+0.1**
SMG				S	**Sg**	**08 44 05.3**	**+0.5**
COMU	**Canakkale**	**1.54**	**316**	Pn	**Pb**	**08 43 44.4**	**0.0**
CHOS	**Chios island**	**1.55**	**247**	Pn	**Pn**	**08 43 43.6**	**+0.2**
CHOS	**Chios island**	**1.55**	**247**	P	**Pn**	**08 43 43.5**	**+0.2**
CHOS				S	**Sg**	**08 44 05.1**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.58**	**29**	Pn	**Pn**	**08 43 43.9**	**+0.2**
SIGR	**SIGRI**	**1.59**	**278**	Pn	**Pn**	**08 43 44.4**	**+0.6**
SIGR	**SIGRI**	**1.59**	**278**	S	**Sb**	**08 44 05.2**	**+0.1**
LPK	**Lapseki**	**1.62**	**328**	Pn	**Pn**	**08 43 44.9**	**+0.6**
BOZC	**Bozcaada**	**1.65**	**301**	Pn	**Pn**	**08 43 44.9**	**+0.3**
MLSB	**Milas**	**1.70**	**183**	Pn	**Pn**	**08 43 45.8**	**+0.4**
YER	**Yerkesik**	**1.89**	**170**	Pn	**Pn**	**08 43 48.3**	**+0.3**
YER	**Yerkesik**	**1.89**	**170**	S	**Sb**	**08 44 14.8**	**+0.9**
GADA	**Gvkgeada**	**1.94**	**309**	P	**Pn**	**08 43 49.2**	**+0.6**
GADA				S	**Sn**	**08 44 13.8**	**+0.8**
BODT	**Bodrum**	**1.98**	**193**	P	**Pn**	**08 43 50.5**	**+1.3**
CAVK	**Edirne/Enez-Ca**	**2.14**	**323**	⇑P	**Pb**	**08 43 53.0**	**-1.6**
CAVK				⇑S	**Sb**	**08 44 20.4**	**-0.8**
ENEZ	**Enez**	**2.19**	**323**	P	**Pn**	**08 43 53.2**	**+1.1**
ENEZ				S	**Sn**	**08 44 20.7**	**+1.6**
LIA	**Limnos Island**	**2.27**	**294**	P	**Pn**	**08 43 53.8**	**+0.6**
LIA				S	**Sn**	**08 44 22.9**	**+1.7**
SMTH	**Samothraki Isl**	**2.33**	**310**	P	**Pn**	**08 43 54.5**	**+0.4**
ALN	**Alexandroupoli**	**2.36**	**324**	P	**Pn**	**08 43 55.0**	**+0.5**
RDO	**Rodhopi**	**2.80**	**321**	P	**Pn**	**08 44 01.4**	**+1.0**
THAS	**Thassos island**	**2.91**	**304**	P	**Pn**	**08 44 02.0**	**-0.1**
SAHE	**Sakarya_HENDEK**	**2.95**	**50**	⇓P	**Pn**	**08 44 04.1**	**+1.5**
ELND	**Elena**	**4.21**	**340**	⇓P	**Pn**	**08 44 21.1**	**+1.2**
IDI	**Anoyia**	**4.40**	**214**	Pn	**Pn**	**08 44 23.7**	**+1.1**
	5.2nm,0.6s,baz=16,slow=7.4,SNR=1.7						
IDI				Sn	**Sn**	**08 45 09.2**	**-4.7**
	1.7nm,0.3s,baz=180,slow=19,SNR=2.0						
IDI				Lg	Lg	08 45 37.3	
	2.2nm,0.3s,baz=261,slow=14,SNR=3.1						
IDI				LR	LR	08 46 19.1	
	comp=Z,257nm,21.1s,baz=66,slow=42						
BRTR	**Keskin Array B**	**4.53**	**79**	Pn	**Pn**	**08 44 26.2**	**+1.9**
	1.5nm,0.3s,baz=258,slow=14,SNR=33						
BRTR				Lg	Lg	08 45 44.0	
	1.4nm,0.3s,baz=263,slow=21,SNR=15						
BRTR				LR	LR	08 46 15.2	
	comp=Z,144nm,20.8s,baz=264,slow=41						
	5.1nm,0.4s						
RAZG	**Razgrad**	**4.68**	**348**	⇑P	**Pn**	**08 44 28.9**	**+2.5**
KIRS	**Kirsehir-Merke**	**4.71**	**86**	⇓P	**Pn**	**08 44 28.5**	**+1.7**
CIDE	**Kastamonu/Cide**	**4.83**	**52**	⇓P	**Pn**	**08 44 29.4**	**+1.1**
ICOR	**Ion Corvin**	**5.12**	**359**	⇓P	**Pn**	**08 44 33.1**	**+0.7**
TIRR	**Tirgusor**	**5.47**	**4**	⇑P	**Pn**	**08 44 39.0**	**+1.8**
OHR	**Ohrid**	**5.83**	**293**	*i* Pn	**Pn**	**08 44 45.5**	**+3.4**
TPGR	**Topolog**	**5.87**	**4**	⇓P	**Pn**	**08 44 44.0**	**+1.3**
CFR	**Carcaliu**	**6.18**	**2**	⇑P	**Pn**	**08 44 47.6**	**+0.7**
TLCR		**6.22**	**6**	⇓P	**Pn**	**08 44 48.6**	**+1.1**
NEHR	**Nehoiu**	**6.53**	**350**	⇓P	**Pn**	**08 44 53.7**	**+1.9**
BOVS	**Bovan**	**6.56**	**317**	⇓P	**Pn**	**08 44 53.6**	**+1.4**
MLR	**Muntele Rosu**	**6.65**	**348**	Pn	**Pn**	**08 44 55.4**	**+1.9**
	0.6nm,0.3s,baz=130,slow=1.2,SNR=3.6						
MLR				Sn	**Sn**	**08 46 06.8**	**-2.4**
	1.8nm,0.3s,baz=144,slow=16,SNR=4.8						
MLR				Lg	Lg	08 46 42.8	
	1.2nm,0.3s,baz=218,slow=19,SNR=1.4						
	3.3nm,0.6s						
MLR	**Muntele Rosu**	**6.65**	**348**	⇑P	**Pn**	**08 44 55.7**	**+2.3**
VOIR		**6.77**	**343**	⇑P	**Pn**	**08 44 56.2**	**+1.1**
PLOR	**Plostina**	**6.91**	**353**	⇑P	**Pn**	**08 44 59.2**	**+2.2**
VRI	**Vrincioaia**	**6.92**	**353**	⇑P	**Pn**	**08 44 58.9**	**+1.9**
COVR	**Voineasa-Covas**	**6.96**	**350**	⇓P	**Pn**	**08 44 59.9**	**+2.3**
SEV	**Sevastopol'**	**7.03**	**36**	*e*P	**Pn**	**08 44 59.3**	**+0.7**
SEV				pmax	pmax	08 45 14.3	
	comp=Z,6.0nm,0.6s						
SEV				*e*S	**Sn**	**08 46 15.6**	**-2.9**
SEV				smax	smax	08 46 16.7	
	comp=E,8.0nm,0.6s						
LOT	**Lotru**	**7.13**	**336**	⇓P	**Pn**	**08 45 01.2**	**+1.2**
HERR	**Herculane**	**7.15**	**327**	⇓P	**Pn**	**08 45 00.6**	**+0.4**
TURR	**Turia**	**7.19**	**350**	⇓P	**Pn**	**08 45 03.1**	**+2.3**
DOPR	**Dopca**	**7.20**	**346**	⇑P	**Pn**	**08 45 02.5**	**+1.4**
TARU	**Tarkhankut**	**7.25**	**27**	*e*S	**Sn**	**08 46 21.4**	**-2.5**
TARU				smax	smax	08 46 21.7	
	comp=N,9.0nm,0.3s						
OZUR		**7.26**	**348**	⇑P	**Pn**	**08 45 03.3**	**+1.5**
MDVR	**Moldovita**	**7.38**	**323**	⇓P	**Pn**	**08 45 04.5**	**+1.0**
PDG	**Podgorica**	**7.39**	**300**	⇑P	**Pn**	**08 45 05.0**	**+1.5**
GZR	**Gura Zlata**	**7.43**	**331**	⇑P	**Pn**	**08 45 04.8**	**+0.7**
TESR	**Tescani**	**7.56**	**354**	⇓P	**Pn**	**08 45 07.4**	**+1.4**
BZS	**Buzias**	**8.08**	**327**	⇓P	**Pn**	**08 45 13.3**	**+0.4**
MMAI	**Mount Meron Ar**	**8.53**	**132**	Pn	**Pn**	**08 45 20.2**	**+0.8**
	comp=N,1.3nm,0.3s,baz=312,slow=14,SNR=3.0						
MMAI				LR	LR	08 50 22.7	
	comp=N,43nm,19.2s,baz=309,slow=50						
	comp=N,0.8nm,0.3s						
ASF	**Jabal al Asfar**	**10.01**	**130**	LR	LR	08 51 17.4	
	comp=N,43nm,18.7s,baz=27,slow=48						
AKASG	**Malin Array Be**	**11.74**	**4**	LR	LR	08 50 19.8	
	comp=N,133nm,18.5s,baz=215,slow=36						
MODS	**Modra-Piesok**	**12.10**	**324**	*e*PN	Pn	08 46 02.9	-5.2
MODS				*e*		08 51 47.9	
KBZ	**Khabaz**	**12.23**	**62**	LR	LR	08 52 02.3	
	comp=N,112nm,18.5s,baz=252,slow=43						
KEST	**Kesra**	**15.09**	**263**	Pn	**P**	**08 46 55.2**	**+1.0**
	comp=N,0.3nm,0.3s,baz=283,slow=8.4,SNR=4.9						
DAVOX	**Davos/Dischmat**	**15.29**	**306**	LR	LR	08 53 08.4	
	comp=N,123nm,21.7s,baz=262,slow=39						
BELG	**Belogornoye**	**19.14**	**39**	P	**P**	**08 47 37.5**	**-1.4**
	comp=N,0.2nm,0.3s,baz=222,slow=11,SNR=4.6						
	comp=N,14nm,0.9s						
AKTO	**Aktyubinsk**	**24.11**	**52**	LR	LR	08 59 34.0	
	comp=N,30nm,19.3s,baz=136,slow=41						
NOA	**NORSAR Array B**	**24.38**	**340**	LR	LR	09 00 29.3	
	comp=N,22nm,22.0s,baz=340,slow=42						
ESDC	**Sonseca Array**	**24.57**	**282**	P	**P**	**08 48 36.7**	**+1.0**
	comp=N,0.8nm,0.9s,baz=67,slow=9.0,SNR=5.2						
	comp=N,0.8nm,0.9s						
ARTI	**Arti**	**26.59**	**39**	LR	LR	09 00 21.1	
	comp=N,34nm,19.1s,baz=193,slow=39						
TORD	**Torodi Ar. Bea**	**34.63**	**229**	P	**P**	**08 50 05.4**	**+0.3**
	comp=N,0.3nm,0.6s,baz=32,slow=6.8,SNR=2.8						
	comp=N,0.3nm,0.6s						
AAK	**Ala-Archa**	**35.12**	**69**	LR	LR	09 05 02.8	
	comp=N,21nm,18.1s,baz=295,slow=37						
KURBB	**Kurchatov Arra**	**37.08**	**55**	P	**P**	**08 50 26.3**	**+0.5**
	comp=N,0.3nm,0.4s,baz=277,slow=7.4,SNR=2.7						
	comp=N,0.3nm,0.4s						
MKAR	**Makanchi Array**	**39.92**	**61**	P	**P**	**08 50 48.0**	**-1.8**
	comp=N,0.3nm,0.8s,baz=267,slow=10,SNR=4.1						
	comp=N,0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**40.82**	**49**	LR	LR	09 08 40.5	
	comp=N,21nm,20.0s,baz=3.5,slow=37						
KSRS	**Korea Array**	**74.26**	**55**	LR	LR	09 31 15.6	
	comp=N,20nm,19.7s,baz=310,slow=39						

*RSNC **04** 09:09:23.1±0.0, 4˚N±1˚×7˚7W±˚, h66km±5km, M3.1, mB4.6, mb4.5, ML2.9, Mw(mB)3.8*
*IDC **04** 09:09:31.2±1.6, 4.˚86N×76.˚60W, h0km, mbtmp3.6/2, ML2.1/2, Error ellipse: s-maj=89.9km s-min=27.2km az=159.0*
ISC 04 09:09:21.9±1.5**, 4.˚00N**±0.˚04×**77.˚14W**±0.˚05**, h8**km±10km**, n43,** σ**2.˚12**/52**, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOTC	**Yotoco, Valle**	**0.79**	**91**	P	**Pg**	**09 09 37.5**	**+0.4**
YOTC				S	**Sb**	**09 09 49.0**	**+0.1**
JAMC	**Jamundi, Valle**	**0.91**	**149**	P	**Pg**	**09 09 38.9**	**-0.4**
JAMC				S	**Sg**	**09 09 50.7**	**-0.4**
PIZC	**Pizarro, Choco**	**0.99**	**347**	P	**Pg**	**09 09 41.6**	**+0.8**
PIZC				S	**Sn**	**09 09 56.2**	**+0.1**
GR1C	**Gorgona, Isla**	**1.42**	**226**	P	Pn	09 09 45.4	-2.6
GR1C				S	Sn	09 10 02.9	-4.0
POPC	**Popayan, Colom**	**1.52**	**162**	P	Pn	09 09 47.5	-2.0
POPC				S	Sn	09 10 06.1	-3.5
ANIL	**Santa Ana**	**1.80**	**74**	P	**Pn**	**09 09 52.3**	**-1.1**
ANIL				S	**Sn**	**09 10 15.8**	**-0.8**
ORTC	**Ortega, Tolima**	**1.89**	**93**	P	**Pn**	**09 09 53.6**	**-0.9**
ORTC				S	**Sn**	**09 10 16.6**	**-1.9**
BBAC	**Balboa, Cauca**	**1.96**	**183**	P	Pn	09 09 53.3	-2.4
BBAC				S	Sn	09 10 16.5	-4.1
NIZA	**Niza - Manizal**	**1.97**	**58**	P	**Pn**	**09 09 55.2**	**-0.6**
NIZA				S	**Sn**	**09 10 20.2**	**-0.6**
CBOC	**Ciudad Bolivar**	**2.17**	**31**	P	**Pn**	**09 09 56.3**	**-2.1**
CBOC				S	**Sn**	**09 10 22.1**	**-3.5**
SOLC	**Bahia Solano**	**2.23**	**353**	P	**Pn**	**09 09 57.0**	**-2.1**
SOLC				S	**Sn**	**09 10 22.7**	**-4.2**
PRAC	**Prado**	**2.27**	**97**	P	**Pn**	**09 09 58.7**	**-0.9**
PRAC				S	**Sn**	**09 10 25.4**	**-2.4**
CRUC	**La Cruz**	**2.42**	**176**	P	Pn	09 10 00.6	-1.5
CRUC				S	Sn	09 10 29.6	-2.5
GARC	**Garzon, Huila**	**2.44**	**138**	P	**Pn**	**09 10 01.2**	**-1.0**
GARC				S	**Sn**	**09 10 31.1**	**-1.2**
GCUF	**Volcan Galeras**	**2.76**	**184**	P	Pn	09 10 05.1	-1.8
GCUF				S	Sn	09 10 35.0	-5.6
FLOC	**Florencia**	**2.82**	**148**	P	Pn	09 10 06.2	-1.1
FLOC				S	**Sn**	**09 10 39.7**	**-1.8**
URMC	**La Uribe, Meta**	**2.85**	**105**	P	**Pn**	**09 10 06.6**	**-1.2**
URMC				S	**Sn**	**09 10 38.3**	**-4.1**
ROSC	**El Rosal**	**2.93**	**73**	Pn	**Pn**	**09 10 10.2**	**+1.1**
	8.5nm,0.3s,baz=0.5,slow=15,SNR=12						
ROSC				Sn	**Sn**	**09 10 46.7**	**+1.9**
	13nm,0.3s,baz=2.0,slow=23,SNR=8.9						
	36nm,0.4s						
ROSC	**El Rosal**	**2.93**	**73**	P	**Pn**	**09 10 09.9**	**+0.8**
ROSC				S	**Sn**	**09 10 44.9**	**+0.1**
CVER	**Cruz Verde, Cu**	**3.10**	**80**	P	**Pn**	**09 10 11.2**	**-0.3**
CMBC	**Cumbal**	**3.11**	**193**	P	Pn	09 10 09.4	-2.3
CMBC				S	Sn	09 10 45.4	-3.9
DBBC	**Dabeiba**	**3.14**	**17**	P	**Pn**	**09 10 10.4**	**-1.3**
PTAC	**Punta Ardita,**	**3.20**	**348**	P	**Pn**	**09 10 10.7**	**-1.8**
PTAC				S	**Sn**	**09 10 44.9**	**-5.9**
VILC	**Villavicencio,**	**3.44**	**88**	P	**Pn**	**09 10 16.2**	**+0.3**
VILC				S	**Sn**	**09 10 53.9**	**-3.0**
CHIC	**Chingaza**	**3.46**	**79**	P	**Pn**	**09 10 16.4**	**+0.1**
CHIC				S	**Sn**	**09 10 56.5**	**-1.2**
SPBC	**San Pablo de B**	**3.47**	**62**	P	**Pn**	**09 10 16.1**	**-0.2**
BONI	**La Bonita**	**3.54**	**186**	P	Pn	09 10 18.3	+0.9
PTBC	**PUERTO BERRIO,**	**3.68**	**46**	P	**Pn**	**09 10 17.9**	**-1.1**
PTBC				S	**Sn**	**09 11 00.5**	**-2.1**
MACC	**Macarena, Meta**	**3.77**	**119**	P	**Pn**	**09 10 18.8**	**-1.5**
MACC				S	**Sn**	**09 11 01.0**	**-3.8**
CUSE	**Cuicocha Este**	**3.88**	**199**	P	Pn	09 10 19.2	-3.0
CUSE				S	Sn	09 10 59.8	-8.3
APAC	**Apartado, Choc**	**3.92**	**8**	P	**Pn**	**09 10 23.3**	**+1.0**
APAC				S	**Sn**	**09 11 08.1**	**-0.4**
OTAV	**Otavalo**	**3.96**	**199**	P	Pn	09 10 20.1	-3.2
OTAV				S	Sn	09 11 02.3	-7.9
PAC1	**Pacto, Paraso**	**4.06**	**204**	P	Pn	09 10 19.6	-4.8
PAC1				S	Sn	09 11 02.9	-9.3
UREC	**San Jos de Ur**	**4.06**	**23**	P	**Pn**	**09 10 23.7**	**-0.6**
UREC				S	**Sn**	**09 11 11.2**	**-0.8**
RUSC	**La Rusia**	**4.46**	**65**	P	**Pn**	**09 10 30.2**	**0.0**
PTLC	**Puerto Leguiza**	**4.46**	**148**	P	**Pn**	**09 10 30.9**	**+1.0**
BRJC	**Barrancabermej**	**4.49**	**49**	P	**Pn**	**09 10 29.3**	**-0.9**
CAPC	**Capurgana**	**4.61**	**357**	P	**Pn**	**09 10 32.6**	**+0.7**
BARC	**Barichara**	**4.71**	**57**	P	**Pn**	**09 10 33.2**	**-0.2**
OCAC	**Ocana**	**5.67**	**42**	P	**Pn**	**09 10 46.1**	**-0.5**
SDV	**Santo Domingo**	**8.09**	**53**	Pn	**Pn**	**09 11 17.4**	**-2.4**
	0.4nm,0.3s,baz=127,slow=20,SNR=2.1						
SDV				Sn	Sn	09 12 40.4	-11
	0.1nm,0.3s,baz=0.0,slow=20,SNR=1.2						
	1.3nm,0.3s						
ASAR	**Alice Springs**	**144.22**	**234**	PKPbc	**PKiKP**	**09 29 10.1**	**+7.1**
	0.4nm,0.7s,baz=119,slow=3.4,SNR=6.7						
WRA	**Warramunga Arr**	**145.47**	**240**	PKPbc	PKiKP	09 29 14.7	+9.1
	0.2nm,0.5s,baz=101,slow=3.3,SNR=4.8						

*NNC **04** 09:30:47.0±1.1, 51.˚93N×75.˚56E, h0km, mb2.8, mpv2.3, Error ellipse: s-maj=13.1km s-min=7.1km az=24.0, Suspected Mining explosion.*
*IDC **04** 09:30:48.1±1.1, 51.˚80N×75.˚47E, h0km, mbtmp2.4/3, ML1.9/1, Error ellipse: s-maj=28.7km s-min=8.1km az=28.0*
ISC 04 09:30:41.7±1.1**, 52.˚9N**±0.˚1×**76.˚52E**±0.˚07**, h0**km**, n9,** σ**0.˚36**/7**, 3C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.55**	**148**	⇑Pg	**Pb**	**09 31 28.6**	**+0.4**
	1.2nm,1.1s						
KURK				⇓Lg	Lg	09 31 59.1	
	2.6nm,0.7s						
KURBB	**Kurchatov Arra**	**2.60**	**150**	Pg	**Pb**	**09 31 29.4**	**+0.3**
	baz=304,slow=19,SNR=13						
KURBB				Lg	Lg	09 31 58.4	
	0.1nm,0.3s,baz=306,slow=30,SNR=6.5						
KURBB	**Kurchatov Arra**	**2.60**	**150**	⇓Pg	**Pb**	**09 31 28.6**	**-0.6**
	3.0nm,0.7s,baz=304,slow=17						
KURBB				⇓Lg	Lg	09 31 58.8	
	8.7nm,0.7s,baz=308,slow=28						
BVA0	**Borovoye Array**	**3.71**	**274**	⇑Lg	Lg	09 32 32.8	
	4.6nm,0.8s						
BVAR	**Borovoye Array**	**3.71**	**274**	Pn	**Pn**	**09 31 40.3**	**+0.1**
	0.3nm,0.4s,baz=134,slow=12,SNR=1.8						
BVAR				Pg	**Pb**	**09 31 48.0**	**0.0**
	baz=116,slow=13						
BVAR				Lg	Lg	09 32 33.1	
	baz=110,slow=33,SNR=6.9						
I46RU	**ZALESOVO INFRA**	**5.07**	**75**	I	I	10 07 40.0	
	baz=247,slow=320,SNR=3.2						
ZALV	**Zalesovo Beam**	**5.07**	**75**	Pn	**Pg**	**09 32 18.8**	**0.0**
	0.3nm,0.3s,baz=242,slow=12,SNR=1.4						
MK31	**Makanchi Array**	**7.16**	**146**	⇑Lg	Lg	09 34 23.3	
	2.2nm,0.9s,baz=315,slow=26,SNR=4.7						
MKAR	**Makanchi Array**	**7.16**	**146**	Pn	**Pn**	**09 32 27.5**	**-0.1**
	baz=319,slow=8.4,SNR=2.4						
MKAR				Lg	Lg	09 34 18.4	
	0.1nm,0.3s,baz=316,slow=24,SNR=6.4						
	0.3nm,0.8s						

*IDC **04** 09:38:41.2±1.9, 8.˚31N×103.˚46W, h0km, mb3.9/5, mbtmp3.8/7, ML3.3/2, MS3.6/8, Error ellipse: s-maj=48.8km s-min=25.6km az=56.0*
*NEIC **04** 09:38:41.8±1.5, 7.˚9N±0.˚1×103.˚1W±0.˚1, h10km±2km, mb4.3/25, Error ellipse: s-maj=24.9km s-min=18.3km az=239.0*
ISC 04 09:38:43.9±1.9**, 7.˚9N**±0.˚2×**103.˚1W**±0.˚2**, h35**km**, n45,** σ**0.˚78**/35**, mb4.2**/17**, MS3.6**/6**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**10.56**	**25**		**Pn**	**09 41 11.8**	**-1.2**
MOIG	**Morelia**	**11.83**	**9**	Pn	**Pn**	**09 41 30.8**	**+0.3**
CMIG	**Matias Romero**	**12.15**	**41**	Pn	**Pn**	**09 41 33.9**	**-0.7**
	0.3nm,0.3s,baz=214,slow=8.2,SNR=8.0						
CMIG				LR	LR	09 45 12.6	
	comp=Z,420nm,21.6s,baz=193,slow=32						
	1.0nm,0.4s						
APG	**El Apazote**	**14.27**	**59**	Pn	**Pn**	**09 42 05.1**	**+1.3**
	0.1nm,0.3s,baz=174,slow=11,SNR=7.2						
	0.7nm,0.7s						
ZAIG	**Zacatecas**	**14.76**	**2**	Pn	**Pn**	**09 42 10.6**	**+0.1**
MTO3	**Montecristo**	**14.96**	**63**	Pn	**Pn**	**09 42 13.2**	**0.0**
LPIG	**La Paz**	**17.48**	**338**	LR	LR	09 47 32.0	
	comp=Z,71nm,20.3s,baz=154,slow=31						
HPIG		**19.05**	**353**	P	**Pn**	**09 43 04.5**	**+0.1**
TX31	**Lajitas Ar. Si**	**21.29**	**359**		**P**	**09 43 27.4**	**-0.3**
TX31				IAmb	IAmb	09 43 45.1	
	comp=Z,14nm,1.5s						
TXAR	**Lajitas Array**	**21.29**	**359**	P	**P**	**09 43 27.6**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=178,slow=10,SNR=9.6						
TXAR				LR	LR	09 50 38.6	
	comp=Z,126nm,19.9s,baz=173,slow=34						
	comp=Z,1.7nm,0.9s						
TXAR	**Lajitas Array**	**21.29**	**359**	P	**P**	**09 43 27.9**	**+0.2**
HNDO	**Hondo**	**21.79**	**9**	P	**P**	**09 43 32.5**	**-0.3**
HNDO				IAmb	IAmb	09 43 36.5	
	comp=Z,20nm,1.2s						
SAND	**Sanderson**	**21.93**	**2**		**P**	**09 43 34.5**	**+0.1**
SAND				IAmb	IAmb	09 43 39.7	
	comp=Z,13nm,1.3s						
ALPN	**Alpine**	**22.33**	**359**	P	**P**	**09 43 39.3**	**+0.4**
JCT	**Junction City**	**22.65**	**8**	P	**P**	**09 43 42.4**	**+0.2**
JCT				IAmb	IAmb	09 43 50.2	
	comp=Z,10nm,1.2s						
VHRN	**Van Horn**	**22.80**	**356**	P	**P**	**09 43 44.6**	**+0.8**
OZNA	**Ozona**	**22.95**	**4**		**P**	**09 43 46.4**	**+1.1**
BRDY	**Brady**	**23.55**	**9**		**P**	**09 43 52.2**	**+0.9**
MNTX	**Cornudas Mount**	**23.74**	**355**	P	**P**	**09 43 51.8**	**-1.1**
ABTX	**Abilene, Hawle**	**24.78**	**7**	P	**P**	**09 44 02.5**	**-0.1**
ABTX				IAmb	IAmb	09 44 04.5	
	comp=Z,19nm,1.3s						
POST	**Post**	**25.05**	**3**	P	**P**	**09 44 05.4**	**+0.3**
POST				IAmb	IAmb	09 44 06.3	
	comp=Z,7.5nm,0.9s						
OTAV	**Otavalo**	**25.77**	**106**	P	**P**	**09 44 12.0**	**-0.2**
OTAV				IAmb	IAmb	09 44 31.3	
	comp=Z,7.8nm,1.2s						
MSTX	**Muleshoe**	**25.91**	**1**	P	**P**	**09 44 12.7**	**-0.2**
MSTX				IAmb	IAmb	09 44 15.4	
	comp=Z,17nm,1.5s						
ANMO	**Albuquerque**	**27.05**	**354**	LR	LR	09 53 26.6	
	comp=Z,121nm,18.4s,baz=167,slow=33						
SMWD	**Samnorwood**	**27.17**	**5**	P	**P**	**09 44 23.4**	**-0.8**
SMWD				IAmb	IAmb	09 44 37.4	
	comp=Z,8.7nm,1.4s						
PV13	**Radium Mtn., P**	**30.52**	**351**	P	**P**	**09 44 54.1**	**-0.1**
PV13				IAmb	IAmb	09 45 30.0	
	comp=Z,4.8nm,1.3s						
R40A	**Maddies Statio**	**31.78**	**16**	P	**P**	**09 45 04.7**	**-0.3**
R40A				IAmb	IAmb	09 45 08.4	
	comp=Z,7.8nm,1.3s						
TKL	**Tuckaleechee C**	**32.80**	**30**	LR	LR	09 59 15.9	
	comp=Z,76nm,20.4s,baz=222,slow=38						
P40A	**Paris**	**33.00**	**16**	P	**P**	**09 45 16.2**	**+0.5**
P46A	**Rosedale**	**34.63**	**22**	P	**P**	**09 45 29.6**	**-0.3**
PD31	**Pinedale Array**	**35.15**	**352**		**P**	**09 45 34.0**	**-0.6**
PD31				IAmb	IAmb	09 45 37.3	
	comp=Z,4.1nm,1.1s						
PDAR	**Pinedale Array**	**35.15**	**352**	P	**P**	**09 45 34.6**	**0.0**
	comp=Z,1.6nm,0.9s,baz=162,slow=9.9,SNR=11						
	comp=Z,1.6nm,0.9s						
RPN	**Rapa Nui**	**35.37**	**190**	LR	LR	09 56 40.8	
	comp=Z,103nm,18.3s,baz=90,slow=30						
MCMT	**McKenzie Canyo**	**37.71**	**349**	P	**P**	**09 45 58.0**	**+1.6**
L56A	**Greenwood**	**40.87**	**29**	P	**P**	**09 46 23.0**	**+0.4**
L56A				IAmb	IAmb	09 46 32.6	
	comp=Z,13nm,1.4s						
LPAZ	**La Paz**	**42.19**	**125**	P	P	09 46 41.1	+6.7
	comp=Z,1.9nm,0.8s,baz=322,slow=6.9,SNR=6.8						
	comp=Z,1.9nm,0.8s						
PECO	**Prince Edward**	**42.50**	**28**	P	**P**	**09 46 36.4**	**+0.5**
ULM	**Lac du Bonnet**	**42.61**	**7**	P	**P**	**09 46 35.2**	**-1.4**
	comp=Z,2.3nm,0.9s,baz=186,slow=10,SNR=3.1						
	comp=Z,2.3nm,0.9s						
H03N2	**Juan Fernandez**	**47.14**	**152**	T	T	10 38 35.4	
	baz=328,slow=78,SNR=15						
H03N1	**Juan Fernandez**	**47.15**	**152**	T	T	10 38 41.6	
	baz=328,slow=78,SNR=18						
H03N3	**Juan Fernandez**	**47.16**	**152**	T	T	10 38 34.7	
	baz=328,slow=78,SNR=14						
PPT	**Papeete**	**52.41**	**241**	LR	LR	10 04 18.6	
	comp=Z,104nm,19.3s,baz=258,slow=29						
FRB	**Frobisher Bay**	**60.96**	**17**	LR	LR	10 17 13.7	
	comp=Z,59nm,18.2s,baz=190,slow=38						
ILAR	**Eielson Array**	**64.50**	**341**	P	**P**	**09 49 15.6**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=157,slow=4.7,SNR=17						
	comp=Z,1.5nm,0.8s						
PPLA	**Purkeypile**	**65.21**	**338**	P	**P**	**09 49 23.4**	**+1.7**

IDC 04 09:46:02.2±2.1**, 8.˚18S×129.˚68E, h0**km**, mb3.3**/1**, mbtmp3.3**/3**, ML3.4**/2**, Error ellipse: s-maj=112.5km s-min=33.2km az=67.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.53**	**159**	Pn	Pn	09 49 01.1	-0.8
	0.3nm,0.3s,baz=338,slow=13,SNR=3.3						
WRA				Sn	Sn	09 51 11.8	-11
	0.3nm,0.3s,baz=353,slow=23,SNR=5.4						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**15.92**	**166**	Pn	Pn	09 49 48.8	+1.0
	0.1nm,0.3s,baz=350,slow=10,SNR=5.0						
ASAR				Sn	Sn	09 52 35.3	-10
	0.1nm,0.3s,baz=344,slow=14,SNR=3.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**69.04**	**327**	P	P	09 57 09.8	0.0
	0.1nm,0.3s,baz=120,slow=6.7,SNR=5.0						
	0.1nm,0.3s						

STR 04 09:46:18.7±0.5**, 44˚N**±3˚×˚±˚**, h0**km**, MLv1.0**/6**, LOCSAT earthModelID alpes_taup-2.11 preliminary, Near south coast of France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MVIF	**Mont Vial**	**0.04**	**221**	Pg	Pg	09 46 19.3	-0.1
SPIF	**crte de Spivo**	**0.13**	**15**	Pg	Pg	09 46 21.1	-0.1
SPIF				Sg	Sg	09 46 24.0	+1.0
TURF	**col de Turini**	**0.15**	**72**	Pg	Pg	09 46 21.6	0.0
TURF				Sg	Sg	09 46 24.4	+0.8
ESCA	**l'Escarene**	**0.17**	**126**	Pg	Pg	09 46 21.8	0.0
ESCA				Sg	Sg	09 46 25.0	+1.0
ISO	**Isola**	**0.28**	**339**	Pg	Pg	09 46 23.9	-0.1
ISO				Sg	Sg	09 46 28.4	+0.9
TRIGF	**Trigance**	**0.59**	**253**	Pg	Pg	09 46 30.3	+0.3
TRIGF				Sg	Sg	09 46 39.0	+1.3

STR 04 09:46:23.4±0.5**, 47˚N**±3˚×˚±˚**, h0**km**, MLv1.7**/6**, LOCSAT earthModelID haslach_taup-2.11 preliminary, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLYF	**Puligny Montra**	**0.07**	**180**	Pg	Pg	09 46 24.5	-0.4
PLYF				Sg	Sg	09 46 26.2	+0.5
PLYF	**Puligny Montra**	**0.07**	**180**	Pg	Pg	09 46 24.4	-0.4
PLYF				Sg	Sg	09 46 26.4	+0.7
LOR	**Lormes**	**0.65**	**292**	Pg	Pg	09 46 35.5	-0.3
LOR				Sg	Sg	09 46 44.9	+0.5
FAHY	**Fahy-L¨s-Autr**	**0.68**	**46**	Pg	Pg	09 46 37.0	+0.5
FAHY				Sg	Sg	09 46 46.0	+0.7
PLDF	**La Plantade**	**1.31**	**217**	Pg	Pb	09 46 48.8	-0.2
PLDF				Sg	Sb	09 47 06.5	+0.1
CHMF	**Charmoille**	**1.32**	**80**	Sg	Sg	09 47 06.0	+0.2

*MOS **04** 09:47:20.6±1.1, 37.˚48S×176.˚50E, h278km, mb5.1/14, Error ellipse: s-maj=12.1km s-min=10.3km az=113.8*
*BJI **04** 09:47:21.0, 37.˚70S×176.˚50E, h286km, mB5.1/8, mb4.5/20*
*GFZ **04** 09:47:22.7, 37.˚57S×176.˚52E, h280km, MW5.2, Moment Tensor Solution. s25 Moment tensor: Mrr5.35; Mθθ-4.21; Mφφ-1.14; Mrθ3.62; Mθφ-4.13; Mφr-2.19; Fault plane solution: NP1:φs84.00000°, δ61.00000°, λ126.00000°. NP2:φs208.00000°, δ45.00000°, λ44.00000°. Principal axes: T 7.9500, Plg58.0000°, Azm45.0000°; N -0.6000, Plg31.0000°, Azm244.0000°; P -7.3500, Plg9.0000°, Azm149.0000°;*
*NEIC **04** 09:47:22.9±1.8, 37.˚71S±0.˚08×176.˚61E±0.˚08, h289km±3km, mb5.1/81 Error ellipse: s-maj=11.1km s-min=8.8km az=181.0*
*NOU **04** 09:47:22.4, 37.˚71S×176.˚73E, h283km, mb5.2/97, North Island, New Zealand*
*GCMT **04** 09:47:23.9±0.2, 37.˚53S±0.˚02×176.˚68E±0.˚02, h288km±1km, MW5.2/101, Moment Tensor Solution. s79,c109; s101,c137; Duration: 1.˚0 Moment tensor: Scale 10^17 Nm; Mrr0.30±.02; Mθθ0.03±.02; Mφφ-0.34±.02; Mrθ0.44±.02; Mθφ-0.71±.02; Mφr-0.29±.02; Best double couple: M0 0.94300×10^17 NP1:φs179.00000°, δ63.00000°, λ27.00000°. NP2:φs76.00000°, δ66.00000°, λ150.00000°. Principal axes: T 0.9920, Plg38.0000°, Azm37.0000°; N -0.1000, Plg52.0000°, Azm221.0000°; P -0.8930, Plg2.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **04** 09:47:26.5±0.7, 37.˚40S×176.˚53E, h324km±6km, mb4.5/20, mbtmp5.1/21 Error ellipse: s-maj=10.0km s-min=8.6km az=26.0*
*WEL **04** 09:47:26.3±0.6, 38˚S±5˚×17˚7E±˚, h257km±4km, M5.5/74, ML4.5/7, MLv5.5/74, Error ellipse: s-maj=6.4km s-min=5.5km az=25.7*
*WEL **04** 09:47:26.3, 37.˚63S×176.˚55E, h320km, ML5.5, Mw5.2, Moment Tensor Solution. s9 Moment tensor: Scale 10^16 Nm; Mrr5.11; Mθθ-1.64; Mφφ-3.47; Mrθ2.38; Mθφ-4.64; Mφr-2.84; Fault plane solution: M0 7.46000×10^16 NP1: φs190.00000°, δ57.00000°, λ49.00000°. NP2:φs69.00000°, δ51.00000°, λ136.00000°. Principal axes: T -7.3284,*

Plg56.0000°, Azm43.0000°; N -0.2638, Plg34.0000°, Azm215.0000°; P 7.5922, Plg3.0000°, Azm308.0000°; Stations used: MWZ KUZ MKAZ PUZ BKZ OTVZ PXZ WCZ BFZ REVERSE FAULTING

ISC 04 09:47:22.9±0.3**, 37.59S**±0.03×**176.59E**±0.03**, h294**km±2km**,**
h294km:pP-P, n659, σ**1.76**/724**, mb5.0**/136**, 17C-13D,**
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.26	186	P	Pn	09 47 59.4	-0.9
OPRZ				S	S	09 48 26.6	-3.4
TGRZ	Tauranga	0.30	241	P	Pn	09 47 59.9	-0.4
MARZ	Manawahe	0.41	170	P	Pn	09 48 00.2	-0.5
MARZ				S	S	09 48 27.2	-3.3
WHRZ	Whale Island	0.41	132	P	Pn	09 48 00.1	-0.5
MYRZ	Mayor Island	0.41	318	P	Pn	09 48 00.4	-0.3
LIRZ	Lichensteins R	0.45	201	P	Pn	09 48 00.3	-0.4
WSRZ	White Island S	0.47	82	P	Pn	09 48 00.2	-0.6
WIZ	White Island	0.48	83	P	Pn	09 47 59.6	-1.2
KARZ	Kaharoa	0.51	212	P	Pn	09 48 00.4	-0.5
EDRZ	Edgecumbe	0.53	167	P	Pn	09 48 00.2	-0.8
EDRZ				S	S	09 48 28.0	-3.2
OMRZ	Omania	0.55	198	P	Pn	09 48 00.5	-0.4
OMRZ				S	S	09 48 28.5	-2.7
MKRZ	Makatiti	0.56	190	P	Pn	09 48 01.1	+0.1
KMRZ	Kaimai	0.57	243	P	Pn	09 48 00.9	-0.2
NGRZ	Ngongotaha	0.61	211	P	Pn	09 48 01.0	-0.2
TARZ	Mount Tarawera	0.65	186	P	Pn	09 48 01.0	-0.3
UTU	Utuhina	0.67	208	P	Pn	09 48 01.2	-0.1
HLRZ	Highlands Stat	0.69	196	P	Pn	09 48 01.2	-0.2
RRRZ	Republican Roa	0.76	184	P	Pn	09 48 01.0	-0.6
RRRZ				S	S	09 48 28.8	-3.5
HSRZ	Hossack Road	0.77	200	P	Pn	09 48 01.3	-0.3
URZ	Urewera	0.79	149	P	Pn	09 48 00.9	-0.8
	13µm,0.4s,baz=292,slow=0.4						
URZ				S	S	09 48 28.2	-4.3
	15µm,0.3s,baz=244,slow=3.2,SNR=40						
URZ	Urewera	0.79	149	P	Pn	09 48 00.9	-0.8
URZ				S	S	09 48 28.1	-4.4
HRRZ	Handcock Road	0.84	197	P	Pn	09 48 01.5	-0.5
TOZ	Tahuroa Road	0.87	260		Pn	09 48 01.8	-0.2
TOZ					S	09 48 31.9	-1.2
TOZ	Tahuroa Road	0.87	260	P	Pn	09 48 01.9	-0.2
TOZ				S	S	09 48 31.5	-1.6
MUGZ	Murupara	0.90	171	P	Pn	09 48 01.4	-0.7
MUGZ				S	S	09 48 29.2	-4.1
PRRZ	Plateau Road	0.93	190	P	Pn	09 48 01.6	-0.7
PRRZ				S	S	09 48 30.0	-3.5
RUGZ	Raukumara Rang	0.94	114	P	Pn	09 48 01.5	-1.0
RUGZ				S	S	09 48 29.1	-4.8
HAZ	Te Kaha	0.96	101	P	Pn	09 48 01.8	-0.6
HAZ				S	S	09 48 29.9	-3.9
WPRZ	Whakapapatarin	0.99	200	P	Pn	09 48 02.1	-0.5
ALRZ	Allen Road	0.99	191	P	Pn	09 48 01.6	-1.0
ALRZ				S	S	09 48 30.1	-4.0
MWZ	Matawai	1.05	135	P	Pn	09 48 02.6	-0.3
MWZ				S	S	09 48 31.1	-3.6
RTZ	Ruatahuna	1.07	163		Pn	09 48 02.5	-0.6
RTZ					S	09 48 31.3	-3.7
RTZ	Ruatahuna	1.07	163	P	Pn	09 48 02.5	-0.6
RTZ				S	S	09 48 31.0	-4.0
KUTZ	Kaahu Road	1.09	214	P	Pn	09 48 02.7	-0.3
KUZ	Kuaotunu	1.09	320	P	Pn	09 48 02.4	-0.7
KUZ	Kuaotunu	1.09	320	P	Pn	09 48 02.6	-0.5
KUZ				S	S	09 48 32.1	-2.9
TLZ	Tolley Road	1.11	228	P	Pn	09 48 03.1	-0.1
RAGZ	Rawiri	1.12	145	P	Pn	09 48 03.2	-0.1
RAGZ				S	S	09 48 32.2	-3.2
WHTZ	Whakaora	1.19	205	P	Pn	09 48 03.3	-0.4
PKGZ	Pakihiroa	1.22	104	P	Pn	09 48 03.7	-0.1
PKGZ				S	S	09 48 32.9	-3.2
MKAZ	Moumakai	1.23	292	P	Pn	09 48 03.8	-0.1
TWGZ	Tauwhareparae	1.25	119	P	Pn	09 48 04.2	+0.3
TWGZ				S	S	09 48 34.9	-1.7
MRHZ	Matea Rd	1.25	186	P	Pn	09 48 03.2	-0.7
MRHZ				S	S	09 48 31.6	-5.0
MTHZ	Maungataniwha	1.28	171	P	Pn	09 48 03.6	-0.5
MTHZ				S	S	09 48 33.8	-3.1
WATZ	Wairara	1.31	211	P	Pn	09 48 03.8	-0.5
TKGZ	Te Karaka	1.31	131	P	Pn	09 48 04.2	0.0
TKGZ				S	S	09 48 34.2	-2.9
SNGZ	Shannon Statio	1.33	154	P	Pn	09 48 04.3	-0.1
SNGZ				S	S	09 48 34.4	-3.0
HATZ	Hinemaiaia	1.36	197	P	Pn	09 48 03.7	-0.8
HATZ				S	S	09 48 33.1	-4.6
MXZ	Matakaoa Point	1.37	90		Pn	09 48 04.7	0.0
MXZ				Sn	S	09 48 34.9	-2.9
MXZ	Matakaoa Point	1.37	90	P	Pn	09 48 04.6	0.0
MXZ	Matakaoa Point	1.37	90	S	S	09 48 35.1	-2.6
MXZ	Matakaoa Point	1.37	90	P	Pn	09 48 04.5	-0.1
MXZ				S	S	09 48 35.3	-2.5
RAHZ	Arahi	1.39	164	P	Pn	09 48 04.7	0.0
RAHZ				S	S	09 48 35.0	-2.9
WIAZ	Waiheke Island	1.41	304	P	Pn	09 48 04.7	-0.2
PUZ	Puketiti	1.41	111	P	Pn	09 48 04.6	-0.3
PUZ				S	S	09 48 35.0	-3.2
RATZ	Rangitukua	1.43	206	P	Pn	09 48 04.3	-0.7
KBAZ	Karaka Road Bo	1.44	289	P	Pn	09 48 05.2	+0.1
RIGZ	Rimuhau	1.45	141	P	Pn	09 48 05.3	+0.1
RIGZ				S	S	09 48 36.2	-2.5
ETAZ	East Tamaki Re	1.47	295	P	Pn	09 48 05.2	-0.1
WMGZ	Waiomatatini S	1.47	100	P	Pn	09 48 05.2	0.0
WMGZ				S	S	09 48 36.7	-2.2
RITZ	Rihia Road	1.50	202	P	Pn	09 48 04.9	-0.6
NMHZ	Naumai	1.52	174	P	Pn	09 48 05.8	+0.2
NMHZ				S	S	09 48 37.3	-2.3
KATZ	Kakaramea	1.56	207	P	Pn	09 48 05.2	-0.8
CNGZ	Carnagh Statio	1.56	126	P	Pn	09 48 06.3	+0.5
CNGZ				S	S	09 48 38.7	-1.2
WHHZ	Waihua	1.57	161	P	Pn	09 48 05.9	0.0
WHHZ				S	S	09 48 37.5	-2.6
MBAZ	Motutapu North	1.58	301	P	Pn	09 48 06.0	0.0
BKZ	Black Stump Fm	1.58	183		Pn	09 48 05.3	-0.7
BKZ	Black Stump Fm	1.58	183	P	Pn	09 48 05.1	-0.9
BKZ	Black Stump Fm	1.58	183	S	S	09 48 36.3	-4.0
BKZ	Black Stump Fm	1.58	183	P	Pn	09 48 05.3	-0.7
BKZ				S	S	09 48 36.0	-4.3
GRZ	Great Barrier	1.61	325	P	Pn	09 48 06.0	-0.3
GRZ				S	S	09 48 38.2	-2.6
EPAZ	Eden Park BICE	1.63	295	P	Pn	09 48 06.2	-0.2
AWAZ	Awhitu Peninsu	1.64	288	P	Pn	09 48 06.3	-0.1
HIZ	Hauiti	1.65	235		Pn	09 48 06.1	-0.4
HIZ	Hauiti	1.65	235	P	Pn	09 48 05.8	-0.7
HBAZ	Herne Bay Bore	1.65	296	P	Pn	09 48 06.4	-0.2
KNZ	Kokohu	1.67	150	P	Pn	09 48 06.3	-0.2
KNZ				S	S	09 48 37.7	-3.5
NTVZ	North Tongarir	1.67	205	P	Pn	09 48 05.9	-0.8
TMVZ	Te Maari	1.68	204	P	Pn	09 48 06.0	-0.8
TMVZ				S	S	09 48 37.1	-4.6
KRVZ	Karewarewa	1.68	206	P	Pn	09 48 05.9	-0.9
PRGZ	Paritu Road	1.68	143	P	Pn	09 48 06.3	-0.4
PRGZ				S	S	09 48 38.6	-3.0
ETVZ	East Tongariro	1.69	204	P	Pn	09 48 06.1	-0.8
ETVZ				S	S	09 48 38.4	-3.5
ARHZ	Aropaoanui	1.71	169	P	Pn	09 48 06.8	0.0
ARHZ				S	S	09 48 39.1	-2.6
ABAZ	Army Bay	1.71	304	P	Pn	09 48 07.2	+0.2
ABAZ				S	S	09 48 40.6	-1.4
WTVZ	West Tongariro	1.72	207	P	Pn	09 48 06.1	-0.9
NNVZ	North Ngauruho	1.72	206	P	Pn	09 48 06.3	-0.9
WTAZ	Waiatarua	1.73	291	P	Pn	09 48 07.3	+0.1
OTVZ	Oturere	1.73	204	P	Pn	09 48 06.3	-0.9
TWVZ	Taurewa	1.74	211	P	Pn	09 48 06.4	-0.8
TWVZ				S	S	09 48 38.9	-3.5
SNVZ	South Ngauruho	1.76	205	P	Pn	09 48 06.6	-0.9
NGZ	Ngauruhoe	1.77	206	P	Pn	09 48 06.4	-1.1
RVAZ	Riverhead Bore	1.80	296	P	Pn	09 48 07.5	-0.1
COVZ	Chateau Observ	1.81	207	P	Pn	09 48 06.5	-1.2
TUVZ	Tukino	1.83	203	P	Pn	09 48 07.3	-0.7
KWHZ	Kaweka Forest	1.84	184	P	Pn	09 48 07.4	-0.5
FWVZ	Far West T-bar	1.85	206	P	Pn	09 48 07.1	-1.1
MCHZ	McNeill Hill	1.86	177	P	Pn	09 48 07.9	-0.1
MAVZ	Matarangi	1.86	205	P	Pn	09 48 07.2	-1.2
WHVZ	Whangaehu Hut	1.87	205	P	Pn	09 48 07.2	-1.1
MHGZ	Mahia Peninsul	1.88	147	P	Pn	09 48 08.3	+0.2
TRVZ	Turoa	1.90	205	P	Pn	09 48 07.5	-1.0
WNVZ	Wahianoa	1.91	204	P	Pn	09 48 07.7	-0.9
MOVZ	Moawhango	1.93	200	P	Pn	09 48 07.4	-1.2
PKVZ	Pokaka	1.96	209	P	Pn	09 48 07.9	-0.9
MTVZ	Mangateitei	2.00	206	P	Pn	09 48 08.2	-0.9
KRHZ	Kereru	2.06	185	P	Pn	09 48 08.8	-0.8
VRZ	Vera Road	2.10	223	P	Pn	09 48 09.2	-0.7
CKHZ	Cape Kidnapper	2.11	170	P	Pn	09 48 09.8	-0.1
KAHZ	Kahuranaki	2.22	174	P	Pn	09 48 10.7	-0.2
MHEZ	Mangahewa	2.32	229	P	Pn	09 48 11.7	0.0
PNHZ	Pukenui	2.34	187	P	Pn	09 48 11.0	-1.1
WCZ	Waipu Caves	2.44	312	P	Pn	09 48 13.1	+0.1
PXZ	Pawanui	2.45	175	P	Pn	09 48 12.4	-0.5
DREZ	Durham Road	2.47	229	P	Pn	09 48 12.7	-0.4
WPHZ	Waipukurau	2.48	183	P	Pn	09 48 12.4	-0.8
WAZ	Wanganui	2.50	210	P	Pn	09 48 12.4	-1.1
TSZ	Takapari Road	2.52	191	P	Pn	09 48 12.4	-1.2
LREZ	Lake Rotokare	2.54	222	P	Pn	09 48 13.2	-0.6
PREZ	Palmer Road	2.59	227	P	Pn	09 48 13.8	-0.5
PKE	Pukeiti	2.60	231	P	Pn	09 48 14.1	-0.3
KHEZ	Kahui Hut	2.65	229	P	Pn	09 48 14.3	-0.5
KHEZ	Kahui Hut	2.65	229	P	Pn	09 48 14.3	-0.5
PRHZ	Porangahau	2.68	179	P	Pn	09 48 14.4	-0.6
NBEZ	Newall Road No	2.72	231	P	Pn	09 48 15.0	-0.4
DVHZ	Dannevirke	2.73	187	P	Pn	09 48 14.2	-1.3
OHWZ	Ohakea	2.80	200	P	Pn	09 48 15.3	-0.8
NMEZ	Namu Road	2.80	229	P	Pn	09 48 15.6	-0.6
ANWZ	Angora Road	2.87	182	P	Pn	09 48 16.4	-0.5
POWZ	Post Office Ro	2.88	193	P	Pn	09 48 15.5	-1.4
PRWZ	Pori Road	3.00	189	P	Pn	09 48 17.1	-1.1
BFZ	Birch Farm	3.10	185		Pn	09 48 18.2	-1.0
BFZ	Birch Farm	3.10	185	P	Pn	09 48 18.0	-1.2
BFZ	Birch Farm	3.10	185	S	S	09 49 00.0	-4.1
BFZ	Birch Farm	3.10	185	P	Pn	09 48 18.1	-1.0
MRZ	Mangatainoka R	3.17	194		Pn	09 48 18.2	-1.6
MRZ	Mangatainoka R	3.17	194	P	Pn	09 48 18.3	-1.6
TIWZ	Tintock	3.23	189	P	Pn	09 48 19.2	-1.4
CPWZ	Castlepoint	3.33	185	P	Pn	09 48 21.1	-0.5
OUZ	Omahuta	3.38	313	P	Pn	09 48 21.7	-0.4
OUZ	Omahuta	3.38	313	P	Pn	09 48 22.0	-0.1
OGWZ	Otaki Gorge	3.41	198	P	Pn	09 48 20.7	-1.6
HOWZ	Holdsworth Sta	3.41	194	P	Pn	09 48 20.5	-1.9
KIW	Kapiti Island	3.52	201	P	Pn	09 48 21.6	-2.0
TMWZ	Te Maipa	3.56	189	P	Pn	09 48 22.5	-1.5
MTW	Mount Morrison	3.67	193	P	Pn	09 48 23.2	-1.9
DUWZ	D'Urville Isla	3.82	212	P	Pn	09 48 24.4	-2.4
TRWZ	Traveller	3.87	190	P	Pn	09 48 25.8	-1.5
MSWZ	Moikau Station	3.96	195		Pn	09 48 26.2	-2.1
SNZO	South Karori	4.00	201		Pn	09 48 26.5	-2.2
SNZO	South Karori	4.00	201	P	Pn	09 48 26.4	-2.2
SNZO	South Karori	4.00	201	P	S	09 49 16.7	-4.5
TCW	Tory Channel	4.04	206		Pn	09 48 27.1	-2.1
BHW	Baring Head	4.04	199		Pn	09 48 26.9	-2.2
TUWZ	Tuamarina	4.35	207		Pn	09 48 31.1	-1.5
NNZ	Nelson	4.40	213		Pn	09 48 30.3	-2.9
TKNZ	Takaka Hill	4.45	218		Pn	09 48 30.4	-3.4
QRZ	Quartz Range	4.52	223		Pn	09 48 31.1	-3.4
QRZ	Quartz Range	4.52	223	P	Pn	09 48 31.1	-3.4
CMWZ	Cape Campbell	4.54	203		Pn	09 48 33.2	-1.6
MRNZ	Matariki Terra	4.83	217		Pn	09 48 34.7	-3.4
KHZ	Kahutara	5.36	205	P	Pn	09 48 42.4	-1.9
	26µm,0.4s						
DSZ	Denniston Nort	5.56	220		Pn	09 48 43.0	-3.7
GVZ	Greta Valley S	6.02	206		Pn	09 48 49.8	-2.5
AMCZ	Amberley	6.34	207		Pn	09 48 53.2	-2.8
INZ	Inchbonnie	6.47	216		Pn	09 48 55.0	-2.6
MQZ	McQueen's Vall	6.81	205		Pn	09 48 58.4	-3.3
RPZ	Rata Peaks	7.43	213	P	Pn	09 49 05.7	-3.6
	3µm,0.5s						
FOZ	Fox Glacier	7.86	219		Pn	09 49 10.5	-4.1
CTZ	Chatham Island	8.02	142		Pn	09 49 17.5	+0.9
CTZ	Chatham Island	8.02	142	P	Pn	09 49 17.2	+0.6
ODZ	Otahua Downs	8.69	209		Pn	09 49 22.6	-2.1
ODZ	Otahua Downs	8.69	209	P	Pn	09 49 22.6	-2.1
	2µm,0.8s						
JCZ	Jackson Bay	8.77	220	P	Pn	09 49 22.7	-3.2
	4µm,0.6s						
WKZ	Wanaka	9.21	216		Pn	09 49 26.4	-4.8
RAO	Raoul Island	9.49	30	P	Pn	09 49 31.8	-3.1
	231nm,0.2s,baz=108,slow=19,SNR=2.7						
RAO				S	S	09 51 10.5	-12
	416nm,0.3s,baz=110,slow=15,SNR=4.0						
MLZ	Mavora Lakes	10.04	217		Pn	09 49 37.3	-4.1
WHZ	Wether Hill Ro	10.51	215		Pn	09 49 42.6	-4.5
SYZ	Scrubby Hill	10.52	209	P	Pn	09 49 46.1	-1.1
	4µm,0.9s						
DCZ	Deep Cove	10.58	219		Pn	09 49 43.0	-5.0
NFK	Norfolk Island	11.17	317	P	P	09 49 57.2	-0.8
	comp=Z,1µm,1.0s						
PYZ	Puysegur Point	11.31	218		Pn	09 49 53.9	-3.0
PYZ	Puysegur Point	11.31	218	P	Pn	09 49 54.8	-2.2
	comp=Z,986nm,0.6s						
LHI	Lord Howe Isla	15.65	288	P	Pn	09 50 49.7	+0.6
	comp=Z,252nm,1.1s						
LHI	Lord Howe Isla	15.65	288		Pn	09 50 49.2	+0.1
PINNC	Pines Island,	16.87	330	P	Pn	09 51 02.9	-0.6
	comp=Z,59µm,0.8s						
PINNC	Pines Island,	16.87	330	S	S	09 54 07.0	+5.3
	comp=Z,59µm,0.8s						
OUENC	Ouen Island, N	17.29	328	P	Pn	09 51 07.2	-1.3
	comp=Z,226nm,1.2s						
ONTNC	Ouen Toro	17.56	327		P	09 51 09.3	+1.1
ONTNC	Ouen Toro	17.56	327	P	P	09 51 09.6	+1.4
	comp=Z,606nm,1.1s						
YATNC	Mamie plateau,	17.59	329	P	Pn	09 51 11.2	-0.8
	comp=Z,131nm,0.9s						
MARNC	Mare, Loyalty	17.68	333		Pn	09 51 11.4	-1.5
MARNC	Mare, Loyalty	17.68	333	P	Pn	09 51 12.0	-0.9
	comp=Z,283nm,0.8s						
DZM	Mont Dzumac	17.77	328	P	Pn	09 51 12.6	-1.6
	comp=Z,131nm,0.7s,baz=174,slow=9.3,SNR=98						
DZM	Mont Dzumac	17.77	328	*e*P	P	09 51 11.6	+1.0
	comp=Z,390nm,1.1s						
DZM				*e*S	S	09 54 19.3	-0.3
	comp=Z,1µm,25.5s						
DZM	Mont Dzumac	17.77	328		P	09 51 11.4	+0.7
DZM	Mont Dzumac	17.77	328	P	P	09 51 12.2	+1.6
	comp=Z,182nm,0.9s						
INH	Isangel	19.07	338	P	Pn	09 51 28.3	-0.7
	comp=Z,267nm,1.6s						
LKBA	Tubou, Lakemba	19.70	13	P	P	09 51 29.5	-1.6
	comp=Z,15nm,0.8s						
MSVF	Nonsavu	19.82	4		P	09 51 31.9	-0.6
MSVF	Nonsavu	19.82	4	P	P	09 51 32.2	-0.3
	comp=Z,246nm,1.0s						
MSVF	Nonsavu	19.82	4	*ce*P	P	09 51 31.1	-1.4
MSVF				pmax	pmax		
	comp=Z,216nm,1.0s						
KOUNC	Koumac, New Ca	20.06	324	P	Pn	09 51 37.8	-2.5
	comp=Z,78nm,0.8s						
TAVE	Taveuni	21.02	9	P	P	09 51 43.2	-1.4
WOLH	Wollongong Har	21.02	271	P	P	09 51 47.1	+2.7
	comp=Z,71nm,0.7s						
DVP	Devils Point	21.12	337	P	P	09 51 47.1	+1.7
	comp=Z,2µm,0.9s						
MGCD	Mangrove Creek	21.20	274	P	P	09 51 48.8	+2.7
	comp=Z,72nm,0.8s						
SYDH	Sydney Hard Ro	21.32	273	P	P	09 51 50.1	+2.9
	comp=Z,95nm,0.8s						
DGTI	Dogotuki	21.38	8	P	P	09 51 46.0	-1.9
GC1S	Gold Coast 1 S	21.49	289	P	P	09 51 52.6	+3.8
	comp=Z,128nm,0.8s						
MILA	Mila	21.80	263	P	P	09 51 54.3	+2.7
	comp=Z,31nm,1.3s						
ARMA	Armidale	21.85	282	P	P	09 51 55.2	+3.0
	comp=Z,134nm,1.0s						
ARMA	Armidale	21.85	282		P	09 51 54.0	+1.8
ARMA	Armidale	21.85	282	P	P	09 51 54.9	+2.7
	comp=Z,134nm,1.0s						
NIUE	Niue	21.89	36	P	P	09 51 53.8	+1.4
	comp=Z,364nm,1.1s						
NIUE	Niue	21.89	36		P	09 51 53.5	+1.1
NIUE	Niue	21.89	36	P	P	09 51 53.6	+1.2
	comp=Z,364nm,1.1s						
AUPHS	Peel High Scho	22.14	279	P	P	09 51 57.4	+2.7
	comp=Z,168nm,1.1s						
AUDAR	Daramalan Coll	22.18	268	P	P	09 51 58.1	+3.0
	comp=Z,78nm,0.9s						
AUMHS	Melrose High S	22.20	267	P	P	09 51 57.8	+2.6
	comp=Z,64nm,0.9s						
AUWSH	Wavell State H	22.25	290	P	P	09 51 58.5	+2.8
	comp=Z,213nm,1.0s						
AUMTS	Mt Stromlo	22.28	267	P	P	09 51 58.6	+2.7
	comp=Z,58nm,1.1s						
CAN	Canberra	22.28	267	P	P	09 51 58.8	+2.8
	comp=Z,52nm,1.1s						
CAN	Canberra	22.28	267		P	09 51 57.0	+1.1
CAN	Canberra	22.28	267	P	P	09 51 58.4	+2.5
	comp=Z,80nm,1.1s						
CAN	Canberra	22.28	267	P	P	09 51 57.0	+1.1
AUSMG	Snowy Mountain	22.35	264	P	P	09 51 59.2	+2.6
	comp=Z,94nm,0.7s						
TW1H	Toowoomba 1 Ha	22.98	289	P	P	09 52 05.6	+3.2
	comp=Z,220nm,0.6s						
YNG	Young	23.02	270	P	P	09 52 05.5	+2.7
	comp=Z,22nm,1.2s						
TOO	Toolangi	24.59	260	P	P	09 52 19.0	+2.1
	comp=Z,14nm,1.2s						
TOO	Toolangi	24.59	260		P	09 52 16.8	-0.1
TOO	Toolangi	24.59	260	P	P	09 52 16.8	-0.1
TOO				pmax	pmax		
	comp=Z,22nm,1.4s						
EIDS	Eidsvold	24.84	292	P	P	09 52 21.1	+1.9
	comp=Z,55nm,0.9s						
EIDS	Eidsvold	24.84	292		P	09 52 20.4	+1.2
EIDS				IAmb	IAmb	09 52 26.0	
	comp=Z,74nm,0.9s						
EIDS	Eidsvold	24.84	292	P	P	09 52 20.9	+1.7
	comp=Z,55nm,0.9s						
AULRC	Lightning Ridg	25.13	280	P	P	09 52 23.7	+2.0
	comp=Z,104nm,0.8s						
GD1S	Gladstone Soft	25.69	295	P	P	09 52 30.0	+3.2
AFI	Afiamalu	25.75	27	P	P	09 52 26.2	-1.3
AFI	Afiamalu	25.75	27	P	P	09 52 26.8	-0.7
	comp=Z,49nm,0.8s						
AFI	Afiamalu	25.75	27	P	P	09 52 26.2	-1.3
AFI				pmax	pmax		
	comp=Z,106nm,0.9s						
BRAT	Ballarat	25.82	260	P	P	09 52 30.3	+2.5
	comp=Z,18nm,0.9s						
CMSA	Cobar Meteorol	26.08	274	P	P	09 52 32.2	+2.0
	comp=Z,102nm,1.1s						
CMSA	Cobar Meteorol	26.08	274	P	P	09 52 31.9	+1.7
	comp=Z,102nm,1.1s						
RAR	Rarotonga	26.16	58	P	P	09 52 31.9	+0.9
	comp=Z,25nm,0.4s,baz=175,slow=5.7,SNR=7.9						
	comp=Z,25nm,0.4s						
RAR	Rarotonga	26.16	58		P	09 52 31.5	+0.5
RAR				IAmb	IAmb	09 52 33.7	
	comp=Z,162nm,1.4s						
RAR	Rarotonga	26.16	58	P	P	09 52 32.1	+1.1
	comp=Z,43nm,1.3s						
RAR	Rarotonga	26.16	58	P	P	09 52 31.5	+0.5
RAR				pmax	pmax		
	comp=Z,162nm,1.4s						
AUNRC	North Rockhamp	26.46	295	P	P	09 52 35.6	+2.0
	comp=Z,107nm,0.8s						
ARPS	Mount Arapiles	27.61	261	P	P	09 52 45.9	+2.2
	comp=Z,22nm,1.6s						
STKA	Stephens Creek	29.20	271	P	P	09 52 59.9	+2.0
	comp=Z,346nm,1.0s						
STKA	Stephens Creek	29.20	271	P	P	09 52 59.8	+1.9
	comp=Z,59nm,0.8s,baz=104,slow=9.7,SNR=80						
STKA				ScP	ScP	09 59 06.7	-3.5
	comp=Z,3.5nm,0.7s,baz=109,slow=5.1,SNR=4.8						
	comp=Z,59nm,0.8s						
STKA	Stephens Creek	29.20	271		P	09 52 59.7	+1.9
STKA	Stephens Creek	29.20	271	P	P	09 52 59.7	+1.9
	comp=Z,17nm,1.0s						
QLP	Quilpie	29.39	282	P	P	09 53 01.2	+1.6
	comp=Z,96nm,0.6s						
QLP	Quilpie	29.39	282	P	P	09 53 00.9	+1.3
	comp=Z,96nm,0.6s						
AUMBR	Murray Bridge	30.01	263	P	P	09 53 06.9	+2.0
	comp=Z,51nm,0.8s						
HURO	Huro Makira	30.06	330	P	P	09 53 06.5	+1.0
	comp=Z,174nm,0.8s						
HTT	Hallett	30.80	266	P	P	09 53 13.8	+1.8
	comp=Z,11nm,1.0s						
HTT	Hallett	30.80	266	P	P	09 53 13.6	+1.6
	comp=Z,27nm,1.0s						
AUJCS	Jamestown Cent	31.12	267	P	P	09 53 16.5	+1.8
	comp=Z,42nm,0.8s						
INKA	Innaminka	31.57	278	IAmb	IAmb	09 53 20.8	
	comp=Z,19nm,0.5s						
CTA	Charters Tower	31.59	295	P	P	09 53 20.6	+1.8
	comp=Z,67nm,1.1s						
CTA	Charters Tower	31.59	295	P	P	09 53 20.5	+1.6
	comp=Z,4.9nm,1.1s						
SAVO	Savo Central	32.11	328	P	P	09 53 24.7	+1.3
	comp=Z,113nm,1.0s						
TBI	Tubuai	32.33	74	*e*P	P	09 53 27.2	+2.0
	comp=Z,177nm,0.9s						
TBI				*e*S	S	09 58 16.0	-0.9
	comp=Z,1µm,36.5s						
TBI				*e*SS	SS	10 00 36.0	-12
	comp=Z,3µm,26.5s						
TBI				*e*T	T	10 26 57.5	
	comp=Z,19nm,0.4s						
TATA	Tatamba Isabel	32.80	328	P	P	09 53 29.2	-0.1
	comp=Z,505nm,0.6s						
BBOO	Buckleboo	33.28	266	IAmb	IAmb	09 53 35.0	
	comp=Z,70nm,1.4s						
BBOO	Buckleboo	33.28	266	P	P	09 53 34.2	+0.9
	comp=Z,36nm,1.1s						
MTSU	Mount Surprise	34.24	296	P	P	09 53 43.4	+1.7
	comp=Z,72nm,0.7s						
MTSU	Mount Surprise	34.24	296	P	P	09 53 43.6	+1.8
	comp=Z,72nm,0.7s						
PAE	Paea	35.67	66	*e*P	P	09 53 55.9	+2.0
	comp=Z,163nm,1.1s						
PAE				*e*T	T	10 31 49.7	
	comp=Z,7.6nm,0.3s						
PPT2	Papeete2	35.72	65	*e*S	S	09 59 08.5	-0.7
	comp=Z,42nm,24.5s						
PPT2				*e*SS	SS	10 01 53.1	-5.8
	comp=Z,976nm,26.0s						
PPTF	Pamatai, Papee	35.73	65	P	P	09 53 56.1	+1.6
PPTF	Pamatai, Papee	35.73	65	P	P	09 53 56.5	+2.0
	comp=Z,790nm,0.9s						
PPTF	Pamatai, Papee	35.73	65	P	P	09 53 56.7	+2.2
PPTF				x	x	09 54 44.2	
PPT	Papeete	35.74	65	P	P	09 53 56.8	+2.3
	comp=Z,509nm,0.6s,baz=65,slow=3.8,SNR=59						
TIAR	Tiarei	35.91	66	*e*P	P	09 53 58.3	+2.4
	comp=Z,2µm,0.7s						
QIS	Mount Isa	36.23	287	P	P	09 53 59.6	+1.0
	comp=Z,25nm,0.6s						
QIS	Mount Isa	36.23	287	P	P	09 53 59.2	+0.6
	comp=Z,25nm,0.6s						
COEN	Coen	37.87	299	P	P	09 54 13.6	+1.2
	comp=Z,173nm,0.8s						
COEN	Coen	37.87	299	P	P	09 54 13.3	+0.9
	comp=Z,172nm,0.8s						
PMG	Port Moresby	38.62	309		P	09 54 19.6	+1.2
PMG				IAmb	IAmb	09 54 20.7	
	comp=Z,73nm,0.6s						
PMG	Port Moresby	38.62	309	P	P	09 54 20.1	+1.6
	comp=Z,95nm,0.7s						
PMG	Port Moresby	38.62	309	*di*P	P	09 54 19.8	+1.3
PMG				pmax	pmax		
	comp=Z,46nm,0.8s						
PMG	Port Moresby	38.62	309	P	P	09 54 19.8	+1.3
	comp=Z,95nm,0.7s						
PMG	Port Moresby	38.62	309	P	P	09 54 19.7	+1.2
PMG				pP	pP	09 55 15.6	-1.6
PMG				PcP	PcP	09 56 24.5	+0.3
PMOR	Pomariorio Ree	38.64	64	*e*P	P	09 54 20.7	+2.0
	comp=Z,314nm,1.1s						
AS31	Alice Springs	38.93	278	IAmb	IAmb	09 54 22.2	
	comp=Z,38nm,0.6s						
ASAR	Alice Springs	38.93	278	P	P	09 54 21.5	+0.4
	comp=Z,71nm,0.5s,baz=123,slow=8.3,SNR=786						
ASAR				ScP	ScP	09 59 41.2	-3.7
	comp=Z,3.2nm,0.8s,baz=121,slow=3.7,SNR=5.0						
ASAR				S	S	09 59 56.0	-1.2
	comp=Z,17nm,0.9s,baz=124,slow=14,SNR=22						
ASAR				P3KPbc		10 24 18.3	
	comp=Z,1.0nm,0.5s,baz=305,slow=4.7,SNR=18						
	comp=Z,71nm,0.5s						
ASAR	Alice Springs	38.93	278		P	09 54 21.0	-0.1
RABL	Rabaul	40.05	320	P	P	09 54 31.6	+1.3
FORT	Forrest	40.35	265	P	P	09 54 33.3	+0.6
	comp=Z,59nm,0.7s						
FORT	Forrest	40.35	265		P	09 54 32.5	-0.1
WR8	Warramunga Arr	40.48	284	IAmb	IAmb	09 54 35.0	
	comp=Z,89nm,0.9s						
VNDA	Vanda	40.54	185	P	P	09 54 37.2	+3.7
	comp=Z,2.8nm,0.6s,baz=11,slow=8.5,SNR=12						
VNDA				ScP	ScP	09 59 49.0	-1.2
	comp=Z,4.2nm,0.6s,baz=347,slow=3.9,SNR=15						
	comp=Z,2.8nm,0.6s						
VNDA	Vanda	40.54	185		P	09 54 35.9	+2.4
VNDA	Vanda	40.54	185	P	P	09 54 35.9	+2.4
VNDA				pmax	pmax		

comp=Z,39nm,2.0s
WRAB Tennant Creek 40.61 284 P **P** 09 54 34.9 +0.1
WRAB IAmb IAmb 09 54 35.9
comp=Z,86nm,0.8s
WRAB Tennant Creek 40.61 284 P **P** 09 54 34.8 0.0
comp=Z,73nm,1.3s
WRAB Tennant Creek 40.61 284 P **P** 09 54 34.9 +0.1
WRAB pmax pmax
comp=Z,86nm,0.8s
WRAB Tennant Creek 40.61 284 P **P** 09 54 35.0 +0.1
WRA Warramunga Arr 40.61 284 P **P** 09 54 34.6 -0.2
comp=Z,69nm,0.6s,baz=123,slow=7.0,SNR=267
WRA ScP **ScP** 09 59 47.6 -3.9
comp=Z,2.8nm,0.6s,baz=122,slow=3.7,SNR=5.1
WRA S **S** 10 00 20.4 -1.8
comp=Z,14nm,0.9s,baz=127,slow=14,SNR=17
comp=Z,69nm,0.6s
WRA Warramunga Arr 40.61 284 **P** 09 54 33.7 -1.2
WRA Warramunga Arr 40.61 284 P **P** 09 54 33.7 -1.2
WRA pmax pmax
comp=Z,4.0nm,0.9s
WB0 Warramunga Arr 40.67 284 **P** 09 54 35.5 +0.1
WB0 IAmb IAmb 09 54 36.4
comp=Z,108nm,0.8s
WRKA Warakurna 42.69 273 P **P** 09 54 51.1 -0.5
CCD Concordia, Ant 44.80 197 P **P** 09 55 09.4 +1.4
CCD pP **pP** 09 56 08.0 -0.7
CCD sP **sP** 09 56 42.5 +0.4
CCD PcP **PcP** 09 56 44.6 +0.3
KMBL Kambalda 44.99 261 P **P** 09 55 09.9 +0.2
comp=Z,15nm,0.5s
KDU Kakadu 46.44 290 P **P** 09 55 21.3 +0.2
comp=Z,7.3nm,0.6s
MTN Manton Dam 47.34 289 P **P** 09 55 28.3 +0.3
comp=Z,46nm,0.6s
PATS Pohnpei 47.37 335 P **P** 09 55 29.0 +0.8
comp=Z,251nm,1.4s
PATS Pohnpei 47.37 335 **P** 09 55 28.2 +0.1
PATS Pohnpei 47.37 335 P **P** 09 55 28.8 +0.6
comp=Z,272nm,1.4s
KNRA Kununurra 47.40 284 P **P** 09 55 29.2 +0.8
comp=Z,78nm,0.8s
KNRA Kununurra 47.40 284 IAmb IAmb 09 55 29.5
comp=Z,43nm,0.7s
DRS Darwin Rock St 47.78 289 P **P** 09 55 31.7 +0.4
comp=Z,47nm,0.9s
JAY Jayapura 47.97 308 P **P** 09 55 32.3 -0.6
comp=Z,48nm,1.0s
NWAO Narrogin (SRO) 48.00 257 P **P** 09 55 32.6 -0.3
NWAO Narrogin (SRO) 48.00 257 P **P** 09 55 32.6 -0.3
NWAO pmax pmax
comp=Z,64nm,1.4s
KLBR Kellerberrin 48.13 259 P **P** 09 55 34.0 +0.1
comp=Z,71nm,0.6s
KLBR Kellerberrin 48.13 259 P **P** 09 55 33.9 +0.1
comp=Z,72nm,0.6s
FITZ Fitzroy Crossi 48.43 279 S **S** 10 02 06.0 -8.1
comp=Z,2.1nm,0.6s,baz=72,slow=20,SNR=1.3
MUN Mundaring 49.17 258 P **P** 09 55 42.1 +0.4
comp=Z,34nm,0.7s
MUN Mundaring 49.17 258 P **P** 09 55 42.2 +0.4
comp=Z,34nm,0.7s
BLDU Ballidu 49.35 259 P **P** 09 55 43.2 +0.2
comp=Z,34nm,0.9s
BLDU Ballidu 49.35 259 P **P** 09 55 43.3 +0.2
comp=Z,34nm,0.9s
MEEK Meekatharra 49.62 265 P **P** 09 55 44.9 -0.3
comp=Z,67nm,0.8s
MEEK Meekatharra 49.62 265 P **P** 09 55 44.9 -0.3
comp=Z,66nm,0.8s
MORW Morawa 50.54 261 P **P** 09 55 52.3 +0.2
comp=Z,25nm,0.8s
MORW Morawa 50.54 261 P **P** 09 55 52.2 +0.2
MORW Morawa 50.54 261 P **P** 09 55 52.3 +0.2
comp=Z,25nm,0.8s
PSA00 Pilbara Seismi 51.13 271 **P** 09 55 55.8 -0.7
PSA00 Pilbara Seismi 51.13 271 P **P** 09 55 56.1 -0.4
PSA00 IAmb IAmb 09 57 14.8
comp=Z,74nm,1.6s
MBWA Marble Bar 51.44 272 P **P** 09 55 58.2 -0.5
QSPA South Pole Qui 52.54 180 P **P** 09 56 09.6 +3.3
comp=Z,21nm,0.7s,baz=32,slow=2.8,SNR=18
QSPA PcP **PcP** 09 57 11.5 -0.8
comp=Z,14nm,0.5s,baz=12,slow=3.4,SNR=7.1
comp=Z,21nm,0.7s
QSPA South Pole Qui 52.54 180 **P** 09 56 09.2 +2.9
QSPA IAmb IAmb 09 57 16.3
comp=Z,75nm,1.4s
QSPA South Pole Qui 52.54 180 P **P** 09 56 09.2 +2.9
QSPA pP **pP** 09 57 09.6 +0.6
SOEI Soe 54.49 287 IAmb IAmb 09 56 35.5
comp=Z,68nm,1.1s
SOEI Soe 54.49 287 P **P** 09 56 23.4 +2.3
comp=Z,64nm,1.1s
JOHN Johnston Islan 55.59 16 P **P** 09 56 28.6 0.0
JOHN Johnston Islan 55.59 16 P **P** 09 56 28.4 0.0
SANI Sanana 58.30 295 P **P** 09 56 48.6 +0.9
comp=Z,60nm,0.8s
GUMO Guam 58.98 323 P **P** 09 56 53.3 +1.0
GUMO Guam 58.98 323 P **P** 09 56 53.3 +1.0
GUMO pmax pmax
comp=Z,332nm,1.3s
OVEH Oceanview Est 62.15 30 P **P** 09 57 14.1 +0.4
OVEH IAmb IAmb 09 57 29.3
comp=Z,195nm,1.4s
PUH Pauahi 62.57 30 **P** 09 57 16.6 +0.3
MLH Mauna Loa 62.61 30 P **P** 09 57 17.4 +0.7
POHA Pohakuloa 62.79 30 P **P** 09 57 17.8 -0.1
POHA PcP **PcP** 09 57 54.3 +0.8
MAW Mawson 63.99 203 P **P** 09 57 26.1 +1.2
comp=Z,8.7nm,0.8s,baz=135,slow=7.1,SNR=3.7
comp=Z,8.7nm,0.8s
BBJI Bungbulang 68.81 277 **P** 09 57 55.2 -1.0
BBJI Bungbulang 68.81 277 P **P** 09 57 56.2 0.0
comp=Z,16nm,0.8s
SNAA Sanae 71.05 180 ⇑P **P** 09 58 09.6 +0.8
comp=Z,138nm,0.4s
SNAA ⇓pP **pP** 09 59 15.2 -0.6
comp=Z,292nm,0.8s
SNAA Sanae 71.05 180 P **P** 09 58 09.3 +0.5
comp=Z,5.6nm,0.4s,baz=206,slow=9.4,SNR=12
comp=Z,5.6nm,0.4s
SNAA Sanae 71.05 180 P **P** 09 58 09.4 +0.6
SNAA Sanae 71.05 180*d i*P **P** 09 58 09.3 +0.5
SNAA pmax pmax
comp=Z,18nm,1.5s
VNA3 Neumayer Olymp 71.38 178 ⇑P **P** 09 58 11.6 +0.8
comp=Z,18nm,0.4s
VNA3 ⇓pP **pP** 09 59 16.8 -1.0
comp=Z,33nm,0.8s
NVL N'lazarevskaya 71.39 185 *e*P **P** 09 58 10.6 -0.2
NVL *e* 09 58 28.6
NVL *e* 10 00 52.0
NVL *e*PPP PPP 10 02 36.8
NVL *e*S **S** **10 07 08.4 +4.5**
NVL *e*SS **SS** **10 11 48.8 +5.0**
NVL pmax pmax
comp=Z,13nm,0.5s
SBUM Sibu 71.48 288 P **P** 09 58 14.6 +2.4
comp=Z,5.3nm,0.8s
VNA2 Neumayer--Watz 71.76 179 ⇑P **P** 09 58 14.1 +1.1
comp=Z,20nm,0.4s,baz=179,slow=6.2
VNA2 ⇓pP **pP** 09 59 19.2 -0.9
comp=Z,26nm,0.7s,baz=172,slow=5.9
VNA1 Neumayer--Stat 72.01 178 ⇑P **P** 09 58 15.9 +1.4
comp=Z,19nm,0.4s
COYC Coyhaique 76.74 138 P **P** 09 58 44.6 +2.6
COYC pP **pP** 09 59 51.9 +2.0
JOW Kunigami 78.50 317 P **P** 09 58 52.1 +0.3
comp=Z,12nm,0.7s,baz=131,slow=9.3,SNR=3.9
comp=Z,12nm,0.7s
YULB Yu-li 79.87 310 IAmb IAmb 10 00 29.4
comp=Z,89nm,1.7s
LR05 Currie 80.29 134 P **P** 09 59 04.2 +2.8
LR05 IAmb IAmb 09 59 13.2
comp=Z,47nm,1.4s
SSLB Suanglung 80.38 310 **P** 09 59 01.4 -0.6
SSLB IAmb IAmb 09 59 03.8
comp=Z,42nm,1.1s
SSLB Suanglung 80.38 310 P **P** 09 59 01.7 -0.3
comp=Z,31nm,0.8s
PLCA Paso Flores 80.78 135 P **P** 09 59 06.7 +2.6
comp=Z,13nm,0.7s,baz=238,slow=4.9,SNR=50
comp=Z,13nm,0.7s
PLCA Paso Flores 80.78 135 **P** 09 59 06.7 +2.6
PLCA Paso Flores 80.78 135 P **P** 09 59 06.7 +2.6
PLCA pmax pmax
comp=Z,17nm,0.9s
PLCA Paso Flores 80.78 135 P **P** 09 59 06.6 +2.6
PLCA pP **pP** **10 00 14.1 +1.2**
JSU Suzuyama 81.12 321 IAmb IAmb 09 59 07.2
comp=Z,61nm,1.5s
INU Inuyama 81.33 328 **P** 09 59 06.5 -0.2
INU IAmb IAmb 09 59 08.0
comp=Z,35nm,1.1s
INU Inuyama 81.33 328 P **P** 09 59 07.0 +0.3
comp=Z,30nm,1.1s
INU Inuyama 81.33 328 P **P** 09 59 06.6 0.0
INU x x 10 00 04.0
INU x x 10 00 16.6
JGF Kuroka 81.40 329 P **P** 09 59 07.5 +0.4
comp=Z,27nm,1.4s
MJAR Matsushiro Arr 81.87 330 P **P** 09 59 09.4 0.0
comp=Z,8.5nm,0.8s,baz=162,slow=5.1,SNR=18
comp=Z,8.5nm,0.8s
MJAR Matsushiro Arr 81.87 330 **P** 09 59 09.5 0.0
MJAR Matsushiro Arr 81.87 330 P **P** 09 59 09.5 0.0
MJAR pmax pmax
comp=Z,12nm,1.0s
MAJO Matsushiro 81.87 330 **P** 09 59 09.7 +0.3
MAJO Matsushiro 81.87 330 P **P** 09 59 09.8 +0.3
comp=Z,19nm,1.3s
MAJO Matsushiro 81.87 330*d i*P **P** 09 59 09.6 +0.1
MAJO pmax pmax
comp=Z,22nm,1.1s
MAJO Matsushiro 81.87 330 P **P** 09 59 09.3 -0.1
MAJO x x 10 00 20.8
MJB9 Matsu-Tunnel 81.87 330 P **P** 09 59 10.2 +0.7
JNU Nakatsue 82.23 323 P **P** 09 59 11.6 +0.1
comp=Z,21nm,1.2s,baz=85,slow=3.0,SNR=6.0
comp=Z,21nm,1.2s
BI02 San Fabin de 83.09 131 **P** 09 59 18.7 +2.5
BI02 IAmb IAmb 09 59 19.3
comp=Z,29nm,0.9s
BO02 Sierra Bellavi 84.64 130 **P** 09 59 26.2 +2.2
BO02 IAmb IAmb 09 59 26.8
comp=Z,56nm,1.5s
MT01 Popeta 84.98 129 P **P** 09 59 27.6 +2.1
MT01 IAmb IAmb 09 59 28.3
comp=Z,21nm,0.7s
PEL Peldehue 85.81 129 P **P** 09 59 32.0 +2.3
PEL IAmb IAmb 09 59 32.8
comp=Z,24nm,1.0s
PEL Peldehue 85.81 129 P **P** 09 59 32.1 +2.3
PEL pmax pmax
comp=Z,24nm,1.0s
TJN Taejon 86.56 322 P **P** 09 59 34.5 +1.6
comp=Z,138nm,1.4s
CO02 Combarbal 86.93 128 P **P** 09 59 37.8 +2.5
KSRS Korea Array 87.15 323 P **P** 09 59 37.1 +1.4
comp=Z,18nm,1.0s,baz=144,slow=5.7,SNR=35
comp=Z,18nm,1.0s
KSAR Wonju Array Be 87.16 323 **P** 09 59 37.1 +1.4
KSAR Wonju Array Be 87.16 323 P **P** 09 59 37.1 +1.4
KS19 Wonju Array Si 87.21 323 IAmb IAmb 09 59 38.6
comp=Z,31nm,1.1s
CO03 El Pedregal 87.37 127 **P** 09 59 39.6 +2.3
NJ2 Nanjing 87.74 314 *e*P **P** 09 59 39.4 +0.8
NJ2 pmax pmax
comp=Z,21nm,0.6s
INCN Inchon 87.79 322 P **P** 09 59 41.3 +2.5
comp=Z,51nm,1.3s
ZON Zonda 88.14 129 **P** 09 59 43.3 +2.4
ZON IAmb IAmb 09 59 43.8
comp=Z,44nm,1.7s
ZON Zonda 88.14 129 P **P** 09 59 43.3 +2.4
ZON pmax pmax
comp=Z,44nm,1.7s
CO01 Juntas del Tor 88.33 127 P **P** 09 59 44.5 +2.4
CO01 IAmb IAmb 09 59 45.6
comp=Z,66nm,1.6s
LCO Las Campanas 88.60 126 P **P** 09 59 45.2 +1.9
LCO x x 10 00 47.4
AC05 El Transito 89.00 126 **P** 09 59 47.6 +2.6
AC05 IAmb IAmb 09 59 48.5
comp=Z,31nm,0.9s
YSS Yuzhno-Sakhali 89.45 338 **P** 09 59 47.6 +1.4
YSS Yuzhno-Sakhali 89.45 338 P **P** 09 59 47.7 +1.4
comp=Z,104nm,0.9s
YSS Yuzhno-Sakhali 89.45 338*c i*P **P** 09 59 47.3 +1.1
YSS pmax pmax
comp=Z,65nm,0.9s
YSS Yuzhno-Sakhali 89.45 338 P **P** 09 59 47.5 +1.3
PSTR Posyet 90.07 328*de*P **P** 09 59 50.7 +1.4
USRK Ussuriysk Ar. 90.87 330 P **P** 09 59 51.0 -1.9
comp=Z,9.0nm,0.8s,baz=163,slow=2.0,SNR=8.9
comp=Z,9.0nm,0.8s
AC02 Maricunga 91.10 125 **P** 09 59 58.0 +2.7
GYA Guiyang 91.42 303 ⇑P P 10 00 01.6 +5.5
GYA pmax pmax
comp=Z,11nm,0.7s
CMAR Chiang Mai Arr 91.71 292 P **P** 09 59 58.4 +0.9
comp=Z,5.3nm,0.7s,baz=145,slow=3.7,SNR=27
CMAR PKKPbc **PKKPbc** **10 17 13.8 -0.1**
comp=Z,0.6nm,0.3s,baz=286,slow=2.4,SNR=4.5
comp=Z,5.3nm,0.7s
CMAR Chiang Mai Arr 91.71 292 **P** 09 59 57.6 +0.1
CMAR Chiang Mai Arr 91.71 292 P **P** 09 59 57.6 +0.1
TIA Tai'an 91.77 316 P **P** 09 59 58.1 +0.8
TIA pmax pmax
comp=Z,14nm,1.5s
PEA0B Petropavlovsk- 91.80 349⇑*e*P **P** 09 59 56.5 -0.5
PETK Petropavlovsk- 91.80 349 P **P** 09 59 56.8 -0.3
comp=Z,17nm,0.8s,baz=119,slow=6.6,SNR=24
comp=Z,17nm,0.8s
PETK Petropavlovsk- 91.80 349 **P** 09 59 57.1 +0.1
CHTO Chiang Mai 91.93 292 **P** 09 59 59.6 +1.1
CHTO Chiang Mai 91.93 292 P **P** 09 59 59.5 +1.1
comp=Z,4.8nm,1.3s
CHTO Chiang Mai 91.93 292 P **P** 09 59 59.6 +1.1
CHTO pmax pmax
comp=Z,4.0nm,0.7s
LPIG La Paz 92.04 61 P **P** 09 59 58.1 -0.8
comp=Z,16nm,0.8s,baz=6.2,slow=3.9,SNR=3.3
comp=Z,16nm,0.8s
ENH Enshi 92.13 307 P **P** 09 59 59.9 +0.7
comp=Z,14nm,0.7s
MDJ Mudanjiang 92.19 328 IAmb IAmb 10 00 01.0
comp=Z,27nm,1.3s
TYV Tymovskoe 92.99 339 *e*P **P** **10 00 03.2 +0.7**
TYV pmax pmax
comp=Z,300nm,5.3s
TYV pmax pmax
comp=Z,7.0nm,1.4s
LYN LuoYang 93.25 312 *e*P **P** **10 00 05.4 +1.2**
LYN pmax pmax
comp=Z,15nm,0.9s
CN2 Changchun 93.33 326 P **P** **10 00 04.6 +0.3**
CN2 S **S** **10 10 44.4 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
VES Vestal, Richgr 94.27 47 IAmb IAmb 10 00 10.6
comp=Z,16nm,0.8s
ISA Isabella, Lake 94.50 48 P **P** **10 00 11.4 +1.4**
ISA IAmb IAmb 10 00 12.3
comp=Z,9.2nm,1.0s
ISA Isabella, Lake 94.50 48 P **P** **10 00 11.4 +1.4**
ISA pmax pmax
comp=Z,9.0nm,1.0s
HSIG 94.79 57 P **P** **10 00 13.0 +1.6**
HSIG IAmb IAmb 10 00 13.7
comp=Z,12nm,0.9s
PZH PanZhiHua 94.79 300 P **P** **10 00 13.7 +2.1**
GLA Glamis 94.94 52 P **P** **10 00 14.0 +2.0**
GLA Glamis 94.94 52 P **P** **10 00 14.0 +2.0**
GLA pmax pmax
comp=Z,25nm,0.9s
BC3 Big Chuckawall 94.95 51 **P** **10 00 12.9 +0.7**
BC3 IAmb IAmb 10 00 14.6
comp=Z,13nm,1.1s
XAN Xi'an 95.03 310 ⇑P **P** **10 00 14.0 +1.6**
XAN pmax pmax
comp=Z,4.0nm,0.6s
BJI2 Beijing 95.04 318 P **P** **10 00 13.1 +0.9**
BJI2 pmax pmax
comp=Z,2.0nm,0.9s
CMB Columbia Colle 95.06 45 **P** **10 00 13.2 +0.8**
CMB IAmb IAmb 10 00 14.3
comp=Z,14nm,1.2s
CMB Columbia Colle 95.06 45 P **P** **10 00 13.2 +0.8**
CMB pmax pmax
comp=Z,14nm,1.2s
CLC China Lake 95.12 48 IAmb IAmb 10 00 14.9
comp=Z,16nm,1.4s
KLR Kul'dur 95.13 332⇑*e*P **P** **10 00 13.3 +0.9**
KLR pmax pmax
comp=Z,8.0nm,1.2s
GSC Goldstone, Bar 95.25 49 IAmb IAmb 10 00 16.9
comp=Z,11nm,1.1s
113A Mohawk Valley, 95.42 53 **P** **10 00 15.9 +1.7**
113A IAmb IAmb 10 00 16.9
comp=Z,8.8nm,0.9s
IRM Iron Mountain 95.48 51 IAmb IAmb 10 00 17.5
comp=Z,18nm,1.2s
DANC Danby, Needles 95.66 50 IAmb IAmb 10 00 19.2
comp=Z,18nm,0.9s
MTPC Mountain Pass 96.12 49 IAmb IAmb 10 00 21.9
comp=Z,8.5nm,0.9s
NEE2 Needles Airpor 96.21 51 IAmb IAmb 10 00 21.6
comp=Z,13nm,1.0s
NVAR Mina Array Bea 96.51 46 P **P** **10 00 20.1 +0.9**
comp=Z,0.8nm,0.5s,baz=220,slow=6.7,SNR=9.5
comp=Z,0.8nm,0.5s
HEH HeiHe 97.60 331 *e*P Pdif 10 00 24.0 +0.4
HEH pmax pmax
comp=Z,3.0nm,1.1s
X16A Lo Mia Camp, P 97.96 53 IAmb IAmb 10 00 28.7
comp=Z,5.6nm,0.9s
HHC Hu-ho-hao-te 98.12 316 *e*P Pdif 10 00 28.6 +2.3
HHC pmax pmax
comp=Z,6.0nm,0.7s
CPUP Villa Florida 98.74 133 PKKPbc PKKPbc 10 16 53.0 -1.8
comp=Z,0.7nm,0.4s,baz=40,slow=3.6,SNR=3.3
BTO2 Baotou 98.99 315 *e*P **P** **10 00 32.1 +1.9**
BTO2 S **S** **10 11 33.6 -0.7**
BTO2 pmax pmax
comp=Z,110nm,4.9s
BTO2 LR LR
comp=Z,350nm,5.4s
BTO2 LR LR
comp=Z,340nm,5.3s
BTO2 LR LR
comp=Z,270nm,5.6s
LPAZ La Paz 99.01 118 P **Pdif** **10 00 34.0 +2.5**
comp=Z,2.0nm,0.6s,baz=229,slow=1.7,SNR=10
comp=Z,2.0nm,0.6s
LPAZ La Paz 99.01 118 P **Pdif** **10 00 34.0 +2.5**
TXAR Lajitas Array 99.94 61 P **Pdif** **10 00 35.7 +1.1**
comp=Z,1.0nm,0.8s,baz=204,slow=7.1,SNR=11
TXAR PP **PP** **10 04 44.1 -0.1**
comp=Z,1.0nm,0.9s,baz=222,slow=8.8,SNR=3.5
TXAR PKKPbc **PKKPbc** **10 16 52.9 +0.5**
comp=Z,0.2nm,0.4s,baz=42,slow=5.8,SNR=6.6
comp=Z,1.0nm,0.8s
GTA2 Gaotai 104.16 309 *e*P **PKiKP** **10 05 08.3 -0.2**
GTA2 pmax pmax
comp=Z,4.0nm,0.6s
PDAR Pinedale Array 104.37 47 Pdiff **Pdif** **10 00 54.6 +0.4**
comp=Z,0.5nm,0.6s,baz=227,slow=4.6,SNR=4.8
PDAR PKiKP **PKiKP** **10 05 09.8 +0.9**
comp=Z,0.6nm,0.8s,baz=217,slow=4.7,SNR=5.1
PDAR PKKPbc **PKKPbc** **10 16 39.0 -1.1**
comp=Z,0.2nm,0.5s,baz=94,slow=4.0,SNR=4.5
SONM Songino Array 105.51 319 Pdiff **Pdif** **10 01 00.8 +1.8**
comp=Z,0.8nm,0.5s,baz=149,slow=5.0,SNR=4.1
SONM PKiKP **PKiKP** **10 05 09.8 -0.9**
comp=Z,0.6nm,0.4s,baz=180,slow=1.5,SNR=4.6
SONM PKKPbc **PKKPbc** **10 16 37.4 +0.6**
comp=Z,2.4nm,0.6s,baz=269,slow=3.1,SNR=9.5
ILAR Eielson Array 105.97 15 PKiKP **PKiKP** **10 05 09.3 -1.5**
comp=Z,0.7nm,0.5s,baz=296,slow=2.5,SNR=10
ILAR PKKPbc **PKKPbc** **10 16 31.7 -4.2**
comp=Z,0.3nm,0.9s,baz=15,slow=3.7,SNR=5.0
BOSA Boshof 108.87 206 PKKPbc PKKPbc 10 16 24.1 -1.3
comp=Z,1.4nm,0.4s,baz=333,slow=3.9,SNR=12
INK Inuvik 111.93 18 PKiKP **PKiKP** **10 05 20.4 -1.5**
comp=Z,1.4nm,0.4s,baz=309,slow=0.7,SNR=14
BDFB Brasilia 112.47 133 PKiKP **PKiKP** **10 05 24.4 -0.4**
comp=Z,0.9nm,0.3s,baz=270,slow=8.1,SNR=3.8
YKA Yellowknife Ar 113.86 28 PKiKP **PKiKP** **10 05 24.6 -1.2**
comp=Z,1.2nm,0.5s,baz=282,slow=2.2,SNR=32
YKA PP **PP** **10 06 21.2 -3.6**
comp=Z,1.0nm,0.8s,baz=238,slow=8.0,SNR=6.7
WMQ Urumqi 114.08 308 *e*PKP PKPdf 10 05 25.3 -1.6
ULM Lac du Bonnet 116.34 46 PKP **PKPdf** **10 05 29.4 -1.5**
comp=Z,4.7nm,0.7s,baz=253,slow=2.5,SNR=9.3
WCI Wyandotte Cave 116.86 61 **PKPdf** **10 05 31.6 -0.8**
WCI Wyandotte Cave 116.86 61 PKiKP **PKPdf** **10 05 31.6 -0.8**
DGZ Jazzator, Alta 117.02 313 *i* PKiKP **PKPdf** **10 05 31.3 -1.2**
ZSN Zaisan 117.53 310 *e*PKiKP **PKPdf** **10 05 32.2 -1.2**
ZSN *e* 10 06 49.6
ZSN Zaisan 117.53 310 *e*PKP **PKPdf** **10 05 32.2 -1.2**
ZSN *e*PP **PP** **10 06 49.6 -1.2**
MK31 Makanchi Array 118.83 309*c i*PKiKP **PKPdf** **10 05 33.8 -2.1**
MKAR Makanchi Array 118.83 309 PKP **PKPdf** **10 05 34.2 -1.7**
comp=Z,11nm,0.5s,baz=178,slow=1.0,SNR=176
MKAR PKKPab **PKKPab** **10 15 53.4 +0.5**
comp=Z,1.4nm,0.3s,baz=294,slow=3.9,SNR=30
MKAR Makanchi Array 118.83 309 **PKPdf** **10 05 34.4 -1.5**
MAKZ Makanchi 119.03 308 **PKPdf** **10 05 34.6 -1.7**
MAKZ Makanchi 119.03 308 PKiKP **PKPdf** **10 05 34.6 -1.7**
SHLS Shalkode 119.08 304 *e*PKiKP **PKPdf** **10 05 34.6 -2.0**
SHLS Shalkode 119.08 304 *e*PKP **PKPdf** **10 05 34.7 -2.0**
UZB Uzynbulak 119.37 304 *e*PKiKP **PKPdf** **10 05 35.7 -1.5**
UZB Uzynbulak 119.37 304 *e*PKP **PKPdf** **10 05 35.8 -1.5**
KSH2 Kashi 120.00 298 PKP **PKPdf** **10 05 38.1 -0.5**
ZALV Zalesovo Beam 120.29 317 PKP **PKPdf** **10 05 36.4 -2.0**
comp=Z,6.3nm,0.4s,baz=148,slow=1.8,SNR=41
ZALV Zalesovo Beam 120.29 317 **PKPdf** **10 05 36.6 -1.8**
ZALV Zalesovo Beam 120.29 317 PKiKP **PKPdf** **10 05 36.6 -1.8**
BLA Blacksburg 120.55 65 **PKPdf** **10 05 39.0 -0.6**
BLA Blacksburg 120.55 65 PKiKP **PKPdf** **10 05 39.0 -0.6**
MDOK Medeo 120.69 303 *e*PKiKP **PKPdf** **10 05 38.2 -1.6**
MDOK Medeo 120.69 303 *e*PKP **PKPdf** **10 05 38.2 -1.6**
TNSS Tian-Shan 120.70 303 *e*PKiKP **PKPdf** **10 05 38.3 -1.8**
TNSS Tian-Shan 120.70 303 *e*PKP **PKPdf** **10 05 38.3 -1.8**
ULHL Ulahol 120.85 302 P **PKPdf** **10 05 39.2 -1.0**
SNR=9.1
FCC Fort Churchill 120.90 37 **PKPdf** **10 05 37.6 -1.8**
FCC Fort Churchill 120.90 37 PKiKP **PKPdf** **10 05 37.6 -1.8**
SEM Semipalatinsk 121.53 312 *e*PKiKP **PKPdf** **10 05 39.9 -1.3**
SEM Semipalatinsk 121.53 312 *e*PKP **PKPdf** **10 05 40.0 -1.3**
TKM2 Tokmak 2 121.56 302 P **PKPdf** **10 05 40.6 -0.9**
SNR=10
KBK Karagaybulak 121.89 302 P **PKPdf** **10 05 41.2 -1.0**
SNR=11
UCH Uchtor 122.01 301 P **PKPdf** **10 05 42.2 -0.5**
SNR=14
CHMS Chumysh 122.16 302 P **PKPdf** **10 05 41.5 -1.0**
SNR=12
AAK Ala-Archa 122.19 302 P **PKPdf** **10 05 42.2 -0.5**
SNR=10
AAK Ala-Archa 122.19 302*c i*PKiKP **PKPdf** **10 05 41.3 -1.4**
AAK pmax pmax
comp=Z,11nm,1.3s
USP Ospenovka 122.43 302 P **PKPdf** **10 05 42.3 -0.7**
SNR=13
KURK Kurchatov 122.61 312*c i*PKiKP **PKPdf** **10 05 41.4 -1.6**
KURK pmax pmax
comp=Z,51nm,1.0s
KURBB Kurchatov Arra 122.62 312 PKP **PKPdf** **10 05 41.6 -1.4**
comp=Z,32nm,0.5s,baz=115,slow=1.8,SNR=140
KURBB PKKPbc **PKKPbc** **10 15 39.2 +1.0**
comp=Z,1.8nm,0.6s,baz=285,slow=5.4,SNR=9.4
EKS2 Erkin-Say 122.69 301 P **PKPdf** **10 05 43.0 -0.6**
SNR=12
KBL Kabul 122.72 291 **PKPdf** **10 05 43.5 -0.5**
KBL Kabul 122.72 291 PKiKP **PKPdf** **10 05 43.5 -0.5**
NRIK Noril'sk 124.27 335 PKP **PKPdf** **10 05 44.4 -1.2**
comp=Z,24nm,0.6s,baz=94,slow=2.7,SNR=61
NRIK Noril'sk 124.27 335 **PKPdf** **10 05 44.5 -1.1**
DZA Taraz 124.44 301 *e*PKiKP **PKPdf** **10 05 45.5 -1.3**
DZA Taraz 124.44 301 *e*PKP **PKPdf** **10 05 45.5 -1.3**
M57A Sunshine Farm, 124.57 61 **PKPdf** **10 05 46.7 -0.4**
IUG luzhnay 125.06 299 *e*PKiKP **PKPdf** **10 05 46.6 -1.5**
IUG *e* 10 07 40.6
IUG luzhnay 125.06 299 *e*PKP **PKPdf** **10 05 46.6 -1.5**
IUG *e*PP **PP** **10 07 40.7 -1.4**
KKAR Karatay Array 125.08 301 **PKPdf** **10 05 47.2 -0.8**
KKAR Karatay Array 125.08 301 PKiKP **PKPdf** **10 05 47.2 -0.8**
CHM Chimkent 125.42 300 *e*PKiKP **PKPdf** **10 05 47.2 -1.5**
CHM Chimkent 125.42 300 *e*PKP **PKPdf** **10 05 47.3 -1.5**
BRLS Boroldav 125.51 300 *e*PKiKP **PKPdf** **10 05 47.4 -1.4**
BRLS Boroldav 125.51 300 *e*PKP **PKPdf** **10 05 47.5 -1.4**
J57A Williamstown 126.10 59 **PKPdf** **10 05 49.5 -0.4**
VLDQ Val d'Or 126.67 53 **PKPdf** **10 05 49.4 -1.5**
PAL Palisades 126.71 63 **PKPdf** **10 05 50.7 -0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PAL	Palisades	126.71	63	PKIKP	PKPdf	10 05 50.7	-0.4
BVAR	Borovoye Array	128.16	312	PKhKP	PKPpre	10 05 44.1	
	comp=Z,0.8nm,0.3s,baz=290,slow=1.0,SNR=6.4						
BVAR				PKP	PKPdf	10 05 52.8	-0.8
	comp=Z,20nm,0.5s,baz=72,slow=0.5,SNR=76						
BVAR				SKPab	SKPab	10 08 41.9	
	comp=Z,9.8nm,0.6s,baz=101,slow=3.0,SNR=13						
BORK	Borovoye	128.21	312	*de*PKIKP	PKPdf	10 05 52.5	-1.1
LMQ	La Malbaie	131.13	56		PKPdf	10 05 59.2	-0.2
TULEG	Thule	131.91	17	*e*P	PKPdf	10 05 58.5	-1.5
ABKAR	Akbulak array	133.81	306		PKPdf	10 06 03.8	-0.6
SCHQ	Schefferville	134.51	47	PKP	PKPdf	10 06 05.3	-0.2
	comp=Z,3.4nm,0.8s,baz=323,slow=1.0,SNR=3.7						
SCHQ				SKPbc	SKPbc	10 09 06.5	-0.7
	comp=Z,4.6nm,0.9s,baz=282,slow=3.5,SNR=6.5						
KULLO	Kullorsuaq	135.29	18	*e*P	PKPdf	10 06 06.6	+0.2
ARTI	Arti	135.53	316	*i* PKIKP	PKPdf	10 06 06.4	-0.9
ARTI						10 08 45.5	
UPNV	Upernavik	136.31	20	*e*P	PKPdf	10 06 07.7	-0.6
NUUG	Nuugaatsiaq	137.66	21	*e*P	PKPdf	10 06 11.4	+0.6
KBS	Kingsbay	138.07	356	*e*PKPdf	PKiKP	10 06 13.5	-0.1
SPA0	Spitsbergen Ar	138.46	354	*e*PKPdf	PKiKP	10 06 14.2	-0.3
SPITS	Spitsbergen Ar	138.46	354	PKhKP	PKPpre	10 06 02.5	
	comp=Z,2.8nm,0.3s,baz=89,slow=3.6,SNR=53						
SPITS				PKP	PKPdf	10 06 11.7	-0.6
	comp=Z,17nm,0.5s,baz=70,slow=4.8,SNR=23						
SPITS				SKPbc	SKPbc	10 09 15.2	-3.1
	comp=Z,12nm,0.6s,baz=87,slow=5.2,SNR=9.6						
BRBB	Barentsburg B	138.71	355	*e*PKPdf	PKiKP	10 06 14.2	-0.6
KIRV	Kirov	140.25	319	*de*PKIKP	PKPdf	10 06 15.0	-0.9
DBG	Daneborg	142.32	7	*e*P	PKPdf	10 06 13.4	-5.9
VADS	Vadso	143.06	342	*e*PKPdf	PKPab	10 06 17.2	+0.4
IVI	Ivigtut	143.57	35	*e*P	PKPab	10 06 18.4	-0.7
HAMF	Hammerfest	143.94	345	*e*PKPbc	PKPab	10 06 20.1	-0.3
EDA	Edea	144.13	204		PKPab	10 06 22.5	-0.2
ARA0	ARCESS Array S	144.40	343	*e*PKPbc	PKPab	10 06 21.7	-0.5
ARCES	ARCESS Array B	144.40	343	PKP	PKPab	10 06 21.6	-0.6
	comp=Z,124nm,0.6s,baz=50,slow=3.7,SNR=622						
ARCES				SKPbc	SKPbc	10 09 30.4	-3.3
	comp=Z,7.4nm,0.6s,baz=80,slow=1.4,SNR=4.8						
ARCES	ARCESS Array B	144.40	343		PKPab	10 06 21.9	-0.3
KLMR	Klimovskoe	144.52	325	*e*PKIKP	PKPab	10 06 20.9	-2.0
KLMR				PPP	PPP	10 12 55.1	
KLMR				pmax	pmax		
	comp=Z,164nm,0.7s						
KBZ	Khabaz	144.70	295	PKP	PKPbc	10 06 23.1	-0.9
	comp=Z,20nm,1.0s,baz=178,slow=1.9,SNR=13						
KBZ	Khabaz	144.70	295	*de*PKIKP	PKPbc	10 06 23.3	-0.7
NRS	Narsarsuaq	144.83	34	*e*P	PKPbc	10 06 22.1	-1.7
SHA1	Shidzhatmaz	144.88	295	*de*PKIKP	PKPbc	10 06 24.4	-0.5
KIV	Kislovodsk	144.88	295	*e*PKIKP	PKPbc	10 06 23.0	-1.7
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
JETT	Jettan, Norway	145.49	345	*e*PKPdf	PKPdf	10 06 24.6	-0.3
VRH	Novokhopyorsk	145.56	308	*c i*PKIKP	PKPdf	10 06 25.4	-0.1
VRH				pmax	pmax		
	comp=Z,275nm,0.6s						
SCO	Scoresbysund	145.61	11		PKPdf	10 06 25.1	+0.1
SCO	Scoresbysund	145.61	11	PKIKP	PKPdf	10 06 25.1	+0.1
SCO	Scoresbysund	145.61	11	*e*P	PKPdf	10 06 25.0	+0.1
ANGG	Ammassalik, Gr	145.61	24	*e*P	PKPdf	10 06 24.3	-0.8
TRO	Tromso	145.71	346	*e*PKPdf	PKPdf	10 06 25.1	-0.1
VORR	Voronezh	147.06	309	*e*PKP2	PKPbc	10 06 30.2	-0.4
VORR				pmax	pmax		
	comp=Z,241nm,0.5s						
LPSR	Galich'ya Gora	147.08	311	*c i*PKP2	PKPbc	10 06 30.1	-0.5
LPSR				pmax	pmax		
	comp=Z,140nm,1.0s						
VORD	Divnogorie	147.10	308	⇑*i*PKP2	PKPbc	10 06 29.8	-1.0
VORD				pmax	pmax		
	comp=Z,80nm,0.8s						
MOS	Moscow	147.12	317	*e*PKIKP	PKPdf	10 06 28.1	+0.1
MOS				*e*		10 07 41.6	
MOS				pmax	pmax		
	comp=Z,161nm,0.7s						
VSR	Storozhevoye	147.15	308	*i* PKP2	PKPbc	10 06 30.0	-0.9
VSR				pmax	pmax		
	comp=Z,90nm,0.4s						
STEI	Steigen	147.86	347	*e*PKPdf	PKPbc	10 06 31.4	-0.9
OBN	Obninsk	147.87	316		PKPbc	10 06 32.1	-0.5
OBN	Obninsk	147.87	316	*ce*PKHKP	PKPpre	10 06 27.9	
OBN				*i*		10 06 36.0	
OBN				pmax	pmax		
	comp=Z,16nm,1.2s						
LOF	Lofoten	147.97	348	*e*PKPdf	PKPbc	10 06 31.4	-1.2
MMAI	Mount Meron Ar	148.15	274	PKPbc	PKPbc	10 06 34.7	+0.4
	comp=Z,2.4nm,0.3s,baz=42,slow=11,SNR=12						
MMAI				pPKP	pPKPbc	10 07 47.8	+0.3
	comp=Z,13nm,0.8s,baz=64,slow=7.5,SNR=3.9						
FAUS	Fauske	148.34	346	*e*PKPdf	PKPbc	10 06 32.4	-1.1
DBIC	Dimbokro	149.20	177	PKP	PKPdf	10 06 33.0	+0.3
	comp=Z,9.3nm,0.3s,baz=174,slow=6.4,SNR=4.8						
DBIC				PKPbc	PKPbc	10 06 36.9	-0.4
	comp=Z,17nm,0.5s,baz=211,slow=4.3,SNR=15						
DBIC				pPKP	pPKPab	10 07 53.1	-0.8
	comp=Z,15nm,0.9s,baz=242,slow=5.2,SNR=3.0						
VAGH	Vaagaholmen	149.28	347	*e*PKPdf	PKPbc	10 06 34.8	-1.0
RAUS	Rausandaksla	149.41	346	*e*PKPdf	PKPbc	10 06 34.8	-1.4
KONS	Konsvik	149.52	347	*e*PKPdf	PKPbc	10 06 35.4	-1.0
MOR8	Moi Rana	149.56	346	*e*PKPdf	PKPbc	10 06 34.8	-1.8
STOK	Stokkvaagen	149.69	347	*e*PKPdf	PKPbc	10 06 35.8	-1.0
LEIR	Leirfjorden	149.87	347	*e*PKPdf	PKPbc	10 06 36.2	-1.0
FINES	FINESS Array B	149.87	332	PKPbc	PKPbc	10 06 36.4	-1.0
	comp=Z,77nm,0.6s,baz=31,slow=4.0,SNR=268						
BRTR	Keskin Array B	151.12	286	PKP	PKPdf	10 06 34.5	-0.6
	comp=Z,0.8nm,0.7s,baz=246,slow=1.4,SNR=3.4						
BRTR				PKPbc	PKPbc	10 06 40.4	-0.9
	comp=Z,9.0nm,0.7s,baz=146,slow=4.2,SNR=32						
BRTR				pPKP	pPKPbc	10 07 54.0	-0.7
	comp=Z,11nm,1.0s,baz=144,slow=4.4,SNR=6.1						
NSS	Namsos	151.50	346	*e*PKPdf	PKPbc	10 06 39.8	-1.3
MNK	Minsk	152.78	319	*i* PKiKP	PKPbc	10 06 43.9	-0.4
	comp=E,12nm,0.8s						
MNK				*i* PKiKP	PKPbc	10 06 43.9	-0.4
	comp=N,14nm,0.9s						
MNK				*i* PKiKP	PKPbc	10 06 43.9	-0.4
	comp=Z,44nm,0.8s,baz=64						
MNK				*i* pPKiKP	pPKPbc	10 07 57.9	+0.1
MNK				*i* sPKiKP	sPKPbc	10 08 26.4	-1.1
MNK				*i* SKP	SKPdf	10 09 40.4	-1.1
MNK				*i* PKS	PKSdf	10 10 11.2	+0.1
MNK				*i* PP	PP	10 10 32.1	+0.8
MNK				*i* PPP	PPP	10 13 59.5	
MNK				*i* SKS	SKSdf	10 14 01.1	+46
MNK				*i* SS	SS	10 29 40.2	+2.3
MNK				*i* SSS	SSS	10 36 44.8	
MNK	Minsk	152.78	319	*i* PKIKP	PKPbc	10 06 43.9	-0.4
MNK				*i*		10 07 57.8	
MNK				*i*		10 08 26.3	
MNK				*i*		10 10 32.1	
MNK				*i*		10 14 01.0	
MNK				*i* SS	SS	10 29 40.1	+2.2
MNK				pmax	pmax		
	comp=Z,44nm,0.8s						
MNK				pmax	pmax		
	comp=E,12nm,0.8s						
MNK				pmax	pmax		
	comp=N,14nm,0.9s						
AKASG	Malin Array Be	153.40	310	PKP	PKPdf	10 06 36.1	-1.8
	comp=N,2.2nm,0.7s,baz=66,slow=1.0,SNR=6.9						
AKASG				PKPbc	PKPbc	10 06 44.7	-1.1
	comp=N,22nm,0.5s,baz=65,slow=2.3,SNR=12						
AKASG				PKPab	PKPab	10 06 59.4	0.0
	comp=N,6.5nm,0.4s,baz=61,slow=5.2,SNR=13						
KIEV	Kiev	153.41	310		PKPbc	10 06 44.7	-1.1
KIEV	Kiev	153.41	310	PKIKP	PKPbc	10 06 44.7	-1.1
MOL	Molde	154.09	348	*e*PKPbc	PKPbc	10 06 46.0	-0.9
AKN	Aaknes	154.55	349	*e*PKPbc	PKPbc	10 06 47.4	-0.5
NB201	NORSAR Array S	154.75	343		PKPbc	10 06 47.5	-0.9
NB201					PKPab	10 07 03.8	-1.0
NB2	NORSAR Subarra	154.78	343	PKP	PKPbc	10 06 47.0	-1.5
	comp=Z,5.7nm,0.5s,baz=28,slow=2.1						
NB2	NORSAR Subarra	154.78	343	PKP	PKPbc	10 06 47.0	-1.5
NB2				AMP		10 06 47.0	
	comp=Z,5.7nm,0.5s						
NOA	NORSAR Array B	154.78	343	PKPbc	PKPbc	10 06 47.2	-1.3
	comp=Z,11nm,0.6s,baz=31,slow=2.1,SNR=35						
NOA				PKPab	PKPab	10 07 04.0	-0.9
	comp=Z,8.3nm,0.6s,baz=29,slow=3.3,SNR=16						
HFS	Hagfors	154.94	340	PKPbc	PKiKP	10 06 47.3	-1.4
	comp=Z,9.1nm,0.5s,baz=82,slow=3.3,SNR=41						
HFS				PKPab	PKPab	10 07 04.1	-1.5
	comp=Z,18nm,0.6s,baz=66,slow=3.7,SNR=12						
TORD	Torodi Ar. Bea	155.24	192	PKP	PKPdf	10 06 40.8	-0.8
	comp=Z,4.7nm,0.9s,baz=226,slow=1.8,SNR=24						
TORD				PKPbc	PKPbc	10 06 49.9	
	comp=Z,2.0nm,0.4s,baz=156,slow=2.7,SNR=6.6						
TORD				PKPab	PKPab	10 07 07.9	-0.1
	comp=Z,3.5nm,0.5s,baz=159,slow=2.9,SNR=8.6						
BURAR	Bucovina Array	156.78	305		PKPab	10 07 14.2	+0.1
STEB	Steborice	160.42	316	*e*PKPAB	PKPab	10 07 30.3	+0.6
MORC	Moravsky Berou	160.63	316	*e*PKP	PKPab	10 07 31.0	+0.3
OSTC	Ostas	160.92	319	*e*PKPAB	PKPab	10 07 42.2	+10
DPC	Dobruska-Polom	160.98	318	*e*PKP2	PKPab	10 07 30.3	-1.9
DPC	Dobruska-Polom	160.98	318	*e*PKPAB	PKPab	10 07 30.3	-1.9
JAVC	Velka Javorina	161.01	313	*e*PKP	PKPab	10 07 34.2	+1.8
BSEG	Bad Segeberg	161.11	334	*e*PKPab	PKPab	10 07 32.6	+0.2
	baz=47,slow=4.5						
VRAC	Vranov	161.40	315	*e*PKP	PKPab	10 07 34.7	+0.6
KRUC	Moravsky	161.64	315	*e*PKP	PKPab	10 07 35.8	+0.7
BRG	Berggiesshubel	161.86	323	*e*PKPab	PKPab	10 07 36.3	+0.3
	baz=47,slow=4.5						
BRG	Berggiesshubel	161.86	323	*i* PKPab	PKPab	10 07 36.2	+0.3
BRG				Amp		10 07 37.5	
	comp=Z,16nm,1.0s						
CLL	Collm	162.01	325	⇓*e*PKIKP	PKPdf	10 06 52.0	+3.5
CLL				*i*		10 07 36.5	
CLL				pmax	pmax		
	comp=Z,27nm,0.9s						
CLL	Collm	162.01	325	*e*PKPdf	PKPdf	10 06 52.0	+3.5
CLL				⇓*i*PKPab	PKPab	10 07 36.5	-0.1
	comp=Z,27nm,0.9s						
CLL				*e*pPKPab	pPKPab	10 08 47.0	-0.2
FLTG	Flechtingen	162.03	330	*e*PKPab	PKPab	10 07 36.1	-0.5
	baz=47,slow=4.5						
EKA	Eskdalemuir Ar	162.25	360	PKPab	PKPab	10 07 36.0	-1.4
	comp=Z,5.0nm,0.5s,baz=340,slow=2.5,SNR=20						
EKA				pPKP	pPKPdf	10 08 08.0	+5.3
	comp=Z,3.6nm,0.8s,baz=167,slow=7.5,SNR=2.8						
RETH	Rethem/Aller,	162.42	334	*e*PKPab	PKPab	10 07 38.1	-0.1
	baz=47,slow=4.5						
CONA	Conrad Observa	162.52	312	*i* PKP	PKPab	10 07 39.5	+0.4
	comp=Z,13nm,1.4s						
NEUB	Neuenburg	162.63	326	*e*PKPab	PKPab	10 07 39.5	+0.2
	baz=47,slow=4.5						
CLZ	Clausthal	162.75	330	*e*PKPab	PKPab	10 07 39.8	0.0
	baz=47,slow=4.5						
TANN	Tannenbergstha	162.88	324	*e*PKPab	PKPab	10 07 40.7	+0.2
	baz=47,slow=4.5						
PLN	Plauen	162.97	324	*e*PKPab	PKPab	10 07 41.1	+0.3
	baz=47,slow=4.5						
NKC	Novy Kostel	163.00	323	*e*PKP2	PKPab	10 07 41.2	+0.2
NKC	Novy Kostel	163.00	323	*e*PKPAB	PKPab	10 07 41.2	+0.2
MOX	Moxa	163.11	325	*e*PKPab	PKPab	10 07 41.7	+0.2
	baz=47,slow=4.5						
GTTG	Gottingen	163.14	330	*e*PKPab	PKPab	10 07 42.2	+0.7
	baz=47,slow=4.5						
GERES	GERESS Array B	163.24	318	PKP	PKPdf	10 06 47.0	-2.9
	comp=Z,0.9nm,0.8s,baz=270,slow=0.8,SNR=3.7						
GERES				PKPab	PKPab	10 07 41.9	-0.4
	comp=Z,1.6nm,0.8s,baz=72,slow=4.3,SNR=4.6						
IBBN	Ibbenburen	163.32	336	*e*PKPab	PKPab	10 07 42.1	-0.1
	baz=47,slow=4.5						
MANZ	Manzenberg	163.33	323	*e*PKPab	PKPab	10 07 42.8	+0.3
	baz=47,slow=4.5						
ROTZ	Rotzenmuhle	163.43	322	*e*PKPab	PKPab	10 07 43.4	+0.5
	baz=47,slow=4.5						
MOA	Molln	163.49	314	*i* PKP	PKPab	10 07 43.8	+0.6
	comp=Z,10nm,0.9s						
SOKA	Soboth	163.61	309	*i* PKP	PKPab	10 07 43.5	-0.5
	comp=Z,10.0nm,1.4s						
BIOA	Bad Ischl, Aus	163.93	314	*i* PKP	PKPab	10 07 45.9	+0.7
	comp=Z,11nm,1.1s						
GRF	Grafenberg Arr	163.95	324	*e*PKPab	PKPab	10 07 46.2	+1.0
	baz=47,slow=4.5						
KASTN	Kahler Asten	164.00	332	*e*PKPab	PKPab	10 07 45.1	-0.2
	baz=47,slow=4.5						
LESA	Schwarzleotal	164.62	315	*i* PKP	PKPab	10 07 48.9	+0.6
	comp=Z,10nm,0.9s						
TNS	Taunus Mts	164.77	330	*e*PKPab	PKPab	10 07 49.0	+0.1
	baz=47,slow=4.5						
ABTA	Abfaltersbach	165.08	313	*i* PKP	PKPab	10 07 50.1	-0.3
	comp=Z,9.9nm,0.7s						
WATA	Walderalm	165.28	316	*e*PKP	PKPab	10 07 51.8	+0.5
	comp=Z,2.9nm,0.4s						
WTTA	Wattenberg	165.29	316	*e*PKP	PKPab	10 07 52.0	+0.5
	comp=Z,14nm,1.0s						
MOTA	Moosalm	165.53	317	*e*PKP	PKPab	10 07 53.9	+1.4
	comp=Z,4.8nm,0.9s						
SQTA	Sankt Quirin	165.55	316	*e*PKP	PKPab	10 07 53.9	+1.4
	comp=Z,10nm,1.2s						
FETA	Feichten	165.93	317	*i* PKP	PKPab	10 07 55.5	+1.3
	comp=Z,7.1nm,1.2s						
WLF	Walferdange	166.09	333	*e*PKPab	PKPab	10 07 54.9	+0.3
	baz=47,slow=4.5						
DAVA	Damuels	166.22	319	*e*PKP	PKPab	10 07 57.1	+1.6
	comp=Z,9.4nm,1.1s						
BFO	Black Forest	166.26	325		PKPab	10 07 55.7	+0.3
BFO	Black Forest	166.26	325	PKP2	PKPab	10 07 55.7	+0.3
BFO	Black Forest	166.26	325	*e*PKPab	PKPab	10 07 55.4	-0.1
	baz=47,slow=4.5						
FUORN	Ofenpass-Fuorn	166.43	316		PKPab	10 07 58.3	+1.7
POLO	Lamas de Olo	174.92	40	*e*PKPab	PKPab	10 08 33.7	-0.4
MDT	Midelt	175.14	168	PKP	PKPdf	10 06 57.8	0.0
	comp=Z,1.1nm,0.4s,baz=286,slow=7.4,SNR=4.4						
PVIS	Viseu	175.32	47	*e*PKPab	PKPab	10 08 34.8	-1.1
MVO	Moncorvo	175.46	37	*e*PKPab	PKPab	10 08 36.0	-0.5
PSARD	Sardoal	175.77	60	*e*PKPab	PKPab	10 08 38.0	0.0
MORF	Marmelete	175.82	92	*e*PKPab	PKPab	10 08 39.4	+1.1
MOE	Montemor	175.99	75	*e*tx	tx	10 08 39.6	
PCBR	Castelo Branco	176.10	53	*e*tx	tx	10 08 38.9	
PARRA	Arraiolos	176.15	70	*e*tx	tx	10 08 39.6	
MESJ	Messejana	176.18	85	*e*PKPab	PKPab	10 08 40.2	+0.3
EVO	Evora	176.25	74	*e*tx	tx	10 08 40.4	
PCVE	Castro Verde	176.33	88	*e*tx	tx	10 08 47.6	
PMRV	Marv??o	176.38	58	*e*tx	tx	10 08 40.1	
PESTR	Estremoz	176.47	67		PKPab	10 08 40.5	-0.7
PESTR	Estremoz	176.47	67	*e*tx	tx	10 08 40.7	
PBAR	Barrancos	177.07	77	*e*tx	tx	10 08 44.8	
ESDC	Sonseca Array	177.87	12	PKP	PKPdf	10 06 57.0	-1.0
	comp=Z,4.7nm,1.3s,baz=6.7,slow=3.2,SNR=9.9						
ESDC				PKPab	PKPab	10 08 45.6	-1.5
	comp=Z,3.9nm,0.8s,baz=342,slow=4.0,SNR=18						

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*IDC **04** 09:52:00.1±1.7, 8°.52N×103°.59W, h0km, mb3.8/7, mbtmp3.7/9, ML3.3/2, MS3.6/17, Error ellipse: s-maj=47.9km s-min=25.7km az=49.0*

*NEIC **04** 09:52:02.3±1.6, 8°.4N±0°.1×103°.7W±0°.2, h10km±2km, mb4.2/27, Error ellipse: s-maj=26.4km s-min=19.8km az=259.0*

ISC 04 09:52:05.6±1.3**, 8°.5N**±0°.1×**103°.6W**±0°.1**, h35km, n59, σ1s.14**/43**, mb4.2**/16**, MS3.6**/15**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	10.21	28		Pn	09 54 30.5	+0.6
MOIG	Morelia	11.33	11	Pn	Pn	09 54 47.0	+1.7
CMIG	Matias Romero	11.99	44	Pn	Pn	09 54 50.8	-3.4
	0.3nm,0.3s,baz=233,slow=11,SNR=4.7						
CMIG				LR	LR	09 58 31.1	
	comp=Z,443nm,21.4s,baz=194,slow=32						
	0.7nm,0.4s						
HUEH	Huehuetenango	13.58	59	Pn	Pn	09 55 17.1	+1.0
APG	El Apazote	14.33	62	Pn	Pn	09 55 25.6	-0.7
	0.1nm,0.3s,baz=169,slow=11,SNR=9.9						
	0.8nm,0.6s						
MTO3	Montecristo	15.08	66	Pn	Pn	09 55 36.8	+0.5
MTO3				IAmb	IAmb	09 55 54.6	
	comp=Z,12nm,1.3s						
PETF	Flores	15.73	57	Pn	Pn	09 55 46.2	+1.6
PETF				IAmb	IAmb	09 55 52.6	
	comp=Z,15nm,0.9s						
LPIG	La Paz	16.80	338	LR	LR	10 00 43.3	
	comp=Z,99nm,18.8s,baz=168,slow=31						
833A	Chaparral WMA,	20.09	11	P	Pn	09 56 37.1	-1.1
833A				IAmb	IAmb	09 56 43.6	
	comp=Z,10nm,1.1s						
TXAR	Lajitas Array	20.71	360	P	Pn	09 56 45.3	-0.2
	comp=Z,1.5nm,0.8s,baz=185,slow=12,SNR=12						
TXAR				LR	LR	10 03 57.5	
	comp=Z,140nm,20.0s,baz=174,slow=35						
TXAR	Lajitas Array	20.71	360	P	P	09 56 42.2	-0.8
TX31	Lajitas Ar. Si	20.71	360		P	09 56 42.7	-0.4
TX31				IAmb	IAmb	09 56 51.9	
	comp=Z,12nm,1.4s						
DRIO	Del Rio	20.98	7	P	P	09 56 43.9	-2.0
HNDO	Hondo	21.28	10	P	P	09 56 49.9	+0.8
HNDO				IAmb	IAmb	09 56 55.3	
	comp=Z,21nm,1.3s						
SAND	Sanderson	21.37	3		P	09 56 50.8	+0.7
SAND				IAmb	IAmb	09 56 56.0	
	comp=Z,12nm,1.3s						
ALPN	Alpine	21.75	360	P	P	09 56 55.1	+0.9
JCT	Junction City	22.13	9	P	P	09 56 58.0	-0.3
JCT				IAmb	IAmb	09 57 02.8	
	comp=Z,15nm,1.4s						
VHRN	Van Horn	22.20	357		P	09 56 58.6	-0.5
435B	Jarrell	22.84	13	P	P	09 57 08.2	+2.3
435B				IAmb	IAmb	09 57 09.7	
	comp=Z,13nm,1.1s						
BRDY	Brady	23.05	10		P	09 57 06.8	-1.1
BRDY				IAmb	IAmb	09 57 11.5	
	comp=Z,4.9nm,0.9s						
MNTX	Cornudas Mount	23.13	356	P	P	09 57 10.1	+1.4
ABTX	Abilene, Hawle	24.26	8	P	P	09 57 21.0	+1.5
ABTX				IAmb	IAmb	09 57 22.7	
	comp=Z,13nm,1.2s						
PLPT	Palo Pinto	24.66	11	P	P	09 57 24.2	+1.0
APMT	Aspermont	24.89	7		P	09 57 26.2	+0.9
APMT				IAmb	IAmb	09 57 27.3	
	comp=Z,7.6nm,1.0s						
ATAH	Atahualpa	29.50	121	LR	LR	10 07 33.6	
	comp=Z,104nm,21.2s,baz=293,slow=32						
TKL	Tuckaleechee C	32.50	31	LR	LR	10 13 18.8	
	comp=Z,122nm,18.4s,baz=246,slow=39						
SDV	Santo Domingo	32.53	87	LR	LR	10 10 16.6	
	comp=Z,92nm,18.9s,baz=252,slow=34						
P40A	Paris	32.55	17	P	P	09 58 35.1	+1.6
NVAR	Mina Array Bea	32.62	338	P	P	09 58 33.3	-1.0
	comp=Z,0.3nm,0.6s,baz=149,slow=6.1,SNR=3.6						
NVAR				LR	LR	10 09 24.4	
	comp=Z,102nm,18.6s,baz=208,slow=32						
	comp=Z,0.3nm,0.6s						
HDIL	Hopedale	34.34	19	P	P	09 58 48.4	-0.6
PD31	Pinedale Array	34.52	352	P	P	09 58 50.6	-0.3
PD31				IAmb	IAmb	09 58 57.3	
	comp=Z,3.5nm,1.1s						
PDAR	Pinedale Array	34.52	352	P	P	09 58 51.2	+0.4
	comp=Z,1.1nm,0.9s,baz=166,slow=7.6,SNR=7.4						
	comp=Z,1.1nm,0.9s						
PDAR	Pinedale Array	34.52	352	P	P	09 58 50.4	-0.4
SJG	San Juan	37.55	71	LR	LR	10 14 07.2	
	comp=Z,67nm,18.8s,baz=310,slow=35						
AGMN	Agassiz Nation	40.18	8	P	P	09 59 39.1	+0.7
AGMN				IAmb	IAmb	09 59 44.1	
	comp=Z,10nm,1.3s						
SADO	Sadowa	41.85	26	LR	LR	10 17 31.9	
	comp=Z,78nm,18.8s,baz=216,slow=37						
ULM	Lac du Bonnet	42.09	7	P	P	09 59 54.3	+0.2
	comp=Z,1.5nm,0.7s,baz=124,slow=3.6,SNR=3.7						
	comp=Z,1.5nm,0.7s						
LPAZ	La Paz	42.85	125	P	P	10 00 01.7	+0.3
	comp=Z,2.1nm,1.1s,baz=330,slow=9.0,SNR=5.3						
LPAZ				LR	LR	10 16 22.0	
	comp=Z,82nm,20.0s,baz=299,slow=34						
	comp=Z,2.1nm,1.1s						
LPAZ	La Paz	42.85	125	P	P	10 00 01.4	-0.1
LPAZ				IAmb	IAmb	10 00 04.4	
	comp=Z,6.6nm,1.3s						
H03N2	Juan Fernandez	47.84	152	T	T	10 51 54.0	
	baz=328,slow=78,SNR=11						
H03N1	Juan Fernandez	47.85	152	T	T	10 51 54.7	
	baz=328,slow=78,SNR=8.9						
H03N3	Juan Fernandez	47.85	152	T	T	10 51 55.4	
	baz=328,slow=78,SNR=8.0						
PPT	Papeete	52.34	240	LR	LR	10 15 40.9	
	comp=Z,11nm,21.8s,baz=74,slow=27						
YKA	Yellowknife Ar	54.48	354	P	P	10 01 29.6	+0.1
	comp=Z,0.2nm,0.6s,baz=165,slow=7.2,SNR=4.4						
YKA				PcP	PcP	10 02 30.8	-1.8
	comp=Z,0.1nm,0.6s,baz=184,slow=2.1,SNR=3.6						
	comp=Z,0.2nm,0.6s						
FRB	Frobisher Bay	60.52	17	LR	LR	10 27 36.2	
	comp=Z,86nm,18.2s,baz=164,slow=35						
KDAK	Kodiak Island	61.86	333	LR	LR	10 26 11.5	
	comp=Z,185nm,18.0s,baz=77,slow=33						
RAR	Rarotonga	62.60	241	LR	LR	10 23 20.9	
	comp=Z,78nm,21.8s,baz=253,slow=30						
INK	Inuvik	62.93	348	P	P	10 02 27.7	-0.4
	comp=Z,2.1nm,0.9s,baz=225,slow=4.8,SNR=6.1						
	comp=Z,2.1nm,0.9s						
INK	Inuvik	62.93	348	P	P	10 02 28.6	+0.5
H27K	Steamboat Moun	63.23	344	P	P	10 02 31.0	+0.8
L22K	Petersville	63.78	338	P	P	10 02 35.4	+1.5
ILAR	Eielson Array	63.82	341	P	P	10 02 33.9	-0.2
	comp=Z,1.5nm,0.8s,baz=149,slow=4.3,SNR=26						
	comp=Z,1.5nm,0.8s						
ILAR	Eielson Array	63.82	341	P	P	10 02 34.0	0.0
F28M	Old Crow	63.82	345	P	P	10 02 34.6	+0.5
F28M				IAmb	IAmb	10 02 50.1	
	comp=Z,2.9nm,1.0s						
PRP	Porcupine Dome	63.89	342	P	P	10 02 35.2	+0.5
F19K	Shaleruckik Mo	68.66	340	P	P	10 03 05.5	+0.4
SHEM	Shemya Is, Ala	78.65	322	LR	LR	10 32 56.3	
	comp=Z,50nm,21.5s,baz=292,slow=31						
EKA	Eskdalemuir Ar	88.92	34	LR	LR	10 44 46.5	
	comp=Z,40nm,18.2s,baz=5.0,slow=36						
ESDC	Sonseca Array	91.92	50	LR	LR	10 37 56.7	
	comp=Z,47nm,21.6s,baz=125,slow=30						

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*TIR **04** 10:06:11.4, 41°.51N×19°.53E, h11km, Ml2.3/3*

*BEO **04** 10:06:13.7±0.7, 41°.52N×19°.57E, h11km±5km, ML2.3/6*

*PDG **04** 10:06:14.2±0.3, 41°.61N×19°.55E, h17km, ML2.5/12, Error ellipse: s-maj=1.7km s-min=1.7km az=0.0*

ISC 04 10:06:11.4±1.2**, 41°.48N**±0°.03×**19°.55E**±0°.03**, h8km**±10km**, n31, σ0s.76**/54**, 4C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.27	120	Pg	Pb	10 06 18.0	-0.5
TIR				AML	AML	10 06 22.2	
	1.7nm,0.3s						
TIR				Sg	Sb	10 06 22.3	-1.0
ULC	Ulcinj	0.53	334	⇓*i*Pg	Pb	10 06 22.4	-0.7
ULC				*i* Sg	Sg	10 06 29.1	+0.3
SDA	Shkodra	0.57	356	Pg	Pg	10 06 22.5	0.0
SDA				Sg	Sg	10 06 30.1	+0.1
SDA				AML	AML	10 06 33.9	
	0.4nm,0.2s						
PHP	Peshkopia	0.70	73	Pg	Pg	10 06 24.6	-0.3
PHP				Sg	Sb	10 06 35.2	-0.4
PHP				AML	AML	10 06 39.2	
	0.7nm,0.4s						
DRME	Dracevica, Mon	0.76	339	⇑*i*Pg	Pg	10 06 26.1	+0.1
DRME				*e*Sg	Sb	10 06 36.8	-0.5
BUM	Brajici-Budva	0.95	329	⇑*i*Pg	Pb	10 06 30.3	0.0
BUM				*i* Sg	Sb	10 06 43.6	+0.5
PDG	Podgorica	0.97	347	Pg	Pg	10 06 29.8	-0.4
PDG				Sg	Sb	10 06 43.4	-0.1
PDG	Podgorica	0.97	347	⇓*i*Pg	Pb	10 06 30.5	0.0
PDG				*i* Sg	Sb	10 06 44.4	+0.9
PDG	Podgorica	0.97	347	*e*Pg	Pb	10 06 30.5	0.0
PDG				*e*Sg	Sn	10 06 45.7	+0.4
PVY	Plav	1.15	15	⇓*i*Pg	Pg	10 06 32.2	-1.4
PVY				*i* Sg	Sn	10 06 49.9	-0.1
CEME	Cevo	1.16	336	⇑*i*Pg	Pb	10 06 33.8	0.0
CEME				*e*Sg	Sb	10 06 49.0	-0.1
HCY	Herceg Novi	1.25	321	⇓*i*Pg	Pg	10 06 35.6	+0.2
HCY				*i* Sg	Sn	10 06 53.9	+1.8
NKME	Niksic	1.36	341	⇓*i*Pg	Pb	10 06 36.9	-0.2
NKME				*e*Sg	Sn	10 06 56.2	+1.2
KOME	Kolasin	1.37	359	*e*Pg	Pg	10 06 37.5	-0.2
KOME				*e*Sg	Sn	10 06 57.0	+1.8
IVA	Berane	1.41	10	⇓*i*Pg	Pn	10 06 37.5	0.0
IVA				*i* Sg	Sg	10 06 57.4	+0.6
TREB	Trebinje	1.52	324	*e*Pg	Pb	10 06 40.1	+0.2
TREB				*e*Sg	Sg	10 07 01.8	+1.4
NEST	Nestorio	1.56	133	P	Pg	10 06 41.4	+0.1
DBRK	Dubrovnik	1.58	319	*i* Pn	Pb	10 06 41.0	+0.1
DBRK				Sg	Sb	10 07 00.8	-0.2
BRY	Bratogost	1.60	332	⇑*i*Pg	Pn	10 06 40.6	+0.4
BRY				*i* Sg	Sg	10 07 02.5	-0.6
SJES	Sjenica	1.81	10	*e*Pg	Pg	10 06 45.7	-0.3
SJES				*e*Sg	Sg	10 07 10.2	+0.7
PLE	Pljevlja	1.85	356	⇓*i*Pn	Pb	10 06 44.6	-1.0
PLE				*i* Sn	Sg	10 07 11.0	+0.1
STON	Ston	1.96	316	*e*Pn	Pb	10 06 46.9	-0.3
STON				Sn	Sn	10 07 08.6	-0.9
STON	Ston	1.96	316	*e*Pn	Pb	10 06 46.0	-1.3
IGT	Igoumenitsa	2.04	163	*e*Pn	Pb	10 06 49.2	+0.5

SELS	**Selova**	**2.09**	**33**	*e*Pn	**Pn**	**10 06 47.3**	**+0.6**
IVAS	**Ivanjica**	**2.14**	**12**	*e*Pn	**Pn**	**10 06 46.9**	**-0.6**
BARS	**Barje**	**2.15**	**51**	*e*Pn	**Pb**	**10 06 50.8**	**+0.3**
LSTV	**Lastovo**	**2.36**	**304**	*i* Pn	**Pn**	**10 06 49.9**	**-0.5**
LSTV				Sn	**Sn**	**10 07 18.5**	**-1.1**
BBLS	**Lazi&#263i**	**2.38**	**357**	*e*Pn	**Pb**	**10 06 53.6**	**-1.0**
GRUS	**Gruza**	**2.55**	**19**	*e*Pn	**Pn**	**10 06 54.2**	**+1.1**
RICI	**Ricice**	**2.69**	**319**	*i* Pn	**Pn**	**10 06 55.2**	**+0.2**
RICI				Sn	**Sn**	**10 07 25.9**	**-1.8**

*AEIC **04** 10:16:02.2±0.7, 52°.3N±0°.3×175°.4W±0°.2, h238km±6km, Error ellipse: s-maj=41.9km s-min=9.7km az=167.0*

NEIC 04 10:16:01.9±0.6**, 52°.4N**±0°.3×**175°.4W**±0°.2**, h233**km±9km**, mb3.5**/7**, ML3.3**/10**, ML2.9**(AEIC)**, Error ellipse: s-maj=48.3km s-min=6.3km az=164.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.55**	**231**		Pn	10 16 33.1	+0.1
GSTR				IAML		10 17 44.0	
	comp=E,254nm,1.6s						
GSIG	**Igitkin Island**	**0.57**	**217**		Pn	10 16 32.9	-0.2
GSIG					S	10 16 56.6	-0.9
GSMY	**Great Sitkin M**	**0.58**	**227**		Pn	10 16 33.0	-0.1
GSMY					S	10 16 57.2	-0.3
GSTD	**Great Sitkin T**	**0.61**	**231**		Pn	10 16 33.0	-0.3
GSTD					S	10 16 57.4	-0.4
GSCK	**Great Sitkin C**	**0.65**	**229**		Pn	10 16 33.3	-0.1
GSCK					S	10 16 58.0	0.0
KOWE	**Korovin West**	**0.69**	**96**		Pn	10 16 33.5	-0.1
KOKL	**Mount Kliuchef**	**0.73**	**99**		Pn	10 16 33.7	-0.1
ATKA	**Atka Island**	**0.76**	**108**		Pn	10 16 33.4	-0.4
ATKA					S	10 16 58.0	-0.7
ATKA	**Atka Island**	**0.76**	**108**	IAML		10 17 21.2	
	comp=N,166nm,4.7s						
KOFP	**Korovin Flat P**	**0.80**	**102**		Pn	10 16 34.2	+0.1
KOSE	**Korovin Southe**	**0.81**	**96**		Pn	10 16 34.3	+0.2
ETKA	**Kagalaska Isla**	**0.86**	**228**		Pn	10 16 34.2	-0.1
ETKA					S	10 16 58.9	-0.8
ADAG	**Mount Adagdak**	**0.89**	**239**		Pn	10 16 34.5	+0.1
ADK	**Adak**	**0.98**	**236**		Pn	10 16 34.9	-0.1
ADK				IAML		10 17 50.2	
	comp=N,155nm,4.7s						
ADK	**Adak**	**0.98**	**236**		S	10 17 00.3	-0.5
KIRH	**Kanaga Island**	**1.19**	**244**		Pn	10 16 36.4	+0.1
KIRH					S	10 17 02.8	-0.4
KIWB	**Kanaga Island**	**1.25**	**242**		Pn	10 16 36.8	+0.1
KIWB				IAML		10 17 35.6	
	comp=E,170nm,3.4s						
KIWB				IAML		10 18 06.7	
	comp=N,147nm,4.4s						
KIMD	**Kanaga Island**	**1.34**	**240**		Pn	10 16 37.1	-0.2
KIMD					S	10 17 04.2	-0.8
TAFL	**Tanaga Flats**	**1.70**	**247**		Pn	10 16 40.5	+0.3
TAFL					S	10 17 09.3	-0.9
GAKI	**Gareloi-Kavalg**	**2.31**	**249**		Pn	10 16 45.9	+0.1
AMKA	**Amchitka**	**3.47**	**254**	Pn	Pn	10 16 58.6	+0.1
AMKA				IAML		10 19 45.3	
	comp=N,39nm,1.0s						
J17K	**VABM Dome**	**13.93**	**32**		P	10 19 11.0	+0.6
E19K	**Redstone River**	**17.46**	**24**	P	P	10 19 49.5	+0.2
D19K	**Kuna River**	**18.09**	**21**	P	P	10 19 55.6	-0.5
D19K				IAmb	IAmb	10 20 12.2	
	comp=Z,1.0nm,0.9s						
DHY	**Denali Highway**	**18.17**	**43**	P	P	10 19 56.9	-0.3
I23K	**Minto, Yukon-K**	**18.35**	**36**	P	P	10 19 58.9	+0.1
I23K				IAmb	IAmb	10 20 10.4	
	comp=Z,2.6nm,1.1s						
D22K	**Ayikyak River**	**19.66**	**25**	P	P	10 20 12.8	-0.2
D22K				IAmb	IAmb	10 20 15.7	
	comp=Z,3.1nm,1.1s						
E24K	**Your Creek**	**20.30**	**29**	P	P	10 20 19.4	-0.4
E24K				IAmb	IAmb	10 20 46.7	
	comp=Z,1.3nm,1.1s						
E25K	**Arctic Village**	**21.22**	**31**	P	P	10 20 28.6	-0.8
K29M	**Barlow Dome**	**22.62**	**45**	P	P	10 20 43.1	+0.5
K29M				IAmb	IAmb	10 20 45.4	
	comp=Z,2.4nm,1.1s						

*NEIC **04** 10:16:57.2±1.4, 17°.87N±0°.02×66°.857W±0°.009, h10km±1km, ML2.7/35, Md2.9/7(RSPR), Error ellipse: s-maj=3.3km s-min=2.2km az=174.0*

*SDD **04** 10:17:00.1±2.2, 17°.98N×67°.02W, h23km±12km, MD3.2, ML2.4, MW2.8, Presumed earthquake*

RSPR 04 10:16:57.5, 17°.89N×66°.87W, h16km, MD2.9/7, 15C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**353**		Pg	10 17 00.7	0.0
GBPR					Sg	10 17 03.5	+0.6
GBPR	**Guanica, Bosqu**	**0.09**	**353**	⇓*i*P	Pg	10 17 00.7	0.0
GBPR				*e*S	Sg	10 17 03.5	+0.6
MLPR	**Magueyes Islan**	**0.18**	**295**	Pg	Pg	10 17 01.9	-0.1
MLPR				IAML		10 17 05.9	
	5μm,0.3s						
MLPR				IAML		10 17 06.2	
	1μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.26**	**297**		Pg	10 17 02.9	-0.2
CRPR					Sg	10 17 07.1	+0.1
CRPR	**Cabo Rojo, PR**	**0.26**	**297**	IAML		10 17 07.3	
	1μm,0.4s						
CRPR				IAML		10 17 07.4	
	1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.26**	**297**	⇑*e*Pg	Pg	10 17 02.9	-0.2
CRPR				⇑*e*Sg	Sg	10 17 07.2	+0.3
CRPR				IAML		10 17 07.4	
	comp=N,1μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.26**	**297**	⇑*i*P	Pg	10 17 02.9	-0.2
CRPR				*e*S	Sg	10 17 07.1	+0.1
OBIP	**Obispado Ponce**	**0.29**	**59**		Pg	10 17 03.2	-0.5
OBIP				IAML		10 17 08.3	
	comp=N,103nm,0.2s						
OBIP	**Obispado Ponce**	**0.29**	**59**		Sg	10 17 07.8	-0.1
OBIP	**Obispado Ponce**	**0.29**	**59**	⇑*e*P	Pg	10 17 03.1	-0.6
OBIP				*e*S	Sg	10 17 07.8	-0.1
CELP	**Cerrillos**	**0.33**	**56**		Pg	10 17 04.0	-0.4
CELP				IAML		10 17 09.4	
	comp=N,591nm,0.3s						
CELP				IAML		10 17 09.7	
	comp=N,574nm,0.2s						
LSP	**Las Mesas**	**0.35**	**324**		Pg	10 17 04.5	-0.3
LSP					Sg	10 17 09.7	-0.1
LSP	**Las Mesas**	**0.35**	**324**	⇓*i*P	Pg	10 17 04.5	-0.3
LSP				*e*S	Sg	10 17 09.7	-0.1
UUPR	**Utuado, UPR, P**	**0.39**	**21**		Pg	10 17 04.7	-0.7
UUPR				IAML		10 17 10.8	
	comp=N,5μm,0.4s						
UUPR				IAML		10 17 13.1	
	comp=N,3μm,0.3s						
PRSN	**Puerto Rico Se**	**0.42**	**321**		Pg	10 17 05.5	-0.5
PRSN					Sg	10 17 11.5	-0.2
PRSN	**Puerto Rico Se**	**0.42**	**321**	IAML		10 17 13.0	
	comp=N,1μm,0.3s						
PRSN				IAML		10 17 15.6	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.42**	**321**	⇑*e*Pg	Pg	10 17 05.5	-0.4
PRSN				⇑*e*Sg	Sg	10 17 11.8	+0.1
PRSN				IAML		10 17 15.5	
	comp=N,708nm,0.2s						
PRSN	**Puerto Rico Se**	**0.42**	**321**	⇑*e*P	Pg	10 17 05.5	-0.5
PRSN				*e*S	Sg	10 17 11.5	-0.2
AGPR	**Aguadilla, PR**	**0.62**	**338**	IAML		10 17 17.7	
	comp=N,295nm,0.5s						
AGPR				IAML		10 17 20.9	
	comp=N,268nm,0.5s						
AGPR	**Aguadilla, PR**	**0.62**	**338**	⇑*e*Pg	Pg	10 17 08.6	-1.1
AGPR				⇑*e*Sg	Sg	10 17 17.0	-1.0
AGPR				IAML		10 17 17.6	
	comp=N,266nm,0.2s						
AGPR	**Aguadilla, PR**	**0.62**	**338**	⇑*e*P	Pg	10 17 08.7	-1.0
AGPR				*e*S	Sg	10 17 17.5	-0.4
ECPR	**Experimental S**	**0.64**	**48**	IAML		10 17 19.4	
	comp=N,363nm,0.2s						
ECPR				IAML		10 17 23.0	
	comp=N,362nm,0.2s						
ECPR	**Experimental S**	**0.64**	**48**	⇓*e*P	Pg	10 17 08.8	-1.3
ECPR				*e*S	Sg	10 17 17.9	-0.7
SJG	**San Juan**	**0.72**	**72**		Pg	10 17 10.2	-1.3
SJG	**San Juan**	**0.72**	**72**	IAML		10 17 22.7	
	comp=N,416nm,0.3s						
SJG				IAML		10 17 23.4	
	comp=N,397nm,0.3s						
SJG	**San Juan**	**0.72**	**72**	⇓*i*P	Pg	10 17 10.2	-1.3
SJG				*e*S	Sb	10 17 21.2	-0.1
IDE	**Isla Desecheo**	**0.76**	**311**		Pg	10 17 11.2	-1.1
IDE					Sg	10 17 21.6	-0.8
IDE	**Isla Desecheo**	**0.76**	**311**	⇑*e*P	Pg	10 17 11.2	-1.1
IDE				*e*S	Sg	10 17 21.6	-0.8
PDPR	**Patillas Dam,**	**0.81**	**81**	Pg	Pb	10 17 12.3	-0.9
PDPR				IAML		10 17 25.8	
	comp=N,320nm,0.5s						
PDPR				IAML		10 17 26.4	
	comp=N,124nm,0.3s						
GCPR	**Guaynabo City**	**0.85**	**61**		Pb	10 17 12.2	-1.7
GCPR	**Guaynabo City**	**0.85**	**61**	IAML		10 17 26.9	
	comp=E,62nm,0.5s						
GCPR				IAML		10 17 27.1	
	comp=N,109nm,0.5s						
GCPR	**Guaynabo City**	**0.85**	**61**	⇑*e*P	Pb	10 17 12.2	-1.7
GCPR				*e*S	Sb	10 17 23.3	-1.9
HUMP	**Col San Antoni**	**1.00**	**75**		Pb	10 17 14.9	-1.6
HUMP					Sb	10 17 28.6	-0.8
HUMP	**Col San Antoni**	**1.00**	**75**	IAML		10 17 30.6	
	comp=N,338nm,0.3s						
HUMP				IAML		10 17 31.8	
	comp=N,147nm,0.2s						
HUMP	**Col San Antoni**	**1.00**	**75**	⇑*e*P	Pb	10 17 14.9	-1.6
HUMP				*e*S	Sb	10 17 28.6	-0.8
CUPR	**Culebra, Puert**	**1.56**	**74**		Pn	10 17 24.9	+0.3
MIDR	**Miches**	**2.34**	**298**	⇑*e*Pg	Pn	10 17 36.7	+1.4
MIDR				⇑*e*Sg	Sn	10 18 02.2	-1.5
MIDR				IAML		10 18 21.2	
	comp=N,22nm,1.9s						
HATOM	**Hato Mayor del**	**2.55**	**291**	⇓*e*Pg	Pb	10 17 41.4	-1.5
HATOM				⇑*e*Sg	Sn	10 18 09.4	+0.4
HATOM				IAML		10 18 28.4	
	comp=N,19nm,2.6s						

*KRNET **04** 10:20:13.7±0.1, 41°.00N×69°.40E, mb2.8*

ISC 04 10:20:14.9±2.0**, 40°.99N**±0°.07×**69°.5E**±0°.1**, h10**km**, n5,** σ**0s.42**/9**, 9C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**1.36**	**66**	⇑*e*P	**Pn**	**10 20 39.5**	**-0.7**
TRKS				⇑*e*S	**Sb**	**10 20 58.3**	**+0.1**
BTK	**Batken**	**1.38**	**132**	⇑*e*P	**Pn**	**10 20 39.9**	**-0.4**
BTK				⇑*e*S	**Sn**	**10 20 58.8**	**+0.1**
GAR	**Garm**	**2.09**	**162**	⇑*e*P	**Pn**	**10 20 49.8**	**-0.3**
GAR				⇑*e*S	**Sn**	**10 21 16.1**	**-0.1**
KK31	**Karatay Array**	**2.25**	**20**	⇑Pg	**Pg**	**10 20 58.5**	**+0.4**
	0.3nm,0.2s,baz=189,slow=16,SNR=6.5						
KK31				⇓Lg	Lg	10 21 32.1	
	1.7nm,0.2s,baz=195,slow=30,SNR=22						
DRK	**Karamyk**	**2.33**	**130**	⇑*e*P	**Pn**	**10 20 53.6**	**0.0**
DRK				⇑*e*S	**Sn**	**10 21 22.7**	**+0.3**

*JSN **04** 10:26:57.5±0.6, 18°.68N×76°.47W, h17km±2km, MD3.0, Presumed earthquake*

*SSNC **04** 10:26:58.0±0.5, 18°.81N×76°.55W, h19km±6km, MD3.0, ML1.8, Presumed earthquake*

ISC 04 10:26:54.2±1.3**, 18°.84N**±0°.04×**76°.53W**±0°.06**, h8**km±13km**, n11,** σ**0s.97**/19**, 1D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STH	**Stony Hill**	**0.81**	**199**	⇓*i*P	**Pg**	**10 27 09.8**	**0.0**
HOJ	**Hope**	**0.86**	**194**	*i* P	**Pg**	**10 27 10.8**	**0.0**
CHIV	**Chivirico**	**1.13**	**5**	*e*P	**Pg**	**10 27 17.0**	**+1.1**
CHIV				*e*S	**Sg**	**10 27 30.9**	**+0.2**
CHIV				IAML		10 27 33.4	
	comp=E,7.4nm,0.1s						
CHIV				IAML		10 27 33.6	
	comp=N,9.1nm,0.1s						
MTDJ	**Mount Denham**	**1.14**	**237**	*e*P	**Pg**	**10 27 15.9**	**-0.1**
MTDJ				*e*S	**Sg**	**10 27 29.6**	**-1.2**
MTDJ				IAML		10 27 31.8	
	comp=N,158nm,0.2s						
MTDJ				IAML		10 27 32.1	
	comp=N,149nm,0.3s						
MTDJ	**Mount Denham**	**1.14**	**237**	*i* P	**Pg**	**10 27 16.9**	**+0.9**
MTDJ				*i* S	**Sg**	**10 27 31.2**	**+0.4**
LMGC	**Las Mercedes**	**1.29**	**340**	*e*P	**Pg**	**10 27 18.8**	**-0.3**
LMGC				*e*S	**Sg**	**10 27 34.5**	**-1.4**
LMGC				IAML		10 27 36.0	
	comp=E,27nm,0.1s						
LMGC				IAML		10 27 36.9	
	comp=N,34nm,0.1s						
MARVS	**Santiago de Cu**	**1.29**	**27**	*e*P	**Pg**	**10 27 19.8**	**+0.7**
MARVS				*e*S	**Sg**	**10 27 35.0**	**-0.9**
MARVS				IAML		10 27 37.4	
	comp=N,7.0nm,0.1s						
MARVS				IAML		10 27 37.7	
	comp=E,6.2nm,0.1s						
RCC	**Rio Carpintero**	**1.39**	**34**	*e*P	**Pn**	**10 27 20.6**	**+0.8**
RCC				*e*S	**Sg**	**10 27 37.3**	**-1.6**
RCC				IAML		10 27 40.0	
	comp=E,1.6nm,0.1s						
RCC				IAML		10 27 40.5	
	comp=N,2.9nm,0.1s						
GTBY	**Guantanamo Bay**	**1.72**	**51**	*e*P	**Pn**	**10 27 25.0**	**+0.6**
PINC	**Pinares de May**	**1.78**	**23**	*e*P	**Pn**	**10 27 26.0**	**+0.8**
PINC				*e*S	**Sn**	**10 27 47.1**	**-0.8**
PINC				IAML		10 27 49.9	
	comp=E,18nm,0.1s						
PINC				IAML		10 27 50.5	
	comp=N,20nm,0.1s						
QMBU	**Quimbuelo**	**2.11**	**50**	*e*P	**Pn**	**10 27 30.7**	**+1.0**
QMBU				*e*S	**Sn**	**10 27 54.9**	**-1.2**

*IDC **04** 10:27:39.0±1.2, 15°.63N×119°.32E, h0km, mb3.7/4, mbtmp3.6/5, ML4.0/1, MS3.2/2, Error ellipse: s-maj=60.0km s-min=20.0km az=59.0*

*NEIC **04** 10:27:41.3±0.6, 15°.59N±0°.05×119°.3E±0°.2, h10km±1km, mb4.2/18, Error ellipse: s-maj=25.6km s-min=5.0km az=103.0*

ISC 04 10:27:43.6±0.6**, 15°.59N**±0°.08×**119°.3E**±0°.1**, h31**km**, n33,** σ**0s.70**/33**, mb4.2**/13**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**7.38**	**13**	Pn	**Pn**	**10 29 28.0**	**-1.3**
TPUB	**Ta-pu**	**7.77**	**9**	Pn	**Pn**	**10 29 34.4**	**-0.2**
KNMB	**Chin-men Tao**	**8.88**	**354**	Pn	**Pn**	**10 29 49.2**	**-0.6**
QIZ	**Qiongzhong**	**9.68**	**292**	Pn	**Pn**	**10 30 01.9**	**+1.1**
KKM	**Kota Kinabalu**	**9.96**	**198**	Pn	**Pn**	**10 30 03.9**	**-0.9**
JSU	**Suzuyama**	**18.83**	**31**	P	**P**	**10 32 00.6**	**-0.3**
JSU				IAmb	IAmb	10 32 33.8	
	comp=Z,30nm,1.4s						
CMAR	**Chiang Mai Arr**	**19.70**	**281**	P	**P**	**10 32 09.4**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=96,slow=7.8,SNR=7.8						
	comp=Z,0.4nm,0.3s						
JCJ	**Chichijima**	**24.13**	**58**	LR	LR	10 40 19.7	
	comp=Z,26nm,21.8s,baz=54,slow=32						
KNRA	**Kununurra**	**32.43**	**163**	P	**P**	**10 34 11.4**	**+0.3**
SONM	**Songino Array**	**33.89**	**344**	P	**P**	**10 34 22.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=159,slow=8.9,SNR=3.8						
	comp=Z,0.3nm,0.3s						
COEN	**Coen**	**37.65**	**140**	P	**P**	**10 34 56.2**	**+0.1**
COEN				IAmb	IAmb	10 34 57.9	
	comp=Z,5.3nm,0.9s						
WB0	**Warramunga Arr**	**38.13**	**157**	P	**P**	**10 34 59.8**	**-0.3**
WB0				IAmb	IAmb	10 35 15.0	
	comp=Z,4.0nm,1.1s						
WRA	**Warramunga Arr**	**38.27**	**157**	P	**P**	**10 35 01.1**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=337,slow=8.3,SNR=11						
	comp=Z,1.4nm,0.8s						
WRA	**Warramunga Arr**	**38.27**	**157**	P	**P**	**10 35 00.9**	**-0.3**
AS31	**Alice Springs**	**41.53**	**160**	P	**P**	**10 35 28.3**	**-0.1**
ASAR	**Alice Springs**	**41.53**	**160**	P	**P**	**10 35 28.7**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=340,slow=7.0,SNR=28						
ASAR				PcP	**PcP**	**10 37 26.7**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=354,slow=2.0,SNR=4.2						
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**41.53**	**160**	P	**P**	**10 35 28.3**	**-0.1**
ASAR					**PcP**	**10 37 26.6**	**+1.0**
MK31	**Makanchi Array**	**43.73**	**323**	P	**P**	**10 35 46.5**	**+0.4**
MKAR	**Makanchi Array**	**43.73**	**323**	P	**P**	**10 35 46.0**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=134,slow=10,SNR=4.6						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**43.73**	**323**	P	**P**	**10 35 45.7**	**-0.4**
CTA	**Charters Tower**	**44.24**	**142**	LR	LR	10 54 58.9	
	comp=Z,65nm,18.8s,baz=69,slow=37						
KURK	**Kurchatov**	**47.89**	**326**	P	**P**	**10 36 18.8**	**+0.1**
KURK				IAmb	IAmb	10 36 24.5	
	comp=Z,1.8nm,0.7s						
AB31	**Akbulak array**	**58.45**	**319**	P	**P**	**10 37 36.9**	**+0.4**
AB31				IAmb	IAmb	10 38 14.3	
	comp=Z,4.3nm,1.4s						
ABKAR	**Akbulak array**	**58.45**	**319**	P	**P**	**10 37 36.7**	**+0.2**
D19K	**Kuna River**	**72.89**	**22**	P	**P**	**10 39 10.4**	**+1.0**
F20K	**Avaraart Lake**	**73.81**	**24**	P	**P**	**10 39 15.8**	**+1.0**
O18K	**Koktuh Hills**	**74.40**	**31**	P	**P**	**10 39 19.1**	**+0.7**
E24K	**Your Creek**	**76.49**	**23**	P	**P**	**10 39 31.3**	**+1.0**
E24K				IAmb	IAmb	10 40 12.2	
	comp=Z,4.3nm,1.5s						
SCM	**Sheep Creek Mo**	**77.98**	**29**	P	**P**	**10 39 39.5**	**+0.7**
F28M	**Old Crow**	**79.78**	**22**	P	**P**	**10 39 49.4**	**+0.9**
F28M				IAmb	IAmb	10 39 50.3	
	comp=Z,0.7nm,0.9s						
G29M	**Pine Creek**	**80.67**	**23**	P	**P**	**10 39 53.8**	**+0.5**
G29M				IAmb	IAmb	10 40 33.3	
	comp=Z,4.4nm,1.4s						
BURAR	**Bucovina Array**	**81.38**	**317**	P	**P**	**10 39 57.1**	**-0.4**
BURAR				IAmb	IAmb	10 40 23.1	
	comp=Z,1.7nm,1.2s						
BUR08	**Bucovina Ar. S**	**81.38**	**317**	P	**P**	**10 39 57.6**	**0.0**
BUR08				IAmb	IAmb	10 40 01.4	
	comp=Z,3.1nm,1.4s						

*VAO **04** 10:27:40.4±1.6, 5°.59N×78°.84W, h10km, mb4.5, Presumed earthquake*

*RSNC **04** 10:27:57.8±0.0, 4°N±1°×7°8W±°, h26km±4km, M3.6, mB4.6, mb4.6, ML3.3, Mw(mB)3.8*

*IDC **04** 10:28:04.1±3.7, 4°.24N×77°.54W, h82km±35km, mb3.2/8, mbtmp3.6/10, MS3.2/4, Error ellipse: s-maj=31.7km s-min=16.5km az=67.0*

ISC 04 10:27:57.4±1.4**, 4°.26N**±0°.03×**77°.84W**±0°.05**, h25**km±11km**, n68,** σ**1s.90**/80**, mb3.5**/7**, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIZC	**Pizarro, Choco**	**0.84**	**34**	P	**Pb**	**10 28 11.7**	**-1.8**
PIZC				S	**Sb**	**10 28 23.7**	**-0.7**
GR1C	**Gorgona, Isla**	**1.29**	**195**	P	**Pb**	**10 28 23.1**	**+2.0**
GR1C				S	**Sn**	**10 28 36.9**	**+0.4**
YOTC	**Yotoco, Valle**	**1.52**	**101**	P	**Pn**	**10 28 21.7**	**-1.4**
YOTC				S	**Sn**	**10 28 40.0**	**-2.1**
JAMC	**Jamundi, Valle**	**1.56**	**132**	P	**Pn**	**10 28 22.9**	**-0.9**
JAMC				S	**Sn**	**10 28 42.6**	**-0.8**
SOLC	**Bahia Solano**	**2.00**	**12**	P	**Pb**	**10 28 37.0**	**+3.9**
SOLC				S	**Sn**	**10 28 51.5**	**-2.3**
POPC	**Popayan, Colom**	**2.07**	**146**	P	**Pn**	**10 28 30.5**	**-0.3**
POPC				S	**Sn**	**10 28 52.9**	**-3.0**
BBAC	**Balboa, Cauca**	**2.30**	**165**	P	**Pn**	**10 28 33.7**	**-0.3**
BBAC				S	**Sn**	**10 28 58.9**	**-2.8**
CBOC	**Ciudad Bolivar**	**2.42**	**49**	P	**Pn**	**10 28 33.3**	**-2.2**
CBOC				S	Sn	10 28 53.2	-11
ANIL	**Santa Ana**	**2.44**	**85**	P	**Pn**	**10 28 35.4**	**-0.6**
ANIL				S	**Sn**	**10 29 05.8**	**+0.7**
ORTC	**Ortega, Tolima**	**2.61**	**98**	P	**Pn**	**10 28 38.5**	**+0.4**
ORTC				S	**Sn**	**10 29 10.6**	**+1.6**
CRUC	**La Cruz**	**2.82**	**162**	P	**Pn**	**10 28 42.8**	**+1.5**
CRUC				S	**Sn**	**10 29 13.5**	**-1.2**
PTAC	**Punta Ardita,**	**2.87**	**1**	P	**Pn**	**10 28 40.0**	**-1.6**
PTAC				S	**Sn**	**10 29 10.6**	**-4.7**
PRAC	**Prado**	**3.00**	**100**	P	**Pn**	**10 28 44.4**	**+1.0**
PRAC				S	**Sn**	**10 29 19.1**	**+0.5**
GCUF	**Volcan Galeras**	**3.06**	**171**	P	**Pn**	**10 28 46.6**	**+1.9**
GCUF				S	**Sn**	**10 29 21.5**	**+0.8**
GARC	**Garzon, Huila**	**3.12**	**131**	P	**Pn**	**10 28 46.8**	**+1.5**
GARC				S	**Sn**	**10 29 24.2**	**+2.3**
DBBC	**Dabeiba**	**3.18**	**31**	P	**Pn**	**10 28 47.7**	**+1.7**
CMBC	**Cumbal**	**3.30**	**180**	P	**Pn**	**10 28 48.6**	**+0.6**
FLOC	**Florencia**	**3.44**	**141**	P	**Pn**	**10 28 51.2**	**+1.7**
TULM	**Tulcn-Chalpat**	**3.52**	**179**	P	**Pb**	**10 28 56.6**	**-2.8**
ROSC	**El Rosal**	**3.55**	**81**	P	**Pn**	**10 28 54.2**	**+2.8**
	89nm,0.5s,baz=275,slow=5.2,SNR=27						
ROSC	**El Rosal**	**3.55**	**81**	P	**Pn**	**10 28 53.6**	**+2.2**
URMC	**La Uribe, Meta**	**3.60**	**106**	P	**Pn**	**10 28 52.5**	**+0.8**
URMC				S	**Sn**	**10 29 38.9**	**+5.4**
CVER	**Cruz Verde, Cu**	**3.76**	**86**	P	**Pn**	**10 28 56.1**	**+1.8**
APAC	**Apartado, Choc**	**3.82**	**19**	P	**Pn**	**10 28 57.2**	**+2.4**
CUSE	**Cuicocha Este**	**3.97**	**188**	P	**Pn**	**10 28 58.1**	**+0.9**
SPBC	**San Pablo de B**	**4.00**	**70**	P	**Pn**	**10 28 57.9**	**+0.7**
OTAV	**Otavalo**	**4.04**	**189**	*e*P	**Pn**	**10 29 00.4**	**+2.2**
OTAV	**Otavalo**	**4.04**	**189**	P	**Pn**	**10 28 59.0**	**+0.8**
PTBC	**PUERTO BERRIO,**	**4.06**	**56**	P	**Pn**	**10 28 58.0**	**0.0**
PTBC				S	**Sn**	**10 29 43.4**	**-1.3**
PAC1	**Pacto, Paraso**	**4.08**	**194**	P	**Pn**	**10 28 58.1**	**-0.4**
CHIC	**Chingaza**	**4.11**	**85**	P	**Pn**	**10 29 01.0**	**+1.9**
CASC	**Dorado de Casc**	**4.13**	**173**	P	Pn	10 29 04.3	+5.2
VILC	**Villavicencio,**	**4.14**	**92**	P	**Pn**	**10 29 01.1**	**+1.9**
UREC	**San Jos de Ur**	**4.16**	**33**	P	**Pn**	**10 28 59.7**	**+0.4**
UREC				S	**Sn**	**10 29 43.9**	**-3.3**
MACC	**Macarena, Meta**	**4.50**	**118**	P	**Pn**	**10 29 04.3**	**+0.1**
BRJC	**Barrancabermej**	**4.88**	**56**	P	**Pn**	**10 29 08.6**	**-0.7**
RUSC	**La Rusia**	**5.00**	**71**	P	**Pn**	**10 29 13.2**	**+1.8**
PTLC	**Puerto Leguiza**	**5.08**	**143**	P	Pn	10 29 17.3	+5.3
BARC	**Barichara**	**5.18**	**63**	P	**Pn**	**10 29 13.1**	**-0.5**
BCIP	**Isla Barro Col**	**5.26**	**338**	P	**Pn**	**10 29 17.6**	**+3.1**
PAMC	**Pamplona, Colo**	**5.96**	**59**	P	**Pn**	**10 29 27.8**	**+3.3**
SDV	**Santo Domingo**	**8.50**	**57**	P	**Pn**	**10 30 00.6**	**+1.4**
	9.4nm,0.6s,baz=247,slow=13,SNR=12						
SDV				S	**Sn**	**10 31 34.4**	**-0.2**
	5.5nm,0.5s,baz=24,slow=20,SNR=1.3						
SDV	**Santo Domingo**	**8.50**	**57**	*e*P	Pn	10 29 46.7	-13
JTS	**Las Juntas de**	**9.25**	**311**	LR	LR	10 33 27.0	
	comp=Z,130nm,19.8s,baz=93,slow=34						
ATAH	**Atahualpa**	**11.34**	**183**	LR	LR	10 36 02.4	
	comp=Z,250nm,18.2s,baz=356,slow=42						
BOAV	**Boa Vista**	**17.39**	**96**	*e*P	**Pn**	**10 31 58.6**	**+0.1**
LPAZ	**La Paz**	**22.56**	**155**	P	**P**	**10 32 56.1**	**-0.6**
	1.9nm,0.8s,baz=339,slow=12,SNR=7.3						
	1.9nm,0.8s						
LPAZ	**La Paz**	**22.56**	**155**	*e*P	**P**	**10 32 55.5**	**-1.2**
ITTB	**Itaituba**	**23.69**	**111**	*e*P	**P**	**10 33 04.0**	**-3.5**
VILB	**Vilhena**	**24.48**	**135**	*e*P	**P**	**10 33 15.2**	**+0.4**
NPGB	**Novo Progresso**	**25.09**	**117**	*e*P	**P**	**10 33 19.0**	**-1.5**
PDRB	**Porto dos Gac**	**26.26**	**127**	*e*P	**P**	**10 33 30.2**	**-0.8**
CLDB	**Colider**	**26.60**	**125**	*e*P	**P**	**10 33 32.4**	**-1.7**
SNDB	**Serra Nova Dou**	**30.93**	**122**	*e*P	**P**	**10 34 11.7**	**-1.0**
PP1B	**Ponte de Pedra**	**31.39**	**134**	*e*P	**P**	**10 34 16.1**	**-0.6**
ARAG	**Araguaiana, MT**	**32.52**	**128**	*e*P	**P**	**10 34 25.1**	**-1.5**
TXAR	**Lajitas Array**	**34.94**	**318**	P	**P**	**10 34 49.3**	**+1.7**
	0.1nm,0.7s,baz=128,slow=7.8,SNR=2.0						
TXAR				LR	LR	10 49 50.1	
	comp=Z,13nm,20.9s,baz=14,slow=37						
	0.1nm,0.7s						
BDFB	**Brasilia**	**35.53**	**124**	P	**P**	**10 34 50.3**	**-2.6**
	1.9nm,0.4s,baz=263,slow=3.8,SNR=3.7						
	1.9nm,0.4s						
JANB	**Januaria**	**38.36**	**121**	*e*P	**P**	**10 35 15.1**	**-1.8**
DIAM	**Diamantina, MG**	**40.45**	**125**	*e*P	**P**	**10 35 33.3**	**-1.2**
SJMB	**Sao Joao De Ma**	**42.71**	**123**	*e*P	**P**	**10 35 51.8**	**-1.0**
BSFB	**Barra de Sao F**	**43.05**	**123**	*e*P	**P**	**10 35 54.0**	**-1.5**
PLCA	**Paso Flores**	**45.27**	**172**	P	**P**	**10 36 14.3**	**+1.2**
	0.9nm,0.6s,baz=333,slow=11,SNR=4.4						
	0.9nm,0.6s						
PDAR	**Pinedale Array**	**47.57**	**328**	P	**P**	**10 36 33.5**	**+2.1**
	0.2nm,0.7s,baz=152,slow=5.2,SNR=2.6						
	0.2nm,0.7s						
ULM	**Lac du Bonnet**	**48.29**	**345**	LR	LR	11 00 16.5	
	comp=Z,44nm,18.3s,baz=12,slow=40						
YKA	**Yellowknife Ar**	**64.13**	**342**	P	**P**	**10 38 30.9**	**+1.5**
	0.4nm,1.0s,baz=143,slow=6.2,SNR=4.8						
	0.4nm,1.0s						
ILAR	**Eielson Array**	**77.32**	**336**	P	**P**	**10 39 49.9**	**+0.2**
	0.3nm,0.5s,baz=105,slow=4.5,SNR=8.8						
	0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.86**	**78**	P	**P**	**10 39 57.9**	**-1.3**
	0.2nm,0.6s,baz=270,slow=7.2,SNR=1.6						
	0.2nm,0.6s						

*JMA **04** 10:30:56.6±0.2, 25°N±1°×122°.3E±0°.5, h150km±1km, MV2.7/14, TAIWAN REGION*

*TAP **04** 10:30:56.7, 25°.06N×122°.31E, h147km, ML4.0, D*

ISC 04 10:30:55.7±1.8**, 25°.02N**±0°.06×**122°.30E**±0°.03**, h154**km±9km**, n87,** σ**0s.79**/164**, 8D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.28**	**269**	⇓P	**Pn**	**10 31 17.1**	**+0.4**
SXI1	**Grass Mountain**	**0.40**	**281**	*e*P	**Pn**	**10 31 17.4**	**+0.3**
SXI1				*e*S	**Sn**	**10 31 32.8**	**-0.6**
TIPB	**Shuangxi**	**0.43**	**264**	⇓P	**Pn**	**10 31 17.6**	**+0.4**
TIPB				*e*S	**Sn**	**10 31 32.6**	**-0.9**
NWF	**Wu-fen Shan**	**0.48**	**277**	*e*P	**Pn**	**10 31 17.8**	**+0.3**
NWF				*e*S	**Sn**	**10 31 33.5**	**-0.5**
WFSB	**Wu-fen Shan**	**0.48**	**277**	*e*P	**Pn**	**10 31 17.9**	**+0.5**
WFSB				*e*S	**Sn**	**10 31 33.4**	**-0.5**
TWC	**Suao**	**0.58**	**226**	*e*P	**Pn**	**10 31 18.0**	**+0.1**
TWC				*e*S	**Sn**	**10 31 33.4**	**-1.3**
EOS2	**EOS2**	**0.60**	**186**	*e*P	**Pn**	**10 31 18.8**	**+0.9**
EOS2				*e*S	**Sn**	**10 31 35.3**	**+0.6**
TWE	**Neicheng**	**0.65**	**243**	*e*P	**Pn**	**10 31 18.6**	**+0.4**
TWE				*e*S	**Sn**	**10 31 35.5**	**+0.1**
YM01	**YM01**	**0.68**	**281**	*e*P	**Pn**	**10 31 18.1**	**-0.4**
YM01				*e*S	**Sn**	**10 31 34.9**	**-1.0**
FUSB	**Fushanzhiwuyua**	**0.70**	**249**	*e*P	**Pn**	**10 31 18.8**	**+0.1**
FUSB				*e*S	**Sn**	**10 31 36.2**	**0.0**
EOS3	**EOS3**	**0.73**	**179**	*e*P	**Pn**	**10 31 19.7**	**+1.1**
EOS3				*e*S	**Sn**	**10 31 36.7**	**+0.6**
NWLT	**Wulai**	**0.76**	**252**	*e*P	**Pn**	**10 31 19.1**	**+0.1**
NWLT				*e*S	**Sn**	**10 31 36.2**	**-0.7**
ENTT	**Nioudou**	**0.77**	**241**	*e*P	**Pn**	**10 31 19.6**	**+0.5**
ENTT				*e*S	**Sn**	**10 31 36.8**	**-0.1**
JYNG	**Yonagunijimaku**	**0.81**	**134**	P	**Pn**	**10 31 19.6**	**+0.2**
JYNG				S	**Sn**	**10 31 37.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.85**	**130**	P	**Pn**	**10 31 20.1**	**+0.4**
YOJ				*e*S	**Sn**	**10 31 37.8**	**-0.1**
YOJ	**Yonaguni jima**	**0.85**	**130**	*e*P	**Pn**	**10 31 20.2**	**+0.6**
YOJ				*e*S	**Sn**	**10 31 37.5**	**-0.4**
LATG	**Datong**	**0.85**	**236**	⇓P	**Pn**	**10 31 20.8**	**+0.9**
LATG				*e*S	**Sn**	**10 31 38.6**	**+0.4**
EAHA	**Aohua**	**0.85**	**217**	*e*P	**Pn**	**10 31 20.1**	**+0.4**
EAHA				*e*S	**Sn**	**10 31 38.0**	**0.0**
EOS4	**EOS4**	**0.89**	**179**	*e*P	**Pn**	**10 31 20.0**	**+0.4**
EOS4				*e*S	**Sn**	**10 31 37.5**	**-0.3**
YHNB	**Yeheng**	**0.91**	**248**	⇓P	**Pn**	**10 31 20.5**	**+0.3**
YHNB				*e*S	**Sn**	**10 31 37.6**	**-1.2**
NSK	**Sanguang**	**0.92**	**249**	*e*P	**Pn**	**10 31 20.7**	**+0.4**
NSK				*e*S	**Sn**	**10 31 37.8**	**-1.3**
NCU	**National Centr**	**1.01**	**268**	*e*S	**Sn**	**10 31 38.5**	**-1.7**
NNSB	**Datong**	**1.02**	**235**	⇓P	**Pn**	**10 31 21.8**	**+0.7**
NNSB				*e*S	**Sn**	**10 31 40.2**	**-0.4**
NNS	**Nan Shan**	**1.02**	**236**	*e*P	**Pn**	**10 31 22.0**	**+0.8**
NNS				*e*S	**Sn**	**10 31 40.1**	**-0.5**
KSHI	**Guanxi Townshi**	**1.05**	**257**	*e*P	**Pn**	**10 31 22.2**	**+1.0**
KSHI				*e*S	**Sn**	**10 31 40.6**	**-0.2**
ETL	**Fush Village**	**1.05**	**216**	*e*P	**Pn**	**10 31 21.6**	**+0.2**
ETL				*e*S	**Sn**	**10 31 40.5**	**-0.4**
NACB	**Ninganchiao**	**1.06**	**218**	⇓P	**Pn**	**10 31 21.4**	**+0.1**
NACB				*e*S	**Sn**	**10 31 40.0**	**-0.9**
ETLH	**Xiulin Townshi**	**1.10**	**223**	*e*P	**Pn**	**10 31 22.3**	**+0.5**
ETLH				*e*S	**Sn**	**10 31 41.3**	**-0.5**
TWD	**Chiawan**	**1.13**	**215**	*e*P	**Pn**	**10 31 22.4**	**+0.4**
TWD				*e*S	**Sn**	**10 31 41.0**	**-1.1**
NFF	**Wufeng Townshi**	**1.14**	**251**	*e*P	**Pn**	**10 31 22.5**	**+0.4**
NFF				*e*S	**Sn**	**10 31 41.2**	**-1.1**
HWA	**Hwalien**	**1.21**	**212**	*e*P	**Pn**	**10 31 23.5**	**+0.8**
HWA				*e*S	**Sn**	**10 31 43.7**	**+0.3**
SBCB	**Hsinchu**	**1.22**	**260**	*e*P	**Pn**	**10 31 23.7**	**+0.9**
SBCB				*e*S	**Sn**	**10 31 42.9**	**-0.5**
LIOB	**Emei**	**1.23**	**253**	*e*P	**Pn**	**10 31 23.5**	**+0.7**
LIOB				*e*S	**Sn**	**10 31 43.1**	**-0.5**
HSN	**Hsinchu**	**1.23**	**260**	*e*S	**Sn**	**10 31 42.2**	**-1.4**
FUSS	**Fushou**	**1.23**	**232**	*e*P	**Pn**	**10 31 24.3**	**+1.2**
FUSS				*e*S	**Sn**	**10 31 44.2**	**+0.1**
NSTT	**Nanjuang**	**1.24**	**252**	*e*P	**Pn**	**10 31 23.5**	**+0.5**
NSTT				*e*S	**Sn**	**10 31 43.1**	**-0.8**
TWT	**Tachien**	**1.28**	**234**	*e*P	**Pn**	**10 31 25.0**	**+1.5**
TWT				*e*S	**Sn**	**10 31 45.0**	**+0.2**
ETM	**Tongmen**	**1.28**	**215**	*e*P	**Pn**	**10 31 23.5**	**+0.1**
ETM				*e*S	**Sn**	**10 31 43.1**	**-1.5**
WHF	**Hehuan Shan**	**1.28**	**228**	*e*P	**Pn**	**10 31 24.8**	**+0.9**
WHF				*e*S	**Sn**	**10 31 45.0**	**-0.3**
TDCB	**Techi**	**1.29**	**234**	*e*P	**Pn**	**10 31 25.0**	**+1.4**
TDCB				*e*S	**Sn**	**10 31 44.7**	**-0.3**
TEYL	**Yanliau Villag**	**1.31**	**209**	*e*P	**Pn**	**10 31 24.1**	**+0.5**
TEYL				*e*S	**Sn**	**10 31 44.9**	**-0.1**
SHUL	**Shoufeng**	**1.40**	**209**	*e*P	**Pn**	**10 31 25.1**	**+0.6**
SHUL				*e*S	**Sn**	**10 31 47.0**	**+0.4**
ESL	**Shilin**	**1.44**	**214**	*e*P	**Pn**	**10 31 24.5**	**-0.4**
WHP	**Taichung City**	**1.44**	**240**	*e*P	**Pn**	**10 31 26.0**	**+1.0**
WHP				*e*S	**Sn**	**10 31 47.3**	**-0.1**
NMLH	**Miaoli**	**1.45**	**251**	*e*S	**Sn**	**10 31 46.7**	**-0.9**
IRIF	**Iriomote-Funau**	**1.47**	**117**	P	**Pn**	**10 31 25.4**	**+0.3**
IRIF				S	**Sn**	**10 31 47.4**	**-0.3**
OWD	**Renai**	**1.47**	**224**	*e*P	**Pn**	**10 31 26.4**	**+1.0**
OWD				*e*S	**Sn**	**10 31 48.1**	**-0.1**
TEGC	**Jichi Village**	**1.48**	**208**	*e*P	**Pn**	**10 31 26.1**	**+0.8**
TEGC				*e*S	**Sn**	**10 31 48.2**	**+0.2**
WUSB	**Renai**	**1.48**	**227**	*e*P	**Pn**	**10 31 26.9**	**+1.3**
WUSB				*e*S	**Sn**	**10 31 48.8**	**+0.4**
NSY	**Sanyi**	**1.52**	**247**	*e*P	**Pn**	**10 31 26.8**	**+1.0**
NSY				*e*S	**Sn**	**10 31 49.2**	**+0.3**
WARBT	**Fenglin Townsh**	**1.54**	**213**	⇓*e*P	**Pn**	**10 31 25.5**	**-0.5**
WARBT				*e*S	**Sn**	**10 31 47.4**	**-1.8**
TWQ1	**Liyutan**	**1.54**	**245**	*e*S	**Sn**	**10 31 48.5**	**-0.7**
EGFH	**Guangfu**	**1.56**	**211**	*e*S	**Sn**	**10 31 48.0**	**-1.6**
WCS	**Beigang Elemen**	**1.59**	**233**	*e*P	**Pn**	**10 31 27.5**	**+1.1**
VWDT	**VWDT**	**1.64**	**220**	⇓P	**Pn**	**10 31 28.3**	**+1.3**
VWDT				*e*S	**Sn**	**10 31 51.3**	**+0.2**
HATJ	**Hateruma jima**	**1.67**	**125**	S	**Sn**	**10 31 51.4**	**-0.2**
SMLT	**Sun Moon Lake**	**1.70**	**229**	*e*P	**Pn**	**10 31 28.9**	**+1.1**
SMLT				*e*S	**Sn**	**10 31 53.8**	**+1.3**
HGSD	**Ruisui**	**1.72**	**208**	*e*P	**Pn**	**10 31 28.4**	**+0.5**
HGSD				*e*S	**Sn**	**10 31 52.1**	**-0.4**
TYC	**Yuchr**	**1.72**	**230**	*e*P	**Pn**	**10 31 29.1**	**+1.2**
TYC				*e*S	**Sn**	**10 31 52.9**	**+0.3**
SSLB	**Suanglung**	**1.73**	**225**	*e*P	**Pn**	**10 31 29.1**	**+1.0**
SSLB				*e*S	**Sn**	**10 31 53.2**	**+0.3**
JKRS	**Kuro-shima**	**1.74**	**116**	P	**Pn**	**10 31 28.8**	**+0.8**
JKRS				S	**Sn**	**10 31 52.4**	**-0.5**
EHY	**Hungye**	**1.75**	**211**	*e*S	**Sn**	**10 31 51.6**	**-1.7**
JIJ	**Ishigaki jima**	**1.80**	**111**	P	**Pn**	**10 31 29.1**	**+0.4**
JIJ				S	**Sn**	**10 31 52.6**	**-1.5**
YULB	**Yu-li**	**1.86**	**210**	*e*P	**Pn**	**10 31 28.9**	**-0.6**
YULB				*e*S	**Sn**	**10 31 53.3**	**-2.1**
WNT	**Mingjian**	**1.86**	**233**	*e*P	**Pn**	**10 31 30.5**	**+1.1**
WNT				*e*S	**Sn**	**10 31 56.0**	**+0.6**
WHYT	**Xinyi Township**	**1.86**	**225**	*e*P	**Pn**	**10 31 30.6**	**+1.0**
WHYT				*e*S	**Sn**	**10 31 55.6**	**+0.1**
JISG	**Ishigakijimahi**	**1.88**	**103**	P	**Pn**	**10 31 30.1**	**+0.5**
JISG				S	**Sn**	**10 31 54.7**	**-1.0**
CHKH	**Chenggong**	**2.00**	**205**	*e*P	**Pn**	**10 31 30.9**	**-0.1**
CHKH				*e*S	**Sn**	**10 31 57.3**	**-0.9**
ALS	**Alishan**	**2.03**	**223**	*e*P	**Pn**	**10 31 32.7**	**+1.0**
ALS				*e*S	**Sn**	**10 31 59.8**	**+0.5**
FULB	**Fuli**	**2.03**	**207**	*e*P	**Pn**	**10 31 31.6**	**+0.1**
FULB				*e*S	**Sn**	**10 31 58.8**	**-0.1**
CHN5	**Tsauling**	**2.05**	**227**	*e*P	**Pn**	**10 31 33.0**	**+1.3**
CHN5				*e*S	**Sn**	**10 31 59.8**	**+0.4**
WRL	**Guolierlin Hig**	**2.08**	**238**	*e*P	**Pn**	**10 31 32.2**	**+0.3**
WRL				*e*S	**Sn**	**10 31 58.8**	**-1.0**
CHKT	**Chengkung**	**2.09**	**204**	*e*P	**Pn**	**10 31 32.5**	**+0.3**
CHKT				*e*S	**Sn**	**10 31 58.9**	**-1.3**
ELDTW	**Lidau**	**2.17**	**213**	*e*P	**Pn**	**10 31 33.6**	**+0.5**
ELDTW				*e*S	**Sn**	**10 32 01.1**	**-0.8**
JTJ	**Tarama**	**2.21**	**99**	P	**Pn**	**10 31 34.7**	**+1.2**
JTJ				S	**Sn**	**10 32 02.5**	**-0.1**
CHN4	**Tsaushan**	**2.28**	**224**	*e*P	**Pn**	**10 31 35.4**	**+1.1**
CHN4				*e*S	**Sn**	**10 32 04.2**	**+0.1**
CHY	**Chiayi**	**2.29**	**229**	P	**Pn**	**10 31 35.3**	**+0.9**
CHY				*i* S	**Sn**	**10 32 04.7**	**+0.5**
TPUB	**Ta-pu**	**2.29**	**222**	*e*P	**Pn**	**10 31 35.3**	**+0.8**
TPUB				*e*S	**Sn**	**10 32 04.0**	**-0.5**
STYH	**Taoyuan**	**2.31**	**218**	*e*P	**Pn**	**10 31 35.7**	**+1.1**
STYH				*e*S	**Sn**	**10 32 04.9**	**+0.2**
WTP	**Ta-pu**	**2.34**	**222**	*e*P	**Pn**	**10 31 35.9**	**+0.7**
WTP				*e*S	**Sn**	**10 32 05.0**	**-0.6**
TWK	**Hsinying**	**2.40**	**224**	*e*P	**Pn**	**10 31 36.5**	**+0.6**
TWK				*e*S	**Sn**	**10 32 06.2**	**-0.8**
WSL	**Shuilin Townsh**	**2.41**	**232**	*e*P	**Pn**	**10 31 36.3**	**+0.4**
WSL				*e*S	**Sn**	**10 32 06.8**	**0.0**
CHN1	**Nanshi**	**2.44**	**222**	*e*P	**Pn**	**10 31 37.3**	**+1.0**
CHN1				*e*S	**Sn**	**10 32 07.2**	**-0.4**
TWG	**Pinlang**	**2.46**	**208**	*e*P	**Pn**	**10 31 36.2**	**-0.3**
TWG				*e*S	**Sn**	**10 32 06.6**	**-1.4**
TWGBT	**Beinan**	**2.46**	**207**	*e*P	**Pn**	**10 31 36.7**	**+0.2**
TWGBT				*e*S	**Sn**	**10 32 06.6**	**-1.4**
SGST	**Jiashian**	**2.48**	**220**	*e*P	**Pn**	**10 31 35.7**	**-1.1**
SGST				*e*S	**Sn**	**10 32 07.8**	**-0.8**
PHUB	**P'eng-hu**	**2.91**	**240**	*i* P	**Pn**	**10 31 42.2**	**+0.2**
PHUB				*i* S	**Sn**	**10 32 16.2**	**-1.6**

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*ISK **04** 10:36:46.7, 38°.25N×42°.80E, h5km, ML2.9/10*
*AFAD **04** 10:36:47.3, 38°.27N×42°.86E, h18km±1km, ML2.9*
ISC 04 10:36:47.3±0.9**, 38°.27N**±0°.03×**42°.82E**±0°.03**, h10**km±8km**,**
n19, σ0s.61/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.14**	**65**	Pg	**Pg**	**10 36 50.6**	**-0.1**
AKDM				Sg	**Sg**	**10 36 53.1**	**0.0**
GEVA	**Gevas**	**0.20**	**77**	P	**Pg**	**10 36 51.3**	**-0.3**
GEVA				S	**Sg**	**10 36 55.0**	**+0.5**
GEVA				IAML		10 36 57.0	
	comp=N,3µm,0.5s						
GEVA				IAML		10 36 58.0	
	comp=E,3µm,0.4s						
PERV	**Siirt/Pervari-**	**0.39**	**214**	P	**Pb**	**10 36 55.9**	**-0.5**
PERV				S	**Sb**	**10 37 03.1**	**+0.7**
PERV				IAML		10 37 05.0	
	comp=N,1µm,0.9s						
PERV				IAML		10 37 06.0	
	comp=E,1µm,0.6s						
TVAN	**Van**	**0.53**	**60**	P	**Pg**	**10 36 57.0**	**-0.7**
TVAN				S	**Sg**	**10 37 04.8**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.54**	**352**	P	**Pb**	**10 36 58.5**	**-0.5**
ADCV				S	**Sb**	**10 37 06.4**	**-0.6**
ADCV				IAML		10 37 07.0	
	comp=N,2µm,0.2s						
ADCV				IAML		10 37 07.0	
	comp=E,1µm,0.4s						
VANB	**Van**	**0.56**	**54**	Pg	**Pg**	**10 36 57.9**	**-0.3**
VANB				Sg	**Sg**	**10 37 05.9**	**+0.4**
BLIS	**Bitlis-Merkez**	**0.57**	**285**	P	**Pg**	**10 36 58.7**	**+0.3**
BLIS				S	**Sg**	**10 37 06.1**	**+0.1**
BLIS				IAML		10 37 07.0	
	comp=E,568nm,0.2s						
BLIS				IAML		10 37 10.0	
	comp=N,814nm,0.2s						
GURO	**Guroymak-BITLI**	**0.68**	**295**	Pg	**Pg**	**10 37 00.3**	**-0.2**
GURO				Sg	**Sg**	**10 37 09.6**	**+0.2**
MLAZ	**Malazgirt-MUS**	**0.90**	**347**	Pg	**Pb**	**10 37 04.8**	**-0.2**
MLAZ				Sg	**Sb**	**10 37 17.9**	**+0.8**
VMUR	**Van-Muradiye**	**0.93**	**39**	P	**Pg**	**10 37 04.8**	**-0.4**
VMUR				S	**Sb**	**10 37 18.3**	**+0.2**
VMUR				IAML		10 37 23.0	
	comp=E,172nm,0.5s						
OZAP	**Van, Ozalp-Mer**	**1.00**	**67**	P	**Pn**	**10 37 08.6**	**+1.0**
DORK	**Agr/Tutak/Do**	**1.12**	**359**	P	**Pb**	**10 37 08.6**	**-0.2**
DORK				S	**Sn**	**10 37 24.0**	**-0.7**
DORK				IAML		10 37 24.0	
	comp=N,160nm,0.5s						
DORK				IAML		10 37 27.0	
	comp=E,180nm,0.5s						
CUKT	**Cukurca**	**1.20**	**148**	Pn	**Pg**	**10 37 09.9**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.28**	**265**	Pn	**Pn**	**10 37 11.0**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.56**	**11**	P	**Pg**	**10 37 16.7**	**-0.6**
KOTA				S	**Sg**	**10 37 38.3**	**+0.7**
KARO	**Karliova-Bingo**	**1.73**	**307**	Pn	**Pb**	**10 37 18.4**	**-0.8**
KOPR	**Koprukoy-ERZUR**	**1.88**	**337**	Pn	**Pb**	**10 37 20.7**	**-1.1**
YEDI	**Yedisu-Bingol**	**2.12**	**304**	Pn	**Pn**	**10 37 23.8**	**+0.8**
SENK	**Senkaya-Erzuru**	**2.32**	**351**	Pn	**Pn**	**10 37 26.9**	**+1.2**

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*IDC **04** 10:40:55.8±0.7, 3°.02S×140°.74E, h0km, mb4.3/16, mbtmp4.4/19, ML1.7/1, MS3.6/24, Error ellipse: s-maj=21.9km s-min=7.7km az=90.0*
*DJA **04** 10:40:57.8±0.4, 3°S±2°×14°1E±°, h18km±2km, M5.0/31, mb4.9/31, mB5.6/11, MLv4.9/12, Mw(mB)5.1/11*
*BJI **04** 10:40:59.6, 3°.05S×141°.09E, h49km, mB5.0/8, mb4.7/47*
*NEIC **04** 10:41:01.8±2.4, 2°.91S±0°.09×140°.54E±0°.08, h35km±2km, mb4.7/33, Error ellipse: s-maj=15.5km s-min=13.4km az=197.0*
ISC 04 10:40:57.5±0.4**, 3°.02S**±0°.04×**140°.72E**±0°.05**, h10**km**, n143,**
σ1s.82/128**, mb4.6**/42**, MS3.5**/22**, 1C-2D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.50**	**359**	Pg	**Pg**	**10 41 06.6**	**-0.6**
	2µm,0.3s,baz=157,slow=10.0,SNR=4161						
JAY				Lg	Lg	10 41 12.2	
	9µm,0.3s,baz=120,slow=20,SNR=43						
JAY	**Jayapura**	**0.50**	**359**	P	**Pg**	**10 41 06.6**	**-0.6**
JAY				S	**Sg**	**10 41 11.9**	**-1.9**
GENI	**Genyem**	**0.69**	**307**	P	**Pg**	**10 41 11.4**	**+0.5**
GENI	**Genyem**	**0.69**	**307**	S	**Sg**	**10 41 19.6**	**-0.3**
GENI	**Genyem**	**0.69**	**307**	P	**Pg**	**10 41 10.8**	**-0.1**
WAMI	**Wamena**	**2.18**	**247**	P	**Pn**	**10 41 35.0**	**+1.2**
SRPI	**Serui, Papua**	**4.62**	**284**	P	**Pn**	**10 42 08.5**	**+1.1**
SRPI				S	**Sn**	**10 43 03.7**	**+2.6**
BAKI	**Biak**	**4.95**	**291**	P	**Pn**	**10 42 12.5**	**+0.5**
	0.7nm178nm,0.7s						
BAKI				S	**Sn**	**10 43 11.3**	**+2.0**
	0.7nm178nm,0.7s						
MMPI	**Merauke**	**5.42**	**183**	P	**Pn**	**10 42 22.7**	**+4.2**
MMPI				S	**Sn**	**10 43 27.7**	**+6.7**
RKPI	**Ransiki, Papua**	**6.70**	**283**	P	**Pn**	**10 42 38.7**	**+2.6**
	0.5nm90nm,0.6s						
RKPI				S	**Sn**	**10 43 55.4**	**+2.8**
	0.5nm90nm,0.6s						
MANU	**Manus Island**	**6.71**	**82**	Pn	Pn	10 42 40.9	+4.7
MWPI	**Manokwari, Pap**	**6.99**	**287**	P	**Pn**	**10 42 43.2**	**+3.2**
	0.4nm100nm,1.4s						
FAKI	**Fak Fak**	**8.46**	**270**	Pn	**Pn**	**10 43 00.4**	**+0.2**
FAKI	**Fak Fak**	**8.46**	**270**	P	**Pn**	**10 43 00.8**	**+0.6**
	60nm,0.7s						
PMG	**Port Moresby**	**9.02**	**135**	Pn	**Pn**	**10 43 09.1**	**+1.2**
	0.4nm,0.3s,baz=231,slow=13,SNR=2.4						
PMG				LR	LR	10 47 57.6	
	comp=Z,388nm,20.4s,baz=16,slow=47						
	7.6nm,0.7s						
PMG	**Port Moresby**	**9.02**	**135**		Pn	10 43 12.7	+4.8
PMG	**Port Moresby**	**9.02**	**135**	P	**Pn**	**10 43 07.7**	**-0.1**
	24nm,0.8s						
SIJI	**Sorong**	**9.68**	**283**	Pn	**Pn**	**10 43 17.7**	**+0.7**
	23nm,0.3s,baz=36,slow=22,SNR=16						
SIJI	**Sorong**	**9.68**	**283**	P	**Pn**	**10 43 20.1**	**+3.1**
	24nm,0.6s						
SWI	**Sorong**	**9.69**	**283**	P	**Pn**	**10 43 18.8**	**+1.7**
	41nm,0.4s						
SAUI	**Saumlaki**	**10.59**	**242**	P	**Pn**	**10 43 30.6**	**+1.2**
COEN	**Coen**	**11.14**	**168**		**Pn**	**10 43 39.4**	**+2.4**
COEN	**Coen**	**11.14**	**168**	P	**Pn**	**10 43 39.6**	**+2.6**
	14nm,1.0s						
KRAI	**Karang Ratu**	**12.31**	**268**	P	**Pn**	**10 43 54.0**	**+1.1**
	5µm22nm,0.5s						
DRS	**Darwin Rock St**	**13.49**	**226**	P	**Pn**	**10 44 09.2**	**+0.1**
	64nm,0.5s						
SANI	**Sanana**	**14.74**	**273**	P	**Pn**	**10 44 25.8**	**-0.5**
	39nm,0.7s						
SANI	**Sanana**	**14.74**	**273**	P	**Pn**	**10 44 27.5**	**+1.2**
	38nm,0.7s						
GUMO	**Guam**	**17.00**	**14**	LR	LR	10 50 54.8	
	comp=Z,184nm,18.6s,baz=182,slow=35						
KNRA	**Kununurra**	**17.23**	**222**		**Pn**	**10 44 58.5**	**+0.1**
KNRA				IAmb	IAmb	10 45 02.9	
	comp=Z,38nm,0.5s						
QIS	**Mount Isa**	**17.47**	**183**	P	**Pn**	**10 45 00.5**	**-0.9**
	comp=Z,24nm,0.7s						
SOEI	**Soe**	**17.66**	**247**	P	**Pn**	**10 45 04.1**	**+0.2**
SOEI				IAmb	IAmb	10 45 09.9	
	comp=Z,66nm,0.7s						
SOEI	**Soe**	**17.66**	**247**	P	**Pn**	**10 45 04.5**	**+0.6**
SOEI	**Soe**	**17.66**	**247**	P	**P**	**10 45 05.6**	**+0.8**
	comp=Z,103nm,0.7s						
WR8	**Warramunga Arr**	**17.90**	**199**		**Pn**	**10 45 06.7**	**-0.1**
WR8				IAmb	IAmb	10 45 08.7	
	comp=Z,78nm,1.4s						
WRAB	**Tennant Creek**	**17.93**	**200**	P	**Pn**	**10 45 07.5**	**+0.4**
WRAB				IAmb	IAmb	10 45 10.6	
	comp=Z,43nm,0.7s						
WRAB	**Tennant Creek**	**17.93**	**200**	P	**Pn**	**10 45 06.6**	**-0.5**
	comp=Z,40nm,0.7s						
WRA	**Warramunga Arr**	**17.94**	**200**	P	**Pn**	**10 45 04.8**	**-2.5**
	comp=Z,16nm,0.5s,baz=20,slow=12,SNR=70						
WRA				S	**Sn**	**10 48 17.5**	**-10**
	comp=Z,3.2nm,0.7s,baz=17,slow=21,SNR=2.9						
WRA	**Warramunga Arr**	**17.94**	**200**	P	**Pn**	**10 45 04.9**	**-2.4**
BATI	**Baumata**	**18.38**	**246**	P	**P**	**10 45 12.5**	**-0.2**
	comp=Z,62nm,0.7s,baz=46,slow=2.7,SNR=4.8						
BATI	**Baumata**	**18.38**	**246**	P	**P**	**10 45 12.5**	**-0.2**
	comp=Z,79nm,0.7s						
MRSI	**Marisa**	**19.09**	**280**	P	**P**	**10 45 20.4**	**-0.1**
	comp=Z,20nm,0.6s						
TATA	**Tatamba Isabel**	**19.72**	**106**	P	**Pn**	**10 45 31.2**	**+2.3**
	comp=Z,53nm,1.0s						
EDFI	**Ende, Flores**	**19.76**	**252**	P	**P**	**10 45 28.3**	**+0.4**
TOLI2	**Tolitoli**	**20.34**	**281**	P	**P**	**10 45 31.6**	**-2.7**
TTSI	**Tana Toraja**	**20.87**	**269**	P	**P**	**10 45 40.4**	**+0.5**
SPSI	**Sidrap Palu**	**20.93**	**267**	P	**P**	**10 45 41.2**	**+0.6**
	comp=Z,4µmcomp=Z,19nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.05**	**224**	P	**P**	**10 45 41.4**	**-0.4**
	comp=Z,18nm,0.8s,baz=40,slow=11,SNR=21						
FITZ				S	**S**	**10 49 28.2**	**-8.1**
	comp=Z,4.9nm,0.6s,baz=230,slow=18,SNR=2.2						
FITZ				LR	LR	10 55 06.6	
	comp=Z,229nm,19.0s,baz=48,slow=40						
	comp=Z,18nm,0.8s						
MPSI	**Mapaga**	**21.07**	**279**	P	**P**	**10 45 43.6**	**+1.4**
AS31	**Alice Springs**	**21.56**	**197**		**P**	**10 45 47.3**	**0.0**
AS31				IAmb	IAmb	10 45 57.3	
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**21.56**	**197**	P	**P**	**10 45 46.9**	**-0.4**
	comp=Z,15nm,0.6s,baz=30,slow=9.9,SNR=334						
ASAR				S	**S**	**10 49 42.0**	**-4.5**
	comp=Z,3.0nm,1.0s,baz=18,slow=27,SNR=4.8						
ASAR				LR	LR	10 54 54.2	
	comp=Z,273nm,19.0s,baz=26,slow=39						
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**21.56**	**197**		**P**	**10 45 47.2**	**-0.2**
PLAI	**Plampang**	**23.53**	**255**	P	**P**	**10 46 07.2**	**-0.9**
EIDS	**Eidsvold**	**24.36**	**157**		**P**	**10 46 18.2**	**+2.4**
EIDS				IAmb	IAmb	10 46 27.6	
	comp=Z,17nm,0.8s						
EIDS	**Eidsvold**	**24.36**	**157**	P	**P**	**10 46 18.5**	**+2.6**
	comp=Z,25nm,1.6s						
INKA	**Innaminka**	**24.59**	**180**	P	**P**	**10 46 18.3**	**+0.4**
TGY	**Tagaytay City**	**25.96**	**311**	LR	LR	10 56 33.6	
	comp=Z,114nm,21.8s,baz=134,slow=36						
MBWA	**Marble Bar**	**27.25**	**227**	P	**P**	**10 46 42.3**	**+0.2**
MBWA				IAmb	IAmb	10 46 45.6	
	comp=Z,17nm,0.8s						
MBWA	**Marble Bar**	**27.25**	**227**	P	**P**	**10 46 42.8**	**+0.8**
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**27.42**	**226**	P	**P**	**10 46 43.6**	**0.0**
PSA00				IAmb	IAmb	10 46 47.1	
	comp=Z,7.0nm,0.8s						
PSA00	**Pilbara Seismi**	**27.42**	**226**	P	**P**	**10 46 43.6**	**0.0**
PSA00				IAmb	IAmb	10 47 25.3	
	comp=Z,27nm,1.1s						
PSA00	**Pilbara Seismi**	**27.42**	**226**	P	**P**	**10 46 45.1**	**+1.5**
STKA	**Stephens Creek**	**28.72**	**178**	P	**P**	**10 46 54.1**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=324,slow=14,SNR=1.6						
STKA				LR	LR	10 58 02.0	
	comp=Z,128nm,18.6s,baz=5.7,slow=36						
	comp=Z,1.5nm,0.6s						
STKA	**Stephens Creek**	**28.72**	**178**	P	**P**	**10 46 55.3**	**+0.2**
STKA				IAmb	IAmb	10 47 38.6	
	comp=Z,19nm,0.9s						
BBOO	**Buckleboo**	**29.96**	**188**	P	**P**	**10 47 06.5**	**+0.4**
	comp=Z,14nm,1.9s						
JCJ	**Chichijima**	**29.97**	**3**	LR	LR	10 56 22.8	
	comp=Z,65nm,20.6s,baz=101,slow=31						
FORT	**Forrest**	**30.09**	**202**	P	**P**	**10 47 06.7**	**-0.6**
FORT				IAmb	IAmb	10 47 41.3	
	comp=Z,8.8nm,0.8s						
DZM	**Mont Dzumac**	**31.35**	**129**	LR	LR	10 58 23.4	
	comp=Z,86nm,20.7s,baz=26,slow=33						
MEEK	**Meekatharra**	**31.63**	**220**	P	**P**	**10 47 21.2**	**+0.2**
	comp=Z,10nm,0.7s						
CAN	**Canberra**	**33.05**	**168**	P	**P**	**10 47 34.5**	**+1.2**
LEM	**Lembang**	**33.19**	**262**	LR	LR	11 03 21.8	
	comp=Z,67nm,19.1s,baz=70,slow=40						
H11S3	**WAKE ISLAND Hy**	**33.33**	**49**	T	T	11 22 16.1	
	baz=232,slow=75,SNR=299						
H11S2	**WAKE ISLAND Hy**	**33.34**	**49**	T	T	11 22 12.7	
	baz=232,slow=75,SNR=226						
H11S1	**WAKE ISLAND Hy**	**33.35**	**49**	T	T	11 22 10.7	
	baz=232,slow=75,SNR=173						
H11N1	**WAKE ISLAND Hy**	**34.23**	**48**	T	T	11 23 27.1	
	baz=229,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**34.24**	**48**	T	T	11 23 29.5	
	baz=229,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**34.24**	**48**	T	T	11 23 26.3	
	baz=229,slow=76,SNR=15						
MORW	**Morawa**	**34.95**	**220**		**P**	**10 47 50.1**	**+0.2**
MORW	**Morawa**	**34.95**	**220**	P	**P**	**10 47 50.0**	**+0.1**
	comp=Z,20nm,0.9s						
BLDU	**Ballidu**	**35.62**	**217**	P	**P**	**10 47 55.5**	**-0.1**
	comp=Z,18nm,1.2s						
JHJ	**Hachijo jima 2**	**35.95**	**359**	LR	LR	10 59 43.0	
	comp=Z,148nm,19.4s,baz=48,slow=31						
NWAO	**Narrogin (SRO)**	**37.00**	**214**	LR	LR	11 05 00.4	
	comp=Z,179nm,18.1s,baz=60,slow=39						
JNU	**Nakatsue**	**37.13**	**346**	LR	LR	11 02 21.4	
	comp=Z,70nm,18.7s,baz=197,slow=35						
MJAR	**Matsushiro Arr**	**39.42**	**357**	P	**P**	**10 48 26.7**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=175,slow=9.0,SNR=2.4						
MJAR				LR	LR	11 01 54.2	
	comp=Z,58nm,20.1s,baz=170,slow=32						
	comp=Z,1.4nm,0.7s						
MJAR	**Matsushiro Arr**	**39.42**	**357**	P	**P**	**10 48 26.9**	**-0.8**
NJ2	**Nanjing**	**40.59**	**331**	*e*P	**P**	**10 48 37.9**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WHN	**Wuhan**	**41.80**	**325**	P	**P**	**10 48 48.8**	**+1.4**
WHN				pmax	pmax		
	comp=Z,30nm,0.8s						
KSRS	**Korea Array**	**41.98**	**345**	P	**P**	**10 48 48.7**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=166,slow=8.7,SNR=4.8						
KSRS				LR	LR	11 03 45.1	
	comp=Z,60nm,22.0s,baz=185,slow=33						
	comp=Z,1.1nm,0.6s						
TIA	**Tai'an**	**44.82**	**333**	P	**P**	**10 49 11.8**	**0.0**
TIA				pmax	pmax		
	comp=Z,18nm,0.9s						
CM31	**Chiang Mai Arr**	**46.33**	**299**	P	**P**	**10 49 24.6**	**+0.5**
CM31				IAmb	IAmb	10 49 25.2	
	comp=Z,7.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.33**	**299**	P	**P**	**10 49 24.8**	**+0.7**
	comp=Z,3.7nm,0.7s,baz=122,slow=6.5,SNR=29						
	comp=Z,3.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**46.33**	**299**	P	**P**	**10 49 24.2**	**+0.1**
HNS	**HongShan**	**46.91**	**331**	⇓P	**P**	**10 49 28.2**	**-0.1**
HNS				pmax	pmax		
	comp=Z,22nm,0.9s						
ASAJ	**Asahikawa**	**46.95**	**2**	LR	LR	11 08 58.6	
	comp=Z,37nm,21.4s,baz=196,slow=36						
XAN	**Xi'an**	**47.49**	**324**	⇑P	**P**	**10 49 32.8**	**-0.2**
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
PZH	**PanZhiHua**	**47.74**	**310**	P	**P**	**10 49 35.7**	**+0.6**
URZ	**Urewera**	**48.31**	**141**	LR	LR	11 09 47.1	
	comp=Z,47nm,21.0s,baz=272,slow=36						
BJI2	**Beijing**	**48.38**	**335**	P	**P**	**10 49 39.8**	**+0.1**
BJI2				pmax	pmax		
	comp=Z,3.0nm,1.5s						
CD2	**Chengdu**	**48.77**	**317**	P	**P**	**10 49 43.1**	**+0.2**
CD2				pP	sP	10 49 51.9	+4.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
BNX	**BinXian**	**49.96**	**348**	⇓P	**P**	**10 49 51.5**	**-0.2**
BNX				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	**Hu-ho-hao-te**	**51.13**	**332**	*e*P	**P**	**10 50 03.2**	**+2.4**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LZH	**Lanzhou**	**51.94**	**322**	*e*P	**P**	**10 50 08.3**	**+1.3**
LZH				sP	sP	10 50 23.0	+12
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZDM	**Lanzhou Array**	**51.95**	**322**	P	**P**	**10 50 07.5**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=120,slow=8.8,SNR=9.8						
	comp=Z,2.7nm,0.6s						
KLR	**Kul'dur**	**52.61**	**353**	LR	LR	11 08 45.1	
	comp=Z,16nm,22.0s,baz=159,slow=32						
GTA2	**Gaotai**	**56.60**	**323**	*e*P	**P**	**10 50 41.4**	**+0.6**
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PEA0B	**Petropavlovsk-**	**57.72**	**12**	P	**P**	**10 50 47.4**	**-0.9**
PETK	**Petropavlovsk-**	**57.72**	**12**	P	**P**	**10 50 47.9**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=166,slow=6.7,SNR=8.2						
	comp=Z,2.4nm,0.6s						
PETK	**Petropavlovsk-**	**57.72**	**12**	P	**P**	**10 50 47.6**	**-0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SONM	**Songino Array**	**58.87**	**334**	P	**P**	**10 50 57.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=158,slow=10,SNR=4.2						
SONM				LR	LR	11 14 53.2	
	comp=Z,57nm,21.9s,baz=33,slow=35						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**58.87**	**334**	P	**P**	**10 50 56.6**	**0.0**
MA2	**Magadan**	**62.91**	**6**	LR	LR	11 15 22.7	
	comp=Z,33nm,21.6s,baz=120,slow=33						
YAK	**Yakutsk**	**65.42**	**354**	LR	LR	11 16 14.4	
	comp=Z,58nm,21.6s,baz=124,slow=32						
WMQ	**Urumqi**	**66.50**	**321**	*e*P	**P**	**10 51 49.0**	**+1.4**
MK31	**Makanchi Array**	**71.26**	**322**	P	**P**	**10 52 17.0**	**-0.1**
MKAR	**Makanchi Array**	**71.26**	**322**	P	**P**	**10 52 17.5**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=108,slow=7.3,SNR=18						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**71.26**	**322**		**P**	**10 52 16.7**	**-0.4**
MAKZ	**Makanchi**	**71.46**	**322**		**P**	**10 52 17.6**	**-0.8**
MAKZ				IAmb	IAmb	10 52 28.5	
	comp=Z,4.9nm,0.9s						
KSH2	**Kashi**	**72.93**	**312**	P	**P**	**10 52 28.0**	**+0.5**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZAA0	**Zalesovo Array**	**73.21**	**329**	P	**P**	**10 52 26.9**	**-1.7**
ZALV	**Zalesovo Beam**	**73.21**	**329**	P	**P**	**10 52 27.6**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=116,slow=6.3,SNR=10						
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**73.21**	**329**	P	**P**	**10 52 27.3**	**-1.3**
TIXI	**Tiksi**	**74.93**	**356**	LR	LR	11 22 33.1	
	comp=Z,24nm,20.8s,baz=309,slow=33						
KURK	**Kurchatov**	**75.12**	**324**	P	**P**	**10 52 39.4**	**-0.4**
KURBB	**Kurchatov Arra**	**75.14**	**324**	P	**P**	**10 52 39.7**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=114,slow=4.7,SNR=5.8						
	comp=Z,0.6nm,0.3s						
GAR	**Garm**	**76.81**	**311**	P	**P**	**10 52 49.3**	**-0.6**
GAR				IAmb	IAmb	10 52 55.1	
	comp=Z,13nm,1.2s						
OHAK	**Old Harbor**	**79.80**	**30**	P	**P**	**10 53 06.0**	**+0.2**
NRIK	**Noril'sk**	**80.58**	**343**	P	**P**	**10 53 09.8**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=138,slow=6.1,SNR=4.7						
	comp=Z,1.6nm,0.5s						
BVAR	**Borovoye Array**	**80.71**	**325**	P	**P**	**10 53 10.6**	**-0.3**
	comp=Z,5.3nm,0.6s,baz=114,slow=7.6,SNR=20						
	comp=Z,5.3nm,0.6s						
BORK	**Borovoye**	**80.76**	**325**	P	**P**	**10 53 09.3**	**-1.9**
BORK				IAmb	IAmb	10 53 12.1	
	comp=Z,5.6nm,0.7s						
MAW	**Mawson**	**82.60**	**202**	LR	LR	11 29 17.0	
	comp=Z,60nm,18.1s,baz=122,slow=35						
RND	**Reindeer**	**84.04**	**25**	P	**P**	**10 53 27.6**	**-0.6**
RND				IAmb	IAmb	10 53 30.8	
	comp=Z,6.2nm,0.8s						
CCB	**Clear Creek Bu**	**84.87**	**24**	P	**P**	**10 53 31.0**	**-1.2**
CCB				IAmb	IAmb	10 53 31.9	
	comp=Z,5.4nm,0.8s						
ILAR	**Eielson Array**	**85.28**	**24**	P	**P**	**10 53 32.5**	**-1.9**
	comp=Z,3.8nm,0.8s,baz=259,slow=5.0,SNR=28						
ILAR				LR	LR	11 30 14.4	
	comp=Z,58nm,18.8s,baz=134,slow=35						
	comp=Z,3.8nm,0.8s						
ILAR	**Eielson Array**	**85.28**	**24**	P	**P**	**10 53 32.8**	**-1.6**
BCAR	**Beaver Creek A**	**87.02**	**26**	P	**P**	**10 53 42.8**	**-0.3**
DAWY	**Dawson**	**88.27**	**26**	P	**P**	**10 53 50.1**	**+1.1**
M30M	**Minto, Yukon**	**89.19**	**27**	P	**P**	**10 53 53.7**	**+0.4**
M31M	**Drury Creek, Y**	**90.26**	**28**	P	**P**	**10 53 58.2**	**-0.1**
YKA	**Yellowknife Ar**	**99.43**	**27**	P	**Pdif**	**10 54 39.1**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=291,slow=5.0,SNR=6.4						
YKA				LR	LR	11 33 09.2	
	comp=Z,60nm,21.9s,baz=352,slow=32						
	comp=Z,0.6nm,0.9s						
PB18	**Visviri**	**143.86**	**126**	PKPdf	**PKPdf**	**11 00 33.9**	**-0.9**
ROSC	**El Rosal**	**145.00**	**86**	PKPdf	**PKPdf**	**11 00 36.5**	**-0.3**
DBIC	**Dimbokro**	**145.51**	**277**	PKPbc	**PKPdf**	**11 00 36.5**	**-0.6**
	comp=Z,12nm,1.2s,baz=144,slow=2.8,SNR=7.6						
LPAZ	**La Paz**	**145.64**	**125**	PKPbc	**PKPab**	**11 00 39.3**	**+0.8**
	comp=Z,4.2nm,0.6s,baz=257,slow=1.9,SNR=18						
CPUP	**Villa Florida**	**146.00**	**150**	PKPbc	**PKPab**	**11 00 38.7**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=249,slow=8.4,SNR=5.0						

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*ISK **04** 10:50:39.4, 38.27N×38.79E, h3km, ML2.7/13*
*AFAD **04** 10:50:40.4, 38.27N×38.80E, h7km±2km, ML2.7*
ISC 04 10:50:40.4±1.0**, 38.27N**±0.03×**38.79E**±0.03**, h10**km±9km**, n22,** σ**0.71**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.27**	**34**	P	**Pg**	**10 50 46.0**	**+0.1**
ELZG				S	**Sg**	**10 50 49.6**	**0.0**
ELZG				IAML		10 50 50.0	
	comp=E,3μm,0.2s						
ELZG				IAML		10 50 52.0	
	comp=N,2μm,0.3s						
MAYA	**Malatya/Merkez**	**0.29**	**280**	P	**Pb**	**10 50 46.8**	**-1.1**
MAYA				IAML		10 50 51.0	
	comp=N,2μm,0.4s						
MAYA				S	**Sg**	**10 50 51.3**	**+1.0**
MAYA				IAML		10 50 52.0	
	comp=E,2μm,0.3s						
NARI	**Adyaman-Kaht**	**0.39**	**184**	P	**Pb**	**10 50 48.6**	**-0.9**
NARI				S	**Sg**	**10 50 53.9**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.42**	**75**	Pg	**Pg**	**10 50 48.2**	**-0.4**
SVRC				Sg	**Sg**	**10 50 55.0**	**+0.8**
KAHTU	**Kahta**	**0.49**	**197**	P	**Pb**	**10 50 51.3**	**+0.2**
KAHTU				S	**Sb**	**10 50 57.9**	**-0.5**
KAHTU				IAML		10 51 03.0	
	comp=E,400nm,0.4s						
KAHTU				IAML		10 51 06.0	
	comp=N,317nm,0.3s						
ELZ	**Elazig**	**0.53**	**38**	P	**Pg**	**10 50 50.5**	**-0.2**
ELZ				S	**Sb**	**10 50 58.4**	**-1.2**
ELZ				IAML		10 50 59.0	
	comp=N,758nm,0.3s						
ELZ				IAML		10 50 59.0	
	comp=E,855nm,0.3s						
MDNT	**Maden**	**0.71**	**80**	P	**Pg**	**10 50 53.9**	**-0.2**
MDNT				S	**Sg**	**10 51 03.0**	**-0.4**
MCKZ	**Bingol**	**0.85**	**10**	P	**Pb**	**10 50 57.1**	**-0.4**
MCKZ				S	**Sb**	**10 51 08.6**	**-0.5**
MCKZ				IAML		10 51 09.0	
	comp=N,196nm,0.2s						
MCKZ				IAML		10 51 09.0	
	comp=E,346nm,0.2s						
ARPR	**Arapgir-MALATY**	**0.89**	**337**	Pg	**Pg**	**10 50 57.2**	**-0.4**
ARPR				Sg	**Sb**	**10 51 10.4**	**+0.2**
KOVA	**Elazig, Kovanc**	**0.91**	**61**	P	**Pg**	**10 50 57.5**	**-0.4**
KOVA				S	**Sn**	**10 51 15.1**	**+2.4**
TNCL	**Tunceli-Merkez**	**1.02**	**35**	P	**Pg**	**10 50 59.6**	**-0.5**
TNCL				S	**Sn**	**10 51 15.1**	**-0.4**
TNCL				IAML		10 51 16.0	
	comp=N,148nm,0.7s						
TNCL				IAML		10 51 17.0	
	comp=E,135nm,0.4s						
DYBB	**Diyarbakir**	**1.11**	**106**	Pn	**Pb**	**10 51 01.5**	**-0.3**
DYBB				Sn	**Sn**	**10 51 17.3**	**-0.2**
ILIC	**ilic-Erzincan**	**1.19**	**352**	Pn	**Pb**	**10 51 02.9**	**-0.3**
ILIC				Sn	**Sn**	**10 51 19.5**	**-0.1**
ERZN	**Erzincan**	**1.50**	**29**	Pn	**Pb**	**10 51 08.1**	**-0.3**
ERZN				Sn	**Sg**	**10 51 28.9**	**+0.3**
KHMN	**Narli-Kahraman**	**1.57**	**236**	Pn	**Pn**	**10 51 08.8**	**+0.4**
GAZ	**Gaziantep**	**1.67**	**229**	Pn	**Pn**	**10 51 10.1**	**+0.3**
KMRS	**Kahramanmaras**	**1.68**	**243**	Pn	**Pn**	**10 51 10.4**	**+0.4**
YEDI	**Yedisu-Bingol**	**1.79**	**49**	Pn	**Pn**	**10 51 12.2**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.87**	**275**	Pn	**Pn**	**10 51 13.3**	**+0.6**
SVAN	**Silvan-Diyarba**	**1.90**	**93**	Pn	**Pn**	**10 51 12.8**	**-0.2**
BAYT	**Aydıntepe-Bayb**	**2.36**	**26**	Pn	**Pn**	**10 51 20.2**	**+0.8**
GURO	**Guroymak-BITLI**	**2.56**	**83**	Pn	**Pn**	**10 51 23.0**	**+0.9**

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*IDC **04** 10:52:58.3±1.2, 1.09N×120.08E, h0km, mb3.9/5, mbtmp3.9/7, ML3.9/2, MS3.6/5, Error ellipse: s-maj=84.9km s-min=19.3km az=64.0*
*NEIC **04** 10:53:01.1±1.7, 0.82N±0.07×119.50E±0.06, h10km±1km, mb4.4/10, Error ellipse: s-maj=12.6km s-min=10.1km az=191.0*
*DJA **04** 10:53:02.2±0.5, 1°N±2°×11°9E±°, h21km±4km, M4.3/24, mB5.6/2, mb4.2/6, MLv4.4/24, Mw(mB)5.1/2*
ISC 04 10:53:03.8±0.7**, 0.81N**±0.05×**119.44E**±0.05**, h35**km**, n47,** σ**1.21**/50**, mb4.3**/9**, MS3.9**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**0.66**	**136**	P	**Pn**	**10 53 16.0**	**-0.6**
MPSI				S	**Sn**	**10 53 26.5**	**+0.7**
TOLI2	**Tolitoli**	**1.38**	**77**		**Pn**	**10 53 26.6**	**+0.1**
TOLI2					**Sn**	**10 53 43.2**	**-0.3**
TOLI2	**Tolitoli**	**1.38**	**77**	P	**Pn**	**10 53 26.5**	**+0.1**
PCI	**Palu**	**1.75**	**167**	P	**Pn**	**10 53 32.8**	**+1.1**
MRSI	**Marisa**	**2.52**	**98**	P	**Pn**	**10 53 42.9**	**+0.6**
MRSI				S	**Sn**	**10 54 13.7**	**+1.8**
APSI	**Ampana**	**2.79**	**128**	P	**Pn**	**10 53 47.8**	**+1.8**
BKB	**Balikpapan**	**3.27**	**231**	P	**Pn**	**10 53 51.0**	**-1.5**
BKB				S	**Sn**	**10 54 29.0**	**-1.2**
MMSI	**Mamuju**	**3.52**	**189**	P	**Pn**	**10 53 54.8**	**-1.2**
LUWI	**Luwuk**	**3.81**	**119**		**Pn**	**10 53 59.2**	**-0.8**
LUWI	**Luwuk**	**3.81**	**119**	P	**Pn**	**10 54 01.7**	**+1.7**
LUWI	**Luwuk**	**3.81**	**119**	P	**Pn**	**10 54 01.0**	**+1.0**
TTSI	**Tana Toraja**	**3.85**	**174**	P	**Pn**	**10 54 00.3**	**-0.2**
TTSI				S	**Sn**	**10 54 47.1**	**+2.5**
PMSI	**Majene**	**4.31**	**187**	P	**Pn**	**10 54 07.8**	**+0.8**
MYLDM	**Lahad Datu**	**4.44**	**348**	Pn	**Pn**	**10 54 09.7**	**+1.0**
MYLDM	**Lahad Datu**	**4.44**	**348**	P	**Pn**	**10 54 11.9**	**+3.2**
MYLDM	**Lahad Datu**	**4.44**	**348**	P	**Pn**	**10 54 08.0**	**-0.7**
SPSI	**Sidrap Palu**	**4.75**	**176**	P	**Pn**	**10 54 13.8**	**+0.8**
KAPI	**Kappang**	**5.79**	**177**	Pn	**Pn**	**10 54 28.9**	**+1.7**
	2.2nm,0.3s,baz=336,slow=11,SNR=4.0						
KAPI				LR	LR	10 57 10.8	
	comp=Z,114nm,18.8s,baz=72,slow=42						
	4.3nm,0.4s						
KAPI	**Kappang**	**5.79**	**177**		**Pn**	**10 54 28.2**	**+1.0**
KAPI	**Kappang**	**5.79**	**177**	P	**Pn**	**10 54 28.3**	**+1.0**
KKM	**Kota Kinabalu**	**6.11**	**328**	Pn	**Pn**	**10 54 31.9**	**+0.1**
KKM	**Kota Kinabalu**	**6.11**	**328**	P	**Pn**	**10 54 30.4**	**-1.4**
	0.1nm19nm,1.2s						
KKM				S	**Sn**	**10 55 40.8**	**+0.2**
	0.1nm19nm,1.2s						
PKKI	**Palangkaraya**	**6.25**	**241**	P	**Pn**	**10 54 32.6**	**-0.9**
SANI	**Sanana**	**7.14**	**113**	P	**Pn**	**10 54 44.7**	**-1.1**
SANI	**Sanana**	**7.14**	**113**	P	**Pn**	**10 54 43.8**	**-2.0**
SBUM	**Sibu**	**7.40**	**283**	P	**Pn**	**10 54 49.6**	**+0.3**
MTN	**Manton Dam**	**17.85**	**140**	P	**Pn**	**10 57 07.4**	**-2.1**
MTN				IAmb	IAmb	10 57 35.0	
	comp=Z,21nm,1.2s						
KNRA	**Kununurra**	**18.80**	**151**	P	**P**	**10 57 19.5**	**-0.9**
KNRA				IAmb	IAmb	10 57 33.6	
	comp=Z,33nm,1.5s						
FITZ	**Fitzroy Crossi**	**19.76**	**162**	P	**P**	**10 57 31.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=8.1,slow=7.1,SNR=1.8						
	comp=Z,3.3nm,0.9s						
WB0	**Warramunga Arr**	**25.17**	**145**		**P**	**10 58 24.9**	**-1.1**
WB0				IAmb	IAmb	10 58 25.4	
	comp=Z,8.6nm,0.7s						
WRAB	**Tennant Creek**	**25.27**	**145**	P	**P**	**10 58 26.2**	**-0.8**
WRAB				IAmb	IAmb	10 58 26.6	
	comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	**25.27**	**145**	P	**P**	**10 58 25.7**	**-1.3**
	comp=Z,6.2nm,0.7s,baz=330,slow=9.9,SNR=44						
	comp=Z,6.2nm,0.7s						
WRA	**Warramunga Arr**	**25.27**	**145**	P	**P**	**10 58 25.6**	**-1.3**
WR8	**Warramunga Arr**	**25.38**	**145**		**P**	**10 58 27.0**	**-1.0**
AS31	**Alice Springs**	**28.10**	**151**	P	**P**	**10 58 51.8**	**-0.7**
ASAR	**Alice Springs**	**28.10**	**151**	P	**P**	**10 58 51.5**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=329,slow=7.6,SNR=34						
ASAR				LR	LR	11 11 25.9	
	comp=Z,43nm,18.6s,baz=103,slow=40						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**28.10**	**151**	P	**P**	**10 58 52.6**	**+0.1**
STKA	**Stephens Creek**	**38.70**	**149**	P	**P**	**11 00 23.0**	**-1.5**
	comp=Z,1.7nm,0.6s,baz=309,slow=12,SNR=4.7						
	comp=Z,1.7nm,0.6s						
STKA	**Stephens Creek**	**38.70**	**149**	P	**P**	**11 00 24.9**	**+0.4**
DZM	**Mont Dzumac**	**51.15**	**119**	LR	LR	11 23 29.2	
	comp=Z,257nm,21.9s,baz=217,slow=36						
MKAR	**Makanchi Array**	**56.09**	**330**	P	**P**	**11 02 40.2**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=128,slow=9.1,SNR=3.9						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**56.09**	**330**	P	**P**	**11 02 40.3**	**+0.7**
KURBB	**Kurchatov Arra**	**60.52**	**331**	P	**P**	**11 03 10.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=149,slow=7.6,SNR=3.3						
	comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	**60.53**	**331**	P	**P**	**11 03 10.5**	**0.0**
KURK				IAmb	IAmb	11 03 10.5	
	comp=Z,4.7nm,1.4s						
ARTI	**Arti**	**73.69**	**330**	LR	LR	11 41 45.4	
	comp=Z,70nm,18.3s,baz=75,slow=40						
BRTR	**Keskin Array B**	**86.25**	**310**	LR	LR	11 51 26.3	
	comp=Z,31nm,18.4s,baz=293,slow=40						
D19K	**Kuna River**	**86.47**	**21**	P	**P**	**11 05 43.4**	**+0.7**
D19K				IAmb	IAmb	11 06 11.1	
	comp=Z,4.4nm,1.2s						

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*IDC **04** 10:59:40.4±1.0, 25.75S×179.23E, h529km±12km, mb3.5/14, mbtmp4.5/17, Error ellipse: s-maj=20.8km s-min=10.7km az=169.0*
*NOU **04** 10:59:40.2, 25.52S×179.96W, h617km, mb4.3/11, South of Fiji Islands*
*NEIC **04** 10:59:41.3±1.6, 25.6S±0.1×179.3E±0.1, h529km±9km, mb4.5/21, Error ellipse: s-maj=20.0km s-min=19.5km az=177.0*
ISC 04 10:59:41.8±0.4**, 25.78S**±0.06×**179.25E**±0.06**, h550**km**, n115,** σ**1.45**/129**, mb4.3**/25**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.26**	**145**	P	**P**	**11 01 03.7**	**-1.9**
RAO	**Raoul Island**	**4.28**	**145**	P	**P**	**11 01 02.9**	**-2.7**
	239nm,0.4s,baz=84,slow=7.0,SNR=13						
RAO				S	**S**	**11 02 09.7**	**-4.5**
	118nm,0.3s,baz=233,slow=20,SNR=1.3						
RAO	**Raoul Island**	**4.28**	**145**	P	**P**	**11 01 04.4**	**-1.3**
RAO	**Raoul Island**	**4.28**	**145**	P	**P**	**11 01 08.4**	**+2.7**
GLKZ	**Green Lake**	**4.28**	**145**	P	**P**	**11 01 05.3**	**-0.4**
GLKZ				S	**S**	**11 02 16.5**	**+2.2**
LKBA	**Tubou, Lakemba**	**7.72**	**14**	P	**P**	**11 01 33.5**	**-3.4**
MSVF	**Nonsavu**	**8.08**	**352**	P	**P**	**11 01 36.9**	**-3.8**
TAVE	**Taveuni**	**9.06**	**5**	P	**P**	**11 01 47.7**	**-2.6**
DGTI	**Dogotuki**	**9.44**	**3**	P	**P**	**11 01 51.4**	**-2.8**
OUZ	**Omahuta**	**10.60**	**206**	P	**P**	**11 02 07.6**	**+1.9**
GRZ	**Great Barrier**	**10.93**	**196**	P	**P**	**11 02 10.9**	**+1.7**
WCZ	**Waipu Caves**	**10.97**	**201**	P	**P**	**11 02 11.5**	**+2.0**
MARNC	**Mare, Loyalty**	**11.14**	**290**	P	**P**	**11 02 10.7**	**-0.8**
PINNC	**Pines Island,**	**11.23**	**284**	P	**P**	**11 02 12.3**	**-0.1**
KUZ	**Kuaotunu**	**11.34**	**195**	P	**P**	**11 02 15.6**	**+2.3**
KUZ	**Kuaotunu**	**11.34**	**195**	P	**P**	**11 02 14.9**	**+1.5**
MXZ	**Matakaoa Point**	**11.78**	**184**	P	**P**	**11 02 19.4**	**+1.5**
MXZ	**Matakaoa Point**	**11.78**	**184**	P	**P**	**11 02 17.8**	**-0.1**
HAZ	**Te Kaha**	**12.01**	**186**	P	**P**	**11 02 19.9**	**-0.3**
HAZ				S	**S**	**11 04 27.4**	**-3.1**
NIUE	**Niue**	**12.02**	**58**	P	**P**	**11 02 23.1**	**+2.4**
NIUE				S	**S**	**11 04 32.9**	**+1.5**
WMGZ	**Waiomatatini S**	**12.03**	**183**	S	**S**	**11 04 30.6**	**-0.4**
PKGZ	**Pakihiroa**	**12.09**	**184**	P	**P**	**11 02 20.3**	**-0.9**
PKGZ				S	**S**	**11 04 30.2**	**-2.1**
RUGZ	**Raukumara Rang**	**12.22**	**186**	P	**P**	**11 02 23.3**	**+0.7**
RUGZ				S	**S**	**11 04 32.5**	**-2.5**
DZM	**Mont Dzumac**	**12.28**	**285**	P	**P**	**11 02 21.8**	**-1.6**
	4.4nm,0.7s,baz=73,slow=17,SNR=2.2						
DZM	**Mont Dzumac**	**12.28**	**285**	P	**P**	**11 02 21.1**	**-2.4**
PUZ	**Puketiti**	**12.29**	**184**	P	**P**	**11 02 23.9**	**+0.8**
PUZ				S	**S**	**11 04 33.8**	**-2.1**
TOZ	**Tahuroa Road**	**12.33**	**194**	P	**P**	**11 02 25.2**	**+1.6**
TWGZ	**Tauwhareparae**	**12.41**	**185**	P	**P**	**11 02 24.2**	**-0.2**
TWGZ				S	**S**	**11 04 39.6**	**+1.3**
URZ	**Urewera**	**12.57**	**188**	P	**P**	**11 02 24.8**	**-1.2**
	28nm,0.4s,baz=265,slow=3.6,SNR=33						
URZ				S	**S**	**11 04 38.7**	**-2.6**
	19nm,0.8s,baz=227,slow=22,SNR=9.3						
URZ	**Urewera**	**12.57**	**188**	P	**P**	**11 02 24.2**	**-1.9**
URZ				S	**S**	**11 04 39.0**	**-2.3**
MWZ	**Matawai**	**12.60**	**186**	P	**P**	**11 02 25.4**	**-1.1**
MWZ				S	**S**	**11 04 40.6**	**-1.4**
TKGZ	**Te Karaka**	**12.68**	**185**	P	**P**	**11 02 26.4**	**-0.8**
CNGZ	**Carnagh Statio**	**12.70**	**184**	P	**P**	**11 02 28.8**	**+1.4**
HRRZ	**Handcock Road**	**12.82**	**191**	P	**P**	**11 02 30.3**	**+1.6**
SNGZ	**Shannon Statio**	**13.06**	**187**	P	**P**	**11 02 30.9**	**-0.3**
SNGZ				S	**S**	**11 04 48.8**	**-1.9**
PRGZ	**Paritu Road**	**13.16**	**185**	P	**P**	**11 02 33.8**	**+1.7**
PRGZ				S	**S**	**11 04 51.7**	**-0.7**
HIZ	**Hauiti**	**13.23**	**195**	P	**P**	**11 02 34.8**	**+1.9**
VRZ	**Vera Road**	**13.83**	**195**	P	**P**	**11 02 41.7**	**+2.6**
AFI	**Afiamalu**	**14.50**	**37**	P	**P**	**11 02 43.0**	**-3.4**
TSZ	**Takapari Road**	**14.50**	**190**	P	**P**	**11 02 45.8**	**-0.2**
MRZ	**Mangatainoka R**	**15.15**	**191**	P	**P**	**11 02 51.6**	**-1.0**
QRZ	**Quartz Range**	**16.02**	**199**	P	**P**	**11 03 01.9**	**+0.6**
QRZ	**Quartz Range**	**16.02**	**199**	P	**P**	**11 03 01.8**	**+0.6**
NNZ	**Nelson**	**16.15**	**196**	P	**P**	**11 03 02.4**	**-0.1**
THZ	**Tophouse**	**16.78**	**197**	P	**P**	**11 03 09.2**	**+0.8**
DSZ	**Denniston Nort**	**17.07**	**199**	P	**P**	**11 03 12.2**	**+1.2**
KHZ	**Kahutara**	**17.25**	**194**	P	**P**	**11 03 12.5**	**-0.1**
KHZ	**Kahutara**	**17.25**	**194**	P	**P**	**11 03 12.4**	**-0.2**
GVZ	**Greta Valley S**	**17.89**	**195**	P	**P**	**11 03 18.4**	**0.0**
LTZ	**Lake Taylor**	**17.90**	**197**	P	**P**	**11 03 18.8**	**+0.1**
OXZ	**Oxford**	**18.47**	**197**	P	**P**	**11 03 25.3**	**+1.5**
WVZ	**Waitaha Valley**	**18.61**	**200**	P	**P**	**11 03 26.6**	**+1.6**
TMZ	**Timaru**	**19.73**	**198**	P	**P**	**11 03 36.7**	**+1.5**
RAR	**Rarotonga**	**19.76**	**81**	P	**P**	**11 03 35.2**	**-0.6**
EIDS	**Eidsvold**	**25.40**	**265**	P	**P**	**11 04 26.5**	**+0.3**
EIDS				IAmb	IAmb	11 04 50.2	
	comp=Z,13nm,1.1s						
CAN	**Canberra**	**27.65**	**243**	P	**P**	**11 04 47.5**	**+1.7**
CAN				IAmb	IAmb	11 04 48.1	
	comp=Z,22nm,1.4s						
CTA	**Charters Tower**	**30.86**	**274**	P	**P**	**11 05 14.4**	**+0.5**
	comp=Z,4.9nm,0.3s,baz=102,slow=12,SNR=20						
	comp=Z,4.9nm,0.3s						
CTA	**Charters Tower**	**30.86**	**274**	P	**P**	**11 05 14.4**	**+0.5**
TOO	**Toolangi**	**30.89**	**239**	P	**P**	**11 05 15.9**	**+2.0**
MTSU	**Mount Surprise**	**33.21**	**276**	P	**P**	**11 05 34.3**	**+0.5**
STKA	**Stephens Creek**	**33.43**	**251**	P	**P**	**11 05 35.9**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=89,slow=12,SNR=5.6						
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**33.43**	**251**	P	**P**	**11 05 36.4**	**+0.8**
COEN	**Coen**	**35.79**	**282**	P	**P**	**11 05 56.0**	**+0.6**
COEN				IAmb	IAmb	11 05 56.5	
	comp=Z,12nm,0.8s						
COEN	**Coen**	**35.79**	**282**	P	**P**	**11 05 55.9**	**+0.5**
BBOO	**Buckleboo**	**38.11**	**249**	P	**P**	**11 06 14.7**	**+0.4**
BBOO				IAmb	IAmb	11 06 34.5	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	**41.09**	**263**		**P**	**11 06 38.6**	**+0.3**
ASAR	**Alice Springs**	**41.09**	**263**	P	**P**	**11 06 38.6**	**+0.2**
	comp=Z,5.1nm,0.4s,baz=90,slow=7.4,SNR=145						
ASAR				S	**S**	**11 12 11.8**	**-0.2**
	comp=Z,1.5nm,1.1s,baz=102,slow=16,SNR=7.1						
	comp=Z,5.1nm,0.4s						
ASAR	**Alice Springs**	**41.09**	**263**	P	**P**	**11 06 38.2**	**-0.1**
WR8	**Warramunga Arr**	**41.49**	**269**		**P**	**11 06 41.1**	**-0.4**
WR8				IAmb	IAmb	11 06 41.9	
	comp=Z,8.7nm,0.8s						
WRAB	**Tennant Creek**	**41.63**	**269**	P	**P**	**11 06 42.4**	**-0.2**
WRAB				IAmb	IAmb	11 06 43.0	
	comp=Z,12nm,1.0s						
WRAB	**Tennant Creek**	**41.63**	**269**	P	**P**	**11 06 42.2**	**-0.4**
WRA	**Warramunga Arr**	**41.64**	**268**	P	**P**	**11 06 41.8**	**-0.9**
	comp=Z,7.5nm,0.4s,baz=100,slow=6.6,SNR=196						
WRA				ScP	**ScP**	**11 11 27.4**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=100,slow=3.7,SNR=5.0						
WRA				S	**S**	**11 12 18.0**	**-1.9**
	comp=Z,1.3nm,0.9s,baz=101,slow=15,SNR=7.1						
	comp=Z,7.5nm,0.4s						
WRA	**Warramunga Arr**	**41.64**	**268**		**P**	**11 06 41.2**	**-1.5**
WB0	**Warramunga Arr**	**41.64**	**269**		**P**	**11 06 42.3**	**-0.4**
WB0				IAmb	IAmb	11 06 43.0	
	comp=Z,16nm,0.7s						
KNRA	**Kununurra**	**48.03**	**272**	P	**P**	**11 07 32.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**50.04**	**267**	P	**P**	**11 07 47.0**	**+0.5**
	comp=Z,4.6nm,0.5s,baz=102,slow=7.2,SNR=19						
	comp=Z,4.6nm,0.5s						
SIJI	**Sorong**	**52.42**	**290**	P	**P**	**11 08 03.4**	**-0.4**
	comp=Z,17nm,0.6s,baz=112,slow=11,SNR=5.1						
	comp=Z,17nm,0.6s						
MJAR	**Matsushiro Arr**	**73.07**	**326**	P	**P**	**11 10 15.5**	**-0.8**
	comp=Z,3.6nm,0.9s,baz=166,slow=5.1,SNR=4.7						
	comp=Z,3.6nm,0.9s						
MJAR	**Matsushiro Arr**	**73.07**	**326**	P	**P**	**11 10 15.7**	**-0.7**
KSRS	**Korea Array**	**79.26**	**321**	P	**P**	**11 10 50.9**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=132,slow=5.0,SNR=4.2						
	comp=Z,1.4nm,0.7s						
PETK	**Petropavlovsk-**	**80.77**	**347**	P	**P**	**11 10 57.1**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=122,slow=7.8,SNR=6.1						
	comp=Z,1.8nm,0.8s						
PETK	**Petropavlovsk-**	**80.77**	**347**	P	**P**	**11 10 58.5**	**+0.7**
USRK	**Ussuriysk Ar.**	**81.98**	**328**	P	**P**	**11 11 04.7**	**+0.5**
	comp=Z,5.7nm,0.8s,baz=109,slow=6.3,SNR=4.1						
	comp=Z,5.7nm,0.8s						
NVAR	**Mina Array Bea**	**86.57**	**44**	P	**P**	**11 11 27.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=223,slow=8.3,SNR=5.3						
	comp=Z,0.7nm,0.7s						
EFI	**East Falkland**	**87.98**	**148**	P	**P**	**11 11 34.5**	**+1.1**
CM31	**Chiang Mai Arr**	**89.55**	**291**	P	**P**	**11 11 43.1**	**+1.8**
CM31				IAmb	IAmb	11 11 44.3	
	comp=Z,4.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**89.55**	**291**	P	**P**	**11 11 42.7**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=138,slow=3.7,SNR=6.0						
	comp=Z,0.4nm,0.3s						
L19K	**White Mountain**	**90.08**	**12**	P	**P**	**11 11 43.7**	**+0.9**
J17K	**VABM Dome**	**90.51**	**10**	P	**P**	**11 11 45.4**	**+0.7**
J17K				IAmb	IAmb	11 12 20.7	
	comp=Z,6.7nm,1.4s						
SIT	**Sitka**	**90.95**	**23**	P	**P**	**11 11 47.4**	**+0.6**
TX31	**Lajitas Ar. Si**	**91.99**	**58**	P	**P**	**11 11 53.3**	**+0.8**
TXAR	**Lajitas Array**	**91.99**	**58**	P	**P**	**11 11 53.2**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=206,slow=8.9,SNR=5.8						
	comp=Z,0.5nm,0.8s						
BCAR	**Beaver Creek A**	**93.77**	**17**	P	**P**	**11 12 00.2**	**+0.4**
ILAR	**Eielson Array**	**94.01**	**14**	P	**P**	**11 11 59.5**	**-1.2**
	comp=Z,0.2nm,0.8s,baz=204,slow=8.5,SNR=3.1						
	comp=Z,0.2nm,0.8s						
FLWY	**Flagg Ranch**	**94.48**	**43**	P	**P**	**11 12 03.9**	**+0.2**
J26L	**Joseph Creek**	**94.53**	**15**	P	**P**	**11 12 04.2**	**+0.9**
J26L				IAmb	IAmb	11 12 43.1	
	comp=Z,2.3nm,1.2s						
M30M	**Minto, Yukon**	**94.75**	**19**	P	**P**	**11 12 05.0**	**+0.8**
M30M				IAmb	IAmb	11 12 14.8	
	comp=Z,7.8nm,1.5s						
MKAR	**Makanchi Array**	**112.92**	**312**	PKiKP	**PKiKP**	**11 17 15.9**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=59,slow=0.5,SNR=2.5						
KURBB	**Kurchatov Arra**	**116.12**	**316**	PKP	**PKPdf**	**11 17 21.8**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=104,slow=1.9,SNR=4.8						
BVAR	**Borovoye Array**	**121.39**	**318**	PKP	**PKPdf**	**11 17 32.3**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=195,slow=2.1,SNR=9.7						
SPITS	**Spitsbergen Ar**	**126.94**	**356**	PKP	**PKiKP**	**11 17 43.2**	**+0.1**
	comp=Z,11nm,1.0s,baz=91,slow=3.5,SNR=7.1						
ARCES	**ARCESS Array B**	**133.57**	**348**	PKP	**PKPdf**	**11 17 55.7**	**+0.5**
	comp=Z,5.1nm,1.0s,baz=85,slow=2.9,SNR=4.8						
ARCES				SKPbc	**SKPbc**	**11 20 34.1**	**+1.6**
	comp=Z,7.7nm,1.0s,baz=25,slow=3.1,SNR=5.8						
FINES	**FINESS Array B**	**139.99**	**340**	PKhKP	PKPpre	11 17 59.7	
	comp=Z,0.5nm,0.4s,baz=44,slow=6.1,SNR=4.7						
FINES				PKP	**PKiKP**	**11 18 09.6**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=82,slow=4.0,SNR=5.5						
FINES	**FINESS Array B**	**139.99**	**340**	PKPdf	**PKiKP**	**11 18 09.8**	**0.0**
NB2	**NORSAR Subarra**	**143.82**	**350**	PKP	PKPbc	11 18 12.9	-0.3
	comp=Z,1.9nm,0.5s,baz=18,slow=3.2						
NOA	**NORSAR Array B**	**143.82**	**350**	PKP	PKPbc	11 18 12.4	-0.8
	comp=Z,0.8nm,0.5s,baz=17,slow=4.1,SNR=14						
HFS	**Hagfors**	**144.24**	**348**	PKP	PKPbc	11 18 14.2	-0.4
	comp=Z,4.7nm,0.3s,baz=66,slow=5.0,SNR=46						
AKASG	**Malin Array Be**	**146.15**	**325**	PKPbc	**PKPbc**	**11 18 20.2**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=43,slow=4.4,SNR=13						
AKASG	**Malin Array Be**	**146.15**	**325**		**PKPbc**	**11 18 20.0**	**-0.4**
MMAI	**Mount Meron Ar**	**147.81**	**292**	PKPbc	**PKiKP**	**11 18 27.0**	**0.0**
	comp=Z,4.3nm,0.4s,baz=46,slow=6.0,SNR=8.7						
BR131	**Keskin Array S**	**148.12**	**304**	PKPab	**PKPab**	**11 18 31.5**	**+0.2**
BRTR	**Keskin Array B**	**148.12**	**304**	PKPbc	**PKPbc**	**11 18 26.6**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=128,slow=3.4,SNR=4.6						
BRTR	**Keskin Array B**	**148.12**	**304**	PKPab	**PKPab**	**11 18 31.4**	**+0.2**
EKA	**Eskdalemuir Ar**	**150.42**	**3**	PKPbc	**PKPbc**	**11 18 30.8**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=340,slow=2.7,SNR=9.1						
TORD	**Torodi Ar. Bea**	**167.23**	**191**	PKPab	**PKPab**	**11 19 54.2**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=117,slow=3.1,SNR=2.8						

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*OSPL **04** 11:02:08.9±0.3, 17.95N×67.00W, h15km±3km, ML2.5, Presumed earthquake*
*NEIC **04** 11:02:08.8±0.9, 17.94N±0.04×66.99W±0.01, h10km±1km, ML3.0/33, Md3.2/6(RSPR), Error ellipse: s-maj=6.4km s-min=2.1km az=15.0*
*SDD **04** 11:02:10.0±0.5, 18.00N×67.01W, h13km±3km, MD3.1, ML2.7, MW2.9, Presumed earthquake*
RSPR 04 11:02:08.8, 17.97N×66.99W, h13km, MD3.2/6, 11C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.05**	**275**		Pg	11 02 11.4	0.0
MLPR				IAML		11 02 13.5	
	12μm,0.4s						
MLPR				IAML		11 02 13.6	
	6μm,0.1s						
GBPR	**Guanica, Bosqu**	**0.11**	**85**		Pg	11 02 12.0	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GBPR					Sg	11 02 14.4	+0.3
GBPR	Guanica, Bosqu	0.11	85	⇓iP	Pg	11 02 12.0	+0.1
GBPR				eS	Sg	11 02 14.4	+0.3
CRPR	Cabo Rojo, PR	0.12	290		Pg	11 02 12.1	-0.1
CRPR					Sg	11 02 14.4	0.0
CRPR	Cabo Rojo, PR	0.12	290	IAML		11 02 14.7	
	8μm,0.2s						
CRPR				IAML		11 02 15.3	
	7μm,0.2s						
CRPR	Cabo Rojo, PR	0.12	290	⇑ePg	Pg	11 02 12.3	+0.2
CRPR				⇑eSg	Sg	11 02 14.5	+0.1
CRPR				IAML		11 02 14.6	
	comp=N,6μm,0.1s						
CRPR	Cabo Rojo, PR	0.12	290	⇑eP	Pg	11 02 12.1	-0.1
CRPR				eS	Sg	11 02 14.4	0.0
CRPR	Cabo Rojo, PR	0.12	290	iP	Pg	11 02 12.2	0.0
CRPR				eS	Sg	11 02 14.4	0.0
CRPR				IAML		11 02 14.7	
	comp=Z,7μm,0.3s						
LSP	Las Mesas	0.23	336		Pg	11 02 13.7	-0.1
LSP					Sg	11 02 17.9	+0.7
LSP	Las Mesas	0.23	336	⇓iP	Pg	11 02 13.7	-0.1
LSP				eS	Sg	11 02 17.9	+0.7
PRSN	Puerto Rico Se	0.29	330		Pg	11 02 14.7	-0.2
PRSN					Sg	11 02 19.6	+0.7
PRSN	Puerto Rico Se	0.29	330	IAML		11 02 21.0	
	comp=Z,2μm,0.2s						
PRSN				IAML		11 02 21.7	
	comp=Z,3μm,0.2s						
PRSN	Puerto Rico Se	0.29	330	⇑ePg	Pg	11 02 14.7	-0.2
PRSN				⇑eSg	Sg	11 02 19.7	+0.8
PRSN				IAML		11 02 21.7	
	comp=N,2μm,0.2s						
PRSN	Puerto Rico Se	0.29	330	⇑iP	Pg	11 02 14.7	-0.2
PRSN				eS	Sg	11 02 19.6	+0.7
OBIP	Obispado Ponce	0.37	78		Pg	11 02 16.0	-0.3
OBIP					Sg	11 02 21.4	-0.1
OBIP	Obispado Ponce	0.37	78	IAML		11 02 22.0	
	comp=N,212nm,0.5s						
OBIP	Obispado Ponce	0.37	78	⇓eP	Pg	11 02 16.0	-0.3
OBIP				eS	Sg	11 02 21.4	-0.1
OBIP	Obispado Ponce	0.37	78	iP	Pg	11 02 16.1	-0.3
OBIP				eS	Sg	11 02 21.5	+0.1
OBIP				IAML		11 02 21.7	
	comp=Z,338nm,0.5s						
UUPR	Utuado, UPR, P	0.38	42		Pg	11 02 16.1	-0.4
UUPR				IAML		11 02 22.4	
	comp=Z,5μm,0.3s						
UUPR				IAML		11 02 22.8	
	comp=Z,6μm,0.4s						
CELP	Cerrillos	0.41	74		Pg	11 02 16.7	-0.3
CELP				IAML		11 02 23.2	
	comp=Z,921nm,0.3s						
CELP				IAML		11 02 23.9	
	comp=Z,522nm,0.2s						
AGPR	Aguadilla, PR	0.51	347		Pg	11 02 18.6	-0.4
AGPR				IAML		11 02 25.9	
	comp=Z,495nm,0.4s						
AGPR				IAML		11 02 26.2	
	comp=Z,683nm,0.4s						
AGPR	Aguadilla, PR	0.51	347	⇑ePg	Pg	11 02 18.5	-0.4
AGPR				⇑eSg	Sg	11 02 25.1	-0.7
AGPR				IAML		11 02 30.4	
	comp=N,401nm,0.1s						
AGPR	Aguadilla, PR	0.51	347	⇑iP	Pg	11 02 18.5	-0.5
AGPR				eS	Sg	11 02 25.5	-0.3
AGPR	Aguadilla, PR	0.51	347	iP	Pg	11 02 18.5	-0.4
AGPR				eS	Sg	11 02 25.5	-0.3
AGPR				IAML		11 02 28.4	
	comp=Z,416nm,0.1s						
IDE	Isla Desecheo	0.62	312		Pg	11 02 20.4	-0.7
IDE					Sg	11 02 28.9	-0.4
IDE	Isla Desecheo	0.62	312	⇑eP	Pg	11 02 20.4	-0.7
IDE				eS	Sg	11 02 28.9	-0.4
ECPR	Experimental S	0.69	59		Pg	11 02 21.3	-1.0
ECPR				IAML		11 02 33.7	
	comp=Z,605nm,0.2s						
ECPR				IAML		11 02 34.1	
	comp=Z,728nm,0.2s						
ECPR	Experimental S	0.69	59	⇓eP	Pg	11 02 21.2	-1.1
ECPR				eS	Sg	11 02 30.6	-0.9
SJG	San Juan	0.81	80		Pg	11 02 23.2	-1.4
SJG	San Juan	0.81	80	IAML		11 02 35.2	
	comp=Z,211nm,0.3s						
SJG				IAML		11 02 36.6	
	comp=Z,200nm,0.2s						
SJG	San Juan	0.81	80	⇑eP	Pg	11 02 23.2	-1.4
SJG				eS	Sg	11 02 33.8	-1.4
SJG	San Juan	0.81	80	iP	Pg	11 02 23.4	-1.2
SJG				IAML		11 02 35.8	
	comp=Z,144nm,0.2s						
PDPR	Patillas Dam,	0.92	87		Pb	11 02 25.4	-1.3
PDPR				IAML		11 02 41.4	
	comp=Z,146nm,0.5s						
PDPR				IAML		11 02 41.5	
	comp=Z,215nm,0.5s						
GCPR	Guaynabo City	0.93	68		Pb	11 02 24.6	-2.2
GCPR					Sg	11 02 37.3	-1.6
GCPR	Guaynabo City	0.93	68	IAML		11 02 43.0	
	comp=N,148nm,0.6s						
GCPR				IAML		11 02 43.3	
	comp=E,90nm,0.3s						
GCPR	Guaynabo City	0.93	68	⇓eP	Pb	11 02 24.6	-2.2
GCPR				eS	Sg	11 02 37.3	-1.6
HUMP	Col San Antoni	1.10	81		Pb	11 02 27.7	-2.0
HUMP					Sb	11 02 43.0	-0.9
HUMP	Col San Antoni	1.10	81	IAML		11 02 46.1	
	comp=E,275nm,0.3s						
HUMP				IAML		11 02 46.4	
	comp=E,395nm,0.4s						
HUMP	Col San Antoni	1.10	81	⇑eP	Pb	11 02 27.7	-2.0
HUMP				eS	Sb	11 02 43.0	-0.9
CUPR	Culebra, Puert	1.66	78	Pn	Pn	11 02 37.6	0.0
HATOM	Hato Mayor del	2.41	290	⇓ePg	Pb	11 02 51.2	-1.0
HATOM				⇑eSg	Sb	11 03 21.0	-0.9
HATOM				IAML		11 03 31.2	
	comp=N,17nm,0.7s						
BRH1	Barahona	3.91	274	i		11 08 29.9	

IDC ***04*** *11:19:54.4±2.6, 2.̊98N×98.̊88E, h180km±22km, mb3.8/15, mbtmp4.3/16, MS3.0/1, Error ellipse: s-maj=30.6km s-min=10.6km az=55.0*
DJA ***04*** *11:19:54.3±0.2, 3˚N±2˚×9˚9E±˚, h187km±3km, M4.7/32, mB5.0/5, mb4.8/7, MLv4.8/32, Mw(mB)4.4/5*
NEIC ***04*** *11:19:56.1±1.3, 3.̊09N±0.̊07×98.̊99E±0.̊07, h182km±2km, mb4.3/37, Error ellipse: s-maj=10.5km s-min=10.2km az=153.0*
ISC 04 11:19:55.0±0.6**, 3.̊07N**±0.̊04×**98.̊98E**±0.̊04**, h183**km±5km**,**
n103, σ**1.̊55**/117**, mb4.2**/37**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	0.27	192	P	Pn	11 20 20.9	+1.3
PSI				S	Sn	11 20 39.2	+0.7
RPSI	Rantau Prapat	0.37	189		Pn	11 20 21.1	+1.4
RPSI				Sn	Sn	11 20 39.3	+0.6
TSI	Tuntungan	0.60	316	P	Pn	11 20 21.7	+1.1
TSI				S	Sn	11 20 41.1	+0.8
KCSI	Kotacane, Aceh	1.29	291	P	Pn	11 20 25.8	+0.5
GSI	Gunungsitoli	2.25	219		Pn	11 20 35.5	+0.5
GSI				Sn	Sn	11 21 05.5	-0.6
GSI	Gunungsitoli	2.25	219	P	Pn	11 20 35.2	+0.2
GSI				S	Sn	11 21 06.1	0.0
MNSI	Mandailing Nat	2.33	165	P	Pn	11 20 37.3	+1.3
IPM	Ipoh	2.48	55	Pn	Pn	11 20 38.3	+0.7
IPM	Ipoh	2.48	55	P	Pn	11 20 37.5	-0.1
IPM				S	Sn	11 21 10.3	-0.5
SNSI	Sinabang, Aceh	2.73	256	P	Pn	11 20 41.4	+0.8
SNSI				S	Sn	11 21 17.0	+1.0
KULM	Kulim	2.77	37	Pn	Pn	11 20 41.1	+0.1
KULM	Kulim	2.77	37	P	Pn	11 20 40.6	-0.4
MLSI	Meulaboh, Aceh	2.84	295	P	Pn	11 20 41.9	+0.1
LHMI	Lhok Sumawe	2.96	317	Pn	Pn	11 20 44.4	+1.2
LHMI	Lhok Sumawe	2.96	317	P	Pn	11 20 44.2	+0.9
PBSI	Pulau Batu	3.18	193	P	Pn	11 20 45.8	-0.2
PBSI				S	Sn	11 21 25.2	-0.7
PPI	Padang Panjang	3.77	158	P	Pn	11 20 54.4	+1.0
PDSI	Padang	4.22	159	P	Pn	11 20 58.9	-0.2
PDSI				S	Sn	11 21 48.4	-0.9
SISI	Saibi	4.37	179	P	Pn	11 20 59.1	-1.8
MYKOM	Kota Tinggi	5.03	104		Pn	11 21 10.1	+0.7
MYKOM	Kota Tinggi	5.03	104	P	Pn	11 21 07.9	-1.5
PPSI	Pulau Pagai	5.88	170	P	Pn	11 21 17.6	-2.9
	1.5nm3μm125nm,0.4s						
CMBY	CAMPBELL BAY	6.38	308	eP	Pn	11 21 28.3	+1.2
CMBY				eS	Sn	11 22 37.2	-2.5
CMBY				IAML		11 22 37.4	
	comp=E,206nm,0.1s						
CMBY				IAML		11 22 40.4	
	comp=N,164nm,0.4s						
MASI	Maura Aman, Be	6.97	152	P	Pn	11 21 34.2	-0.7
MNAI	Manna	8.38	152	Pn	Pn	11 21 52.0	-1.4
MNAI	Manna	8.38	152	P	Pn	11 21 49.8	-3.6
	comp=N,87nm,0.6s						
EGSI	Enggano, Bengk	8.99	159	P	Pn	11 21 57.0	-4.3
	comp=N,40nm,0.5s						
KASI	Kota Agung	10.16	147	P	Pn	11 22 13.2	-3.4
	comp=N,20nm,0.6s						
PBA	Port Blair	10.54	324	eP	Pn	11 22 24.3	+2.7
PBA				IAML		11 23 31.1	
	comp=E,69nm,0.4s						
PBA				IAML		11 23 33.2	
	comp=N,76nm,0.1s						
PBA				eS	Sn	11 24 11.7	-7.2
DGPR	DIGLIPUR	11.69	330	eP	Pn	11 22 37.9	+1.4
DGPR				IAML		11 22 39.0	
	comp=E,64nm,0.3s						
DGPR				IAML		11 22 40.9	
	comp=N,55nm,0.2s						
DGPR				eS	Sn	11 24 37.9	-8.7
CM31	Chiang Mai Arr	15.30	360	P	P	11 23 22.7	+0.3
CM31				IAmb	IAmb	11 23 25.5	
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	15.30	360	P	P	11 23 23.2	+0.8
	comp=Z,6.6nm,0.9s,baz=193,slow=11,SNR=44						
CMAR	Chiang Mai Arr	15.30	360	P	P	11 23 21.9	-0.5
CHTO	Chiang Mai	15.65	360		Pn	11 23 25.8	-0.3
CHTO				IAmb	IAmb	11 23 28.8	
	comp=Z,6.7nm,0.8s						
PALK	Pallekele	18.68	284	P	Pn	11 24 02.2	+0.1
	comp=Z,5.5nm,0.9s,baz=70,slow=8.9,SNR=4.1						
PALK				S	S	11 27 23.4	+0.6
	comp=Z,6.1nm,0.3s,baz=23,slow=22,SNR=7.3						
PALK	Pallekele	18.68	284	P	P	11 24 00.3	+0.7
TOLI2	Tolitoli	21.87	95	P	P	11 24 34.3	+0.7
TOLI2				IAmb	IAmb	11 24 55.7	
	comp=Z,11nm,0.9s						
AGT	Agartala	22.01	341	eP	P	11 24 35.4	+0.6
AGT				IAmb	IAmb	11 24 49.4	
	comp=Z,3.2nm,0.5s						
AGT				eS	S	11 28 25.0	+0.4
IMP	Imphal	22.18	348	eP	P	11 24 37.7	+1.2
IMP				IAmb	IAmb	11 25 01.1	
	comp=Z,2.7nm,0.3s						
IMP				eS	S	11 28 28.0	+0.6
KOHI	KOHIMA	23.01	349	eP	P	11 24 45.1	+0.9
KOHI				IAmb	IAmb	11 25 05.0	
	comp=Z,3.0nm,0.4s						
KOHI				eS	S	11 28 42.7	+1.7
LSA	Lhasa	27.51	345	P	P	11 25 25.5	+0.3
LSA				IAmb	IAmb	11 25 26.6	
	comp=Z,3.5nm,0.6s						
LZDM	Lanzhou Array	33.02	7	P	P	11 26 13.2	-0.2
	comp=Z,2.1nm,0.5s,baz=187,slow=10,SNR=9.1						
	comp=Z,2.1nm,0.5s						
MORW	Morawa	35.90	154	P	P	11 26 38.4	+0.6
MORW				IAmb	IAmb	11 27 01.2	
	comp=Z,8.2nm,1.1s						
HHC	Hu-ho-hao-te	39.29	15	eP	P	11 27 10.1	+3.9
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WB0	Warramunga Arr	41.53	125	P	P	11 27 24.7	-0.1
WRA	Warramunga Arr	41.57	125	P	P	11 27 25.1	0.0
	comp=Z,1.0nm,0.5s,baz=336,slow=5.4,SNR=33						
WRA				ScP	ScP	11 32 52.0	0.0
	comp=Z,0.4nm,0.8s,baz=310,slow=3.5,SNR=7.6						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	41.57	125	P	P	11 27 25.1	0.0
WRAB	Tennant Creek	41.57	125	P	P	11 27 24.9	-0.3
WR8	Warramunga Arr	41.71	125	P	P	11 27 26.7	+0.5
WR8				IAmb	IAmb	11 27 27.1	
	comp=Z,6.3nm,1.1s						
KSH2	Kashi	41.76	332	P	P	11 27 26.2	-0.4
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	Urumqi	41.80	348	eP	P	11 27 27.4	+0.7
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WUS	Wushi	41.92	338		P	11 27 28.2	+0.3
WUS				IAmb	IAmb	11 27 28.8	
	comp=Z,4.6nm,0.6s						
MANEM	Manem	42.48	327		P	11 27 33.9	+1.4
MANEM				IAmb	IAmb	11 27 35.0	
	comp=Z,48nm,1.3s						
TARG	Taragay, Kyrgy	42.93	337		P	11 27 37.3	+1.0
TARG				IAmb	IAmb	11 27 37.9	
	comp=Z,6.1nm,0.6s						
AS31	Alice Springs	43.15	130	P	P	11 27 38.5	+0.6
ASAR	Alice Springs	43.15	130	P	P	11 27 37.8	-0.1
	comp=Z,0.8nm,0.5s,baz=303,slow=7.8,SNR=18						
ASAR				ScP	ScP	11 32 58.0	-0.3
	comp=Z,0.6nm,0.8s,baz=304,slow=4.1,SNR=7.2						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	43.15	130	P	P	11 27 38.6	+0.7
KSRS	Korea Array	43.31	34	P	P	11 27 38.3	-0.6
	comp=Z,1.3nm,0.7s,baz=216,slow=9.4,SNR=5.0						
	comp=Z,1.3nm,0.7s						
DRK	Karamyk	43.85	329	P	P	11 27 44.6	+1.0
GAR	Garm	44.27	328		P	11 27 46.7	0.0
BOOM	Boomskoye usch	44.32	336		P	11 27 47.6	+0.5
SHAA	Shahritus	44.48	324		P	11 27 48.1	-0.3
SHAA				IAmb	IAmb	11 27 53.1	
	comp=Z,11nm,0.7s						
CHGR	Chuyangaron	44.66	326		P	11 27 49.1	-0.6
CHGR				IAmb	IAmb	11 27 49.6	
	comp=Z,15nm,1.0s						
UCH	Uchtor	44.71	334	P	P	11 27 51.4	+0.9
	SNR=11						
BTK	Batken	44.79	329	P	P	11 27 51.8	+1.1
BTK				IAmb	IAmb	11 27 52.3	
	comp=Z,7.0nm,0.7s						
TKM2	Tokmak 2	44.82	336	P	P	11 27 51.7	+0.6
	SNR=9.7						
KBK	Karagaybulak	44.87	335	P	P	11 27 52.8	+1.3
	SNR=14						
AAK	Ala-Archa	45.05	334		P	11 27 54.2	+1.4
SONM	Songino Array	45.05	7	P	P	11 27 53.5	+0.7
	comp=Z,1.1nm,0.5s,baz=190,slow=9.9,SNR=8.6						
	comp=Z,1.1nm,0.5s						
SONM	Songino Array	45.05	7	P	P	11 27 53.3	+0.5
EKS2	Erkin-Say	45.38	334	P	P	11 27 56.9	+1.4
	SNR=6.9						
USP	Ospenovka	45.56	335	P	P	11 27 56.9	+0.2
	SNR=13						
MKAR	Makanchi Array	45.91	344	P	P	11 27 59.5	+0.1
	comp=Z,5.1nm,0.4s,baz=152,slow=9.1,SNR=117						
	comp=Z,5.1nm,0.4s						
MKAR	Makanchi Array	45.91	344		P	11 27 59.7	+0.4
MAKZ	Makanchi	46.01	344		P	11 27 60.0	-0.1
MAKZ				IAmb	IAmb	11 28 00.8	
	comp=Z,8.1nm,0.6s						
KK31	Karatay Array	47.23	332		P	11 28 09.8	+0.1
KKAR	Karatay Array	47.23	332		P	11 28 10.0	+0.3
KURBB	Kurchatov Arra	50.44	343	P	P	11 28 34.3	+0.4
	comp=Z,2.7nm,0.3s,baz=156,slow=7.4,SNR=35						
	comp=Z,2.7nm,0.3s						
KURK	Kurchatov	50.49	343	P	P	11 28 34.9	+0.6
KURK				IAmb	IAmb	11 28 35.1	
	comp=Z,5.5nm,0.8s						
INKA	Innaminka	50.54	130	P	P	11 28 36.0	+1.0
ZAA0	Zalesovo Array	52.03	349	IAmb	IAmb	11 28 47.0	
	comp=Z,12nm,1.4s						
ZALV	Zalesovo Beam	52.03	349	P	P	11 28 46.2	+0.5
	comp=Z,3.6nm,0.3s,baz=172,slow=6.8,SNR=22						
	comp=Z,3.6nm,0.3s						
ZALV	Zalesovo Beam	52.03	349		P	11 28 46.0	+0.3
STKA	Stephens Creek	53.32	134	P	P	11 28 55.2	-0.4
	comp=Z,2.0nm,0.6s,baz=306,slow=7.4,SNR=6.8						
	comp=Z,2.0nm,0.6s						
STKA	Stephens Creek	53.32	134	P	P	11 28 55.9	+0.3
KRVT	Keravat (AS076	53.51	98	LR	LR	11 53 35.6	
	comp=Z,16nm,20.9s,baz=246,slow=38						
BVAR	Borovoye Array	55.11	339	P	P	11 29 07.7	-0.4
	comp=Z,2.7nm,0.6s,baz=140,slow=9.3,SNR=13						
	comp=Z,2.7nm,0.6s						
BORK	Borovoye	55.16	339	P	P	11 29 08.8	+0.4
BORK				IAmb	IAmb	11 29 09.0	
	comp=Z,3.8nm,0.7s						
RAYN	Ar Rayn	55.49	296	P	P	11 29 12.8	+1.4
RAYN				IAmb	IAmb	11 29 13.2	
	comp=Z,3.4nm,0.8s						
AB31	Akbulak array	56.75	330	IAmb	IAmb	11 29 20.8	
	comp=Z,4.7nm,0.6s						
ABKAR	Akbulak array	56.75	330		P	11 29 19.6	-0.2
ARTI	Arti	62.23	336	P	P	11 29 57.0	-0.2
BR131	Keskin Array S	69.20	311		P	11 30 42.1	-0.2
BR131				IAmb	IAmb	11 30 43.3	
	comp=Z,4.9nm,1.2s						
BRTR	Keskin Array B	69.20	311	P	P	11 30 41.5	-0.8
	comp=Z,2.0nm,0.6s,baz=123,slow=7.1,SNR=12						
	comp=Z,2.0nm,0.6s						
BRTR	Keskin Array B	69.20	311	P	P	11 30 41.9	-0.4
BURAR	Bucovina Array	76.82	318	P	P	11 31 27.9	+1.0
BURAR				IAmb	IAmb	11 31 28.5	
	comp=Z,3.6nm,0.6s						
BUR08	Bucovina Ar. S	76.84	318	P	P	11 31 28.1	+1.2
BUR08				IAmb	IAmb	11 31 28.7	
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	79.19	332	P	P	11 31 38.9	-0.5
	comp=Z,1.3nm,0.3s,baz=109,slow=5.6,SNR=22						
	comp=Z,1.3nm,0.3s						
ARCES	ARCESS Array B	81.39	340	P	P	11 31 50.8	-0.3
	comp=Z,2.1nm,0.8s,baz=84,slow=4.8,SNR=6.7						
	comp=Z,2.1nm,0.8s						
ARCES	ARCESS Array B	81.39	340	P	P	11 31 52.0	+1.0
HFS	Hagfors	85.01	330	P	P	11 32 09.9	+0.2
	comp=Z,1.8nm,0.7s,baz=144,slow=2.8,SNR=5.2						
	comp=Z,1.8nm,0.7s						
SPITS	Spitsbergen Ar	85.50	348	P	P	11 32 11.2	-0.6
	comp=Z,8.0nm,1.0s,baz=108,slow=9.3,SNR=4.3						
	comp=Z,8.0nm,1.0s						
TXAR	Lajitas Array	141.15	32	PKhKP	PKPpre	11 39 01.3	
	comp=Z,0.4nm,1.1s,baz=326,slow=2.2,SNR=1.4						

ISK ***04*** *11:31:36.8, 36.̊52N×28.̊67E, h9km, ML3.4/27*
AFAD ***04*** *11:31:36.5, 36.̊49N×28.̊68E, h16km±2km, ML3.0*
ATH ***04*** *11:31:36.7, 36.̊55N×28.̊73E, h8km±1km, ML3.3/7, Manual Solution by I.Dede First location: 2020/02/04 11:33:01, This location: 2020/02/04 12:04:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
THE ***04*** *11:31:37.7, 37˚N±16˚×2˚9E±1˚1, h3km±16km, M3.1/5, MLh3.1/5*
ISC 04 11:31:37.1±1.0**, 36.̊50N**±0.̊02×**28.̊68E**±0.̊02**, h11**km±8km**,**
n71, σ**0.̊79**/99**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DALY	Dalyan (Mula)	0.31	356	Pg	Pg	11 31 43.2	-0.2
DALY				Sg	Sg	11 31 48.1	+0.4
RDI1	Rhodes Town Ha	0.37	262	P	Pg	11 31 44.8	+0.3
RDI1				S	Sb	11 31 51.2	-0.3
RODB	Rodos	0.37	261	P	Pg	11 31 44.5	0.0
RODB				S	Sb	11 31 50.7	-0.9
SABU	Mula-Dalaman	0.40	36	P	Pg	11 31 44.8	-0.2
SABU				S	Sb	11 31 51.0	-1.3
SABU				IAML		11 31 55.0	
	comp=E,2μm,0.5s						
SABU				IAML		11 31 56.0	
	comp=N,2μm,0.4s						
TURN	Turunc	0.44	308	Pg	Pg	11 31 45.3	-0.5
TURN				Sg	Sg	11 31 51.7	0.0
TURN	Turunc	0.44	308	P	Pg	11 31 45.3	-0.5
TURN				IAML		11 31 52.0	
	comp=N,3μm,0.6s						
TURN				S	Sb	11 31 52.9	-0.7
TURN				IAML		11 31 55.0	
	comp=E,1μm,0.3s						
ARG	Arkhangelos	0.53	237	Pg	Pg	11 31 47.2	-0.3
ARG				Sg	Sb	11 31 55.6	-0.5
ARG	Arkhangelos	0.53	237	P	Pg	11 31 47.1	-0.3
ARG				S	Sb	11 31 55.6	-0.5
ARG	Arkhangelos	0.53	237	P	Pg	11 31 47.2	-0.3
ARG				S	Sb	11 31 55.7	-0.5
CAME	Cameli-Denizli	0.67	49	Pg	Pg	11 31 49.9	-0.2
YER	Yerkesik	0.71	333	Pg	Pg	11 31 50.7	-0.1
YER				Sg	Sb	11 32 00.9	-0.4
YER	Yerkesik	0.71	333	P	Pb	11 31 51.0	-0.5
YER				S	Sb	11 32 00.8	-0.5
AKAS	Kas	0.80	110	Pg	Pb	11 31 53.2	+0.1
CAEL	Denizli, Camel	0.80	40	P	Pb	11 31 52.9	-0.4
CAEL				IAML		11 32 14.0	
	comp=E,1μm,0.8s						
CAEL				IAML		11 32 20.0	
	comp=N,1μm,0.6s						
MULA	Mugla, Merkez-	0.80	339	P	Pg	11 31 52.2	-0.5
MULA				IAML		11 32 06.0	
	comp=N,316nm,0.7s						
MULA				IAML		11 32 16.0	
	comp=E,490nm,0.3s						
KSL	Kastellorizon	0.81	116	P	Pb	11 31 53.1	-0.1
KSL				S	Sb	11 32 04.0	-0.2
KSL	Kastellorizon	0.81	116	P	Pg	11 31 52.2	-0.6
KSL				S	Sg	11 32 02.4	-0.9
DAT	Datca	0.91	285	Pg	Pb	11 31 54.8	-0.3
YAZI	Mula-Dat§a-	1.00	281	P	Pg	11 31 55.7	-0.7
YAZI				S	Sn	11 32 10.7	-0.6
YAZI				IAML		11 32 12.0	
	comp=N,635nm,0.5s						
YAZI				IAML		11 32 14.0	
	comp=E,417nm,0.4s						
ELL	Elmali	1.02	76	Pg	Pg	11 31 56.3	-0.4
MLSB	Milas	1.07	318	Pg	Pn	11 31 57.8	-0.4
APMY	Acipayam-Deniz	1.09	27	Pn	Pb	11 31 57.8	-0.2
BDRM	Kayabasi	1.14	300	P	Pg	11 31 58.3	-0.7
BDRM				S	Sn	11 32 15.5	+0.7
BDRM				IAML		11 32 18.0	
	comp=E,703nm,0.6s						
BODT	Bodrum	1.23	297	P	Pg	11 32 01.8	+1.0
ESEN	Aydn-Nazilli	1.32	349	P	Pb	11 32 01.4	-0.5
ESEN				S	Sn	11 32 18.8	-0.3
ESEN				IAML		11 32 22.0	
	comp=E,278nm,0.5s						
ESEN				IAML		11 32 24.0	
	comp=N,240nm,0.3s						
INCE	Denizli-Bozkur	1.40	31	P	Pg	11 32 04.3	+0.3
INCE				S	Sg	11 32 25.9	+3.7
INCE				IAML		11 32 26.0	
	comp=N,248nm,0.8s						
INCE				IAML		11 32 30.0	
	comp=E,317nm,0.7s						
KORT	Korkueli	1.43	69	Pn	Pg	11 32 04.4	-0.2
NAZL	Nazilli-Aydin	1.49	348	Pn	Pg	11 32 04.9	-0.8
SULTU	Buldan	1.55	3	P	Pg	11 32 06.2	-0.7
SULTU				S	Sg	11 32 28.8	+1.8
SULTU				IAML		11 32 29.0	
	comp=E,362nm,0.7s						
SULTU				IAML		11 32 32.0	
	comp=N,239nm,0.6s						
KARP	Karpathos	1.56	233	Pn	Pn	11 32 05.4	+0.6
KARP	Karpathos	1.56	233	P	Pb	11 32 05.7	-0.4
KARP				S	Sg	11 32 27.3	+0.1
KARP	Karpathos	1.56	233	P	Pb	11 32 05.6	-0.4
KARP				S	Sg	11 32 27.1	-0.1
AYDB	Zeytinkoy-Aydi	1.57	337	Pn	Pb	11 32 05.5	-0.8
BRDR	BURDUR-Merkez	1.62	42	P	Pg	11 32 07.6	-0.7
BRDR				IAML		11 32 35.0	
	comp=N,191nm,0.8s						
BRDR				IAML		11 32 43.0	
	comp=E,174nm,0.7s						
ANTB	Antalya	1.64	75	Pn	Pb	11 32 06.5	-0.8
GCAM	G?zelcaml?	1.66	316	Pn	Pn	11 32 06.7	+0.5
GCAM	G?zelcaml?	1.66	316	P	Pb	11 32 07.1	-0.6
GCAM				IAML		11 32 31.0	
	comp=E,450nm,0.6s						
GCAM				IAML		11 32 33.0	
	comp=N,518nm,0.9s						
KIRA	zmir-Kiraz	1.71	353	P	Pb	11 32 07.8	-0.7
KIRA				S	Sg	11 32 31.4	-0.6
KIRA				IAML		11 32 40.0	
	comp=N,106nm,0.9s						
IZMR	zmir-demi	1.73	341	P	Pb	11 32 07.8	-1.1
IZMR				P	Pn	11 32 08.3	+1.1
IZMR				S	Sb	11 32 30.9	+0.2
IZMR				IAML		11 32 40.0	
	comp=N,123nm,0.6s						
IZMR				IAML		11 32 43.0	
	comp=N,94nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BASM	Basmaki-Afyon	1.79	37	Pn	Pn	11 32 08.4	+0.3
KSS1	Kassos Island	1.79	233	P	Pb	11 32 10.2	+0.3
BCK	Bucak	1.80	57	Pn	Pn	11 32 08.9	+0.6
ODEM	Odemis-Izmir	1.83	345	Pn	Pn	11 32 09.2	+0.5
SMG	Samos	1.90	310	P	Pn	11 32 09.4	-0.2
SMG				S	Sn	11 32 33.4	-0.2
ISP	Isparta	1.98	48	Pn	Pn	11 32 11.2	+0.5
ISP	Isparta	1.98	48	P	Pn	11 32 09.7	-1.0
MANT	Manisa	1.99	357	P	Pn	11 32 10.9	0.0
MANT				IAML		11 32 37.0	
	comp=N,87nm,0.4s						
MANT				S	Sb	11 32 37.3	-1.0
KULA	Kula-Manisa	2.01	360	Pn	Pn	11 32 11.7	+0.6
KZIL	AFYON_Kizioren	2.10	33	P	Pb	11 32 15.2	-0.1
KZIL				IAML		11 32 55.0	
	comp=N,79nm,0.7s						
DGB	zmir	2.11	318	P	Pn	11 32 13.3	+1.0
DGB				S	Sb	11 32 39.9	-1.6
DGB				IAML		11 32 42.0	
	comp=N,255nm,0.4s						
DGB				IAML		11 32 42.0	
	comp=E,295nm,0.5s						
USAK	Uak-Merkez	2.22	7	P	Pn	11 32 14.5	+0.5
KTTT	Salihli	2.23	348	P	Pn	11 32 14.7	+0.6
KTTT				S	Sn	11 32 42.8	+1.1
KTTT				IAML		11 32 44.0	
	comp=N,92nm,0.5s						
BLCB	Balcova	2.29	326	Pn	Pn	11 32 15.5	+0.7
GORD	Gordes-Manisa	2.43	351	Pn	Pn	11 32 17.5	+0.6
ZKR	Zakros	2.43	236	Pn	Pn	11 32 17.8	+0.9
ZKR	Zakros	2.43	236	P	Pn	11 32 18.8	+2.0
AKHS	Akhisar	2.47	344	P	Pn	11 32 18.1	+0.7
AKHS				IAML		11 32 59.0	
	comp=E,104nm,0.2s						
CAMT	Merkez	2.49	335	P	Pn	11 32 18.3	+0.7
CAMT				S	Sn	11 32 49.0	+0.9
CAMT				IAML		11 32 51.0	
	comp=E,114nm,0.6s						
CAMT				IAML		11 33 09.0	
	comp=N,138nm,0.6s						
SHUT	Suhut-Afyon	2.53	35	Pn	Pn	11 32 19.1	+0.8
DEMI	Demirci	2.54	1	P	Pn	11 32 19.0	+0.7
DEMI				IAML		11 33 04.0	
	comp=E,45nm,0.5s						
GDZ	Gediz	2.66	14	P	Pn	11 32 20.7	+0.6
SEYD	Seydisehir-KON	2.69	69	Pn	Pn	11 32 21.5	+1.1
NPS	Neapolis	2.78	244	P	Pn	11 32 22.7	+1.1
CHOS	Chios island	2.81	313	Pn	Pn	11 32 22.7	+0.6
CHOS	Chios island	2.81	313	P	Pn	11 32 22.3	+0.2
DURS	Dursunbey	3.10	357	P	Pn	11 32 26.6	+0.6
BUHA	Balikesir, Bur	3.25	338	P	Pn	11 32 29.2	+1.2
BUHA				IAML		11 33 10.0	
	comp=N,38nm,0.4s						
BUHA				IAML		11 33 11.0	
	comp=E,48nm,0.5s						
IDI	Anoyia	3.31	250	P	Pn	11 32 29.1	+0.2
AKMS	Akamas	3.32	115	P	Pn	11 32 28.6	-0.5
BALY	Balya	3.34	346	P	Pn	11 32 30.4	+1.1
BALY				IAML		11 33 11.0	
	comp=N,38nm,0.4s						
BALY				IAML		11 33 12.0	
	comp=E,27nm,0.6s						
BAYC	CANAKKALE_Bayr	3.64	333	P	Pn	11 32 34.0	+0.5
BAYC				IAML		11 33 19.0	
	comp=N,19nm,0.5s						

IDC 04 11:44:07.7±3.2, 25.85N×142.15E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=360.3km s-min=29.2km az=109.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.15	190	P	P	11 52 34.8	+0.7
	0.5nm,0.9s,baz=9.3,slow=7.5,SNR=6.2						
	0.5nm,0.9s						
ASAR	Alice Springs	49.87	190	P	P	11 53 01.9	-1.0
	0.2nm,0.5s,baz=2.7,slow=6.1,SNR=8.0						
	0.2nm,0.5s						
ILAR	Eielson Array	58.82	28	P	P	11 54 07.7	0.0
	0.3nm,0.9s,baz=252,slow=7.8,SNR=4.4						
	0.3nm,0.9s						

KRSC 04 11:48:36.2±0.7, 55.39N×163.17E, h57km±19km, Ml3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.85	346	eP	Pn	11 48 52.7	+0.6
KBTR				eS	Sn	11 49 04.8	+1.0
KBG	Krutoberegovo	0.91	343	eP	Pn	11 48 53.6	+0.7
KBG				eS	Sn	11 49 06.3	+1.1
SMKR	Semkarok	1.53	322	eP	Pn	11 49 02.6	+1.3
TUMD	Tumrok D	1.60	265	eP	Pn	11 49 04.2	+2.1
TUMD				eS	Sn	11 49 24.2	+2.5
BKI	Bering	1.61	95	eP	Pn	11 49 05.3	+3.0
BKI				eS	Sn	11 49 24.9	+2.9
KLY	Klyuchi	1.70	304	eP	Pn	11 49 03.5	0.0
KLY				eS	Sn	11 49 23.2	-0.9
KIRR	Kirishev	1.70	291	eP	Pn	11 49 06.0	+2.3
KMNR	Kamenistaya	1.71	284	eP	Pn	11 49 06.6	+2.9
KMNR				eS	Sn	11 49 27.6	+3.1
KPT	Kopyto	1.77	290	eP	Pn	11 49 07.2	+2.6
KPT				eS	Sn	11 49 29.5	+3.5
KOZ	Kozyrevsk	1.98	291	eP	Pn	11 49 10.3	+2.9
SRDR	Sredinnyy	2.16	297	eP	Pn	11 49 12.2	+2.4
KII	Karymskiy	2.55	239	eP	Pn	11 49 18.0	+2.8
KII				eS	Sn	11 49 48.1	+3.0
ESO	Esso	2.59	284	eP	Pn	11 49 17.9	+2.2
SPN	Mys Shipunski	2.95	220	eP	Pn	11 49 21.9	+1.4
NLC	Nalytchevo	3.16	227	eS	Sn	11 50 01.5	+1.7
SDLR	Sedlovina	3.28	232	eP	Pn	11 49 28.2	+3.0
SDLR				eS	Sn	11 50 05.5	+2.5
KRER	Koryakskii	3.33	233	eP	Pn	11 49 29.2	+3.3
SMAR	Somma	3.33	232	eP	Pn	11 49 28.8	+2.9
KRX	Arik	3.34	234	eP	Pn	11 49 29.5	+3.5
UGLR	Uglovaya	3.35	231	eP	Pn	11 49 29.3	+3.1
AVH	Avacha	3.36	233	eP	Pn	11 49 29.7	+3.5
KOK	Koryaka	3.38	234	eP	Pn	11 49 29.7	+3.1
GNL	Ganaly	3.49	243	eP	Pn	11 49 31.7	+3.7
DALK	Dalny	3.51	230	eP	Pn	11 49 31.1	+3.0
PET	Petropavlovsk	3.56	230	eP	Pn	11 49 31.5	+2.6
KRMR	Karymshinskiy	3.92	231	eP	Pn	11 49 37.7	+3.9
KRMR				eS	Sn	11 50 20.7	+2.2
RUS	Russkaya	4.04	225	eP	Pn	11 49 38.6	+3.0
PALN	Palana	4.10	336	eP	Pn	11 49 41.3	+5.1
GRL	Gorelyy	4.14	229	eP	Pn	11 49 41.2	+4.2
MTVR	Mutnovka	4.14	227	eP	Pn	11 49 40.6	+3.6
ASAK	Asacha	4.33	228	eP	Pn	11 49 43.8	+4.2
TILK	Tilichiki	5.31	16	eP	Pn	11 49 55.6	+2.8

IDC 04 12:01:04.5±8.5, 22.21N×12.71W, h0km, mbtmp3.6/1, ML3.6/1, Error ellipse: s-maj=850.4km s-min=79.4km az=37.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	16.40	121	Pn	Pn	12 04 56.3	0.0
	0.2nm,0.3s,baz=301,slow=12,SNR=4.8						
	0.9nm,0.6s						
WRA	Warramunga Arr	149.20	92	PKPbc	PKPbc	12 20 55.1	-0.7
	0.3nm,0.9s,baz=278,slow=6.0,SNR=2.0						
ASAR	Alice Springs	149.25	99	PKPbc	PKPbc	12 20 55.5	-0.4
	0.6nm,0.8s,baz=301,slow=2.4,SNR=3.4						

*NEIC **04** 12:03:11.2±1.3, 21.68N±0.08×144.2E±0.1, h133km±6km, mb4.5/45, Error ellipse: s-maj=19.4km s-min=8.1km az=63.0*

*IDC **04** 12:03:14.0±4.0, 21.63N×144.35E, h170km±35km, mb3.9/23, mbtmp4.3/25, Error ellipse: s-maj=16.3km s-min=10.9km az=82.0*

ISC 04 12:03:08.0±0.5, 21.59N±0.07×144.4E±0.1, h114km, n88, σ1§13/80, mb4.4/43, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.85	340	P	Pn	12 04 21.3	-11
	47nm,0.3s,baz=277,slow=22,SNR=20						
JCJ				S	Sn	12 05 24.6	-13
	87nm,0.3s,baz=270,slow=24,SNR=12						
JCJ	Chichijima	5.85	340		Pn	12 04 33.8	+1.5
JGF	Kuroka	15.27	338		P	12 06 39.0	-0.6
JGF				IAmb	IAmb	12 07 00.4	
	comp=Z,18nm,1.4s						
MJAR	Matsushiro Arr	15.85	341	P	P	12 06 47.4	+1.3
	comp=Z,1.8nm,0.7s,baz=159,slow=10,SNR=4.9						
MJAR	Matsushiro Arr	15.85	341	Pn	Pn	12 06 43.6	-1.0
MAJO	Matsushiro	15.85	341		P	12 06 48.5	+2.4
MJB9	Matsu-Tunnel	15.85	341	Pn	P	12 06 48.8	+2.6
JNU	Nakatsue	16.61	317	P	P	12 06 56.8	+2.2
	comp=Z,6.6nm,0.6s,baz=123,slow=6.4,SNR=7.9						
H11N1	WAKE ISLAND Hy	21.11	91	T	T	12 29 46.5	
	baz=277						
H11N2	WAKE ISLAND Hy	21.12	91	T	T	12 29 54.2	
	baz=277						
H11N3	WAKE ISLAND Hy	21.13	91	T	T	12 29 46.5	
	baz=277						
H11S3	WAKE ISLAND Hy	21.15	94	T	T	12 30 36.6	
	baz=283						
H11S1	WAKE ISLAND Hy	21.16	94	T	T	12 30 47.5	
	baz=283						
H11S2	WAKE ISLAND Hy	21.16	94	T	T	12 30 38.9	
	baz=283						
KSRS	Korea Array	21.30	322	P	P	12 07 47.8	+2.3
	comp=Z,7.8nm,0.8s,baz=147,slow=8.7,SNR=30						
	comp=Z,7.8nm,0.8s						
KSAR	Wonju Array Be	21.31	321	P	P	12 07 45.2	-0.4
KS19	Wonju Array Si	21.36	322	P	P	12 07 48.2	+2.0
KS19				IAmb	IAmb	12 07 48.8	
	comp=Z,15nm,0.8s						
YHNB	Yeheng	21.40	283	P	P	12 07 47.7	+0.9
SSLB	Suanglung	21.75	280	P	P	12 07 51.9	+1.4
SSLB				IAmb	IAmb	12 07 52.8	
	comp=Z,18nm,0.7s						
COEN	Coen	35.35	182	P	P	12 09 54.0	+1.4
COEN				IAmb	IAmb	12 10 35.5	
	comp=Z,8.9nm,1.3s						
MTN	Manton Dam	36.62	202		P	12 10 04.2	+0.7
LZDM	Lanzhou Array	38.17	301	P	P	12 10 17.1	+0.3
	comp=Z,6.2nm,0.4s,baz=163,slow=7.3,SNR=29						
LZDM				PcP	PcP	12 12 29.0	-0.4
	comp=Z,0.5nm,0.4s,baz=134,slow=4.2,SNR=1.9						
	comp=Z,6.2nm,0.4s						
KNRA	Kununurra	40.09	204	P	P	12 10 33.1	+0.6
KNRA				IAmb	IAmb	12 10 34.6	
	comp=Z,12nm,0.9s						
SONM	Songino Array	40.15	320	P	P	12 10 32.0	-0.9
	comp=Z,1.0nm,0.5s,baz=125,slow=7.3,SNR=6.3						
SONM				PcP	PcP	12 12 34.0	-1.1
	comp=Z,0.6nm,0.5s,baz=70,slow=2.8,SNR=3.8						
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	40.15	320	P	P	12 10 32.4	-0.6
WB0	Warramunga Arr	42.26	194	P	P	12 10 50.7	+0.5
WB0				IAmb	IAmb	12 11 07.2	
	comp=Z,10nm,1.4s						
WR8	Warramunga Arr	42.41	194	P	P	12 10 52.1	+0.6
WRA	Warramunga Arr	42.44	194	P	P	12 10 52.1	+0.5
	comp=Z,1.4nm,0.3s,baz=17,slow=8.9,SNR=48						
WRA				PcP	PcP	12 12 42.4	-0.4
	comp=Z,0.4nm,0.8s,baz=16,slow=3.2,SNR=2.1						
	comp=Z,1.4nm,0.3s						
WRA	Warramunga Arr	42.44	194	P	P	12 10 52.2	+0.5
CMAR	Chiang Mai Arr	42.73	274	P	P	12 10 54.5	+0.4
	comp=Z,0.7nm,0.6s,baz=78,slow=7.0,SNR=5.5						
	comp=Z,0.7nm,0.6s						
AS31	Alice Springs	46.13	193	P	P	12 11 21.7	+0.6
ASAR	Alice Springs	46.13	193	P	P	12 11 21.3	+0.2
	comp=Z,0.3nm,0.3s,baz=11,slow=7.1,SNR=15						
ASAR				PcP	PcP	12 12 54.5	-0.9
	comp=Z,0.2nm,0.5s,baz=7.9,slow=3.5,SNR=1.3						
	comp=Z,0.3nm,0.3s						
ASAR	Alice Springs	46.13	193	P	P	12 11 21.9	+0.8
BILL	Bilibino	48.41	11	P	P	12 11 39.2	+1.0
BILL				IAmb	IAmb	12 11 40.1	
	comp=Z,7.4nm,1.2s						
K13K	Kusilvak Mount	53.15	27	P	P	12 12 15.4	+1.6
STKA	Stephens Creek	53.23	183	P	P	12 12 13.9	-0.9
	comp=Z,1.6nm,0.6s,baz=337,slow=11,SNR=3.0						
	comp=Z,1.6nm,0.6s						
STKA	Stephens Creek	53.23	183	P	P	12 12 15.1	+0.4
M14K	Bethel	53.86	29	P	P	12 12 20.5	+1.5
ANM	Nome	54.05	24	P	P	12 12 21.5	+1.2
N15K	Kwethluk River	54.52	30	P	P	12 12 25.3	+1.4
N15K				IAmb	IAmb	12 12 45.1	
	comp=Z,16nm,1.4s						
ZAA0	Zalesovo Array	55.01	322	P	P	12 12 26.7	-0.7
ZAA0				IAmb	IAmb	12 12 27.6	
	comp=Z,2.2nm,0.7s						
ZALV	Zalesovo Beam	55.01	322	P	P	12 12 26.3	-1.1
	comp=Z,1.9nm,0.3s,baz=109,slow=8.3,SNR=17						
ZALV				PcP	PcP	12 13 26.3	-1.4
	comp=Z,1.3nm,0.5s,baz=129,slow=4.4,SNR=5.3						
	comp=Z,1.9nm,0.3s						
MKAR	Makanchi Array	55.61	313	P	P	12 12 31.7	-0.2
	comp=Z,2.5nm,0.6s,baz=91,slow=9.4,SNR=38						
MKAR				PcP	PcP	12 13 29.4	-0.8
	comp=Z,1.9nm,0.7s,baz=78,slow=4.2,SNR=12						
	comp=Z,2.5nm,0.6s						
MAKZ	Makanchi	55.83	313		P	12 12 32.9	-0.6
MAKZ				IAmb	IAmb	12 12 34.2	
	comp=Z,4.3nm,0.9s						
C19K	Lookout Ridge	58.12	21	P	P	12 12 50.9	+1.6
C19K				IAmb	IAmb	12 12 51.1	
	comp=Z,2.8nm,0.7s						
KURK	Kurchatov	58.33	317		P	12 12 50.1	-0.9
KURK				IAmb	IAmb	12 12 51.0	
	comp=Z,10nm,1.4s						
KURBB	Kurchatov Arra	58.38	317	P	P	12 12 50.6	-0.7
	comp=Z,3.2nm,0.5s,baz=92,slow=7.6,SNR=35						
	comp=Z,3.2nm,0.5s						
NRIK	Noril'sk	58.49	340	P	P	12 12 51.5	-0.3
	comp=Z,1.9nm,0.3s,baz=114,slow=9.2,SNR=7.1						
	comp=Z,1.9nm,0.3s						
D20K	Etivluk River	58.95	21	P	P	12 12 56.1	+1.0
D20K				IAmb	IAmb	12 12 56.9	
	comp=Z,6.3nm,0.8s						
BOOM	Boomskoye usch	60.08	307	IAmb	IAmb	12 13 04.3	
	comp=Z,3.8nm,0.6s						
E23K	Chandalar	61.22	23	P	P	12 13 12.6	+2.0
IL31		61.61	27	IAmb	IAmb	12 13 53.4	
	comp=Z,9.4nm,1.4s						
ILAR	Eielson Array	61.61	27	P	P	12 13 12.2	-1.0
	comp=Z,2.0nm,0.8s,baz=259,slow=5.4,SNR=31						
	comp=Z,2.0nm,0.8s						
D25K	Kavik River	62.66	22	IAmb	IAmb	12 13 22.1	
	comp=Z,6.0nm,0.8s						
BMAR	Burnt Mountain	62.97	24	P	P	12 13 24.1	+1.8
BVAR	Borovoye Array	63.50	320	P	P	12 13 25.4	-0.6
	comp=Z,3.5nm,0.4s,baz=89,slow=6.8,SNR=36						
BVAR				PcP	PcP	12 13 59.8	-1.8
	comp=Z,2.7nm,0.5s,baz=94,slow=8.9,SNR=7.7						
	comp=Z,3.5nm,0.4s						
BORK	Borovoye	63.54	320	P	P	12 13 25.8	-0.4
BORK				IAmb	IAmb	12 14 00.8	
	comp=Z,3.7nm,0.6s						
BCAR	Beaver Creek A	63.65	29	P	P	12 13 27.2	+0.4
KK31	Karatay Array	64.02	308	IAmb	IAmb	12 13 30.3	
	comp=Z,3.9nm,0.8s						
KKAR	Karatay Array	64.02	308		P	12 13 29.2	-0.3
E28M	Babbage River	65.00	23	IAmb	IAmb	12 13 38.1	
	comp=Z,9.2nm,1.4s						
KBL	Kabul	66.39	299		P	12 13 44.9	-0.4
SHAA	Shahritus	66.59	303	IAmb	IAmb	12 14 06.0	
	comp=Z,10nm,0.7s						
AB31	Akbulak array	70.42	316	IAmb	IAmb	12 14 09.7	
	comp=Z,3.6nm,0.8s						
ABKAR	Akbulak array	70.42	316	P	P	12 14 09.1	-0.7
YKA	Yellowknife Ar	76.01	28	P	P	12 14 41.9	-0.6
	comp=Z,1.0nm,0.7s,baz=296,slow=6.2,SNR=15						
	comp=Z,1.0nm,0.7s						
SPITS	Spitsbergen Ar	76.13	350	P	P	12 14 41.9	-1.0
	comp=Z,8.1nm,1.1s,baz=95,slow=9.3,SNR=4.1						
	comp=Z,8.1nm,1.1s						
RES	Resolute Bay	76.91	14	P	P	12 14 47.7	+0.5
ARCES	ARCESS Array B	79.38	342	P	P	12 15 00.5	-0.5
	comp=Z,2.5nm,0.5s,baz=73,slow=8.1,SNR=14						
	comp=Z,2.5nm,0.5s						
ARCES	ARCESS Array B	79.38	342	P	P	12 15 00.5	-0.5
ARCES				IAmb	IAmb	12 15 05.3	
	comp=Z,15nm,1.5s						
TULEG	Thule	80.02	7	P	P	12 15 04.6	+0.3
TULEG				IAmb	IAmb	12 15 05.6	
	comp=Z,5.3nm,1.0s						
NVAR	Mina Array Bea	82.31	52	P	P	12 15 18.5	+1.0
	comp=Z,2.4nm,0.7s,baz=286,slow=5.3,SNR=21						
	comp=Z,2.4nm,0.7s						
KBZ	Khabaz	83.27	314	P	P	12 15 22.6	+0.6
	comp=Z,5.5nm,0.9s,baz=29,slow=2.6,SNR=6.0						
	comp=Z,5.5nm,0.9s						
FIA1	FINESS Array S	83.77	335	P	P	12 15 22.7	-1.5
FINES	FINESS Array B	83.77	335	P	P	12 15 22.6	-1.6
	comp=Z,7.7nm,0.4s,baz=69,slow=4.7,SNR=76						
	comp=Z,7.7nm,0.4s						
SUMG	Summit	86.06	1	P	P	12 15 36.5	+0.5
SUMG				IAmb	IAmb	12 15 39.0	
	comp=Z,7.0nm,1.0s						
SUMG	Summit	86.06	1	*i* P	P	12 15 35.0	-1.0
PDAR	Pinedale Array	86.66	45	P	P	12 15 39.2	-0.1
	comp=Z,0.6nm,0.7s,baz=303,slow=0.8,SNR=7.0						
	comp=Z,0.6nm,0.7s						
HFS	Hagfors	89.27	338	P	P	12 15 48.8	-2.2
	comp=Z,1.7nm,0.5s,baz=87,slow=3.1,SNR=12						
	comp=Z,1.7nm,0.5s						
NOA	NORSAR Array B	89.45	339	P	P	12 15 50.0	-2.0
	comp=Z,0.5nm,0.6s,baz=52,slow=4.2,SNR=1.2						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	97.18	55	P	Pdif	12 16 29.6	+1.2
	comp=Z,0.3nm,0.9s,baz=294,slow=3.4,SNR=2.4						
	comp=Z,0.3nm,0.9s						
TORD	Torodi Ar. Bea	129.69	310	PKP	PKPdf	12 22 03.4	-1.2
	comp=Z,0.7nm,0.6s,baz=322,slow=1.5,SNR=3.6						
PLCA	Paso Flores	144.82	131	PKP	PKPbc	12 22 31.2	+0.1
	comp=Z,3.3nm,0.7s,baz=178,slow=2.0,SNR=5.9						
PLCA	Paso Flores	144.82	131	PKPbc	PKPbc	12 22 31.5	+0.4
EFI	East Falkland	145.26	155	PKPdf	PKPdf	12 22 32.1	+0.1
BO02	Sierra Bellavi	146.48	121	PKPbc	PKPbc	12 22 37.1	+0.7
LPAZ	La Paz	148.81	86	PKPbc	PKPbc	12 22 42.9	-0.9
	comp=Z,2.3nm,0.4s,baz=86,slow=0.6,SNR=10						
LPAZ	La Paz	148.81	86		PKPbc	12 22 44.2	+0.4

IDC 04 12:18:20.4±19.0, 6.63S×129.62E, h177km±218km, mb3.1/2, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=163.0km s-min=92.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.00	161	P	Pn	12 21 31.2	-0.1
	0.1nm,0.3s,baz=343,slow=12,SNR=7.4						
WRA				S	Sn	12 23 56.5	-11
	0.3nm,0.6s,baz=141,slow=18,SNR=4.6						
	0.3nm,0.4s						
ASAR	Alice Springs	17.43	167	P	P	12 22 11.7	0.0
	0.2nm,0.3s,baz=334,slow=8.7,SNR=11						
	0.4nm,0.5s						
MKAR	Makanchi Array	67.72	327	P	P	12 28 59.8	+1.1
	0.1nm,0.3s,baz=123,slow=7.7,SNR=1.4						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	71.09	334	P	P	12 29 18.1	-1.1
	0.4nm,0.4s,baz=121,slow=7.2,SNR=2.6						
	0.4nm,0.4s						

*ROM **04** 12:20:31.3±0.2, 42.501N±0.010×15.31E±0.01, h10km, ML3.0/46, Error ellipse: s-maj=1.5km s-min=0.6km az=228.0*

*BEO **04** 12:20:31.8±0.9, 42.27N×15.11E, h0km, ML3.3/5*

ISC 04 12:20:32.1±1.2, 42.44N±0.02×15.21E±0.02, h9km±10km, n97, σ1§16/110, 1D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRES	Fresagrandinar	0.62	221	P	Pb	12 20 44.3	-0.8
APRC	Apricena	0.73	160	P	Pg	12 20 45.0	-1.2
APRC				S	Sb	12 20 57.2	+0.1
APRC				AML	AML		
	comp=E,3675µm,0.3s						
APRC				AML	AML		
	comp=N,3875µm,0.4s						
APRC				AML	AML		
	comp=E,3704µm,0.3s						
APRC				AML	AML		
	comp=E,3671µm,0.3s						
APRC				AML	AML		
	comp=N,1419µm,0.4s						
APRC				AML	AML		
	comp=N,3878µm,0.4s						
MELA	Melanico ??? S	0.74	185	P	Pg	12 20 45.7	-0.6
MELA				S	Sb	12 20 57.8	+0.4
MELA				AML	AML		
	comp=N,2200µm,0.2s						
MELA				AML	AML		
	comp=N,2325µm,0.2s						
MELA				AML	AML		
	comp=E,2385µm,0.7s						
MELA				AML	AML		
	comp=N,2200µm,0.2s						
MELA				AML	AML		
	comp=N,2325µm,0.2s						
MELA				AML	AML		
	comp=N,2199µm,0.2s						
MELA				AML	AML		
	comp=E,2379µm,0.7s						
MELA				AML	AML		
	comp=E,2380µm,0.7s						
MELA				AML	AML		
	comp=E,2384µm,0.7s						
CIGN	Sant'Elia a Pi	0.82	196	P	Pn	12 20 48.9	-1.0
CIGN				AML	AML		
	comp=E,736µm,0.5s						
CIGN				AML	AML		
	comp=N,862µm,0.6s						
CIGN				AML	AML		
	comp=N,862µm,0.6s						
CIGN				AML	AML		
	comp=E,735µm,0.5s						
TRIV	Trivento	0.83	216	P	Pb	12 20 48.7	-0.2
TRIV				AML	AML		
	comp=E,932µm,0.5s						
TRIV				AML	AML		
	comp=E,948µm,0.4s						
TRIV				AML	AML		
	comp=N,715µm,0.8s						
TRIV				AML	AML		
	comp=N,704µm,0.8s						
TRIV				AML	AML		
	comp=N,715µm,1.2s						
TRIV				AML	AML		
	comp=N,704µm,1.2s						
TRIV				AML	AML		
	comp=E,933µm,0.5s						
TRIV				AML	AML		
	comp=N,715µm,0.8s						
TRIV				AML	AML		
	comp=N,704µm,0.8s						
TRIV				AML	AML		
	comp=E,948µm,0.4s						
TRIV				AML	AML		
	comp=E,933µm,0.5s						
LPEL	Lama dei Pelig	0.86	243	P	Pb	12 20 49.3	+0.1
LPEL				AML	AML		
	comp=E,1370µm,1.3s						
LPEL				AML	AML		
	comp=E,1350µm,0.2s						
LPEL				AML	AML		
	comp=N,874µm,1.1s						
LPEL				AML	AML		
	comp=N,822µm,1.1s						
LPEL				AML	AML		
	comp=E,1346µm,0.2s						
LPEL				AML	AML		
	comp=E,1348µm,0.2s						
LPEL				AML	AML		
	comp=N,768µm,0.2s						
LPEL				AML	AML		
	comp=N,764µm,0.2s						
MSAG	Monte S. Angel	0.90	144	P	Pg	12 20 48.4	-1.0
MSAG				AML	AML		
	comp=N,3860µm,0.8s						
MSAG				AML	AML		
	comp=E,628µm,0.6s						
MSAG				AML	AML		
	comp=N,1630µm,0.9s						
MSAG				AML	AML		
	comp=E,1615µm,0.6s						
MSAG				AML	AML		
	comp=E,628µm,1.4s						
MSAG				AML	AML		
	comp=E,1615µm,1.4s						
MSAG				AML	AML		
	comp=N,3855µm,0.8s						
MSAG				AML	AML		
	comp=E,1473µm,0.3s						
MSAG				AML	AML		
	comp=E,585µm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MSAG				AML	AML		
	comp=N,3273μm,0.3s						
MSAG				AML	AML		
	comp=N,1363μm,0.3s						
GATE	Gambatesa	0.95	194	P	Pb	12 20 50.8	-0.1
BSSO	Busso	1.01	207	P	Pn	12 20 51.7	-0.9
VCEL	Villa Celiera	1.01	268	P	Pb	12 20 51.5	-0.4
TRTR	Tortoreto Alta	1.02	291	P	Pn	12 20 53.3	+0.6
MIDA	Miranda	1.07	222	P	Pg	12 20 52.0	-0.7
MIDA				AML	AML		
	comp=E,593μm,0.2s						
MIDA				AML	AML		
	comp=E,612μm,0.9s						
MIDA				AML	AML		
	comp=N,594μm,0.3s						
MIDA				AML	AML		
	comp=E,594μm,0.2s						
MIDA				AML	AML		
	comp=N,611μm,1.2s						
MIDA				AML	AML		
	comp=N,611μm,0.8s						
MIDA				AML	AML		
	comp=E,594μm,1.8s						
MIDA				AML	AML		
	comp=E,612μm,1.1s						
MIDA				AML	AML		
	comp=E,593μm,0.2s						
MIDA				AML	AML		
	comp=N,595μm,0.3s						
MIDA				AML	AML		
	comp=E,509μm,0.4s						
MIDA				AML	AML		
	comp=N,531μm,0.4s						
MOCO	Biccari - m.te	1.07	182	P	Pn	12 20 53.4	-0.1
RNI2	Rionero Sannit	1.08	227	P	Pn	12 20 53.1	-0.4
T0110	Collepietro	1.08	259	P	Pb	12 20 52.8	-0.3
T0110				AML	AML		
	comp=E,740μm,1.1s						
T0110				AML	AML		
	comp=N,852μm,0.7s						
T0110				AML	AML		
	comp=E,700μm,0.3s						
T0110				AML	AML		
	comp=N,854μm,0.7s						
SACR	S. Croce Del S	1.11	200	P	Pg	12 20 52.6	-0.9
SACR				AML	AML		
	comp=E,464μm,0.7s						
SACR				AML	AML		
	comp=E,504μm,0.7s						
SACR				AML	AML		
	comp=N,644μm,0.5s						
SACR				AML	AML		
	comp=E,465μm,0.7s						
SACR				AML	AML		
	comp=N,616μm,0.5s						
SACR				AML	AML		
	comp=N,644μm,1.5s						
SACR				AML	AML		
	comp=N,616μm,1.5s						
SACR				AML	AML		
	comp=N,617μm,0.5s						
SACR				AML	AML		
	comp=N,644μm,0.5s						
SACR				AML	AML		
	comp=E,452μm,0.4s						
SACR				AML	AML		
	comp=E,437μm,0.4s						
HVAR	Hvar	1.17	51	*i* Pg	Pb	12 20 52.8	-1.8
HVAR				Sg	Sg	12 21 10.0	+0.2
TERO	Teramo	1.20	279	P	Pb	12 20 54.3	-0.8
GIGS	Gran Sasso	1.21	271	P	Pb	12 20 54.1	-1.2
FAGN	Fagnano	1.22	262	P	Pn	12 20 55.3	-0.2
SGG	Gregorio Mates	1.22	211	P	Pn	12 20 56.0	+0.4
SGG				AML	AML		
	comp=N,430μm,0.5s						
SGG				AML	AML		
	comp=E,392μm,0.6s						
SGG				AML	AML		
	comp=E,361μm,0.3s						
SGG				AML	AML		
	comp=N,424μm,0.5s						
SGG				AML	AML		
	comp=E,392μm,0.6s						
SGG				AML	AML		
	comp=E,361μm,0.3s						
SGG				AML	AML		
	comp=N,430μm,0.5s						
CERA	Filignano	1.22	227	P	Pn	12 20 56.4	+0.8
OFFI	Offida	1.23	294	P	Pg	12 20 56.2	+0.6
ZIRJ	Zirje	1.25	15	*e*Pn	Pn	12 20 54.5	-1.4
ZIRJ				Sn	Sb	12 21 12.1	-0.1
PSB1	Pescosannita	1.25	194	P	Pg	12 20 55.5	-0.7
VAGA	Valle Agricola	1.26	216	P	Pn	12 20 55.2	-0.8
VAGA				AML	AML		
	comp=N,652μm,0.3s						
VAGA				AML	AML		
	comp=E,436μm,0.4s						
VAGA				AML	AML		
	comp=E,436μm,1.6s						
VAGA				AML	AML		
	comp=N,634μm,0.3s						
VAGA				AML	AML		
	comp=N,652μm,0.3s						
VAGA				AML	AML		
	comp=E,430μm,0.5s						
VAGA				AML	AML		
	comp=E,436μm,0.4s						
LSTV	Lastovo	1.28	75	*e*Pn	Pn	12 20 54.4	-1.8
LSTV				Sn	Sb	12 21 13.1	0.0
POFI	Posta Fibreno	1.33	237	P	Pn	12 20 56.2	-0.7
VITU	Vitulano (BN)	1.33	199	P	Pg	12 20 57.3	-0.4
CAMP	Campotosto	1.33	275	P	Pn	12 20 56.2	-0.9
SMA1	SAN MARTINO	1.40	278	P	Pb	12 20 58.0	-0.5
MF5	Montefalcone A	1.40	294	P	Pb	12 20 58.2	-0.3
LRP	Arpino	1.45	237	P	Pn	12 20 58.0	-0.5
LRP				AML	AML		
	comp=N,80μm,0.5s						
LRP				AML	AML		
	comp=E,178μm,1.2s						
LRP				AML	AML		
	comp=N,80μm,0.5s						
LRP				AML	AML		
	comp=E,178μm,0.8s						
LRP				AML	AML		
	comp=E,175μm,0.4s						
MORI	Morici	1.47	14	*i* Pn	Pn	12 20 57.2	-1.6
MORI				Sn	Sn	12 21 17.3	-0.9
RM33	Pellescritta (	1.48	273	P	Pg	12 21 00.6	+0.1
PAOL	Paolisi	1.49	199	P	Pg	12 21 00.9	+0.2
PAOL				AML	AML		
	comp=E,232μm,1.0s						
PAOL				AML	AML		
	comp=N,214μm,1.4s						
PAOL				AML	AML		
	comp=E,232μm,1.0s						
SNAL	S. Angelo Dei	1.52	180	P	Pn	12 20 58.4	-1.1
MTMR	Montemarano	1.53	186	AML	AML		
	comp=E,8590μm,0.2s						
MTMR				AML	AML		
	comp=N,22450μm,1.0s						
MTMR				AML	AML		
	comp=E,169μm,0.3s						
MTMR				AML	AML		
	comp=N,205μm,1.4s						
MTMR				AML	AML		
	comp=N,205μm,0.6s						
MTMR				AML	AML		
	comp=N,22450μm,1.0s						
CLT3	Calitri	1.54	175	P	Pb	12 21 00.0	-0.9
DUGI	Dugi Otok	1.55	356	*e*Pn	Pn	12 20 58.6	-1.4
DUGI				Sn	Sn	12 21 19.4	-0.9
FIAM	Fiamignano	1.56	264	P	Pb	12 21 00.6	-0.6
MC2	Monte Cornacci	1.56	288	P	Pn	12 21 00.5	+0.2
MRVN	Minervino Murg	1.56	152	P	Pn	12 20 58.7	-1.5
NRCA	Norcia	1.59	285	⇓P	Pn	12 21 00.7	+0.1
NRCA				AML	AML		
	comp=E,428μm,0.6s						
NRCA				AML	AML		
	comp=N,326μm,0.7s						
NRCA				AML	AML		
	comp=E,428μm,1.4s						
NRCA				AML	AML		
	comp=N,326μm,1.3s						
PALZ	Palazzo San Ge	1.60	159	P	Pn	12 20 59.4	-1.2
LNSS	Leonessa	1.61	276	P	Pn	12 21 01.1	+0.2
CSP1	Cessapalombo	1.61	294	P	Pn	12 21 00.6	-0.4
CSP1				AML	AML		
	comp=N,338μm,1.6s						
CSP1				AML	AML		
	comp=E,354μm,0.7s						
CSP1				AML	AML		
	comp=N,338μm,0.4s						
AOI	Ancona	1.62	314	P	Pn	12 21 00.2	-0.7
MCRV	Calabrutti - M	1.66	181	P	Pn	12 21 01.4	-0.2
MRLC	Muro Lucano	1.70	173	P	Pn	12 21 01.1	-0.9
CERT	Cerreto	1.73	254	P	Pb	12 21 03.2	-0.8
CERT				AML	AML		
	comp=E,150μm,0.9s						
CERT				AML	AML		
	comp=N,101μm,1.3s						
CING	Cingoli	1.75	303	P	Pn	12 21 02.4	-0.4
RICI	Ricice	1.76	53	*e*Pn	Pn	12 21 01.3	-1.6
RICI				Sn	Sn	12 21 25.1	-0.4
MML1	Montelago di S	1.78	293	P	Pn	12 21 03.2	+0.1
EL6	Elcito	1.79	301	P	Pn	12 21 03.2	-0.1
CESI	CESI - Serrava	1.79	289	P	Pn	12 21 02.8	-0.5
KIJV	Kijevo	1.79	29	*e*Pn	Pn	12 21 02.4	-0.9
KIJV				Sn	Sn	12 21 26.3	+0.2
VIRC	Vir	1.85	357	*e*Pn	Pn	12 21 02.9	-1.2
VIRC				Sn	Sn	12 21 27.2	-0.4
AMUR	Altamura	1.86	145	P	Pn	12 21 02.7	-1.5
SNTG	Esanatoglia	1.86	297	P	Pn	12 21 04.2	0.0
STON	Ston	1.89	76	*e*Pg	Pb	12 21 05.8	-1.0
STON				Sn	Sn	12 21 28.0	-0.4
STON	Ston	1.89	76	P	Pn	12 21 02.8	-1.7
STON				AML	AML		
	comp=E,156μm,0.4s						
STON				AML	AML		
	comp=N,146μm,0.4s						
STON				AML	AML		
	comp=N,145μm,0.4s						
STON				AML	AML		
	comp=E,155μm,0.4s						
STON	Ston	1.89	76	*e*Pg	Pb	12 21 06.8	+0.1
STON				*e*Sg	Sg	12 21 36.3	+3.6
VIVA	Pratoni del Vi	1.94	250	AML	AML		
	comp=N,644μm,1.0s						
VIVA				AML	AML		
	comp=E,683μm,0.9s						
VIVA				AML	AML		
	comp=N,644μm,1.0s						
MOMA	Monte Martano	1.98	281	P	Pb	12 21 07.2	-1.3
FOSV	Fossato di Vic	1.99	296	P	Pn	12 21 05.9	-0.2
PTRP	Pietrapertosa	2.02	161	P	Pb	12 21 08.6	-0.6
ATCC	AVT- Casa Cast	2.03	292	P	Pn	12 21 07.0	+0.4
FRON	Frontone	2.12	301	P	Pn	12 21 07.2	-0.5
CMPR	Campora	2.12	178	P	Pn	12 21 07.8	-0.1
UDBI	Udbina	2.12	11	*i* Pn	Pn	12 21 08.1	+0.2
UDBI				Sn	Sn	12 21 36.2	+1.7
NVLJ	Novalja	2.13	354	*i* Pn	Pn	12 21 06.8	-1.2
NVLJ				Sn	Sn	12 21 34.9	+0.3
MURB	Monte Urbino	2.14	293	P	Pn	12 21 08.9	+0.8
MPAG	Monte Paganucc	2.15	304	P	Pn	12 21 07.7	-0.6
NOCI	Noci	2.16	139	P	Pn	12 21 06.7	-1.6
NOCI				AML	AML		
	comp=E,198μm,0.5s						
NOCI				AML	AML		
	comp=N,276μm,0.4s						
NOCI				AML	AML		
	comp=N,276μm,0.4s						
NOCI				AML	AML		
	comp=E,192μm,0.3s						
MCEL	Monticello	2.16	168	P	Pn	12 21 08.2	-0.2
DBRK	Dubrovnik	2.18	83	*e*Pg	Pb	12 21 11.8	0.0
DBRK				Sn	Sn	12 21 36.3	+0.5
ATBU	Serra di Buran	2.21	299	P	Pn	12 21 09.2	+0.1
ATLO	AVT- Montelove	2.24	294	P	Pn	12 21 10.2	+0.7
PIEI	Pieia	2.25	300	P	Pn	12 21 09.2	-0.4
ATPC	Poggio Castell	2.27	298	P	Pn	12 21 10.2	+0.3
ATPI	Pietralunga -	2.29	297	P	Pn	12 21 10.5	+0.3
ATVA	AVT- Monte Val	2.31	292	P	Pn	12 21 11.2	+0.8
MGAB	Montegabbione	2.33	283	P	Pn	12 21 11.5	+0.8
TREB	Trebinje	2.34	82	*e*Pn	Pn	12 21 12.1	+1.3
PARC	Parchiule	2.49	300	P	Pn	12 21 13.3	+0.4
CRE	Caprese Michel	2.66	297	P	Pn	12 21 15.8	+0.4
BLY	Banja Luka	2.72	31	*e*Pn	Pn	12 21 17.8	+1.8
BLY	Banja Luka	2.72	31	*e*Pn	Pn	12 21 17.9	+1.9
BOJS	Bojanci	3.06	1	*e*Pn	Pn	12 21 22.6	+1.9
SKDS	Skadanscina	3.22	345	*e*Pn	Pb	12 21 27.1	-2.4
CEY	Cerknica	3.34	351	*e*Pn	Pb	12 21 28.5	-3.1
BBLS	Lazi&#263i	3.38	64	*e*Pn	Pn	12 21 28.2	+3.0
ZAG	Zagreb	3.43	9	P	Pn	12 21 26.6	+0.8
SJES	Sjenica	3.60	75	*e*Pn	Pn	12 21 31.5	+3.3
GOCS	Kraljevo Serbi	4.30	73	*e*Pn	Pn	12 21 42.1	+4.2
SELS	Selova	4.42	78	*e*Pn	Pn	12 21 41.0	+1.6

IDC 04 12:21:13.6±2.6**, 10°.71N×92°.24E, h0km, mb3.4**/2**, mbtmp3.5**/3**, ML4.0**/1**, MS2.4**/1**, Error ellipse: s-maj=69.3km s-min=32.8km az=61.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.06	39	Pn	Pn	12 23 38.5	-1.0
	0.4nm,0.3s,baz=234,slow=14,SNR=18						
CMAR				LR	LR	12 27 17.2	
	comp=Z,22nm,21.5s,baz=135,slow=36						
	1.6nm,0.7s						
H08S3	Diego Garcia H	26.81	228	T	T	12 55 14.5	
	baz=47,slow=74						
H08S2	Diego Garcia H	26.82	228	T	T	12 55 14.4	
	baz=47,slow=74						
H08S1	Diego Carcia H	26.83	228	T	T	12 55 17.3	
	baz=47						
MKAR	Makanchi Array	36.94	349	P	P	12 28 24.5	+0.1
	0.7nm,0.7s,baz=172,slow=8.0,SNR=8.9						
	0.7nm,0.7s						
WRA	Warramunga Arr	51.43	126	P	P	12 30 20.9	0.0
	0.2nm,0.7s,baz=298,slow=8.8,SNR=1.3						
	0.2nm,0.7s						
H04N2	CROZET ISLANDS	67.23	209	T	T	13 45 42.7	
	baz=44,slow=75						
H04N1	CROZET ISLANDS	67.24	209	T	T	13 45 39.6	
	baz=44,slow=75						
H04N3	CROZET ISLANDS	67.25	209	T	T	13 45 38.8	
	baz=44,slow=75						

*DJA **04** 12:28:25.7±0.6, 4°N±5°×12°8E±°, h10km, M4.4/19, mB5.1/2, mb4.4/8, MLv4.3/19, Mw(mB)4.5/2*
*NEIC **04** 12:28:27.8±1.1, 3°.83N±0°.09×128°.3E±0°.1, h54km±9km, mb4.4/20, Error ellipse: s-maj=18.0km s-min=13.4km az=84.0*
*IDC **04** 12:28:31.1±3.2, 3°.84N×128°.46E, h82km±34km, mb3.6/15, mbtmp4.0/16, Error ellipse: s-maj=36.7km s-min=14.3km az=72.0*
ISC 04 12:28:26.5±0.5**, 3°.90N**±0°.06×**128°.27E**±0°.07**, h35km, n53, σ1s.53**/53**, mb4.2**/24**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	2.74	266	P	Pn	12 29 08.5	+0.4
SGSI				S	Sn	12 29 40.0	0.0
TNTI	Ternate	3.23	196	Pn	Pn	12 29 15.3	+0.6
TNTI				Sn	Sn	12 29 52.3	+0.2
TNTI	Ternate	3.23	196	P	Pn	12 29 17.1	+2.3
MNI	Manado	4.20	235	P	Pn	12 29 28.4	+0.2
SWI	Sorong	5.59	148	P	Pn	12 29 51.3	+4.0
	0.1nm25nm,0.9s						
SIJI	Sorong	5.60	148	P	Pn	12 29 50.1	+2.7
	8.5nm,0.2s,baz=275,slow=23,SNR=14						
SIJI				S	Sn	12 30 51.5	+0.9
	4.2nm,0.3s,baz=214,slow=23,SNR=7.7						
SIJI	Sorong	5.60	148	P	Pn	12 29 49.9	+2.5
	0.1nm1μm17nm,1.1s						
SANI	Sanana	6.33	201	P	Pn	12 29 57.6	+0.2
	0.1nm19nm,0.7s						
MRSI	Marisa	7.18	242	P	Pn	12 30 10.2	+1.1
TOLI2	Tolitoli	7.97	250		Pn	12 30 20.3	+0.3
MTN	Manton Dam	16.87	170		Pn	12 32 18.6	-1.5
KNRA	Kununurra	19.45	179	P	P	12 32 47.4	-2.9
KNRA				IAmb	IAmb	12 33 13.0	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	22.01	187	P	P	12 33 19.5	+1.6
	comp=Z,2.7nm,0.8s,baz=8.1,slow=14,SNR=2.1						
	comp=Z,2.7nm,0.8s						
WB0	Warramunga Arr	24.27	166	P	P	12 33 38.1	-2.6
WB0				IAmb	IAmb	12 33 52.6	
	comp=Z,8.3nm,1.2s						
WRAB	Tennant Creek	24.42	166	P	P	12 33 40.0	-2.0
WRAB				IAmb	IAmb	12 33 52.8	
	comp=Z,4.7nm,0.5s						
WRA	Warramunga Arr	24.43	166	P	P	12 33 40.0	-2.1
	comp=Z,1.7nm,0.5s,baz=345,slow=11,SNR=25						
	comp=Z,1.7nm,0.5s						
WRA	Warramunga Arr	24.43	166	P	P	12 33 38.8	-3.3
AS31	Alice Springs	27.94	169	P	P	12 34 12.9	-0.9
ASAR	Alice Springs	27.94	169	P	P	12 34 13.3	-0.5
	comp=Z,0.4nm,0.5s,baz=357,slow=8.2,SNR=9.4						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	27.94	169	P	P	12 34 12.6	-1.2
CMAR	Chiang Mai Arr	32.12	299	P	P	12 34 53.1	+2.2
	comp=Z,0.4nm,0.4s,baz=109,slow=9.4,SNR=1.5						
	comp=Z,0.4nm,0.4s						
KSRS	Korea Array	33.40	359	P	P	12 35 02.6	+0.9
	comp=Z,1.1nm,0.6s,baz=180,slow=9.9,SNR=4.1						
	comp=Z,1.1nm,0.6s						
STKA	Stephens Creek	37.77	161	P	P	12 35 39.9	+0.5
	comp=Z,1.2nm,0.5s,baz=336,slow=8.5,SNR=2.8						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	37.77	161	P	P	12 35 36.1	-3.2
LZDM	Lanzhou Array	39.14	328	P	P	12 35 53.2	+1.9
	comp=Z,0.7nm,0.4s,baz=147,slow=12,SNR=6.2						
	comp=Z,0.7nm,0.4s						
H11S3	WAKE ISLAND Hy	40.26	66	T	T	13 19 07.5	
	baz=253,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	40.28	66	T	T	13 19 08.1	
	baz=253,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	40.28	66	T	T	13 19 08.0	
	baz=253,slow=75,SNR=40						
HILR	Hailar Array B	46.07	352	P	P	12 36 48.0	+1.0
	comp=Z,1.1nm,0.4s,baz=169,slow=9.5,SNR=1.5						
	comp=Z,1.1nm,0.4s						
SONM	Songino Array	47.65	340	P	P	12 36 59.2	-0.3
	comp=Z,0.7nm,0.5s,baz=148,slow=8.5,SNR=3.9						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	47.65	340	P	P	12 36 59.4	-0.1
MK31	Makanchi Array	58.30	325	P	P	12 38 17.0	-1.0
MK31				IAmb	IAmb	12 38 20.4	
	comp=Z,6.0nm,1.4s						
MKAR	Makanchi Array	58.30	325	P	P	12 38 17.1	-0.9
	comp=Z,3.1nm,0.4s,baz=114,slow=8.0,SNR=76						
	comp=Z,3.1nm,0.4s						
MKAR	Makanchi Array	58.30	325		P	12 38 16.9	-1.1
MAKZ	Makanchi	58.49	324		P	12 38 18.8	-0.5
ZALV	Zalesovo Beam	61.15	332	P	P	12 38 37.4	0.0
	comp=Z,0.6nm,0.3s,baz=121,slow=7.4,SNR=5.9						
	comp=Z,0.6nm,0.3s						
KURK	Kurchatov	62.44	327	P	P	12 38 45.0	-1.1
KURBB	Kurchatov Arra	62.44	327	P	P	12 38 46.7	+0.6
	comp=Z,2.7nm,0.6s,baz=127,slow=6.3,SNR=31						
	comp=Z,2.7nm,0.6s						
GAR	Garm	62.95	312	P	P	12 38 49.1	-0.9
GAR				IAmb	IAmb	12 38 54.2	
	comp=Z,5.3nm,1.0s						
KK31	Karatay Array	64.16	317	P	P	12 38 57.6	-0.2
KK31				IAmb	IAmb	12 39 01.2	
	comp=Z,2.7nm,1.1s						
KKAR	Karatay Array	64.16	317	P	P	12 38 57.8	0.0
TIXI	Tiksi	67.67	0	P	P	12 39 18.9	-0.7
TIXI				IAmb	IAmb	12 39 21.3	
	comp=Z,7.8nm,1.5s						
BVAR	Borovoye Array	68.03	327	P	P	12 39 22.4	+0.1
	comp=Z,0.9nm,0.6s,baz=134,slow=8.5,SNR=4.0						
	comp=Z,0.9nm,0.6s						
NRIK	Noril'sk	70.64	346	P	P	12 39 38.5	+0.3
	comp=Z,1.2nm,0.4s,baz=128,slow=5.2,SNR=3.8						
	comp=Z,1.2nm,0.4s						
AB31	Akbulak array	73.00	320	P	P	12 39 52.6	-0.1
ABKAR	Akbulak array	73.00	320	P	P	12 39 52.6	-0.1
M14K	Bethel	76.81	28	P	P	12 40 13.8	-0.7
M14K				IAmb	IAmb	12 40 17.3	
	comp=Z,6.0nm,1.0s						
E19K	Redstone River	80.50	22	P	P	12 40 33.2	-1.5
E19K				IAmb	IAmb	12 40 37.6	
	comp=Z,2.6nm,0.9s						
D20K	Etivluk River	81.00	21	P	P	12 40 36.4	-1.1
D20K				IAmb	IAmb	12 40 40.3	
	comp=Z,7.5nm,1.4s						
SKT	Skwentna	81.97	28	P	P	12 40 41.1	-1.6
SLKM	Skilak Lake	82.44	30	P	P	12 40 44.0	-1.2
ILAR	Eielson Array	84.30	25	P	P	12 40 53.5	-1.1
	comp=Z,0.4nm,0.9s,baz=252,slow=6.6,SNR=4.2						
	comp=Z,0.4nm,0.9s						
BMAR	Burnt Mountain	85.33	23	P	P	12 40 58.9	-0.9

IDC 04 12:30:40.1±2.2**, 3°.75N×127°.96E, h0km, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=189.7km s-min=22.4km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.36	165	P	P	12 36 00.0	-0.1
	0.7nm,0.5s,baz=344,slow=9.3,SNR=4.6						
	0.7nm,0.5s						
ASAR	Alice Springs	27.86	168	P	P	12 36 31.1	-0.6
	0.2nm,0.5s,baz=353,slow=8.2,SNR=1.6						
	0.2nm,0.5s						
H11S3	WAKE ISLAND Hy	40.60	66	T	T	13 21 28.7	
	baz=253						
H11S1	WAKE ISLAND Hy	40.62	66	T	T	13 21 29.0	
	baz=253						
H11S2	WAKE ISLAND Hy	40.62	66	T	T	13 21 28.7	
	baz=253						
MKAR	Makanchi Array	58.25	325	P	P	12 40 37.0	+0.5
	1.0nm,0.4s,baz=115,slow=7.9,SNR=16						
	1.0nm,0.4s						
KURBB	Kurchatov Arra	62.39	327	P	P	12 41 04.5	-0.3
	0.8nm,0.5s,baz=129,slow=6.3,SNR=8.4						
	0.8nm,0.5s						

*TEH **04** 12:55:38.3, 38°.40N×45°.31E, h4km±735km, ML2.8, Presumed earthquake*
*AZER **04** 12:55:39.1, 38°.55N×45°.37E, h3km, ml2.6*
ISC 04 12:55:38.4±1.6**, 38°.45N**±0°.06×**45°.35E**±0°.06**, h2km**±14km**, n13, σ0s.51**/19**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	Shabestar	0.27	128	Pg	Pg	12 55 43.4	-0.2
IMRD	Marand	0.39	46	Pg	Pb	12 55 47.7	-0.4
ITBZ	Tabriz	0.66	109	Pg	Pg	12 55 50.8	-0.4
ORD	Ordubad	0.70	46	P	Pb	12 55 53.2	-0.1
ORD				S	Sb	12 56 03.9	+0.4
NAX	Nakhchivan	0.73	9	P	Pb	12 55 54.1	+0.1
NAX				S	Sb	12 56 05.4	+0.8
IAZR	Azarshahr	0.92	147	Pg	Pg	12 55 56.1	+0.2
SBZ	Shahbuz	0.96	10	P	Pb	12 55 58.1	+0.2
SBZ				S	Sn	12 56 12.5	-1.0
MAKU	Maku	1.04	330	Pg	Pg	12 55 58.3	-0.2
HYR	Heyderabad	1.33	343	P	Pn	12 56 03.7	-0.4
HYR				S	Sn	12 56 23.1	+0.7
IHRS	Heris	1.34	95	Pg	Pg	12 56 04.1	0.0
ISRB	Sarab	1.93	108	Pn	Pb	12 56 14.2	-0.3
YRD	Yardimli	2.31	77	P	Pb	12 56 20.8	-0.2
YRD				S	Sg	12 56 52.6	-0.1
LRK	Lerik	2.35	84	P	Pb	12 56 22.4	+0.7
LRK				S	Sg	12 56 54.7	+0.6

*THE **04** 12:57:37.3, 35°N±1°×2°4E±°, h2km±2km, M3.1/9, MLh3.1/9*
*ATH **04** 12:57:37.5, 35°.28N×24°.17E, h7km±1km, ML3.1/10, Manual Solution by A.Agalos First location: 2020/02/04 12:58:36, This location: 2020/02/04 13:06:04 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*IDC **04** 12:57:47.2±4.7, 35°.59N×23°.93E, h73km±48km, mb3.2/4, mbtmp3.4/5, ML2.8/1, MS2.7/1, Error ellipse: s-maj=55.6km s-min=21.2km az=157.0*
ISC 04 12:57:37.5±1.1**, 35°.28N**±0°.02×**24°.19E**±0°.02**, h2km**±9km**, n48, σ0s.64**/60**, mb3.4**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAM	Vamos	0.12	2	P	Pg	12 57 40.5	+0.6
VAM				S	Sg	12 57 42.6	+1.1
CHNB	Souda	0.23	333	P	Pg	12 57 42.3	+0.4
CHNB				S	Sg	12 57 45.1	+0.3
IMMV	Iera Moni Meta	0.25	315	P	Pg	12 57 42.4	+0.1
IMMV				S	Sg	12 57 46.1	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IMMV	Iera Moni Meta	0.25	315	P	Pg	12 57 42.4	+0.1
IMMV				S	Sg	12 57 45.5	+0.1
CHAN	Chania	0.27	332	P	Pg	12 57 42.8	+0.2
CHAN				S	Sg	12 57 46.4	+0.4
CH01	Chania	0.27	329	P	Pg	12 57 42.9	+0.2
GVD	Gavdhos	0.45	191	P	Pg	12 57 46.2	+0.1
GVD				S	Sg	12 57 52.9	+0.9
GVD	Gavdhos	0.45	191	P	Pg	12 57 46.2	+0.1
GVD				S	Sg	12 57 52.2	+0.2
KNDR	Palaiochora Ch	0.47	264	P	Pg	12 57 45.8	-0.6
KNDR				S	Sg	12 57 52.4	-0.1
IDI	Anoyia	0.57	89	P	Pg	12 57 47.6	-0.7
IDI				S	Sg	12 57 55.8	0.0
IDI	Anoyia	0.57	89	P	Pg	12 57 47.7	-0.7
ANKY	Antikythira Is	0.93	309	P	Pg	12 57 55.2	-0.1
ANKY				S	Sb	12 58 08.2	-1.0
ANKY	Antikythira Is	0.93	309	P	Pg	12 57 54.9	-0.4
ANKY				S	Sb	12 58 07.8	-1.4
NPS	Neapolis	1.16	91	P	Pg	12 57 59.5	-0.2
NPS				S	Sg	12 58 14.6	-0.2
NPS	Neapolis	1.16	91	P	Pg	12 57 59.2	-0.5
KTHA	Kythira Island	1.34	317	P	Pg	12 58 02.8	-0.3
KTHA	Kythira Island	1.34	317	P	Pn	12 58 02.1	-1.1
MHLO	Agia Marina, M	1.41	7	P	Pn	12 58 03.8	-0.4
THR9	Santorini-Faro	1.43	41	P	Pb	12 58 04.6	-0.2
THR6	Thira Island,	1.45	42	P	Pn	12 58 04.6	-0.1
THR5	Thira Island,	1.47	39	P	Pn	12 58 04.8	-0.2
SNT5	Nea Kammeni, S	1.48	41	P	Pn	12 58 04.9	-0.3
SNT5	Nea Kammeni, S	1.48	41	P	Pn	12 58 04.9	-0.3
SNT5				S	Sg	12 58 25.8	+0.6
THR3	Thira Island,	1.49	41	P	Pn	12 58 05.0	-0.3
THERA	Ancient Thera,	1.50	44	P	Pn	12 58 04.9	-0.5
THERA				S	Sg	12 58 25.7	0.0
ZKR	Zakros	1.67	95	P	Pn	12 58 08.1	+0.4
VLI	Veliai	1.76	325	P	Pn	12 58 07.7	-1.3
VLI	Veliai	1.76	325	P	Pn	12 58 08.3	-0.7
MET1	Methana Town,	2.38	344	P	Pn	12 58 17.4	-0.1
MET6	Megalochori,Me	2.40	344	P	Pn	12 58 17.5	-0.3
MET2	Kameni Chora,	2.43	344	P	Pn	12 58 18.1	0.0
KARP	Karpathos	2.44	83	P	Pn	12 58 18.0	-0.3
KARP	Karpathos	2.44	83	P	Pn	12 58 18.1	-0.3
PYL	PYLOS	2.56	310	P	Pn	12 58 19.7	-0.2
VLY	Voula,Athens	2.58	353	P	Pn	12 58 20.1	-0.2
LTK	Loutraki	2.91	341	P	Pn	12 58 24.3	-0.5
VIL2	Platees	3.02	346	P	Pn	12 58 25.6	-0.7
GUR	Goura	3.04	331	P	Pn	12 58 26.4	-0.2
KLV	Kalavryta, Ach	3.21	330	P	Pn	12 58 28.8	-0.1
MG00	Magoula, Dorid	3.61	331	P	Pn	12 58 34.7	+0.3
ANX	Ano Chora	3.77	332	P	Pn	12 58 37.4	+0.6
BRTR	Keskin Array B	8.71	57	P	Pn	12 59 51.0	+6.3
	0.1nm,0.3s,baz=226,slow=16,SNR=3.6						
	0.9nm,0.8s						
EIL	Elat	10.67	119	LR	LR	13 06 40.8	
	comp=Z,38nm,18.9s,baz=60,slow=48						
MODS	Modra-Piesok	14.05	341	*e*PN	Pn	13 00 56.5	-1.0
ESDC	Sonseca Array	22.73	289	P	P	13 02 39.5	-1.2
	0.3nm,0.2s,baz=90,slow=8.5,SNR=4.1						
	0.3nm,0.2s						
TORD	Torodi Ar. Bea	29.97	228	P	P	13 03 49.6	+2.2
	0.4nm,0.7s,baz=25,slow=6.4,SNR=1.9						
	0.4nm,0.7s						
MKAR	Makanchi Array	44.37	57	P	P	13 05 50.0	+0.8
	0.2nm,0.3s,baz=273,slow=7.9,SNR=12						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	45.49	46	P	P	13 05 58.8	+0.8
	0.3nm,0.3s,baz=270,slow=7.2,SNR=2.2						
	0.3nm,0.3s						

*NOU **04** 13:02:23.5, 32.°94S×177.°44W, h18km, mb4.8/6, South of Kermadec Islands*

*IDC **04** 13:02:38.8±2.0, 33.°56S×179.°23W, h0km, mb4.0/2, mbtmp4.1/3, ML4.4/1, MS3.4/1, Error ellipse: s-maj=46.0km s-min=42.4km az=61.0*

*WEL **04** 13:02:43.5±0.8, 34°S±6°×17°9W±1°3, h33km, M4.7/13, mB5.2/4, ML4.4/15, MLv4.7/13, Mw(mB)4.6/4, Error ellipse: s-maj=18.2km s-min=4.3km az=109.2*

*NEIC **04** 13:02:45.1±1.9, 33.°20S±0.°05×179.°1W±0.°2, h35km±2km, mb4.5/13, Error ellipse: s-maj=26.2km s-min=5.5km az=102.0*

ISC 04 13:02:45.2±0.8**, 33.°78S**±0.°06×**179.°1W**±0.°1**, h50km, n58, σ1.s38**/56**, mb4.4**/8**, 1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.35	209	Pn	Pn	13 03 48.3	-0.4
MXZ	Matakaoa Point	4.35	209	P	Pn	13 03 48.6	-0.1
MXZ	Matakaoa Point	4.35	209	P	Pn	13 03 48.4	-0.4
MXZ				S	Sn	13 04 38.1	0.0
WMGZ	Waiomatatini S	4.53	206	P	Pn	13 03 51.4	+0.2
GLKZ	Green Lake	4.60	12	P	Pn	13 03 50.5	-1.8
GLKZ				S	Sn	13 04 44.0	-0.4
RAO	Raoul Island	4.61	12	Pn	Pn	13 03 42.3	-10
RAO				Sn	Sn	13 04 31.1	-14
PKGZ	Pakihiroa	4.70	209	P	Pn	13 03 53.8	+0.2
PKGZ				S	Sn	13 04 46.1	-0.7
HAZ	Te Kaha	4.73	212	P	Pn	13 03 54.3	+0.3
PUZ	Puketiti	4.81	206	P	Pn	13 03 54.4	-0.7
PUZ				S	Sn	13 04 48.4	-1.1
WIZ	White Island	4.83	218	P	Pn	13 03 56.9	+1.5
RUGZ	Raukumara Rang	4.95	211	P	Pn	13 03 57.2	+0.1
RUGZ				S	Sn	13 04 52.7	-0.5
TWGZ	Tauwhareparae	5.01	208	P	Pn	13 03 57.5	-0.3
TWGZ				S	Sn	13 04 54.7	+0.3
GRZ	Great Barrier	5.14	240	P	Pn	13 04 00.8	+1.3
CNGZ	Carnagh Statio	5.20	204	P	Pn	13 04 00.1	-0.3
CNGZ				S	Sn	13 04 58.2	-0.8
KUZ	Kuaotunu	5.20	234	P	Pn	13 04 01.8	+1.4
KUZ	Kuaotunu	5.20	234	P	Pn	13 04 01.9	+1.5
TKGZ	Te Karaka	5.29	207	P	Pn	13 04 00.3	-1.3
TKGZ				S	Sn	13 05 01.0	-0.1
MWZ	Matawai	5.33	210	P	Pn	13 04 01.0	-1.2
URZ	Urewera	5.45	214	Pn	Pn	13 04 02.6	-1.2
	11nm,0.3s,baz=287,slow=0.9,SNR=50						
URZ				Sn	Sn	13 05 02.1	-3.0
	17nm,0.3s,baz=240,slow=12,SNR=7.3						
	31nm,0.4s						
URZ	Urewera	5.45	214	P	Pn	13 04 03.5	-0.3
URZ	Urewera	5.45	214	P	Pn	13 04 02.3	-1.5
RTZ	Ruatahuna	5.80	212		Pn	13 04 08.7	0.0
WCZ	Waipu Caves	5.84	246	P	Pn	13 04 10.6	+1.4
KNZ	Kokohu	5.86	206	P	Pn	13 04 07.2	-2.3
TOZ	Tahuroa Road	5.93	227		Pn	13 04 10.6	+0.1
OUZ	Omahuta	6.24	255	P	Pn	13 04 15.8	+1.1
OUZ	Omahuta	6.24	255	P	Pn	13 04 15.3	+0.7
BKZ	Black Stump Fm	6.47	212	P	Pn	13 04 17.5	-0.3
HIZ	Hauiti	6.83	224	P	Pn	13 04 24.5	+1.7
HIZ	Hauiti	6.83	224	P	Pn	13 04 23.9	+1.1
PXZ	Pawanui	7.05	206	P	Pn	13 04 23.5	-2.3
NIUE	Niue	16.75	31	Pn	Pn	13 06 31.1	-5.3
DZM	Mont Dzumac	17.30	309	LR	LR	13 11 47.3	
	comp=Z,128nm,20.4s,baz=221,slow=32						
DZM	Mont Dzumac	17.30	309	P	Pn	13 06 40.9	-2.4
DZM				IAmb	IAmb	13 06 46.9	
	comp=Z,20nm,1.3s						
INKA	Innaminka	34.91	269	P	P	13 09 31.3	-0.8
AS31	Alice Springs	42.16	271	P	P	13 10 31.2	-1.9
ASAR	Alice Springs	42.16	271	P	P	13 10 31.6	-1.5
	comp=Z,0.8nm,0.6s,baz=112,slow=7.4,SNR=15						
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	42.16	271	P	P	13 10 30.6	-2.4
WR8	Warramunga Arr	43.31	276	P	P	13 10 41.7	-0.7
WR8				IAmb	IAmb	13 11 22.2	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	43.45	276	P	P	13 10 42.6	-0.9
	comp=Z,1.3nm,0.4s,baz=117,slow=7.9,SNR=30						
	comp=Z,1.3nm,0.4s						
WB0	Warramunga Arr	43.49	277	P	P	13 10 42.9	-1.0
WB0				IAmb	IAmb	13 10 44.0	
	comp=Z,4.0nm,0.9s						
KNRA	Kununurra	50.17	278	P	P	13 11 35.7	-0.4
KNRA				IAmb	IAmb	13 11 50.7	
	comp=Z,11nm,1.1s						
PMSA	Palmer Station	69.57	156	P	P	13 13 52.8	+4.4
JCJ	Chichijima	70.83	324	P	P	13 13 56.0	-0.7
BBJI	Bungbulang	72.02	273	P	P	13 14 04.6	+0.3
BBJI				IAmb	IAmb	13 14 34.6	
	comp=Z,3.4nm,0.8s						
VNA3	Neumayer Olymp	75.00	176	⇓P	P	13 14 28.8	+7.9
	comp=Z,8.0nm,0.8s						
VNA2	Neumayer--Watz	75.42	177	P	P	13 14 31.3	+8.0
	baz=175,slow=6.1						
H03S2	Juan Fernandez	79.35	124	T	T	14 43 15.1	
	baz=235,slow=74,SNR=5.5						
H03S1	Juan Fernandez	79.36	124	T	T	14 43 19.2	
	baz=235,slow=74,SNR=5.4						
H03S3	Juan Fernandez	79.37	124	T	T	14 43 16.6	
	baz=235,slow=74,SNR=6.4						
H03N3	Juan Fernandez	79.56	123	T	T	14 43 17.5	
	baz=239,slow=72,SNR=40						
H03N2	Juan Fernandez	79.56	123	T	T	14 43 15.4	
	baz=239,slow=72,SNR=32						
H03N1	Juan Fernandez	79.58	123	T	T	14 43 16.8	
	baz=239,slow=72,SNR=36						
JGF	Kuroka	80.16	325	P	P	13 14 49.1	-0.9
JGF				IAmb	IAmb	13 14 54.9	
	comp=Z,34nm,1.4s						
SHEM	Shemya Is, Ala	86.35	356	P	P	13 15 21.5	+0.2
SMY	Shemya	86.35	356	P	P	13 15 21.4	+0.1
FINES	FINESS Array B	147.96	337	PKPbc	PKPdf	13 22 23.8	+2.8
	comp=Z,1.1nm,0.5s,baz=18,slow=4.7,SNR=6.1						
TORD	Torodi Ar. Bea	159.45	182	PKPab	PKPab	13 23 18.0	+1.5
	comp=Z,1.0nm,0.9s,baz=202,slow=6.2,SNR=5.4						

*NEIC **04** 13:03:49.5±0.9, 17.°90N±0.°03×66.°928W±0.°009, h10km±1km, ML3.1/35, Md3.3/6(RSPR), Error ellipse: s-maj=5.2km s-min=2.1km az=8.0*

*OSPL **04** 13:03:49.8±0.3, 17.°90N×66.°94W, h14km±3km, ML2.7, Presumed earthquake*

RSPR 04 13:03:49.9, 17.°93N×66.°93W, h9km, MD3.3/6**, 5C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.07	47		Pg	13 03 52.2	+0.3
GBPR					Sg	13 03 53.9	+0.4
GBPR	Guanica, Bosqu	0.07	47	⇑*i*P	Pg	13 03 52.2	+0.3
GBPR				*e*S	Sg	13 03 53.9	+0.4
MLPR	Magueyes Islan	0.12	290		Pg	13 03 52.8	+0.2
MLPR				IAML		13 03 55.6	
	7µm,0.5s						
MLPR				IAML		13 03 55.7	
	7µm,0.3s						
CRPR	Cabo Rojo, PR	0.19	294		Pg	13 03 54.0	+0.2
CRPR					Sg	13 03 56.7	+0.2
CRPR				IAML		13 03 57.2	
	comp=E,5µm,0.2s						
CRPR				IAML		13 03 57.2	
	comp=N,4µm,0.2s						
CRPR	Cabo Rojo, PR	0.19	294	⇓*i*P	Pg	13 03 54.0	+0.2
CRPR				*e*S	Sg	13 03 57.0	+0.5
CRPR	Cabo Rojo, PR	0.19	294	*i* P	Pg	13 03 54.0	+0.2
CRPR				*e*S	Sg	13 03 56.9	+0.4
CRPR				IAML		13 03 57.2	
	comp=Z,6µm,0.2s						
LSP	Las Mesas	0.29	329		Pg	13 03 55.8	+0.1
LSP					Sg	13 04 00.4	+0.8
LSP	Las Mesas	0.29	329	⇓*e*P	Pg	13 03 55.8	+0.1
LSP				*e*S	Sg	13 04 00.4	+0.8
OBIP	Obispado Ponce	0.33	70		Pg	13 03 56.2	-0.3
OBIP					Sg	13 04 01.0	+0.1
OBIP				IAML		13 04 01.9	
	comp=N,604nm,0.3s						
OBIP	Obispado Ponce	0.33	70	⇓*e*P	Pg	13 03 56.3	-0.2
OBIP				*e*S	Sg	13 04 01.4	+0.5
OBIP	Obispado Ponce	0.33	70	*i* P	Pg	13 03 56.3	-0.2
OBIP				*e*S	Sg	13 04 01.4	+0.5
OBIP				IAML		13 04 01.6	
	comp=Z,795nm,0.2s						
PRSN	Puerto Rico Se	0.35	325		Sg	13 04 02.2	+0.7
PRSN	Puerto Rico Se	0.35	325	Pg	Pg	13 03 56.2	-0.6
PRSN				IAML		13 04 02.4	
	comp=Z,5µm,0.3s						
PRSN				IAML		13 04 02.7	
	comp=Z,5µm,0.2s						
PRSN	Puerto Rico Se	0.35	325	⇑*e*P	Pg	13 03 56.8	-0.1
PRSN				*e*S	Sg	13 04 02.2	+0.7
CELP	Cerrillos	0.36	67		Pg	13 03 56.8	-0.3
CELP				IAML		13 04 02.9	
	comp=Z,2µm,0.4s						
CELP				IAML		13 04 03.4	
	comp=Z,1µm,0.3s						
UUPR	Utuado, UPR, P	0.38	32		Pg	13 03 56.9	-0.5
UUPR				IAML		13 04 02.9	
	comp=Z,13µm,0.4s						
UUPR				IAML		13 04 03.6	
	comp=Z,9µm,0.3s						
AGPR	Aguadilla, PR	0.56	342		Pg	13 04 00.2	-0.6
AGPR				IAML		13 04 08.4	
	comp=Z,877nm,0.4s						
AGPR				IAML		13 04 08.7	
	comp=Z,602nm,0.4s						
AGPR	Aguadilla, PR	0.56	342	⇑*i*P	Pg	13 04 00.4	-0.4
AGPR				*e*S	Sg	13 04 08.0	-0.2
AGPR	Aguadilla, PR	0.56	342	*i* P	Pg	13 04 00.4	-0.4
AGPR				*e*S	Sg	13 04 08.2	0.0
AGPR				IAML		13 04 09.5	
	comp=Z,236nm,0.9s						
ECPR	Experimental S	0.67	54		Pg	13 04 01.9	-0.9
ECPR				IAML		13 04 12.0	
	comp=Z,2µm,0.2s						
ECPR				IAML		13 04 13.4	
	comp=Z,2µm,0.2s						
ECPR	Experimental S	0.67	54	⇑*e*P	Pg	13 04 02.1	-0.7
ECPR				*e*S	Sg	13 04 10.8	-0.7
EMPR	Esperanza - Ma	0.67	35		Pg	13 04 02.5	-0.3
EMPR					Sg	13 04 11.9	+0.4
EMPR	Esperanza - Ma	0.67	35	⇑*e*P	Pg	13 04 02.5	-0.3
EMPR				*e*S	Sg	13 04 11.9	+0.4
IDE	Isla Desecheo	0.69	311		Pg	13 04 02.9	-0.3
IDE					Sg	13 04 12.5	+0.3
IDE	Isla Desecheo	0.69	311	⇑*i*P	Pg	13 04 02.9	-0.3
IDE				*e*S	Sg	13 04 12.5	+0.3
SJG	San Juan	0.77	76		Pg	13 04 03.4	-1.2
SJG				IAML		13 04 14.4	
	comp=Z,413nm,0.2s						
SJG				IAML		13 04 17.7	
	comp=Z,307nm,0.3s						
SJG	San Juan	0.77	76		Pg	13 04 03.5	-1.1
SJG	San Juan	0.77	76	⇓*i*P	Pg	13 04 03.7	-1.0
SJG				*e*S	Sg	13 04 14.1	-0.6
SJG	San Juan	0.77	76	*i* P	Pg	13 04 03.7	-1.0
SJG				*e*S	Sg	13 04 13.8	-0.8
SJG				IAML		13 04 14.3	
	comp=Z,244nm,0.2s						
PDPR	Patillas Dam,	0.87	84		Pg	13 04 05.4	-1.3
PDPR				IAML		13 04 18.4	
	comp=Z,184nm,0.3s						
PDPR				IAML		13 04 20.6	
	comp=Z,131nm,0.2s						
GCPR	Guaynabo City	0.89	65		Pg	13 04 05.6	-1.5
GCPR				IAML		13 04 17.8	
	comp=N,226nm,0.3s						
GCPR				IAML		13 04 18.0	
	comp=E,176nm,0.4s						
GCPR	Guaynabo City	0.89	65		Sg	13 04 17.1	-1.6
GCPR	Guaynabo City	0.89	65	⇑*e*P	Pg	13 04 05.8	-1.3
GCPR				*e*S	Sg	13 04 17.1	-1.6
HUMP	Col San Antoni	1.05	78		Pg	13 04 08.2	-1.9
HUMP				IAML		13 04 23.8	
	comp=E,212nm,0.2s						
HUMP				IAML		13 04 31.3	
	comp=E,202nm,0.2s						
HUMP	Col San Antoni	1.05	78		Sg	13 04 22.3	-1.4
HUMP	Col San Antoni	1.05	78	⇑*e*P	Pg	13 04 08.3	-1.8
HUMP				*e*S	Sg	13 04 22.3	-1.4

WEL 04 13:16:27.0±0.5**, 34°S**±5°×**18°0W**±1°0**, h220km**±10km**, mB4.7**/19**, ML4.4**/42**, MLv4.5**/33**, Mw(mB)4.0**/19**, Error ellipse: s-maj=14.2km s-min=4.5km az=109.9, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.05	201	P	Pn	13 17 31.6	+1.6
MXZ				S	S	13 18 19.1	-0.4
WMGZ	Waiomatatini S	4.26	198	P	Pn	13 17 34.9	+2.4
WMGZ				S	S	13 18 25.9	+1.7
HAZ	Te Kaha	4.39	205	P	Pn	13 17 35.6	+1.4
HAZ				S	S	13 18 27.5	+0.3
PKGZ	Pakihiroa	4.40	202	P	Pn	13 17 36.1	+1.8
PKGZ				S	S	13 18 27.2	-0.2
PUZ	Puketiti	4.54	199	P	Pn	13 17 37.4	+1.3
PUZ				S	S	13 18 30.5	0.0
RUGZ	Raukumara Rang	4.62	205	P	Pn	13 17 38.3	+1.1
KUZ	Kuaotunu	4.65	229	P	Pn	13 17 39.5	+2.0
TWGZ	Tauwhareparae	4.71	201	P	Pn	13 17 39.9	+1.7
TWGZ				S	S	13 18 35.6	+1.1
GLKZ	Green Lake	4.81	21	P	Pn	13 17 38.9	-0.6
GLKZ				S	S	13 18 35.6	-1.1
CNGZ	Carnagh Statio	4.94	198	P	Pn	13 17 42.6	+1.6
OPRZ	Ohinepanea	4.98	215	P	Pn	13 17 42.6	+1.1
TKGZ	Te Karaka	5.00	201	P	Pn	13 17 42.4	+0.7
TKGZ				S	S	13 18 40.9	+0.1
MWZ	Matawai	5.00	204	P	Pn	13 17 42.6	+0.7
MWZ				S	S	13 18 40.0	-1.0
URZ	Urewera	5.09	208	P	Pn	13 17 42.7	-0.1
URZ				S	S	13 18 40.1	-2.7
WCZ	Waipu Caves	5.21	244	P	Pn	13 17 43.0	-1.4
RIGZ	Rimuhau	5.27	200	P	Pn	13 17 45.7	+0.6
ETAZ	East Tamaki Re	5.29	232	P	Pn	13 17 47.7	+2.3
RRRZ	Republican Roa	5.40	212	P	Pn	13 17 48.1	+1.2
MUGZ	Murupara	5.41	209	P	Pn	13 17 47.5	+0.5
PRGZ	Paritu Road	5.43	199	P	Pn	13 17 47.6	+0.3
PRGZ				S	S	13 18 50.5	-0.5
SNGZ	Shannon Statio	5.47	203	P	Pn	13 17 48.0	+0.3
OUZ	Omahuta	5.57	253	P	Pn	13 17 47.5	-1.5
KNZ	Kokohu	5.59	200	P	Pn	13 17 48.9	-0.2
PRRZ	Plateau Road	5.59	212	P	Pn	13 17 49.8	+0.6
MHGZ	Mahia Peninsul	5.65	198	P	Pn	13 17 50.5	+0.6
ALRZ	Allen Road	5.66	212	P	Pn	13 17 50.9	+0.8
RAHZ	Arahi	5.67	205	P	Pn	13 17 50.0	-0.3
MTHZ	Maungataniwha	5.71	207	P	Pn	13 17 51.0	+0.2
KUTZ	Kaahu Road	5.84	215	P	Pn	13 17 54.8	+2.4
NMHZ	Naumai	5.94	206	P	Pn	13 17 54.2	+0.5
WATZ	Wairara	6.06	215	P	Pn	13 17 55.7	+0.5
BKZ	Black Stump Fm	6.11	207	P	Pn	13 17 55.5	-0.4
RITZ	Rihia Road	6.22	212	P	Pn	13 17 55.5	-1.8
MCHZ	McNeill Hill	6.28	205	P	Pn	13 17 57.1	-1.0
CKHZ	Cape Kidnapper	6.35	202	P	Pn	13 17 58.1	-0.8
HIZ	Hauiti	6.35	221	P	Pn	13 18 00.4	+1.5
KWHZ	Kaweka Forest	6.36	207	P	Pn	13 17 58.5	-0.7
TMVZ	Te Maari	6.40	212	P	Pn	13 17 59.8	+0.2
ETVZ	East Tongariro	6.41	212	P	Pn	13 18 00.2	+0.4
WTVZ	West Tongariro	6.45	213	P	Pn	13 18 01.0	+0.7
NNVZ	North Ngauruho	6.45	213	P	Pn	13 18 02.0	+1.6
OTVZ	Oturere	6.46	212	P	Pn	13 18 00.8	+0.4
TWVZ	Taurewa	6.48	214	P	Pn	13 18 00.5	-0.2
SNVZ	South Ngauruho	6.49	212	P	Pn	13 17 58.5	-2.3
NGZ	Ngauruhoe	6.49	213	P	Pn	13 18 00.4	-0.5
KAHZ	Kahuranaki	6.54	202	P	Pn	13 18 00.5	-0.8
COVZ	Chateau Observ	6.54	213	P	Pn	13 18 02.6	+1.2
KRHZ	Kereru	6.58	206	P	Pn	13 18 00.1	-1.7
MOVZ	Moawhango	6.62	211	P	Pn	13 18 00.8	-1.6
WNVZ	Wahianoa	6.62	212	P	Pn	13 18 02.8	+0.3
PXZ	Pawanui	6.76	202	P	Pn	13 18 02.2	-1.9
VRZ	Vera Road	6.86	217	P	Pn	13 18 06.0	+0.6
PNHZ	Pukenui	6.88	206	P	Pn	13 18 03.4	-2.3
WPHZ	Waipukurau	6.92	204	P	Pn	13 18 06.2	0.0
PRHZ	Porangahau	7.04	202	P	Pn	13 18 06.4	-1.4
TSZ	Takapari Road	7.09	207	P	Pn	13 18 06.3	-2.2
WAZ	Wanganui	7.24	213	P	Pn	13 18 09.0	-1.4
POWZ	Post Office Ro	7.45	207	P	Pn	13 18 12.6	-0.5
PRWZ	Pori Road	7.52	205	P	Pn	13 18 13.9	-0.1
TIWZ	Tintock	7.75	205	P	Pn	13 18 15.5	-1.4
CPWZ	Castlepoint	7.76	203	P	Pn	13 18 15.6	-1.5

*IDC **04** 13:19:17.9±0.5, 29.°73S×177.°50W, h0km, mb4.7/19, mbtmp4.7/21, ML3.7/2, MS3.9/22, Error ellipse: s-maj=14.8km s-min=11.8km az=55.0*

*BJI **04** 13:19:20.8, 29.°47S×177.°26W, h25km, mB5.6/6, mb4.9/22, Ms5.2/2, Ms7 4.9/1*

*MOS **04** 13:19:21.0±1.0, 29.°65S×177.°46W, h27km, mb5.2/16, Error ellipse: s-maj=12.9km s-min=10.7km az=118.0*

*NEIC **04** 13:19:23.4±1.0, 29.°72S±0.°08×177.°5W±0.°1, h31km±5km, mb5.1/49, Error ellipse: s-maj=14.8km s-min=9.8km az=52.0*

*NOU **04** 13:19:24.1, 29.°84S×176.°44W, h103km, mb4.8/27, Kermadec Islands Region*

*GCMT **04** 13:19:25.4±0.4, 29.°54S±0.°04×177.°19W±0.°04, h36km±1km, MW4.9/54, Moment Tensor Solution. s29,c36; s54,c66; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.77±.24; $M_{\theta\theta}$-0.22±.17; $M_{\phi\phi}$-2.55±.14; $M_{r\theta}$0.68±.17; $M_{\theta\phi}$-0.68±.12; $M_{\phi r}$1.66±.12; Best double couple: $M_0$3.28400×10^{16} NP1:ϕ_s191.00000°,δ29.00000°,λ83.00000°. NP2: ϕ_s19.00000°,δ62.00000°,λ94.00000°. Principal axes: T 3.3090, Plg73.0000°, Azm298.0000°; N -0.0490, Plg3.0000°, Azm197.0000°; P -3.2590, Plg16.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 13:19:23.1±0.3**, 29.°77S**±0.°04×**177.°38W**±0.°05**, h35km, n276, σ1.s69**/272**, mb5.0**/78**, MS3.9**/23**, 16C-12D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	0.69	317	P	Pn	13 19 35.5	-0.9
GLKZ				S	Sn	13 19 44.5	-1.4
RAO	Raoul Island	0.70	318	Pn	Pn	13 19 35.7	-0.7
	9µm,0.3s,baz=261,slow=23,SNR=468						
RAO				Sn	Sn	13 19 44.8	-1.2
	17µm,0.3s,baz=301,slow=24,SNR=22						
RAO	Raoul Island	0.70	318	P	Pn	13 19 35.8	-0.7
MXZ	Matakaoa Point	8.56	204	P	Pn	13 21 23.9	-0.6
MXZ				S	Sn	13 22 59.5	-0.3
WMGZ	Waiomatatini S	8.75	202	P	Pn	13 21 26.2	-0.9
WMGZ				S	Sn	13 23 04.8	+0.2
PKGZ	Pakihiroa	8.91	204	P	Pn	13 21 27.7	-1.7
PKGZ				S	Sn	13 23 07.3	-1.2
HAZ	Te Kaha	8.92	206	P	Pn	13 21 27.8	-1.6
HAZ				S	Sn	13 23 11.5	+2.8
PUZ	Puketiti	9.03	202	P	Pn	13 21 27.9	-3.2
PUZ				S	Sn	13 23 09.8	-1.7
KUZ	Kuaotunu	9.04	218	P	Pn	13 21 38.7	+7.7
RUGZ	Raukumara Rang	9.14	205	P	Pn	13 21 32.2	-0.5
RUGZ				S	Sn	13 23 17.1	+2.8
WCZ	Waipu Caves	9.28	226	P	Pn	13 21 41.9	+7.5
OUZ	Omahuta	9.35	232	P	Pn	13 21 43.4	+8.0
	111nm,0.9s						
OUZ	Omahuta	9.35	232	P	Pn	13 21 42.6	+7.2
CNGZ	Carnagh Statio	9.43	202	P	Pn	13 21 33.8	-2.6
CNGZ				S	Sn	13 23 22.8	+1.7
MWZ	Matawai	9.52	205	P	Pn	13 21 34.9	-2.9
MWZ				S	Sn	13 23 22.3	-1.3
URZ	Urewera	9.62	207	Pn	Pn	13 21 35.6	-3.4
	1.3nm,0.3s,baz=264,slow=3.8,SNR=6.9						
URZ				Sn	Sn	13 23 23.2	-2.6
	5.5nm,0.3s,baz=267,slow=8.9,SNR=8.8						
	2.4nm,0.3s						
URZ	Urewera	9.62	207	P	Pn	13 21 35.7	-3.3
URZ				S	Sn	13 23 23.7	-2.0
SNGZ	Shannon Statio	9.99	204	P	Pn	13 21 42.7	-1.5
SNGZ				S	Sn	13 23 33.0	-2.0
BKZ	Black Stump Fm	10.64	207	P	Pn	13 22 00.1	+7.0
	29nm,2.9s						
MCHZ	McNeill Hill	10.81	205	P	Pn	13 21 54.8	-0.6
MCHZ				S	Sn	13 23 53.1	-1.9
HIZ	Hauiti	10.83	214	P	Pn	13 22 00.5	+4.9
	117nm,1.3s						
NIUE	Niue	12.62	34	P	Pn	13 22 13.9	-6.4
	114nm,1.4s						
NIUE	Niue	12.62	34	P	Pn	13 22 13.7	-6.5
NIUE				S	Sn	13 24 17.1	-22
MSVF	Nonsavu	12.69	340	P	Pn	13 22 25.0	+3.8
	32nm,1.4s						
MSVF	Nonsavu	12.69	340	⇑*e*P	Pn	13 22 19.4	-1.8
NFK	Norfolk Island	12.82	270	P	Pn	13 22 26.7	+3.8
	comp=Z,80nm,1.2s						
SNZO	South Karori	13.18	207	P	Pn	13 22 28.4	+0.6
NNZ	Nelson	13.66	211	P	Pn	13 22 34.2	-0.1
NNZ				S	Sn	13 24 58.4	-6.4
DGTI	Dogotuki	13.67	348	P	Pn	13 22 38.5	+4.0
	comp=Z,80nm,0.9s						
QRZ	Quartz Range	13.75	214	P	P	13 22 41.3	-2.3
	comp=Z,80nm,1.3s						
QRZ	Quartz Range	13.75	214	P	Pn	13 22 37.5	+1.9
QRZ				S	Sn	13 24 59.3	-7.7
CTZ	Chatham Island	13.95	178	P	Pn	13 22 38.1	-0.1
	comp=Z,92nm,1.9s						

CTZ Chatham Island 13.95 178 P **Pn** **13 22 36.8 -1.4**
CTZ S Sn 13 24 59.3 -12
THZ Tophouse 14.31 211 P **Pn** **13 22 42.1 -1.2**
THZ S Sn 13 25 08.9 -12
KHZ Kahutara 14.58 208 P **P** **13 22 50.1 -2.7**
comp=Z,131nm,2.7s
KHZ Kahutara 14.58 208 P **P** **13 22 49.4 -3.5**
KHZ S Sn 13 25 14.2 -13
GVZ Greta Valley S 15.25 208 P **Pn** **13 22 53.6 -2.1**
LTZ Lake Taylor 15.41 210 P **Pn** **13 22 54.3 -3.7**
INZ Inchbonnie 15.74 212 P **P** **13 23 03.6 -2.0**
OXZ Oxford 15.96 209 P **Pn** **13 23 01.4 -3.5**
MQZ McQueen's Vall 16.02 207 P **Pn** **13 23 04.3 -1.3**
WVZ Waitaha Valley 16.34 212 P **P** **13 23 10.6 -1.6**
DZM Mont Dzumac 16.44 294 Pn **Pn** **13 23 09.2 -2.0**
comp=Z,0.1nm,0.3s,baz=309,slow=21,SNR=2.9
comp=Z,11nm,1.0s
DZM Mont Dzumac 16.44 294 *e*P **P** **13 23 12.0 -1.7**
comp=Z,96nm,1.4s
DZM *e*LR LR 13 26 55.2
comp=Z,1μm,24.4s
DZM Mont Dzumac 16.44 294 IAmb IAmb 13 23 18.3
comp=Z,22nm,1.0s
DZM Mont Dzumac 16.44 294 P **P** **13 23 18.9 +5.2**
comp=Z,37nm,1.4s
RPZ Rata Peaks 16.69 210 P **P** **13 23 14.6 -1.7**
comp=Z,78nm,2.1s
RPZ Rata Peaks 16.69 210 P **Pn** **13 23 14.3 +0.1**
TMZ Timaru 17.25 209 P **Pn** **13 23 18.5 -2.7**
LBZ Lake Benmore 17.61 211 P **Pn** **13 23 24.9 -0.7**
LBZ S Sn 13 26 29.6 -11
ODZ Otahua Downs 17.94 209 P **P** **13 23 30.7 +0.7**
comp=Z,44nm,1.9s
ODZ Otahua Downs 17.94 209 P **P** **13 23 29.6 -0.4**
JCZ Jackson Bay 18.02 214 P **Pn** **13 23 29.4 -1.4**
comp=Z,76nm,0.8s
JCZ Jackson Bay 18.02 214 P **Pn** **13 23 29.8 -1.0**
RAR Rarotonga 18.02 66 P **Pn** **13 23 26.7 -4.2**
comp=Z,8.8nm,0.7s,baz=204,slow=22,SNR=1.5
RAR S Sn 13 26 31.4 -20
comp=Z,7.0nm,0.3s,baz=309,slow=11,SNR=2.1
RAR LR LR 13 30 13.3
comp=Z,99nm,19.3s,baz=266,slow=36
RAR Rarotonga 18.02 66 **Pn** **13 23 30.9 0.0**
RAR Rarotonga 18.02 66 P **Pn** **13 23 30.9 0.0**
TUZ Tuapeka 19.09 209 P **Pn** **13 23 42.6 -1.1**
SYZ Scrubby Hill 19.76 208 P **Pn** **13 23 50.4 -1.2**
GC1S Gold Coast 1 S 25.49 266 P **P** **13 24 50.3 +2.2**
TBI Tubuai 25.74 82 *e*S **S** **13 29 13.6 -3.7**
comp=Z,806nm,27.2s
TBI *e*LR LR 13 31 16.6
comp=Z,1μm,28.5s
TBI *e*LR LR 13 31 20.6
comp=Z,3μm,24.2s
TBI *e*T T 13 52 12.4
comp=Z,38nm,0.3s
ARMA Armidale 26.78 261 P **P** **13 25 01.5 +1.5**
comp=Z,29nm,0.8s
ARMA Armidale 26.78 261 P **P** **13 25 03.4 +3.4**
comp=Z,29nm,0.8s
PAE Paea 28.09 71 *e*T T 13 54 47.3
comp=Z,14nm,0.3s
PPT2 Papeete2 28.12 71 *e*S **S** **13 29 49.4 -5.7**
comp=Z,106nm,26.2s
PPT2 *e*LR LR 13 32 14.1
PPT2 comp=Z,608nm,28.0s *e*LR LR 13 32 20.8
PPT2 comp=Z,603nm,24.0s *e*T T 13 54 58.5
comp=Z,8.4nm,0.3s
EIDS Eidsvold 28.25 271 P **P** **13 25 14.2 +1.2**
comp=Z,42nm,0.9s
EIDS Eidsvold 28.25 271 **P** **13 25 13.5 +0.5**
EIDS IAmb IAmb 13 25 15.9
comp=Z,32nm,0.9s
CAN Canberra 28.79 250 P **P** **13 25 20.6 +2.8**
comp=Z,33nm,1.4s
CAN Canberra 28.79 250 P **P** **13 25 18.1 +0.3**
CAN Canberra 28.79 250 P **P** **13 25 18.1 +0.3**
CAN pmax pmax
comp=Z,21nm,1.0s
ALEG Aligegeo Malai 29.31 311 P **P** **13 25 22.5 0.0**
comp=Z,1μm,0.9s
HNR Honiara 29.31 309 LR LR 13 35 55.1
comp=Z,10nm,19.6s,baz=295,slow=34
CMSA Cobar Meteorol 31.72 257 P **P** **13 25 45.7 +2.0**
comp=Z,23nm,1.4s
CMSA Cobar Meteorol 31.72 257 P **P** **13 25 45.2 +1.5**
comp=Z,23nm,1.4s
QLP Quilpie 33.88 266 P **P** **13 26 03.3 +0.7**
comp=Z,32nm,0.7s
CTA Charters Tower 34.23 278 P **P** **13 26 06.4 +0.6**
comp=Z,17nm,0.8s
CTA Charters Tower 34.23 278 P **P** **13 26 06.2 +0.4**
comp=Z,23nm,0.5s,baz=100,slow=10.0,SNR=71
CTA LR LR 13 38 40.9
comp=Z,364nm,18.3s,baz=91,slow=34
comp=Z,23nm,0.5s
CTA Charters Tower 34.23 278 P **P** **13 26 07.1 +1.3**
comp=Z,1.2nm,0.8s
CTAO Charters Tower 34.23 278 P **P** **13 26 07.2 +1.5**
CTAO pP **pP** **13 26 16.1 +1.1**
CTAO x x 13 26 22.6
STKA Stephens Creek 35.14 256 P **P** **13 26 14.9 +1.4**
comp=Z,194nm,1.0s
STKA Stephens Creek 35.14 256 P **P** **13 26 14.2 +0.7**
comp=Z,40nm,0.9s,baz=87,slow=9.3,SNR=43
STKA LR LR 13 39 33.4
comp=Z,308nm,18.0s,baz=55,slow=35
comp=Z,40nm,0.9s
STKA Stephens Creek 35.14 256 **P** **13 26 14.1 +0.5**
STKA Stephens Creek 35.14 256 P **P** **13 26 15.1 +1.6**
comp=Z,9.6nm,1.0s
INKA Innaminka 36.62 263 **P** **13 26 26.6 +0.4**
MTSU Mount Surprise 36.71 280 P **P** **13 26 26.9 -0.2**
comp=Z,21nm,0.8s
MTSU Mount Surprise 36.71 280 P **P** **13 26 28.5 +1.4**
comp=Z,21nm,0.8s
HTT Hallett 37.19 253 P **P** **13 26 31.8 +0.7**
comp=Z,12nm,1.0s
HTT Hallett 37.19 253 P **P** **13 26 32.2 +1.1**
comp=Z,29nm,1.0s
PMG Port Moresby 38.83 294 LR LR 13 40 19.9
comp=Z,244nm,18.5s,baz=158,slow=33
COEN Coen 39.62 285 P **P** **13 26 53.1 +1.5**
BBOO Buckleboo 39.66 253 P **P** **13 26 51.7 -0.1**
comp=Z,28nm,1.1s
BBOO Buckleboo 39.66 253 P **P** **13 26 51.6 -0.1**
BBOO IAmb IAmb 13 26 52.9
comp=Z,69nm,1.6s
BBOO Buckleboo 39.66 253 P **P** **13 26 51.6 -0.1**
comp=Z,28nm,1.1s
QIS Mount Isa 39.81 273 P **P** **13 26 53.3 +0.1**
comp=Z,12nm,0.9s
QIS Mount Isa 39.81 273 P **P** **13 26 53.8 +0.6**
comp=Z,12nm,0.9s
TAOE Nuku Hiva Isla 40.57 67 *e*LR LR 13 38 03.6
comp=Z,483nm,26.5s
AS31 Alice Springs 43.68 266 **P** **13 27 24.0 -0.9**
ASAR Alice Springs 43.68 266 P **P** **13 27 24.1 -0.9**
comp=Z,4.6nm,0.4s,baz=106,slow=7.5,SNR=134
ASAR PcP **PcP** **13 29 11.2 -0.5**
comp=Z,1.6nm,0.6s,baz=110,slow=3.5,SNR=3.0
ASAR ScP **ScP** **13 33 01.9 +1.3**
comp=Z,0.5nm,0.8s,baz=102,slow=3.9,SNR=2.7
ASAR S **S** **13 33 50.1 -2.6**
comp=Z,0.3nm,0.9s,baz=102,slow=16,SNR=2.0
ASAR LR LR 13 45 11.9
comp=Z,496nm,18.4s,baz=112,slow=36
comp=Z,4.6nm,0.4s
ASAR Alice Springs 43.68 266 **P** **13 27 24.0 -0.9**
WR8 Warramunga Arr 44.47 271 **P** **13 27 30.2 -1.0**
WR8 IAmb IAmb 13 27 31.9
comp=Z,23nm,0.8s
WRAB Tennant Creek 44.61 271 P **P** **13 27 31.2 -1.1**
WRAB IAmb IAmb 13 27 32.9
comp=Z,23nm,0.7s
WRAB Tennant Creek 44.61 271 P **P** **13 27 31.7 -0.6**
comp=Z,22nm,0.8s
WRAB Tennant Creek 44.61 271 *ce*P **P** **13 27 31.6 -0.6**
WRAB pmax pmax
comp=Z,43nm,1.3s
WRAB Tennant Creek 44.61 271 P **P** **13 27 31.7 -0.6**
WRAB pP **pP** **13 27 41.1 -0.3**
WRAB PcP **PcP** **13 29 14.7 -0.2**
WRA Warramunga Arr 44.61 271 P **P** **13 27 31.4 -1.0**
comp=Z,25nm,0.6s,baz=110,slow=7.7,SNR=79
WRA PcP **PcP** **13 29 14.3 -0.6**
comp=Z,1.6nm,0.6s,baz=113,slow=2.8,SNR=2.1
WRA ScP **ScP** **13 33 05.5 +1.1**
comp=Z,0.6nm,0.9s,baz=93,slow=3.6,SNR=2.4
comp=Z,25nm,0.6s
WRA Warramunga Arr 44.61 271 **P** **13 27 30.9 -1.5**
WB0 Warramunga Arr 44.63 271 **P** **13 27 31.3 -1.2**
WB0 IAmb IAmb 13 27 33.2
comp=Z,31nm,0.6s
DRV Dumont d'Urvil 44.92 202 P **P** **13 27 35.2 +1.1**
DRV x x 13 27 42.0
DRV x x 13 27 45.9
DRV x x 13 27 50.7
FORT Forrest 46.73 254 P **P** **13 27 47.7 -1.2**
comp=Z,12nm,0.6s
FORT Forrest 46.73 254 P **P** **13 27 47.9 -1.0**
JAY Jayapura 48.09 296 LR LR 13 45 52.6
comp=Z,136nm,21.5s,baz=106,slow=33
WRKA Warakurna 48.09 262 P **P** **13 27 58.6 -1.1**
comp=Z,3.7nm,0.8s
VNDA Vanda 48.77 186 P **P** **13 28 05.4 +1.3**
comp=Z,1.9nm,0.7s,baz=326,slow=9.6,SNR=5.4
comp=Z,1.9nm,0.7s
VNDA Vanda 48.77 186 IAmb IAmb 13 28 49.6
comp=Z,36nm,1.9s
VNDA Vanda 48.77 186 P **P** **13 28 05.4 +1.3**
VNDA pmax pmax
comp=Z,36nm,1.9s
FITZ Fitzroy Crossi 52.90 269 P **P** **13 28 35.8 -0.1**
comp=Z,24nm,0.8s,baz=163,slow=6.4,SNR=20
FITZ LR LR 13 48 56.0
comp=Z,130nm,21.8s,baz=120,slow=34
comp=Z,24nm,0.8s
HMH Humu'ula Sheep 53.43 26 P **P** **13 28 39.7 -0.4**
CCD Concordia, Ant 53.70 196 P **P** **13 28 43.7 +2.2**
CCD x x 13 28 51.5
CCD pP **sP** **13 28 53.6 -1.0**
KIP Kipapa 54.21 22⇑ *e*P **P** **13 28 44.6 -0.7**
KIP pmax pmax
comp=Z,75nm,1.3s
KLBR Kellerberrin 55.06 250 P **P** **13 28 50.5 -1.1**
NWAO Narrogin (SRO) 55.12 249 LR LR 13 50 26.9
comp=Z,138nm,20.3s,baz=63,slow=34
MEEK Meekatharra 55.85 256 P **P** **13 28 56.8 -0.6**
CASY Casey 55.94 208 P **P** **13 28 58.2 +0.9**
CASY Casey 55.94 208 P **P** **13 28 58.0 +0.7**
CASY x x 13 29 04.5
CASY pP **pP** **13 29 07.5 +0.8**
CASY x x 13 29 12.8
GUMO Guam 56.42 314 LR LR 13 50 04.0
comp=Z,55nm,21.1s,baz=143,slow=33
SIJI Sorong 56.61 291 P **P** **13 29 01.8 -1.1**
comp=Z,20nm,0.9s,baz=349,slow=3.1,SNR=4.8
SIJI LR LR 13 53 19.5
comp=Z,44nm,19.1s,baz=148,slow=36
comp=Z,20nm,0.9s
MBWA Marble Bar 56.83 263 P **P** **13 29 02.9 -1.5**
MBWA IAmb IAmb 13 29 32.2
comp=Z,23nm,1.2s
MORW Morawa 57.22 253 P **P** **13 29 06.0 -1.2**
comp=Z,17nm,0.9s
MORW Morawa 57.22 253 P **P** **13 29 05.7 -1.4**
BATI Baumata 58.10 277 LR LR 13 54 47.2
comp=Z,506nm,18.1s,baz=142,slow=37
QSPA South Pole Qui 60.34 180 P **P** **13 29 30.4 +2.1**
comp=Z,8.1nm,0.9s,baz=33,slow=2.5,SNR=7.7
QSPA LR LR 13 53 26.9
comp=Z,86nm,19.3s,baz=32,slow=34
comp=Z,8.1nm,0.9s
QSPA South Pole Qui 60.34 180 **P** **13 29 30.0 +1.7**
QSPA South Pole Qui 60.34 180 P **P** **13 29 31.4 +3.1**
QSPA x x 13 29 38.2
QSPA x x 13 29 46.1
PLAI Plampang 63.86 275 P **P** **13 29 51.5 -1.0**
KAPI Kappang 64.03 280 LR LR 13 56 42.8
comp=Z,66nm,21.7s,baz=122,slow=35
TWSI Taliwang, Sumb 64.67 274 P **P** **13 29 56.5 -1.4**
comp=Z,29nm,0.8s
JAGI Jajag, Banyuwa 67.17 273 **P** **13 30 12.3 -1.7**
JAGI Jajag, Banyuwa 67.17 273 P **P** **13 30 12.3 -1.7**
comp=Z,44nm,1.0s
GMJI Gumukmas 67.88 273 P **P** **13 30 17.5 -0.9**
comp=Z,34nm,0.9s
KMMI Kalianget 68.01 274 P **P** **13 30 19.1 -0.2**
comp=Z,35nm,0.9s
SNJI Sawahan-Nganju 69.58 273 P **P** **13 30 29.2 0.0**
comp=Z,24nm,0.7s
SJI Sawahan 69.59 273 P **P** **13 30 28.4 -0.8**
comp=Z,2μmcomp=Z,16nm,0.8s
PCJI Pacitan 69.89 272 P **P** **13 30 30.5 -0.4**
BELA Belgrano 2 70.33 172 P **P** **13 30 34.0 +1.3**
UGM Wanagama 70.59 272 P **P** **13 30 34.3 -1.0**
KPJI Karang Pucung 72.25 272 P **P** **13 30 44.0 -1.2**
comp=Z,25nm,1.6s
KKM Kota Kinabalu 72.88 288 P **P** **13 30 48.0 -1.1**
KKM IAmb IAmb 13 32 49.4
comp=Z,35nm,1.1s
MAW Mawson 73.08 200 P **P** **13 30 50.8 +1.5**
comp=Z,17nm,0.8s,baz=108,slow=3.2,SNR=2.0
MAW LR LR 14 02 12.2
comp=Z,124nm,18.4s,baz=92,slow=35
comp=Z,17nm,0.8s
LEM Lembang 73.63 271 LR LR 14 02 32.7
comp=Z,60nm,21.2s,baz=154,slow=35
ELIB Princess Elisa 77.53 186 *d*P **P** **13 31 16.6 +1.6**
comp=Z,7.6nm,0.9s
MDSI Maura Dua 77.75 272 P **P** **13 31 15.2 -1.8**
comp=Z,36nm,0.6s
MJAR Matsushiro Arr 78.03 325 P **P** **13 31 17.0 -1.1**
comp=Z,5.7nm,0.9s,baz=150,slow=6.3,SNR=7.3
MJAR LR LR 14 00 05.2
comp=Z,48nm,19.9s,baz=122,slow=31
comp=Z,5.7nm,0.9s
MJAR Matsushiro Arr 78.03 325 P **P** **13 31 17.0 -1.1**
SNAA Sanae 78.77 178 ⇓P **P** **13 31 23.2 +1.4**
comp=Z,130nm,0.9s
SNAA Sanae 78.77 178 P **P** **13 31 22.2 +0.4**
comp=Z,4.5nm,0.8s,baz=186,slow=8.4,SNR=6.4
comp=Z,4.5nm,0.8s
SNAA Sanae 78.77 178⇑ *e*P **P** **13 31 22.7 +0.9**
SNAA pmax pmax
comp=Z,19nm,2.5s
VNA3 Neumayer Olymp 78.89 176 ⇓P **P** **13 31 23.6 +1.2**
comp=Z,4.2nm,0.6s
VNA2 Neumayer--Watz 79.33 177 ⇓P **P** **13 31 26.4 +1.5**
comp=Z,3.4nm,0.6s,baz=164,slow=4.2
JNU Nakatsue 79.45 318 LR LR 14 03 49.9
comp=Z,30nm,20.1s,baz=60,slow=34
NVL N'lazarevskaya 79.53 183 *e*P **P** **13 31 23.8 -2.0**
NVL *e* 13 31 31.4
NVL *e* 13 34 24.3
NVL *e*PPP PPP 13 36 13.4
NVL *e*S **S** **13 41 24.1 -0.4**
NVL *e*SS **SS** **13 46 33.4 +1.9**
NVL *e*SSS SSS 13 49 59.4
NVL pmax pmax
comp=Z,15nm,1.5s
NVL MLR MLR
comp=Z,662nm,20.0s
H03S2 Juan Fernandez 80.36 123 T T 15 01 02.6
baz=239,slow=74,SNR=15
H03S1 Juan Fernandez 80.38 123 T T 15 01 04.8
baz=239,slow=74,SNR=13
H03S3 Juan Fernandez 80.38 123 T T 15 01 04.8
baz=239,slow=74,SNR=25
JKA Kamikawa-asahi 82.13 332 P **P** **13 31 40.4 +0.4**
ASAJ Asahikawa 82.13 332 LR LR 14 03 18.8
comp=Z,110nm,20.1s,baz=163,slow=32
ASAJ Asahikawa 82.13 332 P **P** **13 31 40.4 +0.4**
ASAJ pmax pmax
comp=Z,126nm,1.9s
KSRS Korea Array 84.22 319 P **P** **13 31 51.3 +0.4**
comp=Z,3.7nm,0.8s,baz=147,slow=6.1,SNR=6.9
KSRS LR LR 14 06 08.9
comp=Z,29nm,19.2s,baz=105,slow=33
comp=Z,3.7nm,0.8s
YSS Yuzhno-Sakhali 84.42 334 P **P** **13 31 52.2 +0.6**
YSS Yuzhno-Sakhali 84.42 334⇑ *e*P **P** **13 31 50.4 -1.2**
YSS pmax pmax
comp=Z,12nm,1.0s
IPM Ipoh 84.93 278 P **P** **13 31 53.9 -1.2**
PETK Petropavlovsk- 85.34 345 P **P** **13 31 55.9 -0.3**
comp=Z,9.7nm,0.8s,baz=96,slow=3.3,SNR=10
PETK LR LR 14 03 39.5
comp=Z,56nm,20.8s,baz=124,slow=31
comp=Z,9.7nm,0.8s
KULM Kulim 85.66 279 P **P** **13 31 58.3 -0.4**
KULM IAmb IAmb 13 34 06.1
comp=Z,16nm,1.2s
O02D Mt. Diablo Mer 86.07 39 P **P** **13 32 01.4 +1.1**
CLC China Lake 86.11 45 IAmb IAmb 13 32 16.9
comp=Z,22nm,1.1s
NJ2 Nanjing 86.25 310 *e*P **P** **13 32 03.5 +2.4**
NJ2 pmax pmax
comp=Z,7.0nm,1.0s
GSI Gunungsitoli 86.33 274 P **P** **13 32 01.3 -0.8**
GSI IAmb IAmb 13 32 12.9
comp=Z,22nm,0.9s
USRK Ussuriysk Ar. 86.94 326 P **P** **13 32 04.6 +0.4**
comp=Z,3.9nm,0.7s,baz=124,slow=6.0,SNR=2.5
comp=Z,3.9nm,0.7s
NVAR Mina Array Bea 87.42 42 P **P** **13 32 08.1 +1.1**
comp=Z,2.3nm,0.7s,baz=224,slow=8.1,SNR=16
comp=Z,2.3nm,0.7s
NVAR Mina Array Bea 87.42 42 P **P** **13 32 07.6 +0.6**
NV11 Mina Array Sit 87.50 42 IAmb IAmb 13 32 23.4
comp=Z,11nm,1.1s
TPNV Topopah Spring 87.68 45 IAmb IAmb 13 32 24.8
comp=Z,8.8nm,0.8s
PRN Pahroc Range 88.70 45 IAmb IAmb 13 32 30.1
comp=Z,11nm,1.0s
X16A Lo Mia Camp, P 89.14 49 IAmb IAmb 13 32 32.4
comp=Z,10nm,0.8s
PINE Pine Mountain 89.58 37 P **P** **13 32 17.7 +0.6**
PINE IAmb IAmb 13 32 33.5
comp=Z,13nm,1.2s
U15A North Rim 89.81 47 IAmb IAmb 13 32 35.5
comp=Z,11nm,0.9s
TIA Tai'an 89.94 313 P **P** **13 32 19.4 +0.7**
TIA pmax pmax
comp=Z,13nm,1.5s
CN2 Changchun 89.97 323 P **P** **13 32 19.0 +0.4**
CN2 pP pP 13 32 29.1 +0.5
CN2 SKS **SKSac** **13 42 45.4 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
N14K Kuskokwak Cree 90.30 8 P **P** **13 32 20.8 +1.1**
BNX BinXian 90.30 325 ⇓P **P** **13 32 19.3 -0.8**
BNX pmax pmax
comp=Z,4.0nm,0.8s
W18A Petrified Fore 90.68 49 IAmb IAmb 13 32 39.3
comp=Z,11nm,1.1s
N15K Kwethluk River 90.73 9 P **P** **13 32 22.7 +0.9**
KLR Kul'dur 90.77 329⇑ *e*P **P** **13 32 22.3 +0.1**
KLR pmax pmax
comp=Z,8.0nm,1.5s
TX31 Lajitas Ar. Si 91.60 57 P **P** **13 32 27.3 +0.5**
TX31 IAmb IAmb 13 32 42.7
comp=Z,10nm,1.4s
TXAR Lajitas Array 91.60 57 P **P** **13 32 27.3 +0.6**
comp=Z,1.0nm,1.0s,baz=201,slow=6.7,SNR=6.7
comp=Z,1.0nm,1.0s
O19K Port Alsworth 91.62 11 IAmb IAmb 13 32 26.8
comp=Z,19nm,1.1s
G08A Pilot Rock 91.64 37 **P** **13 32 27.4 +0.8**
G08A IAmb IAmb 13 32 42.7
comp=Z,9.7nm,0.9s
LYN LuoYang 92.02 309⇓ *i*P **P** **13 32 32.8 +4.4**
MFID Camas Ranch 92.10 40 IAmb IAmb 13 32 44.8
comp=Z,6.9nm,1.0s
HNS HongShan 92.20 312 ⇑P **P** **13 32 29.2 +0.1**
HNS pmax pmax
comp=Z,5.0nm,1.1s
ANMO Albuquerque 92.77 51⇑ *e*P **P** **13 32 32.8 +0.7**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
MA2 Magadan 92.83 344 LR LR 14 09 40.0
comp=Z,39nm,19.3s,baz=170,slow=33
CMAR Chiang Mai Arr 93.70 289 P **P** **13 32 37.2 +0.7**
comp=Z,0.5nm,0.5s,baz=129,slow=4.7,SNR=4.9
comp=Z,0.5nm,0.5s
XAN Xi'an 94.16 307 ⇓P **P** **13 32 39.6 +1.2**
XAN pmax pmax
comp=Z,4.0nm,0.5s
ATAH Atahualpa 94.23 101 LR LR 14 05 12.8
comp=Z,74nm,21.6s,baz=238,slow=29
PDAR Pinedale Array 95.31 43 P **P** **13 32 43.8 +0.1**
comp=Z,0.8nm,0.9s,baz=242,slow=3.2,SNR=5.0
PDAR PKKP **PKKPbc** **13 49 37.6 +0.1**
comp=Z,0.5nm,0.8s,baz=106,slow=3.7,SNR=3.9
comp=Z,0.8nm,0.9s
PDAR Pinedale Array 95.31 43 P **P** **13 32 44.3 +0.6**
SEY Seymchan 95.49 347⇑ *e*P **P** **13 32 43.8 +0.2**
SEY pmax pmax
comp=Z,10.0nm,2.5s
PZH PanZhiHua 95.49 297 P **P** **13 32 46.5 +1.7**
YHL Hebgen Lake 95.61 41 IAmb IAmb 13 33 03.4
comp=Z,7.0nm,1.1s
ZEA Zeya 95.96 331 *e*P **P** **13 32 48.4 +2.4**
HHC Hu-ho-hao-te 96.19 314 *e*P **P** **13 32 49.8 +2.3**
HHC pmax pmax
comp=Z,5.0nm,0.7s
COLA College 97.11 12⇓ *e*P **P** **13 32 51.1 +0.2**
COLA pmax pmax
comp=Z,4.0nm,1.1s
BTO2 Baotou 97.19 313 *e*P **P** **13 32 50.7 -1.4**
BTO2 S **S** **13 44 10.2 -2.9**
BTO2 pmax pmax
comp=Z,9.0nm,0.6s
ILAR Eielson Array 97.20 13 P **P** **13 32 50.5 -0.8**
comp=Z,0.9nm,1.0s,baz=222,slow=4.8,SNR=6.6
comp=Z,0.9nm,1.0s
BILL Bilibino 98.28 354⇓ *e*P **P** **13 32 56.3 +0.1**
BILL pmax pmax
comp=Z,2.0nm,1.0s
YKA Yellowknife Ar 104.65 25 PKKPbc PKKPbc 13 49 09.1 -2.0
comp=Z,0.3nm,0.8s,baz=25,slow=3.2,SNR=5.4
WMQ Urumqi 113.26 308 *e*PKP **PKiKP** **13 37 57.5 +0.5**
MK31 Makanchi Array 117.78 310 *d i*PKIKP **PKPdf** **13 38 04.5 -1.0**
MKAR Makanchi Array 117.78 310 PKP **PKPdf** **13 38 04.4 -1.1**
comp=Z,3.0nm,0.9s,baz=208,slow=1.0,SNR=26
ZALV Zalesovo Beam 117.92 318 PKP **PKPdf** **13 38 04.4 -1.1**
comp=Z,1.7nm,0.7s,baz=132,slow=2.2,SNR=9.5
NRIK Noril'sk 119.28 336 PKP **PKPdf** **13 38 06.7 -1.0**
comp=Z,0.8nm,0.4s,baz=81,slow=7.2,SNR=3.6
NRIK Noril'sk 119.28 336⇑ *i*PKIKP **PKPdf** **13 38 07.0 -0.7**
KSH2 Kashi 120.59 300 PKP **PKPdf** **13 38 11.4 +0.1**
KURK Kurchatov 121.00 314 *c i*PKIKP **PKPdf** **13 38 10.1 -1.4**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURBB Kurchatov Arra 121.04 314 PKP **PKPdf** **13 38 10.9 -0.7**
comp=Z,5.4nm,0.7s,baz=108,slow=2.0,SNR=46
AAK Ala-Archa 122.21 304 PKP **PKPdf** **13 38 13.4 -1.0**
comp=Z,2.1nm,0.7s,baz=136,slow=5.9,SNR=5.8
AAK Ala-Archa 122.21 304 *d i*PKIKP **PKPdf** **13 38 14.0 -0.3**
AAK pmax pmax
comp=Z,8.0nm,2.5s
BVAR Borovoye Array 126.33 316 PKP **PKPdf** **13 38 21.4 -0.3**
comp=Z,14nm,0.9s,baz=95,slow=1.8,SNR=40
BORK Borovoye 126.37 316 *d i*PKIKP **PKPdf** **13 38 21.4 -0.4**
BORK pmax pmax
comp=Z,11nm,1.0s
SPITS Spitsbergen Ar 131.11 356 PKP **PKPdf** **13 38 30.1 -0.1**
comp=Z,3.6nm,0.8s,baz=57,slow=3.1,SNR=4.7
ARTI Arti 133.05 321 *i* PKIKP **PKPdf** **13 38 34.7 +0.4**
ARTI 13 40 59.8
ARTI SS SS 13 58 45.6 +4.4
KIRV Kirov 137.10 326 *c i*PKIKP **PKPdf** **13 38 42.3 +0.5**
H10S3 ASCENSION HYDR 138.06 154 T T 16 13 58.1
baz=205,slow=74,SNR=31
H10S2 ASCENSION HYDR 138.06 154 T T 16 13 58.3
baz=15,slow=74,SNR=24
ARCES ARCESS Array B 138.09 348 PKhKP PKPpre 13 38 37.6
comp=Z,3.1nm,0.7s,baz=52,slow=2.0,SNR=7.4
ARCES PKP **PKPdf** **13 38 43.8 +0.4**
comp=Z,3.0nm,0.7s,baz=45,slow=1.9,SNR=6.5
H10N3 ASCENSION HYDR 139.14 154 T T 16 15 18.3
baz=204,slow=74,SNR=63
H10N1 ASCENSION HYDR 139.14 154 T T 16 15 18.6
baz=204,slow=74,SNR=82
H10N2 ASCENSION HYDR 139.16 154 T T 16 15 19.5
baz=204,slow=74,SNR=70
BELG Belogornoye 140.09 318⇑ *i*PKIKP **PKPdf** **13 38 47.9 +0.4**
KLMR Klimovskoe 140.46 333 *e*PKIKP **PKPdf** **13 38 44.7 -3.2**
KLMR *e* 13 38 56.0
KLMR pmax pmax
comp=Z,9.0nm,1.0s
VRH Novokhopyorsk 143.95 318 *e*PKIKP **PKPdf** **13 38 55.7 +1.3**
VRH pmax pmax
comp=Z,36nm,2.4s
FINES FINESS Array B 144.74 341 PKP **PKPab** **13 38 53.7 -0.7**

	comp=Z,44nm,0.5s,baz=60,slow=3.3,SNR=125						
OBN	Obninsk	144.96	326	⇑iPKIKP	PKPab	13 38 54.7	-0.6
OBN				e		13 39 08.9	
OBN				pmax	pmax		
	comp=Z,56nm,0.9s						
LPSR	Galich'ya Gora	144.97	321	ePKIKP	PKPab	13 38 55.1	-0.4
LPSR				pmax	pmax		
	comp=Z,37nm,0.6s						
KBZ	Khabaz	145.20	305	PKPbc	PKPbc	13 38 56.0	-0.5
	comp=Z,6.4nm,1.0s,baz=58,slow=2.2,SNR=4.5						
KBZ	Khabaz	145.20	305	PKIKP	PKPbc	13 38 56.0	-0.5
VORR	Voronezh	145.21	319	ePKIKP	PKPbc	13 38 55.9	-0.4
VORR				pmax	pmax		
	comp=Z,53nm,0.4s						
KIV	Kislovodsk	145.31	305	ePKIKP	PKPbc	13 38 56.6	-0.4
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
VSR	Storozhevoye	145.43	319	ePKIKP	PKPbc	13 38 56.2	-0.8
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
VORD	Divnogorie	145.45	318	ePKP2	PKPdf	13 38 55.4	-1.6
VORD				pmax	pmax		
	comp=Z,20nm,0.5s						
VSU	Vasula	146.87	337	c ePKP2	PKPdf	13 38 59.7	+0.5
NB2	NORSAR Subarra	148.21	352	PKP	PKPbc	13 39 03.8	-1.0
	comp=Z,4.8nm,0.5s,baz=13,slow=2.9						
NOA	NORSAR Array B	148.21	352	PKPbc	PKPbc	13 39 04.5	-0.3
	comp=Z,13nm,0.8s,baz=16,slow=4.5,SNR=23						
HFS	Hagfors	148.73	349	PKPbc	PKPbc	13 39 05.1	-1.0
	comp=Z,19nm,0.8s,baz=48,slow=2.2,SNR=22						
MNK	Minsk	149.31	331	i PKiKP	PKPbc	13 39 08.1	+0.4
	comp=E,20nm,0.8s						
MNK				i PKiKP	PKPbc	13 39 08.1	+0.4
	comp=N,12nm,0.8s						
MNK				i PKiKP	PKPbc	13 39 08.1	+0.4
	comp=Z,47nm,0.8s,baz=47						
MNK				i SKP	SKPdf	13 42 29.2	-5.2
MNK				i PKS	PKSdf	13 42 36.9	-1.1
MNK				i PP	PP	13 42 38.9	-0.8
MNK				i PPP	PPP	13 45 59.3	
MNK				i SKS	SKSdf	13 46 20.8	+12
MNK				i SS	SS	14 01 50.7	+0.9
MNK				i SSS	SSS	14 09 05.7	
MNK	Minsk	149.31	331	c iPKP2	PKPbc	13 39 08.0	+0.4
AKASG	Malin Array Be	151.12	324	PKPbc	PKPbc	13 39 11.8	-0.4
	comp=Z,41nm,0.7s,baz=48,slow=2.8,SNR=107						
KIEV	Kiev	151.13	324		PKPbc	13 39 11.7	-0.5
KIEV	Kiev	151.13	324	PKIKP	PKPbc	13 39 11.7	-0.5
SUW	Suwalki	151.55	334		PKPbc	13 39 12.9	-0.1
SUW	Suwalki	151.55	334	PKIKP	PKPbc	13 39 12.9	-0.1
MMAI	Mount Meron Ar	151.89	285	PKPbc	PKiKP	13 39 15.8	+0.7
	comp=Z,17nm,0.5s,baz=53,slow=7.4,SNR=30						
BRTR	Keskin Array B	152.76	300	PKPbc	PKPbc	13 39 15.8	-0.6
	comp=Z,8.1nm,1.0s,baz=132,slow=3.5,SNR=16						
EKA	Eskdalemuir Ar	154.12	8	PKPbc	PKPbc	13 39 18.3	-0.4
	comp=Z,2.9nm,0.9s,baz=358,slow=2.4,SNR=1.9						
DPC	Dobruska-Polom	157.00	337	ePKP2	PKPab	13 39 47.3	+2.3
DPC	Dobruska-Polom	157.00	337	ePKPAB	PKPab	13 39 47.3	+2.3
CLL	Collm	157.13	343	ePKIKP	PKPdf	13 39 16.0	+1.3
CLL				pmax	pmax		
	comp=Z,12nm,1.3s						
CLL	Collm	157.13	343	ePKPdf	PKPdf	13 39 16.0	+1.3
CLL				ex	x	13 39 38.0	
CLL				ePKPab	PKPab	13 39 44.0	-1.4
	comp=Z,12nm,1.3s						
MODS	Modra-Piesok	158.28	333	ePKIKP	PKPdf	13 39 19.4	+3.1
MODS	Modra-Piesok	158.28	333	ePKP	PKPdf	13 39 19.4	+3.1
ZVC	Zvikov	158.48	339	ePKPAB	PKPab	13 39 51.6	+0.3
KHC	Kasperske Hory	158.94	340	ePKP2	PKPab	13 39 53.5	+0.1
KHC	Kasperske Hory	158.94	340	ePKPAB	PKPab	13 39 53.5	+0.1
GERES	GERESS Array B	159.15	339	PKPab	PKPab	13 39 54.3	-0.1
	comp=Z,1.6nm,0.9s,baz=293,slow=1.0,SNR=5.1						
TORD	Torodi Ar. Bea	163.43	177	PKP	PKPdf	13 39 21.2	-1.7
	comp=Z,1.8nm,1.1s,baz=213,slow=2.2,SNR=6.3						
TORD				PKPab	PKPab	13 40 14.1	+0.4
	comp=Z,3.8nm,0.9s,baz=193,slow=5.1,SNR=11						
ESDC	Sonseca Array	168.74	27	PKP	PKPdf	13 39 28.6	+2.2
	comp=Z,0.8nm,0.9s,baz=333,slow=1.7,SNR=5.4						
ARCES	ARCESS Array B	78.51	339	P	P	14 07 57.9	+0.7
	comp=Z,0.9nm,0.5s,baz=64,slow=3.1,SNR=4.7						
	comp=Z,0.9nm,0.5s						
SPITS	Spitsbergen Ar	78.95	348	P	P	14 07 59.3	-0.1
	comp=Z,4.0nm,0.9s,baz=90,slow=5.8,SNR=1.2						
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	79.78	331	P	P	14 08 03.9	-0.2
	comp=Z,2.8nm,0.9s,baz=64,slow=4.4,SNR=3.5						
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	79.78	331	P	P	14 08 04.6	+0.5
OJC	Ojcow	86.02	321	P	P	14 08 36.7	+0.2
NOA	NORSAR Array B	86.74	333	P	P	14 08 38.8	-1.0
	comp=Z,0.5nm,0.6s,baz=68,slow=4.7,SNR=2.2						
	comp=Z,0.5nm,0.6s						

IDC 04 13:56:12.6±0.5, 14°.34N×120°.85E, h144km±4km, mb3.6/12, mbtmp4.0/12, Error ellipse: s-maj=40.8km s-min=12.8km az=64.0

NEIC 04 13:56:13.1±0.8, 14°.48N±0°.09×121°.0E±0°.1, h144km±2km, mb4.1/17, Error ellipse: s-maj=20.3km s-min=12.7km az=74.0

ISC 04 13:56:12.9±0.5, 14°.40N±0°.08×120°.9E±0°.1, h150km, n39, σ0.90/43, mb3.9/19, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.30	175	P	Pn	13 56 32.4	-1.1
TGY				S	Sn	13 56 48.7	-0.6
TPUB	Ta-pu	8.86	358	Pn	Pn	13 58 17.6	-0.2
KNMB	Chin-men Tao	10.29	347	Pn	Pn	13 58 37.0	+0.3
QIZ	Qiongzhong	11.56	295	Pn	Pn	13 58 51.8	-1.6
TOLI2	Tolitoli	13.20	181	Pn	Pn	13 59 16.6	+1.8
ENH	Enshi	18.98	328	P	P	14 00 22.7	-0.2
CRAI	Chiangrai	20.44	289	P	P	14 00 40.0	+1.3
CRAI				IAmb	IAmb	14 01 10.5	
	comp=Z,4.6nm,1.5s						
CMAR	Chiang Mai Arr	21.45	284	P	P	14 00 48.9	-0.6
	comp=Z,0.4nm,0.3s,baz=89,slow=7.4,SNR=7.4						
	comp=Z,0.4nm,0.3s						
JMN	Monobe	22.55	29	P	P	14 00 59.5	-1.0
SONM	Songino Array	35.45	343	P	P	14 02 56.3	+1.5
	comp=Z,5.3nm,0.7s,baz=162,slow=10,SNR=22						
	comp=Z,5.3nm,0.7s						
SONM	Songino Array	35.45	343	P	P	14 02 54.5	-0.3
SONM				IAmb	IAmb	14 02 57.1	
	comp=Z,3.9nm,0.7s						
WB0	Warramunga Arr	36.45	158	P	P	14 03 03.4	-0.2
WB0				IAmb	IAmb	14 03 19.9	
	comp=Z,9.5nm,1.4s						
WRA	Warramunga Arr	36.59	158	P	P	14 03 04.4	-0.3
	comp=Z,0.3nm,0.3s,baz=330,slow=10,SNR=12						
WRA				pP	pP	14 03 34.9	-2.2
	comp=Z,1.0nm,0.8s,baz=337,slow=9.3,SNR=4.2						
	comp=Z,0.3nm,0.3s						
WRA	Warramunga Arr	36.59	158	P	P	14 03 03.5	-1.2
WR8	Warramunga Arr	36.66	158	P	P	14 03 05.3	0.0
WR8				IAmb	IAmb	14 03 10.0	
	comp=Z,7.2nm,1.5s						
AS31	Alice Springs	39.91	161	P	P	14 03 32.5	+0.1
ASAR	Alice Springs	39.91	161	P	P	14 03 32.8	+0.4
	comp=Z,0.7nm,0.4s,baz=335,slow=7.6,SNR=63						
ASAR				pP	pP	14 04 04.1	-1.2
	comp=Z,0.3nm,0.5s,baz=337,slow=6.9,SNR=2.5						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	45.60	323	P	P	14 04 18.7	+0.7
	comp=Z,0.6nm,0.6s,baz=129,slow=8.3,SNR=9.9						
MKAR				PcP	PcP	14 05 54.1	+0.2
	comp=Z,0.2nm,0.6s,baz=126,slow=2.0,SNR=1.8						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	45.60	323	P	P	14 04 18.2	+0.2
MAKZ	Makanchi	45.79	323	P	P	14 04 19.8	+0.3
INKA	Innaminka	46.09	155	P	P	14 04 23.2	+1.2
INKA				IAmb	IAmb	14 04 32.0	
	comp=Z,3.6nm,1.4s						
ZAA0	Zalesovo Array	48.53	332	P	P	14 04 39.5	-1.1
ZAA0				IAmb	IAmb	14 04 41.4	
	comp=Z,2.1nm,1.1s						
ZALV	Zalesovo Beam	48.53	332	P	P	14 04 40.0	-0.6
	comp=Z,0.8nm,0.3s,baz=119,slow=7.2,SNR=7.3						
	comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	48.53	332	P	P	14 04 39.6	-1.0
KURK	Kurchatov	49.73	326		P	14 04 50.6	+0.8
KURK				IAmb	IAmb	14 04 51.3	
	comp=Z,3.7nm,0.6s						
KURBB	Kurchatov Arra	49.73	326	P	P	14 04 50.4	+0.6
	comp=Z,1.0nm,0.6s,baz=118,slow=8.8,SNR=6.6						
	comp=Z,1.0nm,0.6s						
KKAR	Karatay Array	51.64	314	P	P	14 05 04.9	+0.7
BVAR	Borovoye Array	55.31	325	P	P	14 05 32.0	+1.2
	comp=Z,2.0nm,0.5s,baz=111,slow=8.0,SNR=9.3						
	comp=Z,2.0nm,0.5s						
AB31	Akbulak array	60.34	319		P	14 06 06.2	+0.2
AB31				IAmb	IAmb	14 06 07.2	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	60.34	319	P	P	14 06 06.1	+0.1
BILL	Bilibino	60.98	18	P	P	14 06 11.4	+1.4
BILL				IAmb	IAmb	14 06 26.1	
	comp=Z,3.2nm,1.3s						
MRZ	Mangatainoka R	74.58	140	P	P	14 07 35.6	+0.2
MXZ	Matakaoa Point	74.64	136	P	P	14 07 35.5	-0.4

TRN 04 14:01:44.7, 10°.57N×62°.55W, h27km, MD3.1, Paria peninsula.

FUNV 04 14:01:45.4, 10°.55N×62°.48W, h27km, MW3.5, Presumed earthquake

ISC 04 14:01:44.3±1.5, 10°.56N±0°.06×62°.57W±0°.04, h27km±16km, n17, σ0.90/32, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	1.01	82	eP	Pb	14 02 03.6	+0.4
DMDM				eS	Sn	14 02 16.5	+0.5
PSMG	Mucurapo Girls	1.03	84	eP	Pb	14 02 03.4	-0.1
PSMG				eS	Sn	14 02 16.8	+0.4
TRN	Trinidad (W)	1.15	86	eP	Pn	14 02 04.8	+0.1
TRN				eS	Sn	14 02 18.4	-1.1
TRN	Trinidad (W)	1.15	86	⇓iP	Pn	14 02 05.0	+0.4
TRN				x	x	14 02 13.1	
TRN				eS	Sb	14 02 19.1	-1.0
GRFF	Grenada Fort F	1.69	29	eP	Pn	14 02 12.9	+0.8
GRFF				eS	Sn	14 02 31.7	-1.1
GRGR	Grenville	1.80	30	eP	Pn	14 02 13.8	+0.2
GRGR				eS	Sn	14 02 34.4	-1.2
GRGR	Grenville	1.80	30	eP	Pn	14 02 13.3	-0.3
GRGR				eS	Sn	14 02 35.8	+0.3
GRW	Mount Saint Ca	1.82	29	eP	Pn	14 02 14.5	+0.6
GRW				eS	Sn	14 02 36.7	+0.5
GRSS	Sisters	1.96	28	eP	Pn	14 02 16.1	+0.3
GRSS				eS	Sn	14 02 38.9	-0.6
PCRV	Puerto La Cruz	2.07	259	eP	Pn	14 02 18.3	+1.0
PCRV				eS	Sn	14 02 42.2	0.0
PCRV	Puerto La Cruz	2.07	259	eP	Pn	14 02 18.3	+1.0
PCRV				eS	Sn	14 02 42.9	+0.6
MCLT	Moule a Chique	3.51	27	eP	Pn	14 02 37.5	+0.3
MCLT				eS	Sn	14 03 17.7	-0.1
SLBI	Saint Lucia, B	3.78	24	eP	Pn	14 02 42.0	+1.2
SLBI				eS	Sn	14 03 24.4	+0.1
TACV	Tcata	4.41	265	eP	Pn	14 02 50.6	+1.1
TACV				eS	Sn	14 03 38.4	-1.6
CACV	CAICARA DEL OR	4.92	233	eP	Pn	14 02 51.5	-5.1
CACV				eS	Sn	14 03 41.0	-12
BENV	Beln	4.99	264	eP	Pn	14 02 58.6	+1.2
BENV				eS	Sn	14 03 52.3	-2.0
TURV	Turiamo	5.18	269	eP	Pn	14 03 00.3	+0.1
TURV				eS	Sn	14 03 57.5	-1.6

TEH 04 14:02:42.5, 38°.35N×45°.25E, h6km±127km, ML2.9, Presumed earthquake

AZER 04 14:02:43.3, 38°.50N×45°.23E, h10km, ml2.5

ISC 04 14:02:44.0±1.2, 38°.46N±0°.03×45°.34E±0°.03, h5km±12km, n17, σ1.36/27, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHB	Shabestar	0.28	128	Pg	Pg	14 02 48.3	-1.2
IMRD	Marand	0.38	48	Pg	Pg	14 02 52.6	+1.1
ITBZ	Tabriz	0.67	109	Pg	Pg	14 02 55.7	-1.3
ORD	Ordubad	0.69	47	P	Pg	14 02 58.2	+0.8
ORD				S	Sb	14 03 08.8	+0.2
NAX	Nakhchivan	0.72	10	P	Pb	14 02 58.9	-0.3
NAX				S	Sb	14 03 10.2	+0.7
IAZR	Azarshahr	0.93	147	Pg	Pg	14 03 01.0	-0.9
SBZ	Shahbuz	0.95	10	P	Pb	14 03 03.0	-0.1
SBZ				S	Sn	14 03 17.2	-1.0
MAKU	Maku	1.03	330	Pg	Pb	14 03 03.1	-1.4
HYR	Heyderabad	1.31	343	P	Pg	14 03 09.0	-0.3
HYR				S	Sn	14 03 27.9	+0.8
IHRS	Heris	1.35	95	Pg	Pb	14 03 09.7	-0.2
HAKT	HAKKARI	1.57	236	P	Pg	14 03 13.3	-0.9
HAKT				S	Sg	14 03 38.3	+3.8
ISRB	Sarab	1.94	108	Pn	Pb	14 03 19.4	-0.6
GDB	GEDABAY	2.28	8	P	Pb	14 03 23.9	-1.9
GDB				S	Sb	14 03 53.9	-0.5
GANJ	Ganja	2.31	19	P	Pb	14 03 24.8	-1.5
GANJ				S	Sg	14 03 57.6	-0.7
YRD	Yardimli	2.32	78	P	Pb	14 03 25.6	-0.8
YRD				S	Sb	14 03 57.1	+1.8
LRK	Lerik	2.36	85	P	Pb	14 03 27.0	-0.1
LRK				S	Sg	14 03 59.8	-0.1
ASTR	Astara	2.71	87	P	Pb	14 03 31.9	-1.1
ASTR				S	Sb	14 04 08.8	+2.3

NOU 04 14:04:10.5, 37°.30S×176°.68E, h264km, mb4.4/17, North Island, New Zealand

WEL 04 14:04:13.0±0.8, 37°S±6°×17°7E±°, h238km±6km, M3.0/24, MLv3.0/24, Error ellipse: s-maj=9.9km s-min=5.6km az=40.2

ISC 04 14:04:08.9±2.3, 37°.18S±0°.08×176°.71E±0°.07, h271km±14km, n59, σ1.61/68, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.67	190	P	Pn	14 04 45.9	+1.2
MARZ	Manawahe	0.80	182	P	Pn	14 04 47.0	+1.8
KUZ	Kuaotunu	0.90	299	P	Pn	14 04 46.1	+0.4
KUZ	Kuaotunu	0.90	299	P	Pn	14 04 46.3	+0.6
KUZ				S	S	14 05 14.2	-0.6
OMRZ	Omania	0.96	196	P	Pn	14 04 47.7	+1.7
HAZ	Te Kaha	1.03	124	P	Pn	14 04 46.7	+0.4
HAZ				S	S	14 05 13.4	-2.4
RUGZ	Raukumara Rang	1.10	136	P	Pn	14 04 47.0	+0.1
RUGZ				S	S	14 05 13.6	-3.2
TOZ	Tahuroa Road	1.10	240	P	Pn	14 04 48.6	+1.9
URZ	Urewera	1.12	163	P	Pn	14 04 47.3	+0.6
URZ	Urewera	1.12	163	S	S	14 05 16.9	+0.1
URZ	Urewera	1.12	163	P	Pn	14 04 47.4	+0.6
URZ				S	S	14 05 15.4	-1.4
RRRZ	Republican Roa	1.17	187	P	Pn	14 04 49.0	+1.9
RRRZ				S	S	14 05 15.9	-1.5
PKGZ	Pakihiroa	1.29	122	P	Pn	14 04 49.0	+1.2
MUGZ	Murupara	1.29	178	P	Pn	14 04 49.0	+1.2
MWZ	Matawai	1.32	151	P	Pn	14 04 49.0	+1.0
MXZ	Matakaoa Point	1.33	107	P	Pn	14 04 48.7	+0.7
MXZ	Matakaoa Point	1.33	107	S	S	14 05 17.8	-1.3
MXZ	Matakaoa Point	1.33	107	P	Pn	14 04 48.9	+0.9
MXZ				S	S	14 05 17.2	-1.9
PRRZ	Plateau Road	1.34	191	P	Pn	14 04 50.3	+2.2
GRZ	Great Barrier	1.37	312	P	Pn	14 04 48.7	+0.4
ALRZ	Allen Road	1.41	192	P	Pn	14 04 50.1	+1.6
TWGZ	Tauwhareparae	1.42	135	P	Pn	14 04 51.1	+2.4
TWGZ				S	S	14 05 20.2	0.0
ETAZ	East Tamaki Re	1.44	279	P	Pn	14 04 50.3	+1.5
RTZ	Ruatahuna	1.45	171	P	Pn	14 04 50.2	+1.3
WMGZ	Waiomatatini S	1.50	116	P	Pn	14 04 50.4	+1.3
WMGZ				S	S	14 05 19.9	-1.2
MBAZ	Motutapu North	1.50	285	P	Pn	14 04 50.7	+1.4
PUZ	Puketiti	1.52	126	P	Pn	14 04 50.4	+1.0
PUZ				S	S	14 05 19.4	-2.0
TKGZ	Te Karaka	1.55	145	P	Pn	14 04 50.9	+1.4
ABAZ	Army Bay	1.61	291	P	Pn	14 04 51.4	+1.4
AWAZ	Awhitu Peninsu	1.65	273	P	Pn	14 04 51.6	+1.2
MRHZ	Matea Rd	1.67	188	P	Pn	14 04 52.0	+1.6
MTHZ	Maungataniwha	1.67	176	P	Pn	14 04 52.0	+1.5
SNGZ	Shannon Statio	1.67	163	P	Pn	14 04 52.2	+1.7
RIGZ	Rimuhau	1.74	152	P	Pn	14 04 52.9	+2.0
RAHZ	Arahi	1.76	170	P	Pn	14 04 53.3	+2.2
CNGZ	Carnagh Statio	1.76	138	P	Pn	14 04 53.3	+2.2
RITZ	Rihia Road	1.91	200	P	Pn	14 04 55.0	+2.6
NMHZ	Naumai	1.91	178	P	Pn	14 04 54.8	+2.4
PRGZ	Paritu Road	1.97	152	P	Pn	14 04 54.9	+2.0
HIZ	Hauiti	1.98	227	P	Pn	14 04 55.5	+2.6
BKZ	Black Stump Fm	1.99	185	P	Pn	14 04 54.3	+1.3
BKZ	Black Stump Fm	1.99	185	S	S	14 05 28.4	+0.3
BKZ	Black Stump Fm	1.99	185	P	Pn	14 04 54.3	+1.3
KNZ	Kokohu	1.99	158	P	Pn	14 04 54.5	+1.6
ARHZ	Aropaoanui	2.09	174	P	Pn	14 04 55.9	+2.1
COVZ	Chateau Observ	2.21	204	P	Pn	14 04 57.4	+2.4
WCZ	Waipu Caves	2.27	302	P	Pn	14 04 56.2	+0.7
KRHZ	Kereru	2.47	186	P	Pn	14 04 58.9	+1.6
CKHZ	Cape Kidnapper	2.49	173	P	Pn	14 04 59.4	+1.9
OUZ	Omahuta	3.19	307	P	Pn	14 05 05.3	+0.6
OUZ	Omahuta	3.19	307	P	Pn	14 05 05.6	+0.9
SNZO	South Karori	4.41	200	P	Pn	14 05 18.4	+0.2
SNZO	South Karori	4.41	200	S	S	14 06 12.0	-1.6
QRZ	Quartz Range	4.88	221	P	Pn	14 05 24.7	+0.9
QRZ	Quartz Range	4.88	221	S	S	14 06 22.5	-1.3
KHZ	Kahutara	5.77	204	P	Pn	14 05 35.3	+0.8
KHZ	Kahutara	5.77	204	S	S	14 06 41.5	-1.7
ODZ	Otahua Downs	9.09	208	P	Pn	14 06 16.9	+1.2
ODZ	Otahua Downs	9.09	208	S	S	14 07 55.8	-2.7

IDC 04 14:09:21.4±1.8, 39°.27N×140°.67E, h125km±19km, mb3.0/7, mbtmp3.5/10, MS3.7/1, Error ellipse: s-maj=36.6km s-min=16.0km az=109.0

JMA 04 14:09:22.0±0.1, 39°.4N±0°.4×140°.6E±0°.5, h118km, MV3.3/38, SOUTHERN AKITA PREF

ISC 04 14:09:21.5±0.8, 39°.42N±0°.04×140°.61E±0°.06, h126km±5km, n28, σ1.41/37, mb3.4/7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRG	Rokugo	0.03	137	P	Pn	14 09 38.3	-0.3
JRG				S	Sn	14 09 50.8	-0.6
JYW	Yuwa	0.33	292	P	Pn	14 09 39.1	-0.2
JYW				eS	Sn	14 09 52.0	-0.6
JOM	Ohasama	0.53	84	P	Pn	14 09 40.4	+0.2
JOM				eS	Sn	14 09 54.3	-0.2
JYK	Kaneyama	0.54	201	P	Pn	14 09 39.9	-0.5
JYK				eS	Sn	14 09 53.4	-1.1
JMK	Ichinoseki	0.67	134	P	Pn	14 09 41.0	-0.1
JMK				eS	Sn	14 09 55.8	-0.2
JAH	Hinai	0.77	2	P	Pn	14 09 42.2	+0.3
JAH				eS	Sn	14 09 57.5	0.0
JOU	Okura	1.05	178	P	Pn	14 09 44.7	+0.1
JYA	Atsumi	1.08	220	P	Pn	14 09 44.5	-0.3
JYA				eS	Sn	14 10 01.4	-1.0
JIO	Ouri	1.12	149	P	Pn	14 09 44.9	-0.3
JIO				eS	Sn	14 10 02.3	-0.9
JANG	Nango	1.18	36	P	Pn	14 09 46.3	+0.5
JANG				eS	Sn	14 10 04.3	0.0
JIW	Iwasaki	1.26	339	P	Pn	14 09 47.0	+0.4
JIW				eS	Sn	14 10 05.7	-0.1
JYS	Shirataka	1.27	200	eP	Pn	14 09 47.1	+0.3
JYS				eS	Sn	14 10 06.0	+0.1
JAW	Awa shima	1.43	228	P	Pn	14 09 48.3	-0.2
JAW				eS	Sn	14 10 08.4	-0.7
JOTO	OTAMA OYAMA	1.87	187	P	Pn	14 09 54.1	+0.4
MJAR	Matsushiro Arr	3.44	214	P	Pn	14 10 13.8	0.0
	5.7nm,0.4s,baz=25,slow=13,SNR=42						
ASAJ	Asahikawa	4.92	17	P	Pn	14 10 33.5	+0.1
	2.9nm,0.3s,baz=224,slow=12,SNR=38						
ASAJ				S	Sn	14 11 22.6	-6.8
	5.6nm,0.6s,baz=230,slow=25,SNR=1.9						
JHJ	Hachijo jima 2	6.32	186	P	Pn	14 10 50.4	-2.0
	52nm,0.3s,baz=44,slow=14,SNR=1.8						
JHJ				S	Sn	14 11 52.6	-11
	97nm,0.4s,baz=83,slow=20,SNR=2.4						
H11N2	WAKE ISLAND Hy	29.95	123	T	T	14 46 16.9	
	baz=317,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	29.96	123	T	T	14 46 16.2	
	baz=317,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	29.97	123	T	T	14 46 13.9	
	baz=317,slow=75,SNR=18						
ZALV	Zalesovo Beam	39.86	310	P	P	14 16 43.4	+0.9
	0.4nm,0.5s,baz=90,slow=10,SNR=1.7						
	0.4nm,0.5s						
NRIK	Noril'sk	40.84	334	LR	LR	14 34 10.4	
	comp=Z,93nm,18.7s,baz=230,slow=36						
ILAR	Eielson Array	47.84	33	P	P	14 17 47.0	+0.9
	0.5nm,0.8s,baz=269,slow=5.6,SNR=9.6						
	0.5nm,0.8s						
WRA	Warramunga Arr	59.34	187	P	P	14 19 09.5	-0.8
	0.4nm,0.8s,baz=8.5,slow=6.9,SNR=2.2						
	0.4nm,0.8s						
YKA	Yellowknife Ar	62.07	31	P	P	14 19 29.4	+1.1
	0.2nm,0.5s,baz=303,slow=7.6,SNR=2.0						
	0.2nm,0.5s						
ASAR	Alice Springs	63.07	187	P	P	14 19 33.1	-2.3
	0.4nm,0.9s,baz=355,slow=5.7,SNR=2.6						
	0.4nm,0.9s						
NVAR	Mina Array Bea	74.07	53	P	P	14 20 44.6	+0.6
	0.4nm,0.7s,baz=307,slow=6.6,SNR=2.1						
	0.4nm,0.7s						
PDAR	Pinedale Array	76.45	45	P	P	14 20 58.4	+0.9
	0.2nm,0.5s,baz=321,slow=3.8,SNR=3.7						
	0.2nm,0.5s						

BJI 04 14:10:16.7, 19°.18N×95°.77E, h10km, mB4.7/7, mb4.0/23, Ms4.1/8, Ms7 3.7/8

IDC 04 14:10:20.9±0.9, 19°.75N×95°.75E, h0km, mb4.0/15, mbtmp3.9/16, ML3.3/1, MS3.4/4, Error ellipse: s-maj=34.4km s-min=12.4km az=39.0

NEIC 04 14:10:23.6±1.2, 19°.76N±0°.08×95°.86E±0°.08, h10km±1km, mb4.4/23, Error ellipse: s-maj=15.3km s-min=10.5km az=226.0

NDI 04 14:10:25.3±0.9, 19°.54N×95°.79E, h87km±21km, ML4.3, MW4.3

BKK 04 14:10:34.1±1.1, 20°N±9°×9°7E±°, h10km, M4.1/7, Mjma4.2/7, ML4.3/5, MLv4.0/7

ISC 04 14:10:23.4±0.6, 19°.80N±0°.05×95°.85E±0°.05, h12km, n77, σ1.45/81, mb4.2/29, MS3.4/4, 1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAI	Chiengmai2	3.01	87	P	Pn	14 11 12.0	+0.9
CMAI				S	Sn	14 11 43.5	-3.6
CHTO	Chiang Mai	3.08	108		Pn	14 11 11.5	-0.4
CM13	Chiang Mai Arr	3.20	115	P	Pb	14 11 18.2	-2.0
CM15	Chiang Mai Arr	3.20	114	P	Pb	14 11 19.1	-1.1
CMAR	Chiang Mai Arr	3.21	114	Pn	Pn	14 11 14.3	+0.6
	0.8nm,0.3s,baz=285,slow=14,SNR=14						
CMAR				Pg	Pb	14 11 21.6	+1.2
	8.3nm,0.3s,baz=290,slow=16,SNR=43						
CMAR				Lg	Lg	14 12 03.1	
	12nm,0.3s,baz=166,slow=7.5,SNR=9.1						
	1.9nm,0.3s						
CM02	Chiang Mai Arr	3.23	114	P	Pn	14 11 13.8	-0.1
CM05	Chiang Mai Arr	3.24	115	P	Pn	14 11 14.9	+0.8
CM01	Chiang Mai Arr	3.24	115	P	Pn	14 11 14.5	+0.4
CM09	Chiang Mai Arr	3.26	114	P	Pn	14 11 14.8	+0.4
CM04	Chiang Mai Arr	3.27	115	P	Pb	14 11 23.5	+2.1
MORE	Moreh	4.64	342		Pn	14 11 34.1	+0.7
IMP	Imphal	5.31	341	eP	Pn	14 11 44.6	+2.0
IMP				eS	Sn	14 12 43.0	-0.8
IMP				IAML		14 12 56.0	
	comp=N,507nm,0.6s						
IMP				IAML		14 12 57.5	
	comp=E,498nm,0.4s						
SILR	SILCHAR	5.71	331	eP	Pn	14 11 50.7	+2.7
SILR				IAML		14 12 50.3	
	comp=E,298nm,0.1s						
SILR				eS	Sn	14 12 51.2	-2.3
SILR				IAML		14 12 52.4	
	comp=N,413nm,0.2s						
TNCH	TengChong	5.76	25	Pg	Pg	14 12 12.1	-1.7
TNCH				LR	LR		
	comp=N,900nm,6.6s						
KOHI	KOHIMA	6.11	345	eP	Pn	14 11 55.5	+1.8
KOHI				eS	Sn	14 13 02.4	-1.2
KOHI				IAML		14 13 19.6	
	comp=N,426nm,1.4s						
KOHI				IAML		14 14 01.1	
	comp=E,539nm,0.9s						
SHL	Shillong	6.81	328		Pn	14 12 05.2	+1.9
SHL	Shillong	6.81	328	eP	Pn	14 12 04.1	+0.7
SHL				eS	Sn	14 13 16.2	-4.7
SHL				IAML		14 13 23.0	
	comp=N,315nm,0.2s						
SHL				IAML		14 13 23.3	
	comp=E,302nm,0.2s						
ZIRO	ZIRO	7.91	347	eP	Pn	14 12 20.1	+1.7
ZIRO				eS	Sn	14 13 44.2	-3.8
ZIRO				IAML		14 15 16.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=E,173nm,0.6s						
ZIRO				IAML		14 15 42.4	
	comp=N,199nm,0.6s						
KMI2	Kunming	8.30	49	Pg	Pg	14 13 02.5	+0.1
KMI2				Sg	Sg	14 14 52.6	+2.6
KMI2				smax	smax		
	comp=N,47nm,1.5s						
KMI2				smax	smax		
	comp=E,28nm,1.4s						
KMI2				LR	LR		
	comp=N,360nm,6.3s						
KMI2				LR	LR		
	comp=E,330nm,6.2s						
KMI2				LR	LR		
	comp=Z,490nm,13.7s						
PZH	PanZhiHua	8.59	38	P	Pn	14 12 30.5	+2.7
LSA	Lhasa	10.74	337		Pn	14 12 58.3	+0.8
LSA	Lhasa	10.74	337	P	Pn	14 12 55.5	-2.0
QIZ	Qiongzhong	13.22	91	P	Pn	14 13 29.1	-2.0
QIZ				S	Sn	14 15 56.3	-1.9
QIZ				LR	LR		
	comp=Z,400nm,13.3s						
QIZ				LR	LR		
	comp=Z,200nm,11.2s						
KULM	Kulim	15.16	161		P	14 14 04.9	+2.3
KULM				IAmb	IAmb	14 14 23.2	
	comp=Z,18nm,1.2s						
GOMU	GeErMu	16.36	357	P	Pn	14 14 14.0	+0.6
GOMU				pP	pP	14 14 19.2	-0.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	Lanzhou	17.68	22	eP	P	14 14 31.8	+1.2
LZH				sP	sP	14 14 36.8	+1.1
LZH				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LZH				LR	LR		
	comp=Z,280nm,11.7s						
LZH				LR	LR		
	comp=Z,340nm,12.4s						
LZH				LR	LR		
	comp=Z,160nm,12.7s						
XAN	Xi'an	18.33	37	⇓P	P	14 14 37.7	0.0
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA2	Gaotai	19.91	9	eP	Pn	14 14 57.7	+1.0
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NJ2	Nanjing	23.96	55	eP	P	14 15 38.3	+0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NIL	Nilore	24.38	309		P	14 15 41.7	+0.1
NIL				IAmb	IAmb	14 15 43.1	
	comp=Z,7.2nm,0.8s						
HHC	Hu-ho-hao-te	24.91	29	eP	P	14 15 47.7	+1.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	24.91	346	eP	P	14 15 49.6	+3.3
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WUS	Wushi	25.61	330		P	14 15 53.0	+0.1
WUS				IAmb	IAmb	14 15 57.7	
	comp=Z,12nm,0.8s						
KSH2	Kashi	26.04	322	P	P	14 15 56.8	+0.1
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MANEM	Manem	27.48	315	P	P	14 16 11.0	+1.0
MANEM				IAmb	IAmb	14 16 51.7	
	comp=Z,13nm,0.5s						
AAK	Ala-Archa	29.03	326	P	P	14 16 24.2	+0.7
AAK				IAmb	IAmb	14 16 35.2	
	comp=Z,2.8nm,0.6s						
MKAR	Makanchi Array	29.12	341	P	P	14 16 24.0	-0.2
	comp=Z,0.9nm,0.4s,baz=136,slow=9.3,SNR=1.2						
	comp=Z,0.9nm,0.4s						
SONM	Songino Array	29.25	15	P	P	14 16 25.8	+0.5
	comp=Z,0.8nm,0.8s,baz=219,slow=7.8,SNR=4.0						
SONM				LR	LR	14 30 28.2	
	comp=Z,72nm,18.0s,baz=262,slow=41						
	comp=Z,0.8nm,0.8s						
SONM	Songino Array	29.25	15	IAmb	IAmb	14 16 30.4	
	comp=Z,2.4nm,1.2s						
KSRS	Korea Array	32.98	51	LR	LR	14 32 22.3	
	comp=Z,75nm,18.4s,baz=240,slow=40						
JNU	Nakatsue	33.88	60	LR	LR	14 32 51.8	
	comp=Z,50nm,21.1s,baz=50,slow=40						
ZAA0	Zalesovo Array	35.13	349		P	14 17 16.9	+0.2
ZALV	Zalesovo Beam	35.13	349	P	P	14 17 16.9	+0.2
	comp=Z,1.6nm,0.7s,baz=159,slow=8.7,SNR=7.7						
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	35.13	349		P	14 17 16.6	0.0
BVAR	Borovoye Array	38.57	335	P	P	14 17 43.8	-2.2
	comp=Z,0.8nm,0.5s,baz=143,slow=9.1,SNR=3.5						
	comp=Z,0.8nm,0.5s						
BORK	Borovoye	38.61	335	P	P	14 17 46.3	0.0
AB31	Akbulak array	41.06	324		P	14 18 06.6	-0.1
AB31				IAmb	IAmb	14 18 07.6	
	comp=Z,5.6nm,1.3s						
ABKAR	Akbulak array	41.06	324	P	P	14 18 06.6	-0.1
AKTO	Aktyubinsk	42.74	325	P	P	14 18 19.4	-1.1
	comp=Z,1.8nm,0.8s,baz=105,slow=8.5,SNR=6.2						
	comp=Z,1.8nm,0.8s						
PSA00	Pilbara Seismi	47.34	149	P	P	14 18 58.3	+1.0
PSA00				IAmb	IAmb	14 19 21.8	
	comp=Z,6.7nm,1.2s						
GNI	Garni	47.98	307	LR	LR	14 46 09.8	
	comp=Z,37nm,18.7s,baz=37,slow=45						
WRA	Warramunga Arr	54.60	134	P	P	14 19 52.3	+0.1
	comp=Z,1.0nm,0.9s,baz=319,slow=7.4,SNR=6.0						
	comp=Z,1.0nm,0.9s						
TIXI	Tiksi	55.29	12		P	14 19 56.4	+0.1
TIXI				IAmb	IAmb	14 19 57.0	
	comp=Z,7.8nm,0.8s						
ASAR	Alice Springs	56.95	138	P	P	14 20 08.7	-0.2
	comp=Z,0.8nm,1.0s,baz=326,slow=7.7,SNR=4.7						
	comp=Z,0.8nm,1.0s						
AKASG	Malin Array Be	60.17	318	P	P	14 20 29.7	-1.3
	comp=Z,0.5nm,0.5s,baz=86,slow=6.8,SNR=2.2						
	comp=Z,0.5nm,0.5s						
AKASG	Malin Array Be	60.17	318	IAmb	IAmb	14 20 57.3	
	comp=Z,5.1nm,1.4s						
BURAR	Bucovina Array	62.67	314	P	P	14 20 48.3	+0.2
BURAR				IAmb	IAmb	14 21 29.6	
	comp=Z,1.8nm,1.0s						
FINES	FINESS Array B	63.15	330	P	P	14 20 50.0	-0.9
	comp=Z,3.1nm,1.0s,baz=106,slow=4.5,SNR=4.1						
	comp=Z,3.1nm,1.0s						
FINES	FINESS Array B	63.15	330	P	P	14 20 50.3	-0.6
HFS	Hagfors	69.16	328	P	P	14 21 29.1	-0.4
	comp=Z,3.8nm,0.9s,baz=111,slow=6.5,SNR=7.5						
	comp=Z,3.8nm,0.9s						
GERES	GERESS Array B	70.26	316	P	P	14 21 36.4	-0.3
	comp=Z,1.8nm,0.8s,baz=90,slow=4.0,SNR=6.0						
	comp=Z,1.8nm,0.8s						
NB201	NORSAR Array S	70.27	329	P	P	14 21 36.8	+0.3
NOA	NORSAR Array B	70.31	329	P	P	14 21 36.2	-0.4
	comp=Z,0.7nm,0.7s,baz=85,slow=6.3,SNR=1.9						
	comp=Z,0.7nm,0.7s						
NC204	NORSAR Array S	70.50	329	P	P	14 21 37.5	-0.4
J16K	Anvik River	78.42	27	P	P	14 22 24.9	+1.1
J16K				IAmb	IAmb	14 22 26.2	
	comp=Z,5.2nm,1.0s						
M14K	Bethel	78.71	29	P	P	14 22 25.8	+0.3
M14K				IAmb	IAmb	14 22 40.9	
	comp=Z,7.1nm,1.1s						
EKA	Eskdalemuir Ar	78.93	325	P	P	14 22 26.7	-0.1
	comp=Z,2.0nm,0.7s,baz=65,slow=5.7,SNR=2.4						
	comp=Z,2.0nm,0.7s						
J19K	Poorman	80.19	25	P	P	14 22 34.0	+0.5
K20K	Telida	81.09	25	P	P	14 22 39.3	+1.0
K20K				IAmb	IAmb	14 23 16.2	
	comp=Z,4.2nm,1.3s						
BPAW	Bear Paw Mtn.	81.96	24	P	P	14 22 43.8	+0.9
BMAR	Burnt Mountain	82.46	20	P	P	14 22 46.2	+0.7
L22K	Petersville	82.82	25	P	P	14 22 47.9	+0.4
SPU	Mount Spurr	82.94	27	P	P	14 22 48.9	+0.8
RND	Reindeer	83.13	24	P	P	14 22 49.1	0.0
ILAR	Eielson Array	83.14	23	P	P	14 22 48.8	-0.3
	comp=Z,0.6nm,0.7s,baz=297,slow=4.5,SNR=10						
	comp=Z,0.6nm,0.7s						
H27K	Steamboat Moun	84.14	20	P	P	14 22 55.1	+0.9
H27K				IAmb	IAmb	14 23 07.9	
	comp=Z,4.1nm,1.4s						
TORD	Torodi Ar. Bea	89.45	284	P	P	14 23 19.4	-1.6
	comp=Z,0.4nm,0.7s,baz=115,slow=2.4,SNR=1.8						
	comp=Z,0.4nm,0.7s						

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*NNC **04** 14:13:49.2±0.5, 44.°94N×80.°72E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=7.1km s-min=2.9km az=124.0*
*SOME **04** 14:13:49.9, 44.°85N×80.°78E, h20km*
ISC 04 14:13:47.7±1.3**, 44.°95N**±0.°04×**80.°92E**±0.°05**, h3**km±14km**, n28, σ0.ˢ89**/45**, 2C-6D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	1.01	233	eP	Pg	14 14 07.3	+0.1
	30nm,0.1s						
DJR				eS	Sg	14 14 19.7	-0.6
	56nm,0.2s						
KAPS	Kapalarasan	1.15	287	P	Pb	14 14 09.7	-0.7
	20nm,0.1s						
KAPS				S	Sb	14 14 24.2	-1.6
	174nm,0.1s						
TDK	Taldyqorghan	1.78	273	eP	Pb	14 14 20.7	-0.3
	53nm,0.1s						
TDK				eS	Sb	14 14 43.1	-0.7
	1.0nm,0.2s						
PDGK	Podgornoye	1.92	213	⇓P	Pb	14 14 23.0	-0.4
	10nm,0.2s						
PDGK				⇓S	Sb	14 14 47.8	0.0
	96nm,0.5s						
MAKZ	Makanchi	2.00	21	⇓Pn	Pg	14 14 25.7	-0.4
	2.2nm,0.2s						
MAKZ				⇑Sn	Sg	14 14 52.2	+0.2
	52nm,0.6s						
SHLS	Shalkode	2.08	211	eP	Pn	14 14 23.8	+0.2
	43nm,0.2s						
SHLS				eS	Sn	14 14 48.7	-1.3
	140nm,0.3s						
MK31	Makanchi Array	2.08	27	⇑Pn	Pg	14 14 26.9	-0.7
	1.7nm,0.2s,baz=76,slow=8.3,SNR=414						
MK31				⇓Sn	Sg	14 14 54.2	-0.3
	7.0nm,0.2s,baz=210,slow=27,SNR=4.1						
KPKS	Kokpek	2.19	228	Pg	Pb	14 14 27.4	-0.5
	0.5nm,0.1s						
KPKS				Lg	Lg	14 14 54.5	
	230nm,0.3s						
KPKS	Kokpek	2.19	228	eP	Pb	14 14 27.4	-0.5
	0.5nm,0.1s						
KPKS				eS	Sb	14 14 54.5	-1.0
	230nm,0.3s						
UZB	Uzynbulak	2.26	218	Pg	Pb	14 14 27.8	-1.4
	7.4nm,0.2s						
UZB				Lg	Lg	14 14 55.4	
	58nm,0.2s						
UZB	Uzynbulak	2.26	218	eP	Pb	14 14 27.9	-1.4
	7.4nm,0.2s						
UZB				eS	Sn	14 14 55.4	+0.8
	58nm,0.2s						
ARXS	Arharly	2.33	253	Pg	Pb	14 14 30.0	-0.4
	6.7nm,0.1s						
ARXS				Lg	Lg	14 14 58.5	
	59nm,0.1s						
ARXS	Arharly	2.33	253	eP	Pb	14 14 30.0	-0.4
	6.7nm,0.1s						
ARXS				eS	Sb	14 14 58.5	-1.1
	59nm,0.1s						
KURS	Kuram	2.46	234	Pg	Pb	14 14 32.0	-0.6
	9.8nm,0.4s						
KURS				Lg	Lg	14 15 02.3	
	18nm,0.3s						
SATY	Saty	2.62	225	Pg	Pb	14 14 36.0	+0.7
	6.2nm,0.1s						
SATY				Lg	Lg	14 15 09.3	
	225nm,0.2s						
KOTS	Kotyrbulak	3.23	239	Pg	Pb	14 14 45.5	-0.3
	9.9nm,0.3s						
KOTS				Lg	Lg	14 15 25.3	
	40nm,0.2s						
KOTS	Kotyrbulak	3.23	239	eP	Pb	14 14 45.5	-0.3
	9.9nm,0.3s						
KOTS				eS	Sb	14 15 25.3	-0.4
	40nm,0.2s						
KTBS	Karatobe	3.28	249	Pg	Pb	14 14 46.8	+0.2
	1.2nm,0.1s						
KTBS				Lg	Lg	14 15 28.0	
	0.3nm,0.1s						
KTBS	Karatobe	3.28	249	eP	Pb	14 14 46.8	+0.2
	1.2nm,0.1s						
KTBS				eS	Sb	14 15 28.0	+1.1
	0.3nm,0.1s						
MDOK	Medeo	3.31	239	Pg	Pb	14 14 46.2	-1.0
	3.2nm,0.2s						
MDOK				Lg	Lg	14 15 27.1	
	15nm,0.6s						
ZSN	Zaisan	3.71	46	Pg	Pg	14 14 58.1	-0.7
	2.5nm,0.2s						
ZSN	Zaisan	3.71	46	eP	Pg	14 14 59.3	+0.5
	2.4nm,0.2s						
ZSN				eS	Sg	14 15 48.8	+1.9
	28nm,0.4s						
MTBS	Maitube	3.71	242	Pg	Pb	14 14 54.0	0.0
	3.0nm,0.2s						
MTBS				Lg	Lg	14 15 39.6	
	36nm,0.3s						
MTBS	Maitube	3.71	242	eP	Pb	14 14 54.0	0.0
	3.0nm,0.2s						
MTBS				eS	Sb	14 15 39.6	+0.3
	36nm,0.3s						
KRBS	Karabastau	3.96	253	eP	Pb	14 14 59.0	+0.7
	1.0nm,0.2s						
KRBS				eS	Sb	14 15 48.3	+1.7
	4.4nm,0.2s						
KST	Kastek	4.05	244	eP	Pb	14 15 00.5	+0.7
	0.8nm,0.2s						
KST				eS	Sb	14 15 50.8	+1.7
	8.8nm,0.4s						
DGS	Degeres	4.08	247	eP	Pb	14 15 00.8	+0.5
	2.1nm,0.2s						
DGS				eS	Sb	14 15 51.4	+1.4
	20nm,0.4s						
AAK	Ala-Archa	5.19	246	⇓Pg	Pb	14 15 20.5	+1.3
	1.2nm,0.8s						
AAK				⇓Lg	Lg	14 16 28.3	
	0.9nm,0.5s						

IDC 04 14:21:05.2±6.0**, 13.°49N**×**143.°46E, h72**km±77km**, mb3.0**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=72.8km s-min=27.4km az=85.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.38	86	P	Pn	14 21 29.7	+1.0
	445nm,0.3s,baz=263,slow=2.8,SNR=147						
GUMO				S	Sn	14 21 45.9	-0.4
	97nm,0.3s,baz=150,slow=21,SNR=6.2						
WRA	Warramunga Arr	34.41	195	P	P	14 27 45.9	0.0
	0.4nm,0.9s,baz=7.9,slow=8.8,SNR=1.7						
	0.4nm,0.9s						
ASAR	Alice Springs	38.09	194	P	P	14 28 16.7	-0.6
	0.2nm,0.8s,baz=14,slow=8.2,SNR=1.9						
	0.2nm,0.8s						
MKAR	Makanchi Array	60.61	316	P	P	14 31 08.7	0.0
	0.3nm,0.4s,baz=90,slow=7.5,SNR=13						
	0.3nm,0.4s						

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*NEIC **04** 14:45:51.9±2.1, 3.°98S±0.°08×128.°9E±0.°1, h151km±10km, mb4.1/13, Error ellipse: s-maj=16.1km s-min=10.9km az=112.0*
*DJA **04** 14:45:51.1±0.3, 4°S±3°×12°9E±°, h154km±4km, M4.2/18, mb4.2/6, MLv4.1/18*
*IDC **04** 14:45:52.2±3.9, 3.°99S×128.°93E, h156km±50km, mb3.5/2, mbtmp4.1/5, Error ellipse: s-maj=75.0km s-min=19.9km az=85.0*
ISC 04 14:45:50.6±0.7**, 3.°91S**±0.°07×**128.°87E**±0.°05**, h150**km**, n33, σ1.ˢ63**/37**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.56	6	P	Pn	14 46 13.9	+1.5
AAI	Ambon	0.71	288	P	Pn	14 46 14.8	+1.6
AAI				S	Sn	14 46 30.7	+0.4
KRAI	Karang Ratu	0.76	321	P	Pn	14 46 15.7	+2.1
BNDI	Bandanaira	1.20	120	P	Pn	14 46 19.4	+2.2
NLAI	Namlea	1.89	291	P	Pn	14 46 25.8	+1.3
SANI	Sanana	3.42	303	P	Pn	14 46 44.4	+1.0
SANI				S	Sn	14 47 22.3	-1.9
FAKI	Fak Fak	3.52	74		Pn	14 46 46.6	+2.0
FAKI				Sn	Sn	14 47 25.8	-0.8
FAKI	Fak Fak	3.52	74	P	Pn	14 46 46.8	+2.1
SIJI	Sorong	3.86	38	P	Pn	14 46 50.9	+1.7
	30nm,0.2s,baz=76,slow=6.1,SNR=461						
SIJI				S	Sn	14 47 30.1	-4.3
	95nm,0.2s,baz=150,slow=23,SNR=34						
SIJI	Sorong	3.86	38	P	Pn	14 46 50.8	+1.7
SWI	Sorong	3.86	38	P	Pn	14 46 50.9	+1.8
SAUI	Saumlaki	4.71	149	Pn	Pn	14 47 00.7	+0.4
KMPI	Kaimana, Papua	4.83	87	P	Pn	14 47 03.6	+1.7
RKPI	Ransiki, Papua	5.82	66	P	Pn	14 47 17.2	+2.2
	42nm,0.5s						
MTN	Manton Dam	9.15	166	Pn	Pn	14 47 59.2	-0.3
KNRA	Kununurra	11.69	180	Pn	Pn	14 48 32.5	-0.5
FITZ	Fitzroy Crossi	14.45	192	P	Pn	14 49 07.2	-1.0
	4.3nm,1.0s,baz=13,slow=14,SNR=2.0						
WB0	Warramunga Arr	16.66	162		P	14 49 35.0	-0.3
WB0				IAmb	IAmb	14 49 38.3	
	comp=Z,5.5nm,0.6s						
WRAB	Tennant Creek	16.80	162	P	P	14 49 37.0	+0.2
WRAB				IAmb	IAmb	14 49 39.3	
	comp=Z,7.2nm,1.2s						
WRA	Warramunga Arr	16.80	162	P	P	14 49 35.0	-1.9
	comp=Z,2.8nm,0.4s,baz=340,slow=11,SNR=72						
WRA				S	S	14 52 32.5	-12
	comp=Z,0.3nm,0.5s,baz=352,slow=20,SNR=2.5						
WRA	Warramunga Arr	16.80	162	P	P	14 49 34.8	-2.1
WR8	Warramunga Arr	16.87	161		P	14 49 37.6	0.0
WR8				IAmb	IAmb	14 49 40.5	
	comp=Z,5.9nm,0.9s						
MBWA	Marble Bar	19.31	207		P	14 50 03.4	-0.9
PSA00	Pilbara Seismi	19.62	206		P	14 50 07.2	-0.4
PSA00				IAmb	IAmb	14 50 25.4	
	comp=Z,17nm,1.2s						
PSA00	Pilbara Seismi	19.62	206		P	14 50 06.6	-1.1
PSA00				IAmb	IAmb	14 50 36.7	
	comp=Z,7.8nm,1.4s						
AS31	Alice Springs	20.23	167		P	14 50 15.1	+0.9
AS31				IAmb	IAmb	14 50 16.5	
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	20.23	167	P	P	14 50 15.3	+1.1
	comp=Z,15nm,0.4s,baz=348,slow=12,SNR=421						
	comp=Z,15nm,0.4s						
BBOO	Buckleboo	29.53	168	P	P	14 51 41.6	+0.6
HNR	Honiara	31.34	102	P	P	14 51 56.2	-1.1
MKAR	Makanchi Array	65.04	327	P	P	14 56 16.7	+1.8
	comp=Z,0.1nm,0.4s,baz=108,slow=7.6,SNR=4.8						
	comp=Z,0.1nm,0.4s						
MAKZ	Makanchi	65.22	326	P	P	14 56 17.9	+1.8
ZAA0	Zalesovo Array	68.33	334	P	P	14 56 37.0	+1.4
XMAS	Kiritimati	73.88	87	P	P	14 57 09.0	-0.8

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*SDD **04** 14:45:50.9±2.6, 16.°88N×67.°35W, h15km±20km, MD4.0, ML5.0, MW4.8, Presumed earthquake*
*IDC **04** 14:45:52.3±0.4, 17.°75N×66.°93W, h0km, mb4.5/25, mbtmp4.6/28, ML3.9/3, MS4.1/62, Error ellipse: s-maj=12.0km s-min=8.1km az=156.0*
*MOS **04** 14:45:53.7±0.8, 17.°75N×66.°83W, h17km, mb5.2/28, Error ellipse: s-maj=9.0km s-min=6.6km az=73.3*
*CATAC **04** 14:45:53.8±0.1, 18°N±1°×6°7W±°, h5km, M5.0/44, mb5.1/44, mB5.4/24, MLv5.5/12, Mw(mB)4.9/24, Error ellipse: s-maj=3.0km s-min=2.2km az=8.1, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-1.38; Mθθ1.73; Mφφ-0.35; Mrθ0.01; Mθφ3.16; Mφr-1.12; Fault plane solution: M0 3.71057×10^16 NP1:φs276.34117°, δ65.04885°, λ-16.08092°. NP2:φs13.27470°, δ75.45489°, λ-154.16296°. Principal axes: T 4.0986, Plg6.9328°, Azm143.1493°; N -0.9678, Plg60.5974°, Azm40.6885°; P -3.1308, Plg28.4163°, Azm236.9216°; confirmed*
*NEIC **04** 14:45:54.5, 17.°78N×66.°86W, h16km*
*NEIC **04** 14:45:54.5, 17.°77N×66.°86W, h8km*
*NEIC **04** 14:45:54.8±1.3, 17.°79N±0.°04×66.°86W±0.°04, h9km±3km, mb5.1/290, ML5.2/45, Mwr4.9/34, Mww5.0/20, ML5.0(RSPR), Mwr4.9/18(SLM), Error ellipse: s-maj=6.9km s-min=5.1km az=142.0, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-0.82; Mθθ0.65; Mφφ0.17; Mrθ0.81; Mθφ2.10; Mφr-0.92; Fault plane solution: M0 2.54000×10^16 NP1:φs8.98000°, δ66.08000°, λ-153.46000°. NP2: φs267.53000°, δ65.89000°, λ-26.38000°. Principal axes: T 2.5237, Plg0.0000°, Azm138.0000°; N 0.0395, Plg55.0000°, Azm48.0000°; P -2.5631, Plg35.0000°, Azm228.0000°;*
*NEIC **04** 14:45:54.5, 18.°38N×66.°75W, h16km, Moment Tensor Solution. Duration: 1.ˢ6 Moment tensor: Scale 10^16Nm; Mrr-0.45; Mθθ1.15; Mφφ-0.70; Mrθ1.33; Mθφ2.63; Mφr-1.46; Fault plane solution: M0 3.44000×10^16 NP1:φs14.48000°, δ64.81000°, λ-160.59000°. NP2:φs275.95000°, δ72.50000°, λ-26.50000°. Principal axes: T 3.0316, Plg5.0000°, Azm327.0000°; N 0.7017, Plg59.0000°, Azm65.0000°; P -3.7333, Plg31.0000°, Azm233.0000°;*
*NEIC **04** 14:45:55, 17.°84N×66.°88W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-0.64; Mθθ1.89; Mφφ-1.25; Mrθ0.50; Mθφ2.07; Mφr-1.10; Fault plane solution: M0 2.93000×10^16 NP1:φs22.00000°, δ71.00000°, λ-159.00000°. NP2:φs285.00000°, δ70.00000°, λ-20.00000°. Principal axes: T 2.9190, Plg1.0000°, Azm153.0000°; N -0.0023, Plg62.0000°, Azm62.0000°; P -2.9166, Plg28.0000°, Azm244.0000°;*
*OSPL **04** 14:45:55.7±0.6, 17.°81N×66.°88W, h14km±9km, ML4.7, Presumed earthquake*
*RSPR **04** 14:45:55.7, 17.°84N×66.°88W, h8km±1km*
*INMG **04** 14:45:56.0±6.2, 17.°77N×66.°71W, h10km, M5.2, mb5.0, #DIST_RANGE: DISTANT*
*GCMT **04** 14:45:58.8±0.2, 17.°97N±0.°01×66.°78W±0.°01, h16km±1km, MW5.0/108, Moment Tensor Solution. s35,c44; s108,c149; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.80±.11; Mθθ1.67±.10; Mφφ-0.87±.08; Mrθ-1.41±.30; Mθφ2.83±.09; Mφr-1.29±.28; Best double couple: M0 3.49500×10^16 NP1:φs285.00000°, δ66.00000°, λ6.00000°. NP2:φs192.00000°, δ85.00000°, λ156.00000°. Principal axes: T 4.2110, Plg21.0000°, Azm146.0000°; N -1.4370, Plg65.0000°, Azm0.0000°; P -2.7780, Plg13.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 04 14:45:54.2±0.8**, 17.°74N**±0.°03×**66.°88W**±0.°02**, h10**km±5km**, n785, σ1.ˢ30**/707**, mb5.1**/184**, MS4.2**/61**, 30C-17D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.24	359		Pg	14 45 59.1	0.0
GBPR	Guanica, Bosqu	0.24	359	⇓iP	Pg	14 45 59.1	0.0
MLPR	Magueyes Islan	0.28	325		Pg	14 46 00.2	+0.3
MLPR				IAML		14 46 04.1	
	694µm,0.7s						
MLPR				IAML		14 46 04.4	
	627µm,0.7s						
CRPR	Cabo Rojo, PR	0.35	320		Pg	14 46 01.4	+0.3
CRPR	Cabo Rojo, PR	0.35	320	IAML		14 46 06.2	
	895µm,0.5s						
CRPR				IAML		14 46 06.5	
	372µm,0.6s						
CRPR	Cabo Rojo, PR	0.35	320	ePg	Pg	14 46 01.4	+0.3
CRPR				IAML		14 46 10.5	
	comp=N,19nm,0.7s						
CRPR				IAML		14 46 10.5	
	comp=N,19nm,0.7s						
CRPR	Cabo Rojo, PR	0.35	320	⇑iP	Pg	14 46 01.4	+0.3
CRPR				eS	Sg	14 46 05.8	0.0
CRPR	Cabo Rojo, PR	0.35	320	iP	Pg	14 46 01.4	+0.3
CRPR				eS	Sg	14 46 05.7	-0.1
CRPR				IAML		14 46 07.8	
	comp=Z,283µm,0.3s						
OBIP	Obispado Ponce	0.40	40		Pg	14 46 01.8	-0.2
OBIP	Obispado Ponce	0.40	40		Sg	14 46 07.0	-0.4
OBIP	Obispado Ponce	0.40	40	⇓iP	Pg	14 46 02.0	0.0
OBIP				eS	Sg	14 46 07.0	-0.4
OBIP	Obispado Ponce	0.40	40	iP	Pg	14 46 02.0	0.0
OBIP				eS	Sg	14 46 07.0	-0.4
OBIP				IAML		14 46 10.5	
	comp=Z,48µm,0.9s						
CELP	Cerrillos	0.44	40		Pg	14 46 02.6	-0.2
CELP				IAML		14 46 08.8	
	comp=Z,158µm,0.8s						
LSP	Las Mesas	0.48	335		Pg	14 46 03.3	-0.3
LSP	Las Mesas	0.48	335	⇓iP	Pg	14 46 03.3	-0.3

UUPR Utuado, UPR, P 0.54 16 Pg 14 46 03.8 -0.8
PRSN Puerto Rico Se 0.54 332 Pg 14 46 04.2 -0.5
PRSN Puerto Rico Se 0.54 332 Sg 14 46 11.5 -0.4
PRSN Puerto Rico Se 0.54 332 ePg Pg 14 46 04.3 -0.5
PRSN IAML 14 46 13.9
comp=N,28nm,0.3s
PRSN IAML 14 46 16.1
comp=N,21nm,0.3s
PRSN Puerto Rico Se 0.54 332⇑iP Pg 14 46 04.4 -0.4
PRSN eS Sg 14 46 11.5 -0.4
ECPR Experimental S 0.76 40 Pg 14 46 07.7 -1.1
ECPR IAML 14 46 20.6
comp=N,67µm,0.7s
ECPR Experimental S 0.76 40⇑eP Pg 14 46 07.8 -1.1
ECPR eS Sg 14 46 17.6 -1.1
AGPR Aguadilla, PR 0.76 343 Pg 14 46 07.7 -1.2
AGPR IAML 14 46 21.3
comp=N,83µm,0.5s
AGPR IAML 14 46 21.6
comp=N,88µm,0.7s
AGPR Aguadilla, PR 0.76 343 P Pg 14 46 07.9 -1.0
AGPR S Sg 14 46 16.9 -2.0
AGPR Aguadilla, PR 0.76 343 ePg Pg 14 46 07.9 -1.0
AGPR IAML 14 46 20.3
comp=N,64µm,0.3s
AGPR IAML 14 46 20.3
comp=N,64µm,0.3s
AGPR Aguadilla, PR 0.76 343⇑iP Pg 14 46 07.8 -1.1
AGPR eS Sg 14 46 17.2 -1.7
AGPR Aguadilla, PR 0.76 343 iP Pg 14 46 07.9 -1.0
AGPR eS Sg 14 46 17.1 -1.8
AGPR IAML 14 46 26.4
comp=Z,44µm,0.6s
SJG San Juan 0.79 61 Pg Pg 14 46 08.9 -0.5
comp=Z,2µm,0.3s,baz=250,slow=14,SNR=2615
SJG Lg Lg 14 46 18.9
comp=Z,4µm,0.3s,baz=184,slow=10,SNR=14
SJG San Juan 0.79 61 Pg 14 46 08.8 -0.5
SJG San Juan 0.79 61 P Pg 14 46 09.0 -0.3
SJG S Sg 14 46 19.1 -0.5
SJG San Juan 0.79 61 P Pg 14 46 09.0 -0.3
SJG San Juan 0.79 61 eP Pg 14 46 09.0 -0.3
SJG San Juan 0.79 61 ePg Pg 14 46 09.0 -0.3
SJG San Juan 0.79 61⇑eP Pg 14 46 09.1 -0.3
SJG eS Sg 14 46 19.8 +0.2
SJG San Juan 0.79 61 iP Pg 14 46 09.0 -0.3
SJG eS Sg 14 46 19.5 -0.1
SJG IAML 14 46 22.4
comp=Z,27µm,0.6s
EMPR Esperanza - Ma 0.81 24 Pg 14 46 09.1 -0.7
EMPR Sg 14 46 19.2 -1.1
EMPR Esperanza - Ma 0.81 24⇑iP Pg 14 46 09.1 -0.7
EMPR eS Sg 14 46 19.2 -1.1
PDPR Patillas Dam, 0.86 71 Pg 14 46 10.4 -0.4
PDPR IAML 14 46 25.4
comp=Z,58µm,0.9s
IDE Isla Desecheo 0.86 319 Pg 14 46 09.8 -1.0
IDE Isla Desecheo 0.86 319⇓iP Pg 14 46 09.8 -1.0
GCPR Guaynabo City 0.94 53 Pg 14 46 11.4 -1.0
GCPR Sg 14 46 23.2 -1.5
GCPR Guaynabo City 0.94 53⇓eP Pg 14 46 11.4 -1.0
GCPR eS Sg 14 46 23.2 -1.5
HUMP Col San Antoni 1.06 67 Pg 14 46 13.5 -1.0
HUMP Sg 14 46 27.2 -1.0
HUMP IAML 14 46 30.6
comp=Z,42µm,0.9s
HUMP Col San Antoni 1.06 67⇑eP Pg 14 46 13.7 -0.8
HUMP eS Sg 14 46 28.2 0.0
CUPR Culebra, Puert 1.62 69 Pn 14 46 22.7 0.0
PCDR Punta Cana, DR 1.63 299 ePg Pn 14 46 23.5 +0.6
PCDR eSg Sg 14 46 48.1 +1.5
PCDR IAML 14 46 54.8
comp=N,17µm,1.6s
PCDR IAML 14 46 54.8
comp=N,17µm,1.6s
HIDR Higuey Centro 1.95 296 ePg Pn 14 46 27.6 +0.4
HIDR eSg Sb 14 46 53.7 -0.4
HIDR IAML 14 47 01.0
comp=N,12µm,0.8s
HIDR IAML 14 47 01.0
comp=N,12µm,0.8s
DR12 Loma Pena Alta 2.60 294 Pn 14 46 36.6 +0.3
HATOM Hato Mayor del 2.60 294 ePg Pn 14 46 37.2 +1.0
HATOM eSg Sb 14 47 11.9 -1.0
HATOM IAML 14 47 25.4
comp=N,6µm,0.7s
HATOM IAML 14 47 25.4
comp=N,6µm,0.7s
SMDR Samana, DR 2.68 306 Pb 14 46 39.9 -2.3
SMDR Sb 14 47 13.9 -1.3
SMDR Samana, DR 2.68 306 ePg Pb 14 46 40.0 -2.3
SMDR eSg Sg 14 47 18.3 -2.1
SMDR IAML 14 47 35.2
comp=N,10µm,0.8s
SMDR IAML 14 47 35.2
comp=N,10µm,0.8s
SDD Santo Domingo 2.98 284 Pn 14 46 41.4 0.0
SDD IAML 14 47 35.0
comp=E,9µm,1.1s
SDD IAML 14 47 49.6
comp=N,9µm,1.1s
SDD Santo Domingo 2.98 284 P Pn 14 46 42.6 +1.2
SDD S Sn 14 47 19.7 +2.6
SDD Santo Domingo 2.98 284 iPn Pn 14 46 34.1 -7.3
SDD eSg Sn 14 47 16.6 -0.6
SDD IAML 14 47 46.6
comp=N,3µm,1.6s
SDD IAML 14 47 46.6
comp=N,3µm,1.6s
DR08 Loma La Naviza 3.23 293 ePg Pn 14 46 46.3 +1.4
DR08 eSg Sb 14 47 31.4 +0.4
DR08 IAML 14 47 41.6
comp=N,43µm,0.6s
DR08 IAML 14 47 41.6
comp=N,43µm,0.6s
NADR Nagua 3.25 300 ePg Pb 14 46 49.1 -2.9
NADR eSg Sb 14 47 32.3 +0.6
NADR IAML 14 47 57.4
comp=N,17µm,1.9s
NADR IAML 14 47 57.4
comp=N,17µm,1.9s
BANI BANI 3.38 282 ePg Pn 14 46 48.2 +1.2
BANI eSg Sn 14 47 28.6 +1.3
BANI IAML 14 48 02.2
comp=N,6µm,0.6s
BANI IAML 14 48 02.2
comp=N,6µm,0.6s
SABA Saba 3.47 91 Pn 14 46 48.3 +0.1
SABA IAML 14 47 35.9
comp=N,4µm,0.4s
SABA IAML 14 48 02.8
comp=E,7µm,0.7s
SABA Saba 3.47 91 Sn 14 47 27.9 -1.4
SABA Saba 3.47 91 P Pn 14 46 48.8 +0.6
SABA S Sn 14 47 30.0 +0.7
SABA Saba 3.47 91⇑eP Pn 14 46 48.1 -0.1
SABA eS Sn 14 47 27.9 -1.4
CADR Cabrera 3.48 304 ePg Pb 14 46 54.0 -1.9
CADR eSg Sb 14 47 42.1 +3.8
CADR IAML 14 47 57.1
comp=N,9µm,0.9s
CADR IAML 14 47 57.1
comp=N,9µm,0.9s
SFDR San Fco. de Ma 3.55 296 ePg Pb 14 46 53.8 -3.2
SFDR eSg Sb 14 47 38.7 -1.5
SFDR IAML 14 47 49.4
comp=N,13µm,0.6s
SFDR IAML 14 47 49.4
comp=N,13µm,0.6s
SMRT St. Maarten 3.63 84 Pn 14 46 50.5 +0.1
SMRT Sn 14 47 31.9 -1.6
SMRT St. Maarten 3.63 84⇑eP Pn 14 46 50.5 +0.1
SMRT eS Sn 14 47 31.9 -1.6
ABDR Alto Bandera 3.72 287 ePg Pn 14 46 54.5 +2.5
ABDR eSg Sn 14 47 40.0 +4.0
ABDR IAML 14 48 19.6
comp=N,0.2nm,0.3s
ABDR IAML 14 48 19.6
comp=N,0.2nm,0.3s
SEUS St. Eustatius 3.72 93 P Pn 14 46 55.6 +4.0
SC01 Santiago de lo 4.02 295 P Pn 14 46 59.8 +4.0
SC01 S Sn 14 47 45.4 +2.4
SC01 Santiago de lo 4.02 295 ePg Pn 14 47 00.2 +4.4
SC01 IAML 14 48 16.4
comp=N,7µm,1.0s
SC01 IAML 14 48 16.4
comp=N,7µm,1.0s
SODR Sosua Marina B 4.04 300 ePg Pb 14 47 03.1 -2.3
SODR ⇑eSg Sb 14 47 55.6 +1.3
SODR IAML 14 48 26.7
comp=N,14µm,0.8s
SODR IAML 14 48 26.7
comp=N,14µm,0.8s
BRH1 Barahona 4.04 277 ePg Pn 14 46 57.2 +1.2
BRH1 eSg Sn 14 47 43.5 0.0
PODR Polo 4.21 276 ePg Pn 14 46 58.5 -0.1
PODR eSg Sn 14 47 47.2 -0.8
PODR IAML 14 48 31.9
comp=N,3µm,0.9s
PODR IAML 14 48 31.9
comp=N,3µm,0.9s
SDDR Presa de Saban 4.37 287 Pn 14 47 01.8 +1.1
SDDR Presa de Saban 4.37 287 P Pn 14 47 04.4 +3.8
SDDR S Sn 14 47 53.7 +2.0
SDDR Presa de Saban 4.37 287 eP Pn 14 47 02.0 +1.4
SDDR eS Sn 14 47 49.0 -2.6
SDDR IAML 14 48 13.5
comp=N,4µm,1.1s
SDDR IAML 14 48 18.8
comp=N,4µm,0.7s
SDDR Presa de Saban 4.37 287 eP Pn 14 47 03.8 +3.1
SDDR Presa de Saban 4.37 287 ePg Pn 14 47 05.0 +4.4
SDDR eSg Sn 14 47 57.2 +5.6
SDDR IAML 14 48 31.1
comp=N,3µm,1.7s
SDDR IAML 14 48 31.1
comp=N,3µm,1.7s
NEDR Neiba UASD 4.38 280 ePg Pn 14 47 02.2 +1.5
NEDR ⇑eSg Sn 14 47 55.6 +3.8
NEDR IAML 14 48 34.9
comp=N,1µm,1.0s
NEDR IAML 14 48 34.9
comp=N,1µm,1.0s
MADR Mao Valverde 4.40 295 iPn Pn 14 46 56.9 -4.1
MADR eSg Sb 14 48 02.0 -2.7
MADR IAML 14 48 10.5
comp=N,7µm,0.5s
MADR IAML 14 48 10.5
comp=N,7µm,0.5s
LUDR Luperon 4.42 300 ePg Pb 14 47 08.2 -3.7
LUDR eSg Sb 14 48 05.4 +0.2
MBFL Flemmings, Mon 4.56 102 eP Pn 14 47 03.0 -0.2
MBWH Windy Hill 4.58 102 eP Pn 14 47 02.7 -0.9
MBWH Windy Hill 4.58 102 eS Sn 14 47 53.5 -3.4
MLYT Lee's Yard 4.59 102 eP Pn 14 47 03.2 -0.4
JIDR Jimani 4.79 280 ePg Pn 14 47 08.3 +2.0
JIDR IAML 14 48 41.9
comp=N,2µm,0.7s
JIDR IAML 14 48 41.9
comp=N,2µm,0.7s
ANWB Willy Bob 4.85 90 Pn 14 47 06.9 -0.3
ANWB Willy Bob 4.85 90 P Pn 14 47 07.1 -0.1
ANWB S Sn 14 48 04.7 +1.2
ANWB Willy Bob 4.85 90 eP Pn 14 47 06.2 -1.0
MCDR Montecristi 5.01 296 iPn Pn 14 47 03.8 -5.6
MCDR eSg Sb 14 48 21.7 -0.6
MCDR IAML 14 48 45.0
comp=N,3µm,1.2s
MCDR IAML 14 48 45.0
comp=N,3µm,1.2s
DHSZ Broadband at M 5.10 106 eP Pn 14 47 09.4 -1.2
GDHS Morne Mazeau, 5.10 106 Pn 14 47 10.0 -0.7
GDHS IAML 14 48 23.0
comp=N,3µm,0.6s
ATGZ Broadband at L 5.19 108 eP Pn 14 47 11.7 -0.2
MMLZ Guadeloupe Bro 5.26 108 eP Pn 14 47 11.2 -1.7
ABD La Joyeuse, An 5.30 103⇓eP Pn 14 47 13.8 +0.3
CBE Ff, Capester 5.31 107 Pn 14 47 14.0 +0.5
CBE Sn 14 48 14.2 -0.6
CBE Ff, Capester 5.31 107 IAML 14 48 24.8
comp=N,2µm,0.5s
CBE IAML 14 48 25.4
comp=E,2µm,0.5s
CBE Ff, Capester 5.31 107 P Pn 14 47 13.2 -0.3
CBE S Sn 14 48 15.8 +1.0
CBE Ff, Capester 5.31 107⇑eP Pn 14 47 14.0 +0.5
CBE eS Sn 14 48 14.2 -0.6
TBG Guadaloupe-3 5.35 110 eP Pn 14 47 12.8 -1.2
GRTK Grand Turk 5.50 314 Pn 14 47 15.7 -0.4
GRTK Grand Turk 5.50 314 P Pn 14 47 15.7 -0.4
GRTK S Sn 14 48 21.7 +2.4
GRTK Grand Turk 5.50 314 eP Pn 14 47 16.1 0.0
GRTK eS Sn 14 48 17.1 -2.2
GRTK IAML 14 48 25.4
comp=E,1µm,0.5s
GRTK IAML 14 48 26.9
comp=E,2µm,0.8s
DSLB Salisbury 5.71 113 eP Pn 14 47 18.7 -0.3
DSDZ La Diserade, G 5.74 103 eP Pn 14 47 18.8 -0.5
H05N1 Guadeloupe/Mar 5.74 103 Pn Pn 14 47 19.7 +0.2
H05N1 Sn Sn 14 48 21.0 -4.5
DLPL La Plaine 5.90 113 eP Pn 14 47 19.6 -2.1
SVN Savane Anatole 6.19 117 eP Pn 14 47 25.1 -0.6
BIM Bigot 6.43 119 eP Pn 14 47 28.7 -0.3
ILAM Ilet Lapin Mar 6.47 116 eP Pn 14 47 28.4 -1.1
H05S1 Guadeloupe/Mar 6.67 119 Pn Pn 14 47 33.7 +1.4
H05S1 Sn Sn 14 48 40.2 -8.2
SLBI Saint Lucia, B 6.77 122 eP Pn 14 47 32.6 -1.0
SLAC Saint Lucia, A 6.91 123 eP Pn 14 47 34.6 -0.9
MASC Masc 7.37 290 P Pn 14 47 41.9 +0.1
MASC S Sn 14 49 08.0 +2.5
GRGR Grenville 7.52 137 P Pn 14 47 43.9 +0.1
URI Uribia 7.78 220 P Pn 14 47 45.8 -1.6
URI S Sn 14 49 12.2 -3.3
QMBU Quimbuelo 7.90 289 P Pn 14 47 48.6 -0.5
QMBU S Sn 14 49 20.8 +2.2
QMBU Quimbuelo 7.90 289 eP Pn 14 47 48.4 -0.7
QMBU eS Sn 14 49 15.2 -3.4
QMBU IAML 14 49 27.7
comp=N,182nm,1.0s
QMBU IAML 14 49 32.3
comp=E,229nm,0.6s
QMBU Quimbuelo 7.90 289 IAML 14 49 53.5
comp=N,214nm,0.9s
GTBY Guantanamo Bay 8.10 287 P Pn 14 47 51.4 -0.4
GTBY S Sn 14 49 25.7 +2.3
GTBY Guantanamo Bay 8.10 287 eP Pn 14 47 51.1 -0.7
GTBY eS Sn 14 49 20.1 -3.4
GTBY IAML 14 49 41.4
comp=N,114nm,0.8s
GTBY IAML 14 49 53.6
comp=N,110nm,0.6s
NMDO Nuevo Mundo 8.16 291 P Pn 14 47 55.4 +2.7
NMDO S Sn 14 49 27.3 +2.3
NMDO Nuevo Mundo 8.16 291 eP Pn 14 47 51.8 -0.9
NMDO eS Sn 14 49 21.5 -3.5
NMDO IAML 14 49 33.3
comp=E,138nm,0.8s
NMDO IAML 14 49 58.3
comp=N,102nm,0.8s
MOAC Moa 8.17 292 eP Pn 14 47 52.3 -0.5
MOAC eS Sn 14 49 22.0 -3.3
MOAC IAML 14 49 36.9
comp=N,162nm,0.7s
MOAC IAML 14 49 38.3
comp=E,110nm,0.8s
BBGH Gun Hill 8.40 122 P Pn 14 47 56.3 +0.3
BBGH S Sn 14 49 31.7 +0.7
RCC Rio Carpintero 8.65 286 eP Pn 14 47 58.7 -0.7
RCC eS Sn 14 49 33.7 -3.3
MARVS Santiago de Cu 8.84 286 eP Pn 14 48 00.9 -1.0
MARVS eS Sn 14 49 38.2 -3.4
HLGC Holguin 9.22 291 eP Pn 14 48 08.6 +1.4
HLGC eS Sn 14 49 51.7 +0.6
CHIV Chivirico 9.30 285 P Pn 14 48 08.1 -0.2
CHIV S Sn 14 49 55.8 +2.7
CHIV Chivirico 9.30 285 eP Pn 14 48 07.4 -1.0
CHIV eS Sn 14 49 49.2 -3.9
HOJ Hope 9.41 273 iP Pn 14 48 10.1 +0.3
STH Stony Hill 9.46 274⇑iP Pn 14 48 09.9 -0.7
SDV Santo Domingo 9.53 203 Pn Pn 14 48 12.7 +1.1
comp=E,14nm,0.3s,baz=13,slow=7.6,SNR=44
SDV Sn Sn 14 49 53.2 -5.7
comp=E,5.7nm,0.3s,baz=313,slow=18,SNR=2.0
SDV LR LR 14 52 31.7
comp=E,853nm,18.8s,baz=30,slow=42
comp=E,74nm,0.4s
SDV Santo Domingo 9.53 203 Pn 14 48 12.2 +0.6
SDV Santo Domingo 9.53 203 eP Pn 14 48 12.2 +0.6
SDV Santo Domingo 9.53 203 P Pn 14 48 13.0 +1.4
comp=E,1µmcomp=E,134nm,0.7s
LMGC Las Mercedes 9.86 285 eP Pn 14 48 14.8 -1.3
LMGC eS Sn 14 50 03.4 -3.5
MTDJ Mount Denham 10.15 274 Pn 14 48 19.4 -0.8
MTDJ Mount Denham 10.15 274 P Pn 14 48 20.5 +0.3
MTDJ S Sn 14 50 16.2 +2.0
MTDJ Mount Denham 10.15 274 eP Pn 14 48 18.9 -1.3
MTDJ eS Sn 14 50 10.4 -3.8
CCCC Cccc 10.83 290 eP Pn 14 48 24.2 -5.1
CCCC eS Sn 14 50 19.6 -11
SJCC San Jacinto, C 11.21 227 P Pn 14 48 34.5 -0.1
SJCC S Sn 14 50 41.4 +1.3
PAMC Pamplona, Colo 11.79 210 P Pn 14 48 42.9 0.0
comp=E,2µmcomp=E,163nm,0.6s
CBCY The Bluff, Cay 12.37 281 P Pn 14 48 51.4 +1.1
CBCY S Sn 14 51 10.7 +2.5
CAIB Caibarien 12.74 294 P Pn 14 48 55.7 +0.2
RUSC La Rusia 13.24 208 P Pn 14 49 02.8 +0.1
RUSC S Sn 14 51 30.3 -0.1
APAC Apartado, Choc 13.60 225 P Pn 14 49 07.6 +0.4
comp=E,68nm,0.8s
CAP2 Capurgana 13.62 230 P Pn 14 49 07.2 -0.3
FSCY Frank Sound, G 13.66 279 P Pn 14 49 07.7 -0.3
DBBC Dabeiba 14.01 222 P Pn 14 49 12.1 -0.9
HELC Santa Helena 14.25 217 P Pn 14 49 15.3 -1.2
HELC S Sn 14 51 55.1 +0.2
CAMR Camarioca 14.58 294 P Pn 14 49 21.2 +0.5
CAMR Camarioca 14.58 294⇓eP Pn 14 49 19.5 -1.1
PRVC Isla de Provid 14.62 255 P Pn 14 49 20.4 -0.7
BBSR BB Station 14.71 7 Pn 14 49 20.4 -1.8
BBSR BB Station 14.71 7 P Pn 14 49 22.6 +0.4
ROSC El Rosal 14.74 210 Pn Pn 14 49 23.9 +0.8
comp=E,5.2nm,0.3s,baz=121,slow=18,SNR=5.2
ROSC Sn Sn 14 51 58.6 -8.3
comp=E,0.9nm,0.3s,baz=100,slow=23,SNR=1.0
ROSC LR LR 14 55 53.4
comp=E,1µm,19.9s,baz=343,slow=41
comp=E,12nm,0.3s
ROSC El Rosal 14.74 210 Pn Pn 14 49 23.2 0.0
ROSC El Rosal 14.74 210 P Pn 14 49 24.0 +0.8
PTAC Punta Ardita, 14.98 227 P Pn 14 49 24.5 -1.6
comp=E,2µmcomp=E,70nm,0.6s
VILC Villavicencio, 15.10 207 P Pn 14 49 27.2 -0.6
comp=E,1µmcomp=E,117nm,0.7s
BCIP Isla Barro Col 15.21 238 P Pn 14 49 28.9 -0.2
BCIP S Sn 14 52 18.7 +1.0
BCIP Isla Barro Col 15.21 238 P Pn 14 49 29.5 +0.4
061Z Ochoppi 15.33 304 eP Pn 14 49 30.2 -0.4
SOR Soroa 15.95 291 P P 14 49 42.0 -0.3
SOR Soroa 15.95 291 P P 14 49 42.0 -0.3
SOR pmax pmax
comp=Z,41nm,0.8s
SOR Soroa 15.95 291 eP Pn 14 49 37.9 -0.8
PRAC Prado 15.99 210 P Pn 14 49 39.2 -0.2
ORTC Ortega, Tolima 16.00 212 P Pn 14 49 40.2 +0.7
comp=Z,968nmcomp=Z,104nm,0.8s
BILN Bilwi Airport 16.29 259 P Pn 14 49 42.5 -0.6
BOAV Boa Vista 16.47 157 Pn Pn 14 49 45.1 -0.4
BOAV Boa Vista 16.47 157 eP Pn 14 49 46.0 +0.5
DWPF Disney Wildern 16.91 310 P Pn 14 49 51.0 +0.1
MACC Macarena, Meta 16.94 205 P Pn 14 49 49.2 -2.2
comp=Z,998nmcomp=Z,56nm,0.5s
JAMC Jamundi, Valle 17.34 215 P P 14 49 57.7 -0.3
comp=Z,41nm,0.7s
GARC Garzon, Huila 17.62 210 P P 14 50 00.9 -0.2
comp=Z,625nmcomp=Z,52nm,0.8s
SIUN Universidad Ur 17.68 259 Pn Pn 14 50 00.2 -0.5
SIUN IAmb IAmb 14 50 03.8
comp=Z,32nm,0.8s
BRU2 Volcan 17.76 242 P Pn 14 50 01.7 -0.1
SGC2 Sao Gabriel da 17.77 180 P P 14 50 04.0 +1.4
comp=Z,719nmcomp=Z,44nm,0.7s
TRT2 Tortugero 17.83 249 P Pn 14 50 02.0 -0.5
POPC Popayan, Colom 17.90 214 P P 14 50 04.9 +0.6
comp=Z,594nmcomp=Z,60nm,0.8s
DRK0 Durika 18.00 244 P Pn 14 50 04.5 -0.2
CDITO Canoas 18.03 242 P Pn 14 50 04.9 0.0
FLOC Florencia 18.22 209 P P 14 50 10.0 +2.4
HDC Heredia 18.41 248 eP Pn 14 50 12.4 +2.7
PTJ1 Puerto Jimnez 18.41 242 P P 14 50 09.6 0.0
656A Willston 18.42 312 Pn 14 50 09.7 0.0
656A IAmb IAmb 14 50 11.6
comp=Z,118nm,1.1s
OCHAL Ojochal 18.42 244 P Pn 14 50 09.9 +0.1
LCR2 La Lucha 2 18.43 247 P Pn 14 50 11.9 +1.8
PIRO Carate, Puerto 18.51 242 P Pn 14 50 11.6 +0.7
BBAC Balboa, Cauca 18.64 214 P Pn 14 50 14.7 +2.0
QUEP Quepos 18.71 246 P P 14 50 13.1 +0.1
MDP Montagnes des 18.75 130 P Pn 14 50 15.2 +1.4
comp=Z,1.2nm,0.3s,baz=330,slow=8.4,SNR=5.2
comp=Z,33nm,0.9s
BOAB BOACO BROADBAN 18.88 256 P Pn 14 50 16.1 +0.7
RCPN Sur Rio San Ju 18.97 260 P Pn 14 50 16.7 +0.1
MATN Matagalpa 18.98 258 P P 14 50 16.2 +0.2
JTS Las Juntas de 19.02 250 P Pn 14 50 19.0 +1.9
comp=Z,103nm,0.9s,baz=57,slow=6.7,SNR=40
JTS LR LR 14 57 56.7
comp=Z,428nm,20.2s,baz=58,slow=38
JTS Las Juntas de 19.02 250 P Pn 14 50 19.4 +2.3
JTS IAmb IAmb 14 50 21.5
comp=Z,100nm,0.9s
JTS Las Juntas de 19.02 250d iP Pn 14 50 18.5 +1.3
JTS pmax pmax
comp=Z,116nm,0.9s
JTS Las Juntas de 19.02 250 P Pn 14 50 17.6 +0.4
CARN Rivas 19.18 253 P Pn 14 50 19.2 +0.2
NHSC New Hope 19.43 325 P P 14 50 20.9 +0.3
NANN Nandasmo 19.47 255 P P 14 50 21.4 +0.1
JUD3 Juan Diaz 3 19.60 250 P P 14 50 23.3 +0.5
INDI Punta indio, G 19.70 249 P P 14 50 24.2 +0.5
Y58A Scranton 19.76 327 Pn Pn 14 50 25.9 +0.1
CNGN Cerro Negro 19.83 258 P P 14 50 25.5 +0.3
HERN Volcan Telica 19.92 258 IAmb IAmb 14 50 35.4
comp=Z,83nm,1.1s
HERN Volcan Telica 19.92 258 P P 14 50 26.6 +0.4
TGUH Tegucigalpa,Un 19.95 262 P P 14 50 27.1 +0.4
CRIN San Cristobal 20.09 258 P P 14 50 28.1 -0.1
TEIG Tepich 20.39 280 P P 14 50 31.3 0.0
OTAV Otavalo 20.79 214 P Pn 14 50 38.7 +0.2
OTAV IAmb IAmb 14 50 40.4
comp=Z,58nm,0.8s
OTAV Otavalo 20.79 214 P Pn 14 50 38.7 +0.2
OTAV pmax pmax
comp=Z,59nm,0.9s
OTAV Otavalo 20.79 214 P P 14 50 36.1 0.0
OTAV Otavalo 20.79 214 eP Pn 14 50 39.1 +0.7
JSC Jenkinsville 20.90 325 IAmb IAmb 14 50 53.4
comp=Z,78nm,0.7s
V58A Windy Hill, Pi 21.01 331 IAmb IAmb 14 50 48.1
comp=Z,67nm,1.0s
TEFE Tefe 21.23 174 eP P 14 50 43.0 +2.7
GOGA Godfrey 21.58 319 IAmb IAmb 14 50 50.4
comp=Z,120nm,0.9s
KMSC Kings Mountain 21.59 326 IAmb IAmb 14 50 58.1
comp=Z,82nm,0.9s
MACA Manacapuru-AM 21.64 163 eP P 14 50 47.3 +2.5
MYIG Merida 21.81 282 P P 14 50 46.4 -0.1
MTO3 Montecristo 21.86 265 P P 14 50 47.9 +0.5
R58B Mineral 22.34 337 P P 14 50 51.0 -1.1
BG3 Lake Jocassee 22.36 323 IAmb IAmb 14 51 10.9
comp=Z,76nm,0.6s
FAME Alcaldia de Sa 22.59 263 P P 14 50 55.2 +0.1
APG El Apazote 22.79 267 LR LR 15 00 45.3
comp=Z,58nm,18.5s,baz=76,slow=39
SCIG Sabancuy 23.10 277 P P 14 51 00.9 +0.5
SDMD Soldier's Deli 23.27 340 IAmb IAmb 14 51 20.0
comp=Z,39nm,0.9s
TKL Tuckaleechee C 23.32 323 LR LR 14 59 54.2
comp=Z,554nm,20.6s,baz=157,slow=36
WUPA West Chester U 23.38 343 IAmb IAmb 14 51 23.6
comp=Z,36nm,0.5s
Y49A Blount Mountai 23.75 316 IAmb IAmb 14 51 30.4
comp=Z,35nm,0.8s
W50A Signal Mountai 23.91 320 IAmb IAmb 14 51 11.8
comp=Z,45nm,0.7s
CCIG Comitan 24.20 270 P P 14 51 11.3 0.0
CCIG IAmb IAmb 14 51 21.4
comp=Z,52nm,0.7s
CCIG Comitan 24.20 270 P P 14 51 11.9 +0.7
N58A Sunbury 24.54 342 IAmb IAmb 14 51 41.6

comp=Z,32nm,0.8s
ITTB Itaituba 24.56 152 *e*P P **14 51 15.8 +1.5**
SSPA Standing Stone 24.72 340 P P **14 51 16.3 +0.7**
SSPA IAmb IAmb 14 51 42.6
comp=Z,59nm,1.1s
T50A Nancy 24.89 324 P P **14 51 16.1 -1.0**
T50A IAmb IAmb 14 51 20.4
comp=Z,34nm,0.8s
KSPA Keystone Colle 24.94 344 IAmb IAmb 14 51 45.2
comp=Z,38nm,0.9s
HRV Adam Dziewonsk 25.01 352 P P **14 51 18.8 +0.6**
HRV Adam Dziewonsk 25.01 352 P P **14 51 18.8 +0.6**
HRV pmax pmax
comp=Z,110nm,0.8s
M57A Sunshine Farm, 25.12 342 IAmb IAmb 14 51 46.2
comp=Z,64nm,1.1s
K62A Royalston 25.26 351 IAmb IAmb 14 51 49.0
comp=Z,53nm,0.7s
L59A Walton 25.35 346 IAmb IAmb 14 51 24.8
comp=Z,46nm,0.8s
BINY Binghamton 25.59 344 IAmb IAmb 14 51 59.1
comp=Z,39nm,0.7s
O53A New Philadelph 25.63 334 IAmb IAmb 14 51 29.0
comp=Z,60nm,1.0s
VBMS Vicksburg 25.75 309 IAmb IAmb 14 51 33.6
comp=Z,57nm,1.0s
L56A Greenwood 25.98 342 IAmb IAmb 14 51 31.2
comp=Z,46nm,0.9s
WVT Waverly 26.07 319 P P **14 51 28.2 +0.4**
WVT IAmb IAmb 14 51 32.3
comp=Z,34nm,0.8s
WVT Waverly 26.07 319 P P **14 51 28.3 +0.4**
WVT pmax pmax
comp=Z,34nm,0.8s
PAOC Oil Creek Stat 26.12 338 IAmb IAmb 14 52 02.0
comp=Z,41nm,0.7s
ACSO Alum Creek Sta 26.39 331 IAmb IAmb 14 51 33.8
comp=Z,58nm,0.8s
J59A Piesco 26.45 347 IAmb IAmb 14 52 06.0
comp=Z,76nm,1.6s
WCI Wyandotte Cave 26.56 324 P P **14 51 33.0 +0.8**
WCI IAmb IAmb 14 51 38.7
comp=Z,36nm,0.8s
WCI Wyandotte Cave 26.56 324 P P **14 51 33.0 +0.8**
WCI pmax pmax
comp=Z,36nm,0.8s
N51A Ashland 26.68 333 IAmb IAmb 14 51 35.9
comp=Z,49nm,0.8s
CMIG Matias Romero 26.72 273 LR LR 15 03 57.1
comp=Z,237nm,19.2s,baz=70,slow=41
M52A Chesterland 26.78 335 IAmb IAmb 14 51 36.9
comp=Z,55nm,0.8s
P48A Milroy 26.98 327 IAmb IAmb 14 52 13.6
comp=Z,31nm,0.7s
O49A Covington 26.99 330 IAmb IAmb 14 51 38.7
comp=Z,27nm,0.6s
H62A Milan 27.00 353 IAmb IAmb 14 52 16.9
comp=Z,78nm,1.5s
J55A Hilton 27.09 342 IAmb IAmb 14 51 39.3
comp=Z,29nm,0.8s
NPGB Novo Progresso 27.12 154 *e*P P **14 51 38.9 +1.3**
ATAH Atahualpa 27.21 206 LR LR 15 04 16.1
comp=Z,666nm,20.4s,baz=30,slow=41
DELO Deloro Mine 28.19 344 IAmb IAmb 14 52 39.6
comp=Z,23nm,0.6s
WHAR Wooly Hollow 28.55 313 IAmb IAmb 14 52 12.6
comp=Z,34nm,1.2s
SADO Sadowa 28.85 342 LR LR 15 03 31.5
comp=Z,466nm,20.2s,baz=164,slow=37
E62A Clayton Lake 28.89 356 IAmb IAmb 14 52 40.7
comp=Z,29nm,0.9s
HKT Hockley 29.05 300⇑ *e*P P **14 51 55.9 +1.3**
HKT pmax pmax
comp=Z,15nm,1.1s
PRPB Parauapebas 29.12 143 *e*P P **14 51 56.2 +0.8**
CCM Cathedral Cave 29.40 318 P P **14 51 57.8 +0.1**
CCM IAmb IAmb 14 52 07.8
comp=Z,26nm,0.9s
CCM Cathedral Cave 29.40 318 P P **14 51 57.8 +0.1**
CCM pmax pmax
comp=Z,26nm,1.0s
MGMO Mountain Grove 29.54 316 IAmb IAmb 14 52 08.5
comp=Z,21nm,0.7s
R40A Maddies Statio 30.19 318 IAmb IAmb 14 52 14.7
comp=Z,39nm,1.5s
CLDB Colider 30.46 158 *e*P P **14 52 08.4 +1.2**
P40A Paris 30.79 320 IAmb IAmb 14 52 19.3
comp=Z,23nm,0.9s
PDRB Porto dos Gac 30.84 160 *e*P P **14 52 12.1 +1.5**
WHTX Lake Whitney, 31.04 303 IAmb IAmb 14 52 14.0
comp=Z,24nm,0.9s
NNA Nana 31.13 199 LR LR 15 07 28.8
comp=Z,383nm,19.8s,baz=4.5,slow=42
NNA Nana 31.13 199⇑ *e*P P **14 52 13.5 +0.3**
NNA pmax pmax
comp=Z,18nm,0.8s
VILB Vilhena 31.20 167 *e*P P **14 52 16.1 +2.3**
833A Chaparral WMA, 31.64 295 IAmb IAmb 14 52 20.1
comp=Z,20nm,0.7s
P38A Dawn 31.77 319 IAmb IAmb 14 52 20.7
comp=Z,13nm,0.6s
W35A Tecumseh 31.80 309 IAmb IAmb 14 52 24.3
comp=Z,22nm,0.9s
HNDO Hondo 31.82 298 IAmb IAmb 14 52 20.3
comp=Z,25nm,1.1s
E46A Sault Ste Mari 32.00 337 IAmb IAmb 14 52 23.4
comp=Z,30nm,0.7s
PLPT Palo Pinto 32.00 304 IAmb IAmb 14 52 29.7
comp=Z,23nm,0.7s
QUOK Quay 32.12 311 IAmb IAmb 14 52 36.4
comp=Z,24nm,0.8s
T35A Sooner Cattle 32.33 312 IAmb IAmb 14 52 37.7
comp=Z,27nm,0.7s
JCT Junction City 32.50 299 IAmb IAmb 14 52 33.1
comp=Z,12nm,0.7s
SMTB Santa Maria do 32.58 143 *e*P P **14 52 27.0 +1.1**
I40A Norwalk 32.87 328 IAmb IAmb 14 52 36.9
comp=Z,2nm,0.7s
ABTX Abilene, Hawle 32.99 303 IAmb IAmb 14 52 46.7
comp=Z,28nm,0.9s
WMOK Wichita Mounta 33.06 307 IAmb IAmb 14 52 35.8
comp=Z,22nm,0.7s
NBPS Pedro II - PI 33.37 129 *e*P P **14 52 34.4 +1.5**
OZNA Ozona 33.71 299 IAmb IAmb 14 52 37.6
comp=Z,40nm,1.5s
LPAZ La Paz 33.83 182 P P **14 52 37.5 0.0**
comp=Z,3.1nm,0.8s,baz=249,slow=3.5,SNR=10
LPAZ LR LR 15 07 58.1
comp=Z,448nm,19.7s,baz=323,slow=39
comp=Z,3.1nm,0.8s
PTLB Pontes e Lacer 33.85 167 *e*P P **14 52 38.6 +1.8**
SGCY Sterling City 33.98 301 IAmb IAmb 14 52 49.7
comp=Z,21nm,0.9s
SIV San Ignacio 34.00 170 LR LR 15 07 12.3
comp=Z,818nm,18.2s,baz=294,slow=38
SN07 Snyder 07 34.14 303 IAmb IAmb 14 52 45.5
comp=Z,14nm,0.7s
229A Bryant Ranch, 34.55 301 IAmb IAmb 14 52 44.6
comp=Z,19nm,1.1s
POST Post 34.62 303 IAmb IAmb 14 52 52.0
comp=Z,27nm,0.7s
TMB01 Midkiff 34.70 300 IAmb IAmb 14 52 49.3
comp=Z,15nm,0.9s
MNHN Monahans 35.17 299 IAmb IAmb 14 52 51.0
comp=Z,15nm,0.6s
TXAR Lajitas Array 35.51 296 P P **14 52 51.8 +0.4**
comp=Z,13nm,0.6s,baz=110,slow=9.8,SNR=135
TXAR PcP **PcP 14 55 20.2 -0.6**
comp=Z,3.1nm,0.8s,baz=128,slow=5.9,SNR=4.8
TXAR ScP **ScP 14 59 06.9 0.0**
comp=Z,5.3nm,0.7s,baz=118,slow=6.3,SNR=30
TXAR LR LR 15 11 19.3
comp=Z,174nm,19.4s,baz=80,slow=43
comp=Z,13nm,0.6s
TXAR Lajitas Array 35.51 296 **ScP 14 59 07.0 +0.1**
TXAR Lajitas Array 35.51 296 P P **14 52 51.5 +0.1**
TX31 Lajitas Ar. Si 35.51 296 IAmb IAmb 14 52 53.5
comp=Z,16nm,0.7s
TPB05 Hovey Rd 35.55 299 IAmb IAmb 14 52 57.0
comp=Z,13nm,0.8s
TPB06 Permian Basin 35.63 300 IAmb IAmb 14 52 56.6
comp=Z,27nm,0.8s
ALPN Alpine 35.69 298 IAmb IAmb 14 52 54.0
comp=Z,22nm,0.8s
MSTX Muleshoe 35.90 304 IAmb IAmb 14 53 11.0
comp=Z,26nm,0.9s
TPB01 Permian Basin 35.93 298 IAmb IAmb 14 53 04.0
comp=Z,13nm,0.6s
PB16 IPOC Station P 35.94 184 IAmb IAmb 14 53 00.7
comp=Z,19nm,0.6s
ECSD EROS Data Cent 36.06 322 IAmb IAmb 14 52 58.1
comp=Z,25nm,0.7s
EYMN Ely 36.23 332 IAmb IAmb 14 53 00.4
comp=Z,84nm,2.0s
RTBA Rita Blanca 36.69 308 IAmb IAmb 14 53 15.7
comp=Z,23nm,0.9s
SCHQ Schefferville 37.03 0 P P **14 53 04.3 +0.4**
comp=Z,21nm,0.8s,baz=180,slow=7.9,SNR=32
SCHQ LR LR 15 10 20.1
comp=Z,179nm,18.0s,baz=208,slow=40
comp=Z,21nm,0.8s
GO01 Chusmiza 37.24 184 P P **14 53 06.5 -0.2**
PB11 IPOC Station P 37.36 184 P P **14 53 07.2 0.0**
PB11 IAmb IAmb 14 53 15.4
comp=Z,21nm,0.6s
HMBC Humberstone 37.89 185 IAmb IAmb 14 53 19.6
comp=Z,26nm,0.5s
BDFB Brasilia 38.02 150 P P **14 53 13.5 +0.7**
comp=Z,3.8nm,0.7s,baz=318,slow=13,SNR=3.8
BDFB LR LR 15 09 13.0
comp=Z,525nm,19.1s,baz=327,slow=37
comp=Z,3.8nm,0.7s
BDFB Brasilia 38.02 150 P P **14 53 13.8 +0.9**
BDFB Brasilia 38.02 150 P P **14 53 13.8 +0.9**
BDFB pmax pmax
comp=Z,11nm,0.9s
EPLO Experimental L 38.50 332 IAmb IAmb 14 53 18.4
comp=Z,25nm,0.7s
PB01 IPOC Station P 38.62 184 P P **14 53 17.7 -0.1**
ANMO Albuquerque 39.10 304 ScP **ScP 14 59 19.3 -1.1**
comp=Z,1.4nm,0.6s,baz=107,slow=4.6,SNR=4.0
ANMO LR LR 15 11 07.2
comp=Z,336nm,21.2s,baz=118,slow=39
ANMO Albuquerque 39.10 304 P P **14 53 21.7 -0.2**
ANMO Albuquerque 39.10 304⇑ *e*P P **14 53 21.7 -0.2**
ANMO pmax pmax
comp=Z,56nm,5.4s
PB07 IPOC Station P 39.33 184 IAmb IAmb 14 53 40.3
comp=Z,22nm,0.6s
ULM Lac du Bonnet 39.89 331 P P **14 53 26.9 -1.1**
comp=Z,20nm,0.7s,baz=123,slow=8.5,SNR=42
ULM LR LR 15 09 42.0
comp=Z,305nm,20.3s,baz=135,slow=36
comp=Z,20nm,0.7s
ULM Lac du Bonnet 39.89 331 *c*eP P **14 53 28.4 +0.3**
E28A Huff 40.05 323 P P **14 53 30.1 +0.6**
E28A IAmb IAmb 14 53 31.9
comp=Z,43nm,0.7s
PB05 IPOC Station P 40.47 185 P P **14 53 33.1 -0.2**
SLBS Sierra La Lagu 40.60 286 P P **14 53 34.9 +0.4**
LPIG La Paz 40.94 286 LR LR 15 12 23.5
comp=Z,136nm,19.7s,baz=96,slow=39
PV07 Paradox Valley 41.78 308 IAmb IAmb 14 53 48.1
comp=Z,20nm,0.7s
PV13 Radium Mtn., P 41.83 308 P P **14 53 44.8 +0.2**
PV13 IAmb IAmb 14 54 01.8
comp=Z,34nm,0.9s
PV12 Saucer Basin, 41.87 308 IAmb IAmb 14 53 49.0
comp=Z,41nm,0.7s
PV11 David Mesa, Pa 41.91 308 IAmb IAmb 14 54 00.0
comp=Z,30nm,0.7s
PV16 Nyswonger Mesa 41.95 308 IAmb IAmb 14 54 00.4
comp=Z,31nm,1.0s
DGMT Dagmar 43.08 324 P P **14 53 54.7 +0.3**
DGMT IAmb IAmb 14 53 57.4
comp=Z,29nm,0.7s
PDAR Pinedale Array 43.88 314 P P **14 54 00.2 -0.9**
comp=Z,2.0nm,0.7s,baz=119,slow=8.8,SNR=19
PDAR PcP **PcP 14 55 46.5 -0.9**
comp=Z,2.2nm,0.6s,baz=113,slow=5.2,SNR=9.5
PDAR ScP **ScP 14 59 38.5 -0.7**
comp=Z,0.4nm,0.7s,baz=127,slow=5.0,SNR=2.9
PDAR LR LR 15 13 24.1
comp=Z,261nm,18.9s,baz=110,slow=38
comp=Z,2.0nm,0.7s
PDAR Pinedale Array 43.88 314 P P **14 54 00.6 -0.5**
RLMT Red Lodge 44.59 317 IAmb IAmb 14 54 21.9
comp=Z,41nm,1.4s
CPUP Villa Florida 44.77 168 P P **14 54 07.6 -0.4**
comp=Z,7.6nm,0.7s,baz=357,slow=9.6,SNR=17
CPUP LR LR 15 13 55.5
comp=Z,261nm,18.1s,baz=298,slow=38
comp=Z,7.6nm,0.7s
CPUP Villa Florida 44.77 168 P P **14 54 08.2 +0.2**
CPUP Villa Florida 44.77 168 P P **14 54 08.2 +0.2**
CPUP pmax pmax
comp=Z,23nm,1.3s
FFC Flin Flon 45.66 332 P P **14 54 14.9 +0.1**
FFC Flin Flon 45.66 332 P P **14 54 14.9 +0.1**
FFC pmax pmax
comp=Z,31nm,0.8s
FRB Frobisher Bay 45.98 359 LR LR 15 13 31.2
comp=Z,301nm,19.6s,baz=190,slow=36
PMOZ Porto Moniz, M 46.95 61 *e*P P **14 54 25.8 +0.4**
PMOZ *i* IAmb IAmb 14 54 57.3
comp=Z,187nm,1.6s
PFO Pinyon Flats O 46.96 300 LR LR 15 19 15.9
comp=Z,167nm,18.0s,baz=118,slow=43
ELK Elko 47.31 309 LR LR 15 17 13.6
comp=Z,263nm,19.2s,baz=108,slow=40
HLID Hailey 47.50 313 IAmb IAmb 14 54 33.2
comp=Z,15nm,1.1s
PMPST Porto Santo, M 47.70 61 *e*P P **14 54 31.2 0.0**
MFID Camas Ranch 48.44 313 IAmb IAmb 14 54 40.5
comp=Z,15nm,0.8s
ZON Zonda 49.03 182 P P **14 54 41.5 +0.2**
ZON IAmb IAmb 14 54 54.0
comp=Z,40nm,1.6s
ZON Zonda 49.03 182 P P **14 54 41.5 +0.2**
ZON pmax pmax
comp=Z,40nm,1.6s
NV11 Mina Array Sit 49.03 306 IAmb IAmb 14 54 59.0
comp=Z,32nm,1.1s
PLID Pearl Lake 49.04 315 P P **14 54 41.0 -0.6**
PLID IAmb IAmb 14 54 49.0
comp=Z,11nm,0.7s
NVAR Mina Array Bea 49.15 306 P P **14 54 42.5 0.0**
comp=Z,1.9nm,0.5s,baz=76,slow=7.5,SNR=9.2
NVAR PcP **PcP 14 56 06.3 +0.4**
comp=Z,1.8nm,0.7s,baz=99,slow=2.1,SNR=1.6
NVAR ScP **ScP 15 00 00.4 -0.9**
comp=Z,0.9nm,0.7s,baz=157,slow=4.2,SNR=3.5
NVAR LR LR 15 19 14.7
comp=Z,282nm,18.3s,baz=88,slow=41
comp=Z,1.9nm,0.5s
SFJD Kangerlussuaq 50.36 8 LR LR 15 15 03.3
comp=Z,151nm,20.3s,baz=194,slow=35
SFJD Kangerlussuaq 50.36 8 *i* P P **14 54 52.4 +1.5**
SFJD IAmb IAmb 14 54 53.6
comp=Z,9.1nm,0.6s
EDM Edmonton 50.46 326 IAmb IAmb 14 54 54.3
comp=Z,23nm,0.7s
BLKN Baker Lake 50.56 344 IAmb IAmb 14 54 54.2
comp=Z,15nm,0.9s
NEW Newport 50.77 318 LR LR 15 17 10.6
comp=Z,336nm,19.3s,baz=110,slow=37
ANGG Ammassalik, Gr 51.63 15⇓ *i* P P **14 55 03.3 +2.8**
ANGG IAmb IAmb 14 55 04.5
comp=Z,8.0nm,0.8s
ILULI Ilulissat 52.39 7 P P **14 55 06.8 +0.7**
ILULI Ilulissat 52.39 7 P P **14 55 06.8 +0.7**
ILULI pmax pmax
comp=Z,99nm,1.6s
ILULI Ilulissat 52.39 7 *i* P P **14 55 07.7 +1.5**
ILULI IAmb IAmb 14 55 08.4
comp=Z,22nm,0.5s
YBH Yreka Blue Hor 53.03 309 LR LR 15 20 19.9
comp=Z,14nm,18.2s,baz=94,slow=39
NUUG Nuugaatsiaq 54.41 5 *i* P P **14 55 22.0 +1.1**
NUUG IAmb IAmb 14 55 23.5
comp=Z,8.6nm,0.7s
PMTG Montargil 54.83 54 *e*P P **14 55 25.2 +0.6**
PMTG *i* IAmb IAmb 14 55 35.4
comp=Z,24nm,1.7s
NLWA Neilton Lookou 54.91 316 IAmb IAmb 14 56 40.4
comp=Z,41nm,1.4s
PBDV Barranco-do-Ve 54.91 57 *e*P P **14 55 28.9 +3.6**
PARRA Arraiolos 54.95 55 *e*P P **14 55 28.7 +3.3**
PARRA *i* IAmb IAmb 14 55 33.8
comp=Z,26nm,1.6s
PVAQ Vaqueiros 55.09 56 *e*P P **14 55 28.7 +2.2**
PGAV Gavieira, Arco 55.11 51 *e*P P **14 55 30.1 +3.3**
PVIS Viseu 55.25 52 *e*P P **14 55 31.2 +3.6**
POLO Lamas de Olo 55.40 52 *e*P P **14 55 32.4 +3.6**
YKAW1 Yellowknife Wh 55.49 335 IAmb IAmb 14 55 30.8
comp=Z,10nm,0.8s
PMRV Marv??o 55.50 54 *e*P P **14 55 32.9 +3.4**
PMRV *i* IAmb IAmb 14 55 55.3
comp=Z,22nm,1.8s
YKA Yellowknife Ar 55.54 335 P P **14 55 28.5 -0.8**
comp=Z,8.4nm,0.7s,baz=111,slow=6.7,SNR=126
YKA LR LR 15 18 42.4
comp=Z,304nm,21.0s,baz=120,slow=36
comp=Z,8.4nm,0.7s
YKAW3 Yellowknife Wh 55.58 335 IAmb IAmb 14 55 37.7
comp=Z,14nm,0.8s
PBAR Barrancos 55.68 56 *e*P P **14 55 31.3 +0.6**
PBAR *i* IAmb IAmb 14 55 49.4
comp=Z,17nm,1.5s
MVO Moncorvo 55.95 52 *e*P P **14 55 36.0 +3.4**
MVO *i* IAmb IAmb 14 55 40.4
comp=Z,41nm,1.3s
SUMG Summit 57.23 10 P P **14 55 41.9 +0.2**
SUMG IAmb IAmb 14 55 48.1
comp=Z,26nm,0.8s
SUMG Summit 57.23 10 P P **14 55 41.9 +0.2**
SUMG pmax pmax
comp=Z,26nm,0.8s
SUMG Summit 57.23 10 *i* P P **14 55 43.3 +1.6**
SUMG IAmb IAmb 14 55 44.9
comp=Z,22nm,0.8s
MDT Midelt 57.54 62 LR LR 15 16 07.7
comp=Z,358nm,20.6s,baz=290,slow=32
ESDC Sonseca Array 58.16 54 P P **14 55 48.9 +0.5**
comp=Z,11nm,1.0s,baz=270,slow=7.0,SNR=26
ESDC LR LR 15 15 18.2
comp=Z,267nm,21.9s,baz=264,slow=30
comp=Z,11nm,1.0s
ESDC Sonseca Array 58.16 54 P P **14 55 48.6 +0.2**
PLCA Paso Flores 58.27 183 P P **14 55 48.8 -0.2**
comp=Z,2.9nm,0.7s,baz=358,slow=10.0,SNR=5.0
PLCA LR LR 15 23 12.6
comp=Z,145nm,20.1s,baz=27,slow=38
comp=Z,2.9nm,0.7s
BBB Bella Bella 58.60 321 LR LR 15 21 16.9
comp=Z,262nm,19.9s,baz=95,slow=36
KOTAN Kotaneelee Air 58.62 330 P P **14 55 51.6 +0.4**
baz=110
TOAD Toad River Com 58.76 329 P P **14 55 52.3 +0.1**
baz=108
TULEG Thule 58.83 359 IAmb IAmb 14 55 59.0
comp=Z,25nm,1.2s
TULEG Thule 58.83 359 *i* P P **14 55 52.0 -0.4**
TULEG IAmb IAmb 14 55 53.2
comp=Z,6.0nm,0.8s
RES Resolute Bay 58.97 352 LR LR 15 22 50.8
comp=Z,235nm,18.3s,baz=83,slow=38
WRGLY Wrigley 59.49 334 IAmb IAmb 14 55 59.8
comp=Z,15nm,0.7s
WRGLY Wrigley 59.49 334 P P **14 55 57.5 +0.4**
baz=113
EKA Eskdalemuir Ar 60.68 36 P P **14 56 05.7 +0.3**
comp=Z,2.6nm,0.7s,baz=260,slow=5.7,SNR=4.9
EKA LR LR 15 20 19.2
comp=Z,126nm,19.0s,baz=280,slow=34
comp=Z,2.6nm,0.7s
RPN Rapa Nui 60.70 224 LR LR 15 18 37.1
comp=Z,79nm,20.9s,baz=84,slow=32
T35M Bob Quinn 60.84 326 P P **14 56 07.1 +0.5**
baz=103
WTLY Watson Lake, Y 60.87 330 P P **14 56 07.3 +0.6**
baz=106
DLBC Dease Lake 61.06 328 LR LR 15 22 20.2
comp=Z,135nm,19.1s,baz=91,slow=36
DLBC Dease Lake 61.06 328 P P **14 56 08.7 +0.6**
baz=104
V35K Ketchikan 61.26 324 P P **14 56 09.5 +0.2**
baz=100
DBIC Dimbokro 61.37 92 P P **14 56 10.7 -0.2**
comp=Z,4.9nm,0.6s,baz=318,slow=7.4,SNR=8.7
DBIC LR LR 15 22 11.5
comp=Z,115nm,18.1s,baz=314,slow=36
comp=Z,4.9nm,0.6s
DBIC Dimbokro 61.37 92 P P **14 56 10.6 -0.2**
DBIC IAmb IAmb 14 56 43.8
comp=Z,8.6nm,0.8s
DBIC Dimbokro 61.37 92 P P **14 56 10.6 -0.2**
DBIC pmax pmax
comp=Z,9.0nm,0.8s
S34M Telegraph Cree 61.51 327 P P **14 56 11.9 +0.9**
baz=102
R33M Jennings River 61.76 329 P P **14 56 13.8 +1.0**
baz=103
DBG Daneborg 62.01 13 *i* P P **14 56 15.5 +1.4**
DBG IAmb IAmb 14 56 17.4
comp=Z,7.3nm,0.6s
C36M Paulatuk 62.21 340 P P **14 56 15.5 0.0**
baz=115
U33K Whale Pass 62.23 325 P P **14 56 16.2 +0.3**
baz=100
P33M Teslin, Yukon 62.85 329 IAmb IAmb 14 56 39.2
comp=Z,9.8nm,0.9s
P33M Teslin, Yukon 62.85 329 P P **14 56 20.4 +0.4**
baz=102
P32M Atlin 63.17 328 P P **14 56 22.7 +0.5**
baz=101
N32M Quiet Lake 63.17 330 P P **14 56 22.6 +0.4**
baz=102
S32K Killisnoo 63.24 326 P P **14 56 23.0 +0.4**
baz=99
R32K Eaglecrest 63.34 327 P P **14 56 24.1 +0.8**
baz=100
FARO Faro, Yukon 63.53 331 P P **14 56 24.6 +0.1**
baz=102
SIT Sitka 63.59 325 P P **14 56 24.4 -0.5**
baz=98
A36M Sachs Harbour 63.69 343 P P **14 56 25.5 +0.1**
baz=115
WHY Whitehorse 63.94 329 P P **14 56 27.6 +0.3**
baz=100
SKAG Skagway 63.96 328 P P **14 56 27.8 +0.5**
baz=99
M31M Drury Creek, Y 64.00 331 P P **14 56 28.0 +0.3**
baz=102
N31M Braeburn, Yuko 64.52 330 P P **14 56 31.3 +0.3**
baz=100
O30N Mendenhall 64.55 329 P P **14 56 31.4 +0.1**
baz=99
H31M Peel River 64.76 335 P P **14 56 33.0 +0.5**
baz=103
P30M Million Dollar 64.87 329 P P **14 56 34.1 +0.7**
baz=98
F31M Tsiigehtchic 64.92 337 P P **14 56 33.0 -0.4**
baz=105,SNR=6.4
MAYO Mayo, Yukon 64.95 333 P P **14 56 33.9 +0.1**
baz=101
G31M Satah River 65.00 336 P P **14 56 33.9 -0.1**
baz=104
INK Inuvik 65.07 338 LR LR 15 26 44.8
comp=Z,135nm,18.7s,baz=302,slow=38
INK Inuvik 65.07 338 P P **14 56 33.9 -0.5**
INK IAmb IAmb 14 56 36.4
comp=Z,18nm,0.8s
INK Inuvik 65.07 338 P P **14 56 33.9 -0.5**
INK pmax pmax
comp=Z,18nm,0.8s
INK Inuvik 65.07 338 P P **14 56 34.1 -0.3**
baz=105,SNR=18
M30M Minto, Yukon 65.17 331 P P **14 56 35.4 +0.1**
baz=100
J30M Hart River 65.32 334 P P **14 56 36.3 0.0**
baz=101
I30M Mount Dempster 65.47 334 P P **14 56 37.1 -0.1**
baz=101
YUK6 Outpost Mounta 65.67 329 P P **14 56 38.5 -0.3**
baz=97
O29M Mount Kennedy 65.69 329 P P **14 56 38.4 -0.4**
baz=97
K29M Barlow Dome 65.71 333 P P **14 56 39.5 +0.6**
baz=99
F30M Barrier River 65.73 337 P P **14 56 39.4 +0.6**
baz=103
YUK4 Talbot Arm 65.86 330 P P **14 56 39.5 -0.5**
baz=97
L29M L29M 65.86 332 P P **14 56 39.9 +0.2**
baz=98
M29M Somme Creek 65.92 331 P P **14 56 39.8 -0.4**
baz=98
TORD Torodi Ar. Bea 65.94 83 P P **14 56 40.6 -0.4**
comp=Z,1.7nm,0.6s,baz=273,slow=7.2,SNR=11
TORD LR LR 15 22 11.0
comp=Z,318nm,19.9s,baz=278,slow=33

comp=Z,1.7nm,0.6s
J29N Klondike Camp 66.11 333 IAmb IAmb 14 57 03.1
comp=Z,13nm,0.8s
J29N Klondike Camp 66.11 333 P **P** **14 56 41.7 +0.4**
baz=99
I29M Ogilvie Camp, 66.29 334 P **P** **14 56 42.4 0.0**
baz=99
YUK8 Steele Glacier 66.39 330 P **P** **14 56 43.2 -0.2**
baz=96
G29M Pine Creek 66.44 336 P **P** **14 56 43.5 +0.1**
baz=100
PINM Pinnacle 66.51 328 P **P** **14 56 43.8 -0.2**
baz=95
O28M Mount Upton 66.54 329 P **P** **14 56 44.1 -0.3**
baz=96
DAWY Dawson 66.56 333 P **P** **14 56 44.3 +0.1**
DAWY Dawson 66.56 333 P **P** **14 56 43.5 -0.7**
baz=98
E29M Blow River 66.67 338 P **P** **14 56 44.6 -0.2**
baz=101
YUK3 Moose Creek 66.77 330 P **P** **14 56 45.5 -0.3**
baz=96
I28M Miner Creek 66.98 334 P **P** **14 56 46.7 -0.2**
baz=98
BVCY Beaver Creek 67.02 331 P **P** **14 56 47.0 -0.2**
baz=96
CTG Chitna Glacier 67.12 329 P **P** **14 56 48.1 +0.2**
baz=95
D28M Stokes Point 67.14 339 P **P** **14 56 47.8 +0.1**
baz=101
F28M Old Crow 67.27 337 P **P** **14 56 48.3 -0.3**
baz=99
E28M Babbage River 67.30 338 P **P** **14 56 47.8 -1.0**
baz=100
M27K Edge Creek, AK 67.49 331 IAmb IAmb 14 56 57.9
comp=Z,21nm,1.1s
M27K Edge Creek, AK 67.49 331 P **P** **14 56 50.7 +0.4**
baz=95
BCAR Beaver Creek A 67.51 332 P **P** **14 56 50.4 +0.2**
L27K Beaver Creek, 67.53 332 P **P** **14 56 50.6 +0.2**
baz=95
I27K Kandik River 67.69 334 IAmb IAmb 14 56 58.4
comp=Z,18nm,0.9s
I27K Kandik River 67.69 334 P **P** **14 56 51.6 +0.3**
baz=96
H27K Steamboat Moun 67.72 335 P **P** **14 56 51.0 -0.5**
baz=97
G27K Doyon Strip 67.84 336 P **P** **14 56 51.7 -0.6**
baz=97
D27M Malcolm River 67.91 338 P **P** **14 56 51.9 -0.8**
baz=98
MCARA McCarthy VSAT 67.96 330 P **P** **14 56 53.8 +0.7**
baz=93
E27K Coleen River 67.99 337 P **P** **14 56 53.1 -0.1**
baz=97
L26K Log Cabin Wild 68.22 331 IAmb IAmb 14 57 01.9
comp=Z,20nm,1.0s
L26K Log Cabin Wild 68.22 331 P **P** **14 56 55.3 +0.6**
baz=94
DAVOX Davos/Dischmat 68.28 46 LR LR 15 20 26.0
comp=Z,83nm,22.0s,baz=259,slow=30
MENT Mentasta 68.38 331 P **P** **14 56 56.4 +0.6**
J26L Joseph Creek 68.41 333 P **P** **14 56 55.9 0.0**
baz=94
SCRK Sand Creek 68.56 332 P **P** **14 56 57.1 +0.2**
baz=94
DOT Dot Lake 68.58 332 IAmb IAmb 14 57 06.9
comp=Z,18nm,0.9s
G26K Porcupine Rive 68.70 336 P **P** **14 56 57.5 -0.1**
baz=95
BMRM Bremner River 68.71 329 P **P** **14 56 58.1 +0.2**
baz=92
N25K Chitina, Valde 68.73 330 P **P** **14 56 58.1 +0.2**
baz=92
KEST Kesra 68.86 58 P **P** **14 56 59.3 +0.1**
comp=Z,7.9nm,1.0s,baz=338,slow=1.5,SNR=7.1
KEST LR LR 15 24 10.9
comp=Z,173nm,20.0s,baz=301,slow=33
comp=Z,7.9nm,1.0s
KEST Kesra 68.86 58 IAmb IAmb 14 57 05.4
comp=Z,14nm,1.0s
NB2 NORSAR Subarra 68.89 31 P **P** **14 56 59.5 +0.6**
comp=Z,1.4nm,0.7s,baz=269,slow=6.5
NOA NORSAR Array B 68.89 31 P **P** **14 56 58.8 -0.1**
comp=Z,1.4nm,0.7s,baz=269,slow=6.3,SNR=7.0
NOA LR LR 15 23 34.5
comp=Z,99nm,20.2s,baz=265,slow=33
comp=Z,1.4nm,0.7s
F26K Sheenjek River 68.90 336 P **P** **14 56 58.9 +0.1**
baz=95
C27K Jago River 68.92 339 P **P** **14 56 59.1 +0.1**
baz=96
RIDG Independent Ri 68.93 332 P **P** **14 56 58.9 -0.2**
baz=93
HARP HAARP 69.02 331 P **P** **14 56 59.8 +0.1**
baz=92
BMAR Burnt Mountain 69.04 336 P **P** **14 56 59.5 -0.3**
PAX Paxson 69.18 331 IAmb IAmb 14 57 04.2
comp=Z,10nm,0.8s
PAX Paxson 69.18 331 P **P** **14 57 01.0 +0.2**
baz=92
J25K Salcha River, 69.20 333 IAmb IAmb 14 57 03.5
comp=Z,7.3nm,0.7s
J25K Salcha River, 69.20 333 P **P** **14 57 00.5 -0.4**
baz=92
PRP Porcupine Dome 69.30 334 IAmb IAmb 14 57 04.4
comp=Z,17nm,0.8s
PRP Porcupine Dome 69.30 334 P **P** **14 57 01.4 -0.1**
baz=93,SNR=13
K24K Donnelly Dome 69.34 332 P **P** **14 57 02.0 +0.3**
baz=92
KLU Klutina 69.36 330 P **P** **14 57 01.6 -0.3**
baz=91
F25K Christian Rive 69.46 336 P **P** **14 57 02.5 +0.1**
baz=93
E25K Arctic Village 69.47 337 IAmb IAmb 14 57 09.6
comp=Z,10nm,0.8s
E25K Arctic Village 69.47 337 P **P** **14 57 02.2 -0.2**
baz=94,SNR=7.5
M24K Tolsona, Glenn 69.49 330 P **P** **14 57 02.8 +0.1**
baz=91
NKC Novy Kostel 69.79 42 *e*P P 14 57 10.8 +6.1
NKC Novy Kostel 69.79 42 *e*P P 14 57 10.8 +6.1
D25K Kavík River 69.83 338 P **P** **14 57 04.5 -0.2**
baz=93
IL31 69.85 333 IAmb IAmb 14 57 10.7
comp=Z,16nm,1.1s
ILAR Eielson Array 69.85 333 P **P** **14 57 04.5 -0.3**
comp=Z,5.9nm,0.8s,baz=101,slow=4.3,SNR=116
ILAR PP **PP** **14 59 39.1 +0.1**
comp=Z,0.8nm,0.8s,baz=103,slow=7.8,SNR=3.2
ILAR LR LR 15 28 07.9
comp=Z,286nm,19.4s,baz=93,slow=36
comp=Z,5.9nm,0.8s
ILAR Eielson Array 69.85 333 P **P** **14 57 04.3 -0.5**
HDA Harding Lake 69.87 333 IAmb IAmb 14 57 32.9
comp=Z,12nm,1.0s
HDA Harding Lake 69.87 333 P **P** **14 57 04.9 0.0**
baz=91
SCM Sheep Creek Mo 70.03 330 P **P** **14 57 05.7 -0.3**
baz=90
DHY Denali Highway 70.05 331 IAmb IAmb 14 57 17.4
comp=Z,20nm,1.2s
DHY Denali Highway 70.05 331 P **P** **14 57 06.0 -0.2**
baz=90
POKR Poker Plat Res 70.09 334 IAmb IAmb 14 57 09.6
comp=Z,18nm,0.8s
POKR Poker Plat Res 70.09 334 P **P** **14 57 05.9 -0.4**
baz=91
HFS Hagfors 70.11 32 P **P** **14 57 06.8 +0.3**
comp=Z,2.0nm,0.8s,baz=225,slow=5.5,SNR=5.7
HFS LR LR 15 25 38.5
comp=Z,163nm,19.0s,baz=264,slow=34
comp=Z,2.0nm,0.8s
G24K Hadweenzic Riv 70.14 335 P **P** **14 57 06.4 -0.2**
baz=91
M23K Glacier View 70.22 330 P **P** **14 57 06.7 -0.4**
baz=89
WAT6 Susitna Watana 70.22 331 P **P** **14 57 07.1 -0.1**
baz=90
COLA College 70.27 333⇑ *i*P **P** **14 57 07.0 -0.2**
COLA pmax pmax
comp=Z,12nm,0.9s
COLA College 70.27 333 P **P** **14 57 07.1 -0.2**
baz=90
H24K Noodor Dome 70.29 334 IAmb IAmb 14 57 16.8
comp=Z,13nm,0.8s
H24K Noodor Dome 70.29 334 P **P** **14 57 07.6 +0.1**
baz=91
SML Sawmill 70.51 330 P **P** **14 57 08.8 -0.1**
baz=89
E24K Your Creek 70.56 337 P **P** **14 57 09.4 +0.2**
baz=91
KNK Knik Glacier 70.58 330 P **P** **14 57 09.3 0.0**
baz=88
WAT1 Susitna Watana 70.59 331 P **P** **14 57 09.1 -0.3**
baz=89
BRG Berggiesshubel 70.69 42 *e*P **P** **14 57 10.2 0.0**
BRG Amp 14 57 17.8
comp=Z,4.1nm,0.8s
GERES GERESS Array B 70.71 44 P **P** **14 57 09.6 -0.8**
comp=Z,0.8nm,0.6s,baz=274,slow=6.0,SNR=4.5
GERES LR LR 15 26 39.7
comp=Z,130nm,18.8s,baz=261,slow=35
comp=Z,0.8nm,0.6s
MCK McKinley 70.75 332 IAmb IAmb 14 57 16.4
comp=Z,24nm,1.1s
MCK McKinley 70.75 332 P **P** **14 57 10.3 0.0**
baz=89
NEA2 Nenana 70.79 333 IAmb IAmb 14 57 16.0
comp=Z,23nm,1.1s
NEA2 Nenana 70.79 333 P **P** **14 57 10.1 -0.5**
baz=89,SNR=7.1
PMR Palmer 70.89 330 P **P** **14 57 11.2 0.0**
baz=88
I23K Minto, Yukon-K 70.91 334 IAmb IAmb 14 57 20.7
comp=Z,17nm,0.6s
I23K Minto, Yukon-K 70.91 334 P **P** **14 57 10.9 -0.3**
baz=89,SNR=12
TOLK Toolik Lake Re 70.97 337 P **P** **14 57 11.3 -0.3**
baz=90
E23K Chandalar 70.98 337 P **P** **14 57 11.7 0.0**
baz=90
CKRC Cesky Krumlov 71.11 44 *e*P **P** **14 57 14.0 +1.2**
CKRC Cesky Krumlov 71.11 44 *e*P **P** **14 57 14.0 +1.2**
SEW Seward 71.11 328 P **P** **14 57 12.6 +0.1**
baz=87
G23K Bananza Creek 71.15 335 P **P** **14 57 13.1 +0.3**
baz=89
RC01 Rabbit Creek A 71.20 329 P **P** **14 57 13.1 0.0**
baz=87
COLD Coldfoot 71.22 336 IAmb IAmb 14 57 20.4
comp=Z,14nm,0.9s
COLD Coldfoot 71.22 336 P **P** **14 57 13.0 -0.1**
baz=89,SNR=11
O22K Cooper Landing 71.23 329 P **P** **14 57 13.1 -0.1**
baz=87
M22K Willow 71.36 330 P **P** **14 57 14.2 +0.3**
baz=87
TRF Thorofare Moun 71.36 332 IAmb IAmb 14 57 18.9
comp=Z,24nm,0.9s
TRF Thorofare Moun 71.36 332 P **P** **14 57 14.1 -0.1**
baz=88
D23K Nanushuk River 71.37 338 P **P** **14 57 14.0 +0.1**
baz=89
SPITS Spitsbergen Ar 71.37 12 P **P** **14 57 14.4 +0.5**
comp=Z,6.2nm,0.9s,baz=188,slow=5.1,SNR=5.9
SPITS LR LR 15 29 22.9
comp=Z,147nm,19.0s,baz=285,slow=37
comp=Z,6.2nm,0.9s
CUT Chulitna 71.40 331 P **P** **14 57 14.2 0.0**
baz=87
L22K Petersville 71.62 331 IAmb IAmb 14 57 40.0
comp=Z,10.0nm,0.9s
BPAW Bear Paw Mtn. 71.64 333 IAmb IAmb 14 57 18.5
comp=Z,14nm,0.7s
BPAW Bear Paw Mtn. 71.64 333 P **P** **14 57 15.5 -0.2**
baz=87,SNR=11
SUA Susitna One 71.67 330 P **P** **14 57 16.0 -0.1**
baz=87
H22K Ishtalitna Cre 71.72 334 P **P** **14 57 15.6 -0.6**
baz=88
BRSE Bradley Lake S 71.78 328 P **P** **14 57 16.6 -0.1**
baz=86
SKT Skwentna 72.01 330 IAmb IAmb 14 57 20.7
comp=Z,14nm,0.8s
SKT Skwentna 72.01 330 P **P** **14 57 17.7 -0.3**
baz=86
I21K Tanana 72.01 334 IAmb IAmb 14 57 23.8
comp=Z,21nm,1.0s
I21K Tanana 72.01 334 P **P** **14 57 17.7 -0.2**
baz=87,SNR=9.2
D22K Ayikyak River 72.09 338 P **P** **14 57 18.4 0.0**
baz=87
OSTC Ostas 72.16 42 *e*PCP **P** **14 57 19.5 +0.4**
CHUM Lake Minchumin 72.24 332 P **P** **14 57 18.8 -0.4**
baz=86,SNR=8.4
PPLA Purkeypile 72.25 331 IAmb IAmb 14 57 35.8
comp=Z,23nm,1.1s
PPLA Purkeypile 72.25 331 P **P** **14 57 19.0 -0.6**
baz=86
DPC Dobruska-Polom 72.25 42 *e*P **P** **14 57 20.1 +0.4**
DPC Dobruska-Polom 72.25 42 *e*P **P** **14 57 20.1 +0.4**
SPU Mount Spurr 72.32 330 IAmb IAmb 14 57 37.9
comp=Z,58nm,2.0s
H21K Melozitna Rive 72.33 334 IAmb IAmb 14 57 26.5
comp=Z,22nm,1.0s
H21K Melozitna Rive 72.33 334 P **P** **14 57 19.6 -0.2**
baz=86
SPCR Spurr Chakacha 72.39 330 P **P** **14 57 20.1 -0.3**
baz=85
KRUC Moravsky 72.45 43 *e*P **P** **14 57 21.1 +0.3**
F21K Alatna River 72.49 336 P **P** **14 57 20.6 -0.1**
baz=86
VRAC Vranov 72.55 43 LR LR 15 28 05.4
comp=Z,100nm,18.6s,baz=270,slow=35
VRAC Vranov 72.55 43 *e*P **P** **14 57 21.4 0.0**
G21K Allakaket 72.55 335 P **P** **14 57 21.2 +0.1**
baz=86
E21K Killik River 72.59 337 P **P** **14 57 21.2 -0.1**
baz=86
Q20K Shuyak Island 72.72 327 P **P** **14 57 22.2 0.0**
baz=84
A22K Sinclair Lake 72.76 340 P **P** **14 57 21.3 -0.9**
baz=86
M20K Styx River 72.78 330 P **P** **14 57 22.2 -0.4**
baz=85
KDAK Kodiak Island 72.91 326 P **P** **14 57 23.5 +0.1**
baz=84
J20K Nowinta River 73.02 333 IAmb IAmb 14 57 32.1
comp=Z,15nm,0.6s
J20K Nowinta River 73.02 333 P **P** **14 57 23.3 -0.6**
baz=84
ZST Bratislava 73.03 44 *e*P **P** **14 57 28.6 +4.3**
ZST Bratislava 73.03 44 *e*P **P** **14 57 28.6 +4.3**
P19K Oil Pt 73.05 328 P **P** **14 57 24.1 -0.1**
baz=84
K20K Telida 73.06 332 IAmb IAmb 14 57 32.2
comp=Z,12nm,0.9s
K20K Telida 73.06 332 P **P** **14 57 23.9 -0.3**
baz=84
I20K Naaghedeneel 73.10 333 P **P** **14 57 24.1 -0.2**
baz=84
MORC Moravsky Berou 73.10 42 *e*P **P** **14 57 25.2 +0.4**
MODS Modra-Piesok 73.12 44 *e*P **P** **14 57 28.3 +3.5**
MODS Modra-Piesok 73.12 44 *e*P **P** **14 57 28.3 +3.5**
H20K Anotleneega Mo 73.20 334 P **P** **14 57 24.7 -0.3**
baz=84
STEB Steborice 73.23 42 *e*P **P** **14 57 26.2 +0.8**
A21K Barrow 73.26 340 P **P** **14 57 25.2 0.0**
baz=84
Q19K Cape Douglas, 73.34 327 P **P** **14 57 25.7 -0.2**
baz=83
F20K Avaraart Lake 73.38 336 P **P** **14 57 26.0 +0.1**
baz=84
O19K Port Alsworth 73.53 329 IAmb IAmb 14 57 36.2
comp=Z,21nm,1.0s
O19K Port Alsworth 73.53 329 P **P** **14 57 26.7 -0.2**
baz=83,SNR=5.2
D20K Etivluk River 73.53 338 P **P** **14 57 26.7 -0.2**
baz=84
N19K Bonanza Creek 73.54 329 IAmb IAmb 14 57 37.7
comp=Z,17nm,1.0s
N19K Bonanza Creek 73.54 329 P **P** **14 57 26.5 -0.6**
baz=83
L19K White Mountain 73.55 331 IAmb IAmb 14 57 33.4
comp=Z,18nm,1.1s
L19K White Mountain 73.55 331 P **P** **14 57 26.8 -0.3**
baz=83
J19K Poorman 73.68 333 P **P** **14 57 27.5 -0.4**
baz=83
H19K Roundabout Mou 73.85 334 P **P** **14 57 28.6 -0.1**
baz=83
O18K Koktuh Hills 74.02 328 IAmb IAmb 14 57 38.6
comp=Z,15nm,0.8s
O18K Koktuh Hills 74.02 328 P **P** **14 57 30.0 +0.1**
baz=82
Q18K Katmai Hardscr 74.08 327 P **P** **14 57 30.1 -0.3**
baz=82
P18K Big Mountain, 74.09 328 IAmb IAmb 14 57 38.9
comp=Z,19nm,1.1s
P18K Big Mountain, 74.09 328 P **P** **14 57 30.0 -0.4**
baz=82
M18K Stony River 74.09 330 P **P** **14 57 29.9 -0.4**
baz=82
D19K Kuna River 74.11 337 P **P** **14 57 30.1 -0.1**
baz=82
GCSA Galena City Sc 74.13 334 P **P** **14 57 30.0 -0.4**
baz=82
F19K Shaleruckik Mo 74.21 336 P **P** **14 57 30.6 -0.2**
baz=82
J18K Innoko River 74.23 332 P **P** **14 57 31.4 +0.3**
baz=82
N18K Kilae Creek 74.24 329 IAmb IAmb 14 57 37.6
comp=Z,14nm,0.9s
N18K Kilae Creek 74.24 329 P **P** **14 57 30.5 -0.7**
baz=82
MORH Mrgy, Hungar 74.36 46⇓ P **P** **14 57 32.6 +0.5**
ARCES ARCESS Array B 74.36 21 P **P** **14 57 32.5 +0.8**
comp=Z,4.9nm,0.6s,baz=291,slow=3.4,SNR=14
comp=Z,4.9nm,0.6s
ARCES ARCESS Array B 74.36 21 P **P** **14 57 32.3 +0.6**
ARCES ARCESS Array B 74.36 21 P **P** **14 57 32.3 +0.6**
ARCES pmax pmax
comp=Z,104nm,1.7s
L18K Granite Mounta 74.40 331 P **P** **14 57 31.8 -0.3**
baz=82
LANS Liptovska Anna 74.44 43 *e*P **P** **14 57 35.8 +3.2**
LANS Liptovska Anna 74.44 43 *e*P **P** **14 57 35.8 +3.2**
C19K Lookout Ridge 74.55 338 P **P** **14 57 33.1 +0.3**
baz=81
Q17K Contact Creek 74.59 327 P **P** **14 57 33.4 0.0**
baz=81
H18K Honhosa River 74.69 334 P **P** **14 57 33.8 +0.1**
baz=81
G18K Tagagawik 74.70 335 P **P** **14 57 33.8 +0.1**
baz=81
P17K Kvichak River 74.73 328 P **P** **14 57 33.8 -0.2**
baz=81
M17K Holitna River 74.88 330 P **P** **14 57 35.0 +0.1**
baz=81
N17K Nushagak Hills 74.89 329 P **P** **14 57 35.2 +0.3**
baz=81
Q16K King Salmon 74.92 327 P **P** **14 57 35.1 0.0**
baz=81
O17K Koliganek Bris 74.97 328 P **P** **14 57 35.4 0.0**
baz=81
F18K Selawik 74.98 336 P **P** **14 57 35.1 -0.2**
baz=80
K17K Iditarod 75.06 332 P **P** **14 57 35.6 -0.3**
baz=80
L17K Donlin 75.16 331 P **P** **14 57 36.0 -0.4**
baz=80
C18K Utukok River 75.20 338 P **P** **14 57 36.3 -0.3**
baz=79
E18K Tukpahlearik C 75.20 337 P **P** **14 57 35.8 -0.8**
baz=80
J17K VABM Dome 75.29 332 IAmb IAmb 14 57 40.1
comp=Z,67nm,2.0s
J17K VABM Dome 75.29 332 P **P** **14 57 37.4 +0.2**
baz=80
H17K Granite Mounta 75.38 334 P **P** **14 57 37.5 -0.2**
baz=80
O16K Kokwok River B 75.50 328 P **P** **14 57 38.4 -0.1**
baz=80
P16K Nushagak River 75.55 328 P **P** **14 57 39.0 +0.3**
baz=80
G17K Kiwalik Mounta 75.58 335 P **P** **14 57 38.8 0.0**
baz=79
F17K Baldwin Pennin 75.64 336 P **P** **14 57 38.9 -0.2**
baz=79
M16K Timber Creek 75.67 330 P **P** **14 57 39.4 0.0**
baz=79
N16K Nishlik Lake 75.67 329 P **P** **14 57 39.1 -0.4**
baz=79
E17K Hotham Inlet 75.74 336 P **P** **14 57 39.2 -0.5**
baz=78
L16K Owhat River 75.78 331 P **P** **14 57 40.1 +0.1**
baz=79,SNR=10
I17K Unalakleet 75.91 333 IAmb IAmb 14 57 49.3
comp=Z,44nm,1.8s
I17K Unalakleet 75.91 333 P **P** **14 57 40.9 +0.3**
baz=79
RDOG Red Dog Mine 75.94 337 IAmb IAmb 14 57 41.0
comp=Z,13nm,0.6s
RDOG Red Dog Mine 75.94 337 P **P** **14 57 40.7 -0.2**
baz=78
C17K DeLong Mountai 75.95 338 P **P** **14 57 40.4 -0.5**
baz=78
J16K Anvik River 75.99 332 P **P** **14 57 41.3 +0.2**
baz=78
FINES FINESS Array B 76.00 30 P **P** **14 57 41.6 +0.4**
comp=Z,1.9nm,0.4s,baz=280,slow=4.7,SNR=23
FINES LR LR 15 27 55.8
comp=Z,76nm,20.1s,baz=288,slow=33
comp=Z,1.9nm,0.4s
D17K Noatak River 76.08 337 P **P** **14 57 41.5 -0.2**
baz=77
G16K Koyuk River 76.30 335 P **P** **14 57 43.3 +0.4**
baz=78
N15K Kwethluk River 76.38 329 P **P** **14 57 43.9 +0.4**
baz=78
H16K Elim 76.42 334 P **P** **14 57 43.1 -0.4**
baz=77
O15K Ungalikthiuk R 76.45 328 P **P** **14 57 44.2 +0.3**
baz=78
BZS Buzias 76.51 46⇑ P **P** **14 57 45.5 +1.0**
BZS Buzias 76.51 46 P **P** **14 57 45.5 +1.0**
M15K Kasigluk River 76.56 330 P **P** **14 57 45.2 +0.7**
baz=78
K15K Wolf Creek Mou 76.61 331 P **P** **14 57 45.5 +0.7**
baz=78
L15K Ungalak Mounta 76.73 331 P **P** **14 57 46.2 +0.8**
baz=77
BOVS Bovan 76.98 48⇑ P **P** **14 57 48.0 +0.8**
DRGR 77.01 45⇑ P **P** **14 57 47.9 +0.4**
DRGR 77.01 45 P **P** **14 57 47.8 +0.4**
G15K Niukluk 77.08 334 P **P** **14 57 48.0 +0.6**
baz=76
F15K North Star Dit 77.15 335 P **P** **14 57 48.5 +0.7**
baz=76
M14K Bethel 77.16 330 P **P** **14 57 47.9 +0.1**
baz=77
N14K Kuskokwak Cree 77.21 329 P **P** **14 57 48.7 +0.6**
baz=77
HERR Herculane 77.21 47⇑ P **P** **14 57 49.0 +0.5**
CHNA Chernabura Isl 77.24 324 P **P** **14 57 48.4 0.0**
baz=77
MARR Marisel-Cluj 77.31 45⇓ P **P** **14 57 49.5 +0.4**
GZR Gura Zlata 77.35 46⇓ P **P** **14 57 49.8 +0.5**
GZR Gura Zlata 77.35 46 P **P** **14 57 49.8 +0.5**
L14K Kuka Creek 77.36 331 P **P** **14 57 49.4 +0.5**
baz=76
J14K Nanvaranak Lak 77.42 332 P **P** **14 57 49.8 +0.5**
baz=76
SDPT Sand Point 77.62 324 P **P** **14 57 50.2 -0.3**
baz=77
ANM Nome 77.74 334 P **P** **14 57 51.4 +0.3**
baz=75
F14K Arctic Creek 77.89 335 P **P** **14 57 52.6 +0.7**
baz=74
M13K Dall Lake 77.91 330 P **P** **14 57 52.8 +0.8**
baz=76
K13K Kusilvak Mount 78.13 331 P **P** **14 57 54.1 +0.9**
baz=75
MNK Minsk 78.47 36 *i* P **P** **14 57 55.0 -0.3**
comp=E,13nm,0.8s
MNK *i* P **P** **14 57 55.0 -0.3**
comp=N,13nm,0.8s
MNK *i* P **P** **14 57 55.0 -0.3**
comp=Z,15nm,0.8s,baz=284
MNK *i* PcP **PcP** **14 58 03.3 -1.2**
MNK *i* PP **PP** **15 00 50.7 -1.6**
MNK *i* PPP PPP 15 02 38.6
MNK *i* S **S** **15 07 50.8 -0.5**
MNK *i* PS 15 08 08.1
MNK *i* SS **SS** **15 12 54.0 +0.1**
MNK *i* SSS SSS 15 16 18.7
MNK Minsk 78.47 36 *i* P **P** **14 57 55.0 -0.3**
MNK *i* 14 58 03.2
MNK *i* 15 00 50.7
MNK *i* PPP PPP 15 02 38.5
MNK *i* S **S** **15 07 50.8 -0.5**

MNK *i* PS PnS 15 08 08.1 -24
MNK *i* SS **SS** **15 12 54.0 +0.1**
MNK *i* SSS SSS 15 16 18.6
MNK pmax pmax
comp=E,13nm,0.8s
MNK pmax pmax
comp=N,13nm,0.8s
MNK pmax pmax
comp=Z,15nm,0.8s
BUR08 Bucovina Ar. S 78.48 44 P **P** **14 57 55.6 0.0**
BURAR Bucovina Array 78.50 44 P **P** **14 57 56.5 +0.7**
BURAR Bucovina Array 78.50 44 ⇓P **P** **14 57 56.6 +0.9**
BURAR Bucovina Array 78.50 44 P **P** **14 57 56.6 +0.9**
HORU Horodok 78.90 42 P **P** **14 57 57.8 +0.1**
VOIR 78.90 46 ⇑P **P** **14 57 59.0 +1.0**
VOIR 78.90 46 P **P** **14 57 58.9 +1.0**
M11K Mekoryuk 79.28 330 P **P** **14 58 00.3 +0.8**
baz=73
MLR Muntele Rosu 79.50 46 LR LR 15 34 00.7
comp=Z,54nm,18.0s,baz=241,slow=36
MLR Muntele Rosu 79.50 46 P **P** **14 58 00.8 -0.4**
MLR IAmb IAmb 14 58 13.8
comp=Z,19nm,0.9s
MLR Muntele Rosu 79.50 46 ⇓P **P** **14 58 02.8 +1.5**
MLR Muntele Rosu 79.50 46 P **P** **14 58 00.9 -0.4**
MLR pmax pmax
comp=Z,19nm,0.9s
MLR Muntele Rosu 79.50 46 P **P** **14 58 01.8 +0.5**
comp=Z,24nm,0.8s
LUBAR Lubar, Ukraine 79.56 41 P **P** **14 58 01.1 -0.2**
ONER Baraj Valea Uz 79.59 45 ⇑P **P** **14 58 03.1 +1.4**
MI30 MI30,Zelenitsa 79.61 40 P **P** **14 58 01.8 +0.2**
comp=Z,37nm,0.9s
AK22 Malin Array Si 80.14 40 P **P** **14 58 04.4 -0.1**
AKASG Malin Array Be 80.25 40 P **P** **14 58 04.7 -0.4**
comp=Z,1.1nm,0.6s,baz=288,slow=4.3,SNR=4.5
AKASG LR LR 15 34 23.3
comp=Z,160nm,18.4s,baz=286,slow=36
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 80.25 40 P **P** **14 58 04.7 -0.4**
AKASG pmax pmax
comp=Z,7.0nm,1.4s
AKBB Malin Array Si 80.25 40⇑*e*P **P** **14 58 04.3 -0.8**
SORM Soroca 80.41 43 ⇑P **P** **14 58 06.1 +0.2**
SORM Soroca 80.41 43 P **P** **14 58 06.1 +0.2**
SORM Soroca 80.41 43 P **P** **14 58 05.9 0.0**
comp=Z,14nm,0.5s
GAMB Gambell 80.62 334 P **P** **14 58 06.5 -0.2**
baz=69
NEGRR Negrea 80.80 45 ⇑P **P** **14 58 08.6 +0.5**
CFR Carcaliu 81.07 45 ⇑P **P** **14 58 10.1 +0.5**
CFR Carcaliu 81.07 45 P **P** **14 58 10.0 +0.5**
UNV Unalaska Valle 81.41 324 P **P** **14 58 11.2 0.0**
baz=72
P08K Saint George I 82.15 327 P **P** **14 58 14.6 -0.4**
baz=70
SPIA Saint Paul Isl 82.31 328 P **P** **14 58 14.9 -0.9**
baz=69
KLMR Klimovskoe 82.40 28 *e*P **P** **14 58 15.4 -0.8**
KLMR pmax pmax
comp=Z,26nm,1.2s
OBN Obninsk 83.08 34⇑*e*P **P** **14 58 19.6 -0.3**
OBN pmax pmax
comp=Z,11nm,0.7s
BORA Eskisehir 84.27 50 P **P** **14 58 26.6 +0.1**
BORA IAmb IAmb 14 59 05.5
comp=Z,16nm,0.8s
LPSR Galich'ya Gora 85.32 36 *e*P **P** **14 58 31.4 +0.1**
LPSR pmax pmax
comp=Z,18nm,0.8s
VORR Voronezh 85.84 37 *e*P **P** **14 58 37.0 +3.0**
VORR pmax pmax
comp=Z,72nm,0.5s
VSR Storozhevoye 86.00 37 *e*P **P** **14 58 34.3 -0.5**
VSR pmax pmax
comp=Z,4.0nm,0.5s
VORD Divnogorie 86.17 37 *e*P P 14 58 29.0 -6.6
VORD pmax pmax
comp=Z,5.0nm,0.8s
BILL Bilibino 86.24 342 P **P** **14 58 35.8 +0.1**
BILL IAmb IAmb 14 58 47.8
comp=Z,12nm,0.9s
BILL Bilibino 86.24 342⇓*e*P **P** **14 58 35.7 +0.1**
BILL pmax pmax
comp=Z,20nm,1.8s
BR131 Keskin Array S 86.64 49⇑*e*P **P** **14 58 37.8 -0.6**
BRTR Keskin Array B 86.64 49 P **P** **14 58 37.8 -0.6**
comp=Z,4.2nm,0.8s,baz=270,slow=3.7,SNR=9.7
comp=Z,4.2nm,0.8s
BRTR Keskin Array B 86.64 49 P **P** **14 58 38.1 -0.3**
BRTR Keskin Array B 86.64 49 P **P** **14 58 38.1 -0.3**
BR104 Keskin Array S 86.65 49 P **P** **14 58 38.7 +0.3**
KIRS Kirsehir-Merke 87.05 50 ⇓P **P** **14 58 40.7 +0.3**
VRH Novokhopyorsk 87.47 37 *e*P **P** **14 58 41.1 -0.8**
VRH pmax pmax
comp=Z,3.0nm,0.4s
KIRV Kirov 87.89 28 LR LR 15 34 39.4
comp=Z,44nm,20.8s,baz=298,slow=33
KIRV Kirov 87.89 28*e*P **P** **14 58 43.5 -0.3**
PPT Papeete 88.59 251 LR LR 15 32 48.1
comp=Z,101nm,19.0s,baz=60,slow=32
PPT2 Papeete2 88.59 251 *e*LR LR 15 27 00.7
PPT2 15 27 05.0
comp=Z,144nm,25.5s
comp=Z,126nm,27.5s
BELG Belogornoye 90.17 34⇑*e*P **P** **14 58 52.6 -2.0**
BELG pmax pmax
comp=Z,4.0nm,1.3s
TIXI Tiksi 90.19 355 P **P** **14 58 54.2 -0.1**
TIXI IAmb IAmb 15 01 14.6
comp=Z,11nm,0.7s
TIXI Tiksi 90.19 355⇑*e*P **P** **14 58 54.3 -0.1**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
TBI Tubuai 90.36 246 *e*LR LR 15 27 40.4
comp=Z,492nm,26.2s
TSUM Tsumeb 90.69 110 LR LR 15 33 14.4
comp=Z,121nm,20.6s,baz=330,slow=31
EIL Elat 91.20 58 LR LR 15 39 07.1
comp=Z,139nm,20.7s,baz=239,slow=35
KIV Kislovodsk 91.21 43 *e*P **P** **14 58 58.7 -1.1**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,109nm,20.0s
NRIK Noril'sk 91.26 9 P **P** **14 59 00.0 +0.6**
comp=Z,2.4nm,0.7s,baz=53,slow=5.1,SNR=3.9
comp=Z,2.4nm,0.7s
NRIK Noril'sk 91.26 9 IAmb IAmb 15 01 40.4
comp=Z,6.9nm,0.9s
NRIK Noril'sk 91.26 9⇓*e*P **P** **14 58 59.5 +0.1**
NRIK pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 91.44 43 LR LR 15 40 52.4
comp=Z,66nm,18.8s,baz=334,slow=36
ARTI Arti 93.12 27 LR LR 15 35 14.6
comp=Z,44nm,20.4s,baz=314,slow=32
SEY Seymchan 93.92 343 LR LR 15 44 48.0
comp=Z,116nm,20.0s,baz=349,slow=38
SEY Seymchan 93.92 343⇑*e*P **P** **14 59 11.6 -0.2**
SEY pmax pmax
comp=Z,5.0nm,0.9s
GNI Garni 94.28 46 LR LR 15 45 30.1
comp=Z,50nm,18.2s,baz=314,slow=38
MA2 Magadan 97.09 342 LR LR 15 46 26.7
comp=Z,150nm,19.7s,baz=72,slow=37
SUR Sutherland 97.40 122 LR LR 15 39 00.1
comp=Z,83nm,19.3s,baz=181,slow=33
SNAA Sanae 98.93 163 LR LR 15 42 54.9
comp=Z,72nm,21.2s,baz=0.0,slow=35
LSZ Lusaka 99.23 103 LR LR 15 37 32.4
comp=Z,74nm,19.9s,baz=289,slow=31
LBTB Lobatse 99.48 113 LR LR 15 41 00.8
comp=Z,53nm,18.7s,baz=288,slow=33
PETK Petropavlovsk- 99.66 335 LR LR 15 46 30.5
comp=Z,62nm,22.0s,baz=65,slow=36
WMQ Urumqi 114.46 20 *e*PKP PKPdf 15 04 36.5 +1.8
HHC Hu-ho-hao-te 121.70 1 *e*P **PKiKP** **15 04 50.1 +1.2**
BTO2 Baotou 121.74 3 *e*PKP **PKPdf** **15 04 48.2 -0.7**
BTO2 PP PP 15 06 42.0 +22
KSRS Korea Array 123.36 346 PKP **PKPdf** **15 04 50.5 -1.3**
comp=Z,2.6nm,1.1s,baz=45,slow=3.6,SNR=4.0
XAN Xi'an 128.36 4 PKP **PKiKP** **15 05 04.7 +2.4**
NJ2 Nanjing 130.19 354 *e*P **PKiKP** **15 05 07.4 +1.5**
NJ2 pmax pmax
comp=Z,9.0nm,0.9s

CMAR Chiang Mai Arr 141.43 22 PKP **PKPdf** **15 05 25.5 -0.8**
comp=Z,0.9nm,0.6s,baz=307,slow=2.7,SNR=5.8
PMG Port Moresby 145.94 280 PKPbc **PKPdf** **15 05 33.0 -1.3**
comp=Z,14nm,1.0s,baz=32,slow=5.4,SNR=6.0
PMG Port Moresby 145.94 280 PKIKP **PKPdf** **15 05 33.0 -1.3**
STKA Stephens Creek 150.68 236 PKPbc **PKPbc** **15 05 46.0 -1.1**
comp=Z,4.6nm,0.7s,baz=355,slow=6.3,SNR=2.9
STKA Stephens Creek 150.68 236 **PKPbc** **15 05 46.3 -0.7**
STKA Stephens Creek 150.68 236 PKIKP **PKPbc** **15 05 46.3 -0.7**
ASAR Alice Springs 159.69 250 PKP **PKPdf** **15 05 53.4 -0.7**
comp=Z,0.4nm,0.6s,baz=111,slow=1.3,SNR=7.9
ASAR PKPab **PKPab** **15 06 30.7 -2.0**
comp=Z,0.7nm,0.5s,baz=108,slow=3.5,SNR=8.8
WRA Warramunga Arr 159.80 260 PKP **PKPdf** **15 05 53.1 -1.1**
comp=Z,0.9nm,0.8s,baz=87,slow=0.8,SNR=7.2
WRA PKPab **PKPab** **15 06 32.4 -0.8**
comp=Z,0.9nm,0.7s,baz=85,slow=3.9,SNR=7.4

*IDC **04** 14:47:11.4±5.8, 12°.10S×166°.53E, h88^{km}±57^{km}, mb4.1/6, mbtmp4.4/8, ML3.0/2, MS4.0/1, Error ellipse: s-maj=39.0km s-min=28.8km az=158.0*
*NEIC **04** 14:47:12.2±1.0, 12°.1S±0°.1×166°.6E±0°.2, h87^{km}±7^{km}, mb4.7/7, Error ellipse: s-maj=23.1km s-min=18.6km az=93.0*
*NOU **04** 14:47:15.3, 12°.11S×166°.31E, h87^{km}, ML5.1/14, Santa Cruz Islands*
ISC 04 14:47:11.6±0.9, 12°.06S±0°.08×166°.53E±0°.09, h83^{km}, n38, σ1^{s}50/34, mb4.3/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	**Huro Makira**	**4.80**	**289**	P	**Pn**	**14 48 22.9**	**+1.4**
HURO	**Huro Makira**	**4.80**	**289**	S	**Sn**	**14 49 15.9**	**-0.1**
DVP	**Devils Point**	**5.86**	**164**	P	**Pn**	**14 48 40.5**	**+4.6**
NGOA	**Tingoa Renbel**	**6.35**	**274**	P	**Pn**	**14 48 43.5**	**+0.9**
NGOA	**Tingoa Renbel**	**6.35**	**274**	S	**Sn**	**14 49 53.1**	**-0.6**
HNR	**Honiara**	**6.97**	**291**	LR	LR	14 52 05.2	
	comp=Z,4.2nm,18.5s,baz=282,slow=42						
TATA	**Tatamba Isabel**	**7.56**	**298**	P	**Pn**	**14 49 00.7**	**+1.6**
TATA	**Tatamba Isabel**	**7.56**	**298**	S	**Sn**	**14 50 23.8**	**+0.5**
KOUNC	**Koumac, New Ca**	**8.71**	**194**	P	**Pn**	**14 49 18.3**	**+3.5**
YATNC	**Mamie plateau,**	**9.95**	**178**	P	**Pn**	**14 49 34.5**	**+2.8**
DZM	**Mont Dzumac**	**9.95**	**180**	P	**Pn**	**14 49 32.0**	**+0.1**
	1.0nm,0.3s,baz=332,slow=14,SNR=8.6						
DZM				S	**Sn**	**14 51 19.7**	**-2.2**
	2.3nm,0.3s,baz=315,slow=21,SNR=1.5						
	9.1nm,0.6s						
DZM	**Mont Dzumac**	**9.95**	**180**		**Pn**	**14 49 32.5**	**+0.6**
ONTNC	**Ouen Toro**	**10.19**	**180**	Pn	**Pn**	**14 49 34.2**	**-0.8**
OUENC	**Ouen Island, N**	**10.30**	**178**	P	**Pn**	**14 49 39.3**	**+2.7**
PMG	**Port Moresby**	**19.21**	**276**	P	**P**	**14 51 29.1**	**0.0**
	0.3nm,0.3s,baz=128,slow=12,SNR=3.9						
	12nm,0.9s						
PMG	**Port Moresby**	**19.21**	**276**	P	**P**	**14 51 29.4**	**+0.3**
EIDS	**Eidsvold**	**19.70**	**226**	P	**Pn**	**14 51 36.4**	**-0.2**
CTA	**Charters Tower**	**21.03**	**245**	P	**P**	**14 51 48.0**	**-0.9**
	15nm,0.8s,baz=68,slow=11,SNR=23						
	15nm,0.8s						
AFI	**Afiamalu**	**21.22**	**97**	P	**P**	**14 51 49.5**	**-1.5**
COEN	**Coen**	**22.83**	**263**	P	**P**	**14 52 07.9**	**-0.1**
ARMA	**Armidale**	**22.90**	**215**		**P**	**14 52 08.7**	**+0.1**
INKA	**Innaminka**	**28.73**	**233**		**P**	**14 53 01.3**	**0.0**
STKA	**Stephens Creek**	**30.25**	**225**	P	**P**	**14 53 14.6**	**-0.2**
	5.5nm,0.8s,baz=30,slow=8.8,SNR=7.9						
	5.5nm,0.8s						
STKA	**Stephens Creek**	**30.25**	**225**		**P**	**14 53 14.3**	**-0.4**
H11S2	**WAKE ISLAND Hy**	**30.36**	**0**	T	T	15 24 17.3	
	baz=183						
H11S3	**WAKE ISLAND Hy**	**30.36**	**0**	T	T	15 24 15.6	
	baz=183						
H11S1	**WAKE ISLAND Hy**	**30.38**	**0**	T	T	15 24 25.5	
	baz=183						
WRA	**Warramunga Arr**	**31.87**	**252**	P	**P**	**14 53 28.1**	**-1.1**
	3.6nm,0.9s,baz=84,slow=8.8,SNR=15						
	3.6nm,0.9s						
AS31	**Alice Springs**	**33.04**	**245**		**P**	**14 53 38.2**	**-1.1**
ASAR	**Alice Springs**	**33.04**	**245**	P	**P**	**14 53 38.4**	**-1.0**
	12nm,0.7s,baz=69,slow=9.8,SNR=111						
	12nm,0.7s						
ASAR	**Alice Springs**	**33.04**	**245**		**P**	**14 53 38.2**	**-1.1**
BBOO	**Buckleboo**	**34.71**	**229**	P	**P**	**14 53 53.6**	**-0.2**
FORT	**Forrest**	**40.10**	**236**		**P**	**14 54 39.2**	**-0.1**
PSA00	**Pilbara Seismi**	**45.53**	**252**	P	**P**	**14 55 23.0**	**-0.3**
PSA00				IAmb	IAmb	14 55 24.6	
	comp=Z,7.0nm,0.9s						
MBWA	**Marble Bar**	**45.60**	**252**	P	**P**	**14 55 23.9**	**0.0**
MBWA				IAmb	IAmb	14 55 24.3	
	comp=Z,16nm,0.8s						
CMAR	**Chiang Mai Arr**	**73.22**	**294**	P	**P**	**14 58 34.0**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=109,slow=5.8,SNR=2.0						
	comp=Z,0.6nm,0.7s						
ILAR	**Eilon, Arra**	**84.23**	**18**	P	**P**	**14 59 32.7**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=231,slow=5.6,SNR=7.3						
	comp=Z,1.7nm,0.8s						
AAK	**Ala-Archa**	**99.54**	**312**	LR	LR	15 46 51.4	
	comp=Z,62nm,20.1s,baz=359,slow=36						

*BJI **04** 14:49:29.9, 3°.49S×130°.81E, h20^{km}, mB5.0/11, mb4.6/53, Ms4.5/5, Ms7 4.2/5*
*NEIC **04** 14:49:38.6±1.6, 2°.96S±0°.04×130°.33E±0°.05, h28^{km}±4^{km}, mb4.8/45, Error ellipse: s-maj=8.3km s-min=4.0km az=118.0*
*DJA **04** 14:49:38.9±0.3, 3°.5S±1°×13°.0E±°, h26^{km}±3^{km}, M4.9/65, mb5.0/65, mB5.4/19, MLv4.8/27, Mw(mB)4.9/19, MwMwp4.6/4, Mwp5.0/4*
*IDC **04** 14:49:39.8±1.4, 2°.95S×130°.47E, h42^{km}±13^{km}, mb4.3/21, mbtmp4.5/25, ML4.3/3, MS3.9/24, Error ellipse: s-maj=14.1km s-min=8.0km az=88.0*
ISC 04 14:49:37.5±0.3, 2°.95S±0°.04×130°.38E±0°.03, h24^{km}, n187, σ1^{s}79/173, mb4.7/56, MS3.9/20, 3C-5D, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.50**	**255**	P	**Pb**	**14 50 04.8**	**+0.1**
BNDI	**Bandanaira**	**1.63**	**197**	P	**Pb**	**14 50 07.8**	**+0.9**
BNDI	**Bandanaira**	**1.63**	**197**	P	**Pb**	**14 50 06.9**	**0.0**
FAKI	**Fak Fak**	**1.87**	**89**		**Pb**	**14 50 09.6**	**-1.5**
FAKI	**Fak Fak**	**1.87**	**89**	P	**Pb**	**14 50 10.0**	**-1.0**
FAKI	**Fak Fak**	**1.87**	**89**	P	**Pb**	**14 50 09.5**	**-1.5**
FAKI				S	**Sb**	**14 50 34.3**	**+0.3**
KRAI	**Karang Ratu**	**2.01**	**260**	P	**Pn**	**14 50 10.9**	**+0.9**
SIJI	**Sorong**	**2.25**	**23**	P	**Pn**	**14 50 13.2**	**-0.2**
	40nm,0.3s,baz=95,slow=5.8,SNR=66						
SIJI				S	**Sn**	**14 50 40.6**	**+0.2**
	218nm,0.3s,baz=232,slow=23,SNR=3.8						
	88nm,0.2s						
SIJI	**Sorong**	**2.25**	**23**	P	**Pn**	**14 50 12.8**	**-0.5**
SWI	**Sorong**	**2.26**	**23**	P	**Pn**	**14 50 13.1**	**-0.3**
SWI				S	**Sn**	**14 50 40.1**	**-0.3**
AAI	**Ambon**	**2.30**	**251**	P	**Pn**	**14 50 14.9**	**+1.0**
NLAI	**Namlea**	**3.29**	**265**	P	**Pn**	**14 50 28.8**	**+1.3**
KMPI	**Kaimana, Papua**	**3.40**	**102**	P	**Pn**	**14 50 30.9**	**+1.9**
RKPI	**Ransiki, Papua**	**4.06**	**69**	P	**Pn**	**14 50 39.7**	**+1.5**
RKPI				S	**Sn**	**14 51 27.2**	**+2.2**
SANI	**Sanana**	**4.48**	**281**	P	**Pn**	**14 50 41.1**	**-2.8**
SANI				S	**Sn**	**14 51 30.5**	**-4.8**
TNTI	**Ternate**	**4.77**	**321**		**Pn**	**14 50 47.2**	**-0.7**
TNTI	**Ternate**	**4.77**	**321**	P	**Pn**	**14 50 47.7**	**-0.3**
SAUI	**Saumlaki**	**5.08**	**170**	Pn	**Pn**	**14 50 51.8**	**-0.5**
SAUI	**Saumlaki**	**5.08**	**170**	P	**Pn**	**14 50 56.2**	**+4.0**
SAUI	**Saumlaki**	**5.08**	**170**	P	**Pn**	**14 50 53.9**	**+1.7**
	2.4nm3µm6µm475nm,1.0s						
BAKI	**Biak**	**5.99**	**73**	P	**Pn**	**14 51 07.3**	**+2.6**
KDI	**Kendari**	**7.81**	**262**	P	**Pn**	**14 51 29.9**	**+0.2**
LUWI	**Luwuk**	**7.83**	**284**	P	**Pn**	**14 51 31.3**	**+1.2**
LUWI	**Luwuk**	**7.83**	**284**	P	**Pn**	**14 51 29.0**	**-1.1**
	4µm112nm,1.1s						
KKSI	**Kolaka, Sulawe**	**8.79**	**262**	P	**Pn**	**14 51 45.0**	**+1.7**
APSI	**Ampana**	**8.96**	**283**	P	**Pn**	**14 51 45.8**	**+0.3**
	1µm103nm,0.5s						
SOEI	**Soe**	**9.08**	**222**	P	**Pn**	**14 51 52.1**	**+4.7**
	84nm,1.0s						
MRSI	**Marisa**	**9.10**	**292**	P	**Pn**	**14 51 45.3**	**-2.1**
	69nm,0.8s						
DRS	**Darwin Rock St**	**9.43**	**177**	P	**Pn**	**14 51 54.7**	**+2.7**
GENI	**Genyem**	**9.79**	**88**	P	**Pn**	**14 51 58.2**	**+1.3**
	114nm,0.7s						
BATI	**Baumata**	**9.82**	**222**	P	**Pn**	**14 52 00.7**	**+3.3**
	123nm,0.6s,baz=67,slow=1.7,SNR=14						
BATI				S	**Sn**	**14 53 49.9**	**+3.0**
	53nm,0.8s,baz=105,slow=22,SNR=3.2						

BATI LR LR 14 56 10.2
comp=Z,872nm,21.8s,baz=35,slow=40
BATI Baumata 9.82 222 P **Pn** **14 52 01.2 +3.9**
MTN Manton Dam 9.86 176 **Pn** **14 51 56.9 -0.9**
JAY Jayapura 10.32 88 P **Pn** **14 52 04.4 +0.1**
2.1nm,0.3s,baz=254,slow=3.5,SNR=6.6
JAY LR LR 14 57 28.8
comp=Z,494nm,19.9s,baz=290,slow=46
20nm,0.9s
JAY Jayapura 10.32 88 P Pn 14 52 09.4 +5.1
35nm,0.9s
BSSI Bau Bau, Buton 10.35 252 P **Pn** **14 52 05.5 +0.9**
121nm,0.9s
EDFI Ende, Flores 10.38 236 P **Pn** **14 52 09.4 +4.2**
40nm,0.7s
TOLI2 Tolitoli 10.41 293 **Pn** **14 52 04.0 -1.5**
TOLI2 Tolitoli 10.41 293 P **Pn** **14 52 06.1 +0.7**
TOLI2 Tolitoli 10.41 293 S **Sn** **14 54 01.9 +0.5**
SPSI Sidrap Palu 10.64 264 P **Pn** **14 52 12.3 +3.8**
39nm,1.3s
KAPI Kappang 10.80 259 P **Pn** **14 52 13.5 +2.8**
4.3nm,0.3s,baz=95,slow=6.5,SNR=14
KAPI LR LR 14 57 32.6
comp=Z,705nm,19.1s,baz=74,slow=43
26nm,0.6s
KAPI Kappang 10.80 259 P **Pn** **14 52 12.8 +2.1**
KAPI Kappang 10.80 259 P **Pn** **14 52 13.8 +3.1**
23nm,0.7s
MPSI Mapaga 10.97 287 P **Pn** **14 52 13.3 +0.1**
DAV Davao City (W) 11.05 334 LR LR 14 57 25.7
comp=Z,576nm,19.9s,baz=105,slow=42
DAV Davao City (W) 11.05 334 P **Pn** **14 52 14.7 +0.5**
WSI Waingapu 12.03 236 P **Pn** **14 52 31.5 +3.8**
BASI Baing, Sumba 12.12 233 P Pn 14 52 33.6 +4.8
KNRA Kununurra 12.74 187 **Pn** **14 52 34.2 -3.1**
WBSI Waikabubak, Su 12.78 238 P **Pn** **14 52 42.5 +4.6**
987nm83nm,0.6s
DBNI Kabupaten Domp 13.21 245 P **Pn** **14 52 47.6 +3.9**
35nm,0.6s
PLAI Plampang 13.82 244 P **Pn** **14 52 54.5 +2.4**
PLAI Plampang 13.82 244 P **Pn** **14 52 54.2 +2.1**
935nm90nm,0.7s
TWSI Taliwang, Sumb 14.60 246 P **Pn** **14 53 03.9 +1.2**
40nm,0.6s
KHKI Kahang-Kahang 15.64 249 P **Pn** **14 53 17.4 +0.8**
30nm,0.8s
FITZ Fitzroy Crossi 15.75 197 P **Pn** **14 53 15.5 -2.5**
25nm,0.6s,baz=31,slow=9.2,SNR=8.2
FITZ S **Sn** **14 56 02.5 -9.4**
5.5nm,0.6s,baz=194,slow=3.5,SNR=3.1
FITZ LR LR 15 00 39.3
comp=Z,355nm,19.5s,baz=29,slow=42
COEN Coen 16.71 132 Pn **Pn** **14 53 30.1 -0.1**
COEN Coen 16.71 132 P **P** **14 53 32.5 +0.1**
ABJI Asem Bagus 16.77 253 P **P** **14 53 32.2 -0.9**
46nm,0.9s
KMMI Kalianget 16.84 255 P **P** **14 53 34.3 +0.4**
32nm,0.7s
JAGI Jajag, Banyuwa 17.05 251 **Pn** **14 53 33.3 -1.2**
JAGI Jajag, Banyuwa 17.05 251 P **P** **14 53 35.7 -0.4**
JAGI Jajag, Banyuwa 17.05 251 P **Pn** **14 53 34.6 +0.1**
WRAB Tennant Creek 17.32 167 Pn **Pn** **14 53 35.2 -2.7**
WRA Warramunga Arr 17.32 167 P **Pn** **14 53 34.0 -3.9**
4.0nm,0.7s,baz=343,slow=13,SNR=14
WRA S Sn 14 56 38.0 -12
6.8nm,0.6s,baz=340,slow=21,SNR=5.5
WR8 Warramunga Arr 17.37 167 **Pn** **14 53 35.5 -3.0**
PMG Port Moresby 17.86 112 P **P** **14 53 45.9 +0.7**
17nm,0.7s,baz=301,slow=2.2,SNR=9.8
PMG Port Moresby 17.86 112 **P** **14 53 44.9 -0.3**
SNJI Sawahan-Nganju 19.14 255 P **Pn** **14 54 01.3 +0.9**
29nm,0.6s
NGJI Ngawi 19.34 256 P **Pn** **14 54 05.6 +3.0**
42nm,1.0s
TGY Tagaytay City 19.36 331 LR LR 15 01 40.3
comp=Z,196nm,20.6s,baz=135,slow=37
QIS Mount Isa 19.68 153 P **Pn** **14 54 05.8 -0.8**
PCJI Pacitan 19.80 254 P **P** **14 54 07.1 +0.7**
MBWA Marble Bar 20.85 209 **P** **14 54 15.4 -2.5**
MBWA IAmb IAmb 14 54 35.2
comp=Z,36nm,1.3s
AS31 Alice Springs 20.87 171 **P** **14 54 18.1 0.0**
AS31 IAmb IAmb 14 54 26.6
comp=Z,22nm,0.7s
ASAR Alice Springs 20.87 171 P **P** **14 54 17.9 -0.2**
comp=Z,44nm,0.5s,baz=338,slow=10.0,SNR=137
ASAR S **S** **14 58 07.6 -2.3**
comp=Z,11nm,0.9s,baz=357,slow=25,SNR=7.0
comp=Z,44nm,0.5s
ASAR Alice Springs 20.87 171 **P** **14 54 18.1 +0.1**
KPJI Karang Pucung 21.79 258 P **P** **14 54 26.4 -1.6**
comp=Z,32nm,0.7s
GUMO Guam 21.84 41 LR LR 15 02 52.9
comp=Z,200nm,18.5s,baz=208,slow=36
LEM Lembang 23.00 260 P **P** **14 54 42.0 +0.9**
comp=Z,11nm,0.4s,baz=353,slow=14,SNR=4.0
LEM LR LR 15 05 21.2
comp=Z,705nm,20.2s,baz=90,slow=41
comp=Z,11nm,0.4s
CTA Charters Tower 23.02 139 P **P** **14 54 41.7 +0.6**
comp=Z,6.6nm,0.7s,baz=312,slow=11,SNR=11
CTA LR LR 15 05 42.9
comp=Z,220nm,18.3s,baz=312,slow=42
comp=Z,6.6nm,0.7s
BBJI Bungbulang 23.07 258 **P** **14 54 38.2 -3.4**
BBJI IAmb IAmb 14 54 44.6
comp=Z,14nm,0.6s
GIRL Giralia 25.06 217 P **P** **14 55 00.0 -0.2**
MDSI Maura Dua 26.19 266 P **P** **14 55 11.2 +0.6**
comp=Z,20nm,1.0s
INKA Innaminka 26.57 159 **P** **14 55 14.0 +0.2**
MYKOM Kota Tinggi 26.93 280 P **P** **14 55 17.1 -0.2**
MYKOM IAmb IAmb 14 55 24.9
comp=Z,78nm,1.6s
FORT Forrest 27.76 184 P **P** **14 55 24.6 0.0**
FORT IAmb IAmb 14 55 32.6
comp=Z,17nm,0.7s
MASI Maura Aman, Be 28.10 269 P **P** **14 55 28.5 +0.7**
MORW Morawa 29.33 206 P **P** **14 55 36.1 -2.5**
MORW IAmb IAmb 14 56 26.1
comp=Z,17nm,1.3s
JOW Kunigami 29.68 356 LR LR 15 07 36.3
comp=Z,404nm,19.7s,baz=124,slow=36
QIZ Qiongzhong 29.75 318 P **P** **14 55 44.4 +2.0**
QIZ S **S** **15 00 40.7 +3.2**
QIZ LR LR
comp=Z,260nm,14.5s
QIZ LR LR
comp=Z,160nm,13.8s
QIZ LR LR
comp=Z,220nm,14.4s
PDSI Padang 29.97 273 P **P** **14 55 43.9 -0.5**
comp=Z,31nm,0.5s
BBOO Buckleboo 30.18 170 P **P** **14 55 45.9 -0.1**
IPM Ipoh 30.25 284 P **P** **14 55 46.5 -0.4**
IPM IAmb IAmb 14 55 48.9
comp=Z,10.0nm,0.8s
STKA Stephens Creek 30.65 161 P **P** **14 55 50.3 +0.1**
comp=Z,2.9nm,0.4s,baz=328,slow=12,SNR=14
STKA LR LR 15 08 54.3
comp=Z,347nm,21.8s,baz=349,slow=38
comp=Z,2.9nm,0.4s
STKA Stephens Creek 30.65 161 **P** **14 55 50.4 +0.2**
RPSI Rantau Prapat 31.94 280 **P** **14 56 00.9 -0.8**
RPSI IAmb IAmb 14 56 02.2
comp=Z,14nm,0.6s
PSI Prapat 31.96 280 P **P** **14 56 01.6 -0.5**
comp=Z,21nm,0.7s
JCJ Chichijima 31.97 20 LR LR 15 06 47.6
comp=Z,249nm,19.9s,baz=206,slow=32
NWAO Narrogin (SRO) 32.26 201 P **P** **14 56 03.4 -0.9**
GSI Gunungsitoli 33.06 277 P **P** **14 56 10.9 -0.8**
GSI Gunungsitoli 33.06 277 P **P** **14 56 11.3 -0.4**
comp=Z,26nm,0.9s
KCSI Kotacane, Aceh 33.22 281 P **P** **14 56 13.5 +0.5**
comp=Z,7.2nm,0.6s
JNU Nakatsue 35.88 1 LR LR 15 12 16.9
comp=Z,282nm,18.4s,baz=176,slow=38
NJ2 Nanjing 36.49 343 *e*P **P** **14 56 43.9 +2.9**
NJ2 pmax pmax
comp=Z,7.0nm,1.0s
JHJ Hachijo jima 2 36.96 13 LR LR 15 10 24.4
comp=Z,413nm,21.1s,baz=122,slow=34
GYA Guiyang 37.16 323 ⇓P **P** **14 56 47.6 +0.7**
GYA pmax pmax
comp=Z,9.0nm,0.6s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMAR	Chiang Mai Arr	37.56	306	P	P	14 56 51.1	+0.9
	comp=Z,4.1nm,1.0s,baz=129,slow=7.1,SNR=21						
	comp=Z,4.1nm,1.0s						
CMAR	Chiang Mai Arr	37.56	306		P	14 56 50.3	0.0
CHTO	Chiang Mai	37.74	306		P	14 56 52.1	+0.3
CHTO				IAmb	IAmb	14 56 59.7	
	comp=Z,8.4nm,0.8s						
CHTO	Chiang Mai	37.74	306	P	P	14 56 51.6	-0.3
ENH	Enshi	38.60	330		P	14 56 58.3	-0.6
ENH				IAmb	IAmb	14 57 12.1	
	comp=Z,26nm,1.7s						
KMI2	Kunming	38.72	318	P	P	14 57 01.1	+0.9
KMI2				sP	sP	14 57 10.4	+0.1
KMI2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DZM	Mont Dzumac	39.83	122	LR	LR	15 14 01.2	
	comp=Z,105nm,19.0s,baz=20,slow=37						
DZM	Mont Dzumac	39.83	122	eLR	LR	15 08 01.6	
	comp=Z,237nm,26.9s						
MJAR	Matsushiro Arr	39.97	10	P	P	14 57 08.7	-1.5
	comp=Z,3.6nm,0.9s,baz=188,slow=8.8,SNR=6.8						
MJAR				LR	LR	15 12 03.0	
	comp=Z,130nm,20.6s,baz=196,slow=34						
	comp=Z,3.6nm,0.9s						
MJAR	Matsushiro Arr	39.97	10	IAmb	IAmb	14 58 17.6	
	comp=Z,22nm,1.9s						
KSRS	Korea Array	40.27	357	P	P	14 57 12.6	-0.1
	comp=Z,4.1nm,0.7s,baz=171,slow=8.6,SNR=13						
KSRS				LR	LR	15 13 36.4	
	comp=Z,132nm,20.5s,baz=180,slow=36						
	comp=Z,4.1nm,0.7s						
PZH	PanZhiHua	40.29	318	P	P	14 57 15.4	+2.2
TIA	Tai'an	40.88	344	P	P	14 57 16.9	-0.9
TIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TNCH	TengChong	41.59	314	eP	P	14 57 26.6	+2.6
TNCH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN	Xi'an	41.99	333	⇓P	P	14 57 25.9	-1.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CD2	Chengdu	42.16	325	P	P	14 57 29.1	+0.6
HNS	HongShan	42.71	342	⇑P	P	14 57 32.2	-0.5
HNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI2	Beijing	44.71	344	P	P	14 57 48.5	-0.3
BJI2				pP	pP	14 57 54.2	-1.8
BJI2				sP	sP	14 57 57.5	-1.4
BJI2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJI2				pmax	pmax		
	comp=Z,60nm,6.2s						
LZDM	Lanzhou Array	46.05	330	P	P	14 57 59.6	-0.3
	comp=Z,1.3nm,0.5s,baz=171,slow=13,SNR=11						
	comp=Z,1.3nm,0.5s						
LZH	Lanzhou	46.08	330	eP	P	14 58 00.5	+0.6
LZH				pP	pP	14 58 06.2	-1.0
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,4.1s						
LZH				LR	LR		
	comp=Z,190nm,13.1s						
LZH				LR	LR		
	comp=Z,230nm,13.7s						
LZH				LR	LR		
	comp=Z,200nm,14.4s						
HHC	Hu-ho-hao-te	46.86	340	⇑iP	P	14 58 06.1	+0.2
HHC				pP	pP	14 58 11.9	-1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
USRK	Ussuriysk Ar.	46.96	2	P	P	14 58 05.8	-0.7
	comp=Z,8.5nm,0.7s,baz=177,slow=4.6,SNR=7.5						
	comp=Z,8.5nm,0.7s						
BNX	BinXian	48.55	357	⇓P	P	14 58 18.8	0.0
BNX				pmax	pmax		
	comp=Z,15nm,0.9s						
PALK	Pallekele	50.60	282	LR	LR	15 21 45.5	
	comp=Z,56nm,19.1s,baz=108,slow=38						
GTA2	Gaotai	50.75	329	eP	P	14 58 36.1	+0.2
GTA2				pmax	pmax		
	comp=Z,11nm,0.8s						
KLR	Kul'dur	51.99	1	LR	LR	15 20 34.2	
	comp=Z,34nm,20.0s,baz=193,slow=36						
HEH	HeiHe	53.06	358	eP	P	14 58 52.3	-0.4
HEH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HILR	Hailar Array B	53.10	351	P	P	14 58 53.5	+0.4
	comp=Z,2.5nm,0.7s,baz=183,slow=7.2,SNR=4.4						
	comp=Z,2.5nm,0.7s						
SONM	Songino Array	54.76	340	P	P	14 59 05.1	-0.3
	comp=Z,3.3nm,0.7s,baz=155,slow=8.5,SNR=15						
	comp=Z,3.3nm,0.7s						
SONM	Songino Array	54.76	340	IAmb	IAmb	14 59 08.9	
	comp=Z,5.8nm,1.0s						
WMQ	Urumqi	60.26	326	eP	P	14 59 46.1	+2.0
PETK	Petropavlovsk-	60.39	19	P	P	14 59 45.1	+0.4
	comp=Z,5.9nm,0.8s,baz=174,slow=3.7,SNR=6.5						
PETK				LR	LR	15 24 01.7	
	comp=Z,46nm,21.4s,baz=142,slow=34						
	comp=Z,5.9nm,0.8s						
YAK	Yakutsk	64.81	360	LR	LR	15 28 59.1	
	comp=Z,67nm,19.0s,baz=84,slow=36						
YAK	Yakutsk	64.81	360		P	15 00 14.3	+0.3
NIL	Nilore	64.92	309		P	15 00 14.8	-0.6
NIL				IAmb	IAmb	15 00 16.2	
	comp=Z,6.8nm,0.6s						
MKAR	Makanchi Array	65.09	326	P	P	15 00 16.4	+0.1
	comp=Z,4.8nm,0.6s,baz=116,slow=8.5,SNR=82						
	comp=Z,4.8nm,0.6s						
MKAR	Makanchi Array	65.09	326		P	15 00 16.0	-0.2
MAKZ	Makanchi	65.28	326		P	15 00 17.1	-0.4
MAKZ				IAmb	IAmb	15 00 18.2	
	comp=Z,4.0nm,0.7s						
KSH2	Kashi	65.46	316	P	P	15 00 19.2	+0.2
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SHEM	Shemya Is, Ala	66.53	27	LR	LR	15 26 15.3	
	comp=Z,61nm,20.7s,baz=31,slow=33						
AAK	Ala-Archa	67.74	319	P	P	15 00 33.8	+0.4
AAK	Ala-Archa	67.74	319	⇑eP	P	15 00 34.1	+0.6
AAK	Ala-Archa	67.74	319	pmax	pmax		
	comp=Z,3.0nm,1.3s						
ZALV	Zalesovo Beam	68.16	333	P	P	15 00 35.2	-0.4
	comp=Z,3.1nm,0.6s,baz=108,slow=5.5,SNR=11						
	comp=Z,3.1nm,0.6s						
ZALV	Zalesovo Beam	68.16	333	P	P	15 00 34.2	-1.4
KBL	Kabul	68.50	309		P	15 00 37.5	-1.0
KBL				IAmb	IAmb	15 00 39.0	
	comp=Z,4.9nm,0.5s						
GAR	Garm	69.13	314	IAmb	IAmb	15 00 48.2	
	comp=Z,8.8nm,0.7s						
KURBB	Kurchatov Arra	69.30	328	P	P	15 00 43.1	+0.3
	comp=Z,7.9nm,0.6s,baz=129,slow=5.7,SNR=65						
	comp=Z,7.9nm,0.6s						
KURK	Kurchatov	69.30	328		P	15 00 42.8	-0.1
KURK				IAmb	IAmb	15 00 46.0	
	comp=Z,18nm,1.0s						
KKAR	Karatay Array	70.59	318		P	15 00 50.8	-0.1
TIXI	Tiksi	74.47	360		P	15 01 13.2	-0.3
BVAR	Borovoye Array	74.88	327	P	P	15 01 16.4	+0.2
	comp=Z,2.9nm,0.6s,baz=134,slow=8.1,SNR=18						
	comp=Z,2.9nm,0.6s						
BORK	Borovoye	74.92	327		P	15 01 16.2	-0.2
BORK				IAmb	IAmb	15 01 17.6	
	comp=Z,4.4nm,0.7s						
VNDA	Vanda	76.39	173	P	P	15 01 22.7	-1.8
	comp=Z,0.9nm,0.5s,baz=335,slow=5.7,SNR=5.9						
	comp=Z,0.9nm,0.5s						
VNDA	Vanda	76.39	173	P	P	15 01 23.5	-1.0
VNDA				IAmb	IAmb	15 01 39.1	
	comp=Z,33nm,1.9s						
NRIK	Noril'sk	77.75	346	P	P	15 01 31.8	-0.4
	comp=Z,2.5nm,0.6s,baz=132,slow=4.7,SNR=4.3						
	comp=Z,2.5nm,0.6s						
ABKAR	Akbulak array	79.60	321		P	15 01 42.5	-0.3
PPT2	Papeete2	79.63	107	eLR	LR	15 26 28.5	
	comp=Z,126nm,27.5s						
PPT2				eLR	LR	15 26 37.8	
	comp=Z,144nm,25.5s						
TBI	Tubuai	79.80	113	eLR	LR	15 26 38.9	
	comp=Z,492nm,26.2s						
P16K	Nushagak River	83.17	30	P	P	15 02 02.8	+1.3
J17K	VABM Dome	84.03	25	IAmb	IAmb	15 02 18.2	
	comp=Z,10nm,1.0s						
ACHA	Angle Creek He	84.28	31	P	P	15 02 07.8	+0.5
N19K	Bonanza Creek	85.36	28	P	P	15 02 13.8	+1.1
RAYN	Ar Rayn	86.47	294	P	P	15 02 17.9	-1.1
RAYN				IAmb	IAmb	15 02 20.3	
	comp=Z,8.3nm,0.7s						
QSPA	South Pole Qui	87.00	180	P	P	15 02 21.1	+0.4
	comp=Z,3.6nm,0.8s,baz=294,slow=3.2,SNR=4.8						
	comp=Z,3.6nm,0.8s						
QSPA	South Pole Qui	87.00	180	IAmb	IAmb	15 02 28.9	
	comp=Z,8.5nm,1.0s						
ILAR	Eielson Array	89.55	25	P	P	15 02 31.9	-0.8
	comp=Z,0.7nm,0.7s,baz=274,slow=3.0,SNR=6.6						
	comp=Z,0.7nm,0.7s						
FURI	Furi	92.13	279	LR	LR	15 44 15.9	
	comp=Z,160nm,20.4s,baz=243,slow=36						
ELIB	Princess Elisa	92.44	197	dP	P	15 02 47.8	+1.5
ARCES	ARCESS Array B	97.94	340	P	Pdif	15 03 12.2	+1.0
	comp=Z,4.4nm,0.9s,baz=97,slow=5.3,SNR=4.0						
ARCES				LR	LR	15 53 47.4	
	comp=Z,57nm,18.1s,baz=163,slow=39						
	comp=Z,4.4nm,0.9s						
CLL	Collm	109.15	324	ePKiKP	PKiKP	15 08 06.0	+0.6
BMRD	Maredsous	114.34	325	dPKiKP	PKiKP	15 08 15.8	+0.4
TXAR	Lajitas Array	122.48	57	PKP	PKiKP	15 08 32.0	0.0
	comp=Z,0.3nm,0.8s,baz=276,slow=2.9,SNR=2.2						
TORD	Torodi Ar. Bea	128.29	284	PKP	PKPdf	15 08 42.4	-0.7
	comp=Z,0.4nm,0.6s,baz=123,slow=1.8,SNR=2.2						
DBIC	Dimbokro	135.25	276	PKP	PKPdf	15 08 56.6	+0.3
	comp=Z,1.9nm,0.6s,baz=117,slow=2.3,SNR=2.0						
PLTB	Pedras Altas	145.27	174		PKPbc	15 09 12.9	-0.8
CPUP	Villa Florida	149.95	166	PKPbc	PKiKP	15 09 27.8	+0.1
	comp=Z,3.5nm,0.7s,baz=173,slow=5.3,SNR=9.5						
LPAZ	La Paz	153.54	137	PKPbc	PKPbc	15 09 36.0	0.0
	comp=Z,1.5nm,0.7s,baz=16,slow=1.9,SNR=4.5						
LPAZ	La Paz	153.54	137		PKiKP	15 09 39.5	+3.4

*ISK **04** 14:51:13.9, 38°.25N×38°.81E, h3km, ML2.5/9*
*AFAD **04** 14:51:15.0, 38°.27N×38°.78E, h7km±2km, ML2.2*
ISC 04 14:51:15.0±1.1**, 38°.26N**±0°.03×**38°.81E**±0°.03**, h6km**±10km**,**
n17, σ0s.86/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.28	30	P	Pg	14 51 20.8	+0.3
ELZG				S	Sg	14 51 24.9	+0.7
ELZG				IAML		14 51 25.0	
	comp=E,2μm,0.2s						
ELZG				IAML		14 51 27.0	
	comp=N,2μm,0.3s						
MAYA	Malatya/Merkez	0.31	283	P	Pg	14 51 21.1	0.0
MAYA				S	Sg	14 51 25.9	+0.6
MAYA				IAML		14 51 26.0	
	comp=N,1μm,0.3s						
MAYA				IAML		14 51 26.0	
	comp=E,1μm,0.1s						
NARI	Adyaman-Kaht	0.37	186	P	Pg	14 51 22.6	+0.3
NARI				S	Sb	14 51 28.8	-1.5
NARI				IAML		14 51 32.0	
	comp=E,164nm,0.7s						
NARI				IAML		14 51 33.0	
	comp=N,245nm,0.7s						
SVRC	Sivrice-ELAZID	0.41	73	Pg	Pg	14 51 22.7	-0.3
SVRC				Sg	Sg	14 51 29.2	+0.8
ELZ	Elazig	0.53	36	P	Pg	14 51 25.3	0.0
ELZ				S	Sb	14 51 33.6	-1.3
ELZ				IAML		14 51 34.0	
	comp=N,316nm,0.3s						
ELZ				IAML		14 51 34.0	
	comp=E,371nm,0.4s						
MDNT	Maden	0.70	79	P	Pg	14 51 28.0	-0.5
MDNT				S	Sb	14 51 39.3	-0.5
MDNT				IAML		14 51 41.0	
	comp=E,63nm,0.6s						
MDNT				IAML		14 51 42.0	
	comp=N,73nm,0.6s						
MCKZ	Bingol	0.87	9	P	Pg	14 51 31.1	-0.6
MCKZ				S	Sb	14 51 44.0	-0.8
MCKZ				IAML		14 51 44.0	
	comp=N,209nm,0.2s						
MCKZ				IAML		14 51 44.0	
	comp=E,371nm,0.3s						
KOVA	Elazig, Kovanc	0.91	60	P	Pb	14 51 33.3	0.0
KOVA				S	Sn	14 51 50.8	+2.8
KOVA				IAML		14 51 52.0	
	comp=N,38nm,0.9s						
KOVA				IAML		14 51 54.0	
	comp=E,43nm,0.5s						
ARPR	Arapgir-MALATY	0.91	336	Pg	Pg	14 51 32.2	-0.4
ARPR				Sg	Sb	14 51 45.8	-0.1
TNCL	Tunceli-Merkez	1.03	34	P	Pg	14 51 34.2	-0.6
TNCL				S	Sb	14 51 49.7	+0.4
TNCL				IAML		14 51 51.0	
	comp=E,66nm,0.7s						
TNCL				IAML		14 51 54.0	
	comp=N,73nm,0.5s						
DYBB	Diyarbakir	1.09	106	Pn	Pg	14 51 35.5	-0.5
ILIC	ilic-Erzincan	1.21	351	Pn	Pg	14 51 37.7	-0.5
ERZN	Erzincan	1.51	28	Pn	Pb	14 51 42.7	-0.8
BNGB	Bingl	1.64	63	Pn	Pn	14 51 44.5	-0.1
GAZ	Gaziantep	1.67	230	Pn	Pn	14 51 44.9	0.0
KMRS	Kahramanmaras	1.69	244	Pn	Pn	14 51 44.9	-0.3
SVAN	Silvan-Diyarba	1.89	92	Pn	Pn	14 51 47.2	-0.7

*IDC **04** 14:52:17.9±11.0, 35°.31S×52°.96E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=317.4km s-min=56.2km az=71.0*
*NEIC **04** 14:52:19.6±1.1, 35°.32S±0°.07×52°.9E±0°.2, h10km±2km, mb4.4/9, Error ellipse: s-maj=26.2km s-min=7.5km az=249.0*
ISC 04 14:52:18.9±1.5**, 35°.3S**±0°.2×**52°.9E**±0°.2**, h10km, n23,**
σ0s.53/14**, mb4.0**/7**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N1	CROZET ISLANDS	10.86	184	T	T	15 05 55.8	
	baz=6.9,slow=75,SNR=258						
H04N2	CROZET ISLANDS	10.86	184	T	T	15 05 50.8	
	baz=6.9,slow=75,SNR=236						
H04N3	CROZET ISLANDS	10.88	184	T	T	15 05 54.8	
	baz=6.9,slow=75,SNR=222						
VOI	Vohitsoka	14.40	337	P	P	14 55 49.8	-0.2
ABPO	Ambohimpanom	17.01	341	Pn	Pn	14 56 16.9	-0.2
ABPO				IAmb	IAmb	14 56 49.5	
	comp=Z,11nm,1.4s						
AIS	Amsterdam Isla	19.95	104	P	P	14 56 50.5	-0.5
LPHEP	Lephephe	26.34	290	P	P	14 57 55.2	0.0
LPHEP				IAmb	IAmb	14 58 04.9	
	comp=Z,9.2nm,1.4s						
H08S1	Diego Carcia H	32.88	38	T	T	15 33 30.5	
	baz=209,slow=76,SNR=37						
H08S2	Diego Garcia H	32.89	38	T	T	15 33 21.8	
	baz=209,slow=76,SNR=24						
H08S3	Diego Garcia H	32.90	38	T	T	15 33 22.7	
	baz=209,slow=76,SNR=54						
COCO	West Island	45.84	71	P	P	15 00 41.5	+0.1
H01W2	Cape Leeuwin H	49.35	108	T	T	15 53 36.4	
	baz=250,slow=75,SNR=44						
H01W3	Cape Leeuwin H	49.36	108	T	T	15 53 37.0	
	baz=250,slow=75,SNR=47						
H01W1	Cape Leeuwin H	49.37	108	T	T	15 53 37.7	
	baz=250,slow=75,SNR=43						
PSA00	Pilbara Seismi	59.43	96	P	P	15 02 20.9	-1.1
PSA00				IAmb	IAmb	15 02 21.9	
	comp=Z,11nm,1.5s						
MBWA	Marble Bar	59.53	95	P	P	15 02 22.6	-0.1
CMAR	Chiang Mai Arr	69.04	47	P	P	15 03 25.3	+0.4
	comp=Z,0.5nm,0.6s,baz=230,slow=6.9,SNR=6.0						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	69.69	105	P	P	15 03 29.6	+0.5
	comp=Z,0.3nm,0.5s,baz=228,slow=6.4,SNR=4.9						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	71.95	102	P	P	15 03 43.4	+0.5
	comp=Z,0.7nm,0.6s,baz=233,slow=5.8,SNR=6.3						
	comp=Z,0.7nm,0.6s						
WRA	Warramunga Arr	71.95	102	P	P	15 03 43.8	+0.8
WB0	Warramunga Arr	72.08	102	P	P	15 03 43.8	+0.1
WB0				IAmb	IAmb	15 04 27.1	
	comp=Z,9.2nm,1.4s						
MTN	Manton Dam	73.14	94	P	P	15 03 50.4	+0.4
LZDM	Lanzhou Array	85.24	39	P	P	15 04 56.3	+0.3
	comp=Z,0.3nm,0.3s,baz=234,slow=4.6,SNR=1.4						
	comp=Z,0.3nm,0.3s						

*IDC **04** 14:56:37.4±2.0, 11°.47S×118°.38E, h0km, mb3.7/1, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=69.1km s-min=25.6km az=43.0*
ISC 04 14:56:40.6±1.5**, 10°.6S**±0°.2×**119°.51E**±0°.10**, h10km, n5,**
σ1s.15/6**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.11	85	Pn	Pg	14 57 58.6	-0.7
	2.3nm,0.3s,baz=296,slow=23,SNR=1.7						
BATI				Sn	Sg	14 58 53.2	+0.6
	1.6nm,0.3s,baz=35,slow=16,SNR=2.2						
	22nm,0.7s						
FITZ	Fitzroy Crossi	9.52	142	Pn	Pn	14 58 56.9	-1.0
	0.2nm,0.3s,baz=306,slow=14,SNR=1.2						
FITZ				Sn	Sn	15 00 37.0	-8.1
	0.1nm,0.3s,baz=108,slow=18,SNR=1.1						
	2.4nm,0.6s						
WRA	Warramunga Arr	17.04	125	P	P	15 00 42.1	+1.1
	0.7nm,0.8s,baz=293,slow=13,SNR=1.7						
ASAR	Alice Springs	18.89	135	P	Pn	15 01 03.0	+1.0
	0.4nm,0.8s,baz=311,slow=12,SNR=1.1						
MKAR	Makanchi Array	66.11	333	P	P	15 07 28.1	0.0
	0.6nm,0.6s,baz=134,slow=7.0,SNR=7.0						
	0.6nm,0.6s						

*IDC **04** 15:00:08.5±6.6, 17°.89S×174°.52W, h86km±58km, mb4.2/18, mbtmp4.5/19, ML4.0/1, Error ellipse: s-maj=22.7km s-min=17.8km az=154.0*
*BJI **04** 15:00:09.4, 17°.57S×174°.09W, h107km, mB5.3/2, mb4.7/15*
*NEIC **04** 15:00:09.7±1.9, 17°.83S±0°.08×174°.6W±0°.1, h92km±4km, mb4.9/26, Error ellipse: s-maj=15.1km s-min=11.0km az=112.0*
*NOU **04** 15:00:14.1, 18°.04S×174°.21W, h146km, mb4.9/27, Tonga Islands*
ISC 04 15:00:09.4±0.6**, 17°.86S**±0°.06×**174°.60W**±0°.05**, h94km**±5km**,**
n122, σ1s.66/120**, mb4.8**/51**, 2C-1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.03	264	P	Pn	15 01 19.8	+11
LKBA	Tubou, Lakemba	4.03	264	S	Sn	15 02 10.5	+15
NIUE	Niue	4.59	106		Pn	15 01 18.0	+1.5
NIUE				Sn	Sn	15 02 05.9	-2.9
NIUE	Niue	4.59	106	P	Pn	15 01 18.1	+1.5
NIUE	Niue	4.59	106	S	Sn	15 02 06.0	-2.9
AFI	Afiamalu	4.78	35		Pn	15 01 17.1	-2.1
AFI	Afiamalu	4.78	35	Sn	Sn	15 02 07.0	-6.5
AFI	Afiamalu	4.78	35	P	Pn	15 01 21.9	+2.7
TAVE	Taveuni	5.20	282	P	Pn	15 01 35.5	+11
	231nm,0.8s						
DGTI	Dogotuki	5.64	285	P	Pn	15 01 40.7	+10
	94nm,0.8s						
MSVF	Nonsavu	7.00	270		Pn	15 01 59.9	+10
MSVF	Nonsavu	7.00	270	P	Pn	15 02 00.2	+11
	102nm,0.9s						
MARNC	Mare, Loyalty	16.75	255		Pn	15 03 58.2	-0.2
PINNC	Pines Island,	17.50	251	P	P	15 04 06.8	-0.5
DZM	Mont Dzumac	18.30	254	P	P	15 04 17.0	+0.8
	0.4nm,0.3s,baz=73,slow=18,SNR=6.4						
	15nm,0.9s						
DZM	Mont Dzumac	18.30	254	eP	Pn	15 04 20.3	+3.0
	55nm,1.2s						
DZM	Mont Dzumac	18.30	254		P	15 04 17.6	+1.3
URZ	Urewera	21.58	198	P	P	15 04 51.5	+0.1
	15nm,0.6s,baz=352,slow=2.9,SNR=22						
URZ				S	S	15 08 36.8	-8.4
	5.6nm,0.8s,baz=126,slow=22,SNR=1.7						
	15nm,0.6s						
URZ	Urewera	21.58	198	P	P	15 04 52.3	+0.9
	26nm,0.7s						
TOZ	Tahuroa Road	21.62	202	P	P	15 04 53.4	+1.6
BKZ	Black Stump Fm	22.60	198	P	P	15 05 00.8	-1.5
PPT2	Papeete2	23.83	93	eP	P	15 05 13.8	-0.4
	124nm,22.5s						
PPT2				eS	S	15 09 27.7	+4.2
	168nm,24.5s						
TCW	Tory Channel	25.16	200	P	P	15 05 26.1	+0.2
EIDS	Eidsvold	32.70	251	P	P	15 06 33.3	+0.2
EIDS				IAmb	IAmb	15 06 34.0	
	comp=Z,18nm,1.1s						
ARMA	Armidale	33.12	241	P	P	15 06 37.8	+0.9
ARMA				IAmb	IAmb	15 07 01.5	
	comp=Z,25nm,1.3s						
CTA	Charters Tower	37.03	260	P	P	15 07 11.2	+0.8
	comp=Z,4.5nm,0.4s,baz=84,slow=12,SNR=4.4						
	comp=Z,4.5nm,0.4s						
CMSA	Cobar Meteorol	38.34	242	P	P	15 07 22.0	+0.6
	comp=Z,13nm,0.8s						
QLP	Quilpie	38.95	250	P	P	15 07 26.8	+0.3
	comp=Z,44nm,0.6s						
TOO	Toolangi	40.04	232	P	P	15 07 34.4	-1.1
COEN	Coen	40.73	269	P	P	15 07 41.7	+0.3
STKA	Stephens Creek	41.84	242	P	P	15 07 50.7	+0.4
	comp=Z,8.6nm,0.9s,baz=72,slow=7.4,SNR=6.6						
	comp=Z,8.6nm,0.9s						
STKA	Stephens Creek	41.84	242		P	15 07 50.3	0.0
STKA	Stephens Creek	41.84	242	P	P	15 07 51.1	+0.8
	comp=Z,2.8nm,1.2s						
INKA	Innaminka	42.13	248		P	15 07 53.3	+0.6
INKA				IAmb	IAmb	15 07 54.5	
	comp=Z,20nm,1.4s						
HTT	Hallett	44.31	240	P	P	15 08 10.9	+0.7
	comp=Z,17nm,1.2s						
AUJCS	Jamestown Cent	44.53	241	P	P	15 08 12.6	+0.6
	comp=Z,20nm,1.2s						
BBOO	Buckleboo	46.61	242		P	15 08 28.1	-0.3
BBOO	Buckleboo	46.61	242	P	P	15 08 28.1	-0.3
	comp=Z,34nm,0.9s						
WR0	Warramunga Arr	48.01	259	P	P	15 08 39.2	-0.3
WR0				IAmb	IAmb	15 08 43.5	
	comp=Z,8.6nm,0.6s						
WR8	Warramunga Arr	48.05	259		P	15 08 39.2	-0.6
WR8				IAmb	IAmb	15 08 42.2	
	comp=Z,9.1nm,0.7s						
WRAB	Tennant Creek	48.20	259	P	P	15 08 40.0	-0.9
WRAB				IAmb	IAmb	15 08 41.0	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	48.20	259	P	P	15 08 40.7	-0.1
	comp=Z,13nm,1.0s						
WRAB	Tennant Creek	48.20	259	P	P	15 08 40.5	-0.3
WRAB				PcP	PcP	15 10 06.2	-0.7
WRA	Warramunga Arr	48.20	259	P	P	15 08 40.3	-0.7
	comp=Z,6.5nm,0.3s,baz=97,slow=6.9,SNR=151						
WRA				PcP	PcP	15 10 06.3	-0.5
	comp=Z,0.6nm,0.6s,baz=100,slow=2.9,SNR=1.9						
	comp=Z,6.5nm,0.3s						
AS31	Alice Springs	48.29	254		P	15 08 41.6	0.0
ASAR	Alice Springs	48.29	254	P	P	15 08 41.6	+0.1
	comp=Z,72nm,0.6s,baz=96,slow=7.6,SNR=624						
ASAR				S	S	15 15 26.9	-7.8
	comp=Z,1.2nm,1.0s,baz=96,slow=13,SNR=6.0						
ASAR	Alice Springs	48.29	254	P	P	15 08 41.4	-0.1
MTN	Manton Dam	52.42	267	P	P	15 09 12.7	-0.1
MTN				IAmb	IAmb	15 09 13.2	
	comp=Z,11nm,0.8s						
FORT	Forrest	53.30	245	P	P	15 09 18.4	-0.7
FORT				IAmb	IAmb	15 09 19.2	
	comp=Z,13nm,0.8s						
KNRA	Kununurra	54.10	263		P	15 09 24.9	-0.2
SIJI	Sorong	55.77	281	P	P	15 09 37.7	+0.5
	comp=Z,8.1nm,0.5s,baz=319,slow=18,SNR=2.1						
	comp=Z,8.1nm,0.5s						
FITZ	Fitzroy Crossi	56.61	260	P	P	15 09 43.1	0.0
	comp=Z,7.7nm,0.5s,baz=92,slow=5.5,SNR=22						
	comp=Z,7.7nm,0.5s						
SOEI	Soe	59.70	269	P	P	15 10 05.3	+0.4
SOEI	Soe	59.70	269	P	P	15 10 06.8	+2.0
	comp=Z,54nm,1.1s						
PSA00	Pilbara Seismi	61.43	255	P	P	15 10 15.8	-0.5
PSA00	Pilbara Seismi	61.43	255	P	P	15 10 16.1	-0.2
	comp=Z,24nm,0.9s						
MBWA	Marble Bar	61.60	255	P	P	15 10 17.1	-0.5
MBWA	Marble Bar	61.60	255	P	P	15 10 17.0	-0.5
MBWA				pP	pP	15 10 39.0	-1.2
MBWA				PcP	PcP	15 10 59.7	+1.3
KLBR	Kellerberrin	62.09	243	P	P	15 10 20.3	-0.4
	comp=Z,56nm,0.7s						
NWAO	Narrogin (SRO)	62.43	242	P	P	15 10 22.9	+0.1
	comp=Z,5.6nm,0.6s,baz=80,slow=17,SNR=2.1						
	comp=Z,5.6nm,0.6s						
MORW	Morawa	63.82	246	P	P	15 10 31.2	-0.9

CCD	Concordia, Ant	65.81	195	P	P	15 10 45.3	+0.6
JAGI	Jajag, Banyuwa	69.67	267	P	P	15 11 07.8	-1.7
JAGI				IAmb	IAmb	15 11 08.9	
	comp=Z,23nm,0.8s						
JAGI	Jajag, Banyuwa	69.67	267	P	P	15 11 10.6	+1.1
	comp=Z,32nm,1.3s						
MJAR	Matsushiro Arr	70.09	321	P	P	15 11 11.6	-0.1
	comp=Z,3.4nm,0.9s,baz=160,slow=6.0,SNR=6.4						
	comp=Z,3.4nm,0.9s						
QSPA	South Pole Qui	72.19	180	P	P	15 11 23.7	-0.3
	comp=Z,3.9nm,0.8s,baz=40,slow=1.3,SNR=4.5						
	comp=Z,3.9nm,0.8s						
QSPA	South Pole Qui	72.19	180	P	P	15 11 24.4	+0.3
QSPA				IAmb	IAmb	15 12 16.3	
	comp=Z,32nm,1.8s						
QSPA	South Pole Qui	72.19	180	P	P	15 11 24.9	+0.8
QSPA				x	x	15 12 01.3	
PETK	Petropavlovsk-	74.63	343	P	P	15 11 38.0	-0.2
	comp=Z,2.1nm,0.6s,baz=102,slow=8.7,SNR=11						
	comp=Z,2.1nm,0.6s						
BBJI	Bungbulang	76.13	267	P	P	15 11 46.7	-1.1
NVAR	Mina Array Bea	76.92	42	P	P	15 11 52.5	+0.6
	comp=Z,2.0nm,0.7s,baz=224,slow=9.8,SNR=9.8						
	comp=Z,2.0nm,0.7s						
KSRS	Korea Array	77.12	317	P	P	15 11 54.4	+1.7
	comp=Z,4.5nm,1.1s,baz=143,slow=6.5,SNR=7.2						
	comp=Z,4.5nm,1.1s						
ELK	Elko	80.18	42	P	P	15 12 09.6	-0.2
	comp=Z,0.4nm,0.3s,baz=230,slow=11,SNR=2.7						
	comp=Z,0.4nm,0.3s						
NJ2	Nanjing	80.74	308	*e*P	P	15 12 14.3	+1.6
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CN2	Changchun	82.24	321	P	P	15 12 21.8	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
TXAR	Lajitas Array	82.93	56	P	P	15 12 24.1	-0.3
	comp=Z,0.2nm,0.6s,baz=241,slow=6.1,SNR=2.2						
H03S2	Juan Fernandez	84.80	124	T	T	16 45 46.9	
	baz=249,slow=74,SNR=7.8						
H03S1	Juan Fernandez	84.81	124	T	T	16 45 46.5	
	baz=249,slow=74,SNR=10						
H03S3	Juan Fernandez	84.82	124	T	T	16 45 45.3	
	baz=249,slow=74,SNR=7.9						
PDAR	Pinedale Array	84.86	42	P	P	15 12 33.7	-0.4
	comp=Z,1.3nm,1.1s,baz=189,slow=5.9,SNR=4.5						
	comp=Z,1.3nm,1.1s						
H03N2	Juan Fernandez	84.92	123	T	T	16 45 54.8	
	baz=257,slow=72,SNR=4.9						
H03N3	Juan Fernandez	84.92	123	T	T	16 45 45.6	
	baz=257,slow=72,SNR=4.5						
H03N1	Juan Fernandez	84.93	123	T	T	16 45 53.1	
	baz=257,slow=72,SNR=4.0						
COLA	College	84.98	11	P	P	15 12 33.5	-0.3
	comp=Z,4.8nm,1.4s						
COLA	College	84.98	11	P	P	15 12 33.1	-0.7
COLA				PcP	PcP	15 12 36.8	-0.1
COLA				x	x	15 12 59.1	
COLA				x	x	15 13 09.7	
ILAR	Eielson Array	85.07	12	P	P	15 12 33.6	-0.7
	comp=Z,2.2nm,1.1s,baz=229,slow=5.7,SNR=17						
	comp=Z,2.2nm,1.1s						
IPM	Ipoh	86.02	276		P	15 12 39.4	-0.8
IPM	Ipoh	86.02	276	P	P	15 12 41.8	+1.6
	comp=Z,26nm,1.1s						
HNS	HongShan	86.19	311	⥣P	P	15 12 41.8	+1.3
HNS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BILL	Bilibino	86.79	353	P	P	15 12 42.7	0.0
BILL	Bilibino	86.79	353	P	P	15 12 42.2	-0.5
BILL				pP	pP	15 13 07.1	+0.4
BILL				x	x	15 13 18.6	
ENH	Enshi	87.27	303	P	P	15 12 45.0	-1.0
ENH				IAmb	IAmb	15 12 48.2	
	comp=Z,17nm,1.1s						
ENH	Enshi	87.27	303	IAmb	IAmb	15 12 48.2	
	comp=Z,17nm,1.1s						
ENH	Enshi	87.27	303	P	P	15 12 48.0	+2.0
	comp=Z,18nm,1.4s						
ENH	Enshi	87.27	303	P	P	15 12 47.4	+1.4
ENH				x	x	15 13 15.1	
ENH	Enshi	87.27	303	P	P	15 12 47.8	+1.8
RPSI	Rantau Prapat	87.47	274		P	15 12 46.2	-1.0
PSI	Prapat	87.50	274	P	P	15 12 48.1	+0.5
	comp=Z,29nm,1.0s						
GSI	Gunungsitoli	88.33	272	P	P	15 12 52.9	+1.6
	comp=Z,38nm,1.1s						
HILR	Hailar Array B	88.61	324	P	P	15 12 52.0	+0.2
	comp=Z,0.8nm,0.5s,baz=111,slow=7.9,SNR=2.3						
	comp=Z,0.8nm,0.5s						
XAN	Xi'an	89.14	306	⥣P	P	15 12 55.9	+1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN	Xi'an	89.14	306	P	P	15 12 54.6	-0.2
XAN				PcP	PcP	15 12 56.2	0.0
XAN				pP	pP	15 13 18.5	-0.4
XAN				sP	sP	15 13 29.3	+0.7
XAN				x	x	15 13 31.4	
ELIB	Princess Elisa	89.59	186	*d*P	P	15 12 56.3	-0.1
	comp=Z,2.2nm,0.8s						
HHC	Hu-ho-hao-te	89.86	313	*e*P	P	15 12 59.9	+1.9
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI2	Kunming	91.06	296	P	P	15 13 06.4	+2.3
KMI2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMAR	Chiang Mai Arr	92.30	289	P	P	15 13 11.2	+1.5
	comp=Z,3.7nm,1.0s,baz=103,slow=2.8,SNR=21						
	comp=Z,3.7nm,1.0s						
PZH	PanZhiHua	92.35	297	P	P	15 13 10.8	+0.8
CHTO	Chiang Mai	92.41	289	P	P	15 13 11.6	+1.4
	comp=Z,3.9nm,0.9s						
LZH	Lanzhou	93.76	307	*e*P	P	15 13 17.9	+1.6
LZH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LZDM	Lanzhou Array	93.83	306	P	P	15 13 17.9	+1.1
	comp=Z,0.4nm,0.3s,baz=94,slow=10,SNR=4.9						
	comp=Z,0.4nm,0.3s						
KURK	Kurchatov	114.21	318		PKPdf	15 18 38.2	+0.4
KURBB	Kurchatov Arra	114.27	318	PKP	PKPdf	15 18 38.2	+0.3
	comp=Z,0.3nm,0.6s,baz=109,slow=2.2,SNR=2.2						
BDFB	Brasilia	117.72	119	PKP	PKPdf	15 18 45.8	0.0
	comp=Z,1.5nm,0.4s,baz=209,slow=2.8,SNR=3.0						
BVAR	Borovoye Array	119.09	321	PKP	PKPdf	15 18 46.5	-0.6
	comp=Z,1.0nm,0.5s,baz=103,slow=3.1,SNR=6.4						
CLL	Collm	146.09	351	*i* PKPbc	PKPdf	15 19 37.8	+0.3
	comp=Z,15nm,1.1s						
MORC	Moravsky Berou	146.69	346	*e*PKP	PKPab	15 19 41.6	-0.1
LANS	Liptovska Anna	146.78	343	*e*PKP	PKPbc	15 19 40.6	-0.1
BRTR	Keskin Array B	147.26	318	PKPbc	PKPdf	15 19 41.7	+1.7
	comp=Z,2.4nm,0.8s,baz=168,slow=2.4,SNR=6.4						
VRAC	Vranov	147.35	346	*e*PKP	PKPbc	15 19 43.4	+1.2
KRUC	Moravsky	147.63	346	*e*PKP	PKPbc	15 19 42.9	-0.1
GERES	GERESS Array B	148.37	350	PKPbc	PKPbc	15 19 43.8	-1.2
	comp=Z,1.4nm,0.7s,baz=17,slow=5.7,SNR=4.6						
MMAI	Mount Meron Ar	149.13	305	PKPbc	PKPbc	15 19 47.6	+0.2
	comp=Z,4.5nm,0.9s,baz=96,slow=4.3,SNR=2.8						

*IDC **04** 15:05:19.7±1.7, 2°.74S×130°.91E, h0km, mb3.7/5, mbtmp3.8/7, ML3.9/2, Error ellipse: s-maj=55.4km s-min=25.4km az=78.0*
*DJA **04** 15:05:24.0±0.5, 3°S±3°×13°0E±°, h14km±4km, M4.1/20, mB5.2/1, mb4.7/3, MLv3.8/20, Mw(mB)4.5/1*
*NEIC **04** 15:05:26.5±1.1, 3°.0S±0°.1×130°.41E±0°.08, h32km±6km, mb4.4/13, Error ellipse: s-maj=14.8km s-min=11.2km az=179.0*
ISC 04 15:05:25.0±0.6**, 2°.91S**±0°.06×**130°.40E**±0°.05**, h24**km**, n37,** σ1s.**18**/37**, mb4.1**/10**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.54	254	P	Pn	15 05 51.8	+0.9
BNDI	Bandanaira	1.68	197	P	Pb	15 05 54.5	-0.7
FAKI	Fak Fak	1.84	90		Pn	15 05 56.0	+0.9
FAKI	Fak Fak	1.84	90	P	Pn	15 05 56.1	+0.9
KRAI	Karang Ratu	2.05	259	P	Pn	15 05 58.3	+0.4
SIJI	Sorong	2.21	23	P	Pn	15 05 59.5	-0.6
SWI	Sorong	2.21	23	P	Pn	15 05 59.8	-0.4
AAI	Ambon	2.34	251	P	Pn	15 06 03.1	+1.2
NLAI	Namlea	3.32	264	P	Pn	15 06 14.8	-0.6
KMPI	Kaimana, Papua	3.38	103	P	Pn	15 06 17.0	+0.7
RKPI	Ransiki, Papua	4.02	70	P	Pn	15 06 26.6	+1.5
SANI	Sanana	4.49	281	P	Pn	15 06 29.1	-2.5
BAKI	Biak	5.95	73	P	Pn	15 06 52.9	+1.2
MTN	Manton Dam	9.89	176		Pn	15 07 44.1	-1.7
KAPI	Kappang	10.83	259	Pn	Pn	15 08 02.1	+3.5
	0.9nm,0.3s,baz=57,slow=15,SNR=1.9						
	8.0nm,0.8s						
KAPI	Kappang	10.83	259		Pn	15 07 59.2	+0.5
FITZ	Fitzroy Crossi	15.80	197	Pn	Pn	15 09 07.1	+1.1
	0.3nm,0.3s,baz=30,slow=12,SNR=6.6						
	2.0nm,0.5s						
WRAB	Tennant Creek	17.35	167	P	P	15 09 26.8	-0.2
WR8	Warramunga Arr	17.41	167	P	Pn	15 09 26.8	+0.4
AS31	Alice Springs	20.91	171	P	P	15 10 04.8	-1.1
ASAR	Alice Springs	20.91	171	P	P	15 10 05.4	-0.5
	2.4nm,0.3s,baz=348,slow=11,SNR=10.0						
	2.4nm,0.3s						
ASAR	Alice Springs	20.91	171	P	P	15 10 05.1	-0.8
PSA00	Pilbara Seismi	21.20	208	P	P	15 10 09.8	+0.7
PSA00				IAmb	IAmb	15 10 16.9	
	comp=Z,13nm,1.0s						
EIDS	Eidsvold	29.91	140	P	P	15 11 30.3	-0.9
BBOO	Buckleboo	30.21	171	P	P	15 11 33.4	-0.3
BBOO				IAmb	IAmb	15 12 02.0	
	comp=Z,18nm,1.2s						
CMAR	Chiang Mai Arr	37.56	306	P	P	15 12 40.0	+2.3
	comp=Z,0.2nm,0.3s,baz=123,slow=9.6,SNR=4.4						
	comp=Z,0.2nm,0.3s						
WKZ	Wanaka	53.79	147	P	P	15 14 44.7	-1.0
MKAR	Makanchi Array	65.07	326	P	P	15 16 03.0	-0.6
	comp=Z,0.5nm,0.6s,baz=116,slow=7.8,SNR=6.3						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	65.07	326	P	P	15 16 03.6	0.0
MAKZ	Makanchi	65.26	326	P	P	15 16 04.9	+0.1
MAKZ				IAmb	IAmb	15 16 43.4	
	comp=Z,2.4nm,1.3s						
KURBB	Kurchatov Arra	69.28	328	P	P	15 16 29.5	-0.6
	comp=Z,0.5nm,0.6s,baz=129,slow=5.4,SNR=7.8						
	comp=Z,0.5nm,0.6s						
KURK	Kurchatov	69.28	328	P	P	15 16 29.2	-1.0
KURK				IAmb	IAmb	15 16 30.5	
	comp=Z,1.5nm,0.8s						
KIWB	Kanaga Island	70.25	31	P	P	15 16 36.5	+0.4
BVAR	Borovoye Array	74.85	327	P	P	15 17 01.9	-1.6
	comp=Z,0.2nm,0.4s,baz=123,slow=5.3,SNR=2.0						
	comp=Z,0.2nm,0.4s						
AB31	Akbulak array	79.59	321	P	P	15 17 30.0	-0.2
AB31				IAmb	IAmb	15 17 45.1	
	comp=Z,2.1nm,1.1s						
ABKAR	Akbulak array	79.59	321	P	P	15 17 29.6	-0.5
M16K	Timber Creek	83.27	28	P	P	15 17 49.9	+0.4
M16K				IAmb	IAmb	15 17 56.4	
	comp=Z,11nm,1.3s						

*NEIC **04** 15:05:27.7±0.9, 17°.772N±0°.007×66°.87W±0°.01, h10km±2km, ML2.8/35, Md2.3/6(RSPR), Error ellipse: s-maj=3.1km s-min=2.1km az=3.0*
*SDD **04** 15:05:28.4±0.7, 17°.79N×66°.91W, h23km±6km, MD3.2, ML2.6, MW3.1, Presumed earthquake*
RSPR 04 15:05:28.8, 17°.83N×66°.87W, h9km**, MD2.3**/6**, 13C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.15	356		Pg	15 05 32.2	+0.2
GBPR					Sg	15 05 35.1	+0.8
GBPR	Guanica, Bosqu	0.15	356	⥥*i*P	Pg	15 05 32.2	+0.2
GBPR				*e*S	Sg	15 05 35.1	+0.8
MLPR	Magueyes Islan	0.22	311		Pg	15 05 33.5	+0.2
MLPR				IAML		15 05 37.2	
	2μm,0.5s						
MLPR				IAML		15 05 37.2	
	1μm,0.6s						
CRPR	Cabo Rojo, PR	0.29	308		Pg	15 05 34.6	0.0
CRPR					Sg	15 05 38.9	+0.3
CRPR				IAML		15 05 39.2	
	comp=N,1μm,0.5s						
CRPR				IAML		15 05 39.4	
	comp=E,2μm,0.4s						
CRPR	Cabo Rojo, PR	0.29	308	⥣*e*Pg	Pg	15 05 34.7	+0.1
CRPR				⥣*e*Sg	Sg	15 05 39.0	+0.5
CRPR				IAML		15 05 39.2	
	comp=N,1μm,0.2s						
CRPR	Cabo Rojo, PR	0.29	308	⥥*e*P	Pg	15 05 34.8	+0.2
CRPR				*e*S	Sg	15 05 39.1	+0.6
OBIP	Obispado Ponce	0.33	49		Pg	15 05 35.1	-0.3
OBIP					Sg	15 05 40.0	+0.2
OBIP				IAML		15 05 40.6	
	comp=N,407nm,0.5s						
OBIP	Obispado Ponce	0.33	49	⥥*i*P	Pg	15 05 35.5	+0.1
OBIP				*e*S	Sg	15 05 40.5	+0.7
CELP	Cerrillos	0.37	48		Pg	15 05 35.7	-0.4
CELP					Sg	15 05 41.2	+0.1
CELP				IAML		15 05 42.1	
	comp=N,624nm,0.4s						
CELP				IAML		15 05 42.1	
	comp=N,830nm,0.5s						
LSP	Las Mesas	0.41	329		Pg	15 05 36.7	-0.1
LSP					Sg	15 05 42.9	+0.8
LSP	Las Mesas	0.41	329	⥥*i*P	Pg	15 05 36.7	-0.1
LSP				*e*S	Sg	15 05 42.9	+0.8
UUPR	Utuado, UPR, P	0.45	18		Pg	15 05 36.8	-0.8
UUPR				IAML		15 05 46.1	
	comp=N,5μm,0.3s						
UUPR				IAML		15 05 47.3	
	comp=N,3μm,0.4s						
PRSN	Puerto Rico Se	0.47	326		Pg	15 05 37.4	-0.6
PRSN				IAML		15 05 47.1	
	comp=N,1μm,0.3s						
PRSN				IAML		15 05 49.1	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	0.47	326	⥣*e*Pg	Pg	15 05 38.0	+0.1
PRSN				⥣*e*Sg	Sg	15 05 43.4	-0.8
PRSN				IAML		15 05 45.0	
	comp=N,793nm,0.2s						
AGPR	Aguadilla, PR	0.68	340		Pg	15 05 41.0	-1.0
AGPR				IAML		15 05 51.0	
	comp=N,178nm,0.4s						
AGPR				IAML		15 05 54.2	
	comp=N,202nm,0.3s						
AGPR	Aguadilla, PR	0.68	340	⥣*e*Pg	Pg	15 05 41.1	-0.9
AGPR				⥣*e*Sg	Sg	15 05 50.4	-0.5
AGPR				IAML		15 05 56.7	
	comp=N,150nm,0.8s						
AGPR	Aguadilla, PR	0.68	340	⥥*i*P	Pg	15 05 41.2	-0.8
AGPR				*e*S	Sg	15 05 51.1	+0.2
ECPR	Experimental S	0.69	44		Pg	15 05 41.1	-1.0
ECPR				IAML		15 05 50.9	
	comp=N,1μm,0.2s						
ECPR				IAML		15 05 52.3	
	comp=N,1μm,0.2s						
ECPR	Experimental S	0.69	44	⥥*i*P	Pg	15 05 41.3	-0.8
ECPR				*e*S	Sg	15 05 50.4	-0.7
EMPR	Esperanza - Ma	0.72	26		Pg	15 05 42.3	-0.5
EMPR					Sg	15 05 52.3	0.0
EMPR	Esperanza - Ma	0.72	26	⥥*i*P	Pg	15 05 42.3	-0.5
EMPR				*e*S	Sg	15 05 52.3	0.0
SJG	San Juan	0.74	67		Pg	15 05 42.1	-1.0
SJG				IAML		15 05 53.8	
	comp=N,128nm,0.2s						
SJG				IAML		15 05 56.2	
	comp=N,131nm,0.2s						
SJG	San Juan	0.74	67	⥣*e*Pg	Pg	15 05 41.9	-1.2
SJG				⥣*e*Sg	Sg	15 05 53.2	+0.4
SJG	San Juan	0.74	67	⥣*e*P	Pg	15 05 42.8	-0.4
SJG				*e*S	Sg	15 05 52.5	-0.3
IDE	Isla Desecheo	0.80	314		Pg	15 05 43.5	-0.8
IDE					Sg	15 05 54.1	-0.6
IDE	Isla Desecheo	0.80	314	⥣*e*P	Pg	15 05 43.5	-0.8
IDE				*e*S	Sg	15 05 54.1	-0.6
PDPR	Patillas Dam,	0.83	76		Pg	15 05 43.9	-0.9
PDPR				IAML		15 05 58.7	
	comp=N,134nm,0.5s						
PDPR				IAML		15 06 01.4	
	comp=N,65nm,0.2s						
GCPR	Guaynabo City	0.89	57	Pg	Pg	15 05 44.6	-1.4
GCPR				IAML		15 05 56.9	
	comp=E,65nm,0.5s						
GCPR				IAML		15 05 57.6	
	comp=N,95nm,0.4s						
GCPR	Guaynabo City	0.89	57	*e*S	Sg	15 05 56.3	-1.2
HUMP	Col San Antoni	1.02	72	Pg	Pg	15 05 47.0	-1.5
HUMP	Col San Antoni	1.02	72	IAML		15 06 04.8	
	comp=N,123nm,0.2s						
HUMP				IAML		15 06 05.7	
	comp=N,102nm,0.2s						
HUMP	Col San Antoni	1.02	72	⥣*e*P	Pg	15 05 47.2	-1.3
HUMP				*e*S	Sg	15 05 59.5	-2.2
HATOM	Hato Mayor del	2.57	292	⥣*e*Pg	Pn	15 06 11.2	+0.4
HATOM				⥣*e*Sg	Sn	15 06 42.5	+0.3
HATOM				IAML		15 06 54.5	
	comp=N,34nm,3.8s						

*NEIC **04** 15:09:28.6±0.8, 17°.80N±0°.03×66°.85W±0°.01, h10km±1km, ML2.9/35, Md2.6/7(RSPR), Error ellipse: s-maj=5.8km s-min=2.8km az=14.0*
*SDD **04** 15:09:28.5±1.4, 17°.78N×66°.87W, h20km±14km, MD3.3, ML2.6, MW2.9, Presumed earthquake*
*RSPR **04** 15:09:29.2, 17°.84N×66°.87W, h12km, MD2.6/7*
ISC 04 15:09:29.2±1.1**, 17°.86N**±0°.06×**66°.85W**±0°.02**, h18**km±5km**, n37,** σ**0s.66**/58**, 18C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.12	347		Pg	15 09 32.5	-0.5
GBPR					Sg	15 09 35.6	+0.1
GBPR	Guanica, Bosqu	0.12	347	⥥*e*P	Pg	15 09 32.5	-0.5
GBPR				*e*S	Sg	15 09 35.6	+0.1
MLPR	Magueyes Islan	0.21	300		Pg	15 09 33.8	-0.5
MLPR				IAML		15 09 37.8	
	3μm,0.5s						
MLPR				IAML		15 09 37.8	
	2μm,0.5s						
CRPR	Cabo Rojo, PR	0.28	300		Pg	15 09 34.8	-0.6
CRPR					Sg	15 09 39.4	-0.3
CRPR				IAML		15 09 39.8	
	comp=N,2μm,0.5s						
CRPR	Cabo Rojo, PR	0.28	300	⥣*e*Pg	Pg	15 09 35.3	-0.1
CRPR				⥣*e*Sg	Sg	15 09 39.6	-0.1
CRPR				IAML		15 09 39.8	
	comp=N,2μm,0.3s						
CRPR	Cabo Rojo, PR	0.28	300	⥣*e*P	Pg	15 09 35.0	-0.4
CRPR				*e*S	Sg	15 09 39.6	-0.1
OBIP	Obispado Ponce	0.29	53		Pg	15 09 35.2	-0.5
OBIP					Sg	15 09 40.7	+0.7
OBIP	Obispado Ponce	0.29	53	⥣*e*P	Pg	15 09 35.5	-0.1
OBIP				*e*S	Sg	15 09 41.0	+1.0
CELP	Cerrillos	0.34	51		Pg	15 09 36.1	-0.3
CELP				IAML		15 09 42.5	
	comp=N,632nm,0.5s						
CELP				IAML		15 09 42.8	
	comp=N,919nm,0.6s						
LSP	Las Mesas	0.38	325		Pg	15 09 36.8	-0.4
LSP					Sg	15 09 43.0	+0.4
LSP	Las Mesas	0.38	325	⥣*e*P	Pg	15 09 36.8	-0.4
LSP				*e*S	Sg	15 09 43.0	+0.4
UUPR	Utuado, UPR, P	0.41	18		Pg	15 09 37.4	-0.2
PRSN	Puerto Rico Se	0.45	322		Pg	15 09 38.4	+0.1
PRSN					Sg	15 09 44.6	+0.1
PRSN	Puerto Rico Se	0.45	322	IAML		15 09 45.8	
	comp=N,3μm,0.2s						
PRSN				IAML		15 09 46.1	
	comp=N,3μm,0.2s						
PRSN	Puerto Rico Se	0.45	322	⥣*e*Pg	Pg	15 09 35.9	-2.4
PRSN				⥣*e*Sg	Sg	15 09 45.3	+0.8
PRSN				IAML		15 09 46.0	
	comp=N,2μm,0.2s						
PRSN	Puerto Rico Se	0.45	322	⥣*e*P	Pg	15 09 38.4	+0.1
PRSN				*e*S	Sg	15 09 44.6	+0.1
AGPR	Aguadilla, PR	0.65	338		Pg	15 09 41.5	-0.6
AGPR				IAML		15 09 51.4	
	comp=N,274nm,0.3s						
AGPR				IAML		15 09 56.9	
	comp=N,254nm,0.3s						
AGPR	Aguadilla, PR	0.65	338	⥣*e*Pg	Pg	15 09 41.5	-0.6
AGPR				⥣*e*Sg	Sg	15 09 50.5	-0.2
AGPR				IAML		15 09 52.8	
	comp=N,202nm,0.3s						
AGPR	Aguadilla, PR	0.65	338	⥣*e*P	Pg	15 09 41.5	-0.6
AGPR				*e*S	Sg	15 09 50.3	-0.4
ECPR	Experimental S	0.65	46		Pg	15 09 41.3	-0.8
ECPR					Sg	15 09 51.0	+0.3
ECPR				IAML		15 09 51.6	
	comp=N,1μm,0.2s						
ECPR				IAML		15 09 53.0	
	comp=N,1μm,0.2s						
ECPR	Experimental S	0.65	46	⥥*e*P	Pg	15 09 41.8	-0.2
ECPR				*e*S	Sg	15 09 50.9	+0.1
EMPR	Esperanza - Ma	0.68	27		Pg	15 09 41.9	-0.7
EMPR					Sg	15 09 52.4	+0.6
EMPR	Esperanza - Ma	0.68	27	⥥*e*P	Pg	15 09 41.9	-0.7
EMPR				*e*S	Sg	15 09 52.4	+0.6
SJG	San Juan	0.71	70		Pg	15 09 42.7	-0.5
SJG	San Juan	0.71	70	⥣*e*Pg	Pg	15 09 42.3	-0.9
SJG				⥣*e*Sg	Sg	15 09 52.8	+0.1
SJG	San Juan	0.71	70	⥣*e*P	Pg	15 09 43.0	-0.2
SJG				*e*S	Sg	15 09 52.3	-0.4
PDPR	Patillas Dam,	0.81	79		Pg	15 09 44.4	-0.5
GCPR	Guaynabo City	0.86	59		Sg	15 09 56.9	-0.4
GCPR	Guaynabo City	0.86	59		Pg	15 09 45.4	-0.5
GCPR	Guaynabo City	0.86	59	⥥*e*P	Pg	15 09 44.4	-1.5
GCPR				*e*S	Sg	15 09 56.9	-0.4
HUMP	Col San Antoni	0.99	74		Pb	15 09 47.3	-0.6
HUMP	Col San Antoni	0.99	74	IAML		15 10 05.1	
	comp=N,195nm,0.2s						
HUMP	Col San Antoni	0.99	74	⥣*e*P	Pb	15 09 47.5	-0.4
HUMP				*e*S	Sb	15 10 01.1	+0.4
CUPR	Culebra, Puert	1.56	73	Pn	Pn	15 09 56.8	+0.8
MIDR	Miches	2.37	298	⥣*e*Sg	Sb	15 10 39.7	-0.5
MIDR				IAML		15 11 25.7	
	comp=N,19nm,1.9s						
DR12	Loma Pena Alta	2.57	291	Pn	Pn	15 10 11.1	+1.0
HATOM	Hato Mayor del	2.57	291	⥣*e*Pg	Pn	15 10 11.5	+1.5
HATOM				⥣*e*Sg	Sb	15 10 45.7	-0.5
HATOM				IAML		15 11 07.3	
	comp=N,25nm,1.8s						

*NEIC **04** 15:12:10.8±0.9, 17°.77N±0°.02×66°.84W±0°.01, h10km±1km, ML4.0/37, ML3.6(RSPR), Mwr3.8/16(SLM), Error ellipse: s-maj=4.4km s-min=2.8km az=17.0*
*IDC **04** 15:12:10.6±1.2, 17°.84N×66°.89W, h0km, mb3.5/4, mbtmp3.8/6, ML3.1/2, MS3.9/2, Error ellipse: s-maj=23.7km s-min=10.7km az=164.0*
*SDD **04** 15:12:11.6±1.3, 17°.80N×66°.89W, h17km±11km, MD3.6, ML3.8, MW4.1, Presumed earthquake*
*NEIC **04** 15:12:11, 17°.84N×66°.86W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.20; $M_{\theta\theta}$1.20; $M_{\phi\phi}$0.00; $M_{r\theta}$3.29; $M_{\theta\phi}$5.97; $M_{\phi r}$-1.05; Fault plane solution: $M_0$7.00000×10^{14} NP1:ϕ_s270.00000°, δ80.00000°, λ-39.00000°. NP2:ϕ_s6.00000°, δ61.00000°, λ-168.00000°. Principal axes: T 7.0026, Plg13.0000°, Azm321.0000°; N -0.0041, Plg59.0000°, Azm73.0000°; P -6.9985, Plg28.0000°, Azm224.0000°;*
*RSPR **04** 15:12:11.8, 17°.84N×66°.86W, h11km*
*OSPL **04** 15:12:12.0±0.8, 17°.83N×66°.88W, h17km±9km, ML3.7, Presumed earthquake*
ISC 04 15:12:10.5±1.2**, 17°.76N**±0°.06×**66°.86W**±0°.02**, h8**km±9km**, n59,** σ**1s.14**/79**, mb3.6**/3**, 10C-8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.22	355		Pg	15 12 15.3	+0.4
GBPR					Sg	15 12 17.9	0.0
GBPR	Guanica, Bosqu	0.22	355	⥣*i*P	Pg	15 12 15.3	+0.4
GBPR				*e*S	Sg	15 12 17.9	0.0
MLPR	Magueyes Islan	0.27	320	Pg	Pg	15 12 16.5	+0.5
MLPR				IAML		15 12 20.9	
	21μm,0.7s						
CRPR	Cabo Rojo, PR	0.34	316	Pg	Pg	15 12 17.7	+0.4
CRPR	Cabo Rojo, PR	0.34	316	IAML		15 12 22.7	
	7μm,0.3s						
CRPR				IAML		15 12 22.8	
	13μm,0.6s						
CRPR	Cabo Rojo, PR	0.34	316	⥣*e*Pg	Pg	15 12 17.7	+0.4
CRPR				⥣*e*Sg	Sg	15 12 22.1	+0.2
CRPR				IAML		15 12 22.4	
	comp=N,12μm,0.8s						
CRPR	Cabo Rojo, PR	0.34	316	⥣*i*P	Pg	15 12 17.8	+0.4
CRPR				*e*S	Sg	15 12 22.2	+0.4
CRPR	Cabo Rojo, PR	0.34	316	*i* P	Pg	15 12 17.7	+0.4
CRPR				*e*S	Sg	15 12 22.1	+0.3
CRPR				IAML		15 12 22.8	
	comp=Z,10μm,1.0s						
OBIP	Obispado Ponce	0.37	40		Pg	15 12 17.8	0.0

OBIP	**Obispado Ponce**	**0.37**	**40**		**Sg**	**15 12 23.0**	**+0.2**
OBIP	**Obispado Ponce**	**0.37**	**40**	⇓*i*P	**Pg**	**15 12 18.1**	**+0.2**
OBIP				*e*S	**Sg**	**15 12 23.0**	**+0.2**
OBIP	**Obispado Ponce**	**0.37**	**40**	*i* P	**Pg**	**15 12 18.1**	**+0.3**
OBIP				*e*S	**Sg**	**15 12 22.9**	**+0.1**
OBIP				IAML		15 12 23.4	
	comp=Z,7µm,0.7s						
CELP	**Cerrillos**	**0.41**	**40**		**Pg**	**15 12 18.6**	**0.0**
CELP				IAML		15 12 24.9	
	comp=Z,14µm,0.3s						
LSP	**Las Mesas**	**0.47**	**333**		**Pg**	**15 12 19.6**	**-0.1**
LSP	**Las Mesas**	**0.47**	**333**	⇓*i*P	**Pg**	**15 12 19.6**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.51**	**15**		**Pg**	**15 12 19.9**	**-0.5**
PRSN	**Puerto Rico Se**	**0.53**	**329**		**Pg**	**15 12 20.5**	**-0.3**
PRSN				IAML		15 12 29.9	
	comp=Z,11µm,0.3s						
PRSN				IAML		15 12 30.1	
	comp=Z,16µm,0.3s						
PRSN	**Puerto Rico Se**	**0.53**	**329**		**Sg**	**15 12 27.5**	**-0.3**
PRSN	**Puerto Rico Se**	**0.53**	**329**	⇑*e*Pg	**Pg**	**15 12 20.6**	**-0.3**
PRSN				⇑*e*Sg	**Sg**	**15 12 25.7**	**-2.1**
PRSN				IAML		15 12 30.1	
	comp=N,10µm,0.2s						
PRSN	**Puerto Rico Se**	**0.53**	**329**	⇑*i*P	**Pg**	**15 12 20.6**	**-0.2**
PRSN				*e*S	**Sg**	**15 12 27.5**	**-0.3**
ECPR	**Experimental S**	**0.73**	**40**		**Pg**	**15 12 23.8**	**-0.8**
ECPR				IAML		15 12 35.2	
	comp=N,9µm,0.2s						
ECPR				IAML		15 12 36.6	
	comp=N,8µm,0.2s						
ECPR	**Experimental S**	**0.73**	**40**	⇓*e*P	**Pg**	**15 12 23.9**	**-0.7**
ECPR				*e*S	**Sg**	**15 12 32.3**	**-1.9**
AGPR	**Aguadilla, PR**	**0.75**	**341**		**Pg**	**15 12 24.0**	**-1.0**
AGPR				IAML		15 12 36.5	
	comp=N,4µm,0.6s						
AGPR	**Aguadilla, PR**	**0.75**	**341**	⇑*e*Pg	**Pg**	**15 12 23.9**	**-1.0**
AGPR				⇑*e*Sg	**Sg**	**15 12 32.7**	**-1.9**
AGPR				IAML		15 12 45.7	
	comp=N,4µm,0.6s						
AGPR	**Aguadilla, PR**	**0.75**	**341**	⇑*i*P	**Pg**	**15 12 24.1**	**-0.8**
AGPR				*e*S	**Sg**	**15 12 32.8**	**-1.9**
AGPR	**Aguadilla, PR**	**0.75**	**341**	*i* P	**Pg**	**15 12 24.1**	**-0.9**
AGPR				*e*S	**Sg**	**15 12 32.9**	**-1.7**
AGPR				IAML		15 12 38.0	
	comp=Z,2µm,0.5s						
SJG	**San Juan**	**0.76**	**62**	Pg	**Pg**	**15 12 25.0**	**-0.2**
	comp=Z,366nm,0.3s,baz=249,slow=15,SNR=121						
SJG				Lg	Lg	15 12 35.0	
	comp=Z,371nm,0.3s,baz=266,slow=19,SNR=6.3						
SJG	**San Juan**	**0.76**	**62**		**Pg**	**15 12 24.8**	**-0.5**
SJG				IAML		15 12 38.2	
	comp=Z,6µm,0.5s						
SJG				IAML		15 12 38.4	
	comp=Z,7µm,0.5s						
SJG	**San Juan**	**0.76**	**62**	⇓*e*Pg	**Pg**	**15 12 25.0**	**-0.2**
SJG				⇑*e*Sg	**Sg**	**15 12 35.8**	**+0.7**
SJG	**San Juan**	**0.76**	**62**	⇓*e*P	**Pg**	**15 12 25.0**	**-0.2**
SJG				*e*S	**Sg**	**15 12 35.9**	**+0.7**
SJG	**San Juan**	**0.76**	**62**	*i* P	**Pg**	**15 12 25.0**	**-0.2**
SJG				*e*S	**Sg**	**15 12 35.8**	**+0.6**
SJG				IAML		15 12 38.1	
	comp=Z,4µm,0.3s						
EMPR	**Esperanza - Ma**	**0.78**	**24**		**Pg**	**15 12 25.2**	**-0.4**
EMPR					**Sg**	**15 12 35.0**	**-0.8**
EMPR	**Esperanza - Ma**	**0.78**	**24**	⇓*i*P	**Pg**	**15 12 25.2**	**-0.4**
EMPR				*e*S	**Sg**	**15 12 35.0**	**-0.8**
PDPR	**Patillas Dam,**	**0.84**	**72**		**Pg**	**15 12 26.1**	**-0.5**
PDPR				IAML		15 12 41.0	
	comp=Z,5µm,0.6s						
IDE	**Isla Desecheo**	**0.86**	**317**		**Pg**	**15 12 26.2**	**-0.8**
IDE					**Sg**	**15 12 38.2**	**+0.1**
IDE	**Isla Desecheo**	**0.86**	**317**	⇓*e*P	**Pg**	**15 12 26.2**	**-0.8**
IDE				*e*S	**Sg**	**15 12 38.2**	**+0.1**
GCPR	**Guaynabo City**	**0.92**	**53**		**Sg**	**15 12 38.7**	**-1.5**
GCPR	**Guaynabo City**	**0.92**	**53**		**Pg**	**15 12 27.2**	**-1.0**
GCPR	**Guaynabo City**	**0.92**	**53**	⇑*i*P	**Pg**	**15 12 27.4**	**-0.8**
GCPR				*e*S	**Sg**	**15 12 38.7**	**-1.5**
HUMP	**Col San Antoni**	**1.03**	**68**		**Pg**	**15 12 29.5**	**-0.9**
HUMP				IAML		15 12 46.8	
	comp=Z,3µm,0.2s						
HUMP				IAML		15 12 47.5	
	comp=Z,3µm,0.4s						
HUMP	**Col San Antoni**	**1.03**	**68**		**Sg**	**15 12 43.6**	**-0.3**
HUMP	**Col San Antoni**	**1.03**	**68**	⇓*e*P	**Pg**	**15 12 29.6**	**-0.8**
HUMP				*e*S	**Sg**	**15 12 43.6**	**-0.3**
CUPR	**Culebra, Puert**	**1.60**	**70**		**Pn**	**15 12 39.3**	**+0.3**
MIDR	**Miches**	**2.41**	**301**	⇑*e*Pg	**Pb**	**15 12 52.7**	**-1.4**
MIDR				IAML		15 13 38.7	
	comp=N,175nm,0.6s						
DR12	**Loma Pena Alta**	**2.60**	**294**		**Pn**	**15 12 53.8**	**+0.8**
HATOM	**Hato Mayor del**	**2.60**	**294**	⇑*e*Pg	**Pn**	**15 12 54.8**	**+1.9**
HATOM				IAML		15 13 42.2	
	comp=N,191nm,1.1s						
DR08	**Loma La Naviza**	**3.23**	**292**	⇑*e*Pg	**Pb**	**15 13 06.1**	**-2.1**
DR08				IAML		15 13 56.9	
	comp=N,1µm,1.0s						
SABA	**Saba**	**3.45**	**92**		**Pn**	**15 13 04.7**	**+0.1**
SABA				IAML		15 14 10.4	
	comp=N,421nm,0.6s						
SMRT	**St. Maarten**	**3.62**	**85**		**Pn**	**15 13 06.5**	**-0.4**
SDDR	**Presa de Saban**	**4.38**	**287**		**Pn**	**15 13 17.5**	**+0.2**
SDV	**Santo Domingo**	**9.55**	**203**	Pn	**Pn**	**15 14 29.9**	**+1.3**
	comp=N,1.3nm,0.3s,baz=356,slow=13,SNR=6.5						
SDV				Sn	**Sn**	**15 16 10.6**	**-5.7**
	comp=N,0.8nm,0.3s,baz=299,slow=14,SNR=1.6						
	comp=N,4.2nm,0.4s						
SDV	**Santo Domingo**	**9.55**	**203**		**Pn**	**15 14 28.4**	**-0.2**
ROSC	**El Rosal**	**14.77**	**210**	Pn	**Pn**	**15 15 41.6**	**+1.5**
	comp=N,2.4nm,0.3s,baz=79,slow=21,SNR=1.7						
	comp=N,6.4nm,0.3s						
TXAR	**Lajitas Array**	**35.51**	**296**	P	**P**	**15 19 07.2**	**-0.9**
	comp=N,0.2nm,0.6s,baz=98,slow=10,SNR=4.6						
	comp=N,0.2nm,0.6s						
NEW	**Newport**	**50.76**	**318**	LR	LR	15 44 05.3	
	comp=N,151nm,18.6s,baz=256,slow=38						
YKA	**Yellowknife Ar**	**55.53**	**335**	P	**P**	**15 21 46.7**	**+0.8**
	comp=N,0.4nm,0.6s,baz=117,slow=6.0,SNR=6.2						
	comp=N,0.4nm,0.6s						
ESDC	**Sonseca Array**	**58.14**	**54**	P	**P**	**15 22 07.8**	**+2.9**
	comp=N,1.2nm,0.8s,baz=264,slow=7.0,SNR=7.1						
	comp=N,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.93**	**83**	P	**P**	**15 22 59.5**	**+1.9**
	comp=N,0.1nm,0.3s,baz=291,slow=6.1,SNR=1.8						
	comp=N,0.1nm,0.3s						
FINES	**FINESS Array B**	**75.97**	**30**	LR	LR	15 53 21.7	
	comp=N,59nm,20.6s,baz=360,slow=33						

JMA ***04*** *15:37:18.8±0.1, 24.°3N±0.°3×122.°0E±0.°2, h42km±1km, MV2.8/11, TAIWAN REGION*
TAP ***04*** *15:37:19.3, 24.°40N×121.°99E, h32km, ML3.6, B*
ISC 04 15:37:19.2±0.9, **24.°35N**±0.°02×**122.°04E**±0.°02, **h32**km±6km, **n130**, σ**0.s97**/219, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.19**	**68**	P	**Pb**	**15 37 25.4**	**-0.1**
EOS2				S	**Sn**	**15 37 30.8**	**+1.0**
EOS3	**EOS3**	**0.26**	**104**	*i* P	**Pb**	**15 37 26.1**	**-0.1**
EOS3				*e*S	**Sb**	**15 37 32.0**	**+1.0**
EWUT	**Wuta**	**0.26**	**292**	*i* P	**Pb**	**15 37 25.6**	**-0.8**
EWUT				S	**Sn**	**15 37 30.4**	**-1.3**
EAHA	**Aohua**	**0.28**	**266**	P	**Pb**	**15 37 26.1**	**-0.5**
EAHA				S	**Sn**	**15 37 31.9**	**-0.2**
EHP	**Heping Village**	**0.28**	**262**	*e*P	**Pb**	**15 37 26.3**	**-0.3**
EHP				*e*S	**Sn**	**15 37 32.0**	**-0.2**
TWC	**Suao**	**0.31**	**326**	*i* P	**Pb**	**15 37 26.2**	**-0.9**
TWC				S	**Sb**	**15 37 31.2**	**-1.2**
EOS4	**EOS4**	**0.34**	**132**	P	**Pb**	**15 37 26.8**	**-0.3**
NDS	**Dongshan**	**0.41**	**314**	P	**Pn**	**15 37 27.9**	**-1.0**
NDS				*e*S	**Sn**	**15 37 33.8**	**-1.7**
ETL	**Fush Village**	**0.43**	**244**	*e*P	**Pb**	**15 37 28.4**	**-0.3**
ETL				*e*S	**Sn**	**15 37 36.7**	**+0.7**
NACB	**Ninganchiao**	**0.44**	**247**	P	**Pb**	**15 37 28.5**	**-0.4**
NACB	**Ninganchiao**	**0.44**	**247**	P	**Pb**	**15 37 28.4**	**-0.6**
NACB				S	**Sn**	**15 37 36.6**	**+0.3**
TWD	**Chiawan**	**0.49**	**237**	P	**Pb**	**15 37 29.3**	**-0.3**
TWD				*e*S	**Sn**	**15 37 38.4**	**+1.0**
ILA	**Ilan**	**0.49**	**327**	*e*P	**Pb**	**15 37 28.2**	**-1.5**
ILA				*e*S	**Sn**	**15 37 35.9**	**-1.6**
EGS		**0.50**	**349**	*e*P	**Pn**	**15 37 29.5**	**-0.7**
EGS				*e*S	**Sn**	**15 37 36.8**	**-0.9**
TWE	**Neicheng**	**0.50**	**317**	P	**Pn**	**15 37 29.4**	**-0.8**
TWE				*e*S	**Sn**	**15 37 36.2**	**-1.5**
LATG	**Datong**	**0.51**	**292**	P	**Pn**	**15 37 29.6**	**-0.8**
LATG				S	**Sn**	**15 37 37.2**	**-0.8**
ENTT	**Nioudou**	**0.52**	**304**	P	**Pn**	**15 37 29.8**	**-0.7**
ENTT				*e*S	**Sn**	**15 37 37.4**	**-0.9**
ETLH	**Xiulin Townshi**	**0.53**	**255**	P	**Pb**	**15 37 29.9**	**-0.5**
ETLH				*e*S	**Sn**	**15 37 38.9**	**+0.3**
HWA	**Hwalien**	**0.55**	**227**	*e*P	**Pn**	**15 37 30.7**	**-0.1**
HWA				*e*S	**Sn**	**15 37 41.3**	**+2.5**
FUSB	**Fushanzhiwuyua**	**0.58**	**315**	P	**Pn**	**15 37 30.8**	**-0.6**
FUSB				S	**Sn**	**15 37 39.0**	**-0.8**
NNSB	**Datong**	**0.61**	**278**	*e*P	**Pn**	**15 37 31.4**	**-0.4**
NNSB				*e*S	**Sn**	**15 37 40.1**	**-0.4**
NNS	**Nan Shan**	**0.62**	**279**	P	**Pn**	**15 37 31.4**	**-0.5**
NNS				*e*S	**Sn**	**15 37 39.9**	**-0.8**
TEYL	**Yanliau Villag**	**0.63**	**220**	*e*P	**Pb**	**15 37 31.4**	**-0.5**
TEYL				*e*S	**Sn**	**15 37 42.7**	**+1.9**
ETM	**Tongmen**	**0.63**	**233**	P	**Pb**	**15 37 31.3**	**-0.6**
ETM				*e*S	**Sn**	**15 37 41.8**	**+0.9**
NWLT	**Wulai**	**0.65**	**311**	P	**Pn**	**15 37 31.8**	**-0.5**
NWLT				*e*S	**Sn**	**15 37 40.9**	**-0.5**
TIPB	**Shuangxi**	**0.65**	**342**	P	**Pn**	**15 37 31.8**	**-0.5**
TIPB				S	**Sn**	**15 37 41.2**	**-0.3**
LXIB	**Xiulin Townshi**	**0.66**	**240**	*e*P	**Pb**	**15 37 31.7**	**-0.8**
LXIB				*e*S	**Sn**	**15 37 42.0**	**+0.1**
YHNB	**Yeheng**	**0.69**	**298**	P	**Pn**	**15 37 32.6**	**-0.2**
YHNB	**Yeheng**	**0.69**	**298**	S	**Sn**	**15 37 42.3**	**-0.1**
YHNB	**Yeheng**	**0.69**	**298**	*i* P	**Pn**	**15 37 32.5**	**-0.3**
YHNB				S	**Sn**	**15 37 42.0**	**-0.3**
NSK	**Sanguang**	**0.70**	**298**	P	**Pn**	**15 37 32.7**	**-0.3**
NSK				S	**Sn**	**15 37 42.5**	**-0.3**
SHUL	**Shoufeng**	**0.71**	**218**	P	**Pn**	**15 37 32.7**	**-0.4**
SHUL				*e*S	**Sn**	**15 37 46.4**	**+3.5**
FUSS	**Fushou**	**0.73**	**262**	P	**Pb**	**15 37 33.4**	**-0.4**
FUSS				*e*S	**Sn**	**15 37 44.2**	**+0.3**
WHF	**Hehuan Shan**	**0.74**	**254**	P	**Pb**	**15 37 33.7**	**-0.3**
WHF				*e*S	**Sn**	**15 37 44.4**	**+0.2**
TWA	**Mucha**	**0.75**	**327**	*e*P	**Pb**	**15 37 34.1**	**+0.1**
TWA				*e*S	**Sn**	**15 37 44.3**	**+0.3**
NWF	**Wu-fen Shan**	**0.76**	**342**	*e*P	**Pb**	**15 37 34.3**	**+0.2**
NWF				*e*S	**Sn**	**15 37 44.5**	**+0.3**
WFSB	**Wu-fen Shan**	**0.76**	**342**	P	**Pb**	**15 37 34.1**	**+0.1**
WFSB				S	**Sn**	**15 37 44.0**	**0.0**
SXI1	**Grass Mountain**	**0.76**	**348**	P	**Pb**	**15 37 33.4**	**-0.7**
SXI1				S	**Sn**	**15 37 44.3**	**+0.1**
ESL	**Shilin**	**0.77**	**226**	*e*P	**Pn**	**15 37 33.1**	**-0.8**
ESL				*e*S	**Sn**	**15 37 45.0**	**+0.6**
NHDH	**Xindian Distri**	**0.77**	**322**	P	**Pb**	**15 37 34.2**	**-0.1**
TEGC	**Jichi Village**	**0.79**	**216**	*e*P	**Pn**	**15 37 33.7**	**-0.4**
TWT	**Tachien**	**0.80**	**263**	*e*P	**Pb**	**15 37 35.4**	**+0.6**
TWT				*e*S	**Sn**	**15 37 46.3**	**+1.0**
TATO	**Taipei**	**0.80**	**321**	P	**Pb**	**15 37 35.3**	**+0.5**
TATO	**Taipei**	**0.80**	**321**	S	**Sn**	**15 37 47.1**	**+2.0**
TDCB	**Techi**	**0.81**	**263**	*e*P	**Pb**	**15 37 34.8**	**-0.3**
TDCB				*e*S	**Sn**	**15 37 46.3**	**+0.7**
JYNG	**Yonagunijimaku**	**0.83**	**83**	P	**Pn**	**15 37 34.4**	**-0.2**
JYNG				S	**Sn**	**15 37 45.7**	**-0.1**
TNOU	**National Taiwa**	**0.83**	**343**	*e*P	**Pb**	**15 37 34.9**	**-0.4**
TNOU				*e*S	**Sb**	**15 37 46.3**	**+0.1**
TAP	**Taipei**	**0.84**	**325**	*e*P	**Pb**	**15 37 35.6**	**+0.2**
TAP				*e*S	**Sb**	**15 37 47.7**	**+1.2**
WARBT	**Fenglin Townsh**	**0.87**	**224**	P	**Pn**	**15 37 34.2**	**-1.0**
EGFH	**Guangfu**	**0.88**	**220**	*e*P	**Pn**	**15 37 34.8**	**-0.6**
OWD	**Renai**	**0.88**	**244**	P	**Pn**	**15 37 35.4**	**-0.2**
OWD				*e*S	**Sb**	**15 37 48.4**	**+0.6**
NFF	**Wufeng Townshi**	**0.89**	**289**	P	**Pb**	**15 37 36.0**	**-0.3**
NFF				*e*S	**Sb**	**15 37 49.6**	**+1.8**
YOJ	**Yonaguni jima**	**0.89**	**83**	P	**Pn**	**15 37 35.5**	**0.0**
YOJ	**Yonaguni jima**	**0.89**	**83**	S	**Sn**	**15 37 47.0**	**-0.3**
YOJ	**Yonaguni jima**	**0.89**	**83**	P	**Pn**	**15 37 35.3**	**-0.2**
YOJ				S	**Sn**	**15 37 47.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.89**	**83**	*i* P	**Pn**	**15 37 35.5**	**0.0**
YOJ				*i* S	**Sn**	**15 37 47.8**	**+0.5**
KSHI	**Guanxi Townshi**	**0.90**	**299**	*e*P	**Pb**	**15 37 36.8**	**+0.5**
KSHI				*e*S	**Sb**	**15 37 50.5**	**+2.5**
YM01	**YM01**	**0.90**	**332**	*e*P	**Pb**	**15 37 36.4**	**-0.1**
YM01				*e*S	**Sb**	**15 37 48.4**	**+0.2**
WUSB	**Renai**	**0.92**	**247**	P	**Pb**	**15 37 36.2**	**-0.6**
WUSB				S	**Sb**	**15 37 49.0**	**+0.2**
ZUZH	**Zhuzihu**	**0.93**	**331**	*e*P	**Pb**	**15 37 36.4**	**-0.5**
ZUZH				*e*S	**Sb**	**15 37 49.1**	**+0.2**
YM08	**YM08**	**0.93**	**334**	P	**Pb**	**15 37 36.5**	**-0.4**
TWS1	**Kuangyinshan**	**0.94**	**323**	*e*P	**Pb**	**15 37 36.9**	**-0.1**
TWS1				*e*S	**Sb**	**15 37 50.9**	**+1.7**
ANP	**Anpu**	**0.96**	**330**	*e*P	**Pb**	**15 37 36.9**	**-0.6**
ANP				*e*S	**Sb**	**15 37 51.4**	**+1.5**
NTST	**Danshui**	**0.97**	**327**	*e*P	**Pb**	**15 37 37.5**	**-0.1**
NTST				*e*S	**Sb**	**15 37 48.3**	**-1.9**
LIOB	**Emei**	**0.98**	**288**	P	**Pb**	**15 37 38.2**	**+0.4**
LIOB				*e*S	**Sb**	**15 37 52.3**	**+1.9**
NSTT	**Nanjuang**	**0.99**	**287**	P	**Pb**	**15 37 37.9**	**0.0**
NSTT				*e*S	**Sb**	**15 37 50.6**	**-0.1**
NCU	**National Centr**	**0.99**	**309**	*e*P	**Pn**	**15 37 36.4**	**-0.6**
NCU				*e*S	**Sb**	**15 37 51.2**	**+0.5**
NCUH	**Zhongli**	**0.99**	**308**	*e*P	**Pb**	**15 37 38.3**	**+0.3**
NCUH				*e*S	**Sb**	**15 37 53.4**	**+2.7**
WHP	**Taichung City**	**1.00**	**266**	P	**Pb**	**15 37 38.1**	**0.0**
WHP				*e*S	**Sb**	**15 37 52.1**	**+1.0**
TWY	**Chenhua**	**1.01**	**337**	*e*P	**Pb**	**15 37 38.7**	**+0.5**
TWY				*e*S	**Sb**	**15 37 51.8**	**+0.6**
VWDT	**VWDT**	**1.01**	**234**	*i* P	**Pn**	**15 37 37.4**	**+0.2**
VWDT				*e*S	**Sb**	**15 37 51.4**	**+0.1**
HGSD	**Ruisui**	**1.02**	**214**	P	**Pn**	**15 37 36.5**	**-0.9**
SBCB	**Hsinchu**	**1.06**	**295**	*e*P	**Pb**	**15 37 38.3**	**-0.7**
HSN	**Hsinchu**	**1.07**	**295**	*e*P	**Pb**	**15 37 38.6**	**-0.7**
HSN				*e*S	**Sb**	**15 37 54.7**	**+1.6**
SSLB	**Suanglung**	**1.14**	**241**	P	**Pn**	**15 37 39.3**	**+0.3**
SSLB	**Suanglung**	**1.14**	**241**	S	**Sb**	**15 37 54.9**	**-0.1**
SSLB	**Suanglung**	**1.14**	**241**	P	**Pn**	**15 37 39.2**	**+0.2**
SSLB				*e*S	**Sb**	**15 37 54.2**	**-0.8**
SMLT	**Sun Moon Lake**	**1.14**	**246**	P	**Pb**	**15 37 39.6**	**-0.9**
NMLH	**Miaoli**	**1.16**	**280**	*e*P	**Pb**	**15 37 40.6**	**-0.1**
NMLH				*e*S	**Sb**	**15 37 57.7**	**+2.3**
TWQ1	**Liyutan**	**1.16**	**270**	*e*P	**Pb**	**15 37 40.7**	**0.0**
TWQ1				*e*S	**Sb**	**15 37 57.8**	**+2.3**
ECBN	**Changbin**	**1.16**	**208**	*e*P	**Pn**	**15 37 38.2**	**-1.1**
ECBN				*e*S	**Sn**	**15 37 53.3**	**-0.7**
TYC	**Yuchr**	**1.17**	**248**	*e*P	**Pb**	**15 37 40.3**	**-0.7**
TYC				*e*S	**Sb**	**15 37 56.2**	**+0.4**
YULB	**Yu-li**	**1.17**	**216**	P	**Pn**	**15 37 38.2**	**-1.2**
YULB	**Yu-li**	**1.17**	**216**	P	**Pn**	**15 37 38.0**	**-1.4**
WHYT	**Xinyi Township**	**1.27**	**239**	*e*P	**Pb**	**15 37 41.5**	**-1.1**
WHYT				*e*S	**Sb**	**15 38 00.5**	**+1.9**
WNT	**Mingjian**	**1.33**	**250**	*e*P	**Pb**	**15 37 43.8**	**+0.3**
WNT				*e*S	**Sb**	**15 38 01.9**	**+1.7**
FULB	**Fuli**	**1.33**	**211**	*e*P	**Pn**	**15 37 40.6**	**-1.0**
WCH1	**Changhua City**	**1.39**	**259**	*e*S	**Sb**	**15 38 03.9**	**+1.8**
ALS	**Alishan**	**1.41**	**234**	*e*P	**Pn**	**15 37 43.6**	**+0.7**
CHN5	**Tsauling**	**1.46**	**239**	P	**Pb**	**15 37 44.9**	**-0.9**
CHN5				*e*S	**Sb**	**15 38 04.9**	**+0.9**
ECS	**Chishang**	**1.46**	**211**	*e*P	**Pn**	**15 37 42.8**	**-0.6**
ELDTW	**Lidau**	**1.49**	**219**	P	**Pn**	**15 37 42.6**	**-1.3**
WDL	**Douliou City**	**1.51**	**246**	*e*S	**Sb**	**15 38 06.6**	**+1.1**
WDLH	**Douliu**	**1.52**	**245**	P	**Pb**	**15 37 46.0**	**-0.9**
WDLH				S	**Sb**	**15 38 07.2**	**+1.3**
IRIF	**Iriomote-Funau**	**1.54**	**90**	P	**Pn**	**15 37 44.2**	**-0.2**
IRIF				S	**Sn**	**15 38 03.3**	**0.0**
WRL	**Guolierlin Hig**	**1.58**	**254**	*e*P	**Pb**	**15 37 46.5**	**-1.4**
WRL				*e*S	**Sb**	**15 38 07.7**	**0.0**
WCKO	**Fanlu**	**1.60**	**236**	*e*P	**Pn**	**15 37 45.1**	**-0.1**
WCKO				*e*S	**Sb**	**15 38 07.5**	**-0.5**
STYH	**Taoyuan**	**1.65**	**225**	*e*P	**Pn**	**15 37 46.4**	**+0.4**
STYH				*e*S	**Sb**	**15 38 09.1**	**-0.4**
TPUB	**Ta-pu**	**1.66**	**231**	P	**Pb**	**15 37 47.7**	**-1.6**
TPUB	**Ta-pu**	**1.66**	**231**	P	**Pn**	**15 37 47.4**	**+1.2**
TPUB				*e*S	**Sb**	**15 38 09.8**	**0.0**
CHY	**Chiayi**	**1.71**	**241**	*e*P	**Pb**	**15 37 48.9**	**-1.1**
CHY				*e*S	**Sb**	**15 38 11.4**	**+0.3**
WTP	**Ta-pu**	**1.71**	**230**	*e*P	**Pn**	**15 37 48.3**	**+1.5**
WTP				*e*S	**Sb**	**15 38 11.4**	**+0.2**
TWGBT	**Beinan**	**1.76**	**210**	P	**Pn**	**15 37 46.8**	**-0.7**
TWGBT	**Beinan**	**1.76**	**210**	*e*P	**Pn**	**15 37 45.7**	**-1.8**
TWG	**Pinlang**	**1.76**	**211**	*e*P	**Pn**	**15 37 46.2**	**-1.4**
TWK	**Hsinying**	**1.79**	**233**	*e*P	**Pn**	**15 37 49.0**	**+1.1**
JKRS	**Kuro-shima**	**1.80**	**93**	P	**Pn**	**15 37 48.6**	**+0.6**
JKRS				S	**Sn**	**15 38 10.5**	**+0.8**
CHN1	**Nanshi**	**1.81**	**230**	*e*P	**Pn**	**15 37 49.8**	**+1.6**
CHN1				*e*S	**Sb**	**15 38 13.3**	**-0.7**
SNST	**Tainan City**	**1.81**	**232**	P	**Pn**	**15 37 49.4**	**+1.3**
SNST				*e*S	**Sb**	**15 38 13.7**	**-0.3**
WSF	**Szhu**	**1.81**	**247**	*e*S	**Sb**	**15 38 13.7**	**-0.3**
SGST	**Jiashian**	**1.84**	**227**	P	**Pn**	**15 37 49.4**	**+0.8**
SGST				*e*S	**Sb**	**15 38 13.3**	**-1.6**
WSL	**Shuilin Townsh**	**1.85**	**244**	*e*P	**Pb**	**15 37 50.5**	**-1.9**
WSL				*e*S	**Sb**	**15 38 14.8**	**-0.4**
JIJ	**Ishigaki jima**	**1.92**	**89**	P	**Pn**	**15 37 49.9**	**+0.2**
JIJ				*e*S	**Sn**	**15 38 13.0**	**+0.4**
ECL	**Taimali**	**2.01**	**210**	*e*P	**Pn**	**15 37 49.5**	**-1.4**
SSD	**Sandimen**	**2.06**	**219**	*e*P	**Pn**	**15 37 52.8**	**+1.3**
SSD				*e*S	**Sb**	**15 38 19.5**	**-1.6**
JISG	**Ishigakijimahi**	**2.08**	**83**	P	**Pn**	**15 37 51.6**	**-0.2**
JISG				S	**Sn**	**15 38 16.7**	**0.0**
TSCK	**Chigu Township**	**2.15**	**237**	*e*P	**Pn**	**15 37 54.1**	**+1.1**
TSCK				*e*S	**Sb**	**15 38 21.0**	**-3.0**
MASBT	**Mashibuluo**	**2.16**	**217**	P	**Pn**	**15 37 53.5**	**+0.4**
MASBT				*e*S	**Sn**	**15 38 20.6**	**+1.9**
EAST	**Anshuo**	**2.24**	**210**	*e*P	**Pn**	**15 37 55.2**	**+1.0**
LAY	**Lan-yu**	**2.34**	**191**	*e*P	**Pn**	**15 37 53.4**	**-2.2**
SCZT	**Fangliau**	**2.36**	**214**	*e*P	**Pn**	**15 37 57.1**	**+1.3**
PHUB	**P'eng-hu**	**2.41**	**250**	*e*P	**Pn**	**15 37 56.9**	**+0.4**
PHUB				*e*S	**Sn**	**15 38 25.9**	**+1.1**
SLIU	**Shizi**	**2.41**	**209**	*e*P	**Pn**	**15 37 57.3**	**+0.8**
VWUC	**VWUC**	**2.44**	**286**	*e*P	**Pn**	**15 37 57.4**	**+0.5**
VWUC				S	**Sn**	**15 38 24.9**	**-0.8**
MATB	**Ma-tsu**	**2.61**	**314**	*e*P	**Pn**	**15 37 59.2**	**0.0**
LYJJ	**Jianjiangzhen**	**3.01**	**317**	*e*P	**Pn**	**15 38 04.7**	**0.0**
LYJJ				*e*S	**Sn**	**15 38 40.0**	**+0.3**
XPSS	**Dashiqiu**	**3.06**	**327**	*e*P	**Pn**	**15 38 05.6**	**+0.2**
MHZQ	**Yeshan**	**3.24**	**303**	*e*P	**Pn**	**15 38 08.6**	**+0.7**
MHZQ				*e*S	**Sn**	**15 38 44.7**	**-0.5**
KNMB	**Chin-men Tao**	**3.33**	**273**	*e*P	**Pn**	**15 38 08.9**	**-0.2**
AXDP	**Jialang**	**3.75**	**279**	*e*P	**Pn**	**15 38 14.5**	**-0.3**

ISK ***04*** *15:41:36.3, 39.°09N×27.°83E, h11km, ML3.9/16*
AFAD ***04*** *15:41:36.6, 39.°09N×27.°85E, h7km±2km, MW3.9*
ATH ***04*** *15:41:37.8, 39.°10N×27.°84E, h19km±5km, ML3.7/11, Manual Solution by A.Agalos First location: 2020/02/04 15:43:02, This location: 2020/02/04 15:49:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
THE ***04*** *15:41:38.2, 39°N±2°×2°8E±°, h10km±16km, M3.7/18, MLh3.7/18*
CFUSG ***04*** *15:41:39.2, 39.°40N×28.°00E, h10km, Mb2.7/3, MD3.5/2, MSH3.0/5*
ISC 04 15:41:36.9±0.8, **39.°09N**±0.°02×**27.°84E**±0.°02, **h15**km±6km, **n124**, σ**1.s03**/156, **14C-13D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.21**	**185**	P	**Pg**	**15 41 41.6**	**-0.2**
AKHS				S	**Sg**	**15 41 45.5**	**+0.5**
AKS	**Akhisar**	**0.21**	**185**	Pg	**Pg**	**15 41 41.2**	**-0.6**
AKS				Sg	**Sg**	**15 41 44.8**	**-0.2**
SOMA	**Soma-Manisa**	**0.25**	**286**	Pg	**Pg**	**15 41 41.8**	**-0.5**
SOMA				Sg	**Sg**	**15 41 45.6**	**-0.4**
STEP	**BALIKESIR_Sava**	**0.30**	**342**	P	**Pg**	**15 41 43.1**	**-0.2**
STEP				S	**Sg**	**15 41 47.5**	**-0.1**
GORD	**Gordes-Manisa**	**0.32**	**124**	Pg	**Pg**	**15 41 43.7**	**+0.1**
GOMA	**Golmarmara-Man**	**0.39**	**171**	Pg	**Pg**	**15 41 44.5**	**-0.3**
GOMA				Sg	**Sb**	**15 41 50.6**	**-0.6**
KTTT	**Salihli**	**0.45**	**154**	P	**Pg**	**15 41 45.9**	**0.0**
KTTT				S	**Sb**	**15 41 52.3**	**-0.7**
CAMT	**Merkez**	**0.53**	**230**	P	**Pb**	**15 41 47.8**	**-0.3**
CAMT				S	**Sb**	**15 41 56.2**	**+0.7**
ZEDA	**zmir-Bergama**	**0.61**	**258**	P	**Pb**	**15 41 49.0**	**-0.3**
ZEDA				S	**Sb**	**15 41 57.6**	**0.0**
BKES	**Balkesir-Mer**	**0.65**	**6**	P	**Pg**	**15 41 48.9**	**-0.7**
BKES				S	**Sg**	**15 41 58.3**	**+0.1**
BALY	**Balya**	**0.67**	**345**	P	**Pg**	**15 41 49.9**	**-0.2**
BALY				S	**Sg**	**15 41 58.9**	**-0.1**
DEMI	**Demirci**	**0.69**	**94**	P	**Pg**	**15 41 50.4**	**0.0**
DEMI				S	**Sg**	**15 41 59.2**	**-0.2**
DURS	**Dursunbey**	**0.71**	**44**	P	**Pg**	**15 41 49.9**	**-0.9**
DURS				S	**Sg**	**15 42 00.2**	**0.0**
IZMD	**zmir-Dikili-**	**0.72**	**262**	P	**Pb**	**15 41 51.0**	**-0.2**
IZMD				S	**Sb**	**15 42 00.9**	**+0.1**
BUHA	**Balikesir, Bur**	**0.72**	**305**	P	**Pg**	**15 41 50.7**	**-0.3**
YAYO	**Edremit-Balk**	**0.79**	**311**	Pg	**Pg**	**15 41 51.9**	**-0.4**
DST	**Dursunbey**	**0.79**	**49**	Pg	**Pg**	**15 41 52.1**	**-0.3**
MANT	**Manisa**	**0.82**	**137**	P	**Pg**	**15 41 52.6**	**-0.4**
MANT				S	**Sg**	**15 42 03.2**	**-0.6**
ODEM	**Odemis-Izmir**	**0.83**	**167**	Pg	**Pb**	**15 41 53.1**	**-0.1**
ODEM				Sg	**Sb**	**15 42 04.5**	**+0.3**
KULA	**Kula-Manisa**	**0.86**	**132**	Pg	**Pg**	**15 41 53.4**	**-0.3**
BAGT	**Foa**	**0.88**	**241**	P	**Pb**	**15 41 54.0**	**+0.1**
BAGT				S	**Sn**	**15 42 06.8**	**-0.6**
SMAA	**Simav-Kutahya**	**0.89**	**89**	Pg	**Pg**	**15 41 53.9**	**-0.3**
SIMA	**Simav-Kutahya**	**0.89**	**90**	Pg	**Pg**	**15 41 54.1**	**-0.1**
SUSR	**Susurluk-Balik**	**0.89**	**12**	Pg	**Pg**	**15 41 53.7**	**-0.6**
DUVT	**Torbali**	**0.92**	**199**	P	**Pb**	**15 41 54.3**	**-0.3**
DUVT				S	**Sb**	**15 42 07.3**	**+0.6**
BLCB	**Balcova**	**0.94**	**222**	Pg	**Pb**	**15 41 54.7**	**-0.2**
BLCB	**Balcova**	**0.94**	**222**	P	**Pb**	**15 41 54.9**	**0.0**
BLCB				S	**Sn**	**15 42 08.1**	**-0.6**
FOCM	**Foa**	**0.94**	**247**	Pg	**Pb**	**15 41 54.8**	**-0.2**
IZMR	**zmir-demi**	**0.96**	**175**	P	**Pb**	**15 41 55.2**	**0.0**
IZMR				S	**Sb**	**15 42 07.5**	**-0.1**
GONE	**Gonen-Balikesi**	**0.96**	**353**	Pg	**Pg**	**15 41 54.8**	**-0.8**
YENI	**Yenice-Canakka**	**0.96**	**332**	Pg	**Pg**	**15 41 55.3**	**-0.3**
USAK	**Uak-Merkez**	**0.99**	**112**	P	**Pg**	**15 41 56.0**	**-0.2**
USAK				S	**Sg**	**15 42 08.6**	**-0.6**
KIRA	**zmir-Kiraz**	**0.99**	**154**	P	**Pb**	**15 41 56.1**	**+0.2**
KIRA				S	**Sb**	**15 42 10.1**	**+1.2**
SHAP	**Saphane-Kutahy**	**1.08**	**93**	Pn	**Pg**	**15 41 57.7**	**-0.1**
CANM	**Can-anakkale**	**1.10**	**327**	Pn	**Pg**	**15 41 57.7**	**-0.5**
KRBN	**Karaburun**	**1.12**	**244**	Pn	**Pn**	**15 41 58.1**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.14**	**178**	Pn	**Pn**	**15 41 58.7**	**+0.2**
NAZL	**Nazilli-Aydin**	**1.18**	**162**	Pn	**Pn**	**15 41 59.4**	**+0.5**
GEDZ	**Gediz**	**1.22**	**92**	Pn	**Pn**	**15 42 00.3**	**+0.7**
PRK	**Paraskevi**	**1.23**	**278**	P	**Pn**	**15 42 00.1**	**+0.6**
PRK				S	**Sn**	**15 42 16.6**	**+0.8**
PRK	**Paraskevi**	**1.23**	**278**	P	**Pn**	**15 42 00.2**	**+0.6**
PRK				S	**Sn**	**15 42 15.9**	**0.0**
GMLD	**Gumuldur**	**1.24**	**216**	Pn	**Pn**	**15 42 00.3**	**+0.5**
BAND	**Balkesir-Ban**	**1.28**	**9**	⇑P	**Pn**	**15 42 01.1**	**+0.8**
KUSD	**Kusadasi-Aydin**	**1.30**	**200**	Pn	**Pb**	**15 42 00.9**	**-0.2**
EZN	**Ezine**	**1.38**	**303**	P	**Pn**	**15 42 02.2**	**+0.5**
EZN				S	**Sn**	**15 42 20.5**	**+0.8**
CESE	**eme**	**1.42**	**238**	Pn	**Pn**	**15 42 02.6**	**+0.4**
EAG2	**Marmaro, Chios**	**1.46**	**249**	P	**Pn**	**15 42 03.1**	**+0.4**
EAG2				S	**Sg**	**15 42 22.3**	**-1.6**
SIGR	**SIGRI**	**1.55**	**275**	P	**Pn**	**15 42 04.4**	**+0.5**
SIGR				S	**Sn**	**15 42 24.3**	**+0.6**
SIGR	**SIGRI**	**1.55**	**275**	P	**Pn**	**15 42 04.1**	**+0.2**
SIGR				S	**Sn**	**15 42 24.1**	**+0.4**
CHOS	**Chios island**	**1.56**	**244**	P	**Pn**	**15 42 04.6**	**+0.3**
CHOS				S	**Sg**	**15 42 25.7**	**-1.6**
CHOS	**Chios island**	**1.56**	**244**	P	**Pn**	**15 42 04.6**	**+0.3**
CHOS				S	**Sb**	**15 42 24.8**	**-0.4**
KRL1	**Karlovasi Samo**	**1.57**	**215**	P	**Pb**	**15 42 05.5**	**-0.1**
SMG	**Samos**	**1.59**	**210**	P	**Pb**	**15 42 05.4**	**-0.6**
SMG	**Samos**	**1.59**	**210**	P	**Pn**	**15 42 04.6**	**+0.1**
GADA	**Gvkgeada**	**1.86**	**307**	P	**Pn**	**15 42 08.9**	**+0.6**
YER	**Yerkesik**	**1.98**	**170**	P	**Pn**	**15 42 10.4**	**+0.4**
CAVK	**Edirne/Enez-Ca**	**2.05**	**322**	⇓P	**Pn**	**15 42 12.3**	**+1.4**
BODT	**Bodrum**	**2.07**	**192**	P	**Pn**	**15 42 12.4**	**+1.2**
ENEZ	**Enez**	**2.09**	**322**	P	**Pn**	**15 42 12.7**	**+1.2**
LIA	**Limnos Island**	**2.21**	**292**	P	**Pn**	**15 42 13.8**	**+0.8**
LIA	**Limnos Island**	**2.21**	**292**	P	**Pn**	**15 42 13.2**	**+0.2**
SMTH	**Samothraki Isl**	**2.25**	**309**	P	**Pn**	**15 42 14.3**	**+0.6**
SMTH	**Samothraki Isl**	**2.25**	**309**	P	**Pn**	**15 42 13.8**	**+0.2**
ALN	**Alexandroupoli**	**2.27**	**323**	P	**Pn**	**15 42 14.5**	**+0.6**
ALN	**Alexandroupoli**	**2.27**	**323**	P	**Pn**	**15 42 14.3**	**+0.4**
ALEX	**Alexandroupoli**	**2.31**	**320**	P	**Pn**	**15 42 14.9**	**+0.5**
DAT	**Datca**	**2.37**	**185**	P	**Pn**	**15 42 16.6**	**+1.3**
ISP	**Isparta**	**2.46**	**120**	P	**Pn**	**15 42 16.9**	**+0.3**
SILT	**Sile**	**2.48**	**33**	⇑P	**Pn**	**15 42 17.5**	**+0.7**
RDO	**Rodhopi**	**2.71**	**320**	P	**Pn**	**15 42 21.0**	**+1.1**
RDO	**Rodhopi**	**2.71**	**320**	P	**Pn**	**15 42 20.7**	**+0.8**
THAS	**Thassos island**	**2.84**	**303**	P	**Pn**	**15 42 22.1**	**+0.4**
THAS	**Thassos island**	**2.84**	**303**	P	**Pn**	**15 42 21.9**	**+0.2**
KARY	**Karystos**	**2.87**	**249**	P	**Pn**	**15 42 22.9**	**+0.7**
KARY	**Karystos**	**2.87**	**249**	P	**Pn**	**15 42 22.1**	**-0.1**
ARG	**Arkhangelos**	**2.88**	**175**	P	**Pn**	**15 42 23.9**	**+1.6**
ARG	**Arkhangelos**	**2.88**	**175**	P	**Pn**	**15 42 22.9**	**+0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KYMI	**Kymi, Euboea I**	**2.95**	**262**	P	**Pn**	**15 42 23.9**	**+0.6**
AOS	**Alonnisos**	**3.08**	**273**	P	**Pn**	**15 42 26.1**	**+1.1**
KAVA	**Kavala**	**3.18**	**308**	P	**Pn**	**15 42 27.1**	**+0.6**
KAVA	**Kavala**	**3.18**	**308**	P	**Pn**	**15 42 26.9**	**+0.4**
DION	**Dionisos Attik**	**3.22**	**253**	P	**Pn**	**15 42 27.8**	**+0.8**
OUR	**Ouranopolis**	**3.22**	**294**	P	**Pn**	**15 42 27.7**	**+0.7**
OUR	**Ouranopolis**	**3.22**	**294**	P	**Pn**	**15 42 27.9**	**+1.0**
KSL	**Kastellorizon**	**3.25**	**154**	P	**Pn**	**15 42 28.6**	**+1.3**
VLY	**Voula,Athens**	**3.41**	**250**	P	**Pn**	**15 42 30.3**	**+0.8**
DIM	**Dimitrovgrad**	**3.42**	**330**	P	**Pn**	**15 42 30.8**	**+1.1**
RZN	**Rozhen**	**3.52**	**319**	P	**Pn**	**15 42 32.4**	**+1.2**
KARP	**Karpathos**	**3.58**	**189**	P	**Pn**	**15 42 32.4**	**+0.4**
SRS	**Serrai**	**3.83**	**303**	P	**Pn**	**15 42 35.5**	**+0.1**
PLD	**Plovdiv**	**3.85**	**323**	P	**Pn**	**15 42 36.8**	**+1.1**
MMB	**Musomishta**	**3.97**	**309**	P	**Pn**	**15 42 38.6**	**+1.2**
ELND	**Elena**	**4.11**	**339**	⇓P	**Pn**	**15 42 40.1**	**+0.9**
PVL	**Pavlikeni**	**4.50**	**334**	P	**Pn**	**15 42 45.9**	**+1.3**
RAZG	**Razgrad**	**4.58**	**348**	⇓P	**Pn**	**15 42 47.6**	**+1.9**
KIRS	**Kirsehir-Merke**	**4.73**	**88**	⇑P	**Pn**	**15 42 49.4**	**+1.6**
PLVB	**Pleven**	**4.93**	**332**	⇑P	**Pn**	**15 42 51.3**	**+0.9**
VTS	**Vitosha**	**4.96**	**317**	P	**Pn**	**15 42 52.5**	**+1.5**
ICOR	**Ion Corvin**	**5.02**	**360**	⇑P	**Pn**	**15 42 53.9**	**+2.1**
TIRR	**Tirgusor**	**5.38**	**4**	⇑P	**Pn**	**15 42 57.4**	**+0.8**
CFR	**Carcaliu**	**6.09**	**2**	⇑P	**Pn**	**15 43 07.2**	**+0.8**
BOVS	**Bovan**	**6.47**	**317**	⇑P	**Pn**	**15 43 13.3**	**+1.7**
MLR	**Muntele Rosu**	**6.55**	**348**	⇓P	**Pn**	**15 43 14.7**	**+1.9**
VOIR		**6.67**	**343**	⇑P	**Pn**	**15 43 15.3**	**+0.8**
ODBI	**Odobesti**	**6.69**	**355**	⇑P	**Pn**	**15 43 17.0**	**+2.4**
PLOR	**Plostina**	**6.81**	**353**	⇓P	**Pn**	**15 43 18.7**	**+2.3**
VRI	**Vrincioaia**	**6.82**	**353**	⇑P	**Pn**	**15 43 17.9**	**+1.4**
SEV	**Sevastopol'**	**6.97**	**37**	*e*P	**Pn**	**15 43 18.5**	**0.0**
SEV				pmax	pmax	15 43 24.2	
	comp=Z,4.0nm,0.5s						
SEV				*e*S	**Sn**	**15 44 34.2**	**-3.3**
SEV				smax	smax	15 44 40.8	
	comp=N,4.0nm,0.4s						
SEV				smax	smax	15 44 40.8	
	comp=E,8.0nm,0.6s						
LOT	**Lotru**	**7.03**	**336**	⇓P	**Pn**	**15 43 20.3**	**+0.8**
HERR	**Herculane**	**7.05**	**327**	⇓P	**Pn**	**15 43 20.2**	**+0.6**
TURR	**Turia**	**7.09**	**350**	⇓P	**Pn**	**15 43 22.5**	**+2.3**
DOPR	**Dopca**	**7.11**	**346**	⇓P	**Pn**	**15 43 22.6**	**+2.2**
YAL	**Yalta**	**7.17**	**39**	*e*P	**Pn**	**15 43 21.6**	**+0.5**
YAL				pmax	pmax	15 43 22.0	
	comp=Z,3.0nm,0.3s						
YAL				*e*S	**Sn**	**15 44 39.6**	**-2.6**
YAL				smax	smax	15 44 42.6	
	comp=N,5.0nm,0.3s						
YAL				smax	smax	15 44 42.6	
	comp=E,5.0nm,0.2s						
TARU	**Tarkhankut**	**7.18**	**27**	*e*S	**Sn**	**15 44 41.4**	**-1.2**
TARU				smax	smax	15 44 43.1	
	comp=N,21nm,0.6s						
TARU				smax	smax	15 44 43.1	
	comp=E,13nm,0.7s						
ONER	**Baraj Valea Uz**	**7.32**	**352**	⇓P	**Pn**	**15 43 25.2**	**+1.9**
GZR	**Gura Zlata**	**7.33**	**331**	⇑P	**Pn**	**15 43 24.7**	**+1.2**
DNZ2	**Donuzlav2**	**7.44**	**31**	*e*S	**Sn**	**15 44 45.8**	**-3.1**
DNZ2				smax	smax	15 44 50.2	
	comp=N,9.0nm,0.4s						
DNZ2				smax	smax	15 44 50.2	
	comp=E,6.0nm,0.3s						
TESR	**Tescani**	**7.47**	**354**	⇓P	**Pn**	**15 43 26.7**	**+1.4**
MDB	**Medias**	**7.49**	**341**	⇓P	**Pn**	**15 43 27.8**	**+2.2**
SUDU	**Sudak**	**7.87**	**40**	*e*P	**Pn**	**15 43 32.4**	**+1.6**
SUDU				pmax	pmax	15 43 36.7	
	comp=Z,3.0nm,0.7s						
SUDU				*e*S	**Sn**	**15 44 59.5**	**-0.1**
SUDU				smax	smax	15 45 00.7	
	comp=N,3.0nm,0.4s						
SUDU				smax	smax	15 45 00.7	
	comp=E,2.0nm,0.3s						
BZS	**Buzias**	**7.98**	**327**	⇑P	**Pn**	**15 43 33.1**	**+0.7**
MARR	**Marisel-Cluj**	**8.33**	**337**	⇓P	**Pn**	**15 43 39.4**	**+2.1**
BURAR	**Bucovina Array**	**8.73**	**348**	⇑P	**Pn**	**15 43 45.3**	**+2.6**
ZST	**Bratislava**	**11.96**	**323**	*e*PN	**Pn**	**15 44 29.9**	**+3.1**

IDC 04 15:46:02.9±2.2**, 3°67N**×**127°95E, h0**km**, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=181.7km s-min=22.9km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.29**	**165**	P	P	15 51 21.9	-0.2
	0.3nm,0.7s,baz=345,slow=10,SNR=6.3						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**27.78**	**168**	P	P	15 51 54.1	+0.4
	0.4nm,1.0s,baz=348,slow=9.3,SNR=1.7						
	0.4nm,1.0s						
MKAR	**Makanchi Array**	**58.31**	**325**	P	P	15 55 59.8	+0.1
	0.4nm,0.4s,baz=114,slow=8.1,SNR=20						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**62.45**	**327**	P	P	15 56 27.5	-0.5
	0.3nm,0.4s,baz=106,slow=6.8,SNR=3.0						
	0.3nm,0.4s						

IDC ***04*** *15:46:32.2±0.8, 8°98S×158°00E, h0km, mb4.0/13, mbtmp3.9/14, ML3.6/1, Error ellipse: s-maj=25.5km s-min=18.1km az=135.0*

NEIC ***04*** *15:46:34.0±0.6, 9°0S±0°1×158°04E±0°07, h10km±1km, mb4.6/21, Error ellipse: s-maj=22.1km s-min=12.2km az=182.0*

ISC 04 15:46:35.6±0.5**, 9°1S**±0°1×**158°02E**±0°08**, h23**km**, n47, σ0§85**/47**, mb4.1**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.94**	**101**	Pn	**Pn**	**15 47 06.4**	**-0.7**
	2.1nm,0.3s,baz=346,slow=3.6,SNR=21						
HNR	**Honiara**	**1.94**	**101**		**Pn**	**15 47 06.2**	**-0.9**
PMG	**Port Moresby**	**10.72**	**267**	Pn	**Pn**	**15 49 07.7**	**-0.2**
COEN	**Coen**	**15.33**	**250**	P	**P**	**15 50 15.7**	**+0.4**
CTA	**Charters Tower**	**15.79**	**225**	Pn	**Pn**	**15 50 15.5**	**-1.1**
	0.1nm,0.3s,baz=39,slow=14,SNR=2.2						
	1.8nm,0.7s						
CTA	**Charters Tower**	**15.79**	**225**		**Pn**	**15 50 15.5**	**-1.1**
ARMA	**Armidale**	**22.06**	**195**	P	**P**	**15 51 30.4**	**+1.3**
ARMA				IAmb	IAmb	15 51 43.9	
	comp=Z,55nm,1.7s						
INKA	**Innaminka**	**24.71**	**219**	P	**P**	**15 51 55.9**	**+0.7**
INKA				IAmb	IAmb	15 51 56.8	
	comp=Z,14nm,1.9s						
WR8	**Warramunga Arr**	**25.17**	**242**	P	**P**	**15 51 59.9**	**+0.4**
WR8				IAmb	IAmb	15 52 05.0	
	comp=Z,12nm,1.3s						
WB0	**Warramunga Arr**	**25.19**	**242**	P	**P**	**15 51 59.7**	**-0.1**
WB0				IAmb	IAmb	15 52 07.1	
	comp=Z,14nm,1.3s						
WRAB	**Tennant Creek**	**25.29**	**242**	P	**P**	**15 52 00.4**	**-0.3**
WRAB				IAmb	IAmb	15 52 08.3	
	comp=Z,19nm,1.8s						
WRA	**Warramunga Arr**	**25.31**	**242**	P	**P**	**15 52 00.7**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=68,slow=9.5,SNR=20						
	comp=Z,2.1nm,0.7s						
WRA	**Warramunga Arr**	**25.31**	**242**	P	**P**	**15 51 59.7**	**-1.0**
MTN	**Manton Dam**	**26.65**	**259**	P	**P**	**15 52 12.5**	**-0.5**
MTN				IAmb	IAmb	15 52 34.6	
	comp=Z,33nm,1.6s						
AS31	**Alice Springs**	**27.24**	**235**	P	**P**	**15 52 18.1**	**-0.1**
ASAR	**Alice Springs**	**27.24**	**235**	P	**P**	**15 52 17.7**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=69,slow=9.2,SNR=9.5						
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**27.24**	**235**	P	**P**	**15 52 17.6**	**-0.6**
STKA	**Stephens Creek**	**27.34**	**212**	P	**P**	**15 52 21.4**	**+2.4**
	comp=Z,2.1nm,0.8s,baz=16,slow=16,SNR=3.7						
	comp=Z,2.1nm,0.8s						
STKA	**Stephens Creek**	**27.34**	**212**	P	**P**	**15 52 18.9**	**-0.1**
AFI	**Afiamalu**	**29.97**	**102**	P	**P**	**15 52 42.8**	**+0.2**
NIUE	**Niue**	**32.59**	**111**	P	**P**	**15 53 05.7**	**0.0**
PETK	**Petropavlovsk-**	**61.94**	**360**	P	**P**	**15 56 53.6**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=151,slow=6.9,SNR=9.2						
	comp=Z,3.3nm,0.8s						
PETK	**Petropavlovsk-**	**61.94**	**360**	P	**P**	**15 56 53.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**64.37**	**295**	P	**P**	**15 57 11.2**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=122,slow=5.1,SNR=7.3						
	comp=Z,0.7nm,0.7s						
MA2	**Magadan**	**68.67**	**356**	P	**P**	**15 57 34.9**	**-1.9**
	comp=Z,1.9nm,0.6s,baz=338,slow=19,SNR=2.1						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**72.70**	**326**	P	**P**	**15 58 03.0**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=128,slow=4.4,SNR=2.3						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**72.70**	**326**	P	**P**	**15 58 01.4**	**-0.4**
SONM				IAmb	IAmb	15 58 45.5	
	comp=Z,5.7nm,0.9s						
P16K	**Nushagak River**	**76.50**	**22**	P	**P**	**15 58 23.4**	**-0.1**
BILL	**Bilibino**	**77.14**	**3**	P	**P**	**15 58 27.3**	**+0.3**
M16K	**Timber Creek**	**77.60**	**20**	P	**P**	**15 58 29.7**	**0.0**
CCB	**Clear Creek Bu**	**83.83**	**21**	P	**P**	**15 59 02.7**	**-0.1**
ILAR	**Eielson Array**	**84.22**	**21**	P	**P**	**15 59 04.5**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=257,slow=5.5,SNR=15						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**84.22**	**21**	P	**P**	**15 59 04.8**	**-0.1**
J25K	**Salcha River,**	**84.67**	**21**	P	**P**	**15 59 07.3**	**+0.1**
MKAR	**Makanchi Array**	**86.93**	**318**	P	**P**	**15 59 19.0**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=89,slow=6.3,SNR=7.0						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**86.93**	**318**	P	**P**	**15 59 19.0**	**+0.2**
D25K	**Kavik River**	**87.03**	**17**	P	**P**	**15 59 19.0**	**+0.1**
ZALV	**Zalesovo Beam**	**87.57**	**326**	P	**P**	**15 59 20.5**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=122,slow=7.0,SNR=2.6						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**87.57**	**326**	P	**P**	**15 59 20.5**	**-1.2**
E27K	**Coleen River**	**87.87**	**19**	P	**P**	**15 59 23.3**	**+0.4**
A04D	**Lummi Island**	**89.75**	**41**	P	**P**	**15 59 32.1**	**0.0**
KURBB	**Kurchatov Arra**	**90.34**	**321**	P	**P**	**15 59 33.0**	**-1.9**
	comp=Z,0.2nm,0.8s,baz=93,slow=4.6,SNR=1.4						
	comp=Z,0.2nm,0.8s						
NVAR	**Mina Array Bea**	**90.66**	**51**	P	**P**	**15 59 38.8**	**+1.8**
	comp=Z,0.3nm,0.4s,baz=252,slow=6.7,SNR=3.5						
	comp=Z,0.3nm,0.4s						
BVAR	**Borovoye Array**	**95.75**	**323**	P	**P**	**15 59 59.9**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=129,slow=3.9,SNR=2.5						
	comp=Z,0.4nm,0.6s						
BVAR	**Borovoye Array**	**95.75**	**323**	P	**P**	**15 59 59.9**	**+0.2**
BDFB	**Brasilia**	**144.40**	**133**	PKP	**PKPdf**	**16 06 10.8**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=255,slow=4.9,SNR=5.4						
BDFB	**Brasilia**	**144.40**	**133**		**PKPdf**	**16 06 10.8**	**-0.4**

IDC ***04*** *15:47:09.5±0.6, 9°11S×158°06E, h0km, mb4.6/26, mbtmp4.5/30, ML1.5/1, MS3.8/6, Error ellipse: s-maj=16.9km s-min=13.1km az=123.0*

BJI ***04*** *15:47:10.4, 8°60S×158°44E, h9km, mB5.2/10, mb4.6/51, Ms4.9/6, Ms7 4.7/6*

MOS ***04*** *15:47:12.5±0.9, 9°06S×157°88E, h25km, mb4.9/24, Error ellipse: s-maj=9.3km s-min=7.7km az=35.1*

NEIC ***04*** *15:47:12.2±1.9, 9°0S±0°1×157°91E±0°03, h10km±1km, mb5.1/63, Error ellipse: s-maj=17.7km s-min=3.5km az=191.0*

ISC 04 15:47:13.3±0.3**, 9°19S**±0°06×**157°99E**±0°05**, h23**km**, n203, σ1§72**/186**, mb4.9**/102**, MS4.0**/6**, 11C-13D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.95**	**97**	Pn	**Pn**	**15 47 42.4**	**-2.6**
	7.9nm,0.3s,baz=116,slow=9.6,SNR=5.1						
HNR				Sn	**Sb**	**15 48 14.8**	**+2.8**
	11nm,0.3s,baz=90,slow=23,SNR=4.0						
HNR	**Honiara**	**1.95**	**97**	Pn	**Pn**	**15 47 45.4**	**+0.4**
HNR	**Honiara**	**1.95**	**97**	P	**Pn**	**15 47 45.4**	**+0.4**
HNR						15 48 14.9	
PMG	**Port Moresby**	**10.69**	**268**	Pn	**Pn**	**15 49 44.3**	**-0.9**
	0.2nm,0.3s,baz=92,slow=12,SNR=4.1						
PMG				Sn	**Sn**	**15 51 50.3**	**+6.1**
	1.2nm,0.3s,baz=260,slow=12,SNR=11						
PMG				LR	LR	15 53 28.4	
	comp=Z,657nm,19.7s,baz=86,slow=35						
	6.6nm,0.9s						
PMG	**Port Moresby**	**10.69**	**268**		**Pn**	**15 49 43.3**	**-1.9**
PMG	**Port Moresby**	**10.69**	**268**	⇑*e*P	**Pn**	**15 49 43.6**	**-1.5**
PMG				pmax	pmax		
	comp=Z,15nm,1.3s						
PMG	**Port Moresby**	**10.69**	**268**	P	**Pn**	**15 49 46.9**	**+1.8**
DZM	**Mont Dzumac**	**15.17**	**149**	Pn	**Pn**	**15 50 46.5**	**+0.1**
	comp=Z,6.0nm,0.9s,baz=225,slow=22,SNR=4.0						
DZM	**Mont Dzumac**	**15.17**	**149**	*e*P	**P**	**15 50 50.9**	**-0.4**
	comp=Z,57nm,1.2s						
DZM				*e*LR	LR	15 54 12.1	
	comp=Z,211nm,20.6s						
DZM	**Mont Dzumac**	**15.17**	**149**		**P**	**15 50 53.5**	**+2.3**
DZM				IAmb	IAmb	15 50 55.2	
	comp=Z,60nm,1.7s						
COEN	**Coen**	**15.27**	**251**	Pn	**Pn**	**15 50 49.0**	**+1.5**
CTA	**Charters Tower**	**15.68**	**225**	Pn	**Pn**	**15 50 52.5**	**-0.5**
	comp=Z,11nm,0.8s,baz=52,slow=12,SNR=7.5						
CTA				Sn	**Sn**	**15 53 37.6**	**-8.6**
	comp=Z,0.3nm,0.3s,baz=32,slow=20,SNR=1.7						
CTA				LR	LR	15 56 13.4	
	comp=Z,424nm,21.2s,baz=54,slow=34						
JAY	**Jayapura**	**18.42**	**290**	P	**P**	**15 51 25.2**	**-2.0**
	comp=Z,14nm,0.8s,baz=336,slow=4.0,SNR=5.2						
JAY	**Jayapura**	**18.42**	**290**	P	**P**	**15 51 27.4**	**+0.2**
	comp=Z,44nm,1.0s						
MSVF	**Nonsavu**	**21.26**	**116**	P	**P**	**15 52 01.4**	**+3.1**
MSVF	**Nonsavu**	**21.26**	**116**	⇑*e*P	**P**	**15 52 01.3**	**+3.1**
MSVF				pmax	pmax		
	comp=Z,28nm,1.3s						
ARMA	**Armidale**	**21.94**	**195**		**P**	**15 52 05.8**	**+0.3**
INKA	**Innaminka**	**24.60**	**219**		**P**	**15 52 32.9**	**+1.0**
WR8	**Warramunga Arr**	**25.09**	**242**		**P**	**15 52 36.3**	**-0.2**
WR8				IAmb	IAmb	15 52 42.7	
	comp=Z,45nm,1.2s						
WB0	**Warramunga Arr**	**25.11**	**243**		**P**	**15 52 37.0**	**+0.3**
WB0				IAmb	IAmb	15 52 45.6	
	comp=Z,35nm,1.1s						
WRAB	**Tennant Creek**	**25.21**	**242**	P	**P**	**15 52 37.8**	**+0.2**
WRAB	**Tennant Creek**	**25.21**	**242**	*de*P	**P**	**15 52 38.0**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,44nm,1.7s						
WRA	**Warramunga Arr**	**25.23**	**242**	P	**P**	**15 52 38.4**	**+0.7**
	comp=Z,12nm,0.7s,baz=67,slow=9.2,SNR=31						
WRA				PcP	**PcP**	**15 56 11.5**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=53,slow=1.6,SNR=3.3						
	comp=Z,12nm,0.7s						
AS31	**Alice Springs**	**27.15**	**235**	P	**P**	**15 52 55.3**	**+0.1**
ASAR	**Alice Springs**	**27.16**	**235**	P	**P**	**15 52 55.2**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=64,slow=8.9,SNR=21						
ASAR				PcP	**PcP**	**15 56 15.2**	**-0.3**
	comp=Z,1.4nm,1.0s,baz=68,slow=2.9,SNR=2.8						
	comp=Z,4.6nm,0.8s						
ASAR	**Alice Springs**	**27.16**	**235**		**P**	**15 52 54.9**	**-0.3**
STKA	**Stephens Creek**	**27.23**	**212**	P	**P**	**15 52 56.8**	**+1.1**
	comp=Z,12nm,0.8s,baz=40,slow=14,SNR=14						
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**27.23**	**212**		**P**	**15 52 57.0**	**+1.3**
STKA	**Stephens Creek**	**27.23**	**212**	⇑*e*P	**P**	**15 52 56.4**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**28.81**	**17**	T	T	16 21 53.9	
	baz=199,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.82**	**17**	T	T	16 21 46.1	
	baz=199,slow=76,SNR=31						
H11S1	**WAKE ISLAND Hy**	**28.83**	**17**	T	T	16 21 46.0	
	baz=199,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**30.03**	**17**	T	T	16 23 34.9	
	baz=137,slow=76,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**30.04**	**17**	T	T	16 23 30.2	
	baz=137,slow=76,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**30.05**	**17**	T	T	16 23 37.7	
	baz=137,slow=76,SNR=5.4						
BBOO	**Buckleboo**	**31.04**	**218**	P	**P**	**15 53 28.8**	**-0.8**
BBOO				IAmb	IAmb	15 53 36.8	
	comp=Z,21nm,0.8s						
FITZ	**Fitzroy Crossi**	**32.61**	**251**	P	**P**	**15 53 43.0**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=162,slow=12,SNR=2.5						
	comp=Z,3.5nm,0.8s						
URZ	**Urewera**	**33.68**	**152**	LR	LR	16 05 41.4	
	comp=Z,126nm,18.1s,baz=354,slow=33						
FORT	**Forrest**	**35.20**	**228**	P	**P**	**15 54 06.2**	**+0.4**
MMRI	**Maumere**	**35.31**	**268**	P	**P**	**15 54 09.0**	**+1.9**
EDFI	**Ende, Flores**	**35.85**	**268**	P	**P**	**15 54 09.9**	**-1.9**
	comp=Z,30nm,1.0s						
KKSI	**Kolaka, Sulawe**	**36.41**	**275**	P	**P**	**15 54 17.1**	**+0.6**
	comp=Z,17nm,0.5s						
MQZ	**McQueen's Vall**	**36.69**	**162**	P	**P**	**15 54 19.6**	**+1.2**
KAPI	**Kappang**	**38.15**	**274**	⇑*e*P	**P**	**15 54 32.0**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,24nm,1.0s						
KAPI	**Kappang**	**38.15**	**274**	P	**P**	**15 54 34.3**	**+3.0**
	comp=Z,15nm,1.1s						
TOLI2	**Tolitoli**	**38.45**	**284**	P	**P**	**15 54 34.0**	**+0.2**
DBNI	**Kabupaten Domp**	**39.20**	**268**	P	**P**	**15 54 39.9**	**-0.2**
	comp=Z,11nm,0.7s						
PLAI	**Plampang**	**39.70**	**267**	P	**P**	**15 54 42.7**	**-1.6**
	comp=Z,38nm,0.8s						
KHKI	**Kahang-Kahang**	**41.88**	**268**	P	**P**	**15 55 03.8**	**+1.6**
	comp=Z,16nm,0.7s						
BBKI	**Banjar Baru**	**43.23**	**275**	P	**P**	**15 55 14.6**	**+1.3**
	comp=Z,53nm,1.3s						
JAGI	**Jajag, Banyuwa**	**43.30**	**267**	P	**P**	**15 55 12.3**	**-1.5**
JAGI	**Jajag, Banyuwa**	**43.30**	**267**	P	**P**	**15 55 11.2**	**-2.6**
NWAO	**Narrogin (SRO)**	**44.37**	**232**	P	**P**	**15 55 23.4**	**+1.2**
	comp=Z,7.3nm,0.9s,baz=334,slow=6.8,SNR=1.9						
	comp=Z,7.3nm,0.9s						
SJI	**Sawahan**	**45.72**	**268**	P	**P**	**15 55 34.1**	**+0.9**
	comp=Z,34nm,1.3s						
SNJI	**Sawahan-Nganju**	**45.72**	**268**	P	**P**	**15 55 34.6**	**+1.2**
	comp=Z,56nm,1.3s						
PCJI	**Pacitan**	**46.26**	**267**	P	**P**	**15 55 37.8**	**+0.4**
CTJI	**Waduk Cacaban**	**48.34**	**269**	P	**P**	**15 55 56.3**	**+2.7**
	comp=Z,47nm,1.3s						
JMN	**Monobe**	**48.44**	**333**	P	**P**	**15 55 53.0**	**-1.1**
MJAR	**Matsushiro Arr**	**49.14**	**339**	P	**P**	**15 55 57.3**	**-2.1**
	comp=Z,1.2nm,0.6s,baz=173,slow=8.8,SNR=4.1						
	comp=Z,1.2nm,0.6s						
JNU	**Nakatsue**	**49.36**	**330**	P	**P**	**15 56 01.2**	**0.0**
	comp=Z,16nm,1.1s,baz=337,slow=4.9,SNR=4.1						
	comp=Z,16nm,1.1s						
BBJI	**Bungbulang**	**49.81**	**268**	P	**P**	**15 56 04.8**	**-0.1**
BBJI				IAmb	IAmb	15 56 09.8	
	comp=Z,39nm,1.8s						
BBJI	**Bungbulang**	**49.81**	**268**	P	**P**	**15 56 05.1**	**+0.1**
	comp=Z,9.4nm,0.9s						
LEM	**Lembang**	**49.90**	**269**	P	**P**	**15 56 06.5**	**+0.7**
	comp=Z,50nm,0.9s						
PPT2	**Papeete2**	**51.55**	**105**	*e*LR	LR	16 11 07.0	
	comp=Z,75nm,22.0s						
TBI	**Tubuai**	**52.10**	**112**	*e*LR	LR	16 11 29.6	
	comp=Z,285nm,29.8s						
HON	**Honolulu**	**52.79**	**54**	P	**P**	**15 56 28.2**	**+1.1**
HON	**Honolulu**	**52.79**	**54**	P	**P**	**15 56 28.2**	**+1.1**
HON				pmax	pmax		
	comp=Z,380nm,1.7s						
KASI	**Kota Agung**	**53.14**	**270**	P	**P**	**15 56 31.0**	**+1.2**
	comp=Z,19nm,1.0s						
MDSI	**Maura Dua**	**53.59**	**271**	P	**P**	**15 56 34.0**	**+0.8**
	comp=Z,12nm,1.4s						
KSRS	**Korea Array**	**54.27**	**331**	P	**P**	**15 56 36.9**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=150,slow=7.3,SNR=4.0						
	comp=Z,1.7nm,0.8s						
QIZ	**Qiongzhong**	**55.12**	**301**	P	**P**	**15 56 43.3**	**-0.9**
QIZ				S	**S**	**16 04 28.5**	**+2.4**
QIZ				LR	LR		
	comp=Z,190nm,13.3s						
QIZ				LR	LR		
	comp=Z,230nm,15.3s						
QIZ				LR	LR		
	comp=Z,220nm,13.9s						
NJ2	**Nanjing**	**55.49**	**319**	*e*P	**P**	**15 56 46.5**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PSTR	**Posyet**	**57.26**	**336**	⇑*e*P	**P**	**15 57 00.4**	**+1.4**
YSS	**Yuzhno-Sakhali**	**57.52**	**348**	⇑*e*P	**P**	**15 57 00.7**	**0.0**
YSS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**58.12**	**338**	P	**P**	**15 57 04.8**	**-0.2**
	comp=Z,6.2nm,0.9s,baz=64,slow=3.4,SNR=5.2						
	comp=Z,6.2nm,0.9s						
TAOE	**Nuku Hiva Isla**	**61.03**	**95**	*e*LR	LR	16 15 32.5	
	comp=Z,283nm,31.9s						
GSI	**Gunungsitoli**	**61.07**	**277**	P	**P**	**15 57 26.3**	**+0.3**
GSI	**Gunungsitoli**	**61.07**	**277**	P	**P**	**15 57 27.7**	**+1.7**
	comp=Z,49nm,0.9s						
GYA	**Guiyang**	**61.13**	**307**	⇓P	**P**	**15 57 30.6**	**+4.3**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BNX	**BinXian**	**61.18**	**336**	⇓P	**P**	**15 57 25.4**	**-0.7**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KCSI	**Kotacane, Aceh**	**61.33**	**279**	P	**P**	**15 57 28.4**	**+0.6**
	comp=Z,11nm,0.8s						
KCSI				pP	**pP**	**15 57 30.6**	**-3.3**
	comp=Z,11nm,0.8s						
HNS	**HongShan**	**61.54**	**322**	⇓P	**P**	**15 57 32.0**	**+3.3**
HNS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
PEA0B	**Petropavlovsk-**	**62.05**	**360**	⇓*e*P	**P**	**15 57 29.6**	**-2.2**
PETK	**Petropavlovsk-**	**62.05**	**360**	P	**P**	**15 57 31.1**	**-0.7**
	comp=Z,19nm,0.9s,baz=154,slow=5.8,SNR=10						
	comp=Z,19nm,0.9s						
PETK	**Petropavlovsk-**	**62.05**	**360**	P	**P**	**15 57 31.3**	**-0.5**
PETK	**Petropavlovsk-**	**62.05**	**360**	P	**P**	**15 57 31.3**	**-0.5**
KLR	**Kul'dur**	**62.56**	**341**	⇓*e*P	**P**	**15 57 35.5**	**+0.2**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.7s						
XAN	**Xi'an**	**63.33**	**315**	⇓P	**P**	**15 57 43.1**	**+2.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KMI2	**Kunming**	**63.70**	**304**	P	**P**	**15 57 47.8**	**+4.2**
KMI2				pmax	pmax		
	comp=Z,11nm,1.4s						
CMAR	**Chiang Mai Arr**	**64.40**	**295**	P	**P**	**15 57 48.9**	**+0.8**
	comp=Z,7.7nm,0.9s,baz=118,slow=5.0,SNR=37						
	comp=Z,7.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**64.40**	**295**	P	**P**	**15 57 47.9**	**-0.2**
CHTO	**Chiang Mai**	**64.52**	**296**	P	**P**	**15 57 51.9**	**+3.0**
	comp=Z,13nm,1.0s						
HEH	**HeiHe**	**64.91**	**339**	*e*P	**P**	**15 57 50.1**	**-0.7**
HEH				pmax	pmax		
	comp=Z,11nm,0.8s						
PZH	**PanZhiHua**	**65.09**	**305**	P	**P**	**15 57 54.6**	**+2.0**
CD2	**Chengdu**	**65.48**	**310**	P	**P**	**15 57 55.2**	**+0.2**
CD2				pP	pP	15 57 58.1	-3.4
CD2				S	**S**	**16 06 40.6**	**+1.8**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,280nm,6.0s						
HHC	**Hu-ho-hao-te**	**65.61**	**323**	*e*P	**P**	**15 57 57.6**	**+1.9**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BTO2	**Baotou**	**66.56**	**322**	*e*P	**P**	**15 58 03.3**	**+1.5**
BTO2				PP	**PP**	**16 00 30.1**	**+1.4**
BTO2				S	**S**	**16 06 56.1**	**+4.4**
BTO2				pmax	pmax		
	comp=Z,13nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,250nm,4.2s						
BTO2				LR	LR		
	comp=Z,260nm,5.5s						
BTO2				LR	LR		
	comp=Z,400nm,9.1s						
TNCH	**TengChong**	**67.15**	**302**	P	**P**	**15 58 09.5**	**+3.5**
TNCH				pmax	pmax		
	comp=Z,21nm,1.0s						
HILR	**Hailar Array B**	**67.38**	**334**	P	**P**	**15 58 08.1**	**+1.4**
	comp=Z,3.1nm,0.9s,baz=132,slow=8.2,SNR=5.7						
	comp=Z,3.1nm,0.9s						
ZEA	**Zeya**	**67.88**	**341**	*e*P	**P**	**15 58 09.8**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	**Lanzhou**	**67.95**	**315**	*e*P	**P**	**15 58 11.3**	**+0.5**
LZH				pP	sP	15 58 19.0	-0.8
LZH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LZH				LR	LR		
	comp=Z,210nm,13.1s						
LZH				LR	LR		
	comp=Z,200nm,13.1s						
LZH				LR	LR		
	comp=Z,160nm,13.4s						
LZDM	**Lanzhou Array**	**67.99**	**315**	P	**P**	**15 58 11.5**	**+0.3**
	comp=Z,6.0nm,0.9s,baz=188,slow=5.5,SNR=11						
	comp=Z,6.0nm,0.9s						
MA2	**Magadan**	**68.78**	**356**	P	**P**	**15 58 14.1**	**-1.1**
	comp=Z,9.8nm,0.8s,baz=135,slow=5.2,SNR=11						
	comp=Z,9.8nm,0.8s						
MA2	**Magadan**	**68.78**	**356**	P	**P**	**15 58 14.3**	**-0.9**
MA2				IAmb	IAmb	15 58 15.3	
	comp=Z,9.5nm,0.8s						
MA2	**Magadan**	**68.78**	**356**	*de*P	**P**	**15 58 14.6**	**-0.6**
MA2				pmax	pmax		
	comp=Z,12nm,1.0s						
MA2	**Magadan**	**68.78**	**356**	P	**P**	**15 58 14.1**	**-1.1**
	comp=Z,14nm,0.8s						
SEY	**Seymchan**	**72.03**	**357**	P	**P**	**15 58 34.0**	**-1.1**
	comp=Z,4.3nm,1.0s,baz=165,slow=9.1,SNR=7.4						
	comp=Z,4.3nm,1.0s						
SEY	**Seymchan**	**72.03**	**357**	⇓*e*P	**P**	**15 58 35.0**	**-0.1**
SEY				pmax	pmax		
	comp=Z,20nm,2.5s						
GTA2	**Gaotai**	**72.43**	**316**	*e*P	**P**	**15 58 38.9**	**+0.7**
GTA2				pmax	pmax		

comp=Z,3.0nm,0.9s
ULN Ulaanbaatar 72.44 327 *de*P **P 15 58 38.9 +0.9**
ULN pmax pmax
comp=Z,11nm,1.7s
ULN Ulaanbaatar 72.44 327 P **P 15 58 38.3 +0.3**
comp=Z,18nm,1.1s
SONM Songino Array 72.78 326 P **P 15 58 41.5 +1.5**
comp=Z,4.2nm,0.8s,baz=158,slow=5.0,SNR=13
comp=Z,4.2nm,0.8s
SONM Songino Array 72.78 326 P **P 15 58 39.5 -0.6**
SONM Songino Array 72.78 326 P **P 15 58 39.5 -0.6**
SONM pmax pmax
comp=Z,6.0nm,0.9s
YAK Yakutsk 74.34 347 P **P 15 58 48.2 -0.5**
comp=Z,20nm,0.9s,baz=68,slow=1.5,SNR=11
YAK LR LR 16 29 23.1
comp=Z,21nm,21.7s,baz=274,slow=34
comp=Z,20nm,0.9s
YAK Yakutsk 74.34 347 P **P 15 58 47.9 -0.8**
YAK IAmb IAmb 15 58 52.4
comp=Z,25nm,0.9s
YAK Yakutsk 74.34 347 *e*P **P 15 58 48.7 0.0**
YAK *e**PP **pP 15 58 51.9 -3.3**
YAK *e* 15 59 03.2
YAK *e* 16 01 29.5
YAK *e*PPP PPP 16 03 18.3
YAK *e*S **S 16 08 22.6 +1.3**
YAK *e* 16 08 58.8
YAK *e*SS **SS 16 13 06.0 -1.9**
YAK *e*SSS SSS 16 16 21.2
YAK pmax pmax
comp=Z,30nm,1.4s
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,3.0nm,1.5s
YAK pmax pmax
comp=Z,142nm,6.0s
YAK pmax pmax
comp=N,160nm,5.4s
YAK pmax pmax
comp=E,196nm,7.8s
YAK smax smax
comp=N,253nm,7.2s
YAK smax smax
comp=E,93nm,5.8s
GOMU GeErMu 74.50 311 P **P 15 58 51.9 +1.2**
GOMU pmax pmax
comp=E,2.0nm,0.8s
ZAK Zakamensk 75.92 327 *e*P **P 15 58 57.1 -1.1**
ZAK pmax pmax
comp=Z,8.0nm,1.9s
BILL Bilibino 77.26 3 P **P 15 59 04.7 -0.6**
BILL IAmb IAmb 15 59 10.1
comp=Z,21nm,1.1s
BILL Bilibino 77.26 3 *ce*P **P 15 59 05.0 -0.3**
BILL pmax pmax
comp=Z,15nm,1.1s
ANM Nome 78.52 15 IAmb IAmb 15 59 13.9
comp=Z,20nm,1.4s
I17K Unalakleet 79.28 17 IAmb IAmb 15 59 18.1
comp=Z,19nm,1.2s
QSPA South Pole Qui 80.80 180 P **P 15 59 24.6 -0.4**
comp=Z,2.3nm,0.5s,baz=331,slow=3.6,SNR=3.9
comp=Z,2.3nm,0.5s
J20K Nowinta River 81.52 19 IAmb IAmb 15 59 33.5
comp=Z,19nm,1.3s
WMQ Urumqi 82.44 317 *e*P **P 15 59 35.2 +1.2**
HYB Hyderabad 82.78 289 *e*P **P 15 59 35.9 -0.4**
I21K Tanana 82.88 19 IAmb IAmb 15 59 40.4
comp=Z,11nm,1.0s
TIXI Tiksi 82.95 351 P **P 15 59 35.7 -0.2**
TIXI IAmb IAmb 15 59 41.0
comp=Z,40nm,2.0s
TIXI Tiksi 82.95 351↓ *e*P **P 15 59 35.4 -0.5**
TIXI pmax pmax
comp=Z,16nm,1.7s
NEA2 Nenana 83.48 20 IAmb IAmb 15 59 39.1
comp=Z,12nm,1.0s
WRH Wood River Hil 83.74 21 IAmb IAmb 15 59 40.5
comp=Z,20nm,1.2s
COLA College 84.06 20 *de*P **P 15 59 41.1 -0.7**
COLA pmax pmax
comp=Z,16nm,0.9s
IL31 84.34 21 IAmb IAmb 15 59 46.6
comp=Z,19nm,1.4s
ILAR Eielson Array 84.34 21 P **P 15 59 41.9 -1.3**
comp=Z,5.3nm,1.0s,baz=263,slow=4.4,SNR=24
comp=Z,5.3nm,1.0s
ILAR Eielson Array 84.34 21 P **P 15 59 42.2 -1.0**
DGZ Jazzator, Alta 84.68 322↓ *e*P **P 15 59 45.1 -0.4**
DGZ pmax pmax
comp=Z,9.0nm,1.4s
DOT Dot Lake 84.73 22 IAmb IAmb 15 59 47.0
comp=Z,11nm,0.9s
SCRK Sand Creek 84.93 22 P **P 15 59 46.5 +0.1**
SCRK IAmb IAmb 15 59 47.7
comp=Z,8.7nm,1.0s
ZSN Zaisan 85.52 319 *e*P **P 15 59 49.8 +0.3**
ZSN pmax pmax
comp=Z,7.0nm,1.6s
ZSN Zaisan 85.52 319 *e*P **P 15 59 49.9 +0.3**
comp=Z,7.1nm,1.6s
MK31 Makanchi Array 87.00 318 *ce*P **P 15 59 56.5 -0.4**
MKAR Makanchi Array 87.00 318 P **P 15 59 56.9 0.0**
comp=Z,3.7nm,0.7s,baz=102,slow=5.8,SNR=20
comp=Z,3.7nm,0.7s
MKAR Makanchi Array 87.00 318 P **P 15 59 56.2 -0.7**
MKAR Makanchi Array 87.00 318 P **P 15 59 56.2 -0.7**
MAKZ Makanchi 87.21 318 P **P 15 59 57.2 -0.7**
MAKZ Makanchi 87.21 318 P **P 15 59 57.2 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
J29N Klondike Camp 87.36 23 IAmb IAmb 16 00 04.0
comp=Z,18nm,1.2s
BBB Bella Bella 87.50 36 LR LR 16 37 03.1
comp=Z,71nm,19.2s,baz=206,slow=34
ZALV Zalesovo Beam 87.65 326 P **P 15 59 58.0 -1.8**
comp=Z,1.3nm,0.7s,baz=109,slow=6.8,SNR=6.1
comp=Z,1.3nm,0.7s
ZALV Zalesovo Beam 87.65 326 P **P 15 59 58.2 -1.6**
ZALV Zalesovo Beam 87.65 326 *i*P **P 16 00 00.8 +1.0**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
SHLS Shalkode 87.96 314 *e*P **P 16 00 00.3 -1.4**
SHLS pmax pmax
comp=Z,4.0nm,1.2s
SHLS Shalkode 87.96 314 *e*P **P 16 00 00.4 -1.4**
comp=Z,4.3nm,1.2s
UZB Uzynbulak 88.27 314 *e*P **P 16 00 03.2 0.0**
UZB Uzynbulak 88.27 314 *e*P **P 16 00 03.3 0.0**
PRZ Przheval'sk 88.55 313 IAmb IAmb 16 00 10.2
comp=Z,16nm,1.2s
SATY Saty 88.68 314 *e*P **P 16 00 05.2 0.0**
SATY pmax pmax
comp=Z,6.0nm,1.4s
SATY Saty 88.68 314 *e*P **P 16 00 05.2 0.0**
comp=Z,5.7nm,1.4s
TDK Taldyqorghan 89.15 316 *e*P **P 16 00 07.4 +0.2**
TDK Taldyqorghan 89.15 316 *e*P **P 16 00 07.4 +0.2**
MDOK Medeo 89.68 314 *e*P **P 16 00 09.8 -0.1**
MDOK Medeo 89.68 314 *e*P **P 16 00 09.9 0.0**
TNSS Tian-Shan 89.72 314 *e*P **P 16 00 10.1 -0.3**
TNSS Tian-Shan 89.72 314 *e*P **P 16 00 10.1 -0.3**
AAA Alma-Ata 89.78 314 *e*P **P 16 00 10.3 +0.1**
AAA Alma-Ata 89.78 314 *e*P **P 16 00 10.4 +0.1**
KSH2 Kashi 89.91 310 P **P 16 00 11.8 +0.8**
KSH2 pmax pmax
comp=Z,6.0nm,1.1s
MDPB Devils Postpil 90.00 52 IAmb IAmb 16 01 28.1
comp=Z,11nm,0.7s
KURK Kurchatov 90.38 321 P **P 16 00 13.8 +1.1**
KURK Kurchatov 90.38 321↑ *e*P **P 16 00 13.4 +0.7**
KURK pmax pmax
comp=Z,10.0nm,1.8s
KURBB Kurchatov Arra 90.41 321 P **P 16 00 11.8 -1.1**
comp=Z,0.6nm,0.9s,baz=107,slow=2.6,SNR=4.4
KURBB PP **PP 16 03 42.0 -5.6**
comp=Z,0.5nm,0.8s,baz=97,slow=7.3,SNR=4.3
comp=Z,0.6nm,0.9s
LHV Little Huntoon 90.57 51 IAmb IAmb 16 00 20.8
comp=Z,14nm,1.1s
INK Inuvik 90.72 20 IAmb IAmb 16 00 19.1
comp=Z,13nm,1.4s
NVAR Mina Array Bea 90.76 51 P **P 16 00 16.4 +1.4**
comp=Z,6.4nm,0.9s,baz=257,slow=5.2,SNR=16
comp=Z,6.4nm,0.9s
NVAR Mina Array Bea 90.76 51 P **P 16 00 15.8 +0.7**
DSP Deep Springs 90.81 52 P **P 16 00 16.5 +1.5**
DSP IAmb IAmb 16 00 18.2
comp=Z,9.2nm,1.0s
NV11 Mina Array Sit 90.87 51 IAmb IAmb 16 00 18.3
comp=Z,14nm,1.1s
AAK Ala-Archa 91.40 313↑ *e*P **P 16 00 17.3 -0.6**
AAK pmax pmax
comp=Z,2.0nm,0.9s
J08A Circle Bar Ran 91.57 46 IAmb IAmb 16 00 20.8
comp=Z,6.6nm,1.1s
WCT Wildcat Mounta 91.77 53 IAmb IAmb 16 00 26.2
comp=Z,14nm,1.3s
BMO Blue Mountains 92.68 45 IAmb IAmb 16 00 25.4
comp=Z,8.3nm,1.4s
PSUT Pine Spring 94.22 52 IAmb IAmb 16 00 34.1
comp=Z,15nm,1.6s
HLID Hailey 94.52 47 P **P 16 00 33.0 +0.7**
HLID IAmb IAmb 16 00 34.8
comp=Z,10nm,1.4s
IUG Iuzhnay 94.58 312 *e*P **P 16 00 32.5 0.0**
IUG pmax pmax
comp=Z,10.0nm,1.2s
IUG Iuzhnay 94.58 312 *e*P **P 16 00 32.6 0.0**
comp=Z,9.8nm,1.2s
BRLS Boroldaу 94.85 313 *e*P **P 16 00 34.0 +0.4**
BRLS Boroldaу 94.85 313 *e*P **P 16 00 34.0 +0.4**
CHM Chimkent 94.92 312 *e*P **P 16 00 34.1 +0.2**
CHM Chimkent 94.92 312 *e*P **P 16 00 34.1 +0.2**
BVAR Borovoye Array 95.82 323 P **P 16 00 35.8 -2.0**
comp=Z,1.7nm,0.8s,baz=104,slow=5.0,SNR=8.4
comp=Z,1.7nm,0.8s
BORK Borovoye 95.86 323↑ *e*P **P 16 00 36.0 -2.0**
BORK pmax pmax
comp=Z,3.0nm,1.1s
YKA Yellowknife Ar 96.88 28 P **P 16 00 41.8 -0.5**
comp=Z,0.4nm,0.7s,baz=267,slow=5.1,SNR=7.7
comp=Z,0.4nm,0.7s
PDAR Pinedale Array 97.96 48 P **P 16 00 47.0 -1.0**
comp=Z,0.8nm,0.8s,baz=278,slow=4.1,SNR=6.8
comp=Z,0.8nm,0.8s
ANMO Albuquerque 99.73 56 LR LR 16 48 02.7
comp=Z,39nm,18.3s,baz=298,slow=37
TXAR Lajitas Array 101.68 62 PP **PP 16 05 11.2 -4.3**
comp=Z,0.1nm,0.5s,baz=280,slow=7.8,SNR=3.4
OJC Ojcow 126.46 328 **PKiKP 16 06 15.5 +0.5**
OJC Ojcow 126.46 328 PKIKP **PKiKP 16 06 15.5 +0.5**
MODS Modra-Piesok 128.88 327 *e*PKIKP **PKPdf 16 06 11.9 -7.3**
MODS pmax pmax
comp=N,26nm,0.3s
BDFB Brasilia 144.34 134 PKP **PKPdf 16 06 48.0 -0.7**
comp=N,15nm,0.8s,baz=275,slow=2.8,SNR=18
BDFB Brasilia 144.34 134 PKPbc 16 06 47.5 +0.5
ESDC Sonseca Array 145.63 335 PKPbc **PKPdf 16 06 49.4 -0.9**
comp=N,2.2nm,1.0s,baz=34,slow=2.8,SNR=6.9
TORD Torodi Ar. Bea 156.42 282 PKP **PKPdf 16 07 09.1 +1.8**
comp=N,0.2nm,0.5s,baz=164,slow=2.1,SNR=2.0

IDC 04 15:59:28.0±1.9, 11°32'S×118°60'E, h0km, mb3.5/1, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=50.5km s-min=24.4km az=38.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.10**	**78**	Pn	Pn	Pn	16 00 46.5	+0.8
	2.9nm,0.3s,baz=157,slow=7.4,SNR=1.6							
BATI				Sn	Sn	Sn	16 01 44.6	-0.8
	2.3nm,0.3s,baz=293,slow=20,SNR=1.6							
	23nm,0.7s							
FITZ	**Fitzroy Crossi**	**9.57**	**136**	Pn	Pn	Pn	16 01 47.1	-0.2
	0.1nm,0.3s,baz=132,slow=20,SNR=1.3							
FITZ				Sn	Sn	Sn	16 03 27.0	-8.6
	0.5nm,0.3s,baz=175,slow=19,SNR=6.4							
	2.3nm,0.8s							
WRA	**Warramunga Arr**	**17.40**	**121**	P	Pn	Pn	16 03 31.6	-0.9
	0.1nm,0.3s,baz=291,slow=13,SNR=4.5							
WRA				S	Sn	Sn	16 06 31.6	-15
	0.6nm,1.1s,baz=295,slow=22,SNR=2.1							
	0.6nm,1.0s							
ASAR	**Alice Springs**	**19.05**	**132**	P	Pn	Pn	16 03 52.8	+0.1
	0.1nm,0.3s,baz=305,slow=13,SNR=8.8							
ASAR				S	Sn	Sn	16 07 14.2	-13
	0.2nm,0.5s,baz=310,slow=23,SNR=4.7							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**66.34**	**334**	P	P	P	16 10 18.4	-0.1
	0.3nm,0.5s,baz=147,slow=6.8,SNR=7.0							
	0.3nm,0.5s							

IDC 04 16:01:44.9±2.0, 31°91N×95°00E, h0km, mb3.4/4, mbtmp3.4/5, ML2.9/1, Error ellipse: s-maj=342.8km s-min=21.1km az=56.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.79**	**330**	P	P	P	16 05 55.1	+0.4
	baz=143,slow=13,SNR=4.6							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**22.33**	**332**	P	P	P	16 06 43.5	-0.6
	0.6nm,0.7s,baz=139,slow=10,SNR=4.5							
	0.6nm,0.7s							
BVAR	**Borovoye Array**	**27.59**	**327**	P	P	P	16 07 33.7	0.0
	0.4nm,0.7s,baz=142,slow=7.3,SNR=2.6							
	0.4nm,0.7s							
WRA	**Warramunga Arr**	**63.87**	**138**	P	P	P	16 12 19.0	-0.4
	0.5nm,0.8s,baz=330,slow=6.8,SNR=4.6							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**66.62**	**141**	P	P	P	16 12 37.6	+0.3
	0.2nm,0.5s,baz=324,slow=6.1,SNR=10							
	0.2nm,0.5s							

*NEIC **04** 16:06:51.4±0.9, 17°.77N±0°.03×66°.860W±0°.008, h10km±2km, ML3.0/33, Md2.9/7(RSPR), Error ellipse: s-maj=4.5km s-min=2.9km az=5.0*

RSPR 04 16:06:52.5, 17°.38N×66°.87W, h9km, MD2.9/7, 4C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.15**	**357**			Pg	16 06 56.1	+0.3
GBPR						Sg	16 06 58.8	+0.8
GBPR	**Guanica, Bosqu**	**0.15**	**357**↑	*i*P		Pg	16 06 56.1	+0.3
GBPR				*e*S		Sg	16 06 58.8	+0.8
MLPR	**Magueyes Islan**	**0.22**	**311**			Pg	16 06 57.1	+0.2
MLPR					IAML		16 07 00.9	
	3μm,0.5s							
MLPR					IAML		16 07 01.8	
	2μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.29**	**308**			Pg	16 06 58.3	+0.1
CRPR					IAML		16 07 03.2	
	comp=E,3μm,0.3s							
CRPR					IAML		16 07 03.9	
	comp=N,2μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.29**	**308**			Sg	16 07 02.8	+0.6
CRPR	**Cabo Rojo, PR**	**0.29**	**308**↑	*i*P		Pg	16 06 58.4	+0.1
CRPR				*e*S		Sg	16 07 02.8	+0.6
OBIP	**Obispado Ponce**	**0.33**	**50**			Pg	16 06 58.8	-0.3
OBIP						Sg	16 07 03.8	+0.2
OBIP					IAML		16 07 06.0	
	comp=N,379nm,0.5s							
OBIP	**Obispado Ponce**	**0.33**	**50**↓	*i*P		Pg	16 06 59.0	-0.1
OBIP				*e*S		Sg	16 07 04.2	+0.7
CELP	**Cerrillos**	**0.37**	**48**			Pg	16 06 59.6	-0.3
CELP					IAML		16 07 05.9	
	comp=N,908nm,0.5s							
CELP					IAML		16 07 06.5	
	comp=N,993nm,0.2s							
LSP	**Las Mesas**	**0.40**	**330**			Pg	16 07 00.3	-0.1
LSP						Sg	16 07 06.8	+1.1
LSP	**Las Mesas**	**0.40**	**330**↓	*e*P		Pg	16 07 00.3	-0.1
LSP				*e*S		Sg	16 07 06.8	+1.1
UUPR	**Utuado, UPR, P**	**0.45**	**19**			Pg	16 07 00.8	-0.5
UUPR						Sg	16 07 07.1	-0.1
UUPR					IAML		16 07 10.1	
	comp=N,11μm,0.4s							
UUPR					IAML		16 07 11.2	
	comp=N,7μm,0.4s							
PRSN	**Puerto Rico Se**	**0.47**	**326**			Sg	16 07 08.1	+0.3
PRSN	**Puerto Rico Se**	**0.47**	**326**↑	*e*P		Pg	16 07 01.4	-0.2
PRSN				*e*S		Sg	16 07 08.1	+0.3
AGPR	**Aguadilla, PR**	**0.68**	**340**			Pg	16 07 04.8	-0.8
AGPR					IAML		16 07 15.2	
	comp=N,419nm,0.3s							
AGPR					IAML		16 07 20.1	
	comp=N,606nm,0.6s							
AGPR	**Aguadilla, PR**	**0.68**	**340**↑	*i*P		Pg	16 07 04.9	-0.7
AGPR				*e*S		Sg	16 07 14.1	-0.3
ECPR	**Experimental S**	**0.69**	**45**			Pg	16 07 04.9	-1.0
ECPR					IAML		16 07 16.3	
	comp=N,2μm,0.2s							
ECPR					IAML		16 07 16.3	
	comp=N,2μm,0.2s							
ECPR	**Experimental S**	**0.69**	**45**↓	*e*P		Pg	16 07 05.0	-0.9
ECPR				*e*S		Sg	16 07 14.4	-0.4
EMPR	**Esperanza - Ma**	**0.72**	**27**			Pg	16 07 06.1	-0.4
EMPR						Sg	16 07 16.1	+0.1
EMPR	**Esperanza - Ma**	**0.72**	**27**↓	*i*P		Pg	16 07 06.1	-0.4
EMPR				*e*S		Sg	16 07 16.1	+0.1
SJG	**San Juan**	**0.74**	**67**			Pg	16 07 05.7	-1.2
SJG					IAML		16 07 19.8	
	comp=N,369nm,0.6s							
SJG					IAML		16 07 20.5	
	comp=N,369nm,0.4s							
SJG	**San Juan**	**0.74**	**67**↑	*e*P		Pg	16 07 05.9	-1.0
SJG				*e*S		Sg	16 07 16.5	-0.1
IDE	**Isla Desecheo**	**0.80**	**314**			Pg	16 07 07.0	-1.0
IDE						Sg	16 07 17.9	-0.4
IDE	**Isla Desecheo**	**0.80**	**314**↑	*e*P		Pg	16 07 07.0	-1.0
IDE				*e*S		Sg	16 07 17.9	-0.4
PDPR	**Patillas Dam,**	**0.83**	**77**	Pg		Pg	16 07 07.5	-1.0
PDPR					IAML		16 07 22.2	
	comp=N,153nm,0.6s							
PDPR					IAML		16 07 22.3	
	comp=N,340nm,0.6s							
GCPR	**Guaynabo City**	**0.89**	**57**			Pg	16 07 08.5	-1.2
GCPR					IAML		16 07 26.0	
	comp=N,145nm,0.7s							
GCPR					IAML		16 07 28.8	
	comp=E,128nm,0.6s							
GCPR	**Guaynabo City**	**0.89**	**57**			Sg	16 07 20.3	-1.0
GCPR	**Guaynabo City**	**0.89**	**57**↑	*e*P		Pg	16 07 08.1	-1.6
GCPR				*e*S		Sg	16 07 20.3	-1.0
HUMP	**Col San Antoni**	**1.02**	**72**			Pg	16 07 10.4	-1.8
HUMP					IAML		16 07 25.7	
	comp=E,233nm,0.2s							
HUMP					IAML		16 07 29.0	
	comp=E,222nm,0.2s							
HUMP	**Col San Antoni**	**1.02**	**72**			Sg	16 07 24.4	-1.1
HUMP	**Col San Antoni**	**1.02**	**72**↓	*e*P		Pg	16 07 10.7	-1.5
HUMP				*e*S		Sg	16 07 24.4	-1.1

*AEIC **04** 16:15:23.8±1.8, 60°.38N±0°.02×138°.23W±0°.03, h9km±7km, Error ellipse: s-maj=2.9km s-min=2.1km az=141.0*
*NEIC **04** 16:15:24.5±1.3, 60°.38N±0°.02×138°.25W±0°.03, h4km±8km, ML3.7/129, ML3.6(AEIC), Error ellipse: s-maj=2.8km s-min=2.1km az=151.0*
*ANF **04** 16:15:24.7±0.1, 60°.40N×138°.24W, h0km, ML4.0/44, Error ellipse: s-maj=1.7km s-min=1.4km az=4.0*
*PGC **04** 16:15:25.7±0.3, 60°.41N×138°.24W, h0km, ML3.6/19, ML3.7(NEIC), ML3.7(AEIC), 56km southwest of Haines Junction, Yt Southern Yukon Territory, Canada*

ISC 04 16:15:24.5±1.0, 60°.37N±0°.02×138°.23W±0°.01, h4km±9km, n247, σ1$06/295, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YUK7	**Dusty Glacier**	**0.17**	**16**			**Pg**	**16 15 28.1**	**+0.2**
YUK7						**Sg**	**16 15 30.7**	**+0.6**
YUK7	**Dusty Glacier**	**0.17**	**16**	P		**Pg**	**16 15 28.1**	**+0.2**
O29M	**Mount Kennedy**	**0.18**	**248**			**Pg**	**16 15 28.0**	**-0.1**
O29M						**Sg**	**16 15 30.9**	**+0.4**
O29M	**Mount Kennedy**	**0.18**	**248**	IAML			16 15 31.1	
	comp=E,40μm,0.4s							
O29M				IAML			16 15 31.5	
	comp=N,26μm,0.6s							
O29M	**Mount Kennedy**	**0.18**	**248**	P		**Pg**	**16 15 28.1**	**-0.1**
	baz=64							
O29M				S		**Sg**	**16 15 30.8**	**+0.3**
	baz=64							
YUK6	**Outpost Mounta**	**0.58**	**354**			**Pg**	**16 15 35.1**	**-0.5**
YUK6						**Sg**	**16 15 43.1**	**0.0**
YUK6	**Outpost Mounta**	**0.58**	**354**	P		**Pg**	**16 15 35.1**	**-0.5**
	baz=174							
YUK6				S		**Sg**	**16 15 42.4**	**-0.7**
	baz=174							
YUK6	**Outpost Mounta**	**0.58**	**354**	P		**Pg**	**16 15 35.1**	**-0.5**
YUK6				S		**Sg**	**16 15 42.0**	**-1.1**
HYT	**Haines Junctio**	**0.58**	**38**			**Pg**	**16 15 35.4**	**-0.3**
HYT				Sg		**Sg**	**16 15 43.3**	**+0.1**
HYT	**Haines Junctio**	**0.58**	**38**	P		**Pg**	**16 15 35.4**	**-0.3**
	baz=220							
HYT				S		**Sg**	**16 15 43.3**	**+0.1**
	baz=220							
HYT	**Haines Junctio**	**0.58**	**38**	P		**Pg**	**16 15 35.4**	**-0.3**
HYT				S		**Sg**	**16 15 43.3**	**+0.1**
P30M	**Million Dollar**	**0.68**	**111**			**Pg**	**16 15 37.2**	**-0.3**
P30M						**Sg**	**16 15 46.8**	**+0.4**
P30M	**Million Dollar**	**0.68**	**111**	P		**Pg**	**16 15 37.3**	**-0.3**
	baz=293							
P30M				S		**Sg**	**16 15 47.0**	**+0.5**
	baz=293							
P30M	**Million Dollar**	**0.68**	**111**	P		**Pg**	**16 15 37.2**	**-0.3**
YUK5	**Granite Creek**	**0.79**	**13**			**Pg**	**16 15 39.3**	**-0.3**
YUK5						**Sg**	**16 15 49.9**	**+0.1**
YUK5	**Granite Creek**	**0.79**	**13**	P		**Pg**	**16 15 39.3**	**-0.3**
BCPM	**Bancas Point**	**0.82**	**240**			**Pg**	**16 15 39.6**	**-0.5**
BCPM	**Bancas Point**	**0.82**	**240**			**Pg**	**16 15 51.2**	**+0.6**
YUK4	**Talbot Arm**	**1.00**	**349**	P		**Pg**	**16 15 44.3**	**+0.6**
	baz=172							
YUK4				S		**Sn**	**16 15 59.0**	**-1.2**
	baz=172							
YUK4	**Talbot Arm**	**1.00**	**349**	P		**Pg**	**16 15 44.3**	**+0.6**
YUK4				S		**Sn**	**16 15 59.0**	**-1.2**
PINM	**Pinnacle**	**1.04**	**256**	P		**Pg**	**16 15 43.8**	**-0.7**
	baz=73,SNR=193							
PINM				S		**Sg**	**16 15 58.0**	**+0.1**
	baz=73							
PCA	**Pinnacle**	**1.05**	**256**			**Pg**	**16 15 43.7**	**-0.8**
PCA				Sg		**Sg**	**16 15 58.1**	**0.0**
PCA				IAML			16 15 59.6	
	comp=E,3μm,0.4s							
PCA				IAML			16 16 00.8	
	comp=N,3μm,0.5s							
PCA	**Pinnacle**	**1.05**	**256**	P		**Pg**	**16 15 44.0**	**-0.6**
O28M	**Mount Upton**	**1.05**	**293**			**Pg**	**16 15 43.5**	**-1.1**
O28M	**Mount Upton**	**1.05**	**293**	P		**Pg**	**16 15 43.4**	**-1.1**
	baz=111							
O28M				S		**Sg**	**16 15 58.1**	**0.0**
	baz=111							
BRWY	**Burwash Landin**	**1.08**	**339**	P		**Pg**	**16 15 44.0**	**-1.2**
O30N	**Mendenhall**	**1.13**	**68**			**Pb**	**16 15 45.1**	**-1.5**
O30N					IAML		16 16 05.7	
	comp=N,2μm,0.8s							
O30N	**Mendenhall**	**1.13**	**68**	P		**Pb**	**16 15 45.2**	**-1.5**
	baz=251,SNR=324							
O30N				S		**Sg**	**16 16 00.9**	**0.0**
	baz=251							
O30N	**Mendenhall**	**1.13**	**68**	P		**Pb**	**16 15 45.1**	**-1.5**
O30N				S		**Sg**	**16 16 00.2**	**-0.6**
YUK8	**Steele Glacier**	**1.19**	**321**			**Pb**	**16 15 46.2**	**-1.4**
YUK8						**Sg**	**16 16 02.1**	**-0.5**
YUK8	**Steele Glacier**	**1.19**	**321**	P		**Pb**	**16 15 46.3**	**-1.4**
	baz=140							
YUK8				S		**Sg**	**16 16 01.9**	**-0.6**
	baz=140							
YUK8	**Steele Glacier**	**1.19**	**321**	P		**Pb**	**16 15 46.3**	**-1.4**
LOGN	**Logan Glacier**	**1.44**	**290**			**Pn**	**16 15 50.1**	**-1.4**
LOGN					IAML		16 16 14.6	
	comp=N,958nm,0.5s							
LOGN					IAML		16 16 18.2	
	comp=E,907nm,0.8s							
LOGN	**Logan Glacier**	**1.44**	**290**			**Sn**	**16 16 09.4**	**-1.6**
LOGN						**Sb**	**16 16 10.6**	**-0.2**
LOGN	**Logan Glacier**	**1.44**	**290**	P		**Pn**	**16 15 50.2**	**-1.4**
LOGN				S		**Sb**	**16 16 10.8**	**+0.1**
TABL	**Table Mountain**	**1.45**	**274**			**Pn**	**16 15 49.5**	**-2.1**
TABL					IAML		16 16 14.2	
	comp=N,1μm,0.8s							
TABL					IAML		16 16 14.3	
	comp=E,1000nm,0.8s							
TABL	**Table Mountain**	**1.45**	**274**			**Sn**	**16 16 09.7**	**-1.5**
TABL						**Sg**	**16 16 12.6**	**+1.7**
TABL	**Table Mountain**	**1.45**	**274**	P		**Pn**	**16 15 49.7**	**-2.0**
TABL				S		**Sg**	**16 16 12.7**	**+1.8**
RKAV	**Rock Avalanche**	**1.55**	**269**			**Pn**	**16 15 51.9**	**-1.2**
RKAV						**Sg**	**16 16 15.1**	**+0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RKAV	Rock Avalanche	1.55	269	Pn	Pn	16 15 51.1	-1.9
RKAV				Sn	Sg	16 16 14.9	+0.7
CTGM	Chitina Glacie	1.64	293		Pn	16 15 53.8	-0.5
CTGM				IAML		16 16 19.2	
	comp=N,632nm,0.9s						
CTGM				IAML		16 16 23.6	
	comp=E,688nm,1.1s						
CTGM	Chitina Glacie	1.64	293	Pn	Pn	16 15 54.1	-0.2
CTGM				Sn	Sb	16 16 16.4	-0.1
N31M	Braeburn, Yuko	1.64	46		Pb	16 15 54.9	-0.5
N31M	Braeburn, Yuko	1.64	46	Pb	Pb	16 15 54.8	-0.5
	baz=229,SNR=243						
N31M				S	Sb	16 16 16.5	+0.1
	baz=229						
N31M	Braeburn, Yuko	1.64	46	Pn	Pb	16 15 54.9	-0.5
CTG	Chitna Glacier	1.64	293	P	Pn	16 15 54.0	-0.3
	baz=110,SNR=390						
CTG				S	Sb	16 16 15.9	-0.6
	baz=110						
WHY	Whitehorse	1.68	79		Sb	16 16 17.3	-0.4
WHY	Whitehorse	1.68	79		Pn	16 15 54.8	-0.1
WHY				IAML		16 16 19.7	
	comp=E,1µm,0.7s						
WHY	Whitehorse	1.68	79	P	Pn	16 15 54.8	-0.1
	baz=262						
WHY				S	Sb	16 16 17.5	-0.2
	baz=262						
WHY	Whitehorse	1.68	79	Pn	Pn	16 15 55.1	+0.2
WHY				Sn	Sb	16 16 17.6	-0.2
SKAG	Skagway	1.73	121		Pn	16 15 55.2	0.0
SKAG				IAML		16 16 24.2	
	comp=N,691nm,0.9s						
SKAG				IAML		16 16 25.1	
	comp=E,1µm,0.8s						
SKAG	Skagway	1.73	121	P	Pn	16 15 55.6	+0.3
	baz=304,SNR=48						
SKAG				S	Sg	16 16 19.7	-0.1
	baz=304						
GRNC	Granite Creek	1.78	283		Pn	16 15 55.2	-1.0
GRNC				IAML		16 16 25.9	
	comp=N,890nm,0.4s						
GRNC	Granite Creek	1.78	283		Sn	16 16 19.3	-0.1
GRNC	Granite Creek	1.78	283	Pn	Pn	16 15 55.7	-0.5
YUK3	Moose Creek	1.78	323		Pn	16 15 56.1	-0.1
YUK3					Pb	16 15 56.4	-1.3
YUK3	Moose Creek	1.78	323	P	Pn	16 15 56.0	-0.2
	baz=142,SNR=518						
YUK3				S	Sb	16 16 19.8	-0.7
	baz=142						
YUK3	Moose Creek	1.78	323	Pn	Pn	16 15 56.2	-0.1
BARN	Barnard Glacie	1.82	294		Pn	16 15 56.3	-0.5
BARN	Barnard Glacie	1.82	294		Sb	16 16 21.4	-0.4
MESA	MESA	1.86	266		Pb	16 15 58.7	-0.5
MESA					Pb	16 15 59.2	0.0
MESA	MESA	1.86	266	Pb	Pb	16 15 59.1	0.0
	baz=82,SNR=401						
MESA				Sb	Sg	16 16 25.0	+0.7
	baz=82						
MESA	MESA	1.86	266	Pn	Pb	16 15 58.9	-0.3
YUK2	White River	1.91	319		Pn	16 15 58.7	+0.8
YUK2	White River	1.91	319	Pn	Pn	16 15 58.2	+0.4
BAGL	Bagley Icefiel	1.92	275		Pn	16 15 57.8	-0.1
ISLE	Juniper Island	2.04	278		Pn	16 15 59.4	-0.5
ISLE				IAML		16 16 33.4	
	comp=E,615nm,0.6s						
ISLE				IAML		16 16 35.4	
	comp=N,510nm,0.7s						
M29M	Somme Creek	2.08	357		Pn	16 16 01.1	+0.8
M29M	Somme Creek	2.08	357	IAML		16 16 30.7	
	comp=E,813nm,0.6s						
M29M				IAML		16 16 33.3	
	comp=N,401nm,0.8s						
M29M	Somme Creek	2.08	357	P	Pn	16 16 01.1	+0.8
	baz=177						
M29M				Sb	Sb	16 16 30.2	+1.0
	baz=177						
KIAG	Kiagna River	2.11	287		Pn	16 16 01.1	+0.4
KIAG	Kiagna River	2.11	287	Pn	Pn	16 16 01.1	+0.4
KIAG				Sn	Sb	16 16 29.8	-0.2
BARK	Barkley Ridge	2.11	273		Pb	16 16 02.2	-1.2
BALM	Baldy	2.13	290	Pn	Pn	16 16 02.1	+1.1
BALM				Sn	Sb	16 16 29.8	-0.7
PTPK	Patty Peak	2.23	293		Pn	16 16 03.9	+1.4
PTPK	Patty Peak	2.23	293	Pn	Pb	16 16 04.3	-1.2
WAX	Waxell Ridge	2.29	274		Pn	16 16 03.9	+0.7
SNH	Sunshine Point	2.30	267		Pb	16 16 05.1	-1.5
SNH	Sunshine Point	2.30	267	IAML		16 16 39.9	
	comp=E,602nm,0.9s						
TGL	Tana Glacier	2.30	282		Pn	16 16 03.8	+0.5
TGL				IAML		16 16 44.4	
	comp=N,340nm,0.9s						
M30M	Minto, Yukon	2.32	17		Pn	16 16 03.9	+0.3
M30M				IAML		16 16 39.9	
	comp=N,310nm,0.6s						
M30M				IAML		16 16 43.3	
	comp=E,306nm,0.5s						
M30M	Minto, Yukon	2.32	17	P	Pn	16 16 03.8	+0.3
	baz=198,SNR=96						
M30M				Sb	Sb	16 16 37.0	+1.1
	baz=198						
M30M	Minto, Yukon	2.32	17	Pn	Pn	16 16 04.0	+0.5
P32M	Atlin	2.40	107		Pn	16 16 04.8	+0.2
P32M				IAML		16 16 41.2	
	comp=E,296nm,0.5s						
P32M				IAML		16 16 49.4	
	comp=N,385nm,0.9s						
P32M	Atlin	2.40	107	P	Pn	16 16 04.3	-0.4
	baz=291,SNR=41						
P32M				Sb	Sg	16 16 40.4	-1.2
	baz=291						
P32M	Atlin	2.40	107	Pn	Pn	16 16 06.5	+1.8
BVCY	Beaver Creek	2.41	330		Pn	16 16 04.8	+0.1
BVCY	Beaver Creek	2.41	330	P	Pn	16 16 04.3	-0.4
	baz=147,SNR=255						
BVCY				Sb	Sb	16 16 39.7	+1.2
	baz=147						
BVCY	Beaver Creek	2.41	330	Pn	Pn	16 16 05.3	+0.5
BVCY				Sg	Sb	16 16 40.0	+1.5
CRQE	Cirque	2.43	281	P	Pn	16 16 06.0	+0.9
	baz=97						
CRQE				Sb	Sb	16 16 40.9	+1.7
	baz=97						
KHIT	Khitrov Hills	2.49	274		Pn	16 16 07.1	+1.2
BESE	Bessie Mountai	2.49	135		Pn	16 16 06.1	+0.2
BESE	Bessie Mountai	2.49	135	Pn	Pb	16 16 08.1	-1.7
BESE				Sn	Sb	16 16 40.0	-0.8
BGLC	Bering Glacier	2.53	267	Sb	Sb	16 16 44.0	+2.1
	baz=82						
GRIN	Grindle Hills	2.53	270		Pn	16 16 07.7	+1.3
MCARA	McCarthy VSAT	2.55	296		Pn	16 16 08.4	+1.7
MCARA	McCarthy VSAT	2.55	296	Pb	Pb	16 16 10.2	-0.6
	baz=111						
MCARA				Sb	Sb	16 16 44.0	+1.4
	baz=111						
MCARA	McCarthy VSAT	2.55	296	Pn	Pn	16 16 08.7	+2.0
M31M	Drury Creek, Y	2.61	44	P	Pn	16 16 08.6	+1.0
	baz=227						
M31M				Sb	Sb	16 16 46.0	+1.7
	baz=227						
M31M	Drury Creek, Y	2.61	44	Pn	Pn	16 16 08.6	+1.0
S31K	Pelican	2.63	156		Pn	16 16 08.0	+0.4
S31K				IAML		16 16 47.3	
	comp=E,321nm,1.0s						
S31K				IAML		16 16 49.3	
	comp=N,418nm,0.8s						
S31K	Pelican	2.63	156	P	Pn	16 16 08.1	+0.5
	baz=338,SNR=16						
S31K				S	Sb	16 16 43.6	-1.1
	baz=338						
N32M	Quiet Lake	2.65	71		Pn	16 16 08.6	+0.5
N32M	Quiet Lake	2.65	71	P	Pn	16 16 08.5	+0.5
	baz=255						
N32M				Sb	Sb	16 16 47.3	+2.0
	baz=255						
N32M	Quiet Lake	2.65	71	Pn	Pn	16 16 08.5	+0.5
M27K	Edge Creek, AK	2.66	320		Pn	16 16 09.0	+0.8
M27K					Pn	16 16 09.5	+1.3
M27K	Edge Creek, AK	2.66	320	IAML		16 16 56.4	
	comp=N,343nm,0.9s						
M27K				IAML		16 16 58.4	
	comp=E,235nm,1.0s						
M27K	Edge Creek, AK	2.66	320	Pb	Pb	16 16 12.2	-0.5
	baz=137						
M27K				Sb	Sb	16 16 46.7	+1.0
	baz=137						
P33M	Teslin, Yukon	2.70	91		Pn	16 16 08.3	-0.5
P33M				IAML		16 16 58.6	
	comp=N,285nm,0.7s						
P33M				IAML		16 16 58.8	
	comp=E,228nm,0.7s						
P33M	Teslin, Yukon	2.70	91	P	Pn	16 16 08.2	-0.6
	baz=276,SNR=97						
P33M				Sb	Sb	16 16 49.0	+2.0
	baz=276						
P33M	Teslin, Yukon	2.70	91	Pn	Pn	16 16 08.2	-0.6
BERG	Berg Lake	2.71	273		Pn	16 16 08.5	-0.4
L29M	L29M	2.75	1		Pn	16 16 10.2	+0.8
L29M					Pn	16 16 10.4	+1.0
L29M	L29M	2.75	1	P	Pn	16 16 10.2	+0.8
	baz=181						
L29M				Sb	Sb	16 16 50.4	+2.1
	baz=181						
R32K	Eaglecrest	2.84	136	IAML		16 16 55.8	
	comp=E,347nm,0.6s						
R32K				IAML		16 16 55.8	
	comp=N,296nm,0.8s						
R32K	Eaglecrest	2.84	136	P	Pn	16 16 12.4	+1.8
	baz=320						
R32K				Sb	Sb	16 16 53.0	+2.3
	baz=320						
JIS	Juneau Island	2.88	135		Pn	16 16 12.3	+1.2
JIS					Pn	16 16 12.8	+1.6
GLB	Gilahina Butte	2.93	294		Pn	16 16 13.1	+1.2
FARO	Faro, Yukon	3.01	50		Pn	16 16 14.2	+1.2
FARO	Faro, Yukon	3.01	50	P	Pn	16 16 14.1	+1.2
	baz=234						
FARO				Sb	Sb	16 16 57.9	+2.3
	baz=234						
FARO	Faro, Yukon	3.01	50	Pn	Pn	16 16 14.3	+1.3
BCAR	Beaver Creek A	3.19	330	Pn	Pn	16 16 15.8	+0.3
BMRM	Bremner River	3.19	284	IAML		16 17 07.6	
	comp=E,238nm,0.8s						
BMRM	Bremner River	3.19	284	P	Pn	16 16 16.1	+0.6
	baz=98						
BC01	Beaver Creek A	3.20	329		Pn	16 16 15.3	-0.3
L27K	Beaver Creek,	3.20	329		Pn	16 16 15.4	-0.2
L27K					Pn	16 16 16.0	+0.4
L27K	Beaver Creek,	3.20	329	Pb	Pb	16 16 21.6	-0.2
	baz=146						
GOAT	Goat Mountain	3.22	277		Pn	16 16 17.3	+1.4
N25K	Chitina, Valde	3.34	295		Pn	16 16 18.8	+1.2
N25K	Chitina, Valde	3.34	295	P	Pn	16 16 18.8	+1.2
	baz=109						
N25K				Sb	Sb	16 17 08.5	+3.2
	baz=109						
N25K	Chitina, Valde	3.34	295	Pn	Pn	16 16 19.1	+1.5
Q32M	Nakina River	3.34	112		Pn	16 16 17.2	-0.5
Q32M	Nakina River	3.34	112	P	Pn	16 16 17.4	-0.3
	baz=298						
MAYO	Mayo, Yukon	3.42	18	Sb	Sb	16 17 09.7	+2.1
	baz=200						
S32K	Killisnoo	3.47	145	Pn	Pn	16 16 19.5	+0.2
S32K				IAML		16 17 18.7	
	comp=E,223nm,1.1s						
S32K				IAML		16 17 22.2	
	comp=N,124nm,1.0s						
S32K	Killisnoo	3.47	145	P	Pn	16 16 19.5	+0.2
	baz=328						
S32K				Sb	Sb	16 17 12.4	+3.4
	baz=328						
K29M	Barlow Dome	3.50	5		Pn	16 16 21.0	+1.1
K29M	Barlow Dome	3.50	5	IAML		16 17 21.5	
	comp=E,156nm,0.6s						
K29M	Barlow Dome	3.50	5	P	Pn	16 16 20.8	+0.9
	baz=186						
L26K	Log Cabin Wild	3.61	320	IAML		16 17 26.1	
	comp=N,138nm,0.5s						
L26K				IAML		16 17 29.7	
	comp=E,170nm,0.6s						
L26K	Log Cabin Wild	3.61	320		Pn	16 16 21.5	+0.3
L26K					Pn	16 16 21.8	+0.6
L26K	Log Cabin Wild	3.61	320	P	Pn	16 16 21.8	+0.6
	baz=135						
SIT	Sitka	3.65	154	Pn	Pn	16 16 21.7	-0.1
SIT				IAML		16 17 19.6	
	comp=N,108nm,0.9s						
SIT	Sitka	3.65	154	Pb	Pb	16 16 29.7	+0.1
	baz=337						
SIT				Sb	Sb	16 17 17.5	+3.3
	baz=337						
MENT	Mentasta	3.67	317		Pn	16 16 23.1	+1.0
MENT					Pn	16 16 23.3	+1.2
MENT	Mentasta	3.67	317	IAML		16 17 33.8	
	comp=E,132nm,0.9s						
MENT				IAML		16 17 41.8	
	comp=N,95nm,0.8s						
EYAK	Cordova Ski Ar	3.73	276		Pn	16 16 24.1	+1.4
EYAK	Cordova Ski Ar	3.73	276	Sb	Sb	16 17 18.1	+1.8
	baz=89						
DAWY	Dawson	3.75	352		Pn	16 16 24.2	+1.1
DAWY				IAML		16 17 36.4	
	comp=N,127nm,0.7s						
DAWY				IAML		16 17 42.2	
	comp=E,133nm,0.9s						
DAWY	Dawson	3.75	352	P	Pn	16 16 24.3	+1.1
	baz=171						
DAWY				S	Sn	16 17 08.3	+0.6
	baz=171						
DAWY	Dawson	3.75	352	Pn	Pn	16 16 24.1	+0.9
DIV	Divide	3.78	285		Pn	16 16 24.3	+0.8
DIV					Pn	16 16 24.6	+1.1
DIV	Divide	3.78	285	Pn	Pn	16 16 23.8	+0.2
R33M	Jennings River	3.79	102		Pn	16 16 23.4	-0.4
R33M	Jennings River	3.79	102	IAML		16 17 29.4	
	comp=E,182nm,0.8s						
R33M				IAML		16 17 34.3	
	comp=N,168nm,0.9s						
R33M	Jennings River	3.79	102	P	Pn	16 16 24.0	+0.2
	baz=288						
HARP	HAARP	3.90	304	Pb	Pb	16 16 32.6	-1.2
	baz=118						
KLU	Klutina	3.92	290	IAML		16 17 29.2	
	comp=E,127nm,0.8s						
KLU				IAML		16 17 29.7	
	comp=N,100nm,0.5s						
KLU	Klutina	3.92	290	P	Pn	16 16 26.8	+1.3
	baz=103						
KLU				Sb	Sb	16 17 23.6	+1.7
	baz=103						
M24K	Tolsona, Glenn	4.21	298	P	Pn	16 16 31.2	+1.6
	baz=111						
DOT	Dot Lake	4.29	323	Pn	Pn	16 16 30.5	0.0
J30M	Hart River	4.31	11		Pn	16 16 32.2	+1.3
J30M	Hart River	4.31	11	IAML		16 17 42.9	
	comp=N,108nm,0.8s						
J30M	Hart River	4.31	11	P	Pn	16 16 31.9	+1.0
	baz=193						
PAX	Paxson	4.32	310	Pb	Pb	16 16 39.5	-1.6
	baz=124						
GLI	Glacier Island	4.39	281	IAML		16 17 40.6	
	comp=E,64nm,0.9s						
GLI				IAML		16 17 46.5	
	comp=N,85nm,1.2s						
GLI	Glacier Island	4.39	281	P	Pn	16 16 32.1	+0.1
	baz=93						
S34M	Telegraph Cree	4.41	121	P	Pn	16 16 33.0	+0.8
	baz=307						
S34M	Telegraph Cree	4.41	121	Pn	Pn	16 16 32.3	+0.1
SCRK	Sand Creek	4.51	326		Pn	16 16 33.8	+0.1
SCRK	Sand Creek	4.51	326	P	Pn	16 16 33.3	-0.4
	baz=141						
RIDG	Independent Ri	4.59	320	IAML		16 17 58.1	
	comp=E,52nm,1.1s						
RIDG				IAML		16 17 58.8	
	comp=N,57nm,1.0s						
DLBC	Dease Lake	4.62	111	Pb	Pb	16 16 46.3	+0.2
	baz=298						
SCM	Sheep Creek Mo	4.65	292		Pn	16 16 36.6	+1.0
SCM	Sheep Creek Mo	4.65	292	IAML		16 18 01.5	
	comp=N,80nm,1.1s						
SCM	Sheep Creek Mo	4.65	292	P	Pn	16 16 36.4	+0.8
	baz=104						
J26L	Joseph Creek	4.83	331		Pn	16 16 38.4	+0.4
J26L	Joseph Creek	4.83	331	IAML		16 18 01.7	
	comp=N,58nm,0.8s						
J26L				IAML		16 18 04.3	
	comp=E,62nm,0.7s						
J26L	Joseph Creek	4.83	331	P	Pn	16 16 38.7	+0.7
	baz=147						
K24K	Donnelly Dome	4.94	317	IAML		16 18 10.5	
	comp=E,71nm,1.0s						
K24K				IAML		16 18 25.4	
	comp=N,48nm,0.9s						
I30M	Mount Dempster	4.95	9		Pn	16 16 41.2	+1.5
I30M	Mount Dempster	4.95	9	IAML		16 18 02.6	
	comp=N,74nm,1.1s						
I30M				IAML		16 18 03.5	
	comp=E,64nm,0.6s						
I30M	Mount Dempster	4.95	9	P	Pn	16 16 40.9	+1.2
	baz=191						
WAT6	Susitna Watana	5.07	300	P	Pn	16 16 42.6	+1.3
	baz=112						
KNK	Knik Glacier	5.10	286	IAML		16 18 05.4	
	comp=N,47nm,1.2s						
KNK				IAML		16 18 13.5	
	comp=E,37nm,1.2s						
KNK	Knik Glacier	5.10	286	P	Pn	16 16 42.9	+1.2
	baz=97						
SML	Sawmill	5.11	291	IAML		16 18 11.3	
	comp=N,34nm,0.8s						
SML				IAML		16 18 14.6	
	comp=E,39nm,1.1s						
I28M	Miner Creek	5.16	352		Pn	16 16 43.7	+1.2
I28M	Miner Creek	5.16	352	IAML		16 18 22.2	
	comp=N,59nm,1.1s						
I28M	Miner Creek	5.16	352	P	Pn	16 16 43.6	+1.1
	baz=171						
T35M	Bob Quinn	5.38	126	Pn	Pn	16 16 47.5	+2.0
T35M				Sg	Sg	16 18 14.4	-2.6
GHO	Glory Hole Cre	5.38	290	IAML		16 18 11.4	
	comp=E,33nm,0.9s						
J25K	Salcha River,	5.39	325		Pn	16 16 45.8	+0.2
J25K					Pn	16 16 46.4	+0.7
J25K	Salcha River,	5.39	325	P	Pn	16 16 45.9	+0.2
	baz=139						
I27K	Kandik River	5.47	345		Pn	16 16 48.1	+1.3
I27K	Kandik River	5.47	345	P	Pn	16 16 47.7	+0.9
	baz=162						
WAT1	Susitna Watana	5.51	301	Pb	Pb	16 17 00.8	-0.4
	baz=112						
RC01	Rabbit Creek A	5.69	282		Pn	16 16 51.6	+1.8
H31M	Peel River	5.73	16		Pn	16 16 51.2	+0.9
H31M	Peel River	5.73	16	P	Pn	16 16 51.3	+0.9
	baz=200						
SLKM	Skilak Lake	5.94	277	Pn	Pn	16 16 52.2	-1.0
H27K	Steamboat Moun	6.07	347		Pn	16 16 56.2	+1.3
H27K	Steamboat Moun	6.07	347	P	Pn	16 16 56.0	+1.1
	baz=164						
WRH	Wood River Hil	6.15	316	Pn	Pn	16 16 55.9	-0.2
L22K	Petersville	6.39	295		Pn	16 16 59.1	-0.2
G29M	Pine Creek	6.57	1		Pn	16 17 02.1	+0.4
CNPM	China Poot	6.59	268		Pn	16 17 03.9	+1.8
SKT	Skwentna	6.63	290		Pn	16 17 04.2	+1.6
G27K	Doyon Strip	6.64	348		Pn	16 17 04.1	+1.3
G27K					Pn	16 17 04.4	+1.6
G27K	Doyon Strip	6.64	348	P	Pn	16 17 03.9	+1.1
	baz=165						
G31M	Satah River	6.81	13		Pn	16 17 05.8	+0.8
G31M	Satah River	6.81	13	P	Pn	16 17 05.7	+0.8
	baz=197						
G26K	Porcupine Rive	7.05	342	P	Pn	16 17 09.3	+1.0
	baz=157						
KOTAN	Kotaneelee Air	7.06	86	Pn	Pn	16 17 09.5	+0.9
F28M	Old Crow	7.31	355		Pn	16 17 12.0	+0.1
F28M	Old Crow	7.31	355	P	Pn	16 17 12.5	+0.6
	baz=174						
F28M	Old Crow	7.31	355	Pn	Pn	16 17 12.5	+0.6
F30M	Barrier River	7.35	7		Pn	16 17 12.6	+0.1
F30M	Barrier River	7.35	7	P	Pn	16 17 12.6	+0.1
	baz=190						
F31M	Tsiigehtchic	7.37	14	P	Pn	16 17 12.7	0.0
	baz=198						
G24K	Hadweenzic Riv	7.57	331		Pn	16 17 16.2	+0.7
F26K	Sheenjek River	7.79	343		Pn	16 17 20.1	+1.5
F26K	Sheenjek River	7.79	343	P	Pn	16 17 19.8	+1.2
	baz=158						
KDAK	Kodiak Island	7.83	257		Pn	16 17 20.3	+1.2
KDAK	Kodiak Island	7.83	257	P	Pn	16 17 20.4	+1.3
	baz=64						
Q19K	Cape Douglas,	7.94	266	P	Pn	16 17 22.0	+1.4
	baz=73						
F25K	Christian Rive	7.94	339		Pn	16 17 22.0	+1.4
F25K	Christian Rive	7.94	339	P	Pn	16 17 21.9	+1.2
	baz=152						
E27K	Coleen River	7.98	351		Pn	16 17 22.4	+1.2
E27K	Coleen River	7.98	351	P	Pn	16 17 21.7	+0.6
	baz=168						
E29M	Blow River	8.05	1		Pn	16 17 22.7	+0.6
E29M	Blow River	8.05	1	P	Pn	16 17 22.5	+0.4
	baz=181						
L19K	White Mountain	8.21	290		Pn	16 17 25.1	+0.8
INK	Inuvik	8.22	12		Pn	16 17 24.6	+0.2
INK	Inuvik	8.22	12	Pn	Pn	16 17 24.6	+0.2
E28M	Babbage River	8.29	357		Pn	16 17 25.9	+0.6
E28M	Babbage River	8.29	357	P	Pn	16 17 25.8	+0.5
	baz=176						
E25K	Arctic Village	8.40	341	Pn	Pn	16 17 27.9	+1.0
OHAK	Old Harbor	8.43	255		Pn	16 17 27.9	+0.7
M18K	Stony River	8.64	285		Pn	16 17 30.4	+0.3
E24K	Your Creek	8.92	334		Pn	16 17 35.4	+1.4
E24K	Your Creek	8.92	334	P	Pn	16 17 35.0	+1.0
	baz=145						
D27M	Malcolm River	8.98	354		Pn	16 17 35.7	+0.8
D27M	Malcolm River	8.98	354	P	Pn	16 17 35.8	+0.8
	baz=171						
C27K	Jago River	9.57	348		Pn	16 17 44.9	+1.9
C27K	Jago River	9.57	348	P	Pn	16 17 44.8	+1.8
	baz=164						
D25K	Kavik River	9.62	342	P	Pn	16 17 46.0	+2.4
	baz=155						

KRSC 04 16:16:56.0±1.4, 49.50N×156.69E, h16km±18km, Ml3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.24	343	eP	Pn	16 17 17.4	-1.3
SKR				eS	Sb	16 17 33.7	-1.1
PAU	Pauzhetka	1.97	2	eP	Pn	16 17 29.8	+1.1
PAU				eS	Sn	16 17 54.4	+1.3
KDTR	Khodutka, Kamc	2.47	20	eP	Pb	16 17 38.0	-2.1
KDTR				eS	Sb	16 18 08.7	-1.6
MIPR	Malaya Ipel'ka	2.78	1	eP	Pn	16 17 41.6	+1.8
ASAK	Asacha	2.98	14	eP	Pn	16 17 45.3	+2.5
MTVR	Mutnovka	3.13	17	eP	Pn	16 17 47.6	+2.7
MTVR				eS	Sb	16 18 26.7	-2.6
RUS	Russkaya	3.15	21	eP	Pn	16 17 47.4	+2.4
RUS				eS	Sn	16 18 26.0	+3.7
GRL	Gorelyy	3.18	15	eP	Pn	16 17 48.8	+3.3
KRMR	Karymshinskiy	3.45	15	eP	Pn	16 17 52.2	+3.0
KRMR				eS	Sb	16 18 34.4	-4.1
PET	Petropavlovsk	3.74	19	eP	Pn	16 17 56.8	+3.8
PET				eS	Sn	16 18 40.3	+3.7
DALK	Dalny	3.77	19	eP	Pn	16 17 55.9	+2.6
UGLR	Uglovaya	3.95	19	eP	Pn	16 17 60.0	+4.0
AVH	Avacha	3.98	18	eP	Pn	16 18 01.1	+4.7
KOK	Koryaka	3.99	17	eP	Pn	16 18 01.0	+4.4
SMAR	Somma	3.99	19	eP	Pb	16 18 01.8	-4.3
KRER	Koryakskii	4.02	18	eP	Pn	16 18 01.1	+4.0
SDLR	Sedlovina	4.02	19	eP	Pn	16 18 01.6	+4.5
KRX	Arik	4.05	17	eP	Pn	16 18 01.6	+4.1
SPN	Mys Shipunski	4.17	29	eP	Pn	16 18 02.1	+3.2
SPN				eS	Sn	16 18 51.9	+4.7
GNL	Ganaly	4.27	10	eP	Pn	16 18 04.6	+4.2

*IDC **04** 16:17:31.5±0.8, 1.69N×125.67E, h0km, mb3.9/9, mbtmp3.9/10, ML3.6/1, Error ellipse: s-maj=86.1km s-min=14.6km az=70.0*

*NEIC **04** 16:17:35.3±1.3, 1.94N±0.09×126.15E±0.09, h23km±7km, mb4.4/17, Error ellipse: s-maj=16.0km s-min=8.9km az=222.0*

*DJA **04** 16:17:35.4±0.2, 2°N±3°×12°6E±°, h10km, M4.2/19, mB4.9/2, mb4.3/6, MLv4.1/19, Mw(mB)4.1/2*

ISC 04 16:17:36.5±0.6, 1.94N±0.06×126.42E±0.06, h35km, n40, σ1.32/39, mb4.1/18, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.50	141		Pn	16 18 01.9	+1.0
TNTI	Ternate	1.50	141	P	Pn	16 18 01.5	+0.6
MNI	Manado	1.65	253	P	Pn	16 18 02.8	-0.1
MNI				S	Sn	16 18 22.6	-0.3

SGSI	Sangihe	1.95	333	P	Pn	16 18 08.4	+1.3
SANI	Sanana	3.98	186	P	Pn	16 18 35.0	-0.1
LUWI	Luwuk	4.69	231	Pn	Pn	16 18 40.0	-4.8
LUWI	Luwuk	4.69	231	P	Pn	16 18 46.8	+2.0
MRSI	Marisa	4.70	252	P	Pn	16 18 46.6	+1.6
APSI	Ampana	5.54	239	P	Pn	16 18 58.4	+1.9
KRAI	Karang Ratu	5.58	159	P	Pn	16 19 00.4	+3.3
	0.1nm15nm,0.6s						
TOLI2	Tolitoli	5.69	262	Pn	Pn	16 18 52.5	-6.1
MPSI	Mapaga	6.71	256	P	Pn	16 19 15.0	+2.5
	0.1nm14nm,0.8s						
MYLDM	Lahad Datu	8.53	292	Pn	Pn	16 19 32.1	-5.5
KNRA	Kununurra	17.65	173	P	Pn	16 21 40.1	+0.3
FITZ	Fitzroy Crossi	19.92	182	P	P	16 22 02.0	-3.3
	0.1nm,0.3s,baz=11,slow=12,SNR=2.2						
	3.4nm,0.8s						
TPUB	Ta-pu	21.97	346	P	P	16 22 26.1	-1.3
TPUB				IAmb	IAmb	16 22 46.9	
	comp=Z,30nm,1.2s						
WB0	Warramunga Arr	22.95	160		P	16 22 37.7	-0.2
WB0				IAmb	IAmb	16 22 42.7	
	comp=Z,5.2nm,0.6s						
WRAB	Tennant Creek	23.09	161	P	P	16 22 39.7	+0.4
WRAB				IAmb	IAmb	16 22 40.8	
	comp=Z,7.1nm,1.1s						
WRA	Warramunga Arr	23.09	161	P	P	16 22 38.9	-0.4
	comp=Z,2.8nm,0.5s,baz=340,slow=11,SNR=32						
	comp=Z,2.8nm,0.5s						
WRA	Warramunga Arr	23.09	161	P	P	16 22 37.8	-1.6
WR8	Warramunga Arr	23.16	160		P	16 22 39.7	-0.3
WR8				IAmb	IAmb	16 22 45.6	
	comp=Z,8.5nm,1.2s						
QIZ	Qiongzhong	23.50	317	P	P	16 22 41.8	-1.6
MBWA	Marble Bar	23.87	196	P	P	16 22 46.2	-0.6
MBWA				IAmb	IAmb	16 23 25.5	
	comp=Z,19nm,1.2s						
PSA00	Pilbara Seismi	24.23	195	P	P	16 22 49.5	-0.6
PSA00				IAmb	IAmb	16 23 11.2	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	26.47	164		P	16 23 10.8	+0.2
ASAR	Alice Springs	26.47	164	P	P	16 23 10.9	+0.4
	comp=Z,0.9nm,0.5s,baz=345,slow=8.3,SNR=48						
ASAR				PcP	PcP	16 26 36.2	+1.0
	comp=Z,0.3nm,0.8s,baz=0.0,slow=2.8,SNR=2.1						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	26.47	164	P	P	16 23 11.0	+0.4
MORW	Morawa	32.39	197	P	P	16 24 02.3	-0.7
MORW				IAmb	IAmb	16 24 04.8	
	comp=Z,7.9nm,1.1s						
FORT	Forrest	32.57	177	P	P	16 24 04.7	+0.2
BBOO	Buckleboo	35.74	166	P	P	16 24 32.7	+0.7
STKA	Stephens Creek	36.58	158	P	P	16 24 39.2	-0.1
	comp=Z,3.0nm,0.8s,baz=341,slow=16,SNR=4.6						
	comp=Z,3.0nm,0.8s						
STKA	Stephens Creek	36.58	158	P	P	16 24 39.8	+0.5
HILR	Hailar Array B	47.78	354	P	P	16 26 12.0	+1.6
	comp=Z,0.3nm,0.4s,baz=166,slow=8.6,SNR=3.5						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	48.89	342	P	P	16 26 18.3	-0.7
	comp=Z,0.2nm,0.3s,baz=161,slow=9.2,SNR=1.9						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	58.85	326	P	P	16 27 30.7	-1.0
	comp=Z,0.9nm,0.5s,baz=120,slow=8.0,SNR=22						
	comp=Z,0.9nm,0.5s						
MAKZ	Makanchi	59.03	326		P	16 27 32.1	-0.9
MAKZ				IAmb	IAmb	16 27 34.0	
	comp=Z,4.0nm,1.4s						
KURBB	Kurchatov Arra	63.08	328	P	P	16 27 59.1	-1.1
	comp=Z,0.9nm,0.6s,baz=129,slow=6.0,SNR=12						
	comp=Z,0.9nm,0.6s						
KURK	Kurchatov	63.08	328		P	16 27 58.9	-1.4
KURK				IAmb	IAmb	16 28 01.0	
	comp=Z,2.2nm,0.6s						
BVAR	Borovoye Array	68.65	327	P	P	16 28 35.4	-0.8
	comp=Z,0.5nm,0.6s,baz=157,slow=7.7,SNR=3.9						
	comp=Z,0.5nm,0.6s						
NRIK	Noril'sk	72.09	346	P	P	16 28 58.1	+1.3
	comp=Z,0.8nm,0.4s,baz=140,slow=8.9,SNR=4.3						
	comp=Z,0.8nm,0.4s						

*MEX **04** 16:20:46.6±0.6, 15°.81N×92°.79W, h165km±5km, MD4.1*
*GCG **04** 16:20:46.8±1.0, 15°.84N×92°.72W, h146km±21km, MD4.0, Presumed earthquake*
ISC 04 16:20:44.1±1.7**, 15°.79N**±0°.06×**92°.84W**±0°.06**, h168**km±10km**, n24,** σ2s25/44**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.37	257	eP	Pn	16 21 08.1	+1.1
PCIG				eS	Sn	16 21 24.9	+0.3
CCIG	Comitan	0.84	54	eP	Pn	16 21 10.3	+0.6
CCIG				eS	Sn	16 21 28.1	-1.2
CCIG	Comitan	0.84	54	i P	Pn	16 21 10.4	+0.7
CCIG				i S	Sn	16 21 28.1	-1.2
PAVE	Pavencul	0.87	133	eP	Pn	16 21 10.6	+0.6
PAVE				eS	Sn	16 21 29.5	-0.3
PATR	El Naranjo	0.89	139	eP	Pn	16 21 10.3	+0.1
PATR				eS	Sn	16 21 29.3	-0.8
CHUJ	Union Juarez	0.99	134	eP	Pn	16 21 10.9	0.0
CHUJ				eS	Sn	16 21 30.8	-0.6
TGIG		1.02	345	eP	Pn	16 21 11.9	+0.9
TGIG				eS	Sn	16 21 30.6	-1.0
TGIG		1.02	345	i P	Pn	16 21 11.9	+0.9
TGIG				i S	Sn	16 21 30.4	-1.2
CARR	Arriaga	1.13	294	eP	Pn	16 21 13.4	+1.7
CARR				eS	Sn	16 21 33.8	+0.9
SMCA	Catarina	1.19	141	i P	Pn	16 21 13.0	+0.7
UXUV	UXUV	1.97	321	eP	Pn	16 21 21.4	+1.3
UXUV				eS	Sn	16 21 47.1	-0.8
CMIG	Matias Romero	2.35	304	eP	Pn	16 21 26.0	+1.6
CMIG				eS	Sn	16 21 55.3	-0.4
APG	El Apazote	2.42	108	i P	Pn	16 21 26.4	+0.9
HUIG	Huatulco	3.15	270	eP	Pn	16 21 34.6	+0.6
HUIG				eS	Sn	16 22 10.2	-2.6
NEUV	Arroyo Zacate	3.42	304	eP	Pn	16 21 38.9	+1.4
NEUV				eS	Sn	16 22 15.2	-3.9
PEIG	Puerto Escondi	4.15	273	eP	Pn	16 21 48.0	+1.2
PEIG				eS	Sn	16 22 33.7	-2.1
YOIG	Yosondua	4.64	284	eP	Pn	16 21 56.5	+3.0
YOIG				eS	Sn	16 22 46.0	-1.6
TOIG	Toxpalan	4.65	300	eP	Pn	16 21 56.0	+2.6
TOIG				eS	Sn	16 22 43.4	-4.2
TXIG	Tlaxiaco	4.95	288	eP	Pn	16 22 01.1	+3.7
TXIG				eS	Sn	16 22 52.1	-2.6
PNIG	Pinotepa	5.12	277	eP	Pn	16 22 01.7	+2.3
HLIG	Huajuapan de L	5.17	294	eP	Pn	16 22 04.2	+3.9
HLIG				eS	Sn	16 22 54.4	-5.5
JAUV	Jalcomulco	5.19	314	i P	Pn	16 22 02.0	+1.6
JAUV				eS	Sn	16 22 57.1	-3.1
FTIG	Fresnillo de T	5.49	293	eP	Pn	16 22 08.2	+3.8
FTIG				eS	Sn	16 23 04.2	-3.1
CXUV	Coxquihui	6.28	315	eP	Pn	16 22 17.6	+2.8

*IDC **04** 16:21:52.7±1.8, 53°.74N×164°.51W, h0km, mb3.8/9, mbtmp3.7/11, ML3.1/2, Error ellipse: s-maj=40.6km s-min=19.7km az=166.0*
*AEIC **04** 16:21:57.3±1.2, 53°.59N±0°.08×164°.42W±0°.07, h25km±5km, Error ellipse: s-maj=11.8km s-min=6.0km az=170.0*
*NEIC **04** 16:21:57.8±1.0, 53°.59N±0°.07×164°.44W±0°.07, h35km±2km, mb3.7/9, ML3.5/12, ML3.0(AEIC), Error ellipse: s-maj=12.4km s-min=6.9km az=171.0*
ISC 04 16:21:56.8±0.9**, 53°.54N**±0°.10×**164°.39W**±0°.04**, h33**km**, n66,** σ1s00/64**, mb3.8**/8**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.98	308		Pn	16 22 14.1	0.0
AKSA					Sn	16 22 26.9	0.0
AKUT	Akutan	1.01	306		Sn	16 22 27.9	+0.1
AKUT	Akutan	1.01	306		Pn	16 22 14.7	0.0
AKUT				IAML		16 22 28.1	
	comp=E,2µm,0.6s						
AKUT				IAML		16 22 30.1	
	comp=N,1µm,0.3s						
AHB	Akutan Harbor	1.02	305		Pn	16 22 15.0	+0.2
AKBBA	Akutan Broad B	1.07	302		Pn	16 22 15.6	+0.1
ZRO	Akutan Zero	1.09	301		Pn	16 22 15.9	+0.2
AKMO	Akutan Morgan	1.11	300		Pn	16 22 16.2	+0.2
AKMO					Sn	16 22 30.6	+0.5
AKLV	Akutan Long Va	1.12	304		Pn	16 22 16.1	0.0
AKLV					Sn	16 22 30.2	-0.2
AKGG	Akutan Green G	1.16	305		Pn	16 22 16.9	+0.3
LVA	Lava Point	1.16	303		Pn	16 22 16.6	0.0
LVA				IAML		16 22 42.7	
	comp=E,923nm,0.6s						
AKRB	Akutan Reef Bi	1.16	301		Pn	16 22 16.9	+0.2
SSBA	Shishaldin	1.24	7		Pn	16 22 17.9	+0.1
UNV	Unalaska Valle	1.30	284		Sn	16 22 34.5	-0.2
UNV	Unalaska Valle	1.30	284		Pn	16 22 18.3	-0.2
UNV				IAML		16 22 38.6	
	comp=E,630nm,0.4s						
ISNN	Isanotski Nort	1.34	15		Pn	16 22 19.7	+0.5
MNAT	Makushin Natee	1.41	285		Pn	16 22 20.4	+0.3
FALS	False Pass	1.44	23		Sn	16 22 39.1	+1.0
FALS	False Pass	1.44	23		Pn	16 22 20.4	0.0
MGOD	Makushin Gods	1.50	281		Pn	16 22 22.3	+0.9
DT1	Dutton Round H	2.00	37		Pn	16 22 29.2	+1.1
DTNA	Dutton South F	2.04	37		Pn	16 22 29.9	+1.2
DOL	Dolgoi Island	2.19	42		Pn	16 22 32.2	+1.5
HAG	Hague Volcano	2.30	38		Pn	16 22 34.0	+1.7
PS4A	Pavlof South-4	2.33	38		Pn	16 22 34.5	+1.7
PN7A	Pavlof North-7	2.35	35		Pn	16 22 33.9	+0.8
SDPT	Sand Point	2.91	50		Pn	16 22 41.7	+1.0
SDPT				IAML		16 23 33.3	
	comp=E,168nm,0.5s						
SDPT				IAML		16 23 36.2	
	comp=N,137nm,0.9s						
CNBA	Chernabura Isl	3.10	64	Pn	Pn	16 22 44.4	+1.1
O15K	Ungalikthiuk R	6.19	22	Pn	Pn	16 23 26.5	+0.7
O16K	Kokwok River B	6.99	27		Pn	16 23 37.6	+0.9
KDAK	Kodiak Island	7.91	53	Pn	Pn	16 23 47.6	-1.7
	comp=N,0.5nm,0.3s,baz=214,slow=3.6,SNR=13						
KDAK				Sn	Sn	16 25 14.2	-3.3
	comp=N,0.2nm,0.3s,baz=163,slow=17,SNR=1.5						
	comp=N,11nm,1.0s						
KDAK	Kodiak Island	7.91	53		Pn	16 23 48.7	-0.6
L16K	Owhat River	8.60	16		Pn	16 24 00.3	+1.6
SKT	Skwentna	10.87	34	Pn	Pn	16 24 30.7	+0.8
KLU	Klutina	12.69	44	Pn	Pn	16 24 54.2	-0.5
MENT	Mentasta	14.32	41	Pn	Pn	16 25 17.6	+0.7
ILAR	Eielson Array	14.33	31	Pn	Pn	16 25 13.6	-3.4
	comp=N,0.1nm,0.3s,baz=233,slow=13,SNR=4.7						
	comp=N,0.3nm,0.9s						
ILAR	Eielson Array	14.33	31		Pn	16 25 17.7	+0.7
CTGM	Chitina Glacie	14.46	50	Pn	Pn	16 25 19.6	+0.7
LOGN	Logan Glacier	14.56	51	Pn	Pn	16 25 21.2	+0.9
BCAR	Beaver Creek A	15.15	42	Pn	Pn	16 25 28.3	+0.3
J26L	Joseph Creek	15.25	36	Pn	Pn	16 25 29.3	-0.2
J26L				IAmb	IAmb	16 25 39.2	
	comp=Z,8.9nm,1.5s						
D20K	Etivluk River	15.66	11	P	P	16 25 38.5	+0.1
BMAR	Burnt Mountain	16.88	27	Pn	Pn	16 25 50.2	+0.1
WHY	Whitehorse	17.42	54	P	Pn	16 25 58.5	+1.5
WHY				IAmb	IAmb	16 26 25.1	
	comp=Z,6.5nm,0.8s						
G29M	Pine Creek	18.52	33	P	P	16 26 10.2	+0.2
G29M				IAmb	IAmb	16 26 17.8	
	comp=Z,5.9nm,1.3s						
C27K	Jago River	18.72	23	P	P	16 26 12.4	+0.2
H31M	Peel River	19.27	39	P	P	16 26 18.6	+0.4
H31M				IAmb	IAmb	16 26 51.3	
	comp=Z,12nm,1.5s						
F30M	Barrier River	19.63	33	P	P	16 26 22.5	+0.4
INK	Inuvik	20.72	33	P	P	16 26 32.6	-1.3
	comp=Z,1.0nm,0.6s,baz=244,slow=9.4,SNR=5.7						
	comp=Z,1.0nm,0.6s						
INK	Inuvik	20.72	33	P	P	16 26 32.8	-1.1
INK				IAmb	IAmb	16 26 41.0	
	comp=Z,3.5nm,1.2s						
PETK	Petropavlovsk-	22.48	284	P	P	16 26 52.0	-1.0
	comp=Z,1.6nm,0.6s,baz=84,slow=13,SNR=8.4						
	comp=Z,1.6nm,0.6s						
PETK	Petropavlovsk-	22.48	284	P	P	16 26 52.7	-0.3
H11N2	WAKE ISLAND Hy	40.33	224	T	T	17 12 48.9	
	baz=26,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	40.34	224	T	T	17 12 49.4	
	baz=26,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	40.35	224	T	T	17 12 51.7	
	baz=26,slow=76,SNR=8.9						
H11S1	WAKE ISLAND Hy	41.50	224	T	T	17 14 19.1	
	baz=26,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	41.52	224	T	T	17 14 25.4	
	baz=26,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	41.52	224	T	T	17 14 17.2	
	baz=26,slow=76,SNR=12						
SPITS	Spitsbergen Ar	48.54	360	P	P	16 30 35.5	-0.5
	comp=Z,8.5nm,1.1s,baz=1.9,slow=4.3,SNR=1.9						
	comp=Z,8.5nm,1.1s						
TXAR	Lajitas Array	49.76	94	P	P	16 30 47.9	+1.9
	comp=Z,0.3nm,0.5s,baz=317,slow=6.7,SNR=4.1						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	49.76	94	P	P	16 30 46.9	+0.9
BVAR	Borovoye Array	64.44	327	P	P	16 32 29.7	+0.4
	comp=Z,0.5nm,0.7s,baz=42,slow=8.8,SNR=2.5						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	65.06	354	P	P	16 32 32.6	-0.6
	comp=Z,2.7nm,0.8s,baz=356,slow=8.4,SNR=4.6						
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	65.12	316	P	P	16 32 33.2	-0.8
	comp=Z,0.1nm,0.7s,baz=49,slow=6.9,SNR=1.6						
	comp=Z,0.1nm,0.7s						
HFS	Hagfors	66.67	1	P	P	16 32 43.4	-0.1
	comp=Z,1.1nm,0.4s,baz=17,slow=5.3,SNR=7.4						
	comp=Z,1.1nm,0.4s						
AKASG	Malin Array Be	75.50	351	P	P	16 33 36.7	-0.5
	comp=Z,0.5nm,0.4s,baz=15,slow=6.7,SNR=1.7						
	comp=Z,0.5nm,0.4s						

IDC 04 16:28:29.7±1.9**, 16°.87S**×**177°.80W, h0**km**, mb4.1**/4**, mbtmp4.1**/4**, Error ellipse: s-maj=167.5km s-min=31.8km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.64	240	P	P	16 36 03.9	+0.4
	2.8nm,0.7s,baz=90,slow=14,SNR=5.4						
	2.8nm,0.7s						
WRA	Warramunga Arr	45.40	258	P	P	16 36 50.2	-0.3
	1.0nm,0.5s,baz=95,slow=8.2,SNR=45						
	1.0nm,0.5s						
ASAR	Alice Springs	45.64	253	P	P	16 36 51.9	-0.4
	5.2nm,0.5s,baz=88,slow=8.5,SNR=178						
	5.2nm,0.5s						
TXAR	Lajitas Array	84.95	57	P	P	16 41 07.3	0.0
	0.4nm,0.7s,baz=242,slow=5.9,SNR=3.9						
	0.4nm,0.7s						

*ISK **04** 16:33:01.4, 39°.11N×27°.83E, h13km, ML3.5/22*
*AFAD **04** 16:33:01.9, 39°.09N×27°.85E, h7km±1km, ML3.2*
*THE **04** 16:33:03.3, 39°N±3°×2°8E±°, h5km±17km, M3.4/9, MLh3.4/9*
*ATH **04** 16:33:04.3, 39°.13N×27°.76E, h21km±5km, ML3.4/6, Manual Solution by A.Agalos First location: 2020/02/04 16:34:41, This location: 2020/02/04 16:37:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 4 km*
ISC 04 16:33:02.2±0.9**, 39°.10N**±0°.02×**27°.84E**±0°.02**, h12**km±6km**, n63,** σ0s46/87**, 4C-6D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.22	186	P	Pg	16 33 06.8	-0.2
AKHS				S	Sg	16 33 10.8	+0.5
AKHS				IAML		16 33 11.0	
	comp=E,10µm,0.3s						
AKS	Akhisar	0.22	186	Pg	Pg	16 33 06.6	-0.4
AKS				Sg	Sg	16 33 10.5	+0.2
SOMA	Soma-Manisa	0.25	283	Pg	Pg	16 33 06.7	-0.7
SOMA				Sg	Sg	16 33 10.9	0.0
STEP	BALIKESIR_Sava	0.29	341	P	Pg	16 33 08.1	-0.2
STEP				S	Sg	16 33 12.7	+0.5
STEP				IAML		16 33 13.0	
	comp=N,2µm,0.3s						
STEP				IAML		16 33 13.0	
	comp=E,2µm,0.4s						
GORD	Gordes-Manisa	0.32	126	Pg	Pg	16 33 08.7	-0.1
GOMA	Golmarmara-Man	0.40	172	Pg	Pg	16 33 09.8	-0.3
GOMA				Sg	Sg	16 33 16.2	+0.7
KTTT	Salihli	0.46	155	P	Pg	16 33 11.0	-0.2
KTTT				S	Sg	16 33 17.5	+0.2
KTTT				IAML		16 33 18.0	
	comp=N,1µm,0.3s						
CAMT	Merkez	0.54	230	P	Pg	16 33 13.0	+0.1
CAMT				IAML		16 33 22.0	
	comp=E,1µm,0.2s						
CAMT				S	Sb	16 33 22.0	+0.6
CAMT				IAML		16 33 27.0	
	comp=N,2µm,0.3s						
ZEDA	zmir-Bergama	0.61	257	P	Pg	16 33 14.1	0.0
ZEDA				IAML		16 33 23.0	
	comp=N,1µm,0.6s						
ZEDA				S	Sb	16 33 23.2	-0.1
ZEDA				IAML		16 33 28.0	
	comp=E,710nm,0.6s						
DEMI	Demirci	0.68	95	P	Pg	16 33 15.5	0.0
DEMI				S	Sg	16 33 24.5	+0.1
DEMI				IAML		16 33 25.0	
	comp=E,3µm,0.3s						
DEMI				IAML		16 33 28.0	
	comp=N,2µm,0.3s						
IZMD	zmir-Dikili-	0.72	261	P	Pg	16 33 16.3	+0.1
IZMD				S	Sb	16 33 26.4	-0.2
IZMD				IAML		16 33 29.0	
	comp=N,557nm,0.5s						
IZMD				IAML		16 33 30.0	
	comp=E,586nm,0.5s						
DST	Dursunbey	0.78	50	Pg	Pg	16 33 17.1	-0.3
YAYO	Edremit-Balk	0.79	311	Pg	Pg	16 33 16.9	-0.5
MANT	Manisa	0.83	137	P	Pg	16 33 17.9	-0.3
MANT				S	Sg	16 33 28.8	-0.4
MANT				IAML		16 33 33.0	
	comp=E,630nm,0.4s						
MANT				IAML		16 33 34.0	
	comp=N,642nm,1.0s						
ODEM	Odemis-Izmir	0.84	168	Pg	Pg	16 33 18.4	-0.1
KULA	Kula-Manisa	0.87	132	Pg	Pg	16 33 18.7	-0.3
SUSR	Susurluk-Balik	0.88	12	Pg	Pg	16 33 18.7	-0.5
SMAA	Simav-Kutahya	0.89	90	Pg	Pg	16 33 19.1	-0.2
SIMA	Simav-Kutahya	0.89	91	Pg	Pg	16 33 19.2	-0.2
DUVT	Torbali	0.93	199	P	Pg	16 33 19.8	-0.4
DUVT				IAML		16 33 34.0	
	comp=E,1µm,0.3s						
BLCB	Balcova	0.95	221	Pg	Pg	16 33 20.2	-0.3
BLCB	Balcova	0.95	221	P	Pg	16 33 20.3	-0.3
BLCB				S	Sb	16 33 33.3	+0.3
FOCM	Foa	0.95	246	Pg	Pg	16 33 19.8	-0.7
GONE	Gonen-Balikesi	0.95	353	Pg	Pg	16 33 19.9	-0.7
YENI	Yenice-Canakka	0.95	331	Pg	Pg	16 33 20.0	-0.6
SHAP	Saphane-Kutahy	1.08	94	Pn	Pb	16 33 22.7	-0.1
CANM	Can-anakkale	1.09	326	Pn	Pb	16 33 22.7	-0.3
KRBN	Karaburun	1.13	244	Pn	Pb	16 33 23.3	-0.3
AYDB	Zeytinkoy-Aydi	1.15	178	Pn	Pb	16 33 23.9	-0.2
NAZL	Nazilli-Aydin	1.19	163	Pn	Pn	16 33 24.2	-0.4
GEDZ	Gediz	1.22	92	Pn	Pn	16 33 24.9	-0.2
PRK	Paraskevi	1.23	277	P	Pb	16 33 25.4	0.0
PRK				S	Sg	16 33 41.9	+0.1
PRK	Paraskevi	1.23	277	P	Pb	16 33 25.4	0.0
PRK				S	Sb	16 33 40.5	-0.6
GMLD	Gumuldur	1.26	216	Pn	Pn	16 33 25.5	0.0
BAND	Balkesir-Ban	1.27	9	⇓P	Pb	16 33 25.9	-0.1
BAND				⇑S	Sg	16 33 43.4	+0.4
KUSD	Kusadasi-Aydin	1.31	200	Pn	Pn	16 33 26.2	-0.1
EZN	Ezine	1.38	302	P	Pn	16 33 27.3	+0.1
EZN				S	Sb	16 33 45.9	+0.5
EAG2	Marmaro, Chios	1.47	248	P	Pb	16 33 29.8	+0.4
EAG2				S	Sn	16 33 46.9	-0.5
GCAM	G?zelcaml?	1.48	199	Pn	Pn	16 33 28.4	-0.2
SIGR	SIGRI	1.55	275	P	Pn	16 33 29.6	+0.1
SIGR				S	Sn	16 33 50.0	+0.5
SIGR	SIGRI	1.55	275	P	Pn	16 33 29.6	+0.1
SIGR				S	Sn	16 33 48.6	-0.9
CHOS	Chios island	1.57	244	P	Pn	16 33 29.8	-0.1
CHOS				S	Sb	16 33 51.5	+0.5
CHOS	Chios island	1.57	244	P	Pn	16 33 29.6	-0.3
CHOS				S	Sn	16 33 50.2	+0.1
SMG	Samos	1.60	210	P	Pb	16 33 31.6	-0.1
SMG				S	Sg	16 33 53.4	-0.3
SMG	Samos	1.60	210	P	Pb	16 33 31.6	-0.1
SMG				S	Sb	16 33 52.0	+0.2
GADA	Gvkgeada	1.85	307	P	Pn	16 33 34.1	+0.4
CAVK	Edirne/Enez-Ca	2.04	321	⇑P	Pn	16 33 37.3	+0.9
CAVK				⇓S	Sb	16 34 03.6	-1.0
BODT	Bodrum	2.08	192	P	Pn	16 33 37.7	+0.8
ENEZ	Enez	2.09	322	P	Pn	16 33 37.8	+0.8
LIA	Limnos Island	2.21	292	P	Pn	16 33 38.8	+0.2
LIA	Limnos Island	2.21	292	P	Pn	16 33 39.2	+0.7
SMTH	Samothraki Isl	2.25	308	P	Pn	16 33 39.4	+0.3
SMTH	Samothraki Isl	2.25	308	P	Pn	16 33 39.4	+0.3
ALN	Alexandroupoli	2.26	323	P	Pn	16 33 39.7	+0.4
ALN	Alexandroupoli	2.26	323	P	Pn	16 33 39.7	+0.4
SILT	Sile	2.47	33	⇑P	Pn	16 33 42.4	+0.2
RDO	Rodhopi	2.70	320	P	Pn	16 33 45.8	+0.5
THAS	Thassos island	2.83	303	P	Pn	16 33 47.3	+0.1
ELND	Elena	4.10	339	⇓P	Pn	16 34 05.8	+1.2
BOVS	Bovan	6.47	316	⇓P	Pn	16 34 38.4	+1.3
MLR	Muntele Rosu	6.54	348	⇓P	Pn	16 34 38.1	-0.2
VRI	Vrincioaia	6.81	353	⇑P	Pn	16 34 42.5	+0.6
HERR	Herculane	7.05	327	⇓P	Pn	16 34 46.1	+1.0

*NEIC **04** 16:33:13.9±1.2, 2°.7N±0°.1×128°.4E±0°.2, h211km±10km, mb4.2/13, Error ellipse: s-maj=25.4km s-min=17.7km az=79.0*
*DJA **04** 16:33:14.3±0.6, 3°N±4°×12°8E±°, h196km±5km, M4.0/14, mB4.6/3, mb4.3/5, MLv3.9/14, Mw(mB)3.8/3*
*IDC **04** 16:33:35.5±14.0, 2°.05N×127°.73E, h451km±180km, mb3.0/8, mbtmp3.9/8, Error ellipse: s-maj=104.0km s-min=22.1km az=51.0*
ISC 04 16:33:12.5±0.7**, 2°.68N**±0°.09×**128°.4E**±0°.1**, h200**km**, n32,** σ**0s92**/32**, mb3.9**/13**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.17	209	Pn	Pn	16 33 54.9	+2.0
TNTI	Ternate	2.17	209	P	Pn	16 33 55.0	+2.2
MNI	Manado	3.78	251	P	Pn	16 34 12.4	+0.8
SIJI	Sorong	4.54	141	P	Pn	16 34 22.7	+1.6
SANI	Sanana	5.29	207	P	Pn	16 34 30.4	-0.3
LUWI	Luwuk	6.75	237		Pn	16 34 49.7	+0.2
LUWI	Luwuk	6.75	237	P	Pn	16 34 50.0	+0.5
	1µm67nm,1.2s						
APSI	Ampana	7.65	242	P	Pn	16 35 01.5	+0.3
KNRA	Kununurra	18.25	179	P	P	16 37 11.8	+0.7
KNRA				IAmb	IAmb	16 37 13.0	
	comp=Z,9.8nm,0.8s						
FITZ	Fitzroy Crossi	20.83	187	P	P	16 37 37.5	-1.3
	comp=Z,4.2nm,1.0s,baz=5.2,slow=11,SNR=1.8						
	comp=Z,4.2nm,1.0s						
WB0	Warramunga Arr	23.07	165	P	P	16 38 00.3	-0.4
WB0				IAmb	IAmb	16 38 01.9	
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	23.23	166	P	P	16 38 01.8	-0.3
	comp=Z,2.4nm,0.7s,baz=343,slow=10,SNR=19						
	comp=Z,2.4nm,0.7s						
WRA	Warramunga Arr	23.23	166	P	P	16 38 00.7	-1.4
WR8	Warramunga Arr	23.28	165	P	P	16 38 02.5	0.0
WR8				IAmb	IAmb	16 38 04.0	
	comp=Z,7.9nm,1.1s						
AS31	Alice Springs	26.73	169	P	P	16 38 33.0	-0.7
ASAR	Alice Springs	26.73	169	P	P	16 38 33.2	-0.5
	comp=Z,1.1nm,0.6s,baz=353,slow=7.7,SNR=28						
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	26.73	169	P	P	16 38 33.0	-0.7
CMAR	Chiang Mai Arr	32.85	301	P	P	16 39 29.1	+1.4
	comp=Z,0.2nm,0.4s,baz=113,slow=7.7,SNR=2.2						
	comp=Z,0.2nm,0.4s						
CMAR	Chiang Mai Arr	32.85	301	P	P	16 39 28.5	+0.8
BBOO	Buckleboo	36.03	169	P	P	16 39 54.6	-0.2
BBOO				IAmb	IAmb	16 40 33.0	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	36.58	161	P	P	16 39 59.4	-0.1
	comp=Z,1.2nm,0.4s,baz=341,slow=9.1,SNR=6.0						
	comp=Z,1.2nm,0.4s						
STKA	Stephens Creek	36.58	161	P	P	16 39 59.4	-0.1
MGBR	Mount Gambier	41.76	165	P	P	16 40 40.8	-1.4
MKAR	Makanchi Array	59.37	325	P	P	16 42 53.7	-0.1
	comp=Z,0.6nm,0.4s,baz=113,slow=8.4,SNR=19						
	comp=Z,0.6nm,0.4s						
MAKZ	Makanchi	59.56	325	P	P	16 42 55.0	0.0
MAKZ				IAmb	IAmb	16 42 55.4	
	comp=Z,3.0nm,1.4s						
KURBB	Kurchatov Arra	63.52	327	P	P	16 43 21.0	-0.4
	comp=Z,0.9nm,0.5s,baz=127,slow=6.1,SNR=13						
	comp=Z,0.9nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KURK	**Kurchatov**	**63.52**	**327**	P	**P**	**16 43 21.2**	**-0.3**
TIXI	**Tiksi**	**68.87**	**0**	P	**P**	**16 43 54.4**	**-0.7**
TIXI				IAmb	IAmb	16 43 54.5	
	comp=Z,2.7nm,1.1s						
BVAR	**Borovoye Array**	**69.11**	**327**	P	**P**	**16 43 56.4**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=134,slow=8.3,SNR=4.0						
	comp=Z,0.5nm,0.4s						
L18K	**Granite Mounta**	**80.62**	**27**	P	**P**	**16 45 03.3**	**+0.6**
SKT	**Skwentna**	**82.97**	**28**	P	**P**	**16 45 14.6**	**-0.4**
SKT				IAmb	IAmb	16 45 28.1	
	comp=Z,14nm,1.4s						
BERG	**Berg Lake**	**86.64**	**30**	P	**P**	**16 45 33.1**	**-0.2**

*IPEC **04** 16:46:51.9±0.2, 51.°52N×16.°22E, h1km, ML2.6/6, Error ellipse: s-maj=1.7km s-min=1.3km az=63.0*
*VIE **04** 16:46:51.2±0.5, 51.°53N×16.°34E, h0km, mb2.7/4, ml3.1/7, Error ellipse: s-maj=4.6km s-min=4.2km az=76.0 67 km NW of Wroclaw Suspected Mining induced.*
*DNK **04** 16:46:52.0±0.8, 51.°55N×16.°47E, h30km, ML2.2, Presumed earthquake*
*PRU **04** 16:46:53.1, 51.°51N×16.°11E, h0km*
*IDC **04** 16:46:53.7±1.0, 51.°43N×15.°94E, h0km, mbtmp3.2/6, ML2.5/6, Error ellipse: s-maj=16.5km s-min=9.5km az=107.0*
*BGR **04** 16:46:53.3±0.4, 51.°49N×16.°10E, h1km, ML3.0/17, Error ellipse: s-maj=3.3km s-min=2.2km az=22.0, There seems to be a weak foreshock (~3s)*
ISC 04 16:46:51.1±0.7**, 51.°57N**±0.°03×**16.°10E**±0.°02**, h0km, n65,** σ**1ˢ28**/116**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**171**	*e*Pn	**Pg**	**16 47 02.2**	**-3.0**
KSP				*e*Pg	**Pb**	**16 47 05.3**	**-1.4**
KSP				*e*Sg	**Sg**	**16 47 14.5**	**-0.2**
CHVC	**Chvalec**	**0.98**	**182**	*e*PG	**Pg**	**16 47 10.2**	**+0.3**
	76nm,0.4s						
CHVC				*e*SG	**Sg**	**16 47 22.9**	**+0.3**
OSTC	**Ostas**	**1.02**	**176**	*e*PG	**Pg**	**16 47 09.4**	**-1.2**
	66nm,0.2s						
OSTC				*e*SG	**Sg**	**16 47 23.7**	**0.0**
UPC	**Upice**	**1.06**	**183**	*e*PG	**Pg**	**16 47 11.2**	**-0.3**
	160nm,0.3s						
UPC				*e*SG	**Sg**	**16 47 25.7**	**+0.4**
DPC	**Dobruska-Polom**	**1.23**	**173**	*e*PG	**Pg**	**16 47 14.2**	**-0.4**
	64nm,0.5s						
DPC				*e*SG	**Sg**	**16 47 30.8**	**+0.3**
DPC	**Dobruska-Polom**	**1.23**	**173**	*e*Pg	**Pg**	**16 47 14.2**	**-0.4**
	SNR=10.0						
DPC				*e*Sg	**Sb**	**16 47 31.0**	**-0.6**
	SNR=3.1						
PIVO	**Bartosovice**	**1.41**	**168**	*e*Pg	**Pn**	**16 47 17.4**	**-0.7**
	baz=351						
PIVO				*e*Sg	**Sg**	**16 47 34.2**	**-2.3**
	99nm,0.4s,baz=351						
PVCC	**Panska Ves**	**1.42**	**223**	*e*PG	**Pb**	**16 47 18.4**	**-0.1**
	187nm,0.2s						
PVCC				*e*SG	**Sg**	**16 47 36.8**	**0.0**
PVCC	**Panska Ves**	**1.42**	**223**	*e*Pg	**Pb**	**16 47 19.4**	**+0.9**
	SNR=6.0						
BRG	**Berggiesshubel**	**1.53**	**244**	*e*Pg	**Pg**	**16 47 20.7**	**+0.4**
	SNR=6.3						
BRG				*e*Sg	**Sn**	**16 47 41.0**	**+0.8**
	SNR=4.6						
BRG	**Berggiesshubel**	**1.53**	**244**	Pn	**Pn**	**16 47 17.7**	**-2.0**
BRG				Pg	**Pg**	**16 47 20.8**	**+0.5**
BRG				Sg	**Sn**	**16 47 41.1**	**+1.0**
BRG				Amp		16 47 42.3	
	comp=Z,115nm,0.4s						
RICC	**Richard**	**1.63**	**232**	*e*PG	**Pb**	**16 47 22.0**	**0.0**
	comp=Z,130nm,0.3s						
RICC				*e*SG	**Sg**	**16 47 43.3**	**-0.1**
RUE	**Ruedersdorf**	**1.70**	**303**	*e*Sg	**Sg**	**16 47 49.1**	**+3.4**
	SNR=3.2						
RYBC	**Ceska Rybna**	**1.76**	**181**	*e*Pn	**Pn**	**16 47 22.7**	**-0.2**
	baz=3.2						
RYBC				*e*Sg	**Sn**	**16 47 45.9**	**-0.1**
	comp=Z,57nm,0.3s,baz=3.2						
PRU	**Pruhonice**	**1.87**	**213**	*e*PG	**Pb**	**16 47 25.4**	**-0.7**
	comp=Z,79nm,0.4s						
PRU				*e*SG	**Sb**	**16 47 50.3**	**+0.3**
HSKC	**Hora Svate Kat**	**1.94**	**241**	*e*PG	**Pb**	**16 47 26.9**	**-0.4**
	comp=Z,63nm,0.3s						
HSKC				*e*SG	**Sg**	**16 47 53.4**	**0.0**
STEB	**Steborice**	**1.95**	**146**	*e*PG	**Pb**	**16 47 27.7**	**+0.2**
	comp=Z,108nm,0.5s						
STEB				*e*SG	**Sg**	**16 47 53.7**	**0.0**
CLL	**Collm**	**1.96**	**264**	*e*Pn	**Pn**	**16 47 25.0**	**-0.5**
CLL				*e*Pg	**Pg**	**16 47 29.0**	**+0.4**
CLL				*e*Sg	**Sg**	**16 47 54.0**	**0.0**
	comp=Z,71nm,0.9s						
MORC	**Moravsky Berou**	**2.02**	**152**	*e*Sg	**Sb**	**16 47 54.5**	**+0.2**
	SNR=2.1						
MORC	**Moravsky Berou**	**2.02**	**152**	*e*Pn	**Pn**	**16 47 25.9**	**-0.5**
	baz=335						
MORC				*e*Sg	**Sn**	**16 47 52.7**	**+0.4**
	comp=Z,38nm,0.4s,baz=335						
OKC	**Ostrava-Krasne**	**2.17**	**142**	*e*PG	**Pb**	**16 47 31.1**	**-0.1**
	comp=Z,52nm,0.8s						
OKC				*e*SG	**Sb**	**16 47 59.1**	**+0.5**
OKC	**Ostrava-Krasne**	**2.17**	**142**	*e*Pg	**Pb**	**16 47 31.6**	**+0.5**
	SNR=4.8						
OKC				*e*Sg	**Sb**	**16 47 59.4**	**+0.8**
	SNR=3.0						
VRAC	**Vranov**	**2.29**	**172**	Pn	**Pn**	**16 47 30.6**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=352,slow=16,SNR=19						
VRAC				Lg	Lg	16 48 01.5	
	comp=Z,2.9nm,0.3s,baz=231,slow=17,SNR=3.9						
	comp=Z,6.2nm,0.3s						
VRAC	**Vranov**	**2.29**	**172**	*e*Pn	**Pn**	**16 47 30.7**	**+0.6**
	SNR=12						
VRAC				*e*Pg	**Pg**	**16 47 34.4**	**-0.5**
	SNR=2.6						
VRAC	**Vranov**	**2.29**	**172**	*e*Pn	**Pn**	**16 47 30.0**	**-0.1**
	baz=354						
VRAC				*e*Sg	**Sb**	**16 48 01.9**	**-0.1**
	comp=Z,30nm,0.4s,baz=354						
TREC	**Trest**	**2.31**	**190**	*e*PG	**Pb**	**16 47 33.3**	**-0.3**
TREC				*e*SG	**Sg**	**16 48 04.0**	**-1.3**
ZVC	**Zvikov**	**2.46**	**211**	*e*PG	**Pb**	**16 47 35.4**	**-0.7**
	comp=Z,33nm,0.2s						
ZVC				*e*SG	**Sg**	**16 48 09.2**	**-0.8**
MAUC	**Maruska**	**2.47**	**153**	*e*PG	**Pb**	**16 47 37.0**	**+0.7**
	comp=Z,52nm,0.4s						
MAUC				*e*SG	**Sg**	**16 48 09.6**	**-0.7**
KRUC	**Moravsky**	**2.52**	**176**	*e*Sg	**Sg**	**16 48 11.3**	**-0.6**
	SNR=2.3						
KRUC	**Moravsky**	**2.52**	**176**	*e*Pn	**Pn**	**16 47 33.3**	**+0.1**
	baz=358						
KRUC				*e*Pg	**Pb**	**16 47 37.0**	**-0.1**
	baz=358						
KRUC				*e*Sg	**Sb**	**16 48 09.3**	**+0.6**
	comp=Z,24nm,0.4s,baz=358						
TANN	**Tannenbergstha**	**2.58**	**245**	*e*Sg	**Sg**	**16 48 13.4**	**-0.3**
	SNR=4.6						
NKC	**Novy Kostel**	**2.67**	**241**	*e*PG	**Pb**	**16 47 39.9**	**+0.1**
	comp=Z,104nm,0.3s						
NKC				*e*SG	**Sg**	**16 48 17.9**	**+1.0**
OJC	**Ojcow**	**2.70**	**119**	*e*Pn	**Pn**	**16 47 33.9**	**-1.9**
OJC				*e*Pg	**Pg**	**16 47 43.3**	**+0.5**
OJC				*e*Sg	**Sg**	**16 48 16.9**	**-0.9**
OJC	**Ojcow**	**2.70**	**119**	*e*Pg	**Pg**	**16 47 43.3**	**+0.5**
	SNR=4.3						
OJC				*e*Sg	**Sg**	**16 48 17.9**	**0.0**
	SNR=3.7						
PLN	**Plauen**	**2.72**	**248**	*e*Sg	**Sg**	**16 48 18.2**	**-0.2**
	SNR=4.1						
NEUB	**Neuenburg**	**2.74**	**264**	*e*Sg	**Sg**	**16 48 19.8**	**+0.9**
	SNR=6.4						
JAVC	**Velka Javorina**	**2.90**	**159**	*e*Pn	**Pn**	**16 47 38.0**	**-0.5**
	baz=341						
KHC	**Kasperske Hory**	**2.93**	**214**	*e*PN	**Pn**	**16 47 39.0**	**+0.1**
KHC				*e*PG	**Pb**	**16 47 44.5**	**+0.3**
KHC				*e*SN	**Sn**	**16 48 14.5**	**-0.3**
KHC				*e*SG	**Sg**	**16 48 25.0**	**-0.1**
MOX	**Moxa**	**2.98**	**254**	*e*Pg	**Pg**	**16 47 47.9**	**-0.2**
	SNR=4.2						
MOX				*e*Sg	**Sg**	**16 48 26.5**	**-0.1**
	SNR=4.1						
CKRC	**Cesky Krumlov**	**2.98**	**203**	*e*PG	**Pb**	**16 47 46.0**	**+0.9**
	comp=Z,29nm,0.4s						
CKRC				*e*SG	**Sg**	**16 48 25.8**	**-1.1**
CKRC	**Cesky Krumlov**	**2.98**	**203**	*e*Pn	**Pn**	**16 47 40.3**	**+0.6**
	SNR=3.9						
CKRC				*e*Sg	**Sg**	**16 48 25.5**	**-1.4**
	SNR=3.2						
MANZ	**Manzenberg**	**2.99**	**240**	*e*Pn	**Pn**	**16 47 40.5**	**+0.7**
	SNR=2.6						
MANZ				*e*Sg	**Sg**	**16 48 27.2**	**+0.1**
	SNR=3.3						
ROTZ	**Rotzenmuhle**	**3.07**	**235**	*e*Pn	**Pn**	**16 47 41.2**	**+0.5**
	SNR=3.2						
ROTZ				*e*Sg	**Sg**	**16 48 27.8**	**-1.7**
	SNR=4.7						
GEC2	**GERESS Array S**	**3.13**	**210**	*e*Pn	**Pn**	**16 47 42.6**	**+0.8**
	SNR=5.1						
GERES	**GERESS Array B**	**3.13**	**210**	Pn	**Pn**	**16 47 42.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=28,slow=14,SNR=16						
GERES				Lg	Lg	16 48 28.3	
	comp=Z,0.3nm,0.3s,baz=30,slow=27,SNR=6.8						
	comp=Z,1.7nm,0.4s						
WET	**Wettzell**	**3.19**	**222**	*e*Pn	**Pn**	**16 47 42.9**	**+0.5**
	SNR=2.4						
LANS	**Liptovska Anna**	**3.24**	**137**	*e*PN	**Pn**	**16 47 43.4**	**+0.2**
LANS				*e*PG	**Pg**	**16 47 53.6**	**+0.4**
LANS				*e*SG	**Sb**	**16 48 32.0**	**+2.5**
MODS	**Modra-Piesok**	**3.29**	**166**	*e*PN	**Pn**	**16 47 45.3**	**+1.5**
MODS				*e*PG	**Pg**	**16 47 53.1**	**-1.0**
MODS				*e*SN	**Sg**	**16 48 35.9**	**-0.8**
ZST	**Bratislava**	**3.44**	**169**	*e*SG	**Sg**	**16 48 39.1**	**-2.4**
CLZ	**Clausthal**	**3.58**	**277**	*e*Pn	**Pn**	**16 47 49.2**	**+1.4**
	SNR=1.7						
CLZ				*e*Sg	**Sg**	**16 48 46.8**	**+0.9**
	SNR=2.5						
BSD	**Bornholm Skovb**	**3.62**	**349**	*i* P	**Pn**	**16 47 47.7**	**-0.6**
BSD				*i* S	**Sn**	**16 48 28.0**	**-3.7**
BSD				IAML		16 49 03.7	
	comp=Z,2.5nm,0.4s						
CONA	**Conrad Observa**	**3.65**	**183**	*i* Pn	**Pn**	**16 47 48.4**	**-0.5**
	comp=Z,0.4nm,0.1s						
MOA	**Molln**	**3.91**	**198**	*i* Pn	**Pn**	**16 47 52.7**	**+0.3**
	comp=Z,3.7nm,0.3s						
KECS	**Kecovo**	**4.19**	**136**	*e*PG	**Pg**	**16 48 12.8**	**+1.5**
KECS				*e*SN	**Sn**	**16 48 45.4**	**-0.4**
KECS				*e*SG	**Sg**	**16 49 12.5**	**+7.0**
BIOA	**Bad Ischl, Aus**	**4.20**	**203**	*e*Pn	**Pn**	**16 47 56.1**	**-0.3**
	comp=Z,4.4nm,0.3s						
ARSA	**Arzberg**	**4.34**	**185**	*e*Pn	**Pn**	**16 47 58.3**	**0.0**
	comp=Z,0.7nm,0.2s						
LUNU	**Lund**	**4.37**	**340**	*i* P	**Pn**	**16 47 58.2**	**-0.4**
LUNU				*i* S	**Sn**	**16 48 47.4**	**-2.8**
LESA	**Schwarzleotal**	**4.71**	**210**	*e*Pn	**Pn**	**16 48 03.5**	**0.0**
	comp=Z,0.5nm,0.2s						
KBA	**Koelnbreinsper**	**4.84**	**203**	*e*Pn	**Pn**	**16 48 05.3**	**0.0**
	comp=Z,2.6nm,0.4s						
BJUU	**Bjuv**	**4.87**	**339**	*i* P	**Pn**	**16 48 04.7**	**-0.7**
DEL	**Delary**	**5.08**	**346**	*i* P	**Pn**	**16 48 08.1**	**-0.3**
DEL				*i* S	**Sn**	**16 49 02.7**	**-5.0**
DEL				IAML		16 49 08.0	
	comp=Z,1.0nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.29**	**223**	Pn	**Pn**	**16 48 25.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=265,slow=15,SNR=1.9						
DAVOX				Lg	Lg	16 50 07.0	
	comp=Z,0.4nm,0.3s,baz=165,slow=21,SNR=2.3						
	comp=Z,0.9nm,0.3s						
AKASG	**Malin Array Be**	**8.30**	**91**	Pn	**Pn**	**16 48 53.5**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=277,slow=12,SNR=1.6						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**8.69**	**352**	Pn	**Pn**	**16 48 59.6**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=169,slow=16,SNR=2.4						
	comp=Z,3.4nm,0.9s						
FINES	**FINESS Array B**	**11.31**	**25**	Pn	**Pn**	**16 49 33.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=218,slow=10,SNR=3.6						
	comp=Z,2.5nm,0.9s						

*IDC **04** 16:47:08.6±0.6, 38.°98N×27.°92E, h0km, mb3.9/17, mbtmp3.9/28, ML4.0/8, MS3.6/36, Error ellipse: s-maj=11.0km s-min=9.6km az=94.0*
*ISK **04** 16:47:09.3, 38.°99N×27.°86E, h10km, ML4.5/19*
*AFAD **04** 16:47:09.6, 38.°99N×27.°87E, h7km±2km, MW4.3*
*MED_RC **04** 16:47:09.0±0.4, 38.°99N×27.°87E, h13km±2km, MW4.5/11, Moment Tensor Solution.Mantle waves: s11,c12; Duration: 1ˢ0 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.86±1.17; $M_{\theta\theta}$4.08±.75; $M_{\phi\phi}$1.78±.78; $M_{r\theta}$-1.87±.86; $M_{\theta\phi}$-5.05±.71; $M_{\phi r}$-1.40±1.43; Best double couple: $M_0$7.55000×10^{15} NP1:ϕ_s332.00000°,δ48.00000°, λ-55.00000°. NP2:ϕ_s105.00000°,δ53.00000°, λ-123.00000°. Principal axes: T 8.1300, Plg2.0000°, Azm218.0000°; N -1.1700, Plg26.0000°, Azm127.0000°; P -6.9700, Plg64.0000°, Azm313.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **04** 16:47:10.9±2.1, 39.°00N±0.°04×27.°94E±0.°06, h10km±1km, mb4.5/27 Error ellipse: s-maj=8.3km s-min=6.1km az=225.0*
*MOS **04** 16:47:10.0±0.9, 39.°04N×27.°91E, h17km, mb4.3/13, Error ellipse: s-maj=6.4km s-min=3.7km az=86.9*
*THE **04** 16:47:10.3, 39°N±2°×2°8E±°, h6km±10km, M4.4/25, mb4.7/2, MLh4.4/25*
*MCSM **04** 16:47:11.1±0.6, 39°N±3°×2°8E±°, h10km±4km, mb4.5, mB4.4, MLv4.8, Mw(mB)3.5*
*ATH **04** 16:47:11.7, 38.°98N×27.°85E, h26km±4km, ML4.4/16, Manual Solution by A.Agalos First location: 2020/02/04 16:48:40, This location: 2020/02/04 16:54:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*CFUSG **04** 16:47:12.6, 39.°30N×27.°80E, h10km, Mb3.6/7, MD3.7/7, MSH3.7/7*
ISC 04 16:47:10.5±0.8**, 38.°99N**±0.°02×**27.°89E**±0.°02**, h11**km±5km**, n427,** σ**1ˢ25**/457**, mb4.4**/49**, MS3.7**/28**, 41C-41D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.12**	**209**	P	**Pg**	**16 47 12.9**	**-0.6**
AKHS				S	**Sg**	**16 47 15.3**	**-0.3**
AKS	**Akhisar**	**0.12**	**209**	Pg	**Pg**	**16 47 12.4**	**-1.1**
AKS				Sg	**Sg**	**16 47 14.8**	**-0.8**
GORD	**Gordes-Manisa**	**0.24**	**110**	Pg	**Pg**	**16 47 15.2**	**-0.2**
GORD				Sg	**Sg**	**16 47 19.2**	**+0.5**
GOMA	**Golmarmara-Man**	**0.28**	**176**	Pg	**Pg**	**16 47 15.8**	**-0.4**
GOMA				Sg	**Sg**	**16 47 20.6**	**+0.6**
SOMA	**Soma-Manisa**	**0.32**	**301**	Pg	**Pg**	**16 47 16.0**	**-1.0**
KTTT	**Salihli**	**0.34**	**152**	P	**Pg**	**16 47 16.9**	**-0.3**
KTTT				S	**Sg**	**16 47 21.9**	**+0.2**
STEP	**BALIKESIR_Sava**	**0.41**	**341**	P	**Pg**	**16 47 17.6**	**-1.0**
STEP				S	**Sg**	**16 47 24.2**	**+0.1**
CAMT	**Merkez**	**0.51**	**242**	P	**Pg**	**16 47 19.9**	**-0.5**
CAMT				S	**Sb**	**16 47 28.2**	**-0.8**
ZEDA	**zmir-Bergama**	**0.63**	**268**	P	**Pg**	**16 47 22.2**	**-0.6**
ZEDA				S	**Sg**	**16 47 31.3**	**+0.2**
DEMI	**Demirci**	**0.65**	**85**	P	**Pg**	**16 47 22.7**	**-0.3**
DEMI				S	**Sg**	**16 47 32.1**	**+0.6**
MANT	**Manisa**	**0.72**	**133**		**Pg**	**16 47 23.8**	**-0.7**
MANT	**Manisa**	**0.72**	**133**	P	**Pg**	**16 47 23.9**	**-0.5**
MANT				S	**Sb**	**16 47 34.7**	**-0.5**
ODEM	**Odemis-Izmir**	**0.73**	**168**	Pg	**Pg**	**16 47 23.9**	**-0.6**
ODEM				Sg	**Sg**	**16 47 34.3**	**+0.3**
BKES	**Balkesir-Mer**	**0.74**	**2**	P	**Pg**	**16 47 23.8**	**-1.1**
BKES				S	**Sg**	**16 47 34.4**	**-0.2**
IZMD	**zmir-Dikili-**	**0.75**	**270**	P	**Pg**	**16 47 24.9**	**-0.1**
IZMD				S	**Sg**	**16 47 34.8**	**0.0**
DURS	**Dursunbey**	**0.76**	**36**	P	**Pg**	**16 47 24.2**	**-1.0**
DURS				S	**Sb**	**16 47 36.6**	**+0.4**
KULA	**Kula-Manisa**	**0.77**	**128**	Pg	**Pg**	**16 47 24.8**	**-0.5**
BALY	**Balya**	**0.78**	**344**	P	**Pg**	**16 47 24.5**	**-1.0**
BALY				S	**Sg**	**16 47 35.4**	**-0.4**
BUHA	**Balikesir, Bur**	**0.81**	**309**	P	**Pg**	**16 47 25.2**	**-0.9**
BUHA				S	**Sg**	**16 47 36.5**	**-0.3**
DST	**Dursunbey**	**0.83**	**42**	Pg	**Pg**	**16 47 25.8**	**-0.8**
DUVT	**Torbali**	**0.84**	**204**	P	**Pg**	**16 47 25.6**	**-1.1**
DUVT				S	**Sg**	**16 47 37.2**	**-0.4**
IZMR	**zmir-demi**	**0.85**	**177**	P	**Pg**	**16 47 26.2**	**-0.6**
IZMR				S	**Sg**	**16 47 37.4**	**-0.6**
SIMA	**Simav-Kutahya**	**0.86**	**83**	Pg	**Pg**	**16 47 26.6**	**-0.4**
SMAA	**Simav-Kutahya**	**0.86**	**82**	Pg	**Pg**	**16 47 26.6**	**-0.4**
BAGT	**Foa**	**0.88**	**248**	P	**Pg**	**16 47 26.7**	**-0.7**
BAGT				S	**Sb**	**16 47 39.2**	**-0.3**
KIRA	**zmir-Kiraz**	**0.89**	**153**	P	**Pg**	**16 47 27.2**	**-0.4**
KIRA				S	**Sb**	**16 47 39.7**	**-0.2**
YAYO	**Edremit-Balk**	**0.89**	**315**	Pg	**Pg**	**16 47 26.5**	**-1.1**
BLCB	**Balcova**	**0.90**	**228**	Pg	**Pg**	**16 47 26.6**	**-1.1**
BLCB	**Balcova**	**0.90**	**228**	P	**Pg**	**16 47 26.4**	**-1.3**
BLCB				S	**Sg**	**16 47 39.2**	**-0.3**
FOCM	**Foa**	**0.95**	**253**	Pg	**Pg**	**16 47 27.5**	**-1.2**
SUSR	**Susurluk-Balik**	**0.98**	**9**	Pg	**Pg**	**16 47 28.4**	**-1.0**
SHAP	**Saphane-Kutahy**	**1.04**	**88**	Pg	**Pg**	**16 47 30.1**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.04**	**180**	Pg	**Pg**	**16 47 29.4**	**-1.1**
GONE	**Gonen-Balikesi**	**1.07**	**352**	Pg	**Pg**	**16 47 29.9**	**-1.1**
NAZL	**Nazilli-Aydin**	**1.07**	**163**	Pn	**Pg**	**16 47 30.4**	**-0.6**
YENI	**Yenice-Canakka**	**1.07**	**332**	Pg	**Pg**	**16 47 29.9**	**-1.2**
KRBN	**Karaburun**	**1.12**	**250**	Pn	**Pb**	**16 47 30.6**	**-1.2**
GEDZ	**Gediz**	**1.19**	**87**	Pn	**Pb**	**16 47 32.8**	**-0.2**
GMLD	**Gumuldur**	**1.19**	**220**	Pn	**Pb**	**16 47 32.7**	**-0.3**
CANM	**Can-anakkale**	**1.21**	**328**	Pn	**Pn**	**16 47 32.4**	**-1.0**
KUSD	**Kusadasi-Aydin**	**1.22**	**203**	Pn	**Pn**	**16 47 32.8**	**-0.7**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**16 47 33.7**	**-0.7**
PRK				S	**Sb**	**16 47 51.3**	**+0.1**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**16 47 33.7**	**-0.7**
PRK				S	**Sb**	**16 47 50.2**	**-1.0**
BAND	**Balkesir-Ban**	**1.38**	**7**	⇑P	**Pn**	**16 47 35.0**	**-0.7**
GCAM	**G?zelcaml?**	**1.39**	**202**	Pn	**Pn**	**16 47 34.3**	**-1.5**
EAG2	**Marmaro, Chios**	**1.46**	**253**	P	**Pn**	**16 47 36.2**	**-0.6**
EAG2				S	**Sn**	**16 47 54.4**	**-1.6**
EZN	**Ezine**	**1.47**	**305**	P	**Pn**	**16 47 36.2**	**-0.8**
EZN				S	**Sn**	**16 47 56.3**	**0.0**
EZN	**Ezine**	**1.47**	**305**	P	**Pn**	**16 47 36.1**	**-0.8**
KRL1	**Karlovasi Samo**	**1.51**	**218**	P	**Pn**	**16 47 37.6**	**+0.1**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**16 47 36.2**	**-1.5**
SMG				S	**Sb**	**16 47 58.3**	**+0.3**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**16 47 36.4**	**-1.3**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**16 47 37.5**	**-0.7**
CHOS				S	**Sb**	**16 47 58.9**	**-0.2**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**16 47 37.5**	**-0.7**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**16 47 37.7**	**-1.0**
SIGR				S	**Sn**	**16 47 58.8**	**-0.6**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**16 47 37.7**	**-1.0**
YER	**Yerkesik**	**1.88**	**170**	P	**Pn**	**16 47 41.8**	**-0.8**
GADA	**Gvkgeada**	**1.95**	**309**	P	**Pn**	**16 47 43.0**	**-0.6**
BODT	**Bodrum**	**1.98**	**194**	P	**Pn**	**16 47 44.0**	**+0.1**
CAVK	**Edirne/Enez-Ca**	**2.16**	**323**	⇓P	**Pn**	**16 47 45.8**	**-0.6**
BORA	**Eskisehir**	**2.17**	**65**		**Pn**	**16 47 46.2**	**-0.5**
ENEZ	**Enez**	**2.20**	**323**	P	**Pn**	**16 47 46.8**	**-0.1**
LIA	**Limnos Island**	**2.29**	**294**	P	**Pn**	**16 47 47.6**	**-0.5**
LIA	**Limnos Island**	**2.29**	**294**	P	**Pn**	**16 47 47.6**	**-0.5**
EFSA	**Agios Efstrati**	**2.32**	**285**	P	**Pn**	**16 47 47.9**	**-0.8**
SMTH	**Samothraki Isl**	**2.35**	**310**	P	**Pn**	**16 47 48.4**	**-0.7**
SMTH	**Samothraki Isl**	**2.35**	**310**	P	**Pn**	**16 47 48.3**	**-0.7**
ISP	**Isparta**	**2.37**	**119**		**Pn**	**16 47 49.2**	**-0.2**
ISP	**Isparta**	**2.37**	**119**	*de*P	**Pn**	**16 47 49.1**	**-0.4**
ISP				pmax	pmax		
	comp=Z,102nm,0.8s						
ISP	**Isparta**	**2.37**	**119**	P	**Pn**	**16 47 49.4**	**-0.1**
ALN	**Alexandroupoli**	**2.38**	**324**		**Pn**	**16 47 49.0**	**-0.4**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**16 47 48.7**	**-0.7**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**16 47 49.0**	**-0.4**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**16 47 48.5**	**-0.9**
ALEX	**Alexandroupoli**	**2.41**	**321**	P	**Pn**	**16 47 49.7**	**-0.2**
KLYT	**Kilyos**	**2.43**	**21**	P	**Pn**	**16 47 49.3**	**-0.8**
CTYL	**Yalikoy Yolu**	**2.50**	**7**	P	**Pn**	**16 47 50.4**	**-0.7**
SILT	**Sile**	**2.55**	**31**	⇓P	**Pn**	**16 47 51.0**	**-0.7**
ELL	**Elmali**	**2.75**	**144**		**Pn**	**16 47 55.6**	**+1.0**
ELL	**Elmali**	**2.75**	**144**	P	**Pn**	**16 47 55.6**	**+1.0**
ARG	**Arkhangelos**	**2.77**	**176**		**Pn**	**16 47 54.1**	**-0.8**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**16 47 54.3**	**-0.6**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**16 47 54.1**	**-0.8**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**16 47 54.0**	**-0.9**
RDO	**Rodhopi**	**2.81**	**321**		**Pn**	**16 47 54.9**	**-0.5**
RDO	**Rodhopi**	**2.81**	**321**	P	**Pn**	**16 47 55.1**	**-0.3**
RDO	**Rodhopi**	**2.81**	**321**	P	**Pn**	**16 47 54.9**	**-0.5**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**16 47 55.1**	**-1.1**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**16 47 55.1**	**-1.1**
THAS	**Thassos island**	**2.93**	**304**	P	**Pn**	**16 47 55.8**	**-1.2**
THAS	**Thassos island**	**2.93**	**304**	P	**Pn**	**16 47 55.8**	**-1.2**
SAHE	**Sakarya_HENDEK**	**2.94**	**50**	⇑P	**Pn**	**16 47 56.7**	**-0.5**
MDUB	**Mudurnu**	**2.95**	**59**		**Pn**	**16 47 56.5**	**-0.8**
KYMI	**Kymi, Euboea I**	**2.98**	**264**	P	**Pn**	**16 47 57.5**	**-0.2**
KYMI	**Kymi, Euboea I**	**2.98**	**264**	P	**Pn**	**16 47 56.8**	**-1.0**
AKAS	**Kas**	**3.07**	**153**		**Pn**	**16 48 00.0**	**+1.0**
AOS	**Alonnisos**	**3.13**	**275**	P	**Pn**	**16 47 59.9**	**+0.1**
KSL	**Kastellorizon**	**3.14**	**154**	P	**Pn**	**16 48 00.3**	**+0.5**
KSL	**Kastellorizon**	**3.14**	**154**	P	**Pn**	**16 48 00.1**	**+0.3**
AOS2	**Alonissos-2**	**3.15**	**274**	P	**Pn**	**16 47 59.6**	**-0.5**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**16 48 00.5**	**-0.8**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**16 48 00.4**	**-0.8**
THERA	**Ancient Thera,**	**3.24**	**217**	P	**Pn**	**16 48 00.8**	**-0.6**
THERA	**Ancient Thera,**	**3.24**	**217**	P	**Pn**	**16 47 59.9**	**-1.4**
KAVA	**Kavala**	**3.28**	**309**	P	**Pn**	**16 48 01.1**	**-0.7**
KAVA	**Kavala**	**3.28**	**309**	P	**Pn**	**16 48 01.1**	**-0.7**
OUR	**Ouranopolis**	**3.30**	**295**	P	**Pn**	**16 48 01.2**	**-0.9**
OUR	**Ouranopolis**	**3.30**	**295**	P	**Pn**	**16 48 01.3**	**-0.9**
VLY	**Voula,Athens**	**3.41**	**252**	P	**Pn**	**16 48 02.9**	**-0.7**
KARP	**Karpathos**	**3.48**	**190**		**Pn**	**16 48 04.0**	**-0.6**
KARP	**Karpathos**	**3.48**	**190**	P	**Pn**	**16 48 06.0**	**+1.3**
KARP	**Karpathos**	**3.48**	**190**	P	**Pn**	**16 48 04.1**	**-0.6**
MAGU	**Magoula**	**3.55**	**257**	P	**Pn**	**16 48 04.5**	**-1.0**
RZN	**Rozhen**	**3.62**	**319**	*i* P	**Pn**	**16 48 06.6**	**-0.1**
JMB	**Yambol**	**3.65**	**344**	*e*P	**Pn**	**16 48 08.4**	**+1.5**
PLG	**Polygyros**	**3.70**	**293**	P	**Pn**	**16 48 07.3**	**-0.3**
VIL2	**Platees**	**3.70**	**259**	P	**Pn**	**16 48 06.9**	**-0.8**
ATAL	**Atalanti**	**3.81**	**267**	P	**Pn**	**16 48 08.7**	**-0.5**
MET1	**Methana Town,**	**3.81**	**250**	P	**Pn**	**16 48 08.3**	**-0.8**
MET5	**Makryloggos,Me**	**3.82**	**250**	P	**Pn**	**16 48 08.7**	**-0.6**
MET6	**Megalochori,Me**	**3.83**	**250**	P	**Pn**	**16 48 09.0**	**-0.4**
NVR	**Nevrokopi**	**3.88**	**309**	P	**Pn**	**16 48 09.7**	**-0.5**
SRS	**Serrai**	**3.92**	**304**	P	**Pn**	**16 48 10.1**	**-0.6**
SOH	**Sokhos**	**3.94**	**299**	P	**Pn**	**16 48 10.4**	**-0.6**
PLD	**Plovdiv**	**3.96**	**324**	*i* P	**Pn**	**16 48 11.1**	**-0.1**
LTK	**Loutraki**	**3.98**	**258**	P	**Pn**	**16 48 10.9**	**-0.5**
HORT	**Hortiatis**	**4.03**	**295**	P	**Pn**	**16 48 11.8**	**-0.4**
MMB	**Musomishta**	**4.07**	**310**	*i* P	**Pn**	**16 48 12.7**	**0.0**
AXAR	**Agios Charalam**	**4.09**	**269**	P	**Pn**	**16 48 12.8**	**-0.2**
ELND	**Elena**	**4.22**	**339**	⇑P	**Pn**	**16 48 14.7**	**-0.1**
NEF	**NEVSHA**	**4.30**	**354**	*e*P	**Pn**	**16 48 15.5**	**-0.3**
LIT	**Litokhoron**	**4.32**	**287**		**Pn**	**16 48 15.5**	**-0.6**
LIT	**Litokhoron**	**4.32**	**287**	P	**Pn**	**16 48 15.4**	**-0.8**
LIT	**Litokhoron**	**4.32**	**287**	P	**Pn**	**16 48 15.5**	**-0.6**
KNT	**Kendrikon**	**4.40**	**301**	P	**Pn**	**16 48 17.3**	**+0.1**
IDI	**Anoyia**	**4.40**	**214**	Pn	**Pn**	**16 48 16.2**	**-1.2**
	comp=Z,11nm,0.7s,baz=9.5,slow=12,SNR=12						
IDI				Pg	**Pg**	**16 48 33.4**	**-1.5**
	comp=Z,4.0nm,0.3s,baz=9.4,slow=8.5,SNR=9.4						
IDI				Sn	**Sn**	**16 49 04.7**	**-4.0**
	comp=Z,7.9nm,0.3s,baz=263,slow=18,SNR=4.3						
IDI				Lg	Lg	16 49 30.9	
	comp=Z,7.6nm,0.3s,baz=295,slow=10,SNR=4.6						
IDI				LR	LR	16 50 12.5	
	comp=Z,886nm,20.1s,baz=5.0,slow=42						
IDI	**Anoyia**	**4.40**	**214**		**Pn**	**16 48 16.6**	**-0.8**
BR105	**Keskin Array S**	**4.50**	**79**	P	**Pn**	**16 48 19.7**	**+1.0**
BR106	**Keskin Array S**	**4.50**	**79**	P	**Pn**	**16 48 19.8**	**+1.0**
SZH	**Strazhitsa**	**4.51**	**342**	*e*P	**Pn**	**16 48 20.1**	**+1.3**
PGB	**Panagyurishte**	**4.51**	**322**	*i* P	**Pn**	**16 48 18.7**	**-0.1**
BR104	**Keskin Array S**	**4.52**	**79**	P	**Pn**	**16 48 20.0**	**+1.0**
BR131	**Keskin Array S**	**4.52**	**79**		**Pn**	**16 48 19.5**	**+0.5**
BR131	**Keskin Array S**	**4.52**	**79**	*d i*P	**Pn**	**16 48 19.8**	**+0.8**
BRTR	**Keskin Array B**	**4.52**	**79**	Pn	**Pn**	**16 48 19.6**	**+0.7**
	comp=Z,6.3nm,0.3s,baz=251,slow=14,SNR=116						
BRTR				Pg	**Pg**	**16 48 35.0**	**-2.0**
	comp=Z,8.8nm,0.3s,baz=258,slow=15,SNR=28						
BRTR				Sn	**Sn**	**16 49 10.0**	**-1.6**
	comp=Z,4.1nm,0.3s,baz=152,slow=6.8,SNR=9.7						
BRTR				Lg	Lg	16 49 36.9	
	comp=Z,3.4nm,0.3s,baz=264,slow=22,SNR=15						
BRTR				LR	LR	16 50 09.5	
	comp=Z,568nm,20.1s,baz=270,slow=40						
	comp=Z,18nm,0.4s						
BRTR	**Keskin Array B**	**4.52**	**79**	Pn	**Pn**	**16 48 19.3**	**+0.3**
BRTR	**Keskin Array B**	**4.52**	**79**	P	**Pn**	**16 48 19.3**	**+0.3**
BRTR						16 49 10.0	
VLI	**Veliai**	**4.53**	**242**	P	**Pn**	**16 48 18.6**	**-0.4**
THL	**Klokotos Trika**	**4.60**	**279**	P	**Pn**	**16 48 19.7**	**-0.2**
KLV	**Kalavryta, Ach**	**4.60**	**260**	P	**Pn**	**16 48 20.0**	**0.0**
PVL	**Pavlikeni**	**4.61**	**334**	*i* P	**Pn**	**16 48 20.3**	**+0.2**
KKB	**Krupnik**	**4.62**	**310**	P	**Pn**	**16 48 20.4**	**+0.2**
KKB	**Krupnik**	**4.62**	**310**	*i* P	**Pn**	**16 48 20.4**	**+0.2**
PSN	**Preselentsi**	**4.65**	**2**	*i* P	**Pn**	**16 48 20.4**	**-0.2**
GRG	**Griva**	**4.65**	**297**	P	**Pn**	**16 48 21.1**	**+0.4**
RAZG	**Razgrad**	**4.69**	**348**	⇓P	**Pn**	**16 48 22.0**	**+0.8**
KIRS	**Kirsehir-Merke**	**4.69**	**86**	⇑P	**Pn**	**16 48 22.1**	**+0.8**
CIDE	**Kastamonu/Cide**	**4.82**	**52**	⇑P	**Pn**	**16 48 23.7**	**+0.8**
MANR	**Mangalia**	**4.85**	**6**	⇑P	**Pn**	**16 48 23.6**	**+0.2**

ILGA Ilgaz 4.92 63 Pn 16 48 23.8 -0.8
ZIMR 5.04 339 ⇑P Pn 16 48 25.7 -0.3
ZIMR 5.04 339 P Pn 16 48 25.6 -0.3
ITM Ithomi 5.04 251 Pn 16 48 26.8 +0.8
PLVB Pleven 5.04 332 ⇑P Pn 16 48 26.1 +0.1
VTS Vitosha 5.06 317 *i* P Pn 16 48 26.6 +0.1
KPRO Kipourio 5.14 283 P Pn 16 48 27.1 -0.4
comp=Z,60nm,0.8s
TSCT Constanta Port 5.20 6 ⇑P Pn 16 48 28.5 +0.3
MFTR Murfatlar 5.20 4 ⇓P Pn 16 48 28.6 +0.4
BLSH Balsha 5.21 319 *e*P Pn 16 48 29.8 +1.4
CICN Ciocanesti 5.24 353 ⇑P Pn 16 48 28.7 -0.1
MPEP Malo Peshtene 5.37 326 *i* P Pn 16 48 30.5 +0.1
NEST Nestorio 5.46 287 P Pn 16 48 32.4 +0.4
TIRR Tirgusor 5.48 4 ⇓P Pn 16 48 31.6 -0.4
TIRR Tirgusor 5.48 4 P Pn 16 48 31.6 -0.4
BZK Bozkurt 5.53 56 Pn Pn 16 48 32.8 +0.2
BZK Bozkurt 5.53 56 ⇑P Pn 16 48 33.1 +0.4
TLBR Topalu 5.55 1 ⇓P Pn 16 48 32.8 -0.3
VLAD Vladila 5.65 334 ⇓P Pn 16 48 35.8 +1.4
SKO Skopje 5.75 303 *i* Pn Pn 16 48 36.6 +0.8
OHR Ohrid 5.84 294 *i* Pn Pn 16 48 39.0 +1.9
TPGR Topolog 5.88 4 ⇑P Pn 16 48 37.1 -0.4
CSS Mathiatis 5.92 131 Pn 16 48 38.1 -0.1
CSS Mathiatis 5.92 131 P Pn 16 48 40.0 +1.8
comp=Z,0.1nmcomp=Z,29nm,0.7s
HUMR Humele 5.95 339 ⇑P Pn 16 48 38.0 -0.5
PGOR Pogoanele 5.95 354 ⇑P Pn 16 48 39.8 +1.3
CFR Carcaliu 6.19 2 ⇓P Pn 16 48 40.8 -0.9
CFR Carcaliu 6.19 2 P Pn 16 48 40.8 -0.9
ISR Istrita 6.21 351 ⇓P Pn 16 48 43.4 +1.3
ISR Istrita 6.21 351 P Pn 16 48 43.4 +1.3
TLCR 6.23 6 ⇓P Pn 16 48 42.8 +0.4
TLCR 6.23 6 P Pn 16 48 42.7 +0.4
GRER 6.42 354 ⇓P Pn 16 48 45.3 +0.3
PUNG Punghina 6.46 327 ⇓P Pn 16 48 44.9 -0.6
NEHR Nehoiu 6.54 350 ⇑P Pn 16 48 48.0 +1.4
IZVR Izvoarele 6.55 359 ⇓P Pn 16 48 48.3 +1.6
BOVS Bovan 6.57 317 ⇓P Pn 16 48 47.5 +0.4
MLR Muntele Rosu 6.66 348 Pn Pn 16 48 49.1 +0.7
comp=Z,2.7nm,0.3s,baz=180,slow=6.1,SNR=14
MLR Sn **Sn** 16 50 03.0 -1.2
comp=Z,9.3nm,0.3s,baz=129,slow=18,SNR=6.3
MLR Lg Lg 16 50 43.5
comp=Z,1.4nm,0.3s,baz=180,slow=12,SNR=1.6
MLR LR LR 16 51 48.7
comp=Z,512nm,19.3s,baz=172,slow=42
comp=Z,11nm,0.5s
MLR Muntele Rosu 6.66 348 Pn 16 48 48.9 +0.6
MLR Muntele Rosu 6.66 348 ⇓P Pn 16 48 49.6 +1.3
MLR Muntele Rosu 6.66 348 P Pn 16 48 50.3 +2.0
SCTR Scanteiesti 6.68 1 ⇓P Pn 16 48 49.1 +0.5
VOIR 6.78 343 ⇑P Pn 16 48 51.1 +1.1
VOIR 6.78 343 P Pn 16 48 51.1 +1.1
VOIR 6.78 343 P Pn 16 48 51.9 +1.9
ODBI Odobesti 6.80 355 ⇓P Pn 16 48 51.5 +1.3
VLDR Vladesti 6.85 1 ⇓P Pn 16 48 51.4 +0.5
PANC Panciu 6.90 356 ⇑P Pn 16 48 51.8 +0.3
PLOR Plostina 6.92 353 ⇓P Pn 16 48 53.4 +1.5
PLOR Plostina 6.92 353 P Pn 16 48 53.3 +1.5
VRI Vrincioaia 6.93 353 ⇓P Pn 16 48 52.7 +0.8
VRI Vrincioaia 6.93 353 P Pn 16 48 52.7 +0.8
VRI Vrincioaia 6.93 353 P Pn 16 48 52.5 +0.6
COVR Voineasa-Covas 6.96 350 ⇑P Pn 16 48 53.4 +0.9
SEV Sevastopol' 7.03 36⇓*e*P Pn 16 48 52.7 -0.6
SEV *e*S Sn 16 50 09.3 -4.0
SEV Sevastopol' 7.03 36⇓*e*P Pn 16 48 52.7 -0.6
SEV pmax pmax 16 49 08.5
comp=Z,20nm,0.6s
SEV *e*S Sn 16 50 09.3 -4.0
SEV smax smax 16 50 13.9
comp=N,38nm,0.7s
SEV smax smax 16 50 13.9
comp=E,37nm,0.7s
GHRR 7.08 357 ⇓P Pn 16 48 55.3 +1.3
GHRR 7.08 357 P Pn 16 48 55.1 +1.1
LOT Lotru 7.14 336 ⇑P Pn 16 48 54.8 -0.2
HERR Herculane 7.16 327 ⇓P Pn 16 48 53.9 -1.3
TURR Turia 7.20 350 ⇓P Pn 16 48 56.8 +1.1
DOPR Dopca 7.21 346 ⇓P Pn 16 48 56.4 +0.5
YAL Yalta 7.22 38 *e*P Pn 16 48 55.3 -0.6
YAL *e*S Sn 16 50 13.5 -4.3
YAL Yalta 7.22 38 *e*P Pn 16 48 55.3 -0.6
YAL pmax pmax 16 49 00.0
comp=Z,12nm,0.3s
YAL *e*S Sn 16 50 13.5 -4.3
YAL smax smax 16 50 18.7
comp=N,15nm,0.2s
YAL smax smax 16 50 18.7
comp=E,35nm,0.4s
TARU Tarkhankut 7.25 27 *e*P Pn 16 48 55.8 -0.6
TARU pmax pmax 16 49 10.2
comp=Z,47nm,0.5s
TARU *e*S Sn 16 50 14.6 -4.1
TARU smax smax 16 50 15.4
comp=N,31nm,0.5s
TARU smax smax 16 50 15.4
comp=E,21nm,0.5s
OZUR 7.27 348 ⇑P Pn 16 48 56.6 -0.1
MDVR Moldovita 7.40 323 ⇓P Pn 16 48 57.8 -0.6
PDG Podgorica 7.41 300 Pn 16 49 01.3 +2.8
PDG Podgorica 7.41 300 ⇓P Pn 16 48 59.3 +0.8
ONER Baraj Valea Uz 7.42 352 ⇓P Pn 16 48 59.7 +1.0
GZR Gura Zlata 7.44 331 ⇓P Pn 16 48 59.3 +0.2
GZR Gura Zlata 7.44 331 P Pn 16 48 59.2 +0.2
ALU Alushta 7.48 38 *e*P Pn 16 49 01.7 +2.2
ALU *e*S Sn 16 50 25.2 +0.9
ALU Alushta 7.48 38 *e*P Pn 16 49 01.7 +2.2
ALU pmax pmax 16 49 12.5
comp=Z,7.0nm,0.2s
ALU *e*S Sn 16 50 25.2 +0.9
ALU smax smax 16 50 26.4
comp=N,23nm,0.4s
ALU smax smax 16 50 26.4
comp=E,24nm,0.4s
DNZ2 Donuzlav2 7.50 30 *e*P Pn 16 49 01.5 +1.7
DNZ2 pmax pmax 16 49 02.3
comp=Z,26nm,0.4s
DNZ2 *e*S Sn 16 50 24.8 -0.1
DNZ2 smax smax 16 50 26.7
comp=N,98nm,1.1s
DNZ2 smax smax 16 50 26.7
comp=E,112nm,0.8s
SIM Simferopol' 7.55 36 *e*P Pn 16 49 02.1 +1.7
SIM pmax pmax
comp=Z,21nm,0.5s
SIM MLR MLR
comp=Z,230nm,17.6s
SIM Simferopol' 7.55 36 *e*P Pn 16 49 00.2 -0.2
SIM pmax pmax 16 49 02.4
comp=Z,75nm,0.6s
SIM *e*S Sn 16 50 23.1 -2.9
SIM smax smax 16 50 34.9
comp=N,226nm,0.9s
SIM smax smax 16 50 34.9
comp=E,221nm,1.1s
TESR Tescani 7.57 353 ⇑P Pn 16 49 01.0 +0.2
TESR Tescani 7.57 353 P Pn 16 49 00.6 -0.2
comp=E,0.3nmcomp=E,84nm,0.6s
MDB Medias 7.60 341 ⇑P Pn 16 49 01.4 +0.1
MDB Medias 7.60 341 P Pn 16 49 01.3 +0.1
VASR Vaslui 7.65 359 ⇑P Pn 16 49 02.1 +0.2
PURM Purcari 7.68 10 ⇑P Pn 16 49 01.6 -0.6
PURM Purcari 7.68 10 P Pn 16 49 01.5 -0.7
comp=E,0.6nmcomp=E,79nm,1.2s
DEV Deva 7.81 333 ⇓P Pn 16 49 05.0 +0.9
DEV Deva 7.81 333 P Pn 16 49 05.0 +0.9
SUDU Sudak 7.92 40 *e*P Pn 16 49 06.5 +0.9
SUDU *e*S Sn 16 50 33.5 -1.8
SUDU Sudak 7.92 40 *e*P Pn 16 49 06.5 +0.9
SUDU pmax pmax 16 49 18.6
comp=Z,6.0nm,0.5s
SUDU *e*S Sn 16 50 33.5 -1.8
SUDU smax smax 16 50 36.1
comp=N,86nm,1.0s
SUDU smax smax 16 50 36.1
comp=E,30nm,0.8s
BZS Buzias 8.09 327 ⇓P Pn 16 49 07.0 -0.9
BZS Buzias 8.09 327 P Pn 16 49 07.0 -0.9
MARR Marisel-Cluj 8.44 337 ⇑P Pn 16 49 12.7 -0.1
PRAR RASCA 8.46 352 ⇑P Pn 16 49 13.4 +0.4
MMAI Mount Meron Ar 8.52 132 Pn Pn 16 49 13.6 -0.2
comp=E,3.1nm,0.3s,baz=315,slow=13,SNR=11
MMAI Sn **Sn** 16 50 45.1 -4.9
comp=E,4.4nm,0.3s,baz=319,slow=28,SNR=6.0
comp=E,2.9nm,0.4s
TIP Timpagrande 8.66 275 Pn 16 49 16.6 +0.8
TIP Timpagrande 8.66 275 ⇑P Pn 16 49 15.5 -0.3
TIP Timpagrande 8.66 275 P Pn 16 49 16.2 +0.4
comp=E,21nm,1.1s
DRGR 8.67 336 ⇓P Pn 16 49 16.5 +0.5
DRGR 8.67 336 P Pn 16 49 16.5 +0.5
BURAR Bucovina Array 8.84 348 Pn 16 49 20.6 +2.4
BURAR Bucovina Array 8.84 348 ⇓P Pn 16 49 19.6 +1.4
BURAR Bucovina Array 8.84 348 P Pn 16 49 19.6 +1.4
BUR08 Bucovina Ar. S 8.87 348 Pn 16 49 19.2 +0.6
SQRM Soroca 9.15 2 P Pn 16 49 20.7 -1.7
comp=E,30nm,0.8s
KSV Kosov 9.54 349 P Pn 16 49 29.8 +2.0
MORH Mrgy, Hungar 9.93 320 ⇓P Pn 16 49 32.9 -0.1
MORH Mrgy, Hungar 9.93 320 P Pn 16 49 32.4 -0.6
comp=E,17nm,0.8s
ASF Jabal al Asfar 10.00 130 Pn Pn 16 49 34.9 +0.7
comp=E,0.2nm,0.3s,baz=329,slow=16,SNR=2.4
ASF Sn **Sn** 16 51 27.4 +1.0
comp=E,0.3nm,0.3s,baz=308,slow=18,SNR=1.4
ASF LR LR 16 53 57.6
comp=E,50nm,20.2s,baz=325,slow=41
comp=E,1.3nm,0.4s
SOC Sochi 10.01 59 *e*P Pn 16 49 33.2 -1.0
SOC *e* 16 51 24.7
SOC MLR MLR
comp=Z,208nm,19.0s
PAOL Paolisi 10.42 286 Pn 16 49 41.8 +1.9
VAE Valguarnera 10.71 266 Pn Pn 16 49 50.4 +6.5
comp=Z,1.1nm,0.3s,baz=177,slow=20,SNR=4.1
LUBAR Lubar, Ukraine 10.93 360 P Pn 16 49 45.1 -1.7
EIL Elat 10.97 146 Pn Pn 16 49 45.2 -2.2
comp=Z,1.1nm,0.3s,baz=11,slow=5.3,SNR=11
EIL Sn **Sn** 16 51 43.1 -7.0
comp=Z,1.1nm,0.3s,baz=190,slow=6.4,SNR=6.4
comp=Z,4.3nm,0.4s
MPLH Magyarpolny 11.13 321 P Pn 16 49 50.2 +0.6
comp=Z,62nm,0.9s
AK07 Malin Array Si 11.60 4 P Pn 16 49 53.9 -2.0
AK10 Malin Array Si 11.65 4 P Pn 16 49 54.5 -2.1
AK05 Malin Array Si 11.67 4 P Pn 16 49 54.8 -2.0
AK09 Malin Array Si 11.67 4 P Pn 16 49 54.8 -2.0
AK08 Malin Array Si 11.69 4 P Pn 16 49 55.2 -1.9
AK17 Malin Array Si 11.72 4 P Pn 16 49 57.7 +0.1
AK01 Malin Array Si 11.74 4 P Pn 16 49 56.2 -1.6
AKASG Malin Array Be 11.75 4 Pn Pn 16 49 55.2 -2.7
comp=Z,0.9nm,0.3s,baz=190,slow=12,SNR=4.9
AKASG Sn **Sn** 16 52 07.6 -1.5
comp=Z,1.3nm,0.3s,baz=178,slow=28,SNR=4.7
AKASG LR LR 16 54 52.0
comp=Z,180nm,18.4s,baz=188,slow=39
comp=Z,0.5nm,0.5s
AKASG Malin Array Be 11.75 4 *i* P Pn 16 49 56.5 -1.5
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 11.75 4⇑*e*P Pn 16 49 56.4 -1.6
AK04 Malin Array Si 11.77 4 P Pn 16 49 56.7 -1.5
NEUR Neytrino 11.96 64⇑*e*P Pn 16 50 02.3 +1.3
NEUR pmax pmax
comp=Z,7.0nm,1.4s
SHA1 Shidzhatmaz 12.06 62⇑*e*P Pn 16 50 04.0 +1.5
KIV Kislovodsk 12.15 61 *e*P Pn 16 50 03.2 -0.4
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,53nm,13.0s
KBZ Khabaz 12.23 62 Pn Pn 16 50 07.1 +2.6
comp=Z,5.0nm,1.1s,baz=296,slow=12,SNR=3.6
KBZ LR LR 16 56 05.0
comp=Z,364nm,18.8s,baz=258,slow=44
KBZ Khabaz 12.23 62⇑*e*P Pn 16 50 06.3 +1.8
KBZ pmax pmax
comp=Z,5.0nm,1.0s
GNI Garni 13.06 80 LR LR 16 55 23.7
comp=Z,350nm,19.2s,baz=279,slow=38
GNI Garni 13.06 80 P Pn 16 50 17.6 +1.5
comp=Z,24nm,1.7s
GERES GERESS Array B 14.18 319 Pn Pn 16 50 33.0 +1.7
comp=Z,0.3nm,0.4s,baz=122,slow=12,SNR=3.8
GERES GERESS Array B 14.18 319 P Pn 16 50 33.0 +1.7
VORD Divnogorie 14.42 30 *e*P Pn 16 50 36.2 +1.8
VORD pmax pmax
comp=Z,9.0nm,0.7s
VSR Storozhevoye 14.57 29 *e*P Pn 16 50 37.4 +0.9
VSR pmax pmax
comp=Z,7.0nm,0.5s
VORR Voronezh 14.95 28 *e*P Pn 16 50 40.1 -1.5
KEST Kesra 15.10 263 Pn P 16 50 46.5 -2.6
comp=Z,0.4nm,0.3s,baz=43,slow=14,SNR=11
KEST Kesra 15.10 263 Pn Pn 16 50 46.0 +2.2
KEST IAmb IAmb 16 50 52.7
comp=Z,24nm,0.9s
DAVOX Davos/Dischmat 15.31 306 Pn Pn 16 50 47.3 +0.7
comp=Z,0.6nm,0.3s,baz=125,slow=14,SNR=8.5
DAVOX LR LR 16 57 13.4
comp=Z,119nm,19.6s,baz=86,slow=40
comp=Z,2.9nm,0.5s
MAK Makhachkala 15.33 69*c i*P Pn 16 50 43.5 -3.3
MAK *e*S Sn 16 53 31.6 -5.0
MAK pmax pmax
comp=Z,285nm,1.2s
MAK MLR MLR
comp=Z,259nm,15.0s
AKT Akhty 15.36 74 *e*P Pn 16 50 46.4 -0.8
AKT MLR MLR
comp=Z,132nm,13.0s
BRG Berggiesshubel 15.42 325 *e*P P 16 50 53.2 +0.8
BRG Amp 16 50 53.9
comp=Z,4.2nm,0.8s
VRH Novokhopyorsk 15.60 34 *e*P Pn 16 50 51.8 +1.6
VRH pmax pmax
comp=Z,17nm,0.7s
LPSR Galich'ya Gora 15.61 26 *e*P Pn 16 50 48.3 -2.1
LPSR pmax pmax
comp=Z,17nm,0.7s
NACGM Naroch 15.94 358 *e*P P 16 50 57.8 -0.4
comp=N,25nm,1.0s
CLL Collm 16.15 325 *e*P P 16 51 01.0 +0.5
CLL Collm 16.15 325 *e*P P 16 51 01.0 +0.5
CLL *ex* x 16 51 12.0
CLL AMS AMS 16 56 00.0
comp=N,300nm,18.8s
CLL AMS AMS 16 56 00.0
comp=E,500nm,20.7s
CRHA Rehia 16.41 265 P P 16 51 06.2 +2.5
SENIN Lac Senin/Sane 16.81 303 P P 16 51 09.4 +1.2
BNI Bardonecchia 16.87 298 P P 16 51 10.2 +1.5
BNI IAmb IAmb 16 51 14.6
comp=Z,43nm,1.3s
BNI Bardonecchia 16.87 298 P P 16 51 10.2 +1.5
BNI pmax pmax
comp=Z,43nm,1.3s
OBN Obninsk 17.16 17 P Pn 16 51 05.8 -4.2
comp=Z,6.9nm,0.4s,baz=184,slow=13,SNR=3.3
OBN Obninsk 17.16 17⇓*e*P Pn 16 51 09.3 -0.7
OBN *e*S Sn 16 54 19.5 -1.2
OBN pmax pmax
comp=Z,25nm,1.3s
OBN MLR MLR
comp=Z,151nm,15.0s
MOS Moscow 17.98 18 *e*P Pn 16 51 18.5 -1.7
MOS pmax pmax
comp=Z,29nm,0.8s
BELG Belogornoye 19.14 39 P P 16 51 31.9 -1.6
comp=Z,0.4nm,0.3s,baz=220,slow=3.5,SNR=6.3
comp=Z,23nm,1.0s
BELG Belogornoye 19.14 39⇑*e*P P 16 51 32.2 -1.3
BELG pmax pmax
comp=Z,4.0nm,1.0s
ABSD Ouled Sidi Bra 19.19 267 P P 16 51 34.6 +0.3
AFRS Ain Fares 19.22 264 P P 16 51 35.0 +0.4
VSU Vasula 19.50 358⇓*e*P Pn 16 51 38.1 -0.6
VSU pmax pmax
comp=Z,18nm,0.9s
EADEB Ain Deheb 21.42 267 P P 16 52 02.1 +3.5
EANR `Ain N'Sour 21.45 270 P P 16 51 59.8 +0.9
RAYN Ar Rayn 21.49 131 P P 16 52 00.5 +1.2
RAYN Ar Rayn 21.49 131 P P 16 52 00.5 +1.2
RAYN pmax pmax
comp=Z,3.0nm,0.8s
ESMB Sidi M'hamed B 21.96 270 P P 16 52 07.5 +3.2
FINES FINESS Array B 22.51 358 P P 16 52 09.8 -0.1
comp=Z,4.6nm,0.8s,baz=167,slow=11,SNR=6.5
FINES LR LR 17 00 27.0
comp=Z,156nm,19.4s,baz=193,slow=36
comp=Z,4.6nm,0.8s
FINES FINESS Array B 22.51 358 *i* P P 16 52 10.8 +0.9
FINES pmax pmax
comp=Z,5.0nm,0.8s
ODJA Bouhanifia 22.61 269 P P 16 52 12.5 +1.3
HFS Hagfors 22.98 342 P P 16 52 14.8 -0.1
comp=Z,2.0nm,0.6s,baz=156,slow=13,SNR=5.9
HFS LR LR 17 02 36.5
comp=Z,154nm,18.8s,baz=132,slow=40
comp=Z,2.0nm,0.6s
KLMR Klimovskoe 23.06 15 *e*P P 16 52 15.3 -0.4
KLMR pmax pmax
comp=Z,17nm,1.2s
KIRV Kirov 24.00 28 LR LR 17 01 29.7
comp=Z,124nm,18.5s,baz=230,slow=36
NOA NORSAR Array B 24.39 340 P P 16 52 27.7 -0.9
comp=Z,1.4nm,0.8s,baz=145,slow=9.2,SNR=4.2
NOA LR LR 17 03 37.7
comp=Z,116nm,18.9s,baz=0.0,slow=40
comp=Z,1.4nm,0.8s
ESDC Sonseca Array 24.59 282 P P 16 52 30.0 -0.6
comp=Z,2.1nm,0.8s,baz=70,slow=10,SNR=14
ESDC LR LR 17 02 07.4
comp=Z,56nm,18.9s,baz=73,slow=36
comp=Z,2.1nm,0.8s
PAB San Pablo 24.90 282 P P 16 52 34.7 +1.2
PAB IAmb IAmb 16 52 35.6
comp=Z,6.8nm,0.8s
PAB San Pablo 24.90 282 P P 16 52 34.7 +1.2
PAB pmax pmax
comp=Z,7.0nm,0.9s
EKA Eskdalemuir Ar 26.40 318 P P 16 52 46.7 -0.1
comp=Z,3.0nm,0.7s,baz=111,slow=11,SNR=4.4
comp=Z,3.0nm,0.7s
ARTI Arti 26.59 39*c i*P P 16 52 49.8 +1.3
ARTI 16 53 26.3
ARTI S S 16 57 24.1 +1.2
ARTI pmax pmax
comp=Z,31nm,4.0s
MVO Moncorvo 26.70 286 *e*P P 16 52 49.7 -0.1
MD01 Midelt array s 27.04 267 P P 16 52 54.2 +1.2
MTE Manteigas 27.20 284 *e*P P 16 52 54.8 +0.6
PBAR Barrancos 27.22 279 *e*P P 16 52 54.4 0.0
PBAR *i* IAmb IAmb 16 53 15.1
comp=Z,12nm,1.5s
PCBR Castelo Branco 27.23 283 *e*P P 16 52 55.1 +0.6
PCBR *i* IAmb IAmb 16 52 59.5
comp=Z,25nm,1.8s
PMRV Marv??o 27.24 282 *e*P P 16 52 55.1 +0.5
PMRV *i* IAmb IAmb 16 52 57.5
comp=Z,22nm,1.3s
PESTR Estremoz 27.50 281 *e*P P 16 52 56.4 -0.5
PESTR *i* IAmb IAmb 16 53 05.4
comp=Z,19nm,2.0s
PGAV Gavieira, Arco 27.54 288 *e*P P 16 52 58.7 +1.4
PSARD Sardoal 27.80 283 *e*P P 16 53 03.7 +4.1
PARRA Arraiolos 27.85 281 *e*P P 16 52 59.5 -0.5
PBEJ Beja 27.89 279 *e*P P 16 53 00.2 -0.1
PBEJ *i* IAmb IAmb 16 53 09.7
comp=Z,14nm,2.0s
PVAQ Vaqueiros 27.92 278 *e*P P 16 53 00.7 0.0
PMTG Montargil 27.94 282 *e*P P 16 53 00.6 -0.2
PMTG *i* IAmb IAmb 16 53 06.5
comp=Z,18nm,1.9s
PCVE Castro Verde 28.11 279 *e*P P 16 53 02.2 -0.2
PCVE *i* IAmb IAmb 16 53 13.7
comp=Z,21nm,1.6s
PBDV Barranco-do-Ve 28.13 278 *e*P P 16 53 02.9 +0.4
PBDV *i* IAmb IAmb 16 53 05.9
comp=Z,28nm,1.2s
ARCES ARCESS Array B 30.64 358 LR LR 17 04 58.0
comp=Z,115nm,18.2s,baz=178,slow=35
CHGR Chuyangaron 31.96 77 P P 16 53 37.1 +0.6
CHGR IAmb IAmb 16 53 38.2
comp=Z,10.0nm,1.0s
CHGR Chuyangaron 31.96 77⇑*e*P P 16 53 37.5 +1.0
CHGR pmax pmax
comp=Z,11nm,0.9s
BVAR Borovoye Array 32.17 50 LR LR 17 08 16.3
comp=Z,87nm,19.4s,baz=249,slow=39
GAR Garm 32.76 76 P P 16 53 43.7 +0.2
ARSB Arslanbob 34.25 71 IAmb IAmb 16 54 01.7
comp=Z,5.0nm,1.1s
TORD Torodi Ar. Bea 34.63 229 P P 16 53 59.7 -0.2
comp=Z,1.8nm,0.6s,baz=34,slow=6.5,SNR=12
TORD PcP **PcP** 16 56 32.7 -1.5
comp=Z,1.1nm,1.0s,baz=13,slow=3.8,SNR=2.4
comp=Z,1.8nm,0.6s
AAK Ala-Archa 35.12 69 LR LR 17 11 37.4
comp=Z,82nm,19.0s,baz=274,slow=42
AAK Ala-Archa 35.12 69⇑*e*P P 16 54 05.5 +1.4
AAK pmax pmax
comp=Z,4.0nm,1.3s
LODK Lodwar 36.05 167 P P 16 54 13.8 +1.7
LODK IAmb IAmb 16 54 14.8
comp=Z,3.9nm,1.0s
KSH2 Kashi 36.68 74 P P 16 54 18.1 +0.6
KSH2 pmax pmax
comp=Z,2.0nm,1.1s
KURBB Kurchatov Arra 37.07 55 P P 16 54 20.0 -0.5
comp=Z,0.5nm,0.3s,baz=276,slow=8.8,SNR=6.0
KURBB LR LR 17 13 20.5
comp=Z,96nm,19.3s,baz=194,slow=42
comp=Z,0.5nm,0.3s
KURK Kurchatov 37.13 55 P P 16 54 20.0 -0.9
KURK Kurchatov 37.13 55 P P 16 54 20.0 -0.9
KURK pmax pmax
comp=Z,3.0nm,1.2s
MBAR Mbarara 39.48 176⇑*e*P P 16 54 42.5 +1.2
MBAR pmax pmax
comp=Z,9.0nm,1.3s
MK31 Makanchi Array 39.91 61*de*P P 16 54 44.6 +0.1
MKAR Makanchi Array 39.91 61 P P 16 54 44.6 +0.1
comp=Z,1.1nm,0.4s,baz=277,slow=6.9,SNR=21
MKAR PcP **PcP** 16 56 47.8 -2.0
comp=Z,0.7nm,0.8s,baz=288,slow=4.9,SNR=3.0
MKAR LR LR 17 13 20.6
comp=Z,73nm,21.0s,baz=280,slow=39
comp=Z,1.1nm,0.4s
MKAR Makanchi Array 39.91 61 P P 16 54 44.8 +0.3
SCO Scoresbysund 40.62 337 P P 16 54 51.3 +1.4
SCO IAmb IAmb 16 54 59.2
comp=Z,8.7nm,1.2s
SCO Scoresbysund 40.62 337 P P 16 54 51.3 +1.4
SCO pmax pmax
comp=Z,9.0nm,1.2s
ZALV Zalesovo Beam 40.82 49 P P 16 54 51.1 -0.7
comp=Z,0.5nm,0.4s,baz=260,slow=8.6,SNR=4.1
ZALV LR LR 17 14 16.1
comp=Z,68nm,18.2s,baz=272,slow=40
comp=Z,0.5nm,0.4s
ZALV Zalesovo Beam 40.82 49 *i* P P 16 54 53.5 +1.7
ZALV pmax pmax
comp=Z,1.0nm,0.4s
DGZ Jazzator, Alta 42.86 55⇑*e*P P 16 55 09.7 +1.0
DGZ pmax pmax
comp=Z,4.0nm,2.1s
NRIK Noril'sk 43.49 26 P P 16 55 14.2 +0.8
comp=Z,1.0nm,0.4s,baz=278,slow=6.5,SNR=2.6
NRIK LR LR 17 14 46.5
comp=Z,84nm,18.3s,baz=274,slow=38
comp=Z,1.0nm,0.4s
NRIK Noril'sk 43.49 26⇓*e*P P 16 55 13.7 +0.3
NRIK pmax pmax
comp=Z,4.0nm,1.3s
DBIC Dimbokro 43.66 231 P P 16 55 15.4 0.0
comp=Z,5.2nm,0.8s,baz=73,slow=9.3,SNR=6.4
comp=Z,5.2nm,0.8s
DBIC Dimbokro 43.66 231 P P 16 55 15.6 +0.2
DBIC IAmb IAmb 16 55 16.0
comp=Z,11nm,1.1s
DBIC Dimbokro 43.66 231 P P 16 55 15.6 +0.2
DBIC pmax pmax
comp=Z,11nm,1.1s
LSZ Lusaka 53.98 180 LR LR 17 20 15.0
comp=Z,59nm,18.1s,baz=115,slow=37
GTA2 Gaotai 54.23 65 *e*P P 16 56 36.8 +0.4
GTA2 pmax pmax
comp=Z,2.0nm,0.8s
SONM Songino Array 55.41 53 P P 16 56 45.9 +1.0
comp=Z,0.3nm,0.4s,baz=294,slow=11,SNR=4.8
SONM LR LR 17 23 08.5
comp=Z,81nm,19.0s,baz=327,slow=39
comp=Z,0.3nm,0.4s

SONM	Songino Array	55.41	53	IAmb	IAmb	16 56 49.7	
	comp=Z,2.6nm,1.4s						
SONM	Songino Array	55.41	53	P	P	16 56 45.9	+1.0
SONM				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BRDH	Bariadhala	56.05	87	LR	LR	17 24 00.1	
	comp=Z,94nm,18.4s,baz=204,slow=40						
TIXI	Tiksi	56.81	22	LR	LR	17 23 47.6	
	comp=Z,78nm,19.0s,baz=354,slow=39						
FRB	Frobisher Bay	58.51	329	LR	LR	17 25 21.8	
	comp=Z,198nm,19.1s,baz=86,slow=39						
LZH	Lanzhou	58.62	67	eP	P	16 56 58.4	-9.4
LZH				sP	pP	16 57 08.4	-3.0
LZH				pmax	pmax		
	comp=Z,25nm,1.7s						
TSUM	Tsumeb	58.68	191	LR	LR	17 25 36.7	
	comp=Z,88nm,18.1s,baz=329,slow=39						
ILON	Igloolik, Nuna	60.48	337	P	P	16 57 19.4	-0.5
ILON				IAmb	IAmb	16 57 53.5	
	comp=Z,8.6nm,1.5s						
KUQ	Kuujjuuaa	60.95	323	P	P	16 57 23.1	-0.1
KUQ				IAmb	IAmb	16 57 39.9	
	comp=Z,12nm,1.3s						
YAK	Yakutsk	61.48	32	LR	LR	17 25 06.9	
	comp=Z,46nm,18.3s,baz=292,slow=37						
SCHQ	Schefferville	61.71	319	P	P	16 57 27.0	-1.5
	comp=Z,4.4nm,0.9s,baz=11,slow=5.2,SNR=5.1						
	comp=Z,4.4nm,0.9s						
HHC	Hu-ho-hao-te	61.74	59	eP	P	16 57 30.4	+1.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PZH	PanZhiHua	61.81	78	P	P	16 57 31.5	+1.7
LPHEP	Lephephe	62.05	182	P	P	16 57 32.1	+1.0
XAN	Xi'an	63.25	67	⇑P	P	16 57 39.4	+0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KMI2	Kunming	63.30	78	P	P	16 57 41.6	+1.7
KMI2				S	S	17 05 56.1	-16
KMI2				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CMAR	Chiang Mai Arr	64.06	87	P	P	16 57 44.4	-0.3
	comp=Z,0.4nm,0.3s,baz=306,slow=7.8,SNR=4.3						
CMAR				LR	LR	17 30 04.2	
	comp=Z,24nm,19.1s,baz=295,slow=40						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	64.06	87	ceP	P	16 57 45.7	+1.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HEH	HeiHe	66.57	44	eP	P	16 58 00.4	0.0
HEH				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BOSA	Boshof	67.30	183	P	P	16 58 05.8	+0.4
	comp=Z,1.7nm,0.8s,baz=0.0,slow=5.1,SNR=2.6						
	comp=Z,1.7nm,0.8s						
BOSA	Boshof	67.30	183	P	P	16 58 06.1	+0.8
BOSA				IAmb	IAmb	16 58 35.4	
	comp=Z,7.1nm,1.2s						
BOSA	Boshof	67.30	183	P	P	16 58 06.1	+0.8
BOSA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KLR	Kul'dur	69.46	43	LR	LR	17 33 21.2	
	comp=Z,12nm,20.2s,baz=325,slow=40						
M65A	Busby, Falmout	70.89	308	P	P	16 58 28.5	+0.9
MA2	Magadan	71.09	27	LR	LR	17 34 44.4	
	comp=Z,41nm,18.4s,baz=298,slow=40						
SUR	Sutherland	71.31	186	LR	LR	17 32 37.5	
	comp=Z,53nm,18.5s,baz=16,slow=38						
NJ2	Nanjing	71.35	64	eP	P	16 58 28.6	-1.9
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
F31M	Tsiigehtchic	72.98	353	P	P	16 58 39.4	-0.2
F31M				IAmb	IAmb	16 59 16.1	
	comp=Z,3.1nm,0.9s						
KSRS	Korea Array	74.25	55	LR	LR	17 35 10.2	
	comp=Z,66nm,19.2s,baz=320,slow=39						
YKA	Yellowknife Ar	74.46	343	P	P	16 58 49.8	+1.4
	comp=Z,0.2nm,0.3s,baz=27,slow=5.1,SNR=4.0						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	74.46	343	ceP	P	16 58 52.5	+4.1
ILAR	Eielson Array	76.50	358	P	P	16 58 59.9	-0.1
	comp=Z,0.4nm,0.9s,baz=349,slow=4.0,SNR=2.8						
	comp=Z,0.4nm,0.9s						
ILAR	Eielson Array	76.50	358	P	P	16 59 00.7	+0.7
ILAR	Eielson Array	76.50	358	P	P	16 59 00.7	+0.7
BPAW	Bear Paw Mtn.	77.25	359	P	P	16 59 04.2	-0.1
BCAR	Beaver Creek A	77.95	355	P	P	16 59 09.0	+0.6
ASAJ	Asahikawa	78.46	42	LR	LR	17 39 46.4	
	comp=Z,48nm,18.5s,baz=358,slow=40						
PPLA	Purkeypile	78.46	0	P	P	16 59 11.2	-0.1
PETK	Petropavlovsk-	78.52	28	LR	LR	17 36 12.2	
	comp=Z,65nm,18.1s,baz=7.1,slow=38						
JNU	Nakatsue	78.83	56	LR	LR	17 39 03.5	
	comp=Z,66nm,21.1s,baz=16,slow=40						
SKT	Skwentna	79.38	360	P	P	16 59 15.4	-0.8
SKT				IAmb	IAmb	16 59 18.9	
	comp=Z,7.6nm,1.3s						
O18K	Koktuh Hills	81.48	2	P	P	16 59 27.6	+0.2
O18K				IAmb	IAmb	16 59 51.4	
	comp=Z,10nm,1.3s						
R16K	Pilot Point	83.70	3	P	P	16 59 40.0	+0.9
FVM	French Village	84.73	316	P	P	16 59 44.8	+0.1
FVM				IAmb	IAmb	16 59 50.3	
	comp=Z,3.8nm,0.8s						
FVM	French Village	84.73	316	P	P	16 59 44.8	+0.1
FVM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JCJ	Chichijima	90.11	54	LR	LR	17 44 06.7	
	comp=Z,50nm,18.1s,baz=322,slow=38						
ASAR	Alice Springs	116.57	100	PKP	PKPdf	17 05 53.2	-1.7
	comp=Z,0.5nm,0.9s,baz=300,slow=1.9,SNR=5.4						

*NEIC **04** 16:51:06.4±0.6, 17°.79N±0°.02×66°.84W±0°.01, h10km±2km, ML2.7/32, Md2.4/6(RSPR), Error ellipse: s-maj=3.9km s-min=2.9km az=7.0*

RSPR 04 16:51:07.3, 17°.84N×66°.85W, h9km, MD2.4/6, 1C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.14	348		Pg	16 51 10.6	+0.3
GBPR					Sg	16 51 13.2	+0.6
GBPR	Guanica, Bosqu	0.14	348	⇓eP	Pg	16 51 10.6	+0.3
GBPR				eS	Sg	16 51 13.2	+0.6
MLPR	Magueyes Islan	0.23	305		Pg	16 51 12.0	+0.1
MLPR				IAML		16 51 16.5	
	1μm,0.7s						
MLPR				IAML		16 51 17.1	
	653nm,0.5s						
CRPR	Cabo Rojo, PR	0.30	304		Pg	16 51 13.2	0.0
CRPR				IAML		16 51 18.7	
	comp=E,1μm,0.6s						
CRPR				IAML		16 51 18.8	
	comp=N,1μm,0.2s						
CRPR	Cabo Rojo, PR	0.30	304		Sg	16 51 17.9	+0.6
CRPR	Cabo Rojo, PR	0.30	304	⇑iP	Pg	16 51 13.3	+0.1
CRPR				eS	Sg	16 51 17.9	+0.6
OBIP	Obispado Ponce	0.31	49		Pg	16 51 13.3	-0.1
OBIP				IAML		16 51 18.8	
	comp=N,229nm,0.4s						
OBIP	Obispado Ponce	0.31	49		Sg	16 51 18.4	+0.9
OBIP	Obispado Ponce	0.31	49	⇓iP	Pg	16 51 13.4	0.0
OBIP				eS	Sg	16 51 18.4	+0.9
CELP	Cerrillos	0.35	48		Pg	16 51 14.1	-0.1
CELP				IAML		16 51 20.4	
	comp=N,334nm,0.2s						
CELP				IAML		16 51 20.6	
	comp=N,337nm,0.3s						
LSP	Las Mesas	0.40	326		Pg	16 51 15.2	0.0
LSP					Sg	16 51 21.1	+0.6
LSP	Las Mesas	0.40	326	⇓eP	Pg	16 51 15.2	0.0
LSP				eS	Sg	16 51 21.1	+0.6
UUPR	Utuado, UPR, P	0.43	17		Pg	16 51 15.5	-0.2
UUPR				IAML		16 51 22.9	
	comp=N,7μm,0.4s						
UUPR				IAML		16 51 26.0	
	comp=N,3μm,0.4s						
PRSN	Puerto Rico Se	0.47	323		Pg	16 51 16.2	-0.2
PRSN					Sg	16 51 23.4	+0.7
PRSN	Puerto Rico Se	0.47	323	IAML		16 51 24.0	
	comp=N,712nm,0.2s						
PRSN				IAML		16 51 28.2	
	comp=N,907nm,0.2s						
PRSN	Puerto Rico Se	0.47	323	⇑eP	Pg	16 51 16.2	-0.2
PRSN				eS	Sg	16 51 23.4	+0.7
ECPR	Experimental S	0.66	44		Pg	16 51 19.4	-0.7
ECPR				IAML		16 51 29.1	
	comp=N,593nm,0.3s						
ECPR				IAML		16 51 29.6	
	comp=N,490nm,0.3s						
ECPR	Experimental S	0.66	44	⇓iP	Pg	16 51 19.4	-0.7
ECPR				eS	Sg	16 51 28.8	-0.1
AGPR	Aguadilla, PR	0.67	338		Pg	16 51 19.6	-0.7
AGPR				IAML		16 51 34.5	
	comp=N,128nm,0.6s						
AGPR				IAML		16 51 37.2	
	comp=N,159nm,0.7s						
AGPR	Aguadilla, PR	0.67	338	⇓eP	Pg	16 51 19.5	-0.8
AGPR				eS	Sg	16 51 29.5	+0.4
EMPR	Esperanza - Ma	0.70	26		Pg	16 51 20.2	-0.6
EMPR					Sg	16 51 30.4	+0.4
EMPR	Esperanza - Ma	0.70	26	⇓eP	Pg	16 51 20.2	-0.6
EMPR				eS	Sg	16 51 30.4	+0.4
SJG	San Juan	0.72	68		Pg	16 51 20.4	-0.8
SJG				IAML		16 51 34.0	
	comp=N,89nm,0.4s						
SJG				IAML		16 51 38.0	
	comp=N,98nm,0.2s						
SJG	San Juan	0.72	68	⇓eP	Pg	16 51 20.5	-0.7
PDPR	Patillas Dam,	0.81	77		Pg	16 51 22.1	-0.8
PDPR				IAML		16 51 37.0	
	comp=N,96nm,0.4s						
GCPR	Guaynabo City	0.86	57		Sg	16 51 34.1	-1.1
GCPR	Guaynabo City	0.86	57	Pg	Pg	16 51 22.7	-1.3
GCPR	Guaynabo City	0.86	57	eS	Sg	16 51 34.1	-1.1
HUMP	Col San Antoni	1.00	72		Pg	16 51 25.1	-1.4
HUMP					Sg	16 51 39.1	-0.3
HUMP	Col San Antoni	1.00	72	IAML		16 51 42.0	
	comp=N,140nm,0.2s						
HUMP				IAML		16 51 43.0	
	comp=N,102nm,0.3s						
HUMP	Col San Antoni	1.00	72	⇓eP	Pg	16 51 25.1	-1.4
HUMP				eS	Sg	16 51 39.1	-0.3
CUPR	Culebra, Puert	1.56	72	Pn	Pn	16 51 34.7	-0.5

NOU 04 16:57:22.5, 16°.65S×167°.47E, h0km, mb4.0/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.27	147	P	Pg	16 57 46.7	-0.2
RTV	Rentapao	1.46	141	P	Pg	16 57 50.4	-0.1
YATNC	Mamie plateau,	5.41	186	P	Pn	16 58 44.1	-0.4
DZM	Mont Dzumac	5.48	190	P	Pn	16 58 44.9	-0.6
ONTNC	Ouen Toro	5.71	190	P	Pn	16 58 48.2	-0.4

*ROM **04** 17:02:49.6±0.3, 42°.51N±0°.02×15°.32E±0°.02, h10km, ML2.6/22, Error ellipse: s-maj=2.8km s-min=1.1km az=34.0*

ISC 04 17:02:49.3±1.3, 42°.49N±0°.03×15°.29E±0°.03, h4km±12km, n27, σ0s.84/32, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APRC	Apricena	0.76	166	P	Pg	17 03 03.2	-0.6
APRC				S	Sb	17 03 15.9	+0.1
MELA	Melanico ??? S	0.80	189	P	Pg	17 03 05.0	+0.5
CIGN	Sant'Elia a Pi	0.89	199	P	Pg	17 03 06.3	-0.1
CIGN				AML	AML		
	comp=E,248μm,1.6s						
CIGN				AML	AML		
	comp=N,212μm,1.5s						
CIGN				AML	AML		
	comp=N,212μm,1.5s						
CIGN				AML	AML		
	comp=N,200μm,0.8s						
CIGN				AML	AML		
	comp=N,200μm,1.2s						
CIGN				AML	AML		
	comp=E,175μm,0.5s						
MSAG	Monte S. Angel	0.90	149	P	Pg	17 03 06.7	+0.1
TRIV	Trivento	0.91	218	P	Pg	17 03 07.6	+0.8
TRIV				AML	AML		
	comp=E,259μm,0.7s						
TRIV				AML	AML		
	comp=N,256μm,0.5s						
TRIV				AML	AML		
	comp=E,263μm,0.7s						
TRIV				AML	AML		
	comp=N,260μm,0.5s						
LPEL	Lama dei Pelig	0.94	242	P	Pg	17 03 07.7	+0.4
LPEL				AML	AML		
	comp=N,295μm,0.4s						
LPEL				AML	AML		
	comp=E,516μm,0.2s						
LPEL				AML	AML		
	comp=E,491μm,0.2s						
LPEL				AML	AML		
	comp=N,355μm,0.7s						
LPEL				AML	AML		
	comp=E,515μm,0.2s						
LPEL				AML	AML		
	comp=N,295μm,0.4s						
GATE	Gambatesa	1.02	196	P	Pn	17 03 10.1	-0.4
BSSO	Busso	1.08	209	P	Pb	17 03 10.9	+0.3
VCEL	Villa Celiera	1.08	265	P	Pg	17 03 10.2	+0.2
HVAR	Hvar	1.09	51	ePg	Pb	17 03 10.2	-0.6
HVAR				Sg	Sn	17 03 28.3	+1.3
INTR	Introdacqua	1.14	246	P	Pb	17 03 09.0	-2.6
INTR				AML	AML		
	comp=N,330μm,0.5s						
INTR				AML	AML		
	comp=E,193μm,1.0s						
INTR				AML	AML		
	comp=N,269μm,1.0s						
INTR				AML	AML		
	comp=E,177μm,0.4s						
MIDA	Miranda	1.15	223	P	Pb	17 03 10.8	-1.1
T0110	Collepietro	1.15	257	P	Pb	17 03 11.7	-0.2
T0110				AML	AML		
	comp=N,264μm,1.6s						
T0110				AML	AML		
	comp=E,250μm,1.0s						
T0110				AML	AML		
	comp=N,256μm,0.5s						
T0110				AML	AML		
	comp=E,250μm,1.0s						
T0110				AML	AML		
	comp=N,256μm,1.5s						
T0110				AML	AML		
	comp=E,242μm,0.4s						
T0110				AML	AML		
	comp=N,255μm,0.5s						
LSTV	Lastovo	1.21	76	iPg	Pg	17 03 12.6	0.0
LSTV				Sg	Sn	17 03 31.1	+1.1
TERO	Teramo	1.25	277	P	Pn	17 03 12.9	-0.9
GIGS	Gran Sasso	1.28	269	P	Pn	17 03 12.8	-1.3
FAGN	Fagnano	1.29	260	P	Pb	17 03 14.2	+0.1
CERA	Filignano	1.30	227	P	Pb	17 03 14.5	0.0
VAGA	Valle Agricola	1.33	217	P	Pn	17 03 14.8	-0.1
VAGA				AML	AML		
	comp=N,160μm,0.3s						
VAGA				AML	AML		
	comp=E,127μm,1.1s						
VAGA				AML	AML		
	comp=N,162μm,0.3s						
VAGA				AML	AML		
	comp=E,118μm,1.1s						
VAGA				AML	AML		
	comp=N,162μm,0.3s						
VAGA				AML	AML		
	comp=E,79μm,0.4s						
VAGA				AML	AML		
	comp=N,160μm,0.3s						
VAGA				AML	AML		
	comp=E,103μm,0.9s						
MNTT	Montottone	1.37	295	P	Pn	17 03 15.3	-0.1
MNTT				AML	AML		
	comp=E,674μm,1.3s						
MNTT				AML	AML		
	comp=N,754μm,0.6s						
MNTT				AML	AML		
	comp=N,754μm,0.6s						
MNTT				AML	AML		
	comp=N,754μm,1.4s						
MNTT				AML	AML		
	comp=E,661μm,0.8s						
CAMP	Campotosto	1.39	272	P	Pn	17 03 15.0	-0.7
MORI	Morici	1.41	12	iPn	Pb	17 03 15.4	-0.7
MORI				Sn	Sg	17 03 35.5	+1.0
CSP1	Cessapalombo	1.65	292	P	Pn	17 03 19.6	+0.3
RICI	Ricice	1.68	53	iPn	Pb	17 03 19.6	-1.2
RICI				Sn	Sg	17 03 44.0	+0.6
VIRC	Vir	1.81	355	ePg	Pn	17 03 20.9	-0.3
VIRC				Sg	Sb	17 03 45.5	-0.5
EL6	Elcito	1.81	298	P	Pn	17 03 21.2	-0.2
EL6				AML	AML		
	comp=N,207μm,0.7s						
EL6				AML	AML		
	comp=E,270μm,1.1s						
SALB	San Lorenzo Be	2.73	163	AML	AML		
	comp=E,108μm,0.8s						
SALB				AML	AML		
	comp=N,98μm,1.1s						

AFAD 04 17:21:37.0, 38°.42N×39°.21E, h7km±2km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.19	292	P	Pg	17 21 41.4	+0.4
ELZG				S	Sg	17 21 44.7	+1.0
ELZG				IAML		17 21 46.0	
	comp=Z,78nm,0.1s						
ELZG				IAML		17 21 48.0	
	comp=N,107nm,0.2s						
ELZG				IAML		17 21 48.0	
	comp=E,177nm,0.6s						
ELZG	Elazig	0.19	292	P	Pg	17 21 41.4	+0.4
ELZG				S	Sg	17 21 44.7	+1.1
ELZG				IAML		17 21 48.0	
	comp=N,107nm,0.2s						
ELZG				IAML		17 21 48.0	
	comp=E,177nm,0.6s						
ELZ	Elazig	0.27	359	P	Pg	17 21 42.3	0.0
ELZ				IAML		17 21 46.0	
	comp=E,347nm,0.4s						
ELZ				S	Sg	17 21 46.8	+0.9
ELZ				IAML		17 21 47.0	
	comp=Z,76nm,0.1s						
ELZ				IAML		17 21 47.0	
	comp=N,248nm,0.2s						
ELZ	Elazig	0.27	359	P	Pg	17 21 42.4	+0.1
ELZ				IAML		17 21 46.0	
	comp=E,348nm,0.4s						
ELZ				S	Sg	17 21 46.8	+0.9
ELZ				IAML		17 21 47.0	
	comp=N,248nm,0.2s						
MDNT	Maden	0.37	95	S	Sg	17 21 50.4	+1.2
MDNT	Maden	0.37	95	P	Pg	17 21 44.1	-0.2
MDNT				S	Sg	17 21 50.0	+0.8
MDNT				IAML		17 21 53.0	
	comp=N,27nm,0.3s						
MDNT				IAML		17 21 53.0	
	comp=E,21nm,0.5s						
KOVA	Elazig, Kovanc	0.55	59	P	Pg	17 21 47.0	-0.6
KOVA				S	Sb	17 21 56.9	-0.2
KOVA				IAML		17 21 59.0	
	comp=E,7.2nm,0.6s						
KOVA				IAML		17 22 04.0	
	comp=N,7.5nm,1.0s						
KOVA				IAML		17 22 08.0	
	comp=Z,6.9nm,1.3s						
KOVA	Elazig, Kovanc	0.55	59	P	Pg	17 21 48.1	+0.5
KOVA				S	Sb	17 21 57.0	-0.2
KOVA				IAML		17 21 59.0	
	comp=E,7.2nm,0.6s						
KOVA				IAML		17 22 04.0	
	comp=N,7.5nm,1.0s						
MAYA	Malatya/Merkez	0.63	261	P	Pg	17 21 49.1	+0.1
MAYA				S	Sg	17 21 58.0	+0.7
MAYA				IAML		17 21 59.0	
	comp=N,16nm,0.2s						
MAYA				IAML		17 22 02.0	
	comp=Z,15nm,0.5s						
MAYA				IAML		17 22 03.0	
	comp=E,17nm,0.6s						
MAYA	Malatya/Merkez	0.63	261	P	Pg	17 21 49.0	-0.1
MAYA				S	Sb	17 21 58.7	-0.6
MAYA				IAML		17 21 59.0	
	comp=N,16nm,0.2s						
MAYA				IAML		17 22 03.0	
	comp=E,17nm,0.6s						
MCKZ	Bingol	0.72	345	P	Pg	17 21 50.2	-0.6
MCKZ				IAML		17 22 00.0	
	comp=Z,12nm,0.4s						
MCKZ				IAML		17 22 00.0	
	comp=E,20nm,0.3s						
MCKZ				S	Sg	17 22 00.8	+0.6
MCKZ				IAML		17 22 04.0	
	comp=N,11nm,0.2s						
MCKZ	Bingol	0.72	345	P	Pg	17 21 50.1	-0.8
MCKZ				IAML		17 22 00.0	
	comp=E,20nm,0.3s						
MCKZ				S	Sg	17 22 00.8	+0.6
MCKZ				IAML		17 22 04.0	
	comp=N,11nm,0.2s						

*NEIC **04** 17:29:26.3±1.7, 17°.78N±0°.04×66°.89W±0°.03, h10km±1km, mb4.4/22, ML4.3/45, ML3.9/7(RSPR), Mwr4.1/18(SLM), Error ellipse: s-maj=8.1km s-min=4.2km az=326.0*

*IDC **04** 17:29:26.7±1.1, 18°.13N×66°.94W, h0km, mb3.7/8, mbtmp3.7/8, MS3.7/8, Error ellipse: s-maj=28.3km s-min=9.0km az=11.0*

*OSPL **04** 17:29:27.6±0.8, 17°.81N×66°.88W, h11km±4km, ML3.7, Presumed earthquake*

*SDD **04** 17:29:27.0±2.2, 17°.77N×66°.88W, h20km±23km, MD4.0, ML4.0, MW4.3, Presumed earthquake*

*NEIC **04** 17:29:27, 17°.86N×66°.88W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.00; $M_{\theta\theta}$0.28; $M_{\phi\phi}$-0.28; $M_{r\theta}$0.43; $M_{\theta\phi}$1.58; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.66000×10^{15} NP1:ϕ_s275.00000°, δ90.00000°, λ-15.00000°. NP2:ϕ_s5.00000°, δ75.00000°, λ-180.00000°. Principal axes: T 1.6609, Plg11.0000°, Azm321.0000°; N -0.0002, Plg75.0000°, Azm95.0000°; P -1.6607, Plg11.0000°, Azm229.0000°;*

*RSPR **04** 17:29:27.6, 17°.86N×66°.88W, h4km±1km, MD3.7/7*

*PTWC **04** 17:29:27, 17°.90N×66°.80W, h10km, Ml4.3/15*

ISC 04 17:29:26.1±0.8, 17°.75N±0°.04×66°.91W±0°.02, h19km±2km, n133, σ1s.38/141, mb4.3/18, MS3.7/7, 11C-11D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.23	8		Pb	17 29 30.8	-0.5
GBPR	Guanica, Bosqu	0.23	8	⇓eP	Pb	17 29 30.8	-0.5
MLPR	Magueyes Islan	0.25	330		Pg	17 29 32.1	+0.1
MLPR				IAML		17 29 36.1	
	82μm,0.7s						
MLPR				IAML		17 29 37.4	
	41μm,0.5s						
CRPR	Cabo Rojo, PR	0.32	324		Pb	17 29 33.2	+0.1
CRPR	Cabo Rojo, PR	0.32	324	P	Pg	17 29 32.9	-0.2
CRPR	Cabo Rojo, PR	0.32	324	⇑ePg	Pb	17 29 33.3	+0.1
CRPR				⇑eSg	Sg	17 29 37.8	-0.1
CRPR				IAML		17 29 38.0	
	comp=N,52μm,0.7s						
CRPR				IAML		17 29 38.4	
	comp=E,42μm,0.8s						
CRPR	Cabo Rojo, PR	0.32	324	⇑eP	Pb	17 29 33.4	+0.1
CRPR				eS	Sg	17 29 37.8	-0.1
CRPR	Cabo Rojo, PR	0.32	324	iP	Pb	17 29 33.4	+0.1
CRPR				eS	Sg	17 29 37.5	-0.3
CRPR				IAML		17 29 38.0	
	comp=Z,32μm,1.0s						
OBIP	Obispado Ponce	0.41	45		Pg	17 29 33.5	-1.2
OBIP	Obispado Ponce	0.41	45		Sg	17 29 39.3	-1.3
OBIP	Obispado Ponce	0.41	45	P	Pg	17 29 33.6	-1.1
OBIP	Obispado Ponce	0.41	45	⇓eP	Pg	17 29 33.7	-1.1
OBIP				eS	Sg	17 29 39.3	-1.3
OBIP	Obispado Ponce	0.41	45	iP	Pg	17 29 33.7	-1.1
OBIP				eS	Sg	17 29 38.7	-1.8
OBIP				IAML		17 29 39.4	
	comp=Z,4μm,0.3s						
CELP	Cerrillos	0.46	44		Pg	17 29 34.3	-1.2
LSP	Las Mesas	0.46	339		Pg	17 29 35.2	-0.3
LSP	Las Mesas	0.46	339	⇓eP	Pg	17 29 35.2	-0.3
PRSN	Puerto Rico Se	0.52	335		Pb	17 29 36.2	-0.3
PRSN				IAML		17 29 46.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,32μm,0.3s						
PRSN	Puerto Rico Se	0.52	335		Sb	17 29 43.4	-0.2
PRSN	Puerto Rico Se	0.52	335	P	Pb	17 29 36.2	-0.3
PRSN	Puerto Rico Se	0.52	335	⇑ePg	Pb	17 29 36.2	-0.3
PRSN				IAML		17 29 46.0	
	comp=E,21μm,0.3s						
PRSN				IAML		17 29 47.4	
	comp=N,29μm,0.2s						
PRSN	Puerto Rico Se	0.52	335	⇑eP	Pb	17 29 36.3	-0.3
PRSN				eS	Sb	17 29 43.4	-0.2
UUPR	Utuado, UPR, P	0.54	20		Pb	17 29 35.4	-1.4
AGPR	Aguadilla, PR	0.74	345		Pb	17 29 39.7	-0.7
AGPR				IAML		17 29 49.5	
	comp=N,8μm,0.5s						
AGPR				IAML		17 29 56.9	
	comp=N,7μm,0.8s						
AGPR	Aguadilla, PR	0.74	345	P	Pb	17 29 39.7	-0.7
AGPR	Aguadilla, PR	0.74	345	⇑ePg	Pb	17 29 39.7	-0.7
AGPR				⇑eSg	Sb	17 29 49.4	-0.8
AGPR				IAML		17 29 49.4	
	comp=E,8μm,0.3s						
AGPR				IAML		17 29 53.2	
	comp=N,8μm,1.3s						
AGPR	Aguadilla, PR	0.74	345	⇑eP	Pb	17 29 39.8	-0.7
AGPR				eS	Sb	17 29 49.3	-0.8
AGPR	Aguadilla, PR	0.74	345	i P	Pb	17 29 39.7	-0.7
AGPR				eS	Sb	17 29 49.0	-1.1
AGPR				IAML		17 29 50.5	
	comp=Z,4μm,0.5s						
ECPR	Experimental S	0.77	43		Pb	17 29 39.5	-1.4
ECPR	Experimental S	0.77	43	⇓eP	Pb	17 29 39.7	-1.3
ECPR				eS	Sb	17 29 49.5	-1.5
SJG	San Juan	0.81	63	Pg	Pb	17 29 40.2	-1.4
	comp=Z,465nm,0.3s,baz=248,slow=15,SNR=184						
SJG				Lg	Lg	17 29 51.8	
	comp=Z,1μm,0.3s,baz=359,slow=12,SNR=25						
SJG	San Juan	0.81	63		Pb	17 29 40.6	-1.0
SJG	San Juan	0.81	63	IAML		17 29 54.8	
	comp=Z,6μm,0.5s						
SJG				IAML		17 29 55.4	
	comp=Z,6μm,0.6s						
SJG	San Juan	0.81	63	P	Pb	17 29 40.7	-0.9
SJG	San Juan	0.81	63	eP	Pb	17 29 40.5	-1.1
SJG	San Juan	0.81	63	⇓ePg	Pb	17 29 40.6	-1.0
SJG	San Juan	0.81	63	⇓eP	Pb	17 29 40.7	-0.9
SJG				eS	Sg	17 29 52.7	-0.1
SJG	San Juan	0.81	63	i P	Pb	17 29 40.8	-0.8
SJG				eS	Sb	17 29 51.5	-0.6
SJG				IAML		17 29 54.7	
	comp=Z,3μm,0.8s						
EMPR	Esperanza - Ma	0.81	27		Pb	17 29 40.8	-0.8
EMPR					Sb	17 29 50.7	-1.4
EMPR	Esperanza - Ma	0.81	27	P	Pb	17 29 40.8	-0.8
EMPR	Esperanza - Ma	0.81	27	⇓eP	Pb	17 29 40.8	-0.8
EMPR				eS	Sb	17 29 50.7	-1.4
IDE	Isla Desecheo	0.83	320		Pb	17 29 42.0	+0.1
IDE					Sg	17 29 53.2	-0.2
IDE	Isla Desecheo	0.83	320	⇑eP	Pb	17 29 42.0	+0.1
IDE				eS	Sg	17 29 53.2	-0.2
PDPR	Patillas Dam,	0.89	72		Pb	17 29 42.2	-0.7
GCPR	Guaynabo City	0.97	55		Pb	17 29 42.9	-1.4
GCPR	Guaynabo City	0.97	55		Sb	17 29 56.2	-0.4
GCPR	Guaynabo City	0.97	55	P	Pb	17 29 43.0	-1.2
GCPR	Guaynabo City	0.97	55	⇓eP	Pb	17 29 43.3	-0.9
GCPR				eS	Sb	17 29 56.2	-0.4
HUMP	Col San Antoni	1.08	69	Pg	Pb	17 29 45.3	-1.0
HUMP	Col San Antoni	1.08	69		Sb	17 30 00.0	0.0
HUMP	Col San Antoni	1.08	69	P	Pb	17 29 45.3	-1.0
HUMP	Col San Antoni	1.08	69	⇓eP	Pb	17 29 45.4	-0.9
HUMP				eS	Sb	17 30 00.0	0.0
CUPR	Culebra, Puert	1.65	70		Pn	17 29 54.5	+0.5
HIDR	Higuey Centro	1.91	296	ePg	Pb	17 30 00.9	+0.6
HIDR				IAML		17 30 36.7	
	comp=E,1μm,0.8s						
HIDR				IAML		17 30 38.6	
	comp=N,1μm,0.8s						
HIDR	Higuey Centro	1.91	296	⇑eP	Pb	17 30 00.3	0.0
MIDR	Miches	2.37	302	ePg	Pb	17 30 07.7	-0.5
MIDR				IAML		17 30 41.4	
	comp=E,400nm,0.7s						
MIDR				IAML		17 30 49.2	
	comp=N,463nm,1.1s						
MIDR				IAML		17 30 49.2	
	comp=N,463nm,1.1s						
DR12	Loma Pena Alta	2.56	294		Pb	17 30 09.5	-2.0
HATOM	Hato Mayor del	2.56	294	ePg	Pb	17 30 10.4	-1.1
HATOM				⇓eSg	Sb	17 30 41.3	-1.4
HATOM				IAML		17 30 49.2	
	comp=N,647nm,0.6s						
HATOM				IAML		17 30 53.6	
	comp=E,526nm,0.9s						
SMDR	Samana, DR	2.65	306	IAML		17 31 00.1	
	comp=N,857nm,0.8s						
SMDR				IAML		17 31 04.7	
	comp=E,935nm,0.8s						
SDD	Santo Domingo	2.94	284	Pn	Pn	17 30 13.8	+2.0
SDD				IAML		17 30 58.1	
	comp=E,721nm,0.9s						
SDD				IAML		17 31 15.2	
	comp=N,896nm,1.0s						
BANI	BANI	3.34	282	Pn	Pn	17 30 18.8	+1.4
SABA	Saba	3.50	92		Pn	17 30 20.8	+1.3
SABA				IAML		17 31 12.0	
	comp=N,453nm,0.4s						
SABA				IAML		17 31 48.7	
	comp=E,767nm,0.7s						
SMRT	St. Maarten	3.67	85		Pn	17 30 22.3	+0.5
SMRT	St. Maarten	3.67	85	P	Pn	17 30 22.6	+0.8
SC01	Santiago de lo	3.99	295	Pn	Pn	17 30 27.9	+1.7
PODR	Polo	4.18	276	ePg	Pb	17 30 34.6	-4.5
PODR				IAML		17 31 59.5	
	comp=N,226nm,1.1s						
SDDR	Presa de Saban	4.33	287		Pn	17 30 33.8	+2.8
SDDR	Presa de Saban	4.33	287	P	Pb	17 30 36.7	-5.0
SDDR	Presa de Saban	4.33	287	eP	Pb	17 30 37.1	-4.6
SDDR				eS	Sb	17 31 31.5	-2.1
SDDR				IAML		17 31 45.8	
	comp=N,219nm,0.5s						
SDDR				IAML		17 31 46.8	
	comp=N,297nm,0.5s						
SDDR	Presa de Saban	4.33	287	⇓eP	Pb	17 30 38.0	-3.7
SDDR				eS	Sn	17 31 18.4	-2.7
SDDR				IAML		17 31 45.8	
	comp=N,219nm,0.5s						
SDDR				IAML		17 31 46.8	
	comp=N,297nm,0.5s						
SDDR	Presa de Saban	4.33	287	eP	Pb	17 30 36.8	-4.9
ANWB	Willy Bob	4.89	90	eP	Pn	17 30 40.0	+1.4
DHSZ	Broadband at M	5.14	106	eP	Pn	17 30 43.3	+1.3
DHSZ	Broadband at M	5.14	106	eS	Sn	17 31 39.2	-1.6
GDHS	Morne Mazeau,	5.14	106	Pn	Pn	17 30 43.4	+1.3
GDHS	Morne Mazeau,	5.14	106	P	Pn	17 30 43.5	+1.4
ATGZ	Broadband at L	5.23	108	eP	Pn	17 30 44.0	+0.8
MMLZ	Guadeloupe Bro	5.30	108	eP	Pn	17 30 46.8	+2.6
ABD	La Joyeuse, An	5.34	103	Pn	Pn	17 30 45.3	+0.5
ABD				IAML		17 31 44.2	
	comp=N,128nm,1.9s						
ABD				IAML		17 32 58.5	
	comp=E,158nm,1.8s						
CBE	Ff, Capester	5.34	107	Pn	Pn	17 30 46.0	+1.1
TBG	Guadaloupe-3	5.38	110	eP	Pn	17 30 46.2	+0.8
TDBA	Terre de Bas,	5.39	110	Pn	Pn	17 30 46.6	+1.1
GRTK	Grand Turk	5.46	314	eP	Pn	17 30 47.3	+0.8
GRTK	Grand Turk	5.46	314	eP	Pn	17 30 48.3	+1.8
GRTK				eS	Sn	17 31 36.2	-13
GRTK				IAML		17 31 53.7	
	comp=E,77nm,0.4s						
GRTK				IAML		17 31 55.9	
	comp=E,107nm,0.5s						
MAGL	Barre de l'ile	5.68	108	Pn	Pn	17 30 50.0	+0.6
DSLB	Salisbury	5.74	113	eP	Pn	17 30 50.5	+0.1
DSDZ	La Diserade, G	5.77	103	eP	Pn	17 30 51.0	+0.3
GDSD	La Dsirade Is	5.77	103	Pn	Pn	17 30 51.0	+0.2
BIM	Bigot	6.47	119	Pn	Pn	17 31 01.0	+0.6
MPOM	Morne Pois Mar	6.68	119	Pn	Pn	17 31 04.8	+1.6
QMBU	Quimbuelo	7.86	289	eP	Pn	17 31 18.8	-0.7
QMBU	Quimbuelo	7.86	289	⇑eP	Pn	17 31 25.0	+5.5
QMBU				eS	Sn	17 32 43.0	-5.0
NMDO	Nuevo Mundo	8.12	291	Pn	Pn	17 31 24.1	+1.0
RCC	Rio Carpintero	8.61	286	eP	Pn	17 31 30.7	+1.0
RCC	Rio Carpintero	8.61	286	eP	Pn	17 31 36.0	+6.3
RCC				eS	Sn	17 33 02.0	-4.4
RCC				IAML		17 33 05.3	
	comp=E,3.6nm,0.3s						
RCC				IAML		17 33 05.8	
	comp=N,5.5nm,0.5s						
SDV	Santo Domingo	9.52	203		Pn	17 31 43.9	+1.4
MDP	Montagnes des	18.78	130	LR	LR	17 41 24.7	
	comp=N,56nm,21.7s,baz=316,slow=38						
HODGE	Hodges	21.40	323	P	P	17 34 12.5	-0.2
BG3	Lake Jocassee	22.33	323	P	P	17 34 21.6	-1.1
BG3				IAmb	IAmb	17 34 24.7	
	comp=Z,18nm,0.9s						
BLA	Blacksburg	22.75	331	P	P	17 34 27.0	-0.2
BLA				IAmb	IAmb	17 34 44.2	
	comp=Z,13nm,1.0s						
U54A	Nelsons Funny	22.87	328	P	P	17 34 29.5	+0.9
TKL	Tuckaleechee C	23.29	323	P	P	17 34 32.1	-0.6
	comp=Z,1.5nm,0.3s,baz=129,slow=6.5,SNR=5.8						
TKL				LR	LR	17 43 40.3	
	comp=Z,90nm,18.1s,baz=24,slow=37						
	comp=Z,1.5nm,0.3s						
TKL	Tuckaleechee C	23.29	323	P	P	17 34 31.6	-1.1
TKL				IAmb	IAmb	17 34 39.0	
	comp=Z,17nm,1.4s						
CPCT	Cooper Cave	23.57	322	P	P	17 34 34.7	-0.9
P57A	Homestead Farm	23.71	338	P	P	17 34 37.3	+0.5
P57A				IAmb	IAmb	17 34 41.0	
	comp=Z,17nm,1.4s						
Q56A	Snyder Ridge,	23.76	336	P	P	17 34 38.3	+0.9
Q56A				IAmb	IAmb	17 34 54.6	
	comp=Z,15nm,1.3s						
TZTN	Tazewell	23.80	325	P	P	17 34 37.7	-0.1
TZTN				IAmb	IAmb	17 34 49.9	
	comp=Z,15nm,1.2s						
M63A	Gales Ferry	23.99	350	P	P	17 34 39.6	+0.2
WSPT	Westport, CT	23.99	348	P	P	17 34 39.6	+0.2
T50A	Nancy	24.86	324	P	P	17 34 48.5	+1.1
M57A	Sunshine Farm,	25.09	342	P	P	17 34 49.7	+0.2
L61B	Northampton	25.11	350	P	P	17 34 49.2	-0.4
P52A	Corning	25.50	332	P	P	17 34 54.7	+1.5
P52A				IAmb	IAmb	17 35 08.4	
	comp=Z,16nm,1.4s						
Q51A	Peebles	25.58	329	P	P	17 34 53.1	-0.9
Q51A				IAmb	IAmb	17 35 06.8	
	comp=Z,5.1nm,0.8s						
PAMR	Moraine State	25.75	337	P	P	17 34 56.2	+0.7
PAMR				IAmb	IAmb	17 35 00.6	
	comp=Z,11nm,1.1s						
L56A	Greenwood	25.95	342	P	P	17 34 58.3	+0.9
L56A				IAmb	IAmb	17 35 05.0	
	comp=Z,13nm,1.4s						
PAOC	Oil Creek Stat	26.10	338	P	P	17 35 00.3	+1.7
PAOC				IAmb	IAmb	17 35 09.7	
	comp=Z,16nm,1.3s						
J57A	Williamstown	26.71	345	P	P	17 35 02.8	-1.4
J57A				IAmb	IAmb	17 35 03.1	
	comp=Z,8.3nm,1.1s						
ATAH	Atahualpa	27.20	206	LR	LR	17 47 05.1	
	comp=Z,88nm,20.9s,baz=43,slow=38						
LMN	Caledonia Moun	28.08	3	P	P	17 35 15.6	-0.8
SIV	San Ignacio	34.02	170	P	P	17 36 15.7	+6.7
	comp=Z,0.3nm,0.5s,baz=300,slow=17,SNR=4.1						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	35.47	296	P	P	17 36 24.1	+2.5
	comp=Z,0.5nm,0.6s,baz=100,slow=8.9,SNR=5.7						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	35.47	296	P	P	17 36 23.0	+1.4
SCHQ	Schefferville	37.02	0	P	P	17 36 36.6	+2.2
	comp=Z,2.2nm,0.7s,baz=198,slow=13,SNR=1.8						
	comp=Z,2.2nm,0.7s						
ANMO	Albuquerque	39.06	304	LR	LR	17 54 40.0	
	comp=Z,56nm,19.9s,baz=97,slow=39						
NVAR	Mina Array Bea	49.11	306	LR	LR	18 00 59.2	
	comp=Z,66nm,18.4s,baz=316,slow=39						
YKA	Yellowknife Ar	55.52	335	P	P	17 38 59.0	-0.6
	comp=Z,0.1nm,0.3s,baz=114,slow=6.3,SNR=6.5						
	comp=Z,0.1nm,0.3s						
ESDC	Sonseca Array	58.19	54	P	P	17 39 21.9	+2.8
	comp=Z,1.1nm,0.9s,baz=280,slow=7.2,SNR=5.0						
	comp=Z,1.1nm,0.9s						
TORD	Torodi Ar. Bea	65.98	83	P	P	17 40 16.8	+5.1
	comp=Z,0.5nm,0.8s,baz=276,slow=9.5,SNR=2.2						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	69.83	333	P	P	17 40 36.5	+1.3
	comp=Z,0.3nm,0.6s,baz=97,slow=4.1,SNR=5.3						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	69.83	333	P	P	17 40 35.5	+0.4
GERES	GERESS Array B	70.72	44	LR	LR	18 10 26.7	
	comp=Z,96nm,18.6s,baz=132,slow=35						
VRAC	Vranov	72.57	43	LR	LR	18 06 36.8	
	comp=Z,190nm,20.7s,baz=272,slow=31						
MBAR	Mbarara	97.47	88	LR	LR	18 22 31.3	
	comp=Z,120nm,21.9s,baz=3.5,slow=33						

*NEIC **04** 17:35:15.3±2.0, 27°.97S±0°.07×66°.5W±0°.1, h171^{km}±13^{km}, mb4.4/4, Error ellipse: s-maj=15.0km s-min=9.9km az=94.0*

*SJA **04** 17:35:15.9±0.6, 28°.01S×66°.46W, h190^{km}±5^{km}, ML3.7, MW3.8*

*IDC **04** 17:35:23.4±7.0, 27°.36S×65°.95W, h191^{km}±45^{km}, mb3.5/2, mbtmp3.9/5, Error ellipse: s-maj=76.5km s-min=27.5km az=39.0*

ISC 04 17:35:15.1±0.7**, 27°.91S**±0°.04×**66°.53W**±0°.04**, h182**^{km}±7^{km}**, n87,** σ1^{s}**56**/113**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TINO	Tinogasta	0.93	260	eP	Pn	17 35 45.3	+2.7
TINO				eS	Sn	17 36 02.4	-1.5
AANI	Anillaco	0.96	202	eP	Pn	17 35 25.5	-17
ACLC	CERRO LA CRUZ	1.55	194	eP	Pn	17 35 49.4	+1.5
VCA	Vinchina	1.69	240	eP	Pn	17 35 51.3	+2.1
VCA				eS	Sn	17 36 16.9	+1.2
VCA				IAML		17 36 20.1	
	comp=Z,822nm,0.3s						
FSA	Cafayete	1.86	16	eP	Pn	17 35 54.0	+3.0
FSA				eS	Sn	17 36 18.1	-0.8
AC02	Maricunga	2.54	294		Pn	17 36 02.3	+3.4
AC02				Sn	Sn	17 36 32.9	-0.1
AC02	Maricunga	2.54	294	eP	Pn	17 36 05.2	+6.3
AC02				eS	Sn	17 36 45.8	+13
AVFE	Valle Fertil	2.85	196	eP	Pn	17 36 02.8	+0.7
AVFE				eS	Sn	17 36 37.9	-1.0
AVFE				IAML		17 36 39.2	
	comp=Z,149nm,0.2s						
ACDV	Cuesta del Vie	3.19	225	eP	Pn	17 36 08.3	+2.0
ACDV				IAML		17 36 50.8	
	comp=Z,120nm,0.7s						
ACHE	Chepes	3.24	182	eP	Pn	17 36 07.9	+1.0
ACHE				eS	Sn	17 36 46.3	-1.1
GO03	Copiapo	3.29	275		Pn	17 36 08.6	+1.1
GO03				Sn	Sn	17 36 47.4	-1.0
GO03	Copiapo	3.29	275	eP	Pn	17 36 09.5	+2.0
GO03				eS	Sn	17 36 47.2	-1.2
GO03				IAML		17 36 50.2	
	comp=Z,294nm,0.2s						
SLA	San Lorenzo	3.31	16	eP	Pn	17 36 08.1	+0.2
AROD	Rodeo	3.42	228	eP	Pn	17 36 11.3	+2.1
AROD				eS	Sn	17 36 52.8	+1.3
AC05	El Transito	3.42	254		Pn	17 36 11.2	+2.2
AC05				Sn	Sn	17 36 51.9	+0.6
AC05	El Transito	3.42	254	eP	Pn	17 36 11.3	+2.2
AC05				eS	Sn	17 36 52.2	+0.9
AC05				IAML		17 36 53.6	
	comp=Z,209nm,0.3s						
ACCO	Cerro Coronel	3.46	219	eP	Pn	17 36 11.0	+1.2
ACCO				eS	Sn	17 36 53.2	+0.6
CO01	Juntas del Tor	3.74	236		Pn	17 36 15.6	+2.5
CO01	Juntas del Tor	3.74	236	eP	Pn	17 36 15.7	+2.5
CO01				eS	Sn	17 37 01.1	+2.5
CO01				IAML		17 37 03.5	
	comp=Z,84nm,0.5s						
RTLL	Cerro Villicun	3.80	206	eP	Pn	17 36 14.9	+1.1
RTLL				eS	Sn	17 36 59.0	-0.8
RTLL				IAML		17 36 59.8	
	comp=Z,262nm,0.3s						
TCA	Tanti	3.81	154	eP	Pn	17 36 14.6	+0.8
TCA				eS	Sn	17 36 57.5	-2.5
TCA				IAML		17 36 58.5	
	comp=Z,87nm,1.4s						
LCO	Las Campanas	3.83	252		Pn	17 36 15.8	+1.5
LCO				Sn	Sn	17 37 00.2	-0.5
LCO	Las Campanas	3.83	252	eP	Pn	17 36 15.9	+1.6
LCO				eS	Sn	17 36 59.6	-1.1
AZAP	Zapla	3.90	20	eP	Pn	17 36 18.6	+3.3
AZAP				IAML		17 37 24.7	
	comp=Z,33nm,1.0s						
AC04	Llanos de Chal	4.02	265		Pn	17 36 17.6	+1.2
AC04				Sn	Sn	17 37 02.9	-1.8
AC04	Llanos de Chal	4.02	265	eP	Pn	17 36 17.7	+1.2
AC04				eS	Sn	17 36 52.3	-12
AC04				IAML		17 37 05.0	
	comp=Z,75nm,0.3s						
AC01	Pan de Azucar	4.03	295	Pn	Pn	17 36 17.9	+1.3
AC01				Sn	Sn	17 37 04.0	-0.8
AC01	Pan de Azucar	4.03	295	eP	Pn	17 36 18.7	+2.1
AC01				eS	Sn	17 37 04.2	-0.6
AC01				IAML		17 37 15.0	
	comp=Z,29nm,0.3s						
ZON	Zonda	4.07	207		Pn	17 36 16.9	-0.3
ZON				Sn	Sn	17 37 03.9	-2.1
ZON	Zonda	4.07	207	eP	Pn	17 36 17.1	-0.1
ZON				eS	Sn	17 37 05.0	-1.0
ZON				IAML		17 37 07.6	
	comp=Z,92nm,0.5s						
GO04	Tololo Observa	4.36	238		Pn	17 36 21.9	+0.8
GO04				Sn	Sn	17 37 12.0	-0.8
GO04	Tololo Observa	4.36	238	eP	Pn	17 36 22.2	+1.2
GO04				eS	Sn	17 37 13.2	+0.4
ACAN	Cantantal	4.38	187	eP	Pn	17 36 20.9	-0.2
MRA	San Martin	4.55	171	eP	Pn	17 36 23.6	+0.3
MRA				IAML		17 37 23.4	
	comp=Z,33nm,0.9s						
RTLS	Leoncito	4.56	211	eP	Pn	17 36 24.6	+1.0
CO05	La Serena	4.58	243	Pn	Pn	17 36 23.2	-0.4
CO05				Sn	Sn	17 37 14.2	-3.2
CO03	El Pedregal	4.65	230		Pn	17 36 25.1	+0.4
CO03				Sn	Sn	17 37 19.3	0.0
CO03	El Pedregal	4.65	230	eP	Pn	17 36 26.5	+1.9
CO03				eS	Sn	17 37 19.6	+0.3
CO03				IAML		17 37 21.4	
	comp=Z,151nm,0.2s						
PB14	IPOC Station P	4.77	312	Pn	Pn	17 36 25.5	-1.0
PB14	IPOC Station P	4.77	312	eP	Pn	17 36 30.1	+3.6
PB14				IAML		17 37 29.0	
	comp=Z,17nm,0.9s						
ASAL	Salagasta	5.07	203	eS	Sn	17 37 28.2	-0.8
CO02	Combarbal	5.09	229		Pn	17 36 30.0	-0.3
CO04	Los Peladeros	5.64	222		Pn	17 36 37.1	-0.5
PB06	IPOC Station P	5.87	331	Pn	Pn	17 36 42.0	+1.5
VA03	San Esteban	5.95	215		Pn	17 36 40.9	-0.6
PB05	IPOC Station P	6.03	326		Pn	17 36 43.8	+1.1
VA06	Catapilco	6.20	220	Pn	Pn	17 36 43.8	-0.9
MT08	Bocatoma Ro	6.28	208		Pn	17 36 45.3	-0.5
PEL	Peldehue	6.32	213	Pn	Pn	17 36 43.8	-2.5
MT16	CCHEN	6.48	211	Pn	Pn	17 36 48.2	-0.2
PB03	IPOC Station P	6.53	333		Pn	17 36 50.6	+1.3
MT03	Universidad Ad	6.53	211	Pn	Pn	17 36 48.2	-0.9
MT05	Renca	6.55	213	Pn	Pn	17 36 48.1	-1.3
PB09	IPOC Station P	6.57	337		Pn	17 36 51.4	+1.6
MT02	Curacav	6.64	216	Pn	Pn	17 36 49.6	-0.9
MT13	San Alfonso	6.65	208		Pn	17 36 50.2	-0.4
PB07	IPOC Station P	6.87	333	Pn	Pn	17 36 55.0	+1.3
MT09	Talagante	6.99	212		Pn	17 36 54.1	-1.0
BO04	La Punta	6.99	209		Pn	17 36 54.9	-0.2
MT01	Popeta	7.18	213	Pn	Pn	17 36 55.9	-1.7
PB02	IPOC Station P	7.24	334		Pn	17 36 59.5	+1.0
PB01	IPOC Station P	7.35	338		Pn	17 37 01.1	+1.2
BO01	Tunca	7.54	210	Pn	Pn	17 37 01.0	-1.3
BO02	Sierra Bellavi	7.76	207		Pn	17 37 03.9	-1.3
PATCX	Punta Patache	7.79	334	Pn	Pn	17 37 05.8	0.0
PB08	IPOC Station P	8.10	342	Pn	Pn	17 37 10.9	+0.8
HMBC	Humberstone	8.19	337		Pn	17 37 10.7	-0.4
CPUP	Villa Florida	8.35	81	P	Pn	17 37 13.4	+0.4
	comp=Z,1.3nm,0.7s,baz=270,slow=10,SNR=2.1						
CPUP	Villa Florida	8.35	81		Pn	17 37 09.4	-3.6
GO05	Hualane	8.44	212	Pn	Pn	17 37 11.7	-2.4
GO01	Chusmiza	8.56	343		Pn	17 37 14.8	-1.4
PB11	IPOC Station P	8.60	340	Pn	Pn	17 37 15.4	-1.0
BI02	San Fabin de	9.60	203	Pn	Pn	17 37 27.1	-2.2
PB16	IPOC Station P	9.92	343	Pn	Pn	17 37 34.3	+0.2
TRQA	Tornquist	10.81	160	Pn	Pn	17 37 45.1	0.0
LPAZ	La Paz	11.66	352	P	Pn	17 37 58.5	+1.7
	comp=Z,2.7nm,0.3s,baz=167,slow=8.7,SNR=21						
LPAZ				S	Sn	17 40 03.1	-3.7
	comp=Z,1.0nm,0.5s,baz=179,slow=8.4,SNR=3.7						
LPAZ	La Paz	11.66	352		Pn	17 37 57.6	+0.9
PLTB	Pedras Altas	11.86	112	Pn	Pn	17 37 58.7	0.0
AQDB	Aquidauana	12.35	56	Pn	Pn	17 38 05.4	+0.5
SIV	San Ignacio	12.90	24	P	Pn	17 38 12.4	+0.5
	comp=Z,2.1nm,0.5s,baz=204,slow=12,SNR=9.6						
VILB	Vilhena	16.02	23	P	Pn	17 38 48.8	-1.8
VILB				IAmb	IAmb	17 38 52.9	
	comp=Z,14nm,0.7s						
BDFB	Brasilia	21.06	58	P	P	17 39 46.1	+1.0
	comp=Z,2.7nm,0.3s,baz=198,slow=7.5,SNR=4.4						
	comp=Z,2.7nm,0.3s						
BDFB	Brasilia	21.06	58	P	P	17 39 43.7	-1.5
BOAV	Boa Vista	30.68	12	P	P	17 41 14.4	+1.6
BOAV				IAmb	IAmb	17 41 16.1	
	comp=Z,3.6nm,0.7s						
TORD	Torodi Ar. Bea	77.61	68	P	P	17 46 53.3	+1.8
	comp=Z,0.8nm,0.7s,baz=241,slow=7.3,SNR=4.4						
	comp=Z,0.8nm,0.7s						
ZALV	Zalesovo Beam	146.58	31	PKPbc	PKPab	17 54 37.8	+1.8
	comp=Z,0.4nm,0.3s,baz=289,slow=4.2,SNR=4.3						
MKAR	Makanchi Array	149.16	44	PKPbc	PKPab	17 54 48.4	+1.8
	comp=Z,0.3nm,0.4s,baz=306,slow=2.9,SNR=8.8						

*IDC **04** 17:48:19.1±4.5, 9°.37S×124°.22E, h78^{km}±54^{km}, mb3.4/3, mbtmp3.8/6, ML3.9/3, MS2.6/1, Error ellipse: s-maj=78.3km s-min=24.5km az=38.0*

*DJA **04** 17:48:20.4±0.4, 9°S±3°×12°4E±°, h84^{km}±6^{km}, M3.9/13, mb4.0/4, MLv3.9/13*

ISC 04 17:48:19.2±0.9**, 9°.59S**±0°.08×**124°.04E**±0°.08**, h100**^{km}**, n18,** σ**2**^{s}**90**/24**, mb3.6**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.28	127	P	Pn	17 48 34.7	+0.8
BATI	Baumata	0.72	211	P	Pn	17 48 38.8	+1.9
	169nm,0.3s,baz=59,slow=4.7,SNR=101						
BATI				S	Sn	17 48 52.5	+2.4
	507nm,0.3s,baz=188,slow=0.8,SNR=13						
BATI	Baumata	0.72	211	P	Pn	17 48 38.8	+1.9
BATI				S	Sn	17 48 52.5	+2.4
MMRI	Maumere	2.01	298	P	Pn	17 48 51.1	-0.9
EDFI	Ende, Flores	2.46	290	P	Pn	17 48 57.1	-0.8
EDFI				S	Sn	17 49 24.2	-3.4
BASI	Baing, Sumba	3.46	259	P	Pn	17 49 11.7	+0.5
WSI	Waingapu	3.69	268	P	Pn	17 49 11.6	-2.6
WBSI	Waikabubak, Su	4.58	269	P	Pn	17 49 25.3	-1.0
DBNI	Kabupaten Domp	5.75	280	P	Pn	17 49 42.3	0.0
	0.1nm9.9nm,0.7s						
DBNI				S	Sn	17 50 43.9	-3.1
	0.1nm9.9nm,0.7s						
KAPI	Kappang	6.22	317	LR	LR	17 52 07.3	
	comp=Z,47nm,19.2s,baz=218,slow=37						
PLAI	Plampang	6.22	276	P	Pn	17 49 48.1	-0.5
	0.1nm17nm,1.0s						
MTNI	Mataram	7.82	276	P	Pn	17 50 11.8	+1.4
FITZ	Fitzroy Crossi	8.61	170	P	Pn	17 50 23.1	+2.1
	1.7nm,0.3s,baz=358,slow=10,SNR=50						
FITZ				S	Sn	17 51 53.7	-2.7
	28nm,0.3s,baz=311,slow=7.8,SNR=16						
	3.5nm,0.3s						
WRA	Warramunga Arr	14.32	137	P	Pn	17 51 38.4	+1.0
	0.5nm,0.3s,baz=325,slow=13,SNR=26						
WRA				S	Sn	17 54 08.1	-7.2
	1.9nm,0.5s,baz=70,slow=20,SNR=9.8						
	0.6nm,0.3s						
ASAR	Alice Springs	16.88	147	P	P	17 52 12.8	+2.8
	0.4nm,0.3s,baz=318,slow=11,SNR=53						
ASAR				S	Sn	17 55 10.5	-6.7
	3.0nm,0.7s,baz=314,slow=21,SNR=14						
	2.2nm,0.6s						
CMAR	Chiang Mai Arr	37.28	318	P	P	17 55 23.6	+1.9
	0.8nm,0.8s,baz=134,slow=8.2,SNR=10						
	0.8nm,0.8s						
MKAR	Makanchi Array	67.33	330	P	P	17 59 05.3	+1.8
	0.4nm,0.5s,baz=129,slow=7.3,SNR=14						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	71.44	337	P	P	17 59 29.4	+0.7
	0.4nm,0.4s,baz=140,slow=5.1,SNR=2.8						
	0.4nm,0.4s						

GII **04** 17:55:21.9±0.0, 38.793N±0.002×27.795E±0.001, h0km, Mws4.9, confirmed
BJI **04** 17:55:22.0, 39.00N×27.80E, h9km, mB5.1/14, mb4.8/51, Ms4.7/27, Ms7 4.4/28
IDC **04** 17:55:22.9±0.5, 39.00N×27.93E, h0km, mb4.5/25, mbtmp4.4/41, ML3.8/13, MS4.2/66, Error ellipse: s-maj=9.2km s-min=8.9km az=166.0
SOF **04** 17:55:22.4, 39.04N±0.04×27.97E±0.02, h3km±2km, MD5.0/11
NEIC **04** 17:55:24.0±1.6, 39.04N±0.05×27.88E±0.05, h5km±3km, mb4.9/141, Error ellipse: s-maj=6.8km s-min=5.8km az=196.0
ISK **04** 17:55:23.4, 38.98N×27.84E, h9km, ML5.0/24
MED_RC **04** 17:55:23.0±0.3, 39.06N×27.83E, h10km, MW4.9/32, Moment Tensor Solution.Mantle waves: s32,c40; Duration: 1s2 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.48±.08; $M_{\theta\theta}$1.85±.07; $M_{\phi\phi}$0.63±.07; $M_{r\theta}$0.18±.28; $M_{\theta\phi}$-2.21±.06; $M_{\phi r}$0.54±.22; Best double couple: $M_0$3.10000×10^{16} NP1:ϕ_s290.00000°,δ46.00000°, λ-116.00000°. NP2:ϕ_s144.00000°,δ50.00000°, λ-66.00000°. Principal axes: T 3.5400, Plg2.0000°, Azm218.0000°; N -0.8700, Plg18.0000°, Azm308.0000°; P -2.6600, Plg72.0000°, Azm122.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
PDG **04** 17:55:24.1±0.7, 38.97N×27.85E, h19km, ML4.9/8 Error ellipse: s-maj=0.6km s-min=0.9km az=0.0
MOS **04** 17:55:24.1±0.9, 39.07N×27.93E, h17km, mb4.9/31, MS4.1/10, Error ellipse: s-maj=5.3km s-min=3.2km az=84.6
AFAD **04** 17:55:24.0, 38.99N×27.87E, h9km±1km, MW4.8
GFZ **04** 17:55:25.8, 39.07N×27.92E, h10km, MW4.9, Moment Tensor Solution. s30 Moment tensor: M_{rr}-2.26; $M_{\theta\theta}$1.49; $M_{\phi\phi}$0.76; $M_{r\theta}$-0.08; $M_{\theta\phi}$-1.66; $M_{\phi r}$0.76; Fault plane solution: NP1:ϕ_s144.00000°,δ53.00000°, λ-69.00000°. NP2:ϕ_s293.00000°,δ41.00000°, λ-11.00000°. Principal axes: T 2.8800, Plg6.0000°, Azm220.0000°; N -0.4200, Plg16.0000°, Azm311.0000°; P -2.4600, Plg73.0000°, Azm109.0000°;
THE **04** 17:55:25.8, 39°N±2°×2°8E±°, h11km±11km, M4.8/29, MLh4.8/29
MCSM **04** 17:55:25.5±0.4, 39°N±3°×2°8E±°, h10km±3km, mb4.9, mB5.1, MLv5.3, Mw(mB)4.5
ATH **04** 17:55:26.0, 38.95N×27.85E, h26km±4km, ML4.8/17, Manual Solution by A.Agalos First location: 2020/02/04 17:56:53, This location: 2020/02/04 18:03:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 3 km
CFUSG **04** 17:55:27.9, 39.20N×28.00E, h10km, Mb3.9/8, MD4.2/6, MSH4.3/8
GCMT **04** 17:55:27.0±0.2, 39.11N±0.02×27.70E±0.02, h12km, MW5.0/97, Moment Tensor Solution. s40,c54; s97,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.92±.07; $M_{\theta\theta}$1.92±.07; $M_{\phi\phi}$0.99±.07; $M_{r\theta}$-1.04±.26; $M_{\theta\phi}$-1.97±.06; $M_{\phi r}$0.34±.27; Best double couple: $M_0$3.38800×10^{16} NP1:ϕ_s317.00000°,δ37.00000°,λ-76.00000°. NP2: ϕ_s120.00000°,δ54.00000°,λ-100.00000°. Principal axes: T 3.6400, Plg9.0000°, Azm218.0000°; N -0.5130, Plg8.0000°, Azm126.0000°; P -3.1350, Plg78.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NAO **04** 17:55:28.4, 39.68N×29.89E, h33km, MB4.0
ISC 04 17:55:24.7±0.6, **38.99N**±0.01×**27.89E**±0.01, **h14**km±3km, **n838**, σ**1s58**/853, **mb4.8**/146, **MS4.3**/71, **49C-56D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.12**	**207**	P	**Pg**	**17 55 27.1**	**-1.1**
AKHS				S	**Sg**	**17 55 29.6**	**-0.9**
AKS	**Akhisar**	**0.12**	**208**	Pg	**Pg**	**17 55 26.6**	**-1.6**
GORD	**Gordes-Manisa**	**0.24**	**110**	Pg	**Pg**	**17 55 29.4**	**-0.5**
GOMA	**Golmarmara-Man**	**0.28**	**175**	Pg	**Pg**	**17 55 29.5**	**-1.1**
GOMA				Sg	**Sg**	**17 55 33.9**	**-0.7**
SOMA	**Soma-Manisa**	**0.32**	**301**	Pg	**Pg**	**17 55 29.8**	**-1.5**
KTTT	**Salihli**	**0.34**	**152**	P	**Pg**	**17 55 31.3**	**-0.4**
KTTT				S	**Sg**	**17 55 36.4**	**0.0**
STEP	**BALIKESIR_Sava**	**0.41**	**341**	P	**Pg**	**17 55 31.9**	**-1.0**
STEP				S	**Sg**	**17 55 38.4**	**-0.1**
CAMT	**Merkez**	**0.51**	**242**	P	**Pg**	**17 55 34.1**	**-0.6**
CAMT				S	**Sb**	**17 55 42.3**	**-0.3**
ZEDA	**zmir-Bergama**	**0.63**	**268**	P	**Pg**	**17 55 36.3**	**-0.7**
ZEDA				S	**Sg**	**17 55 45.3**	**-0.1**
DEMI	**Demirci**	**0.65**	**85**	P	**Pg**	**17 55 37.1**	**-0.3**
DEMI				S	**Sb**	**17 55 46.7**	**0.0**
BALB	**Balikesir**	**0.65**	**359**		**Pg**	**17 55 36.5**	**-0.9**
BALB				Sg	**Sg**	**17 55 42.5**	**-3.5**
BALB	**Balikesir**	**0.65**	**359**	Pg	**Pg**	**17 55 36.6**	**-0.9**
BALB				Sg	**Sb**	**17 55 46.4**	**-0.3**
MANT	**Manisa**	**0.72**	**133**		**Pg**	**17 55 38.1**	**-0.8**
MANT				Sg	**Sg**	**17 55 47.6**	**-0.8**
MANT	**Manisa**	**0.72**	**133**	P	**Pg**	**17 55 38.4**	**-0.4**
MANT				S	**Sb**	**17 55 50.5**	**+1.5**
ODEM	**Odemis-Izmir**	**0.73**	**168**	Pg	**Pg**	**17 55 37.7**	**-1.2**
ODEM				Sg	**Sg**	**17 55 48.5**	**+0.1**
BKES	**Balkesir-Mer**	**0.74**	**2**	P	**Pg**	**17 55 38.9**	**-0.3**
BKES				S	**Sb**	**17 55 49.2**	**-0.3**
IZMD	**zmir-Dikili-**	**0.75**	**270**	P	**Pg**	**17 55 38.6**	**-0.7**
IZMD				S	**Sg**	**17 55 49.0**	**-0.1**
DURS	**Dursunbey**	**0.76**	**37**	P	**Pg**	**17 55 38.7**	**-0.9**
DURS				S	**Sb**	**17 55 49.7**	**-0.4**
KULA	**Kula-Manisa**	**0.77**	**128**	Pg	**Pg**	**17 55 39.1**	**-0.5**
KULA				Sg	**Sb**	**17 55 50.4**	**+0.2**
BALY	**Balya**	**0.78**	**345**	P	**Pg**	**17 55 39.0**	**-0.9**
BALY				S	**Sb**	**17 55 49.9**	**-0.6**
BUHA	**Balikesir, Bur**	**0.81**	**309**	P	**Pb**	**17 55 40.4**	**-0.2**
BUHA				S	**Sg**	**17 55 50.8**	**-0.3**
DST	**Dursunbey**	**0.84**	**43**	Pg	**Pg**	**17 55 40.5**	**-0.4**
DUVT	**Torbali**	**0.84**	**204**	P	**Pg**	**17 55 40.0**	**-1.0**
DUVT				S	**Sg**	**17 55 52.1**	**0.0**
IZMR	**zmir-demi**	**0.85**	**177**	P	**Pg**	**17 55 40.7**	**-0.5**
IZMR				S	**Sg**	**17 55 51.5**	**-0.9**
IZMR				S	**Sb**	**17 55 52.1**	**-0.4**
SIMA	**Simav-Kutahya**	**0.86**	**83**	Pg	**Pg**	**17 55 40.9**	**-0.4**
SMAA	**Simav-Kutahya**	**0.86**	**82**	Pg	**Pg**	**17 55 41.1**	**-0.2**
BAGT	**Foa**	**0.88**	**248**	P	**Pg**	**17 55 41.0**	**-0.7**
BAGT				S	**Sb**	**17 55 53.4**	**+0.3**
BLKS	**Balkesir-Sus**	**0.89**	**4**	P	**Pg**	**17 55 40.7**	**-1.2**
BLKS				S	**Sb**	**17 55 53.1**	**-0.5**
YAYO	**Edremit-Balk**	**0.89**	**315**	Pg	**Pg**	**17 55 40.6**	**-1.3**
YAYO				Sg	**Sg**	**17 55 52.9**	**-0.6**
KIRA	**zmir-Kiraz**	**0.89**	**153**	P	**Pg**	**17 55 41.8**	**-0.1**
KIRA				S	**Sb**	**17 55 54.5**	**+0.9**
BLCB	**Balcova**	**0.90**	**228**	Pg	**Pb**	**17 55 40.2**	**-1.8**
BLCB	**Balcova**	**0.90**	**228**	P	**Pb**	**17 55 40.7**	**-1.2**
BLCB				S	**Sg**	**17 55 53.6**	**-0.2**
USAK	**Uak-Merkez**	**0.93**	**107**	P	**Pb**	**17 55 42.0**	**-0.6**
FOCM	**Foa**	**0.94**	**253**	Pg	**Pb**	**17 55 41.2**	**-1.6**
AYVA	**Ayvalik**	**0.98**	**289**	P	**Pb**	**17 55 43.3**	**-0.2**
AYVA				S	**Sn**	**17 55 57.1**	**-0.6**
SUSR	**Susurluk-Balik**	**0.98**	**9**	Pg	**Pb**	**17 55 43.0**	**-0.5**
CMHT	**Manyas**	**1.02**	**4**	P	**Pb**	**17 55 43.2**	**-0.9**
CMHT				S	**Sb**	**17 55 57.1**	**-0.4**
SHAP	**Saphane-Kutahy**	**1.04**	**88**	Pg	**Pb**	**17 55 44.5**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.04**	**180**	Pg	**Pb**	**17 55 43.7**	**-0.9**
GONE	**Gonen-Balikesi**	**1.07**	**352**	Pg	**Pb**	**17 55 44.6**	**-0.3**
YENI	**Yenice-Canakka**	**1.07**	**332**	Pg	**Pb**	**17 55 44.6**	**-0.4**
NAZL	**Nazilli-Aydin**	**1.07**	**163**	Pg	**Pb**	**17 55 44.3**	**-0.7**
KRBN	**Karaburun**	**1.11**	**250**	Pg	**Pb**	**17 55 44.3**	**-1.4**
ATIT	**Gnen**	**1.12**	**347**	P	**Pb**	**17 55 45.0**	**-0.8**
ATIT				S	**Sn**	**17 56 00.9**	**-0.3**
SULTU	**Buldan**	**1.16**	**143**	P	**Pn**	**17 55 46.5**	**-0.1**
SULTU				S	**Sg**	**17 56 03.3**	**+1.1**
GEDZ	**Gediz**	**1.19**	**87**	Pn	**Pb**	**17 55 47.3**	**+0.3**
GMLD	**Gumuldur**	**1.19**	**220**	Pn	**Pn**	**17 55 46.3**	**-0.5**
KARB	**zmir-Karabur**	**1.20**	**255**	P	**Pn**	**17 55 46.5**	**-0.5**
KARB				S	**Sb**	**17 56 02.6**	**+0.1**
CANM	**Can-anakkale**	**1.21**	**328**	Pn	**Pn**	**17 55 46.7**	**-0.4**
KUSD	**Kusadasi-Aydin**	**1.22**	**203**	Pn	**Pn**	**17 55 46.6**	**-0.7**
DGB	**zmir**	**1.22**	**220**	P	**Pn**	**17 55 46.5**	**-0.8**
DGB				S	**Sb**	**17 56 03.3**	**+0.1**
ESEN	**Aydn-Nazilli**	**1.24**	**163**	P	**Pn**	**17 55 47.4**	**-0.2**
ESEN				S	**Sb**	**17 56 03.9**	**+0.1**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**17 55 47.7**	**-0.4**
PRK				S	**Sb**	**17 56 04.4**	**-0.5**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**17 55 48.0**	**-0.2**
ZEYE	**Izmir, Urla-Ze**	**1.32**	**236**	P	**Pn**	**17 55 48.0**	**-0.7**
ZEYE				S	**Sb**	**17 56 05.9**	**0.0**
BAND	**Balkesir-Ban**	**1.37**	**7**	⇑P	**Pn**	**17 55 49.2**	**-0.2**
BAND				⇑S	**Sg**	**17 56 08.5**	**-0.5**
GCAM	**G?zelcaml?**	**1.39**	**202**	Pn	**Pn**	**17 55 48.9**	**-0.7**
GCAM	**G?zelcaml?**	**1.39**	**202**	P	**Pn**	**17 55 48.6**	**-1.0**
GCAM				S	**Sn**	**17 56 07.5**	**-0.2**
EAG2	**Marmaro, Chios**	**1.46**	**253**	P	**Pn**	**17 55 50.7**	**+0.1**
EZN	**Ezine**	**1.47**	**305**	P	**Pb**	**17 55 51.1**	**-0.7**
EZN				S	**Sb**	**17 56 09.7**	**-0.6**
EZN	**Ezine**	**1.47**	**305**	P	**Pb**	**17 55 51.5**	**-0.3**
KRL1	**Karlovasi Samo**	**1.51**	**218**	P	**Pn**	**17 55 50.6**	**-0.6**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**17 55 50.3**	**-1.1**
SMG				S	**Sb**	**17 56 11.8**	**0.0**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**17 55 50.1**	**-1.4**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**17 55 51.5**	**-0.5**
CHOS				S	**Sn**	**17 56 11.9**	**0.0**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**17 55 51.6**	**-0.4**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**17 55 52.2**	**-0.3**
SIGR				S	**Sn**	**17 56 12.7**	**-0.2**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**17 55 51.9**	**-0.6**
YER	**Yerkesik**	**1.88**	**170**	P	**Pn**	**17 55 56.4**	**0.0**
YER				S	**Sb**	**17 56 21.8**	**-0.3**
GADA	**Gvkgeada**	**1.95**	**309**	P	**Pn**	**17 55 57.8**	**+0.5**
GADA				S	**Sn**	**17 56 21.8**	**+0.2**
BODT	**Bodrum**	**1.98**	**194**	P	**Pn**	**17 55 58.4**	**+0.7**
KLNA	**Kalymnos**	**2.15**	**200**	P	**Pn**	**17 55 59.9**	**-0.3**
CAVK	**Edirne/Enez-Ca**	**2.15**	**323**	⇓P	**Pn**	**17 56 00.7**	**+0.6**
BORA	**Eskisehir**	**2.18**	**65**		**Pn**	**17 56 00.8**	**+0.2**
ENEZ	**Enez**	**2.20**	**323**	P	**Pn**	**17 56 01.6**	**+0.9**
LIA	**Limnos Island**	**2.28**	**294**	P	**Pn**	**17 56 02.5**	**+0.6**
LIA	**Limnos Island**	**2.28**	**294**	P	**Pn**	**17 56 02.5**	**+0.6**
EFSA	**Agios Efstrati**	**2.32**	**285**	P	**Pn**	**17 56 03.1**	**+0.8**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**17 56 03.1**	**+0.3**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**17 56 02.8**	**+0.1**
ALN	**Alexandroupoli**	**2.37**	**324**		**Pn**	**17 56 03.6**	**+0.4**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**17 56 03.6**	**+0.4**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**17 56 03.6**	**+0.4**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**17 56 03.4**	**+0.2**
ISP	**Isparta**	**2.38**	**119**		**Pn**	**17 56 03.6**	**+0.3**
ISP	**Isparta**	**2.38**	**119**	P	**Pn**	**17 56 03.6**	**+0.3**
ISP	**Isparta**	**2.38**	**119**	P	**Pn**	**17 56 02.6**	**-0.7**
ISP	**Isparta**	**2.38**	**119**	*e*P	**Pn**	**17 56 03.1**	**-0.2**
ISP	**Isparta**	**2.38**	**119**	P	**Pn**	**17 56 03.5**	**+0.3**
ALEX	**Alexandroupoli**	**2.41**	**321**	P	**Pn**	**17 56 04.0**	**+0.4**
KLYT	**Kilyos**	**2.43**	**21**	pP	**Pb**	**17 56 09.2**	**+1.1**
KLYT	**Kilyos**	**2.43**	**21**	P	**Pn**	**17 56 03.6**	**-0.3**
CTYL	**Yalikoy Yolu**	**2.50**	**7**	P	**Pn**	**17 56 04.9**	**0.0**
CTYL				S	**Sg**	**17 56 42.3**	**-2.8**
SFL1	**Soufli**	**2.51**	**332**	P	**Pn**	**17 56 05.3**	**+0.2**
SILT	**Sile**	**2.55**	**31**	⇓P	**Pn**	**17 56 05.6**	**+0.1**
ELL	**Elmali**	**2.75**	**144**		**Pn**	**17 56 09.6**	**+1.1**
ELL	**Elmali**	**2.75**	**144**	P	**Pn**	**17 56 09.6**	**+1.1**
ARG	**Arkhangelos**	**2.77**	**176**		**Pn**	**17 56 08.8**	**+0.2**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**17 56 09.0**	**+0.3**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**17 56 08.9**	**+0.2**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**17 56 08.7**	**0.0**
RDO	**Rodhopi**	**2.81**	**321**		**Pn**	**17 56 09.7**	**+0.5**
RDO	**Rodhopi**	**2.81**	**321**	P	**Pn**	**17 56 09.9**	**+0.7**
RDO	**Rodhopi**	**2.81**	**321**	P	**Pn**	**17 56 09.9**	**+0.7**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**17 56 09.8**	**-0.3**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**17 56 09.7**	**-0.3**
THAS	**Thassos island**	**2.93**	**304**	P	**Pn**	**17 56 11.1**	**+0.3**
THAS	**Thassos island**	**2.93**	**304**	P	**Pn**	**17 56 10.5**	**-0.2**
SAHE	**Sakarya_HENDEK**	**2.94**	**50**	⇑P	**Pn**	**17 56 10.6**	**-0.4**
MDUB	**Mudurnu**	**2.95**	**59**		**Pn**	**17 56 11.7**	**+0.5**
TRGA	**Dikaia**	**2.97**	**336**	P	**Pn**	**17 56 12.1**	**+0.7**
KYMI	**Kymi, Euboea I**	**2.98**	**264**	P	**Pn**	**17 56 12.1**	**+0.5**
KYMI	**Kymi, Euboea I**	**2.98**	**264**	P	**Pn**	**17 56 11.1**	**-0.5**
XANC	**Avdira**	**3.01**	**312**	P	**Pn**	**17 56 12.1**	**+0.2**
AKAS	**Kas**	**3.07**	**153**		**Pn**	**17 56 13.2**	**+0.3**
THS1	**Thassos, Thass**	**3.09**	**305**	P	**Pn**	**17 56 13.1**	**+0.1**
AOS	**Alonnisos**	**3.12**	**275**	P	**Pn**	**17 56 14.3**	**+0.8**
KSL	**Kastellorizon**	**3.14**	**154**	P	**Pn**	**17 56 15.5**	**+1.9**
KSL	**Kastellorizon**	**3.14**	**154**	P	**Pn**	**17 56 13.5**	**-0.2**
AOS2	**Alonissos-2**	**3.15**	**274**	P	**Pn**	**17 56 14.3**	**+0.5**
THR8	**Santorini-Mono**	**3.21**	**217**	P	**Pn**	**17 56 14.5**	**-0.2**
THR8	**Santorini-Mono**	**3.21**	**217**	P	**Pn**	**17 56 13.7**	**-1.0**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**17 56 14.6**	**-0.4**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**17 56 15.2**	**+0.2**
THERA	**Ancient Thera,**	**3.24**	**217**	P	**Pn**	**17 56 14.6**	**-0.5**
KAVA	**Kavala**	**3.28**	**309**	P	**Pn**	**17 56 15.5**	**0.0**
KAVA	**Kavala**	**3.28**	**309**	P	**Pn**	**17 56 15.8**	**+0.2**
KDZ	**Kurdzhali**	**3.28**	**324**	P	**Pn**	**17 56 14.6**	**-1.0**
THR6	**Thira Island,**	**3.29**	**218**	P	**Pn**	**17 56 15.9**	**+0.1**
PTL	**Penteli**	**3.29**	**255**	P	**Pn**	**17 56 15.9**	**+0.1**
OUR	**Ouranopolis**	**3.30**	**295**	P	**Pn**	**17 56 16.1**	**+0.2**
OUR	**Ouranopolis**	**3.30**	**295**	P	**Pn**	**17 56 16.3**	**+0.4**
THR9	**Santorini-Faro**	**3.31**	**218**	P	**Pn**	**17 56 16.0**	**0.0**
ATHU	**Athens Univers**	**3.38**	**254**	P	**Pn**	**17 56 15.9**	**-1.1**
VLY	**Voula,Athens**	**3.41**	**252**	P	**Pn**	**17 56 17.9**	**+0.5**
VLY	**Voula,Athens**	**3.41**	**252**	P	**Pn**	**17 56 17.1**	**-0.3**
ATH	**Athens Observa**	**3.43**	**254**	P	**Pn**	**17 56 17.6**	**0.0**
KARP	**Karpathos**	**3.48**	**190**		**Pn**	**17 56 18.7**	**+0.2**
KARP	**Karpathos**	**3.48**	**190**	P	**Pn**	**17 56 19.7**	**+1.2**
KARP	**Karpathos**	**3.48**	**190**	P	**Pn**	**17 56 20.2**	**+1.7**
KARP	**Karpathos**	**3.48**	**190**	*e*P	**Pn**	**17 56 19.9**	**+1.4**
KARP	**Karpathos**	**3.48**	**190**	P	**Pn**	**17 56 18.4**	**-0.1**
STFN	**Stefani**	**3.50**	**258**	P	**Pn**	**17 56 18.7**	**0.0**
DIM	**Dimitrovgrad**	**3.52**	**331**	P	**Pn**	**17 56 19.3**	**+0.3**
DIM	**Dimitrovgrad**	**3.52**	**331**	*i* P	**Pn**	**17 56 19.6**	**+0.6**
MAGU	**Magoula**	**3.55**	**257**	P	**Pn**	**17 56 19.1**	**-0.2**
RZN	**Rozhen**	**3.62**	**319**	P	**Pn**	**17 56 21.3**	**+0.8**
RZN	**Rozhen**	**3.62**	**319**	*i* P	**Pn**	**17 56 21.3**	**+0.8**
JMB	**Yambol**	**3.65**	**344**	*i* P	**Pg**	**17 56 31.8**	**-2.7**
VILL	**Villia**	**3.68**	**258**	P	**Pn**	**17 56 21.3**	**+0.1**
PLG	**Polygyros**	**3.70**	**293**	P	**Pn**	**17 56 22.1**	**+0.7**
VIL2	**Platees**	**3.70**	**259**	P	**Pn**	**17 56 20.5**	**-0.9**
ATAL	**Atalanti**	**3.81**	**267**	P	**Pn**	**17 56 22.4**	**-0.5**
MET1	**Methana Town,**	**3.81**	**250**	P	**Pn**	**17 56 22.2**	**-0.7**
MET5	**Makryloggos,Me**	**3.82**	**250**	P	**Pn**	**17 56 22.6**	**-0.4**
MET6	**Megalochori,Me**	**3.83**	**250**	P	**Pn**	**17 56 22.8**	**-0.3**
LKR	**Lokris**	**3.83**	**266**	P	**Pn**	**17 56 22.8**	**-0.5**
MET2	**Kameni Chora,**	**3.84**	**250**	P	**Pn**	**17 56 23.0**	**-0.3**
MMB	**Musomishta**	**4.07**	**310**	P	**Pn**	**17 56 27.2**	**+0.7**
MMB	**Musomishta**	**4.07**	**310**	*i* P	**Pn**	**17 56 27.2**	**+0.7**
NPS	**Neapolis**	**4.14**	**207**	P	**Pn**	**17 56 27.3**	**-0.2**
PRD	**Provadia**	**4.18**	**355**	*i* P	**Pn**	**17 56 28.5**	**+0.5**
ELND	**Elena**	**4.22**	**339**	⇓P	**Pn**	**17 56 29.1**	**+0.5**
LIT	**Litokhoron**	**4.32**	**287**		**Pn**	**17 56 31.4**	**+1.5**
LIT	**Litokhoron**	**4.32**	**287**	P	**Pn**	**17 56 30.3**	**+0.4**
LIT	**Litokhoron**	**4.32**	**287**	P	**Pn**	**17 56 31.4**	**+1.5**
AGG	**Agios Georgios**	**4.33**	**272**	P	**Pn**	**17 56 30.8**	**+0.7**
KNT	**Kendrikon**	**4.40**	**301**	P	**Pn**	**17 56 31.8**	**+0.7**
IDI	**Anoyia**	**4.40**	**214**	Pn	**Pn**	**17 56 30.7**	**-0.5**
	20nm,0.6s,baz=40,slow=12,SNR=20						
IDI				Sn	**Sn**	**17 57 19.7**	**-2.6**
	12nm,0.3s,baz=5.8,slow=16,SNR=3.1						
IDI				Lg	Lg	17 57 42.7	
	9.7nm,0.3s,baz=331,slow=16,SNR=3.7						
IDI				LR	LR	17 58 27.9	
	comp=Z,5µm,19.7s,baz=1.5,slow=42						
IDI	**Anoyia**	**4.40**	**214**		**Pn**	**17 56 30.4**	**-0.8**
IDI	**Anoyia**	**4.40**	**214**		**Sn**	**17 57 19.7**	**-2.6**
IDI	**Anoyia**	**4.40**	**214**	P	**Pn**	**17 56 30.9**	**-0.3**
KALB	**Balgarevo**	**4.43**	**5**	⇓P	**Pn**	**17 56 32.0**	**+0.6**
BR105	**Keskin Array S**	**4.50**	**79**	P	**Pn**	**17 56 34.1**	**+1.5**
BR105	**Keskin Array S**	**4.50**	**79**	P	**Pn**	**17 56 34.2**	**+1.6**
BR106	**Keskin Array S**	**4.50**	**79**	P	**Pn**	**17 56 34.0**	**+1.4**
BR106	**Keskin Array S**	**4.50**	**79**	P	**Pn**	**17 56 34.3**	**+1.7**
PGB	**Panagyurishte**	**4.51**	**322**	*i* P	**Pn**	**17 56 33.3**	**+0.7**
BR104	**Keskin Array S**	**4.52**	**79**	P	**Pn**	**17 56 34.5**	**+1.7**
BR131	**Keskin Array S**	**4.52**	**79**		**Pn**	**17 56 33.5**	**+0.7**
BR131	**Keskin Array S**	**4.52**	**79**	*d i*P	**Pn**	**17 56 33.6**	**+0.8**
BRTR	**Keskin Array B**	**4.52**	**79**	Pn	**Pn**	**17 56 34.1**	**+1.3**
	5.7nm,0.3s,baz=253,slow=14,SNR=111						
BRTR				Pg	**Pg**	**17 56 49.7**	**-1.5**
	14nm,0.3s,baz=262,slow=12,SNR=29						
BRTR				Lg	Lg	17 57 47.5	
	7.6nm,0.3s,baz=264,slow=22,SNR=15						
BRTR				LR	LR	17 58 43.6	
	comp=Z,5µm,19.3s,baz=265,slow=45						
	31nm,0.6s						
BRTR	**Keskin Array B**	**4.52**	**79**		**Pn**	**17 56 32.6**	**-0.2**
BRTR	**Keskin Array B**	**4.52**	**79**	*i* P	**Pn**	**17 56 34.2**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,36nm,0.6s						
VLI	**Veliai**	**4.53**	**241**	P	**Pn**	**17 56 32.2**	**-0.5**
KLV	**Kalavryta, Ach**	**4.60**	**260**	P	**Pn**	**17 56 33.4**	**-0.4**
PVL	**Pavlikeni**	**4.61**	**334**	*i* P	**Pn**	**17 56 34.6**	**+0.7**
KKB	**Krupnik**	**4.62**	**310**	P	**Pn**	**17 56 34.8**	**+0.8**
KKB	**Krupnik**	**4.62**	**310**	*i* P	**Pn**	**17 56 35.4**	**+1.4**
GRG	**Griva**	**4.65**	**297**	P	**Pn**	**17 56 35.7**	**+1.2**
RAZG	**Razgrad**	**4.69**	**348**	⇓P	**Pn**	**17 56 35.2**	**+0.2**
KIRS	**Kirsehir-Merke**	**4.70**	**86**	⇓P	**Pn**	**17 56 35.6**	**+0.5**
CIDE	**Kastamonu/Cide**	**4.82**	**52**	⇓P	**Pn**	**17 56 37.6**	**+0.8**
MANR	**Mangalia**	**4.85**	**6**	⇑P	**Pn**	**17 56 38.4**	**+1.2**
PLNA	**Plana**	**4.86**	**317**	*i* P	**Pn**	**17 56 38.8**	**+1.3**
ILGA	**Ilgaz**	**4.93**	**63**		**Pn**	**17 56 39.0**	**+0.5**
ITM	**Ithomi**	**5.04**	**251**		**Pn**	**17 56 40.2**	**+0.4**
PLVB	**Pleven**	**5.04**	**332**	⇑P	**Pn**	**17 56 40.5**	**+0.7**
VTS	**Vitosha**	**5.06**	**317**	*i* P	**Pn**	**17 56 41.2**	**+1.0**
EFOR	**EFORIE**	**5.12**	**6**	⇑P	**Pn**	**17 56 40.9**	**0.0**
MFTR	**Murfatlar**	**5.20**	**4**	⇑P	**Pn**	**17 56 42.3**	**+0.3**
BLSH	**Balsha**	**5.21**	**319**	*i* P	**Pn**	**17 56 44.1**	**+1.9**
MPEP	**Malo Peshtene**	**5.37**	**326**	*i* P	**Pn**	**17 56 45.1**	**+0.8**
TIRR	**Tirgusor**	**5.48**	**4**		**Pn**	**17 56 45.5**	**-0.3**
TIRR	**Tirgusor**	**5.48**	**4**	⇑P	**Pn**	**17 56 46.0**	**+0.1**
TIRR	**Tirgusor**	**5.48**	**4**	P	**Pn**	**17 56 45.9**	**+0.1**
TIRR	**Tirgusor**	**5.48**	**4**	P	**Pn**	**17 56 45.7**	**-0.1**
	comp=Z,3.0nmcomp=Z,3µmcomp=Z,236nm,1.5s						
TIRR	**Tirgusor**	**5.48**	**4**	P	**Pn**	**17 56 46.0**	**+0.1**
	comp=Z,3.0nmcomp=Z,3µmcomp=Z,236nm,1.5s						
COPA	**Copaceanca**	**5.52**	**340**	⇑P	**Pn**	**17 56 46.7**	**+0.4**
BZK	**Bozkurt**	**5.53**	**56**		**Pn**	**17 56 45.8**	**-0.7**
BZK	**Bozkurt**	**5.53**	**56**	⇑P	**Pn**	**17 56 47.8**	**+1.3**
BZK	**Bozkurt**	**5.53**	**56**	P	**Pn**	**17 56 47.8**	**+1.3**
	comp=Z,4.5nmcomp=Z,7µmcomp=Z,628nm,0.9s						
TLBR	**Topalu**	**5.55**	**1**	⇑P	**Pn**	**17 56 47.1**	**+0.3**
AMRR	**Amara**	**5.63**	**356**	⇑P	**Pn**	**17 56 48.7**	**+0.7**
AMRR	**Amara**	**5.63**	**356**	P	**Pn**	**17 56 48.6**	**+0.7**
VLAD	**Vladila**	**5.65**	**334**	⇑P	**Pn**	**17 56 48.3**	**+0.2**
SKO	**Skopje**	**5.75**	**303**	*i* Pn	**Pn**	**17 56 51.5**	**+2.0**
VALD	**Valchedram**	**5.77**	**326**	*i* P	**Pn**	**17 56 51.4**	**+1.6**
OHR	**Ohrid**	**5.84**	**294**	*i* Pn	**Pn**	**17 56 53.2**	**+2.4**
TPGR	**Topolog**	**5.88**	**4**	⇓P	**Pn**	**17 56 51.8**	**+0.5**
CSS	**Mathiatis**	**5.93**	**131**		**Pn**	**17 56 52.3**	**+0.2**
CSS	**Mathiatis**	**5.93**	**131**	P	**Pn**	**17 56 53.9**	**+1.9**
	comp=Z,0.3nmcomp=Z,777nmcomp=Z,100nm,0.8s						
CSS	**Mathiatis**	**5.93**	**131**	P	**Pn**	**17 56 53.5**	**+1.4**
	comp=Z,0.3nmcomp=Z,777nmcomp=Z,100nm,0.8s						
CSS	**Mathiatis**	**5.93**	**131**	P	**Pn**	**17 56 52.2**	**+0.2**
HUMR	**Humele**	**5.95**	**340**	⇑P	**Pn**	**17 56 52.4**	**+0.1**
PGOR	**Pogoanele**	**5.95**	**354**	⇓P	**Pn**	**17 56 53.9**	**+1.6**
CFR	**Carcaliu**	**6.19**	**2**	⇓P	**Pn**	**17 56 55.2**	**-0.4**
CFR	**Carcaliu**	**6.19**	**2**	P	**Pn**	**17 56 55.1**	**-0.4**
ISR	**Istrita**	**6.21**	**351**	P	**Pn**	**17 56 57.0**	**+1.1**
	comp=Z,5.5nmcomp=Z,5µmcomp=Z,321nm,0.7s						
BNN	**Bunyan**	**6.21**	**89**		**Pn**	**17 56 55.4**	**-0.6**
TLCR		**6.23**	**6**	⇑P	**Pn**	**17 56 57.3**	**+1.1**
TLCR		**6.23**	**6**	P	**Pn**	**17 56 57.2**	**+1.1**
KEK	**Kerkira**	**6.31**	**279**		**Pn**	**17 56 56.6**	**-0.7**
GRER		**6.42**	**354**	⇑P	**Pn**	**17 56 59.7**	**+0.9**
SCHLR	**Schela**	**6.48**	**360**	⇑P	**Pn**	**17 56 59.7**	**+0.1**
GIUM	**Giurgiulesti**	**6.50**	**2**	⇓P	**Pn**	**17 57 00.3**	**+0.6**
NEHR	**Nehoiu**	**6.54**	**350**	⇑P	**Pn**	**17 57 01.2**	**+0.8**
NEGRR	**Negrea**	**6.54**	**360**	⇑P	**Pn**	**17 57 00.8**	**+0.4**
IZVR	**Izvoarele**	**6.55**	**359**	⇓P	**Pn**	**17 57 01.1**	**+0.5**
BOVS	**Bovan**	**6.57**	**317**	⇓P	**Pn**	**17 57 01.9**	**+1.0**
TATR	**Tatarca**	**6.61**	**1**	⇓P	**Pn**	**17 57 02.0**	**+0.8**
BISRR	**Bisoca**	**6.61**	**353**	P	Pb	17 57 11.7	-7.7
MLR	**Muntele Rosu**	**6.66**	**348**	Pn	**Pn**	**17 57 02.9**	**+0.8**
	comp=Z,44nm,0.6s,baz=158,slow=5.0,SNR=37						
MLR				Sn	**Sn**	**17 58 18.2**	**+0.4**
	comp=Z,12nm,0.3s,baz=194,slow=7.7,SNR=3.0						
MLR				Lg	Lg	17 58 53.6	
	comp=Z,8.2nm,0.3s,baz=95,slow=21,SNR=2.3						
MLR	**Muntele Rosu**	**6.66**	**348**		**Pn**	**17 57 02.2**	**+0.1**
MLR	**Muntele Rosu**	**6.66**	**348**	⇓P	**Pn**	**17 57 03.6**	**+1.5**
MLR	**Muntele Rosu**	**6.66**	**348**	P	**Pn**	**17 57 03.6**	**+1.5**
	comp=Z,3.3nmcomp=Z,4µmcomp=Z,338nm,1.2s						
SRE	**Strehaia**	**6.66**	**330**	⇑P	**Pn**	**17 57 02.4**	**+0.3**
SRE	**Strehaia**	**6.66**	**330**	P	**Pn**	**17 57 02.3**	**+0.3**
SCTR	**Scanteiesti**	**6.68**	**1**	⇑P	**Pn**	**17 57 03.4**	**+1.1**
TOKA	**Tokat**	**6.76**	**76**		**Pn**	**17 57 04.1**	**+0.5**
VOIR		**6.78**	**343**	⇑P	**Pn**	**17 57 04.4**	**+0.6**
VOIR		**6.78**	**343**	P	**Pn**	**17 57 04.3**	**+0.6**
VOIR		**6.78**	**343**	P	**Pn**	**17 57 04.1**	**+0.3**
	comp=Z,1.3nmcomp=Z,1µmcomp=Z,74nm,0.7s						
VOIR		**6.78**	**343**	P	**Pn**	**17 57 04.0**	**+0.3**
	comp=Z,1.3nmcomp=Z,1µmcomp=Z,74nm,0.7s						
ODBI	**Odobesti**	**6.80**	**355**	⇓P	**Pn**	**17 57 05.3**	**+1.3**
ODBI	**Odobesti**	**6.80**	**355**	P	**Pn**	**17 57 05.6**	**+1.7**
	comp=Z,36nmcomp=Z,38µmcomp=Z,2µm,0.6s						
VLDR	**Vladesti**	**6.85**	**1**	⇑P	**Pn**	**17 57 05.8**	**+1.1**
VARL	**Varlezi**	**6.91**	**360**	⇓P	**Pn**	**17 57 06.6**	**+1.2**
PLOR	**Plostina**	**6.92**	**353**	⇑P	**Pn**	**17 57 06.8**	**+1.2**
PLOR	**Plostina**	**6.92**	**353**	P	**Pn**	**17 57 06.8**	**+1.2**
VRI	**Vrincioaia**	**6.92**	**353**	⇓P	**Pn**	**17 57 06.5**	**+0.7**
VRI	**Vrincioaia**	**6.92**	**353**	P	**Pn**	**17 57 06.4**	**+0.7**
VRI	**Vrincioaia**	**6.92**	**353**	P	**Pn**	**17 57 06.4**	**+0.7**
	comp=Z,3.3nmcomp=Z,3µmcomp=Z,250nm,0.8s						
VRI	**Vrincioaia**	**6.92**	**353**	P	**Pn**	**17 57 06.3**	**+0.6**
COVR	**Voineasa-Covas**	**6.96**	**350**	⇓P	**Pn**	**17 57 07.4**	**+1.1**
SEV	**Sevastopol'**	**7.03**	**36**	⇓*i*P	**Pn**	**17 57 07.3**	**+0.1**
SEV				*e*S	**Sn**	**17 58 23.3**	**-3.5**
SEV	**Sevastopol'**	**7.03**	**36**	⇓*i*P	**Pn**	**17 57 07.3**	**+0.1**
SEV				pmax	pmax	17 57 20.1	
	comp=Z,29nm,0.4s						
SEV				*e*S	**Sn**	**17 58 23.3**	**-3.5**
SEV				smax	smax	17 58 28.2	
	comp=N,150nm,0.6s						
SEV				smax	smax	17 58 28.2	
	comp=E,165nm,0.6s						
GHRR		**7.08**	**357**	P	**Pn**	**17 57 08.4**	**+0.6**
LOT	**Lotru**	**7.14**	**336**	⇑P	**Pn**	**17 57 09.0**	**+0.2**
HERR	**Herculane**	**7.16**	**327**	⇑P	**Pn**	**17 57 08.5**	**-0.5**
IVA	**Berane**	**7.19**	**305**	*e*Pn	**Pn**	**17 57 10.0**	**+0.6**
IVA				*i* Sn	**Sn**	**17 58 29.1**	**-1.8**
TURR	**Turia**	**7.20**	**350**	⇑P	**Pn**	**17 57 10.8**	**+1.4**
DOPR	**Dopca**	**7.21**	**346**	⇑P	**Pn**	**17 57 10.9**	**+1.2**
YAL	**Yalta**	**7.22**	**38**	*e*P	**Pn**	**17 57 09.2**	**-0.5**
YAL				*e*S	**Sn**	**17 58 28.3**	**-3.1**
YAL	**Yalta**	**7.22**	**38**	*e*P	**Pn**	**17 57 09.2**	**-0.5**
YAL				pmax	pmax	17 57 24.2	
	comp=Z,80nm,0.7s						
YAL				*e*S	**Sn**	**17 58 28.3**	**-3.1**
YAL				smax	smax	17 58 30.2	
	comp=N,75nm,0.3s						
YAL				smax	smax	17 58 30.2	
	comp=E,203nm,0.5s						
ULC	**Ulcinj**	**7.23**	**297**	*e*Pn	**Pn**	**17 57 10.5**	**+0.6**
ULC				*i* Sn	**Sn**	**17 58 30.0**	**-1.7**
TARU	**Tarkhankut**	**7.25**	**27**	*e*P	**Pn**	**17 57 10.9**	**+0.7**
TARU				pmax	pmax	17 57 21.8	
	comp=Z,91nm,0.6s						
TARU				*e*S	**Sn**	**17 58 30.1**	**-2.2**
TARU				smax	smax	17 58 32.9	
	comp=N,159nm,0.6s						
TARU				smax	smax	17 58 32.9	
	comp=E,46nm,0.3s						
BOSR	**Bodos**	**7.27**	**348**	⇑P	**Pn**	**17 57 11.6**	**+1.1**
OZUR		**7.27**	**348**	⇓P	**Pn**	**17 57 11.2**	**+0.7**
BIR	**Birlad**	**7.28**	**359**	⇑P	**Pn**	**17 57 10.9**	**+0.3**
BIR	**Birlad**	**7.28**	**359**	P	**Pn**	**17 57 10.8**	**+0.3**
DRME	**Dracevica, Mon**	**7.35**	**299**	*e*Pn	**Pn**	**17 57 12.3**	**+0.7**
DRME				*e*Sn	**Sn**	**17 58 33.1**	**-1.7**
MDVR	**Moldovita**	**7.39**	**323**	⇓P	**Pn**	**17 57 12.3**	**+0.1**
PDG	**Podgorica**	**7.40**	**300**		**Pn**	**17 57 11.8**	**-0.4**
PDG	**Podgorica**	**7.40**	**300**	*e*Pn	**Pn**	**17 57 12.9**	**+0.7**
PDG				*i* Sn	**Sn**	**17 58 34.3**	**-1.7**
KOME	**Kolasin**	**7.42**	**304**	*e*Pn	**Pn**	**17 57 15.1**	**+2.5**
KOME				*e*Sn	**Sn**	**17 58 34.8**	**-1.8**
ONER	**Baraj Valea Uz**	**7.42**	**352**	⇑P	**Pn**	**17 57 14.0**	**+1.4**
GZR	**Gura Zlata**	**7.44**	**331**	⇓P	**Pn**	**17 57 12.5**	**-0.4**
GZR	**Gura Zlata**	**7.44**	**331**	P	**Pn**	**17 57 12.4**	**-0.4**
ALU	**Alushta**	**7.48**	**38**	*e*P	**Pn**	**17 57 14.9**	**+1.6**
ALU				*e*S	**Sn**	**17 58 35.4**	**-2.5**
ALU	**Alushta**	**7.48**	**38**	*e*P	**Pn**	**17 57 14.9**	**+1.6**
ALU				pmax	pmax	17 57 26.6	
	comp=Z,54nm,0.5s						
ALU				*e*S	**Sn**	**17 58 35.4**	**-2.5**
ALU				smax	smax	17 58 40.0	
	comp=N,84nm,0.3s						
ALU				smax	smax	17 58 40.0	
	comp=E,92nm,0.4s						
DNZ2	**Donuzlav2**	**7.50**	**30**	*e*P	**Pn**	**17 57 14.6**	**+1.0**
DNZ2				pmax	pmax	17 57 22.8	
	comp=Z,43nm,0.4s						

DNZ2 eS Sn 17 58 35.4 -3.1
DNZ2 smax smax 17 58 40.6
comp=N,118nm,0.4s
DNZ2 smax smax 17 58 40.6
comp=E,316nm,0.9s
SIM Simferopol' 7.55 36 eP Pn **17 57 15.4 +1.2**
SIM eS Sn **17 58 35.2 -4.4**
SIM pmax pmax
comp=Z,41nm,0.8s
SIM smax smax
comp=N,328nm,0.7s
SIM smax smax
comp=E,1μm,1.2s
SIM MLR MLR
comp=Z,1μm,15.0s
SIM Simferopol' 7.55 36 eP Pn **17 57 14.9 +0.7**
SIM pmax pmax 17 57 23.1
comp=Z,120nm,0.3s
SIM eS Sn **17 58 35.8 -3.8**
SIM smax smax 17 58 40.2
comp=N,352nm,0.5s
SIM smax smax 17 58 40.2
comp=E,610nm,1.0s
TESR Tescani 7.57 353 ⇑P Pn **17 57 14.9 +0.3**
TESR Tescani 7.57 353 P Pn **17 57 14.6 0.0**
comp=E,0.8nmcomp=E,2μmcomp=E,229nm,0.7s
TESR Tescani 7.57 353 P Pn **17 57 14.3 -0.3**
comp=E,0.8nmcomp=E,2μmcomp=E,229nm,0.7s
GAZ Gaziantep 7.57 101 Pn **17 57 15.8 +1.1**
BUM Brajici-Budva ePn Pn **17 57 18.2 +3.2**
MDB Medias 7.60 341 ⇓P Pn **17 57 16.7 +1.7**
MDB Medias 7.60 341 P Pn **17 57 16.6 +1.7**
PURM Purcari 7.68 10 P Pn **17 57 17.1 +1.1**
comp=E,1.2nmcomp=E,4μmcomp=E,354nm,0.7s
PURM Purcari 7.68 10 P Pn **17 57 15.6 -0.4**
comp=E,1.2nmcomp=E,4μmcomp=E,353nm,0.7s
CEME Cevo 7.68 300 ePn Pn **17 57 16.8 +0.7**
CEME eSn Sn **17 58 41.0 -1.9**
PLE Pljevlja 7.74 307 ePn Pn **17 57 17.7 +0.7**
PLE *i* Sn Sn **17 58 42.5 -1.9**
NKME Niksic 7.75 302 ePn Pn **17 57 17.9 +0.8**
NKME eSn Sn **17 58 42.7 -1.9**
SUDU Sudak 7.93 40 eP Pn **17 57 20.2 +0.8**
SUDU eS Sn **17 58 46.7 -2.1**
SUDU Sudak 7.93 40 eP Pn **17 57 20.2 +0.8**
SUDU pmax pmax 17 57 39.2
comp=Z,152nm,1.4s
SUDU eS Sn **17 58 46.7 -2.1**
SUDU smax smax 17 58 50.4
comp=N,238nm,0.8s
SUDU smax smax 17 58 50.4
comp=E,87nm,0.7s
BZS Buzias 8.09 327 ⇑P Pn **17 57 21.3 -0.4**
BZS Buzias 8.09 327 P Pn **17 57 21.2 -0.4**
FEO Feodosiya 8.21 40 eP Pn **17 57 23.5 +0.2**
FEO eS Sn **17 58 51.7 -4.2**
FEO Feodosiya 8.21 40 eP Pn **17 57 23.5 +0.2**
FEO pmax pmax 17 57 50.7
comp=Z,130nm,0.7s
FEO eS Sn **17 58 51.7 -4.2**
FEO smax smax 17 58 56.0
comp=N,69nm,0.4s
FEO smax smax 17 58 56.0
comp=E,93nm,0.6s
MARR Marisel-Cluj 8.44 337 ⇓P Pn **17 57 27.6 +1.0**
MMAI Mount Meron Ar 8.52 132 Pn Pn **17 57 27.0 -0.7**
comp=E,5.3nm,0.3s,baz=331,slow=14,SNR=19
MMAI Sn Sn **17 59 01.2 -2.4**
comp=E,8.9nm,0.3s,baz=305,slow=28,SNR=8.6
MMAI LR LR 18 01 24.0
comp=E,658nm,19.6s,baz=298,slow=42
comp=E,6.1nm,0.4s
NATI Neve Ativ 8.54 130 P Pn **17 57 24.9 -2.9**
NATI S Sn **17 59 01.0 -3.0**
OFRI `Ofer 8.58 136 P Pn **17 57 24.9 -3.5**
OFRI S Sn **17 59 00.8 -4.2**
TIP Timpagrande 8.66 275 Pn **17 57 29.8 +0.3**
TIP Timpagrande 8.66 275 ⇑P Pn **17 57 30.6 +1.0**
TIP Timpagrande 8.66 275 P Pn **17 57 30.5 +1.0**
comp=E,43nm,1.4s
TIP Timpagrande 8.66 275 P Pn **17 57 30.1 +0.5**
comp=E,43nm,1.4s
DRGR 8.67 336 ⇓P Pn **17 57 30.0 +0.2**
DRGR 8.67 336 P Pn **17 57 29.9 +0.2**
MATE Matera 8.76 284 eP Pn **17 57 33.2 +2.3**
KSHT Keshet 8.78 131 P Pn **17 57 28.3 -3.0**
KSHT S Sn **17 59 07.1 -3.0**
BURAR Bucovina Array 8.84 348 Pn **17 57 31.4 -0.7**
BURAR Bucovina Array 8.84 348 ⇑P Pn **17 57 32.8 +0.7**
BURAR Bucovina Array 8.84 348 P Pn **17 57 32.7 +0.7**
SORM Soroca 9.15 2 ⇑P Pn **17 57 35.6 -0.6**
SORM Soroca 9.15 2 P Pn **17 57 35.5 -0.6**
SORM Soroca 9.15 2 P Pn **17 57 34.4 -1.8**
comp=E,1μmcomp=E,67nm,0.9s
SORM Soroca 9.15 2 P Pn **17 57 34.3 -1.9**
comp=E,1μmcomp=E,67nm,0.9s
HMDT Nahal Hemdat 9.15 135 P Pn **17 57 33.7 -2.6**
HMDT S Sn **17 59 15.2 -3.9**
ANN Anapa 9.18 48 eP Pn **17 57 37.3 +0.7**
ANN eS Sn **17 59 14.5 -5.2**
ANN pmax pmax
comp=Z,57nm,0.8s
ANN MLR MLR
comp=E,1μm,18.0s
ACER Acerenza 9.36 285 Pn **17 57 39.6 +0.5**
AMAZ Amatzia 9.40 140 P Pn **17 57 36.0 -3.6**
AMAZ S Sn **17 59 20.9 -4.2**
CEL Celeste 9.42 269 Pn **17 57 40.1 +0.1**
CEL Celeste 9.42 269 P Pn **17 57 40.8 +0.9**
comp=E,91nm,1.5s
RAKU Rahkiv 9.43 345 P Pn **17 57 41.9 +1.9**
DSI Dead Sea 9.60 138 P Pn **17 57 38.6 -3.9**
DSI S Sn **17 59 26.0 -4.2**
KMPD K-Podol'skiy 9.63 354 P Pn **17 57 42.8 +0.1**
YTIR Yattir 9.63 140 P Pn **17 57 39.5 -3.5**
YTIR S Sn **17 59 26.7 -4.4**
KZIT Kziot 9.67 145 P Pn **17 57 39.8 -3.6**
KZIT S Sn **17 59 27.4 -4.4**
MSBI Mazada 9.80 139 P Pn **17 57 42.9 -2.2**
MSBI S Sn **17 59 30.7 -4.1**
KOPT Kop Dagi 9.80 80 Pn **17 57 44.4 -1.0**
MORH Mrgy, Hungar 9.92 320 ⇓P Pn **17 57 47.1 +0.3**
MORH Mrgy, Hungar 9.92 320 P Pn **17 57 47.3 +0.5**
MORH Mrgy, Hungar 9.92 320 P Pn **17 57 46.6 -0.2**
comp=E,604nmcomp=E,50nm,0.6s
ASF Jabal al Asfar 10.00 130 Pn Pn **17 57 49.2 +1.2**
comp=E,0.7nm,0.3s,baz=331,slow=23,SNR=6.2
ASF Sn Sn **17 59 36.2 -3.9**
comp=E,0.3nm,0.3s,baz=325,slow=23,SNR=0.9
ASF LR LR 18 03 27.8
comp=E,719nm,18.1s,baz=318,slow=49
comp=E,2.3nm,0.4s
ASF Jabal al Asfar 10.00 130 Pn **17 57 49.2 +1.2**
ASF Sn **17 59 36.2 -3.9**
SOC Sochi 10.01 59 eP Pn **17 57 50.2 +2.2**
SOC *e* 17 59 44.9
SOC MLR MLR
comp=Z,1μm,16.0s
STNU Starunia 10.02 347 P Pn **17 57 47.8 -0.3**
RMNI Mount Ramon 10.10 144 P Pn **17 57 46.2 -3.1**
RMNI S Sn **17 59 37.8 -4.7**
IDAN Idan 10.14 141 P Pn **17 57 45.7 -4.1**
IDAN S Sn **17 59 39.1 -4.3**
MARD Mardin 10.29 95 Pn **17 57 52.3 +0.3**
PRNI Paran 10.42 144 P Pn **17 57 50.0 -3.6**
PRNI S Sn **17 59 45.8 -4.3**
PAOL Paolisi 10.42 286 Pn **17 57 53.6 -0.1**
KRMI Paran Flat 10.49 145 P Pn **17 57 50.6 -4.0**
KRMI S Sn **17 59 47.5 -4.5**
PSZ Piszkesteto 10.64 330 Pn **17 57 57.9 +1.2**
PSZ Piszkesteto 10.64 330 P Pn **17 57 57.9 +1.2**
PSZ Piszkesteto 10.64 330 eP Pn **17 57 59.3 +2.5**
HRFI Mount Harif 10.70 144 P Pn **17 57 53.9 -3.6**
HRFI S Sn **17 59 52.5 -4.6**
VAE Valguarnera 10.71 266 Pn Pn **17 57 59.0 +1.3**
comp=Z,15nm,0.9s,baz=189,slow=21,SNR=3.9
VAE LR LR 18 02 12.3
comp=Z,1μm,18.5s,baz=65,slow=38
VAE Valguarnera 10.71 266 Pn **17 57 59.0 +1.3**
MBRI Mt Berech 10.85 146 P Pn **17 57 55.8 -3.9**
MBRI S Sn **17 59 56.3 -4.5**
KECS Kecovo 10.89 333 ePN Pn **17 58 02.8 +2.8**
LUBAR Lubar, Ukraine 10.93 360 P Pn **17 57 59.8 -0.8**

EIL Elat 10.97 146 Pn Pn **17 57 59.4 -1.8**
comp=Z,1.1nm,0.3s,baz=342,slow=5.1,SNR=19
EIL Sn Sn 17 59 53.1 -11
comp=Z,2.0nm,0.3s,baz=36,slow=11,SNR=4.1
comp=Z,19nm,0.7s
EIL Elat 10.97 146 P Pn **17 57 57.0 -4.3**
EIL S Sn **17 59 59.2 -4.6**
GURO Guroymak-BITLI 11.05 88 Pn **17 58 02.9 +0.4**
LABN Labinsk 11.12 55 eP Pn **17 58 00.9 -2.2**
LABN eS Sn **18 00 06.1 -1.0**
MPLH Magyarpolny 11.13 321 P Pn **17 58 04.8 +1.5**
comp=Z,171nm,0.9s
MPLH Magyarpolny 11.13 321 P Pn **17 58 03.7 +0.4**
comp=Z,171nm,0.9s
ERBR Yeremizino-Bor 11.48 50 eP Pn **17 58 09.3 +1.2**
ERBR eS Sn **18 00 15.1 -1.0**
ERBR MLR MLR
comp=Z,619nm,13.0s
AK07 Malin Array Si 11.60 4 P Pn **17 58 07.4 -2.3**
AK10 Malin Array Si 11.65 4 P Pn **17 58 08.4 -2.0**
AK13 Malin Array Si 11.65 4 P Pn **17 58 09.0 -1.4**
AK14 Malin Array Si 11.67 4 P Pn **17 58 09.3 -1.4**
AK08 Malin Array Si 11.68 4 P Pn **17 58 09.2 -1.6**
AK11 Malin Array Si 11.72 4 P Pn **17 58 10.6 -0.8**
AK01 Malin Array Si 11.74 4 P Pn **17 58 10.7 -0.9**
KIEV Kiev 11.74 4 Pn **17 58 09.5 -2.1**
KIEV Kiev 11.74 4 P Pn **17 58 10.5 -1.1**
KIEV Kiev 11.74 4 P Pn **17 58 09.5 -2.1**
KIEV Kiev 11.74 4 P Pn **17 58 11.0 -0.6**
comp=Z,89nm,0.7s
AKASG Malin Array Be 11.75 4 Pn Pn **17 58 09.3 -2.4**
comp=Z,2.1nm,0.3s,baz=191,slow=12,SNR=13
AKASG Sn Sn **18 00 15.0 -7.6**
comp=Z,3.6nm,0.3s,baz=179,slow=24,SNR=4.9
AKASG Lg Lg 18 01 29.8
baz=180,slow=29
AKASG LR LR 18 02 41.5
comp=Z,2μm,20.5s,baz=188,slow=37
comp=Z,1.6nm,0.5s
AKASG Malin Array Be 11.75 4 Pn **17 58 09.3 -2.4**
AKASG Malin Array Be 11.75 4 *i* P Pn **17 58 10.3 -1.4**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 11.75 4 Pn **17 58 09.7 -2.0**
AKBB Malin Array Si 11.75 4⇑eP Pn **17 58 10.8 -0.9**
NIE Niedzica 11.75 335 P Pn **17 58 13.9 +2.0**
comp=E,8.3nm,1.0s
AK19 Malin Array Si 11.76 4 P Pn **17 58 09.9 -2.0**
AK18 Malin Array Si 11.76 4 P Pn **17 58 09.8 -2.1**
AK04 Malin Array Si 11.77 4 P Pn **17 58 10.2 -1.8**
AK03 Malin Array Si 11.77 4 P Pn **17 58 10.0 -2.1**
LANS Liptovska Anna 11.82 332 eP Pn **17 58 15.8 +3.1**
LANS Liptovska Anna 11.82 332 ePN Pn **17 58 15.8 +3.1**
NEUR Neytrino 11.96 64⇑eP Pn **17 58 12.8 -2.0**
NEUR pmax pmax
comp=Z,6.0nm,1.4s
SHA1 Shidzhatmaz 12.07 62⇑eP Pn **17 58 18.3 +2.0**
MODS Modra-Piesok 12.11 324 ePN Pn **17 58 17.8 +1.0**
RONA Rosalia, Austr 12.11 320 ePn Pn **17 58 17.9 +1.1**
comp=Z,2.6nm,0.6s
KIV Kislovodsk 12.15 61 eP Pn **17 58 18.2 +0.8**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,473nm,13.0s
SOKA Soboth 12.16 313 ePn Pn **17 58 18.3 +0.8**
comp=Z,1.8nm,0.6s
KVAR Kislodsk Arr 12.16 61 Pn Pn **17 58 20.2 +2.7**
baz=94,slow=20
comp=Z,2.6nm,0.8s
KVAR Kislovodsk Arr 12.16 61 Pn **17 58 20.2 +2.7**
ARSA Arzberg 12.23 316 Pn **17 58 17.0 -1.3**
ARSA Arzberg 12.23 316 ePn Pn **17 58 19.7 +1.3**
comp=Z,14nm,1.1s
KBZ Khabaz 12.23 62 Pn Pn **17 58 21.4 +3.1**
comp=Z,0.1nm,0.3s,baz=262,slow=12,SNR=4.3
KBZ LR LR 18 04 27.9
comp=Z,2μm,18.3s,baz=256,slow=45
comp=Z,4.6nm,0.9s
KBZ Khabaz 12.23 62⇑eP Pn **17 58 19.2 +0.9**
KBZ pmax pmax
comp=Z,17nm,1.3s
OBKA Obir 12.34 312 eP Pn **17 58 21.9 +1.9**
comp=Z,3.2nm,0.7s
CONA Conrad Observa 12.48 320 ePn Pn **17 58 22.8 +0.9**
comp=Z,4.3nm,0.5s
RNPP9 Sopachiv 12.50 354 P Pn **17 58 20.5 -1.5**
KRUC Moravsky 13.01 324 ePN Pn **17 58 30.6 +1.6**
GNI Garni 13.06 80 Pn Pn **17 58 33.6 +3.8**
comp=Z,0.1nm,0.3s,baz=318,slow=12,SNR=3.1
GNI LR LR 18 03 38.8
comp=Z,2μm,19.0s,baz=276,slow=38
comp=Z,13nm,1.1s
GNI Garni 13.06 80 Pn **17 58 31.0 +1.1**
GNI Garni 13.06 80 P Pn **17 58 31.0 +1.1**
MORC Moravsky Berou 13.06 329 ePN Pn **17 58 31.8 +2.0**
VRAC Vranov 13.11 326 Pn Pn **17 58 32.2 +1.9**
comp=Z,0.1nm,0.3s,baz=138,slow=12,SNR=3.4
comp=Z,1.1nm,0.4s
VRAC Vranov 13.11 326 ePN Pn **17 58 30.9 +0.6**
ABTA Abfaltersbach 13.67 310 ePn Pn **17 58 39.2 +1.1**
comp=Z,5.0nm,0.6s
CKRC Cesky Krumlov 13.85 320 eP P **17 58 49.3 +0.5**
CKRC MLR MLR
comp=Z,1μm,13.5s
CKRC Cesky Krumlov 13.85 320 eP P **17 58 49.3 +0.5**
CKRC AMS AMS 18 05 50.0
comp=Z,1μm,13.5s
LESA Schwarzleotal 13.91 312 eP P **17 58 46.7 -2.9**
comp=Z,3.0nm,0.4s
DPC Dobruska-Polom 14.01 328 P Pn **17 58 43.6 +1.0**
comp=Z,8.8nm,1.1s
DPC Dobruska-Polom 14.01 328 P Pn **17 58 43.1 +0.5**
comp=Z,8.7nm,1.9s
GEC2 GERESS Array S 14.18 319 Pn **17 58 46.5 +1.5**
GEC2 GERESS Array S 14.18 319 eP P **17 58 54.1 +1.6**
comp=Z,22nm,1.1s,baz=126,slow=11
GEC2 eL L 18 06 24.7
comp=Z,800nm,18.2s
GERES GERESS Array B 14.18 319 Pn Pn **17 58 46.2 +1.2**
comp=Z,0.1nm,0.3s,baz=128,slow=15,SNR=5.8
comp=Z,1.2nm,0.8s
GERES GERESS Array B 14.18 319 Pn **17 58 46.2 +1.2**
ZVC Zvikov 14.31 321 eP P **17 58 56.0 +2.1**
ZVC AMS AMS 18 06 30.0
comp=Z,2μm,9.9s
KHC Kasperske Hory 14.42 319 eP P **17 58 57.5 +2.4**
KHC Kasperske Hory 14.42 319 eP P **17 58 57.5 +2.4**
VORD Divnogorie 14.42 30 eP Pn **17 58 47.1 -1.1**
VORD pmax pmax
comp=Z,10.0nm,0.6s
WTTA Wattenberg 14.44 310 eP P **17 58 54.1 -1.4**
comp=Z,6.2nm,0.6s
WATA Walderalm 14.52 310 eP P **17 58 54.3 -2.1**
comp=Z,5.5nm,0.9s
VSR Storozhevoye 14.57 29 eP Pn **17 58 48.3 -2.0**
VSR pmax pmax
comp=Z,10.0nm,0.6s
SQTA Sankt Quirin 14.68 309 eP P **17 58 56.8 -1.3**
comp=Z,13nm,0.9s
WET Wettzell 14.79 318 eP P **17 59 01.4 +2.1**
comp=Z,25nm,1.0s,baz=126,slow=11
WET eL L 18 04 45.0
comp=Z,442nm,19.5s
MOTA Moosalm 14.80 310 eP P **17 58 58.1 -1.4**
comp=Z,20nm,0.8s
PVCC Panska Ves 14.89 325 eP P **17 59 01.7 +1.4**
PVCC Panska Ves 14.89 325 eP P **17 59 01.7 +1.4**
VORR Voronezh 14.95 28 eP Pn **17 58 51.0 -4.4**
VORR pmax pmax
comp=Z,39nm,0.4s
FUORN Ofenpass-Fuorn 15.00 306 Pn **17 58 58.6 +2.3**
RETA Reutte 15.07 310 eP P **17 59 03.4 +1.0**
comp=Z,5.5nm,0.6s
KEST Kesra 15.10 263 Pn P **17 59 00.8 -2.0**
comp=Z,0.8nm,0.3s,baz=80,slow=17,SNR=27
KEST Kesra 15.10 263 Pn **17 58 56.2 -1.4**
FUR Furstenfeldbru 15.11 313 eL L 18 05 09.0
comp=Z,468nm,20.5s
DAVOX Davos/Dischmat 15.30 306 Pn Pn **17 59 01.5 +1.2**
comp=Z,0.4nm,0.3s,baz=108,slow=12,SNR=4.7
comp=Z,4.0nm,0.8s
MAK Makhachkala 15.34 69 eP Pn **17 58 57.8 -2.8**
MAK eS Sn **18 01 47.5 -2.7**
MAK pmax pmax
comp=Z,181nm,1.0s
MAK MLR MLR
comp=Z,1μm,10.0s
AKT Akhty 15.36 74 eP Pn **17 59 01.0 0.0**
AKT pmax pmax
comp=Z,48nm,1.7s
AKT MLR MLR
comp=Z,969nm,12.0s
SUW Suwalki 15.37 349 Pn **17 58 57.8 -3.1**
SUW Suwalki 15.37 349 P Pn **17 58 57.8 -3.1**
SUW Suwalki 15.37 349 eP P **17 59 03.9 -1.6**
BRG Berggiesshubel 15.42 325 eP P **17 59 08.1 +1.9**
comp=Z,17nm,1.1s,baz=126,slow=11
BRG Berggiesshubel 15.42 325⇓*i*P P **17 59 08.6 +2.4**
BRG Amp 17 59 09.5
comp=Z,12nm,1.0s
HSKC Hora Svate Kat 15.46 323 eP P **17 59 04.4 -2.3**
HSKC AMS AMS 18 07 10.0
comp=Z,2μm,16.6s
ROTZ Rotzenmuhle 15.52 319 eP P **17 59 09.4 +2.1**
comp=Z,4.4nm,0.9s,baz=126,slow=11
MNK Minsk 15.52 360 *i* P P **17 59 07.5 +0.2**
comp=E,65nm,0.9s
MNK *i* P P **17 59 07.5 +0.2**
comp=N,13nm,0.8s
MNK *i* P P **17 59 07.5 +0.2**
comp=Z,69nm,0.8s,baz=180
MNK *i* PP sP **17 59 15.7 +2.5**
MNK *i* PPP PPP 17 59 23.4
MNK *i* S Sn **18 01 58.8 +4.3**
MNK *i* SS S **18 02 12.9 +2.7**
MNK *i* LQ LQ 18 03 18.1
MNK *i* LR LR 18 03 56.8
MNK *i* LRM MLR 18 04 17.9
comp=N,2μm,12.9s
MNK *i* LRM MLR 18 05 54.5
comp=Z,877nm,12.7s
MNK *i* LRM MLR 18 05 57.2
comp=E,623nm,12.1s
MNK Minsk 15.52 360 *i* P P **17 59 07.4 +0.2**
MNK *i* S Sn **18 01 58.8 +4.3**
MNK pmax pmax
comp=N,13nm,0.8s
MNK pmax pmax
comp=Z,69nm,0.8s
MNK pmax pmax
comp=E,65nm,0.9s
MNK MLR MLR
comp=N,2μm,13.0s
MNK MLR MLR
comp=Z,877nm,13.0s
MNK MLR MLR
comp=E,623nm,12.0s
UBR Ueberruh 15.55 310 eP P **17 59 09.9 +2.1**
comp=E,60nm,1.0s,baz=126,slow=11
VRH Novokhopyorsk 15.60 34 eP Pn **17 59 05.0 +1.0**
VRH pmax pmax
comp=Z,21nm,0.7s
LPSR Galich'ya Gora 15.61 26 eP Pn **17 59 02.9 -1.2**
LPSR pmax pmax
comp=Z,42nm,0.8s
MANZ Manzenberg 15.70 320 eP P **17 59 11.4 +2.1**
comp=Z,5.1nm,1.2s,baz=126,slow=11
TANN Tannenbergstha 15.80 321 eP P **17 59 14.8 +4.3**
comp=Z,20nm,1.0s,baz=126,slow=11
NACGM Naroch 15.94 358 eP P **17 59 11.4 -0.5**
comp=E,20nm,0.9s
GRF Grafenberg Arr 15.98 317 eL L 18 05 30.7
comp=E,383nm,21.4s
PLN Plauen 15.99 321 eP P **17 59 15.0 +2.4**
comp=E,8.2nm,1.0s,baz=126,slow=11
CLL Collm 16.14 325 Pn Pn **17 59 07.9 -3.1**
CLL Collm 16.14 325 P Pn **17 59 07.9 -3.1**
CLL pmax pmax
comp=Z,22nm,1.1s
CLL Collm 16.14 325 P Pn **17 59 11.9 +0.9**
comp=Z,20nm,1.9s
CLL Collm 16.14 325 P Pn **17 59 11.1 +0.1**
comp=Z,20nm,1.9s
CLL Collm 16.14 325 *i* P Pn **17 59 12.0 +0.9**
comp=Z,69nm,1.9s
CLL *i* x x 17 59 41.6
CLL AMS AMS 18 07 00.0
CLL Collm 16.14 325 eP Pn **17 59 12.0 +1.0**
comp=Z,20nm,1.1s,baz=126,slow=11
CLL eL L 18 06 57.2
comp=Z,507nm,21.6s
MOX Moxa 16.36 321 eP P **17 59 19.2 +2.5**
comp=Z,55nm,1.3s,baz=126,slow=11
MOX eL L 18 07 00.2
comp=Z,587nm,18.3s
CRHA Rehia 16.41 265 P P **17 59 17.3 -0.1**
PABE Peberze 16.73 352 eP P **17 59 22.3 +1.6**
BNI Bardonecchia 16.86 298 Pn **17 59 17.4 -3.0**
BNI Bardonecchia 16.86 298 P Pn **17 59 17.4 -3.0**
BNI pmax pmax
comp=Z,48nm,1.3s
BFO Black Forest 16.91 310 Pn **17 59 19.4 -1.5**
BFO Black Forest 16.91 310 P Pn **17 59 19.4 -1.5**
BFO pmax pmax
comp=Z,23nm,0.9s
BFO Black Forest 16.91 310 eP P **17 59 26.4 +3.6**
comp=Z,21nm,0.9s,baz=126,slow=11
BFO eL L 18 06 27.0
comp=Z,686nm,18.7s
CBBAR Babar 16.95 263 P P **17 59 25.7 +2.2**
CSGS Sigus 17.03 267 P P **17 59 27.5 +3.3**
OBN Obninsk 17.16 17 P Pn **17 59 21.6 -2.2**
comp=Z,2.5nm,0.3s,baz=46,slow=5.8,SNR=6.7
OBN S Sn 18 02 17.5 -17
comp=Z,9.8nm,0.4s,baz=110,slow=23,SNR=1.4
comp=Z,8.0nm,0.4s
OBN Obninsk 17.16 17 Sn 18 02 17.5 -17
OBN Obninsk 17.16 17 P Pn **17 59 21.6 -2.2**
OBN Obninsk 17.16 17 lAmb lAmb 17 59 30.6
comp=Z,65nm,0.3s
OBN Obninsk 17.16 17ceP Pn **17 59 22.0 -1.8**
OBN eS Sn **18 02 33.9 -0.3**
OBN pmax pmax
comp=Z,68nm,1.7s
OBN MLR MLR
comp=Z,567nm,17.0s
OBN Obninsk 17.16 17 P P **17 59 25.6 +0.2**
CASM Ain Smara 17.17 268 P P **17 59 28.1 +2.4**
CTEI Djebel Teioual 17.29 267 P P **17 59 30.5 +3.4**
COAT Oued Athmania 17.33 268 P P **17 59 31.4 +3.8**
CTGD Timgad 17.34 265 P P **17 59 28.7 +1.0**
FLTG Flechtingen 17.64 325 eP Pn **17 59 30.0 +0.1**
comp=Z,41nm,1.5s,baz=126,slow=11
CJSR Ain Djasser 17.70 267 P P **17 59 37.1 +5.5**
GTTG Gottingen 17.74 321 eP P **17 59 32.9 +1.1**
comp=Z,32nm,1.2s,baz=126,slow=11
TNS Taunus Mts 17.77 316 eL L 18 05 52.9
comp=Z,309nm,20.6s
MOS Moscow 17.98 18 eP Pn **17 59 31.2 -2.7**
MOS eS Sn 18 02 43.1 -11
MOS pmax pmax
comp=Z,52nm,0.7s
CKTS El Kantara 18.09 265 P P **17 59 38.9 +3.0**
CAZD Ain Tagrout 18.23 268 P P **17 59 42.2 +4.7**
CTCHA Tamokra 18.55 269 P Pn **17 59 43.4 +2.2**
WLF Walferdange 18.79 312 dP Pn **17 59 45.5 +1.5**
ATKB Taksebt 18.91 270 P Pn **17 59 49.0 +3.6**
BELG Belogornoye 19.14 39 P Pn **17 59 48.3 +0.1**
comp=Z,1.0nm,0.3s,baz=75,slow=2.1,SNR=7.7
comp=Z,16nm,0.8s
BELG Belogornoye 19.14 39⇑eP Pn **17 59 49.0 +0.8**
BELG pmax pmax
comp=Z,11nm,1.0s
BSEG Bad Segeberg 19.15 327 eL L 18 08 02.0
comp=Z,233nm,19.4s
ABSD Ouled Sidi Bra 19.18 267 P Pn **17 59 49.3 +0.4**
AFRS Ain Fares 19.22 264 P Pn **17 59 49.0 -0.3**
BTNL Ternell 19.23 314 dP Pn **17 59 50.7 +1.4**
BTNL dPP PnPn **18 00 01.8 -0.3**
AKET Djebel Ketaf 19.25 269 P Pn **17 59 52.3 +2.5**
VSU Vasula 19.50 358⇑eP P **17 59 51.5 +0.3**
VSU pmax pmax
comp=Z,121nm,2.5s
VSU Vasula 19.50 358 eP P **17 59 50.4 -0.7**
RCHB Rochefort 19.55 312 dP Pn **17 59 55.1 +2.1**
comp=Z,12nm,0.9s
BCLA Clavier 19.62 313 dP Pn **17 59 56.0 +2.1**
comp=Z,14nm,1.1s
BGES Gesves 19.73 313 dP Pn **17 59 56.3 +1.1**
comp=Z,14nm,0.9s

BMRD Maredsous 19.88 312 *d*P **Pn 17 59 57.9 +0.9**
comp=Z,15nm,1.0s
DOU Dourbes 19.89 312 *d*P **P 17 59 55.2 -0.2**
comp=Z,16nm,0.9s
MTSE Matsula 19.92 354 *e*P **P 17 59 55.6 0.0**
ADCK Dar Chioukh 19.93 266 P **Pn 17 59 58.6 +0.7**
ABRIN Birine 19.96 268 P **Pn 17 59 58.0 -0.2**
UCC Uccle 20.33 313 *d*P Pn 18 00 02.8 +0.5
AFDJ Sidi Ladjel 20.46 268 P Pn 18 00 05.2 +1.2
CLF Chambon-Foret 20.59 304 P Pn 18 00 04.7 -0.7
CLF IAmb IAmb 18 00 07.7
comp=Z,53nm,1.1s
EARB Arib 20.65 271 P Pn 18 00 07.6 +1.4
EBGR Bougara 20.91 269 P Pn 18 00 09.4 +0.1
MEF Metsahovi 21.36 355 *e*P **P 18 00 11.7 +0.4**
EADEB Ain Deheb 21.42 267 P **P 18 00 14.4 +2.1**
EANR 'Ain N'Sour 21.45 270 P **P 18 00 14.1 +1.5**
RAYN Ar Rayn 21.49 131 P **P 18 00 13.8 +0.8**
RAYN Ar Rayn 21.49 131 *i* P **P 18 00 15.5 +2.5**
SNR=21
RAYN Ar Rayn 21.49 131 P **P 18 00 13.9 +0.8**
RAYN pmax pmax
comp=Z,30nm,1.2s
AAL Aland 21.79 349 *e*P **P 18 00 15.5 -0.3**
ESMB Sidi M'hamed B 21.96 270 P **P 18 00 19.5 +1.5**
RAF Rauma 22.39 352 *e*P **P 18 00 21.1 -1.1**
OFRG Douar Fergoug 22.40 270 P **P 18 00 24.3 +1.6**
FINES FINESS Array B 22.51 358 P **P 18 00 23.1 -0.5**
comp=Z,21nm,1.0s,baz=154,slow=9.3,SNR=19
FINES S **S 18 04 25.9 -3.9**
comp=Z,4.9nm,0.9s,baz=174,slow=28,SNR=2.6
comp=Z,21nm,1.0s
FINES FINESS Array B 22.51 358 S 18 04 25.9 -3.9
FINES FINESS Array B 22.51 358 P **P 18 00 22.8 -0.8**
FINES FINESS Array B 22.51 358 *i* P **P 18 00 23.7 +0.1**
FINES pmax pmax
comp=Z,15nm,0.8s
FIA1 FINESS Array S 22.51 358 P **P 18 00 22.9 -0.7**
FIA1 IAmb IAmb 18 00 28.4
comp=Z,42nm,0.8s
ODJA Bouhanifia 22.60 269 P **P 18 00 27.3 +2.4**
HFS Hagfors 22.98 342 P **P 18 00 29.6 +1.0**
comp=Z,11nm,0.9s,baz=155,slow=11,SNR=13
HFS LR LR 18 10 39.2
comp=Z,511nm,21.1s,baz=148,slow=40
comp=Z,11nm,0.9s
KLMR Klimovskoe 23.06 15 *e*P **P 18 00 29.3 -0.1**
KLMR pmax pmax
comp=Z,66nm,1.4s
KLMR MLR MLR
comp=Z,893nm,13.0s
KEF Keuruu 23.28 356 *e*P **P 18 00 31.7 +0.1**
SUF Sumiainen 23.78 358 *e*P **P 18 00 36.8 +0.3**
OBBL Beni Bahdel 23.85 269 P **P 18 00 39.9 +2.3**
KIRV Kirov 24.00 28 LR LR 18 10 35.2
comp=Z,637nm,21.4s,baz=206,slow=38
KIRV Kirov 24.00 28‖ *e*P **P 18 00 39.6 +0.9**
JOF Joensuu 24.05 4 *e*P **P 18 00 39.0 -0.1**
AKTO Aktyubinsk 24.11 52 LR LR 18 12 53.5
comp=Z,580nm,21.3s,baz=246,slow=44
VAF Ylistaro 24.29 354 *e*P **P 18 00 41.1 -0.1**
NB2 NORSAR Subarra 24.39 340 P **P 18 00 41.9 -0.4**
comp=Z,3.0nm,0.7s,baz=143,slow=10
NOA NORSAR Array B 24.39 340 P **P 18 00 42.2 -0.1**
comp=Z,4.4nm,0.9s,baz=144,slow=9.3,SNR=12
NOA LR LR 18 11 21.3
comp=Z,340nm,21.3s,baz=150,slow=39
comp=Z,4.4nm,0.9s
ESDC Sonseca Array 24.58 282 P **P 18 00 45.5 +1.2**
comp=Z,6.9nm,0.9s,baz=68,slow=10,SNR=34
ESDC LR LR 18 11 18.1
comp=Z,342nm,18.2s,baz=93,slow=39
comp=Z,6.9nm,0.9s
ESDC Sonseca Array 24.58 282 P 18 00 44.6 +0.3
PAB San Pablo 24.90 282 P **P 18 00 49.2 +2.1**
PAB IAmb IAmb 18 00 52.2
comp=Z,20nm,0.9s
PAB San Pablo 24.90 282 P **P 18 00 49.2 +2.1**
PAB pmax pmax
comp=Z,20nm,1.0s
TAM Tamanrasset 24.98 236 P **P 18 00 49.2 +1.1**
TAM Tamanrasset 24.98 236 P **P 18 00 49.2 +1.1**
TAM pmax pmax
comp=Z,115nm,0.2s
AB31 Akbulak array 25.02 55 P **P 18 00 48.2 +0.1**
ABKAR Akbulak array 25.02 55 P **P 18 00 47.7 -0.4**
EKA Eskdalemuir Ar 26.39 318 P **P 18 01 01.1 +0.7**
comp=Z,10.0nm,0.8s,baz=116,slow=9.9,SNR=12
EKA LR LR 18 13 44.6
comp=Z,461nm,18.1s,baz=92,slow=42
comp=Z,10.0nm,0.8s
PBRG Braganca 26.42 287 *e*P **P 18 01 03.5 +2.7**
PBRG *i* IAmb IAmb 18 01 08.7
comp=Z,39nm,2.0s
ARTI Arti 26.59 39 LR LR 18 12 11.0
comp=Z,254nm,20.6s,baz=212,slow=38
ARTI Arti 26.59 39 P **P 18 01 01.8 -0.4**
ARTI IAmb IAmb 18 01 22.0
comp=Z,22nm,0.8s
ARTI Arti 26.59 39*d i*P **P 18 01 02.2 0.0**
ARTI 18 01 39.0
ARTI S **S 18 05 37.9 +1.6**
ARTI pmax pmax
comp=Z,14nm,0.9s
MVO Moncorvo 26.70 286 *e*P **P 18 01 05.3 +1.9**
MVO *i* IAmb IAmb 18 01 07.7
comp=Z,32nm,1.1s
MVO *e*LR LR 18 14 01.4
MVO *i* IAMs_20 IAMs_20 18 14 40.9
comp=Z,281nm,18.0s
SHME Shamm 26.97 110 *i* P **P 18 01 05.5 -0.4**
SNR=9.6
MZR Muzera 26.99 119 P **P 18 01 10.2 +4.1**
MD01 Midelt array s 27.04 267 P **P 18 01 07.5 +0.8**
MD31 MD31 27.04 267 P **P 18 01 07.6 +1.0**
BANOM Banah 27.16 110 *i* P **P 18 01 08.8 +1.1**
SNR=12
MTE Manteigas 27.19 284 P **P 18 01 08.4 +0.6**
MTE IAmb IAmb 18 01 11.8
comp=Z,31nm,1.1s
MTE Manteigas 27.19 284 *e*P **P 18 01 09.4 +1.5**
MTE *e*LR LR 18 12 47.7
MTE *i* IAMs_20 IAMs_20 18 14 12.5
comp=Z,270nm,18.0s
MTE Manteigas 27.19 284 *e*P **P 18 01 07.5 -0.4**
PBAR Barrancos 27.22 279 *e*P **P 18 01 09.3 +1.3**
PBAR *i* IAmb IAmb 18 01 13.1
comp=Z,24nm,1.4s
PCBR Castelo Branco 27.23 283 *e*P **P 18 01 09.3 +1.2**
PCBR *i* IAmb IAmb 18 01 30.2
comp=Z,28nm,1.6s
ASUD Al Ashush, Dub 27.24 114 P **P 18 01 10.4 +2.1**
PMRV Marv??o 27.24 282 *e*P **P 18 01 09.5 +1.3**
PMRV *i* IAmb IAmb 18 01 16.1
comp=Z,30nm,1.5s
PMRV *e*LR LR 18 12 45.8
PMRV *i* IAMs_20 IAMs_20 18 13 21.9
comp=Z,267nm,16.0s
POLO Lamas de Olo 27.25 287 *e*P **P 18 01 09.6 +1.2**
NAZ Nazwa, Dubai 27.25 113 *i* P **P 18 01 09.5 +1.1**
SNR=6.6
MSFE Esma-Masafi 27.39 111 *i* P **P 18 01 10.7 +1.0**
SNR=6.5
PVIS Viseu 27.41 285 *e*P **P 18 01 11.9 +2.1**
PESTR Estremoz 27.50 281 IAmb IAmb 18 01 13.8
comp=Z,22nm,1.1s
PESTR Estremoz 27.50 281 *e*P **P 18 01 12.6 +2.1**
PESTR *i* IAmb IAmb 18 01 19.8
comp=Z,30nm,1.2s
MDH Madha 27.53 111 *i* P **P 18 01 11.0 +0.1**
SNR=5.9
PGAV Gavieira, Arco 27.54 288 *e*P **P 18 01 12.6 +1.6**
PGAV *e*LR LR 18 13 10.0
PGAV *i* IAMs_20 IAMs_20 18 14 43.5
comp=Z,386nm,18.0s
UOSS Minazif 27.67 112 P **P 18 01 12.6 +0.4**
UOSS IAmb IAmb 18 01 14.5
comp=Z,30nm,1.1s
UOSS Minazif 27.67 112 *i* P **P 18 01 12.9 +0.6**
SNR=7.4
HATD Hatta, Dubai 27.69 112 *i* P **P 18 01 13.1 +0.6**
SNR=9.7
ASHO Ashiyiah 27.72 113 *i* P **P 18 01 13.6 +0.8**
SNR=16
PARRA Arraiolos 27.85 281 *e*P **P 18 01 15.0 +1.3**
PARRA *i* IAmb IAmb 18 01 18.1
comp=Z,18nm,2.2s
EVO Evora 27.89 281 *e*P **P 18 01 16.5 +2.4**
EVO *i* IAmb IAmb 18 01 20.9
comp=Z,20nm,1.7s
PBEJ Beja 27.89 279 *e*P **P 18 01 15.5 +1.5**
PBEJ *i* IAmb IAmb 18 01 17.8
comp=Z,28nm,1.3s
PVAQ Vaqueiros 27.92 278 P **P 18 01 15.4 +1.1**
PVAQ IAmb IAmb 18 01 20.7
comp=Z,36nm,1.1s
PVAQ Vaqueiros 27.92 278 *e*P **P 18 01 17.4 +3.1**
PVAQ *i* IAmb IAmb 18 01 19.6
comp=Z,44nm,1.3s
PMTG Montargil 27.94 282 *e*P **P 18 01 16.6 +2.1**
PMTG *i* IAmb IAmb 18 01 20.7
comp=Z,33nm,1.4s
PCAS Casmilo, Conde 27.97 284 *e*P **P 18 01 18.0 +3.2**
PCAS *i* IAmb IAmb 18 01 19.4
comp=Z,39nm,1.8s
PCVE Castro Verde 28.11 279 *e*P **P 18 01 17.5 +1.5**
PCVE *i* IAmb IAmb 18 01 20.6
comp=Z,27nm,1.1s
PBDV Barranco-do-Ve 28.13 278 *e*P **P 18 01 18.2 +1.9**
PBDV *i* IAmb IAmb 18 01 22.6
comp=Z,53nm,1.3s
MESJ Messejana 28.20 279 *e*P **P 18 01 16.8 -0.1**
MESJ IAmb IAmb 18 01 24.0
comp=Z,61nm,1.7s
MESJ Messejana 28.20 279 IAmb IAmb 18 01 24.4
comp=Z,31nm,1.3s
MESJ Messejana 28.20 279 *e*P **P 18 01 18.5 +1.7**
MESJ *i* IAmb IAmb 18 01 26.1
comp=Z,31nm,1.9s
SOHO SOHO 28.40 113 *i* P **P 18 01 19.4 +0.6**
SNR=9.8
APA Apatity 28.80 4‖ *e*P **P 18 01 22.4 +0.6**
APA *e* 18 02 12.9
APA pmax pmax
comp=Z,11nm,1.3s
APA MLR MLR
comp=Z,2μm,15.4s
ARCES ARCESS Array B 30.63 358 P **P 18 01 38.3 +0.2**
comp=Z,16nm,0.9s,baz=186,slow=4.9,SNR=10
ARCES LR LR 18 13 10.4
comp=Z,300nm,20.8s,baz=170,slow=35
comp=Z,16nm,0.9s
ARCES ARCESS Array B 30.63 358 P **P 18 01 39.6 +1.5**
ARCES IAmb IAmb 18 01 41.6
comp=Z,29nm,1.1s
ARCES ARCESS Array B 30.63 358 P **P 18 01 39.6 +1.5**
ARCES pmax pmax
comp=Z,29nm,1.1s
SHAA Shahritus 31.44 80 IAmb IAmb 18 01 48.5
comp=Z,55nm,1.6s
CHGR Chuyangaron 31.96 77*d i*P **P 18 01 51.4 +1.2**
CHGR pmax pmax
comp=Z,53nm,0.9s
BORK Borovoye 32.13 50*de*P **P 18 01 52.3 +0.8**
BORK pmax pmax
comp=Z,6.0nm,1.9s
KK31 Karatay Array 32.15 69 P **P 18 01 52.7 +0.9**
KK31 IAmb IAmb 18 01 54.0
comp=Z,13nm,1.1s
KK31 Karatay Array 32.15 69 P **P 18 01 52.7 +0.9**
KK31 pmax pmax
comp=Z,13nm,1.1s
KKAR Karatay Array 32.15 69 P **P 18 01 52.3 +0.5**
KKAR Karatay Array 32.15 69 P **P 18 01 52.3 +0.5**
BVAR Borovoye Array 32.17 50 LR LR 18 17 26.5
comp=Z,384nm,19.3s,baz=257,slow=41
BTK Batken 32.90 74 IAmb IAmb 18 02 00.7
comp=Z,19nm,1.2s
DRK Karamyk 33.77 75 IAmb IAmb 18 02 09.3
comp=Z,26nm,1.3s
MANEM Manem 34.17 78 IAmb IAmb 18 02 19.4
comp=Z,27nm,1.1s
EKS2 Erkin-Say 34.59 69 P **P 18 02 14.9 +1.7**
SNR=11
TORD Torodi Ar. Bea 34.63 229 P **P 18 02 14.4 +0.9**
comp=Z,3.6nm,0.9s,baz=37,slow=6.0,SNR=13
TORD PcP **PcP 18 04 47.4 -0.4**
comp=Z,1.6nm,0.9s,baz=25,slow=3.3,SNR=2.8
TORD LR LR 18 19 43.0
comp=Z,345nm,18.5s,baz=44,slow=42
comp=Z,3.6nm,0.9s
TORD Torodi Ar. Bea 34.63 229 PcP 18 04 47.4 -0.4
TORD Torodi Ar. Bea 34.63 229 P **P 18 02 14.4 +0.9**
AAK Ala-Archa 35.12 69 LR LR 18 19 51.7
comp=Z,397nm,20.2s,baz=274,slow=42
AAK Ala-Archa 35.12 69 P **P 18 02 19.3 +1.6**
SNR=16
AAK Ala-Archa 35.12 69 P **P 18 02 18.6 +0.9**
AAK IAmb IAmb 18 02 20.7
comp=Z,14nm,1.1s
AAK Ala-Archa 35.12 69 *i* P **P 18 02 18.8 +1.1**
SNR=18
AAK Ala-Archa 35.12 69*d i*P **P 18 02 19.5 +1.8**
AAK pmax pmax
comp=Z,13nm,1.0s
CHMS Chumysh 35.24 68 P **P 18 02 20.5 +1.8**
SNR=9.3
KBK Karagaybulak 35.44 69 P **P 18 02 22.7 +2.1**
SNR=6.3
TKM2 Tokmak 2 35.87 68 P **P 18 02 25.2 +1.0**
SNR=6.3
LODK Lodwar 36.05 167 P **P 18 02 27.4 +1.5**
BOOM Boomskoye usch 36.19 69 IAmb IAmb 18 02 40.3
comp=Z,14nm,1.0s
NIL Nilore 36.65 84 P 18 02 31.0 +0.2
NIL IAmb IAmb 18 02 33.6
comp=Z,54nm,1.6s
NIL Nilore 36.65 84 P **P 18 02 31.0 +0.2**
NIL pmax pmax
comp=Z,54nm,1.6s
KSH2 Kashi 36.68 74 P **P 18 02 32.8 +1.6**
KSH2 sP sP 18 02 40.9 +3.4
KSH2 PcP **PcP 18 04 54.8 +1.0**
KSH2 pmax pmax
comp=Z,11nm,1.1s
KSH2 LR LR
comp=Z,390nm,15.1s
KSH2 LR LR
comp=Z,250nm,16.5s
KSH2 LR LR
comp=Z,310nm,15.5s
KURBB Kurchatov Arra 37.08 55 P **P 18 02 34.6 +0.4**
comp=Z,3.2nm,0.7s,baz=278,slow=8.7,SNR=27
KURBB PcP **PcP 18 04 54.6 +0.1**
comp=Z,3.1nm,0.8s,baz=273,slow=3.8,SNR=6.8
KURBB LR LR 18 22 07.1
comp=Z,447nm,18.5s,baz=2.0,slow=43
comp=Z,3.2nm,0.7s
JMIC Jan Mayen 37.10 341 LR LR 18 17 37.4
comp=Z,382nm,19.7s,baz=108,slow=36
KURK Kurchatov 37.13 55 PcP 18 04 54.6 0.0
KURK Kurchatov 37.13 55 P **P 18 02 34.7 +0.1**
KURK Kurchatov 37.13 55‖ *e*P **P 18 02 35.1 +0.5**
KURK pmax pmax
comp=Z,9.0nm,1.7s
PRZ Przheval'sk 37.98 68 IAmb IAmb 18 02 45.5
comp=Z,17nm,1.0s
WUS Wushi 38.87 70 IAmb IAmb 18 02 52.3
comp=Z,22nm,1.1s
MBAR Mbarara 39.49 176 P **P 18 02 56.1 +1.1**
MBAR Mbarara 39.49 176*de*P **P 18 02 57.2 +2.2**
MBAR pmax pmax
comp=Z,11nm,1.1s
SPITS Spitsbergen Ar 39.59 356 P **P 18 02 56.5 +1.4**
comp=Z,12nm,1.0s,baz=188,slow=9.7,SNR=5.3
SPITS LR LR 18 21 01.4
comp=Z,231nm,18.4s,baz=173,slow=39
comp=Z,12nm,1.0s
MAKZ Makanchi 39.70 61 P **P 18 02 57.4 +1.0**
MAKZ Makanchi 39.70 61 P **P 18 02 57.4 +1.0**
MAKZ pmax pmax
comp=Z,8.0nm,1.3s
MK31 Makanchi Array 39.92 61*d i*P **P 18 02 58.8 +0.6**
MKAR Makanchi Array 39.92 61 P **P 18 02 58.5 +0.4**
comp=Z,7.3nm,0.8s,baz=278,slow=6.9,SNR=68
MKAR PcP **PcP 18 05 03.4 -0.1**
comp=Z,2.8nm,0.9s,baz=277,slow=3.7,SNR=3.7
MKAR LR LR 18 21 45.5
comp=Z,400nm,20.2s,baz=267,slow=40
comp=Z,7.3nm,0.8s
MKAR Makanchi Array 39.92 61 PcP 18 05 03.4 -0.1
MKAR Makanchi Array 39.92 61 P 18 02 58.4 +0.2
SCO Scoresbysund 40.62 337 P **P 18 03 04.6 +1.0**
SCO IAmb IAmb 18 03 10.6
comp=Z,17nm,1.0s
SCO Scoresbysund 40.62 337 P **P 18 03 04.6 +1.0**
SCO pmax pmax
comp=Z,17nm,1.0s
SCO Scoresbysund 40.62 337 *i* P **P 18 03 04.5 +1.0**
SCO IAmb IAmb 18 03 08.9
comp=Z,15nm,0.9s
ZAA0 Zalesovo Array 40.82 49 P **P 18 03 05.8 +0.3**
ZALV Zalesovo Beam 40.82 49 P **P 18 03 05.5 +0.1**
comp=Z,3.9nm,0.9s,baz=263,slow=8.8,SNR=17
ZALV LR LR 18 22 49.3
comp=Z,278nm,19.4s,baz=267,slow=40
comp=Z,3.9nm,0.9s
ZALV Zalesovo Beam 40.82 49 P **P 18 03 05.4 0.0**
DBG Daneborg 41.88 342 *i* P **P 18 03 15.9 +2.0**
DBG IAmb IAmb 18 03 18.5
comp=Z,15nm,1.2s
DGZ Jazzator, Alta 42.86 55‖ *e*P **P 18 03 23.3 +0.9**
DGZ pmax pmax
comp=Z,8.0nm,1.2s
NRIK Noril'sk 43.49 26 P **P 18 03 28.2 +1.1**
comp=Z,7.8nm,0.8s,baz=244,slow=5.2,SNR=16
NRIK LR LR 18 23 43.2
comp=Z,575nm,19.7s,baz=258,slow=39
comp=Z,7.8nm,0.8s
NRIK Noril'sk 43.49 26 P **P 18 03 28.1 +1.1**
NRIK Noril'sk 43.49 26*d i*P **P 18 03 28.5 +1.4**
NRIK pmax pmax
comp=Z,9.0nm,0.9s
DBIC Dimbokro 43.66 231 P **P 18 03 31.2 +2.1**
comp=Z,12nm,0.9s,baz=54,slow=8.8,SNR=12
DBIC LR LR 18 22 50.5
comp=Z,262nm,19.8s,baz=64,slow=38
comp=Z,12nm,0.9s
DBIC Dimbokro 43.66 231 P **P 18 03 29.6 +0.5**
DBIC IAmb IAmb 18 03 32.3
comp=Z,12nm,0.9s
DBIC Dimbokro 43.66 231 P **P 18 03 29.6 +0.5**
DBIC pmax pmax
comp=Z,12nm,0.9s
WMQ Urumqi 44.27 64 *e*P **P 18 03 34.7 +0.9**
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ LR LR
comp=Z,500nm,19.1s
WMQ LR LR
comp=Z,720nm,19.1s
WMQ LR LR
comp=Z,460nm,19.1s
NOR Nord 45.46 352 *i* P **P 18 03 43.0 +0.3**
NOR IAmb IAmb 18 03 46.0
comp=Z,13nm,1.0s
SUMG Summit 46.23 338 *i* P **P 18 03 50.0 +0.6**
SUMG IAmb IAmb 18 03 53.4
comp=Z,7.3nm,0.9s
NEEM North Greenlan 49.90 344 *i* P **P 18 04 17.6 0.0**
NEEM IAmb IAmb 18 04 21.4
comp=Z,16nm,1.2s
SFJD Kangerlussuaq 50.42 330 LR LR 18 29 31.8
comp=Z,396nm,18.1s,baz=97,slow=41
SAQQ Saqqaq 50.53 334 *i* P **P 18 04 21.3 -0.7**
SAQQ IAmb IAmb 18 04 23.0
comp=Z,12nm,0.8s
MOY Mondy 50.85 50 *e*P **P 18 04 26.5 +1.6**
UPNV Upernavik 51.51 338 *i* P **P 18 04 29.1 -0.3**
UPNV IAmb IAmb 18 04 33.2
comp=Z,9.1nm,0.8s
GOMU GeErMu 52.01 71 P **P 18 04 35.5 +1.4**
GOMU pmax pmax
comp=Z,5.0nm,1.0s
LSA Lhasa 52.12 80 P **P 18 04 31.8 -3.3**
LSA pmax pmax
comp=Z,8.0nm,1.0s
LSA Lhasa 52.12 80 *i* P **P 18 04 36.1 +1.0**
SNR=9.9
ZAK Zakamensk 52.61 51 *e*P **P 18 04 37.2 -0.8**
ZAK pmax pmax
comp=Z,11nm,1.7s
LSZ Lusaka 53.98 180 P **P 18 04 50.3 +2.0**
LSZ Lusaka 53.98 180 P **P 18 04 50.3 +2.0**
LSZ pmax pmax
comp=Z,9.0nm,1.3s
TULEG Thule 54.00 343 P **P 18 04 47.9 +0.3**
TULEG IAmb IAmb 18 04 50.0
comp=Z,16nm,1.2s
TULEG Thule 54.00 343 *i* P **P 18 04 47.4 -0.2**
TULEG IAmb IAmb 18 04 50.2
comp=Z,15nm,1.2s
GTA2 Gaotai 54.23 65 *e*P **P 18 04 50.9 +0.8**
GTA2 pmax pmax
comp=Z,15nm,1.0s
GTA2 LR LR
comp=Z,250nm,16.0s
GTA2 LR LR
comp=Z,290nm,17.1s
GTA2 LR LR
comp=Z,290nm,16.7s
SONM Songino Array 55.41 53 P **P 18 04 59.3 +0.7**
comp=Z,3.6nm,0.9s,baz=285,slow=8.9,SNR=23
SONM LR LR 18 31 59.6
comp=Z,334nm,18.8s,baz=296,slow=40
comp=Z,3.6nm,0.9s
SONM Songino Array 55.41 53 P **P 18 04 59.5 +0.9**
SONM Songino Array 55.41 53 P **P 18 04 59.5 +0.9**
SONM pmax pmax
comp=Z,7.0nm,1.1s
ULN Ulaanbaatar 55.81 53 P **P 18 05 01.7 +0.3**
ULN Ulaanbaatar 55.81 53*de*P **P 18 05 02.3 +0.9**
ULN pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 55.81 53 P **P 18 05 02.0 +0.6**
comp=Z,28nm,0.9s
BRDH Bariadhala 56.05 87 LR LR 18 32 40.3
comp=Z,144nm,19.4s,baz=340,slow=40
TIXI Tiksi 56.81 22 LR LR 18 33 07.1
comp=Z,327nm,18.7s,baz=321,slow=40
TIXI Tiksi 56.81 22 P 18 05 07.8 -0.2
TIXI Tiksi 56.81 22‖ *e*P **P 18 05 08.6 +0.6**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
MORE Moreh 57.28 84 P 18 05 12.1 0.0
MORE IAmb IAmb 18 06 09.0
comp=Z,4.8nm,0.9s
POIN Pond Inlet 57.71 340 P 18 05 14.9 +0.6
POIN IAmb IAmb 18 05 17.6
comp=Z,9.7nm,1.1s
FRB Frobisher Bay 58.51 329 LR LR 18 32 40.0
comp=Z,246nm,20.8s,baz=61,slow=38
LZDM Lanzhou Array 58.58 67 P **P 18 05 21.9 +0.5**
comp=Z,5.5nm,0.9s,baz=282,slow=7.1,SNR=16
LZDM LR LR 18 34 14.7
comp=Z,179nm,18.9s,baz=330,slow=40
comp=Z,5.5nm,0.9s
LZH Lanzhou 58.62 67 *e*P **P 18 05 22.4 +0.9**
LZH sP sP 18 05 30.4 +2.4
LZH PcP **PcP 18 06 07.0 -4.6**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH LR LR
comp=Z,390nm,14.8s
LZH LR LR
comp=Z,270nm,14.1s
LZH LR LR
comp=Z,370nm,14.4s
TSUM Tsumeb 58.68 191 P 18 05 21.9 +0.1
TNCH TengChong 60.12 81 *e*P **P 18 05 32.6 +0.6**
TNCH pmax pmax
comp=Z,9.0nm,3.2s
ILON Igloolik, Nuna 60.48 337 P 18 05 32.8 -0.7
ILON IAmb IAmb 18 05 34.9
comp=Z,7.9nm,1.1s
RES Resolute Bay 60.53 345 LR LR 18 30 58.6
comp=Z,259nm,18.7s,baz=24,slow=35
KUQ Kuujjuuaa 60.95 323 P 18 05 37.1 +0.3
CD2 Chengdu 61.06 72 P **P 18 05 38.9 +0.7**
CD2 pmax pmax
comp=Z,20nm,0.8s
YAK Yakutsk 61.48 32 LR LR 18 36 04.4
comp=Z,186nm,18.5s,baz=298,slow=40
YAK Yakutsk 61.48 32 P 18 05 40.7 +0.3
YAK Yakutsk 61.48 32‖ *e*P **P 18 05 39.0 -1.4**
YAK pmax pmax
comp=Z,12nm,0.7s

SCHQ Schefferville 61.71 319 P **P** **18 05 42.0 -0.2**
comp=Z,6.7nm,0.8s,baz=80,slow=4.9,SNR=8.4
comp=Z,6.7nm,0.8s
HHC Hu-ho-hao-te 61.74 59⇓*i*P **P** **18 05 43.8 +1.0**
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,140nm,5.9s
HHC LR LR
comp=Z,210nm,17.1s
HHC LR LR
comp=Z,320nm,17.1s
HHC LR LR
comp=Z,330nm,19.9s
PZH PanZhiHua 61.81 78 P **P** **18 05 45.5 +2.1**
LPHEP Lephephe 62.05 182 **P** **18 05 46.2 +1.4**
WIN Windhoek 62.06 191 P **P** **18 05 46.1 +1.1**
WIN IAmb IAmb 18 05 49.3
comp=Z,12nm,1.0s
WIN Windhoek 62.06 191 P **P** **18 05 46.1 +1.1**
WIN pmax pmax
comp=Z,12nm,1.0s
KOOLE Kule 62.08 188 P **P** **18 05 46.5 +1.4**
KOOLE IAmb IAmb 18 05 47.5
comp=Z,12nm,1.1s
HILR Hailar Array B 62.67 47 LR LR 18 38 36.8
comp=Z,190nm,18.6s,baz=265,slow=41
XAN Xi'an 63.26 67⇓P **P** **18 05 53.2 +0.3**
XAN pmax pmax
comp=Z,14nm,1.2s
KMI2 Kunming 63.30 78 P **P** **18 05 53.3 -0.2**
KMI2 pmax pmax
comp=Z,7.0nm,1.1s
KMI2 LR LR
comp=Z,160nm,27.2s
KMI2 LR LR
comp=Z,170nm,27.1s
KMI2 LR LR
comp=Z,170nm,26.5s
CHTO Chiang Mai 63.86 86 **P** **18 05 57.1 +0.1**
CHTO IAmb IAmb 18 05 58.0
comp=Z,6.1nm,1.1s
CHTO Chiang Mai 63.86 86 P **P** **18 05 57.1 +0.1**
CHTO pmax pmax
comp=Z,6.0nm,1.1s
CHTO Chiang Mai 63.86 86 P **P** **18 05 56.1 -0.9**
comp=Z,4.1nm,1.0s
CM31 Chiang Mai Arr 64.06 87 P **P** **18 05 58.1 -0.3**
CM31 IAmb IAmb 18 06 46.1
comp=Z,16nm,1.6s
CMAR Chiang Mai Arr 64.06 87 P **P** **18 05 57.9 -0.5**
comp=Z,2.6nm,0.9s,baz=297,slow=8.1,SNR=23
CMAR LR LR 18 38 55.0
comp=Z,100nm,20.8s,baz=315,slow=41
comp=Z,2.6nm,0.9s
CMAR Chiang Mai Arr 64.06 87 **P** **18 05 58.3 -0.1**
BATG Bathurst New B 65.02 311 P **P** **18 06 04.4 +0.2**
BJT Baijiatuau 65.21 58 P **P** **18 06 06.0 +0.5**
BJT IAmb IAmb 18 06 07.1
comp=Z,6.4nm,0.9s
BJT Baijiatuau 65.21 58 P **P** **18 06 06.0 +0.5**
BJT pmax pmax
comp=Z,6.0nm,0.9s
BJI2 Beijing 65.21 58 P **P** **18 06 05.1 -0.4**
BJI2 PP **PP** **18 08 30.4 +1.7**
BJI2 S **S** **18 14 47.3 -1.0**
BJI2 pmax pmax
comp=Z,4.0nm,0.9s
BJI2 pmax pmax
comp=Z,75nm,5.8s
BJI2 LR LR
comp=Z,150nm,19.0s
BJI2 LR LR
comp=Z,190nm,17.5s
BJI2 LR LR
comp=Z,210nm,18.2s
LYN LuoYang 65.51 65 *e*P **P** **18 06 07.6 0.0**
HNS HongShan 65.58 61⇓P **P** **18 06 08.7 +0.7**
HNS pmax pmax
comp=Z,8.0nm,0.9s
HNS LR LR
comp=Z,200nm,19.4s
HNS LR LR
comp=Z,340nm,18.2s
HNS LR LR
comp=Z,410nm,19.2s
ENH Enshi 65.62 70 P **P** **18 06 08.3 -0.1**
ENH IAmb IAmb 18 06 09.5
comp=Z,12nm,1.0s
HEH HeiHe 66.57 44 *e*P **P** **18 06 14.5 +0.4**
HEH pmax pmax
comp=Z,12nm,0.8s
D62A Allapoint, All 66.85 312 P **P** **18 06 15.8 -0.1**
BOSA Boshof 67.30 183 P **P** **18 06 18.9 -0.1**
comp=Z,5.0nm,1.0s,baz=31,slow=7.6,SNR=4.8
BOSA LR LR 18 39 21.4
comp=Z,115nm,18.4s,baz=3.0,slow=39
comp=Z,5.0nm,1.0s
TIA Tai'an 67.85 61 P **P** **18 06 23.1 +0.6**
TIA pmax pmax
comp=Z,11nm,1.0s
BLKN Baker Lake 68.00 337 P **P** **18 06 22.8 -0.1**
BILL Bilibino 68.81 16⇑*e*P **P** **18 06 29.8 +1.8**
BILL pmax pmax
comp=Z,3.0nm,1.1s
BNX BinXian 69.08 48 ⇑P **P** **18 06 30.2 +0.2**
BNX pmax pmax
comp=Z,9.0nm,1.7s
SEY Seymchan 69.19 24 LR LR 18 42 06.6
comp=Z,274nm,18.9s,baz=326,slow=40
SEY Seymchan 69.19 24⇑*e*P **P** **18 06 32.0 +1.6**
SEY pmax pmax
comp=Z,7.0nm,1.3s
KLR Kul'dur 69.46 43 LR LR 18 40 17.7
comp=Z,50nm,18.7s,baz=311,slow=39
KLR Kul'dur 69.46 43⇓*e*P **P** **18 06 32.7 +0.4**
KLR pmax pmax
comp=Z,3.0nm,2.5s
MA2 Magadan 71.09 27 LR LR 18 41 34.4
comp=Z,336nm,18.1s,baz=302,slow=39
MA2 Magadan 71.09 27 **P** **18 06 41.9 -0.2**
MA2 IAmb IAmb 18 06 44.3
comp=Z,8.5nm,0.9s
MA2 Magadan 71.09 27⇑*e*P **P** **18 06 43.2 +1.1**
MA2 pmax pmax
comp=Z,13nm,1.3s
NJ2 Nanjing 71.35 64 *e*P **P** **18 06 43.6 -0.5**
NJ2 pmax pmax
comp=Z,6.0nm,1.6s
C27K Jago River 71.52 357 IAmb IAmb 18 07 44.6
comp=Z,18nm,1.7s
D27M Malcolm River 71.77 356 IAmb IAmb 18 06 50.5
comp=Z,7.7nm,1.2s
D25K Kavik River 71.92 358 IAmb IAmb 18 07 36.8
comp=Z,8.4nm,1.3s
INK Inuvik 72.12 353 LR LR 18 40 59.5
comp=Z,77nm,18.9s,baz=16,slow=38
INK Inuvik 72.12 353 IAmb IAmb 18 06 50.9
comp=Z,12nm,1.4s
KCSI Kotacane, Aceh 72.20 100 P **P** **18 06 47.4 -2.1**
comp=Z,11nm,0.9s
E28M Babbage River 72.31 355 IAmb IAmb 18 08 25.6
comp=Z,4.8nm,0.8s
E29M Blow River 72.41 355 IAmb IAmb 18 06 54.9
comp=Z,11nm,1.0s
C18K Utukok River 72.47 3 IAmb IAmb 18 06 54.4
comp=Z,12nm,1.2s
D19K Kuna River 72.74 2 IAmb IAmb 18 07 50.5
comp=Z,8.8nm,1.2s
E27K Coleen River 72.85 356 IAmb IAmb 18 07 23.8
comp=Z,12nm,1.4s
F26K Sheenjek River 73.47 357 IAmb IAmb 18 07 39.8
comp=Z,26nm,2.0s
PSI Prapat 73.54 100 P **P** **18 06 57.0 -0.6**
comp=Z,17nm,0.9s
RCBR Riachuelo 73.78 248 LR LR 18 39 06.9
comp=Z,82nm,20.8s,baz=66,slow=36
G29M Pine Creek 73.88 354 IAmb IAmb 18 07 39.3
comp=Z,24nm,1.4s
SADO Sadowa 73.91 315 LR LR 18 39 23.7
comp=Z,177nm,18.1s,baz=124,slow=36
G26K Porcupine Rive 74.19 357 IAmb IAmb 18 07 05.8
comp=Z,9.7nm,1.2s
KSAR Wonju Array Be 74.24 55 **P** **18 07 00.6 -0.6**
KSAR Wonju Array Be 74.24 55 P **P** **18 07 00.6 -0.6**
F20K Avaraart Lake 74.25 1 IAmb IAmb 18 07 39.8
comp=Z,22nm,1.9s

KSRS Korea Array 74.25 55 P **P** **18 07 01.1 -0.2**
comp=Z,4.8nm,0.9s,baz=308,slow=5.0,SNR=8.2
KSRS LR LR 18 43 25.4
comp=Z,444nm,18.6s,baz=310,slow=39
comp=Z,4.8nm,0.9s
YKAW3 Yellowknife Wh 74.40 343 IAmb IAmb 18 07 05.1
comp=Z,9.6nm,1.2s
F19K Shaleruckik Mo 74.42 2 IAmb IAmb 18 07 39.7
comp=Z,25nm,1.9s
YKA Yellowknife Ar 74.46 343 P **P** **18 07 01.8 -0.3**
comp=Z,2.4nm,1.1s,baz=21,slow=6.4,SNR=19
YKA LR LR 18 40 48.4
comp=Z,204nm,18.3s,baz=66,slow=37
comp=Z,2.4nm,1.1s
YKA Yellowknife Ar 74.46 343 P **P** **18 07 01.8 -0.3**
H27K Steamboat Moun 74.79 356 IAmb IAmb 18 07 19.7
comp=Z,13nm,1.5s
I30M Mount Dempster 75.39 353 IAmb IAmb 18 07 36.4
comp=Z,29nm,1.9s
G16K Koyuk River 75.64 4 IAmb IAmb 18 08 25.6
comp=Z,24nm,1.9s
H21K Melozitna Rive 75.69 0 IAmb IAmb 18 07 43.5
comp=Z,13nm,1.4s
J30M Hart River 76.03 353 IAmb IAmb 18 07 17.9
comp=Z,10nm,1.1s
I21K Tanana 76.17 360 IAmb IAmb 18 07 15.7
comp=Z,9.1nm,1.0s
ANM Nome 76.25 6 IAmb IAmb 18 07 13.2
comp=Z,18nm,1.7s
ILAR Eielson Array 76.49 358 P **P** **18 07 14.2 +0.5**
comp=Z,1.2nm,1.0s,baz=342,slow=4.7,SNR=9.5
comp=Z,1.2nm,1.0s
ILAR Eielson Array 76.49 358 P **P** **18 07 14.2 +0.5**
YSS Yuzhno-Sakhali 76.58 40 **P** **18 07 14.7 +0.2**
YSS Yuzhno-Sakhali 76.58 40 *e*P **P** **18 07 15.2 +0.7**
YSS *e*S **S** **18 16 59.3 -0.8**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS MLR MLR
comp=Z,400nm,15.0s
J26L Joseph Creek 76.63 356 IAmb IAmb 18 07 17.6
comp=Z,16nm,1.6s
PDSI Padang 77.09 102 P **P** **18 07 17.4 -0.5**
comp=Z,14nm,1.0s
J19K Poorman 77.32 2 IAmb IAmb 18 07 22.7
comp=Z,6.0nm,0.9s
K24K Donnelly Dome 77.42 357 IAmb IAmb 18 07 21.2
comp=Z,17nm,1.1s
Q56A Snyder Ridge, 77.59 310 IAmb IAmb 18 07 22.9
comp=Z,12nm,0.9s
DHY Denali Highway 78.21 358 IAmb IAmb 18 08 08.3
comp=Z,18nm,1.4s
M29M Somme Creek 78.31 354 IAmb IAmb 18 07 26.9
comp=Z,7.5nm,0.8s
ULM Lac du Bonnet 78.32 327 P **P** **18 07 22.2 -2.0**
comp=Z,3.7nm,1.0s,baz=26,slow=10,SNR=5.1
ULM LR LR 18 43 59.1
comp=Z,130nm,19.5s,baz=11,slow=37
ULM Lac du Bonnet 78.32 327⇑*e*P **P** **18 07 24.0 -0.2**
ASAJ Asahikawa 78.46 42 LR LR 18 46 08.5
comp=Z,354nm,18.4s,baz=324,slow=39
PETK Petropavlovsk- 78.52 28 LR LR 18 45 31.7
comp=Z,234nm,19.0s,baz=318,slow=38
JNU Nakatsue 78.83 56 LR LR 18 47 20.6
comp=Z,311nm,19.4s,baz=327,slow=40
MDP Montagnes des 79.45 268 LR LR 18 41 36.4
comp=Z,76nm,20.5s,baz=74,slow=35
M17K Holitna River 79.87 3 IAmb IAmb 18 07 34.6
comp=Z,11nm,0.9s
SUA Susitna One 79.89 359 P **P** **18 07 32.8 +0.1**
JOW Kunigami 81.04 63 LR LR 18 49 14.3
comp=Z,64nm,18.0s,baz=284,slow=40
MJAR Matsushiro Arr 81.17 50 P **P** **18 07 40.2 +0.3**
comp=Z,5.0nm,1.0s,baz=299,slow=5.3,SNR=7.1
MJAR LR LR 18 47 25.1
comp=Z,118nm,18.0s,baz=328,slow=38
comp=Z,5.0nm,1.0s
MJAR Matsushiro Arr 81.17 50 P **P** **18 07 40.2 +0.3**
MJAR Matsushiro Arr 81.17 50 IAmb IAmb 18 07 41.5
comp=Z,6.7nm,1.1s
MJAR Matsushiro Arr 81.17 50 P **P** **18 07 40.2 +0.3**
MJAR pmax pmax
comp=Z,7.0nm,1.1s
DLBC Dease Lake 81.19 348 LR LR 18 43 52.6
comp=Z,156nm,18.5s,baz=357,slow=36
MDSI Maura Dua 82.22 102 P **P** **18 07 44.3 -1.4**
MDSI pP **pP** **18 07 48.7 -1.9**
TKL Tuckaleechee C 82.56 310 LR LR 18 44 01.4
comp=Z,181nm,19.6s,baz=52,slow=35
CPCT Cooper Cave 83.15 311 IAmb IAmb 18 08 31.5
comp=Z,15nm,1.2s
KDAK Kodiak Island 83.59 0 LR LR 18 49 33.6
comp=Z,115nm,18.1s,baz=8.8,slow=39
SHEM Shemya Is, Ala 84.06 20 LR LR 18 48 59.2
comp=Z,187nm,18.2s,baz=287,slow=38
CCM Cathedral Cave 85.11 316 P **P** **18 08 00.1 -0.2**
CCM IAmb IAmb 18 08 01.3
comp=Z,7.4nm,0.8s
CCM Cathedral Cave 85.11 316 P **P** **18 08 00.1 -0.2**
CCM pmax pmax
comp=Z,7.0nm,0.8s
MGMO Mountain Grove 86.33 316 IAmb IAmb 18 08 09.8
comp=Z,15nm,1.2s
LEM Lembang 86.33 102 LR LR 18 49 53.8
comp=Z,36nm,19.7s,baz=329,slow=38
LCAR Lake Charles 86.51 315 IAmb IAmb 18 08 11.2
comp=Z,12nm,1.1s
BBJI Bungbulang 86.76 102 **P** **18 08 07.4 -1.4**
BBJI IAmb IAmb 18 08 10.1
comp=Z,6.9nm,0.9s
FCAR Ozark Folk Cen 87.18 315 IAmb IAmb 18 08 13.3
comp=Z,12nm,1.4s
NEW Newport 87.73 337 LR LR 18 47 54.0
comp=Z,204nm,19.2s,baz=14,slow=36
YNE Yellowstone No 88.19 332 IAmb IAmb 18 08 47.6
comp=Z,6.6nm,1.1s
BDFB Brasilia 89.14 249 P **P** **18 08 21.8 +1.7**
comp=Z,7.8nm,0.9s,baz=69,slow=3.8,SNR=8.6
BDFB LR LR 18 47 56.3
comp=Z,214nm,20.5s,baz=29,slow=35
comp=Z,7.8nm,0.9s
BDFB Brasilia 89.14 249 P **P** **18 08 20.1 0.0**
BDFB Brasilia 89.14 249 P **P** **18 08 20.1 0.0**
BDFB pmax pmax
comp=Z,49nm,2.0s
PDAR Pinedale Array 89.93 330 P **P** **18 08 22.9 -0.8**
comp=Z,0.5nm,0.8s,baz=16,slow=4.6,SNR=4.3
PDAR LR LR 18 51 24.0
comp=Z,118nm,19.9s,baz=20,slow=37
comp=Z,0.5nm,0.8s
PDAR Pinedale Array 89.93 330 P **P** **18 08 22.9 -0.8**
JCJ Chichijima 90.11 54 LR LR 18 52 18.4
comp=Z,213nm,19.0s,baz=327,slow=38
SDV Santo Domingo 91.03 282 LR LR 18 45 37.4
comp=Z,46nm,19.0s,baz=64,slow=33
DAV Davao City (W) 91.54 80 LR LR 18 55 08.2
comp=Z,97nm,19.5s,baz=322,slow=39
HWUT Hardware Ranch 91.69 331 IAmb IAmb 18 08 33.7
comp=Z,3.8nm,0.7s
ANMO Albuquerque 95.17 324 LR LR 18 52 33.2
comp=Z,122nm,19.1s,baz=35,slow=36
YBH Yreka Blue Hor 95.31 338 LR LR 18 52 35.7
comp=Z,9.8nm,19.2s,baz=13,slow=36
NVAR Mina Array Bea 96.93 334 LR LR 18 55 45.2
comp=Z,176nm,18.5s,baz=23,slow=37
TXAR Lajitas Array 98.39 319 P **P** **18 09 02.0 -0.6**
comp=Z,1.4nm,1.1s,baz=40,slow=6.3,SNR=5.4
TXAR LR LR 18 53 46.5
comp=Z,148nm,18.7s,baz=26,slow=36
comp=Z,1.4nm,1.1s
TXAR Lajitas Array 98.39 319 P **P** **18 09 02.0 -0.6**
TXAR Lajitas Array 98.39 319 P **P** **18 09 02.0 -0.6**
NVL N'lazarevskaya 110.06 186 *i* PKIKP **PKiKP** **18 13 55.6 +1.1**
NVL *e* 18 14 28.7
NVL *e*PPP PPP 18 16 47.6
NVL *e* 18 21 07.7
NVL *e*SS SS 18 29 55.8 +2.1
NVL *e*SSS SSS 18 34 02.3
NVL pmax pmax
comp=Z,5.0nm,0.6s
NVL MLR MLR
comp=Z,234nm,19.0s
ASAR Alice Springs 116.57 100 PKP **PKPdf** **18 14 07.6 -0.9**
comp=Z,1.5nm,0.9s,baz=334,slow=1.7,SNR=12
ASAR Alice Springs 116.57 100 **PKPdf** **18 14 07.6 -0.9**
STKA Stephens Creek 126.58 104 PKP **PKPdf** **18 14 26.8 -0.7**
comp=Z,3.3nm,0.9s,baz=0.0,slow=6.1,SNR=4.5

DZM Mont Dzumac 140.90 77 *e*LR LR 19 00 41.7
comp=Z,105nm,27.8s
TAOE Nuku Hiva Isla 148.13 337 *e*LR LR 19 04 03.3
comp=Z,362nm,25.0s
PPT2 Papeete2 158.56 353 *e*LR LR 19 08 46.0
comp=Z,107nm,24.8s
TBI Tubuai 164.25 351 *e*LR LR 19 11 31.0
comp=Z,574nm,27.8s

NEIC ***04*** *18:01:25.8±1.0, 17°.79N±0°.04×66°.869W±0°.005, h10km±2km, ML2.8/35, Md2.9/8(RSPR), Error ellipse: s-maj=5.9km s-min=3.0km az=356.0*
RSPR 04 18:01:26.6, 17°.83N×66°.87W, h8km, MD2.9/8, 5C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GBPR	**Guanica, Bosqu**	**0.15**	**357**			Pg	18 01 30.0	+0.3
GBPR						Sg	18 01 32.7	+0.9
GBPR	**Guanica, Bosqu**	**0.15**	**357**⇓	*e*P		Pg	18 01 30.0	+0.3
GBPR				*e*S		Sg	18 01 32.7	+0.9
MLPR	**Magueyes Islan**	**0.22**	**311**			Pg	18 01 31.2	+0.3
MLPR					Sg	Sg	18 01 34.4	+0.5
MLPR					IAML		18 01 34.9	
	2μm,0.5s							
MLPR					IAML		18 01 34.9	
	2μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.29**	**308**			Pg	18 01 32.3	0.0
CRPR						Sg	18 01 36.7	+0.6
CRPR	**Cabo Rojo, PR**	**0.29**	**308**	IAML			18 01 37.1	
	1μm,0.3s							
CRPR					IAML		18 01 37.1	
	3μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.29**	**308**⇑	*e*P		Pg	18 01 32.5	+0.2
CRPR				*e*S		Sg	18 01 36.9	+0.7
OBIP	**Obispado Ponce**	**0.33**	**50**			Pg	18 01 32.8	-0.3
OBIP						Sg	18 01 37.9	+0.3
OBIP					IAML		18 01 38.4	
	comp=N,360nm,0.5s							
OBIP	**Obispado Ponce**	**0.33**	**50**⇑	*e*P		Pg	18 01 33.1	0.0
OBIP				*e*S		Sg	18 01 38.2	+0.7
CELP	**Cerrillos**	**0.37**	**48**			Pg	18 01 33.6	-0.3
CELP					Sg	Sg	18 01 39.2	+0.4
CELP					IAML		18 01 39.8	
	comp=N,678nm,0.4s							
CELP					IAML		18 01 39.9	
	comp=N,922nm,0.5s							
LSP	**Las Mesas**	**0.40**	**330**			Pg	18 01 34.4	-0.1
LSP						Sg	18 01 40.6	+0.8
LSP	**Las Mesas**	**0.40**	**330**⇑	*e*P		Pg	18 01 34.4	-0.1
LSP				*e*S		Sg	18 01 40.6	+0.8
UUPR	**Utuado, UPR, P**	**0.45**	**19**			Pg	18 01 34.6	-0.7
UUPR					Sg	Sg	18 01 40.5	-0.7
UUPR					IAML		18 01 43.6	
	comp=N,3μm,0.3s							
UUPR					IAML		18 01 43.8	
	comp=N,4μm,0.3s							
PRSN	**Puerto Rico Se**	**0.47**	**326**			Pg	18 01 35.1	-0.6
PRSN						Sg	18 01 41.1	-0.7
PRSN					IAML		18 01 42.8	
	comp=N,2μm,0.2s							
PRSN					IAML		18 01 46.4	
	comp=N,2μm,0.3s							
AGPR	**Aguadilla, PR**	**0.68**	**340**			Pg	18 01 38.8	-0.9
AGPR					Sg	Sg	18 01 47.4	-1.1
AGPR					IAML		18 01 48.5	
	comp=N,210nm,0.5s							
AGPR					IAML		18 01 50.9	
	comp=N,226nm,0.2s							
AGPR	**Aguadilla, PR**	**0.68**	**340**⇓	*e*P		Pg	18 01 38.9	-0.7
AGPR				*e*S		Sg	18 01 48.7	+0.2
ECPR	**Experimental S**	**0.69**	**45**			Pg	18 01 39.0	-0.8
ECPR					Sg	Sg	18 01 47.7	-1.2
ECPR					IAML		18 01 48.6	
	comp=N,975nm,0.2s							
ECPR					IAML		18 01 50.0	
	comp=N,1μm,0.2s							
ECPR	**Experimental S**	**0.69**	**45**⇓	*e*P		Pg	18 01 39.1	-0.8
ECPR				*e*S		Sg	18 01 48.5	-0.4
EMPR	**Esperanza - Ma**	**0.72**	**27**			Pg	18 01 40.0	-0.5
EMPR						Sg	18 01 50.2	+0.2
EMPR	**Esperanza - Ma**	**0.72**	**27**⇓	*e*P		Pg	18 01 40.0	-0.5
EMPR				*e*S		Sg	18 01 50.2	+0.2
SJG	**San Juan**	**0.74**	**67**			Pg	18 01 39.8	-1.1
SJG					IAML		18 01 53.5	
	comp=N,129nm,0.2s							
SJG					IAML		18 01 54.0	
	comp=N,146nm,0.2s							
SJG	**San Juan**	**0.74**	**67**⇓	*e*P		Pg	18 01 40.7	-0.2
SJG				*e*S		Sg	18 01 50.6	0.0
IDE	**Isla Desecheo**	**0.80**	**314**			Pg	18 01 41.2	-0.8
IDE	**Isla Desecheo**	**0.80**	**314**⇑	*e*P		Pg	18 01 41.2	-0.8
PDPR	**Patillas Dam,**	**0.83**	**77**			Pg	18 01 41.8	-0.8
PDPR					IAML		18 01 56.5	
	comp=N,97nm,0.4s							
PDPR					IAML		18 01 58.6	
	comp=N,70nm,0.2s							
GCPR	**Guaynabo City**	**0.89**	**57**			Sg	18 01 54.2	-1.0
GCPR	**Guaynabo City**	**0.89**	**57**			Pg	18 01 42.4	-1.3
GCPR					IAML		18 01 54.7	
	comp=E,73nm,0.5s							
GCPR					IAML		18 01 55.2	
	comp=N,78nm,0.3s							
GCPR	**Guaynabo City**	**0.89**	**57**⇑	*e*P		Pg	18 01 42.7	-1.0
GCPR				*e*S		Sg	18 01 54.2	-1.0
HUMP	**Col San Antoni**	**1.02**	**72**			Pg	18 01 44.9	-1.4
HUMP						Sg	18 01 58.1	-1.4
HUMP	**Col San Antoni**	**1.02**	**72**	Pg		Pg	18 01 44.4	-1.8
HUMP					IAML		18 02 01.9	
	comp=N,116nm,0.2s							
HUMP					IAML		18 02 02.4	
	comp=N,147nm,0.2s							
HUMP	**Col San Antoni**	**1.02**	**72**⇓	*e*P		Pg	18 01 44.9	-1.4
HUMP				*e*S		Sg	18 01 58.1	-1.4
CUPR	**Culebra, Puert**	**1.58**	**72**	Pn		Pn	18 01 52.5	-2.5
DR12	**Loma Pena Alta**	**2.57**	**292**	Pn		Pn	18 02 05.8	-2.8

RSPR ***04*** *18:06:28.5, 17°.85N×66°.87W, h10km, MD3.3/7*
NEIC ***04*** *18:06:28.1±1.0, 17°.83N±0°.03×66°.84W±0°.01, h10km±1km, ML3.5/35, Md3.3/7(RSPR), Error ellipse: s-maj=5.8km s-min=2.9km az=6.0*
OSPL ***04*** *18:06:28.5±0.5, 17°.82N×66°.87W, h16km±6km, ML3.1, Presumed earthquake*
SDD ***04*** *18:06:28.5±1.2, 17°.82N×66°.90W, h23km±9km, MD3.5, ML3.2, MW3.7, Presumed earthquake*
ISC 04 18:06:26.8±1.1, 17.79N±0°.05×66.87W±0°.02, h18km±4km, n46, σ0s68/78, 4C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GBPR	**Guanica, Bosqu**	**0.18**	**356**			**Pg**	**18 06 31.6**	**+0.2**
GBPR						**Sg**	**18 06 34.2**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.18**	**356**⇓	*i*P		**Pg**	**18 06 31.6**	**+0.2**
GBPR				*e*S		**Sg**	**18 06 34.2**	**-0.4**
MLPR	**Magueyes Islan**	**0.24**	**316**			**Pg**	**18 06 33.0**	**+0.6**
MLPR					Sg	**Sg**	**18 06 36.5**	**+0.2**
MLPR					IAML		18 06 37.2	
	12μm,0.6s							
MLPR					IAML		18 06 37.5	
	8μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.32**	**313**			**Pb**	**18 06 34.2**	**+0.3**
CRPR						**Sb**	**18 06 38.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.32**	**313**	IAML			18 06 39.7	
	8μm,0.3s							
CRPR					IAML		18 06 40.1	
	4μm,0.4s							
CRPR	**Cabo Rojo, PR**	**0.32**	**313**⇑	*e*Pg		**Pb**	**18 06 34.2**	**+0.3**
CRPR					IAML		18 06 34.4	
	comp=E,8μm,0.2s							
CRPR			⇑	*e*Sg		**Sb**	**18 06 38.6**	**-0.1**
CRPR					IAML		18 06 39.0	
	comp=N,6μm,0.7s							
CRPR	**Cabo Rojo, PR**	**0.32**	**313**⇑	*i*P		**Pb**	**18 06 34.2**	**+0.3**
CRPR				*e*S		**Sb**	**18 06 38.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.32**	**313**	*i* P		**Pb**	**18 06 34.2**	**+0.3**
CRPR				*e*S		**Sb**	**18 06 38.6**	**-0.1**
CRPR					IAML		18 06 39.3	
	comp=Z,4μm,0.2s							
OBIP	**Obispado Ponce**	**0.35**	**45**			**Pb**	**18 06 34.5**	**0.0**
OBIP					Sg	**Sg**	**18 06 39.3**	**+0.1**
OBIP	**Obispado Ponce**	**0.35**	**45**	*i* P		**Pb**	**18 06 34.6**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OBIP				eS	Sb	18 06 39.6	-0.2
OBIP				IAML		18 06 39.9	
	comp=Z,1μm,0.6s						
CELP	Cerrillos	0.39	44		Pb	18 06 35.3	0.0
CELP				Sg	Sb	18 06 40.9	-0.1
CELP				IAML		18 06 41.5	
	comp=Z,2μm,0.2s						
LSP	Las Mesas	0.43	331		Pb	18 06 36.1	+0.1
LSP					Sb	18 06 42.2	-0.1
LSP	Las Mesas	0.43	331	⇓iP	Pb	18 06 36.1	+0.1
LSP				eS	Sb	18 06 42.2	-0.1
UUPR	Utuado, UPR, P	0.48	17		Pg	18 06 36.4	-0.1
UUPR				Sg	Sg	18 06 42.0	-1.0
PRSN	Puerto Rico Se	0.50	328	Pg	Pg	18 06 37.0	+0.1
PRSN				Sg	Sg	18 06 43.5	-0.1
PRSN				IAML		18 06 49.2	
	comp=Z,8μm,0.3s						
PRSN	Puerto Rico Se	0.50	328	⇑ePg	Pb	18 06 37.1	+0.1
PRSN				⇓eSg	Sb	18 06 44.0	-0.1
PRSN				IAML		18 06 46.1	
	comp=E,5μm,0.2s						
PRSN				IAML		18 06 49.1	
	comp=N,5μm,0.3s						
PRSN	Puerto Rico Se	0.50	328	⇑iP	Pb	18 06 37.1	+0.1
PRSN				eS	Sg	18 06 43.8	+0.2
ECPR	Experimental S	0.71	42		Pb	18 06 40.6	-0.1
ECPR				Sg	Sb	18 06 49.7	-0.3
ECPR	Experimental S	0.71	42	⇓iP	Pb	18 06 40.6	-0.1
ECPR				eS	Sb	18 06 50.0	-0.1
AGPR	Aguadilla, PR	0.71	341		Pb	18 06 40.6	-0.1
AGPR				Sg	Sb	18 06 49.3	-0.8
AGPR				IAML		18 06 50.4	
	comp=N,2μm,0.5s						
AGPR				IAML		18 06 53.6	
	comp=N,2μm,0.5s						
AGPR	Aguadilla, PR	0.71	341	⇑ePg	Pb	18 06 40.6	-0.1
AGPR				⇓eSg	Sb	18 06 49.8	-0.3
AGPR				IAML		18 06 50.5	
	comp=E,2μm,0.5s						
AGPR				IAML		18 06 53.5	
	comp=N,2μm,0.4s						
AGPR	Aguadilla, PR	0.71	341	⇑iP	Pb	18 06 40.6	-0.1
AGPR				eS	Sb	18 06 49.6	-0.5
AGPR	Aguadilla, PR	0.71	341	iP	Pb	18 06 40.6	-0.1
AGPR				eS	Sb	18 06 49.6	-0.5
AGPR				IAML		18 06 52.4	
	comp=Z,1μm,0.3s						
EMPR	Esperanza - Ma	0.75	25		Pg	18 06 41.6	+0.1
EMPR					Sb	18 06 51.3	0.0
EMPR	Esperanza - Ma	0.75	25	⇓iP	Pg	18 06 41.6	+0.1
EMPR				eS	Sb	18 06 51.3	0.0
SJG	San Juan	0.75	65		Pg	18 06 41.6	+0.1
SJG	San Juan	0.75	65	Sg	Sg	18 06 51.9	+0.4
SJG				IAML		18 06 55.1	
	comp=Z,918nm,0.4s						
SJG	San Juan	0.75	65	⇓ePg	Pg	18 06 41.7	+0.1
SJG				eSg	Sn	18 06 52.4	-1.1
SJG	San Juan	0.75	65	⇓eP	Pg	18 06 41.6	+0.1
SJG				eS	Sg	18 06 51.7	+0.2
SJG	San Juan	0.75	65	iP	Pg	18 06 41.7	+0.1
SJG				eS	Sg	18 06 51.9	+0.4
SJG				IAML		18 06 55.6	
	comp=Z,596nm,0.3s						
IDE	Isla Desecheo	0.83	316		Pb	18 06 42.7	0.0
IDE					Sb	18 06 53.5	0.0
IDE	Isla Desecheo	0.83	316	⇑iP	Pb	18 06 42.7	0.0
IDE				eS	Sb	18 06 53.5	0.0
PDPR	Patillas Dam,	0.83	74		Pg	18 06 43.2	+0.1
GCPR	Guaynabo City	0.90	55		Pb	18 06 43.9	0.0
GCPR					Sb	18 06 55.5	-0.2
GCPR	Guaynabo City	0.90	55	⇑iP	Pb	18 06 43.9	0.0
GCPR				eS	Sb	18 06 55.5	-0.2
HUMP	Col San Antoni	1.03	70	Pg	Pn	18 06 46.2	-0.1
HUMP				IAML		18 07 04.0	
	comp=Z,656nm,0.6s						
HUMP				IAML		18 07 07.0	
	comp=Z,557nm,0.2s						
HUMP	Col San Antoni	1.03	70		Sb	18 06 59.4	+0.2
HUMP	Col San Antoni	1.03	70	⇓iP	Pn	18 06 46.2	-0.1
HUMP				eS	Sb	18 06 59.4	+0.2
CUPR	Culebra, Puert	1.59	71		Pb	18 06 56.0	+0.4
MIDR	Miches	2.39	300	ePg	Pb	18 07 08.8	-0.5
MIDR				IAML		18 07 42.6	
	comp=E,47nm,0.4s						
MIDR				IAML		18 07 50.6	
	comp=N,59nm,0.6s						
MIDR				IAML		18 07 50.7	
	comp=N,59nm,0.6s						
DR12	Loma Pena Alta	2.59	293		Pb	18 07 10.7	-2.0
HATOM	Hato Mayor del	2.59	293	ePg	Pb	18 07 11.0	-1.7
HATOM				eSg	Sb	18 07 41.7	-2.5
HATOM				IAML		18 07 54.1	
	comp=E,78nm,0.4s						
HATOM				IAML		18 08 00.1	
	comp=N,63nm,0.8s						
BANI	BANI	3.38	281	Pn	Pn	18 07 21.0	+2.3
SMRT	St. Maarten	3.62	85	Pn	Pn	18 07 23.4	+1.4
SDDR	Presa de Saban	4.36	286		Pn	18 07 35.0	+2.8
SDV	Santo Domingo	9.58	203	Pn	Pn	18 08 43.3	-0.8

*UPP **04** 18:06:58.1±0.1, 67°.06N×20°.92E, h0km, ML1.9, Suspected explosion*
*HEL **04** 18:06:58.8±0.0, 67°.04N×20°.86E, h0km, ML1.7, Explosion*
*IDC **04** 18:06:59.7±0.9, 67°.07N×21°.21E, h0km, mbtmp2.9/4, ML2.0/4, Error ellipse: s-maj=18.0km s-min=8.3km az=113.0*
ISC 04 18:06:58.0±0.7**, 67°.06N**±0°.02×**20°.91E**±0°.02**, h0**km**, n30,** σ**0ˢ82**/46**, Sweden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.15	295	P	Pg	18 07 01.3	+0.5
DUNU				S	Sg	18 07 03.5	+0.8
MASU	Masugnsbyn	0.58	46	P	Pg	18 07 09.2	0.0
MASU				S	Sg	18 07 16.9	+0.3
ERTU	Ertsjaerv	0.72	134	P	Pg	18 07 11.6	-0.1
ERTU				S	Sg	18 07 21.2	+0.2
ERTU	Ertsjaerv	0.72	134	eP	Pg	18 07 11.7	-0.1
ERTU				eS	Sg	18 07 20.6	-0.4
PAJU	Pajala	0.86	91	P	Pg	18 07 14.1	-0.5
HARU	Harads	0.90	178	P	Pg	18 07 14.9	-0.3
HARU				S	Sg	18 07 27.3	+0.5
RATU	Laukkuluspa	0.92	327	P	Pg	18 07 15.2	-0.4
KUA	Kurravaara	0.93	346	P	Pg	18 07 15.1	-0.6
	baz=190						
SALU	Saltoluokta	0.99	290	eP	Pb	18 07 17.4	-0.6
SALU	Saltoluokta	0.99	290	P	Pg	18 07 16.6	-0.3
LANU	Lannavaara	1.08	22	P	Pg	18 07 17.8	-0.8
LANU	Lannavaara	1.08	22	eP	Pg	18 07 18.7	+0.1
LANU				eS	Sg	18 07 32.8	+0.3
NIKU	Nikkaluokta	1.09	319	P	Pg	18 07 18.2	-0.6
KOVU	Salmi	1.20	347	P	Pg	18 07 20.4	-0.7
KLF	Kolari	1.21	80	eP	Pg	18 07 21.0	-0.1
KLF				eS	Sg	18 07 36.5	-0.1
KALU	Kalix	1.56	140	P	Pn	18 07 26.6	-0.3
KALU	Kalix	1.56	140	eP	Pn	18 07 26.5	-0.3
KALU				eS	Sn	18 07 46.7	-1.0
KALU				smax	smax	18 07 47.1	
	comp=Z,2.9nm,0.1s						
SJUU	Sjulsmark	1.58	169	P	Pn	18 07 27.2	0.0
TOF	Tornio	1.68	124	eP	Pn	18 07 28.8	+0.2
TOF				eS	Sn	18 07 50.4	-0.4
TOF				smax	smax	18 07 52.5	
	comp=Z,3.6nm,0.1s						
HEF	Hetta	1.71	36	eP	Pn	18 07 29.0	-0.1
HEF	Hetta	1.71	36	eP	Pb	18 07 29.8	-0.5
HEF				eS	Sb	18 07 52.2	-0.1
HEF				smax	smax	18 07 54.9	
	comp=Z,3.7nm,0.1s						
KIF	Kilpisjarvi	1.96	359	ePB	Pb	18 07 34.1	-0.3
KIF				eS	Sb	18 07 59.8	+0.5
KIF				smax	smax	18 08 03.6	
	comp=Z,5.6nm,0.1s						
RNF	Rovaniemi	2.07	100	ePB	Pb	18 07 35.1	-1.3
RNF				eSG	Sb	18 08 02.9	+0.3
RNF				smax	smax	18 08 05.0	
	comp=Z,6.0nm,0.1s						
I37NO	I37NO	2.20	338	I	I	18 22 30.0	
	baz=153,slow=339,SNR=0.8						
SGF	Sodankyl	2.22	77	eP	Pn	18 07 37.2	+1.3
SGF				eSG	Sb	18 08 07.8	+0.9
SGF				smax	smax	18 08 10.9	
	comp=Z,3.5nm,0.1s						
STEI	Steigen	2.35	294	ePB	Pb	18 07 39.5	-1.6
STEI				eSG	Sb	18 08 10.7	+0.1
ARCES	ARCESS Array B	3.02	32	Pn	Pn	18 07 47.6	+0.7
	comp=Z,0.4nm,0.3s,baz=210,slow=14,SNR=19						
ARCES				Sn	Sn	18 08 25.0	+1.2
	comp=Z,0.5nm,0.3s,baz=218,slow=23,SNR=9.5						
	comp=Z,1.3nm,0.2s						
FINES	FINESS Array B	6.07	156	Pn	Pn	18 08 30.1	+1.2
	comp=Z,0.2nm,0.3s,baz=349,slow=13,SNR=11						
FINES				Sn	Sn	18 09 40.5	+1.6
	comp=Z,0.3nm,0.3s,baz=344,slow=24,SNR=5.4						
	comp=Z,1.8nm,0.8s						
NOA	NORSAR Array B	7.38	220	Pn	Pn	18 08 49.7	+2.8
	baz=19,slow=10,SNR=3.9						
	comp=Z,0.6nm,0.8s						
HFS	Hagfors	7.65	208	Pn	Pn	18 08 50.2	-0.4
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=7.7						
HFS				Sn	Sn	18 10 16.5	-1.4
	comp=Z,0.1nm,0.3s,baz=27,slow=19,SNR=1.4						
	comp=Z,1.2nm,0.8s						

*IDC **04** 18:11:06.5±1.2, 29°.74N×141°.83E, h0km, mb3.5/8, mbtmp3.5/10, ML2.9/2, Error ellipse: s-maj=38.1km s-min=18.3km az=73.0*
ISC 04 18:11:07.2±1.0**, 29°.61N**±0°.09×**141°.9E**±0°.2**, h10**km**, n10,** σ**2ˢ75**/11**, mb3.5**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.52	173	Pn	Pn	18 11 50.8	+2.6
	3.5nm,0.3s,baz=279,slow=21,SNR=1.8						
JCJ				Sn	Sn	18 12 12.7	-6.3
	10nm,0.3s,baz=146,slow=23,SNR=6.6						
	29nm,0.8s						
MJAR	Matsushiro Arr	7.56	337	Pn	Pn	18 12 55.0	-2.6
	0.1nm,0.3s,baz=160,slow=11,SNR=11						
	1.0nm,0.5s						
LZDM	Lanzhou Array	32.55	291	P	P	18 17 38.4	-0.6
	0.2nm,0.3s,baz=81,slow=8.9,SNR=1.6						
	0.2nm,0.3s						
SONM	Songino Array	32.74	314	P	P	18 17 40.0	-0.3
	0.3nm,0.4s,baz=95,slow=10,SNR=2.1						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	40.53	264	P	P	18 18 48.5	+1.7
	0.2nm,0.5s,baz=70,slow=8.4,SNR=2.0						
	0.2nm,0.5s						
MKAR	Makanchi Array	48.68	308	P	P	18 19 51.9	+0.2
	0.7nm,0.5s,baz=87,slow=9.6,SNR=12						
	0.7nm,0.5s						
WRA	Warramunga Arr	49.79	189	P	P	18 20 01.7	+1.4
	0.6nm,0.5s,baz=6.6,slow=7.6,SNR=11						
	0.6nm,0.5s						
ASAR	Alice Springs	53.52	189	P	P	18 20 29.4	+1.3
	0.2nm,0.7s,baz=2.4,slow=7.0,SNR=5.6						
	0.2nm,0.7s						
BVAR	Borovoye Array	56.02	316	P	P	18 20 45.8	-0.2
	0.5nm,0.4s,baz=101,slow=7.9,SNR=4.9						
	0.5nm,0.4s						
YKA	Yellowknife Ar	70.08	29	P	P	18 22 19.9	+0.7
	0.1nm,0.6s,baz=288,slow=5.9,SNR=1.6						
	0.1nm,0.6s						

*IDC **04** 18:15:24.0±1.1, 46°.13N×154°.58E, h0km, mb4.0/11, mbtmp3.9/12, ML2.4/1, Error ellipse: s-maj=31.1km s-min=23.7km az=86.0*
*NEIC **04** 18:15:25.4±1.7, 46°.3N±0°.1×154°.62E±0°.10, h10km±1km, mb4.1/16, Error ellipse: s-maj=21.2km s-min=6.6km az=153.0*
ISC 04 18:15:26.4±0.7**, 46°.2N**±0°.1×**154°.6E**±0°.1**, h19**km**, n38,** σ**1ˢ14**/35**, mb4.0**/16**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PEA0B	Petropavlovsk-	7.16	15	Pn	Pn	18 17 08.8	-1.2
PETK	Petropavlovsk-	7.16	15	Pn	Pn	18 17 09.6	-0.4
	0.3nm,0.3s,baz=170,slow=11,SNR=8.3						
	2.3nm,0.8s						
PETK	Petropavlovsk-	7.16	15		Pn	18 17 09.4	-0.6
MJB9	Matsu-Tunnel	15.65	238	Pn	Pn	18 19 07.0	+1.1
MJB9				IAmb	IAmb	18 19 12.3	
	comp=Z,31nm,1.4s						
MAJO	Matsushiro	15.65	238	Pn	Pn	18 19 06.2	+0.4
JHJ2	Mitsune	17.34	226	Pn	Pn	18 19 26.4	-0.8
MDJ	Mudanjiang	17.64	274	Pn	Pn	18 19 29.2	-1.7
MDJ				IAmb	IAmb	18 19 53.4	
	comp=Z,24nm,1.5s						
H11S1	WAKE ISLAND Hy	29.39	156	T	T	18 52 16.3	
	baz=343,slow=76,SNR=3.3						
H11S3	WAKE ISLAND Hy	29.40	156	T	T	18 52 18.9	
	baz=343,slow=76,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.41	156	T	T	18 52 19.1	
	baz=343,slow=76,SNR=2.9						
SML	Sawmill	35.62	43	P	P	18 22 23.4	+0.8
E24K	Your Creek	35.94	32	P	P	18 22 25.2	-0.1
E24K				IAmb	IAmb	18 22 49.7	
	comp=Z,3.5nm,1.4s						
G24K	Hadweenzic Riv	36.18	35	P	P	18 22 27.9	+0.6
G24K				IAmb	IAmb	18 22 35.2	
	comp=Z,5.3nm,1.4s						
D25K	Kavik River	36.88	30	P	P	18 22 31.8	-1.4
BMAR	Burnt Mountain	37.36	34	P	P	18 22 38.5	+1.2
ZALV	Zalesovo Beam	43.77	307	P	P	18 23 29.5	-0.9
	comp=Z,0.7nm,0.4s,baz=77,slow=6.1,SNR=5.2						
	comp=Z,0.7nm,0.4s						
MK31	Makanchi Array	48.12	298	P	P	18 24 05.3	+0.5
MK31				IAmb	IAmb	18 24 06.1	
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	48.12	298	P	P	18 24 04.9	+0.1
	comp=Z,1.1nm,0.7s,baz=70,slow=8.2,SNR=10						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	48.12	298	P	P	18 24 04.6	-0.2
MAKZ	Makanchi	48.30	299	P	P	18 24 06.4	+0.2
KURK	Kurchatov	48.53	305	P	P	18 24 07.7	-0.1
KURK				IAmb	IAmb	18 24 08.6	
	comp=Z,0.9nm,0.7s						
KURBB	Kurchatov Arra	48.62	305	P	P	18 24 08.3	-0.2
	comp=Z,1.6nm,0.2s,baz=69,slow=8.7,SNR=4.9						
	comp=Z,1.6nm,0.2s						
BVAR	Borovoye Array	52.00	310	P	P	18 24 34.7	+0.6
	comp=Z,0.9nm,0.5s,baz=52,slow=7.9,SNR=6.1						
	comp=Z,0.9nm,0.5s						
JCC	Jacoby Creek,	56.76	64	P	P	18 25 08.6	-0.3
ARCES	ARCESS Array B	58.69	341	P	P	18 25 23.3	+1.3
	comp=Z,6.3nm,1.0s,baz=15,slow=7.3,SNR=2.5						
	comp=Z,6.3nm,1.0s						
AB31	Akbulak array	59.57	311	P	P	18 25 28.2	-0.2
AB31				IAmb	IAmb	18 26 04.3	
	comp=Z,3.3nm,1.4s						
ABKAR	Akbulak array	59.57	311	P	P	18 25 27.8	-0.6
FINES	FINESS Array B	64.95	335	P	P	18 26 06.5	+2.2
	comp=Z,1.7nm,0.7s,baz=28,slow=8.6,SNR=7.9						
	comp=Z,1.7nm,0.7s						
FINES	FINESS Array B	64.95	335	P	P	18 26 04.2	-0.1
RSSD	Black Hills	66.35	50	P	P	18 26 12.8	-1.1
WRA	Warramunga Arr	68.38	201	P	P	18 26 26.6	0.0
	comp=Z,0.5nm,0.9s,baz=7.9,slow=6.7,SNR=2.2						
	comp=Z,0.5nm,0.9s						
WRA	Warramunga Arr	68.38	201	P	P	18 26 25.8	-0.8
NOA	NORSAR Array B	69.06	342	P	P	18 26 33.0	+2.5
	comp=Z,0.9nm,0.8s,baz=25,slow=6.1,SNR=2.6						
	comp=Z,0.9nm,0.8s						
HFS	Hagfors	69.31	340	P	P	18 26 35.1	+3.2
	comp=Z,2.9nm,0.9s,baz=64,slow=3.4,SNR=4.2						
	comp=Z,2.9nm,0.9s						
ASAR	Alice Springs	72.07	200	P	P	18 26 49.7	+0.5
	comp=Z,0.4nm,0.9s,baz=16,slow=7.1,SNR=2.6						
	comp=Z,0.4nm,0.9s						
TXAR	Lajitas Array	76.82	61	P	P	18 27 17.1	0.0
	comp=Z,0.3nm,0.5s,baz=278,slow=3.7,SNR=3.8						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	76.82	61	P	P	18 27 15.9	-1.1
P53A	Whipple	81.04	41		P	18 27 40.9	+1.0

*NEIC **04** 18:15:56.2±0.9, 17°.79N±0°.04×66°.84W±0°.01, h10km±1km, ML2.8/35, Md2.9/8(RSPR), Error ellipse: s-maj=6.4km s-min=2.8km az=13.0*
RSPR 04 18:15:57.0, 17°.83N×66°.86W, h7km**, MD2.9**/8**, 9C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.15	352		Pg	18 16 00.5	+0.4
GBPR					Sg	18 16 03.1	+0.9
GBPR	Guanica, Bosqu	0.15	352	⇑eP	Pg	18 16 00.5	+0.4
GBPR				eS	Sg	18 16 03.1	+0.9
MLPR	Magueyes Islan	0.23	309		Pg	18 16 01.8	+0.3
MLPR				Sg	Sg	18 16 05.2	+0.6
MLPR				IAML		18 16 06.4	
	1μm,0.4s						
MLPR				IAML		18 16 06.0	
	2μm,0.6s						
CRPR	Cabo Rojo, PR	0.30	307		Pg	18 16 02.9	+0.1
CRPR					Sg	18 16 07.1	+0.2
CRPR	Cabo Rojo, PR	0.30	307	IAML		18 16 07.6	
	830nm,0.4s						
CRPR				IAML		18 16 09.3	
	1μm,0.2s						
CRPR	Cabo Rojo, PR	0.30	307	⇑eP	Pg	18 16 03.0	+0.1
CRPR				eS	Sg	18 16 08.0	+1.1
OBIP	Obispado Ponce	0.32	48		Pg	18 16 03.2	-0.1
OBIP					Sg	18 16 08.3	+0.7
OBIP				IAML		18 16 08.7	
	comp=N,146nm,0.4s						
OBIP	Obispado Ponce	0.32	48	⇓eP	Pg	18 16 03.3	0.0
OBIP				eS	Sg	18 16 08.6	+1.0
CELP	Cerrillos	0.36	47		Pg	18 16 04.0	-0.1
CELP				Sg	Sg	18 16 09.3	+0.4
CELP				IAML		18 16 10.5	
	comp=N,462nm,0.2s						
CELP				IAML		18 16 10.7	
	comp=N,609nm,0.2s						
LSP	Las Mesas	0.41	328		Pg	18 16 05.0	0.0
LSP					Sg	18 16 11.3	+1.0
LSP	Las Mesas	0.41	328	⇑eP	Pg	18 16 05.0	0.0
LSP				eS	Sg	18 16 11.3	+1.0
UUPR	Utuado, UPR, P	0.44	17		Pg	18 16 05.1	-0.5
UUPR				Sg	Sg	18 16 11.0	-0.4
UUPR				IAML		18 16 12.1	
	comp=N,8μm,0.3s						
UUPR				IAML		18 16 15.2	
	comp=N,4μm,0.4s						
PRSN	Puerto Rico Se	0.47	325		Sg	18 16 13.0	+0.5
PRSN	Puerto Rico Se	0.47	325	Pg	Pg	18 16 05.7	-0.5
PRSN				IAML		18 16 15.7	
	comp=N,1μm,0.2s						
PRSN				IAML		18 16 20.8	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	0.47	325	⇓eP	Pg	18 16 06.0	-0.2
PRSN				eS	Sg	18 16 13.0	+0.5
ECPR	Experimental S	0.68	44		Pg	18 16 09.2	-0.9
ECPR				Sg	Sg	18 16 18.5	-0.4
ECPR				IAML		18 16 19.3	
	comp=N,999nm,0.3s						
ECPR				IAML		18 16 20.4	
	comp=N,1μm,0.2s						
ECPR	Experimental S	0.68	44	⇑eP	Pg	18 16 09.4	-0.6
ECPR				eS	Sg	18 16 18.8	-0.1
AGPR	Aguadilla, PR	0.68	339		Pg	18 16 09.4	-0.8
AGPR				Sg	Sg	18 16 18.3	-0.7
AGPR				IAML		18 16 19.3	
	comp=N,246nm,0.5s						
AGPR				IAML		18 16 22.4	
	comp=N,278nm,0.5s						
AGPR	Aguadilla, PR	0.68	339	⇓eP	Pg	18 16 09.5	-0.6
AGPR				eS	Sg	18 16 19.9	+0.9
EMPR	Esperanza - Ma	0.72	26		Pg	18 16 10.6	-0.3
EMPR					Sg	18 16 20.7	+0.6
EMPR	Esperanza - Ma	0.72	26	⇑eP	Pg	18 16 10.6	-0.3
EMPR				eS	Sg	18 16 20.7	+0.6
SJG	San Juan	0.73	67		Pg	18 16 10.3	-0.8
SJG				IAML		18 16 23.8	
	comp=N,187nm,0.3s						
SJG				IAML		18 16 27.1	
	comp=N,176nm,0.4s						
SJG	San Juan	0.73	67	⇑eP	Pg	18 16 10.5	-0.6
SJG				eS	Sb	18 16 21.4	-0.8
IDE	Isla Desecheo	0.81	314		Pg	18 16 11.7	-0.9
IDE	Isla Desecheo	0.81	314	⇑eP	Pg	18 16 11.7	-0.9
PDPR	Patillas Dam,	0.82	76		Pg	18 16 12.0	-0.8
PDPR				IAML		18 16 28.2	
	comp=N,160nm,0.3s						
PDPR				IAML		18 16 28.2	
	comp=N,150nm,0.2s						
GCPR	Guaynabo City	0.88	57		Sg	18 16 25.1	-0.3
GCPR	Guaynabo City	0.88	57		Pg	18 16 12.7	-1.2
GCPR				IAML		18 16 28.0	
	comp=E,66nm,0.5s						
GCPR				IAML		18 16 31.7	
	comp=N,72nm,0.6s						
GCPR	Guaynabo City	0.88	57	⇑eP	Pg	18 16 12.9	-0.9
GCPR				eS	Sg	18 16 25.1	-0.3
HUMP	Col San Antoni	1.01	72		Sg	18 16 29.0	-0.5
HUMP	Col San Antoni	1.01	72		Pg	18 16 14.8	-1.5
HUMP				IAML		18 16 32.6	
	comp=N,121nm,0.3s						
HUMP				IAML		18 16 35.9	
	comp=N,131nm,0.2s						
HUMP	Col San Antoni	1.01	72	⇑eP	Pg	18 16 15.1	-1.3
HUMP				eS	Sg	18 16 29.0	-0.5
CUPR	Culebra, Puert	1.57	72	Pn	Pn	18 16 23.8	-1.6
DR12	Loma Pena Alta	2.58	292	Pn	Pn	18 16 37.0	-2.2

*NNC **04** 18:16:47.0±0.3, 42°.82N×76°.65E, h0km, mb2.4, mpv2.9, Error ellipse: s-maj=2.8km s-min=1.5km az=176.0*
*KRNET **04** 18:16:46.5±0.1, 42°.77N×76°.64E, h22km, mb2.4*
*SOME **04** 18:16:46.9, 42°.78N×76°.63E, h15km*
ISC 04 18:16:46.5±1.0**, 42°.79N**±0°.02×**76°.62E**±0°.02**, h8**km±9km**, n44,** σ**1ˢ13**/84**, 13C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IZV	Izvestkoviy	0.24	359	P	Pg	18 16 51.5	+0.1
	30nm,0.1s						
IZV				S	Sg	18 16 54.6	-0.1
	39nm,0.1s						
IZV	Izvestkoviy	0.24	359	eP	Pg	18 16 51.5	+0.1
	30nm,0.1s						
IZV				eS	Sg	18 16 54.6	-0.1
	39nm,0.1s						
TNSS	Tian-Shan	0.34	45	P	Pg	18 16 53.1	-0.4
	12nm,0.1s						
TNSS				S	Sg	18 16 57.2	-0.7
	25nm,0.2s						
TNSS	Tian-Shan	0.34	45	eP	Pg	18 16 53.0	-0.4
	12nm,0.1s						
TNSS				eS	Sg	18 16 57.2	-0.7
	25nm,0.2s						
MTBS	Maitube	0.36	337	P	Pg	18 16 54.3	+0.6
	10nm,0.1s						
MTBS				S	Sg	18 16 59.5	+1.0
	102nm,0.1s						
MTBS	Maitube	0.36	337	eP	Pg	18 16 54.3	+0.6
	10nm,0.1s						
MTBS				eS	Sg	18 16 59.5	+1.0
	102nm,0.1s						
MDOK	Medeo	0.48	40	Pg	Pg	18 16 55.5	-0.4
	18nm,0.1s						
MDOK				Lg	Lg	18 17 01.7	
	38nm,0.3s						
KST	Kastek	0.54	298	P	Pg	18 16 58.0	+1.0
	1.4nm,0.1s						
KST				S	Sb	18 17 05.9	-0.5
	12nm,0.2s						
KST	Kastek	0.54	298	eP	Pg	18 16 58.0	+1.0
	1.4nm,0.1s						
KST				eS	Sb	18 17 05.9	-0.5
	12nm,0.2s						
KOTS	Kotyrbulak	0.57	39	P	Pg	18 16 57.3	-0.2
	11nm,0.2s						
KOTS				S	Sg	18 17 04.6	-0.4
	33nm,0.3s						
KOTS	Kotyrbulak	0.57	39	eP	Pg	18 16 57.3	-0.2
	11nm,0.2s						
KOTS				eS	Sg	18 17 04.6	-0.4
	33nm,0.3s						
ULHL	Ulahol	0.61	207	⇓eP	Pg	18 16 58.1	-0.3
ULHL				⇓eS	Sg	18 17 06.4	-0.1
TKM2	Tokmak 2	0.76	280	⇑eP	Pg	18 17 01.5	+0.3
TKM2				⇑eS	Sg	18 17 12.3	+1.1
DGS	Degeres	0.77	306	P	Pg	18 17 01.8	+0.5
	0.6nm,0.1s						
DGS				S	Sg	18 17 12.1	+0.9
	4.5nm,0.2s						
DGS	Degeres	0.77	306	eP	Pg	18 17 01.8	+0.5
	0.6nm,0.1s						
DGS				eS	Sg	18 17 12.1	+0.9

	4.5nm,0.2s						
KTBS	Karatobe	0.92	3	P	Pb	18 17 04.1	-0.7
	7.2nm,0.1s						
KTBS				S	Sb	18 17 16.1	-1.0
	1.6nm,0.1s						
KTBS	Karatobe	0.92	3	eP	Pb	18 17 04.1	-0.7
	7.2nm,0.1s						
KTBS				eS	Sb	18 17 16.1	-1.0
	1.6nm,0.1s						
KRBS	Karabastau	1.14	323	P	Pb	18 17 08.3	-0.2
	4.3nm,0.1s						
KRBS				S	Sb	18 17 23.4	0.0
	2.1nm,0.2s						
KRBS	Karabastau	1.14	323	eP	Pb	18 17 08.3	-0.2
KRBS				eS	Sb	18 17 23.4	0.0
KRBS	Karabastau	1.14	323	eP	Pb	18 17 08.3	-0.2
	4.3nm,0.1s						
KRBS				eS	Sb	18 17 23.4	0.0
	2.1nm,0.2s						
KBK	Karagaybulak	1.24	264	⇑eP	Pn	18 17 09.7	-0.6
KBK				⇑eS	Sn	18 17 26.5	-0.9
KURS	Kuram	1.33	58	P	Pb	18 17 11.6	-0.2
	0.5nm,0.1s						
KURS				S	Sn	18 17 29.0	-0.5
	6.2nm,0.3s						
SATY	Saty	1.34	78	P	Pn	18 17 10.9	-0.8
	0.7nm,0.1s						
SATY				S	Sb	18 17 27.9	-1.4
	6.8nm,0.2s						
TARG	Taragay, Kyrgy	1.38	140	⇓eP	Pn	18 17 11.3	-1.2
TARG				⇓eS	Sb	18 17 29.3	-1.5
CHMS	Chumysh	1.39	279	⇓eP	Pn	18 17 12.3	0.0
CHMS				⇓eS	Sb	18 17 31.0	+0.4
NRN	Naryn	1.44	199	⇑eP	Pn	18 17 12.7	-0.5
NRN				⇑eS	Sb	18 17 31.6	-0.7
AAK	Ala-Archa	1.57	265	⇑P	Pg	18 17 17.0	+0.3
	1.2nm,0.9s						
AAK				⇑S	Sg	18 17 37.7	+0.6
	0.7nm,0.5s						
AAK	Ala-Archa	1.57	265	⇓eP	Pb	18 17 15.5	-0.5
AAK				⇓eS	Sb	18 17 36.4	+0.3
USP	Ospenovka	1.62	288	⇑eP	Pb	18 17 16.5	-0.3
USP				⇑eS	Sb	18 17 38.1	+0.6
KPKS	Kokpek	1.65	65	P	Pb	18 17 16.9	-0.4
	0.2nm,0.1s						
KPKS				S	Sb	18 17 38.6	+0.2
	5.2nm,0.2s						
KPKS	Kokpek	1.65	65	eP	Pb	18 17 16.9	-0.4
	0.2nm,0.1s						
KPKS				eS	Sb	18 17 38.6	+0.2
	5.2nm,0.2s						
UCH	Uchtor	1.66	251	⇑eP	Pb	18 17 16.8	-0.8
UCH				⇑eS	Sb	18 17 38.7	-0.1
ARXS	Arharly	1.67	31	P	Pb	18 17 17.1	-0.5
	3.6nm,0.1s						
ARXS				S	Sb	18 17 38.8	0.0
	4.2nm,0.1s						
ARXS	Arharly	1.67	31	eP	Pb	18 17 17.1	-0.5
	3.6nm,0.1s						
ARXS				eS	Sb	18 17 38.8	0.0
	4.2nm,0.1s						
UZB	Uzynbulak	1.80	78	P	Pb	18 17 19.1	-0.7
	2.3nm,0.2s						
UZB				S	Sb	18 17 42.3	-0.2
	6.7nm,0.2s						
UZB	Uzynbulak	1.80	78	eP	Pb	18 17 19.1	-0.7
UZB				eS	Sb	18 17 42.4	-0.2
UZB	Uzynbulak	1.80	78	eP	Pb	18 17 19.1	-0.7
	2.3nm,0.2s						
UZB				eS	Sb	18 17 42.3	-0.2
	6.7nm,0.2s						
BLB	Baldybastay	1.88	45	P	Pb	18 17 20.4	-0.8
	0.9nm,0.1s						
BLB				S	Sb	18 17 44.1	-0.7
	8.5nm,0.2s						
JNKS	Jany-Kuch	1.89	203	⇓eP	Pn	18 17 19.5	+0.1
JNKS				⇓eS	Sn	18 17 43.4	-0.1
EKS2	Erkin-Say	2.10	267	⇓eP	Pn	18 17 22.9	+0.8
EKS2				⇓eS	Sb	18 17 49.5	-1.7
SHLS	Shalkode	2.12	79	Pg	Pg	18 17 30.3	+3.2
	1.3nm,0.2s						
SHLS				Lg	Lg	18 18 01.3	
	8.7nm,0.4s						
SHLS	Shalkode	2.12	79	eP	Pg	18 17 30.4	+3.2
	1.3nm,0.2s						
SHLS				eS	Sg	18 18 01.3	+6.7
	8.7nm,0.4s						
PDGK	Podgornoye	2.17	75	⇓Pn	Pb	18 17 24.2	-1.9
	1.3nm,0.6s						
PDGK				⇓Sn	Sb	18 17 53.5	+0.2
	2.5nm,0.4s						
KK31	Karatay Array	4.49	276	⇑Lg	Lg	18 19 10.6	
	0.4nm,0.6s,baz=87,slow=27,SNR=3.9						

TAP **04** *18:19:48.7, 24°.94N×122°.24E, h136km, ML3.4, D*
JMA **04** *18:19:49.8±0.1, 24°.9N±0°.8×122°.2E±0°.3, h130km±1km, MV2.2/11, TAIWAN REGION*
ISC 04 18:19:49.7±1.7**, 24°.92N**±0°.05×**122°.20E**±0°.03**, h132**km±9km**, n84, σ0s61**/148**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SXI1	Grass Mountain	0.34	301	i P	Pn	18 20 08.0	-0.3
TIPB	Shuangxi	0.34	279	i P	Pn	18 20 07.9	-0.3
TIPB				S	Sn	18 20 21.4	-0.8
NWF	Wu-fen Shan	0.41	292	P	Pn	18 20 08.2	-0.4
WFSB	Wu-fen Shan	0.41	292	P	Pn	18 20 08.4	-0.1
WFSB				eS	Sn	18 20 22.2	-0.5
TWC	Suao	0.44	226	P	Pn	18 20 08.2	-0.4
TNOU	National Taiwa	0.45	301	P	Pn	18 20 08.4	-0.3
EOS2	EOS2	0.50	177	P	Pn	18 20 09.2	+0.4
EOS2				eS	Sn	18 20 24.4	+1.2
TWE	Neicheng	0.52	248	eP	Pn	18 20 08.8	-0.3
TWE				eS	Sn	18 20 24.2	+0.6
NDS	Dongshan	0.52	237	eP	Pn	18 20 09.1	0.0
NDS				eS	Sn	18 20 23.8	+0.1
TWA	Mucha	0.56	277	eP	Pn	18 20 08.8	-0.5
TWA				eS	Sn	18 20 25.0	+0.8
FUSB	Fushanzhiwuyua	0.58	254	i P	Pn	18 20 09.0	-0.5
FUSB				S	Sn	18 20 24.5	+0.1
NHY	Taipei	0.58	282	eP	Pn	18 20 09.2	-0.2
NHY				eS	Sn	18 20 25.6	+1.2
EWUT	Wuta	0.60	219	i P	Pn	18 20 09.8	+0.1
EWUT				i S	Sn	18 20 24.9	+0.2
NHDH	Xindian Distri	0.61	274	eP	Pn	18 20 09.4	-0.3
NHDH				S	Sn	18 20 25.6	+0.9
YM01	YM01	0.61	292	i P	Pn	18 20 09.2	-0.5
YM01				eS	Sn	18 20 25.8	+1.0
YM08	YM08	0.62	296	eP	Pn	18 20 09.0	-0.7
EOS3	EOS3	0.64	170	eP	Pn	18 20 10.2	+0.6
EOS3				eS	Sn	18 20 25.8	+1.1
ENTT	Nioudou	0.64	245	P	Pn	18 20 09.9	0.0
ENTT				S	Sn	18 20 25.7	+0.6
ZUZH	Zhuzihu	0.64	293	P	Pn	18 20 09.2	-0.7
ZUZH				eS	Sn	18 20 25.6	+0.4
NWLT	Wulai	0.65	258	eP	Pn	18 20 09.6	-0.4
NWLT				eS	Sn	18 20 24.4	-0.8
TWY	Chenhua	0.65	303	eP	Pn	18 20 09.5	-0.4
EAHA	Aohua	0.72	216	eP	Pn	18 20 10.4	0.0
LATG	Datong	0.72	238	i P	Pn	18 20 10.9	+0.4
LATG				S	Sn	18 20 26.9	+0.6
PCYT	Pengchaiyu	0.72	351	eP	Pn	18 20 09.9	-0.5
NTST	Danshui	0.72	290	eP	Pn	18 20 09.8	-0.6
NTST				eS	Sn	18 20 27.4	+1.3
TWS1	Kuangyinshan	0.73	285	P	Pn	18 20 10.3	-0.2
TWS1				eS	Sn	18 20 27.3	+1.1
YHNB	Yeheng	0.79	252	i P	Pn	18 20 10.8	-0.2
YHNB				S	Sn	18 20 26.2	-0.9
EOS4	EOS4	0.80	172	eP	Pn	18 20 10.6	0.0
EOS4				eS	Sn	18 20 26.6	+0.2
NSK	Sanguang	0.80	253	i P	Pn	18 20 11.0	-0.1
NSK				S	Sn	18 20 26.4	-0.9
JYNG	Yonagunijimaku	0.82	124	eP	Pn	18 20 11.2	0.0
JYNG				eS	Sn	18 20 26.8	-0.7
NNSB	Datong	0.89	237	i P	Pn	18 20 12.1	+0.2
NNSB				S	Sn	18 20 28.7	0.0
NNS	Nan Shan	0.89	238	P	Pn	18 20 12.1	+0.2
NNS				S	Sn	18 20 28.7	0.0
ETL	Fush Village	0.92	215	P	Pn	18 20 11.9	-0.2
ETL				eS	Sn	18 20 29.2	+0.2
NACB	Ninganchiao	0.92	217	i P	Pn	18 20 11.5	-0.6
NACB				i S	Sn	18 20 28.3	-0.7
NCUH	Zhongli	0.92	273	eS	Sn	18 20 28.8	-0.2
KSHI	Guanxi Townshi	0.94	262	P	Pn	18 20 12.2	0.0
KSHI				eS	Sn	18 20 29.5	+0.2
ETLH	Xiulin Townshi	0.96	223	P	Pn	18 20 12.3	-0.3
ETLH				S	Sn	18 20 29.7	-0.1
TWD	Chiawan	1.00	214	P	Pn	18 20 12.4	-0.4
TWD				S	Sn	18 20 30.0	-0.2
NFF	Wufeng Townshi	1.02	254	P	Pn	18 20 12.6	-0.4
NFF				S	Sn	18 20 29.7	-1.0
FUSS	Fushou	1.09	233	eP	Pn	18 20 14.3	+0.4
FUSS				eS	Sn	18 20 32.6	+0.3
LIOB	Emei	1.11	256	P	Pn	18 20 13.7	-0.2
LIOB				S	Sn	18 20 31.8	-0.3
SBCB	Hsinchu	1.11	264	eP	Pn	18 20 13.9	+0.1
SBCB				eS	Sn	18 20 31.9	-0.2
NSTT	Nanjuang	1.13	256	P	Pn	18 20 13.8	-0.1
NSTT				eS	Sn	18 20 31.6	-0.8
TWT	Tachien	1.14	235	P	Pn	18 20 14.9	+0.6
TWT				eS	Sn	18 20 33.6	+0.6
LXIB	Xiulin Townshi	1.14	219	P	Pn	18 20 13.8	-0.5
LXIB				eS	Sn	18 20 32.4	-0.6
ETM	Tongmen	1.15	214	P	Pn	18 20 13.5	-0.7
ETM				eS	Sn	18 20 31.8	-1.0
WHF	Hehuan Shan	1.15	228	eP	Pn	18 20 14.8	+0.2
WHF				eS	Sn	18 20 33.4	-0.1
TDCB	Techi	1.16	235	P	Pn	18 20 14.9	+0.4
TDCB				S	Sn	18 20 33.3	+0.1
TEYL	Yanliau Villag	1.18	208	eP	Pn	18 20 13.7	-0.8
TEYL				eS	Sn	18 20 32.8	-0.5
SHUL	Shoufeng	1.27	207	eP	Pn	18 20 15.4	+0.1
SHUL				eS	Sn	18 20 35.2	+0.3
ESL	Shilin	1.30	213	eP	Pn	18 20 14.7	-1.1
ESL				eS	Sn	18 20 34.3	-1.3
WHP	Taichung City	1.31	241	P	Pn	18 20 16.2	+0.3
WHP				S	Sn	18 20 35.6	-0.2
NMLH	Miaoli	1.33	254	eP	Pn	18 20 16.1	0.0
NMLH				eS	Sn	18 20 36.4	+0.2
OWD	Renai	1.34	224	eP	Pn	18 20 16.7	+0.4
OWD				eS	Sn	18 20 36.8	+0.2
TEGC	Jichi Village	1.34	207	eS	Sn	18 20 37.2	+0.8
WUSB	Renai	1.35	227	P	Pn	18 20 17.1	+0.7
WUSB				eS	Sn	18 20 37.3	+0.6
WARBT	Fenglin Townsh	1.41	212	P	Pn	18 20 16.0	-0.9
WARBT				S	Sn	18 20 35.9	-1.7
TWQ1	Liyutan	1.42	247	eP	Pn	18 20 17.0	-0.1
TWQ1				eS	Sn	18 20 37.5	-0.3
WCS	Beigang Elemen	1.45	234	eP	Pn	18 20 17.7	+0.3
WCS				eS	Sn	18 20 38.4	-0.1
VWDT	VWDT	1.51	220	P	Pn	18 20 18.5	+0.5
VWDT				eS	Sn	18 20 40.1	+0.6
IRIF	Iriomote-Funau	1.51	112	eP	Pn	18 20 17.9	-0.1
IRIF				eS	Sn	18 20 39.6	0.0
SMLT	Sun Moon Lake	1.57	229	eP	Pn	18 20 19.3	+0.5
SMLT				eS	Sn	18 20 41.2	+0.2
HGSD	Ruisui	1.58	207	P	Pn	18 20 19.2	+0.3
HGSD				eS	Sn	18 20 42.0	+0.8
TYC	Yuchr	1.58	231	eP	Pn	18 20 19.2	+0.3
TYC				eS	Sn	18 20 41.5	+0.4
SSLB	Suanglung	1.60	226	P	Pn	18 20 19.7	+0.6
SSLB				S	Sn	18 20 42.1	+0.6
WCH1	Changhua City	1.72	241	eS	Sn	18 20 43.8	-0.2
WNT	Mingjian	1.73	234	S	Sn	18 20 44.3	+0.2
YULB	Yu-li	1.73	209	P	Pn	18 20 19.6	-1.0
YULB				eS	Sn	18 20 41.7	-2.4
WHYT	Xinyi Township	1.73	226	eP	Pn	18 20 21.2	+0.6
WHYT				eS	Sn	18 20 44.6	+0.5
ECBN	Changbin	1.73	203	eP	Pn	18 20 19.7	-0.9
JKRS	Kuro-shima	1.78	112	eP	Pn	18 20 21.3	+0.1
JKRS				eS	Sn	18 20 45.5	+0.3
JIJ	Ishigaki jima	1.85	107	eP	Pn	18 20 22.1	+0.1
JIJ				eS	Sn	18 20 46.1	-0.5
ALS	Alishan	1.89	223	eP	Pn	18 20 23.4	+0.6
ALS				eS	Sn	18 20 48.5	+0.5
FULB	Fuli	1.90	206	eS	Sn	18 20 48.6	+0.9
CHN5	Tsauling	1.91	227	eP	Pn	18 20 23.6	+0.8
CHN5				eS	Sn	18 20 48.6	+0.6
WRL	Guolierlin Hig	1.94	239	eS	Sn	18 20 47.2	-1.4
JISG	Ishigakijimahi	1.95	99	eP	Pn	18 20 23.2	0.0
JISG				eS	Sn	18 20 48.2	-0.4
ELDTW	Lidau	2.03	212	eP	Pn	18 20 24.1	-0.2
ELDTW				eS	Sn	18 20 50.4	-0.3
WCKO	Fanlu	2.07	225	eS	Sn	18 20 52.2	+0.7
TPUB	Ta-pu	2.15	222	eP	Pn	18 20 26.3	+0.6
JTJ	Tarama	2.29	96	eP	Pn	18 20 27.7	+0.4
SNST	Tainan City	2.30	223	eS	Sn	18 20 56.0	-0.4
CHN1	Nanshi	2.30	222	eP	Pn	18 20 28.1	+0.6
CHN1				eS	Sn	18 20 56.7	+0.1
SGST	Jiashian	2.35	219	eS	Sn	18 20 56.9	-0.7

NEIC **04** *18:23:20.0±1.2, 17°.78N±0°.03×66°.86W±0°.02, h10km±1km, ML2.7/35, Md2.8/8(RSPR), Error ellipse: s-maj=5.6km s-min=3.0km az=15.0*
RSPR 04 18:23:20.8, 17°.82N×66°.88W, h7km**, MD2.8**/8**, 8C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.15	358		Pg	18 23 24.4	+0.4
GBPR					Sg	18 23 27.0	+0.9
GBPR	Guanica, Bosqu	0.15	358	⇑eP	Pg	18 23 24.4	+0.4
GBPR				eS	Sg	18 23 27.0	+0.9
MLPR	Magueyes Islan	0.22	312		Pg	18 23 25.6	+0.4
MLPR				Sg	Sg	18 23 28.7	+0.6
MLPR				IAML		18 23 29.6	
	2µm,0.3s						
MLPR				IAML		18 23 30.0	
	937nm,0.2s						
CRPR	Cabo Rojo, PR	0.29	309		Pg	18 23 26.7	+0.2
CRPR					Sg	18 23 30.9	+0.5
CRPR	Cabo Rojo, PR	0.29	309	IAML		18 23 31.4	
	1µm,0.2s						
CRPR				IAML		18 23 32.1	
	833nm,0.2s						
CRPR	Cabo Rojo, PR	0.29	309	⇑eP	Pg	18 23 26.8	+0.3
CRPR				eS	Sg	18 23 31.2	+0.9
OBIP	Obispado Ponce	0.34	49		Pg	18 23 27.3	-0.1
OBIP					Sg	18 23 32.5	+0.6
OBIP				IAML		18 23 33.4	
	comp=N,142nm,0.4s						
OBIP	Obispado Ponce	0.34	49	⇑eP	Pg	18 23 27.5	+0.1
OBIP				eS	Sg	18 23 32.9	+1.0
CELP	Cerrillos	0.38	48		Pg	18 23 28.1	-0.1
CELP				Sg	Sg	18 23 33.7	+0.5
CELP				IAML		18 23 34.6	
	comp=N,504nm,0.2s						
CELP				IAML		18 23 36.7	
	comp=N,431nm,0.3s						
LSP	Las Mesas	0.41	330		Pg	18 23 28.8	0.0
LSP					Sg	18 23 35.3	+1.2
LSP	Las Mesas	0.41	330	⇑eP	Pg	18 23 28.8	0.0
LSP				eS	Sg	18 23 35.3	+1.2
UUPR	Utuado, UPR, P	0.45	19		Pg	18 23 29.0	-0.6
UUPR				Sg	Sg	18 23 35.4	-0.2
UUPR				IAML		18 23 38.1	
	comp=N,3µm,0.3s						
UUPR				IAML		18 23 38.3	
	comp=N,5µm,0.3s						
PRSN	Puerto Rico Se	0.47	327		Sg	18 23 36.9	+0.8
PRSN	Puerto Rico Se	0.47	327	Pg	Pg	18 23 28.9	-1.0
PRSN				IAML		18 23 38.9	
	comp=N,2µm,0.3s						
PRSN				IAML		18 23 42.4	
	comp=N,1µm,0.2s						
PRSN	Puerto Rico Se	0.47	327	⇑eP	Pg	18 23 29.9	0.0
PRSN				eS	Sg	18 23 36.9	+0.8
AGPR	Aguadilla, PR	0.68	341		Pg	18 23 33.1	-0.8
AGPR				Sg	Sg	18 23 41.7	-1.1
AGPR				IAML		18 23 42.6	
	comp=N,272nm,0.4s						
AGPR				IAML		18 23 43.4	
	comp=N,255nm,0.3s						
AGPR	Aguadilla, PR	0.68	341	⇓eP	Pg	18 23 33.4	-0.6
AGPR				eS	Sg	18 23 42.4	-0.4
ECPR	Experimental S	0.69	45		Pg	18 23 33.3	-0.9
ECPR				Sg	Sg	18 23 42.5	-0.7
ECPR				IAML		18 23 43.3	
	comp=N,705nm,0.2s						
ECPR				IAML		18 23 44.7	
	comp=N,747nm,0.2s						
ECPR	Experimental S	0.69	45	⇑eP	Pg	18 23 33.5	-0.7
ECPR				eS	Sg	18 23 43.0	-0.2
EMPR	Esperanza - Ma	0.73	27		Pg	18 23 34.5	-0.3
EMPR					Sg	18 23 44.7	+0.3
EMPR	Esperanza - Ma	0.73	27	⇑eP	Pg	18 23 34.5	-0.3
EMPR				eS	Sg	18 23 44.7	+0.3
SJG	San Juan	0.75	67		Pg	18 23 33.8	-1.5
SJG				IAML		18 23 48.3	
	comp=N,195nm,0.5s						
SJG				IAML		18 23 50.8	
	comp=N,169nm,0.2s						
SJG	San Juan	0.75	67	Sg	Sg	18 23 45.1	+0.2
SJG	San Juan	0.75	67	⇑eP	Pg	18 23 34.5	-0.7
IDE	Isla Desecheo	0.80	315		Pg	18 23 35.5	-0.7
IDE	Isla Desecheo	0.80	315	⇓eP	Pg	18 23 35.5	-0.7
PDPR	Patillas Dam,	0.83	76	Pg	Pg	18 23 36.2	-0.7
PDPR				Sg	Sg	18 23 48.2	+0.5
PDPR				IAML		18 23 50.9	
	comp=N,143nm,0.5s						
PDPR				IAML		18 23 50.9	
	comp=N,100nm,0.3s						
GCPR	Guaynabo City	0.90	57		Sg	18 23 48.8	-0.9
GCPR	Guaynabo City	0.90	57		Pg	18 23 36.5	-1.6
GCPR				IAML		18 23 50.0	
	comp=N,66nm,0.3s						
GCPR				IAML		18 23 54.7	
	comp=E,58nm,0.9s						
GCPR	Guaynabo City	0.90	57	⇓eP	Pg	18 23 36.9	-1.2
GCPR				eS	Sg	18 23 48.8	-0.9
HUMP	Col San Antoni	1.03	72		Pg	18 23 39.4	-1.2
HUMP					Sg	18 23 53.3	-0.6
HUMP	Col San Antoni	1.03	72	Pg	Pg	18 23 38.8	-1.8
HUMP				Sg	Sg	18 23 53.0	-0.8
HUMP				IAML		18 23 56.5	
	comp=E,105nm,0.2s						
HUMP				IAML		18 23 57.7	
	comp=E,137nm,0.2s						
HUMP	Col San Antoni	1.03	72	⇓eP	Pg	18 23 39.4	-1.2
HUMP				eS	Sg	18 23 53.3	-0.6
CUPR	Culebra, Puert	1.59	72	Pn	Pn	18 23 48.0	-1.4
DR12	Loma Pena Alta	2.57	292	Pn	Pn	18 23 59.2	-3.7

NDI **04** *18:26:17.1±0.9, 21°.74N×94°.60E, h36km, ML4.0, MW4.0*
BKK **04** *18:26:19.6±0.4, 22°N±4°×9°5E±°, h10km, M3.7/17, mB4.2/8, mb3.8/10, Mjma3.4/17, ML4.3/13, MLv4.0/16, Mw(mB)3.3/8*
IDC **04** *18:26:20.7±2.4, 21°.71N×94°.48E, h87km±19km, mb3.6/13, mbtmp3.9/15, Error ellipse: s-maj=45.8km s-min=15.5km az=56.0*
NEIC **04** *18:26:20.9±2.0, 21°.73N±0°.07×94°.62E±0°.07, h90km±7km, mb4.1/31, Error ellipse: s-maj=12.9km s-min=6.2km az=217.0*
ISC 04 18:26:19.1±0.8**, 21°.83N**±0°.05×**94°.53E**±0°.05**, h74**km±8km**, n82, σ1s86**/104**, mb4.1**/23**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAIH	SAIHA	1.57	295	eP	Pn	18 26 44.3	-1.0
SAIH				eS	Sn	18 27 04.1	-0.9
SAIH				IAML		18 27 18.3	
	comp=E,2µm,0.5s						
SAIH				IAML		18 27 20.1	
	comp=N,927nm,0.8s						
MORE	Moreh	2.40	355		Pn	18 27 00.9	+4.6
MORE				Sn	Sn	18 27 28.8	+4.1
BRDH	Bariadhala	2.80	288	S	Sn	18 27 38.0	+3.6
	comp=N,261nm,0.3s,baz=57,slow=24,SNR=3.7						
IMP	Imphal	3.03	350	eP	Pn	18 27 04.5	-0.3
IMP				eS	Sn	18 27 39.3	-0.8
IMP				IAML		18 27 59.4	
	comp=N,496nm,1.3s						
IMP				IAML		18 28 00.2	
	comp=E,318nm,0.3s						
AGT	Agartala	3.65	305	eP	Pn	18 27 13.3	+0.1
AGT				eS	Sn	18 27 53.5	-1.6
AGT				IAML		18 33 09.7	
	comp=E,418nm,0.9s						
AGT				IAML		18 33 13.3	
	comp=N,364nm,0.2s						
KOHI	KOHIMA	3.89	354	eP	Pn	18 27 16.0	-0.6
KOHI				eS	Sn	18 27 58.5	-2.6
KOHI				IAML		18 28 18.8	
	comp=N,573nm,0.6s						
KOHI				IAML		18 28 21.9	
	comp=E,631nm,0.3s						
SHL	Shillong	4.44	327		Pn	18 27 27.8	+3.7
SHL				Sn	Sn	18 28 16.8	+2.2
MOKO	MOKOCHONG	4.47	360	eP	Pn	18 27 22.7	-1.7
MOKO				eS	Sn	18 28 11.7	-3.6
MOKO				IAML		18 28 37.0	
	comp=N,508nm,0.6s						
MOKO				IAML		18 28 37.6	
	comp=E,455nm,0.1s						
CMAI	Chiengmai2	4.63	113	P	Pn	18 27 28.1	+1.4
TEZP	TEZPUR	5.02	342	eP	Pn	18 27 31.5	-0.3
TEZP				eS	Sn	18 28 24.9	-3.6
TEZP				IAML		18 28 34.6	
	comp=N,307nm,0.3s						
TEZP				IAML		18 28 34.9	
	comp=E,261nm,0.3s						
GUWA	GUWAHATI	5.06	330	eP	Pn	18 27 31.9	-0.5
GUWA				eS	Sn	18 28 26.2	-3.2
GUWA				IAML		18 28 33.0	
	comp=N,381nm,0.4s						
GUWA				IAML		18 28 33.1	
	comp=E,472nm,0.6s						
CHTO	Chiang Mai	5.12	125		Pn	18 27 34.5	+1.2
CHTO	Chiang Mai	5.12	125	P	Pn	18 27 34.5	+1.2
	comp=E,0.1nmcomp=E,0.2nmcomp=E,6.9nm,0.7s						
CM15	Chiang Mai Arr	5.33	128	P	Pn	18 27 37.4	+1.3
	comp=E,0.0nmcomp=E,143nmcomp=E,6.6nm,0.5s						
CM13	Chiang Mai Arr	5.33	129	P	Pn	18 27 37.3	+1.1
	comp=E,0.0nmcomp=E,158nmcomp=E,5.9nm,0.5s						
CM31	Chiang Mai Arr	5.34	128		Pn	18 27 36.5	+0.3
CMAR	Chiang Mai Arr	5.34	128	P	Pn	18 27 37.6	+1.3
	comp=E,3.1nm,0.8s,baz=306,slow=13,SNR=28						
CMAR	Chiang Mai Arr	5.34	128		Pn	18 27 37.3	+1.0
ITAN	ITANAGAR	5.34	352	eP	Pn	18 27 35.9	-0.3
ITAN				eS	Sn	18 28 32.6	-3.8
ITAN				IAML		18 28 48.6	
	comp=N,462nm,0.1s						
ITAN				IAML		18 28 49.2	
	comp=E,434nm,0.4s						
CM02	Chiang Mai Arr	5.36	128	P	Pn	18 27 37.4	+0.9
	comp=E,0.1nmcomp=E,0.1nmcomp=E,164nmcomp=E,7.3nm,0.7s						
CM01	Chiang Mai Arr	5.37	128	P	Pn	18 27 38.1	+1.4
	comp=E,0.1nmcomp=E,0.1nmcomp=E,199nmcomp=E,8.8nm,0.7s						
CM05	Chiang Mai Arr	5.38	129	P	Pn	18 27 38.1	+1.3
	comp=E,0.1nmcomp=E,0.0nmcomp=E,161nmcomp=E,6.5nm,0.8s						
ZIRO	ZIRO	5.70	354	eP	Pn	18 27 40.3	-1.1
ZIRO				eS	Sn	18 28 41.1	-4.5
ZIRO				eS		18 28 43.3	
ZIRO				IAML		18 28 53.1	
	comp=N,498nm,0.6s						
ZIRO				IAML		18 28 54.2	
	comp=E,417nm,0.5s						
DHUB	DHUBRI	5.88	316	eP	Pn	18 27 42.7	-0.9
DHUB				eS	Sn	18 28 45.5	-4.1
DHUB				IAML		18 28 53.3	
	comp=N,167nm,0.1s						
DHUB				IAML		18 28 53.4	
	comp=E,150nm,0.1s						
TAWA	Tawang	6.22	338	eP	Pn	18 27 47.0	-1.6
TAWA				eS	Sn	18 28 53.9	-4.7
TAWA				IAML		18 29 04.4	
	comp=N,362nm,0.5s						
TAWA				IAML		18 29 05.5	
	comp=E,415nm,0.3s						
UTTA	Uttaradit	6.98	125	P	Pn	18 28 00.8	+2.1
GTK	Tadong	7.67	317	eP	Pn	18 28 06.6	-1.6
GTK				eS	Sn	18 29 27.6	-6.1
GTK				IAML		18 29 39.2	
	comp=E,164nm,0.4s						
GTK				IAML		18 29 39.5	
	comp=N,122nm,0.3s						
KHLT	Khaolaem Dam	7.99	150	P	Pn	18 28 12.5	0.0
LSA	Lhasa	8.40	339		Pn	18 28 20.3	+1.7
PBA	Port Blair	10.26	190	Pn	Pn	18 28 42.4	-1.1
QIZ	Qiongzhong	14.63	98	Pn	Pn	18 29 42.0	-0.2
ENH	Enshi	15.84	55		Pn	18 29 57.0	-0.7
ENH				IAmb	IAmb	18 30 03.6	
	comp=Z,11nm,0.6s						
LZDM	Lanzhou Array	16.19	28	P	Pn	18 30 03.5	+1.2
	comp=Z,1.4nm,0.5s,baz=230,slow=12,SNR=6.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LHMI	Lhok Sumawe	16.67	172		Pn	18 30 07.5	-0.6
IPM	Ipoh	18.37	159	P	P	18 30 26.5	-1.5
IPM				IAmb	IAmb	18 30 37.1	
	comp=Z,17nm,1.5s						
GSI	Gunungsitoli	20.62	171	P	P	18 30 50.5	-2.0
GSI				IAmb	IAmb	18 30 51.8	
	comp=Z,20nm,1.4s						
WUS	Wushi	23.24	330	P	P	18 31 21.5	+1.4
TARG	Taragay, Kyrgy	24.32	328	P	P	18 31 31.2	+1.0
TARG				IAmb	IAmb	18 31 34.8	
	comp=Z,4.5nm,0.6s						
PRZ	Przheval'sk	24.62	330	P	P	18 31 34.5	+1.8
PRZ				IAmb	IAmb	18 31 38.4	
	comp=Z,7.3nm,0.6s						
MANEM	Manem	25.18	314	P	P	18 31 39.5	+1.6
MANEM				IAmb	IAmb	18 31 43.6	
	comp=Z,12nm,0.6s						
DRK	Karamyk	26.18	317	P	P	18 31 49.1	+2.1
DRK				IAmb	IAmb	18 31 50.7	
	comp=Z,6.1nm,0.5s						
MKAR	Makanchi Array	26.81	341	P	P	18 31 54.8	+2.5
	comp=Z,1.4nm,0.5s,baz=152,slow=9.5,SNR=24						
MKAR				PcP	PcP	18 35 14.2	+0.8
	comp=Z,0.4nm,0.5s,baz=132,slow=1.8,SNR=7.4						
MKAR				ScP	ScP	18 38 45.8	-1.2
	comp=Z,0.5nm,0.8s,baz=162,slow=2.3,SNR=5.2						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	26.81	341	P	P	18 31 54.1	+1.9
MKAR					PcP	18 35 13.5	+0.2
MKAR					ScP	18 38 45.5	-1.5
GAR	Garm	26.87	315	P	P	18 31 54.2	+1.2
GAR				IAmb	IAmb	18 32 30.1	
	comp=Z,9.4nm,1.3s						
MAKZ	Makanchi	26.91	341	P	P	18 31 55.1	+1.9
SHAA	Shahritus	27.65	310	P	P	18 32 00.7	+0.7
SHAA				IAmb	IAmb	18 32 07.3	
	comp=Z,5.4nm,0.8s						
KKAR	Karatay Array	29.15	322	P	P	18 32 13.6	+0.4
KURBB	Kurchatov Arra	31.36	340	P	P	18 32 34.0	+1.5
	comp=Z,1.2nm,0.3s,baz=149,slow=8.6,SNR=6.0						
KURBB				PcP	PcP	18 35 25.3	+0.7
	comp=Z,1.1nm,0.3s,baz=159,slow=2.4,SNR=5.4						
KURBB				ScP	ScP	18 39 00.2	-1.1
	comp=Z,1.9nm,0.2s,baz=155,slow=2.9,SNR=4.0						
	comp=Z,1.2nm,0.3s						
KURK	Kurchatov	31.41	340	P	P	18 32 33.6	+0.6
KURK					PcP	18 35 24.3	-0.5
ZAA0	Zalesovo Array	32.90	349		P	18 32 47.2	+1.3
ZALV	Zalesovo Beam	32.90	349	P	P	18 32 48.4	+2.4
	comp=Z,3.5nm,0.4s,baz=166,slow=8.0,SNR=24						
	comp=Z,3.5nm,0.4s						
ZALV	Zalesovo Beam	32.90	349		P	18 32 48.1	+2.1
BVAR	Borovoye Array	36.21	335	P	P	18 33 16.4	+1.9
	comp=Z,1.0nm,0.5s,baz=138,slow=9.3,SNR=8.9						
BVAR				PcP	PcP	18 35 38.8	+0.3
	comp=Z,0.4nm,0.4s,baz=160,slow=2.1,SNR=4.5						
	comp=Z,1.0nm,0.5s						
BORK	Borovoye	36.26	335	P	P	18 33 15.8	+0.8
BORK				IAmb	IAmb	18 33 17.6	
	comp=Z,1.6nm,0.8s						
AB31	Akbulak array	38.69	323		P	18 33 37.4	+1.8
ABKAR	Akbulak array	38.69	323		P	18 33 38.2	+2.6
ARTI	Arti	43.56	332	P	P	18 34 15.8	+0.4
NRIK	Noril'sk	47.70	357	P	P	18 34 49.0	+1.2
NRIK				IAmb	IAmb	18 34 58.4	
	comp=Z,2.7nm,1.1s						
TIXI	Tiksi	53.58	13	P	P	18 35 31.8	-0.2
WB0	Warramunga Arr	56.82	134	P	P	18 35 54.7	-1.4
WRA	Warramunga Arr	56.90	134	P	P	18 35 56.4	-0.3
	comp=Z,0.6nm,1.0s,baz=315,slow=7.2,SNR=2.5						
	comp=Z,0.6nm,1.0s						
AKASG	Malin Array Be	57.84	317	P	P	18 36 02.0	-0.8
	comp=Z,0.5nm,0.3s,baz=84,slow=6.4,SNR=4.5						
	comp=Z,0.5nm,0.3s						
AKBB	Malin Array Si	57.84	317	P	P	18 36 03.1	+0.2
KIEV	Kiev	57.85	317	P	P	18 36 03.1	+0.1
ASAR	Alice Springs	59.27	137	P	P	18 36 13.5	+0.3
	comp=Z,0.3nm,0.8s,baz=335,slow=8.1,SNR=2.1						
	comp=Z,0.3nm,0.8s						
ASAR	Alice Springs	59.27	137	P	P	18 36 12.6	-0.6
BURAR	Bucovina Array	60.37	313	P	P	18 36 20.4	-0.2
FINES	FINESS Array B	60.77	329	P	P	18 36 23.3	+0.4
	comp=Z,2.2nm,0.9s,baz=120,slow=7.5,SNR=5.6						
	comp=Z,2.2nm,0.9s						
SPITS	Spitsbergen Ar	66.35	347	P	P	18 36 59.9	+0.4
	comp=Z,6.4nm,1.0s,baz=112,slow=9.1,SNR=7.2						
	comp=Z,6.4nm,1.0s						
HFS	Hagfors	66.78	327	P	P	18 37 02.8	+0.3
	comp=Z,1.1nm,0.4s,baz=134,slow=10,SNR=1.8						
	comp=Z,1.1nm,0.4s						
NC602	NORSAR Array S	67.80	328	P	P	18 37 08.8	-0.1
NOA	NORSAR Array B	67.93	329	P	P	18 37 09.6	-0.2
	comp=Z,0.3nm,0.5s,baz=82,slow=4.1,SNR=1.6						
	comp=Z,0.3nm,0.5s						
GERES	GERESS Array B	67.95	315	P	P	18 37 10.8	+0.7
	comp=Z,0.5nm,0.6s,baz=85,slow=8.6,SNR=3.1						
	comp=Z,0.5nm,0.6s						
NC204	NORSAR Array S	68.13	329	P	P	18 37 10.4	-0.6
C18K	Utukok River	74.92	22	P	P	18 37 51.3	-0.4
C18K				IAmb	IAmb	18 38 15.7	
	comp=Z,4.3nm,1.4s						
C19K	Lookout Ridge	75.29	21	P	P	18 37 53.6	-0.2
D20K	Etivluk River	76.44	21	P	P	18 37 59.5	-0.8
D20K				IAmb	IAmb	18 38 01.5	
	comp=Z,2.5nm,1.1s						
D23K	Nanushuk River	78.22	20	P	P	18 38 09.1	-1.2
E24K	Your Creek	79.38	20	P	P	18 38 16.9	+0.2
E24K				IAmb	IAmb	18 38 19.0	
	comp=Z,3.2nm,1.4s						
BMAR	Burnt Mountain	80.97	20	P	P	18 38 26.0	+0.8
ILAR	Eielson Array	81.75	22	P	P	18 38 28.4	-1.0
	comp=Z,0.2nm,0.6s,baz=308,slow=5.4,SNR=1.7						
	comp=Z,0.2nm,0.6s						
G31M	Satah River	84.34	17	P	P	18 38 42.0	-0.7

*MOS **04** 18:28:21.3±2.1, 43°.10N×146°.92E, h48km, mb4.0/1, Error ellipse: s-maj=42.7km s-min=16.0km az=134.8*
*JMA **04** 18:28:22.1±0.2, 43°.1N±0°.7×14°7E±°, h51km±2km, MV3.3/34, OFF NEMURO PENINSULA*
*SKHL **04** 18:28:23.1±0.3, 43°.10N×146°.80E, h44km±6km, mb4.5/2*
*IDC **04** 18:28:30.0±3.5, 45°.37N×146°.07E, h0km, mb3.6/3, mbtmp3.6/3, ML3.0/1, Error ellipse: s-maj=94.3km s-min=25.6km az=148.0*
ISC 04 18:28:20.8±3.0**, 43°.11N**±0°.08×**146°.86E**±0°.09**, h26**km±18km**,**
n28, σ1s.02/40**, mb3.4**/3**, 3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.85	288	P	Pn	18 28 37.2	0.0
NEM2				eS	Sb	18 28 48.2	+0.2
NMR	Nemuro--Hokkai	0.86	288	⇓iPN	Pn	18 28 37.1	-0.2
NMR				eS	Sb	18 28 48.1	-0.2
NMR	Nemuro--Hokkai	0.86	288	iP	Pn	18 28 37.1	-0.2
NMR				eS	Sb	18 28 47.7	-0.6
GLVR	Golovnino	1.16	303	⇓iPN	Pn	18 28 41.8	+0.4
GLVR				eS	Sn	18 28 55.6	-0.7
GLVR				pmax	pmax		
	comp=Z,119nm,0.3s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,446nm,0.3s						
GLVR	Golovnino	1.16	303	iP	Pn	18 28 41.7	+0.4
GLVR				AMB	AMB	18 28 43.7	
	comp=E,120nm,0.3s						
GLVR				eS	Sn	18 28 55.6	-0.7
GLVR				A	A	18 28 56.9	
	comp=E,1μm,0.3s						
GLVR				A	A	18 28 56.9	
	comp=E,450nm,0.3s						
YUK	Yuzh-Kuril'sk	1.17	322	d iPN	Pn	18 28 41.8	+0.3
YUK				eS	Sn	18 28 55.6	-1.1
YUK				pmax	pmax		
	comp=Z,420nm,0.2s						
YUK				pmax	pmax		
	comp=N,107nm,0.2s						
YUK				pmax	pmax		
	comp=E,81nm,0.2s						
YUK				smax	smax		
	comp=E,581nm,0.3s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
YUK	Yuzh-Kuril'sk	1.17	322	iP	Pn	18 28 41.9	+0.4
YUK				AMB	AMB	18 28 43.8	
	comp=N,200nm,0.3s						
YUK				eS	Sn	18 28 55.7	-1.0
YUK				A	A	18 28 59.0	
	comp=N,2μm,0.4s						
YUK				A	A	18 28 59.0	
	comp=N,580nm,0.4s						
JKHN	Kushirohamanak	1.24	269	eP	Pn	18 28 42.6	+0.1
JKHN				eS	Sn	18 28 58.1	-0.4
AKK	Akkeshi	1.48	267	eP	Pn	18 28 45.6	-0.2
JNSB	Nemuroshibetsu	1.50	297	eP	Pn	18 28 46.1	0.0
JRA	Rausu	1.51	304	eP	Pn	18 28 46.6	+0.5
JRA				eS	Sn	18 29 04.8	-0.2
RUSJ	Misakicho	1.53	311	ePN	Pn	18 28 47.4	+0.9
RUSJ				eS	Sn	18 29 05.3	-0.3
JAK	Akkeshi	1.59	267	eP	Pn	18 28 47.3	+0.1
JAK				eS	Sn	18 29 06.1	-0.9
JNK	Nakash	1.63	288	eP	Pn	18 28 47.7	-0.2
JNK				eS	Sn	18 29 06.6	-1.4
JOB	Onbets	2.23	266	eP	Pn	18 28 56.3	+0.3
JAR	Ashorobuto	2.27	276	eP	Pn	18 28 57.1	+0.5
JTKR	Abashiri--Toko	2.31	293	P	Pn	18 28 58.3	+1.1
JTKR				S	Sn	18 29 25.5	+0.8
JCH	Churui	2.62	260	eP	Pn	18 29 01.6	+0.2
JFR	Furan	3.12	272	P	Pn	18 29 09.7	+1.4
JNBK	Urakawa-nobuka	3.14	256	eP	Pn	18 29 09.1	+0.5
ASAJ	Asahikawa	3.25	289	Pn	Pn	18 29 15.4	+5.2
	comp=N,1.6nm,0.3s,baz=102,slow=19,SNR=4.2						
ASAJ				Sn	Sn	18 29 52.8	+4.7
	comp=N,1.4nm,0.3s,baz=17,slow=5.0,SNR=4.6						
ASAJ	Asahikawa	3.25	289	PN	Pn	18 29 15.4	+5.2
ASAJ						18 29 52.8	
ILAR	Eielson Array	42.13	36	P	P	18 36 11.2	+0.7
	comp=N,0.2nm,0.6s,baz=279,slow=8.1,SNR=4.3						
	comp=N,0.2nm,0.6s						
ILAR	Eielson Array	42.13	36	P	P	18 36 11.2	+0.7
MKAR	Makanchi Array	44.70	298	P	P	18 36 31.0	-0.5
	comp=N,0.4nm,0.7s,baz=80,slow=8.5,SNR=4.2						
	comp=N,0.4nm,0.7s						
MKAR	Makanchi Array	44.70	298	P	P	18 36 31.0	-0.5
FINES	FINESS Array B	65.35	333	P	P	18 38 59.7	-0.6
	comp=N,4.1nm,1.1s,baz=27,slow=5.8,SNR=1.6						
	comp=N,4.1nm,1.1s						
FINES	FINESS Array B	65.35	333	P	P	18 38 59.7	-0.6

*IDC **04** 18:28:48.4±1.1, 38°.49N×25°.64E, h0km, mb3.4/4, mbtmp3.5/8, ML3.5/3, Error ellipse: s-maj=22.0km s-min=18.8km az=119.0*
*ISK **04** 18:28:48.3, 38°.41N×25°.42E, h5km, ML3.8/24*
*ATH **04** 18:28:49.8, 38°.44N×25°.50E, h18km±2km, ML3.4/35, Manual Solution by A.Andreou First location: 2020/02/04 18:29:57, This location: 2020/02/04 18:47:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **04** 18:28:49.5, 38°N±1°×25°.5E±1°.0, h11km±2km, M3.5/21, MLh3.5/21*
ISC 04 18:28:49.7±1.0**, 38°.43N**±0°.02×**25°.49E**±0°.02**, h13**km±8km**,**
n141, σ0s.89/169**, mb3.4**/3**, 5C-9D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.45	96	Pg	Pg	18 28 58.1	-0.5
CHOS				Sg	Sb	18 29 05.7	-0.4
CHOS	Chios island	0.45	96	P	Pg	18 28 58.9	+0.4
CHOS				S	Sb	18 29 05.3	-0.8
CHOS	Chios island	0.45	96	P	Pg	18 28 59.0	+0.4
CHOS				S	Sg	18 29 04.6	0.0
EAG2	Marmaro, Chios	0.50	77	P	Pg	18 28 59.5	0.0
EAG2				S	Sg	18 29 05.9	-0.2
CESE	eme	0.64	99	Pg	Pg	18 29 02.4	+0.1
SIGR	SIGRI	0.83	20	Pg	Pb	18 29 05.1	-0.9
SIGR				Sg	Sn	18 29 17.8	-1.4
SIGR	SIGRI	0.83	20	P	Pb	18 29 05.0	-1.0
SIGR				S	Sg	18 29 17.2	+0.6
SIGR	SIGRI	0.83	20	P	Pb	18 29 05.0	-1.0
SIGR				S	Sg	18 29 16.6	0.0
KRBN	Karaburun	0.85	79	Pg	Pn	18 29 06.8	-0.6
SKY	Skiros Island	0.86	301	P	Pg	18 29 06.4	+0.1
SKY				S	Sb	18 29 17.4	-0.7
SKY	Skiros Island	0.86	301	P	Pg	18 29 06.7	+0.3
SKY				S	Sb	18 29 17.2	-0.8
KARY	Karystos	0.92	245	P	Pb	18 29 06.3	-1.3
KARY				S	Sb	18 29 18.9	-0.9
KARY	Karystos	0.92	245	P	Pb	18 29 06.9	-0.7
KARY				S	Sb	18 29 18.9	-0.9
FOCM	Foa	1.01	74	Pg	Pb	18 29 08.6	-0.5
PRK	Paraskevi	1.01	37	P	Pb	18 29 08.3	-0.9
PRK				S	Sn	18 29 23.0	-0.8
PRK	Paraskevi	1.01	37	P	Pb	18 29 08.6	-0.6
PRK				S	Sb	18 29 21.9	-0.5
KYMI	Kymi, Euboea I	1.11	281	P	Pn	18 29 09.6	-1.4
KYMI				S	Sb	18 29 25.0	-0.2
KYMI	Kymi, Euboea I	1.11	281	P	Pn	18 29 09.5	-1.5
GPNR	Gulpinar-Canak	1.14	26	Pn	Pb	18 29 10.9	-0.4
GMLD	Gumuldur	1.18	107	Pn	Pb	18 29 11.9	0.0
BLCB	Balcova	1.22	92	Pn	Pg	18 29 13.3	+0.1
BLCB	Balcova	1.22	92	P	Pb	18 29 12.1	-0.6
BLCB				S	Sg	18 29 29.2	+0.2
DION	Dionisos Attik	1.28	254	P	Pn	18 29 12.1	-1.2
DION				S	Sn	18 29 29.6	-0.8
DION	Dionisos Attik	1.28	254	P	Pn	18 29 12.1	-1.2
DION				S	Sn	18 29 29.4	-1.0
SMG	Samos	1.28	124	P	Pn	18 29 12.8	-0.6
SMG				S	Sg	18 29 32.0	+0.8
SMG	Samos	1.28	124	P	Pn	18 29 12.8	-0.6
SMG				S	Sn	18 29 28.8	-1.7
PTL	Penteli	1.34	254	P	Pn	18 29 13.6	-0.5
PTL				S	Sb	18 29 31.9	+0.1
PTL	Penteli	1.34	254	P	Pn	18 29 13.2	-1.0
PTL				S	Sn	18 29 30.3	-1.6
ATHU	Athens Univers	1.42	251	P	Pn	18 29 13.6	-1.7
ATHU				S	Sn	18 29 32.9	-1.0
ATHU	Athens Univers	1.42	251	P	Pn	18 29 14.8	-0.5
ATHU				S	Sn	18 29 32.2	-1.8
AOS	Alonnisos	1.46	301	P	Pn	18 29 15.4	-0.4
AOS				S	Sb	18 29 35.4	+0.2
VLY	Voula,Athens	1.46	247	P	Pn	18 29 14.7	-1.1
VLY	Voula,Athens	1.46	247	P	Pn	18 29 14.7	-1.1
AOS2	Alonissos-2	1.47	299	P	Pn	18 29 15.2	-0.8
ATH	Athens Observa	1.47	252	P	Pn	18 29 14.9	-1.1
ATH				S	Sn	18 29 34.6	-0.5
ATH	Athens Observa	1.47	252	P	Pn	18 29 15.7	-0.3
BOZC	Bozcaada	1.47	17	Pn	Pb	18 29 16.4	-0.6
LIA	Limnos Island	1.48	351	P	Pn	18 29 14.5	-1.6
LIA	Limnos Island	1.48	351	P	Pn	18 29 14.8	-1.3
EZNE	Ezine-Canakkal	1.48	27	Pn	Pb	18 29 16.6	-0.6
KUSD	Kusadasi-Aydin	1.53	111	Pn	Pb	18 29 17.5	-0.4
EZN	Ezine	1.53	25	Pn	Pb	18 29 18.0	0.0
EZN	Ezine	1.53	25	P	Pn	18 29 15.4	-1.5
STFN	Stefani	1.55	261	P	Pn	18 29 16.3	-0.9
STFN	Stefani	1.55	261	P	Pn	18 29 16.4	-0.8
STFN				S	Sb	18 29 37.5	-0.6
MAGU	Magoula	1.60	258	P	Pn	18 29 16.9	-0.8
MAGU	Magoula	1.60	258	P	Pn	18 29 16.9	-0.8
MAGU				S	Sn	18 29 37.1	-1.1
VILL	Villia	1.74	262	P	Pn	18 29 18.9	-0.7
SOMA	Soma-Manisa	1.75	65	Pn	Pb	18 29 20.9	-0.9
VIL2	Platees	1.76	263	P	Pn	18 29 18.8	-1.2
GADA	Gvkgeada	1.78	10	Pn	Pb	18 29 21.8	-0.5
GADA	Gvkgeada	1.78	10	P	Pn	18 29 18.9	-1.3
COMU	Canakkale	1.83	24	Pn	Pb	18 29 21.8	-1.3
MET5	Makryloggos,Me	1.87	245	P	Pn	18 29 21.4	0.0
AKS	Akhisar	1.87	76	Pn	Pb	18 29 22.7	-1.1
MET6	Megalochori,Me	1.89	244	P	Pn	18 29 21.4	-0.3
MET2	Kameni Chora,	1.89	245	P	Pn	18 29 21.7	-0.1
MHLO	Agia Marina, M	1.94	207	P	Pn	18 29 22.7	+0.2
AYDB	Zeytinkoy-Aydi	1.95	104	Pn	Pb	18 29 23.9	-1.3
ATAL	Atalanti	1.95	278	P	Pn	18 29 21.7	-0.9
ATAL	Atalanti	1.95	278	P	Pn	18 29 21.8	-0.9
LKR	Lokris	1.97	277	P	Pn	18 29 21.8	-1.0
BODT	Bodrum	1.99	133	Pn	Pn	18 29 23.1	0.0
BODT	Bodrum	1.99	133	P	Pb	18 29 24.0	-1.8
CANM	Can-anakkale	1.99	37	Pn	Pb	18 29 24.0	-1.8
SAP3	Santorini-Thir	2.00	183	P	Pn	18 29 23.3	+0.1
YENI	Yenice-Canakka	2.02	42	Pn	Pb	18 29 24.8	-1.6
LTK	Loutraki	2.03	259	P	Pn	18 29 23.1	-0.6
SMTH	Samothraki Isl	2.04	1	P	Pn	18 29 23.0	-0.7
SMTH	Samothraki Isl	2.04	1	P	Pn	18 29 24.0	+0.2
ODEM	Odemis-Izmir	2.04	94	Pn	Pb	18 29 25.6	-1.1
THERA	Ancient Thera,	2.06	180	P	Pn	18 29 23.0	-1.2
GELI	Tayfur-Gelibol	2.10	21	Pn	Pb	18 29 25.7	-2.1
MLSB	Milas	2.14	121	Pn	Pn	18 29 24.9	-0.3
GORD	Gordes-Manisa	2.15	76	Pn	Pb	18 29 26.5	-2.2
LPK	Lapseki	2.17	27	Pn	Pn	18 29 26.6	+1.0
OUR	Ouranopolis	2.23	329	P	Pn	18 29 25.6	-0.7
OUR	Ouranopolis	2.23	329	P	Pn	18 29 25.8	-0.6
AXAR	Agios Charalam	2.24	279	P	Pn	18 29 26.0	-0.6
AXAR	Agios Charalam	2.24	279	P	Pn	18 29 26.1	-0.6
THAS	Thassos island	2.25	345	P	Pn	18 29 25.2	-1.5
THAS	Thassos island	2.25	345	P	Pn	18 29 25.3	-1.4
NAZL	Nazilli-Aydin	2.26	101	Pn	Pn	18 29 27.8	+1.0
CAVK	Edirne/Enez-Ca	2.31	13	⇓P	Pn	18 29 27.2	-0.3
ENEZ	Enez	2.36	12	P	Pn	18 29 27.4	-0.8
KULA	Kula-Manisa	2.49	87	Pn	Pn	18 29 31.2	+1.1
ALN	Alexandroupoli	2.50	10	P	Pn	18 29 28.9	-1.2
PLG	Polygyros	2.50	321	P	Pn	18 29 29.8	-0.4
GUR	Goura	2.53	260	P	Pn	18 29 30.4	-0.2
AGG	Agios Georgios	2.54	284	P	Pn	18 29 30.2	-0.5
VLI	Veliai	2.66	231	P	Pn	18 29 31.6	-0.7
KLV	Kalavryta, Ach	2.66	263	P	Pn	18 29 32.1	-0.2
TEME	Temeni, Aigial	2.66	267	P	Pn	18 29 32.5	+0.2
KAVA	Kavala	2.67	344	P	Pn	18 29 31.3	-1.1
TRIZ	Trizonia	2.69	270	P	Pn	18 29 32.8	+0.1
AGEO	AgiosGiorgios,	2.70	267	P	Pn	18 29 31.5	-1.4
RDO	Rodhopi	2.71	1	P	Pn	18 29 31.9	-1.0
MG00	Magoula, Dorid	2.78	271	P	Pn	18 29 34.3	+0.3
BAND	Balkesir-Ban	2.79	46	⇓P	Pn	18 29 33.8	-0.3
ZIRI	Ziria, Aigiali	2.79	268	P	Pn	18 29 34.3	+0.2
ANX	Ano Chora	2.81	274	P	Pn	18 29 34.4	0.0
EFP	Efpalio	2.82	271	P	Pn	18 29 34.6	+0.2
MALA	Malamata, Dori	2.84	270	P	Pn	18 29 35.0	+0.2
LIT	Litokhoron	2.86	306	P	Pn	18 29 34.4	-0.7
EVR	Evrytania	2.92	281	P	Pn	18 29 36.4	+0.3
THL	Klokotos Trika	2.94	294	P	Pn	18 29 36.0	-0.1
AGRP	Agrapidokambos	2.96	270	P	Pn	18 29 36.7	+0.2
DRO	Drossia	3.02	262	P	Pn	18 29 37.8	+0.5
ARG	Arkhangelos	3.05	136	P	Pn	18 29 38.3	+0.6
SRS	Serrai	3.05	332	P	Pn	18 29 37.1	-0.6
ITM	Ithomi	3.09	247	P	Pn	18 29 38.6	+0.4
ANKY	Antikythira Is	3.10	215	P	Pn	18 29 38.8	+0.4
NPS	Neapolis	3.17	178	P	Pn	18 29 39.1	-0.2
KARP	Karpathos	3.18	155	P	Pn	18 29 39.5	0.0
IDI	Anoyia	3.18	189	Pn	Pn	18 29 39.1	-0.4
	11nm,0.3s,baz=346,slow=12,SNR=22						
IDI				Sn	Sb	18 30 26.4	+1.6
	12nm,0.3s,baz=140,slow=24,SNR=5.3						
IDI	Anoyia	3.18	189	P	Pn	18 29 38.8	-0.7
RZN	Rozhen	3.31	350	iP	Pn	18 29 41.0	-0.4
MMB	Musomishta	3.38	337	eP	Pn	18 29 42.2	-0.1
JMB	Yambol	4.13	11	eP	Pb	18 30 03.5	+1.2
SILT	Sile	4.20	48	⇑P	Pn	18 29 53.3	-0.1
ELND	Elena	4.50	4	⇑P	Pn	18 29 56.7	-0.9
VTS	Vitosha	4.52	338	iP	Pn	18 29 59.3	+1.3
PVL	Pavlikeni	4.69	357	eP	Pn	18 30 00.3	+0.1
PLVB	Pleven	4.99	353	⇓P	Pn	18 30 04.0	-0.3
MPEP	Malo Peshtene	5.09	345	iP	Pn	18 30 05.8	0.0
BRTR	Keskin Array B	6.47	76	Pn	Pn	18 30 25.2	+0.4
	0.6nm,0.3s,baz=255,slow=13,SNR=20						
	1.3nm,0.4s						
HERR	Herculane	6.84	341	⇓P	Pn	18 30 28.9	-0.9
VOIR		7.01	357	⇑P	Pn	18 30 31.6	-0.5
MLR	Muntele Rosu	7.06	3	Pn	Pn	18 30 32.4	-0.5
	0.2nm,0.3s,baz=199,slow=3.5,SNR=6.5						
	3.7nm,0.8s						
MLR	Muntele Rosu	7.06	3	⇑P	Pn	18 30 33.0	+0.1
GZR	Gura Zlata	7.24	345	⇓P	Pn	18 30 34.7	-0.7
PLOR	Plostina	7.46	6	⇓P	Pn	18 30 38.9	+0.6
VRI	Vrincioaia	7.48	7	⇓P	Pn	18 30 38.5	-0.1
DOPR	Dopca	7.53	359	⇓P	Pn	18 30 39.8	+0.5
BZS	Buzias	7.73	339	⇑P	Pn	18 30 41.3	-0.7
DRGR		8.60	347	⇓P	Pn	18 30 54.3	+0.3
MMAI	Mount Meron Ar	9.70	121	Pn	Pn	18 31 08.0	-1.1
	1.8nm,0.3s,baz=311,slow=13,SNR=7.7						
	1.3nm,0.4s						
ESDC	Sonseca Array	22.86	282	P	P	18 33 55.3	+2.4
	1.6nm,0.9s,baz=77,slow=9.4,SNR=7.6						
	1.6nm,0.9s						
NOA	NORSAR Array B	24.33	343	P	P	18 34 06.3	-0.6
	0.8nm,0.7s,baz=168,slow=8.6,SNR=3.5						
	0.8nm,0.7s						
TORD	Torodi Ar. Bea	32.87	226	P	P	18 35 25.5	+2.0
	0.6nm,0.7s,baz=18,slow=6.9,SNR=5.2						
	0.6nm,0.7s						
MKAR	Makanchi Array	41.82	60	P	P	18 36 39.6	+0.5
	0.3nm,0.7s,baz=268,slow=8.9,SNR=5.0						
	0.3nm,0.7s						

*ISK **04** 18:44:46.7, 39°.00N×27°.85E, h3km, ML3.8/24*
*IDC **04** 18:44:46.8±1.3, 38°.97N×27°.70E, h0km, mb3.2/2, mbtmp3.3/6, ML3.2/3, MS2.9/5, Error ellipse: s-maj=17.6km s-min=16.5km az=54.0*
*AFAD **04** 18:44:47.3, 39°.00N×27°.86E, h7km±2km, MW3.6*
*THE **04** 18:44:48.5, 39°N±2°×2°8E±°, h4km±12km, M3.5/11, MLh3.5/11*
*SOF **04** 18:44:56.5, 39°.72N±0°.03×27°.49E±0°.01, h11km±3km, MD3.6/10*
ISC 04 18:44:47.6±1.0**, 39°.00N**±0°.02×**27°.87E**±0°.02**, h6**km±8km**,**
n85, σ0s.69/104**, 10C-10D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.13	200	Pg	Pg	18 44 50.1	-0.2
GORD	Gordes-Manisa	0.26	111	Pg	Pg	18 44 52.6	-0.1
GOMA	Golmarmara-Man	0.29	173	Pg	Pg	18 44 53.7	+0.3
GOMA				Sg	Sb	18 44 58.5	-1.9
SOMA	Soma-Manisa	0.30	301	Pg	Pg	18 44 53.2	-0.4
SOMA				Sg	Sg	18 44 58.0	+0.4
BALB	Balikesir	0.64	1	Pg	Pg	18 44 59.9	-0.1
BALB				Sg	Sb	18 45 09.7	-0.7
IZMD	zmir-Dikili-	0.73	269	P	Pg	18 45 01.8	+0.1
IZMD				S	Sg	18 45 12.2	+0.9
MANT	Manisa	0.74	133	P	Pb	18 45 02.0	-1.1
ODEM	Odemis-Izmir	0.74	167	Pg	Pb	18 45 02.6	-0.3
ODEM				Sg	Sb	18 45 12.7	-0.6
DURS	Dursunbey	0.76	38	P	Pg	18 45 01.9	-0.4
DURS				S	Sb	18 45 13.3	-0.7
BALY	Balya	0.77	345	P	Pg	18 45 02.1	-0.3
BALY				S	Sg	18 45 12.9	+0.6
KULA	Kula-Manisa	0.79	128	Pg	Pb	18 45 02.7	-1.0
BUHA	Balikesir, Bur	0.79	309	P	Pg	18 45 02.4	-0.5
BUHA				S	Sg	18 45 13.7	+0.5
DST	Dursunbey	0.84	44	Pg	Pb	18 45 03.8	-0.8
DUVT	Torbali	0.84	203	P	Pg	18 45 03.8	-0.1
DUVT				S	Sb	18 45 16.3	0.0
IZMR	zmir-demi	0.86	176	P	Pg	18 45 04.3	0.0
IZMR				S	Sb	18 45 16.4	-0.4
BAGT	Foa	0.87	247	P	Pg	18 45 04.7	+0.4
BAGT				S	Sg	18 45 16.9	+1.4
YAYO	Edremit-Balk	0.87	315	Pg	Pg	18 45 03.9	-0.4
SIMA	Simav-Kutahya	0.87	84	Pg	Pb	18 45 04.5	-0.7
SMAA	Simav-Kutahya	0.87	83	Pg	Pb	18 45 04.5	-0.7
SMAA				Sg	Sb	18 45 17.3	+0.2
BLCB	Balcova	0.89	227	Pg	Pg	18 45 04.7	-0.1
BLCB	Balcova	0.89	227	P	Pg	18 45 04.7	-0.1
BLCB				S	Sg	18 45 17.1	+0.8
KIRA	zmir-Kiraz	0.90	152	P	Pb	18 45 05.3	-0.4
KIRA				S	Sb	18 45 18.2	+0.1
FOCM	Foa	0.93	253	Pg	Pg	18 45 05.4	-0.2
SUSR	Susurluk-Balik	0.98	10	Pg	Pg	18 45 06.4	0.0
AYDB	Zeytinkoy-Aydi	1.05	179	Pg	Pg	18 45 07.1	-0.7
SHAP	Saphane-Kutahy	1.05	88	Pg	Pb	18 45 08.1	-0.2
YENI	Yenice-Canakka	1.05	333	Pg	Pg	18 45 07.5	-0.4
GONE	Gonen-Balikesi	1.05	352	Pg	Pg	18 45 07.3	-0.6
NAZL	Nazilli-Aydin	1.09	162	Pn	Pb	18 45 08.3	-0.5
KRBN	Karaburun	1.10	249	Pn	Pg	18 45 08.5	-0.3
GMLD	Gumuldur	1.19	219	Pn	Pg	18 45 10.2	-0.2
CANM	Can-anakkale	1.19	328	Pn	Pg	18 45 10.2	-0.3
GEDZ	Gediz	1.20	87	Pn	Pn	18 45 10.5	-0.5
KUSD	Kusadasi-Aydin	1.23	202	Pn	Pg	18 45 10.4	-0.7
PRK	Paraskevi	1.27	282	P	Pg	18 45 11.3	-0.7
PRK				S	Sg	18 45 28.2	-0.2
BAND	Balkesir-Ban	1.37	7	⇓P	Pn	18 45 12.8	-0.4
BAND				⇑S	Sn	18 45 31.9	+0.3
GCAM	G?zelcaml?	1.39	201	Pn	Pn	18 45 11.6	-1.9
EZN	Ezine	1.45	305	P	Pn	18 45 13.7	-0.7
EZN				S	Sb	18 45 33.0	-0.8
SMG	Samos	1.52	213	P	Pn	18 45 15.5	+0.2
SMG				S	Sg	18 45 37.5	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	1.55	247	P	Pn	18 45 14.8	-1.0
CHOS				S	Sn	18 45 37.1	+0.9
SIGR	SIGRI	1.58	278	P	Pn	18 45 15.8	-0.4
YER	Yerkesik	1.89	170	P	Pn	18 45 21.2	+0.7
GADA	Gvkgeada	1.93	309	P	Pn	18 45 20.4	-0.6
BODT	Bodrum	1.98	193	P	Pn	18 45 22.1	+0.4
CAVK	Edirne/Enez-Ca	2.14	323	⇓P	Pn	18 45 23.8	0.0
CAVK				⇑S	Sn	18 45 50.9	+0.3
ENEZ	Enez	2.18	323	P	Pn	18 45 24.1	-0.3
LIA	Limnos Island	2.27	294	P	Pn	18 45 25.1	-0.4
SMTH	Samothraki Isl	2.33	310	P	Pn	18 45 26.0	-0.4
ALN	Alexandroupoli	2.36	324	P	Pn	18 45 26.4	-0.4
SILT	Sile	2.54	32	⇑P	Pn	18 45 29.0	-0.4
ARG	Arkhangelos	2.79	176	P	Pn	18 45 33.8	+1.1
RDO	Rodhopi	2.79	321	P	Pn	18 45 32.7	-0.1
RZN	Rozhen	3.60	319	i P	Pn	18 45 44.1	0.0
PLD	Plovdiv	3.94	324	i P	Pn	18 45 48.6	0.0
MMB	Musomishta	4.05	310	i P	Pn	18 45 50.5	+0.3
ELND	Elena	4.21	340	⇑P	Pn	18 45 52.0	-0.2
IDI	Anoyia	4.40	214	Pn	Pn	18 45 54.0	-1.0
	5.2nm,0.8s,baz=272,slow=16,SNR=1.6						
PGB	Panagyurishte	4.49	323	i P	Pn	18 45 56.2	0.0
BRTR	Keskin Array B	4.53	79	Pn	Pn	18 45 58.9	+2.1
	0.5nm,0.3s,baz=256,slow=14,SNR=12						
BRTR				Pg	Pg	18 46 13.2	-1.2
	0.8nm,0.3s,baz=258,slow=14,SNR=5.5						
BRTR				Lg	Lg	18 47 16.0	
	0.8nm,0.3s,baz=261,slow=25,SNR=9.9						
BRTR				LR	LR	18 48 07.2	
	comp=Z,64nm,18.9s,baz=266,slow=43						
	1.6nm,0.4s						
PVL	Pavlikeni	4.59	335	i P	Pn	18 45 57.9	+0.3
KKB	Krupnik	4.60	310	eP	Pn	18 45 57.8	+0.1
KIRS	Kirsehir-Merke	4.71	86	⇑P	Pn	18 46 00.0	+0.8
PLNA	Plana	4.84	317	i P	Pn	18 46 01.6	+0.5
PLVB	Pleven	5.02	332	⇑P	Pn	18 46 03.9	+0.5
VTS	Vitosha	5.04	317	i P	Pn	18 46 04.1	+0.2
MPEP	Malo Peshtene	5.35	326	eP	Pn	18 46 07.2	-0.8
BOVS	Bovan	6.55	317	⇑P	Pn	18 46 25.0	+0.5
MLR	Muntele Rosu	6.64	348	Pn	Pn	18 46 26.7	+0.9
	0.2nm,0.3s,baz=131,slow=6.0,SNR=5.7						
MLR				Sn	Sn	18 47 41.4	-0.4
	1.4nm,0.3s,baz=209,slow=19,SNR=7.8						
	6.9nm,1.0s						
MLR	Muntele Rosu	6.64	348	⇓P	Pn	18 46 26.0	+0.2
VOIR		6.76	343	⇓P	Pn	18 46 27.3	-0.1
PLOR	Plostina	6.91	353	⇑P	Pn	18 46 30.0	+0.6
VRI	Vrincioaia	6.91	353	⇓P	Pn	18 46 29.4	-0.1
COVR	Voineasa-Covas	6.95	350	⇓P	Pn	18 46 30.9	+0.9
TURR	Turia	7.18	350	⇑P	Pn	18 46 32.6	-0.5
DOPR	Dopca	7.20	346	⇓P	Pn	18 46 34.1	+0.7
ONER	Baraj Valea Uz	7.41	352	⇓P	Pn	18 46 37.3	+1.0
GZR	Gura Zlata	7.42	331	⇓P	Pn	18 46 36.3	-0.2
TESR	Tescani	7.56	354	⇓P	Pn	18 46 38.7	+0.3
BZS	Buzias	8.07	327	⇑P	Pn	18 46 44.6	-0.8
MMAI	Mount Meron Ar	8.54	132	Pn	Pn	18 46 52.4	+0.6
	0.5nm,0.3s,baz=302,slow=12,SNR=2.3						
MMAI				LR	LR	18 50 49.3	
	comp=Z,61nm,18.5s,baz=274,slow=42						
	0.7nm,0.4s						
GNI	Garni	13.07	80	LR	LR	18 54 04.5	
	comp=Z,54nm,20.2s,baz=290,slow=42						
AKTO	Aktyubinsk	24.11	52	LR	LR	19 01 40.7	
	comp=Z,46nm,20.1s,baz=156,slow=42						
NOA	NORSAR Array B	24.38	340	LR	LR	18 59 57.8	
	comp=Z,29nm,20.0s,baz=355,slow=37						
TORD	Torodi Ar. Bea	34.63	229	P	P	18 51 36.5	-1.1
	0.2nm,0.3s,baz=41,slow=6.0,SNR=2.2						
	0.2nm,0.3s						
MKAR	Makanchi Array	39.92	61	P	P	18 52 24.4	+2.0
	0.2nm,0.7s,baz=263,slow=6.2,SNR=2.0						
	0.2nm,0.7s						

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*IDC **04** 18:57:20.8±1.1, 5°.82S×127°.90E, h399km±14km, mb3.0/2, mbtmp4.2/6, Error ellipse: s-maj=19.6km s-min=11.8km az=92.0*

*NEIC **04** 18:57:20.7±2.6, 5°.76S±0°.07×127°.85E±0°.08, h393km±11km, mb4.2/6, Error ellipse: s-maj=13.1km s-min=9.3km az=123.0*

ISC 04 18:57:20.5±0.7, **5°.82S**±0°.06×**127°.89E**±0°.07, **h400**km, **n21**, σ**1.53**/29, **mb3.9**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	4.01	123	Pn	Pn	18 58 31.6	-1.0
SAUI				Sn	S	18 59 28.7	-2.5
FAKI	Fak Fak	5.21	57		Pn	18 58 46.2	+1.4
FAKI				Sn	S	18 59 50.5	-2.8
SOEI	Soe	5.31	222	Pn	Pn	18 58 45.8	-0.1
SOEI				Sn	S	18 59 53.1	-2.2
SIJI	Sorong	5.96	35	P	Pn	18 58 54.9	+2.1
	7.5nm,0.5s,baz=236,slow=22,SNR=19						
SIJI				S	S	19 00 06.6	-1.3
	5.5nm,0.2s,baz=227,slow=22,SNR=11						
BATI	Baumata	6.04	224	P	Pn	18 58 54.6	+0.9
	16nm,0.4s,baz=15,slow=4.4,SNR=5.9						
BATI				S	S	19 00 08.4	-1.2
	18nm,0.6s,baz=319,slow=20,SNR=1.8						
LUWI	Luwuk	6.97	313	Pn	Pn	18 59 01.1	-2.9
KNRA	Kununurra	9.83	175		Pn	18 59 37.6	+1.0
JAGI	Jajag, Banyuwa	13.89	258	P	P	19 00 20.8	-0.2
WB0	Warramunga Arr	15.24	156	P	P	19 00 36.8	+1.2
WRA	Warramunga Arr	15.37	157	P	P	19 00 37.9	+0.8
	10nm,0.3s,baz=338,slow=10,SNR=169						
WRA				S	S	19 03 17.6	-2.3
	0.4nm,0.5s,baz=337,slow=21,SNR=5.3						
WR8	Warramunga Arr	15.45	156	P	P	19 00 39.2	+1.2
WR8				S	S	19 03 19.2	-2.1
COEN	Coen	17.08	119	P	P	19 00 56.6	+1.2
AS31	Alice Springs	18.66	163	P	P	19 01 13.0	+0.8
AS31				IAmb	IAmb	19 01 13.6	
	comp=Z,1.9nm,0.4s						
ASAR	Alice Springs	18.66	163	P	P	19 01 12.7	+0.5
	comp=Z,4.4nm,0.3s,baz=344,slow=12,SNR=131						
ASAR				S	S	19 04 23.1	+0.3
	comp=Z,0.7nm,0.7s,baz=349,slow=21,SNR=6.0						
ASAR	Alice Springs	18.66	163	P	P	19 01 12.8	+0.7
BBOO	Buckleboo	27.91	165	P	P	19 02 37.2	+1.3
BBOO				IAmb	IAmb	19 02 46.1	
	comp=Z,30nm,1.4s						
STKA	Stephens Creek	28.92	155	P	P	19 02 46.1	+1.3
	comp=Z,0.9nm,0.3s,baz=340,slow=15,SNR=3.1						
	comp=Z,0.9nm,0.3s						
STKA	Stephens Creek	28.92	155	P	P	19 02 44.5	-0.3
STKA				IAmb	IAmb	19 03 06.5	
	comp=Z,20nm,1.1s						
KSAR	Wonju Array Be	43.04	360	P	P	19 04 41.6	-1.2
MKAR	Makanchi Array	66.11	328	P	P	19 07 26.6	+0.2
	comp=Z,0.3nm,0.4s,baz=129,slow=7.6,SNR=10						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	66.11	328	P	P	19 07 27.1	+0.8

IDC 04 19:07:03.8±2.7, **4°.55N**×**127°.47E**, **h0**km, **mb3.1**/3, **mbtmp3.1**/3, **Error ellipse: s-maj=206.4km s-min=29.1km az=67.0**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.26	165	P	P	19 12 30.2	-1.7
	0.3nm,0.7s,baz=344,slow=10,SNR=2.4						
	0.3nm,0.7s						
ASAR	Alice Springs	28.74	168	P	P	19 13 04.8	+1.5
	0.2nm,0.8s,baz=350,slow=9.5,SNR=4.0						
	0.2nm,0.8s						
MKAR	Makanchi Array	57.31	325	P	P	19 16 53.6	-0.1
	0.1nm,0.6s,baz=117,slow=7.6,SNR=4.1						
	0.1nm,0.6s						

KRSC 04 19:07:22.5±1.2, **49°.88N**×**156°.93E**, **h20**km±24km, **Ml3.6**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.96	328	eP	Pb	19 07 39.9	-0.5
SKR				eS	Sb	19 07 52.1	-0.6
PAU	Pauzhetka	1.59	357	eP	Pb	19 07 51.6	+0.4
PAU				eS	Sb	19 08 11.4	+0.5
KDTR	Khodutka, Kamc	2.07	20	eP	Pb	19 07 58.3	-1.1
KDTR				eS	Sb	19 08 24.4	-0.1
ASAK	Asacha	2.58	13	eP	Pb	19 08 05.8	-2.3
MTVR	Mutnovka	2.73	16	eP	Pb	19 08 08.1	-2.5
MTVR				eS	Sb	19 08 41.2	-2.5
RUS	Russkaya	2.75	21	eP	Pn	19 08 07.6	+2.2
RUS				eS	Sn	19 08 40.7	+2.7
GRL	Gorelyy	2.77	15	eP	Pb	19 08 09.0	-2.5
KRMR	Karymshinskiy	3.05	14	eS	Sb	19 08 50.0	-2.8
DALK	Dalny	3.36	19	eP	Pn	19 08 16.3	+2.5
UGLR	Uglovaya	3.54	19	eP	Pn	19 08 20.0	+3.6
AVH	Avacha	3.58	18	eP	Pn	19 08 20.8	+3.9
KOK	Koryaka	3.58	17	eP	Pb	19 08 21.2	-4.0
SMAR	Somma	3.59	18	eP	Pn	19 08 19.8	+2.6
SDLR	Sedlovina	3.62	19	eP	Pn	19 08 20.5	+3.0
KRX	Arik	3.65	16	eP	Pn	19 08 21.5	+3.6

SSNC 04 19:12:43.8±0.5, **19°.16N**×**79°.90W**, **h11**km±3km, **MD3.1**, **ML2.1**, **Presumed earthquake**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	0.54	341	eP	Pg	19 12 53.1	-1.2
LCCY				eS	Sg	19 13 00.2	-1.2
LCCY				IAML		19 13 01.4	
	comp=N,188nm,0.2s						
LCCY				IAML		19 13 01.4	
	comp=E,83nm,0.1s						
LCCY	Blossom Villag	0.54	341	i P	Pg	19 12 53.0	-1.3
LCCY				i S	Sg	19 13 00.2	-1.2
LCCY				IAML		19 13 34.6	
	comp=Z,520nm,1.0s						
CBCY	The Bluff, Cay	0.59	13	eP	Pg	19 12 54.0	-1.3
CBCY				eS	Sg	19 13 02.1	-1.0
CBCY				IAML		19 13 02.6	
	comp=E,365nm,0.3s						
CBCY				IAML		19 13 02.7	
	comp=N,194nm,0.2s						
CBCY	The Bluff, Cay	0.59	13	i P	Pg	19 12 54.0	-1.3
CBCY				i S	Sg	19 13 02.1	-1.0
CBCY				IAML		19 13 03.3	
	comp=Z,360nm,1.0s						
CCCC	Cccc	2.85	44	eP	Pn	19 13 30.4	+1.2
CCCC				eS	Sn	19 14 04.3	+0.7
CCCC				IAML		19 14 10.9	
	comp=N,1.7nm,0.3s						
CCCC				IAML		19 14 12.9	
	comp=E,2.3nm,0.4s						
CCCC	Cccc	2.85	44	i P	Pn	19 13 31.1	+1.9
CCCC				IAML		19 15 24.1	
	comp=Z,21nm,1.0s						
LMGC	Las Mercedes	2.87	71	eP	Pn	19 13 27.4	-2.1
LMGC				eS	Sn	19 13 59.3	-4.7
LMGC				IAML		19 14 01.9	
	comp=N,6.1nm,0.1s						
LMGC				IAML		19 14 03.9	
	comp=E,4.5nm,0.1s						
LMGC	Las Mercedes	2.87	71	i P	Pn	19 13 28.3	-1.2
LMGC				IAML		19 14 35.1	
	comp=Z,28nm,1.0s						
MGV	Manicaragua	2.94	358	eP	Pn	19 13 28.4	-2.0
MGV				eS	Sn	19 14 01.0	-4.7
MGV	Manicaragua	2.94	358	i P	Pb	19 13 34.7	-1.5
MGV				IAML		19 13 54.0	
	comp=Z,95nm,1.0s						
CHIV	Chivirico	3.38	76	eP	Pn	19 13 34.2	-2.4
CHIV				eS	Sn	19 14 11.8	-4.9
CHIV	Chivirico	3.38	76	i P	Pn	19 13 34.2	-2.3
CHIV				IAML		19 15 58.8	
	comp=Z,38nm,1.0s						

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*NEIC **04** 19:13:00.9±1.5, 2°.54N±0°.09×123°.1E±0°.1, h454km±7km, mb4.0/21, Error ellipse: s-maj=19.6km s-min=8.0km az=55.0*

*IDC **04** 19:13:02.8±3.5, 2°.47N×123°.09E, h484km±51km, mb3.1/8, mbtmp4.0/10, Error ellipse: s-maj=50.4km s-min=14.4km az=74.0*

ISC 04 19:13:00.5±0.5, **2°.54N**±0°.07×**123°.05E**±0°.08, **h450**km, **n50**, σ**1.23**/51, **mb3.7**/16, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	2.67	238	P	P	19 14 06.7	+1.4
TOLI2				S	S	19 14 53.8	-3.9
TOLI2	Tolitoli	2.67	238	P	P	19 14 07.2	+2.0
LUWI	Luwuk	3.57	184	P	P	19 14 13.0	+1.0
LUWI				S	S	19 15 08.1	-2.0
LUWI	Luwuk	3.57	184	P	P	19 14 13.3	+1.3
LUWI	Luwuk	3.57	184	S	S	19 15 09.5	-0.6
TNTI	Ternate	4.66	112	P	P	19 14 21.7	0.0
TNTI				S	S	19 15 25.9	-1.8
TNTI	Ternate	4.66	112	P	P	19 14 22.9	+1.2
MYLDM	Lahad Datu	5.24	300	P	P	19 14 27.2	0.0
SANI	Sanana	5.42	147	P	P	19 14 28.6	-0.5
KKM	Kota Kinabalu	7.65	297	P	P	19 14 52.3	-0.1
SIJI	Sorong	8.89	112	P	P	19 15 07.5	+1.9
	5.8nm,0.4s,baz=332,slow=17,SNR=9.5						
FAKI	Fak Fak	10.68	120	P	P	19 15 26.0	+0.9
FAKI	Fak Fak	10.68	120	P	P	19 15 26.7	+1.6
SBUM	Sibu	10.82	270	P	P	19 15 28.0	+1.4
PLAI	Plampang	12.46	205	P	P	19 15 47.2	+2.8
BATI	Baumata	12.68	177	P	P	19 15 48.3	+1.5
	15nm,0.5s,baz=53,slow=2.6,SNR=4.3						
MTN	Manton Dam	17.26	152	P	P	19 16 35.1	-0.6
MTN				IAmb	IAmb	19 16 47.4	
	comp=Z,17nm,1.3s						
KNRA	Kununurra	18.96	163	P	P	19 16 51.7	-0.8
FITZ	Fitzroy Crossi	20.67	173	P	P	19 17 07.9	-0.2
	comp=Z,1.1nm,0.3s,baz=8.5,slow=5.4,SNR=9.1						
	comp=Z,1.1nm,0.3s						
TPUB	Ta-pu	20.77	354	P	P	19 17 08.6	-0.4
SSLB	Suanglung	21.22	355	P	P	19 17 12.8	-0.3
WRAB	Tennant Creek	24.94	154	P	P	19 17 45.6	-0.9
WRA	Warramunga Arr	24.94	154	P	P	19 17 45.5	-1.1
	comp=Z,1.3nm,0.5s,baz=335,slow=9.6,SNR=30						
	comp=Z,1.3nm,0.5s						
WRA	Warramunga Arr	24.94	154	P	P	19 17 44.2	-2.4
WR8	Warramunga Arr	25.02	154	P	P	19 17 46.1	-1.2
WR8				IAmb	IAmb	19 18 05.7	
	comp=Z,7.3nm,1.3s						
LHMI	Lhok Sumawe	26.17	277	P	P	19 17 58.9	+1.3
ASAR	Alice Springs	28.11	158	P	P	19 18 14.2	-0.4
	comp=Z,0.5nm,0.3s,baz=335,slow=8.7,SNR=22						
	comp=Z,0.5nm,0.3s						
QIS	Mount Isa	28.12	145	P	P	19 18 14.9	+0.3
MORW	Morawa	32.14	192	P	P	19 18 48.4	-1.0
MORW				IAmb	IAmb	19 18 53.9	
	comp=Z,14nm,1.4s						
FORT	Forrest	33.48	172	P	P	19 18 60.0	-0.8
FORT				IAmb	IAmb	19 19 33.3	
	comp=Z,7.6nm,0.9s						
INKA	Innaminka	34.59	152	P	P	19 19 11.0	+0.7
INKA				IAmb	IAmb	19 19 41.1	
	comp=Z,3.7nm,1.3s						
BBOO	Buckleboo	37.25	162	P	P	19 19 32.2	-0.3
BBOO				IAmb	IAmb	19 20 12.8	
	comp=Z,15nm,1.2s						
BJT	Baijiatuau	37.82	351	P	P	19 19 37.3	+0.2
BJT				IAmb	IAmb	19 19 38.4	
	comp=Z,6.0nm,1.4s						
STKA	Stephens Creek	38.50	154	P	P	19 19 42.5	-0.2
	comp=Z,2.4nm,0.6s,baz=339,slow=8.6,SNR=3.9						
	comp=Z,2.4nm,0.6s						
STKA	Stephens Creek	38.50	154	IAmb	IAmb	19 19 43.9	
	comp=Z,18nm,0.9s						
ARMA	Armidale	42.64	142	P	P	19 20 15.6	-0.5
CAN	Canberra	44.83	149	P	P	19 20 33.5	+0.4
HILR	Hailar Array B	46.93	357	P	P	19 20 49.7	+0.8
	comp=Z,1.2nm,0.4s,baz=172,slow=11,SNR=2.7						
	comp=Z,1.2nm,0.4s						
MKAR	Makanchi Array	56.50	327	P	P	19 21 58.8	+0.2
	comp=Z,0.7nm,0.4s,baz=126,slow=8.1,SNR=30						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	56.50	327	P	P	19 21 58.4	-0.2
MAKZ	Makanchi	56.68	327	P	P	19 21 59.5	-0.3
KBL	Kabul	59.37	309	P	P	19 22 18.6	0.0
ZALV	Zalesovo Beam	60.04	335	P	P	19 22 21.7	-0.8
	comp=Z,0.3nm,0.3s,baz=138,slow=6.4,SNR=2.4						
	comp=Z,0.3nm,0.3s						
GAR	Garm	60.07	314	P	P	19 22 22.4	-0.7
GAR				IAmb	IAmb	19 22 25.9	
	comp=Z,2.9nm,1.1s						
KURBB	Kurchatov Arra	60.81	329	P	P	19 22 27.5	-0.1
	comp=Z,0.4nm,0.3s,baz=117,slow=6.3,SNR=8.3						
	comp=Z,0.4nm,0.3s						
KURK	Kurchatov	60.82	329	P	P	19 22 27.5	-0.2
KURK	Kurchatov	60.82	329	IAmb	IAmb	19 22 28.0	
	comp=Z,2.6nm,0.3s						
AB31	Akbulak array	70.77	322	P	P	19 23 29.6	-0.6
ABKAR	Akbulak array	70.77	322	P	P	19 23 28.8	-1.4
VNDA	Vanda	82.74	172	P	P	19 24 34.7	-0.8
VNDA				IAmb	IAmb	19 25 04.9	
	comp=Z,4.3nm,1.2s						

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*PDG **04** 19:15:15.7±0.0, 41°.60N×19°.80E, h9km, ML2.5/8, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

ISC 04 19:15:11.6±1.5, **41°.40N**±0°.07×**19°.88E**±0°.07, **h11**km±15km, **n9**, σ**0.55**/18, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.75	112	i Pg	Pg	19 15 25.9	-0.2
OHR				i Sg	Sg	19 15 36.1	+0.1
DRME	Dracevica, Mon	0.94	327	ePg	Pb	19 15 29.5	-0.4
DRME				eSg	Sb	19 15 41.2	-1.2
PDG	Podgorica	1.13	336	ePg	Pb	19 15 32.7	-0.4
PDG				i Sg	Sb	19 15 47.2	-0.6
BUM	Brajici-Budva	1.16	321	ePg	Pn	19 15 33.6	-0.2
BUM				i Sg	Sb	19 15 49.0	+0.2
IVA	Berane	1.47	0	ePg	Pb	19 15 39.2	+0.2
IVA				i Sg	Sg	19 15 58.9	0.0
HCY	Herceg Novi	1.47	316	ePg	Pb	19 15 39.5	+0.5
HCY				i Sg	Sg	19 15 59.8	+0.8
KOME	Kolasin	1.47	349	ePg	Pn	19 15 38.9	+0.8
KOME				eSg	Sg	19 15 58.9	-0.1
NKME	Niksic	1.53	333	ePg	Pb	19 15 40.1	+0.1
NKME				eSg	Sg	19 16 00.8	0.0
PLE	Pljevlja	1.96	349	ePn	Pb	19 15 47.3	-0.1
PLE				i Sn	Sb	19 16 12.3	+0.4

MEX 04 19:16:17.1±0.6, **19°.48N**×**102°.23W**, **h10**km, **Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URUA	Uruapan	0.16	110	i P	Pg	19 16 19.3	-1.4
URUA				i S	Sg	19 16 22.4	-0.9
INCO	Volcan de Coli	1.29	272	eP	Pn	19 16 38.6	-3.0
INCO				eS	Sb	19 16 54.5	-4.2
SOMAC	Volcano de Col	1.32	272	eP	Pn	19 16 38.7	-3.2
SOMAC				eS	Sb	19 16 55.6	-3.8
CEGR	Campo Tres	1.54	267	eP	Pn	19 16 41.9	-2.9
CEGR				eS	Sn	19 17 01.6	-3.3
MMIG	Aquila	1.58	222	eP	Pn	19 16 41.7	-3.5
MMIG				eS	Sn	19 17 01.4	-4.3
CDAR	Ciudad de Arme	1.76	253	eP	Pn	19 16 45.0	-2.7
CDAR				eS	Sn	19 17 06.8	-3.5
ZIIG	Zihuatanejo	2.00	159	eP	Pn	19 16 48.8	-2.1
ZIIG				eS	Sn	19 17 13.2	-2.8
ARIG	Puente Sto Nin	2.14	123	eP	Pn	19 16 52.2	-0.8
ARIG				eS	Sn	19 17 20.9	+1.2
CJM	Chamela	2.65	271	eP	Pn	19 16 59.7	-0.3
CJM				eS	Sn	19 17 32.9	+0.7
CAIG	El Cayaco	3.05	142	eP	Pn	19 17 06.5	+1.1
CAIG				eS	Sb	19 17 46.2	-2.7

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*PDG **04** 19:24:20.8±0.1, 41°.63N×20°.04E, h10km, ML2.5/10, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

ISC 04 19:24:18.9±1.3, **41°.60N**±0°.06×**20°.15E**±0°.06, **h4**km±11km, **n11**, σ**1.15**/22, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.69	135	i Pg	Pg	19 24 31.5	-0.6
OHR				i Sg	Sg	19 24 41.9	+1.0
ULC	Ulcinj	0.77	299	ePg	Pg	19 24 33.2	-0.6
ULC				i Sg	Sb	19 24 44.4	-1.5
DRME	Dracevica, Mon	0.94	310	ePg	Pg	19 24 36.6	-0.2
DRME				i Sg	Sb	19 24 49.9	-0.6
PVY	Plav	1.01	352	ePg	Pg	19 24 37.1	-1.2
PVY				i Sg	Sn	19 24 54.0	-0.8
PDG	Podgorica	1.07	322	ePg	Pg	19 24 39.2	-0.2
PDG				i Sg	Sn	19 24 54.7	-1.3
IVA	Berane	1.29	351	ePg	Pn	19 24 43.9	+0.1
IVA				i Sg	Sn	19 25 03.4	+1.8
KOME	Kolasin	1.34	340	ePg	Pn	19 24 44.5	-0.1
KOME				i Sg	Sn	19 25 04.7	+1.8
NKME	Niksic	1.47	323	ePg	Pn	19 24 46.5	+0.2
NKME				i Sg	Sg	19 25 08.4	+2.2
HCY	Herceg Novi	1.50	305	ePg	Pn	19 24 46.9	+0.2
HCY				i Sg	Sg	19 25 08.9	+1.7
BRY	Bratogost	1.77	318	ePn	Pb	19 24 51.7	-0.4
BRY				i Sn	Sg	19 25 15.8	-0.1
PLE	Pljevlja	1.82	342	ePn	Pn	19 24 52.5	+1.3
PLE				i Sn	Sg	19 25 17.4	-0.1

IDC 04 19:24:51.6±1.7, **30°.85S**×**178°.46W**, **h140**km±13km, **mb3.5**/3, **mbtmp4.0**/4, **Error ellipse: s-maj=50.1km s-min=15.4km az=112.0**, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.66	17	P	Pn	19 25 23.2	+1.0
	307nm,0.2s,baz=33,slow=20,SNR=6.4						
RAO				S	Sn	19 25 45.5	-0.1
	898nm,0.3s,baz=86,slow=23,SNR=6.8						
URZ	Urewera	8.24	205	P	Pn	19 26 49.7	+1.6
	4.0nm,0.4s,baz=276,slow=22,SNR=2.0						
URZ				S	Sn	19 28 17.0	-2.7
	16nm,0.4s,baz=310,slow=23,SNR=15						
STKA	Stephens Creek	33.99	258	P	P	19 31 23.3	+1.3
	4.3nm,0.7s,baz=95,slow=11,SNR=11						
	4.3nm,0.7s						
ASAR	Alice Springs	42.69	268	P	P	19 32 34.9	0.0
	0.3nm,0.4s,baz=105,slow=7.2,SNR=8.0						
	0.3nm,0.4s						
WRA	Warramunga Arr	43.72	273	P	P	19 32 42.0	-1.1
	0.8nm,0.5s,baz=112,slow=8.0,SNR=13						
	0.8nm,0.5s						
FINES	FINESS Array B	145.43	339	PKPbc	PKPdf	19 44 11.2	-1.0
	1.7nm,0.4s,baz=58,slow=4.5,SNR=22						

IDC 04 19:27:48.9±3.0, **6°.88S**×**128°.70E**, **h0**km, **mb3.1**/1, **mbtmp3.2**/3, **ML3.3**/2, **MS3.1**/1, **Error ellipse: s-maj=308.8km s-min=33.2km az=67.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.09	158	Pn	Pn	19 31 09.1	-0.9
	0.1nm,0.3s,baz=334,slow=13,SNR=5.7						
WRA				Sn	Sn	19 33 34.3	-13
	0.2nm,0.3s,baz=344,slow=22,SNR=6.3						
	0.2nm,0.5s						
ASAR	Alice Springs	17.43	164	P	Pn	19 31 54.2	+0.6
	0.2nm,0.3s,baz=345,slow=11,SNR=21						
	0.6nm,0.4s						
CTA	Charters Tower	21.50	129	LR	LR	19 41 56.4	
	comp=Z,50nm,20.5s,baz=37,slow=39						
MKAR	Makanchi Array	67.42	327	P	P	19 38 46.5	0.0
	0.1nm,0.4s,baz=123,slow=7.2,SNR=1.6						
	0.1nm,0.4s						

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*JMA **04** 19:29:44.4±0.5, 32°N±4°×13°8E±°, h355km, MV3.0/36, FAR S OFF TOKAI DISTRICT*

*IDC **04** 19:29:47.7±2.9, 32°.64N×138°.21E, h354km±88km, mb2.7/4, mbtmp3.4/5, Error ellipse: s-maj=216.1km s-min=23.0km az=63.0*

ISC 04 19:29:47.8±1.1, **32°.7N**±0°.1×**138°.3E**±0°.1, **h350**km, **n16**, σ**1.47**/21, **mb2.8**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	2.10	322	eP	Pn	19 30 39.8	0.0
JOD2	Odawara 2	2.62	15	eP	Pn	19 30 45.1	+1.3
JOD2				eS	S	19 31 31.4	+2.5
JNY	Yasuok	2.64	353	eP	Pn	19 30 45.5	+1.4
BSO3	Boso 3	2.79	42	eS	S	19 31 31.9	+0.9
BSO2	Boso 2	2.90	45	eS	S	19 31 31.8	-0.8
BSO1	Boso 1	2.97	49	eP	Pn	19 30 47.0	+0.8
BSO1				eS	S	19 31 35.5	+2.2
JRY	Ryogami san	3.32	9	eP	Pn	19 30 51.9	+1.8
MJAR	Matsushiro Arr	3.80	359	P	Pn	19 30 55.4	+0.7
	5.6nm,0.8s,baz=182,slow=10,SNR=11						
JAG	Ashikaga	3.82	15	eP	Pn	19 30 55.1	+0.2
JAG				eS	S	19 31 47.8	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JYT	**Yasato**	**3.84**	**24**	eP	**Pn**	**19 30 55.1**	**0.0**
JYT				eS	**S**	**19 31 46.9**	**-2.4**
JHO	**Hitachi**	**4.32**	**26**	eP	**Pn**	**19 31 00.1**	**+0.1**
JFK	**Kawauchi**	**5.10**	**24**	eP	**Pn**	**19 31 08.8**	**+0.3**
JFK				eS	**S**	**19 32 11.6**	**-2.1**
SONM	**Songino Array**	**28.36**	**312**	P	**P**	**19 35 12.6**	**+1.7**
	0.7nm,0.7s,baz=118,slow=10,SNR=4.2						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**44.35**	**305**	P	**P**	**19 37 23.2**	**-1.2**
	0.3nm,0.6s,baz=86,slow=9.7,SNR=6.2						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**46.73**	**311**	P	**P**	**19 37 41.7**	**-1.1**
	0.2nm,0.3s,baz=91,slow=7.6,SNR=3.1						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**52.51**	**185**	P	**P**	**19 38 25.2**	**-1.1**
	0.2nm,0.4s,baz=0.1,slow=7.8,SNR=4.7						
	0.2nm,0.4s						

*JMA **04** 19:31:38.9±0.1, 24°3N±0°4×121°7E±0°8, h19^{km}±1^{km}, MV2.6/12, TAIWAN REGION*
*TAP **04** 19:31:38.5, 24°30N×121°62E, h22^{km}, ML3.6, B*
ISC 04 19:31:38.9±0.8**, 24°31N**±0°01×**121°64E**±0°01**, h18**^{km}±2^{km}**, n135,** σ**0^{s}79**/220**, 8C-20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**89**	P	**Pg**	**19 31 43.0**	**+0.4**
EHP				eS	**Sg**	**19 31 45.7**	**+0.6**
EAHA	**Aohua**	**0.10**	**77**	⇑iP	**Pg**	**19 31 43.0**	**+0.4**
EAHA				eS	**Sg**	**19 31 45.9**	**+0.8**
NACB	**Ninganchiao**	**0.14**	**196**	P	**Pg**	**19 31 43.1**	**0.0**
NACB	**Ninganchiao**	**0.14**	**196**	⇑iP	**Pg**	**19 31 43.1**	**0.0**
NACB				iS	**Sg**	**19 31 46.3**	**+0.4**
ETL	**Fush Village**	**0.15**	**185**	⇑iP	**Pg**	**19 31 43.3**	**0.0**
ETL				S	**Sg**	**19 31 46.6**	**+0.5**
ETLH	**Xiulin Townshi**	**0.17**	**235**	⇑iP	**Pg**	**19 31 43.9**	**+0.2**
ETLH				S	**Sg**	**19 31 47.2**	**+0.5**
EWUT	**Wuta**	**0.19**	**43**	⇑iP	**Pg**	**19 31 44.1**	**+0.4**
TWD	**Chiawan**	**0.23**	**189**	⇑iP	**Pb**	**19 31 44.2**	**-0.2**
TWD				eS	**Sg**	**19 31 48.5**	**+0.5**
LATG	**Datong**	**0.25**	**336**	⇓iP	**Pb**	**19 31 44.9**	**0.0**
LATG				iS	**Sg**	**19 31 49.2**	**+0.5**
NNSB	**Datong**	**0.26**	**297**	⇓iP	**Pb**	**19 31 45.1**	**+0.1**
NNSB				S	**Sb**	**19 31 49.1**	**-0.1**
NNS	**Nan Shan**	**0.27**	**299**	⇓iP	**Pg**	**19 31 45.3**	**+0.1**
NNS				S	**Sb**	**19 31 49.8**	**+0.1**
HWA	**Hwalien**	**0.33**	**185**	⇓P	**Pg**	**19 31 46.2**	**+0.2**
HWA				eS	**Sb**	**19 31 51.9**	**+0.6**
NDS	**Dongshan**	**0.33**	**12**	eP	**Pg**	**19 31 46.1**	**0.0**
ENTT	**Nioudou**	**0.34**	**349**	⇓iP	**Pg**	**19 31 46.2**	**0.0**
ENTT				eS	**Sg**	**19 31 51.1**	**0.0**
LXIB	**Xiulin Townshi**	**0.35**	**216**	⇑iP	**Pg**	**19 31 46.0**	**-0.5**
TWC	**Suao**	**0.36**	**33**	P	**Pg**	**19 31 46.6**	**+0.1**
TWC				S	**Sg**	**19 31 51.8**	**+0.2**
FUSS	**Fushou**	**0.36**	**261**	⇓P	**Pg**	**19 31 46.9**	**+0.2**
FUSS				iS	**Sg**	**19 31 52.0**	**0.0**
ETM	**Tongmen**	**0.36**	**201**	P	**Pg**	**19 31 46.0**	**-0.6**
ETM				eS	**Sg**	**19 31 51.6**	**-0.3**
WHF	**Hehuan Shan**	**0.38**	**245**	⇓P	**Pg**	**19 31 47.0**	**0.0**
WHF				S	**Sg**	**19 31 52.4**	**-0.2**
TWE	**Neicheng**	**0.41**	**4**	⇓iP	**Pg**	**19 31 47.5**	**0.0**
TWE				iS	**Sg**	**19 31 53.6**	**+0.3**
TWT	**Tachien**	**0.42**	**263**	⇓iP	**Pg**	**19 31 48.0**	**+0.3**
TWT				S	**Sg**	**19 31 54.0**	**+0.3**
YHNB	**Yeheng**	**0.43**	**327**	P	**Pg**	**19 31 48.0**	**+0.1**
YHNB	**Yeheng**	**0.43**	**327**	⇓iP	**Pg**	**19 31 47.9**	**+0.1**
YHNB				S	**Sg**	**19 31 53.8**	**0.0**
TEYL	**Yanliau Villag**	**0.44**	**185**	eP	**Pg**	**19 31 47.4**	**-0.5**
TEYL				eS	**Sg**	**19 31 54.2**	**+0.2**
TDCB	**Techi**	**0.44**	**263**	⇓P	**Pg**	**19 31 48.1**	**+0.1**
TDCB				eS	**Sg**	**19 31 53.4**	**-0.8**
NSK	**Sanguang**	**0.45**	**325**	⇓iP	**Pg**	**19 31 48.1**	**0.0**
NSK				S	**Sg**	**19 31 54.1**	**-0.2**
FUSB	**Fushanzhiwuyua**	**0.45**	**354**	⇓iP	**Pg**	**19 31 48.1**	**-0.1**
FUSB				S	**Sg**	**19 31 54.3**	**-0.1**
ILA	**Ilan**	**0.47**	**12**	eP	**Pg**	**19 31 47.2**	**-1.2**
ILA				eS	**Sg**	**19 31 54.4**	**-0.4**
NWLT	**Wulai**	**0.48**	**345**	⇓iP	**Pg**	**19 31 48.6**	**-0.2**
NWLT				S	**Sg**	**19 31 55.2**	**-0.2**
SHUL	**Shoufeng**	**0.52**	**187**	eP	**Pb**	**19 31 49.2**	**-0.4**
SHUL				eS	**Sg**	**19 31 56.9**	**+0.4**
ESL	**Shilin**	**0.53**	**201**	P	**Pb**	**19 31 48.3**	**-1.3**
ESL				eS	**Sg**	**19 31 55.5**	**-1.1**
OWD	**Renai**	**0.55**	**230**	⇑iP	**Pb**	**19 31 49.5**	**-0.6**
OWD				eS	**Sb**	**19 31 56.5**	**-1.1**
EOS2	**EOS2**	**0.55**	**78**	eP	**Pg**	**19 31 50.7**	**+0.7**
WUSB	**Renai**	**0.57**	**237**	⇓P	**Pb**	**19 31 50.1**	**-0.3**
WUSB				eS	**Sb**	**19 31 57.5**	**-0.6**
NFF	**Wufeng Townshi**	**0.57**	**304**	eP	**Pb**	**19 31 50.3**	**-0.2**
NFF				eS	**Sb**	**19 31 57.5**	**-0.8**
EGS		**0.60**	**27**	eP	**Pb**	**19 31 50.9**	**0.0**
TEGC	**Jichi Village**	**0.60**	**188**	eP	**Pb**	**19 31 51.1**	**+0.2**
TEGC				eS	**Sg**	**19 32 00.0**	**+1.0**
EOS3	**EOS3**	**0.62**	**92**	eP	**Pn**	**19 31 52.2**	**-0.5**
KSHI	**Guanxi Townshi**	**0.63**	**318**	eP	**Pb**	**19 31 51.7**	**+0.4**
WARBT	**Fenglin Townsh**	**0.63**	**201**	⇓P	**Pb**	**19 31 49.5**	**-1.9**
WARBT				eS	**Sb**	**19 31 58.1**	**-1.8**
WHP	**Taichung City**	**0.63**	**267**	eP	**Pb**	**19 31 51.5**	**+0.1**
WHP				eS	**Sb**	**19 31 59.6**	**-0.3**
EOS4	**EOS4**	**0.65**	**107**	eP	**Pg**	**19 31 52.0**	**+0.3**
LIOB	**Emei**	**0.66**	**301**	⇓P	**Pb**	**19 31 52.2**	**+0.3**
LIOB				eS	**Sb**	**19 32 01.2**	**+0.5**
NHDH	**Xindian Distri**	**0.66**	**351**	eP	**Pb**	**19 31 52.0**	**+0.1**
NHDH				eS	**Sb**	**19 32 00.8**	**0.0**
NSTT	**Nanjuang**	**0.66**	**299**	⇓P	**Pb**	**19 31 52.0**	**+0.1**
NSTT				eS	**Sb**	**19 32 00.8**	**0.0**
EGFH	**Guangfu**	**0.66**	**197**	eP	**Pb**	**19 31 50.5**	**-1.5**
EGFH				eS	**Sb**	**19 32 00.3**	**-0.5**
TWA	**Mucha**	**0.67**	**356**	eP	**Pb**	**19 31 52.1**	**-0.1**
TWA				eS	**Sb**	**19 32 01.2**	**+0.2**
TATO	**Taipei**	**0.68**	**349**	P	**Pb**	**19 31 52.6**	**+0.4**
TIPB	**Shuangxi**	**0.68**	**15**	eP	**Pb**	**19 31 52.1**	**-0.3**
TIPB				eS	**Sb**	**19 32 00.7**	**-0.8**
VWDT	**VWDT**	**0.71**	**220**	⇓P	**Pb**	**19 31 52.2**	**-0.7**
VWDT				eS	**Sb**	**19 32 02.3**	**0.0**
NHY	**Taipei**	**0.73**	**355**	eP	**Pg**	**19 31 53.8**	**+0.4**
NHY				eS	**Sg**	**19 32 04.0**	**+0.9**
SBCB	**Hsinchu**	**0.77**	**309**	eP	**Pg**	**19 31 54.7**	**+0.8**
TWB1	**Santiao Chiao**	**0.77**	**25**	eP	**Pb**	**19 31 53.5**	**-0.3**
TWB1				eS	**Sb**	**19 32 03.7**	**-0.2**
NWF	**Wu-fen Shan**	**0.77**	**10**	eP	**Pb**	**19 31 54.1**	**+0.2**
NWF				eS	**Sb**	**19 32 04.3**	**+0.3**
WFSB	**Wu-fen Shan**	**0.77**	**10**	eP	**Pb**	**19 31 54.1**	**+0.3**
WFSB				eS	**Sb**	**19 32 04.1**	**+0.1**
NCUH	**Zhongli**	**0.78**	**328**	eP	**Pb**	**19 31 54.4**	**+0.4**
NCUH				eS	**Sg**	**19 32 05.5**	**+1.1**
NCU	**National Centr**	**0.78**	**328**	eP	**Pb**	**19 31 52.8**	**-1.1**
NCU				eS	**Sb**	**19 32 04.2**	**0.0**
HSN	**Hsinchu**	**0.78**	**309**	eP	**Pg**	**19 31 54.6**	**+0.3**
HSN				eS	**Sg**	**19 32 05.8**	**+1.2**
TWQ1	**Liyutan**	**0.79**	**273**	⇓P	**Pb**	**19 31 54.7**	**+0.6**
TWQ1				eS	**Sb**	**19 32 05.1**	**+0.6**
SMLT	**Sun Moon Lake**	**0.80**	**238**	eP	**Pb**	**19 31 54.2**	**-0.1**
NMLH	**Miaoli**	**0.80**	**287**	eP	**Pg**	**19 31 55.3**	**+0.6**
NSY	**Sanyi**	**0.81**	**278**	eP	**Pg**	**19 31 55.4**	**+0.7**
SSLB	**Suanglung**	**0.81**	**230**	P	**Pb**	**19 31 54.2**	**-0.3**
SSLB	**Suanglung**	**0.81**	**230**	eP	**Pb**	**19 31 53.9**	**-0.6**
SSLB				eS	**Sb**	**19 32 04.2**	**-0.9**
SXI1	**Grass Mountain**	**0.81**	**15**	eP	**Pb**	**19 31 54.6**	**0.0**
SXI1				eS	**Sb**	**19 32 05.5**	**+0.3**
TWS1	**Kuangyinshan**	**0.81**	**346**	eP	**Pg**	**19 31 55.2**	**+0.3**
TWS1				eS	**Sn**	**19 32 06.8**	**-0.4**
TYC	**Yuchr**	**0.82**	**241**	eP	**Pb**	**19 31 54.3**	**-0.3**
HGSD	**Ruisui**	**0.83**	**194**	eP	**Pb**	**19 31 54.9**	**0.0**
YM01	**YM01**	**0.84**	**356**	eP	**Pb**	**19 31 55.3**	**+0.3**
YM01				eS	**Sb**	**19 32 06.3**	**+0.4**
TNOU	**National Taiwa**	**0.85**	**8**	eP	**Pb**	**19 31 55.5**	**+0.4**
EHY	**Hungye**	**0.85**	**200**	eP	**Pb**	**19 31 53.3**	**-1.9**
ZUZH	**Zhuzihu**	**0.85**	**354**	eP	**Pb**	**19 31 55.5**	**+0.2**
ZUZH				eS	**Sg**	**19 32 07.5**	**+0.4**
NTST	**Danshui**	**0.87**	**349**	eP	**Pb**	**19 31 55.9**	**+0.4**
NTST				eS	**Sn**	**19 32 08.4**	**-0.1**
YM08	**YM08**	**0.88**	**357**	eP	**Pb**	**19 31 55.5**	**-0.1**
YM08				S	**Sb**	**19 32 07.0**	**-0.1**
ANP	**Anpu**	**0.88**	**353**	eP	**Pb**	**19 31 55.8**	**0.0**
ANP				eS	**Sb**	**19 32 07.6**	**+0.4**
TCU	**Taichung**	**0.89**	**260**	eP	**Pn**	**19 31 57.4**	**+0.8**
TCU				eS	**Sn**	**19 32 09.8**	**+0.8**
WHYT	**Xinyi Township**	**0.94**	**230**	eP	**Pb**	**19 31 57.1**	**+0.4**
YULB	**Yu-li**	**0.96**	**199**	P	**Pb**	**19 31 56.3**	**-0.8**
YULB	**Yu-li**	**0.96**	**199**	eP	**Pb**	**19 31 54.0**	**-3.2**
TWY	**Chenhua**	**0.96**	**358**	eP	**Pg**	**19 31 58.0**	**+0.3**
TWY				eS	**Sg**	**19 32 10.3**	**-0.2**
WNT	**Mingjian**	**0.97**	**244**	eP	**Pg**	**19 31 58.4**	**+0.6**
WNT				eS	**Sn**	**19 32 12.4**	**+1.4**
WCHH	**Zhanghua**	**1.01**	**257**	eP	**Pn**	**19 31 58.8**	**+0.6**
WCHH				eS	**Sg**	**19 32 13.3**	**+1.4**
WCH1	**Changhua City**	**1.02**	**257**	P	**Pn**	**19 31 59.0**	**+0.7**
WCH1				eS	**Sg**	**19 32 13.9**	**+1.6**
ALS	**Alishan**	**1.10**	**224**	eP	**Pb**	**19 31 59.4**	**-0.2**
ALS				eS	**Sg**	**19 32 15.6**	**+0.7**
CHN5	**Tsauling**	**1.13**	**231**	eP	**Pb**	**19 32 00.6**	**+0.6**
CHN5				eS	**Sg**	**19 32 15.9**	**+0.3**
CHKH	**Chenggong**	**1.13**	**191**	eP	**Pn**	**19 31 59.4**	**-0.4**
FULB	**Fuli**	**1.15**	**196**	eP	**Pn**	**19 32 00.4**	**+0.3**
WGK	**Gukeng**	**1.16**	**238**	eP	**Pb**	**19 32 01.2**	**+0.8**
WDL	**Douliou City**	**1.17**	**240**	eP	**Pg**	**19 32 01.9**	**+0.4**
WDL				eS	**Sg**	**19 32 18.0**	**+1.3**
WDLH	**Douliu**	**1.18**	**239**	eP	**Pb**	**19 32 01.5**	**+0.7**
WDLH				eS	**Sg**	**19 32 17.9**	**+0.7**
JYNG	**Yonagunijimaku**	**1.20**	**83**	eP	**Pn**	**19 32 00.7**	**-0.1**
JYNG				eS	**Sn**	**19 32 16.9**	**+0.2**
WRL	**Guolierlin Hig**	**1.22**	**251**	eP	**Pn**	**19 32 01.2**	**+0.1**
WRL				eS	**Sn**	**19 32 17.5**	**+0.4**
ELDTW	**Lidau**	**1.25**	**207**	eP	**Pn**	**19 31 59.0**	**-2.6**
YOJ	**Yonaguni jima**	**1.26**	**83**	P	**Pb**	**19 32 03.0**	**+0.8**
YOJ	**Yonaguni jima**	**1.26**	**83**	eP	**Pn**	**19 32 01.3**	**-0.4**
WCKO	**Fanlu**	**1.28**	**228**	eP	**Pn**	**19 32 00.8**	**-1.2**
WCKO				eS	**Sn**	**19 32 19.1**	**+0.4**
CHN2	**Minshiung**	**1.31**	**234**	eS	**Sg**	**19 32 21.7**	**+0.2**
TPUB	**Ta-pu**	**1.36**	**223**	P	**Pb**	**19 32 04.6**	**+0.7**
TPUB	**Ta-pu**	**1.36**	**223**	eP	**Pn**	**19 32 03.8**	**+0.7**
TPUB				eS	**Sg**	**19 32 23.4**	**+0.3**
CHY	**Chiayi**	**1.37**	**234**	eP	**Pb**	**19 32 04.8**	**+0.7**
CHY				eS	**Sg**	**19 32 23.1**	**-0.2**
STYH	**Taoyuan**	**1.38**	**215**	eP	**Pn**	**19 32 03.1**	**-0.2**
WTP	**Ta-pu**	**1.41**	**222**	eP	**Pb**	**19 32 04.9**	**+0.1**
WTP				eS	**Sg**	**19 32 24.9**	**+0.2**
WSF	**Szhu**	**1.46**	**243**	eP	**Pn**	**19 32 05.0**	**+0.7**
WSF				eS	**Sb**	**19 32 24.9**	**+1.2**
TWK	**Hsinying**	**1.48**	**226**	eP	**Pb**	**19 32 06.1**	**+0.2**
TWK				eS	**Sg**	**19 32 26.4**	**-0.3**
SNST	**Tainan City**	**1.50**	**224**	eP	**Pb**	**19 32 06.4**	**+0.1**
SNST				eS	**Sb**	**19 32 26.1**	**+1.0**
WSL	**Shuilin Townsh**	**1.51**	**239**	eP	**Pb**	**19 32 06.3**	**-0.1**
WSL				eS	**Sb**	**19 32 26.8**	**+1.6**
CHN1	**Nanshi**	**1.51**	**222**	eP	**Pb**	**19 32 06.3**	**-0.1**
CHN1				eS	**Sb**	**19 32 26.9**	**+1.6**
SGST	**Jiashian**	**1.56**	**219**	eP	**Pn**	**19 32 06.2**	**+0.4**
SGST				eS	**Sb**	**19 32 28.1**	**+1.5**
TWG	**Pinlang**	**1.57**	**199**	eP	**Pn**	**19 32 06.5**	**+0.6**
CHN8	**Yiju**	**1.62**	**234**	eP	**Pb**	**19 32 07.9**	**-0.4**
CHN8				eS	**Sb**	**19 32 30.3**	**+2.0**
SCLT	**Jiali**	**1.74**	**230**	eS	**Sb**	**19 32 33.1**	**+1.3**
SSD	**Sandimen**	**1.81**	**211**	eP	**Pn**	**19 32 10.4**	**+1.2**
IRIF	**Iriomote-Funau**	**1.91**	**89**	eS	**Sn**	**19 32 34.7**	**+0.5**
MASBT	**Mashibuluo**	**1.92**	**209**	eP	**Pn**	**19 32 11.6**	**+0.8**
HATJ	**Hateruma jima**	**2.00**	**97**	eS	**Sn**	**19 32 36.7**	**+0.4**
PHUB	**P'eng-hu**	**2.05**	**248**	eP	**Pn**	**19 32 11.9**	**-0.6**
PHUB				eS	**Sn**	**19 32 37.1**	**-0.5**
WDGT	**Dungji**	**2.09**	**240**	eS	**Sn**	**19 32 40.1**	**+1.5**
VWUC	**VWUC**	**2.10**	**289**	eP	**Pn**	**19 32 12.3**	**-1.0**
VWUC				eS	**Sn**	**19 32 37.3**	**-1.6**
SCZT	**Fangliau**	**2.14**	**206**	eP	**Pn**	**19 32 14.4**	**+0.7**
JKRS	**Kuro-shima**	**2.17**	**91**	eP	**Pn**	**19 32 14.7**	**+0.6**
JKRS				eS	**Sn**	**19 32 40.7**	**+0.2**
LAY	**Lan-yu**	**2.26**	**182**	eP	**Pn**	**19 32 14.7**	**-0.7**
JIJ	**Ishigaki jima**	**2.29**	**88**	eP	**Pn**	**19 32 15.4**	**-0.4**
JIJ				eS	**Sn**	**19 32 43.0**	**-0.5**
VCHM	**Qimei**	**2.30**	**242**	eP	**Pn**	**19 32 16.0**	**0.0**
MATB	**Ma-tsu**	**2.39**	**321**	eP	**Pn**	**19 32 16.4**	**-0.9**
SMST	**Manzhou Townsh**	**2.39**	**198**	eP	**Pn**	**19 32 18.0**	**+0.7**
JISG	**Ishigakijimahi**	**2.45**	**83**	eP	**Pn**	**19 32 18.1**	**0.0**
LYJJ	**Jianjiangzhen**	**2.80**	**323**	eP	**Pn**	**19 32 22.3**	**-0.6**
XPSS	**Dashiqiu**	**2.92**	**334**	eP	**Pn**	**19 32 23.4**	**-1.1**
KNM	**Kinmen**	**2.92**	**273**	eP	**Pn**	**19 32 25.4**	**+0.9**
MHZQ	**Yeshan**	**2.96**	**308**	eP	**Pn**	**19 32 24.6**	**-0.4**
MHZQ				eS	**Sn**	**19 32 58.0**	**-2.1**
KNMB	**Chin-men Tao**	**2.97**	**274**	eP	**Pn**	**19 32 24.4**	**-0.7**
KNMB				eS	**Sn**	**19 32 58.9**	**-1.3**
AXDP	**Jialang**	**3.39**	**281**	eP	**Pn**	**19 32 30.4**	**-0.5**
ZPLA	**Ao Xicun**	**3.57**	**265**	eP	**Pn**	**19 32 33.1**	**-0.4**
DSXP	**Dongshan**	**3.90**	**262**	eP	**Pn**	**19 32 37.1**	**-0.8**
DSXP				eS	**Sn**	**19 33 19.6**	**-3.6**
SXFK	**Yanhouchang**	**4.17**	**301**	eP	**Pn**	**19 32 41.1**	**-0.6**
SXFK				eS	**Sn**	**19 33 27.5**	**-2.5**

*RSPR **04** 19:39:13.4, 17°96N×66°73W, h5^{km}*
NEIC 04 19:39:12.9±1.0**, 17°91N**±0°04×**66°72W**±0°01**, h5**^{km}±2^{km}**, ML3.0**/35**, ML2.8**(RSPR)**, 7C-4D, Error ellipse: s-maj=6.2km s-min=2.9km az=347.0, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.17**	**291**		Pg	19 39 16.8	+0.5
GBPR					Sg	19 39 19.4	+1.0
GBPR	**Guanica, Bosqu**	**0.17**	**291**	⇓eP	Pg	19 39 16.8	+0.5
GBPR				eS	Sg	19 39 19.4	+1.0
OBIP	**Obispado Ponce**	**0.17**	**40**		Pg	19 39 16.6	+0.3
OBIP					Sg	19 39 18.4	-0.1
OBIP	**Obispado Ponce**	**0.17**	**40**	⇑eP	Pg	19 39 16.7	+0.4
OBIP				eS	Sg	19 39 19.4	+0.9
CELP	**Cerrillos**	**0.21**	**39**		Pg	19 39 17.4	+0.4
CELP				IAML		19 39 21.5	
	3µm,0.3s						
CELP				IAML		19 39 22.4	
	2µm,0.2s						
MLPR	**Magueyes Islan**	**0.32**	**280**		Pg	19 39 19.2	+0.1
MLPR				IAML		19 39 25.2	
	1µm,0.3s						
MLPR				IAML		19 39 25.2	
	1µm,0.4s						
UUPR	**Utuado, UPR, P**	**0.34**	**360**		Pg	19 39 18.9	-0.6
CRPR	**Cabo Rojo, PR**	**0.38**	**284**		Sg	19 39 26.7	+1.3
CRPR	**Cabo Rojo, PR**	**0.38**	**284**		Pg	19 39 20.4	0.0
CRPR				IAML		19 39 30.7	
	677nm,0.4s						
CRPR				IAML		19 39 32.1	
	536nm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.38**	**284**	⇑eP	Pg	19 39 20.7	+0.3
CRPR				eS	Sg	19 39 26.7	+1.3
LSP	**Las Mesas**	**0.44**	**307**		Pg	19 39 21.4	0.0
LSP					Sb	19 39 28.8	-1.2
LSP	**Las Mesas**	**0.44**	**307**	⇑eP	Pg	19 39 21.4	0.0
LSP				eS	Sb	19 39 28.8	-1.2
PRSN	**Puerto Rico Se**	**0.51**	**307**		Sg	19 39 30.5	+1.2
PRSN	**Puerto Rico Se**	**0.51**	**307**	Pg	Pg	19 39 22.1	-0.6
PRSN				IAML		19 39 31.7	
	3µm,0.3s						
PRSN				IAML		19 39 32.9	
	2µm,0.2s						
PRSN	**Puerto Rico Se**	**0.51**	**307**	⇑eP	Pg	19 39 22.7	0.0
PRSN				eS	Sg	19 39 30.5	+1.2
ECPR	**Experimental S**	**0.53**	**40**		Pg	19 39 22.8	-0.2
ECPR				IAML		19 39 31.4	
	2µm,0.2s						
ECPR				IAML		19 39 31.6	
	1µm,0.2s						
ECPR	**Experimental S**	**0.53**	**40**	⇓eP	Pg	19 39 23.0	0.0
ECPR				eS	Sg	19 39 30.4	+0.5
SJG	**San Juan**	**0.57**	**70**		Pg	19 39 24.3	+0.3
SJG				IAML		19 39 33.7	
	480nm,0.2s						
SJG	**San Juan**	**0.57**	**70**	⇑eP	Pg	19 39 24.5	+0.5
SJG				eS	Sb	19 39 33.4	-0.6
AGPR	**Aguadilla, PR**	**0.67**	**326**		Pg	19 39 24.8	-0.9
AGPR				IAML		19 39 34.8	
	702nm,0.4s						
AGPR				IAML		19 39 36.5	
	1µm,0.3s						
AGPR	**Aguadilla, PR**	**0.67**	**326**	⇓eP	Pg	19 39 25.1	-0.6
AGPR				eS	Sg	19 39 34.6	+0.2
PDPR	**Patillas Dam,**	**0.67**	**81**		Pg	19 39 26.1	+0.3
GCPR	**Guaynabo City**	**0.72**	**57**		Pg	19 39 26.7	-0.1
GCPR	**Guaynabo City**	**0.72**	**57**		Sg	19 39 35.9	-0.2
GCPR				IAML		19 39 38.0	
	comp=E,126nm,0.3s						
GCPR				IAML		19 39 44.4	
	comp=N,194nm,0.6s						
GCPR	**Guaynabo City**	**0.72**	**57**	⇑eP	Pg	19 39 26.7	-0.1
GCPR				eS	Sg	19 39 37.1	+0.9
HUMP	**Col San Antoni**	**0.86**	**75**	Pg	Pg	19 39 29.1	-0.3
HUMP				IAML		19 39 43.3	
	comp=N,230nm,0.2s						
HUMP				IAML		19 39 50.0	
	comp=N,246nm,0.2s						
HUMP	**Col San Antoni**	**0.86**	**75**	⇓eP	Pg	19 39 29.1	-0.3
HUMP				eS	Sb	19 39 41.5	-0.6
IDE	**Isla Desecheo**	**0.86**	**303**		Pg	19 39 28.6	-0.8
IDE					Sg	19 39 40.8	+0.1
IDE	**Isla Desecheo**	**0.86**	**303**	⇑eP	Pg	19 39 28.6	-0.8
IDE				eS	Sg	19 39 40.8	+0.1
CUPR	**Culebra, Puert**	**1.42**	**74**	Pn	Pn	19 39 39.3	-0.1
DR12	**Loma Pena Alta**	**2.67**	**289**	Pn	Pn	19 39 56.2	-0.6
BANI	**BANI**	**3.49**	**278**	Pn	Pn	19 40 08.6	+0.5
SC01	**Santiago de lo**	**4.09**	**292**	Pn	Pn	19 40 15.2	-1.0
SDDR	**Presa de Saban**	**4.47**	**284**		Pn	19 40 19.6	-1.8

NEIC 04 19:39:38.6±0.5**, 17°95N**±0°02×**66°732W**±0°009**, h10**^{km}±2^{km}**, ML3.4**/35**, Error ellipse: s-maj=3.0km s-min=1.1km az=172.0, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.15**	**53**	Pg	Pg	19 39 42.0	0.0
OBIP				Sg	Sg	19 39 44.4	0.0
CELP	**Cerrillos**	**0.19**	**50**	Pg	Pg	19 39 42.8	+0.1
CELP				Sg	Sg	19 39 46.0	+0.5
CELP				IAML		19 39 47.0	
	5µm,0.2s						
MLPR	**Magueyes Islan**	**0.30**	**274**	Pg	Pg	19 39 44.8	+0.1
MLPR				IAML		19 39 50.2	
	3µm,0.4s						
MLPR				IAML		19 39 50.6	
	3µm,0.3s						
UUPR	**Utuado, UPR, P**	**0.30**	**2**	Pg	Pg	19 39 44.5	-0.2
CRPR	**Cabo Rojo, PR**	**0.36**	**279**	Pg	Pg	19 39 46.0	+0.1
CRPR	**Cabo Rojo, PR**	**0.36**	**279**	IAML		19 39 56.4	
	2µm,0.4s						
PRSN	**Puerto Rico Se**	**0.47**	**304**	Pg	Pg	19 39 47.8	0.0
PRSN				IAML		19 39 58.4	
	4µm,0.3s						
ECPR	**Experimental S**	**0.51**	**44**	Pg	Pg	19 39 48.3	-0.2
ECPR				IAML		19 39 56.8	
	6µm,0.2s						
ECPR				IAML		19 39 57.3	
	4µm,0.2s						
SJG	**San Juan**	**0.58**	**74**	Pg	Pg	19 39 49.3	-0.6
SJG				IAML		19 39 59.2	
	1µm,0.2s						
SJG				IAML		19 40 02.3	
	860nm,0.4s						
AGPR	**Aguadilla, PR**	**0.63**	**325**	Pg	Pg	19 39 50.5	-0.3
AGPR				IAML		19 40 00.2	
	2µm,0.4s						
AGPR				IAML		19 40 02.0	
	3µm,0.3s						
PDPR	**Patillas Dam,**	**0.68**	**84**	Pg	Pb	19 39 52.4	-0.2
GCPR	**Guaynabo City**	**0.71**	**60**	Pg	Pg	19 39 52.3	-0.1
HUMP	**Col San Antoni**	**0.86**	**77**	Pg	Pg	19 39 55.0	-0.2
HUMP				IAML		19 40 15.8	
	641nm,0.2s						
CUPR	**Culebra, Puert**	**1.42**	**75**		Pn	19 40 03.2	-1.4
DR12	**Loma Pena Alta**	**2.65**	**289**	Pn	Pn	19 40 21.4	-0.1
BANI	**BANI**	**3.48**	**278**	Pn	Pn	19 40 33.0	0.0
SDDR	**Presa de Saban**	**4.44**	**284**	Pn	Pn	19 40 46.2	0.0
CBE	**Ff, Capester**	**5.25**	**110**	Pn	Pn	19 40 55.7	-1.6

*IDC **04** 19:53:13.1±0.6, 17°73N×66°87W, h0^{km}, mb4.1/18, mbtmp4.1/19, ML3.1/1, MS3.4/9, Error ellipse: s-maj=14.8km s-min=8.7km az=155.0*
*SDD **04** 19:53:14.5±1.5, 17°74N×66°82W, h15^{km}±564^{km}, MD3.6, ML4.2, MW4.3, Presumed earthquake*
*NEIC **04** 19:53:15.3, 17°83N×66°86W, h12^{km}*
*OSPL **04** 19:53:15.8±0.5, 17°83N×66°88W, h14^{km}±6^{km}, ML3.9, Presumed earthquake*
*NEIC **04** 19:53:15.0±1.5, 17°81N±0°04×66°86W±0°02, h8^{km}±4^{km}, mb4.5/39, ML4.4/47, Mwr4.2/43, ML4.0(RSPR), Mwr4.2/18(SLM), Error ellipse: s-maj=5.6km s-min=2.3km az=185.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.70; $M_{\theta\theta}$1.90; $M_{\phi\phi}$-0.20; $M_{r\theta}$0.55; $M_{\theta\phi}$1.04; $M_{\phi r}$0.67; Fault plane solution: $M_0$2.26000×10^{15} NP1:ϕ_s232.25000°, δ57.54000°, λ-109.67000°. NP2: ϕ_s85.91000°, δ37.39000°, λ-62.11000°. Principal axes: T 2.4697, Plg11.0000°, Azm336.0000°; N -0.5086, Plg16.0000°, Azm243.0000°; P -1.9611, Plg70.0000°, Azm97.0000°;*
*NEIC **04** 19:53:16, 17°87N×66°87W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.89; $M_{\theta\theta}$1.89; $M_{\phi\phi}$0.00; $M_{r\theta}$0.33; $M_{\theta\phi}$0.57; $M_{\phi r}$0.68; Fault plane solution: $M_0$2.11000×10^{15} NP1:ϕ_s239.00000°, δ54.00000°, λ-110.00000°. NP2:ϕ_s90.00000°, δ40.00000°, λ-65.00000°. Principal axes: T 2.1167, Plg7.0000°, Azm342.0000°; N 0.0000, Plg16.0000°, Azm250.0000°; P -2.1167, Plg73.0000°, Azm97.0000°;*
*RSPR **04** 19:53:16.0, 17°87N×66°87W, h6^{km}*
*PTWC **04** 19:53:16, 17°90N×66°80W, Ml4.4/15*
ISC 04 19:53:14.8±1.0**, 17°79N**±0°04×**66°86W**±0°02**, h11**^{km}±6^{km}**, n154,** σ**0^{s}85**/172**, mb4.4**/34**, MS3.4**/7**, 13C-9D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.18**	**354**		**Pg**	**19 53 19.0**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.18**	**354**	⇓eP	**Pg**	**19 53 19.0**	**+0.2**
MLPR	**Magueyes Islan**	**0.25**	**315**		**Pg**	**19 53 20.2**	**+0.3**
MLPR				Sg	**Sg**	**19 53 23.5**	**+0.1**
MLPR				IAML		19 53 24.5	
	97µm,0.9s						
MLPR				IAML		19 53 24.7	
	59µm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.32**	**312**		**Pg**	**19 53 21.3**	**+0.1**
CRPR				Sg	**Sg**	**19 53 25.2**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	IAML		19 53 26.2	
	42µm,0.8s						
CRPR				IAML		19 53 26.5	
	57µm,0.7s						
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	P	**Pg**	**19 53 21.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	⇑ePg	**Pg**	**19 53 21.4**	**+0.1**
CRPR				⇑eSg	**Sg**	**19 53 26.0**	**+0.5**
CRPR				IAML		19 53 26.3	
	comp=N,52µm,1.4s						
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	⇑eP	**Pg**	**19 53 21.4**	**+0.2**
CRPR				eS	**Sg**	**19 53 26.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.32**	**312**	iP	**Pg**	**19 53 21.4**	**+0.2**
CRPR				eS	**Sg**	**19 53 25.3**	**-0.3**
CRPR				IAML		19 53 26.9	
	comp=Z,48µm,0.8s						
OBIP	**Obispado Ponce**	**0.35**	**44**		**Pg**	**19 53 21.9**	**+0.1**
OBIP				Sg	**Sg**	**19 53 26.6**	**+0.2**
OBIP	**Obispado Ponce**	**0.35**	**44**	P	**Pg**	**19 53 21.0**	**-0.8**
OBIP	**Obispado Ponce**	**0.35**	**44**	⇓eP	**Pg**	**19 53 22.1**	**+0.3**
OBIP				eS	**Sg**	**19 53 27.1**	**+0.6**
OBIP	**Obispado Ponce**	**0.35**	**44**	iP	**Pg**	**19 53 22.0**	**+0.3**
OBIP				eS	**Sg**	**19 53 26.9**	**+0.4**
OBIP				IAML		19 53 27.1	
	comp=Z,19µm,0.3s						
CELP	**Cerrillos**	**0.39**	**43**		**Pg**	**19 53 22.6**	**+0.1**
CELP				Sg	**Sg**	**19 53 27.9**	**+0.2**
CELP				IAML		19 53 28.8	
	comp=Z,42µm,0.5s						
CELP				IAML		19 53 30.6	
	comp=Z,24µm,0.4s						
LSP	**Las Mesas**	**0.44**	**331**		**Pg**	**19 53 23.3**	**-0.1**
LSP	**Las Mesas**	**0.44**	**331**	⇑eP	**Pg**	**19 53 23.3**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.48**	**16**		**Pg**	**19 53 23.6**	**-0.6**
UUPR				Sg	**Sg**	**19 53 29.3**	**-1.2**
PRSN	**Puerto Rico Se**	**0.50**	**327**		**Pg**	**19 53 24.2**	**-0.4**
PRSN				Sg	**Sg**	**19 53 30.8**	**-0.5**
PRSN	**Puerto Rico Se**	**0.50**	**327**	P	**Pg**	**19 53 24.3**	**-0.4**
PRSN	**Puerto Rico Se**	**0.50**	**327**	⇑ePg	**Pg**	**19 53 24.3**	**-0.4**
PRSN				⇓eSg	**Sg**	**19 53 31.2**	**-0.2**
PRSN				IAML		19 53 33.6	
	comp=N,33µm,0.2s						
PRSN	**Puerto Rico Se**	**0.50**	**327**	⇑eP	**Pg**	**19 53 24.5**	**-0.2**
PRSN				eS	**Sg**	**19 53 31.5**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ECPR	Experimental S	0.71	42		Pg	19 53 27.7	-0.8
ECPR				Sg	Sg	19 53 36.8	-1.0
ECPR				IAML		19 53 39.0	
	comp=N,27µm,0.2s						
ECPR	Experimental S	0.71	42	⇑eP	Pg	19 53 28.1	-0.4
ECPR				eS	Sg	19 53 37.4	-0.4
AGPR	Aguadilla, PR	0.71	340		Pg	19 53 27.7	-0.9
AGPR				IAML		19 53 42.5	
	comp=N,10µm,1.2s						
AGPR	Aguadilla, PR	0.71	340	P	Pg	19 53 27.8	-0.9
AGPR	Aguadilla, PR	0.71	340	⇑ePg	Pg	19 53 27.8	-0.9
AGPR				⇓eSg	Sb	19 53 39.3	+0.2
AGPR				IAML		19 53 43.5	
	comp=N,9µm,0.8s						
AGPR	Aguadilla, PR	0.71	340	⇓eP	Pg	19 53 27.9	-0.7
AGPR				eS	Sg	19 53 37.4	-0.6
AGPR	Aguadilla, PR	0.71	340	i P	Pg	19 53 27.7	-0.9
AGPR				eS	Sg	19 53 36.6	-1.4
AGPR				IAML		19 53 43.1	
	comp=Z,5µm,0.7s						
SJG	San Juan	0.75	65	Pg	Pg	19 53 29.0	-0.2
	comp=Z,354nm,0.3s,baz=244,slow=17,SNR=181						
SJG				Lg	Lg	19 53 39.1	
	comp=Z,1µm,0.3s,baz=331,slow=19,SNR=23						
SJG	San Juan	0.75	65	eP	Pg	19 53 28.7	-0.5
SJG	San Juan	0.75	65	⇑eP	Pg	19 53 29.1	-0.2
SJG				eS	Sb	19 53 40.3	+0.3
SJG	San Juan	0.75	65	i P	Pg	19 53 29.1	-0.2
SJG				eS	Sg	19 53 39.3	+0.3
SJG				IAML		19 53 41.0	
	comp=Z,3µm,0.2s						
EMPR	Esperanza - Ma	0.75	25		Pg	19 53 28.8	-0.5
EMPR					Sg	19 53 38.8	-0.4
EMPR	Esperanza - Ma	0.75	25	P	Pg	19 53 28.9	-0.5
EMPR	Esperanza - Ma	0.75	25	⇑eP	Pg	19 53 28.8	-0.5
EMPR				eS	Sg	19 53 38.8	-0.4
PDPR	Patillas Dam,	0.83	74		Pg	19 53 30.5	-0.3
PDPR				IAML		19 53 45.6	
	comp=Z,9µm,0.6s						
IDE	Isla Desecheo	0.83	316		Pg	19 53 30.1	-0.8
IDE					Sg	19 53 41.2	-0.6
IDE	Isla Desecheo	0.83	316	⇑eP	Pg	19 53 30.1	-0.8
IDE				eS	Sg	19 53 41.2	-0.6
GCPR	Guaynabo City	0.90	55		Pg	19 53 31.3	-0.9
GCPR	Guaynabo City	0.90	55		Sg	19 53 43.1	-0.8
GCPR	Guaynabo City	0.90	55	P	Pg	19 53 31.6	-0.6
GCPR	Guaynabo City	0.90	55	⇓eP	Pg	19 53 31.6	-0.6
GCPR				eS	Sg	19 53 43.1	-0.8
HUMP	Col San Antoni	1.02	70		Pg	19 53 33.6	-0.9
HUMP	Col San Antoni	1.02	70		Sg	19 53 47.6	-0.2
HUMP	Col San Antoni	1.02	70	P	Pg	19 53 33.7	-0.8
HUMP	Col San Antoni	1.02	70	⇓eP	Pg	19 53 34.0	-0.5
HUMP				eS	Sg	19 53 47.6	-0.2
CUPR	Culebra, Puert	1.59	71		Pb	19 53 43.5	-0.6
PCDR	Punta Cana, DR	1.62	297	⇑ePg	Pb	19 53 44.3	-0.3
PCDR				IAML		19 54 17.8	
	comp=N,2µm,0.8s						
HIDR	Higuey Centro	1.94	295	⇓ePg	Pb	19 53 49.4	-0.7
HIDR				IAML		19 54 26.4	
	comp=N,1µm,0.3s						
MIDR	Miches	2.40	300	⇑ePg	Pb	19 53 56.0	-1.9
MIDR				IAML		19 54 34.5	
	comp=N,478nm,0.6s						
DR12	Loma Pena Alta	2.59	293		Pn	19 53 57.9	+1.2
SMDR	Samana, DR	2.67	304	P	Pb	19 54 00.8	-1.7
SMDR	Samana, DR	2.67	304	⇓ePg	Pb	19 54 00.9	-1.6
SMDR				IAML		19 54 46.6	
	comp=N,1µm,0.8s						
SDD	Santo Domingo	2.98	283		Pn	19 54 03.3	+1.3
SDD				IAML		19 54 56.6	
	comp=E,1µm,1.1s						
SDD				IAML		19 55 03.1	
	comp=N,1µm,1.0s						
BANI	BANI	3.38	281		Pn	19 54 08.7	+1.1
SABA	Saba	3.45	92		Pn	19 54 09.1	+0.6
SABA				IAML		19 54 55.4	
	comp=E,1µm,0.7s						
SABA				IAML		19 55 15.1	
	comp=N,518nm,0.7s						
SMRT	St. Maarten	3.61	85		Pn	19 54 10.6	-0.2
SMRT				IAML		19 55 03.4	
	comp=E,506nm,0.7s						
SEUS	St. Eustatius	3.71	94	Pn	Pn	19 54 12.5	+0.5
SKI	Saint Kitts	3.96	96	eP	Pn	19 54 15.8	+0.3
SC01	Santiago de lo	4.01	295		Pn	19 54 20.2	+3.9
SDDR	Presa de Saban	4.37	286		Pn	19 54 24.5	+3.3
SDDR	Presa de Saban	4.37	286	eP	Pn	19 54 26.2	+5.1
MBFL	Flemmings, Mon	4.56	102	eP	Pn	19 54 23.5	-0.2
ANWB	Willy Bob	4.84	91		Pn	19 54 27.3	-0.2
ANWB	Willy Bob	4.84	91	eP	Pn	19 54 26.8	-0.7
DHSZ	Broadband at M	5.10	106	eP	Pn	19 54 31.4	+0.2
GDHS	Morne Mazeau,	5.10	106		Pn	19 54 31.7	+0.4
ATGZ	Broadband at L	5.19	108	eP	Pn	19 54 32.5	+0.1
MMLZ	Guadeloupe Bro	5.26	108	eP	Pn	19 54 34.4	+1.0
ABD	La Joyeuse, An	5.30	103	Pn	Pn	19 54 34.5	+0.6
ABD				IAML		19 55 35.2	
	comp=N,140nm,1.0s						
ABD				IAML		19 57 43.7	
	comp=E,150nm,1.4s						
CBE	Ff, Capester	5.31	108	Pn	Pn	19 54 33.0	-1.1
CBE				IAML		19 55 41.4	
	comp=E,247nm,0.5s						
CBE				IAML		19 55 52.7	
	comp=N,267nm,0.6s						
TBG	Guadaloupe-3	5.35	110	eP	Pn	19 54 34.6	0.0
TDBA	Terre de Bas,	5.36	110	Pn	Pn	19 54 34.6	-0.2
MAGL	Barre de l'ile	5.64	108	Pn	Pn	19 54 37.6	-1.0
DSLB	Salisbury	5.71	113	eP	Pn	19 54 38.8	-0.8
DSDZ	La Diserade, G	5.73	104	eP	Pn	19 54 39.9	0.0
GDSD	La Dsirade Is	5.73	104		Pn	19 54 39.3	-0.6
CXM	Morne La Croix	6.21	118	Pn	Pn	19 54 45.6	-1.1
BIM	Bigot	6.44	120	Pn	Pn	19 54 49.0	-0.8
BIM	Bigot	6.44	120	eP	Pn	19 54 48.9	-0.8
ILAM	Ilet Lapin Mar	6.48	117	Pn	Pn	19 54 51.6	+1.4
MPOM	Morne Pois Mar	6.66	119	Pn	Pn	19 54 52.9	+0.3
SLBI	Saint Lucia, B	6.79	123	e	Pn	19 54 52.0	-2.4
NMDO	Nuevo Mundo	8.16	291	Pn	Pn	19 55 13.4	+0.2
SDV	Santo Domingo	9.58	203	Pn	Pn	19 55 33.6	+0.7
	comp=N,1.7nm,0.3s,baz=31,slow=13,SNR=12						
SDV				Sn	Sn	19 57 18.2	-2.5
	comp=N,2.7nm,0.3s,baz=314,slow=18,SNR=4.9						
SDV				LR	LR	19 59 45.2	
	comp=N,67nm,18.5s,baz=298,slow=41						
	comp=N,4.3nm,0.4s						
SDV	Santo Domingo	9.58	203		Pn	19 55 34.8	+1.9
BBSR	BB Station	14.65	7	Pn	Pn	19 56 41.0	-1.0
ROSC	El Rosal	14.80	210	LR	LR	20 03 13.2	
	comp=N,62nm,20.1s,baz=243,slow=41						
GOGA	Godfrey	21.55	319		P	19 58 04.9	+0.7
GOGA				IAmb	IAmb	19 58 10.4	
	comp=Z,29nm,1.1s						
BG3	Lake Jocassee	22.32	323		P	19 58 12.0	-0.5
BG3				IAmb	IAmb	19 58 37.0	
	comp=Z,12nm,0.7s						
V53A	Saluda	22.75	325	IAmb	IAmb	19 58 44.0	
	comp=Z,18nm,1.0s						
TKL	Tuckaleechee C	23.28	323	LR	LR	20 07 13.8	
	comp=Z,92nm,19.0s,baz=28,slow=36						
SWET	Sewanee	24.27	319	P	P	19 58 32.6	+0.5
T50A	Nancy	24.85	324		P	19 58 37.0	-0.3
T50A				IAmb	IAmb	19 58 40.4	
	comp=Z,8.8nm,0.9s						
N53A	Lisbon	25.91	335	P	P	19 58 46.3	-0.6
WVT	Waverly	26.04	319	P	P	19 58 47.4	-0.7
WVT				IAmb	IAmb	19 58 51.9	
	comp=Z,6.1nm,0.9s						
ATAH	Atahualpa	27.26	206	LR	LR	20 10 08.3	
	comp=Z,44nm,19.4s,baz=25,slow=37						
SADO	Sadowa	28.80	342	LR	LR	20 11 11.0	
	comp=Z,72nm,18.5s,baz=98,slow=37						
LPAZ	La Paz	33.89	182	P	P	19 59 59.0	+0.6
	comp=Z,1.0nm,0.7s,baz=19,slow=2.2,SNR=5.2						
	comp=Z,1.0nm,0.7s						
LPAZ	La Paz	33.89	182	P	P	19 59 58.0	-0.4
TX31	Lajitas Ar. Si	35.50	296	P	P	20 00 11.2	-0.7
TX31				IAmb	IAmb	20 00 18.2	
	comp=Z,3.1nm,0.7s						
TXAR	Lajitas Array	35.50	296	P	P	20 00 12.8	+0.9
	comp=Z,2.3nm,0.6s,baz=114,slow=10.0,SNR=22						
TXAR				PcP	PcP	20 02 41.9	+0.7
	comp=Z,0.7nm,0.8s,baz=126,slow=5.0,SNR=3.7						
TXAR				ScP	ScP	20 06 28.4	+1.1
	comp=Z,1.0nm,0.8s,baz=128,slow=5.2,SNR=7.4						
	comp=Z,2.3nm,0.6s						
TXAR	Lajitas Array	35.50	296	P	P	20 00 11.2	-0.7
PB16	IPOC Station P	35.99	184	P	P	20 00 15.7	-0.9
PB16				IAmb	IAmb	20 00 16.8	
	comp=Z,3.9nm,0.7s						
ECSD	EROS Data Cent	36.02	322	P	P	20 00 16.0	-0.1
ECSD				IAmb	IAmb	20 00 25.7	
	comp=Z,11nm,1.3s						
SCHQ	Schefferville	36.97	0	P	P	20 00 24.8	+0.8
	comp=Z,2.2nm,0.7s,baz=155,slow=4.7,SNR=3.5						
	comp=Z,2.2nm,0.7s						
GO01	Chusmiza	37.30	184	P	P	20 00 26.1	-1.5
BDFB	Brasilia	38.06	150	LR	LR	20 16 42.3	
	comp=Z,96nm,18.6s,baz=310,slow=37						
ANMO	Albuquerque	39.08	304	LR	LR	20 18 24.6	
	comp=Z,58nm,19.3s,baz=76,slow=39						
ULM	Lac du Bonnet	39.85	331	P	P	20 00 48.2	0.0
	comp=Z,3.1nm,0.7s,baz=114,slow=6.5,SNR=7.1						
	comp=Z,3.1nm,0.7s						
ISCO	Idaho Springs	40.00	311	P	P	20 00 49.7	-0.3
PV18	Skein Mesa, Pa	41.90	308	P	P	20 01 04.5	-1.1
PV18				IAmb	IAmb	20 01 09.7	
	comp=Z,13nm,1.2s						
PDAR	Pinedale Array	43.85	314	P	P	20 01 22.1	+0.7
	comp=Z,0.6nm,0.8s,baz=119,slow=9.3,SNR=4.4						
	comp=Z,0.6nm,0.8s						
CPUP	Villa Florida	44.82	168	P	P	20 01 27.7	-1.2
	comp=Z,3.0nm,0.5s,baz=355,slow=11,SNR=9.0						
	comp=Z,3.0nm,0.5s						
CPUP	Villa Florida	44.82	168	P	P	20 01 27.8	-1.2
CPUP				IAmb	IAmb	20 01 28.8	
	comp=Z,4.5nm,0.7s						
LOHW	Long Hollow	44.87	315	P	P	20 01 28.9	-0.7
FCC	Fort Churchill	45.52	340	P	P	20 01 34.1	0.0
FCC				IAmb	IAmb	20 01 36.5	
	comp=Z,7.0nm,0.8s						
FFC	Flin Flon	45.62	332	P	P	20 01 34.9	-0.1
FFC				IAmb	IAmb	20 01 37.1	
	comp=Z,5.6nm,0.9s						
NVAR	Mina Array Bea	49.13	306	P	P	20 02 03.6	+0.7
	comp=Z,0.5nm,0.6s,baz=75,slow=7.4,SNR=2.7						
	comp=Z,0.5nm,0.6s						
NEW	Newport	50.73	318	P	P	20 02 13.7	-1.0
YKA	Yellowknife Ar	55.50	335	P	P	20 02 49.0	-0.5
	comp=Z,1.3nm,0.8s,baz=110,slow=6.6,SNR=18						
	comp=Z,1.3nm,0.8s						
YKA	Yellowknife Ar	55.50	335	P	P	20 02 49.9	+0.4
MD01	Midelt array s	57.37	62	P	P	20 03 04.5	+1.0
MD01				PcP	PcP	20 03 57.9	+0.3
MD31	MD31	57.37	62	P	P	20 03 04.3	+0.8
MD31				IAmb	IAmb	20 03 05.7	
	comp=Z,3.8nm,0.8s						
ESDC	Sonseca Array	58.12	54	P	P	20 03 09.1	+0.4
	comp=Z,4.4nm,0.9s,baz=269,slow=7.2,SNR=28						
	comp=Z,4.4nm,0.9s						
ESBB	Sonseca Array	58.12	54	P	P	20 03 08.9	+0.2
ESBB				IAmb	IAmb	20 03 12.8	
	comp=Z,8.8nm,1.4s						
PLCA	Paso Flores	58.32	183	P	P	20 03 09.5	-0.3
	comp=Z,2.3nm,0.9s,baz=14,slow=9.3,SNR=4.2						
	comp=Z,2.3nm,0.9s						
PLCA	Paso Flores	58.32	183	P	P	20 03 09.7	-0.1
PLCA				IAmb	IAmb	20 03 53.2	
	comp=Z,6.0nm,1.1s						
EKA	Eskdalemuir Ar	60.63	36	P	P	20 03 25.5	-0.1
	comp=Z,0.6nm,0.5s,baz=260,slow=4.9,SNR=3.6						
	comp=Z,0.6nm,0.5s						
DBIC	Dimbokro	61.36	92	P	P	20 03 30.9	-0.3
	comp=Z,4.5nm,0.6s,baz=317,slow=6.3,SNR=7.1						
	comp=Z,4.5nm,0.6s						
G31M	Satah River	64.95	336	P	P	20 03 54.3	+0.1
M29M	Somme Creek	65.88	331	P	P	20 04 00.5	+0.1
M29M				IAmb	IAmb	20 04 23.6	
	comp=Z,2.7nm,1.2s						
TORD	Torodi Ar. Bea	65.92	83	P	P	20 04 00.6	-0.8
	comp=Z,2.1nm,0.8s,baz=274,slow=7.4,SNR=11						
	comp=Z,2.1nm,0.8s						
TORD	Torodi Ar. Bea	65.92	83	IAmb	IAmb	20 04 02.5	
	comp=Z,52nm,0.7s						
G29M	Pine Creek	66.40	336	P	P	20 04 02.9	-0.7
DAWY	Dawson	66.52	333	P	P	20 04 04.6	+0.2
BCAR	Beaver Creek A	67.47	332	P	P	20 04 11.1	+0.6
PRP	Porcupine Dome	69.26	334	P	P	20 04 21.5	-0.3
PRP				IAmb	IAmb	20 04 24.4	
	comp=Z,2.9nm,0.9s						
ILAR	Eielson Array	69.81	333	P	P	20 04 25.1	0.0
	comp=Z,1.0nm,0.8s,baz=94,slow=3.9,SNR=11						
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	70.66	44	P	P	20 04 32.2	+1.6
	comp=Z,0.3nm,0.5s,baz=330,slow=5.7,SNR=2.2						
	comp=Z,0.3nm,0.5s						
M20K	Styx River	72.74	330	P	P	20 04 42.6	-0.3
M20K				IAmb	IAmb	20 05 21.9	
	comp=Z,3.1nm,1.1s						
ARCES	ARCESS Array B	74.31	21	P	P	20 04 53.0	+1.1
	comp=Z,3.2nm,1.0s,baz=339,slow=3.0,SNR=5.3						
	comp=Z,3.2nm,1.0s						
FINES	FINESS Array B	75.94	30	P	P	20 05 02.0	+0.6
	comp=Z,0.6nm,0.3s,baz=274,slow=3.4,SNR=6.5						
	comp=Z,0.6nm,0.3s						
BUR08	Bucovina Ar. S	78.43	44	P	P	20 05 16.9	+1.1
BUR08				IAmb	IAmb	20 05 29.9	
	comp=Z,6.1nm,1.4s						
BURAR	Bucovina Array	78.45	44	P	P	20 05 17.2	+1.2
ITM	Ithomi	78.53	55	P	P	20 05 17.3	+0.8
MLR	Muntele Rosu	79.45	46	P	P	20 05 22.7	+1.2
RDO	Rodhopi	80.27	50	P	P	20 05 26.5	+0.7
IDI	Anoyia	81.32	56	P	P	20 05 32.8	+1.0
BR131	Keskin Array S	86.59	49	P	P	20 05 58.6	-0.1
BR131				IAmb	IAmb	20 05 59.7	
	comp=Z,3.2nm,0.8s						
BRTR	Keskin Array B	86.59	49	P	P	20 05 59.0	+0.3
	comp=Z,2.4nm,0.8s,baz=261,slow=3.5,SNR=12						
	comp=Z,2.4nm,0.8s						
BRTR	Keskin Array B	86.59	49	P	P	20 05 58.6	-0.1
ARTI	Arti	93.06	27	LR	LR	20 42 23.1	
	comp=Z,75nm,20.9s,baz=132,slow=32						
GNI	Garni	94.23	46	LR	LR	20 44 39.6	
	comp=Z,17nm,21.1s,baz=74,slow=33						

AFAD 04 19:55:05.8, 38.°89N×27.°86E, h5km±3km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.04	253	P	Pg	19 55 06.6	-0.5
AKHS				IAML		19 55 09.0	
	comp=E,133nm,0.7s						
AKHS				S	Sg	19 55 09.4	+1.5
KTTT	Salihli	0.27	138	P	Pg	19 55 10.9	-0.2
KTTT				IAML		19 55 16.0	
	comp=N,21nm,0.3s						
KTTT				S	Sg	19 55 16.3	+1.7
CAMT	Merkez	0.45	252	P	Pb	19 55 16.1	-0.1
CAMT				S	Sb	19 55 21.9	-1.4
CAMT				IAML		19 55 24.0	
	comp=N,37nm,1.2s						
CAMT				IAML		19 55 39.0	
	comp=E,36nm,1.8s						

ISK 04 19:56:04.5, 38.°99N×27.°90E, h3km, ML1.7/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.13	210	Pg	Pg	19 56 07.5	+0.5
AKS				Sg	Sg	19 56 09.9	+1.1
GORD	Gordes-Manisa	0.23	111	Pg	Pg	19 56 09.8	+0.8
GOMA	Golmarmara-Man	0.28	177	Pg	Pb	19 56 11.3	-1.0
GOMA				Sg	Sb	19 56 15.6	-1.8
SOMA	Soma-Manisa	0.33	300	Pg	Pb	19 56 12.0	-1.0
SOMA				Sg	Sg	19 56 16.8	+1.8
ODEM	Odemis-Izmir	0.73	169	Pg	Pb	19 56 19.4	-0.5
KULA	Kula-Manisa	0.76	128	Pg	Pb	19 56 20.1	-0.4
SIMA	Simav-Kutahya	0.85	84	Pg	Pb	19 56 21.7	-0.3
SIMA				Sg	Sb	19 56 33.8	-0.1
YAYO	Edremit-Balk	0.89	314	Pg	Pb	19 56 22.8	+0.2
BLCB	Balcova	0.90	228	Pg	Pb	19 56 23.1	+0.3
AYDB	Zeytinkoy-Aydi	1.04	180	Pg	Pb	19 56 25.4	+0.1
NAZL	Nazilli-Aydin	1.07	163	Pg	Pn	19 56 26.3	-0.2

*IDC **04** 20:00:01.2±1.9, 17.°74N×66.°90W, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=50.1km s-min=10.8km az=164.0*

*NEIC **04** 20:00:03.4±0.9, 17.°84N±0.°04×66.°860W±0.°009, h16km±2km, ML3.8/47, ML3.6/9(RSPR), Mwr3.6/15(SLM), Error ellipse: s-maj=5.3km s-min=1.3km az=184.0*

*SDD **04** 20:00:04.5±1.6, 17.°86N×66.°83W, h15km±32km, MD3.6, ML3.5, MW3.8, Presumed earthquake*

*OSPL **04** 20:00:04.0±0.4, 17.°82N×66.°88W, h12km±15km, ML3.4, Presumed earthquake*

*RSPR **04** 20:00:04.4, 17.°87N×66.°87W, h7km, MD2.8/9*

*NEIC **04** 20:00:04, 17.°96N×66.°87W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.73; $M_{\theta\theta}$2.31; $M_{\phi\phi}$0.42; $M_{r\theta}$-0.62; $M_{\theta\phi}$1.40; $M_{\phi r}$0.73; Fault plane solution: $M_0$3.05000×10^{14} NP1:ϕ_s80.00000°, δ50.00000°, λ-65.00000°. NP2:ϕ_s224.00000°, δ46.00000°, λ-117.00000°. Principal axes: T 3.0614, Plg2.0000°, Azm153.0000°; N -0.0029, Plg19.0000°, Azm243.0000°; P -3.0585, Plg71.0000°, Azm57.0000°;*

ISC 04 20:00:03.8±0.9, 17.°87N±0.°05×66.°86W±0.°02, h16km±5km, n60, σ0.°48/86, mb3.5/4, 12C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.11	348		Pg	20 00 07.3	0.0
GBPR	Guanica, Bosqu	0.11	348	⇓eP	Pg	20 00 07.3	0.0
MLPR	Magueyes Islan	0.21	299		Pg	20 00 08.5	0.0
MLPR				Sg	Sg	20 00 11.7	-0.1
MLPR				IAML		20 00 12.2	
	26µm,0.5s						
CRPR	Cabo Rojo, PR	0.28	300		Pg	20 00 09.6	-0.1
CRPR					Sg	20 00 14.1	+0.3
CRPR	Cabo Rojo, PR	0.28	300	IAML		20 00 14.3	
	11µm,0.4s						
CRPR				IAML		20 00 14.4	
	16µm,0.4s						
CRPR	Cabo Rojo, PR	0.28	300	⇑ePg	Pg	20 00 09.7	-0.1
CRPR				⇑eSg	Sg	20 00 14.0	+0.2
CRPR				IAML		20 00 14.4	
	comp=N,14µm,0.3s						
CRPR	Cabo Rojo, PR	0.28	300	⇑eP	Pg	20 00 09.8	0.0
CRPR				eS	Sg	20 00 14.2	+0.4
CRPR	Cabo Rojo, PR	0.28	300	i P	Pg	20 00 09.7	-0.1
CRPR				eS	Sg	20 00 13.4	-0.4
CRPR				IAML		20 00 14.7	
	comp=Z,8µm,0.2s						
OBIP	Obispado Ponce	0.29	54		Pg	20 00 10.2	+0.2
OBIP					Sb	20 00 15.2	-0.2
OBIP	Obispado Ponce	0.29	54	⇓eP	Pb	20 00 10.4	-0.3
OBIP				eS	Sb	20 00 15.4	+0.1
OBIP	Obispado Ponce	0.29	54	i P	Pg	20 00 10.3	+0.2
OBIP				eS	Sb	20 00 15.3	-0.1
OBIP				IAML		20 00 15.4	
	comp=Z,5µm,0.3s						
CELP	Cerrillos	0.33	52		Pg	20 00 11.0	+0.2
CELP				IAML		20 00 17.3	
	comp=Z,7µm,0.2s						
CELP				IAML		20 00 17.5	
	comp=Z,7µm,0.2s						
LSP	Las Mesas	0.38	324		Pb	20 00 11.7	-0.5
LSP					Sb	20 00 17.5	-0.3
LSP	Las Mesas	0.38	324	⇑eP	Pb	20 00 11.7	-0.5
LSP				eS	Sb	20 00 17.5	-0.3
UUPR	Utuado, UPR, P	0.40	19		Pg	20 00 11.8	-0.2
UUPR					Sg	20 00 16.9	-0.7
PRSN	Puerto Rico Se	0.44	322		Sb	20 00 19.6	-0.1
PRSN	Puerto Rico Se	0.44	322	Pg	Pg	20 00 12.6	-0.1
PRSN				IAML		20 00 21.1	
	comp=Z,14µm,0.3s						
PRSN				IAML		20 00 22.1	
	comp=Z,23µm,0.3s						
PRSN	Puerto Rico Se	0.44	322	⇑ePg	Pg	20 00 12.6	-0.1
PRSN				⇑eSg	Sb	20 00 19.1	-0.5
PRSN				IAML		20 00 22.1	
	comp=N,14µm,0.2s						
PRSN	Puerto Rico Se	0.44	322	⇓eP	Pg	20 00 12.8	+0.1
PRSN				eS	Sb	20 00 19.6	-0.1
AGPR	Aguadilla, PR	0.64	338		Pg	20 00 16.0	-0.4
AGPR				IAML		20 00 28.0	
	comp=N,3µm,0.7s						
AGPR	Aguadilla, PR	0.64	338	⇑ePg	Pg	20 00 16.1	-0.4
AGPR				⇑eSg	Sb	20 00 25.2	-0.2
AGPR				IAML		20 00 27.9	
	comp=N,3µm,0.5s						
AGPR	Aguadilla, PR	0.64	338	⇓eP	Pg	20 00 16.2	-0.2
AGPR				eS	Sb	20 00 25.8	+0.3
AGPR	Aguadilla, PR	0.64	338	i P	Pg	20 00 16.1	-0.4
AGPR				eS	Sb	20 00 25.1	-0.3
AGPR				IAML		20 00 27.0	
	comp=Z,2µm,0.2s						
ECPR	Experimental S	0.65	46		Pg	20 00 15.9	-0.6
ECPR					Sb	20 00 25.5	-0.1
ECPR				IAML		20 00 27.7	
	comp=Z,8µm,0.2s						
ECPR	Experimental S	0.65	46	⇓eP	Pg	20 00 16.4	-0.2
ECPR				eS	Sb	20 00 25.8	+0.2
EMPR	Esperanza - Ma	0.68	27		Pb	20 00 17.3	0.0
EMPR					Sb	20 00 27.0	+0.5
EMPR	Esperanza - Ma	0.68	27	⇓eP	Pb	20 00 17.3	0.0
EMPR				eS	Sb	20 00 27.0	+0.5
SJG	San Juan	0.71	70	Pg	Pb	20 00 17.5	-0.4
	comp=Z,160nm,0.3s,baz=257,slow=15,SNR=31						
SJG				Lg	Lg	20 00 27.4	
	comp=Z,386nm,0.3s,baz=68,slow=22,SNR=20						
SJG	San Juan	0.71	70		Pb	20 00 17.3	-0.6
SJG	San Juan	0.71	70		Sb	20 00 27.7	+0.2
SJG	San Juan	0.71	70	⇑eP	Pb	20 00 17.5	-0.4
SJG				eS	Sb	20 00 28.2	+0.7
SJG	San Juan	0.71	70	i P	Pb	20 00 17.4	-0.4
SJG				eS	Sb	20 00 27.5	0.0
SJG				IAML		20 00 30.6	
	comp=Z,1µm,0.3s						
IDE	Isla Desecheo	0.78	311		Pb	20 00 18.5	-0.5
IDE					Sg	20 00 29.4	0.0
IDE	Isla Desecheo	0.78	311	⇓eP	Pb	20 00 18.5	-0.5
IDE				eS	Sg	20 00 29.4	0.0
PDPR	Patillas Dam,	0.81	79		Pb	20 00 19.0	-0.5
PDPR				IAML		20 00 33.8	
	comp=Z,3µm,0.5s						
GCPR	Guaynabo City	0.85	59		Sg	20 00 31.8	+0.1
GCPR	Guaynabo City	0.85	59		Pb	20 00 19.8	-0.5
GCPR	Guaynabo City	0.85	59	⇑eP	Pb	20 00 19.9	-0.4
GCPR				eS	Sg	20 00 31.8	+0.1
HUMP	Col San Antoni	0.99	74		Pb	20 00 22.0	-0.6
HUMP					Sn	20 00 37.1	+0.2
HUMP	Col San Antoni	0.99	74	Pg	Pb	20 00 21.8	-0.9
HUMP				IAML		20 00 38.6	
	comp=Z,2µm,0.4s						
HUMP				IAML		20 00 38.8	
	comp=Z,2µm,0.2s						
HUMP	Col San Antoni	0.99	74	⇑eP	Pb	20 00 22.0	-0.6
HUMP				eS	Sn	20 00 37.1	+0.2
CUPR	Culebra, Puert	1.56	74		Pb	20 00 32.0	-0.3
MIDR	Miches	2.36	298	⇓ePg	Pb	20 00 46.7	+0.8
MIDR				IAML		20 01 32.2	
	comp=N,116nm,0.6s						
DR12	Loma Pena Alta	2.57	291		Pn	20 00 45.5	+0.6
HATOM	Hato Mayor del	2.57	291	⇑ePg	Pb	20 00 48.2	-1.3
HATOM				IAML		20 01 36.6	
	comp=N,121nm,1.4s						
BANI	BANI	3.37	279		Pn	20 00 56.5	+0.5
SMRT	St. Maarten	3.60	87		Pn	20 00 59.1	+0.1
SMRT				IAML		20 01 43.4	
	comp=N,131nm,0.2s						
SMRT				IAML		20 01 49.0	
	comp=E,184nm,0.5s						
SC01	Santiago de lo	3.98	293		Pn	20 01 04.0	-0.3
SDDR	Presa de Saban	4.35	285		Pn	20 01 10.2	+0.8
SDDR				IAML		20 02 23.9	
	comp=E,103nm,0.7s						
SDDR				IAML		20 02 29.7	
	comp=E,91nm,1.0s						
GDHS	Morne Mazeau,	5.12	107		Pn	20 01 18.9	-1.1
ABD	La Joyeuse, An	5.32	104	Pn	Pn	20 01 21.6	-0.9
ABD				IAML		20 03 02.5	
	comp=N,92nm,1.9s						
CBE	Ff, Capester	5.33	109	Pn	Pn	20 01 21.6	-1.3
MAGL	Barre de l'ile	5.67	109	Pn	Pn	20 01 26.9	-0.5
GDSD	La Dsirade Is	5.75	105	Pn	Pn	20 01 27.9	-0.7
TXAR	Lajitas Array	35.47	296	P	P	20 07 00.6	+0.7
	comp=N,0.4nm,0.7s,baz=112,slow=10,SNR=4.5						
	comp=N,0.4nm,0.7s						
TXAR	Lajitas Array	35.47	296	P	P	20 06 59.3	-0.6
YKA	Yellowknife Ar	55.43	335	P	P	20 09 37.4	+0.1
	comp=N,0.3nm,0.6s,baz=108,slow=6.0,SNR=4.0						
	comp=N,0.3nm,0.6s						
ESDC	Sonseca Array	58.07	54	P	P	20 09 57.7	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,0.9nm,0.8s,baz=264,slow=6.7,SNR=7.1						
	comp=N,0.9nm,0.8s						
TORD	Torodi Ar. Bea	65.91	83	P	P	20 10 49.2	-0.4
	comp=N,0.3nm,0.6s,baz=268,slow=8.0,SNR=2.3						
	comp=N,0.3nm,0.6s						
ILAR	Eielson Array	69.75	333	P	P	20 11 12.9	0.0
	comp=N,0.2nm,0.5s,baz=93,slow=4.6,SNR=5.7						
	comp=N,0.2nm,0.5s						

*IDC **04** 20:12:56.4±4.0, 2°.92N×127°.90E, h125km±45km, mb3.3/6, mbtmp3.7/7, Error ellipse: s-maj=70.2km s-min=18.2km az=71.0*

*DJA **04** 20:12:57.0±0.5, 3°N±4°×12°8E±°, h117km±5km, M4.2/19, mB4.9/5, mb4.2/10, MLv4.1/19, Mw(mB)4.2/5*

ISC 04 20:12:54.3±1.2, 3°.1N±0°.1×128°.04E±0°.09, h100km, n19, σ2s.05/21, mb3.6/6, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.42	196	P	Pn	20 13 36.4	+3.9
SGSI	Sangihe	2.57	283	P	Pn	20 13 36.2	+1.8
SGSI				S	Sn	20 14 06.2	+1.0
MNI	Manado	3.60	243	P	Pn	20 13 49.8	+1.6
SWI	Sorong	5.10	141	P	Pn	20 14 11.5	+3.1
	0.1nm23nm,0.9s						
SIJI	Sorong	5.11	141	P	Pn	20 14 11.6	+3.0
	10.0nm,0.4s,baz=212,slow=23,SNR=33						
SIJI				S	Sn	20 15 07.0	+0.7
	6.5nm,0.3s,baz=1.7,slow=23,SNR=12						
SIJI	Sorong	5.11	141	P	Pn	20 14 11.4	+2.9
	0.1nm1µm10nm,0.4s						
SANI	Sanana	5.53	202	P	Pn	20 14 13.4	-0.8
KRAI	Karang Ratu	6.40	177	P	Pn	20 14 27.1	+1.0
MRSI	Marisa	6.64	247	P	Pn	20 14 31.2	+1.9
LUWI	Luwuk	6.69	232	P	Pn	20 14 31.9	+1.8
	50nm,1.0s						
FAKI	Fak Fak	7.32	145	P	Pn	20 14 41.2	+2.5
	0.1nm23nm,1.2s						
APSI	Ampana	7.54	238	P	Pn	20 14 42.0	+0.4
	0.1nm43nm,1.2s						
KDI	Kendari	8.87	218	P	Pn	20 14 59.9	+0.1
FITZ	Fitzroy Crossi	21.21	186	P	P	20 17 30.5	-1.6
	1.9nm,0.6s,baz=2.9,slow=13,SNR=1.4						
	1.9nm,0.6s						
WRA	Warramunga Arr	23.74	165	P	P	20 17 56.0	-1.6
	1.2nm,0.6s,baz=340,slow=10,SNR=18						
	1.2nm,0.6s						
ASAR	Alice Springs	27.23	168	P	P	20 18 27.4	-1.7
	0.2nm,0.4s,baz=354,slow=7.6,SNR=5.8						
	0.2nm,0.4s						
STKA	Stephens Creek	37.11	161	P	P	20 19 53.8	-1.5
	1.1nm,0.4s,baz=338,slow=7.8,SNR=6.5						
	1.1nm,0.4s						
MKAR	Makanchi Array	58.80	325	P	P	20 22 42.4	+0.1
	0.4nm,0.5s,baz=126,slow=8.3,SNR=7.8						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	62.96	327	P	P	20 23 09.4	-0.8
	0.6nm,0.7s,baz=127,slow=5.0,SNR=5.5						
	0.6nm,0.7s						

*BGR **04** 20:32:40.7, 35°.38N×71°.58E, h33km, mb5.1, Ms3.6*

*BJI **04** 20:32:53.4, 36°.62N×71°.34E, h116km, mB5.0/20, mb4.7/64*

*MOS **04** 20:32:53.2±1.0, 36°.54N×71°.35E, h123km, mb4.9/45, Error ellipse: s-maj=5.0km s-min=3.5km az=96.9*

*IDC **04** 20:32:54.9±0.6, 36°.43N×71°.31E, h133km±5km, mb4.4/35, mbtmp4.8/38, MS3.6/7, Error ellipse: s-maj=10.8km s-min=7.5km az=15.0*

*NNC **04** 20:32:54.3±2.9, 37°.06N×70°.98E, h0km, mb5.4, mpv5.5, Error ellipse: s-maj=23.9km s-min=17.4km az=5.0*

*NEIC **04** 20:32:55.3±1.8, 36°.58N±0°.05×71°.25E±0°.07, h129km±5km, mb4.9/207, Error ellipse: s-maj=8.5km s-min=7.4km az=102.0*

*GCMT **04** 20:32:57.3±0.3, 36°.45N±0°.03×71°.13E±0°.03, h134km±5km, MW4.8/81, Moment Tensor Solution. s6,c6; s81,c107; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.88±.10; Mθθ-1.37±.10; Mφφ0.48±.09; Mrθ1.25±.07; Mθφ-0.27±.12; Mφr0.62±.06; Best double couple: M0 1.83200×10^16 NP1: φs289.00000°, δ25.00000°, λ132.00000°. NP2: φs64.00000°, δ72.00000°, λ73.00000°. Principal axes: T 1.6370, Plg59.0000°, Azm310.0000°; N 0.3860, Plg16.0000°, Azm69.0000°; P -2.0270, Plg25.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 20:32:54.2±0.3, 36°.54N±0°.03×71°.25E±0°.03, h122km±2km, h122km:pP-P, n930, σ1s.58/988, mb4.9/256, 48C-52D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANEM	Manem	1.06	19	Pn	Pn	20 33 19.3	+2.0
GAR	Garm	2.56	344		Pn	20 33 35.8	+0.8
GAR				Sn	Sn	20 34 04.9	-1.4
CHGR	Chuyangaron	2.68	322		Pn	20 33 36.7	+0.2
CHGR				Sn	Sn	20 34 07.4	-1.6
CHGR	Chuyangaron	2.68	322	d iPN	Pn	20 33 36.9	+0.4
CHGR				pmax	pmax		
	comp=Z,3µm,0.9s						
KBL	Kabul	2.69	223		Pn	20 33 38.3	+1.6
KBL				Sn	Sn	20 34 10.3	+1.1
KBL	Kabul	2.69	223	P	Pn	20 33 38.5	+1.8
	SNR=158						
KBL				S	Sn	20 34 11.9	+2.7
SHAA	Shahritus	2.70	293		Pn	20 33 37.0	+0.3
SHAA				Sn	Sn	20 34 08.0	-1.3
DRK	Karamyk	2.97	8		Pn	20 33 42.1	+1.8
DRK				Sn	Sn	20 34 14.8	-1.1
NIL	Nilore	3.32	150		Pn	20 33 46.4	+1.6
NIL	Nilore	3.32	150	PN	Pn	20 33 46.4	+1.6
NIL	Nilore	3.32	150	P	Pn	20 33 47.9	+3.1
SRNI	Srinagar	3.83	129	eP	Pn	20 33 52.9	+1.3
SRNI				eP		20 33 54.1	
SRNI				eS	Sn	20 34 34.8	-1.2
SRNI				IAML		20 34 37.3	
	comp=N,1µm,1.2s						
KSH2	Kashi	4.29	51	P	Pn	20 34 00.3	+2.5
KSH2				S	Sn	20 34 48.9	+1.7
KSH2				smax	smax		
	comp=N,6µm,0.6s						
KSH2				smax	smax		
	comp=N,4µm,0.7s						
JMU	Jammu	4.78	141	eP	Pn	20 34 06.3	+2.2
JMU				eS	Sn	20 34 56.8	-1.7
JMU				IAML		20 35 01.6	
	comp=N,5µm,0.9s						
JMU				IAML		20 35 06.0	
	comp=E,4µm,0.4s						
ARSB	Arslanbob	4.96	15		Pn	20 34 06.3	-0.4
ARSB				Sn	Sn	20 34 58.7	-4.5
ALCI	Alchi Leh	5.38	114	eP	Pn	20 34 12.1	-0.5
ALCI				eS	Sn	20 35 10.3	-3.2
ALCI				IAML		20 35 14.3	
	comp=N,4µm,0.9s						
ALCI				IAML		20 35 14.5	
	comp=E,4µm,0.7s						
TSSA	Tissa	5.47	131	eP	Pn	20 34 14.8	+1.1
TSSA				eS	Sn	20 35 13.0	-2.7
TSSA				IAML		20 35 17.3	
	comp=E,846nm,0.0s						
TSSA				IAML		20 35 22.8	
	comp=N,737nm,0.2s						
IUG	Iuzhnay	5.68	351	d iPN	Pn	20 34 16.5	+0.2
IUG	Iuzhnay	5.68	351	⇓iP	Pn	20 34 16.5	+0.2
CHM	Chimkent	5.91	348	d iPN	Pn	20 34 19.7	+0.4
CHM	Chimkent	5.91	348	⇓iP	Pn	20 34 19.8	+0.4
DHRM	DHARAMSHALA	5.98	134	eP	Pn	20 34 21.2	+0.6
DHRM				eS	Sn	20 35 25.0	-2.9
DHRM				IAML		20 35 27.5	
	comp=N,899nm,0.5s						
DHRM				IAML		20 35 27.7	
	comp=E,989nm,0.7s						
TLWR	Talawar	6.01	138	eP	Pn	20 34 19.7	-1.1
TLWR				eS	Sn	20 35 23.5	-4.9
TLWR				IAML		20 35 26.3	
	comp=N,877nm,0.2s						
TLWR				IAML		20 35 31.8	
	comp=E,704nm,7.1s						
UCH	Uchtor	6.22	23	P	Pn	20 34 24.0	+0.1
	SNR=850						
DZA	Taraz	6.34	1	d iPN	Pn	20 34 25.5	+0.3
DZA	Taraz	6.34	1	⇓iP	Pn	20 34 25.5	+0.3
DZA				eS	Sn	20 35 35.8	-0.5
EKS2	Erkin-Say	6.42	17	P	Pn	20 34 26.6	+0.3
	SNR=384						
BRLS	Borolday	6.57	351	ePN	Pn	20 34 24.8	-3.4
BRLS	Borolday	6.57	351	eP	Pn	20 34 24.9	-3.4
KK31	Karatay Array	6.58	355		Pn	20 34 28.1	-0.2
KK31				Sn	Sn	20 35 36.3	-5.7
KK31	Karatay Array	6.58	355	⇑P	Pn	20 34 27.2	-1.2
	comp=E,554nm,0.4s,baz=182,slow=12,SNR=8994						
KK31				⇓S	Sn	20 35 37.0	-5.0
	comp=E,388nm,0.5s,baz=184,slow=22,SNR=10.0						
KK31	Karatay Array	6.58	355	PN	Pn	20 34 28.1	-0.2
KKAR	Karatay Array	6.58	355		Pn	20 34 28.1	-0.2
KKAR	Karatay Array	6.58	355	PN	Pn	20 34 28.1	-0.2
AAK	Ala-Archa	6.58	21	P	Pn	20 34 29.1	+0.5
	comp=E,315nm,0.4s,baz=186,slow=5.1,SNR=770						
AAK				S	Sn	20 35 40.1	-2.2
	comp=E,238nm,0.5s,baz=187,slow=11,SNR=6.0						
AAK	Ala-Archa	6.58	21	P	Pn	20 34 29.0	+0.5
	SNR=904						
AAK	Ala-Archa	6.58	21		Pn	20 34 28.8	+0.3
AAK	Ala-Archa	6.58	21	⇑P	Pn	20 34 28.8	+0.3
	comp=E,58nm,0.4s						
AAK				⇑S	Sn	20 35 39.4	-3.0
	comp=E,403nm,0.5s						
AAK	Ala-Archa	6.58	21	i P	Pn	20 34 29.1	+0.5
	SNR=278						
AAK	Ala-Archa	6.58	21	P	Pn	20 34 29.7	+1.1
BHK	Bhakra	6.67	139	eP	Pn	20 34 33.9	+4.2
BHK				eS	Sn	20 35 47.2	+2.8
BHK				IAML		20 35 47.9	
	comp=E,3µm,0.7s						
BHK				IAML		20 36 10.5	
	comp=N,2µm,0.8s						
KBK	Karagaybulak	6.74	24	P	Pn	20 34 30.8	+0.1
	SNR=187						
FRU1	Bishkek	6.78	22		Pn	20 34 31.6	+0.5
FRU1	Bishkek	6.78	22	PN	Pn	20 34 31.6	+0.5
ULHL	Ulahol	6.88	33	P	Pn	20 34 32.7	0.0
	SNR=51						
CHMS	Chumysh	6.99	22	P	Pn	20 34 34.1	+0.2
	SNR=81						
USP	Ospenovka	7.17	19	P	Pn	20 34 36.6	+0.3
	SNR=130						
TKM2	Tokmak 2	7.20	26	P	Pn	20 34 37.1	+0.2
	SNR=86						
TARG	Taragay, Kyrgy	7.27	43		Pn	20 34 37.8	-0.2
TARG	Taragay, Kyrgy	7.27	43	PN	Pn	20 34 37.8	-0.2
SMLA	Simla	7.31	136	eP	Pn	20 34 38.2	-0.1
SMLA				eS	Sn	20 35 53.8	-5.9
SMLA				IAML		20 35 59.9	
	comp=E,2µm,0.3s						
SMLA				IAML		20 36 00.7	
	comp=N,3µm,0.3s						
CGRH	CHANDIGARH	7.41	140	eP	Pn	20 34 39.5	-0.1
CGRH				eS	Sn	20 35 57.2	-4.9
CGRH				IAML		20 36 24.9	
	comp=N,758nm,1.1s						
HRA	Herat	7.65	256		Pn	20 34 44.2	+1.1
WUS	Wushi	7.76	51		Pn	20 34 44.4	-0.1
TNSS	Tian-Shan	7.83	32	ePN	Pn	20 34 45.4	-0.2
TNSS	Tian-Shan	7.83	32	eP	Pn	20 34 45.5	-0.2
AAA	Alma-Ata	7.96	31	ePN	Pn	20 34 47.3	+0.3
AAA	Alma-Ata	7.96	31	eP	Pn	20 34 47.4	+0.3
MDOK	Medeo	7.98	32	ePN	Pn	20 34 47.2	-0.1
MDOK	Medeo	7.98	32	eP	Pn	20 34 47.3	-0.1
KNDC	Almaty	7.99	32	⇑P	Pn	20 34 47.5	+0.1
	comp=N,131nm,0.5s						
KNDC				⇓S	Sn	20 36 13.9	-2.2
	comp=N,209nm,0.8s						
PRZ	Przheval'sk	8.11	41		Pn	20 34 49.6	+0.4
PRZ	Przheval'sk	8.11	41	PN	Pn	20 34 49.6	+0.4
SATY	Saty	8.53	38	d iPN	Pn	20 34 54.1	-0.6
SATY	Saty	8.53	38	⇓iP	Pn	20 34 54.2	-0.6
SATY				eS	Sn	20 36 28.0	-1.3
RTK	Rohtak	8.66	148	eP	Pn	20 34 56.9	+0.4
RTK				eS	Sn	20 36 25.6	-6.8
RTK				IAML		20 36 26.9	
	comp=N,947nm,0.8s						
BKNR	BIKANER	8.67	168	eP	Pn	20 34 55.2	-1.5
BKNR				eS	Sn	20 36 20.8	-12
BKNR				IAML		20 36 27.3	
	comp=N,730nm,0.4s						
BKNR				IAML		20 36 29.4	
	comp=E,756nm,0.0s						
UZB	Uzynbulak	8.90	40	d iPN	Pn	20 34 59.3	-0.5
UZB	Uzynbulak	8.90	40	⇓iP	Pn	20 34 59.4	-0.5
SHLS	Shalkode	9.14	41	eP	Pn	20 35 05.7	+2.7
SHLS	Shalkode	9.14	41	eP	Pn	20 35 05.8	+2.7
JOSI	Joshimath	9.15	128	eP	Pn	20 35 02.9	-0.5
JOSI				eS	Sn	20 36 36.1	-8.6
JOSI				IAML		20 36 47.1	
	comp=E,593nm,0.3s						
JOSI				IAML		20 36 54.4	
	comp=N,494nm,0.8s						
ARXS	Arharly	9.16	31	eP	Pn	20 35 01.6	-1.6
PDGK	Podgornoye	9.27	41	⇑P	Pn	20 35 03.3	-1.5
	comp=N,124nm,0.8s						
PDGK				⇓S	Sn	20 36 50.5	+3.1
	comp=N,120nm,0.9s						
NDI	New Delhi	9.31	146	eP	Pn	20 35 05.9	+0.6
NDI				eS	Sn	20 36 42.6	-5.7
NDI				IAML		20 36 44.0	
	comp=E,389nm,0.4s						
NDI				IAML		20 36 44.2	
	comp=N,419nm,0.1s						
AYAN	Aya Nagar	9.44	147	eP	Pn	20 35 06.8	-0.3
AYAN				eS	Sn	20 36 44.4	-7.1
AYAN				IAML		20 36 47.0	
	comp=N,551nm,0.6s						
KUDL	Kundal	9.47	151	eP	Pn	20 35 07.8	+0.3
KUDL				eS	Sn	20 36 44.2	-8.0
KUDL				IAML		20 36 46.5	
	comp=E,554nm,0.5s						
BISR	Bishrakh	9.51	145	eP	Pn	20 35 08.8	+0.8
BISR				eS	Sn	20 36 45.5	-7.5
BISR				IAML		20 37 05.6	
	comp=N,499nm,1.6s						
JASL	Jaisalmer	9.59	182	eP	Pn	20 35 09.2	0.0
JASL				eS	Sn	20 36 47.6	-7.6
JASL				IAML		20 36 55.6	
	comp=N,710nm,0.6s						
TDK	Taldyqorghan	10.04	30	eP	Pn	20 35 14.3	-0.8
TDK	Taldyqorghan	10.04	30	eP	Pn	20 35 14.3	-0.8
PTH	Pithoragarh	10.22	130	eP	Pn	20 35 17.9	+0.1
PTH				eS	Sn	20 37 00.4	-10
PTH				IAML		20 37 05.8	
	comp=E,383nm,0.5s						
PTH				IAML		20 37 07.9	
	comp=N,446nm,0.8s						
LGTI	Lohaghat	10.29	131	eP	Pn	20 35 20.2	+1.6
LGTI				eS	Sn	20 37 01.9	-10
LGTI				IAML		20 37 08.0	
	comp=E,546nm,0.6s						
LGTI				IAML		20 37 08.3	
	comp=N,597nm,0.0s						
AJM	Ajmer	10.49	163	eP	Pn	20 35 21.2	-0.1
AJM				eS	Sn	20 37 06.9	-10
AJM				IAML		20 37 30.4	
	comp=E,329nm,1.0s						
JHNI	Jhansi	12.72	148	eP	Pn	20 35 50.5	-0.2
JHNI				eS	Sn	20 37 59.2	-12
JHNI				IAML		20 38 03.9	
	comp=E,296nm,0.0s						
JHNI				IAML		20 38 15.7	
	comp=N,184nm,1.1s						
GUNA	GUNA	12.96	155	eP	Pn	20 35 53.8	0.0
GUNA				eS	Sn	20 38 03.4	-13
GUNA				IAML		20 38 08.4	
	comp=N,604nm,0.7s						
GUNA				IAML		20 38 08.9	
	comp=E,414nm,0.3s						
MAKZ	Makanchi	13.01	35		Pn	20 35 52.3	-2.0
MAKZ	Makanchi	13.01	35	⇑P	P	20 35 58.5	-1.6
	comp=E,61nm,0.8s						
MAKZ	Makanchi	13.01	35	P	Pn	20 35 52.3	-2.0
MK31	Makanchi Array	13.14	35	⇑P	P	20 35 60.0	-1.6
	comp=E,20nm,0.6s,baz=210,slow=12,SNR=55						
MK31	Makanchi Array	13.14	35	c iP	Pn	20 35 54.3	-1.8
MKAR	Makanchi Array	13.14	35	P	Pn	20 35 54.4	-1.7
	comp=E,11nm,0.8s,baz=221,slow=13,SNR=105						
MKAR				ScP	ScP	20 44 35.9	-3.5
	comp=E,4.4nm,1.0s,baz=300,slow=2.8,SNR=3.8						
MKAR	Makanchi Array	13.14	35		Pn	20 35 53.8	-2.2
MKAR	Makanchi Array	13.14	35	P	Pn	20 35 53.8	-2.2
BHPL	Bhopal	14.29	156	eP	Pn	20 36 12.3	+1.3
BHPL				eS	Sn	20 38 50.1	+1.2
BHPL				IAML		20 39 16.5	
	comp=N,147nm,1.1s						
BHPL				IAML		20 39 16.6	
	comp=E,260nm,1.4s						
ALBI	Allahabad	14.39	138	eP	Pn	20 36 13.7	+1.4
WMQ	Urumqi	14.51	55	eP	Pn	20 36 12.0	-1.7
WMQ				S	Sn	20 38 47.1	-6.8
WMQ				pmax	pmax		
	comp=E,20nm,0.9s						
NRDN	NARMADA NAGAR	14.70	158	eP	Pn	20 36 16.3	+0.1
NRDN				IAML		20 38 55.1	
	comp=E,133nm,1.6s						
NRDN				eS	Sn	20 38 59.8	+1.1
NRDN				IAML		20 39 13.3	
	comp=N,116nm,1.3s						
ZSN	Zaisan	14.85	39	eP	Pn	20 36 17.9	0.0
ZSN	Zaisan	14.85	39	eP	Pn	20 36 18.0	0.0
KURBB	Kurchatov Arra	15.02	18	P	Pn	20 36 16.4	-3.5
	comp=N,7.9nm,0.8s,baz=209,slow=12,SNR=34						
KURBB				S	Sn	20 39 06.9	+0.9
	comp=N,14nm,1.0s,baz=202,slow=20,SNR=5.6						
KURBB	Kurchatov Arra	15.02	18	⇓P	P	20 36 21.6	-0.8
	comp=N,37nm,0.7s						
KURK	Kurchatov	15.13	18		Pn	20 36 17.7	-3.6
KURK	Kurchatov	15.13	18	⇑P	Pn	20 36 21.7	+0.4
	comp=N,13nm,0.8s						
KURK	Kurchatov	15.13	18	c eP	P	20 36 23.1	-0.4
KURK	Kurchatov	15.13	18	P	Pn	20 36 21.5	+0.2
KURK				S	S	20 39 13.1	-3.9
AB31	Akbulak array	15.14	331		Pn	20 36 19.2	-2.3
AB31	Akbulak array	15.14	331	P	Pn	20 36 19.8	-1.7
	comp=N,28nm,0.4s,baz=145,slow=11,SNR=2099						
AB31				S	Sn	20 39 03.7	-5.2
	comp=N,127nm,0.8s,baz=148,slow=21,SNR=9.8						
ABKAR	Akbulak array	15.14	331		Pn	20 36 19.1	-2.4
BVA0	Borovoye Array	16.49	358	⇓P	Pn	20 36 38.0	-0.2
	comp=N,23nm,0.8s						
BVA0				⇑S	Sn	20 39 40.4	-1.0
	comp=N,31nm,0.8s						
BVAR	Borovoye Array	16.49	358	P	Pn	20 36 35.8	-2.4
	comp=N,22nm,0.6s,baz=171,slow=12,SNR=62						
BVAR				S	Sn	20 39 32.0	-9.4
	comp=N,26nm,0.6s,baz=169,slow=22,SNR=7.3						
BORK	Borovoye	16.52	358	P	Pn	20 36 36.6	-1.8
BORK	Borovoye	16.52	358	c eP	Pn	20 36 36.9	-1.5
BORK				pmax	pmax		
	comp=Z,48nm,0.8s						
AKL	Akola	16.57	161	eP	Pn	20 36 39.3	0.0
AKL				eS	S	20 39 46.1	0.0
AKL				IAML		20 39 52.9	
	comp=N,74nm,0.8s						
AKL				IAML		20 39 54.7	
	comp=E,134nm,1.3s						
BANOM	Banah	16.57	235	i P	Pn	20 36 39.5	0.0
	SNR=14						
BANOM	Banah	16.57	235	P	P	20 36 40.1	+0.3
SHME	Shamm	16.59	235	i P	P	20 36 40.1	+0.1
	SNR=6.2						
AKTO	Aktyubinsk	16.84	330	P	P	20 36 42.5	0.0
	comp=E,55nm,0.5s,baz=155,slow=8.8,SNR=125						
AKTO				S	Sn	20 39 39.9	-10
	comp=E,125nm,0.9s,baz=201,slow=17,SNR=6.6						
AKTO	Aktyubinsk	16.84	330	⇓P	Pn	20 36 42.0	-0.5
	comp=E,92nm,1.1s						
AKTO				⇑S	Sn	20 39 45.0	-4.8
	comp=E,97nm,0.7s						
MDH	Madha	17.01	233	P	Pn	20 36 44.7	0.0
MASF	Masafi	17.05	233	P	Pn	20 36 45.5	+0.4
	SNR=5.7						
MSFE	Esma-Masafi	17.05	233	i P	P	20 36 44.0	-1.1
	SNR=7.5						
BLSP	Bilaspur	17.24	144	eP	Pn	20 36 49.9	+2.4
BLSP				IAmb	IAmb	20 36 56.4	
	comp=Z,126nm,0.3s						
BLSP				IAML		20 39 46.1	
	comp=E,124nm,0.4s						
BLSP				eS	S	20 40 01.5	+0.9
BLSP				IAML		20 40 06.5	
	comp=N,66nm,0.6s						
UOSS	Minazif	17.32	232	P	P	20 36 46.2	-1.8
UOSS	Minazif	17.32	232	P	P	20 36 46.6	-1.4
UOSS	Minazif	17.32	232	P	Pn	20 36 48.5	+0.1
HATD	Hatta, Dubai	17.45	232	P	P	20 36 49.1	-0.4
HATD	Hatta, Dubai	17.45	232	P	Pn	20 36 50.7	+0.7
WBK	Wadi Bani Khal	17.49	221	P	Pn	20 36 51.5	+0.9
ASHO	Ashiyiah	17.60	232	i P	Pn	20 36 52.1	+0.3
	SNR=14						
ASHO	Ashiyiah	17.60	232	P	Pn	20 36 52.3	+0.5
	SNR=9.4						
DGZ	Jazzator, Alta	17.63	37	c iP	P	20 36 50.9	-0.5
DGZ				pmax	pmax		
	comp=Z,27nm,0.7s						
SMDO	Samad	17.63	224	P	Pn	20 36 53.4	+1.1
NAZ	Nazwa, Dubai	17.64	234	P	Pn	20 36 52.0	-0.2
NAZ	Nazwa, Dubai	17.64	234	P	Pn	20 36 52.3	0.0
JLN	Jalan Bani Buh	17.64	219	P	Pn	20 36 53.8	+1.4
	SNR=5.4						
HOQ	Hoqain	17.64	227	P	Pn	20 36 53.2	+0.9
SOHO	SOHO	17.70	230	P	Pn	20 36 53.3	+0.3
LSA	Lhasa	18.00	107	P	Pn	20 36 56.8	-0.2
LSA	Lhasa	18.00	107	P	P	20 36 52.7	-3.2
LSA	Lhasa	18.00	107	P	Pn	20 36 57.7	+0.6
LSA	Lhasa	18.00	107	P	Pn	20 36 56.8	-0.2
POO	Poona	18.09	172	eP	Pn	20 36 57.8	+0.1
POO				eS	Sn	20 40 19.3	-1.0
POO				IAML		20 40 44.7	
	comp=N,41nm,1.5s						
POO				IAML		20 40 47.6	
	comp=E,67nm,1.6s						
JMDO	Jabal Madar	18.15	223	P	Pn	20 36 59.5	+1.1
	SNR=5.3						
ALNE	Al Ain	18.24	231	i P	P	20 36 58.3	+0.2
	SNR=17						
ALNE	Al Ain	18.24	231	P	Pn	20 36 59.5	0.0
ALNE				S	S	20 40 19.6	-1.1
BSY	Bisya	18.36	225	P	Pn	20 37 01.7	+0.8
AJN	Ajban	18.37	234	P	Pn	20 37 00.4	-0.6
AKT	Akhty	18.91	292	eP	Pn	20 37 06.7	-0.6
AKT				eS	S	20 40 35.5	+1.7
AKT				pmax	pmax		
	comp=Z,30nm,0.6s						
AKT				smax	smax		
	comp=N,43nm,0.5s						
AKT				smax	smax		
	comp=E,45nm,0.5s						
GOMU	GeErMu	18.98	84	P	Pn	20 37 07.8	-0.7
GOMU				pmax	pmax		
	comp=E,28nm,1.0s						
MAK	Makhachkala	19.31	297	d iP	P	20 37 08.2	-1.4
MAK				eS	S	20 40 41.2	-0.4
MAK				pmax	pmax		
	comp=Z,220nm,1.3s						
KAD	Karad	19.34	171	eP	P	20 37 10.6	+0.5
KAD				eS	S	20 40 43.2	+0.8
KAD				IAML		20 41 46.9	
	comp=N,28nm,1.1s						
KAD				IAML		20 42 04.6	
	comp=E,44nm,0.9s						
MHTO	MHTO	19.35	220	P	Pn	20 37 12.8	+0.3
	SNR=7.2						
JRN	Qarnain Island	19.55	239	P	P	20 37 12.4	+0.1
UMZA	Um Al Zommool	19.59	230	P	P	20 37 13.9	+1.1
UMZA				S	S	20 40 45.5	-1.9
MZWR	Madinat Zayed	19.65	234	P	P	20 37 13.7	+0.2
MZWR				S	S	20 40 46.2	-2.3
ZAA0	Zalesovo Array	19.80	24	P	P	20 37 14.4	-0.3
ZALV	Zalesovo Beam	19.80	24	P	P	20 37 14.6	-0.1
	comp=E,70nm,0.5s,baz=221,slow=11,SNR=322						
ZALV				S	S	20 40 44.6	-6.3
	comp=E,17nm,0.9s,baz=212,slow=19,SNR=3.9						
ZALV	Zalesovo Beam	19.80	24	P	P	20 37 14.3	-0.4
GHWR	Ruwais	20.18	237	P	P	20 37 19.1	0.0
GHWR				S	S	20 40 56.0	-3.0
SHMA	Al-Shehemyia	20.32	244	P	P	20 37 20.6	+0.1
SHMA				S	S	20 41 00.3	-1.4
MZR	Muzera	20.45	234	i P	P	20 37 21.7	-0.3
	SNR=6.5						
MZR	Muzera	20.45	234	P	P	20 37 22.2	+0.2
SAKB	Bahrain	20.56	245	P	P	20 37 22.5	-0.6
SAKB				S	S	20 41 05.1	-1.3

SHL Shillong 20.75 116 P **P** **20 37 25.4 -0.1**
SHL Shillong 20.75 116 P **P** **20 37 25.4 -0.1**
SHL Shillong 20.75 116 P **P** **20 37 25.5 +0.1**
SNR=44
TRNA Turayna 20.82 241 P **P** **20 37 25.2 -0.9**
SLWR Sila 20.92 239 P **P** **20 37 26.3 -0.7**
SLWR S **S** **20 41 10.5 -3.0**
GNI Garni 21.07 288 P **P** **20 37 29.2 +0.4**
comp=E,52nm,0.9s,baz=211,slow=2.3,SNR=18
comp=E,52nm,0.9s
GNI Garni 21.07 288 P **P** **20 37 28.8 +0.1**
GNI Garni 21.07 288 P **P** **20 37 29.3 +0.6**
GNI Garni 21.07 288⇓ *e*P **P** **20 37 28.7 0.0**
GNI pmax pmax
comp=Z,57nm,1.2s
GNI Garni 21.07 288 P **P** **20 37 26.4 -2.4**
KBD Kabd 21.07 256 P **P** **20 37 26.6 -2.1**
SMRA Abu-Samra 21.09 242 P **P** **20 37 29.1 +0.2**
SMRA S **S** **20 41 13.8 -3.0**
SVE Sverdlovsk 21.51 344 *e*P **P** **20 37 34.2 +1.1**
SVE *e*S **S** **20 41 26.8 +2.7**
SVE pmax pmax
comp=N,72nm,1.2s
ARTI Arti 21.67 340 P **P** **20 37 35.3 +0.5**
comp=N,112nm,0.7s,baz=159,slow=7.5,SNR=71
comp=N,112nm,0.7s
ARTI Arti 21.67 340 P **P** **20 37 34.9 +0.2**
ARTI Arti 21.67 340*c i*P **P** **20 37 35.5 +0.7**
ARTI *PP **pP** **20 38 00.3 +2.0**
ARTI 20 38 12.7
ARTI S **S** **20 41 29.4 +2.4**
ARTI *SS **sS** **20 42 05.2 -2.0**
ARTI pmax pmax
comp=Z,265nm,1.3s
NCK Nalchik 22.22 297⇑ *e*P **P** **20 37 41.9 +1.2**
NCK pmax pmax
comp=Z,68nm,0.8s
KARS Kars 22.35 289 P **P** **20 37 42.0 -0.2**
KARS Kars 22.35 289 P **P** **20 37 42.0 -0.2**
GTA2 Gaotai 22.62 74 *e*P **P** **20 37 46.4 +1.5**
GTA2 pP pP 20 38 08.5 -0.8
GTA2 S **S** **20 41 47.2 +3.6**
GTA2 pmax pmax
comp=Z,19nm,0.8s
KBZ Khabaz 22.76 297 P **P** **20 37 46.5 +0.5**
comp=Z,19nm,0.9s,baz=148,slow=7.4,SNR=18
comp=Z,19nm,0.9s
GOF Gofitskoye 22.89 301*c i*P **P** **20 37 49.5 +2.2**
SHA1 Shidzhatmaz 22.93 297*de*P **P** **20 37 50.1 +2.2**
KVAR Kislovodsk Arr 22.94 298 P **P** **20 37 48.6 +0.7**
comp=Z,4.8nm,0.6s,baz=106,slow=20,SNR=3.6
comp=Z,4.8nm,0.6s
KIV Kislovodsk 22.94 298 P **P** **20 37 46.8 -1.1**
KIV IAmb IAmb 20 38 10.7
comp=Z,46nm,0.8s
KIV Kislovodsk 22.94 298 P **P** **20 37 46.6 -1.3**
KIV Kislovodsk 22.94 298 *e*P **P** **20 37 49.5 +1.6**
KIV *e*S **S** **20 41 51.1 +2.5**
KIV pmax pmax
comp=Z,27nm,1.0s
KIV MLR MLR
comp=Z,46nm,14.0s
KIV Kislovodsk 22.94 298 P **P** **20 37 46.1 -1.8**
BELG Belogornoye 22.98 321 P **P** **20 37 48.9 +0.9**
comp=Z,198nm,1.1s,baz=322,slow=2.7,SNR=47
comp=Z,198nm,1.1s
BELG Belogornoye 22.98 321*c i*P **P** **20 37 49.0 +1.0**
BELG pmax pmax
comp=Z,27nm,1.1s
GURO Guroymak-BITLI 23.21 284 P **P** **20 37 50.8 +0.3**
MORE Moreh 23.30 115 P **P** **20 37 51.9 +0.6**
MORE IAmb IAmb 20 37 54.1
comp=Z,71nm,0.7s
DOK Doka 23.36 225 P **P** **20 37 52.2 +0.3**
DOK S **S** **20 41 54.9 -0.6**
KNGR Kungurtug, Tuv 23.50 45*ce*P **P** **20 37 54.6 +1.6**
KNGR pmax pmax
comp=Z,36nm,0.8s
DMTO DMTO 23.64 222 P **P** **20 37 55.1 +0.7**
RBK Rabkut 24.22 223 P **P** **20 38 00.1 +0.4**
ABTO Aybut 24.85 224 P **P** **20 38 05.9 +0.5**
VRH Novokhopyorsk 25.62 314 *e*P **P** **20 38 12.5 +0.5**
VRH pmax pmax
comp=Z,25nm,0.8s
RAYN Ar Rayn 25.70 247 P **P** **20 38 12.2 -0.9**
RAYN Ar Rayn 25.70 247 *i*P **P** **20 38 13.2 +0.1**
SNR=23
RAYN Ar Rayn 25.70 247 P **P** **20 38 12.2 -0.9**
RAYN pmax pmax
comp=Z,11nm,0.8s
RAYN Ar Rayn 25.70 247 P **P** **20 38 13.1 +0.1**
MOY Mondy 25.94 45 *e*P **P** **20 38 16.4 +1.4**
MOY pmax pmax
comp=Z,13nm,1.6s
TNCH TengChong 26.00 109 P **P** **20 38 17.3 +1.3**
TNCH pP pP 20 38 37.4 -5.6
TNCH pmax pmax
comp=Z,41nm,1.0s
TNCH pmax pmax
comp=Z,200nm,4.8s
LZDM Lanzhou Array 26.11 82 P **P** **20 38 16.1 -0.9**
comp=Z,5.2nm,1.0s,baz=272,slow=12,SNR=26
comp=Z,5.2nm,1.0s
LZH Lanzhou 26.21 81 *e*P **P** **20 38 20.1 +2.4**
LZH pP pP 20 38 45.4 0.0
LZH pmax pmax
comp=Z,26nm,1.3s
KIRV Kirov 26.29 334*c i*P **P** **20 38 19.3 +1.4**
ZAK Zakamensk 26.81 49 *e*P **P** **20 38 23.1 +0.2**
ZAK pmax pmax
comp=Z,13nm,1.6s
VORD Divnogorie 26.96 312 *e*P **P** **20 38 22.7 -1.3**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 27.12 313 *e*P **P** **20 38 25.7 +0.2**
VSR pmax pmax
comp=Z,20nm,1.4s
VORR Voronezh 27.25 314 *e*P **P** **20 38 26.0 -0.7**
TLY Talaya 27.47 46⇑ *e*P **P** **20 38 30.1 +1.4**
TLY pmax pmax
comp=Z,4.0nm,0.9s
CD2 Chengdu 27.54 92 P **P** **20 38 31.1 +1.6**
CD2 pP pP 20 38 55.6 -1.5
CD2 pmax pmax
comp=Z,20nm,0.8s
PZH PanZhiHua 27.75 102 P **P** **20 38 33.1 +1.5**
LPSR Galich'ya Gora 27.76 316 *e*P **P** **20 38 31.2 0.0**
LPSR pmax pmax
comp=Z,30nm,0.8s
SONM Songino Array 28.15 55 P **P** **20 38 35.4 +0.5**
comp=Z,4.0nm,0.5s,baz=264,slow=8.8,SNR=41
comp=Z,4.0nm,0.5s
SONM Songino Array 28.15 55 P **P** **20 38 35.4 +0.5**
SONM Songino Array 28.15 55 P **P** **20 38 35.4 +0.5**
SONM pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 28.59 55 P **P** **20 38 38.7 -0.1**
ULN Ulaanbaatar 28.59 55*ce*P **P** **20 38 39.7 +0.9**
ULN pmax pmax
comp=Z,15nm,1.7s
ULN Ulaanbaatar 28.59 55 P **P** **20 38 37.4 -1.4**
comp=Z,36nm,0.8s
SIM Simferopol' 29.15 298 P **P** **20 38 48.1 +4.5**
SIM pmax pmax
comp=Z,23nm,1.3s
KMI2 Kunming 29.21 104 P **P** **20 38 45.3 +0.7**
KMI2 pP pP 20 39 12.9 +1.0
KMI2 pmax pmax
comp=Z,4.0nm,0.6s
MOS Moscow 29.75 321 *e*P **P** **20 38 48.9 +0.1**
MOS *e**PP **pP** **20 39 17.4 +1.7**
MOS *e**SP **sP** **20 39 31.3 +1.2**
MOS *e* 20 39 50.8
MOS pmax pmax
comp=Z,55nm,0.9s
OBN Obninsk 30.04 319 P **P** **20 38 51.9 +0.7**
OBN Obninsk 30.04 319*c i*P **P** **20 38 52.3 +1.0**
OBN *e* 20 39 54.0
OBN pmax pmax
comp=Z,32nm,0.9s
OBN Obninsk 30.04 319 P **P** **20 38 52.2 +1.0**
comp=Z,59nm,1.3s
CHTO Chiang Mai 30.07 118 P **P** **20 38 52.0 +0.1**
CHTO Chiang Mai 30.07 118 P **P** **20 38 53.6 +1.6**
CHTO Chiang Mai 30.07 118 P **P** **20 38 53.2 +1.2**
CHTO Chiang Mai 30.07 118 P **P** **20 38 52.1 +0.1**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 30.07 118 P **P** **20 38 52.4 +0.4**
CHTO Chiang Mai 30.07 118 P **P** **20 38 51.0 -1.0**
CHTO Chiang Mai 30.07 118 P **P** **20 38 52.1 +0.1**
BTO2 Baotou 30.30 70 *e*P **P** **20 38 55.8 +1.8**
BTO2 PP **PnPn** **20 39 57.6 +0.2**
BTO2 S **S** **20 43 49.6 +4.5**
BTO2 pmax pmax
comp=Z,19nm,0.6s
BTO2 pmax pmax
comp=Z,260nm,6.8s
BTO2 LR LR
comp=Z,380nm,6.2s
BTO2 LR LR
comp=Z,260nm,5.3s
BTO2 LR LR
comp=Z,280nm,4.5s
CM31 Chiang Mai Arr 30.30 119 P **P** **20 38 53.4 -0.6**
CMAR Chiang Mai Arr 30.30 119 P **P** **20 38 53.0 -1.0**
comp=Z,7.1nm,0.9s,baz=303,slow=8.4,SNR=53
CMAR PP **PnPn** **20 39 58.0 +0.4**
comp=Z,4.8nm,0.7s,baz=303,slow=11,SNR=5.6
CMAR ScP **ScP** **20 45 18.8 -3.8**
comp=Z,2.2nm,1.0s,baz=300,slow=4.7,SNR=7.7
comp=Z,7.1nm,0.9s
CMAR Chiang Mai Arr 30.30 119 P **P** **20 38 54.0 -0.1**
CMAR **ScP** **20 45 19.6 -3.0**
CMAR Chiang Mai Arr 30.30 119 *i*P **P** **20 38 54.4 +0.3**
CMAR pmax pmax
comp=Z,8.0nm,0.9s
XAN Xi'an 30.73 83⇑ P **P** **20 38 58.3 +0.6**
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN Xi'an 30.73 83 P **P** **20 38 57.6 -0.1**
KLMR Klimovskoe 31.54 331 *e*P **P** **20 39 04.5 0.0**
KLMR *e**SP **sP** **20 39 45.5 -0.8**
KLMR pmax pmax
comp=Z,86nm,1.4s
HHC Hu-ho-hao-te 31.56 70⇓ *i*P **P** **20 39 07.3 +2.2**
HHC pmax pmax
comp=Z,5.0nm,1.1s
GYA Guiyang 31.67 98 ⇓P **P** **20 39 06.9 +0.7**
GYA pmax pmax
comp=Z,10.0nm,0.9s
PURM Purcari 32.21 301 ⇓P **P** **20 39 12.8 +2.3**
PURM Purcari 32.21 301 P **P** **20 39 11.9 +1.4**
comp=Z,125nm,0.8s
ENH Enshi 32.38 90 P **P** **20 39 13.9 +1.7**
ENH Enshi 32.38 90 P **P** **20 39 13.3 +1.0**
ENH x x 20 39 37.2
BAL3X Bal3x, Balta 32.49 304 P **P** **20 39 13.9 +0.9**
TIY Taiyuan 32.67 75 *e*P **P** **20 39 16.8 +2.0**
TIY pmax pmax
comp=Z,30nm,0.7s
ELL Elmali 32.98 283 P **P** **20 39 17.9 +0.4**
ELL IAmb IAmb 20 40 24.6
comp=Z,18nm,1.0s
ELL Elmali 32.98 283 P **P** **20 39 18.0 +0.4**
ELL pmax pmax
comp=Z,18nm,1.0s
AK09 Malin Array Si 33.02 309 P **P** **20 39 18.5 +1.0**
AK10 Malin Array Si 33.04 309 P **P** **20 39 18.8 +1.1**
AK08 Malin Array Si 33.04 309 P **P** **20 39 18.3 +0.6**
AK07 Malin Array Si 33.06 308 P **P** **20 39 18.7 +0.8**
AK06 Malin Array Si 33.07 309 P **P** **20 39 18.7 +0.7**
AKASG Malin Array Be 33.07 309 P **P** **20 39 18.9 +0.9**
comp=Z,8.6nm,0.5s,baz=83,slow=6.9,SNR=59
AKASG pP **pP** **20 39 47.2 +1.9**
comp=Z,7.6nm,0.8s,baz=88,slow=7.6,SNR=3.4
AKASG PP **PP** **20 40 36.4 +1.4**
comp=Z,3.2nm,0.6s,baz=90,slow=9.8,SNR=4.2
AKASG ScP **ScP** **20 45 27.7 -3.7**
comp=Z,0.3nm,0.4s,baz=81,slow=2.3,SNR=4.1
comp=Z,8.6nm,0.5s
AKASG Malin Array Be 33.07 309 P **P** **20 39 18.9 +0.9**
AKASG pP **pP** **20 39 43.6 -1.7**
AKASG Malin Array Be 33.07 309 P **P** **20 39 18.9 +0.9**
AKASG *PP **pP** **20 39 43.6 -1.7**
AKASG pmax pmax
comp=Z,47nm,1.0s
AKBB Malin Array Si 33.07 309 P **P** **20 39 18.5 +0.5**
AKBB IAmb IAmb 20 39 20.0
comp=Z,32nm,1.0s
AKBB pP **pP** **20 39 44.2 -1.0**
AKBB Malin Array Si 33.07 309*c i*P **P** **20 39 18.8 +0.8**
AKBB Malin Array Si 33.07 309 P **P** **20 39 18.4 +0.5**
AK05 Malin Array Si 33.07 309 P **P** **20 39 18.8 +0.8**
AK02 Malin Array Si 33.08 309 P **P** **20 39 18.7 +0.7**
KIEV Kiev 33.08 309 P **P** **20 39 18.0 -0.1**
KIEV IAmb IAmb 20 39 20.0
comp=Z,29nm,1.0s
KIEV Kiev 33.08 309⇑ P **P** **20 39 19.0 +0.9**
KIEV Kiev 33.08 309 *i*P **P** **20 39 18.7 +0.7**
SNR=15
KIEV Kiev 33.08 309 P **P** **20 39 18.0 -0.1**
KIEV pmax pmax
comp=Z,29nm,1.0s
KIEV Kiev 33.08 309 P **P** **20 39 18.3 +0.2**
comp=Z,145nm,1.4s
KIEV Kiev 33.08 309 P **P** **20 39 18.9 +0.9**
KIEV pP **pP** **20 39 47.6 +2.3**
KIEV sP **sP** **20 40 02.1 +2.4**
AK14 Malin Array Si 33.14 309 P **P** **20 39 19.2 +0.7**
AK16 Malin Array Si 33.14 309 P **P** **20 39 19.2 +0.6**
AK20 Malin Array Si 33.21 309 P **P** **20 39 19.8 +0.6**
SORM Soroca 33.34 304 ⇓P **P** **20 39 21.6 +1.2**
SORM Soroca 33.34 304 P **P** **20 39 21.6 +1.2**
SORM Soroca 33.34 304 P **P** **20 39 21.0 +0.6**
comp=Z,54nm,0.8s
CFR Carcaliu 33.39 299 ⇓P **P** **20 39 22.7 +1.8**
CFR Carcaliu 33.39 299 P **P** **20 39 22.6 +1.8**
LYN LuoYang 33.42 81 *ji*P **P** **20 39 23.7 +2.5**
LYN pmax pmax
comp=Z,18nm,1.3s
VLDR Vladesti 33.43 300⇑ P **P** **20 39 23.4 +2.2**
CIT Chita 33.47 49 *e*P **P** **20 39 22.4 +0.9**
CIT *e* 20 40 02.6
CIT *e* 20 40 45.2
CIT *e* 20 44 29.8
CIT pmax pmax
comp=Z,44nm,1.4s
LUBAR Lubar, Ukraine 33.90 307 P **P** **20 39 26.1 +0.9**
NRIK Noril'sk 34.05 10 P **P** **20 39 27.1 +0.9**
comp=Z,51nm,0.8s,baz=200,slow=5.9,SNR=66
comp=Z,51nm,0.8s
NRIK Noril'sk 34.05 10 P **P** **20 39 27.3 +1.1**
NRIK Noril'sk 34.05 10*c i*P **P** **20 39 27.5 +1.3**
NRIK pmax pmax
comp=Z,49nm,0.9s
PANC Panciu 34.09 300 ⇓P **P** **20 39 29.5 +2.7**
VRI Vrincioaia 34.38 300⇑ P **P** **20 39 31.7 +2.3**
VRI Vrincioaia 34.38 300 P **P** **20 39 31.6 +2.3**
PLOR Plostina 34.43 300⇑ P **P** **20 39 32.6 +2.7**
PLOR Plostina 34.43 300 P **P** **20 39 32.6 +2.7**
TESR Tescani 34.43 301⇑ P **P** **20 39 31.6 +1.7**
TESR Tescani 34.43 301 P **P** **20 39 30.8 +0.9**
comp=Z,42nm,0.7s
HNS HongShan 34.51 75⇑ P **P** **20 39 32.4 +1.8**
HNS pmax pmax
comp=Z,16nm,0.8s
ISR Istrita 34.52 298⇑ P **P** **20 39 33.3 +2.6**
ISR Istrita 34.52 298 P **P** **20 39 33.2 +2.6**
GIRR Girov 34.54 302 ⇓P **P** **20 39 32.9 +2.1**
ONER Baraj Valea Uz 34.61 301⇑ P **P** **20 39 33.6 +2.2**
MNK Minsk 34.61 315 *i*P **P** **20 39 32.0 +0.7**
comp=E,6.0nm,0.6s
MNK *i*P **P** **20 39 32.0 +0.7**
comp=N,8.0nm,0.6s
MNK *i*P **P** **20 39 32.0 +0.7**
comp=Z,10.0nm,0.6s,baz=103
MNK *i* pP **pP** **20 39 58.5 -0.1**
MNK *i* sP **sP** **20 40 12.6 -0.2**
MNK *i* PP **PP** **20 40 51.7 -0.2**
MNK *i* S **S** **20 44 52.8 +1.5**
MNK *i* sS **sS** **20 45 39.6 -0.5**
MNK *i* SS **SnSn** **20 47 13.3 -3.6**
MNK Minsk 34.61 315 *i*P **P** **20 39 31.9 +0.7**
MNK *i**PP **pP** **20 39 58.4 -0.1**
MNK *i**SP **sP** **20 40 12.5 -0.2**
MNK *i* 20 40 51.7
MNK *i* 20 42 03.7
MNK *i* S **S** **20 44 52.8 +1.5**
MNK *i* *SS **sS** **20 45 39.6 -0.5**
MNK *i* SS **SnSn** **20 47 13.3 -3.6**
MNK *i* 20 49 40.9
MNK pmax pmax
comp=E,6.0nm,0.6s
MNK pmax pmax
comp=Z,10.0nm,0.6s
MNK pmax pmax
comp=N,8.0nm,0.6s
KMPD K-Podol'skiy 34.63 305 P **P** **20 39 32.3 +0.8**
PRAR RASCA 34.74 302⇑ P **P** **20 39 34.1 +1.6**
COVR Voineasa-Covas 34.74 300⇓ P **P** **20 39 35.0 +2.4**
TURR Turia 34.87 300⇓ P **P** **20 39 36.4 +2.8**
MLR Muntele Rosu 34.93 299 LR LR 20 59 08.9
comp=N,66nm,18.1s,baz=68,slow=45
MLR Muntele Rosu 34.93 299 P **P** **20 39 35.8 +1.5**
MLR Muntele Rosu 34.93 299⇑ P **P** **20 39 37.2 +2.9**
MLR Muntele Rosu 34.93 299 P **P** **20 39 35.8 +1.5**
MLR pmax pmax
comp=Z,43nm,0.9s
PUL Pulkovo 34.99 325⇑ *e*P **P** **20 39 34.6 +0.2**
PUL pmax pmax
comp=Z,73nm,1.2s
BJT Baijiatuao 35.15 70 P **P** **20 39 37.5 +1.5**
BJT Baijiatuao 35.15 70 P **P** **20 39 38.5 +2.4**
BJT Baijiatuao 35.15 70 P **P** **20 39 37.6 +1.5**
BJT pmax pmax
comp=Z,4.0nm,0.7s
BJT Baijiatuao 35.15 70 P **P** **20 39 38.0 +2.0**
BJI2 Beijing 35.16 70 P **P** **20 39 36.4 +0.3**
BJI2 sP **sP** **20 40 19.2 +0.2**
BJI2 pmax pmax
comp=Z,2.0nm,0.6s
RNPP5 Staryi Chortor 35.24 309 P **P** **20 39 37.9 +1.3**
RNPP9 Sopachiv 35.26 309 P **P** **20 39 38.0 +1.2**
RNPP8 Varash 35.27 309 P **P** **20 39 38.2 +1.3**
DOPR Dopca 35.31 300⇓ P **P** **20 39 39.6 +2.2**
NACGM Naroch 35.32 316⇑ *i*P **P** **20 39 38.7 +1.4**
comp=Z,53nm,1.0s,baz=103
BURAR Bucovina Array 35.43 303 P **P** **20 39 39.5 +1.0**
BURAR IAmb IAmb 20 39 41.4
comp=Z,18nm,0.7s
BURAR Bucovina Array 35.43 303⇓ P **P** **20 39 40.3 +1.8**
BURAR Bucovina Array 35.43 303 P **P** **20 39 40.3 +1.8**
BUR08 Bucovina Ar. S 35.44 303 P **P** **20 39 39.9 +1.3**
BUR08 IAmb IAmb 20 39 41.3
comp=Z,14nm,0.8s
KSV Kosov 35.55 304 P **P** **20 39 39.9 +0.5**
VOIR 35.56 299⇓ P **P** **20 39 41.3 +1.7**
VOIR 35.56 299 P **P** **20 39 41.3 +1.7**
JOF Joensuu 35.93 330 *e*P **P** **20 39 43.6 +1.1**
STNU Starunia 35.94 305 P **P** **20 39 44.2 +1.5**
WHN Wuhan 36.19 87 P **P** **20 39 46.6 +1.5**
WHN pmax pmax
comp=Z,20nm,0.8s
VSU Vasula 36.27 321⇑ *e*P **P** **20 39 45.4 0.0**
VSU pmax pmax
comp=Z,25nm,0.7s
VSU Vasula 36.27 321 *e*P **P** **20 39 45.8 +0.4**
MORS Morshin 36.35 305 P **P** **20 39 48.6 +2.4**
TIA Tai'an 36.67 76 P **P** **20 39 51.2 +2.1**
TIA pmax pmax
comp=Z,20nm,0.6s
SHIU Shidnytsya 36.70 306 P **P** **20 39 51.0 +1.8**
MARR Marisel-Cluj 36.87 301⇑ P **P** **20 39 53.0 +2.3**
ARBE Arbavere 36.94 323 *e*P **P** **20 39 51.6 +0.6**
PABE Paberze 37.02 316 *e*P **P** **20 39 53.0 +1.2**
UBPT Khong Chiam 37.07 116 P **P** **20 39 52.4 -0.2**
UBPT Khong Chiam 37.07 116 P **P** **20 39 52.5 -0.2**
HILR Hailar Array B 37.12 54 P **P** **20 39 53.8 +1.0**
comp=Z,1.5nm,0.4s,baz=281,slow=8.5,SNR=6.1
comp=Z,1.5nm,0.4s
DRGR 37.14 301⇓ P **P** **20 39 55.2 +2.1**
DRGR 37.14 301 P **P** **20 39 55.1 +2.1**
GZR Gura Zlata 37.16 299⇑ P **P** **20 39 55.5 +2.3**
GZR Gura Zlata 37.16 299 P **P** **20 39 55.5 +2.3**
FIA1 FINESS Array S 37.56 326 P **P** **20 39 56.9 +0.7**
FINES FINESS Array B 37.56 326 P **P** **20 39 57.4 +1.2**
comp=Z,12nm,0.6s,baz=118,slow=7.4,SNR=74
FINES pP **pP** **20 40 26.6 +2.4**
comp=Z,3.5nm,0.5s,baz=103,slow=8.4,SNR=2.1
comp=Z,12nm,0.6s
FINES LR LR 20 59 01.8
comp=Z,108nm,18.2s,baz=78,slow=42
comp=Z,12nm,0.6s
FINES FINESS Array B 37.56 326 P **P** **20 39 56.8 +0.6**
APA Apatity 37.67 337⇓ *e*P **P** **20 39 54.5 -2.6**
APA *e**PP **pP** **20 40 25.1 -0.1**
APA *e* 20 41 26.2
APA pmax pmax
comp=Z,9.0nm,1.0s
APA MLR MLR
comp=Z,937nm,4.0s
MTSE Matsula 37.81 321 *e*P **P** **20 39 59.3 +0.9**
MEF Metsahovi 37.94 324 *e*P **P** **20 40 00.2 +0.7**
BZS Buzias 37.96 300⇓ P **P** **20 40 01.3 +1.4**
BZS Buzias 37.96 300 P **P** **20 40 01.2 +1.4**
SUF Sumiainen 37.99 328 *e*P **P** **20 40 01.0 +1.2**
R9F13 Warsaw-Wawer 38.27 310 *e*P **P** **20 40 04.1 +1.8**
R9F13 *e*S **S** **20 45 53.0 +6.0**
KEF Keuruu 38.35 327 *e*P **P** **20 40 03.7 +0.8**
NIE Niedzica 38.71 306 *e*P **P** **20 40 08.5 +2.4**
PSZ Piszkesteto 39.01 303⇓ P **P** **20 40 10.8 +2.1**
PSZ Piszkesteto 39.01 303 P **P** **20 40 10.8 +2.1**
PSZ Piszkesteto 39.01 303 *e*P **P** **20 40 10.4 +1.7**
OJC Ojcow 39.04 307 *e*P **P** **20 40 10.2 +1.5**
OJC Ojcow 39.04 307 P **P** **20 40 09.7 +0.9**
NJ2 Nanjing 39.27 82 *e*P **P** **20 40 12.5 +1.6**
NJ2 pmax pmax
comp=Z,11nm,0.8s
RAF Rauma 39.41 324 *e*P **P** **20 40 11.3 -0.4**
DL2 Dalian 39.51 71 P **P** **20 40 14.8 +1.9**
DL2 pmax pmax
comp=Z,19nm,0.6s
VAF Ylistaro 39.60 328 *e*P **P** **20 40 14.4 +1.1**
MORH Mrgy, Hungar 39.98 301⇑ P **P** **20 40 17.9 +1.3**
AAL Aland 40.06 323 *e*P **P** **20 40 17.6 +0.6**
SRO Srobarova 40.08 303 *e*P **P** **20 40 20.3 +2.8**
SRO pmax pmax
comp=Z,32nm,0.8s
SRO Srobarova 40.08 303 *e*P **P** **20 40 20.3 +2.8**
MAUC Maruska 40.33 306 *e*P **P** **20 40 21.7 +2.2**
STEB Steborice 40.34 307 *e*P **P** **20 40 21.3 +1.7**
VADS Vadso 40.34 339 *e*P **P** **20 40 20.7 +1.4**
MORC Moravsky Berou 40.50 306 IAmb IAmb 20 40 23.9
comp=Z,24nm,0.8s
MORC Moravsky Berou 40.50 306⇑ P **P** **20 40 22.8 +1.8**
MORC Moravsky Berou 40.50 306 P **P** **20 40 22.7 +1.8**
MORC Moravsky Berou 40.50 306 *e*P **P** **20 40 22.9 +2.0**
MORC *e* 20 45 57.4
SMOL Smolenice 40.63 304 *e*P **P** **20 40 24.1 +2.1**
SMOL pmax pmax
comp=Z,5.0nm,0.7s
GKP Gorka Klasztor 40.69 312 *e*P **P** **20 40 23.9 +1.5**
GKP Gorka Klasztor 40.69 312 *e*P **P** **20 40 23.5 +1.2**
MODS Modra-Piesok 40.74 304 *e*P **P** **20 40 25.0 +2.1**
MODS pmax pmax
comp=Z,25nm,1.1s
MODS Modra-Piesok 40.74 304 *e*P **P** **20 40 25.0 +2.1**
KCSI Kotacane, Aceh 40.94 137 P **P** **20 40 24.7 -0.2**
comp=Z,8.8nm,0.9s
SNSI Sinabang, Aceh 41.10 140 P **P** **20 40 26.8 +0.6**
comp=Z,101nm,0.9s
VRAC Vranov 41.14 306⇓ P **P** **20 40 28.2 +2.1**
VRAC Vranov 41.14 306 P **P** **20 40 28.2 +2.1**
VRAC Vranov 41.14 306 *e*P **P** **20 40 28.0 +1.9**
VRAC *e* 20 45 59.8
KULM Kulim 41.16 132 P **P** **20 40 28.4 +1.8**
ARA0 ARCESS Array S 41.18 338 *e*P **P** **20 40 28.2 +2.0**
ARCES ARCESS Array B 41.18 338 P **P** **20 40 27.4 +1.2**
comp=Z,14nm,0.6s,baz=112,slow=8.8,SNR=53
ARCES pP **pP** **20 40 57.1 +2.5**
comp=Z,20nm,0.9s,baz=111,slow=9.2,SNR=4.2
ARCES LR LR 20 58 24.7
comp=Z,139nm,18.1s,baz=177,slow=37
comp=Z,14nm,0.6s
ARCES ARCESS Array B 41.18 338 P **P** **20 40 27.4 +1.2**
ARCES IAmb IAmb 20 40 28.7
comp=Z,34nm,1.1s
ARCES ARCESS Array B 41.18 338 P **P** **20 40 27.4 +1.2**
ARCES pmax pmax
comp=Z,34nm,1.1s
DPC Dobruska-Polom 41.26 307 *e*P **P** **20 40 29.1 +1.9**

DPC Dobruska-Polom 41.26 307 *e*P **P** **20 40 29.1 +1.9**
KSP Ksiaz 41.27 308 *e*P **P** **20 40 28.0 +0.8**
KRUC Moravsky 41.28 305 *e*P **P** **20 40 29.2 +1.9**
KRUC *e* 20 46 00.2
CHVC Chvalec 41.43 308 *e*P **P** **20 40 30.4 +1.9**
CHVC Chvalec 41.43 308 *e*P **P** **20 40 30.4 +1.9**
RONA Rosalia, Austr 41.45 303 *i* P **P** **20 40 30.6 +1.8**
comp=Z,7.8nm,0.6s
UPC Upice 41.46 308 *e*P **P** **20 40 30.7 +2.0**
UPC Upice 41.46 308 *e*P **P** **20 40 30.7 +2.0**
SSE Sheshan 41.47 82 P **P** **20 40 31.0 +1.9**
SSE x 20 40 56.0
SSE pP **pP** **20 40 59.4 +1.3**
KTK1 Kautokeino 41.66 336 *e*P **P** **20 40 31.1 +1.0**
CONA Conrad Observa 41.72 304 *i* P **P** **20 40 32.7 +1.7**
comp=Z,11nm,0.6s
ZEA Zeya 41.89 48 *e*P **P** **20 40 33.8 +1.6**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ARSA Arzberg 42.02 303 *e*P **P** **20 40 35.0 +1.7**
comp=Z,1.2nm,0.5s
IPM Ipoh 42.02 132 P **P** **20 40 33.1 -0.6**
IPM Ipoh 42.02 132 P **P** **20 40 33.7 0.0**
IPM Ipoh 42.02 132 P **P** **20 40 33.6 -0.1**
IPM Ipoh 42.02 132 P **P** **20 40 32.5 -1.2**
comp=Z,35nm,0.9s
HEH HeiHe 42.06 53 *e*P **P** **20 40 34.2 +0.6**
HEH pmax pmax
comp=Z,33nm,0.9s
GROS Grobnik 42.12 302 *i* P **P** **20 40 36.0 +1.7**
BSD Bornholm Skovb 42.12 315 *i* P **P** **20 40 35.1 +1.1**
PSI Prapat 42.17 136 P **P** **20 40 34.3 -0.7**
PSI Prapat 42.17 136 P **P** **20 40 33.8 -1.2**
PSI pmax pmax
comp=Z,11nm,0.6s
PSI Prapat 42.17 136 P **P** **20 40 33.9 -1.1**
comp=Z,15nm,0.7s
HAMF Hammerfest 42.26 339 *e*P **P** **20 40 36.8 +1.8**
RPSI Rantau Prapat 42.26 136 P **P** **20 40 33.8 -1.8**
RPSI lAmb lAmb 20 40 37.8
comp=Z,11nm,0.6s
PERS Pernice 42.36 302 *i* P **P** **20 40 38.2 +2.0**
SOKA Soboth 42.41 302 *e*P **P** **20 40 38.6 +1.9**
comp=Z,14nm,0.7s,SNR=18
PRU Pruhonice 42.43 307 *e*P **P** **20 40 38.6 +2.0**
PRU Pruhonice 42.43 307 *e*P **P** **20 40 38.6 +2.0**
BNX BinXian 42.50 59 ⇓P **P** **20 40 37.3 0.0**
BNX pmax pmax
comp=Z,5.0nm,1.4s
CKRC Cesky Krumlov 42.67 305 *e*P **P** **20 40 40.4 +1.8**
CKRC Cesky Krumlov 42.67 305 *e*P **P** **20 40 40.4 +1.8**
GSI Gunungsitoli 42.69 139 P **P** **20 40 38.7 -0.4**
GSI Gunungsitoli 42.69 139 P **P** **20 40 40.1 +1.0**
GSI Gunungsitoli 42.69 139 P **P** **20 40 40.2 +1.1**
GSI Gunungsitoli 42.69 139 P **P** **20 40 38.4 -0.7**
comp=Z,857nmcomp=Z,68nm,1.0s
ZVC Zvikov 42.69 306 *e*P **P** **20 40 40.9 +2.1**
BRG Berggiesshubel 42.75 308 *e*P **P** **20 40 41.1 +1.9**
comp=Z,28nm,0.7s,baz=85,slow=7.9
BRG Berggiesshubel 42.75 308 ⇑ *i*P **P** **20 40 41.1 +1.9**
BRG Amp 20 40 42.0
comp=Z,28nm,0.7s
BRG ⇑SP S 20 46 06.2 -47
BRG Amp 20 46 07.3
comp=Z,9.6nm,1.2s
DEL Delary 42.77 317 *i* P **P** **20 40 40.5 +1.2**
MOA Molln 42.80 304 P **P** **20 40 41.0 +1.4**
comp=Z,4.4nm,0.6s,SNR=7.8
JETT Jettan, Norway 42.80 336 *e*P **P** **20 40 42.0 +2.6**
LUNU Lund 42.98 315 *i* P **P** **20 40 42.3 +1.4**
GEC2 GERESS Array S 43.07 305 P **P** **20 40 42.3 +0.4**
GERES GERESS Array B 43.07 305 P **P** **20 40 43.0 +1.1**
comp=Z,1.9nm,0.6s,baz=86,slow=6.8,SNR=14
GERES PP **PP** **20 42 25.8 +1.6**
comp=Z,1.0nm,0.7s,baz=76,slow=11,SNR=3.5
GERES ScP **ScP** **20 46 07.0 -2.5**
comp=Z,0.4nm,0.5s,baz=104,slow=5.6,SNR=4.2
comp=Z,1.9nm,0.6s
HSKC Hora Svate Kat 43.09 308 *e*P **P** **20 40 43.0 +1.0**
KHC Kasperske Hory 43.12 306 *e*P **P** **20 40 44.0 +1.7**
KHC Kasperske Hory 43.12 306 *e*P **P** **20 40 44.0 +1.7**
HFS Hagfors 43.16 322 P **P** **20 40 43.2 +0.9**
comp=Z,37nm,0.6s,baz=105,slow=9.3,SNR=95
HFS pP **pP** **20 41 12.1 +1.4**
comp=Z,11nm,0.7s,baz=98,slow=11,SNR=2.4
comp=Z,37nm,0.6s
BJUU Bjuv 43.23 316 *i* P **P** **20 40 43.6 +0.7**
BIOA Bad Ischl, Aus 43.23 304 *i* P **P** **20 40 44.3 +1.1**
comp=Z,7.3nm,0.7s
CLL Collm 43.32 309 P **P** **20 40 44.2 +0.4**
CLL lAmb lAmb 20 40 46.0
comp=Z,18nm,0.7s
CLL Collm 43.32 309 *i* P **P** **20 40 45.2 +1.4**
CLL *e**PP **pP** **20 41 10.0 -2.0**
CLL *e*S **S** **20 46 59.0 -3.0**
CLL pmax pmax
comp=Z,19nm,0.8s
CLL Collm 43.32 309 *i* P **P** **20 40 45.2 +1.4**
comp=Z,19nm,0.8s
CLL *e*pP **pP** **20 41 10.0 -2.0**
CLL *e*sP **sP** **20 41 24.0 -1.9**
CLL *e*PP **PP** **20 42 28.0 +1.4**
CLL *e*PPP PPP 20 43 07.0
CLL *e*S **S** **20 46 59.0 -3.0**
CLL *e*sS sS 20 48 00.0 +8.0
CLL Collm 43.32 309 *e*P **P** **20 40 45.2 +1.4**
comp=Z,17nm,0.7s,baz=85,slow=7.9
MYKA Terra Mystica 43.37 302 *e*P **P** **20 40 45.9 +1.6**
comp=Z,5.6nm,0.8s
BORU Boraas 43.43 318 *i* P **P** **20 40 45.0 +0.5**
ROBS Robic 43.52 302 *i* P **P** **20 40 47.0 +1.6**
TANN Tannenbergstha 43.73 308 *e*P **P** **20 40 48.8 +1.6**
comp=Z,11nm,1.0s,baz=85,slow=7.9
YAK Yakutsk 43.82 35 LR LR 20 59 48.4
comp=Z,84nm,18.1s,baz=305,slow=37
YAK Yakutsk 43.82 35 P **P** **20 40 47.1 -0.5**
YAK lAmb lAmb 20 40 48.2
comp=Z,22nm,0.8s
YAK Yakutsk 43.82 35 *e*P **P** **20 40 47.3 -0.3**
YAK *e**PP **pP** **20 41 14.7 -1.9**
YAK *e* 20 42 32.2
YAK *e*PPP PPP 20 43 09.0
YAK *e*S **S** **20 47 08.7 -0.2**
YAK *e**SS **sS** **20 47 56.9 -2.1**
YAK *e*SS SS 20 50 13.3 -16
YAK *e*SSS SSS 20 51 27.1
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=E,12nm,2.3s
YAK pmax pmax
comp=Z,218nm,7.2s
YAK pmax pmax
comp=N,240nm,6.7s
YAK pmax pmax
comp=E,171nm,6.6s
YAK smax smax
comp=E,51nm,1.5s
YAK smax smax
comp=N,39nm,1.6s
YAK Yakutsk 43.82 35 P **P** **20 40 47.5 -0.1**
YAK x x 20 41 14.9
YAK pP **pP** **20 41 16.7 +0.1**
FAUS Fauske 43.86 332 *e*P **P** **20 40 49.1 +1.3**
ONAU Onsala 43.88 318 *i* P **P** **20 40 48.6 +0.5**
MOR8 Moi Rana 43.88 331 *e*P **P** **20 40 48.5 +0.4**
PLN Plauen 43.91 308 *e*P **P** **20 40 50.2 +1.7**
comp=N,3.0nm,0.8s,baz=85,slow=7.9
LESA Schwarzleotal 43.91 303 *e*P **P** **20 40 50.1 +1.4**
comp=N,12nm,0.6s,SNR=21
ROTZ Rotzenmuhle 43.95 307 *e*P **P** **20 40 51.0 +2.1**
comp=N,4.0nm,1.0s,baz=85,slow=7.9
MANZ Manzenberg 43.99 307 *e*P **P** **20 40 51.6 +2.3**
comp=N,3.5nm,0.8s,baz=85,slow=7.9
STAL STALIGIAL 44.06 302 P **P** **20 40 50.4 +0.6**
NEUB Neuenburg 44.09 309 *e*P **P** **20 40 51.7 +1.7**
comp=N,35nm,0.8s,baz=85,slow=7.9
ABTA Abfaltersbach 44.12 302 *i* P **P** **20 40 51.1 +0.7**
comp=N,3.7nm,0.9s
MNSI Mandailing Nat 44.20 137 P **P** **20 40 50.5 -0.7**
comp=N,31nm,0.7s
MOX Moxa 44.24 308 *e*P **P** **20 40 52.9 +1.7**
comp=N,13nm,0.8s,baz=85,slow=7.9
MOX *e*L L 21 02 16.1
comp=N,81nm,20.1s
NC602 NORSAR Array S 44.28 323 lAmb lAmb 20 40 53.0
comp=Z,40nm,1.1s
NC602 NORSAR Array S 44.28 323 *e*P **P** **20 40 51.9 +0.6**
FLTG Flechtingen 44.35 311 *e*P **P** **20 40 53.2 +1.2**
comp=Z,60nm,0.7s,baz=85,slow=7.9
LEIR Leirfjorden 44.39 330 *e*P **P** **20 40 52.4 +0.3**
NB201 NORSAR Array S 44.43 323 P **P** **20 40 53.0 +0.4**
VAGH Vaagaholmen 44.46 331 *e*P **P** **20 40 54.3 +1.7**
NB2 NORSAR Subarra 44.47 323 P **P** **20 40 53.1 +0.3**
comp=Z,31nm,0.7s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.47 323 AMP **P** **20 40 53.1 +0.3**
comp=Z,31nm,0.7s
NB2 P **P** **20 40 53.1 +0.3**
NOA NORSAR Array B 44.47 323 P **P** **20 40 53.3 +0.5**
comp=Z,33nm,0.8s,baz=96,slow=7.8,SNR=101
NOA pP **pP** **20 41 23.1 +1.7**
comp=Z,11nm,0.8s,baz=96,slow=8.1,SNR=3.1
NOA LR LR 21 00 42.2
comp=Z,38nm,20.7s,baz=315,slow=37
comp=Z,33nm,0.8s
GRF Grafenberg Arr 44.59 307 *e*P **P** **20 40 56.3 +2.3**
comp=Z,17nm,0.9s,baz=85,slow=7.9
GRF *e*L L 21 02 30.6
comp=Z,73nm,18.3s
NAO01 NORSAR Array S 44.61 323 lAmb lAmb 20 40 55.4
comp=Z,35nm,0.9s
OSL Oslo 44.62 321 *e*P **P** **20 40 55.0 +1.0**
WTTA Wattenberg 44.64 303 *e*P **P** **20 40 55.5 +0.9**
comp=Z,9.1nm,0.7s,SNR=7.7
WATA Walderalm 44.67 303 *i* P **P** **20 40 55.3 +0.5**
comp=Z,8.1nm,0.8s
KSRS Korea Array 44.68 71 P **P** **20 40 54.7 -0.1**
comp=Z,2.2nm,0.4s,baz=284,slow=7.2,SNR=12
comp=Z,2.2nm,0.4s
BSEG Bad Segeberg 44.81 313 *e*P **P** **20 40 57.6 +2.0**
comp=Z,26nm,0.8s,baz=85,slow=7.9
CLZ Clausthal 44.92 310 *e*P **P** **20 40 58.2 +1.6**
comp=Z,21nm,0.9s,baz=85,slow=7.9
SQTA Sankt Quirin 44.93 303 *i* P **P** **20 40 57.7 +0.8**
comp=Z,5.7nm,0.6s,SNR=7.2
KLR Kul'dur 44.96 54 ⇓ *e*P **P** **20 40 57.7 +0.8**
KLR pmax pmax
comp=Z,8.0nm,1.0s
MOTA Moosalm 44.98 303 *i* P **P** **20 40 57.4 +0.1**
comp=Z,5.6nm,1.0s
KONO Kongsberg 45.18 321 P **P** **20 40 58.7 +0.3**
KONO lAmb lAmb 20 41 00.0
comp=Z,28nm,0.8s
KONO Kongsberg 45.18 321 *e*P **P** **20 40 59.4 +1.0**
KONO Kongsberg 45.18 321 *de*P **P** **20 40 59.4 +1.0**
KONO pmax pmax
comp=Z,26nm,0.9s
KONO Kongsberg 45.18 321 P **P** **20 40 59.2 +0.8**
KONO sP **sP** **20 41 42.1 +1.0**
GTTG Gottingen 45.20 309 *e*P **P** **20 41 00.6 +1.9**
comp=Z,43nm,0.8s,baz=85,slow=7.9
UBBA Unterbreizbach 45.25 308 *e*P **P** **20 41 00.5 +1.5**
comp=Z,11nm,0.7s,baz=85,slow=7.9
BJO1 Bjornoya 45.29 343 *e*P **P** **20 41 00.6 +1.5**
FETA Feichten 45.29 303 *i* P **P** **20 41 00.5 +0.8**
comp=Z,6.6nm,0.7s,SNR=7.9
RETH Rethem/Aller, 45.46 311 *e*P **P** **20 41 02.4 +1.7**
comp=Z,12nm,0.9s,baz=85,slow=7.9
DOMB Dombas 45.57 324 *e*P **P** **20 41 02.6 +1.0**
UBR Ueberruh 45.60 304 *e*P **P** **20 41 03.1 +1.1**
comp=Z,11nm,0.6s,baz=85,slow=7.9
TIXI Tiksi 45.66 22 P **P** **20 41 02.1 0.0**
TIXI lAmb lAmb 20 41 03.3
comp=Z,28nm,0.7s
TIXI Tiksi 45.66 22 *ce*P **P** **20 41 02.4 +0.4**
TIXI pmax pmax
comp=Z,29nm,1.0s
TIXI Tiksi 45.66 22 P **P** **20 41 02.6 +0.6**
TIXI x x 20 41 30.8
TIXI sP **sP** **20 41 46.4 +1.3**
PPI Padang Panjang 45.69 137 P **P** **20 41 00.4 -2.5**
comp=Z,34nm,0.7s
HOMB Homborsund 45.72 319 *e*P **P** **20 41 03.6 +1.0**
HOMB Homborsund 45.72 319 *i* P **P** **20 41 03.6 +1.0**
DAVA Damuels 45.81 304 *e*P **P** **20 41 04.9 +1.1**
comp=Z,25nm,0.6s,SNR=26
PDSI Padang 46.10 137 P **P** **20 41 05.0 -1.2**
comp=Z,735nmcomp=Z,49nm,0.6s
TNS Taunus Mts 46.30 308 *e*P **P** **20 41 09.1 +1.6**
comp=Z,21nm,1.1s,baz=85,slow=7.9
SNART Snartemo 46.40 319 *i* P **P** **20 41 09.1 +1.1**
IBBN Ibbenburen 46.48 311 *e*P **P** **20 41 10.4 +1.7**
comp=Z,46nm,0.8s,baz=85,slow=7.9
LODK Lodwar 46.65 234 P **P** **20 41 10.9 +0.3**
LODK Lodwar 46.65 234 P **P** **20 41 11.0 +0.4**
BFO Black Forest 46.67 305 P **P** **20 41 10.6 +0.3**
ODD1 Odda 46.69 321 *e*P **P** **20 41 12.0 +1.7**
BLS5 Blasjo 46.77 321 *e*P **P** **20 41 12.8 +1.8**
BUG Bochum--Univer 46.88 310 *e*P **P** **20 41 13.5 +1.6**
comp=Z,22nm,0.9s,baz=85,slow=7.9
BER Bergen 47.33 322 *e*P **P** **20 41 16.5 +1.3**
ASK Askoy 47.40 322 *e*P **P** **20 41 16.8 +1.1**
FOO Floro 47.46 324 *e*P **P** **20 41 17.6 +1.3**
SPA0 Spitsbergen Ar 47.50 347 *e*P **P** **20 41 18.3 +2.0**
SPITS Spitsbergen Ar 47.50 347 P **P** **20 41 17.4 +1.1**
comp=Z,5.7nm,0.4s,baz=120,slow=11,SNR=47
comp=Z,5.7nm,0.4s
SPITS Spitsbergen Ar 47.50 347 P **P** **20 41 17.4 +1.1**
SPITS pmax pmax
comp=Z,42nm,1.1s
KRJI Kerinci 47.63 137 P **P** **20 41 16.8 -1.4**
comp=Z,1µmcomp=Z,95nm,0.7s
BTNL Ternell 47.72 309 *dP* **P** **20 41 20.0 +1.6**
comp=Z,13nm,0.9s
MEM Membach 47.79 309 *dP* **P** **20 41 19.8 +0.8**
comp=Z,14nm,0.9s
MEM *dp*P **pP** **20 41 46.5 -1.4**
MEM *dP*cP **PcP** **20 42 46.3 +0.3**
WLF Walferdange 47.86 307 *dP* **P** **20 41 20.9 +1.4**
comp=Z,24nm,0.9s
WLF Walferdange 47.86 307 *e*P **P** **20 41 21.8 +2.3**
comp=Z,32nm,0.8s,baz=85,slow=7.9
RCHB Rochefort 48.36 308 *dP* **P** **20 41 25.0 +1.7**
comp=Z,12nm,0.8s
BGES Gesves 48.41 308 *dP* **P** **20 41 25.1 +1.4**
KBS Kingsbay 48.62 347 *e*P **P** **20 41 26.8 +1.9**
KBS Kingsbay 48.62 347 *i* P **P** **20 41 25.3 +0.5**
BMRD Maredsous 48.62 308 *dP* **P** **20 41 27.5 +2.1**
comp=Z,17nm,0.9s
DOU Dourbes 48.77 308 *dP* **P** **20 41 28.1 +1.7**
comp=Z,8.9nm,0.0s
JOW Kunigami 48.87 84 P **P** **20 41 27.4 -0.1**
comp=Z,19nm,0.4s,baz=285,slow=7.7,SNR=16
comp=Z,19nm,0.4s
JOW Kunigami 48.87 84 P **P** **20 41 28.0 +0.4**
MASI Maura Aman, Be 48.92 137 P **P** **20 41 28.1 0.0**
comp=Z,124nm,1.0s
KEST Kesra 49.21 289 P **P** **20 41 31.2 +1.0**
comp=Z,3.2nm,0.5s,baz=78,slow=1.5,SNR=5.0
comp=Z,3.2nm,0.5s
KIBK Kibwezi 49.51 226 P **P** **20 41 34.5 +1.9**
JMN Monobe 50.49 74 P **P** **20 41 41.5 +1.7**
LRW Lerwick 50.58 322 *e*P **P** **20 41 40.8 +0.7**
LRW lAmb lAmb 20 41 42.0
comp=Z,27nm,0.7s
ELMS Elmsett, Ipswi 50.62 311 *e*P **P** **20 41 41.6 +1.2**
ELMS lAmb lAmb 20 41 42.3
comp=Z,56nm,0.5s
CLF Chambon-Foret 50.71 306 P **P** **20 41 40.8 -0.3**
CLF pP **pP** **20 41 11.0 +0.7**
ELSH Elham, Standar 50.73 310 *e*P **P** **20 41 42.6 +1.4**
ELSH lAmb lAmb 20 41 43.6
comp=Z,83nm,0.8s
DRUM Mains of Drumt 51.73 318 *e*P **P** **20 41 48.9 +0.3**
DRUM lAmb lAmb 20 41 50.1
comp=Z,15nm,0.6s
HPK Haverah Park 51.80 314 *e*P **P** **20 41 50.0 +0.8**
HPK lAmb lAmb 20 41 50.8
comp=Z,49nm,0.6s
EDMD Edmundbyers 51.82 315 *e*P **P** **20 41 50.1 +0.7**
EDMD lAmb lAmb 20 41 50.9
comp=Z,34nm,0.5s
MCD Coleburn Disti 52.02 319 *e*P **P** **20 41 51.6 +0.8**
MCD lAmb lAmb 20 41 52.8
comp=Z,57nm,0.6s
WOL Wolverton 52.14 311 *e*P **P** **20 41 52.4 +0.6**
BIGH Upper Bighouse 52.20 320 *e*P **P** **20 41 53.0 +0.9**
BIGH lAmb lAmb 20 41 54.3
comp=Z,20nm,0.8s
EDI Edinburgh 52.29 317 *e*P **P** **20 41 53.3 +0.5**
EDI lAmb lAmb 20 41 54.6
comp=Z,25nm,0.7s
EKA Eskdalemuir Ar 52.39 316 P **P** **20 41 54.4 +0.8**
comp=Z,17nm,0.8s,baz=99,slow=7.1,SNR=30
EKA LR LR 21 06 48.6
comp=Z,69nm,18.9s,baz=358,slow=39
comp=Z,17nm,0.8s
YSS Yuzhno-Sakhali 52.64 55 *e*P **P** **20 41 54.8 -0.7**
YSS *e* 20 43 04.6
YSS pmax pmax
comp=Z,10.0nm,1.3s
INVG Invergeldie, C 52.66 317 *e*P **P** **20 41 55.3 -0.2**
INVG lAmb lAmb 20 41 57.7
comp=Z,10nm,0.8s
MBAR Mbarara 52.69 235 P **P** **20 41 56.6 +0.1**
MBAR Mbarara 52.69 235 ⇑ *i*P **P** **20 41 57.0 +0.5**
MBAR pmax pmax
comp=Z,6.0nm,0.6s
MBAR Mbarara 52.69 235 P **P** **20 41 56.8 +0.3**
MBAR Mbarara 52.69 235 P **P** **20 41 57.1 +0.5**
MBAR x x 20 42 22.6
MJAR Matsushiro Arr 52.75 69 P **P** **20 41 56.8 +0.2**
comp=Z,2.7nm,0.8s,baz=288,slow=8.8,SNR=6.1
comp=Z,2.7nm,0.8s
MJAR Matsushiro Arr 52.75 69 lAmb lAmb 20 43 11.6
comp=Z,30nm,2.0s
MJAR Matsushiro Arr 52.75 69 P **P** **20 41 56.8 +0.2**
MJAR pmax pmax
comp=Z,30nm,2.0s
HLM1 Long Mynd 52.85 312 *e*P **P** **20 41 57.5 +0.5**
HLM1 lAmb lAmb 20 41 58.9
comp=Z,9.0nm,0.8s
PGBU Glenifferbraes 53.03 317 *e*P **P** **20 41 58.8 +0.6**
PGBU lAmb lAmb 20 42 00.3
comp=Z,55nm,0.8s
NEWG New Galloway 53.04 316 *e*P **P** **20 41 59.3 +1.0**
NEWG lAmb lAmb 20 42 00.5
comp=Z,31nm,0.7s
MCH1 Michaelchurch 53.05 312 *e*P **P** **20 41 58.9 +0.5**
MCH1 lAmb lAmb 20 42 00.2
comp=Z,44nm,0.7s
IOMK Kirk Michael 53.42 315 *e*P **P** **20 42 01.9 +0.7**
IOMK lAmb lAmb 20 42 03.0
comp=Z,14nm,0.6s
LAWE Loch Awe, Argy 53.43 317 *e*P **P** **20 42 02.1 +0.9**
LAWE lAmb lAmb 20 42 03.2
comp=Z,20nm,0.7s
NOR Nord 53.80 350 *i* P **P** **20 42 04.3 +0.8**
NOR lAmb lAmb 20 42 05.8
comp=Z,7.5nm,0.8s
RSBS Rosebush, Pemb 54.10 312 *e*P **P** **20 42 06.5 +0.4**
RSBS lAmb lAmb 20 42 07.4
comp=Z,16nm,0.5s
MA2 Magadan 54.21 38 LR LR 21 07 27.0
comp=Z,62nm,20.1s,baz=4.0,slow=38
SEY Seymchan 54.27 34 ⇑ *e*P **P** **20 42 07.4 +0.2**
SEY pmax pmax
comp=Z,14nm,1.3s
JEM Erimo 54.43 61 P **P** **20 42 11.0 +2.3**
ILTH Belurgan, Co L 54.49 315 P **P** **20 42 08.6 +0.3**
DSB Dublin 54.72 314 P **P** **20 42 11.3 +0.7**
IDGL Inch Island, C 54.88 316 P **P** **20 42 13.0 +1.3**
IDGL Inch Island, C 54.88 316 *e*P **P** **20 42 13.0 +1.3**
IWEX Carrickbyrne, 55.19 313 P **P** **20 42 14.6 +0.6**
DBG Daneborg 55.61 341 *i* P **P** **20 42 17.3 +0.7**
IGLA Glengowla, Co 56.40 315 P **P** **20 42 23.3 +0.8**
VAL Valentia 57.36 313 P **P** **20 42 30.8 +1.5**
ESDC Sonseca Array 57.61 298 P **P** **20 42 31.3 -0.2**
comp=Z,1.1nm,0.5s,baz=55,slow=7.1,SNR=19
ESDC pP **pP** **20 43 03.0 +1.5**
comp=Z,2.7nm,0.8s,baz=60,slow=7.0,SNR=4.4
comp=Z,1.1nm,0.5s
BILL Bilibino 58.48 26 P **P** **20 42 37.3 +0.4**
BILL lAmb lAmb 20 42 39.4
comp=Z,20nm,1.1s
BILL Bilibino 58.48 26 *de*P **P** **20 42 38.2 +1.2**
BILL pmax pmax
comp=Z,16nm,1.0s
BILL Bilibino 58.48 26 P **P** **20 42 37.9 +0.9**
BILL pP **pP** **20 43 07.9 +0.7**
BILL sP **sP** **20 43 21.9 +0.8**
BILL PcP **PcP** **20 43 26.2 +0.1**
ALE Alert 59.02 354 P **P** **20 42 41.6 +1.1**
ABPO Ambohimpanom 59.74 206 P **P** **20 42 46.7 +0.3**
ABPO Ambohimpanom 59.74 206 P **P** **20 42 46.7 +0.3**
ABPO pmax pmax
comp=Z,6.0nm,0.8s
PETK Petropavlovsk- 59.80 44 P **P** **20 42 46.1 -0.1**
comp=Z,3.2nm,0.8s,baz=206,slow=9.9,SNR=4.0
comp=Z,3.2nm,0.8s
NEEM North Greenlan 61.03 348 *i* P **P** **20 42 54.7 0.0**
SUMG Summit 61.09 341 P **P** **20 42 56.2 +1.0**
SUMG Summit 61.09 341 P **P** **20 42 56.2 +1.0**
SUMG pmax pmax
comp=Z,51nm,0.7s
SUMG Summit 61.09 341 *i* P **P** **20 42 55.5 +0.3**
SUMG lAmb lAmb 20 42 57.9
comp=Z,43nm,0.7s
KULLO Kullorsuaq 64.08 347 *i* P **P** **20 43 14.6 +0.1**
TULEG Thule 64.43 350 *i* P **P** **20 43 16.6 -0.1**
EDA Edea 64.70 255 P **P** **20 43 18.6 -0.8**
EDA lAmb lAmb 20 43 19.9
comp=Z,8.8nm,0.8s
EDA Edea 64.70 255 P **P** **20 43 18.7 -0.8**
EDA pP **pP** **20 43 49.2 -1.5**
EDA PcP **PcP** **20 43 51.2 -1.0**
UPNV Upernavik 65.15 345 *i* P **P** **20 43 21.5 0.0**
LSZ Lusaka 65.63 226 P **P** **20 43 25.3 -0.2**
LSZ Lusaka 65.63 226 P **P** **20 43 25.3 -0.2**
LSZ pmax pmax
comp=Z,7.0nm,0.8s
LSZ Lusaka 65.63 226 P **P** **20 43 25.2 -0.2**
LSZ Lusaka 65.63 226 P **P** **20 43 25.8 +0.3**
TORD Torodi Ar. Bea 65.92 269 P **P** **20 43 25.6 -1.7**
comp=Z,5.9nm,0.5s,baz=52,slow=3.4,SNR=110
comp=Z,5.9nm,0.5s
ILULI Ilulissat 66.43 341 *i* P **P** **20 43 30.4 +0.7**
GDH Godhavn 67.03 341 *i* P **P** **20 43 32.5 -1.1**
GDH lAmb lAmb 20 43 35.0
comp=Z,10nm,0.8s
A21K Barrow 67.22 15 P **P** **20 43 35.0 +0.3**
baz=320
BATI Baumata 67.72 123 P **P** **20 43 37.2 -1.5**
comp=Z,23nm,0.5s,baz=359,slow=4.8,SNR=5.3
comp=Z,23nm,0.5s
C17K DeLong Mountai 67.79 19 P **P** **20 43 38.7 +0.4**
baz=315
A22K Sinclair Lake 67.81 15 P **P** **20 43 39.0 +0.6**
baz=321
RDOG Red Dog Mine 68.16 19 P **P** **20 43 40.8 +0.1**
baz=315
C18K Utukok River 68.17 18 lAmb lAmb 20 43 42.1
comp=Z,31nm,1.4s
C18K Utukok River 68.17 18 P **P** **20 43 41.1 +0.3**
baz=317
C19K Lookout Ridge 68.23 17 P **P** **20 43 42.0 +0.8**
baz=318
D17K Noatak River 68.36 19 P **P** **20 43 42.3 +0.4**
baz=315
GAMB Gambell 68.38 25 P **P** **20 43 42.5 +0.4**
baz=310
B22K Teshekpuk Lake 68.66 15 P **P** **20 43 44.3 +0.6**
baz=323
RES Resolute Bay 68.67 356 P **P** **20 43 44.1 +0.4**
RES Resolute Bay 68.67 356 P **P** **20 43 44.1 +0.4**
RES pmax pmax
comp=Z,12nm,1.5s
POIN Pond Inlet 68.98 351 P **P** **20 43 46.6 +1.0**
POIN lAmb lAmb 20 43 47.7
comp=Z,9.7nm,0.6s
F14K Arctic Creek 68.99 22 P **P** **20 43 46.7 +0.8**
baz=313
D19K Kuna River 69.04 17 P **P** **20 43 46.5 +0.3**
baz=319
E17K Hotham Inlet 69.15 20 P **P** **20 43 47.1 +0.3**
baz=316
E18K Tukpahlearik C 69.22 19 lAmb lAmb 20 43 49.3
comp=Z,11nm,0.6s
E18K Tukpahlearik C 69.22 19 P **P** **20 43 47.7 +0.4**
baz=317
D20K Etivluk River 69.23 17 lAmb lAmb 20 43 48.9
comp=Z,43nm,1.4s
D20K Etivluk River 69.23 17 P **P** **20 43 47.8 +0.5**
baz=320

F15K North Star Dit 69.33 21 P P 20 43 48.6 +0.6
baz=315
F17K Baldwin Pennin 69.77 20 IAmb IAmb 20 43 52.2
comp=Z,34nm,1.4s
F17K Baldwin Pennin 69.77 20 P P 20 43 51.2 +0.5
baz=317
ANM Nome 69.92 23 IAmb IAmb 20 43 53.5
comp=Z,30nm,1.4s
ANM Nome 69.92 23 P P 20 43 52.3 +0.6
baz=314
D22K Ayikyak River 69.98 16 IAmb IAmb 20 43 53.9
comp=Z,31nm,1.4s
D22K Ayikyak River 69.98 16 P P 20 43 52.4 +0.4
baz=324
G15K Niukluk 70.02 22 P P 20 43 52.6 +0.3
baz=315
E21K Killik River 70.05 16 P P 20 43 51.9 -0.5
E21K Killik River 70.05 16 P P 20 43 52.4 0.0
baz=323
F18K Selawik 70.08 19 P P 20 43 52.8 +0.3
baz=318
G16K Koyuk River 70.23 21 IAmb IAmb 20 43 55.2
comp=Z,21nm,1.4s
G16K Koyuk River 70.23 21 P P 20 43 53.6 +0.2
baz=316
D23K Nanushuk River 70.33 15 IAmb IAmb 20 43 55.9
comp=Z,21nm,1.4s
D23K Nanushuk River 70.33 15 P P 20 43 54.5 +0.4
baz=325
F19K Shaleruckik Mo 70.40 18 IAmb IAmb 20 43 55.3
comp=Z,23nm,1.7s
F19K Shaleruckik Mo 70.40 18 P P 20 43 53.9 -0.5
baz=320
G17K Kiwalik Mounta 70.63 20 P P 20 43 56.1 +0.2
baz=318
F20K Avaraart Lake 70.74 18 P P 20 43 56.6 0.0
baz=322
BROLN Tlhalogang 70.76 223 *i* P P 20 43 57.2 -0.1
H16K Elim 70.81 22 P P 20 43 57.4 +0.4
baz=317
TOLK Toolik Lake Re 70.83 15 P P 20 43 57.6 +0.4
baz=326
D25K Kavik River 70.88 13 IAmb IAmb 20 44 00.2
comp=Z,54nm,1.8s
D25K Kavik River 70.88 13 P P 20 43 58.1 +0.6
baz=329
G18K Tagagawik 70.88 19 P P 20 43 58.1 +0.6
baz=319
C27K Jago River 71.09 12 IAmb IAmb 20 44 00.9
comp=Z,8.2nm,0.6s
C27K Jago River 71.09 12 P P 20 43 59.6 +0.9
baz=331
G19K Purcell Mounta 71.11 19 IAmb IAmb 20 43 59.9
comp=Z,32nm,1.5s
G19K Purcell Mounta 71.11 19 P P 20 43 59.1 +0.3
baz=321
F21K Alatna River 71.14 17 IAmb IAmb 20 44 01.3
comp=Z,12nm,0.5s
F21K Alatna River 71.14 17 P P 20 43 59.2 +0.2
baz=323
A36M Sachs Harbour 71.15 5 P P 20 43 59.5 +0.6
baz=346,SNR=9.6
H17K Granite Mounta 71.26 21 IAmb IAmb 20 44 01.2
comp=Z,24nm,1.4s
H17K Granite Mounta 71.26 21 P P 20 43 60.0 +0.2
baz=319
E23K Chandalar 71.31 15 IAmb IAmb 20 44 01.9
comp=Z,28nm,1.4s
E23K Chandalar 71.31 15 P P 20 44 00.3 +0.2
baz=326
E24K Your Creek 71.53 15 P P 20 44 01.8 +0.4
baz=327
H18K Honhosa River 71.53 20 IAmb IAmb 20 44 02.8
comp=Z,29nm,1.6s
H18K Honhosa River 71.53 20 P P 20 44 01.5 +0.1
baz=320
G21K Allakaket 71.70 17 IAmb IAmb 20 44 03.8
comp=Z,26nm,1.6s
G21K Allakaket 71.70 17 P P 20 44 02.4 0.0
baz=323
H19K Roundabout Mou 71.75 19 P P 20 44 03.2 +0.6
baz=321
J14K Nanvaranak Lak 71.78 23 IAmb IAmb 20 44 05.3
comp=Z,31nm,1.4s
J14K Nanvaranak Lak 71.78 23 P P 20 44 03.7 +0.9
baz=316
I17K Unalakleet 71.83 22 IAmb IAmb 20 44 05.7
comp=Z,21nm,1.3s
I17K Unalakleet 71.83 22 P P 20 44 03.8 +0.7
baz=318,SNR=5.6
COLD Coldfoot 71.88 16 IAmb IAmb 20 44 04.8
comp=Z,30nm,1.4s
COLD Coldfoot 71.88 16 P P 20 44 03.9 +0.5
baz=326
MREMI Moremi 71.88 222 P P 20 44 03.4 -0.6
D27M Malcolm River 71.88 12 P P 20 44 04.0 +0.5
baz=333
K13K Kusilvak Mount 72.01 24 IAmb IAmb 20 44 05.8
comp=Z,34nm,1.4s
K13K Kusilvak Mount 72.01 24 P P 20 44 04.9 +0.6
baz=316
E25K Arctic Village 72.06 14 IAmb IAmb 20 44 06.8
comp=Z,57nm,2.0s
E25K Arctic Village 72.06 14 P P 20 44 05.1 +0.6
baz=330,SNR=10
D28M Stokes Point 72.15 11 P P 20 44 05.8 +0.9
baz=335
H20K Anotleneega Mo 72.18 18 P P 20 44 05.8 +0.5
baz=322
GCSA Galena City Sc 72.25 20 P P 20 44 06.4 +0.8
baz=321
J16K Anvik River 72.30 22 IAmb IAmb 20 44 08.5
comp=Z,38nm,1.6s
J16K Anvik River 72.30 22 P P 20 44 06.7 +0.7
baz=318
G23K Bananza Creek 72.35 16 P P 20 44 06.9 +0.6
baz=326
KHWEE KHWEE 72.48 224 *i* P P 20 44 08.5 +0.7
F25K Christian Rive 72.51 14 P P 20 44 07.9 +0.7
baz=330
ILON Igloolik, Nuna 72.55 350 P P 20 44 07.4 +0.1
ILON IAmb IAmb 20 44 08.5
comp=Z,53nm,1.7s
H21K Melozitna Rive 72.57 18 P P 20 44 08.3 +0.7
baz=324,SNR=5.9
M11K Mekoryuk 72.58 26 P P 20 44 08.5 +0.9
baz=315
J17K VABM Dome 72.67 21 IAmb IAmb 20 45 55.0
comp=Z,41nm,2.0s
J17K VABM Dome 72.67 21 P P 20 44 08.6 +0.5
baz=320
E28M Babbage River 72.69 11 P P 20 44 09.1 +0.9
baz=334
F26K Sheenjek River 72.70 13 P P 20 44 09.0 +0.6
baz=331
H22K Ishtalitna Cre 72.72 17 IAmb IAmb 20 44 43.2
comp=Z,31nm,1.9s
H22K Ishtalitna Cre 72.72 17 P P 20 44 09.0 +0.5
baz=325
E27K Coleen River 72.72 12 P P 20 44 09.1 +0.6
baz=333
K15K Wolf Creek Mou 72.76 23 P P 20 44 09.4 +0.6
baz=318
I20K Naaghedeneel 72.84 19 IAmb IAmb 20 44 11.4
comp=Z,37nm,1.4s
I20K Naaghedeneel 72.84 19 P P 20 44 09.7 +0.6
baz=323
BMAR Burnt Mountain 72.85 14 P P 20 44 09.4 +0.1
G24K Hadweenzic Riv 72.90 15 IAmb IAmb 20 44 12.4
comp=Z,20nm,1.3s
G24K Hadweenzic Riv 72.90 15 P P 20 44 10.3 +0.8
baz=328
L14K Kuka Creek 73.09 24 IAmb IAmb 20 44 12.7
comp=Z,29nm,1.4s
L14K Kuka Creek 73.09 24 P P 20 44 11.5 +0.8
baz=317
E29M Blow River 73.14 11 P P 20 44 11.6 +0.8
baz=336
I21K Tanana 73.16 18 P P 20 44 11.6 +0.6
baz=325
J19K Poorman 73.18 20 IAmb IAmb 20 44 13.4
comp=Z,26nm,1.3s
J19K Poorman 73.18 20 P P 20 44 11.8 +0.6
baz=322,SNR=14
L15K Ungalak Mounta 73.23 23 P P 20 44 12.2 +0.7
baz=318
J18K Innoko River 73.30 20 IAmb IAmb 20 44 13.9
comp=Z,25nm,1.3s
J18K Innoko River 73.30 20 P P 20 44 12.3 +0.5
baz=321
LPHEP Lephephe 73.38 223 *i* P P 20 44 13.3 +0.3
K17K Iditarod 73.42 21 P P 20 44 13.2 +0.6
baz=320
G26K Porcupine Rive 73.42 14 P P 20 44 13.3 +0.7
baz=331
J20K Nowinta River 73.43 19 IAmb IAmb 20 44 14.1
comp=Z,12nm,0.6s
J20K Nowinta River 73.43 19 P P 20 44 13.1 +0.5
baz=323
F28M Old Crow 73.53 12 P P 20 44 13.9 +0.7
baz=334,SNR=5.9
M13K Dall Lake 73.55 25 P P 20 44 14.2 +0.9
baz=317
H24K Noodor Dome 73.55 16 P P 20 44 14.0 +0.6
baz=328,SNR=7.8
M14K Bethel 73.77 24 P P 20 44 15.5 +0.9
baz=318,SNR=9.4
I23K Minto, Yukon-K 73.81 17 IAmb IAmb 20 45 10.6
comp=Z,41nm,1.9s
I23K Minto, Yukon-K 73.81 17 P P 20 44 15.5 +0.7
baz=327,SNR=5.6
C36M Paulatuk 73.82 6 P P 20 44 15.0 +0.3
baz=347,SNR=31
INK Inuvik 73.83 9 P 20 44 15.3 +0.4
INK IAmb IAmb 20 44 16.2
comp=Z,12nm,0.7s
INK Inuvik 73.83 9 P P 20 44 15.3 +0.4
INK pmax pmax
comp=Z,12nm,0.7s
INK Inuvik 73.83 9 P P 20 44 15.7 +0.8
baz=340,SNR=21
L16K Owhat River 73.84 23 P 20 44 15.5 +0.4
L16K IAmb IAmb 20 44 17.1
comp=Z,11nm,0.5s
L16K Owhat River 73.84 23 P P 20 44 16.1 +1.1
baz=320,SNR=14
L17K Donlin 73.87 22 P P 20 44 16.5 +1.3
baz=320
G27K Doyon Strip 73.94 13 P P 20 44 16.8 +1.2
baz=333
K20K Telida 74.11 19 P P 20 44 17.6 +1.0
baz=324
CHUM Lake Minchumin 74.14 18 P P 20 44 17.6 +0.8
baz=325,SNR=12
F30M Barrier River 74.17 10 IAmb IAmb 20 44 18.6
comp=Z,30nm,1.4s
F30M Barrier River 74.17 10 P P 20 44 17.8 +0.9
baz=338
M15K Kasigluk River 74.23 24 P P 20 44 18.5 +1.2
baz=319
POKR Poker Plat Res 74.27 16 IAmb IAmb 20 44 20.1
comp=Z,46nm,1.6s
POKR Poker Plat Res 74.27 16 P P 20 44 18.4 +0.9
baz=328,SNR=6.3
L18K Granite Mounta 74.28 21 IAmb IAmb 20 44 20.3
comp=Z,27nm,1.5s
L18K Granite Mounta 74.28 21 P P 20 44 18.5 +0.9
baz=322,SNR=8.2
BPAW Bear Paw Mtn. 74.29 18 IAmb IAmb 20 44 18.4
comp=Z,40nm,1.6s
BPAW Bear Paw Mtn. 74.29 18 P P 20 44 18.2 +0.5
baz=326,SNR=7.3
PRP Porcupine Dome 74.33 15 P P 20 44 18.7 +0.7
baz=330,SNR=5.6
NEA2 Nenana 74.34 17 P P 20 44 17.9 0.0
NEA2 IAmb IAmb 20 44 18.9
comp=Z,57nm,1.6s
NEA2 Nenana 74.34 17 P P 20 44 18.2 +0.3
baz=327,SNR=9.0
COLA College 74.38 16 P P 20 44 18.9 +0.7
COLA College 74.38 16 *de*P P 20 44 18.7 +0.6
COLA pmax pmax
comp=Z,13nm,0.9s
COLA College 74.38 16 P P 20 44 18.7 +0.6
baz=328
COLA College 74.38 16 P P 20 44 18.6 +0.6
COLA pP pP 20 44 50.4 +0.6
G29M Pine Creek 74.47 12 IAmb IAmb 20 46 39.3
comp=Z,33nm,1.8s
G29M Pine Creek 74.47 12 P P 20 44 19.5 +0.9
baz=336
N14K Kuskokwak Cree 74.48 25 P P 20 44 19.7 +0.9
baz=318
GRTLG Ghandi 74.48 228 *i* P P 20 44 20.1 +0.7
H27K Steamboat Moun 74.49 13 IAmb IAmb 20 44 20.7
comp=Z,39nm,1.6s
H27K Steamboat Moun 74.49 13 P P 20 44 19.7 +0.9
baz=333
M16K Timber Creek 74.53 23 P P 20 44 20.1 +1.0
baz=320
CCB Clear Creek Bu 74.59 16 IAmb IAmb 20 44 20.3
comp=Z,28nm,1.8s
F31M Tsiigehtchic 74.62 10 P P 20 44 20.3 +0.8
baz=339,SNR=16
IL31 74.69 16 IAmb IAmb 20 44 46.6
comp=Z,41nm,2.0s
ILAR Eielson Array 74.69 16 P P 20 44 19.5 -0.4
comp=Z,2.6nm,0.7s,baz=296,slow=4.4,SNR=55
ILAR pP pP 20 44 54.1 +2.5
comp=Z,1.6nm,0.9s,baz=312,slow=4.8,SNR=2.7
ILAR PP PP 20 47 10.2 +2.5
comp=Z,1.6nm,0.9s,baz=329,slow=9.3,SNR=5.7
comp=Z,2.6nm,0.7s
ILAR Eielson Array 74.69 16 P 20 44 18.8 -1.1
M17K Holitna River 74.70 22 IAmb IAmb 20 44 22.3
comp=Z,22nm,1.1s
M17K Holitna River 74.70 22 P P 20 44 21.4 +1.4
baz=321
KTH Kantishna Hill 74.76 18 IAmb IAmb 20 44 21.5
comp=Z,17nm,0.5s
N15K Kwethluk River 74.82 24 P P 20 44 22.1 +1.4
baz=319
L19K White Mountain 74.84 21 P P 20 44 21.6 +0.7
baz=323
LBTB Lobatse 74.84 222 P P 20 44 21.6 +0.2
LBTB IAmb IAmb 20 44 23.0
comp=Z,11nm,0.6s
LBTB Lobatse 74.84 222 P P 20 44 21.6 +0.2
LBTB pmax pmax
comp=Z,11nm,0.6s
LBTB Lobatse 74.84 222 P P 20 44 21.8 +0.4
LBTB PcP PcP 20 44 35.7 +0.9
LBTB x x 20 44 49.8
DBIC Dimbokro 74.90 267 P P 20 44 20.6 -1.3
comp=Z,3.2nm,0.5s,baz=69,slow=6.3,SNR=9.4
comp=Z,3.2nm,0.5s
DBIC Dimbokro 74.90 267 IAmb IAmb 20 45 00.9
comp=Z,46nm,2.0s
PPLA Purkeypile 74.98 19 IAmb IAmb 20 44 23.1
comp=Z,16nm,0.6s
PPLA Purkeypile 74.98 19 P P 20 44 22.0 +0.1
baz=325,SNR=8.1
HDA Harding Lake 74.98 16 P P 20 44 21.1 -0.5
baz=329
TRF Thorofare Moun 75.01 18 IAmb IAmb 20 44 31.0
comp=Z,30nm,1.5s
TRF Thorofare Moun 75.01 18 P P 20 44 22.3 +0.3
baz=326
N16K Nishlik Lake 75.01 23 P P 20 44 23.0 +1.1
baz=320
G31M Satah River 75.03 10 IAmb IAmb 20 44 23.0
comp=Z,13nm,0.5s
G31M Satah River 75.03 10 P P 20 44 22.5 +0.6
baz=339
I27K Kandik River 75.03 13 IAmb IAmb 20 44 23.4
comp=Z,28nm,1.6s
I27K Kandik River 75.03 13 P P 20 44 22.7 +0.7
baz=333,SNR=6.1
KGCAE Kacgae 75.05 226 IAmb IAmb 20 44 24.3
comp=Z,19nm,0.7s
KGCAE Kagae 75.05 226 *i* P P 20 44 23.0 +0.4
KNRA Kunununra 75.08 123 P P 20 44 23.0 +0.2
comp=Z,16nm,1.5s
TSUM Tsumeb 75.10 232 P 20 44 23.0 -0.1
TSUM Tsumeb 75.10 232 P P 20 44 23.2 +0.1
TSUM x x 20 44 51.5
MCK McKinley 75.10 17 IAmb IAmb 20 44 23.6
comp=Z,16nm,0.5s
MCK McKinley 75.10 17 P P 20 44 22.8 +0.5
baz=328,SNR=10.0
M18K Stony River 75.11 21 P P 20 44 23.2 +0.8
baz=322
O14K Tigyukauivet M 75.12 25 P P 20 44 23.1 +0.6
baz=319
J25K Salcha River, 75.15 15 P P 20 44 22.6 -0.1
baz=330
EPYK Eagle Plains 75.18 11 IAmb IAmb 20 44 24.1
comp=Z,30nm,1.4s
EPYK Eagle Plains 75.18 11 P P 20 44 23.1 +0.3
baz=337
M19K Big River Lodg 75.19 20 IAmb IAmb 20 45 05.0
comp=Z,28nm,1.7s
M19K Big River Lodg 75.19 20 P P 20 44 23.9 +1.0
baz=324
RND Reindeer 75.40 17 IAmb IAmb 20 44 25.0
comp=Z,35nm,1.4s
N17K Nushagak Hills 75.46 22 P P 20 44 25.9 +1.5
baz=322
I28M Miner Creek 75.48 13 IAmb IAmb 20 44 25.6
comp=Z,12nm,0.5s
I28M Miner Creek 75.48 13 P P 20 44 25.1 +0.5
baz=334
M20K Styx River 75.56 20 IAmb IAmb 20 44 44.5
comp=Z,43nm,2.0s
M20K Styx River 75.56 20 P P 20 44 25.6 +0.5
baz=324
J26L Joseph Creek 75.63 15 IAmb IAmb 20 44 26.5
comp=Z,8.2nm,0.6s
J26L Joseph Creek 75.63 15 P P 20 44 25.8 +0.3
baz=332
L22K Petersville 75.66 19 IAmb IAmb 20 44 26.0
comp=Z,57nm,1.8s
O15K Ungalikthiuk R 75.66 24 P P 20 44 26.3 +0.7
baz=320
N18K Kilae Creek 75.73 22 P P 20 44 27.1 +1.1
baz=322
K24K Donnelly Dome 75.77 16 P P 20 44 26.3 +0.1
baz=330,SNR=9.3
I29M Ogilvie Camp, 75.85 12 IAmb IAmb 20 44 27.8
comp=Z,8.3nm,0.6s
I29M Ogilvie Camp, 75.85 12 P P 20 44 27.1 +0.5
baz=336,SNR=11
CUT Chulitna 75.89 19 P P 20 44 26.5 -0.3
baz=327
O16K Kokwok River B 75.91 23 IAmb IAmb 20 44 30.0
comp=Z,28nm,1.4s
O16K Kokwok River B 75.91 23 P P 20 44 28.3 +1.4
baz=321
MAKGR Makgori 75.91 222 *i* P P 20 44 28.0 +0.5
SKT Skwentna 75.91 19 P P 20 44 26.5 -0.6
SKT IAmb IAmb 20 44 28.1
comp=Z,36nm,1.4s
SKT Skwentna 75.91 19 P P 20 44 26.8 -0.2
baz=326,SNR=8.4
WAT1 Susitna Watana 75.96 18 P P 20 44 26.8 -0.5
baz=328
SCRK Sand Creek 76.00 15 IAmb IAmb 20 44 29.9
comp=Z,27nm,1.5s
SCRK Sand Creek 76.00 15 P P 20 44 28.1 +0.5
baz=331,SNR=12
RIDG Independent Ri 76.03 16 IAmb IAmb 20 45 12.9
comp=Z,27nm,1.5s
RIDG Independent Ri 76.03 16 P P 20 44 27.7 +0.1
baz=331,SNR=6.3
DHY Denali Highway 76.03 17 IAmb IAmb 20 44 28.5
comp=Z,13nm,0.6s
DHY Denali Highway 76.03 17 P P 20 44 28.0 +0.2
baz=329,SNR=10
N19K Bonanza Creek 76.04 21 P P 20 44 28.6 +0.7
baz=324
H31M Peel River 76.07 11 IAmb IAmb 20 44 28.9
comp=Z,14nm,0.6s
H31M Peel River 76.07 11 P P 20 44 28.3 +0.5
baz=339
O17K Koliganek Bris 76.08 23 P P 20 44 29.0 +1.0
baz=322
DOT Dot Lake 76.28 15 IAmb IAmb 20 44 38.8
comp=Z,26nm,1.6s
I30M Mount Dempster 76.30 12 IAmb IAmb 20 44 41.2
comp=Z,50nm,1.9s
I30M Mount Dempster 76.30 12 P P 20 44 29.8 +0.5
baz=337
KOOLE Kule 76.33 228 *i* P P 20 44 30.8 +0.7
WAT6 Susitna Watana 76.37 17 P P 20 44 29.8 0.0
baz=329,SNR=8.8
P16K Nushagak River 76.38 24 P P 20 44 30.4 +0.8
baz=321
SUA Susitna One 76.55 19 IAmb IAmb 20 44 35.9
comp=Z,34nm,1.6s
SUA Susitna One 76.55 19 P P 20 44 30.6 -0.2
baz=326
PAX Paxson 76.56 16 P P 20 44 31.1 +0.3
baz=330,SNR=9.0
O19K Port Alsworth 76.59 22 P P 20 44 31.5 +0.7
baz=324
O18K Koktuh Hills 76.60 22 P P 20 44 32.3 +1.3
baz=323,SNR=5.5
J29N Klondike Camp 76.69 13 IAmb IAmb 20 44 34.0
comp=Z,9.7nm,0.5s
J29N Klondike Camp 76.69 13 P P 20 44 32.4 +0.9
baz=336
P17K Kvichak River 76.75 23 P 20 44 32.1 +0.4
P17K Kvichak River 76.75 23 P P 20 44 33.2 +1.5
baz=322,SNR=5.7
DAWY Dawson 76.84 13 IAmb IAmb 20 44 33.7
comp=Z,64nm,1.8s
DAWY Dawson 76.84 13 P P 20 44 32.9 +0.7
baz=335,SNR=10
SML Sawmill 76.88 18 P P 20 44 32.2 -0.4
SML Sawmill 76.88 18 P P 20 44 33.0 +0.4
baz=328,SNR=8.2
J30M Hart River 76.90 12 P P 20 44 33.3 +0.6
baz=338
P18K Big Mountain, 76.97 22 P P 20 44 33.7 +0.7
baz=323
Q16K King Salmon 77.09 23 P P 20 44 34.7 +1.1
baz=322,SNR=5.1
SCM Sheep Creek Mo 77.11 18 P P 20 44 33.9 +0.1
SCM Sheep Creek Mo 77.11 18 P P 20 44 33.9 +0.1
SCM pmax pmax
comp=Z,126nm,1.9s
SCM Sheep Creek Mo 77.11 18 P P 20 44 34.3 +0.4
baz=329
RC01 Rabbit Creek A 77.13 19 P P 20 44 33.8 0.0
baz=327
HARP HAARP 77.13 16 P P 20 44 34.8 +0.9
baz=331,SNR=6.1
M24K Tolsona, Glenn 77.15 17 P P 20 44 35.2 +1.2
baz=330,SNR=5.7
KNK Knik Glacier 77.19 18 P P 20 44 34.6 +0.4
baz=328
L27K Beaver Creek, 77.27 15 P P 20 44 35.7 +1.0
baz=333
BCAR Beaver Creek A 77.27 15 P P 20 44 35.0 +0.3
P19K Oil Pt 77.35 21 P P 20 44 36.2 +1.0
baz=325
K29M Barlow Dome 77.38 13 P P 20 44 36.3 +1.0
baz=337
Q17K Contact Creek 77.66 23 P P 20 44 36.9 -0.1
baz=323
KLU Klutina 77.75 17 P P 20 44 38.0 +0.6
baz=330
M27K Edge Creek, AK 77.89 15 IAmb IAmb 20 44 41.4
comp=Z,25nm,1.2s
M27K Edge Creek, AK 77.89 15 P P 20 44 38.7 +0.4
baz=333,SNR=6.0
BOSA Boshof 77.91 220 P P 20 44 38.6 0.0
comp=Z,11nm,0.7s,baz=26,slow=4.6,SNR=23
comp=Z,11nm,0.7s
BOSA Boshof 77.91 220 P P 20 44 38.4 -0.3
BOSA sP sP 20 45 23.5 -0.7
L29M L29M 77.94 13 P P 20 44 39.0 +0.5
baz=336
N25K Chitina, Valde 77.96 17 P P 20 44 39.4 +0.8
baz=331
GLI Glacier Island 77.99 18 P P 20 44 38.6 -0.1
baz=329
BRSE Bradley Lake S 77.99 20 P P 20 44 38.5 -0.2
baz=327
SEW Seward 78.04 20 P P 20 44 39.7 +0.8
baz=328
BVCY Beaver Creek 78.05 15 P P 20 44 40.2 +1.3
baz=334
Q20K Shuyak Island 78.46 22 P P 20 44 41.5 +0.3
baz=326
M29M Somme Creek 78.49 14 P P 20 44 42.7 +1.2
baz=336
MCARA McCarthy VSAT 78.51 16 P P 20 44 42.6 +1.1
baz=332
BMRM Bremner River 78.52 17 P P 20 44 42.4 +0.8
baz=331
EYAK Cordova Ski Ar 78.61 18 P P 20 44 42.2 +0.2
baz=330

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
M30M	Minto, Yukon	78.68	13	P	P	20 44 43.0	+0.5
	baz=337						
YUK3	Moose Creek	78.71	15	P	P	20 44 43.4	+0.6
	baz=334						
CRQE	Cirque	79.06	16	P	P	20 44 45.1	+0.4
	baz=332						
KDAK	Kodiak Island	79.08	22	P	P	20 44 45.1	+0.5
	baz=326						
CHNA	Chernabura Isl	79.09	27	P	P	20 44 44.6	-0.1
	baz=321						
CTG	Chitna Glacier	79.25	16	P	P	20 44 46.8	+1.0
	baz=334						
YUK8	Steele Glacier	79.29	15	P	P	20 44 46.8	+0.7
	baz=335						
OHAK	Old Harbor	79.33	23	P	P	20 44 47.1	+1.1
	baz=325						
M31M	Drury Creek, Y	79.44	12	P	P	20 44 47.5	+0.9
	baz=339						
YUK4	Talbot Arm	79.46	14	P	P	20 44 47.8	+0.8
	baz=336						
FARO	Faro, Yukon	79.58	11	P	P	20 44 48.1	+0.8
	baz=340						
O28M	Mount Upton	79.67	15	P	P	20 44 48.8	+0.6
	baz=335						
N31M	Braeburn, Yuko	79.87	13	P	P	20 44 49.6	+0.7
	baz=338						
WRGLY	Wrigley	79.88	7	P	P	20 44 50.0	+1.2
	baz=348						
YUK6	Outpost Mounta	79.89	14	P	P	20 44 50.2	+0.9
	baz=336						
HYT	Haines Junctio	80.16	14	P	P	20 44 50.5	-0.1
HYT				IAmb	IAmb	20 44 52.0	
	comp=Z,22nm,1.2s						
HYT	Haines Junctio	80.16	14	P	P	20 44 51.7	+1.1
	baz=337						
PINM	Pinnacle	80.27	15	P	P	20 44 52.0	+0.8
	baz=335						
O29M	Mount Kennedy	80.43	15	P	P	20 44 52.0	-0.1
	baz=336						
O30N	Mendenhall	80.48	13	P	P	20 44 52.9	+0.6
	baz=338						
N32M	Quiet Lake	80.65	12	P	P	20 44 53.5	+0.4
	baz=340						
WHY	Whitehorse	80.80	13	P	P	20 44 53.4	-0.6
	baz=339						
YKAW3	Yellowknife Wh	81.12	3	IAmb	IAmb	20 44 56.9	
	comp=Z,12nm,0.6s						
YKA	Yellowknife Ar	81.19	3	P	P	20 44 55.9	0.0
	comp=Z,7.5nm,0.5s,baz=351,slow=5.9,SNR=149						
YKA				pP	pP	20 45 29.1	+0.9
	comp=Z,4.5nm,1.0s,baz=343,slow=5.8,SNR=2.4						
	comp=Z,7.5nm,0.5s						
YKA	Yellowknife Ar	81.19	3	P	P	20 44 55.8	-0.2
YKA	Yellowknife Ar	81.19	3	*i* P	P	20 44 56.5	+0.6
YKA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YKAW1	Yellowknife Wh	81.21	3	IAmb	IAmb	20 44 57.5	
	comp=Z,15nm,0.7s						
YKAW1					pP	20 45 27.2	-1.0
WRKA	Warakurna	81.50	130	P	P	20 44 58.9	+0.8
	comp=Z,3.3nm,1.3s						
P33M	Teslin, Yukon	81.58	12	P	P	20 44 58.3	+0.2
	baz=341						
WRA	Warramunga Arr	81.84	122	P	P	20 44 58.4	-1.5
	comp=Z,2.6nm,0.6s,baz=324,slow=4.9,SNR=25						
WRA				PKKPbc	PKKPbc	21 03 30.4	+0.8
	comp=Z,0.7nm,1.0s,baz=127,slow=2.4,SNR=6.3						
	comp=Z,2.6nm,0.6s						
WRAB	Tennant Creek	81.85	122	P	P	20 44 58.5	-1.4
WRAB				PcP	PcP	20 45 04.8	-0.5
WR8	Warramunga Arr	81.96	122	P	P	20 44 58.6	-2.0
P32M	Atlin	82.01	13	P	P	20 45 01.6	+1.3
	baz=340						
SCHQ	Schefferville	82.14	337	P	P	20 45 01.4	+0.4
	comp=Z,3.6nm,0.4s,baz=17,slow=2.3,SNR=21						
	comp=Z,3.6nm,0.4s						
WTLY	Watson Lake, Y	82.29	10	P	P	20 45 02.4	+0.6
	baz=344						
R33M	Jennings River	82.65	11	P	P	20 45 04.4	+0.6
	baz=342						
Q32M	Nakina River	82.86	12	P	P	20 45 05.7	+0.8
	baz=341						
DLBC	Dease Lake	83.72	11	P	P	20 45 10.1	+0.9
	baz=343						
TOAD	Toad River Com	83.97	9	P	P	20 45 11.2	+0.7
	baz=347						
S34M	Telegraph Cree	84.04	12	P	P	20 45 11.7	+1.0
	baz=342						
AS31	Alice Springs	84.12	125	P	P	20 45 10.1	-1.6
ASAR	Alice Springs	84.12	125	P	P	20 45 09.6	-2.0
	comp=Z,3.4nm,0.7s,baz=310,slow=5.0,SNR=26						
ASAR				PKKPbc	PKKPbc	21 03 25.4	+0.8
	comp=Z,0.2nm,0.4s,baz=132,slow=2.4,SNR=4.5						
	comp=Z,3.4nm,0.7s						
FCC	Fort Churchill	84.26	352	IAmb	IAmb	20 45 13.6	
	comp=Z,9.6nm,0.8s						
T35M	Bob Quinn	85.08	12	P	P	20 45 16.6	+0.6
	baz=343						
WRAK	Wrangell Islan	85.25	13	P	P	20 45 17.3	+0.5
	baz=341						
FFC	Flin Flon	88.91	356	P	P	20 45 34.3	-0.3
FFC	Flin Flon	88.91	356	P	P	20 45 34.3	-0.3
FFC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
FFC	Flin Flon	88.91	356	P	P	20 45 34.9	+0.4
FFC				sP	sP	20 46 21.6	+1.2
ULM	Lac du Bonnet	92.83	352	P	P	20 45 52.8	0.0
	comp=Z,3.6nm,0.7s,baz=28,slow=4.8,SNR=6.5						
	comp=Z,3.6nm,0.7s						
STKA	Stephens Creek	94.66	126	P	P	20 45 59.8	-1.5
	comp=Z,1.4nm,0.8s,baz=55,slow=9.7,SNR=3.3						
	comp=Z,1.4nm,0.8s						
LAO	LASA Array	97.11	358	P	P	20 46 12.0	-0.6
PLCA	Paso Flores	150.03	250	PKPbc	PKPbc	20 52 30.1	-0.1
	comp=Z,3.1nm,0.6s,baz=162,slow=1.7,SNR=5.8						

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*GEN **04** 20:34:18.8, 44.°67N×10.°00E, h25km, Ml1.6*
*VIE **04** 20:34:20.8±1.0, 44.°81N×10.°08E, h8km, mb2.5/5, ml2.0/7, Error ellipse: s-maj=10.9km s-min=4.9km az=18.0 101 km SE of Milan*
ISC 04 20:34:19.9±0.9**, 44.°63N**±0.°03×**9.°96E**±0.°03**, h28**km±7km**,**
n18, σ**0.s88**/30**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRAM	Graiana	0.16	150	P	Pb	20 34 24.9	-0.6
GRAM				S	Sb	20 34 29.3	0.0
PRMA	PARMA	0.29	62	P	Pn	20 34 26.5	-1.8
PRMA				S	Sb	20 34 32.9	+1.1
BOB	Bobbio (Coli)	0.39	291	P	Pn	20 34 28.7	-1.1
BOB				S	Sn	20 34 35.6	-0.7
MSSA	Maissana	0.44	225	P	Pb	20 34 29.5	+0.2
MSSA				S	Sb	20 34 36.4	+0.6
GORR	Gorreto	0.47	267	P	Pn	20 34 29.9	-1.0
GORR				S	Sb	20 34 37.2	+0.6
EQUI	Equi	0.48	163	P	Pn	20 34 30.0	-1.0
EQUI				S	Sn	20 34 38.9	+0.3
SARO	Sassorosso	0.55	144	P	Pb	20 34 30.5	-0.5
SARO				S	Sn	20 34 39.8	-0.4
VLC	Villacollemand	0.56	147	P	Pn	20 34 31.0	-1.0
VLC				S	Sn	20 34 39.7	-0.8
PLMA	Palmaria, Port	0.58	187	P	Pn	20 34 31.8	-0.5
PLMA				S	Sb	20 34 40.2	+0.7
RNCA	Ronca, Sant'Ol	0.74	258	P	Pn	20 34 34.4	0.0
RNCA				S	Sn	20 34 44.6	-0.1
PII	Pisa	1.00	156	P	Pb	20 34 39.2	+0.7
PII				S	Sn	20 34 53.0	+1.9
MDI	Monti di Nese	1.16	352	P	Pb	20 34 40.5	-0.8
MDI				S	Sb	20 34 55.8	-0.3
DAVA	Damuels	2.66	359	Pn	Pn	20 35 02.1	+1.0
	1.2nm,0.3s						
SQTA	Sankt Quirin	2.73	18	Pn	Pn	20 35 02.3	+0.3
	0.7nm,0.2s						
ABTA	Abfaltersbach	2.77	39	Pn	Pn	20 35 03.0	+0.5
	1.1nm,0.5s						
MOTA	Moosalm	2.83	16	*e*Pn	Pn	20 35 04.5	+1.1
	0.6nm,0.2s						
WTTA	Wattenberg	2.88	23	*e*Pn	Pn	20 35 04.8	+0.6
	0.5nm,0.2s						
WATA	Walderalm	2.93	22	Pn	Pn	20 35 05.0	+0.2
	0.4nm,0.2s						

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*SJA **04** 20:35:38.6±0.7, 22.°86S×68.°22W, h142km±4km, ML4.4, MW4.0*
*GUC **04** 20:35:40.7±0.6, 22.°84S×68.°22W, h133km±3km, ML4.5*
*NEIC **04** 20:35:40.3±2.4, 22.°89S±0.°05×68.°2W±0.°1, h130km±5km, mb4.6/17, ML4.5(GUC), Error ellipse: s-maj=16.6km s-min=7.7km az=96.0*
*IDC **04** 20:35:41.2±2.9, 22.°81S×67.°95W, h123km±27km, mb4.0/4, mbtmp4.4/7, MS2.5/1, Error ellipse: s-maj=37.6km s-min=22.0km az=115.0*
*VAO **04** 20:35:44.7±0.9, 22.°61S×67.°90W, h147km, mb4.5, Presumed earthquake*
ISC 04 20:35:40.1±0.6**, 22.°87S**±0.°03×**68.°27W**±0.°04**, h133**km±5km**,**
n119, σ**1.s53**/143**, mb4.5**/9**, 5C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.12	136		Pn	20 35 58.3	-0.3
AF01				Sn	Sn	20 36 11.8	-0.8
AF01	San Pedro de A	0.12	136	⇓*i*P	Pn	20 35 58.4	-0.2
AF01				*i* S	Sn	20 36 11.7	-0.9
AF01				IAML		20 36 20.9	
	comp=N,12μm,0.3s						
AF01	San Pedro de A	0.12	136	*e*P	Pn	20 35 58.6	+0.1
AF01				*e*S	Sn	20 36 18.4	+5.8
AF01				IAML		20 36 28.6	
	comp=Z,6μm,0.3s						
PB06	IPOC Station P	1.21	277		Pn	20 36 06.1	+0.5
PB06				Sn	Sn	20 36 25.3	+0.4
PB06	IPOC Station P	1.21	277	⇓*e*P	Pn	20 36 06.4	+0.8
PB06				*e*S	Sn	20 36 25.5	+0.6
PB06				IAML		20 36 29.0	
	comp=N,4μm,0.3s						
PB06	IPOC Station P	1.21	277	*e*P	Pn	20 36 05.8	+0.2
PB06				*e*S	Sn	20 36 26.0	+1.1
PB06				IAML		20 36 29.5	
	comp=Z,3μm,0.2s						
PB09	IPOC Station P	1.40	320		Pn	20 36 08.6	+1.1
PB09				Sn	Sn	20 36 28.7	+0.3
PB09	IPOC Station P	1.40	320	⇓*i*P	Pn	20 36 08.6	+1.1
PB09				*i* S	Sn	20 36 29.3	+1.0
PB09	IPOC Station P	1.40	320	*e*P	Pn	20 36 07.9	+0.4
PB09				*e*S	Sn	20 36 30.3	+1.9
PB09				IAML		20 36 32.2	
	comp=Z,2μm,0.3s						
PB03	IPOC Station P	1.60	300		Pn	20 36 10.1	+0.3
PB03				Sn	Sn	20 36 31.8	-0.5
PB03	IPOC Station P	1.60	300	⇓*i*P	Pn	20 36 10.5	+0.8
PB03				IAML		20 36 33.7	
	comp=E,5μm,0.2s						
PB03	IPOC Station P	1.60	300	*e*P	Pn	20 36 09.8	+0.1
PB03				*e*S	Sn	20 36 33.0	+0.7
PB03				IAML		20 36 33.8	
	comp=Z,4μm,0.4s						
PB05	IPOC Station P	1.79	270		Pn	20 36 12.3	+0.5
PB05				Sn	Sn	20 36 34.7	-1.3
PB05	IPOC Station P	1.79	270	⇑*i*P	Pn	20 36 12.4	+0.6
PB05				IAML		20 36 38.2	
	comp=N,1μm,0.2s						
PB05	IPOC Station P	1.79	270	*e*P	Pn	20 36 12.4	+0.6
PB05				*e*S	Sn	20 36 36.9	+0.9
PB05				IAML		20 36 44.9	
	comp=Z,1μm,0.7s						
PB07	IPOC Station P	1.88	307		Pn	20 36 13.5	+0.4
PB07				Sn	Sn	20 36 37.6	-0.5
PB07	IPOC Station P	1.88	307	⇓*i*P	Pn	20 36 13.9	+0.8
PB07				IAML		20 36 40.1	
	comp=N,4μm,0.2s						
PB07	IPOC Station P	1.88	307	*e*P	Pn	20 36 13.1	+0.1
PB07				*e*S	Sn	20 36 39.6	+1.4
PB07				IAML		20 36 41.1	
	comp=Z,2μm,0.5s						
PB01	IPOC Station P	2.14	328		Pn	20 36 16.7	+0.6
PB01				Sn	Sn	20 36 43.2	-0.4
PB01	IPOC Station P	2.14	328	⇓*e*P	Pn	20 36 16.7	+0.6
PB01				*i* S	Sn	20 36 43.7	+0.1
PB01				IAML		20 36 44.3	
	comp=E,3μm,0.2s						
PB02	IPOC Station P	2.16	315		Pn	20 36 16.8	+0.4
PB02				Sn	Sn	20 36 43.0	-1.1
PB02	IPOC Station P	2.16	315	⇓*e*P	Pn	20 36 16.9	+0.6
PB02				IAML		20 36 46.2	
	comp=E,3μm,0.3s						
PB02	IPOC Station P	2.16	315	*e*P	Pn	20 36 16.3	0.0
PB02				*e*S	Sn	20 36 44.1	+0.1
PB02				IAML		20 36 50.0	
	comp=Z,4μm,0.2s						
SALTA		2.23	128	*e*P	Pn	20 36 18.9	+1.4
SALTA				*e*S	Sn	20 36 45.2	-1.0
PB14	IPOC Station P	2.62	228		Pn	20 36 22.4	0.0
PB14	IPOC Station P	2.62	228	⇑*i*P	Pn	20 36 22.5	+0.2
PB14	IPOC Station P	2.62	228	*e*P	Pn	20 36 22.8	+0.4
PB14				*e*S	Sn	20 36 55.3	+0.5
PX03	IPOC Station P	2.76	332	*e*P	Pn	20 36 23.3	-0.6
PX03				IAML		20 36 58.4	
	comp=N,1μm,0.2s						
HMBC	Humberstone	2.99	329		Pn	20 36 26.2	-0.6
HMBC				Sn	Sn	20 37 00.8	-2.0
HMBC	Humberstone	2.99	329	*e*P	Pn	20 36 26.3	-0.5
HMBC				IAML		20 37 03.7	
	comp=E,1μm,0.2s						
HMBC	Humberstone	2.99	329	*e*P	Pn	20 36 26.4	-0.4
HMBC				*e*S	Sn	20 37 02.7	-0.1
TA02	Huaiquique	3.11	326	*e*P	Pn	20 36 28.9	+0.6
TA02				IAML		20 37 07.9	
	comp=N,2μm,0.1s						
AZAP	Zapla	3.23	115	*e*P	Pn	20 36 30.9	+0.8
GO01	Chusmiza	3.30	345		Pn	20 36 31.1	-0.1
GO01	Chusmiza	3.30	345	*e*P	Pn	20 36 32.0	+0.7
GO01				*e*S	Sn	20 37 10.8	+0.2
GO01				IAML		20 37 19.3	
	comp=N,1μm,0.2s						
GO01	Chusmiza	3.30	345	*e*P	Pn	20 36 30.9	-0.4
GO01				*e*S	Sn	20 37 10.9	+0.2
PB11	IPOC Station P	3.35	337		Pn	20 36 31.2	-0.4
PB11	IPOC Station P	3.35	337	*e*P	Pn	20 36 31.3	-0.4
AC01	Pan de Azucar	3.90	213		Pn	20 36 37.6	-0.9
AC01	Pan de Azucar	3.90	213	*e*P	Pn	20 36 37.4	-1.2
AC01	Pan de Azucar	3.90	213	*e*P	Pn	20 36 37.1	-1.5
AC01				*e*S	Sn	20 37 22.4	-1.5
AC02	Maricunga	4.03	191		Pn	20 36 41.4	+0.7
AC02	Maricunga	4.03	191	*e*P	Pn	20 36 41.5	+0.8
AC02	Maricunga	4.03	191	*e*P	Pn	20 36 40.9	+0.2
AC02				*e*P		20 36 41.9	
AC02				*e*S	Sn	20 37 29.5	+1.7
PB16	IPOC Station P	4.66	345		Pn	20 36 49.3	0.0
PB16	IPOC Station P	4.66	345	*e*P	Pn	20 36 49.2	-0.1
PB16				*e*S	Sn	20 37 41.9	-1.0
AP01	Chacalluta	4.88	336	Pn	Pn	20 36 52.4	+0.8
GO03	Copiapo	5.03	200		Pn	20 36 52.1	-1.6
GO03	Copiapo	5.03	200	*e*P	Pn	20 36 52.3	-1.4
GO03				*e*S	Sn	20 37 49.4	-1.6
AC04	Llanos de Chal	5.89	205	Pn	Pn	20 37 01.8	-3.4
AC05	El Transito	6.21	196		Pn	20 37 07.5	-2.1
LCO	Las Campanas	6.50	199		Pn	20 37 10.6	-3.0
LPAZ	La Paz	6.55	1	P	Pn	20 37 15.9	+1.3
	comp=N,15nm,0.3s,baz=177,slow=7.3,SNR=74						
LPAZ	La Paz	6.55	1		Pn	20 37 15.5	+0.9
LPAZ	La Paz	6.55	1	*e*P	Pn	20 37 15.6	+0.9
CO01	Juntas del Tor	7.27	193		Pn	20 37 22.2	-1.7
CO05	La Serena	7.51	200	Pn	Pn	20 37 22.5	-4.4
GO04	Tololo Observa	7.62	197	Pn	Pn	20 37 24.8	-3.9
CO03	El Pedregal	8.23	195		Pn	20 37 33.3	-3.4
CO02	Combarbal	8.65	196	Pn	Pn	20 37 37.1	-5.3
CO04	Los Peladeros	9.45	194	Pn	Pn	20 37 47.7	-5.5
SIV	San Ignacio	9.63	46	P	Pn	20 37 51.8	-3.8
	comp=N,26nm,0.3s,baz=232,slow=11,SNR=96						
VA06	Catapilco	10.02	195	Pn	Pn	20 37 55.1	-5.5
MT02	Curacav	10.66	193	Pn	Pn	20 38 03.2	-5.9
PTLB	Pontes e Lacer	11.35	51		Pn	20 38 15.1	-3.3
PTLB	Pontes e Lacer	11.35	51	*e*P	Pn	20 38 15.7	-2.8
VILB	Vilhena	12.49	39		Pn	20 38 31.4	-2.1
VILB	Vilhena	12.49	39	*e*P	Pn	20 38 31.6	-1.8
PP1B	Ponte de Pedra	13.61	70	*e*P	Pn	20 38 48.7	+0.9
SALV	Santo Antonio	13.73	62	*e*P	Pn	20 38 48.6	-0.7
BI02	San Fabin de	13.99	190	Pn	Pn	20 38 49.5	-3.2
CPSB	Cacapava Do Su	15.23	123	*e*P	P	20 39 10.1	+0.1
ITAB	Concordia	15.25	110	Pn	Pn	20 39 06.6	-1.8
PDRB	Porto dos Gac	15.70	46	*e*P	P	20 39 14.3	-0.9
PLTB	Pedras Altas	15.75	127	Pn	Pn	20 39 12.9	-1.6
PLTB				IAmb	IAmb	20 39 18.9	
	comp=Z,29nm,1.5s						
CLDB	Colider	16.86	47	*e*P	P	20 39 27.2	-0.9
ITRB	Iturama	16.98	83	*e*P	Pn	20 39 30.6	+0.8
ARAG	Araguaiana, MT	17.08	68	*e*P	Pn	20 39 30.4	-0.5
PLCA	Paso Flores	17.92	186	P	Pn	20 39 42.5	+1.7
	comp=Z,1.6nm,0.6s,baz=24,slow=5.4,SNR=3.7						
IPMB	Ipameri, GO	19.41	79	*e*P	P	20 39 56.1	0.0
SNDB	Serra Nova Dou	19.46	59	*e*P	P	20 39 55.5	-1.1
TEFE	Tefe	19.56	11	*e*P	P	20 39 58.2	+0.5
VAO	Valinhos	19.62	95	P	P	20 39 57.0	-1.4
VAO				IAmb	IAmb	20 39 58.2	
	comp=Z,8.7nm,0.7s						
VAO	Valinhos	19.62	95	*e*P	P	20 39 57.8	-0.6
NPGB	Novo Progresso	20.05	40	*e*P	P	20 40 01.2	-1.7
BDFB	Brasilia	20.41	73	P	P	20 40 05.9	-1.1
	comp=Z,3.2nm,0.5s,baz=245,slow=12,SNR=6.2						
	comp=Z,3.2nm,0.5s						
BDFB	Brasilia	20.41	73	P	P	20 40 06.3	-0.7
MACA	Manacapuru-AM	20.92	22	P	P	20 40 11.0	-1.3
AY01	Puyuhuapi	21.80	188	P	P	20 40 20.6	-0.7
ITTB	Itaituba	22.03	35	*e*P	P	20 40 22.2	-1.8
DIAM	Diamantina, MG	23.46	83	*e*P	P	20 40 37.5	-0.4
JANB	Januaria	23.93	75	*e*P	P	20 40 41.5	-0.5
SMTB	Santa Maria do	24.23	58	*e*P	P	20 40 44.8	0.0
PRPB	Parauapebas	24.33	50	*e*P	P	20 40 44.9	-0.8
GO08	Villa O'Higgin	25.77	187	P	P	20 41 00.6	+2.3
GO08				IAmb	IAmb	20 41 06.8	
	comp=Z,16nm,1.2s						
BOAV	Boa Vista	26.22	18	P	P	20 41 04.2	+1.5
BOAV				IAmb	IAmb	20 41 04.8	
	comp=Z,10nm,0.7s						
BOAV	Boa Vista	26.22	18	*e*P	P	20 41 03.8	+1.0
GUA01	Guaratinga, BA	27.48	82	*e*P	P	20 41 14.1	0.0
MG05	Puerto Natales	28.95	185	P	P	20 41 25.3	-1.3
EFI	East Falkland	29.82	167	P	P	20 41 33.5	-0.9
RCBR	Riachuelo	35.51	66	P	P	20 42 24.1	-0.3
RCBR				IAmb	IAmb	20 42 31.9	
	comp=Z,18nm,1.2s						
APG	El Apazote	43.46	328	LR	LR	21 00 48.1	
	comp=Z,5.5nm,20.7s,baz=284,slow=35						
BELA	Belgrano 2	57.32	172	P	P	20 45 15.3	+1.8
BELA				IAmb	IAmb	20 45 19.4	
	comp=Z,17nm,1.3s						
VNA3	Neumayer Olymp	58.59	161	⇑P	P	20 45 24.7	+2.1
	comp=Z,1.0nm,0.4s						
VNA1	Neumayer--Stat	58.80	160	⇑P	P	20 45 26.6	+2.6
	comp=Z,0.9nm,0.3s						
VNA2	Neumayer--Watz	59.17	160	⇑P	P	20 45 28.5	+1.9
	comp=Z,1.7nm,0.5s,baz=283,slow=7.5						
SNAA	Sanae	60.80	161	P	P	20 45 39.9	+2.2
	comp=Z,2.8nm,0.6s,baz=305,slow=5.7,SNR=4.2						
	comp=Z,2.8nm,0.6s						
SNAA	Sanae	60.80	161	P	P	20 45 39.5	+1.8
SNAA				IAmb	IAmb	20 45 40.1	
	comp=Z,4.8nm,0.7s						
QSPA	South Pole Qui	67.33	180	P	P	20 46 23.1	+2.6
	comp=Z,6.2nm,0.5s,baz=133,slow=0.9,SNR=8.3						
	comp=Z,6.2nm,0.5s						
QSPA	South Pole Qui	67.33	180	P	P	20 46 23.7	+3.1
QSPA				IAmb	IAmb	20 46 23.8	
	comp=Z,7.6nm,0.6s						
F64A	Sherman	68.40	360	P	P	20 46 28.9	+1.7
TORD	Torodi Ar. Bea	77.26	70	P	P	20 47 21.3	+1.1
	comp=Z,1.1nm,0.5s,baz=252,slow=5.7,SNR=8.7						
TORD				pP	pP	20 47 54.3	-0.6
	comp=Z,1.3nm,0.8s,baz=246,slow=8.4,SNR=4.2						
	comp=Z,1.1nm,0.5s						
TORD	Torodi Ar. Bea	77.26	70	IAmb	IAmb	20 47 26.5	
	comp=Z,18nm,0.6s						
ASAR	Alice Springs	128.97	206	PKP	PKiKP	20 54 34.9	+1.4
	comp=Z,0.6nm,0.7s,baz=143,slow=2.0,SNR=6.9						
WRA	Warramunga Arr	132.07	209	PKP	PKiKP	20 54 41.0	+1.2
	comp=Z,0.7nm,0.6s,baz=155,slow=1.8,SNR=14						
MKAR	Makanchi Array	146.37	38	PKPbc	PKPbc	20 55 05.6	+0.3
	comp=Z,0.5nm,0.8s,baz=328,slow=2.5,SNR=6.1						
HHC	Hu-ho-hao-te	162.07	0	*e*P	PKPdf	20 55 21.5	-4.4
NJ2	Nanjing	168.88	327	*e*P	PKPdf	20 55 30.4	-1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH	PanZhiHua	170.22	66	PKP	PKPdf	20 55 31.6	-1.2

IDC 04 20:36:59.4±1.3**, 13.°69N**×**121.°47E, h0**km**, mb3.6**/4**,**
mbtmp3.6/4**, Error ellipse: s-maj=59.5km s-min=14.1km az=51.0, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.67	309	Pg	Pg	20 37 12.2	+0.1
	baz=180,slow=0.0						
WRA	Warramunga Arr	35.73	159	P	P	20 43 59.1	-1.0
	0.3nm,0.4s,baz=338,slow=9.5,SNR=8.4						
	0.3nm,0.4s						
SONM	Songino Array	36.29	343	P	P	20 44 05.1	+0.4
	0.6nm,0.7s,baz=158,slow=12,SNR=2.9						
	0.6nm,0.7s						
ASAR	Alice Springs	39.06	162	P	P	20 44 29.2	+0.9
	0.5nm,0.5s,baz=340,slow=7.2,SNR=8.4						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	50.62	326	P	P	20 45 59.3	-0.8
	1.4nm,0.9s,baz=127,slow=7.5,SNR=5.1						
	1.4nm,0.9s						

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*ISK **04** 20:37:12.3, 38.°37N×39.°03E, h7km, ML3.6/13*
*AFAD **04** 20:37:13.3, 38.°37N×39.°08E, h7km±3km, MW3.5*
ISC 04 20:37:13.4±0.9**, 38.°38N**±0.°03×**39.°05E**±0.°03**, h9**km±7km**,**
n27, σ**0.s84**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.12	335	P	Pg	20 37 16.8	+0.3
ELZG				S	Sg	20 37 19.4	+0.7
SVRC	Sivrice-ELAZID	0.20	91	Pg	Pg	20 37 16.7	-1.0
ELZ	Elazig	0.33	22	P	Pg	20 37 19.8	-0.3
ELZ				S	Sg	20 37 24.9	+0.5
MAYA	Malatya/Merkez	0.49	263	P	Pb	20 37 23.3	-1.0
MAYA				S	Sb	20 37 31.0	-0.7
MDNT	Maden	0.50	89	P	Pg	20 37 22.5	-0.6
MDNT				S	Sg	20 37 29.7	0.0
NARI	Adyaman-Kaht	0.55	205	P	Pb	20 37 24.4	-0.9
NARI				S	Sb	20 37 33.4	+0.2
KAHTU	Kahta	0.67	211	P	Pb	20 37 26.9	-0.5
KAHTU				S	Sb	20 37 37.0	+0.2
KOVA	Elazig, Kovanc	0.68	61	P	Pg	20 37 25.6	-1.0
KOVA				S	Sb	20 37 37.8	+0.8
MCKZ	Bingol	0.74	355	P	Pg	20 37 27.0	-0.7
MCKZ				S	Sb	20 37 39.1	+0.3
ARPR	Arapgir-MALATY	0.90	322	Pg	Pg	20 37 30.6	-0.2
ARPR				Sg	Sb	20 37 43.5	0.0
DYBB	Diyarbakir	0.96	116	Pg	Pg	20 37 31.3	-0.6
DYBB				Sg	Sb	20 37 45.4	+0.3
ILIC	ilic-Erzincan	1.13	341	Pn	Pg	20 37 34.5	-0.7
ILIC				Sn	Sb	20 37 50.4	+0.3
ERZN	Erzincan	1.31	23	Pn	Pn	20 37 37.9	-0.1
ERZN				Sn	Sn	20 37 56.4	+0.7
BNGB	Bingl	1.41	64	Pn	Pg	20 37 39.8	-0.7
YEDI	Yedisu-Bingol	1.57	47	Pn	Pn	20 37 41.7	+0.1
KHMN	Narli-Kahraman	1.80	237	Pn	Pn	20 37 44.1	-0.5
KARO	Karliova-Bingo	1.81	59	Pn	Pn	20 37 45.4	+0.4
GAZ	Gaziantep	1.89	231	Pn	Pn	20 37 45.4	-0.6
KMRS	Kahramanmaras	1.91	243	Pn	Pn	20 37 45.7	-0.5
BAYT	Aydıntepe-Bayb	2.18	22	Pn	Pn	20 37 50.3	+0.3
GURO	Guroymak-BITLI	2.35	85	Pn	Pn	20 37 52.5	+0.2
BEIL	Beino	4.48	212	*e*P	Pn	20 38 22.3	+0.8
HWQ	Hawqa	4.80	212	*e*P	Pn	20 38 27.4	+1.3
ZAHL	Zahle	5.19	211	*e*P	Pn	20 38 32.4	+1.0
BHL	Bhannes	5.25	213	*e*P	Pn	20 38 33.8	+1.7
DQRL	Deir Qamar	5.45	212	*e*P	Pn	20 38 36.7	+1.8
QRWL	Qaraoun	5.54	211	*e*P	Pn	20 38 38.4	+2.2

IDC 04 20:55:42.8±2.1**, 3.°88S**×**136.°65E, h132**km±27km**, mb3.0**/1**,**
mbtmp3.6/6**, MS3.7**/1**, Error ellipse: s-maj=29.5km s-min=22.9km az=80.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	4.27	72	P	Pn	20 56 45.9	-0.4
	11nm,0.9s,baz=155,slow=18,SNR=1.7						
JAY				S	Sn	20 57 30.8	-4.7
	7.1nm,0.4s,baz=134,slow=22,SNR=5.2						
SIJI	Sorong	6.15	299	P	Pn	20 57 10.9	-0.6
	12nm,0.2s,baz=234,slow=23,SNR=29						
SIJI				S	Sn	20 58 17.1	-3.6
	4.4nm,0.5s,baz=357,slow=23,SNR=1.8						
BATI	Baumata	14.33	243	LR	LR	21 04 44.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,285nm,19.4s,baz=254,slow=38						
WRA	**Warramunga Arr**	**16.12**	**188**	P	Pn	20 59 20.4	-1.7
	0.2nm,0.3s,baz=5.7,slow=12,SNR=9.4						
FITZ	**Fitzroy Crossi**	**17.77**	**217**	P	Pn	20 59 42.1	+0.1
	4.1nm,0.9s,baz=45,slow=13,SNR=2.3						
ASAR	**Alice Springs**	**19.85**	**187**	P	P	21 00 03.5	0.0
	0.3nm,0.5s,baz=16,slow=10,SNR=6.7						
MKAR	**Makanchi Array**	**69.48**	**323**	P	P	21 06 37.2	+0.3
	0.2nm,0.5s,baz=108,slow=7.4,SNR=4.7						
	0.2nm,0.5s						

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*NEIC **04** 21:24:55.0±1.9, 10.°66N±0.°04×61.°9W±0.°1, h10km±2km, mb3.9/2, Error ellipse: s-maj=18.3km s-min=4.4km az=107.0*

*TRN **04** 21:24:58.5, 10.°74N×61.°92W, h48km, MD4.2, North of the Paria peninsula. Felt in Trinidad, MMI IV, V and VI.*

*FUNV **04** 21:24:59.6, 10.°73N×61.°88W, h43km, MW3.9, Presumed earthquake*

ISC 04 21:24:57.7±1.1**, 10.°71N**±0.°05×**61.°95W**±0.°06**, h58**km±15km**, n60,** σ1.s**42**/89**, 1C, Trinidad**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.39**	**92**	eP	**Pn**	**21 25 08.8**	**+0.4**
DMDM				eS	**Sn**	**21 25 15.1**	**-0.9**
PSMG	**Mucurapo Girls**	**0.41**	**96**	eP	**Pn**	**21 25 09.0**	**+0.4**
PSMG				eS	**Sn**	**21 25 15.4**	**-1.0**
PSKH	**Kent House, Po**	**0.42**	**95**	eP	**Pn**	**21 25 09.1**	**+0.5**
PSKH				eS	**Sn**	**21 25 15.5**	**-1.0**
TRN	**Trinidad (W)**	**0.54**	**97**	⇑iP	**Pn**	**21 25 10.3**	**+0.4**
TRN				eS	**Sn**	**21 25 17.9**	**-0.9**
TRN	**Trinidad (W)**	**0.54**	**97**	eP	**Pn**	**21 25 10.3**	**+0.4**
TRN				eS	**Sn**	**21 25 17.5**	**-1.2**
GRFF	**Grenada Fort F**	**1.34**	**9**	eP	**Pn**	**21 25 20.5**	**+0.2**
GRFF				eS	**Sn**	**21 25 36.4**	**-0.8**
GRGR	**Grenville**	**1.44**	**11**		**Pn**	**21 25 21.6**	**+0.1**
GRGR				Sn	**Sn**	**21 25 39.4**	**-0.1**
GRGR	**Grenville**	**1.44**	**11**	eP	**Pn**	**21 25 21.7**	**+0.1**
GRGR				eS	**Sn**	**21 25 38.8**	**-0.7**
GRGR	**Grenville**	**1.44**	**11**	eP	**Pn**	**21 25 21.4**	**-0.1**
GRW	**Mount Saint Ca**	**1.47**	**11**	eP	**Pn**	**21 25 23.3**	**+1.3**
GRW				eS	**Sn**	**21 25 40.3**	**+0.1**
GRHS	**Sauteurs**	**1.53**	**11**	eP	**Pn**	**21 25 22.7**	**-0.1**
GRHS				eS	**Sn**	**21 25 41.1**	**-0.6**
GRSS	**Sisters**	**1.61**	**12**	eP	**Pn**	**21 25 24.7**	**+0.8**
GRSS				eS	**Sn**	**21 25 43.6**	**0.0**
SVB	**Belmont**	**2.63**	**15**	eP	**Pn**	**21 25 39.4**	**+1.5**
SVB				eS	**Sn**	**21 26 07.1**	**-1.5**
SVB	**Belmont**	**2.63**	**15**	eP	**Pn**	**21 25 39.3**	**+1.5**
SVB				eS	**Sn**	**21 26 09.0**	**+0.4**
PCRV	**Puerto La Cruz**	**2.70**	**259**	eP	**Pn**	**21 25 40.4**	**+1.7**
PCRV				eS	**Sn**	**21 26 09.6**	**-0.7**
PCRV	**Puerto La Cruz**	**2.70**	**259**	eP	**Pn**	**21 25 40.4**	**+1.7**
PCRV				eS	**Sn**	**21 26 10.8**	**+0.5**
MCLT	**Moule a Chique**	**3.14**	**18**	eP	**Pn**	**21 25 45.3**	**+0.6**
MCLT				eS	**Sn**	**21 26 20.5**	**-0.4**
SLCP	**Castries, St.**	**3.41**	**16**	eS	**Sn**	**21 26 27.9**	**+0.4**
SLBI	**Saint Lucia, B**	**3.42**	**16**	eP	**Pn**	**21 25 49.1**	**+0.4**
SLBI				eS	**Sn**	**21 26 26.4**	**-1.6**
MPOM	**Morne Pois Mar**	**3.86**	**16**	Pn	**Pn**	**21 25 54.3**	**-0.3**
BIM	**Bigot**	**3.88**	**13**	Pn	**Pn**	**21 25 55.6**	**+0.7**
BIM	**Bigot**	**3.88**	**13**	eP	**Pn**	**21 25 55.5**	**+0.7**
BIM				eS	**Sn**	**21 26 35.8**	**-3.4**
BIM	**Bigot**	**3.88**	**13**	eP	**Pn**	**21 25 55.7**	**+0.8**
BIM				eS	**Sn**	**21 26 37.5**	**-1.7**
CXM	**Morne La Croix**	**4.14**	**10**	Pn	**Pn**	**21 25 58.7**	**+0.1**
ILAM	**Ilet Lapin Mar**	**4.17**	**14**	Pn	**Pn**	**21 25 58.0**	**-0.9**
ILAM	**Ilet Lapin Mar**	**4.17**	**14**	eP	**Pn**	**21 25 59.9**	**+1.1**
ILAM				eS	**Sn**	**21 26 44.3**	**-2.0**
SVN	**Savane Anatole**	**4.17**	**10**	Pn	**Pn**	**21 25 59.3**	**+0.3**
SVN	**Savane Anatole**	**4.17**	**10**	eP	**Pn**	**21 25 59.7**	**+0.8**
SVN				eS	**Sn**	**21 26 44.1**	**-2.4**
DSLB	**Salisbury**	**4.72**	**6**	eP	**Pn**	**21 26 07.5**	**+1.0**
DSLB				eS	**Sn**	**21 26 58.2**	**-1.8**
FUNV	**FUNVISIS**	**4.79**	**268**	eP	**Pn**	**21 26 09.1**	**+1.7**
FUNV				eS	**Sn**	**21 27 00.4**	**-1.3**
TACV	**Tcata**	**5.03**	**264**	eP	**Pn**	**21 26 12.4**	**+1.7**
TACV				eS	**Sn**	**21 27 05.0**	**-2.6**
TDBA	**Terre de Bas,**	**5.11**	**3**	Pn	**Pn**	**21 26 13.4**	**+1.5**
TBG	**Guadaloupe-3**	**5.12**	**3**	eP	**Pn**	**21 26 12.4**	**+0.5**
MAGL	**Barre de l'ile**	**5.25**	**7**	Pn	**Pn**	**21 26 14.6**	**+1.0**
MMLZ	**Guadeloupe Bro**	**5.31**	**3**	eP	**Pn**	**21 26 16.1**	**+1.7**
MMLZ				eS	**Sn**	**21 27 11.9**	**-2.4**
CBE	**Ff, Capester**	**5.33**	**4**	Pn	**Pn**	**21 26 15.7**	**+0.8**
ATGZ	**Broadband at L**	**5.36**	**2**	eP	**Pn**	**21 26 16.1**	**+1.0**
ATGZ				eS	**Sn**	**21 27 12.4**	**-3.0**
CACV	**CAICARA DEL OR**	**5.51**	**236**	eP	Pn	21 26 12.1	-5.1
CACV				iS	Sn	21 27 06.3	-13
DHSZ	**Broadband at M**	**5.53**	**2**	eP	**Pn**	**21 26 19.0**	**+1.5**
DHSZ				eS	**Sn**	**21 27 17.5**	**-2.2**
GDHS	**Morne Mazeau,**	**5.53**	**2**	Pn	**Pn**	**21 26 18.8**	**+1.3**
BENV	**Beln**	**5.61**	**263**	eP	**Pn**	**21 26 20.2**	**+1.5**
BENV				eS	**Sn**	**21 27 19.5**	**-2.4**
DSDZ	**La Diserade, G**	**5.63**	**9**	eP	**Pn**	**21 26 20.0**	**+1.1**
DSDZ				eS	**Sn**	**21 27 18.2**	**-4.1**
GDSD	**La Dsirade Is**	**5.63**	**9**	Pn	**Pn**	**21 26 19.1**	**+0.1**
ABD	**La Joyeuse, An**	**5.74**	**4**	Pn	**Pn**	**21 26 22.1**	**+1.6**
TURV	**Turiamo**	**5.80**	**268**	eP	**Pn**	**21 26 22.6**	**+1.4**
TURV				eS	**Sn**	**21 27 23.0**	**-3.5**
MBWH	**Windy Hill**	**6.00**	**358**	eP	**Pn**	**21 26 25.2**	**+1.2**
MBFL	**Flemmings, Mon**	**6.00**	**358**	eP	**Pn**	**21 26 25.3**	**+1.3**
MAPV	**Macapo**	**6.47**	**263**	eP	**Pn**	**21 26 30.9**	**+0.5**
SKI	**Saint Kitts**	**6.63**	**353**	eP	**Pn**	**21 26 34.3**	**+1.7**
SEUS	**St. Eustatius**	**6.81**	**352**	Pn	**Pn**	**21 26 36.1**	**+1.0**
ANWB	**Willy Bob**	**6.92**	**1**	eP	**Pn**	**21 26 37.8**	**+1.3**
TEPV	**Terepaima**	**7.17**	**265**	eP	**Pn**	**21 26 40.1**	**+0.1**
SMRT	**St. Maarten**	**7.38**	**352**	Pn	**Pn**	**21 26 44.4**	**+1.6**
CUPR	**Culebra, Puert**	**8.21**	**337**	Pn	**Pn**	**21 26 54.3**	**+0.1**
BOAV	**Boa Vista**	**8.38**	**170**	Pn	**Pn**	**21 26 54.8**	**-1.9**
SDV	**Santo Domingo**	**8.75**	**259**	Pn	**Pn**	**21 27 01.6**	**-0.2**
DR12	**Loma Pena Alta**	**10.77**	**319**	Pn	**Pn**	**21 27 31.3**	**+2.0**
BANI	**BANI**	**11.16**	**314**	Pn	**Pn**	**21 27 36.6**	**+2.0**
SDDR	**Presa de Saban**	**12.21**	**313**	Pn	**Pn**	**21 27 49.8**	**+0.8**
SLOR	**San Lorenzo -**	**20.00**	**236**		**P**	**21 29 27.1**	**+0.7**
SLOR				IAmb	IAmb	21 29 36.4	
	comp=Z,6.2nm,0.8s						

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*IDC **04** 21:35:08.0±0.6, 36.°72N×141.°91E, h0km, mb4.1/23, mbtmp4.1/26, ML3.9/3, MS3.1/9, Error ellipse: s-maj=15.9km s-min=14.3km az=138.0*

*NIED **04** 21:35:12.8, 36.°74N×141.°83E, h55km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.04; $M_{\theta\theta}$0.84; $M_{\phi\phi}$0.19; $M_{r\theta}$-0.79; $M_{\theta\phi}$-0.22; $M_{\phi r}$0.09; Fault plane solution: $M_0$1.25000×10^{15} NP1: ϕ_s291.00000°, δ26.00000°, λ-80.00000°. NP2: ϕ_s101.00000°, δ65.00000°, λ-95.00000°.*

*JMA **04** 21:35:12.8±0.3, 36.°7N±0.°7×14.°2E±.°, h55km±4km, MD4.4/33, MV4.4/33, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

*NEIC **04** 21:35:13.9±2.5, 36.°64N±0.°07×142.°0E±0.°1, h35km±2km, mb4.3/45, Error ellipse: s-maj=14.0km s-min=11.1km az=105.0*

ISC 04 21:35:09.6±3.1**, 36.°71N**±0.°04×**141.°94E**±0.°05**, h10**km±19km**, n131,** σ1.s**26**/123**, mb4.3**/47**, MS3.3**/4**, 1C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.99**	**293**	P	**Pb**	**21 35 29.2**	**+0.3**
ONAJ				eS	**Sb**	**21 35 41.0**	**-1.0**
JFK	**Kawauchi**	**1.07**	**308**	iP	**Pb**	**21 35 30.4**	**+0.1**
JHO	**Hitachi**	**1.11**	**265**	iP	**Pb**	**21 35 31.0**	**+0.2**
JHO				S	**Sb**	**21 35 44.3**	**-1.0**
JHYU	**Hitachinakayam**	**1.15**	**252**	iP	**Pn**	**21 35 32.2**	**+0.5**
JHYU				A	A	21 35 32.2	
	comp=N,10.0nm,0.4s,comp=E,8.0nm,0.6s						
JHYU				S	**Sb**	**21 35 45.7**	**-0.8**
JFFD	**Fukushimafurud**	**1.17**	**289**	P	**Pn**	**21 35 31.7**	**-0.3**
JMM	**Marumori**	**1.47**	**322**	⇓iP	**Pn**	**21 35 36.5**	**+0.4**
JMM				⇓S	**Sn**	**21 35 53.6**	**-1.8**
JOTO	**OTAMA OYAMA**	**1.54**	**304**	iP	**Pb**	**21 35 38.2**	**+0.1**
JOTO				A	A	21 35 38.2	
	comp=N,18nm,0.4s,comp=E,13nm,0.4s						
JOTO				S	**Sn**	**21 35 56.4**	**-0.7**
JSB	**Shiboa**	**1.64**	**280**	A	A	21 35 38.6	
	comp=N,8.0nm,0.9s,comp=E,9.0nm,0.7s						
JIO	**Ouri**	**1.80**	**345**	⇓P	**Pn**	**21 35 41.2**	**+0.6**
JIO				⇓S	**Sn**	**21 36 01.8**	**-1.8**
JYAR	**Yonezawaarcadi**	**1.87**	**311**	A	A	21 35 41.9	
	comp=N,15nm,0.4s,comp=E,17nm,1.8s						
JFY	**Yanaizu**	**1.92**	**292**	⇓P	**Pn**	**21 35 43.4**	**+1.1**
JFY				⇓S	**Sn**	**21 36 06.7**	**+0.2**
JOU	**Okura**	**1.94**	**329**	P	**Pn**	**21 35 43.3**	**+0.7**
JOU				A	A	21 35 43.3	
	comp=N,10.0nm,0.6s,comp=E,10.0nm,1.3s						
JOU				S	**Sn**	**21 36 07.4**	**+0.5**
JAG	**Ashikaga**	**2.02**	**263**	P	**Pn**	**21 35 44.4**	**+0.7**
JKT	**Katashina**	**2.16**	**272**	P	**Pn**	**21 35 47.3**	**+1.6**
MJAR	**Matsushiro Arr**	**3.00**	**268**	Pn	**Pn**	**21 35 58.2**	**+0.9**
	comp=E,2.3nm,0.3s,baz=29,slow=23,SNR=79						
MJAR				Sn	**Sn**	**21 36 35.3**	**+2.0**
	comp=E,4.3nm,0.3s,baz=92,slow=27,SNR=3.0						
MJAR				LR	LR	21 37 29.6	
	comp=E,260nm,21.5s,baz=70,slow=47						
	comp=E,16nm,0.4s						
MJAR	**Matsushiro Arr**	**3.00**	**268**	Pn	**Pn**	**21 35 59.7**	**+2.4**
MAJO	**Matsushiro**	**3.01**	**268**	Pn	**Pn**	**21 35 59.3**	**+2.1**
MJB9	**Matsu-Tunnel**	**3.01**	**268**	Pn	**Pn**	**21 36 00.6**	**+3.3**
JGF	**Kuroka**	**3.87**	**255**	Pn	**Pn**	**21 36 12.5**	**+3.4**
JHJ2	**Mitsune**	**3.99**	**207**	Pn	**Pn**	**21 36 11.1**	**+0.3**
JHJ	**Hachijo jima 2**	**4.00**	**207**	Pn	**Pn**	**21 36 11.8**	**+1.0**
	comp=E,104nm,0.3s,baz=292,slow=21,SNR=16						
JHJ				Sn	**Sn**	**21 36 55.2**	**-2.5**
	comp=E,89nm,0.3s,baz=229,slow=23,SNR=7.3						
	comp=E,230nm,0.3s						
INU	**Inuyama**	**4.21**	**253**	Pn	**Pn**	**21 36 15.3**	**+1.4**
JMN	**Monobe**	**7.24**	**248**	Pn	**Pn**	**21 36 58.0**	**+2.6**
ASAJ	**Asahikawa**	**7.41**	**4**	Pn	**Pn**	**21 36 59.3**	**+1.5**
	comp=E,2.0nm,0.3s,baz=253,slow=10,SNR=4.3						
ASAJ				Sn	**Sn**	**21 38 22.2**	**+0.3**
	comp=E,1.8nm,0.3s,baz=302,slow=26,SNR=4.0						
	comp=E,5.4nm,0.3s						
JKA	**Kamikawa-asahi**	**7.41**	**4**	Pn	Pn	21 36 55.8	-2.0
JCJ	**Chichijima**	**9.59**	**179**	Pn	Pn	21 37 14.2	-13
	comp=E,11nm,0.3s,baz=288,slow=20,SNR=6.7						
JCJ				Sn	Sn	21 38 54.8	-21
	comp=E,10nm,0.3s,baz=295,slow=23,SNR=2.7						
JCJ	**Chichijima**	**9.59**	**179**	Pn	**Pn**	**21 37 26.2**	**-1.5**
JNU	**Nakatsue**	**9.76**	**252**	LR	LR	21 41 23.1	
	comp=E,133nm,18.6s,baz=56,slow=38						
KSRS	**Korea Array**	**11.22**	**278**	LR	LR	21 41 38.7	
	comp=E,74nm,19.1s,baz=95,slow=35						
BNX	**BinXian**	**14.16**	**314**	⇑P	P	21 38 45.3	+7.6
BNX				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KLR	**Kul'dur**	**14.55**	**333**	LR	LR	21 43 18.6	
	comp=Z,23nm,19.9s,baz=146,slow=34						
PETK	**Petropavlovsk-**	**19.76**	**29**	LR	LR	21 48 46.7	
	comp=Z,44nm,18.1s,baz=195,slow=41						
HILR	**Hailar Array B**	**20.57**	**316**	P	**P**	**21 39 44.8**	**-3.7**
	comp=Z,1.7nm,0.4s,baz=109,slow=12,SNR=4.9						
MA2	**Magadan**	**23.58**	**11**	LR	LR	21 50 29.4	
	comp=Z,55nm,18.5s,baz=70,slow=39						
YAK	**Yakutsk**	**26.48**	**347**	P	**P**	**21 40 46.5**	**-0.1**
	comp=Z,14nm,0.6s,baz=348,slow=2.6,SNR=7.4						
	comp=Z,14nm,0.6s						
YAK	**Yakutsk**	**26.48**	**347**	P	**P**	**21 40 46.1**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**27.62**	**121**	T	T	22 10 31.4	
	baz=313,slow=75,SNR=77						
H11N1	**WAKE ISLAND Hy**	**27.63**	**121**	T	T	22 10 46.8	
	baz=313,slow=75,SNR=76						
H11N3	**WAKE ISLAND Hy**	**27.64**	**121**	T	T	22 10 25.8	
	baz=313,slow=75,SNR=80						
ENH	**Enshi**	**27.73**	**266**	P	**P**	**21 40 57.3**	**-1.0**
ENH				IAmb	IAmb	21 41 06.6	
	comp=Z,4.8nm,0.8s						
ULN	**Ulaanbaatar**	**27.88**	**305**	P	**P**	**21 40 59.3**	**-0.3**
ULN				IAmb	IAmb	21 41 02.4	
	comp=Z,6.8nm,1.2s						
SONM	**Songino Array**	**28.31**	**304**	P	**P**	**21 41 03.3**	**-0.2**
	comp=Z,5.3nm,0.7s,baz=106,slow=9.0,SNR=37						
	comp=Z,5.3nm,0.7s						
SONM	**Songino Array**	**28.31**	**304**	P	**P**	**21 41 03.1**	**-0.3**
H11S1	**WAKE ISLAND Hy**	**28.33**	**123**	T	T	22 11 18.6	
	baz=315,slow=76,SNR=68						
H11S3	**WAKE ISLAND Hy**	**28.33**	**123**	T	T	22 11 37.0	
	baz=315,slow=76,SNR=75						
H11S2	**WAKE ISLAND Hy**	**28.35**	**123**	T	T	22 11 20.0	
	baz=315,slow=76,SNR=43						
LZDM	**Lanzhou Array**	**30.68**	**280**	P	**P**	**21 41 24.6**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=137,slow=5.5,SNR=5.8						
	comp=Z,0.9nm,0.5s						
DAV	**Davao City (W)**	**33.07**	**211**	LR	LR	21 56 14.4	
	comp=Z,28nm,18.2s,baz=318,slow=38						
GTA2	**Gaotai**	**33.09**	**288**	eP	**P**	**21 41 46.4**	**+0.7**
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	**35.66**	**353**	LR	LR	21 57 34.6	
	comp=Z,79nm,19.7s,baz=186,slow=38						
GOMU	**GeErMu**	**37.60**	**284**	P	**P**	**21 42 25.4**	**+0.6**
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**41.83**	**256**	P	**P**	**21 42 59.5**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=50,slow=5.8,SNR=1.6						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.83**	**256**	P	**P**	**21 43 00.3**	**+0.6**
ZAA0	**Zalesovo Array**	**42.44**	**313**	P	**P**	**21 43 03.1**	**-1.2**
ZALV	**Zalesovo Beam**	**42.44**	**313**	P	**P**	**21 43 04.1**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=98,slow=7.1,SNR=16						
ZALV				PcP	**PcP**	**21 44 56.9**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=104,slow=3.6,SNR=4.1						
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	**42.44**	**313**	P	**P**	**21 43 04.5**	**+0.2**
ZALV					**PcP**	**21 44 57.0**	**-0.1**
C16K	**Lisburne Hills**	**42.81**	**26**	P	**P**	**21 43 08.1**	**+1.1**
C16K				IAmb	IAmb	21 43 09.6	
	comp=Z,5.8nm,1.1s						
K15K	**Wolf Creek Mou**	**42.84**	**35**	P	**P**	**21 43 09.1**	**+1.7**
K15K				IAmb	IAmb	21 43 45.8	
	comp=Z,8.2nm,1.5s						
F17K	**Baldwin Pennin**	**43.80**	**29**	P	**P**	**21 43 15.7**	**+0.7**
M16K	**Timber Creek**	**43.88**	**37**	P	**P**	**21 43 17.5**	**+1.6**
M16K				IAmb	IAmb	21 43 40.7	
	comp=Z,9.5nm,1.5s						
H17K	**Granite Mounta**	**44.02**	**31**	P	**P**	**21 43 19.1**	**+2.2**
J17K	**VABM Dome**	**44.12**	**34**	P	**P**	**21 43 20.2**	**+2.5**
J17K				IAmb	IAmb	21 43 23.6	
	comp=Z,12nm,1.5s						
K17K	**Iditarod**	**44.38**	**35**	P	**P**	**21 43 22.1**	**+2.2**
K17K				IAmb	IAmb	21 43 23.6	
	comp=Z,4.0nm,0.9s						
C18K	**Utukok River**	**44.38**	**26**	P	**P**	**21 43 21.1**	**+1.3**
MKAR	**Makanchi Array**	**44.65**	**302**	P	**P**	**21 43 22.4**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=94,slow=7.5,SNR=6.6						
	comp=Z,1.9nm,0.7s						
H18K	**Honhosa River**	**44.70**	**31**	P	**P**	**21 43 24.0**	**+1.6**
G18K	**Tagagawik**	**44.71**	**30**	P	**P**	**21 43 24.0**	**+1.5**
G18K				IAmb	IAmb	21 43 50.5	
	comp=Z,4.8nm,1.3s						
C19K	**Lookout Ridge**	**45.06**	**26**	P	**P**	**21 43 27.3**	**+2.0**
C19K				IAmb	IAmb	21 43 41.1	
	comp=Z,9.5nm,1.5s						
D19K	**Kuna River**	**45.44**	**27**	P	**P**	**21 43 29.3**	**+1.1**
J19K	**Poorman**	**45.72**	**33**	P	**P**	**21 43 32.1**	**+1.6**
J19K				IAmb	IAmb	21 43 45.6	
	comp=Z,5.7nm,1.3s						
K20K	**Telida**	**46.36**	**34**	P	**P**	**21 43 36.8**	**+1.3**
K20K				IAmb	IAmb	21 43 37.4	
	comp=Z,6.4nm,1.4s						
KURK	**Kurchatov**	**46.46**	**308**	P	**P**	**21 43 36.0**	**-0.5**
KURBB	**Kurchatov Arra**	**46.53**	**308**	P	**P**	**21 43 36.6**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=82,slow=7.7,SNR=14						
	comp=Z,2.9nm,0.7s						
H21K	**Melozitna Rive**	**47.07**	**31**	P	**P**	**21 43 42.7**	**+1.6**
H21K				IAmb	IAmb	21 43 55.2	
	comp=Z,3.7nm,1.3s						
D22K	**Ayikyak River**	**47.46**	**27**	P	**P**	**21 43 46.0**	**+1.9**
WUS	**Wushi**	**48.05**	**296**	P	**P**	**21 43 49.9**	**+0.7**
WUS				IAmb	IAmb	21 43 50.8	
	comp=Z,2.9nm,0.8s						
E23K	**Chandalar**	**48.51**	**28**	P	**P**	**21 43 52.7**	**+0.4**
E23K				IAmb	IAmb	21 44 13.4	
	comp=Z,5.3nm,1.1s						
E24K	**Your Creek**	**48.93**	**28**	P	**P**	**21 43 58.1**	**+2.6**
E24K				IAmb	IAmb	21 44 07.5	
	comp=Z,2.9nm,1.2s						
G24K	**Hadweenzic Riv**	**49.28**	**30**	P	**P**	**21 43 59.5**	**+1.4**
G24K				IAmb	IAmb	21 44 12.7	
	comp=Z,4.0nm,1.2s						
ILAR	**Eielson Array**	**49.54**	**32**	P	**P**	**21 44 00.1**	**0.0**
	comp=Z,0.7nm,0.8s,baz=265,slow=6.5,SNR=8.5						
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**49.54**	**32**	P	**P**	**21 44 00.8**	**+0.7**
D25K	**Kavik River**	**49.75**	**26**	P	**P**	**21 44 03.0**	**+1.2**
F25K	**Christian Rive**	**50.00**	**28**	P	**P**	**21 44 05.4**	**+1.7**
BMAR	**Burnt Mountain**	**50.41**	**29**	P	**P**	**21 44 09.1**	**+2.3**
BVAR	**Borovoye Array**	**51.10**	**313**	P	**P**	**21 44 12.1**	**0.0**
	comp=Z,1.2nm,0.5s,baz=66,slow=7.1,SNR=3.9						
	comp=Z,1.2nm,0.5s						
E27K	**Coleen River**	**51.51**	**28**	P	**P**	**21 44 16.9**	**+1.9**
BCAR	**Beaver Creek A**	**51.92**	**34**	P	**P**	**21 44 20.1**	**+1.9**
I28M	**Miner Creek**	**52.42**	**31**	P	**P**	**21 44 23.8**	**+1.8**
G29M	**Pine Creek**	**53.00**	**29**	P	**P**	**21 44 28.4**	**+2.3**
F30M	**Barrier River**	**53.76**	**28**	P	**P**	**21 44 34.0**	**+2.4**
F30M				IAmb	IAmb	21 45 04.7	
	comp=Z,6.2nm,1.2s						
G31M	**Satah River**	**54.46**	**29**	P	**P**	**21 44 37.6**	**+0.9**
G31M				IAmb	IAmb	21 44 51.2	
	comp=Z,2.4nm,0.7s						
WB0	**Warramunga Arr**	**56.62**	**189**	P	**P**	**21 44 52.2**	**-0.6**
WB0				IAmb	IAmb	21 45 06.3	
	comp=Z,4.4nm,1.1s						
WR8	**Warramunga Arr**	**56.80**	**188**	P	**P**	**21 44 53.8**	**-0.2**
WRA	**Warramunga Arr**	**56.80**	**189**	P	**P**	**21 44 53.5**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=6.4,slow=7.0,SNR=15						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**56.80**	**189**	P	**P**	**21 44 52.6**	**-1.4**
ARTI	**Arti**	**56.99**	**319**	P	**P**	**21 44 54.3**	**-0.7**
	comp=Z,4.4nm,0.4s,baz=57,slow=14,SNR=4.6						
	comp=Z,4.4nm,0.4s						
ARTI	**Arti**	**56.99**	**319**	P	**P**	**21 44 54.0**	**-1.0**
AB31	**Akbulak array**	**58.47**	**310**	P	**P**	**21 45 04.6**	**-1.0**
ABKAR	**Akbulak array**	**58.47**	**310**	P	**P**	**21 45 04.9**	**-0.6**
ASAR	**Alice Springs**	**60.53**	**188**	P	**P**	**21 45 19.6**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=14,slow=8.0,SNR=6.1						
	comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**63.88**	**30**	P	**P**	**21 45 42.7**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=303,slow=7.2,SNR=5.5						
	comp=Z,0.4nm,0.8s						
FINES	**FINESS Array B**	**69.30**	**332**	P	**P**	**21 46 16.4**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=29,slow=3.2,SNR=3.2						
	comp=Z,2.7nm,0.7s						
FINES	**FINESS Array B**	**69.30**	**332**	P	**P**	**21 46 16.9**	**+0.3**
NC204	**NORSAR Array S**	**74.60**	**338**	P	**P**	**21 46 48.8**	**+0.3**
NB2	**NORSAR Subarra**	**74.64**	**338**	P	**P**	**21 46 49.1**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**74.64**	**338**	P	**P**	**21 46 48.5**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=39,slow=5.8,SNR=8.5						
NOA				LR	LR	22 23 25.0	
	comp=Z,28nm,18.8s,baz=5.0,slow=39						
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**74.81**	**323**	P	**P**	**21 46 49.6**	**-0.2**
	comp=Z,3.8nm,0.5s,baz=46,slow=6.0,SNR=14						
	comp=Z,3.8nm,0.5s						
AKBB	**Malin Array Si**	**74.81**	**323**	P	**P**	**21 46 49.1**	**-0.7**
AK08	**Malin Array Si**	**74.84**	**323**	P	**P**	**21 46 49.7**	**-0.3**
NVAR	**Mina Array Bea**	**74.84**	**53**	P	**P**	**21 46 51.5**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=285,slow=6.0,SNR=7.3						
	comp=Z,1.7nm,0.8s						
AK02	**Malin Array Si**	**74.85**	**323**	P	**P**	**21 46 49.7**	**-0.4**
AK22	**Malin Array Si**	**74.85**	**323**	P	**P**	**21 46 49.7**	**-0.3**
AK21	**Malin Array Si**	**74.85**	**323**	P	**P**	**21 46 49.9**	**-0.2**
AK11	**Malin Array Si**	**74.85**	**323**	P	**P**	**21 46 49.7**	**-0.4**
PDAR	**Pinedale Array**	**77.59**	**46**	P	**P**	**21 47 05.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=99,slow=2.0,SNR=4.9						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**77.59**	**46**	P	**P**	**21 47 06.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**78.81**	**322**	P	**P**	**21 47 13.4**	**+0.7**
BUR08				IAmb	IAmb	21 47 13.9	
	comp=Z,3.2nm,0.7s						
BURAR	**Bucovina Array**	**78.83**	**322**	P	**P**	**21 47 12.8**	**+0.1**
BURAR				IAmb	IAmb	21 47 13.9	
	comp=Z,2.9nm,0.7s						
BRTR	**Keskin Array B**	**79.38**	**312**	P	**P**	**21 47 15.5**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=32,slow=4.8,SNR=4.9						
	comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**79.38**	**312**	P	**P**	**21 47 15.9**	**0.0**
ULM	**Lac du Bonnet**	**79.54**	**34**	P	**P**	**21 47 16.4**	**0.0**
	comp=Z,1.9nm,0.7s,baz=260,slow=6.1,SNR=2.9						
	comp=Z,1.9nm,0.7s						
EPLO	**Experimental L**	**80.91**	**33**	P	**P**	**21 47 23.9**	**+0.1**
EPLO				IAmb	IAmb	21 47 58.6	
	comp=Z,6.3nm,1.1s						
GERES	**GERESS Array B**	**83.21**	**328**	P	**P**	**21 47 35.5**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=40,slow=7.0,SNR=6.1						
	comp=Z,0.9nm,0.5s						
EKA	**Eskdalemuir Ar**	**83.58**	**341**	P	**P**	**21 47 37.8**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=25,slow=4.8,SNR=4.3						
	comp=Z,1.5nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**86.39**	**329**	P	**P**	**21 47 52.0**	**-0.4**
FDMO	**Fiordimonte**	**87.99**	**325**	P	**P**	**21 47 59.9**	**+0.1**
TXAR	**Lajitas Array**	**89.98**	**53**	P	**P**	**21 48 10.6**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=291,slow=2.3,SNR=5.0						
	comp=Z,0.2nm,0.4s						
LPAZ	**La Paz**	**146.49**	**61**	PKPbc	**PKPbc**	**21 54 52.6**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=323,slow=5.2,SNR=4.9						
H03N2	**Juan Fernandez**	**146.57**	**97**	T	T	00 39 07.8	
	baz=291,slow=76,SNR=6.5						
H03N3	**Juan Fernandez**	**146.58**	**97**	T	T	00 39 08.5	
	baz=291,slow=76,SNR=7.5						
H03N1	**Juan Fernandez**	**146.59**	**97**	T	T	00 39 08.6	
	baz=291,slow=76,SNR=7.1						

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*MOS **04** 21:38:03.3±1.4, 39.°80N×54.°65E, h20km, mb4.1/7, Error ellipse: s-maj=6.6km s-min=5.2km az=43.6*

*NEIC **04** 21:38:05.4±2.2, 39.°84N±0.°08×54.°62E±0.°09, h18km±5km, mb4.2/29, Error ellipse: s-maj=12.1km s-min=9.4km az=171.0*

*TEH **04** 21:38:05.0, 39.°57N×54.°54E, h10km, ML4.3, Presumed earthquake*

*IDC **04** 21:38:07.8±1.1, 39.°79N×54.°42E, h34km±6km, mb3.6/14, mbtmp3.9/21, ML3.7/7, MS3.2/7, Error ellipse: s-maj=19.6km s-min=7.6km az=177.0*

*NNC **04** 21:38:15.0±3.2, 40.°36N×55.°81E, h0km, mb4.2, Error ellipse: s-maj=33.2km s-min=19.4km az=57.0*

ISC 04 21:38:06.1±0.5**, 39.°84N**±0.°05×**54.°58E**±0.°04**, h24**km±3km**, h24**km**:pP-P, n184,** σ1.s**84**/206**, mb4.1**/26**, 18C-23D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**2.47**	**151**	Pn	**Pn**	**21 38 44.9**	**-0.1**
IMND	**Minoodasht**	**2.66**	**166**	Pn	**Pn**	**21 38 46.9**	**-0.5**
IGLO	**Ghaloghah**	**3.38**	**190**	Pn	**Pn**	**21 38 56.2**	**-1.4**
GOBA	**Gobu**	**3.76**	**280**	Pn	**Pn**	**21 39 05.9**	**+3.3**
ISFR	**Sfrayin**	**3.86**	**135**	Pn	**Pn**	**21 39 04.8**	**+0.5**
IALA	**Alasht**	**4.00**	**201**	Pn	**Pn**	**21 39 05.6**	**-0.6**
IEMG	**Emamgholi**	**4.00**	**126**	Pn	**Pn**	**21 39 06.0**	**-0.2**
IPRN	**Peran**	**4.00**	**207**	Pn	**Pn**	**21 39 04.4**	**-1.7**
ALIB	**&Aumlli-Bayram**	**4.29**	**273**	Pn	**Pn**	**21 39 12.5**	**+2.6**
LHJ2	**Lahijan - Gila**	**4.43**	**234**	Pn	**Pn**	**21 39 11.4**	**-0.5**
IGZV	**Ghazvin**	**4.87**	**226**	Pn	**Pn**	**21 39 18.0**	**0.0**
TAPT	**Tabas- Tapeh t**	**5.35**	**157**	Pn	**Pn**	**21 39 24.6**	**-0.1**
AKT	**Akhty**	**5.46**	**290**	eP	**Pn**	**21 39 28.8**	**+2.7**
AKT				eS	**Sn**	**21 40 30.7**	**+2.5**
AKT				pmax	pmax		
	comp=Z,23nm,0.5s						
AKT				smax	smax		
	comp=N,166nm,0.4s						
AKT				smax	smax		
	comp=E,192nm,0.4s						
AKT				smax	smax		
	comp=E,161nm,0.4s						
ZNJK	**Zanjan**	**5.61**	**238**	Pn	**Pn**	**21 39 28.5**	**+0.2**
MAK	**Makhachkala**	**6.17**	**303**	eP	**Pn**	**21 39 36.7**	**+1.0**
MAK				eS	**Sn**	**21 40 47.5**	**+2.1**
MAK				pmax	pmax		
	comp=Z,120nm,1.3s						
MAK				MLR	MLR		
	comp=Z,63nm,4.0s						
BTLR	**Botlikh**	**6.90**	**297**	⇑eP	**Pn**	**21 39 49.6**	**+3.8**
BTLR				eS	**Sn**	**21 41 03.6**	**0.0**
IMRD	**Marand**	**6.98**	**264**	Pn	**Pn**	**21 39 49.1**	**+2.1**
DVE	**Vedeno**	**7.08**	**299**	⇑eP	**Pn**	**21 39 50.7**	**+2.4**
DVE				eS	**Sn**	**21 41 07.2**	**-0.8**
DVE				pmax	pmax		
	comp=Z,25nm,0.3s						
GNI	**Garni**	**7.56**	**276**	Pn	**Pn**	**21 39 55.8**	**+0.8**
	comp=Z,1.6nm,0.3s,baz=192,slow=4.3,SNR=7.1						
GNI				Sn	**Sn**	**21 41 16.3**	**-3.7**
	comp=Z,1.7nm,0.3s,baz=193,slow=6.4,SNR=3.7						
	comp=Z,2.9nm,0.4s						
GNI	**Garni**	**7.56**	**276**	⇓eP	**Pn**	**21 39 55.6**	**+0.6**
GNI				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAKU	**Maku**	**7.66**	**270**	Pn	**Pn**	**21 39 58.0**	**+1.7**

HRA Herat 8.19 129 Pn Pn 21 40 03.2 -0.5
LACR Lac 8.29 294 P Pn 21 40 07.9 +2.9
LACR S Sn 21 41 37.8 -0.1
KBZ Khabaz 9.55 298 Pn Pn 21 40 21.5 -0.6
comp=Z,1.0nm,0.3s,baz=129,slow=4.5,SNR=26
KBZ Sn Sn 21 42 02.6 -6.0
comp=Z,2.3nm,0.3s,baz=290,slow=9.5,SNR=5.8
comp=Z,2.6nm,0.4s
KVAR Kislovodsk Arr 9.77 299 Pn Pn 21 40 25.8 +0.6
baz=108,slow=19
KVAR Sn Sn 21 42 08.8 -5.3
baz=220,slow=15
comp=Z,4.2nm,0.4s
KIV Kislovodsk 9.78 299 Pn Pn 21 40 24.1 -1.1
KIV Kislovodsk 9.78 299 eP Pn 21 40 24.4 -0.8
KIV eS Sn 21 42 14.9 +0.6
KIV pmax pmax
comp=Z,10.0nm,0.9s
KIV Kislovodsk 9.78 299 P Pn 21 40 24.9 -0.3
comp=Z,14nm,0.7s
AB31 Akbulak array 10.16 20 Pn Pn 21 40 30.8 +0.4
AB31 Akbulak array 10.16 20 ⇑P Pn 21 40 30.3 -0.1
comp=Z,4.4nm,0.4s,baz=200,slow=13,SNR=204
AB31 ⇓S Sn 21 42 20.8 -2.8
comp=Z,3.4nm,0.3s,baz=196,slow=25,SNR=5.2
ABKAR Akbulak array 10.16 20 Pn Pn 21 40 29.8 -0.6
SHAA Shahritus 10.83 98 Pn Pn 21 40 37.4 -2.2
AKTO Aktyubinsk 10.87 12 Pn Pn 21 40 38.8 -1.3
comp=Z,1.9nm,0.3s,baz=172,slow=12,SNR=16
AKTO Sn Sn 21 42 35.1 -5.8
comp=Z,3.8nm,0.3s,baz=36,slow=20,SNR=8.6
AKTO LR LR 21 46 15.0
comp=Z,116nm,18.0s,baz=54,slow=44
comp=Z,4.9nm,0.3s
AKTO Aktyubinsk 10.87 12 ⇓P Pn 21 40 40.3 +0.1
comp=Z,5.1nm,0.4s
AKTO ⇓S Sn 21 42 37.2 -3.8
comp=Z,10nm,0.6s
CHGR Chuyangaron 11.37 91 Pn Pn 21 40 45.5 -1.6
CHGR Chuyangaron 11.37 91 P Pn 21 40 45.5 -1.6
GAR Garm 12.20 89 Pn Pn 21 40 57.6 -0.9
KK31 Karatay Array 12.39 70 Pn Pn 21 40 59.1 -1.8
KK31 Karatay Array 12.39 70 P Pn 21 40 59.2 -1.7
comp=Z,2.9nm,0.6s,baz=254,slow=16,SNR=25
KK31 ⇓S Sn 21 43 06.1 -12
comp=Z,3.3nm,0.5s,baz=218,slow=85,SNR=8.2
KK31 Karatay Array 12.39 70 P Pn 21 40 59.1 -1.8
KKAR Karatay Array 12.39 70 Pn Pn 21 40 59.2 -1.7
KKAR Karatay Array 12.39 70 P Pn 21 40 59.2 -1.7
BTK Batken 12.47 84 Pn Pn 21 41 00.4 -1.7
BTK Batken 12.47 84 P Pn 21 41 00.4 -1.7
DRK Karamyk 13.28 86 Pn Pn 21 41 12.5 -0.9
DRK Karamyk 13.28 86 P Pn 21 41 12.5 -0.9
BELG Belogornoye 13.45 341 Pn Pn 21 41 13.6 -1.6
comp=Z,1.4nm,0.3s,baz=8.4,slow=4.3,SNR=5.4
BELG Sn Sn 21 43 36.5 -7.3
comp=Z,1.2nm,0.3s,baz=60,slow=20,SNR=8.4
BELG Belogornoye 13.45 341⇑eP Pn 21 41 15.1 -0.1
BELG pmax pmax
comp=Z,3.0nm,1.6s
ARSB Arslanbob 14.07 78 Pn Pn 21 41 20.9 -3.0
ARSB Arslanbob 14.07 78 P Pn 21 41 21.0 -3.0
VRH Novokhopyorsk 14.48 326 eP P 21 41 37.5 +1.6
VRH pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 15.24 73 Pn Pn 21 41 38.4 -1.4
comp=Z,0.3nm,0.3s,baz=269,slow=7.3,SNR=10
AAK LR LR 21 48 18.0
comp=Z,61nm,18.2s,baz=288,slow=40
comp=Z,2.0nm,0.6s
AAK Ala-Archa 15.24 73 Pn Pn 21 41 38.2 -1.7
AAK Ala-Archa 15.24 73 ⇓P Pn 21 41 37.3 -2.5
comp=Z,5.5nm,1.2s
AAK ⇓S Sn 21 44 15.9 -12
comp=Z,6.1nm,1.2s
AAK Ala-Archa 15.24 73 P Pn 21 41 38.2 -1.7
AAK pmax pmax
comp=Z,3.0nm,0.7s
VORD Divnogorie 15.43 321 eP P 21 41 45.8 -0.6
VORD pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 15.65 322 eP Pn 21 41 44.0 -1.0
VSR pmax pmax
comp=Z,20nm,0.5s
VORR Voronezh 15.93 323 eP Pn 21 41 48.7 +0.1
BR104 Keskin Array S 16.10 276 P Pn 21 41 52.0 +1.0
comp=Z,1.6nm,0.9s
BR104 pP pP 21 41 57.8 -3.0
comp=Z,1.6nm,0.9s
BRTR Keskin Array B 16.10 276 Pn Pn 21 41 51.9 +0.9
comp=Z,0.1nm,0.3s,baz=95,slow=10,SNR=1.8
comp=Z,0.2nm,0.3s
KSH2 Kashi 16.22 86 Pn Pn 21 41 52.5 0.0
KSH2 Sn Sn 21 44 44.1 -7.6
KSH2 smax smax
comp=N,4.0nm,0.7s
KSH2 smax smax
comp=E,5.0nm,1.2s
LPSR Galich'ya Gora 16.69 325 eP Pn 21 41 55.5 -2.8
LPSR pmax pmax
comp=Z,10.0nm,1.1s
ARTI Arti 16.75 7 Pn Pn 21 41 57.3 -1.7
comp=Z,0.6nm,0.3s,baz=210,slow=9.9,SNR=7.3
ARTI LR LR 21 49 35.2
comp=Z,116nm,18.6s,baz=214,slow=41
ARTI Arti 16.75 7 Pn Pn 21 41 57.7 -1.2
ARTI IAmb IAmb 21 42 17.9
comp=Z,22nm,0.5s
ARTI Arti 16.75 7 P Pn 21 41 57.8 -1.2
ARTI S Sn 21 45 02.3 -1.9
BORK Borovoye 17.04 34 Pn Pn 21 42 01.6 -1.0
BORK IAmb IAmb 21 42 13.3
comp=Z,5.0nm,0.7s
BORK Borovoye 17.04 34⇑eP Pn 21 42 02.3 -0.4
BORK pmax pmax
comp=Z,4.0nm,0.8s
BVA0 Borovoye Array 17.06 34 ⇑P P 21 42 04.1 -0.3
comp=Z,2.7nm,0.5s
BVA0 ⇓S Sn 21 45 03.5 -8.1
comp=Z,5.2nm,0.8s
BVAR Borovoye Array 17.06 34 Pn Pn 21 42 02.3 -0.5
comp=Z,0.2nm,0.3s,baz=220,slow=9.5,SNR=28
BVAR S Sn 21 45 00.9 -11
comp=Z,1.1nm,0.3s,baz=222,slow=25,SNR=5.5
comp=Z,3.5nm,0.5s
SVE Sverdlovsk 17.46 11 eP P 21 42 14.2 +5.3
SVE eS Sn 21 45 24.4 +3.0
TARG Taragay, Kyrgy 17.68 76 Pn 21 42 11.4 +0.3
TARG Taragay, Kyrgy 17.68 76 P Pn 21 42 11.4 +0.3
TARG pmax pmax
comp=Z,6.0nm,1.3s
RAYN Ar Rayn 17.99 208 Pn 21 42 13.4 -1.2
RAYN Ar Rayn 17.99 208 ⇓P Pn 21 42 12.5 -2.1
KIRV Kirov 19.06 352 LR LR 21 50 03.8
comp=Z,73nm,21.0s,baz=187,slow=38
KIRV Kirov 19.06 352⇑eP Pn 21 42 27.1 -0.2
OBN Obninsk 19.45 328⇑eP Pn 21 42 32.2 +0.2
OBN pmax pmax
comp=Z,18nm,1.3s
ELL Elmali 19.59 269 P Pn 21 42 33.8 -0.3
ELL IAmb IAmb 21 42 40.3
comp=Z,14nm,1.0s
ELL Elmali 19.59 269 P Pn 21 42 33.8 -0.3
ELL pmax pmax
comp=Z,14nm,1.0s
KURBB Kurchatov Arra 19.93 49 P Pn 21 42 37.4 -0.5
comp=Z,1.2nm,0.7s,baz=252,slow=12,SNR=14
KURBB LR LR 21 50 27.0
comp=Z,29nm,18.8s,baz=166,slow=37
comp=Z,1.2nm,0.7s
AKAS Kas 19.98 268 P P 21 42 37.3 +0.5
AKAS IAmb IAmb 21 43 10.9
comp=Z,20nm,1.1s
KURK Kurchatov 20.02 49 Pn Pn 21 42 38.7 -0.2
KURK IAmb IAmb 21 42 39.9
comp=Z,4.9nm,1.1s
KURK Kurchatov 20.02 49⇓eP Pn 21 42 38.6 -0.3
KURK pmax pmax
comp=Z,7.0nm,1.4s
CFR Carcaliu 20.17 294 ⇑P P 21 42 38.5 -0.2
CFR Carcaliu 20.17 294 ⇑P P 21 42 38.5 -0.2
SORM Soroca 20.54 302 ⇓P P 21 42 42.4 -0.3
SORM Soroca 20.54 302 ⇓P P 21 42 42.4 -0.3
SORM Soroca 20.54 302 P P 21 42 42.0 -0.7
comp=Z,9.0nm,0.6s
AK09 Malin Array Si 20.72 310 P P 21 42 44.5 -0.1
AK10 Malin Array Si 20.73 310 P P 21 42 44.7 -0.1
AK07 Malin Array Si 20.74 309 P P 21 42 44.6 -0.3
AK08 Malin Array Si 20.74 310 P P 21 42 44.9 0.0
AK06 Malin Array Si 20.76 310 P P 21 42 44.9 -0.2
AK05 Malin Array Si 20.77 310 P P 21 42 45.1 -0.1
AK02 Malin Array Si 20.78 310 P P 21 42 45.5 +0.2
AKASG Malin Array Be 20.79 310 P P 21 42 45.4 0.0
comp=Z,5.8nm,0.5s,baz=105,slow=9.2,SNR=21
comp=Z,5.8nm,0.5s
AKASG Malin Array Be 20.79 310 P P 21 42 45.2 -0.1
AKASG Malin Array Be 20.79 310 P P 21 42 45.2 -0.1
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 20.79 310 P P 21 42 45.1 -0.2
AKBB IAmb IAmb 21 42 46.2
comp=Z,19nm,0.6s
AKBB Malin Array Si 20.79 310 P P 21 42 45.1 -0.2
AKBB pmax pmax
comp=Z,19nm,0.6s
AKBB Malin Array Si 20.79 310 P P 21 42 45.3 0.0
AK01 Malin Array Si 20.79 310 P P 21 42 45.3 -0.1
KIEV Kiev 20.79 310 P P 21 42 45.1 -0.3
KIEV IAmb IAmb 21 42 46.2
comp=Z,18nm,0.6s
KIEV Kiev 20.79 310 ⇓P P 21 42 45.6 +0.2
KIEV Kiev 20.79 310 ⇓P P 21 42 45.6 +0.2
KIEV Kiev 20.79 310 P P 21 42 45.4 0.0
comp=Z,100nm,0.6s
AK03 Malin Array Si 20.80 310 P P 21 42 45.3 -0.2
AK12 Malin Array Si 20.81 310 P P 21 42 45.5 -0.1
AK11 Malin Array Si 20.81 310 P P 21 42 45.6 0.0
AK04 Malin Array Si 20.83 310 P P 21 42 45.7 -0.1
AK14 Malin Array Si 20.83 310 P P 21 42 45.6 -0.2
AK17 Malin Array Si 20.88 310 P P 21 42 46.2 -0.1
AK19 Malin Array Si 20.92 310 P P 21 42 46.5 -0.3
MAKZ Makanchi 21.05 62 P P 21 42 49.0 +0.8
MAKZ IAmb IAmb 21 43 25.1
comp=Z,5.4nm,1.2s
MAKZ Makanchi 21.05 62 ⇓P P 21 42 48.5 +0.2
comp=Z,3.5nm,0.7s
MAKZ Makanchi 21.05 62 P P 21 42 49.0 +0.8
MAKZ pmax pmax
comp=Z,5.0nm,1.2s
VRI Vrincioaia 21.23 296 ⇑P P 21 42 54.8 +4.6
VRI Vrincioaia 21.23 296 ⇑P P 21 42 54.8 +4.6
MK31 Makanchi Array 21.26 62 P P 21 42 51.2 +0.7
MK31 Makanchi Array 21.26 62 P P 21 42 51.4 +0.9
comp=Z,3.7nm,0.9s,baz=250,slow=4.3,SNR=21
MK31 Makanchi Array 21.26 62 deP P 21 42 52.0 +1.5
MKAR Makanchi Array 21.26 62 P P 21 42 52.1 +1.6
comp=Z,1.0nm,0.6s,baz=251,slow=11,SNR=20
MKAR LR LR 21 51 55.1
comp=Z,45nm,19.9s,baz=320,slow=39
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 21.26 62 P P 21 42 51.5 +1.0
MKAR Makanchi Array 21.26 62 P P 21 42 51.5 +1.0
PLOR Plostina 21.28 296 ⇑P P 21 42 51.4 +0.6
PLOR Plostina 21.28 296 ⇑P P 21 42 51.4 +0.6
TESR Tescani 21.36 297 ⇓P P 21 42 51.6 0.0
LUBAR Lubar, Ukraine 21.41 307 P P 21 42 50.8 -1.2
ONER Baraj Valea Uz 21.52 297 ⇓P P 21 42 54.8 +1.5
MLR Muntele Rosu 21.74 294 P P 21 42 56.7 +1.0
MLR IAmb IAmb 21 43 29.3
comp=Z,10nm,1.1s
MLR Muntele Rosu 21.74 294 ⇑P P 21 42 56.7 +1.0
MLR Muntele Rosu 21.74 294 ⇑P P 21 42 56.7 +1.0
DOPR Dopca 22.17 296 ⇑P P 21 43 02.4 +2.1
VOIR 22.36 294 ⇓P P 21 43 02.8 +0.4
VOIR 22.36 294 ⇓P P 21 43 02.8 +0.4
BURAR Bucovina Array 22.50 300 P P 21 43 03.6 -0.3
BURAR IAmb IAmb 21 43 21.1
comp=Z,5.0nm,0.6s
BURAR Bucovina Array 22.50 300 ⇓P P 21 43 03.9 0.0
BURAR Bucovina Array 22.50 300 ⇓P P 21 43 03.9 0.0
BUR08 Bucovina Ar. S 22.52 300 P P 21 43 03.2 -0.9
BUR08 IAmb IAmb 21 43 29.4
comp=Z,4.8nm,0.9s
KLMR Klimovskoe 23.02 341 eP P 21 43 11.3 +2.2
KLMR pmax pmax
comp=Z,12nm,0.8s
IDI Anoyia 23.91 268 P P 21 43 18.4 +0.2
ZAA0 Zalesovo Array 24.79 45 P P 21 43 26.7 +0.8
ZAA0 IAmb IAmb 21 43 39.0
comp=Z,3.4nm,0.7s
ZALV Zalesovo Beam 24.79 45 P P 21 43 27.0 +1.1
comp=Z,2.4nm,0.5s,baz=259,slow=10.0,SNR=11
ZALV pP sP 21 43 37.7 +1.7
comp=Z,3.2nm,0.5s,baz=256,slow=10,SNR=8.9
comp=Z,2.4nm,0.5s
ZALV Zalesovo Beam 24.79 45 P P 21 43 26.4 +0.4
WMQ Urumqi 24.90 70 eP P 21 43 26.6 -0.5
WMQ PP PnPn 21 44 03.0 +2.9
WMQ pmax pmax
comp=Z,14nm,0.7s
PABE Paberze 25.61 318 P P 21 43 33.6 +0.3
ITM Ithomi 25.61 275 P P 21 43 33.6 0.0
FIA1 FINESS Array S 27.78 331 P P 21 43 52.9 0.0
FINES FINESS Array B 27.78 331 P P 21 43 53.8 +1.0
comp=Z,1.3nm,0.5s,baz=137,slow=11,SNR=17
comp=Z,1.3nm,0.5s
FINES FINESS Array B 27.78 331 P P 21 43 53.5 +0.6
FINES FINESS Array B 27.78 331 i P P 21 43 53.7 +0.8
FINES pmax pmax
comp=Z,1.0nm,0.5s
CLL Collm 30.88 306 eP P 21 44 21.0 +0.6
CLL e*PP sP 21 44 32.0 +1.3
CLL Collm 30.88 306 eP P 21 44 21.0 +0.6
CLL ex x 21 44 28.0
CLL epP sP 21 44 32.0 +1.3
CLL ePP PP 21 45 29.0 -1.2
HFS Hagfors 32.46 322 P P 21 44 34.9 +0.7
comp=Z,1.1nm,0.3s,baz=115,slow=8.6,SNR=10
comp=Z,1.1nm,0.3s
ARCES ARCESS Array B 33.49 342 P P 21 44 44.0 +0.8
comp=Z,0.5nm,0.3s,baz=138,slow=8.6,SNR=9.6
comp=Z,0.5nm,0.3s
ARCES ARCESS Array B 33.49 342 P P 21 44 44.3 +1.1
ARCES IAmb IAmb 21 45 02.3
comp=Z,2.3nm,0.9s
ARCES ARCESS Array B 33.49 342 P P 21 44 44.3 +1.1
ARCES pmax pmax
comp=Z,2.0nm,0.9s
NB201 NORSAR Array S 33.89 323 P P 21 44 46.2 -0.5
NB2 NORSAR Subarra 33.92 323 P P 21 44 47.0 0.0
comp=Z,1.0nm,0.5s,baz=115,slow=8.6
NOA NORSAR Array B 33.92 323 P P 21 44 47.2 +0.2
comp=Z,0.9nm,0.6s,baz=118,slow=8.2,SNR=5.6
comp=Z,0.9nm,0.6s
GTA2 Gaotai 34.50 76 eP P 21 44 54.1 +1.7
GTA2 pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 37.61 60 P P 21 45 20.0 +1.0
comp=Z,0.3nm,0.4s,baz=225,slow=0.6,SNR=1.5
comp=Z,0.3nm,0.4s
SONM Songino Array 37.61 60 P P 21 45 19.3 +0.4
SONM Songino Array 37.61 60 P P 21 45 19.3 +0.4
SONM pmax pmax
comp=Z,2.0nm,1.4s
ULN Ulaanbaatar 38.04 60 P P 21 45 24.2 +1.5
ULN IAmb IAmb 21 45 25.2
comp=Z,4.7nm,1.1s
ULN Ulaanbaatar 38.04 60⇓eP P 21 45 24.7 +2.1
ULN pmax pmax
comp=Z,13nm,2.7s
LZH Lanzhou 38.63 79 eP P 21 45 32.0 +4.3
LZH sP sP 21 45 40.1 +2.1
LZH pmax pmax
comp=Z,5.0nm,1.2s
EKA Eskdalemuir Ar 40.67 312 P P 21 45 44.3 +0.1
comp=Z,1.7nm,0.5s,baz=102,slow=8.9,SNR=20
EKA pP sP 21 45 54.0 -0.6
comp=Z,0.7nm,0.4s,baz=96,slow=8.6,SNR=2.9
comp=Z,1.7nm,0.5s
ESK Eskdalemuir 40.70 312 P P 21 45 44.2 -0.2
ESK Eskdalemuir 40.70 312 P P 21 45 44.2 -0.2
ESK pmax pmax
comp=Z,43nm,1.4s
PZH PanZhiHua 41.21 94 P P 21 45 49.7 +0.5
HHC Hu-ho-hao-te 42.78 69 eP P 21 46 02.2 +0.4
HHC pmax pmax
comp=Z,2.0nm,0.6s
ESDC Sonseca Array 44.29 289 P P 21 46 13.2 -0.7
comp=Z,0.3nm,0.5s,baz=60,slow=7.1,SNR=4.6
ESDC pP sP 21 46 23.3 -1.0
comp=Z,0.9nm,0.6s,baz=60,slow=8.4,SNR=5.9
ESDC LR LR 22 08 13.1
comp=Z,49nm,18.0s,baz=90,slow=41
comp=Z,0.3nm,0.5s
ESDC Sonseca Array 44.29 289 P P 21 46 12.6 -1.4
TIXI Tiksi 47.84 24 P P 21 46 43.0 +1.6
TIXI IAmb IAmb 21 46 43.3
comp=Z,1.3nm,0.6s
TIXI Tiksi 47.84 24 P P 21 46 43.0 +1.6
TIXI pmax pmax
comp=Z,1.0nm,0.6s
HEH HeiHe 50.57 53 eP P 21 47 03.8 +1.2
HEH pmax pmax
comp=Z,8.0nm,0.9s
TORD Torodi Ar. Bea 53.36 255 P P 21 47 24.6 +0.8
comp=Z,0.1nm,0.3s,baz=46,slow=5.3,SNR=6.4
comp=Z,0.1nm,0.3s
TORD Torodi Ar. Bea 53.36 255 P P 21 47 23.3 -0.5
KSRS Korea Array 55.80 67 P P 21 47 41.1 -0.2
comp=Z,2.2nm,0.8s,baz=299,slow=4.7,SNR=4.4
comp=Z,2.2nm,0.8s
BMAR Burnt Mountain 72.07 8 P P 21 49 29.0 +1.1
YKA Yellowknife Ar 77.65 355 P P 21 50 00.3 +0.3
comp=Z,0.2nm,0.5s,baz=360,slow=7.7,SNR=5.4
comp=Z,0.2nm,0.5s
YKA Yellowknife Ar 77.65 355 P P 21 49 58.8 -1.3
YKA Yellowknife Ar 77.65 355 ceP P 21 50 01.5 +1.4

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*NEIC **04** 21:46:58.5±1.1, 17°.79N±0°.04×66°.847W±0°.009, h10km±2km, ML2.6/35, Md2.9/7(RSPR), Error ellipse: s-maj=6.3km s-min=2.9km az=5.0*

RSPR 04 21:46:59.8, 17°.86N×66°.86W, h9km, MD2.9/7, 3C-6D, Puerto Rico region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GBPR Guanica, Bosqu 0.11 351 Pg 21 47 02.7 +0.2
GBPR Sg 21 47 04.6 +0.1
GBPR Guanica, Bosqu 0.11 351 ⇓iP Pg 21 47 02.7 +0.2
GBPR eS Sg 21 47 04.6 +0.1
MLPR Magueyes Islan 0.20 301 Pg Pg 21 47 04.0 0.0
MLPR Sg Sg 21 47 07.3 +0.4
MLPR IAML 21 47 08.2
818nm,0.5s
MLPR IAML 21 47 08.2
962nm,0.6s
CRPR Cabo Rojo, PR 0.28 301 Pg Pg 21 47 05.3 -0.1
CRPR Sg Sg 21 47 09.2 +0.2
CRPR Cabo Rojo, PR 0.28 301 IAML 21 47 10.0
695nm,0.6s
CRPR IAML 21 47 10.3
735nm,0.2s
CRPR Cabo Rojo, PR 0.28 301 ⇑iP Pg 21 47 05.4 +0.1
CRPR eS Sg 21 47 09.5 +0.4
OBIP Obispado Ponce 0.30 54 Pg Pg 21 47 05.7 -0.2
OBIP Sg Sg 21 47 10.5 +0.6
OBIP IAML 21 47 10.9
comp=N,252nm,0.6s
OBIP Obispado Ponce 0.30 54⇓eP Pg 21 47 05.8 0.0
OBIP eS Sg 21 47 10.4 +0.6
CELP Cerrillos 0.34 52 Pg Pg 21 47 06.2 -0.4
CELP Sg Sg 21 47 11.8 +0.7
CELP IAML 21 47 12.4
comp=N,838nm,0.5s
CELP IAML 21 47 12.4
comp=N,409nm,0.2s
LSP Las Mesas 0.38 325 Pg 21 47 07.2 0.0
LSP Sg 21 47 13.1 +0.9
LSP Las Mesas 0.38 325⇑iP Pg 21 47 07.2 0.0
LSP eS Sg 21 47 13.1 +0.9
UUPR Utuado, UPR, P 0.41 19 Pg Pg 21 47 07.3 -0.5
UUPR Sg Sg 21 47 12.8 -0.5
UUPR IAML 21 47 16.1
comp=N,1μm,0.3s
UUPR IAML 21 47 16.3
comp=N,2μm,0.3s
PRSN Puerto Rico Se 0.44 323 Sg 21 47 14.2 -0.1
PRSN Puerto Rico Se 0.44 323 Pg Pg 21 47 07.9 -0.6
PRSN IAML 21 47 15.3
comp=N,901nm,0.2s
PRSN IAML 21 47 20.3
comp=N,935nm,0.3s
PRSN Puerto Rico Se 0.44 323 eS Sg 21 47 14.2 -0.1
AGPR Aguadilla, PR 0.65 338 Pg Pg 21 47 11.6 -0.8
AGPR IAML 21 47 15.4
comp=N,191nm,2.6s
AGPR Sg Sg 21 47 20.4 -0.4
AGPR IAML 21 47 35.6
comp=N,159nm,2.6s
AGPR Aguadilla, PR 0.65 338⇑eP Pg 21 47 11.8 -0.5
AGPR eS Sg 21 47 20.6 -0.2
ECPR Experimental S 0.66 46 Pg Pg 21 47 11.6 -0.9
ECPR IAML 21 47 22.5
comp=N,1μm,0.2s
ECPR IAML 21 47 22.9
comp=N,892nm,0.2s
ECPR Experimental S 0.66 46⇓eP Pg 21 47 11.8 -0.7
ECPR eS Sg 21 47 21.1 0.0
EMPR Esperanza - Ma 0.69 27 Pg 21 47 12.5 -0.6
EMPR Sg 21 47 22.7 +0.6
EMPR Esperanza - Ma 0.69 27⇑eP Pg 21 47 12.5 -0.6
EMPR eS Sg 21 47 22.7 +0.6
SJG San Juan 0.72 70 Pg Pg 21 47 12.3 -1.4
SJG IAML 21 47 27.0
comp=N,87nm,0.2s
SJG IAML 21 47 27.6
comp=N,99nm,0.3s
SJG San Juan 0.72 70⇑eP Pg 21 47 12.1 -1.6
SJG eS Sg 21 47 22.4 -0.8
IDE Isla Desecheo 0.78 312 Pg 21 47 14.0 -0.9
IDE Sg 21 47 24.8 -0.3
IDE Isla Desecheo 0.78 312⇓eP Pg 21 47 14.0 -0.9
IDE eS Sg 21 47 24.8 -0.3
PDPR Patillas Dam, 0.81 79 Pg Pg 21 47 14.4 -1.0
PDPR IAML 21 47 29.5
comp=N,96nm,0.2s
PDPR IAML 21 47 30.4
comp=N,52nm,0.1s
GCPR Guaynabo City 0.86 59 Pg Pg 21 47 15.0 -1.4
GCPR Sg Sg 21 47 26.1 -1.5
GCPR IAML 21 47 27.2
comp=E,52nm,0.5s
GCPR IAML 21 47 27.7
comp=N,81nm,0.3s
GCPR Guaynabo City 0.86 59⇓eP Pg 21 47 15.3 -1.1
GCPR eS Sg 21 47 26.8 -0.8
HUMP Col San Antoni 1.00 74 Sg 21 47 30.9 -1.2
HUMP Col San Antoni 1.00 74 Pg Pg 21 47 17.2 -1.8
HUMP IAML 21 47 34.5
comp=N,95nm,0.2s
HUMP IAML 21 47 35.5
comp=N,75nm,0.2s
HUMP Col San Antoni 1.00 74⇓eP Pg 21 47 17.6 -1.5
HUMP eS Sg 21 47 30.9 -1.2
CUPR Culebra, Puert 1.56 73 Pn Pn 21 47 26.5 -1.2

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*AFAD **04** 21:48:36.9, 34°.94N×27°.84E, h6km±2km, ML3.4*
*IDC **04** 21:48:38.9±0.8, 35°.19N×27°.77E, h0km, mb3.9/14, mbtmp3.8/22, ML3.5/8, MS3.3/11, Error ellipse: s-maj=16.8km s-min=13.6km az=161.0*
*NIC **04** 21:48:39.2, 34°.80N×27°.61E, h30km±3km, Ml3.5/13*
*GII **04** 21:48:40.9±0.0, 34°.96N×27°.92E, h0km±9km, Mws3.6, confirmed*
*NEIC **04** 21:48:41.0±2.1, 35°.14N±0°.06×27°.86E±0°.05, h11km±5km, mb4.3/18, Error ellipse: s-maj=8.6km s-min=5.8km az=198.0*
*ISK **04** 21:48:41.7, 35°.16N×27°.94E, h7km, ML3.7/21*
*HLW **04** 21:48:43.3, 35°.16N×27°.85E, h23km±3km, Ml3.6*
*ATH **04** 21:48:44.6, 35°.26N×27°.92E, h28km±12km, ML3.5/8, Manual Solution by A.Moschou First location: 2020/02/04 21:50:08, This location: 2020/02/04 22:15:39 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*THE **04** 21:48:44.3, 35°N±12°×2°8E±1°8, h0km±25km, M3.4/11, MLh3.4/11*
ISC 04 21:48:40.2±1.2, **35°.08N**±0°.03×**27°.87E**±0°.02, **h12**km±7km, **n193**, σ1^s**55**/238, **mb4.0**/19, **MS3.5**/5, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.74	309		Pg	21 48 54.1	-0.4
KARP	Karpathos	0.74	309	Pg	Pg	21 48 54.7	+0.1
KARP	Karpathos	0.74	309	P	Pg	21 48 54.2	-0.4
KARP				S	Sg	21 49 03.1	-1.2
KARP	Karpathos	0.74	309	P	Pg	21 48 54.1	-0.4
KARP				S	Sn	21 49 06.8	-1.0
KARP				AML	AML	21 49 15.2	
	7.5nm,0.6s						
KARP				AML	AML	21 49 16.4	
	10nm,0.4s						
KARP	Karpathos	0.74	309	P	Pb	21 48 55.1	0.0
KARP				S	Sb	21 49 06.4	+1.2
KSS1	Kassos Island	0.84	294	P	Pn	21 49 01.0	+3.1
KSS1				S	Sn	21 49 11.4	+1.1
ARG	Arkhangelos	1.15	10		Pn	21 49 02.5	+0.4
ARG	Arkhangelos	1.15	10	Pg	Pn	21 49 02.5	+0.4
ARG				Sg	Sn	21 49 17.8	-0.1
ARG	Arkhangelos	1.15	10	P	Pn	21 49 02.5	+0.4
ARG	Arkhangelos	1.15	10	P	Pn	21 49 02.7	+0.6
ARG				S	Sn	21 49 22.5	+4.6
ARG				AML	AML	21 49 26.8	
	5.8nm,1.0s						
ARG				AML	AML	21 49 29.4	
	5.1nm,0.5s						
ARG	Arkhangelos	1.15	10	P	Pn	21 49 02.4	+0.3
ARG				S	Sg	21 49 15.5	-1.8
ZKR	Zakros	1.35	272	Pn	Pg	21 49 08.6	+2.4
ZKR	Zakros	1.35	272	P	Pg	21 49 08.2	+2.0
RDI1	Rhodes Town Ha	1.40	12	P	Pn	21 49 05.6	+0.1
RDI1				S	Sb	21 49 21.0	-3.0
YAZI	Mula-Dat§a-	1.63	348	P	Pb	21 49 10.3	+0.1
YAZI				S	Sg	21 49 33.4	+0.7
YAZI				IAML		21 49 38.0	
	comp=E,640nm,0.6s						
YAZI				IAML		21 49 44.0	
	comp=N,471nm,0.7s						
DAT	Datca	1.66	352	Pn	Pg	21 49 11.1	-1.0
DAT				Sn	Sg	21 49 32.6	-1.0
TURN	Turunc	1.72	10	Pn	Pb	21 49 11.6	-0.1
TURN	Turunc	1.72	10	P	Pg	21 49 12.3	-0.8
TURN				S	Sg	21 49 38.8	+3.4
TURN				IAML		21 49 45.0	
	comp=N,465nm,0.6s						
TURN				IAML		21 49 46.0	
	comp=E,428nm,1.3s						
KSL	Kastellorizon	1.76	52	P	Pb	21 49 13.4	+1.0
KSL	Kastellorizon	1.76	52	P	Pn	21 49 12.1	+1.6
KSL				S	Sg	21 49 38.3	+1.6
KSL				AML	AML	21 50 03.6	
	0.9nm,1.5s						
KSL				AML	AML	21 50 10.5	
	1.0nm,1.8s						
KSL	Kastellorizon	1.76	52	P	Pn	21 49 12.0	+1.6
KSL				S	Sn	21 49 31.4	-1.4
AKAS	Kas	1.82	50		Pn	21 49 12.8	+1.3
AKAS	Kas	1.82	50	Pn	Pn	21 49 13.1	+1.6
FETY	Fethiye	1.84	32	P	Pn	21 49 04.4	-7.2
DALY	Dalyan (Mula)	1.84	20	Pn	Pb	21 49 13.2	-0.7
NPS	Neapolis	1.86	276	P	Pg	21 49 15.6	-0.2
NPS	Neapolis	1.86	276	P	Pb	21 49 14.7	+0.6
SABU	Mula-Dalaman	1.95	27	P	Pn	21 49 14.6	+1.4
SABU				IAML		21 50 05.0	
	comp=N,371nm,1.6s						
SABU				IAML		21 50 12.0	
	comp=E,331nm,0.9s						
BDRM	Kayabasi	2.01	350	P	Pn	21 49 15.0	+1.0
BDRM				S	Sg	21 49 45.7	+0.9
BDRM				IAML		21 49 51.0	
	comp=E,410nm,0.7s						
BODT	Bodrum	2.03	347	Pn	Pb	21 49 16.5	-0.5
BODT	Bodrum	2.03	347	P	Pb	21 49 16.6	-0.5
YER	Yerkesik	2.08	9	Pn	Pb	21 49 16.7	-1.1
YER	Yerkesik	2.08	9	P	Pb	21 49 16.8	-1.1
YKAV	Yalikavak-Bodr	2.09	347	Pn	Pb	21 49 17.4	-0.7
CAME	Cameli-Denizli	2.19	32	Pn	Pn	21 49 18.3	+1.7
MULA	Mugla, Merkez-	2.20	9	P	Pb	21 49 19.5	-0.5
MULA				IAML		21 50 01.0	
	comp=E,269nm,0.8s						
MULA				IAML		21 50 13.0	
	comp=N,165nm,1.1s						
MLSB	Milas	2.21	358	Pn	Pb	21 49 18.9	-1.2
THERA	Ancient Thera,	2.33	304	P	Pb	21 49 21.0	-1.2
THERA	Ancient Thera,	2.33	304	P	Pn	21 49 19.6	+1.2
ELL	Elmali	2.35	44	Pn	Pn	21 49 20.6	+1.9
ELL	Elmali	2.35	44	Pn	Pn	21 49 20.6	+1.9
ELL	Elmali	2.35	44	P	Pn	21 49 20.7	+2.0
ELL				S	Sg	21 49 53.4	-2.2
ELL				AML	AML	21 49 57.4	
	1.6nm,0.6s						
ELL				AML	AML	21 50 34.5	
	2.3nm,1.3s						
THR8	Santorini-Mono	2.35	305	P	Pn	21 49 20.7	+2.1
THR8	Santorini-Mono	2.35	305	P	Pn	21 49 20.4	+1.7
THR6	Thira Island,	2.38	303	P	Pn	21 49 21.0	+2.0
THR6	Thira Island,	2.38	303	P	Pn	21 49 20.3	+1.3
DNZT	Denizli-Tavas-	2.38	23	P	Pn	21 49 21.3	+2.1
DNZT				S	Sb	21 49 53.1	+0.6
DNZT				IAML		21 50 05.0	
	comp=E,125nm,1.4s						
DNZT				IAML		21 50 13.0	
	comp=N,180nm,0.9s						
THR3	Thira Island,	2.40	304	P	Pn	21 49 21.8	+2.5
SNT5	Nea Kammeni, S	2.41	304	P	Pn	21 49 20.8	+1.4
THR9	Santorini-Faro	2.41	303	P	Pn	21 49 21.8	+2.4
DDIM	Aydin, Didim	2.42	348	P	Pg	21 49 26.4	-0.3
DDIM				S	Sg	21 49 57.4	-0.7
DDIM				IAML		21 50 22.0	
	comp=E,348nm,1.7s						
DDIM				IAML		21 50 37.0	
	comp=N,506nm,1.7s						
IDI	Anoyia	2.45	276	Pn	Pb	21 49 23.2	-1.0
	13nm,0.3s,baz=78,slow=14,SNR=46						
IDI				LR	LR	21 50 27.9	
	comp=Z,555nm,20.9s,baz=92,slow=46						
IDI	Anoyia	2.45	276	Pn	Pn	21 49 22.9	+2.8
IDI	Anoyia	2.45	276	Pn	Pb	21 49 23.9	-0.3
IDI	Anoyia	2.45	276	P	Pb	21 49 23.4	-0.8
IDI	Anoyia	2.45	276	P	Pb	21 49 23.5	-0.7
TAVA	DENIZLI_Tavas	2.52	19	P	Pn	21 49 22.7	+1.5
TAVA				S	Sg	21 50 05.2	+3.9
TAVA				IAML		21 50 17.0	
	comp=N,230nm,1.4s						
TAVA				IAML		21 50 24.0	
	comp=E,166nm,0.9s						
APMY	Acipayam-Deniz	2.65	25	Pn	Pn	21 49 24.6	+1.7
GCAM	G?zelcaml?	2.66	349	Pn	Pn	21 49 25.4	+2.5
GCAM	G?zelcaml?	2.66	349	P	Pn	21 49 25.4	+2.5
GCAM				IAML		21 50 22.0	
	comp=E,130nm,0.8s						
GCAM				IAML		21 50 23.0	
	comp=N,125nm,0.7s						
ESEN	Aydn-Nazilli	2.74	8	P	Pn	21 49 25.6	+1.7
ESEN				S	Sb	21 50 02.8	+0.2
ESEN				IAML		21 50 17.0	
	comp=E,148nm,0.7s						
ESEN				IAML		21 50 25.0	
	comp=N,97nm,1.1s						
SMG	Samos	2.75	343	P	Pn	21 49 26.1	+1.9
SMG	Samos	2.75	343	P	Pn	21 49 24.5	+0.4
KORT	Korkueli	2.78	46	Pn	Pn	21 49 26.9	+2.3
AYDB	Zeytinkoy-Aydi	2.86	0	Pn	Pn	21 49 27.9	+2.1
NAZL	Nazilli-Aydin	2.90	7	Pn	Pn	21 49 27.9	+1.7
ANTB	Antalya	2.90	50	Pn	Pn	21 49 27.9	+1.8
VAM	Vamos	3.02	277	P	Pn	21 49 31.5	+3.6
GVD	Gavdhos	3.11	267	P	Pb	21 49 33.9	-1.6
ODEM	Odemis-Izmir	3.19	3	Pn	Pn	21 49 32.9	+2.6
IMMV	Iera Moni Meta	3.20	278	P	Pn	21 49 34.0	+3.6
IMMV	Iera Moni Meta	3.20	278	P	Pn	21 49 33.9	+3.6
BASM	Basmaki-Afyon	3.33	31	Pn	Pn	21 49 34.3	+2.1
BLCB	Balcova	3.36	349	Pn	Pn	21 49 35.3	+2.8
MANT	Manisa	3.45	9	Pn	Pn	21 49 34.3	+0.4
KULA	Kula-Manisa	3.48	10	Pn	Pn	21 49 36.7	+2.4
CHOS	Chios island	3.61	337	Pn	Pn	21 49 39.3	+3.3
AKMS	Akamas	3.67	90	P	Pn	21 49 36.9	+0.2
AKMS				S	Sn	21 50 23.2	+3.3
AKMS				AML	AML	21 50 23.6	
	0.3nm,0.8s						
AKMS				AML	AML	21 50 26.8	
	0.4nm,0.5s						
AKMS	Akamas	3.67	90	P	Pn	21 49 38.3	+1.5
ANKY	Antikythira Is	3.81	283	P	Pn	21 49 42.1	+3.5
NATA	Nata	3.88	93	P	Pn	21 49 40.8	+1.1
NATA				S	Sn	21 50 28.2	+3.1
NATA				AML	AML	21 50 29.8	
	0.8nm,0.5s						
NATA				AML	AML	21 50 31.1	
	0.7nm,0.4s						
ALFC	Alefka	3.88	88	S	Sn	21 50 27.8	+2.6
ALFC				AML	AML	21 50 30.7	
	0.4nm,0.4s						
ALFC				AML	AML	21 50 31.7	
	0.4nm,0.6s						
SHUT	Suhut-Afyon	4.08	31	Pn	Pn	21 49 45.0	+2.5
TROD	Troodos	4.11	90	P	Pn	21 49 44.4	+1.5
TROD				AML	AML	21 50 39.5	
	0.1nm,0.6s						
TROD				AML	AML	21 50 41.9	
	0.2nm,0.4s						
APOL	The Sanctuary	4.13	94	P	Pn	21 49 44.2	+1.1
APOL				S	Sn	21 50 33.5	+2.3
APOL				AML	AML	21 50 34.8	
	0.2nm,0.6s						
APOL				AML	AML	21 50 35.9	
	0.3nm,0.8s						
SLUM	Salum	4.21	213	P	Pn	21 49 46.9	+2.6
XYLS	Xyliatos	4.25	89	P	Pn	21 49 45.6	+0.7
XYLS				S	Sn	21 50 36.7	+2.3
XYLS				AML	AML	21 50 40.0	
	0.1nm,0.4s						
XYLS				AML	AML	21 50 40.1	
	0.2nm,0.7s						
VLY	Voula,Athens	4.29	311	P	Pn	21 49 47.8	+2.5
ATHU	Athens Univers	4.37	312	P	Pn	21 49 47.3	+0.9
ASGA	Asgata	4.43	92	P	Pn	21 49 48.3	+1.1
ASGA				S	Sn	21 50 41.3	+2.5
ASGA				AML	AML	21 50 45.5	
	0.2nm,0.6s						
ASGA				AML	AML	21 50 50.0	
	0.4nm,0.5s						
ASGA	Asgata	4.43	92	P	Pn	21 49 48.7	+1.5
CSS	Mathiatis	4.49	90	Pn	Pn	21 49 48.2	+0.2
CSS	Mathiatis	4.49	90	P	Pn	21 49 49.1	+1.1
CSS				S	Sn	21 50 42.6	+2.4
CSS				AML	AML	21 50 46.6	
	0.1nm,0.5s						
CSS				AML	AML	21 50 48.1	
	0.1nm,0.6s						
CSS	Mathiatis	4.49	90	P	Pn	21 49 48.5	+0.5
CSS				S	Sn	21 50 40.4	+0.3
MVOU	Mavrovouni	4.73	89	P	Pn	21 49 51.8	+0.5
MVOU				S	Sn	21 50 49.0	+2.9
MVOU				AML	AML	21 50 54.1	
	0.1nm,0.7s						
MVOU				AML	AML	21 50 55.0	
	0.2nm,0.7s						
BORA	Eskisehir	5.21	22	Pn	Pn	21 50 00.0	+1.9
ITM	Ithomi	5.24	295	Pn	Pn	21 49 58.9	+0.5
ALN	Alexandroupoli	5.98	347	Pn	Pn	21 50 10.7	+2.2
SWA2		6.17	200	P	Pn	21 50 14.1	+2.9
RDO	Rodhopi	6.33	344	Pn	Pn	21 50 16.1	+2.9
OFRI	`Ofer	6.41	111	P	Pn	21 50 14.0	-0.5
OFRI				S	Sn	21 51 26.8	-0.8
DQRL	Deir Qamar	6.51	100	*e*P	Pn	21 50 18.6	+2.7
BRTR	Keskin Array B	6.52	43	Pn	Pn	21 50 17.2	+1.1
	0.5nm,0.3s,baz=221,slow=16,SNR=13						
BRTR				Sn	Sn	21 51 32.0	+1.4
	0.6nm,0.3s,baz=215,slow=27,SNR=8.1						
	1.8nm,0.6s						
BRTR	Keskin Array B	6.52	43	Pn	Pn	21 50 17.8	+1.6
BR131	Keskin Array S	6.53	43	Pn	Pn	21 50 16.4	+0.2
MMAI	Mount Meron Ar	6.58	106	Pn	Pn	21 50 18.2	+1.3
	4.4nm,0.3s,baz=320,slow=14,SNR=20						
MMAI				Sn	Sn	21 51 31.0	-1.0
	5.7nm,0.3s,baz=294,slow=23,SNR=6.4						
	1.9nm,0.3s						
SLTI	Sal'it	6.62	113	P	Pn	21 50 17.0	-0.3
SLTI				S	Sn	21 51 31.6	-1.1
QRWL	Qaraoun	6.64	101	*e*P	Pn	21 50 18.3	+0.5
HWQ	Hawqa	6.70	95	*e*P	Pn	21 50 19.4	+0.8
ZAHL	Zahle	6.73	98	*e*P	Pn	21 50 20.5	+1.5
NATI	Neve Ativ	6.77	103	P	Pn	21 50 19.1	-0.2
NATI				S	Sn	21 51 36.4	+0.1
RCY	Rachaya	6.78	101	*e*P	Pn	21 50 19.9	+0.2
SALP	Salfit	6.81	114	P	Pn	21 50 20.1	+0.1
SALP				S	Sn	21 51 36.7	-0.7
BEIL	Beino	6.86	92	*e*P	Pn	21 50 21.0	+0.3
AMAZ	Amatzia	6.88	119	P	Pn	21 50 20.5	-0.4
AMAZ				S	Sn	21 51 38.0	-1.2
KZIT	Kziot	6.88	125	P	Pn	21 50 20.9	-0.1
KZIT				S	Sn	21 51 38.0	-1.3
KSHT	Keshet	6.92	105	P	Pn	21 50 21.6	+0.1
KSHT				S	Sn	21 51 39.6	-0.5
HMDT	Nahal Hemdat	6.98	112	P	Pn	21 50 22.2	-0.1
HMDT				S	Sn	21 51 40.8	-0.8
UJAP	Al Uja	7.07	114	P	Pn	21 50 23.2	-0.2
UJAP				S	Sn	21 51 43.0	-0.8
YTIR	Yattir	7.12	119	P	Pn	21 50 24.0	-0.2
YTIR				S	Sn	21 51 44.1	-1.0
BALJ	Balqa	7.14	113	Pn	Pn	21 50 24.5	0.0
DSI	Dead Sea	7.20	117	P	Pn	21 50 25.7	+0.5
DSI				S	Sn	21 51 45.4	-1.5
MSBI	Mazada	7.32	119	P	Pn	21 50 27.6	+0.8
MSBI				S	Sn	21 51 49.2	-0.6
RMNI	Mount Ramon	7.32	126	P	Pn	21 50 26.7	-0.4
RMNI				S	Sn	21 51 50.0	-0.2
BNN	Bunyan	7.41	57	Pn	Pn	21 50 28.3	0.0
GHAJ	Ghor Haditha	7.47	118	Pn	Pn	21 50 29.0	0.0
GHAJ	Ghor Haditha	7.47	118	P	Pn	21 50 28.7	-0.3
GHAJ				S	Sn	21 51 52.6	-1.1
IDAN	Idan	7.53	122	P	Pn	21 50 29.7	0.0
IDAN				S	Sn	21 51 53.4	-1.7
KRMI	Paran Flat	7.61	129	P	Pn	21 50 30.7	-0.3
KRMI				S	Sn	21 51 55.5	-1.7
ZFRI	Zfri	7.63	124	P	Pn	21 50 30.8	-0.4
ZFRI				S	Sn	21 51 56.2	-1.4
PRNI	Paran	7.64	126	P	Pn	21 50 30.9	-0.5
PRNI				S	Sn	21 51 56.6	-1.3
HRFI	Mount Harif	7.87	128	P	Pn	21 50 34.2	-0.3
HRFI				S	Sn	21 52 01.8	-1.7
MBRI	Mt Berech	7.95	130	P	Pn	21 50 35.2	-0.5
MBRI				S	Sn	21 52 04.4	-1.3
EIL	Elat	8.06	130	Pn	Pn	21 50 38.4	+1.3
	2.7nm,0.3s,baz=225,slow=4.9,SNR=24						
EIL				Sn	Sn	21 52 05.3	-2.9
	2.1nm,0.3s,baz=169,slow=18,SNR=4.3						
	12nm,0.5s						
EIL	Elat	8.06	130	P	Pn	21 50 36.8	-0.3
EIL				S	Sn	21 52 06.7	-1.5
ASF	Jabal al Asfar	8.07	109	Pn	Pn	21 50 38.9	+1.6
	0.5nm,0.3s,baz=234,slow=5.5,SNR=3.5						
	2.6nm,0.6s						
TIP	Timpagrande	9.77	298	Pn	Pn	21 51 00.2	-0.3
CEL	Celeste	10.13	292	Pn	Pn	21 51 05.6	+0.2
MLR	Muntele Rosu	10.50	353	Pn	Pn	21 51 10.9	+0.3
	baz=312,slow=24,SNR=1.4						
MLR				LR	LR	21 56 03.3	
	comp=Z,150nm,20.2s,baz=184,slow=43						
	1.3nm,0.8s						
MLR	Muntele Rosu	10.50	353	Pn	Pn	21 51 09.6	-1.0
CUC	Castrocucco	10.75	301	Pn	Pn	21 51 13.6	-0.4
RAFF	Raffo Rosso	11.13	285	Pn	Pn	21 51 18.7	-0.4
GNI	Garni	14.29	64	LR	LR	21 59 09.4	
	comp=Z,167nm,18.1s,baz=268,slow=44						
KBZ	Khabaz	14.46	49	Pn	P	21 52 09.8	-1.6
	0.2nm,0.3s,baz=234,slow=10,SNR=5.6						
	1.2nm,0.7s						
SABO	M.te Sabotino	15.34	319	Pn	Pn	21 52 15.6	-1.0
SABO				IAmb	IAmb	21 52 16.1	
	comp=Z,47nm,1.4s						
MODS	Modra-Piesok	15.43	333	*e*PN	Pn	21 52 12.6	-5.1
MODS	Modra-Piesok	15.43	333	*e*P	P	21 52 21.6	-0.6
AKASG	Malin Array Be	15.64	3	Pn	Pn	21 52 19.9	-0.5
	comp=Z,0.7nm,0.3s,baz=178,slow=8.3,SNR=4.2						
	comp=Z,0.2nm,0.3s						
VRAC	Vranov	16.46	333	LR	LR	21 58 36.9	
	comp=Z,38nm,21.7s,baz=168,slow=37						
GERES	GERESS Array B	17.28	327	P	Pn	21 52 41.5	+0.1
	baz=116,slow=12,SNR=7.4						
GERES				LR	LR	21 59 42.2	
	comp=Z,115nm,18.7s,baz=150,slow=39						
	comp=Z,0.4nm,0.4s						
KHC	Kasperske Hory	17.55	327	*e*P	P	21 52 46.0	+0.3
FUORN	Ofenpass-Fuorn	17.57	316		Pn	21 52 45.5	+0.5
FUORN				IAmb	IAmb	21 52 56.2	
	comp=Z,16nm,1.3s						
DAVOX	Davos/Dischmat	17.88	316	LR	LR	22 00 27.9	
	comp=Z,70nm,19.0s,baz=82,slow=40						
SENIN	Lac Senin/Sane	19.18	312	P	P	21 53 03.7	-0.1
CLL	Collm	19.44	331	*e*P	P	21 53 06.0	-0.4
CLL				*e*S	Sn	21 56 42.0	-3.5
ESBB	Sonseca Array	25.63	290	P	P	21 54 10.0	+0.4
ESBB				IAmb	IAmb	21 54 21.7	
	comp=Z,7.9nm,1.4s						
ESDC	Sonseca Array	25.63	290	P	P	21 54 09.2	-0.4
	comp=Z,1.1nm,0.5s,baz=83,slow=9.3,SNR=31						
	comp=Z,1.1nm,0.5s						
ESDC	Sonseca Array	25.63	290	P	P	21 54 09.4	-0.3
PAB	San Pablo	25.93	289	P	P	21 54 12.1	-0.2
PAB				IAmb	IAmb	21 54 30.2	
	comp=Z,7.3nm,1.2s						
FINES	FINESS Array B	26.41	358	P	P	21 54 15.3	-1.0
	comp=Z,2.9nm,0.9s,baz=157,slow=12,SNR=8.2						
	comp=Z,2.9nm,0.9s						
FINES	FINESS Array B	26.41	358	P	P	21 54 15.0	-1.4
HFS	Hagfors	26.71	344	P	P	21 54 17.5	-1.5
	comp=Z,1.3nm,0.4s,baz=157,slow=13,SNR=9.2						
HFS				LR	LR	22 06 53.7	
	comp=Z,72nm,18.4s,baz=104,slow=41						
	comp=Z,1.3nm,0.4s						
AB31	Akbulak array	27.43	49	P	P	21 54 27.6	+1.9
AB31				IAmb	IAmb	21 54 36.8	
	comp=Z,3.3nm,1.0s						
ABKAR	Akbulak array	27.43	49	P	P	21 54 26.7	+1.0
FURI	Furi	27.88	157	LR	LR	22 07 07.9	
	comp=Z,152nm,19.2s,baz=358,slow=40						
NOA	NORSAR Array B	28.09	343	P	P	21 54 31.1	-0.3
	comp=Z,0.6nm,0.6s,baz=145,slow=9.8,SNR=3.4						
NOA				LR	LR	22 08 42.6	
	comp=Z,32nm,18.9s,baz=10.0,slow=43						
	comp=Z,0.6nm,0.6s						
TORD	Torodi Ar. Bea	32.19	234	P	P	21 55 09.7	+1.5
	comp=Z,1.4nm,0.6s,baz=42,slow=4.7,SNR=20						
	comp=Z,1.4nm,0.6s						
ARCES	ARCESS Array B	34.53	359	P	P	21 55 28.1	0.0
	comp=Z,3.5nm,0.9s,baz=165,slow=6.3,SNR=3.6						
	comp=Z,3.5nm,0.9s						
BVAR	Borovoye Array	34.80	46	P	P	21 55 31.9	+1.3
	comp=Z,0.6nm,0.7s,baz=224,slow=7.2,SNR=2.9						
	comp=Z,0.6nm,0.7s						
MBAR	Mbarara	35.60	175	LR	LR	22 10 29.1	
	comp=Z,93nm,19.6s,baz=7.0,slow=37						
KURBB	Kurchatov Arra	39.45	51	P	P	21 56 10.2	+0.2
	comp=Z,0.8nm,0.6s,baz=275,slow=8.8,SNR=16						
	comp=Z,0.8nm,0.6s						
KURK	Kurchatov	39.51	51	P	P	21 56 11.3	+0.8
DBIC	Dimbokro	41.29	234	P	P	21 56 25.9	+0.2
	comp=Z,1.3nm,0.4s,baz=89,slow=7.2,SNR=3.9						
	comp=Z,1.3nm,0.4s						
DBIC	Dimbokro	41.29	234	P	P	21 56 26.8	+1.1
DBIC				IAmb	IAmb	21 56 59.3	
	comp=Z,10nm,1.3s						
MAKZ	Makanchi	41.75	57	P	P	21 56 30.1	+0.9
MKAR	Makanchi Array	41.96	57	P	P	21 56 32.0	+1.1
	comp=Z,0.4nm,0.5s,baz=269,slow=7.7,SNR=7.9						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	41.96	57	P	P	21 56 31.8	+0.9
ZALV	Zalesovo Beam	43.46	46	P	P	21 56 43.9	+1.0
	comp=Z,0.4nm,0.4s,baz=264,slow=10,SNR=4.0						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	43.46	46	P	P	21 56 43.0	+0.1
SPB2	Spitsbergen Ar	43.48	357	P	P	21 56 44.2	+1.4
SPITS	Spitsbergen Ar	43.48	357	P	P	21 56 42.1	-0.8
	comp=Z,4.4nm,0.9s,baz=147,slow=11,SNR=11						
	comp=Z,4.4nm,0.9s						
PALK	Pallekele	55.70	107	LR	LR	22 24 14.4	
	comp=Z,50nm,18.4s,baz=336,slow=38						
SONM	Songino Array	57.81	51	P	P	21 58 30.8	-0.7
	comp=Z,0.3nm,0.5s,baz=283,slow=7.6,SNR=3.9						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	57.81	51	P	P	21 58 30.5	-1.0
SONM				IAmb	IAmb	21 58 40.9	
	comp=Z,1.9nm,1.3s						
SCHQ	Schefferville	64.67	320	P	P	21 59 16.7	-1.0
	comp=Z,2.8nm,0.6s,baz=44,slow=3.6,SNR=8.2						
	comp=Z,2.8nm,0.6s						
BMAR	Burnt Mountain	77.65	357	P	P	22 00 36.5	+0.4
ILAR	Eielson Array	80.39	358	P	P	22 00 52.7	+1.5
WRH	Wood River Hil	80.73	358	P	P	22 00 53.7	+0.7
WRH				IAmb	IAmb	22 01 37.4	
	comp=Z,6.5nm,1.5s						
TRF	Thorofare Moun	81.79	359	P	P	22 00 59.7	+0.8
TRF				IAmb	IAmb	22 01 16.8	
	comp=Z,4.4nm,1.2s						
BCAR	Beaver Creek A	81.84	355	P	P	22 00 58.5	-0.5
L22K	Petersville	82.72	359	P	P	22 01 04.6	+1.0
L22K				IAmb	IAmb	22 01 43.9	
	comp=Z,8.7nm,1.4s						
SKT	Skwentna	83.28	360	P	P	22 01 05.2	-1.2
SUA	Susitna One	83.79	359	P	P	22 01 09.2	+0.1

*IDC **04** 21:53:39.3±1.5, 11°.31S×118°.51E, h0km, mb3.6/3, mbtmp3.5/7, ML3.5/4, MS2.4/1, Error ellipse: s-maj=50.3km s-min=20.4km az=38.0*

ISC 04 21:53:42.3±0.8**, 11°.48S**±0°.07×**118°.64E**±0°.07**, h26**km**, n17, σ3ˢ.26**/21**, mb3.8**/3**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	2.77	342	P	Pn	21 54 25.0	0.0
BATI	Baumata	5.09	76	Pn	Pn	21 54 59.3	+2.3
	4.3nm,0.3s,baz=330,slow=6.7,SNR=4.1						
BATI				Sn	Sn	21 55 58.6	+3.5
	2.4nm,0.3s,baz=116,slow=22,SNR=1.3						
	35nm,0.7s						
SOEI	Soe	5.79	73	P	Pn	21 55 10.6	+3.9
KAPI	Kappang	6.51	10	Sn	Sn	21 56 25.2	-4.9
	2.3nm,0.3s,baz=82,slow=23,SNR=2.7						
KAPI				LR	LR	21 57 49.0	
	comp=Z,32nm,20.6s,baz=202,slow=39						
UGM	Wanagama	8.75	293	P	Pn	21 55 47.7	+0.3
FITZ	Fitzroy Crossi	9.44	135	Pn	Pn	21 55 58.8	+2.0
	0.4nm,0.3s,baz=329,slow=9.2,SNR=6.1						
FITZ				Sn	Sn	21 57 39.4	-2.7
	0.8nm,0.3s,baz=170,slow=22,SNR=5.6						
	4.6nm,0.9s						
MBWA	Marble Bar	9.69	174	P	Pn	21 56 00.8	+0.7
PSA00	Pilbara Seismi	10.11	174	P	Pn	21 56 06.9	+1.0
MEEK	Meekatharra	15.08	180	P	Pn	21 57 14.6	+0.7
WRA	Warramunga Arr	17.29	121	P	Pn	21 57 43.0	+0.9
	0.1nm,0.3s,baz=291,slow=13,SNR=7.5						
WRA				S	Sn	22 00 45.2	-8.5
	0.1nm,0.4s,baz=244,slow=22,SNR=5.0						
	0.4nm,0.8s						
WRAB	Tennant Creek	17.29	121	P	Pn	21 57 43.9	+1.8
MORW	Morawa	17.67	188	P	Pn	21 57 47.6	+0.8
ASAR	Alice Springs	18.91	132	P	Pn	21 58 05.6	+3.5
	0.2nm,0.3s,baz=325,slow=11,SNR=8.7						
ASAR				S	Sn	22 01 27.8	-5.4
	0.2nm,0.4s,baz=309,slow=22,SNR=4.8						
	0.3nm,0.5s						
BLDU	Ballidu	19.13	185	P	Pn	21 58 05.1	+0.6
MKAR	Makanchi Array	66.50	334	P	P	22 04 29.9	+0.1
	0.5nm,0.5s,baz=148,slow=7.0,SNR=15						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	71.03	334	P	P	22 04 57.6	-0.2
	0.2nm,0.6s,baz=129,slow=7.3,SNR=2.1						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	71.22	340	P	P	22 04 58.3	-0.7
	0.3nm,0.4s,baz=151,slow=3.3,SNR=2.6						
	0.3nm,0.4s						

*AFAD **04** 21:55:51.1, 38°.23N×38°.72E, h7km±1km, ML2.3*

*ISK **04** 21:55:51.2, 38°.26N×38°.77E, h8km, ML2.5/7*

ISC 04 21:55:51.5±1.2**, 38°.25N**±0°.05×**38°.73E**±0°.04**, h10**km±10km**, n11, σ0ˢ.53**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAYA	Malatya/Merkez	0.25	288	P	Pg	21 55 56.3	-0.4
MAYA				IAML		21 56 00.0	
	comp=N,2µm,0.3s						
MAYA				IAML		21 56 00.0	
	comp=E,3µm,0.1s						
MAYA				S	Sg	21 56 00.6	+0.5
ELZG	Elazig	0.32	39	P	Pg	21 55 57.8	-0.1
ELZG				S	Sg	21 56 03.0	+0.7
ELZG				IAML		21 56 04.0	
	comp=N,393nm,0.4s						
ELZG				IAML		21 56 05.0	
	comp=E,466nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.47**	**74**	Pg	**Pg**	**21 56 00.5**	**-0.2**
ELZ	**Elazig**	**0.58**	**40**	P	**Pg**	**21 56 02.5**	**-0.2**
ELZ				S	**Sb**	**21 56 11.6**	**-0.5**
ELZ				IAML		21 56 12.0	
	comp=E,112nm,0.3s						
ELZ				IAML		21 56 13.0	
	comp=N,136nm,0.3s						
MCKZ	**Bingol**	**0.89**	**12**	P	**Pg**	**21 56 07.7**	**-0.9**
MCKZ				S	**Sb**	**21 56 21.2**	**+0.1**
ARPR	**Arapgir-MALATY**	**0.90**	**340**	Pg	**Pb**	**21 56 08.9**	**-0.4**
ARPR				Sg	**Sb**	**21 56 22.2**	**+0.8**
DYBB	**Diyarbakir**	**1.15**	**104**	Pn	**Pb**	**21 56 13.2**	**-0.3**
ILIC	**ilic-Erzincan**	**1.21**	**354**	Pn	**Pg**	**21 56 14.2**	**-0.5**
ILIC				Sn	**Sn**	**21 56 31.3**	**+0.2**
GAZ	**Gaziantep**	**1.61**	**229**	Pn	**Pb**	**21 56 21.2**	**-0.2**
BNGB	**Bingl**	**1.70**	**63**	Pn	**Pn**	**21 56 21.8**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.95**	**92**	Pn	**Pn**	**21 56 24.7**	**0.0**

*OSPL **04** 22:06:07.3±1.3, 18°.49N×69°.65W, h107km±8km, ML2.6, Presumed earthquake*
*SDD **04** 22:06:08.2±2.5, 18°.56N×69°.72W, h103km±11km, MD3.6, ML2.4, MW3.0, Presumed earthquake*
ISC 04 22:06:07.7±1.7**, 18°.47N**±0°.07×**69°.72W**±0°.04**, h95**km±11km**, n21, σ1s.43**/34**, 18C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SDD	**Santo Domingo**	**0.19**	**266**	⇑eSg	**Sn**	**22 06 32.3**	**+1.0**
SDD				IAML		22 07 17.6	
	comp=N,82nm,1.4s						
SDD	**Santo Domingo**	**0.19**	**266**	iP	**Pn**	**22 06 21.8**	**+0.5**
SDD				eS	**Sn**	**22 06 32.2**	**+0.9**
HATOM	**Hato Mayor del**	**0.45**	**45**	⇑ePg	**Pn**	**22 06 22.2**	**-0.5**
HATOM				⇑eSg	**Sn**	**22 06 32.9**	**-0.9**
HATOM				IAML		22 06 33.8	
	comp=N,83nm,0.3s						
DR08	**Loma La Naviza**	**0.57**	**330**	⇑ePg	**Pn**	**22 06 21.8**	**-1.7**
DR08				⇑eSg	**Sn**	**22 06 33.6**	**-1.8**
DR08				IAML		22 06 35.6	
	comp=N,2μm,0.2s						
BANI	**BANI**	**0.61**	**263**	⇑ePg	**Pn**	**22 06 24.7**	**+0.7**
BANI				⇑eSg	**Sn**	**22 06 37.6**	**+1.4**
BANI				IAML		22 06 39.3	
	comp=N,224nm,0.2s						
MIDR	**Miches**	**0.81**	**51**	⇑ePg	**Pn**	**22 06 25.8**	**0.0**
MIDR				⇑eSg	**Sn**	**22 06 39.8**	**+0.5**
MIDR				IAML		22 06 40.1	
	comp=N,56nm,0.3s						
ABDR	**Alto Bandera**	**0.93**	**292**	⇑eSg	**Sn**	**22 06 41.6**	**-0.4**
ABDR				IAML		22 07 25.5	
	comp=N,0.3nm,0.5s						
SADR	**Isla Saona**	**0.93**	**107**	⇑ePg	**Pn**	**22 06 27.5**	**+0.5**
HIDR	**Higuey Centro**	**0.96**	**83**	⇑ePg	**Pn**	**22 06 26.1**	**-1.2**
HIDR				⇑eSg	**Sn**	**22 06 41.9**	**0.0**
HIDR				IAML		22 06 47.4	
	comp=N,175nm,0.2s						
SMDR	**Samana, DR**	**0.96**	**31**	⇓ePg	**Pn**	**22 06 27.4**	**+0.1**
SMDR				IAML		22 07 10.4	
	comp=N,58nm,0.6s						
PCDR	**Punta Cana, DR**	**1.27**	**88**	⇑ePg	**Pn**	**22 06 31.7**	**+0.9**
PCDR				IAML		22 07 00.7	
	comp=N,193nm,3.5s						
PODR	**Polo**	**1.52**	**259**	⇑ePg	**Pn**	**22 06 32.6**	**-1.5**
PODR				⇑eSg	**Sn**	**22 06 53.5**	**-0.5**
PODR				IAML		22 06 57.0	
	comp=N,53nm,0.9s						
PODR	**Polo**	**1.52**	**259**	iP	**Pn**	**22 06 34.3**	**+0.2**
PODR				eS	**Sn**	**22 06 54.2**	**+0.1**
SDDR	**Presa de Saban**	**1.57**	**289**	⇑ePg	**Pn**	**22 06 35.2**	**+0.6**
SDDR				IAML		22 07 05.7	
	comp=N,25nm,1.8s						
SDDR	**Presa de Saban**	**1.57**	**289**	iP	**Pn**	**22 06 34.5**	**-0.1**
SDDR				eS	**Sn**	**22 06 54.3**	**-0.8**
SDDR				IAML		22 07 02.4	
	comp=Z,16nm,0.9s						
LONE3	**El Aguacate, B**	**1.66**	**275**	iP	**Pn**	**22 06 35.3**	**-0.5**
LONE3				eS	**Sn**	**22 06 56.6**	**-0.5**
LONE3				IAML		22 06 57.3	
	comp=Z,12nm,1.6s						
LODU1	**El Espartillar**	**1.67**	**266**	iP	**Pn**	**22 06 35.1**	**-0.7**
LODU1				IAML		22 07 02.9	
	comp=Z,66nm,2.6s						
LOVI	**El Cajuil, Ovi**	**1.71**	**247**	iP	**Pn**	**22 06 35.9**	**-0.4**
LOVI				eS	**Sn**	**22 06 55.9**	**-2.1**
LOVI				IAML		22 06 56.9	
	comp=Z,61nm,1.2s						
REDR	**Restauracion**	**1.73**	**294**	⇓ePg	**Pn**	**22 06 39.0**	**+2.4**
REDR				⇑eSg	**Sn**	**22 07 04.0**	**+5.4**
REDR				IAML		22 07 07.4	
	comp=N,24nm,1.6s						
LOBH	**Bahia de las A**	**1.92**	**252**	iP	**Pn**	**22 06 39.4**	**+0.3**
LOBH				eS	**Sn**	**22 07 02.1**	**-1.0**
LOBH				IAML		22 07 04.2	
	comp=Z,31nm,0.9s						
LOPP1	**Punta Rusia, P**	**1.96**	**315**	⇓iP	**Pn**	**22 06 38.3**	**-1.3**
LOPP1				IAML		22 07 03.2	
	comp=Z,64nm,2.3s						

*IDC **04** 22:06:19.7±1.9, 36°.25N×140°.32E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=40.8km s-min=18.4km az=18.0*
*JMA **04** 22:06:28.5±0.1, 36°.1N±0°.3×139°.9E±0°.3, h46km, MV3.1/36, SW IBARAKI PREF*
ISC 04 22:06:27.9±1.0**, 36°.09N**±0°.07×**139°.90E**±0°.06**, h60**km**, n11, σ0s.89**/14**, mb3.6**/3**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.27**	**60**	iP	**Pn**	**22 06 37.2**	**-0.6**
JYT				S	**Sn**	**22 06 43.4**	**-1.6**
JAG	**Ashikaga**	**0.49**	**313**	iP	**Pn**	**22 06 39.4**	**-0.4**
JAG				S	**Sn**	**22 06 47.1**	**-1.3**
JRY	**Ryogami san**	**0.81**	**265**	iP	**Pn**	**22 06 43.2**	**-0.4**
JRY				S	**Sn**	**22 06 53.8**	**-1.4**
JKT	**Katashina**	**0.86**	**322**	iP	**Pn**	**22 06 44.0**	**-0.3**
JUON	**Uonuma**	**1.31**	**329**	P	**Pn**	**22 06 50.4**	**+0.3**
JFY	**Yanaizu**	**1.32**	**353**	iP	**Pn**	**22 06 51.0**	**+0.7**
BSO3	**Boso 3**	**1.38**	**159**	P	**Pn**	**22 06 50.9**	**+0.2**
MJAR	**Matsushiro Arr**	**1.44**	**289**	Pg	**Pn**	**22 06 52.3**	**+0.5**
	2.2nm,0.3s,baz=95,slow=9.0,SNR=81						
MJAR				Lg	Lg	22 07 11.8	
	1.2nm,0.3s,baz=85,slow=30,SNR=7.4						
ZALV	**Zalesovo Beam**	**41.66**	**313**	P	**P**	**22 14 10.6**	**+0.3**
	0.5nm,0.4s,baz=105,slow=9.0,SNR=3.5						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**45.63**	**309**	P	**P**	**22 14 42.9**	**+0.7**
	0.5nm,0.3s,baz=84,slow=7.9,SNR=4.4						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**55.97**	**186**	P	**P**	**22 16 00.8**	**+0.6**
	0.2nm,0.7s,baz=16,slow=6.8,SNR=1.9						
	0.2nm,0.7s						

*SJA **04** 22:09:25.3±0.7, 22°.82S×68°.74W, h109km±3km, ML3.9, MW3.8*
*GUC **04** 22:09:26.7±0.8, 22°.76S×68°.75W, h101km±4km, ML3.8*
ISC 04 22:09:26.3±1.5**, 22°.79S**±0°.03×**68°.74W**±0°.05**, h110**km±10km**, n29, σ0s.88**/48**, 5C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.54**	**108**	⇓iP	**Pn**	**22 09 43.8**	**-0.1**
AF01				eS	**Sn**	**22 09 56.7**	**-0.2**
AF01				IAML		22 09 56.9	
AF01	**San Pedro de A**	**0.54**	**108**	eP	**Pn**	**22 09 43.7**	**-0.1**
AF01				eS	**Sn**	**22 09 56.4**	**-0.5**
AF01				IAML		22 10 12.7	
	comp=Z,4μm,0.4s						
PB06	**IPOC Station P**	**0.77**	**276**	⇑iP	**Pn**	**22 09 45.5**	**0.0**
PB06				eS	**Sn**	**22 09 59.5**	**-0.4**
PB06				IAML		22 10 00.0	
	comp=N,4μm,0.4s						
PB06	**IPOC Station P**	**0.77**	**276**	eP	**Pn**	**22 09 45.2**	**-0.2**
PB06				eS	**Sn**	**22 09 59.9**	**0.0**
PB06				IAML		22 10 02.1	
	comp=Z,3μm,0.5s						
PB09	**IPOC Station P**	**1.09**	**335**	iP	**Pn**	**22 09 49.3**	**+0.6**
PB09				eS	**Sn**	**22 10 05.7**	**+0.1**
PB09				IAML		22 10 06.4	
	comp=E,2μm,0.7s						
PB09	**IPOC Station P**	**1.09**	**335**	eP	**Pn**	**22 09 48.6**	**-0.1**
PB09				eS	**Sn**	**22 10 06.0**	**+0.4**
PB09				IAML		22 10 07.3	
	comp=Z,1μm,0.5s						
PB03	**IPOC Station P**	**1.19**	**308**	⇑iP	**Pn**	**22 09 49.8**	**0.0**
PB03				eS	**Sn**	**22 10 06.8**	**-0.7**
PB03				IAML		22 10 07.4	
	comp=N,2μm,0.3s						
PB03	**IPOC Station P**	**1.19**	**308**	eP	**Pn**	**22 09 49.7**	**-0.1**
PB03				eS	**Sn**	**22 10 07.1**	**-0.3**
PB03				IAML		22 10 11.9	
	comp=Z,2μm,0.3s						
PB05	**IPOC Station P**	**1.35**	**267**	⇑iP	**Pn**	**22 09 51.6**	**+0.1**
PB05				eS	**Sn**	**22 10 11.0**	**+0.4**
PB05				IAML		22 10 14.2	
	comp=E,877nm,0.3s						
PB05	**IPOC Station P**	**1.35**	**267**	eP	**Pn**	**22 09 50.9**	**-0.6**
PB05				eS	**Sn**	**22 10 12.1**	**+1.5**
PB07	**IPOC Station P**	**1.50**	**315**	⇑iP	**Pn**	**22 09 53.5**	**+0.2**
PB07				eS	**Sn**	**22 10 13.9**	**+0.2**
PB07				IAML		22 10 16.9	
	comp=E,2μm,0.3s						
PB07	**IPOC Station P**	**1.50**	**315**	eP	**Pn**	**22 09 53.4**	**+0.1**
PB07				eS	**Sn**	**22 10 14.2**	**+0.4**
PB07				IAML		22 10 14.6	
	comp=Z,1μm,0.1s						
PB02	**IPOC Station P**	**1.81**	**324**	⇑iP	**Pn**	**22 09 57.4**	**+0.3**
PB02				eS	**Sn**	**22 10 20.7**	**+0.2**
PB02				IAML		22 10 26.6	
	comp=E,1μm,0.3s						
PB02	**IPOC Station P**	**1.81**	**324**	eP	**Pn**	**22 09 57.3**	**+0.2**
PB02				eS	**Sn**	**22 10 21.0**	**+0.5**
PB02				IAML		22 10 23.8	
	comp=Z,1μm,0.2s						
PB01	**IPOC Station P**	**1.87**	**338**	eP	**Pn**	**22 09 58.3**	**+0.5**
PB01				eS	**Sn**	**22 10 22.1**	**+0.4**
PB01				IAML		22 10 23.5	
	comp=E,1μm,0.1s						
PB01	**IPOC Station P**	**1.87**	**338**	eP	**Pn**	**22 09 58.2**	**+0.5**
PB01				eS	**Sn**	**22 10 22.7**	**+0.9**
PB01				IAML		22 10 25.6	
	comp=Z,889nm,0.4s						
PATCX	**Punta Patache**	**2.36**	**326**	eP	**Pn**	**22 10 04.1**	**+0.1**
PATCX				eS	**Sn**	**22 10 28.6**	**-4.2**
PATCX				IAML		22 10 36.5	
	comp=E,576nm,0.7s						
PB14	**IPOC Station P**	**2.38**	**219**	eP	**Pn**	**22 10 04.5**	**0.0**
PB14				eS	**Sn**	**22 10 35.1**	**+1.3**
PB14				IAML		22 10 39.4	
	comp=Z,293nm,0.2s						
PB08	**IPOC Station P**	**2.66**	**352**	eP	**Pn**	**22 10 09.2**	**+0.9**
PB08	**IPOC Station P**	**2.66**	**352**	eP	**Pn**	**22 10 08.6**	**+0.3**
PB08				eS	Sn	22 10 30.1	-10
PB11	**IPOC Station P**	**3.13**	**344**	eP	**Pn**	**22 10 14.4**	**+0.2**
PB11	**IPOC Station P**	**3.13**	**344**	eP	**Pn**	**22 10 13.8**	**-0.5**
PB11				eS	Sn	22 10 36.1	-15
PB11				IAML		22 10 43.5	
	comp=Z,166nm,0.6s						
GO01	**Chusmiza**	**3.13**	**352**	eP	**Pn**	**22 10 14.1**	**-0.5**
GO01	**Chusmiza**	**3.13**	**352**	eP	**Pn**	**22 10 14.0**	**-0.5**
AC01	**Pan de Azucar**	**3.75**	**206**	eP	**Pn**	**22 10 21.9**	**-0.4**
AC01	**Pan de Azucar**	**3.75**	**206**	eP	**Pn**	**22 10 21.7**	**-0.6**
AC01				eS	**Sn**	**22 11 04.4**	**-1.2**
AC02	**Maricunga**	**4.04**	**185**	eP	**Pn**	**22 10 28.1**	**+1.4**
PB16	**IPOC Station P**	**4.49**	**351**	eP	**Pn**	**22 10 34.2**	**+1.3**
PB16				eS	Sn	22 11 10.0	-14
GO03	**Copiapo**	**4.97**	**195**	eP	**Pn**	**22 10 38.4**	**-0.5**

*SOME **04** 22:10:37.8, 41°.32N×83°.85E, h10km*
*NNC **04** 22:10:41.4±6.6, 41°.35N×83°.76E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=46.4km s-min=21.1km az=135.0*
ISC 04 22:10:48.8±3.5**, 41°.4N**±0°.2×**83°.3E**±0°.1**, h10**km**, n6, σ0s.95**/10**, 4C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.31**	**303**	eP	**Pn**	**22 11 41.6**	**+0.8**
	3.2nm,0.3s						
SHLS				eS	**Sb**	**22 12 28.2**	**+0.1**
	23nm,0.5s						
PDGK	**Podgornoye**	**3.38**	**306**	⇑Pg	**Pb**	**22 11 49.0**	**0.0**
	6.4nm,1.2s						
PDGK				⇓Lg	Lg	22 12 41.6	
	7.6nm,0.8s						
UZB	**Uzynbulak**	**3.59**	**300**	eP	**Pb**	**22 11 51.1**	**-1.3**
	2.5nm,0.2s						
UZB				eS	**Sg**	**22 12 44.2**	**+0.2**
	4.6nm,0.3s						
KPKS	**Kokpek**	**3.96**	**303**	eP	**Pb**	**22 11 58.3**	**-0.4**
	0.5nm,0.2s						
KPKS				eS	**Sg**	**22 12 56.9**	**+1.0**
	3.7nm,0.2s						
MK31	**Makanchi Array**	**5.42**	**353**	⇓Pg	**Pb**	**22 12 23.7**	**+0.2**
	0.2nm,0.4s,baz=163,slow=15,SNR=2.8						
MK31				⇑Sn	**Sn**	**22 13 11.8**	**-0.3**
	0.3nm,0.4s,baz=141,slow=10,SNR=3.9						
MK31				⇓Lg	Lg	22 13 37.2	
	2.9nm,0.6s,baz=162,slow=26,SNR=6.8						
MAKZ	**Makanchi**	**5.46**	**351**	⇑Sn	**Sn**	**22 13 11.6**	**-1.6**
	2.2nm,1.1s						
MAKZ				⇑Lg	Lg	22 13 36.8	
	3.0nm,0.8s						

*BJI **04** 22:17:43.4, 52°.16N×178°.36E, h118km, mB5.2/28, mb5.5/89*
*MOS **04** 22:17:44.4±1.1, 52°.01N×178°.50E, h123km, mb5.1/74, MS4.2/4, Error ellipse: s-maj=7.0km s-min=4.9km az=108.2*
*AEIC **04** 22:17:45.9±2.2, 51°.85N±0°.08×178°.33E±0°.08, h122km±3km, Error ellipse: s-maj=12.3km s-min=6.7km az=185.0*
*NEIC **04** 22:17:45.4, 51°.96N×178°.40E, h110km*
*NEIC **04** 22:17:45.5±1.9, 52°.02N±0°.08×178°.39E±0°.08, h118km±3km, mb5.3/627, ML5.0/14, Mww4.9/51, Error ellipse: s-maj=11.6km s-min=6.6km az=187.0*
*NEIC **04** 22:17:45.4, 51°.56N×178°.23E, h110km, Moment Tensor Solution. Duration: 1s.5 Moment tensor: Scale 10^16Nm; Mrr-1.40; Mθθ1.53; Mφφ-0.13; Mrθ0.52; Mθφ1.26; Mφr-2.34; Fault plane solution: M0 3.08000×10^16 NP1: φs269.55000°, δ42.76000°, λ-29.13000°. NP2: φs21.81000°, δ70.70000°, λ-128.93000°. Principal axes: T 2.4067, Plg17.0000°, Azm139.0000°; N 1.0670, Plg36.0000°, Azm37.0000°; P -3.4737, Plg49.0000°, Azm249.0000°;*
*IDC **04** 22:17:46.1±0.5, 52°.06N×178°.46E, h122km±3km, mb4.8/44, mbtmp5.2/48, MS3.5/35 Error ellipse: s-maj=9.9km s-min=6.6km az=154.0*
*GCMT **04** 22:17:46.5±0.2, 52°.14N±0°.02×178°.44E±0°.02, h114km±3km, MW4.9/109, Moment Tensor Solution. s32,c41; s109,c147; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.31±.11; Mθθ-0.05±.15; Mφφ1.36±.14; Mrθ0.40±.08; Mθφ-1.73±.12; Mφr-2.49±.07; Best double couple: M0 3.28000×10^16 NP1: φs111.00000°, δ29.00000°, λ-148.00000°. NP2: φs352.00000°, δ75.00000°, λ-65.00000°. Principal axes: T 3.6370, Plg26.0000°, Azm62.0000°; N -0.7120, Plg24.0000°, Azm165.0000°; P -2.9240, Plg53.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 04 22:17:45.6±0.3**, 51°.96N**±0°.05×**178°.41E**±0°.02**, h122**km±1km**, h121**km**:pP-P, n1166, σ1s.08**/1000**, mb5.3**/484**, 21C-65D, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**0.07**	**77**		**Pn**	**22 18 02.0**	**-0.2**
LSSE	**Little Sitkin**	**0.10**	**103**		**Pn**	**22 18 02.1**	**-0.2**
LSPA	**Little Sitkin**	**0.10**	**89**		**Pn**	**22 18 02.1**	**-0.1**
LSPA					**Sn**	**22 18 16.2**	**+1.5**
CESW	**Semis' Southwe**	**0.72**	**94**		**Pn**	**22 18 05.0**	**-0.2**
CERB	**Semis' Cerberu**	**0.76**	**91**		**Pn**	**22 18 05.8**	**+0.2**
CEPE	**Semis' Perret**	**0.77**	**89**		**Pn**	**22 18 05.8**	**+0.2**
AMKA	**Amchitka**	**0.80**	**136**		**Pn**	**22 18 05.5**	**-0.4**
AMKA				Sn	**Sn**	**22 18 19.9**	**-1.3**
GASW	**Gareloi Southw**	**1.71**	**95**		**Pn**	**22 18 15.4**	**-0.1**
GANO	**Gareloi North**	**1.73**	**93**		**Pn**	**22 18 15.9**	**+0.1**
GANO					**Sn**	**22 18 38.5**	**-0.5**
GANE	**Gareloi Northe**	**1.75**	**93**		**Pn**	**22 18 15.9**	**-0.1**
GALAA	**Gareloi Lava P**	**1.76**	**95**		**Pn**	**22 18 16.2**	**+0.1**
GAEA	**Gareloi East**	**1.77**	**94**		**Pn**	**22 18 16.6**	**+0.3**
GAKI	**Gareloi-Kavalg**	**1.77**	**102**		**Pn**	**22 18 16.0**	**-0.3**
GAKI					**Sn**	**22 18 38.9**	**-0.8**
TANO	**Tanaga North**	**2.15**	**90**		**Pn**	**22 18 21.4**	**+0.4**
TASE	**Tanaga Southea**	**2.21**	**92**		**Pn**	**22 18 21.6**	**-0.1**
TASE					**Sn**	**22 18 49.4**	**+0.1**
TAFP	**Tanaga Falls P**	**2.23**	**90**		**Pn**	**22 18 21.9**	**-0.2**
TAFP					**Sn**	**22 18 50.1**	**+0.2**
TAFL	**Tanaga Flats**	**2.30**	**94**		**Sn**	**22 18 51.4**	**0.0**
KIMD	**Kanaga Island**	**2.71**	**92**		**Sn**	**22 19 00.1**	**-0.6**
KICM	**Kanaga Island**	**2.72**	**89**		**Pn**	**22 18 28.4**	**+0.2**
KIKV	**Kanaga Island**	**2.74**	**90**		**Sn**	**22 19 02.1**	**+0.6**
KIWB	**Kanaga Island**	**2.75**	**90**	Pn	**Pn**	**22 18 28.5**	**-0.1**
KIWB				Sn	**Sn**	**22 19 00.5**	**-1.3**
KIWB				IAML		22 19 05.5	
	comp=N,3μm,0.8s						
KIWB				IAML		22 19 06.2	
	comp=E,4μm,0.6s						
SHEM	**Shemya Is, Ala**	**2.75**	**288**	P	**Pn**	**22 18 27.7**	**-0.9**
	comp=E,840nm,0.3s,baz=47,slow=3.8,SNR=85						
SHEM				S	**Sn**	**22 19 00.9**	**-0.9**
	comp=E,910nm,0.3s,baz=146,slow=9.6,SNR=3.7						
SHEM	**Shemya Is, Ala**	**2.75**	**288**		**Pn**	**22 18 26.8**	**-1.9**
SHEM				Sn	**Sn**	**22 18 59.6**	**-2.2**
SHEM				IAML		22 19 03.9	
	comp=E,7μm,0.4s						
SMY	**Shemya**	**2.75**	**288**	Pn	**Pn**	**22 18 27.6**	**-1.1**
SMY					**Sn**	**22 18 59.5**	**-2.3**
SMY				IAML		22 19 03.1	
	comp=N,8μm,0.6s						
SMY	**Shemya**	**2.75**	**288**	P	**Pn**	**22 18 28.0**	**-0.6**
SMY	**Shemya**	**2.75**	**288**	S	**Sn**	**22 19 01.8**	**0.0**
SMY	**Shemya**	**2.75**	**288**	P	**Pn**	**22 18 27.6**	**-1.1**
SMY						22 18 59.5	
KIRH	**Kanaga Island**	**2.79**	**89**		**Pn**	**22 18 29.2**	**+0.1**
KIRH					**Sn**	**22 19 03.1**	**+0.5**
ADK	**Adak**	**3.04**	**89**	Sn	**Sn**	**22 19 06.2**	**-2.3**
ADK	**Adak**	**3.04**	**89**	Pn	**Pn**	**22 18 31.1**	**-1.3**
ADK				IAML		22 19 09.5	
	comp=N,3μm,0.9s						
ADK				IAML		22 19 10.0	
	comp=N,3μm,0.7s						
ADK	**Adak**	**3.04**	**89**	P	**Pn**	**22 18 31.7**	**-0.7**
ADK	**Adak**	**3.04**	**89**	S	**Sn**	**22 19 08.3**	**-0.1**
ADK	**Adak**	**3.04**	**89**	P	**Pn**	**22 18 31.1**	**-1.3**
ADK						22 19 06.2	
ADAG	**Mount Adagdak**	**3.09**	**88**		**Sn**	**22 19 09.3**	**-0.3**
ETKA	**Kagalaska Isla**	**3.21**	**90**		**Sn**	**22 19 10.9**	**-1.6**
GSSP	**Great Sitkin S**	**3.35**	**86**		**Pn**	**22 18 36.4**	**0.0**
GSTD	**Great Sitkin T**	**3.37**	**86**		**Pn**	**22 18 36.3**	**-0.4**
GSTD					**Sn**	**22 19 16.1**	**-0.2**
GSTR	**Great Sitkin T**	**3.42**	**86**	Pn	**Pn**	**22 18 37.0**	**-0.5**
GSTR				IAML		22 19 51.4	
	comp=E,2μm,0.8s						
GSTR				IAML		22 19 52.1	
	comp=N,4μm,1.0s						
GSMY	**Great Sitkin M**	**3.42**	**86**		**Sn**	**22 19 17.4**	**-0.1**
GSIG	**Igitkin Island**	**3.50**	**87**		**Pn**	**22 18 37.9**	**-0.6**
GSIG					**Sn**	**22 19 18.7**	**-0.8**
KOWE	**Korovin West**	**4.54**	**82**		**Sn**	**22 19 43.0**	**-1.1**
KONW	**Korovin Northw**	**4.57**	**82**		**Pn**	**22 18 52.4**	**-0.2**
KOKL	**Mount Kliuchef**	**4.57**	**82**		**Pn**	**22 18 52.5**	**-0.3**
ATKA	**Atka Island**	**4.57**	**84**	Pn	**Pn**	**22 18 52.4**	**-0.2**
ATKA				Sn	**Sn**	**22 19 43.4**	**-1.4**
ATKA	**Atka Island**	**4.57**	**84**	P	**Pn**	**22 18 52.5**	**-0.2**
ATKA	**Atka Island**	**4.57**	**84**	S	**Sn**	**22 19 44.7**	**-0.1**
KOKV	**Korovin Volcan**	**4.59**	**82**		**Pn**	**22 18 53.2**	**+0.1**
KOKV					**Sn**	**22 19 47.0**	**+1.6**
KOSE	**Korovin Southe**	**4.66**	**82**		**Pn**	**22 18 54.1**	**+0.1**
NIKH	**Nikolski High**	**7.85**	**78**	Pn	**Pn**	**22 19 38.0**	**+1.2**
NIKH	**Nikolski High**	**7.85**	**78**	P	**Pn**	**22 19 38.2**	**+1.3**
	comp=N,259nm,0.7s						
NIKH	**Nikolski High**	**7.85**	**78**	P	**Pn**	**22 19 38.1**	**+1.2**
	baz=268,SNR=6.0						
SPIA	**Saint Paul Isl**	**8.41**	**47**	Pn	**Pn**	**22 19 46.1**	**+1.7**
SPIA	**Saint Paul Isl**	**8.41**	**47**	P	**Pn**	**22 19 46.5**	**+2.1**
	comp=N,1μm,1.3s						
SPIA	**Saint Paul Isl**	**8.41**	**47**	S	**Sn**	**22 21 17.5**	**0.0**
	comp=N,1μm,1.3s						
SPIA	**Saint Paul Isl**	**8.41**	**47**	P	**Pn**	**22 19 45.7**	**+1.3**
	baz=236,SNR=12						
P08K	**Saint George I**	**8.44**	**52**	Pn	**Pn**	**22 19 46.5**	**+1.7**
P08K	**Saint George I**	**8.44**	**52**	P	**Pn**	**22 19 46.5**	**+1.7**
	baz=242,SNR=14						
MGOD	**Makushin Gods**	**9.09**	**73**		**Pn**	**22 19 54.5**	**+0.9**
MNAT	**Makushin Natee**	**9.21**	**72**		**Pn**	**22 19 55.2**	**-0.1**
UNV	**Unalaska Valle**	**9.31**	**72**	Pn	**Pn**	**22 19 56.9**	**+0.3**
UNV	**Unalaska Valle**	**9.31**	**72**	P	**Pn**	**22 19 57.3**	**+0.7**
	comp=N,172nm,1.0s						
UNV	**Unalaska Valle**	**9.31**	**72**	P	**Pn**	**22 19 56.8**	**+0.2**
	baz=264						
LVA	**Lava Point**	**9.62**	**71**	Pn	**Pn**	**22 20 01.4**	**+0.6**
AKMO	**Akutan Morgan**	**9.63**	**71**		**Pn**	**22 20 00.5**	**-0.4**
ZRO	**Akutan Zero**	**9.65**	**71**		**Pn**	**22 20 01.3**	**+0.2**
AKGG	**Akutan Green G**	**9.65**	**70**		**Pn**	**22 20 01.5**	**+0.3**
AKLV	**Akutan Long Va**	**9.67**	**71**		**Pn**	**22 20 01.9**	**+0.5**
AKBBA	**Akutan Broad B**	**9.68**	**71**		**Pn**	**22 20 02.0**	**+0.5**
AKUT	**Akutan**	**9.78**	**71**	Pn	**Pn**	**22 20 03.3**	**+0.5**
AKUT	**Akutan**	**9.78**	**71**	P	**Pn**	**22 20 04.2**	**+1.4**
	comp=N,282nm,1.6s						
FALS	**False Pass**	**11.23**	**68**	Pn	**Pn**	**22 20 22.0**	**-0.3**
FALS	**False Pass**	**11.23**	**68**	P	**Pn**	**22 20 21.8**	**-0.5**
	comp=N,191nm,0.4s						
FALS	**False Pass**	**11.23**	**68**	P	**Pn**	**22 20 24.6**	**+2.4**
	baz=262						
M11K	**Mekoryuk**	**12.01**	**39**	Pn	**Pn**	**22 20 34.2**	**+1.7**
M11K	**Mekoryuk**	**12.01**	**39**	P	**Pn**	**22 20 34.2**	**+1.7**
	baz=232,SNR=30						
PET	**Petropavlovsk**	**12.09**	**283**	Pn	**Pn**	**22 20 34.3**	**+0.6**
PET	**Petropavlovsk**	**12.09**	**283**	eP	**Pn**	**22 20 35.9**	**+2.2**
PET				eS	**Sn**	**22 22 39.6**	**-7.0**
PET				pmax	pmax		
	comp=Z,35nm,0.7s						
PET				MLR	MLR		
	comp=Z,800nm,6.0s						
PEA0B	**Petropavlovsk-**	**12.66**	**283**	Pn	**Pn**	**22 20 41.9**	**+0.7**
PEA0B	**Petropavlovsk-**	**12.66**	**283**	deP	**Pn**	**22 20 41.2**	**0.0**
PETK	**Petropavlovsk-**	**12.66**	**283**	P	**Pn**	**22 20 41.4**	**+0.3**
	comp=Z,36nm,0.7s,baz=90,slow=17,SNR=38						
PETK				S	**Sn**	**22 22 56.5**	**-3.9**
	comp=Z,14nm,0.5s,baz=290,slow=11,SNR=4.4						
PETK				LR	LR	22 25 14.0	
	comp=Z,107nm,20.1s,baz=93,slow=35						
PETK				ScP	**ScP**	**22 29 29.9**	**+0.4**
	comp=Z,6.4nm,0.7s,baz=86,slow=5.1,SNR=7.7						
PETK	**Petropavlovsk-**	**12.66**	**283**	Pn	**Pn**	**22 20 41.0**	**-0.2**
GAMB	**Gambell**	**12.94**	**20**	Pn	**Pn**	**22 20 44.6**	**-0.1**
GAMB	**Gambell**	**12.94**	**20**	P	**Pn**	**22 20 46.5**	**+1.8**
	baz=208						
SDPT	**Sand Point**	**12.96**	**67**	Pn	**Pn**	**22 20 43.3**	**-1.7**
SDPT	**Sand Point**	**12.96**	**67**	P	**Pn**	**22 20 44.1**	**-1.0**
	comp=Z,252nm,0.8s						
SDPT	**Sand Point**	**12.96**	**67**	P	**Pn**	**22 20 44.3**	**-0.8**
	baz=264						
M13K	**Dall Lake**	**13.19**	**43**	Pn	**Pn**	**22 20 47.8**	**-0.1**
M13K	**Dall Lake**	**13.19**	**43**	P	**Pn**	**22 20 49.7**	**+1.9**
	baz=238,SNR=47						
CHNA	**Chernabura Isl**	**13.43**	**69**	P	**Pn**	**22 20 51.0**	**-0.1**
	comp=Z,122nm,1.9s						
CHNA	**Chernabura Isl**	**13.43**	**69**	P	**Pn**	**22 20 49.8**	**-1.2**
	baz=267						
CNBA	**Chernabura Isl**	**13.43**	**69**	Pn	**Pn**	**22 20 50.3**	**-0.7**
K13K	**Kusilvak Mount**	**13.57**	**36**	P	**Pn**	**22 20 54.3**	**+1.5**
	baz=230,SNR=60						
O14K	**Tigyukauivet M**	**13.58**	**49**	P	**Pn**	**22 20 54.0**	**+1.1**
	baz=246						
N14K	**Kuskokwak Cree**	**13.67**	**47**	P	**Pn**	**22 20 55.5**	**+1.4**
	baz=243						
M14K	**Bethel**	**13.95**	**43**	P	**P**	**22 20 59.4**	**-2.3**
	baz=240,SNR=119						
L14K	**Kuka Creek**	**13.96**	**40**	P	**P**	**22 21 00.0**	**-2.0**
	baz=236,SNR=66						
SKR	**Severo-Kuril's**	**13.99**	**274**	eP	**Pn**	**22 20 54.6**	**-3.7**
SKR				eS	**Sn**	**22 23 26.8**	**-5.8**
SKR				pmax	pmax		
	comp=Z,900nm,10.2s						
SKR				pmax	pmax		
	comp=Z,290nm,0.7s						
SKR				smax	smax		
	comp=N,634nm,0.7s						
SKR				smax	smax		
	comp=E,443nm,0.8s						
SKR				MLR	MLR		
	comp=Z,800nm,12.0s						

O15K	Ungalikthiuk R	14.23	51	P	Pn	22 21 02.2	+0.9
	baz=249,SNR=72						
M15K	Kasigluk River	14.47	45	P	P	22 21 05.7	-1.9
	baz=242,SNR=60						
J14K	Nanvaranak Lak	14.48	35		Pn	22 21 04.9	+0.4
J14K	Nanvaranak Lak	14.48	35	P	P	22 21 06.3	-1.4
	baz=230,SNR=69						
N15K	Kwethluk River	14.50	47	P	P	22 21 06.2	-1.7
	baz=245						
L15K	Ungalak Mounta	14.63	40	P	P	22 21 08.0	-1.4
	baz=237,SNR=32						
R16K	Pilot Point	14.91	58	P	P	22 21 10.9	-1.6
	baz=258						
K15K	Wolf Creek Mou	14.96	38	P	P	22 21 12.1	-0.8
	baz=235,SNR=154						
P16K	Nushagak River	15.08	53	P	P	22 21 13.3	-1.0
	baz=252,SNR=36						
ANM	Nome	15.18	27		P	22 21 13.5	-2.0
ANM	Nome	15.18	27	P	P	22 21 13.5	-2.0
ANM	Nome	15.18	27	P	P	22 21 15.2	-0.3
	baz=221,SNR=29						
O16K	Kokwok River B	15.21	51	P	P	22 21 14.6	-1.2
	baz=250,SNR=49						
N16K	Nishlik Lake	15.22	47	P	P	22 21 14.8	-1.1
	baz=246						
M16K	Timber Creek	15.37	45	P	P	22 21 16.8	-0.8
	baz=244,SNR=39						
L16K	Owhat River	15.47	42	P	P	22 21 18.0	-0.7
	baz=241,SNR=90						
R17L	Mt. Peulik Vol	15.57	59	P	P	22 21 19.4	-0.4
	baz=259						
F14K	Arctic Creek	15.63	24	P	P	22 21 19.8	-0.6
	baz=217						
Q16K	King Salmon	15.64	55	P	P	22 21 20.5	-0.1
	baz=255,SNR=50						
O17K	Koliganek Bris	15.74	51	P	P	22 21 20.9	-0.8
	baz=251,SNR=59						
CHIR	Chirikof Islan	15.75	66	P	Pn	22 21 19.1	-1.3
	comp=Z,335nm,0.8s						
CHIR	Chirikof Islan	15.75	66	P	Pn	22 21 19.6	-0.8
	baz=267,SNR=6.2						
J16K	Anvik River	15.88	36	P	P	22 21 23.4	+0.2
	baz=234,SNR=25						
G15K	Niukluk	15.88	28	P	P	22 21 23.1	-0.1
	baz=223,SNR=41						
P17K	Kvichak River	15.89	53	P	P	22 21 23.9	+0.6
	baz=254,SNR=108						
Q17K	Contact Creek	15.94	57	P	P	22 21 24.3	+0.3
	baz=258						
N17K	Nushagak Hills	15.96	48		P	22 21 23.3	-0.9
N17K	Nushagak Hills	15.96	48	P	P	22 21 24.6	+0.4
	baz=248,SNR=66						
L17K	Donlin	16.16	42	P	P	22 21 26.9	+0.6
	baz=242						
H16K	Elim	16.18	31	P	P	22 21 26.8	+0.3
	baz=227,SNR=50						
M17K	Holitna River	16.20	45	P	P	22 21 27.7	+0.9
	baz=245						
I17K	Unalakleet	16.21	34	P	P	22 21 27.8	+1.0
	baz=232,SNR=32						
F15K	North Star Dit	16.25	26	P	P	22 21 28.3	+1.0
	baz=220,SNR=53						
K17K	Iditarod	16.45	40	P	P	22 21 31.1	+1.7
	baz=240						
Q18K	Katmai Hardscr	16.47	56	P	P	22 21 30.7	+0.8
	baz=258,SNR=95						
J17K	VABM Dome	16.51	37	P	P	22 21 31.6	+1.5
	baz=236						
P18K	Big Mountain,	16.54	53	P	P	22 21 31.2	+0.7
	baz=255,SNR=75						
SII	Sitkinak Islan	16.60	63	Pn	Pn	22 21 28.7	-2.2
SII	Sitkinak Islan	16.60	63	P	Pn	22 21 29.9	-1.0
	comp=Z,131nm,0.7s						
SII	Sitkinak Islan	16.60	63	P	Pn	22 21 29.0	-1.9
	baz=266						
N18K	Kilae Creek	16.62	48	P	P	22 21 32.1	+0.7
	baz=250,SNR=98						
G16K	Koyuk River	16.67	29	P	P	22 21 33.1	+1.2
	baz=225						
O18K	Koktuh Hills	16.68	51	P	P	22 21 33.3	+1.2
	baz=253,SNR=176						
M18K	Stony River	16.94	46	P	P	22 21 36.5	+1.5
	baz=247,SNR=75						
H17K	Granite Mounta	17.13	32	P	Pn	22 21 38.6	+1.4
	baz=231						
OHAK	Old Harbor	17.15	61	P	P	22 21 35.4	-1.9
	comp=Z,142nm,0.7s						
OHAK	Old Harbor	17.15	61	P	P	22 21 34.8	-2.5
	baz=264,SNR=14						
BILL	Bilibino	17.18	344		Pn	22 21 38.2	+0.4
BILL	Bilibino	17.18	344	deP	Pn	22 21 38.5	+0.7
BILL				pmax	pmax		
	comp=Z,162nm,1.0s						
O19K	Port Alsworth	17.20	51	P	Pn	22 21 39.5	+1.4
	baz=254,SNR=240						
MA2	Magadan	17.22	307	P	Pn	22 21 38.4	+0.1
	comp=Z,35nm,0.7s,baz=92,slow=10,SNR=37						
MA2				ScP	ScP	22 29 37.1	-0.5
	comp=Z,11nm,0.5s,baz=121,slow=4.2,SNR=12						
MA2	Magadan	17.22	307	P	Pn	22 21 37.9	-0.4
MA2	Magadan	17.22	307	deP	Pn	22 21 38.8	+0.4
MA2				pmax	pmax		
	comp=Z,38nm,0.7s						
MA2	Magadan	17.22	307	P	Pn	22 21 38.7	+0.4
	comp=Z,69nm,0.9s						
Q19K	Cape Douglas,	17.23	55	P	Pn	22 21 37.9	-0.6
	baz=258,SNR=42						
G17K	Kiwalik Mounta	17.26	30	P	Pn	22 21 39.9	+1.2
	baz=228						
N19K	Bonanza Creek	17.31	49	P	Pn	22 21 41.0	+1.5
	baz=251,SNR=144						
J18K	Innoko River	17.45	39	P	Pn	22 21 42.0	+0.9
	baz=240						
P19K	Oil Pt	17.59	53	P	Pn	22 21 43.4	+0.5
	baz=257,SNR=88						
KDAK	Kodiak Island	17.59	59	P	P	22 21 40.6	-1.5
	comp=Z,133nm,0.6s,baz=255,slow=3.9,SNR=130						
KDAK				ScP	ScP	22 29 37.3	-1.0
	comp=Z,8.2nm,0.8s,baz=258,slow=2.2,SNR=6.6						
KDAK	Kodiak Island	17.59	59	P	P	22 21 40.0	-2.1
KDAK	Kodiak Island	17.59	59	⇑eP	P	22 21 40.4	-1.7
KDAK				pmax	pmax		
	comp=Z,162nm,0.9s						
KDAK	Kodiak Island	17.59	59	P	P	22 21 40.3	-1.9
	baz=263						
L19K	White Mountain	17.64	44	P	Pn	22 21 44.0	+0.6
	baz=247,SNR=122						
SEY	Seymchan	17.66	319	P	P	22 21 42.0	-0.7
	comp=Z,4.9nm,0.7s,baz=121,slow=13,SNR=16						
SEY				PcP	PcP	22 26 16.4	+1.6
	comp=Z,3.7nm,0.7s,baz=182,slow=2.8,SNR=4.0						
SEY				ScP	ScP	22 29 37.2	-1.2
	comp=Z,9.0nm,0.5s,baz=106,slow=4.5,SNR=23						
SEY	Seymchan	17.66	319	⇓eP	Pn	22 21 43.3	-0.3
SEY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
F17K	Baldwin Pennin	17.73	27	P	Pn	22 21 45.2	+0.8
	baz=225						
M19K	Big River Lodg	17.73	45	P	Pn	22 21 45.4	+0.8
	baz=248						
H18K	Honhosa River	17.78	33	P	Pn	22 21 46.1	+1.0
	baz=233						
Q20K	Shuyak Island	17.81	57	P	P	22 21 44.0	-0.4
	baz=261,SNR=12						
RED	Redoubt Volcan	18.00	51	P	Pn	22 21 46.8	-1.1
E17K	Hotham Inlet	18.04	25	P	Pn	22 21 48.3	+0.2
	baz=222,SNR=59						
GCSA	Galena City Sc	18.06	35	P	Pn	22 21 48.5	+0.2
	baz=237,SNR=34						
J19K	Poorman	18.13	38	P	Pn	22 21 49.4	+0.2
	baz=241,SNR=68						
G18K	Tagagawik	18.14	31	P	Pn	22 21 49.5	+0.1
	baz=231						
C16K	Lisburne Hills	18.15	20	P	Pn	22 21 49.8	+0.4
	baz=214,SNR=35						
D17K	Noatak River	18.19	23	P	Pn	22 21 50.4	+0.5
	baz=219,SNR=38						
M20K	Styx River	18.28	46	P	Pn	22 21 51.4	+0.2
	baz=250,SNR=134						
F18K	Selawik	18.30	28	P	Pn	22 21 51.4	+0.2
	baz=227,SNR=42						
HOM	Homer	18.38	53	P	Pn	22 21 52.0	-0.2
	baz=258,SNR=20						
K20K	Telida	18.45	41	P	Pn	22 21 53.2	+0.1
	baz=245,SNR=98						
SPCR	Spurr Chakacha	18.49	49	P	Pn	22 21 53.3	-0.2
	baz=253,SNR=84						
RDOG	Red Dog Mine	18.51	22	P	Pn	22 21 53.8	+0.1
	baz=219,SNR=28						
E18K	Tukpahlearik C	18.61	26	P	Pn	22 21 54.9	0.0
	baz=224						
H19K	Roundabout Mou	18.65	34	P	Pn	22 21 55.6	+0.3
	baz=235						
BRLK	Bradley Lake	18.78	53	P	P	22 21 54.0	-1.1
C17K	DeLong Mountai	18.78	21	P	Pn	22 21 56.7	-0.2
	baz=217						
J20K	Nowinta River	18.79	39	P	Pn	22 21 56.6	-0.4
	baz=242,SNR=116						
G19K	Purcell Mounta	18.80	32	P	Pn	22 21 56.3	-0.9
	baz=233						
BRSE	Bradley Lake S	18.84	54	P	P	22 21 55.4	-0.4
	baz=259,SNR=67						
CAPN	Captain Cook N	18.87	50	P	Pn	22 21 58.7	+0.8
	baz=256,SNR=17						
I20K	Naaghedeneel	18.96	37	P	Pn	22 21 58.4	-0.6
	baz=240						
F19K	Shaleruckik Mo	19.02	29	P	Pn	22 21 58.7	-0.9
	baz=230,SNR=104						
SKT	Skwentna	19.03	47	P	Pn	22 21 58.9	-0.9
SKT	Skwentna	19.03	47	P	Pn	22 21 59.6	-0.3
	baz=252,SNR=123						
PPLA	Purkeypile	19.05	44	P	Pn	22 21 59.8	-0.5
	baz=249,SNR=92						
H20K	Anotleneega Mo	19.18	35	P	Pn	22 22 00.3	-1.3
	baz=238						
SUA	Susitna One	19.24	48	P	P	22 22 00.4	+0.2
	baz=254,SNR=82						
C18K	Utukok River	19.38	23	P	Pn	22 22 02.9	-1.0
	baz=221						
CHUM	Lake Minchumin	19.39	41	P	Pn	22 22 03.5	-0.4
	baz=246,SNR=155						
O22K	Cooper Landing	19.49	52	P	P	22 22 02.9	+0.2
	baz=258,SNR=16						
SEW	Seward	19.55	53	P	P	22 22 01.9	-1.5
	baz=260,SNR=56						
M22K	Willow	19.60	48	P	P	22 22 03.4	-0.5
	baz=254						
RC01	Rabbit Creek A	19.62	50	P	P	22 22 04.1	0.0
	baz=257,SNR=46						
CUT	Chulitna	19.72	46	P	Pn	22 22 06.0	-1.9
CUT	Chulitna	19.72	46	P	P	22 22 05.4	+0.1
	baz=252						
F20K	Avaraart Lake	19.79	30	P	Pn	22 22 06.7	-1.8
	baz=233						
H21K	Melozitna Rive	20.00	36	P	Pn	22 22 09.6	-1.6
	baz=241,SNR=164						
BPAW	Bear Paw Mtn.	20.01	41	P	Pn	22 22 09.7	-1.6
	baz=247,SNR=80						
PMR	Palmer	20.02	49	P	P	22 22 08.3	-0.1
PMR	Palmer	20.02	49	P	P	22 22 08.7	+0.3
	comp=Z,58nm,0.6s						
PMR	Palmer	20.02	49	P	P	22 22 08.3	-0.1
PMR	Palmer	20.02	49	P	P	22 22 08.3	-0.1
	baz=256,SNR=19						
D19K	Kuna River	20.04	25	P	Pn	22 22 09.9	-1.7
	baz=226						
TRF	Thorofare Moun	20.06	43	P	P	22 22 09.6	+0.6
	baz=250,SNR=95						
I21K	Tanana	20.08	37	P	Pn	22 22 10.6	-1.5
	baz=243						
C19K	Lookout Ridge	20.10	23	P	Pn	22 22 10.5	-1.9
	baz=222						
G21K	Allakaket	20.20	33	P	Pn	22 22 11.5	-1.9
	baz=238						
KNK	Knik Glacier	20.29	49	P	P	22 22 11.2	-0.2
	baz=257,SNR=59						
SML	Sawmill	20.44	48	P	P	22 22 12.0	-1.0
	baz=256,SNR=62						
P23K	Montague Islan	20.55	54	P	P	22 22 14.0	-0.2
P23K	Montague Islan	20.55	54	P	P	22 22 13.1	-1.1
	baz=262,SNR=13						
D20K	Etivluk River	20.59	26	P	Pn	22 22 15.5	-2.6
	baz=228						
F21K	Alatna River	20.60	31	P	Pn	22 22 15.7	-2.4
	baz=236						
WAT1	Susitna Watana	20.61	45	P	P	22 22 14.2	-0.6
	baz=254						
RND	Reindeer	20.65	44	P	P	22 22 15.3	-0.1
RND	Reindeer	20.65	44	P	P	22 22 15.3	-0.1
M23K	Glacier View	20.72	48	P	P	22 22 15.6	-0.4
	baz=257,SNR=69						
MCK	McKinley	20.72	43	P	P	22 22 15.7	-0.4
	baz=251,SNR=56						
GLI	Glacier Island	20.84	51	P	P	22 22 16.2	-1.0
	baz=260						
WAT6	Susitna Watana	20.90	46	P	P	22 22 17.4	-0.7
	baz=255,SNR=102						
SCM	Sheep Creek Mo	20.91	48	P	P	22 22 17.8	-0.4
	baz=258,SNR=48						
NEA2	Nenana	20.97	40	P	P	22 22 19.1	+0.4
	baz=248,SNR=104						
Q23K	Middleton Isla	21.01	55	P	P	22 22 19.1	0.0
	baz=265						
I23K	Minto, Yukon-K	21.07	39	P	P	22 22 20.1	+0.4
	baz=247,SNR=63						
E21K	Killik River	21.16	28	P	P	22 22 20.6	-0.1
	baz=233						
DHY	Denali Highway	21.19	45	P	P	22 22 20.5	-0.7
DHY	Denali Highway	21.19	45	P	P	22 22 20.7	-0.5
	baz=254,SNR=134						
EYAK	Cordova Ski Ar	21.44	52	P	P	22 22 23.8	+0.1
	comp=Z,139nm,1.1s						
EYAK	Cordova Ski Ar	21.44	52	P	P	22 22 23.1	-0.6
	baz=262,SNR=8.5						
KLU	Klutina	21.50	50	P	P	22 22 23.6	-0.8
	baz=260,SNR=56						
M24K	Tolsona, Glenn	21.50	48	P	P	22 22 24.6	+0.1
	baz=258,SNR=46						
G23K	Bananza Creek	21.50	35	P	P	22 22 25.0	+0.6
	baz=242						
COLA	College	21.56	40	P	P	22 22 24.6	-0.3
COLA	College	21.56	40	P	P	22 22 25.5	+0.6
	comp=Z,86nm,1.0s						
COLA	College	21.56	40	P	P	22 22 24.6	-0.3
COLA	College	21.56	40	P	P	22 22 24.9	0.0
	baz=249						
COLD	Coldfoot	21.69	33	P	P	22 22 26.5	+0.2
	baz=241,SNR=32						
HDA	Harding Lake	21.77	42	P	P	22 22 26.9	-0.3
	baz=252,SNR=54						
D22K	Ayikyak River	21.80	28	P	P	22 22 27.8	+0.3
	baz=234						
POKR	Poker Plat Res	21.81	40	P	P	22 22 27.6	-0.1
	baz=249,SNR=50						
H24K	Noodor Dome	21.91	38	P	P	22 22 28.9	+0.2
	baz=247						
ILAR	Eielson Array	21.91	41	P	P	22 22 26.6	-2.1
	comp=Z,19nm,0.6s,baz=241,slow=9.2,SNR=156						
ILAR				ScP	ScP	22 29 45.8	-2.6
	comp=Z,7.5nm,0.7s,baz=285,slow=3.4,SNR=30						
ILAR				LR	LR	22 30 57.0	
	comp=Z,175nm,18.0s,baz=257,slow=36						
	comp=Z,19nm,0.6s						
ILAR	Eielson Array	21.91	41	P	P	22 22 26.3	-2.4
PAX	Paxson	22.01	46	P	P	22 22 29.1	-0.7
	baz=257,SNR=70						
HARP	HAARP	22.03	48	P	P	22 22 29.4	-0.5
	baz=258,SNR=22						
KAIM	Kayak Island	22.03	54	P	P	22 22 31.4	+1.4
	baz=265						
BMRM	Bremner River	22.05	51	P	P	22 22 29.6	-0.6
	baz=263,SNR=22						
K24K	Donnelly Dome	22.08	44	P	P	22 22 29.6	-0.9
	baz=254,SNR=40						
N25K	Chitina, Valde	22.14	50	P	P	22 22 30.7	-0.5
	baz=261,SNR=40						
TYV	Tymovskoe	22.19	281	eP	P	22 22 32.9	+1.2
TYV				eS	S	22 26 31.9	+4.3
TYV				pmax	pmax		
	comp=Z,600nm,2.0s						
TYV				pmax	pmax		
	comp=Z,95nm,0.8s						
TYV				smax	smax		
	comp=E,15nm,0.9s						
TYV				smax	smax		
	comp=N,1µm,7.7s						
E23K	Chandalar	22.30	32	P	P	22 22 32.9	+0.2
	baz=240						
SUCK	Suckling Hills	22.37	54	P	P	22 22 33.7	+0.3
G24K	Hadweenzic Riv	22.41	36	P	P	22 22 34.6	+0.8
	baz=246						
A21K	Barrow	22.43	21	P	P	22 22 33.3	-0.5
	baz=223,SNR=17						
D23K	Nanushuk River	22.45	29	P	P	22 22 34.6	+0.5
	baz=236						
RIDG	Independent Ri	22.47	44	P	P	22 22 33.3	-1.1
	baz=256,SNR=50						
J25K	Salcha River,	22.48	42	P	P	22 22 32.4	-2.2
	baz=253,SNR=36						
B22K	Teshekpuk Lake	22.51	25	P	P	22 22 30.6	-4.0
	baz=230						
A22K	Sinclair Lake	22.57	22	P	P	22 22 35.1	-0.1
	baz=226						
TOLK	Toolik Lake Re	22.61	30	P	P	22 22 36.1	+0.3
	baz=239						
E24K	Your Creek	22.68	32	P	P	22 22 36.9	+0.4
	baz=241						
PRP	Porcupine Dome	22.70	39	P	P	22 22 35.5	-1.3
	baz=251,SNR=76						
CRQM	Cirque	22.74	52	P	P	22 22 37.1	-0.2
CRQE	Cirque	22.76	52	P	P	22 22 37.4	0.0
	baz=265,SNR=54						
MENT	Mentasta	22.78	46	P	P	22 22 38.2	+0.7
	comp=N,170nm,0.7s						
MCARA	McCarthy VSAT	22.86	51	P	P	22 22 38.3	+0.1
	baz=263,SNR=19						
SCRK	Sand Creek	22.89	44	P	P	22 22 37.6	-1.1
	baz=256,SNR=78						
L26K	Log Cabin Wild	22.97	46	P	P	22 22 39.6	+0.4
	baz=259						
M26K	Nabesna, AK	23.02	48	P	P	22 22 39.2	-0.6
M26K	Nabesna, AK	23.02	48	P	P	22 22 39.9	+0.2
	baz=261						
YUK	Yuzh-Kuril'sk	23.02	263	diP	P	22 22 40.1	+0.2
UGL	Uglegorsk	23.14	277	eP	P	22 22 42.5	+1.6
UGL				pmax	pmax		
	comp=Z,300nm,0.7s						
J26L	Joseph Creek	23.20	43	P	P	22 22 40.8	-0.7
	baz=255						
MESA	MESA	23.29	54	P	P	22 22 42.3	-0.1
	baz=267,SNR=7.2						
GRNC	Granite Creek	23.42	52	P	P	22 22 43.4	-0.2
F25K	Christian Rive	23.43	34	P	P	22 22 44.3	+0.8
	baz=246						
M27K	Edge Creek, AK	23.53	48	P	P	22 22 44.8	+0.3
	baz=262,SNR=39						
YSS	Yuzhno-Sakhali	23.55	272	P	P	22 22 46.0	+1.3
YSS	Yuzhno-Sakhali	23.55	272	P	P	22 22 46.7	+2.0
	comp=Z,299nm,0.9s						
YSS	Yuzhno-Sakhali	23.55	272	diP	P	22 22 46.0	+1.3
YSS				pmax	pmax		
	comp=Z,167nm,0.9s						
CTG	Chitna Glacier	23.64	52	P	P	22 22 45.6	+0.1
	baz=266,SNR=35						
L27K	Beaver Creek,	23.66	47	P	P	22 22 45.7	+0.1
	baz=261						
E25K	Arctic Village	23.67	33	P	P	22 22 46.6	+0.9
E25K	Arctic Village	23.67	33	P	P	22 22 46.9	+1.2
	baz=245,SNR=176						
BCAR	Beaver Creek A	23.68	47	P	P	22 22 45.7	-0.1
BMAR	Burnt Mountain	23.74	35	P	P	22 22 46.9	+0.6
G26K	Porcupine Rive	23.85	37	P	P	22 22 48.1	+0.9
	baz=250						
D25K	Kavik River	23.95	30	P	P	22 22 49.1	+0.9
	baz=242						
F26K	Sheenjek River	23.99	35	P	P	22 22 49.8	+1.2
	baz=248						
BVCY	Beaver Creek	24.00	48	P	P	22 22 48.6	-0.1
	baz=263,SNR=82						
YUK3	Moose Creek	24.12	50	P	P	22 22 49.9	-0.1
	baz=265,SNR=110						
PINM	Pinnacle	24.13	54	P	P	22 22 49.6	-0.3
	baz=269,SNR=22						
O28M	Mount Upton	24.18	52	P	P	22 22 50.5	-0.2
	baz=267,SNR=181						
I27K	Kandik River	24.28	40	P	P	22 22 50.2	-1.0
	baz=255,SNR=34						
YUK8	Steele Glacier	24.42	51	P	P	22 22 52.1	-0.7
	baz=267,SNR=68						
BCPM	Bancas Point	24.44	54	P	P	22 22 52.5	-0.2
H27K	Steamboat Moun	24.48	39	P	P	22 22 51.7	-1.4
	baz=254						
G27K	Doyon Strip	24.60	38	P	P	22 22 54.5	+0.4
	baz=253						
DAWY	Dawson	24.89	45	P	P	22 22 57.3	+0.5
	baz=261,SNR=132						
I28M	Miner Creek	24.93	41	IAmb	IAmb	22 22 57.9	
	comp=Z,127nm,0.8s						
I28M	Miner Creek	24.93	41	P	P	22 22 57.0	-0.1
	baz=257						
C27K	Jago River	24.93	31	IAmb	IAmb	22 22 58.8	
	comp=Z,94nm,0.6s						
C27K	Jago River	24.93	31	P	P	22 22 57.8	+0.9
	baz=244						
YUK4	Talbot Arm	24.96	51	P	P	22 23 00.7	+3.1
	baz=267,SNR=182						
O29M	Mount Kennedy	24.97	54	P	P	22 22 58.5	+0.9
	baz=270,SNR=42						
JKA	Kamikawa-asahi	24.99	266	P	P	22 22 58.5	+0.8
JKA				IAmb	IAmb	22 23 00.1	
	comp=Z,96nm,0.8s						
ASAJ	Asahikawa	24.99	266	LR	LR	22 33 33.7	
	comp=Z,33nm,19.5s,baz=54,slow=38						
ASAJ	Asahikawa	24.99	266	P	P	22 22 58.5	+0.7
ASAJ				pmax	pmax		
	comp=Z,96nm,0.8s						
E27K	Coleen River	25.07	35	IAmb	IAmb	22 23 02.2	
	comp=Z,108nm,0.8s						
E27K	Coleen River	25.07	35	P	P	22 22 59.5	+1.1
	baz=250						
YUK6	Outpost Mounta	25.09	52	P	P	22 22 58.7	0.0
	baz=269,SNR=22						
M29M	Somme Creek	25.12	49	P	P	22 22 59.0	+0.2
	baz=265,SNR=92						
L29M	L29M	25.33	47	P	P	22 23 00.9	+0.1
	baz=264						
J29N	Klondike Camp	25.46	44	P	P	22 23 02.4	+0.5
	baz=261,SNR=12						
HYT	Haines Junctio	25.50	52	P	P	22 23 02.6	+0.2
	baz=270,SNR=86						
F28M	Old Crow	25.51	36	P	P	22 23 03.0	+0.8
F28M	Old Crow	25.51	36	P	P	22 23 02.8	+0.6
	baz=253,SNR=41						
I29M	Ogilvie Camp,	25.58	42	IAmb	IAmb	22 23 06.3	
	comp=Z,100nm,0.8s						
I29M	Ogilvie Camp,	25.58	42	P	P	22 23 02.5	-0.4
	baz=259						
D27M	Malcolm River	25.66	32	IAmb	IAmb	22 23 08.3	
	comp=Z,128nm,0.8s						
D27M	Malcolm River	25.66	32	P	P	22 23 05.0	+1.2
	baz=248						
K29M	Barlow Dome	25.68	45	IAmb	IAmb	22 23 12.5	
	comp=Z,66nm,0.7s						
K29M	Barlow Dome	25.68	45	P	P	22 23 04.4	+0.4
	baz=263,SNR=34						
P30M	Million Dollar	25.78	54	P	P	22 23 07.8	+2.9
	baz=272,SNR=19						
JEM	Erimo	25.79	261	P	P	22 23 05.9	+0.9
	comp=Z,93nm,0.9s						
M30M	Minto, Yukon	25.90	48	IAmb	IAmb	22 23 11.6	
	comp=Z,101nm,0.7s						
M30M	Minto, Yukon	25.90	48	P	P	22 23 10.3	+4.5
	baz=267						
E28M	Babbage River	25.93	34	P	P	22 23 07.2	+1.1
	baz=252						
GRNR	Gornyy	25.98	284	⇓iP	P	22 23 07.3	+0.6
GRNR				pmax	pmax		
	comp=E,30nm,0.6s						
GRNR				pmax	pmax		
	comp=N,10.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,70nm,1.1s						
G29M	Pine Creek	26.02	38	IAmb	IAmb	22 23 08.6	
	comp=Z,66nm,0.7s						
G29M	Pine Creek	26.02	38	P	P	22 23 07.4	+0.5
	baz=256						
O30N	Mendenhall	26.20	52	P	P	22 23 08.8	+0.2
	baz=271,SNR=8.5						
J30M	Hart River	26.29	44	P	P	22 23 09.4	0.0
J30M				IAmb	IAmb	22 23 10.8	
	comp=Z,51nm,0.8s						
J30M	Hart River	26.29	44	P	P	22 23 10.0	+0.5
	baz=263						
S31K	Pelican	26.31	59	P	P	22 23 10.2	+0.7
	baz=277						
N31M	Braeburn, Yuko	26.34	51	IAmb	IAmb	22 23 28.5	
	comp=Z,72nm,0.7s						
N31M	Braeburn, Yuko	26.34	51	P	P	22 23 10.5	+0.6
	baz=270						
I30M	Mount Dempster	26.35	42	IAmb	IAmb	22 23 22.8	
	comp=Z,52nm,0.7s						
I30M	Mount Dempster	26.35	42	P	P	22 23 10.4	+0.4
	baz=262						
EPYK	Eagle Plains	26.41	40	IAmb	IAmb	22 23 11.6	

comp=Z,110nm,0.9s
EPYK Eagle Plains 26.41 40 P P 22 23 10.0 -0.4
baz=259
D28M Stokes Point 26.44 33 P P 22 23 11.6 +1.1
baz=251
E29M Blow River 26.44 35 P P 22 23 11.5 +0.9
baz=254,SNR=41
SKAG Skagway 26.64 55 P P 22 23 13.6 +1.1
baz=274
WHY Whitehorse 26.79 53 P P 22 23 14.9 +0.9
baz=272
SIT Sitka 26.92 61 P P 22 23 15.1 +0.1
baz=279
M31M Drury Creek, Y 27.00 49 P P 22 23 15.8 0.0
baz=270,SNR=46
F30M Barrier River 27.02 37 IAmb IAmb 22 23 18.2
comp=Z,90nm,0.9s
F30M Barrier River 27.02 37 P P 22 23 16.7 +0.8
baz=258
R32K Eaglecrest 27.18 58 P P 22 23 17.6 +0.3
baz=277,SNR=5.1
S32K Killisnoo 27.26 60 IAmb IAmb 22 23 20.1
comp=Z,60nm,1.0s
S32K Killisnoo 27.26 60 P P 22 23 18.3 +0.3
baz=279,SNR=5.6
H31M Peel River 27.27 41 P P 22 23 18.0 -0.1
baz=263,SNR=32
P32M Atlin 27.45 55 P P 22 23 20.1 +0.3
P32M Atlin 27.45 55 P P 22 23 20.1 +0.3
baz=275,SNR=11
G31M Satah River 27.47 39 IAmb IAmb 22 23 21.0
comp=Z,67nm,0.6s
G31M Satah River 27.47 39 P P 22 23 19.8 0.0
baz=261
FARO Faro, Yukon 27.49 49 P P 22 23 20.6 +0.5
baz=270,SNR=8.7
N32M Quiet Lake 27.65 52 IAmb IAmb 22 23 27.2
comp=Z,44nm,0.7s
N32M Quiet Lake 27.65 52 P P 22 23 22.0 +0.4
baz=273
YAK Yakutsk 27.73 310 LR LR 22 33 29.8
comp=Z,71nm,20.0s,baz=108,slow=34
YAK Yakutsk 27.73 310 P P 22 23 20.5 -1.6
YAK Yakutsk 27.73 310 *e*P P 22 23 20.3 -1.8
YAK *e**PP **pwP** 22 23 49.7 -2.8
YAK *e* 22 24 13.1
YAK *e* 22 26 34.6
YAK *e*S **S** 22 27 53.5 -1.7
YAK *e**SS **sS** 22 28 42.7 +1.5
YAK pmax pmax
comp=Z,44nm,1.2s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,26nm,1.2s
YAK pmax pmax
comp=Z,79nm,3.0s
YAK pmax pmax
comp=N,157nm,7.4s
YAK pmax pmax
comp=E,338nm,5.8s
YAK smax smax
comp=N,190nm,5.6s
YAK smax smax
comp=E,176nm,5.0s
F31M Tsiigehtchic 27.76 38 IAmb IAmb 22 23 23.8
comp=Z,52nm,0.7s
F31M Tsiigehtchic 27.76 38 P P 22 23 22.7 +0.4
baz=260,SNR=43
P33M Teslin, Yukon 27.84 54 IAmb IAmb 22 23 25.2
comp=Z,76nm,1.4s
P33M Teslin, Yukon 27.84 54 P P 22 23 23.8 +0.5
baz=275,SNR=13
INK Inuvik 28.00 36 P P 22 23 25.1 +0.7
comp=Z,21nm,0.4s,baz=265,slow=7.1,SNR=151
INK SCP **ScP** 22 30 03.2 -2.1
comp=Z,14nm,0.8s,baz=257,slow=2.1,SNR=22
comp=Z,21nm,0.4s
INK Inuvik 28.00 36 P P 22 23 24.4 -0.1
INK Inuvik 28.00 36 P P 22 23 24.4 -0.1
INK pmax pmax
comp=Z,29nm,0.8s
INK Inuvik 28.00 36 P P 22 23 24.8 +0.3
baz=259,SNR=42
Q32M Nakina River 28.25 56 IAmb IAmb 22 23 29.4
comp=Z,40nm,0.8s
Q32M Nakina River 28.25 56 P P 22 23 27.9 +0.8
baz=278
U33K Whale Pass 28.29 62 P P 22 23 27.9 +0.7
baz=282
CRAG Craig 28.43 64 P P 22 23 29.2 +0.7
baz=283
MMPY Sheldon Lake, 28.46 48 IAmb IAmb 22 23 36.9
comp=Z,59nm,0.7s
MMPY Sheldon Lake, 28.46 48 P P 22 23 29.6 +0.9
baz=272,SNR=22
WRAK Wrangell Islan 28.65 61 P P 22 23 31.4 +1.0
baz=282
R33M Jennings River 28.86 55 IAmb IAmb 22 23 34.6
comp=Z,45nm,0.8s
R33M Jennings River 28.86 55 P P 22 23 33.5 +1.1
baz=278,SNR=20
S34M Telegraph Cree 29.01 58 P P 22 23 34.5 +1.0
baz=280,SNR=7.4
TIXI Tiksi 29.28 330 LR LR 22 35 48.2
comp=Z,132nm,18.1s,baz=182,slow=37
TIXI Tiksi 29.28 330 P P 22 23 34.6 -1.2
TIXI Tiksi 29.28 330⇑ *e*P P 22 23 35.3 -0.5
TIXI pmax pmax
comp=Z,10.0nm,1.0s
V35K Ketchikan 29.30 63 IAmb IAmb 22 23 38.3
comp=Z,106nm,1.4s
V35K Ketchikan 29.30 63 P P 22 23 37.0 +0.9
baz=284
KLR Kul'dur 29.35 283 *d* iP P 22 23 36.8 +0.1
KLR pmax pmax
comp=Z,26nm,0.6s
DLBC Dease Lake 29.49 57 P P 22 23 38.5 +0.6
comp=Z,22nm,0.7s,baz=267,slow=9.7,SNR=35
DLBC LR LR 22 33 54.8
comp=Z,66nm,20.5s,baz=276,slow=33
comp=Z,22nm,0.7s
DLBC Dease Lake 29.49 57 P P 22 23 39.4 +1.4
baz=280,SNR=11
T35M Bob Quinn 29.66 60 IAmb IAmb 22 23 41.8
comp=Z,46nm,0.8s
T35M Bob Quinn 29.66 60 P P 22 23 40.9 +1.5
baz=282,SNR=11
ZEA Zeya 30.41 294 *e*P P 22 23 45.4 -0.6
ZEA pmax pmax
comp=N,20nm,0.6s
ZEA pmax pmax
comp=E,20nm,0.6s
ZEA pmax pmax
comp=Z,60nm,0.8s
A36M Sachs Harbour 31.43 30 P P 22 23 55.9 +1.1
A36M Sachs Harbour 31.43 30 P P 22 23 56.4 +1.7
baz=261,SNR=54
USRK Ussuriysk Ar. 31.51 274 P P 22 23 55.7 0.0
comp=Z,59nm,0.7s,baz=57,slow=10,SNR=58
USRK PcP **PcP** 22 26 46.5 +1.0
comp=Z,13nm,0.7s,baz=56,slow=2.2,SNR=11
comp=Z,59nm,0.7s
C36M Paulatuk 31.54 35 P P 22 23 56.4 +0.7
baz=266,SNR=33
HEH HeiHe 31.54 287⇓ *i*P P 22 23 54.7 -1.2
HEH PcP **PcP** 22 26 45.4 -0.1
HEH ScP **ScP** 22 30 17.2 0.0
HEH pmax pmax
comp=Z,100nm,0.8s
TOAD Toad River Com 31.87 55 P P 22 23 59.8 +1.0
baz=283,SNR=13
WRGLY Wrigley 31.97 47 IAmb IAmb 22 24 02.1
comp=Z,78nm,1.0s
WRGLY Wrigley 31.97 47 P P 22 24 00.7 +1.1
baz=277,SNR=18
VLA Vladivostok 32.14 273⇑ *e*P P 22 24 02.1 +0.8
VLA pmax pmax
comp=Z,117nm,1.3s
MAJO Matsushiro 32.19 257 P P 22 24 02.4 +0.6
MAJO IAmb IAmb 22 24 04.0
comp=Z,50nm,0.9s
MAJO Matsushiro 32.19 257 P P 22 24 02.7 +0.9
comp=Z,60nm,0.9s
MAJO Matsushiro 32.19 257 *d* iP P 22 24 02.7 +0.9
MAJO pmax pmax
comp=Z,49nm,1.0s
MJAR Matsushiro Arr 32.19 257 P P 22 24 02.9 +1.1
comp=Z,18nm,0.7s,baz=49,slow=7.2,SNR=41
MJAR PcP **PcP** 22 26 47.8 +0.3
comp=Z,3.2nm,0.5s,baz=82,slow=1.5,SNR=7.9
MJAR LR LR 22 36 13.1
comp=Z,34nm,21.6s,baz=38,slow=34
MJAR P3KP 22 56 44.4
comp=Z,1.0nm,0.4s,baz=214,slow=5.3,SNR=4.5
comp=Z,18nm,0.7s
MJAR Matsushiro Arr 32.19 257 P P 22 24 02.4 +0.6
MJAR IAmb IAmb 22 24 03.9
comp=Z,80nm,1.9s
MJAR Matsushiro Arr 32.19 257 P P 22 24 02.4 +0.6
MJAR pmax pmax
comp=Z,79nm,1.9s
KOTAN Kotaneelee Air 32.19 52 P P 22 24 02.6 +1.1
baz=282,SNR=40
BBB Bella Bella 32.25 68 LR LR 22 35 46.7
comp=Z,83nm,19.6s,baz=291,slow=34
MDJ Mudanjiang 32.77 277 P P 22 24 06.4 -0.4
MDJ pmax pmax
comp=Z,34nm,0.7s
PSTR Posyet 33.06 273 *d* iP P 22 24 09.9 +0.6
JGF Kuroka 33.33 257 IAmb IAmb 22 24 14.2
comp=Z,55nm,0.8s
JGF Kuroka 33.33 257 P P 22 24 13.4 +1.6
comp=Z,76nm,0.8s
H11N2 WAKE ISLAND Hy 33.40 200 T T 22 59 37.7
baz=11,slow=76,SNR=20
H11N3 WAKE ISLAND Hy 33.41 200 T T 22 59 39.6
baz=11,slow=76,SNR=20
H11N1 WAKE ISLAND Hy 33.42 200 T T 22 59 41.0
baz=11,slow=76,SNR=18
BNX BinXian 33.55 280 ⇓P P 22 24 12.6 -0.9
BNX pmax pmax
comp=Z,220nm,0.6s
H11S1 WAKE ISLAND Hy 34.63 200 T T 23 01 20.1
baz=11,slow=76,SNR=13
H11S2 WAKE ISLAND Hy 34.64 200 T T 23 01 13.0
baz=11,slow=76,SNR=16
H11S3 WAKE ISLAND Hy 34.64 200 T T 23 01 12.9
baz=11,slow=76,SNR=17
CN2 Changchun 35.74 278 ⇓P P 22 24 31.7 -0.7
CN2 sP sP 22 25 14.2 +1.5
CN2 PcP **PcP** 22 26 57.8 +0.2
CN2 S **S** 22 29 57.4 -2.7
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,150nm,3.5s
YKAW3 Yellowknife Wh 36.07 46 P P 22 24 35.1 +0.1
YKAW3 IAmb IAmb 22 24 36.6
comp=Z,50nm,0.8s
YKA Yellowknife Ar 36.09 47 P P 22 24 35.7 +0.5
comp=Z,25nm,0.8s,baz=288,slow=9.0,SNR=214
YKA ScP **ScP** 22 30 31.0 -2.0
comp=Z,4.4nm,1.0s,baz=291,slow=4.2,SNR=20
YKA LR LR 22 38 58.7
comp=Z,183nm,20.7s,baz=280,slow=35
comp=Z,25nm,0.8s
YKAW1 Yellowknife Wh 36.15 46 IAmb IAmb 22 24 37.3
comp=Z,42nm,0.8s
BOD Bodaibo 36.23 305 *e*P P 22 24 34.6 -1.8
BOD pmax pmax
comp=Z,47nm,0.9s
HILR Hailar Array B 36.32 290 P P 22 24 36.8 -0.5
comp=Z,8.4nm,0.4s,baz=68,slow=9.9,SNR=32
HILR PcP **PcP** 22 27 00.1 +0.8
comp=Z,2.7nm,0.6s,baz=116,slow=5.1,SNR=4.2
HILR ScP **ScP** 22 30 34.3 +0.1
comp=Z,5.3nm,0.7s,baz=90,slow=5.9,SNR=8.1
comp=Z,8.4nm,0.4s
HIA Hailar 36.45 290 IAmb IAmb 22 24 38.5
comp=Z,44nm,0.6s
HIA Hailar 36.45 290 P P 22 24 38.1 -0.4
comp=Z,74nm,1.1s
HIA Hailar 36.45 290 *d* iP P 22 24 37.9 -0.5
HIA pmax pmax
comp=Z,29nm,0.8s
HIA Hailar 36.45 290 P P 22 24 38.0 -0.5
LLLB Lillooet 36.46 68 IAmb IAmb 22 24 39.8
comp=Z,42nm,1.1s
JCJ Chichijima 36.78 242 LR LR 22 37 11.3
comp=Z,53nm,21.0s,baz=78,slow=32
JCJ Chichijima 36.78 242 P P 22 24 42.9 +1.5
comp=Z,138nm,0.8s
NLWA Neiton Lookou 36.78 74 IAmb IAmb 22 24 43.5
comp=Z,57nm,1.1s
GNW Green Mountain 37.32 73 IAmb IAmb 22 24 47.2
comp=Z,31nm,0.9s
KSRS Korea Array 37.91 268 P P 22 24 52.4 +1.6
comp=Z,29nm,0.8s,baz=59,slow=8.2,SNR=48
KSRS PcP **PcP** 22 27 05.5 +1.3
comp=Z,7.2nm,0.7s,baz=47,slow=2.9,SNR=11
comp=Z,29nm,0.8s
KSAR Wonju Array Be 37.94 268 P P 22 24 51.3 +0.3
KSAR Wonju Array Be 37.94 268 P P 22 24 51.3 +0.3
SNY Shenyang 37.97 277 ⇓P P 22 24 51.5 +0.2
SNY pmax pmax
comp=Z,54nm,0.8s
D05A Enumclaw 38.00 73 IAmb IAmb 22 24 53.2
comp=Z,45nm,0.9s
INCN Inchon 38.69 269 P P 22 24 58.6 +1.3
INCN Inchon 38.69 269 P P 22 24 58.6 +1.3
INCN pmax pmax
comp=Z,107nm,0.8s
JTU Tsushima 38.89 263 P P 22 24 59.5 +0.4
comp=Z,79nm,1.4s
H04D Lebanon 38.93 77 IAmb IAmb 22 25 01.0
comp=Z,38nm,0.7s
TJN Taejon 38.94 267 P P 22 25 00.9 +1.5
comp=Z,480nm,0.8s
JNU Nakatsue 38.94 260 P P 22 25 01.0 +1.5
comp=Z,51nm,0.9s,baz=49,slow=4.8,SNR=14
JNU LR LR 22 44 37.7
comp=Z,38nm,18.0s,baz=58,slow=41
comp=Z,51nm,0.9s
J01E Myrtle Point 38.95 80 IAmb IAmb 22 25 01.7
comp=Z,50nm,1.1s
BUCK Buck Mountain 38.96 78 P P 22 25 00.7 +1.0
B08A Colville Reser 38.98 70 IAmb IAmb 22 25 00.3
comp=Z,32nm,0.9s
HOOD Mount Hood Mea 39.16 75 IAmb IAmb 22 25 02.6
comp=Z,88nm,1.4s
H04A Deit Lake 39.18 76 IAmb IAmb 22 25 02.7
comp=Z,47nm,0.8s
KBO Bosley Butte 39.31 81 P P 22 25 04.0 +1.4
EPH Ephrata 39.32 71 P P 22 25 01.7 -0.8
EPH IAmb IAmb 22 25 02.9
comp=Z,43nm,1.1s
G05A Wamic 39.40 75 IAmb IAmb 22 25 10.4
comp=Z,40nm,0.9s
KSXB Camp Six Broad 39.74 81 IAmb IAmb 22 25 08.5
comp=Z,52nm,0.9s
WIFE Three Sisters- 39.74 77 IAmb IAmb 22 25 07.8
comp=Z,30nm,0.6s
L02F Cave Junction 39.76 81 P P 22 25 07.1 +0.9
L02F IAmb IAmb 22 25 08.5
comp=Z,42nm,0.7s
HAWA Hanford 39.86 73 IAmb IAmb 22 25 07.8
comp=Z,58nm,0.9s
BBOR Butler Butte 39.87 79 IAmb IAmb 22 25 09.5
comp=Z,55nm,1.1s
C09A Chrisman Ranch 39.87 70 IAmb IAmb 22 25 07.4
comp=Z,46nm,0.9s
F07A Phinny Hill Vi 39.88 73 IAmb IAmb 22 25 08.2
comp=Z,50nm,0.8s
KRMB Red Mountain 39.90 82 P P 22 25 08.5 +1.0
KRMB IAmb IAmb 22 25 09.8
comp=Z,25nm,0.6s
RES Resolute Bay 39.94 24 P P 22 25 07.8 +0.5
comp=Z,12nm,0.8s,baz=257,slow=12,SNR=42
RES ScP **ScP** 22 30 45.7 -1.8
comp=Z,5.9nm,0.9s,baz=322,slow=1.8,SNR=7.4
comp=Z,12nm,0.8s
J04A Umpqua Nationa 40.02 78 P P 22 25 08.9 +0.3
EDM Edmonton 40.04 60 P P 22 25 07.7 -0.7
EDM Edmonton 40.04 60 P P 22 25 07.7 -0.7
EDM pmax pmax
comp=Z,165nm,0.8s
E08A Dider Farm, El 40.08 72 IAmb IAmb 22 25 09.4
comp=Z,35nm,0.8s
NEW Newport 40.30 69 ScP **ScP** 22 30 48.3 -1.2
comp=Z,2.4nm,0.6s,baz=325,slow=2.8,SNR=5.1
NEW LR LR 22 40 46.7
comp=Z,62nm,19.2s,baz=296,slow=34
NEW Newport 40.30 69 P P 22 25 09.6 -1.1
NEW IAmb IAmb 22 25 10.9
comp=Z,63nm,1.0s
NEW Newport 40.30 69 P P 22 25 09.6 -1.1
NEW pmax pmax
comp=Z,63nm,1.0s
KHMM Horse Mountain 40.38 82 P P 22 25 12.6 +1.1
L04D Klamath Falls 40.48 80 IAmb IAmb 22 25 14.2
comp=Z,85nm,1.1s
YBH Yreka Blue Hor 40.51 81 LR LR 22 39 06.1
comp=Z,4.6nm,19.8s,baz=322,slow=32
YBH Yreka Blue Hor 40.51 81 P P 22 25 13.3 +0.9
YBH IAmb IAmb 22 25 15.0
comp=Z,45nm,0.8s
YBH Yreka Blue Hor 40.51 81 P P 22 25 13.4 +0.9
YBH pmax pmax
comp=Z,45nm,0.8s
J05D Fort Rock, OR 40.52 78 IAmb IAmb 22 25 14.6
comp=Z,109nm,1.4s
LNOR Lincton Mounta 40.87 73 P P 22 25 14.2 -1.2
DL2 Dalian 40.90 274 P P 22 25 15.8 +0.2
DL2 pmax pmax
comp=Z,120nm,0.6s
N02D Trinity Center 40.95 82 IAmb IAmb 22 25 18.7
comp=Z,138nm,1.6s
K05A Summer Lake 41.04 78 IAmb IAmb 22 25 18.6
comp=Z,48nm,0.6s
I07A Izee 41.12 76 IAmb IAmb 22 25 18.6
comp=Z,40nm,0.8s
M03C McCloud 41.13 81 IAmb IAmb 22 25 19.6
comp=Z,76nm,0.9s
KCPM Cahto Peak 41.18 84 IAmb IAmb 22 25 20.5
comp=Z,46nm,0.7s
XLT XiLinHaoTe 41.36 284 *e*P P 22 25 20.3 +0.8
XLT pP pP 22 25 46.2 -0.5
XLT PcP **PcP** 22 27 16.0 +0.7
XLT ScP **ScP** 22 30 54.5 +0.7
XLT pmax pmax
comp=Z,120nm,0.8s
XLT pmax pmax
comp=Z,120nm,4.2s
O02D Mt. Diablo Mer 41.38 83 P P 22 25 20.7 +1.1
O02D IAmb IAmb 22 25 22.3
comp=Z,92nm,1.2s
DCMP DeCamp, Califo 41.47 84 IAmb IAmb 22 25 22.4
comp=Z,41nm,0.7s
J08A Circle Bar Ran 42.14 76 IAmb IAmb 22 25 26.4
comp=Z,22nm,0.6s
ALE Alert 42.35 10 P P 22 25 27.6 +0.6
ALE x x 22 25 49.1
ALE pP **pwP** 22 25 55.4 -2.3
MNRC McLaughlin Min 42.38 84 P P 22 25 28.0 +0.3
MNRC IAmb IAmb 22 25 30.3
comp=Z,52nm,0.8s
ORV Oroville 42.54 82 IAmb IAmb 22 25 30.1
comp=Z,40nm,0.7s
WVOR Wild Horse Val 42.58 77 IAmb IAmb 22 25 30.1
comp=Z,30nm,0.6s
CVS Carmenet Viney 42.70 84 IAmb IAmb 22 25 32.0
comp=Z,77nm,0.8s
MSO Missoula 42.89 69 IAmb IAmb 22 25 31.9
comp=Z,38nm,0.9s
NRIK Noril'sk 43.02 329 P P 22 25 32.6 +0.2
comp=Z,20nm,0.8s,baz=85,slow=9.5,SNR=22
NRIK ScP **ScP** 22 30 59.8 0.0
comp=Z,6.0nm,0.7s,baz=55,slow=3.3,SNR=7.8
comp=Z,20nm,0.8s
NRIK Noril'sk 43.02 329 P P 22 25 31.5 -0.9
BLKN Baker Lake 43.30 39 IAmb IAmb 22 25 35.5
comp=Z,37nm,0.7s
BJI2 Beijing 43.57 280 P P 22 25 38.0 +0.7
BJI2 pP **pP** 22 26 03.8 -0.9
BJI2 sP **sP** 22 26 17.2 -1.1
BJI2 S **S** 22 31 56.6 -0.5
BJI2 pmax pmax
comp=Z,33nm,0.8s
BJI2 pmax pmax
comp=Z,100nm,4.1s
BJI2 LR LR
comp=Z,96nm,20.2s
BJT Baijiatuau 43.58 280 IAmb IAmb 22 25 40.5
comp=Z,49nm,0.8s
BJT Baijiatuau 43.58 280 P P 22 25 38.7 +1.4
comp=Z,76nm,0.8s
IRK Irkutsk 43.66 301 *e*P P 22 25 30.7 -7.1
IRK pmax pmax
comp=Z,44nm,1.6s
PAHR Pah Rah Range 43.74 81 IAmb IAmb 22 25 40.4
comp=Z,100nm,1.3s
MHC Mount Hamilton 43.83 85 IAmb IAmb 22 25 41.3
comp=Z,79nm,1.3s
CMB Columbia Colle 44.16 83 IAmb IAmb 22 25 44.1
comp=Z,57nm,1.2s
TLY Talaya 44.28 301 P P 22 25 42.3 -0.4
TLY Talaya 44.28 301 *d* iP P 22 25 43.1 +0.3
TLY pmax pmax
comp=Z,18nm,0.6s
TLY Talaya 44.28 301 P P 22 25 43.1 +0.3
TLY x x 22 26 04.6
TLY PcP **PcP** 22 27 26.0 +1.1
ULN Ulaanbaatar 44.44 294 P P 22 25 44.3 0.0
ULN IAmb IAmb 22 25 45.8
comp=Z,39nm,0.8s
ULN Ulaanbaatar 44.44 294 *d* iP P 22 25 44.7 +0.4
ULN pmax pmax
comp=Z,42nm,1.0s
ULN Ulaanbaatar 44.44 294 P P 22 25 44.3 0.0
EGMT Eagleton 44.62 65 IAmb IAmb 22 25 46.7
comp=Z,34nm,0.8s
SONM Songino Array 44.83 295 P P 22 25 48.1 +0.8
comp=Z,36nm,0.6s,baz=63,slow=8.1,SNR=314
SONM PcP **PcP** 22 27 27.5 +0.5
comp=Z,9.1nm,0.7s,baz=72,slow=2.6,SNR=8.5
SONM ScP **ScP** 22 31 08.3 +0.5
comp=Z,9.6nm,0.9s,baz=55,slow=3.2,SNR=27
comp=Z,36nm,0.6s
SONM Songino Array 44.83 295 P P 22 25 47.6 +0.3
SONM IAmb IAmb 22 25 49.0
comp=Z,37nm,0.6s
SONM Songino Array 44.83 295 P P 22 25 47.6 +0.3
SONM pmax pmax
comp=Z,37nm,0.6s
BOZ Bozeman (W) 44.91 69 IAmb IAmb 22 25 48.1
comp=Z,50nm,0.8s
HULI Fort Hunter Li 44.92 86 IAmb IAmb 22 25 50.4
comp=Z,57nm,0.9s
TULEG Thule 44.96 18 P P 22 25 47.0 -0.9
TULEG Thule 44.96 18 *i* P P 22 25 47.2 -0.6
TULEG IAmb IAmb 22 25 48.3
comp=Z,11nm,0.5s
JOW Kunigami 45.00 256 P P 22 25 50.1 +1.3
comp=Z,61nm,0.7s,baz=78,slow=7.2,SNR=8.5
comp=Z,61nm,0.7s
JOW Kunigami 45.00 256 P P 22 25 48.1 -0.7
JOW IAmb IAmb 22 25 50.8
comp=Z,97nm,1.0s
JOW Kunigami 45.00 256 P P 22 25 50.5 +1.7
comp=Z,119nm,1.1s
PMPB Monarch Peak 45.06 86 IAmb IAmb 22 25 53.1
comp=Z,51nm,0.8s
ZAK Zakamensk 45.16 299 *e*P P 22 25 49.4 -0.5
ZAK *e* 22 27 28.0
ZAK pmax pmax
comp=Z,33nm,1.5s
ZAK pmax pmax
comp=Z,12nm,1.5s
LHV Little Huntoon 45.18 82 IAmb IAmb 22 25 52.5
comp=Z,108nm,1.4s
NVAR Mina Array Bea 45.19 81 P P 22 25 51.1 +0.7
comp=Z,31nm,0.5s,baz=295,slow=7.5,SNR=200
NVAR pP **pP** 22 26 18.2 -0.1
comp=Z,9.9nm,0.7s,baz=295,slow=7.4,SNR=4.1
NVAR ScP **ScP** 22 31 07.9 -1.7
comp=Z,3.2nm,0.7s,baz=322,slow=4.5,SNR=11
comp=Z,31nm,0.5s
NVAR Mina Array Bea 45.19 81 P P 22 25 50.5 +0.1
FFC Flin Flon 45.20 54 P P 22 25 49.0 -1.0
FFC Flin Flon 45.20 54 P P 22 25 49.0 -1.0
FFC pmax pmax
comp=Z,16nm,0.9s
MDPB Devils Postpil 45.22 83 IAmb IAmb 22 25 52.7
comp=Z,62nm,0.7s
TIA Tai'an 45.37 275 P P 22 25 52.4 +0.8
TIA pmax pmax
comp=Z,220nm,0.7s
PKD Bear Valley Ra 45.40 86 IAmb IAmb 22 25 53.6
comp=Z,59nm,0.8s

YHL Hebgen Lake 45.59 70 lAmb lAmb 22 25 53.9
comp=Z,57nm,0.9s

ELK Elko 45.63 77 ScP **ScP** **22 31 10.5 -0.9**
comp=Z,1.0nm,0.7s,baz=228,slow=2.7,SNR=5.1

ELK Elko 45.63 77 lAmb lAmb 22 25 54.9
comp=Z,32nm,0.7s

YHB Horse Butte 45.65 70 P **P** **22 25 52.9 -1.0**
YHB lAmb lAmb 22 25 54.2
comp=Z,71nm,0.8s

MOY Mondy 45.69 302 *e*P **P** **22 25 54.4 +0.4**
MOY pmax pmax
comp=Z,29nm,1.4s

ILON Igloolik, Nuna 45.79 29 lAmb lAmb 22 25 55.7
comp=Z,62nm,0.7s

YMR Madison River 45.83 70 lAmb lAmb 22 25 55.7
comp=Z,49nm,1.0s

HHC Hu-ho-hao-te 45.86 284 ⇓*i*P **P** **22 25 56.8 +1.3**
HHC sP sP 22 26 34.6 -2.2
HHC pmax pmax
comp=Z,50nm,1.2s

YFT Old Faithful 46.03 70 lAmb lAmb 22 25 58.7
comp=Z,47nm,0.7s

DSP Deep Springs 46.07 82 lAmb lAmb 22 25 59.3
comp=Z,52nm,1.1s

HNS HongShan 46.10 278 ⇓P **P** **22 25 58.6 +1.3**
HNS pmax pmax
comp=Z,130nm,0.7s

H17A Grant Village 46.21 70 P **P** **22 25 58.3 -0.1**
H17A lAmb lAmb 22 26 00.1
comp=Z,46nm,1.0s

SSE Sheshan 46.28 266 P **P** **22 25 59.8 +1.0**
SSE pmax pmax
comp=Z,50nm,0.9s

SSE Sheshan 46.28 266 P **P** **22 25 59.7 +0.9**

FLWY Flagg Ranch 46.32 70 lAmb lAmb 22 26 00.2
comp=Z,41nm,0.7s

NOR Nord 46.44 3 *i*P **P** **22 25 59.1 -0.2**
NOR lAmb lAmb 22 25 60.0
comp=Z,6.7nm,1.0s

HVU Hansel Valley 46.48 74 lAmb lAmb 22 26 01.1
comp=Z,47nm,0.6s

RLMT Red Lodge 46.54 68 lAmb lAmb 22 26 02.1
comp=Z,62nm,1.1s

GUMO Guam 46.77 228 LR LR 22 42 56.2
comp=Z,45nm,22.0s,baz=118,slow=32

BTO2 Baotou 46.94 285 *e*P **P** **22 26 05.6 +1.6**
BTO2 S **S** **22 32 49.3 +3.5**
BTO2 pmax pmax
comp=Z,280nm,0.8s
BTO2 pmax pmax
comp=Z,270nm,3.9s
BTO2 LR LR
comp=Z,270nm,5.3s
BTO2 LR LR
comp=Z,390nm,5.8s
BTO2 LR LR
comp=Z,290nm,5.2s

NJ2 Nanjing 47.07 269 ⇓*i*P **P** **22 26 05.4 +0.5**
NJ2 pmax pmax
comp=Z,45nm,0.6s

S11A Rachel 47.25 80 P **P** **22 26 06.3 -0.2**
S11A lAmb lAmb 22 26 08.1
comp=Z,97nm,1.4s

NEEM North Greenlan 47.27 13 *i*P **P** **22 26 06.8 +0.5**
NEEM lAmb lAmb 22 26 07.1
comp=Z,35nm,0.6s

TIY Taiyuan 47.29 280 P **P** **22 26 08.1 +1.5**
TIY pmax pmax
comp=Z,95nm,0.7s

CLC China Lake 47.30 84 lAmb lAmb 22 26 08.2
comp=Z,42nm,0.8s

LAO LASA Array 47.36 65 lAmb lAmb 22 26 07.6
comp=Z,51nm,1.1s

TPNV Topopah Spring 47.39 82 lAmb lAmb 22 26 09.0
comp=Z,79nm,0.8s

OSI Osito Audit: C 47.39 86 lAmb lAmb 22 26 09.2
comp=Z,54nm,0.7s

DUG Dugway, Tooele 47.42 76 P **P** **22 26 07.6 -0.2**
DUG lAmb lAmb 22 26 08.8
comp=Z,43nm,0.7s

DUG Dugway, Tooele 47.42 76 P **P** **22 26 07.6 -0.2**
DUG pmax pmax
comp=Z,43nm,0.7s

LRMC Laurel Mtn Rad 47.47 84 lAmb lAmb 22 26 08.7
comp=Z,24nm,0.6s

TPO Tropico Hills 47.52 85 lAmb lAmb 22 26 10.0
comp=Z,168nm,1.9s

GWY Greenwater Val 47.63 83 lAmb lAmb 22 26 10.7
comp=Z,46nm,0.8s

QSM Queen of Sheba 47.65 83 lAmb lAmb 22 26 10.7
comp=Z,67nm,1.3s

BW06 Boulder Array 47.78 71 lAmb lAmb 22 26 10.7
comp=Z,34nm,0.8s

PD31 Pinedale Array 47.78 71 lAmb lAmb 22 26 10.7
comp=Z,35nm,0.8s

PDAR Pinedale Array 47.78 71 P **P** **22 26 09.8 -0.8**
comp=Z,34nm,0.7s,baz=311,slow=3.6,SNR=253
PDAR ScP **ScP** **22 31 18.2 -2.1**
comp=Z,1.4nm,0.6s,baz=299,slow=1.5,SNR=7.8
PDAR LR LR 22 44 57.6
comp=Z,28nm,18.4s,baz=340,slow=34

PDAR Pinedale Array 47.78 71 P **P** **22 26 09.2 -1.4**
comp=Z,34nm,0.7s

PRN Pahroc Range 47.83 80 lAmb lAmb 22 26 12.4
comp=Z,45nm,0.7s

PSUT Pine Spring 47.84 78 lAmb lAmb 22 26 11.9
comp=Z,47nm,0.6s

PASC Pasadena Art C 48.02 86 lAmb lAmb 22 26 13.6
comp=Z,43nm,0.9s

KNGR Kungurtug, Tuv 48.10 302 *d*iP **P** **22 26 13.1 +0.3**
KNGR pmax pmax
comp=Z,15nm,0.9s

BFSC Mount Baldy Ra 48.30 85 lAmb lAmb 22 26 16.1
comp=Z,28nm,0.8s

BSUT Blindstream Ca 48.44 74 P **P** **22 26 14.5 -1.3**

KULLO Kullorsuaq 48.44 17 *i*P **P** **22 26 14.7 -0.2**
KULLO lAmb lAmb 22 26 16.0
comp=Z,24nm,0.8s

TCRU Three Creeks R 48.64 77 lAmb lAmb 22 26 19.2
comp=Z,33nm,0.7s

MTPC Mountain Pass 48.77 83 lAmb lAmb 22 26 19.4
comp=Z,27nm,0.8s

P17A Butcher Ranch, 49.12 75 lAmb lAmb 22 26 21.7
comp=Z,26nm,0.7s

KBS Kingsbay 49.13 357 *i*P **P** **22 26 20.3 +0.2**

LCMT Little Creek M 49.19 79 lAmb lAmb 22 26 22.8
comp=Z,26nm,0.8s

Q16A Castle Valley 49.21 76 lAmb lAmb 22 26 22.6
comp=Z,26nm,0.7s

LYN LuoYang 49.33 276 ⇓*i*P **P** **22 26 23.3 +1.1**
LYN pmax pmax
comp=Z,210nm,0.7s

DNR Dunn Ranch,Anz 49.38 85 P **P** **22 26 22.6 -0.2**

DANC Danby, Needles 49.44 83 lAmb lAmb 22 26 24.6
comp=Z,35nm,0.7s

KNB Kanab 49.44 79 lAmb lAmb 22 26 24.7
comp=Z,30nm,0.6s

PFO Pinyon Flats O 49.46 85 LR LR 22 44 26.9
comp=Z,48nm,18.3s,baz=17,slow=32

PFO Pinyon Flats O 49.46 85 *ce*P **P** **22 26 23.5 +0.1**
PFO pmax pmax
comp=Z,22nm,0.9s

PFO Pinyon Flats O 49.46 85 P **P** **22 26 23.6 +0.1**

PKCU Pink Cliffs 49.47 78 lAmb lAmb 22 26 25.2
comp=Z,30nm,0.7s

SRU San Rafael Swe 49.48 75 lAmb lAmb 22 26 24.6
comp=Z,38nm,0.6s

PMD Palm Desert 49.48 85 lAmb lAmb 22 26 24.4
comp=Z,24nm,0.8s

DPP Dos Picos Cty 49.58 86 lAmb lAmb 22 26 25.7
comp=Z,43nm,1.1s

K22A Casper 49.62 69 lAmb lAmb 22 26 24.2
comp=Z,20nm,0.7s

SPA0 Spitsbergen Ar 49.66 355 *e*P **P** **22 26 24.1 -0.1**

SPITS Spitsbergen Ar 49.66 355 P **P** **22 26 24.0 -0.3**
comp=Z,6.2nm,0.3s,baz=44,slow=6.1,SNR=99
comp=Z,6.2nm,0.3s

SPITS Spitsbergen Ar 49.66 355 P **P** **22 26 23.4 -0.8**
SPITS pmax pmax
comp=Z,34nm,0.9s

SPB2 Spitsbergen Ar 49.67 355 P **P** **22 26 23.3 -0.9**
SPB2 lAmb lAmb 22 26 24.7
comp=Z,40nm,0.9s

BORC Borrego Spring 49.72 85 lAmb lAmb 22 26 26.7
comp=Z,40nm,0.8s

IRM Iron Mountain 49.90 84 lAmb lAmb 22 26 27.9
comp=Z,39nm,0.9s

UPNV Upernavik 49.99 18 *i*P **P** **22 26 26.9 +0.2**
UPNV lAmb lAmb 22 26 27.9
comp=Z,40nm,1.0s

W13A Hualapai Mount 50.05 82 lAmb lAmb 22 26 29.0
comp=Z,26nm,0.7s

BC3 Big Chuckawall 50.05 84 lAmb lAmb 22 26 28.6
comp=Z,27nm,0.7s

RSSD Black Hills 50.13 66 P **P** **22 26 26.4 -2.1**

RSSD Black Hills 50.13 66 P **P** **22 26 26.4 -2.1**
RSSD pmax pmax
comp=Z,13nm,0.7s

O20A White River Ci 50.19 73 lAmb lAmb 22 26 29.0
comp=Z,44nm,0.7s

E28A Huff 50.49 62 lAmb lAmb 22 26 31.1
comp=Z,37nm,1.1s

BLYC Blythe 50.56 84 P **P** **22 26 31.3 -0.2**
BLYC lAmb lAmb 22 26 32.8
comp=Z,44nm,0.8s

HOPEN Hopen 50.68 352 *e*P **P** **22 26 31.9 +0.1**

YHNB Yeheng 50.77 260 P **P** **22 26 33.0 -0.3**

YHNB Yeheng 50.77 260 P **P** **22 26 34.0 +0.7**
comp=Z,43nm,0.9s

ULM Lac du Bonnet 50.81 56 P **P** **22 26 32.3 -0.9**
comp=Z,24nm,0.6s,baz=304,slow=7.1,SNR=58
ULM LR LR 22 49 46.9
comp=Z,32nm,19.2s,baz=12,slow=38
comp=Z,24nm,0.6s

ULM Lac du Bonnet 50.81 56 lAmb lAmb 22 26 33.1
comp=Z,62nm,1.3s

ULM Lac du Bonnet 50.81 56 *de*P **P** **22 26 32.4 -0.8**

PV23 Carpenter Ridg 50.81 75 lAmb lAmb 22 26 37.7
comp=Z,40nm,0.6s

ESJX Sierra Juarez 50.87 86 lAmb lAmb 22 26 35.6
comp=Z,33nm,0.7s

PV22 Blue Mesa, Par 50.89 75 lAmb lAmb 22 26 35.0
comp=Z,33nm,0.9s

WHN Wuhan 50.89 271 ⇓*i*P **P** **22 26 34.3 +0.2**
WHN PcP **PcP** **22 27 49.5 +0.7**

PV04 Paradox Valley 50.91 75 lAmb lAmb 22 26 34.7
comp=Z,42nm,0.6s

PV05 Paradox Valley 51.00 76 P **P** **22 26 33.4 -1.7**
PV05 lAmb lAmb 22 26 35.7
comp=Z,65nm,1.3s

NACB Ninganchiao 51.01 260 P **P** **22 26 35.6 +0.6**
comp=Z,65nm,1.0s

PV07 Paradox Valley 51.03 75 lAmb lAmb 22 26 35.7
comp=Z,20nm,0.7s

PV15 Paradox Valley 51.20 75 lAmb lAmb 22 26 39.5
comp=Z,26nm,0.8s

Y14A Wickenburg 51.36 82 lAmb lAmb 22 26 38.8
comp=Z,58nm,1.4s

NUUG Nuugaatsiaq 51.53 19 *i*P **P** **22 26 38.4 +0.2**
NUUG lAmb lAmb 22 26 39.0
comp=Z,12nm,0.7s

SSLB Suanglung 51.68 260 P **P** **22 26 39.8 -0.3**

SSLB Suanglung 51.68 260 P **P** **22 26 40.5 +0.4**
comp=Z,105nm,1.1s

YULB Yu-li 51.77 259 lAmb lAmb 22 26 49.7
comp=Z,47nm,0.7s

YULB Yu-li 51.77 259 P **P** **22 26 41.3 +0.6**
comp=Z,66nm,0.7s

XAN Xi'an 51.85 278 ⇓P **P** **22 26 41.3 +0.1**
XAN pmax pmax
comp=Z,54nm,1.0s

XAN Xi'an 51.85 278 P **P** **22 26 41.3 +0.1**
XAN PcP **PcP** **22 27 55.1 +2.7**

AGMN Agassiz Nation 52.01 58 lAmb lAmb 22 26 42.0
comp=Z,54nm,1.1s

NIAQ Niaqornat 52.02 19 *i*P **P** **22 26 42.5 +0.6**
NIAQ lAmb lAmb 22 26 43.9
comp=Z,42nm,0.8s

TPUB Ta-pu 52.24 260 P **P** **22 26 45.3 +1.1**
comp=Z,127nm,0.9s

EPLO Experimental L 52.26 55 lAmb lAmb 22 26 44.0
comp=Z,36nm,0.6s

QZH2 Quanzhou 52.27 263 P **P** **22 26 45.8 +1.5**
QZH2 pmax pmax
comp=Z,130nm,0.9s

TWGBT Beinan 52.33 259 P **P** **22 26 45.4 +0.6**
comp=Z,36nm,1.1s

TWG Pinlang 52.33 259 lAmb lAmb 22 26 53.1
comp=Z,40nm,1.0s

ZALV Zalesovo Beam 52.36 312 P **P** **22 26 43.9 -0.7**
comp=Z,6.1nm,0.5s,baz=47,slow=6.5,SNR=48
ZALV PcP **PcP** **22 27 54.4 +0.5**
comp=Z,14nm,0.7s,baz=28,slow=4.0,SNR=13
ZALV ScP **ScP** **22 31 39.3 -0.1**
comp=Z,4.6nm,0.7s,baz=38,slow=4.6,SNR=14
comp=Z,6.1nm,0.5s

ZALV Zalesovo Beam 52.36 312 P **P** **22 26 43.7 -0.9**

SAATT Saattut 52.42 19 *i*P **P** **22 26 44.9 +0.1**
SAATT lAmb lAmb 22 26 45.5
comp=Z,9.6nm,0.6s

214A Organ Pipe Nat 52.83 84 lAmb lAmb 22 26 49.8
comp=Z,34nm,0.9s

SAQQ Saqqaq 53.00 19 *i*P **P** **22 26 49.9 +0.8**
SAQQ lAmb lAmb 22 26 50.6
comp=Z,15nm,0.6s

SUMG Summit 53.14 13 P **P** **22 26 50.2 -0.4**

SUMG Summit 53.14 13 P **P** **22 26 50.2 -0.4**
SUMG pmax pmax
comp=Z,12nm,0.9s

SUMG Summit 53.14 13 *i*P **P** **22 26 50.9 +0.3**
SUMG lAmb lAmb 22 26 51.9
comp=Z,9.0nm,0.6s

GDH Godhavn 53.27 20 *i*P **P** **22 26 50.7 -0.4**
GDH lAmb lAmb 22 26 52.1
comp=Z,5.2nm,0.7s

OGNE Ogallala 53.29 68 lAmb lAmb 22 26 53.4
comp=Z,61nm,0.8s

SDCO Great Sand Dun 53.36 74 lAmb lAmb 22 26 53.6
comp=Z,43nm,1.4s

CNSH ChangSha 53.43 270 P **P** **22 26 53.2 +0.3**
CNSH pmax pmax
comp=Z,41nm,0.7s

LZH Lanzhou 53.55 284 *e*P **P** **22 26 54.9 +1.0**
LZH pP pP 22 27 22.7 +0.3
LZH sP sP 22 27 36.5 +0.8
LZH PcP **PcP** **22 28 00.2 +1.2**
LZH pmax pmax
comp=Z,94nm,1.3s
LZH pmax pmax
comp=Z,190nm,3.8s

GTA2 Gaotai 53.72 290 P **P** **22 26 55.8 +0.8**
GTA2 pP pP 22 27 23.1 +0.1
GTA2 ScP **ScP** **22 31 47.3 +1.5**
GTA2 S **S** **22 34 20.1 +0.4**
GTA2 ScS **ScS** **22 36 33.4 +1.2**
GTA2 pmax pmax
comp=Z,230nm,0.7s

LZDM Lanzhou Array 53.73 284 P **P** **22 26 56.4 +1.1**
comp=Z,8.9nm,0.5s,baz=39,slow=0.9,SNR=59
LZDM PcP **PcP** **22 28 00.7 +0.8**
comp=Z,7.3nm,0.6s,baz=281,slow=2.3,SNR=6.1
LZDM ScP **ScP** **22 31 47.4 +1.2**
comp=Z,1.0nm,0.5s,baz=253,slow=1.5,SNR=4.7
comp=Z,8.9nm,0.5s

DGZ Jazzator, Alta 53.80 306 *d*iP **P** **22 26 56.1 +0.6**
DGZ pmax pmax
comp=Z,27nm,1.0s

ILULI Ilulissat 53.82 20 P **P** **22 26 53.9 -1.2**
ILULI lAmb lAmb 22 26 55.8
comp=Z,19nm,0.7s

ILULI Ilulissat 53.82 20 P **P** **22 26 53.9 -1.2**
ILULI pmax pmax
comp=Z,19nm,0.7s

ILULI Ilulissat 53.82 20 *i*P **P** **22 26 54.3 -0.8**
ILULI lAmb lAmb 22 26 55.9
comp=Z,18nm,0.7s

TUC Tucson 53.83 82 P **P** **22 26 55.6 -0.3**
TUC lAmb lAmb 22 26 57.3
comp=Z,36nm,1.1s

TUC Tucson 53.83 82 P **P** **22 26 55.6 -0.3**
TUC pmax pmax
comp=Z,36nm,1.1s

ENH Enshi 54.09 275 P **P** **22 26 57.8 +0.1**
comp=Z,86nm,0.9s

ENH Enshi 54.09 275 P **P** **22 26 57.5 -0.2**
ENH PcP **PcP** **22 28 01.3 +0.3**

KSCO Kaye Shedlock' 54.22 70 lAmb lAmb 22 26 59.5
comp=Z,40nm,0.7s

T25A Trinidad 54.41 73 lAmb lAmb 22 27 01.3
comp=Z,63nm,1.2s

EYMN Ely 54.49 56 lAmb lAmb 22 27 00.6
comp=Z,36nm,0.8s

ANMO Albuquerque 54.67 77 LR LR 22 50 28.7
comp=Z,44nm,18.1s,baz=328,slow=36

ANMO Albuquerque 54.67 77 P **P** **22 27 01.9 -0.1**

ANMO Albuquerque 54.67 77 *de*P **P** **22 27 02.0 0.0**
ANMO pmax pmax
comp=Z,7.0nm,0.8s

Y22A Socorro 55.05 78 lAmb lAmb 22 27 06.3
comp=Z,25nm,0.7s

TBO Thunder Bay 55.09 54 lAmb lAmb 22 27 05.1
comp=Z,34nm,0.9s

E38A The Farm, Brul 55.34 57 lAmb lAmb 22 27 06.4
comp=Z,55nm,0.9s

SPMN Marine on St. 55.60 59 lAmb lAmb 22 27 08.6
comp=Z,24nm,0.6s

HSIG 56.03 85 lAmb lAmb 22 27 12.8
comp=Z,38nm,0.8s

ZSN Zaisan 56.57 306 *d*iP **P** **22 27 15.4 +0.2**
ZSN pmax pmax
comp=Z,7.0nm,0.5s

ZSN Zaisan 56.57 306 ⇓*i*P **P** **22 27 15.4 +0.2**
comp=Z,7.0nm,0.5s

G40A Rib Lake 56.94 57 lAmb lAmb 22 27 18.1
comp=Z,32nm,1.1s

SCO Scoresbysund 56.99 8 *i*P **P** **22 27 17.8 +0.1**
SCO lAmb lAmb 22 27 19.6
comp=Z,14nm,1.0s

PH02 Texas Public H 57.06 73 lAmb lAmb 22 27 19.5
comp=Z,70nm,0.8s

GULI GuiLin 57.10 270 P **P** **22 27 21.2 +2.0**
GULI pmax pmax
comp=Z,32nm,0.9s

CD2 Chengdu 57.16 279 P **P** **22 27 19.8 +0.2**
CD2 pP pP 22 27 47.5 -1.1
CD2 S **S** **22 35 04.8 -0.7**
CD2 pmax pmax
comp=Z,70nm,0.5s

ARA0 ARCESS Array S 57.21 349 *e*P **P** **22 27 20.1 +0.7**

ARCES ARCESS Array B 57.21 349 P **P** **22 27 19.4 +0.1**
comp=Z,7.9nm,0.6s,baz=28,slow=8.4,SNR=25
comp=Z,7.9nm,0.6s

ARCES ARCESS Array B 57.21 349 P **P** **22 27 18.4 -0.9**

ARCES ARCESS Array B 57.21 349 P **P** **22 27 18.4 -0.9**
ARCES pmax pmax
comp=Z,124nm,1.9s

KURK Kurchatov 57.35 312 P **P** **22 27 20.1 -0.5**

KURK Kurchatov 57.35 312 *d*iP **P** **22 27 20.6 0.0**
KURK pmax pmax
comp=Z,63nm,1.1s

KURK Kurchatov 57.35 312 P **P** **22 27 20.7 0.0**
KURK sP **sP** **22 28 02.2 +0.1**
KURK PcP **PcP** **22 28 13.6 +0.3**

KURBB Kurchatov Arra 57.46 312 P **P** **22 27 21.4 +0.1**
comp=Z,51nm,0.5s,baz=42,slow=6.7,SNR=362
KURBB pP **pP** **22 27 48.6 -1.1**
comp=Z,10nm,1.0s,baz=47,slow=7.0,SNR=2.1
KURBB PcP **PcP** **22 28 13.9 +0.3**
comp=Z,11nm,0.7s,baz=36,slow=5.6,SNR=6.4
KURBB ScP **ScP** **22 32 02.5 +0.6**
comp=Z,3.8nm,0.8s,baz=46,slow=4.2,SNR=8.7
KURBB S **S** **22 35 06.2 -2.5**
comp=Z,1.0nm,0.6s,baz=48,slow=13,SNR=7.9
comp=Z,51nm,0.5s

MSTX Muleshoe 57.55 75 lAmb lAmb 22 27 23.6
comp=Z,32nm,1.0s

MNTX Cornudas Mount 57.55 79 lAmb lAmb 22 27 23.7
comp=Z,34nm,0.7s

WMQ Urumqi 57.56 301 ⇓P **P** **22 27 23.0 +0.7**
WMQ pmax pmax
comp=Z,43nm,0.9s
WMQ pmax pmax
comp=Z,230nm,3.6s

KUQ Kuujjuuaa 57.56 35 lAmb lAmb 22 27 22.5
comp=Z,36nm,0.7s

AMTX Amarillo 57.56 74 lAmb lAmb 22 27 22.8
comp=Z,27nm,0.6s

KSU1 Kansas State U 57.62 67 lAmb lAmb 22 27 22.3
comp=Z,36nm,0.8s

JETT Jettan, Norway 57.73 351 *e*P **P** **22 27 22.9 -0.1**

APA Apatity 57.94 345 ⇓*e*P **P** **22 27 22.1 -2.4**
APA *e**PP **pP** **22 27 49.9 -2.6**
APA pmax pmax
comp=Z,8.0nm,1.3s
APA MLR MLR
comp=Z,1μm,5.3s

KTK1 Kautokeino 57.97 350 *e*P **P** **22 27 24.9 +0.3**

ELIS Ellis County 58.08 71 lAmb lAmb 22 27 26.0
comp=Z,29nm,0.6s

SMWD Samnorwood 58.26 72 lAmb lAmb 22 27 28.0
comp=Z,29nm,0.8s

MK31 Makanchi Array 58.30 307 *d*iP **P** **22 27 26.7 -0.7**

MKAR Makanchi Array 58.30 307 P **P** **22 27 26.8 -0.5**
comp=Z,26nm,0.5s,baz=49,slow=6.1,SNR=725
MKAR ScP **ScP** **22 32 04.9 -0.9**
comp=Z,1.5nm,0.8s,baz=56,slow=3.2,SNR=3.7
MKAR LR LR 22 52 27.8
comp=Z,58nm,19.9s,baz=313,slow=36
comp=Z,26nm,0.5s

MKAR Makanchi Array 58.30 307 P **P** **22 27 26.5 -0.9**

MKAR Makanchi Array 58.30 307 *ce*P **P** **22 27 26.7 -0.7**
MKAR pmax pmax
comp=Z,26nm,0.5s

VHRN Van Horn 58.44 79 lAmb lAmb 22 27 29.9
comp=Z,27nm,0.8s

MAKZ Makanchi 58.45 307 P **P** **22 27 27.2 -1.2**

MAKZ Makanchi 58.45 307 P **P** **22 27 27.2 -1.2**
MAKZ pmax pmax
comp=Z,40nm,0.7s

GYA Guiyang 58.54 274 ⇓P **P** **22 27 29.6 +0.2**
GYA pmax pmax
comp=Z,37nm,0.9s

L40A Anamosa 58.58 61 lAmb lAmb 22 27 28.9
comp=Z,34nm,0.7s

128A Castleberry Fa 58.66 76 lAmb lAmb 22 27 30.6
comp=Z,27nm,0.7s

PECS Pecos 58.70 78 lAmb lAmb 22 27 31.4
comp=Z,39nm,1.5s

GOMU GeErMu 58.82 290 P **P** **22 27 31.4 -0.1**
GOMU pmax pmax
comp=Z,48nm,0.7s

DKNS Dickens 58.86 74 lAmb lAmb 22 27 32.2
comp=Z,29nm,0.7s

TPB06 Permian Basin 58.90 77 P **P** **22 27 31.2 -0.6**
TPB06 lAmb lAmb 22 27 32.2
comp=Z,38nm,0.7s

ODSA Odessa 58.97 76 lAmb lAmb 22 27 32.6
comp=Z,33nm,0.8s

129A Stewart Farms, 59.02 76 lAmb lAmb 22 29 16.3
comp=Z,26nm,0.3s

TPB01 Permian Basin 59.06 78 lAmb lAmb 22 27 33.4
comp=Z,26nm,0.7s

T35A Sooner Cattle 59.18 68 lAmb lAmb 22 27 32.7
comp=Z,19nm,0.6s

OK048 Pawnee Station 59.28 69 lAmb lAmb 22 27 34.1
comp=Z,23nm,0.7s

SN07 Snyder 07 59.28 75 lAmb lAmb 22 27 34.5
comp=Z,24nm,0.5s

BVAR Borovoye Array 59.31 318 P **P** **22 27 34.6 +0.4**
comp=Z,69nm,0.5s,baz=51,slow=6.5,SNR=558
BVAR PcP **PcP** **22 28 21.5 +0.5**
comp=Z,17nm,0.4s,baz=16,slow=3.9,SNR=14
BVAR ScP **ScP** **22 32 09.7 -0.4**
comp=Z,6.7nm,0.7s,baz=46,slow=4.3,SNR=11
BVAR LR LR 22 53 56.4
comp=Z,61nm,21.8s,baz=44,slow=37
comp=Z,69nm,0.5s

BORK Borovoye 59.32 318 P **P** **22 27 34.4 +0.1**

BORK Borovoye 59.32 318 *d*iP **P** **22 27 34.5 +0.2**
BORK pmax pmax
comp=Z,35nm,0.8s

TPB05 Hovey Rd 59.35 78 lAmb lAmb 22 27 35.7
comp=Z,26nm,0.8s

WMOK Wichita Mounta 59.38 72 lAmb lAmb 22 27 35.6
comp=Z,22nm,0.7s

ALPN Alpine 59.55 79 P **P** **22 27 35.8 -0.5**
ALPN lAmb lAmb 22 27 36.9
comp=Z,18nm,0.7s

TMB01 Midkiff 59.57 76 lAmb lAmb 22 27 36.9
comp=Z,26nm,0.6s

APMT Aspermont 59.58 74 lAmb lAmb 22 27 36.9
comp=Z,36nm,1.0s

QUOK Quay 59.59 69 lAmb lAmb 22 27 36.1
comp=Z,25nm,0.8s

N41A Harden Midland 59.72 62 P **P** **22 27 36.0 -1.2**
N41A lAmb lAmb 22 27 37.0
comp=Z,40nm,0.9s

LPIG La Paz 59.97 89 LR LR 22 50 08.7
comp=Z,33nm,18.8s,baz=202,slow=32

X34A Smith Ranch, M 60.03 71 lAmb lAmb 22 27 40.6

comp=Z,25nm,0.7s
SVE Sverdlovsk 60.16 326 *e*P **P 22 27 41.5 +1.6**
TX31 Lajitas Ar. Si 60.27 80 IAmb IAmb 22 27 42.2
comp=Z,31nm,0.7s
TXAR Lajitas Array 60.27 80 P **P 22 27 41.3 +0.1**
comp=Z,24nm,0.6s,baz=300,slow=4.8,SNR=166
TXAR ScP **ScP 22 32 14.2 -0.7**
comp=Z,2.4nm,0.7s,baz=287,slow=2.9,SNR=8.9
comp=Z,24nm,0.6s
TXAR Lajitas Array 60.27 80 P **P 22 27 40.8 -0.5**
TUL3 Leonard 60.30 69 IAmb IAmb 22 27 41.2
comp=Z,33nm,0.9s
FAUS Fauske 60.31 353 *e*P **P 22 27 40.9 +0.2**
SLBS Sierra La Lagu 60.50 89 P **P 22 27 42.2 -0.6**
SLBS IAmb IAmb 22 27 44.8
comp=Z,48nm,0.9s
SLBS Sierra La Lagu 60.50 89 P **P 22 27 43.6 +0.8**
SCHQ Schefferville 60.61 37 P **P 22 27 42.9 -0.2**
comp=Z,25nm,0.6s,baz=319,slow=5.9,SNR=81
SCHQ LR LR 22 57 12.5
comp=Z,117nm,19.5s,baz=58,slow=39
comp=Z,25nm,0.6s
OZNA Ozona 60.67 76 IAmb IAmb 22 27 44.3
comp=Z,24nm,1.0s
U38A Gravette 60.73 67 IAmb IAmb 22 27 43.5
comp=Z,31nm,1.0s
PLPT Palo Pinto 61.01 73 IAmb IAmb 22 27 46.7
comp=Z,31nm,0.6s
HHAR Hobbs 61.10 67 IAmb IAmb 22 27 45.8
comp=Z,20nm,0.8s
J47A Sunmer 61.13 56 IAmb IAmb 22 27 47.1
comp=Z,39nm,0.9s
Z35A Perchaven, San 61.27 72 IAmb IAmb 22 27 48.1
comp=Z,46nm,0.9s
ARTI Arti 61.27 327 P **P 22 27 47.7 +0.2**
ARTI Arti 61.27 327 *d i*P **P 22 27 48.2 +0.7**
ARTI *PP **pP 22 28 15.8 -0.2**
ARTI 22 28 27.1
ARTI 22 30 01.3
ARTI S **S 22 36 00.6 +3.0**
ARTI SS **SS 22 39 58.0 -0.9**
ARTI pmax pmax
comp=Z,129nm,1.0s
RAUS Rausandaksla 61.34 353 *e*P **P 22 27 49.3 +1.5**
TDK Taldyqorghan 61.49 307 *d i*P **P 22 27 49.4 +0.3**
TDK pmax pmax
comp=Z,17nm,0.6s
TDK Taldyqorghan 61.49 307 ⇓ *i*P **P 22 27 49.5 +0.3**
comp=Z,17nm,0.6s
PZH PanZhiHua 61.54 277 P **P 22 27 50.3 +0.4**
PZH pmax pmax
comp=Z,9.0nm,1.1s
PZH pmax pmax
comp=Z,230nm,6.1s
BRDY Brady 61.69 75 IAmb IAmb 22 27 51.4
comp=Z,47nm,1.5s
LEIR Leirfjorden 61.73 353 *e*P **P 22 27 51.4 +1.1**
JCT Junction City 61.79 76 IAmb IAmb 22 27 52.3
comp=Z,30nm,1.0s
FVM French Village 61.87 64 IAmb IAmb 22 27 51.1
comp=Z,20nm,0.5s
KMI2 Kunming 61.91 276 ⇓P **P 22 27 52.8 +0.3**
KMI2 pP pP 22 28 19.1 -2.7
KMI2 pmax pmax
comp=Z,23nm,0.8s
KMI Kunming 61.93 276 P **P 22 27 52.8 +0.1**
KMI pP **pP 22 28 21.2 -0.7**
KMI PcP **PcP 22 28 33.0 +0.7**
DRIO Del Rio 62.05 77 IAmb IAmb 22 27 54.5
comp=Z,21nm,0.6s
QIZ Qiongzhong 62.06 265 P **P 22 27 55.0 +1.7**
comp=Z,36nm,1.0s
BUKO Buck Lake 62.23 51 IAmb IAmb 22 27 54.1
comp=Z,66nm,1.1s
KIRV Kirov 62.28 333 LR LR 22 56 18.3
comp=Z,25nm,18.1s,baz=333,slow=37
KIRV Kirov 62.28 333 *de*P **P 22 27 55.0 +0.9**
SHLS Shalkode 62.29 305 *d i*P **P 22 27 53.5 -1.2**
SHLS pmax pmax
comp=Z,18nm,0.9s
SHLS Shalkode 62.29 305 ⇓ *i*P **P 22 27 53.5 -1.2**
comp=Z,18nm,0.9s
P46A Rosedale 62.46 60 IAmb IAmb 22 27 55.3
comp=Z,34nm,0.6s
UZB Uzunbulak 62.52 306 *d i*P **P 22 27 56.5 +0.2**
UZB pmax pmax
comp=Z,10.0nm,0.7s
UZB Uzunbulak 62.52 306 ⇓ *i*P **P 22 27 56.5 +0.2**
comp=Z,10nm,0.7s
MIAR Mount Ida 62.54 68 P **P 22 27 55.4 -0.9**
MIAR Mount Ida 62.54 68 P **P 22 27 55.4 -0.9**
MIAR pmax pmax
comp=Z,85nm,1.3s
WHAR Wooly Hollow 62.75 67 IAmb IAmb 22 27 57.4
comp=Z,60nm,1.3s
HNDO Hondo 62.78 76 P **P 22 27 57.0 -1.0**
KLMR Klimovskoe 62.83 339 *e*P **P 22 27 57.2 -0.5**
KLMR *PP **pP 22 28 26.4 -0.2**
KLMR pmax pmax
comp=Z,16nm,0.9s
SADO Sadowa 62.85 51 LR LR 22 55 02.8
comp=Z,104nm,18.7s,baz=229,slow=36
SADO Sadowa 62.85 51 IAmb IAmb 22 27 58.0
comp=Z,42nm,1.1s
435B Jarrell 62.89 74 IAmb IAmb 22 27 59.7
comp=Z,35nm,0.7s
SATY Saty 62.90 306 *d i*P **P 22 27 59.0 +0.3**
SATY Saty 62.90 306 ⇓ *i*P **P 22 27 59.0 +0.3**
JAY Jayapura 62.94 223 P **P 22 28 01.5 +2.4**
comp=Z,7.4nm,0.6s,baz=279,slow=5.4,SNR=3.8
comp=Z,7.4nm,0.6s
O48B Farmland 63.09 59 IAmb IAmb 22 27 59.0
comp=Z,29nm,0.5s
N49A Columbus Grove 63.12 57 IAmb IAmb 22 27 59.5
comp=Z,29nm,0.5s
BLO Bloomington 63.15 60 IAmb IAmb 22 28 00.8
comp=Z,20nm,0.6s
GENI Genyem 63.24 224 P **P 22 28 01.9 +0.8**
comp=Z,120nm,0.8s
MDOK Medeo 63.50 307 *e*P **P 22 28 02.9 +0.2**
MDOK Medeo 63.50 307 *e*P **P 22 28 02.9 +0.2**
P48A Milroy 63.53 59 P **P 22 28 01.2 -1.5**
AAA Alma-Ata 63.53 307 *e*P **P 22 28 03.1 +0.3**
AAA pmax pmax
comp=Z,12nm,0.5s
AAA Alma-Ata 63.53 307 *e*P **P 22 28 03.1 +0.3**
comp=Z,12nm,0.5s
833A Chaparral WMA, 63.59 77 IAmb IAmb 22 28 04.5
comp=Z,21nm,0.7s
TNSS Tian-Shan 63.64 307 *e*P **P 22 28 03.9 0.0**
TNSS Tian-Shan 63.64 307 *e*P **P 22 28 04.0 0.0**
DELO Deloro Mine 63.77 51 IAmb IAmb 22 28 04.2
comp=Z,49nm,1.3s
WUS Wushi 63.84 304 IAmb IAmb 22 28 06.4
comp=Z,47nm,0.8s
WUS Wushi 63.84 304 P **P 22 28 05.3 +0.3**
WUS pP **pP 22 28 33.2 -0.7**
WUS PcP **PcP 22 28 40.2 +0.4**
NATX Nacogdoches 63.92 71 IAmb IAmb 22 28 06.2
comp=Z,35nm,0.7s
TRQ Mont Tremblant 63.93 48 IAmb IAmb 22 28 04.6
comp=Z,28nm,0.8s
WCI Wyandotte Cave 63.95 61 P **P 22 28 04.4 -1.2**
WCI Wyandotte Cave 63.95 61 P **P 22 28 04.4 -1.2**
WCI pmax pmax
comp=Z,15nm,0.6s
HALT Halls 63.96 65 IAmb IAmb 22 28 06.5
comp=Z,54nm,0.8s
HNVL Huntsville, TX 64.17 73 IAmb IAmb 22 28 10.8
comp=Z,41nm,0.9s
TARG Taragay, Kyrgy 64.17 305 IAmb IAmb 22 28 09.5
comp=Z,17nm,0.5s
MEDO Medina 64.37 52 IAmb IAmb 22 28 08.7
comp=Z,45nm,0.7s
TKM2 Tokmak 2 64.39 307 P **P 22 28 09.2 +0.6**
SNR=38
SGDS Sogindy 64.47 308 *e*P **P 22 28 09.4 +0.4**
PECO Prince Edward 64.50 51 IAmb IAmb 22 28 09.1
comp=Z,43nm,1.0s
WBO Williamsburg 64.52 49 IAmb IAmb 22 28 08.6
comp=Z,48nm,1.3s
HKT Hockley 64.54 73 P **P 22 28 08.8 -0.6**
HKT Hockley 64.54 73 ⇓ *e*P **P 22 28 09.9 +0.5**
HKT pmax pmax
comp=Z,16nm,0.9s
ULHL Ulahol 64.58 307 P **P 22 28 11.0 +1.1**
SNR=8.7
TNCH TengChong 64.59 279 P **P 22 28 11.3 +1.2**
TNCH pmax pmax
comp=Z,43nm,0.8s
TNCH pmax pmax
comp=Z,180nm,2.9s
WVT Waverly 64.64 63 P **P 22 28 08.4 -1.7**
WVT Waverly 64.64 63 P **P 22 28 08.4 -1.7**
WVT pmax pmax
comp=Z,16nm,0.7s
USP Ospenovka 64.67 308 P **P 22 28 11.1 +0.9**
SNR=7.1
CHMS Chumysh 64.75 308 P **P 22 28 11.5 +0.7**
SNR=19
LMQ La Malbaie 64.80 44 IAmb IAmb 22 28 10.7
comp=Z,36nm,1.0s
FINES FINESS Array B 64.81 346 P **P 22 28 09.5 -1.2**
comp=Z,5.3nm,0.4s,baz=19,slow=7.0,SNR=92
FINES pP **pP 22 28 40.6 +0.9**
comp=Z,4.4nm,0.8s,baz=77,slow=8.4,SNR=2.7
comp=Z,5.3nm,0.4s
MNTQ Montreal, Queb 64.90 48 IAmb IAmb 22 28 10.6
comp=Z,17nm,0.6s
KBK Karagaybulak 64.91 308 P **P 22 28 12.7 +0.8**
SNR=34
O52A Adamsville 64.93 57 IAmb IAmb 22 28 11.9
comp=Z,34nm,0.8s
HBVL Hebbronville 64.94 78 IAmb IAmb 22 28 15.1
comp=Z,23nm,0.7s
R50A Paris 64.97 59 IAmb IAmb 22 28 12.6
comp=Z,74nm,1.9s
AAK Ala-Archa 65.14 308 LR LR 22 59 25.1
comp=Z,32nm,19.0s,baz=30,slow=38
AAK Ala-Archa 65.14 308 P **P 22 28 14.2 +0.8**
SNR=8.0
AAK Ala-Archa 65.14 308 P **P 22 28 13.5 0.0**
AAK IAmb IAmb 22 28 15.0
comp=Z,31nm,0.7s
AAK Ala-Archa 65.14 308 *i* P **P 22 28 14.1 +0.6**
SNR=10
AAK Ala-Archa 65.14 308 *d i*P **P 22 28 14.0 +0.6**
AAK pmax pmax
comp=Z,22nm,0.8s
AAK Ala-Archa 65.14 308 P **P 22 28 14.1 +0.6**
AAK sP **sP 22 28 55.5 -0.1**
Y45A Yeager Farm, C 65.34 66 IAmb IAmb 22 28 14.7
comp=Z,48nm,0.8s
UCH Uchur 65.44 308 P **P 22 28 16.4 +0.7**
SNR=15
EKS2 Erkin-Say 65.48 308 P **P 22 28 16.5 +1.0**
SNR=52
V48A Smith Brothers 65.48 63 IAmb IAmb 22 28 15.3
comp=Z,17nm,0.5s
U49A Red Boiling Sp 65.49 62 IAmb IAmb 22 28 15.5
comp=Z,26nm,0.5s
CLTN Cedars of Leba 65.50 62 IAmb IAmb 22 28 15.9
comp=Z,23nm,0.7s
Q52A Bidwell 65.56 58 IAmb IAmb 22 28 15.4
comp=Z,18nm,0.6s
LSA Lhasa 65.61 287 P **P 22 28 14.4 -2.6**
LSA pmax pmax
comp=Z,66nm,0.7s
LSA Lhasa 65.61 287 P **P 22 28 18.6 +1.7**
P53A Whipple 65.63 57 IAmb IAmb 22 29 17.5
comp=Z,60nm,1.8s
T50A Nancy 65.63 61 IAmb IAmb 22 28 16.2
comp=Z,22nm,0.6s
D62A Allapoint, All 65.71 44 IAmb IAmb 22 28 16.9
comp=Z,27nm,0.6s
ZAIG Zacatecas 65.73 84 P **P 22 28 17.5 -0.2**
ZAIG IAmb IAmb 22 28 19.3
comp=Z,28nm,0.9s
SWI Sorong 65.85 233 P **P 22 28 18.2 +0.1**
SIJI Sorong 65.86 233 P **P 22 28 18.9 +0.7**
comp=Z,142nm,0.7s,baz=19,slow=5.6,SNR=36
comp=Z,142nm,0.7s
SIJI Sorong 65.86 233 P **P 22 28 18.2 +0.1**
E62A Clayton Lake 65.87 44 IAmb IAmb 22 28 18.3
comp=Z,25nm,0.5s
AKN Aaknes 66.01 356 *e*P **P 22 28 18.7 +0.2**
J59A Piesco 66.04 50 IAmb IAmb 22 28 18.3
comp=Z,31nm,0.5s
AKTO Aktyubinsk 66.19 323 LR LR 22 58 13.5
comp=Z,68nm,18.7s,baz=324,slow=37
VT1 Waterbury 66.19 48 IAmb IAmb 22 28 20.1
comp=Z,39nm,1.2s
Q54A Coxs Mills 66.29 57 IAmb IAmb 22 29 43.7
comp=Z,71nm,1.8s
SWET Sewanee 66.36 63 IAmb IAmb 22 28 20.6
comp=Z,27nm,0.5s
M57A Sunshine Farm, 66.39 53 IAmb IAmb 22 28 21.7
comp=Z,56nm,1.0s
AB31 Akbulak array 66.41 321 IAmb IAmb 22 28 23.0
comp=Z,46nm,1.2s
ABKAR Akbulak array 66.41 321 P **P 22 28 20.8 -0.4**
DZA Taraz 66.47 310 *e*P **P 22 28 22.2 +0.4**
DZA pmax pmax
comp=Z,11nm,0.9s
DZA Taraz 66.47 310 *e*P **P 22 28 22.2 +0.4**
comp=Z,12nm,0.9s
G62A West of Eustis 66.51 46 IAmb IAmb 22 28 22.0
comp=Z,28nm,0.6s
SSPA Standing Stone 66.55 54 P **P 22 28 21.0 -1.2**
SSPA IAmb IAmb 22 28 22.5
comp=Z,30nm,0.7s
SSPA Standing Stone 66.55 54 P **P 22 28 21.6 -0.6**
SSPA x x 22 28 44.8
KK31 Karatay Array 66.70 311 IAmb IAmb 22 28 24.4
comp=Z,38nm,0.7s
KKAR Karatay Array 66.70 311 P **P 22 28 22.8 -0.4**
KKAR Karatay Array 66.70 311 P **P 22 28 22.8 -0.4**
W50A Signal Mountai 66.71 62 IAmb IAmb 22 28 24.1
comp=Z,57nm,1.5s
L59A Walton 66.76 51 IAmb IAmb 22 28 23.7
comp=Z,28nm,0.9s
PMG Port Moresby 66.77 214 P **P 22 28 24.5 +0.7**
comp=Z,9.9nm,0.5s,baz=43,slow=11,SNR=3.6
comp=Z,9.9nm,0.5s
PMG Port Moresby 66.77 214 P **P 22 28 23.8 0.0**
PMG Port Moresby 66.77 214 P **P 22 28 23.8 0.0**
PMG pmax pmax
comp=Z,14nm,0.8s
PMG Port Moresby 66.77 214 P **P 22 28 23.6 -0.2**
ARSB Arslanbob 66.88 308 IAmb IAmb 22 28 26.3
comp=Z,31nm,0.8s
NB2 NORSAR Subarra 66.89 353 P **P 22 28 23.4 -0.7**
comp=Z,1.6nm,0.6s,baz=10,slow=6.2
NB2 NORSAR Subarra 66.89 353 P **P 22 28 23.4 -0.7**
NB2 AMP 22 28 23.4
comp=Z,1.6nm,0.6s
NOA NORSAR Array B 66.89 353 P **P 22 28 23.7 -0.4**
comp=Z,2.7nm,0.6s,baz=2.7,slow=5.4,SNR=21
NOA pP **pP 22 28 54.1 +0.8**
comp=Z,2.7nm,0.7s,baz=8.5,slow=6.4,SNR=5.1
comp=Z,2.7nm,0.6s
KSPA Keystone Colle 66.89 52 IAmb IAmb 22 28 24.2
comp=Z,24nm,0.7s
F64A Sherman 66.97 44 IAmb IAmb 22 28 24.7
comp=Z,38nm,0.8s
N58A Sunbury 66.97 53 IAmb IAmb 22 28 25.3
comp=Z,37nm,0.9s
PKME Peaks-Kenny Pk 67.03 45 P **P 22 28 24.1 -1.1**
HYA Hoyanger 67.06 356 *e*P **P 22 28 26.1 +1.0**
BRLS Borolday 67.07 311 *e*P **P 22 28 27.5 +1.9**
BRLS Borolday 67.07 311 *e*P **P 22 28 27.5 +1.9**
FAKI Fak Fak 67.15 231 P **P 22 28 26.4 +0.1**
FAKI Fak Fak 67.15 231 P **P 22 28 27.3 +1.0**
comp=Z,86nm,1.1s
FAKI Fak Fak 67.15 231 P **P 22 28 26.2 -0.1**
comp=Z,85nm,0.7s
NC602 NORSAR Array S 67.17 353 *e*P **P 22 28 25.8 -0.1**
TKL Tuckaleechee C 67.21 61 LR LR 22 58 59.6
comp=Z,60nm,18.5s,baz=290,slow=37
TKL Tuckaleechee C 67.21 61 IAmb IAmb 22 28 26.5
comp=Z,43nm,1.4s
KSH2 Kashi 67.24 305 P **P 22 28 27.9 +1.1**
KSH2 pmax pmax
comp=Z,53nm,0.7s
I63A Otisfield 67.40 47 IAmb IAmb 22 28 27.8
comp=Z,32nm,0.7s
WVL Waterville 67.41 46 IAmb IAmb 22 29 04.2
comp=Z,49nm,1.5s
PAGS Pennsylvania G 67.43 53 IAmb IAmb 22 28 40.0
comp=Z,66nm,1.6s
SKAR Skarslia 67.43 355 *e*P **P 22 28 27.4 -0.2**
W52A Murphy 67.55 62 IAmb IAmb 22 28 28.6
comp=Z,60nm,1.7s
HFS Hagfors 67.59 352 P **P 22 28 27.3 -1.2**
comp=Z,3.4nm,0.4s,baz=32,slow=4.2,SNR=17
comp=Z,3.4nm,0.4s
UBPT Khong Chiam 67.61 266 P **P 22 28 29.9 +0.7**
U54A Nelsons Funny 67.61 59 P **P 22 28 28.0 -1.2**
U54A IAmb IAmb 22 28 29.1
comp=Z,17nm,0.4s
IUG Iuzhnay 67.66 310 *e*P **P 22 28 30.0 +0.6**
IUG pmax pmax
comp=Z,27nm,0.7s
IUG Iuzhnay 67.66 310 *e*P **P 22 28 30.1 +0.6**
comp=Z,27nm,0.7s
L61B Northampton 67.68 49 IAmb IAmb 22 28 29.0
comp=Z,21nm,0.6s
K62A Royalston 67.72 49 IAmb IAmb 22 28 29.6
comp=Z,76nm,1.5s
CHM Chimkent 67.73 311 *e*P **P 22 28 30.1 +0.4**
CHM pmax pmax
comp=Z,17nm,0.6s
CHM Chimkent 67.73 311 *e*P **P 22 28 30.1 +0.4**
comp=Z,17nm,0.6s
G65A Princeton 67.83 44 IAmb IAmb 22 28 30.3
comp=Z,27nm,0.6s
BLA Blacksburg 67.83 58 IAmb IAmb 22 28 30.6
comp=Z,65nm,1.6s
BELG Belogornoye 68.10 330 *d i*P **P 22 28 32.3 +0.5**
BELG pmax pmax
comp=Z,14nm,0.9s
BRNJ Basking Ridge 68.14 52 IAmb IAmb 22 28 32.5
comp=Z,73nm,1.4s
HRV Adam Dziewonsk 68.16 48 P **P 22 28 31.3 -1.0**
HRV Adam Dziewonsk 68.16 48 P **P 22 28 31.3 -1.0**
HRV pmax pmax
comp=Z,30nm,1.2s
BG3 Lake Jocassee 68.16 61 IAmb IAmb 22 28 33.1
comp=Z,53nm,1.4s
S57A Dark Hollow, R 68.18 56 IAmb IAmb 22 28 33.3
comp=Z,65nm,1.8s
GGN Saint George 68.20 44 IAmb IAmb 22 28 32.5
comp=Z,37nm,0.7s
PAL Palisades 68.21 51 IAmb IAmb 22 28 32.7
comp=Z,57nm,1.3s
KKM Kota Kinabalu 68.33 251 P **P 22 28 35.5 +1.6**
comp=Z,34nm,1.1s
KKM Kota Kinabalu 68.33 251 P **P 22 28 33.7 -0.2**
comp=Z,33nm,1.1s
CPNY Central Park 68.35 51 IAmb IAmb 22 28 33.7
comp=Z,35nm,0.6s
WES Weston 68.36 48 P **P 22 28 32.1 -1.4**
WES IAmb IAmb 22 28 33.4
comp=Z,37nm,0.6s
WES Weston 68.36 48 P **P 22 28 32.2 -1.4**
WES pmax pmax
comp=Z,37nm,0.6s
KONO Kongsberg 68.38 354 *e*P **P 22 28 33.6 +0.2**
Y52A Lilburn 68.39 63 IAmb IAmb 22 28 33.8
comp=Z,22nm,0.6s
UCCT U. Connecticut 68.40 49 IAmb IAmb 22 28 33.8
comp=Z,28nm,0.8s
LMN Caledonia Moun 68.48 42 IAmb IAmb 22 28 34.4
comp=Z,41nm,0.9s
250A Grady 68.58 65 IAmb IAmb 22 28 34.9
comp=Z,30nm,0.6s
OBN Obninsk 68.69 338 P **P 22 28 34.9 -0.5**
OBN IAmb IAmb 22 28 37.2
comp=Z,43nm,1.0s
OBN Obninsk 68.69 338 ⇑ *i*P **P 22 28 35.1 -0.3**
OBN *e* 22 31 09.2
OBN pmax pmax
comp=Z,36nm,1.3s
OBN MLR MLR
comp=Z,151nm,17.0s
BLS5 Blasjo 68.79 356 *e*P **P 22 28 36.9 +0.8**
M63A Gales Ferry 68.79 50 IAmb IAmb 22 28 36.0
comp=Z,50nm,0.8s
DRK Karamyk 68.87 307 IAmb IAmb 22 28 39.1
comp=Z,28nm,0.8s
BTK Batken 68.90 308 IAmb IAmb 22 28 38.8
comp=Z,48nm,0.8s
KMSC Kings Mountain 68.91 60 IAmb IAmb 22 28 36.8
comp=Z,31nm,0.5s
CHTO Chiang Mai 68.96 274 P **P 22 28 37.2 -0.5**
CHTO Chiang Mai 68.96 274 P **P 22 28 39.1 +1.4**
comp=Z,18nm,1.0s
CHTO Chiang Mai 68.96 274 P **P 22 28 37.2 -0.5**
CHTO pmax pmax
comp=Z,21nm,0.8s
CHTO Chiang Mai 68.96 274 P **P 22 28 37.2 -0.5**
comp=Z,31nm,1.0s
CHTO Chiang Mai 68.96 274 P **P 22 28 37.7 0.0**
CHTO pP **pP 22 29 06.5 -1.1**
HODGE Hodges 69.10 61 IAmb IAmb 22 28 38.4
comp=Z,30nm,0.6s
MSAI Masohi 69.16 234 P **P 22 28 40.4 +1.6**
comp=Z,110nm,0.8s
CM31 Chiang Mai Arr 69.23 274 IAmb IAmb 22 28 40.9
comp=Z,41nm,1.1s
CMAR Chiang Mai Arr 69.23 274 P **P 22 28 39.8 +0.4**
comp=Z,12nm,0.5s,baz=26,slow=7.1,SNR=102
CMAR LR LR 23 03 33.7
comp=Z,12nm,18.1s,baz=40,slow=40
comp=Z,12nm,0.5s
CMAR Chiang Mai Arr 69.23 274 P **P 22 28 39.4 0.0**
CMAR Chiang Mai Arr 69.23 274 *ce*P **P 22 28 39.7 +0.4**
CMAR pmax pmax
comp=Z,13nm,0.5s
KRAI Karang Ratu 69.40 235 P **P 22 28 41.9 +1.6**
comp=Z,33nm,0.6s
SANI Sanana 69.56 238 P **P 22 28 40.6 -0.7**
comp=Z,51nm,1.0s
JSC Jenkinsville 69.60 60 IAmb IAmb 22 28 41.5
comp=Z,26nm,0.5s
MRSI Marisa 69.61 243 P **P 22 28 41.2 -0.5**
comp=Z,946nmcomp=Z,114nm,0.9s
TOLI2 Tolitoli 69.73 244 P **P 22 28 40.7 -1.7**
TOLI2 IAmb IAmb 22 28 43.1
comp=Z,48nm,0.9s
TOLI2 Tolitoli 69.73 244 P **P 22 28 42.6 +0.2**
comp=Z,58nm,1.0s
AAI Ambon 69.82 235 P **P 22 28 43.3 +0.4**
comp=Z,98nm,0.7s
154A Montrose 69.86 63 IAmb IAmb 22 28 42.6
comp=Z,45nm,0.7s
LPSR Galich'ya Gora 70.39 335 *e*P **P 22 28 45.6 -0.3**
LPSR pmax pmax
comp=Z,20nm,0.8s
LUWI Luwuk 70.42 241 P **P 22 28 45.9 -0.7**
comp=Z,1µmcomp=Z,137nm,1.0s
MPSI Mapaga 70.86 245 P **P 22 28 49.2 -0.1**
comp=Z,640nmcomp=Z,78nm,0.9s
VRH Novokhopyorsk 70.89 333 *e*P **P 22 28 48.5 -0.5**
VRH pmax pmax
comp=Z,52nm,0.6s
APSI Ampana 70.93 242 P **P 22 28 49.8 +0.1**
comp=Z,1µmcomp=Z,69nm,1.2s
MNK Minsk 71.11 342 *i* P **P 22 28 51.2 +1.0**
comp=E,5.0nm,0.6s
MNK *i* P **P 22 28 51.2 +1.0**
comp=N,11nm,0.8s
MNK *i* P **P 22 28 51.2 +1.0**
comp=Z,13nm,0.7s,baz=19
MNK *i* pP **pwP 22 29 21.0 -1.4**
MNK *i* sP **sP 22 29 34.2 +1.8**
MNK *i* PP **PP 22 31 30.2 +1.6**
MNK *i* PPP PPP 22 33 14.1
MNK *i* S **S 22 37 58.8 +2.3**
MNK *i* PS PnS 22 38 23.1 -18
MNK *i* sS **sS 22 38 50.7 +4.5**
MNK *i* SS SS 22 42 59.3 +28
MNK *i* SSS SSS 22 45 55.4
MNK Minsk 71.11 342 *i* P **P 22 28 51.2 +1.0**
MNK *i* 22 29 10.3
MNK *i* *PP **pwP 22 29 21.0 -1.4**
MNK *i* *SP **sP 22 29 34.2 +1.8**
MNK *i* 22 31 30.2
MNK *i* PPP PPP 22 33 14.1
MNK *i* S **S 22 37 58.8 +2.3**
MNK *i* PS PnS 22 38 23.1 -18
MNK pmax pmax
comp=E,5.0nm,0.6s
MNK pmax pmax
comp=Z,13nm,0.7s
MNK pmax pmax
comp=N,11nm,0.8s
VORR Voronezh 71.16 335 *e*P **P 22 28 50.0 -0.6**
VORR pmax pmax

	comp=Z,33nm,0.3s						
VSR	**Storozhevoye**	**71.59 334**	*e*P	**P**	**22 28 53.1**	**0.0**
VSR			pmax	pmax		
	comp=Z,10.0nm,0.5s					
VORD	**Divnogorie**	**71.78 334**	*e*P	**P**	**22 28 53.6**	**-0.7**
VORD			pmax	pmax		
	comp=Z,20nm,0.6s					
PCI	**Palu**	**71.92 244**	P	**P**	**22 28 55.2**	**-0.5**
	comp=Z,33nm,0.7s					
SAUI	**Saumlaki**	**72.01 230**	P	**P**	**22 28 57.3**	**+1.2**
SHAA	**Shahritus**	**72.16 308**	IAmb	IAmb	22 28 58.6	
	comp=Z,140nm,0.5s					
NIL	**Nilore**	**72.65 302**	P	**P**	**22 29 00.6**	**+0.8**
NIL	**Nilore**	**72.65 302**	P	**P**	**22 29 00.6**	**+0.8**
NIL			pmax	pmax		
	comp=Z,104nm,1.1s					
PMOR	**Pomariorio Ree**	**72.81 146**	*e*T	T	23 50 08.1	
	comp=Z,15nm,0.2s					
EKA	**Eskdalemuir Ar**	**73.07 1**	P	**P**	**22 29 01.5**	**-0.4**
	comp=Z,5.2nm,0.9s,baz=354,slow=4.1,SNR=6.4					
EKA			pP	**pP**	**22 29 30.9**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=2.3,slow=4.2,SNR=4.7					
	comp=Z,5.2nm,0.9s					
SBUM	**Sibu**	**73.56 252**	P	**P**	**22 29 06.9**	**+1.5**
	comp=Z,17nm,0.7s					
SBUM	**Sibu**	**73.56 252**	P	**P**	**22 29 05.0**	**-0.4**
	comp=Z,17nm,0.7s					
TTSI	**Tana Toraja**	**73.70 243**	P	**P**	**22 29 06.4**	**+0.3**
	comp=Z,53nm,0.9s					
KBL	**Kabul**	**74.10 306**	P	**P**	**22 29 07.4**	**-1.2**
KBL			IAmb	IAmb	22 29 09.1	
	comp=Z,65nm,0.8s					
KBL	**Kabul**	**74.10 306**	P	**P**	**22 29 07.4**	**-1.2**
KBL			pmax	pmax		
	comp=Z,65nm,0.8s					
AK21	**Malin Array Si**	**74.41 340**	P	**P**	**22 29 09.2**	**-0.6**
AK22	**Malin Array Si**	**74.42 340**	P	**P**	**22 29 09.2**	**-0.6**
AK03	**Malin Array Si**	**74.42 340**	P	**P**	**22 29 09.2**	**-0.6**
AK04	**Malin Array Si**	**74.43 340**	P	**P**	**22 29 09.3**	**-0.6**
AKASG	**Malin Array Be**	**74.44 340**	P	**P**	**22 29 09.5**	**-0.4**
	comp=Z,9.7nm,0.4s,baz=23,slow=6.1,SNR=34					
AKASG			pP	**pwP**	**22 29 41.2**	**+1.4**
	comp=Z,6.4nm,0.6s,baz=23,slow=6.1,SNR=4.8					
AKASG			LR	LR	23 04 48.8	
	comp=Z,32nm,18.3s,baz=18,slow=38					
	comp=Z,9.7nm,0.4s					
AKASG	**Malin Array Be**	**74.44 340**	P	**P**	**22 29 09.2**	**-0.8**
AKASG	**Malin Array Be**	**74.44 340**	P	**P**	**22 29 09.2**	**-0.8**
AKASG			pmax	pmax		
	comp=Z,3.0nm,0.6s					
AKBB	**Malin Array Si**	**74.44 340**	IAmb	IAmb	22 29 11.3	
	comp=Z,21nm,0.6s					
AKBB	**Malin Array Si**	**74.44 340**	⇓*e*P	**P**	**22 29 09.3**	**-0.6**
DZM	**Mont Dzumac**	**74.45 192**	P	**P**	**22 29 10.9**	**+0.6**
KIEV	**Kiev**	**74.45 340**	P	**P**	**22 29 09.1**	**-0.9**
KIEV	**Kiev**	**74.45 340**	⇑P	**P**	**22 29 09.6**	**-0.4**
KIEV	**Kiev**	**74.45 340**	*i* P	**P**	**22 29 09.4**	**-0.6**
	SNR=14					
KIEV	**Kiev**	**74.45 340**	P	**P**	**22 29 09.1**	**-0.9**
KIEV			pmax	pmax		
	comp=Z,18nm,0.6s					
SPSI	**Sidrap Palu**	**74.49 242**	P	**P**	**22 29 10.6**	**-0.1**
	comp=Z,35nm,0.9s					
AK09	**Malin Array Si**	**74.51 340**	P	**P**	**22 29 09.9**	**-0.5**
AK10	**Malin Array Si**	**74.53 340**	P	**P**	**22 29 09.8**	**-0.7**
PPT2	**Papeete2**	**74.66 148**	*e*LR	LR	22 52 12.6	
	comp=Z,98nm,31.2s					
KAPI	**Kappang**	**75.38 242**	P	**P**	**22 29 16.7**	**+0.9**
	comp=Z,17nm,0.7s,baz=251,slow=2.7,SNR=4.8					
KAPI			LR	LR	22 56 15.1	
	comp=Z,14nm,21.6s,baz=82,slow=31					
	comp=Z,17nm,0.7s					
KAPI	**Kappang**	**75.38 242**	P	**P**	**22 29 16.2**	**+0.5**
KAPI	**Kappang**	**75.38 242**	P	**P**	**22 29 16.3**	**+0.5**
KAPI			pmax	pmax		
	comp=Z,20nm,1.0s					
KAPI	**Kappang**	**75.38 242**	P	**P**	**22 29 15.4**	**-0.4**
LUBAR	**Lubar, Ukraine**	**75.48 341**	P	**P**	**22 29 14.5**	**-1.5**
GOF	**Gofitskoye**	**75.99 329**	*ce*P	**P**	**22 29 19.6**	**+0.6**
ERBR	**Yeremizino-Bor**	**76.19 331**	*e*P	**P**	**22 29 20.3**	**+0.2**
ERBR			*e*S	**S**	**22 38 52.2**	**-1.8**
ERBR			pmax	pmax		
	comp=Z,42nm,1.0s					
MAK	**Makhachkala**	**76.35 325**	*e*P	**P**	**22 29 21.1**	**+0.1**
MAK			*e**PP	**pP**	**22 29 50.8**	**-0.1**
MAK			*e**SP	**sP**	**22 30 03.7**	**0.0**
MAK			*e*		22 32 11.9	
MAK			*e*S	**S**	**22 38 56.6**	**+0.8**
MAK			*e**SS	**sS**	**22 39 49.3**	**+3.2**
MAK			*e*SS	**SS**	**22 43 57.6**	**+6.4**
MAK			pmax	pmax		
	comp=Z,40nm,0.4s					
MAK			MLR	MLR		
	comp=Z,126nm,18.0s					
CLL	**Collm**	**76.37 351**	*e*P	**P**	**22 29 22.0**	**+1.0**
CLL	**Collm**	**76.37 351**	*e*P	**P**	**22 29 22.0**	**+1.0**
CTA	**Charters Tower**	**77.04 211**	P	**P**	**22 29 24.6**	**-0.5**
	comp=Z,14nm,0.8s,baz=14,slow=7.7,SNR=11					
CTA			LR	LR	22 58 40.7	
	comp=Z,36nm,19.2s,baz=86,slow=32					
	comp=Z,14nm,0.8s					
CTAO	**Charters Tower**	**77.04 211**	P	**P**	**22 29 25.2**	**+0.1**
CTAO	**Charters Tower**	**77.04 211**	P	**P**	**22 29 25.2**	**+0.1**
CTAO			pmax	pmax		
	comp=Z,19nm,1.0s					
SORM	**Soroca**	**77.05 340**	⇑P	**P**	**22 29 24.7**	**-0.2**
SORM	**Soroca**	**77.05 340**	P	**P**	**22 29 24.6**	**-0.2**
LABN	**Labinsk**	**77.09 330**	*e*P	**P**	**22 29 25.8**	**+0.6**
LABN			*e*S	**S**	**22 39 04.8**	**+1.0**
LABN			pmax	pmax		
	comp=Z,19nm,0.8s					
KIV	**Kislovodsk**	**77.09 329**	P	**P**	**22 29 25.5**	**+0.2**
KIV			IAmb	IAmb	22 29 29.0	
	comp=Z,40nm,0.7s					
KIV	**Kislovodsk**	**77.09 329**	⇑P	**P**	**22 29 25.2**	**-0.1**
KIV	**Kislovodsk**	**77.09 329**	*i* P	**P**	**22 29 25.9**	**+0.6**
	SNR=9.8					
KIV	**Kislovodsk**	**77.09 329**	*e*P	**P**	**22 29 25.5**	**+0.2**
KIV			pmax	pmax		
	comp=Z,32nm,1.0s					
KIV	**Kislovodsk**	**77.09 329**	P	**P**	**22 29 25.8**	**+0.5**
KIV			PcP	**PcP**	**22 29 34.1**	**-1.6**
KIV			x	x	22 29 51.6	
KBZ	**Khabaz**	**77.23 329**	P	**P**	**22 29 26.4**	**+0.5**
	comp=Z,16nm,0.8s,baz=112,slow=4.0,SNR=42					
	comp=Z,16nm,0.8s					
KBZ	**Khabaz**	**77.23 329**	*de*P	**P**	**22 29 27.2**	**+1.3**
KBZ			pmax	pmax		
	comp=Z,16nm,0.9s					
SHA1	**Shidzhatmaz**	**77.30 329**	*de*P	**P**	**22 29 27.8**	**+1.2**
MORC	**Moravsky Berou**	**77.35 347**	*e*P	**P**	**22 29 27.5**	**+0.9**
EDFI	**Ende, Flores**	**77.47 238**	P	**P**	**22 29 26.8**	**-0.9**
	comp=Z,48nm,0.9s					
HRA	**Herat**	**77.53 311**	IAmb	IAmb	22 29 29.6	
	comp=Z,29nm,0.7s					
AKT	**Akhty**	**77.57 324**	*e*P	**P**	**22 29 28.0**	**0.0**
AKT			*e*		22 29 37.1	
AKT			*e**PP	**pP**	**22 29 57.6**	**-0.5**
AKT			*e**SP	**sP**	**22 30 09.6**	**-1.3**
AKT			pmax	pmax		
	comp=Z,54nm,0.8s					
BATI	**Baumata**	**77.68 235**	P	**P**	**22 29 29.4**	**+0.6**
	comp=Z,102nm,0.8s,baz=131,slow=3.2,SNR=6.0					
	comp=Z,102nm,0.8s					
BATI	**Baumata**	**77.68 235**	P	**P**	**22 29 29.0**	**+0.2**
	comp=Z,86nm,0.8s					
LANS	**Liptovska Anna**	**77.68 346**	*e*P	**P**	**22 29 30.4**	**+2.0**
LANS			pmax	pmax		
	comp=Z,6.0nm,0.7s					
LANS	**Liptovska Anna**	**77.68 346**	*e*P	**P**	**22 29 30.4**	**+2.0**
ANN	**Anapa**	**77.92 333**	*e*P	**P**	**22 29 29.5**	**-0.2**
ANN			*e**PP	**pP**	**22 29 59.4**	**-0.4**
ANN			pmax	pmax		
	comp=Z,127nm,1.1s					
VRAC	**Vranov**	**77.93 348**	*e*P	**P**	**22 29 30.9**	**+1.1**
BURAR	**Bucovina Array**	**78.19 342**	P	**P**	**22 29 31.4**	**+0.1**
BURAR			IAmb	IAmb	22 29 34.2	
	comp=Z,29nm,0.8s					
BURAR	**Bucovina Array**	**78.19 342**	⇓P	**P**	**22 29 31.2**	**-0.1**
BURAR	**Bucovina Array**	**78.19 342**	P	**P**	**22 29 31.4**	**+0.1**
KRUC	**Moravsky**	**78.20 348**	*e*P	**P**	**22 29 32.3**	**+1.1**
JAVC	**Velka Javorina**	**78.23 347**	*e*P	**P**	**22 29 33.8**	**+2.3**
KULM	**Kulim**	**78.31 264**	P	**P**	**22 29 33.0**	**+0.7**
	comp=Z,17nm,1.1s					
KULM	**Kulim**	**78.31 264**	P	**P**	**22 29 32.0**	**-0.3**
GIRR	**Girov**	**78.56 341**	⇑P	**P**	**22 29 34.1**	**+0.8**
SMOL	**Smolenice**	**78.60 347**	*e*P	**P**	**22 29 35.1**	**+1.7**
IPM	**Ipoh**	**78.71 263**	P	**P**	**22 29 34.4**	**-0.2**
	comp=Z,24nm,0.9s					
GERES	**GERESS Array B**	**78.73 350**	P	**P**	**22 29 34.5**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=42,slow=6.3,SNR=3.5					
GERES			LR	LR	23 07 01.9	
	comp=Z,70nm,18.0s,baz=101,slow=38					
MODS	**Modra-Piesok**	**78.76 347**	*e*P	**P**	**22 29 37.1**	**+2.8**
MODS	**Modra-Piesok**	**78.76 347**	*e*P	**P**	**22 29 37.1**	**+2.8**
PSZ	**Piszkesteto**	**78.82 345**	⇓P	**P**	**22 29 36.4**	**+1.7**
PSZ	**Piszkesteto**	**78.82 345**	P	**P**	**22 29 36.4**	**+1.7**
TESR	**Tescani**	**78.96 341**	⇑P	**P**	**22 29 36.4**	**+1.0**
MYKOM	**Kota Tinggi**	**79.10 259**	P	**P**	**22 29 37.2**	**+0.6**
	comp=Z,31nm,1.3s					
SRO	**Srobarova**	**79.16 346**	*e*P	**P**	**22 29 37.7**	**+1.2**
SRO	**Srobarova**	**79.16 346**	*e*P	**P**	**22 29 37.7**	**+1.2**
GHRR		**79.23 340**	⇓P	**P**	**22 29 38.1**	**+1.2**
VLDR	**Vladesti**	**79.29 339**	⇓P	**P**	**22 29 37.9**	**+0.6**
CJR	**Cluj-Napoca**	**79.36 343**	⇑P	**P**	**22 29 39.2**	**+1.5**
CJR	**Cluj-Napoca**	**79.36 343**	P	**P**	**22 29 39.2**	**+1.5**
CONA	**Conrad Observa**	**79.38 348**	*e*P	**P**	**22 29 39.1**	**+1.2**
	comp=Z,2.1nm,0.7s					
DRGR		**79.44 343**	⇑P	**P**	**22 29 38.5**	**+0.3**
DRGR		**79.44 343**	P	**P**	**22 29 38.4**	**+0.3**
TURR	**Turia**	**79.52 341**	⇓P	**P**	**22 29 38.9**	**+0.4**
VRI	**Vrincioaia**	**79.56 340**	⇑P	**P**	**22 29 38.9**	**+0.2**
VRI	**Vrincioaia**	**79.56 340**	P	**P**	**22 29 38.9**	**+0.2**
PLOR	**Plostina**	**79.59 340**	⇓P	**P**	**22 29 39.8**	**+0.8**
PLOR	**Plostina**	**79.59 340**	P	**P**	**22 29 39.7**	**+0.8**
PLAI	**Plampang**	**79.62 241**	P	**P**	**22 29 38.7**	**-0.7**
	comp=Z,52nm,0.8s					
PLAI	**Plampang**	**79.62 241**	P	**P**	**22 29 37.7**	**-1.7**
	comp=Z,53nm,0.8s					
COVR	**Voineasa-Covas**	**79.68 341**	⇑P	**P**	**22 29 40.4**	**+1.0**
DOPR	**Dopca**	**79.73 341**	⇑P	**P**	**22 29 41.0**	**+1.3**
TLCR		**79.75 339**	⇓P	**P**	**22 29 41.2**	**+1.4**
TLCR		**79.75 339**	P	**P**	**22 29 41.1**	**+1.4**
GNI	**Garni**	**79.81 326**	LR	LR	23 08 20.2	
	comp=Z,38nm,20.3s,baz=31,slow=38					
GNI	**Garni**	**79.81 326**	P	**P**	**22 29 41.2**	**+0.8**
GNI	**Garni**	**79.81 326**	P	**P**	**22 29 41.5**	**+1.1**
GNI	**Garni**	**79.81 326**	P	**P**	**22 29 41.2**	**+0.8**
GNI			pmax	pmax		
	comp=Z,32nm,1.2s					
CFR	**Carcaliu**	**79.91 339**	⇑P	**P**	**22 29 41.3**	**+0.7**
CFR	**Carcaliu**	**79.91 339**	P	**P**	**22 29 41.2**	**+0.7**
MLR	**Muntele Rosu**	**80.08 341**	⇓P	**P**	**22 29 42.7**	**+1.0**
MLR	**Muntele Rosu**	**80.08 341**	P	**P**	**22 29 42.6**	**+1.0**
ARSA	**Arzberg**	**80.09 348**	*e*P	**P**	**22 29 42.7**	**+1.1**
	comp=Z,2.9nm,0.8s					
TBI	**Tubuai**	**80.09 150**	*e*LR	LR	22 54 49.4	
	comp=Z,824nm,40.5s					
SIRR	**Siria**	**80.13 344**	⇓P	**P**	**22 29 41.7**	**-0.1**
KMMI	**Kalianget**	**80.26 245**	P	**P**	**22 29 41.9**	**-0.9**
	comp=Z,46nm,1.0s					
VOIR		**80.31 341**	⇓P	**P**	**22 29 43.9**	**+1.0**
VOIR		**80.31 341**	P	**P**	**22 29 43.8**	**+1.0**
KHKI	**Kahang-Kahang**	**80.42 243**	P	**P**	**22 29 42.7**	**-1.0**
	comp=Z,47nm,0.8s					
WATA	**Walderalm**	**80.44 351**	*e*P	**P**	**22 29 43.4**	**-0.2**
	comp=Z,2.8nm,0.6s					
ARR	**Arges**	**80.46 342**	⇑P	**P**	**22 29 44.7**	**+1.1**
DSRI	**Dabo**	**80.46 257**	P	**P**	**22 29 44.1**	**+0.1**
	comp=Z,3µmcomp=Z,52nm,0.9s					
MOTA	**Moosalm**	**80.48 351**	*e*P	**P**	**22 29 44.4**	**+0.5**
	comp=Z,3.2nm,0.8s					
WTTA	**Wattenberg**	**80.51 351**	*e*P	**P**	**22 29 44.1**	**+0.1**
	comp=Z,1.9nm,0.5s					
KBA	**Koelnbreinsper**	**80.52 350**	*e*P	**P**	**22 29 44.5**	**+0.4**
	comp=Z,2.4nm,0.5s					
SQTA	**Sankt Quirin**	**80.59 351**	*e*P	**P**	**22 29 45.2**	**+0.7**
	comp=Z,2.2nm,0.7s					
LHMI	**Lhok Sumawe**	**80.64 267**	P	**P**	**22 29 45.5**	**+0.5**
SOKA	**Soboth**	**80.71 348**	*e*P	**P**	**22 29 45.4**	**+0.4**
	comp=Z,5.8nm,0.6s					
GZR	**Gura Zlata**	**80.78 343**	⇓P	**P**	**22 29 45.6**	**+0.2**
GZR	**Gura Zlata**	**80.78 343**	P	**P**	**22 29 45.5**	**+0.2**
MFTR	**Murfatlar**	**80.80 339**	⇓P	**P**	**22 29 45.3**	**0.0**
FETA	**Feichten**	**80.84 351**	*e*P	**P**	**22 29 45.8**	**0.0**
	comp=Z,3.2nm,1.1s					
ABTA	**Abfaltersbach**	**80.93 350**	*e*P	**P**	**22 29 46.2**	**0.0**
	comp=Z,3.3nm,1.2s					
OBKA	**Obir**	**80.94 349**	*e*P	**P**	**22 29 46.6**	**+0.4**
	comp=Z,5.0nm,0.5s					
WRA	**Warramunga Arr**	**81.26 221**	P	**P**	**22 29 48.2**	**+0.2**
	comp=Z,23nm,0.7s,baz=32,slow=6.2,SNR=18					
	comp=Z,23nm,0.7s					
WRA	**Warramunga Arr**	**81.26 221**	P	**P**	**22 29 46.9**	**-1.1**
WRA	**Warramunga Arr**	**81.26 221**	P	**P**	**22 29 46.9**	**-1.1**
WRA			pmax	pmax		
	comp=Z,1.0nm,0.9s					
PSI	**Prapat**	**81.32 263**	P	**P**	**22 29 48.9**	**+0.2**
	comp=Z,397nmcomp=Z,44nm,1.1s					
RPSI	**Rantau Prapat**	**81.40 263**	IAmb	IAmb	22 29 49.7	
	comp=Z,34nm,0.8s					
SNJI	**Sawahan-Nganju**	**82.10 247**	P	**P**	**22 29 52.5**	**-0.3**
HYB	**Hyderabad**	**82.38 288**	*e*P	**P**	**22 29 54.2**	**0.0**
HYB			*e*PcP	**PcP**	**22 29 58.8**	**-0.2**
HYB			*e*sP	**sP**	**22 30 37.3**	**-0.3**
TEOL	**Teolo**	**82.39 351**	IAmb	IAmb	22 30 09.7	
	comp=Z,29nm,0.7s					
BOVS	**Bovan**	**82.68 343**	⇑P	**P**	**22 29 55.1**	**-0.1**
UGM	**Wanagama**	**82.92 248**	P	**P**	**22 29 57.9**	**+1.1**
	comp=Z,38nm,1.1s					
CTJI	**Waduk Cacaban**	**82.95 249**	P	**P**	**22 29 56.6**	**-0.4**
	comp=Z,56nm,1.0s					
SNSI	**Sinabang, Aceh**	**83.22 265**	P	**P**	**22 29 58.6**	**+0.1**
	comp=Z,61nm,1.1s					
PDSI	**Padang**	**83.29 260**	P	**P**	**22 29 57.0**	**-1.8**
GSI	**Gunungsitoli**	**83.32 264**	P	**P**	**22 29 59.6**	**+0.6**
	comp=Z,54nm,1.2s					
GSI	**Gunungsitoli**	**83.32 264**	P	**P**	**22 29 58.9**	**-0.1**
	comp=Z,1µmcomp=Z,54nm,1.2s					
KPJI	**Karang Pucung**	**83.36 249**	P	**P**	**22 29 57.7**	**-1.4**
	comp=Z,41nm,0.8s					
FITZ	**Fitzroy Crossi**	**83.48 230**	P	**P**	**22 30 00.4**	**+0.8**
	comp=Z,41nm,0.7s,baz=151,slow=4.7,SNR=9.3					
	comp=Z,41nm,0.7s					
BRTR	**Keskin Array B**	**83.67 333**	P	**P**	**22 30 01.3**	**+0.7**
	comp=Z,4.7nm,0.6s,baz=42,slow=2.7,SNR=32					
	comp=Z,4.7nm,0.6s					
BRTR	**Keskin Array B**	**83.67 333**	P	**P**	**22 30 00.6**	**0.0**
MDSI	**Maura Dua**	**83.88 255**	P	**P**	**22 30 00.0**	**-1.8**
ASAR	**Alice Springs**	**84.77 220**	P	**P**	**22 30 06.8**	**+0.8**
	comp=Z,13nm,0.8s,baz=25,slow=5.0,SNR=26					
ASAR			LR	LR	23 07 26.2	
	comp=Z,28nm,18.4s,baz=108,slow=35					
	comp=Z,13nm,0.8s					
ASAR	**Alice Springs**	**84.77 220**	P	**P**	**22 30 06.3**	**+0.2**
ASAR	**Alice Springs**	**84.77 220**	P	**P**	**22 30 06.3**	**+0.2**
SHME	**Shamm**	**87.37 310**	P	**P**	**22 30 18.3**	**-0.7**
BANOM	**Banah**	**87.40 310**	*i* P	**P**	**22 30 19.0**	**-0.1**
	SNR=7.2					
CMSA	**Cobar Meteorol**	**87.95 208**	P	**P**	**22 30 23.5**	**+2.2**
	comp=Z,28nm,1.0s					
UOSS	**Minazif**	**88.28 310**	P	**P**	**22 30 21.5**	**-1.8**
UOSS	**Minazif**	**88.28 310**	P	**P**	**22 30 22.1**	**-1.2**
HATD	**Hatta, Dubai**	**88.41 310**	P	**P**	**22 30 22.9**	**-1.0**
NAZ	**Nazwa, Dubai**	**88.50 310**	P	**P**	**22 30 23.4**	**-1.0**
ASHO	**Ashiyiah**	**88.57 310**	P	**P**	**22 30 24.0**	**-0.8**
ESDC	**Sonseca Array**	**88.72 2**	P	**P**	**22 30 24.4**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=350,slow=3.9,SNR=6.8					
ESDC			pP	**pP**	**22 30 56.8**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=355,slow=4.0,SNR=2.8					
ESDC	**Sonseca Array**	**88.72 2**	P	**P**	**22 30 24.4**	**-0.8**
FAQ	**Al Faqa, Dubai**	**88.74 310**	P	**P**	**22 30 24.5**	**-1.0**
SOHO	**SOHO**	**88.81 309**	*i* P	**P**	**22 30 24.2**	**-1.6**
	SNR=6.1					
MBWA	**Marble Bar**	**88.95 233**	P	**P**	**22 30 27.4**	**+1.2**
	comp=Z,26nm,0.9s					
PALK	**Pallekele**	**89.06 281**	LR	LR	23 16 42.2	
	comp=Z,17nm,18.0s,baz=56,slow=40					
PSA00	**Pilbara Seismi**	**89.24 233**	P	**P**	**22 30 29.0**	**+1.4**
	comp=Z,29nm,0.7s					
ALNE	**Al Ain**	**89.25 310**	*i* P	**P**	**22 30 26.8**	**-1.1**
	SNR=7.4					
MMAI	**Mount Meron Ar**	**89.39 330**	P	**P**	**22 30 27.9**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=354,slow=7.0,SNR=8.8					
	comp=Z,1.0nm,0.4s					
STKA	**Stephens Creek**	**89.50 211**	P	**P**	**22 30 30.1**	**+1.6**
	comp=Z,21nm,0.6s,baz=354,slow=6.4,SNR=29					
	comp=Z,21nm,0.6s					
STKA	**Stephens Creek**	**89.50 211**	P	**P**	**22 30 29.8**	**+1.2**
STKA	**Stephens Creek**	**89.50 211**	P	**P**	**22 30 30.3**	**+1.7**
	comp=Z,11nm,1.6s					
STKA	**Stephens Creek**	**89.50 211**	P	**P**	**22 30 29.8**	**+1.2**
STKA			pmax	pmax		
	comp=Z,492nm,1.7s					
BKZ	**Black Stump Fm**	**90.76 181**	P	**P**	**22 30 33.7**	**-0.6**
	comp=Z,19nm,1.4s					
MZR	**Muzera**	**91.22 311**	*i* P	**P**	**22 30 36.4**	**-0.7**
	SNR=10					
HTT	**Hallett**	**91.80 212**	P	**P**	**22 30 40.0**	**+0.7**
	comp=Z,9.2nm,0.7s					
MEEK	**Meekatharra**	**94.11 231**	P	**P**	**22 30 50.3**	**+0.2**
	comp=Z,37nm,1.0s					
RAYN	**Ar Rayn**	**94.30 318**	P	**P**	**22 30 50.8**	**-0.5**
RAYN			IAmb	IAmb	22 30 51.9	
	comp=Z,10nm,0.9s					
RAYN	**Ar Rayn**	**94.30 318**	*i* P	**P**	**22 30 51.0**	**-0.3**
	SNR=11					
RAYN	**Ar Rayn**	**94.30 318**	P	**P**	**22 30 50.8**	**-0.5**
RAYN			pmax	pmax		
	comp=Z,10.0nm,1.0s					
SDV	**Santo Domingo**	**95.63 68**	LR	LR	23 17 23.6	
	comp=Z,30nm,18.9s,baz=5.5,slow=37					
TORD	**Torodi Ar. Bea**	**115.11 356**	PKP	**PKiKP**	**22 36 11.6**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=281,slow=2.3,SNR=38					
TORD			PKKPbc	**PKKPbc**	**22 46 46.8**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=145,slow=1.8,SNR=6.5					
LPAZ	**La Paz**	**117.10 82**	PKKPbc	PKKPbc	22 46 42.8	+3.1
	comp=Z,1.0nm,0.6s,baz=132,slow=2.3,SNR=4.4					
DBIC	**Dimbokro**	**121.54 4**	PKP	**PKPdf**	**22 36 23.5**	**-1.4**
	comp=Z,4.6nm,0.6s,baz=317,slow=1.1,SNR=14					
PB14	**IPOC Station P**	**121.94 90**	PKPdf	**PKPdf**	**22 36 25.8**	**0.0**
VNDA	**Vanda**	**129.62 185**	SKPbc	SKPab	22 39 49.4	+0.9
	comp=Z,4.4nm,0.8s,baz=347,slow=2.9,SNR=8.2					
BI02	**San Fabin de**	**129.78 101**	PKPdf	**PKPdf**	**22 36 40.0**	**0.0**
CPUP	**Villa Florida**	**131.24 81**	SKPbc	**SKPbc**	**22 39 55.4**	**-1.1**
	comp=Z,9.4nm,0.6s,baz=313,slow=4.1,SNR=24					
PLCA	**Paso Flores**	**132.80 105**	PKP	**PKiKP**	**22 36 46.5**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=252,slow=2.6,SNR=5.6					
PLCA			SKPbc	**SKPbc**	**22 40 01.5**	**-0.1**
	comp=Z,14nm,0.9s,baz=307,slow=3.3,SNR=19					
QSPA	**South Pole Qui**	**141.71 180**	PKhKP	PKPpre	22 36 57.4	
	comp=Z,7.7nm,0.7s,baz=54,slow=1.7,SNR=8.1					
QSPA			PKP	**PKiKP**	**22 37 03.1**	**-1.0**
	comp=Z,6.4nm,0.6s,baz=146,slow=1.2,SNR=6.5					
BROLN	**Tlhalogang**	**141.90 313**	*i* P	**PKPdf**	**22 36 58.9**	**-4.1**
KHWEE	**KHWEE**	**143.48 315**	*i* P	PKPbc	22 37 03.5	+0.1
LPHEP	**Lephephe**	**144.53 313**	*i* P	**PKPdf**	**22 37 07.5**	**-0.1**
GRTLG	**Ghanzi**	**144.71 321**	*i* P	**PKPdf**	**22 37 07.7**	**-0.3**
KGCAE	**Kacgae**	**145.65 319**	*i* P	**PKPab**	**22 37 11.2**	**+0.7**
MAW	**Mawson**	**145.87 218**	PKPbc	**PKPbc**	**22 37 09.7**	**+0.5**
	comp=Z,42nm,0.8s,baz=95,slow=4.6,SNR=7.6					
KOOLE	**Kule**	**146.58 322**	*i* P	**PKPab**	**22 37 14.2**	**+0.1**
BOSA	**Boshof**	**149.28 309**	PKPbc	**PKPbc**	**22 37 20.0**	**+0.1**
	comp=Z,24nm,0.6s,baz=32,slow=2.5,SNR=102					
BOSA	**Boshof**	**149.28 309**		**PKPbc**	**22 37 20.5**	**+0.7**
BOSA	**Boshof**	**149.28 309**	PKP2	**PKPbc**	**22 37 20.0**	**+0.1**
GRHM	**Grahamstown, E**	**152.48 302**	PKPbc	**PKiKP**	**22 37 27.8**	**+0.5**
SUR	**Sutherland**	**154.52 311**	PKPbc	**PKiKP**	**22 37 32.1**	**+0.3**
SUR				**PKPab**	**22 37 48.1**	**+1.4**
ELIB	**Princess Elisa**	**157.12 200**	*d*PKP	PKPdf	22 37 36.0	+11

NEIC ***04*** *22:20:27.7±1.2, 17.°80N±0.°01×66.°85W±0.°01, h10km±1km, ML2.7/35, Md2.8/8(RSPR), Error ellipse: s-maj=3.2km s-min=2.7km az=29.0*

RSPR 04 22:20:28.6, 17.°84N×66.°87W, h8km±1km, MD2.8/8, 7C-5D, Puerto Rico region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.14 356**		Pg	22 20 31.9	+0.3
GBPR				Sg	22 20 34.5	+0.8
GBPR	**Guanica, Bosqu**	**0.14 356**	⇓*e*P	Pg	22 20 31.9	+0.3
GBPR			*e*S	Sg	22 20 34.5	+0.8
MLPR	**Magueyes Islan**	**0.21 308**	Pg	Pg	22 20 33.1	+0.2
MLPR			Sg	Sg	22 20 36.2	+0.3
MLPR			IAML		22 20 36.9	
	1µm,0.5s					
MLPR			IAML		22 20 37.0	
	808nm,0.4s					
CRPR	**Cabo Rojo, PR**	**0.28 306**	Pg	Pg	22 20 34.3	0.0
CRPR			Sg	Sg	22 20 38.5	+0.4
CRPR	**Cabo Rojo, PR**	**0.28 306**	IAML		22 20 39.2	
	898nm,0.3s					
CRPR			IAML		22 20 39.8	
	917nm,0.3s					
CRPR	**Cabo Rojo, PR**	**0.28 306**	⇑*e*P	Pg	22 20 34.5	+0.2
CRPR			*e*S	Sg	22 20 38.8	+0.7
OBIP	**Obispado Ponce**	**0.32 51**	Pg	Pg	22 20 34.9	-0.2
OBIP			Sg	Sg	22 20 39.6	+0.3
OBIP			IAML		22 20 40.2	
	comp=N,193nm,0.4s					
OBIP	**Obispado Ponce**	**0.32 51**	⇓*e*P	Pg	22 20 35.1	+0.1
OBIP			*e*S	Sg	22 20 40.1	+0.8
CELP	**Cerrillos**	**0.36 49**	Pg	Pg	22 20 35.7	-0.1
CELP			Sg	Sg	22 20 41.0	+0.4
CELP			IAML		22 20 41.9	
	comp=N,706nm,0.1s					
CELP			IAML		22 20 42.2	
	comp=N,557nm,0.2s					
LSP	**Las Mesas**	**0.40 328**		Pg	22 20 36.4	0.0
LSP				Sg	22 20 42.7	+1.1
LSP	**Las Mesas**	**0.40 328**	⇑*e*P	Pg	22 20 36.4	0.0
LSP			*e*S	Sg	22 20 42.7	+1.1
UUPR	**Utuado, UPR, P**	**0.44 19**	Pg	Pg	22 20 36.6	-0.5
UUPR			Sg	Sg	22 20 42.2	-0.7
UUPR			IAML		22 20 43.5	
	comp=N,3µm,0.4s					
UUPR			IAML		22 20 47.7	
	comp=N,2µm,0.4s					
PRSN	**Puerto Rico Se**	**0.46 325**	Pg	Pg	22 20 37.0	-0.6
PRSN			Sg	Sg	22 20 43.8	+0.1
PRSN			IAML		22 20 44.8	
	comp=N,2µm,0.2s					
PRSN			IAML		22 20 46.8	
	comp=N,2µm,0.3s					
PRSN	**Puerto Rico Se**	**0.46 325**	⇓*e*P	Pg	22 20 37.4	-0.2
PRSN			*e*S	Sg	22 20 44.1	+0.4
AGPR	**Aguadilla, PR**	**0.67 340**	Pg	Pg	22 20 40.6	-1.0
AGPR			Sg	Sg	22 20 49.6	-0.7
AGPR			IAML		22 20 50.0	
	comp=N,249nm,0.4s					
AGPR			IAML		22 20 50.8	
	comp=N,236nm,0.3s					
AGPR	**Aguadilla, PR**	**0.67 340**	⇓*e*P	Pg	22 20 40.9	-0.6
AGPR			*e*S	Sg	22 20 49.7	-0.6
ECPR	**Experimental S**	**0.68 45**	Pg	Pg	22 20 40.7	-1.1
ECPR			Sg	Sg	22 20 49.6	-1.0
ECPR			IAML		22 20 51.9	
	comp=N,1µm,0.2s					
ECPR			IAML		22 20 52.3	
	comp=N,789nm,0.2s					
ECPR	**Experimental S**	**0.68 45**	⇓*e*P	Pg	22 20 41.1	-0.7
ECPR			*e*S	Sg	22 20 50.3	-0.4
EMPR	**Esperanza - Ma**	**0.71 27**		Pg	22 20 42.0	-0.4
EMPR				Sg	22 20 51.7	0.0
EMPR	**Esperanza - Ma**	**0.71 27**	⇑*e*P	Pg	22 20 42.0	-0.4
EMPR			*e*S	Sg	22 20 51.7	0.0
SJG	**San Juan**	**0.74 68**	Pg	Pg	22 20 42.0	-0.9
SJG			Sg	Sg	22 20 51.0	-1.5
SJG			IAML		22 20 55.2	
	comp=N,134nm,0.4s					
SJG			IAML		22 20 55.5	
	comp=N,135nm,0.3s					
SJG	**San Juan**	**0.74 68**	⇑*e*P	Pg	22 20 42.0	-0.9
IDE	**Isla Desecheo**	**0.79 314**		Pg	22 20 43.1	-0.8
IDE				Sg	22 20 54.0	-0.3
IDE	**Isla Desecheo**	**0.79 314**	⇑*e*P	Pg	22 20 43.1	-0.8
IDE			*e*S	Sg	22 20 54.0	-0.3
PDPR	**Patillas Dam,**	**0.83 77**	Pg	Pg	22 20 43.7	-0.8
PDPR			IAML		22 20 58.9	
	comp=N,109nm,0.3s					
PDPR			IAML		22 20 59.1	
	comp=N,191nm,0.3s					
GCPR	**Guaynabo City**	**0.88 58**	Pg	Pg	22 20 44.6	-1.0
GCPR			Sg	Sg	22 20 56.0	-1.1
GCPR			IAML		22 20 57.6	
	comp=N,55nm,0.5s					
GCPR			IAML		22 21 03.2	
	comp=E,59nm,0.9s					
GCPR	**Guaynabo City**	**0.88 58**	⇑*e*P	Pg	22 20 44.8	-0.8
GCPR			*e*S	Sg	22 20 56.5	-0.6
HUMP	**Col San Antoni**	**1.02 72**		Pg	22 20 46.9	-1.3
HUMP				Sg	22 21 01.3	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HUMP	**Col San Antoni**	**1.02**	**72**	Pg	Pg	22 20 46.6	-1.6
HUMP				Sg	Sg	22 21 00.7	-0.7
HUMP				IAML		22 21 03.3	
	comp=E,135nm,0.4s						
HUMP				IAML		22 21 03.5	
	comp=E,145nm,0.2s						
HUMP	**Col San Antoni**	**1.02**	**72⇑**	*e*P	Pg	22 20 46.9	-1.3
HUMP				*e*S	Sg	22 21 01.3	-0.1
CUPR	**Culebra, Puert**	**1.58**	**73**	Pn	Pn	22 20 56.3	-0.7
DR12	**Loma Pena Alta**	**2.57**	**292**	Pn	Pn	22 21 10.7	+0.1

*IDC **04** 22:22:39.0±1.4, 5°.78S×133°.41E, h0^{km}, mb4.0/7, mbtmp4.1/11, ML4.2/4, MS3.4/7, Error ellipse: s-maj=70.8km s-min=18.6km az=76.0*
*DJA **04** 22:22:39.7±0.7, 6°S±2°×13°4E±°, h13^{km}±6^{km}, M4.6/19, mB5.2/7, mb4.5/17, MLv4.7/19, Mw(mB)4.5/7*
*NEIC **04** 22:22:42.3±1.8, 5°.67S±0°.03×133°.5E±0°.1, h19^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=19.5km s-min=3.0km az=82.0*
ISC 04 22:22:43.2±0.6, **5°.69S**±0°.05×**133°.60E**±0°.08, **h35^{km}, n63,** σ1^s.**92**/62, **mb4.3**/13, **MS3.2**/5, **Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**2.01**	**3**	P	**Pn**	**22 23 13.2**	**-1.5**
KMPI				S	**Sn**	**22 23 35.5**	**-3.2**
FAKI	**Fak Fak**	**3.06**	**334**		**Pn**	**22 23 27.3**	**-1.9**
FAKI	**Fak Fak**	**3.06**	**334**	P	**Pn**	**22 23 28.4**	**-0.7**
FAKI				S	**Sn**	**22 24 00.8**	**-3.8**
SAUI	**Saumlaki**	**3.23**	**225**	Pn	**Pn**	**22 23 31.7**	**+0.3**
BNDI	**Bandanaira**	**3.85**	**287**	P	**Pn**	**22 23 41.3**	**+1.2**
RKPI	**Ransiki, Papua**	**4.19**	**8**	P	**Pn**	**22 23 44.1**	**-0.6**
BAKI	**Biak**	**5.12**	**29**	P	**Pn**	**22 23 58.2**	**+0.7**
	0.3nm50nm,1.1s						
MSAI	**Masohi**	**5.20**	**296**	P	**Pn**	**22 24 00.3**	**+1.7**
	0.8nm3μm63nm,0.5s						
SIJI	**Sorong**	**5.32**	**334**	Pn	**Pn**	**22 23 59.9**	**-0.4**
	8.2nm,0.3s,baz=92,slow=2.2,SNR=36						
SIJI				Sn	**Sn**	**22 24 54.8**	**-5.6**
	26nm,0.3s,baz=97,slow=23,SNR=6.0						
	18nm,0.3s						
SIJI	**Sorong**	**5.32**	**334**	P	**Pn**	**22 24 00.0**	**-0.3**
	0.6nm29nm,0.7s						
SWI	**Sorong**	**5.33**	**334**	P	**Pn**	**22 24 00.8**	**+0.5**
	4μm28nm,0.5s						
KRAI	**Karang Ratu**	**5.70**	**294**	P	**Pn**	**22 24 06.5**	**+1.1**
	0.2nm16nm,0.8s						
MTN	**Manton Dam**	**7.52**	**199**	Pn	**Pn**	**22 24 31.4**	**+1.0**
SANI	**Sanana**	**8.41**	**295**	P	**Pn**	**22 24 42.4**	**-0.2**
	15nm,0.6s						
SOEI	**Soe**	**10.09**	**246**	Pn	**Pn**	**22 25 04.2**	**-1.6**
SOEI	**Soe**	**10.09**	**246**	P	**Pn**	**22 25 05.1**	**-0.7**
KNRA	**Kununurra**	**11.00**	**205**	Pn	**Pn**	**22 25 18.0**	**-0.2**
EDFI	**Ende, Flores**	**12.20**	**255**	P	**Pn**	**22 25 34.6**	**-0.1**
COEN	**Coen**	**12.51**	**132**	Pn	**Pn**	**22 25 37.1**	**-1.8**
WB0	**Warramunga Arr**	**14.02**	**177**	Pn	**Pn**	**22 25 58.0**	**-1.4**
WRA	**Warramunga Arr**	**14.19**	**177**	Pn	**Pn**	**22 25 59.9**	**-2.0**
	0.6nm,0.3s,baz=354,slow=13,SNR=30						
WRA				Sn	Sn	22 28 27.4	-11
	1.1nm,0.3s,baz=352,slow=24,SNR=6.3						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**14.19**	**177**	Pn	**Pn**	**22 25 57.9**	**-3.9**
WR8	**Warramunga Arr**	**14.21**	**177**	Pn	**Pn**	**22 25 58.7**	**-3.4**
WR0	**Warramunga Arr**	**14.22**	**176**	Pn	**Pn**	**22 26 00.6**	**-1.6**
FITZ	**Fitzroy Crossi**	**14.58**	**212**	Pn	**Pn**	**22 26 03.8**	**-3.3**
	2.0nm,0.3s,baz=22,slow=9.8,SNR=35						
FITZ				Sn	Sn	22 28 36.5	-11
	2.7nm,0.3s,baz=192,slow=16,SNR=11						
	4.2nm,0.3s						
DBNI	**Kabupaten Domp**	**15.42**	**259**	P	**Pn**	**22 26 19.6**	**+1.2**
PLAI	**Plampang**	**16.00**	**258**	P	**Pn**	**22 26 24.0**	**-1.8**
	14nm,0.8s						
AS31	**Alice Springs**	**17.88**	**179**	Pn	**Pn**	**22 26 48.4**	**-0.9**
ASAR	**Alice Springs**	**17.88**	**179**	P	**Pn**	**22 26 48.8**	**-0.5**
	0.7nm,0.3s,baz=4.5,slow=9.9,SNR=25						
ASAR				S	**Sn**	**22 30 01.1**	**-6.7**
	1.8nm,0.6s,baz=360,slow=28,SNR=4.8						
ASAR				LR	LR	22 34 46.2	
	comp=Z,147nm,19.6s,baz=344,slow=41						
	5.7nm,0.8s						
ASAR	**Alice Springs**	**17.88**	**179**		**P**	**22 26 49.9**	**+0.2**
CTA	**Charters Tower**	**18.88**	**140**	LR	LR	22 35 33.5	
	comp=Z,232nm,18.5s,baz=32,slow=41						
CTAO	**Charters Tower**	**18.88**	**140**	P	**Pn**	**22 27 04.3**	**+2.8**
MBWA	**Marble Bar**	**20.43**	**220**	P	**P**	**22 27 18.5**	**+0.9**
MBWA				IAmb	IAmb	22 27 56.4	
	comp=Z,38nm,1.3s						
PSA00	**Pilbara Seismi**	**20.66**	**219**	P	**P**	**22 27 19.9**	**-0.2**
PSA00				IAmb	IAmb	22 27 34.9	
	comp=Z,17nm,1.2s						
PSA00	**Pilbara Seismi**	**20.66**	**219**	P	**P**	**22 27 20.9**	**+0.8**
PSA00				IAmb	IAmb	22 27 35.0	
	comp=Z,31nm,1.3s						
PCJI	**Pacitan**	**22.39**	**262**	P	**P**	**22 27 39.7**	**+0.9**
INKA	**Innaminka**	**22.96**	**164**	P	**P**	**22 27 46.5**	**+1.8**
FORT	**Forrest**	**25.50**	**191**	P	**P**	**22 28 08.2**	**-0.1**
FORT				IAmb	IAmb	22 28 42.4	
	comp=Z,8.5nm,0.8s						
LEM	**Lembang**	**25.85**	**266**	LR	LR	22 40 38.7	
	comp=Z,62nm,19.0s,baz=231,slow=42						
STKA	**Stephens Creek**	**27.11**	**165**	P	**P**	**22 28 23.4**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=344,slow=9.6,SNR=4.5						
STKA				LR	LR	22 41 26.6	
	comp=Z,68nm,18.3s,baz=25,slow=42						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**27.11**	**165**	P	**P**	**22 28 23.6**	**+0.7**
KULM	**Kulim**	**34.66**	**288**	P	**P**	**22 29 31.3**	**+1.5**
CMAR	**Chiang Mai Arr**	**41.75**	**306**	P	**P**	**22 30 29.6**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=119,slow=8.5,SNR=1.8						
	comp=Z,0.5nm,0.3s						
MJAR	**Matsushiro Arr**	**42.23**	**6**	LR	LR	22 46 50.7	
	comp=Z,60nm,18.8s,baz=156,slow=34						
KSRS	**Korea Array**	**43.24**	**353**	LR	LR	22 48 47.2	
	comp=Z,28nm,20.0s,baz=90,slow=36						
KLR	**Kul'dur**	**54.71**	**359**	LR	LR	22 52 48.1	
	comp=Z,19nm,21.2s,baz=56,slow=33						
SONM	**Songino Array**	**58.43**	**339**	P	**P**	**22 32 37.2**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=167,slow=8.2,SNR=2.4						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**69.15**	**325**	P	**P**	**22 33 48.0**	**+1.8**
	comp=Z,2.6nm,0.8s,baz=118,slow=8.0,SNR=12						
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**69.15**	**325**	P	**P**	**22 33 46.9**	**+0.7**
MAKZ	**Makanchi**	**69.34**	**325**	P	**P**	**22 33 48.8**	**+1.6**
MAKZ				IAmb	IAmb	22 33 49.9	
	comp=Z,5.2nm,1.1s						
ZAA0	**Zalesovo Array**	**72.05**	**332**	P	**P**	**22 34 04.3**	**+0.8**
ZAA0				IAmb	IAmb	22 34 04.9	
	comp=Z,3.3nm,0.8s						
ZALV	**Zalesovo Beam**	**72.05**	**332**	P	**P**	**22 34 04.3**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=106,slow=5.3,SNR=8.8						
	comp=Z,3.3nm,0.9s						
ARSB	**Arslanbob**	**72.36**	**316**	P	**P**	**22 34 07.8**	**+1.9**
ARSB				IAmb	IAmb	22 34 22.1	
	comp=Z,7.4nm,1.2s						
KURBB	**Kurchatov Arra**	**73.32**	**327**	P	**P**	**22 34 11.9**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=122,slow=5.7,SNR=7.2						
	comp=Z,1.7nm,0.8s						
KURK	**Kurchatov**	**73.32**	**327**	P	**P**	**22 34 11.8**	**+0.7**
KURK				IAmb	IAmb	22 34 26.5	
	comp=Z,4.3nm,0.9s						
KKAR	**Karatay Array**	**74.76**	**317**	P	**P**	**22 34 21.4**	**+1.6**
BVAR	**Borovoye Array**	**78.90**	**327**	P	**P**	**22 34 43.7**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=124,slow=9.2,SNR=3.9						
	comp=Z,0.7nm,0.7s						
AB31	**Akbulak array**	**83.73**	**321**	P	**P**	**22 35 09.9**	**+1.3**
ABKAR	**Akbulak array**	**83.73**	**321**	P	**P**	**22 35 09.9**	**+1.3**
J16K	**Anvik River**	**84.46**	**24**	P	**P**	**22 35 13.9**	**+1.9**
J16K				IAmb	IAmb	22 35 29.4	
	comp=Z,4.3nm,1.1s						
H17K	**Granite Mounta**	**85.41**	**23**	P	**P**	**22 35 18.1**	**+1.3**
J18K	**Innoko River**	**86.15**	**25**	P	**P**	**22 35 21.8**	**+1.3**
D20K	**Etivluk River**	**88.06**	**20**	P	**P**	**22 35 30.2**	**+0.5**

*SKHL **04** 22:47:28.7±0.4, 47°.30N×146°.90E, h385^{km}±4^{km}, mb5.0/8, mbv5.1/2, msh5.0/4, msha5.6/5*
*MOS **04** 22:47:28.8±0.9, 47°.40N×146°.76E, h398^{km}, mb4.4/41, Error ellipse: s-maj=7.5km s-min=5.2km az=103.9*
*JMA **04** 22:47:29.6±0.5, 47°N±3°×14°7E±°, h428^{km}, MV4.3/32, SOUTHERN SEA OF OKHOTSK*
*NIED **04** 22:47:29.6, 46°.85N×147°.07E, h428^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.28; M$_{\theta\theta}$0.24; M$_{\phi\phi}$0.04; M$_{r\theta}$-0.20; M$_{\theta\phi}$0.61; M$_{\phi r}$-0.93; Fault plane solution: M$_0$1.15000×10^{16} NP1: φ$_s$270.00000°, δ31.00000°, λ-16.00000°. NP2: φ$_s$14.00000°, δ82.00000°, λ-120.00000°.*
*NEIC **04** 22:47:30.9±1.6, 47°.53N±0°.09×146°.6E±0°.1, h394^{km}±6^{km}, mb4.4/98 Error ellipse: s-maj=15.2km s-min=12.4km az=127.0*
*IDC **04** 22:47:31.1±0.6, 47°.48N×146°.61E, h399^{km}±6^{km}, mb3.7/28, mbtmp4.5/37, Error ellipse: s-maj=9.9km s-min=7.2km az=139.0*
ISC 04 22:47:29.9±0.4, **47°.25N**±0°.04×**146°.82E**±0°.04, **h400^{km}**±3^{km}, **h399^{km}:pP-P, n364,** σ1^s.**44**/422, **mb4.4**/120, **26C-35D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.15**	**160**	*e*PN	**P**	**22 48 26.1**	**-0.7**
KUR				*e*S	**S**	**22 49 12.9**	**+0.2**
KUR				pmax	pmax		
	comp=E,107nm,0.8s						
KUR				pmax	pmax		
	comp=Z,431nm,0.8s						
KUR				pmax	pmax		
	comp=N,69nm,1.0s						
KUR				smax	smax		
	comp=N,321nm,0.6s						
KUR				smax	smax		
	comp=E,160nm,0.5s						
KUR	**Kuril'sk**	**2.15**	**160**	*e*P	**P**	**22 48 26.1**	**-0.7**
KUR				AMB	AMB	22 48 27.8	
	comp=E,400nm,0.5s						
KUR				*e*S	**S**	**22 49 11.4**	**-1.3**
KUR				A	A	22 49 12.2	
	comp=E,4μm,2.0s						
KUR				A	A	22 49 12.2	
	comp=E,1μm,2.0s						
KUR				A	A	22 49 12.9	
	comp=E,340nm,0.6s						
KUR				A	A	22 49 12.9	
	comp=E,430nm,0.6s						
YSS	**Yuzhno-Sakhali**	**2.79**	**265**		**P**	**22 48 31.2**	**-0.1**
YSS	**Yuzhno-Sakhali**	**2.79**	**265α**	*e*PN	**P**	**22 48 32.1**	**+0.7**
YSS				*e*S	**S**	**22 49 19.5**	**-1.6**
YSS				pmax	pmax		
	comp=Z,1μm,3.3s						
YSS				pmax	pmax		
	comp=N,300nm,2.7s						
YSS				pmax	pmax		
	comp=E,900nm,2.2s						
YSS				pmax	pmax		
	comp=Z,550nm,1.0s						
YSS				smax	smax		
	comp=N,90nm,1.2s						
YSS				smax	smax		
	comp=E,80nm,1.2s						
YSS				smax	smax		
	comp=N,1μm,4.4s						
YSS				smax	smax		
	comp=E,800nm,4.6s						
YSS	**Yuzhno-Sakhali**	**2.79**	**265**	*e*P	**P**	**22 48 31.8**	**+0.4**
YSS				AMB	AMB	22 48 32.4	
	comp=E,1μm,3.3s						
YSS				AMB	AMB	22 48 32.6	
	comp=E,550nm,0.6s						
YSS				*e*S	**S**	**22 49 20.5**	**-0.6**
YSS				A	A	22 49 20.7	
	comp=E,90nm,0.7s						
YSS				A	A	22 49 20.7	
	comp=E,80nm,0.7s						
YSS				A	A	22 49 21.0	
	comp=E,1μm,4.0s						
YSS				A	A	22 49 21.0	
	comp=E,800nm,4.0s						
YUK	**Yuzh-Kuril'sk**	**3.29**	**192**	*e*PN	**P**	**22 48 36.2**	**+0.6**
YUK				*e*S	**S**	**22 49 27.1**	**-1.6**
YUK				pmax	pmax		
	comp=Z,341nm,0.2s						
YUK				pmax	pmax		
	comp=N,50nm,0.1s						
YUK				smax	smax		
	comp=N,773nm,0.3s						
YUK				smax	smax		
	comp=E,5μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.29**	**192**	*e*P	**P**	**22 48 35.2**	**-0.4**
YUK				AMB	AMB	22 48 37.1	
	comp=E,270nm,0.3s						
YUK				*e*S	**S**	**22 49 28.5**	**-0.2**
YUK				A	A	22 49 32.5	
	comp=E,6μm,2.0s						
YUK				A	A	22 49 32.5	
	comp=E,3μm,2.0s						
YUK				A	A	22 49 34.4	
	comp=E,3μm,0.4s						
YUK				A	A	22 49 34.4	
	comp=E,760nm,0.4s						
RUSJ	**Misakicho**	**3.33**	**200**	*e*PN	**P**	**22 48 36.0**	**0.0**
RUSJ				*e*S	**S**	**22 49 29.2**	**-0.2**
JRA	**Rausu**	**3.52**	**200**	*e*P	**P**	**22 48 37.0**	**-0.6**
GLVR	**Golovnino**	**3.63**	**195**	*e*PN	**P**	**22 48 37.7**	**-0.9**
GLVR				*e*S	**S**	**22 49 32.2**	**-2.0**
GLVR				pmax	pmax		
	comp=Z,371nm,0.6s						
GLVR				pmax	pmax		
	comp=E,40nm,0.4s						
GLVR				smax	smax		
	comp=E,4μm,0.6s						
GLVR				smax	smax		
	comp=N,4μm,0.3s						
GLVR	**Golovnino**	**3.63**	**195**	*e*P	**P**	**22 48 37.7**	**-0.9**
GLVR				AMB	AMB	22 48 38.8	
	comp=N,370nm,0.6s						
GLVR				*e*S	**S**	**22 49 31.8**	**-2.4**
GLVR				A	A	22 49 37.5	
	comp=N,4μm,0.5s						
GLVR				A	A	22 49 37.5	
	comp=N,4μm,0.5s						
UGL	**Uglegorsk**	**3.67**	**302**	*e*P	**P**	**22 48 38.1**	**-0.7**
UGL				AMB	AMB	22 48 39.9	
	comp=N,130nm,0.5s						
JSE	**Soyaes**	**3.73**	**234**	P	**P**	**22 48 40.3**	**+0.9**
JTKR	**Abashiri--Toko**	**3.87**	**213**	P	**P**	**22 48 40.8**	**+0.1**
JTKR				S	**S**	**22 49 36.9**	**-1.2**
JWK2	**Keihoku**	**3.92**	**242**	P	**P**	**22 48 42.6**	**+1.4**
JWK2				*e*S	**S**	**22 49 41.8**	**+2.8**
JNK	**Nakash**	**3.95**	**203**	*e*P	**P**	**22 48 41.1**	**-0.6**
NMR	**Nemuro--Hokkai**	**3.96**	**192⇓**	*i*PN	**P**	**22 48 39.1**	**-2.5**
NMR	**Nemuro--Hokkai**	**3.96**	**192**	*i* P	**P**	**22 48 39.1**	**-2.5**
NEM2	**Nemuro 2**	**3.96**	**191**	P	**P**	**22 48 39.2**	**-2.5**
NEM2				S	**S**	**22 49 34.7**	**-5.1**
JMP	**Maruseppu**	**4.05**	**218**	P	**P**	**22 48 42.8**	**+0.2**
JKA	**Kamikawa-asahi**	**4.31**	**225**	Pn	**P**	**22 48 45.7**	**+0.7**
ASAJ	**Asahikawa**	**4.31**	**225**	P	**P**	**22 48 46.1**	**+1.1**
	comp=N,22nm,0.4s,baz=7.3,slow=4.8,SNR=14						
ASAJ				S	**S**	**22 49 47.9**	**+2.0**
	comp=N,23nm,0.6s,baz=42,slow=31,SNR=6.5						
JRBN	**Rebuntou**	**4.39**	**247**	P	**P**	**22 48 45.9**	**+0.2**
JRBN				S	**S**	**22 49 45.1**	**-2.0**
AKK	**Akkeshi**	**4.46**	**199**	*e*P	**P**	**22 48 44.6**	**-1.9**
JAR	**Ashorobuto**	**4.50**	**210**	P	**P**	**22 48 46.8**	**-0.1**
JAK	**Akkeshi**	**4.51**	**200**	P	**P**	**22 48 45.0**	**-2.0**
JAK				S	**S**	**22 49 44.2**	**-5.4**
TYV	**Tymovskoe**	**4.53**	**324**	*e*PN	**P**	**22 48 46.6**	**-0.4**
TYV				*e*S	**S**	**22 49 46.0**	**-3.7**
TYV				pmax	pmax		
	comp=Z,90nm,0.7s						
TYV				pmax	pmax		
	comp=Z,600nm,2.9s						
TYV				smax	smax		
	comp=N,42nm,1.0s						
TYV				smax	smax		
	comp=E,38nm,1.0s						
TYV				smax	smax		
	comp=N,800nm,4.7s						
TYV				smax	smax		
	comp=E,700nm,4.7s						
TYV	**Tymovskoe**	**4.53**	**324**	*e*P	**P**	**22 48 46.5**	**-0.4**
TYV				AMB	AMB	22 48 46.7	
	comp=E,90nm,0.7s						
TYV				AMB	AMB	22 48 47.1	
	comp=E,600nm,2.9s						
TYV				*e*S	**S**	**22 49 48.2**	**-1.5**
TYV				A	A	22 49 49.6	
	comp=E,40nm,0.5s						
TYV				A	A	22 49 49.6	
	comp=E,40nm,0.5s						
TYV				A	A	22 49 49.8	
	comp=E,800nm,4.8s						
TYV				A	A	22 49 49.8	
	comp=E,700nm,4.8s						
JHR	**Hokuryu**	**5.01**	**227**	P	**P**	**22 48 53.3**	**+1.2**
JFR	**Furan**	**5.06**	**218**	P	**P**	**22 48 52.9**	**+0.2**
JCH	**Churui**	**5.25**	**209**	P	**P**	**22 48 52.8**	**-1.8**
JCH				S	**S**	**22 49 56.6**	**-6.6**
JBT2	**Biratori 2**	**5.48**	**217**	P	**P**	**22 48 56.2**	**-0.7**
JNBK	**Urakawa-nobuka**	**5.75**	**212**	P	**P**	**22 48 57.9**	**-2.0**
JEW	**Eniwo**	**5.83**	**223**	P	**P**	**22 49 01.0**	**+0.3**
SKR	**Severo-Kuril's**	**7.02**	**57**	*e*P	**P**	**22 49 12.7**	**-1.5**
SKR				AMB	AMB	22 49 15.7	
	comp=E,70nm,0.6s						
NKL	**Nikolayevsk**	**7.10**	**329**	*e*P	**P**	**22 49 13.6**	**-1.4**
NKL				AMB	AMB	22 49 15.0	
	comp=E,50nm,0.5s						
JOT	**Ohata**	**7.18**	**217**	P	**P**	**22 49 13.7**	**-2.5**
JOT				S	**S**	**22 50 33.6**	**-8.3**
JOSM	**Okushiri--Mats**	**7.36**	**228**	P	**P**	**22 49 16.7**	**-1.4**
TEY	**Ternei**	**7.43**	**256⇑**	*e*PN	**P**	**22 49 19.7**	**+0.7**
TEY				pmax	pmax		
	comp=N,10.0nm,0.6s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.6s						
TEY				pmax	pmax		
	comp=Z,50nm,0.6s						
GRNR	**Gornyy**	**7.69**	**301⇑**	*i*PN	**P**	**22 49 21.0**	**-0.7**
GRNR				pmax	pmax		
	comp=E,20nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
JSI2	**Shiura 2**	**7.72**	**219**	*e*P	**P**	**22 49 19.4**	**-2.7**
JSI2				*e*S	**S**	**22 50 45.6**	**-7.5**
PAU	**Pauzhetka**	**7.77**	**53**	*e*P	**P**	**22 49 22.0**	**-0.5**
JANG	**Nango**	**7.87**	**211**	P	**P**	**22 49 21.6**	**-2.4**
JIW	**Iwasaki**	**8.27**	**219**	*e*P	**P**	**22 49 26.6**	**-1.8**
JIW				*e*S	**S**	**22 50 58.9**	**-5.9**
PEA0B	**Petropavlovsk-**	**9.11**	**46**		**P**	**22 49 38.2**	**+0.8**
PEA0B	**Petropavlovsk-**	**9.11**	**46⇑**	*e*PN	**P**	**22 49 37.6**	**+0.2**
PETK	**Petropavlovsk-**	**9.11**	**46**	P	**P**	**22 49 37.3**	**-0.1**
	comp=Z,7.0nm,0.7s,baz=219,slow=9.0,SNR=6.2						
PETK	**Petropavlovsk-**	**9.11**	**46**		**P**	**22 49 38.1**	**+0.7**
PETK	**Petropavlovsk-**	**9.11**	**46**	PN	**P**	**22 49 38.1**	**+0.7**
PET	**Petropavlovsk**	**9.54**	**48**	*e*PN	**P**	**22 49 40.5**	**-1.7**
PET				*e*S	**S**	**22 51 28.3**	**-2.8**
PET				pmax	pmax		
	comp=Z,13nm,1.0s						
KLR	**Kul'dur**	**10.25**	**287**	*de*PN	**P**	**22 49 50.7**	**+0.6**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KLR	**Kul'dur**	**10.25**	**287**	*e*P	**P**	**22 49 50.7**	**+0.6**
USRK	**Ussuriysk Ar.**	**10.81**	**259**	P	**P**	**22 49 56.0**	**-0.4**
	comp=Z,14nm,0.8s,baz=64,slow=10,SNR=12						
PSTR	**Posyet**	**12.24**	**254**	*de*PN	**P**	**22 50 12.6**	**+0.4**
PSTR	**Posyet**	**12.24**	**254**	*e*P	**P**	**22 50 12.6**	**+0.4**
MDJ	**Mudanjiang**	**12.28**	**264**	P	**P**	**22 50 12.0**	**-0.6**
MJB9	**Matsu-Tunnel**	**12.46**	**214**	P	**P**	**22 50 17.1**	**+2.3**
MAJO	**Matsushiro**	**12.47**	**214**	P	**P**	**22 50 17.6**	**+2.8**
MAJO	**Matsushiro**	**12.47**	**214⇑**	*e*PN	**P**	**22 50 17.0**	**+2.2**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MJAR	**Matsushiro Arr**	**12.47**	**214**	P	**P**	**22 50 17.1**	**+2.3**
	comp=Z,12nm,0.6s,baz=16,slow=11,SNR=28						
MJAR	**Matsushiro Arr**	**12.47**	**214**	P	**P**	**22 50 17.8**	**+2.9**
HEH	**HeiHe**	**13.15**	**290**	⇑P	**P**	**22 50 21.1**	**-1.0**
HEH				pmax	pmax		
	comp=Z,86nm,0.5s						
BNX	**BinXian**	**13.46**	**271**	⇓P	**P**	**22 50 24.3**	**-1.3**
BNX				pmax	pmax		
	comp=Z,13nm,0.6s						
JGF	**Kuroka**	**13.62**	**215**	P	**P**	**22 50 31.7**	**+4.2**
ZEA	**Zeya**	**14.02**	**305**	*e*P	**P**	**22 50 30.2**	**-1.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SEY	**Seymchan**	**16.02**	**9**	P	**P**	**22 50 52.9**	**-0.2**
	comp=Z,4.1nm,0.6s,baz=190,slow=9.5,SNR=16						
JMN	**Monobe**	**16.68**	**221**	P	**P**	**22 51 01.4**	**+0.9**
KSRS	**Korea Array**	**17.02**	**242**	P	**P**	**22 51 05.6**	**+1.6**
	comp=Z,21nm,0.8s,baz=46,slow=10,SNR=40						
KS19	**Wonju Array Si**	**17.02**	**242**	P	**P**	**22 51 05.8**	**+1.7**
KS19				IAmb	IAmb	22 51 06.7	
	comp=Z,39nm,1.0s						
KSAR	**Wonju Array Be**	**17.05**	**242**	P	**P**	**22 51 04.9**	**+0.6**
KSAR	**Wonju Array Be**	**17.05**	**242**	P	**P**	**22 51 04.9**	**+0.6**
KSAR	**Wonju Array Be**	**17.05**	**242**	*e*P	**P**	**22 51 04.9**	**+0.6**
YAK	**Yakutsk**	**17.73**	**333**	P	**P**	**22 51 09.2**	**-2.0**
	comp=Z,63nm,0.5s,baz=126,slow=3.6,SNR=28						
YAK	**Yakutsk**	**17.73**	**333**	P	**P**	**22 51 08.7**	**-2.4**
YAK	**Yakutsk**	**17.73**	**333**	*e*P	**P**	**22 51 09.0**	**-2.2**
YAK				*e*S	**S**	**22 54 11.0**	**-3.4**
YAK				pmax	pmax		
	comp=Z,129nm,1.4s						
YAK				pmax	pmax		
	comp=N,48nm,1.6s						
YAK				pmax	pmax		
	comp=E,30nm,1.6s						
YAK				smax	smax		
	comp=N,303nm,2.5s						
YAK				smax	smax		
	comp=E,252nm,2.7s						
HILR	**Hailar Array B**	**18.09**	**287**	P	**P**	**22 51 12.8**	**-2.4**
	comp=E,4.2nm,0.4s,baz=74,slow=11,SNR=17						
JNU	**Nakatsue**	**18.59**	**226**	P	**P**	**22 51 21.6**	**+0.8**
	comp=E,19nm,0.8s,baz=113,slow=7.4,SNR=6.3						
XLT	**XiLinHaoTe**	**21.71**	**272**	*e*P	**P**	**22 51 49.8**	**-0.1**
XLT				pmax	pmax		
	comp=Z,35nm,0.8s						
XLT				pmax	pmax		
	comp=Z,54nm,3.6s						
BILL	**Bilibino**	**23.09**	**19⇑**	*e*P	**P**	**22 52 01.1**	**-0.9**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BJT	**Baijiatuau**	**23.23**	**263**	P	**P**	**22 52 05.5**	**+1.9**
BJT	**Baijiatuau**	**23.23**	**263**	P	**P**	**22 52 05.5**	**+1.9**
BJT				pmax	pmax		
	comp=Z,52nm,1.1s						
TIA	**Tai'an**	**24.61**	**254**	P	**P**	**22 52 22.2**	**+6.1**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HNS	**HongShan**	**25.54**	**259**	⇓P	**P**	**22 52 25.1**	**+0.8**
HNS				pmax	pmax		
	comp=Z,13nm,1.0s						
TIXI	**Tiksi**	**25.89**	**347**	P	**P**	**22 52 24.9**	**-2.1**
	comp=Z,2.5nm,0.2s,baz=156,slow=5.9,SNR=12						
	comp=Z,2.5nm,0.2s						
TIXI	**Tiksi**	**25.89**	**347**	P	**P**	**22 52 24.5**	**-2.4**
TIXI	**Tiksi**	**25.89**	**347⇓**	*e*P	**P**	**22 52 25.0**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
HHC	**Hu-ho-hao-te**	**25.98**	**269⇓**	*i*P	**P**	**22 52 29.0**	**+0.7**
HHC				pmax	pmax		
	comp=Z,57nm,0.9s						
ULN	**Ulaanbaatar**	**26.64**	**286**	P	**P**	**22 52 32.8**	**-1.4**
ULN				IAmb	IAmb	22 52 39.4	
	comp=Z,12nm,1.1s						
ULN	**Ulaanbaatar**	**26.64**	**286**	*de*P	**P**	**22 52 33.5**	**-0.6**
ULN				pmax	pmax		
	comp=Z,24nm,2.5s						
ULN	**Ulaanbaatar**	**26.64**	**286**	*e*P	**P**	**22 52 33.6**	**-0.6**
SONM	**Songino Array**	**27.08**	**286**	P	**P**	**22 52 37.1**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=76,slow=8.3,SNR=32						
SONM				pP	**pP**	**22 53 48.2**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=82,slow=8.2,SNR=1.8						
SONM				ScP	**ScP**	**22 58 49.1**	**+0.9**
	comp=Z,3.8nm,0.9s,baz=75,slow=2.0,SNR=16						
	comp=Z,3.9nm,0.7s						
SONM	**Songino Array**	**27.08**	**286**	P	**P**	**22 52 36.9**	**-1.1**
SONM				IAmb	IAmb	22 52 43.6	
	comp=Z,12nm,1.4s						
SONM	**Songino Array**	**27.08**	**286**	P	**P**	**22 52 36.9**	**-1.1**
SONM				pmax	pmax		
	comp=Z,12nm,1.4s						
TLY	**Talaya**	**28.09**	**295**	P	**P**	**22 52 45.9**	**-0.8**
ZAK	**Zakamensk**	**28.54**	**293**	*e*P	**P**	**22 52 50.1**	**-0.6**
ZAK				*e*		22 54 02.7	
ZAK				pmax	pmax		
	comp=Z,17nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,13nm,1.8s						
KNGR	**Kungurtug, Tuv**	**32.09**	**295⇑**	*e*P	**P**	**22 53 21.2**	**-0.4**
KNGR				pmax	pmax		
	comp=Z,10.0nm,1.3s						

N15K	Kwethluk River	33.01	47	P	P	22 53 30.5	+1.2
O15K	Ungalikthiuk R	33.18	49	P	P	22 53 32.0	+1.3
M16K	Timber Creek	33.55	46	P	P	22 53 35.6	+1.7
M16K				IAmb	IAmb	22 53 37.6	
	comp=Z,17nm,1.4s						
LZH	Lanzhou	33.59	266	*e*P	P	22 53 35.8	+1.0
LZH				pP	pP	22 54 49.1	+0.6
LZH				pmax	pmax		
	comp=Z,49nm,1.3s						
LZDM	Lanzhou Array	33.76	266	P	P	22 53 37.5	+1.1
	comp=Z,9.5nm,0.6s,baz=79,slow=2.3,SNR=56						
	comp=Z,9.5nm,0.6s						
G18K	Tagagawik	33.92	37	P	P	22 53 37.7	+0.8
GTA2	Gaotai	34.64	275	P	P	22 53 44.2	+0.6
GTA2				PP	PP	22 55 12.4	-0.1
GTA2				ScP	ScP	22 59 15.5	+1.9
GTA2				pmax	pmax		
	comp=Z,45nm,1.0s						
P18K	Big Mountain,	35.52	48	P	P	22 53 51.5	+0.9
NRIK	Noril'sk	36.10	329	P	P	22 53 54.1	-1.2
	comp=Z,1.3nm,0.5s,baz=70,slow=7.1,SNR=6.1						
	comp=Z,1.3nm,0.5s						
NRIK	Noril'sk	36.10	329	P	P	22 53 53.8	-1.5
NRIK	Noril'sk	36.10	329	⇑*e*P	P	22 53 54.4	-0.9
NRIK				pmax	pmax		
	comp=Z,13nm,1.6s						
Q19K	Cape Douglas,	36.38	49	P	P	22 53 58.9	+1.1
Q19K				IAmb	IAmb	22 54 25.8	
	comp=Z,30nm,1.1s						
L22K	Petersville	37.35	43	P	P	22 54 06.6	+0.7
GHO	Glory Hole Cre	38.30	44	P	P	22 54 13.6	-0.2
GHO				IAmb	IAmb	22 54 50.6	
	comp=Z,22nm,1.4s						
DGZ	Jazzator, Alta	38.56	296	⇓*e*P	P	22 54 16.0	-0.1
DGZ				*i* *PP	pP	22 55 31.9	+0.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KNK	Knik Glacier	38.58	44	P	P	22 54 15.3	-0.7
KNK				IAmb	IAmb	22 54 18.3	
	comp=Z,28nm,1.4s						
ZAA0	Zalesovo Array	38.78	304	P	P	22 54 15.5	-2.1
ZALV	Zalesovo Beam	38.78	304	P	P	22 54 16.2	-1.5
	comp=Z,3.9nm,0.5s,baz=68,slow=7.1,SNR=23						
ZALV				PcP	sP	22 56 20.0	+0.7
	comp=Z,3.1nm,0.8s,baz=54,slow=2.1,SNR=8.8						
ZALV				ScP	ScP	22 59 29.2	+0.6
	comp=Z,3.5nm,1.0s,baz=90,slow=4.4,SNR=9.6						
	comp=Z,3.9nm,0.5s						
ZALV	Zalesovo Beam	38.78	304	P	P	22 54 16.1	-1.6
ILAR	Eielson Array	38.85	39	P	P	22 54 18.0	-0.1
	comp=Z,0.8nm,0.9s,baz=267,slow=7.3,SNR=6.8						
ILAR				pP	pP	22 55 35.4	+1.9
	comp=Z,0.3nm,0.8s,baz=244,slow=7.3,SNR=1.5						
	comp=Z,0.8nm,0.9s						
SCM	Sheep Creek Mo	39.05	43	P	P	22 54 19.1	-0.6
SCM				IAmb	IAmb	22 54 23.6	
	comp=Z,26nm,1.5s						
SCM	Sheep Creek Mo	39.05	43	P	P	22 54 19.2	-0.6
SCM				pmax	pmax		
	comp=Z,26nm,1.5s						
GOMU	GeErMu	39.68	273	P	P	22 54 25.7	0.0
GOMU				pmax	pmax		
	comp=Z,44nm,0.8s						
SCRK	Sand Creek	40.20	40	P	P	22 54 28.7	-0.6
WMQ	Urumqi	40.70	288	*e*P	P	22 54 34.1	+0.6
WMQ				PcP	PcP	22 56 26.8	+0.9
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
PZH	PanZhiHua	40.89	256	P	P	22 54 36.5	+1.2
M27K	Edge Creek, AK	41.46	42	P	P	22 54 40.4	+1.0
E29M	Blow River	41.92	32	P	P	22 54 43.1	+0.3
MK31	Makanchi Array	42.84	294	*d i*P	P	22 54 49.9	-0.6
MKAR	Makanchi Array	42.84	294	P	P	22 54 50.0	-0.5
	comp=Z,8.1nm,0.7s,baz=70,slow=7.6,SNR=95						
MKAR				PcP	PcP	22 56 33.3	+0.3
	comp=Z,1.0nm,0.7s,baz=58,slow=3.4,SNR=3.6						
MKAR				ScP	ScP	22 59 45.2	+0.3
	comp=Z,2.5nm,0.9s,baz=57,slow=4.5,SNR=10						
	comp=Z,8.1nm,0.7s						
MKAR	Makanchi Array	42.84	294	P	P	22 54 50.0	-0.5
MAKZ	Makanchi	43.03	294	P	P	22 54 51.4	-0.6
MAKZ	Makanchi	43.03	294	P	P	22 54 51.4	-0.6
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	43.45	301	P	P	22 54 54.1	-1.1
KURK				IAmb	IAmb	22 54 55.1	
	comp=Z,29nm,1.1s						
KURK	Kurchatov	43.45	301	P	P	22 54 55.1	-0.1
KURK				*PP	pP	22 56 13.9	+1.0
KURK						22 56 35.9	
KURK	Kurchatov	43.45	301	*e*P	P	22 54 54.2	-1.0
INK	Inuvik	43.52	32	P	P	22 54 55.5	0.0
	comp=Z,1.1nm,0.4s,baz=308,slow=6.0,SNR=13						
	comp=Z,1.1nm,0.4s						
INK	Inuvik	43.52	32	P	P	22 54 55.5	0.0
INK	Inuvik	43.52	32	P	P	22 54 55.5	0.0
INK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KURBB	Kurchatov Arra	43.54	301	P	P	22 54 55.1	-0.8
	comp=Z,10nm,0.6s,baz=69,slow=8.5,SNR=63						
KURBB				pP	pP	22 56 13.9	+0.3
	comp=Z,1.4nm,0.8s,baz=66,slow=8.6,SNR=2.9						
KURBB				PcP	PcP	22 56 35.9	+0.6
	comp=Z,2.6nm,0.7s,baz=72,slow=3.3,SNR=12						
KURBB				ScP	ScP	22 59 47.8	+0.1
	comp=Z,2.0nm,0.8s,baz=72,slow=3.2,SNR=9.1						
	comp=Z,10nm,0.6s						
H31M	Peel River	43.83	36	P	P	22 54 58.0	0.0
BVAR	Borovoye Array	47.16	307	P	P	22 55 23.2	-0.6
	comp=Z,2.2nm,0.5s,baz=40,slow=7.6,SNR=20						
BVAR				PcP	PcP	22 56 48.2	+0.2
	comp=Z,1.4nm,0.6s,baz=37,slow=1.5,SNR=5.6						
	comp=Z,2.2nm,0.5s						
BORK	Borovoye	47.19	307	P	P	22 55 23.3	-0.7
BORK	Borovoye	47.19	307	*de*P	P	22 55 23.1	-1.0
BORK				pmax	pmax		
	comp=Z,14nm,1.7s						
PRZ	Przheval'sk	47.32	291	P	P	22 55 25.8	+0.4
PRZ				IAmb	IAmb	22 55 26.9	
	comp=Z,11nm,0.6s						
PRZ	Przheval'sk	47.32	291	P	P	22 55 25.8	+0.4
PRZ				pmax	pmax		
	comp=Z,11nm,0.6s						
SHL	Shillong	48.11	263	P	P	22 55 31.7	0.0
SHL				IAmb	IAmb	22 55 32.6	
	comp=Z,21nm,0.9s						
SHL	Shillong	48.11	263	P	P	22 55 31.7	0.0
SHL				pmax	pmax		
	comp=Z,21nm,0.9s						
CHTO	Chiang Mai	48.13	251	P	P	22 55 32.4	+0.8
CHTO	Chiang Mai	48.13	251	P	P	22 55 32.4	+0.8
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	Chiang Mai Arr	48.39	250	P	P	22 55 35.2	+1.6
	comp=Z,1.2nm,0.5s,baz=33,slow=7.2,SNR=14						
CMAR				PcP	pP	22 56 54.3	+1.0
	comp=Z,0.7nm,0.3s,baz=2.6,slow=0.9,SNR=5.2						
	comp=Z,1.2nm,0.5s						
CMAR	Chiang Mai Arr	48.39	250	*ce*P	P	22 55 35.2	+1.6
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ULHL	Ulahol	48.81	291	P	P	22 55 37.3	+0.6
	SNR=5.5						
TKM2	Tokmak 2	48.87	293	P	P	22 55 37.6	+0.4
	SNR=11						
USP	Ospenovka	49.38	294	P	P	22 55 41.2	+0.4
	SNR=23						
KBK	Karagaybulak	49.41	293	P	P	22 55 41.7	+0.5
	SNR=16						
AAK	Ala-Archa	49.71	293	P	P	22 55 43.6	+0.3
	SNR=13						
AAK	Ala-Archa	49.71	293	P	P	22 55 43.4	0.0
AAK				IAmb	IAmb	22 55 44.5	
	comp=Z,9.6nm,0.7s						
AAK	Ala-Archa	49.71	293	*de*P	P	22 55 43.6	+0.3
AAK				pmax	pmax		
	comp=Z,23nm,1.7s						
AAK	Ala-Archa	49.71	293	*e*P	P	22 55 43.7	+0.3
EKS2	Erkin-Say	50.15	293	P	P	22 55 47.0	+0.4
	SNR=17						
KSH2	Kashi	50.91	288	P	P	22 55 53.3	+1.0
KSH2				pmax	pmax		
	comp=Z,26nm,0.5s						
SPITS	Spitsbergen Ar	51.30	348	P	P	22 55 52.8	-1.7
	comp=Z,24nm,1.3s,baz=60,slow=8.2,SNR=6.9						
	comp=Z,24nm,1.3s						

ARSB	Arslanbob	51.36	292	P	P	22 55 56.7	+1.1
ARSB				IAmb	IAmb	22 55 57.4	
	comp=Z,32nm,1.1s						
ARSB	Arslanbob	51.36	292	P	P	22 55 56.7	+1.1
ARSB				pmax	pmax		
	comp=Z,32nm,1.1s						
RABL	Rabaul	51.44	173	P	P	22 55 59.0	+2.7
RES	Resolute Bay	51.69	17	P	P	22 55 56.1	-1.1
RES	Resolute Bay	51.69	17	P	P	22 55 56.1	-1.1
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARTI	Arti	51.77	315	P	P	22 55 56.8	-1.3
ARTI	Arti	51.77	315	*d i*P	P	22 55 57.0	-1.1
ARTI						22 57 02.7	
ARTI				*PP	pP	22 57 18.9	-0.2
ARTI						22 57 57.5	
ARTI				SS	SS	23 06 27.7	-2.9
ARTI				pmax	pmax		
	comp=Z,11nm,0.6s						
KK31	Karatay Array	51.94	295	P	P	22 55 59.1	-0.5
KK31				IAmb	IAmb	22 56 00.3	
	comp=Z,10nm,0.8s						
KK31	Karatay Array	51.94	295	P	P	22 55 59.1	-0.5
KK31				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KKAR	Karatay Array	51.94	295	P	P	22 55 58.7	-0.9
KKAR	Karatay Array	51.94	295	P	P	22 55 58.7	-0.9
YKA	Yellowknife Ar	53.04	35	P	P	22 56 07.5	+0.2
	comp=Z,0.4nm,0.6s,baz=306,slow=7.6,SNR=5.3						
YKA				pP	pP	22 57 30.2	+1.9
	comp=Z,0.2nm,0.6s,baz=302,slow=8.3,SNR=2.8						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	53.04	35	P	P	22 56 07.2	0.0
DRK	Karamyk	53.14	291	P	P	22 56 09.2	+0.5
DRK				IAmb	IAmb	22 56 10.2	
	comp=Z,52nm,1.3s						
DRK	Karamyk	53.14	291	P	P	22 56 09.2	+0.5
DRK				pmax	pmax		
	comp=Z,52nm,1.3s						
BTK	Batken	53.43	292	P	P	22 56 10.1	-0.4
BTK				IAmb	IAmb	22 56 11.6	
	comp=Z,24nm,0.7s						
BTK	Batken	53.43	292	P	P	22 56 10.1	-0.4
BTK				pmax	pmax		
	comp=Z,24nm,0.7s						
MANEM	Manem	54.33	289	P	P	22 56 18.0	+0.8
GAR	Garm	54.36	291	P	P	22 56 16.7	-0.5
AB31	Akbulak array	54.73	307	P	P	22 56 18.9	-0.6
AB31				IAmb	IAmb	22 56 19.4	
	comp=Z,9.6nm,0.5s						
ABKAR	Akbulak array	54.73	307	P	P	22 56 18.7	-0.8
CHGR	Chuyangaron	55.29	292	P	P	22 56 23.8	0.0
CHGR	Chuyangaron	55.29	292	P	P	22 56 23.8	0.0
CHGR				pmax	pmax		
	comp=Z,129nm,0.5s						
NIL	Nilore	55.63	284	P	P	22 56 26.4	+0.3
NIL				IAmb	IAmb	22 56 28.0	
	comp=Z,32nm,0.8s						
NIL	Nilore	55.63	284	P	P	22 56 26.4	+0.3
NIL				pmax	pmax		
	comp=Z,32nm,0.8s						
ARCES	ARCESS Array B	55.89	339	P	P	22 56 26.2	-1.2
	comp=Z,5.0nm,1.1s,baz=35,slow=4.4,SNR=4.5						
	comp=Z,5.0nm,1.1s						
ARCES	ARCESS Array B	55.89	339	P	P	22 56 26.1	-1.2
ARCES				IAmb	IAmb	22 56 56.4	
	comp=Z,16nm,1.3s						
ARCES	ARCESS Array B	55.89	339	P	P	22 56 26.1	-1.2
ARCES				pmax	pmax		
	comp=Z,16nm,1.3s						
POIN	Pond Inlet	56.37	15	P	P	22 56 28.9	-1.6
SHAA	Shahritus	56.60	291	P	P	22 56 33.3	+0.4
SHAA				IAmb	IAmb	22 56 33.8	
	comp=Z,59nm,0.6s						
KLMR	Klimovskoe	57.37	326	*e*P	P	22 56 35.4	-2.3
KLMR				pmax	pmax		
	comp=Z,29nm,1.6s						
KBL	Kabul	57.84	288	P	P	22 56 41.0	-0.7
KBL				IAmb	IAmb	22 56 41.8	
	comp=Z,28nm,0.9s						
KBL	Kabul	57.84	288	P	P	22 56 41.0	-0.7
KBL				pmax	pmax		
	comp=Z,28nm,0.9s						
ILON	Igloolik, Nuna	58.33	18	P	P	22 56 42.8	-1.3
SUMG	Summit	60.42	2	P	P	22 56 58.5	-0.2
SUMG				IAmb	IAmb	22 57 00.5	
	comp=Z,11nm,1.2s						
SUMG	Summit	60.42	2	P	P	22 56 58.5	-0.2
SUMG				pmax	pmax		
	comp=Z,11nm,1.2s						
COEN	Coen	61.02	184	P	P	22 57 04.5	+1.6
COEN				IAmb	IAmb	22 57 05.8	
	comp=Z,10nm,0.8s						
MTN	Manton Dam	61.45	197	P	P	22 57 06.9	+1.2
MTN				IAmb	IAmb	22 57 15.9	
	comp=Z,9.1nm,1.1s						
FIA1	FINESS Array S	61.66	332	P	P	22 57 05.2	-1.4
FINES	FINESS Array B	61.66	332	P	P	22 57 05.6	-1.0
	comp=Z,17nm,0.5s,baz=38,slow=7.7,SNR=202						
	comp=Z,17nm,0.5s						
FINES	FINESS Array B	61.66	332	P	P	22 57 05.3	-1.3
HRA	Herat	62.30	292	P	P	22 57 11.6	+0.1
HRA				IAmb	IAmb	22 57 12.5	
	comp=Z,10nm,0.6s						
OBN	Obninsk	62.37	323	⇑*i*P	P	22 57 10.6	-0.8
OBN				*e**PP	pP	22 58 37.1	+1.1
OBN				*e*		22 59 32.7	
OBN				*e*S	S	23 05 07.3	+2.0
OBN				pmax	pmax		
	comp=Z,23nm,1.7s						
OBN	Obninsk	62.37	323	*e*P	P	22 57 10.6	-0.8
VRH	Novokhopyorsk	62.78	317	*e*P	P	22 57 11.7	-2.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PLID	Pearl Lake	62.84	52	P	P	22 57 16.8	+1.8
PLID				IAmb	IAmb	22 57 17.6	
	comp=Z,6.0nm,1.1s						
LPSR	Galich'ya Gora	63.10	319	*e*P	P	22 57 14.7	-1.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FCC	Fort Churchill	63.12	31	P	P	22 57 16.4	+0.3
FCC	Fort Churchill	63.12	31	P	P	22 57 16.4	+0.3
FCC				pmax	pmax		
	comp=Z,7.0nm,1.5s						
VORR	Voronezh	63.61	319	*e*P	P	22 57 17.6	-1.9
VSR	Storozhevoye	63.95	318	*e*P	P	22 57 20.3	-1.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VORD	Divnogorie	64.06	318	*e*P	P	22 57 20.8	-1.6
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
BOZ	Bozeman (W)	64.82	49	P	P	22 57 28.2	+0.7
BOZ	Bozeman (W)	64.82	49	P	P	22 57 28.2	+0.7
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NVAR	Mina Array Bea	65.94	59	P	P	22 57 37.1	+2.2
	comp=Z,2.6nm,0.8s,baz=279,slow=7.0,SNR=8.2						
	comp=Z,2.6nm,0.8s						
NC303	NORSAR Array S	66.06	338	P	P	22 57 33.8	-1.1
NC303				IAmb	IAmb	22 58 11.7	
	comp=Z,16nm,1.4s						
NC405	NORSAR Array S	66.07	338	P	P	22 57 33.9	-1.2
NC204	NORSAR Array S	66.17	339	P	P	22 57 34.4	-1.3
NC204				IAmb	IAmb	22 57 46.1	
	comp=Z,15nm,1.2s						
NB201	NORSAR Array S	66.23	338	P	P	22 57 35.2	-0.8
NB2	NORSAR Subarra	66.26	338	P	P	22 57 35.5	-0.8
	comp=Z,3.5nm,0.5s,baz=30,slow=6.5						
NOA	NORSAR Array B	66.26	338	P	P	22 57 35.5	-0.8
	comp=Z,5.4nm,0.6s,baz=32,slow=6.6,SNR=43						
	comp=Z,5.4nm,0.6s						
MNK	Minsk	66.27	326	*i* P	P	22 57 36.3	0.0
	comp=E,8.0nm,0.8s						
MNK				*i* P	P	22 57 36.3	0.0
	comp=N,7.0nm,0.8s						
MNK				*i* P	P	22 57 36.3	0.0
	comp=Z,17nm,0.8s,baz=40						
MNK				*i* pP	pP	22 59 02.5	+0.2
MNK				*i* sP	sP	22 59 45.7	+0.5
MNK				*i* PP	PP	23 00 08.1	+0.4
MNK				*i* PPP	PPP	23 01 50.2	
MNK				*i* S	S	23 05 53.4	+0.7
MNK				*i* PS		23 06 12.0	
MNK				*i* sS	sS	23 08 27.4	+3.6
MNK				*i* SS	SS	23 10 19.4	+2.7

MNK				*i* SSS	SSS	23 13 37.0	
MNK	Minsk	66.27	326	*i* P	P	22 57 36.3	0.0
MNK				*i*		22 58 02.6	
MNK				*i* *PP	pP	22 59 02.4	+0.2
MNK				*i* *SP	sP	22 59 45.6	+0.5
MNK				*i*		23 00 08.1	
MNK				*i* PPP	PPP	23 01 50.2	
MNK				*i* S	S	23 05 53.3	+0.7
MNK				*i* PS		23 06 11.9	
MNK				*i* SS	SS	23 10 19.4	+2.7
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,17nm,0.8s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.8s						
NBO00	NORSAR Array S	66.38	338	P	P	22 57 35.9	-1.0
NBO00				IAmb	IAmb	22 58 18.2	
	comp=Z,9.0nm,1.0s						
HFS	Hagfors	66.38	337	P	P	22 57 35.7	-1.3
	comp=Z,7.6nm,0.5s,baz=46,slow=4.9,SNR=59						
	comp=Z,7.6nm,0.5s						
NACGM	Naroch	66.38	327	⇑*i*P	P	22 57 36.5	-0.5
	comp=Z,29nm,0.9s,baz=40						
NC602	NORSAR Array S	66.44	338	P	P	22 57 35.8	-1.5
NC602				IAmb	IAmb	22 58 01.2	
	comp=Z,13nm,1.2s						
MOOW	Moose Ponds	66.54	50	P	P	22 57 40.6	+2.1
KIV	Kislovodsk	67.28	311	P	P	22 57 43.3	+0.4
KIV	Kislovodsk	67.28	311	⇓P	P	22 57 43.6	+0.7
KIV	Kislovodsk	67.28	311	*e*P	P	22 57 42.9	-0.1
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIV	Kislovodsk	67.28	311	P	P	22 57 43.4	+0.4
	comp=Z,39nm,1.3s						
KIV	Kislovodsk	67.28	311	*e*P	P	22 57 44.1	+1.1
KBZ	Khabaz	67.33	310	P	P	22 57 43.8	+0.7
	comp=Z,15nm,0.9s,baz=78,slow=2.6,SNR=31						
	comp=Z,15nm,0.9s						
SHA1	Shidzhatmaz	67.45	310	⇓*e*P	P	22 57 44.7	+0.5
WB0	Warramunga Arr	67.64	193	P	P	22 57 46.2	+0.9
WB0				IAmb	IAmb	22 57 47.2	
	comp=Z,7.1nm,0.8s						
WR8	Warramunga Arr	67.81	193	P	P	22 57 47.3	+1.0
WR8				IAmb	IAmb	22 57 48.3	
	comp=Z,5.4nm,0.8s						
WRAB	Tennant Creek	67.81	193	⇑*e*P	P	22 57 44.6	-1.7
WRAB				pmax	pmax		
	comp=Z,24nm,0.9s						
WRA	Warramunga Arr	67.82	193	P	P	22 57 47.5	+1.2
	comp=Z,5.3nm,0.7s,baz=10,slow=6.5,SNR=27						
	comp=Z,5.3nm,0.7s						
WRA	Warramunga Arr	67.82	193	P	P	22 57 46.1	-0.3
BW06	Boulder Array	67.84	51	P	P	22 57 47.5	+0.8
BW06				IAmb	IAmb	22 57 49.0	
	comp=Z,5.2nm,1.1s						
PD31	Pinedale Array	67.84	51	P	P	22 57 47.5	+0.8
PD31				IAmb	IAmb	22 57 49.0	
	comp=Z,4.8nm,1.1s						
PDAR	Pinedale Array	67.84	51	P	P	22 57 48.0	+1.3
	comp=Z,2.7nm,0.8s,baz=2.1,slow=0.9,SNR=19						
	comp=Z,2.7nm,0.8s						
PDAR	Pinedale Array	67.84	51	P	P	22 57 47.7	+1.0
AK03	Malin Array Si	68.62	323	P	P	22 57 50.0	-0.9
AKASG	Malin Array Be	68.64	323	P	P	22 57 50.1	-0.9
	comp=Z,9.0nm,0.6s,baz=37,slow=6.2,SNR=33						
	comp=Z,9.0nm,0.6s						
AKASG	Malin Array Be	68.64	323	P	P	22 57 50.7	-0.3
AKASG				IAmb	IAmb	22 57 51.4	
	comp=Z,7.7nm,1.2s						
AKASG	Malin Array Be	68.64	323	P	P	22 57 50.7	-0.3
AKASG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AKBB	Malin Array Si	68.64	323	P	P	22 57 50.0	-1.0
AKBB	Malin Array Si	68.64	323	P	P	22 57 50.0	-1.0
AKBB				pmax	pmax		
	comp=Z,13nm,0.8s						
AKBB	Malin Array Si	68.64	323	P	P	22 57 50.0	-1.0
AK04	Malin Array Si	68.64	323	P	P	22 57 50.2	-0.9
AK01	Malin Array Si	68.65	323	P	P	22 57 50.2	-0.9
KIEV	Kiev	68.65	323	P	P	22 57 49.9	-1.2
KIEV				IAmb	IAmb	22 57 50.6	
	comp=Z,12nm,0.7s						
KIEV	Kiev	68.65	323	⇓P	P	22 57 50.1	-1.0
KIEV	Kiev	68.65	323	P	P	22 57 49.9	-1.2
KIEV				pmax	pmax		
	comp=Z,12nm,0.7s						
AK21	Malin Array Si	68.65	323	P	P	22 57 50.1	-1.0
AK22	Malin Array Si	68.65	323	P	P	22 57 50.1	-1.0
AK08	Malin Array Si	68.67	323	P	P	22 57 50.3	-1.0
AK11	Malin Array Si	68.68	323	P	P	22 57 50.3	-1.0
GNI	Garni	68.84	307	P	P	22 57 54.6	+1.9
GNI	Garni	68.84	307	P	P	22 57 54.6	+1.9
GNI				pmax	pmax		
	comp=Z,23nm,1.2s						
TMUT	Trail Mountain	69.38	54	P	P	22 57 57.3	+1.1
RNPP9	Sopachiv	69.42	325	P	P	22 57 55.2	-0.6
SORM	Soroca	70.97	321	⇑P	P	22 58 04.5	-0.6
SORM	Soroca	70.97	321	⇑P	P	22 58 04.5	-0.6
ASAR	Alice Springs	71.54	192	P	P	22 58 10.9	+2.1
	comp=Z,1.2nm,0.7s,baz=6.0,slow=6.6,SNR=9.5						
	comp=Z,1.2nm,0.7s						
UOSS	Minazif	72.52	288	P	P	22 58 14.4	-0.2
UOSS				IAmb	IAmb	22 58 15.2	
	comp=Z,8.4nm,0.8s						
BUR08	Bucovina Ar. S	72.67	323	P	P	22 58 14.7	-0.6
BUR08				IAmb	IAmb	22 58 15.7	
	comp=Z,6.9nm,0.7s						
BURAR	Bucovina Array	72.69	323	P	P	22 58 15.0	-0.4
BURAR				IAmb	IAmb	22 58 16.0	
	comp=Z,6.7nm,0.7s						
BURAR	Bucovina Array	72.69	323	⇓P	P	22 58 15.0	-0.4
BURAR	Bucovina Array	72.69	323	⇓P	P	22 58 15.0	-0.4
VLDR	Vladesti	72.87	320	⇑P	P	22 58 16.5	+0.2
TESR	Tescani	72.96	321	⇓P	P	22 58 16.3	-0.5
MARD	Mardin	73.03	307	P	P	22 58 18.0	+0.3
TLCR		73.06	319	⇓P	P	22 58 17.2	-0.2
TLCR		73.06	319	⇓P	P	22 58 17.2	-0.2
GIUM	Giurgiulesti	73.09	320	⇑P	P	22 58 16.8	-0.8
ONER	Baraj Valea Uz	73.21	321	⇑P	P	22 58 18.1	-0.2
ODBI	Odobesti	73.38	321	⇓P	P	22 58 19.4	+0.2
VRI	Vrincioaia	73.44	321	⇓P	P	22 58 19.2	-0.5
VRI	Vrincioaia	73.44	321	⇓P	P	22 58 19.2	-0.5
TPGR	Topolog	73.49	319	⇓P	P	22 58 19.5	-0.5
LANS	Liptovska Anna	73.69	327	*e*P	P	22 58 22.3	+1.2
LANS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LANS	Liptovska Anna	73.69	327	*e*P	P	22 58 22.2	+1.2
CHVC	Chvalec	73.71	330	*e*P	P	22 58 20.6	-0.5
CHVC	Chvalec	73.71	330	*e*P	P	22 58 20.6	-0.5
MORC	Moravsky Berou	73.87	329	⇑P	P	22 58 21.6	-0.5
MORC	Moravsky Berou	73.87	329	⇑P	P	22 58 21.6	-0.5
MORC	Moravsky Berou	73.87	329	*e*P	P	22 58 22.2	+0.1
MLR	Muntele Rosu	74.07	321	⇓P	P	22 58 22.8	-0.7
MLR	Muntele Rosu	74.07	321	⇓P	P	22 58 22.8	-0.7
CLL	Collm	74.11	332	P	P	22 58 22.7	-0.7
CLL				IAmb	IAmb	22 58 23.6	
	comp=Z,9.2nm,0.7s						
CLL	Collm	74.11	332	*i* P	P	22 58 22.7	-0.7
CLL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CLL	Collm	74.11	332	*i* P	P	22 58 22.7	-0.7
	comp=Z,10.0nm,0.6s						
BNN	Bunyan	74.52	311	P	P	22 58 27.2	+1.1
BNN				IAmb	IAmb	22 58 27.8	
	comp=Z,8.1nm,1.0s						
PSZ	Piszkesteto	74.55	326	⇑P	P	22 58 26.3	+0.2
PSZ	Piszkesteto	74.55	326	⇑P	P	22 58 26.3	+0.2
JAVC	Velka Javorina	74.59	328	*e*P	P	22 58 27.6	+1.3
VRAC	Vranov	74.60	329	⇓P	P	22 58 25.6	-0.6
VRAC	Vranov	74.60	329	⇓P	P	22 58 25.6	-0.6
VRAC	Vranov	74.60	329	*e*P	P	22 58 26.7	+0.5
EKA	Eskdalemuir Ar	74.71	343	P	P	22 58 26.6	-0.1
	comp=Z,2.9nm,0.7s,baz=27,slow=5.2,SNR=8.8						
	comp=Z,2.9nm,0.7s						
ARR	Arges	74.73	322	⇑P	P	22 58 27.9	+0.8
KRUC	Moravsky	74.88	329	*e*P	P	22 58 27.8	0.0
BR131	Keskin Array S	74.98	313	P	P	22 58 28.7	0.0
BR131				IAmb	IAmb	22 58 30.0	
	comp=Z,6.0nm,1.0s						
BR131	Keskin Array S	74.98	313	P	P	22 58 28.7	0.0
BR131				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRTR	Keskin Array B	74.98	313	P	P	22 58 28.9	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.0nm,0.8s,baz=78,slow=4.0,SNR=14						
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**74.98**	**313**	P	**P**	**22 58 28.6**	**-0.1**
BRTR	**Keskin Array B**	**74.98**	**313**	P	**P**	**22 58 29.0**	**+0.3**
MODS	**Modra-Piesok**	**75.14**	**328**	*e*P	**P**	**22 58 30.4**	**+1.1**
MODS	**Modra-Piesok**	**75.14**	**328**	*e*P	**P**	**22 58 30.4**	**+1.1**
ZVC	**Zvikov**	**75.32**	**330**	*e*P	**P**	**22 58 30.4**	**+0.1**
GZR	**Gura Zlata**	**75.48**	**323**	⇓P	**P**	**22 58 31.1**	**-0.2**
GZR	**Gura Zlata**	**75.48**	**323**	⇓P	**P**	**22 58 31.1**	**-0.2**
BZS	**Buzias**	**75.77**	**324**	⇑P	**P**	**22 58 32.6**	**-0.3**
BZS	**Buzias**	**75.77**	**324**	⇑P	**P**	**22 58 32.6**	**-0.3**
KHC	**Kasperske Hory**	**75.79**	**330**	*e*P	**P**	**22 58 29.0**	**-4.0**
KHC	**Kasperske Hory**	**75.79**	**330**	*e*P	**P**	**22 58 29.0**	**-4.0**
CKRC	**Cesky Krumlov**	**75.81**	**330**	*e*P	**P**	**22 58 33.0**	**-0.1**
CKRC	**Cesky Krumlov**	**75.81**	**330**	*e*P	**P**	**22 58 33.0**	**-0.1**
GERES	**GERESS Array B**	**76.00**	**330**	P	**P**	**22 58 33.9**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=23,slow=7.2,SNR=7.5						
	comp=Z,1.6nm,0.6s						
CONA	**Conrad Observa**	**76.03**	**328**	*e*P	**P**	**22 58 34.9**	**+0.5**
	comp=Z,4.3nm,0.7s						
RONA	**Rosalia, Austr**	**76.07**	**328**	*e*P	**P**	**22 58 35.1**	**+0.6**
	comp=Z,5.2nm,0.7s						
MOA	**Molln**	**76.66**	**329**	*e*P	**P**	**22 58 37.9**	**+0.2**
	comp=Z,3.9nm,0.8s						
ARSA	**Arzberg**	**76.72**	**328**	*i* P	**P**	**22 58 38.6**	**+0.4**
	comp=Z,8.7nm,1.4s						
MEM	**Membach**	**76.83**	**336**	*d*P	**P**	**22 58 38.4**	**-0.2**
BIOA	**Bad Ischl, Aus**	**77.01**	**330**	*i* P	**P**	**22 58 40.3**	**+0.6**
	comp=Z,3.9nm,0.6s						
SOKA	**Soboth**	**77.39**	**328**	*e*P	**P**	**22 58 41.9**	**0.0**
	comp=Z,3.1nm,0.9s						
BMRD	**Maredsous**	**77.45**	**336**	*d*P	**P**	**22 58 41.8**	**-0.3**
VLDQ	**Val d'Or**	**77.50**	**29**	P	**P**	**22 58 41.7**	**-0.6**
VLDQ				IAmb	IAmb	22 58 45.7	
	comp=Z,6.0nm,1.1s						
LESA	**Schwarzleotal**	**77.57**	**330**	*e*P	**P**	**22 58 43.0**	**+0.1**
	comp=Z,3.5nm,0.6s,SNR=4.7						
KBA	**Koelnbreinsper**	**77.64**	**329**	*e*P	**P**	**22 58 43.6**	**+0.2**
	comp=Z,7.4nm,0.6s						
WLF	**Walferdange**	**77.64**	**335**	*d*PcP	**PcP**	**22 58 50.1**	**-1.4**
WATA	**Walderalm**	**78.02**	**331**	*e*P	**P**	**22 58 45.6**	**+0.2**
	comp=Z,6.3nm,0.7s						
WTTA	**Wattenberg**	**78.06**	**331**	*e*P	**P**	**22 58 45.9**	**+0.2**
	comp=Z,6.5nm,0.6s,SNR=4.3						
RETA	**Reutte**	**78.15**	**331**	*i* P	**P**	**22 58 46.0**	**-0.1**
	comp=Z,5.6nm,1.1s						
MOTA	**Moosalm**	**78.17**	**331**	*i* P	**P**	**22 58 46.3**	**+0.1**
	comp=Z,17nm,1.3s						
SQTA	**Sankt Quirin**	**78.24**	**331**	*e*P	**P**	**22 58 46.8**	**+0.2**
	comp=Z,4.7nm,0.9s,SNR=4.1						
FETA	**Feichten**	**78.57**	**331**	*i* P	**P**	**22 58 48.5**	**0.0**
	comp=Z,6.8nm,1.2s						
DAVA	**Damuels**	**78.62**	**332**	*i* P	**P**	**22 58 48.6**	**-0.1**
	comp=Z,6.0nm,0.7s						
CSS	**Mathiatis**	**78.78**	**310**	P	**P**	**22 58 50.0**	**+0.4**
CSS				IAmb	IAmb	22 58 55.7	
	comp=Z,17nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**79.08**	**331**	P	**P**	**22 58 51.0**	**-0.3**
FUORN				IAmb	IAmb	22 58 52.0	
	comp=Z,6.4nm,1.0s						
ELL	**Elmali**	**79.14**	**313**	P	**P**	**22 58 51.7**	**+0.1**
ELL				IAmb	IAmb	22 59 00.2	
	comp=Z,9.9nm,1.2s						
ELL	**Elmali**	**79.14**	**313**	P	**P**	**22 58 51.7**	**+0.1**
ELL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MMAI	**Mount Meron Ar**	**79.17**	**307**	P	**P**	**22 58 53.0**	**+1.2**
	comp=Z,2.9nm,0.5s,baz=28,slow=12,SNR=12						
	comp=Z,2.9nm,0.5s						
PDG	**Podgorica**	**79.36**	**323**	P	**P**	**22 58 51.7**	**-0.8**
TUE	**Stuetta**	**79.51**	**332**	P	**P**	**22 58 53.9**	**+0.4**
TUE				IAmb	IAmb	22 58 54.4	
	comp=Z,5.7nm,0.8s						
RAYN	**Ar Rayn**	**80.34**	**294**	P	**P**	**22 58 58.2**	**+0.1**
RAYN				IAmb	IAmb	22 58 58.9	
	comp=Z,3.9nm,0.5s						
RAYN	**Ar Rayn**	**80.34**	**294**	P	**P**	**22 58 58.2**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TXAR	**Lajitas Array**	**80.90**	**56**	P	**P**	**22 59 02.8**	**+1.8**
	comp=Z,2.6nm,0.9s,baz=293,slow=4.0,SNR=16						
TXAR				pP	**pwP**	**23 00 31.6**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=294,slow=3.6,SNR=2.3						
	comp=Z,2.6nm,0.9s						
TXAR	**Lajitas Array**	**80.90**	**56**	P	**P**	**22 59 02.4**	**+1.4**
FDMO	**Fiordimonte**	**81.23**	**328**	P	**P**	**22 59 02.1**	**-0.3**
NRCA	**Norcia**	**81.39**	**327**	P	**P**	**22 59 03.5**	**+0.1**
INTR	**Introdacqua**	**81.81**	**327**	P	**P**	**22 59 06.0**	**+0.5**
MIAR	**Mount Ida**	**82.22**	**46**	P	**P**	**22 59 07.5**	**-0.1**
MIAR				IAmb	IAmb	22 59 25.4	
	comp=Z,5.0nm,1.1s						
MIAR	**Mount Ida**	**82.22**	**46**	P	**P**	**22 59 07.5**	**-0.1**
ITM	**Ithomi**	**82.57**	**319**	P	**P**	**22 59 08.4**	**-1.0**
IDI	**Anoyia**	**82.75**	**316**	P	**P**	**22 59 08.8**	**-1.5**
U49A	**Red Boiling Sp**	**84.24**	**40**	P	**P**	**22 59 18.6**	**+0.8**
U49A				IAmb	IAmb	22 59 19.6	
	comp=Z,12nm,1.4s						
TZTN	**Tazewell**	**85.18**	**38**	P	**P**	**22 59 23.0**	**+0.6**
TZTN				IAmb	IAmb	22 59 24.6	
	comp=Z,15nm,1.4s						
ELIB	**Princess Elisa**	**144.36**	**207**	*d*PKP	**PKPdf**	**23 06 19.7**	**+1.8**
LCO	**Las Campanas**	**145.74**	**71**	PKPdf	**PKPbc**	**23 06 22.4**	**-0.7**
LCO	**Las Campanas**	**145.74**	**71**	PKP2	**PKPbc**	**23 06 22.4**	**-0.7**
CO04	**Los Peladeros**	**147.53**	**76**	PKPbc	**PKPbc**	**23 06 28.4**	**+0.4**

IDC 04 23:00:14.6±9.6**, 14°.87S**×**174°.03W, h0**km**, mb3.4**/2**,**
mbtmp3.4/2**, Error ellipse: s-maj=410.8km**
s-min=65.4km az=138.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.37**	**256**	P	P	23 09 06.5	+0.1
	0.3nm,0.8s,baz=91,slow=7.3,SNR=5.8						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**49.70**	**251**	P	P	23 09 08.6	-0.3
	0.3nm,0.3s,baz=89,slow=8.4,SNR=7.7						
	0.3nm,0.3s						
BRTR	**Keskin Array B**	**145.36**	**321**	PKPbc	PKPbc	23 19 54.0	-0.9
	1.2nm,1.0s,baz=36,slow=3.7,SNR=4.3						

*NEIC **04** 23:04:19.8±1.2, 17°.74N±0°.03×66°.874W±0°.009, h10km±2km, ML3.2/33, Md3.0/9(RSPR), Error ellipse: s-maj=5.8km s-min=3.0km az=8.0*
*SDD **04** 23:04:23.8±1.8, 17°.92N×66°.87W, h0km±8km, MD2.9, ML2.7, MW2.9, Presumed earthquake*
RSPR 04 23:04:21.8, 17°.83N×66°.89W, h8km**, MD3.0**/9**, 22C-4D,**
Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.14**	**3**		Pg	23 04 25.2	+0.3
GBPR					Sg	23 04 27.9	+0.8
GBPR	**Guanica, Bosqu**	**0.14**	**3**	⇑*e*P	Pg	23 04 25.2	+0.3
GBPR				*e*S	Sg	23 04 27.9	+0.8
MLPR	**Magueyes Islan**	**0.20**	**312**	Pg	Pg	23 04 26.1	+0.2
MLPR				Sg	Sg	23 04 29.3	+0.5
MLPR				IAML		23 04 29.6	
	7µm,0.3s						
MLPR				IAML		23 04 30.5	
	3µm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.27**	**309**	Pg	Pg	23 04 27.2	0.0
CRPR				Sg	Sg	23 04 31.2	+0.2
CRPR	**Cabo Rojo, PR**	**0.27**	**309**	IAML		23 04 31.9	
	6µm,0.2s						
CRPR				IAML		23 04 32.0	
	3µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.27**	**309**	⇑*i*P	Pg	23 04 27.4	+0.2
CRPR				⇑*i*S	Sg	23 04 30.2	-0.8
CRPR	**Cabo Rojo, PR**	**0.27**	**309**	⇓*e*P	Pg	23 04 27.4	+0.2
CRPR				*e*S	Sg	23 04 31.7	+0.8
OBIP	**Obispado Ponce**	**0.34**	**52**	Pg	Pg	23 04 28.0	-0.5
OBIP				Sg	Sg	23 04 33.5	+0.4
OBIP				IAML		23 04 33.9	
	comp=N,624nm,0.6s						
OBIP	**Obispado Ponce**	**0.34**	**52**	⇑*e*P	Pg	23 04 28.5	0.0
OBIP				*e*S	Sg	23 04 33.8	+0.7
CELP	**Cerrillos**	**0.38**	**51**	Sg	Sg	23 04 34.3	0.0
LSP	**Las Mesas**	**0.39**	**331**		Pg	23 04 29.5	0.0
LSP					Sg	23 04 35.4	+0.7
LSP	**Las Mesas**	**0.39**	**331**	⇓*e*P	Pg	23 04 29.5	0.0
LSP				*e*S	Sg	23 04 35.4	+0.7
UUPR	**Utuado, UPR, P**	**0.45**	**21**	Pg	Pg	23 04 29.8	-0.7
UUPR				Sg	Sg	23 04 35.7	-0.7
UUPR				IAML		23 04 36.6	
	comp=N,11µm,0.4s						
UUPR				IAML		23 04 40.3	
	comp=N,7µm,0.4s						
PRSN	**Puerto Rico Se**	**0.45**	**327**	Pg	Pg	23 04 29.9	-0.8
PRSN				Sg	Sg	23 04 36.9	+0.3
PRSN				IAML		23 04 37.6	
	comp=N,4µm,0.2s						
PRSN				IAML		23 04 37.7	
	comp=N,4µm,0.4s						
PRSN	**Puerto Rico Se**	**0.45**	**327**	⇑*i*P	Pg	23 04 29.6	-1.1
PRSN				⇑*i*S	Sg	23 04 36.8	+0.2
	comp=N,2µm,0.2s						
PRSN				IAML		23 04 37.8	
	comp=N,2µm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**327**	⇑*e*P	Pg	23 04 29.5	-1.1
PRSN				*e*S	Sg	23 04 37.3	+0.7
AGPR	**Aguadilla, PR**	**0.67**	**341**	Pg	Pg	23 04 33.9	-0.8
AGPR				Sg	Sg	23 04 43.3	-0.1
AGPR				IAML		23 04 43.4	
	comp=N,649nm,0.2s						
AGPR				IAML		23 04 44.0	
	comp=N,606nm,0.3s						
AGPR	**Aguadilla, PR**	**0.67**	**341**	⇑*i*P	Pg	23 04 33.9	-0.8
AGPR				⇑*i*S	Sg	23 04 42.9	-0.5
AGPR	**Aguadilla, PR**	**0.67**	**341**	⇓*e*P	Pg	23 04 34.0	-0.7
AGPR				*e*S	Sg	23 04 43.2	-0.2
ECPR	**Experimental S**	**0.69**	**46**	Pg	Pg	23 04 34.2	-1.0
ECPR				Sg	Sg	23 04 43.6	-0.7
ECPR				IAML		23 04 44.6	
	comp=N,1µm,0.2s						
ECPR				IAML		23 04 45.2	
	comp=N,1µm,0.2s						
ECPR	**Experimental S**	**0.69**	**46**	⇑*e*P	Pg	23 04 34.3	-0.9
ECPR				*e*S	Sg	23 04 43.8	-0.5
EMPR	**Esperanza - Ma**	**0.72**	**28**		Pg	23 04 35.9	+0.1
EMPR					Sg	23 04 45.5	+0.2
EMPR	**Esperanza - Ma**	**0.72**	**28**	⇑*e*P	Pg	23 04 35.9	+0.1
EMPR				*e*S	Sg	23 04 45.5	+0.2
SJG	**San Juan**	**0.75**	**68**	Pg	Pg	23 04 35.2	-1.1
SJG				Sg	Sg	23 04 44.8	-1.3
SJG				IAML		23 04 49.1	
	comp=N,324nm,0.3s						
SJG				IAML		23 04 49.9	
	comp=N,326nm,0.3s						
SJG	**San Juan**	**0.75**	**68**	⇑*i*P	Pg	23 04 36.4	+0.1
SJG				⇑*i*S	Sg	23 04 45.7	-0.5
SJG	**San Juan**	**0.75**	**68**	⇑*e*P	Pg	23 04 35.4	-0.9
SJG				*e*S	Sg	23 04 46.8	+0.6
IDE	**Isla Desecheo**	**0.78**	**315**		Pg	23 04 36.2	-0.7
IDE					Sg	23 04 47.0	-0.2
IDE	**Isla Desecheo**	**0.78**	**315**	⇑*e*P	Pg	23 04 36.2	-0.7
IDE				*e*S	Sg	23 04 47.0	-0.2
PDPR	**Patillas Dam,**	**0.84**	**77**	Pg	Pg	23 04 36.8	-1.2
PDPR				IAML		23 04 51.9	
	comp=N,156nm,0.5s						
PDPR				IAML		23 04 53.2	
	comp=N,165nm,0.2s						
GCPR	**Guaynabo City**	**0.90**	**58**	Pg	Pg	23 04 37.4	-1.7
GCPR				Sg	Sg	23 04 49.5	-1.4
GCPR				IAML		23 04 50.6	
	comp=N,186nm,0.3s						
GCPR				IAML		23 04 51.0	
	comp=E,124nm,0.3s						
GCPR	**Guaynabo City**	**0.90**	**58**	⇓*e*P	Pg	23 04 37.8	-1.3
GCPR				*e*S	Sg	23 04 49.8	-1.0
HUMP	**Col San Antoni**	**1.03**	**73**		Pg	23 04 40.0	-1.6
HUMP				Sg	Sg	23 04 54.3	-0.8
HUMP				IAML		23 04 57.0	
	comp=E,317nm,0.2s						
HUMP				IAML		23 04 57.1	
	comp=E,298nm,0.2s						
HUMP	**Col San Antoni**	**1.03**	**73**		Sg	23 04 54.5	-0.6
HUMP	**Col San Antoni**	**1.03**	**73**	⇑*e*P	Pg	23 04 40.1	-1.6
HUMP				*e*S	Sg	23 04 54.5	-0.6
PCDR	**Punta Cana, DR**	**1.57**	**296**	⇑*i*P	Pn	23 04 50.5	+0.6
PCDR				⇑*i*S	Sn	23 05 10.1	-0.4
PCDR				IAML		23 05 16.6	
	comp=N,141nm,1.7s						
CUPR	**Culebra, Puert**	**1.60**	**73**	Pn	Pn	23 04 48.9	-1.5
MIDR	**Miches**	**2.35**	**299**	⇑*i*P	Pb	23 05 03.1	-1.3
MIDR				⇑*i*S	Sn	23 05 28.7	-1.0
MIDR				IAML		23 05 39.6	
	comp=N,44nm,3.4s						
DR12	**Loma Pena Alta**	**2.55**	**292**	Pn	Pn	23 05 00.7	-2.8
HATOM	**Hato Mayor del**	**2.55**	**292**	⇑*i*P	Pn	23 05 05.2	+1.7
HATOM				⇑*i*S	Sn	23 05 33.8	-1.0
HATOM				IAML		23 05 45.9	
	comp=N,30nm,1.9s						
BANI	**BANI**	**3.35**	**280**	Pn	Pn	23 05 11.0	-3.5

HEL 04 23:06:14.6±0.8**, 67°.14N**×**20°.72E, h0**km**, ML1.0,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERTU	**Ertsjaerv**	**0.83**	**135**	PB	Pg	23 06 30.0	-0.4
LANU	**Lannavaara**	**1.03**	**28**	PG	Pg	23 06 33.2	-1.2
KLF	**Kolari**	**1.27**	**84**	PG	Pg	23 06 37.6	-1.2
	baz=272						
KLF				smax	smax	23 06 53.0	
	comp=Z,0.9nm,0.2s						
KLF				SN	Sb	23 06 55.8	-0.3
HEF	**Hetta**	**1.69**	**40**	PN	Pn	23 06 45.1	-0.3
HEF				smax	smax	23 07 05.1	
	comp=Z,1.0nm,0.2s						
HEF				SN	Sn	23 07 07.2	-0.6
KTK1	**Kautokeino**	**2.10**	**26**	PG	Pn	23 06 52.3	+1.2
KTK1				SG	Sb	23 07 19.6	-0.6
KU1	**Kurvinen**	**3.90**	**110**	SN	Sn	23 08 00.2	-1.8
HEMU	**Hemsoen**	**4.63**	**196**	PG	Pb	23 07 36.3	-0.2

UPP 04 23:06:57.5±0.3**, 67°.18N**×**20°.61E, h1**km±2km**, ML2.1,**
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.06**	**195**	P	Pg	23 06 58.9	+0.2
	baz=24						
DUNU				S	Sg	23 06 60.0	+0.4
MASU	**Masugnsbyn**	**0.60**	**62**	P	Pg	23 07 09.0	-0.1
MASU				S	Sg	23 07 17.2	+0.3
RATU	**Laukkuluspa**	**0.75**	**329**	P	Pg	23 07 11.5	-0.4
RATU				S	Sg	23 07 22.0	+0.3
KUA	**Kurravaara**	**0.78**	**352**	P	Pg	23 07 12.1	-0.3
SALU	**Saltoluokta**	**0.84**	**285**	P	Pg	23 07 13.3	-0.3
SALU				S	Sg	23 07 24.7	+0.3
ERTU	**Ertsjaerv**	**0.89**	**135**	P	Pg	23 07 13.6	-0.8
ERTU				S	Sg	23 07 25.9	0.0
NIKU	**Nikkaluokta**	**0.92**	**319**	P	Pg	23 07 14.5	-0.5
LANU	**Lannavaara**	**1.02**	**31**	P	Pg	23 07 16.2	-0.7
KOVU	**Salmi**	**1.06**	**351**	P	Pg	23 07 17.2	-0.6
KALU	**Kalix**	**1.73**	**139**	P	Pn	23 07 29.1	+0.5
SJUU	**Sjulsmark**	**1.73**	**166**	P	Pn	23 07 28.5	-0.1

JSN 04 23:07:21.4±0.6**, 17°.97N**×**76°.76W, h8**km±4km**, MD2.5,**
MW3.8, 3D, Confirmed Earthquake, Jamaica region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOJ	**Hope**	**0.04**	**11**	⇓*i*P	**Pg**	**23 07 23.1**	**+0.4**
GWJ	**Greenwich**	**0.11**	**14**	⇓*i*P	**Pg**	**23 07 24.1**	**+0.6**
STH	**Stony Hill**	**0.12**	**336**	⇓*i*P	**Pb**	**23 07 23.9**	**-0.1**
MTDJ	**Mount Denham**	**0.78**	**289**	*i* P	**Pg**	**23 07 35.6**	**0.0**

SSNC 04 23:08:10.6±0.3**, 19°.73N**×**75°.80W, h30**km±2km**, MD1.7,**
ML0.6, Presumed earthquake, Cuba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RCC	**Rio Carpintero**	**0.28**	**20**	*e*P	Pb	23 08 17.0	-0.7
RCC				*e*S	Sb	23 08 21.9	-0.7
RCC				IAML		23 08 23.9	
	comp=N,3.0nm,0.1s						
RCC				IAML		23 08 24.5	
	comp=E,3.8nm,0.2s						
MARVS	**Santiago de Cu**	**0.28**	**340**	*e*P	Pb	23 08 17.1	-0.7
MARVS				*e*S	Sb	23 08 21.8	-1.0
MARVS				IAML		23 08 21.9	
	comp=N,5.1nm,0.2s						
MARVS				IAML		23 08 22.0	
	comp=E,4.3nm,0.1s						
GTBY	**Guantanamo Bay**	**0.68**	**73**	*e*P	Pb	23 08 22.3	-1.6
GTBY				*e*S	Sb	23 08 30.9	-2.1
GTBY				IAML		23 08 31.6	
	comp=E,3.6nm,0.2s						
GTBY				IAML		23 08 32.2	
	comp=E,3.5nm,0.2s						
PINC	**Pinares de May**	**0.75**	**0**	*e*P	Pb	23 08 23.5	-1.7
PINC				*e*S	Sb	23 08 33.0	-2.1
PINC				IAML		23 08 34.8	
	comp=E,8.1nm,0.1s						
PINC				IAML		23 08 34.9	
	comp=N,9.1nm,0.1s						

*ISK **04** 23:19:33.5, 38°.31N×38°.92E, h8km, ML2.6/13*
*AFAD **04** 23:19:35.3, 38°.42N×38°.84E, h7km±3km, ML2.7*
ISC 04 23:19:34.2±1.1**, 38°.33N**±0°.04×**38°.90E**±0°.03**, h11**km±8km**,**
n16, σ0ˢ67/23**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.18**	**20**	P	**Pg**	**23 19 38.4**	**+0.1**
ELZG				IAML		23 19 41.0	
	comp=E,2µm,0.5s						
ELZG				S	**Sg**	**23 19 41.2**	**0.0**
ELZG				IAML		23 19 42.0	
	comp=N,3µm,0.2s						
SVRC	**Sivrice-ELAZID**	**0.32**	**81**	Pg	**Pg**	**23 19 40.0**	**-0.8**
SVRC				Sg	**Sg**	**23 19 44.7**	**-0.4**
MAYA	**Malatya/Merkez**	**0.38**	**270**	P	**Pg**	**23 19 42.3**	**+0.5**
MAYA				IAML		23 19 48.0	
	comp=N,1µm,0.2s						
MAYA				S	**Sb**	**23 19 48.2**	**-0.6**
MAYA				IAML		23 19 49.0	
	comp=E,1µm,0.3s						
ELZ	**Elazig**	**0.43**	**33**	P	**Pg**	**23 19 42.5**	**-0.3**
ELZ				IAML		23 19 48.0	
	comp=N,410nm,0.3s						
ELZ				S	**Sg**	**23 19 48.8**	**+0.3**
ELZ				IAML		23 19 49.0	
	comp=E,688nm,0.3s						
ARPR	**Arapgir-MALATY**	**0.89**	**330**	Pg	**Pb**	**23 19 51.4**	**-0.2**
ARPR				Sg	**Sn**	**23 20 04.5**	**-1.1**
DYBB	**Diyarbakir**	**1.04**	**111**	Pg	**Pg**	**23 19 54.5**	**+0.2**
ILIC	**ilic-Erzincan**	**1.15**	**347**	Pn	**Pg**	**23 19 55.9**	**-0.5**
ILIC				Sn	**Sn**	**23 20 12.2**	**0.0**
ERZN	**Erzincan**	**1.41**	**27**	Pn	**Pn**	**23 20 00.3**	**+0.4**
ERZN				Sn	**Sg**	**23 20 20.3**	**+0.7**
BNGB	**Bingl**	**1.54**	**64**	Pn	**Pn**	**23 20 02.7**	**+1.0**
YEDI	**Yedisu-Bingol**	**1.69**	**49**	Pn	**Pn**	**23 20 04.8**	**+1.0**
GAZ	**Gaziantep**	**1.77**	**230**	Pn	**Pn**	**23 20 05.2**	**+0.4**
KMRS	**Kahramanmaras**	**1.79**	**243**	Pn	**Pn**	**23 20 05.4**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.81**	**95**	Pn	**Pn**	**23 20 05.2**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.96**	**273**	Pn	**Pn**	**23 20 07.7**	**+0.3**
BAYT	**Aydıntepe-Bayb**	**2.27**	**25**	Pn	**Pn**	**23 20 12.9**	**+1.1**
GURO	**Guroymak-BITLI**	**2.47**	**84**	Pn	**Pn**	**23 20 15.5**	**+1.1**

*NEIC **04** 23:38:11.7±2.0, 0°.08N±0°.07×123°.43E±0°.07, h144km±5km, mb4.4/44, Error ellipse: s-maj=10.6km s-min=9.3km az=52.0*
*IDC **04** 23:38:13.3±2.2, 0°.11N×123°.39E, h169km±20km, mb3.8/20, mbtmp4.2/22, MS2.6/2, Error ellipse: s-maj=20.9km s-min=9.4km az=69.0*
*DJA **04** 23:38:13.1±0.2, 0°N±2°×12°3E±°, h133km±4km, M4.7/31, mB5.2/4, mb4.7/12, MLv4.7/31, Mw(mB)4.6/4*
ISC 04 23:38:12.2±0.3**, 0°.10N**±0°.05×**123°.37E**±0°.05**, h157**km**, n123,**
σ1ˢ37/136**, mb4.2**/43**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.28**	**208**		**Pn**	**23 38 38.6**	**-1.5**
LUWI				Sn	**Sn**	**23 38 57.7**	**-4.0**
LUWI	**Luwuk**	**1.28**	**208**	P	**Pn**	**23 38 38.7**	**-1.5**
LUWI				S	**Sn**	**23 38 57.8**	**-3.9**
MRSI	**Marisa**	**1.48**	**285**	P	**Pn**	**23 38 41.7**	**-0.4**
MRSI				S	**Sn**	**23 39 02.7**	**-2.3**
MNI	**Manado**	**1.99**	**48**	P	**Pn**	**23 38 48.4**	**+0.7**
APSI	**Ampana**	**1.99**	**240**	P	**Pn**	**23 38 47.0**	**-0.7**
TOLI2	**Tolitoli**	**2.77**	**291**	Pn	**Pn**	**23 38 56.5**	**-0.5**
TOLI2				Sn	**Sn**	**23 39 29.4**	**-2.4**
SANI	**Sanana**	**3.38**	**129**	P	**Pn**	**23 39 02.1**	**-2.6**
MPSI	**Mapaga**	**3.48**	**274**	P	**Pn**	**23 39 07.2**	**+1.2**
PCI	**Palu**	**3.67**	**254**	P	**Pn**	**23 39 09.3**	**+0.9**
TNTI	**Ternate**	**4.05**	**81**	Pn	**Pn**	**23 39 11.6**	**-1.8**
TNTI				Sn	**Sn**	**23 39 56.0**	**-5.0**
TNTI	**Ternate**	**4.05**	**81**	P	**Pn**	**23 39 13.6**	**+0.2**
KDI	**Kendari**	**4.10**	**191**	P	**Pn**	**23 39 13.9**	**-0.1**
TTSI	**Tana Toraja**	**4.73**	**229**	P	**Pn**	**23 39 22.1**	**-0.1**
NLAI	**Namlea**	**4.99**	**132**	P	**Pn**	**23 39 25.3**	**-0.4**
SPSI	**Sidrap Palu**	**5.41**	**222**	P	**Pn**	**23 39 32.3**	**+1.1**
	0.4nm6µm73nm,0.6s						
KRAI	**Karang Ratu**	**6.07**	**124**	P	**Pn**	**23 39 40.0**	**+0.1**
	0.6nm68nm,0.6s						
AAI	**Ambon**	**6.12**	**128**	P	**Pn**	**23 39 40.3**	**-0.3**
	0.5nm135nm,0.7s						
KAPI	**Kappang**	**6.23**	**215**	S	**Sn**	**23 40 54.8**	**+2.2**
	30nm,0.5s,baz=226,slow=23,SNR=6.6						
KAPI				LR	LR	23 42 38.5	
	comp=Z,40nm,21.4s,baz=80,slow=42						
MSAI	**Masohi**	**6.53**	**122**	P	**Pn**	**23 39 46.4**	**+0.3**
	4µm83nm,0.6s						
BKB	**Balikpapan**	**6.61**	**258**	Pn	**Pn**	**23 39 48.4**	**+1.3**
BSSI	**Bau Bau, Buton**	**6.83**	**205**	P	**Pn**	**23 39 50.4**	**+0.2**
	0.3nm66nm,0.8s						
SWI	**Sorong**	**7.95**	**97**	P	**Pn**	**23 40 04.7**	**-0.3**
	0.2nm45nm,0.7s						
SIJI	**Sorong**	**7.96**	**97**	P	**Pn**	**23 40 05.7**	**+0.5**
	13nm,0.4s,baz=266,slow=10,SNR=8.3						
SIJI				S	**Sn**	**23 41 38.6**	**+4.6**
	11nm,0.7s,baz=42,slow=23,SNR=1.5						
SIJI	**Sorong**	**7.96**	**97**	P	**Pn**	**23 40 04.6**	**-0.5**
EDFI	**Ende, Flores**	**8.95**	**191**	P	**Pn**	**23 40 20.6**	**+2.2**
KKM	**Kota Kinabalu**	**9.27**	**310**	Pn	Pn	23 40 29.2	+6.6
FAKI	**Fak Fak**	**9.37**	**109**	Pn	**Pn**	**23 40 22.3**	**-1.6**
FAKI	**Fak Fak**	**9.37**	**109**	P	**Pn**	**23 40 23.0**	**-0.9**
SOEI	**Soe**	**9.83**	**175**	Pn	**Pn**	**23 40 31.6**	**+1.5**
MTN	**Manton Dam**	**14.99**	**149**	Pn	**Pn**	**23 41 35.0**	**-1.4**
KNRA	**Kununurra**	**16.56**	**161**		**P**	**23 41 55.2**	**0.0**
KNRA				IAmb	IAmb	23 41 56.7	
	comp=Z,14nm,0.7s						
BBJI	**Bungbulang**	**17.38**	**244**	P	**P**	**23 42 06.2**	**+1.8**
BBJI				IAmb	IAmb	23 42 08.2	
	comp=Z,9.8nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.22**	**173**	P	**P**	**23 42 13.4**	**-0.1**
	comp=Z,4.6nm,0.4s,baz=7.0,slow=9.4,SNR=27						
WB0	**Warramunga Arr**	**22.51**	**152**	P	**P**	**23 42 57.8**	**-1.2**
WB0				IAmb	IAmb	23 43 07.3	
	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**22.64**	**152**	P	**P**	**23 42 59.6**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=334,slow=9.9,SNR=40						
WRA				PcP	**PcP**	**23 46 47.5**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=322,slow=2.6,SNR=4.8						
	comp=Z,1.6nm,0.5s						
WRA	**Warramunga Arr**	**22.64**	**152**	P	**P**	**23 42 58.1**	**-2.1**
WR8	**Warramunga Arr**	**22.72**	**152**	P	**P**	**23 42 59.9**	**-1.0**
WR8				IAmb	IAmb	23 43 09.5	
	comp=Z,9.8nm,0.7s						
IPM	**Ipoh**	**22.74**	**281**	P	**P**	**23 43 02.4**	**+1.1**
KULM	**Kulim**	**23.26**	**283**	P	**P**	**23 43 06.9**	**+0.9**
KULM				IAmb	IAmb	23 43 08.6	
	comp=Z,14nm,1.0s						
COEN	**Coen**	**24.08**	**126**	P	**P**	**23 43 12.4**	**-1.0**
YHNB	**Yeheng**	**24.50**	**356**	P	**P**	**23 43 17.6**	**+0.4**
ASAR	**Alice Springs**	**25.75**	**157**	P	**P**	**23 43 29.6**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=340,slow=14,SNR=12						
ASAR				PcP	**PcP**	**23 46 54.2**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=351,slow=2.2,SNR=12						
ASAR				ScP	**ScP**	**23 50 18.1**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=338,slow=1.7,SNR=4.2						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**25.75**	**157**	P	**P**	**23 43 29.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**30.14**	**309**	P	**P**	**23 44 09.0**	**+1.4**
	comp=Z,3.5nm,0.6s,baz=136,slow=7.3,SNR=21						
CMAR				PcP	**PcP**	**23 47 05.7**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=184,slow=1.9,SNR=5.2						
CMAR				LR	LR	23 57 40.6	
	comp=Z,12nm,18.3s,baz=80,slow=39						
	comp=Z,3.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.14**	**309**	P	**P**	**23 44 08.4**	**+0.8**
CHTO	**Chiang Mai**	**30.34**	**309**	P	**P**	**23 44 10.9**	**+1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CHTO				IAmb	IAmb	23 44 13.0	
	comp=Z,7.7nm,0.7s						
ENH	**Enshi**	**32.78**	**337**	P	**P**	**23 44 32.0**	**+1.3**
ENH				IAmb	IAmb	23 44 33.8	
	comp=Z,8.5nm,0.8s						
JMN	**Monobe**	**34.88**	**15**	P	**P**	**23 44 49.3**	**+0.6**
STKA	**Stephens Creek**	**36.18**	**153**	P	**P**	**23 44 57.8**	**-2.0**
	comp=Z,1.9nm,0.6s,baz=346,slow=8.3,SNR=3.8						
	comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**36.18**	**153**		**P**	**23 44 57.8**	**-2.0**
INU	**Inuyama**	**37.31**	**19**	P	**P**	**23 45 08.6**	**-0.7**
INU				IAmb	IAmb	23 45 19.7	
	comp=Z,8.7nm,0.9s						
KSRS	**Korea Array**	**37.41**	**6**	P	**P**	**23 45 10.1**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=186,slow=9.8,SNR=2.4						
	comp=Z,1.8nm,0.6s						
MJAR	**Matsushiro Arr**	**38.78**	**19**	P	**P**	**23 45 21.2**	**-0.5**
	comp=Z,6.0nm,0.7s,baz=191,slow=9.6,SNR=11						
	comp=Z,6.0nm,0.7s						
LZDM	**Lanzhou Array**	**40.09**	**335**	P	**P**	**23 45 33.5**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=156,slow=9.1,SNR=5.3						
	comp=Z,1.1nm,0.5s						
ARMA	**Armidale**	**40.54**	**141**	P	**P**	**23 45 38.2**	**+1.8**
ARMA				IAmb	IAmb	23 46 01.5	
	comp=Z,14nm,1.1s						
HHC	**Hu-ho-hao-te**	**41.95**	**347**	*e*P	**P**	**23 45 51.6**	**+3.9**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LSA	**Lhasa**	**42.53**	**317**	P	**P**	**23 45 54.4**	**+1.4**
LSA				IAmb	IAmb	23 45 55.9	
	comp=Z,4.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**44.58**	**9**	P	**P**	**23 46 08.8**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=134,slow=9.4,SNR=4.2						
	comp=Z,2.6nm,0.5s						
GTA2	**Gaotai**	**44.75**	**334**	*e*P	**P**	**23 46 12.3**	**+2.1**
GTA2				pmax	pmax		
	comp=Z,12nm,0.8s						
JKA	**Kamikawa-asahi**	**47.06**	**19**	P	**P**	**23 46 28.3**	**+0.3**
HILR	**Hailar Array B**	**49.36**	**357**	P	**P**	**23 46 46.0**	**+0.3**
	comp=Z,3.6nm,0.4s,baz=173,slow=9.7,SNR=13						
	comp=Z,3.6nm,0.4s						
ULN	**Ulaanbaatar**	**49.64**	**346**	P	**P**	**23 46 49.1**	**+1.2**
ULN				IAmb	IAmb	23 46 49.9	
	comp=Z,3.6nm,0.6s						
SONM	**Songino Array**	**49.78**	**345**	P	**P**	**23 46 49.1**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=169,slow=6.9,SNR=33						
SONM				PcP	**PcP**	**23 48 06.8**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=186,slow=3.2,SNR=3.7						
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**49.78**	**345**	P	**P**	**23 46 49.9**	**+0.9**
SONM				IAmb	IAmb	23 46 51.0	
	comp=Z,3.3nm,0.8s						
HEH	**HeiHe**	**50.08**	**3**	*e*P	**P**	**23 46 50.9**	**-0.1**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH2	**Kashi**	**58.44**	**317**	P	**P**	**23 47 51.9**	**0.0**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**58.72**	**328**	P	**P**	**23 47 53.2**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=123,slow=8.6,SNR=57						
MKAR				PcP	**PcP**	**23 48 40.5**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=158,slow=2.8,SNR=9.8						
	comp=Z,1.7nm,0.5s						
MKAR	**Makanchi Array**	**58.72**	**328**	P	**P**	**23 47 53.0**	**-0.6**
MAKZ	**Makanchi**	**58.90**	**328**	P	**P**	**23 47 54.3**	**-0.4**
PEA0B	**Petropavlovsk-**	**60.05**	**23**	P	**P**	**23 48 02.1**	**-0.3**
PETK	**Petropavlovsk-**	**60.05**	**23**	P	**P**	**23 48 02.4**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=210,slow=3.0,SNR=6.1						
	comp=Z,1.8nm,0.6s						
PETK	**Petropavlovsk-**	**60.05**	**23**	P	**P**	**23 48 03.1**	**+0.6**
KBL	**Kabul**	**61.16**	**310**	P	**P**	**23 48 10.8**	**+0.2**
GAR	**Garm**	**62.00**	**315**	P	**P**	**23 48 15.3**	**-0.8**
ZAA0	**Zalesovo Array**	**62.37**	**335**	P	**P**	**23 48 17.8**	**-0.3**
ZAA0				IAmb	IAmb	23 48 18.6	
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**62.37**	**335**	P	**P**	**23 48 17.1**	**-1.0**
	comp=Z,1.5nm,0.4s,baz=134,slow=4.8,SNR=9.2						
	comp=Z,1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**62.37**	**335**	P	**P**	**23 48 17.2**	**-0.8**
KURBB	**Kurchatov Arra**	**63.06**	**330**	P	**P**	**23 48 21.7**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=130,slow=6.2,SNR=15						
KURBB				PcP	**PcP**	**23 48 57.1**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=136,slow=3.0,SNR=4.5						
	comp=Z,1.3nm,0.6s						
KURK	**Kurchatov**	**63.07**	**330**	P	**P**	**23 48 21.9**	**-0.9**
KURK				IAmb	IAmb	23 48 23.6	
	comp=Z,3.6nm,0.5s						
KKAR	**Karatay Array**	**63.68**	**319**	P	**P**	**23 48 26.1**	**-0.9**
BVAR	**Borovoye Array**	**68.59**	**329**	P	**P**	**23 48 57.0**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=119,slow=7.5,SNR=2.8						
	comp=Z,0.4nm,0.4s						
TIXI	**Tiksi**	**71.52**	**2**	P	**P**	**23 49 14.8**	**-0.7**
TIXI				IAmb	IAmb	23 49 15.3	
	comp=Z,6.6nm,0.9s						
ABKAR	**Akbulak array**	**72.88**	**322**	P	**P**	**23 49 22.5**	**-1.5**
NRIK	**Noril'sk**	**73.17**	**347**	P	**P**	**23 49 24.0**	**-1.4**
	comp=Z,1.6nm,0.7s,baz=133,slow=5.8,SNR=4.4						
	comp=Z,1.6nm,0.7s						
AKTO	**Aktyubinsk**	**74.45**	**323**	P	**P**	**23 49 32.1**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=112,slow=6.9,SNR=4.0						
	comp=Z,0.9nm,0.5s						
VNDA	**Vanda**	**80.30**	**172**	P	**P**	**23 50 05.2**	**0.0**
	comp=Z,2.4nm,0.9s,baz=342,slow=3.2,SNR=3.2						
	comp=Z,2.4nm,0.9s						
VNDA	**Vanda**	**80.30**	**172**	P	**P**	**23 50 05.3**	**+0.2**
K13K	**Kusilvak Mount**	**81.50**	**27**	P	**P**	**23 50 12.9**	**+1.1**
M13K	**Dall Lake**	**81.70**	**29**	P	**P**	**23 50 13.9**	**+1.0**
ANM	**Nome**	**81.93**	**24**	P	**P**	**23 50 15.4**	**+1.3**
L14K	**Kuka Creek**	**82.25**	**28**	P	**P**	**23 50 17.0**	**+1.3**
F15K	**North Star Dit**	**82.56**	**23**	P	**P**	**23 50 18.6**	**+1.2**
K15K	**Wolf Creek Mou**	**83.01**	**27**	P	**P**	**23 50 20.3**	**+0.6**
K15K				IAmb	IAmb	23 50 22.3	
	comp=Z,9.6nm,1.0s						
J16K	**Anvik River**	**83.65**	**26**	P	**P**	**23 50 24.9**	**+2.0**
J16K				IAmb	IAmb	23 50 25.6	
	comp=Z,6.5nm,1.1s						
M16K	**Timber Creek**	**83.94**	**29**	P	**P**	**23 50 25.9**	**+1.3**
M16K				IAmb	IAmb	23 50 26.7	
	comp=Z,4.5nm,0.8s						
O16K	**Kokwok River B**	**84.11**	**30**	P	**P**	**23 50 26.2**	**+0.9**
O16K				IAmb	IAmb	23 50 27.3	
	comp=Z,4.6nm,0.7s						
C18K	**Utukok River**	**84.62**	**21**	P	**P**	**23 50 28.5**	**+0.7**
C18K				IAmb	IAmb	23 50 29.5	
	comp=Z,2.2nm,0.6s						
K20K	**Telida**	**86.56**	**27**	P	**P**	**23 50 38.5**	**+1.0**
NEA2	**Nenana**	**88.86**	**26**	P	**P**	**23 50 47.8**	**-0.6**
NEA2				IAmb	IAmb	23 50 60.0	
	comp=Z,2.5nm,1.0s						
G24K	**Hadweenzic Riv**	**89.57**	**23**	P	**P**	**23 50 51.8**	**+0.1**
ILAR	**Eielson Array**	**89.80**	**25**	P	**P**	**23 50 51.6**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=240,slow=5.2,SNR=7.5						
	comp=Z,0.3nm,0.5s						
D25K	**Kavik River**	**90.00**	**21**	P	**P**	**23 50 53.8**	**+0.1**
BMAR	**Burnt Mountain**	**90.70**	**23**	P	**P**	**23 50 57.7**	**+0.8**
BCAR	**Beaver Creek A**	**92.12**	**27**	P	**P**	**23 51 04.5**	**+0.9**
G29M	**Pine Creek**	**93.29**	**23**	P	**P**	**23 51 08.7**	**-0.2**
G29M				IAmb	IAmb	23 51 26.9	
	comp=Z,1.9nm,1.1s						
SPITS	**Spitsbergen Ar**	**93.36**	**349**	P	**P**	**23 51 07.3**	**-1.7**
	comp=Z,4.8nm,0.8s,baz=91,slow=7.8,SNR=11						
	comp=Z,4.8nm,0.8s						
K29M	**Barlow Dome**	**93.94**	**26**	P	**P**	**23 51 12.5**	**+0.5**
H31M	**Peel River**	**94.94**	**24**	P	**P**	**23 51 16.1**	**-0.4**
LSZ	**Lusaka**	**95.03**	**255**	P	**P**	**23 51 16.7**	**-1.4**
WHY	**Whitehorse**	**95.67**	**29**	P	**P**	**23 51 20.8**	**+0.7**
PDAR	**Pinedale Array**	**116.28**	**41**	PKP	**PKPdf**	**23 56 38.2**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=203,slow=1.3,SNR=2.3						
PDAR				PKKPbc	**PKKPbc**	**00 07 11.2**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=111,slow=3.4,SNR=4.0						
PDAR	**Pinedale Array**	**116.28**	**41**	PKPdf	**PKPdf**	**23 56 37.1**	**-0.6**
ULM	**Lac du Bonnet**	**119.73**	**28**	PKP	**PKPdf**	**23 56 43.0**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=1.5,slow=8.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**120.74**	**285**	PKP	**PKPdf**	**23 56 45.5**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=82,slow=1.8,SNR=5.9						
MD01	**Midelt array s**	**121.24**	**309**	PKPdf	**PKPdf**	**23 56 47.1**	**-0.3**
TBO	**Thunder Bay**	**123.80**	**26**	PKPdf	**PKPdf**	**23 56 51.7**	**+0.1**
TXAR	**Lajitas Array**	**126.46**	**53**	PKP	**PKPdf**	**23 56 57.6**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=150,slow=2.7,SNR=5.9						
R40A	**Maddies Statio**	**129.68**	**37**	PKPdf	**PKPdf**	**23 57 02.9**	**-0.3**
T50A	**Nancy**	**134.77**	**32**	PKPdf	**PKPdf**	**23 57 13.3**	**+0.5**
TKL	**Tuckaleechee C**	**136.36**	**33**	PKPdf	**PKPdf**	**23 57 17.2**	**+1.4**
CO02	**Combarbal**	**146.20**	**158**	PKPbc	**PKPdf**	**23 57 35.3**	**+1.6**
CO03	**El Pedregal**	**146.64**	**158**	PKPbc	**PKPdf**	**23 57 36.2**	**+1.7**
LCO	**Las Campanas**	**148.26**	**156**	PKPbc	**PKPbc**	**23 57 41.5**	**+0.6**

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*NNC **04** 23:47:54.7±0.2, 44°.13N×79°.40E, h0km, mb3.6, mpv2.6, Error ellipse: s-maj=1.3km s-min=1.2km az=94.0*
*SOME **04** 23:47:54.9, 44°.13N×79°.42E, h5km*
ISC 04 23:47:55.1±1.2**, 44°.13N**±0°.04×**79°.42E**±0°.04**, h5**km±13km**, n9, σ0s.47**/18**, 3C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
DJR	**Jarkent**	**0.34**	**52**	P	**Pg**	**23 48 01.7**	**0.0**
	1.4nm,0.1s						
DJR				S	**Sg**	**23 48 06.4**	**+0.3**
	4.9nm,0.2s						
DJR	**Jarkent**	**0.34**	**52**	*e*P	**Pg**	**23 48 01.7**	**0.0**
	1.4nm,0.1s						
DJR				*e*S	**Sg**	**23 48 06.4**	**+0.3**
	4.9nm,0.2s						
BLB	**Baldybastay**	**0.68**	**268**	P	**Pg**	**23 48 08.0**	**-0.1**
	14nm,0.1s						
BLB				S	**Sg**	**23 48 17.5**	**+0.5**
	10nm,0.2s						
PDGK	**Podgornoye**	**0.80**	**176**	⇑P	**Pg**	**23 48 10.4**	**0.0**
	1.9nm,1.2s						
PDGK				⇑S	**Sg**	**23 48 21.6**	**+0.8**
	1.3nm,0.7s						
KPKS	**Kokpek**	**0.85**	**219**	P	**Pb**	**23 48 11.7**	**-0.7**
	0.2nm,0.1s						
KPKS				S	**Sb**	**23 48 23.9**	**-0.3**
	3.3nm,0.2s						
KPKS	**Kokpek**	**0.85**	**219**	*e*P	**Pb**	**23 48 11.7**	**-0.7**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**23 48 23.9**	**-0.3**
	3.3nm,0.2s						
UZB	**Uzynbulak**	**1.02**	**196**	P	**Pg**	**23 48 14.6**	**0.0**
	3.2nm,0.1s						
UZB				S	**Sb**	**23 48 29.0**	**-0.2**
	2.7nm,0.2s						
UZB	**Uzynbulak**	**1.02**	**196**	*e*P	**Pg**	**23 48 14.6**	**0.0**
	3.2nm,0.1s						
UZB				*e*S	**Sb**	**23 48 29.0**	**-0.2**
	2.7nm,0.2s						
KNDC	**Almaty**	**2.00**	**244**	⇓Pn	**Pn**	**23 48 29.7**	**+0.1**
	7.0nm,0.4s						
KNDC				⇑Sn	**Sn**	**23 48 56.0**	**+0.9**
	9.2nm,0.6s						

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*NEIC **05** 00:11:41.4±1.2, 17°.76N±0°.04×66°.876W±0°.009, h10km±2km, ML3.2/35, Md3.1/8(RSPR), Error ellipse: s-maj=6.2km s-min=3.0km az=10.0*
*RSPR **05** 00:11:42.9, 17°.83N×66°.89W, h10km, MD3.1/8*
*SDD **05** 00:11:43.2±2.6, 17°.83N×66°.89W, h18km±23km, MD3.6, ML3.0, MW3.5, Presumed earthquake*
ISC 05 00:11:41.8±1.2**, 17°.83N**±0°.06×**66°.90W**±0°.02**, h18**km±3km**, n38, σ0s.59**/68**, 18C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.15**	**8**		**Pg**	**00 11 46.5**	**+0.4**
GBPR					**Sg**	**00 11 49.0**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.15**	**8**	⇓*e*P	**Pg**	**00 11 46.5**	**+0.4**
GBPR				*e*S	**Sg**	**00 11 49.0**	**+0.2**
MLPR	**Magueyes Islan**	**0.20**	**315**		**Pg**	**00 11 47.3**	**+0.6**
MLPR				Sg	**Sg**	**00 11 50.4**	**+0.4**
MLPR				IAML		00 11 51.9	
	4μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.27**	**311**	Pg	**Pb**	**00 11 48.4**	**+0.4**
CRPR				Sg	**Sb**	**00 11 52.5**	**+0.3**
CRPR				IAML		00 11 52.9	
	comp=N,5μm,0.5s						
CRPR				IAML		00 11 53.1	
	comp=E,4μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.27**	**311**	⇑*e*Pg	**Pb**	**00 11 48.5**	**+0.4**
CRPR				⇑*e*Sg	**Sb**	**00 11 52.6**	**+0.3**
CRPR				IAML		00 11 52.8	
	comp=N,5μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.27**	**311**	⇑*e*P	**Pb**	**00 11 48.6**	**+0.5**
CRPR				*e*S	**Sb**	**00 11 52.6**	**+0.4**
OBIP	**Obispado Ponce**	**0.35**	**53**	Pg	**Pg**	**00 11 49.2**	**0.0**
OBIP				Sg	**Sb**	**00 11 54.6**	**-0.2**
OBIP	**Obispado Ponce**	**0.35**	**53**	⇓*e*P	**Pb**	**00 11 49.5**	**-0.1**
OBIP				*e*S	**Sb**	**00 11 54.9**	**0.0**
LSP	**Las Mesas**	**0.39**	**333**		**Pb**	**00 11 50.5**	**+0.2**
LSP					**Sb**	**00 11 56.6**	**+0.6**
LSP	**Las Mesas**	**0.39**	**333**	⇓*e*P	**Pb**	**00 11 50.5**	**+0.2**
LSP				*e*S	**Sb**	**00 11 56.6**	**+0.6**
CELP	**Cerrillos**	**0.39**	**51**	Pg	**Pg**	**00 11 50.0**	**0.0**
CELP				Sg	**Sb**	**00 11 56.0**	**0.0**
CELP				IAML		00 11 58.7	
	comp=N,1μm,0.3s						
PRSN	**Puerto Rico Se**	**0.45**	**329**	Pg	**Pb**	**00 11 51.4**	**+0.2**
PRSN				Sg	**Sb**	**00 11 58.1**	**+0.4**
PRSN	**Puerto Rico Se**	**0.45**	**329**	*e*Pg	**Pb**	**00 11 51.5**	**+0.2**
PRSN				⇑*e*Sg	**Sb**	**00 11 57.6**	**-0.1**
PRSN				IAML		00 12 01.3	
	comp=N,3μm,0.3s						
PRSN	**Puerto Rico Se**	**0.45**	**329**	⇑*e*P	**Pb**	**00 11 51.5**	**+0.2**
PRSN				*e*S	**Sb**	**00 11 58.4**	**+0.7**
UUPR	**Utuado, UPR, P**	**0.45**	**22**	Pg	**Pg**	**00 11 51.1**	**0.0**
UUPR				Sg	**Sg**	**00 11 57.0**	**-0.4**
AGPR	**Aguadilla, PR**	**0.67**	**342**	Pg	**Pg**	**00 11 55.1**	**+0.1**
AGPR				Sg	**Sg**	**00 12 03.9**	**0.0**
AGPR				IAML		00 12 04.4	
	comp=N,890nm,0.5s						
AGPR				IAML		00 12 05.2	
	comp=N,552nm,0.3s						
AGPR	**Aguadilla, PR**	**0.67**	**342**	⇑*e*Pg	**Pg**	**00 11 55.1**	**+0.1**
AGPR				⇑*e*Sg	**Sg**	**00 12 04.2**	**+0.3**
AGPR				IAML		00 12 05.2	
	comp=N,579nm,0.2s						
AGPR	**Aguadilla, PR**	**0.67**	**342**	⇑*e*P	**Pg**	**00 11 55.1**	**+0.1**
AGPR				*e*S	**Sg**	**00 12 04.2**	**+0.3**
ECPR	**Experimental S**	**0.70**	**46**	Pg	**Pb**	**00 11 55.2**	**-0.4**
ECPR				Sg	**Sg**	**00 12 05.0**	**-0.2**
ECPR				IAML		00 12 05.8	
	comp=N,960nm,0.2s						
ECPR				IAML		00 12 06.7	
	comp=N,1μm,0.3s						
ECPR	**Experimental S**	**0.70**	**46**	⇓*e*P	**Pb**	**00 11 55.4**	**-0.2**
ECPR				*e*S	**Sg**	**00 12 05.7**	**+0.5**
EMPR	**Esperanza - Ma**	**0.73**	**29**		**Pg**	**00 11 56.5**	**+0.3**
EMPR					**Sn**	**00 12 06.8**	**-1.2**
EMPR	**Esperanza - Ma**	**0.73**	**29**	⇑*e*P	**Pg**	**00 11 56.5**	**+0.3**
EMPR				*e*S	**Sn**	**00 12 06.8**	**-1.2**
SJG	**San Juan**	**0.77**	**68**	Pg	**Pb**	**00 11 56.2**	**-0.4**
SJG				Sg	**Sg**	**00 12 07.3**	**+0.3**
SJG	**San Juan**	**0.77**	**68**	IAML		00 12 10.2	
	comp=N,641nm,0.5s						
SJG				IAML		00 12 10.4	
	comp=N,651nm,0.5s						
SJG	**San Juan**	**0.77**	**68**	⇓*e*Pg	**Pb**	**00 11 56.5**	**-0.1**
SJG				⇑*e*Sg	**Sn**	**00 12 07.6**	**-1.2**
SJG	**San Juan**	**0.77**	**68**	⇓*e*P	**Pb**	**00 11 56.6**	**-0.1**
SJG				*e*S	**Sn**	**00 12 08.9**	**0.0**
IDE	**Isla Desecheo**	**0.78**	**315**		**Pg**	**00 11 57.2**	**+0.1**
IDE	**Isla Desecheo**	**0.78**	**315**	⇑*e*P	**Pg**	**00 11 57.2**	**+0.1**
PDPR	**Patillas Dam,**	**0.86**	**77**	Pg	**Pb**	**00 11 57.8**	**-0.4**
GCPR	**Guaynabo City**	**0.91**	**58**	Pg	**Pb**	**00 11 58.4**	**-0.8**
GCPR				Sg	**Sb**	**00 12 10.8**	**-0.2**
GCPR	**Guaynabo City**	**0.91**	**58**	⇓*e*P	**Pb**	**00 11 59.0**	**-0.1**
GCPR				*e*S	**Sn**	**00 12 13.2**	**+0.7**
HUMP	**Col San Antoni**	**1.05**	**73**		**Pb**	**00 12 00.8**	**-0.6**
HUMP				IAML		00 12 18.2	
	comp=N,301nm,0.2s						
HUMP				IAML		00 12 18.4	
	comp=N,624nm,0.3s						
HUMP	**Col San Antoni**	**1.05**	**73**		**Sg**	**00 12 17.8**	**+1.9**
HUMP	**Col San Antoni**	**1.05**	**73**	⇑*e*P	**Pg**	**00 12 02.7**	**+0.5**
HUMP				*e*S	**Sg**	**00 12 17.8**	**+1.9**
PCDR	**Punta Cana, DR**	**1.56**	**296**	⇑*e*Pg	**Pn**	**00 12 08.7**	**-0.1**
PCDR				⇑*e*Sg	**Sb**	**00 12 30.5**	**+0.8**
PCDR				IAML		00 12 34.7	
	comp=N,232nm,1.5s						
CUPR	**Culebra, Puert**	**1.61**	**73**	Pn	**Pn**	**00 12 09.4**	**0.0**
HIDR	**Higuey Centro**	**1.89**	**294**	⇑*e*Pg	**Pg**	**00 12 17.5**	**-0.6**
HIDR				⇑*e*Sg	**Sg**	**00 12 41.8**	**-0.9**
HIDR				IAML		00 12 49.0	
	comp=N,69nm,0.2s						
MIDR	**Miches**	**2.34**	**300**	⇑*e*Pg	**Pb**	**00 12 22.4**	**-1.1**
MIDR				⇑*e*Sg	**Sb**	**00 12 52.7**	**+0.6**
MIDR				IAML		00 13 05.7	
	comp=N,44nm,1.1s						

TRN 05 00:33:18.3, 17°.41N×**62°.26W, h94**km**, MD3.8, East of St. Kitts., Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SKI	**Saint Kitts**	**0.46**	**261**	*e*P	Pn	00 33 34.7	+1.4
SKI				*e*S	Sn	00 33 45.8	+1.4
ANWB	**Willy Bob**	**0.52**	**60**	*e*P	Pn	00 33 35.2	+1.5
ANWB				*e*S	Sn	00 33 47.4	+2.3
MBFL	**Flemmings, Mon**	**0.65**	**176**	*e*P	Pn	00 33 36.1	+1.3
MBFL				*e*S	Sn	00 33 48.4	+1.3
MBWH	**Windy Hill**	**0.66**	**174**	*e*P	Pn	00 33 36.2	+1.3
MBWH				*e*S	Sn	00 33 48.7	+1.4
DHSZ	**Broadband at M**	**1.22**	**157**	*e*P	Pn	00 33 41.9	+1.1
DHSZ				*e*S	Sn	00 33 59.4	+1.5
ATGZ	**Broadband at L**	**1.40**	**159**	*e*P	Pn	00 33 44.3	+1.3
ATGZ				*e*S	Sn	00 34 04.9	+3.2
MMLZ	**Guadeloupe Bro**	**1.47**	**157**	*e*P	Pn	00 33 45.4	+1.6
MMLZ				*e*S	Sn	00 34 05.1	+2.0
DSDZ	**La Diserade, G**	**1.58**	**133**	*e*P	Pn	00 33 46.2	+1.0
DSDZ				*e*S	Sn	00 34 06.2	+0.6
TBG	**Guadaloupe-3**	**1.65**	**159**	*e*P	Pn	00 33 48.0	+1.7
TBG				*e*S	Sn	00 34 10.7	+3.4
DWS	**Wesley**	**2.04**	**153**	*e*P	Pn	00 33 52.0	+0.8
DWS				*e*S	Sn	00 34 16.4	+0.1
DSLB	**Salisbury**	**2.12**	**158**	*e*P	Pn	00 33 53.4	+1.2
DSLB				*e*S	Sn	00 34 19.9	+1.8
BIM	**Bigot**	**3.09**	**158**	*e*P	Pn	00 34 05.9	+0.7
BIM				*e*S	Sn	00 34 42.3	+1.0
SLAC	**Saint Lucia, A**	**3.73**	**159**	*e*P	Pn	00 34 15.8	+2.1

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*IDC **05** 00:38:07.0±4.5, 18°.06S×178°.33W, h599km±57km, mb3.1/7, mbtmp4.0/7, Error ellipse: s-maj=38.5km s-min=20.0km az=165.0*
ISC 05 00:38:05.2±0.8**, 17°.9S**±0°.2×**178°.4W**±0°.2**, h579**km**, n11, σ0s.93**/13**, mb3.5**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
URZ	**Urewera**	**20.63**	**190**	P	**P**	**00 42 04.7**	**-0.7**
	5.4nm,0.5s,baz=273,slow=3.1,SNR=8.6						
	5.4nm,0.5s						
WRA	**Warramunga Arr**	**44.62**	**260**	P	**P**	**00 45 28.0**	**+0.6**
	0.4nm,0.5s,baz=96,slow=7.7,SNR=11						
WRA				PcP	**PcP**	**00 46 56.8**	**-0.7**
	0.2nm,0.5s,baz=85,slow=2.9,SNR=1.9						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**00 45 29.9**	**+1.4**
	0.8nm,0.5s,baz=83,slow=7.7,SNR=11						
ASAR				PcP	**PcP**	**00 46 57.8**	**-0.3**
	0.2nm,0.7s,baz=94,slow=3.5,SNR=4.4						
	0.8nm,0.5s						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**00 49 13.1**	**+0.5**
	0.8nm,0.7s,baz=251,slow=8.4,SNR=5.0						
	0.8nm,0.7s						
ILAR	**Eielson Array**	**85.91**	**13**	P	**P**	**00 49 43.0**	**-1.0**
	0.5nm,0.4s,baz=220,slow=5.0,SNR=16						
	0.5nm,0.4s						
TXAR	**Lajitas Array**	**86.01**	**58**	P	**P**	**00 49 47.0**	**+1.5**
	1.1nm,0.7s,baz=224,slow=6.1,SNR=14						
	1.1nm,0.7s						
PDAR	**Pinedale Array**	**87.37**	**43**	P	**P**	**00 49 51.8**	**0.0**
	0.6nm,0.6s,baz=221,slow=3.6,SNR=8.6						
	0.6nm,0.6s						
BVAR	**Borovoye Array**	**116.86**	**321**	PKP	**PKPdf**	**00 55 43.1**	**-1.3**
	0.5nm,0.4s,baz=162,slow=1.0,SNR=4.5						
BRTR	**Keskin Array B**	**144.80**	**315**	PKP	**PKPdf**	**00 56 37.0**	**-0.2**
	0.4nm,0.4s,baz=56,slow=4.0,SNR=4.1						
MMAI	**Mount Meron Ar**	**146.15**	**303**	PKPbc	**PKPbc**	**00 56 41.8**	**-0.1**
	0.5nm,0.5s,baz=62,slow=6.7,SNR=5.4						
GERES	**GERESS Array B**	**147.63**	**345**	PKPbc	**PKPbc**	**00 56 44.9**	**-0.4**
	1.0nm,0.6s,baz=32,slow=3.7,SNR=3.6						

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*IDC **05** 00:48:28.4±7.4, 17°.88S×178°.29W, h555km±91km, mb3.0/7, mbtmp3.9/7, Error ellipse: s-maj=51.8km s-min=24.0km az=173.0*
ISC 05 00:48:30.1±0.9**, 18°.0S**±0°.2×**178°.4W**±0°.2**, h579**km**, n10, σ0s.93**/10**, mb3.4**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
URZ	**Urewera**	**20.61**	**190**	P	**P**	**00 52 29.3**	**-0.8**
	2.5nm,0.3s,baz=56,slow=11,SNR=2.6						
	2.5nm,0.3s						
WRA	**Warramunga Arr**	**44.67**	**260**	P	**P**	**00 55 52.9**	**+0.3**
	0.3nm,0.3s,baz=95,slow=7.6,SNR=7.3						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**44.82**	**254**	P	**P**	**00 55 54.8**	**+1.0**
	1.0nm,0.5s,baz=87,slow=8.5,SNR=14						
	1.0nm,0.5s						
NVAR	**Mina Array Bea**	**79.42**	**44**	P	**P**	**00 59 37.6**	**+0.2**
	0.7nm,0.6s,baz=257,slow=5.2,SNR=2.9						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**01 00 07.7**	**-1.3**
	0.3nm,0.4s,baz=224,slow=5.0,SNR=14						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**85.98**	**58**	P	**P**	**01 00 11.7**	**+1.4**
	1.2nm,0.8s,baz=221,slow=5.4,SNR=13						
	1.2nm,0.8s						
PDAR	**Pinedale Array**	**87.35**	**43**	P	**P**	**01 00 16.6**	**0.0**
	0.5nm,0.6s,baz=208,slow=4.6,SNR=5.9						
	0.5nm,0.6s						
BRTR	**Keskin Array B**	**144.85**	**315**	PKP	**PKPdf**	**01 07 02.2**	**0.0**
	0.4nm,0.4s,baz=37,slow=2.6,SNR=2.5						
MMAI	**Mount Meron Ar**	**146.21**	**303**	PKPbc	**PKPbc**	**01 07 06.7**	**-0.2**
	0.5nm,0.4s,baz=41,slow=4.6,SNR=4.8						
GERES	**GERESS Array B**	**147.67**	**345**	PKPbc	**PKPbc**	**01 07 09.7**	**-0.6**
	0.7nm,0.6s,baz=33,slow=3.2,SNR=2.8						

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*BJI **05** 01:00:44.2, 43°.13N×146°.58E, h55km, mB5.0/22, mb4.7/63, Ms4.1/11, Ms7 4.0/12*
*MOS **05** 01:00:46.7±0.9, 43°.20N×146°.11E, h54km, mb5.0/32, Error ellipse: s-maj=8.0km s-min=4.7km az=111.8*
*SKHL **05** 01:00:47.6±0.3, 43°.20N×146°.20E, h63km±2km, mb5.6/5, mbv5.2/3*
*NIED **05** 01:00:47.8, 43°.23N×146°.10E, h45km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.47; $M_{\theta\theta}$-1.51; $M_{\phi\phi}$-2.96; $M_{r\theta}$2.77; $M_{\theta\phi}$-2.43; $M_{\phi r}$3.71; Fault plane solution: $M_0$6.54000×10^{15} NP1: ϕ_s217.00000°, δ22.00000°, λ90.00000°. NP2:ϕ_s37.00000°, δ68.00000°, λ90.00000°.*
*JMA **05** 01:00:47.8±0.1, 43°.2N±0°.5×146°.1E±0°.8, h45km, MD4.4/40, MV4.6/40, OFF NEMURO PENINSULA*
JMA Felt II J1 at OFF NEMURO PENINSULA .
*NEIC **05** 01:00:50.0±1.2, 43°.32N±0°.08×146°.1E±0°.1, h61km±5km, mb4.7/58, Error ellipse: s-maj=12.1km s-min=11.3km az=142.0*
*IDC **05** 01:00:50.9±1.8, 43°.25N×146°.17E, h74km±15km, mb4.0/32, mbtmp4.3/40, MS3.6/33, Error ellipse: s-maj=13.2km s-min=11.2km az=147.0*
ISC 05 01:00:48.2±0.6**, 43°.20N**±0°.05×**146°.17E**±0°.04**, h51**km±4km**, h51**km**:pP-P, n468, σ1s.21**/492**, mb4.6**/110**, MS3.7**/32**, 18C-14D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
NEM2	**Nemuro 2**	**0.35**	**298**	P	**Pn**	**01 00 56.4**	**-1.5**
NEM2				A	A	01 00 56.4	
	comp=N,35nm,1.0s,comp=E,46nm,1.2s						
NEM2				*e*S	**Sn**	**01 01 02.3**	**-2.5**
NMR	**Nemuro--Hokkai**	**0.37**	**298**	⇓*i*PN	**Pn**	**01 00 56.4**	**-1.6**
NMR				*e*S	**Sn**	**01 01 02.4**	**-2.6**
NMR	**Nemuro--Hokkai**	**0.37**	**298**	*i* P	**Pn**	**01 00 56.4**	**-1.6**
GLVR	**Golovnino**	**0.72**	**319**	⇓*i*PN	**Pn**	**01 01 00.8**	**-1.4**
GLVR				*e*S	**Sn**	**01 01 10.5**	**-1.8**
GLVR				pmax	pmax		
	comp=N,874nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,9μm,0.2s						
GLVR				smax	smax		
	comp=N,25μm,0.4s						
GLVR				smax	smax		
	comp=E,32μm,0.4s						
GLVR	**Golovnino**	**0.72**	**319**	*i* P	**Pn**	**01 01 00.8**	**-1.4**
GLVR				AMB	AMB	01 01 01.1	
	comp=E,9μm,0.2s						
GLVR				*e*S	**Sn**	**01 01 10.5**	**-1.8**
GLVR				A	A	01 01 11.0	
	comp=E,25μm,0.4s						

GLVR A A 01 01 11.0
comp=E,32μm,0.4s
JKHN Kushirohamanak 0.75 261 P **Pn** **01 01 01.7 -0.9**
JKHN A A 01 01 01.7
comp=N,39nm,1.8s,comp=E,27nm,0.9s
JKHN eS **Sn** **01 01 11.7 -1.3**
YUK Yuzh-Kuril'sk 0.87 345 *d* iPN **Pn** **01 01 02.2 -1.9**
YUK eS **Sn** **01 01 12.9 -2.8**
YUK pmax pmax
comp=E,1μm,0.2s
YUK pmax pmax
comp=Z,4μm,0.2s
YUK smax smax
comp=E,21μm,0.5s
YUK smax smax
comp=N,13μm,0.3s
YUK Yuzh-Kuril'sk 0.87 345 *i* P **Pn** **01 01 02.2 -1.9**
YUK AMB AMB 01 01 03.0
comp=N,4μm,0.2s
YUK eS **Sn** **01 01 13.0 -2.8**
YUK A A 01 01 14.2
comp=N,13μm,0.4s
YUK A A 01 01 14.2
comp=N,21μm,0.4s
AKK Akkeshi 0.99 260 *e*P **Pn** **01 01 04.5 -1.3**
JNSB Nemuroshibetsu 1.03 305 *i* P **Pn** **01 01 05.0 -1.3**
JNSB A A 01 01 05.0
comp=N,14nm,2.4s,comp=E,18nm,2.6s
JNSB eS **Sn** **01 01 17.5 -2.1**
JRA Rausu 1.06 314 P **Pn** **01 01 05.8 -1.0**
JRA A A 01 01 05.8
comp=N,10.0nm,2.3s,comp=E,9.0nm,2.8s
JRA eS **Sn** **01 01 18.9 -1.6**
JAK Akkeshi 1.10 260 P **Pn** **01 01 06.0 -1.2**
JAK A A 01 01 06.0
comp=N,13nm,3.9s,comp=E,14nm,0.8s
JAK eS **Sn** **01 01 19.8 -1.6**
JNK Nakash 1.13 291 P **Pn** **01 01 06.3 -1.4**
JNK eS **Sn** **01 01 20.0 -2.0**
RUSJ Misakicho 1.13 324⇓ *i* PN **Pn** **01 01 06.7 -0.9**
RUSJ eS **Sn** **01 01 21.6 -0.4**
JOB Onbets 1.74 261 P **Pn** **01 01 15.1 -0.8**
JAR Ashorobuto 1.76 274 *i* P **Pn** **01 01 15.6 -0.6**
JAR A A 01 01 15.6
comp=N,8.0nm,0.3s,comp=E,8.0nm,0.4s
JAR eS **Sn** **01 01 36.4 -1.0**
JTKR Abashiri--Toko 1.82 296 *i* P **Pn** **01 01 17.0 0.0**
JCH Churui 2.14 255 A A 01 01 21.5
comp=N,9.0nm,1.2s,comp=E,4.0nm,2.7s
KUR Kuril'sk 2.37 30 *e*PN **Pn** **01 01 26.4 +1.8**
KUR eS **Sn** **01 01 52.5 +0.1**
KUR pmax pmax
comp=Z,147nm,0.4s
KUR smax smax
comp=N,772nm,0.5s
KUR smax smax
comp=E,242nm,0.3s
KUR Kuril'sk 2.37 30 *e*P **Pn** **01 01 24.2 -0.4**
KUR AMB AMB 01 01 26.1
comp=E,730nm,2.0s
KUR AMB AMB 01 01 29.9
comp=E,150nm,0.4s
KUR eS **Sn** **01 01 51.9 -0.6**
KUR A A 01 02 00.1
comp=E,1μm,0.4s
KUR A A 01 02 00.1
comp=E,830nm,0.4s
JNBK Urakawa-nobuka 2.68 251 A A 01 01 29.2
comp=N,7.0nm,0.5s,comp=E,13nm,1.4s
JKA Kamikawa-asahi 2.75 291 **Pn** **01 01 30.7 +0.9**
JKA Sn **Sn** **01 02 04.2 +2.4**
JKA Kamikawa-asahi 2.75 291 *e*P **Pn** **01 01 30.7 +0.9**
ASAJ Asahikawa 2.75 291 P **Pn** **01 01 31.3 +1.5**
comp=E,329nm,0.5s,baz=110,slow=10,SNR=82
ASAJ S **Sn** **01 02 06.8 +5.0**
comp=E,328nm,0.7s,baz=292,slow=30,SNR=3.8
ASAJ LR LR 01 02 50.3
comp=E,2μm,18.8s,baz=102,slow=44
JSHD Hidakashinhida 2.84 255 A A 01 01 31.4
comp=N,6.0nm,0.9s,comp=E,7.0nm,5.2s
JIAM Iburiatsuma 3.17 261 A A 01 01 36.1
comp=N,10.0nm,0.8s,comp=E,10.0nm,0.9s
YSS Yuzhno-Sakhali 4.47 328 **Pn** **01 01 52.8 -0.5**
YSS Yuzhno-Sakhali 4.47 328⇑ *e*PN **Pn** **01 01 53.5 +0.2**
YSS eS **Sn** **01 02 42.5 -1.4**
YSS pmax pmax
comp=Z,100nm,2.3s
YSS pmax pmax
comp=N,200nm,3.9s
YSS pmax pmax
comp=E,300nm,3.7s
YSS pmax pmax
comp=Z,70nm,0.7s
YSS smax smax
comp=N,90nm,0.8s
YSS smax smax
comp=E,80nm,0.8s
YSS smax smax
comp=N,300nm,3.2s
YSS smax smax
comp=E,200nm,3.8s
YSS MLR MLR
comp=Z,300nm,13.0s
YSS MLR MLR
comp=N,300nm,11.0s
YSS Yuzhno-Sakhali 4.47 328 *e*P **Pn** **01 01 53.5 +0.2**
YSS AMB AMB 01 01 55.9
comp=N,100nm,2.3s
YSS eS **Sn** **01 02 42.5 -1.4**
UGL Uglegorsk 6.54 336 *e*PN **Pn** **01 02 23.9 +2.3**
UGL pmax pmax
comp=Z,100nm,0.9s
UGL Uglegorsk 6.54 336 *e*P **Pn** **01 02 23.9 +2.3**
TYV Tymovskoe 8.03 344 *e*PN **Pn** **01 02 43.4 +1.2**
TYV eS **Sn** **01 04 14.9 +3.4**
TYV pmax pmax
comp=Z,17nm,1.1s
TYV pmax pmax
comp=Z,400nm,3.7s
TYV smax smax
comp=N,10.0nm,1.5s
TYV smax smax
comp=E,4.0nm,1.5s
TYV smax smax
comp=N,400nm,5.4s
TYV Tymovskoe 8.03 344 *e*P **Pn** **01 02 43.4 +1.2**
TYV AMB AMB 01 02 48.5
comp=N,400nm,3.7s
TYV eS **Sn** **01 04 10.0 -1.5**
MAJO Matsushiro 9.03 225 Pn **Pn** **01 02 57.6 +1.7**
MAJO Matsushiro 9.03 225 PN **Pn** **01 02 57.6 +1.7**
MJAR Matsushiro Arr 9.03 225 P **Pn** **01 02 57.1 +1.1**
comp=N,4.1nm,0.6s,baz=27,slow=12,SNR=8.0
MJAR LR LR 01 06 43.4
comp=N,111nm,19.9s,baz=120,slow=39
MJAR Matsushiro Arr 9.03 225 **Pn** **01 02 56.7 +0.7**
USRK Ussuriysk Ar. 10.32 280 P **Pn** **01 03 15.1 +1.6**
comp=N,5.9nm,0.7s,baz=82,slow=12,SNR=3.2
OKH Okha 10.58 349 *e*P **Pn** **01 03 15.7 -1.2**
OKH AMB AMB 01 03 18.3
comp=N,130nm,0.3s
NKL Nikolayevsk 10.61 342 *e*P **Pn** **01 03 17.1 -0.2**
NKL AMB AMB 01 03 24.5
comp=N,30nm,0.5s
PAU Pauzhetka 10.97 37 *e*P **Pn** **01 03 20.4 -1.9**
PSTR Posyet 11.29 272⇑ *e*PN **Pn** **01 03 26.3 -0.4**
KLR Kul'dur 11.66 306 LR LR 01 08 22.0
comp=N,60nm,19.9s,baz=126,slow=39
KLR Kul'dur 11.66 306⇑ *e*PN **Pn** **01 03 32.2 +0.4**
KLR Kul'dur 11.66 306 *e*P **Pn** **01 03 32.2 +0.4**
MDJ Mudanjiang 12.04 282 **Pn** **01 03 37.6 +0.6**
PEA0B Petropavlovsk- 12.54 34 Pn **Pn** **01 03 44.4 +0.7**
PEA0B Petropavlovsk- 12.54 34 PN **Pn** **01 03 44.4 +0.7**
PETK Petropavlovsk- 12.54 34 P **Pn** **01 03 45.5 +1.8**
comp=N,4.0nm,0.8s,baz=220,slow=8.8,SNR=2.0
PETK LR LR 01 07 48.6
comp=N,172nm,21.9s,baz=203,slow=33
PETK Petropavlovsk- 12.54 34 Pn **Pn** **01 03 44.2 +0.6**
BNX BinXian 13.64 287⇑ P **Pn** **01 03 58.5 -0.3**
BNX pmax pmax
comp=N,15nm,1.3s
HEH HeiHe 14.65 305 *e*P **P** **01 04 16.9 -0.5**
HEH pmax pmax
comp=N,10.0nm,1.2s
KSRS Korea Array 15.04 254 P **P** **01 04 20.1 -1.8**
comp=N,1.7nm,0.8s,baz=63,slow=13,SNR=5.0
KSRS LR LR 01 10 23.3
comp=N,68nm,19.0s,baz=60,slow=38
CN2 Changchun 15.05 279 P **Pn** **01 04 18.6 +1.1**
CN2 LR LR
comp=N,180nm,12.0s
CN2 LR LR
comp=N,210nm,12.0s
CN2 LR LR
comp=N,280nm,16.0s
JNU Nakatsue 15.66 235 P **Pn** **01 04 26.8 +1.3**
comp=N,6.2nm,0.8s,baz=56,slow=11,SNR=2.9
JNU LR LR 01 10 33.9
comp=N,201nm,18.7s,baz=25,slow=37
ZEA Zeya 16.34 317 *e*P **P** **01 04 35.1 -1.0**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
MA2 Magadan 16.64 8 P **P** **01 04 39.9 +0.5**
comp=Z,4.9nm,0.6s,baz=180,slow=14,SNR=5.5
MA2 LR LR 01 10 11.6
comp=Z,96nm,20.8s,baz=167,slow=34
MA2 Magadan 16.64 8 P **P** **01 04 38.6 -0.8**
MA2 Magadan 16.64 8 P **P** **01 04 38.6 -0.8**
MA2 pmax pmax
comp=Z,5.0nm,0.6s
HIA Hailar 19.21 298 P **P** **01 05 08.0 +0.2**
HIA Hailar 19.21 298 P **P** **01 05 08.0 +0.2**
HIA pmax pmax
comp=Z,5.0nm,1.0s
HILR Hailar Array B 19.25 298 P **P** **01 05 08.6 +0.3**
comp=Z,2.4nm,0.4s,baz=108,slow=9.5,SNR=7.4
SEY Seymchan 20.10 8 P **P**
comp=Z,3.4nm,0.6s,baz=196,slow=10,SNR=10.0
comp=Z,3.4nm,0.6s
SEY Seymchan 20.10 8⇓ *e*P **P** **01 05 18.1 +0.8**
SEY pmax pmax
comp=Z,6.0nm,0.9s
SHEM Shemya Is, Ala 20.87 53 LR LR 01 13 50.5
comp=Z,45nm,19.7s,baz=270,slow=37
YAK Yakutsk 21.23 338 P **P** **01 05 28.7 -0.8**
comp=Z,17nm,0.5s,baz=146,slow=16,SNR=2.1
YAK LR LR 01 13 36.7
comp=Z,76nm,21.9s,baz=105,slow=36
comp=Z,17nm,0.5s
YAK Yakutsk 21.23 338 P **P** **01 05 27.7 -1.9**
YAK IAmb IAmb 01 05 49.8
comp=Z,22nm,0.9s
YAK Yakutsk 21.23 338 *e*P **P** **01 05 29.0 -0.6**
YAK *e* 01 05 47.8
YAK eS **S** **01 09 24.5 +2.0**
YAK *e* 01 09 32.3
YAK eSS **SnSn** **01 09 53.4 +6.0**
YAK *e* 01 16 50.9
YAK pmax pmax
comp=Z,19nm,1.1s
YAK pmax pmax
comp=N,18nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.6s
YAK pmax pmax
comp=Z,133nm,3.5s
YAK smax smax
comp=N,100nm,3.5s
YAK smax smax
comp=E,66nm,4.0s
XLT XiLinHaoTe 21.77 282 *e*P **P** **01 05 35.7 +0.1**
XLT pP pP 01 05 49.5 +2.2
XLT pmax pmax
comp=E,14nm,0.8s
XLT LR LR
comp=E,160nm,13.8s
XLT LR LR
comp=E,230nm,20.6s
BJI2 Beijing 22.60 272 P **P** **01 05 42.9 -1.5**
BJI2 pP **pP** **01 05 56.3 +0.2**
BJI2 sP **sP** **01 06 04.2 +1.8**
BJI2 S **S** **01 09 40.2 -8.2**
BJI2 pmax pmax
comp=E,7.0nm,0.8s
BJI2 LR LR
comp=E,81nm,11.8s
BJI2 LR LR
comp=E,95nm,12.8s
BJT Baijiatuan 22.60 272 **P** **01 05 42.9 -1.5**
BJT Baijiatuan 22.60 272 P **P** **01 05 42.9 -1.5**
BJT pmax pmax
comp=Z,9.0nm,0.7s
TIA Tai'an 23.34 262 P **P** **01 05 51.3 -0.6**
TIA pP **pP** **01 06 06.3 +2.3**
TIA pmax pmax
comp=Z,26nm,0.9s
NJ2 Nanjing 24.22 252⇓ P **P** **01 06 03.0 +2.9**
NJ2 pmax pmax
comp=Z,19nm,0.8s
HNS HongShan 24.60 267⇑ P **P** **01 06 04.7 +1.2**
HNS pmax pmax
comp=Z,15nm,0.9s
HHC Hu-ho-hao-te 25.71 277⇓ *i* P **P** **01 06 15.4 +1.7**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,83nm,6.6s
BTO2 Baotou 26.96 277 *e*P **P** **01 06 25.6 +0.6**
BTO2 pP **pP** **01 06 39.8 +1.9**
BTO2 PP **PnPn** **01 07 16.2 +7.0**
BTO2 S **S** **01 10 59.7 +0.9**
BTO2 pmax pmax
comp=Z,14nm,0.8s
BTO2 pmax pmax
comp=Z,210nm,4.9s
BTO2 LR LR
comp=Z,360nm,6.2s
BTO2 LR LR
comp=Z,300nm,6.8s
BTO2 LR LR
comp=Z,270nm,8.3s
LYN LuoYang 27.47 263 *e*P **P** **01 06 30.9 +1.4**
LYN pmax pmax
comp=Z,21nm,0.5s
LYN pmax pmax
comp=Z,220nm,4.5s
ULN Ulaanbaatar 27.59 293 **P** **01 06 29.6 -1.0**
ULN IAmb IAmb 01 06 32.2
comp=Z,12nm,1.2s
ULN Ulaanbaatar 27.59 293 *de*P **P** **01 06 30.8 +0.2**
ULN pmax pmax
comp=Z,11nm,1.3s
ULN Ulaanbaatar 27.59 293 *e*P **P** **01 06 29.1 -1.5**
SONM Songino Array 28.03 293 P **P** **01 06 34.9 +0.3**
comp=Z,7.4nm,0.9s,baz=88,slow=8.3,SNR=30
SONM LR LR 01 18 42.0
comp=Z,230nm,21.1s,baz=82,slow=38
comp=Z,7.4nm,0.9s
SONM Songino Array 28.03 293 **P** **01 06 34.1 -0.4**
SONM Songino Array 28.03 293 P **P** **01 06 34.1 -0.4**
SONM pmax pmax
comp=Z,8.0nm,0.9s
WHN Wuhan 28.24 254 P **P** **01 06 37.1 +0.8**
WHN pmax pmax
comp=Z,28nm,0.8s
H11N2 WAKE ISLAND Hy 29.17 137 T T 01 37 21.1
baz=328,slow=75,SNR=1349
H11N1 WAKE ISLAND Hy 29.18 137 T T 01 37 35.6
baz=328,slow=75,SNR=1123
H11N3 WAKE ISLAND Hy 29.19 137 T T 01 37 22.5
baz=328,slow=75,SNR=1167
TIXI Tiksi 29.76 349 LR LR 01 18 38.1
comp=Z,94nm,21.2s,baz=189,slow=36
H11S1 WAKE ISLAND Hy 30.11 138 T T 01 38 31.1
baz=330,slow=76,SNR=3628
H11S3 WAKE ISLAND Hy 30.11 138 T T 01 38 37.8
baz=330,slow=76,SNR=3585
H11S2 WAKE ISLAND Hy 30.13 138 T T 01 38 40.7
baz=330,slow=76,SNR=2158
XAN Xi'an 30.30 265⇑ P **P** **01 06 54.3 -0.4**
XAN sP sP 01 07 16.3 +2.7
XAN pmax pmax
comp=Z,8.0nm,0.9s
SPIA Saint Paul Isl 30.62 47 P **P** **01 06 57.5 +0.3**
baz=262
P08K Saint George I 30.93 49 P **P** **01 07 00.7 +0.8**
baz=264
NIKH Nikolski High 31.12 56 P **P** **01 07 02.3 +0.7**
baz=270
ENH Enshi 31.85 258 P **P** **01 07 07.6 -0.7**
ENH IAmb IAmb 01 07 18.4
comp=Z,8.2nm,0.9s
UNV Unalaska Valle 32.52 54 P **P** **01 07 15.1 +1.1**
baz=271
LZH Lanzhou 33.08 272 *e*P **P** **01 07 20.1 +0.9**
LZH pP pP 01 07 35.2 +2.9
LZH sP sP 01 07 44.2 +6.0
LZH pmax pmax
comp=Z,7.0nm,1.3s
M11K Mekoryuk 33.20 42 P **P** **01 07 20.2 +0.5**
baz=261
LZDM Lanzhou Array 33.24 272 P **P** **01 07 21.3 +0.5**
comp=Z,0.5nm,0.3s,baz=103,slow=4.6,SNR=7.3
comp=Z,0.5nm,0.3s
K13K Kusilvak Mount 34.20 40 P **P** **01 07 28.8 +0.4**
K13K IAmb IAmb 01 07 30.9
comp=Z,13nm,1.2s
K13K Kusilvak Mount 34.20 40 P **P** **01 07 29.0 +0.6**
baz=260
F14K Arctic Creek 34.31 33 P **P** **01 07 30.7 +1.4**
baz=253
ANM Nome 34.45 35 P **P** **01 07 31.1 +0.5**
ANM Nome 34.45 35 P **P** **01 07 31.1 +0.5**
ANM pmax pmax
comp=Z,4.0nm,1.2s
ANM Nome 34.45 35 P **P** **01 07 31.7 +1.1**
baz=256
M13K Dall Lake 34.60 42 P **P** **01 07 32.7 +0.8**
baz=264
GTA2 Gaotai 34.70 280 *e*P **P** **01 07 33.5 +0.3**
GTA2 pmax pmax
comp=Z,4.0nm,0.8s
J14K Nanvaranak Lak 34.85 38 P **P** **01 07 34.4 +0.3**
J14K IAmb IAmb 01 07 35.6
comp=Z,7.0nm,0.9s
J14K Nanvaranak Lak 34.85 38 P **P** **01 07 34.3 +0.3**
baz=260
L14K Kuka Creek 35.04 41 P **P** **01 07 36.5 +0.8**
baz=263
F15K North Star Dit 35.04 33 P **P** **01 07 36.6 +1.0**
baz=255
G15K Niukluk 35.11 34 P **P** **01 07 37.2 +1.0**
baz=256
M14K Bethel 35.32 42 P **P** **01 07 38.5 +0.4**
M14K IAmb IAmb 01 07 57.9
comp=Z,17nm,1.4s
M14K Bethel 35.32 42 P **P** **01 07 38.3 +0.2**
baz=264
N14K Kuskokwak Cree 35.38 43 P **P** **01 07 39.3 +0.7**
baz=266
O14K Tigyukauivet M 35.56 45 P **P** **01 07 40.6 +0.5**
baz=267
C16K Lisburne Hills 35.56 29 P **P** **01 07 39.7 -0.3**
baz=251
CD2 Chengdu 35.64 264 P **P** **01 07 41.2 -0.1**
CD2 pmax pmax
comp=Z,30nm,0.9s
L15K Ungalak Mounta 35.65 40 P **P** **01 07 41.9 +1.0**
baz=264
K15K Wolf Creek Mou 35.71 39 P **P** **01 07 42.0 +0.6**
baz=263
H16K Elim 35.78 35 P **P** **01 07 42.7 +0.7**
baz=259,SNR=7.6
G16K Koyuk River 35.89 34 P **P** **01 07 43.2 +0.3**
G16K IAmb IAmb 01 07 45.1
comp=Z,4.3nm,1.0s
G16K Koyuk River 35.89 34 P **P** **01 07 43.8 +0.9**
baz=258
M15K Kasigluk River 35.94 42 P **P** **01 07 44.4 +1.0**
baz=266
D17K Noatak River 36.19 30 P **P** **01 07 45.9 +0.4**
baz=254
N15K Kwethluk River 36.20 43 P **P** **01 07 46.8 +1.2**
baz=267
J16K Anvik River 36.26 38 P **P** **01 07 47.0 +0.9**
baz=262
O15K Ungalikthiuk R 36.29 45 P **P** **01 07 46.2 -0.3**
baz=269
I17K Unalakleet 36.31 37 P **P** **01 07 47.4 +0.9**
baz=261
C17K DeLong Mountai 36.39 29 P **P** **01 07 47.0 -0.2**
baz=253
E17K Hotham Inlet 36.49 31 P **P** **01 07 48.5 +0.4**
baz=256
CHNA Chernabura Isl 36.53 52 P **P** **01 07 49.6 +1.1**
baz=275
F17K Baldwin Pennin 36.57 32 P **P** **01 07 49.6 +0.9**
baz=257
L16K Owhat River 36.61 40 P **P** **01 07 49.8 +0.7**
baz=266
G17K Kiwalik Mounta 36.61 34 P **P** **01 07 49.9 +0.8**
baz=259
H17K Granite Mounta 36.82 35 P **P** **01 07 51.1 +0.2**
baz=261
N16K Nishlik Lake 36.87 43 P **P** **01 07 52.2 +0.8**
baz=268
J17K VABM Dome 36.96 38 P **P** **01 07 53.0 +0.9**
baz=264
C18K Utukok River 37.13 29 P **P** **01 07 54.1 +0.5**
baz=255
O16K Kokwok River B 37.19 44 P **P** **01 07 54.4 +0.4**
baz=270
L17K Donlin 37.20 40 P **P** **01 07 54.6 +0.5**
baz=266
F18K Selawik 37.23 32 P **P** **01 07 54.6 +0.3**
baz=259
K17K Iditarod 37.24 39 P **P** **01 07 55.6 +1.1**
baz=265
G18K Tagagawik 37.49 34 P **P** **01 07 57.3 +0.7**
baz=261
H18K Honhosa River 37.50 35 P **P** **01 07 57.2 +0.5**
baz=262
M17K Holitna River 37.56 41 P **P** **01 07 58.0 +0.7**
baz=268
N17K Nushagak Hills 37.66 43 P **P** **01 07 58.8 +0.8**
baz=269
O17K Koliganek Bris 37.70 44 P **P** **01 07 59.1 +0.8**
baz=270
C19K Lookout Ridge 37.82 28 P **P** **01 07 59.7 +0.4**
baz=256
Q16K King Salmon 37.94 46 P **P** **01 08 01.1 +0.7**
baz=272
L18K Granite Mounta 37.96 40 P **P** **01 08 01.6 +1.1**
baz=267
F19K Shaleruckik Mo 38.00 32 P **P** **01 08 00.4 -0.4**
baz=260
J18K Innoko River 38.02 38 P **P** **01 08 01.7 +0.5**
baz=266
G19K Purcell Mounta 38.17 33 P **P** **01 08 02.3 0.0**
baz=262
D19K Kuna River 38.20 30 P **P** **01 08 02.8 +0.3**
baz=258
E19K Redstone River 38.32 31 P **P** **01 08 04.0 +0.4**
baz=260
M18K Stony River 38.34 41 P **P** **01 08 04.7 +0.9**
baz=269
H19K Roundabout Mou 38.34 34 P **P** **01 08 04.6 +0.9**
baz=263
J19K Poorman 38.55 37 P **P** **01 08 06.2 +0.7**
baz=266,SNR=9.0
O18K Koktuh Hills 38.65 44 P **P** **01 08 06.8 +0.4**
baz=272
P18K Big Mountain, 38.65 44 P **P** **01 08 07.5 +1.0**
baz=272
D20K Etivluk River 38.78 29 P **P** **01 08 07.4 0.0**
baz=259
Q18K Katmai Hardscr 38.80 46 P **P** **01 08 08.1 +0.3**
baz=273
L19K White Mountain 38.81 40 P **P** **01 08 09.1 +1.3**
baz=269
F20K Avaraart Lake 38.83 32 P **P** **01 08 07.6 -0.2**
baz=262
E20K Nigu River 38.85 30 P **P** **01 08 07.8 -0.2**
baz=260
N19K Bonanza Creek 38.99 42 P **P** **01 08 09.6 +0.2**
baz=271
H20K Anotleneega Mo 38.99 35 P **P** **01 08 09.5 +0.3**
baz=265
I20K Naaghedeneel 39.10 36 P **P** **01 08 10.6 +0.5**
baz=266
K20K Telida 39.21 38 P **P** **01 08 11.2 +0.1**
baz=268
J20K Nowinta River 39.21 37 P **P** **01 08 12.2 +1.2**
baz=267,SNR=8.9
A21K Barrow 39.35 25 P **P** **01 08 11.3 -0.7**
baz=256,SNR=5.8
NRIK Noril'sk 39.39 331 LR LR 01 24 01.3
comp=Z,80nm,18.9s,baz=141,slow=35
PZH PanZhiHua 39.58 260 P **P** **01 08 15.3 +0.6**

GOMU GeErMu 39.61 278 P P 01 08 14.8 -0.3
GOMU pmax pmax
comp=Z,19nm,1.0s
M20K Styx River 39.62 40 P P 01 08 15.9 +1.3
baz=271
G21K Allakaket 39.65 33 P P 01 08 15.2 +0.5
baz=265
P19K Oil Pt 39.66 44 P P 01 08 15.4 +0.6
baz=274
KMI2 Kunming 39.68 257 P P 01 08 16.6 +0.9
KMI2 pP sP 01 08 33.2 -1.6
KMI2 pmax pmax
comp=Z,10.0nm,0.8s
E21K Killik River 39.69 30 P P 01 08 15.4 +0.3
baz=262
F21K Alatna River 39.72 32 P P 01 08 15.8 +0.5
baz=264
A22K Sinclair Lake 39.80 26 P P 01 08 16.3 +0.5
baz=258
OHAK Old Harbor 39.83 48 P P 01 08 15.6 -0.6
OHAK IAmb IAmb 01 08 28.5
comp=Z,28nm,1.5s
H21K Melozitna Rive 39.86 34 P P 01 08 17.6 +1.1
baz=267,SNR=7.7
CHUM Lake Minchumin 40.00 37 P P 01 08 18.7 +1.1
baz=269
PPLA Purkeypile 40.05 39 P P 01 08 19.1 +0.9
baz=271
DGZ Jazzator, Alta 40.08 300⇑ *eP* P 01 08 19.0 +0.4**
DGZ pmax pmax
comp=Z,5.0nm,1.5s
KDAK Kodiak Island 40.15 47 P P 01 08 18.2 -0.6
KDAK IAmb IAmb 01 08 19.4
comp=Z,17nm,0.9s
KDAK Kodiak Island 40.15 47 P P 01 08 18.2 -0.6
KDAK pmax pmax
comp=Z,17nm,1.0s
KDAK Kodiak Island 40.15 47 P P 01 08 18.9 +0.1
baz=276
Q20K Shuyak Island 40.16 45 P P 01 08 19.3 +0.3
baz=276
I21K Tanana 40.18 35 P P 01 08 19.5 +0.5
baz=268
D22K Ayikyak River 40.22 29 P P 01 08 19.5 +0.1
baz=263
G22K Bettles 40.47 33 P P 01 08 21.7 +0.3
baz=266
BPAW Bear Paw Mtn. 40.59 37 P P 01 08 22.8 +0.3
baz=270
KTH Kantishna Hill 40.62 38 P 01 08 23.1 +0.2
KTH IAmb IAmb 01 08 25.1
comp=Z,14nm,1.0s
ZALV Zalesovo Beam 40.76 307 P P 01 08 23.7 -0.3
comp=Z,0.9nm,0.5s,baz=97,slow=8.7,SNR=8.0
ZALV PcP PcP 01 10 24.7 +0.4
comp=Z,5.6nm,0.8s,baz=77,slow=3.2,SNR=18
ZALV LR LR 01 26 44.0
comp=Z,60nm,18.1s,baz=62,slow=38
comp=Z,0.9nm,0.5s
ZALV Zalesovo Beam 40.76 307 P P 01 08 23.5 -0.5
SUA Susitna One 40.78 41 P P 01 08 24.9 +0.7
baz=274
BRSE Bradley Lake S 40.91 44 P P 01 08 25.3 +0.2
baz=276
TRF Thorofare Moun 40.91 38 P P 01 08 25.0 -0.3
TRF Thorofare Moun 40.91 38 P P 01 08 26.0 +0.7
baz=272
D23K Nanushuk River 40.95 29 P P 01 08 25.2 -0.1
baz=265
COLD Coldfoot 41.00 32 P 01 08 25.6 -0.2
COLD IAmb IAmb 01 08 27.0
comp=Z,7.3nm,1.0s
COLD Coldfoot 41.00 32 P P 01 08 26.4 +0.6
baz=267,SNR=6.5
G23K Bananza Creek 41.05 33 P P 01 08 26.5 +0.3
baz=268,SNR=9.4
E23K Chandalar 41.27 31 P P 01 08 28.7 +0.6
baz=267
RC01 Rabbit Creek A 41.29 41 P P 01 08 27.9 -0.3
baz=275
I23K Minto, Yukon-K 41.29 35 P P 01 08 29.1 +0.9
baz=270
TOLK Toolik Lake Re 41.32 30 P P 01 08 28.4 -0.1
baz=266
NEA2 Nenana 41.42 36 P P 01 08 29.5 +0.2
baz=271
MCK McKinley 41.51 37 P P 01 08 30.1 0.0
baz=272
SEW Seward 41.52 43 P P 01 08 30.3 +0.2
baz=276
WMQ Urumqi 41.64 292 *eP* P 01 08 33.3 +1.9**
WMQ pmax pmax
comp=Z,13nm,1.3s
E24K Your Creek 41.69 31 P P 01 08 32.1 +0.6
baz=268
WAT1 Susitna Watana 41.72 39 P P 01 08 31.8 -0.1
baz=274
KNK Knik Glacier 41.88 41 P P 01 08 34.0 +0.9
baz=276
SML Sawmill 41.90 40 P P 01 08 34.0 +0.7
baz=275
H24K Noodor Dome 41.90 34 P P 01 08 34.3 +1.1
baz=271,SNR=6.0
COLA College 41.94 36 *d iP* P 01 08 34.3 +0.9**
COLA pmax pmax
comp=Z,11nm,1.1s
G24K Hadweenzic Riv 42.06 33 P P 01 08 35.7 +1.2
baz=270
POKR Poker Plat Res 42.11 35 P P 01 08 35.4 +0.5
baz=272
WAT6 Susitna Watana 42.12 39 P P 01 08 35.5 +0.3
baz=275
DHY Denali Highway 42.24 38 P P 01 08 36.5 +0.3
baz=274
HDA Harding Lake 42.35 36 P P 01 08 36.9 0.0
baz=273
ILAR Eielson Array 42.35 36 P P 01 08 36.8 -0.1
comp=Z,4.2nm,0.9s,baz=270,slow=5.5,SNR=25
comp=Z,4.2nm,0.9s
ILAR Eielson Array 42.35 36 P P 01 08 36.3 -0.6
D25K Kavik River 42.51 29 P P 01 08 37.8 -0.4
baz=268
F25K Christian Rive 42.77 32 P P 01 08 41.3 +1.0
baz=271
E25K Arctic Village 42.79 31 P P 01 08 41.3 +0.9
baz=271
TNCH TengChong 42.79 261⇑ *iP* P 01 08 41.9 +0.8**
TNCH pP sP 01 08 57.9 -2.5
TNCH PP PP 01 10 21.0 0.0
TNCH S S 01 14 56.3 -5.5
TNCH pmax pmax
comp=Z,19nm,0.7s
TNCH pmax pmax
comp=Z,98nm,4.5s
TNCH LR LR
comp=Z,140nm,5.4s
TNCH LR LR
comp=Z,110nm,5.6s
TNCH LR LR
comp=Z,83nm,5.8s
M24K Tolsona, Glenn 42.89 40 P P 01 08 42.8 +1.5
baz=277
PRP Porcupine Dome 42.89 35 P P 01 08 41.4 0.0
PRP IAmb IAmb 01 08 42.9
comp=Z,8.2nm,0.9s
PRP Porcupine Dome 42.89 35 P P 01 08 42.4 +1.0
baz=274,SNR=6.3
K24K Donnelly Dome 42.90 37 P P 01 08 41.4 0.0
baz=275
Q23K Middleton Isla 43.16 44 P P 01 08 44.6 +1.1
baz=279
BMAR Burnt Mountain 43.18 32 P 01 08 43.6 0.0
RIDG Independent Ri 43.32 37 P P 01 08 45.2 +0.4
baz=276
HARP HAARP 43.33 39 P P 01 08 45.6 +0.8
baz=277
F26K Sheenjek River 43.34 31 P P 01 08 46.0 +1.1
baz=272
C27K Jago River 43.45 29 P P 01 08 46.3 +0.6
baz=271
G26K Porcupine Rive 43.51 33 P P 01 08 47.2 +1.0
baz=274
SCRK Sand Creek 43.67 37 P 01 08 47.0 -0.7
SCRK Sand Creek 43.67 37 P P 01 08 47.5 -0.2
baz=276
J26L Joseph Creek 43.80 36 P P 01 08 48.4 -0.3
baz=276
L26K Log Cabin Wild 44.07 38 P P 01 08 51.6 +0.8
baz=278
MK31 Makanchi Array 44.21 298 *c iP* P 01 08 51.6 -0.5**
MKAR Makanchi Array 44.21 298 P P 01 08 51.8 -0.4
comp=Z,2.6nm,0.7s,baz=83,slow=9.2,SNR=44
MKAR PcP PcP 01 10 36.4 +0.4
comp=Z,1.8nm,0.8s,baz=60,slow=2.9,SNR=5.8
MKAR LR LR 01 28 24.5
comp=Z,97nm,19.9s,baz=110,slow=37
comp=Z,2.6nm,0.7s
E27K Coleen River 44.27 31 P P 01 08 53.1 +0.8
baz=274
M26K Nabesna, AK 44.32 39 P P 01 08 53.9 +1.1
baz=279
G27K Doyon Strip 44.36 33 P P 01 08 54.1 +1.0
baz=276
MAKZ Makanchi 44.41 298 P 01 08 53.0 -0.7
MAKZ Makanchi 44.41 298 P P 01 08 53.0 -0.7
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
D27M Malcolm River 44.43 29 P P 01 08 54.1 +0.5
baz=274
H27K Steamboat Moun 44.47 33 P P 01 08 55.4 +1.5
baz=276,SNR=12
MCARA McCarthy VSAT 44.47 40 P P 01 08 55.5 +1.5
baz=280
I27K Kandik River 44.50 34 P P 01 08 55.6 +1.3
baz=277
CRQE Cirque 44.55 41 P P 01 08 56.2 +1.5
baz=280
L27K Beaver Creek, 44.75 38 P P 01 08 57.5 +1.2
baz=279,SNR=6.1
BCAR Beaver Creek A 44.77 38 P P 01 08 57.1 +0.7
F28M Old Crow 44.97 31 P P 01 08 59.2 +1.3
baz=276,SNR=11
E28M Babbage River 45.00 30 P P 01 08 58.7 +0.6
baz=276
I28M Miner Creek 45.22 34 P P 01 09 00.9 +0.9
baz=278
D28M Stokes Point 45.22 29 P P 01 09 00.5 +0.8
baz=276
KURK Kurchatov 45.25 304 P 01 08 59.5 -0.8
KURK IAmb IAmb 01 09 03.2
comp=Z,4.3nm,0.6s
KURK Kurchatov 45.25 304⇑ *eP* P 01 09 00.3 0.0**
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 45.25 304 *eP* P 01 09 00.3 0.0**
BVCY Beaver Creek 45.30 39 P P 01 09 01.8 +1.2
baz=281
KURBB Kurchatov Arra 45.33 304 P P 01 09 01.0 +0.1
comp=Z,3.3nm,0.6s,baz=72,slow=8.8,SNR=28
KURBB PcP PcP 01 10 39.6 -0.2
comp=Z,2.7nm,0.8s,baz=76,slow=3.7,SNR=10
comp=Z,3.3nm,0.6s
CTG Chitna Glacier 45.35 41 P P 01 09 02.5 +1.3
baz=282
E29M Blow River 45.62 30 P P 01 09 04.3 +1.3
baz=277
G29M Pine Creek 45.77 32 P P 01 09 05.5 +1.2
baz=279
I29M Ogilvie Camp, 45.90 34 P P 01 09 05.9 +0.6
baz=280,SNR=12
O28M Mount Upton 45.94 41 P P 01 09 06.9 +0.9
baz=283
EPYK Eagle Plains 46.37 33 P P 01 09 09.3 +0.3
EPYK IAmb IAmb 01 09 10.8
comp=Z,18nm,0.9s
EPYK Eagle Plains 46.37 33 P P 01 09 10.2 +1.2
baz=280,SNR=8.6
M29M Somme Creek 46.39 38 P P 01 09 10.3 +1.0
baz=282
L29M L29M 46.40 37 P P 01 09 10.5 +1.2
baz=282
K29M Barlow Dome 46.52 36 P P 01 09 11.2 +0.9
baz=282
F30M Barrier River 46.52 31 P P 01 09 11.4 +1.3
baz=280
CMAR Chiang Mai Arr 46.69 253 P P 01 09 12.8 +0.8
comp=Z,1.4nm,0.3s,baz=44,slow=7.9,SNR=1.3
CMAR LR LR 01 28 47.4
comp=Z,38nm,20.8s,baz=65,slow=36
comp=Z,1.4nm,0.3s
I30M Mount Dempster 46.73 34 P P 01 09 12.7 +0.8
baz=282,SNR=12
J30M Hart River 46.88 35 P P 01 09 13.7 +0.6
baz=282
M30M Minto, Yukon 47.12 38 P P 01 09 15.6 +0.8
baz=284
HYT Haines Junctio 47.21 40 P 01 09 16.4 +0.7
HYT Haines Junctio 47.21 40 P P 01 09 16.9 +1.1
baz=285
G31M Satah River 47.23 32 P P 01 09 16.1 +0.5
baz=282,SNR=8.5
INK Inuvik 47.24 30 P P 01 09 16.2 +0.6
baz=281,SNR=8.2
F31M Tsiigehtchic 47.33 31 P P 01 09 17.1 +0.8
baz=282
H31M Peel River 47.43 33 P P 01 09 18.4 +1.2
baz=283
P30M Million Dollar 47.65 41 P P 01 09 20.3 +1.2
baz=286
N31M Braeburn, Yuko 47.85 39 P P 01 09 21.5 +0.9
baz=285
O30N Mendenhall 47.90 40 P P 01 09 21.8 +0.9
baz=286
M31M Drury Creek, Y 48.29 38 P P 01 09 24.6 +0.6
baz=286
WUS Wushi 48.42 292 P 01 09 25.2 -0.2
WHY Whitehorse 48.50 40 P P 01 09 26.3 +0.7
baz=287
FARO Faro, Yukon 48.76 38 P P 01 09 28.1 +0.6
baz=287
A36M Sachs Harbour 49.17 24 P P 01 09 30.7 +0.3
baz=285
N32M Quiet Lake 49.19 39 P P 01 09 31.6 +0.7
baz=288
BVAR Borovoye Array 49.30 309 P P 01 09 31.8 0.0
comp=Z,1.1nm,0.4s,baz=96,slow=8.0,SNR=8.0
BVAR LR LR 01 30 42.5
comp=Z,84nm,20.2s,baz=58,slow=36
comp=Z,1.1nm,0.4s
BORK Borovoye 49.33 309 P P 01 09 32.0 0.0
BORK Borovoye 49.33 309⇑ *eP* P 01 09 32.9 +0.9**
BORK pmax pmax
comp=Z,2.0nm,0.8s
P33M Teslin, Yukon 49.61 40 P P 01 09 34.5 +0.3
baz=289
BOOM Boomskoye usch 50.06 295 P 01 09 38.1 +0.1
BOOM Boomskoye usch 50.06 295 P P 01 09 38.1 +0.1
BOOM pmax pmax
comp=Z,19nm,0.9s
AAK Ala-Archa 50.95 296 P P 01 09 44.2 -0.4
comp=Z,2.1nm,0.6s,baz=108,slow=5.8,SNR=8.4
AAK LR LR 01 33 45.1
comp=Z,43nm,19.3s,baz=63,slow=39
comp=Z,2.1nm,0.6s
AAK Ala-Archa 50.95 296 P 01 09 44.4 -0.3
AAK IAmb IAmb 01 09 45.6
comp=Z,6.3nm,1.2s
AAK Ala-Archa 50.95 296 *de* **P P 01 09 44.7 +0.1**
AAK pmax pmax
comp=Z,5.0nm,1.2s
AAK Ala-Archa 50.95 296 *eP* **P 01 09 44.7 +0.1**
S34M Telegraph Cree 51.22 43 P P 01 09 46.2 0.0
baz=292
KSH2 Kashi 51.85 291 P P 01 09 51.3 -0.1
KSH2 pmax pmax
comp=Z,6.0nm,0.9s
ARSB Arslanbob 52.56 295 P P 01 09 56.6 0.0
ARSB Arslanbob 52.56 295 P P 01 09 56.6 0.0
ARSB pmax pmax
comp=Z,17nm,0.8s
KK31 Karatay Array 53.34 298 P 01 10 01.4 -0.8
KK31 IAmb IAmb 01 10 02.7
comp=Z,5.5nm,0.8s
KK31 Karatay Array 53.34 298 P P 01 10 01.4 -0.8
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 53.34 298 P 01 10 01.3 -0.9
KKAR Karatay Array 53.34 298 P P 01 10 01.3 -0.9
ARTI Arti 54.37 317 P P 01 10 08.9 -0.6
comp=Z,3.2nm,0.4s,baz=41,slow=5.2,SNR=12
ARTI LR LR 01 35 21.4
comp=Z,67nm,18.6s,baz=46,slow=38
comp=Z,3.2nm,0.4s
ARTI Arti 54.37 317 P 01 10 08.5 -0.9
ARTI IAmb IAmb 01 10 12.1
comp=Z,8.1nm,0.5s
ARTI Arti 54.37 317 P P 01 10 08.5 -0.9
ARTI pmax pmax
comp=Z,8.0nm,0.5s
BTK Batken 54.61 294 P 01 10 10.9 -0.7
BTK IAmb IAmb 01 10 12.6
comp=Z,8.8nm,1.2s
BTK Batken 54.61 294 P P 01 10 10.9 -0.7
BTK pmax pmax
comp=Z,9.0nm,1.2s
SPITS Spitsbergen Ar 55.19 349 P P 01 10 15.2 +0.1
comp=Z,24nm,1.1s,baz=39,slow=5.5,SNR=3.8
comp=Z,24nm,1.1s
SPITS Spitsbergen Ar 55.19 349 P P 01 10 15.4 +0.3
SPITS pmax pmax
comp=Z,62nm,1.3s
GAR Garm 55.48 293 P 01 10 17.3 -0.6
RES Resolute Bay 55.70 16 P 01 10 18.0 -0.7
RES Resolute Bay 55.70 16 P P 01 10 18.0 -0.7
RES pmax pmax
comp=Z,15nm,0.9s
NIL Nilore 56.26 287 P P 01 10 22.7 -0.8
NIL Nilore 56.26 287 P P 01 10 22.7 -0.8
NIL pmax pmax
comp=Z,22nm,1.1s
CHGR Chuyangaron 56.43 294 P 01 10 24.2 -0.5
CHGR Chuyangaron 56.43 294 P P 01 10 24.2 -0.5
CHGR pmax pmax
comp=Z,25nm,0.7s
YKA Yellowknife Ar 56.66 33 P P 01 10 25.7 0.0
comp=Z,2.9nm,0.9s,baz=304,slow=7.9,SNR=27
comp=Z,2.9nm,0.9s
YKA Yellowknife Ar 56.66 33 P P 01 10 25.2 -0.6
AB31 Akbulak array 56.85 309 P 01 10 26.9 -0.5
AB31 IAmb IAmb 01 10 30.6
comp=Z,6.0nm,1.0s
ABKAR Akbulak array 56.85 309 P 01 10 26.9 -0.5
AKTO Aktyubinsk 57.35 311 P P 01 10 30.8 -0.1
comp=Z,1.6nm,0.7s,baz=45,slow=6.4,SNR=5.3
AKTO LR LR 01 35 09.6
comp=Z,73nm,21.0s,baz=352,slow=36
comp=Z,1.6nm,0.7s
KIRV Kirov 57.59 322 LR LR 01 37 36.6
comp=Z,94nm,18.1s,baz=37,slow=38
KIRV Kirov 57.59 322 *ceP* **P 01 10 30.7 -1.7**
SHAA Shahritus 57.70 293 P 01 10 33.5 -0.1
SHAA IAmb IAmb 01 10 34.4
comp=Z,22nm,0.6s
KBL Kabul 58.70 290 P 01 10 39.5 -1.3
KBL IAmb IAmb 01 10 40.5
comp=Z,9.6nm,0.8s
KBL Kabul 58.70 290 P P 01 10 39.5 -1.3
KBL pmax pmax
comp=Z,10.0nm,0.8s
ARCES ARCESS Array B 59.51 339 P P 01 10 44.7 -1.0
comp=Z,12nm,1.3s,baz=70,slow=4.6,SNR=1.5
comp=Z,12nm,1.3s
BELG Belogornoye 61.81 317⇓ *eP* **P 01 11 01.1 -0.4**
BELG pmax pmax
comp=Z,2.0nm,0.8s
BLKN Baker Lake 62.28 26 P 01 11 03.6 -0.8
BLKN IAmb IAmb 01 11 04.9
comp=Z,8.9nm,0.7s
HRA Herat 63.42 293 P 01 11 12.0 -0.8
HRA IAmb IAmb 01 11 13.9
comp=Z,7.1nm,0.9s
WB0 Warramunga Arr 63.58 192 P P 01 11 14.1 +0.5
WB0 IAmb IAmb 01 11 34.0
comp=Z,10nm,1.4s
WRAB Tennant Creek 63.75 192⇑ *eP* **P 01 11 14.9 +0.2**
WRAB pmax pmax
comp=Z,15nm,0.8s
WRA Warramunga Arr 63.76 192 P P 01 11 14.4 -0.4
comp=Z,1.4nm,0.8s,baz=8.7,slow=6.6,SNR=8.4
comp=Z,1.4nm,0.8s
WRA Warramunga Arr 63.76 192 P P 01 11 14.7 -0.1
WRA Warramunga Arr 63.76 192 P P 01 11 14.7 -0.1
SUMG Summit 64.48 2 P 01 11 18.8 -0.6
SUMG Summit 64.48 2 P P 01 11 18.8 -0.6
SUMG pmax pmax
comp=Z,24nm,1.2s
FIA1 FINESS Array S 65.04 333 P P 01 11 21.8 -0.9
FINES FINESS Array B 65.04 333 P P 01 11 21.9 -0.8
comp=Z,8.2nm,0.7s,baz=43,slow=7.7,SNR=80
FINES LR LR 01 45 48.3
comp=Z,46nm,19.3s,baz=24,slow=42
comp=Z,8.2nm,0.7s
FINES FINESS Array B 65.04 333 P P 01 11 21.7 -1.0
OBN Obninsk 65.33 323⇓ *eP* **P 01 11 25.0 +0.3**
OBN *SP **pP 01 11 40.0 +1.2**
OBN 01 12 01.0
OBN 01 13 45.0
OBN S S 01 20 00.0 -4.5
OBN *e 01 21 16.6
OBN SS SS 01 24 19.0 +1.7**
OBN pmax pmax
comp=Z,7.0nm,0.8s
OBN MLR MLR
comp=Z,84nm,16.0s
OBN Obninsk 65.33 323 *eP* **P 01 11 25.0 +0.3**
VRH Novokhopyorsk 65.46 318 *eP* **P 01 11 23.5 -2.0**
VRH pmax pmax
comp=Z,20nm,0.8s
LPSR Galich'ya Gora 65.90 320 *eP* **P 01 11 27.4 -1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 66.37 319 *eP* **P 01 11 30.2 -1.2**
VORR pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 66.69 319 *eP* **P 01 11 32.2 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORD Divnogorie 66.79 319 *eP* **P 01 11 33.6 -0.5**
VORD pmax pmax
comp=Z,10.0nm,1.0s
ASAR Alice Springs 67.48 192 P P 01 11 39.9 +1.1
comp=Z,1.7nm,0.7s,baz=12,slow=6.1,SNR=18
comp=Z,1.7nm,0.7s
ASAR Alice Springs 67.48 192 P P 01 11 39.7 +1.0
NVAR Mina Array Bea 68.48 57 P P 01 11 45.8 +0.5
comp=Z,1.1nm,0.7s,baz=273,slow=6.3,SNR=5.7
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 68.48 57 P P 01 11 45.4 +0.1
GOF Gofitskoye 68.69 312 *ceP* **P 01 11 46.3 +0.1**
MNK Minsk 69.39 327 *i P* **P 01 11 51.0 +0.6**
comp=E,16nm,1.0s
MNK *i P P 01 11 51.0 +0.6**
comp=N,214nm,21.9s
MNK *i P P 01 11 51.0 +0.6**
comp=Z,23nm,0.9s,baz=43
MNK *i* PP **PP 01 14 24.8 +1.2**
MNK *i* PPP PPP 01 16 05.6
MNK *i* S **S 01 20 57.3 +3.9**
MNK *i* SS **SS 01 25 25.9 +5.8**
MNK *i* SSS SSS 01 28 40.3
MNK *i* LR LR 01 41 22.6
MNK *i* LRM MLR 01 45 00.7
MNK comp=Z,107nm,13.3s *i* LRM MLR 01 45 17.5
comp=N,253nm,25.0s
MNK *i* LRM MLR 01 45 21.4
comp=E,213nm,18.9s
MNK Minsk 69.39 327 *c iP* **P 01 11 51.0 +0.6**
KIV Kislovodsk 69.60 311 P 01 11 52.0 0.0
KIV Kislovodsk 69.60 311 *eP* **P 01 11 52.8 +0.8**
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,57nm,17.0s
KIV Kislovodsk 69.60 311 P P 01 11 52.7 +0.8
comp=Z,27nm,0.8s
KIV Kislovodsk 69.60 311 *eP* **P 01 11 52.8 +0.8**
KBZ Khabaz 69.63 311 P P 01 11 52.9 +0.9
comp=Z,12nm,0.8s,baz=63,slow=4.2,SNR=24
KBZ LR LR 01 43 43.7
comp=Z,61nm,19.2s,baz=25,slow=37
comp=Z,12nm,0.8s
KBZ Khabaz 69.63 311 *ceP* **P 01 11 52.3 +0.3**
KBZ pmax pmax
comp=Z,14nm,0.8s
KBZ Khabaz 69.63 311 *eP* **P 01 11 52.3 +0.3**
SHA1 Shidzhatmaz 69.75 311⇑ *eP* **P 01 11 53.3 +0.2**
NB201 NORSAR Array S 69.83 338 P P 01 11 52.2 -0.8
NB2 NORSAR Subarra 69.86 338 P P 01 11 52.4 -0.8
comp=Z,14nm,1.2s,baz=32,slow=6.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOA	NORSAR Array B	69.86	338	P	P	01 11 52.6	-0.6
	comp=Z,3.1nm,0.8s,baz=34,slow=6.1,SNR=9.4						
NOA				LR	LR	01 46 48.8	
	comp=Z,63nm,18.2s,baz=5.0,slow=40						
	comp=Z,3.1nm,0.8s						
HFS	Hagfors	69.92	337	P	P	01 11 52.7	-0.8
	comp=Z,3.8nm,0.5s,baz=46,slow=6.4,SNR=20						
HFS				LR	LR	01 45 41.7	
	comp=Z,49nm,21.0s,baz=62,slow=38						
	comp=Z,3.8nm,0.5s						
PDAR	Pinedale Array	70.81	49	P	P	01 11 59.9	+0.3
	comp=Z,0.6nm,0.7s,baz=274,slow=3.0,SNR=8.9						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	70.81	49	P	P	01 11 59.8	+0.2
GNI	Garni	70.91	307	LR	LR	01 46 22.4	
	comp=Z,41nm,19.5s,baz=23,slow=38						
GNI	Garni	70.91	307	ceP	P	01 12 01.0	+0.8
GNI				pmax	pmax		
	comp=Z,33nm,2.5s						
GNI	Garni	70.91	307	P	P	01 12 00.3	+0.1
	comp=Z,21nm,1.5s						
SOC	Sochi	71.45	313	eP	P	01 12 03.2	+0.1
SOC				e		01 14 42.0	
SOC				ePPP	PPP	01 16 30.2	
SOC				eS	S	01 21 19.6	+1.9
SOC				MLR	MLR		
	comp=Z,193nm,22.0s						
AKASG	Malin Array Be	71.60	323	P	P	01 12 03.5	-0.4
	comp=Z,5.8nm,0.6s,baz=41,slow=6.1,SNR=23						
AKASG				LR	LR	01 47 45.9	
	comp=Z,33nm,19.4s,baz=68,slow=39						
	comp=Z,5.8nm,0.6s						
AKASG	Malin Array Be	71.60	323	P	P	01 12 02.9	-1.0
AKASG	Malin Array Be	71.60	323	P	P	01 12 02.9	-1.0
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKBB	Malin Array Si	71.60	323	⇓eP	P	01 12 03.4	-0.5
AK04	Malin Array Si	71.61	323	P	P	01 12 03.2	-0.7
AK01	Malin Array Si	71.61	323	P	P	01 12 03.3	-0.6
KIEV	Kiev	71.61	323		P	01 12 03.0	-0.9
KIEV				IAmb	IAmb	01 12 04.1	
	comp=Z,15nm,0.9s						
KIEV	Kiev	71.61	323	P	P	01 12 03.0	-0.9
KIEV				pmax	pmax		
	comp=Z,15nm,0.9s						
KIEV	Kiev	71.61	323	P	P	01 12 03.2	-0.7
AK22	Malin Array Si	71.62	323	P	P	01 12 03.3	-0.7
RNPP9	Sopachiv	72.49	325	P	P	01 12 08.7	-0.5
LUBAR	Lubar, Ukraine	72.81	323	P	P	01 12 10.3	-0.8
MARD	Mardin	75.11	307	P	P	01 12 25.1	+0.2
BUR08	Bucovina Ar. S	75.64	323		P	01 12 27.9	0.0
BUR08				IAmb	IAmb	01 12 28.8	
	comp=Z,8.9nm,0.7s						
BURAR	Bucovina Array	75.65	323		P	01 12 28.0	+0.1
BURAR				IAmb	IAmb	01 12 29.1	
	comp=Z,10nm,0.8s						
OJC	Ojcow	75.87	328		P	01 12 28.5	-0.5
OJC	Ojcow	75.87	328	P	P	01 12 28.5	-0.5
STEB	Steborice	76.88	329	eP	P	01 12 35.0	+0.4
STEB				ex	x	01 12 38.6	
UPC	Upice	77.07	330	eP	P	01 12 36.1	+0.4
UPC	Upice	77.07	330	eP	P	01 12 36.1	+0.4
DPC	Dobruska-Polom	77.08	330	eP	P	01 12 36.3	+0.4
DPC	Dobruska-Polom	77.08	330	eP	P	01 12 36.3	+0.4
MORC	Moravsky Berou	77.09	329		P	01 12 35.7	-0.2
MORC				IAmb	IAmb	01 12 40.8	
	comp=Z,6.8nm,0.8s						
MORC	Moravsky Berou	77.09	329	P	P	01 12 35.7	-0.2
MORC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MORC	Moravsky Berou	77.09	329	eP	P	01 12 36.0	+0.1
MAUC	Maruska	77.32	328	eP	P	01 12 40.7	+3.5
BRTR	Keskin Array B	77.40	313	P	P	01 12 38.2	+0.3
	comp=Z,2.1nm,0.8s,baz=90,slow=2.3,SNR=9.4						
BRTR				LR	LR	01 50 15.2	
	comp=Z,28nm,19.0s,baz=36,slow=38						
	comp=Z,2.1nm,0.8s						
BRTR	Keskin Array B	77.40	313	P	P	01 12 37.3	-0.7
CLL	Collm	77.47	332	i P	P	01 12 37.4	-0.5
CLL				i *PP	pP	01 12 51.5	-0.9
CLL				pmax	pmax		
	comp=Z,11nm,0.8s						
CLL	Collm	77.47	332	i P	P	01 12 37.4	-0.5
	comp=Z,11nm,0.8s						
CLL				i pP	pP	01 12 51.5	-0.9
PVCC	Panska Ves	77.57	331	eP	P	01 12 39.7	+1.2
PVCC	Panska Ves	77.57	331	eP	P	01 12 39.7	+1.2
PSZ	Piszkesteto	77.66	326	P	P	01 12 39.0	-0.2
PSZ				IAmb	IAmb	01 12 44.2	
	comp=Z,6.7nm,0.8s						
PSZ	Piszkesteto	77.66	326	P	P	01 12 39.0	-0.2
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JAVC	Velka Javorina	77.79	328	eP	P	01 12 40.8	+1.0
VRAC	Vranov	77.83	329	LR	LR	01 48 51.4	
	comp=Z,103nm,18.8s,baz=49,slow=37						
VRAC	Vranov	77.83	329	eP	P	01 12 40.3	+0.3
KRUC	Moravsky	78.11	329	eP	P	01 12 41.7	+0.2
SMOL	Smolenice	78.16	328	eP	P	01 12 42.5	+0.7
MODS	Modra-Piesok	78.33	328	eP	P	01 12 44.2	+1.4
MODS	Modra-Piesok	78.33	328	eP	P	01 12 44.2	+1.4
SCHQ	Schefferville	78.38	19	P	P	01 12 42.1	-0.8
	comp=Z,2.8nm,0.9s,baz=351,slow=6.8,SNR=3.8						
SCHQ				LR	LR	01 50 36.6	
	comp=Z,60nm,18.6s,baz=34,slow=38						
	comp=Z,2.8nm,0.9s						
SRO	Srobarova	78.38	327	eP	P	01 12 45.7	+2.7
SRO	Srobarova	78.38	327	eP	P	01 12 45.7	+2.7
EKA	Eskdalemuir Ar	78.44	343	P	P	01 12 43.0	-0.2
	comp=Z,3.5nm,0.6s,baz=24,slow=5.0,SNR=23						
	comp=Z,3.5nm,0.6s						
ZVC	Zvikov	78.61	330	eP	P	01 12 44.1	-0.2
CKRC	Cesky Krumlov	79.09	330	eP	P	01 12 45.1	-1.9
CKRC				e		01 12 50.3	
CKRC	Cesky Krumlov	79.09	330	eP	P	01 12 45.1	-1.9
CKRC				ex	x	01 12 50.3	
KHC	Kasperske Hory	79.09	330	eP	P	01 12 46.5	-0.5
KHC				e		01 12 50.0	
KHC	Kasperske Hory	79.09	330	eP	P	01 12 46.5	-0.5
KHC				ex	x	01 12 50.0	
CONA	Conrad Observa	79.24	329	i P	P	01 12 48.0	+0.1
	comp=Z,2.7nm,0.7s						
RONA	Rosalia, Austr	79.27	328	eP	P	01 12 47.2	-0.8
	comp=Z,2.1nm,0.5s						
GERES	GERESS Array B	79.29	330	P	P	01 12 47.6	-0.6
	comp=Z,1.2nm,0.7s,baz=31,slow=8.3,SNR=4.8						
GERES				LR	LR	01 53 24.7	
	comp=Z,64nm,18.2s,baz=76,slow=40						
	comp=Z,1.2nm,0.7s						
MOA	Molln	79.91	329	eP	P	01 12 51.4	0.0
	comp=Z,3.5nm,1.1s						
BIOA	Bad Ischl, Aus	80.28	330	eP	P	01 12 53.3	-0.1
	comp=Z,7.8nm,1.2s						
SOKA	Soboth	80.60	328	eP	P	01 12 54.7	-0.5
	comp=Z,12nm,1.6s						
BGES	Gesves	80.81	336	dP	P	01 12 56.0	-0.2
	comp=Z,5.7nm,1.1s						
LESA	Schwarzleotal	80.85	330	eP	P	01 12 56.7	+0.1
	comp=Z,6.3nm,1.2s						
KBA	Koelnbreinsper	80.90	329	eP	P	01 12 57.2	+0.2
	comp=Z,3.5nm,0.6s						
OBKA	Obir	80.92	328	eP	P	01 12 57.2	+0.2
	comp=Z,7.9nm,1.0s						
MMAI	Mount Meron Ar	81.26	307	P	P	01 12 59.7	+0.7
	comp=Z,6.4nm,0.8s,baz=23,slow=11,SNR=9.2						
MMAI				LR	LR	01 52 18.1	
	comp=Z,39nm,18.0s,baz=356,slow=38						
	comp=Z,6.4nm,0.8s						
WATA	Walderalm	81.33	331	eP	P	01 12 59.0	-0.2
	comp=Z,4.0nm,0.7s						
WTTA	Wattenberg	81.37	331	eP	P	01 12 59.3	-0.1
	comp=Z,4.5nm,0.6s						
ABTA	Abfaltersbach	81.49	330	eP	P	01 12 58.8	-1.1
	comp=Z,8.0nm,1.3s						
MOTA	Moosalm	81.49	331	eP	P	01 12 59.7	-0.4
	comp=Z,1.9nm,0.5s						
RAYN	Ar Rayn	81.58	294	P	P	01 13 00.6	-0.2
RAYN	Ar Rayn	81.58	294	P	P	01 13 00.6	-0.2
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DAVOX	Davos/Dischmat	82.40	331	LR	LR	01 51 54.9	
	comp=Z,62nm,18.4s,baz=254,slow=37						
TX31	Lajitas Ar. Si	83.55	56	P	P	01 13 11.5	+0.5
TXAR	Lajitas Array	83.55	56	P	P	01 13 11.7	+0.7
	comp=Z,1.9nm,0.8s,baz=301,slow=4.1,SNR=20						
	comp=Z,1.9nm,0.8s						
TXAR	Lajitas Array	83.55	56	P	P	01 13 11.3	+0.3
TXAR	Lajitas Array	83.55	56	P	P	01 13 11.3	+0.3
PPT	Papeete	84.35	120	LR	LR	01 41 09.7	
	comp=Z,47nm,21.9s,baz=312,slow=29						
ESDC	Sonseca Array	93.19	337	P	P	01 13 56.3	-0.8
	comp=Z,1.0nm,0.8s,baz=16,slow=4.1,SNR=6.9						
	comp=Z,1.0nm,0.8s						
ESDC	Sonseca Array	93.19	337	P	P	01 13 56.0	-1.0
H03N2	Juan Fernandez	143.68	90	T	T	04 01 05.1	
	baz=302,slow=77,SNR=3.4						
H03N3	Juan Fernandez	143.69	90	T	T	04 01 12.9	
	baz=302,slow=77,SNR=4.4						
H03N1	Juan Fernandez	143.69	90	T	T	04 01 10.4	
	baz=302,slow=77,SNR=6.0						
SNAA	Sanae	147.71	198	PKPbc	PKPdf	01 20 24.2	+1.1
	comp=Z,4.8nm,0.9s,baz=71,slow=1.9,SNR=4.9						

*NEIC **05** 01:15:49.1±0.9, 17°.80N±0°.03×66°.85W±0°.01, h10km±2km, ML3.0/35, Md3.1/8(RSPR), Error ellipse: s-maj=5.2km s-min=2.9km az=8.0*

*RSPR **05** 01:15:50.1, 17°.86N×66°.86W, h9km, MD3.1/8*

*SDD **05** 01:15:50.5±2.0, 17°.87N×66°.86W, h15km±22km, MD3.6, ML2.8, MW3.1, Presumed earthquake*

ISC 05 01:15:49.7±1.0**, 17°.89N**±0°.06×**66°.84W**±0°.02**, h17**km±5km**, n42, σ0s.46**/66**, 10C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.10	338		Pg	01 15 53.2	-0.1
GBPR					Sg	01 15 55.3	-0.3
GBPR	Guanica, Bosqu	0.10	338	⇓iP	Pg	01 15 53.2	-0.1
GBPR				eS	Sg	01 15 55.3	-0.3
MLPR	Magueyes Islan	0.21	293		Pg	01 15 54.7	-0.1
MLPR				Sg	Sg	01 15 58.0	-0.1
MLPR				IAML		01 15 58.4	
	3µm,0.6s						
MLPR				IAML		01 15 58.7	
	4µm,0.4s						
OBIP	Obispado Ponce	0.27	55		Pb	01 15 56.1	-0.1
OBIP				Sg	Sb	01 16 00.8	+0.3
OBIP	Obispado Ponce	0.27	55	⇑iP	Pb	01 15 56.2	0.0
OBIP				eS	Sb	01 16 00.9	+0.4
CRPR	Cabo Rojo, PR	0.28	295		Pg	01 15 55.8	-0.1
CRPR				Sg	Sg	01 16 00.1	-0.1
CRPR	Cabo Rojo, PR	0.28	295	IAML		01 16 00.6	
	3µm,0.4s						
CRPR				IAML		01 16 00.6	
	2µm,0.3s						
CRPR	Cabo Rojo, PR	0.28	295	⇓ePg	Pg	01 15 55.8	-0.1
CRPR				⇑eSg	Sg	01 16 00.0	-0.1
CRPR				IAML		01 16 00.5	
	comp=N,3µm,0.3s						
CRPR	Cabo Rojo, PR	0.28	295	⇑iP	Pg	01 15 55.9	0.0
CRPR				eS	Sg	01 16 00.2	+0.1
CELP	Cerrillos	0.31	53		Pb	01 15 56.9	0.0
CELP				Sg	Sb	01 16 02.3	+0.6
CELP				IAML		01 16 02.4	
	comp=N,1µm,0.5s						
CELP				IAML		01 16 02.7	
	comp=N,2µm,0.6s						
LSP	Las Mesas	0.37	321		Pg	01 15 57.7	+0.2
LSP					Sb	01 16 03.8	+0.4
LSP	Las Mesas	0.37	321	⇑iP	Pg	01 15 57.7	+0.2
LSP				eS	Sb	01 16 03.8	+0.4
UUPR	Utuado, UPR, P	0.38	17		Pg	01 15 57.7	+0.1
UUPR				Sg	Sb	01 16 03.6	-0.1
PRSN	Puerto Rico Se	0.44	319		Pg	01 15 58.3	-0.3
PRSN	Puerto Rico Se	0.44	319		Sb	01 16 05.1	-0.2
PRSN	Puerto Rico Se	0.44	319	⇑ePg	Pg	01 15 58.6	0.0
PRSN				⇑eSg	Sg	01 16 04.7	0.0
PRSN				IAML		01 16 08.3	
	comp=N,2µm,0.2s						
PRSN	Puerto Rico Se	0.44	319	⇑iP	Pg	01 15 58.6	0.0
PRSN				eS	Sb	01 16 05.1	-0.2
ECPR	Experimental S	0.63	46		Pg	01 16 02.0	-0.1
ECPR				IAML		01 16 12.7	
	comp=N,2µm,0.3s						
ECPR	Experimental S	0.63	46	⇑iP	Pg	01 16 02.1	-0.1
ECPR				eS	Sb	01 16 11.0	+0.3
AGPR	Aguadilla, PR	0.63	336		Pg	01 16 02.1	-0.1
AGPR				IAML		01 16 14.9	
	comp=N,405nm,0.5s						
AGPR				IAML		01 16 15.2	
	comp=N,391nm,0.4s						
AGPR	Aguadilla, PR	0.63	336	⇑ePg	Pg	01 16 01.7	-0.6
AGPR				eSg	Sg	01 16 10.3	-0.4
AGPR				IAML		01 16 14.8	
	comp=N,435nm,0.4s						
AGPR	Aguadilla, PR	0.63	336	⇓iP	Pg	01 16 02.2	-0.1
AGPR				eS	Sb	01 16 11.2	+0.2
EMPR	Esperanza - Ma	0.66	27		Pb	01 16 03.1	+0.4
EMPR					Sn	01 16 13.1	-1.2
EMPR	Esperanza - Ma	0.66	27	⇓iP	Pb	01 16 03.1	+0.4
EMPR				eS	Sn	01 16 13.1	-1.2
SJG	San Juan	0.69	71		Pg	01 16 03.0	-0.3
SJG	San Juan	0.69	71	⇑ePg	Pg	01 16 02.8	-0.6
SJG				⇑eSg	Sb	01 16 13.4	+0.7
SJG	San Juan	0.69	71	⇓iP	Pg	01 16 03.1	-0.3
SJG				eS	Sb	01 16 13.1	+0.4
IDE	Isla Desecheo	0.78	310		Pb	01 16 04.2	-0.7
IDE					Sb	01 16 15.1	-0.1
IDE	Isla Desecheo	0.78	310	⇑eP	Pb	01 16 04.2	-0.7
IDE				eS	Sb	01 16 15.1	-0.1
PDPR	Patillas Dam,	0.79	80		Pb	01 16 04.7	-0.4
GCPR	Guaynabo City	0.83	60		Pb	01 16 05.5	-0.3
GCPR	Guaynabo City	0.83	60		Sg	01 16 16.8	-0.3
GCPR	Guaynabo City	0.83	60	⇓eP	Pb	01 16 05.8	0.0
GCPR				eS	Sg	01 16 16.8	-0.3
HUMP	Col San Antoni	0.98	75		Pb	01 16 07.7	-0.5
HUMP				IAML		01 16 24.2	
	comp=N,225nm,0.4s						
HUMP	Col San Antoni	0.98	75		Sg	01 16 21.3	-0.2
HUMP	Col San Antoni	0.98	75	⇑iP	Pb	01 16 07.8	-0.4
HUMP				eS	Sg	01 16 21.3	-0.2
CUPR	Culebra, Puert	1.54	74		Pb	01 16 17.2	-0.6
PCDR	Punta Cana, DR	1.59	293	⇑ePg	Pb	01 16 18.2	-0.5
PCDR				IAML		01 16 45.8	
	comp=N,176nm,2.1s						
HIDR	Higuey Centro	1.92	292	⇑ePg	Pb	01 16 24.2	0.0
HIDR				IAML		01 16 55.4	
	comp=N,74nm,0.3s						
MIDR	Miches	2.36	298	⇑ePg	Pb	01 16 31.2	-0.6
MIDR				IAML		01 17 28.1	
	comp=N,21nm,1.3s						
DR12	Loma Pena Alta	2.57	291	Pn	Pn	01 16 31.6	+0.9
HATOM	Hato Mayor del	2.57	291	ePg	Pn	01 16 32.5	+1.8
HATOM				IAML		01 17 29.3	
	comp=N,32nm,1.7s						

MEX 05 01:18:01.1±0.4**, 19°.42N**×**102°.28W, h5**km**, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URUA	Uruapan	0.19	89	i P	Pg	01 18 02.9	-2.0
URUA				i S	Sg	01 18 06.2	-1.3
MOIG	Morelia	1.06	76	eP	Pg	01 18 18.0	-3.4
MOIG				eS	Sg	01 18 31.9	-3.3
INCO	Volcan de Coli	1.26	275	eP	Pg	01 18 21.8	-3.5
INCO				eS	Sg	01 18 39.3	-2.3
SOMAC	Volcano de Col	1.28	275	eP	Pg	01 18 22.1	-3.6
SOMAC				eS	Sg	01 18 39.9	-2.5
CEGR	Campo Tres	1.49	269	eP	Pn	01 18 25.6	-3.2
CEGR				eS	Sn	01 18 44.9	-3.9
MMIG	Aquila	1.51	222	eP	Pn	01 18 25.2	-3.7
MMIG				eS	Sn	01 18 44.9	-4.1
CDAR	Ciudad de Arme	1.71	254	eP	Pn	01 18 28.5	-3.0
CDAR				eS	Sn	01 18 50.4	-3.4
ZIIG	Zihuatanejo	1.96	157	eP	Pn	01 18 32.6	-2.4
ZIIG				eS	Sn	01 18 58.7	-1.3
ARIG	Puente Sto Nin	2.15	122	eP	Pn	01 18 35.2	-2.5
ARIG				eS	Sn	01 19 04.8	0.0

*IPEC **05** 01:22:26.5±0.3, 50°.07N×18°.47E, h1km, ML1.7/6, Error ellipse: s-maj=1.8km s-min=1.7km az=101.0*

PRU 05 01:22:29.2, 50°.06N×18°.29E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.07	291	ePG	Pg	01 22 30.8	+0.3
RAC				eSG	Sg	01 22 34.0	+2.7
OKC	Ostrava-Krasne	0.24	203	ePG	Pg	01 22 33.1	-0.7
OKC				eSG	Sg	01 22 36.8	-0.1
	comp=Z,62nm,0.8s						
STEB	Steborice	0.36	250	ePG	Pg	01 22 35.9	-0.1
STEB				eSG	Sg	01 22 41.9	+1.3
MORC	Moravsky Berou	0.56	240	ePg	Pg	01 22 39.2	-0.7
	baz=64						
MORC				eSg	Sg	01 22 47.3	+0.1
	14nm,0.5s,baz=64						
ANAC	Anensky vrch	0.59	272	ePg	Pg	01 22 39.9	-0.5
	baz=90						
ANAC				eSg	Sg	01 22 48.6	+0.6
	18nm,0.4s,baz=90						
LOSC	Losov	0.74	234	ePg	Pg	01 22 42.6	-0.7
	baz=57						
LOSC				eSg	Sg	01 22 52.8	-0.1
	14nm,0.4s,baz=57						
MAUC	Maruska	0.76	204	ePG	Pg	01 22 42.9	-0.8
MAUC				eSG	Sg	01 22 54.7	+1.2
OJC	Ojcow	0.98	80	ePg	Pg	01 22 43.2	-4.8
OJC				eSg	Sg	01 22 55.5	-5.3
DPC	Dobruska-Polom	1.30	284	ePG	Pg	01 22 52.5	-1.5
DPC				eSG	Sb	01 23 11.3	-0.4
	comp=Z,18nm,0.6s						
VRAC	Vranov	1.33	236	ePg	Pg	01 22 53.0	-1.7
	baz=57						
VRAC				eSg	Sg	01 23 11.5	-0.5
	7.8nm,0.4s,baz=57						
OSTC	Ostas	1.42	291	ePG	Pn	01 22 54.2	-2.1
OSTC				eSG	Sn	01 23 15.5	-0.2
NIE	Niedzica	1.45	115	ePg	Pn	01 22 52.8	-4.0
NIE				eSg	Sg	01 23 13.2	-2.7
CHVC	Chvalec	1.53	291	ePG	Pn	01 22 56.4	-1.4
KRUC	Moravsky	1.59	232	ePn	Pn	01 22 56.8	-1.8
	baz=52						
KRUC				eSg	Sn	01 23 19.2	-0.6
	9.6nm,0.6s,baz=52						
KRUC	Moravsky	1.59	232	ePN	Pn	01 22 56.9	-1.7
KRUC				eSG	Sn	01 23 19.3	-0.5
TREC	Trest	1.98	248	eSG	Sb	01 23 31.6	+0.4
PRU	Pruhonice	2.42	270	eSG	Sb	01 23 44.4	+0.5
CKRC	Cesky Krumlov	2.88	246	eSG	Sg	01 24 00.1	-1.5
KHC	Kasperske Hory	3.20	255	eSG	Sb	01 24 08.5	+2.0

MEX 05 01:29:09.4±0.5**, 14°.90N**×**93°.11W, h62**km±22km**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.81	352	eP	Pn	01 29 23.9	-1.3
PCIG				eS	Sn	01 29 34.8	-1.9
PATR	El Naranjo	0.87	75	eP	Pn	01 29 24.4	-1.8
PATR				eS	Sn	01 29 36.5	-2.0
PAVE	Pavencul	0.95	72	eP	Pn	01 29 25.8	-1.2
PAVE				eS	Sn	01 29 38.6	-1.5
CHUJ	Union Juarez	0.98	78	eP	Pn	01 29 26.0	-1.6
CHUJ				eS	Sn	01 29 39.2	-1.8
CCIG	Comitan	1.67	34	eP	Pn	01 29 36.7	+0.1
CCIG				eS	Sn	01 29 56.0	-1.1
TGIG		1.87	360	eP	Pn	01 29 37.4	-1.8
TGIG				eS	Sn	01 29 59.0	-2.9
UXUV	UXUV	2.61	338	eP	Pn	01 29 48.9	-0.3
UXUV				eS	Sn	01 30 24.3	+4.6
CMIG	Matias Romero	2.77	322	eP	Pn	01 29 50.1	-1.3
CMIG				eS	Sn	01 30 22.2	-1.6

*NEIC **05** 01:37:03.7±1.2, 19°.02N±0°.05×67°.60W±0°.02, h10km±2km, ML2.7/33, Md3.0/3(RSPR), Error ellipse: s-maj=8.7km s-min=3.0km az=11.0*

*SDD **05** 01:37:06.4±1.3, 18°.96N×67°.65W, h17km±73km, MD3.5, ML2.4, MW2.8, Presumed earthquake*

*RSPR **05** 01:37:07.7, 18°.87N×67°.59W, h6km±1km, MD3.0/3*

ISC 05 01:37:03.9±1.6**, 18°.94N**±0°.07×**67°.65W**±0°.03**, h7**km±12km**, n30, σ0s.51**/40**, 8C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.58	163		Pb	01 37 17.0	+0.6
IDE					Sb	01 37 25.1	+0.4
IDE	Isla Desecheo	0.58	163	⇑iP	Pb	01 37 17.0	+0.6
IDE				eS	Sb	01 37 25.1	+0.4
AGPR	Aguadilla, PR	0.70	132		Pb	01 37 19.0	+0.6
AGPR				Sg	Sb	01 37 28.9	+0.7
AGPR				IAML		01 37 29.6	
	205nm,0.3s						
AGPR				IAML		01 37 29.7	
	263nm,0.4s						
AGPR	Aguadilla, PR	0.70	132	⇓ePg	Pb	01 37 18.9	+0.6
AGPR				⇑eSg	Sb	01 37 29.1	+0.9
AGPR				IAML		01 37 29.7	
	comp=N,180nm,0.2s						
AGPR	Aguadilla, PR	0.70	132	⇑eP	Pb	01 37 18.9	+0.6
AGPR				eS	Sb	01 37 29.2	+0.9
PCDR	Punta Cana, DR	0.81	239	⇑ePg	Pn	01 37 20.8	-1.0
PCDR				⇑eSg	Sb	01 37 32.0	+0.6
PCDR				IAML		01 37 37.5	
	comp=N,190nm,2.7s						
PRSN	Puerto Rico Se	0.87	146		Pb	01 37 21.4	+0.2
PRSN				IAML		01 37 39.5	
	comp=N,265nm,0.2s						
PRSN				IAML		01 37 39.8	
	comp=N,361nm,0.2s						
PRSN	Puerto Rico Se	0.87	146		Sb	01 37 32.9	-0.2
PRSN	Puerto Rico Se	0.87	146	⇑eSg	Sn	01 37 35.2	-0.2
PRSN				IAML		01 37 43.0	
	comp=N,246nm,0.3s						
PRSN	Puerto Rico Se	0.87	146	⇓eP	Pb	01 37 21.8	+0.5
PRSN				eS	Sb	01 37 32.9	-0.2
LSP	Las Mesas	0.93	145		Pn	01 37 23.2	-0.2
LSP					Sg	01 37 34.0	+0.1
LSP	Las Mesas	0.93	145	⇓eP	Pn	01 37 23.2	-0.2
LSP				eS	Sg	01 37 34.0	+0.1
CRPR	Cabo Rojo, PR	1.06	151		Pg	01 37 23.7	-0.6
CRPR				Sg	Sb	01 37 38.9	+0.1
CRPR	Cabo Rojo, PR	1.06	151	IAML		01 37 44.1	
	comp=N,180nm,0.2s						
CRPR				IAML		01 37 44.1	
	comp=N,235nm,0.3s						
CRPR	Cabo Rojo, PR	1.06	151	⇑ePg	Pn	01 37 24.8	-0.4
CRPR				eSg	Sb	01 37 39.2	+0.5
CRPR				IAML		01 37 43.6	
	comp=N,179nm,0.3s						
HIDR	Higuey Centro	1.07	251	ePg	Pb	01 37 24.3	-0.4
HIDR				IAML		01 37 41.3	
	comp=N,52nm,0.5s						
UUPR	Utuado, UPR, P	1.12	128	Pn	Pg	01 37 25.1	-0.2
MLPR	Magueyes Islan	1.12	149		Pb	01 37 25.7	0.0
MLPR				IAML		01 37 41.8	
	comp=N,244nm,0.5s						
MLPR				IAML		01 37 41.8	
	comp=N,229nm,0.4s						
MIDR	Miches	1.32	272	⇑ePg	Pg	01 37 29.9	+0.7
MIDR				IAML		01 37 49.9	
	comp=N,43nm,1.0s						
CELP	Cerrillos	1.33	130		Pn	01 37 28.5	-0.5
CELP				IAML		01 37 46.3	
	comp=N,85nm,0.3s						
OBIP	Obispado Ponce	1.33	132		Pn	01 37 28.4	-0.6
OBIP	Obispado Ponce	1.33	132	⇓eP	Pn	01 37 28.7	-0.3
ECPR	Experimental S	1.37	117	Pn	Pn	01 37 28.9	-0.5
ECPR				IAML		01 37 52.5	
	comp=N,119nm,0.2s						
ECPR				IAML		01 37 54.6	
	comp=N,110nm,0.2s						
ECPR	Experimental S	1.37	117	⇑iP	Pn	01 37 29.0	-0.5
GCPR	Guaynabo City	1.61	113	Pn	Pn	01 37 32.0	-0.8
DR12	Loma Pena Alta	1.64	265	Pn	Pn	01 37 33.4	+0.1
HATOM	Hato Mayor del	1.64	265	⇑ePg	Pg	01 37 35.2	-0.3
HATOM				IAML		01 38 33.4	
	comp=N,36nm,2.2s						
PDPR	Patillas Dam,	1.80	120	Pn	Pn	01 37 35.2	-0.2
HUMP	Col San Antoni	1.89	115		Pn	01 37 36.4	-0.2
HUMP	Col San Antoni	1.89	115	⇓eP	Pb	01 37 38.4	-0.3

*AEIC **05** 01:41:43.1±2.6, 60°.38N±0°.02×138°.26W±0°.05, h13km±4km, Error ellipse: s-maj=3.8km s-min=2.4km az=122.0*

*ANF **05** 01:41:43.7±0.2, 60°.38N×138°.26W, h0km, ML3.8/45, Error ellipse: s-maj=1.7km s-min=1.3km az=11.0*

*NEIC **05** 01:41:44.1±1.7, 60°.39N±0°.01×138°.25W±0°.03, h2km±2km,*

ML3.5/123, ML3.4(AEIC), Error ellipse: s-maj=2.2km s-min=1.9km az=145.0
*PGC **05** 01:41:44.3, 60°.36N×138°.22W, h0^{km}, ML3.5/29, ML3.5(NEIC), 59km southwest of Haines Junction, Yt Southern Yukon Territory, Canada*
ISC 05 01:41:43.5±1.0**, 60°.38N**±0°.01×**138°.25W**±0°.01**, h1**^{km}±9^{km}**, n248,** σ**1°.22**/348**, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK7	Dusty Glacier	0.16	19		Pg	01 41 47.3	+0.6
YUK7					Sg	01 41 49.9	+1.1
YUK7	Dusty Glacier	0.16	19	P	Pg	01 41 47.3	+0.6
YUK7				S	Sg	01 41 49.9	+1.1
O29M	Mount Kennedy	0.18	245		Pg	01 41 47.4	+0.4
O29M					Sg	01 41 50.0	+0.7
O29M				IAML		01 41 52.2	
	comp=N,15µm,0.5s						
O29M	Mount Kennedy	0.18	245	P	Pg	01 41 47.3	+0.4
	baz=62						
O29M				S	Sg	01 41 49.8	+0.5
	baz=62						
O29M	Mount Kennedy	0.18	245	P	Pg	01 41 47.4	+0.4
O29M				S	Sg	01 41 50.0	+0.7
YUK6	Outpost Mounta	0.57	354		Pg	01 41 54.4	0.0
YUK6					Sg	01 42 02.6	+0.8
YUK6	Outpost Mounta	0.57	354	P	Pg	01 41 54.5	+0.1
	baz=175,SNR=1000						
YUK6				S	Sg	01 42 01.7	-0.1
	baz=175						
YUK6	Outpost Mounta	0.57	354	P	Pg	01 41 54.5	+0.1
HYT	Haines Junctio	0.58	39		Pg	01 41 54.8	+0.2
HYT				Sg	Sg	01 42 02.9	+0.8
HYT	Haines Junctio	0.58	39	P	Pg	01 41 54.7	+0.2
	baz=220,SNR=1000						
HYT				S	Sg	01 42 02.7	+0.6
	baz=220						
HYT	Haines Junctio	0.58	39	P	Pg	01 41 54.8	+0.2
HYT				S	Sg	01 42 02.5	+0.4
P30M	Million Dollar	0.69	111		Pg	01 41 56.6	-0.1
P30M					Sg	01 42 06.0	+0.3
P30M	Million Dollar	0.69	111	P	Pg	01 41 56.7	-0.1
	baz=293						
P30M				S	Sg	01 42 06.3	+0.6
	baz=293						
P30M	Million Dollar	0.69	111	P	Pg	01 41 56.5	-0.3
P30M				S	Sg	01 42 05.9	+0.3
YUK5	Granite Creek	0.78	14		Pg	01 41 58.6	+0.2
YUK5	Granite Creek	0.78	14	P	Pg	01 41 58.6	+0.2
YUK5				S	Sg	01 42 09.1	+0.6
BCPM	Bancas Point	0.81	239		Pg	01 41 59.4	+0.3
BCPM				Sg	Sg	01 42 10.4	+0.8
YUK4	Talbot Arm	0.99	349	P	Pn	01 42 03.5	-1.1
	baz=172,SNR=1000						
YUK4	Talbot Arm	0.99	349	P	Pn	01 42 03.8	-0.9
YUK4				S	Sn	01 42 18.6	-0.7
O28M	Mount Upton	1.04	293		Pg	01 42 02.8	-0.6
O28M					Sg	01 42 16.7	0.0
O28M	Mount Upton	1.04	293	P	Pg	01 42 02.8	-0.6
	baz=111						
O28M				S	Sg	01 42 16.8	+0.1
	baz=111						
O28M	Mount Upton	1.04	293	P	Pg	01 42 02.8	-0.6
O28M				S	Sb	01 42 18.0	-0.5
PINM	Pinnacle	1.04	255	P	Pg	01 42 03.1	-0.2
	baz=73,SNR=158						
PINM				S	Sg	01 42 17.3	+0.6
	baz=73						
PCA	Pinnacle	1.04	255		Pg	01 42 03.2	-0.1
PCA				Sg	Sb	01 42 17.6	-0.9
PCA				IAML		01 42 18.4	
	comp=E,2µm,0.4s						
PCA	Pinnacle	1.04	255	P	Pg	01 42 03.3	-0.1
PCA				S	Sg	01 42 17.4	+0.5
BRWY	Burwash Landin	1.07	339	P	Pg	01 42 03.3	-0.6
BRWY				S	Sb	01 42 19.0	-0.2
YKU2	Yakutat	1.13	220	Pg	Pn	01 42 05.8	-0.5
YKU2				IAML		01 42 29.1	
	comp=N,2µm,0.5s						
O30N	Mendenhall	1.14	69		Pb	01 42 04.7	-1.2
O30N				IAML		01 42 25.0	
	comp=E,814nm,0.4s						
O30N				IAML		01 42 25.4	
	comp=N,1µm,0.6s						
O30N	Mendenhall	1.14	69	P	Pb	01 42 04.5	-1.4
	baz=251,SNR=650						
O30N				S	Sg	01 42 20.1	+0.2
	baz=251						
O30N	Mendenhall	1.14	69	P	Pb	01 42 04.5	-1.4
O30N				S	Sg	01 42 19.9	-0.1
YUK8	Steele Glacier	1.17	321		Pb	01 42 05.5	-1.2
YUK8					Sg	01 42 21.5	+0.3
YUK8	Steele Glacier	1.17	321	P	Pb	01 42 05.4	-1.2
	baz=140,SNR=1000						
YUK8				S	Sg	01 42 21.1	0.0
	baz=140						
YUK8	Steele Glacier	1.17	321	P	Pb	01 42 05.4	-1.3
LOGN	Logan Glacier	1.43	289		Pn	01 42 09.5	-1.1
LOGN				IAML		01 42 30.4	
	comp=N,870nm,0.6s						
LOGN				IAML		01 42 31.7	
	comp=E,622nm,0.7s						
LOGN	Logan Glacier	1.43	289	P	Pn	01 42 09.3	-1.4
LOGN				S	Sg	01 42 29.9	+0.6
TABL	Table Mountain	1.44	274		Pn	01 42 09.0	-1.8
TABL				IAML		01 42 33.7	
	comp=E,712nm,0.8s						
TABL				IAML		01 42 34.2	
	comp=N,791nm,1.0s						
TABL	Table Mountain	1.44	274	P	Pn	01 42 08.8	-1.9
RKAV	Rock Avalanche	1.54	268		Pn	01 42 11.3	-0.8
RKAV	Rock Avalanche	1.54	268	Pn	Pb	01 42 12.5	-0.4
RKAV				Sn	Sg	01 42 33.0	0.0
CTGM	Chitina Glacie	1.63	293		Pb	01 42 13.3	-1.1
CTGM					Sg	01 42 35.4	-0.4
CTGM				IAML		01 42 38.5	
	comp=N,468nm,0.8s						
CTGM	Chitina Glacie	1.63	293	Pn	Pn	01 42 13.1	-0.3
CTGM				Sn	Sb	01 42 35.2	-0.2
CTG	Chitna Glacier	1.63	292	P	Pb	01 42 13.3	-1.1
	baz=110,SNR=99						
CTG				S	Sb	01 42 35.3	-0.2
	baz=110						
N31M	Braeburn, Yuko	1.64	46		Pb	01 42 14.1	-0.4
N31M	Braeburn, Yuko	1.64	46	Pb	Pb	01 42 14.2	-0.3
	baz=229,SNR=443						
N31M				S	Sg	01 42 35.7	-0.4
	baz=229						
N31M	Braeburn, Yuko	1.64	46	Pn	Pb	01 42 13.8	-0.6
N31M				Sn	Sb	01 42 34.9	-0.7
WHY	Whitehorse	1.69	79		Pb	01 42 14.4	-1.0
WHY				IAML		01 42 41.9	
	comp=E,730nm,0.9s						
WHY				IAML		01 42 42.1	
	comp=N,818nm,0.7s						
WHY	Whitehorse	1.69	79	P	Pn	01 42 14.1	-0.1
	baz=262,SNR=1000						
WHY				S	Sb	01 42 37.1	-0.1
	baz=262						
WHY	Whitehorse	1.69	79	Pn	Pn	01 42 14.1	-0.1
WHY				Sn	Sb	01 42 36.2	-0.9
SKAG	Skagway	1.74	121		Pb	01 42 15.0	-1.1
SKAG				IAML		01 42 44.4	
	comp=E,524nm,0.8s						
SKAG	Skagway	1.74	121	P	Pb	01 42 14.9	-1.1
	baz=304,SNR=36						
SKAG				Sb	Sg	01 42 40.2	+1.0
	baz=304						
YUK3	Moose Creek	1.77	324	P	Pn	01 42 14.8	-0.5
	baz=142						
YUK3				Sb	Sg	01 42 40.0	-0.2
	baz=142						
YUK3	Moose Creek	1.77	324	Pn	Pb	01 42 15.8	-0.9
YUK3				Sn	Sb	01 42 38.8	-0.7
GRNC	Granite Creek	1.77	283		Pn	01 42 15.2	-0.1
GRNC				IAML		01 42 44.4	
	comp=N,556nm,0.9s						
GRNC	Granite Creek	1.77	283	Pn	Pn	01 42 15.1	-0.3
GRNC				Sn	Sb	01 42 38.3	-1.1
BARN	Barnard Glacie	1.81	294		Pb	01 42 16.2	-1.2
BARN				IAML		01 42 45.8	
	comp=E,417nm,0.8s						
BARN				IAML		01 42 46.7	
	comp=N,416nm,0.6s						
MESA	MESA	1.85	265		Pb	01 42 17.8	-0.4
MESA	MESA	1.85	265	Pg	Pg	01 42 18.6	-0.4
	baz=82,SNR=466						
MESA				Sb	Sg	01 42 44.6	+1.6
	baz=82						
MESA	MESA	1.85	265	Pn	Pb	01 42 18.2	0.0
YUK2	White River	1.89	319		Pn	01 42 17.1	+0.1
YUK2					Pb	01 42 17.4	-1.4
YUK2	White River	1.89	319	Pn	Pb	01 42 17.7	-1.1
YUK2				Sn	Sb	01 42 41.7	-1.3
BAGL	Bagley Icefiel	1.91	275		Pn	01 42 17.1	+0.1
BAGL					Pb	01 42 17.4	-1.6
ISLE	Juniper Island	2.04	278		Pn	01 42 19.2	+0.3
ISLE				IAML		01 42 52.3	
	comp=E,469nm,0.7s						
ISLE				IAML		01 42 54.7	
	comp=N,343nm,0.5s						
M29M	Somme Creek	2.08	357		Pb	01 42 20.4	-1.5
M29M				IAML		01 42 52.4	
	comp=E,289nm,0.6s						
M29M	Somme Creek	2.08	357	P	Pb	01 42 20.5	-1.4
	baz=177						
M29M				Sb	Sg	01 42 50.2	+0.1
	baz=177						
M29M	Somme Creek	2.08	357	Pn	Pb	01 42 20.2	-1.7
M29M				Sn	Sn	01 42 45.4	-0.5
KIAG	Kiagna River	2.10	287		Pn	01 42 19.9	+0.1
KIAG					Pb	01 42 20.4	-1.9
KIAG	Kiagna River	2.10	287	Pn	Pb	01 42 20.9	-1.5
KIAG				Sn	Sn	01 42 46.4	-0.1
BALM	Baldy	2.12	290		Pn	01 42 20.6	+0.5
BALM					Pb	01 42 21.0	-1.6
BALM	Baldy	2.12	290	Pn	Pb	01 42 21.2	-1.5
BALM				Sn	Sb	01 42 47.2	-2.2
PTPK	Patty Peak	2.22	293		Pb	01 42 22.4	-2.1
PTPK					Pb	01 42 23.4	-1.1
PTPK	Patty Peak	2.22	293	Pn	Pb	01 42 23.3	-1.1
PTPK				Sn	Sn	01 42 49.6	-0.1
WAX	Waxell Ridge	2.29	274		Pb	01 42 24.3	-1.2
TGL	Tana Glacier	2.29	281		Pn	01 42 23.4	+1.0
TGL				IAML		01 42 58.0	
	comp=N,280nm,1.0s						
TGL				IAML		01 42 59.3	
	comp=E,212nm,0.8s						
SNH	Sunshine Point	2.29	267		Pb	01 42 23.7	-2.0
SNH				IAML		01 42 58.2	
	comp=E,316nm,0.9s						
SNH				IAML		01 43 01.2	
	comp=N,392nm,1.4s						
M30M	Minto, Yukon	2.31	17		Pn	01 42 23.4	+0.7
M30M				IAML		01 42 57.1	
	comp=E,229nm,0.6s						
M30M				IAML		01 42 59.2	
	comp=N,230nm,0.6s						
M30M	Minto, Yukon	2.31	17	P	Pn	01 42 23.1	+0.4
	baz=198,SNR=514						
M30M				Sb	Sg	01 42 56.2	-1.6
	baz=198						
M30M	Minto, Yukon	2.31	17	Pn	Pn	01 42 23.2	+0.5
M30M				Sn	Sn	01 42 51.8	+0.1
BVCY	Beaver Creek	2.40	330	P	Pn	01 42 24.0	+0.1
	baz=147,SNR=177						
BVCY				Sb	Sg	01 42 58.7	-1.7
	baz=147						
BVCY	Beaver Creek	2.40	330	Pn	Pn	01 42 24.1	+0.3
BVCY				Sn	Sn	01 42 53.7	-0.2
P32M	Atlin	2.41	107		Pn	01 42 23.6	-0.4
P32M	Atlin	2.41	107	P	Pn	01 42 23.6	-0.4
	baz=291						
P32M				Sb	Sg	01 42 59.8	-1.1
	baz=291						
P32M	Atlin	2.41	107	Pn	Pn	01 42 23.8	-0.2
P32M				Sn	Sn	01 42 53.6	-0.6
CRQE	Cirque	2.42	281	P	Pb	01 42 25.5	-2.4
	baz=97						
CRQE				Sb	Sb	01 42 59.1	+0.9
	baz=97						
CRQM	Cirque	2.44	281		Pn	01 42 25.1	+0.5
CRQM				IAML		01 43 04.7	
	comp=E,310nm,1.0s						
KHIT	Khitrov Hills	2.48	274		Pn	01 42 25.6	+0.6
BESE	Bessie Mountai	2.50	135		Pn	01 42 25.9	+0.6
BESE	Bessie Mountai	2.50	135	Pn	Pn	01 42 26.1	+0.8
BESE				Sg	Sg	01 43 02.2	-1.5
GRIN	Grindle Hills	2.52	270		Pn	01 42 26.1	+0.6
GRIN					Pb	01 42 27.2	-2.3
BGLC	Bering Glacier	2.52	266	Sb	Sg	01 43 02.4	-2.0
	baz=82						
MCARA	McCarthy VSAT	2.54	295		Pb	01 42 27.8	-2.0
MCARA	McCarthy VSAT	2.54	295	Pb	Pb	01 42 28.6	-1.2
	baz=111						
MCARA				Sb	Sb	01 43 03.0	+1.4
	baz=111						
MCARA	McCarthy VSAT	2.54	295	Pn	Pb	01 42 28.0	-1.8
MCARA				Sn	Sn	01 42 57.5	+0.2
M31M	Drury Creek, Y	2.61	44		Pn	01 42 27.8	+1.1
M31M				IAML		01 43 06.8	
	comp=E,310nm,0.7s						
M31M				IAML		01 43 08.8	
	comp=N,276nm,0.3s						
M31M	Drury Creek, Y	2.61	44	P	Pn	01 42 27.9	+1.1
	baz=227						
M31M				S	Sn	01 42 59.4	+0.3
	baz=227						
M31M	Drury Creek, Y	2.61	44	Pn	Pn	01 42 27.7	+0.9
M31M				Sn	Sn	01 42 58.6	-0.5
S31K	Pelican	2.64	156		Pn	01 42 27.5	+0.5
S31K				IAML		01 43 07.4	
	comp=E,215nm,0.8s						
S31K				IAML		01 43 08.4	
	comp=N,241nm,0.7s						
S31K	Pelican	2.64	156	P	Pn	01 42 27.6	+0.5
	baz=338,SNR=12						
M27K	Edge Creek, AK	2.65	320		Pn	01 42 28.0	+0.7
M27K				IAML		01 43 10.0	
	comp=E,147nm,0.8s						
M27K				IAML		01 43 11.6	
	comp=N,224nm,0.8s						
M27K	Edge Creek, AK	2.65	320	P	Pn	01 42 28.0	+0.7
	baz=137						
M27K				Sb	Sb	01 43 05.8	+1.2
	baz=137						
N32M	Quiet Lake	2.65	71		Pn	01 42 27.9	+0.5
N32M	Quiet Lake	2.65	71	P	Pn	01 42 27.8	+0.5
	baz=255						
N32M				Sb	Sb	01 43 06.3	+1.5
	baz=255						
N32M	Quiet Lake	2.65	71	Pn	Pn	01 42 27.7	+0.3
N32M				Sn	Sn	01 42 59.1	-1.0
VRDI	Verde Repeater	2.69	291		Pn	01 42 29.0	+1.1
VRDI				IAML		01 43 13.6	
	comp=N,198nm,0.9s						
BERG	Berg Lake	2.71	273		Pb	01 42 29.8	-2.8
P33M	Teslin, Yukon	2.71	91		Pn	01 42 27.6	-0.5
P33M	Teslin, Yukon	2.71	91	P	Pn	01 42 27.5	-0.7
	baz=276,SNR=161						
P33M				Sb	Sb	01 43 07.6	+1.2
	baz=276						
P33M	Teslin, Yukon	2.71	91	Pn	Pn	01 42 27.5	-0.7
P33M				Sn	Sn	01 43 00.6	-0.9
L29M	L29M	2.74	1		Pn	01 42 29.4	+0.9
L29M	L29M	2.74	1	P	Pn	01 42 29.5	+0.9
	baz=181						
L29M				Sb	Sg	01 43 09.4	-2.0
	baz=181						
L29M	L29M	2.74	1	Pn	Pn	01 42 29.2	+0.7
L29M				Sn	Sn	01 43 02.5	+0.2
L29M				Sg	Sg	01 43 10.3	-1.1
SUCK	Suckling Hills	2.77	266	Pn	Pn	01 42 29.0	0.0
SUCK				IAML		01 43 14.7	
	comp=E,245nm,1.4s						
R32K	Eaglecrest	2.85	136		Pn	01 42 30.9	+0.9
R32K				IAML		01 43 12.7	
	comp=E,183nm,1.1s						
R32K				IAML		01 43 14.9	
	comp=N,175nm,0.9s						
R32K	Eaglecrest	2.85	136	P	Pb	01 42 31.9	-3.1
	baz=320,SNR=9.3						
R32K				Sb	Sb	01 43 11.7	+1.4
	baz=320						
JIS	Juneau Island	2.89	135		Pn	01 42 31.5	+1.0
GLB	Gilahina Butte	2.92	294		Pn	01 42 32.0	+1.0
GLB				IAML		01 43 17.2	
	comp=N,137nm,0.6s						
FARO	Faro, Yukon	3.01	50		Pn	01 42 33.2	+1.0
FARO	Faro, Yukon	3.01	50	P	Pn	01 42 33.4	+1.2
	baz=234						
FARO				Sb	Sg	01 43 17.5	-2.4
	baz=234						
FARO	Faro, Yukon	3.01	50	Pn	Pn	01 42 33.0	+0.8
FARO				Sg	Sg	01 43 17.7	-2.3
M26K	Nabesna, AK	3.06	314		Pn	01 42 34.0	+1.1
M26K	Nabesna, AK	3.06	314	Sg	Sg	01 43 23.7	+2.2
	baz=130						
BCAR	Beaver Creek A	3.18	330		Pn	01 42 34.9	+0.3
BMRM	Bremner River	3.18	283		Pn	01 42 35.7	+1.1
BMRM				IAML		01 43 26.1	
	comp=N,161nm,0.9s						
BMRM				IAML		01 43 27.2	
	comp=E,141nm,0.6s						
BMRM	Bremner River	3.18	283	P	Pn	01 42 35.8	+1.2
	baz=98						
BMRM				Sb	Sb	01 43 20.7	+0.7
	baz=98						
BC01	Beaver Creek A	3.19	329		Pn	01 42 34.4	-0.2
BC01					Pb	01 42 34.8	-6.0
L27K	Beaver Creek,	3.19	329		Pn	01 42 34.5	-0.1
L27K	Beaver Creek,	3.19	329	P	Pn	01 42 34.5	-0.1
	baz=146						
L27K				Sb	Sb	01 43 21.4	+1.3
	baz=146						
L27K	Beaver Creek,	3.19	329	Pn	Pn	01 42 34.8	+0.2
GOAT	Goat Mountain	3.21	276		Pn	01 42 35.4	+0.4
N25K	Chitina, Valde	3.33	294		Pn	01 42 38.0	+1.3
N25K	Chitina, Valde	3.33	294	P	Pn	01 42 39.1	+2.4
	baz=109						
N25K				Sb	Sb	01 43 26.4	+2.2
	baz=109						
N25K	Chitina, Valde	3.33	294	Pn	Pn	01 42 38.5	+1.8
N25K				Sg	Sg	01 43 28.1	-2.3
Q32M	Nakina River	3.35	113		Pn	01 42 35.8	-1.3
Q32M				IAML		01 43 35.0	
	comp=E,169nm,1.2s						
Q32M				IAML		01 43 38.8	
	comp=N,127nm,0.8s						
Q32M	Nakina River	3.35	113	Pb	Pb	01 42 43.8	+0.1
	baz=298						
Q32M				Sb	Sg	01 43 29.2	-1.8
	baz=298						
Q32M	Nakina River	3.35	113	Sn	Sn	01 43 16.1	-1.4
MAYO	Mayo, Yukon	3.42	18		Pn	01 42 39.2	+1.4
MAYO	Mayo, Yukon	3.42	18	S	Sn	01 43 19.9	+1.0
	baz=200						
MAYO	Mayo, Yukon	3.42	18	Sn	Sn	01 43 18.9	+0.1
S32K	Killisnoo	3.48	145	Pn	Pn	01 42 38.4	-0.3
S32K				IAML		01 43 38.0	
	comp=E,148nm,1.3s						
S32K				IAML		01 43 38.2	
	comp=N,81nm,1.2s						
S32K	Killisnoo	3.48	145	P	Pn	01 42 38.5	-0.1
	baz=328						
S32K				Sb	Sb	01 43 31.4	+2.8
	baz=328						
K29M	Barlow Dome	3.50	5		Pn	01 42 40.0	+1.0
K29M				IAML		01 43 40.0	
	comp=E,73nm,0.5s						
K29M	Barlow Dome	3.50	5	P	Pn	01 42 39.9	+1.0
	baz=186						
K29M				S	Sn	01 43 21.0	+0.1
	baz=186						
K29M	Barlow Dome	3.50	5	Pn	Pn	01 42 39.8	+0.8
K29M				Sn	Sn	01 43 21.4	+0.4
L26K	Log Cabin Wild	3.60	320		Pn	01 42 40.0	-0.3
L26K				IAML		01 43 44.2	
	comp=N,86nm,0.4s						
L26K				IAML		01 43 49.1	
	comp=E,101nm,0.5s						
L26K	Log Cabin Wild	3.60	320	P	Pn	01 42 40.7	+0.4
	baz=135,SNR=13						
L26K				Sb	Sg	01 43 35.5	-3.5
	baz=135						
MENT	Mentasta	3.66	317		Pn	01 42 41.7	+0.5
MENT				IAML		01 43 46.6	
	comp=E,69nm,0.8s						
MENT				IAML		01 43 51.1	
	comp=N,66nm,0.9s						
SIT	Sitka	3.66	154	Sb	Sb	01 43 37.0	+3.3
	baz=337						
EYAK	Cordova Ski Ar	3.72	276		Pn	01 42 42.5	+0.6
EYAK	Cordova Ski Ar	3.72	276	Sb	Sb	01 43 37.8	+2.5
	baz=89						
DAWY	Dawson	3.74	352		Pn	01 42 43.0	+0.7
DAWY				IAML		01 43 47.7	
	comp=E,76nm,0.7s						
DAWY				IAML		01 43 55.9	
	comp=N,65nm,0.6s						
DAWY	Dawson	3.74	352	P	Pn	01 42 43.3	+1.1
	baz=171						
DAWY				S	Sn	01 43 27.8	+0.9
	baz=171						
DAWY	Dawson	3.74	352	Pn	Pn	01 42 42.9	+0.7
DIV	Divide	3.77	285	Pn	Pn	01 42 43.8	+1.1
R33M	Jennings River	3.80	102		Pn	01 42 43.1	-0.1
R33M				IAML		01 43 49.6	
	comp=E,99nm,0.8s						
R33M				IAML		01 43 56.7	
	comp=N,91nm,0.8s						
R33M	Jennings River	3.80	102	P	Pn	01 42 43.1	-0.1
	baz=288						
R33M				S	Sn	01 43 30.2	+1.8
	baz=288						
R33M	Jennings River	3.80	102	Pn	Pn	01 42 42.7	-0.5
KLU	Klutina	3.91	290		Pn	01 42 45.4	+0.8
KLU				IAML		01 43 44.6	
	comp=E,64nm,0.8s						
KLU				IAML		01 43 46.0	
	comp=N,66nm,0.5s						
KLU	Klutina	3.91	290	P	Pn	01 42 46.2	+1.6
	baz=103						
KLU				Sb	Sb	01 43 43.2	+2.3
	baz=103						
DOT	Dot Lake	4.27	323	Pn	Pn	01 42 49.4	-0.2
DOT	Dot Lake	4.27	323	Pn	Pn	01 42 49.4	-0.2
J30M	Hart River	4.31	11		Pn	01 42 51.4	+1.2
J30M	Hart River	4.31	11	IAML		01 44 02.0	
	comp=N,76nm,1.2s						
J30M	Hart River	4.31	11	P	Pn	01 42 51.2	+1.1
	baz=193						
J30M				Sb	Sb	01 43 56.0	+3.7
	baz=193						
J30M	Hart River	4.31	11	Pn	Pn	01 42 51.1	+1.0
J30M				Sn	Sn	01 43 41.0	0.0
J30M				Sg	Sg	01 43 58.2	-3.5
S34M	Telegraph Cree	4.42	121		Pn	01 42 51.4	-0.2
S34M	Telegraph Cree	4.42	121	Sb	Sg	01 44 01.4	-3.9
	baz=307						
SCRK	Sand Creek	4.50	326		Pn	01 42 52.9	+0.1
SCRK	Sand Creek	4.50	326	P	Pn	01 42 52.5	-0.3
	baz=141						
SCRK				Sb	Sb	01 44 02.1	+4.1
	baz=141						
RIDG	Independent Ri	4.58	320	Pb	Pb	01 43 04.0	-0.6
	baz=134						
DLBC	Dease Lake	4.63	111	P	Pn	01 42 54.2	-0.4
	baz=298						
DLBC				Sb	Sg	01 44 07.3	-4.7
	baz=298						
SCM	Sheep Creek Mo	4.64	292		Pn	01 42 56.0	+1.4
SCM				IAML		01 44 09.8	
	comp=E,34nm,1.1s						
SCM				IAML		01 44 13.3	
	comp=N,50nm,1.1s						
SCM	Sheep Creek Mo	4.64	292	P	Pn	01 42 56.0	+1.4
	baz=104						
SCM				Sb	Sb	01 44 04.1	+2.2
	baz=104						
M23K	Glacier View	4.81	291	Sb	Sb	01 44 08.8	+1.9
	baz=103						
J26L	Joseph Creek	4.82	331		Pn	01 42 57.6	+0.5
J26L	Joseph Creek	4.82	331	IAML		01 44 22.5	
	comp=E,44nm,0.9s						
J26L				IAML		01 44 26.7	
	comp=N,29nm,1.2s						
J26L	Joseph Creek	4.82	331	P	Pn	01 42 57.6	+0.5
	baz=147						
K24K	Donnelly Dome	4.93	317	Pb	Pb	01 43 11.2	+0.7
	baz=131						
K24K				Sb	Sb	01 44 14.9	+4.7
	baz=131						
I30M	Mount Dempster	4.94	9		Pn	01 43 00.7	+1.9
I30M	Mount Dempster	4.94	9	IAML		01 44 00.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,52nm,0.6s						
I30M				IAML		01 44 30.0	
	comp=N,40nm,1.2s						
I30M	**Mount Dempster**	**4.94**	**9**	P	**Pn**	**01 43 00.2**	**+1.5**
	baz=191						
I30M				S	**Sn**	**01 43 57.7**	**+1.2**
	baz=191						
I30M	**Mount Dempster**	**4.94**	**9**	Pn	**Pn**	**01 43 00.0**	**+1.2**
I30M				Sn	**Sn**	**01 43 56.5**	**0.0**
I29M	**Ogilvie Camp,**	**5.00**	**360**	S	**Sn**	**01 43 59.6**	**+1.7**
	baz=180						
I29M	**Ogilvie Camp,**	**5.00**	**360**	Sn	**Sn**	**01 43 58.6**	**+0.7**
WRAK	**Wrangell Islan**	**5.04**	**139**	Pn	**Pn**	**01 43 00.1**	**+0.1**
WRAK	**Wrangell Islan**	**5.04**	**139**	Sb	**Sb**	**01 44 17.4**	**+4.1**
	baz=324						
WRAK	**Wrangell Islan**	**5.04**	**139**	Sn	**Sn**	**01 43 57.8**	**-1.0**
WAT6	**Susitna Watana**	**5.06**	**300**	Sb	**Sb**	**01 44 16.6**	**+2.6**
	baz=112						
KNK	**Knik Glacier**	**5.09**	**286**	P	**Pn**	**01 43 01.8**	**+1.0**
	baz=97						
KNK				Sb	**Sb**	**01 44 17.8**	**+3.0**
	baz=97						
SML	**Sawmill**	**5.10**	**291**	Sb	**Sb**	**01 44 16.3**	**+1.3**
	baz=102						
I28M	**Miner Creek**	**5.15**	**352**		**Pn**	**01 43 03.0**	**+1.3**
I28M	**Miner Creek**	**5.15**	**352**	IAML		01 44 34.6	
	comp=E,33nm,1.5s						
I28M				IAML		01 44 44.8	
	comp=N,24nm,0.6s						
I28M	**Miner Creek**	**5.15**	**352**	P	**Pn**	**01 43 02.5**	**+0.9**
	baz=171						
I28M				S	**Sn**	**01 44 02.8**	**+1.2**
	baz=171						
I28M	**Miner Creek**	**5.15**	**352**	Pn	**Pn**	**01 43 02.7**	**+1.1**
I28M				Sn	**Sn**	**01 44 02.0**	**+0.4**
J25K	**Salcha River,**	**5.38**	**325**		**Pn**	**01 43 04.9**	**+0.1**
J25K	**Salcha River,**	**5.38**	**325**	P	**Pn**	**01 43 04.6**	**-0.2**
	baz=139						
I27K	**Kandik River**	**5.46**	**345**		**Pn**	**01 43 07.2**	**+1.2**
I27K	**Kandik River**	**5.46**	**345**	P	**Pn**	**01 43 06.9**	**+0.9**
	baz=162,SNR=41						
H31M	**Peel River**	**5.73**	**16**		**Pn**	**01 43 10.9**	**+1.4**
H31M	**Peel River**	**5.73**	**16**	P	**Pn**	**01 43 10.1**	**+0.6**
	baz=200						
H31M	**Peel River**	**5.73**	**16**	Pn	**Pn**	**01 43 10.3**	**+0.8**
EPYK	**Eagle Plains**	**6.05**	**6**		**Pn**	**01 43 15.0**	**+1.0**
EPYK	**Eagle Plains**	**6.05**	**6**	Sn	**Sn**	**01 44 23.9**	**+0.1**
H27K	**Steamboat Moun**	**6.06**	**347**		**Pn**	**01 43 15.2**	**+1.1**
H27K	**Steamboat Moun**	**6.06**	**347**	P	**Pn**	**01 43 15.1**	**+1.1**
	baz=164						
H27K	**Steamboat Moun**	**6.06**	**347**	Pn	**Pn**	**01 43 15.0**	**+0.9**
PRP	**Porcupine Dome**	**6.13**	**330**		**Pn**	**01 43 14.9**	**-0.3**
PRP	**Porcupine Dome**	**6.13**	**330**	P	**Pn**	**01 43 15.9**	**+0.8**
	baz=144						
G29M	**Pine Creek**	**6.56**	**1**		**Pn**	**01 43 21.4**	**+0.5**
G29M	**Pine Creek**	**6.56**	**1**	Pn	**Pn**	**01 43 21.1**	**+0.2**
CNPM	**China Poot**	**6.58**	**268**		**Pn**	**01 43 21.4**	**+0.2**
G27K	**Doyon Strip**	**6.63**	**348**		**Pn**	**01 43 22.4**	**+0.5**
G27K	**Doyon Strip**	**6.63**	**348**	P	**Pn**	**01 43 22.5**	**+0.6**
	baz=165						
G27K	**Doyon Strip**	**6.63**	**348**	Pn	**Pn**	**01 43 22.6**	**+0.7**
G31M	**Satah River**	**6.80**	**13**		**Pn**	**01 43 24.1**	**-0.1**
G31M	**Satah River**	**6.80**	**13**	P	**Pn**	**01 43 24.9**	**+0.8**
	baz=197,SNR=92						
G31M	**Satah River**	**6.80**	**13**	Pn	**Pn**	**01 43 24.7**	**+0.5**
G31M				Sn	**Sn**	**01 44 41.2**	**-0.9**
H24K	**Noodor Dome**	**7.00**	**326**		**Pn**	**01 43 28.0**	**+1.1**
G26K	**Porcupine Rive**	**7.04**	**342**	Pn	**Pn**	**01 43 28.5**	**+1.1**
G26K				Sn	**Sn**	**01 44 48.1**	**+0.1**
KOTAN	**Kotaneelee Air**	**7.07**	**86**	Sn	**Sn**	**01 44 47.5**	**-1.3**
F28M	**Old Crow**	**7.30**	**355**		**Pn**	**01 43 32.0**	**+1.0**
F28M	**Old Crow**	**7.30**	**355**	P	**Pn**	**01 43 31.8**	**+0.7**
	baz=174,SNR=11						
F28M	**Old Crow**	**7.30**	**355**	Pn	**Pn**	**01 43 31.6**	**+0.5**
F30M	**Barrier River**	**7.34**	**7**		**Pn**	**01 43 31.9**	**+0.3**
F30M	**Barrier River**	**7.34**	**7**	P	**Pn**	**01 43 31.9**	**+0.3**
	baz=190						
F30M	**Barrier River**	**7.34**	**7**	Pn	**Pn**	**01 43 31.9**	**+0.3**
F31M	**Tsiigehtchic**	**7.36**	**14**		**Pn**	**01 43 32.3**	**+0.4**
F31M	**Tsiigehtchic**	**7.36**	**14**	P	**Pn**	**01 43 32.3**	**+0.4**
	baz=198						
F31M	**Tsiigehtchic**	**7.36**	**14**	Pn	**Pn**	**01 43 32.2**	**+0.4**
G24K	**Hadweenzic Riv**	**7.56**	**331**		**Pn**	**01 43 33.7**	**-0.9**
F26K	**Sheenjek River**	**7.78**	**343**	P	**Pn**	**01 43 39.1**	**+1.4**
	baz=158						
F26K	**Sheenjek River**	**7.78**	**343**	Pn	**Pn**	**01 43 37.8**	**0.0**
F25K	**Christian Rive**	**7.93**	**339**	Pn	**Pn**	**01 43 40.2**	**+0.4**
E27K	**Coleen River**	**7.97**	**351**		**Pn**	**01 43 41.5**	**+1.2**
E27K	**Coleen River**	**7.97**	**351**	P	**Pn**	**01 43 41.1**	**+0.8**
	baz=168						
E27K	**Coleen River**	**7.97**	**351**	Pn	**Pn**	**01 43 40.5**	**+0.2**
E29M	**Blow River**	**8.05**	**1**		**Pn**	**01 43 42.1**	**+0.9**
E29M	**Blow River**	**8.05**	**1**	P	**Pn**	**01 43 41.5**	**+0.3**
	baz=181						
E29M	**Blow River**	**8.05**	**1**	Pn	**Pn**	**01 43 40.6**	**-0.7**
INK	**Inuvik**	**8.22**	**12**	Pn	**Pn**	**01 43 43.3**	**-0.3**
E28M	**Babbage River**	**8.28**	**357**		**Pn**	**01 43 45.1**	**+0.7**
E28M	**Babbage River**	**8.28**	**357**	P	**Pn**	**01 43 45.1**	**+0.7**
	baz=176						
E28M	**Babbage River**	**8.28**	**357**	Pn	**Pn**	**01 43 44.4**	**-0.1**
D27M	**Malcolm River**	**8.98**	**354**	P	**Pn**	**01 43 55.1**	**+1.0**
	baz=171						
D27M	**Malcolm River**	**8.98**	**354**	Pn	**Pn**	**01 43 54.4**	**+0.4**
D28M	**Stokes Point**	**8.99**	**359**	P	**Pn**	**01 43 55.2**	**+1.0**
	baz=178						
D28M	**Stokes Point**	**8.99**	**359**	Pn	**Pn**	**01 43 55.2**	**+1.0**
C27K	**Jago River**	**9.56**	**348**	P	**Pn**	**01 44 04.7**	**+2.6**
	baz=164						
C27K	**Jago River**	**9.56**	**348**	Pn	**Pn**	**01 44 04.0**	**+1.9**
C27K				Sn	**Sn**	**01 45 49.8**	**-0.2**
D25K	**Kavik River**	**9.61**	**342**	Pn	**Pn**	**01 44 04.1**	**+1.4**
D25K				Sn	**Sn**	**01 45 49.2**	**-2.0**

*DJA **05** 01:42:17.2±1.0, 4°N±8°×12°6E±°, h113km±6km, M4.2/7, MLv4.2/7*
*IDC **05** 01:42:22.5±6.8, 4°.23N×125°.60E, h216km±68km, mb3.2/8, mbtmp3.7/8, Error ellipse: s-maj=45.6km s-min=15.9km az=74.0*
ISC 05 01:42:15.0±0.7**, 4°.2N**±0°.1×**125°.5E**±0°.4**, h150**km**, n11, σ1§52**/14**, mb3.5**/9**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.46**	**177**	P	**Pn**	**01 42 35.5**	**-0.7**
SGSI				S	**Sn**	**01 42 50.4**	**-2.0**
WRA	**Warramunga Arr**	**25.46**	**160**	P	**P**	**01 47 31.7**	**+2.4**
	0.4nm,0.5s,baz=338,slow=10,SNR=9.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**28.83**	**164**	P	**P**	**01 48 00.9**	**+1.5**
	0.3nm,0.4s,baz=341,slow=8.2,SNR=2.5						
	0.3nm,0.4s						
KSRS	**Korea Array**	**33.22**	**4**	P	**P**	**01 48 38.9**	**+1.1**
	1.8nm,0.7s,baz=182,slow=8.7,SNR=3.2						
	1.8nm,0.7s						
SONM	**Songino Array**	**46.52**	**342**	P	**P**	**01 50 27.1**	**-0.4**
	0.4nm,0.4s,baz=144,slow=8.4,SNR=2.7						
SONM				PcP	**PcP**	**01 52 00.6**	**+1.2**
	0.9nm,0.7s,baz=156,slow=3.9,SNR=5.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**56.52**	**326**	P	**P**	**01 51 42.4**	**+0.7**
	0.5nm,0.4s,baz=117,slow=7.7,SNR=24						
MKAR				PcP	**PcP**	**01 52 37.3**	**+0.7**
	0.3nm,0.5s,baz=111,slow=5.0,SNR=2.4						
	0.5nm,0.4s						
YAK	**Yakutsk**	**57.84**	**2**	P	**P**	**01 51 51.2**	**+0.6**
	24nm,0.6s,baz=176,slow=5.4,SNR=5.3						
KURBB	**Kurchatov Arra**	**60.73**	**328**	P	**P**	**01 52 10.2**	**-0.5**
	0.7nm,0.2s,baz=130,slow=6.2,SNR=2.0						
	0.7nm,0.2s						
BVAR	**Borovoye Array**	**66.31**	**327**	P	**P**	**01 52 47.2**	**-0.1**
	0.4nm,0.6s,baz=104,slow=6.1,SNR=2.5						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**85.25**	**25**	P	**P**	**01 54 32.2**	**-2.4**
	0.2nm,0.6s,baz=257,slow=5.2,SNR=4.3						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**121.63**	**288**	PKP	**PKPdf**	**02 00 50.4**	**-1.6**
	0.3nm,0.5s,baz=111,slow=3.1,SNR=2.9						

*PDG **05** 01:42:23.0±0.1, 43°.38N×17°.73E, h5km, ML2.6/10, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
*BEO **05** 01:42:23.3±0.4, 43°.42N×17°.72E, h0km±4km, ML2.1/7*
ISC 05 01:42:23.0±1.1**, 43°.40N**±0°.03×**17°.78E**±0°.02**, h5**km±10km**, n28, σ1§37**/55**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RICI	**Ricice**	**0.48**	**281**	ePg	**Pg**	**01 42 32.0**	**-0.3**
RICI				Sg	**Sb**	**01 42 39.5**	**-1.9**
STON	**Ston**	**0.54**	**186**	ePg	**Pg**	**01 42 32.3**	**-1.0**
STON				Sg	**Sg**	**01 42 40.8**	**+0.6**
STON	**Ston**	**0.54**	**186**	ePg	**Pg**	**01 42 32.5**	**-0.8**
STON				eSg	**Sg**	**01 42 40.6**	**+0.4**
BRY	**Bratogost**	**0.75**	**132⇑**	iPg	**Pg**	**01 42 36.0**	**-1.4**
BRY				i Sg	**Sb**	**01 42 49.1**	**-0.1**
DBRK	**Dubrovnik**	**0.78**	**160**	ePg	**Pg**	**01 42 37.3**	**-0.7**
DBRK				Sg	**Sb**	**01 42 49.5**	**-0.6**
TREB	**Trebinje**	**0.80**	**148**	ePg	**Pg**	**01 42 37.2**	**-1.2**
TREB				eSg	**Sg**	**01 42 49.0**	**+0.2**
HVAR	**Hvar**	**1.00**	**257**	ePg	**Pg**	**01 42 40.7**	**-1.4**
HVAR				Sg	**Sb**	**01 42 56.1**	**-0.2**
NKME	**Niksic**	**1.07**	**126**	ePg	**Pg**	**01 42 42.9**	**-0.6**
NKME				i Sg	**Sn**	**01 42 59.9**	**-0.1**
HCY	**Herceg Novi**	**1.09**	**151**	ePg	**Pb**	**01 42 43.1**	**-1.3**
HCY				i Sg	**Sn**	**01 42 59.9**	**-0.5**
KIJV	**Kijevo**	**1.17**	**302**	ePg	**Pn**	**01 42 45.5**	**-0.6**
KIJV				Sn	**Sn**	**01 43 05.1**	**+2.8**
PLE	**Pljevlja**	**1.18**	**93**	ePg	**Pb**	**01 42 45.2**	**-0.7**
PLE				i Sg	**Sn**	**01 43 04.2**	**+1.5**
BBLS	**Lazi&#263i**	**1.27**	**68**	ePg	**Pn**	**01 42 46.2**	**-1.3**
BBLS				eSg	**Sn**	**01 43 05.2**	**+0.3**
BUM	**Brajici-Budva**	**1.37**	**143**	ePg	**Pn**	**01 42 48.3**	**-0.6**
BUM				i Sg	**Sg**	**01 43 09.8**	**+2.7**
KOME	**Kolasin**	**1.39**	**113**	ePg	**Pn**	**01 42 48.9**	**-0.2**
KOME				i Sg	**Sg**	**01 43 11.0**	**+3.5**
BLY	**Banja Luka**	**1.41**	**342**	ePg	**Pb**	**01 42 49.5**	**-0.4**
BLY				eSg	**Sg**	**01 43 08.4**	**0.0**
PDG	**Podgorica**	**1.46**	**131**	ePg	**Pn**	**01 42 49.9**	**-0.1**
PDG				i Sg	**Sg**	**01 43 12.9**	**+3.1**
PDG	**Podgorica**	**1.46**	**131**	ePg	**Pb**	**01 42 50.2**	**-0.4**
PDG				eSg	**Sg**	**01 43 12.6**	**+2.8**
MORI	**Morici**	**1.57**	**288**	i Pn	**Pb**	**01 42 52.4**	**-0.2**
MORI				Sn	**Sg**	**01 43 15.5**	**+1.9**
ZIRJ	**Zirje**	**1.57**	**280**	ePn	**Pg**	**01 42 53.3**	**+0.1**
ZIRJ				Sn	**Sg**	**01 43 16.3**	**+2.8**
DRME	**Dracevica, Mon**	**1.60**	**139**	ePn	**Pb**	**01 42 52.5**	**-0.5**
DRME				i Sn	**Sg**	**01 43 16.5**	**+2.2**
IVA	**Berane**	**1.64**	**108**	ePn	**Pb**	**01 42 53.6**	**-0.1**
IVA				i Sn	**Sg**	**01 43 18.0**	**+2.5**
IVAS	**Ivanjica**	**1.73**	**83**	ePg	**Pn**	**01 42 54.2**	**+0.3**
IVAS				eSg	**Sg**	**01 43 18.7**	**-0.1**
DIVS	**Divibare**	**1.75**	**66**	ePn	**Pb**	**01 42 55.0**	**-0.6**
DIVS				eSg	**Sg**	**01 43 19.4**	**+0.3**
PVY	**Plav**	**1.79**	**116**	ePn	**Pb**	**01 42 56.1**	**-0.3**
PVY				i Sn	**Sg**	**01 43 22.0**	**+1.5**
DUGI	**Dugi Otok**	**2.06**	**288**	Sn	**Sg**	**01 43 29.3**	**+0.2**
PLIT	**Plitvice**	**2.14**	**314**	ePn	**Pb**	**01 43 01.9**	**-0.4**
PLIT				Sn	**Sb**	**01 43 29.7**	**+0.5**
VIRC	**Vir**	**2.16**	**295**	ePn	**Pb**	**01 43 03.2**	**+0.5**
VIRC				Sn	**Sg**	**01 43 31.4**	**-1.1**
SELS	**Selova**	**2.44**	**93**	ePn	**Pn**	**01 43 04.6**	**+1.0**
SELS				eSn	**Sb**	**01 43 36.3**	**-1.6**

*IDC **05** 01:51:37.8±0.4, 5°.94S×81°.11W, h0km, mb4.5/18, mbtmp4.6/24, ML3.7/5, MS4.1/47, Error ellipse: s-maj=13.6km s-min=9.0km az=59.0*
*VAO **05** 01:51:40.1±0.7, 5°.86S×80°.83W, h10km, mb4.9, Presumed earthquake*
*MOS **05** 01:51:43.1±0.9, 5°.79S×80°.79W, h43km, mb5.2/36, Error ellipse: s-maj=13.0km s-min=6.4km az=105.5*
*GCMT **05** 01:51:44.4±0.4, 5°.82S±0°.02×80°.83W±0°.03, h40km±1km, MW4.9/64, Moment Tensor Solution. s38,c48; s64,c75; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.35±.16; Mθθ-1.56±.11; Mφφ-0.78±.13; Mrθ-0.27±.07; Mθφ-0.87±.07; Mφr1.76±.10; Best double couple: M0 2.75000×10^16 NP1:φs254.00000°, δ38.00000°, λ129.00000°. NP2: φs29.00000°, δ61.00000°, λ64.00000°. Principal axes: T 3.2150, Plg64.0000°, Azm253.0000°; N -0.9280, Plg23.0000°, Azm42.0000°; P -2.2850, Plg12.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **05** 01:51:45.4±1.6, 5°.81S±0°.05×80°.75W±0°.08, h42km±3km, mb5.0/126 Error ellipse: s-maj=11.1km s-min=6.7km az=89.0*
ISC 05 01:51:44.3±0.5**, 5°.81S**±0°.04×**80°.86W**±0°.05**, h40**km±4km**, n554, σ1§15**/551**, mb5.0**/88**, MS4.1**/45**, 14C-7D, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCRA	**Macar, Loja**	**1.69**	**32**	P	**Pn**	**01 52 11.3**	**-0.2**
MCRA				S	**Sn**	**01 52 32.2**	**+0.2**
ATAH	**Atahualpa**	**2.78**	**118**	Pn	**Pn**	**01 52 28.4**	**+1.7**
	502nm,0.3s,baz=302,slow=17,SNR=283						
ATAH				Sn	**Sn**	**01 53 04.3**	**+5.0**
	909nm,0.3s,baz=324,slow=19,SNR=17						
ATAH				LR	LR	01 53 33.2	
	comp=Z,5μm,21.2s,baz=254,slow=39						
COHC	**Cochancay**	**3.69**	**26**		**Pn**	**01 52 39.9**	**+1.0**
COHC	**Cochancay**	**3.69**	**26**	P	**Pn**	**01 52 39.4**	**+0.5**
COHC				S	**Sn**	**01 53 28.1**	**+6.9**
PPLP	**Puerto Lpez**	**4.24**	**1**	P	**Pn**	**01 52 46.0**	**-0.5**
PPLP				S	**Sn**	**01 53 31.1**	**-3.7**
SLOR	**San Lorenzo -**	**5.57**	**25**		**Pn**	**01 53 06.1**	**+0.9**
PAC1	**Pacto, Paraso**	**6.38**	**19**	P	**Pn**	**01 53 15.5**	**-0.5**
	7μm327nm,0.6s						
OTAV	**Otavalo**	**6.47**	**22**		**Pn**	**01 53 17.9**	**+0.3**
OTAV				Sn	**Sn**	**01 54 30.4**	**-0.1**
OTAV	**Otavalo**	**6.47**	**22**	P	**Pn**	**01 53 17.9**	**+0.3**
OTAV						01 54 30.4	
OTAV	**Otavalo**	**6.47**	**22**	eP	**Pn**	**01 53 17.4**	**-0.2**
OTAV	**Otavalo**	**6.47**	**22**	P	**Pn**	**01 53 17.6**	**0.0**
	1μm128nm,1.0s						
CUSE	**Cuicocha Este**	**6.56**	**22**	P	**Pn**	**01 53 19.3**	**+0.6**
	4μm275nm,0.5s						
CASC	**Dorado de Casc**	**6.88**	**31**	P	**Pn**	**01 53 22.2**	**-0.6**
	3μm264nm,1.0s						
BONI	**La Bonita**	**7.06**	**28**	P	**Pn**	**01 53 25.5**	**+0.1**
	2μm199nm,1.1s						
NNA	**Nana**	**7.31**	**147**	Pn	**Pn**	**01 53 28.2**	**-0.4**
	14nm,0.3s,baz=328,slow=10.0,SNR=20						
NNA				Sn	**Sn**	**01 54 52.9**	**+2.5**
	32nm,0.3s,baz=264,slow=9.2,SNR=4.4						
	59nm,0.4s						
NNA	**Nana**	**7.31**	**147⇑**	eP	**Pn**	**01 53 27.7**	**-0.9**
NNA				pmax	pmax		
	comp=Z,72nm,0.6s						
CMBC	**Cumbal**	**7.36**	**24**	P	**Pn**	**01 53 32.0**	**+2.2**
GCUF	**Volcan Galeras**	**7.82**	**27**	P	**Pn**	**01 53 36.2**	**+0.1**
	comp=Z,978nmcomp=Z,72nm,0.9s						
CRUC	**La Cruz**	**8.31**	**28**	P	**Pn**	**01 53 43.3**	**+0.7**
CZSB	**Cruzeiro do Su**	**8.32**	**104**	Pn	**Pn**	**01 53 40.8**	**-1.7**
PTLC	**Puerto Leguiza**	**8.48**	**46**	P	Pn	01 53 37.2	-7.6
	comp=Z,3μmcomp=Z,179nm,0.6s						
BBAC	**Balboa, Cauca**	**8.58**	**25**	P	**Pn**	**01 53 44.4**	**-1.8**
	comp=Z,587nmcomp=Z,40nm,0.6s						
FLOC	**Florencia**	**9.00**	**35**	P	**Pn**	**01 53 50.3**	**-1.6**
	comp=Z,2μmcomp=Z,32nm,1.1s						
GARC	**Garzon, Huila**	**9.59**	**34**	P	**Pn**	**01 53 58.6**	**-1.5**
MACC	**Macarena, Meta**	**10.56**	**42**	P	Pn	01 54 08.5	-4.8
	comp=Z,1μmcomp=Z,76nm,0.6s						
PAYG	**Puerto Ayora**	**10.70**	**298**		**Pn**	**01 54 17.3**	**+2.2**
YOTC	**Yotoco, Valle**	**10.72**	**25**	P	**Pn**	**01 54 11.7**	**-3.9**
	comp=Z,13nm,0.9s						
I20EC	**Galapagos**	**10.81**	**298**	I	I	02 55 00.0	
	baz=121,slow=319,SNR=1.6						
URMC	**La Uribe, Meta**	**11.09**	**36**	P	**Pn**	**01 54 18.1**	**-2.4**
	comp=Z,575nmcomp=Z,37nm,0.7s						
ROSC	**El Rosal**	**12.44**	**32**	Pn	**Pn**	**01 54 41.4**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=98,slow=22,SNR=1.3						
ROSC				Lg	Lg	01 58 14.0	
	comp=Z,2.0nm,0.3s,baz=287,slow=19,SNR=1.3						
ROSC				LR	LR	01 59 44.9	
	comp=Z,2μm,19.1s,baz=232,slow=38						
	comp=Z,4.5nm,0.3s						
DBBC	**Dabeiba**	**13.56**	**20**	P	**Pn**	**01 54 55.8**	**+1.4**
PIRO	**Carate, Puerto**	**14.34**	**350**	Pn	**Pn**	**01 55 05.7**	**+0.9**
BRU2	**Volcan**	**14.62**	**353**		**Pn**	**01 55 11.8**	**+3.0**
HDC	**Heredia**	**16.04**	**348**	Pn	**Pn**	**01 55 28.6**	**+1.3**
PB18	**Visviri**	**16.15**	**137**		**Pn**	**01 55 27.5**	**-1.5**
PB18				IAmb	IAmb	01 55 35.9	
	comp=Z,369nm,2.0s						
LPAZ	**La Paz**	**16.25**	**131**	Pn	**Pn**	**01 55 30.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=322,slow=9.2,SNR=32						
LPAZ				Sn	**Sn**	**01 58 35.0**	**+4.9**
	comp=Z,0.3nm,0.3s,baz=353,slow=19,SNR=1.4						
LPAZ				LR	LR	02 02 58.9	
	comp=Z,635nm,21.0s,baz=304,slow=42						
	comp=Z,22nm,1.1s						
LPAZ	**La Paz**	**16.25**	**131**		**Pn**	**01 55 30.0**	**-0.4**
LPAZ	**La Paz**	**16.25**	**131**	eP	**Pn**	**01 55 31.2**	**+0.8**
LPAZ	**La Paz**	**16.25**	**131**	eP	**Pn**	**01 55 28.9**	**-1.6**
TEFE	**Tefe**	**16.33**	**83**	eP	**Pn**	**01 55 30.2**	**-0.7**
JTS	**Las Juntas de**	**16.51**	**346**	Pn	**Pn**	**01 55 32.5**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=145,slow=11,SNR=4.2						
JTS				Sn	**Sn**	**01 58 40.0**	**+4.6**
	comp=Z,0.2nm,0.3s,baz=198,slow=19,SNR=0.9						
JTS				LR	LR	02 00 55.7	
	comp=Z,651nm,18.5s,baz=187,slow=34						
	comp=Z,1.0nm,0.3s						
JTS	**Las Juntas de**	**16.51**	**346**		**P**	**01 55 35.5**	**+0.2**
JTS	**Las Juntas de**	**16.51**	**346⇑**	eP	**P**	**01 55 35.8**	**+0.5**
JTS				pmax	pmax		
	comp=Z,32nm,2.2s						
JUD3	**Juan Diaz 3**	**16.54**	**344**	P	**P**	**01 55 35.2**	**-0.5**
PB16	**IPOC Station P**	**16.66**	**139**		**Pn**	**01 55 34.8**	**-0.8**
PB11	**IPOC Station P**	**17.64**	**143**		**Pn**	**01 55 45.9**	**-1.4**
SDV	**Santo Domingo**	**17.81**	**35**	P	**Pn**	**01 55 48.7**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=198,slow=9.6,SNR=17						
SDV				S	**S**	**01 59 17.6**	**+4.8**
	comp=Z,4.6nm,0.8s,baz=252,slow=20,SNR=2.1						
SDV				LR	LR	02 03 47.4	
	comp=Z,836nm,18.0s,baz=211,slow=40						
	comp=Z,16nm,0.7s						
SDV	**Santo Domingo**	**17.81**	**35**		**Pn**	**01 55 47.1**	**-2.3**
SDV	**Santo Domingo**	**17.81**	**35**	eP	**Pn**	**01 55 48.5**	**-1.0**
GO01	**Chusmiza**	**17.85**	**142**	P	**Pn**	**01 55 49.7**	**-0.5**
PB08	**IPOC Station P**	**18.23**	**142**	P	**P**	**01 55 54.0**	**-0.7**
PB02	**IPOC Station P**	**18.72**	**146**	P	**P**	**01 55 59.9**	**+0.1**
PB01	**IPOC Station P**	**18.73**	**145**		**P**	**01 55 59.4**	**-0.5**
BOAB	**BOACO BROADBAN**	**18.76**	**345**	P	**Pn**	**01 56 01.8**	**+1.0**
PB07	**IPOC Station P**	**19.06**	**147**	P	**P**	**01 56 03.9**	**+0.4**
PB03	**IPOC Station P**	**19.39**	**147**	P	**P**	**01 56 07.0**	**-0.2**
PB09	**IPOC Station P**	**19.47**	**146**	P	**P**	**01 56 07.2**	**-0.8**
SIUN	**Universidad Ur**	**19.79**	**349**	P	**Pn**	**01 56 12.5**	**-0.7**
SIUN				IAmb	IAmb	01 56 15.4	
	comp=Z,16nm,0.9s						
PB05	**IPOC Station P**	**19.82**	**150**	P	**P**	**01 56 12.4**	**+0.6**
MACA	**Manacapuru-AM**	**20.29**	**83**		**P**	**01 56 14.6**	**-2.3**
MACA	**Manacapuru-AM**	**20.29**	**83**	eP	**P**	**01 56 15.1**	**-1.7**
TGUH	**Tegucigalpa,Un**	**20.74**	**342**	P	**P**	**01 56 22.7**	**+0.9**
TGUH				IAmb	IAmb	01 56 38.3	
	comp=Z,62nm,0.9s						
AF01	**San Pedro de A**	**20.98**	**146**	P	**P**	**01 56 23.3**	**-1.3**
AF01				IAmb	IAmb	01 56 40.4	
	comp=Z,129nm,1.2s						
PB14	**IPOC Station P**	**21.23**	**153**	P	**P**	**01 56 27.2**	**-0.1**
PB14				IAmb	IAmb	01 56 41.8	
	comp=Z,46nm,1.0s						
VILB	**Vilhena**	**21.57**	**111**	P	**P**	**01 56 29.0**	**-1.7**
VILB				IAmb	IAmb	01 56 49.5	
	comp=Z,71nm,1.0s						
VILB	**Vilhena**	**21.57**	**111**	eP	**P**	**01 56 30.2**	**-0.6**
MTO3	**Montecristo**	**21.78**	**337**	P	**P**	**01 56 34.0**	**+0.9**
MTO3				IAmb	IAmb	01 56 38.1	
	comp=Z,39nm,1.0s						
SIV	**San Ignacio**	**21.88**	**119**	P	**P**	**01 56 33.7**	**-0.4**
	comp=Z,7.4nm,0.8s,baz=296,slow=12,SNR=25						
SIV				S	Sn	02 00 39.6	-5.5
	comp=Z,7.4nm,1.1s,baz=266,slow=15,SNR=4.2						
SIV				LR	LR	02 06 01.4	
	comp=Z,2μm,18.5s,baz=294,slow=39						
	comp=Z,7.4nm,0.8s						
BOAV	**Boa Vista**	**21.89**	**69**	P	**P**	**01 56 31.8**	**-2.4**
BOAV				IAmb	IAmb	01 56 44.9	
	comp=Z,107nm,1.3s						
BOAV	**Boa Vista**	**21.89**	**69**	eP	**P**	**01 56 33.1**	**-1.0**
ESQI	**Esquipulas**	**21.92**	**338**	P	**P**	**01 56 35.6**	**+1.1**
APG	**El Apazote**	**22.77**	**335**	P	**P**	**01 56 44.0**	**+0.3**
	comp=Z,1.3nm,1.1s,baz=151,slow=13,SNR=8.7						
APG				LR	LR	02 04 12.5	
	comp=Z,41nm,19.8s,baz=274,slow=33						
PTLB	**Pontes e Lacer**	**23.38**	**116**	P	**P**	**01 56 47.6**	**-2.0**
PTLB	**Pontes e Lacer**	**23.38**	**116**	eP	**P**	**01 56 49.1**	**-0.5**
HUEH	**Huehuetenango**	**23.49**	**333**	P	**P**	**01 56 52.3**	**+1.3**
AC02	**Maricunga**	**23.71**	**153**	P	**P**	**01 56 52.6**	**-0.6**
AC02				IAmb	IAmb	01 57 07.4	
	comp=Z,112nm,1.9s						
MTDJ	**Mount Denham**	**24.11**	**8**	P	**P**	**01 56 57.5**	**+0.9**
PETF	**Flores**	**24.27**	**339**	P	**P**	**01 56 58.2**	**+0.2**
PETF				IAmb	IAmb	01 57 02.2	
	comp=Z,27nm,0.9s						
PDRB	**Porto dos Gac**	**24.53**	**105**	eP	**P**	**01 56 59.4**	**-1.0**
AC05	**El Transito**	**25.00**	**158**	P	**P**	**01 57 04.1**	**-0.5**
AC05				IAmb	IAmb	01 57 39.7	
	comp=Z,50nm,1.2s						
ITTB	**Itaituba**	**25.07**	**88**	eP	**P**	**01 57 04.3**	**-1.0**
CLDB	**Colider**	**25.30**	**103**	eP	**P**	**01 57 06.0**	**-1.3**
NPGB	**Novo Progresso**	**25.37**	**94**	eP	**P**	**01 57 06.6**	**-1.5**
SALV	**Santo Antonio**	**26.64**	**114**	eP	**P**	**01 57 19.1**	**-0.4**
TEIG	**Tepich**	**26.88**	**344**	P	**P**	**01 57 22.9**	**+1.3**
TEIG				IAmb	IAmb	01 57 43.7	
	comp=Z,111nm,1.8s						
DR12	**Loma Pena Alta**	**26.94**	**25**	P	**P**	**01 57 21.9**	**-0.3**
MURT	**Porto Murtinho**	**27.47**	**127**	eP	**P**	**01 57 26.4**	**-0.5**
H03N2	**Juan Fernandez**	**27.55**	**177**	T	T	02 26 07.8	
	baz=355,slow=76,SNR=359						
H03N1	**Juan Fernandez**	**27.55**	**176**	T	T	02 26 08.7	
	baz=355,slow=76,SNR=413						
BDQN	**Bodoquena, MS**	**27.56**	**124**	eP	**P**	**01 57 28.9**	**+1.2**
H03N3	**Juan Fernandez**	**27.56**	**176**	T	T	02 26 07.5	
	baz=355,slow=76,SNR=409						
OBIP	**Obispado Ponce**	**27.57**	**30**	P	**P**	**01 57 26.9**	**-0.8**
CELP	**Cerrillos**	**27.61**	**30**	P	**P**	**01 57 27.9**	**-0.2**
CELP				IAmb	IAmb	01 57 44.9	
	comp=Z,54nm,1.1s						
SJG	**San Juan**	**27.86**	**31**	LR	LR	02 10 03.9	
	comp=Z,207nm,18.7s,baz=210,slow=39						
SJG	**San Juan**	**27.86**	**31**	P	**P**	**01 57 29.9**	**-0.4**
SJG	**San Juan**	**27.86**	**31**	P	**P**	**01 57 29.9**	**-0.4**
SJG				pmax	pmax		
	comp=Z,57nm,0.9s						
PP1B	**Ponte de Pedra**	**27.96**	**117**	eP	**P**	**01 57 31.2**	**-0.2**
AQDB	**Aquidauana**	**28.44**	**123**	eP	**P**	**01 57 34.3**	**-1.3**
CAMR	**Camarioca**	**28.70**	**359**	P	**P**	**01 57 38.8**	**+1.0**
SNDB	**Serra Nova Dou**	**29.83**	**104**	eP	**P**	**01 57 47.3**	**-0.7**
MDP	**Montagnes des**	**30.19**	**69**	LR	LR	02 12 20.1	
	comp=Z,207nm,21.5s,baz=251,slow=41						
CPUP	**Villa Florida**	**30.34**	**135**	P	**P**	**01 57 52.8**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=300,slow=14,SNR=3.9						
CPUP				LR	LR	02 12 44.8	
	comp=Z,299nm,18.2s,baz=305,slow=42						
	comp=Z,3.0nm,0.9s						
CPUP	**Villa Florida**	**30.34**	**135**	P	**P**	**01 57 51.5**	**-0.9**
CPUP	**Villa Florida**	**30.34**	**135**	P	**P**	**01 57 51.5**	**-0.9**
CPUP				pmax	pmax		
	comp=Z,20nm,1.6s						
SMTB	**Santa Maria do**	**33.13**	**97**	eP	**P**	**01 58 16.4**	**-0.7**
PTGB	**Pitanga**	**33.41**	**127**	eP	**P**	**01 58 18.9**	**-0.6**
BDFB	**Brasilia**	**33.67**	**110**	P	**P**	**01 58 21.3**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=278,slow=17,SNR=3.5						
BDFB				LR	LR	02 13 00.5	
	comp=Z,1μm,18.7s,baz=291,slow=38						
	comp=Z,2.7nm,0.7s						
BDFB	**Brasilia**	**33.67**	**110**	P	**P**	**01 58 20.2**	**-1.6**
BDFB				IAmb	IAmb	01 58 34.6	
	comp=Z,31nm,1.5s						
BDFB	**Brasilia**	**33.67**	**110**	P	**P**	**01 58 20.3**	**-1.6**
BDFB				pmax	pmax		
	comp=Z,31nm,1.5s						
IPMB	**Ipameri, GO**	**34.09**	**114**	eP	**P**	**01 58 23.6**	**-1.9**
RPN	**Rapa Nui**	**34.40**	**229**	LR	LR	02 08 32.7	
	comp=Z,667nm,19.7s,baz=52,slow=30						
PLCA	**Paso Flores**	**35.98**	**167**	P	**P**	**01 58 41.8**	**+0.3**
	comp=Z,8.8nm,1.1s,baz=340,slow=10.0,SNR=9.1						
PLCA				PcP	**PcP**	**02 01 07.8**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=333,slow=6.8,SNR=5.9						
PLCA				LR	LR	02 10 31.3	
	comp=Z,147nm,18.6s,baz=354,slow=32						
	comp=Z,8.8nm,1.1s						
PLCA	**Paso Flores**	**35.98**	**167**	P	**P**	**01 58 41.5**	**0.0**
PLCA				IAmb	IAmb	01 58 43.5	
	comp=Z,19nm,1.2s						
PLCA	**Paso Flores**	**35.98**	**167**	P	**P**	**01 58 41.5**	**0.0**
PLCA						02 01 07.8	
PLCA				pmax	pmax		
	comp=Z,19nm,1.2s						

PLCA Paso Flores 35.98 167 *e*P P **01 58 41.9 +0.5**
PLCA Paso Flores 35.98 167 P P **01 58 41.8 +0.3**
PLCA pP **pP 01 58 53.0 +0.5**
PLCA PcP **PcP 02 01 08.0 +0.4**
SDBA SAO DESIDERIO 36.08 103 *e*P P **01 58 41.0 -1.6**
PLTB Pedras Altas 36.28 139 P P **01 58 43.8 -0.3**
TRQA Tornquist 36.40 155 P P **01 58 44.4 -0.7**
TRQA IAmb IAmb 01 58 48.9
comp=Z,19nm,1.2s
TRQA Tornquist 36.40 155 P P **01 58 44.4 -0.7**
TRQA pmax pmax
comp=Z,19nm,1.2s
JANB Januaria 37.05 107 *e*P P **01 58 49.6 -1.3**
DIAM Diamantina, MG 38.33 112 *e*P P **01 59 00.5 -1.4**
HKT Hockley 38.35 339⇑*e*P P **01 59 01.5 0.0**
HKT pmax pmax
comp=Z,43nm,1.3s
HKT Hockley 38.35 339 P P **01 59 03.6 +2.1**
MLDN Muldoon 38.66 337 P P **01 59 05.6 +1.4**
GOGA Godfrey 39.09 357 P **01 59 07.1 -0.6**
GOGA IAmb IAmb 01 59 08.9
comp=Z,27nm,1.4s
GOGA Godfrey 39.09 357 P P **01 59 07.1 -0.6**
GOGA pmax pmax
comp=Z,27nm,1.4s
DRIO Del Rio 39.85 333 P **01 59 14.6 +0.4**
DRIO IAmb IAmb 01 59 16.2
comp=Z,25nm,0.9s
FPAL Fort Paine 40.38 354 P P **01 59 17.7 -0.8**
JCT Junction City 40.39 334 P P **01 59 19.6 +0.9**
JCT IAmb IAmb 01 59 21.2
comp=Z,21nm,0.9s
JCT Junction City 40.39 334 P P **01 59 19.6 +0.9**
JCT pmax pmax
comp=Z,21nm,1.0s
SLBS Sierra La Lagu 40.81 317 P P **01 59 23.7 +1.4**
SLBS pP **pP 01 59 33.5 -0.1**
SLBS x x 01 59 36.4
SWET Sewanee 41.09 354 P P **01 59 23.5 -0.8**
TXAR Lajitas Array 41.25 329 P P **01 59 24.9 -1.0**
comp=Z,3.4nm,1.0s,baz=141,slow=7.0,SNR=8.9
TXAR PcP **PcP 02 01 24.3 0.0**
comp=Z,1.3nm,0.9s,baz=151,slow=1.7,SNR=4.4
TXAR LR LR 02 15 36.7
comp=Z,282nm,18.6s,baz=129,slow=35
comp=Z,3.4nm,1.0s
TXAR Lajitas Array 41.25 329 P P **01 59 26.5 +0.7**
LPIG La Paz 41.33 317 LR LR 02 12 38.7
comp=Z,128nm,21.0s,baz=162,slow=31
TKL Tuckaleechee C 41.34 356 LR LR 02 16 03.3
comp=Z,251nm,18.4s,baz=155,slow=35
TKL Tuckaleechee C 41.34 356 P P **01 59 26.2 -0.2**
TKL Tuckaleechee C 41.34 356 P P **01 59 26.2 -0.2**
TKL pmax pmax
comp=Z,20nm,1.1s
GUA01 Guaratinga, BA 41.59 108 *e*P P **01 59 27.3 -1.4**
RIB01 Linhares ES 41.59 113 *e*P P **01 59 27.3 -1.4**
CMC01 Camacan, BA 41.66 107 *e*P P **01 59 28.7 -0.6**
NBIT Itapeh - BA 41.68 106 *e*P P **01 59 28.4 -1.0**
MIAR Mount Ida 41.90 344 P P **01 59 31.4 +0.5**
MIAR Mount Ida 41.90 344 P P **01 59 31.4 +0.5**
MIAR pmax pmax
comp=Z,12nm,1.0s
WVT Waverly 42.23 352 P P **01 59 32.2 -1.4**
WVT Waverly 42.23 352 P P **01 59 32.2 -1.4**
WVT pmax pmax
comp=Z,10.0nm,0.9s
WVT Waverly 42.23 352 P P **01 59 32.5 -1.1**
WVT pP **pP 01 59 42.4 -2.5**
WVT PcP **PcP 02 01 24.6 -2.5**
WHAR Wooly Hollow 42.28 346 P P **01 59 34.4 +0.4**
WHAR IAmb IAmb 01 59 35.6
comp=Z,16nm,0.8s
T59A Double "B" Far 42.67 4 P P **01 59 36.5 -0.6**
T59A IAmb IAmb 01 59 37.6
comp=Z,24nm,1.2s
LCAR Lake Charles 42.77 348 P P **01 59 37.7 -0.3**
LCAR IAmb IAmb 01 59 39.0
comp=Z,22nm,0.7s
X34A Smith Ranch, M 43.27 339 P P **01 59 43.0 +0.9**
WMOK Wichita Mounta 43.73 338 P P **01 59 46.1 +0.2**
WMOK IAmb IAmb 01 59 47.5
comp=Z,20nm,1.1s
WMOK Wichita Mounta 43.73 338 P P **01 59 46.1 +0.2**
WMOK pmax pmax
comp=Z,20nm,1.1s
CCM Cathedral Cave 44.70 348 P P **01 59 53.5 0.0**
CCM IAmb IAmb 01 59 55.1
comp=Z,16nm,0.7s
CCM Cathedral Cave 44.70 348 P P **01 59 53.5 0.0**
CCM pmax pmax
comp=Z,17nm,0.7s
CCM Cathedral Cave 44.70 348 P P **01 59 53.7 +0.2**
CCM pP **pP 02 00 03.8 -1.1**
CCM PcP **PcP 02 01 35.9 +0.4**
RCBR Riachuelo 44.72 92 LR LR 02 19 32.3
comp=Z,84nm,18.4s,baz=268,slow=37
AMTX Amarillo 44.99 336 P P **01 59 56.5 +0.6**
AMTX IAmb IAmb 01 59 57.8
comp=Z,22nm,0.7s
319A Douglas 45.87 325 P P **02 00 04.4 +1.3**
319A IAmb IAmb 02 00 05.8
comp=Z,25nm,0.9s
121A Cookes Peak, D 45.93 328 P P **02 00 04.4 +0.8**
121A IAmb IAmb 02 00 06.7
comp=Z,18nm,1.1s
SSPA Standing Stone 46.30 3 P P **02 00 05.3 -0.8**
SSPA IAmb IAmb 02 00 06.7
comp=Z,28nm,1.3s
DUN6 Lazy B Ranch 46.65 327 P P **02 00 10.6 +1.4**
SBM South Baldy 46.76 330 P P **02 00 11.8 +1.6**
ANMO Albuquerque 47.18 331 LR LR 02 18 34.8
comp=Z,240nm,18.4s,baz=138,slow=34
ANMO Albuquerque 47.18 331 P P **02 00 14.7 +1.3**
ANMO Albuquerque 47.18 331 *ce*P P **02 00 14.0 +0.7**
ANMO pmax pmax
comp=Z,60nm,1.7s
ANMO Albuquerque 47.18 331 P P **02 00 14.8 +1.5**
KSPA Keystone Colle 47.37 5 P P **02 00 14.0 -0.5**
TUC Tucson 47.42 325 P P **02 00 15.7 +0.6**
TUC Tucson 47.42 325 P P **02 00 15.7 +0.6**
TUC pmax pmax
comp=Z,7.0nm,0.9s
CBKS Cedar Bluff 47.73 340 P P **02 00 17.7 +0.4**
CBKS Cedar Bluff 47.73 340 P P **02 00 17.7 +0.4**
CBKS pmax pmax
comp=Z,30nm,0.8s
BINY Binghamton 47.99 5 P P **02 00 18.6 -0.7**
T25A Trinidad 48.06 335 P P **02 00 20.9 +0.7**
L40A Anamosa 48.58 350 P P **02 00 23.2 -0.6**
SCIA State Center 48.81 348 P P **02 00 25.6 0.0**
SDCO Great Sand Dun 49.04 334 P P **02 00 28.2 +0.4**
SDCO IAmb IAmb 02 00 30.1
comp=Z,18nm,0.8s
MVCO Mesa Verde 49.98 331 P P **02 00 35.5 +0.6**
MVCO IAmb IAmb 02 00 37.0
comp=Z,12nm,0.7s
WUAZ Wupatki 50.13 327 P P **02 00 36.8 +0.8**
WUAZ IAmb IAmb 02 00 38.8
comp=Z,22nm,0.9s
SADO Sadowa 50.38 2 LR LR 02 20 58.1
comp=Z,125nm,21.7s,baz=174,slow=35
ISCO Idaho Springs 50.81 335 P P **02 00 41.6 +0.4**
ISCO IAmb IAmb 02 00 43.3
comp=Z,14nm,0.9s
ISCO Idaho Springs 50.81 335 P P **02 00 41.6 +0.4**
ISCO pmax pmax
comp=Z,14nm,0.9s
ECSD EROS Data Cent 51.33 345 P P **02 00 44.0 -0.7**
ECSD IAmb IAmb 02 00 44.7
comp=Z,9.6nm,0.6s
PFO Pinyon Flats O 51.71 322 LR LR 02 20 45.3
comp=Z,190nm,18.4s,baz=64,slow=34
PFO Pinyon Flats O 51.71 322⇓*eP* P **02 00 47.7 -0.2**
PFO pmax pmax
comp=Z,19nm,1.2s
PFO Pinyon Flats O 51.71 322 P P **02 00 49.6 +1.8**
PFO pP **pP 02 01 01.2 +1.8**
PFO PcP **PcP 02 02 00.1 -0.9**
PKME Peaks-Kenny Pk 51.89 10 P P **02 00 48.8 0.0**
PKME IAmb IAmb 02 01 00.9
comp=Z,34nm,1.2s
SZCU Shurtz Canyon 52.60 328 P P **02 00 55.3 +0.8**
SZCU IAmb IAmb 02 00 57.4
comp=Z,23nm,1.1s
BSUT Blindstream Ca 53.69 332 P P **02 01 03.6 +1.0**
BSUT IAmb IAmb 02 01 05.0
comp=Z,21nm,0.9s
GBN Guysborough 53.85 17 P P **02 01 03.1 -0.2**
RSSD Black Hills 53.92 339 P P **02 01 04.7 +0.6**
RSSD IAmb IAmb 02 01 06.0
comp=Z,21nm,1.3s
RSSD Black Hills 53.92 339 P P **02 01 04.7 +0.6**
RSSD pmax pmax
comp=Z,21nm,1.3s
RSSD Black Hills 53.92 339 P P **02 01 05.2 +1.1**
RSSD pP **pP 02 01 16.1 +0.4**
RSSD x x 02 01 22.2
RSSD PcP **PcP 02 02 09.2 0.0**
LDAQ Lac Daran 54.21 8 P P **02 01 05.4 -0.6**
LDAQ IAmb IAmb 02 01 06.2
comp=Z,11nm,0.6s
PDAR Pinedale Array 54.93 334 P P **02 01 11.4 -0.1**
comp=Z,7.3nm,0.8s,baz=141,slow=7.0,SNR=59
PDAR PcP **PcP 02 02 12.3 -0.8**
comp=Z,2.3nm,0.6s,baz=149,slow=2.5,SNR=7.5
PDAR LR LR 02 24 51.2
comp=Z,197nm,18.0s,baz=152,slow=36
comp=Z,7.3nm,0.8s
PDAR Pinedale Array 54.93 334 P P **02 01 11.7 +0.1**
PDAR PcP **PcP 02 02 12.7 -0.4**
AGMN Agassiz Nation 55.47 348 P P **02 01 15.1 +0.1**
AHID Auburn Hatcher 55.60 333 P P **02 01 16.8 +0.5**
AHID IAmb IAmb 02 01 31.8
comp=Z,11nm,0.8s
ELK Elko 56.05 329 LR LR 02 24 17.2
comp=Z,528nm,19.1s,baz=120,slow=35
ELK Elko 56.05 329 P P **02 01 20.2 +0.6**
ELK IAmb IAmb 02 01 21.8
comp=Z,15nm,1.0s
ELK Elko 56.05 329 P P **02 01 20.2 +0.6**
ELK pmax pmax
comp=Z,15nm,1.0s
NVAR Mina Array Bea 56.07 325 P P **02 01 20.5 +0.7**
comp=Z,7.3nm,0.8s,baz=122,slow=5.6,SNR=55
NVAR PcP **PcP 02 02 18.2 +0.6**
comp=Z,1.7nm,0.9s,baz=134,slow=3.7,SNR=6.5
NVAR LR LR 02 24 28.9
comp=Z,154nm,18.2s,baz=132,slow=35
comp=Z,7.3nm,0.8s
NVAR Mina Array Bea 56.07 325 P P **02 01 20.7 +0.9**
NVAR PcP **02 02 17.6 0.0**
MOOW Moose Ponds 56.23 334 P P **02 01 21.1 +0.2**
YHB Horse Butte 57.23 335 P P **02 01 28.7 +0.8**
YHB IAmb IAmb 02 01 44.9
comp=Z,16nm,0.9s
ULM Lac du Bonnet 57.33 349 P P **02 01 27.3 -0.9**
comp=Z,9.6nm,0.7s,baz=158,slow=9.0,SNR=15
ULM PcP **PcP 02 02 21.2 -0.8**
comp=Z,3.8nm,0.5s,baz=182,slow=4.2,SNR=1.6
comp=Z,9.6nm,0.7s
ULM Lac du Bonnet 57.33 349 P P **02 01 27.3 -0.9**
ULM IAmb IAmb 02 01 29.3
comp=Z,17nm,0.9s
ULM Lac du Bonnet 57.33 349 *de*P P **02 01 27.7 -0.5**
ULM pmax pmax
comp=Z,10.0nm,0.7s
HLID Hailey 57.75 332 P P **02 01 32.2 +0.7**
BCYI Bear Canyon 57.85 333 P P **02 01 33.3 +1.0**
BCYI IAmb IAmb 02 01 49.4
comp=Z,17nm,0.9s
AFDM Forest Hills D 57.97 324 P P **02 01 33.4 +0.4**
MCMT McKenzie Canyo 58.01 334 P P **02 01 34.5 +1.0**
BOZ Bozeman (W) 58.09 335 P P **02 01 34.3 +0.5**
BOZ IAmb IAmb 02 01 35.7
comp=Z,18nm,0.9s
BOZ Bozeman (W) 58.09 335 P P **02 01 34.3 +0.5**
BOZ pmax pmax
comp=Z,18nm,1.0s
WVOR Wild Horse Val 59.03 328 P P **02 01 40.7 +0.2**
WVOR IAmb IAmb 02 01 42.3
comp=Z,22nm,1.1s
WVOR Wild Horse Val 59.03 328 P P **02 01 40.7 +0.2**
WVOR pmax pmax
comp=Z,22nm,1.1s
PLID Pearl Lake 59.65 332 P P **02 01 44.7 0.0**
PLID IAmb IAmb 02 01 46.0
comp=Z,10.0nm,1.0s
MSO Missoula 60.05 334 P P **02 01 47.9 +0.6**
PMSA Palmer Station 60.06 172 LR LR 02 23 07.1
comp=Z,130nm,19.9s,baz=346,slow=32
YBH Yreka Blue Hor 60.79 325 LR LR 02 27 26.7
comp=Z,14nm,18.1s,baz=128,slow=35
J05D Fort Rock, OR 61.00 327 P P **02 01 54.8 +0.8**
J05D IAmb IAmb 02 01 57.2
comp=Z,14nm,0.9s
SCHQ Schefferville 61.55 9 P P **02 01 56.0 -1.3**
comp=Z,4.4nm,0.6s,baz=186,slow=9.2,SNR=19
comp=Z,4.4nm,0.6s
NEW Newport 62.54 334 LR LR 02 29 58.4
comp=Z,157nm,18.1s,baz=138,slow=37
FFC Flin Flon 62.84 346 P P **02 02 05.2 -0.7**
FFC pP **pP 02 02 16.0 -1.7**
FFC x x 02 02 22.4
PPT Papeete 67.99 253 LR LR 02 25 03.5
comp=Z,221nm,18.5s,baz=106,slow=30
MACI Morro de la Ar 70.58 57 P P **02 02 56.1 +0.1**
PMPS Porto Santo 72.26 53 *eP* P **02 03 09.4 +3.6**
PMPS *i* IAmb IAmb 02 03 13.6
comp=Z,110nm,1.4s
YKA Yellowknife Ar 72.84 344 P P **02 03 08.3 -0.3**
comp=Z,0.8nm,0.4s,baz=146,slow=5.5,SNR=22
comp=Z,0.8nm,0.4s
YKA Yellowknife Ar 72.84 344 P P **02 03 08.4 -0.2**
TOAD Toad River Com 73.52 338 P P **02 03 13.7 +0.9**
baz=133
KOTAN Kotaneelee Air 73.98 339 P P **02 03 16.7 +1.2**
baz=135
T35M Bob Quinn 74.31 334 P P **02 03 19.0 +1.5**
baz=128
CRAG Craig 74.69 332 P P **02 03 21.2 +1.5**
baz=125
WRAK Wrangell Islan 74.89 333 P P **02 03 21.7 +1.0**
baz=126
DLBC Dease Lake 75.13 336 P P **02 03 23.4 +1.2**
baz=129
WTLY Watson Lake, Y 75.72 337 P P **02 03 26.3 +0.8**
baz=130
BELA Belgrano 2 75.89 171 P P **02 03 26.3 +0.1**
BELA IAmb IAmb 02 03 27.4
comp=Z,12nm,1.0s
WRGLY Wrigley 76.00 342 P P **02 03 28.2 +1.2**
baz=136
R33M Jennings River 76.11 336 P P **02 03 29.1 +1.2**
baz=128
Q32M Nakina River 76.38 335 P P **02 03 30.9 +1.4**
baz=127
S32K Killisnoo 76.50 333 P P **02 03 31.9 +2.0**
baz=124
SIT Sitka 76.60 333 P P **02 03 32.2 +1.7**
baz=124
DBIC Dimbokro 76.86 82 P P **02 03 33.0 +0.1**
comp=Z,5.4nm,0.7s,baz=285,slow=8.0,SNR=7.7
DBIC LR LR 02 35 55.8
comp=Z,373nm,19.3s,baz=292,slow=34
comp=Z,5.4nm,0.7s
DBIC Dimbokro 76.86 82 P P **02 03 32.1 -0.8**
DBIC IAmb IAmb 02 04 17.1
comp=Z,30nm,1.5s
DBIC Dimbokro 76.86 82 P P **02 03 32.1 -0.8**
DBIC pmax pmax
comp=Z,30nm,1.5s
DBIC Dimbokro 76.86 82 P P **02 03 32.7 -0.2**
DBIC PcP **PcP 02 03 43.1 -0.9**
DBIC x x 02 03 50.3
R32K Eaglecrest 76.93 334 P P **02 03 33.4 +1.0**
baz=125
P32M Atlin 77.35 335 P P **02 03 36.1 +1.4**
baz=126
P33M Teslin, Yukon 77.35 336 P P **02 03 36.1 +1.3**
baz=126
RAR Rarotonga 77.60 250 LR LR 02 26 39.0
comp=Z,30nm,21.7s,baz=92,slow=27
N32M Quiet Lake 78.02 337 P P **02 03 39.5 +1.0**
baz=126
POIN Pond Inlet 78.39 1 P P **02 03 39.6 -0.6**
POIN IAmb IAmb 02 04 03.5
comp=Z,18nm,1.3s
WHY Whitehorse 78.44 336 P P **02 03 41.4 +0.4**
baz=125
VNA3 Neumayer Olymp 78.52 162⇑P P **02 03 40.5 -0.6**
comp=Z,9.3nm,0.9s
FARO Faro, Yukon 78.76 338 P P **02 03 43.6 +1.0**
baz=126
O30N Mendenhall 79.00 336 P P **02 03 44.9 +1.0**
baz=124
M31M Drury Creek, Y 79.14 337 P P **02 03 45.5 +0.9**
baz=125
VNA2 Neumayer--Watz 79.16 161⇑P P **02 03 45.1 +0.5**
comp=Z,3.0nm,0.6s,baz=294,slow=8.2
N31M Braeburn, Yuko 79.27 336 P P **02 03 46.7 +1.3**
baz=124
AVE Averroes 79.49 55 P P **02 03 47.7 +0.5**
PMAFR Mafra 79.50 49 *eP* P **02 03 51.4 +4.3**
MORF Marmelete 79.53 51 P P **02 03 47.2 -0.1**
MORF IAmb IAmb 02 03 49.3
comp=Z,16nm,1.0s
MORF Marmelete 79.53 51 *eP* P **02 03 48.5 +1.1**
MORF *i* IAmb IAmb 02 04 01.9
comp=Z,34nm,1.9s
MORF Marmelete 79.53 51 P P **02 03 47.2 -0.1**
MORF pmax pmax
comp=Z,16nm,1.0s
HYT Haines Junctio 79.61 335 P P **02 03 48.6 +1.3**
baz=122
O29M Mount Kennedy 79.78 335 P P **02 03 49.8 +1.5**
baz=121
YUK6 Outpost Mounta 80.03 335 P P **02 03 50.9 +1.1**
baz=122
PBDV Barranco-do-Ve 80.07 51 *eP* P **02 03 51.6 +1.4**
PBDV *i* IAmb IAmb 02 03 52.3
comp=Z,32nm,1.5s
MOE Montemor 80.09 49 *eP* P **02 03 50.5 +0.2**
MOE *i* IAmb IAmb 02 04 03.3
comp=Z,30nm,1.7s
PCVE Castro Verde 80.09 50 *eP* P **02 03 50.9 +0.7**
PCVE *i* IAmb IAmb 02 03 52.1
comp=Z,30nm,1.6s
PVAQ Vaqueiros 80.28 51 *eP* P **02 03 52.0 +0.7**
M30M Minto, Yukon 80.28 337 P P **02 03 52.1 +1.2**
baz=123
YUK4 Talbot Arm 80.36 336 P P **02 03 52.6 +1.2**
baz=121,SNR=5.1
PINM Pinnacle 80.40 334 P P **02 03 52.7 +1.2**
baz=120
PSARD Sardoal 80.52 48 *eP* P **02 03 53.5 +0.9**
PTO Porto 80.62 47 *eP* P **02 03 52.8 -0.2**
O28M Mount Upton 80.71 335 P P **02 03 54.5 +1.0**
baz=120
SNAA Sanae 80.75 162⇑P P **02 03 53.3 0.0**
comp=Z,181nm,0.8s
SNAA Sanae 80.75 162 P P **02 03 52.7 -0.5**
comp=Z,7.3nm,0.8s,baz=288,slow=7.9,SNR=8.0
SNAA LR LR 02 36 31.8
comp=Z,44nm,19.2s,baz=241,slow=33
comp=Z,7.3nm,0.8s
SNAA Sanae 80.75 162 P P **02 03 53.5 +0.2**
SNAA IAmb IAmb 02 04 04.6
comp=Z,15nm,1.0s
SNAA Sanae 80.75 162 *ce*P P **02 03 52.8 -0.5**
SNAA pmax pmax
comp=Z,20nm,1.7s
YUK8 Steele Glacier 80.79 335 P P **02 03 54.6 +0.7**
baz=120
RES Resolute Bay 80.82 356 LR LR 02 39 53.8
comp=Z,87nm,18.4s,baz=87,slow=36
M29M Somme Creek 80.86 337 P P **02 03 55.3 +1.3**
baz=122,SNR=12
L29M L29M 81.08 337 P P **02 03 56.7 +1.5**
baz=122
J30M Hart River 81.22 339 P P **02 03 57.4 +1.6**
baz=124
H31M Peel River 81.24 340 P P **02 03 56.9 +1.0**
baz=126
K29M Barlow Dome 81.25 338 P P **02 03 56.8 +0.8**
baz=123
POLO Lamas de Olo 81.27 47 *eP* P **02 03 57.1 +0.5**
CTG Chitna Glacier 81.30 335 P P **02 03 57.8 +1.4**
baz=119
YUK3 Moose Creek 81.32 335 P P **02 03 57.8 +1.2**
baz=120,SNR=5.6
MD01 Midelt array s 81.56 56 P P **02 03 58.8 +0.3**
MD31 MD31 81.56 56 P P **02 03 58.2 -0.2**
I30M Mount Dempster 81.60 339 P P **02 03 58.8 +0.9**
baz=124,SNR=9.2
MDT Midelt 81.67 56 LR LR 02 37 31.7
comp=Z,94nm,21.3s,baz=282,slow=34
BVCY Beaver Creek 81.81 336 P P **02 04 00.1 +1.2**
baz=119
G31M Satah River 81.88 341 P P **02 03 59.8 +0.7**
baz=126
F31M Tsiigehtchic 82.02 342 P P **02 04 00.3 +0.4**
baz=127,SNR=10
DAWY Dawson 82.07 338 P P **02 04 00.3 0.0**
DAWY Dawson 82.07 338 P P **02 04 00.5 +0.2**
baz=121,SNR=5.3
KAIM Kayak Island 82.17 333 P P **02 04 01.6 +0.8**
baz=116
M27K Edge Creek, AK 82.19 336 P P **02 04 02.1 +1.0**
baz=118,SNR=6.5
MCARA McCarthy VSAT 82.21 335 P P **02 04 01.2 +0.2**
MCARA McCarthy VSAT 82.21 335 P P **02 04 02.2 +1.2**
baz=117
I29M Ogilvie Camp, 82.35 339 P P **02 04 02.2 +0.5**
baz=122,SNR=5.9
EPYK Eagle Plains 82.36 340 P P **02 04 02.4 +0.7**
baz=124,SNR=5.7
INK Inuvik 82.48 343 P P **02 04 02.2 0.0**
INK IAmb IAmb 02 04 04.2
comp=Z,28nm,1.1s
INK Inuvik 82.48 343 P P **02 04 02.2 0.0**
INK pmax pmax
comp=Z,28nm,1.2s
INK Inuvik 82.48 343 P P **02 04 02.6 +0.4**
baz=127,SNR=18
BCAR Beaver Creek A 82.50 336 P P **02 04 02.8 +0.2**
L27K Beaver Creek, 82.51 336 P P **02 04 03.3 +0.7**
baz=119
TULEG Thule 82.52 3 P P **02 04 02.1 -0.3**
M26K Nabesna, AK 82.67 335 P P **02 04 04.6 +1.1**
baz=118
BMRM Bremner River 82.71 334 P P **02 04 04.2 +0.5**
baz=116
F30M Barrier River 82.76 342 P P **02 04 04.4 +0.6**
baz=125
A36M Sachs Harbour 82.78 347 P P **02 04 04.0 +0.2**
baz=135,SNR=10
BORG Borgarnes 82.79 22 LR LR 02 40 17.3
comp=Z,42nm,18.1s,baz=200,slow=35
SUMG Summit 82.80 12 P P **02 04 04.0 -0.4**
SUMG Summit 82.80 12 P P **02 04 04.0 -0.4**
SUMG pmax pmax
comp=Z,40nm,1.3s
I28M Miner Creek 82.98 339 P P **02 04 05.3 +0.3**
baz=121
N25K Chitina, Valde 82.99 334 P P **02 04 06.4 +1.2**
baz=116
EYAK Cordova Ski Ar 83.04 333 P P **02 04 06.1 +0.7**
baz=115
G29M Pine Creek 83.09 341 P P **02 04 06.4 +0.8**
baz=123
L26K Log Cabin Wild 83.11 336 P P **02 04 07.1 +1.5**
baz=117
KLU Klutina 83.51 334 P P **02 04 08.5 +0.6**
baz=115
I27K Kandik River 83.66 339 P P **02 04 09.2 +0.7**
baz=119,SNR=5.2
ESDC Sonseca Array 83.68 49 P P **02 04 09.1 -0.2**
comp=Z,6.3nm,1.1s,baz=260,slow=5.2,SNR=20
ESDC LR LR 02 40 00.3
comp=Z,46nm,18.3s,baz=270,slow=35
comp=Z,6.3nm,1.1s
ESDC Sonseca Array 83.68 49 P P **02 04 09.0 -0.2**
ESDC IAmb IAmb 02 04 22.7
comp=Z,31nm,1.6s
ESBB Sonseca Array 83.68 49 P P **02 04 08.9 -0.3**
SCRK Sand Creek 83.79 337 P P **02 04 09.2 -0.1**
SCRK IAmb IAmb 02 04 10.4
comp=Z,8.6nm,1.0s
SCRK Sand Creek 83.79 337 P P **02 04 09.8 +0.5**
baz=117,SNR=5.7
E29M Blow River 83.85 342 P P **02 04 09.5 +0.1**
baz=123,SNR=11
J26L Joseph Creek 83.87 337 P P **02 04 10.4 +0.7**
baz=117
M24K Tolsona, Glenn 83.88 335 P P **02 04 10.0 +0.2**
baz=114

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H27K	**Steamboat Moun**	**83.94**	**339**	P	**P**	**02 04 10.4**	**+0.4**
	baz=119						
PAX	**Paxson**	**83.95**	**335**	P	**P**	**02 04 10.1**	**0.0**
	baz=115,SNR=5.6						
RIDG	**Independent Ri**	**84.03**	**336**	P	**P**	**02 04 11.2**	**+0.7**
	baz=116						
F28M	**Old Crow**	**84.07**	**341**	P	**P**	**02 04 10.3**	**-0.3**
	baz=121,SNR=7.0						
TORD	**Torodi Ar. Bea**	**84.10**	**76**	P	**P**	**02 04 11.3**	**-0.5**
	comp=Z,3.8nm,0.7s,baz=276,slow=9.0,SNR=30						
TORD				LR	LR	02 39 42.2	
	comp=Z,263nm,21.7s,baz=264,slow=34						
	comp=Z,3.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**84.10**	**76**	P	**P**	**02 04 10.7**	**-1.1**
TORD				IAmb	IAmb	02 04 23.4	
	comp=Z,13nm,1.6s						
SCM	**Sheep Creek Mo**	**84.26**	**334**	P	**P**	**02 04 12.1**	**+0.4**
	baz=114						
G27K	**Doyon Strip**	**84.27**	**340**	P	**P**	**02 04 11.4**	**-0.2**
	baz=119						
QSPA	**South Pole Qui**	**84.28**	**180**	P	**P**	**02 04 12.2**	**+0.4**
	comp=Z,22nm,1.0s,baz=146,slow=4.4,SNR=15						
QSPA				LR	LR	02 36 59.5	
	comp=Z,139nm,19.3s,baz=162,slow=32						
	comp=Z,22nm,1.0s						
QSPA	**South Pole Qui**	**84.28**	**180**	P	**P**	**02 04 12.1**	**+0.4**
QSPA	**South Pole Qui**	**84.28**	**180**	P	**P**	**02 04 12.2**	**+0.4**
M23K	**Glacier View**	**84.42**	**334**	P	**P**	**02 04 13.2**	**+0.7**
	baz=113						
K24K	**Donnelly Dome**	**84.43**	**336**	P	**P**	**02 04 12.5**	**0.0**
	baz=115						
E28M	**Babbage River**	**84.48**	**342**	P	**P**	**02 04 12.7**	**+0.1**
	baz=121						
SEW	**Seward**	**84.56**	**332**	P	**P**	**02 04 13.7**	**+0.7**
	baz=111						
KNK	**Knik Glacier**	**84.60**	**333**	P	**P**	**02 04 13.4**	**+0.1**
	baz=112						
D28M	**Stokes Point**	**84.62**	**342**	P	**P**	**02 04 13.9**	**+0.7**
	baz=122						
J25K	**Salcha River,**	**84.62**	**337**	P	**P**	**02 04 13.9**	**+0.4**
	baz=116,SNR=7.2						
SML	**Sawmill**	**84.69**	**334**	P	**P**	**02 04 13.7**	**-0.1**
	baz=113						
WAT6	**Susitna Watana**	**84.74**	**335**	P	**P**	**02 04 14.4**	**+0.2**
	baz=113,SNR=5.1						
DHY	**Denali Highway**	**84.78**	**335**	P	**P**	**02 04 14.5**	**+0.1**
	baz=114						
E27K	**Coleen River**	**84.92**	**341**	P	**P**	**02 04 15.2**	**+0.4**
	baz=119						
BRSE	**Bradley Lake S**	**85.03**	**331**	P	**P**	**02 04 14.9**	**-0.7**
	baz=110						
RC01	**Rabbit Creek A**	**85.05**	**333**	P	**P**	**02 04 15.8**	**+0.3**
	baz=111						
PRP	**Porcupine Dome**	**85.07**	**338**	P	**P**	**02 04 16.1**	**+0.3**
	baz=115,SNR=5.1						
G26K	**Porcupine Rive**	**85.08**	**339**	P	**P**	**02 04 16.4**	**+0.8**
	baz=117						
HDA	**Harding Lake**	**85.15**	**337**	P	**P**	**02 04 16.5**	**+0.5**
	baz=114						
WAT1	**Susitna Watana**	**85.18**	**335**	P	**P**	**02 04 16.9**	**+0.7**
	baz=112						
D27M	**Malcolm River**	**85.25**	**342**	P	**P**	**02 04 17.2**	**+0.7**
	baz=120						
ILAR	**Eielson Array**	**85.28**	**337**	P	**P**	**02 04 15.7**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=134,slow=3.9,SNR=24						
ILAR				PP	**PP**	**02 07 35.1**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=125,slow=7.1,SNR=8.2						
ILAR				LR	LR	02 43 58.9	
	comp=Z,189nm,18.1s,baz=114,slow=37						
	comp=Z,1.5nm,0.9s						
ILAR	**Eielson Array**	**85.28**	**337**	P	**P**	**02 04 16.6**	**0.0**
ILAR	**Eielson Array**	**85.28**	**337**	*e*P	**P**	**02 04 16.3**	**-0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KDAK	**Kodiak Island**	**85.28**	**329**	⇓*e*P	**P**	**02 04 15.6**	**-1.2**
KDAK				pmax	pmax		
	comp=Z,73nm,1.5s						
KDAK	**Kodiak Island**	**85.28**	**329**	P	**P**	**02 04 17.2**	**+0.4**
	baz=108						
NVL	**N'lazarevskaya**	**85.44**	**161**	*e*P	**P**	**02 04 20.5**	**+3.1**
NVL				*e*		02 07 38.6	
NVL				*e*PPP	PPP	02 09 32.1	
NVL				*e*S	**SKSac**	**02 14 41.8**	**+2.7**
NVL				*e*SS	**SS**	**02 20 25.5**	**+4.7**
NVL				*e*SSS	SSS	02 23 57.1	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,561nm,20.0s						
OHAK	**Old Harbor**	**85.47**	**329**	P	**P**	**02 04 18.0**	**+0.2**
	baz=108						
RND	**Reindeer**	**85.53**	**335**	P	**P**	**02 04 18.1**	**+0.1**
RND	**Reindeer**	**85.53**	**335**	P	**P**	**02 04 18.1**	**+0.1**
RND				pmax	pmax		
	comp=Z,25nm,1.4s						
SCO	**Scoresbysund**	**85.53**	**17**	P	**P**	**02 04 17.6**	**-0.2**
SCO				IAmb	IAmb	02 04 35.1	
	comp=Z,17nm,1.2s						
SCO	**Scoresbysund**	**85.53**	**17**	P	**P**	**02 04 17.6**	**-0.2**
SCO				pmax	pmax		
	comp=Z,17nm,1.2s						
F26K	**Sheenjek River**	**85.54**	**340**	P	**P**	**02 04 18.6**	**+0.7**
	baz=117						
BMAR	**Burnt Mountain**	**85.57**	**340**	P	**P**	**02 04 18.8**	**+0.7**
POKR	**Poker Plat Res**	**85.63**	**337**	P	**P**	**02 04 19.4**	**+1.0**
	baz=114						
SUA	**Susitna One**	**85.64**	**333**	P	**P**	**02 04 18.6**	**-0.1**
	baz=110						
MCK	**McKinley**	**85.69**	**336**	P	**P**	**02 04 19.5**	**+0.8**
	baz=112						
COLA	**College**	**85.69**	**337**	⇓*e*P	**P**	**02 04 19.0**	**+0.3**
COLA				pmax	pmax		
	comp=Z,14nm,1.8s						
CUT	**Chulitna**	**85.76**	**334**	P	**P**	**02 04 19.1**	**0.0**
	baz=111						
F25K	**Christian Rive**	**86.01**	**340**	P	**P**	**02 04 21.2**	**+0.8**
	baz=116						
NEA2	**Nenana**	**86.07**	**336**	P	**P**	**02 04 20.8**	**+0.2**
NEA2				IAmb	IAmb	02 04 21.4	
	comp=Z,17nm,1.0s						
NEA2	**Nenana**	**86.07**	**336**	P	**P**	**02 04 20.8**	**+0.2**
	baz=112,SNR=9.0						
H24K	**Noodor Dome**	**86.09**	**338**	P	**P**	**02 04 21.1**	**+0.4**
	baz=113						
TRF	**Thorofare Moun**	**86.14**	**335**	P	**P**	**02 04 21.2**	**0.0**
	baz=111						
SKT	**Skwentna**	**86.17**	**333**	P	**P**	**02 04 21.5**	**+0.3**
	baz=110,SNR=6.2						
SPCR	**Spurr Chakacha**	**86.21**	**333**	P	**P**	**02 04 21.6**	**+0.1**
	baz=109						
E25K	**Arctic Village**	**86.21**	**340**	P	**P**	**02 04 22.2**	**+1.0**
	baz=116,SNR=8.3						
G24K	**Hadweenzic Riv**	**86.29**	**339**	P	**P**	**02 04 22.2**	**+0.6**
	baz=114						
C27K	**Jago River**	**86.29**	**342**	P	**P**	**02 04 21.9**	**+0.3**
	baz=117						
I23K	**Minto, Yukon-K**	**86.39**	**337**	P	**P**	**02 04 22.5**	**+0.4**
	baz=112,SNR=7.0						
BPAW	**Bear Paw Mtn.**	**86.67**	**336**	P	**P**	**02 04 23.2**	**-0.3**
BPAW	**Bear Paw Mtn.**	**86.67**	**336**	P	**P**	**02 04 23.7**	**+0.2**
	baz=110,SNR=7.7						
PPLA	**Purkeypile**	**86.76**	**334**	P	**P**	**02 04 24.0**	**-0.2**
	baz=109						
Q18K	**Katmai Hardscr**	**86.77**	**330**	P	**P**	**02 04 24.4**	**+0.1**
	baz=106						
M20K	**Styx River**	**86.85**	**333**	P	**P**	**02 04 24.5**	**-0.1**
	baz=108						
D25K	**Kavik River**	**87.00**	**341**	P	**P**	**02 04 25.4**	**+0.3**
	baz=115						
Q17K	**Contact Creek**	**87.11**	**329**	P	**P**	**02 04 26.4**	**+0.4**
	baz=106						
CHUM	**Lake Minchumin**	**87.14**	**335**	P	**P**	**02 04 25.8**	**0.0**
	baz=109						
N19K	**Bonanza Creek**	**87.14**	**332**	P	**P**	**02 04 26.2**	**+0.2**
	baz=107						
O18K	**Koktuh Hills**	**87.21**	**331**	P	**P**	**02 04 26.9**	**+0.6**
	baz=106						
G23K	**Bananza Creek**	**87.22**	**338**	P	**P**	**02 04 26.8**	**+0.6**
	baz=111						
I21K	**Tanana**	**87.44**	**336**	P	**P**	**02 04 27.8**	**+0.5**
	baz=110						
COLD	**Coldfoot**	**87.48**	**339**	P	**P**	**02 04 28.3**	**+0.8**
	baz=111						
E23K	**Chandalar**	**87.58**	**339**	P	**P**	**02 04 28.7**	**+0.7**
	baz=112,SNR=13						
Q16K	**King Salmon**	**87.61**	**330**	P	**P**	**02 04 28.8**	**+0.6**
	baz=105						
P17K	**Kvichak River**	**87.64**	**330**	P	**P**	**02 04 28.9**	**+0.6**
	baz=105						
L19K	**White Mountain**	**87.72**	**333**	P	**P**	**02 04 28.7**	**0.0**
L19K				IAmb	IAmb	02 04 29.2	
	comp=Z,13nm,1.0s						
L19K	**White Mountain**	**87.72**	**333**	P	**P**	**02 04 29.0**	**+0.3**
	baz=107						
K20K	**Telida**	**87.72**	**334**	P	**P**	**02 04 28.5**	**-0.1**
	baz=108,SNR=6.5						
ESK	**Eskdalemuir**	**87.76**	**34**	P	**P**	**02 04 28.2**	**-0.8**
ESK	**Eskdalemuir**	**87.76**	**34**	P	**P**	**02 04 28.2**	**-0.8**
ESK				pmax	pmax		
	comp=Z,100nm,1.8s						
N18K	**Kilae Creek**	**87.77**	**332**	P	**P**	**02 04 29.3**	**+0.3**
	baz=106,SNR=7.4						
TOLK	**Toolik Lake Re**	**87.78**	**340**	P	**P**	**02 04 29.2**	**+0.4**
TOLK				IAmb	IAmb	02 04 30.2	
	comp=Z,17nm,1.2s						
TOLK	**Toolik Lake Re**	**87.78**	**340**	P	**P**	**02 04 29.3**	**+0.4**
	baz=112,SNR=8.0						
EKA	**Eskdalemuir Ar**	**87.79**	**34**	P	**P**	**02 04 28.1**	**-1.1**
	comp=Z,3.5nm,0.6s,baz=254,slow=4.3,SNR=25						
EKA				LR	LR	02 44 52.8	
	comp=Z,26nm,18.1s,baz=218,slow=36						
	comp=Z,3.5nm,0.6s						
G22K	**Bettles**	**87.85**	**338**	P	**P**	**02 04 29.9**	**+0.7**
	baz=110						
H21K	**Melozitna Rive**	**87.92**	**337**	P	**P**	**02 04 29.7**	**+0.1**
	baz=109						
M18K	**Stony River**	**87.96**	**332**	P	**P**	**02 04 30.1**	**+0.3**
	baz=106						
J20K	**Nowinta River**	**88.00**	**335**	P	**P**	**02 04 30.2**	**+0.2**
	baz=108,SNR=8.2						
O17K	**Koliganek Bris**	**88.11**	**331**	P	**P**	**02 04 30.8**	**+0.2**
	baz=105						
CHNA	**Chernabura Isl**	**88.25**	**325**	P	**P**	**02 04 31.7**	**+0.4**
	baz=102						
D23K	**Nanushuk River**	**88.28**	**340**	P	**P**	**02 04 32.1**	**+0.9**
	baz=111,SNR=19						
I20K	**Naaghedeneel**	**88.32**	**336**	P	**P**	**02 04 32.2**	**+0.7**
	baz=107						
N17K	**Nushagak Hills**	**88.35**	**331**	P	**P**	**02 04 32.4**	**+0.8**
	baz=105						
P16K	**Nushagak River**	**88.37**	**330**	P	**P**	**02 04 32.4**	**+0.7**
	baz=104						
G21K	**Allakaket**	**88.47**	**338**	P	**P**	**02 04 32.8**	**+0.7**
	baz=108						
L18K	**Granite Mounta**	**88.55**	**333**	P	**P**	**02 04 33.4**	**+0.8**
	baz=105						
O16K	**Kokwok River B**	**88.56**	**330**	P	**P**	**02 04 32.9**	**+0.2**
	baz=104						
J19K	**Poorman**	**88.57**	**335**	P	**P**	**02 04 33.2**	**+0.6**
	baz=106,SNR=5.9						
F21K	**Alatna River**	**88.68**	**338**	P	**P**	**02 04 33.7**	**+0.5**
	baz=108						
M17K	**Holitna River**	**88.69**	**332**	P	**P**	**02 04 33.8**	**+0.5**
	baz=104						
H20K	**Anotleneega Mo**	**88.69**	**336**	P	**P**	**02 04 33.7**	**+0.5**
	baz=107,SNR=15						
SDPT	**Sand Point**	**88.86**	**326**	P	**P**	**02 04 34.7**	**+0.5**
	baz=102						
J18K	**Innoko River**	**88.89**	**334**	P	**P**	**02 04 35.1**	**+0.8**
	baz=105						
D22K	**Ayikyak River**	**88.93**	**340**	P	**P**	**02 04 35.2**	**+1.0**
	baz=109						
E21K	**Killik River**	**89.23**	**339**	P	**P**	**02 04 36.4**	**+0.6**
	baz=108,SNR=18						
L17K	**Donlin**	**89.26**	**333**	P	**P**	**02 04 37.0**	**+1.1**
	baz=104						
M16K	**Timber Creek**	**89.31**	**332**	P	**P**	**02 04 37.1**	**+0.9**
	baz=103						
O15K	**Ungalikthiuk R**	**89.32**	**330**	P	**P**	**02 04 37.8**	**+1.5**
	baz=102						
H19K	**Roundabout Mou**	**89.33**	**336**	P	**P**	**02 04 36.9**	**+0.8**
	baz=105						
K17K	**Iditarod**	**89.40**	**333**	P	**P**	**02 04 37.3**	**+0.7**
	baz=104						
F20K	**Avaraart Lake**	**89.47**	**338**	P	**P**	**02 04 37.3**	**+0.6**
	baz=106						
B22K	**Teshekpuk Lake**	**89.64**	**341**	P	**P**	**02 04 38.4**	**+0.9**
	baz=108						
N15K	**Kwethluk River**	**89.67**	**331**	P	**P**	**02 04 38.9**	**+1.0**
	baz=102						
L16K	**Owhat River**	**89.71**	**332**	P	**P**	**02 04 38.7**	**+0.7**
	baz=103						
G19K	**Purcell Mounta**	**89.75**	**337**	P	**P**	**02 04 38.6**	**+0.5**
	baz=105						
J17K	**VABM Dome**	**89.91**	**334**	P	**P**	**02 04 40.1**	**+1.2**
	baz=103						
E20K	**Nigu River**	**89.97**	**339**	P	**P**	**02 04 40.1**	**+0.9**
	baz=106						
H18K	**Honhosa River**	**90.01**	**336**	P	**P**	**02 04 40.9**	**+1.5**
	baz=104						
VNDA	**Vanda**	**90.06**	**191**	P	**P**	**02 04 37.4**	**-2.1**
	comp=Z,1.9nm,0.8s,baz=125,slow=3.9,SNR=3.5						
VNDA				LR	LR	02 36 56.3	
	comp=Z,123nm,19.7s,baz=122,slow=30						
	comp=Z,1.9nm,0.8s						
VNDA	**Vanda**	**90.06**	**191**		**P**	**02 04 40.8**	**+1.3**
VNDA				IAmb	IAmb	02 05 48.3	
	comp=Z,20nm,1.8s						
VNDA	**Vanda**	**90.06**	**191**	P	**P**	**02 04 40.8**	**+1.3**
VNDA				pmax	pmax		
	comp=Z,20nm,1.8s						
M15K	**Kasigluk River**	**90.07**	**331**	P	**P**	**02 04 40.7**	**+0.9**
	baz=102						
E19K	**Redstone River**	**90.14**	**338**	P	**P**	**02 04 40.1**	**+0.1**
	baz=105						
F19K	**Shaleruckik Mo**	**90.19**	**337**	P	**P**	**02 04 40.6**	**+0.4**
	baz=104						
D20K	**Etivluk River**	**90.24**	**339**	P	**P**	**02 04 40.8**	**+0.3**
	baz=105						
G18K	**Tagagawik**	**90.31**	**336**	P	**P**	**02 04 41.5**	**+0.7**
	baz=103,SNR=19						
A22K	**Sinclair Lake**	**90.34**	**342**	P	**P**	**02 04 41.3**	**+0.6**
	baz=107						
N14K	**Kuskokwak Cree**	**90.40**	**330**	P	**P**	**02 04 42.2**	**+1.0**
	baz=101						
J16K	**Anvik River**	**90.55**	**334**	P	**P**	**02 04 43.3**	**+1.4**
	baz=102,SNR=5.3						
H17K	**Granite Mounta**	**90.60**	**335**	P	**P**	**02 04 43.1**	**+0.9**
	baz=102,SNR=6.9						
L15K	**Ungalak Mounta**	**90.64**	**332**	P	**P**	**02 04 43.5**	**+1.2**
	baz=101						
M14K	**Bethel**	**90.69**	**331**	P	**P**	**02 04 43.7**	**+1.2**
	baz=100						
I17K	**Unalakleet**	**90.72**	**334**	P	**P**	**02 04 44.2**	**+1.5**
	baz=102,SNR=7.6						
D19K	**Kuna River**	**90.72**	**339**	P	**P**	**02 04 43.9**	**+1.2**
	baz=104						
K15K	**Wolf Creek Mou**	**90.78**	**333**	P	**P**	**02 04 44.0**	**+1.0**
	baz=101						
F18K	**Selawik**	**90.86**	**337**	P	**P**	**02 04 44.0**	**+0.8**
	baz=102,SNR=12						
G17K	**Kiwalik Mounta**	**91.03**	**336**	P	**P**	**02 04 45.0**	**+0.9**
	baz=102						
L14K	**Kuka Creek**	**91.14**	**331**	P	**P**	**02 04 45.8**	**+1.1**
	baz=100						
M13K	**Dall Lake**	**91.31**	**331**	P	**P**	**02 04 47.0**	**+1.5**
	baz=99						
C19K	**Lookout Ridge**	**91.38**	**339**	P	**P**	**02 04 46.3**	**+0.5**
	baz=102						
E18K	**Tukpahlearik C**	**91.40**	**338**	P	**P**	**02 04 46.2**	**+0.5**
	baz=102						
F17K	**Baldwin Pennin**	**91.45**	**337**	P	**P**	**02 04 47.2**	**+1.2**
	baz=101						
H16K	**Elim**	**91.52**	**335**	P	**P**	**02 04 47.4**	**+1.0**
	baz=100,SNR=5.6						
G16K	**Koyuk River**	**91.70**	**336**	P	**P**	**02 04 48.4**	**+1.1**
	baz=100						
J14K	**Nanvaranak Lak**	**91.78**	**333**	P	**P**	**02 04 48.6**	**+1.0**
	baz=99						
E17K	**Hotham Inlet**	**91.80**	**337**	P	**P**	**02 04 48.6**	**+0.9**
	baz=100						
C18K	**Utukok River**	**91.86**	**339**	P	**P**	**02 04 48.7**	**+0.7**
	baz=101						
K13K	**Kusilvak Mount**	**92.17**	**332**	P	**P**	**02 04 50.3**	**+0.9**
	baz=98						
G15K	**Niukluk**	**92.34**	**335**	P	**P**	**02 04 51.1**	**+0.9**
	baz=98						
RDOG	**Red Dog Mine**	**92.38**	**338**	P	**P**	**02 04 51.1**	**+0.7**
	baz=99						
D17K	**Noatak River**	**92.38**	**338**	P	**P**	**02 04 51.2**	**+0.9**
	baz=99						
C17K	**DeLong Mountai**	**92.55**	**339**	P	**P**	**02 04 51.6**	**+0.5**
	baz=99						
F15K	**North Star Dit**	**92.70**	**336**	P	**P**	**02 04 52.8**	**+1.0**
	baz=98						
ANM	**Nome**	**92.85**	**335**	P	**P**	**02 04 52.6**	**+0.1**
	baz=97						
F14K	**Arctic Creek**	**93.36**	**335**	P	**P**	**02 04 55.3**	**+0.4**
	baz=96						
KEST	**Kesra**	**93.52**	**55**	LR	LR	02 49 22.7	
	comp=Z,80nm,18.1s,baz=259,slow=37						
URZ	**Urewera**	**95.81**	**231**	LR	LR	02 40 13.4	
	comp=Z,158nm,18.6s,baz=120,slow=30						
TSUM	**Tsumeb**	**96.04**	**110**	LR	LR	02 45 59.1	
	comp=Z,254nm,19.6s,baz=288,slow=34						
NOA	**NORSAR Array B**	**96.05**	**29**	LR	LR	02 45 46.0	
	comp=Z,18nm,21.1s,baz=280,slow=34						
SUR	**Sutherland**	**96.70**	**123**	LR	LR	02 45 09.8	
	comp=Z,147nm,20.1s,baz=276,slow=33						
CLL	**Collm**	**96.92**	**39**	*i* P	**P**	**02 05 12.0**	**+0.6**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	**Collm**	**96.92**	**39**	*i* P	**P**	**02 05 12.0**	**+0.6**
	comp=Z,5.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**97.14**	**12**	P	**P**	**02 05 10.9**	**-1.1**
	comp=Z,7.1nm,1.0s,baz=270,slow=4.3,SNR=6.3						
SPITS				LR	LR	02 50 55.2	
	comp=Z,47nm,19.1s,baz=250,slow=37						
SPITS	**Spitsbergen Ar**	**97.14**	**12**	P	**P**	**02 05 10.9**	**-1.1**
SPITS				pmax	pmax		
	comp=Z,164nm,1.8s						
HFS	**Hagfors**	**97.28**	**30**	LR	LR	02 47 20.1	
	comp=Z,32nm,20.1s,baz=256,slow=34						
GERES	**GERESS Array B**	**97.34**	**42**	LR	LR	02 48 51.5	
	comp=Z,38nm,19.3s,baz=10.0,slow=35						
VRAC	**Vranov**	**99.24**	**41**	LR	LR	02 51 17.2	
	comp=Z,41nm,18.3s,baz=252,slow=36						
H11N3	**WAKE ISLAND Hy**	**112.85**	**289**	T	T	04 12 46.1	
	baz=88,slow=75,SNR=42						
H11N2	**WAKE ISLAND Hy**	**112.86**	**289**	T	T	04 12 47.9	
	baz=88,slow=75,SNR=44						
H11N1	**WAKE ISLAND Hy**	**112.87**	**289**	T	T	04 12 47.4	
	baz=88,slow=75,SNR=29						
H11S2	**WAKE ISLAND Hy**	**113.08**	**288**	T	T	04 13 05.8	
	baz=89,slow=74,SNR=303						
H11S1	**WAKE ISLAND Hy**	**113.08**	**288**	T	T	04 13 08.6	
	baz=89,slow=74,SNR=354						
H11S3	**WAKE ISLAND Hy**	**113.10**	**288**	T	T	04 13 09.6	
	baz=89,slow=74,SNR=292						
KIV	**Kislovodsk**	**117.82**	**43**	*i* PKIKP	**PKPdf**	**02 10 26.0**	**-0.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	**Khabaz**	**118.04**	**43**	PKP	**PKiKP**	**02 10 27.3**	**+0.2**
	comp=Z,3.2nm,1.1s,baz=297,slow=2.3,SNR=5.2						
KBZ	**Khabaz**	**118.04**	**43**	⇑*e*PKIKP	**PKPdf**	**02 10 25.5**	**-1.6**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AB31	**Akbulak array**	**125.53**	**31**		**PKPdf**	**02 10 41.3**	**0.0**
BVAR	**Borovoye Array**	**127.38**	**21**	PKP	**PKPdf**	**02 10 44.8**	**0.0**
	comp=Z,1.4nm,0.5s,baz=283,slow=3.1,SNR=10						
KLR	**Kul'dur**	**128.71**	**333**	⇑*i*PKIKP	**PKPdf**	**02 10 45.9**	**-1.5**
ZALV	**Zalesovo Beam**	**130.62**	**11**	PKP	**PKPdf**	**02 10 50.3**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=318,slow=1.9,SNR=16						
KURK	**Kurchatov**	**132.07**	**17**		**PKPdf**	**02 10 52.9**	**-0.8**
KURK	**Kurchatov**	**132.07**	**17**	*d i*PKIKP	**PKPdf**	**02 10 53.8**	**+0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
COEN	**Coen**	**132.09**	**245**	PKPdf	**PKPdf**	**02 10 55.0**	**+0.2**
KURBB	**Kurchatov Arra**	**132.12**	**18**	PKP	**PKPdf**	**02 10 53.5**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=328,slow=2.3,SNR=9.2						
HILR	**Hailar Array B**	**133.06**	**342**	PKP	**PKPdf**	**02 10 54.6**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=0.0,slow=1.4,SNR=2.4						
UOSS	**Minazif**	**134.70**	**60**	PKPdf	**PKPdf**	**02 10 58.4**	**-1.1**
ASAR	**Alice Springs**	**135.17**	**228**	PKhKP	PKPpre	02 10 50.7	
	comp=Z,0.4nm,0.3s,baz=123,slow=3.4,SNR=4.7						
ASAR				PKP	**PKPdf**	**02 10 58.9**	**-1.6**
	comp=Z,2.4nm,0.7s,baz=123,slow=2.0,SNR=17						
ASAR	**Alice Springs**	**135.17**	**228**		**PKPdf**	**02 10 59.5**	**-1.0**
ASAR	**Alice Springs**	**135.17**	**228**	PKIKP	**PKPdf**	**02 10 59.5**	**-1.0**
MAKZ	**Makanchi**	**136.56**	**17**		**PKPdf**	**02 11 01.2**	**-1.1**
MAKZ	**Makanchi**	**136.56**	**17**	PKIKP	**PKPdf**	**02 11 01.2**	**-1.1**
MK31	**Makanchi Array**	**136.66**	**17**	⇑*i*PKIKP	**PKPdf**	**02 11 02.2**	**-0.3**
MKAR	**Makanchi Array**	**136.66**	**17**	PKhKP	PKPpre	02 10 49.4	
	comp=Z,0.2nm,0.7s,baz=349,slow=2.9,SNR=1.9						
MKAR				PKP	**PKPdf**	**02 11 01.5**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=318,slow=3.5,SNR=10						
MKAR	**Makanchi Array**	**136.66**	**17**		**PKPdf**	**02 11 01.8**	**-0.8**
MKAR	**Makanchi Array**	**136.66**	**17**	*c i*PKIKP	**PKPdf**	**02 11 01.7**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRAB	**Tennant Creek**	**136.94**	**233**	*d i*PKIKP	**PKPdf**	**02 11 03.7**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,14nm,2.5s						
WRA	**Warramunga Arr**	**136.95**	**233**	PKhKP	PKPpre	02 10 51.0	
	comp=Z,0.6nm,0.8s,baz=113,slow=3.2,SNR=7.9						
WRA				PKP	**PKPdf**	**02 11 03.2**	**-0.6**
	comp=Z,3.6nm,0.8s,baz=116,slow=1.9,SNR=18						
WRA	**Warramunga Arr**	**136.95**	**233**		**PKPdf**	**02 11 03.1**	**-0.7**
AAK	**Ala-Archa**	**137.32**	**27**	⇑*i*PKIKP	**PKiKP**	**02 11 05.2**	**-0.8**
ULN	**Ulaanbaatar**	**137.56**	**352**	⇑*i*PKIKP	**PKiKP**	**02 11 05.5**	**-0.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.7s						
SONM	**Songino Array**	**137.67**	**353**	PKhKP	PKPpre	02 10 49.5	
	comp=Z,0.3nm,0.5s,baz=4.6,slow=1.2,SNR=3.6						
SONM				PKP	**PKPdf**	**02 11 04.2**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=51,slow=2.8,SNR=9.2						
KSRS	**Korea Array**	**139.01**	**324**	PKP	**PKPdf**	**02 11 06.6**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=7.6,slow=1.5,SNR=4.1						
KSRS	**Korea Array**	**139.01**	**324**	*e*PKIKP	**PKPdf**	**02 11 07.6**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	**Urumqi**	**140.83**	**13**	*e*PKP	**PKPdf**	**02 11 10.5**	**+0.2**
WMQ				sPKP	sPKPdf	02 11 29.3	+1.8
WMQ				LR	LR		
	comp=Z,170nm,23.8s						
HHC	**Hu-ho-hao-te**	**143.38**	**344**	*e*P	**PKiKP**	**02 11 17.0**	**-1.3**
BTO2	**Baotou**	**143.91**	**346**	*e*PKP	PKPab	02 11 13.2	+0.1
BTO2				pmax	pmax		
	comp=Z,27nm,0.8s						
BTO2				pmax	pmax		
	comp=Z,190nm,4.5s						
HNS	**HongShan**	**145.50**	**338**	⇓PKP	**PKPdf**	**02 11 18.4**	**-0.2**
TIA	**Tai'an**	**145.54**	**334**	PKP	**PKPdf**	**02 11 17.1**	**-1.7**
PSA00	**Pilbara Seismi**	**146.04**	**216**		**PKPdf**	**02 11 19.9**	**-0.2**
GTA2	**Gaotai**	**146.47**	**359**	*e*PKP	**PKPdf**	**02 11 20.8**	**+0.4**
GTA2				pPKP	pPKPdf	02 11 31.7	-1.4
GTA2				PP	**PP**	**02 14 50.6**	**+7.2**
NJ2	**Nanjing**	**148.04**	**327**	*e*P	**PKPdf**	**02 11 23.0**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU	**GeErMu**	**149.50**	**7**	PKP	**PKPdf**	**02 11 27.1**	**+1.3**
LZH	**Lanzhou**	**149.56**	**352**	PKP	**PKPbc**	**02 11 30.1**	**-0.1**
LZH				pPKP	pPKPdf	02 11 42.2	+3.8
LZDM	**Lanzhou Array**	**149.71**	**353**	PKPbc	**PKPbc**	**02 11 30.8**	**0.0**
	comp=Z,3.1nm,0.4s,baz=38,slow=2.6,SNR=16						
XAN	**Xi'an**	**150.48**	**343**	PKP	**PKPbc**	**02 11 31.0**	**-1.3**
XAN				pPKP	pPKPdf	02 11 41.7	+2.0
XAN				sPKP	sPKPdf	02 11 48.2	+4.0
WHN	**Wuhan**	**151.54**	**332**	P	**PKPbc**	**02 11 34.9**	**+0.1**
ENH	**Enshi**	**153.79**	**339**		**PKPdf**	**02 11 30.8**	**-1.2**
ENH					**PKPbc**	**02 11 38.6**	**-1.3**
PZH	**PanZhiHua**	**159.28**	**353**	PKPbc	**PKPdf**	**02 11 37.7**	**-1.7**
CMAR	**Chiang Mai Arr**	**167.43**	**1**	PKP	**PKPdf**	**02 11 46.5**	**-0.6**
	comp=Z,1.2nm,0.2s,baz=49,slow=1.1,SNR=7.3						
CMAR				PKPab	**PKPab**	**02 12 51.1**	**-1.1**
	comp=Z,3.2nm,0.7s,baz=359,slow=3.8,SNR=14						
CMAR	**Chiang Mai Arr**	**167.43**	**1**		**PKPdf**	**02 11 45.9**	**-1.2**
CMAR					**PKPab**	**02 12 50.7**	**-1.4**

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*RSNC **05** 01:53:44.5±0.0, 7°N±1°×7°3W±°, h150km±2km, M2.5, ML2.3*
*FUNV **05** 01:53:44.8, 6°88N×73°23W, h144km, MW3.0, Presumed earthquake*
ISC 05 01:53:42.6±1.4**, 6°89N**±0°04×**73°17W**±0°04**, h158**km±9km**,**
n22, σ**1§51**/41**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.30**	**182**	P	**Pn**	**01 54 04.7**	**+0.3**
BARC				S	**Sn**	**01 54 19.8**	**-1.3**
BRJC	**Barrancabermej**	**0.57**	**278**	P	**Pn**	**01 54 06.4**	**+1.2**
BRJC				S	**Sn**	**01 54 23.8**	**+1.3**
PAMC	**Pamplona, Colo**	**0.64**	**46**	P	**Pn**	**01 54 07.5**	**+1.3**
PAMC				S	**Sn**	**01 54 24.9**	**+0.6**
RUSC	**La Rusia**	**1.00**	**175**	P	**Pn**	**01 54 08.5**	**-0.2**
RUSC				S	**Sn**	**01 54 27.2**	**-1.5**
RUSC	**La Rusia**	**1.00**	**175**	*e*P	**Pn**	**01 54 08.7**	**0.0**
RUSC				*e*S	**Sn**	**01 54 26.3**	**-2.4**
CAPV	**Capacho**	**1.29**	**41**	⇓*i*P	**Pn**	**01 54 12.5**	**+1.6**
PTBC	**PUERTO BERRIO,**	**1.32**	**255**	P	**Pn**	**01 54 11.6**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTBC				S	Sn	01 54 32.6	-0.3
SPBC	San Pablo de B	1.52	216	P	Pn	01 54 13.6	+0.5
SPBC				S	Sn	01 54 35.5	-1.1
NORC	Norcasia	2.14	232	P	Pn	01 54 21.1	+1.2
NORC				S	Sn	01 54 48.0	-0.8
CHIC	Chingaza	2.32	194	P	Pn	01 54 22.6	+0.2
CHIC				S	Sn	01 54 52.3	-0.7
ROSC	El Rosal	2.34	209	P	Pn	01 54 24.4	+1.8
ROSC				S	Sn	01 54 55.6	+2.2
HELC	Santa Helena	2.44	254	P	Pn	01 54 26.1	+2.3
HELC	Santa Helena	2.44	254	eP	Pn	01 54 23.5	-0.3
HELC				eS	Sn	01 54 52.1	-3.5
UREC	San Jos de Ur	2.49	290	P	Pn	01 54 24.9	+0.9
UREC				S	Sn	01 54 53.5	-2.6
SOCV	Socops	2.68	59	eP	Pn	01 54 27.7	+1.4
SOCV				eS	Sn	01 54 58.3	-1.9
CBOC	Ciudad Bolivar	3.00	250	P	Pn	01 54 32.7	+2.2
CBOC				S	Sn	01 55 08.9	+1.3
SDV	Santo Domingo	3.20	52	eP	Pn	01 54 34.7	+1.7
SDV				eS	Sn	01 55 10.4	-1.6
SJCC	San Jacinto, C	3.59	326	P	Pn	01 54 38.6	+0.8
SJCC				S	Sn	01 55 20.2	-0.5
SJCC	San Jacinto, C	3.59	326	eP	Pn	01 54 37.9	+0.1
SJCC				eS	Sn	01 55 17.6	-3.2
PRAC	Prado	3.59	208	P	Pn	01 54 38.4	+0.5
PRAC				S	Sn	01 55 20.1	-0.7
ORTC	Ortega, Tolima	3.61	215	P	Pn	01 54 38.3	+0.2
ORTC				S	Sn	01 55 21.4	+0.1
URMC	La Uribe, Meta	3.82	198	P	Pn	01 54 40.5	-0.3

*SDD **05** 02:02:38.4±2.4, 17°.94N×66°.63W, h13km±830km, MD3.4, ML2.8, MW2.9, Presumed earthquake*
*RSPR **05** 02:02:40.4, 17°.98N×66°.78W, h16km, MD3.1/7*
*NEIC **05** 02:02:41.0±1.9, 18°.03N±0°.02×66°.777W±0°.009, h10km±1km, ML3.0/35, Md3.2/7(RSPR), Error ellipse: s-maj=3.0km s-min=2.7km az=12.0*
*OSPL **05** 02:02:40.4±0.4, 17°.98N×66°.77W, h18km±3km, ML3.7, Presumed earthquake*
ISC 05 02:02:39.9±0.9, **18°.00N**±0°.04×**66°.76W**±0°.01, **h15**km±8km, **n44**, σ**0s.78**/72, **11C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.12	260		Pb	02 02 43.8	-0.1
GBPR					Sb	02 02 46.3	-0.2
GBPR	Guanica, Bosqu	0.12	260	⇑iP	Pb	02 02 43.8	-0.1
GBPR				eS	Sb	02 02 46.3	-0.2
OBIP	Obispado Ponce	0.15	72		Pb	02 02 44.5	+0.1
OBIP				Sg	Sb	02 02 47.5	0.0
OBIP	Obispado Ponce	0.15	72	⇓iP	Pb	02 02 44.6	+0.1
OBIP				eS	Sb	02 02 47.6	0.0
OBIP	Obispado Ponce	0.15	72	i P	Pb	02 02 44.6	+0.1
OBIP				eS	Sb	02 02 47.5	0.0
OBIP				IAML		02 02 48.4	
	comp=Z,15μm,0.1s						
CELP	Cerrillos	0.19	65		Pb	02 02 45.1	0.0
CELP				Sg	Sb	02 02 48.5	0.0
CELP				IAML		02 02 48.9	
	comp=Z,3μm,0.3s						
CELP				IAML		02 02 48.9	
	comp=Z,4μm,0.2s						
UUPR	Utuado, UPR, P	0.26	8		Pg	02 02 45.7	+0.3
UUPR				Sg	Sg	02 02 49.2	-0.1
MLPR	Magueyes Islan	0.27	265		Pg	02 02 45.7	0.0
CRPR	Cabo Rojo, PR	0.34	272		Pg	02 02 46.7	0.0
CRPR	Cabo Rojo, PR	0.34	272	IAML		02 02 51.7	
	comp=Z,2μm,0.1s						
CRPR				IAML		02 02 52.4	
	comp=Z,1μm,0.2s						
CRPR	Cabo Rojo, PR	0.34	272	⇑ePg	Pg	02 02 46.8	0.0
CRPR				⇑eSg	Sg	02 02 51.3	-0.2
CRPR				IAML		02 02 51.6	
	comp=N,1μm,0.1s						
CRPR	Cabo Rojo, PR	0.34	272	⇓iP	Pg	02 02 46.8	0.0
CRPR				eS	Sg	02 02 51.3	-0.2
CRPR	Cabo Rojo, PR	0.34	272	i P	Pg	02 02 46.8	0.0
CRPR				eS	Sg	02 02 51.3	-0.2
CRPR				IAML		02 02 52.3	
	comp=Z,1μm,0.2s						
LSP	Las Mesas	0.36	300		Pg	02 02 47.2	0.0
LSP					Sg	02 02 52.8	+0.5
LSP	Las Mesas	0.36	300	⇑iP	Pg	02 02 47.2	0.0
LSP				eS	Sg	02 02 52.8	+0.5
PRSN	Puerto Rico Se	0.43	301		Pg	02 02 48.0	-0.5
PRSN	Puerto Rico Se	0.43	301		Sg	02 02 55.0	+0.7
PRSN	Puerto Rico Se	0.43	301	⇑ePg	Pg	02 02 48.1	-0.3
PRSN				⇑eSg	Sg	02 02 52.5	-1.9
PRSN				IAML		02 02 56.8	
	comp=N,2μm,0.2s						
PRSN	Puerto Rico Se	0.43	301	⇑iP	Pg	02 02 48.1	-0.3
PRSN				eS	Sg	02 02 55.0	+0.7
ECPR	Experimental S	0.49	49		Pg	02 02 49.8	+0.1
ECPR				IAML		02 02 58.2	
	comp=N,1μm,0.2s						
ECPR				IAML		02 03 01.0	
	comp=N,1μm,0.2s						
ECPR	Experimental S	0.49	49	⇑iP	Pg	02 02 49.9	+0.2
ECPR				eS	Sg	02 02 57.1	+0.8
EMPR	Esperanza - Ma	0.53	24		Pg	02 02 50.8	+0.5
EMPR					Sb	02 02 58.6	+0.3
EMPR	Esperanza - Ma	0.53	24	⇓iP	Pg	02 02 50.8	+0.5
EMPR				eS	Sb	02 02 58.6	+0.3
AGPR	Aguadilla, PR	0.58	324		Pg	02 02 50.7	-0.5
AGPR	Aguadilla, PR	0.58	324	⇑ePg	Pg	02 02 50.7	-0.5
AGPR				⇑eSg	Sg	02 02 59.1	+0.2
AGPR				IAML		02 02 59.8	
	comp=N,380nm,0.1s						
AGPR	Aguadilla, PR	0.58	324	⇑iP	Pg	02 02 50.8	-0.5
AGPR				eS	Sg	02 02 59.0	0.0
AGPR	Aguadilla, PR	0.58	324	i P	Pg	02 02 50.7	-0.5
AGPR				eS	Sg	02 02 59.0	0.0
SJG	San Juan	0.59	79	Pg	Pg	02 02 51.4	0.0
SJG				IAML		02 03 01.6	
	comp=N,850nm,0.2s						
SJG				IAML		02 03 01.7	
	comp=N,827nm,0.3s						
SJG	San Juan	0.59	79	⇑iP	Pg	02 02 51.5	0.0
SJG				eS	Sg	02 02 59.5	+0.2
SJG	San Juan	0.59	79	i P	Pg	02 02 51.4	0.0
SJG				eS	Sg	02 02 59.5	+0.2
SJG				IAML		02 03 01.8	
	comp=Z,10μm,0.1s						
PDPR	Patillas Dam,	0.70	88		Pb	02 02 53.4	-0.3
GCPR	Guaynabo City	0.71	64		Pb	02 02 53.3	-0.7
GCPR	Guaynabo City	0.71	64		Sb	02 03 02.8	-0.9
GCPR	Guaynabo City	0.71	64	⇑eP	Pb	02 02 53.5	-0.5
GCPR				eS	Sb	02 03 02.8	-0.9
IDE	Isla Desecheo	0.79	300		Pb	02 02 54.1	-1.1
IDE					Sb	02 03 04.6	-1.2
IDE	Isla Desecheo	0.79	300	⇓iP	Pb	02 02 54.1	-1.1
IDE				eS	Sb	02 03 04.6	-1.2
HUMP	Col San Antoni	0.88	80		Pb	02 02 55.9	-0.9
HUMP				IAML		02 03 09.5	
	comp=Z,350nm,0.2s						
HUMP				IAML		02 03 09.7	
	comp=Z,415nm,0.3s						
HUMP	Col San Antoni	0.88	80		Sb	02 03 07.6	-0.7
HUMP	Col San Antoni	0.88	80	⇓iP	Pb	02 02 55.9	-0.9
HUMP				eS	Sb	02 03 07.6	-0.7
CUPR	Culebra, Puert	1.44	77	Pn	Pn	02 03 05.7	+0.3
HIDR	Higuey Centro	1.95	288	⇑ePg	Pn	02 03 13.2	+0.6
HIDR				⇑eSg	Sb	02 03 40.3	+0.9
HIDR				IAML		02 03 53.7	
	comp=N,50nm,1.3s						
MIDR	Miches	2.39	295	⇑ePg	Pb	02 03 22.0	-0.6
MIDR				⇑eSg	Sb	02 03 54.9	+3.1
MIDR				IAML		02 03 57.9	
	comp=N,33nm,2.5s						
DR12	Loma Pena Alta	2.61	288	Pn	Pn	02 03 21.7	0.0
HATOM	Hato Mayor del	2.61	288	⇓ePg	Pb	02 03 25.6	-0.8
HATOM				⇓eSg	Sb	02 04 01.7	+3.3
HATOM				IAML		02 04 07.4	
	comp=N,32nm,1.3s						

*AEIC **05** 02:11:09.4±1.1, 69°.58N±0°.05×144°.74W±0°.02, h10km±6km, Error ellipse: s-maj=7.3km s-min=0.9km az=178.0*
*NEIC **05** 02:11:10.9±0.9, 69°.65N±0°.05×144°.71W±0°.10, h10km±2km, ML3.3/94, ML3.2(AEIC), Error ellipse: s-maj=8.2km s-min=5.6km az=357.0*
*IDC **05** 02:11:10.6±3.0, 69°.62N×144°.85W, h0km, mb3.3/1, mbtmp3.4/5, ML3.2/4, MS3.7/1, Error ellipse: s-maj=33.8km s-min=18.7km az=143.0*
ISC 05 02:11:09.7±1.4, **69°.61N**±0°.05×**144°.75W**±0°.03, **h1**km±11km, **n92**, σ**0s.78**/104, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
C27K	Jago River	0.36	87		Pg	02 11 17.2	+0.6
C27K					Sg	02 11 22.2	+0.9
D25K	Kavik River	0.64	244		Pg	02 11 21.6	-0.4
D25K				Sg	Sg	02 11 30.1	-0.1
D27M	Malcolm River	1.39	104		Pn	02 11 35.3	-0.9
D27M					Sg	02 11 55.0	+0.8
E25K	Arctic Village	1.53	192		Pn	02 11 37.8	-0.4
E25K					Sn	02 11 59.3	+0.7
E25K				IAML		02 12 00.7	
	comp=E,339nm,0.8s						
E25K				IAML		02 12 00.8	
	comp=N,456nm,0.9s						
E27K	Coleen River	1.83	140		Pn	02 11 42.7	+0.4
E27K					Sn	02 12 06.3	+0.2
E27K				IAML		02 12 11.1	
	comp=E,282nm,0.7s						
E27K				IAML		02 12 13.4	
	comp=N,224nm,0.9s						
F26K	Sheenjek River	1.94	173		Pn	02 11 44.5	+0.7
F26K					Sn	02 12 09.5	+0.7
F26K				IAML		02 12 13.8	
	comp=N,218nm,0.8s						
TOLK	Toolik Lake Re	1.98	243		Pn	02 11 45.0	+0.5
TOLK				IAML		02 12 15.5	
	comp=E,280nm,1.0s						
TOLK				IAML		02 12 26.2	
	comp=N,249nm,0.7s						
F25K	Christian Rive	2.05	190		Pn	02 11 45.8	+0.4
F25K					Sn	02 12 12.1	+0.4
F25K				IAML		02 12 18.6	
	comp=E,172nm,0.7s						
F25K				IAML		02 12 21.4	
	comp=N,182nm,0.8s						
E28M	Babbage River	2.12	116		Pn	02 11 46.6	+0.3
E28M					Sn	02 12 13.8	+0.5
D28M	Stokes Point	2.14	95		Pn	02 11 47.2	+0.7
D28M				IAML		02 12 23.6	
	comp=N,210nm,0.6s						
D28M				IAML		02 12 35.3	
	comp=E,237nm,1.2s						
BMAR	Burnt Mountain	2.19	178		Pn	02 11 47.4	+0.1
D23K	Nanushuk River	2.21	256		Pn	02 11 48.4	+0.9
D23K					Sn	02 12 16.1	+0.7
D23K				IAML		02 12 30.8	
	comp=N,191nm,0.6s						
D23K				IAML		02 12 35.8	
	comp=E,260nm,0.9s						
E23K	Chandalar	2.36	231		Pn	02 11 49.9	+0.3
F28M	Old Crow	2.69	136		Pn	02 11 54.1	+0.1
F28M				Sn	Sn	02 12 26.0	-1.2
F28M				IAML		02 12 36.7	
	comp=E,114nm,0.7s						
F28M				IAML		02 12 41.0	
	comp=N,148nm,0.8s						
G26K	Porcupine Rive	2.70	172		Pn	02 11 54.2	+0.1
G26K					Sn	02 12 28.5	+1.1
E29M	Blow River	2.75	113		Pn	02 11 55.2	+0.2
E29M				IAML		02 12 39.3	
	comp=N,94nm,0.9s						
D22K	Ayikyak River	2.92	259		Pn	02 11 57.5	+0.3
D22K				IAML		02 12 55.0	
	comp=E,124nm,0.7s						
G27K	Doyon Strip	3.04	156		Pn	02 11 58.8	-0.2
G27K				IAML		02 12 53.1	
	comp=E,67nm,0.8s						
FYU	Fort Yukon	3.06	184		Pn	02 12 00.3	+1.1
FYU				IAML		02 12 52.0	
	comp=N,104nm,1.0s						
B22K	Teshekpuk Lake	3.07	288		Pn	02 11 59.9	+0.6
G24K	Hadweenzic Riv	3.10	201		Pn	02 11 59.6	-0.1
G24K				IAML		02 12 56.8	
	comp=E,76nm,0.9s						
COLD	Coldfoot	3.13	223		Pn	02 12 00.9	+0.8
G23K	Bananza Creek	3.52	217		Pn	02 12 06.2	+0.7
G23K				IAML		02 13 09.3	
	comp=N,60nm,1.0s						
G23K				IAML		02 13 11.8	
	comp=E,75nm,1.1s						
E21K	Killik River	3.52	255		Pn	02 12 05.5	0.0
E21K				IAML		02 13 06.0	
	comp=N,64nm,0.7s						
H27K	Steamboat Moun	3.61	159		Pn	02 12 07.3	+0.6
H27K				IAML		02 13 09.6	
	comp=N,70nm,1.2s						
G29M	Pine Creek	3.69	134		Pn	02 12 08.1	+0.3
G29M				IAML		02 12 55.4	
	comp=N,76nm,0.6s						
A22K	Sinclair Lake	3.73	297		Pn	02 12 09.2	+0.8
F30M	Barrier River	3.85	117		Pn	02 12 11.7	+1.7
F30M				IAML		02 13 00.5	
	comp=E,44nm,0.9s						
F30M				IAML		02 13 23.6	
	comp=N,44nm,1.0s						
H24K	Noodor Dome	3.97	199		Pn	02 12 11.6	-0.2
H24K				IAML		02 13 20.4	
	comp=N,33nm,0.9s						
H24K				IAML		02 13 27.5	
	comp=E,40nm,1.0s						
F21K	Alatna River	4.02	238		Pn	02 12 12.8	+0.5
F21K				IAML		02 13 23.5	
	comp=N,32nm,0.7s						
F21K				IAML		02 13 25.4	
	comp=E,39nm,0.8s						
PRP	Porcupine Dome	4.12	185		Pn	02 12 14.5	+0.6
PRP				IAML		02 13 26.7	
	comp=N,49nm,0.8s						
I27K	Kandik River	4.20	162		Pn	02 12 15.6	+0.8
INK	Inuvik	4.25	103	Pn	Pn	02 12 16.5	+1.0
	comp=N,0.7nm,0.3s,baz=288,slow=13,SNR=44						
INK				Sn	Sn	02 13 05.4	-0.3
	comp=N,1.5nm,0.3s,baz=331,slow=19,SNR=5.4						
INK				Lg	Lg	02 13 26.1	
	comp=N,0.8nm,0.3s,baz=241,slow=19,SNR=3.9						
	comp=N,5.6nm,0.5s						
INK	Inuvik	4.25	103		Pn	02 12 15.9	+0.4
D20K	Etivluk River	4.33	264		Pn	02 12 17.8	+1.2
D20K				IAML		02 13 42.8	
	comp=E,40nm,1.1s						
D20K				IAML		02 13 51.6	
	comp=N,37nm,0.8s						
E20K	Nigu River	4.35	257		Pn	02 12 18.1	+1.2
EPYK	Eagle Plains	4.44	133		Pn	02 12 18.9	+0.8
H22K	Ishtalitna Cre	4.50	217		Pn	02 12 19.0	+0.1
H22K				IAML		02 13 45.2	
	comp=E,33nm,1.5s						
I28M	Miner Creek	4.57	154		Pn	02 12 21.0	+1.0
F31M	Tsiigehtchic	4.59	113		Pn	02 12 20.4	+0.3
F31M				IAML		02 13 43.5	
	comp=N,20nm,1.2s						
F31M				IAML		02 13 44.8	
	comp=E,22nm,0.8s						
POKR	Poker Plat Res	4.63	194		Pn	02 12 21.2	+0.5
POKR				IAML		02 13 48.5	
	comp=E,25nm,1.5s						
POKR				IAML		02 13 49.8	
	comp=N,22nm,0.9s						
G31M	Satah River	4.74	120		Pn	02 12 22.1	0.0
G31M				IAML		02 13 55.2	
	comp=N,33nm,1.0s						
G31M				IAML		02 14 12.4	
	comp=E,21nm,1.3s						
I23K	Minto, Yukon-K	4.82	204		Pn	02 12 23.8	+0.5
I23K				IAML		02 13 53.9	
	comp=E,25nm,0.9s						
I23K				IAML		02 14 03.4	
	comp=N,24nm,1.4s						
MDM	Murphy Dome	4.86	198		Pn	02 12 24.1	+0.1
D19K	Kuna River	4.93	263		Pn	02 12 25.5	+0.7
IL31		4.93	191		Pn	02 12 25.3	+0.5
ILAR	Eielson Array	4.93	191	Pn	Pn	02 12 25.4	+0.5
	comp=N,0.9nm,0.3s,baz=3.2,slow=13,SNR=40						
ILAR				Sn	Sn	02 13 22.9	+0.4
	comp=N,1.1nm,0.3s,baz=10,slow=22,SNR=8.0						
ILAR				Lg	Lg	02 13 43.2	
	comp=N,1.2nm,0.3s,baz=5.3,slow=31,SNR=7.5						
	comp=N,2.5nm,0.5s						
ILAR	Eielson Array	4.93	191	Pn	Pn	02 12 24.5	-0.4
J25K	Salcha River,	5.03	183		Pn	02 12 26.8	+0.6
J25K				IAML		02 13 59.0	
	comp=E,15nm,1.5s						
CCB	Clear Creek Bu	5.13	195		Pn	02 12 27.8	+0.3
J26L	Joseph Creek	5.15	174		Pn	02 12 28.5	+0.5
J26L				IAML		02 13 34.2	
	comp=N,24nm,0.7s						
I21K	Tanana	5.25	216		Pn	02 12 29.7	+0.5
HDA	Harding Lake	5.30	190		Pn	02 12 30.3	+0.5
HDA				IAML		02 14 02.4	
	comp=N,15nm,1.4s						
NEA2	Nenana	5.31	201		Pn	02 12 30.2	+0.1
WRH	Wood River Hil	5.33	196		Pn	02 12 30.4	+0.2
WRH				IAML		02 14 06.4	
	comp=N,17nm,1.4s						
WRH				IAML		02 14 08.9	
	comp=E,15nm,1.2s						
I30M	Mount Dempster	5.46	140		Pn	02 12 32.4	+0.2
H31M	Peel River	5.50	129		Pn	02 12 32.6	-0.1
F19K	Shaleruckik Mo	5.59	246	Pn	Pn	02 12 34.6	+0.7
SCRK	Sand Creek	5.67	177		Pn	02 12 35.8	+0.7
K24K	Donnelly Dome	5.85	185	Pn	Pn	02 12 37.9	+0.4
RIDG	Independent Ri	5.90	180		Pn	02 12 39.1	+0.9
C18K	Utukok River	5.95	268		Pn	02 12 39.0	+0.1
DAWY	Dawson	5.95	157		Pn	02 12 39.8	+0.9
DOT	Dot Lake	6.00	177		Pn	02 12 40.1	+0.6
J30M	Hart River	6.03	143		Pn	02 12 40.3	+0.3
BPAW	Bear Paw Mtn.	6.05	207		Pn	02 12 40.6	+0.3
H19K	Roundabout Mou	6.07	233	Pn	Pn	02 12 41.1	+0.8
MCK	McKinley	6.13	198		Pn	02 12 41.6	+0.3
E18K	Tukpahlearik C	6.22	257		Pn	02 12 42.6	+0.1
RND	Reindeer	6.44	197		Pn	02 12 46.2	+0.5
K29M	Barlow Dome	6.46	150		Pn	02 12 47.0	+1.1
KTH	Kantishna Hill	6.56	205		Pn	02 12 47.2	0.0
TRF	Thorofare Moun	6.57	202		Pn	02 12 47.3	-0.1
L26K	Log Cabin Wild	6.64	174		Pn	02 12 48.9	+0.6
DHY	Denali Highway	6.65	190		Pn	02 12 50.0	+1.5
PAX	Paxson	6.68	183		Pn	02 12 49.5	+0.7
BCAR	Beaver Creek A	6.68	168	Pn	Pn	02 12 49.8	+0.9
BC01	Beaver Creek A	6.68	169		Pn	02 12 49.7	+0.8
L27K	Beaver Creek,	6.68	169		Pn	02 12 49.8	+0.9
C17K	DeLong Mountai	6.70	269		Pn	02 12 48.4	-0.7
MENT	Mentasta	6.71	176		Pn	02 12 49.9	+0.6
E17K	Hotham Inlet	6.80	256		Pn	02 12 50.5	0.0
A36M	Sachs Harbour	6.84	61		Pn	02 12 50.6	-0.4
F17K	Baldwin Pennin	6.95	251		Pn	02 12 51.9	-0.6
C36M	Paulatuk	7.26	82		Pn	02 12 55.5	-1.3
K20K	Telida	7.29	215	Pn	Pn	02 12 57.7	+0.4
PPLA	Purkeypile	7.38	208		Pn	02 12 59.1	+0.6
L22K	Petersville	7.52	202		Pn	02 13 01.8	+1.4
YKA	Yellowknife Ar	14.02	106	Pn	Pn	02 14 25.3	-3.8
	comp=E,0.1nm,0.3s,baz=314,slow=14,SNR=6.7						
	comp=E,0.5nm,0.6s						
RES	Resolute Bay	15.64	49	Pn	Pn	02 14 51.0	+0.1
	comp=E,0.1nm,0.3s,baz=267,slow=14,SNR=4.4						
	comp=E,0.7nm,0.4s						
PDAR	Pinedale Array	32.38	128	P	P	02 17 42.4	+1.7
	comp=E,0.2nm,0.6s,baz=353,slow=4.9,SNR=4.3						
	comp=E,0.2nm,0.6s						
LPIG	La Paz	49.88	137	LR	LR	02 44 04.7	
	comp=E,74nm,18.4s,baz=12,slow=40						

IDC 05 02:16:34.6±4.6, **23°.00S**×**175°.34W**, **h0**km, **mb3.6**/2, **mbtmp3.6**/2, **Error ellipse: s-maj=314.4km s-min=45.3km az=157.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.41	259	P	P	02 25 03.2	-0.1
	0.3nm,0.3s,baz=101,slow=8.2,SNR=5.7						
	0.3nm,0.3s						
WRA	Warramunga Arr	46.75	264	P	P	02 25 06.0	0.0
	0.4nm,0.4s,baz=102,slow=8.3,SNR=16						
	0.4nm,0.4s						
MKAR	Makanchi Array	114.70	312	PKP	PKiKP	02 35 17.4	+0.4
	0.1nm,0.6s,baz=110,slow=3.4,SNR=1.4						
KURBB	Kurchatov Arra	117.56	316	PKP	PKPdf	02 35 19.8	-2.4
	0.8nm,0.9s,baz=79,slow=2.0,SNR=4.9						
GERES	GERESS Array B	153.23	347	PKPbc	PKiKP	02 36 36.1	+1.4
	0.5nm,0.6s,baz=33,slow=3.8,SNR=1.7						

WEL 05 02:21:12.2±0.8, **32°S**±14°×**18°0W**±3°2, **h340**km, **M4.1**/10, **mB4.6**/10, **ML4.3**/10, **MLv4.5**/6, **Mw(mB)3.8**/10, **Error ellipse: s-maj=45.2km s-min=5.0km az=112.5, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.97	36	P	Pn	02 22 09.5	-1.0
GLKZ				S	S	02 22 55.1	-2.3
MXZ	Matakaoa Point	6.04	194	P	Pn	02 22 44.0	+1.0
MXZ				S	S	02 23 57.2	+0.7
WMGZ	Waiomatatini S	6.27	192	P	Pn	02 22 49.0	+3.4
WMGZ				S	S	02 24 03.7	+2.4
HAZ	Te Kaha	6.34	197	P	Pn	02 22 48.3	+1.9
HAZ				S	S	02 24 02.9	0.0
PKGZ	Pakihiroa	6.38	194	P	Pn	02 22 48.7	+1.8
PKGZ				S	S	02 24 01.5	-2.3
PUZ	Puketiti	6.54	193	P	Pn	02 22 50.4	+1.6
PUZ				S	S	02 24 07.3	0.0
RUGZ	Raukumara Rang	6.57	197	P	Pn	02 22 49.2	-0.1
RUGZ				S	S	02 24 07.2	-0.8
TWGZ	Tauwhareparae	6.70	194	P	Pn	02 22 52.3	+1.6
TWGZ				S	S	02 24 12.9	+2.3
CNGZ	Carnagh Statio	6.95	192	P	Pn	02 22 55.0	+1.4
MWZ	Matawai	6.95	197	P	Pn	02 22 55.1	+1.5
MWZ				S	S	02 24 15.2	-0.9
URZ	Urewera	6.99	200	P	Pn	02 22 53.3	-0.8
URZ				S	S	02 24 15.5	-1.4
RAGZ	Rawiri	7.13	197	P	Pn	02 22 56.4	+0.5
RAGZ				S	S	02 24 19.1	-1.0
RTZ	Ruatahuna	7.36	199	P	Pn	02 22 57.9	-0.6
SNGZ	Shannon Statio	7.42	197	P	Pn	02 23 00.1	+0.9
KNZ	Kokohu	7.58	194	P	Pn	02 23 02.4	+1.5
BKZ	Black Stump Fm	8.01	200	P	Pn	02 23 05.5	-0.8
BKZ				S	S	02 24 36.5	-2.7
NGZ	Ngauruhoe	8.32	205	P	Pn	02 23 10.4	+0.5
PXZ	Pawanui	8.72	197	P	Pn	02 23 14.4	-0.2
PXZ				S	S	02 24 51.5	-3.1
BFZ	Birch Farm	9.49	198	P	Pn	02 23 21.0	-2.9
MRZ	Mangatainoka R	9.66	201	P	Pn	02 23 22.6	-3.4

*SKHL **05** 02:28:57.4±0.7, 45°.30N×150°.80E, h47km±7km, mb4.7/3*
*IDC **05** 02:29:30.7±25.0, 47°.76N×152°.49E, h0km, mb3.6/2, mbtmp3.5/3, ML2.3/1, Error ellipse: s-maj=547.2km s-min=47.0km az=149.0*
ISC 05 02:28:57.1±2.0, **45°.4N**±0°.2×**150°.8E**±0°.2, **h42**km, **n14**, σ**0s.58**/8, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.07	265	eP	Pn	02 29 29.4	+0.1
KUR				AMB	AMB	02 29 30.5	
	170nm,0.4s						
KUR				eS	Sn	02 29 54.0	+0.1
KUR				A	A	02 29 56.3	
	680nm,0.4s						
KUR				A	A	02 29 56.3	
	770nm,0.4s						
YUK	Yuzh-Kuril'sk	3.78	250	eP	Pn	02 29 53.7	+0.9
YUK				AMB	AMB	02 29 56.4	
	120nm,0.3s						
YUK				eS	Sn	02 30 35.4	-0.6
YUK				A	A	02 30 42.0	
	250nm,0.5s						
YUK				A	A	02 30 42.0	
	380nm,0.5s						
GLVR	Golovnino	4.13	247	erx	rx	02 30 48.0	
NMR	Nemuro--Hokkai	4.18	242	eP	Pn	02 29 58.3	0.0
NMR				eS	Sn	02 30 45.2	-0.6
AKK	Akkeshi	4.91	242	eP	Pn	02 30 08.8	+0.4
PETK	Petropavlovsk-	8.90	28	Pn	Pn	02 31 02.9	-0.2
	0.3nm,0.3s,baz=214,slow=11,SNR=6.5						
	2.2nm,0.5s						
H11N2	WAKE ISLAND Hy	28.90	147	T	T	03 06 19.2	
	baz=337,slow=76,SNR=33						
H11N1	WAKE ISLAND Hy	28.91	147	T	T	03 06 19.0	
	baz=337,slow=76,SNR=34						
H11N3	WAKE ISLAND Hy	28.92	147	T	T	03 06 21.7	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=337,slow=76,SNR=33						
H11S1	WAKE ISLAND Hy	29.94	149	T	T	03 07 35.6	
	baz=337,slow=76,SNR=46						
H11S3	WAKE ISLAND Hy	29.95	149	T	T	03 07 37.7	
	baz=337,slow=76,SNR=44						
H11S2	WAKE ISLAND Hy	29.96	149	T	T	03 07 37.6	
	baz=337,slow=76,SNR=44						
MKAR	Makanchi Array	46.10	297	P	P	02 37 54.6	+38
	0.1nm,0.5s,baz=77,slow=6.2,SNR=1.9						
	0.1nm,0.5s						
FINES	FINESS Array B	64.52	334	P	P	02 39 59.8	+31
	2.4nm,1.0s,baz=57,slow=5.9,SNR=6.6						
	2.4nm,1.0s						

*IDC **05** 02:50:49.5±0.7, 29°.18N×142°.57E, h0^{km}, mb4.1/19, mbtmp4.0/21, ML3.4/2, MS3.5/5, Error ellipse: s-maj=19.5km s-min=17.1km az=62.0*
*NEIC **05** 02:50:52.0±1.1, 29°.37N±0°.07×142°.5E±0°.1, h10^{km}±1^{km}, mb4.5/25, Error ellipse: s-maj=21.2km s-min=10.9km az=84.0*
ISC 05 02:50:53.3±0.6**, 29°.24N**±0°.07×**142°.50E**±0°.09**, h27^{km}, n75, σ1^{s}11**/74**, mb4.3**/38**, MS3.6**/5**, 1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.16	188	Pn	Pn	02 51 14.8	-13
	7.6nm,0.3s,baz=51,slow=22,SNR=1.7						
JCJ				Sn	Sn	02 51 39.6	-14
	36nm,0.3s,baz=311,slow=20,SNR=12						
JCJ	Chichijima	2.16	188		Pb	02 51 30.1	-1.6
JGF	Kuroka	7.69	327	Pn	Pn	02 52 42.6	-1.0
MJAR	Matsushiro Arr	8.12	335	Pn	Pn	02 52 49.2	-0.3
	0.3nm,0.3s,baz=159,slow=11,SNR=16						
MJAR				Sn	Sn	02 54 18.9	-1.6
	0.1nm,0.3s,baz=130,slow=28,SNR=4.2						
	3.7nm,0.4s						
MJAR	Matsushiro Arr	8.12	335		Pn	02 52 47.8	-1.7
MAJO	Matsushiro	8.13	335	Pn	Pn	02 52 49.2	-0.3
KSRS	Korea Array	14.67	308	Pn	Pn	02 54 21.1	+2.1
	0.3nm,0.3s,baz=108,slow=12,SNR=5.7						
KSRS				LR	LR	02 59 33.5	
	comp=Z,92nm,20.4s,baz=170,slow=36						
	2.4nm,0.8s						
YSS	Yuzhno-Sakhali	17.68	1	Pn	Pn	02 54 55.0	-2.6
YSS				IAmb	IAmb	02 54 58.8	
	comp=Z,32nm,1.2s						
BNX	BinXian	20.31	328	⇓P	P	02 55 27.4	+0.3
BNX				pmax	pmax		
	comp=Z,32nm,0.7s						
NJ2	Nanjing	20.53	284	eP	Pn	02 55 31.0	-1.0
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HEH	HeiHe	23.89	336	eP	P	02 56 06.4	+1.8
HEH				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BJI2	Beijing	24.11	303	P	P	02 56 07.7	+1.0
BJI2				S	S	03 00 20.4	-2.4
BJI2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BJI2				LR	LR		
	comp=N,74nm,8.1s						
BJI2				LR	LR		
	comp=E,73nm,9.3s						
BJI2				LR	LR		
	comp=Z,130nm,13.9s						
HILR	Hailar Array B	26.66	326	P	P	02 56 31.8	+1.9
	comp=Z,1.9nm,0.5s,baz=134,slow=11,SNR=7.3						
	comp=Z,1.9nm,0.5s						
HHC	Hu-ho-hao-te	27.71	303	eP	P	02 56 40.8	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN	Xi'an	28.91	288	P	P	02 56 49.3	-0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	Ulaanbaatar	33.00	314		P	02 57 26.0	-0.2
LZH	Lanzhou	33.09	292	eP	P	02 57 27.0	-0.2
LZH				sP	pP	02 57 33.5	+0.1
LZH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LZDM	Lanzhou Array	33.21	292	P	P	02 57 27.2	-1.2
	comp=Z,0.5nm,0.3s,baz=127,slow=6.3,SNR=5.1						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	33.40	314	P	P	02 57 30.7	+1.0
	comp=Z,3.7nm,0.8s,baz=117,slow=7.9,SNR=21						
SONM				LR	LR	03 12 19.2	
	comp=Z,73nm,18.1s,baz=313,slow=38						
	comp=Z,3.7nm,0.8s						
SONM	Songino Array	33.40	314	P	P	02 57 30.1	+0.4
GTA2	Gaotai	36.44	298	eP	P	02 57 55.0	-1.0
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHTO	Chiang Mai	40.91	265	P	P	02 58 33.1	-0.5
CMAR	Chiang Mai Arr	41.06	265	P	P	02 58 35.0	+0.2
	comp=Z,1.2nm,0.3s,baz=63,slow=9.2,SNR=4.4						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	41.06	265	P	P	02 58 34.5	-0.3
WMQ	Urumqi	45.58	304	eP	P	02 59 13.3	+2.2
WMQ				PcS	PcS	03 04 38.9	-4.5
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
ANM	Nome	47.93	27	P	P	02 59 29.0	-0.1
ZAA0	Zalesovo Array	48.07	318		P	02 59 30.4	+0.1
ZAA0				IAmb	IAmb	02 59 32.4	
	comp=Z,3.4nm,0.8s						
ZALV	Zalesovo Beam	48.07	318	P	P	02 59 30.9	+0.6
	comp=Z,1.8nm,0.5s,baz=100,slow=7.3,SNR=12						
	comp=Z,1.8nm,0.5s						
ZALV	Zalesovo Beam	48.07	318		P	02 59 30.3	0.0
M14K	Bethel	48.22	33	P	P	02 59 31.8	+0.5
WB0	Warramunga Arr	49.35	190	P	P	02 59 40.9	+0.4
MKAR	Makanchi Array	49.35	308	P	P	02 59 41.0	+0.7
	comp=Z,2.0nm,0.7s,baz=92,slow=8.8,SNR=23						
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	49.35	308		P	02 59 40.6	+0.2
WRA	Warramunga Arr	49.53	190	P	P	02 59 42.3	+0.4
	comp=Z,1.5nm,0.5s,baz=8.7,slow=7.9,SNR=18						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	49.53	190	P	P	02 59 41.6	-0.3
MAKZ	Makanchi	49.57	308		P	02 59 41.8	-0.2
MAKZ				IAmb	IAmb	02 59 44.4	
	comp=Z,2.2nm,0.5s						
M17K	Holitna River	50.51	33	P	P	02 59 49.3	+0.4
KURK	Kurchatov	51.70	313		P	02 59 58.0	0.0
KURK				IAmb	IAmb	03 00 00.1	
	comp=Z,9.0nm,1.0s						
KURBB	Kurchatov Arra	51.76	313	P	P	02 59 59.4	+1.0
	comp=Z,5.1nm,0.8s,baz=93,slow=6.0,SNR=66						
KURBB				LR	LR	03 21 50.6	
	comp=Z,51nm,18.4s,baz=175,slow=36						
	comp=Z,5.1nm,0.8s						
KDAK	Kodiak Island	52.49	38	P	P	03 00 03.4	-0.3
D20K	Etivluk River	52.57	24	P	P	03 00 05.0	+0.8
D20K				IAmb	IAmb	03 00 07.2	
	comp=Z,4.0nm,1.0s						
PPLA	Purkeypile	53.18	31	P	P	03 00 09.2	+0.2
PPLA				IAmb	IAmb	03 00 36.4	
	comp=Z,16nm,1.5s						
ASAR	Alice Springs	53.25	190	P	P	03 00 09.3	-0.4
	comp=Z,0.5nm,0.5s,baz=3.0,slow=5.2,SNR=9.9						
	comp=Z,0.5nm,0.5s						
ASAR	Alice Springs	53.25	190	P	P	03 00 10.2	+0.5
KNK	Knik Glacier	54.80	33	P	P	03 00 20.5	-0.1
KNK				IAmb	IAmb	03 00 40.0	
	comp=Z,8.1nm,1.1s						
ILAR	Eielson Array	55.70	29	P	P	03 00 26.6	-0.4
	comp=Z,0.5nm,0.7s,baz=258,slow=6.2,SNR=9.8						
	comp=Z,0.5nm,0.7s						
BVAR	Borovoye Array	56.67	317	P	P	03 00 35.1	+1.0
	comp=Z,3.1nm,0.5s,baz=91,slow=5.8,SNR=16						
	comp=Z,3.1nm,0.5s						
BORK	Borovoye	56.71	317		P	03 00 34.8	+0.4
BORK				IAmb	IAmb	03 00 36.0	
	comp=Z,4.0nm,0.7s						
BMAR	Burnt Mountain	56.81	26	P	P	03 00 36.5	+1.5
KK31	Karatay Array	58.08	305	P	P	03 00 44.0	-0.2
KK31				IAmb	IAmb	03 00 46.6	
	comp=Z,11nm,1.1s						
KKAR	Karatay Array	58.08	305	P	P	03 00 44.6	+0.3
MANEM	Manem	58.46	298	P	P	03 00 47.5	+0.1
F28M	Old Crow	58.62	26	P	P	03 00 47.9	+0.3
F28M				IAmb	IAmb	03 01 03.9	
	comp=Z,6.0nm,1.4s						
GAR	Garm	59.14	300	P	P	03 00 51.5	-0.3
GAR				IAmb	IAmb	03 00 54.2	
	comp=Z,5.3nm,0.8s						
CHGR	Chuyangaron	60.10	300	P	P	03 00 58.2	-0.3
INK	Inuvik	60.97	25	P	P	03 01 04.2	+0.5
AB31	Akbulak array	63.81	314	P	P	03 01 23.7	+0.6
AB31				IAmb	IAmb	03 01 25.0	
	comp=Z,3.6nm,1.1s						
ABKAR	Akbulak array	63.81	314	P	P	03 01 23.6	+0.5
YKA	Yellowknife Ar	70.13	29	P	P	03 02 03.2	+0.2
	comp=Z,0.5nm,0.9s,baz=295,slow=6.5,SNR=3.7						
	comp=Z,0.5nm,0.9s						
FINES	FINESS Array B	76.15	334	P	P	03 02 40.7	+2.1
	comp=Z,2.0nm,0.9s,baz=66,slow=1.7,SNR=4.1						
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	76.15	334	P	P	03 02 39.6	+1.0
BLKN	Baker Lake	76.20	22	P	P	03 02 39.0	+0.2
BLKN				IAmb	IAmb	03 02 52.4	
	comp=Z,2.6nm,0.9s						
NVAR	Mina Array Bea	78.98	52	P	P	03 02 56.1	+1.0
	comp=Z,0.8nm,0.6s,baz=298,slow=5.6,SNR=7.6						
	comp=Z,0.8nm,0.6s						
NVAR	Mina Array Bea	78.98	52	P	P	03 02 55.6	+0.5
AKASG	Malin Array Be	81.06	324	LR	LR	03 41 11.3	
	comp=Z,34nm,18.8s,baz=34,slow=37						
HFS	Hagfors	81.57	337	P	P	03 03 09.7	+1.3
	comp=Z,3.9nm,1.0s,baz=27,slow=6.6,SNR=1.5						
	comp=Z,3.9nm,1.0s						
NOA	NORSAR Array B	81.73	338	P	P	03 03 10.7	+1.5
	comp=Z,0.8nm,0.9s,baz=30,slow=2.7,SNR=1.5						
	comp=Z,0.8nm,0.9s						
PDAR	Pinedale Array	82.50	45	P	P	03 03 14.2	+0.3
	comp=Z,0.2nm,0.5s,baz=294,slow=1.5,SNR=3.0						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	82.50	45	P	P	03 03 13.8	-0.2
RAYN	Ar Rayn	84.54	294	P	P	03 03 25.5	+1.0
BRTR	Keskin Array B	84.75	313	P	P	03 03 26.4	+0.9
	comp=Z,1.3nm,0.8s,baz=76,slow=2.2,SNR=6.5						
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	84.75	313	P	P	03 03 25.7	+0.3
GERES	GERESS Array B	89.82	329	LR	LR	03 47 04.6	
	comp=Z,22nm,18.8s,baz=76,slow=38						
TXAR	Lajitas Array	94.10	53	P	P	03 04 10.1	+0.3
	comp=Z,0.5nm,0.6s,baz=348,slow=6.8,SNR=2.7						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	94.10	53	P	P	03 04 08.8	-1.0

IDC 05 02:54:06.3±1.5**, 6°.66N**×**124°.92E, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=29.0km s-min=11.6km az=139.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.78	58	Pg	Pg	02 54 21.5	+0.3
	426nm,0.3s,baz=239,slow=5.9,SNR=11						
DAV				Lg	Lg	02 54 31.8	
	839nm,0.3s,baz=240,slow=20,SNR=7.9						
ASAR	Alice Springs	31.39	164	P	P	03 00 28.7	-0.5
	0.3nm,0.5s,baz=341,slow=8.6,SNR=6.2						
	0.3nm,0.5s						
STKA	Stephens Creek	41.49	158	P	P	03 01 55.5	+0.2
	2.6nm,0.8s,baz=333,slow=9.0,SNR=4.7						
	2.6nm,0.8s						
MKAR	Makanchi Array	54.14	325	P	P	03 03 33.1	-0.2
	0.2nm,0.6s,baz=110,slow=7.1,SNR=2.4						
	0.2nm,0.6s						

*IDC **05** 03:06:36.3±2.2, 3°.65S×152°.91E, h0^{km}, mb3.9/3, mbtmp3.9/3, MS3.3/2, Error ellipse: s-maj=156.7km s-min=28.9km az=125.0*
*NEIC **05** 03:06:42.0±1.7, 3°.8S±0°.1×153°.24E±0°.06, h35^{km}±2^{km}, mb4.3/15, Error ellipse: s-maj=21.8km s-min=10.3km az=354.0*
ISC 05 03:06:41.5±0.9**, 3°.8S**±0°.2×**153°.23E**±0°.09**, h35^{km}, n25, σ1^{s}08**/24**, mb4.2**/12**, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.13	250		Pn	03 07 02.0	+1.2
RABL				Sn	Sn	03 07 16.4	+1.3
HNR	Honiara	8.71	130	Pn	Pn	03 08 46.4	+1.4
SAUI	Saumlaki	22.20	258	P	P	03 11 35.0	0.0
MARNC	Mare, Loyalty	22.71	142	P	P	03 11 40.1	-0.3
WB0	Warramunga Arr	24.28	228	P	P	03 11 54.9	-0.7
WR8	Warramunga Arr	24.32	227	P	P	03 11 55.3	-0.7
WR8				IAmb	IAmb	03 12 14.6	
	comp=Z,8.8nm,1.4s						
WRA	Warramunga Arr	24.42	227	P	P	03 11 56.1	-0.9
	comp=Z,3.4nm,0.4s,baz=53,slow=9.7,SNR=58						
	comp=Z,3.4nm,0.4s						
WRA	Warramunga Arr	24.42	227	P	P	03 11 55.5	-1.6
KNRA	Kununurra	26.80	242	P	P	03 12 17.4	-1.2
KNRA				IAmb	IAmb	03 12 28.7	
	comp=Z,23nm,1.4s						
ASAR	Alice Springs	27.17	222	P	P	03 12 20.9	-1.0
	comp=Z,0.4nm,0.4s,baz=52,slow=8.7,SNR=7.7						
	comp=Z,0.4nm,0.4s						
ASAR	Alice Springs	27.17	222	P	P	03 12 20.2	-1.7
FORT	Forrest	35.83	219	P	P	03 13 36.5	-1.3
FORT				IAmb	IAmb	03 13 39.8	
	comp=Z,5.1nm,0.9s						
NWAO	Narrogin (SRO)	44.39	225	LR	LR	03 32 36.1	
	comp=Z,31nm,18.8s,baz=270,slow=35						
ILAR	Eielson Array	81.08	22	P	P	03 18 53.3	+0.6
	comp=Z,0.5nm,0.9s,baz=236,slow=5.3,SNR=4.4						
	comp=Z,0.5nm,0.9s						
MCARA	McCarthy VSAT	81.10	26	P	P	03 18 52.1	-0.8
MCARA				IAmb	IAmb	03 19 08.8	
	comp=Z,11nm,1.2s						
H24K	Noodor Dome	81.25	21	P	P	03 18 54.3	+0.6
H24K				IAmb	IAmb	03 19 02.3	
	comp=Z,2.7nm,1.2s						
D22K	Ayikyak River	81.33	17	P	P	03 18 54.7	+0.7
D22K				IAmb	IAmb	03 18 58.3	
	comp=Z,3.8nm,1.4s						
J25K	Salcha River,	81.58	22	P	P	03 18 56.5	+1.0
J25K				IAmb	IAmb	03 18 57.2	
	comp=Z,1.6nm,0.8s						
O28M	Mount Upton	82.11	27	P	P	03 18 59.0	+0.4
L27K	Beaver Creek,	82.31	25	P	P	03 19 00.7	+1.3
BCAR	Beaver Creek A	82.33	25	P	P	03 19 00.1	+0.7
D25K	Kavik River	83.48	18	P	P	03 19 05.8	+0.5
D25K				IAmb	IAmb	03 19 05.9	
	comp=Z,1.5nm,1.1s						
QSPA	South Pole Qui	86.15	180	P	P	03 19 18.4	-0.5
QSPA				IAmb	IAmb	03 19 26.0	
	comp=Z,4.8nm,1.1s						
PDAR	Pinedale Array	97.86	48	LR	LR	04 02 53.5	
	comp=Z,12nm,18.4s,baz=4.0,slow=34						
TORD	Torodi Ar. Bea	150.38	290	PKPbc	PKPbc	03 26 28.8	-1.5
	comp=Z,0.6nm,0.7s,baz=53,slow=2.4,SNR=5.1						

*IDC **05** 03:13:19.4±0.8, 25°.18S×176°.62W, h0^{km}, mb4.2/7, mbtmp4.3/11, ML3.6/3, Error ellipse: s-maj=29.5km s-min=19.9km az=146.0*
*NEIC **05** 03:13:25.5±1.8, 25°.28S±0°.04×176°.55W±0°.09, h35^{km}±1^{km}, mb5.1/20, Error ellipse: s-maj=14.6km s-min=7.1km az=260.0*
ISC 05 03:13:24.3±0.5**, 25°.24S**±0°.07×**176°.49W**±0°.08**, h35^{km}, n61, σ1^{s}57**/58**, mb4.8**/15**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.20	197	Pn	Pn	03 14 26.4	+0.6
	221nm,0.2s,baz=74,slow=22,SNR=2.5						
RAO				Sn	Sn	03 15 14.8	+1.2
	129nm,0.3s,baz=18,slow=20,SNR=4.0						
RAO	Raoul Island	4.20	197		Pn	03 14 26.4	+0.6
RAO					Sn	03 15 15.4	+1.7
NIUE	Niue	8.63	46	Pn	Pn	03 15 28.6	+1.8
URZ	Urewera	14.07	201	Pn	Pn	03 16 39.7	-1.5
	0.5nm,0.3s,baz=27,slow=14,SNR=1.9						
URZ				Sn	Sn	03 19 02.4	-14
	1.4nm,0.3s,baz=342,slow=19,SNR=6.5						
	5.8nm,0.8s						
RAR	Rarotonga	15.87	79	Pn	Pn	03 17 04.7	-0.5
	1.8nm,0.3s,baz=322,slow=19,SNR=1.9						
RAR				Sn	Sn	03 19 53.9	-6.2
	2.0nm,0.3s,baz=173,slow=14,SNR=1.9						
	7.3nm,0.5s						
RAR	Rarotonga	15.87	79		Pn	03 17 04.4	-0.8
RAR				IAmb	IAmb	03 17 14.5	
	comp=Z,199nm,1.8s						
DZM	Mont Dzumac	15.96	278	Pn	Pn	03 17 03.7	-2.6
	comp=Z,0.1nm,0.3s,baz=166,slow=19,SNR=1.2						
	comp=Z,5.6nm,0.9s						
DZM	Mont Dzumac	15.96	278		Pn	03 17 04.4	-2.0
CTA	Charters Tower	34.69	271	P	P	03 20 10.7	-0.3
	comp=Z,3.3nm,0.6s,baz=106,slow=9.7,SNR=9.3						
	comp=Z,3.3nm,0.6s						
CTAO	Charters Tower	34.69	271	P	P	03 20 11.2	+0.2
STKA	Stephens Creek	37.23	250	P	P	03 20 32.1	-0.5
	comp=Z,2.1nm,0.5s,baz=98,slow=11,SNR=10						
	comp=Z,2.1nm,0.5s						
STKA	Stephens Creek	37.23	250	P	P	03 20 31.8	-0.9
STKA				IAmb	IAmb	03 20 39.4	
	comp=Z,84nm,1.9s						
AS31	Alice Springs	44.98	261	P	P	03 21 35.9	-0.6
ASAR	Alice Springs	44.98	261	P	P	03 21 35.9	-0.7
	comp=Z,2.1nm,0.4s,baz=89,slow=7.6,SNR=45						
ASAR				PcP	PcP	03 23 17.6	+0.2
	comp=Z,0.9nm,0.8s,baz=115,slow=4.0,SNR=4.4						
	comp=Z,2.1nm,0.4s						
ASAR	Alice Springs	44.98	261	P	P	03 21 35.6	-0.9
ASAR					PcP	03 23 16.9	-0.5
WB0	Warramunga Arr	45.51	267	P	P	03 21 39.5	-1.3
WRA	Warramunga Arr	45.51	266	P	P	03 21 38.8	-1.9
	comp=Z,1.4nm,0.5s,baz=104,slow=7.9,SNR=24						
WRA				PcP	PcP	03 23 19.4	+0.2
	comp=Z,0.8nm,1.0s,baz=93,slow=3.9,SNR=4.6						
	comp=Z,1.4nm,0.5s						
WRA	Warramunga Arr	45.51	266	P	P	03 21 38.4	-2.3
WRA					PcP	03 23 19.3	+0.1
FORT	Forrest	48.86	250	P	P	03 22 06.4	-0.3
FORT				IAmb	IAmb	03 22 07.0	
	comp=Z,11nm,0.6s						
CCD	Concordia, Ant	58.27	195	P	P	03 23 16.0	+0.6
CASY	Casey	60.33	206	P	P	03 23 29.2	-0.1
GIRL	Giralia	62.72	256	P	P	03 23 46.2	0.0
PMSA	Palmer Station	76.41	156	P	P	03 25 10.3	+0.4
CMB	Columbia Colle	82.03	41	P	P	03 25 41.2	+0.3
H03S2	Juan Fernandez	82.19	124	T	T	04 56 52.4	
	baz=244,slow=74,SNR=7.2						
H03S1	Juan Fernandez	82.20	124	T	T	04 56 51.7	
	baz=244,slow=74,SNR=9.9						
H03S3	Juan Fernandez	82.21	124	T	T	04 56 50.5	
	baz=244,slow=74,SNR=8.4						
H03N2	Juan Fernandez	82.35	123	T	T	04 56 50.7	
	baz=249,slow=73,SNR=5.5						
H03N3	Juan Fernandez	82.35	123	T	T	04 56 50.7	
	baz=249,slow=73,SNR=6.1						
H03N1	Juan Fernandez	82.37	123	T	T	04 56 57.5	
	baz=249,slow=73,SNR=4.8						
NVAR	Mina Array Bea	83.54	42	P	P	03 25 50.4	+1.4
	comp=Z,0.4nm,0.6s,baz=257,slow=5.2,SNR=2.2						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	83.54	42	P	P	03 25 49.4	+0.4
O15K	Ungalikthiuk R	85.22	9	P	P	03 25 58.4	+1.6
O15K				IAmb	IAmb	03 26 11.6	
	comp=Z,34nm,1.6s						
N15K	Kwethluk River	86.15	8	P	P	03 26 04.5	+3.2
N15K				IAmb	IAmb	03 26 20.8	
	comp=Z,19nm,1.6s						
N17K	Nushagak Hills	86.90	9	P	P	03 26 06.0	+1.0
N17K				IAmb	IAmb	03 26 25.9	
	comp=Z,8.9nm,1.4s						
N18K	Kilae Creek	87.24	10	P	P	03 26 08.1	+1.4
N18K				IAmb	IAmb	03 26 11.5	
	comp=Z,17nm,1.6s						
N19K	Bonanza Creek	87.59	11	P	P	03 26 12.5	+4.0
N19K				IAmb	IAmb	03 26 13.0	
	comp=Z,15nm,1.4s						
K15K	Wolf Creek Mou	88.05	7	P	P	03 26 13.6	+3.1
K15K				IAmb	IAmb	03 26 25.4	
	comp=Z,15nm,1.6s						
HIN	Hinchinbrook I	88.77	14	P	P	03 26 13.8	-0.2
SUA	Susitna One	88.87	12	P	P	03 26 16.4	+1.9
SUA				IAmb	IAmb	03 26 17.7	
	comp=Z,27nm,1.9s						
GHO	Glory Hole Cre	89.50	13	P	P	03 26 19.6	+2.2
ILAR	Eielson Array	92.61	12	P	P	03 26 32.4	+0.6
	comp=Z,0.3nm,0.8s,baz=216,slow=5.7,SNR=4.7						
	comp=Z,0.3nm,0.8s						
ILAR	Eielson Array	92.61	12	P	P	03 26 34.1	+2.3
CMAR	Chiang Mai Arr	92.99	289	P	P	03 26 34.4	-0.2
	comp=Z,0.7nm,0.3s,baz=145,slow=3.6,SNR=5.1						
	comp=Z,0.7nm,0.3s						
MKAR	Makanchi Array	115.42	312	PKP	PKPdf	03 32 02.2	-0.1
	comp=Z,0.4nm,0.5s,baz=100,slow=1.6,SNR=9.0						
MKAR	Makanchi Array	115.42	312		PKPdf	03 32 02.1	-0.2
BVAR	Borovoye Array	123.56	318	PKP	PKPdf	03 32 17.7	-0.1
	comp=Z,0.8nm,0.5s,baz=85,slow=1.6,SNR=3.3						
NB2	NORSAR Subarra	143.83	354	PKP	PKPbc	03 32 54.2	+1.2
	comp=Z,1.0nm,0.6s,baz=22,slow=4.1						
NOA	NORSAR Array B	143.83	354	PKP	PKPbc	03 32 54.0	+1.0
	comp=Z,1.4nm,0.7s,baz=4.2,slow=2.3,SNR=5.5						
NC602	NORSAR Array S	144.09	353	PKPdf	PKPbc	03 32 54.9	+1.1
HFS	Hagfors	144.41	351	PKP	PKPbc	03 32 55.9	+1.1
	comp=Z,2.8nm,0.4s,baz=64,slow=3.4,SNR=30						
KONO	Kongsberg	145.35	355	PKPbc	PKPdf	03 32 58.5	+0.6
AKASG	Malin Array Be	147.80	329	PKPbc	PKPbc	03 33 05.4	+0.2
	comp=Z,1.0nm,0.5s,baz=45,slow=4.3,SNR=7.6						
AKASG	Malin Array Be	147.80	329	PKPdf	PKPdf	03 33 02.2	-0.1
KIEV	Kiev	147.81	329	PKPbc	PKPbc	03 33 05.4	+0.2
BRTR	Keskin Array B	150.93	307	PKPbc	PKPbc	03 33 14.0	+0.3
	comp=Z,1.3nm,0.7s,baz=148,slow=3.0,SNR=6.0						
BRTR	Keskin Array B	150.93	307	PKPbc	PKPbc	03 33 13.3	-0.4
MMAI	Mount Meron Ar	151.17	293	PKPbc	PKiKP	03 33 15.3	+0.5
	comp=Z,1.3nm,0.4s,baz=99,slow=4.5,SNR=4.7						
BURAR	Bucovina Array	151.83	328	PKPbc	PKiKP	03 33 16.4	+0.7
TORD	Torodi Ar. Bea	167.85	172	PKPab	PKPab	03 34 35.0	+0.5
	comp=Z,0.6nm,1.1s,baz=189,slow=3.4,SNR=4.4						
TORD	Torodi Ar. Bea	167.85	172	PKPdf	PKPdf	03 33 27.2	-0.6

*ISK **05** 03:34:40.3, 35°.10N×27°.92E, h6^{km}, ML2.7/20*
*ATH **05** 03:34:41.2, 35°.16N×27°.98E, h5^{km}±2^{km}, ML2.9/6, Manual Solution by F.Xalaris First location: 2020/02/05 03:36:18, This location: 2020/02/05 05:44:43 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 05 03:34:40.8±1.5**, 35°.14N**±0°.05×**27°.94E**±0°.04**, h3^{km}**±12^{km}**, n33, σ0^{s}64**/41**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.76	303	Pg	Pg	03 34 55.7	+0.4
KARP				Sg	Sg	03 35 05.8	+0.7
KARP	Karpathos	0.76	303	P	Pg	03 34 54.5	-0.8
KARP	Karpathos	0.76	303	P	Pb	03 34 56.0	-0.6
KARP				S	Sb	03 35 06.3	-1.0
ARG	Arkhangelos	1.08	8	Pn	Pb	03 35 02.4	+0.2
ARG				Sn	Sn	03 35 18.4	0.0
ARG	Arkhangelos	1.08	8	P	Pb	03 35 02.4	+0.2
ARG	Arkhangelos	1.08	8	P	Pg	03 35 01.6	-0.1
ARG				S	Sg	03 35 15.4	-0.3
ZKR	Zakros	1.41	270	P	Pg	03 35 08.0	+0.1
ZKR				S	Sg	03 35 27.1	+1.0
DAT	Datca	1.61	350	Pn	Pb	03 35 10.7	-0.6
DAT				Sn	Sg	03 35 32.9	+0.2
TURN	Turunc	1.65	8	Pn	Pn	03 35 11.0	+0.4
KSL	Kastellorizon	1.68	53	P	Pb	03 35 11.8	-0.4
AKAS	Kas	1.74	51	Pn	Pn	03 35 12.4	+0.4
DALY	Dalyan (Mula)	1.77	19	Pn	Pb	03 35 13.2	-0.7
NPS	Neapolis	1.91	274	P	Pb	03 35 15.6	-0.7
NPS	Neapolis	1.91	274	P	Pb	03 35 15.1	-1.2
NPS				S	Sn	03 35 39.4	+0.6
BODT	Bodrum	1.99	345	Pn	Pn	03 35 16.2	+0.9
YER	Yerkesik	2.01	8	Pn	Pn	03 35 16.5	+0.8
YKAV	Yalikavak-Bodr	2.05	345	Pn	Pn	03 35 16.7	+0.5
MLSB	Milas	2.16	357	Pn	Pn	03 35 18.4	+0.8
ELL	Elmali	2.26	44	Pn	Pn	03 35 19.7	+0.5
THERA	Ancient Thera,	2.35	302	P	Pn	03 35 20.7	+0.5
IDI	Anoyia	2.50	274	Pn	Pn	03 35 22.6	+0.2
IDI	Anoyia	2.50	274	P	Pn	03 35 23.2	+0.8
APMY	Acipayam-Deniz	2.57	25	Pn	Pn	03 35 24.0	+0.6
GCAM	G?zelcaml?	2.62	348	Pn	Pn	03 35 24.4	+0.5
KORT	Korkueli	2.69	46	Pn	Pn	03 35 25.9	+0.8
SMG	Samos	2.71	341	P	Pn	03 35 25.4	+0.1
SMG				S	Sn	03 35 58.5	-0.1
AYDB	Zeytinkoy-Aydi	2.80	359	Pn	Pn	03 35 26.2	-0.4
NAZL	Nazilli-Aydin	2.83	6	Pn	Pn	03 35 27.4	+0.4
ODEM	Odemis-Izmir	3.13	2	Pn	Pn	03 35 31.6	+0.5
BCK	Bucak	3.15	42	Pn	Pn	03 35 32.4	+1.0
IMMV	Iera Moni Meta	3.25	277	Pn	Pn	03 35 33.3	+0.6
IMMV	Iera Moni Meta	3.25	277	P	Pn	03 35 33.7	+1.0
NATA	Nata	3.82	94	P	Pn	03 35 40.4	-0.1

*MOS **05** 04:31:26.1, 42°.43N×45°.84E, h15^{km}, MPVA3.6*
*NORS **05** 04:31:27.0, 42°.36N×45°.82E, h8^{km}, MPVA3.7*
*DRS **05** 04:31:27.3, 42°.45N×45°.96E, h6^{km}*
*AZER **05** 04:31:27.4, 42°.32N×45°.79E, h21^{km}, ml2.1*
ISC 05 04:31:27.6±1.0**, 42°.42N**±0°.02×**45°.84E**±0°.02**, h17**^{km}±8^{km}**,**
n33, σ**0^{s}77**/66**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.38**	**49**	*e*Pg	**Pb**	**04 31 35.3**	**-0.6**
BTLR				*e*Sg	**Sb**	**04 31 41.0**	**-0.5**
TLTR	**Tlyarata**	**0.49**	**129**	*e*Pg	**Pg**	**04 31 37.3**	**-0.2**
TLTR				*e*Sg	**Sb**	**04 31 44.7**	**-0.2**
DVE	**Vedeno**	**0.58**	**21**	*e*Pg	**Pg**	**04 31 38.8**	**-0.3**
DVE				*e*Sg	**Sb**	**04 31 47.4**	**0.0**
XNZR	**Khunzakh**	**0.65**	**79**	*i* Pg	**Pb**	**04 31 40.9**	**+0.3**
XNZR				*e*Sg	**Sn**	**04 31 51.0**	**-1.3**
UNCR	**Uncukul**	**0.77**	**67**	*e*Pg	**Pb**	**04 31 42.6**	**+0.1**
UNCR				*e*Sg	**Sn**	**04 31 54.8**	**-0.1**
GROC	**Groznyy**	**0.79**	**358**	*e*Pg	**Pn**	**04 31 43.2**	**-0.8**
GROC				*e*Sg	**Sn**	**04 31 55.1**	**-0.3**
GNBR	**Gunib**	**0.83**	**92**	*e*Pg	**Pb**	**04 31 43.7**	**0.0**
GNBR				*e*Sg	**Sn**	**04 31 56.8**	**+0.2**
ARKR	**Arakani**	**0.87**	**77**	*e*Pg	**Pg**	**04 31 44.5**	**-0.1**
ARKR				*e*Sg	**Sn**	**04 31 58.9**	**+1.3**
DLMR	**Dylym**	**0.87**	**41**	*e*Pg	**Pn**	**04 31 44.9**	**-0.3**
DLMR				*e*Sg	**Sn**	**04 31 58.3**	**+0.7**
KRNR	**Karanay**	**0.89**	**62**	*e*Pg	**Pb**	**04 31 44.1**	**-0.6**
KRNR				*e*Sg	**Sn**	**04 31 57.9**	**-0.1**
DBC	**Dubki**	**0.95**	**50**	*e*Pg	**Pn**	**04 31 46.1**	**-0.1**
DBC				*e*Sg	**Sn**	**04 31 59.8**	**+0.4**
KMGR	**Komgaron**	**0.96**	**312**	*e*Pg	**Pb**	**04 31 45.4**	**-0.5**
KMGR				*e*Sg	**Sn**	**04 32 01.4**	**+1.6**
ZKTA	**Zakatala**	**0.97**	**143**	P	**Pn**	**04 31 46.6**	**0.0**
ZKTA				S	**Sg**	**04 31 59.4**	**+0.2**
KMKR	**Kumukh**	**0.98**	**107**	*e*Pg	**Pg**	**04 31 46.3**	**-0.3**
KMKR				*e*Sg	**Sn**	**04 32 00.8**	**+0.5**
BUJR	**Buynaksk**	**1.02**	**66**	*e*Pg	**Pn**	**04 31 47.7**	**+0.4**
BUJR				*e*Sg	**Sn**	**04 32 03.3**	**+2.1**
VLKR	**Vladikavkaz**	**1.06**	**307**	*e*Pg	**Pb**	**04 31 47.4**	**-0.3**
VLKR				*e*Sg	**Sn**	**04 32 02.3**	**0.0**
LACR	**Lac**	**1.21**	**290**	*e*Pg	**Pn**	**04 31 48.1**	**-1.8**
LACR				*e*Sg	**Sb**	**04 32 04.2**	**-1.4**
SGKR	**Sergokala**	**1.35**	**88**	*e*Pg	**Pg**	**04 31 53.1**	**-0.4**
SGKR				*e*Sg	**Sg**	**04 32 12.2**	**+1.1**
BTKR	**Batakoyurt**	**1.35**	**315**	*e*Pg	**Pg**	**04 31 53.6**	**0.0**
BTKR				*e*Sg	**Sg**	**04 32 12.8**	**+1.5**
URKR	**Urkarakh**	**1.35**	**100**	*e*Pg	**Pb**	**04 31 52.9**	**+0.3**
URKR				*e*Sg	**Sg**	**04 32 12.4**	**+1.1**
ARNR	**Ardon**	**1.38**	**304**	*e*Pg	**Pb**	**04 31 53.0**	**0.0**
ARNR				*e*Sg	**Sg**	**04 32 12.8**	**+0.7**
QZX	**Qazax, Azerbai**	**1.40**	**195**	P	**Pb**	**04 31 53.1**	**-0.3**
QZX				S	**Sg**	**04 32 12.9**	**0.0**
SEKA	**Sheki**	**1.58**	**139**	P	**Pg**	**04 31 57.8**	**-0.1**
SEKA				S	**Sg**	**04 32 20.0**	**+1.5**
STDR	**Stavd-Durt**	**1.62**	**307**	*e*Pg	**Pb**	**04 31 57.4**	**+0.3**
STDR				*e*Sg	**Sg**	**04 32 20.2**	**+0.5**
AKT	**Akhty**	**1.69**	**123**	*e*Pg	**Pb**	**04 31 57.6**	**-0.7**
AKT				*e*Sg	**Sg**	**04 32 21.8**	**-0.4**
GDB	**GEDABAY**	**1.69**	**182**	P	**Pn**	**04 31 57.4**	**+0.8**
GDB				S	**Sb**	**04 32 20.0**	**+0.4**
LSNR	**Lesken**	**1.71**	**301**	*e*Pg	**Pb**	**04 31 58.5**	**-0.2**
LSNR				*e*Sg	**Sb**	**04 32 20.7**	**+0.7**
DIGR	**Digorskoe uzhe**	**1.74**	**287**	*e*Pg	**Pn**	**04 31 57.4**	**+0.2**
DIGR				*e*Sg	**Sb**	**04 32 20.5**	**-0.3**
PRTR	**Priterechnaya**	**1.76**	**320**	*e*Pg	**Pb**	**04 31 59.5**	**+0.2**
PRTR				*e*Sg	**Sg**	**04 32 24.4**	**+0.2**
GANJ	**Ganja**	**1.81**	**168**	P	**Pn**	**04 31 57.3**	**-0.7**
GANJ				S	**Sb**	**04 32 23.8**	**+1.2**
QSAR	**Qusar**	**2.02**	**116**	P	**Pb**	**04 32 03.1**	**-0.7**
QSAR				S	**Sb**	**04 32 29.1**	**+0.4**
XNQ	**Khinaliq**	**2.12**	**125**	P	**Pg**	**04 32 07.3**	**-1.1**
XNQ				S	**Sg**	**04 32 34.1**	**-1.8**
AGDM	**Agdam**	**2.50**	**157**	P	**Pn**	**04 32 07.9**	**+0.4**
AGDM				S	**Sg**	**04 32 47.7**	**-0.2**

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*IDC **05** 04:48:56.8±1.1, 8°.96S×159°.24E, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=27.9km s-min=16.7km az=21.0*
ISC 05 04:49:02.0±1.1**, 9°.0S**±0°.2×**159°.3E**±0°.1**, h35**^{km}**, n6,** σ**1^{s}23**/7**,**
mb3.7/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.81**	**125**	Pn	**Pn**	**04 49 16.3**	**-0.7**
	19nm,0.3s,baz=328,slow=9.5,SNR=52						
HNR				Sn	**Sn**	**04 49 28.1**	**+0.3**
	35nm,0.3s,baz=315,slow=20,SNR=11						
WRA	**Warramunga Arr**	**26.45**	**243**	P	**P**	**04 54 34.2**	**-1.9**
	0.3nm,0.4s,baz=70,slow=10.0,SNR=5.7						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**28.09**	**213**	P	**P**	**04 54 51.0**	**+0.4**
	0.7nm,0.3s,baz=21,slow=14,SNR=1.7						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**28.32**	**236**	P	**P**	**04 54 53.7**	**+0.9**
	0.2nm,0.4s,baz=56,slow=9.5,SNR=2.0						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**83.69**	**20**	P	**P**	**05 01 27.8**	**+0.8**
	0.3nm,0.5s,baz=246,slow=5.0,SNR=10						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**87.69**	**318**	P	**P**	**05 01 46.5**	**-0.7**
	0.3nm,0.6s,baz=101,slow=5.5,SNR=3.1						
	0.3nm,0.6s						

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*NOU **05** 04:49:20.9, 32°.80S×176°.57W, h172^{km}, mb4.4/5, South of Kermadec Islands*
*NEIC **05** 04:49:27.0±1.7, 32°.67S±0°.09×177°.9W±0°.1, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=16.9km s-min=11.8km az=317.0*
*IDC **05** 04:49:26.6±1.0, 32°.72S×178°.18W, h0^{km}, mb4.4/4, mbtmp4.4/5, ML4.3/1, MS3.1/2, Error ellipse: s-maj=36.6km s-min=25.2km az=154.0*
*WEL **05** 04:49:27.6±0.9, 33°S±5°×17°8W±1°5, h33^{km}, mB5.0/6, ML4.6/17, MLv4.9/13, Mw(mB)4.4/6, Error ellipse: s-maj=20.2km s-min=4.2km az=106.5*
ISC 05 04:49:27.3±0.7**, 32°.74S**±0°.06×**177°.7W**±0°.1**, h21**^{km}**, n80,**
σ**1^{s}69**/92**, mb4.6**/11**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.47**	**357**	P	**Pn**	**04 50 19.3**	**-0.8**
GLKZ				S	**Sn**	**04 50 55.7**	**-4.9**
RAO	**Raoul Island**	**3.48**	**357**	Sn	**Sn**	**04 50 55.3**	**-5.5**
	94nm,0.3s,baz=162,slow=20,SNR=3.7						
RAO	**Raoul Island**	**3.48**	**357**	Pn	**Pn**	**04 50 18.7**	**-1.5**
MXZ	**Matakaoa Point**	**5.82**	**213**	Pn	**Pn**	**04 50 52.5**	**+0.1**
MXZ	**Matakaoa Point**	**5.82**	**213**	P	**Pn**	**04 50 52.2**	**-0.2**
MXZ	**Matakaoa Point**	**5.82**	**213**	P	**Pn**	**04 50 52.2**	**-0.2**
MXZ				S	**Sn**	**04 51 56.5**	**-1.9**
WMGZ	**Waiomatatini S**	**5.98**	**211**	P	**Pn**	**04 50 55.4**	**+0.8**
WMGZ				S	**Sn**	**04 52 04.6**	**+2.2**
PKGZ	**Pakihiroa**	**6.17**	**213**	P	**Pn**	**04 50 57.9**	**+0.7**
PKGZ				S	**Sn**	**04 52 06.0**	**-1.2**
HAZ	**Te Kaha**	**6.22**	**215**	P	**Pn**	**04 50 58.5**	**+0.6**
HAZ				S	**Sn**	**04 52 08.8**	**+0.4**
PUZ	**Puketiti**	**6.26**	**211**	P	**Pn**	**04 50 58.6**	**+0.1**
PUZ				S	**Sn**	**04 52 08.3**	**-1.1**
WIZ	**White Island**	**6.35**	**220**	P	**Pn**	**04 50 58.8**	**-0.9**
WIZ				S	**Sn**	**04 52 12.3**	**+0.7**
RUGZ	**Raukumara Rang**	**6.44**	**215**	P	**Pn**	**04 51 00.9**	**-0.1**
RUGZ				S	**Sn**	**04 52 12.8**	**-1.1**
TWGZ	**Tauwhareparae**	**6.47**	**212**	P	**Pn**	**04 51 01.7**	**+0.3**
TWGZ				S	**Sn**	**04 52 14.4**	**-0.2**
CNGZ	**Carnagh Statio**	**6.63**	**209**	P	**Pn**	**04 51 03.8**	**+0.3**
CNGZ				S	**Sn**	**04 52 19.2**	**+0.8**
KUZ	**Kuaotunu**	**6.73**	**232**	P	**Pn**	**04 51 07.5**	**+2.6**
TKGZ	**Te Karaka**	**6.74**	**211**	P	**Pn**	**04 51 05.3**	**+0.2**
TKGZ				S	**Sn**	**04 52 20.6**	**-0.6**
MWZ	**Matawai**	**6.80**	**214**	P	**Pn**	**04 51 05.3**	**-0.7**
MWZ				S	**Sn**	**04 52 21.3**	**-1.5**
URZ	**Urewera**	**6.95**	**216**	Pn	**Pn**	**04 51 07.7**	**-0.1**
	5.4nm,0.3s,baz=48,slow=14,SNR=27						
URZ				Sn	**Sn**	**04 52 22.9**	**-3.3**
	14nm,0.3s,baz=114,slow=20,SNR=16						
	10nm,0.3s						
URZ	**Urewera**	**6.95**	**216**	P	**Pn**	**04 51 07.4**	**-0.4**
URZ	**Urewera**	**6.95**	**216**	P	**Pn**	**04 51 06.9**	**-0.9**
URZ				S	**Sn**	**04 52 23.7**	**-2.5**
RAGZ	**Rawiri**	**6.99**	**213**	P	**Pn**	**04 51 07.8**	**-0.6**
RAGZ				S	**Sn**	**04 52 25.4**	**-1.9**
PRGZ	**Paritu Road**	**7.14**	**209**	P	**Pn**	**04 51 10.0**	**-0.5**
PRGZ				S	**Sn**	**04 52 29.8**	**-1.2**
RTZ	**Ruatahuna**	**7.29**	**215**		**Pn**	**04 51 12.4**	**-0.2**
RTZ	**Ruatahuna**	**7.29**	**215**	P	**Pn**	**04 51 12.1**	**-0.6**
KNZ	**Kokohu**	**7.31**	**210**	P	**Pn**	**04 51 11.8**	**-1.0**
KNZ				S	**Sn**	**04 52 32.9**	**-2.1**
WCZ	**Waipu Caves**	**7.31**	**242**	P	**Pn**	**04 51 15.3**	**+2.4**
TOZ	**Tahuroa Road**	**7.46**	**226**	Pn	**Pn**	**04 51 16.4**	**+1.4**
TOZ	**Tahuroa Road**	**7.46**	**226**	P	**Pn**	**04 51 17.6**	**+2.6**
OUZ	**Omahuta**	**7.64**	**249**	P	**Pn**	**04 51 21.0**	**+3.6**
OUZ	**Omahuta**	**7.64**	**249**	P	**Pn**	**04 51 21.4**	**+4.0**
BKZ	**Black Stump Fm**	**7.95**	**215**		**Pn**	**04 51 20.0**	**-1.8**
BKZ	**Black Stump Fm**	**7.95**	**215**	P	**Pn**	**04 51 20.6**	**-1.1**
NGZ	**Ngauruhoe**	**8.41**	**218**	P	**Pn**	**04 51 27.4**	**-0.7**
PXZ	**Pawanui**	**8.49**	**210**	P	**Pn**	**04 51 26.8**	**-2.3**
BFZ	**Birch Farm**	**9.29**	**210**	Pn	**Pn**	**04 51 36.8**	**-3.3**
BFZ	**Birch Farm**	**9.29**	**210**	P	**Pn**	**04 51 37.1**	**-3.0**
TKNZ	**Takaka Hill**	**11.15**	**219**	Pn	**Pn**	**04 52 05.3**	**-0.2**
THZ	**Tophouse**	**11.70**	**217**	Pn	**Pn**	**04 52 14.0**	**+0.9**
GVZ	**Greta Valley S**	**12.55**	**213**	Pn	**Pn**	**04 52 26.4**	**+1.7**
WHZ	**Wether Hill Ro**	**17.16**	**216**	Pn	**Pn**	**04 53 24.6**	**-1.1**
WHZ				IAmb	IAmb	04 53 39.3	
	comp=Z,56nm,1.4s						
RAR	**Rarotonga**	**19.64**	**59**	LR	LR	05 01 25.1	
	comp=Z,22nm,18.2s,baz=246,slow=36						
ARMA	**Armidale**	**26.19**	**267**	P	**P**	**04 54 58.9**	**-1.7**
ARMA				IAmb	IAmb	04 55 03.4	
	comp=Z,12nm,1.3s						
EIDS	**Eidsvold**	**28.19**	**277**	P	**P**	**04 55 16.8**	**-1.8**
EIDS				IAmb	IAmb	04 55 22.1	
	comp=Z,13nm,1.1s						
HNR	**Honiara**	**31.05**	**313**	P	**P**	**04 55 43.4**	**-0.5**
STKA	**Stephens Creek**	**34.27**	**260**	LR	LR	05 08 36.6	
	comp=Z,54nm,18.7s,baz=156,slow=34						
CTA	**Charters Tower**	**34.49**	**282**	P	**P**	**04 56 14.4**	**+0.4**
	comp=Z,4.2nm,0.5s,baz=121,slow=10,SNR=11						
	comp=Z,4.2nm,0.5s						
CTAO	**Charters Tower**	**34.49**	**282**	P	**P**	**04 56 14.7**	**+0.7**
CTAO				IAmb	IAmb	04 56 15.1	
	comp=Z,4.2nm,0.5s						
INKA	**Innaminka**	**36.08**	**267**		**P**	**04 56 26.8**	**-0.8**
COEN	**Coen**	**40.20**	**288**	P	**P**	**04 57 01.9**	**-0.6**
AS31	**Alice Springs**	**43.29**	**269**		**P**	**04 57 27.1**	**-0.7**
ASAR	**Alice Springs**	**43.29**	**269**	P	**P**	**04 57 26.9**	**-0.8**
	comp=Z,3.7nm,0.6s,baz=111,slow=7.9,SNR=48						
	comp=Z,3.7nm,0.6s						
ASAR	**Alice Springs**	**43.29**	**269**	P	**P**	**04 57 26.3**	**-1.4**
WR8	**Warramunga Arr**	**44.34**	**274**	P	**P**	**04 57 35.0**	**-1.2**
WR8				IAmb	IAmb	04 57 36.0	
	comp=Z,4.9nm,0.7s						
WRA	**Warramunga Arr**	**44.48**	**274**	P	**P**	**04 57 36.4**	**-1.0**
	comp=Z,2.8nm,0.3s,baz=113,slow=8.0,SNR=96						
	comp=Z,2.8nm,0.3s						
WRA	**Warramunga Arr**	**44.48**	**274**		**P**	**04 57 35.3**	**-2.1**
WB0	**Warramunga Arr**	**44.52**	**275**		**P**	**04 57 36.6**	**-1.0**
WB0				IAmb	IAmb	04 57 37.4	
	comp=Z,18nm,1.2s						
FORT	**Forrest**	**45.74**	**257**	P	**P**	**04 57 46.2**	**-1.0**
FORT				IAmb	IAmb	04 57 47.2	
	comp=Z,6.6nm,0.7s						
MTN	**Manton Dam**	**50.63**	**281**	P	**P**	**04 58 24.4**	**-0.8**
MTN				IAmb	IAmb	04 58 24.5	
	comp=Z,7.0nm,1.0s						
KNRA	**Kununurra**	**51.17**	**276**	P	**P**	**04 58 28.4**	**-0.8**
KNRA				IAmb	IAmb	04 58 33.3	
	comp=Z,12nm,1.1s						
MBWA	**Marble Bar**	**56.25**	**265**	P	**P**	**04 59 05.6**	**-0.8**
ISNN	**Isanotski Nort**	**88.04**	**8**	P	**P**	**05 02 17.9**	**+2.5**
WVOR	**Wild Horse Val**	**92.36**	**39**	P	**P**	**05 02 37.2**	**+1.1**
TXAR	**Lajitas Array**	**93.44**	**57**	P	P	05 02 47.5	+6.1
	comp=Z,0.7nm,0.7s,baz=256,slow=4.7,SNR=4.2						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**93.44**	**57**	P	**P**	**05 02 43.4**	**+2.0**
J14K	**Nanvaranak Lak**	**95.83**	**6**	P	**P**	**05 02 52.7**	**+1.3**
WACK	**Wrangell Chich**	**98.17**	**15**	P	Pdif	05 03 04.2	+1.8
HARP	**HAARP**	**98.36**	**15**	P	Pdif	05 03 03.8	+0.9
MKAR	**Makanchi Array**	**119.45**	**309**	PKP	**PKiKP**	**05 08 16.3**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=94,slow=1.9,SNR=2.4						
MKAR	**Makanchi Array**	**119.45**	**309**		**PKiKP**	**05 08 16.6**	**+1.5**
ZALV	**Zalesovo Beam**	**119.93**	**317**	PKP	**PKiKP**	**05 08 16.6**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=116,slow=3.4,SNR=1.9						
ZALV	**Zalesovo Beam**	**119.93**	**317**		**PKiKP**	**05 08 16.5**	**+0.8**
KURK	**Kurchatov**	**122.83**	**313**		**PKiKP**	**05 08 22.8**	**+1.3**
KURBB	**Kurchatov Arra**	**122.87**	**313**	PKP	**PKiKP**	**05 08 22.9**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=106,slow=2.0,SNR=4.4						
BVAR	**Borovoye Array**	**128.24**	**314**	PKP	**PKiKP**	**05 08 32.5**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=64,slow=3.4,SNR=2.9						
FINES	**FINESS Array B**	**147.42**	**339**	PKPbc	**PKiKP**	**05 09 10.6**	**-0.4**
	comp=Z,3.4nm,0.5s,baz=42,slow=3.8,SNR=27						
FINES	**FINESS Array B**	**147.42**	**339**		**PKiKP**	**05 09 10.3**	**-0.7**
HFS	**Hagfors**	**151.58**	**348**	PKPbc	**PKiKP**	**05 09 21.0**	**+1.4**
	comp=Z,7.6nm,1.2s,baz=40,slow=2.5,SNR=1.9						
BRTR	**Keskin Array B**	**153.87**	**294**	PKPbc	**PKiKP**	**05 09 26.6**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=123,slow=1.7,SNR=4.6						
BRTR	**Keskin Array B**	**153.87**	**294**		**PKiKP**	**05 09 27.4**	**+2.2**
TORD	**Torodi Ar. Bea**	**160.49**	**178**	PKPab	**PKPab**	**05 10 10.1**	**+3.1**
	comp=Z,0.7nm,0.7s,baz=196,slow=5.9,SNR=4.3						

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*IDC **05** 05:01:02.4±1.6, 56°.46N×156°.26W, h0^{km}, mb3.9/16, mbtmp3.9/19, ML3.4/3, Error ellipse: s-maj=39.6km s-min=16.3km az=173.0*
*AEIC **05** 05:01:09.6±1.5, 56°.37N±0°.05×155°.86W±0°.08, h62^{km}±6^{km}, Error ellipse: s-maj=7.6km s-min=5.8km az=207.0*
*NEIC **05** 05:01:09.2±1.6, 56°.38N±0°.04×155°.87W±0°.06, h57^{km}±8^{km}, mb4.0/5, ML3.9/72, ML3.8(AEIC), Error ellipse: s-maj=5.9km s-min=4.5km az=189.0*
ISC 05 05:01:09.4±0.9**, 56°.39N**±0°.05×**155°.82W**±0°.05**, h59**^{km}±9^{km}**,**
n220, σ**1^{s}04**/219**, mb4.0**/16**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.58**	**169**		**Pn**	**05 01 20.9**	**-1.2**
CHIR					**Sn**	**05 01 32.0**	**+0.6**
CHIR	**Chirikof Islan**	**0.58**	**169**	IAML		05 01 32.7	
	comp=N,8μm,0.4s						
SII	**Sitkinak Islan**	**0.92**	**79**		**Pn**	**05 01 26.2**	**-0.2**
SII	**Sitkinak Islan**	**0.92**	**79**		**Sn**	**05 01 40.1**	**+1.2**
SII	**Sitkinak Islan**	**0.92**	**79**	P	**Pn**	**05 01 27.0**	**+0.6**
PLK4	**Peulik 4**	**1.28**	**347**		**Pn**	**05 01 31.0**	**-0.2**
PLK4					**Sn**	**05 01 48.1**	**+0.6**
PLK3	**Peulik 3**	**1.33**	**349**		**Pn**	**05 01 31.6**	**-0.2**
PLK3					**Sn**	**05 01 49.1**	**+0.6**
ANNE	**Aniakchak Nort**	**1.35**	**294**		**Pn**	**05 01 30.8**	**-1.2**
PLK2	**Peulik 2**	**1.41**	**349**		**Pn**	**05 01 32.9**	**+0.1**
PLK2					**Sn**	**05 01 50.7**	**+0.3**
PLBL	**Peulik Blue Cr**	**1.43**	**338**		**Pn**	**05 01 32.7**	**-0.3**
PLBL					**Sn**	**05 01 51.0**	**+0.2**
ANPB	**Aniakchak Plen**	**1.43**	**288**		**Pn**	**05 01 32.1**	**-1.0**
ANNW	**Aniakchak Nort**	**1.45**	**295**		**Pn**	**05 01 32.8**	**-0.6**
PLK1	**Peulik 1**	**1.48**	**343**		**Pn**	**05 01 33.8**	**0.0**
PLK1					**Sn**	**05 01 52.8**	**+0.7**
R16K	**Pilot Point**	**1.52**	**322**		**Pn**	**05 01 33.6**	**-0.8**
R16K				IAML		05 01 55.2	
	comp=E,1μm,0.7s						
OHAK	**Old Harbor**	**1.62**	**58**		**Sn**	**05 01 55.2**	**-0.3**
OHAK	**Old Harbor**	**1.62**	**58**		**Pn**	**05 01 35.3**	**-0.3**
OHAK	**Old Harbor**	**1.62**	**58**	P	**Pn**	**05 01 35.4**	**-0.3**
PLK5	**Peulik 5**	**1.71**	**341**		**Sn**	**05 01 57.4**	**-0.3**
ANCK	**Angle Creek**	**1.82**	**5**		**Pn**	**05 01 38.5**	**0.0**
VNSG	**Veniaminof 6**	**1.84**	**263**		**Pn**	**05 01 37.9**	**-0.8**
ACHA	**Angle Creek He**	**1.85**	**8**		**Pn**	**05 01 39.0**	**+0.2**
ACHA	**Angle Creek He**	**1.85**	**8**		**Sn**	**05 02 00.5**	**-0.6**
VNHG	**Veniaminof 1**	**1.87**	**266**		**Pn**	**05 01 38.6**	**-0.6**
CNTC	**Contact Creek**	**1.88**	**359**		**Pn**	**05 01 39.1**	**-0.2**
CNTC					**Sn**	**05 02 02.4**	**+0.4**
KABU	**Katmai Buttres**	**1.91**	**8**		**Pn**	**05 01 39.8**	**+0.1**
KABU					**Sn**	**05 02 02.6**	**0.0**
KAKN	**Katmai Knife C**	**1.96**	**12**		**Sn**	**05 02 04.3**	**+0.5**
VNKR	**Veniaminof 5**	**2.02**	**261**		**Pn**	**05 01 40.6**	**-0.5**
VNSS	**Veniaminof 8**	**2.04**	**267**		**Pn**	**05 01 40.8**	**-0.7**
KAWH	**Katmai**	**2.08**	**15**		**Sn**	**05 02 07.1**	**+0.4**
KARR	**Katmai Rainbow**	**2.20**	**15**		**Sn**	**05 02 09.5**	**-0.1**
KDAK	**Kodiak Island**	**2.25**	**50**	Pn	**Pn**	**05 01 43.7**	**-0.5**
	comp=E,21nm,0.3s,baz=132,slow=0.3,SNR=1970						
KDAK				Sn	**Sn**	**05 02 10.0**	**-0.8**
	comp=E,68nm,0.3s,baz=204,slow=14,SNR=6.9						
	comp=E,68nm,0.3s						
KDAK	**Kodiak Island**	**2.25**	**50**		**Pn**	**05 01 43.7**	**-0.5**
KDAK				IAML		05 02 25.4	
	comp=E,532nm,0.7s						
KDAK				IAML		05 02 27.2	
	comp=E,466nm,0.6s						
Q16K	**King Salmon**	**2.34**	**349**		**Pn**	**05 01 45.5**	**+0.1**
CNBA	**Chernabura Isl**	**2.66**	**235**		**Pn**	**05 01 48.4**	**-1.4**
CNBA				IAML		05 02 41.0	
	comp=E,347nm,0.8s						
Q19K	**Cape Douglas,**	**2.80**	**24**		**Pn**	**05 01 52.0**	**+0.3**
Q19K				IAML		05 02 54.1	
	comp=E,695nm,0.8s						
Q19K				IAML		05 03 04.4	
	comp=N,746nm,0.9s						
SDPT	**Sand Point**	**2.83**	**250**		**Pn**	**05 01 51.0**	**-1.1**
SDPT				IAML		05 02 47.8	
	comp=E,579nm,1.2s						
SDPT				IAML		05 02 48.6	
	comp=N,733nm,0.8s						
P17K	**Kvichak River**	**2.83**	**353**		**Pn**	**05 01 51.4**	**-0.7**
SYI	**Shuyak Island**	**2.89**	**38**		**Pn**	**05 01 52.9**	**-0.1**
SYI				IAML		05 02 53.3	
	comp=N,309nm,0.9s						
P16K	**Nushagak River**	**2.90**	**337**		**Pn**	**05 01 52.4**	**-0.6**
P16K				IAML		05 02 44.1	
	comp=E,676nm,0.9s						
P16K				IAML		05 02 44.7	
	comp=N,608nm,0.8s						
P18K	**Big Mountain,**	**3.03**	**6**		**Pn**	**05 01 54.9**	**0.0**
O16K	**Kokwok River B**	**3.44**	**340**		**Pn**	**05 02 00.2**	**-0.2**
O17K	**Koliganek Bris**	**3.46**	**349**		**Pn**	**05 02 00.1**	**-0.6**
PS1A	**Pavlof South-1**	**3.48**	**256**		**Pn**	**05 01 59.7**	**-1.3**
O18K	**Koktuh Hills**	**3.49**	**5**		**Pn**	**05 02 01.1**	**-0.1**
O18K				IAML		05 03 03.0	
	comp=E,239nm,1.2s						
O18K				IAML		05 03 10.4	
	comp=N,264nm,0.9s						
O15K	**Ungalikthiuk R**	**3.52**	**324**		**Pn**	**05 02 01.0**	**-0.6**
O15K				IAML		05 03 10.4	
	comp=E,184nm,0.8s						
P19K	**Oil Pt**	**3.55**	**22**		**Pn**	**05 02 02.6**	**+0.6**
P19K				IAML		05 03 12.6	
	comp=E,215nm,0.8s						
P19K				IAML		05 03 14.7	
	comp=N,240nm,1.0s						
PS4A	**Pavlof South-4**	**3.56**	**255**		**Pn**	**05 02 00.8**	**-1.3**
PN7A	**Pavlof North-7**	**3.61**	**257**		**Pn**	**05 02 01.7**	**-1.1**
DTNA	**Dutton South F**	**3.84**	**254**		**Pn**	**05 02 04.8**	**-1.2**
ILS	**Iliamna Low So**	**3.86**	**21**		**Pn**	**05 02 05.9**	**-0.4**
ILSW	**Iliamna Southw**	**3.87**	**20**		**Pn**	**05 02 06.9**	**+0.4**
O19K	**Port Alsworth**	**3.90**	**11**		**Pn**	**05 02 07.3**	**+0.6**
IVE	**Iliamna Volcan**	**3.93**	**21**		**Pn**	**05 02 07.0**	**-0.3**
HOM	**Homer**	**3.96**	**32**	Pn	**Pn**	**05 02 08.1**	**+0.6**
CNPM	**China Poot**	**3.98**	**36**		**Pn**	**05 02 07.8**	**-0.1**
CNPM				IAML		05 03 10.7	
	comp=N,127nm,0.8s						
CNPM				IAML		05 03 22.6	
	comp=E,130nm,1.3s						
O14K	**Tigyukauivet M**	**4.09**	**317**		**Pn**	**05 02 08.8**	**-0.5**
O14K				IAML		05 03 36.0	
	comp=N,138nm,0.9s						
N17K	**Nushagak Hills**	**4.21**	**351**		**Pn**	**05 02 10.3**	**-0.7**
N17K	**Nushagak Hills**	**4.21**	**351**	IAML		05 03 21.5	
	comp=E,111nm,0.7s						
N17K				IAML		05 03 28.0	
	comp=N,100nm,0.7s						
BRLK	**Bradley Lake**	**4.28**	**36**		**Pn**	**05 02 11.2**	**-0.7**
BRLK				IAML		05 02 57.3	
	comp=E,120nm,0.4s						
BRLK				IAML		05 02 58.0	
	comp=N,167nm,0.3s						
N18K	**Kilae Creek**	**4.30**	**360**		**Pn**	**05 02 11.7**	**-0.6**
N18K	**Kilae Creek**	**4.30**	**360**	IAML		05 03 28.5	
	comp=N,80nm,0.9s						
N18K				IAML		05 03 28.6	
	comp=E,171nm,1.2s						
RED	**Redoubt Volcan**	**4.35**	**20**		**Pn**	**05 02 13.4**	**+0.5**
N16K	**Nishlik Lake**	**4.38**	**340**		**Pn**	**05 02 12.8**	**-0.6**
RDSO	**Redoubt South**	**4.39**	**20**		**Pn**	**05 02 12.8**	**-0.8**
RDWB	**Redoubt West**	**4.40**	**20**		**Pn**	**05 02 13.1**	**-0.6**
N15K	**Kwethluk River**	**4.41**	**331**		**Pn**	**05 02 13.6**	**-0.2**
N15K	**Kwethluk River**	**4.41**	**331**	IAML		05 03 33.5	
	comp=N,142nm,0.9s						
N15K				IAML		05 03 47.6	
	comp=E,132nm,1.2s						
NCT	**North Crescent**	**4.45**	**19**		**Pn**	**05 02 13.9**	**-0.5**
N19K	**Bonanza Creek**	**4.49**	**8**		**Pn**	**05 02 15.3**	**+0.4**
N19K				IAML		05 03 38.2	
	comp=E,120nm,1.1s						
N19K				IAML		05 03 39.0	
	comp=N,86nm,0.7s						
DFR	**Drift River**	**4.52**	**20**		**Pn**	**05 02 15.1**	**-0.3**
RDT	**Redoubt**	**4.56**	**22**		**Pn**	**05 02 15.2**	**-0.6**
FALS	**False Pass**	**4.58**	**254**		**Pn**	**05 02 14.2**	**-1.7**
N14K	**Kuskokwak Cree**	**4.71**	**321**		**Pn**	**05 02 17.5**	**-0.4**
N14K	**Kuskokwak Cree**	**4.71**	**321**	IAML		05 04 02.4	
	comp=E,145nm,1.1s						
ISNN	**Isanotski Nort**	**4.78**	**254**		**Pn**	**05 02 16.9**	**-1.9**
M16K	**Timber Creek**	**4.93**	**342**		**Pn**	**05 02 20.1**	**-0.7**
M16K	**Timber Creek**	**4.93**	**342**	IAML		05 03 58.4	
	comp=N,74nm,1.2s						
M16K				IAML		05 04 00.3	
	comp=E,71nm,1.2s						
M15K	**Kasigluk River**	**5.02**	**331**		**Pn**	**05 02 21.6**	**-0.4**
SEW	**Seward**	**5.02**	**39**		**Pn**	**05 02 20.5**	**-1.5**
SEW				IAML		05 03 47.3	
	comp=E,56nm,1.1s						
SLKM	**Skilak Lake**	**5.07**	**33**		**Pn**	**05 02 21.8**	**-1.0**
SLKM				IAML		05 03 24.3	
	comp=E,51nm,0.4s						
SLKM				IAML		05 03 24.8	
	comp=N,48nm,0.3s						
M17K	**Holitna River**	**5.10**	**351**		**Pn**	**05 02 22.4**	**-0.7**
M18K	**Stony River**	**5.12**	**360**		**Pn**	**05 02 23.0**	**-0.4**
SPU	**Mount Spurr**	**5.19**	**21**		**Pn**	**05 02 24.8**	**+0.4**
O22K	**Cooper Landing**	**5.20**	**35**		**Pn**	**05 02 23.4**	**-1.1**
SPBG	**Spurr Blockage**	**5.20**	**19**		**Pn**	**05 02 23.9**	**-0.8**
SPCG	**Spurr Capps Gl**	**5.30**	**20**		**Pn**	**05 02 25.2**	**-0.7**
M14K	**Bethel**	**5.43**	**326**		**Pn**	**05 02 27.5**	**-0.1**
M13K	**Dall Lake**	**5.65**	**319**		**Pn**	**05 02 30.8**	**+0.1**
L16K	**Owhat River**	**5.66**	**342**		**Pn**	**05 02 30.7**	**-0.2**
RC01	**Rabbit Creek A**	**5.68**	**31**		**Pn**	**05 02 30.6**	**-0.4**
SUA	**Susitna One**	**5.73**	**25**		**Pn**	**05 02 31.8**	**0.0**
P23K	**Montague Islan**	**5.73**	**47**		**Pn**	**05 02 30.3**	**-1.5**
L19K	**White Mountain**	**5.83**	**4**		**Pn**	**05 02 33.1**	**-0.1**
L18K	**Granite Mounta**	**5.87**	**356**		**Pn**	**05 02 33.2**	**-0.4**
L17K	**Donlin**	**5.90**	**349**		**Pn**	**05 02 33.6**	**-0.6**
SKT	**Skwentna**	**6.02**	**20**		**Pn**	**05 02 35.6**	**-0.2**
L15K	**Ungalak Mounta**	**6.06**	**333**		**Pn**	**05 02 34.9**	**-1.4**
L14K	**Kuka Creek**	**6.11**	**327**		**Pn**	**05 02 36.7**	**-0.2**
M22K	**Willow**	**6.13**	**26**		**Pn**	**05 02 37.4**	**+0.2**
AHB	**Akutan Harbor**	**6.16**	**252**		**Pn**	**05 02 37.4**	**-0.2**
PMR	**Palmer**	**6.26**	**31**		**Pn**	**05 02 37.8**	**-1.2**
PMR	**Palmer**	**6.26**	**31**	P	**Pn**	**05 02 37.3**	**-1.6**
KNK	**Knik Glacier**	**6.32**	**34**		**Pn**	**05 02 38.5**	**-1.3**
HIN	**Hinchinbrook I**	**6.33**	**47**		**Pn**	**05 02 39.4**	**-0.7**
GHO	**Glory Hole Cre**	**6.46**	**30**		**Pn**	**05 02 40.9**	**-0.9**
K17K	**Iditarod**	**6.47**	**350**		**Pn**	**05 02 41.2**	**-0.7**
K15K	**Wolf Creek Mou**	**6.60**	**336**		**Pn**	**05 02 42.1**	**-1.6**
SML	**Sawmill**	**6.66**	**32**		**Pn**	**05 02 43.1**	**-1.5**
L22K	**Petersville**	**6.67**	**21**		**Pn**	**05 02 45.0**	**+0.3**
EYAK	**Cordova Ski Ar**	**6.72**	**48**		**Pn**	**05 02 44.0**	**-1.4**
EYAK	**Cordova Ski Ar**	**6.72**	**48**	P	**Pn**	**05 02 43.9**	**-1.4**
M11K	**Mekoryuk**	**6.77**	**311**		**Pn**	**05 02 45.6**	**-0.4**
PPLA	**Purkeypile**	**6.78**	**14**	Pn	**Pn**	**05 02 48.2**	**+1.9**
SCM	**Sheep Creek Mo**	**6.99**	**35**		**Pn**	**05 02 47.7**	**-1.4**
DIV	**Divide**	**7.06**	**44**		**Pn**	**05 02 49.6**	**-0.5**
RAGM	**Ragged Mountai**	**7.09**	**51**		**Pn**	**05 02 48.8**	**-1.7**
J18K	**Innoko River**	**7.12**	**357**		**Pn**	**05 02 50.7**	**0.0**
GOAT	**Goat Mountain**	**7.17**	**50**		**Pn**	**05 02 50.0**	**-1.6**
K13K	**Kusilvak Mount**	**7.18**	**324**		**Pn**	**05 02 51.0**	**-0.5**
J17K	**VABM Dome**	**7.22**	**348**		**Pn**	**05 02 51.6**	**-0.5**
KLU	**Klutina**	**7.23**	**41**		**Pn**	**05 02 51.0**	**-1.5**
J16K	**Anvik River**	**7.32**	**343**		**Pn**	**05 02 52.1**	**-1.5**
WAT7	**Susitna Watana**	**7.36**	**26**		**Pn**	**05 02 52.6**	**-1.6**
BMRM	**Bremner River**	**7.43**	**47**	Pn	**Pn**	**05 02 54.2**	**-0.8**
WAT1	**Susitna Watana**	**7.43**	**27**		**Pn**	**05 02 53.5**	**-1.6**
WAT6	**Susitna Watana**	**7.44**	**30**		**Pn**	**05 02 53.9**	**-1.5**
J14K	**Nanvaranak Lak**	**7.49**	**332**		**Pn**	**05 02 54.5**	**-1.2**
BERG	**Berg Lake**	**7.52**	**53**	Pn	**Pn**	**05 02 56.9**	**+0.6**
M24K	**Tolsona, Glenn**	**7.56**	**37**		**Pn**	**05 02 55.4**	**-1.5**
KTH	**Kantishna Hill**	**7.59**	**17**		**Pn**	**05 02 57.6**	**+0.3**
N25K	**Chitina, Valde**	**7.80**	**43**	Pn	**Pn**	**05 03 00.3**	**+0.2**
SNH	**Sunshine Point**	**7.82**	**56**	Pn	**Pn**	**05 03 00.5**	**+0.1**
RND	**Reindeer**	**7.86**	**24**	Pn	**Pn**	**05 02 59.6**	**-1.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J20K	Nowinta River	7.86	5		Pn	05 03 02.4	+1.6
I17K	Unalakleet	7.90	344		Pn	05 03 01.6	+0.2
WAX	Waxell Ridge	7.93	54	Pn	Pn	05 03 01.1	-0.7
CRQM	Cirque	7.94	51		Pn	05 03 00.7	-1.4
DHY	Denali Highway	7.94	29		Pn	05 03 01.6	-0.5
SPIA	Saint Paul Isl	7.97	282	Pn	Pn	05 03 03.8	+1.5
GLB	Gilahina Butte	8.01	46		Pn	05 03 02.4	-0.7
VRDI	Verde Repeater	8.04	48	Pn	Pn	05 03 03.1	-0.5
TGL	Tana Glacier	8.07	52	Pn	Pn	05 03 03.0	-0.9
BPAW	Bear Paw Mtn.	8.10	15		Pn	05 03 04.6	+0.4
HARP	HAARP	8.11	38		Pn	05 03 02.8	-1.5
MCK	McKinley	8.13	22		Pn	05 03 03.7	-0.8
WACK	Wrangell Chich	8.13	42		Pn	05 03 02.9	-2.0
ISLE	Juniper Island	8.22	54	Pn	Pn	05 03 05.3	-0.7
BAGL	Bagley Icefiel	8.29	55		Pn	05 03 05.6	-1.1
MCARA	McCarthy VSAT	8.30	48	Pn	Pn	05 03 07.2	+0.3
KIAG	Kiagna River	8.35	51		Pn	05 03 06.1	-1.7
BALM	Baldy	8.41	51		Pn	05 03 06.7	-1.9
PAX	Paxson	8.41	34		Pn	05 03 08.2	-0.3
PTPK	Patty Peak	8.43	50		Pn	05 03 06.1	-2.8
GRNC	Granite Creek	8.54	54		Pn	05 03 08.3	-2.0
BARN	Barnard Glacie	8.72	52		Pn	05 03 12.1	-0.7
CTGM	Chitina Glacie	8.82	53	Pn	Pn	05 03 13.7	-0.5
H16K	Elim	8.86	342		Pn	05 03 12.2	-2.3
NEA2	Nenana	8.87	19		Pn	05 03 12.5	-2.2
LOGN	Logan Glacier	8.91	54		Pn	05 03 14.1	-1.4
WRH	Wood River Hil	8.96	22		Pn	05 03 13.8	-2.1
K24K	Donnelly Dome	8.96	30		Pn	05 03 17.0	+1.1
PCA	Pinnacle	9.00	59		Pn	05 03 15.0	-1.6
I21K	Tanana	9.02	10		Pn	05 03 16.2	-0.5
L26K	Log Cabin Wild	9.15	38		Pn	05 03 19.3	+0.8
HDA	Harding Lake	9.15	25		Pn	05 03 17.5	-1.1
CCB	Clear Creek Bu	9.17	22		Pn	05 03 18.1	-0.7
RIDG	Independent Ri	9.18	32		Pn	05 03 19.0	+0.1
O28M	Mount Upton	9.26	55		Pn	05 03 19.7	-0.6
I23K	Minto, Yukon-K	9.33	17		Pn	05 03 19.5	-1.5
YUK2	White River	9.40	49		Pn	05 03 19.9	-2.1
H21K	Melozitna Rive	9.41	8		Pn	05 03 22.6	+0.5
ANM	Nome	9.45	334		Pn	05 03 22.7	+0.1
IL31		9.48	24		Pn	05 03 20.2	-2.8
ILAR	Eielson Array	9.48	24	Pn	Pn	05 03 20.1	-2.9
	comp=N,0.4nm,0.3s,baz=215,slow=14,SNR=24						
ILAR				Sn	Sn	05 04 59.0	-8.8
	comp=N,0.4nm,0.3s,baz=0.4,slow=22,SNR=4.2						
ILAR	Eielson Array	9.48	24	Pn	Pn	05 03 22.3	-0.7
YUK3	Moose Creek	9.56	49		Pn	05 03 22.5	-1.8
G16K	Koyuk River	9.57	343		Pn	05 03 24.8	+0.5
SCRK	Sand Creek	9.61	33		Pn	05 03 22.8	-2.1
O29M	Mount Kennedy	9.87	59		Pn	05 03 26.2	-2.2
J26L	Joseph Creek	10.12	32		Pn	05 03 30.5	-1.3
H24K	Noodor Dome	10.22	19		Pn	05 03 32.4	-0.7
G21K	Allakaket	10.22	5		Pn	05 03 33.9	+0.8
F15K	North Star Dit	10.27	339		Pn	05 03 34.6	+0.8
F17K	Baldwin Pennin	10.41	348		Pn	05 03 36.9	+1.1
PRP	Porcupine Dome	10.42	24	Pn	Pn	05 03 36.0	+0.1
HYT	Haines Junctio	10.52	57	Pn	Pn	05 03 38.4	+1.1
F19K	Shaleruckik Mo	10.52	356		Pn	05 03 37.9	+0.7
M29M	Somme Creek	10.70	48		Pn	05 03 39.6	-0.2
G23K	Bananza Creek	10.71	12	Pn	Pn	05 03 39.9	+0.1
G24K	Hadweenzic Riv	11.07	17		Pn	05 03 42.8	-1.9
E18K	Tukpahlearik C	11.29	351		Pn	05 03 48.5	+0.7
FYU	Fort Yukon	11.37	22	Pn	Pn	05 03 48.4	-0.4
I27K	Kandik River	11.49	31	Pn	Pn	05 03 50.5	-0.1
WHY	Whitehorse	11.73	60	Pn	Pn	05 03 53.6	-0.2
I28M	Miner Creek	11.88	34	Pn	Pn	05 03 56.0	0.0
D19K	Kuna River	12.20	356		Pn	05 04 01.6	+1.5
BMAR	Burnt Mountain	12.25	21	Pn	Pn	05 03 58.2	-2.6
DLBC	Dease Lake	14.02	71	Pn	Pn	05 04 24.9	+0.1
	comp=N,0.1nm,0.3s,baz=274,slow=24,SNR=1.9						
	comp=N,2.0nm,1.0s						
INK	Inuvik	15.67	31	Pn	Pn	05 04 46.1	0.0
	comp=N,0.1nm,0.3s,baz=272,slow=11,SNR=7.3						
	comp=N,0.7nm,0.6s						
YKA	Yellowknife Ar	21.51	57	P	P	05 05 54.1	+1.1
	comp=N,1.3nm,0.7s,baz=275,slow=11,SNR=14						
	comp=N,1.3nm,0.7s						
PETK	Petropavlovsk-	26.63	283	P	P	05 06 40.3	-1.8
	comp=N,1.5nm,0.5s,baz=75,slow=12,SNR=2.1						
	comp=N,1.5nm,0.5s						
PDAR	Pinedale Array	32.28	95	P	P	05 07 35.0	+2.5
	comp=N,0.3nm,0.7s,baz=305,slow=10,SNR=3.6						
	comp=N,0.3nm,0.7s						
SPITS	Spitsbergen Ar	45.60	2	P	P	05 09 23.0	0.0
	comp=N,13nm,1.1s,baz=0.0,slow=6.1,SNR=12						
	comp=N,13nm,1.1s						
NRIK	Noril'sk	46.49	334	P	P	05 09 27.6	-2.4
	comp=N,1.3nm,0.4s,baz=60,slow=6.3,SNR=4.0						
	comp=N,1.3nm,0.4s						
NRIK	Noril'sk	46.49	334	IAmb	IAmb	05 09 30.3	
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	55.71	306	P	P	05 10 39.7	+0.2
	comp=Z,1.1nm,0.8s,baz=35,slow=7.3,SNR=5.7						
	comp=Z,1.1nm,0.8s						
SONM	Songino Array	55.71	306	IAmb	IAmb	05 10 40.3	
	comp=Z,1.3nm,1.0s						
ZALV	Zalesovo Beam	59.39	323	P	P	05 11 04.9	-0.2
	comp=Z,0.5nm,0.3s,baz=33,slow=9.4,SNR=3.6						
	comp=Z,0.5nm,0.3s						
NOA	NORSAR Array B	62.47	7	P	P	05 11 26.3	+0.4
	comp=Z,0.7nm,0.7s,baz=353,slow=6.7,SNR=3.3						
	comp=Z,0.7nm,0.7s						
FINES	FINESS Array B	62.50	359	P	P	05 11 26.5	+0.4
	comp=Z,2.1nm,0.9s,baz=347,slow=5.7,SNR=1.7						
	comp=Z,2.1nm,0.9s						
HFS	Hagfors	63.52	6	P	P	05 11 34.0	+1.1
	comp=Z,0.8nm,0.6s,baz=320,slow=3.8,SNR=1.0						
	comp=Z,0.8nm,0.6s						
KURK	Kurchatov	64.16	325	P	P	05 11 38.0	+0.8
KURK	Kurchatov	64.16	325	IAmb	IAmb	05 11 39.2	
	comp=Z,3.3nm,1.4s						
KURBB	Kurchatov Arra	64.27	325	P	P	05 11 38.0	+0.1
	comp=Z,0.4nm,0.5s,baz=20,slow=6.5,SNR=5.1						
	comp=Z,0.4nm,0.5s						
BVAR	Borovoye Array	64.54	331	P	P	05 11 40.0	+0.2
	comp=Z,1.1nm,0.5s,baz=46,slow=6.8,SNR=5.3						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	66.30	320	P	P	05 11 50.6	-0.6
	comp=Z,0.9nm,0.6s,baz=43,slow=7.1,SNR=11						
	comp=Z,0.9nm,0.6s						
EKA	Eskdalemuir Ar	66.44	17	P	P	05 11 52.8	+1.0
	comp=Z,0.4nm,0.4s,baz=333,slow=5.0,SNR=4.3						
	comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	73.19	357	P	P	05 12 33.4	0.0
	comp=Z,1.7nm,0.5s,baz=9.1,slow=5.9,SNR=9.1						
	comp=Z,1.7nm,0.5s						
AKASG	Malin Array Be	73.19	357	IAmb	IAmb	05 13 02.3	
	comp=Z,3.4nm,1.4s						
CMAR	Chiang Mai Arr	82.95	293	P	P	05 13 27.4	-0.6
	comp=Z,0.7nm,0.3s,baz=14,slow=4.7,SNR=4.9						
	comp=Z,0.7nm,0.3s						

IDC 05 05:04:18.8±5.1, 61°.81S×161°.90W, h0km, mb3.5/2, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=128.8km s-min=50.3km az=77.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	19.56	203	P	P	05 08 47.7	0.0
	baz=80,slow=11,SNR=2.1						
	1.6nm,1.0s						
ASAR	Alice Springs	57.26	281	P	P	05 14 07.8	-0.1
	0.8nm,0.9s,baz=147,slow=9.3,SNR=5.5						
	0.8nm,0.9s						
H03S2	Juan Fernandez	57.58	102	T	T	06 16 32.9	
	baz=211,slow=74,SNR=36						
H03S1	Juan Fernandez	57.59	102	T	T	06 16 30.8	
	baz=211,slow=74,SNR=33						
H03S3	Juan Fernandez	57.60	102	T	T	06 16 33.8	
	baz=211,slow=74,SNR=43						
H03N3	Juan Fernandez	57.90	102	T	T	06 16 48.9	
	baz=220,slow=77,SNR=35						
H03N2	Juan Fernandez	57.91	102	T	T	06 16 49.9	
	baz=220,slow=77,SNR=28						
H03N1	Juan Fernandez	57.92	102	T	T	06 16 50.6	
	baz=220,slow=77,SNR=19						
WRA	Warramunga Arr	60.27	284	P	P	05 14 28.8	-0.1
	0.2nm,0.6s,baz=154,slow=6.0,SNR=6.1						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	145.86	279	PKPbc	PKPdf	05 23 57.9	-0.2
	0.5nm,0.7s,baz=133,slow=2.5,SNR=4.5						

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*IDC **05** 05:12:39.6±2.4, 62°.14S×162°.48W, h0km, mb3.9/3, mbtmp3.9/4, ML3.2/1, MS4.2/32, Error ellipse: s-maj=69.5km s-min=45.5km az=70.0*

*GCMT **05** 05:12:41.0±0.2, 62°.47S±0°.01×161°.80W±0°.03, h17km±1km, MW5.0/95, Moment Tensor Solution. s22,c23; s95,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.60±.14; $M_{\theta\theta}$3.53±.14; $M_{\phi\phi}$-2.93±.12; $M_{r\theta}$0.89±.31; $M_{\theta\phi}$1.23±.10; $M_{\phi r}$0.11±.31; Best double couple: $M_0$3.54600×10^{16} NP1:ϕ_s34.00000°,δ81.00000°,λ173.00000°. NP2: ϕ_s125.00000°,δ83.00000°,λ9.00000°. Principal axes: T 3.9340, Plg11.0000°, Azm350.0000°; N -0.7770, Plg79.0000°, Azm163.0000°; P -3.1580, Plg1.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 05 05:12:40.6±2.3, 62°.2S±0°.2×162°.3W±0°.4, h10km, n46, σ1s.33/8, mb4.0/3, MS4.2/31, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	19.13	203	P	Pn	05 17 04.2	0.0
	0.1nm,0.3s,baz=75,slow=16,SNR=5.8						
VNDA				LR	LR	05 22 25.3	
	comp=Z,1µm,21.1s,baz=58,slow=31						
	2.1nm,0.9s						
URZ	Urewera	27.12	323	LR	LR	05 26 54.1	
	comp=Z,496nm,21.1s,baz=152,slow=32						
QSPA	South Pole Qui	27.91	180	LR	LR	05 27 44.2	
	comp=Z,411nm,18.9s,baz=54,slow=32						
RAO	Raoul Island	34.53	335	LR	LR	05 30 25.7	
	comp=Z,454nm,21.6s,baz=130,slow=31						
PMSA	Palmer Station	39.69	138	LR	LR	05 34 31.8	
	comp=Z,330nm,18.1s,baz=208,slow=33						
RAR	Rarotonga	41.00	4	LR	LR	05 34 07.9	
	comp=Z,197nm,20.4s,baz=198,slow=32						
PPT	Papeete	45.47	17	LR	LR	05 34 39.1	
	comp=Z,315nm,21.6s,baz=188,slow=29						
MAW	Mawson	46.44	202	LR	LR	05 38 34.7	
	comp=Z,341nm,20.7s,baz=148,slow=34						
STKA	Stephens Creek	46.66	284	P	P	05 21 10.4	+1.5
	2.7nm,0.8s,baz=146,slow=5.8,SNR=3.5						
STKA				LR	LR	05 36 13.1	
	comp=Z,250nm,21.6s,baz=165,slow=30						
	2.7nm,0.8s						
RPN	Rapa Nui	49.27	70	LR	LR	05 37 10.3	
	comp=Z,411nm,21.1s,baz=218,slow=30						
CTA	Charters Tower	54.84	296	LR	LR	05 43 11.2	
	comp=Z,76nm,18.0s,baz=53,slow=34						
PLCA	Paso Flores	55.69	113	LR	LR	05 40 10.9	
	comp=Z,202nm,20.5s,baz=206,slow=30						
H01W1	Cape Leeuwin H	56.91	257	T	T	06 24 30.4	
	baz=146,slow=76,SNR=14						
H01W2	Cape Leeuwin H	56.91	257	T	T	06 24 27.7	
	baz=146,slow=76,SNR=17						
H01W3	Cape Leeuwin H	56.92	257	T	T	06 24 28.5	
	baz=146,slow=76,SNR=13						
NWAO	Narrogin (SRO)	57.12	261	LR	LR	05 41 04.0	
	comp=Z,163nm,19.3s,baz=286,slow=30						
ASAR	Alice Springs	57.18	282	P	P	05 22 26.8	-0.8
	1.4nm,0.9s,baz=148,slow=6.8,SNR=8.0						
ASAR				LR	LR	05 43 16.8	
	comp=Z,312nm,21.7s,baz=132,slow=32						
	1.4nm,0.9s						
H03S2	Juan Fernandez	57.66	102	T	T	06 24 57.6	
	baz=211,slow=74,SNR=40						
H03S1	Juan Fernandez	57.66	102	T	T	06 25 01.5	
	baz=211,slow=74,SNR=28						
H03S3	Juan Fernandez	57.67	102	T	T	06 24 58.7	
	baz=211,slow=74,SNR=38						
H03N3	Juan Fernandez	57.98	102	T	T	06 25 22.0	
	baz=228,slow=70,SNR=24						
H03N2	Juan Fernandez	57.99	102	T	T	06 25 21.5	
	baz=228,slow=70,SNR=27						
H03N1	Juan Fernandez	57.99	102	T	T	06 25 17.8	
	baz=228,slow=70,SNR=14						
WRA	Warramunga Arr	60.21	284	P	P	05 22 46.8	-1.8
	0.9nm,0.9s,baz=156,slow=5.5,SNR=5.7						
	0.9nm,0.9s						
BATI	Baumata	73.62	279	LR	LR	05 53 09.2	
	comp=Z,234nm,21.8s,baz=330,slow=33						
CPUP	Villa Florida	73.66	115	LR	LR	05 51 58.8	
	comp=Z,106nm,19.8s,baz=207,slow=32						
NNA	Nana	77.35	92	LR	LR	05 50 33.6	
	comp=Z,214nm,18.2s,baz=196,slow=29						
LPAZ	La Paz	77.65	101	LR	LR	05 51 19.0	
	comp=Z,85nm,18.7s,baz=206,slow=30						
KAPI	Kappang	79.99	278	LR	LR	05 57 06.4	
	comp=Z,111nm,20.8s,baz=155,slow=33						
ATAH	Atahualpa	80.86	88	LR	LR	05 52 12.7	
	comp=Z,211nm,20.9s,baz=220,slow=29						
LEM	Lembang	84.08	267	LR	LR	05 56 07.9	
	comp=Z,114nm,21.3s,baz=164,slow=31						
SUR	Sutherland	85.72	183	LR	LR	06 01 45.5	
	comp=Z,41nm,18.5s,baz=166,slow=34						
BDFB	Brasilia	87.06	118	LR	LR	06 00 29.9	
	comp=Z,192nm,20.6s,baz=161,slow=33						
DAV	Davao City (W)	88.03	289	LR	LR	06 03 57.6	
	comp=Z,24nm,18.9s,baz=157,slow=35						
BOSA	Boshof	89.30	187	LR	LR	06 01 56.2	
	comp=Z,319nm,20.0s,baz=186,slow=33						
LBTB	Lobatse	92.86	187	LR	LR	06 04 23.3	
	comp=Z,238nm,19.9s,baz=178,slow=33						
JTS	Las Juntas de	93.17	74	LR	LR	05 58 41.8	
	comp=Z,114nm,20.3s,baz=203,slow=30						
ROSC	El Rosal	93.28	86	LR	LR	06 01 28.9	
	comp=Z,77nm,19.1s,baz=221,slow=31						
CMIG	Matias Romero	94.90	62	LR	LR	06 01 12.9	
	comp=Z,24nm,18.1s,baz=180,slow=31						
SDV	Santo Domingo	98.55	87	LR	LR	06 03 43.8	
	comp=Z,119nm,21.0s,baz=216,slow=31						
TSUM	Tsumeb	98.87	180	LR	LR	06 07 07.2	
	comp=Z,320nm,19.8s,baz=150,slow=33						
JCJ	Chichijima	99.43	312	LR	LR	06 10 33.2	
	comp=Z,46nm,18.8s,baz=106,slow=35						
MKAR	Makanchi Array	141.29	277	PKP	PKPdf	05 32 10.5	+0.2
	0.3nm,0.8s,baz=122,slow=5.2,SNR=2.6						
ZALV	Zalesovo Beam	145.13	288	PKPbc	PKPdf	05 32 18.1	+1.3
	0.3nm,0.3s,baz=145,slow=5.3,SNR=4.5						
KURBB	Kurchatov Arra	145.76	279	PKPbc	PKPdf	05 32 17.0	-1.0
	2.4nm,0.9s,baz=133,slow=2.4,SNR=12						
BVAR	Borovoye Array	151.14	276	PKPbc	PKPbc	05 32 32.7	+0.1
	2.1nm,0.8s,baz=101,slow=3.0,SNR=6.9						

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*IDC **05** 05:23:29.1±1.4, 52°.46N×168°.53W, h0km, mb4.0/13, mbtmp3.9/14, ML2.5/1, MS3.3/5, Error ellipse: s-maj=35.6km s-min=17.3km az=179.0*

*AEIC **05** 05:23:34.0±1.7, 52°.25N±0°.07×168°.46W±0°.05, h35km±6km, Error ellipse: s-maj=11.1km s-min=2.5km az=157.0*

*NEIC **05** 05:23:34.2±1.6, 52°.31N±0°.03×168°.50W±0°.07, h39km±8km, mb4.0/13, ML3.8/22, ML3.3(AEIC), Error ellipse: s-maj=6.9km s-min=2.7km az=124.0*

ISC 05 05:23:33.9±1.0, 52°.26N±0°.09×168°.46W±0°.05, h40km±9km, n85, σ0s.82/88, mb4.0/13, MS3.5/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.76	341		Pn	05 23 47.1	-0.9
NIKH					Sn	05 23 58.4	+0.2
NIKH	Nikolski High	0.76	341	IAML		05 23 59.3	
	comp=N,3µm,0.7s						
CLCO	Concord Point,	0.94	305		Pn	05 23 49.6	-0.9
CLCO					Sn	05 24 03.5	+0.8
CLES	Cleveland East	1.04	303		Pn	05 23 50.9	-1.1
CLES					Sn	05 24 05.0	-0.3
CLES	Cleveland East	1.04	303	IAML		05 24 11.9	
	comp=N,2µm,0.6s						
CLES				IAML		05 24 14.1	
	comp=E,3µm,0.2s						
OKFG	Magazine Ridge	1.20	16		Pn	05 23 53.4	-0.7
OKFG					Sn	05 24 09.9	+0.7
OKWE	Okmok W'ng Wal	1.22	6		Pn	05 23 54.0	-0.5
OKWE					Sn	05 24 10.1	+0.3
MAPS	Pakushin South	1.80	30		Pn	05 24 02.1	-0.3
MGOD	Makushin Gods	1.81	31		Pn	05 24 02.1	-0.5
MGOD					Sn	05 24 24.4	0.0
MNAT	Makushin Natee	1.95	33		Pn	05 24 04.0	-0.4
UNV	Unalaska Valle	1.98	36		Pn	05 24 04.4	-0.4
UNV					Sn	05 24 28.7	+0.4
AKMO	Akutan Morgan	2.35	38		Pn	05 24 10.1	+0.1
AKMO					Sn	05 24 38.1	+0.6
ZRO	Akutan Zero	2.37	38		Pn	05 24 10.0	-0.2
ZRO					Sn	05 24 37.3	-0.7
AKV	Akutan Volcano	2.40	38		Pn	05 24 10.7	0.0
AKV					Sn	05 24 39.4	+0.6
LVA	Lava Point	2.40	36	Pn	Pn	05 24 11.3	+0.7
LVA				IAML		05 24 48.9	
	comp=N,406nm,0.7s						
LVA				IAML		05 24 50.7	
	comp=E,302nm,1.2s						
AKUT	Akutan	2.48	40	Pn	Pn	05 24 11.8	+0.2
KOSE	Korovin Southe	3.44	274		Pn	05 24 24.3	-0.5
KOSE					Sn	05 25 04.6	+0.3
KOFP	Korovin Flat P	3.46	272		Pn	05 24 25.1	-0.2
KOFP					Sn	05 25 05.6	+0.5
KOKV	Korovin Volcan	3.50	274		Pn	05 24 26.0	+0.1
KOKV					Sn	05 25 06.2	+0.1
KOKL	Mount Kliuchef	3.53	273		Pn	05 24 26.6	+0.5
KOKL					Sn	05 25 08.1	+1.5
ATKA	Atka Island	3.53	271		Pn	05 24 25.9	-0.2
ATKA					Sn	05 25 06.0	-0.5
ATKA	Atka Island	3.53	271	IAML		05 25 07.5	
	comp=E,137nm,1.4s						
ATKA				IAML		05 25 07.8	
	comp=N,132nm,0.5s						
FALS	False Pass	3.98	47	Pn	Pn	05 24 32.6	+0.4
P08K	Saint George I	4.40	352	Pn	Pn	05 24 38.8	+0.8
P08K				IAML		05 27 37.5	
	comp=E,122nm,1.3s						
GSMY	Great Sitkin M	4.69	270		Pn	05 24 41.7	-0.3
GSMY					Sn	05 25 34.1	-0.9
GSTD	Great Sitkin T	4.74	271		Pn	05 24 42.5	-0.3
GSTD					Sn	05 25 35.7	-0.7
GSCK	Great Sitkin C	4.75	270		Pn	05 24 42.9	0.0
GSCK					Sn	05 25 35.9	-0.8
ETKA	Kagalaska Isla	4.92	269		Pn	05 24 45.2	0.0
ETKA					Sn	05 25 41.0	+0.1
SPIA	Saint Paul Isl	5.04	349	Pn	Pn	05 24 48.2	+1.5
SPIA				IAML		05 25 54.5	
	comp=E,92nm,1.3s						
ADK	Adak	5.09	269	Pn	Pn	05 24 47.4	-0.1
ADK				IAML		05 25 46.0	
	comp=E,69nm,0.5s						
ADK				IAML		05 25 50.5	
	comp=E,86nm,1.4s						
KIWB	Kanaga Island	5.38	269	Pn	Pn	05 24 52.0	+0.5
KIWB				IAML		05 25 55.4	
	comp=N,66nm,0.6s						
SDPT	Sand Point	5.65	54	Pn	Pn	05 24 55.8	+0.6
AMKA	Amchitka	7.64	268	Pn	Pn	05 25 22.7	+0.2
CHIR	Chirikof Islan	8.35	60	Pn	Pn	05 25 31.4	-0.9
N14K	Kuskokwak Cree	8.56	24	Pn	Pn	05 25 36.0	+1.0
ACHA	Angle Creek He	9.57	46	Pn	Pn	05 25 50.7	+1.7
O18K	Koktuh Hills	10.60	39	Pn	Pn	05 26 05.2	+2.2
KDAK	Kodiak Island	10.65	52	Pn	Pn	05 26 01.6	-2.0
	comp=N,1.4nm,0.3s,baz=216,slow=6.5,SNR=48						
KDAK	Kodiak Island	10.65	52	Pn	Pn	05 26 02.4	-1.3
Q19K	Cape Douglas,	10.70	46	Pn	Pn	05 26 05.3	+0.9
SLKM	Skilak Lake	13.01	43	Pn	Pn	05 26 35.6	-0.4
O22K	Cooper Landing	13.21	44	Pn	Pn	05 26 38.5	-0.1
SUA	Susitna One	13.33	39	Pn	Pn	05 26 40.1	-0.2
SCM	Sheep Creek Mo	14.90	42	Pn	Pn	05 26 59.5	-2.0
BPAW	Bear Paw Mtn.	14.95	31	Pn	Pn	05 27 03.1	+1.0
BMRM	Bremner River	15.68	47	Pn	Pn	05 27 12.3	+0.7
BMRM				IAmb	IAmb	05 27 42.5	
	comp=Z,17nm,1.2s						
WAX	Waxell Ridge	16.30	50	Pn	Pn	05 27 19.0	-0.6
TGL	Tana Glacier	16.41	49	Pn	Pn	05 27 21.4	+0.4
TGL				IAmb	IAmb	05 27 30.4	
	comp=Z,21nm,1.3s						
MCARA	McCarthy VSAT	16.54	47	Pn	Pn	05 27 23.2	+0.6
ILAR	Eielson Array	16.73	33	Pn	Pn	05 27 22.0	-3.0
	baz=240,slow=10,SNR=2.6						
	comp=Z,0.2nm,0.8s						
GRNC	Granite Creek	16.90	49	Pn	Pn	05 27 27.0	-0.3
MENT	Mentasta	16.91	41		P	05 27 28.2	-0.6
MENT				IAmb	IAmb	05 27 39.9	
	comp=Z,6.5nm,1.2s						
BARN	Barnard Glacie	17.05	48	Pn	Pn	05 27 28.1	-1.0
BARN				IAmb	IAmb	05 27 44.7	
	comp=Z,15nm,1.4s						
J25K	Salcha River,	17.16	35	Pn	Pn	05 27 30.2	-0.2
SCRK	Sand Creek	17.32	38		Pn	05 27 33.0	+0.7
J26L	Joseph Creek	17.75	37		P	05 27 38.2	+0.1
BCAR	Beaver Creek A	17.75	42		P	05 27 38.7	+0.5
D23K	Nanushuk River	18.75	20		Pn	05 27 49.6	-0.2
D23K				IAmb	IAmb	05 28 05.0	
	comp=Z,6.3nm,1.5s						
PETK	Petropavlovsk-	20.43	286	P	P	05 28 07.1	-0.3
	comp=Z,4.2nm,0.5s,baz=84,slow=14,SNR=27						
	comp=Z,4.2nm,0.5s						
YKA	Yellowknife Ar	29.89	49	P	P	05 29 37.0	-0.3
	comp=Z,0.2nm,0.6s,baz=278,slow=8.5,SNR=4.8						
	comp=Z,0.2nm,0.6s						
KLR	Kul'dur	37.02	290	LR	LR	05 47 01.8	
	comp=Z,7.7nm,18.4s,baz=346,slow=38						
H11N2	WAKE ISLAND Hy	37.72	220	T	T	06 11 09.5	
	baz=24,slow=76,SNR=4.8						
H11N3	WAKE ISLAND Hy	37.73	220	T	T	06 11 14.4	
	baz=24,slow=76,SNR=6.3						
H11N1	WAKE ISLAND Hy	37.74	220	T	T	06 11 11.8	
	baz=24,slow=76,SNR=4.2						
H11S1	WAKE ISLAND Hy	38.91	219	T	T	06 12 41.1	
	baz=23,slow=76,SNR=32						
H11S2	WAKE ISLAND Hy	38.92	219	T	T	06 12 40.7	
	baz=23,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	38.92	219	T	T	06 12 41.2	
	baz=23,slow=76,SNR=25						
PDAR	Pinedale Array	39.87	80	P	P	05 31 04.8	+1.1
	comp=Z,1.5nm,0.5s,baz=300,slow=3.5,SNR=21						
	comp=Z,1.5nm,0.5s						
KSRS	Korea Array	45.97	277	P	P	05 31 54.0	+1.2
	comp=Z,1.5nm,0.7s,baz=47,slow=8.7,SNR=3.4						
	comp=Z,1.5nm,0.7s						
NRIK	Noril'sk	46.79	332	P	P	05 31 58.0	-0.8
	comp=Z,1.2nm,0.4s,baz=82,slow=10.0,SNR=3.1						
	comp=Z,1.2nm,0.4s						
NRIK	Noril'sk	46.79	332	IAmb	IAmb	05 32 39.5	
	comp=Z,3.1nm,1.1s						
SPITS	Spitsbergen Ar	49.79	359	P	P	05 32 21.2	-0.6
	comp=Z,1.4nm,0.5s,baz=33,slow=8.6,SNR=6.0						
	comp=Z,1.4nm,0.5s						
TXAR	Lajitas Array	52.19	90	P	P	05 32 41.2	+0.6
	comp=Z,0.4nm,0.5s,baz=327,slow=9.0,SNR=2.7						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	58.09	354	LR	LR	05 59 56.9	
	comp=Z,37nm,18.5s,baz=276,slow=38						
KURK	Kurchatov	62.83	319	P	P	05 33 55.8	+0.8
KURK	Kurchatov	62.83	319	IAmb	IAmb	05 33 55.9	
	comp=Z,1.6nm,0.9s						
KURBB	Kurchatov Arra	62.94	319	P	P	05 33 55.8	+0.1
	comp=Z,0.8nm,0.8s,baz=45,slow=7.4,SNR=6.0						
	comp=Z,0.8nm,0.8s						
BVAR	Borovoye Array	64.12	325	P	P	05 34 03.8	+0.3
	comp=Z,0.8nm,0.4s,baz=26,slow=6.6,SNR=4.5						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	64.29	314	P	P	05 34 03.5	-1.2
	comp=Z,0.9nm,0.8s,baz=49,slow=6.8,SNR=10						
	comp=Z,0.9nm,0.8s						
FINES	FINESS Array B	66.06	352	P	P	05 34 15.4	-0.5
	comp=Z,2.7nm,0.5s,baz=18,slow=6.9,SNR=23						
	comp=Z,2.7nm,0.5s						
NOA	NORSAR Array B	67.05	0	P	P	05 34 22.7	+0.3
	comp=Z,0.6nm,0.5s,baz=360,slow=6.2,SNR=2.0						
	comp=Z,0.6nm,0.5s						
HFS	Hagfors	67.95	359	P	P	05 34 27.8	-0.2
	comp=Z,2.2nm,0.4s,baz=11,slow=3.0,SNR=28						
	comp=Z,2.2nm,0.4s						
CMAR	Chiang Mai Arr	77.19	283	LR	LR	06 14 29.6	
	comp=Z,13nm,18.4s,baz=165,slow=40						
CTA	Charters Tower	82.12	222	LR	LR	06 08 48.2	
	comp=Z,27nm,20.0s,baz=38,slow=33						
SJG	San Juan	83.16	69	LR	LR	06 09 50.6	
	comp=Z,48nm,21.8s,baz=218,slow=34						

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*KRNET **05** 05:32:03.7±0.1, 43°.57N×74°.03E, h16km, mb2.6*

*SOME **05** 05:32:03.7, 43°.60N×74°.00E, h15km*

*NNC **05** 05:32:04.0±1.4, 43°.50N×74°.03E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=16.3km s-min=4.2km az=154.0, Suspected Mining explosion.*

ISC 05 05:32:02.3±0.9, 43°.61N±0°.04×73°.97E±0°.03, h0km, n18, σ0s.47/36, 8C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USP	Ospenovka	0.52	132	⇑iP	Pg	05 32 12.6	+0.4
USP				⇑iS	Sg	05 32 19.5	+0.6
CHMS	Chumysh	0.84	137	⇑iP	Pg	05 32 18.3	0.0
CHMS				⇑iS	Sg	05 32 29.2	0.0
EKS2	Erkin-Say	0.96	189	⇓iP	Pg	05 32 21.3	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EKS2				⇓iS	Sb	05 32 34.2	-1.0
MRKS	Merke	1.02	212	P	Pg	05 32 22.3	+0.3
	3.2nm,0.3s						
MRKS				S	Sg	05 32 35.5	+0.3
	2.8nm,0.3s						
MRKS	Merke	1.02	212	eP	Pg	05 32 22.3	+0.3
	3.2nm,0.3s						
MRKS				eS	Sg	05 32 35.5	+0.3
	2.8nm,0.3s						
KRBS	Karabastau	1.24	86	P	Pg	05 32 26.4	+0.4
	1.5nm,0.2s						
KRBS				S	Sg	05 32 42.6	+0.4
	2.6nm,0.2s						
KRBS	Karabastau	1.24	86	eP	Pg	05 32 26.4	+0.4
KRBS				eS	Sg	05 32 42.5	+0.4
KRBS	Karabastau	1.24	86	eP	Pg	05 32 26.4	+0.4
	1.5nm,0.2s						
KRBS				eS	Sg	05 32 42.6	+0.4
	2.6nm,0.2s						
DGS	Degeres	1.36	105	P	Pg	05 32 28.4	0.0
	1.9nm,0.1s						
DGS				S	Sg	05 32 45.8	-0.2
	2.1nm,0.2s						
DGS	Degeres	1.36	105	eP	Pg	05 32 28.4	0.0
	1.9nm,0.1s						
DGS				eS	Sg	05 32 45.8	-0.2
	2.1nm,0.2s						
TKM2	Tokmak 2	1.37	120	⇑iP	Pg	05 32 27.9	-0.7
TKM2				⇑iS	Sg	05 32 45.7	-0.7
BTLS	Baital	1.43	2	eP	Pn	05 32 29.3	-0.3
	1.4nm,0.1s						
BTLS				eS	Sg	05 32 47.2	-1.0
	1.2nm,0.2s						
UCH	Uchtor	1.44	164	⇓iP	Pg	05 32 29.6	-0.3
UCH				⇓iS	Sb	05 32 48.6	-0.7
MNAS	Manas	1.56	224	⇑iP	Pb	05 32 32.1	0.0
MNAS				⇑iS	Sn	05 32 53.1	+0.7
KST	Kastek	1.56	111	P	Pb	05 32 32.2	0.0
	1.8nm,0.3s						
KST				S	Sn	05 32 52.3	-0.1
	3.4nm,0.2s						
KST	Kastek	1.56	111	eP	Pb	05 32 32.2	0.0
	1.8nm,0.3s						
KST				eS	Sn	05 32 52.3	-0.1
	3.4nm,0.2s						
KTBS	Karatobe	1.97	86	P	Pb	05 32 39.3	+0.3
	3.2nm,0.3s						
KTBS				S	Sb	05 33 04.6	+0.4
	0.4nm,0.1s						
KTBS	Karatobe	1.97	86	eP	Pb	05 32 39.4	+0.3
	3.2nm,0.3s						
KTBS				eS	Sb	05 33 04.6	+0.4
	0.4nm,0.1s						

IGQ 05 05:47:39.7±0.6, 3˚S±2˚×8˚1W±˚, h9^{km}±3^{km}, M4.0/19, Mjma3.9/19, MLv3.8/19, Ms(BB)4.4/13, 6C-5D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARNL	Arenillas	0.84	99	⇓P	Pg	05 47 55.8	-0.1
ARNL				S	Sg	05 48 06.6	-0.3
ISPG	Isla Puna-Puer	0.85	58	⇑P	Pn	05 47 58.5	+0.5
MORR	Playas El Morr	0.96	36	⇑P	Pb	05 47 58.6	+0.2
MORR				S	Sb	05 48 11.9	+0.8
ACH2	Ecuador-Machal	1.10	82	P	Pg	05 48 00.3	-0.5
SALI	Salinas	1.23	356	⇑P	Pb	05 48 03.1	0.0
SALI				S	Sb	05 48 17.8	-1.3
AMCR	Ecuador-Macara	1.33	135	P	Pn	05 48 03.5	-1.1
MCRA	Macar, Loja	1.33	135	⇓P	Pn	05 48 03.4	-1.2
MCRA				S	Sb	05 48 20.1	-2.0
PCRA	Pucara 2	1.41	81	⇑P	Pn	05 48 04.0	-2.0
AC07	Ecuador-Guayaq	1.56	36	P	Pn	05 48 07.1	-0.5
AGUAY	Guayaquil	1.65	35	P	Pn	05 48 07.8	-1.2
GONZ	Gonzanam	1.71	118	P	Pn	05 48 09.7	-0.3
GONZ				S	Sn	05 48 30.8	-1.3
MILO	Milagro-Astudi	1.76	50	P	Pn	05 48 10.8	+0.4
ALJ1	Ecuador-Loja-U	1.79	108	P	Pn	05 48 11.0	+0.1
CSOL	CASCOL	1.80	14	P	Pn	05 48 10.2	-0.8
PPLP	Puerto Lpez	1.87	4	P	Pn	05 48 10.9	-1.0
PPLP	Puerto Lpez	1.87	4	P	Pn	05 48 11.0	-0.9
COHC	Cochancay	1.90	60	⇑P	Pn	05 48 11.5	-0.8
ACUE	Ecuador-Cuenca	2.00	75	P	Pn	05 48 14.5	+0.5
AZAM	Ecuador-Zamora	2.04	108	P	Pn	05 48 14.9	+0.5
JIPI	JIPIJAPA	2.07	9	P	Pn	05 48 14.6	-0.1
ABAB	Ecuador-Univer	2.12	41	P	Pn	05 48 13.5	-1.8
ISPT	Isla de la Pla	2.15	355	⇓P	Pn	05 48 15.6	-0.2
ZUMB	Zumba	2.26	129	⇓P	Pn	05 48 18.6	+1.1
BOSC	San Juan Bosco	2.41	84	⇓P	Pn	05 48 20.6	+1.0
AMNT	Manta-Manabi	2.47	4	P	Pn	05 48 20.4	+0.3
JSCH	Cashca Tororas	2.56	49	P	Pn	05 48 20.0	-1.7
PECV	Mancha de Ca P	2.76	18	P	Pn	05 48 23.8	-0.4
CHSH	Refugio Sur-Vo	2.79	47	P	Pn	05 48 25.2	+0.2
TAMH	Tambohuasha Ch	2.82	49	P	Pn	05 48 24.9	-0.5
SANGA	Volcan Sangay	2.87	62	P	Pn	05 48 27.0	+1.0
PORT	Chimborazo Vol	2.88	48	P	Pn	05 48 26.9	+0.6
IGUA	Igualata	2.96	50	P	Pn	05 48 27.3	-0.2
BMAS	Trigal station	3.08	52	P	Pn	05 48 27.9	-0.9
BPAT	Tungurahua Vol	3.11	52	P	Pn	05 48 30.2	+0.7
JUI6	Juive	3.13	51	P	Pn	05 48 29.9	+0.3
PIS1	Pisayambo	3.44	47	⇑P	Pn	05 48 35.6	+1.7
ILLI	Illinizas Sur	3.45	39	P	Pn	05 48 34.8	+0.7
SRAM	San Ramn-Vol	3.53	41	P	Pn	05 48 37.5	+2.4
TAIS	Taisha	3.55	73	P	Pn	05 48 35.3	+0.3
BRRN	Barrancas-Volc	3.57	43	P	Pn	05 48 37.3	+1.6
SLOR	San Lorenzo -	3.59	42	P	Pn	05 48 37.9	+1.9
VCES	Cotopaxi	3.61	44	P	Pn	05 48 38.1	+1.8
SUCR	Mariscal Sucre	3.66	41	P	Pn	05 48 38.9	+2.0
BREF	Cotopaxi Volca	3.67	42	P	Pn	05 48 40.0	+2.7
AMAC	Ecuador-Machac	3.68	39	P	Pn	05 48 40.3	+3.2
BTAM	Cotopaxi Volca	3.70	43	P	Pn	05 48 40.1	+2.5
BVC2	Cotopaxi Volca	3.70	42	P	Pn	05 48 39.2	+1.5
TAMB	Tambo	3.71	43	P	Pn	05 48 39.1	+1.4
VC1	Cotopaxi 1	3.72	42	P	Pn	05 48 39.4	+1.6
PKYU	Pakayacu	3.74	62	P	Pn	05 48 38.8	+1.1
PITA	Cotopaxi Volc	3.76	41	P	Pn	05 48 40.3	+2.0
GGPT	Toaza - Volcan	3.91	36	P	Pn	05 48 41.3	+1.0
ANTM	Antisana-La Mi	3.92	43	P	Pn	05 48 42.7	+2.1
ANTG	Antisana-Guama	3.92	42	P	Pn	05 48 42.3	+1.7
JUA2	San Juan 2	3.92	36	P	Pn	05 48 41.5	+0.9
BV15	Puerto Quito-O	3.93	25	P	Pn	05 48 39.1	-1.2
TERV	Terraza Guagua	3.96	35	P	Pn	05 48 42.0	+0.9
PINO	Pino	3.97	35	P	Pn	05 48 41.9	+0.6
ANTS	Antisana-Sarah	3.98	43	P	Pn	05 48 43.4	+1.9
YANA	Yana	4.02	35	P	Pn	05 48 43.1	+1.1
PULU	Pululahua	4.17	35	P	Pn	05 48 45.0	+1.0
PAC1	Pacto, Paraso	4.22	30	P	Pn	05 48 44.0	-0.4
OTAV	Otavalo	4.38	34	P	Pn	05 48 47.9	+1.1
CUSE	Cuicocha Este	4.46	34	P	Pn	05 48 49.4	+1.4
CAYR	Refugio Cayamb	4.47	40	P	Pn	05 48 50.5	+2.2
CUIC	Cuicocha-Domo	4.49	34	P	Pn	05 48 49.8	+1.5
URCU	Urcuqui	4.66	35	P	Pn	05 48 54.0	+3.4
CHMA	Chilma	5.11	34	P	Pn	05 48 59.4	+2.6
CHL1	Volc¡n Chiles	5.12	35	P	Pn	05 49 00.3	+3.2
ECEN	Cerro Negro	5.13	35	P	Pn	05 49 00.4	+3.2

SDD 05 06:16:09.1±1.5, 19.˚20N×70.˚58W, h41^{km}±9^{km}, MD2.9, ML2.3, MW2.6, Presumed earthquake
OSPL 05 06:16:10.0±1.5, 19.˚13N×70.˚56W, h18^{km}±14^{km}, ML1.8, Presumed earthquake
ISC 05 06:16:08.6±1.7, 19.˚21N±0.˚05×70.˚53W±0.˚04, h35^{km}±2^{km}, n13, σ1^{s}02/23, 12C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SC01	Santiago de lo	0.28	319	⇑ePg	Pn	06 16 15.6	-1.0
SC01				⇓eSg	Sn	06 16 22.4	-0.3
SC01				IAML		06 16 23.8	
	comp=N,82nm,0.1s						
SC01	Santiago de lo	0.28	319	iP	Pn	06 16 16.4	-0.2
SC01				eS	Sn	06 16 22.3	-0.3
SFDR	San Fco. de Ma	0.28	75	⇑ePg	Pn	06 16 17.1	+0.5
SFDR				⇑eSg	Sn	06 16 23.4	+0.8
SFDR				IAML		06 16 25.3	
	comp=N,223nm,0.1s						
DR08	Loma La Naviza	0.54	117	⇑ePg	Pn	06 16 19.4	-0.6
DR08				⇓eSg	Sn	06 16 27.8	0.0
DR08				IAML		06 16 28.4	
	comp=N,1µm,0.1s						
MADR	Mao Valverde	0.64	303	⇑ePg	Pn	06 16 20.7	-0.6
MADR				⇑eSg	Sn	06 16 29.3	-1.0
MADR				IAML		06 16 33.0	
	comp=N,127nm,0.2s						
SDDR	Presa de Saban	0.75	252	iP	Pn	06 16 22.7	0.0
SDDR				eS	Sn	06 16 31.4	-1.6
SDDR				IAML		06 16 33.6	
	comp=Z,30nm,0.3s						
LUDR	Luperon	0.79	330	⇑ePg	Pn	06 16 22.0	-1.2
BANI	BANI	0.83	168	⇑ePg	Pn	06 16 24.4	+0.4
BANI				⇑eSg	Sn	06 16 33.5	-1.5
BANI				IAML		06 16 37.6	
	comp=N,83nm,0.2s						
LOPP1	Punta Rusia, P	0.90	316	iP	Pn	06 16 25.7	+1.0
LOPP1				eS	Sn	06 16 39.0	+2.5
LOPP1				IAML		06 16 43.9	
	comp=Z,59nm,1.0s						
LONE3	El Aguacate, B	1.06	236	iP	Pn	06 16 27.3	+0.1
LONE3				eS	Sn	06 16 41.4	+0.6
LONE3				IAML		06 16 44.7	
	comp=Z,18nm,1.8s						
HATOM	Hato Mayor del	1.17	111	⇑ePg	Pn	06 16 29.6	+1.0
HATOM				IAML		06 17 03.4	
	comp=N,25nm,2.0s						
LODU1	El Espartillar	1.23	226	iP	Pn	06 16 30.3	+0.9
LODU1				IAML		06 16 50.8	
	comp=Z,34nm,2.6s						
MIDR	Miches	1.42	99	⇑ePg	Pn	06 16 31.7	-0.2
MIDR				⇑eSg	Sn	06 16 49.1	-0.3
MIDR				IAML		06 16 52.3	
	comp=N,35nm,1.8s						

SSNC 05 06:31:32.0±1.5, 18.˚83N×81.˚18W, h0^{km}±13^{km}, MD3.6, Presumed earthquake
JSN 05 06:31:33.3±1.3, 19.˚18N×80.˚93W, h0^{km}±999^{km}, MD4.5, Presumed earthquake
ISC 05 06:31:33.8±2.3, 18.˚9N±0.˚1×81.˚2W±0.˚1, h35^{km}, n14, σ1^{s}23/17, 1D, North of Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCCY	Blossom Villag	1.29	52	eP	Pn	06 31 54.2	-1.2
LCCY				eS	Sn	06 32 12.5	+1.0
CBCY	The Bluff, Cay	1.58	57	eP	Pn	06 31 58.1	-1.3
MGV	Manicaragua	3.40	19	eP	Pn	06 32 23.4	-1.1
MTDJ	Mount Denham	3.50	100	eP	Pn	06 32 26.4	+0.6
MTDJ				eS	Sn	06 33 05.1	-1.2
MTDJ	Mount Denham	3.50	100	iP	Pn	06 32 26.6	+0.6
MTDJ				iS	Sn	06 33 04.7	-1.5
CCCC	Cccc	3.94	54	eP	Pn	06 32 36.3	+4.4
LMGC	Las Mercedes	4.10	73	eP	Pn	06 32 34.6	+0.6
LMGC				eS	Sn	06 33 20.4	-0.4
CAMR	Camarioca	4.17	357	eP	Pn	06 32 35.9	+0.9
STH	Stony Hill	4.21	100	iP	Pn	06 32 35.5	0.0
SOR	Soroa	4.26	336	eP	Pn	06 32 36.3	0.0
GWJ	Greenwich	4.29	100	⇓iP	Pn	06 32 36.9	+0.2
HLGC	Holguin	5.21	67	eP	Pn	06 32 51.0	+1.7
RCC	Rio Carpintero	5.28	77	eP	Pn	06 32 51.0	+0.7
PINC	Pinares de May	5.31	72	eP	Pn	06 32 53.2	+2.5

RSPR 05 07:27:17.5, 18.˚03N×66.˚73W, h10^{km}±1^{km}
NEIC 05 07:26:53.2±0.9, 19.˚2N±0.˚1×66.˚02W±0.˚06, h19^{km}±16^{km}, ML2.9/33, ML2.7(RSPR), 2C-3D, Error ellipse: s-maj=18.4km s-min=6.8km az=197.0, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCPR	Guaynabo City	0.86	184		Pg	07 27 10.0	0.0
GCPR				Sn	Sn	07 27 23.4	+1.0
ECPR	Experimental S	0.91	201		Pb	07 27 10.2	-0.2
ECPR				Sn	Sn	07 27 24.8	+1.2
ECPR				IAML		07 27 28.8	
	278nm,0.2s						
ECPR				IAML		07 27 29.0	
	206nm,0.2s						
HUMP	Col San Antoni	1.04	171		Pb	07 27 12.2	-0.4
SJG	San Juan	1.06	186		Pn	07 27 13.3	+0.2
SJG				Sn	Sn	07 27 27.4	0.0
SJG				IAML		07 27 32.4	
	119nm,0.4s						
SJG				IAML		07 27 32.5	
	130nm,0.4s						
CUPR	Culebra, Puert	1.11	141	Pn	Pn	07 27 12.7	-1.1
UUPR	Utuado, UPR, P	1.13	216		Pn	07 27 14.0	0.0
PDPR	Patillas Dam,	1.15	180	Pn	Pn	07 27 14.3	0.0
AGPR	Aguadilla, PR	1.25	236	Pn	Pn	07 27 14.6	-1.0
AGPR				IAML		07 27 37.2	
	142nm,0.3s						
AGPR				IAML		07 27 58.7	
	112nm,2.4s						
AGPR	Aguadilla, PR	1.25	236	⇑eP	Pg	07 27 28.4	+11
AGPR				eS	Sg	07 27 36.6	+3.0
OBIP	Obispado Ponce	1.25	206		Pn	07 27 15.8	0.0
OBIP				IAML		07 27 22.9	
	comp=N,102nm,0.3s						
OBIP	Obispado Ponce	1.25	206	⇓iP	Pg	07 27 20.5	+3.1
OBIP				eS	Sb	07 27 22.7	-9.3
LSP	Las Mesas	1.41	226	⇑eP	Pg	07 27 25.0	+4.5
LSP				eS	Sn	07 27 30.6	-5.6
PRSN	Puerto Rico Se	1.42	228	Pn	Pn	07 27 18.0	-0.2
PRSN				IAML		07 27 34.1	
	comp=N,300nm,0.2s						
PRSN				IAML		07 27 37.6	
	comp=N,386nm,0.3s						
PRSN	Puerto Rico Se	1.42	228	eS	Sn	07 27 32.3	-4.0
GBPR	Guanica, Bosqu	1.44	214	⇓iP	Pg	07 27 21.2	+0.2
GBPR				eS	Sn	07 27 24.1	-13
MLPR	Magueyes Islan	1.54	219	Pn	Pn	07 27 19.1	-0.6
MLPR				IAML		07 27 29.1	
	comp=N,116nm,0.2s						
MLPR				IAML		07 27 29.3	
	comp=N,160nm,0.2s						
CRPR	Cabo Rojo, PR	1.55	222	Pn	Pn	07 27 19.7	-0.1
CRPR				IAML		07 27 31.8	
	comp=N,102nm,0.2s						
CRPR				IAML		07 27 32.0	
	comp=N,103nm,0.3s						
CRPR	Cabo Rojo, PR	1.55	222	⇓eP	Pg	07 27 24.8	+1.7
CRPR				eS	Sn	07 27 30.2	-9.2
DR12	Loma Pena Alta	3.20	264	Pn	Pn	07 27 42.3	-0.3
SDDR	Presa de Saban	4.98	269	Pn	Pn	07 28 06.6	-0.6
SDDR				IAML		07 30 51.4	
	comp=N,23nm,2.6s						

NNC 05 07:29:01.6±5.0, 36.˚82N×70.˚53E, h155^{km}±78^{km}, mb3.0, mpv3.8, 4C-2D, Error ellipse: s-maj=45.8km s-min=31.3km az=9.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.28	360	⇑P	Pn	07 30 32.5	+0.5
	6.7nm,0.3s,baz=166,slow=12,SNR=60						
KK31				⇓S	Sn	07 31 43.5	+0.6
	2.2nm,0.3s,baz=185,slow=19,SNR=6.4						
AAK	Ala-Archa	6.57	27	⇓P	Pn	07 30 35.4	-0.5
	2.3nm,0.7s						
AAK				⇑S	Sn	07 31 50.2	+0.2
	10nm,0.9s						
MK31	Makanchi Array	13.26	38	⇑P	Pn	07 32 04.6	+0.7
	2.1nm,0.6s,baz=213,slow=11,SNR=21						
AB31	Akbulak array	14.62	332	⇑P	Pn	07 32 20.2	-0.8
	0.3nm,0.4s,baz=159,slow=12,SNR=16						

JSN 05 07:41:29.8±0.6, 18.˚16N×79.˚77W, h19^{km}±730^{km}, MD3.9, Presumed earthquake
SSNC 05 07:41:31.7±1.1, 18.˚30N×79.˚68W, h16^{km}±18^{km}, MD3.4, ML2.7, Presumed earthquake
ISC 05 07:41:31.6±2.4, 18.˚3N±0.˚1×79.˚7W±0.˚1, h35^{km}, n16, σ0^{s}73/18, 1D, North of Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCCY	Blossom Villag	1.39	344	eP	Pn	07 41 54.6	+0.1
LCCY				eS	Sn	07 42 10.2	-1.5
LCCY				IAML		07 42 12.3	
	comp=E,113nm,0.2s						
LCCY				IAML		07 42 12.5	
	comp=N,117nm,0.1s						
CBCY	The Bluff, Cay	1.41	357	eP	Pn	07 41 54.9	+0.1
CBCY				eS	Sn	07 42 12.1	-0.1
CBCY				IAML		07 42 12.6	
	comp=N,156nm,0.2s						
CBCY				IAML		07 42 13.3	
	comp=E,88nm,0.2s						
MTDJ	Mount Denham	2.04	92	eP	Pn	07 42 03.2	-0.4
MTDJ				eS	Sn	07 42 27.3	-0.7
MTDJ				IAML		07 42 30.6	
	comp=E,67nm,0.4s						
MTDJ				IAML		07 42 30.8	
	comp=E,34nm,0.3s						
MTDJ	Mount Denham	2.04	92	iP	Pn	07 42 03.3	-0.4
MTDJ				iS	Sn	07 42 28.5	+0.5
STH	Stony Hill	2.74	95	⇓iP	Pn	07 42 13.4	+0.2
LMGC	Las Mercedes	3.07	55	eP	Pn	07 42 17.6	0.0
CCCC	Cccc	3.38	32	eP	Pn	07 42 26.6	+4.6
CHIV	Chivirico	3.50	61	eP	Pn	07 42 23.9	+0.3
MGV	Manicaragua	3.78	356	eP	Pn	07 42 27.9	+0.5
MARVS	Santiago de Cu	3.95	64	eP	Pn	07 42 29.2	-0.5
RCC	Rio Carpintero	4.12	66	eP	Pn	07 42 32.1	0.0
PINC	Pinares de May	4.26	59	eP	Pn	07 42 34.7	+0.7
HLGC	Holguin	4.26	53	eP	Pn	07 42 36.1	+2.0
GTBY	Guantanamo Bay	4.61	69	eP	Pn	07 42 40.6	+1.8
QMBU	Quimbuelo	4.96	67	eP	Pn	07 42 43.9	+0.1
SOR	Soroa	5.43	326	eP	Pn	07 42 50.7	+0.6

TRN 05 07:41:36.9, 10.˚86N×62.˚35W, h79^{km}, MD4.1, North of the Paria peninsula.
FUNV 05 07:41:37.2, 10.˚87N×62.˚35W, h24^{km}, MW3.6, Presumed earthquake
ISC 05 07:41:35.3±1.7, 10.˚83N±0.˚06×62.˚35W±0.˚06, h94^{km}±20^{km}, n31, σ1^{s}42/53, 2C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	0.80	99	eP	Pn	07 41 53.9	+0.8
DMDM				eS	Sn	07 42 05.7	-0.7
PSMG	Mucurapo Girls	0.82	101	eP	Pn	07 41 54.0	+0.7
PSMG				eS	Sn	07 42 06.0	-0.8
PSKH	Kent House, Po	0.83	100	eP	Pn	07 41 54.2	+0.8
PSKH				eS	Sn	07 42 06.2	-0.8
TRN	Trinidad (W)	0.95	101	eP	Pn	07 41 55.1	+0.4
TRN				eS	Sn	07 42 08.1	-1.1
TRN	Trinidad (W)	0.95	101	eP	Pn	07 41 55.2	+0.5
TRN				eS	Sn	07 42 07.9	-1.4
TPP	Pointe-a-Pierr	1.02	120	eP	Pn	07 41 57.4	+1.9
GRFF	Grenada Fort F	1.35	26	eP	Pn	07 41 59.8	+0.3
GRFF				eS	Sn	07 42 17.1	-0.6
GRGR	Grenville	1.46	28	⇑iP	Pn	07 42 00.9	+0.1
GRGR				eS	Sn	07 42 19.1	-1.0
GRGR	Grenville	1.46	28	eP	Pn	07 42 01.1	+0.3
GRGR				eS	Sn	07 42 20.1	0.0
GRW	Mount Saint Ca	1.48	27	eP	Pn	07 42 03.2	+2.1
GRW				eS	Sn	07 42 20.1	-0.6
GCMP	Grenada, Carri	1.88	29	eP	Pn	07 42 06.3	+0.3
GCMP				eS	Sn	07 42 28.6	-1.0
PCRV	Puerto La Cruz	2.34	254	⇓eP	Pn	07 42 14.0	+1.9
PCRV				eS	Sn	07 42 39.5	-0.9
PCRV	Puerto La Cruz	2.34	254	eP	Pn	07 42 14.4	+2.3
PCRV				eS	Sn	07 42 40.9	+0.5
SVB	Belmont	2.66	24	eP	Pn	07 42 18.0	+1.7
SVB				eS	Sn	07 42 46.3	-1.5
MCLT	Moule a Chique	3.18	26	eP	Pn	07 42 23.8	+0.5
MCLT				eS	Sn	07 43 00.5	+0.2
SLAC	Saint Lucia, A	3.36	25	eP	Pn	07 42 27.3	+1.4
SLCP	Castries, St.	3.43	23	eS	Sn	07 43 06.5	+0.1
SLBI	Saint Lucia, B	3.45	23	eP	Pn	07 42 27.7	+0.8
SLBI				eS	Sn	07 43 07.0	+0.2
SLBI				x	x	07 43 07.0	
BBGH	Gun Hill	3.57	50	eP	Pn	07 42 30.2	+1.6
BBGH				eS	Sn	07 43 09.6	-0.3
BIM	Bigot	3.87	19	eP	Pn	07 42 32.9	+0.2
BIM				eS	Sn	07 43 15.9	-1.3
TACV	Tcata	4.65	262	eP	Pn	07 42 44.5	+1.2
TACV				eS	Sn	07 43 34.9	-1.2
DSLB	Salisbury	4.67	11	e	Pn	07 42 43.3	-0.2
DSLB	Salisbury	4.67	11	eP	Pn	07 42 44.1	+0.6
DSLB				eS	Sn	07 43 33.4	-3.1
BENV	Beln	5.23	261	eP	Pn	07 42 52.6	+1.4
BENV				eS	Sn	07 43 47.8	-2.6
CACV	CAICARA DEL OR	5.26	232	eP	Pn	07 42 47.2	-4.3
CACV				eS	Sn	07 43 40.5	-10
ATGZ	Broadband at L	5.27	7	eP	Pn	07 42 51.9	+0.2
TURV	Turiamo	5.41	267	eP	Pn	07 42 55.2	+1.7
TURV				eS	Sn	07 43 52.3	-2.2
MAPV	Macapo	6.09	261	⇑eP	Pn	07 43 03.4	+0.6
MAPV				eS	Sn	07 44 08.9	-2.2
SKI	Saint Kitts	6.48	357	eP	Pn	07 43 09.2	+1.1
TEPV	Terepaima	6.78	263	eP	Pn	07 43 12.4	+0.1
ANWB	Willy Bob	6.82	5	eP	Pn	07 43 15.0	+2.2

IDC 05 07:57:17.5±0.5, 4.˚40S×77.˚45W, h0^{km}, mb4.6/16, mbtmp4.6/22, ML3.9/6, MS4.4/58, Error ellipse: s-maj=21.4km s-min=11.4km az=64.0
MOS 05 07:57:18.0±1.1, 4.˚44S×77.˚55W, h10^{km}, mb5.2/20, Error ellipse: s-maj=16.1km s-min=6.6km az=105.1
NEIC 05 07:57:20.3, 4.˚48S×77.˚46W, h12^{km}, Moment Tensor Solution. Duration: 1^{s}8 Moment tensor: Scale 10^{16}Nm; M_{rr}5.30; $M_{\theta\theta}$-1.89; $M_{\phi\phi}$-3.41; $M_{r\theta}$-1.91; $M_{\theta\phi}$-2.04; $M_{\phi r}$1.46; Fault plane solution: $M_0$5.62000×10^{16} NP1: ϕ_s233.37000°, δ47.67000°, λ117.35000°. NP2: ϕ_s15.84000°, δ48.96000°, λ63.23000°. Principal axes: T 6.1704, Plg70.0000°, Azm216.0000°; N -1.3416, Plg20.0000°, Azm34.0000°; P -4.8288, Plg1.0000°, Azm124.0000°;
NEIC 05 07:57:20.3, 4.˚48S×77.˚46W, h12^{km}
NEIC 05 07:57:20.3±2.0, 4.˚48S±0.˚05×77.˚46W±0.˚07, h10^{km}±1^{km}, mb5.1/453, Mww5.1/32, Error ellipse: s-maj=12.1km s-min=7.7km az=274.0
VAO 05 07:57:22.4±0.3, 4.˚42S×77.˚12W, h10^{km}, mb4.9, Presumed earthquake
GCMT 05 07:57:22.2±0.1, 4.˚48S±0.˚01×77.˚50W±0.˚01, h12^{km}, MW5.1/128, Moment Tensor Solution. s77,c108; s128,c208; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.70±.10; $M_{\theta\theta}$-2.23±.08; $M_{\phi\phi}$-3.47±.12; $M_{r\theta}$0.15±.29; $M_{\theta\phi}$-2.83±.07; $M_{\phi r}$0.69±.29; Best double couple: $M_0$5.76800×10^{16} NP1: ϕ_s222.00000°, δ42.00000°, λ95.00000°. NP2: ϕ_s36.00000°, δ48.00000°, λ86.00000°. Principal axes: T 5.7530, Plg85.0000°, Azm263.0000°; N 0.0290, Plg3.0000°, Azm38.0000°; P -5.7820, Plg3.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 05 07:57:23.0±0.3, 4.˚46S±0.˚04×77.˚41W±0.˚06, h35^{km}, n701, σ1^{s}14/490, mb5.1/214, MS4.4/60, 8C-2D, Northern Peru

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCRA	Macar, Loja	2.54	272	P	Pn	07 58 00.0	-1.8
COHC	Cochancay	2.71	317		Pn	07 58 03.8	-0.2
COHC	Cochancay	2.71	317	P	Pn	07 58 04.6	+0.6
ATAH	Atahualpa	2.83	200	Pn	Pn	07 58 07.0	+0.9
	9.6nm,0.3s,baz=30,slow=12,SNR=101						
ATAH				Sn	Sn	07 58 34.7	-4.6
	89nm,0.3s,baz=157,slow=17,SNR=7.6						
ATAH				Lg	Lg	07 58 46.9	
	197nm,0.3s,baz=94,slow=11,SNR=8.5						
ATAH				LR	LR	07 59 37.4	
	comp=Z,8µm,20.8s,baz=26,slow=49						
	249nm,0.6s						
SLOR	San Lorenzo -	3.86	344		Pn	07 58 21.0	+0.6
PPLP	Puerto Lpez	4.44	311	P	Pn	07 58 29.3	+1.4
	16µm6µm414nm,0.7s						
OTAV	Otavalo	4.78	347		Pn	07 58 34.8	+1.8
OTAV	Otavalo	4.78	347	P	Pn	07 58 34.8	+1.8
OTAV	Otavalo	4.78	347	eP	Pn	07 58 35.0	+2.0
OTAV	Otavalo	4.78	347	P	Pn	07 58 35.6	+2.6
	10µm6µm302nm,0.9s						
CUSE	Cuicocha Este	4.83	348	P	Pn	07 58 39.9	+6.2
	9µm647nm,0.9s						
BONI	La Bonita	4.88	359	P	Pn	07 58 32.8	-1.4
	7µm5µm521nm,1.0s						
PAC1	Pacto, Paraso	4.89	344	P	Pn	07 58 35.3	+1.1
	12µm592nm,0.8s						
TULM	Tulcn-Chalpat	5.16	356	P	Pn	07 58 39.5	+1.4
	10µm631nm,0.8s						

PTLC Puerto Leguiza 5.29 30 P Pn 07 58 35.7 -3.9
6µm11µm1µm,0.8s
CMBC Cumbal 5.38 356 P Pn 07 58 43.6 +2.4
CRUC La Cruz 6.00 4 P Pn 07 58 50.2 +0.5
FLOC Florencia 6.25 16 P Pn 07 58 51.9 -0.9
6µm10µm245nm,1.2s
BBAC Balboa, Cauca 6.44 1 P Pn 07 58 58.5 +2.9
18µm3µm174nm,1.0s
GARC Garzon, Huila 6.87 16 P Pn 07 59 00.8 -0.8
6µm255nm,0.4s
POPC Popayan, Colom 6.99 6 P Pn 07 59 05.9 +2.7
9µm3µm166nm,0.9s
MACC Macarena, Meta 7.46 29 P Pn 07 59 09.1 -0.4
5µm3µm229nm,0.7s
NNA Nana 7.50 176 Pn Pn 07 59 09.6 -0.4
14nm,0.3s,baz=350,slow=10,SNR=29
NNA Sn Sn 08 00 33.6 -0.3
30nm,0.3s,baz=266,slow=15,SNR=9.6
NNA LR LR 08 01 43.9
comp=Z,3µm,18.7s,baz=334,slow=35
55nm,0.4s
NNA Nana 7.50 176 Pn 07 59 09.9 -0.1
NNA Nana 7.50 176 ⇑*iP* Pn 07 59 09.1 -0.9
JAMC Jamundi, Valle 7.66 6 P Pn 07 59 15.3 +3.0
9µm3µm197nm,1.1s
YOTC Yotoco, Valle 8.45 7 P Pn 07 59 25.2 +2.0
2µm81nm,0.8s
PRAC Prado 8.50 17 P Pn 07 59 25.1 +1.4
3µm4µm70nm,1.2s
ORTC Ortega, Tolima 8.59 15 P Pn 07 59 28.6 +3.7
3µm4µm137nm,1.3s
VILC Villavicencio, 9.29 24 P Pn 07 59 36.4 +1.8
3µm190nm,0.5s
ROSC El Rosal 9.74 19 Pn Pn 07 59 43.6 +2.6
2.2nm,0.3s,baz=220,slow=13,SNR=13
ROSC Lg Lg 08 02 25.9
2.5nm,0.3s,baz=61,slow=19,SNR=2.0
ROSC El Rosal 9.74 19 Pn 07 59 43.4 +2.4
ROSC El Rosal 9.74 19 P Pn 07 59 43.4 +2.4
CBOC Ciudad Bolivar 10.35 8 P Pn 07 59 53.2 +4.0
TEFE Tefe 12.78 86 *eP* Pn 08 00 21.1 -1.2
I20EC Galapagos 13.50 286 I I 09 13 30.0
baz=110,slow=316,SNR=3.1
PIRO Carate, Puerto 14.08 335 Pn Pn 08 00 41.3 +1.2
BRU2 Volcan 14.18 338 Pn 08 00 40.9 -0.7
LPAZ La Paz 14.87 143 Pn Pn 08 00 48.6 -2.7
0.4nm,0.3s,baz=340,slow=6.0,SNR=9.5
LPAZ LR LR 08 07 45.0
comp=Z,4µm,20.4s,baz=296,slow=42
1.8nm,0.6s
LPAZ La Paz 14.87 143 Pn 08 00 49.8 -1.6
LPAZ La Paz 14.87 143 *eP* Pn 08 00 51.1 -0.3
LPAZ La Paz 14.87 143 *eP* Pn 08 00 49.5 -1.9
SDV Santo Domingo 14.88 27 Pn Pn 08 00 49.6 -1.5
0.9nm,0.3s,baz=228,slow=8.7,SNR=13
SDV Lg Lg 08 04 55.5
1.5nm,0.3s,baz=27,slow=10,SNR=3.4
SDV LR LR 08 08 15.4
comp=Z,5µm,18.9s,baz=228,slow=44
14nm,0.7s
SDV Santo Domingo 14.88 27 Pn 08 00 50.1 -1.0
SDV Santo Domingo 14.88 27 *eP* Pn 08 00 50.8 -0.2
PB18 Visviri 15.19 150 Pn Pn 08 00 55.0 -0.5
PB16 IPOC Station P 15.81 151 P P 08 01 06.2 -0.9
HDC Heredia 15.84 335 Pn Pn 08 01 03.4 -0.3
HDC Heredia 15.84 335 *eP* P 08 01 06.1 -0.9
JTS Las Juntas de 16.47 333 Pn Pn 08 01 10.9 -0.5
0.2nm,0.3s,baz=320,slow=2.9,SNR=7.1
JTS LR LR 08 06 39.7
comp=Z,2µm,20.4s,baz=143,slow=34
18nm,1.0s
JTS Las Juntas de 16.47 333 Pn 08 01 11.2 -0.3
JUD3 Juan Diaz 3 16.63 331 Pn Pn 08 01 12.5 -1.1
MACA Manacapuru-AM 16.74 86 Pn 08 01 13.6 -1.3
MACA IAmb IAmb 08 01 20.9
comp=Z,117nm,0.7s
MACA Manacapuru-AM 16.74 86 *eP* Pn 08 01 11.0 -3.9
PB11 IPOC Station P 16.98 154 P 08 01 19.7 0.0
PB11 IAmb IAmb 08 01 23.4
comp=Z,160nm,1.4s
GO01 Chusmiza 17.11 153 P P 08 01 20.6 -0.8
GO01 IAmb IAmb 08 01 27.2
comp=Z,290nm,1.3s
PB08 IPOC Station P 17.54 153 P P 08 01 25.7 -0.4
PATCX Punta Patache 17.73 157 P P 08 01 29.5 +1.7
PATCX IAmb IAmb 08 01 33.2
comp=Z,311nm,1.6s
BOAV Boa Vista 18.20 68 Pn 08 01 32.3 -0.7
BOAV Boa Vista 18.20 68 *eP* Pn 08 01 32.6 -0.4
PB02 IPOC Station P 18.28 157 IAmb IAmb 08 01 38.7
comp=Z,237nm,1.6s
PB07 IPOC Station P 18.65 158 IAmb IAmb 08 01 45.9
comp=Z,131nm,1.1s
BOAB BOACO BROADBAN 18.70 334 P Pn 08 01 38.4 -0.6
PB09 IPOC Station P 18.97 156 IAmb IAmb 08 01 50.0
comp=Z,104nm,1.2s
VILB Vilhena 18.98 117 P P 08 01 40.5 -1.1
VILB Vilhena 18.98 117 *eP* P 08 01 41.0 -0.6
PB03 IPOC Station P 18.99 158 IAmb IAmb 08 01 48.1
comp=Z,121nm,1.1s
SIUN Universidad Ur 19.48 338 P P 08 01 46.6 -0.5
SIUN IAmb IAmb 08 01 51.3
comp=Z,38nm,1.4s
PB05 IPOC Station P 19.57 160 IAmb IAmb 08 01 52.4
comp=Z,213nm,1.6s
PB06 IPOC Station P 19.66 158 P Pn 08 01 48.8 -1.9
PB06 IAmb IAmb 08 01 54.8
comp=Z,242nm,1.7s
SIV San Ignacio 19.72 127 P P 08 01 48.4 -1.3
comp=Z,0.1nm,0.3s,baz=297,slow=8.2,SNR=25
SIV LR LR 08 10 06.4
comp=Z,4µm,18.0s,baz=303,slow=39
comp=Z,2.4nm,0.4s
AF01 San Pedro de A 20.44 155 P Pn 08 01 57.9 -2.1
TGUH Tegucigalpa,Un 20.84 332 P P 08 02 01.9 -0.1
TGUH IAmb IAmb 08 02 08.2
comp=Z,90nm,1.2s
PTLB Pontes e Lacer 21.03 123 P P 08 02 03.9 0.0
PTLB IAmb IAmb 08 02 10.7
comp=Z,178nm,1.8s
PTLB Pontes e Lacer 21.03 123 *eP* P 08 02 04.6 +0.7
PB14 IPOC Station P 21.15 162 IAmb IAmb 08 02 09.6
comp=Z,156nm,1.4s
ITTB Itaituba 21.61 91 *eP* P 08 02 09.3 -0.8
PDRB Porto dos Gac 21.66 110 *eP* P 08 02 10.7 0.0
MTO3 Montecristo 22.17 328 IAmb IAmb 08 02 19.7
comp=Z,58nm,1.1s
ESQI Esquipulas 22.30 328 P P 08 02 17.0 -0.6
CLDB Colider 22.34 108 *eP* P 08 02 16.4 -1.6
AC01 Pan de Azucar 22.53 164 P P 08 02 18.9 -1.1
AC01 IAmb IAmb 08 02 24.2
comp=Z,108nm,1.2s
APG El Apazote 23.27 326 P P 08 02 25.6 -2.3
comp=Z,0.9nm,1.0s,baz=152,slow=9.7,SNR=11
APG LR LR 08 10 11.1
comp=Z,80nm,20.5s,baz=238,slow=33
AC02 Maricunga 23.62 161 IAmb IAmb 08 02 51.0
comp=Z,87nm,1.6s
SALV Santo Antonio 24.18 120 *eP* P 08 02 36.7 +0.4
DR12 Loma Pena Alta 24.42 19 P P 08 02 38.5 +0.1
SC01 Santiago de lo 24.63 15 P 08 02 41.4 +1.1
OBIP Obispado Ponce 24.77 25 P P 08 02 42.2 +0.7
OBIP IAmb IAmb 08 02 44.5
comp=Z,43nm,1.3s
PDPR Patillas Dam, 25.00 26 P P 08 02 43.2 -0.5
SJG San Juan 25.03 26 LR LR 08 14 00.3
comp=Z,2µm,21.5s,baz=224,slow=40
SJG San Juan 25.03 26 P P 08 02 43.5 -0.5
SJG San Juan 25.03 26 P P 08 02 43.5 -0.5
SJG pmax pmax
comp=Z,110nm,1.2s
LCO Las Campanas 25.23 166 P P 08 02 47.3 +1.3
LCO Las Campanas 25.23 166 P P 08 02 47.3 +1.3
LCO pmax pmax
comp=Z,116nm,1.7s
BDQN Bodoquena, MS 25.62 130 *eP* P 08 02 50.7 +1.3
PP1B Ponte de Pedra 25.64 122 *eP* P 08 02 50.8 +1.2
CBE Ff, Capester 25.70 37 P P 08 02 49.0 -1.1
MURT Porto Murtinho 25.71 133 *eP* P 08 02 50.6 +0.5
AQDB Aquidauana 26.45 129 P P 08 02 57.6 +0.8
AQDB IAmb IAmb 08 03 03.0
comp=Z,99nm,1.6s
AQDB Aquidauana 26.45 129 *eP* P 08 02 58.5 +1.6
MDP Montagnes des 26.50 69 LR LR 08 14 12.8
comp=Z,1µm,18.4s,baz=250,slow=38

TEIG Tepich 26.75 337 P P 08 02 59.9 +0.3
TEIG IAmb IAmb 08 03 01.0
comp=Z,45nm,1.1s
SNDB Serra Nova Dou 26.88 108 *eP* P 08 03 01.4 +0.6
CMIG Matias Romero 27.51 322 LR LR 08 12 23.6
comp=Z,515nm,19.7s,baz=180,slow=33
PRPB Parauapebas 27.53 95 *eP* P 08 03 06.8 +0.1
ARAG Araguaiana, MT 27.53 116 *eP* P 08 03 07.6 +1.0
C2SB Chapadao do Su 27.89 123 *eP* P 08 03 11.7 +1.8
ZON Zonda 28.17 164 P 08 03 14.6 +2.4
ZON IAmb IAmb 08 03 16.4
comp=Z,32nm,1.3s
ZON Zonda 28.17 164 P P 08 03 14.6 +2.4
ZON pmax pmax
comp=Z,32nm,1.3s
AMBA Amambai (Brazi 28.40 132 *eP* P 08 03 14.7 +0.3
VA03 San Esteban 28.88 168 P P 08 03 19.2 +0.6
CPUP Villa Florida 29.02 141 P P 08 03 20.1 +0.3
comp=Z,5.1nm,1.1s,baz=326,slow=10,SNR=7.3
CPUP LR LR 08 17 47.0
comp=Z,2µm,18.1s,baz=304,slow=42
comp=Z,5.1nm,1.1s
CPUP Villa Florida 29.02 141 P 08 03 21.2 +1.4
CPUP IAmb IAmb 08 03 24.1
comp=Z,72nm,1.8s
CPUP Villa Florida 29.02 141 P P 08 03 21.2 +1.4
CPUP pmax pmax
comp=Z,72nm,1.8s
CPUP Villa Florida 29.02 141 *eP* P 08 03 21.5 +1.7
SMTB Santa Maria do 29.93 100 *eP* P 08 03 28.6 +0.6
TRCB Terra Rica 30.10 130 P P 08 03 30.2 +0.7
TRCB Terra Rica 30.10 130 *eP* P 08 03 30.7 +1.2
BO01 Tunca 30.36 170 P 08 03 32.5 +1.0
PCMB Pacambu 30.56 126 *eP* P 08 03 34.2 +0.7
GO05 Hualane 30.82 171 P P 08 03 36.9 +1.3
BDFB Brasilia 30.95 113 P P 08 03 37.9 +0.7
comp=Z,5.2nm,0.8s,baz=287,slow=8.7,SNR=7.2
BDFB LR LR 08 17 40.7
comp=Z,5µm,18.1s,baz=293,slow=39
comp=Z,5.2nm,0.8s
BDFB Brasilia 30.95 113 P P 08 03 38.8 +1.6
BDFB IAmb IAmb 08 03 39.4
comp=Z,32nm,1.6s
BDFB Brasilia 30.95 113 P P 08 03 38.8 +1.6
BDFB pmax pmax
comp=Z,31nm,1.6s
IPMB Ipameri, GO 31.57 118 *eP* P 08 03 42.1 -0.4
LDASE Londrina, Braz 31.60 129 *eP* P 08 03 45.8 +3.1
PTGB Pitanga 31.62 132 *eP* P 08 03 41.6 -1.3
PSAL Palomas, Salto 32.38 147 *eP* P 08 03 53.4 +4.0
BI02 San Fabin de 32.54 171 P 08 03 51.6 +0.7
BB19B Bebedouro 32.55 123 *eP* P 08 03 51.2 +0.2
SDBA SAO DESIDERIO 33.08 106 *eP* P 08 03 55.8 -0.1
ITAB Concordia 33.08 136 P P 08 03 55.9 +0.3
ITAB Concordia 33.08 136 *eP* P 08 03 58.3 +2.7
PMNB Patos De Minas 33.34 117 *eP* P 08 03 59.2 +1.1
JANB Januaria 34.22 110 *eP* P 08 04 08.7 +2.9
CPSB Cacapava Do Su 34.31 141 *eP* P 08 04 08.5 +2.2
SPB Sao Paulo 34.61 126 *eP* P 08 04 11.4 +2.4
VAO Varginos 34.71 125 *eP* P 08 04 12.6 +2.7
PLTB Pedras Altas 35.17 143 P P 08 04 14.1 +0.4
PLTB Pedras Altas 35.17 143 *eP* P 08 04 16.4 +2.7
GO06 Curarrehue 35.38 172 P P 08 04 15.6 +0.1
DIAM Diamantina, MG 35.73 115 *eP* P 08 04 18.5 -0.3
NBPS Pedro II - PI 35.85 91 *eP* P 08 04 20.9 +1.0
TRQA Tornquist 36.28 159 P P 08 04 23.6 +0.5
TRQA IAmb IAmb 08 04 26.4
comp=Z,30nm,1.2s
TRQA Tornquist 36.28 159 P P 08 04 23.7 +0.5
TRQA pmax pmax
comp=Z,30nm,1.3s
PLCA Paso Flores 36.64 171 P P 08 04 26.0 -0.2
comp=Z,17nm,1.2s,baz=355,slow=9.5,SNR=13
PLCA LR LR 08 19 33.1
comp=Z,264nm,19.3s,baz=358,slow=36
comp=Z,17nm,1.2s
PLCA Paso Flores 36.64 171 IAmb IAmb 08 04 29.9
comp=Z,47nm,1.4s
PLCA Paso Flores 36.64 171 *eP* P 08 04 27.1 +0.9
PLCA pmax pmax
comp=Z,17nm,1.2s
PLCA Paso Flores 36.64 171 *eP* P 08 04 27.6 +1.4
154A Montrose 37.26 352 IAmb IAmb 08 04 32.2
comp=Z,37nm,1.0s
RPN Rapa Nui 37.89 230 LR LR 08 17 01.3
comp=Z,299nm,19.0s,baz=74,slow=31
SJMB Sao Joao De Ma 38.10 115 *eP* P 08 04 39.1 +0.3
DUB01 Friburgo-RJ 38.18 121 *eP* P 08 04 40.0 +0.4
Y57A Sumter 38.37 356 P P 08 04 40.9 0.0
Y57A IAmb IAmb 08 04 42.8
comp=Z,46nm,1.3s
LRAL Lakeview Retre 38.38 347 IAmb IAmb 08 04 45.0
comp=Z,42nm,1.6s
BSFB Barra de Sao F 38.44 115 *eP* P 08 04 41.6 -0.1
CMC01 Camacan, BA 38.79 109 *eP* P 08 04 44.7 0.0
GUA01 Guaratinga, BA 38.80 111 *eP* P 08 04 46.1 +1.4
LL02 Futaleuf 38.88 174 IAmb IAmb 08 04 48.1
comp=Z,52nm,1.4s
RIB01 Linhares ES 38.99 115 *eP* P 08 04 46.3 0.0
ALF01 Guarapari-ES 39.10 117 *eP* P 08 04 48.2 +1.0
PAULI Pauline 39.29 354 IAmb IAmb 08 04 50.6
comp=Z,36nm,1.3s
W57A Gilead 39.48 357 IAmb IAmb 08 04 52.0
comp=Z,44nm,1.3s
KMSC Kings Mountain 39.56 355 P P 08 04 50.5 -0.3
KMSC IAmb IAmb 08 04 52.9
comp=Z,48nm,1.3s
HNDO Hondo 39.78 330 IAmb IAmb 08 04 57.8
comp=Z,67nm,1.8s
Y45A Yeager Farm, C 39.81 344 IAmb IAmb 08 04 55.0
comp=Z,87nm,1.3s
W50A Signal Mountai 40.14 350 IAmb IAmb 08 04 56.8
comp=Z,58nm,1.7s
CPCT Cooper Cave 40.26 351 IAmb IAmb 08 04 58.0
comp=Z,50nm,1.5s
TKL Tuckaleechee C 40.35 352 LR LR 08 22 52.0
comp=Z,625nm,19.4s,baz=160,slow=38
U56A King 40.69 356 IAmb IAmb 08 05 02.7
comp=Z,52nm,1.2s
V48A Smith Brothers 40.95 348 IAmb IAmb 08 05 02.2
comp=Z,29nm,1.0s
U54A Nelsons Funny 40.98 355 IAmb IAmb 08 05 05.5
comp=Z,88nm,1.8s
TZTN Tazewell 41.19 352 IAmb IAmb 08 05 05.7
comp=Z,49nm,1.3s
COYC Coyhaique 41.21 174 P P 08 05 03.4 -0.9
T59A Double "B" Far 41.22 360 IAmb IAmb 08 05 06.8
comp=Z,39nm,1.4s
RCBR Riachuelo 41.36 94 LR LR 08 25 24.8
comp=Z,837nm,18.6s,baz=279,slow=41
WVT Waverly 41.54 347 P P 08 05 04.8 -2.3
WVT Waverly 41.54 347 P P 08 05 04.8 -2.3
WVT pmax pmax
comp=Z,16nm,1.2s
WHAR Wooly Hollow 41.94 342 IAmb IAmb 08 05 12.1
comp=Z,64nm,1.9s
TXAR Lajitas Array 42.01 325 P P 08 05 10.4 -0.8
comp=Z,1.8nm,0.9s,baz=148,slow=7.3,SNR=8.1
TXAR LR LR 08 22 44.6
comp=Z,196nm,19.0s,baz=109,slow=36
comp=Z,1.8nm,0.9s
TXAR Lajitas Array 42.01 325 P P 08 05 10.6 -0.6
TXAR Lajitas Array 42.01 325 P P 08 05 10.6 -0.6
Z35A Perchaven, San 42.02 335 IAmb IAmb 08 05 12.6
comp=Z,32nm,1.0s
S57A Dark Hollow, R 42.03 358 IAmb IAmb 08 05 13.4
comp=Z,39nm,1.2s
PLPT Palo Pinto 42.04 333 IAmb IAmb 08 05 12.7
comp=Z,48nm,0.8s
S54A Dingess, Beckl 42.20 355 IAmb IAmb 08 05 15.2
comp=Z,94nm,1.7s
R58B Mineral 42.21 359 IAmb IAmb 08 05 15.3
comp=Z,34nm,1.4s
S51A Beattyville 42.28 353 IAmb IAmb 08 05 13.3
comp=Z,26nm,1.0s
LOOK Love County 42.56 335 IAmb IAmb 08 05 16.5
comp=Z,30nm,0.9s
R55A Marlinton 42.60 357 IAmb IAmb 08 05 18.4
comp=Z,46nm,1.3s
ALPN Alpine 42.77 326 IAmb IAmb 08 05 20.6
comp=Z,44nm,1.7s
LPIG La Paz 42.81 313 LR LR 08 20 06.7
comp=Z,172nm,18.9s,baz=122,slow=32
AY03 Cochrane 42.83 175 P P 08 05 18.4 +0.8
AY03 IAmb IAmb 08 05 22.0
comp=Z,52nm,1.4s
WTFS Witchita Falls 42.92 334 IAmb IAmb 08 05 19.7
comp=Z,26nm,1.0s
TMB01 Midkiff 42.93 328 IAmb IAmb 08 05 20.5
comp=Z,13nm,1.4s
R50A Paris 43.01 352 IAmb IAmb 08 05 20.1
comp=Z,30nm,1.2s
WCI Wyandotte Cave 43.27 350 P P 08 05 19.4 -1.7
WCI IAmb IAmb 08 05 21.4
comp=Z,47nm,1.7s
WCI Wyandotte Cave 43.27 350 P P 08 05 19.4 -1.7
WCI pmax pmax
comp=Z,47nm,1.7s
TPB01 Permian Basin 43.28 326 IAmb IAmb 08 05 29.0
comp=Z,16nm,1.2s
APMT Aspermont 43.30 332 IAmb IAmb 08 05 25.0
comp=Z,49nm,1.4s
X34A Smith Ranch, M 43.36 335 IAmb IAmb 08 05 24.5
comp=Z,49nm,1.2s
Q52A Bidwell 43.44 354 IAmb IAmb 08 05 24.8
comp=Z,86nm,1.6s
TPB06 Permian Basin 43.52 327 IAmb IAmb 08 05 58.3
comp=Z,12nm,0.8s
Q51A Peebles 43.62 353 IAmb IAmb 08 05 25.1
comp=Z,22nm,1.0s
RLO Rose Lookout 43.65 339 IAmb IAmb 08 05 25.7
comp=Z,33nm,1.4s
MGMO Mountain Grove 43.66 343 IAmb IAmb 08 05 25.1
comp=Z,50nm,1.6s
U38A Gravette 43.67 340 IAmb IAmb 08 05 25.4
comp=Z,36nm,1.6s
TUL3 Leonard 43.70 338 IAmb IAmb 08 06 04.5
comp=Z,22nm,1.1s
P53A Whipple 43.88 356 IAmb IAmb 08 05 27.9
comp=Z,49nm,1.4s
DEOK Depew 43.91 337 IAmb IAmb 08 05 28.8
comp=Z,60nm,1.4s
DKNS Dickens 43.96 331 IAmb IAmb 08 05 28.2
comp=Z,22nm,0.8s
P51A Williamsport 44.03 354 IAmb IAmb 08 05 27.2
comp=Z,26nm,1.1s
P52A Corning 44.09 355 IAmb IAmb 08 05 29.0
comp=Z,47nm,1.2s
OK052 Battle Ridge R 44.16 337 IAmb IAmb 08 05 29.0
comp=Z,32nm,1.0s
CCM Cathedral Cave 44.21 344 P P 08 05 26.6 -2.1
CCM Cathedral Cave 44.21 344 P P 08 05 26.6 -2.1
CCM pmax pmax
comp=Z,13nm,1.1s
MVL Millersville 44.25 1 IAmb IAmb 08 05 32.0
comp=Z,53nm,1.2s
S39A Bolivar 44.47 342 IAmb IAmb 08 06 32.1
comp=Z,30nm,1.7s
PAGS Pennsylvania G 44.47 1 IAmb IAmb 08 05 33.6
comp=Z,56nm,1.4s
O52A Adamsville 44.54 355 IAmb IAmb 08 05 32.6
comp=Z,45nm,1.4s
OK048 Pawnee Station 44.58 337 IAmb IAmb 08 05 33.6
comp=Z,40nm,1.4s
O53A New Philadelph 44.63 356 IAmb IAmb 08 05 36.3
comp=Z,52nm,1.4s
R40A Maddies Statio 44.71 343 IAmb IAmb 08 06 35.7
comp=Z,33nm,1.7s
MNTX Cornudas Mount 44.75 325 IAmb IAmb 08 05 37.6
comp=Z,27nm,1.7s
ACSO Alum Creek Sta 44.77 354 IAmb IAmb 08 05 34.2
comp=Z,43nm,1.1s
SSPA Standing Stone 44.88 359 P P 08 05 33.8 -0.2
SSPA IAmb IAmb 08 05 36.7
comp=Z,24nm,1.0s
CROK Carrier 45.06 336 IAmb IAmb 08 05 36.2
comp=Z,22nm,0.9s
O48B Farmland 45.06 352 IAmb IAmb 08 05 34.7
comp=Z,27nm,0.9s
N58A Sunbury 45.08 1 IAmb IAmb 08 05 38.4
comp=Z,42nm,1.4s
MSTX Muleshoe 45.11 330 IAmb IAmb 08 05 39.0
comp=Z,60nm,1.6s
PAMR Moraine State 45.25 357 IAmb IAmb 08 05 37.9
comp=Z,35nm,1.2s
KAN01 Argonia South 45.54 337 IAmb IAmb 08 05 42.3
comp=Z,42nm,1.2s
M57A Sunshine Farm, 45.58 0 IAmb IAmb 08 05 40.9
comp=Z,21nm,0.9s
KSPA Keystone Colle 45.82 2 IAmb IAmb 08 05 44.5
comp=Z,31nm,1.2s
M65A Busby, Falmout 46.22 7 P P 08 05 44.6 0.0
baz=189
121A Cookes Peak, D 46.74 324 IAmb IAmb 08 06 08.8
comp=Z,39nm,1.4s
GO09 Cerro Castillo 46.85 176 P P 08 05 51.3 +1.8
R32A Long Quarter, 47.01 337 IAmb IAmb 08 06 26.0
comp=Z,24nm,1.0s
RTBA Rita Blanca 47.08 332 IAmb IAmb 08 05 52.2
comp=Z,11nm,0.8s
CBKS Cedar Bluff 47.76 336 IAmb IAmb 08 05 58.1
comp=Z,26nm,1.0s
ANMO Albuquerque 47.78 327 LR LR 08 26 22.6
comp=Z,89nm,18.3s,baz=120,slow=37
ANMO Albuquerque 47.78 327 P P 08 05 56.9 -0.3
ANMO IAmb IAmb 08 05 59.6
comp=Z,26nm,1.4s
ANMO Albuquerque 47.78 327 *c iP* P 08 05 57.4 +0.2
ANMO pmax pmax
comp=Z,14nm,1.1s
L40A Anamosa 47.98 346 IAmb IAmb 08 06 38.4
comp=Z,28nm,1.3s
TUC Tucson 48.40 321 P P 08 06 01.9 0.0
TUC Tucson 48.40 321 P P 08 06 01.9 0.0
TUC pmax pmax
comp=Z,9.0nm,1.1s
LONY Lake Ozonia 48.92 3 IAmb IAmb 08 06 08.9
comp=Z,37nm,1.3s
SADO Sadowa 49.03 358 LR LR 08 28 50.1
comp=Z,451nm,19.7s,baz=179,slow=39
WBO Williamsburg 49.27 2 IAmb IAmb 08 06 10.3
comp=Z,19nm,1.1s
SDCO Great Sand Dun 49.45 331 IAmb IAmb 08 06 11.1
comp=Z,11nm,0.9s
214A Organ Pipe Nat 49.45 320 P P 08 06 10.9 +1.0
214A IAmb IAmb 08 06 49.6
comp=Z,14nm,1.1s
W18A Petrified Fore 49.73 325 IAmb IAmb 08 06 15.7
comp=Z,49nm,1.4s
EFI East Falkland 49.74 164 ⇑*iP* P 08 06 13.2 +1.4
EFI pmax pmax
comp=Z,38nm,1.0s
G62A West of Eustis 49.84 6 IAmb IAmb 08 06 16.1
comp=Z,42nm,1.3s
S22A 4UR Ranch, Cre 50.11 330 IAmb IAmb 08 06 18.7
comp=Z,44nm,1.8s
OGNE Ogallala 50.49 336 IAmb IAmb 08 06 21.1
comp=Z,18nm,1.1s
TRQ Mont Tremblant 50.52 3 P P 08 06 17.3 -0.5
Y14A Wickenburg 50.87 321 IAmb IAmb 08 06 24.3
comp=Z,42nm,2.0s
WUAZ Wupatki 50.96 324 IAmb IAmb 08 07 03.8
comp=Z,20nm,1.1s
ISCO Idaho Springs 51.12 332 IAmb IAmb 08 06 25.1
comp=Z,36nm,1.9s
E62A Clayton Lake 51.34 7 P P 08 06 24.7 +0.8
SPMN Marine on St. 51.34 346 IAmb IAmb 08 06 23.9
comp=Z,22nm,1.2s
PV13 Radium Mtn., P 51.45 328 IAmb IAmb 08 06 26.4
comp=Z,28nm,0.9s
PV03 Paradox Valley 51.53 328 IAmb IAmb 08 06 26.9
comp=Z,14nm,0.9s
PV05 Paradox Valley 51.53 328 IAmb IAmb 08 06 26.8
comp=Z,17nm,0.9s
PV18 Skein Mesa, Pa 51.56 328 IAmb IAmb 08 06 35.8
comp=Z,30nm,0.9s
PV07 Paradox Valley 51.56 329 IAmb IAmb 08 06 31.1
comp=Z,27nm,1.3s
PV11 David Mesa, Pa 51.58 328 IAmb IAmb 08 06 29.2
comp=Z,28nm,1.1s
PV16 Nyswonger Mesa 51.61 328 IAmb IAmb 08 06 28.7
comp=Z,31nm,1.4s
PV17 East Wray Mesa 51.61 328 IAmb IAmb 08 06 26.9
comp=Z,21nm,1.2s
PV19 Morning Glory 51.64 328 IAmb IAmb 08 06 28.7
comp=Z,37nm,1.3s
PV20 West Nyswonger 51.66 328 IAmb IAmb 08 06 28.9
comp=Z,45nm,1.3s
PV04 Paradox Valley 51.67 328 IAmb IAmb 08 06 29.1
comp=Z,35nm,1.4s
PV10 Paradox Valley 51.72 328 IAmb IAmb 08 06 31.4
comp=Z,36nm,1.3s
PV23 Carpenter Ridg 51.77 328 IAmb IAmb 08 06 32.3

comp=Z,64nm,1.8s
D62A Allapoint, All 51.85 7 P P 08 06 27.8 +0.1
D62A IAmb IAmb 08 06 30.9
comp=Z,50nm,1.4s
HMU Henry Mountain 52.31 327 IAmb IAmb 08 06 38.0
comp=Z,24nm,1.5s
IRM Iron Mountain 52.36 320 IAmb IAmb 08 07 11.0
comp=Z,27nm,1.8s
E38A The Farm, Brul 52.37 348 IAmb IAmb 08 06 31.3
comp=Z,23nm,1.1s
LDAQ Lac Daran 52.48 5 IAmb IAmb 08 06 35.0
comp=Z,43nm,1.5s
PFO Pinyon Flats O 52.87 319 LR LR 08 28 13.6
comp=Z,173nm,20.3s,baz=132,slow=35
SRU San Rafael Swe 53.05 328 IAmb IAmb 08 06 39.0
comp=Z,48nm,1.9s
Q16A Castle Valley 53.25 327 IAmb IAmb 08 06 42.1
comp=Z,39nm,1.8s
EYMN Ely 53.63 348 IAmb IAmb 08 06 41.4
comp=Z,44nm,1.5s
RDMU Red Mountain 53.64 330 IAmb IAmb 08 06 42.3
comp=Z,14nm,0.8s
RSSD Black Hills 53.96 336 P **P 08 06 43.4 -0.3**
RSSD IAmb IAmb 08 06 46.0
comp=Z,41nm,1.8s
RSSD Black Hills 53.96 336 P **P 08 06 43.4 -0.3**
RSSD pmax pmax
comp=Z,41nm,1.8s
GSC Goldstone, Bar 54.14 320 IAmb IAmb 08 06 48.7
comp=Z,52nm,1.8s
BSUT Blindstream Ca 54.22 329 IAmb IAmb 08 06 50.7
comp=Z,29nm,1.3s
LRMC Laurel Mtn Rad 54.81 320 P **P 08 06 49.7 -0.2**
LRMC IAmb IAmb 08 06 53.5
comp=Z,36nm,1.7s
CTU Camp Tracy 54.84 328 IAmb IAmb 08 07 23.7
comp=Z,26nm,1.8s
TCUT Toone Canyon 54.98 329 IAmb IAmb 08 06 54.5
comp=Z,44nm,1.5s
PDAR Pinedale Array 55.29 332 P **P 08 06 52.4 -1.0**
comp=Z,4.8nm,0.9s,baz=130,slow=8.1,SNR=25
PDAR LR LR 08 33 04.5
comp=Z,196nm,18.4s,baz=123,slow=39
comp=Z,4.8nm,0.9s
PDAR Pinedale Array 55.29 332 P **P 08 06 52.0 -1.3**
HWUT Hardware Ranch 55.41 329 IAmb IAmb 08 07 01.8
comp=Z,15nm,1.1s
EPLO Experimental L 55.74 347 IAmb IAmb 08 06 55.9
comp=Z,24nm,1.0s
VES Vestal, Richgr 55.94 319 P **P 08 06 58.2 +0.4**
VES IAmb IAmb 08 07 57.7
comp=Z,34nm,1.4s
AHID Auburn Hatcher 56.04 330 IAmb IAmb 08 07 01.4
comp=Z,35nm,1.9s
HVU Hansel Valley 56.16 329 IAmb IAmb 08 08 27.7
comp=Z,23nm,1.7s
SNOW Snow King Moun 56.39 331 IAmb IAmb 08 07 06.0
comp=Z,28nm,1.5s
LOHW Long Hollow 56.43 331 IAmb IAmb 08 07 06.0
comp=Z,16nm,1.4s
ELK Elko 56.76 326 LR LR 08 30 57.8
comp=Z,319nm,19.1s,baz=130,slow=36
ULM Lac du Bonnet 56.78 346 P **P 08 07 02.0 -1.5**
comp=Z,19nm,0.8s,baz=155,slow=7.6,SNR=29
ULM LR LR 08 32 38.7
comp=Z,425nm,21.9s,baz=182,slow=37
comp=Z,19nm,0.8s
ULM Lac du Bonnet 56.78 346 IAmb IAmb 08 07 03.1
comp=Z,25nm,0.9s
ULM Lac du Bonnet 56.78 346 P **P 08 07 02.0 -1.5**
FLWY Flagg Ranch 56.84 332 IAmb IAmb 08 07 05.1
comp=Z,23nm,1.3s
NV11 Mina Array Sit 56.95 322 IAmb IAmb 08 07 10.3
comp=Z,33nm,1.9s
RLMT Red Lodge 56.98 334 IAmb IAmb 08 07 07.0
comp=Z,38nm,1.7s
YPP Pitchstone Pla 57.03 332 IAmb IAmb 08 07 13.4
comp=Z,25nm,1.7s
NVAR Mina Array Bea 57.04 322 P **P 08 07 06.0 +0.2**
comp=Z,1.8nm,0.8s,baz=130,slow=7.1,SNR=9.0
comp=Z,1.8nm,0.8s
NVAR Mina Array Bea 57.04 322 P **P 08 07 05.6 -0.3**
YMR Madison River 57.40 332 IAmb IAmb 08 07 16.9
comp=Z,40nm,1.6s
YHB Horse Butte 57.57 332 IAmb IAmb 08 07 24.6
comp=Z,23nm,1.2s
YHL Hebgen Lake 57.64 332 IAmb IAmb 08 07 14.1
comp=Z,34nm,1.2s
DGMT Dagmar 57.68 339 IAmb IAmb 08 07 12.2
comp=Z,35nm,1.5s
HLID Hailey 58.28 329 IAmb IAmb 08 07 16.9
comp=Z,23nm,1.6s
BOZ Bozeman (W) 58.41 332 IAmb IAmb 08 07 18.4
comp=Z,38nm,1.6s
DLMT Dillon 58.69 332 IAmb IAmb 08 07 22.1
comp=Z,21nm,1.4s
MFID Camas Ranch 58.91 328 IAmb IAmb 08 07 28.9
comp=Z,16nm,1.0s
SCHQ Schefferville 59.73 7 P **P 08 07 23.8 -0.3**
comp=Z,7.5nm,1.1s,baz=178,slow=7.3,SNR=3.6
SCHQ LR LR 08 37 15.4
comp=Z,226nm,18.0s,baz=212,slow=40
comp=Z,7.5nm,1.1s
PLID Pearl Lake 60.16 329 P **P 08 07 26.2 -1.4**
PLID IAmb IAmb 08 07 29.1
comp=Z,29nm,1.9s
PMSA Palmer Station 60.96 173 LR LR 08 33 12.0
comp=Z,186nm,18.9s,baz=1.5,slow=35
I07A Izee 61.34 327 IAmb IAmb 08 07 38.0
comp=Z,36nm,1.7s
YBH Yreka Blue Hor 61.73 323 LR LR 08 33 05.2
comp=Z,12nm,21.2s,baz=130,slow=35
G08A Pilot Rock 61.84 328 IAmb IAmb 08 07 49.3
comp=Z,32nm,1.8s
TAOE Nuku Hiva Isla 62.41 262 *e*LR LR 08 26 11.0
comp=Z,460nm,25.2s
FFC Flin Flon 62.41 344 P **P 08 07 41.6 -0.6**
FFC Flin Flon 62.41 344 P **P 08 07 41.6 -0.6**
FFC pmax pmax
comp=Z,35nm,1.6s
NEW Newport 62.94 331 LR LR 08 36 09.8
comp=Z,245nm,20.5s,baz=129,slow=37
NEW Newport 62.94 331 P **P 08 07 45.6 -0.3**
NEW IAmb IAmb 08 08 07.8
comp=Z,41nm,1.9s
NEW Newport 62.94 331 P **P 08 07 45.6 -0.3**
NEW pmax pmax
comp=Z,41nm,2.0s
FCC Fort Churchill 64.42 350 IAmb IAmb 08 07 54.8
comp=Z,10nm,1.0s
FRB Frobisher Bay 68.35 4 LR LR 08 42 21.4
comp=Z,133nm,18.4s,baz=188,slow=40
BLKN Baker Lake 69.99 351 IAmb IAmb 08 08 30.5
comp=Z,12nm,0.9s
BBB Bella Bella 70.86 330 LR LR 08 41 02.9
comp=Z,171nm,20.3s,baz=152,slow=37
PPT Papeete 71.67 253 LR LR 08 34 02.9
comp=Z,165nm,20.0s,baz=94,slow=31
PPT2 Papeete2 71.67 253 *e*LR LR 08 30 22.5
comp=Z,187nm,31.5s
PPT2 *e*LR LR 08 30 26.3
comp=Z,254nm,25.8s
TBI Tubuai 71.77 247 *e*LR LR 08 30 34.8
comp=Z,1μm,25.8s
YKA Yellowknife Ar 72.52 343 P **P 08 08 45.3 -0.7**
comp=Z,2.9nm,0.8s,baz=144,slow=4.8,SNR=49
YKA LR LR 08 43 20.4
comp=Z,184nm,18.9s,baz=112,slow=38
comp=Z,2.9nm,0.8s
DBIC Dimbokro 73.26 82 P **P 08 08 52.2 +0.8**
comp=Z,12nm,0.8s,baz=281,slow=5.5,SNR=11
DBIC LR LR 08 39 47.0
comp=Z,798nm,19.4s,baz=272,slow=35
comp=Z,12nm,0.8s
DBIC Dimbokro 73.26 82 P **P 08 08 51.2 -0.2**
DBIC IAmb IAmb 08 08 57.5
comp=Z,15nm,0.8s
DBIC Dimbokro 73.26 82 P **P 08 08 51.2 -0.2**
DBIC pmax pmax
comp=Z,15nm,0.9s
TOAD Toad River Com 73.62 336 P **P 08 08 52.8 +0.2**
baz=130
ILON Igloolik, Nuna 73.74 358 IAmb IAmb 08 09 57.1
comp=Z,27nm,1.6s
SFJD Kangerlussuaq 73.81 11 LR LR 08 43 13.5
comp=Z,116nm,18.3s,baz=200,slow=37
KOTAN Kotaneelee Air 73.99 338 P **P 08 08 54.5 -0.2**
baz=131

V35K Ketchikan 74.34 331 P **P 08 08 57.0 +0.1**
baz=123
T35M Bob Quinn 74.63 333 P **P 08 08 58.4 -0.2**
baz=125
CRAG Craig 75.15 331 P **P 08 09 01.5 0.0**
baz=122
WRAK Wrangell Islan 75.28 332 P **P 08 09 01.8 -0.5**
baz=123
DLBC Dease Lake 75.36 334 LR LR 08 46 54.4
comp=Z,197nm,18.2s,baz=82,slow=40
DLBC Dease Lake 75.36 334 P **P 08 09 03.4 +0.6**
baz=125
S34M Telegraph Cree 75.55 334 P **P 08 09 04.6 +0.8**
baz=124
PFVI Vila Bisbo 75.84 50 *e*P **P 08 09 09.6 +3.6**
WRGLY Wrigley 75.85 340 P **P 08 09 06.4 +1.0**
baz=132
MORF Marmelete 76.03 50 *e*P **P 08 09 08.6 +1.6**
R33M Jennings River 76.31 335 P **P 08 09 08.8 +0.5**
baz=124
MESJ Messejana 76.51 50 *e*P **P 08 09 10.7 +1.0**
PBDV Barranco-do-Ve 76.56 50 *e*P P 08 09 15.7 +5.6
PCVE Castro Verde 76.59 50 *e*P **P 08 09 11.6 +1.4**
Q32M Nakina River 76.63 334 P **P 08 09 10.8 +0.7**
baz=123
BELA Belgrano 2 76.69 172 P **P 08 09 10.1 +0.1**
BELA IAmb IAmb 08 09 13.9
comp=Z,32nm,1.2s
PMTG Montargil 76.86 48 *e*P **P 08 09 13.3 +1.6**
S32K Killisoo 76.87 332 P **P 08 09 12.7 +1.4**
baz=121
PARRA Arraiolos 76.92 49 *e*P **P 08 09 14.3 +2.2**
SIT Sitka 77.02 332 P **P 08 09 11.9 -0.1**
baz=120
POIN Pond Inlet 77.02 360 IAmb IAmb 08 09 14.0
comp=Z,14nm,1.4s
R32K Eaglecrest 77.26 333 P **P 08 09 13.3 -0.2**
baz=121
P33M Teslin, Yukon 77.54 335 P **P 08 09 15.0 -0.1**
baz=123
PVIS Viseu 77.58 47 *e*P **P 08 09 17.0 +1.2**
PMRV Marv??o 77.58 48 *e*P **P 08 09 17.7 +1.9**
P32M Atlin 77.59 334 P **P 08 09 17.3 +1.9**
baz=122
PGAV Gavieira, Arco 77.68 46 *e*P **P 08 09 18.2 +1.9**
POLO Lamas de Olo 77.85 46 *e*P **P 08 09 18.3 +1.0**
S31K Pelican 77.89 332 P **P 08 09 19.1 +2.2**
baz=119
MD01 Midelt array s 77.97 55 P 08 09 19.4 +1.2
MDT Midelt 78.08 55 LR LR 08 41 35.9
comp=Z,204nm,20.7s,baz=268,slow=34
N32M Quiet Lake 78.16 336 P **P 08 09 20.2 +1.6**
baz=123
MVO Moncorvo 78.34 47 *e*P **P 08 09 21.2 +1.2**
PBRG Braganca 78.73 46 *e*P **P 08 09 23.0 +0.9**
VNA3 Neumayer Olymp 78.74 162 ⇑P **P 08 09 20.4 -1.1**
comp=Z,18nm,0.9s
O30N Mendenhall 79.22 335 P **P 08 09 25.7 +1.3**
baz=120
M31M Drury Creek, Y 79.25 336 P **P 08 09 25.0 +0.5**
baz=122
P30M Million Dollar 79.27 334 P **P 08 09 24.9 +0.3**
baz=119
VNA2 Neumayer--Watz 79.34 162 ⇑P **P 08 09 25.4 +0.6**
comp=Z,14nm,0.7s,baz=288,slow=5.8
N31M Braeburn, Yuko 79.45 335 P **P 08 09 26.1 +0.6**
baz=120
RES Resolute Bay 79.73 355 LR LR 08 47 00.1
comp=Z,405nm,19.2s,baz=160,slow=37
HYT Haines Junctio 79.85 334 P **P 08 09 27.5 -0.4**
baz=119
O29M Mount Kennedy 80.07 334 P **P 08 09 28.2 -0.9**
baz=118
C36M Paulatuk 80.18 345 P **P 08 09 29.8 +0.6**
baz=133
ESDC Sonseca Array 80.20 49 P **P 08 09 30.6 +0.5**
comp=Z,4.0nm,1.0s,baz=257,slow=6.0,SNR=13
ESDC LR LR 08 43 33.1
comp=Z,156nm,18.4s,baz=250,slow=35
comp=Z,4.0nm,1.0s
ESDC Sonseca Array 80.20 49 P 08 09 31.0 +0.9
YUK6 Outpost Mounta 80.28 334 P **P 08 09 30.1 -0.2**
baz=118
BORG Borgarnes 80.28 21 LR LR 08 43 24.3
comp=Z,182nm,21.4s,baz=226,slow=34
M30M Minto, Yukon 80.41 336 P **P 08 09 30.2 -0.6**
baz=120
TORD Torodi Ar. Bea 80.44 76 P **P 08 09 32.1 +0.3**
comp=Z,9.5nm,1.1s,baz=270,slow=4.8,SNR=23
TORD LR LR 08 45 37.9
comp=Z,526nm,18.3s,baz=255,slow=36
comp=Z,9.5nm,1.1s
TORD Torodi Ar. Bea 80.44 76 IAmb IAmb 08 11 10.3
comp=Z,14nm,0.7s
MAYO Mayo, Yukon 80.56 337 P **P 08 09 31.6 +0.1**
baz=121
YUK4 Talbot Arm 80.59 335 P **P 08 09 32.4 +0.5**
baz=118
PINM Pinnacle 80.72 333 P **P 08 09 33.2 +0.7**
baz=116
SUMG Summit 80.80 11 P **P 08 09 33.0 -0.1**
SUMG Summit 80.80 11 P **P 08 09 33.0 -0.1**
SUMG pmax pmax
comp=Z,8.0nm,0.9s
SUMG Summit 80.80 11 *i*P **P 08 09 32.8 -0.3**
SNAA Sanae 80.96 162 P **P 08 09 33.2 -0.4**
comp=Z,7.2nm,0.5s,baz=261,slow=7.1,SNR=7.1
SNAA LR LR 08 44 59.2
comp=Z,237nm,21.9s,baz=321,slow=35
comp=Z,7.2nm,0.5s
SNAA Sanae 80.96 162 P **P 08 09 34.0 +0.4**
SNAA Sanae 80.96 162 ⇓*i*P **P 08 09 34.5 +0.9**
SNAA pmax pmax
comp=Z,26nm,1.0s
O28M Mount Upton 81.00 334 P **P 08 09 33.6 -0.6**
baz=116
M29M Somme Creek 81.02 336 P **P 08 09 33.7 -0.4**
baz=118
TULEG Thule 81.03 2 P 08 09 33.9 +0.1
TULEG IAmb IAmb 08 09 37.3
comp=Z,44nm,1.7s
YUK8 Steele Glacier 81.04 334 P **P 08 09 33.8 -0.6**
baz=117
H31M Peel River 81.15 340 P **P 08 09 34.5 -0.2**
baz=122
L29M L29M 81.20 336 IAmb IAmb 08 10 08.9
comp=Z,17nm,1.2s
L29M L29M 81.20 336 P **P 08 09 34.4 -0.5**
baz=118
J30M Hart River 81.23 338 P **P 08 09 34.8 -0.4**
baz=120
RAR Rarotonga 81.29 249 LR LR 08 38 04.5
comp=Z,199nm,18.3s,baz=110,slow=30
K29M Barlow Dome 81.32 337 P **P 08 09 35.1 -0.6**
baz=119
MESA MESA 81.53 333 P **P 08 09 35.7 -1.2**
baz=115
YUK3 Moose Creek 81.56 335 P **P 08 09 36.6 -0.5**
baz=116
I30M Mount Dempster 81.57 339 P **P 08 09 37.7 +0.7**
baz=120
CTG Chitna Glacier 81.59 334 P **P 08 09 36.9 -0.2**
baz=115
G31M Satah River 81.73 341 IAmb IAmb 08 09 38.4
comp=Z,14nm,1.0s
G31M Satah River 81.73 341 P **P 08 09 37.5 -0.1**
baz=122
F31M Tsiigehtchic 81.84 341 P **P 08 09 38.4 +0.2**
baz=123,SNR=8.9
BVCY Beaver Creek 82.00 335 P **P 08 09 39.1 -0.1**
baz=116
DAWY Dawson 82.15 337 P **P 08 09 39.9 0.0**
DAWY IAmb IAmb 08 11 53.5
comp=Z,28nm,1.9s
DAWY Dawson 82.15 337 P **P 08 09 39.8 -0.1**
baz=117
INK Inuvik 82.24 342 LR LR 08 50 42.1
comp=Z,188nm,18.2s,baz=60,slow=39
INK Inuvik 82.24 342 IAmb IAmb 08 09 43.6
comp=Z,32nm,1.4s
INK Inuvik 82.24 342 P **P 08 09 40.6 +0.4**
baz=123,SNR=9.6
A36M Sachs Harbour 82.25 347 P **P 08 09 40.3 +0.1**
baz=132
EPYK Eagle Plains 82.27 340 P **P 08 09 41.1 +0.5**
baz=120
CRQE Cirque 82.28 333 P **P 08 09 40.8 0.0**
baz=114
I29M Ogilvie Camp, 82.35 338 IAmb IAmb 08 09 44.5
comp=Z,41nm,1.6s
I29M Ogilvie Camp, 82.35 338 P **P 08 09 41.8 +0.9**
baz=119
M27K Edge Creek, AK 82.41 335 P **P 08 09 42.0 +0.5**
baz=115
MCARA McCarthy VSAT 82.50 334 P **P 08 09 43.2 +1.4**
baz=114
KAIM Kayak Island 82.57 332 P **P 08 09 43.5 +1.4**
baz=112
F30M Barrier River 82.59 341 IAmb IAmb 08 10 32.3
comp=Z,12nm,1.1s
F30M Barrier River 82.59 341 P **P 08 09 43.5 +1.4**
baz=121
BCAR Beaver Creek A 82.67 336 P 08 09 43.1 +0.4
L27K Beaver Creek, 82.69 336 P **P 08 09 44.2 +1.4**
baz=115
M26K Nabesna, AK 82.90 335 P **P 08 09 44.8 +0.9**
baz=114
I28M Miner Creek 82.99 338 IAmb IAmb 08 09 49.1
comp=Z,18nm,1.3s
I28M Miner Creek 82.99 338 P **P 08 09 44.3 -0.1**
baz=117
G29M Pine Creek 82.99 340 IAmb IAmb 08 09 45.0
comp=Z,13nm,0.9s
G29M Pine Creek 82.99 340 P **P 08 09 44.1 -0.2**
baz=119
BMRM Bremner River 83.05 333 P **P 08 09 45.5 +0.8**
baz=112
NEEM North Greenlan 83.10 6 *i*P **P 08 09 45.0 0.0**
N25K Chitina, Valde 83.29 334 P **P 08 09 46.0 0.0**
baz=112
Q23K Middleton Isla 83.30 331 P **P 08 09 45.5 -0.4**
baz=111
L26K Log Cabin Wild 83.30 335 IAmb IAmb 08 09 49.3
comp=Z,16nm,1.4s
L26K Log Cabin Wild 83.30 335 P **P 08 09 46.4 +0.5**
baz=114
EYAK Cordova Ski Ar 83.41 332 P **P 08 09 46.1 -0.4**
baz=111
E29M Blow River 83.67 341 IAmb IAmb 08 09 48.3
comp=Z,9.4nm,0.9s
E29M Blow River 83.67 341 P **P 08 09 47.9 +0.2**
baz=119,SNR=9.4
I27K Kandik River 83.69 338 P **P 08 09 48.7 +0.8**
baz=116
KLU Klutina 83.83 333 P **P 08 09 48.3 -0.5**
baz=111
DOT Dot Lake 83.85 336 P **P 08 09 48.8 +0.1**
DOT IAmb IAmb 08 09 52.0
comp=Z,25nm,1.4s
H27K Steamboat Moun 83.93 338 P **P 08 09 49.2 +0.1**
baz=116
SCRK Sand Creek 83.94 336 IAmb IAmb 08 09 50.0
comp=Z,8.5nm,0.9s
SCRK Sand Creek 83.94 336 P **P 08 09 49.6 +0.2**
baz=113,SNR=8.7
F28M Old Crow 83.96 340 P **P 08 09 49.5 +0.2**
baz=117,SNR=5.1
J26L Joseph Creek 83.98 337 P **P 08 09 50.2 +0.7**
baz=114,SNR=7.1
M24K Tolsona, Glenn 84.17 334 P **P 08 09 51.1 +0.6**
baz=111
PAX Paxson 84.17 335 IAmb IAmb 08 09 53.4
comp=Z,29nm,1.5s
PAX Paxson 84.17 335 P **P 08 09 50.6 +0.1**
baz=112,SNR=5.2
RIDG Independent Ri 84.20 336 P **P 08 09 51.2 +0.6**
baz=112,SNR=5.1
G27K Doyon Strip 84.22 339 IAmb IAmb 08 10 48.9
comp=Z,28nm,1.9s
G27K Doyon Strip 84.22 339 P **P 08 09 50.5 -0.1**
baz=116
E28M Babbage River 84.31 341 IAmb IAmb 08 09 55.3
comp=Z,12nm,1.2s
E28M Babbage River 84.31 341 P **P 08 09 50.8 -0.2**
baz=118
D28M Stokes Point 84.40 342 P **P 08 09 51.9 +0.6**
baz=118
SCM Sheep Creek Mo 84.58 333 P **P 08 09 52.9 +0.3**
baz=110
K24K Donnelly Dome 84.61 336 P **P 08 09 50.7 -1.9**
baz=112
J25K Salcha River, 84.75 336 IAmb IAmb 08 09 54.0
comp=Z,6.8nm,0.9s
J25K Salcha River, 84.75 336 P **P 08 09 53.6 +0.3**
baz=112,SNR=5.5
M23K Glacier View 84.75 333 P **P 08 09 52.7 -0.6**
baz=110
EKA Eskdalemuir Ar 84.76 34 P **P 08 09 53.5 0.0**
comp=Z,2.6nm,0.8s,baz=239,slow=4.7,SNR=5.6
EKA LR LR 08 44 19.4
comp=Z,153nm,20.6s,baz=228,slow=33
comp=Z,2.6nm,0.8s
E27K Coleen River 84.80 340 P **P 08 09 53.5 0.0**
baz=116
KNK Knik Glacier 84.95 333 P **P 08 09 54.0 -0.3**
baz=109
SEW Seward 85.00 331 P **P 08 09 53.8 -0.7**
baz=108
WAT6 Susitna Watana 85.02 334 P **P 08 09 55.0 +0.2**
baz=110,SNR=5.2
SML Sawmill 85.02 333 P **P 08 09 54.5 -0.3**
baz=109
DHY Denali Highway 85.03 335 P **P 08 09 54.3 -0.6**
baz=110
G26K Porcupine Rive 85.05 339 P **P 08 09 54.7 0.0**
baz=114
D27M Malcolm River 85.06 341 IAmb IAmb 08 09 55.8
comp=Z,12nm,1.1s
D27M Malcolm River 85.06 341 P **P 08 09 54.8 0.0**
baz=116
PRP Porcupine Dome 85.14 337 IAmb IAmb 08 09 56.1
comp=Z,22nm,1.6s
PRP Porcupine Dome 85.14 337 P **P 08 09 55.1 -0.3**
baz=112
TAM Tamanrasset 85.21 67 P **P 08 09 58.2 +1.5**
TAM Tamanrasset 85.21 67 P **P 08 09 58.2 +1.5**
TAM pmax pmax
comp=Z,46nm,0.3s
O22K Cooper Landing 85.25 332 P **P 08 09 55.1 -0.7**
baz=108
HDA Harding Lake 85.31 336 P **P 08 09 55.3 -0.8**
baz=110
PMR Palmer 85.31 333 P **P 08 09 55.3 -0.8**
baz=108
IL31 85.41 336 IAmb IAmb 08 09 59.3
comp=Z,12nm,1.4s
ILAR Eielson Array 85.41 336 P **P 08 09 56.0 -0.6**
comp=Z,2.7nm,0.9s,baz=124,slow=3.4,SNR=23
ILAR PP **PP 08 13 14.8 -0.2**
comp=Z,2.0nm,1.1s,baz=111,slow=6.5,SNR=6.6
ILAR LR LR 08 52 10.9
comp=Z,177nm,18.1s,baz=90,slow=39
comp=Z,2.7nm,0.9s
ILAR Eielson Array 85.41 336 P **P 08 09 55.9 -0.6**
RC01 Rabbit Creek A 85.44 332 P **P 08 09 56.1 -0.7**
baz=108
WAT1 Susitna Watana 85.45 334 P **P 08 09 56.2 -0.7**
baz=109
F26K Sheenjek River 85.47 339 P **P 08 09 57.5 +0.7**
baz=113
BRSE Bradley Lake S 85.51 331 P **P 08 09 57.0 -0.2**
baz=107
BMAR Burnt Mountain 85.52 339 P 08 09 57.4 +0.3
NVL N'lazarevskaya 85.57 161 *e*P **P 08 09 57.8 +0.5**
NVL *e* 08 10 01.0
NVL *e* 08 13 16.3
NVL *e*PPP PPP 08 15 09.6
NVL *e*S **SKSac 08 20 22.4 +2.7**
NVL *e*SS **SS 08 26 07.4 +5.2**
NVL *e*SSS SSS 08 29 38.7
NVL pmax pmax
comp=Z,55nm,1.3s
NVL MLR MLR
comp=Z,282nm,17.0s
QSPA South Pole Qui 85.62 180 P **P 08 09 58.2 +0.4**
comp=Z,32nm,1.1s,baz=149,slow=3.1,SNR=11
comp=Z,32nm,1.1s
QSPA South Pole Qui 85.62 180 P P 08 09 58.3 +0.5
POKR Poker Plat Res 85.75 337 P P 08 09 58.1 -0.1
baz=110
COLA College 85.83 336 ⇑*i*P **P 08 09 59.2 +0.6**
COLA pmax pmax
comp=Z,4.0nm,1.1s
COLA College 85.83 336 P **P 08 09 58.1 -0.5**
baz=110

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KDAK	Kodiak Island	85.90	329	LR	LR	08 49 15.4	
	comp=Z,44nm,20.1s,baz=92,slow=36						
KDAK	Kodiak Island	85.90	329	P	P	08 09 59.2	0.0
	baz=105						
MCK	McKinley	85.91	335	P	P	08 09 58.6	-0.4
	baz=109						
HOM	Homer	85.93	331	P	P	08 09 59.2	0.0
	baz=106						
F25K	Christian Rive	85.96	339	IAmb	IAmb	08 10 17.4	
	comp=Z,20nm,1.9s						
F25K	Christian Rive	85.96	339	P	P	08 09 59.2	-0.1
	baz=112						
CAPN	Captain Cook N	86.00	332	P	P	08 09 59.6	+0.1
	baz=106						
SUA	Susitna One	86.01	333	P	P	08 10 00.4	+0.6
	baz=107						
OHAK	Old Harbor	86.13	328	P	P	08 10 01.4	+1.2
	baz=104						
E25K	Arctic Village	86.13	340	IAmb	IAmb	08 10 08.5	
	comp=Z,12nm,1.2s						
E25K	Arctic Village	86.13	340	P	P	08 10 00.7	+0.6
	baz=112						
H24K	Noodor Dome	86.17	337	P	P	08 10 00.2	-0.2
	baz=110						
NEA2	Nenana	86.24	336	IAmb	IAmb	08 10 01.2	
	comp=Z,10.0nm,0.8s						
NEA2	Nenana	86.24	336	P	P	08 10 00.5	-0.2
	baz=108,SNR=7.5						
G24K	Hadweenzic Riv	86.31	338	IAmb	IAmb	08 10 30.6	
	comp=Z,37nm,1.8s						
G24K	Hadweenzic Riv	86.31	338	P	P	08 10 01.4	+0.4
	baz=110						
TRF	Thorofare Moun	86.39	335	P	P	08 10 01.0	-0.7
	baz=107						
SII	Sitkinak Islan	86.45	327	P	P	08 10 02.2	+0.3
	baz=104						
SKT	Skwentna	86.52	333	P	P	08 10 02.5	+0.4
	baz=106,SNR=5.6						
I23K	Minto, Yukon-K	86.53	336	P	P	08 10 02.2	+0.2
	baz=108,SNR=5.9						
SPU	Mount Spurr	86.54	332	IAmb	IAmb	08 10 32.0	
	comp=Z,13nm,1.4s						
SPCR	Spurr Chakacha	86.62	332	P	P	08 10 02.8	+0.1
	baz=106						
RED	Redoubt Volcan	86.68	331	IAmb	IAmb	08 10 05.6	
	comp=Z,15nm,0.9s						
P19K	Oil Pt	86.71	330	P	P	08 10 03.0	-0.1
	baz=104						
D25K	Kavik River	86.85	341	IAmb	IAmb	08 10 04.6	
	comp=Z,9.9nm,1.0s						
D25K	Kavik River	86.85	341	P	P	08 10 03.8	+0.1
	baz=111						
BPAW	Bear Paw Mtn.	86.88	335		P	08 10 03.4	-0.5
BPAW				IAmb	IAmb	08 10 04.2	
	comp=Z,13nm,0.9s						
BPAW	Bear Paw Mtn.	86.88	335	P	P	08 10 03.7	-0.1
	baz=107,SNR=9.5						
PPLA	Purkeypile	87.06	334	P	P	08 10 04.1	-0.9
	baz=106						
CHIR	Chirikof Islan	87.07	326	P	P	08 10 05.2	+0.4
	baz=102						
E24K	Your Creek	87.14	339	P	P	08 10 05.2	+0.1
	baz=109						
M20K	Styx River	87.22	333	P	P	08 10 05.3	-0.4
	baz=105						
G23K	Bananza Creek	87.27	338	IAmb	IAmb	08 10 45.0	
	comp=Z,8.8nm,1.1s						
G23K	Bananza Creek	87.27	338	P	P	08 10 06.3	+0.6
	baz=108						
O19K	Port Alsworth	87.37	331	P	P	08 10 06.5	+0.2
	baz=104						
CHUM	Lake Minchumin	87.38	335	P	P	08 10 06.2	0.0
	baz=106						
JMIC	Jan Mayen	87.44	18	LR	LR	08 50 03.1	
	comp=Z,66nm,18.1s,baz=250,slow=36						
COLD	Coldfoot	87.50	338	IAmb	IAmb	08 10 12.4	
	comp=Z,17nm,1.3s						
COLD	Coldfoot	87.50	338	P	P	08 10 07.8	+1.0
	baz=108						
E23K	Chandalar	87.54	339	P	P	08 10 07.8	+0.7
	baz=108						
H22K	Ishtalitna Cre	87.56	337	P	P	08 10 08.2	+1.1
	baz=106						
N19K	Bonanza Creek	87.59	331	P	P	08 10 07.1	-0.4
	baz=104						
I21K	Tanana	87.60	336	P	P	08 10 07.0	-0.3
	baz=106						
P18K	Big Mountain,	87.64	330	P	P	08 10 07.0	-0.6
	baz=103						
TOLK	Toolik Lake Re	87.71	340	P	P	08 10 07.9	+0.1
	baz=108						
O18K	Koktuh Hills	87.73	330	P	P	08 10 07.6	-0.5
	baz=103						
M19K	Big River Lodg	87.81	333	P	P	08 10 08.3	-0.1
	baz=104						
R17L	Mt. Peulik Vol	87.84	328	P	P	08 10 08.7	+0.1
	baz=102						
K20K	Telida	88.01	334	IAmb	IAmb	08 10 09.5	
	comp=Z,8.5nm,1.0s						
K20K	Telida	88.01	334	P	P	08 10 08.8	-0.5
	baz=104						
H21K	Melozitna Rive	88.06	336	P	P	08 10 08.8	-0.7
	baz=105						
L19K	White Mountain	88.08	333	P	P	08 10 09.3	-0.4
	baz=103						
D23K	Nanushuk River	88.19	340	IAmb	IAmb	08 10 11.5	
	comp=Z,16nm,1.1s						
D23K	Nanushuk River	88.19	340	P	P	08 10 10.7	+0.7
	baz=107						
P17K	Kvichak River	88.20	330	P	P	08 10 10.7	+0.5
	baz=102						
Q16K	King Salmon	88.20	329	P	P	08 10 10.3	0.0
	baz=102						
N18K	Kilae Creek	88.24	331	P	P	08 10 10.2	-0.2
	baz=102						
J20K	Nowinta River	88.24	335	IAmb	IAmb	08 10 10.6	
	comp=Z,8.6nm,1.2s						
J20K	Nowinta River	88.24	335	P	P	08 10 10.1	-0.2
	baz=104						
M18K	Stony River	88.38	332	P	P	08 10 11.7	+0.7
	baz=102						
R16K	Pilot Point	88.47	328	P	P	08 10 12.1	+0.6
	baz=101						
G21K	Allakaket	88.55	337	IAmb	IAmb	08 10 19.9	
	comp=Z,26nm,1.6s						
G21K	Allakaket	88.55	337	P	P	08 10 12.1	+0.3
	baz=105						
O17K	Koliganek Bris	88.64	330	P	P	08 10 12.4	+0.1
	baz=101						
F21K	Alatna River	88.72	338	P	P	08 10 13.2	+0.6
	baz=105						
J19K	Poorman	88.83	334	P	P	08 10 13.9	+0.7
	baz=103						
N17K	Nushagak Hills	88.83	331	P	P	08 10 13.4	+0.2
	baz=101						
H20K	Anotleneega Mo	88.85	336	P	P	08 10 13.5	+0.3
	baz=103						
D22K	Ayikyak River	88.86	339	P	P	08 10 13.7	+0.5
	baz=105						
L18K	Granite Mounta	88.93	333	P	P	08 10 13.8	+0.2
	baz=102						
P16K	Nushagak River	88.95	329	P	P	08 10 14.2	+0.4
	baz=100						
O16K	Kokwok River B	89.11	330	P	P	08 10 14.9	+0.4
	baz=100						
CHNA	Chernabura Isl	89.11	325	P	P	08 10 14.1	-0.5
	baz=99						
M17K	Holitna River	89.12	332	P	P	08 10 14.3	-0.2
	baz=101						
J18K	Innoko River	89.19	334	P	P	08 10 15.1	+0.2
	baz=102						
E21K	Killik River	89.21	339	IAmb	IAmb	08 10 53.6	
	comp=Z,12nm,1.3s						
E21K	Killik River	89.21	339	P	P	08 10 15.1	+0.3
	baz=104						
B22K	Teshekpuk Lake	89.49	341	P	P	08 10 16.7	+0.7
	baz=105						
H19K	Roundabout Mou	89.50	336	IAmb	IAmb	08 10 40.4	
	comp=Z,25nm,1.6s						
H19K	Roundabout Mou	89.50	336	P	P	08 10 16.5	+0.3
	baz=102						
GCSA	Galena City Sc	89.52	335	P	P	08 10 16.6	+0.3
	baz=102						
N16K	Nishlik Lake	89.59	331	P	P	08 10 17.9	+1.1
	baz=100						
L17K	Donlin	89.66	332	P	P	08 10 17.7	+0.7
	baz=100						
ECH	Echery	89.67	42		P	08 10 17.3	-0.2
ECH				IAmb	IAmb	08 10 20.7	
	comp=Z,8.6nm,1.0s						
ECH	Echery	89.67	42	P	P	08 10 17.3	-0.2
ECH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SDPT	Sand Point	89.69	325	P	P	08 10 17.8	+0.5
	baz=98						
K17K	Iditarod	89.76	333	P	P	08 10 17.4	-0.1
	baz=100						
M16K	Timber Creek	89.78	331	P	P	08 10 18.8	+1.1
	baz=100						
G19K	Purcell Mounta	89.88	336	P	P	08 10 18.9	+0.9
	baz=101						
O15K	Ungalikthiuk R	89.91	329	P	P	08 10 19.6	+1.3
	baz=99						
E20K	Nigu River	89.97	339	P	P	08 10 19.2	+0.8
	baz=102						
L16K	Owhat River	90.14	332	P	P	08 10 20.4	+1.2
	baz=99						
A22K	Sinclair Lake	90.15	341	P	P	08 10 20.6	+1.4
	baz=103						
N15K	Kwethluk River	90.19	330	P	P	08 10 20.7	+1.1
	baz=99						
D20K	Etivluk River	90.21	339	P	P	08 10 20.0	+0.5
	baz=102						
H18K	Honhosa River	90.22	335	IAmb	IAmb	08 10 59.4	
	comp=Z,25nm,1.4s						
H18K	Honhosa River	90.22	335	P	P	08 10 20.5	+0.9
	baz=100						
J17K	VABM Dome	90.22	334	P	P	08 10 20.6	+0.9
	baz=100						
F19K	Shaleruckik Mo	90.28	337	P	P	08 10 20.6	+0.8
	baz=101						
G18K	Tagagawik	90.46	336	IAmb	IAmb	08 10 22.2	
	comp=Z,10.0nm,1.1s						
G18K	Tagagawik	90.46	336	P	P	08 10 21.6	+0.9
	baz=100						
M15K	Kasigluk River	90.56	331	P	P	08 10 21.9	+0.7
	baz=98						
O14K	Tigyukauivet M	90.66	329	P	P	08 10 22.6	+0.8
	baz=98						
D19K	Kuna River	90.71	339	P	P	08 10 22.9	+1.0
	baz=100						
A21K	Barrow	90.74	342	P	P	08 10 23.1	+1.2
	baz=102						
H17K	Granite Mounta	90.83	335	P	P	08 10 22.9	+0.4
	baz=99						
J16K	Anvik River	90.89	333	P	P	08 10 23.4	+0.7
	baz=98						
N14K	Kuskokwak Cree	90.95	330	P	P	08 10 24.0	+0.9
	baz=97						
TUE	Stuetta	90.96	44	P	P	08 10 24.6	+0.8
F18K	Selawik	90.98	337	P	P	08 10 24.0	+0.9
	baz=99						
I17K	Unalakleet	91.01	334	P	P	08 10 24.8	+1.5
	baz=98						
L15K	Ungalak Mounta	91.08	332	P	P	08 10 24.8	+1.1
	baz=97						
K15K	Wolf Creek Mou	91.18	332	P	P	08 10 25.4	+1.2
	baz=97						
M14K	Bethel	91.19	331	P	P	08 10 24.9	+0.8
	baz=97						
G17K	Kiwalik Mounta	91.22	336	P	P	08 10 25.1	+0.8
	baz=98						
FALS	False Pass	91.31	325	P	P	08 10 25.9	+1.1
	baz=96						
C19K	Lookout Ridge	91.34	339	P	P	08 10 25.9	+1.1
	baz=99						
DAVOX	Davos/Dischmat	91.36	43	LR	LR	08 44 23.8	
	comp=Z,113nm,21.5s,baz=260,slow=31						
E18K	Tukpahlearik C	91.47	337	P	P	08 10 25.1	-0.3
	baz=98						
F17K	Baldwin Pennin	91.59	336	P	P	08 10 26.8	+0.9
	baz=98						
L14K	Kuka Creek	91.61	331	P	P	08 10 26.2	+0.1
	baz=96						
H16K	Elim	91.78	335	P	P	08 10 27.3	+0.4
	baz=97						
M13K	Dall Lake	91.84	330	P	P	08 10 28.3	+1.1
	baz=96						
C18K	Utukok River	91.85	339	P	P	08 10 28.6	+1.4
	baz=98						
E17K	Hotham Inlet	91.90	337	P	P	08 10 28.1	+0.7
	baz=97						
G16K	Koyuk River	91.91	335	IAmb	IAmb	08 12 00.5	
	comp=Z,14nm,1.7s						
G16K	Koyuk River	91.91	335	P	P	08 10 28.1	+0.7
	baz=96						
VNDA	Vanda	92.03	191	LR	LR	08 43 17.1	
	comp=Z,200nm,21.5s,baz=126,slow=30						
J14K	Nanvaranak Lak	92.16	333	P	P	08 10 29.6	+1.0
	baz=96						
D17K	Noatak River	92.45	338	P	P	08 10 30.6	+0.7
	baz=96						
C17K	DeLong Mountai	92.56	338	P	P	08 10 30.6	+0.2
	baz=96						
G15K	Niukluk	92.58	335	P	P	08 10 31.0	+0.5
	baz=95						
K13K	Kusilvak Mount	92.60	332	P	P	08 10 31.8	+1.1
	baz=95						
F15K	North Star Dit	92.89	336	P	P	08 10 32.9	+0.9
	baz=94						
ANM	Nome	93.12	334	P	P	08 10 34.0	+1.0
	baz=94						
NOA	NORSAR Array B	93.20	29	LR	LR	08 49 32.6	
	comp=Z,78nm,21.8s,baz=285,slow=34						
M11K	Mekoryuk	93.25	330	P	P	08 10 33.7	0.0
	baz=93						
TSUM	Tsumeb	93.25	109	LR	LR	08 50 49.5	
	comp=Z,1µm,19.1s,baz=328,slow=34						
C16K	Lisburne Hills	93.34	338	P	P	08 10 34.2	+0.2
	baz=94						
CLL	Collm	93.70	39	*e*P	P	08 10 37.0	+1.0
CLL	Collm	93.70	39	*e*P	P	08 10 37.0	+1.0
GERES	GERESS Array B	94.06	41	LR	LR	08 51 31.3	
	comp=Z,68nm,19.4s,baz=267,slow=35						
BRG	Berggiesshubel	94.28	39	*e*P	P	08 10 40.2	+1.5
BRG				Amp		08 10 42.2	
	comp=Z,5.0nm,1.0s						
HFS	Hagfors	94.39	30	LR	LR	08 50 19.7	
	comp=Z,172nm,20.5s,baz=258,slow=34						
NIKH	Nikolski High	94.40	323	P	P	08 10 38.2	-1.0
	baz=92						
SUR	Sutherland	94.56	123	LR	LR	08 51 34.5	
	comp=Z,358nm,19.5s,baz=279,slow=34						
SPITS	Spitsbergen Ar	95.11	12	LR	LR	08 55 15.3	
	comp=Z,134nm,19.9s,baz=264,slow=37						
GAMB	Gambell	95.88	334	P	P	08 10 45.9	+0.3
	baz=88						
VRAC	Vranov	95.97	41	LR	LR	08 54 12.2	
	comp=Z,69nm,18.8s,baz=266,slow=36						
ARCES	ARCESS Array B	98.67	20	LR	LR	08 53 43.5	
	comp=Z,66nm,20.7s,baz=290,slow=34						
BOSA	Boshof	98.94	120	LR	LR	08 53 06.2	
	comp=Z,565nm,20.5s,baz=248,slow=34						
URZ	Urewera	99.31	230	LR	LR	08 48 40.9	
	comp=Z,156nm,19.2s,baz=112,slow=31						
LBTB	Lobatse	99.85	116	LR	LR	08 55 05.0	
	comp=Z,1µm,18.6s,baz=238,slow=35						
DZM	Mont Dzumac	112.25	244	*e*LR	LR	08 49 23.9	
	comp=Z,146nm,29.9s						
KIV	Kislovodsk	114.49	43	*i* PKIKP	PKiKP	08 16 00.1	+0.4
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,70nm,22.0s						
AB31	Akbulak array	122.60	32		PKiKP	08 16 15.5	+0.3
ABKAR	Akbulak array	122.60	32		PKiKP	08 16 15.6	+0.4
BVAR	Borovoye Array	124.83	23	PKP	PKiKP	08 16 19.4	-0.1
	comp=Z,0.9nm,0.6s,baz=318,slow=2.0,SNR=4.6						
ZAA0	Zalesovo Array	128.57	13		PKiKP	08 16 25.9	-1.1
ZALV	Zalesovo Beam	128.57	13	PKP	PKiKP	08 16 26.2	-0.7
	comp=Z,3.4nm,0.8s,baz=302,slow=2.8,SNR=14						
ZALV	Zalesovo Beam	128.57	13	*e*PKIKP	PKiKP	08 16 26.6	-0.3
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	129.70	20		PKiKP	08 16 28.4	-0.8
KURK	Kurchatov	129.70	20*c*	*i*PKIKP	PKiKP	08 16 29.1	-0.2
KURBB	Kurchatov Arra	129.75	20	PKP	PKiKP	08 16 29.2	-0.2
	comp=Z,3.3nm,0.9s,baz=320,slow=2.4,SNR=22						
MAKZ	Makanchi	134.20	20		PKiKP	08 16 37.0	-1.6
MAKZ	Makanchi	134.20	20	PKIKP	PKiKP	08 16 37.0	-1.6
ZAK	Zakamensk	134.23	359	*e*PKIKP	PKiKP	08 16 39.5	+0.9
ZAK				pmax	pmax		
	comp=Z,8.0nm,2.2s						
MK31	Makanchi Array	134.31	19⇓	*i*PKIKP	PKiKP	08 16 37.7	-1.1
MKAR	Makanchi Array	134.31	19	PKP	PKiKP	08 16 37.5	-1.4
	comp=Z,0.8nm,0.7s,baz=0.4,slow=1.6,SNR=9.4						
MKAR	Makanchi Array	134.31	19	*e*PKIKP	PKiKP	08 16 37.7	-1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	136.66	356	PKP	PKPdf	08 16 40.6	-1.4
	comp=Z,1.0nm,0.8s,baz=225,slow=0.2,SNR=5.4						
KSH2	Kashi	137.66	32	PKP	PKiKP	08 16 45.4	-0.6
AS31	Alice Springs	138.60	226		PKPdf	08 16 45.8	-0.3
ASAR	Alice Springs	138.60	226	PKhKP	PKPpre	08 16 39.7	
	comp=Z,1.9nm,0.8s,baz=124,slow=1.6,SNR=8.1						
ASAR				PKP	PKPdf	08 16 45.5	-0.6
	comp=Z,1.9nm,0.8s,baz=125,slow=1.8,SNR=18						
WMQ	Urumqi	138.65	16	*e*PKP	PKiKP	08 16 46.5	-1.3
WMQ				sPKP	sPKPdf	08 16 55.8	-5.3
WMQ				LR	LR		
	comp=Z,160nm,24.2s						
WRA	Warramunga Arr	140.48	231	PKhKP	PKPpre	08 16 41.3	
	comp=Z,1.4nm,0.9s,baz=118,slow=3.0,SNR=6.5						
WRA				PKP	PKiKP	08 16 49.9	-2.2
	comp=Z,2.5nm,0.9s,baz=120,slow=2.3,SNR=7.9						
HHC	Hu-ho-hao-te	142.88	349	*e*PKP	PKPdf	08 16 50.3	-3.1
BTO2	Baotou	143.29	351	*e*PKP	PKPbc	08 16 50.4	-0.8
BTO2				AMB	AMB		
	comp=Z,330nm,6.0s						
GTA2	Gaotai	145.04	4	*e*PKPbc	PKPdf	08 16 56.2	-1.1
GTA2				LR	LR		
	comp=Z,170nm,12.0s						
GTA2				LR	LR		
	comp=Z,140nm,14.2s						
GTA2				LR	LR		
	comp=Z,170nm,16.4s						
HNS	HongShan	145.39	343	⇑PKPbc	PKPab	08 16 57.1	-0.6
TIA	Tai'an	145.68	339	PKPbc	PKPab	08 16 58.9	0.0
GOMU	GeErMu	147.61	12	PKPbc	PKPbc	08 17 02.4	-2.3
LZH	Lanzhou	148.50	358	*e*PKPbc	PKiKP	08 17 07.4	-1.0
LZH				LR	LR		
	comp=Z,180nm,17.5s						
LZH				LR	LR		
	comp=Z,250nm,20.3s						
LZH				LR	LR		
	comp=Z,300nm,20.5s						
NJ2	Nanjing	148.60	333	*e*PKPbc	PKPdf	08 17 03.9	+0.7
LZDM	Lanzhou Array	148.64	358	PKP	PKPdf	08 17 03.7	0.0
	comp=Z,1.8nm,0.5s,baz=343,slow=3.1,SNR=9.3						
LZDM				PKPbc	PKiKP	08 17 07.6	-1.3
	comp=Z,2.2nm,0.6s,baz=309,slow=3.0,SNR=1.0						
PSA00	Pilbara Seismi	149.09	213		PKPbc	08 17 06.9	-1.6
XAN	Xi'an	149.99	349	PKPbc	PKPbc	08 17 08.6	-1.8
HYB	Hyderabad	153.16	59	*e*PKiKP	PKiKP	08 17 18.5	+0.2
PZH	PanZhiHua	158.06	2	PKP	PKPdf	08 17 16.8	-0.4
TNCH	TengChong	159.18	10	PKP	PKPdf	08 17 18.6	0.0
TNCH				pPKP	pPKPdf	08 17 22.2	-8.0
TNCH				PKPab	PKPab	08 17 55.8	+0.4
TNCH				PP	PP	08 21 34.5	-0.3
TNCH				AMB	AMB		
	comp=Z,230nm,4.7s						
TNCH				LR	LR		
	comp=Z,1µm,23.6s						
TNCH				LR	LR		
	comp=Z,2µm,28.4s						
TNCH				LR	LR		
	comp=Z,420nm,24.2s						
QIZ	Qiongzhong	163.88	335	PKP	PKPdf	08 17 22.3	-1.1
QIZ				PP	PP	08 22 04.3	+4.1
QIZ				SS	SS	08 42 28.8	+2.6
QIZ				LR	LR		
	comp=Z,250nm,19.0s						
QIZ				LR	LR		
	comp=Z,260nm,15.7s						
QIZ				LR	LR		
	comp=Z,270nm,21.4s						
CMAR	Chiang Mai Arr	165.64	14	PKP	PKPdf	08 17 24.5	-0.5
	comp=Z,1.1nm,0.3s,baz=0.7,slow=1.4,SNR=5.8						
CMAR	Chiang Mai Arr	165.64	14	PKPdf	PKPdf	08 17 24.2	-0.8

*ASRS **05** 08:05:03.0±1.3, 53°.50N×87°.42E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 05 08:05:05.1±3.3**, 53°.48N×87°.54E, h0**km**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=31.6km s-min=16.2km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.69	287	I	I	08 16 50.0	
	baz=103,slow=335,SNR=5.0						
ZALV	Zalesovo Beam	1.69	287	Pg	Pn	08 05 35.1	-0.6
	1.4nm,0.3s,baz=110,slow=16,SNR=15						
ZALV				Lg	Lg	08 05 57.8	
	1.4nm,0.3s,baz=108,slow=24,SNR=7.2						
KURBB	Kurchatov Arra	6.25	246	Pn	Pn	08 06 40.1	+1.6
	0.1nm,0.3s,baz=62,slow=14,SNR=4.7						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.49	209	Pn	Pn	08 06 56.1	+0.6
	0.2nm,0.3s,baz=27,slow=15,SNR=5.3						
	0.2nm,0.4s						

*SJA **05** 08:06:12.7±1.1, 30°.77S×73°.01W, h10km, ML3.5, MW3.3*
*GUC **05** 08:06:23.2±0.8, 30°.30S×72°.24W, h21km±18km, ML3.3*

ISC 05 08:06:18.2±2.1**, 30°.12S**±0°.06×**72°.35W**±0°.08**, h1**km±13km**, n27,** σ**1^{s}78**/33**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.98	79	*e*P	Pn	08 06 40.4	+1.3
CO05				*e*S	Sn	08 06 53.4	-0.2
CO05				IAML		08 06 56.7	
	comp=N,999nm,0.3s						
GO04	Tololo Observa	1.34	93	*e*P	Pb	08 06 45.4	+1.1
CO02	Combarbal	1.59	133	*e*P	Pn	08 06 47.9	+0.4
CO02				*e*S	Sn	08 07 05.6	-3.2
CO02				IAML		08 07 16.1	
	comp=N,1µm,0.3s						
CO03	El Pedregal	1.60	117	*i* P	Pb	08 06 48.3	-0.3
CO03				*e*S	Sn	08 07 06.9	-2.1
CO03				IAML		08 07 12.5	
	comp=E,459nm,0.3s						
LCO	Las Campanas	1.81	53	*e*P	Pg	08 06 53.5	+0.7
LCO				IAML		08 07 29.9	
	comp=E,1µm,0.5s						
CO01	Juntas del Tor	1.96	86	*e*P	Pb	08 06 55.3	+0.6
CO01				IAML		08 07 25.0	
	comp=N,132nm,0.4s						
AC04	Llanos de Chal	2.21	31	*e*P	Pb	08 06 59.3	+0.4
AC05	El Transito	2.21	55	*e*P	Pg	08 06 60.0	-0.6
AC05				IAML		08 07 44.7	
	comp=N,95nm,0.6s						
CO04	Los Peladeros	2.25	149	*e*P	Pn	08 06 57.4	+0.6
CO04				IAML		08 07 34.1	
	comp=N,244nm,0.3s						
AROD	Rodeo	2.49	92	*e*P	Pb	08 07 04.4	+0.6
AROD				*e*S	Sg	08 07 37.1	-1.0
VA06	Catapilco	2.60	160	*e*P	Pn	08 07 01.4	+0.1
VA06				IAML		08 07 53.8	
	comp=E,185nm,0.5s						
ACCO	Cerro Coronel	2.87	100	*e*P	Pb	08 07 10.1	-0.4
ACCO				*e*S	Sg	08 07 51.6	+1.1
VA03	San Esteban	3.05	150	*e*P	Pn	08 07 08.9	+1.2
VA03				IAML		08 07 53.3	
	comp=N,144nm,0.4s						
ROCH	El Roble	3.07	159	*e*P	Pn	08 07 08.4	+0.5
ROCH				IAML		08 07 59.9	
	comp=N,153nm,0.7s						
PEL	Peldehue	3.33	155	*e*P	Pn	08 07 12.0	+0.5
PEL				IAML		08 08 12.7	
	comp=E,67nm,0.3s						
AGUA	GUANDACOL	3.41	80	*e*S	Pg	08 07 24.8	+1.3
AGUA				IAML		08 07 28.9	
	comp=Z,58nm,0.3s						
MT10	Hacienda Santa	3.50	154	*e*P	Pn	08 07 15.1	+1.2
MT10				IAML		08 08 16.0	
	comp=N,163nm,0.5s						
MT05	Renca	3.54	158	IAML		08 08 18.6	
	comp=E,132nm,0.5s						
MT14	Cerro Cal¡n	3.61	155	*e*P	Pn	08 07 16.8	+1.5
MT04	Ro Olivares	3.78	151	*e*P	Pn	08 07 19.9	+2.1
MT04				IAML		08 08 07.2	
	comp=E,39nm,0.6s						
MT09	Talagante	3.83	163	*e*P	Pn	08 07 19.4	+1.0
MT08	Bocatoma Ro	3.87	150	*e*P	Pn	08 07 21.8	+2.8
VCA	Vinchina	3.87	70	*e*P	Pb	08 07 25.9	-1.3
VCA				*e*P	Pg	08 07 29.6	-2.6
VCA				IAML		08 08 38.8	
	comp=Z,40nm,1.3s						
MT12	Pirque	3.92	157	*e*P	Pn	08 07 20.2	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AVFE	**Valle Fertil**	**4.26**	**99**	*e*P	Pg	08 07 52.1	+12
AVFE				*e*S	**Sb**	**08 08 29.9**	**+4.0**
AVFE				IAML		08 08 37.8	
	comp=Z,32nm,0.6s						
TINO	**Tinogasta**	**4.66**	**65**	*e*P	**Pb**	**08 07 38.8**	**-1.9**
ACLC	**CERRO LA CRUZ**	**4.74**	**83**	*e*P	**Pb**	**08 07 37.7**	**-4.5**
ACLC				*e*S	**Sb**	**08 08 40.1**	**+0.3**
ACLC				IAML		08 08 46.1	
	comp=Z,16nm,0.6s						

*ASRS **05** 08:17:33.0±1.7, 53.72N×91.16E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 05 08:17:39.2±5.1**, 53.67N×90.79E, h0km, mbtmp2.8**/3**, ML2.4**/3**, Error ellipse: s-maj=54.1km s-min=28.2km az=48.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.55**	**277**	I	I	08 44 40.0	
	baz=90,slow=334,SNR=2.6						
ZALV	**Zalesovo Beam**	**3.55**	**277**	Pn	Pn	08 18 37.6	+2.0
	0.6nm,0.3s,baz=94,slow=16,SNR=6.7						
ZALV				Lg	Lg	08 19 30.7	
	1.1nm,0.3s,baz=90,slow=29,SNR=5.9						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**8.14**	**253**	Pn	Pn	08 19 38.2	-0.3
	0.1nm,0.3s,baz=64,slow=15,SNR=6.3						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**8.77**	**222**	Pn	Pn	08 19 47.8	+0.5
	0.1nm,0.3s,baz=31,slow=13,SNR=5.5						
	0.2nm,0.4s						
I34MN	**SONGINO INFRAS**	**11.49**	**114**	I	I	09 24 50.0	
	baz=306,slow=330,SNR=3.5						

*IDC **05** 08:25:39.3±1.8, 51.53N×82.64E, h0km, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=17.5km s-min=15.4km az=159.0*

*NNC **05** 08:25:43.1±2.4, 51.43N×82.95E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=24.4km s-min=11.0km az=25.0, Suspected Mining explosion.*

ISC 05 08:25:29.8±1.4**, 51.16N**±0.05×**83.52E**±0.06**, h0km, n8, σ1s04**/10**, 2C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.90**	**15**	I	I	08 43 30.0	
	baz=202,slow=324,SNR=5.6						
ZALV	**Zalesovo Beam**	**2.90**	**15**	Pn	**Pg**	**08 26 24.4**	**-1.0**
	0.6nm,0.3s,baz=208,slow=14,SNR=7.4						
ZALV				Sn	**Sb**	**08 26 59.7**	**+1.3**
	1.0nm,0.3s,baz=208,slow=26,SNR=7.9						
	1.1nm,0.3s						
KURK	**Kurchatov**	**3.13**	**264**	⇓Pn	**Pg**	**08 26 30.0**	**+0.3**
	1.0nm,1.2s						
KURK				⇑Sn	**Sb**	**08 27 05.7**	**+0.8**
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**3.20**	**262**	Pg	**Pb**	**08 26 27.9**	**+0.4**
	0.1nm,0.3s,baz=72,slow=19,SNR=5.9						
KURBB				Lg	Lg	08 27 05.8	
	0.2nm,0.3s,baz=68,slow=33,SNR=10						
KURBB	**Kurchatov Arra**	**3.20**	**262**	⇑Pn	**Pg**	**08 26 29.7**	**-1.4**
	2.7nm,0.8s						
KURBB				⇓Sn	**Sb**	**08 27 06.7**	**-0.3**
	4.9nm,0.5s						
MK31	**Makanchi Array**	**4.45**	**191**	Pn	**Pg**	**08 26 55.6**	**+0.6**
	0.5nm,0.6s,baz=20,slow=11,SNR=7.6						
MK31				⇓Lg	Lg	08 28 10.4	
	0.7nm,0.5s,baz=12,slow=29,SNR=7.0						
MKAR	**Makanchi Array**	**4.45**	**191**	Pn	**Pg**	**08 26 54.0**	**-1.0**
	0.1nm,0.3s,baz=6.5,slow=12,SNR=5.2						
MKAR				Lg	Lg	08 28 09.2	
	0.3nm,0.3s,baz=7.8,slow=29,SNR=8.9						
	0.4nm,0.5s						
MAKZ	**Makanchi**	**4.47**	**194**	⇓Pn	**Pg**	**08 26 54.7**	**-0.8**
	1.2nm,0.8s						
MAKZ				⇓Lg	Lg	08 28 11.2	
	1.0nm,0.6s						

*IDC **05** 08:54:25.7±2.7, 6.97S×129.90E, h88km±33km, mb3.8/4, mbtmp4.0/8, Error ellipse: s-maj=54.1km s-min=22.4km az=90.0*

*NEIC **05** 08:54:26.5±2.4, 6.90S±0.07×130.1E±0.1, h92km±12km, mb4.2/6, Error ellipse: s-maj=16.0km s-min=10.6km az=103.0*

*DJA **05** 08:54:27.8±0.4, 7°S±3°×13°0E±°, h105km±13km, M4.3/13, mB5.0/4, mb4.2/9, MLv4.3/13, Mw(mB)4.3/4*

ISC 05 08:54:26.7±0.7**, 6.81S**±0.05×**130.03E**±0.07**, h104km, n33, σ1s96**/35**, mb4.2**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.71**	**133**	Pn	**Pn**	**08 54 52.0**	**-3.9**
SAUI	**Saumlaki**	**1.71**	**133**	P	**Pn**	**08 54 58.5**	**+2.7**
SAUI				S	**Sn**	**08 55 20.6**	**+2.6**
BNDI	**Bandanaira**	**2.28**	**357**	P	**Pn**	**08 55 03.7**	**+0.6**
FAKI	**Fak Fak**	**4.45**	**30**		**Pn**	**08 55 32.1**	**0.0**
FAKI	**Fak Fak**	**4.45**	**30**	P	**Pn**	**08 55 32.3**	**+0.2**
FAKI				S	**Sn**	**08 56 21.8**	**-1.1**
KMPI	**Kaimana, Papua**	**4.81**	**50**	P	**Pn**	**08 55 38.5**	**+1.5**
KMPI				S	**Sn**	**08 56 30.4**	**-1.2**
SIJI	**Sorong**	**6.03**	**12**	P	**Pn**	**08 55 54.9**	**+1.4**
	4.5nm,0.3s,baz=193,slow=19,SNR=7.3						
SIJI				S	**Sn**	**08 56 58.3**	**-2.9**
	13nm,0.3s,baz=295,slow=23,SNR=8.1						
SIJI	**Sorong**	**6.03**	**12**	P	**Pn**	**08 55 53.9**	**+0.4**
	0.2nm4μm12nm,1.0s						
SWI	**Sorong**	**6.04**	**12**	P	**Pn**	**08 55 53.8**	**+0.3**
	0.2nm18nm,0.7s						
MTN	**Manton Dam**	**6.09**	**170**		**Pn**	**08 55 54.8**	**+0.5**
SOEI	**Soe**	**6.41**	**242**		**Pn**	**08 55 58.6**	**-0.1**
SOEI	**Soe**	**6.41**	**242**	P	**Pn**	**08 55 59.8**	**+1.1**
BAKI	**Biak**	**8.24**	**48**	P	**Pn**	**08 56 26.6**	**+3.1**
KNRA	**Kununurra**	**8.90**	**188**		**Pn**	**08 56 30.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**12.01**	**200**	P	**Pn**	**08 57 11.0**	**-3.5**
	2.4nm,0.3s,baz=21,slow=12,SNR=34						
FITZ				S	Sn	08 59 14.3	-12
	6.2nm,0.3s,baz=338,slow=23,SNR=5.7						
WB0	**Warramunga Arr**	**13.56**	**162**		**Pn**	**08 57 32.4**	**-2.5**
WRA	**Warramunga Arr**	**13.71**	**163**	P	**Pn**	**08 57 33.4**	**-3.4**
	1.2nm,0.5s,baz=341,slow=13,SNR=20						
WRA				S	Sn	08 59 56.0	-12
	3.0nm,0.6s,baz=347,slow=21,SNR=7.7						
WRA	**Warramunga Arr**	**13.71**	**163**		**Pn**	**08 57 33.3**	**-3.5**
WR8	**Warramunga Arr**	**13.77**	**162**	Pn	**Pn**	**08 57 34.9**	**-2.7**
COEN	**Coen**	**14.74**	**120**	Pn	**Pn**	**08 57 49.0**	**-1.1**
AS31	**Alice Springs**	**17.17**	**168**		**Pn**	**08 58 18.6**	**-1.6**
ASAR	**Alice Springs**	**17.17**	**168**	P	**Pn**	**08 58 20.1**	**-0.2**
	0.8nm,0.6s,baz=339,slow=9.7,SNR=32						
ASAR				S	Sn	09 01 18.1	-13
	0.8nm,0.6s,baz=351,slow=25,SNR=6.0						
MBWA	**Marble Bar**	**17.40**	**214**		**P**	**08 58 22.1**	**-0.6**
PSA00	**Pilbara Seismi**	**17.67**	**213**	P	**P**	**08 58 25.4**	**-0.4**
PSA00				IAmb	IAmb	08 58 40.3	
	comp=Z,37nm,1.3s						
CMAR	**Chiang Mai Arr**	**39.63**	**310**	P	**P**	**09 01 49.6**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=139,slow=7.2,SNR=6.2						
	comp=Z,1.2nm,0.3s						
GTA2	**Gaotai**	**53.91**	**331**	*e*P	**P**	**09 03 41.4**	**+1.7**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA2				LR	LR		
	comp=N,170nm,14.9s						
GTA2				LR	LR		
	comp=E,190nm,16.4s						
GTA2				LR	LR		
	comp=Z,180nm,16.4s						
SONM	**Songino Array**	**58.27**	**341**	P	**P**	**09 04 11.2**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=167,slow=7.3,SNR=2.2						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**58.27**	**341**	IAmb	IAmb	09 04 34.2	
	comp=Z,1.3nm,1.3s						
MKAR	**Makanchi Array**	**68.08**	**327**	P	**P**	**09 05 16.9**	**+1.6**
	comp=Z,2.2nm,0.5s,baz=123,slow=7.5,SNR=23						
	comp=Z,2.2nm,0.5s						
MAKZ	**Makanchi**	**68.27**	**327**	P	**P**	**09 05 18.1**	**+1.6**
MAKZ				IAmb	IAmb	09 05 24.5	
	comp=Z,5.3nm,1.3s						
KURBB	**Kurchatov Arra**	**72.37**	**328**	P	**P**	**09 05 41.8**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=127,slow=4.9,SNR=7.8						
	comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**72.37**	**329**	P	**P**	**09 05 41.8**	**+0.5**
KURK	**Kurchatov**	**72.37**	**329**	IAmb	IAmb	09 05 43.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.8nm,1.1s						

*OSPL **05** 08:56:07.7±1.8, 19.15N×67.69W, h0km±11km, ML2.8, Presumed earthquake*

*NEIC **05** 08:56:09.5±1.5, 19.04N±0.03×67.49W±0.06, h10km±2km, ML3.0/37, Md3.2/6(RSPR), Error ellipse: s-maj=10.9km s-min=3.0km az=239.0*

*SDD **05** 08:56:09.3±2.1, 19.14N×67.59W, h19km±115km, MD3.5, ML3.2, MW3.3, Presumed earthquake*

*RSPR **05** 08:56:10.8, 18.95N×67.72W, h7km±31km, MD3.2/6*

ISC 05 08:56:10.9±1.3**, 18.94N**±0.06×**67.65W**±0.03**, h25km**±13km**, n46, σ1s12**/73**, 22C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.57**	**163**		**Pb**	**08 56 21.5**	**-0.9**
IDE					**Sb**	**08 56 30.8**	**+0.7**
IDE	**Isla Desecheo**	**0.57**	**163**	⇑*e*P	**Pb**	**08 56 21.5**	**-0.9**
IDE				*e*S	**Sb**	**08 56 30.8**	**+0.7**
AGPR	**Aguadilla, PR**	**0.69**	**133**		**Pb**	**08 56 23.4**	**-0.9**
AGPR				IAML		08 56 35.0	
	622nm,0.3s						
AGPR	**Aguadilla, PR**	**0.69**	**133**	⇑*e*Pg	**Pb**	**08 56 23.2**	**-1.1**
AGPR				⇑*e*Sg	**Sb**	**08 56 34.1**	**+0.7**
AGPR				IAML		08 56 35.0	
	comp=N,509nm,0.2s						
AGPR	**Aguadilla, PR**	**0.69**	**133**	⇓*e*P	**Pb**	**08 56 23.4**	**-0.9**
AGPR				*e*S	**Sn**	**08 56 34.5**	**-0.5**
AGPR	**Aguadilla, PR**	**0.69**	**133**	*i* P	**Pb**	**08 56 23.4**	**-0.9**
AGPR				*e*S	**Sb**	**08 56 34.0**	**+0.5**
AGPR				IAML		08 56 35.5	
	comp=Z,223nm,0.3s						
PRSN	**Puerto Rico Se**	**0.86**	**146**		**Pn**	**08 56 26.5**	**-0.9**
PRSN	**Puerto Rico Se**	**0.86**	**146**	⇑*e*Pg	**Pn**	**08 56 25.2**	**-2.2**
PRSN				⇑*e*Sg	**Sn**	**08 56 40.2**	**+1.1**
PRSN				IAML		08 56 48.7	
	comp=N,1μm,0.3s						
PRSN	**Puerto Rico Se**	**0.86**	**146**	⇓*e*P	**Pn**	**08 56 26.5**	**-0.9**
PRSN				*e*S	**Sn**	**08 56 39.4**	**+0.2**
LSP	**Las Mesas**	**0.92**	**145**		**Pn**	**08 56 27.5**	**-0.9**
LSP					**Sn**	**08 56 41.1**	**+0.3**
LSP	**Las Mesas**	**0.92**	**145**	⇑*e*P	**Pn**	**08 56 27.5**	**-0.9**
LSP				*e*S	**Sn**	**08 56 41.1**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.06**	**151**		**Pn**	**08 56 29.5**	**-0.6**
CRPR					**Sb**	**08 56 44.8**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.06**	**151**	IAML		08 56 49.5	
	comp=N,345nm,0.6s						
CRPR				IAML		08 56 51.0	
	comp=N,442nm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.06**	**151**	⇑*e*Pg	**Pn**	**08 56 30.0**	**-0.1**
CRPR				⇑*e*Sg	**Sb**	**08 56 47.4**	**+3.5**
CRPR				IAML		08 56 50.8	
	comp=N,448nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.06**	**151**	⇑*e*P	**Pn**	**08 56 29.5**	**-0.6**
CRPR				*e*S	**Sb**	**08 56 44.8**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.06**	**151**	*i* P	**Pb**	**08 56 30.6**	**+0.1**
CRPR				*e*S	**Sb**	**08 56 47.9**	**+4.0**
CRPR				IAML		08 56 49.4	
	comp=Z,449nm,0.3s						
HIDR	**Higuey Centro**	**1.07**	**252**	⇑*e*Pg	**Pn**	**08 56 29.6**	**-0.8**
HIDR				⇑*e*Sg	**Sn**	**08 56 44.2**	**-0.2**
HIDR				IAML		08 56 47.5	
	comp=N,365nm,0.3s						
HIDR	**Higuey Centro**	**1.07**	**252**	⇑*e*P	**Pn**	**08 56 28.6**	**-1.7**
HIDR				*e*S	**Sn**	**08 56 41.6**	**-2.8**
UUPR	**Utuado, UPR, P**	**1.11**	**128**		**Pn**	**08 56 29.8**	**-1.1**
MLPR	**Magueyes Islan**	**1.12**	**149**		**Pn**	**08 56 30.8**	**-0.2**
MLPR				IAML		08 56 50.6	
	comp=N,334nm,0.5s						
MLPR				IAML		08 56 50.6	
	comp=N,329nm,0.2s						
GBPR	**Guanica, Bosqu**	**1.20**	**143**		**Pn**	**08 56 32.3**	**+0.2**
GBPR					**Sb**	**08 56 48.2**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.20**	**143**	⇑*e*P	**Pn**	**08 56 32.3**	**+0.2**
GBPR				*e*S	**Sb**	**08 56 48.2**	**+0.1**
CELP	**Cerrillos**	**1.33**	**130**		**Pn**	**08 56 33.7**	**-0.1**
CELP				IAML		08 56 57.1	
	comp=N,239nm,0.3s						
CELP				IAML		08 56 58.8	
	comp=N,195nm,0.3s						
OBIP	**Obispado Ponce**	**1.33**	**132**		**Pn**	**08 56 33.4**	**-0.5**
OBIP					**Sb**	**08 56 52.0**	**+0.3**
OBIP	**Obispado Ponce**	**1.33**	**132**	⇓*e*P	**Pn**	**08 56 33.4**	**-0.5**
OBIP				*e*S	**Sb**	**08 56 52.0**	**+0.3**
OBIP	**Obispado Ponce**	**1.33**	**132**	*i* P	**Pn**	**08 56 33.4**	**-0.5**
OBIP				*e*S	**Sb**	**08 56 52.7**	**+1.0**
OBIP				IAML		08 56 58.0	
	comp=Z,78nm,0.7s						
MIDR	**Miches**	**1.33**	**272**	⇑*e*Pg	**Pn**	**08 56 33.8**	**-0.1**
MIDR				⇑*e*Sg	**Sb**	**08 56 52.8**	**+1.0**
MIDR				IAML		08 56 54.5	
	comp=N,221nm,0.3s						
ECPR	**Experimental S**	**1.36**	**117**		**Pn**	**08 56 33.5**	**-0.9**
ECPR				IAML		08 57 01.5	
	comp=N,390nm,0.2s						
ECPR	**Experimental S**	**1.36**	**117**	⇑*e*P	**Pn**	**08 56 33.4**	**-0.9**
ECPR				*e*S	**Sn**	**08 56 52.0**	**+0.4**
GCPR	**Guaynabo City**	**1.61**	**113**		**Pn**	**08 56 38.4**	**+0.7**
GCPR					**Sb**	**08 56 59.0**	**-0.8**
GCPR	**Guaynabo City**	**1.61**	**113**	⇓*e*P	**Pn**	**08 56 38.4**	**+0.7**
GCPR				*e*S	**Sb**	**08 56 59.0**	**-0.8**
SJG	**San Juan**	**1.64**	**120**		**Pn**	**08 56 37.9**	**-0.3**
SJG	**San Juan**	**1.64**	**120**	IAML		08 57 04.9	
	comp=N,144nm,0.3s						
SJG				IAML		08 57 06.5	
	comp=N,144nm,0.4s						
SJG	**San Juan**	**1.64**	**120**	⇑*e*P	**Pn**	**08 56 37.9**	**-0.3**
SJG				*e*S	**Sn**	**08 56 57.9**	**-0.6**
SJG	**San Juan**	**1.64**	**120**	*i* P	**Pn**	**08 56 37.8**	**-0.4**
SJG				*e*S	**Sb**	**08 57 01.4**	**+0.7**
SJG				IAML		08 57 03.6	
	comp=Z,101nm,0.3s						
DR12	**Loma Pena Alta**	**1.65**	**265**		**Pn**	**08 56 39.5**	**+1.2**
HATOM	**Hato Mayor del**	**1.65**	**265**	⇓*e*Pg	**Pb**	**08 56 39.9**	**-0.8**
HATOM				⇑*e*Sg	**Sb**	**08 57 01.3**	**+0.2**
HATOM				IAML		08 57 07.2	
	comp=N,77nm,0.8s						
PDPR	**Patillas Dam,**	**1.79**	**120**	Pn	**Pn**	**08 56 40.2**	**0.0**
HUMP	**Col San Antoni**	**1.88**	**115**		**Pn**	**08 56 41.6**	**+0.1**
HUMP					**Sn**	**08 57 05.5**	**+1.1**
HUMP	**Col San Antoni**	**1.88**	**115**	IAML		08 57 12.0	
	comp=N,103nm,0.2s						
HUMP	**Col San Antoni**	**1.88**	**115**	⇑*e*P	**Pn**	**08 56 41.6**	**+0.1**
HUMP				*e*S	**Sn**	**08 57 05.5**	**+1.1**
DR08	**Loma La Naviza**	**2.25**	**271**	⇑*e*Pg	**Pn**	**08 56 48.1**	**+1.5**
DR08				⇑*e*Sg	**Sb**	**08 57 19.1**	**+0.7**
DR08				IAML		08 57 23.4	
	comp=N,1μm,0.2s						
CUPR	**Culebra, Puert**	**2.33**	**105**	Pn	**Pn**	**08 56 47.6**	**0.0**
BANI	**BANI**	**2.63**	**259**	Pn	**Pb**	**08 56 56.0**	**-1.4**
BANI	**BANI**	**2.63**	**259**	⇑*e*Pg	**Pb**	**08 56 56.1**	**-1.3**
BANI				IAML		08 57 37.6	
	comp=N,68nm,0.3s						
SDDR	**Presa de Saban**	**3.45**	**271**	Pn	**Pn**	**08 57 05.8**	**+2.7**
SDDR				IAML		08 58 03.9	
	comp=N,37nm,0.9s						

*AEIC **05** 09:25:11.3±1.0, 51.9N±0.1×171.35W±0.08, h30km±9km, Error ellipse: s-maj=21.8km s-min=2.9km az=161.0*

NEIC 05 09:25:11.7±1.1**, 51.9N**±0.1×**171.39W**±0.09**, h35km**±2km**, ML3.5**/12**, ML3.1**(AEIC)**, Error ellipse: s-maj=26.8km s-min=3.1km az=160.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**1.27**	**45**		Pn	09 25 32.1	-0.8
CLES					Sn	09 25 49.8	+1.0
CLCO	**Concord Point,**	**1.33**	**50**		Pn	09 25 33.4	-0.3
CLCO					Sn	09 25 51.0	+0.9
KOSE	**Korovin Southe**	**1.69**	**285**		Pn	09 25 38.3	-0.4
KOFP	**Korovin Flat P**	**1.71**	**283**		Pn	09 25 38.7	-0.3
KOFP					Sn	09 26 00.5	+0.9
ATKA	**Atka Island**	**1.75**	**280**		Pn	09 25 39.0	-0.5
ATKA					Sn	09 25 59.6	-1.0
ATKA				IAML		09 26 02.9	
	comp=E,200nm,0.7s						
KOKL	**Mount Kliuchef**	**1.78**	**284**		Pn	09 25 39.9	0.0
KOKL					Sn	09 26 01.9	+0.6
NIKH	**Nikolski High**	**1.86**	**55**		Pn	09 25 40.5	-0.5
NIKH					Sn	09 26 02.6	-0.7
NIKH				IAML		09 26 07.8	
	comp=E,456nm,0.6s						
OKFG	**Magazine Ridge**	**2.58**	**54**		Pn	09 25 51.3	+0.4
GSMY	**Great Sitkin M**	**2.89**	**274**		Pn	09 25 55.1	0.0
GSMY					Sn	09 26 29.4	+0.8
GSTD	**Great Sitkin T**	**2.94**	**274**		Pn	09 25 55.7	-0.2
GSTD					Sn	09 26 30.4	+0.3
GSCK	**Great Sitkin C**	**2.95**	**273**		Pn	09 25 56.1	+0.1
GSCK					Sn	09 26 29.8	-0.5
ETKA	**Kagalaska Isla**	**3.11**	**271**		Pn	09 25 58.4	+0.2
ETKA					Sn	09 26 33.1	-1.0
ADAG	**Mount Adagdak**	**3.23**	**273**		Pn	09 25 59.5	-0.2
ADK	**Adak**	**3.28**	**271**		Pn	09 26 00.9	+0.4
ADK					Sn	09 26 37.8	-0.4
ADK	**Adak**	**3.28**	**271**	IAML		09 26 46.8	
	comp=E,128nm,0.7s						
ADK				IAML		09 26 48.2	
	comp=E,127nm,0.8s						
MREP	**Makushin Rep't**	**3.38**	**54**		Pn	09 26 01.7	-0.3
MNAT	**Makushin Natee**	**3.45**	**54**		Pn	09 26 02.7	-0.2
UNV	**Unalaska Valle**	**3.52**	**55**		Pn	09 26 03.6	-0.2
KIWB	**Kanaga Island**	**3.57**	**271**		Pn	09 26 04.7	+0.2
KIWB					Sn	09 26 45.6	+0.1
KIWB				IAML		09 26 54.2	
	comp=E,107nm,0.7s						
KIWB				IAML		09 26 57.9	
	comp=N,126nm,1.1s						
SDPT	**Sand Point**	**7.33**	**58**	Pn	Pn	09 26 54.7	-1.4
M14K	**Bethel**	**10.26**	**27**	Pn	Pn	09 27 36.1	0.0
N15K	**Kwethluk River**	**10.38**	**33**	Pn	Pn	09 27 37.9	+0.1
P16K	**Nushagak River**	**10.39**	**42**	Pn	Pn	09 27 38.5	+0.6
O16K	**Kokwok River B**	**10.70**	**39**	Pn	Pn	09 27 43.1	+0.8

AFAD 05 09:40:13.4, 39.47N×28.17E, h7km±4km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.27**	**62**	P	Pg	09 40 18.7	-0.1
DURS				S	Sb	09 40 26.6	+1.0
BKES	**Balkesir-Mer**	**0.32**	**325**	P	Pg	09 40 14.2	-5.4
BKES				S	Sb	09 40 25.4	-1.4
STEP	**BALIKESIR_Sava**	**0.36**	**255**	P	Pg	09 40 19.9	-0.5
STEP				S	Sb	09 40 26.9	-1.1
STEP				IAML		09 40 27.0	
	comp=N,81nm,0.9s						
STEP				IAML		09 40 31.0	
	comp=E,95nm,0.7s						
BLKS	**Balkesir-Sus**	**0.43**	**339**	P	Pg	09 40 20.3	-1.4
BLKS				S	Sg	09 40 28.7	+1.3
DEMI	**Demirci**	**0.61**	**135**	P	Pg	09 40 25.2	+0.1
DEMI				S	Sb	09 40 34.6	-0.5
DEMI				IAML		09 40 38.0	
	comp=E,23nm,0.6s						
DEMI				IAML		09 40 40.0	
	comp=N,20nm,0.6s						
BAYC	**CANAKKALE_Bayr**	**1.28**	**283**	P	Pn	09 40 37.4	-0.3
BAYC				S	Sn	09 40 55.7	+0.6
BAYC				IAML		09 41 01.0	
	comp=N,21nm,1.4s						
BAYC				IAML		09 41 05.0	
	comp=E,40nm,2.8s						

ISK 05 09:41:02.2, 38.93N×27.86E, h5km, ML1.4/5**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.06**	**212**	Pg	Pg	09 41 04.0	+0.3
AKS				Sg	Sg	09 41 05.5	+0.8
GORD	**Gordes-Manisa**	**0.25**	**95**	Pg	Pg	09 41 07.8	+0.7
GORD				Sg	Sg	09 41 11.9	+1.4
SOMA	**Soma-Manisa**	**0.34**	**312**	Pg	Pg	09 41 09.4	+0.7
SOMA				Sg	Sg	09 41 14.6	+1.4
YAYO	**Edremit-Balk**	**0.91**	**318**	Pg	Pb	09 41 20.2	-0.3
SUSR	**Susurluk-Balik**	**1.05**	**10**	Pg	Pb	09 41 22.7	-0.1

IDC 05 09:44:52.5±9.4**, 8.87S×150.84E, h0km, mb3.3**/2**, mbtmp3.4**/3**, ML3.3**/1**, Error ellipse: s-maj=267.5km s-min=36.8km az=112.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.39**	**234**	P	Pn	09 49 21.1	-0.1
	0.1nm,0.3s,baz=61,slow=10,SNR=6.6						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**21.89**	**226**	P	P	09 49 46.6	-0.7
	0.7nm,0.7s,baz=58,slow=9.0,SNR=8.2						
	0.7nm,0.7s						
SONM	**Songino Array**	**68.77**	**330**	P	P	09 55 58.5	0.0
	0.3nm,0.6s,baz=123,slow=5.3,SNR=2.4						
	0.3nm,0.6s						

*NNC **05** 09:48:09.5±0.4, 42.80N×77.88E, h0km, mb2.3, mpv2.6, Error ellipse: s-maj=4.8km s-min=1.5km az=179.0*

*KRNET **05** 09:48:09.6±0.1, 42.81N×77.87E, h10km, mb2.6*

*SOME **05** 09:48:10.3, 42.83N×77.87E, h5km*

ISC 05 09:48:09.8±1.1**, 42.81N**±0.03×**77.87E**±0.02**, h6km**±11km**, n22, σ0s31**/43**, 2C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.47**	**57**	P	**Pg**	**09 48 19.0**	**+0.3**
	4.1nm,0.2s						
SATY				S	**Sg**	**09 48 25.6**	**+0.7**
	7.9nm,0.1s						
MDOK	**Medeo**	**0.70**	**301**	Pg	**Pg**	**09 48 23.2**	**-0.1**
	2.9nm,0.3s						
MDOK				Lg	Lg	09 48 32.8	
	10nm,0.4s						
TNSS	**Tian-Shan**	**0.72**	**289**	P	**Pg**	**09 48 23.7**	**+0.1**
	1.6nm,0.2s						
TNSS				S	**Sg**	**09 48 33.8**	**+0.8**
	2.0nm,0.3s						
TNSS	**Tian-Shan**	**0.72**	**289**	*e*P	**Pg**	**09 48 23.7**	**+0.1**
	1.6nm,0.2s						
TNSS				*e*S	**Sg**	**09 48 33.8**	**+0.8**
	2.0nm,0.3s						
KPKS	**Kokpek**	**0.89**	**42**	*e*P	**Pg**	**09 48 26.6**	**-0.2**
	0.1nm,0.2s						
KPKS				*e*S	**Sg**	**09 48 38.2**	**-0.1**
	3.4nm,0.3s						
UZB	**Uzynbulak**	**0.91**	**68**	P	**Pg**	**09 48 26.9**	**-0.3**
	3.9nm,0.2s						
UZB				S	**Sg**	**09 48 39.1**	**+0.1**
	4.4nm,0.1s						
UZB	**Uzynbulak**	**0.91**	**68**	*e*P	**Pg**	**09 48 26.9**	**-0.3**
UZB				*e*S	**Sg**	**09 48 39.1**	**+0.1**
UZB	**Uzynbulak**	**0.91**	**68**	*e*P	**Pg**	**09 48 26.9**	**-0.3**
	3.9nm,0.2s						
UZB				*e*S	**Sg**	**09 48 39.1**	**+0.1**
	4.4nm,0.1s						
IZV	**Izvestkoviy**	**0.95**	**284**	P	**Pg**	**09 48 27.7**	**-0.4**
	13nm,0.1s						
IZV				S	**Sg**	**09 48 40.5**	**+0.1**
	11nm,0.3s						
IZV	**Izvestkoviy**	**0.95**	**284**	*e*P	**Pg**	**09 48 27.7**	**-0.4**
	13nm,0.1s						
IZV				*e*S	**Sg**	**09 48 40.5**	**+0.1**
	11nm,0.3s						
TARG	**Taragay, Kyrgy**	**1.08**	**183**	⇓*i*P	**Pg**	**09 48 30.5**	**0.0**
TARG				⇓*i*S	**Sg**	**09 48 44.5**	**0.0**
MTBS	**Maitube**	**1.11**	**287**	P	**Pg**	**09 48 30.5**	**-0.5**
	1.9nm,0.1s						
MTBS				S	**Sg**	**09 48 45.5**	**+0.1**
	4.4nm,0.1s						
MTBS	**Maitube**	**1.11**	**287**	*e*P	**Pg**	**09 48 30.8**	**-0.3**
	1.9nm,0.1s						
MTBS				*e*S	**Sg**	**09 48 45.5**	**+0.1**
	4.4nm,0.1s						
ULHL	**Ulahol**	**1.33**	**246**	⇑*i*P	**Pb**	**09 48 35.2**	**-0.1**
ULHL				⇑*i*S	**Sb**	**09 48 52.6**	**-0.1**
ARXS	**Arharly**	**1.41**	**359**	P	**Pb**	**09 48 36.3**	**-0.2**
	0.7nm,0.2s						
ARXS				S	**Sn**	**09 48 55.2**	**+0.2**
	1.9nm,0.1s						
ARXS	**Arharly**	**1.41**	**359**	*e*P	**Pb**	**09 48 36.3**	**-0.2**
	0.7nm,0.2s						
ARXS				*e*S	**Sn**	**09 48 55.2**	**+0.2**
	1.9nm,0.1s						
KST	**Kastek**	**1.42**	**280**	P	**Pb**	**09 48 36.6**	**-0.2**
	0.8nm,0.2s						
KST				S	**Sn**	**09 48 55.9**	**+0.4**
	3.6nm,0.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KST	**Kastek**	**1.42**	**280**	*e*P	**Pb**	**09 48 36.6**	**-0.2**
	0.8nm,0.2s						
KST				*e*S	**Sn**	**09 48 55.9**	**+0.4**
	3.6nm,0.2s						
BOOM	**Boomskoye usch**	**1.46**	**258**	⇓*i*P	**Pb**	**09 48 37.5**	**0.0**
BOOM				⇓*i*S	**Sn**	**09 48 56.5**	**0.0**
DGS	**Degeres**	**1.60**	**286**	P	**Pb**	**09 48 39.8**	**0.0**
	0.7nm,0.3s						
DGS				S	**Sg**	**09 49 01.1**	**-0.1**
	2.2nm,0.4s						
DGS	**Degeres**	**1.60**	**286**	*e*P	**Pb**	**09 48 39.8**	**0.0**
	0.7nm,0.3s						
DGS				*e*S	**Sg**	**09 49 01.1**	**-0.1**
	2.2nm,0.4s						
TKM2	**Tokmak 2**	**1.68**	**275**	⇓*i*P	**Pg**	**09 48 41.6**	**-0.3**
TKM2				⇓*i*S	**Sg**	**09 49 03.4**	**-0.3**

IDC 05 10:03:24.5±2.4**, 2°.25N×127°.12E, h0km, mb3.4**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=202.5km s-min=25.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.17**	**163**	P	P	10 08 32.3	-0.6
	0.6nm,0.5s,baz=342,slow=11,SNR=6.0						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.60**	**166**	P	P	10 09 05.3	+0.6
	0.4nm,0.5s,baz=337,slow=8.9,SNR=5.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	P	10 13 25.9	-0.1
	0.3nm,0.4s,baz=122,slow=8.0,SNR=7.7						
	0.3nm,0.4s						

*TRN **05** 10:05:10.4, 11°.37N×61°.87W, h138km, MD2.8, North-west of Trinidad.*

*FUNV **05** 10:05:11.6, 11°.29N×62°.40W, h10km, MW2.8, Presumed earthquake*

ISC 05 10:05:05.7±1.8**, 11°.31N**±0°.05×**62°.20W**±0°.07**, h154km**±14km**, n19, σ2s.18**/35**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRFF	**Grenada Fort F**	**0.86**	**32**	*e*P	**Pn**	**10 05 30.6**	**+0.8**
GRFF				*e*S	**Sn**	**10 05 46.7**	**-1.5**
DMDM	**Guralp CMG5TDE**	**0.88**	**134**	*e*P	**Pn**	**10 05 32.4**	**+2.5**
DMDM				*e*S	**Sn**	**10 05 47.9**	**-0.4**
PSKH	**Kent House, Po**	**0.91**	**133**	*e*P	**Pn**	**10 05 32.4**	**+2.3**
PSKH				*e*S	**Sn**	**10 05 48.5**	**-0.3**
PSMG	**Mucurapo Girls**	**0.91**	**134**	*e*P	**Pn**	**10 05 32.4**	**+2.3**
PSMG				*e*S	**Sn**	**10 05 48.1**	**-0.6**
GRGR	**Grenville**	**0.97**	**33**	*e*P	**Pn**	**10 05 31.3**	**+0.7**
GRGR				*e*S	**Sn**	**10 05 47.4**	**-2.3**
GRGR	**Grenville**	**0.97**	**33**	*e*P	**Pn**	**10 05 31.4**	**+0.7**
GRGR				*e*S	**Sn**	**10 05 48.8**	**-0.9**
GRW	**Mount Saint Ca**	**0.99**	**32**	*e*P	**Pn**	**10 05 33.1**	**+2.2**
GRW				*e*S	**Sn**	**10 05 47.9**	**-2.3**
TRN	**Trinidad (W)**	**1.02**	**130**	*e*P	**Pn**	**10 05 33.0**	**+2.0**
TRN				*e*S	**Sn**	**10 05 48.8**	**-1.5**
TRN	**Trinidad (W)**	**1.02**	**130**	*e*P	**Pn**	**10 05 33.2**	**+2.2**
TRN				*e*S	**Sn**	**10 05 49.4**	**-0.9**
GRSS	**Sisters**	**1.14**	**30**	*e*P	**Pn**	**10 05 33.0**	**+1.0**
GRSS				*e*S	**Sn**	**10 05 51.9**	**-0.3**
TPP	**Pointe-a-Pierr**	**1.23**	**143**	*e*P	**Pn**	**10 05 33.6**	**+0.8**
GCMP	**Grenada, Carri**	**1.39**	**33**	*e*P	**Pn**	**10 05 35.2**	**+0.8**
GCMP				*e*S	**Sn**	**10 05 55.0**	**-1.5**
TPR	**Prospect**	**1.40**	**95**	*e*P	**Pn**	**10 05 35.6**	**+1.0**
TPR				*e*S	**Sn**	**10 05 52.1**	**-4.5**
SVB	**Belmont**	**2.16**	**25**	*e*P	**Pn**	**10 05 45.7**	**+2.8**
PCRV	**Puerto La Cruz**	**2.65**	**245**	*e*P	**Pn**	**10 05 51.1**	**+2.2**
PCRV				*e*S	**Sn**	**10 06 18.8**	**-3.4**
MCLT	**Moule a Chique**	**2.68**	**27**	*e*P	**Pn**	**10 05 51.5**	**+2.2**
MCLT				*e*S	**Sn**	**10 06 20.4**	**-2.6**
SLBI	**Saint Lucia, B**	**2.95**	**24**	*e*P	**Pn**	**10 05 54.9**	**+2.3**
SLBI				*e*S	**Sn**	**10 06 25.7**	**-3.2**
CACV	**CAICARA DEL OR**	**5.67**	**229**	*e*P	**Pn**	**10 06 26.9**	**-1.3**
CACV				*e*S	Sn	10 07 23.3	-9.3
MAPV	**Macapo**	**6.33**	**257**	*e*P	**Pn**	**10 06 40.6**	**+3.7**
MAPV				*e*S	**Sn**	**10 07 46.2**	**-2.1**

*IDC **05** 10:43:04.0±0.8, 19°.91N×109°.39W, h0km, mb4.5/13, mbtmp4.6/18, ML3.6/6, MS4.6/61, Error ellipse: s-maj=27.3km s-min=13.0km az=64.0*

*MEX **05** 10:43:05.3±0.3, 19°.93N×109°.43W, h10km, MD5.0*

*NEIC **05** 10:43:06.4±1.8, 19°.89N±0°.09×109°.42W±0°.10, h10km±1km, mb5.1/337, Mww5.2/22, Error ellipse: s-maj=18.4km s-min=11.8km az=228.0*

*NEIC **05** 10:43:07.5, 19°.93N×109°.35W, h16km*

*NEIC **05** 10:43:07.5, 19°.93N×109°.35W, h16km, Moment Tensor Solution. Duration: 1s.1.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.02; $M_{\theta\theta}$-4.94; $M_{\phi\phi}$6.95; $M_{r\theta}$-0.48; $M_{\theta\phi}$4.59; $M_{\phi r}$1.25; Fault plane solution: $M_0$7.82000×10^{16} NP1: ϕ_s63.66000°, δ78.55000°, λ-3.65000°. NP2:ϕ_s154.38000°, δ86.42000°, λ-168.52000°. Principal axes: T 8.6158, Plg6.0000°, Azm289.0000°; N -1.9553, Plg78.0000°, Azm171.0000°; P -6.6606, Plg11.0000°, Azm20.0000°;*

*GCMT **05** 10:43:08.4±0.2, 20°.04N±0°.01×109°.30W±0°.01, h13km, MW5.2/140, Moment Tensor Solution. s82, c115; s140, c244; Duration: 1s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.20±.01; $M_{\theta\theta}$-0.58±.01; $M_{\phi\phi}$0.77±.02; $M_{r\theta}$-0.01±.03; $M_{\theta\phi}$0.47±.01; $M_{\phi r}$-0.14±.03; Best double couple: $M_0$0.83400×10^{17} NP1:ϕ_s243.00000°, δ83.00000°, λ2.00000°. NP2:ϕ_s152.00000°, δ88.00000°, λ173.00000°. Principal axes: T 0.9390, Plg7.0000°, Azm107.0000°; N -0.2110, Plg82.0000°, Azm317.0000°; P -0.7280, Plg4.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 10:43:05.1±0.4**, 19°.86N**±0°.04×**109°.64W**±0°.04**, h10km, n397, σ2s.11**/202**, mb5.0**/115**, MS4.6**/59**, 1D, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06N	**Isla Socorro**	**1.62**	**232**	*e*P	**Pn**	**10 43 33.1**	**-0.6**
H06S		**1.68**	**228**	*e*P	**Pn**	**10 43 34.1**	**-0.4**
H06S				*e*S	**Sn**	**10 43 55.1**	**-1.0**
SLBS	**Sierra La Lagu**	**3.82**	**356**		Pn	10 44 02.3	-1.7
SLBS	**Sierra La Lagu**	**3.82**	**356**	*e*P	Pn	10 44 00.9	-3.1
LPIG	**La Paz**	**4.27**	**352**	Pn	Pn	10 44 08.9	-1.2
	2.4nm,0.3s,baz=176,slow=2.8,SNR=7.5						
LPIG				Sn	**Sn**	**10 44 57.2**	**-2.7**
	0.7nm,0.3s,baz=87,slow=15,SNR=7.6						
LPIG				LR	LR	10 45 36.4	
	comp=Z,5μm,18.4s,baz=170,slow=36						
	93nm,0.8s						
LPIG	**La Paz**	**4.27**	**352**	*e*P	Pn	10 44 08.4	-1.7
LPIG				*e*S	**Sn**	**10 44 56.8**	**-3.1**
CJM	**Chamela**	**4.35**	**94**	*e*P	Pn	10 44 03.8	-7.4
MAIG	**Mazatlaan**	**4.46**	**42**	*e*P	Pn	10 44 08.7	-4.1
MAIG				*e*S	**Sn**	**10 44 58.1**	**-6.7**
ANIG	**Ahuacatlan**	**4.95**	**75**	*e*P	Pn	10 44 11.8	-7.8
ANIG				*e*S	Sn	10 44 58.2	-19
CDAR	**Ciudad de Arme**	**5.39**	**99**	*e*P	Pn	10 44 17.0	-8.7
SSIG	**Sanalona**	**5.45**	**25**	*i* P	Pn	10 44 23.5	-2.9
SSIG				*e*S	**Sn**	**10 45 31.9**	**+2.7**
CEGR	**Campo Tres**	**5.47**	**94**	*e*P	Pn	10 44 22.9	-4.0
EZ5V		**5.70**	**93**	*e*P	**Pn**	**10 44 27.3**	**-2.8**
TSIG	**Topolobambo**	**5.74**	**5**	*e*P	**Pn**	**10 44 29.4**	**-0.9**
TSIG				*e*S	**Sn**	**10 45 36.8**	**+0.5**
MMIG	**Aquila**	**6.16**	**104**	*e*P	Pn	10 44 27.6	-8.5
MMIG				*e*S	**Sn**	**10 45 41.6**	**-5.0**
PDIG	**Papasquiaro**	**6.48**	**37**	*e*P	Pn	10 44 35.8	-5.0
PDIG				*e*S	**Sn**	**10 45 54.6**	**-0.2**
CSIG	**Choix**	**7.03**	**9**	*i* P	**Pn**	**10 44 47.3**	**-0.9**
CSIG				*e*S	**Sn**	**10 46 09.6**	**+1.4**
ZAIG	**Zacatecas**	**7.20**	**65**		Pn	10 44 43.5	-7.3
ZAIG	**Zacatecas**	**7.20**	**65**	*e*P	Pn	10 44 43.2	-7.5
ZAIG				*e*S	**Sn**	**10 46 12.3**	**-0.5**
HPIG		**7.93**	**27**		**Pn**	**10 44 59.8**	**-0.9**
HPIG		**7.93**	**27**	*e*P	**Pn**	**10 45 00.1**	**-0.6**
HPIG				*e*S	**Sn**	**10 46 38.2**	**+7.6**
MOIG	**Morelia**	**7.96**	**90**	*e*P	**Pn**	**10 44 58.2**	**-3.0**
MOIG				*e*S	Sn	10 46 17.1	-14
ZIIG	**Zihuatanejo**	**8.06**	**105**	*e*P	Pn	10 44 53.4	-8.9
ZIIG				*e*S	Sb	10 46 49.7	-11
JRQG	**Juriquilla Cam**	**8.67**	**83**		**Pn**	**10 45 09.1**	**-1.8**
ARIG	**Puente Sto Nin**	**8.93**	**99**	*e*P	Pn	10 45 07.0	-7.2
ARIG				*e*S	Sn	10 47 21.0	+26
HSIG		**9.20**	**353**		**Pn**	**10 45 20.7**	**+2.8**
CAIG	**El Cayaco**	**9.32**	**106**	*i* P	Pn	10 45 15.2	-4.4
CAIG				*i* S	Sn	10 47 31.9	+27
MEIG	**Mezcala**	**9.68**	**100**	*e*P	Pn	10 45 19.9	-4.6
MEIG				*e*S	Sn	10 47 38.0	+25
PLIG	**Platanillo**	**9.70**	**97**	*e*P	Pn	10 45 19.9	-4.8
PLIG				*e*S	Sn	10 47 30.5	+17
UNM	**Universidad Na**	**9.88**	**91**	Pn	Pn	10 45 23.3	-4.1
UNM	**Universidad Na**	**9.88**	**91**	*e*P	**Pn**	**10 45 25.4**	**-2.1**
UNM				*e*S	Sn	10 47 46.2	+28
DAIG	**Los Arroyos**	**9.89**	**105**	*i* P	**Pn**	**10 45 25.4**	**-2.1**
DAIG				*e*S	Sn	10 47 33.2	+15
DEIG	**Demacu**	**9.98**	**86**	*e*P	Pn	10 45 22.7	-6.1
DEIG				*e*S	Sn	10 47 38.0	+17
YAIG	**Yautepec**	**10.03**	**94**	*e*P	Pn	10 45 24.0	-5.4
YAIG				*e*S	Sn	10 47 33.2	+11
GTIG	**Gomez Farias**	**10.26**	**70**	*e*P	Pn	10 45 25.4	-7.1
GTIG				*e*S	**Sn**	**10 47 31.9**	**+4.3**
PPM	**Popocatepetl**	**10.42**	**93**	*e*P	**Pn**	**10 45 32.9**	**-2.3**
PPM				*e*S	Sn	10 48 10.0	+38
CRIG	**Cruz Grande**	**10.46**	**106**	*i* P	**Pn**	**10 45 32.9**	**-2.3**
CRIG				*e*S	Sn	10 47 51.6	+19
LNIG	**Linares**	**10.66**	**60**	*e*P	Pn	10 45 30.8	-7.2
LNIG				*e*S	**Sn**	**10 47 43.5**	**+5.9**
TLIG	**Tlapa**	**10.74**	**100**		**Pn**	**10 45 36.2**	**-3.0**
TLIG	**Tlapa**	**10.74**	**100**	*e*P	Pn	10 45 35.6	-3.6
TLIG				*e*S	Sn	10 48 20.2	+41
TX31	**Lajitas Ar. Si**	**10.88**	**29**		**Pn**	**10 45 41.1**	**+0.1**
TXAR	**Lajitas Array**	**10.88**	**29**	Pn	**Pn**	**10 45 40.8**	**-0.3**
	0.4nm,0.3s,baz=200,slow=10,SNR=77						
TXAR				LR	LR	10 49 31.8	
	comp=Z,5μm,18.2s,baz=208,slow=36						
	72nm,1.0s						
MCIG	**Muzquiz**	**10.92**	**42**	*e*P	**Pn**	**10 45 41.0**	**-0.5**
MCIG				*e*S	**Sn**	**10 47 47.5**	**+3.7**
FTIG	**Fresnillo de T**	**11.07**	**98**	*i* P	**Pn**	**10 45 41.0**	**-2.6**
FTIG				*e*S	Sn	10 48 22.3	+35
HLIG	**Huajuapan de L**	**11.39**	**98**	*i* P	**Pn**	**10 45 45.8**	**-2.3**
HLIG				*e*S	Sn	10 48 54.2	+59
319A	**Douglas**	**11.47**	**2**		**Pn**	**10 45 51.3**	**+2.2**
PNIG	**Pinotepa**	**11.48**	**106**	*e*P	Pn	10 45 45.1	-4.0
PNIG				*e*S	Sn	10 48 11.3	+14
TXIG	**Tlaxiaco**	**11.55**	**101**	*i* P	Pn	10 45 45.1	-5.3
TXIG				*e*S	Sn	10 48 38.5	+39
VHRN	**Van Horn**	**11.66**	**20**		**Pn**	**10 45 51.0**	**-0.8**
TPIG	**Tehuac#an**	**11.69**	**95**	*i* P	**Pn**	**10 45 49.9**	**-2.4**
TPIG				*e*S	Sn	10 48 46.7	+44
ALPN	**Alpine**	**11.79**	**26**		**Pn**	**10 45 53.4**	**-0.2**
YOIG	**Yosondua**	**11.87**	**103**	*e*P	Pn	10 45 47.8	-6.9
YOIG				*e*S	Sn	10 48 27.0	+20
TOIG	**Toxpalan**	**12.03**	**96**	*i* P	Pn	10 45 53.3	-3.5
TOIG				*e*S	Sn	10 48 51.5	+40
SFX	**San Felipe**	**12.08**	**338**		**Pn**	**10 45 57.7**	**+0.4**
SAND	**Sanderson**	**12.14**	**33**		**Pn**	**10 45 58.0**	**-0.2**
PIX	**Pinacate**	**12.15**	**344**	Pn	**Pn**	**10 45 59.4**	**+1.2**
EPT	**El Paso**	**12.19**	**13**		**Pn**	**10 46 00.1**	**+1.1**
TPB01	**Permian Basin**	**12.24**	**24**		**Pn**	**10 46 00.0**	**+0.4**
HBVL	**Hebbronville**	**12.36**	**52**		**Pn**	**10 45 59.5**	**-1.7**
214A	**Organ Pipe Nat**	**12.38**	**347**		**Pn**	**10 46 03.7**	**+2.3**
MNTX	**Cornudas Mount**	**12.39**	**17**		**Pn**	**10 46 02.0**	**+0.4**
TPB05	**Hovey Rd**	**12.40**	**26**		**Pn**	**10 46 02.4**	**+0.6**
TUC	**Tucson**	**12.44**	**356**		**Pn**	**10 46 04.6**	**+2.3**
LVIG	**Laguna Verde**	**12.45**	**88**	*e*P	Pn	10 45 51.9	-11
LVIG				*e*S	Sn	10 49 01.7	+40
PEIG	**Puerto Escondi**	**12.49**	**106**	*e*P	Pn	10 45 56.0	-7.1
PEIG				*e*S	Sn	10 48 33.8	+11
VHO	**Vista Hermosa**	**12.56**	**101**	*e*P	Pn	10 45 58.7	-5.4
VHO				*e*S	Sn	10 49 09.2	+45
DRIO	**Del Rio**	**12.56**	**39**		**Pn**	**10 46 03.5**	**-0.5**
833A	**Chaparral WMA,**	**12.59**	**46**		**Pn**	**10 46 02.9**	**-1.3**
PECS	**Pecos**	**12.59**	**23**		**Pn**	**10 46 04.8**	**+0.5**
DUN6	**Lazy B Ranch**	**12.65**	**2**	Pn	**Pn**	**10 46 07.3**	**+2.0**
121A	**Cookes Peak, D**	**12.73**	**7**		**Pn**	**10 46 08.6**	**+2.2**
VTX	**Valle De La Tr**	**12.74**	**335**		**Pn**	**10 46 08.1**	**+1.6**
MNHN	**Monahans**	**13.00**	**27**		**Pn**	**10 46 10.3**	**+0.3**
NEUV	**Arroyo Zacate**	**13.28**	**97**	*e*P	Pn	10 46 05.5	-8.3
NEUV				*e*S	**S**	**10 49 14.6**	**+8.5**
113A	**Mohawk Valley,**	**13.37**	**345**	Pn	**Pn**	**10 46 17.6**	**+2.6**
OZNA	**Ozona**	**13.43**	**33**		**Pn**	**10 46 15.5**	**-0.3**
HNDO	**Hondo**	**13.46**	**42**		**Pn**	**10 46 15.7**	**-0.4**
EF02	**Christine**	**13.46**	**47**	Pn	**Pn**	**10 46 15.1**	**-1.1**
HUIG	**Huatulco**	**13.51**	**105**	*e*P	Pn	10 46 12.3	-4.7
HUIG				*e*S	**S**	**10 49 18.7**	**+7.7**
YUH	**Yuha Desert**	**13.92**	**337**		**Pn**	**10 46 24.5**	**+2.0**
128A	**Castleberry Fa**	**14.23**	**25**		**Pn**	**10 46 26.3**	**-0.5**
BAR	**Barrett**	**14.23**	**335**		**Pn**	**10 46 28.7**	**+1.9**
EF04	**Eagle Ford 04**	**14.24**	**47**	Pn	**Pn**	**10 46 25.1**	**-1.7**
CMIG	**Matias Romero**	**14.27**	**99**	Pn	**Pn**	**10 46 26.3**	**-1.0**
	0.4nm,0.3s,baz=284,slow=9.9,SNR=43						
CMIG				LR	LR	10 51 31.0	
	comp=Z,8μm,18.0s,baz=289,slow=36						
	52nm,1.2s						
CMIG	**Matias Romero**	**14.27**	**99**	*e*P	Pn	10 46 21.2	-6.2
CMIG				*e*S	S	10 50 03.6	+37
129A	**Stewart Farms,**	**14.50**	**27**		**Pn**	**10 46 30.2**	**-0.2**
UXUV	**UXUV**	**14.91**	**97**	*i* P	Pn	10 46 30.0	-6.0
UXUV				*e*S	S	10 50 24.6	+45
PFO	**Pinyon Flats O**	**14.98**	**337**	Pn	**Pn**	**10 46 38.5**	**+1.5**
	0.1nm,0.3s,baz=156,slow=14,SNR=7.4						
PFO				LR	LR	10 51 32.6	
	comp=Z,5μm,21.3s,baz=148,slow=34						
	10nm,1.0s						
PMD	**Palm Desert**	**14.98**	**338**		**Pn**	**10 46 38.4**	**+1.4**
DNR	**Dunn Ranch,Anz**	**15.00**	**337**		**Pn**	**10 46 38.8**	**+1.4**
DNR				IAmb	IAmb	10 46 45.9	
	comp=Z,56nm,1.3s						
W18A	**Petrified Fore**	**15.20**	**360**	IAmb	IAmb	10 46 48.3	
	comp=Z,101nm,1.5s						
ANMO	**Albuquerque**	**15.29**	**10**	Pn	**Pn**	**10 46 42.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=180,slow=13,SNR=28						
ANMO				LR	LR	10 52 13.6	
	comp=Z,2μm,20.7s,baz=192,slow=36						
	comp=Z,8.6nm,1.0s						
ANMO	**Albuquerque**	**15.29**	**10**		**Pn**	**10 46 42.4**	**+1.1**
SN07	**Snyder 07**	**15.32**	**29**	IAmb	IAmb	10 46 48.2	
	comp=Z,93nm,1.3s						
ABTX	**Abilene, Hawle**	**15.54**	**33**		**Pn**	**10 46 43.0**	**-1.5**
ABTX				IAmb	IAmb	10 46 50.5	
	comp=Z,166nm,1.3s						
WUAZ	**Wupatki**	**15.67**	**355**	IAmb	IAmb	10 46 55.2	
	comp=Z,95nm,1.1s						
APMT	**Aspermont**	**15.87**	**30**	IAmb	IAmb	10 46 50.2	
	comp=Z,130nm,1.4s						
TGIG		**15.98**	**98**	*e*P	Pn	10 46 42.9	-7.3
TGIG				*e*S	**Sn**	**10 49 54.0**	**+6.5**
WHTX	**Lake Whitney,**	**16.29**	**40**	IAmb	IAmb	10 46 55.2	
	comp=Z,119nm,1.2s						
AMTX	**Amarillo**	**16.54**	**24**		**Pn**	**10 46 56.5**	**-0.8**
AMTX				IAmb	IAmb	10 47 03.6	
	comp=Z,185nm,1.4s						
FW13	**Cleburne**	**16.56**	**39**	IAmb	IAmb	10 46 58.5	
	comp=Z,179nm,1.4s						
PH02	**Texas Public H**	**16.89**	**22**	IAmb	IAmb	10 47 05.9	
	comp=Z,141nm,1.4s						
FW06	**Azle**	**16.94**	**37**		**Pn**	**10 47 01.1**	**-1.2**
CCIG	**Comitan**	**17.02**	**99**		**Pn**	**10 46 59.5**	**-4.0**
CCIG				IAmb	IAmb	10 47 09.5	
	comp=Z,302nm,1.6s						
CCCA	**Chr Cany lake**	**17.02**	**338**	IAmb	IAmb	10 47 08.9	
	comp=Z,242nm,1.9s						
LRMC	**Laurel Mtn Rad**	**17.10**	**337**	IAmb	IAmb	10 47 09.5	
	comp=Z,158nm,1.8s						
SMWD	**Samnorwood**	**17.31**	**27**	IAmb	IAmb	10 47 11.0	
	comp=Z,152nm,1.1s						
MVCO	**Mesa Verde**	**17.32**	**3**	IAmb	IAmb	10 47 11.3	
	comp=Z,190nm,1.3s						
KNB	**Kanab**	**17.32**	**351**	IAmb	IAmb	10 47 16.2	
	comp=Z,218nm,1.8s						
Z35A	**Perchaven, San**	**17.38**	**37**	IAmb	IAmb	10 47 11.3	
	comp=Z,228nm,1.4s						
RTBA	**Rita Blanca**	**17.59**	**19**	IAmb	IAmb	10 47 14.2	
	comp=Z,262nm,1.4s						
T25A	**Trinidad**	**17.81**	**14**	IAmb	IAmb	10 47 22.8	
	comp=Z,295nm,1.6s						
VES	**Vestal, Richgr**	**17.96**	**334**	IAmb	IAmb	10 47 22.5	
	comp=Z,252nm,1.7s						
X34A	**Smith Ranch, M**	**18.03**	**33**	IAmb	IAmb	10 47 19.6	
	comp=Z,174nm,1.3s						
PV05	**Paradox Valley**	**18.16**	**1**	IAmb	IAmb	10 47 29.1	
	comp=Z,155nm,1.3s						
SDCO	**Great Sand Dun**	**18.18**	**11**	P	**Pn**	**10 47 18.7**	**+0.8**
SDCO				IAmb	IAmb	10 47 23.9	
	comp=Z,137nm,1.4s						
PV13	**Radium Mtn., P**	**18.25**	**2**	IAmb	IAmb	10 47 29.3	
	comp=Z,123nm,1.5s						
PV02	**Paradox Valley**	**18.30**	**2**	IAmb	IAmb	10 47 23.4	
	comp=Z,115nm,1.3s						
PV18	**Skein Mesa, Pa**	**18.33**	**2**	IAmb	IAmb	10 47 23.8	
	comp=Z,312nm,1.8s						
441A	**DeRidder**	**18.38**	**51**	IAmb	IAmb	10 47 21.2	
	comp=Z,135nm,1.2s						
PV11	**David Mesa, Pa**	**18.39**	**2**	IAmb	IAmb	10 47 24.4	
	comp=Z,159nm,1.6s						
PV19	**Morning Glory**	**18.39**	**2**	IAmb	IAmb	10 47 24.5	
	comp=Z,277nm,1.7s						
PV16	**Nyswonger Mesa**	**18.40**	**2**	IAmb	IAmb	10 47 24.6	
	comp=Z,132nm,1.6s						
PV12	**Saucer Basin,**	**18.41**	**2**	IAmb	IAmb	10 47 31.1	
	comp=Z,145nm,1.3s						
PV20	**West Nyswonger**	**18.43**	**2**	IAmb	IAmb	10 47 30.4	
	comp=Z,136nm,1.1s						
PV10	**Paradox Valley**	**18.46**	**1**	IAmb	IAmb	10 47 29.8	
	comp=Z,150nm,1.2s						
ELIS	**Ellis County**	**18.48**	**27**	IAmb	IAmb	10 47 23.6	
	comp=Z,229nm,1.4s						
PV04	**Paradox Valley**	**18.48**	**2**	IAmb	IAmb	10 47 25.9	
	comp=Z,225nm,1.8s						
PV07	**Paradox Valley**	**18.53**	**2**	IAmb	IAmb	10 47 32.4	
	comp=Z,136nm,1.6s						
PV23	**Carpenter Ridg**	**18.53**	**2**	IAmb	IAmb	10 47 26.4	
	comp=Z,102nm,1.2s						
Z38A	**Mt. Pleasant**	**18.68**	**41**	IAmb	IAmb	10 47 32.2	
	comp=Z,88nm,1.2s						
FNO	**Franklin**	**18.76**	**33**	IAmb	IAmb	10 47 25.8	
	comp=Z,190nm,1.2s						
APG	**El Apazote**	**18.92**	**102**	P	**P**	**10 47 25.4**	**-1.1**
	baz=213,slow=16,SNR=15						
APG				LR	LR	10 53 52.4	
	comp=Z,156nm,19.8s,baz=234,slow=35						
W35A	**Tecumseh**	**18.95**	**34**	IAmb	IAmb	10 47 27.0	
	comp=Z,114nm,1.2s						
CROK	**Carrier**	**19.48**	**29**	IAmb	IAmb	10 47 34.7	
	comp=Z,168nm,1.4s						
P17A	**Butcher Ranch,**	**19.57**	**357**	IAmb	IAmb	10 47 39.3	
	comp=Z,112nm,1.4s						
DEOK	**Depew**	**19.68**	**33**	IAmb	IAmb	10 47 36.0	
	comp=Z,111nm,1.2s						
P18A	**Preston Nutter**	**19.71**	**359**	IAmb	IAmb	10 47 42.0	
	comp=Z,178nm,1.3s						
SAO	**San Andreas Ge**	**19.76**	**331**	IAmb	IAmb	10 47 40.4	
	comp=Z,137nm,1.6s						
OK048	**Pawnee Station**	**19.90**	**31**	IAmb	IAmb	10 47 39.0	
	comp=Z,158nm,1.2s						
NV11	**Mina Array Sit**	**19.93**	**340**	IAmb	IAmb	10 47 45.0	
	comp=Z,88nm,1.6s						
NVAR	**Mina Array Bea**	**19.97**	**340**	P	**P**	**10 47 40.0**	**+2.2**
	comp=Z,4.8nm,0.9s,baz=166,slow=14,SNR=22						
NVAR				LR	LR	10 54 52.6	
	comp=Z,2μm,20.1s,baz=150,slow=36						
	comp=Z,4.8nm,0.9s						
NVAR	**Mina Array Bea**	**19.97**	**340**	P	**P**	**10 47 39.3**	**+1.5**
BLOK	**Blackwell**	**20.05**	**30**	IAmb	IAmb	10 47 41.5	
	comp=Z,182nm,1.3s						
TEIG	**Tepich**	**20.08**	**85**	P	**P**	**10 47 36.4**	**-2.4**
TEIG				IAmb	IAmb	10 47 40.3	
	comp=Z,227nm,1.6s						
TEIG	**Tepich**	**20.08**	**85**	P	**P**	**10 47 37.5**	**-1.3**
	comp=Z,6μmcomp=Z,6μmcomp=Z,216nm,1.9s						
TUL3	**Leonard**	**20.10**	**34**	IAmb	IAmb	10 47 40.7	
	comp=Z,84nm,1.2s						
MTO3	**Montecristo**	**20.12**	**102**	IAmb	IAmb	10 47 43.1	
	comp=Z,169nm,1.4s						
WLAR	**White Oak Lake**	**20.15**	**44**	IAmb	IAmb	10 47 40.5	
	comp=Z,90nm,1.1s						
ISCO	**Idaho Springs**	**20.17**	**9**		**P**	**10 47 40.1**	**+0.1**
O20A	**White River Ci**	**20.24**	**3**		**P**	**10 47 41.3**	**+0.6**
O20A				IAmb	IAmb	10 47 51.0	
	comp=Z,149nm,1.3s						
MHC	**Mount Hamilton**	**20.32**	**332**	P	**P**	**10 47 42.8**	**+1.3**
MHC				IAmb	IAmb	10 47 50.5	
	comp=Z,120nm,1.5s						
DUG	**Dugway, Tooele**	**20.45**	**353**	IAmb	IAmb	10 47 58.6	
	comp=Z,104nm,1.1s						
BSUT	**Blindstream Ca**	**20.63**	**358**	IAmb	IAmb	10 47 53.8	
	comp=Z,78nm,1.2s						
JRSC	**Jasper Ridge**	**20.65**	**330**	IAmb	IAmb	10 47 55.4	
	comp=Z,197nm,1.6s						
RLO	**Rose Lookout**	**20.70**	**35**	IAmb	IAmb	10 47 49.4	
	comp=Z,150nm,1.4s						
143A	**Socs Landing,**	**20.72**	**48**	P	**P**	**10 47 44.3**	**-1.4**
PNTR	**Pine Nut**	**21.00**	**338**		**P**	**10 47 50.6**	**+1.6**
PNTR				IAmb	IAmb	10 48 01.0	
	comp=Z,47nm,0.9s						
U38A	**Gravette**	**21.25**	**36**		**P**	**10 47 49.5**	**-1.9**
U38A				IAmb	IAmb	10 47 55.0	
	comp=Z,113nm,1.3s						
UALR	**University of**	**21.33**	**42**	P	**P**	**10 47 50.5**	**-1.8**
UALR				IAmb	IAmb	10 47 56.4	
	comp=Z,73nm,1.1s						
MPK	**Martis Peak**	**21.34**	**337**	IAmb	IAmb	10 48 04.6	
	comp=Z,80nm,1.1s						
ELK	**Elko**	**21.36**	**348**	P	**P**	**10 47 55.0**	**+2.2**
	comp=Z,7.4nm,0.9s,baz=178,slow=9.1,SNR=24						
ELK				LR	LR	10 55 53.8	
	comp=Z,846nm,20.2s,baz=171,slow=36						
	comp=Z,7.4nm,0.9s						
HHAR	**Hobbs**	**21.39**	**37**	IAmb	IAmb	10 47 56.4	
	comp=Z,91nm,1.2s						
346A	**Big Creek Wild**	**21.47**	**54**	P	**P**	**10 47 52.5**	**-1.3**
CVS	**Carmenet Viney**	**21.52**	**332**	IAmb	IAmb	10 48 05.3	
	comp=Z,102nm,1.2s						
HWUT	**Hardware Ranch**	**21.74**	**356**	IAmb	IAmb	10 48 09.9	
	comp=Z,108nm,1.4s						
TGUH	**Tegucigalpa,Un**	**22.15**	**102**	P	**P**	**10 48 00.5**	**-0.9**
TGUH	**Tegucigalpa,Un**	**22.15**	**102**	P	**P**	**10 48 01.5**	**+0.1**
	comp=Z,3μmcomp=Z,2μmcomp=Z,171nm,1.5s						
KSU1	**Kansas State U**	**22.23**	**28**	IAmb	IAmb	10 48 04.6	
	comp=Z,55nm,1.1s						
PD31	**Pinedale Array**	**22.84**	**0**	IAmb	IAmb	10 48 16.2	
	comp=Z,57nm,1.4s						
PDAR	**Pinedale Array**	**22.84**	**0**	P	**P**	**10 48 09.1**	**+0.5**
	comp=Z,17nm,1.1s,baz=148,slow=8.6,SNR=54						
PDAR				LR	LR	10 57 06.6	
	comp=Z,612nm,19.4s,baz=176,slow=37						
	comp=Z,17nm,1.1s						
PDAR	**Pinedale Array**	**22.84**	**0**		**P**	**10 48 09.4**	**+0.8**
LCAR	**Lake Charles**	**22.90**	**41**	IAmb	IAmb	10 48 10.8	
	comp=Z,94nm,1.4s						
MGMO	**Mountain Grove**	**22.95**	**38**	IAmb	IAmb	10 48 10.9	
	comp=Z,78nm,1.5s						
OXF	**Oxford**	**23.11**	**47**	IAmb	IAmb	10 48 13.2	
	comp=Z,105nm,1.2s						
BGNE	**Belgrade**	**23.60**	**22**	IAmb	IAmb	10 48 20.1	
	comp=Z,82nm,1.1s						
MOOW	**Moose Ponds**	**23.84**	**358**	IAmb	IAmb	10 48 40.9	
	comp=Z,56nm,1.6s						
MFID	**Camas Ranch**	**24.05**	**349**	IAmb	IAmb	10 48 28.2	
	comp=Z,60nm,1.5s						
LRAL	**Lakeview Retre**	**24.08**	**52**	IAmb	IAmb	10 48 23.5	
	comp=Z,84nm,1.3s						
P38A	**Dawn**	**24.09**	**32**	IAmb	IAmb	10 48 21.7	
	comp=Z,42nm,1.0s						
BOAB	**BOACO BROADBAN**	**24.16**	**104**		**P**	**10 48 20.5**	**-1.2**
CCM	**Cathedral Cave**	**24.16**	**37**		**P**	**10 48 20.4**	**-1.1**
YBH	**Yreka Blue Hor**	**24.46**	**336**	LR	LR	10 57 21.8	
	comp=Z,97nm,19.4s,baz=136,slow=35						
RSSD	**Black Hills**	**24.64**	**10**		**P**	**10 48 26.2**	**+0.1**
RSSD				IAmb	IAmb	10 48 29.3	
	comp=Z,52nm,1.2s						
K05A	**Summer Lake**	**24.69**	**340**	IAmb	IAmb	10 48 44.8	
	comp=Z,47nm,1.1s						
L04D	**Klamath Falls**	**24.73**	**337**	IAmb	IAmb	10 48 40.9	
	comp=Z,36nm,1.3s						
L34A	**Svendsen Farm,**	**24.74**	**24**	IAmb	IAmb	10 48 58.3	
	comp=Z,26nm,1.0s						
WVT	**Waverly**	**25.08**	**45**		**P**	**10 48 27.8**	**-2.1**
WVT				IAmb	IAmb	10 48 32.1	
	comp=Z,46nm,1.2s						
DLMT	**Dillon**	**25.55**	**355**	IAmb	IAmb	10 48 58.5	
	comp=Z,49nm,1.7s						
JTS	**Las Juntas de**	**25.64**	**108**	LR	LR	10 56 52.3	
	comp=Z,734nm,21.1s,baz=315,slow=33						
JTS	**Las Juntas de**	**25.64**	**108**		**P**	**10 48 34.5**	**-0.6**
JTS				IAmb	IAmb	10 48 37.7	
	comp=Z,38nm,1.4s						
JTS	**Las Juntas de**	**25.64**	**108**	P	**P**	**10 48 34.3**	**-0.8**
	comp=Z,781nmcomp=Z,27nm,2.0s						
PINE	**Pine Mountain**	**25.67**	**341**	IAmb	IAmb	10 48 43.1	
	comp=Z,23nm,0.9s						

FPAL Fort Paine 25.81 51 IAmb IAmb 10 48 38.9
comp=Z,41nm,1.0s
SWET Sewanee 25.90 49 IAmb IAmb 10 48 39.3
comp=Z,46nm,1.1s
T47A Sharon Grove 26.05 44 IAmb IAmb 10 48 39.5
comp=Z,57nm,1.0s
ECSD EROS Data Cent 26.18 22 IAmb IAmb 10 48 43.4
comp=Z,78nm,1.6s
P43A Skaggs, Pawnee 26.23 37 IAmb IAmb 10 48 40.8
comp=Z,55nm,1.2s
OLIL Olney 26.47 40 IAmb IAmb 10 48 45.3
comp=Z,64nm,1.2s
U49A Red Boiling Sp 26.68 47 IAmb IAmb 10 48 47.5
comp=Z,51nm,1.6s
LAO LASA Array 26.90 5 IAmb IAmb 10 48 52.2
comp=Z,49nm,1.2s
T50A Nancy 27.59 46 IAmb IAmb 10 48 54.3
comp=Z,36nm,1.1s
E28A Huff 27.64 13 IAmb IAmb 10 48 55.9
comp=Z,85nm,1.6s
TKL Tuckaleechee C 27.66 50 LR LR 11 00 38.8
comp=Z,567nm,18.1s,baz=236,slow=38
TKL Tuckaleechee C 27.66 50 IAmb IAmb 10 48 53.9
comp=Z,62nm,1.3s
L42A Oliver, Polo 27.81 33 IAmb IAmb 10 48 54.4
comp=Z,62nm,1.2s
F33A 5 Mile Ranch, 28.15 20 IAmb IAmb 10 48 58.4
comp=Z,40nm,1.5s
JFWS Jewell Farm 28.19 31 IAmb IAmb 10 48 57.9
comp=Z,33nm,0.9s
V53A Saluda 28.36 51 IAmb IAmb 10 49 01.6
comp=Z,33nm,1.2s
S51A Beattyville 28.75 46 IAmb IAmb 10 49 03.6
comp=Z,33nm,1.0s
I40A Norwalk 28.76 29 IAmb IAmb 10 49 03.3
comp=Z,49nm,1.2s
SPMN Marine on St. 28.88 25 IAmb IAmb 10 49 04.5
comp=Z,52nm,1.4s
NEW Newport 28.97 350 LR LR 11 00 29.9
comp=Z,552nm,20.8s,baz=168,slow=36
O48B Farmland 29.20 41 IAmb IAmb 10 49 06.4
comp=Z,24nm,1.2s
U54A Nelsons Funny 29.46 50 IAmb IAmb 10 49 10.2
comp=Z,35nm,1.0s
V55A Taylorsville 29.61 52 IAmb IAmb 10 49 12.7
comp=Z,47nm,1.3s
G40A Rib Lake 30.01 28 IAmb IAmb 10 49 14.4
comp=Z,35nm,1.2s
W57A Gilead 30.24 54 IAmb IAmb 10 49 18.0
comp=Z,66nm,1.6s
Q52A Bidwell 30.33 45 IAmb IAmb 10 49 17.3
comp=Z,41nm,1.1s
AGMN Agassiz Nation 30.48 18 IAmb IAmb 10 49 19.5
comp=Z,50nm,1.2s
BLA Blacksburg 30.77 50 IAmb IAmb 10 49 21.7
comp=Z,42nm,1.1s
O52A Adamsville 31.21 44 IAmb IAmb 10 49 24.8
comp=Z,33nm,1.1s
F42A Maple Grove Fa 31.32 30 IAmb IAmb 10 49 25.0
comp=Z,35nm,1.1s
ULM Lac du Bonnet 32.24 17 P **P** **10 49 32.4 -1.1**
comp=Z,38nm,1.1s,baz=202,slow=9.1,SNR=24
ULM LR LR 11 02 43.8
comp=Z,1µm,18.5s,baz=184,slow=37
comp=Z,38nm,1.1s
TBO Thunder Bay 33.02 25 IAmb IAmb 10 49 40.2
comp=Z,20nm,1.0s
EDM Edmonton 33.42 356 IAmb IAmb 10 49 50.2
comp=Z,55nm,1.6s
SJCC San Jacinto, C 34.68 102 P **P** **10 49 55.0 -0.3**
comp=Z,50nm,1.3s
DBBC Dabeiba 34.85 107 P **P** **10 49 58.0 +1.2**
MVL Millersville 34.85 48 IAmb IAmb 10 49 57.1
comp=Z,52nm,1.4s
FFC Flin Flon 35.29 8 **P** **10 49 59.3 -0.8**
FFC IAmb IAmb 10 50 01.6
comp=Z,35nm,1.1s
BBB Bella Bella 35.34 340 LR LR 11 04 16.8
comp=Z,849nm,19.4s,baz=161,slow=36
SADO Sadowa 35.44 39 LR LR 11 03 22.3
comp=Z,720nm,19.7s,baz=258,slow=35
CBOC Ciudad Bolivar 35.52 108 P **P** **10 50 03.8 +1.1**
comp=Z,3µmcomp=Z,38nm,1.8s
YOTC Yotoco, Valle 36.08 112 P **P** **10 50 07.3 -0.2**
comp=Z,497nmcomp=Z,11nm,1.3s
JAMC Jamundi, Valle 36.17 113 P **P** **10 50 08.1 -0.2**
comp=Z,13nm,1.8s
OTAV Otavalo 36.24 119 **P** **10 50 08.0 -1.1**
OTAV Otavalo 36.24 119 *eP* **P** **10 50 06.8 -2.4**
OTAV Otavalo 36.24 119 P **P** **10 50 09.8 +0.6**
comp=Z,660nmcomp=Z,43nm,1.9s
BBAC Balboa, Cauca 36.28 115 P **P** **10 50 10.0 +0.7**
comp=Z,1µmcomp=Z,60nm,2.0s
POPC Popayan, Colom 36.51 114 P **P** **10 50 11.1 -0.1**
comp=Z,9.7nm,2.2s
GCUF Volcan Galeras 36.62 116 P **P** **10 50 13.8 +1.3**
OCAC Ocana 36.99 103 P **P** **10 50 13.9 -1.4**
comp=Z,778nmcomp=Z,16nm,1.2s
ORTC Ortega, Tolima 37.08 111 P **P** **10 50 16.4 +0.5**
comp=Z,755nmcomp=Z,33nm,1.2s
CASC Dorado de Casc 37.21 118 P **P** **10 50 18.6 +1.5**
comp=Z,1µmcomp=Z,49nm,1.8s
PRAC Prado 37.49 111 P **P** **10 50 19.2 -0.2**
comp=Z,18nm,2.1s
BARC Barichara 37.76 105 P **P** **10 50 22.0 +0.1**
comp=Z,634nmcomp=Z,28nm,1.2s
MCRA Macar, Loja 37.83 126 P **P** **10 50 22.2 -0.1**
comp=Z,435nmcomp=Z,13nm,1.5s
FLOC Florencia 37.87 114 P **P** **10 50 23.3 +0.7**
comp=Z,413nmcomp=Z,17nm,1.6s
WBO Williamsburg 37.89 41 IAmb IAmb 10 50 22.3
comp=Z,35nm,1.1s
PAMC Pamplona, Colo 37.90 104 P **P** **10 50 22.9 -0.5**
comp=Z,360nmcomp=Z,23nm,1.2s
CHIC Chingaza 38.10 109 P **P** **10 50 25.3 +0.4**
comp=Z,26nm,1.8s
RUSC La Rusia 38.13 106 P **P** **10 50 24.2 -1.1**
comp=Z,641nmcomp=Z,38nm,1.5s
VLDQ Val d'Or 38.33 35 IAmb IAmb 10 50 25.9
comp=Z,53nm,1.8s
MACC Macarena, Meta 39.15 112 P **P** **10 50 33.6 +0.3**
SDV Santo Domingo 39.23 100 LR LR 11 07 52.5
comp=Z,528nm,18.5s,baz=311,slow=38
SDV Santo Domingo 39.23 100 **P** **10 50 33.0 -1.3**
SDV IAmb IAmb 10 50 35.1
comp=Z,72nm,1.1s
SDV Santo Domingo 39.23 100 *eP* P 10 50 30.6 -3.6
SDV Santo Domingo 39.23 100 P **P** **10 50 33.8 -0.4**
comp=Z,3µmcomp=Z,974nmcomp=Z,66nm,1.5s
T35M Bob Quinn 40.10 343 P **P** **10 50 41.4 +0.7**
T35M IAmb IAmb 10 51 17.2
comp=Z,48nm,1.6s
FCC Fort Churchill 40.47 12 **P** **10 50 42.5 -1.1**
FCC IAmb IAmb 10 50 44.9
comp=Z,60nm,1.1s
ATAH Atahualpa 40.81 128 LR LR 11 03 59.0
comp=Z,2µm,21.0s,baz=302,slow=31
SJG San Juan 41.08 85 LR LR 11 09 37.8
comp=Z,238nm,18.8s,baz=300,slow=39
DLBC Dease Lake 41.30 344 LR LR 11 07 30.8
comp=Z,1µm,18.6s,baz=140,slow=36
YKA Yellowknife Ar 42.74 357 P **P** **10 51 01.8 -0.4**
comp=Z,4.6nm,0.9s,baz=177,slow=7.3,SNR=52
YKA LR LR 11 10 36.1
comp=Z,820nm,19.2s,baz=188,slow=39
comp=Z,4.6nm,0.9s
BATG Bathurst New B 44.63 42 **P** **10 51 16.7 -1.0**
NNA Nana 45.21 132 LR LR 11 06 15.3
comp=Z,1µm,20.5s,baz=316,slow=31
BLKN Baker Lake 45.37 8 **P** **10 51 22.6 -0.7**
BLKN IAmb IAmb 10 51 24.4
comp=Z,34nm,1.0s
RPN Rapa Nui 46.71 180 LR LR 11 06 22.2
comp=Z,552nm,21.4s,baz=1.0,slow=30
GBN Guysborough 46.98 46 **P** **10 51 34.9 -1.3**
SCHQ Schefferville 47.55 32 P P 10 51 38.1 -2.5
comp=Z,22nm,1.1s,baz=197,slow=5.2,SNR=10.0
SCHQ LR LR 11 12 00.2
comp=Z,762nm,18.6s,baz=247,slow=37
comp=Z,22nm,1.1s
KDAK Kodiak Island 49.13 331 LR LR 11 07 41.3
comp=Z,391nm,20.7s,baz=123,slow=30
SCRK Sand Creek 49.77 341 **P** **10 51 59.0 +1.3**
TEFE Tefe 49.93 113 *eP* **P** **10 51 57.9 -1.5**
F31M Tsiigehtchic 49.98 348 IAmb IAmb 10 52 03.6
comp=Z,35nm,1.5s
INK Inuvik 50.69 349 LR LR 11 15 27.5
comp=Z,448nm,21.2s,baz=170,slow=38
INK Inuvik 50.69 349 IAmb IAmb 10 52 12.0
comp=Z,24nm,1.1s
BOAV Boa Vista 50.98 104 **P** **10 52 06.0 -1.5**
BOAV IAmb IAmb 10 52 07.2
comp=Z,30nm,1.3s
BOAV Boa Vista 50.98 104 *eP* **P** **10 52 06.0 -1.5**
L22K Petersville 51.10 337 **P** **10 52 09.6 +1.9**
L22K IAmb IAmb 10 52 26.1
comp=Z,22nm,1.4s
ILAR Eielson Array 51.23 341 P **P** **10 52 08.9 +0.4**
comp=Z,2.3nm,0.7s,baz=145,slow=6.4,SNR=33
ILAR LR LR 11 13 15.3
comp=Z,217nm,18.1s,baz=125,slow=35
comp=Z,2.3nm,0.7s
ILAR Eielson Array 51.23 341 P **P** **10 52 10.3 +1.7**
TRF Thorofare Moun 51.49 338 IAmb IAmb 10 52 29.3
comp=Z,31nm,1.3s
N19K Bonanza Creek 51.58 334 IAmb IAmb 10 52 29.6
comp=Z,22nm,1.2s
E29M Blow River 51.62 347 IAmb IAmb 10 52 19.8
comp=Z,46nm,1.4s
FRB Frobisher Bay 51.83 22 LR LR 11 13 35.0
comp=Z,961nm,18.4s,baz=228,slow=35
ILON Igloolik, Nuna 52.35 12 **P** **10 52 16.4 -0.4**
ILON IAmb IAmb 10 52 18.2
comp=Z,27nm,1.0s
A36M Sachs Harbour 52.91 354 IAmb IAmb 10 52 30.8
comp=Z,28nm,1.0s
E25K Arctic Village 53.22 344 IAmb IAmb 10 52 42.2
comp=Z,28nm,1.8s
MACA Manacapuru-AM 53.23 110 **P** **10 52 22.5 -1.7**
MACA Manacapuru-AM 53.23 110 *eP* **P** **10 52 22.2 -1.9**
PPT Papeete 54.04 229 LR LR 11 08 59.9
comp=Z,342nm,19.1s,baz=41,slow=29
LPAZ La Paz 54.35 128 P **P** **10 52 31.8 -1.2**
comp=Z,8.8nm,1.1s,baz=338,slow=6.8,SNR=18
LPAZ LR LR 11 12 21.8
comp=Z,1µm,21.2s,baz=297,slow=32
comp=Z,8.8nm,1.1s
LPAZ La Paz 54.35 128 **P** **10 52 32.5 -0.6**
LPAZ IAmb IAmb 10 52 33.8
comp=Z,22nm,1.3s
LPAZ La Paz 54.35 128 *eP* **P** **10 52 32.6 -0.4**
RES Resolute Bay 55.42 5 LR LR 11 16 40.7
comp=Z,1µm,21.6s,baz=196,slow=36
RES Resolute Bay 55.42 5 IAmb IAmb 10 52 40.5
comp=Z,13nm,1.1s
POIN Pond Inlet 55.81 11 IAmb IAmb 10 52 43.5
comp=Z,23nm,1.3s
H17K Granite Mounta 55.82 337 IAmb IAmb 10 53 02.5
comp=Z,17nm,1.3s
F19K Shaleruckik Mo 56.03 339 IAmb IAmb 10 53 03.6
comp=Z,25nm,1.6s
MDP Montagnes des 57.28 97 LR LR 11 18 29.5
comp=Z,455nm,20.4s,baz=315,slow=37
ANM Nome 57.76 335 IAmb IAmb 10 53 17.0
comp=Z,15nm,1.4s
ITTB Itaituba 58.17 108 *eP* **P** **10 52 57.5 -2.2**
VILB Vilhena 58.57 120 *eP* **P** **10 53 01.2 -1.2**
SIV San Ignacio 59.56 123 LR LR 11 16 14.4
comp=Z,1µm,19.0s,baz=294,slow=34
NPGB Novo Progresso 59.72 111 *eP* P 10 53 07.8 -2.6
SFJD Kangerlussuaq 59.94 23 LR LR 11 19 02.3
comp=Z,1µm,18.3s,baz=238,slow=36
TULEG Thule 60.32 10 **P** **10 53 12.5 -1.1**
H03N2 Juan Fernandez 60.56 151 T T 11 58 59.5
baz=329,slow=77,SNR=66
H03N1 Juan Fernandez 60.58 151 T T 11 58 59.1
baz=329,slow=77,SNR=82
H03N3 Juan Fernandez 60.58 151 T T 11 59 01.6
baz=329,slow=77,SNR=72
PDRB Porto dos Gac 60.75 116 *eP* P 10 53 14.6 -2.9
PTLB Pontes e Lacer 60.80 122 **P** **10 53 16.0 -1.7**
PTLB IAmb IAmb 10 53 16.9
comp=Z,18nm,1.3s
PTLB Pontes e Lacer 60.80 122 *eP* **P** **10 53 16.1 -1.6**
AC02 Maricunga 60.81 138 IAmb IAmb 10 53 21.0
comp=Z,24nm,1.4s
CLDB Colider 61.17 115 *eP* **P** **10 53 18.5 -1.9**
RAR Rarotonga 63.80 233 LR LR 11 13 15.2
comp=Z,295nm,21.8s,baz=60,slow=28
SALV Santo Antonio 63.83 120 *eP* **P** **10 53 36.5 -1.5**
NEEM North Greenlan 64.09 12 *i P* **P** **10 53 37.7 -1.6**
PRPB Parauapebas 64.26 107 *eP* **P** **10 53 39.0 -2.0**
ZON Zonda 64.47 142 IAmb IAmb 10 53 44.5
comp=Z,25nm,1.4s
PP1B Ponte de Pedra 65.39 121 *eP* **P** **10 53 47.7 -0.6**
BDQN Bodoquena, MS 65.47 125 *eP* **P** **10 53 48.4 -0.3**
MURT Porto Murtinho 65.50 126 *eP* **P** **10 53 47.8 -1.0**
SNDB Serra Nova Dou 65.56 114 *eP* **P** **10 53 47.8 -1.6**
SUMG Summit 65.58 18 **P** **10 53 48.7 -0.4**
SUMG IAmb IAmb 10 54 04.0
comp=Z,15nm,1.2s
SUMG Summit 65.58 18 *i P* **P** **10 53 48.0 -1.1**
SHEM Shemya Is, Ala 66.17 320 LR LR 11 15 07.9
comp=Z,531nm,21.9s,baz=105,slow=29
AQDB Aquidauana 66.30 124 **P** **10 53 52.9 -1.1**
AQDB Aquidauana 66.30 124 *eP* **P** **10 53 53.8 -0.3**
ARAG Araguaiana, MT 66.93 118 *eP* **P** **10 53 57.0 -1.2**
SMTB Santa Maria do 67.40 109 *eP* **P** **10 54 00.3 -1.0**
AMBA Amambai (Brazi 68.21 126 *eP* **P** **10 54 06.3 +0.1**
CPUP Villa Florida 68.44 130 P **P** **10 54 07.1 -0.4**
comp=Z,7.2nm,1.0s,baz=329,slow=10,SNR=7.2
CPUP LR LR 11 23 14.0
comp=Z,535nm,18.8s,baz=277,slow=35
comp=Z,7.2nm,1.0s
CPUP Villa Florida 68.44 130 **P** **10 54 07.1 -0.4**
CPUP IAmb IAmb 10 54 17.9
comp=Z,16nm,1.1s
CPUP Villa Florida 68.44 130 *eP* **P** **10 54 07.8 +0.3**
BILL Bilibino 69.55 336 **P** **10 54 15.4 +1.6**
BILL IAmb IAmb 10 54 21.1
comp=Z,22nm,1.5s
BDFB Brasilia 70.10 116 P **P** **10 54 17.3 -0.9**
comp=Z,4.7nm,0.8s,baz=286,slow=10,SNR=4.7
comp=Z,4.7nm,0.8s
BDFB Brasilia 70.10 116 **P** **10 54 17.7 -0.4**
PLCA Paso Flores 70.39 149 P **P** **10 54 21.1 +1.7**
comp=Z,5.7nm,1.1s,baz=335,slow=8.0,SNR=4.4
comp=Z,5.7nm,1.1s
PLCA Paso Flores 70.39 149 **P** **10 54 20.6 +1.2**
PLCA IAmb IAmb 10 54 24.2
comp=Z,35nm,1.7s
PLCA Paso Flores 70.39 149 *eP* **P** **10 54 21.0 +1.7**
PCMB Pacaembu 70.39 123 *eP* **P** **10 54 19.3 -0.4**
PSAL Palomas, Salto 71.14 134 *eP* **P** **10 54 22.7 -1.3**
PTGB Pitanga 71.42 126 *eP* **P** **10 54 25.4 -0.6**
BORG Borgarnes 71.52 27 LR LR 11 25 09.8
comp=Z,709nm,18.4s,baz=274,slow=35
BB19B Bebedouro 72.30 121 *eP* **P** **10 54 30.7 -0.6**
PMNB Patos De Minas 72.79 118 *eP* **P** **10 54 34.3 -0.1**
CPSB Cacapava Do Su 73.60 132 *eP* **P** **10 54 38.7 -0.1**
PETK Petropavlovsk- 75.93 322 P **P** **10 54 54.3 +2.3**
comp=Z,12nm,1.1s,baz=69,slow=8.4,SNR=5.9
PETK LR LR 11 21 38.4
comp=Z,198nm,21.6s,baz=83,slow=30
comp=Z,12nm,1.1s
SEY Seymchan 76.08 332 LR LR 11 25 14.3
comp=Z,208nm,19.7s,baz=131,slow=33
RCBR Riachuelo 76.81 101 LR LR 11 30 36.4
comp=Z,101nm,18.7s,baz=281,slow=37
SPITS Spitsbergen Ar 77.50 10 LR LR 11 29 51.6
comp=Z,455nm,20.9s,baz=312,slow=36
GUA01 Guaratinga, BA 77.56 113 *eP* **P** **10 55 00.7 -1.1**
MA2 Magadan 77.83 329 LR LR 11 24 55.6
comp=Z,120nm,21.8s,baz=86,slow=32
MA2 Magadan 77.83 329 P **P** **10 55 05.4 +2.8**
comp=Z,13nm,1.4s
TIXI Tiksi 80.53 344 LR LR 11 33 58.6
comp=Z,237nm,18.9s,baz=32,slow=38
TIXI Tiksi 80.53 344 **P** **10 55 16.7 -0.4**
TIXI IAmb IAmb 10 55 23.1
comp=Z,29nm,1.1s
ARCES ARCESS Array B 85.33 14 LR LR 11 34 01.5
comp=Z,444nm,20.4s,baz=324,slow=36
YAK Yakutsk 85.90 336 LR LR 11 34 12.3
comp=Z,210nm,18.4s,baz=74,slow=36
NOA NORSAR Array B 86.56 25 LR LR 11 34 43.3
comp=Z,304nm,18.5s,baz=310,slow=36
HFS Hagfors 88.08 25 LR LR 11 35 49.3
comp=Z,337nm,18.2s,baz=299,slow=36
ASAJ Asahikawa 88.43 317 LR LR 11 28 11.1
comp=Z,202nm,21.9s,baz=68,slow=31
ESDC Sonseca Array 88.94 48 LR LR 11 35 39.1
comp=Z,222nm,18.5s,baz=300,slow=36
BMRD Maredsous 89.44 36 *d*PP **PP** **10 59 32.7 -0.2**
URZ Urewera 89.70 229 LR LR 11 26 54.0
comp=Z,223nm,21.8s,baz=52,slow=29
NRIK Noril'sk 90.19 354 P **P** **10 56 04.9 -0.5**
comp=Z,4.9nm,0.9s,baz=45,slow=4.0,SNR=6.7
NRIK LR LR 11 40 12.8
comp=Z,161nm,18.3s,baz=24,slow=38
comp=Z,4.9nm,0.9s
NRIK Noril'sk 90.19 354 **P** **10 56 05.5 +0.1**
NRIK IAmb IAmb 10 56 11.8
comp=Z,19nm,1.2s
MDT Midelt 91.34 54 LR LR 11 33 48.4
comp=Z,159nm,20.9s,baz=308,slow=33
FINES FINESS Array B 91.58 20 LR LR 11 35 52.9
comp=Z,322nm,20.9s,baz=313,slow=35
KLR Kul'dur 92.32 325 LR LR 11 32 19.2
comp=Z,69nm,20.9s,baz=52,slow=32
HNR Honiara 93.53 261 LR LR 11 31 31.1
comp=Z,17nm,18.8s,baz=199,slow=31
HEH HeiHe 93.99 327 *eP* **P** **10 56 25.5 +2.1**
HEH pmax pmax
comp=Z,10.0nm,1.5s
DAVOX Davos/Dischmat 94.21 37 LR LR 11 37 35.5
comp=Z,463nm,20.6s,baz=263,slow=35
MJAR Matsushiro Arr 94.91 312 LR LR 11 32 38.4
comp=Z,339nm,19.6s,baz=84,slow=31
GERES GERESS Array B 95.06 34 LR LR 11 38 41.6
comp=Z,195nm,20.3s,baz=278,slow=35
JHJ Hachijo jima 2 95.39 308 LR LR 11 34 57.7
comp=Z,587nm,19.1s,baz=108,slow=33
JCJ Chichijima 96.24 302 LR LR 11 30 39.8
comp=Z,485nm,21.1s,baz=77,slow=30
VRAC Vranov 96.25 32 LR LR 11 40 11.7
comp=Z,281nm,18.8s,baz=304,slow=36
GUMO Guam 99.53 288 LR LR 11 31 11.1
comp=Z,226nm,21.8s,baz=104,slow=29
KEST Kesra 100.06 46 LR LR 11 41 45.7
comp=Z,133nm,18.7s,baz=6.7,slow=35
HHC Hu-ho-hao-te 108.49 328 *eP* **Pdif** **10 57 26.3 -2.4**
BTO2 Baotou 109.40 329 *e*Pdif **Pdif** **10 57 30.2 -2.6**
BTO2 PP **PP** **11 02 01.3 -3.6**
BTO2 Baotou 109.40 329 S **Sdif** **11 09 33.9 -11**
BTO2 Baotou 109.40 329 LR LR
comp=Z,400nm,11.6s
BTO2 Baotou 109.40 329 LR LR
comp=E,350nm,7.2s
BTO2 Baotou 109.40 329 LR LR
comp=N,160nm,4.1s
BTO2 Baotou 109.40 329 pmax pmax
comp=Z,600nm,4.8s
BTO2 Baotou 109.40 329 pmax pmax
comp=Z,11nm,0.6s
KURBB Kurchatov Arra 109.46 354 PP **PP** **11 02 03.1 -1.5**
comp=Z,0.5nm,0.2s,baz=360,slow=7.0,SNR=5.2
NJ2 Nanjing 110.57 317 *eP* **Pdif** **10 57 38.1 +0.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
WMQ Urumqi 114.67 346 *e*PKP **PKiKP** **11 01 47.8 +1.8**
WMQ LR LR
comp=Z,310nm,24.3s
LZH Lanzhou 115.97 330 PKP PKiKP 11 01 42.3 -6.6
WRA Warramunga Arr 120.20 258 PKP **PKPdf** **11 01 57.2 0.0**
comp=Z,1.8nm,1.0s,baz=75,slow=1.7,SNR=4.7
ASAR Alice Springs 121.28 254 PKP **PKPdf** **11 01 58.2 -1.0**
comp=Z,1.5nm,0.9s,baz=101,slow=5.2,SNR=4.4
PZH PanZhiHua 124.76 325 PKP **PKPdf** **11 02 06.3 +0.3**
CMAR Chiang Mai Arr 132.71 322 PKP **PKPdf** **11 02 23.2 +2.1**
comp=Z,0.6nm,0.4s,baz=88,slow=3.4,SNR=1.4
HYB Hyderabad 142.09 347 *e*PKiKP **PKPdf** **11 02 41.8 +3.3**

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*NEIC **05** 10:49:35.0±1.1, 7.7°S±0.1°×106.1°E±0.09, h86km±7km, mb4.2/16, Error ellipse: s-maj=18.2km s-min=8.1km az=215.0*
*IDC **05** 10:49:40.9±4.3, 7.7°S×106.4°E, h121km±29km, mb3.7/7, mbtmp4.0/7, MS4.4/2, Error ellipse: s-maj=72.6km s-min=16.0km az=51.0*
*DJA **05** 10:49:42.4±0.2, 7.7°S±3.3°×107.0°E±0.7°, h103km±2km, M4.2/36, mB5.1/1, mb4.5/4, MLv4.1/36, Mw(mB)4.5/1*
ISC 05 10:49:40.1±0.9, 7.35°S±0.08°×106.51°E±0.07, h125km±6km, n62, σ1°52/61, mb4.0/13, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.35**	**8**	P	P	**Pn**	**10 49 58.2**	**+0.4**
SKJI					S	**Sn**	**10 50 10.6**	**-0.6**
CNJI	**Cibinong**	**0.62**	**86**	P	P	**Pn**	**10 49 59.4**	**+0.1**
DBJI	**Dramaga**	**0.83**	**17**	P	P	**Pn**	**10 50 01.4**	**+0.4**
DBJI					S	**Sn**	**10 50 15.5**	**-1.3**
BBJI	**Bungbulang**	**1.14**	**96**			**Pn**	**10 50 04.2**	**+0.3**
BBJI					Sn	**Sn**	**10 50 20.4**	**-1.7**
BBJI	**Bungbulang**	**1.14**	**96**	P	P	**Pn**	**10 50 04.2**	**+0.3**
BBJI					S	**Sn**	**10 50 19.9**	**-2.1**
TNG	**Tangerang**	**1.18**	**7**	P	P	**Pn**	**10 50 04.4**	**+0.1**
TNG					S	**Sn**	**10 50 21.8**	**-0.9**
LEM	**Lembang**	**1.22**	**65**	P	P	**Pn**	**10 50 05.2**	**+0.3**
LEM	2µm,0.4s,baz=278,slow=4.9,SNR=336				S	**Sn**	**10 50 24.8**	**+1.1**
	556nm,0.4s,baz=152,slow=23,SNR=8.5							
LEM					LR	LR	10 50 53.8	
	comp=Z,122nm,20.9s,baz=298,slow=58							
LEM	**Lembang**	**1.22**	**65**	P	P	**Pn**	**10 50 04.7**	**-0.2**
SBJI	**Serang**	**1.28**	**343**	P	P	**Pn**	**10 50 05.5**	**+0.1**
KPJI	**Karang Pucung**	**2.40**	**90**	P	P	**Pn**	**10 50 18.9**	**+0.1**
CTJI	**Waduk Cacaban**	**2.68**	**83**	P	P	**Pn**	**10 50 22.7**	**+0.4**
KASI	**Kota Agung**	**2.70**	**312**	P	P	**Pn**	**10 50 24.4**	**+1.7**
KLSI		**3.18**	**326**	P	P	**Pn**	**10 50 30.7**	**+1.8**
MDSI	**Maura Dua**	**3.67**	**321**	P	P	**Pn**	**10 50 37.9**	**+2.5**
SMRI	**Semarang**	**3.91**	**86**	Pn	Pn	**Pn**	**10 50 38.9**	**+0.3**
UGM	**Wanagama**	**4.02**	**98**	Pn	Pn	**Pn**	**10 50 40.3**	**+0.3**
UGM	**Wanagama**	**4.02**	**98**	P	Pn	**Pn**	**10 50 40.2**	**+0.2**
MNAI	**Manna**	**4.62**	**310**	Pn	Pn		10 50 38.5	-9.5
MNAI	**Manna**	**4.62**	**310**	P	Pn	**Pn**	**10 50 50.7**	**+2.7**
EGSI	**Enggano, Bengk**	**4.65**	**295**	P	Pn	**Pn**	**10 50 51.8**	**+3.4**
PCJI	**Pacitan**	**4.70**	**101**	P	Pn	**Pn**	**10 50 49.8**	**+0.7**
TPI	**Tanjungpandan**	**4.71**	**14**	P	Pn	**Pn**	**10 50 47.9**	**-1.3**
SNJI	**Sawahan-Nganju**	**5.22**	**95**	P	Pn	**Pn**	**10 50 59.2**	**+2.9**
	0.3nm32nm,0.6s							
GMJI	**Gumukmas**	**6.93**	**98**	P	Pn	**Pn**	**10 51 20.8**	**+1.6**
	0.1nm18nm,1.1s							
JAGI	**Jajag, Banyuwa**	**7.65**	**99**	Pn	Pn	**Pn**	**10 51 30.0**	**+1.1**
PPSI	**Pulau Pagai**	**7.92**	**305**	P	Pn	**Pn**	**10 51 32.7**	**+0.2**
KAPI	**Kappang**	**13.37**	**81**	Pn	Pn	**Pn**	**10 52 43.9**	**-1.2**
KKM	**Kota Kinabalu**	**16.46**	**36**			**P**	**10 53 24.7**	**+0.3**
KKM					IAmb	IAmb	10 53 51.4	
	comp=Z,26nm,1.1s							
MYLDM	**Lahad Datu**	**17.27**	**44**	P	P	**Pn**	**10 53 35.1**	**+1.4**
MYLDM					IAmb	IAmb	10 53 48.1	
	comp=Z,18nm,1.1s							
LUWI	**Luwuk**	**17.38**	**70**	P	P	**Pn**	**10 53 35.5**	**+0.4**
SOEI	**Soe**	**17.72**	**99**	P	P	**Pn**	**10 53 39.8**	**+0.5**
SOEI					IAmb	IAmb	10 53 50.6	
	comp=Z,17nm,0.8s							
KNRA	**Kununurra**	**23.30**	**113**	P	P	**P**	**10 54 38.0**	**+0.9**
MORW	**Morawa**	**23.40**	**159**	P	P	**P**	**10 54 33.1**	**-4.8**
MORW					IAmb	IAmb	10 54 43.3	
	comp=Z,5.9nm,1.1s							
MTN	**Manton Dam**	**24.84**	**105**	P	P	**P**	**10 54 53.0**	**+1.9**
MTN					IAmb	IAmb	10 54 53.4	
	comp=Z,6.7nm,1.1s							
FAKI	**Fak Fak**	**26.01**	**82**	P	P	**P**	**10 55 01.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**26.71**	**344**	P	P	**P**	**10 55 06.0**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=179,slow=7.8,SNR=7.5							
	comp=Z,0.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**26.71**	**344**	P	P	**P**	**10 55 05.7**	**-2.2**
H01W3	**Cape Leeuwin H**	**28.28**	**167**	T	T		11 25 13.3	
	baz=343,slow=78,SNR=28							
H01W1	**Cape Leeuwin H**	**28.30**	**167**	T	T		11 25 17.0	
	baz=343,slow=78,SNR=21							
H01W2	**Cape Leeuwin H**	**28.30**	**167**	T	T		11 25 15.7	
	baz=343,slow=78,SNR=30							
WB0	**Warramunga Arr**	**29.72**	**117**	P	P	**P**	**10 55 35.2**	**+0.5**
WB0					IAmb	IAmb	10 55 40.8	
	comp=Z,3.9nm,0.9s							
WRA	**Warramunga Arr**	**29.74**	**118**	P	P	**P**	**10 55 37.2**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=306,slow=8.8,SNR=19							
	comp=Z,1.2nm,0.8s							
WRA	**Warramunga Arr**	**29.74**	**118**	P	P	**P**	**10 55 35.5**	**+0.5**
WR8	**Warramunga Arr**	**29.88**	**118**	P	P	**P**	**10 55 37.4**	**+1.2**
WR8					IAmb	IAmb	10 55 39.1	
	comp=Z,3.0nm,0.8s							
ASAR	**Alice Springs**	**30.89**	**125**	P	P	**P**	**10 55 48.1**	**+3.1**
	comp=Z,0.5nm,0.5s,baz=295,slow=8.1,SNR=11							
	comp=Z,0.5nm,0.5s							
H08S2	**Diego Garcia H**	**33.72**	**267**	T	T		11 31 51.2	

baz=91,slow=76,SNR=19
H08S3 Diego Garcia H 33.73 267 T T 11 31 54.8
baz=91,slow=76,SNR=25
H08S1 Diego Carcia H 33.74 267 T T 11 31 52.6
baz=91,slow=76,SNR=16
COEN Coen 36.59 103 P P 10 56 35.6 +1.2
COEN IAmb IAmb 10 56 57.1
comp=Z,5.0nm,1.1s
STKA Stephens Creek 40.77 132 P P 10 57 09.5 +0.4
SONM Songino Array 54.95 360 P P 10 58 57.7 -0.5
comp=Z,0.6nm,0.7s,baz=175,slow=5.3,SNR=2.7
SONM PcP PcP 10 59 59.5 +0.9
comp=Z,2.1nm,0.5s,baz=180,slow=3.9,SNR=13
comp=Z,0.6nm,0.7s
MKAR Makanchi Array 58.05 341 P P 10 59 19.1 -1.0
comp=Z,1.3nm,0.5s,baz=150,slow=8.8,SNR=34
comp=Z,1.3nm,0.5s
MKAR Makanchi Array 58.05 341 P P 10 59 18.9 -1.1
KURBB Kurchatov Arra 62.62 340 P P 10 59 49.8 -1.2
comp=Z,0.4nm,0.3s,baz=150,slow=6.3,SNR=1.8
KURBB PcP PcP 11 00 29.4 +0.6
comp=Z,0.3nm,0.2s,baz=150,slow=3.2,SNR=4.6
comp=Z,0.4nm,0.3s
KURK Kurchatov 62.66 340 P P 10 59 50.0 -1.3
KURK IAmb IAmb 10 59 50.9
comp=Z,2.0nm,0.9s
ZAA0 Zalesovo Array 63.75 346 P P 10 59 56.9 -1.5
ZALV Zalesovo Beam 63.75 346 P P 10 59 56.6 -1.8
ARTI Arti 74.78 335 P P 11 01 07.3 +0.9
comp=Z,8.7nm,0.6s,baz=123,slow=3.2,SNR=17
comp=Z,8.7nm,0.6s
ARTI Arti 74.78 335 P P 11 01 07.5 +1.2
AKASG Malin Array Be 87.67 322 LR LR 11 44 47.5
comp=Z,168nm,20.7s,baz=284,slow=38
MLR Muntele Rosu 88.62 316 LR LR 11 48 47.7
comp=Z,248nm,20.2s,baz=322,slow=40
TXAR Lajitas Array 144.16 49 PKP PKPdf 11 09 02.5 +0.5
comp=Z,0.4nm,0.5s,baz=14,slow=3.2,SNR=4.6

IDC 05 10:57:58.5±705.0, 53°.23N×34°.42E, h0km, Error ellipse: s-maj=299.7km s-min=85.9km az=29.0, Baltic States-Belarus-Northwestern Russia

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
I43RU DUBNA INFRASON 3.85 24 I I 11 22 30.0
0.2nm,0.7s,baz=206,slow=316,SNR=1.9
I31KZ AKTYUBINSK INF 14.86 91 I I 12 26 20.0
0.1nm,0.5s,baz=290,slow=304,SNR=0.8
I46RU ZALESOVO INFRA 29.41 68 I I 13 57 40.0
baz=290,slow=323,SNR=1.6

ISK 05 10:58:04.2, 39°.41N×40°.37E, h5km, ML2.1/3, Turkey

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
ERZN Erzincan 0.53 290 Pg Pb 10 58 15.5 -0.6
ERZN Sg Sb 10 58 24.2 +0.1
KARO Karliova-Bingo 0.54 100 Pg Pb 10 58 15.8 -0.4
BAYT Aydıntepe-Bayb 1.00 350 Pg Pb 10 58 24.4 +0.3
BAYT Sg Sn 10 58 39.5 -0.2

AFAD 05 10:58:04.3, 39°.73N×39°.04E, h7km±2km, ML1.8, Turkey

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
MBOZ 0.44 318 P Pg 10 58 13.3 +0.5
MBOZ S Sg 10 58 19.5 +0.9
MBOZ IAML 10 58 20.0
comp=N,122nm,0.2s
MBOZ IAML 10 58 20.0
comp=E,59nm,0.2s
KELT Kelkit 0.45 22 P Pg 10 58 13.2 +0.2
KELT S Sg 10 58 19.3 +0.4
KELT IAML 10 58 20.0
comp=N,40nm,0.4s
MCKZ Bingol 0.62 184 P Pg 10 58 16.1 -0.1
MCKZ S Sb 10 58 25.5 -0.9
BAYB BAYBURT 1.07 60 P Pn 10 58 26.6 +0.6
BAYB S Sb 10 58 40.0 +0.3

IDC 05 11:17:37.8±3.8, 29°.69S×67°.88W, h63km±32km, mb3.4/2, mbtmp3.7/5, ML3.8/3, Error ellipse: s-maj=51.1km s-min=30.4km az=126.0
SJA 05 11:17:42.6±0.7, 29°.75S×67°.63W, h113km±4km, ML3.8, MW3.9
ISC 05 11:17:42.7±0.8, 29°.75S±0°.03×67°.65W±0°.03, h115km±6km, n39, σ1°.43/55, La Rioja Province

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
ACLC CERRO LA CRUZ 0.68 62 eP Pn 11 18 02.2 +0.6
ACLC eS Sn 11 18 15.8 0.0
ACLC IAML 11 18 16.5
comp=Z,5μm,0.2s
AVFE Valle Fertil 0.93 170 eP Pn 11 18 04.6 +1.0
AVFE IAML 11 18 21.4
comp=Z,1μm,0.6s
AANI Anillaco 1.12 34 eP Pn 11 18 06.4 +0.8
AANI eS Sn 11 18 23.4 +0.4
VCA Vinchina 1.12 334 eP Pn 11 18 06.2 +0.6
VCA eS Sn 11 18 23.8 +0.8
VCA IAML 11 18 28.1
comp=Z,1μm,0.5s
ACDV Cuesta del Vie 1.35 251 eP Pn 11 18 08.9 +0.8
ACCO Cerro Coronel 1.49 235 eP Pn 11 18 10.4 +0.4
ACCO eS Sn 11 18 29.6 -1.1
AROD Rodeo 1.64 255 eP Pn 11 18 12.8 +1.0
AROD eS Sn 11 18 34.8 +0.9
ACHE Chepes 1.65 149 eP Pn 11 18 12.8 +1.1
ACHE eS Sn 11 18 33.5 -0.3
TINO Tinogasta 1.68 2 eP Pn 11 18 13.5 +1.4
TINO eS Sn 11 18 38.8 +4.4
RTLL Cerro Villicun 1.73 204 eP Pn 11 18 13.4 +0.8
RTLL eS Sn 11 18 36.4 +0.9
RTLL IAML 11 18 37.4
comp=Z,2μm,0.7s
SJA San Juan 1.94 204 eP Pn 11 18 16.4 +1.2
SJA IAML 11 18 50.8
comp=Z,301nm,0.4s
ZON Zonda 2.00 206 eP Pn 11 18 16.7 +0.8
ZON eS Sn 11 18 42.8 +1.4
ZON IAML 11 18 43.6
comp=Z,358nm,0.8s
CO01 Juntas del Tor 2.14 263 eP Pn 11 18 19.3 +1.5
CO01 eS Sn 11 18 46.4 +1.6
AC05 El Transito 2.47 291 eP Pn 11 18 19.3 -2.7
AC05 eS Sn 11 18 53.4 +1.3
AC05 IAML 11 19 22.1
comp=Z,611nm,0.8s
ACAN Cantantal 2.55 171 eP Pn 11 18 23.7 +0.7
LCO Las Campanas 2.76 285 eP Pn 11 18 26.3 +0.3
LCO eS Sn 11 18 59.2 0.0
LCO IAML 11 18 59.6
comp=Z,353nm,0.4s
GO04 Tololo Observa 2.77 260 eP Pn 11 18 27.2 +1.2
GO04 eS Sn 11 19 00.3 +1.0
CO03 El Pedregal 2.85 247 eP Pn 11 18 28.1 +1.2
CO03 eS Sn 11 19 02.1 +1.2
CO03 IAML 11 19 05.5
comp=Z,401nm,0.5s
TCA Tanti 3.07 122 eP Pn 11 18 30.6 +0.8
TCA eS Sn 11 19 06.1 -0.1
TCA IAML 11 19 06.9
comp=Z,199nm,0.6s
GO03 Copiapo 3.12 313 eP Pn 11 18 30.9 +0.4
GO03 eS Sn 11 19 07.2 -0.2
GO03 IAML 11 19 10.9
comp=Z,176nm,0.3s
MRA San Martin 3.14 149 eP Pn 11 18 31.7 +1.0
MRA IAML 11 19 35.1
comp=Z,273nm,0.7s
AC02 Maricunga 3.18 335 eP Pn 11 18 33.2 +1.5
AC02 eS Sn 11 19 09.2 -0.2
CO02 Combarbal 3.24 242 eP Pn 11 18 32.1 0.0
CO02 eS Sn 11 19 10.9 +0.7
CO02 IAML 11 19 14.3
comp=Z,211nm,0.3s
AC04 Llanos de Chal 3.37 296 eP Pn 11 18 33.4 -0.3
VA03 San Esteban 3.90 219 eP Pn 11 18 41.8 +0.9
VA03 IAML 11 19 59.9
comp=Z,102nm,1.1s
FSA Cafayete 3.91 23 eP Pn 11 18 42.7 +1.6
MT08 Bocatoma Ro 4.21 208 eP Pn 11 18 46.5 +1.4
MT04 Ro Olivares 4.22 210 eS Sn 11 19 47.6 +14
MT04 IAML 11 20 02.2
comp=Z,46nm,0.7s
AC01 Pan de Azucar 4.43 323 IAML 11 19 44.8
comp=Z,75nm,0.7s
MT03 Universidad Ad 4.46 212 IAML 11 19 43.6
comp=Z,88nm,0.3s
CPUP Villa Florida 9.73 72 P Pn 11 19 57.1 -2.4
comp=Z,0.4nm,0.3s,baz=253,slow=14,SNR=4.7
comp=Z,0.8nm,0.3s
PLCA Paso Flores 11.22 191 P Pn 11 20 16.6 -3.1
comp=Z,0.2nm,0.3s,baz=18,slow=16,SNR=3.7
comp=Z,0.9nm,0.5s
SIV San Ignacio 14.96 25 P Pn 11 21 04.8 -3.6
baz=213,slow=14,SNR=4.2
comp=Z,0.7nm,0.5s
TORD Torodi Ar. Bea 79.20 68 P P 11 29 37.5 +2.1
comp=Z,1.0nm,0.9s,baz=254,slow=4.9,SNR=4.4
comp=Z,1.0nm,0.9s
PDAR Pinedale Array 81.80 330 P P 11 29 49.6 +0.6
comp=Z,0.4nm,0.8s,baz=144,slow=7.2,SNR=4.0
comp=Z,0.4nm,0.8s
WRA Warramunga Arr 126.25 206 PKP PKiKP 11 36 32.2 -0.6
comp=Z,0.5nm,0.6s,baz=161,slow=1.8,SNR=5.1
KURBB Kurchatov Arra 147.22 41 PKPbc PKPab 11 37 13.4 -0.8
comp=Z,0.5nm,0.3s,baz=302,slow=3.6,SNR=4.8
ZALV Zalesovo Beam 148.65 32 PKPbc PKiKP 11 37 17.2 0.0
comp=Z,2.2nm,0.4s,baz=300,slow=3.5,SNR=12
MKAR Makanchi Array 151.14 45 PKPbc PKiKP 11 37 23.6 +0.9
comp=Z,1.0nm,0.6s,baz=292,slow=2.0,SNR=7.8
MKAR PKPab PKPab 11 37 32.4 +2.0
comp=Z,0.6nm,0.7s,baz=274,slow=3.6,SNR=2.3

IDC 05 11:22:47.1±1.5, 3°.35N×74°.13W, h0km, mb3.3/2, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=38.4km s-min=15.6km az=98.0
RSNC 05 11:22:47.4±0.0, 3°N±1°×7°4W±°, h-2km±2km, M3.5, mB4.7, mb4.2, ML3.4, Mw(mB)3.9
ISC 05 11:22:47.2±1.2, 3°.40N±0°.02×74°.15W±0°.03, h1km±9km, n38, σ1°.70/61, Colombia

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
URMC La Uribe, Meta 0.27 237 P Pb 11 22 53.5 -1.4
URMC S Sg 11 22 57.0 +1.1
PRAC Prado 0.80 293 P Pg 11 23 02.6 +0.1
PRAC S Sg 11 23 13.1 +0.3
VILC Villavicencio, 0.85 33 P Pb 11 23 04.5 -0.3
VILC S Sb 11 23 16.1 -0.6
CVER Cruz Verde, Cu 1.12 4 P Pg 11 23 08.6 -0.1
CVER S Sg 11 23 23.6 +0.3
ORTC Ortega, Tolima 1.20 295 P Pb 11 23 09.9 -0.9
ORTC S Sn 11 23 28.1 -0.1
MACC Macarena, Meta 1.28 166 P Pg 11 23 12.0 +0.3
MACC S Sg 11 23 28.9 +0.6
CHIC Chingaza 1.29 19 P Pn 11 23 11.6 -1.2
CHIC S Sb 11 23 28.1 -1.8
ROSC El Rosal 1.44 353 Pg Pg 11 23 15.6 +0.7
108nm,0.3s,baz=180,slow=20,SNR=73
ROSC Lg Lg 11 23 35.0
99nm,0.3s,baz=203,slow=23,SNR=11
ROSC El Rosal 1.44 353 P Pg 11 23 15.0 +0.1
ROSC S Sg 11 23 35.6 +2.0
ANIL Santa Ana 1.65 311 P Pb 11 23 17.4 -1.2
ANIL S Sg 11 23 39.7 -0.7
GARC Garzon, Huila 1.80 228 P Pb 11 23 20.5 -0.6
GARC S Sb 11 23 43.7 -0.5
RECRC Villamaria, Ca 1.96 322 P Pb 11 23 23.4 -0.6
RECRC S Sb 11 23 48.1 -1.1
NIZA Niza - Manizal 2.11 322 P Pb 11 23 25.8 -0.6
NIZA S Sb 11 23 52.6 -0.6
SPBC San Pablo de B 2.24 2 P Pb 11 23 28.4 -0.2
SPBC S Sb 11 23 57.5 +0.6
YOTC Yotoco, Valle 2.26 285 P Pb 11 23 26.7 -2.2
YOTC S Sb 11 23 57.3 -0.2
FLOC Florencia 2.34 220 P Pb 11 23 29.3 -0.9
FLOC S Sb 11 23 59.8 +0.1
JAMC Jamundi, Valle 2.52 266 P Pb 11 23 32.6 -0.8
JAMC S Sb 11 24 05.6 +0.5
POPC Popayan, Colom 2.66 251 P Pb 11 23 34.2 -1.5
POPC S Sb 11 24 08.7 -0.3
RUSC La Rusia 2.70 23 P Pb 11 23 35.0 -1.6
RUSC S Sb 11 24 07.8 -2.6
CBOC Ciudad Bolivar 3.07 323 P Pb 11 23 40.1 -2.7
CBOC S Sb 11 24 17.1 -3.8
PTBC PUERTO BERRIO, 3.14 354 P Pn 11 23 39.8 +2.0
PTBC S Sn 11 24 17.9 +2.0
PTLC Puerto Leguiza 3.27 191 P Pb 11 23 45.9 -0.1
PTLC S Sb 11 24 23.5 -2.8
BARC Barichara 3.32 17 P Pb 11 23 43.6 -3.4
CRUC La Cruz 3.33 237 P Pb 11 23 45.3 -2.0
BBAC Balboa, Cauca 3.38 246 P Pb 11 23 45.2 -2.8
BRJC Barrancabermej 3.58 7 P Pb 11 23 48.1 -3.2
BRJC S Sn 11 24 29.8 +3.0
GCUF Volcan Galeras 3.85 236 P Pb 11 23 53.0 -3.2
GCUF S Sn 11 24 34.6 +0.4
DBBC Dabeiba 4.14 330 P Pn 11 23 53.5 +1.9
PAMC Pamplona, Colo 4.18 20 P Pb 11 23 56.9 -4.9
BONI La Bonita 4.46 229 P Pn 11 23 58.7 +2.4
OCAC Ocana 4.88 10 P Pn 11 24 05.5 +3.6
SDV Santo Domingo 6.48 33 Pn Pn 11 24 25.4 +1.5
8.1nm,0.3s,baz=172,slow=15,SNR=29
SDV Sn Sn 11 25 38.6 -0.1
10nm,0.3s,baz=18,slow=14,SNR=6.5
SDV Lg Lg 11 26 13.2
5.6nm,0.3s,baz=90,slow=20,SNR=4.0
16nm,0.3s
SDV Santo Domingo 6.48 33 P Pn 11 24 25.7 +1.8
512nm20nm,0.4s
SJCC San Jacinto, C 6.54 351 P Pn 11 24 26.8 +2.2
PDAR Pinedale Array 50.28 326 P P 11 31 46.2 +0.6
0.4nm,0.7s,baz=102,slow=8.7,SNR=3.9
0.4nm,0.7s
YKA Yellowknife Ar 66.12 341 P P 11 33 35.4 -0.4
0.1nm,0.5s,baz=137,slow=5.7,SNR=5.3
0.1nm,0.5s
ASAR Alice Springs 146.22 231 PKPbc PKPab 11 42 29.7 -1.4
0.4nm,0.5s,baz=123,slow=4.1,SNR=11
WRA Warramunga Arr 147.71 237 PKPbc PKPbc 11 42 34.3 -0.3
0.8nm,1.0s,baz=112,slow=2.7,SNR=2.7

NEIC 05 11:24:23.4±1.0, 4°.98S±0°.06×152°.88E±0°.07, h21km±6km, mb4.5/46, Error ellipse: s-maj=12.5km s-min=5.2km az=52.0
IDC 05 11:24:26.1±3.8, 4°.95S×152°.75E, h40km±33km, mb4.1/19, mbtmp4.3/21, ML2.9/2, MS3.5/2, Error ellipse: s-maj=20.2km s-min=14.5km az=80.0
ISC 05 11:24:26.0±0.5, 4°.98S±0°.05×152°.80E±0°.08, h43km, n96, σ1°.14/83, mb4.5/46, MS4.5/5, 2D, New Britain region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
RABL Rabaul 1.01 321 Pn 11 24 42.7 -1.1
RABL Sn Sn 11 24 56.9 0.0
BULU Kimbe 2.54 257 P Pn 11 25 15.9 +11
MANU Manus Island 6.16 298 Pn 11 25 52.9 -1.6
PMG Port Moresby 7.12 232 P Pn 11 26 09.3 +1.8
3.0nm,0.3s,baz=29,slow=20,SNR=9.9
PMG S Sn 11 27 26.5 -0.8
42nm,0.8s,baz=269,slow=3.3,SNR=3.1
28nm,0.8s
PMG Port Moresby 7.12 232 Pn 11 26 06.7 -0.9
PMG Port Moresby 7.12 232 P Pn 11 26 10.2 +2.6
PATS Pohnpei 12.97 25 Pn Pn 11 27 24.2 -3.5
COEN Coen 13.02 226 Pn Pn 11 27 26.5 -1.9
CTA Charters Tower 16.31 202 P Pn 11 28 12.8 +0.7
0.1nm,0.3s,baz=351,slow=12,SNR=3.2
4.5nm,1.0s
CTAO Charters Tower 16.31 202 Pn Pn 11 28 10.8 -1.2
QIS Mount Isa 20.10 218 P P 11 28 57.3 +1.0
EIDS Eidsvold 20.34 184 P P 11 28 57.5 -1.2
FAKI Fak Fak 20.61 275 P P 11 29 01.7 -0.1
FAKI IAmb IAmb 11 29 07.2
comp=Z,17nm,0.9s
DZM Mont Dzumac 21.52 143 P P 11 29 12.4 +0.8
comp=Z,11nm,0.7s,baz=185,slow=7.9,SNR=12
comp=Z,11nm,0.7s
DZM Mont Dzumac 21.52 143 eLR LR 11 34 16.3
comp=Z,340nm,25.9s
SIJI Sorong 21.89 280 P P 11 29 16.6 +1.1
comp=Z,9.3nm,0.5s,baz=70,slow=12,SNR=5.6
comp=Z,9.3nm,0.5s
MTN Manton Dam 22.77 249 P 11 29 23.8 -1.2
MTN IAmb IAmb 11 29 26.9
comp=Z,14nm,0.7s
WB0 Warramunga Arr 23.18 229 P 11 29 28.8 -0.3
WB0 IAmb IAmb 11 29 42.7
comp=Z,18nm,0.8s
WR8 Warramunga Arr 23.21 229 P 11 29 29.5 +0.1
WR8 IAmb IAmb 11 29 43.6
comp=Z,12nm,0.8s
WRAB Tennant Creek 23.31 229 P P 11 29 30.0 -0.4
WRAB IAmb IAmb 11 29 44.5
comp=Z,17nm,0.8s
WRAB Tennant Creek 23.31 229 P P 11 29 30.4 0.0
WRA Warramunga Arr 23.32 229 P P 11 29 30.0 -0.6
comp=Z,8.0nm,0.5s,baz=53,slow=10.0,SNR=65
comp=Z,8.0nm,0.5s
WRA Warramunga Arr 23.32 229 P 11 29 29.2 -1.3
INKA Innaminka 25.38 206 P 11 29 48.7 -0.6
KNRA Kununurra 25.89 244 P 11 29 54.1 0.0
AS31 Alice Springs 26.01 223 P 11 29 55.0 -0.2
ASAR Alice Springs 26.02 223 P P 11 29 55.1 -0.1
comp=Z,3.9nm,0.7s,baz=56,slow=8.7,SNR=48
comp=Z,3.9nm,0.7s
STKA Stephens Creek 28.74 200 P P 11 30 18.7 -0.8
comp=Z,3.5nm,1.0s,baz=339,slow=14,SNR=3.2
comp=Z,3.5nm,1.0s
FORT Forrest 34.65 219 P P 11 31 11.4 0.0
FORT IAmb IAmb 11 31 27.7
comp=Z,8.7nm,0.9s
MBWA Marble Bar 35.88 240 P P 11 31 21.6 -0.5
PSA00 Pilbara Seismi 35.94 240 P P 11 31 22.0 -0.7
PSA00 IAmb IAmb 11 31 23.2
comp=Z,7.8nm,1.1s
MORW Morawa 42.23 231 P 11 32 15.1 -0.1
BBJI Bungbulang 44.94 264 P P 11 32 35.5 -1.8
KSRS Korea Array 48.16 333 LR LR 11 51 08.2
comp=Z,38nm,19.3s,baz=30,slow=33
KS19 Wonju Array Si 48.23 333 P P 11 33 01.5 -1.1
QIZ Qiongzhong 48.56 301 P P 11 33 05.4 -0.1
JKA Kamikawa-asahi 49.73 350 P P 11 33 13.9 0.0
ASAJ Asahikawa 49.73 350 P P 11 33 14.3 +0.3
comp=Z,4.4nm,0.6s,baz=179,slow=12,SNR=4.4
comp=Z,4.4nm,0.6s
YSS Yuzhno-Sakhali 52.47 351 P P 11 33 34.1 -0.3
YSS IAmb IAmb 11 33 54.8
comp=Z,6.9nm,1.0s
LYN LuoYang 54.68 319 eP P 11 33 55.4 +4.5
LYN pmax pmax
comp=Z,10.0nm,0.4s
LYN pmax pmax
comp=Z,280nm,5.4s
BNX BinXian 55.34 339 ⇓P P 11 33 55.2 -0.3
BNX pmax pmax
comp=Z,6.0nm,0.9s
XAN Xi'an 56.76 317 ⇓P P 11 34 08.6 +2.7
XAN pmax pmax
comp=Z,4.0nm,0.7s
PPT2 Papeete2 57.67 108 eLR LR 11 51 02.2
comp=Z,156nm,38.0s
CM31 Chiang Mai Arr 57.96 295 P P 11 34 14.4 -0.2
CMAR Chiang Mai Arr 57.96 295 P P 11 34 15.0 +0.4
comp=Z,7.5nm,0.8s,baz=116,slow=5.4,SNR=52
comp=Z,7.5nm,0.8s
CMAR Chiang Mai Arr 57.96 295 P 11 34 14.8 +0.2
PETK Petropavlovsk- 58.02 3 P P 11 34 14.8 +0.5
comp=Z,2.3nm,0.5s,baz=142,slow=5.2,SNR=9.8
PETK LR LR 11 52 33.2
comp=Z,60nm,21.4s,baz=160,slow=29
comp=Z,2.3nm,0.5s
PETK Petropavlovsk- 58.02 3 P P 11 34 14.6 +0.2
CHTO Chiang Mai 58.07 296 P 11 34 14.9 -0.5
CHTO IAmb IAmb 11 34 16.5
comp=Z,3.8nm,0.6s
PZH PanZhiHua 58.48 305 P P 11 34 20.6 +2.4
TBI Tubuai 58.48 114 eLR LR 11 51 11.4
comp=Z,319nm,31.0s
HHC Hu-ho-hao-te 59.20 324 eP P 11 34 25.6 +2.7
HHC pmax pmax
comp=Z,4.0nm,0.6s
LZH Lanzhou 61.36 316 eP P 11 34 45.0 +7.1
LZH pP pP 11 34 48.7 -1.2
LZH pmax pmax
comp=Z,11nm,1.3s
LZH LR LR
comp=N,310nm,18.5s
LZH LR LR
comp=E,310nm,19.5s
LZH LR LR
comp=Z,370nm,20.4s
LZDM Lanzhou Array 61.40 316 P P 11 34 37.8 -0.5
comp=Z,1.7nm,0.4s,baz=134,slow=6.4,SNR=7.4
comp=Z,1.7nm,0.4s
MA2 Magadan 64.38 359 P P 11 34 57.2 -0.1
comp=Z,4.3nm,0.6s,baz=169,slow=5.2,SNR=7.6
comp=Z,4.3nm,0.6s
MA2 Magadan 64.38 359 P P 11 34 56.8 -0.5
MA2 IAmb IAmb 11 34 57.6
comp=Z,5.1nm,0.8s
GTA2 Gaotai 65.87 317 eP P 11 35 08.5 +1.0
GTA2 pmax pmax
comp=Z,3.0nm,0.8s
GTA2 LR LR
comp=N,140nm,13.8s
GTA2 LR LR
comp=E,180nm,14.9s
GTA2 LR LR
comp=Z,270nm,16.4s
SHL Shillong 66.40 301 P 11 35 11.0 -0.3
SONM Songino Array 66.48 328 P P 11 35 11.9 +0.6
comp=Z,0.5nm,0.5s,baz=147,slow=7.4,SNR=3.7
comp=Z,0.5nm,0.5s
VNDA Vanda 72.65 178 P P 11 35 49.8 +1.1
comp=Z,2.4nm,0.9s,baz=337,slow=8.8,SNR=5.3
comp=Z,2.4nm,0.9s
VNDA Vanda 72.65 178 P P 11 35 48.5 -0.2
VNDA IAmb IAmb 11 36 07.0
comp=Z,6.0nm,1.1s
WMQ Urumqi 75.88 317 eP P 11 36 09.7 +1.5
WMQ LR LR
comp=E,2μm,24.1s
H17K Granite Mounta 77.89 19 IAmb IAmb 11 36 20.7
comp=Z,3.8nm,0.8s
F17K Baldwin Pennin 78.50 17 IAmb IAmb 11 36 24.4
comp=Z,4.3nm,0.8s
G18K Tagagawik 78.92 18 P P 11 36 25.2 +0.5
SUA Susitna One 79.12 24 P P 11 36 25.9 -0.1
SUA IAmb IAmb 11 36 26.2
comp=Z,4.3nm,0.7s
J20K Nowinta River 79.36 21 IAmb IAmb 11 36 33.7
comp=Z,4.0nm,1.0s
G19K Purcell Mounta 79.57 19 IAmb IAmb 11 36 41.8
comp=Z,5.2nm,1.1s
PMR Palmer 79.85 24 P P 11 36 29.7 -0.1
PMR IAmb IAmb 11 36 48.1
comp=Z,4.7nm,1.1s
SML Sawmill 80.29 24 P P 11 36 32.3 +0.1
E19K Redstone River 80.36 17 IAmb IAmb 11 36 43.5
comp=Z,8.4nm,1.1s
MKAR Makanchi Array 80.47 319 P P 11 36 33.6 +0.1
comp=Z,0.8nm,0.8s,baz=88,slow=8.2,SNR=8.4
comp=Z,0.8nm,0.8s
MKAR Makanchi Array 80.47 319 P P 11 36 33.5 0.0
C19K Lookout Ridge 80.77 16 IAmb IAmb 11 36 37.0
comp=Z,5.3nm,0.7s
D19K Kuna River 80.77 16 IAmb IAmb 11 36 47.3
comp=Z,4.7nm,1.1s
ZAA0 Zalesovo Array 81.31 326 P P 11 36 36.9 -0.8
ZAA0 IAmb IAmb 11 36 37.6
comp=Z,2.7nm,0.6s
ZALV Zalesovo Beam 81.31 326 P P 11 36 37.0 -0.7
comp=Z,3.4nm,0.6s,baz=113,slow=6.6,SNR=17
comp=Z,3.4nm,0.6s
ZALV Zalesovo Beam 81.31 326 P P 11 36 37.2 -0.5
I23K Minto, Yukon-K 81.61 21 P P 11 36 39.4 +0.3
WRH Wood River Hil 81.73 22 P P 11 36 39.2 -0.5
E21K Killik River 81.94 17 IAmb IAmb 11 36 51.1
comp=Z,3.0nm,0.8s
ILAR Eielson Array 82.33 22 P P 11 36 42.1 -0.8
comp=Z,1.2nm,0.7s,baz=242,slow=5.8,SNR=21
comp=Z,1.2nm,0.7s
ILAR Eielson Array 82.33 22 P P 11 36 42.0 -0.9
J25K Salcha River, 82.83 23 IAmb IAmb 11 36 46.5
comp=Z,3.9nm,0.6s
KURK Kurchatov 83.91 322 P P 11 36 51.3 0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	83.94	322	P	P	11 36 51.7	+0.2
	comp=Z,0.4nm,0.4s,baz=97,slow=4.7,SNR=4.5						
	comp=Z,0.4nm,0.4s						
NIL	Nilore	84.08	304	P	P	11 36 51.9	-0.8
QSPA	South Pole Qui	84.98	180	P	P	11 36 58.3	+1.6
	comp=Z,3.1nm,0.4s,baz=20,slow=1.7,SNR=6.2						
	comp=Z,3.1nm,0.4s						
QSPA	South Pole Qui	84.98	180	P	P	11 36 57.2	+0.5
E27K	Coleen River	85.77	20	IAmb	IAmb	11 37 28.9	
	comp=Z,2.5nm,1.1s						
BVAR	Borovoye Array	89.39	323	P	P	11 37 17.4	-0.7
	comp=Z,2.4nm,0.6s,baz=121,slow=7.1,SNR=6.9						
	comp=Z,2.4nm,0.6s						
NVAR	Mina Array Bea	92.20	52	P	P	11 37 32.8	+1.0
	comp=Z,0.5nm,0.8s,baz=267,slow=5.3,SNR=2.7						
	comp=Z,0.5nm,0.8s						
GERES	GERESS Array B	124.21	328	PKP	PKiKP	11 43 21.4	+0.8
	comp=Z,0.4nm,0.4s,baz=27,slow=2.5,SNR=2.9						
TORD	Torodi Ar. Bea	150.37	288	PKPbc	PKPbc	11 44 13.8	+0.1
	comp=Z,3.4nm,0.5s,baz=76,slow=1.7,SNR=25						
TORD				PKPab	PKPab	11 44 20.5	+0.3
	comp=Z,4.7nm,0.6s,baz=82,slow=3.2,SNR=10						
BDFB	Brasilia	150.94	135	PKPbc	PKiKP	11 44 16.2	+0.3
	comp=Z,6.9nm,0.6s,baz=308,slow=1.8,SNR=11						
DBIC	Dimbokro	157.71	275	PKPab	PKPab	11 44 51.5	0.0
	comp=Z,3.8nm,0.6s,baz=103,slow=3.2,SNR=6.4						

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*IDC **05** 12:03:00.9±2.7, 6.°08S×130.°73E, h89km±29km, mb3.5/8, mbtmp4.0/13, Error ellipse: s-maj=36.3km s-min=15.9km az=71.0*

*DJA **05** 12:03:02.0±0.8, 6°S±2°×13°1E±°, h15km±6km, M4.4/22, mB5.3/4, mb4.4/6, MLv4.3/22, Mw(mB)4.7/4*

ISC 05 12:03:01.0±0.7, **5.°98S**±0.°05×**130.°98E**±0.°06, **h86**km, **n32**, σ**2^{s}38**/34, **mb3.8**/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.80	324	P	Pn	12 03 34.0	+3.5
BNDI	Bandanaira	1.80	324	P	Pn	12 03 33.8	+3.3
SAUI	Saumlaki	2.01	171	P	Pn	12 03 36.7	+3.4
SAUI	Saumlaki	2.01	171	P	Pn	12 03 36.4	+3.1
FAKI	Fak Fak	3.29	23	P	Pn	12 03 52.8	+2.2
FAKI	Fak Fak	3.29	23	P	Pn	12 03 52.7	+2.2
FAKI				S	Sn	12 04 30.0	+1.3
MSAI	Masohi	3.32	322	P	Pn	12 03 54.1	+3.2
MSAI				S	Sn	12 04 29.4	+0.1
KMPI	Kaimana, Papua	3.56	50	P	Pn	12 03 58.5	+4.4
KRAI	Karang Ratu	3.69	316	P	Pn	12 03 59.9	+4.0
NLAI	Namlea	4.73	305	P	Pn	12 04 14.0	+4.0
SIJI	Sorong	5.09	3	P	Pn	12 04 16.3	+1.4
	22nm,0.2s,baz=24,slow=22,SNR=70						
SIJI				S	Sn	12 05 10.4	-1.9
	73nm,0.2s,baz=300,slow=23,SNR=14						
SIJI	Sorong	5.09	3	P	Pn	12 04 16.4	+1.5
SWI	Sorong	5.09	3	P	Pn	12 04 17.0	+2.1
	5µm27nm,0.6s						
MWPI	Manokwari, Pap	5.88	31	P	Pn	12 04 27.6	+2.0
	0.4nm78nm,0.9s						
SANI	Sanana	6.33	308	P	Pn	12 04 34.9	+3.1
SANI	Sanana	6.33	308	P	Pn	12 04 34.1	+2.3
	0.1nm17nm,0.5s						
DRS	Darwin Rock St	6.41	181	P	Pn	12 04 33.9	+1.0
FITZ	Fitzroy Crossi	13.12	203	P	Pn	12 06 00.8	-3.2
	3.3nm,0.6s,baz=29,slow=9.4,SNR=18						
FITZ				S	Sn	12 08 17.6	-11
	5.8nm,0.3s,baz=243,slow=18,SNR=8.3						
WRA	Warramunga Arr	14.26	167	P	Pn	12 06 16.6	-2.3
	0.8nm,0.3s,baz=347,slow=12,SNR=29						
WRA				S	Sn	12 08 42.4	-13
	3.3nm,0.4s,baz=342,slow=22,SNR=10						
COEN	Coen	14.38	124	P	Pn	12 06 21.0	+0.4
PMG	Port Moresby	16.39	103	P	P	12 06 48.4	+1.0
	13nm,0.9s,baz=286,slow=10,SNR=3.8						
QIS	Mount Isa	16.73	151	P	Pn	12 06 50.3	+0.1
MTSU	Mount Surprise	17.76	134	P	Pn	12 07 03.3	+0.5
ASAR	Alice Springs	17.81	171	P	P	12 07 03.0	+0.1
	3.2nm,0.6s,baz=350,slow=10,SNR=67						
ASAR				S	Sn	12 10 08.1	-14
	2.5nm,0.8s,baz=356,slow=25,SNR=12						
CTA	Charters Tower	20.42	135	P	Pn	12 07 33.1	-1.2
	2.8nm,0.7s,baz=308,slow=12,SNR=3.7						
	2.8nm,0.7s						
STKA	Stephens Creek	27.61	160	P	P	12 08 40.0	-0.4
	1.1nm,0.4s,baz=344,slow=6.1,SNR=3.2						
	1.1nm,0.4s						
CMAR	Chiang Mai Arr	39.85	308	P	P	12 10 26.0	-0.5
	0.3nm,0.3s,baz=123,slow=9.6,SNR=1.4						
	0.3nm,0.3s						
SONM	Songino Array	57.80	341	P	P	12 12 43.1	-0.4
	0.3nm,0.4s,baz=155,slow=7.6,SNR=3.0						
	0.3nm,0.4s						
MKAR	Makanchi Array	67.92	326	P	P	12 13 50.5	-0.1
	2.6nm,0.6s,baz=120,slow=8.2,SNR=35						
	2.6nm,0.6s						
ZALV	Zalesovo Beam	71.11	333	P	P	12 14 09.3	-0.7
	0.3nm,0.3s,baz=134,slow=6.9,SNR=2.5						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	72.16	328	P	P	12 14 14.9	-1.5
	0.4nm,0.3s,baz=122,slow=5.3,SNR=4.5						
	0.4nm,0.3s						
BVAR	Borovoye Array	77.73	327	P	P	12 14 46.3	-2.2
	0.3nm,0.4s,baz=123,slow=6.0,SNR=2.7						
	0.3nm,0.4s						

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*IDC **05** 12:17:03.7±0.4, 54.°58S×158.°49E, h0km, mb5.3/17, mbtmp5.2/17, MS5.3/39, Error ellipse: s-maj=13.4km s-min=8.7km az=82.0*

*BJI **05** 12:17:03.7, 54.°45S×158.°76E, h10km, mB6.1/41, mb5.4/39, Ms5.6/54, Ms7 5.3/57*

*ISC-PP **05** 12:17:05, 54.°60S×158.°74E, h35km, Mwppsm5.9, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}0.25±.13; $M_{\theta\theta}$0.37±.22; $M_{\phi\phi}$-0.59±.17; $M_{r\theta}$-0.28±.18; $M_{\theta\phi}$0.14±.18; $M_{\phi r}$0.35±.14; Fault plane solution: $M_0$8.81000×10^{17} NP1:ϕ_s203.80000°, δ57.20000°, λ164.60000°. NP2:ϕ_s302.30000°, δ77.10000°, λ33.80000°.*

*NEIC **05** 12:17:05.5, 54.°45S×158.°79E, h22km, Moment Tensor Solution. Duration: 3^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.05; $M_{\theta\theta}$1.71; $M_{\phi\phi}$-1.76; $M_{r\theta}$-0.29; $M_{\theta\phi}$5.06; $M_{\phi r}$0.89; Fault plane solution: $M_0$5.43000×10^{17} NP1:ϕ_s99.11000°, δ81.32000°, λ-4.28000°. NP2:ϕ_s189.76000°, δ85.77000°, λ-171.30000°. Principal axes: T 5.3379, Plg3.0000°, Azm324.0000°; N 0.1820, Plg80.0000°, Azm215.0000°; P -5.5199, Plg9.0000°, Azm55.0000°;*

*NEIC **05** 12:17:05.4±1.5, 54.°60S±0.°09×158.°7E±0.°2, h10km±1km, mb5.9/128, Ms_20 5.6/285, Mww5.8/36 Error ellipse: s-maj=16.8km s-min=14.5km az=88.0*

*NEIC **05** 12:17:05.5, 54.°55S×158.°79E, h22km*

*MOS **05** 12:17:06.7±1.3, 54.°53S×158.°18E, h19km, mb5.9/20, MS5.2/16, Error ellipse: s-maj=25.7km s-min=8.3km az=104.5*

*GFZ **05** 12:17:06.3, 54.°48S×158.°54E, h11km, MW5.7, Moment Tensor Solution. s22 Moment tensor: M_{rr}-0.29; $M_{\theta\theta}$1.79; $M_{\phi\phi}$-1.50; $M_{r\theta}$-0.69; $M_{\theta\phi}$4.18; $M_{\phi r}$0.75; Fault plane solution: NP1:ϕ_s100.00000°, δ82.00000°, λ-10.00000°. NP2:ϕ_s191.00000°, δ79.00000°, λ-17.00000°. Principal axes: T 4.6400, Plg2.0000°, Azm146.0000°; N -0.0500, Plg77.0000°, Azm243.0000°; P -4.5900, Plg13.0000°, Azm56.0000°;*

*PTWC **05** 12:17:06, 54.°50S×158.°60E, h10km, Mwp6.1/16, MACQUARIE ISLAND REGION*

*GCMT **05** 12:17:07.4±0.1, 54.°59S×158.°56E, h12km, MW5.7/146, Moment Tensor Solution. s134,c253; s146,c430; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.19±.03; $M_{\theta\theta}$1.79±.03; $M_{\phi\phi}$-1.60±.04; $M_{r\theta}$0.45±.09; $M_{\theta\phi}$4.38±.04; $M_{\phi r}$1.39±.11; Best double couple: $M_0$4.91600×10^{17} NP1:ϕ_s101.00000°, δ73.00000°, λ1.00000°. NP2:ϕ_s11.00000°, δ89.00000°, λ163.00000°. Principal axes: T 5.0520, Plg13.0000°, Azm324.0000°; N -0.2740, Plg73.0000°, Azm188.0000°; P -4.7800, Plg11.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 05 12:17:07.5±0.6, **54.°53S**±0.°04×**158.°82E**±0.°05, **h19**km±2km, **n1186**, σ**1^{s}64**/1079, **mb5.7**/211, **MS5.5**/209, **43C-44D, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	The Paps	9.65	41	P	Pn	12 19 22.3	-2.8
APZ				S	Sn	12 21 05.9	-7.0
PYZ	Puysegur Point	9.76	34		Pn	12 19 25.8	-0.8
PYZ	Puysegur Point	9.76	34	P	Pn	12 19 25.7	-0.8
SYZ	Scrubby Hill	10.34	44	P	Pn	12 19 33.2	-1.4
	616nm,1.0s						
SYZ	Scrubby Hill	10.34	44	P	Pn	12 19 32.3	-2.3
SYZ				S	Sn	12 21 23.4	-6.4
WHZ	Wether Hill Ro	10.43	38		Pn	12 19 34.1	-1.7
WHZ	Wether Hill Ro	10.43	38	P	Pn	12 19 33.5	-2.3
WHZ				S	Sn	12 21 25.8	-6.2
DCZ	Deep Cove	10.53	34		Pn	12 19 37.2	0.0
DCZ	Deep Cove	10.53	34	P	Pn	12 19 37.6	+0.5
MLZ	Mavora Lakes	10.94	37		Pn	12 19 42.4	-0.5
MLZ	Mavora Lakes	10.94	37	P	Pn	12 19 42.1	-0.7
TUZ	Tuapeka	11.01	43	P	Pn	12 19 42.2	-1.6
TUZ				S	Sn	12 21 42.3	-4.0
HHSZ	Highcliff Hill	11.46	46	P	Pn	12 19 49.2	-0.8
MSZ	Milford Sound	11.48	35	P	Pn	12 19 51.2	+0.9
EAZ	Earnscleugh	11.49	40	P	Pn	12 19 49.4	-0.9
WKZ	Wanaka	11.73	38		Pn	12 19 54.3	+0.6
WKZ	Wanaka	11.73	38	P	Pn	12 19 54.4	+0.7
ODZ	Otahua Downs	12.17	44		Pn	12 19 57.9	-1.7
ODZ	Otahua Downs	12.17	44	P	Pn	12 19 57.5	-2.1
	136nm,1.6s						
ODZ	Otahua Downs	12.17	44	P	Pn	12 20 00.6	+1.0
ODZ	Otahua Downs	12.17	44	P	Pn	12 19 57.6	-2.0
JCZ	Jackson Bay	12.30	36	P	Pn	12 20 03.7	+2.2
	372nm,0.7s						
JCZ	Jackson Bay	12.30	36	P	Pn	12 20 00.1	-1.4
LBZ	Lake Benmore	12.54	41		Pn	12 20 02.7	-1.9
LBZ	Lake Benmore	12.54	41	P	Pn	12 20 02.7	-1.9
TMZ	Timaru	12.86	43	P	Pn	12 20 07.7	-1.4
TMZ				S	Sn	12 22 27.4	-4.1
FOZ	Fox Glacier	13.14	38		Pn	12 20 12.2	-0.6
FOZ	Fox Glacier	13.14	38	P	Pn	12 20 12.6	-0.2
RPZ	Rata Peaks	13.44	41		Pn	12 20 17.1	+0.2
RPZ	Rata Peaks	13.44	41	P	Pn	12 20 17.7	+0.7
	152nm,1.4s						
RPZ	Rata Peaks	13.44	41	P	Pn	12 20 17.6	+0.6
AUTAR	Taroona High S	13.82	322	P	Pn	12 20 19.9	-2.2
	2µm,0.7s						
TAU	Tasmania Unive	13.86	322		Pn	12 20 18.9	-3.8
TAU	Tasmania Unive	13.86	322	P	Pn	12 20 19.1	-3.6
	570nm,0.8s						
TAU	Tasmania Unive	13.86	322	P	Pn	12 20 18.9	-3.8
TAU	Tasmania Unive	13.86	322	P	Pn	12 20 19.7	-3.0
WVZ	Waitaha Valley	13.87	39	P	Pn	12 20 20.7	-2.1
MQZ	McQueen's Vall	14.09	45		Pn	12 20 24.6	-1.2
MQZ	McQueen's Vall	14.09	45	P	Pn	12 20 23.7	-2.0
OXZ	Oxford	14.15	43	P	Pn	12 20 24.2	-2.5
MNZS	Menzies Bay Ba	14.28	46	P	Pn	12 20 28.4	0.0
MOO	Moorlands	14.32	323	P	Pn	12 20 26.1	-2.9
MOO	Moorlands	14.32	323	P	Pn	12 20 26.3	-2.7
	406nm,0.8s						
MOO	Moorlands	14.32	323	P	Pn	12 20 26.1	-2.9
MOO	Moorlands	14.32	323	P	Pn	12 20 26.1	-2.9
MOO				S	Sn	12 23 01.4	-5.7
INZ	Inchbonnie	14.43	40	P	Pn	12 20 31.5	+1.0
INZ	Inchbonnie	14.43	40	P	Pn	12 20 31.5	+1.0
AMCZ	Amberley	14.52	44		Pn	12 20 31.8	0.0
LTZ	Lake Taylor	14.70	42	P	Pn	12 20 32.8	-1.4
GVZ	Greta Valley S	14.85	45		Pn	12 20 38.8	+2.6
DRV	Dumont d'Urvil	15.19	209	P	Pn	12 20 41.2	+0.7
CORO	Coronation Par	15.21	325	P	Pn	12 20 39.4	-1.6
	215nm,0.6s						
GLAD	Gladstone	15.35	328	P	Pn	12 20 40.2	-2.6
	599nm,0.8s						
DSZ	Denniston Nort	15.41	39		Pn	12 20 43.8	+0.1
KHZ	Kahutara	15.52	45		Pn	12 20 45.4	+0.4
KHZ				IAmb	IAmb	12 20 48.0	
	comp=Z,944nm,1.7s						
KHZ	Kahutara	15.52	45	P	Pn	12 20 45.0	0.0
	comp=Z,333nm,2.8s						
KHZ	Kahutara	15.52	45	P	Pn	12 20 46.7	+1.7
THZ	Tophouse	15.82	42		Pn	12 20 49.6	+0.7
THZ				IAmb	IAmb	12 20 53.3	
	comp=Z,2µm,1.8s						
AUBRN	Burnie High Sc	16.02	322	P	Pn	12 20 50.3	-1.2
	comp=Z,307nm,1.5s						
MRNZ	Matariki Terra	16.07	41		Pn	12 20 52.1	0.0
BSWZ	Blackbirch Sta	16.24	44	P	Pn	12 20 55.3	+1.0
CMWZ	Cape Campbell	16.35	45	P	P	12 20 57.9	-0.6
TKNZ	Takaka Hill	16.46	41	P	Pn	12 20 57.9	+0.7
NNZ	Nelson	16.47	42	P	P	12 21 00.8	+1.0
NNZ				IAmb	IAmb	12 21 03.2	
	comp=Z,1µm,1.4s						
QRZ	Quartz Range	16.48	39	P	Pn	12 20 58.2	+0.8
QRZ	Quartz Range	16.48	39	P	Pn	12 20 57.9	+0.5
	comp=Z,289nm,2.1s						
QRZ	Quartz Range	16.48	39	P	Pn	12 20 56.9	-0.5
TUWZ	Tuamarina	16.51	44	P	P	12 20 59.1	-1.2
TCW	Tory Channel	16.83	44		P	12 21 04.1	+0.3
BHW	Baring Head	16.91	46	P	P	12 21 04.9	+0.2
SNZO	South Karori	16.92	45	P	P	12 21 05.7	+0.9
SNZO	South Karori	16.92	45	P	P	12 21 04.9	+0.1
	comp=Z,133nm,1.6s						
SNZO	South Karori	16.92	45	P	P	12 21 04.2	-0.6
MSWZ	Moikau Station	17.06	46	P	Pn	12 21 05.4	+0.7
MRZ	Mangatainoka R	17.82	46	P	P	12 21 14.6	-0.3
BFZ	Birch Farm	18.09	47	P	Pn	12 21 17.3	-0.1
BFZ	Birch Farm	18.09	47	P	P	12 21 19.5	+1.7
	comp=Z,261nm,1.7s						
BFZ	Birch Farm	18.09	47	P	Pn	12 21 17.0	-0.5
AUSSC	Sale College,	18.28	329	P	Pn	12 21 19.6	-0.2
	comp=Z,879nm,2.1s						
MILA	Mila	18.70	335	P	Pn	12 21 26.4	+1.4
CTZ	Chatham Island	19.26	66	P	P	12 21 30.2	-0.3
CTZ	Chatham Island	19.26	66	P	Pn	12 21 33.2	+1.6
TOO	Toolangi	19.26	326	P	Pn	12 21 31.2	-0.5
	comp=Z,224nm,1.8s,comp=Z,0.0nm						
TOO	Toolangi	19.26	326		P	12 21 31.0	+0.3
TOO	Toolangi	19.26	326	P	P	12 21 31.0	+0.3
TOO				pmax	pmax		
	comp=Z,687nm,1.7s						
AUSMG	Snowy Mountain	19.43	335	P	Pn	12 21 33.3	-0.6
	comp=Z,674nm,1.9s						
BKZ	Black Stump Fm	19.46	45		Pn	12 21 34.8	+0.7
BKZ				IAmb	IAmb	12 21 40.6	
	comp=Z,864nm,1.6s						
BKZ	Black Stump Fm	19.46	45	P	Pn	12 21 34.5	+0.3
	comp=Z,353nm,2.7s						
BKZ	Black Stump Fm	19.46	45	P	Pn	12 21 34.4	+0.3
BRAT	Ballarat	19.81	323	P	P	12 21 36.8	+0.2
	comp=Z,165nm,1.5s						
AUHPC	Hawkesdale P12	19.90	319	P	P	12 21 38.0	+0.4
	comp=Z,492nm,1.6s						
AUUHS	Ulladulla High	20.03	340	P	Pn	12 21 40.0	-0.8
	comp=Z,418nm,1.8s						
RTZ	Ruatahuna	20.13	45		Pn	12 21 41.4	-0.7
RTZ				IAmb	IAmb	12 21 45.6	
	comp=Z,1µm,1.8s						
RTZ				IAMs_20	IAMs_20	12 29 08.2	
	comp=Z,22µm,20.0s						
TOZ	Tahuroa Road	20.30	41	P	Pn	12 21 46.8	+2.7
AUMHS	Melrose High S	20.33	337	P	P	12 21 42.7	+0.4
	comp=Z,270nm,1.9s						
CAN	Canberra	20.39	336	P	Pn	12 21 43.9	-1.2
	comp=Z,443nm,1.6s,comp=Z,0.0nm						
CAN	Canberra	20.39	336		P	12 21 43.4	+0.4
CAN	Canberra	20.39	336	P	P	12 21 43.3	+0.3
	comp=Z,679nm,1.6s						
CAN	Canberra	20.39	336	P	P	12 21 43.4	+0.4
CAN				pmax	pmax		
	comp=Z,2µm,1.8s						
CAN				MLR	MLR		
	comp=Z,17µm,19.0s						
CAN	Canberra	20.39	336	P	P	12 21 43.8	+0.8
AUMTS	Mt Stromlo	20.39	336	P	P	12 21 43.3	+0.3
	comp=Z,502nm,1.6s						
AUDAR	Daramalan Coll	20.42	337	P	P	12 21 43.6	+0.3
	comp=Z,270nm,1.8s						
URZ	Urewera	20.49	45	P	P	12 21 44.5	+0.6
	comp=Z,131nm,0.9s,baz=210,slow=7.3,SNR=26						
URZ				S	Sn	12 25 39.2	+2.8
	comp=Z,13nm,1.1s,baz=140,slow=10,SNR=2.5						
URZ				LR	LR	12 29 30.7	
	comp=Z,20µm,18.4s,baz=223,slow=36						
	comp=Z,131nm,0.9s						
URZ	Urewera	20.49	45	P	P	12 21 44.6	+0.7
WOLH	Wollongong Har	20.88	341	P	P	12 21 49.0	+0.8
	comp=Z,132nm,0.6s						
MGBR	Mount Gambier	20.93	316	P	P	12 21 49.7	+1.0
ARPS	Mount Arapiles	21.26	320	P	P	12 21 52.6	+0.3
	comp=Z,401nm,2.1s,comp=Z,0.0nm						
RIV	Riverview	21.39	342	P	P	12 21 55.1	+1.5
RIV	Riverview	21.39	342	P	P	12 21 54.1	+0.4
	comp=Z,298nm,1.6s						
YNG	Young	21.51	336	P	P	12 21 55.4	+0.4
	comp=Z,107nm,1.8s,comp=Z,0.0nm						
SYDH	Sydney Hard Ro	21.53	341	P	P	12 21 55.9	+0.7
	comp=Z,264nm,1.4s						
MXZ	Matakaoa Point	21.57	46	P	P	12 21 57.2	+1.6
MXZ				IAmb	IAmb	12 22 12.6	
	comp=Z,1µm,1.6s						
MXZ	Matakaoa Point	21.57	46	P	P	12 21 57.7	+2.0
	comp=Z,381nm,1.3s						
AUKHS	Kincumber High	21.71	343	P	P	12 21 57.6	+0.5
	comp=Z,482nm,1.9s						
OUZ	Omahuta	21.88	34	P	P	12 22 01.3	+2.4
MGCD	Mangrove Creek	22.00	343	P	P	12 22 02.1	+1.8
MGCD	Mangrove Creek	22.00	343	P	P	12 22 01.4	+1.1
	comp=Z,177nm,1.4s						
VNDA	Vanda	23.12	178	P	P	12 22 10.3	-1.5
	comp=Z,35nm,1.2s,baz=352,slow=11,SNR=23						
VNDA				S	S	12 26 23.9	+2.2
	comp=Z,1.4nm,0.9s,baz=193,slow=20,SNR=0.9						
VNDA				LR	LR	12 29 10.7	
	comp=Z,8µm,22.0s,baz=2.5,slow=32						
	comp=Z,35nm,1.2s						
VNDA	Vanda	23.12	178		P	12 22 09.9	-1.8
VNDA	Vanda	23.12	178	P	P	12 22 10.2	-1.5
AUDCS	Dubbo College	23.44	338	P	P	12 22 16.3	+1.0
	comp=Z,363nm,1.9s						
SBA	Scott Base	23.59	176	P	P	12 22 16.5	0.0
SBA				IAmb	IAmb	12 22 39.7	
	comp=Z,491nm,1.8s						
SBA	Scott Base	23.59	176	P	P	12 22 16.5	0.0
SBA				pmax	pmax		
	comp=Z,491nm,1.8s						
SBA	Scott Base	23.59	176	P	P	12 22 17.3	+0.8
AUMBR	Murray Bridge	23.69	317	P	P	12 22 17.6	-0.1
	comp=Z,224nm,2.4s						
AUPHS	Peel High Scho	24.10	343	P	P	12 22 21.5	-0.1
	comp=Z,148nm,2.1s						
AUMAR	Marden Senior	24.16	316	P	P	12 22 22.3	+0.1
	comp=Z,183nm,2.0s						
ARMA	Armidale	24.64	345	P	P	12 22 27.4	+0.6
	comp=Z,106nm,1.6s,comp=Z,0.0nm						
ARMA	Armidale	24.64	345		P	12 22 26.3	-0.4
ARMA	Armidale	24.64	345	P	P	12 22 27.2	+0.4
	comp=Z,106nm,1.6s						
ARMA	Armidale	24.64	345	P	P	12 22 26.1	-0.7
CMSA	Cobar Meteorol	24.82	332	P	P	12 22 28.3	+0.1
	comp=Z,175nm,1.6s,comp=Z,0.0nm						
CMSA	Cobar Meteorol	24.82	332	P	P	12 22 27.8	-0.4
	comp=Z,175nm,1.6s						
CCD	Concordia, Ant	24.82	201	P	P	12 22 28.0	-0.3
HTT	Hallett	25.32	318	P	P	12 22 32.7	-0.1
	comp=Z,81nm,1.6s						
HTT	Hallett	25.32	318	P	P	12 22 32.8	-0.1
	comp=Z,199nm,1.6s						
AUJCS	Jamestown Cent	25.65	318	P	P	12 22 35.6	-0.2
	comp=Z,140nm,1.6s						
STKA	Stephens Creek	25.75	325	P	P	12 22 36.8	+0.1
	comp=Z,704nm,1.6s,comp=Z,0.0nm						
STKA	Stephens Creek	25.75	325	P	P	12 22 36.0	-0.7
	comp=Z,60nm,1.0s,baz=146,slow=10,SNR=64						
STKA				S	S	12 27 06.8	+2.2
	comp=Z,8.0nm,1.2s,baz=90,slow=20,SNR=1.4						
STKA				LR	LR	12 31 16.8	
	comp=Z,11µm,19.9s,baz=157,slow=33						
	comp=Z,60nm,1.0s						
STKA	Stephens Creek	25.75	325		P	12 22 36.7	+0.1
STKA	Stephens Creek	25.75	325	P	P	12 22 36.5	-0.2
	comp=Z,35nm,1.6s						
STKA	Stephens Creek	25.75	325	P	P	12 22 36.7	+0.1
STKA				pmax	pmax		
	comp=Z,2µm,1.7s						
CASY	Casey	25.84	224		P	12 22 37.6	+0.5
AULRC	Lightning Ridg	26.28	338	P	P	12 22 41.5	+0.1
	comp=Z,182nm,1.5s						
BBOO	Buckleboo	27.02	314	P	P	12 22 47.6	-0.5
	comp=Z,184nm,1.9s,comp=Z,0.0nm						
BBOO	Buckleboo	27.02	314		P	12 22 47.2	-1.0
BBOO				IAmb	IAmb	12 22 49.0	
	comp=Z,327nm,1.4s						
BBOO	Buckleboo	27.02	314	P	P	12 22 47.3	-0.8
	comp=Z,184nm,1.9s						
TW1H	Toowoomba 1 Ha	27.42	347	P	P	12 22 52.8	+1.0
	comp=Z,157nm,1.3s						
AUWSH	Wavell State H	27.43	349	P	P	12 22 52.4	+0.6
	comp=Z,206nm,1.5s						
RMQ	Roma	28.98	341	P	P	12 23 06.3	+0.7
	comp=Z,69nm,1.8s						
EIDS	Eidsvold	29.69	346	P	P	12 23 12.2	+0.3
	comp=Z,79nm,1.8s,comp=Z,0.0nm						
EIDS	Eidsvold	29.69	346	P	P	12 23 11.6	-0.3
EIDS				IAmb	IAmb	12 23 13.2	
	comp=Z,408nm,2.0s						
EIDS	Eidsvold	29.69	346	P	P	12 23 11.9	0.0
	comp=Z,79nm,1.8s						
INKA	Innaminka	29.84	326		P	12 23 13.6	+0.3
INKA				IAmb	IAmb	12 23 15.2	
	comp=Z,387nm,1.8s						
QLP	Quilpie	29.91	333	P	P	12 23 14.2	+0.3
	comp=Z,390nm,1.4s						
QLP	Quilpie	29.91	333	P	P	12 23 13.9	0.0
	comp=Z,390nm,1.4s						
RAO	Raoul Island	30.34	43	LR	LR	12 34 26.6	
	comp=Z,6µm,20.0s,baz=195,slow=34						
GD1S	Gladstone Soft	31.18	346	P	P	12 23 26.0	+1.0
AUNRC	North Rockhamp	31.75	345	P	P	12 23 30.9	+0.8
	comp=Z,60nm,1.9s						
FORT	Forrest	32.35	305	P	P	12 23 34.5	-0.8
	comp=Z,69nm,1.6s,comp=Z,0.0nm						
FORT	Forrest	32.35	305	P	P	12 23 34.4	-0.9
ONTNC	Ouen Toro	32.68	13	P	P	12 23 37.2	-1.1
ONTNC				IAmb	IAmb	12 23 44.1	
	comp=Z,225nm,1.3s						
ONTNC	Ouen Toro	32.68	13	P	P	12 23 40.4	+2.1
	comp=Z,151nm,1.7s						
DZM	Mont Dzumac	32.91	13	P	P	12 23 40.5	0.0
	comp=Z,40nm,0.9s,baz=194,slow=10.0,SNR=11						
DZM				S	S	12 29 01.4	+4.2
	comp=Z,5.8nm,0.9s,baz=158,slow=22,SNR=1.6						
DZM				LR	LR	12 34 16.9	
	comp=Z,2µm,19.8s,baz=194,slow=31						
	comp=Z,40nm,0.9s						
DZM	Mont Dzumac	32.91	13	P	P	12 23 40.1	-0.4
DZM				IAmb	IAmb	12 23 46.4	
	comp=Z,167nm,1.4s						
DZM	Mont Dzumac	32.91	13	P	P	12 23 42.6	+2.1
	comp=Z,97nm,1.8s						
KOUNC	Koumac, New Ca	34.17	9	P	P	12 23 53.0	+1.7
	comp=Z,142nm,1.5s						
AUALB	St Joseph's Co	34.36	288	P	P	12 23 52.4	-0.4
	comp=Z,178nm,1.7s						
KMBL	Kambalda	34.98	296	P	P	12 23 57.3	-0.9
	comp=Z,34nm,2.0s,comp=Z,0.0nm						
RKGY	Rocky Gully	35.16	287	P	P	12 23 58.8	-0.9
	comp=Z,156nm,2.3s,comp=Z,0.0nm						
QSPA	South Pole Qui	35.58	180	P	P	12 24 02.7	-0.6
	comp=Z,17nm,1.0s,baz=8.2,slow=5.7,SNR=14						
QSPA				LR	LR	12 36 36.2	
	comp=Z,3µm,21.6s,baz=22,slow=33						
	comp=Z,17nm,1.0s						
QSPA	South Pole Qui	35.58	180	P	P	12 24 02.5	-0.8
QSPA				IAmb	IAmb	12 24 11.5	
	comp=Z,245nm,1.8s						
CTA	Charters Tower	35.69	339	LR	LR	12 37 11.5	
	comp=Z,6µm,18.4s,baz=155,slow=34						
CTA	Charters Tower	35.69	339	P	P	12 24 04.6	+0.2
	comp=Z,5.3nm,1.6s						
CTAO	Charters Tower	35.69	339	P	P	12 24 04.4	0.0
CTAO				IAmb	IAmb	12 24 06.0	
	comp=Z,337nm,1.4s						
CTAO	Charters Tower	35.69	339	IAMs_20	IAMs_20	12 35 17.6	
	comp=Z,9µm,19.0s						
CTAO	Charters Tower	35.69	339	P	P	12 24 04.6	+0.2
	comp=Z,66nm,1.6s						
CTAO	Charters Tower	35.69	339	P	P	12 24 04.4	0.0
CTAO				pmax	pmax		
	comp=Z,337nm,1.4s						
ASAR	Alice Springs	36.00	319	P	P	12 24 05.8	-1.3
	comp=Z,111nm,0.8s,baz=156,slow=8.9,SNR=887						
ASAR				PcP	PcP	12 26 31.3	-2.1
	comp=Z,6.4nm,0.8s,baz=153,slow=3.8,SNR=5.2						
ASAR				S	S	12 29 47.0	+2.2

comp=Z,0.4nm,0.8s,baz=120,slow=34,SNR=1.7
ASAR LR LR 12 38 40.7
comp=Z,6µm,18.2s,baz=146,slow=36
comp=Z,111nm,0.8s
ASAR Alice Springs 36.00 319 P **P** **12 24 05.6 -1.5**
AS31 Alice Springs 36.00 319 P **P** **12 24 06.0 -1.1**
NWAO Narrogin (SRO) 36.27 289 P **P** **12 24 07.7 -1.6**
comp=Z,82nm,1.8s
NWAO Narrogin (SRO) 36.27 289 LR LR 12 35 54.2
comp=Z,5µm,18.4s,baz=124,slow=31
NWAO Narrogin (SRO) 36.27 289 P **P** **12 24 07.5 -1.8**
NWAO Narrogin (SRO) 36.27 289 P **P** **12 24 08.2 -1.1**
comp=Z,47nm,1.8s
NWAO Narrogin (SRO) 36.27 289 P **P** **12 24 07.5 -1.8**
NWAO pmax pmax
comp=Z,199nm,1.7s
H01W1 Cape Leeuwin H 36.54 284 T T 13 02 47.7
baz=136,slow=76
H01W2 Cape Leeuwin H 36.54 284 T T 13 02 45.6
baz=136,slow=76
H01W3 Cape Leeuwin H 36.55 284 T T 13 02 46.5
baz=136,slow=76
QIS Mount Isa 36.92 329 P **P** **12 24 13.9 -1.1**
comp=Z,139nm,1.4s,comp=Z,0.0nm
QIS Mount Isa 36.92 329 P **P** **12 24 13.9 -1.1**
comp=Z,139nm,1.4s
KLBR Kellerberrin 37.00 291 P **P** **12 24 14.5 -1.0**
comp=Z,152nm,1.4s
KLBR Kellerberrin 37.00 291 P **P** **12 24 14.6 -1.0**
comp=Z,152nm,1.4s
WRKA Warakurna 37.11 310 P **P** **12 24 15.6 -1.0**
comp=Z,80nm,1.3s,comp=Z,0.0nm
MUN Mundaring 37.55 289 P **P** **12 24 19.0 -1.2**
comp=Z,115nm,1.8s,comp=Z,0.0nm
MUN Mundaring 37.55 289 P **P** **12 24 19.4 -0.8**
comp=Z,115nm,1.8s
MTKN Mount Kenneth 37.83 289 P **P** **12 24 21.8 -0.7**
comp=Z,125nm,1.4s
MTSU Mount Surprise 38.00 337 P **P** **12 24 24.4 +0.3**
comp=Z,71nm,1.2s
MTSU Mount Surprise 38.00 337 P **P** **12 24 24.4 +0.3**
comp=Z,71nm,1.2s
BLDU Ballidu 38.32 291 P **P** **12 24 25.3 -1.5**
comp=Z,99nm,2.1s
BLDU Ballidu 38.32 291 P **P** **12 24 25.6 -1.1**
comp=Z,99nm,2.1s
WR0 Warramunga Arr 39.15 322 P **P** **12 24 32.3 -1.4**
comp=Z,344nm,1.5s
WR8 Warramunga Arr 39.16 322 P **P** **12 24 32.2 -1.6**
WB1 Warramunga Ar. 39.22 322 P **P** **12 24 32.6 -1.7**
comp=Z,309nm,1.6s
WB2 Warramunga Arr 39.23 322 P **P** **12 24 33.1 -1.3**
comp=Z,281nm,1.6s
WR1 Warramunga Arr 39.23 322 P **P** **12 24 32.9 -1.5**
comp=Z,267nm,1.6s
WRA Warramunga Arr 39.23 322 P **P** **12 24 32.3 -2.2**
comp=Z,104nm,1.0s,baz=158,slow=7.2,SNR=282
WRA PcP **PcP** **12 26 41.4 -1.9**
comp=Z,32nm,1.3s,baz=161,slow=3.2,SNR=5.5
WRA S **S** **12 30 35.0 +1.1**
comp=Z,0.8nm,1.1s,baz=179,slow=32,SNR=5.7
WRA LR LR 12 40 01.7
comp=Z,23µm,19.4s,baz=190,slow=35
comp=Z,104nm,1.0s
WRA Warramunga Arr 39.23 322 P **P** **12 24 31.9 -2.6**
WRA Warramunga Arr 39.23 322 P **P** **12 24 31.9 -2.6**
WRA pmax pmax
comp=Z,16nm,2.0s
WRAB Tennant Creek 39.24 322 P **P** **12 24 32.4 -2.1**
WRAB IAmb IAmb 12 24 34.4
comp=Z,380nm,1.3s
WRAB Tennant Creek 39.24 322 P **P** **12 24 32.9 -1.6**
comp=Z,136nm,1.6s
WRAB Tennant Creek 39.24 322*c iP* **P** **12 24 32.8 -1.7**
WRAB pmax pmax
comp=Z,213nm,1.2s
WRAB MLR MLR
comp=Z,21µm,19.0s
WB9 Warramunga Arr 39.36 322 P **P** **12 24 33.9 -1.6**
comp=Z,243nm,1.7s
WB0 Warramunga Arr 39.38 322 P **P** **12 24 33.9 -1.8**
WB0 IAmb IAmb 12 24 35.5
comp=Z,268nm,1.2s
MSVF Nonsavu 39.60 29 IAMs_20 IAMs_20 12 39 29.1
comp=Z,6µm,18.0s
MSVF Nonsavu 39.60 29 P **P** **12 24 39.3 +1.7**
comp=Z,26nm,2.0s
MSVF Nonsavu 39.60 29⇓*iP* **P** **12 24 38.9 +1.3**
MSVF pmax pmax
comp=Z,10.0nm,1.0s
MSVF MLR MLR
comp=Z,4µm,14.0s
MORW Morawa 39.89 292 P **P** **12 24 38.9 -0.9**
comp=Z,127nm,1.8s,comp=Z,0.0nm
MORW Morawa 39.89 292 P **P** **12 24 38.5 -1.4**
MORW Morawa 39.89 292 P **P** **12 24 38.7 -1.2**
comp=Z,127nm,1.8s
MEEK Meekatharra 40.47 297 P **P** **12 24 43.4 -1.3**
comp=Z,106nm,2.1s,comp=Z,0.0nm
MEEK Meekatharra 40.47 297 P **P** **12 24 43.1 -1.6**
comp=Z,106nm,2.1s
DGTI Dogotuki 41.45 31 P **P** **12 24 54.4 +1.6**
comp=Z,40nm,1.3s
COEN Coen 42.30 337 P **P** **12 24 59.5 -0.2**
comp=Z,173nm,1.9s,comp=Z,0.0nm
COEN Coen 42.30 337 P **P** **12 24 59.2 -0.5**
COEN Coen 42.30 337 P **P** **12 24 59.5 -0.2**
comp=Z,173nm,1.9s
MAW Mawson 43.34 214 P **P** **12 25 10.2 +2.7**
MAW Mawson 43.34 214 P **P** **12 25 07.2 -0.4**
comp=Z,77nm,1.2s,baz=113,slow=8.1,SNR=4.5
MAW LR LR 12 41 26.9
comp=Z,3µm,21.9s,baz=114,slow=34
comp=Z,77nm,1.2s
HURO Huro Makira 44.02 4 P **P** **12 25 15.6 +2.0**
PSAB3 Pilbara Seismi 44.02 303 P **P** **12 25 12.8 -0.9**
comp=Z,142nm,1.9s
PSAC2 Pilbara Seismi 44.02 303 P **P** **12 25 12.3 -1.3**
comp=Z,131nm,1.8s
PSA00 Pilbara Seismi 44.04 303 P **P** **12 25 13.0 -0.9**
comp=Z,136nm,1.9s
PSA00 Pilbara Seismi 44.04 303 P **P** **12 25 12.1 -1.7**
PSA00 IAmb IAmb 12 25 13.9
comp=Z,324nm,1.6s
PSA00 Pilbara Seismi 44.04 303 P **P** **12 25 12.6 -1.2**
comp=Z,136nm,1.9s
PSAC1 Pilbara Seismi 44.09 303 P **P** **12 25 13.3 -0.9**
comp=Z,116nm,1.7s
FITZ Fitzroy Crossi 44.37 312 LR LR 12 41 39.6
comp=Z,6µm,21.7s,baz=142,slow=33
MBWA Marble Bar 44.45 303 P **P** **12 25 15.7 -1.4**
comp=Z,140nm,1.6s,comp=Z,0.0nm
MBWA Marble Bar 44.45 303 P **P** **12 25 15.2 -1.9**
MBWA IAmb IAmb 12 25 17.1
comp=Z,292nm,1.4s
MBWA Marble Bar 44.45 303 IAMs_20 IAMs_20 12 41 43.4
comp=Z,6µm,19.0s
MBWA Marble Bar 44.45 303 P **P** **12 25 15.8 -1.3**
comp=Z,80nm,1.6s
KNRA Kununurra 45.24 317 P **P** **12 25 22.9 -0.5**
comp=Z,331nm,1.5s,comp=Z,0.0nm
KNRA Kununurra 45.24 317 **P** **12 25 22.5 -0.8**
SAVO Savo Central 45.26 1 P **P** **12 25 24.7 +1.1**
comp=Z,58nm,1.3s
RAR Rarotonga 45.55 60 P **P** **12 25 25.6 -0.2**
comp=Z,23nm,0.8s,baz=234,slow=6.6,SNR=5.8
RAR LR LR 12 42 41.1
comp=Z,4µm,18.0s,baz=208,slow=34
comp=Z,23nm,0.8s
RAR Rarotonga 45.55 60 P **P** **12 25 28.6 +2.8**
comp=Z,38nm,2.2s
PMG Port Moresby 45.96 344 **P** **12 25 28.4 -0.6**
PMG Port Moresby 45.96 344 IAMs_20 IAMs_20 12 42 52.8
comp=Z,4µm,19.0s
PMG Port Moresby 45.96 344 P **P** **12 25 29.4 +0.4**
comp=Z,158nm,1.4s
PMG Port Moresby 45.96 344*c iP* **P** **12 25 29.0 0.0**
PMG pmax pmax
comp=Z,118nm,1.0s
PMG MLR MLR
comp=Z,4µm,15.0s
PMG Port Moresby 45.96 344 P **P** **12 25 29.2 +0.2**
comp=Z,2µmcomp=Z,155nm,1.4s
GIRL Giralia 46.01 296 P **P** **12 25 30.9 +1.4**
GIRL Giralia 46.01 296 **P** **12 25 28.8 -0.6**
TATA Tatamba Isabel 46.02 1 P **P** **12 25 30.5 +1.0**
comp=Z,215nm,1.0s

KDU Kakadu 46.60 323 P **P** **12 25 33.2 -0.9**
comp=Z,86nm,1.5s
MTN Manton Dam 46.93 322 P **P** **12 25 35.6 -1.1**
comp=Z,152nm,1.5s,comp=Z,0.0nm
MTN Manton Dam 46.93 322 **P** **12 25 35.2 -1.5**
DRS Darwin Rock St 47.40 322 P **P** **12 25 38.9 -1.4**
comp=Z,142nm,1.4s
BELA Belgrano 2 47.60 176 P **P** **12 25 40.0 -1.3**
SYO Syowa Base 49.05 205⇓*e*Pdiff **PKiKP** **12 34 07.0 +3.3**
ELIB Princess Elisa 50.02 197*d*P **P** **12 25 58.7 -1.4**
comp=Z,58nm,1.1s
ELIB *d*PcP **PcP** **12 27 21.4 +1.8**
SAUI Saumlaki 51.38 324 P **P** **12 26 11.6 +0.8**
comp=Z,162nm,1.3s
SAUI Saumlaki 51.38 324 P **P** **12 26 12.7 +1.9**
comp=Z,159nm,1.3s
PAF Port-aux-Franc 51.39 237 IAMs_20 IAMs_20 12 43 48.3
comp=Z,7µm,19.0s
BATI Baumata 52.26 314 LR LR 12 47 14.9
comp=Z,4µm,19.8s,baz=182,slow=35
BATI Baumata 52.26 314 P **P** **12 26 18.6 +1.3**
comp=Z,3µmcomp=Z,3µmcomp=Z,126nm,1.4s
SOEI Soe 52.41 315 P **P** **12 26 19.0 +0.4**
SOEI Soe 52.41 315 IAMs_20 IAMs_20 12 47 00.8
comp=Z,7µm,20.0s
SOEI Soe 52.41 315 P **P** **12 26 19.0 +0.4**
comp=Z,200nm,2.0s
SOEI Soe 52.41 315 P **P** **12 26 20.0 +1.4**
comp=Z,4µmcomp=Z,4µmcomp=Z,201nm,2.0s
NVL N'lazarevskaya 52.80 193*eP* **P** **12 26 18.0 -2.6**
NVL *e* 12 27 27.3
NVL *e* 12 28 17.4
NVL *e*PPP PPP 12 29 21.2
NVL *e*S **S** **12 33 45.1 -2.3**
NVL *e*SS **SS** **12 37 27.1 +1.8**
NVL *e*SSS SSS 12 39 13.4
NVL pmax pmax
comp=Z,173nm,1.6s
NVL MLR MLR
comp=Z,3µm,14.0s
SNAA Sanae 53.43 187⇓P **P** **12 26 24.3 -1.2**
comp=Z,460nm,0.8s
SNAA Sanae 53.43 187 P **P** **12 26 23.8 -1.7**
comp=Z,29nm,1.0s,baz=186,slow=7.3,SNR=17
SNAA LR LR 12 48 23.9
comp=Z,1µm,18.8s,baz=170,slow=35
comp=Z,29nm,1.0s
SNAA Sanae 53.43 187 P **P** **12 26 23.4 -2.0**
SNAA IAmb IAmb 12 26 33.7
comp=Z,282nm,1.7s
SNAA Sanae 53.43 187⇑*iP* **P** **12 26 23.2 -2.2**
SNAA pmax pmax
comp=Z,56nm,1.5s
SNAA MLR MLR
comp=Z,3µm,15.0s
BASI Baing, Sumba 53.57 311 P **P** **12 26 28.8 +1.8**
PPT Papeete 53.90 68 LR LR 12 45 07.9
comp=Z,5µm,19.8s,baz=222,slow=31
JAY Jayapura 53.92 337 LR LR 12 48 46.3
comp=Z,3µm,18.7s,baz=142,slow=35
JAY Jayapura 53.92 337 P **P** **12 26 29.4 -0.2**
comp=Z,1µmcomp=Z,70nm,1.5s
GENI Genyem 53.97 337 P **P** **12 26 30.6 +0.7**
comp=Z,152nm,1.4s
GENI Genyem 53.97 337 P **P** **12 26 30.5 +0.7**
comp=Z,3µmcomp=Z,3µmcomp=Z,152nm,1.4s
VNA3 Neumayer Olymp 54.26 185⇓P **P** **12 26 30.7 -0.8**
comp=Z,18nm,0.7s
MMRI Maumere 54.27 313 P **P** **12 26 31.0 -1.1**
EDFI Ende, Flores 54.40 313 P **P** **12 26 32.0 -1.2**
comp=Z,2µmcomp=Z,117nm,1.3s
VNA2 Neumayer--Watz 54.46 186⇓P **P** **12 26 32.1 -0.8**
comp=Z,16nm,0.7s,baz=164,slow=7.3
WBSI Waikabubak, Su 54.61 310 P **P** **12 26 34.9 +0.3**
comp=Z,3µmcomp=Z,3µmcomp=Z,162nm,1.5s
VNA1 Neumayer--Stat 54.78 185⇓P **P** **12 26 34.1 -1.0**
comp=Z,68nm,0.9s
BNDI Bandanaira 55.09 324 P **P** **12 26 37.8 -0.2**
comp=Z,508nm,1.7s
BNDI Bandanaira 55.09 324 P **P** **12 26 37.9 -0.1**
FAKI Fak Fak 55.82 327 P **P** **12 26 42.3 -1.1**
FAKI IAMs_20 IAMs_20 12 53 30.7
comp=Z,5µm,20.0s
FAKI Fak Fak 55.82 327 P **P** **12 26 42.8 -0.6**
comp=Z,177nm,1.7s
FAKI Fak Fak 55.82 327 P **P** **12 26 42.7 -0.6**
comp=Z,3µmcomp=Z,3µmcomp=Z,179nm,1.7s
PLAI Plampang 56.06 309 P **P** **12 26 44.7 -0.3**
comp=Z,92nm,1.8s
PLAI Plampang 56.06 309 P **P** **12 26 45.0 0.0**
comp=Z,3µmcomp=Z,2µmcomp=Z,92nm,1.8s
DBNI Kabupaten Domp 56.10 309 P **P** **12 26 45.8 +0.4**
BAKI Biak 56.33 332 P **P** **12 26 48.6 +1.6**
comp=Z,4µmcomp=Z,243nm,1.7s
AAI Ambon 56.46 322 P **P** **12 26 47.3 -0.6**
comp=Z,3µmcomp=Z,140nm,1.8s
TWSI Taliwang, Sumb 56.55 308 P **P** **12 26 48.0 -0.5**
comp=Z,3µmcomp=Z,2µmcomp=Z,113nm,1.9s
PMSA Palmer Statio 56.56 160 LR LR 12 46 28.0
comp=Z,2µm,21.2s,baz=204,slow=31
RKPI Ransiki, Papua 56.57 330 P **P** **12 26 48.7 0.0**
comp=Z,222nm,1.4s
KRAI Karang Ratu 56.74 323 P **P** **12 26 48.1 -1.7**
comp=Z,4µmcomp=Z,170nm,1.6s
MWPI Manokwari, Pap 57.16 330 P **P** **12 26 53.7 +0.8**
comp=Z,147nm,1.2s
BSSI Bau Bau, Buton 57.25 313 P **P** **12 26 53.2 -0.3**
NLAI Namlea 57.27 321 P **P** **12 26 52.9 -0.7**
IGBI Denpasar 57.29 306 P **P** **12 26 56.4 +2.6**
comp=Z,3µmcomp=Z,174nm,1.2s
DNP Denpasar 57.38 306 P **P** **12 26 56.4 +2.0**
KHKI Kahang-Kahang 57.47 307 P **P** **12 26 55.5 +0.5**
comp=Z,3µmcomp=Z,2µmcomp=Z,120nm,1.8s
RTBI Rangdo, Negare 57.70 306 P **P** **12 26 57.9 +1.2**
comp=Z,3µmcomp=Z,3µmcomp=Z,156nm,1.9s
JAGI Jajag, Banyuwa 58.06 305 IAmb IAmb 12 27 22.3
comp=Z,141nm,1.4s
JAGI Jajag, Banyuwa 58.06 305 P **P** **12 26 59.1 -0.2**
comp=Z,67nm,1.4s
JAGI Jajag, Banyuwa 58.06 305 P **P** **12 26 59.0 -0.2**
comp=Z,2µmcomp=Z,2µmcomp=Z,67nm,1.4s
SIJI Sorong 58.06 327 LR LR 12 53 32.9
comp=Z,3µm,19.3s,baz=141,slow=38
SIJI Sorong 58.06 327 P **P** **12 26 59.2 0.0**
comp=Z,4µmcomp=Z,2µmcomp=Z,108nm,1.8s
SWI Sorong 58.07 327 P **P** **12 26 59.6 +0.4**
comp=Z,4µmcomp=Z,3µmcomp=Z,138nm,1.7s
KKSI Kolaka, Sulawe 58.53 315 P **P** **12 27 04.2 +1.7**
comp=Z,3µmcomp=Z,3µmcomp=Z,106nm,1.4s
GMJI Gumukmas 58.58 304 P **P** **12 27 02.6 -0.2**
comp=Z,2µmcomp=Z,107nm,1.7s
KAPI Kappang 58.58 313 LR LR 12 52 40.9
comp=Z,2µm,19.1s,baz=148,slow=37
KAPI Kappang 58.58 313 P **P** **12 27 01.8 -1.0**
KAPI Kappang 58.58 313 P **P** **12 27 03.1 +0.3**
comp=Z,52nm,1.8s
KAPI Kappang 58.58 313*c iP* **P** **12 27 02.1 -0.7**
KAPI pmax pmax
comp=Z,81nm,1.4s
KAPI MLR MLR
comp=Z,3µm,16.0s
KAPI Kappang 58.58 313 P **P** **12 27 03.4 +0.6**
ABJI Asem Bagus 58.61 305 P **P** **12 27 03.6 +0.6**
comp=Z,3µmcomp=Z,161nm,1.6s
SANI Sanana 58.78 321 P **P** **12 27 01.8 -2.4**
SANI Sanana 58.78 321 P **P** **12 27 02.9 -1.3**
comp=Z,232nm,1.3s
SANI Sanana 58.78 321 P **P** **12 27 02.4 -1.8**
comp=Z,3µmcomp=Z,232nm,1.3s
BLJI Banyuglugur 58.96 305 P **P** **12 27 06.2 +0.7**
comp=Z,2µmcomp=Z,57nm,1.2s
KMMI Kalianget 59.39 306 P **P** **12 27 10.0 +1.6**
comp=Z,4µmcomp=Z,3µmcomp=Z,173nm,1.5s
SPSI Sidrap Palu 59.51 313 P **P** **12 27 09.1 -0.2**
comp=Z,4µmcomp=Z,190nm,1.9s
PCJI Pacitan 59.75 302 P **P** **12 27 11.3 +0.4**
comp=Z,2µmcomp=Z,162nm,1.4s
SNJI Sawahan-Nganju 59.82 303 P **P** **12 27 12.5 +0.9**
SJI Sawahan 59.85 303 P **P** **12 27 11.8 0.0**
comp=Z,3µmcomp=Z,161nm,1.6s
PMSI Majene 60.29 312 P **P** **12 27 16.1 +1.4**
comp=Z,3µmcomp=Z,167nm,1.4s
UGM Wanagama 60.31 302 P **P** **12 27 13.6 -1.3**
UGM Wanagama 60.31 302 P **P** **12 27 15.5 +0.7**
comp=Z,167nm,1.5s
UGM Wanagama 60.31 302 P **P** **12 27 15.6 +0.7**
comp=Z,3µmcomp=Z,168nm,1.5s

TTSI Tana Toraja 60.32 314 P **P** **12 27 14.4 -0.4**
comp=Z,143nm,1.5s
NGJI Ngawi 60.32 303 P **P** **12 27 17.5 +2.6**
comp=Z,4µmcomp=Z,98nm,1.4s
TNTI Ternate 60.90 323 P P 12 27 25.7 +6.9
LUWI Luwuk 60.93 318 P **P** **12 27 18.0 -1.0**
LUWI PP **PP** **12 29 31.0 -2.3**
LUWI Luwuk 60.93 318 P **P** **12 27 19.1 +0.1**
comp=Z,226nm,1.5s
LUWI Luwuk 60.93 318 P **P** **12 27 19.2 +0.2**
comp=Z,4µmcomp=Z,227nm,1.5s
MMSI Mamuju 61.02 313 P **P** **12 27 20.0 +0.4**
APSI Ampana 61.50 317 P **P** **12 27 23.1 +0.3**
comp=Z,3µmcomp=Z,122nm,1.4s
KPJI Karang Pucung 61.61 300 P **P** **12 27 23.8 +0.2**
comp=Z,3µmcomp=Z,3µmcomp=Z,176nm,1.6s
H04S2 CROZET ISLANDS 61.67 228 T T 13 35 02.3
baz=139,slow=76,SNR=2326
H04S1 CROZET ISLANDS 61.68 228 T T 13 35 05.5
baz=139,slow=76,SNR=2534
H04S3 CROZET ISLANDS 61.69 228 T T 13 34 59.5
baz=139,slow=76,SNR=3013
CTJI Waduk Cacaban 61.76 301 P **P** **12 27 26.0 +1.4**
comp=Z,6µmcomp=Z,132nm,1.4s
BBKI Banjar Baru 62.13 308 P **P** **12 27 26.7 -0.4**
comp=Z,3µmcomp=Z,5µmcomp=Z,266nm,1.7s
BBJI Bungbulang 62.15 299 P **P** **12 27 27.0 -0.3**
comp=Z,50nm,1.8s
BBJI Bungbulang 62.15 299 P **P** **12 27 27.2 -0.1**
PCI Palu 62.24 315 P **P** **12 27 28.5 +0.7**
comp=Z,3µmcomp=Z,112nm,1.5s
MNI Manado 62.43 321 P **P** **12 27 29.6 +0.5**
comp=Z,150nm,1.1s
CNJI Cibinong 62.54 299 P **P** **12 27 29.8 -0.1**
comp=Z,53nm,1.4s
MRSI Marisa 62.65 317 P **P** **12 27 29.1 -1.4**
comp=Z,2µmcomp=Z,109nm,1.3s
LEM Lembang 62.70 299 LR LR 12 50 49.1
comp=Z,4µm,22.0s,baz=158,slow=32
BKB Balikpapan 63.17 312 IAMs_20 IAMs_20 12 58 54.6
comp=Z,4µm,18.0s
MPSI Mapaga 63.34 315 P **P** **12 27 34.6 -0.5**
comp=Z,4µmcomp=Z,276nm,1.6s
DBJI Dramaga 63.38 299 P **P** **12 27 35.9 +0.4**
TOLI2 Tolitoli 63.68 317 P **P** **12 27 35.9 -1.5**
TOLI2 IAMs_20 IAMs_20 12 55 04.8
comp=Z,3µm,20.0s
TOLI2 Tolitoli 63.68 317 P **P** **12 27 36.2 -1.2**
comp=Z,126nm,1.5s
USHA Ushuaia 64.29 152 LR LR 12 50 04.3
comp=Z,2µm,20.6s,baz=210,slow=31
MTKI Muara Teweh, K 64.34 310 P **P** **12 27 41.5 -0.3**
MG01 Puerto William 64.42 152 IAMs_20 IAMs_20 12 49 58.3
comp=Z,3µm,20.0s
KASI Kota Agung 65.41 297 P **P** **12 27 48.9 +0.1**
comp=Z,2µmcomp=Z,94nm,1.6s
MG05 Puerto Natales 65.86 148 P **P** **12 27 51.1 0.0**
KLSI 66.00 298 P **P** **12 27 51.8 -0.8**
comp=Z,2µmcomp=Z,132nm,1.7s
TPI Tanjungpandan 66.18 302 P **P** **12 27 53.9 +0.2**
comp=Z,2µmcomp=Z,2µmcomp=Z,93nm,1.3s
GO09 Cerro Castillo 66.26 148 P **P** **12 27 53.4 -0.4**
MDSI Maura Dua 66.46 298 P **P** **12 27 54.7 -0.8**
comp=Z,2µmcomp=Z,103nm,1.5s
DAV Davao City (W) 67.39 324 LR LR 12 58 49.4
comp=Z,1µm,19.9s,baz=127,slow=37
PMBI Palembang 67.48 299 P **P** **12 28 01.7 -0.3**
KSI Kapahiang 67.99 297 P **P** **12 28 06.5 +1.2**
comp=Z,111nm,1.3s
MYLDM Lahad Datu 68.30 316 P **P** **12 28 07.6 +0.5**
comp=Z,89nm,2.4s
SBUM Sibu 68.56 309 P **P** **12 28 07.8 -0.9**
SBUM Sibu 68.56 309 P **P** **12 28 08.5 -0.2**
comp=Z,32nm,1.7s
SBUM Sibu 68.56 309 P **P** **12 28 08.3 -0.4**
MASI Maura Aman, Be 68.61 296 P **P** **12 28 09.4 +0.3**
GO08 Villa O'Higgin 68.64 146 IAmb IAmb 12 28 12.9
comp=Z,113nm,1.6s
GO08 IAMs_20 IAMs_20 12 50 36.2
comp=Z,3µm,22.0s
RPN Rapa Nui 69.40 108 LR LR 12 51 56.7
comp=Z,1µm,20.1s,baz=220,slow=30
DSRI Dabo 69.67 300 P **P** **12 28 15.6 -0.1**
comp=Z,2µmcomp=Z,3µmcomp=Z,31nm,0.5s
AY03 Cochrane 69.68 145 IAmb IAmb 12 28 19.5
comp=Z,82nm,1.2s
EFI East Falkland 69.79 157⇑*eP* **P** **12 28 17.7 +1.8**
EFI pmax pmax
comp=Z,70nm,1.2s
EFI MLR MLR
comp=Z,380nm,16.0s
KRJI Kerinci 69.90 296 P **P** **12 28 18.1 +0.9**
KKM Kota Kinabalu 70.02 314 P **P** **12 28 16.4 -1.5**
KKM IAmb IAmb 12 28 18.0
comp=Z,149nm,1.4s
KKM Kota Kinabalu 70.02 314 P **P** **12 28 17.4 -0.4**
comp=Z,75nm,1.5s
KKM Kota Kinabalu 70.02 314 P **P** **12 28 17.5 -0.4**
comp=Z,75nm,1.5s
HOPE Hope Point 70.82 171 P **P** **12 28 21.0 -1.1**
HOPE IAmb IAmb 12 28 30.8
comp=Z,101nm,1.4s
HOPE Hope Point 70.82 171 IAMs_20 IAMs_20 12 55 30.3
comp=Z,3µm,20.0s
HOPE Hope Point 70.82 171 P **P** **12 28 21.0 -1.1**
HOPE pmax pmax
comp=Z,101nm,1.4s
TPRI Tanjung Pinang 70.90 301 P **P** **12 28 23.8 +0.6**
comp=Z,90nm,1.3s
COYC Coyhaique 71.33 145 IAmb IAmb 12 28 29.6
comp=Z,122nm,1.3s
PDSI Padang 71.42 296 P **P** **12 28 25.4 -1.0**
comp=Z,1µmcomp=Z,69nm,1.4s
PPI Padang Panjang 71.84 296 P **P** **12 28 27.7 -1.2**
comp=Z,2µmcomp=Z,2µmcomp=Z,177nm,1.4s
MYKOM Kota Tinggi 71.99 301 IAmb IAmb 12 28 30.8
comp=Z,156nm,1.5s
MYKOM Kota Tinggi 71.99 301 P **P** **12 28 30.2 +0.5**
comp=Z,68nm,1.8s
MYKOM Kota Tinggi 71.99 301 P **P** **12 28 30.1 +0.4**
comp=Z,2µmcomp=Z,68nm,1.8s
LL07 Hotel Espejo d 73.25 143 IAMs_20 IAMs_20 12 52 11.5
comp=Z,3µm,22.0s
PBSI Pulau Batu 73.30 295 P **P** **12 28 38.8 +1.3**
MNSI Mandailing Nat 73.33 296 P **P** **12 28 37.2 -0.5**
GSI Gunungsitoli 74.81 295 P **P** **12 28 45.6 -0.8**
GSI Gunungsitoli 74.81 295 P **P** **12 28 46.8 +0.4**
comp=Z,183nm,1.6s
GSI Gunungsitoli 74.81 295 P **P** **12 28 47.3 +0.9**
comp=Z,3µmcomp=Z,183nm,1.6s
LL03 Petrohue 75.12 142 P **P** **12 28 47.2 -0.7**
LL03 IAmb IAmb 12 28 51.3
comp=Z,133nm,1.1s
LL03 IAMs_20 IAMs_20 12 53 39.0
comp=Z,2µm,21.0s
RPSI Rantau Prapat 75.28 297 IAmb IAmb 12 28 48.7
comp=Z,120nm,1.5s
PSI Prapat 75.37 297 P **P** **12 28 47.8 -2.0**
comp=Z,54nm,1.3s
PSI Prapat 75.37 297 P **P** **12 28 47.7 -2.0**
comp=Z,2µmcomp=Z,50nm,1.3s
IPM Ipoh 75.72 299 IAMs_20 IAMs_20 13 03 06.2
comp=Z,2µm,19.0s
IPM Ipoh 75.72 299 P **P** **12 28 50.9 -0.7**
comp=Z,55nm,1.3s
IPM Ipoh 75.72 299 P **P** **12 28 51.0 -0.7**
comp=Z,55nm,1.3s
LR04 Corral 75.86 141 IAmb IAmb 12 28 55.9
comp=Z,107nm,1.2s
LR05 Currie 76.06 142 P **P** **12 28 52.4 -0.9**
LR05 IAmb IAmb 12 28 57.3
comp=Z,194nm,1.4s
LR05 IAMs_20 IAMs_20 12 53 34.9
comp=Z,3µm,22.0s
PLCA Paso Flores 76.13 144 P **P** **12 28 55.3 +1.5**
comp=Z,34nm,1.2s,baz=216,slow=7.2,SNR=21
PLCA LR LR 12 54 29.3
comp=Z,2µm,21.3s,baz=202,slow=30
comp=Z,34nm,1.2s
PLCA Paso Flores 76.13 144 IAmb IAmb 12 28 57.8
comp=Z,153nm,1.6s
PLCA Paso Flores 76.13 144*eP* **P** **12 28 54.2 +0.4**
KCSI Kotacane, Aceh 76.58 296 P **P** **12 28 55.4 -1.1**
KULM Kulim 76.60 300 IAMs_20 IAMs_20 13 03 29.7
comp=Z,2µm,19.0s
KULM Kulim 76.60 300 P **P** **12 28 55.9 -0.7**
comp=Z,134nm,1.5s

KULM **Kulim** 76.60 300 P **P** 12 28 55.5 -1.1
comp=Z,2µmcomp=Z,134nm,1.5s
GO06 **Curarrehue** 76.83 142 IAmb IAmb 12 29 01.5
comp=Z,111nm,1.5s
MLSI **Meulaboh, Aceh** 77.93 295 P **P** 12 29 03.5 -0.6
LHMI **Lhok Sumawe** 78.46 296 P **P** 12 29 07.5 +0.5
BI05 **Punta Hualpn** 78.70 140 IAmb IAmb 12 29 11.8
comp=Z,183nm,1.4s
BI05 IAMs_20 IAMs_20 12 54 60.0
comp=Z,2µm,20.0s
H03S2 **Juan Fernandez** 78.96 134 T T 13 56 28.5
baz=208,slow=74
H03S1 **Juan Fernandez** 78.97 134 T T 13 56 29.8
baz=208,slow=74
H03S3 **Juan Fernandez** 78.98 134 T T 13 56 29.2
baz=208,slow=74
BI02 **San Fabin de** 79.49 141 IAMs_20 IAMs_20 12 55 54.8
comp=Z,2µm,22.0s
ML02 **Panimavida** 80.24 141 IAmb IAmb 12 29 20.0
comp=Z,83nm,0.8s
ML02 IAMs_20 IAMs_20 12 58 54.6
comp=Z,2µm,18.0s
GO05 **Hualane** 80.72 140 IAMs_20 IAMs_20 12 56 00.3
comp=Z,2µm,21.0s
BO02 **Sierra Bellavi** 81.34 141 IAmb IAmb 12 29 26.1
comp=Z,164nm,1.2s
BO02 IAMs_20 IAMs_20 12 57 19.7
comp=Z,2µm,20.0s
CMBY **CAMPBELL BAY** 81.55 295 *e*P **P** 12 29 25.1 +1.4
CMBY IAmb IAmb 12 29 27.0
comp=Z,40nm,0.3s
H08S2 **Diego Garcia H** 81.70 269 T T 13 59 09.6
baz=144,slow=76,SNR=4083
FOMA **Nahampoana Res** 81.70 238 IAMs_20 IAMs_20 12 58 14.9
comp=Z,2µm,19.0s
H08S1 **Diego Carcia H** 81.71 269 T T 13 59 10.5
baz=144,slow=76,SNR=3898
H08S3 **Diego Garcia H** 81.72 269 T T 13 59 11.2
baz=144,slow=76,SNR=9188
MT01 **Popeta** 81.99 140 IAmb IAmb 12 29 29.1
comp=Z,109nm,1.3s
MT01 IAMs_20 IAMs_20 12 56 37.0
comp=Z,2µm,21.0s
MT13 **San Alfonso** 82.45 141 IAmb IAmb 12 29 32.4
comp=Z,171nm,1.2s
MT02 **Curacav** 82.57 140 IAMs_20 IAMs_20 12 57 05.4
comp=Z,3µm,22.0s
VA01 **Torpederas** 82.59 139 IAMs_20 IAMs_20 12 56 01.0
comp=Z,2µm,21.0s
MT08 **Bocatoma Ro** 82.82 141 IAMs_20 IAMs_20 12 58 37.9
comp=Z,2µm,19.0s
PEL **Peldehue** 82.84 140 IAmb IAmb 12 29 33.8
comp=Z,165nm,1.5s
PEL IAMs_20 IAMs_20 12 57 12.7
comp=Z,2µm,20.0s
VA06 **Catapilco** 83.13 139 IAmb IAmb 12 29 34.9
comp=Z,111nm,1.2s
VA03 **San Esteban** 83.23 140 IAmb IAmb 12 29 35.8
comp=Z,80nm,1.2s
CO04 **Los Peladeros** 83.71 139 IAmb IAmb 12 29 39.5
comp=Z,123nm,1.4s
KIP **Kipapa** 84.20 40 IAMs_20 IAMs_20 13 02 51.8
comp=Z,2µm,22.0s
QIZ **Qiongzhong** 84.34 314 P **P** 12 29 37.3 -0.7
QIZ PP **PP** 12 32 54.0 +0.7
QIZ S **S** 12 40 04.2 +1.6
QIZ pmax pmax
comp=Z,47nm,1.8s
QIZ pmax pmax
comp=Z,730nm,10.1s
QIZ LR LR
comp=Z,630nm,29.8s
QIZ LR LR
comp=Z,740nm,21.2s
QIZ LR LR
comp=Z,2µm,29.6s
VOI **Vohitsoka** 84.36 240 P **P** 12 29 37.4 -1.1
VOI IAmb IAmb 12 29 41.5
comp=Z,185nm,1.8s
SSLB **Suanglung** 84.51 326 IAMs_20 IAMs_20 13 05 45.0
comp=Z,2µm,21.0s
CO01 **Juntas del Tor** 85.89 139 IAmb IAmb 12 29 50.1
comp=Z,136nm,1.6s
PBA **Port Blair** 86.08 296 *e*P **P** 12 29 46.9 +0.1
PBA IAmb IAmb 12 29 58.4
comp=Z,51nm,0.9s
SUR **Sutherland** 86.19 215 LR LR 13 02 27.2
comp=Z,571nm,21.3s,baz=161,slow=32
SUR **Sutherland** 86.19 215 P **P** 12 29 45.8 -1.7
LCO **Las Campanas** 86.52 138 P **P** 12 29 48.2 -1.0
LCO IAmb IAmb 12 29 52.8
comp=Z,125nm,1.6s
LCO **Las Campanas** 86.52 138 P **P** 12 29 48.3 -1.0
LCO pmax pmax
comp=Z,125nm,1.7s
ABPO **Ambohimpanom** 86.55 242 P **P** 12 29 50.5 +1.1
ABPO **Ambohimpanom** 86.55 242 P **P** 12 29 50.5 +1.1
ABPO pmax pmax
comp=Z,211nm,0.9s
AC05 **El Transito** 86.85 138 IAmb IAmb 12 29 54.4
comp=Z,111nm,1.6s
OPO **Ambohidratompo** 86.94 242 LR LR 13 02 31.7
comp=Z,628nm,18.0s,baz=9.5,slow=31
DGPR **DIGLIPUR** 87.26 297 IAmb IAmb 12 29 52.4
comp=Z,67nm,1.4s
DGPR *e*P **P** 12 29 53.2 +0.7
GO03 **Copiapo** 87.97 138 IAmb IAmb 12 29 60.0
comp=Z,126nm,1.5s
BOSA **Boshof** 88.06 220 P **P** 12 29 55.4 -1.2
comp=Z,7.4nm,0.8s,baz=154,slow=4.4,SNR=16
BOSA LR LR 13 04 05.7
comp=Z,1µm,19.0s,baz=158,slow=32
comp=Z,7.4nm,0.8s
BOSA **Boshof** 88.06 220 P **P** 12 29 54.6 -1.9
BOSA IAmb IAmb 12 29 59.1
comp=Z,91nm,1.6s
BOSA **Boshof** 88.06 220 P **P** 12 29 54.6 -1.9
BOSA pmax pmax
comp=Z,91nm,1.6s
CM31 **Chiang Mai Arr** 88.74 305 P **P** 12 29 58.9 -0.6
CM31 IAmb IAmb 12 30 00.8
comp=Z,106nm,1.4s
CMAR **Chiang Mai Arr** 88.74 305 P **P** 12 29 59.1 -0.4
comp=Z,26nm,1.1s,baz=170,slow=3.6,SNR=92
CMAR LR LR 13 07 20.4
comp=Z,1µm,21.6s,baz=150,slow=34
comp=Z,26nm,1.1s
CMAR **Chiang Mai Arr** 88.74 305 P **P** 12 29 59.0 -0.6
CMAR **Chiang Mai Arr** 88.74 305 P **P** 12 29 59.0 -0.6
PALK **Pallekele** 89.03 284 LR LR 13 05 00.3
comp=Z,1µm,18.5s,baz=139,slow=32
PALK **Pallekele** 89.03 284 P **P** 12 29 59.8 -1.3
PALK IAmb IAmb 12 30 01.6
comp=Z,121nm,1.4s
PALK **Pallekele** 89.03 284 IAMs_20 IAMs_20 13 05 07.5
comp=Z,2µm,19.0s
PALK **Pallekele** 89.03 284 P **P** 12 29 59.8 -1.3
PALK pmax pmax
comp=Z,121nm,1.4s
PALK **Pallekele** 89.03 284 P **P** 12 30 00.8 -0.3
comp=Z,34nm,1.6s
CHTO **Chiang Mai** 89.05 305 P **P** 12 30 00.3 -0.7
CHTO IAmb IAmb 12 30 02.2
comp=Z,108nm,1.4s
CHTO **Chiang Mai** 89.05 305 P **P** 12 30 00.7 -0.3
comp=Z,35nm,1.4s
CHTO **Chiang Mai** 89.05 305 P **P** 12 30 00.3 -0.7
CHTO pmax pmax
comp=Z,108nm,1.4s
CHTO **Chiang Mai** 89.05 305 P **P** 12 30 00.6 -0.4
comp=Z,1µmcomp=Z,59nm,1.4s
AC02 **Maricunga** 89.08 138 IAMs_20 IAMs_20 13 02 40.0
comp=Z,2µm,18.0s
JSU **Suzuyama** 89.11 336 P **P** 12 30 00.6 -0.4
JSU IAmb IAmb 12 30 02.5
comp=Z,106nm,1.3s
JSU **Suzuyama** 89.11 336 P **P** 12 30 02.0 +1.0
comp=Z,72nm,1.2s
PSAL **Palomas, Salto** 89.14 149 *e*P **P** 12 30 02.4 +1.0
PLTB **Pedras Altas** 89.62 153 IAmb IAmb 12 30 07.8
comp=Z,116nm,1.3s
PLTB **Pedras Altas** 89.62 153 *e*P **P** 12 30 05.4 +1.7
GULI **GuiLin** 89.73 317 P **P** 12 30 05.8 +1.8
GULI S **S** 12 41 00.8 +6.4
GULI pmax pmax
comp=Z,33nm,2.1s
GULI pmax pmax
comp=Z,500nm,10.4s
GULI LR LR
comp=Z,650nm,27.9s
GULI LR LR
comp=Z,530nm,26.1s
GULI LR LR
comp=Z,1µm,30.9s
MALK **Mahakanadarawa** 90.04 284 P **P** 12 30 04.5 -1.3
PB14 **IPOC Station P** 90.56 136 P **P** 12 30 06.8 -1.8
PB14 **IPOC Station P** 90.56 136 IAmb IAmb 12 30 12.3
comp=Z,85nm,1.3s
JNU **Nakatsue** 90.56 337 P **P** 12 30 07.5 -0.3
comp=Z,19nm,0.9s,baz=115,slow=6.9,SNR=4.7
JNU LR LR 13 08 14.7
comp=Z,2µm,21.3s,baz=163,slow=34
comp=Z,19nm,0.9s
CPSB **Cacapava Do Su** 90.95 153 *e*P **P** 12 30 11.8 +1.8
LBTB **Lobatse** 91.17 221 LR LR 13 04 36.9
comp=Z,1µm,21.5s,baz=156,slow=31
LBTB **Lobatse** 91.17 221 IAmb IAmb 12 30 13.9
comp=Z,74nm,1.7s
INU **Inuyama** 91.47 342 P **P** 12 30 12.2 +0.4
INU IAmb IAmb 12 30 13.8
comp=Z,78nm,1.3s
INU **Inuyama** 91.47 342 P **P** 12 30 12.9 +1.1
comp=Z,52nm,1.4s
JGF **Kuroka** 91.65 343 P **P** 12 30 14.0 +1.3
comp=Z,47nm,2.2s
GYA **Guiyang** 92.27 315 ⇑P **P** 12 30 15.7 -0.2
GYA pP pP 12 30 21.8 -0.5
GYA PP **PP** 12 33 55.5 -1.4
GYA SKS **SKSac** 12 40 49.5 +1.6
GYA S **ScS** 12 41 19.8 -0.2
GYA SS **SS** 12 47 25.7 -3.2
GYA pmax pmax
comp=Z,33nm,1.9s
GYA LR LR
comp=Z,2µm,31.3s
MJAR **Matsushiro Arr** 92.43 344 P **P** 12 30 16.6 +0.3
comp=Z,29nm,1.1s,baz=176,slow=5.7,SNR=16
MJAR LR LR 13 09 24.5
comp=Z,738nm,21.3s,baz=172,slow=34
comp=Z,29nm,1.1s
MJAR **Matsushiro Arr** 92.43 344 P **P** 12 30 16.7 +0.5
MJAR IAmb IAmb 12 30 23.7
comp=Z,66nm,1.5s
MJAR **Matsushiro Arr** 92.43 344 P **P** 12 30 16.7 +0.5
MJAR pmax pmax
comp=Z,67nm,1.5s
MAJO **Matsushiro** 92.43 344 P **P** 12 30 15.7 -0.6
MAJO IAmb IAmb 12 30 17.8
comp=Z,87nm,1.3s
MAJO **Matsushiro** 92.43 344 P **P** 12 30 17.1 +0.8
comp=Z,49nm,1.4s
MAJO **Matsushiro** 92.43 344 ⇓*i*P **P** 12 30 16.6 +0.3
MAJO pmax pmax
comp=Z,48nm,1.2s
MAJO MLR MLR
comp=Z,866nm,19.0s
MJB9 **Matsu-Tunnel** 92.43 344 P **P** 12 30 18.3 +2.0
MJB9 IAmb IAmb 12 30 18.7
comp=Z,86nm,1.3s
PB06 **IPOC Station P** 92.61 136 IAMs_20 IAMs_20 13 00 57.6
comp=Z,2µm,19.0s
CNLB **Canela** 92.67 154 *e*P **P** 12 30 21.0 +3.1
KMI2 **Kunming** 92.78 311 ⇑P **P** 12 30 18.4 -0.1
KMI2 PP **PP** 12 33 57.1 -4.0
KMI2 SKS **SKSac** 12 40 49.6 -1.5
KMI2 S **ScS** 12 41 27.1 +2.5
KMI2 SS **SS** 12 47 35.3 -1.3
KMI2 pmax pmax
comp=Z,21nm,1.6s
KMI2 pmax pmax
comp=Z,430nm,7.2s
KMI2 LR LR
comp=Z,690nm,19.9s
KMI2 LR LR
comp=Z,560nm,20.6s
KMI2 LR LR
comp=Z,1µm,21.6s
NJ2 **Nanjing** 92.85 327 *e*P **P** 12 30 17.6 -0.7
NJ2 PP **PP** 12 34 00.0 -1.3
NJ2 SS SS 12 47 41.2 +4.2
NJ2 pmax pmax
comp=Z,490nm,3.9s
NJ2 LR LR
comp=Z,1µm,14.7s
NJ2 LR LR
comp=Z,980nm,14.5s
NJ2 LR LR
comp=Z,1µm,18.5s
WHN **Wuhan** 92.98 323 P **P** 12 30 18.4 -0.5
WHN PP **PP** 12 34 00.1 -2.2
WHN SKS **SKSac** 12 40 55.2 +3.8
WHN S **S** 12 41 24.0 +0.4
WHN sS **pS** 12 41 31.5 +0.1
WHN pmax pmax
comp=Z,58nm,1.1s
WHN LR LR
comp=Z,3µm,20.6s
CPUP **Villa Florida** 93.67 148 P **P** 12 30 22.3 -0.2
comp=Z,10nm,1.0s,baz=205,slow=4.1,SNR=9.0
comp=Z,10nm,1.0s
CPUP **Villa Florida** 93.67 148 *e*P **P** 12 30 24.5 +2.0
MSEY **Mahe Island** 93.92 256 IAMs_20 IAMs_20 13 03 24.6
comp=Z,2µm,20.0s
MDRS **Chennai** 94.02 287 *e*P **P** 12 30 24.2 +0.1
MDRS IAmb IAmb 12 30 27.4
comp=Z,17nm,0.2s
ITAB **Concordia** 94.31 153 IAmb IAmb 12 30 28.4
comp=Z,55nm,1.3s
ITAB **Concordia** 94.31 153 *e*P **P** 12 30 25.9 +0.4
PZH **PanZhiHua** 94.40 311 P **P** 12 30 25.1 -0.7
PZH PP **PP** 12 34 11.1 -2.6
PZH S **S** 12 41 32.8 -3.8
PZH sS **sS** 12 41 49.4 +2.0
PZH SS **SS** 12 48 02.2 +2.6
PZH pmax pmax
comp=Z,10.0nm,2.2s
PZH pmax pmax
comp=Z,290nm,5.7s
PZH LR LR
comp=Z,340nm,19.2s
PZH LR LR
comp=Z,210nm,19.6s
PZH LR LR
comp=Z,410nm,21.0s
ENH **Enshi** 94.53 319 P **P** 12 30 25.4 -0.7
comp=Z,21nm,2.4s
TNCH **TengChong** 94.58 308 ⇑P **P** 12 30 26.0 -0.7
TNCH pP PcP 12 30 29.2 +2.1
TNCH sP sP 12 30 33.2 -2.3
TNCH S **S** 12 41 36.0 -2.4
TNCH sS pS 12 41 42.9 -3.4
TNCH pmax pmax
comp=Z,24nm,1.7s
TNCH LR LR
comp=Z,970nm,17.2s
TNCH LR LR
comp=Z,460nm,20.8s
TNCH LR LR
comp=Z,2µm,20.8s
SAIH **SAIHA** 95.07 302 *e*P **P** 12 30 28.2 -0.7
SAIH IAmb IAmb 12 30 29.8
comp=Z,26nm,0.6s
PB08 **IPOC Station P** 95.08 136 P **P** 12 30 28.1 -1.5
KSRS **Korea Array** 95.39 336 P **P** 12 30 29.0 -0.8
comp=Z,3.3nm,1.0s,baz=152,slow=5.7,SNR=5.0
KSRS PP **PP** 12 34 21.6 +0.5
comp=Z,8.3nm,1.2s,baz=170,slow=9.0,SNR=7.4
comp=Z,3.3nm,1.0s
KSRS **Korea Array** 95.39 336 P **P** 12 30 29.0 -0.8
BRDH **Bariadhala** 95.89 301 LR LR 13 17 15.6
comp=Z,655nm,18.1s,baz=166,slow=38
MORE **Moreh** 95.90 304 IAMs_20 IAMs_20 13 13 39.0
comp=Z,746nm,21.0s
GRTLG **Ghanzi** 96.14 219 IAmb IAmb 12 30 36.5
comp=Z,48nm,1.4s
WIN **Windhoek** 96.48 215 IAmb IAmb 12 30 39.0
comp=Z,37nm,1.4s
WIN IAMs_20 IAMs_20 13 07 03.0
comp=Z,2µm,21.0s
TIA **Tai'an** 97.24 327 P Pdif 12 30 39.0 +0.6
TIA PP **PP** 12 34 35.3 -0.1
TIA SKS **SKSac** 12 41 17.8 +3.9
TIA S **ScS** 12 42 04.9 +4.1
TIA SS **SS** 12 48 35.6 -3.7
TIA pmax pmax
comp=Z,7.0nm,0.9s
TIA pmax pmax
comp=Z,530nm,5.3s
TIA LR LR
comp=Z,710nm,19.2s
TIA LR LR
comp=Z,670nm,15.9s
TIA LR LR
comp=Z,1µm,20.2s
KOHI **KOHIMA** 97.25 305 *e*P **P** 12 30 37.7 -1.1
KOHI IAmb IAmb 12 30 41.1
comp=Z,15nm,0.8s
LYN **LuoYang** 97.28 323 *e*P Pdif 12 30 40.9 +2.3
LYN PP **PP** 12 34 38.1 +2.4
LYN SKS **SKSac** 12 41 16.2 +2.0
LYN S **S** 12 42 00.8 0.0
LYN sS sS 12 42 11.8 +0.2
LYN pmax pmax
comp=Z,13nm,0.5s
LYN pmax pmax
comp=Z,240nm,3.9s
LYN LR LR
comp=Z,720nm,28.0s
LYN LR LR
comp=Z,450nm,18.8s
LYN LR LR
comp=Z,1µm,25.4s
CD2 **Chengdu** 97.38 315 P **P** 12 30 38.8 -0.3
CD2 pP pP 12 30 42.8 -2.7
CD2 PP **PP** 12 34 35.4 -1.2
CD2 SKS **SKSac** 12 41 14.5 -0.5
CD2 S **ScS** 12 42 05.3 +3.0
CD2 SS **SS** 12 48 44.5 +3.0
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 pmax pmax
comp=Z,300nm,8.3s
CD2 LR LR
comp=Z,1µm,16.7s
CD2 LR LR
comp=Z,1µm,17.5s
CD2 LR LR
comp=Z,2µm,22.2s
MOKO **MOKOCHONG** 97.56 305 *e*P Pdif 12 30 41.1 +0.8
MOKO IAmb IAmb 12 30 49.2
comp=Z,10nm,0.4s
MURT **Porto Murtinho** 97.94 146 *e*P Pdif 12 30 44.3 +2.2
XAN **Xi'an** 98.10 320 ⇑P **P** 12 30 41.5 -0.8
XAN SKS **SKSac** 12 41 16.0 -2.5
XAN S **S** 12 42 07.9 -0.2
XAN SS **SS** 12 48 54.7 +3.0
XAN pmax pmax
comp=Z,14nm,1.4s
SHL **Shillong** 98.19 303 IAmb IAmb 12 30 43.1
comp=Z,27nm,1.4s
SHL **Shillong** 98.19 303⇓*e*P Pdif 12 30 43.1 0.0
SHL IAmb IAmb 12 30 44.7
comp=Z,32nm,1.6s
DL2 **Dalian** 98.39 332 *e*P **P** 12 30 41.6 -1.8
DL2 PP **PP** 12 34 42.3 -1.9
DL2 SKS **SKSac** 12 41 20.4 +0.8
DL2 SS **SS** 12 48 56.8 +1.3
DL2 pmax pmax
comp=Z,40nm,1.5s
DL2 pmax pmax
comp=Z,330nm,4.7s
DL2 LR LR
comp=Z,1µm,23.5s
DL2 LR LR
comp=Z,670nm,23.8s
DL2 LR LR
comp=Z,2µm,25.2s
HYB **Hyderabad** 98.49 288 *e*PKiKP **PKiKP** 12 35 15.8 -0.6
HYB *e*SKSac **SKSac** 12 41 21.7 +0.5
TEZP **TEZPUR** 98.63 304 *e*P Pdif 12 30 44.8 0.0
TEZP IAmb IAmb 12 30 54.0
comp=Z,2µm,3.5s
ITAN **ITANAGAR** 98.63 305 *e*P Pdif 12 30 45.4 +0.6
ITAN IAmb IAmb 12 30 51.2
comp=Z,32nm,0.6s
LSZ **Lusaka** 98.84 228 LR LR 13 09 34.9
comp=Z,3µm,19.0s,baz=154,slow=32
NNA **Nana** 98.86 125 LR LR 13 06 23.4
comp=Z,1µm,18.5s,baz=210,slow=30
NNA **Nana** 98.86 125 IAMs_20 IAMs_20 13 03 48.0
comp=Z,2µm,20.0s
ZIRO **ZIRO** 98.89 305 *e*P **P** 12 30 45.1 -1.1
ZIRO IAmb IAmb 12 30 55.0
LPAZ **La Paz** 98.95 135 LR LR 13 04 45.7
comp=Z,880nm,20.2s,baz=184,slow=29
HNS **HongShan** 99.10 326 ⇑P **Pdif** 12 30 47.5 +0.9
HNS PP **PP** 12 34 46.0 -3.6
HNS SKS **SKSac** 12 41 27.8 +4.6
HNS S **ScS** 12 42 16.6 +0.4
HNS SS **SS** 12 49 04.8 -0.6
HNS pmax pmax
comp=Z,250nm,6.0s
HNS LR LR
comp=Z,890nm,19.6s
HNS LR LR
comp=Z,490nm,19.4s
HNS LR LR
comp=Z,990nm,22.5s
ASAJ **Asahikawa** 99.24 348 LR LR 13 12 07.9
comp=Z,450nm,20.1s,baz=180,slow=33
TSUM **Tsumeb** 99.43 217 LR LR 13 10 33.0
comp=Z,1µm,20.2s,baz=156,slow=32
TSUM **Tsumeb** 99.43 217 IAMs_20 IAMs_20 13 10 11.2
comp=Z,1µm,20.0s
TAWA **Tawang** 99.90 304 *e*P **Pdif** 12 30 50.9 0.0
TAWA IAmb IAmb 12 31 07.0
comp=Z,40nm,7.2s
TIY **Taiyuan** 100.14 324 *e*P **Pdif** 12 30 51.2 -0.1
TIY PP **PP** 12 35 00.4 +2.7
TIY SKS **SKSac** 12 41 32.6 +4.0
TIY S **SKKSac** 12 42 11.9 +10
TIY SS **SS** 12 49 22.4 +2.2
TIY pmax pmax
comp=Z,6.0nm,0.6s
TIY LR LR
comp=Z,510nm,18.6s
TIY LR LR
comp=Z,400nm,19.2s
TIY LR LR
comp=Z,580nm,18.6s
BJI2 **Beijing** 101.02 328 P **Pdif** 12 30 55.0 -0.1
BJI2 PP **PP** 12 35 06.7 +2.5
BJI2 SKS **SKSac** 12 41 31.2 -1.4
BJI2 S **Sdif** 12 42 31.1 -1.0
BJI2 SS **SS** 12 49 32.0 -0.3
BJI2 pmax pmax
comp=Z,3.0nm,1.8s
BJI2 pmax pmax
comp=Z,100nm,9.3s
BJI2 LR LR
comp=Z,290nm,21.0s
BJI2 LR LR
comp=Z,290nm,24.2s
BJI2 LR LR
comp=Z,620nm,24.3s
LZDM **Lanzhou Array** 101.81 317 P **Pdif** 12 30 59.3 +0.2
comp=Z,1.0nm,0.6s,baz=165,slow=6.0,SNR=7.8
LZH **Lanzhou** 101.86 317 *e*P **Pdif** 12 30 58.6 -0.6
LZH pP sPdif 12 31 06.0 -1.9
LZH PP **PP** 12 35 15.5 +4.7
LZH SKS **SKSac** 12 41 38.2 +1.0
LZH S **Sdif** 12 42 43.2 +3.5
LZH pmax pmax
comp=Z,9.0nm,1.2s
LZH pmax pmax
comp=Z,190nm,4.1s
LZH LR LR
comp=Z,790nm,18.9s
LZH LR LR
comp=Z,810nm,17.5s
LZH LR LR
comp=Z,2µm,17.5s
CN2 **Changchun** 102.00 336 P **Pdif** 12 30 58.2 -1.2
CN2 PP **PP** 12 35 13.5 +1.9
CN2 SKS **SKSac** 12 41 36.0 -1.1
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR

comp=Z,910nm,16.0s
CN2 LR LR
comp=Z,430nm,16.0s
CN2 LR LR
comp=Z,940nm,17.0s
BTO2 Baotou 103.73 324 *e*Pdif **Pdif 12 31 09.4 +2.1**
BTO2 PP **PKiKP 12 35 26.8 +1.6**
BTO2 SKS **SKSac 12 41 47.4 +1.7**
BTO2 AMB AMB
comp=Z,220nm,6.8s
BTO2 LR LR
comp=Z,2μm,20.4s
BTO2 LR LR
comp=Z,1μm,19.8s
BTO2 LR LR
comp=Z,2μm,19.4s
GTA2 Gaotai 106.42 316 Pdif **Pdif 12 31 18.3 -1.0**
GTA2 PP **PP 12 35 42.7 -2.0**
GTA2 SS SS 12 50 44.2 -2.7
GTA2 AMB AMB
comp=Z,620nm,13.5s
GTA2 LR LR
comp=Z,700nm,23.6s
GTA2 LR LR
comp=Z,560nm,22.9s
GTA2 LR LR
comp=Z,1μm,24.7s
SLBS Sierra La Lagu 109.64 77 IAms_20 IAms_20 13 12 43.2
comp=Z,2μm,20.0s
NIKH Nikolski High 110.44 20 P **PKiKP 12 35 38.4 +1.3**
baz=199
MBAR Mbarara 110.55 237 IAms_20 IAms_20 13 16 43.1
comp=Z,1μm,18.0s
UNV Unalaska Valle 111.75 21 P **PKiKP 12 35 40.9 +1.4**
baz=201
UNM Universidad Na 112.44 88 IAms_20 IAms_20 13 13 07.1
comp=Z,1μm,19.0s
CPE Camp Elliot 112.86 65 IAms_20 IAms_20 13 18 24.7
comp=Z,2μm,18.0s
BAR Barrett 112.93 66 IAms_20 IAms_20 13 20 52.5
comp=Z,2μm,19.0s
HULI Fort Hunter Li 113.16 60 IAms_20 IAms_20 13 14 39.6
comp=Z,2μm,19.0s
PASC Pasadena Art C 113.29 64 IAms_20 IAms_20 13 14 49.0
comp=Z,2μm,20.0s
OSI Osito Audit: C 113.35 63 IAms_20 IAms_20 13 14 49.7
comp=Z,2μm,19.0s
FALS False Pass 113.36 23 P **PKiKP 12 35 44.5 +2.0**
baz=203
MWC Mount Wilson 113.39 64 IAms_20 IAms_20 13 13 54.8
comp=Z,2μm,20.0s
FORD Fort Ord Natur 113.40 59 IAms_20 IAms_20 13 16 10.0
comp=Z,2μm,19.0s
JTS Las Juntas de 113.44 106 IAms_20 IAms_20 13 14 35.3
comp=Z,1μm,19.0s
BFSC Mount Baldy Ra 113.61 64 IAms_20 IAms_20 13 14 50.7
comp=Z,2μm,19.0s
HDC Heredia 113.67 107 IAms_20 IAms_20 13 18 01.4
comp=Z,1μm,18.0s
P08K Saint George I 113.73 18 P **PKiKP 12 35 44.9 +1.7**
baz=200
MHC Mount Hamilton 113.98 59 IAms_20 IAms_20 13 19 35.3
comp=Z,2μm,18.0s
MCCM Marconi Confer 113.99 58 IAms_20 IAms_20 13 20 18.6
comp=Z,2μm,19.0s
VES Vestal, Richgr 114.11 62 IAms_20 IAms_20 13 13 31.9
comp=Z,1μm,20.0s
SPIA Saint Paul Isl 114.15 18 P **PKiKP 12 35 45.4 +1.4**
baz=199
CHNA Chernabura Isl 114.24 25 P **PKiKP 12 35 45.7 +1.5**
baz=205
ISA Isabella, Lake 114.29 62 IAms_20 IAms_20 13 13 37.6
comp=Z,2μm,21.0s
BC3 Big Chuckawall 114.33 66 IAms_20 IAms_20 13 18 31.6
comp=Z,2μm,19.0s
CVS Carmenet Viney 114.35 58 IAms_20 IAms_20 13 20 31.3
comp=Z,2μm,19.0s
FURI Furi 114.46 250 IAms_20 IAms_20 13 16 33.5
comp=Z,1μm,19.0s
SDPT Sand Point 114.49 24 P **PKiKP 12 35 45.6 +1.0**
baz=205
LRMC Laurel Mtn Rad 114.56 63 IAms_20 IAms_20 13 14 07.7
comp=Z,2μm,21.0s
KCPM Cahto Peak 114.85 56 IAms_20 IAms_20 13 22 13.3
comp=Z,2μm,19.0s
CWC Cottonwood Cre 115.09 62 IAms_20 IAms_20 13 14 23.8
comp=Z,2μm,20.0s
WMQ Urumqi 115.10 311 *e*PKP **PKPdf 12 35 45.7 -0.7**
WMQ LR LR
comp=Z,500nm,23.8s
WMQ LR LR
comp=Z,1μm,24.1s
WMQ LR LR
comp=Z,900nm,24.0s
DANC Danby, Needles 115.12 65 IAms_20 IAms_20 13 21 36.5
comp=Z,2μm,18.0s
CMB Columbia Colle 115.14 59 IAms_20 IAms_20 13 19 29.2
comp=Z,1μm,18.0s
WELL Weller Preserv 115.29 59 IAms_20 IAms_20 13 20 27.0
comp=Z,1μm,19.0s
TIN Tinemaha, Big 115.48 62 IAms_20 IAms_20 13 15 44.2
comp=Z,2μm,20.0s
JCC Jacoby Creek, 115.51 55 IAms_20 IAms_20 13 23 23.9
comp=Z,1μm,21.0s
O02D Mt. Diablo Mer 115.61 56 IAms_20 IAms_20 13 21 57.6
comp=Z,2μm,19.0s
SHOC Shoshone, Teco 115.61 64 IAms_20 IAms_20 13 16 02.6
comp=Z,2μm,20.0s
NEE2 Needles Airpor 115.62 66 IAms_20 IAms_20 13 23 24.9
comp=Z,1μm,18.0s
KHMM Horse Mountain 115.70 55 IAms_20 IAms_20 13 25 20.8
comp=Z,2μm,18.0s
ORV Oroville 115.76 58 IAms_20 IAms_20 13 21 25.5
comp=Z,1μm,18.0s
KHBM Hayfork Bally 115.78 56 IAms_20 IAms_20 13 23 36.9
comp=Z,1μm,19.0s
KRMB Red Mountain 116.11 55 IAms_20 IAms_20 13 26 24.9
comp=Z,1μm,18.0s
CHIR Chirikof Islan 116.13 27 P **PKiKP 12 35 49.4 +1.5**
baz=208
O03E Paynes Creek 116.18 57 IAms_20 IAms_20 13 22 41.7
comp=Z,1μm,18.0s
N02D Trinity Center 116.27 56 IAms_20 IAms_20 13 23 44.9
comp=Z,1μm,19.0s
KSXB Camp Six Broad 116.37 54 IAms_20 IAms_20 13 26 09.6
comp=Z,1μm,18.0s
TPNV Topopah Spring 116.43 63 IAms_20 IAms_20 13 14 59.1
comp=Z,2μm,20.0s
NVAR Mina Array Bea 116.50 61 PKP **PKPdf 12 35 49.3 -0.2**
comp=Z,2.5nm,1.0s,baz=232,slow=2.0,SNR=4.2
M02C Callahan 116.52 55 IAms_20 IAms_20 13 26 17.6
comp=Z,1μm,19.0s
HATC Hat Creek Radi 116.75 57 IAms_20 IAms_20 13 23 00.7
comp=Z,2μm,18.0s
SII Sitkinak Islan 117.16 27 P **PKiKP 12 35 51.1 +1.2**
baz=209
R16K Pilot Point 117.19 25 P **PKiKP 12 35 51.7 +1.9**
baz=207
SEY Seymchan 117.23 357 PKP **PKPdf 12 35 48.0 -1.8**
comp=Z,1.0nm,0.7s,baz=98,slow=4.7,SNR=4.1
SEY Seymchan 117.23 357 *i* PKIKP **PKiKP 12 35 51.4 +1.6**
KSH2 Kashi 117.24 300 PKP **PKPdf 12 35 50.1 -0.7**
KSH2 LR LR
comp=Z,390nm,20.3s
KSH2 LR LR
comp=Z,530nm,20.6s
KSH2 LR LR
comp=Z,670nm,22.3s
R17L Mt. Peulik Vol 117.55 25 P **PKiKP 12 35 52.2 +1.6**
baz=208
TXAR Lajitas Array 117.55 78 PKP **PKiKP 12 35 52.9 +1.2**
comp=Z,1.3nm,1.0s,baz=219,slow=3.2,SNR=6.0
EPT El Paso 117.79 74 IAms_20 IAms_20 13 15 24.1
comp=Z,2μm,21.0s
O14K Tigyukauivet M 117.86 22 P **PKiKP 12 35 52.9 +1.8**
baz=205
M11K Mekoryuk 117.91 19 P **PKiKP 12 35 52.9 +1.8**
baz=202
OHAK Old Harbor 117.98 27 P **PKiKP 12 35 53.1 +1.7**
baz=209
O15K Ungalikthiuk R 118.11 23 P **PKiKP 12 35 53.4 +1.8**
baz=206
Q17K Contact Creek 118.23 25 P **PKiKP 12 35 53.1 +1.1**
baz=208
MNTX Cornudas Mount 118.36 75 IAms_20 IAms_20 13 19 51.3
comp=Z,2μm,18.0s
SHLS Shalkode 118.36 305 *e*PKIKP **PKPdf 12 35 51.5 -1.3**
SHLS Shalkode 118.36 305 *e*PKP **PKPdf 12 35 51.5 -1.3**
N14K Kuskokwak Cree 118.38 21 P **PKiKP 12 35 53.9 +1.8**
baz=205
P16K Nushagak River 118.41 24 P **PKiKP 12 35 53.5 +1.4**
baz=207
Q16K King Salmon 118.41 25 P **PKiKP 12 35 53.5 +1.4**
baz=208
YAK Yakutsk 118.46 345 PKP **PKPdf 12 35 51.7 -0.4**
comp=Z,4.2nm,0.3s,baz=118,slow=1.7,SNR=5.8
YAK Yakutsk 118.46 345 *e*PKIKP **PKiKP 12 35 53.8 +1.6**
YAK *e* 12 37 10.5
YAK *e* 12 43 02.8
YAK *e*PS **PS 12 46 55.9 +0.3**
YAK *e*SS SS 12 53 28.9 +3.2
YAK pmax pmax
comp=Z,13nm,1.1s
YAK pmax pmax
comp=N,4.0nm,1.5s
YAK pmax pmax
comp=Z,172nm,2.8s
YAK pmax pmax
comp=E,49nm,2.9s
YAK pmax pmax
comp=N,77nm,2.8s
M13K Dall Lake 118.49 20 P **PKiKP 12 35 53.9 +1.7**
baz=204
UZB Uzunbulak 118.56 305 *e*PKIKP **PKPdf 12 35 52.3 -0.9**
UZB Uzunbulak 118.56 305 *e*PKP **PKPdf 12 35 52.4 -0.9**
KDAK Kodiak Island 118.66 27 P **PKiKP 12 35 53.7 +1.0**
baz=210
SATY Saty 118.79 304 *e*PKIKP **PKPdf 12 35 52.5 -1.1**
SATY Saty 118.79 304 *e*PKP **PKPdf 12 35 52.6 -1.1**
O16K Kokwok River B 118.88 23 **PKiKP 12 35 56.1 +3.0**
O16K IAms_20 IAms_20 13 30 52.5
comp=Z,1μm,20.0s
O16K Kokwok River B 118.88 23 P **PKiKP 12 35 54.9 +1.8**
baz=207
P17K Kvichak River 118.92 24 P **PKiKP 12 35 55.0 +1.9**
baz=208
N15K Kwethluk River 118.95 22 P **PKiKP 12 35 55.0 +1.8**
baz=206
M14K Bethel 119.08 21 P **PKiKP 12 35 55.5 +2.1**
baz=205
ZSN Zaisan 119.17 312 *e*PKIKP **PKPdf 12 35 53.4 -0.7**
ZSN Zaisan 119.17 312 *e*PKP **PKPdf 12 35 53.4 -0.7**
O17K Koliganek Bris 119.28 24 P **PKiKP 12 35 56.4 +2.6**
baz=208
M15K Kasigluk River 119.30 21 P **PKiKP 12 35 55.4 +1.6**
baz=206
WVOR Wild Horse Val 119.36 57 IAms_20 IAms_20 13 23 42.7
comp=Z,1μm,18.0s
Q19K Cape Douglas, 119.38 26 P **PKiKP 12 35 55.8 +1.7**
baz=210
P18K Big Mountain, 119.39 25 P **PKiKP 12 35 55.2 +1.0**
baz=209
Q20K Shuyak Island 119.43 27 P **PKiKP 12 35 56.0 +1.8**
baz=210
L14K Kuka Creek 119.47 20 P **PKiKP 12 35 56.2 +2.0**
baz=205
TNSS Tian-Shan 119.48 304 *e*PKIKP **PKPdf 12 35 54.0 -1.3**
TNSS Tian-Shan 119.48 304 *e*PKP **PKPdf 12 35 54.1 -1.3**
N16K Nishlik Lake 119.52 23 P **PKiKP 12 35 55.0 +0.7**
baz=207
MDOK Medeo 119.53 304 *e*PKIKP **PKPdf 12 35 54.0 -1.0**
MDOK Medeo 119.53 304 *e*PKP **PKPdf 12 35 54.1 -1.0**
MDOK LR LR 13 26 52.3
AAA Alma-Ata 119.63 304 *e*PKIKP **PKPdf 12 35 54.3 -0.8**
AAA Alma-Ata 119.63 304 *e*PKP **PKPdf 12 35 54.3 -0.8**
AAA LR LR 13 27 00.5
K13K Kusilvak Mount 119.63 19 P **PKiKP 12 35 55.9 +1.4**
baz=204
O18K Koktuh Hills 119.80 25 P **PKiKP 12 35 56.3 +1.4**
baz=209
MK31 Makanchi Array 119.81 310 *d i* PKIKP **PKPdf 12 35 53.6 -1.7**
MKAR Makanchi Array 119.81 310 PKhKP PKPpre 12 35 47.8
comp=Z,0.9nm,0.9s,baz=83,slow=5.1,SNR=3.6
MKAR PKP **PKPdf 12 35 53.0 -2.3**
comp=Z,3.2nm,0.9s,baz=126,slow=2.5,SNR=17
MKAR PKKPbc **PKKPbc 12 46 04.3 0.0**
comp=Z,1.4nm,1.0s,baz=298,slow=2.6,SNR=6.8
MKAR Makanchi Array 119.81 310 PKIKP **PKPdf 12 35 53.0 -2.3**
N17K Nushagak Hills 119.92 23 P **PKiKP 12 35 57.3 +2.2**
baz=208
SDV San Domingo 119.94 120 IAms_20 IAms_20 13 18 41.6
comp=Z,2μm,21.0s
MAKZ Makanchi 119.96 309 **PKPdf 12 35 53.6 -2.0**
MAKZ Makanchi 119.96 309 PKIKP **PKPdf 12 35 53.6 -2.0**
MAKZ MLR MLR
comp=Z,400nm,20.0s
M16K Timber Creek 119.97 22 P **PKiKP 12 35 55.5 +0.4**
baz=207
L15K Ungalak Mounta 120.02 21 P **PKiKP 12 35 56.7 +1.5**
baz=205
P19K Oil Pt 120.11 26 P **PKiKP 12 35 57.2 +1.6**
baz=210
GAMB Gambell 120.17 15 P **PKiKP 12 35 57.5 +2.1**
baz=199
ANMO Albuquerque 120.18 71 IAms_20 IAms_20 13 19 17.4
comp=Z,3μm,19.0s
ANMO Albuquerque 120.18 71 IAms_20 IAms_20 13 19 17.4
comp=Z,3μm,19.0s
ANMO Albuquerque 120.18 71 *c i* PKIKP **PKiKP 12 35 57.2 +0.5**
ANMO MLR MLR
comp=Z,958nm,16.0s
TDK Taldyqorghan 120.25 306 *e*PKIKP **PKPdf 12 35 55.4 -0.8**
TDK MLR MLR
comp=Z,299nm,23.0s
TDK Taldyqorghan 120.25 306 *e*PKP **PKPdf 12 35 55.5 -0.8**
TDK LR LR 13 27 09.9
comp=Z,299nm,23.0s
O19K Port Alsworth 120.32 25 P **PKiKP 12 35 58.0 +2.2**
baz=210
N18K Kilae Creek 120.36 24 P **PKiKP 12 35 58.4 +2.4**
baz=209
AAK Ala-Archa 120.39 302 **PKPdf 12 35 56.1 -0.7**
AAK Ala-Archa 120.39 302 *c i* PKIKP **PKPdf 12 35 56.7 -0.1**
AAK MLR MLR
comp=Z,511nm,21.0s
L16K Owhat River 120.47 22 P **PKiKP 12 35 58.5 +2.4**
baz=207
HOM Homer 120.53 27 P **PKiKP 12 35 58.2 +1.9**
baz=211
735A Kenedy 120.55 82 IAms_20 IAms_20 13 18 44.1
comp=Z,1μm,20.0s
K15K Wolf Creek Mou 120.57 20 P **PKiKP 12 35 58.8 +2.5**
baz=206
J14K Nanvaranak Lak 120.58 19 P **PKiKP 12 35 58.7 +2.5**
baz=204
JCT Junction City 120.62 80 IAms_20 IAms_20 13 20 22.8
comp=Z,1μm,20.0s
DUG Dugway, Tooele 120.64 63 IAms_20 IAms_20 13 19 32.6
comp=Z,2μm,18.0s
M17K Holitna River 120.64 23 P **PKiKP 12 35 59.3 +2.8**
baz=208
N19K Bonanza Creek 120.81 25 P **PKiKP 12 35 59.1 +2.1**
baz=210
BRSE Bradley Lake S 120.84 27 P **PKiKP 12 35 59.6 +2.6**
baz=212
M18K Stony River 121.09 23 P **PKiKP 12 35 59.0 +1.6**
baz=209
L17K Donlin 121.10 22 P **PKiKP 12 35 58.9 +1.5**
baz=208
SEW Seward 121.49 27 P **PKiKP 12 36 00.0 +1.9**
baz=212
MSTX Muleshoe 121.52 75 IAms_20 IAms_20 13 17 12.7
comp=Z,1μm,21.0s
CAPN Captain Cook N 121.61 26 P **PKiKP 12 36 00.8 +2.4**
baz=212
K17K Iditarod 121.62 22 **PKiKP 12 36 01.8 +3.4**
K17K Iditarod 121.62 22 P **PKiKP 12 36 01.0 +2.6**
baz=208
J16K Anvik River 121.65 20 P **PKiKP 12 36 00.6 +2.2**
baz=206
SPCR Spurr Chakacha 121.71 25 P **PKiKP 12 36 00.7 +2.0**
baz=211
O22K Cooper Landing 121.74 27 P **PKiKP 12 36 00.9 +2.3**
baz=212
M19K Big River Lodg 121.79 24 P **PKiKP 12 36 00.9 +2.2**
baz=210
Q23K Middleton Isla 121.79 29 P **PKiKP 12 36 00.8 +2.1**
baz=214
BMO Blue Mountains 121.79 56 IAms_20 IAms_20 13 27 15.2
comp=Z,1μm,18.0s
ANM Nome 121.92 17 P **PKiKP 12 36 01.4 +2.5**
baz=204,SNR=20
L19K White Mountain 121.92 24 P **PKiKP 12 36 01.5 +2.4**
baz=210
P23K Montague Islan 121.96 29 P **PKiKP 12 36 02.1 +2.9**
baz=214
J17K VABM Dome 122.06 21 P **PKiKP 12 36 02.1 +2.9**
baz=207
M20K Styx River 122.07 25 P **PKiKP 12 36 01.7 +2.2**
baz=211
I17K Unalakleet 122.17 20 P **PKiKP 12 36 01.9 +2.5**
baz=207
RC01 Rabbit Creek A 122.25 27 P **PKiKP 12 36 01.9 +2.2**
baz=213
HLID Hailey 122.28 59 IAms_20 IAms_20 13 24 58.1
comp=Z,1μm,18.0s
IUG Iuzhnay 122.28 298 *e*PKIKP **PKPdf 12 35 59.5 -0.8**
IUG *e* 12 37 35.1
IUG Iuzhnay 122.28 298 *e*PKP **PKPdf 12 35 59.5 -0.8**
IUG *e*PP **PP 12 37 35.1 -1.7**
RAYN Ar Rayn 122.29 266 **PKPdf 12 36 00.2 -0.7**
RAYN Ar Rayn 122.29 266 IAms_20 IAms_20 13 19 52.0
comp=Z,1μm,20.0s
RAYN Ar Rayn 122.29 266 PKIKP **PKPdf 12 36 00.2 -0.7**
SUA Susitna One 122.31 26 P **PKiKP 12 36 01.9 +2.0**
baz=212
BILL Bilibino 122.38 3 **PKiKP 12 36 00.5 +0.8**
BILL Bilibino 122.38 3 ‖ *i* PKIKP **PKiKP 12 35 59.9 +0.2**
BILL MLR MLR
comp=Z,585nm,20.0s
TNA Tin City 122.42 16 **PKPdf 12 35 59.6 0.0**
TNA Tin City 122.42 16 P **PKiKP 12 36 02.3 +2.4**
baz=202
HKT Hockley 122.51 83 IAms_20 IAms_20 13 25 10.2
comp=Z,1μm,20.0s
HIN Hinchinbrook I 122.55 29 IAms_20 IAms_20 13 24 44.5
comp=Z,904nm,18.0s
G15K Niukluk 122.55 18 P **PKiKP 12 36 02.7 +2.6**
baz=205
SKT Skwentna 122.55 25 P **PKiKP 12 36 02.6 +2.3**
baz=212
H16K Elim 122.55 19 P **PKiKP 12 36 02.9 +2.7**
baz=206
F14K Arctic Creek 122.59 16 P **PKiKP 12 36 02.8 +2.6**
baz=203
PLID Pearl Lake 122.60 57 **PKPdf 12 36 00.2 -0.8**
PLID IAms_20 IAms_20 13 27 16.6
comp=Z,1μm,18.0s
J18K Innoko River 122.62 22 P **PKiKP 12 36 03.0 +2.6**
baz=209
CHM Chimkent 122.63 298 *e*PKIKP **PKPdf 12 35 59.9 -0.9**
CHM MLR MLR
comp=Z,373nm,25.0s
CHM Chimkent 122.63 298 *e*PKP **PKPdf 12 35 60.0 -0.9**
CHM LR LR 13 28 43.4
comp=Z,373nm,24.6s
M22K Willow 122.71 26 P **PKiKP 12 36 03.1 +2.6**
baz=213
KKAR Karatay Array 122.73 300 **PKPdf 12 35 59.7 -1.3**
KKAR Karatay Array 122.73 300 PKIKP **PKPdf 12 35 59.7 -1.3**
AMTX Amarillo 122.80 75 IAms_20 IAms_20 13 18 45.7
comp=Z,2μm,20.0s
PMR Palmer 122.83 27 P **PKiKP 12 36 03.1 +2.4**
PMR Palmer 122.83 27 P **PKiKP 12 36 03.1 +2.4**
baz=213
KNK Knik Glacier 122.86 27 P **PKiKP 12 36 03.5 +2.6**
baz=214
CRAG Craig 122.95 39 P **PKiKP 12 36 03.5 +2.3**
baz=220
O20A White River Ci 123.00 66 IAms_20 IAms_20 13 22 03.1
comp=Z,2μm,19.0s
BRLS Boroldav 123.02 299 *e*PKIKP **PKPdf 12 36 00.5 -1.1**
BRLS *e* 12 37 39.2
BRLS Boroldav 123.02 299 *e*PKP **PKPdf 12 36 00.6 -1.1**
BRLS *e*PP **PP 12 37 39.3 -2.5**
WHTX Lake Whitney, 123.08 80 IAms_20 IAms_20 13 22 42.2
comp=Z,1μm,19.0s
F15K North Star Dit 123.09 17 P **PKiKP 12 36 03.7 +2.5**
baz=204,SNR=5.5
K20K Telida 123.12 23 P **PKiKP 12 36 03.7 +2.3**
baz=211
PPLA Purkeypile 123.17 24 P **PKiKP 12 36 04.4 +2.8**
baz=212
L22K Petersville 123.20 25 IAms_20 IAms_20 13 21 26.7
comp=Z,2μm,21.0s
G16K Koyuk River 123.21 18 P **PKiKP 12 36 03.8 +2.4**
baz=206,SNR=5.9
SML Sawmill 123.22 27 P **PKiKP 12 36 03.9 +2.2**
baz=214
CUT Chulitna 123.22 26 IAms_20 IAms_20 13 21 48.4
comp=Z,2μm,22.0s
CUT Chulitna 123.22 26 P **PKiKP 12 36 03.5 +2.0**
baz=213
H17K Granite Mounta 123.27 20 P **PKiKP 12 36 03.3 +1.7**
baz=207
J19K Poorman 123.33 22 P **PKiKP 12 36 04.2 +2.4**
baz=210
EDA Edea 123.37 218 IAms_20 IAms_20 13 22 54.7
comp=Z,1μm,21.0s
M23K Glacier View 123.37 27 P **PKiKP 12 36 04.1 +2.2**
baz=214
SIT Sitka 123.38 37 P **PKiKP 12 36 04.3 +2.4**
baz=220
AHID Auburn Hatcher 123.39 62 IAms_20 IAms_20 13 23 13.3
comp=Z,2μm,19.0s
SEM Semipalatinsk 123.40 311 *e*PKIKP **PKPdf 12 36 01.6 -0.7**
SEM Semipalatinsk 123.40 311 *e*PKP **PKPdf 12 36 01.6 -0.7**
SEM LR LR 13 29 11.5
U33K Whale Pass 123.44 39 P **PKiKP 12 36 04.3 +2.2**
baz=220
SCM Sheep Creek Mo 123.51 27 P **PKiKP 12 36 04.6 +2.4**
baz=214
BMRM Bremner River 123.55 29 P **PKiKP 12 36 03.5 +1.2**
baz=216
KLU Klutina 123.61 28 P **PKiKP 12 36 04.7 +2.2**
baz=215
G17K Kiwalik Mounta 123.63 19 P **PKiKP 12 36 04.6 +2.4**
baz=207
MESA MESA 123.69 31 P **PKiKP 12 36 04.7 +1.9**
baz=217
GCSA Galena City Sc 123.71 21 P **PKiKP 12 36 05.2 +2.8**
baz=209,SNR=5.1
H18K Honhosa River 123.76 20 P **PKiKP 12 36 04.7 +2.1**
baz=208
S31K Pelican 123.77 36 P **PKiKP 12 36 05.1 +2.4**
baz=219
HAYD Hayden 123.80 66 IAms_20 IAms_20 13 22 21.3
comp=Z,996nm,18.0s
J20K Nowinta River 123.81 23 P **PKiKP 12 36 04.7 +2.0**
baz=211
CRQE Cirque 123.81 30 P **PKiKP 12 36 05.2 +2.3**
baz=216
Q24A Divide 123.82 69 IAms_20 IAms_20 13 20 58.9
comp=Z,1μm,20.0s
WRAK Wrangell Islan 123.96 39 P **PKiKP 12 36 06.0 +2.9**
baz=221
S32K Killisnoo 123.96 37 P **PKiKP 12 36 04.4 +1.3**
baz=220
CHUM Lake Minchumin 123.98 24 P **PKiKP 12 36 04.7 +1.7**
baz=212,SNR=6.0
WAT1 Susitna Watana 124.02 26 P **PKiKP 12 36 05.1 +2.0**
baz=214
WAT6 Susitna Watana 124.02 27 P **PKiKP 12 36 04.8 +1.5**
baz=214
KTH Kantishna Hill 124.03 25 IAms_20 IAms_20 13 24 46.8
comp=Z,1μm,20.0s
T33K Petersburg 124.04 38 P **PKiKP 12 36 04.8 +1.6**
baz=221
M24K Tolsona, Glenn 124.05 28 P **PKiKP 12 36 04.4 +1.1**
baz=215
SNOW Snow King Moun 124.06 62 IAms_20 IAms_20 13 22 09.1
comp=Z,1μm,20.0s
N25K Chitina, Valde 124.07 29 P **PKiKP 12 36 05.2 +1.9**
baz=216
ZALV Zalesovo Beam 124.09 317 PKP **PKPdf 12 36 01.3 -1.9**
comp=Z,1.3nm,0.8s,baz=132,slow=2.1,SNR=7.4
ZALV Zalesovo Beam 124.09 317 **PKPdf 12 36 01.0 -2.2**
ZALV Zalesovo Beam 124.09 317 PKIKP **PKPdf 12 36 01.0 -2.2**
TRF Thorofare Moun 124.10 25 P **PKiKP 12 36 05.3 +1.8**
baz=213,SNR=6.8
PCA Pinnacle 124.14 32 IAms_20 IAms_20 13 26 09.9
comp=Z,1μm,19.0s
PINM Pinnacle 124.14 32 P **PKiKP 12 36 05.6 +2.0**
baz=218
Z35A Perchaven, San 124.18 79 IAms_20 IAms_20 13 19 39.2
comp=Z,1μm,20.0s
BW06 Boulder Array 124.18 63 IAms_20 IAms_20 13 21 19.3
comp=Z,2μm,20.0s
PDAR Pinedale Array 124.18 63 PKP **PKPdf 12 36 03.2 -0.9**
comp=Z,5.1nm,1.2s,baz=229,slow=1.9,SNR=7.0
PDAR Pinedale Array 124.18 63 **PKiKP 12 36 06.5 +2.1**
LOHW Long Hollow 124.25 61 IAms_20 IAms_20 13 21 06.9

comp=Z,1µm,19.0s
MOOW **Moose Ponds** 124.27 61 IAMs_20 IAMs_20 13 29 29.6
comp=Z,1µm,18.0s
I20K **Naaghedeneel** 124.27 22 P PKiKP 12 36 05.4 +1.9
baz=211
KURBB **Kurchatov Arra** 124.32 311 PKP PKPdf 12 36 01.4 -2.4
comp=Z,3.7nm,0.9s,baz=126,slow=1.4,SNR=24
KURBB PP PP 12 37 49.1 -1.2
comp=Z,1.6nm,1.1s,baz=142,slow=6.3,SNR=9.7
WMOK **Wichita Mounta** 124.33 77 IAMs_20 IAMs_20 13 23 29.1
comp=Z,2µm,18.0s
MCARA **McCarthy VSAT** 124.34 30 P PKiKP 12 36 06.1 +2.3
baz=217
KURK **Kurchatov** 124.34 311 PKPdf 12 36 02.2 -1.6
KURK **Kurchatov** 124.34 311 *i* PKIKP PKPdf 12 36 02.8 -1.0
NEW **Newport** 124.35 54 IAMs_20 IAMs_20 13 20 21.5
comp=Z,2µm,18.0s
F17K **Baldwin Pennin** 124.36 18 P PKiKP 12 36 05.9 +2.3
baz=207
G18K **Tagagawik** 124.36 20 P PKiKP 12 36 06.0 +2.3
baz=208
DLMT **Dillon** 124.48 59 IAMs_20 IAMs_20 13 26 39.1
comp=Z,1µm,18.0s
BPAW **Bear Paw Mtn.** 124.48 24 P PKiKP 12 36 06.1 +2.1
baz=213,SNR=6.8
H19K **Roundabout Mou** 124.48 21 P PKiKP 12 36 05.9 +2.0
baz=210
CTG **Chitna Glacier** 124.50 31 P PKiKP 12 36 06.5 +2.2
baz=218
CTGM **Chitina Glacie** 124.50 31 IAMs_20 IAMs_20 13 20 56.4
comp=Z,1µm,22.0s
DHY **Denali Highway** 124.52 26 P PKiKP 12 36 06.4 +2.0
baz=215
NATX **Nacogdoches** 124.53 82 IAMs_20 IAMs_20 13 21 19.2
comp=Z,1µm,18.0s
FLWY **Flagg Ranch** 124.53 61 IAMs_20 IAMs_20 13 22 44.5
comp=Z,1µm,20.0s
HARP **HAARP** 124.56 28 P PKiKP 12 36 06.1 +1.8
baz=216
R32K **Eaglecrest** 124.60 36 P PKiKP 12 36 05.8 +1.4
baz=220
MCK **McKinley** 124.67 25 IAMs_20 IAMs_20 13 21 35.6
comp=Z,1µm,21.0s
MCK **McKinley** 124.67 25 P PKiKP 12 36 06.2 +1.7
baz=214,SNR=12
O28M **Mount Upton** 124.69 31 P PKiKP 12 36 05.8 +0.9
baz=218
H20K **Anotleneega Mo** 124.78 22 P PKiKP 12 36 06.0 +1.4
baz=211
F18K **Selawik** 124.79 19 P PKiKP 12 36 06.6 +2.1
baz=208
O29M **Mount Kennedy** 124.83 33 P PKiKP 12 36 06.9 +1.9
baz=219
E17K **Hotham Inlet** 124.83 18 P PKiKP 12 36 06.9 +2.4
baz=207
MSO **Missoula** 124.85 57 IAMs_20 IAMs_20 13 29 11.9
comp=Z,1µm,21.0s
G19K **Purcell Mounta** 124.89 20 P PKiKP 12 36 05.6 +0.8
baz=210
PAX **Paxson** 124.94 27 P PKiKP 12 36 06.5 +1.4
baz=216
T35M **Bob Quinn** 125.15 39 P PKiKP 12 36 07.3 +1.7
baz=222
I21K **Tanana** 125.16 23 P PKiKP 12 36 07.3 +2.0
baz=213,SNR=6.8
M26K **Nabesna, AK** 125.16 29 P PKiKP 12 36 07.1 +1.6
baz=217
D17K **Noatak River** 125.17 17 P PKiKP 12 36 07.5 +2.3
baz=206
P30M **Million Dollar** 125.20 33 P PKiKP 12 36 07.9 +2.3
baz=220
YUK8 **Steele Glacier** 125.23 31 P PKiKP 12 36 07.4 +1.5
baz=219
SKAG **Skagway** 125.23 35 P PKiKP 12 36 07.8 +2.3
baz=221
C16K **Lisburne Hills** 125.32 15 P PKiKP 12 36 07.6 +2.1
baz=205
E18K **Tukpahlearik C** 125.35 18 P PKiKP 12 36 07.9 +2.3
baz=208
NEA2 **Nenana** 125.35 25 P PKiKP 12 36 07.8 +2.1
baz=214,SNR=5.5
F19K **Shaleruckik Mo** 125.36 19 P PKiKP 12 36 07.8 +2.2
baz=209
H21K **Melozitna Rive** 125.38 22 P PKiKP 12 36 08.4 +2.6
baz=212,SNR=6.7
YUK6 **Outpost Mounta** 125.39 32 P PKiKP 12 36 08.1 +1.8
baz=220
YUK3 **Moose Creek** 125.40 31 P PKiKP 12 36 08.2 +2.0
baz=219
Z38A **Mt. Pleasant** 125.43 81 IAMs_20 IAMs_20 13 22 09.2
comp=Z,1µm,20.0s
M27K **Edge Creek, AK** 125.45 29 P PKiKP 12 36 08.6 +2.4
baz=218
RDOG **Red Dog Mine** 125.52 17 P PKiKP 12 36 08.0 +2.0
baz=206
S34M **Telegraph Cree** 125.52 38 P PKiKP 12 36 07.9 +1.6
baz=222
K24K **Donnelly Dome** 125.54 27 P PKiKP 12 36 07.3 +1.1
baz=216
L26K **Log Cabin Wild** 125.56 28 P PKiKP 12 36 08.4 +2.2
baz=217,SNR=5.6
HYT **Haines Junctio** 125.57 33 P PKiKP 12 36 08.1 +1.6
baz=220
YUK4 **Talbot Arm** 125.61 32 P PKiKP 12 36 08.1 +1.5
baz=220
K22A **Casper** 125.69 65 IAMs_20 IAMs_20 13 19 47.2
comp=Z,2µm,22.0s
CCB **Clear Creek Bu** 125.71 25 IAMs_20 IAMs_20 13 22 07.0
comp=Z,1µm,22.0s
HDA **Harding Lake** 125.73 26 P PKiKP 12 36 08.4 +1.9
baz=216,SNR=16
RIDG **Independent Ri** 125.73 27 P PKiKP 12 36 07.8 +1.2
baz=217,SNR=5.7
I23K **Minto, Yukon-K** 125.74 24 P PKiKP 12 36 08.2 +1.8
baz=214
BVCY **Beaver Creek** 125.79 30 P PKiKP 12 36 08.6 +1.9
baz=219
C17K **DeLong Mountai** 125.85 16 P PKiKP 12 36 08.9 +2.3
baz=206
P32M **Atlin** 125.87 35 P PKiKP 12 36 09.0 +2.0
baz=222
COLA **College** 125.88 25 PKPdf 12 36 05.7 -0.6
COLA **College** 125.88 25 P PKiKP 12 36 08.7 +2.0
COLA **College** 125.88 25 PKIKP PKPdf 12 36 05.7 -0.6
COLA **College** 125.88 25 P PKiKP 12 36 08.6 +1.9
baz=215
Q32M **Nakina River** 125.89 37 P PKiKP 12 36 08.5 +1.2
baz=222
F20K **Avaraart Lake** 125.95 20 P PKiKP 12 36 09.1 +2.3
baz=211
G21K **Allakaket** 125.95 21 P PKiKP 12 36 07.9 +1.1
baz=212
O30N **Mendenhall** 125.97 33 P PKiKP 12 36 08.4 +1.3
baz=221
L27K **Beaver Creek,** 126.02 29 P PKiKP 12 36 08.6 +1.5
baz=218,SNR=5.9
BCAR **Beaver Creek A** 126.03 29 PKPdf 12 36 06.0 -0.7
ILAR **Eielson Array** 126.04 25 PKP PKPdf 12 36 05.2 -1.5
comp=Z,18nm,1.1s,baz=265,slow=3.1,SNR=25
ILAR **Eielson Array** 126.04 25 PKPdf 12 36 04.7 -2.0
SCRK **Sand Creek** 126.15 27 P PKiKP 12 36 09.0 +1.5
baz=217,SNR=6.6
POKR **Poker Plat Res** 126.18 25 P PKiKP 12 36 08.7 +1.3
baz=216
WHY **Whitehorse** 126.28 34 P PKiKP 12 36 09.2 +1.4
baz=221
J25K **Salcha River,** 126.30 26 P PKiKP 12 36 09.5 +1.8
baz=217
DLBC **Dease Lake** 126.30 38 P PKiKP 12 36 09.1 +1.2
baz=223
C18K **Utukok River** 126.34 17 P PKiKP 12 36 09.5 +1.9
baz=208
M29M **Somme Creek** 126.52 31 P PKiKP 12 36 09.9 +1.6
baz=220,SNR=5.0
F21K **Alatna River** 126.56 21 P PKiKP 12 36 10.1 +2.0
baz=212
OK048 **Pawnee Station** 126.58 77 PKiKP 12 36 10.9 +1.8
N31M **Braeburn, Yuko** 126.61 33 P PKiKP 12 36 09.6 +1.2
baz=221
P33M **Teslin, Yukon** 126.63 35 IAMs_20 IAMs_20 13 22 13.8
comp=Z,968nm,20.0s
P33M **Teslin, Yukon** 126.63 35 P PKiKP 12 36 09.2 +0.7
baz=222
H24K **Noodor Dome** 126.66 24 P PKiKP 12 36 10.2 +1.8
baz=216
R33M **Jennings River** 126.67 37 P PKiKP 12 36 09.9 +1.3
baz=223
J26L **Joseph Creek** 126.68 27 P PKiKP 12 36 10.4 +1.9
baz=218
G22K **Bettles** 126.73 22 P PKiKP 12 36 09.4 +1.0
baz=214
GTBY **Guantanamo Bay** 126.74 108 IAMs_20 IAMs_20 13 23 07.7
comp=Z,889nm,18.0s
D19K **Kuna River** 126.75 18 P PKiKP 12 36 10.1 +1.7
baz=210
G23K **Bananza Creek** 126.88 23 P PKiKP 12 36 09.9 +1.2
baz=215
OGNE **Ogallala** 126.91 69 IAMs_20 IAMs_20 13 24 59.6
comp=Z,1µm,20.0s
PRP **Porcupine Dome** 126.98 26 P PKiKP 12 36 10.4 +1.3
baz=217,SNR=5.3
R32A **Long Quarter,** 126.99 74 IAMs_20 IAMs_20 13 21 06.7
comp=Z,2µm,21.0s
C19K **Lookout Ridge** 127.02 17 P PKiKP 12 36 11.1 +2.2
baz=209
M30M **Minto, Yukon** 127.12 32 P PKiKP 12 36 11.0 +1.6
baz=221
L29M **L29M** 127.12 31 P PKiKP 12 36 11.0 +1.6
baz=221
D20K **Etivluk River** 127.21 19 P PKiKP 12 36 11.3 +1.9
baz=211
N32M **Quiet Lake** 127.24 34 P PKiKP 12 36 11.5 +1.9
baz=223
COLD **Coldfoot** 127.27 22 P PKiKP 12 36 10.6 +1.1
baz=215
G24K **Hadweenzic Riv** 127.46 24 P PKiKP 12 36 11.3 +1.5
baz=216
DAWY **Dawson** 127.49 29 P PKiKP 12 36 11.2 +1.1
baz=220,SNR=5.7
E21K **Killik River** 127.49 20 P PKiKP 12 36 11.1 +1.1
baz=213
M31M **Drury Creek, Y** 127.59 33 P PKiKP 12 36 11.9 +1.6
baz=222
TIXI **Tiksi** 127.64 348 PKP PKPdf 12 36 08.0 -1.5
comp=Z,10nm,0.9s,baz=105,slow=1.8,SNR=11
TIXI **Tiksi** 127.64 348 PKIKP PKPdf 12 36 08.0 -1.5
TIXI MLR MLR
comp=Z,500nm,19.0s
EGMT **Eagleton** 127.73 58 IAMs_20 IAMs_20 13 28 50.2
comp=Z,2µm,20.0s
K29M **Barlow Dome** 127.86 30 P PKiKP 12 36 12.6 +1.7
baz=221
WTLY **Watson Lake, Y** 127.95 37 P PKiKP 12 36 12.7 +1.6
baz=225
RSSD **Black Hills** 128.02 65 PKPdf 12 36 10.3 -1.1
RSSD IAMs_20 IAMs_20 13 25 18.8
comp=Z,1µm,18.0s
RSSD **Black Hills** 128.02 65 PKIKP PKPdf 12 36 10.3 -1.1
U38A **Gravette** 128.05 79 PKPdf 12 36 10.9 -0.6
I27K **Kandik River** 128.06 27 P PKiKP 12 36 12.8 +1.6
baz=220
E23K **Chandalar** 128.08 22 P PKiKP 12 36 12.9 +1.7
baz=215
D22K **Ayikyak River** 128.12 20 P PKiKP 12 36 12.9 +1.7
baz=214
MAYO **Mayo, Yukon** 128.16 31 P PKiKP 12 36 12.6 +1.3
baz=222
E24K **Your Creek** 128.34 22 P PKiKP 12 36 13.0 +1.3
baz=216
TOAD **Toad River Com** 128.36 40 P PKiKP 12 36 13.4 +1.5
baz=226
I28M **Miner Creek** 128.39 28 P PKiKP 12 36 13.0 +1.1
baz=221
WHAR **Wooly Hollow** 128.44 81 PKiKP 12 36 14.8 +2.0
G26K **Porcupine Rive** 128.55 25 P PKiKP 12 36 13.4 +1.4
baz=219
H27K **Steamboat Moun** 128.57 27 P PKiKP 12 36 13.1 +0.9
baz=220
TOLK **Toolik Lake Re** 128.57 22 P PKiKP 12 36 13.5 +1.4
baz=216
D23K **Nanushuk River** 128.60 21 P PKiKP 12 36 13.3 +1.2
baz=215
F25K **Christian Rive** 128.61 24 P PKiKP 12 36 13.3 +1.0
baz=218
J30M **Hart River** 128.75 30 IAMs_20 IAMs_20 13 25 41.7
comp=Z,1µm,20.0s
J30M **Hart River** 128.75 30 P PKiKP 12 36 14.0 +1.3
baz=223
I29M **Ogilvie Camp,** 128.78 29 P PKiKP 12 36 14.1 +1.6
baz=222
G27K **Doyon Strip** 128.98 26 IAMs_20 IAMs_20 13 28 41.4
comp=Z,1µm,20.0s
G27K **Doyon Strip** 128.98 26 P PKiKP 12 36 14.9 +1.9
baz=220
E25K **Arctic Village** 129.04 23 P PKiKP 12 36 14.6 +1.6
baz=218
F26K **Sheenjek River** 129.04 24 P PKiKP 12 36 14.3 +1.3
baz=219
B22K **Teshekpuk Lake** 129.20 19 P PKiKP 12 36 14.5 +1.3
baz=214
I30M **Mount Dempster** 129.22 29 P PKiKP 12 36 14.5 +0.9
baz=223
A21K **Barrow** 129.45 17 P PKiKP 12 36 15.3 +1.6
baz=212
BVAR **Borovoye Array** 129.64 308 PKP PKPdf 12 36 13.0 -0.9
comp=Z,2.4nm,0.7s,baz=131,slow=4.1,SNR=16
LCAR **Lake Charles** 129.64 81 PKPdf 12 36 13.2 -1.2
KOTAN **Kotaneelee Air** 129.67 39 P PKiKP 12 36 15.1 +0.7
baz=228
BORK **Borovoye** 129.68 308 PKPdf 12 36 13.2 -0.8
BORK **Borovoye** 129.68 308 *i* PKIKP PKPdf 12 36 13.1 -0.8
BORK MLR MLR
comp=Z,509nm,20.0s
D25K **Kavik River** 129.81 22 P PKiKP 12 36 15.8 +1.2
baz=218
EPYK **Eagle Plains** 129.96 28 P PKiKP 12 36 15.8 +0.9
baz=223
G29M **Pine Creek** 130.01 27 P PKiKP 12 36 16.3 +1.3
baz=223
E27K **Coleen River** 130.04 25 P PKiKP 12 36 16.4 +1.4
baz=221
F28M **Old Crow** 130.04 26 P PKiKP 12 36 16.2 +1.1
baz=222
H31M **Peel River** 130.23 30 P PKiKP 12 36 16.6 +1.2
baz=225
T42A **Van Buren** 130.35 80 PKPdf 12 36 14.8 -1.0
DBIC **Dimbokro** 130.50 202 PKP PKPdf 12 36 15.8 -1.0
comp=Z,16nm,1.1s,baz=238,slow=3.1,SNR=8.0
DBIC **Dimbokro** 130.50 202 PKPdf 12 36 16.5 -0.3
DBIC **Dimbokro** 130.50 202 PKIKP PKPdf 12 36 16.5 -0.3
C27K **Jago River** 130.64 23 P PKiKP 12 36 17.9 +1.8
baz=220
E28M **Babbage River** 130.87 25 P PKiKP 12 36 17.4 +0.7
baz=223
CCM **Cathedral Cave** 130.97 79 PKiKP 12 36 19.0 +1.2
CCM **Cathedral Cave** 130.97 79 PKIKP PKiKP 12 36 19.0 +1.2
D27M **Malcolm River** 130.99 24 P PKiKP 12 36 18.2 +1.2
baz=222
G31M **Satah River** 131.04 29 P PKiKP 12 36 18.3 +1.3
baz=225
F30M **Barrier River** 131.12 28 P PKiKP 12 36 18.3 +1.1
baz=225
E29M **Blow River** 131.12 26 P PKiKP 12 36 18.0 +0.8
baz=224
FVM **French Village** 131.39 80 PKiKP 12 36 20.4 +1.8
FVM **French Village** 131.39 80 PKIKP PKiKP 12 36 20.5 +1.8
F31M **Tsiigehtchic** 131.55 28 P PKiKP 12 36 19.5 +1.5
baz=226
D28M **Stokes Point** 131.59 25 P PKiKP 12 36 18.5 +0.5
baz=224
WVT **Waverly** 131.61 84 PKiKP 12 36 20.1 +0.9
WVT **Waverly** 131.61 84 PKIKP PKiKP 12 36 20.1 +0.9
T45A **Paducah** 131.75 82 IAMs_20 IAMs_20 13 26 09.5
comp=Z,1µm,20.0s
V48A **Smith Brothers** 131.92 85 IAMs_20 IAMs_20 13 31 26.9
comp=Z,919nm,18.0s
WRGLY **Wrigley** 131.94 37 P PKiKP 12 36 20.1 +1.2
baz=230
INK **Inuvik** 132.21 28 P PKiKP 12 36 19.7 +0.4
baz=227
T47A **Sharon Grove** 132.62 83 PKiKP 12 36 22.2 +1.0
CPCT **Cooper Cave** 133.05 87 PKiKP 12 36 23.7 +1.6
L40A **Anamosa** 133.67 75 IAMs_20 IAMs_20 13 32 19.3
comp=Z,1µm,19.0s
NRIK **Noril'sk** 133.88 332 PKP PKPdf 12 36 19.9 -1.5
comp=Z,6.3nm,0.9s,baz=114,slow=2.0,SNR=9.0
NRIK **Noril'sk** 133.88 332 PKPdf 12 36 20.7 -0.7
NRIK **Noril'sk** 133.88 332 *d* PKIKP PKPdf 12 36 20.2 -1.2
WCI **Wyandotte Cave** 133.94 83 PKiKP 12 36 23.6 -0.2
WCI **Wyandotte Cave** 133.94 83 PKIKP PKiKP 12 36 23.6 -0.2
T50A **Nancy** 133.96 85 PKiKP 12 36 24.9 +1.0
R49A **Shelbyville** 134.63 84 PKiKP 12 36 26.3 +1.1
R49A IAMs_20 IAMs_20 13 32 46.7
comp=Z,1µm,18.0s
YKA **Yellowknife Ar** 134.71 41 PKP PKPdf 12 36 21.2 -1.9
comp=Z,2.3nm,1.0s,baz=244,slow=2.7,SNR=8.1
YKA **Yellowknife Ar** 134.71 41 PKPdf 12 36 22.5 -0.6
YKA **Yellowknife Ar** 134.71 41 PKIKP PKPdf 12 36 22.5 -0.6
TORD **Torodi Ar. Bea** 134.98 212 PKhKP PKPpre 12 36 12.4
comp=Z,1.6nm,1.0s,baz=191,slow=4.0,SNR=5.7
TORD PKP PKPdf 12 36 24.0 -1.2
comp=Z,8.5nm,1.0s,baz=200,slow=3.4,SNR=19
R50A **Paris** 135.11 84 IAMs_20 IAMs_20 13 36 38.5
comp=Z,1000nm,19.0s
P48A **Milroy** 135.27 82 IAMs_20 IAMs_20 13 26 12.6
comp=Z,1µm,20.0s
C36M **Paulatuk** 135.52 30 P PKiKP 12 36 25.5 -0.5
baz=234
FFC **Flin Flon** 135.72 55 PKPdf 12 36 25.1 -0.2
FFC **Flin Flon** 135.72 55 PKIKP PKPdf 12 36 25.1 -0.2
O48B **Farmland** 135.95 82 IAMs_20 IAMs_20 13 28 03.7
comp=Z,1µm,19.0s
ULM **Lac du Bonnet** 136.20 63 PKP PKiKP 12 36 27.4 -0.6
comp=Z,4.3nm,1.0s,baz=196,slow=4.8,SNR=3.7
A36M **Sachs Harbour** 136.73 26 P PKiKP 12 36 28.2 -0.2
baz=236
ARTI **Arti** 137.22 306 PKPdf 12 36 27.1 -1.0
ARTI **Arti** 137.22 306 *i* PKIKP PKPdf 12 36 26.5 -1.5
ARTI 12 39 08.0
ARTI SS SS 12 57 12.1 -7.0
KBZ **Khabaz** 138.11 282 PKP PKPdf 12 36 29.8 -0.2
comp=Z,4.3nm,0.9s,baz=155,slow=1.3,SNR=4.8
KIV **Kislovodsk** 138.37 283 *e* PKIKP PKiKP 12 36 31.9 -0.9
KIV *i* 12 36 33.6
KIV *e* 12 39 19.1
KIV *e* SS SS 12 57 31.2 -2.1
KIV *e* SSS SSS 13 02 44.6
KIV pmax pmax
comp=Z,18nm,1.1s
BNN **Bunyan** 139.06 272 PKPdf 12 36 32.8 +0.6
SOC **Sochi** 139.84 280 *e* PKIKP PKPdf 12 36 33.3 +0.1
SOC *e* 12 39 27.2
SOC *e* PPP PPP 12 42 32.9
SOC *e* SS SS 12 57 48.9 -1.4
SSPA **Standing Stone** 140.41 87 PKiKP 12 36 36.4 -0.5
BRTR **Keskin Array B** 140.92 271 PKP PKPdf 12 36 35.8 +0.2
comp=Z,2.9nm,0.9s,baz=151,slow=2.8,SNR=6.4
BRTR **Keskin Array B** 140.92 271 PKiKP 12 36 37.3 -0.9
BRTR **Keskin Array B** 140.92 271 PKIKP PKiKP 12 36 37.3 -0.9
FCC **Fort Churchill** 141.51 53 PKPdf 12 36 32.1 -3.3
FCC **Fort Churchill** 141.51 53 PKIKP PKPdf 12 36 32.4 -3.3
TAM **Tamanrasset** 142.52 223 PKPpre 12 36 34.0
TAM IAMs_20 IAMs_20 13 34 50.2
comp=Z,1µm,22.0s
TAM **Tamanrasset** 142.52 223 PKHKP PKPpre 12 36 34.0
BLKN **Baker Lake** 142.92 44 PKPpre 12 36 32.9
VRH **Novokhopyorsk** 143.00 291 *e* PKIKP PKPdf 12 36 35.6 -3.0
VRH pmax pmax
comp=Z,31nm,1.1s
VORD **Divnogorie** 144.21 290 *e* PKHKP PKPpre 12 36 36.4
VORD pmax pmax
comp=Z,20nm,1.1s
VSR **Storozhevoye** 144.40 290 *e* PKHKP PKPpre 12 36 37.0
VSR pmax pmax
comp=Z,60nm,1.6s
VORR **Voronezh** 144.60 291 *e* PKIKP PKPab 12 36 39.2 -0.9
VORR pmax pmax
comp=Z,50nm,1.3s
NCB **Newcomb** 144.61 85 PKPab 12 36 39.9 -0.5
VLDQ **Val d'Or** 145.08 77 PKPbc 12 36 39.8 -2.1
LPSR **Galich'ya Gora** 145.19 292 *e* PKIKP PKPbc 12 36 40.1 -2.0
LPSR pmax pmax
comp=Z,193nm,1.2s
M65A **Busby, Falmout** 145.22 91 P PKPdf 12 36 43.6 +0.8
baz=231
TRQ **Mont Tremblant** 145.71 82 PKPdf 12 36 42.6 -1.1
TIRR **Tirgusor** 146.90 273 ⇓P PKPbc 12 36 47.4 -0.2
TIRR **Tirgusor** 146.90 273 ⇓PKP2 PKPbc 12 36 47.4 -0.2
TIRR **Tirgusor** 146.90 273 PKP PKPdf 12 36 44.9 -0.7
ICOR **Ion Corvin** 147.06 272 ⇑P PKPbc 12 36 47.9 -0.1
TPGR **Topolog** 147.13 274 ⇑P PKPbc 12 36 47.9 -0.3
MOS **Moscow** 147.23 297 *e* PKP2 PKPdf 12 36 46.4 +0.6
MOS pmax pmax
comp=Z,220nm,1.6s
LOZB **Loznitsa** 147.32 270 ⇓P PKPbc 12 36 48.4 -0.4
ELND **Elena** 147.47 269 ⇓P PKPbc 12 36 48.9 -0.3
G62A **West of Eustis** 147.48 86 PKPbc 12 36 48.9 -0.3
CFR **Carcaliu** 147.48 274 ⇑P PKPbc 12 36 48.6 -0.5
CFR **Carcaliu** 147.48 274 ⇑PKP2 PKPbc 12 36 48.6 -0.5
OBN **Obninsk** 147.54 295 PKPdf 12 36 47.0 +0.7
OBN **Obninsk** 147.54 295 ⇓P PKPdf 12 36 46.8 +0.5
OBN **Obninsk** 147.54 295 *ce* PKP2 PKPbc 12 36 48.1 -0.9
OBN 12 40 14.0
OBN *i* 12 43 46.9
OBN *e* 12 52 55.4
OBN pmax pmax
comp=Z,397nm,1.6s
OBN pmax pmax
comp=Z,175nm,1.1s
OBN **Obninsk** 147.54 295 PKP PKPdf 12 36 47.0 +0.7
LIT **Litokhoron** 147.65 262 PKiKP 12 36 51.0 -0.8
LIT **Litokhoron** 147.65 262 PKP2 PKPbc 12 36 51.0 -0.8
KLMR **Klimovskoe** 148.01 306 *e* PKIKP PKPdf 12 36 47.8 +0.9
KLMR PPP PPP 12 43 35.3
KLMR pmax pmax
comp=Z,260nm,1.4s
ISR **Istrita** 148.37 273 ⇑P PKPbc 12 36 51.3 -0.3
ISR **Istrita** 148.37 273 ⇑PKP2 PKPbc 12 36 51.3 -0.3
VAY **Valandovo** 148.39 264 *i* P PKPbc 12 36 50.2 -1.5
ODBI **Odobesti** 148.44 274 ⇑P PKPbc 12 36 50.3 -1.4
PLVB **Pleven** 148.48 268 ⇑P PKPbc 12 36 51.3 -0.5
LDAQ **Lac Daran** 148.55 81 PKiKP 12 36 54.5 +0.9
VRI **Vrincioaia** 148.68 274 ⇑P PKPbc 12 36 51.5 -0.9
VRI **Vrincioaia** 148.68 274 ⇑PKP2 PKPbc 12 36 51.5 -0.9
PLOR **Plostina** 148.72 274 ⇑P PKPbc 12 36 50.9 -1.6
PLOR **Plostina** 148.72 274 ⇑PKP2 PKPbc 12 36 50.9 -1.6
MLR **Muntele Rosu** 148.93 273 ⇑P PKPbc 12 36 52.3 -0.8
MLR **Muntele Rosu** 148.93 273 ⇑PKP2 PKPbc 12 36 52.3 -0.8
MLR **Muntele Rosu** 148.93 273 PKP PKPdf 12 36 50.3 +1.2
SORM **Soroca** 148.95 279 ⇓P PKPbc 12 36 51.2 -1.7
SORM **Soroca** 148.95 279 ⇓PKP2 PKPbc 12 36 51.2 -1.7
SORM **Soroca** 148.95 279 PKP PKPdf 12 36 50.1 +1.2
EMMW **East Machias** 148.97 89 PKPab 12 36 56.6 -0.6
COVR **Voineasa-Covas** 148.98 274 ⇓P PKPbc 12 36 52.2 -0.9
TESR **Tescani** 149.08 275 ⇓P PKPbc 12 36 52.0 -1.3
TURR **Turia** 149.20 274 ⇑P PKPbc 12 36 52.8 -0.9
OHR **Ohrid** 149.28 262 *i* P PKPbc 12 36 53.8 -0.2
ADZR **Andozero** 149.29 312 *e* PKIKP PKPdf 12 36 49.2 +0.3
ADZR pmax pmax
comp=Z,94nm,1.6s
OZUR 149.36 274 ⇑P PKPbc 12 36 53.3 -0.8
D62A **Allapoint, All** 149.36 84 PKiKP 12 36 54.9 -0.2
VOIR 149.42 272 ⇓P PKPbc 12 36 52.7 -1.6
VOIR 149.42 272 ⇓PKP2 PKPbc 12 36 52.7 -1.6
ILON **Igloolik, Nuna** 149.44 37 PKPdf 12 36 51.0 +2.0
DOPR **Dopca** 149.52 273 ⇑P PKPbc 12 36 53.3 -1.2
ARR **Arges** 149.62 272 ⇓P PKPbc 12 36 53.3 -1.5
AK08 **Malin Array Si** 149.65 284 PKP PKPdf 12 36 49.5 -0.4
AK06 **Malin Array Si** 149.66 284 PKP PKPdf 12 36 50.6 +0.7
AKASG **Malin Array Be** 149.70 284 PKPbc PKPbc 12 36 52.6 -2.0
comp=Z,8.7nm,0.6s,baz=89,slow=2.2,SNR=15
AKASG **Malin Array Be** 149.70 284 PKPdf 12 36 48.0 -2.0
AK01 **Malin Array Si** 149.70 284 PKP PKPdf 12 36 50.4 +0.4
KIEV **Kiev** 149.70 284 ⇑P PKPbc 12 36 52.6 -2.1
KIEV **Kiev** 149.70 284 ⇑PKIKP PKPbc 12 36 52.6 -2.1
KIEV **Kiev** 149.70 284 PKP PKPdf 12 36 49.9 -0.1
PRAR **RASCA** 149.78 276 ⇑P PKPdf 12 36 51.7 +1.4
LOT **Lotru** 150.17 271 ⇓P PKPbc 12 36 54.8 -1.4
MDB **Medias** 150.20 273 ⇑P PKPbc 12 36 54.7 -1.4
MDB **Medias** 150.20 273 ⇑PKP2 PKPbc 12 36 54.7 -1.4
BOVS **Bovan** 150.32 266 ⇑P PKPbc 12 36 54.8 -1.7
BURAR **Bucovina Array** 150.50 276 ⇓P PKPbc 12 36 54.9 -2.0
BURAR **Bucovina Array** 150.50 276 ⇓PKIKP PKPbc 12 36 54.9 -2.0
BUR08 **Bucovina Ar. S** 150.52 276 PKPbc 12 36 56.4 -0.6
POIN **Pond Inlet** 150.56 31 PKPdf 12 36 51.7 +1.0
HERR **Herculane** 150.64 269 ⇓P PKPbc 12 36 55.6 -1.5
GZR **Gura Zlata** 150.72 270 ⇑P PKPbc 12 36 55.8 -1.6
GZR **Gura Zlata** 150.72 270 ⇑PKIKP PKPbc 12 36 55.8 -1.6
DEV **Deva** 150.92 271 ⇓P PKPbc 12 36 56.6 -1.2
DEV **Deva** 150.92 271 ⇓PKIKP PKPbc 12 36 56.6 -1.2
MDVR **Moldovita** 150.99 268 ⇑P PKPbc 12 36 55.9 -2.2
PDG **Podgorica** 151.01 262 ⇓P PKPbc 12 36 57.4 -0.7
LVZ **Lovozero** 151.16 320 PKPbc 12 36 57.0 -0.7
LVZ **Lovozero** 151.16 320 PKIKP PKPbc 12 36 57.0 -0.7
BATG **Bathurst New B** 151.20 86 PKPbc 12 36 56.9 -1.5
MARR **Marisel-Cluj** 151.22 273 ⇑P PKPbc 12 36 56.9 -1.7
BZS **Buzias** 151.52 270 ⇑P PKPbc 12 36 57.2 -2.0

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
BZS	Buzias	151.52	270	⇑PKIKP	PKPbc	12 36 57.2	-2.0
DRGR		151.52	273	⇓P	PKPbc	12 36 56.7	-2.5
DRGR		151.52	273	⇓PKIKP	PKPbc	12 36 56.7	-2.5
KEST	Kesra	151.76	241	PKPbc	PKiKP	12 37 00.4	-0.1
	comp=Z,40nm,1.2s,baz=236,slow=3.9,SNR=4.6						
TULEG	Thule	151.88	22		PKPdf	12 36 54.5	+1.9
MNK	Minsk	151.98	290	*i* PKiKP	PKiKP	12 37 02.8	+2.5
	comp=E,48nm,0.9s						
MNK				*i* PKiKP	PKiKP	12 37 02.8	+2.5
	comp=N,39nm,1.3s						
MNK				*i* PKiKP	PKiKP	12 37 02.8	+2.5
	comp=Z,68nm,1.1s,baz=111						
MNK				*i* PP	PP	12 40 43.7	+1.7
MNK				*i* SKS	SKSdf	12 43 30.4	-29
MNK				*i* PPP	PPP	12 44 08.1	
MNK				*i* SKKS	SKKSdf	12 52 49.7	+4.6
MNK				*i* SS	SS	13 00 11.1	+2.8
MNK				*i* SSS	SSS	13 05 56.3	
MNK	Minsk	151.98	290	*i* PKIKP	PKiKP	12 37 02.7	+2.5
MNK				*i*		12 40 43.7	
MNK				*i* PPP	PPP	12 44 08.0	
MNK				*i* SS	SS	13 00 11.0	+2.7
MNK				*i* SSS	SSS	13 05 56.3	
MNK				pmax	pmax		
	comp=Z,68nm,1.1s						
MNK				pmax	pmax		
	comp=E,48nm,0.9s						
MNK				pmax	pmax		
	comp=N,39nm,1.3s						
SPITS	Spitsbergen Ar	152.92	344	PKPbc	PKPbc	12 37 00.7	-0.8
	comp=N,37nm,1.0s,baz=130,slow=9.9,SNR=6.9						
MORH	Mrgy, Hungar	153.58	268	⇓P	PKPbc	12 37 02.8	-1.0
BLY	Banja Luka	153.61	264	⇓P	PKPbc	12 37 02.1	-1.8
PSZ	Piszkesteto	153.75	272		PKPbc	12 37 04.0	-0.1
PSZ				IAMs_20	IAMs_20	13 59 17.0	
	comp=Z,736nm,19.0s						
PSZ	Piszkesteto	153.75	272	PKIKP	PKPbc	12 37 04.0	-0.1
ARCES	ARCESS Array B	154.33	324	PKPbc	PKPbc	12 37 03.0	-1.6
	comp=Z,15nm,1.1s,baz=84,slow=2.8,SNR=5.2						
ARCES				PKPab	PKPab	12 37 17.3	-1.7
	comp=Z,29nm,1.0s,baz=72,slow=2.9,SNR=8.9						
ARCES	ARCESS Array B	154.33	324		PKPab	12 37 19.2	+0.2
ARCES	ARCESS Array B	154.33	324	PKP2	PKPab	12 37 19.2	+0.2
FIA1	FINESS Array S	154.51	305		PKPab	12 37 19.8	-0.1
FINES	FINESS Array B	154.52	305	PKPbc	PKPbc	12 37 03.2	-2.1
	comp=Z,4.6nm,0.8s,baz=80,slow=4.1,SNR=12						
FINES				PKPab	PKPab	12 37 18.7	-1.3
	comp=Z,6.6nm,0.8s,baz=125,slow=3.9,SNR=6.6						
MD31	MD31	155.43	215		PKPdf	12 36 59.6	+0.5
MODS	Modra-Piesok	155.50	271	*e*PKP2	PKPab	12 37 22.9	-1.7
MODS	Modra-Piesok	155.50	271	*e*PKP	PKPab	12 37 22.9	-1.7
JAVC	Velka Javorina	155.50	273	*e*PKP	PKPdf	12 37 00.1	+1.4
RONA	Rosalia, Austr	155.73	269	*i* PKP	PKPab	12 37 24.7	-1.0
	comp=Z,41nm,1.3s						
SOKA	Soboth	155.94	266	*e*PKP	PKPab	12 37 25.0	-1.6
	comp=Z,25nm,1.6s						
ARSA	Arzberg	155.95	268	*i* PKP	PKPab	12 37 25.2	-1.4
	comp=Z,48nm,1.4s,SNR=7.2						
MORC	Moravsky Berou	155.99	275	*e*PKP	PKPdf	12 36 59.9	+0.6
CONA	Conrad Observa	156.10	269	*i* PKP	PKPab	12 37 25.7	-1.5
	comp=Z,16nm,1.3s						
OBKA	Obir	156.13	265	*e*PKP	PKPab	12 37 26.9	-0.5
	comp=Z,19nm,1.7s						
VRAC	Vranov	156.33	273	*e*PKP	PKPdf	12 37 00.7	+1.0
KRUC	Moravsky	156.34	272	*e*PKP	PKPdf	12 37 01.1	+1.4
MYKA	Terra Mystica	156.72	265	*e*PKP	PKPab	12 37 29.5	-0.5
	comp=Z,20nm,1.6s						
DPC	Dobruska-Polom	156.95	275	*e*PKP2	PKPab	12 37 30.1	-0.7
DPC	Dobruska-Polom	156.95	275	*e*PKP	PKPab	12 37 30.1	-0.7
MOA	Molln	156.99	268	*i* PKP	PKPab	12 37 29.4	-1.7
	comp=Z,20nm,1.5s						
BIOA	Bad Ischl, Aus	157.28	267	*i* PKP	PKPab	12 37 30.6	-1.7
	comp=Z,26nm,1.8s						
ABTA	Abfaltersbach	157.44	264	*i* PKP	PKPab	12 37 31.7	-1.4
	comp=Z,32nm,1.6s						
LESA	Schwarzleotal	157.70	265	*i* PKP	PKPab	12 37 30.9	-3.3
	comp=Z,18nm,1.3s						
GEC2	GERESS Array S	157.81	270	*e*PKPab	PKPab	12 37 32.1	-2.5
	baz=116,slow=4.5						
GERES	GERESS Array B	157.81	270	PKPab	PKPab	12 37 33.1	-1.5
	comp=Z,3.4nm,0.9s,baz=109,slow=2.4,SNR=7.8						
KHC	Kasperske Hory	158.01	270	*e*PKP2	PKPab	12 37 33.5	-1.9
KHC	Kasperske Hory	158.01	270	*e*PKP	PKPab	12 37 33.5	-1.9
CART	Cartagena	158.15	227	IAMs_20	IAMs_20	13 47 12.7	
	comp=Z,898nm,18.0s						
WTTA	Wattenberg	158.22	264	*i* PKP	PKPab	12 37 34.6	-2.0
	comp=Z,43nm,1.3s						
WATA	Walderalm	158.29	264	*i* PKP	PKPab	12 37 34.6	-2.3
	comp=Z,40nm,1.5s						
WET	Wettzell	158.42	270	*e*PKPab	PKPab	12 37 34.8	-2.4
	baz=116,slow=4.5						
SQTA	Sankt Quirin	158.44	264	*i* PKP	PKPab	12 37 36.0	-1.4
	comp=Z,21nm,1.0s						
BRG	Berggiesshubel	158.55	275	*e*PKPab	PKPab	12 37 36.4	-1.2
	baz=116,slow=4.5						
BRG	Berggiesshubel	158.55	275	⇓*e*PKPf		12 37 01.6	
BRG				Amp		12 37 05.6	
	comp=Z,5.6nm,1.0s						
BRG				PKPab	PKPab	12 37 37.0	-0.7
BRG				Amp		12 37 38.1	
	comp=Z,34nm,1.4s						
BRG				PP	PP	12 41 15.8	-3.0
BRG				Amp		12 41 22.9	
	comp=Z,16nm,1.4s						
MOTA	Moosalm	158.57	264	*i* PKP	PKPab	12 37 37.0	-1.1
	comp=Z,30nm,1.3s						
FETA	Feichten	158.62	263	*i* PKP	PKPab	12 37 36.1	-2.2
	comp=Z,35nm,1.2s						
FUORN	Ofenpass-Fuorn	158.67	261		PKPab	12 37 37.2	-1.4
HSKC	Hora Svate Kat	158.74	274	*e*PKP	PKPab	12 37 37.4	-1.1
RETA	Reutte	158.84	264	*i* PKP	PKPab	12 37 37.9	-1.2
	comp=Z,35nm,1.4s						
TUE	Stuetta	159.11	260		PKPab	12 37 38.5	-2.0
TUE				IAMs_20	IAMs_20	14 03 14.6	
	comp=Z,1μm,18.0s						
TANN	Tannenbergstha	159.22	272	*e*PKPab	PKPab	12 37 39.4	-1.3
	baz=116,slow=4.5						
DAVA	Damuels	159.25	262	*i* PKP	PKPab	12 37 40.0	-1.0
	comp=Z,48nm,1.3s,SNR=8.0						
MANZ	Manzenberg	159.25	271	*e*PKPab	PKPab	12 37 39.4	-1.4
	baz=116,slow=4.5						
CLL	Collm	159.26	275	*i* PKIKP	PKPdf	12 37 04.5	+1.3
CLL				*i*		12 37 38.7	
CLL				pmax	pmax		
	comp=Z,24nm,1.6s						
CLL				pmax	pmax		
	comp=Z,36nm,1.5s						
CLL				MLR	MLR		
	comp=Z,900nm,22.0s						
CLL	Collm	159.26	275	*i* PKPdf	PKPdf	12 37 04.5	+1.3
	comp=Z,24nm,1.6s						
CLL				*e*PKPdif	sPKPdf	12 37 17.0	+5.0
CLL				*i* PKPab	PKPab	12 37 38.7	-2.0
	comp=Z,36nm,1.5s						
CLL				*e*x	x	12 37 46.0	
CLL				*e*PP	PP	12 41 17.0	-5.7
	comp=Z,33nm,1.7s						
CLL				*e*SKSdf	SKSdf	12 44 12.0	+4.9
CLL				*e*PPP	PPP	12 45 06.0	
CLL				*e*SKKSac	SKKSac	12 48 09.0	-0.3
CLL				*e*PSKS		12 51 42.0	
CLL				*e*x	x	12 52 38.0	
CLL				*e*PPS	PPS	12 54 42.0	
CLL				*e*x	x	12 56 26.0	
CLL				*e*x	x	12 58 54.0	
CLL				*e*SS	SS	13 01 12.0	-15
CLL				*e*PSPS		13 03 06.0	
CLL				*e*SSS	SSS	13 07 40.0	
CLL				*e*x	x	13 09 30.0	
CLL				*e*x	x	13 10 48.0	
CLL				*e*x	x	13 14 00.0	
CLL				AMS	AMS	13 57 00.0	
	comp=Z,900nm,22.0s						
UBR	Ueberruh	159.32	264	*e*PKPab	PKPab	12 37 39.4	-1.8
	baz=116,slow=4.5						
PLN	Plauen	159.43	272	*e*PKPab	PKPab	12 37 40.1	-1.5
	baz=116,slow=4.5						
GRF	Grafenberg Arr	159.64	270	*e*L	L	13 59 29.7	
	comp=Z,790nm,20.4s						
MOX	Moxa	159.81	272	*e*PKPab	PKPab	12 37 41.4	-1.8
	baz=116,slow=4.5						
MOX				*e*L	L	14 03 13.8	
	comp=Z,834nm,19.5s						
SENIN	Lac Senin/Sane	160.22	257		PKPab	12 37 44.4	-0.9
SUMG	Summit	160.47	16		PKPdf	12 37 05.5	+1.0
SUMG	Summit	160.47	16	PKIKP	PKPdf	12 37 05.5	+1.0
HFS	Hagfors	160.53	301	PKPab	PKPab	12 37 44.1	-2.0
	comp=Z,17nm,0.9s,baz=90,slow=2.9,SNR=9.8						
PVAQ	Vaqueiros	160.54	214	*e*LR	LR	13 33 34.4	
PVAQ				*i* IAMs_20	IAMs_20	13 48 18.2	
	comp=Z,732nm,20.0s						
FLTG	Flechtingen	160.65	277	*e*PKPab	PKPab	12 37 44.9	-1.9
	baz=116,slow=4.5						
BFO	Black Forest	160.68	263		PKPab	12 37 45.3	-1.8
BFO	Black Forest	160.68	263	PKP2	PKPab	12 37 45.3	-1.8
BFO	Black Forest	160.68	263	*e*PKPab	PKPab	12 37 45.2	-1.8
	baz=116,slow=4.5						
MORF	Marmelete	160.75	212	*e*PKPab	PKPab	12 37 46.0	-1.5
UBBA	Unterbreizbach	160.82	272	*e*PKPab	PKPab	12 37 45.8	-1.7
	baz=116,slow=4.5						
CLZ	Clausthal	160.99	275	*e*PKPab	PKPab	12 37 46.6	-1.7
	baz=116,slow=4.5						
PTEO	Sao Teotonio	160.99	212	*e*PKPdf	PKPdf	12 37 05.8	+0.2
PBAR	Barrancos	161.02	216	*e*PKPab	PKPab	12 37 48.1	-0.6
GTTG	Gottingen	161.12	274	*e*PKPab	PKPab	12 37 47.1	-1.7
	baz=116,slow=4.5						
ESDC	Sonseca Array	161.16	225	PKP	PKPdf	12 37 05.7	-0.2
	comp=Z,13nm,1.3s,baz=52,slow=0.9,SNR=13						
ESDC				PKPab	PKPab	12 37 47.1	-2.3
	comp=Z,4.9nm,1.1s,baz=181,slow=2.3,SNR=5.3						
ESDC	Sonseca Array	161.16	225		PKPdf	12 37 05.0	-0.8
ESDC					PKPab	12 37 47.7	-1.6
ESBB	Sonseca Array	161.16	225		PKPdf	12 37 06.2	+0.4
PAB	San Pablo	161.21	224		PKPab	12 37 48.4	-1.2
PAB	San Pablo	161.21	224	PKP2	PKPab	12 37 48.4	-1.2
TNS	Taunus Mts	161.48	269	*e*PKPab	PKPab	12 37 49.3	-1.3
	baz=116,slow=4.5						
NOA	NORSAR Array B	161.69	304	PKPab	PKPab	12 37 49.0	-2.1
	comp=Z,10.0nm,1.1s,baz=80,slow=4.4,SNR=4.2						
NOA	NORSAR Array B	161.69	304	PKP2	PKPab	12 37 49.0	-2.1
MOE	Montemor	161.77	214	*e*PKPdf	PKPdf	12 37 08.9	+2.4
PESTR	Estremoz	161.83	216	*e*PKPab	PKPab	12 37 54.2	+2.0
KASTN	Kahler Asten	161.89	272	*e*PKPab	PKPab	12 37 50.8	-1.5
	baz=116,slow=4.5						
PARRA	Arraiolos	161.93	215	*e*PKPdf	PKPdf	12 37 07.5	+1.0
PARRA				*e*PKPab	PKPab	12 37 52.4	-0.2
PMTG	Montargil	162.22	215	*e*PKPdf	PKPdf	12 37 08.0	+1.2
PMTG				*e*PKPab	PKPab	12 37 54.5	+0.6
PMRV	Marv??o	162.26	217	*e*PKPdf	PKPdf	12 37 09.6	+2.7
PMRV				*e*PKPab	PKPab	12 37 56.0	+1.9
PMRV				*e*LR	LR	13 37 27.8	
PMRV				*i* IAMs_20	IAMs_20	14 00 15.1	
	comp=Z,941nm,20.0s						
WLF	Walferdange	162.57	265	*d*PKP	PKPab	12 37 54.4	-0.9
BUG	Bochum--Univer	162.65	271	*e*PKPab	PKPab	12 37 54.1	-1.4
	baz=116,slow=4.5						
PCBR	Castelo Branco	162.66	218	*e*PKPdf	PKPdf	12 37 09.9	+2.7
PCBR				*e*PKPab	PKPab	12 37 57.8	+2.0
IBBN	Ibbenburen	162.66	275	*e*PKPab	PKPab	12 37 54.2	-1.4
	baz=116,slow=4.5						
PSARD	Sardoal	162.68	216	*e*PKPab	PKPab	12 37 55.6	-0.3
BHOU	Houvegnez	162.96	267	*d*PKP	PKPab	12 37 55.7	-1.3
MTE	Manteigas	163.17	218	*e*PKPab	PKPab	12 38 01.2	+3.1
MTE				*e*LR	LR	13 40 28.5	
MTE				*i* IAMs_20	IAMs_20	13 51 59.5	
	comp=Z,829nm,18.0s						
PCAS	Casmilo, Conde	163.20	216	*e*PKPdf	PKPdf	12 37 09.2	+1.4
PCAS				*e*PKPab	PKPab	12 37 57.9	-0.3
RCHB	Rochefort	163.33	266	*d*PKP	PKPab	12 37 57.6	-1.0
BCLA	Clavier	163.40	267	*d*PKP	PKPab	12 37 57.8	-1.0
BGES	Gesves	163.51	266	*d*PKP	PKPab	12 37 57.8	-1.6
MVO	Moncorvo	163.65	221	*e*LR	LR	13 38 05.4	
MVO				*i* IAMs_20	IAMs_20	14 03 31.2	
	comp=Z,864nm,20.0s						
DOU	Dourbes	163.67	265	*d*PKP	PKPab	12 37 59.2	-0.9
UCC	Uccle	164.10	267		PKPab	12 38 01.5	-0.4
UCC	Uccle	164.10	267	PKP2	PKPab	12 38 01.5	-0.4
UCC	Uccle	164.10	267	*d*PKP	PKPab	12 38 00.2	-1.7
POLO	Lamas de Olo	164.12	220	*e*PKPab	PKPab	12 38 01.8	-0.5
PGAV	Gavieira, Arco	164.81	219	*e*LR	LR	13 40 58.6	
PGAV				*i* IAMs_20	IAMs_20	14 02 51.8	
	comp=Z,856nm,18.0s						
EKA	Eskdalemuir Ar	169.60	282	PKPab	PKPab	12 38 24.6	-1.5
	comp=Z,3.6nm,0.8s,baz=62,slow=3.3,SNR=6.4						

*IDC **05** 12:23:28.6±2.3, 30°.63S×177°.55W, h0km, mb4.1/3, mbtmp4.1/4, ML3.1/1, Error ellipse: s-maj=59.5km s-min=33.3km az=126.0*

*NEIC **05** 12:23:29.1±1.1, 30°.58S±0°.05×177°.3W±0°.2, h10km±2km, mb4.3/13, Error ellipse: s-maj=27.6km s-min=8.3km az=90.0*

ISC 05 12:23:33.7±1.8**, 30°.59S**±0°.09×**177°.6W**±0°.3**, h33km, n22, σ0s.91**/23**, mb4.2**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
RAO	Raoul Island	1.37	347	Pn	Pn	12 23 55.3	-1.2
URZ	Urewera	8.82	208	Pn	Pn	12 25 37.2	-1.6
	0.2nm,0.3s,baz=351,slow=7.1,SNR=2.5						
URZ				Sn	Sn	12 27 16.3	-0.7
	0.8nm,0.3s,baz=54,slow=19,SNR=11						
	12nm,1.1s						
BKZ	Black Stump Fm	9.84	208		Pn	12 25 51.9	-0.9
EIDS	Eidsvold	28.11	273	P	P	12 29 22.9	+0.2
EIDS				IAmb	IAmb	12 29 32.3	
	comp=Z,3.8nm,1.1s						
TOO	Toolangi	31.23	247	P	P	12 29 49.7	-0.5
TOO				IAmb	IAmb	12 29 56.4	
	comp=Z,3.7nm,1.1s						
CTAO	Charters Tower	34.19	279	P	P	12 30 16.2	0.0
STKA	Stephens Creek	34.79	257	P	P	12 30 22.1	+0.8
	comp=Z,2.9nm,0.7s,baz=97,slow=13,SNR=6.7						
	comp=Z,2.9nm,0.7s						
STKA	Stephens Creek	34.79	257	P	P	12 30 22.4	+1.1
INKA	Innaminka	36.36	264	P	P	12 30 36.1	+1.3
PMG	Port Moresby	39.02	295	P	P	12 30 57.9	+0.6
BBOO	Buckleboo	39.27	254	P	P	12 30 59.8	+0.5
BBOO				IAmb	IAmb	12 31 19.6	
	comp=Z,12nm,1.1s						
COEN	Coen	39.67	286		P	12 31 02.9	0.0
COEN				IAmb	IAmb	12 31 04.5	
	comp=Z,4.4nm,1.1s						
AS31	Alice Springs	43.46	267	P	P	12 31 33.8	-0.1
ASAR	Alice Springs	43.46	267	P	P	12 31 33.6	-0.3
	comp=Z,0.8nm,0.5s,baz=104,slow=7.4,SNR=23						
	comp=Z,0.8nm,0.5s						
WR0	Warramunga Arr	44.29	272	P	P	12 31 40.2	-0.3
WR0				IAmb	IAmb	12 31 40.7	
	comp=Z,4.1nm,0.9s						
WRA	Warramunga Arr	44.47	272	P	P	12 31 41.0	-1.0
	comp=Z,2.0nm,0.5s,baz=113,slow=7.0,SNR=42						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	44.47	272	P	P	12 31 41.2	-0.8
WB0	Warramunga Arr	44.49	272	P	P	12 31 41.6	-0.6
WB0				IAmb	IAmb	12 31 42.6	
	comp=Z,3.5nm,0.6s						
KNRA	Kununurra	51.08	274	P	P	12 32 34.0	+0.7
CASY	Casey	55.14	208	P	P	12 33 04.4	+1.9
KURBB	Kurchatov Arra	121.48	314	PKP	PKiKP	12 42 23.5	+0.1
	comp=Z,0.2nm,0.3s,baz=104,slow=2.1,SNR=1.6						
FINES	FINESS Array B	145.45	340	PKPbc	PKPab	12 43 07.2	-0.6
	comp=Z,7.7nm,1.1s,baz=58,slow=3.4,SNR=12						

*NEIC **05** 12:27:58.5±1.3, 17°.95N±0°.04×66°.751W±0°.009, h10km±1km, ML3.5/33, Md3.3/7(RSPR), Error ellipse: s-maj=7.6km s-min=2.5km az=356.0*

*RSPR **05** 12:27:58.9, 17°.96N×66°.76W, h11km, MD3.3/7*

*OSPL **05** 12:27:59.1±0.5, 17°.94N×66°.76W, h12km±2km, ML3.0, Presumed earthquake*

*SDD **05** 12:27:59.2±2.0, 17°.94N×66°.80W, h20km±15km, MD3.5, ML3.5, MW3.7, Presumed earthquake*

ISC 05 12:27:58.0±1.0**, 17°.94N**±0°.04×**66°.76W**±0°.02**, h19km**±2km**, n47, σ0s.51**/76**, 6C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.12	289		Pg	12 28 02.0	-0.1
GBPR					Sg	12 28 04.4	-0.4
GBPR	Guanica, Bosqu	0.12	289	⇑*i*P	Pg	12 28 02.0	-0.1
GBPR				*e*S	Sg	12 28 04.4	-0.4
OBIP	Obispado Ponce	0.18	54		Pg	12 28 02.7	-0.1
OBIP	Obispado Ponce	0.18	54	⇓*i*P	Pg	12 28 02.7	-0.1
OBIP				*e*S	Sg	12 28 05.8	-0.4
OBIP	Obispado Ponce	0.18	54	*i* P	Pg	12 28 02.7	-0.1
OBIP				*e*S	Sg	12 28 05.7	-0.4
OBIP				IAML		12 28 07.8	
	comp=Z,2μm,0.8s						
CELP	Cerrillos	0.22	51		Pg	12 28 03.4	-0.1
CELP				IAML		12 28 07.2	
	comp=Z,8μm,0.2s						
CELP				IAML		12 28 07.3	
	comp=Z,6μm,0.2s						
MLPR	Magueyes Islan	0.27	277		Pg	12 28 04.3	0.0
MLPR				IAML		12 28 09.3	
	comp=Z,6μm,0.3s						
MLPR				IAML		12 28 09.4	
	comp=Z,5μm,0.3s						
UUPR	Utuado, UPR, P	0.32	7		Pg	12 28 04.6	-0.4
CRPR	Cabo Rojo, PR	0.34	282		Pg	12 28 05.3	-0.1
CRPR				IAML		12 28 10.7	
	comp=Z,4μm,0.1s						
CRPR				IAML		12 28 12.8	
	comp=Z,3μm,0.3s						
CRPR	Cabo Rojo, PR	0.34	282		Sg	12 28 10.4	0.0
CRPR	Cabo Rojo, PR	0.34	282	*e*Pg	Pg	12 28 05.3	-0.1
CRPR				*e*Sg	Sb	12 28 10.5	-0.1
CRPR				IAML		12 28 12.6	
	comp=N,4μm,0.3s						
CRPR	Cabo Rojo, PR	0.34	282	⇑*e*P	Pg	12 28 05.3	-0.1
CRPR				*e*S	Sg	12 28 10.4	0.0
CRPR	Cabo Rojo, PR	0.34	282	*i* P	Pg	12 28 05.3	-0.1
CRPR				*e*S	Sg	12 28 10.4	0.0
CRPR				IAML		12 28 12.7	
	comp=Z,4μm,0.4s						
LSP	Las Mesas	0.39	308		Pg	12 28 06.2	-0.1
LSP					Sg	12 28 11.8	0.0
LSP	Las Mesas	0.39	308	⇑*i*P	Pg	12 28 06.2	-0.1
LSP				*e*S	Sg	12 28 11.8	0.0
PRSN	Puerto Rico Se	0.46	307		Pg	12 28 07.1	-0.4
PRSN	Puerto Rico Se	0.46	307		Sg	12 28 13.8	0.0
PRSN	Puerto Rico Se	0.46	307	*e*Pg	Pg	12 28 07.1	-0.4
PRSN				*e*Sg	Sg	12 28 13.8	0.0
PRSN				IAML		12 28 16.1	
	comp=N,8μm,0.3s						
PRSN	Puerto Rico Se	0.46	307	⇑*e*P	Pg	12 28 07.1	-0.4
PRSN				*e*S	Sg	12 28 13.8	0.0
ECPR	Experimental S	0.54	45		Pb	12 28 08.5	-0.3
ECPR				IAML		12 28 17.6	
	comp=N,7μm,0.2s						
ECPR	Experimental S	0.54	45	⇑*i*P	Pb	12 28 08.5	-0.3
ECPR				*e*S	Sb	12 28 15.5	-0.6
EMPR	Esperanza - Ma	0.58	22		Pg	12 28 09.7	0.0
EMPR					Sg	12 28 17.9	+0.4
EMPR	Esperanza - Ma	0.58	22	⇑*i*P	Pg	12 28 09.7	0.0
EMPR				*e*S	Sg	12 28 17.9	+0.4
SJG	San Juan	0.61	73		Pg	12 28 10.0	-0.1
SJG	San Juan	0.61	73	*e*Pg	Pn	12 28 11.7	+0.1
SJG				*e*Sg	Sg	12 28 18.3	0.0
SJG	San Juan	0.61	73	⇑*e*P	Pg	12 28 10.1	-0.1
SJG				*e*S	Sg	12 28 18.3	0.0
SJG	San Juan	0.61	73	*i* P	Pg	12 28 10.0	-0.1
SJG				*e*S	Sg	12 28 18.3	0.0
SJG				IAML		12 28 19.3	
	comp=Z,744nm,0.5s						
AGPR	Aguadilla, PR	0.62	328		Pb	12 28 09.8	-0.4
AGPR				IAML		12 28 22.2	
	comp=Z,2μm,0.6s						
AGPR				IAML		12 28 22.9	
	comp=Z,2μm,0.4s						
AGPR	Aguadilla, PR	0.62	328	⇑*e*Pg	Pb	12 28 09.8	-0.4
AGPR				*e*Sg	Sg	12 28 18.8	-0.1
AGPR				IAML		12 28 22.1	
	comp=N,2μm,0.4s						
AGPR	Aguadilla, PR	0.62	328	⇑*i*P	Pb	12 28 09.9	-0.4
AGPR				*e*S	Sg	12 28 18.8	-0.1
AGPR	Aguadilla, PR	0.62	328	*i* P	Pb	12 28 09.9	-0.4
AGPR				*e*S	Sb	12 28 18.5	-0.1
AGPR				IAML		12 28 21.3	
	comp=Z,869nm,0.2s						
PDPR	Patillas Dam,	0.71	83		Pg	12 28 11.8	-0.2
GCPR	Guaynabo City	0.74	60		Pb	12 28 11.6	-0.7
GCPR	Guaynabo City	0.74	60		Sb	12 28 21.7	-0.4
GCPR	Guaynabo City	0.74	60	⇑*e*P	Pb	12 28 12.2	-0.2
GCPR				*e*S	Sb	12 28 21.7	-0.4
IDE	Isla Desecheo	0.81	304		Pb	12 28 13.1	-0.4
IDE					Sb	12 28 24.3	+0.2
IDE	Isla Desecheo	0.81	304	⇓*i*P	Pb	12 28 13.1	-0.4
IDE				*e*S	Sb	12 28 24.3	+0.2
HUMP	Col San Antoni	0.89	77		Sb	12 28 26.5	+0.2
HUMP	Col San Antoni	0.89	77		Pb	12 28 14.5	-0.3
HUMP				IAML		12 28 27.5	
	comp=Z,707nm,0.5s						
HUMP	Col San Antoni	0.89	77	⇑*e*P	Pb	12 28 14.7	-0.2
HUMP				*e*S	Sb	12 28 26.5	+0.2
CUPR	Culebra, Puert	1.45	75		Pb	12 28 24.3	-0.2
MIDR	Miches	2.41	296	*e*Pg	Pb	12 28 41.0	+0.2
MIDR				*e*Sg	Sb	12 29 10.2	0.0
MIDR				IAML		12 29 20.8	
	comp=N,93nm,0.7s						
DR12	Loma Pena Alta	2.63	289		Pn	12 28 42.0	+2.4
HATOM	Hato Mayor del	2.63	289	*e*Pg	Pb	12 28 43.4	-1.2
HATOM				*e*Sg	Sb	12 29 15.3	-1.2
HATOM				IAML		12 29 22.8	
	comp=N,97nm,0.5s						
SMDR	Samana, DR	2.67	301	*e*Pg	Pb	12 28 44.3	-0.9
SMDR				*e*Sg	Sb	12 29 17.2	-0.4
SMDR				IAML		12 29 24.7	
	comp=N,145nm,0.8s						
DR08	Loma La Naviza	3.26	289	*e*Pg	Pb	12 28 53.6	-1.8
DR08				*e*Sg	Sb	12 29 35.3	+0.6
DR08				IAML		12 29 39.4	
	comp=N,719nm,0.2s						
SDDR	Presa de Saban	4.42	284	*e*Pg	Pb	12 29 14.1	-1.1
SDDR				*e*Sg	Sb	12 30 07.8	-0.3
SDDR				IAML		12 30 17.2	
	comp=N,66nm,0.8s						

*NOU **05** 12:30:26.0, 37°.95S×178°.00E, h88km, MLv4.2/19, Off E. Coast of N. Island, N.Z.*

*WEL **05** 12:30:30.1±0.2, 38°S±3°×17°8E±°, h35km±3km, ML3.5/55, MLv3.6/49, Error ellipse: s-maj=3.6km s-min=3.0km az=2.9*

ISC 05 12:30:28.6±1.4**, 37°.88S**±0°.04×**177°.66E**±0°.04**, h68km**±8km**, n189, σ1s.72**/195**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
RUGZ	Raukumara Rang	0.08	171	P	Pn	12 30 37.7	-1.1
HAZ	Te Kaha	0.16	37	P	Pn	12 30 37.8	-0.9
HAZ				S	Sn	12 30 44.1	-2.0
OPCS	Opotiki Colleg	0.32	246	P	Pn	12 30 39.3	-0.4
OPCS				S	Sn	12 30 46.9	-0.8
PKGZ	Pakihiroa	0.33	87	P	Pn	12 30 39.9	+0.2
TWGZ	Tauwhareparae	0.39	139	P	Pn	12 30 41.6	+1.4
TWGZ				S	Sn	12 30 51.6	+2.8
MWZ	Matawai	0.46	193	P	Pn	12 30 41.6	+0.7
PUZ	Puketiti	0.51	112	P	Pn	12 30 41.9	+0.6
WIZ	White Island	0.52	313	P	Pn	12 30 40.5	-0.8
WSRZ	White Island S	0.53	313	P	Pn	12 30 42.9	+1.3
WKHS	Whakatane High	0.54	261	P	Pn	12 30 41.6	0.0
WKHS				S	Sn	12 30 50.5	-0.6
WHRZ	Whale Island	0.54	273	P	Pn	12 30 41.8	+0.1
URZ	Urewera	0.57	229	P	Pn	12 30 42.4	+0.5
URZ	Urewera	0.57	229	P	Pn	12 30 42.5	+0.5
URZ				S	Sn	12 30 51.8	+0.1
TKGZ	Te Karaka	0.57	165	P	Pn	12 30 43.4	+1.4
WMGZ	Waiomatatini S	0.60	84	P	Pn	12 30 42.9	+0.7
WMGZ				S	Sn	12 30 53.8	+1.5
MXZ	Matakaoa Point	0.60	58	P	Pn	12 30 42.9	+0.6
MXZ	Matakaoa Point	0.60	58	S	Sn	12 30 52.8	+0.5
MXZ	Matakaoa Point	0.60	58	P	Pn	12 30 42.9	+0.6
MXZ				S	Sn	12 30 52.7	+0.4
TDHS	Te Araroa Dist	0.61	66	P	Pn	12 30 43.4	+1.0
RAGZ	Rawiri	0.64	197	P	Pn	12 30 44.3	+1.5
TBAS	Tolaga Bay Are	0.70	134	P	Pn	12 30 45.0	+1.7
ECLS	East Cape Ligh	0.73	75	P	Pn	12 30 45.1	+1.4
CNGZ	Carnagh Statio	0.74	144	P	Pn	12 30 45.4	+1.6
EDRZ	Edgecumbe	0.76	253	P	Pn	12 30 44.7	+0.6
MWFS	Matata Watchor	0.79	271	P	Pn	12 30 44.2	-0.1
MARZ	Manawahe	0.79	262	P	Pn	12 30 44.5	+0.2
MARZ				S	Sn	12 30 55.8	-0.2
RIGZ	Rimuhau	0.82	174	P	Pn	12 30 46.2	+1.3
GKBS	Kaiti Beach	0.85	160	P	Pn	12 30 46.5	+1.4
OPRZ	Ohinepanea	0.88	272	P	Pn	12 30 45.4	0.0
RTZ	Ruatahuna	0.91	216	P	Pn	12 30 46.9	+1.0
RTZ				S	Sn	12 30 59.9	+1.2
MUGZ	Murupara	0.92	230	P	Pn	12 30 46.9	+0.9
SNGZ	Shannon Statio	0.93	196	P	Pn	12 30 48.1	+2.0

MKRZ	**Makatiti**	**0.98**	**254**	P	**Pn**	**12 30 47.8**	**+1.0**
TARZ	**Mount Tarawera**	**0.98**	**249**	P	**Pn**	**12 30 47.7**	**+0.9**
RRRZ	**Republican Roa**	**1.01**	**243**	P	**Pn**	**12 30 48.1**	**+0.9**
LIRZ	**Lichensteins R**	**1.02**	**263**	P	**Pn**	**12 30 48.0**	**+0.8**
OMRZ	**Omania**	**1.04**	**257**	P	**Pn**	**12 30 48.2**	**+0.7**
PRGZ	**Paritu Road**	**1.05**	**171**	P	**Pn**	**12 30 48.6**	**+0.9**
HLRZ	**Highlands Stat**	**1.10**	**250**	P	**Pn**	**12 30 49.3**	**+1.1**
TGRZ	**Tauranga**	**1.12**	**277**	P	**Pn**	**12 30 48.6**	**+0.1**
RAHZ	**Arahi**	**1.13**	**203**	P	**Pn**	**12 30 50.6**	**+2.0**
KARZ	**Kaharoa**	**1.13**	**263**	P	**Pn**	**12 30 49.3**	**+0.6**
KNZ	**Kokohu**	**1.14**	**179**	P	**Pn**	**12 30 49.6**	**+0.9**
MTHZ	**Maungataniwha**	**1.16**	**213**	P	**Pn**	**12 30 50.5**	**+1.3**
MTHZ				S	**Sn**	**12 31 06.2**	**+1.8**
PRRZ	**Plateau Road**	**1.17**	**238**	P	**Pn**	**12 30 50.3**	**+1.1**
NGRZ	**Ngongotaha**	**1.18**	**259**	P	**Pn**	**12 30 50.5**	**+1.1**
UTU	**Utuhina**	**1.20**	**255**	P	**Pn**	**12 30 50.8**	**+1.3**
HSRZ	**Hossack Road**	**1.20**	**249**	P	**Pn**	**12 30 51.0**	**+1.5**
HRRZ	**Handcock Road**	**1.20**	**245**	P	**Pn**	**12 30 50.5**	**+1.0**
WHHZ	**Waihua**	**1.24**	**196**	P	**Pn**	**12 30 52.0**	**+2.0**
ALRZ	**Allen Road**	**1.24**	**236**	P	**Pn**	**12 30 51.2**	**+1.1**
MYRZ	**Mayor Island**	**1.28**	**298**	P	**Pn**	**12 30 50.9**	**+0.3**
MHGZ	**Mahia Peninsul**	**1.28**	**171**	P	**Pn**	**12 30 51.8**	**+1.2**
WPRZ	**Whakapapatarin**	**1.34**	**241**	P	**Pn**	**12 30 52.7**	**+1.3**
KMRZ	**Kaimai**	**1.36**	**271**	P	**Pn**	**12 30 52.0**	**+0.3**
MRHZ	**Matea Rd**	**1.36**	**225**	P	**Pn**	**12 30 53.0**	**+1.3**
NMHZ	**Naumai**	**1.39**	**209**	P	**Pn**	**12 30 54.4**	**+2.3**
ARHZ	**Aropaoanui**	**1.47**	**201**	P	**Pn**	**12 30 54.9**	**+1.8**
WHTZ	**Whakaora**	**1.55**	**239**	P	**Pn**	**12 30 56.0**	**+1.8**
KUTZ	**Kaahu Road**	**1.57**	**247**	P	**Pn**	**12 30 55.8**	**+1.4**
BKZ	**Black Stump Fm**	**1.57**	**215**	P	**Pn**	**12 30 56.0**	**+1.5**
BKZ	**Black Stump Fm**	**1.57**	**215**	P	**Sn**	**12 31 17.2**	**+3.1**
BKZ	**Black Stump Fm**	**1.57**	**215**	P	**Pn**	**12 30 56.0**	**+1.5**
HATZ	**Hinemaiaia**	**1.59**	**230**	P	**Pn**	**12 30 55.8**	**+1.1**
TOZ	**Tahuroa Road**	**1.72**	**274**	P	**Pn**	**12 30 56.8**	**+0.4**
WATZ	**Wairara**	**1.73**	**241**	P	**Pn**	**12 30 57.9**	**+1.4**
MCHZ	**McNeill Hill**	**1.73**	**206**	P	**Pn**	**12 30 58.2**	**+1.6**
TLZ	**Tolley Road**	**1.73**	**254**	P	**Pn**	**12 30 57.6**	**+1.0**
RATZ	**Rangitukua**	**1.78**	**236**	P	**Pn**	**12 30 59.1**	**+1.8**
RITZ	**Rihia Road**	**1.79**	**232**	P	**Pn**	**12 30 59.2**	**+1.9**
KWHZ	**Kaweka Forest**	**1.82**	**212**	P	**Pn**	**12 30 59.3**	**+1.5**
CKHZ	**Cape Kidnapper**	**1.83**	**194**	P	**Pn**	**12 30 59.0**	**+1.1**
KATZ	**Kakaramea**	**1.89**	**234**	P	**Pn**	**12 31 00.5**	**+1.6**
KUZ	**Kuaotunu**	**1.92**	**306**	P	**Pn**	**12 30 59.0**	**-0.1**
KUZ	**Kuaotunu**	**1.92**	**306**	P	**Pn**	**12 30 58.8**	**-0.3**
TMVZ	**Te Maari**	**1.97**	**231**	P	**Pn**	**12 31 01.6**	**+1.7**
NTVZ	**North Tongarir**	**1.97**	**231**	P	**Pn**	**12 31 01.7**	**+1.7**
ETVZ	**East Tongariro**	**1.98**	**230**	P	**Pn**	**12 31 01.7**	**+1.7**
KRVZ	**Karewarewa**	**1.99**	**232**	P	**Pn**	**12 31 02.0**	**+1.8**
KAHZ	**Kahuranaki**	**2.00**	**198**	P	**Pn**	**12 31 01.1**	**+0.8**
OTVZ	**Oturere**	**2.02**	**230**	P	**Pn**	**12 31 02.4**	**+1.7**
KRHZ	**Kereru**	**2.03**	**209**	P	**Pn**	**12 31 01.5**	**+0.9**
NNVZ	**North Ngauruho**	**2.03**	**232**	P	**Pn**	**12 31 02.7**	**+1.9**
WTVZ	**West Tongariro**	**2.04**	**232**	P	**Pn**	**12 31 02.8**	**+1.9**
SNVZ	**South Ngauruho**	**2.05**	**230**	P	**Pn**	**12 31 02.8**	**+1.7**
NGZ	**Ngauruhoe**	**2.07**	**231**	P	**Pn**	**12 31 03.1**	**+1.8**
TUVZ	**Tukino**	**2.09**	**228**	P	**Pn**	**12 31 03.3**	**+1.7**
TWVZ	**Taurewa**	**2.11**	**235**	P	**Pn**	**12 31 03.4**	**+1.6**
COVZ	**Chateau Observ**	**2.12**	**231**	P	**Pn**	**12 31 03.8**	**+1.9**
MOVZ	**Moawhango**	**2.13**	**224**	P	**Pn**	**12 31 03.5**	**+1.4**
MKAZ	**Moumakai**	**2.13**	**291**	P	**Pn**	**12 31 02.5**	**+0.5**
WHVZ	**Whangaehu Hut**	**2.14**	**229**	P	**Pn**	**12 31 04.0**	**+1.7**
FWVZ	**Far West T-bar**	**2.15**	**230**	P	**Pn**	**12 31 04.1**	**+1.7**
MAVZ	**Matarangi**	**2.15**	**229**	P	**Pn**	**12 31 04.4**	**+1.9**
WNVZ	**Wahianoa**	**2.17**	**228**	P	**Pn**	**12 31 04.2**	**+1.6**
TRVZ	**Turoa**	**2.18**	**229**	P	**Pn**	**12 31 05.7**	**+2.9**
PXZ	**Pawanui**	**2.23**	**196**	P	**Pn**	**12 31 03.1**	**-0.2**
MTVZ	**Mangateitei**	**2.28**	**228**	P	**Pn**	**12 31 05.7**	**+1.7**
WIAZ	**Waiheke Island**	**2.29**	**298**	P	**Pn**	**12 31 04.6**	**+0.5**
PKVZ	**Pokaka**	**2.29**	**232**	P	**Pn**	**12 31 06.2**	**+2.0**
HIZ	**Hauiti**	**2.30**	**253**	P	**Pn**	**12 31 06.3**	**+2.1**
HIZ	**Hauiti**	**2.30**	**253**	S	**Sn**	**12 31 35.5**	**+4.0**
PNHZ	**Pukenui**	**2.33**	**209**	P	**Pn**	**12 31 04.9**	**+0.2**
KBAZ	**Karaka Road Bo**	**2.34**	**289**	P	**Pn**	**12 31 07.1**	**+2.3**
ETAZ	**East Tamaki Re**	**2.37**	**292**	P	**Pn**	**12 31 06.0**	**+0.9**
WPHZ	**Waipukurau**	**2.38**	**203**	P	**Pn**	**12 31 05.5**	**+0.2**
GRZ	**Great Barrier**	**2.40**	**312**	P	**Pn**	**12 31 05.7**	**+0.1**
MBAZ	**Motutapu North**	**2.47**	**296**	P	**Pn**	**12 31 07.4**	**+0.9**
PRHZ	**Porangahau**	**2.51**	**198**	P	**Pn**	**12 31 06.8**	**-0.4**
EPAZ	**Eden Park BICE**	**2.53**	**293**	P	**Pn**	**12 31 08.7**	**+1.3**
AWAZ	**Awhitu Peninsu**	**2.54**	**288**	P	**Pn**	**12 31 08.8**	**+1.3**
TSZ	**Takapari Road**	**2.54**	**211**	P	**Pn**	**12 31 07.7**	**+0.1**
HBAZ	**Herne Bay Bore**	**2.55**	**293**	P	**Pn**	**12 31 09.1**	**+1.4**
VRZ	**Vera Road**	**2.59**	**241**	P	**Pn**	**12 31 10.8**	**+2.6**
ABAZ	**Army Bay**	**2.59**	**299**	P	**Pn**	**12 31 09.4**	**+1.2**
DVHZ	**Dannevirke**	**2.68**	**205**	P	**Pn**	**12 31 08.7**	**-0.7**
RVAZ	**Riverhead Bore**	**2.70**	**293**	P	**Pn**	**12 31 10.8**	**+1.2**
ANWZ	**Angora Road**	**2.73**	**199**	P	**Pn**	**12 31 10.1**	**-0.1**
WAZ	**Wanganui**	**2.80**	**227**	P	**Pn**	**12 31 13.5**	**+2.4**
POWZ	**Post Office Ro**	**2.91**	**210**	P	**Pn**	**12 31 12.5**	**0.0**
OHWZ	**Ohakea**	**2.95**	**217**	P	**Pn**	**12 31 14.4**	**+1.3**
PRWZ	**Pori Road**	**2.97**	**206**	P	**Pn**	**12 31 13.0**	**-0.4**
LREZ	**Lake Rotokare**	**3.00**	**237**	P	**Pn**	**12 31 16.9**	**+3.2**
BFZ	**Birch Farm**	**3.00**	**201**	P	**Pn**	**12 31 13.3**	**-0.5**
BFZ	**Birch Farm**	**3.00**	**201**	S	**Sn**	**12 31 48.4**	**-0.2**
BFZ	**Birch Farm**	**3.00**	**201**	P	**Pn**	**12 31 13.0**	**-0.8**
DREZ	**Durham Road**	**3.01**	**243**	P	**Pn**	**12 31 17.7**	**+3.8**
PREZ	**Palmer Road**	**3.11**	**241**	P	Pn	12 31 19.6	+4.3
PKE	**Pukeiti**	**3.16**	**244**	P	Pn	12 31 20.2	+4.2
KHEZ	**Kahui Hut**	**3.19**	**243**	P	**Pn**	**12 31 19.2**	**+2.8**
KHEZ	**Kahui Hut**	**3.19**	**243**	P	**Pn**	**12 31 20.1**	**+3.8**
TIWZ	**Tintock**	**3.20**	**205**	P	**Pn**	**12 31 16.1**	**-0.5**
MRZ	**Mangatainoka R**	**3.21**	**210**	P	**Pn**	**12 31 15.7**	**-0.9**
CPWZ	**Castlepoint**	**3.23**	**200**	P	**Pn**	**12 31 16.6**	**-0.2**
NBEZ	**Newall Road No**	**3.28**	**244**	P	**Pn**	**12 31 21.3**	**+3.8**
WCZ	**Waipu Caves**	**3.29**	**305**	P	**Pn**	**12 31 18.7**	**+1.0**
NMEZ	**Namu Road**	**3.33**	**242**	P	Pn	12 31 22.7	+4.4
HOWZ	**Holdsworth Sta**	**3.44**	**208**	P	**Pn**	**12 31 18.3**	**-1.5**
TMWZ	**Te Maipa**	**3.50**	**202**	P	**Pn**	**12 31 19.1**	**-1.5**
OGWZ	**Otaki Gorge**	**3.51**	**213**	P	**Pn**	**12 31 19.9**	**-0.8**
KIW	**Kapiti Island**	**3.66**	**215**	P	**Pn**	**12 31 21.8**	**-0.9**
MTW	**Mount Morrison**	**3.67**	**206**	P	**Pn**	**12 31 21.2**	**-1.8**
CAW	**Cannon Point**	**3.79**	**211**	P	**Pn**	**12 31 22.9**	**-1.7**
TRWZ	**Traveller**	**3.83**	**203**	P	**Pn**	**12 31 23.4**	**-1.7**
PAWZ	**Paruwai Farm**	**3.90**	**206**	P	**Pn**	**12 31 24.1**	**-1.9**
MSWZ	**Moikau Station**	**3.99**	**207**	P	**Pn**	**12 31 25.1**	**-2.2**
WEL	**Wellington**	**4.07**	**212**	P	**Pn**	**12 31 27.0**	**-1.3**
DUWZ	**D'Urville Isla**	**4.11**	**224**	P	**Pn**	**12 31 28.1**	**-0.8**
SNZO	**South Karori**	**4.11**	**213**	P	**Pn**	**12 31 27.1**	**-1.8**
SNZO	**South Karori**	**4.11**	**213**	S	**Sn**	**12 32 14.4**	**-1.4**
BHW	**Baring Head**	**4.13**	**211**	P	**Pn**	**12 31 27.0**	**-2.1**
OUZ	**Omahuta**	**4.21**	**308**	P	**Pn**	**12 31 31.9**	**+1.6**
OUZ	**Omahuta**	**4.21**	**308**	P	**Pn**	**12 31 32.0**	**+1.6**
TCW	**Tory Channel**	**4.23**	**217**	P	**Pn**	**12 31 28.8**	**-1.8**
TUWZ	**Tuamarina**	**4.56**	**218**	P	**Pn**	**12 31 33.3**	**-1.7**
NNZ	**Nelson**	**4.69**	**223**	P	**Pn**	**12 31 35.3**	**-1.5**
TKNZ	**Takaka Hill**	**4.81**	**228**	P	**Pn**	**12 31 38.6**	**+0.1**
BSWZ	**Blackbirch Sta**	**4.81**	**216**	P	**Pn**	**12 31 36.6**	**-1.8**
QRZ	**Quartz Range**	**4.95**	**232**	P	**Pn**	**12 31 39.8**	**-0.5**
QRZ	**Quartz Range**	**4.95**	**232**	P	**Pn**	**12 31 39.2**	**-1.1**
MRNZ	**Matariki Terra**	**5.16**	**226**	P	**Pn**	**12 31 41.7**	**-1.6**
THZ	**Tophouse**	**5.33**	**222**	P	**Pn**	**12 31 43.8**	**-1.8**
KHZ	**Kahutara**	**5.52**	**214**	P	**Pn**	**12 31 45.6**	**-2.5**
KHZ	**Kahutara**	**5.52**	**214**	P	Pn	12 31 42.9	-5.2
DSZ	**Denniston Nort**	**5.93**	**228**	P	**Pn**	**12 31 51.8**	**-2.1**
GVZ	**Greta Valley S**	**6.18**	**213**	P	**Pn**	**12 31 54.3**	**-2.9**
LTZ	**Lake Taylor**	**6.39**	**218**	P	**Pn**	**12 31 57.0**	**-3.2**
AMCZ	**Amberley**	**6.52**	**214**	P	**Pn**	**12 31 59.7**	**-2.1**
INZ	**Inchbonnie**	**6.78**	**223**	P	**Pn**	**12 32 02.5**	**-2.9**
OKCZ	**Okains Bay**	**6.80**	**209**	P	**Pn**	**12 32 01.7**	**-4.0**
OXZ	**Oxford**	**6.92**	**216**	P	**Pn**	**12 32 04.4**	**-2.9**
MQZ	**McQueen's Vall**	**6.95**	**212**	P	**Pn**	**12 32 03.5**	**-4.2**
AKCZ	**Akaroa Harbour**	**6.98**	**210**	P	**Pn**	**12 32 04.8**	**-3.3**
RACZ	**Rakaia**	**7.18**	**214**	P	**Pn**	**12 32 07.6**	**-3.3**
CTZ	**Chatham Island**	**7.28**	**145**	P	**Pn**	**12 32 14.0**	**+1.8**
MHCZ	**Mount Hutt**	**7.30**	**217**	P	**Pn**	**12 32 09.7**	**-2.8**
WVZ	**Waitaha Valley**	**7.40**	**223**	P	**Pn**	**12 32 13.1**	**-0.8**
WACZ	**Wakanui South**	**7.49**	**214**	P	**Pn**	**12 32 11.8**	**-3.2**
RPZ	**Rata Peaks**	**7.68**	**219**	P	**Pn**	**12 32 16.5**	**-1.3**
RPZ	**Rata Peaks**	**7.68**	**219**	P	**Pn**	**12 32 16.0**	**-1.8**
ARCZ	**Arundel**	**7.79**	**217**	P	**Pn**	**12 32 16.8**	**-2.5**
FOZ	**Fox Glacier**	**8.20**	**224**	P	**Pn**	**12 32 23.3**	**-1.6**
TMZ	**Timaru**	**8.21**	**216**	P	**Pn**	**12 32 21.3**	**-3.6**
LBZ	**Lake Benmore**	**8.60**	**219**	P	**Pn**	**12 32 28.1**	**-2.2**
ODZ	**Otahua Downs**	**8.88**	**214**	P	**Pn**	**12 32 30.7**	**-3.4**
ODZ	**Otahua Downs**	**8.88**	**214**	P	**Pn**	**12 32 30.5**	**-3.6**
HHSZ	**Highcliff Hill**	**9.57**	**211**	P	**Pn**	**12 32 41.7**	**-1.9**
TUZ	**Tuapeka**	**10.04**	**214**	P	**Pn**	**12 32 47.0**	**-2.9**
SYZ	**Scrubby Hill**	**10.70**	**213**	P	**Pn**	**12 32 58.4**	**-0.6**

IDC ***05*** *12:36:41.5±0.5, 10°.55N×86°.79W, h0km, mb4.5/17, mbtmp4.5/20, ML3.4/4, MS4.1/10, Error ellipse: s-maj=17.9km s-min=9.2km az=38.0*

NEIC ***05*** *12:36:44.0±1.6, 10°.50N±0°.06×86°.87W±0°.03, h10km±1km, mb4.9/445, Error ellipse: s-maj=9.9km s-min=3.0km az=200.0*

CATAC ***05*** *12:36:44.7±0.2, 10°N±2°×8°7W±°, h56km±15km, M5.0/44, MLv5.0/44, Error ellipse: s-maj=5.1km s-min=2.1km az=48.1, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.00; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-0.04; $M_{r\theta}$0.88; $M_{\theta\phi}$-0.61; $M_{\phi r}$-0.67; Fault plane solution: $M_0$1.26086×10^{16} NP1: ϕ_s185.20028°, δ15.51387°, λ-23.82706°. NP2: ϕ_s298.25134°, δ83.79694°, λ-104.24777°. Principal axes: T 1.4465, Plg37.2245°, Azm40.8756°; N -0.5801, Plg14.1626°, Azm299.8230°; P -0.8664, Plg49.2661°, Azm192.7837°; confirmed*

UCR ***05*** *12:36:44.2±0.5, 10°.46N×86°.83W, h12km±7km, MW4.8, Presumed earthquake*

GCMT ***05*** *12:36:45.0±0.5, 10°.21N±0°.04×87°.19W±0°.05, h20km±1km, MW5.0/68, Moment Tensor Solution. s12,c15; s68,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.10±.37; $M_{\theta\theta}$2.08±.24; $M_{\phi\phi}$1.02±.25; $M_{r\theta}$-2.15±.44; $M_{\theta\phi}$-1.64±.14; $M_{\phi r}$1.56±.54; Best double couple: $M_0$4.14900×10^{16} NP1: ϕ_s306.00000°, δ25.00000°, λ-90.00000°. NP2: ϕ_s126.00000°, δ65.00000°, λ-90.00000°. Principal axes: T 4.2350, Plg20.0000°, Azm216.0000°; N -0.1740, Plg0.0000°, Azm126.0000°; P -4.0620, Plg70.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GFZ ***05*** *12:36:46.0, 10°.50N×86°.75W, h10km, MW4.8, Moment Tensor Solution. s27 Moment tensor: M_{rr}-1.92; $M_{\theta\theta}$1.22; $M_{\phi\phi}$0.69; $M_{r\theta}$-0.02; $M_{\theta\phi}$-0.55; $M_{\phi r}$-0.23; Fault plane solution: NP1: ϕ_s117.00000°, δ43.00000°, λ-96.00000°. NP2: ϕ_s307.00000°, δ47.00000°, λ-82.00000°. Principal axes: T 1.5700, Plg2.0000°, Azm32.0000°; N 0.3700, Plg5.0000°, Azm123.0000°; P -1.9400, Plg85.0000°, Azm283.0000°;*

ISC 05 12:36:43.6±1.0, **10°.44N**±0°.03×**86°.90W**±0°.03, **h15**km±5km, **n635**, σ**0**s.**93**/502, **mb4.8**/211, **MS4.2**/10, **36C**, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DELF	**Filadelfia**	**1.33**	**89**	*e*P	**Pn**	**12 37 07.0**	**-0.6**
ELI1	**Hacienda Flor**	**1.34**	**81**	P	**Pg**	**12 37 08.7**	**-0.8**
ELI1				S	**Sg**	**12 37 27.8**	**+0.9**
ELI1	**Hacienda Flor**	**1.34**	**81**	*e*P	**Pn**	**12 37 08.2**	**+0.3**
ALIBA	**Liberia Airpor**	**1.34**	**83**	⇑*i*P	**Pn**	**12 37 08.1**	**+0.3**
JUD3	**Juan Diaz 3**	**1.37**	**101**		**Pn**	**12 37 07.4**	**-0.9**
JUD3	**Juan Diaz 3**	**1.37**	**101**	⇑*i*P	**Pn**	**12 37 07.2**	**-1.1**
JUD3				*e*S	**Sb**	**12 37 24.5**	**-1.8**
LCRUZ	**La Cruz**	**1.40**	**63**	⇑*i*P	**Pn**	**12 37 08.3**	**-0.4**
ERIA	**Liberia**	**1.45**	**82**	*e*P	**Pn**	**12 37 09.6**	**+0.2**
LAPC	**Finca la Perla**	**1.48**	**77**	⇑*i*P	**Pn**	**12 37 09.5**	**-0.3**
INDI	**Punta indio, G**	**1.49**	**112**	P	**Pn**	**12 37 09.0**	**-0.9**
INDI				S	**Sn**	**12 37 26.6**	**-2.5**
CMARA	**Lajas Hojancha**	**1.51**	**106**	P	**Pn**	**12 37 09.4**	**-0.8**
CMARA	**Lajas Hojancha**	**1.51**	**106**	*e*P	**Pn**	**12 37 09.2**	**-1.1**
CMARA				*e*S	**Sn**	**12 37 28.2**	**-1.6**
PLVR	**Palo Verde**	**1.53**	**93**	⇑*i*P	**Pn**	**12 37 09.5**	**-1.1**
GPS3	**Bodega del ICE**	**1.54**	**78**	⇑*e*P	**Pg**	**12 37 13.1**	**-0.2**
VRLE	**La Escondida,**	**1.55**	**77**	⇑*i*P	**Pn**	**12 37 10.7**	**-0.1**
ELVJ	**El Viejo (Barb**	**1.55**	**89**	⇑*i*P	**Pn**	**12 37 08.4**	**-2.3**
GPS2	**Hotel Rincn d**	**1.56**	**78**	⇑*e*P	**Pn**	**12 37 10.7**	**-0.1**
NADN	**Granada**	**1.56**	**33**	P	**Pn**	**12 37 11.4**	**+0.5**
NADN				S	**Sg**	**12 37 33.5**	**-0.3**
NADN	**Granada**	**1.56**	**33**	⇑*i*P	**Pn**	**12 37 11.3**	**+0.5**
GPS1	**Guardaparques**	**1.56**	**77**	⇑*i*P	**Pn**	**12 37 11.0**	**0.0**
VORI	**VORI**	**1.57**	**76**	⇑*i*P	**Pn**	**12 37 11.2**	**0.0**
BUAI	**Buenos Aires**	**1.60**	**74**	⇑*i*P	**Pn**	**12 37 11.9**	**+0.4**
BAGA	**Bagaces**	**1.61**	**87**	⇑*i*P	**Pn**	**12 37 11.8**	**+0.2**
PEJA	**Penjamo Buenos**	**1.63**	**74**	⇑*e*P	**Pn**	**12 37 12.1**	**+0.3**
MORN	**Al O del Volca**	**1.65**	**48**	P	**Pn**	**12 37 12.7**	**+0.5**
MORN				S	**Sg**	**12 37 36.0**	**-0.9**
SABN	**Sabanita**	**1.67**	**26**	P	**Pn**	**12 37 10.9**	**-1.6**
NANN	**Nandasmo**	**1.68**	**27**	P	**Pb**	**12 37 13.9**	**-0.4**
NYURE	**Nandayure**	**1.68**	**105**	⇑*e*P	**Pn**	**12 37 11.4**	**-1.1**
MESS	**Mesas**	**1.71**	**80**	⇑*i*P	**Pn**	**12 37 13.0**	**+0.1**
MASN	**Masaya**	**1.71**	**25**	P	**Pn**	**12 37 13.3**	**+0.4**
MASN				S	**Sg**	**12 37 36.1**	**-2.5**
MASN	**Masaya**	**1.71**	**25**	*e*P	**Pn**	**12 37 13.1**	**+0.2**
HORNC	**Hornillas**	**1.72**	**81**	⇑*i*P	**Pn**	**12 37 13.1**	**0.0**
CUI	**Cuipilapa**	**1.72**	**83**	⇑*i*P	**Pn**	**12 37 13.3**	**+0.1**
MAS3	**Al N del Volca**	**1.73**	**24**	P	**Pn**	**12 37 13.1**	**-0.1**
COPN	**Copaltepe**	**1.76**	**10**	P	**Pn**	**12 37 13.6**	**0.0**
COPN	**Copaltepe**	**1.76**	**10**	⇑*i*P	**Pn**	**12 37 13.7**	**+0.1**
ABCN	**Banco Central**	**1.77**	**19**	P	**Pn**	**12 37 14.5**	**+0.7**
ABCN				S	**Sb**	**12 37 37.8**	**-0.1**
UNAN	**Cigeo UNAN**	**1.77**	**20**	P	**Pn**	**12 37 14.2**	**+0.3**
UNAN				S	**Sb**	**12 37 37.7**	**-0.3**
USIM	**UNAN**	**1.78**	**20**		**Pn**	**12 37 13.2**	**-0.6**
CNAS	**Canas**	**1.78**	**90**	*e*P	**Pb**	**12 37 15.3**	**-0.7**
VMAR	**Armenia, Volca**	**1.80**	**78**	⇑*i*P	**Pn**	**12 37 14.3**	**+0.1**
TISN	**Laguna Tiscapa**	**1.80**	**20**	P	**Pn**	**12 37 13.7**	**-0.6**
INVE	**Universidad In**	**1.81**	**89**	⇑*i*P	**Pn**	**12 37 14.5**	**+0.2**
MGAN	**Managua**	**1.81**	**21**		**Pn**	**12 37 14.9**	**+0.6**
MGAN				Sn	**Sn**	**12 37 37.4**	**+0.2**
MGAN	**Managua**	**1.81**	**21**	P	**Pn**	**12 37 14.5**	**+0.1**
MGAN				S	**Sb**	**12 37 38.5**	**-0.6**
MGAN	**Managua**	**1.81**	**21**	⇑*i*P	**Pn**	**12 37 14.7**	**+0.3**
TIMP	**Tierras Morena**	**1.86**	**85**	⇑*i*P	**Pn**	**12 37 14.9**	**-0.1**
APYN	**Apoyeque**	**1.86**	**17**	P	**Pn**	**12 37 15.5**	**+0.4**
APYN				S	**Sb**	**12 37 39.6**	**-1.1**
TILA	**Tilaran**	**1.90**	**89**	⇑*e*P	**Pn**	**12 37 15.6**	**0.0**
TENO	**El Achiote**	**1.91**	**82**	⇑*i*P	**Pn**	**12 37 15.5**	**-0.3**
UPAL	**Upala**	**1.91**	**76**	P	**Pn**	**12 37 16.6**	**+0.9**
UPAL				S	**Sg**	**12 37 42.5**	**-2.7**
UPAL	**Upala**	**1.91**	**76**	⇑*i*P	**Pn**	**12 37 16.1**	**+0.4**
JUNT	**Juntas**	**1.92**	**94**	⇑*i*P	**Pn**	**12 37 15.7**	**-0.1**
JTS	**Las Juntas de**	**1.92**	**94**	Pg	**Pn**	**12 37 15.7**	**-0.1**
	22nm,0.3s,baz=272,slow=7.1,SNR=80						
JTS				Lg	Lg	12 37 38.8	
	101nm,0.3s,baz=297,slow=16,SNR=5.8						
JTS				LR	LR	12 37 59.7	
	comp=Z,746nm,19.9s,baz=271,slow=43						
JTS	**Las Juntas de**	**1.92**	**94**	P	**Pn**	**12 37 15.6**	**-0.3**
JTS				S	**Sn**	**12 37 39.5**	**-0.3**
JTS	**Las Juntas de**	**1.92**	**94**	⇑*i*P	**Pn**	**12 37 15.8**	**-0.1**
QUEB	**Quebradon, Cot**	**1.98**	**84**	⇑*i*P	**Pn**	**12 37 17.0**	**+0.3**
MOMN	**Momotombo**	**1.99**	**10**	P	**Pn**	**12 37 16.1**	**-0.8**
CNGN	**Cerro Negro**	**2.06**	**6**		**Pn**	**12 37 17.8**	**0.0**
CNGN	**Cerro Negro**	**2.06**	**6**	P	**Pn**	**12 37 17.7**	**0.0**
CNGN				S	**Sn**	**12 37 43.7**	**+0.5**
CNGN	**Cerro Negro**	**2.06**	**6**	⇑*i*P	**Pn**	**12 37 17.7**	**0.0**
TABAC	**Tabacon**	**2.10**	**88**	*e*P	**Pn**	**12 37 19.0**	**+0.6**
ARE1	**Arenal 1**	**2.15**	**89**	⇑*i*P	**Pn**	**12 37 20.1**	**+1.1**
VARE2	**V. Arenal**	**2.15**	**89**	⇑*i*P	**Pn**	**12 37 19.5**	**+0.5**
HERN	**Volcan Telica**	**2.16**	**2**		**Pn**	**12 37 18.9**	**-0.3**
HERN	**Volcan Telica**	**2.16**	**2**	P	**Pn**	**12 37 19.3**	**+0.1**
HERN				S	**Sn**	**12 37 45.9**	**+0.2**
CEDE	**Laguna Cedeo**	**2.16**	**89**	⇑*i*P	**Pn**	**12 37 19.9**	**+0.7**
REZ	**Monterrey de S**	**2.17**	**87**	*e*P	**Pn**	**12 37 20.8**	**+1.5**
VACR	**Volcan Arenal**	**2.19**	**89**	⇑*i*P	**Pn**	**12 37 20.1**	**+0.5**
POLN	**Al Sur del Vol**	**2.20**	**2**	P	**Pn**	**12 37 19.5**	**-0.2**
POLN				S	**Sn**	**12 37 48.1**	**+1.4**
LCHIL	**Los Chiles**	**2.23**	**74**	*e*P	**Pn**	**12 37 20.4**	**+0.4**
CRIN	**San Cristobal**	**2.25**	**356**		**Pn**	**12 37 20.5**	**+0.1**
CRIN	**San Cristobal**	**2.25**	**356**	P	**Pn**	**12 37 20.8**	**+0.3**
CRIN				S	**Sn**	**12 37 49.0**	**+0.9**
CRIN	**San Cristobal**	**2.25**	**356**	⇑*i*P	**Pn**	**12 37 20.5**	**+0.1**
BOAB	**BOACO BROADBAN**	**2.34**	**31**		**Pn**	**12 37 21.6**	**+0.1**
BOAB	**BOACO BROADBAN**	**2.34**	**31**	P	**Pn**	**12 37 21.5**	**0.0**
BOAB				S	**Sb**	**12 37 51.9**	**-2.3**
RAMO	**San Ramon**	**2.42**	**98**	*e*P	**Pn**	**12 37 24.1**	**+1.3**
PALD	**Palmares**	**2.46**	**99**	*e*P	**Pn**	**12 37 24.0**	**+0.7**
CSGN	**Cosiguina Volc**	**2.60**	**346**	P	**Pn**	**12 37 25.2**	**-0.1**
CSGN				S	**Sn**	**12 37 54.5**	**-2.2**
MATN	**Matagalpa**	**2.65**	**21**	P	**Pn**	**12 37 25.5**	**-0.5**
MATN				S	**Sn**	**12 37 58.1**	**0.0**
LIMN	**Finca el Limon**	**2.66**	**11**	P	**Pn**	**12 37 26.1**	**0.0**
LIMN				S	**Sn**	**12 37 57.7**	**-0.5**
HDC	**Heredia**	**2.78**	**99**		**Pn**	**12 37 28.9**	**+1.1**
HDC	**Heredia**	**2.78**	**99**	*e*P	**Pn**	**12 37 29.3**	**+1.6**
CNCH	**Conchagua**	**2.96**	**342**	P	**Pn**	**12 37 30.1**	**-0.2**
CNCH				S	**Sn**	**12 38 04.8**	**-0.9**
LCND	**La Caada**	**3.01**	**341**	P	**Pn**	**12 37 30.5**	**-0.4**
RAFA	**San Farael, Vo**	**3.08**	**99**		**Pn**	**12 37 34.4**	**+2.3**
RCON	**San Juan de Ri**	**3.11**	**13**	P	**Pn**	**12 37 33.0**	**+0.6**
RCON				S	**Sn**	**12 38 10.3**	**+0.9**
TRT2	**Tortugero**	**3.12**	**88**	P	**Pn**	**12 37 33.8**	**+1.5**
TRT2				S	**Sn**	**12 38 10.0**	**+0.8**
RCPN	**Sur Rio San Ju**	**3.17**	**14**	P	**Pn**	**12 37 33.8**	**+0.7**
RCPN				S	**Sn**	**12 38 10.8**	**0.0**
OCON	**Estacion meteo**	**3.20**	**7**	P	**Pn**	**12 37 34.0**	**+0.5**
OCON				S	**Sn**	**12 38 12.3**	**+0.8**
RCVN	**Varillal2**	**3.20**	**12**	P	**Pn**	**12 37 34.5**	**+0.9**
RCVN				S	**Sn**	**12 38 11.7**	**+0.1**
RANC	**El Ranchito**	**3.27**	**336**	P	**Pn**	**12 37 34.0**	**-0.6**
RANC				S	**Sn**	**12 38 11.0**	**-2.4**
PACA	**Pacayal**	**3.32**	**335**	P	**Pn**	**12 37 35.4**	**+0.3**
PACA				S	**Sn**	**12 38 13.1**	**-1.4**
OCHAL	**Ojochal**	**3.47**	**112**	P	**Pn**	**12 37 38.1**	**+0.9**
OCHAL				S	**Sn**	**12 38 16.5**	**-1.7**
TGUH	**Tegucigalpa,Un**	**3.62**	**354**		**Pn**	**12 37 40.1**	**+0.8**
TGUH	**Tegucigalpa,Un**	**3.62**	**354**	P	**Pn**	**12 37 39.8**	**+0.5**
TGUH				S	**Sn**	**12 38 21.0**	**-0.8**
SCLA	**Alcaldia de Sa**	**3.70**	**331**	P	**Pn**	**12 37 40.8**	**+0.4**
SCLA				S	**Sn**	**12 38 21.5**	**-2.4**
COEG	**Centro de Oper**	**3.71**	**329**	P	**Pn**	**12 37 41.0**	**+0.5**
COEG				S	**Sn**	**12 38 22.4**	**-1.6**
DRK0	**Durika**	**3.79**	**108**	P	**Pn**	**12 37 42.0**	**+0.4**
DRK0				S	**Sn**	**12 38 24.2**	**-1.9**
PAVA	**Las Pavas**	**3.82**	**329**	P	**Pn**	**12 37 42.4**	**+0.4**
PAVA				S	**Sn**	**12 38 25.3**	**-1.4**
SIUN	**Universidad Ur**	**3.87**	**32**		**Pn**	**12 37 43.8**	**+1.2**
SIUN	**Universidad Ur**	**3.87**	**32**	P	**Pn**	**12 37 43.7**	**+1.2**
PMON	**Piamonte**	**4.02**	**324**	P	**Pn**	**12 37 44.8**	**0.0**
PMON				S	**Sn**	**12 38 29.2**	**-2.6**
JAYA	**Jayaque - finc**	**4.05**	**322**	P	**Pn**	**12 37 44.6**	**-0.8**
JAYA				S	**Sn**	**12 38 29.7**	**-2.9**
PIRO	**Carate, Puerto**	**4.06**	**120**		**Pn**	**12 37 47.3**	**+2.1**
PIRO	**Carate, Puerto**	**4.06**	**120**	P	**Pn**	**12 37 47.0**	**+1.8**
PIRO				S	**Sn**	**12 38 30.2**	**-2.3**
NUBE	**Las Nubes**	**4.45**	**321**	P	**Pn**	**12 37 50.6**	**-0.1**
NUBE				S	**Sn**	**12 38 37.5**	**-4.9**
BRU2	**Volcan**	**4.46**	**111**		**Pn**	**12 37 52.1**	**+1.2**
FAME	**Alcaldia de Sa**	**4.55**	**318**	P	**Pn**	**12 37 51.9**	**-0.1**
FAME				S	**Sn**	**12 38 42.8**	**-1.9**
MTO3	**Montecristo**	**4.61**	**329**		**Pn**	**12 37 53.4**	**+0.3**
MTO3	**Montecristo**	**4.61**	**329**	P	**Pn**	**12 37 53.4**	**+0.3**
MTO3				S	**Sn**	**12 38 46.3**	**-0.2**
ESQI	**Esquipulas**	**4.74**	**330**		**Pn**	**12 37 55.7**	**+0.9**
BILN	**Bilwi Airport**	**4.98**	**43**	Pn	**Pn**	**12 37 57.7**	**-0.1**
APG	**El Apazote**	**5.72**	**323**	Pn	**Pn**	**12 38 08.7**	**+0.5**
	0.4nm,0.3s,baz=143,slow=9.4,SNR=14						
APG				Sn	**Sn**	**12 39 13.2**	**-0.6**
	0.1nm,0.3s,baz=92,slow=15,SNR=3.8						
RTAL	**Retalhuleu**	**6.20**	**311**	Pn	**Pn**	**12 38 15.9**	**+1.2**
HUEH	**Huehuetenango**	**6.61**	**318**	Pn	**Pn**	**12 38 22.8**	**+2.3**
CCIG	**Comitan**	**7.73**	**319**		**Pn**	**12 38 35.6**	**-0.2**
CMIG	**Matias Romero**	**10.19**	**311**	Pn	**Pn**	**12 39 10.0**	**+0.5**
	2.1nm,0.3s,baz=132,slow=9.8,SNR=33						
CMIG				Sn	**Sn**	**12 41 02.0**	**-1.6**
	0.4nm,0.3s,baz=358,slow=18,SNR=1.5						
	19nm,0.6s						
OTAV	**Otavalo**	**13.16**	**140**	Pn	**Pn**	**12 39 51.5**	**+0.9**
TLIG	**Tlapa**	**13.35**	**303**		**Pn**	**12 39 53.6**	**+0.8**
CAIB	**Caibarien**	**13.94**	**30**	Pn	**Pn**	**12 39 59.9**	**-0.8**
COHC	**Cochancay**	**14.91**	**149**	Pn	**Pn**	**12 40 15.2**	**+1.1**
NMDO	**Nuevo Mundo**	**15.26**	**47**		**Pn**	**12 40 19.4**	**+0.7**
SDV	**Santo Domingo**	**16.11**	**94**	Pn	**Pn**	**12 40 29.8**	**-0.2**
	0.5nm,0.3s,baz=257,slow=6.0,SNR=14						
SDV				LR	LR	12 48 25.0	
	comp=Z,200nm,19.2s,baz=276,slow=44						
	8.4nm,0.7s						
SDV	**Santo Domingo**	**16.11**	**94**		**Pn**	**12 40 29.9**	**-0.1**
SDV	**Santo Domingo**	**16.11**	**94**	*e*P	**P**	**12 40 33.9**	**+0.6**
JRQG	**Juriquilla Cam**	**16.55**	**310**		**Pn**	**12 40 37.4**	**+1.8**
MOIG	**Morelia**	**16.56**	**305**	Pn	**Pn**	**12 40 36.9**	**+1.2**
MOIG				IAmb	IAmb	12 40 41.5	
	comp=Z,72nm,1.1s						
DR12	**Loma Pena Alta**	**18.86**	**62**	P	**P**	**12 41 03.2**	**-0.3**
656A	**Willston**	**19.27**	**12**		**P**	**12 41 07.0**	**-0.8**
ZAIG	**Zacatecas**	**19.36**	**311**	P	**P**	**12 41 09.5**	**+0.3**
ATAH	**Atahualpa**	**19.40**	**154**	P	**P**	**12 41 11.8**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=46,slow=9.7,SNR=4.2						
	comp=Z,5.0nm,0.7s						
553A	**Crawfordville**	**19.79**	**6**	P	**P**	**12 41 14.2**	**+0.8**
553A				IAmb	IAmb	12 41 27.9	
	comp=Z,44nm,0.8s						
HBVL	**Hebbronville**	**19.92**	**328**		**P**	**12 41 15.7**	**+0.8**
HBVL				IAmb	IAmb	12 41 27.2	
	comp=Z,44nm,0.8s						
352A	**Blakely**	**21.02**	**5**	P	**P**	**12 41 27.2**	**+0.4**
352A				IAmb	IAmb	12 41 32.8	
	comp=Z,50nm,0.9s						
CELP	**Cerrillos**	**21.09**	**67**	IAmb	IAmb	12 41 39.2	
	comp=Z,34nm,0.8s						
TIGA	**Tifton**	**21.12**	**8**	P	**P**	**12 41 29.0**	**+1.0**
HKT	**Hockley**	**21.13**	**338**		**P**	**12 41 29.0**	**+1.0**
833A	**Chaparral WMA,**	**21.31**	**328**		**P**	**12 41 28.2**	**-1.8**
833A				IAmb	IAmb	12 41 36.4	
	comp=Z,38nm,1.1s						
250A	**Grady**	**21.44**	**1**	P	**P**	**12 41 30.6**	**-0.8**
SJG	**San Juan**	**21.49**	**67**	P	**P**	**12 41 31.9**	**-0.2**
	comp=Z,20nm,0.4s,baz=267,slow=6.4,SNR=8.1						
SJG				LR	LR	12 50 36.9	
	comp=Z,186nm,18.2s,baz=263,slow=39						
	comp=Z,20nm,0.4s						
VBMS	**Vicksburg**	**21.93**	**352**	IAmb	IAmb	12 41 52.4	
	comp=Z,48nm,0.8s						
152A	**Waverly Hall**	**22.22**	**5**	P	**P**	**12 41 39.3**	**-0.4**
152A				IAmb	IAmb	12 41 52.4	
	comp=Z,69nm,1.1s						
154A	**Montrose**	**22.34**	**8**	P	**P**	**12 41 40.1**	**-1.0**
NATX	**Nacogdoches**	**22.40**	**342**	P	**P**	**12 41 40.7**	**-1.0**
NATX				IAmb	IAmb	12 41 54.7	
	comp=Z,36nm,0.8s						
LRAL	**Lakeview Retre**	**22.49**	**360**		**P**	**12 41 42.4**	**-0.2**
Z47A	**Carrollton**	**22.68**	**357**	P	**P**	**12 41 44.4**	**-0.2**
Z47A				IAmb	IAmb	12 42 07.6	
	comp=Z,33nm,0.9s						
DRIO	**Del Rio**	**22.83**	**328**		**P**	**12 41 45.8**	**-0.5**
CZSB	**Cruzeiro do Su**	**22.92**	**141**	*e*P	**P**	**12 41 46.6**	**-0.8**
GOGA	**Godfrey**	**23.08**	**7**		**P**	**12 41 49.1**	**+0.3**
GOGA				IAmb	IAmb	12 41 59.7	
	comp=Z,38nm,1.1s						
JCT	**Junction City**	**23.28**	**331**	P	**P**	**12 41 50.7**	**-0.2**
Y49A	**Blount Mountai**	**23.32**	**1**		**P**	**12 41 50.7**	**-0.5**
Y49A				IAmb	IAmb	12 42 01.7	
	comp=Z,22nm,0.6s						
Y52A	**Lilburn**	**23.46**	**6**	P	**P**	**12 41 52.2**	**-0.5**
Y52A				IAmb	IAmb	12 41 55.0	
	comp=Z,22nm,0.7s						
WLAR	**White Oak Lake**	**23.83**	**347**	IAmb	IAmb	12 41 59.3	
	comp=Z,19nm,0.6s						
Z38A	**Mt. Pleasant**	**23.90**	**343**	IAmb	IAmb	12 42 02.6	
	comp=Z,31nm,1.0s						
HODGE	**Hodges**	**24.06**	**9**	IAmb	IAmb	12 42 08.4	
	comp=Z,24nm,1.1s						
OXF	**Oxford**	**24.07**	**355**	IAmb	IAmb	12 42 17.9	
	comp=Z,27nm,0.8s						
X51A	**Calhoun**	**24.09**	**4**	IAmb	IAmb	12 42 09.7	
	comp=Z,30nm,1.0s						
SMRT	**St. Maarten**	**24.28**	**69**		**P**	**12 41 59.1**	**-1.6**
JSC	**Jenkinsville**	**24.29**	**11**	IAmb	IAmb	12 42 02.8	
	comp=Z,30nm,0.7s						
TXAR	**Lajitas Array**	**24.48**	**323**	P	**P**	**12 42 03.4**	**+1.0**
	comp=Z,9.3nm,1.0s,baz=141,slow=10,SNR=21						
TXAR				PcP	**PcP**	**12 45 41.3**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=138,slow=2.0,SNR=3.9						
	comp=Z,9.3nm,1.0s						
TXAR	**Lajitas Array**	**24.48**	**323**		**P**	**12 42 02.8**	**+0.4**
TX31	**Lajitas Ar. Si**	**24.48**	**323**		**P**	**12 42 02.7**	**+0.3**
FW06	**Azle**	**24.48**	**338**	IAmb	IAmb	12 42 05.2	
	comp=Z,38nm,0.8s						
PLPT	**Palo Pinto**	**24.63**	**336**	IAmb	IAmb	12 42 08.2	
	comp=Z,16nm,0.7s						
SWET	**Sewanee**	**24.68**	**2**	IAmb	IAmb	12 42 14.6	
	comp=Z,33nm,1.1s						
W50A	**Signal Mountai**	**24.69**	**3**	IAmb	IAmb	12 42 15.4	
	comp=Z,28nm,0.8s						
W52A	**Murphy**	**24.69**	**6**	IAmb	IAmb	12 42 07.8	
	comp=Z,18nm,0.9s						
BG3	**Lake Jocassee**	**24.71**	**8**	IAmb	IAmb	12 42 15.6	
	comp=Z,28nm,1.1s						
PAULI	**Pauline**	**24.71**	**10**	IAmb	IAmb	12 42 12.7	
	comp=Z,25nm,1.0s						

UALR University of 24.73 349 IAmb IAmb 12 42 05.5
comp=Z,18nm,1.0s
MIAR Mount Ida 24.76 347 IAmb IAmb 12 42 08.8
comp=Z,15nm,0.7s
BIRD Birdtown, Kers 24.80 13 IAmb IAmb 12 42 07.0
comp=Z,20nm,0.8s
X58A Rowland 24.98 15 IAmb IAmb 12 42 17.3
comp=Z,35nm,0.9s
CPCT Cooper Cave 24.99 5 IAmb IAmb 12 42 10.0
comp=Z,28nm,0.7s
ABTX Abilene, Hawle 25.01 334 IAmb IAmb 12 42 13.0
comp=Z,11nm,0.5s
SGCY Sterling City 25.10 330 IAmb IAmb 12 42 09.4
comp=Z,18nm,0.8s
KMSC Kings Mountain 25.11 11 IAmb IAmb 12 42 15.7
comp=Z,15nm,0.8s
V48A Smith Brothers 25.19 0 IAmb IAmb 12 42 21.2
comp=Z,18nm,1.0s
WHAR Wooly Hollow 25.22 350 IAmb IAmb 12 42 10.6
comp=Z,16nm,0.8s
TKL Tuckaleechee C 25.27 6 LR LR 12 52 04.2
comp=Z,252nm,21.0s,baz=195,slow=37
TKL Tuckaleechee C 25.27 6 IAmb IAmb 12 42 21.8
comp=Z,51nm,1.2s
TMB01 Midkiff 25.38 329 IAmb IAmb 12 42 23.3
comp=Z,14nm,1.0s
V53A Saluda 25.39 8 IAmb IAmb 12 42 14.2
comp=Z,32nm,1.0s
W57A Gilead 25.40 13 IAmb IAmb 12 42 13.3
comp=Z,20nm,0.8s
TPB05 Hovey Rd 25.46 326 IAmb IAmb 12 42 25.8
comp=Z,37nm,1.9s
MNHN Monahans 25.47 327 IAmb IAmb 12 42 22.7
comp=Z,24nm,1.1s
229A Bryant Ranch, 25.48 329 IAmb IAmb 12 42 12.2
comp=Z,18nm,0.8s
WTFS Witchita Falls 25.53 337 IAmb IAmb 12 42 17.1
comp=Z,20nm,0.7s
CLTN Cedars of Leba 25.54 1 IAmb IAmb 12 42 23.8
comp=Z,14nm,0.8s
WVT Waverly 25.59 358 P P 12 42 12.1 -0.2
WVT IAmb IAmb 12 42 22.5
comp=Z,35nm,1.8s
TPB01 Permian Basin 25.73 325 IAmb IAmb 12 42 21.2
comp=Z,9.0nm,0.6s
MPOM Morne Pois Mar 25.73 78 P 12 42 12.7 -1.1
APMT Aspermont 25.82 334 IAmb IAmb 12 42 15.7
comp=Z,16nm,0.8s
TPB06 Permian Basin 25.96 327 IAmb IAmb 12 42 35.6
comp=Z,30nm,1.3s
ODSA Odessa 25.98 328 IAmb IAmb 12 42 28.8
comp=Z,32nm,1.1s
U49A Red Boiling Sp 25.98 2 IAmb IAmb 12 42 27.8
comp=Z,14nm,0.9s
129A Stewart Farms, 26.04 330 IAmb IAmb 12 42 18.4
comp=Z,22nm,0.9s
X34A Smith Ranch, M 26.05 339 IAmb IAmb 12 42 30.2
comp=Z,26nm,0.7s
PECS Pecos 26.10 325 IAmb IAmb 12 42 31.3
comp=Z,13nm,0.4s
TEFE Tefe 26.14 121 *e*P P 12 42 19.2 +1.7
TZTN Tazewell 26.17 6 IAmb IAmb 12 42 30.2
comp=Z,18nm,0.9s
POST Post 26.23 331 IAmb IAmb 12 42 19.6
comp=Z,31nm,0.8s
W35A Tecumseh 26.23 341 IAmb IAmb 12 42 21.6
comp=Z,11nm,0.7s
128A Castleberry Fa 26.34 329 IAmb IAmb 12 42 31.2
comp=Z,13nm,0.8s
T47A Sharon Grove 26.43 360 IAmb IAmb 12 42 23.3
comp=Z,14nm,0.6s
DKNS Dickens 26.46 333 IAmb IAmb 12 42 32.0
comp=Z,13nm,0.8s
U56A King 26.46 12 IAmb IAmb 12 42 24.7
comp=Z,31nm,0.7s
WMOK Wichita Mounta 26.51 338 IAmb IAmb 12 42 34.6
comp=Z,38nm,1.1s
TUL3 Leonard 26.61 344 IAmb IAmb 12 42 31.7
comp=Z,18nm,0.7s
RLO Rose Lookout 26.65 345 IAmb IAmb 12 42 35.5
comp=Z,64nm,2.0s
T42A Van Buren 26.75 353 IAmb IAmb 12 42 32.5
comp=Z,63nm,2.0s
DEOK Depew 26.75 342 IAmb IAmb 12 42 23.9
comp=Z,16nm,0.6s
MNTX Cornudas Mount 27.21 324 IAmb IAmb 12 42 37.2
comp=Z,31nm,1.6s
SIUC Southern Illin 27.24 356 IAmb IAmb 12 42 37.1
comp=Z,18nm,1.0s
S51A Beattyville 27.25 6 IAmb IAmb 12 42 35.7
comp=Z,28nm,1.3s
BOAV Boa Vista 27.38 105 P 12 42 28.6 -0.2
BOAV Boa Vista 27.38 105 *e*P P 12 42 31.1 +2.4
SMWD Samorwood 27.40 336 IAmb IAmb 12 42 36.5
comp=Z,23nm,0.8s
OK048 Pawnee Station 27.42 342 IAmb IAmb 12 42 39.8
comp=Z,16nm,0.7s
MSTX Muleshoe 27.57 331 IAmb IAmb 12 42 42.9
comp=Z,20nm,0.7s
CCM Cathedral Cave 27.77 353 P 12 42 30.8 -1.2
AMTX Amarillo 27.82 333 P P 12 42 32.5 0.0
AMTX IAmb IAmb 12 42 46.3
comp=Z,17nm,0.9s
CROK Carrier 27.82 341 IAmb IAmb 12 42 34.5
comp=Z,13nm,0.7s
R55A Marlinton 28.39 11 IAmb IAmb 12 42 46.4
comp=Z,32nm,1.4s
Q44A Meyer Farm, Va 28.41 357 IAmb IAmb 12 42 38.0
comp=Z,17nm,0.9s
Q52A Bidwell 28.70 8 IAmb IAmb 12 42 41.8
comp=Z,20nm,0.8s
P48A Milroy 28.93 2 IAmb IAmb 12 42 51.7
comp=Z,45nm,1.6s
P46A Rosedale 29.06 360 IAmb IAmb 12 42 44.3
comp=Z,13nm,0.8s
121A Cookes Peak, D 29.23 322 IAmb IAmb 12 42 49.7
comp=Z,12nm,0.9s
Q56A Snyder Ridge, 29.30 12 IAmb IAmb 12 42 56.3
comp=Z,39nm,1.3s
P53A Whipple 29.34 9 IAmb IAmb 12 42 47.7
comp=Z,23nm,0.8s
MACA Manacapuru-AM 29.39 116 P P 12 42 47.5 +0.9
319A Douglas 29.40 318 IAmb IAmb 12 42 49.8
comp=Z,30nm,1.1s
CRNM Carthage 29.63 325 P P 12 42 47.9 -0.9
R32A Long Quarter, 29.81 341 IAmb IAmb 12 43 01.2
comp=Z,11nm,0.7s
KSU1 Kansas State U 29.83 345 IAmb IAmb 12 42 51.7
comp=Z,18nm,0.9s
ACSO Alum Creek Sta 29.88 6 IAmb IAmb 12 42 51.8
comp=Z,14nm,0.7s
O52A Adamsville 29.90 8 IAmb IAmb 12 42 58.5
comp=Z,27nm,1.1s
P57A Homestead Farm 29.99 14 IAmb IAmb 12 43 12.6
comp=Z,19nm,1.0s
SDMD Soldier's Deli 30.21 16 IAmb IAmb 12 42 54.9
comp=Z,12nm,0.8s
ANMO Albuquerque 30.22 327 P 12 42 54.0 0.0
N49A Columbus Grove 30.46 4 IAmb IAmb 12 42 57.3
comp=Z,24nm,0.9s
N38A Joes South For 30.75 351 IAmb IAmb 12 43 00.1
comp=Z,14nm,0.6s
T25A Trinidad 30.92 332 IAmb IAmb 12 43 14.5
comp=Z,37nm,2.0s
SSPA Standing Stone 31.12 13 P 12 43 01.6 0.0
SSPA IAmb IAmb 12 43 12.1
comp=Z,17nm,0.8s
L40A Anamosa 31.73 354 IAmb IAmb 12 43 08.0
comp=Z,13nm,0.8s
W18A Petrified Fore 32.19 323 IAmb IAmb 12 43 15.2
comp=Z,20nm,1.3s
LPAZ La Paz 32.41 145 P P 12 43 13.9 0.0
comp=Z,5.8nm,0.9s,baz=340,slow=5.2,SNR=9.6
comp=Z,5.8nm,0.9s
LPAZ La Paz 32.41 145 P 12 43 13.9 0.0
LPAZ La Paz 32.41 145 *e*P P 12 43 13.9 0.0
JFWS Jewell Farm 32.48 355 IAmb IAmb 12 43 16.8
comp=Z,14nm,0.8s
X16A Lo Mia Camp, P 32.75 321 IAmb IAmb 12 43 20.1
comp=Z,8.9nm,0.8s
113A Mohawk Valley, 33.25 316 IAmb IAmb 12 43 23.2
comp=Z,19nm,1.5s
PB16 IPOC Station P 33.35 149 P P 12 43 22.7 +0.6
PB16 IAmb IAmb 12 43 24.6
comp=Z,16nm,0.9s
WUAZ Wupatki 33.44 322 IAmb IAmb 12 43 25.8
comp=Z,12nm,1.1s
Y14A Wickenburg 33.45 318 IAmb IAmb 12 43 24.8
comp=Z,8.9nm,1.0s
I40A Norwalk 33.48 355 IAmb IAmb 12 43 23.4
comp=Z,28nm,1.2s
PV02 Paradox Valley 33.88 328 IAmb IAmb 12 43 40.4
comp=Z,10.0nm,0.9s
PV13 Radium Mtn., P 33.89 328 IAmb IAmb 12 43 28.5
comp=Z,24nm,1.5s
PV03 Paradox Valley 33.97 328 IAmb IAmb 12 43 28.6
comp=Z,9.0nm,0.8s
PV11 David Mesa, Pa 34.02 328 IAmb IAmb 12 43 30.2
comp=Z,12nm,0.8s
PV17 East Wray Mesa 34.05 328 IAmb IAmb 12 43 32.3
comp=Z,10nm,0.6s
PV16 Nyswonger Mesa 34.05 328 IAmb IAmb 12 43 32.1
comp=Z,9.0nm,0.6s
PV19 Morning Glory 34.09 328 IAmb IAmb 12 43 29.4
comp=Z,15nm,0.8s
PV20 West Nyswonger 34.10 328 IAmb IAmb 12 43 32.3
comp=Z,14nm,0.6s
PV04 Paradox Valley 34.11 328 IAmb IAmb 12 43 32.6
comp=Z,9.9nm,0.8s
PV10 Paradox Valley 34.16 328 IAmb IAmb 12 43 40.1
comp=Z,12nm,0.7s
PV23 Carpenter Ridg 34.21 328 IAmb IAmb 12 43 31.0
comp=Z,16nm,0.9s
ECSD EROS Data Cent 34.23 347 IAmb IAmb 12 43 38.2
comp=Z,9.0nm,0.8s
MDP Montagnes des 34.34 96 LR LR 12 58 01.3
comp=Z,185nm,18.3s,baz=312,slow=37
ITTB Itaituba 34.34 114 *e*P P 12 43 31.3 +1.1
PB11 IPOC Station P 34.48 150 P 12 43 32.2 +0.8
PB11 IAmb IAmb 12 43 33.4
comp=Z,22nm,1.0s
W13A Hualapai Mount 34.73 319 IAmb IAmb 12 43 36.8
comp=Z,20nm,1.0s
G40A Rib Lake 34.82 356 P 12 43 33.6 -0.4
G40A IAmb IAmb 12 43 52.3
comp=Z,22nm,1.4s
SADO Sadowa 34.86 10 LR LR 12 57 18.7
comp=Z,200nm,21.2s,baz=204,slow=36
BC3 Big Chuckawall 34.92 316 P 12 43 34.3 -0.8
IRM Iron Mountain 35.00 317 IAmb IAmb 12 43 38.7
comp=Z,14nm,1.3s
O20A White River Ci 35.12 331 IAmb IAmb 12 43 39.1
comp=Z,11nm,0.8s
VILB Vilhena 35.25 131 *e*P P 12 43 39.6 +1.6
KNB Kanab 35.31 323 IAmb IAmb 12 43 41.6
comp=Z,15nm,1.1s
SRU San Rafael Swe 35.49 328 IAmb IAmb 12 43 44.7
comp=Z,8.3nm,0.7s
MTPU Mount Pierson 35.64 325 IAmb IAmb 12 43 52.1
comp=Z,35nm,1.9s
V12A Nelson 35.74 319 P 12 43 41.4 -0.7
V12A IAmb IAmb 12 43 45.0
comp=Z,13nm,1.0s
SZCU Shurtz Canyon 35.86 323 IAmb IAmb 12 43 59.0
comp=Z,33nm,1.9s
P17A Butcher Ranch, 35.87 328 IAmb IAmb 12 43 46.4
comp=Z,12nm,1.0s
NPGB Novo Progresso 35.89 118 *e*P P 12 43 44.1 +0.5
CCUT Cedar City 35.99 323 IAmb IAmb 12 43 47.8
comp=Z,18nm,1.5s
F33A 5 Mile Ranch, 36.18 349 IAmb IAmb 12 43 45.9
comp=Z,17nm,0.7s
E38A The Farm, Brul 36.26 355 IAmb IAmb 12 43 46.1
comp=Z,12nm,0.8s
PB09 IPOC Station P 36.42 152 IAmb IAmb 12 43 57.5
comp=Z,20nm,0.9s
SIV San Ignacio 36.65 135 P P 12 43 50.9 +0.9
comp=Z,4.9nm,0.9s,baz=305,slow=12,SNR=13
comp=Z,4.9nm,0.9s
RSSD Black Hills 36.69 339 P P 12 43 50.3 0.0
PDRB Porto dos Gac 37.13 125 *e*P P 12 43 54.2 +0.1
TPNV Topopah Spring 37.38 320 IAmb IAmb 12 43 59.6
comp=Z,17nm,1.1s
TCUT Toone Canyon 37.42 329 IAmb IAmb 12 44 10.7
comp=Z,36nm,1.8s
CLDB Colider 37.48 123 *e*P P 12 43 56.9 -0.2
FURC Furnace Creek, 37.49 319 IAmb IAmb 12 44 00.1
comp=Z,21nm,1.2s
S11A Rachel 37.49 321 IAmb IAmb 12 44 02.1
comp=Z,30nm,1.2s
PTLB Pontes e Lacer 37.65 133 IAmb IAmb 12 44 12.5
comp=Z,39nm,1.9s
PTLB Pontes e Lacer 37.65 133 *e*P P 12 43 58.8 +0.3
BW06 Bender Array 37.79 332 P P 12 43 59.5 -0.1
PDAR Pinedale Array 37.79 332 P P 12 43 59.5 -0.1
comp=Z,3.2nm,0.6s,baz=132,slow=11,SNR=19
PDAR PcP PcP 12 46 16.2 -0.1
comp=Z,1.5nm,0.9s,baz=170,slow=2.2,SNR=4.4
comp=Z,3.2nm,0.6s
PDAR Pinedale Array 37.79 332 P P 12 43 59.0 -0.7
HWUT Hardware Ranch 37.87 329 IAmb IAmb 12 44 13.0
comp=Z,44nm,1.7s
AGMN Agassiz Nation 38.48 350 IAmb IAmb 12 44 15.1
comp=Z,11nm,0.7s
SNOW Snow King Moun 38.88 332 IAmb IAmb 12 44 10.7
comp=Z,13nm,0.8s
NV11 Mina Array Sit 39.48 320 IAmb IAmb 12 44 17.0
comp=Z,23nm,1.1s
EPLO Experimental L 39.52 353 IAmb IAmb 12 44 13.7
comp=Z,13nm,0.8s
D62A Allapoint, All 39.53 19 IAmb IAmb 12 44 29.6
comp=Z,41nm,1.5s
NVAR Mina Array Bea 39.57 320 P P 12 44 15.3 +0.6
comp=Z,10nm,0.9s,baz=135,slow=7.7,SNR=44
NVAR PcP PcP 12 46 21.9 0.0
comp=Z,2.2nm,0.7s,baz=88,slow=3.6,SNR=5.8
comp=Z,10nm,0.9s
NVAR Mina Array Bea 39.57 320 P P 12 44 16.7 +2.1
LDAQ Lac Daran 39.66 17 P 12 44 15.3 +0.2
LDAQ IAmb IAmb 12 45 17.4
comp=Z,39nm,1.7s
ULM Lac du Bonnet 40.38 351 P P 12 44 18.7 -2.2
comp=Z,11nm,0.8s,baz=157,slow=8.5,SNR=17
ULM PcP PcP 12 46 23.8 -0.2
comp=Z,4.4nm,0.9s,baz=166,slow=4.2,SNR=3.1
ULM LR LR 13 02 45.4
comp=Z,262nm,20.2s,baz=190,slow=39
comp=Z,11nm,0.8s
ULM Lac du Bonnet 40.38 351 P 12 44 18.9 -2.0
PRPB Parauapebas 40.45 112 *e*P P 12 44 23.6 +1.6
SALV Santo Antonio 40.49 130 *e*P P 12 44 22.8 +0.5
DGMT Dagmar 40.59 342 P 12 44 22.3 -0.4
DGMT IAmb IAmb 12 44 24.5
comp=Z,10nm,0.7s
PNTR Pine Nut 40.78 320 P 12 44 26.8 +2.1
AC02 Maricunga 40.87 155 P P 12 44 27.8 +1.9
AC02 IAmb IAmb 12 44 28.6
comp=Z,31nm,1.4s
MPK Martis Peak 41.17 320 P P 12 44 30.8 +2.9
MPK IAmb IAmb 12 44 31.0
comp=Z,17nm,1.1s
DLMT Dillon 41.19 332 P 12 44 27.8 0.0
SNDB Serra Nova Dou 41.80 121 *e*P P 12 44 33.8 +0.8
WVOR Wild Horse Val 42.24 325 IAmb IAmb 12 44 38.3
comp=Z,44nm,1.8s
ORV Oroville 42.26 319 P P 12 44 38.4 +1.9
MSO Missoula 42.91 333 P 12 44 42.6 +0.7
AQDB Aquidauana 43.42 135 P 12 44 45.6 -0.6
AQDB IAmb IAmb 12 44 47.4
comp=Z,12nm,0.9s
AQDB Aquidauana 43.42 135 *e*P P 12 44 45.6 -0.6
SMTB Santa Maria do 43.57 115 *e*P P 12 44 49.8 +2.3
F10A Beach Ranch, E 43.85 329 IAmb IAmb 12 44 51.7
comp=Z,19nm,1.4s
H03N2 Juan Fernandez 44.29 170 T T 13 32 09.5
baz=349,slow=76,SNR=5.5
H03N1 Juan Fernandez 44.29 170 T T 13 32 11.4
baz=349,slow=76,SNR=6.1
H03N3 Juan Fernandez 44.30 170 T T 13 32 12.0
baz=349,slow=76,SNR=5.3
ZON Zonda 45.25 158 P 12 45 01.9 +1.2
D08A Wollman Farm, 45.45 329 IAmb IAmb 12 45 19.4
comp=Z,28nm,1.6s
AMBA Amambai (Brazi 45.56 137 *e*P P 12 45 04.0 +0.7
E07A Sunnyside 45.59 328 IAmb IAmb 12 45 16.4
comp=Z,13nm,0.8s
VA03 San Esteban 45.71 161 P P 12 45 05.2 +0.8
FFC Flin Flon 45.77 348 P 12 45 03.4 -1.0
FFC IAmb IAmb 12 45 06.0
comp=Z,21nm,1.6s
MXC Moxie City 45.83 328 IAmb IAmb 12 45 07.1
comp=Z,15nm,1.0s
BDFB Brasilia 46.41 123 P P 12 45 10.5 +0.3
comp=Z,5.2nm,0.8s,baz=262,slow=10,SNR=3.8
comp=Z,5.2nm,0.8s
CPUP Villa Florida 46.50 142 P P 12 45 10.4 -0.1
comp=Z,1.7nm,0.3s,baz=341,slow=12,SNR=4.5
comp=Z,1.7nm,0.3s
CPUP Villa Florida 46.50 142 IAmb IAmb 12 45 10.6
comp=Z,8.9nm,1.1s
SCHQ Schefferville 47.05 16 P P 12 45 13.2 -1.3
comp=Z,4.5nm,0.6s,baz=219,slow=7.0,SNR=10
SCHQ LR LR 13 05 26.7
comp=Z,318nm,19.2s,baz=216,slow=37
comp=Z,4.5nm,0.6s
SDBA SAO DESIDERIO 47.49 118 *e*P P 12 45 19.4 +0.9
BO02 Sierra Bellavi 47.51 162 P 12 45 18.9 +0.5
EDM Edmonton 47.67 339 IAmb IAmb 12 45 30.4
comp=Z,8.0nm,0.7s
BI02 San Fabin de 49.10 163 IAmb IAmb 12 45 31.5
comp=Z,11nm,1.1s
DIAM Diamantina, MG 51.34 124 *e*P P 12 45 47.8 -0.2
PLCA Paso Flores 53.11 164 P P 12 46 00.8 +0.1
comp=Z,9.9nm,0.9s,baz=340,slow=9.1,SNR=22
comp=Z,9.9nm,0.9s
PLCA Paso Flores 53.11 164 P 12 46 01.0 +0.3
PLCA IAmb IAmb 12 46 01.3
comp=Z,10nm,0.8s
FRB Frobisher Bay 54.80 10 LR LR 13 09 24.2
comp=Z,390nm,20.8s,baz=162,slow=36
LL02 Futaleuf 55.11 167 P P 12 46 15.8 +0.6
LL02 IAmb IAmb 12 46 16.0
comp=Z,13nm,0.9s
YKA Yellowknife Ar 55.68 345 P P 12 46 18.2 -0.9
comp=Z,1.7nm,0.8s,baz=143,slow=6.5,SNR=33
YKA PcP PcP 12 47 18.5 +0.1
comp=Z,1.0nm,0.7s,baz=145,slow=3.2,SNR=5.2
comp=Z,1.7nm,0.8s
TOAD Toad River Com 56.30 337 P P 12 46 24.2 +0.5
baz=133
KOTAN Kotaneelee Air 56.75 339 P P 12 46 27.5 +0.7
baz=135
V35K Ketchikan 56.83 331 P P 12 46 28.1 +0.7
baz=124
T35M Bob Quinn 57.16 333 P P 12 46 31.2 +1.4
baz=126
CRAG Craig 57.62 331 P P 12 46 33.9 +0.9
baz=123
WRAK Wrangell Islan 57.78 332 P P 12 46 34.8 +0.7
baz=124
DLBC Dease Lake 57.95 335 P P 12 46 36.5 +1.1
baz=128
U33K Whale Pass 57.97 332 P P 12 46 36.5 +1.1
baz=123
S34M Telegraph Cree 58.10 334 P P 12 46 37.3 +1.0
baz=126
WTLY Watson Lake, Y 58.50 337 P P 12 46 39.8 +0.7
baz=130
WRGLY Wrigley 58.78 342 P P 12 46 42.0 +1.0
baz=137
R33M Jennings River 58.92 335 P P 12 46 43.1 +0.9
baz=127
Q32M Nakina River 59.20 335 P P 12 46 45.3 +1.0
baz=125
S32K Killisnoo 59.38 332 P P 12 46 46.4 +1.2
baz=122
SIT Sitka 59.51 332 P P 12 46 47.6 +1.5
baz=121
R32K Eaglecrest 59.79 333 P P 12 46 48.7 +0.7
baz=123
P33M Teslin, Yukon 60.16 336 P P 12 46 51.2 +0.6
baz=125
P32M Atlin 60.17 335 P P 12 46 51.3 +0.6
baz=124
S31K Pelican 60.40 332 P P 12 46 53.1 +1.0
baz=121
N32M Quiet Lake 60.81 336 P P 12 46 56.0 +0.9
baz=126
SFJD Kangerlussuaq 61.50 15 LR LR 13 13 57.7
comp=Z,258nm,18.6s,baz=248,slow=36
O30N Mendenhall 61.81 335 IAmb IAmb 12 47 10.4
comp=Z,13nm,0.9s
O30N Mendenhall 61.81 335 P P 12 47 02.8 +1.0
baz=122
P30M Million Dollar 61.84 334 P P 12 47 02.3 +0.3
baz=121
M31M Drury Creek, Y 61.93 337 P P 12 47 03.7 +1.1
baz=125
N31M Braeburn, Yuko 62.07 336 P P 12 47 04.5 +0.9
baz=123
HYT Haines Junctio 62.43 335 P P 12 47 07.4 +1.3
baz=121
O29M Mount Kennedy 62.62 334 P P 12 47 07.9 +0.5
baz=120
YUK6 Outpost Mounta 62.85 335 P P 12 47 09.2 +0.2
baz=120
M30M Minto, Yukon 63.07 337 P P 12 47 11.0 +0.8
baz=122
YUK4 Talbot Arm 63.17 335 P P 12 47 12.3 +1.2
baz=120
PINM Pinnacle 63.26 333 P P 12 47 12.4 +0.8
baz=118
MAYO Mayo, Yukon 63.28 338 P P 12 47 12.8 +1.2
baz=124
C36M Paulatuk 63.49 346 P P 12 47 14.2 +1.5
baz=138
O28M Mount Upton 63.55 334 P P 12 47 14.8 +1.0
baz=118
YUK8 Steele Glacier 63.61 335 P P 12 47 15.2 +1.1
baz=119
M29M Somme Creek 63.66 336 IAmb IAmb 12 47 17.3
comp=Z,10nm,0.8s
M29M Somme Creek 63.66 336 P P 12 47 15.8 +1.5
baz=121
L29M L29M 63.87 337 IAmb IAmb 12 48 02.5
comp=Z,17nm,1.4s
L29M L29M 63.87 337 P P 12 47 16.4 +0.9
baz=121
J30M Hart River 63.99 339 P P 12 47 17.7 +1.3
baz=124
H31M Peel River 64.01 340 P P 12 47 17.4 +1.1
baz=126
K29M Barlow Dome 64.03 338 P P 12 47 17.2 +0.5
baz=122
MESA MESA 64.05 333 P P 12 47 17.0 +0.1
baz=116
CTG Chitna Glacier 64.14 334 P P 12 47 18.4 +1.0
baz=117
YUK3 Moose Creek 64.14 335 P P 12 47 18.6 +1.1
baz=118
I30M Mount Dempster 64.37 339 IAmb IAmb 12 47 21.6
comp=Z,6.3nm,0.9s
I30M Mount Dempster 64.37 339 P P 12 47 19.7 +0.8
baz=124
BVCY Beaver Creek 64.61 335 P P 12 47 21.1 +0.7
baz=118
G31M Satah River 64.66 341 P P 12 47 21.3 +0.8
baz=127
F31M Tsiigehtchic 64.81 342 P P 12 47 22.3 +0.8
baz=128
CRQE Cirque 64.81 333 P P 12 47 22.3 +0.4
baz=115
DAWY Dawson 64.85 337 P P 12 47 22.5 +0.6
baz=120
M27K Edge Creek, AK 65.01 335 P P 12 47 24.1 +1.0
baz=117
MCARA McCarthy VSAT 65.06 334 P P 12 47 24.1 +0.9
baz=116
I29M Ogilvie Camp, 65.12 339 P P 12 47 24.2 +0.6
baz=122
EPYK Eagle Plains 65.13 340 P P 12 47 24.6 +0.9
baz=124
INK Inuvik 65.28 343 IAmb IAmb 12 47 27.0
comp=Z,7.6nm,1.1s
INK Inuvik 65.28 343 P P 12 47 25.0 +0.5
baz=128
BCAR Beaver Creek A 65.30 336 P P 12 47 25.1 +0.2
L27K Beaver Creek, 65.31 336 IAmb IAmb 12 47 26.5
comp=Z,7.6nm,0.8s
L27K Beaver Creek, 65.31 336 P P 12 47 26.0 +1.1
baz=118
F30M Barrier River 65.54 342 P P 12 47 27.0 +0.7
baz=126
BMRM Bremner River 65.58 333 P P 12 47 27.6 +0.9
baz=114
N25K Chitina, Valde 65.83 334 P P 12 47 28.9 +0.5
baz=114
G29M Pine Creek 65.86 340 IAmb IAmb 12 47 41.9
comp=Z,12nm,1.1s
G29M Pine Creek 65.86 340 P P 12 47 29.1 +0.7
baz=123
L26K Log Cabin Wild 65.91 335 P P 12 47 29.7 +0.8
baz=116

KLU	Klutina baz=113	66.37 333	P	P	12 47 32.4	+0.5
HARP	HAARP baz=114	66.40 334	P	P	12 47 32.6	+0.6
I27K	Kandik River baz=119	66.44 338	P	P	12 47 33.0	+0.8
P23K	Montague Islan baz=111	66.48 332	P	P	12 47 33.0	+0.6
SCRK	Sand Creek comp=Z,14nm,1.5s	66.59 336	IAmb	IAmb	12 47 37.5	
SCRK	Sand Creek baz=116	66.59 336	P	P	12 47 34.2	+1.0
E29M	Blow River baz=124	66.64 342	P	P	12 47 34.5	+1.2
J26L	Joseph Creek baz=116	66.66 337	P	P	12 47 34.4	+0.8
H27K	Steamboat Moun baz=119,SNR=17	66.71 339	P	P	12 47 35.2	+1.3
M24K	Tolsona, Glenn baz=113	66.72 334	P	P	12 47 34.7	+0.7
PAX	Paxson baz=114	66.77 335	P	P	12 47 35.4	+1.0
RIDG	Independent Ri baz=115,SNR=7.0	66.83 336	P	P	12 47 35.7	+1.0
F28M	Old Crow comp=Z,6.1nm,0.8s	66.85 341	IAmb	IAmb	12 47 38.4	
F28M	Old Crow baz=121,SNR=8.0	66.85 341	P	P	12 47 35.9	+1.1
G27K	Doyon Strip comp=Z,8.8nm,1.5s	67.04 339	IAmb	IAmb	12 48 00.2	
G27K	Doyon Strip baz=119	67.04 339	P	P	12 47 36.4	+0.4
SCM	Sheep Creek Mo baz=112	67.12 333	P	P	12 47 37.5	+0.8
K24K	Donnelly Dome baz=114,SNR=5.7	67.23 336	P	P	12 47 38.2	+0.9
E28M	Babbage River baz=122	67.26 342	P	P	12 47 37.8	+0.5
M23K	Glacier View baz=111	67.28 333	P	P	12 47 38.4	+0.8
J25K	Salcha River, comp=Z,11nm,0.9s	67.41 337	IAmb	IAmb	12 47 39.9	
J25K	Salcha River, baz=115,SNR=10	67.41 337	P	P	12 47 39.3	+0.9
D28M	Stokes Point baz=123	67.41 342	P	P	12 47 39.2	+1.0
KNK	Knik Glacier baz=110	67.47 333	P	P	12 47 39.3	+0.6
SEW	Seward baz=109	67.48 331	P	P	12 47 38.9	0.0
SML	Sawmill baz=111	67.56 333	P	P	12 47 40.1	+0.7
WAT6	Susitna Watana baz=112,SNR=7.6	67.58 334	P	P	12 47 40.5	+0.9
DHY	Denali Highway baz=112	67.61 335	P	P	12 47 40.3	+0.5
E27K	Coleen River comp=Z,22nm,1.8s	67.70 341	IAmb	IAmb	12 47 43.1	
E27K	Coleen River baz=120	67.70 341	P	P	12 47 41.2	+1.1
O22K	Cooper Landing baz=109	67.74 332	P	P	12 47 41.2	+0.8
PMR	Palmer baz=110	67.84 333	P	P	12 47 41.5	+0.5
G26K	Porcupine Rive baz=117	67.85 339	P	P	12 47 41.7	+0.7
PRP	Porcupine Dome comp=Z,6.4nm,0.8s	67.85 337	IAmb	IAmb	12 47 42.5	
PRP	Porcupine Dome baz=115,SNR=5.4	67.85 337	P	P	12 47 41.6	+0.4
RC01	Rabbit Creek A baz=109,SNR=5.1	67.94 332	P	P	12 47 42.5	+0.8
HDA	Harding Lake baz=113,SNR=9.6	67.95 336	P	P	12 47 42.2	+0.5
BRSE	Bradley Lake S baz=108	67.99 331	P	P	12 47 42.2	+0.2
WAT1	Susitna Watana baz=111	68.02 334	P	P	12 47 42.3	+0.1
D27M	Malcolm River baz=121	68.04 342	P	P	12 47 42.7	+0.4
IL31	comp=Z,11nm,0.8s	68.07 336	IAmb	IAmb	12 47 44.7	
ILAR	Eielson Array comp=Z,15nm,1.1s,baz=146,slow=3.8,SNR=57 comp=Z,15nm,1.1s	68.07 336	P	P	12 47 42.5	0.0
ILAR	Eielson Array	68.07 336		P	12 47 42.7	+0.3
F26K	Sheenjek River comp=Z,5.0nm,0.9s	68.31 340	IAmb	IAmb	12 47 45.3	
F26K	Sheenjek River baz=117	68.31 340	P	P	12 47 45.3	+1.3
M22K	Willow baz=109	68.33 333	P	P	12 47 45.0	+0.9
BMAR	Burnt Mountain	68.34 339	P	P	12 47 43.8	-0.4
KDAK	Kodiak Island comp=Z,629nm,21.7s,baz=206,slow=37	68.35 328	LR	LR	13 18 42.6	
CCB	Clear Creek Bu comp=Z,19nm,1.6s	68.38 336	IAmb	IAmb	12 47 45.0	
POKR	Poker Plat Res baz=113	68.42 337	P	P	12 47 45.1	+0.4
WRH	Wood River Hil comp=Z,6.0nm,0.9s	68.43 336	IAmb	IAmb	12 47 45.2	
COLA	College	68.49 336	P	P	12 47 45.8	+0.7
CAPN	Captain Cook N baz=108	68.50 332	P	P	12 47 46.0	+0.8
MCK	McKinley baz=111,SNR=9.4	68.50 335	P	P	12 47 46.0	+0.7
SUA	Susitna One baz=108	68.53 332	P	P	12 47 45.4	-0.1
OHAK	Old Harbor baz=104	68.57 328	P	P	12 47 46.4	+0.8
CUT	Chulitna baz=109	68.62 333	P	P	12 47 46.5	+0.6
F25K	Christian Rive comp=Z,6.7nm,0.8s	68.78 339	IAmb	IAmb	12 47 49.0	
F25K	Christian Rive baz=116	68.78 339	P	P	12 47 47.3	+0.4
NEA2	Nenana baz=111,SNR=6.2	68.87 336	P	P	12 47 47.1	-0.4
H24K	Noodor Dome baz=113,SNR=6.9	68.87 337	P	P	12 47 47.2	-0.3
SII	Sitkinak Islan baz=103	68.89 327	P	P	12 47 48.1	+0.3
TRF	Thorofare Moun baz=110	68.97 335	P	P	12 47 48.5	+0.2
E25K	Arctic Village comp=Z,7.5nm,0.9s	68.99 340	IAmb	IAmb	12 47 50.1	
E25K	Arctic Village baz=116,SNR=8.8	68.99 340	P	P	12 47 49.0	+0.9
SKT	Skwentna baz=108,SNR=6.4	69.04 333	P	P	12 47 48.9	+0.3
G24K	Hadweenzic Riv baz=113,SNR=6.7	69.06 338	P	P	12 47 49.0	+0.4
C27K	Jago River comp=Z,4.3nm,0.5s	69.07 342	IAmb	IAmb	12 50 09.4	
C27K	Jago River baz=118	69.07 342	P	P	12 47 49.3	+0.7
SPCR	Spurr Chakacha baz=107	69.12 332	P	P	12 47 49.3	+0.2
P19K	Oil Pt baz=105	69.17 330	P	P	12 47 49.7	+0.3
I23K	Minto, Yukon-K baz=111,SNR=11	69.19 336	P	P	12 47 49.1	-0.2
Q19K	Cape Douglas, baz=105	69.19 329	P	P	12 47 49.4	-0.2
BPAW	Bear Paw Mtn. baz=109,SNR=12	69.48 335	P	P	12 47 51.5	+0.2
CHIR	Chirikof Islan baz=102	69.51 326	P	P	12 47 51.0	-0.6
PPLA	Purkeypile baz=108	69.61 334	P	P	12 47 52.1	-0.2
M20K	Styx River comp=Z,12nm,1.0s	69.74 332	IAmb	IAmb	12 47 54.0	
M20K	Styx River baz=106	69.74 332	P	P	12 47 52.9	-0.1
D25K	Kavik River baz=115	69.77 341	P	P	12 47 53.4	+0.4
O19K	Port Alsworth baz=105	69.84 331	P	P	12 47 53.5	0.0
E24K	Your Creek baz=113	69.96 339	P	P	12 47 54.6	+0.3
CHUM	Lake Minchumin baz=108	69.97 335	P	P	12 47 54.1	-0.2
G23K	Bananza Creek comp=Z,12nm,0.9s	70.00 338	IAmb	IAmb	12 47 56.4	
G23K	Bananza Creek baz=111,SNR=12	70.00 338	P	P	12 47 54.7	+0.2
N19K	Bonanza Creek comp=Z,12nm,1.0s	70.08 331	IAmb	IAmb	12 47 56.1	
N19K	Bonanza Creek baz=105	70.08 331	P	P	12 47 55.0	-0.2
P18K	Big Mountain, baz=104	70.09 330	P	P	12 47 54.9	-0.2
Q17K	Contact Creek baz=102	70.17 328	P	P	12 47 56.0	+0.2
O18K	Koktuh Hills baz=104	70.19 330	P	P	12 47 56.0	+0.3
I21K	Tanana baz=108,SNR=5.8	70.24 336	P	P	12 47 55.9	+0.1
COLD	Coldfoot baz=111,SNR=22	70.25 338	P	P	12 47 56.4	+0.4
M19K	Big River Lodg comp=Z,9.1nm,1.0s	70.32 332	IAmb	IAmb	12 47 57.6	
M19K	Big River Lodg baz=105	70.32 332	P	P	12 47 56.8	+0.3
E23K	Chandalar baz=112	70.35 339	P	P	12 47 56.8	+0.2
TOLK	Toolik Lake Re comp=Z,7.2nm,0.8s	70.55 340	IAmb	IAmb	12 47 59.2	
TOLK	Toolik Lake Re baz=112,SNR=6.2	70.55 340	P	P	12 47 57.9	0.0
K20K	Telida baz=106	70.56 334	P	P	12 47 57.6	-0.4
L19K	White Mountain baz=105	70.60 333	P	P	12 47 57.5	-0.8
G22K	Bettles baz=110	70.63 338	P	P	12 47 58.3	+0.1
P17K	Kvichak River baz=102	70.65 329	P	P	12 47 57.7	-0.8
Q16K	King Salmon baz=102	70.65 329	P	P	12 47 57.8	-0.7
N18K	Kilae Creek baz=103	70.71 331	P	P	12 47 58.4	-0.5
H21K	Melozitna Rive comp=Z,5.4nm,0.9s	70.72 336	IAmb	IAmb	12 47 59.5	
H21K	Melozitna Rive baz=108	70.72 336	P	P	12 47 58.3	-0.5
J20K	Nowinta River baz=106	70.83 335	P	P	12 47 59.1	-0.4
M18K	Stony River baz=104,SNR=6.5	70.87 332	P	P	12 47 59.3	-0.5
D23K	Nanushuk River comp=Z,16nm,1.1s	71.05 340	IAmb	IAmb	12 48 03.5	
D23K	Nanushuk River baz=111	71.05 340	P	P	12 48 00.3	-0.5
O17K	Koliganek Bris baz=102	71.10 330	P	P	12 48 00.6	-0.6
I20K	Naaghedeneel baz=106	71.14 335	P	P	12 48 01.7	+0.4
G21K	Allakaket baz=108	71.25 337	P	P	12 48 02.5	+0.5
N17K	Nushagak Hills baz=102	71.31 331	P	P	12 48 02.4	0.0
J19K	Poorman comp=Z,9.3nm,1.0s	71.40 334	IAmb	IAmb	12 48 10.8	
J19K	Poorman baz=105	71.40 334	P	P	12 48 03.0	0.0
P16K	Nushagak River baz=101	71.40 329	P	P	12 48 02.4	-0.6
F21K	Alatna River baz=108	71.46 338	P	P	12 48 04.2	+0.9
H20K	Anotleneega Mo baz=106	71.49 336	P	P	12 48 03.8	+0.3
O16K	Kokwok River B baz=101	71.56 329	P	P	12 48 03.8	-0.2
CHNA	Chernabura Isl baz=98	71.57 324	P	P	12 48 03.8	-0.4
M17K	Holitna River baz=102	71.61 331	P	P	12 48 04.2	-0.1
D22K	Ayikyak River comp=Z,5.3nm,0.9s	71.70 340	IAmb	IAmb	12 48 06.4	
D22K	Ayikyak River baz=109,SNR=11	71.70 340	P	P	12 48 05.1	+0.4
J18K	Innoko River baz=104	71.74 334	P	P	12 48 05.0	-0.1
E21K	Killik River comp=Z,8.6nm,0.8s	72.01 339	IAmb	IAmb	12 48 07.9	
E21K	Killik River baz=108	72.01 339	P	P	12 48 07.0	+0.3
GCSA	Galena City Sc baz=104	72.12 335	P	P	12 48 07.6	+0.3
H19K	Roundabout Mou baz=104	72.13 336	P	P	12 48 07.6	+0.3
SDPT	Sand Point baz=98	72.14 325	P	P	12 48 07.9	+0.3
L17K	Donlin baz=102	72.16 332	P	P	12 48 07.3	-0.3
F20K	Avaraart Lake comp=Z,6.5nm,0.8s	72.25 337	IAmb	IAmb	12 48 09.7	
F20K	Avaraart Lake baz=106	72.25 337	P	P	12 48 08.4	+0.4
M16K	Timber Creek baz=101	72.26 331	P	P	12 48 07.5	-0.7
K17K	Iditarod baz=102	72.28 333	P	P	12 48 07.8	-0.5
O15K	Ungalikthiuk R baz=99	72.36 329	P	P	12 48 08.7	-0.1
B22K	Teshekpuk Lake baz=104	72.42 341	P	P	12 48 09.4	+0.4
G19K	Purcell Mounta comp=Z,17nm,1.0s	72.54 336	IAmb	IAmb	12 48 11.3	
G19K	Purcell Mounta baz=104	72.54 336	P	P	12 48 10.0	+0.2
L16K	Owhat River baz=100	72.63 332	P	P	12 48 10.2	-0.2
N15K	Kwethluk River baz=99	72.66 330	P	P	12 48 09.9	-0.7
J17K	VABM Dome baz=101	72.77 333	P	P	12 48 11.4	+0.2
H18K	Honhosa River comp=Z,15nm,0.9s	72.83 335	IAmb	IAmb	12 48 13.5	
H18K	Honhosa River baz=102	72.83 335	P	P	12 48 11.7	+0.2
E19K	Redstone River comp=Z,7.5nm,0.8s	72.92 338	IAmb	IAmb	12 48 13.2	
E19K	Redstone River baz=104	72.92 338	P	P	12 48 12.1	+0.1
F19K	Shaleruckik Mo comp=Z,8.0nm,0.8s	72.97 337	IAmb	IAmb	12 48 13.7	
F19K	Shaleruckik Mo baz=104	72.97 337	P	P	12 48 12.6	+0.3
D20K	Etivluk River baz=105	73.02 339	P	P	12 48 13.2	+0.6
M15K	Kasigluk River baz=99	73.03 330	P	P	12 48 12.6	-0.2
O14K	Tigyukauivet M baz=103	73.10 329	P	P	12 48 12.6	-0.7
G18K	Tagagawik comp=Z,16nm,1.0s	73.11 336	IAmb	IAmb	12 48 14.9	
G18K	Tagagawik baz=102	73.11 336	P	P	12 48 12.6	-0.6
A22K	Sinclair Lake baz=108	73.12 341	P	P	12 48 13.4	+0.3
N14K	Kuskokwak Cree baz=98	73.41 330	P	P	12 48 14.5	-0.5
J16K	Anvik River comp=Z,15nm,1.1s	73.42 333	IAmb	IAmb	12 48 17.4	
J16K	Anvik River baz=100	73.42 333	P	P	12 48 15.6	+0.5
H17K	Granite Mounta comp=Z,8.5nm,0.9s	73.42 335	IAmb	IAmb	12 48 16.9	
H17K	Granite Mounta baz=101	73.42 335	P	P	12 48 15.2	+0.2
D19K	Kuna River comp=Z,11nm,1.1s	73.49 339	IAmb	IAmb	12 48 17.0	
D19K	Kuna River baz=104	73.49 339	P	P	12 48 15.4	0.0
I17K	Unalakleet comp=Z,11nm,1.1s	73.57 334	IAmb	IAmb	12 48 18.1	
I17K	Unalakleet baz=100	73.57 334	P	P	12 48 16.1	+0.2
L15K	Ungalak Mounta baz=99	73.57 331	P	P	12 48 16.0	0.0
F18K	Selawik baz=102	73.65 337	P	P	12 48 16.6	+0.3
M14K	Bethel baz=98	73.66 330	P	P	12 48 16.4	-0.1
K15K	Wolf Creek Mou baz=99	73.68 332	P	P	12 48 16.6	0.0
A21K	Barrow baz=106	73.72 342	P	P	12 48 16.5	-0.1
FALS	False Pass baz=95	73.77 324	P	P	12 48 17.2	-0.1
G17K	Kiwalik Mounta baz=100	73.84 335	P	P	12 48 18.4	+1.0
L14K	Kuka Creek baz=97	74.09 331	P	P	12 48 19.6	+0.6
C19K	Lookout Ridge comp=Z,18nm,1.1s	74.16 339	IAmb	IAmb	12 48 23.1	
C19K	Lookout Ridge baz=102	74.16 339	P	P	12 48 20.1	+0.7
E18K	Tukpahlearik C baz=101	74.18 337	P	P	12 48 20.2	+0.8
F17K	Baldwin Pennin comp=Z,26nm,1.6s	74.25 336	IAmb	IAmb	12 48 23.2	
F17K	Baldwin Pennin baz=100	74.25 336	P	P	12 48 20.9	+1.1
M13K	Dall Lake baz=97	74.30 330	P	P	12 48 20.2	0.0
H16K	Elim baz=99	74.36 334	P	P	12 48 21.7	+1.3
G16K	Koyuk River comp=Z,9.4nm,1.1s	74.52 335	IAmb	IAmb	12 48 23.4	
G16K	Koyuk River baz=99	74.52 335	P	P	12 48 22.4	+1.0
E17K	Hotham Inlet baz=100	74.58 337	P	P	12 48 22.8	+1.0
C18K	Utukok River comp=Z,8.1nm,0.9s	74.63 339	IAmb	IAmb	12 48 23.4	
C18K	Utukok River baz=101	74.63 339	P	P	12 48 23.3	+1.2
J14K	Nanvaranak Lak baz=97	74.67 332	P	P	12 48 23.5	+1.2
K13K	Kusilvak Mount baz=96	75.09 331	P	P	12 48 26.4	+1.6
RDOG	Red Dog Mine baz=99	75.16 338	P	P	12 48 25.7	+0.6
D17K	Noatak River baz=99	75.17 337	P	P	12 48 26.9	+1.8
G15K	Niukluk baz=97	75.17 335	P	P	12 48 26.7	+1.5
C17K	DeLong Mountai baz=99	75.32 338	P	P	12 48 26.8	+0.7
F15K	North Star Dit comp=Z,16nm,0.9s	75.51 335	IAmb	IAmb	12 48 29.5	
F15K	North Star Dit baz=97	75.51 335	P	P	12 48 28.3	+1.2
UNV	Unalaska Valle baz=92	75.51 323	P	P	12 48 28.5	+1.1
ANM	Nome baz=96	75.69 334	P	P	12 48 28.9	+0.7
C16K	Lisburne Hills baz=97	76.09 338	P	P	12 48 31.4	+1.0
F14K	Arctic Creek baz=95	76.18 335	P	P	12 48 32.0	+1.1
TNA	Tin City baz=94	76.85 335	P	P	12 48 36.2	+1.4
EKA	Eskdalemuir Ar comp=Z,1.5nm,0.8s,baz=272,slow=5.1,SNR=3.0 comp=Z,1.5nm,0.8s	77.94 36	P	P	12 48 40.6	-0.4
ESDC	Sonseca Array comp=Z,2.2nm,0.8s,baz=280,slow=5.4,SNR=8.1 comp=Z,2.2nm,0.8s	78.01 52	P	P	12 48 41.0	-0.9
DBIC	Dimbokro comp=Z,9.1nm,0.8s,baz=303,slow=5.5,SNR=6.9 comp=Z,9.1nm,0.8s	81.03 85	P	P	12 48 58.6	-0.1
TORD	Torodi Ar. Bea comp=Z,1.9nm,1.0s,baz=266,slow=6.0,SNR=6.3 comp=Z,1.9nm,1.0s	86.32 77	P	P	12 49 25.1	-0.8
BILL	Bilibino	86.58 339	P	P	12 49 26.3	+0.2
BILL	comp=Z,14nm,1.1s		IAmb	IAmb	12 49 35.9	
MODS	Modra-Piesok	91.52 40	*e*P	P	12 49 48.3	-1.6
TIXI	Tiksi	94.71 349		P	12 50 03.7	-0.3
TIXI	comp=Z,5.1nm,0.8s		IAmb	IAmb	12 50 12.9	
KURBB	Kurchatov Arra	117.88 10	PKP	PKPdf	12 55 29.2	-0.5
	comp=Z,0.4nm,0.7s,baz=340,slow=2.3,SNR=5.2					
SONM	Songino Array	120.80 350	PKP	PKPdf	12 55 35.0	-0.6
	comp=Z,0.4nm,0.7s,baz=19,slow=3.6,SNR=3.9					
MKAR	Makanchi Array	122.21 9	PKP	PKPdf	12 55 36.6	-1.6
	comp=Z,0.7nm,1.0s,baz=321,slow=1.7,SNR=4.5					
KSRS	Korea Array	122.25 327	PKP	PKPdf	12 55 38.3	-0.2
	comp=Z,1.5nm,0.6s,baz=20,slow=2.0,SNR=5.6					
WMQ	Urumqi	125.78 5	*e*PKP	PKPdf	12 55 46.1	+0.9
WMQ	comp=E,3μm,23.8s		LR	LR		
HHC	Hu-ho-hao-te	126.19 343	*e*P	PKPdf	12 55 42.5	-3.7
GTA2	Gaotai	129.95 353	*e*PKP	PKPdf	12 55 53.5	+0.1
STKA	Stephens Creek	130.48 237	PKP	PKPdf	12 55 54.1	-0.3
	comp=E,2.4nm,0.7s,baz=252,slow=3.2,SNR=3.3					
NJ2	Nanjing	131.09 331	*e*P	PKPdf	12 55 55.4	-0.2
NJ2	comp=Z,9.0nm,0.5s		pmax	pmax		
ASAR	Alice Springs	138.99 246	PKhKP	PKPpre	12 55 59.3	
	comp=Z,0.4nm,0.5s,baz=113,slow=3.6,SNR=7.4					
ASAR			PKP	PKPdf	12 56 10.3	-0.3
	comp=Z,2.8nm,0.9s,baz=93,slow=1.8,SNR=16					
WRA	Warramunga Arr	139.19 252	PKhKP	PKPpre	12 56 01.6	
	comp=Z,0.6nm,0.9s,baz=103,slow=3.1,SNR=5.8					
WRA			PKP	PKPdf	12 56 10.4	-0.6
	comp=Z,3.6nm,0.9s,baz=101,slow=2.3,SNR=14					
CMAR	Chiang Mai Arr	150.72 349	PKP	PKPdf	12 56 31.1	+0.2
	comp=Z,3.4nm,1.2s,baz=27,slow=1.8,SNR=7.4					
CMAR			PKPbc	sPKPdf	12 56 36.5	+1.0
	comp=Z,4.4nm,0.8s,baz=344,slow=3.3,SNR=24					
CMAR			PKPab	PKPab	12 56 44.5	+1.4
	comp=Z,5.7nm,0.9s,baz=328,slow=4.1,SNR=11					

ROM 05 12:41:20.4±0.1,46°.177N±0°.004×12°.420E±0°.008,
h10km,ML1.5/10,3C-2D,Error ellipse: s-maj=0.5km
s-min=0.4km az=306.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APGO	Alpago	0.05	238	↑*e*Pg	Pg	12 41 23.1	+0.7
APGO				*e*Sg	Sg	12 41 24.6	+0.8
PNAL	Ponte nelle Va	0.09	267	P	Pg	12 41 23.4	+0.6
PNAL				S	Sg	12 41 25.0	+0.5
CSO	Casso	0.12	325	↓*e*Pg	Pg	12 41 23.9	+0.6
CSO				*e*Sg	Sg	12 41 26.0	+0.6
CIMO	Cimolais	0.13	6	↓*e*Pg	Pg	12 41 24.1	+0.6
CIMO				*e*Sg	Sg	12 41 26.2	+0.5
CIMO	Cimolais	0.13	6	P	Pg	12 41 24.1	+0.6
CIMO				S	Sg	12 41 26.4	+0.7
CIMO				AML	AML		
	comp=N,440μm,0.1s						
CIMO				AML	AML		
	comp=N,399μm,0.1s						
CIMO				AML	AML		
	comp=E,176μm,0.4s						
CIMO				AML	AML		
	comp=E,186μm,0.4s						
MLNI	Malnisio	0.14	101	↑*e*Pg	Pg	12 41 24.1	+0.6
MLNI				*e*Sg	Sg	12 41 26.6	+0.9
FRE8	Fregona	0.17	196	P	Pg	12 41 24.9	+0.9
FRE8				S	Sg	12 41 27.7	+1.2
CAE	Caneva	0.17	176	↑*e*Pg	Pg	12 41 24.9	+0.8
CAE				*e*Sg	Sg	12 41 27.7	+1.0
CAE	Caneva	0.17	176	P	Pg	12 41 24.5	+0.4
CAE				S	Sg	12 41 27.8	+1.2
STAL	STALIGIAL	0.22	67	P	Pg	12 41 25.4	+0.5
STAL				S	Sg	12 41 28.9	+1.0
STAL				AML	AML		
	comp=N,181μm,0.1s						
STAL				AML	AML		
	comp=E,184μm,1.5s						
AGOR	Agordo	0.28	292	*e*Pg	Pb	12 41 26.8	-0.7
VARN	Col Varnada, M	0.29	230	*e*Pg	Pg	12 41 26.5	+0.4
VARN				*e*Sg	Sg	12 41 31.1	+1.1
VARN	Col Varnada, M	0.29	230	P	Pg	12 41 26.6	+0.4
VARN				S	Sg	12 41 30.9	+0.9
VARN				AML	AML		
	comp=E,158μm,1.1s						
VARN				AML	AML		
	comp=N,113μm,0.9s						
VARN				AML	AML		
	comp=E,158μm,1.1s						
VARN				AML	AML		
	comp=N,112μm,0.5s						
VARN				AML	AML		
	comp=E,158μm,0.9s						
VARN				AML	AML		
	comp=N,113μm,1.1s						
VARN				AML	AML		
	comp=E,158μm,0.9s						
FUSE	Fusea	0.47	59	P	Pg	12 41 30.1	+0.6
FUSE				S	Sb	12 41 37.7	0.0

VIE 05 12:41:50.9±0.2,46°.70N×13°.76E,h0km,mb1.6/1,ml1.0/3,
Error ellipse: s-maj=1.8km s-min=1.1km az=151.0 4

km SW of Afritz Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKA	Terra Mystica	0.11	227	iPg	Pg	12 41 52.6	-0.3
	0.4nm,0.1s						
MYKA				iSg	Sg	12 41 54.4	+0.1
	2.2nm,0.1s						
KBA	Koelnbreinsper	0.47	323	iPg	Pg	12 42 00.4	+0.5
	0.3nm,0.1s						
KBA				eSg	Sg	12 42 06.7	+0.7
	1.0nm,0.3s						
OBKA	Obir	0.58	109	ePg	Pg	12 42 01.5	-0.5
	0.5nm,0.1s						
OBKA				iSg	Sg	12 42 10.6	+1.1
	1.5nm,0.1s						

*NOU **05** 12:46:06.2, 33°.27S×178°.48W, h347km, mb4.1/6, South of Kermadec Islands*
*WEL **05** 12:46:27.3±0.5, 34°S±8°×18°0E±1°8, h193km±13km, M3.9/14, mB4.4/6, ML4.0/19, MLv4.1/14, Mw(mB)3.6/6, Error ellipse: s-maj=24.9km s-min=5.4km az=112.2*
ISC 05 12:46:28.5±1.7, 34°.4S±0°.1×179°.8E±0°.2, h250km, n42, σ1s.15/50, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.44	201	P	Pn	12 47 26.1	+0.4
MXZ	Matakaoa Point	3.44	201	P	Pn	12 47 25.9	+0.2
MXZ				S	S	12 48 11.3	+0.2
WMGZ	Waiomatatini S	3.65	198	P	Pn	12 47 29.8	+1.7
WMGZ				S	S	12 48 19.2	+3.7
HAZ	Te Kaha	3.79	205	P	Pn	12 47 29.8	+0.2
HAZ				S	S	12 48 18.1	-0.2
PKGZ	Pakihiroa	3.79	202	P	Pn	12 47 30.6	+0.9
PKGZ				S	S	12 48 20.8	+2.4
PUZ	Puketiti	3.93	199	P	Pn	12 47 32.1	+0.8
PUZ				S	S	12 48 22.0	+0.6
RUGZ	Raukumara Rang	4.01	205	P	Pn	12 47 33.4	+1.0
RUGZ				S	S	12 48 21.8	-1.5
TWGZ	Tauwhareparae	4.10	201	P	Pn	12 47 34.5	+1.0
TWGZ				S	S	12 48 25.5	+0.4
KUZ	Kuaotunu	4.12	233	P	Pn	12 47 33.7	+0.1
TBAS	Tolaga Bay Are	4.20	197	P	Pn	12 47 38.8	+4.3
OPRZ	Ohinepanea	4.38	216	P	Pn	12 47 37.6	+0.9
TKGZ	Te Karaka	4.39	201	P	Pn	12 47 36.9	+0.2
MWZ	Matawai	4.39	204	P	Pn	12 47 37.0	+0.1
MWZ				S	S	12 48 30.6	-0.7
MARZ	Manawahe	4.44	214	P	Pn	12 47 38.9	+1.4
URZ	Urewera	4.48	209	P	Pn	12 47 37.4	-0.4
URZ	Urewera	4.48	209	P	Pn	12 47 37.5	-0.4
RAGZ	Rawiri	4.58	205	P	Pn	12 47 39.3	+0.2
RIGZ	Rimuhau	4.66	200	P	Pn	12 47 40.1	0.0
RIGZ				S	S	12 48 36.7	-0.4
MUGZ	Murupara	4.80	210	P	Pn	12 47 42.8	+1.0
PRGZ	Paritu Road	4.83	198	P	Pn	12 47 42.1	+0.1
RTZ	Ruatahuna	4.84	208	P	Pn	12 47 42.8	+0.5
SNGZ	Shannon Statio	4.86	204	P	Pn	12 47 42.4	0.0
SNGZ				S	S	12 48 41.5	0.0
PRRZ	Plateau Road	4.99	213	P	Pn	12 47 45.1	+1.1
MHGZ	Mahia Peninsul	5.04	197	P	Pn	12 47 45.0	+0.3
ALRZ	Allen Road	5.06	213	P	Pn	12 47 46.0	+1.0
RAHZ	Arahi	5.07	205	P	Pn	12 47 44.7	-0.3
MTHZ	Maungataniwha	5.10	207	P	Pn	12 47 45.5	0.0
TLZ	Tolley Road	5.27	220	P	Pn	12 47 49.3	+1.8
NMHZ	Naumai	5.33	206	P	Pn	12 47 48.0	-0.2
ARHZ	Aropaoanui	5.41	204	P	Pn	12 47 50.1	+1.0
GLKZ	Green Lake	5.42	21	S	S	12 48 42.3	-12
BKZ	Black Stump Fm	5.51	208	P	Pn	12 47 51.1	+0.7
BKZ	Black Stump Fm	5.51	208	P	Pn	12 47 51.1	+0.7
RITZ	Rihia Road	5.62	214	P	Pn	12 47 52.5	+0.7
MCHZ	McNeill Hill	5.67	205	P	Pn	12 47 53.2	+0.8
TMVZ	Te Maari	5.80	214	P	Pn	12 47 54.3	+0.2
NGZ	Ngauruhoe	5.90	214	P	Pn	12 47 55.7	+0.3
PWZ	Pawanui	6.15	202	P	Pn	12 47 58.3	0.0
BFZ	Birch Farm	6.94	203	P	Pn	12 48 05.9	-2.3
SNZO	South Karori	8.05	209	P	Pn	12 48 20.4	-1.8
KHZ	Kahutara	9.45	210	P	Pn	12 48 36.5	-3.4
AFI	Afiamalu	21.72	23	P	P	12 50 59.7	-0.3

*SJA **05** 12:48:36.4±0.7, 19°.71S×69°.71W, h83km±2km, ML3.6, MW3.7*
*GUC **05** 12:48:37.4±0.8, 19°.72S×69°.71W, h77km±3km, ML3.6*
ISC 05 12:48:38.6±1.3, 19°.69S±0°.03×69°.75W±0°.05, h71km±7km, n26, σ1s.19/51, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.11	130	⇑iP	Pn	12 48 49.0	-0.3
PB11				eS	Sn	12 48 57.5	+0.5
PB11				IAML		12 48 58.4	
	comp=E,11µm,0.4s						
PB11	IPOC Station P	0.11	130	eP	Pn	12 48 48.9	-0.3
PB11				eS	Sn	12 48 58.2	+1.2
PB11				IAML		12 48 58.2	
	comp=Z,3µm,0.3s						
GO01	Chusmiza	0.52	88	eP	Pn	12 48 51.6	-0.6
GO01				eS	Sn	12 49 02.5	+0.3
GO01				IAML		12 49 03.5	
	comp=N,19µm,0.1s						
GO01	Chusmiza	0.52	88	eP	Pn	12 48 51.6	-0.6
GO01				eS	Sn	12 49 02.9	+0.7
GO01				IAML		12 49 02.9	
	comp=Z,1µm,0.3s						
HMBC	Humberstone	0.60	193	⇑iP	Pn	12 48 52.0	-0.7
HMBC				eS	Sn	12 49 03.1	+0.1
HMBC				IAML		12 49 04.5	
	comp=N,2µm,0.2s						
HMBC	Humberstone	0.60	193	eP	Pn	12 48 52.0	-0.7
HMBC				eS	Sn	12 49 04.2	+1.2
HMBC				eS		12 49 04.8	
HMBC				IAML		12 49 04.9	
	comp=Z,2µm,0.2s						
TA02	Huaiquique	0.68	212	eP	Pn	12 48 52.8	-0.6
TA02				eS	Sn	12 49 04.4	+0.1
TA02				IAML		12 49 05.2	
	comp=N,10µm,0.1s						
TA02	Huaiquique	0.68	212	eP	Pn	12 48 52.8	-0.6
TA02				eS	Sn	12 49 05.1	+0.8
TA02				IAML		12 49 05.2	
	comp=Z,2µm,0.2s						
PB08	IPOC Station P	0.72	129	⇑iP	Pn	12 48 53.8	-0.4
PB08				eS	Sn	12 49 05.8	+0.2
PB08				IAML		12 49 06.3	
	comp=E,3µm,0.2s						
PB08	IPOC Station P	0.72	129	eP	Pn	12 48 53.6	-0.6
PB08				eS	Sn	12 49 06.0	+0.4
PB08				IAML		12 49 06.2	
	comp=Z,2µm,0.2s						
PX03	IPOC Station P	0.72	171	eP	Pn	12 48 52.6	-1.4
PX03				eS	Sn	12 49 05.3	+0.1
PX03				IAML		12 49 06.1	
	comp=N,4µm,0.2s						
PATCX	Punta Patache	1.19	199	eP	Pn	12 48 58.8	-0.9
PATCX				eS	Sn	12 49 15.1	-0.3
PATCX				IAML		12 49 17.2	
	comp=E,640nm,0.3s						
PATCX	Punta Patache	1.19	199	eP	Pn	12 48 58.9	-0.8
PATCX				eS	Sn	12 49 16.2	+0.8
PATCX				IAML		12 49 16.8	
	comp=Z,585nm,0.5s						
PB16	IPOC Station P	1.37	10	eP	Pn	12 49 02.6	+0.1
PB16				eS	Sn	12 49 21.4	+1.2
PB01	IPOC Station P	1.37	170	⇑iP	Pn	12 49 01.2	-0.8
PB01				eS	Sn	12 49 19.5	0.0
PB01				IAML		12 49 20.1	
	comp=N,932nm,0.3s						
PB01	IPOC Station P	1.37	170	eP	Pn	12 49 01.2	-0.8
PB01				eS	Sn	12 49 19.7	+0.2
PB01				IAML		12 49 21.2	
	comp=Z,522nm,0.1s						
AP01	Chacalluta	1.43	337	eP	Pn	12 49 02.4	-0.3
AP01				eS	Sn	12 49 22.1	+1.3
PB02	IPOC Station P	1.63	185	eP	Pn	12 49 04.8	-0.6
PB02				eS	Sn	12 49 25.8	+0.2
PB02				IAML		12 49 30.1	
	comp=E,1µm,0.4s						
PB02	IPOC Station P	1.63	185	eP	Pn	12 49 04.8	-0.6
PB02				eS	Sn	12 49 26.5	+0.9
PB02				IAML		12 49 30.4	
	comp=Z,1µm,0.3s						
PB07	IPOC Station P	2.03	184	eP	Pn	12 49 10.2	-0.7
PB07				eS	Sn	12 49 37.8	+2.4
PB07				IAML		12 49 39.4	
	comp=Z,300nm,0.4s						
PB09	IPOC Station P	2.15	167	eP	Pn	12 49 12.6	+0.2
PB09				eS	Sn	12 49 42.7	+4.4
PB03	IPOC Station P	2.35	180	eP	Pn	12 49 14.1	-0.9
PB03				eS	Sn	12 49 42.8	-0.3
PB03				IAML		12 49 49.6	
	comp=E,285nm,0.7s						
PB03	IPOC Station P	2.35	180	eP	Pn	12 49 14.2	-0.9
PB03				eS	Sn	12 49 45.3	+2.2
PB03				IAML		12 49 49.7	
	comp=Z,257nm,0.6s						
PB06	IPOC Station P	3.00	177	eP	Pn	12 49 23.8	-0.3
PB06				eS	Sn	12 50 01.7	+2.6
PB05	IPOC Station P	3.18	188	eP	Pn	12 49 24.9	-1.5
PB05				eS	Sn	12 50 02.1	-1.0
LPAZ	La Paz	3.72	25	eP	Pn	12 49 31.9	-2.2

*IDC **05** 13:17:03.4±1.1, 12°.62N×144°.20E, h0km, mb3.7/8, mbtmp3.6/8, Error ellipse: s-maj=30.1km s-min=17.7km az=131.0*
ISC 05 13:17:07.4±1.0, 12°.6N±0°.2×144°.2E±0°.2, h27km, n15, σ0s.36/10, mb3.7/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.16	33	Pn	Pn	13 17 28.0	0.0
	169nm,0.3s,baz=219,slow=5.0,SNR=53						
GUMO				Sn	Sb	13 17 43.8	+0.2
	216nm,0.3s,baz=154,slow=22,SNR=36						
H11S3	WAKE ISLAND Hy	22.42	72	T	T	13 45 09.1	
	baz=258,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	22.43	72	T	T	13 45 15.1	
	baz=258,slow=75,SNR=6.2						
H11S2	WAKE ISLAND Hy	22.43	72	T	T	13 45 11.1	
	baz=258,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	22.88	69	T	T	13 45 44.6	
	baz=255,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	22.89	69	T	T	13 45 45.4	
	baz=255,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	22.90	69	T	T	13 45 46.0	
	baz=255,slow=75,SNR=20						
ASAR	Alice Springs	37.44	196	P	P	13 24 18.9	+0.2
	0.4nm,0.8s,baz=23,slow=11,SNR=8.8						
	0.4nm,0.8s						
CMAR	Chiang Mai Arr	43.92	284	P	P	13 25 12.4	+0.1
	0.9nm,0.6s,baz=85,slow=6.4,SNR=6.4						
	0.9nm,0.6s						
MKAR	Makanchi Array	61.75	317	P	P	13 27 23.8	+0.1
	0.3nm,0.6s,baz=88,slow=7.7,SNR=7.1						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	64.96	320	P	P	13 27 44.5	-0.3
	0.6nm,0.6s,baz=106,slow=6.3,SNR=6.3						
	0.6nm,0.6s						
ILAR	Eielson Array	69.72	25	P	P	13 28 14.9	+0.2
	0.3nm,0.9s,baz=247,slow=5.7,SNR=4.5						
	0.3nm,0.9s						
BVAR	Borovoye Array	70.30	322	P	P	13 28 18.3	-0.1
	0.8nm,0.4s,baz=94,slow=6.7,SNR=6.7						
	0.8nm,0.4s						
NVAR	Mina Array Bea	88.03	51	P	P	13 29 55.9	0.0
	0.5nm,0.7s,baz=289,slow=9.1,SNR=4.0						
	0.5nm,0.7s						
PDAR	Pinedale Array	93.10	45	P	P	13 30 18.7	-0.8
	0.1nm,0.5s,baz=286,slow=5.3,SNR=2.0						
	0.1nm,0.5s						

*IDC **05** 13:20:38.3±1.4, 7°.69S×127°.57E, h174km±15km, mb3.7/5, mbtmp4.3/10, Error ellipse: s-maj=17.2km s-min=13.5km az=110.0*
*NEIC **05** 13:20:39.7±2.2, 7°.7S±0°.1×127°.61E±0°.05, h184km±9km, mb4.3/15, Error ellipse: s-maj=14.5km s-min=6.7km az=177.0*
*DJA **05** 13:20:40.1±0.2, 8°S±2°×12°8E±°, h92km, M4.4/19, mB5.2/2, mb4.2/10, MLv4.4/19, Mw(mB)4.6/2*
ISC 05 13:20:39.3±0.5, 7°.81S±0°.05×127°.69E±0°.05, h200km, n44, σ2s.55/53, mb4.1/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.58	93	Pn	Pn	13 21 36.7	+0.8
SAUI	Saumlaki	3.58	93	P	Pn	13 21 36.5	+0.6
SAUI				S	Sn	13 22 16.8	-3.4
SOEI	Soe	3.90	240	Pn	Pn	13 21 39.6	-0.4
SOEI	Soe	3.90	240	P	Pn	13 21 39.5	-0.4
SOEI				S	Sn	13 22 23.6	-4.0
BNDI	Bandanaira	3.94	34	P	Pn	13 21 36.4	-3.9
BATI	Baumata	4.64	239	P	Pn	13 21 48.0	-1.2
	49nm,0.6s,baz=154,slow=1.2,SNR=7.0						
BATI				S	Sn	13 22 40.9	-3.2
	110nm,0.5s,baz=58,slow=14,SNR=12						
BATI	Baumata	4.64	239	P	Pn	13 21 48.5	-0.6
BATI				S	Sn	13 22 41.8	-2.3
EDFI	Ende, Flores	6.01	261	P	Pn	13 22 05.0	-1.9
MTN	Manton Dam	6.04	146		Pn	13 22 09.4	+2.3
FAKI	Fak Fak	6.64	43	Pn	Pn	13 22 14.1	-0.9
FAKI	Fak Fak	6.64	43	P	Pn	13 22 13.6	-1.4
	0.1nm13nm,1.0s						
FAKI				S	Sn	13 23 26.2	-4.6
	0.1nm13nm,1.0s						
BASI	Baing, Sumba	7.42	251	P	Pn	13 22 24.2	-0.9
	154nm,1.5s						
SIJI	Sorong	7.76	27	P	Pn	13 22 28.9	-0.5
	9.6nm,0.3s,baz=234,slow=23,SNR=15						
SIJI				S	Sn	13 23 53.9	-3.3
	4.1nm,0.3s,baz=261,slow=24,SNR=1.7						
SIJI	Sorong	7.76	27	P	Pn	13 22 29.1	-0.4
	0.1nm13nm,0.7s						
SIJI				S	Sn	13 23 53.5	-3.7
	0.1nm13nm,0.7s						
KNRA	Kununurra	7.89	172		Pn	13 22 31.1	0.0
FITZ	Fitzroy Crossi	10.42	191	P	Pn	13 23 02.8	-1.2
	12nm,0.7s,baz=26,slow=10,SNR=30						
FITZ				S	Sn	13 24 52.1	-8.3
	11nm,0.5s,baz=94,slow=17,SNR=8.3						
WB0	Warramunga Arr	13.55	152	Pn	P	13 23 45.0	-1.2
WRA	Warramunga Arr	13.68	153	P	P	13 23 45.3	-2.3
	2.3nm,0.5s,baz=325,slow=15,SNR=42						
WRA				S	S	13 26 12.1	-5.7
	4.2nm,0.4s,baz=332,slow=22,SNR=14						
WRA	Warramunga Arr	13.68	153	Pn	P	13 23 46.0	-1.6
MBWA	Marble Bar	15.34	209	P	P	13 24 06.6	+0.7
PSA00	Pilbara Seismi	15.64	208	P	Pn	13 24 11.2	+1.9
PSA00				IAmb	IAmb	13 24 12.5	
	comp=Z,7.5nm,1.2s						
COEN	Coen	16.38	113	P	Pn	13 24 21.0	+2.7
COEN				IAmb	IAmb	13 24 32.4	
	comp=Z,8.5nm,1.2s						
AS31	Alice Springs	16.86	160		Pn	13 24 26.9	+2.9
AS31				IAmb	IAmb	13 24 30.3	
	comp=Z,8.9nm,0.5s						
ASAR	Alice Springs	16.86	160	P	Pn	13 24 26.9	+2.9
	comp=Z,17nm,0.7s,baz=339,slow=10,SNR=323						
ASAR				S	S	13 27 27.7	-0.8
	comp=Z,2.4nm,0.4s,baz=347,slow=26,SNR=8.4						
ASAR	Alice Springs	16.86	160		Pn	13 24 26.6	+2.6
MORW	Morawa	23.83	206	P	P	13 25 37.3	+3.1
MORW				IAmb	IAmb	13 25 55.2	
	comp=Z,19nm,1.4s						
BBOO	Buckleboo	26.06	164	P	P	13 25 58.5	+4.1
STKA	Stephens Creek	27.23	153	P	P	13 26 08.3	+3.6
	comp=Z,1.3nm,0.5s,baz=308,slow=5.3,SNR=3.0						
	comp=Z,1.3nm,0.5s						
KULM	Kulim	29.95	295	P	P	13 26 28.2	-0.9
CMAR	Chiang Mai Arr	38.55	313	P	P	13 27 43.3	+0.5
	comp=Z,1.6nm,0.3s,baz=136,slow=7.1,SNR=7.2						
	comp=Z,1.6nm,0.3s						
MKAR	Makanchi Array	67.67	328	P	P	13 31 15.7	+0.8
	comp=Z,1.0nm,0.6s,baz=116,slow=8.5,SNR=24						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	67.67	328	P	P	13 31 14.9	+0.1
BOOM	Boomskoye usch	68.72	321	P	P	13 31 21.4	-0.3
AAK	Ala-Archa	69.70	321	P	P	13 31 29.1	+1.4
ZALV	Zalesovo Beam	71.31	335	P	P	13 31 36.9	0.0
	comp=Z,1.0nm,0.4s,baz=140,slow=6.0,SNR=2.9						
	comp=Z,1.0nm,0.4s						
VNDA	Vanda	71.94	173	P	P	13 31 43.4	+3.0
VNDA				IAmb	IAmb	13 32 14.2	
	comp=Z,7.6nm,1.5s						
KURBB	Kurchatov Arra	72.02	330	P	P	13 31 41.8	+0.6
	comp=Z,1.0nm,0.5s,baz=135,slow=5.1,SNR=30						
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	72.03	330	P	P	13 31 41.7	+0.4
KURK				IAmb	IAmb	13 31 43.0	
	comp=Z,1.8nm,0.5s						
AB31	Akbulak array	81.73	322	P	P	13 32 37.1	+1.6
ABKAR	Akbulak array	81.73	322	P	P	13 32 36.4	+0.9
J16K	Anvik River	88.84	25	P	P	13 33 12.1	+1.8
J16K				IAmb	IAmb	13 33 14.4	
	comp=Z,4.7nm,1.2s						
C19K	Lookout Ridge	91.17	20	P	P	13 33 23.3	+2.2
C19K				IAmb	IAmb	13 33 57.5	
	comp=Z,6.0nm,1.4s						
D19K	Kuna River	91.48	21	P	P	13 33 23.3	+0.7
D19K				IAmb	IAmb	13 33 30.4	
	comp=Z,7.0nm,1.5s						
PDAR	Pinedale Array	119.08	45	PKP	PKiKP	13 39 06.8	+1.9
	comp=Z,0.2nm,0.6s,baz=295,slow=1.6,SNR=2.7						

*NEIC **05** 13:31:52.3±2.2, 19°.20N±0°.04×67°.12W±0°.02, h10km±1km, ML3.1/37, Md3.2/7(RSPR), Error ellipse: s-maj=6.6km s-min=2.9km az=203.0*
*OSPL **05** 13:31:54.4±0.6, 19°.18N×67°.34W, h17km±3km, ML2.9, Presumed earthquake*
*RSPR **05** 13:31:55.9, 19°.13N×67°.17W, h11km±3km, MD3.2/7*
*SDD **05** 13:31:55.9±2.5, 19°.09N×67°.22W, h8km±11km, MD3.7, ML3.3, MW3.3, Presumed earthquake*
ISC 05 13:31:52.7±1.4, 19°.14N±0°.05×67°.16W±0°.03, h11km±9km, n53, σ1s.01/88, 25C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.67	176		Pb	13 32 07.2	+0.9
AGPR				Sg	Sb	13 32 15.8	+0.1
AGPR				IAML		13 32 18.3	
	887nm,0.4s						
AGPR				IAML		13 32 18.8	
	607nm,0.4s						
AGPR	Aguadilla, PR	0.67	176	⇑iP	Pn	13 32 07.4	-0.7
AGPR				⇑iS	Sb	13 32 15.3	-0.3
AGPR				IAML		13 32 19.7	
	comp=N,937nm,0.2s						
AGPR	Aguadilla, PR	0.67	176	⇑eP	Pb	13 32 07.3	+0.9
AGPR				eS	Sb	13 32 17.1	+1.6
AGPR	Aguadilla, PR	0.67	176	iP	Pn	13 32 07.5	-0.7
AGPR				eS	Sb	13 32 17.2	+1.6
AGPR				IAML		13 32 20.7	
	comp=Z,407nm,0.2s						
IDE	Isla Desecheo	0.80	202		Pb	13 32 09.1	+0.4
IDE					Sb	13 32 20.6	+0.9
IDE	Isla Desecheo	0.80	202	⇑eP	Pb	13 32 09.1	+0.4
IDE				eS	Sb	13 32 20.6	+0.9
EMPR	Esperanza - Ma	0.88	138		Pn	13 32 12.1	+1.0
EMPR	Esperanza - Ma	0.88	138	⇓eP	Pn	13 32 12.1	+1.0
PRSN	Puerto Rico Se	0.91	179		Pn	13 32 11.2	-0.3
PRSN	Puerto Rico Se	0.91	179		Sn	13 32 24.2	-0.5
PRSN	Puerto Rico Se	0.91	179	⇑iP	Pn	13 32 11.2	-0.3
PRSN				⇑iS	Sg	13 32 22.5	+0.2
PRSN				IAML		13 32 28.7	
	comp=N,1µm,0.2s						
PRSN	Puerto Rico Se	0.91	179	⇑eP	Pn	13 32 11.4	-0.1
PRSN				eS	Sn	13 32 24.2	-0.5
LSP	Las Mesas	0.96	176		Pn	13 32 11.8	-0.3
LSP					Sg	13 32 23.9	+0.3
LSP	Las Mesas	0.96	176	⇓eP	Pn	13 32 11.8	-0.3
LSP				eS	Sg	13 32 23.9	+0.3
UUPR	Utuado, UPR, P	0.97	155		Pn	13 32 12.2	-0.1
UUPR				Sg	Sg	13 32 22.5	-1.6
ECPR	Experimental S	1.11	137		Pn	13 32 14.3	+0.2
ECPR					Sn	13 32 29.6	+0.2
ECPR				IAML		13 32 35.9	
	comp=N,888nm,0.2s						
ECPR	Experimental S	1.11	137	⇑eP	Pn	13 32 14.4	+0.2
ECPR				eS	Sb	13 32 29.0	+0.7
CRPR	Cabo Rojo, PR	1.12	178		Pb	13 32 14.0	-0.2
CRPR				IAML		13 32 31.3	
	comp=N,307nm,0.3s						
CRPR				IAML		13 32 37.8	
	comp=N,232nm,0.3s						
CRPR	Cabo Rojo, PR	1.12	178		Sb	13 32 29.3	+0.5
CRPR	Cabo Rojo, PR	1.12	178	⇑iP	Pn	13 32 14.6	+0.2
CRPR				⇑iS	Sg	13 32 28.9	-0.1
CRPR				IAML		13 32 39.8	
	comp=N,279nm,0.4s						
CRPR	Cabo Rojo, PR	1.12	178	⇑eP	Pg	13 32 14.3	-0.1
CRPR				eS	Sb	13 32 29.3	+0.5
CRPR	Cabo Rojo, PR	1.12	178	iP	Pn	13 32 14.6	+0.2
CRPR				eS	Sb	13 32 29.5	+0.7
CRPR				IAML		13 32 31.1	
	comp=Z,253nm,0.3s						
MLPR	Magueyes Islan	1.17	175		Pb	13 32 14.8	0.0
MLPR				Sg	Sb	13 32 30.1	+0.2
GBPR	Guanica, Bosqu	1.18	167		Pb	13 32 14.9	-0.3
GBPR					Sb	13 32 29.5	-1.1
GBPR	Guanica, Bosqu	1.18	167	⇓eP	Pb	13 32 14.9	-0.3
GBPR				eS	Sb	13 32 29.5	-1.1
CELP	Cerrillos	1.19	152		Pg	13 32 15.5	-0.1
CELP				Sn	Sg	13 32 31.0	-0.1
CELP				IAML		13 32 34.3	
	comp=Z,326nm,0.3s						
CELP				IAML		13 32 36.4	
	comp=Z,384nm,0.3s						
OBIP	Obispado Ponce	1.21	154		Pg	13 32 16.0	+0.1
OBIP	Obispado Ponce	1.21	154		Sb	13 32 30.7	-0.5
OBIP	Obispado Ponce	1.21	154	⇓eP	Pg	13 32 16.0	+0.1
OBIP				eS	Sb	13 32 30.7	-0.5
OBIP	Obispado Ponce	1.21	154	iP	Pg	13 32 16.1	+0.2
OBIP				eS	Sn	13 32 32.5	+0.6
OBIP				IAML		13 32 34.3	
	comp=Z,198nm,0.3s						
GCPR	Guaynabo City	1.31	129		Pn	13 32 16.9	0.0
SJG	San Juan	1.40	137		Pg	13 32 19.3	-0.3
SJG				IAML		13 32 47.0	
	comp=Z,267nm,0.3s						
SJG				IAML		13 32 49.3	
	comp=Z,219nm,0.3s						
SJG	San Juan	1.40	137	⇑iP	Pg	13 32 19.9	+0.4
SJG				⇑iS	Sg	13 32 37.7	0.0
SJG	San Juan	1.40	137	⇓eP	Pg	13 32 19.1	-0.5
SJG				eS	Sn	13 32 35.3	-1.2
SJG	San Juan	1.40	137	iP	Pg	13 32 19.7	+0.1
SJG				eS	Sg	13 32 38.4	+0.7
SJG				IAML		13 32 47.8	
	comp=Z,139nm,0.3s						
PDPR	Patillas Dam,	1.55	136		Pb	13 32 21.2	-0.2
HIDR	Higuey Centro	1.57	250	⇑iP	Pn	13 32 20.3	-0.3
HIDR				⇑iS	Sn	13 32 40.4	-0.6
HIDR				IAML		13 32 47.0	
	comp=N,354nm,0.2s						
HIDR	Higuey Centro	1.57	250	⇓eP	Pn	13 32 20.3	-0.3
HIDR				eS	Sn	13 32 40.6	-0.3
HUMP	Col San Antoni	1.58	128		Pb	13 32 21.7	-0.4
HUMP				IAML		13 32 56.1	
	comp=N,158nm,0.4s						
HUMP				IAML		13 32 58.3	
	comp=N,225nm,0.3s						
HUMP	Col San Antoni	1.58	128		Sn	13 32 39.8	-1.4
HUMP	Col San Antoni	1.58	128	⇑eP	Pb	13 32 21.6	-0.4
HUMP				eS	Sn	13 32 39.8	-1.4
SMDR	Samana, DR	1.93	275		Pn	13 32 24.4	-1.1
SMDR					Sn	13 32 48.7	-1.0
SMDR	Samana, DR	1.93	275	⇑iP	Pn	13 32 26.1	+0.6
SMDR				iS	Sn	13 32 48.8	-0.8
SMDR				IAML		13 32 57.8	
	comp=N,92nm,0.8s						
SMDR	Samana, DR	1.93	275	⇓eP	Pn	13 32 24.4	-1.1
SMDR				eS	Sn	13 32 48.7	-1.0
CUPR	Culebra, Puert	1.96	115	Pn	Pn	13 32 26.0	+0.2
DR12	Loma Pena Alta	2.13	261		Pn	13 32 29.1	+0.7
HATOM	Hato Mayor del	2.13	261	⇑iP	Pn	13 32 29.0	+0.6
HATOM				⇑iS	Sn	13 32 54.2	-0.7
HATOM				IAML		13 33 04.8	
	comp=N,86nm,0.3s						
DR08	Loma La Naviza	2.72	267	⇑iP	Pn	13 32 36.5	+0.1
DR08				⇑iS	Sn	13 33 07.5	-1.7
DR08				IAML		13 33 21.3	
	comp=N,2µm,0.2s						
BANI	BANI	3.12	257		Pn	13 32 43.0	+0.9
BANI	BANI	3.12	257	⇑iP	Pb	13 32 46.1	-2.3
BANI				⇑iS	Sn	13 33 16.9	-2.5
BANI				IAML		13 33 37.5	
	comp=N,158nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	Presa de Saban	3.91	268		Pn	13 32 53.9	+1.1
REDR	Restauracion	4.01	271	⇑iP	Pn	13 32 57.9	+3.8
REDR				⇑iS	Sn	13 33 45.3	+4.2
REDR				IAML		13 33 49.8	
	comp=N,86nm,0.1s						
SMRT	St. Maarten	4.02	105	Pn	Pn	13 32 55.4	+1.2

IDC 05 13:35:53.8±1.2, 5.17S×120.80E, h0km, mb3.4/3, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=37.0km s-min=17.9km az=30.0

DJA 05 13:35:55.4±0.2, 6°S±1°×12°0E±°, h10km, M4.1/17, mb4.3/2, MLv4.0/17

ISC 05 13:35:55.3±1.9, 6.14S±0.03×119.59E±0.05, h14km±14km, n19, σ0.88/28, mb3.6/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSSI	Bau Bau, Buton	0.89	90	P	Pb	13 36 12.6	0.0
BSSI				S	Sn	13 36 26.1	-0.1
MKS	Makassar	0.93	352	P	Pb	13 36 13.0	-0.2
MKS				S	Sn	13 36 26.5	-0.6
KAPI	Kappang	1.13	8	Pn	Pb	13 36 16.1	-0.6
	77nm,0.3s,baz=175,slow=3.3,SNR=156						
KAPI				LR	LR	13 36 24.4	
	comp=Z,70nm,18.0s,baz=222,slow=29						
KAPI				Sn	Sg	13 36 31.8	0.0
	276nm,0.3s,baz=167,slow=16,SNR=18						
KAPI	Kappang	1.13	8	P	Pb	13 36 16.0	-0.7
KAPI				S	Sg	13 36 31.9	0.0
SPSI	Sidrap Palu	2.17	5	P	Pn	13 36 31.9	+0.8
DBNI	Kabupaten Domp	2.67	208	P	Pn	13 36 38.1	+0.1
DBNI				S	Sn	13 37 10.5	+0.4
PMSI	Majene	2.71	346	P	Pn	13 36 39.1	+0.6
KKSI	Kolaka, Sulawe	2.83	46	P	Pn	13 36 40.6	+0.4
TTSI	Tana Toraja	3.08	4	P	Pn	13 36 45.0	+1.3
TTSI				S	Sn	13 37 22.2	+1.8
PLAI	Plampang	3.22	214	P	Pn	13 36 45.9	+0.3
PLAI				S	Sn	13 37 24.9	+1.1
EDFI	Ende, Flores	3.32	141	P	Pn	13 36 47.4	+0.3
WBSI	Waikabubak, Su	3.48	183	P	Pn	13 36 50.1	+0.9
WBSI				S	Sn	13 37 31.0	+0.7
MMSI	Mamuju	3.50	349	P	Pn	13 36 50.4	+1.0
TWSI	Taliwang, Sumb	3.73	226	P	Pn	13 36 52.4	-0.1
TWSI				S	Sn	13 37 36.1	-0.2
KMMI	Kalianget	5.66	261	P	Pn	13 37 20.4	+1.2
WRA	Warramunga Arr	19.84	135	P	P	13 40 25.8	-0.2
	0.1nm,0.3s,baz=311,slow=12,SNR=7.2						
	0.5nm,0.8s						
ASAR	Alice Springs	22.21	143	P	P	13 40 52.8	+1.2
	0.7nm,0.8s,baz=322,slow=10.0,SNR=7.9						
	0.7nm,0.8s						
MKAR	Makanchi Array	62.21	332	P	P	13 46 15.7	-0.9
	0.5nm,0.8s,baz=136,slow=7.6,SNR=6.3						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	66.70	333	P	P	13 46 43.9	-1.9
	0.3nm,0.7s,baz=141,slow=6.0,SNR=4.2						
	0.3nm,0.7s						

IDC 05 13:42:38.9±3.3, 2.42S×67.58E, h0km, mb3.8/7, mbtmp3.8/7, MS3.6/4, Error ellipse: s-maj=93.8km s-min=26.3km az=67.0

NEIC 05 13:42:45.3±1.5, 2.09S±0.07×68.4E±0.1, h10km±1km, mb4.4/12, Error ellipse: s-maj=26.5km s-min=8.6km az=290.0

ISC 05 13:42:44.4±1.2, 2.1S±0.1×68.4E±0.2, h10km, n25, σ1.16/22, mb4.2/11, MS3.8/3, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	5.29	61	Pn	Pn	13 44 03.5	-0.1
PALK	Pallekele	15.43	53	LR	LR	13 50 41.8	
	comp=Z,194nm,19.6s,baz=214,slow=30						
LHMI	Lhok Sumawe	29.46	76	P	P	13 48 46.9	-1.9
KULM	Kulim	33.06	77	P	P	13 49 19.4	-1.2
SHL	Shillong	35.71	38	P	P	13 49 41.8	-1.8
CMAR	Chiang Mai Arr	36.37	54	P	P	13 49 51.8	+2.7
	0.2nm,0.3s,baz=250,slow=12,SNR=5.3						
CMAR				LR	LR	14 02 57.7	
	comp=Z,40nm,21.8s,baz=265,slow=33						
	0.2nm,0.3s						
KBL	Kabul	36.46	1	P	P	13 49 49.2	-0.7
KBL				IAmb	IAmb	13 50 33.8	
	comp=Z,3.0nm,0.5s						
LSA	Lhasa	38.40	33	P	P	13 50 08.1	+1.4
GAR	Garm	40.95	2	P	P	13 50 27.3	-0.1
GAR				IAmb	IAmb	13 50 28.9	
	comp=Z,14nm,1.3s						
BTK	Batken	42.02	3	P	P	13 50 36.2	0.0
BTK				IAmb	IAmb	13 50 40.2	
	comp=Z,5.0nm,0.4s						
AAK	Ala-Archa	44.88	6	P	P	13 51 00.8	+1.5
AAK				IAmb	IAmb	13 51 02.2	
	comp=Z,6.0nm,1.4s						
MKAR	Makanchi Array	50.21	12	P	P	13 51 39.4	-1.1
	comp=Z,0.3nm,0.8s,baz=181,slow=7.2,SNR=3.7						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	50.21	12	P	P	13 51 40.6	0.0
ABKAR	Akbulak array	51.68	353	P	P	13 51 51.2	-0.3
KURBB	Kurchatov Arra	53.24	8	P	P	13 52 02.5	-0.6
	comp=Z,1.6nm,1.1s,baz=200,slow=7.4,SNR=4.6						
	comp=Z,1.6nm,1.1s						
BATI	Baumata	55.48	101	LR	LR	14 17 23.3	
	comp=Z,80nm,18.3s,baz=283,slow=37						
ZALV	Zalesovo Beam	57.52	11	P	P	13 52 32.7	-1.1
	comp=Z,0.7nm,0.6s,baz=237,slow=4.9,SNR=4.5						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	59.77	29	P	P	13 52 51.3	+1.4
	comp=Z,1.7nm,1.0s,baz=220,slow=6.0,SNR=7.2						
	comp=Z,1.7nm,1.0s						
SONM	Songino Array	59.77	29	P	P	13 52 50.3	+0.4
SONM				IAmb	IAmb	13 52 55.6	
	comp=Z,3.1nm,1.3s						
FORT	Forrest	63.08	124	P	P	13 53 12.5	+0.1
WRA	Warramunga Arr	66.71	111	P	P	13 53 36.4	+0.1
	comp=Z,1.4nm,0.8s,baz=282,slow=6.0,SNR=9.5						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	66.71	111	P	P	13 53 36.4	+0.1
ASAR	Alice Springs	66.79	115	P	P	13 53 36.6	-0.1
	comp=Z,1.4nm,0.8s,baz=287,slow=6.1,SNR=9.7						
	comp=Z,1.4nm,0.8s						
CASY	Casey	70.54	163	P	P	13 53 59.5	+0.2
KLR	Kul'dur	74.57	37	LR	LR	14 29 13.5	
	comp=Z,50nm,21.4s,baz=355,slow=37						

IDC 05 13:44:58.4±1.6, 14.98N×122.86E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=26.8km s-min=18.1km az=170.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	2.06	245	Pg	Pb	13 45 36.6	-0.1
	214nm,0.3s,baz=118,slow=4.1,SNR=10						
TGY				Lg	Lg	13 46 03.6	
	248nm,0.3s,baz=158,slow=23,SNR=15						
CMAR	Chiang Mai Arr	23.16	282	P	P	13 50 05.6	-1.2
	0.7nm,0.6s,baz=88,slow=7.4,SNR=7.8						
	0.7nm,0.6s						
WRA	Warramunga Arr	36.49	162	P	P	13 52 04.7	-1.0
	0.7nm,1.0s,baz=342,slow=8.6,SNR=3.2						
	0.7nm,1.0s						
ASAR	Alice Springs	39.90	164	P	P	13 52 35.2	+0.8
	0.1nm,0.4s,baz=342,slow=8.1,SNR=2.0						
	0.1nm,0.4s						
H11S3	WAKE ISLAND Hy	42.04	79	T	T	14 37 56.2	
	baz=271,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	42.05	79	T	T	14 38 06.0	
	baz=271,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	42.06	79	T	T	14 37 57.6	
	baz=271,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	42.20	77	T	T	14 38 14.9	
	baz=270,slow=75,SNR=9.4						
H11N2	WAKE ISLAND Hy	42.21	77	T	T	14 38 17.4	
	baz=270,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	42.22	77	T	T	14 38 19.4	
	baz=270,slow=75,SNR=9.5						
MKAR	Makanchi Array	46.29	322	P	P	13 53 26.5	+0.6
	0.4nm,0.8s,baz=118,slow=7.0,SNR=3.7						
	0.4nm,0.8s						

SDD 05 13:48:15.8±0.8, 19.05N×68.19W, h15km±999km, MD3.2, ML2.5, Presumed earthquake, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATOM	Hato Mayor del	1.16	257	ePg	Pn	13 48 35.6	-1.9
HATOM				eSg	Sb	13 48 51.2	-1.3
HATOM				IAML		13 49 25.5	
	comp=N,15nm,1.6s						
AGPR	Aguadilla, PR	1.17	119	ePg	Pn	13 48 36.6	-1.1
AGPR				eSg	Sb	13 48 51.0	-1.7
AGPR				IAML		13 49 01.8	
	comp=N,72nm,1.3s						
PRSN	Puerto Rico Se	1.29	130	ePg	Pn	13 48 35.3	-3.9
PRSN				eSg	Sb	13 48 53.7	-2.4
PRSN				IAML		13 48 56.6	
	comp=N,319nm,0.3s						
CADR	Cabrera	1.77	291	ePg	Pn	13 48 46.2	+0.4
CADR				IAML		13 49 18.7	
	comp=N,307nm,1.1s						

RSPR 05 13:48:38.2, 17.85N×66.88W, h11km, MD2.7/5, 5C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.13	2	⇑iP	Pg	13 48 41.5	+0.2
GBPR				eS	Sg	13 48 44.1	+0.5
CRPR	Cabo Rojo, PR	0.27	307	⇑iP	Pg	13 48 43.7	0.0
CRPR				eS	Sg	13 48 48.1	+0.7
OBIP	Obispado Ponce	0.33	53	⇑eP	Pg	13 48 44.6	-0.2
OBIP				eS	Sg	13 48 49.9	+0.7
LSP	Las Mesas	0.38	330	⇑iP	Pg	13 48 45.7	-0.1
LSP				eS	Sg	13 48 51.4	+0.5
AGPR	Aguadilla, PR	0.66	341	⇑iP	Pg	13 48 50.3	-0.7
AGPR				eS	Sg	13 48 59.2	-0.4
ECPR	Experimental S	0.68	46	⇑eP	Pg	13 48 50.6	-0.9
ECPR				eS	Sg	13 48 59.7	-0.8
EMPR	Esperanza - Ma	0.71	28	⇑eP	Pg	13 48 51.5	-0.5
EMPR				eS	Sg	13 49 01.0	-0.4
IDE	Isla Desecheo	0.78	314	⇑eP	Pg	13 48 52.4	-0.9
IDE				eS	Sg	13 49 02.9	-0.6
HUMP	Col San Antoni	1.03	73	⇑eP	Pg	13 48 56.2	-1.8
HUMP				eS	Sg	13 49 10.4	-1.0

IDC 05 13:54:05.5±736.0, 52.58N×33.81E, h0km, Error ellipse: s-maj=318.8km s-min=97.6km az=30.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.60	24	I	I	14 24 40.0	
	0.4nm,0.7s,baz=208,slow=320,SNR=1.3						
I31KZ	AKTYUBINSK INF	15.23	89	I	I	15 25 11.9	
	baz=290,slow=309,SNR=1.4						
I46RU	ZALESOVO INFRA	30.01	67	I	I	16 55 56.3	
	baz=286,slow=314						
I34MN	SONGINO INFRAS	44.92	66	I	I	18 28 40.0	
	baz=302,slow=330,SNR=0.6						

IDC 05 13:54:15.9±0.7, 11.44N×86.18W, h0km, mb4.3/9, mbtmp4.3/10, ML3.3/2, MS4.0/11, Error ellipse: s-maj=39.3km s-min=12.9km az=51.0

UCR 05 13:54:17.9±0.8, 10.75N×86.63W, h12km±4km, MW5.0, Presumed earthquake

NEIC 05 13:54:20.5±1.2, 10.98N±0.06×86.55W±0.08, h35km±10km, mb4.7/40, Error ellipse: s-maj=13.1km s-min=6.3km az=52.0

CATAC 05 13:54:26.2±0.3, 11°N±2°×8°7W±°, h31km±3km, M4.4/40, MLv4.4/40, Error ellipse: s-maj=4.9km s-min=2.7km az=36.4, confirmed

ISC 05 13:54:19.0±1.3, 11.01N±0.03×86.68W±0.04, h27km±9km, n223, σ1.68/244, mb4.7/23, MS4.1/11, 18C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIN	Rivas	0.94	62	P	Pn	13 54 41.9	+5.5
ARIN				S	Sn	13 54 53.5	+4.6
ARIN	Rivas	0.94	62	⇑eP	Pn	13 54 44.9	+8.5
LCRUZ	La Cruz	1.03	86	⇑eP	Pn	13 54 36.9	-0.8
LCRUZ				eS	Sn	13 54 52.6	+1.3
SABN	Sabanita	1.07	28	P	Pb	13 54 38.7	-0.2
NANN	Nandasmo	1.07	30	P	Pb	13 54 40.5	+1.5
NANN				S	Sb	13 54 51.3	-1.3
MASN	Masaya	1.10	28	P	Pb	13 54 40.2	+0.8
MASN				S	Sb	13 54 51.1	-2.4
MAS3	Al N del Volca	1.12	26	P	Pb	13 54 40.8	+0.9
CARN	Rivas	1.15	81	⇑eP	Pn	13 54 39.4	+0.1
CARN				eS	Sb	13 54 57.5	+2.8
ELI1	Hacienda Flor	1.16	108	eP	Pn	13 54 38.8	-0.7
ELI1				eS	Sn	13 54 54.3	-0.2
ABCN	Banco Central	1.17	18	P	Pb	13 54 40.8	+0.3
ABCN				S	Sn	13 54 51.6	-2.9
UNAN	Cigeo UNAN	1.17	20	P	Pb	13 54 40.7	+0.1
UNAN				S	Sn	13 54 51.8	-2.9
COPN	Copaltepe	1.17	4	P	Pb	13 54 41.1	+0.5
COPN	Copaltepe	1.17	4	⇑iP	Pb	13 54 40.9	+0.3
USIM	UNAN	1.17	20		Pb	13 54 40.0	-0.6
ALIBA	Liberia Airpor	1.19	110	⇑eP	Pn	13 54 38.5	-1.4
TISN	Laguna Tiscapa	1.20	20	P	Pb	13 54 40.5	-0.5
ALLN	Telcor Managua	1.21	19	P	Pb	13 54 41.3	+0.1
MGAN	Managua	1.21	20		Pb	13 54 41.1	-0.1
MGAN	Managua	1.21	20	P	Pb	13 54 41.5	+0.3
MGAN	Managua	1.21	20	⇑iP	Pb	13 54 41.7	+0.5
APQ2	Apoyeque	1.23	16	P	Pb	13 54 41.7	+0.1
APQ2				S	Sn	13 54 51.9	-4.3
AERN	Aeropuerto Man	1.24	24	P	Pb	13 54 42.1	+0.4
DELF	Filadelfia	1.24	117	eP	Pn	13 54 38.2	-2.3
DELF				eS	Sn	13 54 53.7	-2.7
AMTN	Mateare	1.25	11	P	Pb	13 54 41.7	-0.1
AMTN				S	Sn	13 54 52.4	-4.1
LAPC	Finca la Perla	1.25	101	⇑iP	Pn	13 54 39.3	-1.3
LAPC				eS	Sn	13 54 55.4	-1.2
APYN	Apoyeque	1.26	15	P	Pb	13 54 42.4	+0.2
ERIA	Liberia	1.27	107	eP	Pn	13 54 39.9	-1.1
SACU	Santa Cruz	1.31	124	eP	Pn	13 54 39.3	-2.1
VRLE	La Escondida,	1.31	99	⇑iP	Pn	13 54 40.4	-1.1
GPS3	Bodega del ICE	1.31	101	eP	Pn	13 54 37.3	-4.3
VORI	VORI	1.32	98	⇑iP	Pn	13 54 40.9	-0.9
VORI				eS	Sn	13 54 56.8	-1.9
GPS1	Guardaparques	1.33	100	eP	Pn	13 54 40.9	-0.9
GPS1				eS	Sn	13 54 58.1	-0.5
GPS2	Hotel Rincn d	1.33	101	eP	Pn	13 54 40.5	-1.3
GPS2				eS	Sn	13 54 57.0	-1.7
BUAI	Buenos Aires	1.33	95	⇑eP	Pn	13 54 41.4	-0.4
BUAI				eS	Sb	13 55 13.1	+13
PEJA	Penjamo Buenos	1.35	95	⇑eP	Pn	13 54 41.5	-0.5
JUD3	Juan Diaz 3	1.40	127	Pn	Pn	13 54 40.0	-2.7
JUD3	Juan Diaz 3	1.40	127	eP	Pn	13 54 39.9	-2.9
MOMN	Momotombo	1.40	6	P	Pn	13 54 42.9	+0.1
PLVR	Palo Verde	1.46	117	eP	Pn	13 54 41.5	-2.3
BAGA	Bagaces	1.47	109	⇑eP	Pn	13 54 42.5	-1.2
CNGA	Al SSO del Vol	1.48	359	P	Pb	13 54 45.0	-0.8
MESS	Mesas	1.48	100	⇑eP	Pn	13 54 43.0	-0.9
CNGN	Cerro Negro	1.48	359		Pb	13 54 44.9	-1.0
CNGN	Cerro Negro	1.48	359	P	Pb	13 54 45.2	-0.7
CNGN				S	Sn	13 54 59.6	-2.9
CNGN	Cerro Negro	1.48	359	⇑iP	Pb	13 54 45.1	-0.9
CLARA	Aguas Claras	1.49	98	eP	Pn	13 54 43.5	-0.5
HORNC	Hornillas	1.50	101	eP	Pn	13 54 43.0	-1.2
CUI	Cuipilapa	1.53	103	eP	Pn	13 54 43.6	-1.0
CUI				eS	Sn	13 55 02.2	-1.4
VMAR	Armenia, Volca	1.55	97	⇑eP	Pn	13 54 44.6	-0.2
VMAR				eS	Sb	13 55 05.5	-0.8
CMARA	Lajas Hojancha	1.58	128	S	Sb	13 55 19.1	+12
CMARA	Lajas Hojancha	1.58	128	eP	Pn	13 54 42.2	-3.0
CMARA				eS	Sn	13 54 59.4	-5.5
HOYN	Al Sur del Vol	1.59	355	P	Pb	13 54 46.5	-1.2
HOYN				S	Sn	13 55 01.7	-3.4
HERN	Volcan Telica	1.60	355		Pb	13 54 46.7	-1.3
HERN	Volcan Telica	1.60	355	P	Pb	13 54 46.6	-1.3
HERN				S	Sn	13 55 00.6	-4.8
POLN	Al Sur del Vol	1.64	355	P	Pb	13 54 47.4	-1.1
CNAS	Canas	1.66	110	eP	Pb	13 54 49.5	+0.6
INVE	Universidad In	1.67	108	eP	Pn	13 54 45.0	-1.6
PKGN	Cerro Pekin	1.68	350	P	Pb	13 54 47.8	-1.4
PKGN				S	Sn	13 55 02.7	-4.5
TIMP	Tierras Morena	1.69	104	eP	Pn	13 54 45.4	-1.3
TENO	El Achiote	1.70	100	eP	Pn	13 54 45.8	-1.1
CRIN	San Cristobal	1.72	348		Pn	13 54 48.0	+0.7
CRIN	San Cristobal	1.72	348	P	Pb	13 54 49.0	-1.0
CRIN				S	Sn	13 55 04.4	-4.0
CRIN	San Cristobal	1.72	348	⇑iP	Pb	13 54 48.6	-1.4
NYURE	Nandayure	1.73	126	eP	Pn	13 54 44.1	-3.2
BOAB	BOACO BROADBAN	1.74	35		Pn	13 54 47.5	0.0
BOAB	BOACO BROADBAN	1.74	35	P	Pn	13 54 48.2	+0.8
TILA	Tilaran	1.76	108	eP	Pn	13 54 46.8	-1.0
QUEB	Quebradon, Cot	1.79	102	eP	Pn	13 54 47.8	-0.4
CHIK	Chiripa	1.83	108	eP	Pn	13 54 46.5	-2.2
JUNT	Juntas	1.84	113	eP	Pn	13 54 47.3	-1.5
JTS	Las Juntas de	1.84	113	Pn	Pn	13 54 47.2	-1.6
	37nm,0.3s,baz=304,slow=22,SNR=56						
JTS				Sn	Sn	13 55 09.0	-2.3
	171nm,0.3s,baz=273,slow=19,SNR=7.1						
JTS	Las Juntas de	1.84	113		Pn	13 54 47.5	-1.3
JTS	Las Juntas de	1.84	113	eP	Pn	13 54 47.0	-1.9
LCHIL	Los Chiles	1.93	89	eP	Pn	13 54 50.5	+0.5
TABAC	Tabacon	1.94	105	eP	Pn	13 54 51.4	+1.1
ARE1	Arenal 1	2.00	106	eP	Pn	13 54 50.6	-0.5
VARE2	V. Arenal	2.00	106	eP	Pn	13 54 50.6	-0.5
CEDE	Laguna Cedeo	2.01	105	⇑eP	Pn	13 54 50.8	-0.5
VACR	Volcan Arenal	2.04	105	eP	Pn	13 54 52.3	+0.7
FORC	Fortuna	2.05	105	eP	Pn	13 54 50.8	-0.8
MATN	Matagalpa	2.05	21	P	Pn	13 54 51.9	+0.2
LIMN	Finca el Limon	2.06	8	P	Pn	13 54 53.0	+1.0
LIMN				S	Sn	13 55 12.6	-4.3
CSGN	Cosiguina Volc	2.14	336	P	Pn	13 54 54.4	+1.4
CSGN	Cosiguina Volc	2.14	336	⇑eP	Pn	13 54 54.3	+1.4
ROBF	Roble, Puntare	2.17	118	eP	Pb	13 54 58.8	+1.3
COVE	Coope Vega, Sa	2.25	97	S	Sb	13 55 31.0	+4.5
ATEO	Atenas	2.48	114	eP	Pn	13 54 58.1	+0.4
ARTO	Ro Cuarto	2.51	105	eP	Pn	13 54 57.2	-0.9
RCON	San Juan de Ri	2.51	12	P	Pn	13 54 59.7	+1.5
CNCH	Conchagua	2.52	334	P	Pn	13 54 59.5	+1.2
CNCH				S	Sn	13 55 25.8	-2.4
VPS8	V Poas	2.53	109	eP	Pn	13 54 58.9	+0.3
LCND	La Caada	2.58	333	P	Pn	13 55 00.2	+1.2
RCVN	Varillal2	2.60	10	P	Pn	13 55 01.1	+1.7
OCON	Estacion meteo	2.62	4	P	Pn	13 55 01.2	+1.6
BELE	Belen	2.66	112	eP	Pn	13 55 02.2	+2.1
VBV1	V. Barva	2.69	109	eP	Pb	13 55 10.2	+3.6
HDC	Heredia	2.71	111		Pn	13 54 59.3	-1.6
HDC	Heredia	2.71	111	eP	Pn	13 55 03.4	+2.4
ACOS	Acosta	2.75	116	eP	Pn	13 54 58.8	-2.7
LUJA	Lujan	2.78	113	eP	Pn	13 55 02.8	+0.9
PICV	PH. Pirrs	2.80	119	eP	Pn	13 55 01.5	-0.6
RANC	El Ranchito	2.88	327	P	Pn	13 55 04.5	+1.2
RANC				S	Sn	13 55 35.8	-1.3
TRT2	Tortugero	2.93	99	P	Pb	13 55 10.6	+0.1
TRT2	Tortugero	2.93	99	eP	Pn	13 55 05.2	+1.5
PACA	Pacayal	2.93	327	P	Pn	13 55 04.8	+0.9
PACA				S	Sn	13 55 36.4	-1.9
PILE	Guapiles	2.95	105	eP	Pn	13 55 04.4	+0.3
VICA	Volcano Irazu	2.97	110	eP	Pn	13 55 06.1	+1.4
PIEC	Cerro El Cedra	3.01	117	eP	Pn	13 55 04.8	-0.3
CVTQ	Turrialba Volc	3.03	109	eP	Pn	13 55 04.7	-0.8
CVTR	Volcan Turrial	3.03	109	eP	Pn	13 55 05.0	-0.6
VTR0	Volcan Turrial	3.03	109	eP	Pn	13 55 05.5	-0.1
CVTV	Tajo	3.05	109	eP	Pn	13 55 03.3	-2.5
VTCV	VTCV, Calle Va	3.08	109	eP	Pn	13 55 06.5	+0.5
ABRB	Las Abras (San	3.08	109	eP	Pn	13 55 06.0	-0.1
TGUH	Tegucigalpa,Un	3.09	349		Pn	13 55 07.7	+1.6
TGUH	Tegucigalpa,Un	3.09	349	P	Pn	13 55 08.0	+1.9
RVLA	Villa Bonita	3.17	106	eP	Pn	13 55 09.5	+2.4
LCOCO	El Coco	3.20	106	eP	Pn	13 55 10.0	+2.4
BUS1	Rivas	3.23	116	eP	Pn	13 55 07.7	-0.6
TECO	Alcaldia de Te	3.25	321	S	Sn	13 55 45.4	-0.6
IRES	Siquirres	3.25	106	eP	Pn	13 55 09.3	+1.1
SIUN	Universidad Ur	3.27	34		Pn	13 55 09.2	+0.6
SIUN	Universidad Ur	3.27	34	P	Pn	13 55 10.3	+1.8
UESV	Universidad de	3.33	322	P	Pn	13 55 11.0	+1.6
UESV				S	Sn	13 55 48.1	+0.1
SCLA	Alcaldia de Sa	3.34	323	P	Pn	13 55 11.0	+1.4
SCLA				S	Sn	13 55 49.0	+0.6
COEG	Centro de Oper	3.37	321	P	Pn	13 55 11.5	+1.5
COEG				S	Sn	13 55 48.4	-0.8
PAVA	Las Pavas	3.48	321	P	Pn	13 55 12.8	+1.3
PAVA				S	Sn	13 55 52.8	+0.9
LALI	Alcalda de L	3.57	314	S	Sn	13 55 54.0	+0.1
LAES	El Progreso Va	3.78	109	eP	Pn	13 55 16.4	+0.9
DRK0	Durika	3.80	117	eP	Pn	13 55 14.1	-1.9
CEUA	Cerro Uatsi, L	3.93	110	eP	Pn	13 55 19.7	+2.1
EDP2	Potrero Grande	3.98	120	eP	Pn	13 55 19.5	+1.3
EDAD	Golfito	4.18	124	eP	Pn	13 55 20.7	-0.4
PIRO	Carate, Puerto	4.19	128		Pn	13 55 20.4	-0.8
PIRO	Carate, Puerto	4.19	128	eP	Pn	13 55 20.9	-0.2
MTO3	Montecristo	4.27	322		Pn	13 55 23.5	+1.0
ALCO	Alturas Coton,	4.30	118	eP	Pn	13 55 21.9	-1.0
ESQI	Esquipulas	4.38	324		Pn	13 55 25.3	+1.4
BRU2	Volcan	4.50	119		Pn	13 55 24.8	-0.8
BRU2	Volcan	4.50	119	eP	Pn	13 55 23.8	-1.8
CLLRA	Cordillera,	4.59	119	eP	Pn	13 55 27.4	+0.6
PTPA	Petro Terminal	4.68	126	eP	Pn	13 55 27.1	-0.8
BQTLY	Boquete Panama	4.72	118	eP	Pn	13 55 29.2	+0.6
PBNVO	Pueblo Nuevo,	4.89	115	eP	Pn	13 55 31.6	+0.8
RBALA	Bur	4.93	115	eP	Pn	13 55 31.1	-0.3
APG	El Apazote	5.42	318	Pn	Pn	13 55 40.6	+2.3
	0.1nm,0.3s,baz=153,slow=10,SNR=8.0						
APG				Sn	Sn	13 56 43.1	+3.2
	0.1nm,0.3s,baz=105,slow=12,SNR=1.3						
RTAL	Retalhuleu	6.01	306	Pn	Pn	13 55 49.7	+3.5
HUEH	Huehuetenango	6.36	313	Pn	Pn	13 55 53.6	+2.4
CCIG	Comitan	7.46	315		Pn	13 56 07.2	+0.9
CMIG	Matias Romero	9.99	308	Pn	Pn	13 56 42.7	+1.8
	1.8nm,0.3s,baz=127,slow=11,SNR=19						
	5.7nm,0.3s						
TLIG	Tlapa	13.23	301		Pn	13 57 27.7	+2.4
SDV	Santo Domingo	15.95	96	Pn	Pn	13 57 59.7	-2.1
	0.4nm,0.3s,baz=265,slow=7.3,SNR=7.1						
SDV	Santo Domingo	15.95	96		Pn	13 58 00.5	-1.3
BANI	BANI	17.40	63		Pn	13 58 18.1	-2.0
ATAH	Atahualpa	19.82	155	LR	LR	14 05 29.8	
	comp=Z,590nm,19.6s,baz=339,slow=34						
346A	Big Creek Wild	20.45	353	P	P	13 58 53.6	-0.8
346A				IAmb	IAmb	13 59 30.9	
	comp=Z,32nm,0.8s						
TIGA	Tifton	20.53	8	P	P	13 58 54.9	-0.4
441A	DeRidder	20.55	344	P	P	13 58 56.2	+0.6
HKT	Hockley	20.69	337		Pn	13 58 58.7	-0.6
HKT				IAmb	IAmb	13 58 59.9	
	comp=Z,50nm,1.1s						
250A	Grady	20.87	1	P	P	13 59 00.2	+1.1
250A				IAmb	IAmb	13 59 18.7	
	comp=Z,31nm,1.1s						
833A	Chaparral WMA,	20.95	327	P	P	13 59 00.8	+0.9
833A				IAmb	IAmb	13 59 11.8	
	comp=Z,26nm,1.0s						
VBMS	Vicksburg	21.41	351	P	P	13 59 06.2	+1.5
152A	Waverly Hall	21.63	4	P	P	13 59 06.9	-0.3
152A				IAmb	IAmb	13 59 11.5	
	comp=Z,42nm,0.9s						
LRAL	Lakeview Retre	21.93	359		P	13 59 11.1	+0.7
CZSB	Cruzeiro do Su	23.23	143	P	P	13 59 23.2	-1.1
Z38A	Mt. Pleasant	23.43	342	P	P	13 59 26.9	+0.9
X51A	Calhoun	23.51	4	P	P	13 59 27.6	+0.8
X51A				IAmb	IAmb	13 59 28.8	
	comp=Z,19nm,0.7s						
OZNA	Ozona	23.92	328	P	P	13 59 31.0	+0.1
OZNA				IAmb	IAmb	13 59 54.4	
	comp=Z,34nm,1.4s						
W52A	Murphy	24.11	6	P	P	13 59 32.9	+0.3
SWET	Sewanee	24.11	1	P	P	13 59 32.5	0.0
SWET				IAmb	IAmb	13 59 34.4	
	comp=Z,30nm,1.2s						
PAULI	Pauline	24.12	10	P	P	13 59 32.7	+0.1
PAULI				IAmb	IAmb	13 59 34.3	
	comp=Z,20nm,0.9s						
BG3	Lake Jocassee	24.12	8	P	P	13 59 32.8	+0.2
BG3				IAmb	IAmb	13 59 34.4	
	comp=Z,22nm,0.9s						
TXAR	Lajitas Array	24.16	321	P	P	13 59 34.2	+1.0
	comp=Z,11nm,0.8s,baz=138,slow=8.7,SNR=72						
TXAR				PcP	PcP	14 03 16.1	+2.3
	comp=Z,1.4nm,0.8s,baz=132,slow=5.2,SNR=5.6						
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	24.60	333	P	P	13 59 37.6	+0.5
ABTX				IAmb	IAmb	13 59 51.8	
	comp=Z,17nm,1.0s						
MNHN	Monahans	25.12	326		P	13 59 41.7	-0.1
MNHN				IAmb	IAmb	13 59 44.8	
	comp=Z,18nm,0.9s						

U49A	Red Boiling Sp	25.41	2		P	13 59 43.9	-0.4
U49A				IAmb	IAmb	13 59 45.1	
	comp=Z,27nm,1.4s						
APMT	Aspermont	25.41	333		P	13 59 45.0	+0.7
APMT				IAmb	IAmb	13 59 47.7	
	comp=Z,17nm,0.8s						
QUOK	Quay	26.65	342		P	13 59 55.0	-0.6
MSTX	Muleshoe	27.19	330		P	14 00 00.7	+0.2
MSTX				IAmb	IAmb	14 00 15.5	
	comp=Z,18nm,0.9s						
BOAV	Boa Vista	27.32	106	P	P	14 00 00.5	-1.4
AMTX	Amarillo	27.42	332	P	P	14 00 02.9	+0.3
AMTX				IAmb	IAmb	14 00 19.8	
	comp=Z,23nm,1.0s						
KSU1	Kansas State U	29.34	344		P	14 00 19.3	-0.3
MACA	Manacapuru-AM	29.45	117	P	P	14 00 19.4	-1.4
MACA				IAmb	IAmb	14 00 23.3	
	comp=Z,15nm,0.8s						
X16A	Lo Mia Camp, P	32.46	320	P	P	14 00 48.1	+0.7
MVCO	Mesa Verde	32.65	327		P	14 00 50.3	+1.2
LPAZ	La Paz	32.75	146	P	P	14 00 49.0	-1.5
K30B	Basset	33.51	343		P	14 00 56.7	+0.5
SADO	Sadowa	34.26	10	LR	LR	14 16 52.3	
	comp=Z,344nm,18.1s,baz=60,slow=40						
PDAR	Pinedale Array	37.39	332	P	P	14 01 30.1	+0.2
	comp=Z,1.8nm,0.7s,baz=128,slow=9.6,SNR=21						
PDAR				PcP	PcP	14 03 48.6	+0.2
	comp=Z,1.6nm,1.1s,baz=128,slow=6.0,SNR=4.9						
	comp=Z,1.8nm,0.7s						
PTLB	Pontes e Lacer	37.88	133	P	P	14 01 34.2	+0.2
MDND	Maddock	38.30	346		P	14 01 36.6	-0.6
NVAR	Mina Array Bea	39.28	319	P	P	14 01 46.7	+0.9
	comp=Z,5.7nm,0.9s,baz=136,slow=7.9,SNR=22						
NVAR				PcP	PcP	14 03 56.2	+1.7
	comp=Z,3.0nm,0.7s,baz=141,slow=4.6,SNR=11						
	comp=Z,5.7nm,0.9s						
ULM	Lac du Bonnet	39.85	351	P	P	14 01 47.5	-2.6
	comp=Z,6.0nm,0.9s,baz=166,slow=11,SNR=8.1						
	comp=Z,6.0nm,0.9s						
RPN	Rapa Nui	43.82	210	LR	LR	14 15 45.8	
	comp=Z,167nm,21.2s,baz=27,slow=29						
H03N2	Juan Fernandez	44.81	171	T	T	14 50 09.7	
	baz=349,slow=76,SNR=5.8						
H03N1	Juan Fernandez	44.82	171	T	T	14 50 10.5	
	baz=349,slow=76,SNR=5.8						
H03N3	Juan Fernandez	44.83	171	T	T	14 50 09.4	
	baz=349,slow=76,SNR=5.1						
SCHQ	Schefferville	46.45	16	P	P	14 02 40.9	-2.5
	comp=Z,7.2nm,0.9s,baz=266,slow=1.9,SNR=4.7						
SCHQ				LR	LR	14 21 42.7	
	comp=Z,201nm,18.8s,baz=269,slow=36						
	comp=Z,7.2nm,0.9s						
BDFB	Brasilia	46.55	124	P	P	14 02 44.2	-0.6
	comp=Z,3.5nm,0.7s,baz=280,slow=12,SNR=4.7						
	comp=Z,3.5nm,0.7s						
PLCA	Paso Flores	53.60	165	P	P	14 03 41.0	+3.1
	comp=Z,3.9nm,1.2s,baz=0.2,slow=12,SNR=3.6						
	comp=Z,3.9nm,1.2s						
FRB	Frobisher Bay	54.20	10	LR	LR	14 25 52.0	
	comp=Z,179nm,20.6s,baz=170,slow=35						
YKA	Yellowknife Ar	55.19	345	P	P	14 03 47.8	-1.3
	comp=Z,1.8nm,1.0s,baz=142,slow=6.8,SNR=17						
	comp=Z,1.8nm,1.0s						
SFJD	Kangerlussuaq	60.90	15	LR	LR	14 30 51.3	
	comp=Z,206nm,18.7s,baz=194,slow=36						
IL31		67.64	336	P	P	14 05 12.5	-0.7
IL31				IAmb	IAmb	14 05 38.3	
	comp=Z,10.0nm,1.4s						
ILAR	Eielson Array	67.64	336	P	P	14 05 12.3	-0.9
	comp=Z,3.8nm,1.1s,baz=113,slow=3.9,SNR=16						
	comp=Z,3.8nm,1.1s						
ILAR	Eielson Array	67.64	336	P	P	14 05 12.9	-0.4
RND	Reindeer	67.93	335	P	P	14 05 15.2	0.0
M14K	Bethel	73.28	330	P	P	14 05 47.9	+0.3
MDT	Midelt	77.50	59	LR	LR	14 38 30.2	
	comp=Z,78nm,18.3s,baz=305,slow=34						
SPITS	Spitsbergen Ar	81.96	12	LR	LR	14 44 21.7	
	comp=Z,162nm,18.1s,baz=246,slow=37						
NOA	NORSAR Array B	84.25	29	LR	LR	14 41 31.4	
	comp=Z,32nm,19.9s,baz=255,slow=34						
ARCES	ARCESS Array B	87.30	19	LR	LR	14 44 54.4	
	comp=Z,52nm,19.8s,baz=310,slow=35						
CLL	Collm	87.48	38	*e*P	P	14 07 03.0	-1.2
CLL				*e*PP	PP	14 10 33.0	+4.2
FINES	FINESS Array B	90.92	26	LR	LR	14 46 47.3	
	comp=Z,42nm,19.3s,baz=242,slow=35						
LBTB	Lobatse	114.67	112	PKP	PKiKP	14 12 58.3	+0.5
	comp=Z,2.0nm,0.6s,baz=51,slow=1.8,SNR=4.4						
KSRS	Korea Array	121.89	328	PKP	PKPdf	14 13 11.0	-0.2
	comp=Z,2.9nm,0.8s,baz=50,slow=1.7,SNR=7.7						
WMQ	Urumqi	125.19	5	PKP	PKiKP	14 13 18.2	+0.3
WMQ				PP	PP	14 15 11.8	+6.0
WMQ				AMB	AMB		
	comp=Z,170nm,4.3s						
WMQ				LR	LR		
	comp=Z,190nm,24.0s						
HHC	Hu-ho-hao-te	125.72	343	*e*P	PKPdf	14 13 17.1	-1.5
GTA2	Gaotai	129.41	354	*e*PKP	PKiKP	14 13 26.6	+0.1
NJ2	Nanjing	130.70	331	*e*P	PKiKP	14 13 29.2	+0.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LZH	Lanzhou	132.12	348	*e*PKP	PKiKP	14 13 32.8	+0.7
LZH				sPKP	sPKPdf	14 13 44.3	+1.3
ASAR	Alice Springs	139.41	246	PKP	PKPdf	14 13 44.4	-0.4
	comp=Z,0.6nm,0.8s,baz=87,slow=1.7,SNR=5.4						
CMAR	Chiang Mai Arr	150.20	349	PKP	PKPdf	14 14 03.8	+0.4
	comp=Z,2.9nm,1.1s,baz=6.1,slow=1.4,SNR=4.0						
CMAR				PKPbc	PKiKP	14 14 09.1	-0.2
	comp=Z,3.7nm,1.1s,baz=321,slow=2.1,SNR=11						

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*IDC **05** 14:05:10.5±0.9, 23°.76N×123°.11E, h0km, mb3.5/8, mbtmp3.6/10, ML3.5/2, Error ellipse: s-maj=23.3km s-min=19.7km az=70.0*

*TAP **05** 14:05:14.2, 23°.90N×122°.96E, h23km, ML4.4, D*

*JMA **05** 14:05:15.0±0.2, 24°N±1°×122°.9E±0°.6, h29km±4km, MD4.1/13, MV4.0/13, NEAR ISHIGAKIJIMA ISLAND*

ISC 05 14:05:13.9±1.0**, 23°.83N**±0°.02×**122°.94E**±0°.02**, h19**km±3km**, n179, σ1°.04**/302**, mb3.4**/7**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.62	0	P	Pb	14 05 25.4	-0.6
JYNG				A	A	14 05 25.4	
	comp=N,33nm,0.5s,comp=E,14nm,1.1s						
JYNG				*e*S	Sb	14 05 32.3	-2.0
YOJ	Yonaguni jima	0.63	6	P	Sb	14 05 34.0	-0.7
YOJ	Yonaguni jima	0.63	6	P	Pb	14 05 25.8	-0.4
YOJ				A	A	14 05 25.8	
	comp=N,13nm,0.4s,comp=E,10.0nm,0.5s						
YOJ				S	Sb	14 05 33.1	-1.5
YOJ	Yonaguni jima	0.63	6	*i* P	Pb	14 05 25.8	-0.4
YOJ				*i* S	Sb	14 05 33.7	-1.0
EOS4	EOS4	0.64	297	*e*P	Pg	14 05 26.4	-0.1
EOS4				*e*S	Sb	14 05 34.0	-0.5
EOS3	EOS3	0.73	309	*e*P	Pb	14 05 27.8	0.0
EOS3				*e*S	Sg	14 05 37.8	-0.2
HATJ	Hateruma jima	0.82	74	P	Pg	14 05 30.1	+0.2
HATJ				A	A	14 05 30.1	
	comp=N,12nm,2.3s,comp=E,14nm,2.7s						
HATJ				*e*S	Sg	14 05 41.2	+0.3
EOS2	EOS2	0.88	312	*e*P	Pg	14 05 30.6	-0.3
EOS2				*e*S	Sn	14 05 43.1	-0.1
IRIF	Iriomote-Funau	0.88	55	*e*P	Pb	14 05 30.5	0.0
IRIF				A	A	14 05 30.5	
	comp=N,13nm,1.2s,comp=E,12nm,1.2s						
IRIF				*e*S	Sb	14 05 41.7	-0.1
JKRS	Kuro-shima	1.06	67	P	Pn	14 05 33.9	+0.3
JKRS				A	A	14 05 33.9	
	comp=N,16nm,1.3s,comp=E,13nm,3.4s						
JKRS				*e*S	Sg	14 05 48.2	-0.1
EHP	Heping Village	1.20	294	P	Pn	14 05 35.8	+0.2
EHP				*e*S	Sb	14 05 49.9	-1.1
EAHA	Aohua	1.21	295	*e*P	Pb	14 05 36.1	0.0
EAHA				S	Sn	14 05 51.5	0.0
JIJ	Ishigaki jima	1.22	64	P	Pn	14 05 36.1	+0.2
JIJ				A	A	14 05 36.1	
	comp=N,5.0nm,2.0s,comp=E,4.0nm,2.5s						
EWUT	Wuta	1.23	300	*e*P	Pn	14 05 36.0	0.0
TEYL	Yanliau Villag	1.23	272	P	Pn	14 05 36.0	-0.1
TEYL				*e*S	Sn	14 05 52.5	+0.3
HWA	Hwalien	1.23	277	*e*P	Pn	14 05 36.2	+0.2
ESAO	Su ao	1.25	307	*i* P	Pn	14 05 36.2	0.0
ESAO				S	Sb	14 05 51.8	-0.7
ENA	Nanau	1.25	299	*i* P	Pn	14 05 36.5	+0.2
ENA				S	Sb	14 05 51.8	-0.7
ETL	Fush Village	1.25	285	*e*P	Pn	14 05 36.6	+0.2
ETL				*e*S	Sg	14 05 54.2	-0.3
TWD	Chiawan	1.26	282	P	Pn	14 05 35.8	-0.6
SHUL	Shoufeng	1.27	268	*e*P	Pn	14 05 36.4	-0.1
SHUL				*e*S	Sb	14 05 52.5	-0.5
TWC	Suao	1.27	308	P	Pn	14 05 36.3	-0.2
TWC				*e*S	Sb	14 05 50.5	-2.5
NACB	Ninganchiao	1.28	286	P	Pn	14 05 36.7	0.0
NACB	Ninganchiao	1.28	286	P	Pn	14 05 36.2	-0.5
NACB				S	Sn	14 05 53.1	-0.3
TEGC	Jichi Village	1.29	265	*e*P	Pb	14 05 37.3	-0.2
TEGC				*e*S	Sn	14 05 53.4	-0.2
ETM	Tongmen	1.33	276	*e*P	Pn	14 05 36.7	-0.7
ETM				*e*S	Sn	14 05 53.5	-1.1
EGS		1.37	318	*e*P	Pb	14 05 39.0	+0.2
EGS				*e*S	Sn	14 05 55.3	-0.2
NDS	Dongshan	1.38	306	P	Pb	14 05 38.7	-0.3
NDS				*e*S	Sn	14 05 56.0	+0.2
ESL	Shilin	1.38	270	*i* P	Pn	14 05 37.2	-0.9
ETLH	Xiulin Townshi	1.39	286	*i* P	Pn	14 05 37.8	-0.5
ETLH				*e*S	Sn	14 05 56.2	+0.1
EGFH	Guangfu	1.40	264	*e*P	Pn	14 05 38.5	+0.2
EGFH				*e*S	Sn	14 05 55.7	-0.5
LXIB	Xiulin Townshi	1.41	278	P	Pn	14 05 38.3	-0.4
WARBT	Fenglin Townsh	1.43	266	P	Pn	14 05 37.9	-0.9
WARBT				S	Sn	14 05 56.1	-1.0
HGSD	Ruisui	1.43	257	*i* P	Pn	14 05 38.1	-0.7
HGSD				*e*S	Sn	14 05 56.0	-1.0
ILA	Ilan	1.44	311	P	Pn	14 05 39.0	+0.2
ILA				S	Sn	14 05 56.0	-1.1
NTC	Toucheng	1.44	315	*e*S	Sb	14 05 58.1	+0.1
JISG	Ishigakijimahi	1.46	59	P	Pn	14 05 39.3	+0.1
ECBN	Changbin	1.46	250	P	Pn	14 05 38.9	-0.2
ECBN				*e*S	Sn	14 05 55.6	-2.2
TWB1	Santiao Chiao	1.46	324	P	Pn	14 05 39.4	+0.2
TWB1				*i* S	Sn	14 05 57.1	-0.7
TWE	Neicheng	1.47	308	P	Pb	14 05 40.2	-0.3
TWE				*e*S	Sb	14 05 59.1	+0.4
LATG	Datong	1.47	299	*e*P	Pn	14 05 39.8	+0.4
LATG				*e*S	Sb	14 05 59.5	+0.5
ENTT	Nioudou	1.49	303	P	Pb	14 05 40.8	-0.2
ENTT				*e*S	Sb	14 06 00.2	+0.6
EHY	Hungye	1.52	258	P	Pn	14 05 39.9	-0.2
EHY				S	Sn	14 05 59.0	-0.3
TIPB	Shuangxi	1.53	318	P	Pn	14 05 40.8	+0.6
TIPB				S	Sb	14 06 00.5	-0.1
FUSB	Fushanzhiwuyua	1.55	307	P	Pb	14 05 41.5	-0.4
NNSB	Datong	1.55	293	P	Pn	14 05 40.8	+0.3
NNSB				S	Sn	14 05 57.8	-2.3
CHKH	Chenggong	1.56	246	P	Pn	14 05 40.1	-0.4
CHKH				*e*S	Sn	14 05 58.5	-1.6
NNS	Nan Shan	1.56	293	P	Pn	14 05 41.1	+0.5
WHF	Hehuan Shan	1.57	282	P	Pn	14 05 40.9	-0.2
YULB	Yu-li	1.57	254	P	Pn	14 05 40.8	0.0
YULB	Yu-li	1.57	254	P	Pn	14 05 40.7	0.0
YULB				S	Sn	14 06 00.7	+0.2
TWF1	Yuli	1.58	253	P	Pn	14 05 40.8	-0.1
TWF1				S	Sn	14 06 00.2	-0.6
SXI1	Grass Mountain	1.59	323	*e*P	Pn	14 05 41.2	+0.1
SXI1				*e*S	Sn	14 06 00.2	-0.9
FUSS	Fushou	1.61	285	P	Pn	14 05 41.8	+0.3
NWLT	Wulai	1.62	306	*e*P	Pb	14 05 43.5	+0.3
NWLT				*e*S	Sb	14 06 03.2	0.0
CHKT	Chengkung	1.62	244	P	Pn	14 05 40.9	-0.5
CHKT				*e*S	Sn	14 06 00.7	-1.0
OWD	Renai	1.62	275	*e*P	Pn	14 05 41.6	0.0
OWD				*e*S	Sn	14 06 00.9	-1.1
NWF	Wu-fen Shan	1.63	320	P	Pn	14 05 42.4	+0.9
NWF				*e*S	Sn	14 06 00.7	-1.4
WFSB	Wu-fen Shan	1.63	320	P	Pb	14 05 42.5	-0.8
WFSB				*e*S	Sn	14 06 00.8	-1.1
FULB	Fuli	1.64	248	*e*P	Pn	14 05 41.5	-0.2
FULB				*e*S	Sn	14 06 00.8	-1.5
VWDT	VWDT	1.65	268	*i* P	Pn	14 05 42.0	+0.2
VWDT				*e*S	Sn	14 06 00.2	-2.2
YHNB	Yeheng	1.66	301	P	Pb	14 05 43.0	-0.8
YHNB	Yeheng	1.66	301	P	Pn	14 05 42.6	+0.6
YHNB				*e*S	Sn	14 06 01.8	-1.0
TWT	Tachien	1.67	285	*e*P	Pn	14 05 43.1	+0.9
NSK	Sanguang	1.68	301	*e*P	Pn	14 05 42.7	+0.5
WUSB	Renai	1.68	276	*e*P	Pn	14 05 42.5	+0.2
TDCB	Techi	1.69	285	P	Pn	14 05 43.0	+0.5
TDCB				*e*S	Sn	14 06 02.7	-0.8
TWA	Mucha	1.69	313	P	Pb	14 05 43.8	-0.5
TWA				S	Sb	14 06 04.7	-0.5
TNOU	National Taiwa	1.69	321	P	Pn	14 05 42.9	+0.5
TNOU				S	Sn	14 06 02.6	-0.9
NHDH	Xindian Distri	1.72	311	*e*P	Pb	14 05 44.3	-0.5
NHDH				S	Sb	14 06 05.7	-0.3
NHY	Taipei	1.74	314	*e*S	Sb	14 06 06.8	+0.2
ECS	Chishang	1.74	246	P	Pn	14 05 44.0	+0.9
ECS				*e*S	Sn	14 06 03.5	-1.3
TATO	Taipei	1.75	311	P	Pb	14 05 44.9	-0.5
TAP	Taipei	1.78	313	*e*P	Pb	14 05 45.9	0.0
TAP				S	Sb	14 06 08.2	+0.4
JTJ	Tarama	1.80	63	*e*P	Pn	14 05 44.8	+1.0
YM01	YM01	1.81	317	*e*P	Pn	14 05 45.1	+1.0
YM01				*e*S	Sn	14 06 05.9	-0.6
SSLB	Suanglung	1.82	269	P	Pn	14 05 44.6	+0.4
SSLB	Suanglung	1.82	269	*e*P	Pn	14 05 44.5	+0.3
SSLB				*e*S	Sb	14 06 08.7	-0.4
YM08	YM08	1.83	318	*e*P	Pn	14 05 45.3	+1.0
ZUZH	Zhuzihu	1.84	316	*e*P	Pn	14 05 45.0	+0.6
NFF	Wufeng Townshi	1.85	296	P	Pb	14 05 46.4	-0.7
KSHI	Guanxi Townshi	1.87	301	P	Pb	14 05 46.5	-0.9
SMLT	Sun Moon Lake	1.87	272	P	Pn	14 05 45.7	+0.7
SMLT				S	Sn	14 06 08.4	+0.3
ANP	Anpu	1.87	316	*e*P	Pn	14 05 45.7	+0.7
WCS	Beigang Elemen	1.87	277	*e*P	Pb	14 05 47.0	-0.5
WCS				*e*S	Sb	14 06 10.0	-0.4
ELDTW	Lidau	1.88	251	P	Pn	14 05 44.8	-0.3
ELDTW				*e*S	Sn	14 06 07.4	-0.9
TWS1	Kuangyinshan	1.88	313	*e*P	Pb	14 05 46.8	-0.8
TWS1				*e*S	Sb	14 06 09.9	-0.8
WHP	Taichung City	1.88	284	*e*P	Pb	14 05 47.4	-0.2
WHP				S	Sb	14 06 09.8	-0.9
TWY	Chenhua	1.89	320	P	Pn	14 05 46.3	+1.2
TWY				*e*S	Sn	14 06 08.2	-0.2
NTST	Danshui	1.90	315	*e*P	Pb	14 05 48.2	+0.2
NTST				*e*S	Sb	14 06 11.5	+0.2
TYC	Yuchr	1.91	273	*e*P	Pn	14 05 46.2	+0.9
TYC				*e*S	Sb	14 06 10.5	-1.0
WHYT	Xinyi Township	1.92	266	*e*P	Pb	14 05 47.4	-0.9
WHYT				*e*S	Sn	14 06 09.9	+0.7
LIOB	Emei	1.94	295	*e*P	Pb	14 05 47.5	-1.0
NSTT	Nanjuang	1.94	295	P	Pb	14 05 47.4	-1.2
NSTT				*i* S	Sn	14 06 09.6	-0.2
PCYT	Pengchaiyu	1.96	336	P	Pn	14 05 47.1	+1.0
NCU	National Centr	1.96	306	*e*P	Pb	14 05 48.1	-0.9
NCU				*e*S	Sn	14 06 10.1	-0.1
NCUH	Zhongli	1.96	306	*e*P	Pb	14 05 48.8	-0.2
TTN	Taitung	1.97	237	*e*P	Pn	14 05 46.4	+0.2
TTN				S	Sn	14 06 10.4	+0.1
ALS	Alishan	1.99	261	P	Pn	14 05 47.8	+1.2
ALS				S	Sn	14 06 10.9	-0.3
TWGBT	Beinan	1.99	240	P	Pn	14 05 47.2	+0.7
TWGBT	Beinan	1.99	240	P	Pn	14 05 47.1	+0.7
TWGBT				S	Sn	14 06 10.7	-0.1
TWG	Pinlang	1.99	240	P	Pn	14 05 47.2	+0.7
TWG				S	Sn	14 06 10.6	-0.3
SBCB	Hsinchu	2.03	299	*e*P	Pb	14 05 49.5	-0.6
SBCB				*e*S	Sn	14 06 11.4	-0.4
HSN	Hsinchu	2.04	299	*e*P	Pn	14 05 47.4	+0.2
TWQ1	Liyutan	2.05	285	P	Pb	14 05 49.4	-1.0
WNT	Mingjian	2.07	272	*e*P	Pb	14 05 49.5	-1.3
WNT				*e*S	Sb	14 06 15.2	-0.9
NSY	Sanyi	2.08	287	P	Pb	14 05 50.0	-1.0
NSY				S	Sb	14 06 16.1	-0.3
NMLH	Miaoli	2.09	290	*e*P	Pb	14 05 50.1	-1.0
NMLH				*e*S	Sb	14 06 16.7	0.0
CHN5	Tsauling	2.09	264	P	Pb	14 05 49.6	-1.6
CHN5				*e*S	Sb	14 06 15.4	-1.3
STYH	Taoyuan	2.10	252	*i* P	Pn	14 05 48.8	+0.9
STYH				S	Sn	14 06 14.0	+0.6
TCU	Taichung	2.10	279	*e*P	Pb	14 05 50.2	-1.1
TCU				*e*S	Sb	14 06 15.7	-1.3
WCKO	Fanlu	2.18	260	*e*P	Pb	14 05 51.8	-0.9
WCKO				*e*S	Sb	14 06 18.6	-0.7
WGK	Gukeng	2.19	267	P	Pb	14 05 52.5	-0.3
WGK				*e*S	Sb	14 06 18.4	-1.1
TPUB	Ta-pu	2.19	257	P	Pb	14 05 51.3	-1.5
TPUB	Ta-pu	2.19	257	P	Pb	14 05 51.2	-1.7
TPUB				S	Sb	14 06 18.2	-1.4
LAY	Lan-yu	2.20	216	P	Pn	14 05 49.3	0.0
LAY				*e*S	Sn	14 06 13.9	-2.1
WCHH	Zhanghua	2.20	277	*e*P	Pb	14 05 51.6	-1.3
WCHH				*e*S	Sb	14 06 19.4	-0.3
ECL	Taimali	2.20	237	P	Pn	14 05 49.5	+0.1
ECL				*e*S	Sn	14 06 14.4	-1.7
WDL	Douliou City	2.21	268	*e*P	Pn	14 05 51.1	+1.7
WDL				*e*S	Sb	14 06 21.8	+1.8
WCH1	Changhua City	2.21	277	*e*P	Pb	14 05 51.5	-1.6
WCH1				S	Sb	14 06 20.1	+0.1
LYUB	Lan-yu	2.21	215	*i* P	Pn	14 05 49.2	-0.2
LYUB				*e*S	Sn	14 06 14.0	-2.2
WDLH	Douliu	2.21	267	*e*P	Pb	14 05 52.5	-0.6
WDLH				*e*S	Sb	14 06 20.1	0.0
WTP	Ta-pu	2.21	255	*e*P	Pb	14 05 51.5	-1.8
WTP				S	Sb	14 06 19.2	-1.1
CHN2	Minshiung	2.28	263	*e*S	Sb	14 06 21.9	-0.3
SGST	Jiashian	2.29	252	*e*P	Pn	14 05 51.8	+1.2
SGST				*e*S	Sb	14 06 21.1	-1.5
CHN1	Nanshi	2.31	254	*e*P	Pb	14 05 53.5	-1.4
CHN1				*e*S	Sb	14 06 22.1	-0.9
TWK	Hsinying	2.32	257	*e*P	Pb	14 05 53.1	-2.0
TWK				*e*S	Sb	14 06 22.1	-1.4
SNST	Tainan City	2.33	255	*e*P	Pb	14 05 54.0	-1.2
SNST				*e*S	Sb	14 06 22.5	-1.0
CHY	Chiayi	2.33	262	*e*P	Pb	14 05 53.6	-1.7
CHY				*e*S	Sb	14 06 22.4	-1.4
WRL	Guolierlin Hig	2.35	272	*e*P	Pb	14 05 53.6	-2.0
WRL				*e*S	Sn	14 06 21.9	+2.1
JMJ	Miyako jima 2	2.36	65	P	Pg	14 05 57.9	-1.3
SSD	Sandimen	2.38	244	*e*P	Pn	14 05 53.5	+1.6
SSD				*e*S	Sb	14 06 23.0	-2.1
EAST	Anshuo	2.41	234	P	Pn	14 05 53.0	+0.8
WTCT	Ta-ch'eng	2.44	271	*e*P	Pb	14 05 55.2	-1.9
WTCT				*e*S	Sb	14 06 25.6	-1.1
MASBT	Mashibuluo	2.45	241	P	Pn	14 05 54.0	+1.2
MASBT				*e*S	Sn	14 06 23.9	+1.8
CHN3	Shinhua	2.48	253	P	Pb	14 05 57.4	-0.5
CHN3				*e*S	Sb	14 06 28.5	+0.5
WSF	Szhu	2.50	266	*e*P	Pn	14 05 55.7	+2.2
WSF				*e*S	Sb	14 06 27.2	-1.3
SGLT	Jiouru	2.51	245	*e*P	Pb	14 05 58.1	-0.2
SGLT				*e*S	Sb	14 06 30.6	+1.8
WSL	Shuilin Townsh	2.51	264	*e*P	Pn	14 05 55.5	+2.0
WSL				*e*S	Sn	14 06 26.1	+2.5
SHHT	Tainan City	2.52	252	*e*P	Pb	14 05 57.9	-0.5
SHHT				*e*S	Sb	14 06 28.1	-0.9
TWM1	Shoushan	2.52	247	*e*P	Pb	14 05 58.1	-0.5
TWM1				*e*S	Sb	14 06 30.2	+1.0
SLIU	Shizi	2.54	231	P	Pn	14 05 55.0	+0.9
CHN8	Yiju	2.55	260	P	Pn	14 05 56.3	+2.1
CHN8				S	Sb	14 06 27.9	-2.1
SCZT	Fangliau	2.58	236	*e*P	Pb	14 05 57.3	-2.3
SCLT	Jiali	2.61	256	*e*S	Sb	14 06 29.9	-1.7
SNJT	Kaohsiung City	2.63	246	*e*P	Pb	14 05 59.0	-1.2
SMST	Manzhou Townsh	2.65	228	P	Pn	14 05 56.7	+1.2
SMST				*e*S	Sn	14 06 26.7	-0.4
TSEB	Hengchuen, Pin	2.69	225	*e*S	Sn	14 06 30.4	+2.3
TSCK	Chigu Township	2.71	256	*e*P	Pn	14 05 58.5	+2.2
TSCK				S	Sn	14 06 31.3	+2.7
TWKBT	Hengchun	2.72	227	P	Pn	14 05 58.0	+1.5
TWKBT				*e*S	Sn	14 06 29.9	+1.0
TWK1	Hengchun	2.72	227	*e*P	Pn	14 05 58.2	+1.6
TWK1				*e*S	Sn	14 06 30.2	+1.3
HEN	Hengchun	2.73	229	*e*P	Pb	14 06 00.8	-1.2
HEN				*e*S	Sn	14 06 30.2	+1.2
WSSB	Gushan	2.73	245	*e*P	Pb	14 06 01.3	-0.9
WLCH	Liuqiu	2.78	239	*e*P	Pb	14 06 03.1	+0.1
TWP	Hsiaoliuchiu	2.80	239	*e*P	Pb	14 06 02.8	-0.4
WDGT	Dungji	3.07	260	*e*P	Pn	14 06 02.8	+1.5
WDGT				*e*S	Sn	14 06 38.0	+0.6
PHUB	P'eng-hu	3.11	265	P	Pn	14 06 03.1	+1.3
PHUB				*e*S	Sn	14 06 39.8	+1.4
PNG	Penghu	3.12	266	*e*P	Pn	14 06 03.1	+1.1
PNG				*e*S	Sn	14 06 40.5	+1.8
VCHM	Qimei	3.28	260	*e*P	Pn	14 06 05.2	+0.9
VCHM				*e*S	Sn	14 06 43.0	+0.2
VWUC	VWUC	3.39	291	*e*P	Pn	14 06 05.6	-0.1
VWUC				*e*S	Sn	14 06 43.8	-1.6
MATB	Ma-tsu	3.57	311	*e*P	Pn	14 06 09.2	+1.0
MATB				*e*S	Sn	14 06 48.0	-1.9
LYJJ	Jianjiangzhen	3.96	314	*e*P	Pn	14 06 13.4	-0.1
LYJJ				*e*S	Sn	14 06 58.5	-0.9
XPSS	Dashiqiu	3.97	322	*e*P	Pn	14 06 14.2	+0.5
XPSS				*e*S	Sn	14 06 57.9	-1.7
KNM	Kinmen	4.16	279	*e*P	Pn	14 06 18.1	+1.8
KNM				*e*S	Sn	14 07 07.3	+2.9
MHZQ	Yeshan	4.21	303	*e*P	Pn	14 06 16.2	-0.8
MHZQ				*e*S	Sn	14 07 05.0	-0.7
AXDP	Jialang	4.66	284	P	Pn	14 06 23.3	+0.2
AXDP				*e*S	Sn	14 07 15.3	-1.4
ZPLA	Ao Xicun	4.75	272	*e*P	Pn	14 06 25.1	+0.6
ZPLA				*e*S	Sn	14 07 17.8	-1.3
DSXP	Dongshan	5.06	270	*e*P	Pn	14 06 29.7	+1.0
DSXP				*e*S	Sn	14 07 25.2	-1.3
SXFK	Yanhouchang	5.44	299	*e*P	Pn	14 06 34.7	+0.7
JOW	Kunigami	5.67	57	Pn	Pn	14 06 36.0	-1.1
	comp=E,2.8nm,0.3s,baz=126,slow=17,SNR=8.7						
JOW				Sn	Sn	14 07 39.1	-2.7
	comp=E,0.8nm,0.3s,baz=127,slow=16,SNR=1.5						
	comp=E,15nm,0.4s						
KSRS	Korea Array	14.24	16	Pn	Pn	14 08 34.8	+0.4
	comp=E,0.3nm,0.3s,baz=196,slow=11,SNR=6.0						
	comp=E,0.8nm,0.7s						
LZDM	Lanzhou Array	20.56	310	P	Pn	14 09 53.8	-0.2
	comp=E,0.5nm,0.3s,baz=124,slow=9.2,SNR=4.5						
	comp=E,0.5nm,0.3s						
CMAR	Chiang Mai Arr	23.00	261	P	P	14 10 19.1	+1.4
	comp=E,0.8nm,0.8s,baz=59,slow=8.4,SNR=6.5						
	comp=E,0.8nm,0.8s						
SONM	Songino Array	27.34	335	P	P	14 10 58.2	+0.5
	comp=E,0.4nm,0.5s,baz=152,slow=9.6,SNR=3.0						
	comp=E,0.4nm,0.5s						
MKAR	Makanchi Array	39.71	316	P	P	14 12 44.6	-0.3
	comp=E,0.3nm,0.5s,baz=101,slow=8.4,SNR=7.0						
MKAR				PcP	PcP	14 14 51.5	+0.1
	comp=E,0.4nm,0.7s,baz=90,slow=2.8,SNR=3.6						
	comp=E,0.3nm,0.5s						
ZALV	Zalesovo Beam	41.42	327	P	P	14 12 59.9	+1.0
	comp=E,0.3nm,0.4s,baz=123,slow=11,SNR=1.6						
	comp=E,0.3nm,0.4s						
WRA	Warramunga Arr	44.90	165	P	P	14 13 26.0	-1.4
	comp=E,0.6nm,0.8s,baz=345,slow=8.7,SNR=5.4						
	comp=E,0.6nm,0.8s						
ASAR	Alice Springs	48.40	167	P	P	14 13 53.6	-1.2
	comp=E,0.2nm,0.4s,baz=356,slow=11,SNR=4.7						
	comp=E,0.2nm,0.4s						
YKA	Yellowknife Ar	82.67	23	P	P	14 17 35.6	-0.2
	comp=E,0.8nm,0.6s,baz=311,slow=5.6,SNR=20						
	comp=E,0.8nm,0.6s						

IDC 05 14:11:20.9±6.6**, 12°.23S**×**167°.42E, h0**km**, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=336.8km s-min=33.1km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.65	252	P	P	14 17 54.4	-0.6
	1.1nm,1.2s,baz=84,slow=8.8,SNR=4.5						
	1.1nm,1.2s						
ASAR	Alice Springs	33.76	246	P	P	14 18 05.2	+0.5
	0.1nm,0.6s,baz=79,slow=10,SNR=4.1						
	0.1nm,0.6s						
ILAR	Eielson Array	84.12	18	P	P	14 23 53.5	0.0
	0.3nm,0.6s,baz=239,slow=5.3,SNR=9.4						
	0.3nm,0.6s						

IDC 05 14:20:44.6±3.3**, 18°.34S**×**172°.84W, h0**km**, mb3.9**/5**, mbtmp3.9**/5**, Error ellipse: s-maj=171.8km s-min=26.2km az=149.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	38.60	261	P	P	14 28 10.1	+0.3
	3.6nm,0.5s,baz=88,slow=9.5,SNR=15						
	3.6nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	Warramunga Arr	49.76	259	P	P	14 29 38.9	-0.4
	0.8nm,0.6s,baz=97,slow=8.7,SNR=24						
	0.8nm,0.6s						
ASAR	Alice Springs	49.77	254	P	P	14 29 39.4	-0.1
	1.4nm,0.7s,baz=86,slow=8.3,SNR=26						
	1.4nm,0.7s						
PDAR	Pinedale Array	84.10	41	P	P	14 33 17.7	-0.1
	0.6nm,0.8s,baz=233,slow=4.9,SNR=4.8						
	0.6nm,0.8s						
ILAR	Eielson Array	85.22	11	P	P	14 33 22.6	0.0
	0.4nm,0.8s,baz=194,slow=5.6,SNR=5.6						
	0.4nm,0.8s						

*CATAC **05** 14:21:12.5±0.5, 11°N±2°×8°7W±°, h19km±3km, M4.2/33, MLv4.2/33, Error ellipse: s-maj=4.9km s-min=2.7km az=36.2, confirmed*

*IDC **05** 14:21:13.7±1.0, 11°.78N×85°.87W, h0km, mb3.6/5, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=78.9km s-min=17.5km az=56.0*

*UCR **05** 14:21:14.9±0.5, 10°.85N×86°.67W, h14km±10km, MW4.4, Presumed earthquake*

ISC 05 14:21:12.5±1.6, 10°.79N±0°.04×86°.76W±0°.05, h10km±9km, n64, σ1s.22/88, mb3.6/5, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRUZ	La Cruz	1.15	75	eP	Pn	14 21 34.9	+0.2
LCRUZ				eS	Sn	14 21 49.8	-0.7
NADN	Granada	1.20	37	P	Pg	14 21 35.6	+0.1
NADN				S	Sn	14 21 54.0	+2.5
ELI1	Hacienda Flor	1.20	97	P	Pg	14 21 35.9	+0.3
ELI1				S	Sn	14 21 52.6	+1.0
ELI1	Hacienda Flor	1.20	97	eP	Pg	14 21 36.5	+1.0
ALIBA	Liberia Airpor	1.21	99	eP	Pg	14 21 36.4	+0.6
SABN	Sabanita	1.30	27	P	Pg	14 21 36.8	-0.8
NANN	Nandasmo	1.31	29	P	Pg	14 21 38.3	+0.7
LAPC	Finca la Perla	1.31	91	eP	Pg	14 21 37.1	-0.6
MORN	Al O del Volca	1.33	55	P	Pg	14 21 37.8	-0.3
MORN				S	Sg	14 21 57.4	+2.0
MASN	Masaya	1.33	27	P	Pg	14 21 39.2	+1.0
MASN				S	Sg	14 21 58.8	+3.2
JUD3	Juan Diaz 3	1.35	117	eP	Pn	14 21 37.7	+0.2
MAS3	Al N del Volca	1.36	25	P	Pg	14 21 38.4	-0.2
MAS3				S	Sg	14 21 58.2	+1.9
COPN	Copaltepe	1.40	7	P	Pb	14 21 38.8	+0.2
COPN	Copaltepe	1.40	7	eP	Pb	14 21 38.5	-0.2
ABCN	Banco Central	1.40	18	P	Pg	14 21 39.5	+0.1
ABCN				S	Sg	14 21 58.2	+0.6
UNAN	Cigeo UNAN	1.40	20	P	Pg	14 21 39.0	-0.5
UNAN				S	Sg	14 22 00.8	+3.1
BUAI	Buenos Aires	1.41	86	eP	Pg	14 21 39.3	-0.3
TISN	Laguna Tiscapa	1.43	20	P	Pn	14 21 38.2	-0.3
ALLN	Telcor Managua	1.44	19	P	Pn	14 21 38.5	-0.1
ALLN				S	Sg	14 21 58.6	-0.3
MGAN	Managua	1.44	20	P	Pb	14 21 39.0	-0.5
MGAN				S	Sg	14 22 00.5	+1.5
ELVJ	El Viejo (Barb	1.45	103	eP	Pn	14 21 37.9	-0.9
APQ2	Apoyeque	1.47	17	P	Pb	14 21 39.5	-0.3
APQ2				S	Sg	14 21 57.9	-1.8
APYN	Apoyeque	1.49	16	P	Pg	14 21 40.8	-0.4
CMARA	Lajas Hojancha	1.52	120	S	Sn	14 21 58.7	-1.0
MESS	Mesas	1.54	92	eP	Pb	14 21 40.8	-0.4
VMAR	Armenia, Volca	1.62	89	eP	Pb	14 21 42.3	-0.2
MOMN	Momotombo	1.63	8	P	Pn	14 21 41.0	-0.2
CNGA	Al SSO del Vol	1.70	2	P	Pn	14 21 42.9	+0.6
CNGA				S	Sg	14 22 05.6	-1.6
CNGN	Cerro Negro	1.70	2	P	Pn	14 21 42.9	+0.6
CNGN				S	Sg	14 22 06.2	-1.2
CNGN	Cerro Negro	1.70	2	eP	Pn	14 21 42.8	+0.4
UPAL	Upala	1.72	86	P	Pb	14 21 42.9	-1.3
UPAL				S	Sg	14 22 06.4	-1.5
HOYN	Al Sur del Vol	1.80	358	P	Pb	14 21 44.8	-0.9
HOYN				S	Sg	14 22 09.3	-1.2
HERN	Volcan Telica	1.81	358	P	Pn	14 21 44.3	+0.4
HERN				S	Sg	14 22 09.1	-1.8
JTS	Las Juntas de	1.85	105	Pn	Pb	14 21 45.6	-0.8
	36nm,0.3s,baz=298,slow=9.5,SNR=20						
JTS				Sn	Sn	14 22 07.1	-0.6
	104nm,0.3s,baz=317,slow=15,SNR=10						
JTS	Las Juntas de	1.85	105	P	Pb	14 21 45.4	-1.0
JTS				S	Sb	14 22 08.0	-1.6
POLN	Al Sur del Vol	1.85	358	P	Pb	14 21 45.8	-0.7
PKGN	Cerro Pekin	1.88	354	P	Pn	14 21 45.5	+0.8
CRIN	San Cristobal	1.92	352	P	Pn	14 21 46.2	+0.9
CRIN				S	Sb	14 22 11.4	-0.4
CRIN	San Cristobal	1.92	352	eP	Pn	14 21 46.2	+0.9
BOAB	BOACO BROADBAN	1.97	33	P	Pn	14 21 46.4	+0.5
BOAB				S	Sg	14 22 14.0	-1.9
ARE1	Arenal 1	2.04	99	eP	Pb	14 21 49.5	-0.1
MATN	Matagalpa	2.28	21	P	Pn	14 21 49.8	-0.5
LIMN	Finca el Limon	2.29	10	P	Pn	14 21 50.8	+0.3
LIMN				S	Sb	14 22 21.0	-1.6
CSGN	Cosiguina Volc	2.31	340	P	Pn	14 21 51.3	+0.6
CSGN				S	Sn	14 22 19.8	+0.6
CSGN	Cosiguina Volc	2.31	340	eP	Pn	14 21 51.9	+1.2
CNCH	Conchagua	2.69	337	P	Pn	14 21 56.3	+0.4
CNCH				S	Sn	14 22 29.0	+0.4
RCON	San Juan de Ri	2.75	12	P	Pn	14 21 57.8	+1.1
RCPN	Sur Rio San Ju	2.80	13	P	Pn	14 21 58.6	+1.1
RCVN	Varillal2	2.83	11	P	Pn	14 21 58.4	+0.4
PACA	Pacayal	3.07	330	S	Sn	14 22 37.8	-0.3
BUS1	Rivas	3.21	112	eP	Pn	14 22 05.7	+2.2
TGUH	Tegucigalpa,Un	3.29	351	P	Pn	14 22 04.9	+0.7
DRK0	Durika	3.78	113	S	Sn	14 22 55.7	+0.1
JAYA	Jayaque - finc	3.88	318	S	Sn	14 22 57.8	-0.1
NUBE	Las Nubes	4.28	317	S	Sn	14 23 06.4	-1.4
CMIG	Matias Romero	10.07	309	Pn	Pn	14 23 40.1	+2.9
	0.7nm,0.3s,baz=112,slow=11,SNR=5.9						
	1.8nm,0.3s						
TXAR	Lajitas Array	24.29	322	P	P	14 26 31.9	+1.6
	2.1nm,0.7s,baz=136,slow=10,SNR=20						
	2.1nm,0.7s						
PDAR	Pinedale Array	37.55	332	P	P	14 28 25.3	-1.9
	0.6nm,0.7s,baz=125,slow=10,SNR=6.3						
	0.6nm,0.7s						
NVAR	Mina Array Bea	39.39	320	P	P	14 28 44.5	+1.7
	1.0nm,0.8s,baz=144,slow=5.3,SNR=5.9						
NVAR				PcP	PcP	14 30 53.5	+2.5
	1.1nm,0.7s,baz=138,slow=4.4,SNR=6.7						
	1.0nm,0.8s						
YKA	Yellowknife Ar	55.38	345	P	P	14 30 43.6	-2.9
	0.2nm,0.6s,baz=140,slow=6.4,SNR=4.4						
	0.2nm,0.6s						
ILAR	Eielson Array	67.81	336	P	P	14 32 09.5	-0.9
	0.8nm,1.1s,baz=113,slow=4.7,SNR=4.4						
	0.8nm,1.1s						
ASAR	Alice Springs	139.25	246	PKP	PKiKP	14 40 44.7	+1.8
	0.2nm,0.5s,baz=108,slow=2.9,SNR=1.7						
WRA	Warramunga Arr	139.43	252	PKP	PKiKP	14 40 44.1	+0.7
	0.3nm,0.7s,baz=91,slow=2.0,SNR=2.1						
CMAR	Chiang Mai Arr	150.40	349	PKPbc	PKiKP	14 41 06.2	+0.3
	0.3nm,0.4s,baz=7.4,slow=3.9,SNR=4.9						

*IDC **05** 14:31:01.8±2.6, 6°.07S×154°.85E, h340km±26km, mb3.3/10, mbtmp4.0/11, Error ellipse: s-maj=33.2km s-min=10.7km az=117.0*

ISC 05 14:31:02.5±1.2, 6°.1S±0°.1×154°.9E±0°.2, h350km, n12, σ0s.93/16, mb3.5/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	16.28	210	P	P	14 34 31.2	+0.1
	3.1nm,0.5s,baz=21,slow=10,SNR=9.6						
WRA	Warramunga Arr	24.30	234	P	P	14 35 49.5	-0.2
	0.8nm,0.6s,baz=55,slow=9.5,SNR=14						
WRA				PcP	PcP	14 39 20.8	+1.8
	0.4nm,0.9s,baz=65,slow=2.5,SNR=2.2						
WRA				S	S	14 39 42.5	-0.1
	0.7nm,0.9s,baz=56,slow=16,SNR=4.4						
	0.8nm,0.6s						
ASAR	Alice Springs	26.74	227	P	P	14 36 10.4	-1.0
	0.5nm,0.5s,baz=58,slow=9.2,SNR=16						
ASAR				PcP	PcP	14 39 26.5	+1.9
	0.2nm,0.6s,baz=61,slow=2.9,SNR=1.9						
ASAR				S	S	14 40 21.9	+0.8
	0.3nm,0.8s,baz=57,slow=14,SNR=4.6						
	0.5nm,0.5s						
STKA	Stephens Creek	28.54	204	P	P	14 36 26.6	-0.5
	0.9nm,0.5s,baz=29,slow=8.9,SNR=4.7						
	0.9nm,0.5s						
PETK	Petropavlovsk-	59.01	2	P	P	14 40 26.6	+0.2
	2.9nm,0.7s,baz=138,slow=7.1,SNR=11						
	2.9nm,0.7s						
CMAR	Chiang Mai Arr	60.34	295	P	P	14 40 35.6	-0.5
	0.7nm,0.6s,baz=108,slow=5.7,SNR=5.3						
	0.7nm,0.6s						
LZDM	Lanzhou Array	63.67	315	P	P	14 40 58.5	+0.4
	0.4nm,0.3s,baz=121,slow=6.0,SNR=2.0						
	0.4nm,0.3s						
SONM	Songino Array	68.54	327	P	P	14 41 28.9	+0.6
	1.2nm,0.6s,baz=132,slow=5.3,SNR=9.2						
	1.2nm,0.6s						
ILAR	Eielson Array	82.55	22	P	P	14 42 45.9	-0.7
	0.3nm,0.6s,baz=246,slow=5.1,SNR=6.9						
	0.3nm,0.6s						
MKAR	Makanchi Array	82.69	319	P	P	14 42 47.5	-0.2
	1.9nm,0.8s,baz=108,slow=5.7,SNR=22						
	1.9nm,0.8s						
ZALV	Zalesovo Beam	83.40	326	P	P	14 42 50.0	-1.1
	1.0nm,0.5s,baz=111,slow=8.1,SNR=5.6						
	1.0nm,0.5s						
TORD	Torodi Ar. Bea	152.72	287	PKPbc	PKPbc	14 50 19.1	-0.2
	0.5nm,0.6s,baz=80,slow=1.7,SNR=3.6						

*KRNET **05** 14:40:16.5±0.1, 39°.96N×77°.09E, h19km, mb3.1*

*SOME **05** 14:40:16.8, 39°.95N×77°.15E, h5km*

*NNC **05** 14:40:17.2±1.4, 39°.95N×77°.05E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=9.3km s-min=7.9km az=176.0*

ISC 05 14:40:20.7±2.2, 39°.88N±0°.09×77°.10E±0°.06, h26km±16km, n42, σ1s.72/66, 23C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKS	Jany-Kuch	1.63	317	⇑eP	Pn	14 40 45.5	-2.4
JNKS				⇑eS	Sn	14 41 06.8	-1.3
NRN	Naryn	1.77	332	⇑eP	Pn	14 40 48.0	-1.9
NRN				⇑eS	Sn	14 41 11.0	-0.7
TARG	Taragay, Kyrgy	1.93	16	⇑iP	Pn	14 40 50.7	-1.5
TARG				⇑eS	Sn	14 41 15.8	0.0
KDJ	Kajisay	2.25	2	⇓eP	Pn	14 40 55.8	-0.6
KDJ				⇓eS	Sn	14 41 24.1	+0.6
ULHL	Ulahol	2.46	345	⇓eP	Pn	14 40 58.4	-0.8
ULHL				⇓eS	Sn	14 41 29.1	+0.6
BOOM	Boomskoye usch	2.75	342	⇑eP	Pn	14 41 02.5	-0.8
BOOM				⇑eS	Sn	14 41 36.3	+0.5
SFK	Sufi-Kurgan	2.77	274	⇑eP	Pn	14 41 03.8	+0.3
SFK				⇑iS	Sn	14 41 38.4	+2.2
ARLS	Aral	2.89	314	⇑eP	Pn	14 41 05.0	-0.2
ARLS				⇑eS	Sn	14 41 39.6	+0.4
UCH	Uchtor	3.06	321	⇑eP	Pn	14 41 07.2	-0.5
UCH				⇑eS	Sn	14 41 44.1	+0.4
TNSS	Tian-Shan	3.16	358	Pg	Pb	14 41 14.0	-2.4
	1.6nm,0.1s						
TNSS				Lg	Lg	14 41 55.5	
	8.0nm,0.6s						
TNSS	Tian-Shan	3.16	358	eP	Pb	14 41 14.3	-2.1
	1.6nm,0.1s						
TNSS				eS	Sb	14 41 55.4	+0.8
	8.0nm,0.6s						
IZV	Izvestkoviy	3.18	354	Pg	Pb	14 41 14.1	-2.4
	2.8nm,0.2s						
IZV				Lg	Lg	14 41 55.4	
	27nm,0.5s						
IZV	Izvestkoviy	3.18	354	eP	Pb	14 41 14.1	-2.4
	2.8nm,0.2s						
IZV				eS	Sb	14 41 55.4	+0.5
	27nm,0.5s						
KBK	Karagaybulak	3.22	330	⇑eP	Pn	14 41 09.0	-0.7
KBK				⇑eS	Sn	14 41 47.6	+0.4
TKM2	Tokmak 2	3.25	340	⇑eP	Pn	14 41 09.4	-0.7
TKM2				⇑eS	Sn	14 41 48.1	+0.1
KST	Kastek	3.28	345	Pg	Pb	14 41 16.8	-1.4
	2.8nm,0.3s						
KST				Lg	Lg	14 42 00.0	
	16nm,0.3s						
KST	Kastek	3.28	345	eP	Pb	14 41 16.8	-1.4
	2.8nm,0.3s						
KST				eS	Sb	14 42 00.0	+2.3
	16nm,0.3s						
MDOK	Medeo	3.29	359	Pg	Pb	14 41 16.4	-1.9
	4.0nm,0.3s						
MDOK				Lg	Lg	14 41 59.3	
	46nm,0.8s						
MTBS	Maitube	3.29	351	Pg	Pb	14 41 16.1	-2.3
	0.9nm,0.2s						
MTBS				Lg	Lg	14 41 59.1	
	14nm,0.6s						
MTBS	Maitube	3.29	351	eP	Pb	14 41 16.1	-2.3
	0.9nm,0.2s						
MTBS				eS	Sb	14 41 59.1	+1.1
	14nm,0.6s						
SATY	Saty	3.33	17	Pg	Pb	14 41 17.0	-2.0
	6.3nm,0.5s						
SATY				Lg	Lg	14 42 00.7	
	13nm,0.4s						
KOTS	Kotyrbulak	3.36	0	Pg	Pb	14 41 18.0	-1.5
	2.2nm,0.3s						
KOTS				Lg	Lg	14 42 02.1	
	124nm,0.6s						
KOTS	Kotyrbulak	3.36	0	eP	Pb	14 41 18.0	-1.5
	2.2nm,0.3s						
KOTS				eS	Sb	14 42 02.0	+2.1
	124nm,0.6s						
AAK	Ala-Archa	3.39	325	⇑Pg	Pn	14 41 13.7	+1.8
	1.6nm,0.5s						
AAK				⇑Lg	Lg	14 42 02.6	
	3.7nm,0.6s						
AAK	Ala-Archa	3.39	325	⇑eP	Pn	14 41 11.4	-0.6
AAK				⇑eS	Sn	14 41 51.6	+0.2
DGS	Degeres	3.51	344	Pg	Pb	14 41 20.6	-1.5
	8.1nm,0.6s						
DGS				Lg	Lg	14 42 06.7	
	18nm,0.6s						
DGS	Degeres	3.51	344	eP	Pb	14 41 20.6	-1.5
	8.1nm,0.6s						
DGS				eS	Sb	14 42 06.7	+2.4
	18nm,0.6s						
UZB	Uzynbulak	3.57	23	Pg	Pb	14 41 21.3	-2.0
	4.0nm,0.3s						
UZB				Lg	Lg	14 42 08.0	
	7.7nm,0.6s						
UZB	Uzynbulak	3.57	23	eP	Pb	14 41 21.3	-2.0
	4.0nm,0.3s						
UZB				eS	Sb	14 42 08.0	+1.8
	7.7nm,0.6s						
KURS	Kuram	3.70	12	Pg	Pb	14 41 23.6	-1.8
	2.0nm,0.4s						
KURS				Lg	Lg	14 42 11.6	
	11nm,0.8s						
KPKS	Kokpek	3.78	18	Pg	Pb	14 41 25.2	-1.6
	0.2nm,0.1s						
KPKS				Lg	Lg	14 42 14.3	
	10nm,0.6s						
KPKS	Kokpek	3.78	18	eP	Pb	14 41 25.2	-1.6
	0.2nm,0.1s						
KPKS				eS	Sb	14 42 14.3	+2.2
	10nm,0.6s						
KTBS	Karatobe	3.85	355	Pg	Pb	14 41 26.7	-1.1
	1.3nm,0.3s						
KTBS				Lg	Lg	14 42 17.0	
	0.4nm,0.4s						
KTBS	Karatobe	3.85	355	eP	Pb	14 41 26.7	-1.1
	1.3nm,0.3s						
KTBS				eS	Sb	14 42 17.0	+3.0
	0.4nm,0.4s						
PDGK	Podgornoye	3.89	27	⇓Pg	Pb	14 41 26.2	-2.4
	2.6nm,0.5s						
PDGK				⇑Lg	Lg	14 42 18.1	
	21nm,0.9s						
KRBS	Karabastau	3.96	345	Pg	Pb	14 41 27.9	-1.9
	4.8nm,0.6s						
KRBS				Lg	Lg	14 42 19.0	
	11nm,0.5s						
KRBS	Karabastau	3.96	345	eP	Pb	14 41 27.9	-1.9
	4.8nm,0.6s						
KRBS				eS	Sb	14 42 19.0	+1.7
	11nm,0.5s						
ARXS	Arharly	4.37	7	Pg	Pb	14 41 35.7	-1.0
	0.8nm,0.4s						
ARXS				Lg	Lg	14 42 32.7	
	13nm,0.6s						
ARXS	Arharly	4.37	7	eP	Pb	14 41 35.7	-1.0
	0.8nm,0.4s						
ARXS				eS	Sb	14 42 32.7	+3.7
	13nm,0.6s						
KNOS	Konyrlen	4.74	18	Pg	Pb	14 41 43.3	+0.2
	1.2nm,0.3s						
KNOS				Lg	Lg	14 42 45.5	
	4.8nm,0.6s						
DJR	Jarkent	4.88	23	Pg	Pb	14 41 44.8	-0.7
	0.5nm,0.1s						
DJR				Lg	Lg	14 42 48.0	
	2.4nm,0.5s						
DJR	Jarkent	4.88	23	eP	Pb	14 41 44.8	-0.7
	0.5nm,0.1s						
DJR				eS	Sb	14 42 48.0	+4.2
	2.4nm,0.5s						

IDC 05 14:56:54.7±3.4, 27°.71N×44°.07W, h0km, mb3.5/4, mbtmp3.5/4, MS3.4/11, Error ellipse: s-maj=109.9km s-min=31.7km az=26.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SADO	Sadowa	32.71	311	LR	LR	15 14 13.9	
	comp=Z,46nm,20.7s,baz=136,slow=32						
TKL	Tuckaleechee C	34.53	293	LR	LR	15 15 32.5	
	comp=Z,54nm,18.7s,baz=106,slow=32						
ESDC	Sonseca Array	35.16	60	P	P	15 03 50.3	0.0
	0.5nm,0.7s,baz=265,slow=13,SNR=2.7						
	0.5nm,0.7s						
DBIC	Dimbokro	42.63	112	LR	LR	15 20 21.8	
	comp=Z,50nm,18.1s,baz=358,slow=33						
TORD	Torodi Ar. Bea	45.00	99	P	P	15 05 12.0	-0.2
	1.2nm,1.0s,baz=283,slow=7.2,SNR=5.1						
TORD				LR	LR	15 23 11.3	
	comp=Z,57nm,20.2s,baz=298,slow=35						
	1.2nm,1.0s						
ULM	Lac du Bonnet	45.05	315	LR	LR	15 22 18.1	
	comp=Z,30nm,19.2s,baz=20,slow=34						
H10N2	ASCENSION HYDR	45.46	137	T	T	15 52 12.0	
	baz=317,slow=76,SNR=9.9						
H10N3	ASCENSION HYDR	45.46	137	T	T	15 52 12.4	
	baz=317,slow=76,SNR=5.5						
H10N1	ASCENSION HYDR	45.48	137	T	T	15 52 13.3	
	baz=317,slow=76,SNR=9.0						
H10S3	ASCENSION HYDR	46.24	138	T	T	15 53 06.9	
	baz=315,slow=74,SNR=16						
H10S2	ASCENSION HYDR	46.26	138	T	T	15 53 07.6	
	baz=265,slow=74,SNR=14						
ANMO	Albuquerque	53.04	294	LR	LR	15 25 56.6	
	comp=Z,41nm,22.0s,baz=64,slow=33						
PDAR	Pinedale Array	54.29	304	LR	LR	15 27 48.3	
	comp=Z,22nm,19.5s,baz=9.0,slow=34						
YKA	Yellowknife Ar	56.85	328	P	P	15 06 40.0	-0.8
	0.2nm,0.7s,baz=90,slow=6.5,SNR=2.0						
	0.2nm,0.7s						
ELK	Elko	58.80	303	LR	LR	15 31 16.7	
	comp=Z,53nm,18.2s,baz=58,slow=35						
NEW	Newport	58.89	312	LR	LR	15 31 48.1	
	comp=Z,36nm,18.2s,baz=62,slow=36						
PFO	Pinyon Flats O	61.41	295	LR	LR	15 32 32.8	
	comp=Z,30nm,19.6s,baz=56,slow=35						
NVAR	Mina Array Bea	61.61	301	LR	LR	15 32 19.1	
	comp=Z,59nm,19.2s,baz=106,slow=34						
ILAR	Eielson Array	70.52	334	P	P	15 08 11.6	+0.7
	0.5nm,0.9s,baz=62,slow=6.2,SNR=1.5						
	0.5nm,0.9s						

*RSPR **05** 15:02:54.6, 19°.15N×67°.89W, h19km±18km*

*OSPL **05** 15:02:54.4±0.7, 19°.17N×67°.66W, h0km±4km, ML2.7, Presumed earthquake*

*NEIC **05** 15:02:54.3±1.1, 19°.02N±0°.03×67°.70W±0°.04, h10km±1km, ML3.0/35, Md3.1/2(RSPR), Error ellipse: s-maj=7.0km s-min=4.8km az=240.0*

*SDD **05** 15:02:56.0±1.4, 19°.09N×67°.62W, h12km±79km, MD3.1, ML3.0, MW3.0, Presumed earthquake*

ISC 05 15:02:55.7±1.3, 19°.04N±0°.05×67°.63W±0°.02, h11km±9km, n48, σ0s.87/80, 19C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.66	167		Pg	15 03 08.5	-0.1
IDE					Sg	15 03 17.5	+0.2
IDE	Isla Desecheo	0.66	167	⇑iP	Pg	15 03 08.5	-0.1
IDE				eS	Sg	15 03 17.5	+0.2
AGPR	Aguadilla, PR	0.75	139		Pg	15 03 10.1	0.0
AGPR				Sg	Sb	15 03 20.8	-0.1
AGPR				IAML		15 03 21.9	
	646nm,0.3s						
AGPR				IAML		15 03 23.3	
	370nm,0.3s						
AGPR	Aguadilla, PR	0.75	139	⇑iP	Pb	15 03 10.7	0.0
AGPR				⇑iS	Sb	15 03 21.5	+0.6
AGPR				IAML		15 03 21.8	
	comp=N,530nm,0.2s						
AGPR	Aguadilla, PR	0.75	139	ePg	Pg	15 03 10.4	+0.3
AGPR				eSg	Sb	15 03 20.8	-0.1
AGPR				IAML		15 03 21.4	
	comp=E,469nm,0.2s						
AGPR				IAML		15 03 21.8	
	comp=N,535nm,0.2s						
AGPR				IAML		15 03 21.8	
	comp=N,535nm,0.2s						
AGPR	Aguadilla, PR	0.75	139	⇑eP	Pg	15 03 10.1	0.0
AGPR				eS	Sb	15 03 21.3	+0.3
AGPR	Aguadilla, PR	0.75	139	i P	Pg	15 03 10.4	+0.3
AGPR				eS	Sb	15 03 21.2	+0.3
AGPR				IAML		15 03 23.0	
	comp=Z,265nm,0.2s						
PCDR	Punta Cana, DR	0.89	234	⇑iP	Pn	15 03 14.1	+0.1
PCDR				i S	Sn	15 03 25.7	-1.2
PCDR	Punta Cana, DR	0.89	234	⇑ePg	Pb	15 03 12.7	-0.3
PCDR				⇑eSg	Sg	15 03 24.0	-0.3
PCDR				IAML		15 03 24.2	
	comp=E,277nm,0.5s						
PCDR				IAML		15 03 34.3	
	comp=N,485nm,15.0s						
PRSN	Puerto Rico Se	0.94	151	Pg	Pg	15 03 13.1	-0.6
PRSN	Puerto Rico Se	0.94	151	⇑iP	Pn	15 03 17.3	+2.6
PRSN				⇑iS	Sn	15 03 28.2	+0.1
PRSN				IAML		15 03 32.2	
	comp=N,630nm,0.3s						
PRSN	Puerto Rico Se	0.94	151	ePg	Pg	15 03 13.6	-0.1
PRSN				eSg	Sb	15 03 27.0	+0.7
PRSN				IAML		15 03 32.1	
	comp=N,630nm,0.3s						
PRSN				IAML		15 03 32.2	
	comp=N,630nm,0.3s						
PRSN				IAML		15 03 32.6	
	comp=E,533nm,0.2s						
LSP	Las Mesas	1.00	149		Pb	15 03 14.4	-0.5
LSP	Las Mesas	1.00	149	⇓eP	Pb	15 03 14.4	-0.5
HIDR	Higuey Centro	1.12	247	i P	Pg	15 03 18.4	+1.1
HIDR				i S	Sn	15 03 32.9	+0.1
HIDR				IAML		15 03 34.6	
	comp=N,289nm,0.3s						
HIDR	Higuey Centro	1.12	247	ePg	Pb	15 03 15.9	-1.2
HIDR				⇑eSg	Sn	15 03 32.2	-0.5
HIDR				IAML		15 03 34.2	
	comp=E,201nm,0.6s						
HIDR				IAML		15 03 34.6	
	comp=N,289nm,0.3s						
HIDR				IAML		15 03 34.6	
	comp=N,289nm,0.3s						
CRPR	Cabo Rojo, PR	1.14	154		Pb	15 03 16.1	-1.2
CRPR				Sg	Sb	15 03 30.9	-1.2
CRPR				IAML		15 03 36.5	
	comp=E,324nm,0.6s						
CRPR				IAML		15 03 37.8	
	comp=N,313nm,0.5s						
CRPR	Cabo Rojo, PR	1.14	154	⇑iP	Pg	15 03 18.6	+1.1
CRPR				⇑iS	Sn	15 03 35.0	+2.0
CRPR				IAML		15 03 38.4	
	comp=N,322nm,0.5s						
CRPR	Cabo Rojo, PR	1.14	154	ePg	Pb	15 03 17.1	-0.2
CRPR				eSg	Sn	15 03 34.4	+1.3
CRPR				IAML		15 03 36.4	
	comp=E,357nm,0.7s						
CRPR				IAML		15 03 38.4	
	comp=N,322nm,0.5s						
CRPR				IAML		15 03 38.4	
	comp=N,322nm,0.5s						
CRPR	Cabo Rojo, PR	1.14	154	⇑eP	Pb	15 03 16.2	-1.2
CRPR				eS	Sg	15 03 32.5	+0.2
CRPR	Cabo Rojo, PR	1.14	154	i P	Pb	15 03 17.1	-0.2
CRPR				eS	Sn	15 03 34.0	+0.9
CRPR				IAML		15 03 36.3	
	comp=Z,331nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UUPR	Utuado, UPR, P	1.16	132	Pn	Pn	15 03 16.8	-1.1
UUPR				Sg	Sb	15 03 32.2	-0.6
EMPR	Esperanza - Ma	1.18	118		Pn	15 03 17.0	-1.1
EMPR					Sn	15 03 34.5	+0.3
EMPR	Esperanza - Ma	1.18	118⇓	eP	Pn	15 03 17.0	-1.1
EMPR				eS	Sn	15 03 34.5	+0.3
MLPR	Magueyes Islan	1.20	152		Pn	15 03 17.0	-1.4
MLPR				IAML		15 03 37.4	
	comp=Z,354nm,0.5s						
MLPR				IAML		15 03 38.4	
	comp=Z,235nm,0.4s						
MIDR	Miches	1.35	268⇑	iP	Pg	15 03 23.4	+1.9
MIDR				IAML		15 03 41.3	
	comp=N,271nm,0.5s						
MIDR				IAML		15 03 41.6	
	comp=N,231nm,0.3s						
MIDR				iS	Sg	15 03 41.6	+2.6
MIDR	Miches	1.35	268⇑	ePg	Pg	15 03 20.9	-0.7
MIDR			⇑	eSg	Sg	15 03 38.9	-0.2
MIDR				IAML		15 03 41.3	
	comp=N,271nm,0.5s						
MIDR				IAML		15 03 41.4	
	comp=E,180nm,0.4s						
CELP	Cerrillos	1.38	134	Pn	Pn	15 03 20.5	-0.3
CELP				IAML		15 03 45.8	
	comp=E,293nm,0.3s						
CELP				IAML		15 03 46.3	
	comp=E,221nm,0.3s						
OBIP	Obispado Ponce	1.38	135	Pn	Pn	15 03 19.9	-1.0
OBIP	Obispado Ponce	1.38	135⇑	eP	Pn	15 03 19.8	-1.1
OBIP				eS	Sb	15 03 39.5	+0.3
OBIP	Obispado Ponce	1.38	135	iP	Pn	15 03 20.4	-0.5
OBIP				eS	Sb	15 03 39.9	+0.7
OBIP				IAML		15 03 45.0	
	comp=Z,89nm,0.3s						
ECPR	Experimental S	1.40	121	Pn	Pn	15 03 20.4	-0.6
ECPR	Experimental S	1.40	121⇓	eP	Pn	15 03 20.4	-0.6
ECPR				eS	Sb	15 03 40.0	+0.5
SMDR	Samana, DR	1.50	280	ePg	Pb	15 03 22.9	-0.6
GCPR	Guaynabo City	1.63	116	Pn	Pn	15 03 23.9	-0.4
SJG	San Juan	1.68	123	Pn	Pn	15 03 24.1	-0.9
SJG				IAML		15 03 50.6	
	comp=Z,131nm,0.4s						
SJG				IAML		15 03 53.8	
	comp=Z,146nm,0.3s						
SJG	San Juan	1.68	123	ePg	Pb	15 03 25.8	-0.8
SJG				eSg	Sg	15 03 49.5	-0.1
SJG	San Juan	1.68	123⇑	eP	Pn	15 03 24.2	-0.7
SJG				eS	Sn	15 03 46.9	+0.5
SJG	San Juan	1.68	123	iP	Pn	15 03 24.1	-0.9
SJG				eS	Sn	15 03 47.0	+0.5
SJG				IAML		15 03 51.9	
	comp=Z,80nm,0.5s						
DR12	Loma Pena Alta	1.68	262	Pn	Pn	15 03 24.4	-0.6
HATOM	Hato Mayor del	1.68	262⇑	iP	Pg	15 03 28.5	+0.6
HATOM			⇑	iS	Sg	15 03 48.3	-1.4
HATOM				IAML		15 03 52.1	
	comp=N,74nm,0.6s						
HATOM	Hato Mayor del	1.68	262	ePg	Pb	15 03 26.7	0.0
HATOM				eSg	Sg	15 03 49.1	-0.6
HATOM				IAML		15 03 50.3	
	comp=E,62nm,0.3s						
HATOM				IAML		15 03 52.1	
	comp=N,74nm,0.6s						
HATOM				IAML		15 03 52.1	
	comp=N,74nm,0.6s						
PDPR	Patillas Dam,	1.83	123	Pn	Pn	15 03 26.1	-0.9
HUMP	Col San Antoni	1.91	118		Pn	15 03 27.5	-0.6
HUMP					Sn	15 03 53.1	+1.0
HUMP	Col San Antoni	1.91	118	Pn	Pn	15 03 27.1	-0.9
HUMP				IAML		15 03 57.0	
	comp=N,63nm,0.5s						
HUMP				IAML		15 03 59.5	
	comp=N,68nm,0.2s						
HUMP	Col San Antoni	1.91	118⇓	eP	Pn	15 03 27.5	-0.6
HUMP				eS	Sn	15 03 53.1	+1.0
DR08	Loma La Naviza	2.27	268	IAML		15 04 08.6	
	comp=N,1μm,0.2s						
DR08				IAML		15 04 09.9	
	comp=E,796nm,0.2s						
CUPR	Culebra, Puert	2.34	108	Pn	Pn	15 03 34.7	+0.7

SDD 05 15:40:00.0±2.5, 19°05N×67°59W, h15km±15km, MD2.9, ML2.4, MW2.9, 20C-2D, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.74	142⇑	iP	Pg	15 40 12.1	-2.3
AGPR			⇑	iS	Sg	15 40 22.9	-1.2
AGPR				IAML		15 40 30.7	
	comp=N,107nm,0.2s						
AGPR	Aguadilla, PR	0.74	142	ePg	Pg	15 40 12.0	-2.4
AGPR			⇑	eSg	Sg	15 40 23.0	-1.1
AGPR				IAML		15 40 23.2	
	comp=E,112nm,0.2s						
AGPR				IAML		15 40 30.7	
	comp=N,107nm,0.2s						
PCDR	Punta Cana, DR	0.92	235⇑	iP	Pb	15 40 15.0	-2.6
PCDR			⇑	iS	Sb	15 40 26.2	-3.4
PCDR	Punta Cana, DR	0.92	235⇓	ePg	Pb	15 40 16.5	-1.1
PCDR			⇑	eSg	Sb	15 40 27.1	-2.5
PRSN	Puerto Rico Se	0.93	153	IAML		15 40 29.9	
	comp=N,194nm,0.2s						
PRSN	Puerto Rico Se	0.93	153	eSg	Sb	15 40 29.8	-0.2
PRSN				IAML		15 40 29.9	
	comp=N,186nm,0.2s						
CRPR	Cabo Rojo, PR	1.13	156⇑	iP	Pb	15 40 19.9	-1.4
CRPR			⇑	iS	Sb	15 40 35.7	-0.2
CRPR				IAML		15 40 36.8	
	comp=N,69nm,0.7s						
CRPR				IAML		15 40 36.9	
	comp=N,69nm,0.7s						
CRPR	Cabo Rojo, PR	1.13	156	ePg	Pb	15 40 20.6	-0.7
CRPR			⇑	eSg	Sb	15 40 35.1	-0.8
CRPR				IAML		15 40 36.8	
	comp=N,69nm,0.7s						
CRPR				IAML		15 40 40.8	
	comp=E,70nm,0.4s						
HIDR	Higuey Centro	1.16	247⇑	iP	Pn	15 40 19.5	-2.1
HIDR				iS	Sb	15 40 34.4	-2.2
HIDR				IAML		15 40 35.2	
	comp=N,75nm,0.2s						
HIDR				IAML		15 40 35.2	
	comp=N,75nm,0.2s						
HIDR	Higuey Centro	1.16	247⇑	eSg	Sb	15 40 36.3	-0.2
HIDR				IAML		15 40 36.4	
	comp=N,70nm,0.5s						
HIDR				IAML		15 40 36.8	
	comp=E,69nm,0.2s						
MIDR	Miches	1.38	268⇑	iP	Pn	15 40 22.9	-1.8
MIDR			⇑	iS	Sn	15 40 42.3	-0.4
MIDR			⇑	iS	Sb	15 40 42.8	-0.2
MIDR				IAML		15 40 45.1	
	comp=N,44nm,0.3s						
MIDR				IAML		15 40 45.1	
	comp=N,44nm,0.3s						
MIDR				IAML		15 40 45.2	
	comp=N,25nm,0.8s						
MIDR	Miches	1.38	268⇓	ePg	Pn	15 40 22.7	-2.0
MIDR			⇑	eSg	Sn	15 40 41.9	-0.8
MIDR				IAML		15 40 45.1	
	comp=N,44nm,0.3s						
MIDR				IAML		15 40 45.1	
	comp=N,44nm,0.3s						
SMDR	Samana, DR	1.53	279⇑	iS	Sn	15 40 45.4	-0.9
SMDR				eSg	Sb	15 40 46.4	-0.8
HATOM	Hato Mayor del	1.71	262⇑	iP	Pb	15 40 31.1	-0.2
HATOM				IAML		15 40 59.8	
	comp=N,17nm,1.1s						
HATOM				IAML		15 41 00.4	
	comp=N,20nm,1.6s						
HATOM	Hato Mayor del	1.71	262⇑	ePg	Pn	15 40 28.9	-0.5
HATOM			⇑	eSg	Sn	15 40 51.3	+0.3
HATOM				IAML		15 40 53.9	
	comp=N,22nm,1.1s						
DR08	Loma La Naviza	2.30	268⇑	eSg	Sb	15 41 07.7	-1.9
DR08				IAML		15 41 08.3	
	comp=N,387nm,0.2s						

IDC 05 15:55:20.4±1.6, 6°72S×128°26E, h262km±23km, mb2.6/1, mbtmp3.8/6, Error ellipse: s-maj=25.1km s-min=17.8km az=107.0

ISC 05 15:55:19.0±0.9, 6°80S±0°07×128°4E±0°1, h250km, n6, $\sigma 1^{s}51$/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.80	234	P	Pn	15 56 46.4	+1.7
	52nm,0.4s,baz=144,slow=0.4,SNR=24						
BATI				S	S	15 57 51.9	-1.3
	11nm,0.3s,baz=91,slow=23,SNR=6.6						
SIJI	Sorong	6.54	26	P	Pn	15 56 55.6	+1.7
	3.7nm,0.5s,baz=207,slow=23,SNR=9.0						
SIJI				S	S	15 58 07.6	-2.4
	4.4nm,0.6s,baz=229,slow=23,SNR=6.0						
FITZ	Fitzroy Crossi	11.55	193	P	P	15 58 00.1	-0.6
	4.3nm,1.0s,baz=13,slow=11,SNR=7.1						
FITZ				S	S	16 00 05.4	-0.8
	1.0nm,0.4s,baz=282,slow=11,SNR=1.5						
WRA	Warramunga Arr	14.27	157	P	P	15 58 31.5	+0.7
	0.6nm,0.5s,baz=341,slow=11,SNR=8.9						
WRA				S	S	16 01 07.9	-0.6
	0.4nm,0.8s,baz=330,slow=24,SNR=2.8						
ASAR	Alice Springs	17.58	163	P	Pn	15 59 09.1	-0.6
	2.0nm,0.5s,baz=343,slow=11,SNR=45						
MKAR	Makanchi Array	67.21	327	P	P	16 05 45.7	-0.8
	0.2nm,0.6s,baz=119,slow=6.5,SNR=2.3						
	0.2nm,0.6s						

IDC 05 16:22:55.7±10.0, 19°22S×65°82E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=576.3km s-min=36.5km az=39.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.20	30	T	T	16 39 49.0	
	baz=208,slow=75,SNR=32						
H08S2	Diego Garcia H	13.21	30	T	T	16 39 49.7	
	baz=208,slow=75,SNR=20						
H08S3	Diego Garcia H	13.22	30	T	T	16 39 57.6	
	baz=208,slow=75,SNR=37						
ASAR	Alice Springs	63.01	107	P	P	16 33 24.9	-0.1
	1.1nm,0.9s,baz=265,slow=6.8,SNR=7.3						
	1.1nm,0.9s						
WRA	Warramunga Arr	64.13	103	P	P	16 33 32.5	+0.1
	0.7nm,0.9s,baz=251,slow=5.8,SNR=5.4						
	0.7nm,0.9s						
AKASG	Malin Array Be	76.70	337	P	P	16 34 48.5	0.0
	0.4nm,0.4s,baz=137,slow=5.0,SNR=4.1						
	0.4nm,0.4s						

AFAD 05 16:32:56.9, 39°10N×27°82E, h7km±2km, MW3.6
ISK 05 16:32:56.5, 39°11N×27°83E, h12km, ML3.3/19
THE 05 16:32:59.0, 39°N±6°×2°8E±1°1, h5km±24km, M3.3/12, MLh3.3/12

ISC 05 16:32:57.1±0.8, 39°10N±0°01×27°83E±0°02, h14km±6km, n73, $\sigma 0^{s}57$/110, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.22	183	P	Pg	16 33 01.8	-0.2
AKHS				S	Sg	16 33 05.6	+0.3
AKS	Akhisar	0.22	183	Pg	Pg	16 33 01.4	-0.6
AKS				Sg	Sg	16 33 05.6	+0.3
SOMA	Soma-Manisa	0.24	284	Pg	Pg	16 33 01.8	-0.5
SOMA				Sg	Sg	16 33 05.8	+0.1
STEP	BALIKESIR_Sava	0.29	343	P	Pg	16 33 03.2	0.0
STEP				S	Sg	16 33 06.8	-0.6
GORD	Gordes-Manisa	0.33	125	Pg	Pg	16 33 03.6	-0.3
GORD				Sg	Sg	16 33 09.1	+0.5
GOMA	Golmarmara-Man	0.40	170	Pg	Pg	16 33 04.9	-0.2
GOMA				Sg	Sg	16 33 11.0	+0.5
KTTT	Salihli	0.46	153	P	Pg	16 33 06.0	-0.2
KTTT				S	Sg	16 33 12.1	-0.4
CAMT	Merkez	0.53	229	P	Pb	16 33 07.9	-0.3
CAMT				S	Sb	16 33 15.6	-0.2
ZEDA	zmir-Bergama	0.60	257	P	Pg	16 33 09.0	+0.1
ZEDA				S	Sb	16 33 17.3	-0.4
BKES	Balkesir-Mer	0.64	7	P	Pg	16 33 08.9	-0.7
BKES				S	Sg	16 33 17.9	-0.2
BALY	Balya	0.66	346	P	Pg	16 33 10.1	0.0
BALY				S	Sg	16 33 18.0	-0.8
DEMI	Demirci	0.69	94	P	Pg	16 33 09.5	-1.1
DEMI				S	Sg	16 33 19.2	-0.6
BUHA	Balikesir, Bur	0.71	305	P	Pg	16 33 10.7	-0.2
DURS	Dursunbey	0.71	45	P	Pg	16 33 10.2	-0.7
DURS				S	Sg	16 33 19.9	-0.4
IZMD	zmir-Dikili-	0.71	261	P	Pb	16 33 11.2	-0.1
IZMD				S	Sg	16 33 20.3	0.0
YAYO	Edremit-Balk	0.78	311	Pg	Pg	16 33 11.8	-0.4
BLKS	Balkesir-Sus	0.78	8	P	Pg	16 33 11.8	-0.5
BLKS				P	Pg	16 33 11.8	-0.5
BLKS				S	Sg	16 33 22.6	0.0
DST	Dursunbey	0.79	50	Pg	Pg	16 33 12.1	-0.4
MANT	Manisa	0.83	137	P	Pb	16 33 13.6	+0.1
ODEM	Odemis-Izmir	0.84	167	Pg	Pg	16 33 13.2	-0.3
KULA	Kula-Manisa	0.87	132	Pg	Pg	16 33 13.9	-0.2
BAGT	Foa	0.88	240	P	Pg	16 33 13.8	-0.3
BAGT				S	Sb	16 33 26.0	+0.2
SUSR	Susurluk-Balik	0.89	13	Pg	Pg	16 33 13.8	-0.5
SMAA	Simav-Kutahya	0.90	90	Pg	Pg	16 33 14.2	-0.3
SIMA	Simav-Kutahya	0.90	91	Pg	Pg	16 33 14.2	-0.3
AYVA	Ayvalik	0.91	284	P	Pb	16 33 14.9	+0.3
CMHT	Manyas	0.92	7	P	Pg	16 33 14.5	-0.4
CMHT				S	Sg	16 33 26.1	-0.8
DUVT	Torbali	0.93	199	P	Pg	16 33 12.9	-2.1
DUVT				S	Sg	16 33 27.0	-0.1
FOCM	Foa	0.94	246	Pg	Pb	16 33 15.2	+0.1
BLCB	Balcova	0.94	221	Pg	Pg	16 33 15.0	-0.3
BLCB	Balcova	0.94	221	P	Pg	16 33 15.1	-0.2
BLCB				S	Sg	16 33 27.5	-0.2
YENI	Yenice-Canakka	0.95	332	Pg	Pg	16 33 15.3	-0.2
GONE	Gonen-Balikesi	0.95	353	Pg	Pg	16 33 14.9	-0.6
IZMR	zmir-demi	0.97	174	P	Pb	16 33 15.9	+0.3
IZMR				P	Pb	16 33 16.0	+0.3
IZMR				S	Sg	16 33 27.2	-1.2
ATIT	Gnen	1.00	348	P	Pg	16 33 16.3	-0.2
ATIT				S	Sg	16 33 28.9	-0.8
USAK	Uak-Merkez	1.00	112	P	Pg	16 33 16.1	-0.4
KIRA	zmir-Kiraz	1.01	153	P	Pb	16 33 16.8	+0.5
SHAP	Saphane-Kutahy	1.09	94	Pn	Pg	16 33 17.8	-0.3
CANM	Can-anakkale	1.09	327	Pn	Pg	16 33 17.8	-0.4
BAYC	CANAKKALE_Bayr	1.18	303	P	Pg	16 33 19.3	-0.6
BAYC				S	Sg	16 33 34.6	-0.7
KARB	zmir-Karabur	1.19	249	P	Pg	16 33 19.5	-0.5
KARB				S	Sb	16 33 35.7	+1.1
NAZL	Nazilli-Aydin	1.19	162	Pn	Pg	16 33 19.3	-0.7
EMET	Ktahya-Emet	1.19	76	P	Pg	16 33 19.8	-0.3
PRK	Paraskevi	1.22	277	P	Pg	16 33 20.1	-0.5
PRK				S	Sg	16 33 35.1	-1.4
GEDZ	Gediz	1.23	92	Pn	Pg	16 33 20.0	-0.9
ORLT	Orhaneli	1.25	41	P	Pg	16 33 21.0	-0.3
ORLT				S	Sb	16 33 37.4	+0.8
BAND	Balkesir-Ban	1.27	9	P	Pn	16 33 20.6	+0.1
BAND				S	Sb	16 33 36.5	-0.5
SULTU	Buldan	1.28	145	P	Pn	16 33 20.8	+0.2
SULTU				S	Sg	16 33 37.4	-1.0
DGB	zmir	1.28	216	P	Pn	16 33 21.2	+0.7
ZEYE	Izmir, Urla-Ze	1.35	231	P	Pn	16 33 21.4	0.0
ZEYE				S	Sb	16 33 38.9	-0.3
ESEN	Aydn-Nazilli	1.36	162	P	Pn	16 33 21.1	-0.5
ESEN				S	Sb	16 33 39.2	-0.4
EZN	Ezine	1.37	302	P	Pn	16 33 22.3	+0.5
EZN				S	Sg	16 33 40.9	-0.4
KOCA	Canakkale, Ayv	1.37	288	P	Pn	16 33 21.9	+0.1
KOCA				S	Sb	16 33 39.2	-0.7
LAPS	Lapseki, ANA	1.38	327	P	Pn	16 33 22.1	+0.1
LAPS				S	Sb	16 33 39.7	-0.5
ULDT	Uludag	1.45	44	P	Pn	16 33 23.4	+0.3
GCAM	G?zelcaml?	1.47	199	Pn	Pn	16 33 23.6	+0.4
GCAM	G?zelcaml?	1.47	199	P	Pn	16 33 23.0	-0.2
CNKL	anakkale-Mer	1.47	311	P	Pn	16 33 23.9	+0.7
CNKL				P	Pn	16 33 24.0	+0.7
CNKL				S	Sn	16 33 43.0	+0.7
PASA	Karahalli, USA	1.50	119	P	Pg	16 33 25.7	-0.2
SIGR	SIGRI	1.54	275	P	Pn	16 33 24.3	+0.2
SIGR				S	Sn	16 33 44.2	+0.4
CHOS	Chios island	1.56	243	P	Pn	16 33 25.2	+0.7
SMG	Samos	1.59	210	P	Pb	16 33 26.7	+0.4
BNAZ	Uak-Banaz	1.66	104	P	Pg	16 33 29.0	+0.1
DDIM	Aydin, Didim	1.70	196	P	Pg	16 33 29.5	-0.3
DNIZ	Denizli-Tavas-	1.75	147	P	Pb	16 33 29.7	+0.7
GADA	Gvkgeada	1.85	307	P	Pn	16 33 29.0	+0.6
ENEZ	Enez	2.08	322	P	Pn	16 33 32.6	+1.1
LIA	Limnos Island	2.20	292	P	Pn	16 33 33.8	+0.7
SMTH	Samothraki Isl	2.24	308	P	Pn	16 33 34.1	+0.3
ALN	Alexandroupoli	2.26	323	P	Pn	16 33 34.7	+0.7
RDO	Rodhopi	2.69	320	P	Pn	16 33 41.1	+1.1
KAVA	Kavala	3.17	308	P	Pn	16 33 47.2	+0.6
OUR	Ouranopolis	3.21	294	P	Pn	16 33 47.8	+0.7

IDC 05 16:49:49.2±2.0, 3°39S×100°55E, h0km, mb3.9/9, mbtmp3.9/9, MS3.8/2, Error ellipse: s-maj=78.4km s-min=17.9km az=55.0
NEIC 05 16:49:50.6±1.8, 3°5S±0°2×100°5E±0°1, h10km±2km, mb4.4/11, Error ellipse: s-maj=32.5km s-min=12.1km az=221.0
DJA 05 16:49:54.1±0.4, 3°S±3°×10°1E±°, h68km±9km, M3.9/20, MLv3.9/20

ISC 05 16:49:52.9±0.8, 3°55S±0°09×100°53E±0°09, h29km, n51, $\sigma 1^{s}32$/39, mb4.3/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.94	326	P	Pb	16 50 12.1	+1.5
PPSI				S	Sn	16 50 25.1	+2.5
KRJI	Kerinci	1.72	33	P	Pn	16 50 21.1	+0.1
UBSI	University, Be	1.75	97	P	Pn	16 50 21.5	+0.2
UBSI				S	Sn	16 50 43.9	+1.3
MASI	Maura Aman, Be	1.75	77	P	Pn	16 50 22.0	+0.6
KSI	Kapahiang	2.06	93	P	Pn	16 50 26.2	+0.6
EGSI	Enggano, Bengk	2.50	136	P	Pn	16 50 31.3	-0.3
MNAI	Manna	2.55	109	Pn	Pn	16 50 32.7	+0.4
MNAI	Manna	2.55	109	P	Pn	16 50 32.8	+0.4
PDSI	Padang	2.62	358	P	Pn	16 50 32.2	-1.1
PPI	Padang Panjang	3.07	357	P	Pn	16 50 40.1	+0.6
MDSI	Maura Dua	3.75	105	P	Pn	16 50 50.0	+1.1
GSI	Gunungsitoli	5.65	328	Pn	Pn	16 51 15.0	0.0
BBJI	Bungbulang	8.08	119	Pn	Pn	16 51 46.3	-2.2
CMAR	Chiang Mai Arr	21.92	356	P	P	16 54 40.9	-3.2
	1.5nm,1.0s,baz=185,slow=8.5,SNR=11						
	1.5nm,1.0s						
DAV	Davao City (W)	27.13	67	LR	LR	17 05 43.8	
	comp=Z,66nm,19.6s,baz=228,slow=35						
H08S2	Diego Garcia H	28.19	260	T	T	17 25 02.8	
	baz=83,slow=76,SNR=412						
H08S3	Diego Garcia H	28.20	261	T	T	17 25 04.6	
	baz=83,slow=76,SNR=796						
H08S1	Diego Carcia H	28.21	260	T	T	17 25 05.5	
	baz=83,slow=76,SNR=251						
H01W3	Cape Leeuwin H	33.64	160	T	T	17 32 09.0	
	baz=335,slow=76,SNR=27						
H01W2	Cape Leeuwin H	33.65	160	T	T	17 32 10.0	
	baz=335,slow=76,SNR=22						
H01W1	Cape Leeuwin H	33.66	160	T	T	17 32 10.3	
	baz=335,slow=76,SNR=15						
WRA	Warramunga Arr	36.77	119	P	P	16 56 57.8	-0.5
	0.2nm,0.4s,baz=298,slow=8.2,SNR=8.5						
	0.2nm,0.4s						
WRAB	Tennant Creek	36.77	119	P	P	16 56 59.9	+1.6
WR8	Warramunga Arr	36.91	119	P	P	16 57 00.4	+0.8
WR8				IAmb	IAmb	16 57 14.3	
	comp=Z,7.8nm,1.3s						
ASAR	Alice Springs	37.93	125	P	P	16 57 10.3	+2.1
	comp=Z,0.8nm,0.5s,baz=298,slow=7.8,SNR=44						
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	37.93	125	P	P	16 57 10.7	+2.6
AS31	Alice Springs	37.93	125	P	P	16 57 11.4	+3.3
WUS	Wushi	48.60	339	P	P	16 58 33.7	-0.4
WUS				IAmb	IAmb	16 59 15.6	
	comp=Z,4.1nm,0.7s						
MANEM	Manem	48.88	329	P	P	16 58 35.6	-1.0
MANEM				IAmb	IAmb	16 58 38.1	
	comp=Z,9.0nm,1.0s						
SONM	Songino Array	51.42	5	P	P	16 58 56.0	+0.5
	comp=Z,3.6nm,0.7s,baz=190,slow=8.9,SNR=17						
	comp=Z,3.6nm,0.7s						
SONM	Songino Array	51.42	5	P	P	16 58 55.1	-0.3
SONM				IAmb	IAmb	16 58 57.0	
	comp=Z,3.1nm,0.8s						
ULN	Ulaanbaatar	51.52	6	P	P	16 58 55.7	-0.5
ULN				IAmb	IAmb	16 58 57.4	
	comp=Z,3.1nm,0.9s						
JHJ	Hachijo jima 2	52.03	42	LR	LR	17 20 05.9	
	comp=Z,277nm,21.4s,baz=88,slow=35						
MKAR	Makanchi Array	52.65	344	P	P	16 59 04.4	-0.1
	comp=Z,1.8nm,0.8s,baz=147,slow=8.5,SNR=18						
	comp=Z,1.8nm,0.8s						
MKAR	Makanchi Array	52.65	344	P	P	16 59 03.6	-0.9
USRK	Ussuriysk Ar.	55.27	27	P	P	16 59 23.5	-0.1
	comp=Z,2.3nm,0.7s,baz=206,slow=4.3,SNR=3.4						
	comp=Z,2.3nm,0.7s						
KURBB	Kurchatov Arra	57.17	344	P	P	16 59 36.7	-0.4
	comp=Z,1.7nm,1.0s,baz=164,slow=7.1,SNR=7.4						
	comp=Z,1.7nm,1.0s						
ZAA0	Zalesovo Array	58.78	349	P	P	16 59 47.1	-1.2
ZAA0				IAmb	IAmb	16 59 49.2	
	comp=Z,4.5nm,1.1s						
ZALV	Zalesovo Beam	58.78	349	P	P	16 59 47.7	-0.5
	comp=Z,2.6nm,0.8s,baz=172,slow=4.5,SNR=12						
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	58.78	349	P	P	16 59 47.2	-1.0
H04N2	CROZET ISLANDS	59.88	217	T	T	18 04 55.0	
	baz=59,slow=75,SNR=1860						
H04N1	CROZET ISLANDS	59.90	217	T	T	18 04 54.9	
	baz=59,slow=75,SNR=2716						
H04N3	CROZET ISLANDS	59.90	217	T	T	18 04 54.1	
	baz=59,slow=75,SNR=2308						
H04S1	CROZET ISLANDS	60.16	216	T	T	18 05 10.0	
	baz=60,slow=76,SNR=33						
H04S3	CROZET ISLANDS	60.17	216	T	T	18 05 09.5	
	baz=60,slow=76,SNR=55						
H04S2	CROZET ISLANDS	60.17	216	T	T	18 05 10.8	
	baz=60,slow=76,SNR=34						
BVAR	Borovoye Array	61.81	340	P	P	17 00 08.2	-0.9
	comp=Z,0.7nm,0.6s,baz=146,slow=8.7,SNR=3.9						
	comp=Z,0.7nm,0.6s						
AB31	Akbulak array	63.24	331	P	P	17 00 17.8	-0.9
AB31				IAmb	IAmb	17 00 19.0	
	comp=Z,2.5nm,0.8s						
ABKAR	Akbulak array	63.24	331	P	P	17 00 17.6	-1.1
TXAR	Lajitas Array	145.58	39	PKPbc	PKPab	17 09 29.8	+0.1
	comp=Z,1.9nm,0.8s,baz=293,slow=1.9,SNR=14						
TXAR	Lajitas Array	145.58	39		PKPab	17 09 29.6	-0.1

NEIC 05 16:53:28.8±1.4, 17°86N±0°03×66°83W±0°01, h10km±1km, ML2.8/33, Md2.8/6(RSPR), Error ellipse: s-maj=5.8km s-min=2.8km az=7.0
SDD 05 16:53:28.2±1.3, 17°72N×66°89W, h14km±32km, MD2.7, ML2.7, MW3.1, Presumed earthquake
RSPR 05 16:53:29.8, 17°90N×66°87W, h12km, MD2.8/6

ISC 05 16:53:29.3±0.9, 17°90N±0°05×66°84W±0°02, h16km±5km, n41, $\sigma 0^{s}69$/78, 16C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.09	336		Pg	16 53 32.6	0.0
GBPR					Sg	16 53 34.9	+0.2
GBPR	Guanica, Bosqu	0.09	336⇑	iP	Pg	16 53 32.6	0.0
GBPR				eS	Sg	16 53 34.9	+0.2
MLPR	Magueyes Islan	0.20	291	Pg	Pg	16 53 33.8	-0.3
MLPR				Sg	Sg	16 53 37.2	-0.1
MLPR				IAML		16 53 37.6	
	4μm,0.4s						
MLPR				IAML		16 53 38.1	
	2μm,0.5s						
OBIP	Obispado Ponce	0.27	57	Pg	Pg	16 53 35.3	+0.1
OBIP				Sg	Sg	16 53 39.6	+0.5
OBIP				IAML		16 53 40.3	
	comp=N,224nm,0.6s						
OBIP	Obispado Ponce	0.27	57⇓	eP	Pg	16 53 35.4	+0.2
OBIP				eS	Sb	16 53 40.1	+0.1
CRPR	Cabo Rojo, PR	0.28	293	Pg	Pg	16 53 34.9	-0.3
CRPR				Sg	Sg	16 53 38.9	-0.5
CRPR				IAML		16 53 39.3	
	comp=N,2μm,0.3s						
CRPR				IAML		16 53 39.5	
	comp=E,2μm,0.3s						
CRPR	Cabo Rojo, PR	0.28	293⇑	iP	Pg	16 53 35.0	-0.3
CRPR			⇑	iS	Sg	16 53 39.3	-0.1
CRPR				IAML		16 53 39.3	
	comp=N,2μm,0.2s						
CRPR	Cabo Rojo, PR	0.28	293⇑	ePg	Pg	16 53 35.0	-0.3
CRPR			⇑	eSg	Sg	16 53 39.1	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRPR				IAML		16 53 39.3	
	comp=N,2µm,0.2s						
CRPR				IAML		16 53 39.3	
	comp=E,2µm,0.3s						
CRPR	Cabo Rojo, PR	0.28	293	⇑iP	Pg	16 53 35.0	-0.2
CRPR				eS	Sg	16 53 39.2	-0.1
CELP	Cerrillos	0.31	55	Pg	Pg	16 53 35.9	+0.1
CELP				Sg	Sb	16 53 41.1	0.0
CELP				IAML		16 53 41.5	
	comp=E,1µm,0.3s						
CELP				IAML		16 53 42.1	
	comp=E,910nm,0.2s						
LSP	Las Mesas	0.36	320		Pg	16 53 36.7	0.0
LSP					Sg	16 53 41.7	-0.1
LSP	Las Mesas	0.36	320	⇓iP	Pg	16 53 36.7	0.0
LSP				eS	Sg	16 53 41.7	-0.1
UUPR	Utuado, UPR, P	0.37	18	Pg	Pg	16 53 36.7	-0.3
UUPR				Sg	Sg	16 53 41.7	-0.5
UUPR				IAML		16 53 43.2	
	comp=E,7µm,0.4s						
UUPR				IAML		16 53 46.1	
	comp=E,5µm,0.4s						
PRSN	Puerto Rico Se	0.43	318	Pg	Pg	16 53 37.7	-0.2
PRSN				Sg	Sg	16 53 43.6	-0.2
PRSN				IAML		16 53 44.7	
	comp=E,2µm,0.2s						
PRSN				IAML		16 53 46.3	
	comp=E,3µm,0.3s						
PRSN	Puerto Rico Se	0.43	318	⇑iP	Pg	16 53 37.8	-0.2
PRSN				⇑iS	Sg	16 53 44.1	+0.3
PRSN				IAML		16 53 46.3	
	comp=N,2µm,0.2s						
PRSN	Puerto Rico Se	0.43	318	⇑ePg	Pg	16 53 37.7	-0.2
PRSN				⇑eSg	Sg	16 53 44.4	+0.6
PRSN				IAML		16 53 44.6	
	comp=E,1µm,0.2s						
PRSN				IAML		16 53 46.3	
	comp=N,2µm,0.2s						
PRSN	Puerto Rico Se	0.43	318	⇑iP	Pg	16 53 37.8	-0.1
PRSN				eS	Sg	16 53 43.1	-0.8
ECPR	Experimental S	0.62	47	Pg	Pg	16 53 41.1	-0.4
ECPR				Sg	Sg	16 53 49.4	-0.3
ECPR				IAML		16 53 52.9	
	comp=N,564nm,0.2s						
ECPR				IAML		16 53 53.6	
	comp=N,554nm,0.2s						
ECPR	Experimental S	0.62	47	⇓eP	Pg	16 53 41.3	-0.2
ECPR				eS	Sg	16 53 49.7	-0.1
AGPR	Aguadilla, PR	0.62	336	Pg	Pg	16 53 41.0	-0.5
AGPR				IAML		16 53 51.0	
	comp=N,226nm,0.4s						
AGPR				IAML		16 53 53.9	
	comp=N,380nm,0.5s						
AGPR	Aguadilla, PR	0.62	336	⇑iP	Pg	16 53 41.1	-0.4
AGPR				⇑iS	Sg	16 53 50.4	+0.6
AGPR				IAML		16 53 57.6	
	comp=N,274nm,0.2s						
AGPR	Aguadilla, PR	0.62	336	ePg	Pg	16 53 41.0	-0.5
AGPR				⇓eSg	Sn	16 53 52.4	-0.6
AGPR				IAML		16 53 53.7	
	comp=E,239nm,0.7s						
AGPR				IAML		16 53 57.6	
	comp=N,274nm,0.2s						
AGPR	Aguadilla, PR	0.62	336	⇑iP	Pg	16 53 41.1	-0.4
AGPR				eS	Sg	16 53 49.7	-0.2
EMPR	Esperanza - Ma	0.65	27		Pg	16 53 42.2	+0.1
EMPR					Sg	16 53 51.0	+0.3
EMPR	Esperanza - Ma	0.65	27	⇑iP	Pg	16 53 42.2	+0.1
EMPR				eS	Sg	16 53 51.0	+0.3
SJG	San Juan	0.69	72	Pg	Pg	16 53 42.2	-0.7
SJG				Sg	Sg	16 53 50.4	-1.7
SJG				IAML		16 53 55.6	
	comp=N,166nm,0.2s						
SJG				IAML		16 53 59.0	
	comp=N,146nm,0.2s						
SJG	San Juan	0.69	72	ePg	Pb	16 53 43.1	+0.2
SJG				eSg	Sb	16 53 52.6	+0.3
SJG	San Juan	0.69	72	⇑eP	Pg	16 53 42.3	-0.5
SJG				eS	Sg	16 53 50.8	-1.3
IDE	Isla Desecheo	0.77	309		Pb	16 53 43.5	-0.8
IDE					Sb	16 53 53.3	-1.2
IDE	Isla Desecheo	0.77	309	⇑eP	Pb	16 53 43.5	-0.8
IDE				eS	Sb	16 53 53.3	-1.2
PDPR	Patillas Dam,	0.79	81	Pg	Pb	16 53 44.3	-0.3
PDPR				IAML		16 53 58.7	
	comp=N,161nm,0.4s						
PDPR				IAML		16 53 59.3	
	comp=N,179nm,0.1s						
GCPR	Guaynabo City	0.83	60	Pg	Pb	16 53 44.8	-0.5
GCPR				Sg	Sb	16 53 55.5	-0.8
GCPR				IAML		16 54 00.2	
	comp=N,79nm,0.6s						
GCPR				IAML		16 54 01.4	
	comp=E,82nm,0.6s						
GCPR	Guaynabo City	0.83	60	⇑eP	Pb	16 53 44.8	-0.5
GCPR				eS	Sb	16 53 55.5	-0.8
HUMP	Col San Antoni	0.98	75		Pb	16 53 47.3	-0.5
HUMP					Sb	16 54 00.0	-0.4
HUMP	Col San Antoni	0.98	75	Pg	Pb	16 53 47.1	-0.7
HUMP					Sb	16 54 00.2	-0.2
HUMP				IAML		16 54 03.9	
	comp=E,138nm,0.2s						
HUMP				IAML		16 54 04.3	
	comp=E,207nm,0.2s						
HUMP	Col San Antoni	0.98	75	⇑eP	Pb	16 53 47.3	-0.5
HUMP				eS	Sb	16 54 00.0	-0.4
CUPR	Culebra, Puert	1.54	74	Pn	Pn	16 53 56.4	+0.3
MIDR	Miches	2.36	298	⇑iP	Pn	16 54 08.4	+1.1
MIDR				iS	Sn	16 54 37.9	+2.1
MIDR				IAML		16 54 48.0	
	comp=N,23nm,1.2s						
DR12	Loma Pena Alta	2.57	291	Pn	Pn	16 54 10.1	-0.1
HATOM	Hato Mayor del	2.57	291	⇑iP	Pb	16 54 13.8	-1.1
HATOM				iS	Sn	16 54 43.6	+2.4
HATOM				IAML		16 54 56.1	
	comp=N,16nm,0.6s						
HATOM	Hato Mayor del	2.57	291	ePg	Pn	16 54 12.2	+2.0
HATOM				eSg	Sb	16 54 45.6	-0.7
HATOM				IAML		16 54 53.1	
	comp=N,14nm,0.6s						

IDC 05 16:56:34.6±5.0, 3°.53S×150°.54E, h76km±48km, mb3.5/6, mbtmp3.9/7, ML1.8/1, MS3.1/7, Error ellipse: s-maj=52.3km s-min=25.8km az=119.0

ISC 05 16:56:30.4±1.4, 3°.3S±0°.2×150°.4E±0°.3, h27km, n20, σ1s.32/8, mb3.8/6, MS3.2/5, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.91	208	P	Pn	16 58 11.2	+1.2
	1.2nm,0.3s,baz=32,slow=5.0,SNR=22						
PMG				LR	LR	17 00 52.4	
	comp=Z,216nm,20.7s,baz=80,slow=38						
	45nm,0.8s						
HNR	Honiara	11.27	123	LR	LR	17 03 20.6	
	comp=Z,10nm,18.2s,baz=119,slow=37						
WRA	Warramunga Arr	22.83	222	P	P	17 01 29.7	-1.9
	4.0nm,0.9s,baz=48,slow=10.0,SNR=20						
	4.0nm,0.9s						
ASAR	Alice Springs	25.82	217	P	P	17 01 58.1	-1.5
	2.1nm,0.9s,baz=51,slow=9.0,SNR=15						
	2.1nm,0.9s						
H11S3	WAKE ISLAND Hy	26.91	36	T	T	17 29 27.1	
	baz=218,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	26.91	36	T	T	17 29 27.2	
	baz=218,slow=76,SNR=6.3						
H11S1	WAKE ISLAND Hy	26.92	36	T	T	17 29 31.7	
	baz=218,slow=76,SNR=5.1						
H11N1	WAKE ISLAND Hy	27.98	35	T	T	17 30 48.9	
	baz=218,slow=77,SNR=5.7						
H11N3	WAKE ISLAND Hy	28.00	35	T	T	17 30 54.5	
	baz=218,slow=77,SNR=4.7						
H11N2	WAKE ISLAND Hy	28.00	35	T	T	17 30 53.3	
	baz=218,slow=77,SNR=14						
FITZ	Fitzroy Crossi	28.41	237	LR	LR	17 14 55.8	
	comp=Z,58nm,19.3s,baz=26,slow=39						
NWAO	Narrogin (SRO)	42.84	223	LR	LR	17 23 26.8	
	comp=Z,30nm,19.5s,baz=152,slow=38						
CMAR	Chiang Mai Arr	55.08	295	P	P	17 06 01.3	+0.8
	0.9nm,0.8s,baz=111,slow=5.3,SNR=9.4						
	0.9nm,0.8s						
PETK	Petropavlovsk-	56.50	5	P	P	17 06 10.2	+0.2
	4.7nm,1.1s,baz=136,slow=8.0,SNR=4.4						
	4.7nm,1.1s						
BRDH	Bariadhala	62.85	297	LR	LR	17 35 33.4	
	comp=Z,20nm,19.2s,baz=129,slow=37						
SONM	Songino Array	63.78	329	LR	LR	17 35 17.5	
	comp=Z,24nm,19.5s,baz=206,slow=36						
PALK	Pallekele	70.36	279	LR	LR	17 39 32.4	
	comp=Z,12nm,20.8s,baz=120,slow=37						
MKAR	Makanchi Array	77.62	319	P	P	17 08 23.8	-0.6
	0.3nm,0.8s,baz=113,slow=3.7,SNR=6.7						
	0.3nm,0.8s						
ILAR	Eielson Array	81.65	23	P	P	17 08 45.6	-0.2
	0.7nm,0.9s,baz=251,slow=5.4,SNR=5.1						
	0.7nm,0.9s						
TORD	Torodi Ar. Bea	147.57	289	PKPbc	PKPdf	17 16 11.1	+0.5
	0.5nm,0.8s,baz=67,slow=3.7,SNR=3.3						

IDC 05 17:02:37.5±2.7, 13°.82N×92°.39W, h0km, mb3.5/2, mbtmp3.3/4, ML3.0/3, MS3.4/2, Error ellipse: s-maj=52.7km s-min=27.0km az=3.0
CATAC 05 17:02:37.7±0.6, 14°N±2°×9°2W±°, h8km±3km, M3.8/14, MLv3.8/14, Error ellipse: s-maj=6.3km s-min=3.2km az=40.1, confirmed
GCG 05 17:02:38.8±2.1, 13°.68N×92°.30W, h19km±13km, MD4.3, Presumed earthquake
MEX 05 17:02:42.3±0.4, 13°.82N×92°.38W, h10km, MD4.1

ISC 05 17:02:39.7±1.5, 13°.81N±0°.06×92°.31W±0°.04, h19km±4km, n41, σ1s.09/51, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.93	40	eP	Pn	17 02 58.2	+0.5
RTAL				iS	Sn	17 03 10.5	+0.1
RTAL	Retalhuleu	0.93	40	P	Pn	17 02 57.5	-0.1
SMCA	Catarina	1.06	12	iP	Pn	17 02 59.7	+0.1
STG2	El Palmar, Qui	1.10	55	eP	Pg	17 03 01.3	+0.2
STG5	El Palmar, Qui	1.10	57	eP	Pn	17 03 00.1	0.0
STG8	El Palmar, Qui	1.12	55	eP	Pg	17 03 01.0	-0.6
CHUJ	Union Juarez	1.29	8	eP	Pn	17 03 02.6	-0.4
PATR	El Naranjo	1.30	3	eP	Pn	17 03 02.8	-0.2
SOKI	Kika Raxquin	1.33	41	iP	Pb	17 03 03.9	-0.4
PAVE	Pavencul	1.38	5	eP	Pn	17 03 04.0	-0.2
ESSG	Sabana Grande	1.54	68	iP	Pn	17 03 05.9	-0.3
HUEH	Huehuetenango	1.69	27	P	Pb	17 03 09.6	-0.8
HUEH				S	Sg	17 03 34.0	-0.3
HUEH	Huehuetenango	1.69	27	iP	Pb	17 03 10.4	+0.1
FG16	Alotenango, Sa	1.80	75	iP	Pn	17 03 06.0	-4.0
QUIS	Sacapulas	1.88	38	eP	Pb	17 03 13.0	-0.6
PCG5	San Vicente Pa	1.92	78	iP	Pn	17 03 08.6	-2.9
PCIG		2.08	335	eP	Pn	17 03 13.6	+0.1
APG	El Apazote	2.14	56	Pn	Pn	17 03 16.2	+1.5
	1.3nm,0.3s,baz=187,slow=12,SNR=34						
APG				Sn	Sb	17 03 44.0	-0.3
	1.5nm,0.3s,baz=191,slow=12,SNR=5.7						
APG	El Apazote	2.14	56	iP	Pn	17 03 16.2	+1.5
FAME	Alcaldia de Sa	2.23	89	P	Pn	17 03 16.3	+0.7
FAME				S	Sn	17 03 43.7	+1.2
NUBE	Las Nubes	2.46	88	P	Pn	17 03 18.4	-0.4
NUBE				S	Sn	17 03 49.9	+1.5
NUBE	Las Nubes	2.46	88	eP	Pn	17 03 19.0	+0.1
CCIG	Comitan	2.46	4	eP	Pb	17 03 22.9	-0.6
CCIG	Comitan	2.46	4	iP	Pb	17 03 22.1	-1.4
CCIG				iS	Sb	17 03 52.6	-1.0
CEVE	Cerro Verde	2.60	89	P	Pn	17 03 20.5	-0.5
CEVE				S	Sn	17 03 53.4	+1.2
UNIC	Universidad Ca	2.68	86	S	Sn	17 03 55.1	+1.1
JAYA	Jayaque - finc	2.78	93	P	Pn	17 03 23.1	-0.3
JAYA				S	Sn	17 03 57.7	+1.2
PMON	Piamonte	2.91	92	P	Pn	17 03 24.5	-0.6
PMON				S	Sn	17 04 01.5	+1.9
MTO3	Montecristo	2.92	78	P	Pn	17 03 25.1	-0.2
MTO3				S	Sn	17 04 02.2	+2.3
TGIG		3.06	345	eP	Pn	17 03 28.5	+1.5
TGIG				iS	Sn	17 04 03.5	+0.3
TGIG		3.06	345	iP	Pn	17 03 26.8	-0.2
CMIG	Matias Romero	4.10	323	Pn	Pn	17 03 41.2	-0.2
	0.7nm,0.3s,baz=145,slow=14,SNR=4.6						
CMIG				Sn	Sn	17 04 29.0	+0.2
	2.6nm,0.3s,baz=64,slow=18,SNR=1.9						
	1.8nm,0.3s						
CMIG	Matias Romero	4.10	323	eP	Pn	17 03 42.0	+0.6
LCND	La Caada	4.32	96	P	Pn	17 03 43.6	-0.8
CNCH	Conchagua	4.38	96	P	Pn	17 03 45.2	-0.1
TXAR	Lajitas Array	18.69	328	P	Pn	17 06 58.2	+0.7
	baz=152,slow=12,SNR=3.6						
	0.8nm,1.0s						
TKL	Tuckaleechee C	23.07	18	LR	LR	17 18 03.7	
	comp=Z,72nm,18.6s,baz=187,slow=40						
SCHQ	Schefferville	45.50	20	LR	LR	17 30 38.5	
	comp=Z,58nm,18.6s,baz=56,slow=37						
YKA	Yellowknife Ar	51.14	347	P	P	17 11 41.2	+0.1
	0.7nm,0.7s,baz=151,slow=6.9,SNR=11						
	0.7nm,0.7s						
ILAR	Eielson Array	62.90	337	P	P	17 13 04.4	0.0
	0.2nm,0.7s,baz=166,slow=4.6,SNR=4.4						
	0.2nm,0.7s						
CMAR	Chiang Mai Arr	146.07	341	PKPbc	PKPab	17 22 19.8	0.0
	1.3nm,0.7s,baz=333,slow=3.1,SNR=13						

IDC 05 17:10:10.9±3.6, 5°.74S×129°.05E, h468km±68km, mb2.6/1, mbtmp3.2/4, Error ellipse: s-maj=127.6km s-min=19.2km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.31	25	P	P	17 11 40.4	+1.1
	2.2nm,0.3s,baz=220,slow=7.7,SNR=2.2						
SIJI				S	S	17 12 51.2	-0.1
	2.5nm,0.3s,baz=167,slow=23,SNR=8.2						
WRA	Warramunga Arr	15.03	160	P	P	17 13 21.3	-0.8
	0.1nm,0.4s,baz=339,slow=11,SNR=5.4						
ASAR	Alice Springs	18.43	166	P	P	17 13 57.0	0.0
	0.2nm,0.3s,baz=348,slow=11,SNR=9.8						
MKAR	Makanchi Array	66.66	327	P	P	17 20 14.1	0.0
	0.2nm,0.4s,baz=121,slow=7.3,SNR=5.2						
	0.2nm,0.4s						

GCG 05 17:15:58.5±2.8, 13°.58N×92°.20W, h24km±27km, MD4.0, ML4.0, MW3.5, Presumed earthquake
MEX 05 17:16:01.1±0.7, 13°.76N×92°.33W, h10km, MD4.1

ISC 05 17:15:56.4±2.7, 13°.5N±0°.2×92°.30W±0°.07, h32km, n18, σ2s.11/21, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	1.18	30	eP	Pn	17 16 17.8	+1.1
RTAL				iS	Sn	17 16 29.4	-2.2
STG5	El Palmar, Qui	1.29	45	iP	Pn	17 16 19.6	+1.3
STG2	El Palmar, Qui	1.30	44	iP	Pn	17 16 19.9	+1.6
STG8	El Palmar, Qui	1.32	44	iP	Pn	17 16 20.1	+1.3
CHUJ	Union Juarez	1.60	7	eP	Pn	17 16 22.1	-0.6
PATR	El Naranjo	1.61	2	eP	Pn	17 16 22.4	-0.4
ESSG	Sabana Grande	1.68	58	iP	Pb	17 16 25.9	-0.7
PAVE	Pavencul	1.69	4	eP	Pn	17 16 23.5	-0.5
FG16	Alotenango, Sa	1.90	66	iP	Pn	17 16 25.4	-1.4
FG16				IAML		17 16 49.5	
	comp=E,2µm,0.2s						
QUIS	Sacapulas	2.13	33	eP	Pn	17 16 32.5	+2.6
APG	El Apazote	2.33	50	iP	Pn	17 16 35.6	+2.9
PCIG		2.37	338	eP	Pn	17 16 33.0	-0.1
CCIG	Comitan	2.78	3	iP	Pn	17 16 42.6	+3.8
CCIG	Comitan	2.78	3	iP	Pb	17 16 43.0	-2.4
CCIG				eS	Sn	17 17 14.6	+3.3
TGIG		3.36	346	eP	Pn	17 16 48.9	+2.2
TGIG				iS	Sn	17 17 23.9	-1.7
TGIG		3.36	346	eP	Pn	17 16 48.6	+1.8
CMIG	Matias Romero	4.36	325	eP	Pn	17 17 02.8	+2.4
NEUV	Arroyo Zacate	5.38	322	eP	Pn	17 17 15.5	+1.0

SDD 05 17:22:20.7±2.4, 17°.91N×66°.67W, h0km±9km, MD3.1, ML3.6, MW3.4, Presumed earthquake
RSPR 05 17:22:23.0, 17°.97N×66°.85W, h14km, MD3.5/5
NEIC 05 17:22:22.9±1.2, 17°.98N±0°.01×66°.831W±0°.008, h10km±1km, ML3.7/33, Md3.5/5(RSPR), Error ellipse: s-maj=2.6km s-min=1.8km az=350.0
OSPL 05 17:22:22.7±0.3, 17°.95N×66°.84W, h18km±3km, ML3.2, Presumed earthquake

ISC 05 17:22:22.4±0.9, 17°.97N±0°.04×66°.81W±0°.02, h16km±6km, n46, σ0s.81/73, 18C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.06	275		Pg	17 22 25.6	+0.2
GBPR	Guanica, Bosqu	0.06	275	⇑iP	Pg	17 22 25.6	+0.2
OBIP	Obispado Ponce	0.21	70		Pg	17 22 27.5	+0.2
OBIP				Sg	Sb	17 22 31.5	+0.1
OBIP	Obispado Ponce	0.21	70	⇓eP	Pb	17 22 27.6	-0.3
OBIP				eS	Sb	17 22 31.6	+0.1
OBIP	Obispado Ponce	0.21	70	iP	Pb	17 22 27.6	-0.3
OBIP				eS	Sb	17 22 31.5	-0.1
OBIP				IAML		17 22 31.6	
	comp=Z,3µm,0.3s						
MLPR	Magueyes Islan	0.22	270		Pg	17 22 27.2	-0.3
MLPR				IAML		17 22 31.2	
	comp=Z,15µm,0.2s						
MLPR				IAML		17 22 31.4	
	comp=Z,20µm,0.3s						
CELP	Cerrillos	0.25	65		Pb	17 22 28.2	-0.3
CELP				IAML		17 22 32.9	
	comp=Z,13µm,0.5s						
CELP				IAML		17 22 33.4	
	comp=Z,7µm,0.4s						
CRPR	Cabo Rojo, PR	0.28	277	Pg	Pg	17 22 28.0	-0.4
CRPR				Sg	Sg	17 22 32.1	-0.5
CRPR	Cabo Rojo, PR	0.28	277	IAML		17 22 32.3	
	comp=Z,30µm,0.3s						
CRPR				IAML		17 22 32.4	
	comp=Z,21µm,0.2s						
CRPR	Cabo Rojo, PR	0.28	277	⇑iP	Pg	17 22 28.1	-0.4
CRPR				⇓iS	Sg	17 22 32.2	-0.5
CRPR				IAML		17 22 32.3	
	comp=N,28µm,0.1s						
CRPR	Cabo Rojo, PR	0.28	277	⇑eP	Pg	17 22 28.1	-0.4
CRPR				eS	Sg	17 22 32.2	-0.5
CRPR	Cabo Rojo, PR	0.28	277	iP	Pg	17 22 28.1	-0.4
CRPR				eS	Sg	17 22 32.2	-0.5
CRPR				IAML		17 22 32.4	
	comp=Z,22µm,0.1s						
UUPR	Utuado, UPR, P	0.29	17		Pg	17 22 28.8	+0.1
LSP	Las Mesas	0.33	308		Pg	17 22 29.1	-0.3
LSP	Las Mesas	0.33	308	⇓eP	Pg	17 22 29.1	-0.3
PRSN	Puerto Rico Se	0.40	308		Pg	17 22 30.1	-0.5
PRSN	Puerto Rico Se	0.40	308	Sg	Sg	17 22 35.7	-0.4
PRSN				IAML		17 22 38.1	
	comp=Z,34µm,0.3s						
PRSN				IAML		17 22 39.6	
	comp=Z,19µm,0.3s						
PRSN	Puerto Rico Se	0.40	308	⇑eP	Pg	17 22 30.1	-0.5
PRSN				eS	Sg	17 22 36.1	0.0
ECPR	Experimental S	0.55	51		Pg	17 22 32.8	-0.5
ECPR					Sg	17 22 40.7	-0.1
ECPR				IAML		17 22 46.6	
	comp=Z,3µm,0.2s						
ECPR				IAML		17 22 48.8	
	comp=Z,3µm,0.2s						
ECPR	Experimental S	0.55	51	⇑eP	Pg	17 22 33.0	-0.3
ECPR				eS	Sb	17 22 41.8	+0.4
AGPR	Aguadilla, PR	0.57	330		Pg	17 22 32.9	-0.8
AGPR				IAML		17 22 41.4	
	comp=Z,4µm,0.4s						
AGPR				IAML		17 22 44.4	
	comp=Z,3µm,0.6s						
AGPR	Aguadilla, PR	0.57	330	⇑iP	Pg	17 22 33.0	-0.7
AGPR				⇑iS	Sb	17 22 42.7	+0.8
AGPR				IAML		17 22 44.2	
	comp=N,3µm,0.7s						
AGPR	Aguadilla, PR	0.57	330	⇑eP	Pg	17 22 33.0	-0.7
AGPR				eS	Sg	17 22 41.0	-0.3
AGPR	Aguadilla, PR	0.57	330	iP	Pg	17 22 33.0	-0.7
AGPR				eS	Sg	17 22 41.0	-0.4
AGPR				IAML		17 22 42.8	
	comp=Z,1µm,0.2s						
EMPR	Esperanza - Ma	0.57	28		Pg	17 22 33.7	0.0
EMPR					Sb	17 22 42.1	+0.2
EMPR	Esperanza - Ma	0.57	28	⇑eP	Pg	17 22 33.7	0.0
EMPR				eS	Sb	17 22 42.1	+0.2
SJG	San Juan	0.65	77		Pg	17 22 34.5	-0.6
SJG				IAML		17 22 44.6	
	comp=Z,3µm,0.6s						
SJG	San Juan	0.65	77	⇑eP	Pg	17 22 34.8	-0.3
SJG				eS	Sb	17 22 44.0	-0.1
SJG	San Juan	0.65	77	iP	Pg	17 22 34.9	-0.3
SJG				eS	Sb	17 22 43.8	-0.2
SJG				IAML		17 22 44.6	
	comp=Z,922nm,0.2s						
IDE	Isla Desecheo	0.75	304		Pg	17 22 35.8	-1.3
IDE					Sg	17 22 46.0	-1.0
IDE	Isla Desecheo	0.75	304	⇓eP	Pg	17 22 35.8	-1.3
IDE				eS	Sg	17 22 46.0	-1.0
PDPR	Patillas Dam,	0.75	86		Pg	17 22 36.5	-0.6
PDPR				Sg	Sg	17 22 46.6	-0.4
GCPR	Guaynabo City	0.77	64		Pb	17 22 36.1	-1.3
GCPR	Guaynabo City	0.77	64		Sg	17 22 47.5	-0.1
GCPR	Guaynabo City	0.77	64	⇓eP	Pb	17 22 37.1	-0.4
GCPR				eS	Sg	17 22 47.5	-0.1
HUMP	Col San Antoni	0.93	79		Pb	17 22 39.2	-1.0
HUMP					Sb	17 22 50.8	-1.6
HUMP	Col San Antoni	0.93	79	⇓eP	Pb	17 22 39.5	-0.7
HUMP				eS	Sb	17 22 52.2	-0.1
CUPR	Culebra, Puert	1.49	77		Pn	17 22 48.6	+0.1
PCDR	Punta Cana, DR	1.59	290	⇑iP	Pn	17 22 48.6	-1.2
PCDR				iS	Sg	17 23 13.0	-0.6
HIDR	Higuey Centro	1.91	289	⇑iP	Pn	17 22 54.5	+0.2
HIDR				⇑iS	Sb	17 23 20.0	-0.5
HIDR				IAML		17 23 29.7	
	comp=N,352nm,0.3s						
MIDR	Miches	2.35	296	⇑iP	Pn	17 23 00.8	+0.5
MIDR				⇑iS	Sn	17 23 29.8	+0.9
MIDR				IAML		17 23 41.7	
	comp=N,112nm,1.4s						
DR12	Loma Pena Alta	2.57	289		Pn	17 23 04.4	+0.9
HATOM	Hato Mayor del	2.57	289	⇑iP	Pn	17 23 05.2	+1.7
HATOM				⇑iS	Sn	17 23 36.9	+2.5
HATOM				IAML		17 23 48.1	
	comp=N,112nm,0.5s						
SMDR	Samana, DR	2.61	301	⇑iP	Pn	17 23 03.3	-0.6
SMDR				⇑iS	Sn	17 23 36.1	+0.9
BANI	BANI	3.40	278		Pn	17 23 15.3	+0.5
SDDR	Presa de Saban	4.37	284		Pn	17 23 31.5	+3.4

RSNC 05 17:32:25.0±0.0, 10°N±2°×7°3W±°, h0km±5km, M2.4, ML2.4
FUNV 05 17:32:26.4, 9°.23N×73°.47W, h19km, MW3.3, Presumed earthquake

ISC 05 17:32:27.0±0.9, 9°.51N±0°.05×73°.57W±0°.04, h19km, n9, σ1s.99/12, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARGC	Ariguani, Magd	0.76	297	P	Pb	17 32 38.9	-2.7
MCQV	Machiques	1.15	62	eP	Pn	17 32 48.3	+0.2
MCQV				eS	Sg	17 33 04.6	+0.1
OCAC	Ocana	1.28	169	P	Pg	17 32 52.1	+0.2
SJCC	San Jacinto, C	1.64	284	P	Pn	17 32 54.9	0.0
SJCC	San Jacinto, C	1.64	284	eP	Pn	17 32 55.5	+0.6
SJCC				eS	Sb	17 33 18.7	+1.7
PAMC	Pamplona, Colo	2.32	158	P	Pb	17 33 10.0	+1.4
URIC	Uribia, Colomb	2.67	35	P	Pn	17 33 07.5	-1.6
URIC	Uribia, Colomb	2.67	35	eP	Pn	17 33 11.0	+1.9
URIC				eS	Sn	17 33 42.4	+1.4
SOCV	Socops	2.94	114	eP	Pn	17 33 08.9	-3.9

DJA 05 18:12:35.2±0.1, 7°S±2°×11°3E±°, h641km, M5.9/136, mB6.4/136, mb6.4/135, MLv6.7/73, Mw(mB)6.2/136, MwMwp5.5/120, Mwp5.7/120
MOS 05 18:12:36.9±0.8, 6°.00S×113°.12E, h605km, mb6.5/69, Error ellipse: s-maj=6.9km s-min=4.0km az=116.8
BKK 05 18:12:36.5±0.5, 6°S±10°×11°3E±°, h590km±11km, M5.9/31, mb6.3/31, mB6.4/31, MLv6.8/1, Mw(mB)6.2/31, MwMwp5.0/18, Mwp5.3/18
BJI 05 18:12:36.1, 6°.23S×113°.13E, h600km, mB6.4/47, mb6.9/73
GCMT 05 18:12:36.7±0.1, 6°.11S×113°.09E, h597km, MW6.2/169, Moment Tensor Solution. s169,c387; s147,c201; Duration: 3s.2 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.78±.01; $M_{\theta\theta}$1.65±.02; $M_{\phi\phi}$0.13±.02; $M_{r\theta}$-1.96±.02; $M_{\theta\phi}$-0.47±.02; $M_{\phi r}$0.76±.02; Best double couple: $M_0$2.75500×10^{18} NP1:ϕ_s282.00000°, δ20.00000°, λ-97.00000°. NP2:ϕ_s110.00000°, δ70.00000°, λ-87.00000°. Principal axes: T 2.7540, Plg25.0000°,

Azm198.0000°; N 0.0060, Plg2.0000°, Azm289.0000°; P -2.7560, Plg65.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function

*NEIC **05** 18:12:37.5, 6.°07S×113.°12E, h590km*

*PTWC **05** 18:12:37, 6.°20S×113.°10E, h597km, Mwp6.0/8*

*NEIC **05** 18:12:37.7, 6.°08S×113.°08E, h592km*

*GFZ **05** 18:12:37.9, 6.°09S×113.°09E, h622km, MW6.2, Moment Tensor Solution. s183 Moment tensor: Mrr-1.40; Mθθ1.50; Mϕϕ-0.10; Mrθ-1.45; Mθϕ-0.38; Mϕr0.55; Fault plane solution: NP1:ϕs109.00000°, δ68.00000°, λ-84.00000°. NP2:ϕs275.00000°, δ22.00000°, λ-10.00000°. Principal axes: T 2.2300, Plg23.0000°, Azm195.0000°; N -0.1700, Plg5.0000°, Azm287.0000°; P -2.0700, Plg66.0000°, Azm28.0000°;*

*IDC **05** 18:12:37.5±0.3, 6.°09S×113.°11E, h597km±2km, mb6.0/35, mbtmp6.9/41 Error ellipse: s-maj=8.0km s-min=5.7km az=80.0*

*NEIC **05** 18:12:37.5, 6.°17S×113.°12E, h590km, Moment Tensor Solution. Duration: 6s3 Moment tensor: Scale 10^18Nm; Mrr-1.56; Mθθ1.79; Mϕϕ-0.23; Mrθ-1.71; Mθϕ0.11; Mϕr0.72; Fault plane solution: M0 2.51000×10^18 NP1: ϕs247.73000°, δ25.07000°, λ-125.43000°. NP2: ϕs105.88000°, δ69.80000°, λ-74.83000°. Principal axes: T 2.5213, Plg23.0000°, Azm184.0000°; N -0.0219, Plg14.0000°, Azm281.0000°; P -2.4994, Plg62.0000°, Azm39.0000°;*

*NEIC **05** 18:12:37.7±2.1, 6.°08S±0.°07×113.°08E±0.°08, h592km±4km, mb6.5/284, Mwb6.2/101, Mww6.2/58 Error ellipse: s-maj=11.2km s-min=10.4km az=108.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-1.98; Mθθ1.79; Mϕϕ0.19; Mrθ-2.09; Mθϕ-0.41; Mϕr0.88; Fault plane solution: M0 2.98000×10^18 NP1:ϕs110.50000°, δ69.84000°, λ-85.49000°. NP2:ϕs277.60000°, δ20.64000°, λ-102.10000°. Principal axes: T 2.9185, Plg25.0000°, Azm197.0000°; N 0.1181, Plg4.0000°, Azm289.0000°; P -3.0366, Plg65.0000°, Azm28.0000°;*

ISC 05 18:12:37.3±0.2**, 6.°07S**±0.°02**×113.°09E**±0.°03**, h603**km±1km**, h605**km**:pP-P, n2065, σ1s50**/2714**, mb6.5**/327**, 109C-206D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMMI	**Kalianget**	**1.31**	**138**	P	**P**	**18 13 50.4**	**+0.8**
KMMI				S	**S**	**18 14 50.1**	**+1.7**
BLJI	**Banyuglugur**	**1.74**	**163**	P	**P**	**18 13 51.0**	**0.0**
BLJI				S	**S**	**18 14 51.3**	**+0.5**
ABJI	**Asem Bagus**	**2.06**	**147**	P	**P**	**18 13 52.6**	**+0.4**
NGJI	**Ngawi**	**2.07**	**231**	P	**P**	**18 13 53.6**	**+1.4**
SJI	**Sawahan**	**2.11**	**218**	P	**P**	**18 13 52.3**	**-0.2**
SNJI	**Sawahan-Nganju**	**2.15**	**218**	P	**P**	**18 13 53.3**	**+0.5**
SNJI				S	**S**	**18 14 57.0**	**+2.8**
GMJI	**Gumukmas**	**2.22**	**171**	P	**P**	**18 13 51.8**	**-1.1**
GMJI				S	**S**	**18 14 53.8**	**-0.5**
JAGI	**Jajag, Banyuwa**	**2.61**	**156**		**P**	**18 13 53.0**	**-1.7**
JAGI	**Jajag, Banyuwa**	**2.61**	**156**	P	**P**	**18 13 53.5**	**-1.2**
JAGI	**Jajag, Banyuwa**	**2.61**	**156**	P	**P**	**18 13 53.2**	**-1.5**
JAGI	**Jajag, Banyuwa**	**2.61**	**156**	P	**P**	**18 13 53.2**	**-1.5**
SMRI	**Semarang**	**2.81**	**250**	P	**P**	**18 13 56.1**	**+0.3**
SMRI	**Semarang**	**2.81**	**250**	⇑P	**P**	**18 13 56.0**	**+0.2**
SMRI	**Semarang**	**2.81**	**250**	P	**P**	**18 13 56.2**	**+0.4**
SMRI				S	**S**	**18 15 00.4**	**+0.8**
PCJI	**Pacitan**	**2.84**	**222**	P	**P**	**18 13 54.9**	**-1.0**
RTBI	**Rangdo, Negare**	**3.00**	**142**	P	**P**	**18 13 55.7**	**-1.1**
BBKI	**Banjar Baru**	**3.12**	**34**	P	**P**	**18 13 58.5**	**+0.9**
UGM	**Wanagama**	**3.14**	**234**		**P**	**18 13 56.9**	**-0.7**
UGM	**Wanagama**	**3.14**	**234**	P	**P**	**18 13 57.1**	**-0.5**
UGM	**Wanagama**	**3.14**	**234**	P	**P**	**18 13 57.0**	**-0.7**
UGM	**Wanagama**	**3.14**	**234**	P	**P**	**18 13 57.2**	**-0.4**
UGM				S	**S**	**18 15 01.0**	**-2.0**
YOGI	**Yogyakarta**	**3.27**	**238**	P	**P**	**18 13 57.9**	**-0.5**
DNP	**Denpasar**	**3.34**	**141**	P	**P**	**18 13 57.9**	**-0.8**
DNP	**Denpasar**	**3.34**	**141**	P	**P**	**18 13 57.8**	**-0.9**
DNP				S	**S**	**18 15 04.7**	**-0.3**
KHKI	**Kahang-Kahang**	**3.38**	**133**	P	**P**	**18 13 59.0**	**0.0**
KHKI				S	**S**	**18 15 04.3**	**-1.2**
IGBI	**Denpasar**	**3.41**	**143**	P	**P**	**18 13 57.5**	**-1.7**
CTJI	**Waduk Cacaban**	**3.99**	**256**	P	**P**	**18 14 03.3**	**+0.3**
CTJI				S	**S**	**18 15 13.7**	**+0.9**
KPJI	**Karang Pucung**	**4.32**	**253**	P	**P**	**18 14 05.6**	**+0.3**
KPJI				S	**S**	**18 15 17.6**	**+0.6**
PLAI	**Plampang**	**5.39**	**121**	P	**P**	**18 14 11.1**	**-2.5**
PLAI	**Plampang**	**5.39**	**121**	P	**P**	**18 14 11.1**	**-2.5**
	69nm32μm85μm6μm,1.1s						
MTKI	**Muara Teweh, K**	**5.40**	**20**	P	**P**	**18 14 15.8**	**+2.0**
LEM	**Lembang**	**5.49**	**262**	P	**P**	**18 14 14.4**	**-0.1**
	16μm,0.7s,baz=60,slow=8.3,SNR=1493						
LEM				S	**S**	**18 15 31.4**	**-2.6**
	8μm,0.9s,baz=314,slow=22,SNR=7.9						
LEM	**Lembang**	**5.49**	**262**	P	**P**	**18 14 14.5**	**-0.1**
LEM	**Lembang**	**5.49**	**262**	P	**P**	**18 14 14.6**	**0.0**
	78nm84μm240μm21μm,0.8s						
LEM				S	**S**	**18 15 34.3**	**+0.3**
	78nm84μm240μm21μm,0.8s						
BBJI	**Bungbulang**	**5.58**	**255**		**P**	**18 14 13.8**	**-1.3**
BBJI	**Bungbulang**	**5.58**	**255**	P	**P**	**18 14 14.1**	**-1.1**
BBJI	**Bungbulang**	**5.58**	**255**	P	**P**	**18 14 13.9**	**-1.3**
BBJI				S	**S**	**18 15 32.9**	**-2.2**
DBNI	**Kabupaten Domp**	**5.71**	**115**	P	**P**	**18 14 13.8**	**-2.5**
CNJI	**Cibinong**	**6.05**	**258**	P	**P**	**18 14 17.1**	**-2.0**
	56nm28μm164μm13μm,1.2s						
BKB	**Balikpapan**	**6.10**	**39**		**P**	**18 14 23.2**	**+3.6**
BKB	**Balikpapan**	**6.10**	**39**	P	**P**	**18 14 22.9**	**+3.3**
BKB	**Balikpapan**	**6.10**	**39**	P	**P**	**18 14 23.4**	**+3.8**
BKB	**Balikpapan**	**6.10**	**39**	⇑P	**P**	**18 14 23.0**	**+3.4**
BKB	**Balikpapan**	**6.10**	**39**	P	**P**	**18 14 23.2**	**+3.6**
DBJI	**Dramaga**	**6.32**	**265**	P	**P**	**18 14 20.7**	**-0.8**
	91nm49μm250μm24μm,0.9s						
DBJI				S	**S**	**18 15 43.7**	**-2.9**
	91nm49μm250μm24μm,0.9s						
PMSI	**Majene**	**6.34**	**67**	P	**P**	**18 14 22.9**	**+1.2**
	71μm360μm40μm,1.1s						
PMSI				S	**S**	**18 15 50.9**	**+3.9**
	71μm360μm40μm,1.1s						
TPI	**Tanjungpandan**	**6.34**	**301**	P	**P**	**18 14 22.8**	**+1.1**
	76nm20μm170μm21μm,0.9s						
MKS	**Makassar**	**6.41**	**83**	P	**P**	**18 14 22.4**	**+0.2**
MKS				S	**S**	**18 15 50.2**	**+2.3**
TNG	**Tangerang**	**6.41**	**269**	P	P	18 14 21.6	-0.7
	59nm31μm151μm18μm,1.2s						
TNG				P	**P**	**18 14 21.5**	**-0.8**
	111nm58μm286μm34μm,1.1s						
MMSI	**Mamuju**	**6.70**	**60**	P	**P**	**18 14 26.5**	**+1.6**
MMSI				S	**S**	**18 15 55.6**	**+2.8**
KAPI	**Kappang**	**6.71**	**81**	P	**P**	**18 14 24.8**	**-0.1**
	2μm,0.7s,baz=249,slow=8.0,SNR=275						
KAPI				S	**S**	**18 15 51.4**	**-1.6**
	1μm,1.0s,baz=216,slow=0.9,SNR=1.6						
KAPI	**Kappang**	**6.71**	**81**		**P**	**18 14 25.0**	**+0.1**
KAPI	**Kappang**	**6.71**	**81**	P	**P**	**18 14 25.1**	**+0.1**
KAPI	**Kappang**	**6.71**	**81**	P	**P**	**18 14 25.1**	**+0.1**
KAPI				P	**P**	**18 14 25.1**	**+0.1**
KAPI				S	**S**	**18 15 53.3**	**+0.3**
KAPI				S	**S**	**18 15 53.3**	**+0.3**
KAPI	**Kappang**	**6.71**	**81**	P	**P**	**18 14 25.2**	**+0.2**
KAPI	**Kappang**	**6.71**	**81**	P	**P**	**18 14 25.0**	**+0.1**
SBJI	**Serang**	**6.92**	**269**	P	**P**	**18 14 26.1**	**-0.7**
	67nm37μm164μm15μm,1.1s						
SPSI	**Sidrap Palu**	**6.97**	**73**	P	**P**	**18 14 27.4**	**+0.1**
	36nm36μm103μm11μm,1.1s						
SPSI				S	**S**	**18 15 58.3**	**+1.0**
	36nm36μm103μm11μm,1.1s						
WBSI	**Waikabubak, Su**	**7.18**	**120**	P	**P**	**18 14 26.3**	**-2.9**
	81nm16μm162μm15μm,1.3s						
TTSI	**Tana Toraja**	**7.35**	**66**	P	**P**	**18 14 32.3**	**+1.5**
	46μm203μm24μm,1.1s						
BSSI	**Bau Bau, Buton**	**7.36**	**91**	P	**P**	**18 14 30.6**	**-0.3**
	19nm10μm42μm4μm,1.3s						
BSSI				S	**S**	**18 16 04.0**	**+0.3**
	19nm10μm42μm4μm,1.3s						
BLSI	**Bandar Lampung**	**7.84**	**275**	P	**P**	**18 14 34.0**	**-1.3**
	14nm17μm56μm4μm,0.8s						
PPBI	**Pangkal Pinang**	**7.95**	**299**	P	**P**	**18 14 37.5**	**+1.1**
WSI	**Waingapu**	**7.98**	**117**	P	**P**	**18 14 34.0**	**-2.7**
KSM	**Kuching**	**7.99**	**340**	P	**P**	**18 14 38.9**	**+2.1**
KSM	**Kuching**	**7.99**	**340**	P	**P**	**18 14 39.0**	**+2.1**
KSM	**Kuching**	**7.99**	**340**	⇑P	**P**	**18 14 38.9**	**+2.1**
KSM	**Kuching**	**7.99**	**340**	P	**P**	**18 14 38.9**	**+2.1**
KLI	**Kotabumi**	**8.28**	**278**	P	**P**	**18 14 38.8**	**-0.7**
	16μm38μm3μm,1.0s						
PCI	**Palu**	**8.46**	**53**	P	**P**	**18 14 42.8**	**+1.5**
	37μm,0.9s						
BASI	**Baing, Sumba**	**8.48**	**120**	P	**P**	**18 14 39.8**	**-1.6**
	15μm120μm9μm,1.3s						
SBUM	**Sibu**	**8.51**	**354**		**P**	**18 14 44.2**	**+2.6**
SBUM	**Sibu**	**8.51**	**354**	P	**P**	**18 14 43.6**	**+1.8**
SBUM	**Sibu**	**8.51**	**354**	P	**P**	**18 14 43.5**	**+1.8**
SBUM	**Sibu**	**8.51**	**354**	⇑P	**P**	**18 14 43.3**	**+1.6**
SBUM	**Sibu**	**8.51**	**354**	P	**P**	**18 14 44.3**	**+2.6**
XMI	**Christmas Isla**	**8.52**	**239**	P	**P**	**18 14 40.9**	**-0.9**
XMI	**Christmas Isla**	**8.52**	**239**	P	**P**	**18 14 40.7**	**-1.1**
XMI	**Christmas Isla**	**8.52**	**239**	⇓P	**P**	**18 14 40.6**	**-1.2**
KASI	**Kota Agung**	**8.57**	**273**	P	**P**	**18 14 40.5**	**-1.8**
	12μm74μm8μm,1.1s						
KKSI	**Kolaka, Sulawe**	**8.73**	**78**	P	**P**	**18 14 44.6**	**+0.7**
	18μm44μm5μm,1.1s						
PMBI	**Palembang**	**8.86**	**290**	P	**P**	**18 14 46.1**	**+1.0**
PMBI	**Palembang**	**8.86**	**290**	P	**P**	**18 14 46.7**	**+1.6**
PMBI	**Palembang**	**8.86**	**290**	P	**P**	**18 14 46.5**	**+1.4**
PMBI	**Palembang**	**8.86**	**290**	⇓P	**P**	**18 14 46.3**	**+1.2**
PMBI	**Palembang**	**8.86**	**290**	P	**P**	**18 14 46.2**	**+1.1**
	17μm174μm19μm,1.0s						
MDSI	**Maura Dua**	**9.01**	**280**	P	**P**	**18 14 45.2**	**-1.4**
LWLI	**Liwa**	**9.05**	**276**	P	**P**	**18 14 45.7**	**-1.4**
	12μm56μm4μm,0.9s						
MPSI	**Mapaga**	**9.31**	**47**	P	**P**	**18 14 51.3**	**+1.8**
MMRI	**Maumere**	**9.42**	**106**		**P**	**18 14 47.5**	**-3.1**
MMRI	**Maumere**	**9.42**	**106**	P	**P**	**18 14 48.1**	**-2.5**
MMRI	**Maumere**	**9.42**	**106**	P	**P**	**18 14 47.7**	**-2.9**
MMRI	**Maumere**	**9.42**	**106**	⇓P	**P**	**18 14 47.6**	**-3.0**
MMRI	**Maumere**	**9.42**	**106**	P	**P**	**18 14 47.9**	**-2.7**
	29μm3μm,0.8s						
APSI	**Ampana**	**9.96**	**59**	P	**P**	**18 14 56.4**	**+0.5**
	87μm11μm,1.0s						
DSRI	**Dabo**	**10.15**	**303**	P	**P**	**18 14 58.8**	**+1.1**
MNAI	**Manna**	**10.23**	**279**	P	**P**	**18 14 56.3**	**-2.3**
MNAI	**Manna**	**10.23**	**279**	P	**P**	**18 14 57.3**	**-1.3**
MNAI	**Manna**	**10.23**	**279**	P	**P**	**18 14 56.8**	**-1.8**
MNAI	**Manna**	**10.23**	**279**	⇓P	**P**	**18 14 56.2**	**-2.4**
MNAI	**Manna**	**10.23**	**279**	P	**P**	**18 14 56.6**	**-2.0**
	57μm3μm,0.6s						
TARAI	**Tarakan**	**10.35**	**26**	P	**P**	**18 15 02.0**	**+2.3**
JMBI	**JAMBI**	**10.40**	**295**	P	**P**	**18 15 02.5**	**+2.2**
	12μm52μm5μm,0.9s						
TOLI2	**Tolitoli**	**10.48**	**47**		**P**	**18 15 01.6**	**+0.5**
TOLI2	**Tolitoli**	**10.48**	**47**	P	**P**	**18 15 01.4**	**+0.4**
TOLI2	**Tolitoli**	**10.48**	**47**	P	**P**	**18 15 01.7**	**+0.7**
KSI	**Kapahiang**	**10.73**	**282**	P	**P**	**18 15 02.3**	**-1.3**
	24μm2μm,0.8s						
EGSI	**Enggano, Bengk**	**10.78**	**273**	P	**P**	**18 15 01.4**	**-2.6**
LUWI	**Luwuk**	**10.87**	**63**	P	**P**	**18 15 06.0**	**+1.1**
LUWI	**Luwuk**	**10.87**	**63**		**P**	**18 15 05.9**	**+1.0**
LUWI	**Luwuk**	**10.87**	**63**	P	**P**	**18 15 05.8**	**+0.9**
LUWI	**Luwuk**	**10.87**	**63**	P	**P**	**18 15 05.8**	**+0.9**
	32μm131μm13μm,1.2s						
MRSI	**Marisa**	**10.97**	**54**	P	**P**	**18 15 04.7**	**-1.2**
	19μm48μm7μm,0.8s						
TPRI	**Tanjung Pinang**	**11.01**	**309**	P	**P**	**18 15 07.7**	**+1.4**
	8μm41μm5μm,0.9s						
UBSI	**University, Be**	**11.02**	**282**	P	**P**	**18 15 05.0**	**-1.4**
	54μm5μm,0.7s						
MASI	**Maura Aman, Be**	**11.20**	**285**	P	**P**	**18 15 07.1**	**-1.1**
	27μm2μm,0.6s						
BATI	**Baumata**	**11.24**	**112**	P	**P**	**18 15 06.7**	**-2.0**
	745nm,0.4s,baz=302,slow=1.6,SNR=111						
BATI				S	**S**	**18 17 08.3**	**-4.5**
	2μm,0.6s,baz=249,slow=23,SNR=11						
BATI				ScP	**ScP**	**18 22 42.9**	**+0.7**
	297nm,0.7s,baz=212,slow=2.0,SNR=3.6						
BATI	**Baumata**	**11.24**	**112**	P	**P**	**18 15 06.7**	**-2.0**
SOEI	**Soe**	**11.66**	**109**	P	**P**	**18 15 09.9**	**-3.0**
SOEI	**Soe**	**11.66**	**109**		**P**	**18 15 09.9**	**-3.0**
SOEI	**Soe**	**11.66**	**109**	P	**P**	**18 15 10.2**	**-2.7**
SOEI	**Soe**	**11.66**	**109**	P	**P**	**18 15 10.1**	**-2.8**
SOEI	**Soe**	**11.66**	**109**	P	**P**	**18 15 10.2**	**-2.7**
	23μm2μm,0.8s						
MYKOM	**Kota Tinggi**	**12.09**	**310**	P	**P**	**18 15 18.5**	**+1.4**
MYKOM	**Kota Tinggi**	**12.09**	**310**	P	**P**	**18 15 18.3**	**+1.2**
MYKOM	**Kota Tinggi**	**12.09**	**310**	P	**P**	**18 15 18.8**	**+1.7**
MYKOM	**Kota Tinggi**	**12.09**	**310**	P	**P**	**18 15 18.5**	**+1.4**
	7μm20μm2μm,0.9s						
KRJI	**Kerinci**	**12.25**	**288**	P	**P**	**18 15 19.2**	**+0.4**
	23μm3μm,0.8s						
MYLDM	**Lahad Datu**	**12.41**	**26**	P	**P**	**18 15 23.6**	**+3.4**
MYLDM	**Lahad Datu**	**12.41**	**26**	P	**P**	**18 15 23.0**	**+2.7**
MYLDM	**Lahad Datu**	**12.41**	**26**	⇑P	**P**	**18 15 23.8**	**+3.5**
MYLDM	**Lahad Datu**	**12.41**	**26**	P	**P**	**18 15 23.8**	**+3.5**
	207μm21μm,1.2s						
KKM	**Kota Kinabalu**	**12.43**	**15**	P	**P**	**18 15 20.7**	**+0.1**
KKM	**Kota Kinabalu**	**12.43**	**15**	P	**P**	**18 15 20.3**	**-0.3**
KKM	**Kota Kinabalu**	**12.43**	**15**	P	**P**	**18 15 20.8**	**+0.1**
KKM	**Kota Kinabalu**	**12.43**	**15**	P	**P**	**18 15 20.7**	**+0.1**
	30μm90μm8μm,0.6s						
PPSI	**Pulau Pagai**	**13.45**	**284**	P	**P**	**18 15 28.1**	**-2.7**
SANI	**Sanana**	**13.47**	**73**	P	**P**	**18 15 30.9**	**-0.1**
SANI				S	**S**	**18 17 54.8**	**+1.4**
SANI	**Sanana**	**13.47**	**73**	P	**P**	**18 15 30.9**	**-0.1**
	6μm1μm,0.9s						
PDSI	**Padang**	**13.60**	**292**	P	**P**	**18 15 30.1**	**-2.3**
BKNI	**Bangkinang**	**13.61**	**297**	P	**P**	**18 15 33.2**	**+0.9**
BKNI				S	**S**	**18 17 58.9**	**+3.1**
BKNI	**Bangkinang**	**13.61**	**297**	P	**P**	**18 15 33.1**	**+0.7**
BKNI	**Bangkinang**	**13.61**	**297**	P	**P**	**18 15 34.6**	**+2.2**
BKNI	**Bangkinang**	**13.61**	**297**	P	**P**	**18 15 33.5**	**+1.1**
	6μm36μm5μm,1.1s						
PPI	**Padang Panjang**	**13.84**	**293**	P	**P**	**18 15 32.5**	**-2.2**
MNI	**Manado**	**13.90**	**58**	P	**P**	**18 15 34.3**	**-1.1**
	12μm58μm7μm,0.7s						
NLAI	**Namlea**	**14.24**	**79**	P	**P**	**18 15 39.3**	**+0.7**
	11μm49μm7μm,0.8s						
MNSI	**Mandailing Nat**	**15.12**	**296**	P	**P**	**18 15 45.3**	**-1.3**
	12μm875nm,0.7s						
AAI	**Ambon**	**15.23**	**82**	P	**P**	**18 15 45.9**	**-1.8**
	9μm32μm4μm,0.9s						
KRAI	**Karang Ratu**	**15.49**	**81**	P	**P**	**18 15 47.9**	**-2.2**
	7μm17μm2μm,0.8s						
SGSI	**Sangihe**	**15.75**	**52**	P	**P**	**18 15 52.3**	**-0.1**
	6μm62μm6μm,0.6s						
TNTI	**Ternate**	**15.79**	**65**	P	**P**	**18 15 54.2**	**+1.5**
TNTI	**Ternate**	**15.79**	**65**	P	**P**	**18 15 54.1**	**+1.3**
TNTI	**Ternate**	**15.79**	**65**	P	**P**	**18 15 54.3**	**+1.5**
TNTI	**Ternate**	**15.79**	**65**	P	**P**	**18 15 54.1**	**+1.3**
	14μm14μm,1.4s						
PBSI	**Pulau Batu**	**15.95**	**291**	P	**P**	**18 15 53.7**	**-0.5**
IPM	**Ipoh**	**15.97**	**311**	P	**P**	**18 15 55.8**	**+1.4**
IPM	**Ipoh**	**15.97**	**311**	P	**P**	**18 15 55.9**	**+1.6**
IPM	**Ipoh**	**15.97**	**311**	P	**P**	**18 15 56.0**	**+1.6**
	6μm21μm2μm,0.8s						
MSAI	**Masohi**	**16.01**	**81**	P	**P**	**18 15 52.3**	**-2.5**
	5μm12μm2μm,0.7s						
MBWA	**Marble Bar**	**16.32**	**157**	P	**P**	**18 15 57.2**	**-0.4**
MBWA	**Marble Bar**	**16.32**	**157**	P	**P**	**18 15 56.9**	**-0.6**
MBWA	**Marble Bar**	**16.32**	**157**	P	**P**	**18 15 57.3**	**-0.2**
MBWA				P	**P**	**18 15 57.3**	**-0.2**
MBWA				S	**S**	**18 18 37.0**	**-3.6**
MBWA				S	**S**	**18 18 37.0**	**-3.6**
MBWA	**Marble Bar**	**16.32**	**157**	P	**P**	**18 15 57.3**	**-0.2**
MBWA	**Marble Bar**	**16.32**	**157**	⇑P	**P**	**18 15 57.1**	**-0.4**
GIRL	**Giralia**	**16.51**	**176**	P	**P**	**18 15 59.8**	**+0.5**
GIRL	**Giralia**	**16.51**	**176**	P	**P**	**18 16 00.2**	**+1.0**
RPSI	**Rantau Prapat**	**16.61**	**301**	P	**P**	**18 16 01.7**	**+1.4**
PSI	**Prapat**	**16.67**	**302**	P	**P**	**18 16 02.2**	**+1.3**
PSI	**Prapat**	**16.67**	**302**	P	**P**	**18 16 01.7**	**+0.8**
PSI	**Prapat**	**16.67**	**302**	P	**P**	**18 16 02.1**	**+1.2**
	10μm47μm5μm,1.0s						
PSA00	**Pilbara Seismi**	**16.74**	**158**	P	**P**	**18 16 01.0**	**-0.4**
PSA00	**Pilbara Seismi**	**16.74**	**158**	P	**P**	**18 16 00.7**	**-0.7**
KULM	**Kulim**	**16.78**	**312**	P	**P**	**18 16 02.8**	**+1.0**
KULM	**Kulim**	**16.78**	**312**	P	**P**	**18 16 02.5**	**+0.7**
KULM	**Kulim**	**16.78**	**312**	P	**P**	**18 16 02.8**	**+1.0**
	15μm1μm,1.0s						
BNDI	**Bandanaira**	**16.81**	**86**	P	**P**	**18 16 00.2**	**-1.9**
BNDI	**Bandanaira**	**16.81**	**86**	P	**P**	**18 15 59.5**	**-2.6**
	10μm28μm2μm,0.7s						
FITZ	**Fitzroy Crossi**	**17.12**	**135**	P	**P**	**18 16 04.9**	**+0.1**
	2μm,0.8s,baz=332,slow=6.3,SNR=814						
FITZ				S	**S**	**18 18 49.6**	**-3.9**
	438nm,0.9s,baz=261,slow=18,SNR=11						
FITZ				ScP	**ScP**	**18 22 53.1**	**+0.8**
	348nm,0.9s,baz=318,slow=2.8,SNR=6.8						
FITZ				ScS	**ScS**	**18 26 31.7**	**-1.3**
	89nm,0.8s,baz=284,slow=23,SNR=22						
FITZ				P3KPbc		18 50 22.8	
	6.4nm,0.8s,baz=158,slow=5.4,SNR=3.8						
GSI	**Gunungsitoli**	**17.14**	**295**	P	**P**	**18 16 05.2**	**+0.1**
GSI	**Gunungsitoli**	**17.14**	**295**	P	**P**	**18 16 05.0**	**-0.1**
	16μm1μm,0.9s						
COCO	**West Island**	**17.16**	**248**	P	**P**	**18 16 05.6**	**+0.4**
COCO	**West Island**	**17.16**	**248**	P	**P**	**18 16 05.9**	**+0.7**
COCO	**West Island**	**17.16**	**248**	P	**P**	**18 16 05.6**	**+0.4**
COCO	**West Island**	**17.16**	**248**	P	**P**	**18 16 05.8**	**+0.7**
COCO	**West Island**	**17.16**	**248**	P	**P**	**18 16 05.0**	**-0.2**
TSI	**Tuntungan**	**17.34**	**303**	P	**P**	**18 16 08.6**	**+1.6**
	10μm43μm5μm,0.8s						
KCSI	**Kotacane, Aceh**	**18.02**	**302**	P	**P**	**18 16 13.4**	**+0.2**
	13μm1μm,1.1s						
DAV	**Davao City (W)**	**18.05**	**44**	P	**P**	**18 16 13.3**	**-0.1**
	4μm,0.7s,baz=261,slow=1.5,SNR=55						
DAV				S	**S**	**18 19 11.5**	**+2.8**
	312nm,0.4s,baz=221,slow=23,SNR=1.7						
DAV	**Davao City (W)**	**18.05**	**44**	P	**P**	**18 16 14.6**	**+1.3**
DAV	**Davao City (W)**	**18.05**	**44**	P	**P**	**18 16 12.8**	**-0.6**
DAV	**Davao City (W)**	**18.05**	**44**	P	**P**	**18 16 14.1**	**+0.7**
DAV	**Davao City (W)**	**18.05**	**44**	P	**P**	**18 16 15.4**	**+2.0**
DAV	**Davao City (W)**	**18.05**	**44**	⇓P	**P**	**18 16 14.2**	**+0.9**
DAV	**Davao City (W)**	**18.05**	**44**	P	**P**	**18 16 15.3**	**+1.9**
	12μm45μm7μm,0.9s						
DAV	**Davao City (W)**	**18.05**	**44**	P	**P**	**18 16 14.0**	**+0.7**
KNRA	**Kununurra**	**18.10**	**123**	P	**P**	**18 16 13.4**	**-0.4**
SAUI	**Saumlaki**	**18.17**	**97**	P	**P**	**18 16 12.8**	**-1.8**
SAUI	**Saumlaki**	**18.17**	**97**	P	**P**	**18 16 13.4**	**-1.1**
SAUI	**Saumlaki**	**18.17**	**97**	P	**P**	**18 16 12.0**	**-2.5**
SAUI	**Saumlaki**	**18.17**	**97**	P	**P**	**18 16 13.2**	**-1.3**
	9μm53μm5μm,0.9s						
DRS	**Darwin Rock St**	**18.67**	**111**	P	**P**	**18 16 18.9**	**-0.1**
SNSI	**Sinabang, Aceh**	**18.74**	**296**	P	**P**	**18 16 21.1**	**+1.4**
	8μm42μm5μm,1.2s						
SWI	**Sorong**	**18.85**	**75**	P	**P**	**18 16 21.4**	**+0.7**
	11μm42μm6μm,0.8s						
SIJI	**Sorong**	**18.86**	**75**	P	**P**	**18 16 21.4**	**+0.6**
	4μm,0.7s,baz=293,slow=6.4,SNR=1050						
SIJI				S	**S**	**18 19 21.7**	**-0.2**
	283nm,1.1s,baz=117,slow=23,SNR=19						
SIJI				PcP	**PcP**	**18 20 17.6**	**+0.9**
	248nm,0.6s,baz=8.6,slow=3.8,SNR=6.8						
SIJI				ScP	**ScP**	**18 22 57.0**	**+0.6**
	502nm,0.7s,baz=322,slow=3.0,SNR=31						
SIJI				ScS	**ScS**	**18 26 37.5**	**-1.3**
	70nm,1.0s,baz=188,slow=22,SNR=22						
SIJI				PKiKP	**PKiKP**	**18 28 05.5**	**-1.4**
	24nm,1.0s,baz=33,slow=21,SNR=1.6						
SIJI	**Sorong**	**18.86**	**75**	P	**P**	**18 16 21.4**	**+0.6**
	9μm35μm5μm,0.8s						
MTN	**Manton Dam**	**19.02**	**112**	P	**P**	**18 16 20.9**	**-1.3**
FAKI	**Fak Fak**	**19.35**	**82**	P	**P**	**18 16 24.8**	**-0.4**
FAKI	**Fak Fak**	**19.35**	**82**	P	**P**	**18 16 25.1**	**-0.2**
FAKI	**Fak Fak**	**19.35**	**82**	P	**P**	**18 16 25.1**	**-0.2**
FAKI	**Fak Fak**	**19.35**	**82**	P	**P**	**18 16 25.0**	**-0.2**
	16μm30μm2μm,1.2s						
MLSI	**Meulaboh, Aceh**	**19.57**	**301**	P	**P**	**18 16 27.9**	**+0.7**
LHMI	**Lhok Sumawe**	**19.64**	**305**	P	**P**	**18 16 29.4**	**+1.6**
LHMI	**Lhok Sumawe**	**19.64**	**305**	P	**P**	**18 16 29.1**	**+1.3**
	9μm55μm6μm,1.0s						
PKDT	**Phuket**	**20.22**	**313**	P	**P**	**18 16 34.4**	**+1.3**
	19μm2μm,1.3s						
MEEK	**Meekatharra**	**21.12**	**166**	P	**P**	**18 16 40.5**	**-0.5**
RNTT	**Ranong**	**21.16**	**316**	P	**P**	**18 16 42.7**	**+1.2**
TGY	**Tagaytay City**	**21.50**	**21**	P	**P**	**18 16 45.8**	**+1.2**
	3μm,0.5s,baz=199,slow=4.2,SNR=34						
TGY				sP	**sP**	**18 19 18.6**	**-0.9**
	713nm,0.6s,baz=192,slow=14,SNR=1.8						
TGY				S	**S**	**18 20 04.4**	**+0.8**
	3μm,1.1s,baz=186,slow=20,SNR=7.6						
TGY				ScP	**ScP**	**18 23 03.3**	**+0.6**
	1μm,0.8s,baz=197,slow=5.2,SNR=6.9						
	3μm,0.5s						
MORW	**Morawa**	**23.05**	**173**	P	**P**	**18 16 58.4**	**+0.3**
MORW	**Morawa**	**23.05**	**173**	P	**P**	**18 16 57.9**	**-0.2**
MORW	**Morawa**	**23.05**	**173**	⇑P	**P**	**18 16 58.4**	**+0.3**
CMBY	**CAMPBELL BAY**	**23.12**	**304**	*e*P	P	18 16 50.7	-8.2
CMBY				IAmb	IAmb	18 17 01.5	
	comp=Z,958nm,1.0s						
CMBY				*e*S	**S**	**18 20 28.1**	**-1.0**
KHON	**Khomkaen**	**24.47**	**336**	P	**P**	**18 17 13.0**	**+2.1**
	comp=Z,9μmcomp=Z,1μm,0.9s						
PANO	**Nakornpanom**	**24.54**	**340**	P	**P**	**18 17 13.4**	**+1.9**
	comp=Z,11μmcomp=Z,1μm,1.0s						
SZP	**Santa**	**24.57**	**17**	P	**P**	**18 17 12.7**	**+1.0**
BLDU	**Ballidu**	**24.65**	**173**	P	**P**	**18 17 11.6**	**-0.7**
WRA	**Warramunga Arr**	**24.83**	**126**	P	**P**	**18 17 13.7**	**-0.4**
	comp=Z,692nm,0.8s,baz=314,slow=9.2,SNR=911						
WRA				PcP	**PcP**	**18 20 29.2**	**+0.4**
	comp=Z,172nm,0.7s,baz=301,slow=2.1,SNR=10						
WRA				S	**S**	**18 20 51.1**	**-4.8**
	comp=Z,286nm,1.1s,baz=294,slow=17,SNR=19						
WRA				ScP	**ScP**	**18 23 11.4**	**-0.2**
	comp=Z,1μm,0.8s,baz=303,slow=2.4,SNR=53						
WRA				ScS	**ScS**	**18 26 58.3**	**-2.8**
	comp=Z,56nm,0.9s,baz=264,slow=3.7,SNR=5.8						
WRA				PKiKP	**PKiKP**	**18 28 08.8**	**-0.8**
	comp=Z,7.4nm,0.5s,baz=290,slow=1.2,SNR=1.4						
WRA				P3KPbc		18 49 57.6	
	comp=Z,0.8nm,0.7s,baz=119,slow=2.9,SNR=5.7						
WRA				P3KP		18 50 43.3	
	comp=Z,15nm,1.0s,baz=55,slow=2.9,SNR=6.5						
	comp=Z,692nm,0.8s						
WRAB	**Tennant Creek**	**24.83**	**126**	P	**P**	**18 17 14.0**	**-0.1**
WRAB	**Tennant Creek**	**24.83**	**126**	P	**P**	**18 17 13.8**	**-0.3**
WRAB	**Tennant Creek**	**24.83**	**126**	*d i*P	**P**	**18 17 13.9**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,1μm,0.9s						
QIZ	**Qiongzhong**	**25.14**	**353**	P	**P**	**18 17 19.0**	**+2.2**
QIZ	**Qiongzhong**	**25.14**	**353**	⇓*i*P	**P**	**18 17 19.3**	**+2.5**
QIZ				sP	**sP**	**18 19 59.1**	**0.0**
QIZ				PcP	**PcP**	**18 20 31.6**	**+2.1**
QIZ				S	**S**	**18 21 04.4**	**+3.6**
QIZ				ScP	**ScP**	**18 23 13.8**	**+1.3**
QIZ				ScS	**ScS**	**18 27 05.1**	**+2.7**
QIZ				pmax	pmax		
	comp=Z,3μm,0.9s						
QIZ				pmax	pmax		
	comp=Z,5μm,3.7s						
KHLT	**Khaolaem Dam**	**25.23**	**325**	P	**P**	**18 17 19.8**	**+2.2**
	comp=Z,24μmcomp=Z,2μm,1.3s						
UTHA	**Uthaitani**	**25.39**	**328**	P	**P**	**18 17 21.3**	**+2.4**
	comp=Z,11μmcomp=Z,1μm,0.7s						
KLBR	**Kellerberrin**	**25.76**	**171**	P	**P**	**18 17 22.0**	**-0.1**
MTKN	**Mount Kenneth**	**25.85**	**175**	P	**P**	**18 17 23.1**	**+0.3**
MUN	**Mundaring**	**25.94**	**174**	P	**P**	**18 17 23.3**	**-0.3**
PHIT	**Phitsanulok**	**26.29**	**332**	P	**P**	**18 17 29.3**	**+2.5**
ASAR	**Alice Springs**	**26.59**	**133**	P	**P**	**18 17 29.6**	**+0.1**
	comp=Z,641nm,0.8s,baz=312,slow=8.3,SNR=5463						
ASAR				PcP	**PcP**	**18 20 33.6**	**+0.6**
	comp=Z,254nm,0.7s,baz=332,slow=1.9,SNR=22						
ASAR				S	**S**	**18 21 18.6**	**-4.8**
	comp=Z,452nm,1.1s,baz=306,slow=16,SNR=13						
ASAR				ScP	**ScP**	**18 23 16.8**	**0.0**
	comp=Z,954nm,0.9s,baz=320,slow=2.4,SNR=55						
ASAR				ScS	**ScS**	**18 27 05.9**	**-2.9**
	comp=Z,54nm,0.8s,baz=301,slow=4.8,SNR=8.6						
ASAR				PKKP	**PKKPdf**	**18 43 16.1**	**+1.3**
	comp=Z,3.0nm,0.8s,baz=198,slow=0.6,SNR=5.5						
ASAR				P3KPbc		18 49 48.9	
	comp=Z,1.0nm,0.5s,baz=98,slow=2.2,SNR=10						
ASAR				P3KP		18 50 38.0	
	comp=Z,21nm,0.8s,baz=52,slow=3.0,SNR=14						
	comp=Z,641nm,0.8s						
AS31	**Alice Springs**	**26.59**	**133**	P	**P**	**18 17 29.6**	**+0.1**
UTTA	**Uttaradit**	**26.70**	**333**	P	**P**	**18 17 32.8**	**+2.3**
PBA	**Port Blair**	**26.83**	**311**	P	**P**	**18 17 31.0**	**-0.7**
PBA	**Port Blair**	**26.83**	**311**	*e*P	P	18 17 20.4	-11
PBA				IAmb	IAmb	18 17 39.1	
	comp=Z,953nm,0.8s						
PBA				*e*S	**S**	**18 21 23.5**	**-3.7**
PBA	**Port Blair**	**26.83**	**311**	P	**P**	**18 17 30.8**	**-0.8**
	SNR=28						
PBA				S	**S**	**18 21 25.0**	**-2.2**
PBA	**Port Blair**	**26.83**	**311**	⇓P	**P**	**18 17 31.2**	**-0.4**
NWAO	**Narrogin (SRO)**	**27.00**	**172**	P	**P**	**18 17 33.0**	**+0.2**
NWAO	**Narrogin (SRO)**	**27.00**	**172**	P	**P**	**18 17 32.7**	**-0.2**
NWAO	**Narrogin (SRO)**	**27.00**	**172**	P	**P**	**18 17 33.1**	**+0.2**
NWAO	**Narrogin (SRO)**	**27.00**	**172**	P	**P**	**18 17 32.8**	**-0.1**
NWAO				P	**P**	**18 17 32.8**	**-0.1**
NWAO				S	**S**	**18 21 28.0**	**-1.4**
NWAO				S	**S**	**18 21 28.0**	**-1.4**
GENI	**Genyem**	**27.21**	**84**	P	**P**	**18 17 35.1**	**0.0**
GENI	**Genyem**	**27.21**	**84**	⇓P	**P**	**18 17 34.7**	**-0.3**

DGPR DIGLIPUR 27.69 314 *e*P P 18 17 28.9 -10
DGPR IAmb IAmb 18 17 39.9
comp=Z,939nm,0.5s
DGPR *e*S **S** **18 21 37.7 -2.8**
LAMP Lampang 27.81 332 P **P** **18 17 42.6 +2.5**
comp=Z,22µmcomp=Z,2µm,1.0s
CM31 Chiang Mai Arr 28.08 330 P **P** **18 17 44.7 +2.2**
CMAR Chiang Mai Arr 28.08 330 P **P** **18 17 44.8 +2.2**
comp=Z,1µm,1.0s,baz=159,slow=7.5,SNR=3252
CMAR sP **sP** **18 20 27.9 0.0**
comp=Z,65nm,1.1s,baz=126,slow=4.7,SNR=1.1
CMAR PcP **PcP** **18 20 38.5 +1.8**
comp=Z,314nm,0.7s,baz=182,slow=3.2,SNR=15
CMAR S **S** **18 21 46.1 -0.5**
comp=Z,20nm,0.9s,baz=152,slow=14,SNR=2.3
CMAR ScP **ScP** **18 23 22.9 +1.4**
comp=Z,181nm,0.8s,baz=184,slow=3.5,SNR=20
CMAR ScS **ScS** **18 27 16.3 +0.6**
comp=Z,12nm,1.1s,baz=55,slow=38,SNR=1.9
CMAR PKiKP **PKiKP** **18 28 11.3 -0.2**
comp=Z,23nm,0.9s,baz=241,slow=2.0,SNR=6.3
CMAR P3KPbc 18 49 43.6
comp=Z,6.7nm,0.8s,baz=332,slow=5.1,SNR=36
CMAR P3KP 18 50 53.3
comp=Z,1.0nm,0.9s,baz=25,slow=1.4,SNR=4.7
comp=Z,1µm,1.0s
HKPS Hong Kong Po S 28.19 2 P **P** **18 17 44.7 +1.4**
HKPS IAmb IAmb 18 17 46.1
comp=Z,4µm,1.6s
HKPS Hong Kong Po S 28.19 2 P **P** **18 17 44.6 +1.2**
FORT Forrest 28.32 152 P **P** **18 17 45.0 +0.6**
MHMT Maesarieng 28.36 328 P **P** **18 17 46.7 +1.8**
comp=Z,525nmcomp=Z,11µmcomp=Z,1µm,1.1s
CHTO Chiang Mai 28.39 331 P **P** **18 17 47.0 +1.9**
CHTO IAmb IAmb 18 17 48.4
comp=Z,2µm,1.2s
CHTO Chiang Mai 28.39 331 P **P** **18 17 46.7 +1.5**
CHTO Chiang Mai 28.39 331 P **P** **18 17 47.0 +1.9**
CHTO pmax pmax
comp=Z,2µm,1.3s
CHTO Chiang Mai 28.39 331 P **P** **18 17 47.0 +1.9**
CHTO P **P** **18 17 47.0 +1.9**
CHTO S **S** **18 21 54.0 +2.7**
CHTO S **S** **18 21 54.0 +2.7**
H01W3 Cape Leeuwin H 28.69 178 P **P** **18 17 48.3 +1.0**
baz=19,slow=4.4,SNR=39
H01W1 Cape Leeuwin H 28.70 178 P **P** **18 17 48.4 +1.0**
baz=19,slow=4.4,SNR=54
H01W2 Cape Leeuwin H 28.70 178 P **P** **18 17 48.4 +1.0**
baz=19,slow=4.4,SNR=44
QIS Mount Isa 29.48 122 P **P** **18 17 54.5 -0.1**
GZH2 Guangzhou 29.55 1⇓*i*P **P** **18 17 56.9 +1.9**
GZH2 sP **sP** **18 20 41.6 +0.5**
GZH2 S **S** **18 22 10.3 +1.3**
GZH2 pmax pmax
comp=Z,5µm,0.9s
TWGBT Beinan 29.75 15 P **P** **18 17 57.5 +0.6**
TWG Pinlang 29.76 15 IAmb IAmb 18 18 01.5
comp=Z,1µm,0.6s
TPUB Ta-pu 30.11 14 P **P** **18 18 01.1 +1.2**
YULB Yu-li 30.36 15 P **P** **18 18 01.9 -0.2**
YULB Yu-li 30.36 15 P **P** **18 18 02.2 +0.1**
COEN Coen 30.62 107 P **P** **18 18 04.2 -0.2**
COEN IAmb IAmb 18 18 05.4
comp=Z,1µm,0.8s
COEN Coen 30.62 107 P **P** **18 18 04.1 -0.3**
SSLB Suanglung 30.65 14 P **P** **18 18 06.0 +1.4**
SSLB Suanglung 30.65 14 P **P** **18 18 05.7 +1.1**
NACB Ninganchiao 31.18 15 P **P** **18 18 09.0 -0.1**
GULI GuiLin 31.29 355 P **P** **18 18 13.7 +3.8**
GULI sP **sP** **18 20 57.9 +1.3**
GULI S **S** **18 22 39.3 +3.7**
GULI SS **SS** **18 25 48.5 +2.4**
GULI pmax pmax
comp=Z,2µm,0.8s
QZH2 Quanzhou 31.29 10⇓*i*P **P** **18 18 10.6 +0.6**
QZH2 pmax pmax
comp=Z,770nm,1.0s
QZH2 pmax pmax
comp=Z,3µm,5.4s
YHNB Yeheng 31.60 14 P **P** **18 18 13.2 +0.5**
YOJ Yonaguni jima 31.85 17 P **P** **18 18 15.7 +1.0**
YOJ Yonaguni jima 31.85 17 P **P** **18 18 15.8 +1.0**
YOJ Yonaguni jima 31.85 17⇓P **P** **18 18 15.7 +1.0**
TATO Taipei 31.92 15 P **P** **18 18 15.7 +0.4**
TATO Taipei 31.92 15 P **P** **18 18 15.7 +0.4**
TATO Taipei 31.92 15 P **P** **18 18 15.9 +0.6**
TATO S **S** **18 22 42.8 -2.5**
KMI2 Kunming 32.62 342⇓P **P** **18 18 24.7 +3.2**
KMI2 PcP **PcP** **18 20 49.7 +0.6**
KMI2 sP sP 18 21 10.4 +1.6
KMI2 S **S** **18 22 57.7 +1.3**
KMI2 ScP **ScP** **18 23 38.0 +1.3**
KMI2 PcS **PcS** **18 24 36.2 +0.6**
KMI2 ScS **ScS** **18 27 38.6 +0.1**
KMI2 pmax pmax
comp=Z,3µm,1.1s
KMI2 pmax pmax
comp=Z,8µm,3.4s
MTSU Mount Surprise 32.73 114 P **P** **18 18 22.8 +0.4**
JMJ Miyako jima 2 32.92 21 P **P** **18 18 25.0 +1.3**
GYA Guiyang 32.93 349⇓P **P** **18 18 26.2 +2.2**
GYA S **S** **18 23 03.3 +2.5**
GYA pmax pmax
comp=Z,4µm,0.7s
GYA pmax pmax
comp=Z,9µm,3.1s
PMG Port Moresby 33.91 98 PKPPKP 18 51 36.2
comp=Z,3.9nm,0.6s,baz=339,slow=8.6,SNR=3.0
PMG Port Moresby 33.91 98 P **P** **18 18 32.7 +0.5**
PMG Port Moresby 33.91 98 P **P** **18 18 32.7 +0.5**
PMG Port Moresby 33.91 98*d*i*P **P** **18 18 32.8 +0.6**
PMG pmax pmax
comp=Z,3µm,1.1s
PMG Port Moresby 33.91 98 P **P** **18 18 32.7 +0.5**
PMG PcP **PcP** **18 20 53.8 +1.0**
PMG ScP **ScP** **18 23 42.1 +0.9**
TNCH TengChong 34.01 336⇓*i*P **P** **18 18 35.4 +2.3**
TNCH PcP **PcP** **18 20 54.2 +1.1**
TNCH sP sP 18 21 20.7 -0.3
TNCH S **S** **18 23 21.5 +4.2**
TNCH ScS **ScS** **18 27 44.5 -1.4**
TNCH pmax pmax
comp=Z,5µm,1.2s
CNSH ChangSha 34.05 360 P **P** **18 18 35.4 +2.2**
CNSH S **S** **18 23 20.2 +2.8**
BBOO Buckleboo 34.13 144 IAmb IAmb 18 18 35.1
comp=Z,2µm,1.2s
BBOO Buckleboo 34.13 144 P **P** **18 18 33.6 -0.3**
PZH PanZhiHua 34.20 342 P **P** **18 18 36.6 +2.0**
PZH sP **sP** **18 21 22.6 0.0**
PZH S **S** **18 23 21.9 +1.9**
PZH ScS **ScS** **18 27 48.6 +1.9**
PZH pmax pmax
comp=Z,2µm,1.3s
PZH pmax pmax
comp=Z,3µm,4.2s
MANU Manus Island 34.41 85 IAmb IAmb 18 18 39.2
comp=Z,1µm,1.1s
MANU Manus Island 34.41 85⇓P **P** **18 18 37.9 +1.4**
HALK Hakmana 34.53 290⇓P **P** **18 18 38.1 +0.7**
SAIH SaiHa 34.54 326 *e*P P 18 18 29.4 -8.1
SAIH IAmb IAmb 18 18 39.9
comp=Z,918nm,1.0s
SAIH *e*S **S** **18 23 23.9 -1.3**
PALK Pallekele 34.93 292 P **P** **18 18 41.0 +0.3**
PALK IAmb IAmb 18 18 42.5
comp=Z,643nm,1.1s
PALK Pallekele 34.93 292 *i* P **P** **18 18 41.2 +0.5**
SNR=12
PALK Pallekele 34.93 292*d*i*P **P** **18 18 41.2 +0.5**
PALK pmax pmax
comp=Z,822nm,1.2s
PALK Pallekele 34.93 292 P **P** **18 18 41.1 +0.3**
PALK S **S** **18 23 28.0 -3.1**
CTA Charters Tower 35.08 117 P3KPbc 18 49 18.0
comp=Z,6.8nm,0.7s,baz=126,slow=4.6,SNR=12
CTA Charters Tower 35.08 117 P **P** **18 18 42.5 +0.6**
CTAO Charters Tower 35.08 117 P **P** **18 18 42.3 +0.4**
CTAO IAmb IAmb 18 18 43.9
comp=Z,834nm,0.8s
CTAO Charters Tower 35.08 117 P **P** **18 18 42.5 +0.6**
CTAO Charters Tower 35.08 117 P **P** **18 18 42.3 +0.4**
CTAO pmax pmax
comp=Z,835nm,0.9s
MORE Moreh 35.26 329 IAmb IAmb 18 18 45.6
comp=Z,8µm,0.8s
MALK Mahakanadarawa 35.49 294 P **P** **18 18 45.7 +0.3**
MALK S **S** **18 23 36.4 -3.1**
PTPS Port Pirie 35.54 143 P **P** **18 18 46.1 +0.7**
JOW Kunigami 35.86 24 P **P** **18 18 49.3 +1.1**
JOW Kunigami 35.86 24 P **P** **18 18 49.5 +1.3**
JOW Kunigami 35.86 24⇓P **P** **18 18 49.5 +1.3**
IMP Imphal 35.93 329 *e*P P 18 18 40.2 -8.7
IMP IAmb IAmb 18 18 50.6
comp=Z,911nm,0.7s
IMP *e*S **S** **18 23 43.9 -1.9**
BELO BELONIA 36.01 325 *e*P P 18 18 41.9 -7.5
BELO IAmb IAmb 18 18 52.5
comp=Z,963nm,1.0s
BELO *e*S **S** **18 23 45.4 -1.3**
QLP Quilpie 36.01 128 P **P** **18 18 50.2 +0.8**
QLP Quilpie 36.01 128⇓P **P** **18 18 50.5 +1.0**
JMZ Minamidaito 2 36.26 28 P **P** **18 18 51.4 -0.1**
JMZ Minamidaito 2 36.26 28 P **P** **18 18 51.1 -0.3**
JMZ Minamidaito 2 36.26 28⇑P **P** **18 18 51.4 -0.1**
HTT Hallett 36.28 142 P **P** **18 18 51.9 +0.3**
HTT Hallett 36.28 142⇑P **P** **18 18 52.1 +0.5**
ENH Enshi 36.30 355 P **P** **18 18 52.7 +0.9**
ENH Enshi 36.30 355 P **P** **18 18 53.0 +1.2**
ENH pP **pP** **18 20 30.8 -1.0**
ENH PcP **PcP** **18 21 00.4 +0.8**
ENH ScP **S** **18 23 50.8 -0.2**
WHN Wuhan 36.42 2⇓*i*P **P** **18 18 54.6 +1.9**
WHN pP **PP** **18 20 36.1 -2.3**
WHN PcP **PcP** **18 21 01.2 +1.3**
WHN sP **sP** **18 21 42.3 +0.1**
WHN ScP **ScP** **18 23 51.1 +1.0**
WHN S **S** **18 23 54.6 +1.8**
WHN PcS **PcS** **18 24 48.0 -0.9**
WHN ScS **ScS** **18 27 58.4 -0.2**
WHN pmax pmax
comp=Z,11µm,4.9s
SILR SILCHAR 36.48 328 *e*P P 18 18 45.1 -8.1
SILR IAmb IAmb 18 18 55.9
comp=Z,917nm,0.5s
SILR *e*S **S** **18 23 52.1 -1.6**
KOHI KOHIMA 36.59 331 *e*P P 18 18 44.4 -10
KOHI IAmb IAmb 18 18 55.8
comp=Z,974nm,0.9s
KOHI *e*S **S** **18 23 53.5 -2.2**
AGT Agartala 36.62 325 *e*P P 18 18 47.4 -7.0
AGT IAmb IAmb 18 18 57.6
comp=Z,934nm,1.0s
AGT *e*S **S** **18 23 55.5 -0.4**
MOKO MOKOCHONG 36.90 332 *e*P P 18 18 49.3 -7.5
MOKO IAmb IAmb 18 18 58.9
comp=Z,993nm,1.1s
MOKO *e*S **S** **18 23 57.6 -2.6**
STKA Stephens Creek 36.99 138 P **P** **18 18 58.0 +0.5**
comp=Z,781nm,0.9s,baz=316,slow=8.7,SNR=910
STKA ScP **ScP** **18 23 52.0 -0.3**
comp=Z,856nm,0.9s,baz=318,slow=6.2,SNR=32
STKA ScS **ScS** **18 27 57.5 -4.6**
comp=Z,118nm,1.3s,baz=195,slow=21,SNR=2.5
STKA P3KPbc 18 49 09.6
comp=Z,9.4nm,0.7s,baz=124,slow=3.8,SNR=13
comp=Z,781nm,0.9s
STKA Stephens Creek 36.99 138 P **P** **18 18 57.7 +0.3**
STKA Stephens Creek 36.99 138 P **P** **18 18 58.0 +0.5**
BULU Kimbe 37.03 91 P **P** **18 18 58.8 +0.8**
GUMO Guam 37.11 58 P **P** **18 18 57.7 -0.8**
GUMO Guam 37.11 58 P **P** **18 18 57.8 -0.8**
GUMO Guam 37.11 58 P **P** **18 18 57.7 -0.8**
GUMO pmax pmax
comp=Z,3µm,0.6s
GHSS Government Hou 37.12 144 P **P** **18 18 59.0 +0.6**
JORH JORHAT 37.38 332 *e*P P 18 18 53.1 -7.5
JORH IAmb IAmb 18 19 02.1
comp=Z,982nm,0.4s
JORH *e*S **S** **18 24 05.4 -1.6**
SHL Shillong 37.60 328 *e*P P 18 18 55.3 -7.4
SHL IAmb IAmb 18 19 04.2
comp=Z,919nm,0.0s
SHL *e*S **S** **18 24 08.6 -2.1**
SHL Shillong 37.60 328 P **P** **18 19 04.0 +1.4**
SNR=1694
SHL S **S** **18 24 10.6 -0.1**
VIS Vishakhapatnam 37.72 309 *e*P P 18 18 56.2 -7.2
VIS IAmb IAmb 18 19 05.4
comp=Z,1µm,1.2s
VIS *e*S **S** **18 24 10.8 -1.4**
SSE Sheshan 37.76 11 P **P** **18 19 05.6 +2.0**
SSE S **S** **18 24 15.6 +3.2**
SSE pmax pmax
comp=Z,3µm,0.7s
SSE pmax pmax
comp=Z,5µm,3.5s
MDRS Chennai 37.76 300 *e*P P 18 18 55.5 -8.3
MDRS IAmb IAmb 18 19 05.2
comp=Z,1µm,1.0s
MDRS *e*S **S** **18 24 09.7 -3.3**
JAM Amami Oshima 37.80 24 P **P** **18 19 04.7 +0.8**
CD2 Chengdu 37.84 347 P **P** **18 19 05.6 +1.3**
CD2 pP pP 18 20 47.6 +2.2
CD2 PP **PP** **18 20 53.8 +2.3**
CD2 sP sP 18 21 54.4 +0.2
CD2 S **S** **18 24 14.7 +0.9**
CD2 sS sS 18 27 23.3 +3.3
CD2 pmax pmax
comp=Z,2µm,1.4s
ITAN ITANAGAR 37.97 331 *e*P P 18 18 57.6 -7.8
ITAN IAmb IAmb 18 19 07.3
comp=Z,999nm,1.2s
ITAN *e*S **S** **18 24 13.2 -2.5**
TEZP TEZPUR 37.98 330 *e*P P 18 18 58.4 -7.1
TEZP IAmb IAmb 18 19 07.3
comp=Z,2µm,0.4s
TEZP *e*S **S** **18 24 14.8 -1.1**
PASG PASIGHAT 38.02 334 *e*P P 18 18 56.2 -10
PASG IAmb IAmb 18 19 07.1
comp=Z,2µm,1.2s
GUWA GUWAHATI 38.21 328 *e*P P 18 19 00.3 -6.9
GUWA IAmb IAmb 18 19 09.4
comp=Z,2µm,0.8s
ZIRO ZIRO 38.23 332 *e*P P 18 18 58.4 -9.3
ZIRO IAmb IAmb 18 19 10.5
comp=Z,1µm,0.7s
ZIRO *e*S **S** **18 24 17.7 -2.2**
NJ2 Nanjing 38.30 8⇓*i*P **P** **18 19 10.0 +2.0**
NJ2 PP **PP** **18 20 55.0 -0.6**
NJ2 PcP **PcP** **18 21 07.2 +1.4**
NJ2 sP **sP** **18 21 57.7 -0.5**
NJ2 ScP **ScP** **18 23 58.6 +1.4**
NJ2 S **S** **18 24 23.6 +3.2**
NJ2 SS **SS** **18 27 31.7 -10**
RAGD RAYAGADA 38.53 311 *e*P P 18 19 01.7 -8.3
RAGD IAmb IAmb 18 19 12.1
comp=Z,1µm,1.0s
RAGD *e*S **S** **18 24 22.1 -2.0**
TRD Trivandrum 38.83 292 *e*P P 18 19 05.1 -7.4
TRD IAmb IAmb 18 19 13.8
comp=Z,346nm,0.7s
TRD *e*S **S** **18 24 27.1 -1.6**
RABL Rabaul 38.95 89 IAmb IAmb 18 19 29.3
comp=Z,800nm,0.8s
RABL Rabaul 38.95 89⇓P **P** **18 19 13.2 -0.4**
SALM Salem 38.96 297 *e*P P 18 19 05.6 -8.0
SALM IAmb IAmb 18 19 14.6
comp=Z,1µm,1.1s
SALM *e*S **S** **18 24 28.9 -1.7**
DHUB DHUBRI 38.99 326 *e*P P 18 19 04.7 -8.9
DHUB IAML 18 19 15.9
comp=Z,1µm,0.7s
DHUB *e*S **S** **18 24 30.1 -0.6**
VJD Vijayawada 39.16 305 *e*P P 18 19 06.7 -8.4
VJD IAML 18 19 22.9
comp=Z,1µm,1.0s
VJD *e*S **S** **18 24 32.3 -1.1**
TAWA Tawang 39.25 329 *e*P P 18 19 07.9 -8.2
TAWA IAmb IAmb 18 19 18.4
comp=Z,942nm,0.4s
TAWA *e*S **S** **18 24 33.2 -2.0**
MISM Misima Island 39.57 99 P **P** **18 19 17.8 -0.7**
RMQ Roma 39.59 125 P **P** **18 19 19.8 +1.3**
CMSA Cobar Meteorol 39.64 134 P **P** **18 19 19.3 +0.5**
SHBG Sahibganj 39.76 323 *e*P P 18 19 10.3 -10
SHBG IAmb IAmb 18 19 22.0
comp=Z,942nm,1.0s
SHBG *e*S **S** **18 24 40.5 -1.4**
XAN Xi'an 40.09 355⇓P **P** **18 19 23.1 +0.8**
XAN S **S** **18 24 46.5 +0.1**
XAN SS **SS** **18 28 04.5 -6.9**
XAN pmax pmax
comp=Z,9µm,5.0s
MGBR Mount Gambier 40.22 145 IAmb IAmb 18 19 27.1
comp=Z,1µm,1.3s
H08S2 Diego Garcia H 40.33 265 P **P** **18 19 25.2 +1.0**
baz=58,slow=9.3,SNR=18
H08S3 Diego Garcia H 40.34 265 P **P** **18 19 25.1 +0.8**
baz=58,slow=9.3,SNR=31
H08S1 Diego Garcia H 40.35 265 P **P** **18 19 25.2 +0.9**
baz=58,slow=9.3,SNR=23
DGAR Diego Garcia 40.37 266 P **P** **18 19 25.3 +0.5**
DGAR Diego Garcia 40.37 266*c*i*P **P** **18 19 25.7 +0.8**
DGAR pmax pmax
comp=Z,325nm,0.6s
DGAR Diego Garcia 40.37 266 P **P** **18 19 25.7 +0.8**
DGAR Diego Garcia 40.37 266⇑P **P** **18 19 25.6 +0.8**
LYN LuoYang 40.41 359 P **P** **18 19 26.1 +1.3**
LYN pP PcP 18 21 10.8 -1.8
LYN PcP **PP** **18 21 13.9 -0.9**
LYN S **S** **18 24 50.2 -0.7**
LYN sS sS 18 27 59.6 0.0
KAAM Kaadhehdhoo 40.55 278 P **P** **18 19 27.4 +1.1**
KAAM Kaadhehdhoo 40.55 278 P **P** **18 19 27.6 +1.3**
KAAM Kaadhehdhoo 40.55 278⇑P **P** **18 19 27.4 +1.1**
GTK Tadong 40.78 326 *e*P P 18 19 20.1 -7.9
GTK IAmb IAmb 18 19 30.6
comp=Z,1µm,0.9s
GTK *e*S **S** **18 24 55.8 -1.0**
JSU Suzuyama 40.88 23 P **P** **18 19 28.5 -0.1**
JSU Suzuyama 40.88 23 P **P** **18 19 28.8 +0.2**
JSU Suzuyama 40.88 23⇓P **P** **18 19 28.8 +0.2**
EIDS Eidsvold 41.08 122 P **P** **18 19 30.8 +0.5**
EIDS Eidsvold 41.08 122⇑P **P** **18 19 31.0 +0.7**
BLSP Bilaspur 41.24 314 *e*P P 18 19 22.8 -8.8
BLSP IAmb IAmb 18 19 33.0
comp=Z,2µm,1.6s
JFU Fukue jima 2 41.29 20 P **P** **18 19 32.6 +0.8**
HYB Hyderabad 41.34 305 *e*P P **18 19 32.6 +0.2**
HYB *e*PP **PP** **18 21 23.9 +0.3**
HYB *e*sP **sP** **18 22 22.2 -1.9**
HYB *e*ScP **ScP** **18 24 10.5 +1.0**
LSA Lhasa 41.34 331 P **P** **18 19 30.6 -2.2**
LSA S **S** **18 25 01.4 -4.1**
LSA pmax pmax
comp=Z,4µm,0.9s
LSA Lhasa 41.34 331 P **P** **18 19 34.9 +2.1**
LSA Lhasa 41.34 331 P **P** **18 19 34.6 +1.8**
LSA PcP **pP** **18 21 17.7 +1.2**
LSA sP **sP** **18 22 25.3 +0.8**
LSA ScP **ScP** **18 24 10.3 +0.4**
HMDM Hanimaadhoo 41.82 287 P **P** **18 19 37.3 +1.1**
HMDM IAmb IAmb 18 19 38.8
comp=Z,1µm,1.2s
HMDM Hanimaadhoo 41.82 287 P **P** **18 19 38.3 +2.1**
SNR=5.4
BRAT Ballarat 42.06 143 P **P** **18 19 39.1 +1.3**
TIA Tai'an 42.23 5 P **P** **18 19 39.4 +0.3**
TIA PcP **PcP** **18 21 20.1 +1.4**
TIA pP **pP** **18 21 23.9 +0.4**
TIA sP **sP** **18 22 29.4 -2.0**
TIA ScP **ScP** **18 24 13.8 +1.1**
TIA PcS **PcS** **18 25 12.4 +0.7**
TIA S **S** **18 25 18.3 +1.2**
TIA ScS **ScS** **18 28 34.0 +0.6**
TIA SS **SS** **18 28 38.4 -7.6**
TIA pmax pmax
comp=Z,4µm,0.7s
TIA pmax pmax
comp=Z,7µm,3.8s
JNU Nakatsue 42.48 22 P **P** **18 19 41.1 0.0**
TW1H Toowoomba 1 Ha 42.63 125 P **P** **18 19 44.9 +2.4**
LZDM Lanzhou Array 42.73 349 P **P** **18 19 45.0 +1.6**
comp=Z,2µm,0.5s,baz=186,slow=13,SNR=8321
LZDM PcP **PcP** **18 21 22.5 +1.7**
comp=Z,193nm,0.5s,baz=172,slow=4.0,SNR=4.4
LZDM ScP **ScP** **18 24 16.4 +1.3**
comp=Z,172nm,0.7s,baz=188,slow=6.0,SNR=7.5
LZDM S **S** **18 25 25.9 +1.1**
comp=Z,26nm,0.8s,baz=253,slow=25,SNR=1.7
LZDM PKPPKP **P'P'df** **18 51 26.8 +1.7**
comp=Z,2.1nm,0.8s,baz=42,slow=4.6,SNR=4.2
LZDM P4KPbc 18 57 29.9
comp=Z,3.6nm,0.7s,baz=181,slow=5.9,SNR=8.4
comp=Z,2µm,0.5s
LZH Lanzhou 42.82 349 P **P** **18 19 45.9 +2.0**
LZH PcP **PcP** **18 21 23.1 +2.2**
LZH pP pP 18 21 32.0 +3.3
LZH sP sP 18 22 34.7 -1.7
LZH ScP **ScP** **18 24 17.3 +2.0**
LZH S **S** **18 25 28.1 +2.2**
LZH sS sS 18 28 36.8 -0.2
LZH pmax pmax
comp=Z,7µm,1.3s
LZH pmax pmax
comp=Z,14µm,4.8s
NGP Nagpur 42.99 310 *e*P P 18 19 38.2 -7.2
NGP IAmb IAmb 18 19 46.2
comp=Z,2µm,0.8s
NGP *e*S **S** **18 25 27.3 -1.2**
TOO Toolangi 43.03 141 P **P** **18 19 47.0 +1.6**
TOO Toolangi 43.03 141 P **P** **18 19 47.0 +1.6**
TOO pmax pmax
comp=Z,351nm,1.1s
TOO Toolangi 43.03 141⇑P **P** **18 19 47.1 +1.6**
JTU Tsushima 43.22 20 P **P** **18 19 47.0 +0.2**
JTU Tsushima 43.22 20 P **P** **18 19 47.0 +0.2**
JTU Tsushima 43.22 20⇓P **P** **18 19 47.1 +0.4**
HNS HongShan 43.27 2⇓P **P** **18 19 47.7 +0.6**
HNS PcP **PcP** **18 21 23.5 +1.3**
HNS pP **pP** **18 21 33.7 +1.2**
HNS sP **sP** **18 22 37.8 -2.1**
HNS ScP **ScP** **18 24 18.4 +1.6**
HNS S **S** **18 25 31.4 -0.4**
HNS ScS **ScS** **18 28 39.8 0.0**
HNS pmax pmax
comp=Z,3µm,1.0s
CBIJ Chichi jima 43.36 39 P **P** **18 19 46.2 -1.8**
JCJ Chichijima 43.36 39 IAmb IAmb 18 19 49.4
comp=Z,2µm,0.9s
JCJ Chichijima 43.36 39 P **P** **18 19 46.1 -1.9**
JCJ Chichijima 43.36 39⇓P **P** **18 19 46.0 -1.9**
ARMA Armidale 43.54 129 P **P** **18 19 51.6 +2.0**
ARMA IAmb IAmb 18 19 53.2
comp=Z,763nm,0.8s
ARMA Armidale 43.54 129 P **P** **18 19 51.5 +2.0**
ARMA Armidale 43.54 129⇓P **P** **18 19 51.6 +2.0**
TIY Taiyuan 43.56 359 P **P** **18 19 50.2 +0.7**
TIY pP **pP** **18 21 38.9 +4.0**
TIY sP **sP** **18 22 42.8 +0.4**
TIY S **S** **18 25 35.2 -0.9**
TIY pmax pmax
comp=Z,4µm,0.7s
CAN Canberra 44.02 136 IAmb IAmb 18 19 55.5
comp=Z,778nm,1.0s
CAN Canberra 44.02 136 P **P** **18 19 53.8 +0.7**
CAN Canberra 44.02 136⇓P **P** **18 19 53.9 +0.8**
JMN Monobe 44.21 25 P **P** **18 19 55.0 +0.5**
JMN Monobe 44.21 25 P **P** **18 19 55.2 +0.7**
JMN Monobe 44.21 25⇓P **P** **18 19 55.2 +0.7**
TJN Taejon 44.30 17 P **P** **18 19 55.5 +0.5**
MGCD Mangrove Creek 44.43 132 P **P** **18 19 57.8 +1.6**
SYDH Sydney Hard Ro 44.44 133 P **P** **18 19 57.7 +1.5**
RIV Riverview 44.77 133 P **P** **18 19 59.9 +1.1**
RIV Riverview 44.77 133⇓P **P** **18 20 00.3 +1.5**
JHS Saijyo 45.00 23 P **P** **18 20 01.2 +0.6**
MILA Mila 45.08 138⇑P **P** **18 20 02.1 +0.9**
INCN Inchon 45.13 15 P **P** **18 20 01.8 +0.3**
INCN IAmb IAmb 18 20 03.3
comp=Z,1µm,0.8s
INCN Inchon 45.13 15 P **P** **18 20 01.9 +0.4**
INCN Inchon 45.13 15 P **P** **18 20 01.8 +0.4**
INCN pmax pmax
comp=Z,1µm,0.8s
INCN Inchon 45.13 15 P **P** **18 20 01.9 +0.4**
INCN P **P** **18 20 01.9 +0.4**
INCN Inchon 45.13 15⇓P **P** **18 20 02.0 +0.5**
INCN Inchon 45.13 15 P **P** **18 20 01.9 +0.4**

Code	Station	Dist	Az	Phase	ID	Time	Res
INCN				PcP	PcP	18 21 29.6	+0.9
INCN				x	x	18 21 49.2	
INCN				sP	sP	18 22 53.5	-1.6
INCN				ScP	ScP	18 24 26.8	+2.1
AIS	Amsterdam Isla	45.15	220	P	P	18 20 03.6	+2.0
AIS				IAmb	IAmb	18 20 05.2	
	comp=Z,3µm,1.5s						
AIS	Amsterdam Isla	45.15	220	⇑P	P	18 20 03.8	+2.2
BRCI	Bahraich	45.21	319	eP	P	18 19 53.1	-9.1
BRCI				IAmb	IAmb	18 20 03.8	
	comp=Z,2µm,0.6s						
BRCI				eS	S	18 25 58.1	-1.4
JAD	Aida	45.38	25	P	P	18 20 03.5	+0.2
GOMU	GeErMu	45.41	339	P	P	18 20 05.4	+1.4
GOMU				S	S	18 26 05.0	+2.3
GOMU				SS	SS	18 29 42.1	+4.5
GOMU				pmax	pmax		
	comp=Z,2µm,0.7s						
BHPL	Bhopal	45.42	311	eP	P	18 19 54.6	-9.3
BHPL				IAmb	IAmb	18 20 04.5	
	comp=Z,1µm,1.1s						
BHPL				eS	S	18 26 01.1	-1.5
KSAR	Wonju Array Be	45.44	17	P	P	18 20 05.0	+1.3
KSAR	Wonju Array Be	45.44	17	P	P	18 20 05.0	+1.3
DL2	Dalian	45.44	9	⇓iP	P	18 20 04.0	+0.2
DL2				PcP	PcP	18 21 30.8	+1.1
DL2				pP	pP	18 21 50.3	-0.3
DL2				PP	PP	18 22 06.2	+5.6
DL2				sP	sP	18 22 54.6	-2.9
DL2				ScP	ScP	18 24 26.4	+0.6
DL2				PcS	PcS	18 25 24.1	-0.8
DL2				S	S	18 25 59.6	-2.7
DL2				ScS	ScS	18 28 53.4	-0.5
DL2				SS	SS	18 29 35.9	-1.4
DL2				pmax	pmax		
	comp=Z,4µm,0.8s						
DL2				pmax	pmax		
	comp=Z,10µm,3.8s						
KSRS	Korea Array	45.46	17	P	P	18 20 04.9	+1.0
	comp=Z,3µm,0.7s,baz=203,slow=7.7,SNR=4114						
KSRS				PcP	PcP	18 21 31.1	+1.3
	comp=Z,330nm,0.8s,baz=190,slow=3.3,SNR=8.8						
KSRS				sP	sP	18 22 56.2	-1.4
	comp=Z,30nm,0.9s,baz=210,slow=7.0,SNR=1.5						
KSRS				ScP	ScP	18 24 27.3	+1.4
	comp=Z,44nm,0.7s,baz=200,slow=3.9,SNR=6.7						
KSRS				S	S	18 26 03.8	+1.2
	comp=Z,3.0nm,0.7s,baz=53,slow=39,SNR=1.2						
KSRS				PKPPKP	P'P'df	18 51 20.8	-0.7
	comp=Z,3.8nm,1.1s,baz=20,slow=2.0,SNR=4.4						
KSRS				P4KPbc		18 57 40.9	
	comp=Z,2.6nm,0.7s,baz=220,slow=4.7,SNR=6.8						
	comp=Z,3µm,0.7s						
POO	Poona	45.77	303	eP	P	18 19 59.7	-7.0
POO				IAML		18 20 07.3	
	comp=Z,708nm,0.7s						
POO				eS	S	18 26 05.8	-1.8
BJT	Baijiatuau	45.95	3	P	P	18 20 08.2	+0.6
BJI2	Beijing	45.95	3	P	P	18 20 08.6	+1.0
BJI2				PcP	PcP	18 21 33.1	+1.6
BJI2				pP	pP	18 21 57.3	+2.5
BJI2				ScP	ScP	18 24 28.9	+1.0
BJI2				S	S	18 26 09.2	-0.1
BJI2				sS	sS	18 29 25.1	+1.4
BJI2				pmax	pmax		
	comp=Z,2µm,0.6s						
BJI2				pmax	pmax		
	comp=Z,4µm,3.9s						
JIE	Ise	46.02	27	P	P	18 20 08.6	+0.4
JWT	Wachi	46.19	25	P	P	18 20 10.0	+0.5
TATA	Tatamba Isabel	46.38	96	P	P	18 20 10.6	-0.7
SAVO	Savo Central	46.39	97	P	P	18 20 11.0	-0.4
JHJ2	Mitsune	46.50	31	P	P	18 20 10.4	-1.5
JHJ2	Mitsune	46.50	31	P	P	18 20 10.1	-1.8
JHJ2	Mitsune	46.50	31	⇓P	P	18 20 10.1	-1.8
HNR	Honiara	46.52	97	P	P	18 20 12.5	+0.1
HNR	Honiara	46.52	97	P	P	18 20 12.5	+0.1
HNR	Honiara	46.52	97	P	P	18 20 12.5	+0.1
HNR				pmax	pmax		
	comp=Z,305nm,0.8s						
HNR	Honiara	46.52	97	⇓P	P	18 20 12.5	+0.1
BTO2	Baotou	46.68	357	eP	P	18 20 14.4	+1.2
BTO2				pP	pP	18 22 02.6	+1.6
BTO2				S	S	18 26 22.2	+2.5
GLAD	Gladstone	46.69	143	P	P	18 20 14.5	+1.3
NGOA	Tingoa Renbel	46.69	100	P	P	18 20 13.5	-0.2
HHC	Hu-ho-hao-te	46.71	358	⇓iP	P	18 20 14.6	+1.1
HHC				pP	pP	18 22 00.9	-0.4
HHC				sP	sP	18 23 08.3	+0.4
HHC				S	S	18 26 23.2	+3.1
HHC				pmax	pmax		
	comp=Z,3µm,0.9s						
HHC				pmax	pmax		
	comp=Z,2µm,3.8s						
PATS	Pohnpei	46.91	75	P	P	18 20 15.9	+0.6
PATS				IAmb	IAmb	18 21 38.5	
	comp=Z,2µm,1.0s						
PATS	Pohnpei	46.91	75	P	P	18 20 16.3	+1.0
JSG	Sagara	46.94	29	P	P	18 20 15.6	+0.5
JSG	Sagara	46.94	29	P	P	18 20 15.6	+0.5
JSG	Sagara	46.94	29	⇓P	P	18 20 15.6	+0.5
INU	Inuyama	46.95	27	P	P	18 20 15.1	-0.2
INU	Inuyama	46.95	27	P	P	18 20 15.0	-0.2
INU	Inuyama	46.95	27	⇓P	P	18 20 15.1	-0.2
GTA2	Gaotai	46.98	346	P	P	18 20 17.6	+2.1
GTA2				PcP	PcP	18 21 37.1	+1.7
GTA2				pP	pP	18 22 07.0	+3.5
GTA2				sP	sP	18 23 12.5	+2.4
GTA2				ScP	ScP	18 24 33.6	+1.1
GTA2				S	S	18 26 24.8	+0.9
GTA2				ScS	ScS	18 29 03.2	-1.2
GTA2				sS	sS	18 29 42.0	+2.7
GTA2				pmax	pmax		
	comp=Z,3µm,0.9s						
GTA2				pmax	pmax		
	comp=Z,9µm,7.6s						
MOO	Moorlands	47.14	146	P	P	18 20 18.0	+1.4
JGF	Kuroka	47.32	27	IAmb	IAmb	18 20 18.4	
	comp=Z,2µm,0.7s						
JGF	Kuroka	47.32	27	P	P	18 20 17.4	-0.6
JGF	Kuroka	47.32	27	P	P	18 20 17.6	-0.4
JGF	Kuroka	47.32	27	⇓P	P	18 20 17.6	-0.4
PTH	Pithoragarh	47.48	320	eP	P	18 20 12.5	-7.1
PTH				IAmb	IAmb	18 20 19.9	
	comp=Z,1µm,1.0s						
PTH				eS	S	18 26 31.5	+0.2
TAU	Tasmania Unive	47.52	146	P	P	18 20 20.5	+1.1
TAU	Tasmania Unive	47.52	146	P	P	18 20 20.3	+0.9
TAU	Tasmania Unive	47.52	146	P	P	18 20 20.5	+1.1
TAU				pmax	pmax		
	comp=Z,547nm,1.1s						
TAU	Tasmania Unive	47.52	146	⇑P	P	18 20 20.5	+1.1
JGN	Niukaw	47.81	27	P	P	18 20 21.3	-0.5
JOD2	Odawara 2	47.85	29	P	P	18 20 20.9	-1.0
JRY	Ryogami san	48.37	28	P	P	18 20 25.3	-0.5
HURO	Huro Makira	48.46	99	P	P	18 20 26.2	-0.7
MAJO	Matsushiro	48.48	27	P	P	18 20 26.1	-0.6
MAJO	Matsushiro	48.48	27	P	P	18 20 26.0	-0.6
MAJO	Matsushiro	48.48	27	P	P	18 20 26.1	-0.6
MAJO				pmax	pmax		
	comp=Z,3µm,0.8s						
MAJO	Matsushiro	48.48	27	⇓P	P	18 20 26.0	-0.7
MAT	Matsushiro	48.48	27	P	P	18 20 26.0	-0.7
MJAR	Matsushiro Arr	48.48	27	P	P	18 20 26.1	-0.6
	comp=Z,3µm,0.7s,baz=202,slow=8.5,SNR=4835						
MJAR				PcP	PcP	18 21 41.7	+0.9
	comp=Z,443nm,0.8s,baz=200,slow=3.9,SNR=6.4						
MJAR				pP	pP	18 22 15.1	-0.6
	comp=Z,208nm,0.9s,baz=202,slow=7.8,SNR=3.6						
MJAR				ScP	ScP	18 24 39.8	+1.0
	comp=Z,71nm,0.8s,baz=205,slow=4.3,SNR=6.2						
MJAR				S	S	18 26 39.9	-4.5
	comp=Z,39nm,1.0s,baz=114,slow=15,SNR=6.6						
MJAR				PKPPKP	P'P'df	18 51 21.7	+3.6
	comp=Z,5.9nm,1.1s,baz=5.5,slow=3.4,SNR=4.3						
MJAR				P4KPbc		18 57 53.9	
	comp=Z,1.7nm,0.2s,baz=198,slow=4.0,SNR=30						
	comp=Z,3µm,0.7s						
MJAR	Matsushiro Arr	48.48	27	P	P	18 20 26.0	-0.6
ASOR	Ausora	48.53	317	eP	P	18 20 20.2	-7.0
ASOR				IAmb	IAmb	18 20 30.8	
	comp=N,962nm,0.5s						
ASOR				eS	S	18 26 46.7	+1.4

Code	Station	Dist	Az	Phase	ID	Time	Res
JOSI	Joshimath	48.55	321	eP	P	18 20 21.1	-6.4
JOSI				eS	S	18 26 44.8	-1.2
SNY	Shenyang	48.62	10	⇓P	P	18 20 27.3	-0.2
SNY				S	S	18 26 44.6	-1.4
SNY				pmax	pmax		
	comp=N,4µm,0.7s						
SNY				pmax	pmax		
	comp=N,9µm,3.8s						
NDI	New Delhi	48.86	317	eP	P	18 20 23.1	-6.4
NDI				IAmb	IAmb	18 20 29.1	
	comp=Z,971nm,0.4s						
NDI				eS	S	18 26 51.0	+1.1
NPLP	NPLP New Delhi	48.87	317	eP	P	18 20 22.5	-7.0
NPLP				IAmb	IAmb	18 20 29.2	
	comp=Z,4µm,0.9s						
NPLP				eS	S	18 26 50.3	+0.4
KUDL	Kundal	49.02	316	eP	P	18 20 23.6	-7.1
KUDL				IAmb	IAmb	18 20 30.4	
	comp=Z,3µm,0.9s						
KUDL				eS	S	18 26 51.4	-0.6
JYT	Yasato	49.16	29	P	P	18 20 29.7	-1.9
AJM	Ajmer	49.33	313	eP	P	18 20 27.0	-6.1
AJM				IAmb	IAmb	18 20 33.5	
	comp=Z,1µm,0.8s						
AJM				eS	S	18 26 55.6	-0.7
DDI	Dehra Dun	49.36	319	eP	P	18 20 26.1	-7.1
DDI				IAmb	IAmb	18 20 33.4	
	comp=Z,1µm,0.8s						
DDI				eS	S	18 26 57.0	+0.3
XLT	XiLinHaoTe	49.81	3	eP	P	18 20 37.3	+1.0
XLT				PcP	PcP	18 21 46.8	+1.1
XLT				pP	pP	18 22 28.7	+2.4
XLT				PP	PP	18 22 43.2	+3.3
XLT				sP	sP	18 23 32.0	-0.2
XLT				ScP	ScP	18 24 45.8	+1.4
XLT				S	S	18 27 03.0	+0.7
XLT				sS	sS	18 30 25.7	+5.0
XLT				SS	SS	18 30 53.4	+7.1
XLT				pmax	pmax		
	comp=Z,4µm,1.0s						
LHI	Lord Howe Isla	49.84	127	⇓P	P	18 20 37.8	+1.1
LHI	Lord Howe Isla	49.84	127	P	P	18 20 37.8	+1.1
SMLA	Simla	50.46	319	eP	P	18 20 33.0	-8.2
SMLA				IAmb	IAmb	18 20 41.8	
	comp=Z,2µm,0.3s						
SMLA				eS	S	18 27 12.4	+1.0
JMM	Marumori	50.76	28	P	P	18 20 43.2	+0.1
JYA	Atsumi	50.84	27	P	P	18 20 44.3	+0.4
CN2	Changchun	50.88	12	⇓iP	P	18 20 43.6	-0.4
CN2				PcP	PcP	18 21 49.4	-0.2
CN2				pP	pP	18 22 35.1	+0.4
CN2				PP	PP	18 22 51.2	+1.9
CN2				sP	sP	18 23 36.8	-3.6
CN2				ScP	ScP	18 24 47.9	-1.0
CN2				S	S	18 27 10.7	-5.8
CN2				ScS	ScS	18 29 31.5	+0.8
CN2				pmax	pmax		
	comp=Z,5µm,2.0s						
PSTR	Posyet	51.10	17	d iP	P	18 20 45.9	+0.4
BHK	Bhakra	51.15	319	eP	P	18 20 36.5	-10
BHK				IAmb	IAmb	18 20 47.0	
	comp=Z,4µm,1.1s						
BHK				eS	S	18 27 15.1	-5.5
BKNR	BIKANER	51.23	313	eP	P	18 20 38.7	-8.1
BKNR				IAmb	IAmb	18 20 47.0	
	comp=Z,4µm,0.9s						
KOUNC	Koumac, New Ca	51.63	111	P	P	18 20 51.2	+1.3
KOUNC	Koumac, New Ca	51.63	111	⇓P	P	18 20 51.2	+1.3
DHRM	DHARAMSHALA	51.75	320	eP	P	18 20 42.6	-8.2
DHRM				IAML		18 20 51.4	
	comp=Z,8µm,0.7s						
DHRM				eS	S	18 27 29.5	+0.5
TLWR	Talawar	51.79	319	eP	P	18 20 43.5	-7.3
TLWR				IAmb	IAmb	18 20 51.4	
	comp=Z,6µm,1.4s						
TLWR				eS	S	18 27 30.9	+1.7
VLA	Vladivostok	51.84	17	c iP	P	18 20 51.7	+0.8
VLA				pmax	pmax		
	comp=Z,4µm,1.0s						
TSSA	Tissa	52.23	320	eP	P	18 20 47.6	-6.6
TSSA				IAmb	IAmb	18 20 54.4	
	comp=Z,6µm,1.3s						
TSSA				eS	S	18 27 33.5	-1.8
JOM	Ohasama	52.28	28	P	P	18 20 54.0	-0.1
ALCI	Alchi Leh	52.50	322	eP	P	18 20 48.8	-7.5
ALCI				IAmb	IAmb	18 20 56.8	
	comp=Z,971nm,0.6s						
ALCI				eS	S	18 27 38.5	-0.7
MDJ	Mudanjiang	52.59	15	P	P	18 20 56.3	+0.1
MDJ	Mudanjiang	52.59	15	P	P	18 20 56.4	+0.2
MDJ				pP	pP	18 22 48.3	+0.2
MDJ				sP	sP	18 23 51.1	-2.3
MDJ				PcS	PcS	18 25 56.1	+0.5
MDJ				S	S	18 27 37.1	-2.2
MDJ				ScS	ScS	18 29 46.9	+4.1
MDJ				SS	SS	18 31 29.2	-0.7
MDJ				pmax	pmax		
	comp=Z,4µm,0.8s						
MDJ				pmax	pmax		
	comp=Z,9µm,3.9s						
MDJ	Mudanjiang	52.59	15	P	P	18 20 56.7	+0.4
MDJ				PcP	PcP	18 21 53.9	-2.2
MDJ				pP	pP	18 22 47.9	-0.2
USRK	Ussuriysk Ar.	52.86	17	P	P	18 20 58.6	+0.5
	comp=Z,5µm,0.7s,baz=190,slow=5.1,SNR=2364						
USRK				pP	pP	18 22 50.0	-0.2
	comp=Z,525nm,1.1s,baz=191,slow=5.8,SNR=4.6						
USRK				sP	sP	18 23 55.1	-0.3
	comp=Z,22nm,0.7s,baz=210,slow=8.3,SNR=0.8						
USRK				ScP	ScP	18 24 58.5	+1.0
	comp=Z,48nm,0.8s,baz=224,slow=4.0,SNR=3.8						
USRK				P4KPbc		18 58 13.3	
	comp=Z,3.5nm,0.8s,baz=186,slow=5.8,SNR=4.1						
	comp=Z,5µm,0.7s						
BNX	BinXian	53.14	12	⇓P	P	18 21 00.0	-0.1
BNX				pP	pP	18 22 52.1	-0.2
BNX				PP	PP	18 23 18.7	+9.3
BNX				sP	sP	18 23 54.8	-2.7
BNX				S	S	18 27 44.2	-2.2
BNX				pmax	pmax		
	comp=Z,8µm,2.0s						
JTM	Tenmabayashi	53.24	26	P	P	18 21 00.9	0.0
JOT	Ohata	53.71	26	P	P	18 21 04.4	+0.2
DZM	Mont Dzumac	53.85	113	eP	P	18 21 05.4	-0.3
	comp=Z,1µm,1.2s						
DZM				epP	pP	18 22 53.8	-4.1
	comp=Z,854nm,24.9s						
DZM				eS	S	18 27 59.9	+3.0
	comp=Z,350nm,1.4s						
DZM	Mont Dzumac	53.85	113	IAmb	IAmb	18 21 08.1	
	comp=Z,2µm,1.8s						
DZM	Mont Dzumac	53.85	113	P	P	18 21 06.6	+0.9
DZM	Mont Dzumac	53.85	113	⇓P	P	18 21 06.8	+1.1
SRNI	Srinagar	53.87	320	eP	P	18 20 58.5	-7.3
SRNI				IAmb	IAmb	18 21 06.4	
	comp=Z,3µm,0.8s						
SRNI				eS	S	18 27 58.8	+1.9
ONTNC	Ouen Toro	53.90	113	P	P	18 21 06.8	+0.9
ONTNC	Ouen Toro	53.90	113	⇑P	P	18 21 06.2	+0.3
ULN	Ulaanbaatar	53.97	355	P	P	18 21 07.2	+1.1
ULN				IAmb	IAmb	18 21 08.2	
	comp=Z,3µm,0.8s						
ULN	Ulaanbaatar	53.97	355	P	P	18 21 07.2	+1.1
ULN				pmax	pmax		
	comp=Z,3µm,0.9s						
ULN	Ulaanbaatar	53.97	355	P	P	18 21 07.3	+1.2
ULN				P	P	18 21 07.3	+1.2
ULN	Ulaanbaatar	53.97	355	⇑P	P	18 21 06.4	+0.3
SONM	Songino Array	54.00	354	P	P	18 21 07.4	+1.1
	comp=Z,4µm,0.7s,baz=177,slow=8.6						
SONM				PcP	PcP	18 22 02.4	+0.8
	comp=Z,369nm,0.7s,baz=182,slow=4.2,SNR=10						
SONM				pP	pP	18 22 59.1	+0.1
	comp=Z,211nm,1.1s,baz=149,slow=21,SNR=2.0						
SONM				ScP	ScP	18 25 03.5	+0.9
	comp=Z,71nm,0.7s,baz=172,slow=4.9,SNR=3.7						
SONM				S	S	18 27 57.6	-0.3
	comp=Z,5.3nm,0.8s,baz=33,slow=21,SNR=1.2						
SONM				ScS	ScS	18 29 50.9	-2.2
	comp=Z,6.3nm,0.8s,baz=168,slow=7.4,SNR=1.7						
SONM				P4KPbc		18 58 18.2	
	comp=Z,12nm,0.7s,baz=177,slow=3.5,SNR=52						
	comp=Z,4µm,0.7s						
SONM	Songino Array	54.00	354	P	P	18 21 07.3	+1.1

Code	Station	Dist	Az	Phase	ID	Time	Res
YATNC	Mamie plateau,	54.26	113	P	P	18 21 10.1	+1.6
OUENC	Ouen Island, N	54.27	113	P	P	18 21 09.9	+1.4
JSH	Shimam	54.33	24	P	P	18 21 09.1	+0.7
NIL	Nilore	54.62	319	P	P	18 21 10.1	-0.7
NIL				IAmb	IAmb	18 21 11.2	
	comp=Z,2µm,0.6s						
NIL	Nilore	54.62	319	P	P	18 21 10.1	-0.7
NIL				pmax	pmax		
	comp=Z,2µm,0.6s						
NIL	Nilore	54.62	319	P	P	18 21 10.3	-0.5
WMQ	Urumqi	54.70	338	⇓P	P	18 21 12.7	+1.5
WMQ				PcP	PcP	18 22 05.9	+1.5
WMQ				pP	pP	18 23 07.3	+2.8
WMQ				sP	sP	18 24 08.6	-0.8
WMQ				ScP	ScP	18 25 06.4	+0.7
WMQ				S	S	18 28 08.2	+1.0
WMQ				ScS	ScS	18 29 56.4	-1.8
WMQ				sS	sS	18 31 34.4	+3.9
WMQ				pmax	pmax		
	comp=Z,5µm,0.7s						
WMQ				pmax	pmax		
	comp=Z,5µm,3.7s						
WMQ	Urumqi	54.70	338	P	P	18 21 12.6	+1.4
WMQ				PcP	PcP	18 22 05.3	+0.9
WMQ				pP	pP	18 23 03.2	-1.3
WMQ				x	x	18 23 07.1	
WMQ				ScP	ScP	18 25 06.2	+0.5
PINNC	Pines Island,	54.85	113	P	P	18 21 13.3	+0.8
PINNC	Pines Island,	54.85	113	P	P	18 21 13.4	+0.8
DVP	Devils Point	54.96	107	P	P	18 21 14.7	+1.3
JEW	Eniwo	55.08	25	P	P	18 21 14.0	+0.3
TEY	Ternei	55.08	20	⇓iP	P	18 21 14.0	+0.4
TEY				e		18 28 04.9	
TEY				pmax	pmax		
	comp=E,390nm,0.6s						
TEY				pmax	pmax		
	comp=N,170nm,0.8s						
TEY				pmax	pmax		
	comp=Z,510nm,0.7s						
TEY				pmax	pmax		
	comp=N,600nm,5.6s						
TEY				pmax	pmax		
	comp=E,200nm,6.4s						
JEM	Erimo	55.16	27	P	P	18 21 14.7	+0.4
JEM	Erimo	55.16	27	P	P	18 21 14.8	+0.5
RTV	Rentapao	55.19	107	P	P	18 21 16.1	+1.1
MARNC	Mare, Loyalty	55.23	112	P	P	18 21 16.2	+1.0
MARNC				IAmb	IAmb	18 21 17.8	
	comp=Z,4µm,1.4s						
MARNC	Mare, Loyalty	55.23	112	P	P	18 21 16.3	+1.0
MARNC	Mare, Loyalty	55.23	112	⇓P	P	18 21 16.5	+1.3
HIA	Hailar	55.41	5	P	P	18 21 15.9	0.0
HILR	Hailar Array B	55.70	5	P	P	18 21 18.5	+0.6
	comp=Z,3µm,0.5s,baz=185,slow=8.3,SNR=4469						
HILR				PcP	PcP	18 22 09.2	+1.1
	comp=Z,499nm,0.8s,baz=194,slow=3.4,SNR=5.4						
HILR				pP	pP	18 23 11.7	-0.1
	comp=Z,39nm,0.6s,baz=173,slow=13,SNR=1.3						
HILR				ScP	ScP	18 25 11.2	+1.3
	comp=Z,110nm,0.7s,baz=180,slow=5.8,SNR=5.5						
HILR				S	S	18 28 17.2	-2.5
	comp=Z,4.6nm,0.6s,baz=144,slow=48,SNR=1.9						
HILR				PKPPKP	P'P'df	18 51 10.4	+3.2
	comp=Z,7.7nm,1.0s,baz=338,slow=1.6,SNR=4.7						
HILR				P4KPbc		18 58 26.5	
	comp=Z,5.6nm,0.7s,baz=164,slow=5.8,SNR=7.1						
	comp=Z,3µm,0.5s						
PAF	Port-aux-Franc	56.22	212	P	P	18 21 22.6	+1.2
PAF				IAmb	IAmb	18 21 24.1	
	comp=Z,4µm,1.5s						
PAF	Port-aux-Franc	56.22	212	P	P	18 21 22.6	+1.2
PAF				pmax	pmax		
	comp=Z,4µm,1.5s						
PAF	Port-aux-Franc	56.22	212	⇑P	P	18 21 22.7	+1.2
WUS	Wushi	56.35	330	IAmb	IAmb	18 21 25.0	
	comp=Z,4µm,0.8s						
WUS	Wushi	56.35	330	P	P	18 21 23.9	+1.2
WUS				PcP	PcP	18 22 12.4	+1.4
WUS				sP	sP	18 24 19.3	-2.3
WUS				ScP	ScP	18 25 14.1	+0.9
NFK	Norfolk Island	56.49	121	⇓P	P	18 21 25.1	+1.3
NFK	Norfolk Island	56.49	121	P	P	18 21 23.7	0.0
ASAJ	Asahikawa	56.60	25	P	P	18 21 24.6	+0.4
KSH2	Kashi	56.82	326	P	P	18 21 26.4	+0.4
KSH2				sP	sP	18 24 21.4	-3.6
KSH2				PcS	PcS	18 26 12.8	-2.0
KSH2				S	S	18 28 30.7	-4.1
KSH2				ScS	ScS	18 30 09.9	-4.2
KSH2				sS	sS	18 31 57.1	-3.0
KSH2				pmax	pmax		
	comp=Z,4µm,0.8s						
JMP	Maruseppu	56.84	26	P	P	18 21 26.5	+0.7
ZAK	Zakamensk	56.86	353	eP	P	18 21 26.5	+0.5
ZAK				e		18 22 13.0	
ZAK				e		18 28 36.1	
ZAK				pmax	pmax		
	comp=Z,2µm,1.6s						
JWK2	Keihoku	57.29	24	P	P	18 21 29.6	+0.8
RER	Riviere de l'E	57.41	249	P	P	18 21 31.6	+1.3
RER	Riviere de l'E	57.41	249	⇑P	P	18 21 31.4	+1.1
KLR	Kul'dur	57.43	14	d iP	P	18 21 29.7	0.0
KLR				pmax	pmax		
	comp=Z,1µm,0.6s						
HEH	HeiHe	57.45	11	eP	P	18 21 30.2	+0.4
HEH				PcP	PcP	18 22 15.1	+0.2
HEH				pP	pP	18 23 25.6	+0.8
HEH				ScP	ScP	18 25 18.2	+0.6
HEH				S	S	18 28 40.4	-1.6
HEH				sS	sS	18 32 03.6	-4.4
HEH				SS	SS	18 32 53.4	+7.5
HEH				pmax	pmax		
	comp=Z,7µm,0.9s						
SHLS	Shalkode	57.70	331	d iP	P	18 21 32.1	+0.2
SHLS				eS	S	18 28 45.4	-0.3
SHLS				pmax	pmax		
	comp=Z,3µm,0.8s						
SHLS	Shalkode	57.70	331	⇓iP	P	18 21 32.1	+0.2
	comp=Z,3µm,0.8s						
SHLS				eS	S	18 28 45.5	-0.3
PRZ	Przheval'sk	57.71	330	IAmb	IAmb	18 21 35.1	
	comp=Z,4µm,1.1s						
PDGK	Podgornoye	57.82	332	P	P	18 21 33.2	+0.5
CIT	Chita	57.87	0	eP	P	18 21 33.8	+1.1
CIT				e		18 22 18.0	
CIT				e		18 23 29.6	
CIT				e		18 24 33.6	
CIT				pmax	pmax		
	comp=Z,8µm,1.8s						
UZB	Uzynbulak	57.90	331	d iP	P	18 21 34.5	+1.3
UZB				eS	S	18 28 50.3	+1.9
UZB	Uzynbulak	57.90	331	⇓iP	P	18 21 34.5	+1.3
UZB				eS	S	18 28 50.3	+1.9
KBL	Kabul	57.94	317	P	P	18 21 33.3	-0.5
KBL				IAmb	IAmb	18 21 34.5	
	comp=Z,1µm,0.8s						
KBL	Kabul	57.94	317	P	P	18 21 33.3	-0.5
KBL				pmax	pmax		
	comp=Z,1µm,0.8s						
KBL	Kabul	57.94	317	P	P	18 21 33.3	-0.5
	SNR=692						
KBL				P	P	18 21 33.3	-0.5
	SNR=692						
YUK	Yuzh-Kuril'sk	57.97	27	d iP	P	18 21 33.7	+0.2
YUK				i		18 22 18.2	
YUK				i *PP	pP	18 23 28.6	-0.1
YUK				e		18 23 51.3	
YUK				i S	S	18 28 49.1	+0.3
YUK				eSS	SS	18 32 53.3	-0.9
YUK				pmax	pmax		
	comp=N,1µm,0.7s						
YUK				pmax	pmax		
	comp=Z,7µm,0.7s						
YUK				pmax	pmax		
	comp=E,2µm,0.6s						
KNGR	Kungurtug, Tuv	58.03	348	d iP	P	18 21 35.2	+1.3
KNGR				pmax	pmax		
	comp=Z,1µm,1.0s						
TLY	Talaya	58.09	353	P	P	18 21 35.4	+1.3
TLY				IAmb	IAmb	18 21 36.7	
	comp=Z,1µm,0.8s						
TLY	Talaya	58.09	353	d iP	P	18 21 35.5	+1.3
TLY				pmax	pmax		
	comp=Z,2µm,1.1s						

TLY Talaya 58.09 353 P P 18 21 35.5 +1.3
TLY P P 18 21 35.5 +1.3
TLY Talaya 58.09 353 ⇓P P 18 21 35.5 +1.3
SATY Saty 58.14 331 *d i*P P 18 21 36.1 +1.3
SATY *e*S S 18 28 53.2 +1.9
SATY Saty 58.14 331 ⇓*i*P P 18 21 36.1 +1.3
SATY *e*S S 18 28 53.2 +1.9
H11S3 WAKE ISLAND Hy 58.20 64 P P 18 21 35.6 +0.3
baz=239,slow=6.4,SNR=13
H11S2 WAKE ISLAND Hy 58.22 64 P P 18 21 35.7 +0.3
baz=239,slow=6.4,SNR=28
H11S1 WAKE ISLAND Hy 58.22 64 P P 18 21 35.7 +0.3
baz=239,slow=6.4,SNR=20
KPKS Kokpek 58.31 331 *e*P P 18 21 36.8 +0.9
KPKS *e*S S 18 28 54.9 +1.6
KPKS Kokpek 58.31 331 *e*P P 18 21 36.9 +0.9
KPKS *e*S S 18 28 54.9 +1.6
MOY Mondy 58.44 351 *e*P P 18 21 37.7 +1.1
MOY *e* 18 22 20.4
MOY *e* 18 23 33.4
MOY pmax pmax
comp=Z,3µm,1.8s
IRK Irkutsk 58.57 354 ⇑*i*P P 18 21 36.7 -0.7
IRK *e* 18 23 33.4
IRK *e*S S 18 28 53.0 -3.2
IRK pmax pmax
comp=Z,3µm,2.2s
ULHL Ulahol 58.63 329 P P 18 21 39.1 +0.8
SNR=112
ULHL Ulahol 58.63 329 P P'P'df 18 50 43.7 -20
SNR=6.0
H11N1 WAKE ISLAND Hy 58.80 63 P P 18 21 40.0 +0.8
baz=255,slow=10,SNR=34
H11N2 WAKE ISLAND Hy 58.81 63 P P 18 21 40.1 +0.8
baz=255,slow=10,SNR=44
H11N3 WAKE ISLAND Hy 58.81 63 P P 18 21 40.2 +0.9
baz=255,slow=10,SNR=58
ZSN Zaisan 58.83 338 *d i*P P 18 21 40.3 +1.1
ZSN *e*S S 18 29 01.6 +2.0
ZSN Zaisan 58.83 338 ⇓*i*P P 18 21 40.4 +1.1
ZSN *e*S S 18 29 01.6 +2.0
TNSS Tian-Shan 58.84 330 *e*P P 18 21 40.7 +0.8
TNSS Tian-Shan 58.84 330 *e*P P 18 21 40.8 +0.8
MDOK Medeo 58.88 330 *e*P P 18 21 40.8 +1.0
MDOK *e*S S 18 29 02.3 +1.6
MDOK Medeo 58.88 330 *e*P P 18 21 40.9 +1.0
MDOK *e*S S 18 29 02.4 +1.6
BOOM Boomskoye usch 58.96 329 IAmb IAmb 18 21 42.5
comp=Z,3µm,1.1s
KNDC Almaty 58.97 330 P P 18 21 40.9 +0.6
YSS Yuzhno-Sakhali 58.97 23 P P 18 21 40.9 +0.8
YSS Yuzhno-Sakhali 58.97 23 P P 18 21 40.7 +0.6
YSS Yuzhno-Sakhali 58.97 23 κ*e*P P 18 21 40.9 +0.8
YSS *e**PP pP 18 23 34.0 -2.0
YSS *e**SP sP 18 24 37.3 -2.8
YSS *e*S S 18 29 00.7 -0.6
YSS *e* 18 30 30.0
YSS pmax pmax
comp=Z,10µm,0.5s
YSS pmax pmax
comp=Z,3µm,2.2s
YSS pmax pmax
comp=N,4µm,2.6s
YSS pmax pmax
comp=E,3µm,2.4s
YSS smax smax
comp=N,2µm,6.6s
YSS smax smax
comp=E,3µm,6.4s
YSS Yuzhno-Sakhali 58.97 23 ⇓P P 18 21 40.8 +0.6
AAA Alma-Ata 58.98 330 *d i*P P 18 21 41.5 +1.1
AAA pmax pmax
comp=Z,3µm,1.1s
AAA Alma-Ata 58.98 330 ⇓*i*P P 18 21 41.5 +1.1
comp=Z,3µm,1.1s
DRK Karamyk 59.22 324 IAmb IAmb 18 21 46.9
comp=Z,2µm,0.6s
MK31 Makanchi Array 59.30 336 *d i*P P 18 21 43.3 +0.9
MKAR Makanchi Array 59.30 336 P P 18 21 43.1 +0.7
comp=Z,3µm,0.7s,baz=148,slow=7.4
MKAR PcP PcP 18 22 23.0 +0.5
comp=Z,368nm,0.8s,baz=152,slow=3.3,SNR=4.5
MKAR pP pP 18 23 38.7 +0.3
comp=Z,194nm,0.9s,baz=144,slow=8.5,SNR=2.8
MKAR ScP ScP 18 25 26.5 +0.6
comp=Z,81nm,0.6s,baz=147,slow=5.6,SNR=3.6
MKAR S S 18 29 04.7 -0.8
comp=Z,49nm,0.9s,baz=152,slow=13,SNR=6.5
MKAR ScS ScS 18 30 27.9 -4.1
comp=Z,9.5nm,0.8s,baz=112,slow=11,SNR=1.4
MKAR PKKP PKKPdf 18 42 46.0 -0.1
comp=Z,0.9nm,0.6s,baz=315,slow=0.5,SNR=2.0
MKAR PKPPKP P'P'df 18 51 04.8 +2.4
comp=Z,9.4nm,0.9s,baz=0.0,slow=2.9,SNR=9.1
MKAR P4KPbc 18 58 42.6
comp=Z,6.1nm,0.9s,baz=142,slow=5.8,SNR=31
comp=Z,3µm,0.7s
MKAR Makanchi Array 59.30 336 P P 18 21 43.2 +0.9
MKAR Makanchi Array 59.30 336 *i* P P 18 21 43.0 +0.7
MKAR pmax pmax
comp=Z,3µm,0.6s
NGCH Negor - Chabah 59.35 304 P P 18 21 43.9 +0.8
SNR=103
MAKZ Makanchi 59.44 336 P P 18 21 43.7 +0.4
MAKZ IAmb IAmb 18 21 45.0
comp=Z,1µm,0.7s
MAKZ Makanchi 59.44 336 P P 18 21 43.7 +0.4
MAKZ pmax pmax
comp=Z,1µm,0.7s
MAKZ Makanchi 59.44 336 ⇓P P 18 21 43.7 +0.4
TKM2 Tokmak 2 59.45 329 P P 18 21 44.2 +0.5
SNR=2764
TKM2 Tokmak 2 59.45 329 P P'P'df 18 50 39.8 -23
SNR=30
UCH Uchtor 59.53 327 P P 18 21 45.5 +1.0
SNR=92
UCH Uchtor 59.53 327 P P'P'df 18 50 40.2 -23
SNR=9.4
JLN Jalan Bani Buh 59.56 300 P P 18 21 44.3 -0.3
SNR=221
JLN P P 18 21 44.3 -0.3
SNR=221
TDK Taldyqorghan 59.59 332 *d i*P P 18 21 45.4 +1.1
TDK pmax pmax
comp=Z,4µm,0.7s
TDK Taldyqorghan 59.59 332 ⇓*i*P P 18 21 45.4 +1.1
comp=Z,4µm,0.7s
KBK Karagaybulak 59.60 328 P P 18 21 45.8 +1.1
SNR=4178
KBK Karagaybulak 59.60 328 P P'P'df 18 50 39.7 -23
SNR=11
ARSB Arslanbob 59.75 326 IAmb IAmb 18 21 47.8
comp=Z,5µm,1.0s
KUU Kurty 59.77 330 *e*P P 18 21 46.1 +0.6
KUU Kurty 59.77 330 *e*P P 18 21 46.1 +0.6
KUR Kuril'sk 59.81 28 *d i*P P 18 21 44.9 -0.8
KUR *i* 18 23 41.5
KUR *i* S S 18 29 09.9 -1.9
KUR pmax pmax
comp=Z,24µm,1.5s
KUR pmax pmax
comp=Z,18µm,1.2s
KUR pmax pmax
comp=N,4µm,1.1s
KUR pmax pmax
comp=E,3µm,1.1s
AAK Ala-Archa 59.83 328 PKPPKP 18 51 03.6
comp=E,5.0nm,0.9s,baz=247,slow=2.2,SNR=5.3
AAK P4KPbc 18 58 47.1
comp=E,16nm,0.8s,baz=144,slow=5.6,SNR=45
AAK Ala-Archa 59.83 328 P P 18 21 47.2 +1.2
SNR=3079
AAK Ala-Archa 59.83 328 P P'P'df 18 50 38.6 -24
SNR=6.8
AAK Ala-Archa 59.83 328 P P 18 21 47.3 +1.2
AAK IAmb IAmb 18 21 48.5
comp=Z,3µm,1.0s
AAK Ala-Archa 59.83 328 *i* P P 18 21 47.3 +1.2
SNR=105
AAK Ala-Archa 59.83 328 P P 18 21 47.3 +1.2
AAK pmax pmax
comp=Z,3µm,1.0s
AAK Ala-Archa 59.83 328 P P 18 21 47.4 +1.3
AAK P P 18 21 47.4 +1.3
AAK Ala-Archa 59.83 328 ⇓P P 18 21 47.3 +1.2

AAK Ala-Archa 59.83 328 P P 18 21 47.3 +1.2
AAK PcP PcP 18 22 26.0 +1.1
DGZ Jazzator, Alta 59.86 341 *d i*P P 18 21 47.7 +1.5
DGZ pmax pmax
comp=Z,6µm,0.7s
FRU1 Bishkek 59.87 328 IAmb IAmb 18 21 48.6
comp=Z,2µm,1.1s
CHMS Chumysh 59.94 328 P P 18 21 47.2 +0.5
SNR=19
CHMS Chumysh 59.94 328 P P'P'df 18 50 37.2 -25
SNR=12
GRNR Gornyy 60.09 17 ⇓*i*P P 18 21 48.3 +0.8
GRNR *e* 18 23 44.0
GRNR *e*S S 18 29 14.9 -0.2
GRNR pmax pmax
comp=N,430nm,1.0s
GRNR pmax pmax
comp=E,90nm,1.0s
GRNR pmax pmax
comp=Z,960nm,0.8s
GRNR smax smax
comp=N,4.0nm,0.8s
WBK Wadi Bani Khal 60.10 300 P P 18 21 48.3 +0.1
SNR=161
CASY Casey 60.13 181 P P 18 21 47.4 0.0
CASY Casey 60.13 181 ⇑P P 18 21 47.5 0.0
BTK Batken 60.17 323 IAmb IAmb 18 21 50.6
comp=Z,4µm,1.2s
TARA Tarawa 60.19 85 P P 18 21 50.4 +1.5
EKS2 Erkin-Say 60.22 327 P P 18 21 50.0 +1.3
SNR=160
EKS2 Erkin-Say 60.22 327 P P'P'df 18 50 36.5 -25
SNR=13
USP Ospenovka 60.26 328 P P 18 21 49.6 +0.7
SNR=66
CHGR Chuyangaron 60.30 321 IAmb IAmb 18 21 49.7
comp=Z,3µm,0.8s
SHAA Shahritus 60.31 320 P P 18 21 47.5 -1.8
SHAA IAmb IAmb 18 21 48.2
comp=Z,2µm,0.7s
SGDS Sogindy 60.32 329 *e*P P 18 21 49.9 +0.6
MHTO MHTO 60.40 298 P P 18 21 49.7 -0.4
SNR=354
MHTO P P 18 21 49.7 -0.4
SNR=354
DQM DQM 60.42 297 P P 18 21 50.4 +0.1
SNR=73
UGL Uglegorsk 60.47 21 ⇓*i*P P 18 21 51.1 +1.2
UGL *e* 18 22 28.3
UGL *e* 18 23 47.1
UGL *e*S S 18 29 17.0 -2.8
UGL pmax pmax
comp=Z,12µm,2.4s
UGL pmax pmax
comp=E,3µm,0.7s
UGL pmax pmax
comp=N,2µm,0.6s
UGL pmax pmax
comp=Z,5µm,1.1s
UGL smax smax
comp=N,400nm,0.9s
UGL smax smax
comp=E,900nm,0.9s
UGL smax smax
comp=E,7µm,5.3s
UGL smax smax
comp=N,3µm,7.2s
JMDO Jabal Madar 60.76 300 P P 18 21 52.4 -0.1
SNR=221
JMDO P P 18 21 52.4 -0.1
SNR=221
ZEA Zeya 60.77 10 *e*P P 18 21 52.8 +0.9
ZEA *e**PP pP 18 23 49.1 +0.3
ZEA *e**SP sP 18 24 49.8 -2.8
ZEA *e* 18 25 52.8
ZEA *e*S S 18 29 22.7 -0.7
ZEA *e* 18 36 46.4
ZEA pmax pmax
comp=E,1µm,1.4s
ZEA pmax pmax
comp=N,2µm,1.6s
ZEA pmax pmax
comp=Z,6µm,1.8s
ZEA pmax pmax
comp=E,590nm,0.8s
ZEA pmax pmax
comp=N,1µm,1.0s
ZEA pmax pmax
comp=Z,3µm,1.0s
ZEA smax smax
comp=E,1µm,7.5s
ZEA smax smax
comp=N,2µm,7.6s
PYZ Puysegur Point 60.94 140 P P 18 21 54.3 +1.1
PYZ Puysegur Point 60.94 140 P P 18 21 54.3 +1.1
PYZ S S 18 29 28.1 +2.1
DCZ Deep Cove 60.96 139 P P 18 21 54.0 +0.6
DCZ Deep Cove 60.96 139 P P 18 21 54.3 +1.0
DCZ ScP ScP 18 25 31.8 -1.6
DCZ S S 18 29 27.8 +1.6
SMDO Samad 61.06 300 P P 18 21 54.6 0.0
SNR=259
SMDO P P 18 21 54.6 0.0
SNR=259
BIDO Bidbid 61.16 301 P P 18 21 55.4 +0.3
SNR=572
MSZ Milford Sound 61.17 138 P P 18 21 56.2 +1.6
MSZ ScP ScP 18 25 32.9 -1.4
MSZ S S 18 29 30.7 +2.0
JCZ Jackson Bay 61.52 137 P P 18 21 57.8 +0.6
JCZ Jackson Bay 61.52 137 P P 18 21 58.0 +0.8
JCZ S S 18 29 33.6 +0.2
SHAO Shalim 61.54 294 *i* P P 18 21 57.6 0.0
SNR=132
SHAO Shalim 61.54 294 P P 18 21 57.8 +0.2
SNR=97
SHAO P P 18 21 57.8 +0.2
SNR=97
MLZ Mavora Lakes 61.55 139 P P 18 21 57.6 +0.4
BSY Bisya 61.68 300 P P 18 21 58.6 +0.1
SNR=238
DZA Taraz 61.71 326 *e*P P 18 21 58.7 +0.4
DZA Taraz 61.71 326 *e*P P 18 21 58.8 +0.4
HOQ Hoqain 61.88 301 P P 18 21 60.0 +0.2
SNR=323
HOQ P P 18 21 60.0 +0.2
SNR=323
IUG Iuzhnay 61.96 325 *d i*P P 18 22 01.1 +1.1
IUG pmax pmax
comp=Z,3µm,0.7s
IUG Iuzhnay 61.96 325 ⇓*i*P P 18 22 01.2 +1.2
comp=Z,3µm,0.7s
FOZ Fox Glacier 62.04 136 P P 18 22 00.1 -0.3
DMTO DMTO 62.06 294 P P 18 22 01.0 0.0
SNR=116
DMTO P P 18 22 01.0 0.0
SNR=116
TYV Tymovskoe 62.17 21 *e*P P 18 22 02.3 +1.3
TYV *e*S S 18 29 41.9 +1.2
TYV pmax pmax
comp=Z,6µm,2.6s
TYV pmax pmax
comp=Z,1µm,1.6s
TYV smax smax
comp=N,21nm,1.7s
TYV smax smax
comp=E,30nm,1.7s
KK31 Karatay Array 62.30 326 P P 18 22 02.2 +0.1
KK31 Karatay Array 62.30 326 P P 18 22 02.2 +0.1
KK31 pmax pmax
comp=Z,635nm,0.8s
KKAR Karatay Array 62.30 326 P P 18 22 02.3 +0.2
KKAR Karatay Array 62.30 326 P P 18 22 02.3 +0.2
CHM Chimkent 62.31 325 *d i*P P 18 22 03.4 +1.2
CHM pmax pmax
comp=Z,1µm,0.6s
CHM Chimkent 62.31 325 ⇓*i*P P 18 22 03.5 +1.2
comp=Z,1µm,0.6s
WVZ Waitaha Valley 62.52 136 P P 18 22 03.5 0.0
WVZ PKiKP PKiKP 18 28 46.7 +2.4
OUZ Omahuta 62.54 127 P P 18 22 05.3 +1.5
OUZ Omahuta 62.54 127 ⇓P P 18 22 05.3 +1.5
OUZ Omahuta 62.54 127 P P 18 22 05.8 +2.1
HRA Herat 62.60 314 P P 18 22 03.4 -1.1
BRLS Borolday 62.63 326 *e*P P 18 22 04.3 +0.1

BRLS Borolday 62.63 326 *e*P P 18 22 04.3 +0.1
SYZ Scrubby Hill 62.65 140 P P 18 22 04.2 -0.1
RBK Rabkut 62.68 293 P P 18 22 04.8 -0.2
SNR=98
SOHO SOHO 62.74 301 *i* P P 18 22 04.8 -0.5
SNR=68
SOHO SOHO 62.74 301 P P 18 22 05.0 -0.2
SOHO P P 18 22 05.0 -0.2
DSZ Denniston Nort 62.86 134 P P 18 22 05.7 -0.1
DSZ PcP PcP 18 22 36.7 -0.6
INZ Inchbonnie 62.90 135 P P 18 22 05.6 -0.4
RPZ Rata Peaks 62.95 136 P P 18 22 06.4 +0.1
SEM Semipalatinsk 63.01 337 *e*P P 18 22 09.4 +2.7
SEM pmax pmax
comp=Z,2µm,0.9s
SEM Semipalatinsk 63.01 337 *e*P P 18 22 09.5 +2.7
comp=Z,2µm,0.9s
DOK Doka 63.07 294 P P 18 22 06.9 -0.6
SNR=194
DOK P P 18 22 06.9 -0.6
SNR=194
ODZ Otahua Downs 63.11 138 P P 18 22 07.1 -0.2
ODZ Otahua Downs 63.11 138 ⇑P P 18 22 07.1 -0.2
QRZ Quartz Range 63.12 133 P P 18 22 08.2 +0.8
QRZ Quartz Range 63.12 133 P P 18 22 08.3 +0.9
QRZ sP sP 18 25 12.1 +3.0
QRZ ScS ScS 18 31 05.7 +4.3
WCZ Waipu Caves 63.29 127 P P 18 22 10.3 +1.7
UOSS Minazif 63.31 302 P P 18 22 08.2 -0.7
UOSS IAmb IAmb 18 22 09.6
comp=Z,3µm,1.5s
UOSS Minazif 63.31 302 *i* P P 18 22 08.2 -0.7
SNR=70
UOSS Minazif 63.31 302 P P 18 22 08.2 -0.7
UOSS P P 18 22 08.2 -0.7
UOSS Minazif 63.31 302 ⇓P P 18 22 08.1 -0.8
HATD Hatta, Dubai 63.33 302 *i* P P 18 22 09.0 0.0
SNR=440
HATD Hatta, Dubai 63.33 302 P P 18 22 09.1 0.0
SNR=541
HATD P P 18 22 09.1 0.0
SNR=541
ASHO Ashiyiah 63.34 301 *i* P P 18 22 09.2 0.0
SNR=140
ASHO Ashiyiah 63.34 301 P P 18 22 09.2 0.0
SNR=456
MDH Madha 63.36 302 *i* P P 18 22 08.2 -1.0
SNR=27
MDH Madha 63.36 302 P P 18 22 08.1 -1.1
SNR=155
MDH P P 18 22 08.1 -1.1
SNR=155
ALNE Al Ain 63.38 301 *i* P P 18 22 09.4 -0.1
SNR=36
ALNE Al Ain 63.38 301 P P 18 22 09.3 -0.1
SNR=327
ALNE P P 18 22 09.3 -0.1
SNR=327
UMZA Um Al Zommool 63.43 299 P P 18 22 09.3 -0.4
UMZA P P 18 22 09.3 -0.4
MRNZ Matariki Terra 63.45 133 P P 18 22 09.6 +0.2
MRNZ sP sP 18 25 13.2 +1.8
ABTO Aybut 63.47 293 P P 18 22 09.9 -0.2
SNR=114
ABTO P P 18 22 09.9 -0.2
SNR=114
TKNZ Takaka Hill 63.49 133 P P 18 22 10.0 +0.2
TKNZ sP sP 18 25 15.4 +3.8
MSFE Esma-Masafi 63.50 302 *i* P P 18 22 09.6 -0.5
SNR=369
MASF Masafi 63.50 302 P P 18 22 09.6 -0.6
SNR=221
MASF P P 18 22 09.6 -0.6
SNR=221
BANOM Banah 63.59 303 *i* P P 18 22 10.3 -0.4
SNR=205
THZ Tophouse 63.66 134 IAmb IAmb 18 22 12.4
comp=Z,1µm,0.8s
THZ Tophouse 63.66 134 P P 18 22 11.0 +0.1
THZ sP sP 18 25 15.4 +2.5
BOD Bodaibo 63.68 1 ⇑*i*P P 18 22 11.1 +0.6
BOD pmax pmax
comp=Z,3µm,1.6s
WTAZ Waiatarua 63.69 128 P P 18 22 13.2 +2.1
NBEZ Newall Road No 63.70 131 P P 18 22 13.3 +2.2
NMEZ Namu Road 63.74 131 P P 18 22 13.5 +2.2
FAQ Al Faqa, Dubai 63.76 301 *i* P P 18 22 11.9 +0.1
SNR=344
FAQ Al Faqa, Dubai 63.76 301 P P 18 22 11.8 +0.1
SNR=433
FAQ P P 18 22 11.8 +0.1
SNR=433
SHME Shamm 63.77 303 *i* P P 18 22 12.0 +0.2
SNR=31
SHME Shamm 63.77 303 P P 18 22 12.0 +0.2
SNR=100
SHME P P 18 22 12.0 +0.2
SNR=100
AWAZ Awhitu Peninsu 63.77 128 P P 18 22 13.6 +2.0
NAZ Nazwa, Dubai 63.79 302 *i* P P 18 22 11.8 -0.2
SNR=212
NAZ Nazwa, Dubai 63.79 302 P P 18 22 11.7 -0.2
SNR=228
NAZ P P 18 22 11.7 -0.2
SNR=228
KHEZ Kahui Hut 63.81 131 P P 18 22 13.7 +1.7
KHEZ Kahui Hut 63.81 131 P P 18 22 13.9 +1.9
NNZ Nelson 63.85 133 P P 18 22 11.8 -0.2
NNZ sP sP 18 25 17.6 +3.6
KURBB Kurchatov Arra 63.85 336 P P 18 22 12.2 +0.5
comp=Z,1µm,0.8s,baz=151,slow=4.9,SNR=7029
KURBB PcP PcP 18 22 41.8 +0.8
comp=Z,143nm,0.9s,baz=145,slow=3.0,SNR=4.3
KURBB pP pP 18 24 10.8 +0.4
comp=Z,263nm,0.9s,baz=146,slow=6.7,SNR=8.6
KURBB S S 18 29 54.4 -6.7
comp=Z,16nm,1.2s,baz=125,slow=16,SNR=5.2
KURBB ScS SKSac 18 31 01.4 -4.8
comp=Z,4.3nm,0.7s,baz=116,slow=33,SNR=1.6
KURBB PKPPKP P'P'df 18 50 56.7 +1.7
comp=Z,6.2nm,0.6s,baz=314,slow=2.9,SNR=6.1
KURBB P4KPbc 18 59 02.5
comp=Z,6.3nm,1.0s,baz=141,slow=3.8,SNR=24
comp=Z,1µm,0.8s
KURBB Kurchatov Arra 63.85 336 P P 18 22 12.0 +0.2
KURK Kurchatov 63.89 336 P P 18 22 12.6 +0.6
KURK IAmb IAmb 18 22 13.6
comp=Z,2µm,0.8s
KURK Kurchatov 63.89 336 P P 18 22 12.6 +0.6
KURK pmax pmax
comp=Z,2µm,0.8s
KURK Kurchatov 63.89 336 P P 18 22 12.7 +0.7
KURK P P 18 22 12.7 +0.7
MBAZ Motutapu North 63.91 128 P P 18 22 14.6 +2.1
DREZ Durham Road 63.93 131 P P 18 22 14.6 +2.0
ASUD Al Ashush, Dub 63.94 301 *i* P P 18 22 13.3 +0.4
SNR=193
ASUD Al Ashush, Dub 63.94 301 P P 18 22 13.3 +0.4
SNR=195
ASUD P P 18 22 13.3 +0.4
SNR=195
UMQ Umm Al-Quwin 63.98 302 *i* P P 18 22 14.0 +0.9
SNR=61
UMQ Umm Al-Quwin 63.98 302 P P 18 22 13.8 +0.7
SNR=52
WIAZ Waiheke Island 64.09 128 P P 18 22 15.5 +1.8
DUWZ D'Urville Isla 64.13 133 P P 18 22 14.1 +0.2
DUWZ sP sP 18 25 17.6 +1.6
MKAZ Moumakai 64.18 128 P P 18 22 16.0 +1.8
AJN Ajban 64.21 301 *i* P P 18 22 14.3 -0.3
SNR=28
AJN Ajban 64.21 301 P P 18 22 14.1 -0.5
SNR=114
AJN P P 18 22 14.1 -0.5
SNR=114
GRZ Great Barrier 64.23 127 P P 18 22 16.2 +1.7
HIZ Hauiti 64.26 130 P P 18 22 16.1 +1.4
HIZ Hauiti 64.26 130 P P 18 22 16.2 +1.4
HIZ sP sP 18 25 15.4 -1.4
HIZ PKiKP PKiKP 18 28 47.7 +1.1
KHZ Kahutara 64.29 134 P P 18 22 14.7 -0.1
KHZ Kahutara 64.29 134 ⇑P P 18 22 14.4 -0.3
KHZ Kahutara 64.29 134 P P 18 22 14.6 -0.1
KHZ sP sP 18 25 19.8 +2.9
KHZ PKiKP PKiKP 18 28 46.7 +0.1

TUWZ **Tuamarina** 64.31 133 P **P** 18 22 14.4 -0.5
TUWZ sP **sP** 18 25 19.8 +2.7
TUWZ ScS **SKiKP** 18 31 27.6 +4.0
VRZ **Vera Road** 64.33 131 P **P** 18 22 16.2 +1.0
VRZ PKiKP **PKiKP** 18 28 43.4 -3.4
VRZ ScS **SKiKP** 18 31 15.5 -8.1
BSWZ **Blackbirch Sta** 64.34 134 P **P** 18 22 14.9 -0.2
I46RU **ZALESOVO INFRA** 64.34 342 P **P** 18 22 14.0 -0.8
baz=143,slow=4.4,SNR=5.8
ZAA0 **Zalesovo Array** 64.34 342 IAmb IAmb 18 22 15.5
comp=Z,2μm,0.7s
ZALV **Zalesovo Beam** 64.34 342 P **P** 18 22 14.9 0.0
comp=Z,3μm,0.7s,baz=145,slow=4.8
ZALV PcP **PcP** 18 22 42.4 -0.6
comp=E,275nm,0.6s,baz=161,slow=4.6,SNR=4.9
ZALV pP **pP** 18 24 14.0 +0.3
comp=E,418nm,0.8s,baz=160,slow=4.6,SNR=9.2
ZALV S **S** 18 29 59.4 -7.5
comp=E,86nm,1.1s,baz=134,slow=8.4,SNR=6.7
ZALV PKPPKP **P'P'df** 18 50 54.7 +0.8
comp=Z,7.7nm,0.9s,baz=298,slow=3.2,SNR=5.5
ZALV P4KPbc 18 59 03.1
comp=Z,2.9nm,0.7s,baz=157,slow=3.5,SNR=10
comp=Z,3μm,0.7s
ZALV **Zalesovo Beam** 64.34 342 *i* P **P** 18 22 14.8 0.0
ZALV pmax pmax
comp=Z,3μm,0.7s
MSVF **Nonsavu** 64.34 107 P **P** 18 22 17.0 +1.3
MSVF **Nonsavu** 64.34 107 P **P** 18 22 16.8 +1.1
MSVF **Nonsavu** 64.34 107 P **P** 18 22 17.0 +1.3
MSVF pmax pmax
comp=Z,516nm,0.8s
MSVF **Nonsavu** 64.34 107 P **P** 18 22 17.0 +1.3
MSVF PcP **PcP** 18 22 41.6 -2.3
TCW **Tory Channel** 64.50 133 P **P** 18 22 15.6 -0.5
TCW sP **sP** 18 25 20.9 +2.5
TCW ScS **SKiKP** 18 31 25.4 +1.6
KUZ **Kuaotunu** 64.55 128 P **P** 18 22 17.6 +1.1
KUZ **Kuaotunu** 64.55 128 P **P** 18 22 17.7 +1.1
TOZ **Tahuroa Road** 64.58 129 P **P** 18 22 18.4 +1.7
TOZ S **S** 18 30 12.0 +1.6
CMWZ **Cape Campbell** 64.59 133 P **P** 18 22 16.7 -0.1
WAZ **Wanganui** 64.66 131 P **P** 18 22 18.4 +1.2
WAZ sP **sP** 18 25 23.1 +3.6
PKVZ **Pokaka** 64.82 131 P **P** 18 22 18.7 +0.4
SNZO **South Karori** 64.83 133 P **P** 18 22 17.3 -0.9
SNZO IAmb IAmb 18 22 18.5
comp=Z,643nm,0.8s
SNZO **South Karori** 64.83 133 P **P** 18 22 17.5 -0.8
SNZO **South Karori** 64.83 133 ⇓P **P** 18 22 17.4 -0.8
TWVZ **Taurewa** 64.83 130 P **P** 18 22 18.7 +0.3
KIW **Kapiti Island** 64.87 132 P **P** 18 22 18.2 -0.3
KIW sP **sP** 18 25 22.0 +1.1
KIW ScS **SKiKP** 18 31 22.1 -2.3
WEL **Wellington** 64.87 133 P **P** 18 22 18.1 -0.4
MTVZ **Mangateitei** 64.93 131 P **P** 18 22 19.9 +0.9
COVZ **Chateau Observ** 64.94 130 P **P** 18 22 19.8 +0.7
KMRZ **Kaimai** 64.95 129 P **P** 18 22 20.0 +0.9
WTVZ **West Tongariro** 64.96 130 P **P** 18 22 20.0 +0.8
WTVZ S **S** 18 30 16.4 +1.2
FWVZ **Far West T-bar** 64.97 131 P **P** 18 22 20.3 +0.9
FWVZ sP **sP** 18 25 25.2 +3.4
TRVZ **Turoa** 64.97 131 P **P** 18 22 20.1 +0.7
TRVZ sP **sP** 18 25 22.0 +0.1
MAVZ **Matarangi** 64.97 131 P **P** 18 22 20.4 +0.8
WATZ **Wairara** 64.98 130 P **P** 18 22 20.7 +1.4
BHW **Baring Head** 64.98 133 P **P** 18 22 18.5 -0.6
NGZ **Ngauruhoe** 64.98 130 P **P** 18 22 19.6 +0.2
NNVZ **North Ngauruho** 64.98 130 P **P** 18 22 20.2 +0.7
MZR **Muzera** 64.99 299 *i* P **P** 18 22 19.6 0.0
SNR=22
MZR **Muzera** 64.99 299 P **P** 18 22 19.5 0.0
SNR=261
KRVZ **Karewarewa** 65.00 130 P **P** 18 22 20.5 +1.1
KUTZ **Kaahu Road** 65.00 130 P **P** 18 22 20.6 +1.3
WHVZ **Whangaehu Hut** 65.00 131 P **P** 18 22 20.1 +0.4
KATZ **Kakaramea** 65.01 130 P **P** 18 22 20.6 +1.1
OHWZ **Ohakea** 65.01 132 P **P** 18 22 19.7 +0.3
SNVZ **South Ngauruho** 65.02 130 P **P** 18 22 20.4 +0.8
WNVZ **Wahianoa** 65.02 131 P **P** 18 22 20.0 +0.4
NTVZ **North Tongarir** 65.02 130 P **P** 18 22 20.2 +0.5
OTVZ **Oturere** 65.03 130 P **P** 18 22 20.4 +0.7
RATZ **Rangitukua** 65.04 130 P **P** 18 22 20.7 +1.0
TUVZ **Tukino** 65.04 131 P **P** 18 22 20.6 +0.8
CAW **Cannon Point** 65.05 133 P **P** 18 22 19.3 -0.3
TMVZ **Te Maari** 65.05 130 P **P** 18 22 20.7 +0.9
OGWZ **Otaki Gorge** 65.05 132 P **P** 18 22 19.5 -0.2
ETVZ **East Tongariro** 65.06 130 P **P** 18 22 20.7 +0.9
RITZ **Rihia Road** 65.13 130 P **P** 18 22 21.2 +1.0
MOVZ **Moawhango** 65.15 131 P **P** 18 22 20.3 -0.1
TGRZ **Tauranga** 65.17 129 P **P** 18 22 21.7 +1.2
NGRZ **Ngongotaha** 65.19 129 P **P** 18 22 22.1 +1.4
KARZ **Kaharoa** 65.22 129 P **P** 18 22 21.9 +1.2
ABPO **Ambohimpanom** 65.24 252 P **P** 18 22 21.7 +0.3
ABPO **Ambohimpanom** 65.24 252 P **P** 18 22 21.7 +0.3
MSWZ **Moikau Station** 65.26 133 P **P** 18 22 20.5 -0.5
WPRZ **Whakapapatarin** 65.26 130 P **P** 18 22 22.1 +1.1
MRZ **Mangatainoka R** 65.31 132 P **P** 18 22 20.9 -0.4
HOWZ **Holdsworth Sta** 65.32 132 P **P** 18 22 21.0 -0.3
HRRZ **Handcock Road** 65.33 129 P **P** 18 22 22.9 +1.4
OMRZ **Omania** 65.34 129 P **P** 18 22 22.7 +1.2
HLRZ **Highlands Stat** 65.35 129 P **P** 18 22 23.8 +2.2
MTW **Mount Morrison** 65.38 133 P **P** 18 22 21.4 -0.3
PAWZ **Paruwai Farm** 65.38 133 P **P** 18 22 22.0 +0.3
POWZ **Post Office Ro** 65.39 132 P **P** 18 22 22.0 +0.2
ALRZ **Allen Road** 65.41 130 P **P** 18 22 22.6 +0.7
OPRZ **Ohinepanea** 65.42 129 P **P** 18 22 23.1 +1.1
TSZ **Takapari Road** 65.46 131 P **P** 18 22 22.3 +0.1
TARZ **Mount Tarawera** 65.47 129 P **P** 18 22 23.9 +1.5
RRRZ **Republican Roa** 65.50 129 P **P** 18 22 23.5 +1.0
MRHZ **Matea Rd** 65.53 130 P **P** 18 22 22.7 -0.1
MARZ **Manawahe** 65.55 129 P **P** 18 22 23.9 +1.1
FUNA **Funafuti** 65.55 97 P **P** 18 22 24.8 +1.6
FUNA IAmb IAmb 18 22 26.4
comp=Z,2μm,0.9s
FUNA **Funafuti** 65.55 97 P **P** 18 22 25.1 +1.9
TIWZ **Tintock** 65.57 132 P **P** 18 22 23.2 +0.3
TRWZ **Traveller** 65.57 133 P **P** 18 22 23.3 +0.4
PRWZ **Pori Road** 65.58 132 P **P** 18 22 23.2 +0.3
PNHZ **Pukenui** 65.60 131 P **P** 18 22 23.1 0.0
EDRZ **Edgecumbe** 65.62 129 P **P** 18 22 23.8 +0.5
TMWZ **Te Maipa** 65.65 132 P **P** 18 22 23.6 +0.2
BKZ **Black Stump Fm** 65.66 130 IAmb IAmb 18 22 24.4
comp=Z,875nm,0.8s
BKZ **Black Stump Fm** 65.66 130 P **P** 18 22 23.3 -0.2
BKZ **Black Stump Fm** 65.66 130 P **P** 18 22 23.5 0.0
KWHZ **Kaweka Forest** 65.66 131 P **P** 18 22 23.7 +0.1
DVHZ **Dannevirke** 65.67 132 P **P** 18 22 23.4 -0.1
KRHZ **Kereru** 65.67 131 P **P** 18 22 23.5 0.0
WHRZ **Whale Island** 65.75 129 P **P** 18 22 25.4 +1.3
VOI **Vohitsoka** 65.78 249 P **P** 18 22 25.1 +0.4
VOI **Vohitsoka** 65.78 249 P **P** 18 22 25.3 +0.6
SNR=22
VOI **Vohitsoka** 65.78 249 ⇑P **P** 18 22 25.1 +0.4
BFZ **Birch Farm** 65.81 132 IAmb IAmb 18 22 26.0
comp=Z,758nm,0.8s
BFZ **Birch Farm** 65.81 132 P **P** 18 22 24.4 0.0
BFZ **Birch Farm** 65.81 132 P **P** 18 22 24.3 0.0
WPHZ **Waipukurau** 65.82 131 P **P** 18 22 24.9 +0.5
FOMA **Nahampoana Res** 65.82 245 P **P** 18 22 25.2 +0.5
FOMA **Nahampoana Res** 65.82 245 ⇑P **P** 18 22 25.4 +0.7
GHWR **Ruwais** 65.83 300 P **P** 18 22 24.6 -0.1
GHWR P **P** 18 22 24.6 -0.1
CPWZ **Castlepoint** 65.83 132 P **P** 18 22 25.6 +1.1
MTHZ **Maungataniwha** 65.85 130 P **P** 18 22 24.7 -0.1
MCHZ **McNeill Hill** 65.87 131 P **P** 18 22 25.4 +0.6
NMHZ **Naumai** 65.88 130 P **P** 18 22 25.6 +0.6
BRZS **Berezniki** 65.88 333 *e*P **P** 18 22 25.4 +0.8
BRZS **Berezniki** 65.88 333 *e*P **P** 18 22 25.4 +0.8
RTZ **Ruatahuna** 65.91 130 P **P** 18 22 24.5 -0.6
RTZ IAmb IAmb 18 22 25.8
comp=Z,1μm,0.8s
RTZ **Ruatahuna** 65.91 130 P **P** 18 22 25.1 0.0
DGTI **Dogotuki** 65.93 105 P **P** 18 22 26.6 +1.1
ANWZ **Angora Road** 65.93 132 P **P** 18 22 25.3 +0.2
URZ **Urewera** 65.94 129 P **P** 18 22 24.4 -0.8
URZ **Urewera** 65.94 129 ⇓P **P** 18 22 24.1 -1.1
URZ **Urewera** 65.94 129 P **P** 18 22 24.6 -0.6
H04N2 **CROZET ISLANDS** 65.95 222 P **P** 18 22 27.1 +2.3
baz=29,slow=75,SNR=10
H04N1 **CROZET ISLANDS** 65.96 222 P **P** 18 22 26.0 +1.1
baz=29,slow=75,SNR=22
H04N3 **CROZET ISLANDS** 65.97 222 P **P** 18 22 27.0 +2.1
baz=29,slow=75,SNR=21
CRZF **Crozet Islands** 65.99 222 P **P** 18 22 25.0 -0.3
CRZF **Crozet Islands** 65.99 222 ⇑P **P** 18 22 25.4 +0.1
PRHZ **Porangahau** 66.01 131 P **P** 18 22 26.1 +0.5
RAHZ **Arahi** 66.06 130 P **P** 18 22 26.1 +0.2
ARHZ **Aropaoanui** 66.06 130 P **P** 18 22 26.2 +0.3
H04S1 **CROZET ISLANDS** 66.08 221 P **P** 18 22 27.1 +1.5
baz=79,slow=5.5,SNR=12
KAHZ **Kahuranaki** 66.08 131 P **P** 18 22 26.7 +0.5
H04S3 **CROZET ISLANDS** 66.09 221 P **P** 18 22 27.2 +1.5
baz=79,slow=5.5,SNR=23
H04S2 **CROZET ISLANDS** 66.09 221 P **P** 18 22 27.4 +1.6
baz=79,slow=5.5,SNR=24
PXZ **Pawanui** 66.12 131 P **P** 18 22 26.7 +0.4
JRN **Qarnain Island** 66.17 301 P **P** 18 22 26.3 -0.5
SNR=76
JRN P **P** 18 22 26.3 -0.5
SNR=76
RAGZ **Rawiri** 66.22 129 P **P** 18 22 27.0 -0.1
SNGZ **Shannon Statio** 66.22 130 P **P** 18 22 26.9 -0.1
MWZ **Matawai** 66.28 129 P **P** 18 22 26.9 -0.5
TAVE **Taveuni** 66.28 106 P **P** 18 22 29.1 +1.4
RUGZ **Raukumara Rang** 66.32 129 P **P** 18 22 26.6 -1.1
KNZ **Kokohu** 66.53 130 P **P** 18 22 28.6 -0.2
TKGZ **Te Karaka** 66.54 129 P **P** 18 22 29.1 +0.2
TWGZ **Tauwhareparae** 66.59 129 P **P** 18 22 29.7 +0.4
PRGZ **Paritu Road** 66.67 130 P **P** 18 22 30.1 +0.4
MXZ **Matakaoa Point** 66.73 128 IAmb IAmb 18 22 31.6
comp=Z,1μm,0.6s
MXZ **Matakaoa Point** 66.73 128 P **P** 18 22 30.2 +0.1
MXZ **Matakaoa Point** 66.73 128 P **P** 18 22 30.0 -0.1
CNGZ **Carnagh Statio** 66.83 129 P **P** 18 22 31.0 +0.4
SLWR **Sila** 66.89 299 P **P** 18 22 31.2 -0.1
SLWR P **P** 18 22 31.2 -0.1
LKBA **Tubou, Lakemba** 67.34 107 P **P** 18 22 34.7 +0.6
TRNA **Turayna** 67.51 300 P **P** 18 22 34.8 -0.2
SNR=114
SKR **Severo-Kuril's** 67.58 28 *e*P **P** 18 22 35.8 +0.9
SKR *e*S **S** 18 30 45.3 +0.3
SKR pmax pmax
comp=Z,2μm,7.6s
SKR smax smax
comp=N,2μm,10.1s
SKR smax smax
comp=E,4μm,13.5s
SMRA **Abu-Samra** 67.85 300 P **P** 18 22 36.9 -0.2
SNR=181
SAKB **Bahrain** 68.48 301 P **P** 18 22 40.6 -0.3
BVA0 **Borovoye Array** 69.04 334 P **P** 18 22 43.3 -0.4
BVAR **Borovoye Array** 69.04 334 P **P** 18 22 44.2 +0.5
comp=E,2μm,0.7s,baz=141,slow=7.6,SNR=6818
BVAR pP **pP** 18 24 45.5 +0.5
comp=E,115nm,0.7s,baz=115,slow=6.8,SNR=3.6
BVAR S **S** 18 30 59.0 -2.9
comp=E,3.9nm,0.7s,baz=122,slow=7.0,SNR=1.2
BVAR PKPPKP **P'P'df** 18 50 47.4 +0.8
comp=E,4.3nm,0.7s,baz=300,slow=3.3,SNR=6.3
BVAR P4KPbc 18 59 24.2
comp=E,3.6nm,0.9s,baz=145,slow=5.4,SNR=12
comp=E,2μm,0.7s
BORK **Borovoye** 69.08 334 P **P** 18 22 44.4 +0.5
BORK IAmb IAmb 18 22 45.5
comp=Z,2μm,0.9s
BORK **Borovoye** 69.08 334 *d* iP **P** 18 22 44.5 +0.5
BORK pmax pmax
comp=Z,2μm,1.0s
BORK **Borovoye** 69.08 334 ⇓P **P** 18 22 44.5 +0.5
YAK **Yakutsk** 69.10 8 P4KPbc 18 59 25.0
comp=Z,3.8nm,0.4s,baz=265,slow=3.0,SNR=5.7
YAK **Yakutsk** 69.10 8 P **P** 18 22 44.2 +0.4
YAK **Yakutsk** 69.10 8 *d* iP **P** 18 22 44.2 +0.4
YAK *e* 18 23 03.5
YAK *e**PP **pP** 18 24 44.7 -0.5
YAK *e* 18 25 28.0
YAK *e*S **S** 18 31 03.3 +1.1
YAK *e* 18 31 42.6
YAK *e*SS **SS** 18 35 47.8 +2.6
YAK pmax pmax
comp=N,2μm,0.9s
YAK pmax pmax
comp=E,977nm,0.9s
YAK pmax pmax
comp=N,247nm,1.3s
YAK pmax pmax
comp=E,157nm,1.3s
YAK smax smax
comp=E,1μm,1.6s
YAK smax smax
comp=N,596nm,1.6s
YAK **Yakutsk** 69.10 8 ⇑P **P** 18 22 43.5 -0.3
YAK **Yakutsk** 69.10 8 P **P** 18 22 44.2 +0.4
YAK PcP **PcP** 18 23 04.0 +1.2
YAK pP **pP** 18 24 43.9 -1.4
PEA0B **Petropavlovsk-** 69.94 27 *ce*P **P** 18 22 49.7 +0.6
PETK **Petropavlovsk-** 69.94 27 P **P** 18 22 49.8 +0.7
comp=N,2μm,0.7s,baz=189,slow=1.5,SNR=5904
PETK pP **pP** 18 24 51.0 +0.2
comp=N,191nm,0.8s,baz=228,slow=6.8,SNR=6.0
PETK PKPPKP **P'P'df** 18 50 46.1 +1.1
comp=N,17nm,0.9s,baz=76,slow=8.3,SNR=12
PETK P4KPbc 18 59 28.6
comp=N,11nm,1.2s,baz=194,slow=4.1,SNR=4.4
comp=N,2μm,0.7s
MAW **Mawson** 70.07 198 P **P** 18 22 50.4 +0.9
comp=N,388nm,0.6s,baz=55,slow=6.1,SNR=220
MAW pP **pP** 18 24 51.4 +1.2
comp=N,82nm,1.1s,baz=56,slow=7.3,SNR=2.8
MAW S **S** 18 31 11.6 -1.5
comp=N,17nm,0.9s,baz=276,slow=23,SNR=2.0
MAW PKP2ab **P'P'ab** 18 50 42.7 -3.4
comp=N,214nm,1.0s,baz=255,slow=8.7,SNR=12
comp=N,388nm,0.6s
PET **Petropavlovsk** 70.31 27 P **P** 18 22 51.7 +0.6
PET **Petropavlovsk** 70.31 27 P **P** 18 22 51.8 +0.6
PET **Petropavlovsk** 70.31 27 κ *i*P **P** 18 22 51.9 +0.7
PET *e**PP **pP** 18 24 54.0 +0.8
PET *e**SP **sP** 18 25 53.8 -1.8
PET *e*S **S** 18 31 17.5 +1.2
PET *e*SS **SS** 18 36 04.4 +0.5
PET pmax pmax
comp=Z,3μm,0.7s
PET pmax pmax
comp=Z,2μm,9.0s
PET **Petropavlovsk** 70.31 27 P **P** 18 22 51.5 +0.3
comp=Z,38μmcomp=Z,3μm,1.1s
PET **Petropavlovsk** 70.31 27 ⇓P **P** 18 22 51.8 +0.6
CTZ **Chatham Island** 71.61 134 P **P** 18 22 59.9 +0.8
AB31 **Akbulak array** 71.85 327 *i* P **P** 18 23 00.7 +0.4
ABKAR **Akbulak array** 71.85 327 P **P** 18 23 00.9 +0.6
MA2 **Magadan** 71.93 19 P **P** 18 23 01.5 +1.0
MA2 **Magadan** 71.93 19 P **P** 18 23 01.4 +0.8
MA2 **Magadan** 71.93 19 *d* iP **P** 18 23 01.6 +1.0
MA2 pmax pmax
comp=Z,4μm,0.9s
MA2 **Magadan** 71.93 19 P **P** 18 23 00.8 +0.2
comp=Z,58μmcomp=Z,7μm,0.9s
MA2 **Magadan** 71.93 19 ⇑P **P** 18 23 01.3 +0.7
MA2 **Magadan** 71.93 19 P **P** 18 23 01.6 +1.1
MA2 PcP **PcP** 18 23 17.0 +2.0
MA2 pP **pP** 18 25 04.2 +0.8
MA2 sP **sP** 18 26 03.6 -1.9
ATD **Arta Tunnel** 72.03 284 ⇑P **P** 18 23 03.3 +1.2
RAYN **Ar Rayn** 72.16 297 P **P** 18 23 02.6 -0.2
RAYN IAmb IAmb 18 23 03.6
comp=Z,746nm,0.8s
RAYN **Ar Rayn** 72.16 297 *i* P **P** 18 23 02.6 -0.2
SNR=108
RAYN **Ar Rayn** 72.16 297 P **P** 18 23 02.6 -0.2
RAYN pmax pmax
comp=Z,746nm,0.8s
RAYN **Ar Rayn** 72.16 297 P **P** 18 23 02.3 -0.5
RAYN **Ar Rayn** 72.16 297 ⇓P **P** 18 23 02.5 -0.2
AKTO **Aktyubinsk** 73.54 327 P **P** 18 23 09.7 -0.3
AFI **Afiamalu** 74.17 103 P **P** 18 23 15.7 +1.4
AFI IAmb IAmb 18 23 17.2
comp=Z,3μm,1.4s
AFI **Afiamalu** 74.17 103 P **P** 18 23 16.2 +1.9
AFI **Afiamalu** 74.17 103 P **P** 18 23 15.7 +1.4
AFI pmax pmax
comp=Z,3μm,1.5s
AFI **Afiamalu** 74.17 103 ⇓P **P** 18 23 16.1 +1.9
AFI **Afiamalu** 74.17 103 P **P** 18 23 16.2 +1.9
KIBK **Kibwezi** 74.89 269 P **P** 18 23 19.3 +0.9
KIBK **Kibwezi** 74.89 269 P **P** 18 23 19.4 +1.0
SNR=70
SEY **Seymchan** 75.01 17 P **P** 18 23 19.0 +1.1
comp=Z,2μm,0.6s,baz=230,slow=5.6,SNR=4898
SEY S **S** 18 32 07.5 -0.2
comp=Z,7.7nm,0.8s,baz=122,slow=21,SNR=8.8
comp=Z,2μm,0.6s
SEY **Seymchan** 75.01 17 *d* iP **P** 18 23 19.0 +1.1
SEY pmax pmax
comp=Z,3μm,1.0s
FURI **Furi** 75.65 281 P **P** 18 23 25.8 +2.9
FURI IAmb IAmb 18 23 27.3
comp=Z,2μm,1.2s
FURI **Furi** 75.65 281 ⇑P **P** 18 23 26.0 +3.0
FURI **Furi** 75.65 281 P **P** 18 23 25.9 +3.0
FURI pP **pP** 18 25 27.1 -0.3
NIUE **Niue** 75.76 108 IAmb IAmb 18 23 25.8
comp=Z,934nm,1.1s
NIUE **Niue** 75.76 108 P **P** 18 23 24.4 +1.4
NIUE **Niue** 75.76 108 P **P** 18 23 25.0 +2.0
SVE **Sverdlovsk** 75.79 333 *c* iP **P** 18 23 23.3 +0.9
SVE *i* S **S** 18 32 15.1 -1.3
SVE pmax pmax
comp=N,1μm,1.1s
SVE pmax pmax
comp=E,1μm,1.0s
KMBO **Kilima Mbogo** 75.80 270 P **P** 18 23 24.5 +0.8
comp=E,169nm,0.8s,baz=209,slow=15,SNR=21
KMBO pP **pP** 18 25 26.9 -1.3
comp=E,38nm,0.5s,baz=123,slow=6.9,SNR=1.3
KMBO S **S** 18 32 17.8 -0.9
comp=E,54nm,0.5s,baz=209,slow=16,SNR=1.7
comp=E,169nm,0.8s
VNDA **Vanda** 75.81 170 P **P** 18 23 22.9 +0.7
comp=E,179nm,0.6s,baz=317,slow=6.2,SNR=826
VNDA PP **PP** 18 26 22.2 -1.3
comp=E,47nm,1.1s,baz=313,slow=10,SNR=4.3
VNDA S **S** 18 32 15.8 -0.2
comp=E,12nm,1.1s,baz=193,slow=23,SNR=18
VNDA ScS **ScS** 18 32 41.4 +0.7
comp=E,13nm,1.1s,baz=10,slow=2.2,SNR=7.1
VNDA PKPPKP **P'P'df** 18 50 35.8 +1.0
comp=E,12nm,1.0s,baz=140,slow=4.8,SNR=6.9
comp=E,179nm,0.6s
AKT **Akhty** 75.98 315 ⇓ iP **P** 18 23 24.9 +0.9
AKT *e* 18 23 32.8
AKT *e**PP **pP** 18 25 27.8 -0.8
AKT *e**SP **sP** 18 26 29.4 -0.8
AKT *e*S **S** 18 32 16.6 -2.7
AKT pmax pmax
comp=Z,3μm,1.2s
AKT pmax pmax
comp=Z,2μm,1.0s
AKT pmax pmax
comp=E,546nm,0.8s
AKT pmax pmax
comp=N,323nm,1.0s
AKT smax smax
comp=E,940nm,3.8s
ARTI **Arti** 76.57 332 P **P** 18 23 27.0 +0.4
ARTI **Arti** 76.57 332 *d* iP **P** 18 23 27.1 +0.4
ARTI pmax pmax
comp=Z,3μm,0.9s
MAK **Makhachkala** 76.68 317 *d* iP **P** 18 23 28.6 +1.1
MAK *e**PP **pP** 18 25 33.5 +1.0
MAK *e* 18 26 30.7
MAK *e**SP **sP** 18 26 33.1 -0.9
MAK *e*S **S** 18 32 25.4 -0.9
MAK *e*SS **SS** 18 37 38.5 -1.5
MAK *e*SSS SSS 18 41 12.9
MAK pmax pmax
comp=Z,1μm,0.7s
SBA **Scott Base** 76.85 170 P **P** 18 23 29.3 +1.4
SBA **Scott Base** 76.85 170 P **P** 18 23 29.3 +1.4
SBA pmax pmax
comp=Z,350nm,1.0s
NRIK **Noril'sk** 77.28 351 P **P** 18 23 30.6 +0.5
comp=Z,1μm,0.7s,baz=144,slow=5.5,SNR=1384
NRIK PP **PP** 18 26 34.9 -1.0
comp=Z,159nm,0.8s,baz=139,slow=7.8,SNR=3.9
NRIK S **S** 18 32 28.2 -3.4
comp=Z,14nm,0.9s,baz=222,slow=3.3,SNR=1.8
NRIK PKPPKP **P'P'df** 18 50 32.3 +0.9
comp=Z,2.5nm,0.8s,baz=316,slow=7.2,SNR=3.6
NRIK P4KPbc 18 59 55.8
comp=Z,3.8nm,0.7s,baz=154,slow=2.7,SNR=7.3
comp=Z,1μm,0.7s
NRIK **Noril'sk** 77.28 351 IAmb IAmb 18 23 32.0
comp=Z,3μm,1.2s
NRIK **Noril'sk** 77.28 351 *d* iP **P** 18 23 30.7 +0.5
NRIK pmax pmax
comp=Z,3μm,1.3s
GNI **Garni** 77.66 313 P **P** 18 23 34.1 +0.9
GNI IAmb IAmb 18 23 35.6
comp=Z,1μm,1.3s
GNI **Garni** 77.66 313 P **P** 18 23 34.2 +1.0
GNI **Garni** 77.66 313 *d* iP **P** 18 23 34.2 +1.0
GNI pmax pmax
comp=Z,1μm,1.4s
GNI **Garni** 77.66 313 P **P** 18 23 34.2 +1.0
GNI **Garni** 77.66 313 P **P** 18 23 33.7 +0.5
comp=Z,11μmcomp=Z,509nm,1.1s
SHEM **Shemya Is, Ala** 77.89 33 P **P** 18 23 34.2 +0.4
comp=Z,2μm,0.8s,baz=334,slow=2.6,SNR=53
SHEM pP **pP** 18 25 39.6 +0.2
comp=Z,880nm,1.1s,baz=308,slow=4.8,SNR=9.0
comp=Z,2μm,0.8s
SHEM **Shemya Is, Ala** 77.89 33 IAmb IAmb 18 23 35.2
comp=Z,2μm,0.9s
LODK **Lodwar** 78.19 275 P **P** 18 23 37.4 +0.9
SNR=112
TIXI **Tiksi** 78.26 5 P **P** 18 23 35.1 -0.3
TIXI **Tiksi** 78.26 5 P **P** 18 23 35.2 -0.3
TIXI pmax pmax
comp=Z,6μm,0.9s
GEVA **Gevas** 78.33 311 IAmb IAmb 18 23 39.1
comp=Z,2μm,1.0s
SYO **Syowa Base** 78.48 201 ⇑ iP **P** 18 23 37.1 +0.4
SYO **Syowa Base** 78.48 201 ⇓ iP **P** 18 23 40.7 +4.0
NCK **Nalchik** 79.55 316 *d* iP **P** 18 23 44.0 +1.1
NCK pmax pmax
comp=Z,2μm,2.0s
JOHN **Johnston Islan** 79.74 72 P **P** 18 23 45.4 +1.0
JOHN **Johnston Islan** 79.74 72 P **P** 18 23 45.9 +1.5
MARD **Mardin** 79.78 309 IAmb IAmb 18 23 46.0
comp=Z,1μm,0.6s
NEUR **Neytrino** 80.09 316 *d* iP **P** 18 23 48.4 +2.4
NEUR pmax pmax
comp=Z,766nm,1.5s
KBZ **Khabaz** 80.10 316 P **P** 18 23 46.8 +1.0
comp=Z,754nm,0.9s,baz=109,slow=4.4,SNR=727
KBZ pP **pP** 18 25 52.4 +0.2
comp=Z,93nm,0.9s,baz=109,slow=6.6,SNR=2.6
KBZ S **S** 18 33 01.5 -0.3
comp=Z,9.0nm,1.0s,baz=28,slow=22,SNR=11
KBZ PKKPbc **PKKPbc** 18 42 25.8 -0.4
comp=Z,18nm,0.8s,baz=243,slow=4.5,SNR=21
KBZ PKPPKP **P'P'df** 18 50 27.2 -0.8
comp=Z,10nm,1.0s,baz=183,slow=1.8,SNR=4.9
comp=Z,754nm,0.9s
KBZ **Khabaz** 80.10 316 *d* iP **P** 18 23 46.7 +1.0
KBZ pmax pmax
comp=Z,963nm,1.0s
BELG **Belogornoye** 80.21 326 *d* iP **P** 18 23 46.6 +0.5
BELG pmax pmax
comp=Z,915nm,1.0s
SHA1 **Shidzhatmaz** 80.27 316 *d* iP **P** 18 23 47.9 +0.9
BCA **Borcka** 80.31 314 ⇓P **P** 18 23 48.2 +1.3
KIV **Kislovodsk** 80.32 316 P **P** 18 23 47.7 +0.7
KIV IAmb IAmb 18 23 51.4
comp=Z,3μm,1.5s
KIV **Kislovodsk** 80.32 316 ⇓P **P** 18 23 47.8 +0.7
KIV **Kislovodsk** 80.32 316 *i* P **P** 18 23 47.8 +0.7
SNR=30
KIV **Kislovodsk** 80.32 316 *e*P **P** 18 23 47.3 +0.3
KIV *e**PP **pP** 18 25 52.6 -1.0
KIV *e**SP **sP** 18 26 51.7 -3.0
KIV *e* 18 26 58.2
KIV *e*PPP PPP 18 28 52.6
KIV *e*S **S** 18 33 04.0 -0.2
KIV pmax pmax
comp=Z,748nm,1.1s
KIV **Kislovodsk** 80.32 316 P **P** 18 23 47.7 +0.7
KIV **Kislovodsk** 80.32 316 P **P** 18 23 47.5 +0.5
comp=Z,8μmcomp=Z,703nm,1.2s

KIV Kislovodsk 80.32 316 P **P** **18 23 47.7 +0.7**
KIV PcP **PcP** **18 23 53.6 +1.7**
KIV pP **pP** **18 25 53.0 -0.5**
KIV sP **sP** **18 26 52.6 -2.1**
KOPT Kop Dagi 80.72 312 IAmb IAmb 18 23 52.6
comp=Z,5μm,1.8s
MUSN Musina, Limpop 81.48 248 *i* P **P** **18 23 54.2 +0.8**
KIRV Kirov 81.86 332 *d* iP **P** **18 23 55.0 +0.6**
LABN Labinsk 81.87 317 *d* iP **P** **18 23 55.9 +1.1**
LABN *e**PP **pP** **18 26 01.7 -0.3**
LABN *e*S **SKSac** **18 33 16.8 -1.3**
LABN pmax pmax
comp=Z,1μm,0.9s
LABN pmax pmax
comp=E,59nm,0.9s
LABN pmax pmax
comp=N,19nm,0.7s
LABN pmax pmax
comp=Z,2μm,1.0s
LABN smax smax
comp=N,7μm,3.3s
LABN smax smax
comp=E,2μm,2.9s
VSLR Vesyoloye 82.01 315 *d* iP **P** **18 23 56.4 +0.8**
VSLR pmax pmax
comp=Z,3μm,1.1s
SOC Sochi 82.26 315 *d* iP **P** **18 23 57.1 +0.3**
SOC *e**PP **pP** **18 26 03.0 -1.2**
SOC *e**SP **sP** **18 27 01.7 -3.4**
SOC *e* 18 27 17.4
SOC *e*PPP PPP 18 29 12.6
SOC *e*S **SKSac** **18 33 19.8 -0.9**
SOC *e*SS **SS** **18 38 59.7 -2.7**
SOC pmax pmax
comp=Z,1μm,0.8s
MBAR Mbarara 82.33 270 P **P** **18 23 58.9 +0.9**
MBAR Mbarara 82.33 270 P **P** **18 23 58.9 +0.9**
MBAR pmax pmax
comp=Z,443nm,1.0s
MBAR Mbarara 82.33 270 P **P** **18 23 59.0 +0.9**
ERBR Yeremizino-Bor 82.34 318 *d* iP **P** **18 23 57.7 +0.5**
ERBR *e**PP **pP** **18 26 03.4 -1.2**
ERBR pmax pmax
comp=Z,6μm,1.9s
ERBR pmax pmax
comp=N,143nm,1.6s
ERBR pmax pmax
comp=Z,6μm,1.9s
ERBR pmax pmax
comp=N,342nm,1.9s
ERBR pmax pmax
comp=E,120nm,1.0s
ERBR pmax pmax
comp=E,151nm,0.8s
GAZ Gaziantep 82.50 309 IAmb IAmb 18 24 00.9
comp=Z,1μm,1.1s
BILL Bilibino 82.71 18 P **P** **18 23 58.5 0.0**
BILL IAmb IAmb 18 23 59.3
comp=Z,476nm,0.7s
BILL Bilibino 82.71 18 *d* iP **P** **18 23 58.5 0.0**
BILL pmax pmax
comp=Z,550nm,0.8s
ADK Adak 82.75 36 P **P** **18 23 59.1 0.0**
ADK Adak 82.75 36 P **P** **18 23 59.2 +0.1**
ADK Adak 82.75 36 P **P** **18 23 59.1 0.0**
ADK pmax pmax
comp=Z,2μm,0.6s
HWQ Hawqa 82.86 306 *e*P **P** **18 24 01.7 +1.5**
BHL Bhannes 83.02 305 *e*P **P** **18 24 02.5 +1.6**
MMAI Mount Meron Ar 83.04 304 P **P** **18 24 03.1 +2.1**
comp=Z,368nm,0.8s,baz=59,slow=8.1,SNR=404
MMAI pP **pP** **18 26 08.8 0.0**
comp=Z,46nm,1.0s,baz=93,slow=5.9,SNR=3.3
MMAI S **SKSac** **18 33 26.1 -0.3**
comp=Z,4.9nm,0.8s,baz=23,slow=16,SNR=2.1
MMAI PKKPbc **PKKPbc** **18 42 19.2 +0.1**
comp=Z,11nm,0.9s,baz=263,slow=1.2,SNR=8.1
comp=Z,368nm,0.8s
VRH Novokhopyorsk 83.21 323 *e*P **P** **18 24 01.3 -0.1**
VRH *i* *PP **pP** **18 26 07.2 -2.0**
VRH *i* 18 27 20.6
VRH *e*S **SKSac** **18 33 21.0 -5.5**
VRH pmax pmax
comp=Z,4μm,0.7s
VRH pmax pmax
comp=Z,3μm,0.7s
LSZ Lusaka 83.52 255 P **P** **18 24 04.5 +0.6**
LSZ Lusaka 83.52 255 P **P** **18 24 04.5 +0.6**
LSZ pmax pmax
comp=Z,361nm,1.1s
LSZ Lusaka 83.52 255 P **P** **18 24 04.5 +0.6**
LSZ Lusaka 83.52 255 *i* P **P** **18 24 04.5 +0.6**
LSZ Lusaka 83.52 255 P pP 18 26 07.6 -4.1
MREMI Moremi 83.69 248 P pP 18 26 09.8 -2.8
TOKA Tokat 83.78 312 IAmb IAmb 18 24 07.2
comp=Z,1μm,1.0s
BROLN Tlhalogang 83.90 249 *i* P **P** **18 24 06.0 +0.4**
BROLN Tlhalogang 83.90 249 P pP 18 26 09.1 -4.6
QSPA South Pole Qui 83.91 180 P **P** **18 24 05.1 +0.3**
comp=Z,210nm,0.6s,baz=310,slow=1.5,SNR=236
QSPA pP **pP** **18 26 11.9 -0.3**
comp=Z,63nm,0.9s,baz=306,slow=4.1,SNR=3.4
QSPA PP **PP** **18 27 28.1 -1.4**
comp=Z,81nm,1.2s,baz=92,slow=2.2,SNR=4.3
QSPA S **SKSac** **18 33 24.0 -6.7**
comp=Z,24nm,0.9s,baz=296,slow=2.2,SNR=18
QSPA PKKP **PKKPdf** **18 42 10.1 +1.3**
comp=Z,51nm,0.6s,baz=306,slow=0.9,SNR=17
QSPA PKPPKP **P'P'df** **18 50 22.4 +1.9**
comp=Z,32nm,1.0s,baz=232,slow=3.4,SNR=4.2
comp=Z,210nm,0.6s
QSPA South Pole Qui 83.91 180 P **P** **18 24 04.6 -0.1**
QSPA South Pole Qui 83.91 180 P **P** **18 24 05.1 +0.3**
BNN Bunyan 83.93 310 IAmb IAmb 18 24 07.7
comp=Z,1μm,1.1s
ANN Anapa 84.17 316 *c* iP **P** **18 24 06.2 0.0**
ANN *e**PP **pP** **18 26 13.1 -1.3**
ANN *e* 18 27 40.6
ANN *e*S **SKSac** **18 33 28.6 -4.2**
ANN pmax pmax
comp=N,491nm,1.0s
ANN pmax pmax
comp=Z,2μm,1.0s
ANN pmax pmax
comp=E,271nm,1.0s
ANN pmax pmax
comp=Z,2μm,1.0s
ANN pmax pmax
comp=N,844nm,1.1s
ANN pmax pmax
comp=E,445nm,1.2s
ANN smax smax
comp=E,506nm,1.8s
ANN smax smax
comp=N,5μm,3.0s
ELIB Princess Elisa 84.19 198 *d* P **P** **18 24 07.3 +1.2**
comp=Z,231nm,1.3s
ELIB *d*pP **pP** **18 26 12.4 -1.5**
ELIB *d*PP **PP** **18 27 31.8 +0.1**
ATKA Atka Island 84.31 36 P **P** **18 24 06.2 -0.6**
VORD Divnogorie 84.60 322 ⇓ *i* P **P** **18 24 08.2 0.0**
VORD pmax pmax
comp=Z,4μm,0.9s
VSR Storozhevoye 84.75 323 *i* P **P** **18 24 09.1 +0.2**
VSR *e**PP **pP** **18 26 17.5 +0.1**
VSR *e*S **SKSac** **18 33 31.0 -5.2**
VSR pmax pmax
comp=Z,5μm,0.5s
VSR pmax pmax
comp=Z,8μm,0.9s
VORR Voronezh 84.85 323 *e*P **P** **18 24 09.5 +0.1**
VORR *e*S **SKSac** **18 33 30.1 -6.7**
VORR pmax pmax
comp=Z,4μm,0.6s
VORR pmax pmax
comp=Z,3μm,0.6s
VORR smax smax
comp=E,208nm,1.2s
LPHEP Lephephe 85.09 247 *i* P **P** **18 24 12.2 +0.8**
LPHEP Lephephe 85.09 247 P pP 18 26 17.1 -2.8
CSS Mathiatis 85.11 306 IAmb IAmb 18 24 13.2
comp=Z,1μm,1.0s
CSS Mathiatis 85.11 306 P **P** **18 24 11.1 0.0**
comp=Z,16μmcomp=Z,2μm,1.5s
RAR Rarotonga 85.17 111 P **P** **18 24 12.5 +0.8**
RAR pmax pmax
comp=Z,161nm,1.1s
LBTB Lobatse 85.20 245 *i* P **P** **18 24 12.5 +0.6**
LBTB Lobatse 85.20 245 P pP 18 26 15.7 -4.9
BOSA Boshof 85.23 242 P **P** **18 24 12.6 +0.6**
comp=Z,106nm,0.7s,baz=105,slow=3.6,SNR=226
BOSA pP **pP** **18 26 19.8 -1.0**
comp=Z,66nm,1.1s,baz=98,slow=6.6,SNR=6.9
BOSA S **SKSac** **18 33 38.9 -1.7**
comp=Z,46nm,1.3s,baz=234,slow=21,SNR=19
BOSA PKKPbc **PKKPbc** **18 42 14.6 +0.7**
comp=Z,42nm,0.7s,baz=275,slow=2.3,SNR=26
BOSA SKKPbc **SKKPbc** **18 44 55.2 +0.8**
comp=Z,8.8nm,0.6s,baz=307,slow=2.4,SNR=10
BOSA PKPPKP **P'P'df** **18 50 19.2 -1.3**
comp=Z,9.7nm,1.1s,baz=21,slow=1.5,SNR=3.5
comp=Z,106nm,0.7s
BOSA Boshof 85.23 242 *i* P **P** **18 24 12.7 +0.6**
BOSA Boshof 85.23 242 P pP 18 26 17.9 -2.9
LPSR Galich'ya Gora 85.28 324 *e*P **P** **18 24 11.6 +0.1**
LPSR *i* *SP **sP** **18 27 21.5 +0.8**
LPSR *e* 18 27 36.1
LPSR *e*S **SKSac** **18 33 35.4 -4.0**
LPSR pmax pmax
comp=Z,5μm,0.9s
LPSR pmax pmax
comp=Z,5μm,0.9s
KIRS Kirsehir-Merke 85.45 310 ⇓ P **P** **18 24 13.4 +0.7**
KHWEE KHWEE 85.58 248 *i* P **P** **18 24 14.4 +0.6**
KHWEE KHWEE 85.58 248 P pP 18 26 21.5 -1.0
BR104 Keskin Array S 85.78 310 P **P** **18 24 14.6 +0.3**
comp=Z,9μmcomp=Z,1μm,1.0s
BR131 Keskin Array S 85.78 311 IAmb IAmb 18 24 15.9
comp=Z,1μm,0.9s
BR131 Keskin Array S 85.78 311 *d* iP **P** **18 24 14.6 +0.2**
BRTR Keskin Array B 85.78 311 P **P** **18 24 14.7 +0.2**
comp=Z,852nm,0.9s,baz=123,slow=6.1,SNR=1131
BRTR pP **pP** **18 26 22.8 -0.5**
comp=Z,81nm,1.0s,baz=131,slow=6.7,SNR=7.8
BRTR S **SKSac** **18 33 39.9 -3.5**
comp=Z,3.4nm,0.8s,baz=311,slow=38,SNR=2.6
BRTR ScS **S** **18 33 58.9 +0.7**
comp=Z,33nm,1.1s,baz=91,slow=10,SNR=7.7
BRTR PKKPbc **PKKPbc** **18 42 14.2 +1.0**
comp=Z,3.2nm,0.8s,baz=323,slow=1.4,SNR=4.5
BRTR PKPPKP **P'P'df** **18 50 18.2 -0.1**
comp=Z,5.5nm,1.2s,baz=270,slow=0.4,SNR=4.2
comp=Z,852nm,0.9s
BRTR Keskin Array B 85.78 311 *i* P **P** **18 24 14.6 +0.2**
BRTR pmax pmax
comp=Z,872nm,0.9s
BR105 Keskin Array S 85.80 311 P **P** **18 24 14.7 +0.2**
comp=Z,10μmcomp=Z,1μm,1.1s
BR106 Keskin Array S 85.80 311 P **P** **18 24 14.7 +0.2**
comp=Z,9μmcomp=Z,1μm,1.0s
MAKGR Makgori 85.86 245 *i* P **P** **18 24 16.1 +1.1**
BZK Bozkurt 85.96 313 ⇓ P **P** **18 24 15.9 +0.9**
BZK Bozkurt 85.96 313 P **P** **18 24 15.4 +0.5**
comp=Z,17μmcomp=Z,1μm,1.5s
ILGA Ilgaz 85.99 312 IAmb IAmb 18 24 16.8
comp=Z,356nm,0.8s
KSANE Kasane 86.21 253 *i* P **P** **18 24 17.8 +1.0**
KSANE Kasane 86.21 253 P pP 18 26 23.0 -2.8
KHAM Kharkiv 86.22 321 P **P** **18 24 16.3 +0.2**
SIM Simferopol' 86.50 316 *e*P **P** **18 24 17.9 +0.5**
SIM *e* 18 27 50.9
SIM *e*S **S** **18 34 01.9 -2.5**
SIM pmax pmax
comp=Z,2μm,0.9s
SIM pmax pmax
comp=Z,338nm,0.8s
SIM smax smax
comp=E,222nm,1.0s
CIDE Kastamonu/Cide 86.72 313 ⇓ P **P** **18 24 19.1 +0.5**
SKOMA Sekoma 86.75 246 *i* P **P** **18 24 20.1 +0.9**
SKOMA Sekoma 86.75 246 P pP 18 26 24.4 -4.1
MOS Moscow 86.88 327 *k* iP **P** **18 24 19.1 +0.2**
MOS *e**PP **pP** **18 26 26.5 -1.8**
MOS *e**SP **sP** **18 27 29.9 +1.3**
MOS *e* 18 27 53.9
MOS *e* 18 33 46.2
MOS *e*S **S** **18 34 02.9 -4.5**
MOS pmax pmax
comp=Z,2μm,1.5s
MOS pmax pmax
comp=E,383nm,1.2s
MOS pmax pmax
comp=N,379nm,1.2s
MOS pmax pmax
comp=E,1μm,2.0s
MOS pmax pmax
comp=Z,5μm,2.0s
MOS pmax pmax
comp=N,800nm,1.5s
MOS smax smax
comp=N,6μm,2.0s
MOS smax smax
comp=E,2μm,1.6s
OBN Obninsk 87.30 326 P **P** **18 24 21.1 +0.2**
OBN IAmb IAmb 18 24 23.1
comp=Z,1μm,0.9s
OBN Obninsk 87.30 326 ⇓ P **P** **18 24 21.3 +0.4**
OBN Obninsk 87.30 326 *d* iP **P** **18 24 21.2 +0.3**
OBN *i* *PP **pP** **18 26 30.2 -0.2**
OBN *e**SP **sP** **18 27 31.1 +0.4**
OBN *i* 18 27 56.8
OBN *i* PPP PPP 18 30 00.4
OBN *i* 18 33 49.1
OBN *i* 18 34 08.2
OBN *i* SS SS 18 40 12.0 -2.7
OBN pmax pmax
comp=Z,3μm,1.6s
OBN MLR MLR
comp=Z,835nm,19.0s
OBN Obninsk 87.30 326 P **P** **18 24 21.0 +0.2**
comp=Z,20μmcomp=Z,2μm,1.4s
KLMR Klimovskoe 87.36 332 *e*P **P** **18 24 19.6 -1.5**
KLMR *e**PP **pP** **18 26 29.5 -1.1**
KLMR *e* 18 27 56.1
KLMR pmax pmax
comp=Z,945nm,0.7s
NIKH Nikolski High 87.66 36 P **P** **18 24 22.2 -0.5**
NIKH Nikolski High 87.66 36 P **P** **18 24 22.2 -0.5**
baz=257,SNR=42
MDUB Mudurnu 87.76 311 IAmb IAmb 18 24 24.4
comp=Z,428nm,0.8s
ISP Isparta 87.84 308 *c* *e*P **P** **18 24 23.6 -0.4**
ISP pmax pmax
comp=Z,448nm,1.7s
SPIA Saint Paul Isl 87.89 32 P **P** **18 24 24.4 +0.8**
baz=256
NVL N'lazarevskaya 88.01 199 *e*P **P** **18 24 24.2 +0.2**
NVL *e* 18 28 01.8
NVL *e*PPP PPP 18 30 03.3
NVL *e*S **SKSac** **18 33 55.1 -0.1**
NVL *e*SS **SS** **18 40 25.8 +2.1**
NVL *e*SSS SSS 18 44 08.5
NVL pmax pmax
comp=Z,477nm,1.2s
P08K Saint George I 88.12 33 P **P** **18 24 25.7 +1.0**
baz=256
ELL Elmali 88.15 307 IAmb IAmb 18 24 29.2
comp=Z,241nm,0.7s
BORA Eskisehir 88.22 310 IAmb IAmb 18 24 26.5
comp=Z,282nm,0.8s
AKAS Kas 88.31 307 IAmb IAmb 18 24 27.1
comp=Z,982nm,1.6s
KGCAE Kacgae 88.49 247 IAmb IAmb 18 26 41.2
comp=Z,583nm,1.4s
KGCAE Kacgae 88.49 247 *i* P **P** **18 24 28.5 +1.1**
KGCAE Kacgae 88.49 247 P pP 18 26 31.8 -5.5
SUR Sutherland 88.71 238 P **P** **18 24 30.0 +1.6**
ADZR Andozero 88.80 335 *d* iP **P** **18 24 27.1 -0.6**
ADZR *e**PP **pP** **18 26 36.4 -1.3**
ADZR S **SKSac** **18 33 59.7 -0.2**
ADZR pmax pmax
comp=Z,873nm,1.2s
GAMB Gambell 88.93 25 IAmb IAmb 18 24 31.0
comp=Z,1μm,1.1s
GAMB Gambell 88.93 25 P **P** **18 24 29.7 +1.4**
baz=254
UNV Unalaska Valle 89.22 36 P **P** **18 24 29.4 -0.5**
UNV Unalaska Valle 89.22 36 P **P** **18 24 29.5 -0.4**
baz=259,SNR=50
LKGWB Lokgwabe 89.26 246 P pP 18 26 36.9 -4.2
MANT Manisa 89.47 309 IAmb IAmb 18 24 33.4
comp=Z,539nm,1.0s
ARG Arkhangelos 89.50 306 IAmb IAmb 18 26 42.3
comp=Z,1μm,1.8s
AUGR Augrabies 89.54 241 *i* P P 18 24 26.7 -5.4
GRTLG Ghanzi 89.56 249 *i* P **P** **18 24 33.1 +0.7**
GRTLG Ghanzi 89.56 249 *i* P pP 18 26 41.9 -0.7
GRTLG Ghanzi 89.56 249 P pP 18 26 39.1 -3.5
KEKH Kekaha 89.66 68 IAmb IAmb 18 24 35.8
comp=Z,753nm,0.9s
XMAS Kiritimati 89.68 88 P **P** **18 24 35.0 +2.0**
XMAS IAmb IAmb 18 24 36.6
comp=Z,911nm,0.9s
XMAS Kiritimati 89.68 88 P **P** **18 24 33.6 +0.6**
AKUT Akutan 89.70 36 P **P** **18 24 31.8 -0.3**
PURM Purcari 89.71 317 ⇑ P **P** **18 24 32.3 -0.1**
PURM Purcari 89.71 317 P **P** **18 24 32.4 +0.1**
comp=Z,16μmcomp=Z,2μm,1.0s
XAUDM Khaudum 89.75 251 P pP 18 26 40.5 -3.0
BAND Balkesir-Ban 90.08 310 ⇓ P **P** **18 24 34.4 +0.2**
CTYL Yalikoy Yolu 90.09 312 P **P** **18 24 33.5 -0.7**
comp=Z,7μmcomp=Z,442nm,1.2s
BAL3X Bal3x, Balta 90.11 318 P **P** **18 24 33.9 -0.3**
ARMS Ukamas 90.13 242 *i* P **P** **18 24 32.3 -2.6**
JURR Jurilovca 90.13 315 ⇓ P **P** **18 24 35.1 +0.8**
KARP Karpathos 90.19 306 P **P** **18 24 35.3 +0.4**
comp=Z,17μmcomp=Z,2μm,0.9s
MANR Mangalia 90.20 314 ⇓ P **P** **18 24 35.0 +0.4**
EFOR EFORIE 90.21 314 ⇓ P **P** **18 24 35.2 +0.5**
TLCR 90.24 315 ⇓ P **P** **18 24 34.8 0.0**
TLCR 90.24 315 ⇓ P **P** **18 24 34.8 0.0**
KALB Balgarevo 90.27 313 ⇑ P **P** **18 24 35.7 +0.7**
KOOLE Kule 90.31 247 *i* P **P** **18 24 36.7 +0.8**
KOOLE Kule 90.31 247 P pP 18 26 44.2 -2.1
MFTR Murfatlar 90.37 314 ⇑ P **P** **18 24 35.7 +0.3**
TIRR Tirgusor 90.42 315 IAmb IAmb 18 24 36.8
comp=Z,518nm,1.1s
TIRR Tirgusor 90.42 315 ⇑ P **P** **18 24 35.7 0.0**
TIRR Tirgusor 90.42 315 ⇑ P **P** **18 24 35.7 0.0**
TIRR Tirgusor 90.42 315 P **P** **18 24 35.3 -0.4**
comp=Z,5μmcomp=Z,503nm,1.0s
TPGR Topolog 90.47 315 ⇓ P **P** **18 24 35.9 0.0**
KIS Kishinev 90.50 317 P **P** **18 24 35.2 -0.8**
comp=Z,154nm,0.7s
PSN Preselentsi 90.50 314 P **P** **18 24 36.1 0.0**
M11K Mekoryuk 90.65 29 P **P** **18 24 38.0 +1.6**
baz=259
CVDA Cernavoda 90.67 314 ⇑ P **P** **18 24 37.4 +0.6**
TLBR Topalu 90.69 315 ⇓ P **P** **18 24 37.3 +0.4**
GIUM Giurgiulesti 90.70 316 ⇑ P **P** **18 24 37.2 +0.3**
CFR Carcaliu 90.71 315 ⇓ P **P** **18 24 37.2 +0.2**
CFR Carcaliu 90.71 315 ⇓ P **P** **18 24 37.2 +0.2**
AK09 Malin Array Si 90.72 321 P **P** **18 24 36.4 -0.5**
AK10 Malin Array Si 90.74 321 P **P** **18 24 36.5 -0.5**
AK08 Malin Array Si 90.74 321 P **P** **18 24 36.5 -0.5**
AKASG Malin Array Be 90.77 321 P **P** **18 24 36.6 -0.6**
comp=Z,283nm,0.7s,baz=84,slow=4.6,SNR=663
AKASG pP **pP** **18 26 46.3 -1.3**
comp=Z,32nm,0.8s,baz=84,slow=4.5,SNR=6.1
AKASG PP **PP** **18 28 21.2 -2.8**
comp=Z,31nm,0.7s,baz=84,slow=6.8,SNR=7.1
AKASG PKiKP **PKiKP** **18 29 26.5 -0.1**
comp=Z,7.9nm,0.4s,baz=77,slow=2.2,SNR=7.3
AKASG SKiKP **SKiKP** **18 32 05.7 +0.9**
comp=Z,1.5nm,0.5s,baz=70,slow=2.4,SNR=4.3
AKASG S **SKSac** **18 34 09.2 -2.5**
comp=Z,1.5nm,0.6s,baz=272,slow=23,SNR=1.9
AKASG ScS **S** **18 34 42.8 -0.2**
comp=Z,2.9nm,0.7s,baz=94,slow=8.9,SNR=4.6
AKASG PKiKP **PKKPdf** **18 41 57.0 +0.1**
comp=Z,7.1nm,0.4s,baz=288,slow=3.2,SNR=21
AKASG SKKPbc **SKKPbc** **18 44 40.6 -3.5**
comp=Z,4.7nm,0.7s,baz=280,slow=3.2,SNR=7.2
AKASG PKPPKP **P'P'df** **18 50 11.3 +3.2**
comp=Z,0.9nm,0.7s,baz=277,slow=2.8,SNR=4.2
comp=Z,283nm,0.7s
AKASG Malin Array Be 90.77 321 P **P** **18 24 36.5 -0.7**
AKASG IAmb IAmb 18 24 37.8
comp=Z,638nm,0.9s
AKBB Malin Array Si 90.77 321 IAmb IAmb 18 24 37.7
comp=Z,522nm,0.8s
AKBB Malin Array Si 90.77 321 *d* iP **P** **18 24 36.5 -0.7**
AKBB pmax pmax
comp=Z,583nm,1.0s
AKBB Malin Array Si 90.77 321 P **P** **18 24 36.5 -0.7**
AK05 Malin Array Si 90.77 321 P **P** **18 24 36.5 -0.7**
AK02 Malin Array Si 90.78 321 P **P** **18 24 36.5 -0.7**
AK03 Malin Array Si 90.78 321 P **P** **18 24 36.6 -0.6**
KIEV Kiev 90.78 321 IAmb IAmb 18 24 37.7
comp=Z,485nm,0.8s
KIEV Kiev 90.78 321 ⇓ P **P** **18 24 36.5 -0.7**
KIEV Kiev 90.78 321 *i* P **P** **18 24 36.7 -0.5**
SNR=14
KIEV Kiev 90.78 321 ⇓ P **P** **18 24 36.5 -0.7**
KIEV Kiev 90.78 321 P **P** **18 24 36.5 -0.7**
comp=Z,32μmcomp=Z,3μm,1.1s
ICOR Ion Corvin 90.81 314 ⇓ P **P** **18 24 38.0 +0.6**
TATR Tatarca 90.83 316 ⇑ P **P** **18 24 38.9 +1.4**
SCTR Scanteiesti 90.88 316 ⇑ P **P** **18 24 38.4 +0.7**
NEGRR Negrea 90.94 316 ⇑ P **P** **18 24 39.6 +1.6**
TNA Tin City 90.94 24 P **P** **18 24 38.6 +1.0**
baz=256
PRD Provadia 90.96 313 P **P** **18 24 38.5 +0.3**
SCHLR Schela 90.96 315 ⇑ P **P** **18 24 38.7 +0.5**
SORM Soroca 90.97 318 ⇓ P **P** **18 24 37.6 -0.5**
SORM Soroca 90.97 318 ⇓ P **P** **18 24 37.6 -0.5**
SORM Soroca 90.97 318 P **P** **18 24 37.4 -0.7**
comp=Z,8μmcomp=Z,844nm,1.0s
VARL Varlezi 91.01 316 ⇑ P **P** **18 24 38.9 +0.6**
IZVR Izvoarele 91.02 316 ⇑ P **P** **18 24 39.0 +0.6**
TUDR 91.09 316 ⇑ P **P** **18 24 39.6 +0.9**
KIP Kipapa 91.16 69 IAmb IAmb 18 24 42.5
comp=Z,443nm,1.1s
FALS False Pass 91.18 35 P **P** **18 24 38.7 -0.2**
baz=261,SNR=79
LVZ Lovozero 91.25 338 *d* iP **P** **18 24 37.5 -1.5**
LVZ pmax pmax
comp=Z,222nm,0.9s
LVZ Lovozero 91.25 338 P **P** **18 24 37.6 -1.5**
comp=Z,5μmcomp=Z,359nm,1.3s
GHRR 91.33 316 ⇑ P **P** **18 24 41.0 +1.1**
GHRR 91.33 316 P **P** **18 24 40.3 +0.4**
PRK Paraskevi 91.34 309 P **P** **18 24 40.4 +0.4**
IASR Iasi 91.36 317 ⇓ P **P** **18 24 40.3 +0.3**
EZN Ezine 91.36 310 P **P** **18 24 40.0 -0.1**
CICN Ciconesti 91.37 314 ⇑ P **P** **18 24 40.6 +0.5**
COSR Cosmesti PH 91.37 316 ⇑ P **P** **18 24 41.3 +1.3**
CHOS Chios island 91.41 308 P **P** **18 24 41.0 +0.5**
NPS Neapolis 91.41 305 P **P** **18 24 41.2 +0.7**
PANC Panciu 91.49 316 ⇑ P **P** **18 24 41.8 +1.2**
JMB Yambol 91.52 312 P **P** **18 24 41.1 +0.2**
JMB Yambol 91.52 312 P **P** **18 24 40.8 0.0**
ODBI Odobesti 91.54 316 ⇓ P **P** **18 24 42.2 +1.4**
PUL Pulkovo 91.56 330 *d* iP **P** **18 24 41.1 +0.5**
PUL pmax pmax
comp=Z,2μm,1.0s
GOBN Gobabis 91.57 247 *i* P **P** **18 24 42.2 +0.5**
F14K Arctic Creek 91.58 24 P **P** **18 24 41.9 +1.4**
baz=259
LOZB Loznitsa 91.58 313 ⇑ P **P** **18 24 41.0 -0.1**
CAVK Edijne/Enez-Ca 91.58 311 ⇓ P **P** **18 24 41.4 +0.2**
LUBAR Lubar, Ukraine 91.60 320 P **P** **18 24 40.4 -0.6**
ENEZ Enez 91.60 311 P **P** **18 24 41.3 +0.1**
APA Apatity 91.64 338 ⇓ iP **P** **18 24 37.1 -3.7**
APA *i* *PP **pP** **18 26 50.4 -0.9**
APA *i* S **S** **18 34 44.3 -5.7**
APA pmax pmax
comp=Z,100nm,0.9s
SIGR SIGRI 91.66 309 P **P** **18 24 41.5 0.0**
RAZG Razgrad 91.67 313 ⇓ P **P** **18 24 41.5 0.0**
K13K Kusilvak Mount 91.67 28 IAmb IAmb 18 24 43.3
comp=Z,729nm,0.9s
K13K Kusilvak Mount 91.67 28 P **P** **18 24 42.2 +1.1**
baz=260
NDNU Novodnistrovsk 91.68 319 P **P** **18 24 41.1 -0.3**
ALN Alexandroupoli 91.70 311 IAmb IAmb 18 24 42.5
comp=Z,723nm,1.5s
ALN Alexandroupoli 91.70 311 P **P** **18 24 41.5 -0.2**
GADA Gvkgeada 91.73 310 P **P** **18 24 41.8 0.0**
VRI Vrincioaia 91.78 316 ⇑ P **P** **18 24 42.1 +0.1**
VRI Vrincioaia 91.78 316 ⇑ P **P** **18 24 42.1 +0.1**
VRI Vrincioaia 91.78 316 P **P** **18 24 42.0 +0.1**
comp=Z,7μmcomp=Z,634nm,1.3s

MI28	Mi28,Pidlybu	91.78	321	P	P	18 24 40.3	-1.5
ANM	Nome	91.81	25	IAmb	IAmb	18 24 43.5	
	comp=Z,206nm,0.8s						
ANM	Nome	91.81	25	P	P	18 24 42.7	+1.1
	baz=260						
PLOR	Plostina	91.83	316	⇑P	P	18 24 42.2	0.0
PLOR	Plostina	91.83	316	⇑P	P	18 24 42.2	0.0
TESR	Tescani	91.91	316	⇑P	P	18 24 43.0	+0.4
TESR	Tescani	91.91	316	P	P	18 24 42.3	-0.2
	comp=Z,9µmcomp=Z,768nm,1.2s						
SULR		91.97	315	⇑P	P	18 24 43.9	+1.1
IDI	Anoyia	92.00	305	P	P	18 24 43.9	+0.5
IDI	Anoyia	92.00	305	IAmb	IAmb	18 24 45.0	
	comp=Z,388nm,1.4s						
IDI	Anoyia	92.00	305	P	P	18 24 43.8	+0.5
SZH	Strazhitsa	92.02	313	P	P	18 24 43.2	+0.1
SZH	Strazhitsa	92.02	313	P	P	18 24 43.2	+0.1
SMTH	Samothraki Isl	92.04	310	P	P	18 24 42.8	-0.5
ELND	Elena	92.05	313	⇓P	P	18 24 43.3	0.0
M13K	Dall Lake	92.05	30	P	P	18 24 43.9	+1.1
	baz=261						
ONER	Baraj Valea Uz	92.06	316	⇓P	P	18 24 43.7	+0.5
S12K	Black Hills	92.07	34	P	P	18 24 42.0	-1.0
	baz=262						
RDO	Rodhopi	92.11	311	IAmb	IAmb	18 24 44.3	
	comp=Z,346nm,1.2s						
RDO	Rodhopi	92.11	311	P	P	18 24 43.2	-0.4
MNK	Minsk	92.11	324	*i* P	P	18 24 43.4	+0.2
	comp=E,98nm,0.9s						
MNK				*i* P	P	18 24 43.4	+0.2
	comp=N,429nm,1.0s						
MNK				*i* P	P	18 24 43.4	+0.2
	comp=Z,878nm,0.9s,baz=97						
MNK				*i* pP	pP	18 26 52.5	-1.3
MNK				*i* sP	sP	18 27 53.1	-0.6
MNK				*i* PP	PP	18 28 34.8	+0.5
MNK				*i* PPP	PPP	18 30 42.8	
MNK				*i* SKS	SKiKP	18 32 00.1	-7.0
MNK				*i* S	SKSac	18 34 19.0	0.0
MNK				*i* sS	sS	18 38 28.4	-20
MNK				*i* SS	SS	18 41 10.6	-13
MNK				*i* SSS	SSS	18 45 15.1	
MNK	Minsk	92.11	324	*i* P	P	18 24 43.4	+0.2
MNK				*i* *PP	pP	18 26 52.5	-1.3
MNK				*i* *SP	sP	18 27 53.1	-0.6
MNK				*i*		18 28 34.7	
MNK				*i* PPP	PPP	18 30 42.8	
MNK				*i* S	SKSac	18 34 19.0	0.0
MNK				*i* SSS	SSS	18 45 15.1	
MNK				pmax	pmax		
	comp=Z,878nm,0.9s						
MNK				pmax	pmax		
	comp=N,429nm,1.0s						
MNK				pmax	pmax		
	comp=E,98nm,0.9s						
SGRR	Singureni	92.12	314	⇑P	P	18 24 43.7	+0.2
SNAA	Sanae	92.17	197	⇑P	P	18 24 44.4	+1.1
	comp=Z,2µm,0.5s						
SNAA				⇑pP	pP	18 26 56.5	+2.6
SNAA				⇑PP	PP	18 28 34.9	+0.8
SNAA				⇓SKS	SKSac	18 34 17.3	-1.7
SNAA				⇑S	S	18 34 54.3	-0.5
SNAA				⇓PKKP	PKKPdf	18 41 53.1	-1.1
	comp=Z,2µm,0.6s						
SNAA	Sanae	92.17	197	P	P	18 24 44.4	+1.1
	comp=Z,85nm,0.6s,baz=142,slow=4.4,SNR=90						
SNAA				pP	pP	18 26 52.8	-1.0
	comp=Z,13nm,0.5s,baz=87,slow=4.2,SNR=3.9						
SNAA				PP	PP	18 28 34.8	+0.6
	comp=Z,67nm,1.2s,baz=134,slow=12,SNR=3.9						
SNAA				S	SKSac	18 34 17.6	-1.4
	comp=Z,70nm,1.0s,baz=222,slow=22,SNR=26						
SNAA				PKKP	PKKPdf	18 41 54.8	+0.7
	comp=Z,73nm,0.6s,baz=269,slow=4.3,SNR=47						
SNAA				SKKPbc	SKKPbc	18 44 36.7	-3.4
	comp=Z,11nm,0.8s,baz=293,slow=3.3,SNR=5.1						
SNAA				PKPPKP	P'P'df	18 50 05.3	+0.1
	comp=Z,18nm,0.8s,baz=286,slow=2.2,SNR=10						
	comp=Z,85nm,0.6s						
SNAA	Sanae	92.17	197*c*	*i*P	P	18 24 44.5	+1.2
SNAA				pmax	pmax		
	comp=Z,139nm,0.9s						
DIM	Dimitrovgrad	92.17	312	P	P	18 24 43.9	+0.1
LIA	Limnos Island	92.25	310	P	P	18 24 44.0	-0.2
KMPD	K-Podol'skiy	92.28	318	P	P	18 24 43.3	-0.8
KMPD				P	P	18 24 43.0	-1.1
MLR	Muntele Rosu	92.28	315	IAmb	IAmb	18 24 45.8	
	comp=Z,1µm,1.7s						
MLR	Muntele Rosu	92.28	315	⇑P	P	18 24 44.8	+0.4
MLR	Muntele Rosu	92.28	315	⇑P	P	18 24 44.8	+0.4
MLR	Muntele Rosu	92.28	315	P	P	18 24 44.1	-0.3
	comp=Z,6µmcomp=Z,420nm,1.5s						
PRAR	RASCA	92.30	317	⇑P	P	18 24 43.8	-0.5
TURR	Turia	92.30	316	⇓P	P	18 24 44.6	+0.3
F15K	North Star Dit	92.31	24	IAmb	IAmb	18 24 46.4	
	comp=Z,1µm,1.4s						
F15K	North Star Dit	92.31	24	P	P	18 24 45.2	+1.3
	baz=260						
KDZ	Kurdzhali	92.31	311	P	P	18 24 42.2	-2.2
KDZ	Kurdzhali	92.31	311	P	P	18 24 42.0	-2.5
J14K	Nanvaranak Lak	92.31	27	IAmb	IAmb	18 24 46.2	
	comp=Z,2µm,1.9s						
J14K	Nanvaranak Lak	92.31	27	P	P	18 24 45.0	+1.1
	baz=261						
HORU	Horodok	92.37	319	P	P	18 24 43.8	-0.8
G15K	Niukluk	92.44	25	P	P	18 24 45.1	+0.5
	baz=261						
C16K	Lisburne Hills	92.47	22	P	P	18 24 45.9	+1.4
	baz=260						
L14K	Kuka Creek	92.51	29	IAmb	IAmb	18 24 46.9	
	comp=Z,476nm,0.7s						
L14K	Kuka Creek	92.51	29	P	P	18 24 46.0	+1.1
	baz=262						
BOSR	Bodos	92.54	316	⇑P	P	18 24 45.6	+0.1
VAM	Vamos	92.57	305	P	P	18 24 46.8	+1.0
KHLH	Kahului Airpor	92.58	69	IAmb	IAmb	18 24 57.4	
	comp=Z,249nm,1.0s						
PVL	Pavlikeni	92.58	313	P	P	18 24 45.6	-0.1
KARY	Karystos	92.64	308	P	P	18 24 45.8	-0.3
COPA	Copaceanca	92.66	314	⇓P	P	18 24 45.8	-0.1
DOPR	Dopca	92.72	316	⇑P	P	18 24 45.8	-0.4
HLK	Haleakala	92.74	70	IAmb	IAmb	18 24 57.9	
	comp=Z,831nm,2.0s						
RZN	Rozhen	92.76	311	P	P	18 24 46.8	0.0
RZN	Rozhen	92.76	311	P	P	18 24 46.6	-0.2
M14K	Bethel	92.78	29	P	P	18 24 47.0	+0.9
	baz=263						
PLD	Plovdiv	92.80	312	P	P	18 24 46.4	-0.3
PLD	Plovdiv	92.80	312	P	P	18 24 46.3	-0.4
N14K	Kuskokwak Cree	92.81	30	P	P	18 24 46.8	+0.5
	baz=263						
HUMR	Humele	92.86	314	⇑P	P	18 24 46.7	-0.2
KAVA	Kavala	92.86	311	P	P	18 24 46.8	-0.2
SDPT	Sand Point	92.92	35	P	P	18 24 46.6	-0.2
SDPT	Sand Point	92.92	35	P	P	18 24 46.7	-0.2
	baz=264,SNR=58						
RNPP5	Staryi Chortor	92.93	321	P	P	18 24 46.9	-0.2
O14K	Tigyukauivet M	92.94	31	P	P	18 24 47.4	+0.4
	baz=263						
RNPP2	Kostyukhnivka	92.94	321	P	P	18 24 46.9	-0.2
RNPP9	Sopachiv	92.95	321	P	P	18 24 46.9	-0.2
KHLU	Kahalu`u	92.96	71	IAmb	IAmb	18 24 51.0	
	comp=Z,248nm,1.0s						
RNPP8	Varash	92.97	321	P	P	18 24 46.9	-0.3
PLVB	Pleven	93.01	313	⇓P	P	18 24 47.6	0.0
BUR08	Bucovina Ar. S	93.02	317	IAmb	IAmb	18 24 49.4	
	comp=Z,232nm,0.8s						
HUH	Hualalai	93.02	71	IAmb	IAmb	18 24 51.7	
	comp=Z,458nm,1.3s						
OVEH	Oceanview Est	93.04	71	IAmb	IAmb	18 24 55.8	
	comp=Z,128nm,0.8s						
PTL	Penteli	93.09	308	P	P	18 24 47.4	-0.8
L15K	Ungalak Mounta	93.12	28	P	P	18 24 48.3	+0.6
	baz=263						
VLY	Voula,Athens	93.12	308	P	P	18 24 47.3	-1.0
ATHU	Athens Univers	93.14	308	P	P	18 24 46.4	-2.0
H16K	Elim	93.15	25	P	P	18 24 48.6	+0.9
	baz=263						
K15K	Wolf Creek Mou	93.18	28	IAmb	IAmb	18 24 50.2	
	comp=Z,359nm,0.8s						
K15K	Wolf Creek Mou	93.18	28	P	P	18 24 49.0	+1.1
	baz=263						
HPAH	Hawaii Prepara	93.18	70	IAmb	IAmb	18 24 51.8	
	comp=Z,186nm,0.9s						
ARR	Arges	93.19	315	⇓P	P	18 24 48.1	-0.4
TSUM	Tsumeb	93.20	250	*i* P	P	18 24 50.0	+0.7
TSUM	Tsumeb	93.20	250	P	pP	18 26 55.9	-4.0
WIN	Windhoek	93.20	247	P	pP	18 26 58.1	-1.8
G16K	Koyuk River	93.20	25	P	P	18 24 49.2	+1.2
	baz=262						
VSU	Vasula	93.22	328*ce*	P	P	18 24 47.4	-0.8
VSU				pmax	pmax		
	comp=Z,1µm,1.0s						
VLAD	Vladila	93.22	314	⇓P	P	18 24 48.9	+0.3
D17K	Noatak River	93.23	22	P	P	18 24 49.8	+1.8
	baz=262,SNR=1000						
MWH	Mokuaweoweo	93.23	71	IAmb	IAmb	18 24 52.0	
	comp=Z,344nm,1.2s						
MLOA	Mauna Loa Obse	93.25	71	IAmb	IAmb	18 24 52.8	
	comp=Z,345nm,1.0s						
PGB	Panagyurishte	93.26	312	P	P	18 24 48.4	-0.4
C17K	DeLong Mountai	93.30	22	P	P	18 24 49.9	+1.4
	baz=262						
POHA	Pohakuloa	93.31	71	IAmb	IAmb	18 24 52.6	
	comp=Z,214nm,0.8s						
RDOG	Red Dog Mine	93.34	22	IAmb	IAmb	18 24 51.0	
	comp=Z,488nm,0.8s						
RDOG	Red Dog Mine	93.34	22	P	P	18 24 50.0	+1.4
	baz=262,SNR=82						
HMH	Humu'ula Sheep	93.35	71	IAmb	IAmb	18 24 53.5	
	comp=Z,890nm,1.6s						
STFN	Stefani	93.35	308	P	P	18 24 48.6	-0.8
MAGU	Magoula	93.37	308	P	P	18 24 48.3	-1.1
CHNA	Chernabura Isl	93.37	35	P	P	18 24 49.0	0.0
CHNA	Chernabura Isl	93.37	35	P	P	18 24 48.7	-0.2
	baz=264,SNR=19						
TGMR	Targu Mures	93.37	316	⇑P	P	18 24 50.3	+1.1
NVR	Nevrokopi	93.39	311	P	P	18 24 48.8	-0.7
M15K	Kasigluk River	93.39	29	P	P	18 24 49.4	+0.4
	baz=264						
MLH	Mauna Loa	93.43	71	IAmb	IAmb	18 24 53.3	
	comp=Z,728nm,1.1s						
MDB	Medias	93.44	316	⇑P	P	18 24 50.0	+0.5
MDB	Medias	93.44	316	⇑P	P	18 24 50.0	+0.5
TNR	Turnu Rosu	93.47	315	⇑P	P	18 24 50.1	+0.4
TNR	Turnu Rosu	93.47	315	⇑P	P	18 24 50.1	+0.4
HLP	Hilina Pali	93.48	71	IAmb	IAmb	18 24 53.3	
	comp=Z,339nm,1.3s						
MMB	Musomishta	93.49	311	P	P	18 24 49.1	-0.8
MMB	Musomishta	93.49	311	P	P	18 24 49.1	-0.8
UWE	Uwekahuna	93.51	71	IAmb	IAmb	18 24 53.3	
	comp=Z,207nm,1.0s						
VADS	Vadso	93.53	340	*e*P	P	18 24 48.7	-0.7
VADS				IVmB_BB		18 24 49.7	
	comp=Z,3µm,1.3s						
VILL	Villia	93.53	308	P	P	18 24 48.8	-1.4
BYL	Byron's Ledge	93.54	71	IAmb	IAmb	18 24 53.4	
	comp=Z,202nm,1.1s						
HATHI	Halema'uma'u T	93.54	71	IAmb	IAmb	18 24 53.4	
	comp=Z,188nm,1.1s						
SRS	Serrai	93.57	311	P	P	18 24 49.2	-1.1
KTHA	Kythira Island	93.57	306	P	P	18 24 50.2	-0.2
PUH	Pauahi	93.58	71	IAmb	IAmb	18 24 55.0	
	comp=Z,209nm,1.2s						
STNU	Starunia	93.58	318	P	P	18 24 49.8	-0.3
PLG	Polygyros	93.62	310	P	P	18 24 49.8	-0.8
E17K	Hotham Inlet	93.63	23	P	P	18 24 51.3	+1.4
	baz=263,SNR=379						
N15K	Kwethluk River	93.63	30	P	P	18 24 50.9	+0.8
	baz=264						
MPEP	Malo Peshtene	93.65	313	P	P	18 24 50.5	-0.1
O15K	Ungalikthiuk R	93.67	31	P	P	18 24 50.6	+0.3
	baz=264						
VLI	Veliai	93.71	306	P	P	18 24 49.9	-1.1
J16K	Anvik River	93.71	27	P	P	18 24 51.7	+1.3
	baz=264						
SOH	Sokhos	93.72	310	P	P	18 24 50.2	-0.8
HIL	Hilo	93.73	71	IAmb	IAmb	18 24 54.0	
	comp=Z,255nm,1.3s						
I17K	Unalakleet	93.73	26	P	P	18 24 51.8	+1.4
	baz=264						
RAKU	Rahkiv	93.75	318	P	P	18 24 50.4	-0.5
F17K	Baldwin Pennin	93.78	24	IAmb	IAmb	18 24 53.0	
	comp=Z,372nm,1.1s						
F17K	Baldwin Pennin	93.78	24	P	P	18 24 51.9	+1.3
	baz=264						
LTK	Loutraki	93.79	308	P	P	18 24 49.9	-1.4
LOT	Lotru	93.80	315	⇓P	P	18 24 51.0	-0.4
ATAL	Atalanti	93.80	308	P	P	18 24 50.1	-1.2
PLNA	Plana	93.81	312	P	P	18 24 51.2	-0.3
LKR	Lokris	93.82	308	P	P	18 24 50.5	-0.9
VNA2	Neumayer--Watz	93.82	196	⇑P	P	18 24 51.6	+0.8
	comp=Z,74nm,0.7s,baz=100,slow=4.7						
VNA2				⇑pP	pP	18 27 02.4	+1.0
	baz=109,slow=4.0						
VNA2				⇑PP	PP	18 28 47.3	+0.6
	baz=129,slow=7.6						
VNA2				⇑PKiKP	PKiKP	18 29 32.0	+0.7
	baz=102,slow=0.9						
VNA2				⇓SKS	SKSac	18 34 25.4	-2.4
	baz=93,slow=5.6						
VNA2				⇓S	S	18 35 08.6	-0.3
	baz=97,slow=5.4						
VNA2				⇓PKKP	PKKPdf	18 41 48.9	-2.2
	comp=Z,45nm,0.7s,baz=301,slow=4.3						
FINES	FINESS Array B	93.86	331	P	P	18 24 51.0	0.0
	comp=Z,546nm,0.7s,baz=111,slow=5.9,SNR=1297						
FINES				pP	pP	18 27 01.3	-0.4
	comp=Z,20nm,0.8s,baz=69,slow=9.1,SNR=1.2						
FINES				PKiKP	PKiKP	18 29 31.8	+0.2
	comp=Z,29nm,0.7s,baz=114,slow=3.7,SNR=5.9						
FINES				SKiKP	SKiKP	18 32 10.8	+0.9
	comp=Z,6.9nm,0.6s,baz=101,slow=4.3,SNR=3.5						
FINES				S	SKSac	18 34 26.8	-1.3
	comp=Z,12nm,0.6s,baz=93,slow=12,SNR=3.8						
FINES				PKKP	PKKPdf	18 41 51.4	-0.3
	comp=Z,7.5nm,0.6s,baz=284,slow=2.0,SNR=21						
	comp=Z,546nm,0.7s						
VALD	Valchedram	93.90	313	P	P	18 24 51.5	-0.1
HORT	Hortiatis	93.90	310	P	P	18 24 50.8	-1.1
G17K	Kiwalik Mounta	93.92	25	P	P	18 24 52.5	+1.2
	baz=264						
BLSH	Balsha	93.94	313	P	P	18 24 52.0	0.0
VTS	Vitosha	93.96	312	P	P	18 24 51.7	-0.5
KKB	Krupnik	93.97	311	P	P	18 24 51.7	-0.4
KKB	Krupnik	93.97	311	P	P	18 24 51.5	-0.6
LVV	L'vov	93.98	320	P	P	18 24 51.6	-0.3
BAIL	Bailesti	93.99	314	⇑P	P	18 24 52.0	-0.1
MORS	Morshin	94.02	319	P	P	18 24 51.0	-1.1
CJR	Cluj-Napoca	94.02	316	⇑P	P	18 24 53.2	+0.9
CJR	Cluj-Napoca	94.02	316	⇑P	P	18 24 53.2	+0.9
C18K	Utukok River	94.05	21	IAmb	IAmb	18 24 54.2	
	comp=Z,447nm,0.8s						
C18K	Utukok River	94.05	21	P	P	18 24 53.1	+1.2
	baz=264						
L16K	Owhat River	94.08	28	P	P	18 24 52.9	+0.9
	baz=265						
KNT	Kendrikon	94.09	311	P	P	18 24 51.8	-0.8
E18K	Tukpahlearik C	94.14	23	P	P	18 24 53.7	+1.5
	baz=264						
BMR	Baia Mare	94.17	317	⇓P	P	18 24 53.2	+0.4
BMR	Baia Mare	94.17	317	⇓P	P	18 24 53.2	+0.4
H17K	Granite Mounta	94.18	25	P	P	18 24 53.8	+1.3
	baz=265						
VLX	Vlachokerasia	94.20	307	P	P	18 24 53.0	-0.4
VNA1	Neumayer--Stat	94.21	197	⇑P	P	18 24 53.7	+1.2
	comp=Z,69nm,1.0s						
VNA1				⇓SKS	SKSac	18 34 28.4	-1.4
VNA1				⇓PKKP	PKKPdf	18 41 49.2	-1.2
	comp=Z,92nm,1.0s						
M16K	Timber Creek	94.27	29	P	P	18 24 53.7	+0.7
	baz=265						
GUR	Goura	94.28	308	P	P	18 24 52.7	-1.0
VNA3	Neumayer Olymp	94.28	196	P	P	18 24 53.5	+0.6
	comp=Z,85nm,1.0s						
VNA3				⇑pP	pP	18 27 06.8	+3.2
VNA3				⇑PP	PP	18 28 50.5	+0.3
VNA3				⇑SKS	SKSac	18 34 27.8	-2.5
VNA3				⇑S	S	18 35 12.7	-0.2
VNA3				PKKP	PKKPdf	18 41 46.4	-3.9
	comp=Z,38nm,0.7s						
KEV	Kevo	94.29	340	IAmb	IAmb	18 24 53.1	
	comp=Z,328nm,1.1s						
PUNG	Punghina	94.30	314	⇑P	P	18 24 53.8	+0.3
BELA	Belgrano 2	94.31	187	IAmb	IAmb	18 28 50.0	
	comp=Z,222nm,1.4s						
N16K	Nishlik Lake	94.32	30	P	P	18 24 54.2	+1.0
	baz=265						
MARR	Marisel-Cluj	94.35	316	⇓P	P	18 24 53.9	+0.1
VAY	Valandovo	94.35	311	*i* P	P	18 24 52.8	-1.0
AGG	Agios Georgios	94.37	309	P	P	18 24 52.6	-1.4
SHIU	Shidnytsya	94.37	319	P	P	18 24 53.9	+0.2
TBI	Tubuai	94.42	114	*e*S	S	18 35 11.2	-4.8
	comp=Z,12µm,30.5s						
TBI				*e*SS	SS	18 41 47.0	-10
	comp=Z,15µm,27.8s						
F18K	Selawik	94.43	24	P	P	18 24 54.6	+1.0
	baz=265,SNR=228						
KLV	Kalavryta, Ach	94.44	308	P	P	18 24 53.8	-0.6
DEV	Deva	94.44	316	⇓P	P	18 24 54.4	+0.3
DEV	Deva	94.44	316	⇓P	P	18 24 54.4	+0.3
KORU	Korolevo	94.45	318	P	P	18 24 54.1	+0.1
GRG	Griva	94.45	311	P	P	18 24 53.4	-0.9
KALE	Kalithea	94.47	308	P	P	18 24 53.7	-0.8
MESR	Meseseni	94.50	317	⇑P	P	18 24 56.1	+1.8
MAKR	Makrakomi, Fth	94.52	309	P	P	18 24 53.8	-0.8
BRIU	Brid	94.53	318	P	P	18 24 54.7	+0.3
SERG	Sergoula	94.54	308	P	P	18 24 53.9	-0.8
ITM	Ithomi	94.55	307	IAmb	IAmb	18 24 55.6	
	comp=Z,843nm,1.6s						
ITM	Ithomi	94.55	307	P	P	18 24 54.4	-0.4
O16K	Kokwok River B	94.59	31	P	P	18 24 54.9	+0.5
	baz=266						
P16K	Nushagak River	94.60	31	P	P	18 24 54.7	+0.3
	baz=266,SNR=24						
DJES	Djerdap	94.63	314	⇓P	P	18 24 54.9	-0.1
DRGR		94.64	316	⇓P	P	18 24 54.9	-0.1
DRGR		94.64	316	⇓P	P	18 24 54.9	-0.1
THL	Klokotos Trika	94.65	309	P	P	18 24 53.5	-1.6
ANX	Ano Chora	94.66	308	P	P	18 24 55.2	-0.2
C19K	Lookout Ridge	94.67	21	P	P	18 24 56.4	+1.7
	baz=265						
L17K	Donlin	94.67	28	P	P	18 24 56.0	+1.2
	baz=266						
K17K	Iditarod	94.71	28	P	P	18 24 56.2	+1.3
	baz=266						
HERR	Herculane	94.72	314	⇓P	P	18 24 55.2	-0.2
R16K	Pilot Point	94.72	33	P	P	18 24 54.6	-0.5
	baz=266						
AMT	Artemida-Makis	94.75	307	P	P	18 24 55.5	-0.3
MUKU	Mukachevo	94.76	318	P	P	18 24 55.4	-0.1
EVR	Evrytania	94.77	308	P	P	18 24 55.5	-0.3
BERU	Beregovo	94.78	318	P	P	18 24 55.7	+0.2
DRO	Drossia	94.78	308	P	P	18 24 56.8	+0.9
G18K	Tagagawik	94.78	24	IAmb	IAmb	18 24 57.0	
	comp=Z,161nm,1.1s						
G18K	Tagagawik	94.78	24	P	P	18 24 55.7	+0.6
	baz=266						
ARA0	ARCESS Array S	94.80	339	*e*P	P	18 24 54.3	-0.9
ARA0				IVmB_BB		18 24 55.7	
	comp=Z,3µm,1.3s						
ARCES	ARCESS Array B	94.80	339	P	P	18 24 54.5	-0.7
	comp=Z,190nm,0.8s,baz=96,slow=6.3,SNR=256						
ARCES				PP	PP	18 28 50.7	-3.8
	comp=Z,86nm,0.8s,baz=90,slow=8.5,SNR=5.6						
ARCES				PKiKP	PKiKP	18 29 33.5	+0.5
	comp=Z,7.7nm,0.4s,baz=115,slow=1.1,SNR=7.1						
ARCES				S	SKSac	18 34 31.1	-1.7
	comp=Z,25nm,0.8s,baz=84,slow=12,SNR=8.5						
ARCES				PKKP	PKKPdf	18 41 48.0	-2.2
	comp=Z,2.1nm,0.4s,baz=247,slow=3.1,SNR=10						
	comp=Z,190nm,0.8s						
ARCES	ARCESS Array B	94.80	339	IAmb	IAmb	18 24 55.7	
	comp=Z,408nm,1.1s						
SUW	Suwalki	94.81	324	*e*P	P	18 24 55.2	-0.4
KWP	Kalwaria Pacla	94.83	319	*e*P	P	18 24 56.0	+0.2
KWP				*e*PP	PP	18 28 55.2	-0.1
KWP	Kalwaria Pacla	94.83	319	P	P	18 24 55.8	0.0
	comp=Z,551nm,1.2s						
H18K	Honhosa River	94.85	25	IAmb	IAmb	18 24 57.5	
	comp=Z,304nm,0.9s						
H18K	Honhosa River	94.85	25	P	P	18 24 56.4	+0.9
	baz=266						
CEI	Carei	94.87	317	⇑P	P	18 24 56.8	+0.8
CEI	Carei	94.87	317	⇑P	P	18 24 56.8	+0.8
PVO	Paravola	94.97	308	P	P	18 24 56.8	+0.2
HOLU	Holmets	94.97	318	P	P	18 24 54.9	-1.5
RLS	Riolos of Patr	94.98	308	P	P	18 24 57.2	+0.5
M17K	Holitna River	95.03	29	IAmb	IAmb	18 24 58.7	
	comp=Z,451nm,0.8s						
M17K	Holitna River	95.03	29	P	P	18 24 57.5	+1.1
	baz=267						
AXS	Araxos	95.06	308	P	P	18 24 57.3	+0.3
N17K	Nushagak Hills	95.10	30	P	P	18 24 57.6	+0.9
	baz=267						
O17K	Koliganek Bris	95.11	31	P	P	18 24 57.1	+0.4
	baz=267,SNR=45						
PPT2	Papeete2	95.14	108	*e*PKIKP	P	18 24 59.4	+1.4
	comp=Z,54nm,1.0s						
PPT2				*e*S	S	18 35 17.3	-5.1
	comp=Z,4µm,25.5s						
PPT2				*e*sS	sS	18 39 16.6	-0.2
	comp=Z,2µm,26.8s						
PPT2				*e*LR	LR	18 56 39.6	
	comp=Z,580nm,26.0s						
PPT2				*e*LR	LR	18 56 43.4	
	comp=Z,704nm,24.8s						
BOVS	Bovan	95.14	313	⇓P	P	18 24 56.9	-0.4
KPRO	Kipourio	95.18	310	P	P	18 24 56.7	-1.0
F19K	Shaleruckik Mo	95.19	23	IAmb	IAmb	18 24 58.3	
	comp=Z,179nm,0.9s						
F19K	Shaleruckik Mo	95.19	23	P	P	18 24 57.7	+0.7
	baz=267						
MDVR	Moldovita	95.21	314	⇓P	P	18 24 57.5	-0.2
TETR	Tetrakomo, Epi	95.21	309	P	P	18 24 58.0	+0.1
AMPL	Ampelaki	95.23	308	P	P	18 24 57.9	+0.1
Q16K	King Salmon	95.27	32	P	P	18 24 56.5	-1.0
	baz=267,SNR=10						
BZS	Buzias	95.32	315	⇓P	P	18 24 57.7	-0.4
BZS	Buzias	95.32	315	⇓P	P	18 24 57.7	-0.4
SIRR	Siria	95.33	316	⇑P	P	18 24 58.0	-0.2
PRMD	Pramanda	95.36	309	P	P	18 24 58.9	+0.4
TIAR	Tiarei	95.36	108	*e*PKIKP	P	18 25 00.6	+1.7
	comp=Z,107nm,0.8s						
R17L	Mt. Peulik Vol	95.38	33	P	P	18 24 57.6	-0.5
	baz=267						
P17K	Kvichak River	95.41	31	P	P	18 24 58.3	+0.2
	baz=267,SNR=31						
HOPEN	Hopen	95.41	346	*e*P	P	18 24 57.5	-0.3
HOPEN				IVmB_BB		18 25 12.5	
	comp=Z,3µm,5.6s						
L18K	Granite Mounta	95.43	28	P	P	18 24 59.1	+1.0
	baz=267						
G19K	Purcell Mounta	95.43	24	P	P	18 24 59.4	+1.2
	baz=267						
NEST	Nestorio	95.44	310	P	P	18 24 57.7	-1.2
LTHK	Lithakia	95.45	307	P	P	18 24 58.4	-0.5
GCSA	Galena City Sc	95.46	26	P	P	18 24 59.1	+0.9
	baz=267,SNR=35						
J18K	Innoko River	95.47	27	IAmb	IAmb	18 25 00.2	
	comp=Z,541nm,1.1s						
J18K	Innoko River	95.47	27	P	P	18 24 59.1	+0.7
	baz=267						
HAMF	Hammerfest	95.48	340	*e*P	P	18 24 57.8	-0.5
JAN	Janina	95.55	309	P	P	18 24 59.4	+0.1
KTK1	Kautokeino	95.57	339	*e*P	P	18 24 57.7	-1.0
KTK1				IVmB_BB		18 25 09.9	
	comp=Z,4µm,4.7s						
TIM	Timisoara	95.61	315	⇑P	P	18 25 00.7	+1.4
TIM	Timisoara	95.61	315	⇑P	P	18 25 00.7	+1.4
NYDR	Nydri-Lefkada	95.62	308	P	P	18 24 59.4	-0.1
EVGI	Lefkada island	95.65	308	P	P	18 24 59.4	-0.3
LKD2	Lefkada island	95.65	308	P	P	18 24 59.8	+0.1
Q17K	Contact Creek	95.66	32	P	P	18 24 58.4	-1.1
	baz=268						
H19K	Roundabout Mou	95.67	25	P	P	18 25 00.5	+1.3
	baz=268						
OHR	Ohrid	95.67	311	*i* P	P	18 24 59.0	-0.9
VLS	Valsamata	95.67	308	P	P	18 24 59.6	-0.3
D20K	Etivluk River	95.72	22	P	P	18 25 00.7	+1.3
	baz=268						
N18K	Kilae Creek	95.75	30	P	P	18 25 00.3	+0.6
	baz=268						
A21K	Barrow	95.80	19	P	P	18 25 01.0	+1.3
	baz=268						
M18K	Stony River	95.81	29	P	P	18 25 00.8	+0.9
	baz=268						
IGT	Igoumenitsa	95.95	309	P	P	18 25 00.6	-0.4
R9F13	Warsaw-Wawer	95.95	322	*e*P	P	18 25 00.7	0.0
	comp=Z,5.1nm,0.6s						
R9F13				*e*pP	pP	18 27 13.0	+1.4
R9F13				*e*PP	PP	18 29 04.3	+0.6
R9F13				*e*S	SKSac	18 34 39.7	+0.3
PHP	Peshkopia	95.97	311	P	P	18 25 00.1	-1.0
J19K	Poorman	95.98	26	IAmb	IAmb	18 25 02.8	

comp=Z,352nm,1.0s
J19K Poorman 95.98 26 P **P** 18 25 01.6 +1.0
baz=268
P18K Big Mountain, 96.04 31 P **P** 18 25 00.3 -0.7
baz=268,SNR=29
O18K Koktuh Hills 96.06 30 lAmb lAmb 18 25 02.6
comp=Z,220nm,0.9s
O18K Koktuh Hills 96.06 30 P **P** 18 25 01.4 +0.3
baz=268,SNR=56
BEL Belsk 96.15 321 *e*P **P** 18 25 02.0 +0.4
KECS Kecovo 96.23 318⇑ *e*P **P** 18 25 02.0 -0.1
KECS *e* 18 29 05.1
KECS *e* 18 34 40.7
KECS Kecovo 96.23 318 *e*PDIFF **P** 18 25 02.0 -0.1
KECS *e*PP **PP** 18 29 05.1 -0.9
KECS Kecovo 96.23 318⇑ *e*SKSp **SKSac** 18 34 40.7 -0.4
L19K White Mountain 96.29 28 lAmb lAmb 18 25 04.2
comp=Z,423nm,1.1s
L19K White Mountain 96.29 28 Pdiff **P** 18 25 03.0 +0.9
baz=269
H20K Anotleneega Mo 96.32 25 Pdiff **P** 18 25 03.1 +1.0
baz=269
A22K Sinclair Lake 96.33 19 Pdiff **P** 18 25 03.6 +1.6
baz=270
KEK Kerkira 96.37 309 P **P** 18 25 02.9 0.0
NIE Niedzica 96.38 319 *e*P **P** 18 25 03.4 +0.6
NIE Niedzica 96.38 319 P **P** 18 25 03.1 +0.3
comp=Z,1µmcomp=Z,113nm,1.2s
N19K Bonanza Creek 96.44 30 Pdiff **P** 18 25 03.6 +0.7
baz=269
I20K Naaghedeneel 96.49 26 Pdiff **P** 18 25 04.2 +1.3
baz=270
M19K Big River Lodg 96.50 28 Pdiff **P** 18 25 04.1 +1.1
baz=269
O19K Port Alsworth 96.51 30 Pdiff **P** 18 25 03.0 0.0
baz=269
SII Sitkinak Islan 96.53 34 lAmb lAmb 18 25 04.4
comp=Z,330nm,0.8s
SII Sitkinak Islan 96.53 34 P **P** 18 25 03.7 +0.4
SII Sitkinak Islan 96.53 34 Pdiff **P** 18 25 03.8 +0.6
baz=269
JETT Jettan, Norway 96.59 339 *e*Pdif **P** 18 25 02.5 -0.8
JETT IVmB_BB 18 25 03.6
comp=Z,4µm,1.3s
JETT *e*SKSac **SKSac** 18 34 40.1 -2.0
PSZ Piszkesteto 96.61 317 lAmb lAmb 18 29 09.1
comp=Z,339nm,1.1s
PSZ Piszkesteto 96.61 317 ⇓P **P** 18 25 03.9 0.0
PSZ Piszkesteto 96.61 317 ⇓P **P** 18 25 03.9 0.0
J20K Nowinta River 96.63 26 lAmb lAmb 18 25 05.9
comp=Z,410nm,1.3s
J20K Nowinta River 96.63 26 Pdiff **P** 18 25 04.6 +1.1
baz=270
K20K Telida 96.66 27 lAmb lAmb 18 25 06.0
comp=Z,404nm,1.0s
K20K Telida 96.66 27 Pdiff **P** 18 25 04.8 +1.1
baz=270
E21K Killik River 96.69 22 Pdiff **P** 18 25 04.8 +1.0
baz=270
OJC Ojcow 96.73 320 *e*P **P** 18 25 04.4 +0.1
OJC Ojcow 96.73 320 P **P** 18 25 04.2 -0.1
comp=Z,3µmcomp=Z,190nm,1.2s
Q19K Cape Douglas, 96.84 31 Pdiff **P** 18 25 03.7 -0.9
baz=270
B22K Teshekpuk Lake 96.85 20 Pdiff **P** 18 25 05.7 +1.3
baz=271
PDG Podgorica 96.88 312 lAmb lAmb 18 25 05.6
comp=Z,268nm,0.8s
PDG Podgorica 96.88 312 ⇓P **P** 18 25 04.7 -0.5
F21K Alatna River 96.89 23 lAmb lAmb 18 25 06.7
comp=Z,418nm,1.9s
F21K Alatna River 96.89 23 Pdiff **P** 18 25 05.4 +0.7
baz=271
G21K Allakaket 96.89 24 Pdiff **P** 18 25 05.8 +1.1
baz=271
BJO1 Bjornoya 96.91 344 *e*P **P** 18 25 03.8 -0.7
OHAK Old Harbor 97.03 33 P **P** 18 25 05.5 +0.1
OHAK Old Harbor 97.03 33 Pdiff **P** 18 25 05.5 +0.1
baz=270
P19K Oil Pt 97.06 31 Pdiff Pdif 18 25 04.6 -1.0
baz=270
M20K Styx River 97.10 28 lAmb lAmb 18 25 12.0
comp=Z,276nm,1.0s
M20K Styx River 97.10 28 Pdiff **P** 18 25 06.5 +0.7
baz=270
TRO Tromso 97.10 339 *e*P Pdif 18 25 04.6 -0.9
D22K Ayikyak River 97.15 21 lAmb lAmb 18 25 07.8
comp=Z,150nm,0.9s
D22K Ayikyak River 97.15 21 Pdiff **P** 18 25 07.1 +1.3
baz=272
H21K Melozitna Rive 97.19 25 lAmb lAmb 18 25 08.5
comp=Z,188nm,1.1s
H21K Melozitna Rive 97.19 25 Pdiff **P** 18 25 07.2 +1.2
baz=271
SPA0 Spitsbergen Ar 97.28 348 *e*Pdif Pdif 18 25 06.0 -0.2
SPITS Spitsbergen Ar 97.28 348 P Pdif 18 25 05.9 -0.3
comp=Z,590nm,0.7s,baz=96,slow=7.6,SNR=796
SPITS pP pP 18 27 17.7 +0.4
comp=Z,85nm,1.0s,baz=98,slow=10,SNR=3.9
SPITS PP **PP** 18 29 09.2 -3.9
comp=Z,75nm,0.9s,baz=92,slow=21,SNR=3.7
SPITS PKiKP **PKiKP** 18 29 38.1 +0.9
comp=Z,29nm,0.7s,baz=177,slow=2.7,SNR=2.0
SPITS S **SKSac** 18 34 44.0 -1.4
comp=Z,20nm,1.0s,baz=329,slow=47,SNR=2.2
SPITS PKKPbc **PKKPbc** 18 41 41.8 -3.4
comp=Z,16nm,1.0s,baz=280,slow=4.9,SNR=6.7
comp=Z,590nm,0.7s
KDAK Kodiak Island 97.41 33 P **P** 18 25 07.2 +0.1
comp=Z,265nm,0.8s,baz=265,slow=2.9,SNR=54
KDAK PP **PP** 18 29 09.7 -4.8
comp=Z,98nm,0.9s,baz=264,slow=4.0,SNR=7.2
KDAK PKiKP **PKiKP** 18 29 38.7 +0.8
comp=Z,25nm,0.8s,baz=132,slow=2.1,SNR=0.8
comp=Z,265nm,0.8s
KDAK Kodiak Island 97.41 33 lAmb lAmb 18 25 08.3
comp=Z,328nm,0.8s
KDAK Kodiak Island 97.41 33 Pdiff **P** 18 25 07.2 +0.1
baz=270
MORH Mrgy, Hungar 97.42 316 ⇓P Pdif 18 25 06.8 -0.6
MORH Mrgy, Hungar 97.42 316 P Pdif 18 25 06.8 -0.6
comp=Z,1µmcomp=Z,74nm,1.3s
CHUM Lake Minchumin 97.44 26 Pdiff **P** 18 25 08.2 +1.1
baz=271
Q20K Shuyak Island 97.50 32 Pdiff Pdif 18 25 07.5 0.0
baz=271
PPLA Purkeypile 97.52 27 Pdiff **P** 18 25 08.1 +0.3
baz=271
I21K Tanana 97.54 25 Pdiff **P** 18 25 08.8 +1.2
baz=272
SPCR Spurr Chakacha 97.55 29 Pdiff Pdif 18 25 07.5 -0.3
baz=271
HSPB Hornsund (broa 97.58 347 *e*P Pdif 18 25 07.0 -0.5
SRO Srobarova 97.67 317 *e*P **P** 18 25 08.7 +0.2
SRO *e* 18 29 15.5
SRO Srobarova 97.67 317 *e*PDIFF **P** 18 25 08.7 +0.2
SRO *e*PP **PP** 18 29 15.5 -1.3
H22K Ishtalitna Cre 97.77 24 Pdiff **P** 18 25 10.0 +1.4
baz=272
OKC Ostrava-Krasne 97.79 319 *i* P **P** 18 25 09.3 +0.3
OKC Ostrava-Krasne 97.79 319 *e*PDIFF **P** 18 25 09.3 +0.3
SKT Skwentna 97.85 28 Pdiff Pdif 18 25 08.4 -0.7
baz=272
HOM Homer 97.86 31 Pdiff Pdif 18 25 08.8 -0.3
baz=271
D23K Nanushuk River 97.87 21 Pdiff **P** 18 25 10.6 +1.6
baz=274
MAUC Maruska 98.00 319 *e*PDIFF Pdif 18 25 09.9 -0.1
MAUC *e*PP **PP** 18 29 15.6 -3.7
MAUC *e*SKS **SKSac** 18 34 51.7 +1.6
BPAW Bear Paw Mtn. 98.02 26 Pdiff **P** 18 25 10.1 +0.4
baz=273
STEB Steborice 98.03 319 *e*PDIFF **P** 18 25 10.5 +0.4
STEB *e*PKKP **PKKPbc** 18 41 40.3 -2.0
KBS Kingsbay 98.06 349 *e*P Pdif 18 25 09.3 -0.4
KBS IVmB_BB 18 25 10.1
comp=Z,4µm,1.0s
KBS Kingsbay 98.06 349 *i* P Pdif 18 25 08.8 -0.8
CAPN Captain Cook N 98.08 30 Pdiff **P** 18 25 10.7 +0.7
baz=272
JAVC Velka Javorina 98.10 318 *e*PDIFF **P** 18 25 11.4 +0.9
JAVC *e*PP **PP** 18 29 19.2 -0.9
JAVC *e*SKS **SKSac** 18 34 53.3 +2.6
JAVC *e*PKKP **PKKPbc** 18 41 42.3 +0.1
COLD Coldfoot 98.16 23 Pdiff **P** 18 25 11.7 +1.3
baz=274

MORC Moravsky Berou 98.18 319 ⇓P **P** 18 25 11.6 +0.7
MORC Moravsky Berou 98.18 319 ⇓P **P** 18 25 11.6 +0.7
MORC Moravsky Berou 98.18 319 *e*PDIFF **P** 18 25 11.2 +0.3
MORC *e*PP **PP** 18 29 20.3 -0.4
MORC *e*SKS **SKSac** 18 34 51.4 +0.4
MORC *e*PKKP **PKKPbc** 18 41 41.2 -0.8
MPLH Magyarpolny 98.19 317 P **P** 18 25 11.0 +0.1
comp=Z,5µmcomp=Z,355nm,1.3s
SUA Susitna One 98.25 29 Pdiff Pdif 18 25 10.6 -0.4
baz=272
G23K Bananza Creek 98.27 24 Pdiff **P** 18 25 12.2 +1.3
baz=274
TOLK Toolik Lake Re 98.30 22 Pdiff **P** 18 25 12.2 +1.3
baz=275
BRSE Bradley Lake S 98.32 31 Pdiff Pdif 18 25 10.9 -0.3
baz=272
E23K Chandalar 98.33 22 Pdiff **P** 18 25 12.5 +1.3
baz=274
GKP Gorka Klasztor 98.33 323 *e*P Pdif 18 25 11.1 -0.2
TRF Thorofare Moun 98.36 27 Pdiff Pdif 18 25 11.4 0.0
baz=273
MODS Modra-Piesok 98.36 318⇑ *e*P **P** 18 25 11.7 0.0
MODS *e* 18 29 19.9
MODS *e* 18 34 52.0
MODS Modra-Piesok 98.36 318 *e*PDIFF **P** 18 25 11.7 0.0
MODS *e*PP **PP** 18 29 19.9 -2.1
MODS Modra-Piesok 98.36 318⇑ *e*SKSp **SKSac** 18 34 52.0 +0.1
MODS *e* 18 41 40.4
CUT Chulitna 98.42 28 Pdiff Pdif 18 25 11.3 -0.3
baz=273
BLY Banja Luka 98.43 314 ⇑P **P** 18 25 12.1 +0.1
ZST Bratislava 98.48 318 *e*P Pdif 18 25 12.1 0.0
ZST *e* 18 29 22.0
ZST Bratislava 98.48 318 *e*PDIFF Pdif 18 25 12.1 0.0
ZST *e*PP **PP** 18 29 21.9 -1.0
M22K Willow 98.53 29 Pdiff Pdif 18 25 11.5 -0.5
baz=273
STEI Steigen 98.54 338 *e*P Pdif 18 25 11.0 -0.9
STEI IVmB_BB 18 25 11.8
comp=Z,3µm,0.8s
FAUS Fauske 98.57 337 *e*P Pdif 18 25 11.1 -1.0
I23K Minto, Yukon-K 98.65 25 Pdiff **P** 18 25 13.6 +1.1
baz=274
TIP Timpagrande 98.70 309 ⇓P **P** 18 25 14.1 +0.5
E24K Your Creek 98.75 22 Pdiff **P** 18 25 14.0 +1.0
baz=276
RC01 Rabbit Creek A 98.75 29 Pdiff Pdif 18 25 12.9 -0.2
baz=273
O22K Cooper Landing 98.79 30 Pdiff Pdif 18 25 13.2 0.0
baz=273
VRAC Vranov 98.81 319 ⇓P **P** 18 25 13.7 +0.1
VRAC Vranov 98.81 319 ⇓P **P** 18 25 13.7 +0.1
VRAC Vranov 98.81 319 *e*PDIFF **P** 18 25 13.8 +0.1
VRAC *e*PP **PP** 18 29 23.1 -2.2
VRAC *e*SKS **SKSac** 18 34 54.4 +0.4
VRAC *e*PKKP **PKKPbc** 18 41 38.7 -1.5
NEA2 Nenana 98.82 26 Pdiff Pdif 18 25 13.2 -0.1
baz=274
KRUC Moravsky 98.94 319 *e*PDIFF Pdif 18 25 14.1 -0.1
KRUC *e*PP **PP** 18 29 24.7 -1.6
KRUC *e*SKS **SKSac** 18 34 56.0 +1.3
KRUC *e*PKKP **PKKPbc** 18 41 38.6 -1.2
MCK McKinley 98.94 26 Pdiff Pdif 18 25 13.8 0.0
baz=274
SEW Seward 98.95 30 Pdiff **P** 18 25 14.0 0.0
baz=273
DPC Dobruska-Polom 98.96 320 *i* P Pdif 18 25 14.1 -0.2
DPC *e* 18 29 22.1
DPC Dobruska-Polom 98.96 320 *e*PDIFF Pdif 18 25 14.1 -0.2
DPC *e*PP **PP** 18 29 22.1 -4.4
DPC Dobruska-Polom 98.96 320 P **P** 18 25 14.8 +0.4
comp=Z,2µmcomp=Z,97nm,1.4s
KSP Ksiaz 98.97 320 *e*P **P** 18 25 14.7 +0.4
KSP *e*PP **PP** 18 29 26.0 -0.5
KSP Ksiaz 98.97 320 P **P** 18 25 14.5 +0.2
comp=Z,127nm,1.1s
PMR Palmer 99.01 29 P **Pdif** 18 25 14.1 -0.1
PMR Palmer 99.01 29 Pdiff **Pdif** 18 25 14.1 -0.1
baz=274
MOR8 Moi Rana 99.02 336 *e*P **Pdif** 18 25 12.6 -1.6
MOR8 IVmB_BB 18 25 30.9
comp=Z,5µm,3.6s
OSTC Ostas 99.02 320 *i* P **Pdif** 18 25 15.6 +1.1
OSTC *e* 18 29 23.8
OSTC Ostas 99.02 320 *e*PDIFF **Pdif** 18 25 15.6 +1.1
OSTC *e*PP **PP** 18 29 23.8 -3.1
OSTC *e*PKKP **PKKPbc** 18 41 38.2 -1.5
RONA Rosalia, Austr 99.03 317 *i* Pdiff **Pdif** 18 25 14.3 -0.4
comp=Z,33nm,1.3s,SNR=5.9
RONA *i* PP **PP** 18 29 23.5 -3.6
comp=Z,105nm,1.2s
RONA *e*SKS **SKSac** 18 34 57.8 +2.5
comp=Z,16nm,1.1s
RONA Rosalia, Austr 99.03 317 *i* P **PKKPbc** 18 41 38.4 -1.2
comp=Z,8.2nm,0.5s
KOGS Kog 99.08 316 *i* Pdiff **Pdif** 18 25 14.7 -0.1
KOGS *i* PP **PP** 18 29 25.6 -1.8
CHVC Chvalec 99.12 320 *i* P **Pdif** 18 25 14.1 -0.9
CHVC *e* 18 29 23.8
CHVC Chvalec 99.12 320 *e*PDIFF **Pdif** 18 25 14.1 -0.9
CHVC *e*PP **PP** 18 29 23.8 -3.9
RAUS Rausandaksla 99.15 336 *e*P **Pdif** 18 25 13.6 -1.1
RAUS *e*SKSac **SKSac** 18 34 54.8 -0.2
UPC Upice 99.15 320 *i* P **Pdif** 18 25 15.0 -0.1
UPC *e* 18 29 25.2
UPC Upice 99.15 320 *e*PDIFF **Pdif** 18 25 15.0 -0.1
UPC *e*PP **PP** 18 29 25.2 -2.7
LOF Lofoten 99.16 338 *e*P **Pdif** 18 25 13.5 -1.2
WAT1 Susitna Watana 99.19 27 Pdiff **Pdif** 18 25 14.9 -0.1
baz=275
H24K Noodor Dome 99.21 24 Pdiff **Pdif** 18 25 16.2 +1.2
baz=276
G24K Hadweenzic Riv 99.28 23 lAmb lAmb 18 25 25.2
comp=Z,101nm,0.8s
G24K Hadweenzic Riv 99.28 23 Pdiff **Pdif** 18 25 16.5 +1.2
baz=276
COLA College 99.31 25 P **Pdif** 18 25 16.2 +0.8
COLA College 99.31 25 ⇑P **Pdif** 18 25 15.4 0.0
COLA College 99.31 25 Pdiff **Pdif** 18 25 15.1 -0.3
baz=276
CONA Conrad Observa 99.32 317 *i* Pdiff **Pdif** 18 25 15.3 -0.7
comp=Z,26nm,1.3s,SNR=7.5
CONA *i* PP **PP** 18 29 26.7 -2.5
comp=Z,500nm,2.1s,SNR=7.3
CONA *e*SKS **SKSac** 18 35 01.1 +4.3
comp=Z,6.0nm,0.9s
CONA *i* PKKP **PKKPbc** 18 41 37.8 -1.0
comp=Z,31nm,0.7s,SNR=22
KNK Knik Glacier 99.34 29 Pdiff **Pdif** 18 25 16.2 +0.5
baz=274
D25K Kavik River 99.37 21 Pdiff **Pdif** 18 25 16.6 +0.9
baz=278
SML Sawmill 99.37 28 Pdiff **Pdif** 18 25 16.2 +0.3
baz=275
VAGH Vaagaholmen 99.43 337 *e*P **Pdif** 18 25 15.4 -0.4
POKR Poker Plat Res 99.47 25 Pdiff **Pdif** 18 25 15.7 -0.4
baz=276
KONS Konsvik 99.51 336 *e*P **Pdif** 18 25 15.5 -0.7
TREC Trest 99.53 319 *i* P **Pdif** 18 25 17.1 +0.3
TREC Trest 99.53 319 *e*PDIFF **Pdif** 18 25 17.1 +0.3
LEIR Leirfjorden 99.56 336 *e*P **Pdif** 18 25 15.8 -0.7
LEIR IVmB_BB 18 25 24.9
comp=Z,6µm,4.0s
ARSA Arzberg 99.56 317 *i* Pdiff **Pdif** 18 25 16.8 -0.2
comp=Z,54nm,1.5s,SNR=11
ARSA *i* PP **PP** 18 29 29.8 -1.2
comp=Z,94nm,1.0s,SNR=5.6
ARSA *i* SKS **SKSac** 18 34 58.3 +0.5
comp=Z,19nm,1.2s
ARSA *i* PKKP **PKKPbc** 18 41 36.9 -1.2
comp=Z,12nm,0.9s,SNR=4.3
ARSA Arzberg 99.56 317 *i* P **PKKPbc** 18 41 36.9 -1.2
comp=Z,12nm,0.9s,SNR=4.3
STOK Stokkvaagen 99.57 336 *e*P **Pdif** 18 25 15.3 -1.2
WAT6 Susitna Watana 99.58 28 Pdiff **Pdif** 18 25 17.4 +0.5
baz=275
BSD Bornholm Skovb 99.63 325 *i* P **Pdif** 18 25 16.6 -0.4
BSD lAmb lAmb 18 25 17.1
comp=Z,96nm,1.1s
M23K Glacier View 99.66 28 Pdiff **Pdif** 18 25 17.5 +0.4
baz=275
DHY Denali Highway 99.70 27 Pdiff **Pdif** 18 25 17.8 +0.3
baz=276
ILAR Eielson Array 99.73 25 P **Pdif** 18 25 16.2 -1.1
comp=Z,26nm,0.6s,baz=273,slow=4.1,SNR=283

ILAR pP **pP** 18 27 28.7 0.0
comp=Z,19nm,1.1s,baz=284,slow=6.6,SNR=2.7
ILAR PKiKP **PKiKP** 18 29 43.0 +1.2
comp=Z,22nm,0.8s,baz=277,slow=2.9,SNR=5.3
ILAR S **SKSac** 18 34 55.6 -2.3
comp=Z,2.3nm,0.7s,baz=269,slow=12,SNR=5.5
ILAR PKKPbc **PKKPbc** 18 41 35.0 -3.1
comp=Z,10.0nm,0.6s,baz=103,slow=1.4,SNR=22
ILAR SKKP **SKKPdf** 18 44 19.1 -0.6
comp=Z,15nm,0.9s,baz=95,slow=1.8,SNR=12
ILAR PKPPKP **P'P'df** 18 49 51.8 +1.4
comp=Z,5.3nm,1.2s,baz=128,slow=1.8,SNR=6.2
comp=Z,26nm,0.6s
HDA Harding Lake 99.75 26 Pdiff **Pdif** 18 25 17.0 -0.5
baz=276
BOJS Bojanci 99.79 315 *i* Pdiff **Pdif** 18 25 18.0 0.0
BOJS *i* PP **PP** 18 29 29.9 -2.9
E25K Arctic Village 99.83 22 Pdiff **Pdif** 18 25 19.2 +1.4
baz=278
SCM Sheep Creek Mo 99.85 28 Pdiff **Pdif** 18 25 18.6 +0.6
baz=276
F25K Christian Rive 99.88 22 Pdiff **Pdif** 18 25 19.6 +1.6
baz=278
SOKA Soboth 99.91 316 *i* Pdiff **Pdif** 18 25 18.6 -0.1
comp=Z,58nm,1.3s,SNR=13
SOKA *i* PP **PP** 18 29 32.1 -1.7
comp=Z,236nm,1.3s,SNR=7.2
SOKA *i* SKS **SKSac** 18 35 06.3 +6.6
comp=Z,11nm,1.1s
SOKA *i* PKKP **PKKPbc** 18 41 35.9 -1.2
comp=Z,4.3nm,0.5s
HFS Hagfors 99.92 330 P **Pdif** 18 25 18.3 0.0
comp=Z,297nm,0.8s,baz=97,slow=3.4,SNR=192
HFS PP **PP** 18 29 33.5 +0.3
comp=Z,123nm,0.8s,baz=102,slow=6.2,SNR=7.3
HFS PKKPbc **PKKPbc** 18 41 34.5 -2.9
comp=Z,4.6nm,0.6s,baz=198,slow=4.2,SNR=8.9
comp=Z,297nm,0.8s
P23K Montague Islan 99.98 30 Pdiff **Pdif** 18 25 19.2 +0.7
baz=275
PVCC Panska Ves 100.07 320 *i* P **Pdif** 18 25 19.5 +0.3
PVCC Panska Ves 100.07 320 *e*PDIFF **Pdif** 18 25 19.5 +0.3
PRU Pruhonice 100.12 320 *e*PDIFF **Pdif** 18 25 19.5 +0.1
PRU *e*PP **PP** 18 29 31.9 -3.1
PRU *e*SKS **SKSac** 18 35 01.5 +1.2
DEL Delary 100.13 326 *i* P **Pdif** 18 25 19.5 +0.3
PRP Porcupine Dome 100.21 25 Pdiff **Pdif** 18 25 19.5 -0.1
baz=278
NSS Namsos 100.23 334 *e*P **Pdif** 18 25 18.6 -0.9
C27K Jago River 100.25 20 Pdiff **Pdif** 18 25 21.2 +1.6
baz=280
OBKA Obir 100.25 316 *i* Pdiff **Pdif** 18 25 20.2 0.0
comp=Z,42nm,1.4s
OBKA *i* PP **PP** 18 29 33.9 -2.3
comp=Z,186nm,1.0s
OBKA *i* SKS **SKSac** 18 35 05.8 +4.5
comp=Z,20nm,1.3s
LJU Ljubljana 100.28 316 *i* Pdiff **Pdif** 18 25 20.4 +0.1
LJU *i* PP **PP** 18 29 34.2 -2.2
LJU *e*SKSac **SKSac** 18 35 02.1 +0.8
CKRC Cesky Krumlov 100.32 318 *i* P **Pdif** 18 25 20.7 +0.4
CKRC *e* 18 29 34.4
CKRC *e* 18 35 01.3
CKRC Cesky Krumlov 100.32 318 *e*PDIFF **Pdif** 18 25 20.7 +0.4
CKRC *e*PP **PP** 18 29 34.4 -2.2
CKRC *e*SKS **SKSac** 18 35 01.3 -0.1
CKRC *e*PKKP **PKKPbc** 18 41 33.8 -2.2
K24K Donnelly Dome 100.33 26 Pdiff **Pdif** 18 25 20.3 +0.2
baz=277
M24K Tolsona, Glenn 100.36 28 Pdiff **Pdif** 18 25 21.4 +1.1
baz=277
ZVC Zvikov 100.37 319 *e*PDIFF **Pdif** 18 25 20.4 -0.1
ZVC *e*PP **PP** 18 29 30.8 -6.1
ZVC *e*PKKP **PKKPbc** 18 41 34.6 -1.2
RICC Richard 100.37 320 *e*PDIFF **Pdif** 18 25 20.4 -0.1
MOA Molln 100.39 317 *i* Pdiff **Pdif** 18 25 20.5 -0.2
comp=Z,33nm,1.6s,SNR=8.1
MOA *i* PP **PP** 18 29 34.1 -3.1
comp=Z,193nm,1.0s,SNR=8.0
MOA *i* SKS **SKSac** 18 35 05.4 +3.5
comp=Z,18nm,1.1s
J25K Salcha River, 100.40 25 Pdiff **Pdif** 18 25 20.0 -0.4
baz=278
F26K Sheenjek River 100.42 22 Pdiff **Pdif** 18 25 21.9 +1.5
baz=280
LUNU Lund 100.43 325 *i* P **Pdif** 18 25 20.7 +0.1
BRG Berggiesshubel 100.45 320 *e*Pdif **Pdif** 18 25 21.3 +0.5
comp=Z,86nm,0.9s,baz=85,slow=4.5
BRG *e*PKKPbc **PKKPbc** 18 41 33.9 -1.7
baz=264,slow=2.9
BRG Berggiesshubel 100.45 320 ⇓ *i*Pif 18 25 21.3
BRG Amp 18 25 22.0
comp=Z,86nm,0.9s
BRG Berggiesshubel 100.45 320 sS sS 18 40 01.0 -1.7
BRG Berggiesshubel 100.45 320 SS SS 18 43 18.0 -1.5
RUE Ruedersdorf 100.46 322 *e*Pdiff **Pdif** 18 25 21.4 +0.6
baz=85,slow=4.5
KLU Klutina 100.55 29 Pdiff **Pdif** 18 25 22.0 +0.8
baz=277
Q23K Middleton Isla 100.57 31 Pdiff **Pdif** 18 25 22.0 +0.9
baz=276
PAX Paxson 100.58 27 Pdiff **Pdif** 18 25 22.0 +0.8
baz=277
BORU Boraas 100.62 327 *i* P **Pdif** 18 25 21.4 0.0
BJUU Bjuv 100.63 326 *i* P **Pdif** 18 25 21.7 +0.3
G26K Porcupine Rive 100.69 23 Pdiff **Pdif** 18 25 23.2 +1.7
baz=280
GEC2 GERESS Array S 100.72 318 *e*Pdiff **Pdif** 18 25 22.4 +0.2
comp=Z,47nm,0.9s,baz=85,slow=4.5
GEC2 *e*PKKPbc **PKKPbc** 18 41 33.7 -1.2
baz=264,slow=2.9
GEC2 *e*L L 19 15 57.5
comp=Z,969nm,19.9s
GERES GERESS Array B 100.72 318 P **Pdif** 18 25 22.2 0.0
comp=Z,14nm,0.7s,baz=72,slow=4.3,SNR=90
GERES pP **pPdif** 18 27 32.8 -0.5
comp=Z,2.0nm,0.7s,baz=75,slow=6.9,SNR=1.9
GERES PP **PP** 18 29 35.0 -4.7
comp=Z,26nm,0.8s,baz=66,slow=7.8,SNR=10
GERES PKiKP **PKiKP** 18 29 44.6 +0.3
comp=Z,19nm,0.7s,baz=69,slow=3.3,SNR=4.3
GERES PKKPbc **PKKPbc** 18 41 33.8 -1.2
comp=Z,4.4nm,0.6s,baz=230,slow=1.1,SNR=14
GERES PKPPKP **P'P'df** 18 49 50.2 +0.6
comp=Z,1.3nm,1.1s,baz=250,slow=3.8,SNR=3.9
RIDG Independent Ri 100.75 26 Pdiff **Pdif** 18 25 22.5 +0.6
baz=278
KHC Kasperske Hory 100.79 319 *i* P **Pdif** 18 25 22.0 -0.4
KHC Kasperske Hory 100.79 319 *e*PDIF **Pdif** 18 25 22.0 -0.4
KHC *ex* x 18 28 04.5
KHC *e*PP PP 18 29 31.0 -9.1
KHC *e*PKKP **PKKPbc** 18 41 33.0 -1.7
HSKC Hora Svate Kat 100.79 320 *e*PDIFF **Pdif** 18 25 22.5 +0.1
HARP HAARP 100.80 28 Pdiff **Pdif** 18 25 23.2 +1.1
baz=278
BIOA Bad Ischl, Aus 100.82 317 *i* Pdiff **Pdif** 18 25 21.9 -0.7
comp=Z,32nm,1.3s,SNR=8.9
BIOA *i* PP **PP** 18 29 38.0 -2.4
comp=Z,54nm,0.9s
BIOA *e*SKS **SKSac** 18 35 06.6 +2.7
comp=Z,26nm,1.3s
BIOA *i* PKKP **PKKPbc** 18 41 33.2 -1.3
comp=Z,11nm,0.5s
BIOA *e*P'P' **P'P'df** 18 49 49.7 +0.3
comp=Z,13nm,1.6s
MYKA Terra Mystica 100.87 316 *i* Pdiff **Pdif** 18 25 22.5 -0.5
comp=Z,9.4nm,0.7s
MYKA *i* PP **PP** 18 29 41.0 +0.1
comp=Z,118nm,1.3s
MYKA *i* SKS **SKSac** 18 35 06.1 +1.8
comp=Z,52nm,1.2s
MYKA *i* PKKP **PKKPbc** 18 41 33.4 -1.0
comp=Z,6.8nm,0.6s
MYKA *e*P'P' **P'P'df** 18 49 44.7 -4.8
comp=Z,8.9nm,1.2s
NC602 NORSAR Array S 100.91 331 *e*Pdif **Pdif** 18 25 22.4 -0.3
CLL Collm 101.02 321 ⇓ *i*P **Pdif** 18 25 23.1 -0.2
CLL *i* 18 29 39.7
CLL *e* 18 35 03.0
CLL *e*S **Sdif** 18 36 08.0 -2.2
CLL pmax pmax
comp=Z,79nm,1.1s
CLL pmax pmax
comp=Z,80nm,1.1s
CLL Collm 101.02 321 P **Pdif** 18 25 23.2 -0.1
comp=Z,73nm,1.4s

CLL Collm 101.02 321 ǁ *i* Pdif **Pdif** **18 25 23.1 -0.2**
comp=Z,79nm,1.1s
CLL *ep* Pdif **pPdif** **18 27 34.0 -0.5**
CLL *ex* x 18 27 45.0
CLL *es* Pdif **sPdif** **18 28 34.0 -0.1**
CLL *i* x x 18 28 55.0
CLL *ex* x 18 29 08.0
CLL *i* PP **PP** **18 29 39.7 -1.9**
comp=Z,80nm,1.1s
CLL *e* PPP PPP 18 31 48.0
CLL *es* PP 18 32 32.0
CLL *ex* x 18 33 16.0
CLL *es* PPP 18 34 39.0
CLL *e* SKSac **SKSac** **18 35 03.0 -1.6**
CLL *e* SKKSac **SKKSac** **18 35 42.0 -1.9**
CLL *e* Sdif **Sdif** **18 36 08.0 -2.2**
CLL *ex* x 18 36 37.0
CLL *e* SP **SP** **18 37 42.0 -4.4**
CLL *e* SPP SPP 18 38 39.0
CLL *e* PS **PS** **18 39 04.0 0.0**
CLL *ex* x 18 40 00.0
CLL *es* Sdif sSdif 18 40 03.0 -4.1
CLL *e* PKKPbc **PKKPbc** **18 41 31.0 -3.0**
comp=Z,18nm,0.9s
CLL *es* PS 18 41 32.0
CLL *ex* x 18 43 11.0
CLL *e* SS **SS** **18 43 31.0 +3.9**
CLL *es* SS 18 46 46.0
CLL *e* SSSS 18 50 48.0
CLL *ex* x 18 52 36.0
CLL Collm 101.02 321 *e* Pdiff **Pdif** **18 25 23.3 -0.1**
baz=85,slow=4.5
CLL *e* PKKPbc **PKKPbc** **18 41 32.9 -1.1**
baz=264,slow=2.9
CLL *e* L L 19 18 49.9
comp=Z,750nm,20.4s
NB2 NORSAR Subarra101.03 331 P **Pdif** **18 25 22.4 -0.8**
comp=Z,170nm,1.1s,baz=78,slow=4.6
NB2 PP **PP** **18 29 37.1 -4.4**
comp=Z,275nm,1.2s,baz=85,slow=7.4
NB2 PKKP **PKKPbc** **18 41 32.4 -2.0**
comp=Z,3.3nm,0.6s,baz=256,slow=2.5
NB2 NORSAR Subarra101.03 331 P **Pdif** **18 25 22.4 -0.8**
NB2 AMP 18 25 22.4
comp=Z,170nm,1.1s
NOA NORSAR Array B 101.03 331 P **Pdif** **18 25 22.7 -0.5**
comp=Z,59nm,0.9s,baz=77,slow=4.5,SNR=84
NOA PP **PP** **18 29 37.6 -3.9**
comp=Z,37nm,0.7s,baz=83,slow=7.7,SNR=6.9
NOA PKKPbc **PKKPbc** **18 41 32.5 -2.0**
comp=Z,2.7nm,0.7s,baz=259,slow=4.3,SNR=8.5
KBA Koelnbreinsper 101.05 317 *i* Pdiff **Pdif** **18 25 23.1 -0.8**
comp=Z,26nm,1.3s
KBA *i* PP **PP** **18 29 40.1 -2.1**
comp=Z,102nm,1.0s
KBA *e* SKS **SKSac** **18 35 06.3 +0.9**
comp=Z,87nm,1.2s
KBA *i* PKKP **PKKPbc** **18 41 33.0 -1.0**
comp=Z,8.7nm,0.6s
SCRK Sand Creek 101.09 26 Pdiff **Pdif** **18 25 24.4 +0.8**
baz=279
ONAU Onsala 101.11 327 *i* P **Pdif** **18 25 23.9 +0.3**
N25K Chitina, Valde 101.16 28 Pdiff **Pdif** **18 25 25.1 +1.2**
baz=278
J26L Joseph Creek 101.19 25 Pdiff **Pdif** **18 25 24.5 +0.6**
baz=280
TJOU Tjoern 101.19 328 *i* P **Pdif** **18 25 24.3 +0.4**
AQU L'Aquila 101.22 312 PKP **PP** **18 29 39.3 -4.2**
WET Wettzell 101.25 319 *e* Pdiff **Pdif** **18 25 24.8 +0.4**
baz=85,slow=4.5
WET *e* PKKPbc **PKKPbc** **18 41 32.6 -0.7**
baz=264,slow=2.9
WET *e* L L 19 15 58.1
comp=Z,933nm,20.2s
BMRM Bremner River 101.25 29 Pdiff **Pdif** **18 25 25.1 +0.9**
baz=278
D27M Malcolm River 101.28 20 Pdiff **Pdif** **18 25 25.5 +1.3**
baz=283
E27K Coleen River 101.28 22 Pdiff **Pdif** **18 25 25.4 +1.2**
baz=282
STRU Stroemstad 101.30 329 *i* P **Pdif** **18 25 24.6 +0.2**
NOR Nord 101.39 353 *i* P **Pdif** **18 25 23.0 -1.4**
NOR IAmb IAmb 18 25 25.3
comp=Z,55nm,0.8s
OSL Oslo 101.42 330 *e* P **Pdif** **18 25 25.3 +0.4**
OSL IVmB_BB 18 25 26.4
comp=Z,3μm,1.3s
TANN Tannenbergstha 101.42 320 *e* Pdiff **Pdif** **18 25 25.5 +0.2**
baz=85,slow=4.5
TANN *e* PP **PP** **18 29 42.4 -2.3**
baz=79,slow=7.8
TANN *e* PKKPbc **PKKPbc** **18 41 32.2 -0.8**
baz=264,slow=2.9
NKC Novy Kostel 101.45 320 *i* P **Pdif** **18 25 25.3 0.0**
NKC *e* 18 29 43.1
NKC Novy Kostel 101.45 320 *e* PDIFF **Pdif** **18 25 25.3 0.0**
NKC *e* PP **PP** **18 29 43.1 -1.8**
NKC *e* PKKP **PKKPbc** **18 41 32.0 -0.8**
LESA Schwarzleotal 101.49 317 *i* Pdiff **Pdif** **18 25 24.8 -0.9**
comp=Z,44nm,1.6s,SNR=13
LESA *e* PP **PP** **18 29 41.1 -4.3**
comp=Z,158nm,1.2s
LESA *e* SKS **SKSac** **18 35 05.9 -1.2**
comp=Z,96nm,1.4s
LESA *i* PKKP **PKKPbc** **18 41 31.7 -0.9**
comp=Z,8.1nm,0.7s,SNR=4.7
LESA Schwarzleotal 101.49 317 *e* P **PKKPbc** **18 41 31.7 -0.9**
comp=Z,8.1nm,0.7s,SNR=4.7
L26K Log Cabin Wild 101.53 27 Pdiff **Pdif** **18 25 26.6 +1.2**
baz=279
G27K Doyon Strip 101.54 23 Pdiff **Pdif** **18 25 26.7 +1.3**
baz=282
PLN Plauen 101.61 320 *e* Pdiff **Pdif** **18 25 26.4 +0.3**
baz=85,slow=4.5
PLN *e* PKKPbc **PKKPbc** **18 41 31.6 -0.8**
baz=264,slow=2.9
ROTZ Rotzenmuhle 101.64 319 *e* Pdiff **Pdif** **18 25 26.8 +0.6**
baz=85,slow=4.5
ROTZ *e* PP **PKiKP** **18 29 43.6 -2.1**
baz=79,slow=7.8
ROTZ *e* PKKPbc **PKKPbc** **18 41 31.5 -0.7**
baz=264,slow=2.9
ABTA Abfaltersbach 101.64 316 *i* Pdiff **Pdif** **18 25 25.7 -0.6**
comp=Z,25nm,1.2s,SNR=5.4
ABTA *i* PKiKP **PKiKP** **18 29 43.6 -2.4**
ABTA comp=Z,91nm,1.2s *e* SKS **SKSac** **18 35 06.9 -1.1**
ABTA comp=Z,81nm,1.5s *i* PKKP **PKKPbc** **18 41 31.2 -1.0**
ABTA comp=Z,7.4nm,0.9s *i* P'P' **P'P'df** **18 49 43.2 -4.9**
comp=Z,10nm,1.4s
MANZ Manzenberg 101.68 320 *e* Pdiff **Pdif** **18 25 27.0 +0.6**
baz=85,slow=4.5
MANZ *e* PKKPbc **PKKPbc** **18 41 30.8 -1.3**
baz=264,slow=2.9
H27K Steamboat Moun 101.71 24 Pdiff **Pdif** **18 25 27.8 +1.6**
baz=282
M26K Nabesna, AK 101.79 28 Pdiff **Pdif** **18 25 27.7 +1.1**
baz=280
NEUB Neuenburg 101.79 321 *e* Pdiff **Pdif** **18 25 27.2 +0.4**
baz=85,slow=4.5
NEUB *e* PKKPbc **PKKPbc** **18 41 31.1 -0.7**
baz=264,slow=2.9
I27K Kandik River 101.80 24 Pdiff **Pdif** **18 25 28.1 +1.5**
baz=282
DOMB Dombas 101.90 332 *e* P **Pdif** **18 25 27.2 +0.1**
GORT1 Trebel 101.91 323 *e* Pdiff **Pdif** **18 25 27.6 +0.4**
baz=85,slow=4.5
E28M Babbage River 101.93 21 Pdiff **Pdif** **18 25 28.2 +1.2**
baz=284
MCARA McCarthy VSAT 101.94 29 Pdiff **Pdif** **18 25 28.6 +1.3**
baz=279
MOX Moxa 101.94 320 *e* Pdiff **Pdif** **18 25 27.8 +0.3**
baz=85,slow=4.5
MOX *e* PP **PKiKP** **18 29 46.3 -0.1**
baz=79,slow=7.8
MOX *e* PKKPbc **PKKPbc** **18 41 30.6 -0.8**
baz=264,slow=2.9
MOX *e* L L 19 19 09.3
comp=Z,836nm,19.7s
CRQE Cirque 102.01 29 Pdiff **Pdif** **18 25 28.9 +1.1**
baz=279
BGLC Bering Glacier 102.02 30 Pdiff **Pdif** **18 25 29.4 +1.9**
baz=279
FLTG Flechtingen 102.02 322 *e* Pdiff **Pdif** **18 25 27.3 -0.4**
baz=85,slow=4.5
FLTG *e* PKKPbc **PKKPbc** **18 41 30.1 -1.1**
baz=264,slow=2.9
D28M Stokes Point 102.02 20 Pdiff **Pdif** **18 25 28.7 +1.3**
baz=285
KONO Kongsberg 102.02 330 *e* P **Pdif** **18 25 27.6 0.0**
KONO Kongsberg 102.02 330 ǁ P **Pdif** **18 25 27.8 +0.2**
F28M Old Crow 102.04 22 Pdiff **Pdif** **18 25 28.7 +1.1**
baz=284
L27K Beaver Creek, 102.20 27 Pdiff **Pdif** **18 25 30.2 +1.8**
baz=281
WTTA Wattenberg 102.20 317 *i* Pdiff **Pdif** **18 25 28.3 -0.6**
comp=Z,43nm,1.1s,SNR=11
WTTA *i* PKiKP **PKiKP** **18 29 47.2 +0.1**
comp=Z,148nm,1.2s
WTTA *i* SKS **SKSac** **18 35 15.2 +4.5**
comp=Z,46nm,1.0s
WTTA *i* PKKP **PKKPbc** **18 41 29.6 -1.1**
comp=Z,16nm,0.7s
WTTA *e* P'P' **P'P'df** **18 49 47.2 +0.1**
comp=Z,18nm,1.8s
WATA Walderalm 102.24 317 *i* Pdiff **Pdif** **18 25 28.1 -1.0**
comp=Z,51nm,1.1s,SNR=16
WATA *i* PKiKP **PKiKP** **18 29 47.3 +0.2**
comp=Z,200nm,1.2s,SNR=6.0
WATA *e* SKS **SKSac** **18 35 16.7 +5.9**
comp=Z,32nm,1.0s
WATA *i* PKKP **PKKPbc** **18 41 30.2 -0.4**
comp=Z,22nm,1.0s
WATA *i* P'P' **P'P'df** **18 49 47.4 +0.4**
comp=Z,22nm,2.1s
GRF Grafenberg Arr 102.28 319 *e* Pdiff **Pdif** **18 25 29.7 +0.6**
baz=85,slow=4.5
GRF *e* PP **PP** **18 29 49.6 -1.4**
baz=79,slow=7.8
GRF *e* L L 19 16 30.9
comp=Z,668nm,20.7s
M27K Edge Creek, AK 102.31 27 Pdiff **Pdif** **18 25 30.4 +1.3**
baz=281
FUR Furstenfeldbru 102.38 318 *e* Pdiff **Pdif** **18 25 29.4 -0.1**
baz=85,slow=4.5
FUR *e* PKKPbc **PKKPbc** **18 41 29.6 -0.5**
baz=264,slow=2.9
FUR *e* L L 19 16 50.8
comp=Z,921nm,21.1s
ASSE Asse, Remlinge 102.39 322 *e* Pdiff **Pdif** **18 25 29.6 +0.3**
baz=85,slow=4.5
BSEG Bad Segeberg 102.40 324 *e* Pdiff **Pdif** **18 25 30.1 +0.7**
baz=85,slow=4.5
BSEG *e* PKKPbc **PKKPbc** **18 41 29.6 -0.6**
baz=264,slow=2.9
BSEG *e* L L 19 13 50.1
comp=Z,468nm,20.7s
SQTA Sankt Quirin 102.50 317 *i* Pdiff **Pdif** **18 25 29.6 -0.6**
comp=Z,19nm,0.9s,SNR=9.9
SQTA *i* PKiKP **PKiKP** **18 29 47.8 +0.3**
comp=Z,44nm,0.6s
SQTA *i* SKS **SKSac** **18 35 11.5 -0.5**
comp=Z,66nm,1.2s
SQTA *i* PKKP **PKKPbc** **18 41 28.7 -1.2**
comp=Z,8.9nm,0.6s
SQTA *i* P'P' **P'P'df** **18 49 48.4 +1.9**
comp=Z,18nm,1.6s
MOL Molde 102.50 333 *e* P **Pdif** **18 25 30.4 +0.8**
I28M Miner Creek 102.52 24 Pdiff **Pdif** **18 25 31.0 +1.1**
baz=283
MOTA Moosalm 102.56 317 *i* Pdiff **Pdif** **18 25 29.9 -0.6**
comp=Z,52nm,1.0s,SNR=17
MOTA *i* PKiKP **PKiKP** **18 29 48.3 +0.6**
comp=Z,49nm,0.7s
MOTA *e* SKS **SKSac** **18 35 11.8 -0.5**
comp=Z,60nm,1.4s
MOTA *i* PKKP **PKKPbc** **18 41 28.0 -1.6**
comp=Z,9.9nm,0.6s
MOTA *i* P'P' **P'P'df** **18 49 45.4 -1.0**
comp=Z,15nm,1.5s
E29M Blow River 102.57 21 Pdiff **Pdif** **18 25 30.8 +0.9**
baz=286
CLZ Clausthal 102.60 322 *e* Pdiff **Pdif** **18 25 30.9 +0.4**
baz=85,slow=4.5
CLZ *e* PKKPbc **PKKPbc** **18 41 29.0 -0.5**
baz=264,slow=2.9
MESA MESA 102.67 30 Pdiff **Pdif** **18 25 32.3 +1.6**
baz=280
MUD Monsted U'grnd 102.72 326 *i* P **Pdif** **18 25 31.5 +0.7**
BVCY Beaver Creek 102.77 27 Pdiff **Pdif** **18 25 32.7 +1.8**
baz=282
RETA Reutte 102.78 317 *e* Pdiff **Pdif** **18 25 31.1 -0.3**
comp=Z,55nm,1.3s,SNR=13
RETA *i* PKiKP **PKiKP** **18 29 49.8 +1.8**
comp=Z,108nm,1.2s
RETA *i* SKS **SKSac** **18 35 12.6 -0.5**
comp=Z,66nm,1.2s
RETA *i* PKKP **PKKPbc** **18 41 26.4 -2.5**
comp=Z,8.5nm,1.2s
HOMB Homborsund 102.80 328 *i* P **Pdif** **18 25 31.3 +0.2**
CTG Chitna Glacier 102.82 29 Pdiff **Pdif** **18 25 33.0 +1.6**
baz=281
AKN Aaknes 102.83 332 *e* P **Pdif** **18 25 31.7 +0.5**
FETA Feichten 102.84 317 *i* Pdiff **Pdif** **18 25 31.2 -0.6**
comp=Z,38nm,1.2s,SNR=12
FETA *i* PKiKP **PKiKP** **18 29 48.2 -0.1**
comp=Z,134nm,1.1s
FETA *i* SKS **SKSac** **18 35 14.3 +0.7**
comp=Z,61nm,1.9s
FETA *i* P'P' **P'P'df** **18 49 47.5 +1.7**
comp=Z,16nm,1.9s
GTTG Gottingen 102.89 321 *e* Pdiff **Pdif** **18 25 32.1 +0.5**
baz=85,slow=4.5
GTTG *e* PKKPbc **PKKPbc** **18 41 28.2 -0.5**
baz=264,slow=2.9
G29M Pine Creek 102.91 23 Pdiff **Pdif** **18 25 32.2 +0.7**
baz=285
UBBA Unterbreizbach 102.95 321 *e* Pdiff **Pdif** **18 25 31.9 +0.1**
baz=85,slow=4.5
DAWY Dawson 103.06 25 Pdiff **Pdif** **18 25 33.3 +1.1**
baz=283
YUK3 Moose Creek 103.08 28 Pdiff **Pdif** **18 25 33.9 +1.3**
baz=282
RETH Rethem/Aller, 103.11 323 *e* Pdiff **Pdif** **18 25 33.0 +0.4**
baz=85,slow=4.5
I29M Ogilvie Camp, 103.20 24 Pdiff **Pdif** **18 25 33.7 +0.9**
baz=284
UBR Ueberruh 103.20 317 *e* Pdiff **Pdif** **18 25 32.9 -0.4**
baz=85,slow=4.5
DAVA Damuels 103.39 317 *i* Pdiff **Pdif** **18 25 34.2 0.0**
comp=Z,74nm,1.3s,SNR=16
DAVA *i* PKiKP **PKiKP** **18 29 48.8 -0.5**
comp=Z,128nm,0.9s
DAVA *e* SKS **SKSac** **18 35 15.6 -0.6**
comp=Z,43nm,1.2s
O28M Mount Upton 103.41 29 Pdiff **Pdif** **18 25 35.5 +1.4**
baz=282
YUK8 Steele Glacier 103.51 28 Pdiff **Pdif** **18 25 36.1 +1.6**
baz=282
PINM Pinnacle 103.52 30 Pdiff **Pdif** **18 25 35.8 +1.4**
baz=282
F30M Barrier River 103.55 22 Pdiff **Pdif** **18 25 35.1 +0.8**
baz=287
BLS5 Blasjo 103.64 330 *e* P **Pdif** **18 25 35.5 +0.7**
STU Stuttgart 103.70 319 *e* Pdiff **Pdif** **18 25 35.6 +0.3**
baz=85,slow=4.5
STU *e* PKKPbc **PKKPbc** **18 41 25.7 -0.5**
baz=264,slow=2.9
L29M L29M 103.83 26 Pdiff **Pdif** **18 25 37.5 +1.8**
baz=284
TUE Stuetta 103.84 316 P **Pdif** **18 25 36.3 0.0**
comp=Z,62nm,1.9s
M29M Somme Creek 103.85 27 Pdiff **Pdif** **18 25 37.7 +1.8**
baz=284
KASTN Kahler Asten 103.89 321 *e* Pdiff **Pdif** **18 25 36.6 +0.4**
baz=85,slow=4.5
KASTN *e* PKKPbc **PKKPbc** **18 41 25.0 -0.8**
baz=264,slow=2.9
K29M Barlow Dome 103.92 26 Pdiff **Pdif** **18 25 37.3 +1.2**
baz=285
YKU2 Yakutat 103.92 30 P **Pdif** **18 25 44.0 +8.0**
TNS Taunus Mts 104.00 320 *e* Pdiff **Pdif** **18 25 37.3 +0.5**
baz=85,slow=4.5
TNS *e* PKKPbc **PKKPbc** **18 41 24.6 -0.8**
baz=264,slow=2.9
TNS *e* L L 19 15 03.7
comp=Z,619nm,19.3s
I30M Mount Dempster 104.02 24 Pdiff **Pdif** **18 25 37.1 +0.5**
baz=286
YUK4 Talbot Arm 104.02 28 Pdiff **Pdif** **18 25 38.2 +1.5**
baz=283
INK Inuvik 104.14 21 Pdiff **Pdif** **18 25 37.3 +0.5**
comp=Z,74nm,1.1s,baz=298,slow=4.5,SNR=22
INK PKiKP **PKiKP** **18 29 50.5 +0.8**
comp=Z,59nm,1.0s,baz=324,slow=2.4,SNR=10
INK PP **PP** **18 30 03.0 -0.9**
comp=Z,72nm,0.8s,baz=278,slow=9.5,SNR=6.6
INK SKiKP **SKiKP** **18 32 29.2 +0.6**
comp=Z,18nm,0.6s,baz=200,slow=1.0,SNR=1.9
INK Inuvik 104.14 21 Pdiff **Pdif** **18 25 37.4 +0.6**
baz=290
IBBN Ibbenburen 104.14 322 *e* Pdiff **Pdif** **18 25 37.8 +0.6**
baz=85,slow=4.5
J30M Hart River 104.22 25 Pdiff **Pdif** **18 25 38.4 +0.9**
baz=286
YUK6 Outpost Mounta 104.25 29 Pdiff **Pdif** **18 25 39.5 +1.7**
baz=283
KMY Karmoy 104.29 330 *e* PP **PP** **18 30 05.0 -0.3**
O29M Mount Kennedy 104.29 29 Pdiff **Pdif** **18 25 39.4 +1.5**
baz=283
BFO Black Forest 104.32 318 *e* Pdiff **Pdif** **18 25 37.8 -0.3**
baz=85,slow=4.5
BFO *e* L L 19 17 39.8
comp=Z,737nm,20.9s
G31M Satah River 104.33 22 Pdiff **Pdif** **18 25 38.1 +0.4**
baz=289
F31M Tsiigehtchic 104.35 21 Pdiff **Pdif** **18 25 38.3 +0.5**
baz=289
M30M Minto, Yukon 104.56 27 Pdiff **Pdif** **18 25 40.5 +1.6**
baz=285
BUG Bochum--Univer 104.57 322 *e* Pdiff **Pdif** **18 25 39.5 +0.4**
baz=85,slow=4.5
BUG *e* PKKPbc **PKKPbc** **18 41 22.8 -0.8**
baz=264,slow=2.9
H31M Peel River 104.66 23 Pdiff **Pdif** **18 25 39.8 +0.6**
baz=288
KEST Kesra 104.67 305 Pdiff **Pdif** **18 25 41.4 +1.3**
comp=Z,28nm,1.0s,baz=7.2,slow=0.6,SNR=7.8
KEST PKiKP **PKiKP** **18 29 53.0 +1.1**
comp=Z,16nm,0.8s,baz=43,slow=0.3,SNR=8.4
KEST PP **PP** **18 30 08.4 -0.7**
comp=Z,61nm,0.9s,baz=78,slow=6.1,SNR=7.7
KEST PKKPbc **PKKPbc** **18 41 23.6 +0.6**
comp=Z,16nm,0.9s,baz=296,slow=1.3,SNR=8.4
KEST SKKPbc SKKPbc 18 44 07.4 -1.0
comp=Z,9.1nm,1.0s,baz=265,slow=3.3,SNR=3.7
MAYO Mayo, Yukon 104.68 26 Pdiff **Pdif** **18 25 40.8 +1.4**
baz=286
HYT Haines Junctio 104.68 29 Pdiff **Pdif** **18 25 41.0 +1.4**
baz=284
P30M Million Dollar 105.12 29 Pdiff **Pdif** **18 25 43.2 +1.7**
baz=284
A36M Sachs Harbour 105.20 16 Pdiff **Pdif** **18 25 41.9 +0.4**
baz=299
N31M Braeburn, Yuko 105.32 28 Pdiff **Pdif** **18 25 43.6 +1.3**
baz=286
O30N Mendenhall 105.37 28 Pdiff **Pdif** **18 25 43.7 +1.1**
baz=285
BTNL Ternell 105.42 321 *d* Pdif **Pdif** **18 25 43.1 +0.1**
MEM Membach 105.49 321 *d* Pdif **Pdif** **18 25 42.6 -0.7**
WLF Walferdange 105.55 320 *d* Pdif **Pdif** **18 25 43.9 +0.3**
WLF Walferdange 105.55 320 *e* Pdiff **Pdif** **18 25 44.0 +0.5**
baz=85,slow=4.5
WLF *e* PKKPbc **PKKPbc** **18 41 19.5 -1.2**
baz=264,slow=2.9
M31M Drury Creek, Y 105.74 27 Pdiff **Pdif** **18 25 45.6 +1.4**
baz=287
BSTI Sart Tilman 105.77 321 *d* Pdif **Pdif** **18 25 45.2 +0.7**
BCLA Clavier 105.97 321 *d* Pdif **Pdif** **18 25 45.9 +0.6**
WHY Whitehorse 105.97 28 Pdiff **Pdif** **18 25 46.5 +1.2**
baz=286
S31K Pelican 106.03 31 Pdiff **Pdif** **18 25 46.5 +1.1**
baz=284
RCHB Rochefort 106.06 320 *d* Pdif **Pdif** **18 25 46.1 +0.4**
SKAG Skagway 106.09 30 Pdiff **Pdif** **18 25 46.9 +1.3**
baz=286
BGES Gesves 106.11 321 *d* Pdif **Pdif** **18 25 46.1 +0.1**
BMRD Maredsous 106.33 321 *d* Pdif **Pdif** **18 25 47.0 +0.1**
CBBAR Babar 106.47 305 P **PKiKP** **18 29 55.9 +0.6**
DOU Dourbes 106.47 320 *d* Pdif **Pdif** **18 25 47.7 +0.1**
UCC Uccle 106.49 321 *d* Pdif **Pdif** **18 25 47.7 +0.1**
N32M Quiet Lake 106.66 28 Pdiff **Pdif** **18 25 49.1 +0.8**
baz=288
DBG Daneborg 106.66 348 *i* P **Pdif** **18 25 47.8 -0.2**
DBG IAmb IAmb 18 25 49.3
comp=Z,134nm,1.7s
SIT Sitka 106.73 32 Pdiff **Pdif** **18 25 49.0 +0.5**
baz=285
R32K Eaglecrest 106.82 31 Pdiff **Pdif** **18 25 49.6 +0.6**
baz=286
C36M Paulatuk 106.83 18 Pdiff **Pdif** **18 25 48.8 0.0**
baz=299
P32M Atlin 106.84 29 Pdiff **Pdif** **18 25 50.3 +1.1**
baz=287
S32K Killisnoo 107.01 32 Pdiff **Pdif** **18 25 50.9 +1.1**
baz=286
P33M Teslin, Yukon 107.08 28 Pdiff **Pdif** **18 25 51.4 +1.2**
baz=288
Q32M Nakina River 107.74 30 Pdiff **Pdif** **18 25 54.6 +1.3**
baz=288
CAZD Ain Tagrout 108.03 306 P **PKiKP** **18 29 58.4 +0.3**
T33K Petersburg 108.05 32 Pdiff **Pdif** **18 25 55.5 +1.0**
baz=287
U33K Whale Pass 108.16 33 Pdiff **Pdif** **18 25 55.9 +0.9**
baz=287
NEEM North Greenlan 108.17 356 *i* P **Pdif** **18 25 55.5 +0.5**
NEEM IAmb IAmb 18 25 58.4
comp=Z,67nm,0.7s
R33M Jennings River 108.23 29 Pdiff **Pdif** **18 25 56.6 +1.2**
baz=290
CRAG Craig 108.34 33 Pdiff **Pdif** **18 25 57.1 +1.3**
baz=286
CTCHA Tamokra 108.41 306 P **PKiKP** **18 29 59.6 +0.9**
WRAK Wrangell Islan 108.48 32 Pdiff **Pdif** **18 25 57.6 +1.2**
baz=288
S34M Telegraph Cree 108.64 30 Pdiff **Pdif** **18 25 58.2 +1.1**
baz=289
AFRS Ain Fares 108.75 304 P **PKiKP** **18 30 00.1 +0.6**
ATKB Taksebt 108.81 307 P **PKiKP** **18 30 00.0 +0.6**
ABSD Ouled Sidi Bra 108.88 305 P **PKiKP** **18 30 00.0 +0.3**
WTLY Watson Lake, Y 109.00 28 Pdiff **Pdif** **18 25 59.6 +0.9**
baz=292
DLBC Dease Lake 109.02 30 Pdiff **Pdif** **18 26 00.3 +1.5**
comp=Z,10nm,0.9s,baz=243,slow=4.8,SNR=9.9
DLBC PKiKP **PKiKP** **18 30 00.2 +1.0**
comp=Z,39nm,0.7s,baz=277,slow=2.5,SNR=25
DLBC PP **PP** **18 30 39.4 0.0**
comp=Z,42nm,1.1s,baz=240,slow=6.4,SNR=3.8
DLBC PKKPbc **PKKPbc** **18 41 08.8 -1.7**
comp=Z,3.9nm,0.7s,baz=153,slow=6.7,SNR=3.4
DLBC Dease Lake 109.02 30 Pdiff **Pdif** **18 25 59.9 +1.0**
baz=290
AKET Djebel Ketaf 109.07 306 P **PKiKP** **18 30 01.3 +1.1**
V35K Ketchikan 109.21 33 Pdiff **Pdif** **18 25 59.1 -0.5**
baz=288
T35M Bob Quinn 109.40 31 Pdiff **Pdif** **18 26 01.4 +0.9**
baz=290
RES Resolute Bay 109.55 8 Pdiff **Pdif** **18 26 01.1 +0.3**
comp=Z,38nm,0.9s,baz=324,slow=5.0,SNR=85
RES PKiKP **PKiKP** **18 30 00.1 +0.3**
comp=Z,76nm,0.8s,baz=263,slow=2.3,SNR=23
RES PP **PP** **18 30 39.3 -3.3**
comp=Z,80nm,0.9s,baz=325,slow=5.6,SNR=9.9
RES SKiKP **SKiKP** **18 32 39.2 +0.4**
comp=Z,39nm,0.9s,baz=275,slow=2.4,SNR=4.6
TULEG Thule 109.57 0 *e* P **Pdif** **18 26 01.9 +1.1**
SCO Scoresbysund 109.60 345 *i* P **Pdif** **18 26 02.5 +1.4**
EKA Eskdalemuir Ar 109.73 327 Pdiff **Pdif** **18 26 03.1 +1.1**
comp=Z,16nm,0.9s,baz=88,slow=5.6,SNR=24
EKA PKiKP **PKiKP** **18 30 00.9 +0.3**
comp=Z,6.5nm,0.4s,baz=26,slow=3.1,SNR=27
EKA PP **PP** **18 30 43.0 -1.5**
comp=Z,25nm,0.8s,baz=77,slow=7.2,SNR=5.0
EKA SKiKP **SKiKP** **18 32 40.4 +0.8**
comp=Z,9.2nm,0.6s,baz=24,slow=2.9,SNR=8.1
EKA PKKPbc **PKKPbc** **18 41 06.3 -1.7**
comp=Z,18nm,0.6s,baz=260,slow=2.8,SNR=40
EKA PKKPab **PKKPab** **18 41 17.9 -2.6**
comp=Z,7.4nm,0.7s,baz=250,slow=5.0,SNR=6.1
EKA SKKPbc **SKKPbc** **18 43 52.0 -3.1**
comp=Z,1.4nm,0.7s,baz=255,slow=2.5,SNR=3.9
ABRIN Birine 109.73 306 P **PKiKP** **18 30 00.8 -0.5**
WRGLY Wrigley 109.99 24 Pdiff **Pdif** **18 26 03.7 +0.7**
baz=298
AFDJ Sidi Ladjel 110.20 305 P **PKiKP** **18 30 03.0 +0.8**
CSOR Sort 110.25 313 *e* PP **PP** **18 30 49.6 +0.8**
CSOR *e* S **Sdif** **18 37 23.6 -4.4**
CSOR *e* SP **SP** **18 39 25.0 +6.3**
CSOR *e* PS **PS** **18 40 31.9 +2.0**

CSOR				eSKKP		18 43 05.9	
CSOR				eSS	SS	18 45 30.4	-1.2
ABKD	Sidi Amar	110.27	307	P	PKiKP	18 30 02.9	+0.7
KPL	Plockton	110.34	330	eP	PKiKP	18 30 01.1	-0.5
EDDR	Deurdeur	110.42	306	P	PKiKP	18 30 02.9	+0.3
HLM1	Long Mynd	110.44	324	eP	PKiKP	18 30 02.0	0.0
EHRZ	Djelida	110.48	306	P	PKiKP	18 30 04.1	+1.5
EZEK	Zmalet El Emir	110.48	305	P	PKiKP	18 30 02.9	+0.1
FOEL	Foel Wylfa	110.52	325	eP	PKiKP	18 30 02.5	+0.3
CTRE	Tremp	110.52	313	ePKiKP	PKiKP	18 30 03.1	+0.4
CTRE				ePP	PP	18 30 52.1	+1.4
CTRE				eS	Sdif	18 37 28.0	-2.2
CTRE				eSP	SP	18 39 26.7	+5.5
CTRE				ePS	PS	18 40 36.0	+3.7
CTRE				eSKKP		18 43 07.3	
CTRE				eSS	SS	18 45 32.6	-2.6
EARB	Arib	110.54	306	P	PKiKP	18 30 03.7	+0.9
MONM	Monmouth	110.60	323	eP	PKiKP	18 30 02.3	0.0
LAWE	Loch Awe, Argy	110.60	328	eP	PKiKP	18 30 01.8	-0.4
EBGR	Bougara	110.70	306	P	PKiKP	18 30 03.2	0.0
GAL1	Galloway	110.72	327	eP	PKiKP	18 30 02.5	0.0
WIM	Isle of Man	110.94	326	eP	PKiKP	18 30 03.1	+0.1
JSA	Saint Aubin	110.96	321	eP	PKiKP	18 30 02.9	-0.1
WLF1	Llynfaes	111.07	325	eP	PKiKP	18 30 03.4	+0.2
EADEB	Ain Deheb	111.09	305	P	PKiKP	18 30 04.4	+0.4
WPS	Cemaes, Angles	111.09	325	eP	PKiKP	18 30 03.2	0.0
KOTAN	Kotaneelee Air	111.16	27	Pdiff	Pdif	18 26 09.0	+0.7
	baz=296						
TOAD	Toad River Com	111.17	28	Pdiff	Pdif	18 26 09.7	+1.3
	baz=295						
KULLO	Kullorsuaq	111.31	357	i P	Pdif	18 26 09.7	+1.1
EANR	'Ain N'Sour	111.32	306	P	PKiKP	18 30 05.7	+1.4
SUMG	Summit	111.32	351	PKP	PKiKP	18 30 03.4	-0.3
SUMG	Summit	111.32	351	i P	Pdif	18 26 08.6	-0.6
SUMG				IAmb	IAmb	18 26 18.6	
	comp=Z,31nm,0.9s						
RSBS	Rosebush, Pemb	111.71	324	eP	PKiKP	18 30 04.1	-0.4
ESMB	Sidi M'hamed B	111.79	306	P	PKiKP	18 30 05.7	+0.6
HTL	Hartland	111.86	323	eP	PKiKP	18 30 04.8	+0.1
ILTH	Belurgan, Co L	111.91	326	PKP	PKiKP	18 30 04.3	-0.4
SBD	Saint Breward	112.11	322	eP	PKiKP	18 30 05.4	+0.1
IDGL	Inch Island, C	112.15	328	PKP	PKiKP	18 30 05.5	+0.3
IDGL	Inch Island, C	112.15	328	eP	PKiKP	18 30 05.1	-0.1
TORD	Torodi Ar. Bea	112.16	282	Pdiff	Pdif	18 26 14.2	+0.6
	comp=Z,2.6nm,1.2s,baz=166,slow=1.4,SNR=6.3						
TORD				PKiKP	PKiKP	18 30 06.5	+0.1
	comp=Z,41nm,0.5s,baz=197,slow=0.9,SNR=165						
TORD				SKP	SKPdf	18 32 45.4	0.0
	comp=Z,75nm,0.9s,baz=187,slow=1.2,SNR=9.3						
TORD				PKKPbc	PKKPbc	18 40 58.4	-0.7
	comp=Z,17nm,0.9s,baz=314,slow=3.6,SNR=14						
TORD				PKKPab	PKKPab	18 41 08.6	-1.4
	comp=Z,10nm,0.8s,baz=272,slow=6.3,SNR=5.9						
TORD				SKKPbc	SKKPbc	18 43 45.6	-0.6
	comp=Z,11nm,0.6s,baz=271,slow=3.6,SNR=13						
BBB	Bella Bella	112.19	36	PKiKP	PKiKP	18 30 06.6	+1.3
	comp=Z,119nm,0.8s,baz=326,slow=3.4,SNR=18						
BBB				SKP	SKPdf	18 32 44.9	+0.5
	comp=Z,48nm,0.8s,baz=30,slow=0.9,SNR=4.4						
DSB	Dublin	112.21	326	PKP	PKiKP	18 30 04.0	-1.4
DSB	Dublin	112.21	326	PKP	PKiKP	18 30 05.3	-0.1
ECHE	Chera	112.33	310	PKP	PKiKP	18 30 05.4	-0.7
ODJA	Bouhanifia	112.42	306	P	PKiKP	18 30 07.8	+1.4
CCA1	Carnmenellis	112.56	322	eP	PKiKP	18 30 06.4	+0.3
CART	Cartagena	112.72	308	PKP	PKiKP	18 30 05.4	-1.4
IWEX	Carrickbyrne,	112.74	325	PKP	PKiKP	18 30 06.5	+0.1
EMUR	La Murta	112.86	308	PKP	PKiKP	18 30 06.0	-1.2
ETOB	Tobarra	112.95	309	PKP	PKiKP	18 30 06.5	-0.8
UPNV	Upernavik	113.03	357	eP	Pdif	18 26 17.4	+1.1
OSBL	Sidi Abdelli	113.26	306	P	PKiKP	18 30 09.0	+1.0
OBBL	Beni Bahdel	113.61	305	P	PKiKP	18 30 09.5	+0.8
IGLA	Glengowla, Co	113.81	326	PKP	PKiKP	18 30 08.1	-0.3
IGLA	Glengowla, Co	113.81	326	eP	PKiKP	18 30 07.7	-0.7
YKA	Yellowknife Ar	113.82	22	Pdiff	Pdif	18 26 20.9	+1.0
	comp=Z,3.0nm,0.7s,baz=308,slow=5.1,SNR=45						
YKA				PKiKP	PKiKP	18 30 08.3	+0.2
	comp=Z,125nm,0.7s,baz=315,slow=2.5,SNR=254						
YKA				SKP	SKPdf	18 32 47.1	-0.1
	comp=Z,12nm,0.5s,baz=310,slow=2.8,SNR=10						
YKA				PKKPbc	PKKPbc	18 40 52.0	-2.9
	comp=Z,2.5nm,0.3s,baz=82,slow=5.6,SNR=41						
YKA				PKKPab	PKKPab	18 41 01.2	-1.0
	comp=Z,6.8nm,0.9s,baz=119,slow=3.9,SNR=5.9						
YKA				PKKP	PKKPdf	18 41 13.0	-1.8
	comp=Z,2.6nm,0.5s,baz=124,slow=2.3,SNR=10.0						
YKA				SKKPbc	SKKPbc	18 43 38.9	-4.6
	comp=Z,19nm,0.9s,baz=118,slow=1.1,SNR=21						
YKA				SKKP	SKKPdf	18 43 53.6	-0.1
	comp=Z,0.3nm,0.3s,baz=124,slow=2.2,SNR=6.3						
UCM	Universidad Co	113.89	311	PKP	PKiKP	18 30 09.9	+0.9
ESDC	Sonseca Array	114.58	311	Pdiff	Pdif	18 26 23.8	-0.2
	comp=Z,1.4nm,0.8s,baz=46,slow=3.7,SNR=5.1						
ESDC				PKP	PKiKP	18 30 10.8	+0.4
	comp=Z,58nm,0.7s,baz=20,slow=2.9,SNR=108						
ESDC				SKP	SKPdf	18 32 49.9	+0.4
	comp=Z,55nm,0.8s,baz=22,slow=3.1,SNR=18						
ESDC				PKKPbc	PKKPbc	18 40 50.8	-1.0
	comp=Z,7.8nm,0.9s,baz=279,slow=3.5,SNR=17						
ESDC				PKKPab	PKKPab	18 40 59.4	+0.3
	comp=Z,17nm,0.8s,baz=272,slow=4.6,SNR=26						
ESDC				SKKPbc	SKKPbc	18 43 39.5	-0.7
	comp=Z,18nm,0.9s,baz=275,slow=3.3,SNR=20						
ESDC				SKKP	SKKPdf	18 43 52.4	+0.4
	comp=Z,3.3nm,1.0s,baz=258,slow=3.8,SNR=1.6						
VAL	Valentia	114.89	325	PKP	PKiKP	18 30 10.5	0.0
PBRG	Braganca	116.08	314	ePKPdf	PKiKP	18 30 13.5	+0.2
PBRG				ePP	PP	18 31 28.9	-0.5
PBRG				eSKPdf	SKiKP	18 32 53.0	+0.5
MVO	Moncorvo	116.47	313	ePKPdf	PKiKP	18 30 14.8	+0.7
MVO				ePP	PP	18 31 33.0	+0.9
MVO				eSKPdf	SKiKP	18 32 54.4	+1.1
PVRL	Vila Real	116.93	313	ePKPdf	PKiKP	18 30 15.6	+0.7
PVRL				ePP	PP	18 31 36.1	+0.9
POLO	Lamas de Olo	116.96	314	ePKPdf	PKiKP	18 30 15.6	+0.6
POLO				ePP	PP	18 31 36.0	+0.6
POLO				eSKPdf	SKiKP	18 32 55.2	+0.9
PCAB	Cabril	117.03	314	ePKPdf	PKiKP	18 30 15.5	+0.4
PCAB				ePP	PP	18 31 36.1	+0.3
PCAB				eSKPdf	SKiKP	18 32 55.1	+0.8
MTE	Manteigas	117.05	312	ePKPdf	PKiKP	18 30 15.9	+0.7
MTE				ePP	PP	18 31 36.8	+0.7
MTE				eSKPdf	SKiKP	18 32 55.4	+1.0
PGAV	Gavieira, Arco	117.13	314	ePKPdf	PKiKP	18 30 15.9	+0.5
PGAV				ePP	PP	18 31 37.2	+0.6
PGAV				eSKPdf	SKiKP	18 32 55.2	+0.6
PCBR	Castelo Branco	117.16	312	ePKPdf	PKiKP	18 30 15.9	+0.6
PCBR				ePP	PP	18 31 36.4	-0.3
PCBR				eSKPdf	SKiKP	18 32 55.5	+1.0
PMRV	Marv??o	117.20	311	ePKPdf	PKiKP	18 30 15.8	+0.3
PMRV				eSKPdf	SKiKP	18 32 55.5	+0.8
PVIS	Viseu	117.22	313	ePKPdf	PKiKP	18 30 16.1	+0.6
PVIS				ePP	PP	18 31 38.6	+1.4
PVIS				eSKPdf	SKiKP	18 32 55.6	+0.8
PBAR	Barrancos	117.26	310	ePKPdf	PKiKP	18 30 16.1	+0.5
PBAR				ePP	PP	18 31 33.6	-3.9
PBAR				eSKPdf	SKiKP	18 32 55.7	+0.9
PESTR	Estremoz	117.50	311	ePKPdf	PKiKP	18 30 16.4	+0.3
PESTR				eSKPdf	SKiKP	18 32 56.1	+0.8
PTO	Porto	117.61	314	ePKPdf	PKiKP	18 30 16.7	+0.6
PTO				ePP	PP	18 31 41.0	+1.2
PTO				eSKPdf	SKiKP	18 32 56.2	+0.7
PSARD	Sardoal	117.73	312	ePKPdf	PKiKP	18 30 17.0	+0.5
PSARD				ePP	PP	18 31 37.8	-2.9
PSARD				eSKPdf	SKiKP	18 32 56.6	+0.8
PCAS	Casmilo, Conde	117.85	312	ePKPdf	PKiKP	18 30 17.2	+0.5
PCAS				ePP	PP	18 31 42.6	+1.2
PCAS				eSKPdf	SKiKP	18 32 56.9	+0.9
PARRA	Arraiolos	117.85	311	ePKPdf	PKiKP	18 30 17.2	+0.5
PARRA				eSKPdf	SKiKP	18 32 56.7	+0.7
EVO	Evora	117.91	311	ePKPdf	PKiKP	18 30 17.4	+0.6
EVO				ePP	PP	18 31 42.0	0.0
EVO				eSKPdf	SKiKP	18 32 57.0	+0.8
PMTG	Montargil	117.92	311	ePKPdf	PKiKP	18 30 17.0	+0.2
PMTG				ePP	PP	18 31 41.8	-0.2
PMTG				eSKPdf	SKiKP	18 32 56.8	+0.6
PBEJ	Beja	117.93	310	ePKPdf	PKiKP	18 30 17.6	+0.7
PBEJ				eSKPdf	SKiKP	18 32 56.5	+0.4
SFJD	Kangerlussuaq	118.15	353	eP	Pdif	18 26 41.2	+2.0
MOE	Montemor	118.17	311	ePKPdf	PKiKP	18 30 18.0	+0.6
MOE				ePP	PP	18 31 44.1	+0.4
MOE				eSKPdf	SKiKP	18 32 57.6	+1.0
PCVE	Castro Verde	118.17	310	ePKPdf	PKiKP	18 30 17.7	+0.4

PCVE				ePP	PP	18 31 44.6	+0.9
PCVE				eSKPdf	SKiKP	18 32 57.6	+1.0
PBDV	Barranco-do-Ve	118.18	309	ePKPdf	PKiKP	18 30 18.5	+1.0
PBDV				ePP	PP	18 31 45.0	+1.1
PBDV				eSKPdf	SKiKP	18 32 58.1	+1.3
PSBE	So Bento	118.22	312	ePKPdf	PKiKP	18 30 17.9	+0.5
PSBE				ePP	PP	18 31 45.2	+1.2
PSBE				eSKPdf	SKiKP	18 32 57.5	+0.7
MESJ	Messejana	118.25	310	ePKP	PKiKP	18 30 18.4	+0.8
MESJ	Messejana	118.25	310	ePKPdf	PKiKP	18 30 18.3	+0.8
MESJ				ePP	PP	18 31 44.2	0.0
MESJ				eSKPdf	SKiKP	18 32 57.7	+0.9
DBIC	Dimbokro	118.36	274	PKP	PKPdf	18 30 18.2	-0.1
	comp=Z,216nm,0.7s,baz=118,slow=1.9,SNR=163						
DBIC				SKP	SKPdf	18 32 57.1	-0.3
	comp=Z,164nm,0.8s,baz=115,slow=1.9,SNR=14						
DBIC				PKKPbc	PKKPbc	18 40 37.5	-0.4
	comp=Z,11nm,0.8s,baz=340,slow=4.6,SNR=3.8						
DBIC				PKKPab	PKKPab	18 40 43.4	+0.8
	comp=Z,24nm,0.8s,baz=318,slow=4.4,SNR=7.9						
PTEO	Sao Teotonio	118.71	310	ePKPdf	PKiKP	18 30 19.2	+0.8
PTEO				ePP	PP	18 31 48.6	+1.2
PTEO				eSKPdf	SKiKP	18 32 58.9	+1.1
LIS	Lisbon	118.72	311	ePKP	PKiKP	18 30 19.3	+0.9
LIS	Lisbon	118.72	311	ePKPdf	PKiKP	18 30 19.3	+0.9
LIS				ePP	PP	18 31 49.8	+2.4
LIS				eSKPdf	SKiKP	18 32 59.0	+1.3
MORF	Marmelete	118.72	309	ePKP	PKiKP	18 30 19.2	+0.8
MORF	Marmelete	118.72	309	ePKPdf	PKiKP	18 30 19.3	+0.8
MORF				ePP	PP	18 31 48.1	+0.5
MORF				eSKPdf	SKiKP	18 32 59.0	+1.2
PMAFR	Mafra	118.75	311	ePKPdf	PKiKP	18 30 18.9	+0.4
PMAFR				ePP	PP	18 31 48.3	+0.7
PMAFR				eSKPdf	SKiKP	18 32 58.7	+0.9
PFVI	Vila Bisbo	118.90	309	ePKPdf	PKiKP	18 30 19.6	+0.8
PFVI				ePP	PP	18 31 48.6	-0.1
YBH	Yreka Blue Hor	119.21	45	Pdiff	Pdif	18 26 46.1	+1.4
	comp=Z,0.1nm,0.7s,baz=203,slow=9.9,SNR=3.7						
YBH				PKP	PKiKP	18 30 20.1	+0.6
	comp=Z,5.2nm,0.7s,baz=16,slow=3.3,SNR=62						
YBH				PP	PP	18 31 46.7	-4.0
	comp=Z,2.6nm,1.1s,baz=226,slow=3.2,SNR=5.9						
YBH				SKP	SKPdf	18 32 59.3	+0.9
	comp=Z,3.7nm,0.9s,baz=299,slow=3.0,SNR=6.0						
NEW	Newport	120.22	36	Pdiff	Pdif	18 26 49.7	+0.8
	comp=Z,5.2nm,0.9s,baz=288,slow=5.5,SNR=6.0						
NEW				PKP	PKiKP	18 30 21.5	+0.4
	comp=Z,188nm,0.8s,baz=309,slow=1.4,SNR=77						
NEW				PP	PP	18 31 51.1	-6.0
	comp=Z,73nm,1.0s,baz=305,slow=4.1,SNR=8.0						
NEW				SKP	SKPdf	18 33 01.0	+0.9
	comp=Z,50nm,1.1s,baz=334,slow=2.6,SNR=4.6						
NVAR	Mina Array Bea	123.53	47	Pdiff	Pdif	18 27 04.2	+0.1
	comp=Z,1.7nm,0.8s,baz=266,slow=6.0,SNR=6.4						
NVAR				PKP	PKiKP	18 30 28.9	+0.7
	comp=Z,211nm,0.7s,baz=258,slow=1.4,SNR=56						
NVAR				PP	PP	18 32 15.2	-4.6
	comp=Z,34nm,0.7s,baz=276,slow=7.4,SNR=5.2						
NVAR				SKP	SKPdf	18 33 09.1	+2.1
	comp=Z,83nm,0.7s,baz=245,slow=2.3,SNR=8.2						
NVAR				PKKPbc	PKKPbc	18 40 20.3	+0.3
	comp=Z,12nm,0.8s,baz=139,slow=5.4,SNR=11						
NVAR				SKKPbc	SKKPbc	18 43 11.4	-0.7
	comp=Z,13nm,0.8s,baz=147,slow=4.7,SNR=13						
ELK	Elko	124.80	44	Pdiff	Pdif	18 27 14.0	+4.3
	comp=Z,1.2nm,0.7s,baz=297,slow=2.1,SNR=4.5						
ELK				PKP	PKiKP	18 30 31.6	+0.9
	comp=Z,418nm,0.8s,baz=291,slow=2.1,SNR=201						
ELK				PP	PP	18 32 26.8	-1.2
	comp=Z,31nm,0.9s,baz=292,slow=4.3,SNR=4.9						
ELK				SKP	SKPdf	18 33 10.4	+1.1
	comp=Z,53nm,0.6s,baz=307,slow=2.6,SNR=12						
H10N1	ASCENSION HYDR	125.91	256	PKP	PKiKP	18 30 33.9	+0.9
	baz=68,slow=4.3,SNR=12						
H10N2	ASCENSION HYDR	125.92	256	PKP	PKiKP	18 30 34.0	+1.0
	baz=68,slow=4.3,SNR=8.8						
H10N3	ASCENSION HYDR	125.93	256	PKP	PKiKP	18 30 34.0	+1.0
	baz=68,slow=4.3,SNR=10						
PMPST	Porto Santo, M	125.97	307	ePKPdf	PKiKP	18 30 33.5	+0.6
PMPST				ePP	PP	18 32 35.9	+0.1
PMPST				eSKPdf	SKiKP	18 33 13.1	+0.6
PMPS	Porto Santo	125.97	307	ePKPdf	PKiKP	18 30 33.7	+0.8
PMPS				eSKPdf	SKiKP	18 33 13.0	+0.6
PMAR	Madeira	126.54	307	ePKPdf	PKiKP	18 30 35.2	+0.9
PMAR				ePP	PP	18 32 36.8	-2.9
PFO	Pinyon Flats O	126.61	52	PKP	PKiKP	18 30 35.4	+1.0
	comp=Z,276nm,0.9s,baz=294,slow=1.2,SNR=97						
PFO				PP	PP	18 32 32.5	-7.5
	comp=Z,18nm,0.8s,baz=256,slow=4.9,SNR=4.3						
PFO				SKP	SKPdf	18 33 14.0	+1.2
	comp=Z,67nm,0.8s,baz=294,slow=1.5,SNR=6.1						
PMOZ	Porto Moniz, M	126.73	307	ePKPdf	PKiKP	18 30 35.9	+1.3
PMOZ				ePP	PP	18 32 41.3	+0.4
PDAR	Pinedale Array	127.57	39	Pdiff	Pdif	18 27 23.9	+1.9
	comp=Z,0.2nm,0.6s,baz=278,slow=4.0,SNR=1.5						
PDAR				PKP	PKiKP	18 30 35.9	-0.3
	comp=Z,7.3nm,0.6s,baz=81,slow=1.4,SNR=5.7						
PDAR				PP	PP	18 32 45.1	-0.8
	comp=Z,18nm,0.7s,baz=294,slow=4.5,SNR=3.9						
PDAR				SKP	SKPdf	18 33 15.8	+1.3
	comp=Z,18nm,0.7s,baz=9.1,slow=2.4,SNR=1.9						
PDAR				PKKPbc	PKKPbc	18 40 02.8	
	comp=Z,1.7nm,0.4s,baz=115,slow=7.7,SNR=8.7						
PDAR				SKKPbc	SKKPbc	18 42 56.0	-2.7
	comp=Z,16nm,0.6s,baz=127,slow=5.4,SNR=27						
ULM	Lac du Bonnet	129.72	24	Pdiff	Pdif	18 27 31.9	+0.9
	comp=Z,0.9nm,0.5s,baz=343,slow=1.6,SNR=1.7						
ULM				PKP	PKPdf	18 30 38.6	-0.4
	comp=Z,263nm,0.6s,baz=172,slow=4.7,SNR=4.9						
ULM				pPKP	pPKPdf	18 32 58.0	-0.3
	comp=Z,71nm,0.8s,baz=342,slow=4.1,SNR=5.1						
ULM				SKKPbc	SKKPbc	18 42 47.7	-3.7
	comp=Z,13nm,0.8s,baz=154,slow=6.7,SNR=4.0						
BART	Pico Bartolome	130.70	316	ePKPdf	PKiKP	18 30 43.0	+0.6
PGRON	Lagoa das Cont	130.84	316	ePKPdf	PKiKP	18 30 43.7	+1.1
PGRON				ePP	PP	18 33 12.0	+5.2
CMLA	Cha da Macela	130.95	316	ePKPdf	PKiKP	18 30 42.8	0.0
CMLA				ePP	PP	18 33 09.4	+2.0
PSMN	Pico do Norte,	131.00	315	ePKPdf	PKiKP	18 30 42.5	-0.4
PSMN				ePP	PP	18 33 07.5	-0.3
PSMN				ePP	PP	18 33 11.9	+4.2
PDA	Ponta Delgada	131.05	316	ePP	PP	18 33 11.1	+3.1
SCHQ	Schefferville	131.38	360	PKhKP	PKPpre	18 30 27.3	
	comp=Z,14nm,0.8s,baz=9.8,slow=2.8,SNR=14						
SCHQ				PKP	PKPdf	18 30 42.5	+0.4
	comp=Z,215nm,0.6s,baz=4.5,slow=1.3,SNR=83						
SCHQ				pPKP	pPKPdf	18 33 00.9	-0.5
	comp=Z,87nm,0.9s,baz=27,slow=3.6,SNR=3.0						
PAGU	Agualva, Azore	131.56	318	ePKPdf	PKiKP	18 30 44.3	+0.4
PAGU				ePP	PP	18 33 14.8	+3.6
ADH	Angra Heroismo	131.66	318	ePP	PP	18 33 14.8	+3.0
PSBA	Serra de Santa	131.66	318	ePKPdf	PKPdf	18 30 42.5	-0.6
PSCRZ	Santa Cruz da	131.94	319	ePP	PP	18 33 16.5	+3.0
PGRA	Graciosa	131.95	319	ePP	PP	18 33 16.8	+3.2
PMAN	Manadas	132.23	318	ePKPdf	PKiKP	18 30 45.5	+0.2
PMAN				ePP	PP	18 33 17.5	+2.1
ROSA	Rosais	132.29	319	ePKPdf	PKiKP	18 30 46.1	+0.7
PID	Ribeirinha	132.35	318	ePP	PP	18 33 15.6	-0.6
PPNO	Prainha do Nor	132.44	318	ePKPdf	PKiKP	18 30 46.2	+0.3
PPNO				ePP	PP	18 33 18.1	+1.3
PICO	Pico	132.53	319	ePP	PP	18 33 18.6	+1.2
PCAN	Candelaria	132.59	318	ePP	PP	18 33 19.2	+1.6
PCED	Cedros	132.64	319	ePKPdf	PKiKP	18 30 47.6	+1.5
PCED				ePP	PP	18 33 18.9	+0.9
HOR	Horta	132.65	319	ePKP	PKiKP	18 30 47.8	+1.6
CALA	Caldeira	132.66	319	ePKP	PKiKP	18 30 48.4	+2.1
CALA				ePP	PP	18 33 18.6	+0.3
PLCA	Paso Flores	133.31	176	PKhKP	PKPpre	18 30 31.1	
	comp=Z,5.0nm,0.9s,baz=271,slow=2.1,SNR=7.9						
PLCA				PKP	PKPdf	18 30 46.9	+0.6
	comp=Z,24nm,0.8s,baz=161,slow=1.8,SNR=5.3						
PLCA				SKPbc	SKPbc	18 33 19.6	+0.6
	comp=Z,178nm,1.0s,baz=186,slow=3.1,SNR=19						
PLCA				SKKPbc	SKKPbc	18 42 37.5	-0.1
	comp=Z,15nm,1.1s,baz=331,slow=4.3,SNR=4.6						
ANMO	Albuquerque	133.62	46	PKhKP	PKPpre	18 30 31.9	
	comp=Z,20nm,0.8s,baz=273,slow=4.0,SNR=15						
ANMO				PKP	PKPdf	18 30 47.8	+0.6
	comp=Z,211nm,0.8s,baz=188,slow=3.2,SNR=40						
ANMO				SKPbc	SKPab	18 33 22.1	-1.5
	comp=Z,279nm,0.7s,baz=284,slow=3.2,SNR=45						
LPIG	La Paz	134.67	62	PKhKP	PKPpre	18 30 36.9	
	comp=Z,31nm,0.3s,baz=168,slow=17,SNR=4.0						
LPIG				PKP	PKiKP	18 30 50.2	-0.5
	comp=Z,233nm,0.9s,baz=283,slow=9.5,SNR=4.9						

LPIG				SKPbc	SKPbc	18 33 24.4	+0.7
	comp=Z,437nm,1.1s,baz=116,slow=0.8,SNR=15						
EDS3	Malargue	138.32	177	eP	PKPpre	18 30 47.4	
TXAR	Lajitas Array	138.32	52	PKhKP	PKPpre	18 30 46.1	
	comp=Z,50nm,0.6s,baz=263,slow=2.6,SNR=73						
TXAR				SKPbc	SKPbc	18 33 35.7	+1.2
	comp=Z,132nm,0.8s,baz=314,slow=2.8,SNR=17						
TXAR				SKKPbc	SKKPbc	18 42 17.9	-1.2
	comp=Z,19nm,1.0s,baz=79,slow=3.5,SNR=11						
TXAR				PKPPKP		18 48 40.1	
	comp=Z,5.1nm,1.3s,baz=131,slow=5.5,SNR=4.0						
RFA	San Rafael	139.35	178	eP	PKPpre	18 30 51.5	
SADO	Sadowa	140.00	14	PKhKP	PKPpre	18 30 51.1	
	comp=Z,115nm,0.6s,baz=346,slow=5.5,SNR=60						
SADO				SKPbc	SKPbc	18 33 38.8	+0.4
	comp=Z,321nm,0.7s,baz=357,slow=4.5,SNR=16						
AVIZ	Vizcacheras	140.65	178	eP	PKPpre	18 30 56.1	
AAGR	Agrelo	141.02	177	i P	PKPpre	18 30 56.7	
VA03	San Esteban	141.23	175⇓	eP	PKPpre	18 30 57.6	
ARCO	CERRO ARCO	141.26	177	eP	PKPpre	18 30 57.5	
ASAL	Salagasta	141.51	177	i P	PKPpre	18 30 58.1	
MRA	San Martin	141.71	182	i P	PKPpre	18 30 58.9	
RTLS	Leoncito	142.28	177	i P	PKPdf	18 31 01.0	-2.2
TCA	Tanti	142.74	183	i P	PKPdf	18 31 02.7	-1.1
RTLL	Cerro Villicun	142.78	178	i P	PKPdf	18 31 01.6	-2.2
CAM01	Campos-RJ	142.84	221	eP	PKPdf	18 31 02.5	-1.5
ACHE	Chepes	142.98	180	i P	PKPdf	18 31 02.8	-1.5
DUB01	Friburgo-RJ	143.12	220	eP	PKPbc	18 31 03.1	+0.1
CO03	El Pedregal	143.12	175	eP	PKPbc	18 31 03.3	+0.4
AVFE	Valle Fertil	143.48	179	i P	PKPdf	18 31 04.9	-0.2
ACCO	Cerro Coronel	143.49	177	i P	PKPdf	18 31 05.4	-0.1
AROD	Rodeo	143.89	176	i P	PKPdf	18 31 06.9	+0.7
M65A	Busby, Falmout	144.50	5	PKPab	PKPab	18 31 07.3	+0.1
	baz=354						
AGUA	GUANDACOL	144.62	178	eP	PKiKP	18 31 14.7	+3.6
ACLC	CERRO LA CRUZ	144.71	180	eP	PKPbc	18 31 07.9	+0.1
LCO	Las Campanas	144.93	174		PKPdf	18 31 08.1	+0.2
LCO	Las Campanas	144.93	174	PKIKP	PKPdf	18 31 08.1	+0.2
S51A	Beattyville	145.09	23		PKPdf	18 31 07.5	0.0
VAO	Valinhos	145.14	213		PKPbc	18 31 09.1	0.0
VCA	Vinchina	145.37	178	i P	PKPbc	18 31 09.6	-0.2
VCA				eP	PKPab	18 31 10.1	-1.0
UNM	Universidad Na	145.96	64		PKPbc	18 31 11.4	-0.4
UNM	Universidad Na	145.96	64	PKP2	PKPbc	18 31 11.4	-0.4
TINO	Tinogasta	146.06	179	i P	PKPbc	18 31 11.8	0.0
CPUP	Villa Florida	146.48	196	PKP	PKPdf	18 31 10.4	+0.3
	comp=Z,317nm,0.6s,baz=150,slow=2.2,SNR=110						
CPUP				PKPbc	PKPbc	18 31 13.6	+0.9
	comp=Z,315nm,0.6s,baz=149,slow=2.3,SNR=152						
CPUP				pPKPbc	pPKPab	18 33 29.2	-0.4
	comp=Z,273nm,1.2s,baz=169,slow=3.1,SNR=9.3						
CPUP				SKP	SKPdf	18 33 48.8	+0.8
	comp=Z,52nm,0.9s,baz=318,slow=0.1,SNR=2.8						
CPUP				SKPbc	SKiKP	18 33 55.0	+0.4
	comp=Z,248nm,0.6s,baz=166,slow=1.2,SNR=24						
TKL	Tuckaleechee C	146.72	26	PKP	PKPdf	18 31 10.7	+0.4
	comp=Z,3µm,0.6s,baz=136,slow=2.1,SNR=347						
TKL				PKPbc	PKiKP	18 31 14.1	-1.0
	comp=Z,3µm,0.6s,baz=120,slow=2.0,SNR=492						
RCBR	Riachuelo	146.87	250	pPKPbc	pPKPbc	18 33 30.2	-1.0
	comp=Z,71nm,1.1s,baz=93,slow=12,SNR=9.9						
CMIG	Matias Romero	150.53	66	PKPbc	PKiKP	18 31 23.6	+0.1
	comp=Z,1µm,0.8s,baz=296,slow=1.8,SNR=138						
CMIG				PKPab	PKPab	18 31 32.7	+0.2
	comp=Z,373nm,0.7s,baz=331,slow=4.2,SNR=9.4						
CMIG				pPKPbc	pPKPdf	18 33 38.8	+2.0
	comp=Z,48nm,0.9s,baz=220,slow=2.0,SNR=2.0						
BDFB	Brasilia	151.44	221	PKP	PKPdf	18 31 19.0	+0.6
	comp=Z,54nm,0.8s,baz=87,slow=1.6,SNR=68						
BDFB				PKPbc	PKiKP	18 31 25.6	+0.1
	comp=Z,538nm,0.5s,baz=127,slow=2.7,SNR=257						
BDFB				PKPab	PKPab	18 31 37.6	+1.2
	comp=Z,210nm,0.7s,baz=176,slow=6.2,SNR=12						
BDFB				pPKPbc	pPKPbc	18 33 41.5	-2.2
	comp=Z,33nm,0.8s,baz=102,slow=5.8,SNR=1.7						
APG	El Apazote	155.22	67	PKP	PKPdf	18 31 24.1	+0.1
	comp=Z,17nm,0.9s,baz=158,slow=10.0,SNR=68						
APG				PKPab	PKPab	18 31 53.5	+0.7
	comp=Z,6.9nm,0.6s,baz=79,slow=18,SNR=8.2						
SIV	San Ignacio	157.33	195	PKP	PKPdf	18 31 27.0	+0.6
	comp=Z,83nm,0.9s,baz=153,slow=1.7,SNR=214						
SIV				PKPab	PKPab	18 32 02.5	+1.1
	comp=Z,90nm,0.5s,baz=187,slow=5.4,SNR=34						
SIV				pPKP	pPKPdf	18 33 45.7	-0.9
	comp=Z,24nm,1.1s,baz=136,slow=2.6,SNR=1.5						
SIV				SKP	SKPdf	18 34 03.5	+0.7
	comp=Z,16nm,0.8s,baz=157,slow=1.7,SNR=4.5						
SIV				PP	PP	18 35 42.2	+0.8
	comp=Z,75nm,1.1s,baz=196,slow=5.8,SNR=7.9						
LPAZ	La Paz	157.75	177	PKP	PKPdf	18 31 28.6	+1.0
	comp=Z,75nm,1.0s,baz=78,slow=0.7,SNR=161						
LPAZ				PKPab	PKPab	18 32 04.5	+0.6
	comp=Z,104nm,0.5s,baz=40,slow=2.1,SNR=25						
LPAZ				SKP	SKPdf	18 34 04.1	+0.1
	comp=Z,30nm,0.9s,baz=165,slow=1.2,SNR=4.8						
NNA	Nana	159.52	151	PKP	PKPdf	18 31 30.1	+1.1
	comp=Z,111nm,1.1s,baz=317,slow=2.6,SNR=20						
NNA				SKP	SKPdf	18 34 06.0	+0.8
	comp=Z,10nm,0.6s,baz=297,slow=2.3,SNR=3.9						
LCCY	Blossom Villag	161.38	42	eP	PKPdf	18 31 30.5	-0.3
CBCY	The Bluff, Cay	161.54	41	eP	PKPdf	18 31 30.6	-0.3
CCCC	Cccc	161.65	34	eP	PKPdf	18 31 29.6	-1.4
JTS	Las Juntas de	161.66	76	PKP	PKPdf	18 31 30.6	-0.7
	comp=Z,178nm,0.9s,baz=329,slow=2.6,SNR=79						
JTS				PKPab	PKPab	18 32 20.6	-0.2
	comp=Z,180nm,0.7s,baz=324,slow=2.7,SNR=22						
JTS				PP	PP	18 36 06.9	+0.2
	comp=Z,15nm,0.8s,baz=273,slow=2.5,SNR=2.0						
ATAH	Atahualpa	162.58	139	PKP	PKPdf	18 31 34.1	+1.3
	comp=Z,169nm,1.0s,baz=133,slow=1.4,SNR=99						
ATAH				PKPab	PKPab	18 32 25.6	+0.6
	comp=Z,66nm,0.7s,baz=174,slow=5.7,SNR=7.5						
HLGC	Holguin	162.80	30	eP	PKPdf	18 31 32.8	+0.6
LMGC	Las Mercedes	162.98	34	eP	PKPdf	18 31 32.5	+0.1
YAR	Yar	163.08	32	eP	PKPdf	18 31 32.9	+0.4
PINC	Pinares de May	163.28	30	eP	PKPdf	18 31 33.3	+0.7
CHIV	Chivirico	163.37	33	P	PP	18 36 17.6	+3.6
CHIV	Chivirico	163.37	33	eP	PKPdf	18 31 33.2	+0.5
NMDO	Nuevo Mundo	163.60	28	P	PP	18 36 15.4	+0.5
MARVS	Santiago de Cu	163.63	31	eP	PKPdf	18 31 32.7	-0.2
RCC	Rio Carpintero	163.74	31	eP	PKPdf	18 31 33.2	+0.2
QMBU	Quimbuelo	163.99	28	P	PP	18 36 17.2	+0.2
QMBU	Quimbuelo	163.99	28	eP	PKPdf	18 31 33.8	+0.4
GTBY	Guantanamo Bay	164.09	29	P	PP	18 36 19.5	+2.0
GTBY	Guantanamo Bay	164.09	29	eP	PKPdf	18 31 33.9	+0.5
MASC	Masc	164.28	26	P	PP	18 36 19.5	+1.1
STH	Stony Hill	164.64	38⇑	i P	PKPdf	18 31 34.7	+0.7
GWJ	Greenwich	164.70	38⇑	i P	PKPdf	18 31 35.1	+0.9
HOJ	Hope	164.74	38⇓	i P	PKPdf	18 31 35.7	+1.7
ITTB	Itaituba	164.77	227	eP	PKPdf	18 31 32.6	-1.6
CZSB	Cruzeiro do Su	165.12	157	eP	PKPdf	18 31 32.5	-2.0
OTAV	Otavalo	167.11	116	eP	PKPdf	18 31 34.7	-1.9
SJG	San Juan	168.01	357	PKP	PKPdf	18 31 35.8	-0.7
	comp=Z,179nm,1.0s,baz=65,slow=3.8,SNR=35						
SJG				PKPab	PKPab	18 32 47.8	-0.4
	comp=Z,60nm,0.5s,baz=18,slow=5.1,SNR=7.1						
SJG				PP	PP	18 36 36.9	+0.2
	comp=Z,22nm,0.6s,baz=97,slow=4.2,SNR=5.0						
MACA	Manacapuru-AM	168.92	214	eP	PKPdf	18 31 35.7	-1.5
POPC	Popayan, Colom	169.65	109	P	SKKSac	18 42 33.8	-2.4
	comp=Z,2µmcomp=Z,117nm,1.2s						
PTLC	Puerto Leguiza	170.19	126	P	SKKSac	18 42 52.0	+14
	comp=Z,6µmcomp=Z,551nm,1.2s						
TEFE	Tefe	170.22	193	eP	PKPdf	18 31 35.7	-2.3
MACC	Macarena, Meta	172.06	119	P	SKKSac	18 42 56.7	+9.4
	comp=Z,7µmcomp=Z,526nm,1.5s						
ROSC	El Rosal	172.52	99	PKP	PKPdf	18 31 39.8	+0.2
	comp=Z,175nm,1.0s,baz=121,slow=1.2,SNR=97						
ROSC				PKPab	PKPab	18 33 09.2	-0.1
	comp=Z,74nm,0.8s,baz=135,slow=11,SNR=5.5						
ROSC				PP	PP	18 37 03.1	+1.0
	comp=Z,13nm,0.4s,baz=296,slow=8.0,SNR=3.8						
BOAV	Boa Vista	172.66	240	eP	PKPdf	18 31 37.8	-1.4
CHIC	Chingaza	173.06	102	P	SKKSac	18 42 53.5	+0.5
	comp=Z,5µmcomp=Z,345nm,1.3s						
OCAC	Ocana	173.28	71	P	SKKSac	18 42 58.3	+4.8
BARC	Barichara	173.74	85	P	SKKSac	18 42 55.5	-0.5
	comp=Z,4µmcomp=Z,563nm,1.0s						
RUSC	La Rusia	173.86	91	P	SKKSac	18 42 55.2	-1.8
	comp=Z,8µmcomp=Z,727nm,1.2s						
PAMC	Pamplona, Colo	174.11	77	P	SKKSac	18 42 57.3	-0.9
SDV	Santo Domingo	175.37	53	PKP	PKPdf	18 31 39.3	-1.0
	comp=Z,205nm,1.1s,baz=134,slow=0.4,SNR=111						
SDV				PKPab	PKPab	18 33 21.3	-0.3
	comp=Z,80nm,0.7s,baz=302,slow=2.1,SNR=4.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SDV				PP	PP	18 37 11.1	-3.3
	comp=Z,13nm,0.7s,baz=333,slow=4.8,SNR=7.8						
SDV	Santo Domingo	175.37	53	eP	PKPdf	18 31 38.5	-1.9

*IDC **05** 18:34:37.3±0.9, 6.13°S×113.19°E, h586km±13km, mb3.1/9, mbtmp4.2/13, Error ellipse: s-maj=20.0km s-min=10.0km az=49.0*

*NEIC **05** 18:34:38.2±1.6, 6.2°S±0.1°×113.1°E±0.1°, h593km±7km, mb4.5/26, Error ellipse: s-maj=17.9km s-min=13.8km az=61.0*

*DJA **05** 18:34:38.4±0.1, 7°S±3°×11°3E±°, h594km, M4.2/43, mB5.7/1, mb4.2/13, MLv4.2/43, Mw(mB)5.3/1*

ISC 05 18:34:37.5±0.5, **6.26°S**±0.07°×**113.14°E**±0.06°, **h594**km±6km, **n110**, σ1s.**42**/123, **mb4.2**/21, **Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMMI	Kalianget	1.14	134	P	P	18 35 49.9	+1.5
KMMI				S	S	18 36 47.8	+1.7
BLJI	Banyuglugur	1.54	163	P	P	18 35 50.4	+0.8
BLJI				S	S	18 36 48.8	+0.6
ABJI	Asem Bagus	1.88	145	P	P	18 35 52.2	+1.5
NGJI	Ngawi	2.00	236	P	P	18 35 53.1	+1.9
SJI	Sawahan	2.00	223	P	P	18 35 51.7	+0.4
GMJI	Gumukmas	2.02	171	P	P	18 35 51.2	-0.1
GMJI				S	S	18 36 50.4	-1.0
SNJI	Sawahan-Nganju	2.04	222	P	P	18 35 53.0	+1.4
JAGI	Jajag, Banyuwa	2.42	155	P	P	18 35 52.5	-0.6
JAGI	Jajag, Banyuwa	2.42	155	P	P	18 35 52.8	-0.3
JAGI	Jajag, Banyuwa	2.42	155	S	S	18 36 53.0	-1.6
JAGI	Jajag, Banyuwa	2.42	155	P	P	18 35 52.6	-0.5
JAGI				S	S	18 36 52.6	-2.0
PCJI	Pacitan	2.74	225	P	P	18 35 54.5	-0.2
PCJI				S	S	18 36 55.2	-2.3
SMRI	Semarang	2.79	254	P	P	18 35 55.3	+0.3
SMRI	Semarang	2.79	254	P	P	18 35 55.9	+0.9
SMRI	Semarang	2.79	254	P	P	18 35 55.9	+0.9
SMRI				S	S	18 36 59.1	+1.0
RTBI	Rangdo, Negare	2.83	141	P	P	18 35 55.2	0.0
RTBI				S	S	18 36 57.4	-1.1
UGM	Wanagama	3.07	237	P	P	18 35 56.5	-0.1
UGM	Wanagama	3.07	237	P	P	18 35 56.9	+0.3
UGM	Wanagama	3.07	237	S	S	18 37 00.0	-1.0
UGM	Wanagama	3.07	237	P	P	18 35 56.9	+0.3
UGM				S	S	18 36 59.7	-1.3
DNP	Denpasar	3.16	140	P	P	18 35 56.7	-0.4
DNP				S	S	18 37 02.3	+0.4
YOGI	Yogyakarta	3.22	241	P	P	18 35 57.7	+0.3
YOGI				S	S	18 37 00.8	-1.7
KHKI	Kahang-Kahang	3.22	131	P	P	18 35 58.7	+1.3
KHKI				S	S	18 37 02.6	+0.1
IGBI	Denpasar	3.23	142	P	P	18 35 57.1	-0.4
IGBI				S	S	18 37 00.8	-1.8
CTJI	Waduk Cacaban	4.00	259	P	P	18 36 02.8	+0.3
KPJI	Karang Pucung	4.31	255	P	P	18 36 05.5	+0.8
KPJI				S	S	18 37 16.7	+0.8
PLAI	Plampang	5.26	119	P	P	18 36 10.8	-1.3
	31nm,0.9s						
PLAI	Plampang	5.26	119	P	P	18 36 10.6	-1.5
LEM	Lembang	5.51	264	P	P	18 36 15.1	+0.7
	36nm,0.7s,baz=37,slow=11,SNR=9.3						
LEM				S	S	18 37 33.5	0.0
	25nm,0.6s,baz=103,slow=19,SNR=4.0						
LEM	Lembang	5.51	264	P	P	18 36 15.3	+0.9
	0.2nm41nm,1.0s						
BBJI	Bungbulang	5.58	257	P	P	18 36 13.7	-1.2
BBJI	Bungbulang	5.58	257	P	P	18 36 14.0	-0.8
	73nm,0.7s						
BBJI	Bungbulang	5.58	257	S	S	18 37 33.3	-1.0
	73nm,0.7s						
BBJI	Bungbulang	5.58	257	P	P	18 36 14.0	-0.8
	0.5nm74nm,0.7s						
BBJI				S	S	18 37 32.8	-1.5
	0.5nm74nm,0.7s						
DBNI	Kabupaten Domp	5.59	114	P	P	18 36 13.5	-1.4
BKB	Balikpapan	6.22	37	P	P	18 36 23.4	+3.1
	153nm,1.3s						
TPI	Tanjungpandan	6.48	302	P	P	18 36 23.1	+0.5
	0.2nm55nm,0.7s						
KAPI	Kappang	6.70	80	P	P	18 36 22.2	-2.3
	15nm,1.1s,baz=264,slow=10,SNR=2.5						
KAPI	Kappang	6.70	80	P	P	18 36 24.4	-0.1
WBSI	Waikabubak, Su	7.05	119	P	P	18 36 25.8	-1.9
	49nm,1.2s						
PCI	Palu	8.54	52	P	P	18 36 45.2	+3.3
	49nm,0.7s						
SBUM	Sibu	8.70	354	P	P	18 36 44.3	+0.9
SBUM	Sibu	8.70	354	P	P	18 36 44.6	+1.2
	47nm,0.7s						
SBUM	Sibu	8.70	354	P	P	18 36 44.6	+1.2
	47nm,0.7s						
MPSI	Mapaga	9.40	46	P	P	18 36 51.6	+1.3
TOLI2	Tolitoli	10.57	46		P	18 37 02.2	+0.2
TOLI2	Tolitoli	10.57	46	P	P	18 37 02.3	+0.3
	37nm,0.7s						
BATI	Baumata	11.13	111	P	P	18 37 07.1	-0.4
	6.3nm,0.3s,baz=335,slow=0.7,SNR=7.4						
BATI				S	S	18 39 07.1	-3.7
	25nm,0.5s,baz=130,slow=20,SNR=5.1						
SOEI	Soe	11.55	108	P	P	18 37 09.1	-2.8
MYLDM	Lahad Datu	12.56	25	P	P	18 37 23.8	+1.8
MYLDM	Lahad Datu	12.56	25	P	P	18 37 24.5	+2.5
KKM	Kota Kinabalu	12.60	14		P	18 37 21.0	-1.5
KKM	Kota Kinabalu	12.60	14	P	P	18 37 21.8	-0.7
TNTI	Ternate	15.83	64	P	P	18 37 54.8	+1.2
TNTI	Ternate	15.83	64	P	P	18 37 54.9	+1.2
	22nm,0.9s						
MBWA	Marble Bar	16.13	157	P	P	18 37 57.2	+0.8
MBWA				IAmb	IAmb	18 38 12.0	
	comp=Z,39nm,1.4s						
MBWA	Marble Bar	16.13	157	P	P	18 37 57.4	+1.1
	comp=Z,15nm,1.8s						
GIRL	Giralia	16.32	176	P	P	18 37 59.9	+1.8
PSA00	Pilbara Seismi	16.55	158	P	P	18 38 00.8	+0.6
PSA00				IAmb	IAmb	18 38 02.3	
	comp=Z,12nm,0.7s						
PSA00	Pilbara Seismi	16.55	158	P	P	18 38 00.9	+0.7
	comp=Z,34nm,2.7s						
FITZ	Fitzroy Crossi	16.95	135	P	P	18 38 04.4	+0.6
	comp=Z,3.7nm,0.4s,baz=320,slow=4.6,SNR=16						
KNRA	Kununurra	17.95	123	P	P	18 38 13.1	0.0
KNRA				IAmb	IAmb	18 38 43.8	
	comp=Z,19nm,1.1s						
MTN	Manton Dam	18.91	112	P	P	18 38 21.6	-0.2
MTN				IAmb	IAmb	18 38 32.9	
	comp=Z,19nm,1.5s						
MEEK	Meekatharra	20.93	166	P	P	18 38 40.9	+1.0
	comp=Z,16nm,2.0s						
MORW	Morawa	22.85	173	P	P	18 38 58.1	+1.1
MORW				IAmb	IAmb	18 39 36.0	
	comp=Z,23nm,1.5s						
MORW	Morawa	22.85	173	P	P	18 38 58.4	+1.4
	comp=Z,16nm,2.9s						
WB0	Warramunga Arr	24.64	125	P	P	18 39 13.4	+0.4
WB0				IAmb	IAmb	18 39 16.6	
	comp=Z,8.1nm,1.2s						
WRA	Warramunga Arr	24.68	125	P	P	18 39 14.0	+0.7
	comp=Z,2.0nm,0.6s,baz=314,slow=9.3,SNR=43						
	comp=Z,2.0nm,0.6s						
WRA	Warramunga Arr	24.68	125	IAmb	IAmb	18 39 14.7	
	comp=Z,0.4nm,1.1s						
WRAB	Tennant Creek	24.68	125	P	P	18 39 13.9	+0.5
WRAB				IAmb	IAmb	18 39 17.9	
	comp=Z,10nm,1.4s						
WR8	Warramunga Arr	24.82	125	P	P	18 39 15.1	+0.6
WR8				IAmb	IAmb	18 39 38.3	
	comp=Z,12nm,1.4s						
KLBR	Kellerberrin	25.57	171	P	P	18 39 22.0	+1.0
	comp=Z,24nm,1.1s						
ASAR	Alice Springs	26.43	133	P	P	18 39 29.4	+0.8
	comp=Z,2.2nm,0.5s,baz=312,slow=8.5,SNR=50						
	comp=Z,2.2nm,0.5s						
NWAO	Narrogin (SRO)	26.81	172	P	P	18 39 32.6	+0.8
CMAR	Chiang Mai Arr	28.27	331	P	P	18 39 44.6	-0.1
	comp=Z,0.9nm,0.7s,baz=159,slow=7.4,SNR=10.0						
	comp=Z,0.9nm,0.7s						
QIS	Mount Isa	29.34	122	P	P	18 39 54.8	+0.8
	comp=Z,5.0nm,2.2s						
COEN	Coen	30.52	107	P	P	18 40 04.3	+0.1
COEN				IAmb	IAmb	18 40 06.4	
	comp=Z,8.5nm,1.1s						
CTAO	Charters Tower	34.96	116	P	P	18 40 41.1	-0.5
ENH	Enshi	36.49	355	P	P	18 40 53.8	-0.3
ENH				IAmb	IAmb	18 40 54.1	
	comp=Z,5.4nm,0.4s						
STKA	Stephens Creek	36.82	137	P	P	18 40 57.3	+0.6
	comp=Z,1.3nm,0.3s,baz=306,slow=8.2,SNR=13						
	comp=Z,1.3nm,0.3s						
STKA	Stephens Creek	36.82	137	IAmb	IAmb	18 41 03.5	
	comp=Z,62nm,1.4s						
EIDS	Eidsvold	40.94	122	P	P	18 41 31.4	+1.4
EIDS				IAmb	IAmb	18 41 43.2	
	comp=Z,29nm,1.4s						
SONM	Songino Array	54.19	354	P	P	18 43 08.1	-0.3
	comp=Z,0.4nm,0.3s,baz=178,slow=8.7,SNR=4.1						
SONM				PcP	PcP	18 44 02.9	-0.4
	comp=Z,0.3nm,0.3s,baz=184,slow=3.7,SNR=5.2						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	59.49	336	P	P	18 43 44.1	-0.4
	comp=Z,0.9nm,0.4s,baz=150,slow=7.2,SNR=7.8						
	comp=Z,0.9nm,0.4s						
MKAR	Makanchi Array	59.49	336	P	P	18 43 43.4	-1.1
ZALV	Zalesovo Beam	64.53	342	P	P	18 44 15.4	-1.6
	comp=Z,0.7nm,0.3s,baz=162,slow=4.5,SNR=1.8						
	comp=Z,0.7nm,0.3s						
BFZ	Birch Farm	65.65	132	P	P	18 44 24.7	+0.5
BFZ				IAmb	IAmb	18 44 58.3	
	comp=Z,41nm,1.4s						
RTZ	Ruatahuna	65.76	130	P	P	18 44 25.3	+0.3
RTZ				IAmb	IAmb	18 44 31.2	
	comp=Z,38nm,1.4s						
MXZ	Matakaoa Point	66.58	128	P	P	18 44 30.3	+0.2
PETK	Petropavlovsk-	70.08	27	P	P	18 44 50.6	-0.2
	comp=Z,1.0nm,0.4s,baz=134,slow=1.5,SNR=5.7						
	comp=Z,1.0nm,0.4s						
AB31	Akbulak array	72.04	327	P	P	18 45 01.7	-0.6
ABKAR	Akbulak array	72.04	327	P	P	18 45 01.6	-0.7
VNDA	Vanda	75.62	170	P	P	18 45 22.7	+0.6
	comp=Z,1.0nm,0.3s,baz=313,slow=6.3,SNR=1.8						
	comp=Z,1.0nm,0.3s						
LSZ	Lusaka	83.52	255	P	P	18 46 05.0	+0.1
LSZ				IAmb	IAmb	18 46 05.5	
	comp=Z,4.2nm,0.6s						
CONA	Conrad Observa	99.49	317	ePKiKP	PKiKP	18 51 47.8	+4.7
	comp=Z,8.8nm,1.5s						
MOA	Molln	100.56	317	ePKiKP	PKiKP	18 51 45.7	+0.7
	comp=Z,12nm,1.5s						
BIOA	Bad Ischl, Aus	100.99	317	ePKiKP	PKiKP	18 51 48.3	+2.5
	comp=Z,26nm,1.2s						
ABTA	Abfaltersbach	101.81	316	ePKiKP	PKiKP	18 51 40.7	-6.7
	comp=Z,17nm,1.5s						
MGMO	Mountain Grove	141.50	33		PKPdf	18 52 58.8	-3.6
SSPA	Standing Stone	144.37	14	PKPdf	PKPdf	18 53 07.0	-0.3
Q52A	Bidwell	144.59	21	PKPdf	PKPbc	18 53 07.8	-0.2
WVT	Waverly	144.59	30	PKPdf	PKPbc	18 53 08.0	-0.1
Q54A	Coxs Mills	145.06	19		PKPbc	18 53 09.3	-0.1
T50A	Nancy	145.26	26		PKPbc	18 53 09.6	-0.5
U49A	Red Boiling Sp	145.26	27	PKPbc	PKPbc	18 53 09.8	-0.3
Q56A	Snyder Ridge,	145.51	17	PKPdf	PKPdf	18 53 08.7	-0.5
CPUP	Villa Florida	146.31	196	PKPbc	PKPbc	18 53 13.9	+0.6
	comp=Z,3.8nm,0.7s,baz=165,slow=3.2,SNR=7.0						
BDFB	Brasilia	151.33	220	PKPbc	PKiKP	18 53 26.5	+0.2
	comp=Z,5.0nm,0.5s,baz=89,slow=4.1,SNR=7.4						
BDFB	Brasilia	151.33	220		PKiKP	18 53 26.4	+0.1
PB03	IPOC Station P	151.73	174	PKPbc	PKiKP	18 53 27.1	0.0

*IDC **05** 19:17:09.6±2.0, 16.28°S×174.25°W, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=131.9km s-min=23.1km az=145.0*

ISC 05 19:17:33.3±2.0, **16.3°S**±0.7°×**174.5°W**±0.5°, **h200**km, **n6**, σ1s.**29**/8, **mb3.5**/6, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.69	241	P	P	19 25 09.9	-0.8
	2.9nm,0.9s,baz=90,slow=13,SNR=3.5						
	2.9nm,0.9s						
WRA	Warramunga Arr	48.64	258	P	P	19 25 57.2	-0.3
	0.3nm,0.5s,baz=92,slow=8.4,SNR=7.6						
WRA				PcP	PcP	19 27 21.2	+1.4
	0.3nm,0.8s,baz=104,slow=3.3,SNR=2.1						
	0.3nm,0.5s						
ASAR	Alice Springs	48.86	253	P	P	19 25 59.0	-0.1
	3.0nm,0.5s,baz=88,slow=8.1,SNR=106						
ASAR				PcP	PcP	19 27 22.7	+2.1
	0.2nm,0.5s,baz=89,slow=4.2,SNR=1.2						
	3.0nm,0.5s						
NVAR	Mina Array Bea	75.70	42	P	P	19 28 57.3	+0.2
	2.8nm,1.1s,baz=248,slow=4.8,SNR=2.1						
	2.8nm,1.1s						
ILAR	Eielson Array	83.56	12	P	P	19 29 38.5	0.0
	0.2nm,0.4s,baz=225,slow=5.6,SNR=7.5						
	0.2nm,0.4s						
PDAR	Pinedale Array	83.64	42	P	P	19 29 38.7	-1.1
	0.4nm,0.7s,baz=247,slow=5.1,SNR=2.9						
	0.4nm,0.7s						

*IDC **05** 19:22:55.6±0.6, 20.08°N×121.56°E, h0km, mb4.1/19, mbtmp4.1/21, ML4.0/2, MS3.9/6, Error ellipse: s-maj=21.1km s-min=12.8km az=68.0*

*JMA **05** 19:22:58.8±0.8, 20°N±3°×12°1E±°, h3km, MV4.9/12, PHILIPPINE ISL REGION*

*NEIC **05** 19:23:01.5±1.6, 20.08°N±0.03°×121.46°E±0.10°, h35km±2km, mb4.5/54, Error ellipse: s-maj=15.8km s-min=3.4km az=106.0*

ISC 05 19:23:01.1±0.5, **20.08°N**±0.05°×**121.38°E**±0.06°, **h40**km, **n108**, σ1s.**54**/101, **mb4.4**/47, **MS3.7**/8, **1D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWG	Pinlang	2.74	354		Pn	19 23 40.4	-2.3
TPUB	Ta-pu	3.28	348		Pn	19 23 48.8	-1.2
YULB	Yu-li	3.30	359		Pn	19 23 49.5	-0.7
SSLB	Suanglung	3.71	354		Pn	19 23 55.3	-0.7
NACB	Ninganchiao	4.08	3		Pn	19 24 01.3	+0.3
HATJ	Hateruma jima	4.55	29	eP	Pn	19 24 07.5	0.0
HATJ				eS	Sn	19 24 57.0	-2.1
YHNB	Yeheng	4.57	360		Pn	19 24 08.3	+0.5
JYNG	Yonagunijimaku	4.59	18	eS	Sn	19 24 58.3	-1.7
YOJ	Yonaguni jima	4.62	19	Pn	Pn	19 24 07.7	-0.6
IRIF	Iriomote-Funau	4.76	27	eP	Pn	19 24 10.7	+0.3
IRIF				eS	Sn	19 25 03.3	-1.0
JKRS	Kuro-shima	4.80	30	eP	Pn	19 24 11.5	+0.6
JKRS				eS	Sn	19 25 03.1	-2.1
TATO	Taipei	4.87	1	Pn	Pn	19 24 12.8	+0.9
JIJ	Ishigaki jima	4.97	30	eP	Pn	19 24 13.2	0.0
JIJ				eS	Sn	19 25 05.7	-3.8
KNMB	Chin-men Tao	5.17	328	Pn	Pn	19 24 13.1	-2.9
JISG	Ishigakijimahi	5.24	31	eP	Pn	19 24 15.5	-1.5
JISG				eS	Sn	19 25 13.4	-2.7
JTJ	Tarama	5.48	33	S	Sn	19 25 19.8	-2.2
JMJ2	Miyako jima3	5.90	37	eS	Sn	19 25 31.9	-0.5
HKPS	Hong Kong Po S	7.10	289		Pn	19 24 39.8	-2.7
JOW	Kunigami	9.23	42	Pn	Pn	19 25 09.4	-2.3
	4.7nm,0.3s,baz=162,slow=14,SNR=8.6						
	11nm,0.3s						
JOW	Kunigami	9.23	42	Pn	Pn	19 25 10.9	-0.8
QIZ	Qiongzhong	10.93	266	Pn	Pn	19 25 32.8	-2.2
QIZ	Qiongzhong	10.93	266	P	Pn	19 25 33.3	-1.7
QIZ				S	Sn	19 27 30.6	-5.5
QIZ				LR	LR		
	comp=N,350nm,13.1s						
QIZ				LR	LR		
	comp=E,400nm,13.9s						
QIZ				LR	LR		
	comp=Z,510nm,17.9s						
ENH	Enshi	14.79	316		Pn	19 26 22.1	-5.4
JNU	Nakatsue	15.51	31	Pn	P	19 26 39.5	-1.4
	comp=Z,0.3nm,0.3s,baz=209,slow=6.8,SNR=5.1						
LYN	LuoYang	16.43	333	eP	Pn	19 26 49.8	+1.0
LYN				pmax	pmax		
	comp=Z,23nm,0.8s						
KSRS	Korea Array	18.23	17	P	P	19 27 10.8	0.0
	comp=Z,0.3nm,0.3s,baz=195,slow=11,SNR=6.1						
	comp=Z,1.6nm,0.7s						
CD2	Chengdu	19.19	308	P	P	19 27 22.5	+0.9
CD2				pP	pP	19 27 31.6	+0.9
CD2				sP	sP	19 27 35.8	+0.4
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
SBUM	Sibu	19.67	208		Pn	19 27 28.6	+0.1
BJI2	Beijing	20.37	348	P	P	19 27 35.4	+1.1
BJI2				pP	Pn	19 27 39.7	+3.1
BJI2				sP	pP	19 27 42.1	-1.2
BJI2				S	S	19 31 18.2	-2.1
BJI2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJI2				pmax	pmax		
	comp=Z,120nm,12.0s						
BJI2				LR	LR		
	comp=N,120nm,12.9s						
BJI2				LR	LR		
	comp=E,110nm,10.7s						
BJI2				LR	LR		
	comp=Z,130nm,15.0s						
BJT	Baijiatuau	20.37	348		P	19 27 35.1	+0.8
BJT				IAmb	IAmb	19 27 52.3	
	comp=Z,13nm,0.8s						
CHTO	Chiang Mai	21.20	270	P	P	19 27 44.7	+1.2
CM31	Chiang Mai Arr	21.24	269	P	P	19 27 45.6	+1.7
CMAR	Chiang Mai Arr	21.24	269	P	P	19 27 45.0	+1.1
	comp=Z,2.2nm,0.7s,baz=75,slow=9.1,SNR=22						
CMAR				LR	LR	19 36 06.6	
	comp=Z,169nm,19.1s,baz=95,slow=37						
	comp=Z,2.2nm,0.7s						
CMAR	Chiang Mai Arr	21.24	269	P	P	19 27 44.9	+0.9
TNCH	TengChong	21.67	287	⇓P	P	19 27 50.5	+1.8
TNCH				pP	pP	19 27 59.0	+1.1
TNCH				sP	sP	19 28 04.3	+1.7
TNCH				PP	PnPn	19 28 13.5	+3.1
TNCH				S	S	19 31 34.3	-12
TNCH				sS	Sn	19 31 51.8	-5.2
TNCH				pmax	pmax		
	comp=Z,14nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,130nm,4.1s						
TNCH				LR	LR		
	comp=N,230nm,6.6s						
TNCH				LR	LR		
	comp=E,380nm,12.6s						
TNCH				LR	LR		
	comp=Z,580nm,16.4s						
MJAR	Matsushiro Arr	22.05	38	P	P	19 27 52.1	-0.3
	comp=Z,1.1nm,0.8s,baz=228,slow=12,SNR=1.7						
	comp=Z,1.1nm,0.8s						
LZH	Lanzhou	22.16	320	eP	P	19 27 55.3	+1.5
LZH				pP	pP	19 27 59.4	-3.5
LZH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LZDM	Lanzhou Array	22.17	319	P	P	19 27 55.3	+1.2
	comp=Z,5.9nm,0.8s,baz=158,slow=12,SNR=18						
LZDM				LR	LR	19 37 41.7	
	comp=Z,194nm,20.2s,baz=80,slow=40						
	comp=Z,5.9nm,0.8s						
SIJI	Sorong	22.96	154	P	P	19 28 01.9	-0.4
	comp=Z,4.3nm,0.4s,baz=340,slow=12,SNR=6.7						
	comp=Z,4.3nm,0.4s						
GUMO	Guam	23.37	102	LR	LR	19 37 04.2	
	comp=Z,193nm,19.2s,baz=256,slow=37						
XLT	XiLinHaoTe	24.16	351	eP	P	19 28 14.4	+0.8
XLT				pP	pP	19 28 19.7	-3.8
XLT				sP	pwP	19 28 24.8	-3.2
XLT				PP	PnPn	19 28 49.0	+4.8
XLT				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,170nm,5.1s						
GTA2	Gaotai	26.83	321	eP	P	19 28 39.2	+1.3
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SHL	Shillong	27.70	287	P	P	19 28 46.0	+0.1
LSA	Lhasa	28.98	295		P	19 28 59.6	+2.0
SONM	Songino Array	30.24	340	P	P	19 29 09.2	+1.1
	comp=Z,0.6nm,0.6s,baz=151,slow=9.5,SNR=4.9						
SONM				LR	LR	19 42 37.5	
	comp=Z,279nm,21.3s,baz=160,slow=39						
	comp=Z,0.6nm,0.6s						
SONM	Songino Array	30.24	340	P	P	19 29 08.8	+0.7
PSA00	Pilbara Seismi	41.42	182	P	P	19 30 43.6	-0.3
MKAR	Makanchi Array	41.48	319	P	P	19 30 45.9	+1.7
	comp=Z,2.0nm,0.6s,baz=114,slow=9.4,SNR=29						
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	41.48	319		P	19 30 45.5	+1.4
WB0	Warramunga Arr	41.60	161		P	19 30 44.2	-1.2
WB0				IAmb	IAmb	19 30 45.0	
	comp=Z,8.8nm,1.0s						
MAKZ	Makanchi	41.68	319		P	19 30 46.3	+0.5
WRAB	Tennant Creek	41.74	162	P	P	19 30 45.4	-1.1
WRAB				IAmb	IAmb	19 30 46.5	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	41.75	162	P	P	19 30 45.7	-0.9
	comp=Z,3.0nm,0.3s,baz=342,slow=9.1,SNR=106						
	comp=Z,3.0nm,0.3s						
WRA	Warramunga Arr	41.75	162	IAmb	IAmb	19 30 46.4	
	comp=Z,0.3nm,1.0s						
WR8	Warramunga Arr	41.81	161		P	19 30 46.2	-0.9
WR8				IAmb	IAmb	19 30 47.0	
	comp=Z,14nm,1.0s						
H11N1	WAKE ISLAND Hy	42.69	82	T	T	20 16 13.8	
	baz=279,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	42.69	82	T	T	20 16 18.9	
	baz=279,slow=75,SNR=7.1						
H11S3	WAKE ISLAND Hy	42.69	84	T	T	20 16 09.6	
	baz=281,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	42.70	84	T	T	20 16 07.6	
	baz=281,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	42.71	82	T	T	20 16 12.1	
	baz=279,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	42.71	84	T	T	20 16 10.8	
	baz=281,slow=75,SNR=16						
PETK	Petropavlovsk-	43.21	31	P	P	19 30 57.1	-1.0
	comp=Z,2.9nm,0.8s,baz=236,slow=7.6,SNR=2.6						
	comp=Z,2.9nm,0.8s						
ZAA0	Zalesovo Array	43.82	329		P	19 31 03.8	+0.8
ZALV	Zalesovo Beam	43.82	329	P	P	19 31 03.3	+0.3
	comp=Z,2.9nm,0.7s,baz=120,slow=7.3,SNR=16						
	comp=Z,2.9nm,0.7s						
ZALV	Zalesovo Beam	43.82	329		P	19 31 03.7	+0.7
AS31	Alice Springs	45.16	164	IAmb	IAmb	19 31 15.2	
	comp=Z,4.2nm,0.9s						
ASAR	Alice Springs	45.16	164	P	P	19 31 14.1	0.0
	comp=Z,4.8nm,0.4s,baz=343,slow=8.4,SNR=230						
	comp=Z,4.8nm,0.4s						
ASAR	Alice Springs	45.16	164		P	19 31 13.8	-0.2
AAK	Ala-Archa	45.22	311	LR	LR	19 52 59.7	
	comp=Z,247nm,20.1s,baz=26,slow=40						
KURK	Kurchatov	45.40	323	P	P	19 31 17.2	+1.5
KURK	Kurchatov	45.40	323	IAmb	IAmb	19 31 30.4	
	comp=Z,3.6nm,0.9s						
KURBB	Kurchatov Arra	45.41	323	P	P	19 31 17.2	+1.4
	comp=Z,2.1nm,0.7s,baz=124,slow=7.5,SNR=16						
	comp=Z,2.1nm,0.7s						
KKAR	Karatay Array	48.18	310	P	P	19 31 39.2	+1.6
BVAR	Borovoye Array	51.00	323	P	P	19 31 58.5	-0.4
	comp=Z,1.0nm,0.6s,baz=107,slow=7.9,SNR=5.1						
	comp=Z,1.0nm,0.6s						
BORK	Borovoye	51.05	323	P	P	19 31 58.2	-1.0
BORK				IAmb	IAmb	19 32 14.1	
	comp=Z,4.9nm,0.9s						
TIXI	Tiksi	51.76	3		P	19 32 03.7	-0.5
TIXI				IAmb	IAmb	19 32 09.8	
	comp=Z,11nm,1.5s						
NRIK	Noril'sk	53.40	346	P	P	19 32 15.2	-1.2
	comp=Z,3.7nm,0.8s,baz=134,slow=8.7,SNR=6.8						
	comp=Z,3.7nm,0.8s						
NRIK	Noril'sk	53.40	346		P	19 32 15.3	-1.2
NRIK				IAmb	IAmb	19 32 17.9	
	comp=Z,5.4nm,0.9s						
STKA	Stephens Creek	55.17	159	P	P	19 32 29.7	-0.1
	comp=Z,2.3nm,1.0s,baz=348,slow=9.3,SNR=2.9						
	comp=Z,2.3nm,1.0s						
BILL	Bilibino	55.48	19	P	P	19 32 31.4	-0.1
BILL				IAmb	IAmb	19 32 43.8	
	comp=Z,6.7nm,1.1s						
AB31	Akbulak array	56.48	316		P	19 32 37.2	-1.8
AB31				IAmb	IAmb	19 32 54.1	
	comp=Z,3.0nm,0.8s						
C16K	Lisburne Hills	65.33	23	P	P	19 33 39.4	+0.6
C16K				IAmb	IAmb	19 33 45.9	
	comp=Z,3.4nm,0.8s						
L14K	Kuka Creek	65.85	31	P	P	19 33 43.3	+1.1
G16K	Koyuk River	66.21	26	P	P	19 33 46.3	+1.8
G16K				IAmb	IAmb	19 33 59.2	
	comp=Z,6.6nm,1.3s						
F17K	Baldwin Pennin	66.73	25		P	19 33 48.8	+1.0
F17K				IAmb	IAmb	19 33 49.9	
	comp=Z,4.2nm,0.8s						
I17K	Unalakleet	66.85	28	P	P	19 33 49.4	+0.8
E18K	Tukpahlearik C	67.03	24	P	P	19 33 50.9	+1.2
E18K				IAmb	IAmb	19 33 53.0	
	comp=Z,2.6nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H17K	Granite Mounta	67.22	27	P	P	19 33 53.1	+2.1
H17K				IAmb	IAmb	19 33 54.3	
	comp=Z,3.3nm,0.8s						
L16K	Owhat River	67.39	30	P	P	19 33 52.6	+0.5
C19K	Lookout Ridge	67.50	22	P	P	19 33 54.6	+1.9
C19K				IAmb	IAmb	19 34 11.4	
	comp=Z,2.6nm,0.8s						
D20K	Etivluk River	68.56	23	IAmb	IAmb	19 34 01.4	
	comp=Z,5.3nm,0.9s						
E21K	Killik River	69.54	23	IAmb	IAmb	19 34 12.6	
	comp=Z,3.1nm,0.7s						
J20K	Nowinta River	69.73	28	P	P	19 34 08.3	+1.7
J20K				IAmb	IAmb	19 34 22.1	
	comp=Z,4.4nm,1.0s						
RAYN	Ar Rayn	69.76	288	P	P	19 34 08.6	+0.9
RAYN				IAmb	IAmb	19 34 09.7	
	comp=Z,3.1nm,1.1s						
D23K	Nanushuk River	70.70	22	IAmb	IAmb	19 34 20.2	
	comp=Z,4.6nm,0.8s						
E23K	Chandalar	71.19	23	IAmb	IAmb	19 34 42.1	
	comp=Z,4.5nm,1.1s						
D25K	Kavik River	72.18	22	IAmb	IAmb	19 34 28.5	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	72.77	27	P	P	19 34 24.1	-0.9
	comp=Z,0.5nm,0.8s,baz=261,slow=4.8,SNR=7.5						
	comp=Z,0.5nm,0.8s						
C27K	Jago River	73.05	21	P	P	19 34 27.5	+0.9
FINES	FINESS Array B	75.08	330	P	P	19 34 40.0	+1.5
	comp=Z,3.4nm,0.9s,baz=112,slow=2.1,SNR=6.2						
	comp=Z,3.4nm,0.9s						
L27K	Beaver Creek,	75.33	28	P	P	19 34 41.2	+1.2
L27K				IAmb	IAmb	19 34 49.7	
	comp=Z,7.5nm,1.4s						
BCAR	Beaver Creek A	75.35	28	P	P	19 34 40.8	+0.6
BARN	Barnard Glacie	75.95	30	P	P	19 34 44.6	+0.7
CTGM	Chitina Glacie	76.13	30	P	P	19 34 44.8	0.0
HFS	Hagfors	81.23	331	P	P	19 35 14.2	+1.5
	comp=Z,6.2nm,1.0s,baz=134,slow=4.3,SNR=4.8						
	comp=Z,6.2nm,1.0s						
NOA	NORSAR Array B	81.93	333	P	P	19 35 17.4	+0.9
	comp=Z,1.8nm,0.9s,baz=64,slow=5.3,SNR=2.7						
NOA				LR	LR	20 15 06.2	
	comp=Z,68nm,18.1s,baz=65,slow=38						
	comp=Z,1.8nm,0.9s						
YKAW3	Yellowknife Wh	86.62	23	P	P	19 35 40.5	+0.3
YKAW3				IAmb	IAmb	19 36 13.5	
	comp=Z,4.6nm,1.3s						
YKA	Yellowknife Ar	86.67	23	P	P	19 35 40.5	+0.2
	comp=Z,0.5nm,0.6s,baz=313,slow=5.2,SNR=12						
	comp=Z,0.5nm,0.6s						

IDC 05 19:31:46.8±7.5**, 15.°48N**×**119.°42E, h0**km**, mb3.9**/2**, mbtmp3.7**/3**, MS3.5**/1**, Error ellipse: s-maj=236.5km s-min=31.6km az=36.0, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	19.81	281	P	P	19 36 18.9	-0.2
	1.0nm,0.9s,baz=101,slow=9.2,SNR=9.9						
PMG	Port Moresby	36.97	130	LR	LR	19 56 21.9	
	comp=Z,63nm,19.2s,baz=159,slow=40						
WRA	Warramunga Arr	38.14	157	P	P	19 39 08.0	0.0
	1.2nm,0.5s,baz=339,slow=9.0,SNR=20						
	1.2nm,0.5s						
ASAR	Alice Springs	41.41	160	P	P	19 39 35.0	-0.1
	1.3nm,0.8s,baz=340,slow=6.8,SNR=20						
	1.3nm,0.8s						

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*KRNET **05** 19:33:14.3±0.1, 39.°84N×77.°16E, h17km, mb3.4*
*SOME **05** 19:33:17.8, 40.°00N×77.°15E, h10km*
*NNC **05** 19:33:19.4±0.9, 40.°05N×77.°20E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=6.0km s-min=4.2km az=169.0*
ISC 05 19:33:14.4±1.7**, 39.°71N**±0.°08×**77.°00E**±0.°04**, h10**km**, n55, σ2.**ˢ**23**/82**, 16C-15D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNKS	Jany-Kuch	1.70	322	⇓eP	Pb	19 33 45.7	-0.2
JNKS				⇓eS	Sg	19 34 08.6	-0.5
NRN	Naryn	1.88	336	⇑eP	Pb	19 33 48.2	-0.8
NRN				⇑eS	Sb	19 34 13.1	+0.4
TARG	Taragay, Kyrgy	2.10	17	⇓eP	Pb	19 33 50.7	-2.2
TARG				⇓eS	Sb	19 34 17.1	-2.2
KDJ	Kajisay	2.42	3	⇑eP	Pb	19 33 55.3	-2.8
KDJ				⇑eS	Sb	19 34 25.5	-2.6
ULHL	Ulahol	2.59	347	P	Pb	19 34 01.9	+0.7
	SNR=18						
ULHL	Ulahol	2.59	347	⇓eP	Pb	19 33 58.3	-2.8
ULHL				⇓eS	Sb	19 34 30.4	-2.8
SFK	Sufi-Kurgan	2.71	277	⇓eP	Pb	19 34 02.7	-0.4
SFK				⇓eS	Sb	19 34 38.1	+1.7
BOOM	Boomskoye usch	2.89	344	⇓eP	Pb	19 34 02.6	-3.5
BOOM				⇓eS	Sn	19 34 37.7	+2.2
ARLS	Aral	2.96	317	⇓eP	Pb	19 34 04.3	-2.9
ARLS				⇓eS	Sb	19 34 40.9	-2.6
PRZ	Przheval'sk	2.96	20	⇑eP	Pn	19 34 02.7	+1.0
PRZ				⇑eS	Sn	19 34 38.1	+0.7
UCH	Uchtor	3.14	324	P	Pb	19 34 10.0	-0.5
	SNR=9.6						
UCH	Uchtor	3.14	324	⇑eP	Pb	19 34 06.9	-3.6
UCH				⇑eS	Sb	19 34 45.5	-3.6
TNSS	Tian-Shan	3.32	359	Pg	Pg	19 34 15.7	-2.3
	2.0nm,0.4s						
TNSS				Lg	Lg	19 34 57.0	
	6.2nm,1.0s						
TNSS	Tian-Shan	3.32	359	eP	Pg	19 34 15.7	-2.3
	2.0nm,0.4s						
TNSS				eS	Sb	19 34 57.0	+2.8
	6.2nm,1.0s						
KBK	Karagaybulak	3.32	333	P	Pg	19 34 16.3	-1.7
	SNR=14						
KBK	Karagaybulak	3.32	333	⇑eP	Pn	19 34 08.9	+2.3
KBK				⇑eS	Sn	19 34 48.9	+2.7
IZV	Izvestkoviy	3.33	355	Pg	Pg	19 34 15.2	-3.1
	10nm,0.4s						
IZV				Lg	Lg	19 34 56.4	
	19nm,0.5s						
IZV	Izvestkoviy	3.33	355	eP	Pg	19 34 15.2	-3.1
	10nm,0.4s						
IZV				eS	Sb	19 34 56.4	+2.1
	19nm,0.5s						
TKM2	Tokmak 2	3.38	342	P	Pb	19 34 11.5	-2.9
	SNR=13						
KST	Kastek	3.42	347	Pg	Pb	19 34 16.6	+1.5
	10nm,0.6s						
KST				Lg	Lg	19 34 58.9	
	14nm,0.5s						
KST	Kastek	3.42	347	eP	Pb	19 34 16.6	+1.5
	10nm,0.6s						
KST				eS	Sb	19 34 58.9	+2.1
	14nm,0.5s						
MTBS	Maitube	3.44	353	Pg	Pg	19 34 17.3	-3.0
	7.2nm,0.7s						
MTBS				Lg	Lg	19 34 59.6	
	9.9nm,0.4s						
MTBS	Maitube	3.44	353	eP	Pg	19 34 17.3	-3.0
	7.2nm,0.7s						
MTBS				eS	Sb	19 34 59.6	+2.3
	9.9nm,0.4s						
MDOK	Medeo	3.45	1	Pg	Pb	19 34 16.4	+0.7
	14nm,0.6s						
MDOK				Lg	Lg	19 34 58.1	
	31nm,0.8s						
AAK	Ala-Archa	3.48	328	P	Pg	19 34 19.6	-1.5
	SNR=13						
AAK	Ala-Archa	3.48	328	⇑Pg	Pg	19 34 18.7	-2.4
	6.9nm,0.7s						
AAK				⇑Lg	Lg	19 35 04.4	
	6.3nm,0.6s						
AAK	Ala-Archa	3.48	328	⇑eP	Pn	19 34 11.4	+2.7
AAK				⇑eS	Sn	19 34 53.1	+3.0
SATY	Saty	3.51	17	Pg	Pb	19 34 16.9	+0.3
	16nm,0.8s						
SATY				Lg	Lg	19 34 59.2	
	24nm,0.5s						
KOTS	Kotyrbulak	3.52	1	Pg	Pb	19 34 17.5	+0.6
	10nm,0.6s						
KOTS				Lg	Lg	19 35 00.4	
	32nm,0.8s						
KOTS	Kotyrbulak	3.52	1	eP	Pb	19 34 17.5	+0.6
	10nm,0.6s						
KOTS				eS	Sb	19 35 00.4	+0.7
	32nm,0.8s						
FRU1	Bishkek	3.57	331	⇓eP	Pn	19 34 12.8	+2.9
FRU1				⇓eS	Sn	19 34 55.4	+3.2
DGS	Degeres	3.65	346	Pg	Pb	19 34 20.7	+1.7
	12nm,0.7s						
DGS				Lg	Lg	19 35 05.9	
	8.6nm,0.4s						
DGS	Degeres	3.65	346	eP	Pb	19 34 20.7	+1.7
	12nm,0.7s						
DGS				eS	Sb	19 35 05.9	+2.6
	8.6nm,0.4s						
CHMS	Chumysh	3.69	333	P	Pb	19 34 16.2	-3.6
	SNR=5.2						
UZB	Uzynbulak	3.75	23	Pg	Pb	19 34 20.8	-0.1
	7.9nm,0.3s						
UZB				Lg	Lg	19 35 05.6	
	11nm,0.5s						
UZB	Uzynbulak	3.75	23	eP	Pb	19 34 20.8	-0.1
	7.9nm,0.3s						
UZB				eS	Sb	19 35 05.6	-0.8
	11nm,0.5s						
EKS2	Erkin-Say	3.82	322	P	Pb	19 34 20.6	-1.4
	SNR=9.8						
KURS	Kuram	3.87	13	Pg	Pb	19 34 23.2	+0.4
	7.0nm,0.5s						
KURS				Lg	Lg	19 35 09.8	
	10nm,0.9s						
SHLS	Shalkode	3.91	27	Pg	Pg	19 34 26.8	-2.5
	9.7nm,0.6s						
SHLS				Lg	Lg	19 35 16.3	
	27nm,0.6s						
SHLS	Shalkode	3.91	27	eP	Pg	19 34 26.8	-2.5
	9.7nm,0.6s						
SHLS				eS	Sg	19 35 16.3	-3.6
	27nm,0.6s						
KPKS	Kokpek	3.96	18	Pg	Pb	19 34 25.1	+0.8
	0.3nm,0.1s						
KPKS				Lg	Lg	19 35 13.4	
	19nm,0.5s						
KPKS	Kokpek	3.96	18	eP	Pb	19 34 25.1	+0.8
	0.3nm,0.1s						
KPKS				eS	Sb	19 35 13.4	+1.2
	19nm,0.5s						
KTBS	Karatobe	4.00	357	Pg	Pb	19 34 26.8	+1.8
	5.0nm,0.4s						
KTBS				Lg	Lg	19 35 16.0	
	0.4nm,0.3s						
KTBS	Karatobe	4.00	357	eP	Pb	19 34 26.8	+1.8
	5.0nm,0.4s						
KTBS				eS	Sb	19 35 16.0	+2.5
	0.4nm,0.3s						
PDGK	Podgornoye	4.07	27	⇓Pg	Pb	19 34 25.5	-0.6
	5.5nm,0.6s						
PDGK				⇑Lg	Lg	19 35 15.8	
	19nm,0.7s						
KRBS	Karabastau	4.10	346	Pg	Pb	19 34 28.4	+1.7
	4.6nm,0.6s						
KRBS				Lg	Lg	19 35 19.1	
	6.8nm,0.5s						
KRBS	Karabastau	4.10	346	eP	Pb	19 34 28.4	+1.7
	4.6nm,0.6s						
KRBS				eS	Sb	19 35 19.1	+2.8
	6.8nm,0.5s						
MRKS	Merke	4.16	318	Pg	Pg	19 34 32.6	-1.3
	4.3nm,0.5s						
MRKS				Lg	Lg	19 35 25.8	
	4.8nm,0.6s						
MRKS	Merke	4.16	318	eP	Pg	19 34 32.6	-1.3
	4.3nm,0.5s						
MRKS				eS	Sg	19 35 25.8	-2.0
	4.8nm,0.6s						
ARXS	Arharly	4.54	8	Pg	Pb	19 34 35.6	+1.4
	8.4nm,0.6s						
ARXS				Lg	Lg	19 35 31.4	
	14nm,0.6s						
ARXS	Arharly	4.54	8	eP	Pb	19 34 35.6	+1.4
	8.4nm,0.6s						
ARXS				eS	Sb	19 35 31.4	+2.5
	14nm,0.6s						
KNOS	Konyrlen	4.92	19	Pg	Pg	19 34 43.9	-4.6
	2.4nm,0.5s						
KNOS				Lg	Lg	19 35 45.7	
	6.3nm,0.5s						
DJR	Jarkent	5.06	23	Pg	Pb	19 34 44.9	+1.9
	3.6nm,0.3s						
DJR				Lg	Lg	19 35 47.4	
	3.8nm,0.7s						
DJR	Jarkent	5.06	23	eP	Pb	19 34 44.9	+1.9
	3.6nm,0.3s						
DJR				eS	Sb	19 35 47.4	+3.5
	3.8nm,0.7s						
KK31	Karatay Array	5.94	307	⇑Pg	Pg	19 35 05.6	-2.5
	0.9nm,0.6s,baz=127,slow=16,SNR=6.7						
KK31				Lg	Lg	19 36 26.3	
	1.9nm,0.7s,baz=129,slow=25,SNR=4.8						

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*IDC **05** 19:44:15.7±1.0, 52.°42S×20.°29E, h0km, mb3.7/5, mbtmp3.8/5, Error ellipse: s-maj=42.3km s-min=27.3km az=87.0*
ISC 05 19:44:16.8±1.0**, 52.°4S**±0.°2×**20.°2E**±0.°3**, h10**km**, n14, σ0.**ˢ**89**/8**, mb3.9**/5**, South of Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H04S2	CROZET ISLANDS	21.17	87	T	T	20 10 51.8	
	baz=242,slow=74,SNR=26						
H04S3	CROZET ISLANDS	21.18	87	T	T	20 10 53.0	
	baz=242,slow=74,SNR=23						
H04S1	CROZET ISLANDS	21.19	87	T	T	20 10 52.5	
	baz=242,slow=74,SNR=32						
SNAA	Sanae	21.84	199	P	P	19 49 08.3	-0.8
	2.0nm,0.6s,baz=49,slow=8.4,SNR=4.5						
	2.0nm,0.6s						
BOSA	Boshof	24.08	11	P	P	19 49 31.4	-1.1
	1.4nm,0.9s,baz=184,slow=14,SNR=3.2						
	1.4nm,0.9s						
VNDA	Vanda	48.16	170	P	P	19 52 56.0	-0.5
	1.4nm,1.0s,baz=225,slow=5.7,SNR=1.9						
	1.4nm,1.0s						
H01W2	Cape Leeuwin H	65.45	116	T	T	21 06 36.7	
	baz=221						
H01W3	Cape Leeuwin H	65.46	116	T	T	21 06 32.6	
	baz=221						
H01W1	Cape Leeuwin H	65.47	116	T	T	21 06 37.7	
	baz=221						
ASAR	Alice Springs	84.86	123	P	P	19 56 52.8	+0.9
	0.9nm,0.9s,baz=205,slow=5.2,SNR=7.8						
	0.9nm,0.9s						
WRA	Warramunga Arr	88.16	121	P	P	19 57 08.1	+0.2
	0.6nm,1.0s,baz=205,slow=4.3,SNR=3.2						
	0.6nm,1.0s						
PDAR	Pinedale Array	145.40	274	PKPbc	PKPab	20 03 55.5	+0.8
	0.5nm,0.5s,baz=98,slow=2.2,SNR=6.5						
NVAR	Mina Array Bea	148.15	261	PKPbc	PKPbc	20 04 03.3	+0.7
	0.6nm,0.4s,baz=100,slow=6.2,SNR=3.7						
YKA	Yellowknife Ar	154.22	311	PKPab	PKPab	20 04 29.7	+0.1
	0.3nm,0.7s,baz=98,slow=4.1,SNR=4.0						

BER 05 19:49:57.7±2.4**, 61.°55N**×**4.°52E, h15**km±8km**, ML2.0, Southern Norway**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FOO	Floro	0.26	80	eP	Pg	19 50 02.4	-0.9
FOO				eS	Sg	19 50 06.0	-1.0
FOO				IAML		19 50 06.1	
	comp=Z,352nm,0.1s						
SUE	Sulen	0.51	167	eP	Pg	19 50 06.8	-1.0
SUE				eS	Sg	19 50 13.7	-1.0
SUE				IAML		19 50 14.3	
	comp=Z,147nm,0.1s						
HYA	Hoyanger	0.89	115	eP	Pb	19 50 12.9	-2.0
HYA				eS	Sb	19 50 24.7	-1.9
HYA				IAML		19 50 26.2	
	comp=Z,81nm,0.1s						
BAS02	BAS02	0.97	167	eP	Pb	19 50 14.8	-1.4
BAS02				eS	Sb	19 50 27.4	-1.5
BAS02				IAML		19 50 28.7	
	comp=Z,25nm,0.3s						
BAS03	BAS03	1.05	164	eS	Sb	19 50 30.1	-1.0
BAS0D	BAS04	1.12	160	eS	Sb	19 50 31.9	-1.2
ASK	Askoy	1.12	163	e	Pb	19 50 14.3	-4.4
ASK				eP	Pn	19 50 17.3	-1.5
ASK				eS	Sb	19 50 32.3	-0.9
ASK				IAML		19 50 33.3	
	comp=Z,35nm,0.3s						
BER	Bergen	1.24	161	eP	Pn	19 50 19.1	-1.3
BER				eS	Sb	19 50 35.2	-1.3
BER				IAML		19 50 35.4	
	comp=Z,75nm,0.2s						
AKN	Aaknes	1.33	61	eP	Pn	19 50 20.4	-1.4
AKN				eS	Sn	19 50 37.2	-2.0
AKN				IAML		19 50 39.3	
	comp=Z,81nm,0.1s						
MOL	Molde	1.75	53	eP	Pn	19 50 25.6	-1.9
MOL				eS	Sn	19 50 47.9	-1.7
MOL				IAML		19 50 50.6	
	comp=Z,20nm,0.1s						
ODD1	Odda	1.95	147	ePg	Pn	19 50 30.8	+0.6
ODD1				eSg	Sb	19 50 55.6	-1.3
ODD1				IAML		19 50 57.7	
	comp=Z,34nm,0.3s						
SKAR	Skarslia	2.04	114	eP	Pn	19 50 30.0	-1.5
SKAR				eS	Sn	19 50 54.4	-2.2
SKAR				IAML		19 51 04.2	
	comp=Z,16nm,0.2s						
DOMB	Dombas	2.21	75	eP	Pn	19 50 34.8	+0.9
DOMB				eS	Sn	19 50 59.6	-1.4
BLS5	Blasjo	2.34	155	eP	Pn	19 50 34.0	-1.6
BLS5				eSg	Sb	19 51 08.0	-0.3
BLS5				IAML		19 51 09.2	
	comp=Z,9.1nm,0.4s						
KMY	Karmoy	2.38	171	eP	Pn	19 50 35.6	-0.4
KMY				eSg	Sb	19 51 08.8	-0.4
KMY				IAML		19 51 11.8	
	comp=Z,10nm,0.5s						
NC204	NORSAR Array S	3.02	93	eP	Pn	19 50 43.4	-1.5
NBO00	NORSAR Array S	3.07	97	eP	Pn	19 50 43.9	-1.7
KONO	Kongsberg	3.15	125	ePg	Pb	19 50 50.4	-2.9
NAO01	NORSAR Array S	3.17	100	eP	Pn	19 50 45.1	-1.8
NB201	NORSAR Array S	3.31	96	eP	Pn	19 50 47.6	-1.3
NC303	NORSAR Array S	3.31	93	ePg	Pb	19 50 53.0	-3.1
SNART	Snartemo	3.50	156	ePg	Pn	19 50 53.5	+2.0
SNART				eSg	Sb	19 51 42.0	+0.5
SNART				IAML		19 51 47.2	
	comp=Z,18nm,0.5s						
NC602	NORSAR Array S	3.50	100	eP	Pn	19 50 49.2	-2.3

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*IDC **05** 20:06:25.0±1.2, 25.°88N×65.°32E, h0km, mb3.8/13, mbtmp3.8/14, ML3.5/1, MS3.8/1, Error ellipse: s-maj=26.8km s-min=21.6km az=18.0*
*OMAN **05** 20:06:32.4±0.8, 25.°82N×64.°66E, h10km, mb5.0/27, ms2.7/3, Error ellipse: s-maj=6.7km s-min=5.2km az=8.0*
*DSN **05** 20:06:35.8±2.1, 25.°78N×64.°42E, h15km, ML3.5/13, Error ellipse: s-maj=39.6km s-min=14.7km az=19.0*
ISC 05 20:06:29.9±0.7**, 25.°92N**±0.°07×**65.°04E**±0.°06**, h35**km**, n59, σ1.**ˢ**46**/86**, mb3.6**/12**, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NGCH	Negor - Chabah	3.56	262	P	Pn	20 07 23.9	+1.2
	SNR=38						
NGCH				S	Sn	20 08 03.3	-0.3
JLN	Jalan Bani Buh	6.37	235	P	Pn	20 08 00.9	-0.3
	SNR=60						
JLN				S	Sn	20 09 10.2	-2.6
WBK	Wadi Bani Khal	6.44	240	P	Pn	20 08 02.3	0.0
	SNR=292						
WBK				S	Sn	20 09 12.8	-1.9
BIDO	Bidbid	6.72	251	P	Pn	20 08 07.1	+1.0
	SNR=20						
BIDO				S	Sn	20 09 19.3	-2.2
SMDO	Samad	6.97	247	P	Pn	20 08 09.6	-0.1
	SNR=27						
SMDO				S	Sn	20 09 26.9	-1.0
JMDO	Jabal Madar	7.25	242	P	Pn	20 08 14.5	+1.1
	SNR=40						
JMDO				S	Sn	20 09 34.0	-0.6
HOQ	Hoqain	7.40	253	P	Pn	20 08 14.7	-0.7
	SNR=12						
BSY	Bisya	7.81	248	P	Pn	20 08 23.0	+1.9
	SNR=24						
BSY				S	Sn	20 09 48.8	+0.4
BANOM	Banah	7.87	272	i P	Pn	20 08 22.1	+0.3
	SNR=9.0						
BANOM	Banah	7.87	272	P	Pn	20 08 22.5	+0.7
BANOM				S	Sn	20 09 47.9	-1.8
MDH	Madha	7.91	267	P	Pn	20 08 21.7	-0.8
MDH	Madha	7.91	267	P	Pn	20 08 21.3	-1.2
	SNR=17						
MDH				P	Pn	20 08 21.3	-1.2
	SNR=17						
MDH				S	Sn	20 09 47.8	-3.0
MDH				S	Sn	20 09 47.8	-3.0
SOHO	SOHO	7.91	259	i P	Pn	20 08 21.9	-0.5
	SNR=5.7						
SOHO	SOHO	7.91	259	P	Pn	20 08 22.0	-0.5
SOHO				S	Sn	20 09 49.8	-1.0
SHME	Shamm	8.01	273	i P	Pn	20 08 24.6	+0.9
	SNR=10						
SHME				S	Sn	20 09 49.1	-3.9
SHME	Shamm	8.01	273	P	Pn	20 08 27.1	+3.4
	SNR=10						
SHME				S	Sn	20 09 52.0	-1.0
MASF	Masafi	8.03	268	P	Pn	20 08 24.1	0.0
	SNR=10						
MASF				P	Pn	20 08 24.1	0.0
	SNR=10						
MASF				S	Sn	20 09 51.8	-2.0
MASF				S	Sn	20 09 51.8	-2.0
MSFE	Esma-Masafi	8.03	268	P	Pn	20 08 23.8	-0.4
UOSS	Minazif	8.04	265	P	Pn	20 08 23.3	-1.0
UOSS	Minazif	8.04	265	P	Pn	20 08 23.6	-0.6
UOSS				S	Sn	20 09 50.8	-3.2
HATD	Hatta, Dubai	8.13	264	i P	Pn	20 08 25.7	+0.3
	SNR=14						
HATD	Hatta, Dubai	8.13	264	P	Pn	20 08 27.6	+2.2
	SNR=14						
HATD				S	Sn	20 09 53.5	-2.6
MHTO	MHTO	8.14	234	P	Pn	20 08 25.6	+0.1
	SNR=14						
MHTO				S	Sn	20 09 56.9	+0.6
ASHO	Ashiyiah	8.22	263	i P	Pn	20 08 27.5	+0.8
	SNR=26						
ASHO	Ashiyiah	8.22	263	P	Pn	20 08 29.1	+2.4
	SNR=27						
ASHO				S	Sn	20 09 57.5	-0.8
NAZ	Nazwa, Dubai	8.52	266	i P	Pn	20 08 32.4	+1.6
	SNR=10						
NAZ	Nazwa, Dubai	8.52	266	P	Pn	20 08 29.9	-0.9
	SNR=10						
NAZ				P	Pn	20 08 29.9	-0.9
	SNR=10						
FAQ	Al Faqa, Dubai	8.62	264	P	Pn	20 08 34.2	+1.9
FAQ				S	Sn	20 10 07.7	-0.6
ALNE	Al Ain	8.63	260	i P	Pn	20 08 33.6	+1.3
	SNR=29						
ALNE	Al Ain	8.63	260	P	Pn	20 08 33.9	+1.6
	SNR=29						
ALNE				S	Sn	20 10 07.6	-0.8
ASUD	Al Ashush, Dub	8.88	264	P	Pn	20 08 36.6	+0.9
ASUD	Al Ashush, Dub	8.88	264	P	Pn	20 08 36.7	+0.9
	SNR=8.5						
ASUD				S	Sn	20 10 14.5	-0.1
DQM	DQM	9.12	231	P	Pn	20 08 40.5	+1.4
AJN	Ajban	9.20	264	P	Pn	20 08 40.1	0.0
AJN				S	Sn	20 10 20.9	-1.5
UMZA	Um Al Zommool	9.55	253	P	Pn	20 08 45.5	+0.5
UMZA				S	Sn	20 10 30.1	-1.1
MZR	Muzera	10.92	257	P	Pn	20 09 03.1	-0.6
MZR	Muzera	10.92	257	P	Pn	20 09 03.3	-0.4
DMTO	DMTO	12.42	231	P	Pn	20 09 25.2	+0.9
DOK	Doka	12.44	236	P	Pn	20 09 25.2	+0.7
TRNA	Turayna	12.56	268	P	Pn	20 09 27.4	+1.3
SMRA	Abu-Samra	12.91	268	P	Pn	20 09 31.3	+0.5
SMRA				S	Sn	20 11 51.9	-1.4
RBK	Rabkut	13.09	232	P	Pn	20 09 33.1	-0.3
ABTO	Aybut	13.84	234	P	Pn	20 09 43.5	-0.2
RAYN	Ar Rayn	17.91	267	P	P	20 10 36.6	-0.1
AAK	Ala-Archa	18.39	23	P	P	20 10 40.0	-2.0
	0.2nm,0.3s,baz=236,slow=7.3,SNR=5.2						
	0.8nm,0.5s						
MKAR	Makanchi Array	24.93	29	P	P	20 11 48.8	-1.0
	1.4nm,0.6s,baz=211,slow=9.2,SNR=14						
	1.4nm,0.6s						
KBZ	Khabaz	25.29	320	P	P	20 11 54.6	+1.7
	2.4nm,1.1s,baz=238,slow=13,SNR=1.5						
	2.4nm,1.1s						
MMAI	Mount Meron Ar	26.69	292	LR	LR	20 24 52.8	
	comp=Z,181nm,20.0s,baz=94,slow=41						
KURBB	Kurchatov Arra	26.75	19	P	P	20 12 05.7	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.9nm,0.6s,baz=212,slow=8.9,SNR=7.0						
	0.9nm,0.6s						
BVAR	**Borovoye Array**	**27.37**	**7**	P	**P**	**20 12 12.7**	**+1.0**
	0.7nm,0.6s,baz=184,slow=10,SNR=12						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**31.62**	**22**	P	**P**	**20 12 47.7**	**-1.6**
	0.8nm,0.4s,baz=234,slow=10,SNR=6.8						
	0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**32.19**	**96**	P	**P**	**20 12 52.8**	**-2.0**
	0.2nm,0.4s,baz=292,slow=9.9,SNR=11						
	0.2nm,0.4s						
SONM	**Songino Array**	**39.04**	**45**	P	**P**	**20 13 52.4**	**-1.0**
	0.2nm,0.4s,baz=251,slow=9.0,SNR=1.7						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**44.13**	**334**	P	**P**	**20 14 35.0**	**+0.4**
	9.3nm,1.1s,baz=116,slow=8.0,SNR=4.2						
	9.3nm,1.1s						
HFS	**Hagfors**	**48.86**	**329**	P	**P**	**20 15 14.5**	**+2.7**
	4.2nm,1.0s,baz=174,slow=7.0,SNR=1.4						
	4.2nm,1.0s						
ARCES	**ARCESS Array B**	**49.36**	**343**	P	**P**	**20 15 17.7**	**+2.2**
	3.4nm,0.9s,baz=128,slow=7.6,SNR=1.7						
	3.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**60.54**	**271**	P	**P**	**20 16 38.5**	**+1.4**
	0.7nm,0.7s,baz=59,slow=4.5,SNR=4.3						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**82.87**	**120**	P	**P**	**20 18 50.8**	**-0.4**
	0.4nm,0.8s,baz=314,slow=4.4,SNR=2.1						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**86.26**	**13**	P	**P**	**20 19 08.7**	**+1.1**
	0.1nm,0.7s,baz=323,slow=6.5,SNR=1.3						
	0.1nm,0.7s						

*IDC **05** 20:07:31.0±1.2, 33°75N×137°16E, h350km±12km, mb3.2/12, mbtmp3.9/16, Error ellipse: s-maj=17.6km s-min=11.5km az=77.0*
*JMA **05** 20:07:30.2±0.4, 34°N±2°×13°7E±°, h359km±3km, MV3.1/45, SE OFF KII PENINSULA*
ISC 05 20:07:30.8±0.8**, 33°76N**±0°09×**137°17E**±0°06**, h351**km±6km**, n37,** σ**0s92**/44**, mb3.3**/11**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TTO2	**TONANKAI O.B.S**	**0.12**	**257**	*e*P	**Pn**	**20 08 15.7**	**+1.4**
TTO4	**TONANKAI O.B.S**	**0.39**	**51**	P	**Pn**	**20 08 15.9**	**+1.3**
TTO5	**TONANKAI O.B.S**	**0.67**	**43**	P	**Pn**	**20 08 16.8**	**+1.4**
JIE	**Ise**	**0.74**	**329**	P	**Pn**	**20 08 16.5**	**+0.8**
JKN2	**Miekihoku**	**0.88**	**303**	P	**Pn**	**20 08 16.7**	**+0.5**
JKN2				*e*S	**S**	**20 08 52.1**	**-0.5**
JHMK	**Hamakita**	**1.16**	**25**	P	**Pn**	**20 08 17.9**	**+0.7**
HMMJ	**Hamamatsu 2**	**1.18**	**23**	P	**Pn**	**20 08 18.2**	**+0.8**
JTNC	**Tanabenakahech**	**1.30**	**273**	*e*P	**Pn**	**20 08 18.4**	**+0.4**
JWY	**Kouya**	**1.39**	**290**	*e*P	**Pn**	**20 08 19.1**	**+0.6**
JYTA	**Yamagatataniai**	**1.86**	**349**	P	**Pn**	**20 08 21.8**	**+0.6**
JYTA				*e*S	**S**	**20 09 01.9**	**+0.2**
JWT	**Wachi**	**2.11**	**317**	P	**Pn**	**20 08 23.4**	**+0.5**
JWT				*e*S	**S**	**20 09 03.4**	**-1.3**
JOD2	**Odawara 2**	**2.18**	**46**	P	**Pn**	**20 08 24.3**	**+0.8**
JAI	**Aioi**	**2.27**	**272**	P	**Pn**	**20 08 24.2**	**+0.1**
JAI				*e*S	**S**	**20 09 05.8**	**-1.1**
JRY	**Ryogami san**	**2.66**	**32**	P	**Pn**	**20 08 28.5**	**+1.2**
JRY				S	**S**	**20 09 13.4**	**+0.7**
JMN	**Monobe**	**2.74**	**270**	P	**Pn**	**20 08 28.3**	**+0.2**
MJAR	**Matsushiro Arr**	**2.90**	**17**	P	**Pn**	**20 08 29.3**	**0.0**
	9.9nm,0.6s,baz=191,slow=9.8,SNR=26						
MAT	**Matsushiro**	**2.90**	**17**	*e*P	**Pn**	**20 08 29.7**	**+0.4**
JAG	**Ashikaga**	**3.25**	**35**	P	**Pn**	**20 08 31.9**	**-0.6**
JAG				*e*S	**S**	**20 09 18.4**	**-3.7**
BSO1	**Boso 1**	**3.28**	**73**	P	**Pn**	**20 08 31.1**	**-1.0**
BSO1				*e*S	**S**	**20 09 20.6**	**-1.0**
JHS	**Saijyo**	**3.57**	**291**	*e*P	**Pn**	**20 08 36.4**	**+0.8**
JTO	**Tosashimizu**	**3.77**	**257**	P	**Pn**	**20 08 37.6**	**0.0**
JNU	**Nakatsue**	**5.30**	**265**	P	**Pn**	**20 08 53.8**	**0.0**
	8.1nm,0.5s,baz=62,slow=1.2,SNR=11						
KSRS	**Korea Array**	**8.38**	**299**	P	**Pn**	**20 09 30.2**	**+0.8**
	3.6nm,0.6s,baz=111,slow=12,SNR=14						
ASAJ	**Asahikawa**	**11.17**	**21**	P	**Pn**	**20 10 02.3**	**-0.2**
	6.4nm,0.7s,baz=220,slow=12,SNR=12						
HILR	**Hailar Array B**	**20.38**	**326**	P	**P**	**20 11 42.3**	**+0.2**
	1.6nm,0.5s,baz=134,slow=9.1,SNR=2.5						
	1.6nm,0.5s						
SONM	**Songino Array**	**27.00**	**311**	P	**P**	**20 12 42.3**	**+0.5**
	1.3nm,0.9s,baz=123,slow=9.7,SNR=7.5						
	1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.32**	**256**	P	**P**	**20 14 10.8**	**-0.2**
	0.7nm,0.6s,baz=47,slow=7.9,SNR=8.8						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**41.67**	**315**	P	**P**	**20 14 46.4**	**+0.4**
	0.4nm,0.4s,baz=87,slow=8.8,SNR=2.7						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**43.01**	**305**	P	**P**	**20 14 56.6**	**-0.2**
	0.5nm,0.3s,baz=87,slow=9.2,SNR=11						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**45.37**	**310**	P	**P**	**20 15 15.1**	**-0.1**
	1.2nm,0.5s,baz=88,slow=7.1,SNR=9.4						
	1.2nm,0.5s						
BVAR	**Borovoye Array**	**50.27**	**314**	P	**P**	**20 15 52.6**	**+0.2**
	0.3nm,0.3s,baz=84,slow=6.4,SNR=4.9						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**53.47**	**183**	P	**P**	**20 16 16.1**	**-0.1**
	1.2nm,0.3s,baz=360,slow=7.4,SNR=43						
	1.2nm,0.3s						
ILAR	**Eielson Array**	**54.09**	**31**	P	**P**	**20 16 20.4**	**+0.4**
	0.3nm,0.8s,baz=272,slow=9.4,SNR=2.1						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**57.19**	**184**	P	**P**	**20 16 42.5**	**0.0**
	0.4nm,0.3s,baz=356,slow=4.7,SNR=24						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**70.06**	**332**	P	**P**	**20 18 05.2**	**0.0**
	1.0nm,0.4s,baz=56,slow=5.7,SNR=14						
	1.0nm,0.4s						
HFS	**Hagfors**	**75.59**	**334**	P	**P**	**20 18 37.4**	**-0.1**
	5.2nm,1.0s,baz=29,slow=3.4,SNR=4.1						
	5.2nm,1.0s						
LPAZ	**La Paz**	**151.34**	**59**	PKPbc	**PKiKP**	**20 26 45.0**	**0.0**
	0.7nm,0.4s,baz=153,slow=5.3,SNR=2.1						

*CATAC **05** 20:43:12.4±0.7, 13°N±4°×9°1W±°, h15km, M3.5/9, MLv3.5/9, Error ellipse: s-maj=11.3km s-min=4.4km az=36.4, confirmed*
*SNET **05** 20:43:13.3±0.7, 13°57N×91°14W, h14km, ML3.5, Presumed earthquake*
*GCG **05** 20:43:13.1±1.5, 13°56N×91°25W, h28km±14km, MD3.9, MW3.0, Presumed earthquake*
ISC 05 20:43:12.6±4.3**, 13°6N**±0°1×**91°13W**±0°09**, h5**km±25km**, n25,** σ**1s05**/31**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.87**	**346**	*e*P	**Pn**	**20 43 33.5**	**+1.8**
ESSG	**Sabana Grande**	**0.88**	**19**	*i* P	**Pb**	**20 43 30.1**	**-0.3**
STG8	**El Palmar, Qui**	**0.92**	**347**	*i* P	**Pn**	**20 43 34.8**	**+2.4**
FG16	**Alotenango, Sa**	**0.94**	**40**	*i* P	**Pb**	**20 43 31.6**	**+0.1**
PCG5	**San Vicente Pa**	**0.99**	**48**	*i* P	**Pb**	**20 43 31.9**	**-0.4**
RTAL	**Retalhuleu**	**1.11**	**331**	S	**Sn**	**20 43 48.3**	**-2.3**
FAME	**Alcaldia de Sa**	**1.12**	**75**	P	**Pn**	**20 43 33.6**	**-1.4**
SOKI	**Kika Raxquin**	**1.29**	**348**	*e*P	**Pn**	**20 43 36.0**	**-1.7**
NUBE	**Las Nubes**	**1.36**	**75**	P	**Pn**	**20 43 37.8**	**-0.5**
NUBE	**Las Nubes**	**1.36**	**75**	*e*P	**Pn**	**20 43 37.5**	**-0.9**
NUBE	**Las Nubes**	**1.36**	**75**	*e*P	**Pn**	**20 43 37.5**	**-0.9**
LOAL	**Lomas de Alarc**	**1.38**	**71**	P	**Pn**	**20 43 38.0**	**-0.7**
SLOZ	**Alcaldia de Sa**	**1.39**	**70**	P	**Pn**	**20 43 38.1**	**-0.6**
CEVE	**Cerro Verde**	**1.49**	**79**	P	**Pn**	**20 43 40.1**	**-0.2**
CEVE	**Cerro Verde**	**1.49**	**79**	*e*P	**Pn**	**20 43 40.4**	**+0.1**
CEVE				*e*S	**Sn**	**20 44 00.5**	**+0.3**
APG	**El Apazote**	**1.58**	**24**	*i* P	**Pb**	**20 43 42.2**	**-0.3**
JAYA	**Jayaque - finc**	**1.64**	**86**	S	**Sn**	**20 44 03.2**	**-0.6**
JAYA	**Jayaque - finc**	**1.64**	**86**	*e*P	**Pn**	**20 43 41.2**	**-1.0**
JAYA				*e*S	**Sn**	**20 44 02.8**	**-1.0**
PMON	**Piamonte**	**1.77**	**85**	P	**Pn**	**20 43 44.1**	**+0.1**
MTO3	**Montecristo**	**1.91**	**64**	P	**Pn**	**20 43 46.2**	**+0.1**
MTO3				S	**Sb**	**20 44 12.8**	**+0.4**
MTO3	**Montecristo**	**1.91**	**64**	*e*P	**Pn**	**20 43 46.3**	**+0.1**
MTO3	**Montecristo**	**1.91**	**64**	*e*P	**Pn**	**20 43 46.1**	**+0.1**
ESQI	**Esquipulas**	**2.00**	**60**	P	**Pn**	**20 43 47.8**	**+0.6**
ESQI				S	**Sb**	**20 44 15.4**	**+0.5**
COEG	**Centro de Oper**	**2.19**	**88**	P	**Pn**	**20 43 50.1**	**+0.3**
COEG				S	**Sn**	**20 44 18.5**	**+1.3**
PACA	**Pacayal**	**2.73**	**91**	P	**Pn**	**20 43 58.0**	**+0.8**
PACA				S	**Sn**	**20 44 32.1**	**+1.4**

*IDC **05** 20:47:06.1±0.6, 7°29N×73°49E, h0km, mb4.2/26, mbtmp4.2/26, MS3.5/6, Error ellipse: s-maj=17.6km s-min=14.6km az=40.0*
*NEIC **05** 20:47:08.4±1.6, 7°34N±0°04×73°65E±0°06, h10km±1km, mb4.5/31, Error ellipse: s-maj=10.6km s-min=5.8km az=113.0*
*NDI **05** 20:47:14.8±3.0, 7°29N×73°45E, h10km, ML4.3, MW4.3*
ISC 05 20:47:08.0±0.4**, 7°33N**±0°05×**73°59E**±0°05**, h10**km**, n95,** σ**1s51**/91**, mb4.4**/46**, MS3.6**/5**, 2C, Maldive Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HMDM	**Hanimaadhoo**	**0.68**	**216**		**Pg**	**20 47 22.3**	**+1.1**
HMDM				Sg	**Sg**	**20 47 32.0**	**+1.8**
TRD	**Trivandrum**	**3.54**	**70**	*e*P	**Pb**	**20 48 10.6**	**-0.2**
TRD				IAML		20 48 48.6	
	comp=E,1μm,0.4s						
TRD				*e*S	**Sb**	**20 48 55.3**	**+1.5**
TRD				IAML		20 48 55.8	
	comp=N,941nm,0.0s						
KAAM	**Kaadhehdhoo**	**6.82**	**185**	Pn	**Pn**	**20 48 48.2**	**+0.1**
PALK	**Pallekele**	**7.06**	**90**	Pn	**Pn**	**20 48 49.6**	**-1.9**
	comp=N,7.0nm,0.3s,baz=276,slow=16,SNR=44						
PALK				Sn	Sn	20 50 02.2	-10
	comp=N,12nm,0.3s,baz=190,slow=23,SNR=6.5						
PALK				LR	LR	20 51 18.0	
	comp=N,222nm,22.0s,baz=270,slow=35						
PALK	**Pallekele**	**7.06**	**90**	Pn	**Pn**	**20 48 49.5**	**-2.0**
GOA	**Goa**	**8.12**	**2**	*e*P	Pn	20 49 13.8	+7.8
GOA				IAML		20 50 19.2	
	comp=E,344nm,0.0s						
GOA				*e*S	**Sn**	**20 50 38.8**	**+0.9**
GOA				IAML		20 50 52.4	
	comp=N,215nm,0.3s						
MDRS	**Chennai**	**8.69**	**48**	*e*P	Pn	20 49 20.3	+6.5
MDRS				*e*S	**Sn**	**20 50 50.1**	**-1.8**
MDRS				IAML		20 51 16.3	
	comp=E,164nm,0.4s						
MDRS				IAML		20 51 56.2	
	comp=N,245nm,0.9s						
KAD	**Karad**	**9.94**	**3**	*e*P	Pn	20 49 38.6	+7.6
KAD				*e*S	**Sn**	**20 51 21.6**	**-1.1**
KAD				IAML		20 51 35.0	
	comp=N,113nm,0.6s						
KAD				IAML		20 51 39.5	
	comp=E,226nm,0.8s						
HYB	**Hyderabad**	**11.14**	**25**	*e*P	Pn	20 49 54.7	+7.2
HYB				*e*S	**Sn**	**20 51 52.7**	**+0.6**
HYB				IAML		20 52 37.5	
	comp=N,91nm,1.8s						
HYB				IAML		20 53 16.2	
	comp=E,28nm,1.7s						
HYB	**Hyderabad**	**11.14**	**25**	⇑*e*P	**Pn**	**20 49 47.5**	**0.0**
POO	**Poona**	**11.14**	**1**	*e*P	Pn	20 49 53.9	+6.5
POO				*e*S	**Sn**	**20 51 49.6**	**-2.6**
POO				IAML		20 52 02.8	
	comp=N,38nm,1.1s						
POO				IAML		20 52 38.6	
	comp=E,58nm,1.7s						
AKL	**Akola**	**13.70**	**14**	*e*P	**P**	**20 50 28.5**	**-2.8**
AKL				*e*S	**Sn**	**20 53 03.7**	**+8.8**
AKL				IAML		20 53 07.6	
	comp=N,45nm,0.0s						
AKL				IAML		20 54 16.0	
	comp=E,26nm,0.2s						
NIL	**Nilore**	**26.20**	**359**	P	**P**	**20 52 42.1**	**-0.9**
NIL				IAmb	IAmb	20 52 53.3	
	comp=Z,8.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**27.04**	**63**	P	**P**	**20 52 51.6**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=234,slow=8.9,SNR=4.7						
CMAR				PcP	**PcP**	**20 56 12.7**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=252,slow=3.7,SNR=4.3						
CMAR				LR	LR	21 03 59.4	
	comp=Z,28nm,19.0s,baz=200,slow=37						
	comp=Z,0.2nm,0.3s						
TNCH	**TengChong**	**29.62**	**51**	P	**P**	**20 53 15.1**	**+1.2**
TNCH				pP	sP	20 53 18.7	+1.5
TNCH				sP	pwP	20 53 20.6	+1.1
TNCH				PP	**PnPn**	**20 54 11.7**	**+3.0**
TNCH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MANEM	**Manem**	**30.13**	**357**	P	**P**	**20 53 15.4**	**-3.0**
SHAA	**Shahritus**	**30.50**	**351**	P	**P**	**20 53 21.2**	**-0.2**
SHAA				IAmb	IAmb	20 53 31.6	
	comp=Z,24nm,1.3s						
RAYN	**Ar Rayn**	**31.40**	**304**	P	**P**	**20 53 29.8**	**+0.3**
RAYN				IAmb	IAmb	20 53 31.1	
	comp=Z,2.9nm,0.7s						
CHGR	**Chuyangaron**	**31.45**	**353**	P	**P**	**20 53 29.9**	**+0.2**
KSH2	**Kashi**	**31.73**	**3**	P	**P**	**20 53 33.1**	**+0.8**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DRK	**Karamyk**	**32.05**	**357**	P	**P**	**20 53 33.2**	**-2.1**
DRK				IAmb	IAmb	20 53 35.7	
	comp=Z,2.7nm,0.7s						
PZH	**PanZhiHua**	**32.87**	**51**	P	**P**	**20 53 44.4**	**+2.0**
AAK	**Ala-Archa**	**35.17**	**1**	P	**P**	**20 54 03.1**	**+0.8**
LODK	**Lodwar**	**38.24**	**266**	P	**P**	**20 54 29.9**	**+1.0**
WMQ	**Urumqi**	**38.39**	**17**	*e*P	**P**	**20 54 31.2**	**+1.6**
LZDM	**Lanzhou Array**	**39.62**	**40**	P	**P**	**20 54 41.0**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=246,slow=9.2,SNR=1.6						
LZDM				PcP	**PcP**	**20 56 47.6**	**+0.1**
	comp=Z,3.3nm,0.9s,baz=207,slow=2.9,SNR=4.2						
	comp=Z,0.3nm,0.4s						
LZH	**Lanzhou**	**39.80**	**40**	*e*P	**P**	**20 54 42.7**	**+1.1**
LZH				sP	pwP	20 54 50.3	+3.1
LZH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MAKZ	**Makanchi**	**39.99**	**9**	P	**P**	**20 54 42.7**	**-0.1**
MKAR	**Makanchi Array**	**40.03**	**9**	P	**P**	**20 54 43.2**	**0.0**
	comp=Z,0.6nm,0.6s,baz=194,slow=10,SNR=10						
MKAR				PcP	**PcP**	**20 56 48.0**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=198,slow=2.4,SNR=5.3						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**40.03**	**9**	P	**P**	**20 54 43.1**	**-0.1**
XAN	**Xi'an**	**42.05**	**46**	⇑P	**P**	**20 55 04.0**	**+3.9**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AB31	**Akbulak array**	**43.34**	**347**	P	**P**	**20 55 10.5**	**+0.3**
AB31				IAmb	IAmb	20 55 11.9	
	comp=Z,9.6nm,1.2s						
ABKAR	**Akbulak array**	**43.34**	**347**	P	**P**	**20 55 10.8**	**+0.5**
KURBB	**Kurchatov Arra**	**43.35**	**5**	P	**P**	**20 55 10.6**	**+0.3**
	comp=Z,1.5nm,0.2s,baz=197,slow=8.2,SNR=7.1						
KURBB				LR	LR	21 13 25.3	
	comp=Z,66nm,18.6s,baz=189,slow=36						
	comp=Z,1.5nm,0.2s						
KURK	**Kurchatov**	**43.45**	**5**	P	**P**	**20 55 11.1**	**0.0**
KURK				IAmb	IAmb	20 55 12.1	
	comp=Z,3.7nm,0.7s						
MMAI	**Mount Meron Ar**	**43.63**	**311**	LR	LR	21 14 05.7	
	comp=Z,70nm,18.6s,baz=100,slow=37						
KBZ	**Khabaz**	**45.12**	**329**	P	**P**	**20 55 25.9**	**+1.3**
	comp=Z,6.8nm,1.0s,baz=136,slow=9.8,SNR=5.8						
	comp=Z,6.8nm,1.0s						
KIV	**Kislovodsk**	**45.38**	**329**	P	**P**	**20 55 28.4**	**+1.5**
BVAR	**Borovoye Array**	**45.63**	**357**	P	**P**	**20 55 28.6**	**0.0**
	comp=Z,0.8nm,0.6s,baz=186,slow=8.7,SNR=3.3						
	comp=Z,0.8nm,0.6s						
ZAA0	**Zalesovo Array**	**47.37**	**9**	P	**P**	**20 55 41.4**	**-0.7**
ZAA0				IAmb	IAmb	20 55 42.7	
	comp=Z,4.6nm,1.0s						
ZALV	**Zalesovo Beam**	**47.37**	**9**	P	**P**	**20 55 42.0**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=209,slow=7.7,SNR=18						
	comp=Z,3.7nm,0.8s						
ZALV	**Zalesovo Beam**	**47.37**	**9**	P	**P**	**20 55 41.4**	**-0.7**
HHC	**Hu-ho-hao-te**	**47.49**	**39**	*e*P	**P**	**20 55 45.2**	**+1.7**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRTR	**Keskin Array B**	**48.15**	**318**	P	**P**	**20 55 48.3**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=141,slow=8.0,SNR=5.8						
	comp=Z,1.9nm,0.7s						
BRTR	**Keskin Array B**	**48.15**	**318**	P	**P**	**20 55 49.2**	**+0.5**
NJ2	**Nanjing**	**48.72**	**53**	*e*P	**P**	**20 55 53.6**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SONM	**Songino Array**	**49.05**	**29**	P	**P**	**20 55 55.7**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=230,slow=8.1,SNR=8.1						
	comp=Z,1.3nm,0.9s						
SONM	**Songino Array**	**49.05**	**29**	P	**P**	**20 55 57.0**	**+1.5**
ARTI	**Arti**	**50.38**	**349**	P	**P**	**20 56 04.3**	**-1.0**
ARTI				IAmb	IAmb	20 56 19.1	
	comp=Z,14nm,1.5s						
TIRR	**Tirgusor**	**53.90**	**321**	P	**P**	**20 56 31.4**	**-0.2**
KSANE	**Kasane**	**53.94**	**242**	P	**P**	**20 56 32.1**	**-0.4**
LPHEP	**Lephephe**	**55.72**	**235**	P	**P**	**20 56 45.1**	**-0.2**
LPHEP				IAmb	IAmb	20 57 07.7	
	comp=Z,9.0nm,1.2s						
AKASG	**Malin Array Be**	**56.72**	**328**	P	**P**	**20 56 51.7**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=123,slow=9.9,SNR=1.6						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**56.72**	**328**	IAmb	IAmb	20 57 25.3	
	comp=Z,4.9nm,1.2s						
H01W3	**Cape Leeuwin H**	**56.80**	**140**	T	T	21 58 09.7	
	baz=309,slow=75,SNR=181						
H01W2	**Cape Leeuwin H**	**56.81**	**140**	T	T	21 58 10.3	
	baz=309,slow=75,SNR=191						
H01W1	**Cape Leeuwin H**	**56.82**	**140**	T	T	21 58 11.1	
	baz=309,slow=75,SNR=217						
HILR	**Hailar Array B**	**57.07**	**34**	P	**P**	**20 56 55.2**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=243,slow=6.5,SNR=3.9						
	comp=Z,1.0nm,0.4s						
BOSA	**Boshof**	**58.71**	**230**	P	**P**	**20 57 05.9**	**-0.5**
	comp=Z,6.9nm,1.0s,baz=60,slow=9.3,SNR=6.7						
	comp=Z,6.9nm,1.0s						
BOSA	**Boshof**	**58.71**	**230**	P	**P**	**20 57 04.7**	**-1.6**
BOSA				IAmb	IAmb	20 57 08.0	
	comp=Z,5.5nm,0.9s						
SUR	**Sutherland**	**63.88**	**229**	LR	LR	21 21 29.2	
	comp=Z,57nm,19.7s,baz=164,slow=32						
MOA	**Molln**	**64.24**	**320**	*e*P	**P**	**20 57 43.1**	**-0.3**
	comp=Z,11nm,2.1s						
FINES	**FINESS Array B**	**64.34**	**337**	P	**P**	**20 57 42.8**	**-0.9**
	comp=Z,4.8nm,1.0s,baz=188,slow=4.2,SNR=4.2						
	comp=Z,4.8nm,1.0s						
BIOA	**Bad Ischl, Aus**	**64.60**	**320**	*e*P	**P**	**20 57 47.3**	**+1.6**
	comp=Z,2.8nm,0.7s						
LESA	**Schwarzleotal**	**65.14**	**319**	*i* P	**P**	**20 57 50.6**	**+1.3**
	comp=Z,6.0nm,1.3s						
WB0	**Warramunga Arr**	**65.60**	**115**	P	**P**	**20 57 51.2**	**-1.5**
WB0				IAmb	IAmb	20 58 01.7	
	comp=Z,8.6nm,1.1s						
WRA	**Warramunga Arr**	**65.61**	**116**	P	**P**	**20 57 52.8**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=292,slow=6.5,SNR=18						
	comp=Z,1.7nm,0.7s						
WRA	**Warramunga Arr**	**65.61**	**116**	P	**P**	**20 57 51.5**	**-1.2**
WR8	**Warramunga Arr**	**65.75**	**116**	P	**P**	**20 57 52.5**	**-1.2**
WR8				IAmb	IAmb	20 58 05.5	
	comp=Z,8.5nm,1.4s						
CLL	**Collm**	**66.14**	**323**	*e*P	**P**	**20 57 56.0**	**+0.4**
FETA	**Feichten**	**66.30**	**318**	*e*P	**P**	**20 57 58.3**	**+1.3**
	comp=Z,9.2nm,2.0s						
ASAR	**Alice Springs**	**66.43**	**120**	P	**P**	**20 57 58.2**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=292,slow=6.6,SNR=23						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**66.43**	**120**	P	**P**	**20 57 58.7**	**+0.6**
SENIN	**Lac Senin/Sane**	**68.43**	**317**	P	**P**	**20 58 09.2**	**-1.3**
SENIN				IAmb	IAmb	20 58 20.6	
	comp=Z,9.3nm,1.2s						
HFS	**Hagfors**	**68.98**	**332**	P	**P**	**20 58 12.8**	**-0.6**
	comp=Z,12nm,0.9s,baz=109,slow=6.6,SNR=24						
	comp=Z,12nm,0.9s						
ARCES	**ARCESS Array B**	**69.41**	**344**	P	**P**	**20 58 15.8**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=127,slow=5.3,SNR=15						
	comp=Z,1.8nm,0.4s						
ARCES	**ARCESS Array B**	**69.41**	**344**	P	**P**	**20 58 15.4**	**-0.5**
NOA	**NORSAR Array B**	**70.45**	**333**	P	**P**	**20 58 21.7**	**-0.9**
	comp=Z,1.8nm,1.0s,baz=133,slow=7.5,SNR=3.3						
	comp=Z,1.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**70.80**	**281**	P	**P**	**20 58 23.9**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=86,slow=4.8,SNR=4.5						
	comp=Z,0.8nm,0.9s						
TIXI	**Tiksi**	**72.59**	**16**	P	**P**	**20 58 34.2**	**-0.9**
	comp=Z,4.2nm,0.3s,baz=216,slow=2.5,SNR=8.5						
	comp=Z,4.2nm,0.3s						
TIXI	**Tiksi**	**72.59**	**16**	P	**P**	**20 58 34.6**	**-0.6**
TIXI				IAmb	IAmb	20 58 36.9	
	comp=Z,4.2nm,1.1s						
STKA	**Stephens Creek**	**75.56**	**125**	P	**P**	**20 58 53.2**	**0.0**
	comp=Z,2.1nm,0.6s,baz=229,slow=9.3,SNR=3.4						
	comp=Z,2.1nm,0.6s						
STKA	**Stephens Creek**	**75.56**	**125**	IAmb	IAmb	20 59 02.1	
	comp=Z,22nm,1.1s						
ESDC	**Sonseca Array**	**75.78**	**309**	P	**P**	**20 58 53.4**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=99,slow=6.6,SNR=7.0						
	comp=Z,1.6nm,0.9s						
ESDC	**Sonseca Array**	**75.78**	**309**	IAmb	IAmb	20 58 54.7	
	comp=Z,3.2nm,1.3s						
MDT	**Midelt**	**76.16**	**302**	LR	LR	21 33 46.2	
	comp=Z,35nm,18.3s,baz=84,slow=37						
MD01	**Midelt array s**	**76.29**	**302**	P	**P**	**20 58 57.5**	**-0.2**
SPITS	**Spitsbergen Ar**	**76.42**	**350**	P	**P**	**20 58 57.5**	**+0.2**
	comp=Z,9.5nm,1.1s,baz=123,slow=6.1,SNR=5.2						
	comp=Z,9.5nm,1.1s						
EKA	**Eskdalemuir Ar**	**76.47**	**325**	P	**P**	**20 58 57.1**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=105,slow=6.4,SNR=4.8						
	comp=Z,0.8nm,0.5s						
DBIC	**Dimbokro**	**77.76**	**275**	P	**P**	**20 59 05.6**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=145,slow=3.4,SNR=4.8						
	comp=Z,2.8nm,0.7s						
DBIC	**Dimbokro**	**77.76**	**275**	IAmb	IAmb	20 59 06.5	
	comp=Z,3.9nm,0.8s						
SEY	**Seymchan**	**78.41**	**27**	P	**P**	**20 59 08.2**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=243,slow=8.9,SNR=5.7						
	comp=Z,1.8nm,0.7s						
PDAR	**Pinedale Array**	**130.06**	**3**	PKP	**PKPdf**	**21 06 18.6**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=9.1,slow=2.4,SNR=4.3						
NVAR	**Mina Array Bea**	**133.15**	**13**	PKP	**PKPdf**	**21 06 25.8**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=304,slow=4.6,SNR=2.4						
TXAR	**Lajitas Array**	**143.46**	**356**	PKP	PKPab	21 06 41.0	+1.1
	comp=Z,0.4nm,0.7s,baz=96,slow=3.8,SNR=5.1						

*IDC **05** 20:59:38.1±1.4, 7°69S×110°17E, h0km, mb3.5/3, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=73.7km s-min=20.7km az=31.0*
*DJA **05** 20:59:46.3±0.3, 8°S±2°×10°9E±°, h36km±6km, M4.0/36, mB5.1/1, mb4.0/5, MLv4.0/36, Mw(mB)4.5/1*
ISC 05 20:59:45.3±1.5**, 8°5S**±0°1×**109°41E**±0°06**, h67**km±17km**, n26,** σ**1s51**/29**, mb3.3**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.11**	**52**	P	**Pn**	**21 00 04.4**	**-0.7**
YOGI				S	**Sn**	**21 00 18.3**	**-1.6**
KPJI	**Karang Pucung**	**1.25**	**338**	P	**Pn**	**21 00 06.6**	**-0.3**
KPJI				S	**Sn**	**21 00 22.7**	**-0.4**
UGM	**Wanagama**	**1.25**	**62**	P	**Pn**	**21 00 06.6**	**-0.3**
UGM				S	**Sn**	**21 00 21.9**	**-1.2**
CTJI	**Waduk Cacaban**	**1.50**	**352**	P	**Pn**	**21 00 10.0**	**-0.2**
CTJI				S	**Sn**	**21 00 29.2**	**+0.3**
SMRI	**Semarang**	**1.77**	**36**	P	**Pn**	**21 00 14.7**	**+0.9**
SMRI				S	**Sn**	**21 00 36.4**	**+1.0**
PCJI	**Pacitan**	**1.78**	**80**	P	**Pn**	**21 00 14.5**	**+0.6**
PCJI				S	**Sn**	**21 00 35.7**	**+0.1**
BBJI	**Bungbulang**	**2.02**	**301**	P	**Pn**	**21 00 16.8**	**-0.4**
BBJI				S	**Sn**	**21 00 41.4**	**-0.2**
NGJI	**Ngawi**	**2.33**	**61**	P	**Pn**	**21 00 24.0**	**+2.7**
LEM	**Lembang**	**2.43**	**313**	Pn	**Pn**	**21 00 23.2**	**+0.4**
	12nm,0.3s,baz=320,slow=19,SNR=7.8						
LEM				Sn	**Sn**	**21 00 55.4**	**+3.7**
	20nm,0.3s,baz=25,slow=23,SNR=6.5						
	35nm,0.4s						
LEM	**Lembang**	**2.43**	**313**	P	**Pn**	**21 00 24.6**	**+1.7**
SNJI	**Sawahan-Nganju**	**2.44**	**73**	P	**Pn**	**21 00 24.8**	**+1.8**
SNJI				S	**Sn**	**21 00 53.8**	**+2.0**
SJI	**Sawahan**	**2.46**	**72**	P	**Pn**	**21 00 24.5**	**+1.3**
GMJI	**Gumukmas**	**4.00**	**87**	P	**Pn**	**21 00 45.7**	**+1.5**
JAGI	**Jajag, Banyuwa**	**4.70**	**90**	P	**Pn**	**21 00 55.5**	**+1.8**
MDSI	**Maura Dua**	**6.55**	**307**	P	**Pn**	**21 01 19.9**	**+0.9**
PLAI	**Plampang**	**8.28**	**93**	P	**Pn**	**21 01 44.3**	**+1.5**
	14nm,1.4s						
DBNI	**Kabupaten Domp**	**8.81**	**91**	P	**Pn**	**21 01 51.4**	**+1.4**
WRA	**Warramunga Arr**	**26.67**	**118**	P	**P**	**21 05 16.5**	**-1.7**
	0.6nm,0.8s,baz=290,slow=9.5,SNR=3.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**27.88**	**126**	P	**P**	**21 05 28.9**	**-0.1**
	0.4nm,0.5s,baz=304,slow=9.9,SNR=7.2						
	0.4nm,0.5s						
H08S2	**Diego Garcia H**	**36.55**	**269**	T	T	21 45 11.1	
	baz=94						
H08S3	**Diego Garcia H**	**36.56**	**269**	T	T	21 45 16.2	
	baz=94,SNR=4.0						
H08S1	**Diego Carcia H**	**36.57**	**269**	T	T	21 45 17.3	
	baz=94						
MKAR	**Makanchi Array**	**60.12**	**339**	P	**P**	**21 09 44.0**	**-1.7**
	0.3nm,0.7s,baz=153,slow=6.0,SNR=1.9						
	0.3nm,0.7s						
H04N2	**CROZET ISLANDS**	**61.71**	**222**	T	T	22 17 22.0	
	baz=72,slow=75,SNR=57						
H04N1	**CROZET ISLANDS**	**61.72**	**222**	T	T	22 17 15.3	

	baz=72,slow=75,SNR=63						
H04N3	CROZET ISLANDS	61.73	222	T	T	22 17 24.1	
	baz=72,slow=75,SNR=48						

IDC 05 21:03:38.0±1.6,28°.31N×104°.58E,h0km,mb3.7/3, mbtmp3.5/5,ML3.5/2,Error ellipse: s-maj=62.1km s-min=23.3km az=70.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	7.66	355	Pn	Pn	21 05 30.9	-0.2
	baz=180,slow=15						
LZDM				Lg	Lg	21 07 41.1	
	baz=170,slow=26						
	0.8nm,0.3s						
SONM	Songino Array	19.54	4	P	P	21 08 06.7	-0.5
	0.1nm,0.3s,baz=188,slow=11,SNR=2.5						
	0.5nm,0.8s						
MKAR	Makanchi Array	25.40	323	P	P	21 09 07.2	+0.1
	0.7nm,0.7s,baz=128,slow=9.4,SNR=11						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	29.74	326	P	P	21 09 46.2	+0.3
	0.6nm,0.2s,baz=133,slow=9.4,SNR=2.0						
	0.6nm,0.2s						
WRA	Warramunga Arr	55.94	146	P	P	21 13 17.9	-0.1
	0.3nm,0.8s,baz=329,slow=7.5,SNR=1.9						
	0.3nm,0.8s						

NERS 05 21:24:08.9,65°.84N×166°.09W,h0km

IDC 05 21:24:10.6±1.5,66°.26N×166°.84W,h0km,mb3.5/3, mbtmp3.6/6,ML3.4/3,Error ellipse: s-maj=40.4km s-min=19.4km az=6.0

NEIC 05 21:24:10.7±1.6,65°.998N±0°.010×166°.23W±0°.08, h4km±6km,ML3.4/66,ML3.4(AEIC),Error ellipse: s-maj=4.9km s-min=1.4km az=84.0

AEIC 05 21:24:10.0±1.6,65°.99N±0°.03×166°.27W±0°.08,h6km±6km, Error ellipse: s-maj=5.1km s-min=4.3km az=119.0

ISC 05 21:24:10.9±0.7,66°.01N±0°.03×166°.18W±0°.03,h10km,n90, σ1s.22/110,mb3.5/3,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
F14K	Arctic Creek	0.54	187		Pg	21 24 20.1	-1.3
F14K					Sg	21 24 27.5	-0.9
F15K	North Star Dit	0.70	115	Pg	Pg	21 24 23.9	-0.5
F15K				Sg	Sb	21 24 33.6	-1.3
TNA	Tin City	0.85	239		Pg	21 24 26.0	-1.2
TNA					Sg	21 24 37.1	-1.1
TNA				IAML		21 24 40.7	
	comp=E,2µm,0.5s						
TNA				IAML		21 24 41.7	
	comp=N,2µm,0.5s						
G15K	Niukluk	1.35	138		Pb	21 24 35.4	-0.9
G15K					Pg	21 24 36.0	-0.8
G15K					Sg	21 24 54.5	+0.1
G15K					Sn	21 24 54.8	+1.0
ANM	Nome	1.49	166		Pb	21 24 37.4	-1.2
ANM				Sn	Sn	21 24 56.2	-1.0
ANM				IAML		21 24 59.9	
	comp=E,616nm,0.4s						
G16K	Koyuk River	1.70	109		Pn	21 24 40.2	-0.4
G16K				Sn	Sn	21 25 01.8	-0.5
G16K				IAML		21 25 14.2	
	comp=E,360nm,0.8s						
F17K	Baldwin Pennin	2.05	75		Pn	21 24 45.7	+0.4
E17K	Hotham Inlet	2.05	56		Pn	21 24 45.7	+0.3
E17K					Sb	21 25 12.5	-1.2
E17K					Sg	21 25 14.1	-2.7
D17K	Noatak River	2.10	34		Pn	21 24 45.8	-0.2
D17K					Sn	21 25 12.7	+0.6
D17K					Sb	21 25 15.2	+0.2
H16K	Elim	2.15	128		Pn	21 24 46.5	-0.3
H16K					Sn	21 25 13.4	-0.1
H16K					Sb	21 25 15.0	-1.6
C16K	Lisburne Hills	2.30	8		Pn	21 24 49.3	+0.4
C16K					Sn	21 25 18.0	+0.7
C16K				IAML		21 25 30.7	
	comp=N,257nm,0.8s						
G17K	Kiwalik Mounta	2.34	100		Pn	21 24 49.0	-0.4
G17K					Sn	21 25 18.3	+0.2
G17K					Sb	21 25 21.2	-0.8
RDOG	Red Dog Mine	2.42	30		Pn	21 24 49.9	-0.7
RDOG					Sn	21 25 21.1	+0.9
RDOG				IAML		21 25 34.7	
	comp=E,172nm,1.0s						
E18K	Tukpahlearik C	2.63	55		Pn	21 24 53.8	+0.3
E18K				IAML		21 25 40.4	
	comp=N,236nm,0.7s						
E18K				IAML		21 25 47.8	
	comp=E,200nm,0.8s						
F18K	Selawik	2.70	74		Pn	21 24 54.5	+0.2
C17K	DeLong Mountai	2.74	24		Pn	21 24 55.7	+0.8
H17K	Granite Mounta	2.83	109		Pn	21 24 56.4	+0.3
H17K					Sn	21 25 30.5	+0.3
H17K				IAML		21 25 44.5	
	comp=N,102nm,1.1s						
H17K				IAML		21 25 56.3	
	comp=E,106nm,0.7s						
G18K	Tagagawik	3.08	89		Pn	21 24 59.0	-0.6
I17K	Unalakleet	3.16	130		Pn	21 25 01.1	+0.4
I17K				IAML		21 25 59.0	
	comp=E,142nm,0.7s						
GAMB	Gambell	3.25	229		Pb	21 25 04.7	-3.9
C18K	Utukok River	3.28	34		Pn	21 25 03.3	+0.9
C18K				IAML		21 26 07.5	
	comp=E,84nm,1.2s						
H18K	Honhosa River	3.36	101		Pn	21 25 03.4	0.0
H18K				IAML		21 26 05.3	
	comp=N,111nm,1.0s						
H18K				IAML		21 26 06.2	
	comp=E,102nm,0.8s						
PVDR	Provideniya	3.36	245	*e*Pg	Pb	21 25 10.0	-0.5
PVDR				Pgmax		21 25 13.4	
	comp=E,50nm,0.4s						
PVDR				*e*Sg	Sb	21 25 53.8	+2.5
PVDR				Sgmax		21 25 57.3	
	comp=E,150nm,0.5s						
PVDR				Sgmax		21 25 57.3	
	comp=E,180nm,0.4s						
J14K	Nanvaranak Lak	3.46	160	Pn	Pn	21 25 05.4	+0.6
J14K				IAML		21 26 04.3	
	comp=N,93nm,0.8s						
J14K				IAML		21 26 04.5	
	comp=E,89nm,0.9s						
F19K	Shaleruckik Mo	3.48	72		Pn	21 25 04.4	-0.6
J16K	Anvik River	3.64	136		Pn	21 25 07.5	+0.3
J16K				IAML		21 26 14.7	
	comp=E,100nm,0.9s						
G19K	Purcell Mounta	3.71	84		Pn	21 25 08.2	0.0
G19K				IAML		21 26 12.0	
	comp=E,80nm,0.8s						
G19K				IAML		21 26 12.0	
	comp=N,88nm,0.7s						
E19K	Redstone River	3.84	64		Pn	21 25 11.9	+1.9
E19K				IAML		21 26 17.7	
	comp=E,54nm,0.5s						
E19K				IAML		21 26 21.7	
	comp=N,68nm,0.8s						
C19K	Lookout Ridge	4.01	36		Pn	21 25 14.0	+1.7
C19K				IAML		21 26 33.5	
	comp=E,57nm,1.1s						
C19K				IAML		21 26 34.7	
	comp=N,48nm,1.1s						
J17K	VABM Dome	4.02	127		Pn	21 25 13.3	+0.8
J17K				IAML		21 26 31.0	
	comp=N,63nm,0.8s						
H19K	Roundabout Mou	4.04	92		Pn	21 25 12.7	0.0
H19K				IAML		21 26 33.8	
	comp=N,51nm,0.8s						
H19K				IAML		21 26 34.4	
	comp=E,46nm,0.7s						
K13K	Kusilvak Mount	4.14	170		Pn	21 25 14.7	+0.5
K15K	Wolf Creek Mou	4.25	149		Pn	21 25 16.5	+0.9
F20K	Avaraart Lake	4.31	71		Pn	21 25 17.8	+1.4
F20K				IAML		21 26 42.6	
	comp=N,35nm,1.0s						
D20K	Etivluk River	4.59	49		Pn	21 25 21.4	+1.1
D20K				IAML		21 26 43.6	
	comp=E,35nm,1.1s						
D20K				IAML		21 26 44.3	
	comp=N,35nm,0.8s						
H20K	Anotleneega Mo	4.69	91		Pn	21 25 22.1	+0.4
K17K	Iditarod	4.75	130		Pn	21 25 23.4	+0.8
J18K	Innoko River	4.79	118	Pn	Pn	21 25 23.9	+0.8
J18K				IAML		21 26 48.1	
	comp=N,30nm,1.1s						
J18K				IAML		21 26 49.7	
	comp=E,26nm,1.1s						
J19K	Poorman	4.91	109		Pn	21 25 25.1	+0.3
J19K				IAML		21 26 54.7	
	comp=E,31nm,1.1s						
L14K	Kuka Creek	4.93	160	Pn	Pn	21 25 26.0	+1.0
I20K	Naaghedeneel	5.04	99		Pn	21 25 27.6	+1.2
G21K	Allakaket	5.15	79		Pn	21 25 28.5	+0.5
G21K				IAML		21 27 04.1	
	comp=N,22nm,1.3s						
G21K				IAML		21 27 08.2	
	comp=E,22nm,1.1s						
L16K	Owhat River	5.23	142		Pn	21 25 29.7	+0.6
J20K	Nowinta River	5.41	104		Pn	21 25 32.3	+0.8
H21K	Melozitna Rive	5.51	88		Pn	21 25 33.5	+0.6
M14K	Bethel	5.61	158		Pn	21 25 35.3	+1.1
L18K	Granite Mounta	5.63	128		Pn	21 25 35.9	+1.3
M11K	Mekoryuk	5.64	180		Pn	21 25 34.9	+0.2
M13K	Dall Lake	5.76	166		Pn	21 25 37.6	+1.3
K20K	Telida	5.83	112		Pn	21 25 38.3	+0.9
M15K	Kasigluk River	5.87	153		Pn	21 25 38.9	+1.0
D22K	Ayikyak River	5.94	55		Pn	21 25 40.2	+1.5
M16K	Timber Creek	5.95	144		Pn	21 25 39.9	+0.9
L19K	White Mountain	6.27	122		Pn	21 25 44.4	+1.0
B22K	Teshekpuk Lake	6.44	42		Pn	21 25 46.6	+1.0
M18K	Stony River	6.45	130		Pn	21 25 46.9	+1.1
N15K	Kwethluk River	6.47	152		Pn	21 25 47.5	+1.3
D23K	Nanushuk River	6.64	56		Pn	21 25 50.0	+1.6
BPAW	Bear Paw Mtn.	6.70	100		Pn	21 25 50.1	+0.8
PPLA	Purkeypile	6.80	111		Pn	21 25 52.0	+1.2
TOLK	Toolik Lake Re	6.94	60		Pn	21 25 53.9	+1.4
KTH	Kantishna Hill	6.96	104		Pn	21 25 54.2	+1.2
N18K	Kilae Creek	7.06	134		Pn	21 25 55.8	+1.5
M20K	Styx River	7.07	120		Pn	21 25 56.0	+1.5
O14K	Tigyukauivet M	7.14	159		Pn	21 25 56.4	+1.1
E24K	Your Creek	7.22	65		Pn	21 25 58.1	+1.7
TRF	Thorofare Moun	7.26	103		Pn	21 25 58.0	+0.8
L22K	Petersville	7.55	110		Pn	21 26 03.3	+2.2
SPNN	North Nagishla	7.58	122		Pn	21 26 03.5	+2.1
SKT	Skwentna	7.59	115		Pn	21 26 03.5	+2.0
MCK	McKinley	7.68	99		Pn	21 26 03.3	+0.5
SPWE	Spurr West	7.69	122		Pn	21 26 05.1	+2.1
CCB	Clear Creek Bu	7.80	92		Pn	21 26 04.7	+0.3
CKL	Chakachamna La	7.82	122		Pn	21 26 06.5	+1.7
RND	Reindeer	7.86	101		Pn	21 26 06.0	+0.8
O18K	Koktuh Hills	7.94	136		Pn	21 26 07.5	+1.3
IL31		8.14	90		Pn	21 26 09.4	+0.4
ILAR	Eielson Array	8.14	90	Pn	Pn	21 26 09.5	+0.5
	comp=E,0.5nm,0.3s,baz=283,slow=14,SNR=37						
ILAR				Sn	Sn	21 27 39.1	-1.9
	comp=E,0.2nm,0.3s,baz=285,slow=24,SNR=4.9						
	comp=E,1.0nm,0.4s						
ILAR	Eielson Array	8.14	90	*e*Pn	Pn	21 26 09.5	+0.5
D25K	Kavik River	8.22	57	Pn	Pn	21 26 09.7	-0.4
F25K	Christian Rive	8.25	70		Pn	21 26 11.8	+1.2
E25K	Arctic Village	8.31	66		Pn	21 26 12.5	+1.1
BMAR	Burnt Mountain	8.66	71	Pn	Pn	21 26 17.5	+1.4
C27K	Jago River	9.21	57	Pn	Pn	21 26 23.2	-0.4
KDAK	Kodiak Island	10.42	136	Pn	Pn	21 26 43.3	+3.1
	comp=E,0.3nm,0.3s,baz=35,slow=7.1,SNR=1.3						
	comp=E,6.5nm,1.1s						
BILL	Bilibino	10.91	293	*e*Sg		21 29 55.2	
BILL				Sgmax		21 30 19.7	
	comp=E,10.0nm,0.9s						
INK	Inuvik	12.80	65	Pn	Pn	21 27 14.9	+2.3
	comp=E,0.1nm,0.3s,baz=267,slow=14,SNR=1.8						
	comp=E,0.4nm,0.3s						
YKA	Yellowknife Ar	22.14	75	P	P	21 29 07.7	+1.4
	comp=E,1.2nm,0.8s,baz=302,slow=11,SNR=6.6						
	comp=E,1.2nm,0.8s						
NVAR	Mina Array Bea	38.71	111	P	P	21 31 38.2	+3.2
	comp=E,0.4nm,0.3s,baz=336,slow=8.8,SNR=1.5						
	comp=E,0.4nm,0.3s						
CMAR	Chiang Mai Arr	75.28	282	P	P	21 35 53.5	-0.4
	comp=E,0.4nm,0.7s,baz=28,slow=6.4,SNR=5.8						
	comp=E,0.4nm,0.7s						

NIED 05 21:35:03.0,43°.37N×147°.29E,h15km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr-1.43; Mθθ5.72; Mφφ-4.29; Mrθ0.44; Mθφ-0.89; Mφr1.63; Fault plane solution: M0 5.46000×10^14 NP1: φs138.00000°,δ71.00000°,λ-16.00000°. NP2: φs233.00000°,δ75.00000°,λ-161.00000°.

JMA 05 21:35:03.0±0.5,43°N±2°×14°7E±°,h15km±4km,MV3.8/26, E OFF HOKKAIDO

MOS 05 21:35:03.6±0.7,43°.42N×147°.34E,h50km,mb4.5/1,Error ellipse: s-maj=16.2km s-min=12.5km az=124.6

SKHL 05 21:35:05.4±0.3,43°.40N×147°.30E,h62km±3km,mb4.8/2

IDC 05 21:35:17.1±5.1,44°.72N×146°.85E,h84km±46km,mb3.3/10, mbtmp3.7/12,ML3.0/2,Error ellipse: s-maj=30.6km s-min=21.6km az=162.0

ISC 05 21:35:02.8±2.1,43°.45N±0°.08×147°.43E±0°.06,h25km±13km, n43,σ1s.47/48,mb3.5/10,2C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.23	267	*i* P	Pn	21 35 23.8	-0.6
NEM2				S	Sn	21 35 38.7	-1.4
NMR	Nemuro--Hokkai	1.24	267	⇑*i*PN	Pn	21 35 23.9	-0.6
NMR				*i* S	Sn	21 35 38.8	-1.6
NMR	Nemuro--Hokkai	1.24	267	*i* P	Pn	21 35 24.2	-0.3
NMR				*i* S	Sn	21 35 38.5	-1.9
YUK	Yuzh-Kuril'sk	1.28	298*c*	*i*PN	Pn	21 35 25.1	+0.1
YUK				*i* S	Sn	21 35 39.5	-1.9
YUK				pmax	pmax		
	comp=N,107nm,0.2s						
YUK				pmax	pmax		
	comp=E,133nm,0.2s						
YUK				pmax	pmax		
	comp=Z,262nm,0.2s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				smax	smax		
	comp=E,1µm,0.2s						
YUK	Yuzh-Kuril'sk	1.28	298	*e*P	Pn	21 35 25.3	+0.3
YUK				AMB	AMB	21 35 27.3	
	comp=E,180nm,0.2s						
YUK				*e*S	Sn	21 35 40.0	-1.4
YUK				A	A	21 35 41.4	
	comp=E,2µm,0.3s						
YUK				A	A	21 35 41.4	
	comp=E,1µm,0.3s						
GLVR	Golovnino	1.42	283	*e*PN	Pn	21 35 27.0	+0.1
GLVR				*i* S	Sn	21 35 44.0	-0.8
GLVR				pmax	pmax		
	comp=N,11nm,0.1s						
GLVR				pmax	pmax		
	comp=E,38nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,178nm,0.1s						
GLVR				smax	smax		
	comp=E,1µm,0.2s						
GLVR				smax	smax		
	comp=N,2µm,0.4s						
GLVR	Golovnino	1.42	283	*e*P	Pn	21 35 27.0	+0.1
GLVR				AMB	AMB	21 35 27.9	
	comp=N,180nm,0.2s						
GLVR				*i* S	Sn	21 35 44.0	-0.8
GLVR				A	A	21 35 47.1	
	comp=N,2µm,0.5s						
GLVR				A	A	21 35 47.1	
	comp=N,1µm,0.5s						
JKHN	Kushirohamanak	1.70	258	*e*S	Sn	21 35 52.3	+0.6
RUSJ	Misakicho	1.71	293	*e*PN	Pn	21 35 31.5	+0.5
RUSJ				*e*S	Sn	21 35 51.6	-0.4
JRA	Rausu	1.74	287	*e*P	Pn	21 35 31.9	+0.5
JNSB	Nemuroshibetsu	1.79	281	*e*P	Pn	21 35 32.4	+0.3
JNSB				S	Sn	21 35 53.8	-0.2
KUR	Kuril'sk	1.81	10	*e*PN	Pb	21 35 34.4	-0.9
KUR				*i* S	Sn	21 35 54.7	+0.1
KUR				smax	smax		
	comp=E,679nm,0.5s						
KUR				smax	smax		
	comp=N,609nm,0.3s						
KUR	Kuril'sk	1.81	10	*e*P	Pb	21 35 34.1	-1.2
KUR				AMB	AMB	21 35 36.0	
	comp=N,90nm,0.3s						
KUR				*i* S	Sb	21 35 55.3	-2.2
KUR				A	A	21 35 58.2	
	comp=N,350nm,0.3s						
KUR				A	A	21 35 58.2	
	comp=N,230nm,0.3s						
AKK	Akkeshi	1.94	258	*e*P	Pn	21 35 34.6	+0.5
JNK	Nakash	1.98	275	*e*P	Pn	21 35 34.7	+0.1
JTKR	Abashiri--Toko	2.61	283	P	Pn	21 35 44.7	+1.4
JAR	Ashorobuto	2.67	268	P	Pn	21 35 45.3	+1.1
JMP	Maruseppu	3.00	282	P	Pn	21 35 51.1	+2.4
JCH	Churui	3.10	256	P	Pn	21 35 51.7	+1.7
JKK2	Kamakawa 2	3.42	279	*e*P	Pn	21 35 57.2	+2.7
ASAJ	Asahikawa	3.56	282	P	Pn	21 35 58.6	+2.2
	comp=N,12nm,0.5s,baz=84,slow=13,SNR=21						
ASAJ				S	Sb	21 36 44.9	-3.0
	comp=N,28nm,0.6s,baz=291,slow=12,SNR=5.4						
YSS	Yuzhno-Sakhali	4.82	318	*e*PN	Pb	21 36 30.7	+4.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS	Yuzhno-Sakhali	4.82	318	*e*P	Pn	21 36 16.0	+2.3
PETK	Petropavlovsk-	11.83	32	P	Pn	21 37 51.2	+1.4
	comp=Z,0.2nm,0.3s,baz=201,slow=11,SNR=1.5						
	comp=Z,2.1nm,0.9s						
SEY	Seymchan	19.73	7	P	P	21 39 28.3	-2.0
	comp=Z,0.2nm,0.3s,baz=186,slow=8.7,SNR=7.3						
	comp=Z,1.7nm,0.7s						
H11N2	WAKE ISLAND Hy	28.74	139	T	T	22 11 40.8	
	baz=330,slow=76,SNR=30						
H11N1	WAKE ISLAND Hy	28.75	139	T	T	22 11 42.0	
	baz=330,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	28.76	139	T	T	22 11 42.2	
	baz=330,slow=76,SNR=33						
SONM	Songino Array	28.78	293	P	P	21 40 58.3	-0.2
	comp=Z,0.3nm,0.6s,baz=81,slow=8.7,SNR=3.5						
	comp=Z,0.3nm,0.6s						
H11S1	WAKE ISLAND Hy	29.70	141	T	T	22 12 56.9	
	baz=331,slow=76,SNR=73						
H11S3	WAKE ISLAND Hy	29.71	141	T	T	22 12 49.3	
	baz=331,slow=76,SNR=61						
H11S2	WAKE ISLAND Hy	29.72	141	T	T	22 12 58.8	
	baz=331,slow=76,SNR=26						
ZALV	Zalesovo Beam	41.34	307	P	P	21 42 45.7	-0.5
	comp=Z,0.3nm,0.4s,baz=99,slow=8.9,SNR=2.0						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	41.61	36	P	P	21 42 49.5	+1.2
	comp=Z,0.6nm,0.8s,baz=262,slow=7.1,SNR=7.8						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	44.91	298	P	P	21 43 15.3	+0.1
	comp=Z,0.7nm,0.7s,baz=74,slow=8.7,SNR=8.5						
	comp=Z,0.7nm,0.7s						
KURK	Kurchatov	45.87	304	P	P	21 43 22.0	-0.7
KURK	Kurchatov	45.87	304	*e*P	P	21 43 22.0	-0.7
KURBB	Kurchatov Arra	45.95	304	P	P	21 43 22.0	-1.4
	comp=Z,0.2nm,0.4s,baz=76,slow=8.2,SNR=2.9						
	comp=Z,0.2nm,0.4s						
BVAR	Borovoye Array	49.85	310	P	P	21 43 53.4	-0.1
	comp=Z,0.3nm,0.4s,baz=66,slow=4.9,SNR=2.0						
	comp=Z,0.3nm,0.4s						
YKA	Yellowknife Ar	55.94	34	P	P	21 44 39.4	+1.1
	comp=Z,0.2nm,0.5s,baz=304,slow=7.6,SNR=4.4						
	comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	64.21	194	P	P	21 45 50.8	+15
	comp=Z,0.5nm,1.0s,baz=11,slow=6.6,SNR=2.4						
	comp=Z,0.5nm,1.0s						
FINES	FINESS Array B	65.24	333	P	P	21 45 40.5	-1.2
	comp=Z,6.8nm,1.1s,baz=63,slow=9.2,SNR=5.2						
	comp=Z,6.8nm,1.1s						
HFS	Hagfors	70.05	337	P	P	21 46 11.6	-0.5
	comp=Z,3.3nm,0.9s,baz=45,slow=6.5,SNR=6.1						
	comp=Z,3.3nm,0.9s						

SJA 05 21:41:49.4±0.8,20°.72S×69°.27W,h112km±4km,ML3.6, MW3.6

GUC 05 21:41:51.3±0.7,20°.70S×69°.25W,h104km±3km,ML3.5

ISC 05 21:41:48.3±1.7,20°.71S±0°.03×69°.24W±0°.08, h123km±10km,n27,σ1s.15/52,4C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.40	215	⇓*i*P	Pn	21 42 06.5	+0.3
PB01				*i* S	Sn	21 42 18.3	-1.5
PB01	IPOC Station P	0.40	215	*e*P	Pn	21 42 06.5	+0.3
PB01				*e*S	Sn	21 42 18.6	-1.2
PB01				IAML		21 42 19.8	
	comp=Z,4µm,0.1s						
PX03	IPOC Station P	0.48	310	⇑*i*P	Pn	21 42 06.1	-0.6
PX03				*i* S	Sn	21 42 18.5	-2.0
PB08	IPOC Station P	0.57	8	⇓*i*P	Pn	21 42 08.3	+0.7
PB08				*e*S	Sn	21 42 21.0	-1.1
PB08				IAML		21 42 23.2	
	comp=E,2µm,0.3s						
PB08	IPOC Station P	0.57	8	*e*P	Pn	21 42 08.1	+0.5
PB08				*e*S	Sn	21 42 22.4	+0.3
PB08				IAML		21 42 23.5	
	comp=Z,853nm,0.4s						
HMBC	Humberstone	0.74	305	⇑*i*P	Pn	21 42 08.8	+0.2
HMBC				*i* S	Sn	21 42 22.6	-1.2
HMBC				IAML		21 42 24.0	
	comp=E,3µm,0.6s						
HMBC	Humberstone	0.74	305	*e*P	Pn	21 42 08.8	+0.2
HMBC				*e*S	Sn	21 42 23.2	-0.6
HMBC				IAML		21 42 23.8	
	comp=Z,2µm,0.5s						
PB02	IPOC Station P	0.86	225	⇑*i*P	Pn	21 42 10.5	+1.0
PB02				*e*S	Sn	21 42 24.7	-0.8
PB02	IPOC Station P	0.86	225	*e*P	Pn	21 42 09.9	+0.4
PB02				*e*S	Sn	21 42 25.3	-0.2
TA02	Huaiquique	0.94	298	*e*P	Pn	21 42 10.7	+0.6
TA02				*i* S	Sn	21 42 25.7	-0.9
TA02	Huaiquique	0.94	298	*e*P	Pn	21 42 10.7	+0.6
TA02				*e*S	Sn	21 42 26.7	+0.2
TA02				IAML		21 42 27.8	
	comp=Z,2µm,0.1s						
PB11	IPOC Station P	1.02	338	*e*P	Pn	21 42 11.6	+0.5
PB11				*i* S	Sn	21 42 27.8	-0.5
PB11				IAML		21 42 28.9	
	comp=N,3µm,0.4s						
PB11	IPOC Station P	1.02	338	*e*P	Pn	21 42 11.6	+0.5
PB11				*e*S	Sn	21 42 28.0	-0.2
PB11				IAML		21 42 28.9	
	comp=Z,1µm,0.2s						
GO01	Chusmiza	1.04	2	*e*P	Pn	21 42 12.9	+1.3
GO01				*i* S	Sn	21 42 29.2	0.0
GO01				IAML		21 42 31.5	
	comp=N,3µm,0.2s						
GO01	Chusmiza	1.04	2	*e*P	Pn	21 42 07.3	-4.3
GO01				*e*S	Sn	21 42 29.6	+0.5
GO01				IAML		21 42 30.1	
	comp=Z,532nm,0.3s						
PB09	IPOC Station P	1.08	180	*e*P	Pn	21 42 13.2	+1.6
PB09				*i* S	Sn	21 42 30.4	+1.1
PB09				IAML		21 42 33.8	
	comp=E,927nm,0.4s						
PB09	IPOC Station P	1.08	180	*e*P	Pn	21 42 13.2	+1.6
PB09				*e*S	Sn	21 42 30.9	+1.6
PB09				IAML		21 42 34.7	
	comp=Z,582nm,0.4s						
PB07	IPOC Station P	1.18	211	⇑*i*P	Pn	21 42 13.7	+1.1
PB07				*e*S	Sn	21 42 30.5	-0.5
PB07				IAML		21 42 32.3	
	comp=E,1µm,0.1s						
PB07	IPOC Station P	1.18	211	*e*P	Pn	21 42 13.6	+1.0
PB07				*e*S	Sn	21 42 31.6	+0.5
PB07				IAML		21 42 33.6	
	comp=Z,638nm,0.2s						
PB03	IPOC Station P	1.41	200	*e*P	Pn	21 42 16.7	+1.5
PB03				*i* S	Sn	21 42 35.0	-0.6
PB03				IAML		21 42 36.1	
	comp=E,653nm,0.2s						
PB03	IPOC Station P	1.41	200	*e*P	Pn	21 42 14.2	-1.0
PB03				*e*S	Sn	21 42 35.8	+0.2
PB03				IAML		21 42 39.8	
	comp=Z,488nm,0.1s						
PB06	IPOC Station P	2.01	189	*e*P	Pn	21 42 23.7	+1.5
PB06				*i* S	Sn	21 42 48.1	-0.1
PB06				IAML		21 42 51.8	
	comp=E,260nm,0.2s						
PB06	IPOC Station P	2.01	189	*e*P	Pn	21 42 23.6	+1.4
PB06				*e*S	Sn	21 42 47.3	-0.8
PB06				IAML		21 42 51.2	
	comp=Z,170nm,0.2s						
PB05	IPOC Station P	2.31	203	*e*P	Pn	21 42 27.4	+1.4
PB05				*i* S	Sn	21 42 52.5	-2.3
PB05				IAML		21 42 54.7	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,219nm,0.5s						
PB05	IPOC Station P	2.31	203	eP	Pn	21 42 26.8	+0.8
PB05				eS	Sn	21 42 53.0	-1.9
PB05				IAML		21 42 54.6	
	comp=Z,178nm,0.2s						
PB16	IPOC Station P	2.38	354	eP	Pn	21 42 25.8	-1.5
PB16				eS	Sn	21 42 59.5	+2.4
AF01	San Pedro de A	2.44	156	eP	Pn	21 42 25.4	-2.4
AF01				IAML		21 43 41.1	
	comp=Z,116nm,0.7s						

*IDC **05** 21:54:57.8±1.3, 2°.87S×123°.23E, h0km, mb3.3/4, mbtmp3.7/6, ML3.9/2, MS3.0/2, Error ellipse: s-maj=49.0km s-min=22.3km az=62.0*
*DJA **05** 21:55:00.4±0.4, 3°S±1°×12°3E±°, h10km±3km, M4.4/31, mb4.8/10, mB5.2/6, MLv4.1/31, Mw(mB)4.6/6, MwMwp4.3/1, Mwp4.7/1*
ISC 05 21:55:02.9±0.8**, 2°.86S**±0°.05×**123°.26E**±0°.06**, h35**km**, n23,** σ**0ˢ.66**/28**, mb3.5**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.87	345	P	Pn	21 55 32.3	-0.2
LUWI				S	Sn	21 55 55.7	+0.8
KKSI	Kolaka, Sulawe	2.07	231	P	Pn	21 55 35.3	+0.1
APSI	Ampana	2.52	320	P	Pn	21 55 41.3	-0.1
TTSI	Tana Toraja	3.44	267	P	Pn	21 55 54.0	-0.1
MRSI	Marisa	3.57	338	P	Pn	21 55 55.4	-0.4
MRSI				S	Sn	21 56 36.9	+0.1
SPSI	Sidrap Palu	3.65	252	P	Pn	21 55 56.5	-0.5
SPSI				S	Sn	21 56 39.7	+0.8
NLAI	Namlea	3.85	96	P	Pn	21 55 59.8	0.0
PCI	Palu	3.93	300	P	Pn	21 56 00.3	-0.6
PCI				S	Sn	21 56 46.8	+0.9
KAPI	Kappang	4.10	238	LR	LR	21 57 55.8	
	comp=Z,150nm,18.4s,baz=118,slow=44						
KAPI	Kappang	4.10	238	P	Pn	21 56 02.2	-1.0
KAPI				S	Sn	21 56 50.3	+0.3
BSSI	Bau Bau, Buton	4.27	220	P	Pn	21 56 04.1	-1.5
PMSI	Majene	4.38	262	P	Pn	21 56 06.0	-1.1
PMSI				S	Sn	21 56 58.0	+1.0
MPSI	Mapaga	4.62	313	P	Pn	21 56 10.0	-0.4
MPSI				S	Sn	21 57 02.5	-0.4
TNTI	Ternate	5.46	49	P	Pn	21 56 21.7	-0.2
BATI	Baumata	7.31	177	LR	LR	21 59 52.4	
	comp=Z,102nm,18.3s,baz=340,slow=40						
SIJI	Sorong	8.24	76	Pn	Pn	21 56 59.7	-0.4
	2.6nm,0.3s,baz=257,slow=17,SNR=7.0						
	7.3nm,0.3s						
SIJI	Sorong	8.24	76	P	Pn	21 57 00.3	+0.2
	12nm,0.9s						
FAKI	Fak Fak	8.98	91	P	Pn	21 57 11.1	+0.9
	13nm,0.8s						
FITZ	Fitzroy Crossi	15.32	171	Pn	Pn	21 58 37.4	+0.6
	0.2nm,0.3s,baz=357,slow=17,SNR=2.9						
	4.4nm,0.9s						
WRA	Warramunga Arr	20.13	148	P	P	21 59 33.5	-0.6
	0.5nm,0.6s,baz=325,slow=12,SNR=7.6						
	0.5nm,0.6s						
ASAR	Alice Springs	23.11	154	P	P	22 00 05.3	-0.6
	1.0nm,0.7s,baz=334,slow=12,SNR=15						
	1.0nm,0.7s						
MKAR	Makanchi Array	61.18	329	P	P	22 05 14.1	-0.1
	0.2nm,0.6s,baz=117,slow=8.2,SNR=1.8						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	65.01	336	P	P	22 05 39.7	+0.3
	0.3nm,0.3s,baz=141,slow=7.3,SNR=1.7						
	0.3nm,0.3s						

IDC 05 21:59:22.7±3.5**, 16°.21N**×**120°.21E, h118**km±24km**, mb3.1**/4**, mbtmp3.6**/5**, MS3.9**/1**, Error ellipse: s-maj=72.0km s-min=18.9km az=50.0, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	2.21	161	P	Pn	21 59 58.5	-0.2
	195nm,0.4s,baz=294,slow=1.6,SNR=1.7						
TGY				S	Sn	22 00 27.0	+0.7
	776nm,0.5s,baz=17,slow=23,SNR=5.4						
CMAR	Chiang Mai Arr	20.43	279	P	P	22 03 50.8	+0.1
	0.8nm,0.3s,baz=93,slow=8.5,SNR=8.0						
	0.8nm,0.3s						
JHJ	Hachijo jima 2	24.42	43	LR	LR	22 12 44.7	
	comp=Z,340nm,21.9s,baz=81,slow=33						
WRA	Warramunga Arr	38.51	158	P	P	22 06 33.5	-0.2
	0.5nm,0.4s,baz=338,slow=9.1,SNR=11						
	0.5nm,0.4s						
ASAR	Alice Springs	41.83	161	P	P	22 07 01.1	0.0
	0.4nm,0.4s,baz=336,slow=6.6,SNR=6.4						
	0.4nm,0.4s						
MKAR	Makanchi Array	43.76	322	P	P	22 07 16.3	-0.2
	0.1nm,0.4s,baz=109,slow=7.9,SNR=1.8						
	0.1nm,0.4s						

*IDC **05** 22:06:29.3±0.7, 68°.12N×140°.50E, h0km, mb3.6/12, mbtmp3.6/14, ML3.6/2, MS2.2/1, Error ellipse: s-maj=14.4km s-min=11.6km az=150.0*
*YARS **05** 22:06:30.6, 68°.14N×140°.49E, h8km, mb4.9/4, ML3.5/17*
*NERS **05** 22:07:12.5, 67°.37N×142°.97E, h0km*
ISC 05 22:06:30.6±0.5**, 68°.08N**±0°.04×**140°.42E**±0°.04**, h10**km**, n25,** σ**2ˢ.15**/44**, mb3.5**/13**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOMR	Moma	1.95	145	ePg	Pb	22 07 06.7	+0.6
	0.1nm,0.5s						
MOMR				eSg	Sb	22 07 32.2	+1.7
	99nm,0.5s						
MOMR				eSg	Sb	22 07 32.2	+1.7
	102nm,0.5s						
BTGS	Batagay	2.23	262	ePg	Pb	22 07 11.3	+0.3
	13nm,0.6s						
BTGS				eSg	Sg	22 07 42.3	+0.1
	51nm,0.6s						
BTGS				eSg	Sg	22 07 42.3	+0.1
	42nm,0.5s						
UNR	Ust'-Nera	3.70	161	ePg	Pb	22 07 37.5	+1.4
	0.1nm,0.6s						
UNR				eSg	Sg	22 08 27.2	-2.2
	0.4nm,0.5s						
UNR				eSg	Sg	22 08 27.2	-2.2
	0.6nm,0.7s						
TIXI	Tiksi	5.36	317	Pn	Pn	22 07 50.8	+0.4
	0.7nm,0.3s,baz=139,slow=16,SNR=12						
TIXI				Sn	Sn	22 08 49.0	-3.0
	4.9nm,0.3s,baz=153,slow=16,SNR=7.7						
TIXI				Lg	Lg	22 09 17.2	
	11nm,0.3s,baz=55,slow=20,SNR=19						
TIXI				LR	LR	22 09 31.3	
	comp=Z,22nm,19.4s,baz=192,slow=34						
	1.4nm,0.3s						
TIXI	Tiksi	5.36	317	ePn	Pn	22 07 52.1	+1.6
	11nm,0.2s						
TIXI				ePg	Pb	22 08 06.9	+2.8
	24nm,0.2s						
TIXI				eSn	Sn	22 08 51.9	-0.2
	99nm,0.6s						
TIXI				eSn	Sn	22 08 51.9	-0.2
	81nm,0.5s						
TIXI				eSg	Sg	22 09 16.5	-5.8
	295nm,0.6s						
TIXI				eSg	Sg	22 09 16.5	-5.8
	391nm,0.6s						
SUUS	Susuman	6.22	145	eP	Pg	22 08 30.8	+1.2
SUUS				eSg	Sg	22 09 49.2	-0.9
SUUS				Sgmax		22 09 58.6	
	60nm,0.6s						
SUUS				Sgmax		22 09 58.6	
	30nm,0.7s						
SEY	Seymchan	7.16	130	Pg	Pb	22 08 26.1	-8.8
	0.2nm,0.3s,baz=5.3,slow=23,SNR=1.5						
SEY				Sn	Sn	22 09 32.9	-3.6
	0.7nm,0.3s,baz=222,slow=21,SNR=3.5						
SEY				Lg	Lg	22 10 13.8	
	0.8nm,0.3s,baz=14,slow=22,SNR=6.0						
SEY	Seymchan	7.16	130	eP	Pg	22 08 45.2	-2.3
SEY				eSg	Sg	22 10 17.1	-3.0
SEY				Sgmax		22 10 31.6	
	20nm,0.6s						
SEY				Sgmax		22 10 31.6	
	20nm,0.3s						
YAK	Yakutsk	7.57	222	Pn	Pn	22 08 21.6	+0.7
	1.3nm,0.3s,baz=18,slow=1.8,SNR=1.5						
YAK				Pg	Pb	22 08 39.3	-2.5
	3.6nm,0.3s,baz=214,slow=2.1,SNR=4.1						
YAK				Sn	Sn	22 09 45.7	-0.8
	1.0nm,0.3s,baz=197,slow=1.5,SNR=2.1						
YAK				Lg	Lg	22 10 32.6	
	3.0nm,0.3s,baz=182,slow=21,SNR=6.5						
	4.7nm,0.4s						
YAK	Yakutsk	7.57	222	ePn	Pn	22 08 22.9	+2.1
	6.0nm,0.3s						
YAK				ePg	Pb	22 08 48.3	+6.5
	9.8nm,0.6s						
YAK				eSn	Sn	22 09 48.5	+1.9
	9.4nm,0.7s						
YAK				eSn	Sn	22 09 48.5	+1.9
	13nm,0.6s						
YAK				eSg	Sg	22 10 29.5	-3.8
	27nm,0.5s						
YAK				eSg	Sg	22 10 29.5	-3.8
	25nm,0.8s						
MA2	Magadan	9.67	147	eSg		22 11 42.4	
MA2				Sgmax		22 11 44.7	
	10.0nm,0.4s						
SONM	Songino Array	26.55	238	P	P	22 12 10.1	+1.8
	0.2nm,0.5s,baz=27,slow=6.8,SNR=2.4						
	0.2nm,0.5s						
ILAR	Eielson Array	27.71	62	P	P	22 12 18.5	0.0
	0.9nm,0.9s,baz=296,slow=7.4,SNR=10						
	0.9nm,0.9s						
ZALV	Zalesovo Beam	29.20	269	P	P	22 12 32.3	+0.5
	0.1nm,0.3s,baz=30,slow=8.4,SNR=2.0						
	0.1nm,0.3s						
SPITS	Spitsbergen Ar	30.28	340	P	P	22 12 40.7	-0.5
	9.8nm,1.0s,baz=46,slow=12,SNR=2.4						
KURBB	Kurchatov Arra	34.19	271	P	P	22 13 16.0	+0.4
	0.3nm,0.7s,baz=38,slow=8.9,SNR=7.9						
	0.3nm,0.7s						
BVAR	Borovoye Array	35.30	281	P	P	22 13 25.5	+0.2
	0.3nm,0.6s,baz=43,slow=6.5,SNR=3.9						
	0.3nm,0.6s						
MKAR	Makanchi Array	35.94	264	P	P	22 13 31.1	+0.2
	0.3nm,0.5s,baz=29,slow=6.3,SNR=11						
	0.3nm,0.5s						
YKA	Yellowknife Ar	39.12	45	P	P	22 13 57.4	-0.1
	0.1nm,0.5s,baz=328,slow=8.2,SNR=2.0						
	0.1nm,0.5s						
FINES	FINESS Array B	42.40	320	P	P	22 14 24.9	+0.4
	6.3nm,1.0s,baz=204,slow=4.2,SNR=3.4						
	6.3nm,1.0s						
KBZ	Khabaz	52.93	296	P	P	22 15 47.3	+0.8
	1.6nm,0.9s,baz=18,slow=9.6,SNR=1.3						
	1.6nm,0.9s						
PDAR	Pinedale Array	57.83	55	P	P	22 16 22.4	+0.2
	0.7nm,0.8s,baz=328,slow=4.0,SNR=4.7						
	0.7nm,0.8s						
ESDC	Sonseca Array	69.28	331	P	P	22 17 37.4	-0.2
	1.0nm,1.0s,baz=12,slow=6.0,SNR=4.6						
	1.0nm,1.0s						
TXAR	Lajitas Array	72.03	56	P	P	22 17 54.3	-0.2
	0.2nm,0.5s,baz=325,slow=7.0,SNR=1.2						
	0.2nm,0.5s						
PLCA	Paso Flores	147.90	47	PKPbc	PKPbc	22 26 15.1	+0.2
	1.1nm,0.7s,baz=67,slow=1.0,SNR=3.4						

IDC 05 22:19:08.4±999.0**, 67°.75N**×**38°.09E, h0**km**, Error ellipse: s-maj=762.7km s-min=259.4km az=116.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	20.01	140	I	I	00 17 20.0	
	baz=338,slow=333,SNR=2.0						
I46RU	ZALESOVO INFRA	25.83	99	I	I	00 57 20.0	
	baz=321,slow=341,SNR=2.5						
I18DK	QAANAAQ INFRAS	28.66	334	I	I	01 46 50.0	
	baz=31,slow=346,SNR=1.7						
I34MN	SONGINO INFRAS	38.95	85	I	I	02 17 40.0	
	baz=326,slow=339,SNR=1.0						

*BGSI **05** 22:22:10.7±2.3, 24°.85S×24°.62E, h0km±35km, ML1.7*
BUL 05 22:21:48.1±1.9**, 26°.11S**×**23°.43E, h10**km**, MD3.3, Presumed earthquake, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAKGR	Makgori	1.27	77	iP	Pg	22 22 28.7	+16
MAKGR				IAML		22 23 06.3	
	comp=E,66nm,0.5s						
SKOMA	Sekoma	1.65	16	iP	Pg	22 22 22.9	+3.0
SKOMA				IAML		22 23 47.0	
	comp=N,15nm,0.6s						
LBTB	Lobatse	2.24	61	iP	Pn	22 22 25.6	+0.2
LBTB				IAML		22 22 56.5	
	comp=E,42nm,0.2s						
LBTB	Lobatse	2.24	61	iP	Pn	22 22 26.9	+1.5
LBTB				iS	Sn	22 22 51.5	-1.8
BOSA	Boshof	2.98	147	iP	Pn	22 22 34.6	-0.9
BOSA				iS	Sn	22 23 09.7	-1.7
LPHEP	Lephephe	3.52	40	iP	Pn	22 22 43.2	+0.3
LPHEP				IAML		22 23 38.0	
	comp=E,10.0nm,0.5s						
BLWY	Bulawayo	7.62	40	iP	Pn	22 23 35.4	-4.0

*JMA **05** 22:25:34.5±0.5, 32°N±2°×14°2E±°, h41km, MV4.0/11, FAR E OFF IZU ISLANDS*
*IDC **05** 22:25:41.1±1.4, 31°.58N×140°.06E, h0km, mb3.7/6, mbtmp3.6/7, ML2.5/1, Error ellipse: s-maj=42.8km s-min=16.6km az=79.0*
ISC 05 22:25:39.2±1.3**, 32°.21N**±0°.09×**141°.9E**±0°.1**, h29**km**, n14,** σ**1ˢ.12**/17**, mb3.8**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.95	298	eP	Pn	22 26 09.8	-0.7
JHJ	Hachijo jima 2	1.98	298	Pn	Pn	22 26 09.8	-1.0
	23nm,0.3s,baz=174,slow=23,SNR=6.9						
JHJ				Sn	Sn	22 26 33.5	-1.2
	12nm,0.3s,baz=64,slow=19,SNR=1.3						
BSO1	Boso 1	2.55	343	P	Pn	22 26 17.1	-1.0
BSO1				eS	Sn	22 26 48.7	+0.8
BSO2	Boso 2	2.70	340	eS	Sn	22 26 52.3	+0.3
BSO3	Boso 3	2.82	337	eP	Pn	22 26 21.1	-1.1
BSO3				eS	Sn	22 26 55.8	+0.7
JHO	Hitachi	4.52	347	P	Pn	22 26 43.8	-1.9
JAG	Ashikaga	4.66	335	eP	Pn	22 26 47.0	-0.6
MJAR	Matsushiro Arr	5.28	326	Pn	Pn	22 26 58.6	+2.5
	0.2nm,0.3s,baz=157,slow=13,SNR=4.6						
	1.9nm,0.6s						
SONM	Songino Array	31.01	311	P	P	22 31 53.9	-0.4
	0.7nm,0.7s,baz=105,slow=9.0,SNR=4.5						
	0.7nm,0.7s						
MKAR	Makanchi Array	47.13	306	P	P	22 34 08.4	-0.4
	0.7nm,0.7s,baz=92,slow=8.7,SNR=11						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	49.37	311	P	P	22 34 26.3	+0.4
	0.5nm,0.5s,baz=89,slow=7.3,SNR=6.8						
	0.5nm,0.5s						
WRA	Warramunga Arr	52.36	189	P	P	22 34 48.8	+0.1
	1.4nm,0.6s,baz=6.4,slow=7.5,SNR=19						
	1.4nm,0.6s						
BVAR	Borovoye Array	54.17	315	P	P	22 35 02.5	+0.7
	0.4nm,0.5s,baz=104,slow=6.1,SNR=2.9						
	0.4nm,0.5s						
ASAR	Alice Springs	56.08	189	P	P	22 35 16.2	+0.4
	0.3nm,0.6s,baz=19,slow=13,SNR=5.3						
	0.3nm,0.6s						

IDC 05 22:33:13.5±2.1**, 2°.79N**×**128°.28E, h0**km**, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=173.2km s-min=20.8km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	165	P	P	22 38 23.0	-0.9
	0.6nm,0.3s,baz=341,slow=9.5,SNR=11						
	0.6nm,0.3s						
ASAR	Alice Springs	26.86	169	P	P	22 38 55.0	-1.1
	0.5nm,0.6s,baz=357,slow=8.0,SNR=11						
	0.5nm,0.6s						
MKAR	Makanchi Array	59.20	325	P	P	22 43 17.5	+1.0
	0.2nm,0.4s,baz=112,slow=7.9,SNR=10						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.36	327	P	P	22 43 45.1	+0.5
	0.3nm,0.4s,baz=129,slow=6.3,SNR=1.7						
	0.3nm,0.4s						

*NEIC **05** 23:17:58.6±1.9, 18°.62N±0°.08×145°.6E±0°.1, h190km±7km, mb4.5/61, Error ellipse: s-maj=17.3km s-min=11.0km az=89.0*
*IDC **05** 23:18:05.2±2.2, 18°.76N×145°.46E, h251km±20km, mb3.8/29, mbtmp4.4/31, Error ellipse: s-maj=12.1km s-min=9.9km az=99.0*
ISC 05 23:17:59.2±0.4**, 18°.60N**±0°.05×**145°.64E**±0°.08**, h200**km**, n121,** σ**1ˢ.28**/123**, mb4.2**/61**, 1C-1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DPSS	Saipan	3.34	178	Pn	Pn	23 18 52.0	-1.0
DPSS					Sn	23 19 32.0	-3.1
GUMO	Guam	5.04	189	S	Sn	23 20 15.2	+2.0
	141nm,0.3s,baz=6.2,slow=22,SNR=2.0						
JCJ	Chichijima	9.04	340	Pn	Pn	23 20 05.7	-0.3
JMZ	Minamidaito 2	15.16	301		P	23 21 25.5	+1.6
JOW	Kunigami	17.98	300	P	P	23 21 56.5	+1.5
	122nm,0.9s,baz=126,slow=12,SNR=13						
JOW	Kunigami	17.98	300		P	23 21 56.0	+1.1
JMN	Monobe	18.38	327	P	P	23 21 58.9	-0.3
JMN				IAmb	IAmb	23 22 02.0	
	comp=Z,51nm,1.1s						
JGF	Kuroka	18.46	338	P	P	23 22 00.3	+0.3
JGF				IAmb	IAmb	23 22 03.0	
	comp=Z,24nm,0.9s						
MJAR	Matsushiro Arr	19.04	341	P	P	23 22 06.0	-0.3
	comp=Z,6.3nm,0.6s,baz=167,slow=10,SNR=12						
MJAR	Matsushiro Arr	19.04	341	P	P	23 22 05.2	-1.1
MJB9	Matsu-Tunnel	19.04	341	P	P	23 22 06.5	+0.2
MJB9				IAmb	IAmb	23 22 10.8	
	comp=Z,13nm,0.8s						
H11S3	WAKE ISLAND Hy	19.95	87	T	T	23 43 35.0	
	baz=275						
H11S1	WAKE ISLAND Hy	19.96	87	T	T	23 42 59.7	
	baz=275						
H11S2	WAKE ISLAND Hy	19.97	87	T	T	23 43 26.1	
	baz=275						
H11N1	WAKE ISLAND Hy	20.10	83	T	T	23 44 03.2	
	baz=275						
H11N2	WAKE ISLAND Hy	20.11	83	T	T	23 43 50.8	
	baz=275						
H11N3	WAKE ISLAND Hy	20.12	83	T	T	23 44 01.8	
	baz=275						
NACB	Ninganchiao	23.05	288	P	P	23 22 46.3	-0.9
YHNB	Yeheng	23.34	289	P	P	23 22 49.1	-0.7
SSLB	Suanglung	23.58	287	P	P	23 22 51.1	-0.8
SSLB				IAmb	IAmb	23 23 16.5	
	comp=Z,45nm,1.3s						
KSRS	Korea Array	24.37	324	P	P	23 22 58.3	-0.6
	comp=Z,3.0nm,0.6s,baz=148,slow=9.4,SNR=10.0						
	comp=Z,3.0nm,0.6s						
JKA	Kamikawa-asahi	25.57	355	P	P	23 23 10.4	+0.7
JKA				IAmb	IAmb	23 23 12.8	
	comp=Z,14nm,0.7s						
NJ2	Nanjing	27.58	304	eP	P	23 23 29.4	+1.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
YSS	Yuzhno-Sakhali	28.38	356	P	P	23 23 33.8	-1.0
BNX	BinXian	31.01	335	⇓P	P	23 23 57.4	-0.5
BNX				pmax	pmax		
	comp=Z,7.0nm,1.9s						
KKM	Kota Kinabalu	31.28	250	P	P	23 24 00.0	-0.8
KKM				IAmb	IAmb	23 24 38.9	
	comp=Z,18nm,1.2s						
COEN	Coen	32.44	184	P	P	23 24 10.9	+0.2
HNS	HongShan	32.90	311	⇑P	P	23 24 15.2	+0.6
HNS				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BJI2	Beijing	33.16	316	P	P	23 24 18.5	+1.7
BJI2				sP	sP	23 25 23.2	+3.7
BJI2				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ENH	Enshi	34.77	296	P	P	23 24 30.5	-0.3
ENH				IAmb	IAmb	23 25 00.2	
	comp=Z,11nm,1.5s						
HEH	HeiHe	34.78	339	eP	P	23 24 27.7	-2.9
PEA0B	Petropavlovsk-	35.70	12	P	P	23 24 38.6	+0.2
PEA0B				IAmb	IAmb	23 24 39.6	
	comp=Z,40nm,1.3s						
PETK	Petropavlovsk-	35.70	12	P	P	23 24 39.5	+1.1
	comp=Z,4.7nm,0.7s,baz=225,slow=9.1,SNR=7.1						
	comp=Z,4.7nm,0.7s						
PETK	Petropavlovsk-	35.70	12	P	P	23 24 38.8	+0.4
SBUM	Sibu	36.45	248	P	P	23 24 45.4	+0.1
HHC	Hu-ho-hao-te	36.63	315	eP	P	23 24 48.7	+2.0
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HILR	Hailar Array B	37.23	332	P	P	23 24 51.1	-0.3
	comp=Z,1.1nm,0.4s,baz=130,slow=7.9,SNR=5.4						
	comp=Z,1.1nm,0.4s						
WB0	Warramunga Arr	39.69	197	P	P	23 25 12.9	+0.7
WB0				IAmb	IAmb	23 25 35.6	
	comp=Z,12nm,1.3s						
WRA	Warramunga Arr	39.87	197	P	P	23 25 15.1	+1.4
	comp=Z,2.4nm,0.4s,baz=23,slow=9.1,SNR=51						
WRA				PcP	PcP	23 27 15.7	+0.3
	comp=Z,0.4nm,0.5s,baz=19,slow=3.2,SNR=2.3						
WRA				ScP	ScP	23 30 41.3	-4.1
	comp=Z,0.4nm,0.8s,baz=12,slow=3.9,SNR=2.2						
	comp=Z,2.4nm,0.4s						
WRA	Warramunga Arr	39.87	197	P	P	23 25 13.2	-0.5
LZDM	Lanzhou Array	40.74	304	P	P	23 25 21.2	+0.1
	comp=Z,4.1nm,0.4s,baz=134,slow=8.4,SNR=22						
	comp=Z,4.1nm,0.4s						
SONM	Songino Array	43.19	321	P	P	23 25 39.8	-0.7
	comp=Z,0.9nm,0.3s,baz=129,slow=6.7,SNR=10						
SONM				PcP	PP	23 27 24.8	-0.3
	comp=Z,0.4nm,0.6s,baz=129,slow=3.9,SNR=2.2						
	comp=Z,0.9nm,0.3s						
SONM	Songino Array	43.19	321	P	P	23 25 39.9	-0.7
AS31	Alice Springs	43.54	196	P	P	23 25 42.1	-1.3
ASAR	Alice Springs	43.54	196	P	P	23 25 45.3	+1.9
	comp=Z,0.6nm,0.4s,baz=15,slow=7.3,SNR=11						
ASAR				ScP	ScP	23 30 56.7	-3.3
	comp=Z,0.4nm,0.8s,baz=23,slow=6.0,SNR=2.6						
	comp=Z,0.6nm,0.4s						
ASAR	Alice Springs	43.54	196	P	P	23 25 42.2	-1.2
CMAR	Chiang Mai Arr	44.18	278	P	P	23 25 49.0	+0.3
	comp=Z,0.8nm,0.3s,baz=68,slow=8.2,SNR=9.7						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	44.18	278	P	P	23 25 48.4	-0.3
MYKOM	Kota Tinggi	44.23	253	P	P	23 25 50.2	+1.1
MYKOM				IAmb	IAmb	23 26 00.2	
	comp=Z,22nm,1.2s						
ADK	Adak	44.43	33	P	P	23 25 50.2	+0.1
KULM	Kulim	45.82	259	P	P	23 26 01.9	+0.3
KULM				IAmb	IAmb	23 26 35.1	
	comp=Z,13nm,1.2s						
MBWA	Marble Bar	46.96	214	P	P	23 26 09.9	-0.4
MBWA				IAmb	IAmb	23 26 45.8	
	comp=Z,47nm,1.3s						
PSA00	Pilbara Seismi	47.24	213	P	P	23 26 12.0	-0.4
PSA00				IAmb	IAmb	23 26 12.3	
	comp=Z,26nm,1.2s						
GOMU	GeErMu	47.86	302	P	P	23 26 19.1	+1.5
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GSI	Gunungsitoli	50.15	256	P	P	23 26 35.3	+0.5
STKA	Stephens Creek	50.34	184	P	P	23 26 37.6	+1.8
	comp=Z,0.6nm,0.4s,baz=0.0,slow=10,SNR=1.0						
	comp=Z,0.6nm,0.4s						
BILL	Bilibino	51.13	10		P	23 26 41.7	+0.5
BILL				IAmb	IAmb	23 26 43.0	
	comp=Z,8.1nm,1.0s						
LVA	Lava Point	51.15	34	P	P	23 26 42.1	+0.4
AKUT	Akutan	51.28	34	P	P	23 26 43.5	+0.9
WMQ	Urumqi	54.34	311	eP	P	23 27 07.8	+2.5
WMQ				LR	LR		
	comp=Z,190nm,24.1s						
SDPT	Sand Point	54.58	34	P	P	23 27 06.8	+0.1
MORW	Morawa	55.34	212	P	P	23 27 11.8	-0.7
MORW				IAmb	IAmb	23 27 37.6	
	comp=Z,20nm,1.4s						
ANM	Nome	56.31	23	P	P	23 27 19.8	+0.9
P16K	Nushagak River	57.11	31	P	P	23 27 25.9	+1.3
ZAA0	Zalesovo Array	58.06	323		P	23 27 29.6	-1.8
ZALV	Zalesovo Beam	58.06	323	P	P	23 27 29.7	-1.6
	comp=Z,1.9nm,0.4s,baz=110,slow=7.6,SNR=14						
ZALV				PcP	pwP	23 28 19.7	-0.5
	comp=Z,1.0nm,0.6s,baz=94,slow=4.5,SNR=2.5						
	comp=Z,1.9nm,0.4s						
MKAR	Makanchi Array	58.49	314	P	P	23 27 33.9	-0.6
	comp=Z,2.7nm,0.6s,baz=92,slow=6.7,SNR=22						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR				PcP	**pP**	**23 28 21.3**	**+2.5**
	comp=Z,0.4nm,0.4s,baz=90,slow=4.6,SNR=5.9						
	comp=Z,2.7nm,0.6s						
MAKZ	**Makanchi**	**58.71**	**314**		**P**	**23 27 34.9**	**-1.1**
MAKZ				IAmb	IAmb	23 27 36.5	
	comp=Z,3.6nm,0.6s						
KDAK	**Kodiak Island**	**59.47**	**33**	P	**P**	**23 27 42.0**	**+1.1**
	comp=Z,3.4nm,0.5s,baz=102,slow=1.1,SNR=18						
	comp=Z,3.4nm,0.5s						
KDAK	**Kodiak Island**	**59.47**	**33**	P	**P**	**23 27 41.4**	**+0.4**
J20K	**Nowinta River**	**60.57**	**26**	P	**P**	**23 27 49.7**	**+1.4**
J20K				IAmb	IAmb	23 27 51.9	
	comp=Z,2.2nm,0.4s						
PRZ	**Przheval'sk**	**61.01**	**309**	P	**P**	**23 27 51.7**	**-0.3**
PRZ				IAmb	IAmb	23 27 55.8	
	comp=Z,7.2nm,1.0s						
KURK	**Kurchatov**	**61.31**	**318**		**P**	**23 27 52.2**	**-1.3**
KURBB	**Kurchatov Arra**	**61.36**	**318**	P	**P**	**23 27 52.7**	**-1.1**
	comp=Z,3.4nm,0.4s,baz=93,slow=7.4,SNR=69						
	comp=Z,3.4nm,0.4s						
O22K	**Cooper Landing**	**61.54**	**31**	P	**P**	**23 27 54.8**	**-0.1**
L22K	**Petersville**	**61.54**	**28**	P	**P**	**23 27 54.8**	**-0.2**
L22K				IAmb	IAmb	23 28 22.4	
	comp=Z,9.1nm,1.4s						
NRIK	**Noril'sk**	**61.69**	**340**	P	**P**	**23 27 54.7**	**-1.1**
	comp=Z,8.4nm,0.6s,baz=114,slow=9.0,SNR=21						
	comp=Z,8.4nm,0.6s						
NRIK	**Noril'sk**	**61.69**	**340**		**P**	**23 27 54.6**	**-1.1**
NRIK				IAmb	IAmb	23 27 55.6	
	comp=Z,7.6nm,0.8s						
BOOM	**Boomskoye usch**	**62.83**	**309**	P	**P**	**23 28 03.2**	**-0.8**
BOOM				IAmb	IAmb	23 28 05.0	
	comp=Z,3.1nm,0.6s						
KSH2	**Kashi**	**63.22**	**305**	P	**P**	**23 28 07.8**	**+1.2**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
IL31		**63.76**	**26**	P	**P**	**23 28 08.5**	**-1.0**
IL31				IAmb	IAmb	23 28 10.0	
	comp=Z,2.9nm,0.7s						
ILAR	**Eielson Array**	**63.76**	**26**	P	**P**	**23 28 08.8**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=254,slow=4.6,SNR=33						
	comp=Z,2.5nm,0.7s						
AAK	**Ala-Archa**	**63.89**	**309**	P	**P**	**23 28 10.5**	**-0.5**
PAX	**Paxson**	**64.02**	**28**	P	**P**	**23 28 12.1**	**+0.7**
PAX				IAmb	IAmb	23 28 14.9	
	comp=Z,17nm,1.5s						
TKNZ	**Takaka Hill**	**64.52**	**157**	P	**P**	**23 28 16.3**	**+1.6**
ARSB	**Arslanbob**	**65.08**	**308**	P	**P**	**23 28 18.0**	**-0.6**
ARSB				IAmb	IAmb	23 28 21.6	
	comp=Z,5.4nm,1.1s						
BMAR	**Burnt Mountain**	**65.23**	**24**	P	**P**	**23 28 20.5**	**+1.4**
BVAR	**Borovoye Array**	**66.52**	**320**	P	**P**	**23 28 26.4**	**-1.0**
	comp=Z,5.5nm,0.4s,baz=93,slow=7.5,SNR=32						
	comp=Z,5.5nm,0.4s						
BORK	**Borovoye**	**66.56**	**320**		**P**	**23 28 26.9**	**-0.8**
BORK				IAmb	IAmb	23 28 28.1	
	comp=Z,6.9nm,0.6s						
KK31	**Karatay Array**	**66.79**	**310**		**P**	**23 28 28.7**	**-0.7**
KKAR	**Karatay Array**	**66.79**	**310**		**P**	**23 28 28.6**	**-0.9**
SHAA	**Shahritus**	**69.19**	**304**	P	**P**	**23 28 43.9**	**-0.7**
SHAA				IAmb	IAmb	23 28 47.4	
	comp=Z,3.8nm,0.7s						
INK	**Inuvik**	**69.48**	**23**	P	**P**	**23 28 45.9**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=303,slow=5.7,SNR=18						
	comp=Z,1.5nm,0.3s						
INK	**Inuvik**	**69.48**	**23**	P	**P**	**23 28 45.6**	**0.0**
DLBC	**Dease Lake**	**71.40**	**34**	P	**P**	**23 28 58.4**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=271,slow=7.2,SNR=3.5						
	comp=Z,3.0nm,0.7s						
A36M	**Sachs Harbour**	**72.19**	**19**	P	**P**	**23 29 02.2**	**+0.4**
A36M				IAmb	IAmb	23 29 03.1	
	comp=Z,4.1nm,0.7s						
ARTI	**Arti**	**73.22**	**325**	P	**P**	**23 29 07.4**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=96,slow=5.3,SNR=9.9						
	comp=Z,1.8nm,0.3s						
ARTI	**Arti**	**73.22**	**325**	P	**P**	**23 29 07.6**	**-0.6**
AB31	**Akbulak array**	**73.38**	**317**		**P**	**23 29 07.6**	**-1.7**
ABKAR	**Akbulak array**	**73.38**	**317**		**P**	**23 29 07.6**	**-1.7**
AKTO	**Aktyubinsk**	**74.41**	**318**	P	**P**	**23 29 14.2**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=87,slow=5.7,SNR=9.1						
	comp=Z,1.8nm,0.5s						
YKAW3	**Yellowknife Wh**	**78.08**	**28**		**P**	**23 29 36.0**	**+0.4**
YKA	**Yellowknife Ar**	**78.10**	**28**	P	**P**	**23 29 36.0**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=296,slow=6.1,SNR=32						
	comp=Z,1.2nm,0.5s						
YKA	**Yellowknife Ar**	**78.10**	**28**	P	**P**	**23 29 35.8**	**+0.1**
SPITS	**Spitsbergen Ar**	**79.26**	**351**	P	**P**	**23 29 41.5**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=119,slow=5.2,SNR=9.2						
	comp=Z,2.6nm,0.7s						
O02D	**Mt. Diablo Mer**	**79.41**	**51**	P	**P**	**23 29 44.5**	**+1.0**
O02D				IAmb	IAmb	23 30 00.6	
	comp=Z,12nm,1.4s						
BELG	**Belogornoye**	**80.25**	**322**	P	**P**	**23 29 46.6**	**-0.9**
	comp=Z,2.9nm,0.4s,baz=356,slow=6.1,SNR=4.4						
	comp=Z,2.9nm,0.4s						
ARCES	**ARCESS Array B**	**82.57**	**342**	P	**P**	**23 29 58.1**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=46,slow=5.2,SNR=4.6						
	comp=Z,2.5nm,0.6s						
ARCES	**ARCESS Array B**	**82.57**	**342**	P	**P**	**23 29 57.9**	**-1.6**
TULEG	**Thule**	**82.82**	**8**	P	**P**	**23 30 00.4**	**-0.2**
TULEG				IAmb	IAmb	23 30 38.8	
	comp=Z,12nm,1.3s						
NVAR	**Mina Array Bea**	**83.24**	**52**	P	**P**	**23 30 05.3**	**+1.5**
	comp=Z,2.7nm,0.7s,baz=266,slow=5.4,SNR=14						
	comp=Z,2.7nm,0.7s						
NVAR	**Mina Array Bea**	**83.24**	**52**	P	**P**	**23 30 04.3**	**+0.5**
BCYI	**Bear Canyon**	**84.76**	**45**	P	**P**	**23 30 12.2**	**+0.8**
LRM	**Limekiln Ridge**	**84.85**	**43**	P	**P**	**23 30 12.4**	**+0.6**
FINES	**FINESS Array B**	**86.95**	**335**	P	**P**	**23 30 18.8**	**-2.7**
	comp=Z,2.2nm,0.5s,baz=67,slow=4.3,SNR=28						
	comp=Z,2.2nm,0.5s						
PD31	**Pinedale Array**	**87.93**	**45**	P	**P**	**23 30 26.7**	**-0.2**
PDAR	**Pinedale Array**	**87.93**	**45**	P	**P**	**23 30 27.1**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=185,slow=0.7,SNR=11						
	comp=Z,0.4nm,0.4s						
PDAR	**Pinedale Array**	**87.93**	**45**	P	**P**	**23 30 26.3**	**-0.5**
HFS	**Hagfors**	**92.46**	**338**	P	**P**	**23 30 44.6**	**-2.6**
	comp=Z,1.4nm,0.5s,baz=113,slow=1.1,SNR=7.0						
	comp=Z,1.4nm,0.5s						
NOA	**NORSAR Array B**	**92.65**	**340**	P	**P**	**23 30 46.3**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=53,slow=6.3,SNR=3.4						
	comp=Z,0.6nm,0.8s						
LPAZ	**La Paz**	**147.72**	**91**	PKPbc	**PKPdf**	**23 37 21.7**	**+2.9**
	comp=Z,1.9nm,0.5s,baz=349,slow=5.4,SNR=8.5						

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*NORS **05** 23:30:02.7, 42.°10N×45.°84E, h6km, MPVA3.3*
*MOS **05** 23:30:03.0, 42.°17N×45.°86E, h15km, MPVA3.2*
*DRS **05** 23:30:03.9, 42.°20N×45.°80E, h18km*
*AZER **05** 23:30:04.1, 41.°87N×45.°81E, h5km, ml2.3*
ISC 05 23:30:04.0±1.0, **42.°14N**±0.°02×**45.°82E**±0.°02, **h15**km±8km, **n35**, σ**1.ˢ11**/68, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLTR	**Tlyarata**	**0.40**	**94**	*e*Pg	**Pg**	**23 30 11.8**	**-0.4**
TLTR				*e*Sg	**Sb**	**23 30 18.3**	**-0.5**
BTLR	**Botlikh**	**0.61**	**30**	*i* Pg	**Pb**	**23 30 15.7**	**-0.6**
BTLR				*e*Sg	**Sb**	**23 30 24.6**	**-0.1**
ZKTA	**Zakatala**	**0.78**	**129**	P	**Pg**	**23 30 18.9**	**-0.3**
ZKTA				S	**Sb**	**23 30 30.6**	**+1.0**
DVE	**Vedeno**	**0.85**	**16**	*e*Pg	**Pg**	**23 30 19.1**	**-1.5**
DVE				*e*Sg	**Sb**	**23 30 31.4**	**-0.3**
GNBR	**Gunib**	**0.89**	**73**	*e*Pg	**Pn**	**23 30 21.4**	**-0.6**
GNBR				*e*Sg	**Sn**	**23 30 34.8**	**+0.2**
UNCR	**Uncukul**	**0.93**	**51**	*e*Pg	**Pg**	**23 30 21.4**	**-0.5**
UNCR				*e*Sg	**Sn**	**23 30 34.5**	**-1.0**
KMKR	**Kumukh**	**0.95**	**90**	*e*Pg	**Pg**	**23 30 22.2**	**-0.3**
KMKR				*e*Sg	**Sn**	**23 30 35.6**	**-0.8**
ARKR	**Arakani**	**0.99**	**62**	*e*Pg	**Pn**	**23 30 23.0**	**-0.4**
ARKR				*e*Sg	**Sn**	**23 30 36.8**	**-0.3**
KRNR	**Karanay**	**1.06**	**49**	*e*Pg	**Pn**	**23 30 24.2**	**-0.2**
KRNR				*e*Sg	**Sn**	**23 30 39.0**	**0.0**
GROC	**Groznyy**	**1.07**	**359**	*e*Pg	**Pg**	**23 30 25.1**	**+0.5**
GROC				*e*Sg	**Sn**	**23 30 41.0**	**+2.1**
DLMR	**Dylym**	**1.11**	**33**	*e*Pg	**Pg**	**23 30 25.3**	**-0.1**
DLMR				*e*Sg	**Sn**	**23 30 40.6**	**+0.6**
QZX	**Qazax, Azerbai**	**1.13**	**197**	P	**Pn**	**23 30 23.5**	**-1.7**
QZX				S	**Sb**	**23 30 39.0**	**-0.6**
KMGR	**Komgaron**	**1.16**	**323**	*e*Pg	**Pg**	**23 30 26.0**	**-0.3**
KMGR				*e*Sg	**Sg**	**23 30 43.4**	**+1.9**
DBC	**Dubki**	**1.16**	**40**	*e*Pg	**Pg**	**23 30 25.7**	**-0.7**
DBC				*e*Sg	**Sn**	**23 30 41.8**	**+0.5**
BUJR	**Buynaksk**	**1.18**	**54**	*e*Pg	**Pg**	**23 30 26.7**	**0.0**
BUJR				*e*Sg	**Sg**	**23 30 43.0**	**+0.9**
VLKR	**Vladikavkaz**	**1.24**	**318**	*e*Pg	**Pg**	**23 30 27.5**	**-0.3**
VLKR				*e*Sg	**Sg**	**23 30 45.6**	**+1.6**
LACR	**Lac**	**1.32**	**302**	*e*Pg	**Pn**	**23 30 27.3**	**-0.7**
LACR				*e*Sg	**Sb**	**23 30 44.5**	**-0.8**
URKR	**Urkarakh**	**1.35**	**88**	*e*Pg	**Pg**	**23 30 29.4**	**-0.6**
URKR				*e*Sg	**Sg**	**23 30 48.1**	**+0.5**
SEKA	**Sheki**	**1.39**	**131**	P	**Pn**	**23 30 28.9**	**0.0**
SEKA				S	**Sg**	**23 30 48.7**	**-0.1**
SGKR	**Sergokala**	**1.40**	**76**	*e*Pg	**Pg**	**23 30 30.1**	**-0.9**
SGKR				*e*Sg	**Sg**	**23 30 49.3**	**0.0**
GDB	**GEDABAY**	**1.42**	**182**	P	**Pn**	**23 30 27.9**	**-1.4**
GDB				S	**Sn**	**23 30 43.8**	**-4.0**
GANJ	**Ganja**	**1.54**	**165**	P	**Pn**	**23 30 30.1**	**-0.7**
GANJ				S	**Sn**	**23 30 50.9**	**+0.4**
ARNR	**Ardon**	**1.54**	**313**	*e*Pg	**Pb**	**23 30 32.1**	**0.0**
ARNR				*e*Sg	**Sg**	**23 30 54.8**	**+1.3**
AKT	**Akhty**	**1.57**	**114**	*e*Pg	**Pb**	**23 30 33.3**	**+0.5**
AKT				*e*Sg	**Sg**	**23 30 55.8**	**+1.1**
KORR	**Kora**	**1.60**	**307**	*e*Pg	**Pb**	**23 30 32.9**	**-0.4**
KORR				*e*Sg	**Sg**	**23 30 56.0**	**+0.4**
MNGR	**Mingechevir, A**	**1.66**	**145**	P	**Pb**	**23 30 34.2**	**0.0**
MNGR				S	**Sg**	**23 30 58.5**	**+1.0**
DIGR	**Digorskoe uzhe**	**1.82**	**296**	*e*Pg	**Pb**	**23 30 36.1**	**-0.9**
DIGR				*e*Sg	**Sb**	**23 31 00.4**	**+0.6**
LSNR	**Lesken**	**1.86**	**309**	*e*Pg	**Pb**	**23 30 37.3**	**-0.3**
LSNR				*e*Sg	**Sg**	**23 31 02.4**	**-1.4**
QBL	**Gabala**	**1.93**	**127**	P	**Pb**	**23 30 38.9**	**0.0**
QBL				S	**Sg**	**23 31 05.9**	**-0.1**
QSAR	**Qusar**	**1.93**	**108**	P	**Pg**	**23 30 40.7**	**-0.3**
QSAR				S	**Sg**	**23 31 04.7**	**-1.4**
BRDA	**Brd**	**2.14**	**151**	S	**Sb**	**23 31 07.6**	**-1.0**
IML	**Ismayilli**	**2.23**	**126**	S	**Sg**	**23 31 14.1**	**-1.5**
AGDM	**Agdam**	**2.25**	**154**	P	**Pn**	**23 30 42.7**	**+2.1**
AGDM				S	**Sb**	**23 31 14.4**	**+2.5**
SBZ	**Shahbuz**	**2.74**	**184**	P	**Pn**	**23 30 50.1**	**+2.6**
SBZ				S	**Sn**	**23 31 22.0**	**+1.5**
YRD	**Yardimli**	**3.71**	**149**	P	**Pn**	**23 31 02.3**	**+1.4**
YRD				S	**Sn**	**23 31 45.5**	**+1.1**

IDC 05 23:34:13.9±2.2, **49.°88N**×**114.°61W**, **h0**km, **mb2.7**/1, **mbtmp3.0**/3, **ML3.3**/2, **Error ellipse: s-maj=39.6km s-min=10.1km az=119.0, British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	**Newport**	**2.31**	**227**	Pn	Pn	23 34 54.5	+1.2
	1.3nm,0.3s,baz=41,slow=7.9,SNR=29						
NEW				Lg	Lg	23 35 25.9	
	3.5nm,0.3s,baz=21,slow=14,SNR=6.2						
	6.8nm,0.4s						
I56US	**NEWPORT INFRAS**	**2.31**	**227**	I	I	23 48 30.0	
	baz=41,slow=326,SNR=4.3						
YKA	**Yellowknife Ar**	**12.65**	**0**	Pn	Pn	23 37 10.7	-4.1
	0.3nm,0.3s,baz=185,slow=12,SNR=5.6						
YKA				Lg	Lg	23 40 44.6	
	baz=173,slow=26,SNR=6.2						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**22.57**	**323**	P	P	23 39 16.4	+0.9
	0.2nm,0.6s,baz=101,slow=9.3,SNR=2.3						
	0.2nm,0.6s						

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*IDC **05** 23:35:03.6±1.3, 51.°42N×176.°25W, h0km, mb4.0/13, mbtmp4.0/14, ML2.8/1, Error ellipse: s-maj=39.0km s-min=17.3km az=180.0*
*NEIC **05** 23:35:07.9±1.5, 51.°13N±0.°02×176.°11W±0.°06, h35km±6km, mb4.1/36, ML4.0/12, ML3.6(AEIC), Error ellipse: s-maj=5.6km s-min=3.0km az=82.0*
*AEIC **05** 23:35:08.3±1.9, 51.°18N±0.°02×176.°15W±0.°06, h32km±5km, Error ellipse: s-maj=5.5km s-min=2.1km az=96.0*
ISC 05 23:35:06.0±1.6, **51.°08N**±0.°06×**176.°13W**±0.°03, **h25**km±10km, **n102**, σ**0.ˢ90**/124, **mb4.3**/17, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.80**	**347**		**Pn**	**23 35 21.8**	**0.0**
ETKA					**Sb**	**23 35 32.0**	**+0.2**
ADK	**Adak**	**0.88**	**337**		**Pn**	**23 35 23.0**	**+0.2**
ADK					**Sb**	**23 35 33.9**	**0.0**
GSIG	**Igitkin Island**	**0.92**	**8**		**Pn**	**23 35 23.7**	**+0.3**
GSIG					**Pb**	**23 35 23.8**	**+0.6**
GSIG					**Sb**	**23 35 35.3**	**+0.3**
GSCK	**Great Sitkin C**	**0.94**	**359**		**Pn**	**23 35 24.2**	**+0.6**
GSCK					**Sb**	**23 35 36.1**	**+0.5**
GSCK					**Sn**	**23 35 36.3**	**0.0**
ADAG	**Mount Adagdak**	**0.95**	**342**		**Pn**	**23 35 24.6**	**+0.7**
ADAG					**Sn**	**23 35 36.8**	**+0.2**
GSMY	**Great Sitkin M**	**0.97**	**3**		**Pn**	**23 35 24.7**	**+0.7**
GSMY					**Sb**	**23 35 36.9**	**+0.4**
GSMY					**Sn**	**23 35 37.0**	**0.0**
KIMD	**Kanaga Island**	**0.97**	**315**		**Pn**	**23 35 24.5**	**+0.4**
KIMD					**Sn**	**23 35 36.8**	**-0.3**
GSTD	**Great Sitkin T**	**0.98**	**359**		**Pn**	**23 35 24.9**	**+0.6**
GSTD					**Sb**	**23 35 37.3**	**+0.4**
KIWB	**Kanaga Island**	**1.01**	**321**		**Pn**	**23 35 25.1**	**+0.5**
KIWB					**Sn**	**23 35 37.7**	**-0.3**
KIWB				IAML		23 35 38.8	
	comp=N,2μm,0.4s						
KIWB				IAML		23 35 39.3	
	comp=E,4μm,0.3s						
GSSP	**Great Sitkin S**	**1.02**	**358**		**Sb**	**23 35 38.2**	**+0.3**
GSTR	**Great Sitkin T**	**1.02**	**2**		**Pn**	**23 35 25.7**	**+0.9**
GSTR				Sn	**Sb**	**23 35 37.3**	**-0.7**
GSTR				IAML		23 35 41.3	
	comp=N,8μm,0.5s						
GSTR				IAML		23 35 42.2	
	comp=E,8μm,0.3s						
KIRH	**Kanaga Island**	**1.02**	**324**		**Pn**	**23 35 25.5**	**+0.8**
KIRH					**Sn**	**23 35 38.5**	**+0.1**
KIKV	**Kanaga Island**	**1.03**	**321**		**Sn**	**23 35 38.7**	**+0.1**
KINC	**Kanaga Island**	**1.06**	**324**		**Pb**	**23 35 26.1**	**+0.4**
KINC					**Sn**	**23 35 39.4**	**+0.2**
TAPA	**Tanaga Point A**	**1.29**	**306**		**Sb**	**23 35 46.0**	**+0.3**
TAFL	**Tanaga Flats**	**1.30**	**302**		**Sb**	**23 35 46.2**	**+0.2**
TAFL					**Sn**	**23 35 46.5**	**+1.3**
TASE	**Tanaga Southea**	**1.42**	**303**		**Pb**	**23 35 31.6**	**-0.1**
TASE					**Sb**	**23 35 49.3**	**0.0**
TAFP	**Tanaga Falls P**	**1.42**	**306**		**Pb**	**23 35 31.2**	**-0.6**
TAFP					**Sb**	**23 35 49.5**	**-0.1**
TANO	**Tanaga North**	**1.50**	**305**		**Pb**	**23 35 33.6**	**+0.4**
ATKA	**Atka Island**	**1.65**	**46**		**Pn**	**23 35 33.6**	**+0.3**
ATKA					**Sn**	**23 35 52.6**	**-1.1**
ATKA				IAML		23 35 53.2	
	comp=E,920nm,0.6s						
KOKL	**Mount Kliuchef**	**1.73**	**43**		**Pn**	**23 35 35.7**	**+1.1**
KOKL					**Sn**	**23 35 56.1**	**+0.3**
KOWE	**Korovin West**	**1.74**	**41**		**Sn**	**23 35 56.7**	**+0.6**
KOFP	**Korovin Flat P**	**1.74**	**46**		**Pn**	**23 35 36.0**	**+1.3**
KOFP					**Sn**	**23 35 56.6**	**+0.5**
GAKI	**Gareloi-Kavalg**	**1.75**	**287**		**Sb**	**23 35 57.2**	**-1.7**
GAEA	**Gareloi East**	**1.79**	**294**		**Pb**	**23 35 37.3**	**-0.8**
GAEA					**Sb**	**23 35 59.8**	**-0.2**
GALAA	**Gareloi Lava P**	**1.79**	**293**		**Sb**	**23 35 59.6**	**-0.6**
KOSE	**Korovin Southe**	**1.81**	**45**		**Pb**	**23 35 37.5**	**-0.9**
KOSE					**Sn**	**23 35 58.6**	**+0.8**
GANE	**Gareloi Northe**	**1.82**	**295**		**Pb**	**23 35 37.7**	**-0.8**
GANE					**Sb**	**23 36 00.5**	**-0.3**
CEPE	**Semis' Perret**	**2.79**	**290**		**Pn**	**23 35 50.7**	**+1.7**
CERB	**Semis' Cerberu**	**2.79**	**289**		**Pn**	**23 35 51.4**	**+2.3**
CERB					**Sn**	**23 36 23.9**	**+2.1**
CESW	**Semis' Southwe**	**2.82**	**289**		**Pn**	**23 35 51.2**	**+1.8**
AMKA	**Amchitka**	**2.89**	**278**	Pn	**Pn**	**23 35 51.2**	**+0.8**
AMKA				Sn	**Sn**	**23 36 23.3**	**-1.1**
NIKH	**Nikolski High**	**4.87**	**64**	Pn	**Pn**	**23 36 18.3**	**+0.6**
NIKH				Sn	**Sn**	**23 37 12.9**	**-0.4**
NIKH				IAML		23 39 13.9	
	comp=E,134nm,1.4s						
UNV	**Unalaska Valle**	**6.50**	**61**	Pn	**Pn**	**23 36 40.0**	**0.0**
P16K	**Nushagak River**	**13.06**	**45**	Pn	**Pn**	**23 38 10.7**	**+0.9**
OHAK	**Old Harbor**	**14.69**	**56**	Pn	**Pn**	**23 38 33.9**	**+2.0**
Q19K	**Cape Douglas,**	**15.04**	**50**	Pn	**Pn**	**23 38 37.2**	**+0.4**
KDAK	**Kodiak Island**	**15.20**	**55**	Pn	**Pn**	**23 38 35.0**	**-3.8**
	comp=E,0.3nm,0.3s,baz=78,slow=3.0,SNR=18						
KDAK				Sn	**Sn**	**23 41 25.2**	**-1.0**
	comp=E,0.4nm,0.3s,baz=141,slow=20,SNR=10						
KDAK	**Kodiak Island**	**15.20**	**55**	Pn	**Pn**	**23 38 38.0**	**-0.8**
KDAK				IAmb	IAmb	23 38 56.8	
	comp=Z,28nm,1.4s						
PEA0B	**Petropavlovsk-**	**16.18**	**287**	Pn	**Pn**	**23 38 51.6**	**+0.1**
PEA0B				IAmb	IAmb	23 39 01.5	
	comp=Z,39nm,1.3s						
PETK	**Petropavlovsk-**	**16.18**	**287**	Pn	**Pn**	**23 38 49.4**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=84,slow=18,SNR=5.8						
	comp=Z,1.9nm,0.8s						
KTH	**Kantishna Hill**	**18.31**	**37**		**P**	**23 39 18.1**	**+0.1**
KTH				IAmb	IAmb	23 39 22.6	
	comp=Z,16nm,1.1s						
KNK	**Knik Glacier**	**18.38**	**45**		**P**	**23 39 17.3**	**-1.4**
KNK				IAmb	IAmb	23 39 23.1	
	comp=Z,16nm,1.4s						
BPAW	**Bear Paw Mtn.**	**18.58**	**36**		**P**	**23 39 21.4**	**+0.5**
SCM	**Sheep Creek Mo**	**19.03**	**44**		**P**	**23 39 24.8**	**-1.2**
C18K	**Utukok River**	**19.05**	**17**	P	**Pn**	**23 39 27.5**	**+0.6**
MCK	**McKinley**	**19.17**	**38**		**P**	**23 39 27.5**	**+0.1**
MCK				IAmb	IAmb	23 39 46.8	
	comp=Z,7.7nm,1.2s						
DHY	**Denali Highway**	**19.50**	**41**	P	**P**	**23 39 30.7**	**-0.5**
DHY				IAmb	IAmb	23 39 33.1	
	comp=Z,6.6nm,0.6s						
F21K	**Alatna River**	**19.71**	**26**	P	**P**	**23 39 34.0**	**+0.7**
WRH	**Wood River Hil**	**19.85**	**37**	P	**P**	**23 39 33.4**	**-1.4**
WRH				IAmb	IAmb	23 39 38.6	
	comp=Z,10nm,1.4s						
CCB	**Clear Creek Bu**	**20.05**	**37**		**P**	**23 39 35.5**	**-1.4**
HDA	**Harding Lake**	**20.26**	**38**	P	**P**	**23 39 39.7**	**+0.4**
HDA				IAmb	IAmb	23 39 41.4	
	comp=Z,9.2nm,0.5s						
G23K	**Bananza Creek**	**20.41**	**30**		**P**	**23 39 41.7**	**+0.7**
IL31		**20.45**	**37**	P	**P**	**23 39 41.7**	**+0.4**
IL31				IAmb	IAmb	23 40 01.0	
	comp=Z,10nm,1.4s						
ILAR	**Eielson Array**	**20.45**	**37**	P	**P**	**23 39 39.9**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=235,slow=11,SNR=28						
	comp=Z,1.2nm,0.4s						
ILAR	**Eielson Array**	**20.45**	**37**	P	**P**	**23 39 41.9**	**+0.6**
K24K	**Donnelly Dome**	**20.46**	**40**	P	**P**	**23 39 40.7**	**-0.7**
H24K	**Noodor Dome**	**20.63**	**34**		**P**	**23 39 43.7**	**+0.4**
H24K				IAmb	IAmb	23 39 45.8	
	comp=Z,6.7nm,0.8s						
RIDG	**Independent Ri**	**20.81**	**41**	P	**P**	**23 39 44.6**	**-0.7**
RIDG				IAmb	IAmb	23 39 47.1	
	comp=Z,7.3nm,0.4s						
J25K	**Salcha River,**	**20.96**	**38**	P	**P**	**23 39 46.4**	**-0.5**
J25K				IAmb	IAmb	23 39 48.7	
	comp=Z,8.3nm,0.6s						
DOT	**Dot Lake**	**21.10**	**41**	P	**P**	**23 39 48.0**	**-0.4**
DOT				IAmb	IAmb	23 39 49.7	
	comp=Z,8.1nm,0.5s						
D22K	**Ayikyak River**	**21.10**	**24**	P	**P**	**23 39 48.0**	**-0.4**
SCRK	**Sand Creek**	**21.25**	**40**		**P**	**23 39 49.9**	**-0.3**
J26L	**Joseph Creek**	**21.63**	**39**	P	**P**	**23 39 53.6**	**-0.5**
E24K	**Your Creek**	**21.72**	**28**	P	**P**	**23 39 55.0**	**0.0**
TOLK	**Toolik Lake Re**	**21.77**	**26**	P	**P**	**23 39 55.8**	**+0.3**
BMAR	**Burnt Mountain**	**22.58**	**32**	P	**P**	**23 40 04.6**	**+0.3**
INK	**Inuvik**	**26.75**	**34**	P	**P**	**23 40 42.4**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=213,slow=9.6,SNR=7.8						
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**26.75**	**34**	P	**P**	**23 40 42.2**	**-1.1**
H11N2	**WAKE ISLAND Hy**	**34.03**	**209**	T	T	00 18 41.5	
	baz=18,slow=76,SNR=43						
H11N3	**WAKE ISLAND Hy**	**34.04**	**209**	T	T	00 18 41.3	
	baz=18,slow=76,SNR=36						
H11N1	**WAKE ISLAND Hy**	**34.05**	**209**	T	T	00 18 42.8	
	baz=18,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**35.24**	**209**	T	T	00 19 59.5	
	baz=17,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**35.26**	**209**	T	T	00 20 03.7	
	baz=17,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**35.26**	**209**	T	T	00 20 01.5	
	baz=17,slow=76,SNR=9.7						
PD31	**Pinedale Array**	**44.79**	**74**	P	**P**	**23 43 18.1**	**+0.4**
PD31				IAmb	IAmb	23 43 20.1	
	comp=Z,2.2nm,0.7s						
PDAR	**Pinedale Array**	**44.79**	**74**	P	**P**	**23 43 19.6**	**+1.8**
	comp=Z,1.8nm,0.6s,baz=304,slow=4.1,SNR=20						
	comp=Z,1.8nm,0.6s						
PDAR	**Pinedale Array**	**44.79**	**74**	P	**P**	**23 43 18.8**	**+1.0**
ILON	**Igloolik, Nuna**	**44.86**	**30**	P	**P**	**23 43 16.5**	**-1.2**
ILON				IAmb	IAmb	23 43 18.7	
	comp=Z,3.1nm,1.2s						
SPITS	**Spitsbergen Ar**	**50.78**	**357**	P	**P**	**23 44 01.9**	**-1.6**
	comp=Z,4.0nm,0.9s,baz=342,slow=7.6,SNR=6.9						
	comp=Z,4.0nm,0.9s						
FRB	**Frobisher Bay**	**52.39**	**32**	P	**P**	**23 44 15.1**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=312,slow=8.0,SNR=18						
	comp=Z,1.9nm,0.3s						
TXAR	**Lajitas Array**	**57.03**	**83**	P	**P**	**23 44 50.8**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=326,slow=7.7,SNR=2.4						
	comp=Z,0.2nm,0.5s						
LZDM	**Lanzhou Array**	**57.26**	**288**	P	**P**	**23 44 52.6**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=49,slow=6.6,SNR=1.7						
	comp=Z,0.4nm,0.3s						
KURK	**Kurchatov**	**60.43**	**315**	P	**P**	**23 45 12.6**	**-0.5**
KURBB	**Kurchatov Arra**	**60.54**	**315**	P	**P**	**23 45 13.1**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=43,slow=6.5,SNR=36						
	comp=Z,1.9nm,0.5s						
MKAR	**Makanchi Array**	**61.53**	**310**	P	**P**	**23 45 19.7**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=48,slow=5.6,SNR=21						
MKAR				PcP	**PcP**	**23 46 02.6**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=51,slow=4.4,SNR=1.9						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**61.53**	**310**	P	**P**	**23 45 19.6**	**-1.0**
MKAR					**PcP**	**23 46 03.3**	**+1.0**
MAKZ	**Makanchi**	**61.67**	**310**	P	**P**	**23 45 20.5**	**-1.0**
MAKZ				IAmb	IAmb	23 45 24.5	
	comp=Z,1.2nm,1.1s						
BVAR	**Borovoye Array**	**62.19**	**321**	P	**P**	**23 45 25.1**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=55,slow=7.0,SNR=16						
BVAR				PcP	**PcP**	**23 46 05.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=39,slow=3.5,SNR=5.3						
	comp=Z,1.1nm,0.4s						
BORK	**Borovoye**	**62.20**	**321**	P	**P**	**23 45 24.6**	**-0.5**
BORK				IAmb	IAmb	23 45 25.8	
	comp=Z,0.9nm,0.5s						
TKL	**Tuckaleechee C**	**64.58**	**64**	P	**P**	**23 45 42.2**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=18,slow=3.2,SNR=1.8						
	comp=Z,1.8nm,0.7s						
G62A	**West of Eustis**	**64.59**	**49**	P	**P**	**23 45 41.0**	**+0.1**
FINES	**FINESS Array B**	**66.43**	**349**	P	**P**	**23 45 51.5**	**-1.0**
	comp=Z,3.4nm,1.0s,baz=10,slow=8.5,SNR=1.4						
	comp=Z,3.4nm,1.0s						
HFS	**Hagfors**	**68.86**	**355**	P	**P**	**23 46 06.8**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=26,slow=3.7,SNR=6.1						
	comp=Z,1.8nm,0.6s						
KKAR	**Karatay Array**	**69.81**	**314**	P	**P**	**23 46 14.1**	**-0.1**
ARSB	**Arslanbob**	**70.06**	**312**	P	**P**	**23 46 15.9**	**+0.1**
ARSB				IAmb	IAmb	23 46 17.5	
	comp=Z,2.8nm,1.0s						
GAR	**Garm**	**73.15**	**312**	P	**P**	**23 46 34.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**116.02**	**2**	PKP	**PKiKP**	**23 53 46.9**	**0.0**
	comp=Z,0.2nm,0.4s,baz=358,slow=1.8,SNR=4.6						
H03N2	**Juan Fernandez**	**119.45**	**108**	T	T	02 05 16.5	
	baz=317,slow=77,SNR=8.4						
H03N1	**Juan Fernandez**	**119.46**	**108**	T	T	02 05 20.8	
	baz=317,slow=77,SNR=9.3						
H03N3	**Juan Fernandez**	**119.46**	**108**	T	T	02 05 25.3	
	baz=317,slow=77,SNR=15						
BOSA	**Boshof**	**152.39**	**316**	PKPbc	**PKPbc**	**23 55 00.0**	**+0.3**
	comp=Z,3.4nm,1.0s,baz=188,slow=9.3,SNR=1.9						

IDC 05 23:36:19.2±5.2, **23.°67N**×**95.°06E**, **h0**km, **mb3.3**/3, **mbtmp3.3**/3, **Error ellipse: s-maj=477.8km s-min=30.7km az=60.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**25.25**	**339**	P	P	23 41 47.0	0.0
	0.2nm,0.6s,baz=148,slow=9.6,SNR=2.7						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**57.84**	**135**	P	P	23 46 12.3	-0.6
	0.1nm,0.3s,baz=322,slow=7.4,SNR=5.1						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**60.31**	**139**	P	P	23 46 30.5	+0.5
	0.2nm,0.5s,baz=320,slow=7.1,SNR=5.4						
	0.2nm,0.5s						

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*NEIC **05** 23:44:30.7±2.2, 14.°58N±0.°04×94.°29W±0.°05, h10km±2km, mb4.1/5, Md4.3/54(MEX), Error ellipse: s-maj=9.7km s-min=3.3km az=233.0*
*IDC **05** 23:44:31.2±2.9, 14.°81N×94.°36W, h0km, mb3.7/3, mbtmp3.7/5, ML3.2/3, MS2.8/3, Error ellipse: s-maj=54.9km s-min=26.0km az=26.0*
*MEX **05** 23:44:34.7±0.7, 14.°66N×94.°33W, h16km±21km, MD4.3*

ISC 05 23:44:30.6±3.1**, 14°.65N**±0°.06×**94°.37W**±0°.03**, h10**km±21km**,**
n64, σ**2s.35**/92**, mb4.0**/6**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.52**	**46**		**Pn**	**23 44 57.1**	**-0.8**
PCIG					**Sn**	**23 45 15.0**	**-2.8**
PCIG		**1.52**	**46**	*e*P	**Pn**	**23 44 57.1**	**-0.8**
PCIG				*e*S	**Sn**	**23 45 15.0**	**-2.8**
CARR	**Arriaga**	**1.65**	**15**	*e*P	**Pn**	**23 44 58.9**	**-0.7**
CARR				*e*S	**Sn**	**23 45 15.0**	**-5.8**
HUIG	**Huatulco**	**2.02**	**304**		**Pn**	**23 45 04.7**	**0.0**
HUIG	**Huatulco**	**2.02**	**304**	*e*P	**Pn**	**23 45 04.7**	**0.0**
HUIG				*e*S	**Sn**	**23 45 25.8**	**-4.2**
THIG		**2.05**	**83**		**Pn**	**23 45 03.7**	**-1.4**
THIG					**Sn**	**23 45 29.0**	**-1.7**
THIG		**2.05**	**83**	*e*P	**Pn**	**23 45 03.7**	**-1.4**
THIG				*e*S	**Sn**	**23 45 29.0**	**-1.7**
PATR	**El Naranjo**	**2.11**	**77**		**Pn**	**23 45 05.3**	**-0.9**
PATR					**Sn**	**23 45 30.0**	**-2.7**
PATR	**El Naranjo**	**2.11**	**77**	*e*P	**Pn**	**23 45 05.3**	**-0.9**
PATR				*e*S	**Sn**	**23 45 30.0**	**-2.7**
PAVE	**Pavencul**	**2.18**	**75**		**Pn**	**23 45 07.1**	**-0.1**
PAVE					**Sn**	**23 45 30.9**	**-3.5**
PAVE	**Pavencul**	**2.18**	**75**	*e*P	**Pn**	**23 45 07.1**	**-0.1**
PAVE				*e*S	**Sn**	**23 45 30.9**	**-3.5**
CHUJ	**Union Juarez**	**2.23**	**78**	*e*P	**Pn**	**23 45 07.4**	**-0.4**
CHUJ				*e*S	**Sn**	**23 45 32.7**	**-2.8**
TGIG		**2.43**	**29**		**Pn**	**23 45 10.9**	**+0.4**
TGIG					**Sn**	**23 45 40.8**	**+0.5**
TGIG		**2.43**	**29**	*e*P	**Pn**	**23 45 10.9**	**+0.4**
TGIG				*e*S	**Sn**	**23 45 40.8**	**+0.5**
TGBT	**Tuxtla Gutierr**	**2.44**	**30**		**Sn**	**23 45 41.0**	**+0.5**
TGBT	**Tuxtla Gutierr**	**2.44**	**30**	*e*P	Pn	23 45 00.9	-10
TGBT				*e*S	**Sn**	**23 45 41.0**	**+0.5**
CMIG	**Matias Romero**	**2.48**	**348**	Pn	**Pn**	**23 45 11.5**	**+0.5**
	9.1nm,0.3s,baz=172,slow=11,SNR=56						
CMIG				Sn	**Sn**	**23 45 40.3**	**-1.1**
	8.9nm,0.3s,baz=175,slow=13,SNR=6.5						
CMIG				LR	LR	23 46 06.7	
	comp=Z,106nm,18.4s,baz=75,slow=41						
	31nm,0.4s						
RTAL	**Retalhuleu**	**2.59**	**92**	*e*P	**Pb**	**23 45 16.2**	**-0.9**
RTAL				*e*S	**Sb**	**23 45 47.6**	**-1.4**
CCIG	**Comitan**	**2.69**	**53**		**Pn**	**23 45 15.0**	**+0.9**
CCIG				Sn	**Sn**	**23 45 47.5**	**+0.6**
CCIG	**Comitan**	**2.69**	**53**	*e*P	**Pn**	**23 45 15.5**	**+1.3**
CCIG				*e*S	**Sn**	**23 45 48.6**	**+1.7**
HUEH	**Huehuetenango**	**2.84**	**76**		**Pn**	**23 45 16.0**	**-0.3**
HUEH				Sn	**Sn**	**23 45 50.8**	**0.0**
HUEH	**Huehuetenango**	**2.84**	**76**	*e*P	**Pn**	**23 45 15.8**	**-0.5**
HUEH				*e*S	**Sn**	**23 45 51.3**	**+0.5**
PEIG	**Puerto Escondi**	**3.00**	**297**		**Pn**	**23 45 18.4**	**+0.1**
PEIG	**Puerto Escondi**	**3.00**	**297**	*e*P	**Pn**	**23 45 18.4**	**+0.1**
PEIG				*e*S	**Sn**	**23 45 49.7**	**-4.6**
VHO	**Vista Hermosa**	**3.32**	**317**	*e*P	Pn	23 45 18.0	-4.7
VHO				*e*S	**Sn**	**23 45 58.3**	**-4.0**
NEUV	**Arroyo Zacate**	**3.34**	**336**		**Pn**	**23 45 25.6**	**+2.7**
NEUV					**Sn**	**23 46 01.4**	**-1.3**
NEUV	**Arroyo Zacate**	**3.34**	**336**	*e*P	**Pn**	**23 45 25.6**	**+2.7**
NEUV				*e*S	**Sn**	**23 46 01.4**	**-1.3**
YOIG	**Yosondua**	**3.77**	**306**		**Pn**	**23 45 32.5**	**+3.5**
YOIG	**Yosondua**	**3.77**	**306**	*e*P	**Pn**	**23 45 32.5**	**+3.5**
YOIG				*e*S	**Sn**	**23 46 11.9**	**-1.7**
APG	**El Apazote**	**3.79**	**84**	Pn	**Pn**	**23 45 31.8**	**+2.5**
	0.4nm,0.3s,baz=167,slow=11,SNR=11						
APG				Sn	**Sn**	**23 46 16.6**	**+2.6**
	0.3nm,0.3s,baz=187,slow=12,SNR=6.0						
PNIG	**Pinotepa**	**4.02**	**296**		**Pn**	**23 45 32.7**	**+0.5**
PNIG	**Pinotepa**	**4.02**	**296**	*e*P	**Pn**	**23 45 32.7**	**+0.5**
PNIG				*e*S	Sn	23 46 12.5	-7.0
TXIG	**Tlaxiaco**	**4.17**	**309**		**Pn**	**23 45 37.4**	**+2.8**
TXIG	**Tlaxiaco**	**4.17**	**309**	*e*P	**Pn**	**23 45 37.4**	**+2.8**
TXIG				*e*S	**Sn**	**23 46 18.6**	**-5.0**
TOIG	**Toxpalan**	**4.29**	**323**	*e*P	**Pn**	**23 45 40.8**	**+4.6**
TOIG				*e*S	**Sn**	**23 46 22.3**	**-4.1**
HLIG	**Huajuapan de L**	**4.57**	**314**		**Sn**	**23 46 32.0**	**-1.4**
HLIG	**Huajuapan de L**	**4.57**	**314**	*e*P	Pb	23 45 47.4	-3.7
HLIG				*e*S	**Sn**	**23 46 32.0**	**-1.4**
TPIG	**Tehuac#an**	**4.72**	**323**		**Sn**	**23 46 36.2**	**-0.8**
TPIG	**Tehuac#an**	**4.72**	**323**	*e*P	**Pb**	**23 45 51.1**	**-2.6**
TPIG				*e*S	**Sn**	**23 46 36.2**	**-0.8**
MTO3	**Montecristo**	**4.85**	**92**		**Pn**	**23 45 42.7**	**-1.3**
FTIG	**Fresnillo de T**	**4.86**	**312**		**Pn**	**23 45 47.6**	**+3.7**
FTIG	**Fresnillo de T**	**4.86**	**312**	*e*P	**Pn**	**23 45 47.6**	**+3.7**
FTIG				*e*S	**Sn**	**23 46 36.0**	**-4.3**
PETF	**Flores**	**4.88**	**62**		**Pn**	**23 45 43.9**	**-0.2**
TLIG	**Tlapa**	**4.97**	**306**	Pn	**Pn**	**23 45 46.5**	**+1.0**
CRIG	**Cruz Grande**	**5.04**	**295**	*e*P	Pn	23 45 41.2	-5.1
CRIG				*e*S	Sn	23 46 36.0	-8.6
JAUV	**Jalcomulco**	**5.24**	**334**		**Pn**	**23 45 49.8**	**+0.7**
JAUV	**Jalcomulco**	**5.24**	**334**	*e*P	**Pn**	**23 45 49.8**	**+0.7**
JAUV				*e*S	**Sn**	**23 46 47.4**	**-2.1**
SCIG	**Sabancuy**	**5.26**	**35**		**Pn**	**23 45 48.1**	**-1.2**
SCIG	**Sabancuy**	**5.26**	**35**	*e*P	**Pn**	**23 45 48.1**	**-1.2**
SCIG				*e*S	**Sn**	**23 46 45.1**	**-5.0**
CXUV	**Coxquihui**	**6.30**	**331**		**Pn**	**23 46 07.9**	**+4.3**
CXUV	**Coxquihui**	**6.30**	**331**	*e*P	**Pn**	**23 46 07.9**	**+4.3**
CXUV				*e*S	**Sn**	**23 47 10.7**	**-4.9**
TEIG	**Tepich**	**8.03**	**45**	Pn	**Pn**	**23 46 26.1**	**-1.3**
TXAR	**Lajitas Array**	**16.95**	**331**	Pn	**P**	**23 48 30.4**	**+0.4**
	baz=149,slow=11,SNR=8.5						
	1.6nm,1.0s						
TXAR	**Lajitas Array**	**16.95**	**331**		**Pn**	**23 48 29.4**	**+1.3**
ABTX	**Abilene, Hawle**	**18.53**	**346**	P	**P**	**23 48 46.2**	**-1.2**
FNO	**Franklin**	**20.70**	**353**	P	**P**	**23 49 11.4**	**+0.4**
AMTX	**Amarillo**	**21.20**	**343**	P	**P**	**23 49 17.2**	**+0.7**
AMTX				IAmb	IAmb	23 49 22.0	
	comp=Z,8.2nm,0.7s						
FCAR	**Ozark Folk Cen**	**21.25**	**5**	P	**P**	**23 49 17.5**	**+0.6**
FCAR				IAmb	IAmb	23 49 44.5	
	comp=Z,9.3nm,1.4s						
121A	**Cookes Peak, D**	**21.60**	**328**	P	**P**	**23 49 23.2**	**+2.3**
121A				IAmb	IAmb	23 49 27.2	
	comp=Z,6.9nm,0.8s						
TKL	**Tuckaleechee C**	**22.98**	**23**	LR	LR	00 01 00.1	
	comp=Z,24nm,18.3s,baz=146,slow=43						
SDV	**Santo Domingo**	**23.92**	**101**	LR	LR	23 59 09.2	
	comp=Z,33nm,18.3s,baz=136,slow=37						
YKA	**Yellowknife Ar**	**49.89**	**348**	P	**P**	**23 53 25.4**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=156,slow=6.8,SNR=5.7						
	comp=Z,0.4nm,0.8s						
FRB	**Frobisher Bay**	**52.22**	**14**	P	**P**	**23 53 41.0**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=217,slow=7.1,SNR=5.2						
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**61.35**	**337**	P	**P**	**23 54 48.0**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=141,slow=4.9,SNR=7.6						
	comp=Z,0.5nm,0.8s						

IDC 05 23:44:47.8±4.6**, 6°.48S**×**130°.36E, h170**km±64km**, mb3.1**/1**,**
mbtmp3.4/4**, Error ellipse: s-maj=130.5km**
s-min=19.7km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.64**	**9**	P	Pn	23 46 11.7	+1.6
	3.5nm,0.4s,baz=180,slow=20,SNR=1.0						
SIJI				S	Sn	23 47 13.9	-0.7
	4.6nm,0.2s,baz=211,slow=22,SNR=2.1						
WRA	**Warramunga Arr**	**13.93**	**164**	P	Pn	23 47 57.2	-0.9
	0.3nm,0.7s,baz=347,slow=13,SNR=7.1						
ASAR	**Alice Springs**	**17.43**	**169**	P	P	23 48 39.8	+0.3
	0.3nm,0.3s,baz=338,slow=9.8,SNR=6.6						
MKAR	**Makanchi Array**	**67.99**	**327**	P	P	23 55 28.6	0.0
	0.3nm,0.5s,baz=135,slow=7.2,SNR=5.4						
	0.3nm,0.5s						

*GCMT **05** 23:48:00.0±0.2, 55°.73S±0°.01×124°.15W±0°.02, h26km±1km, MW5.0/106, Moment Tensor Solution. s52,c62; s106,c149; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.41±.18; Mθθ2.59±.16; Mφφ-2.99±.14; Mrθ0.22±.29; Mθφ3.91±.10; Mφr0.13±.26; Best double couple: M0 4.81100×10^16 NP1:φs108.00000°, δ87.00000°, λ2.00000°. NP2:φs18.00000°, δ88.00000°, λ177.00000°. Principal axes: T 4.6190, Plg4.0000°, Azm333.0000°; N 0.3890, Plg86.0000°, Azm156.0000°; P -5.0030, Plg0.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 05 23:47:56.8±2.0**, 56°.33S**×**125°.04W, h0**km**, mb3.6**/2**,**
mbtmp3.6/2**, MS3.9**/31 **Error ellipse: s-maj=352.1km**
s-min=56.5km az=157.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.99**	**131**	LR	LR	00 03 27.7	
	comp=Z,228nm,19.8s,baz=270,slow=31						
VNDA	**Vanda**	**32.24**	**203**	LR	LR	00 03 43.2	
	comp=Z,194nm,21.3s,baz=86,slow=29						
QSPA	**South Pole Qui**	**33.85**	**180**	LR	LR	00 06 32.0	
	comp=Z,189nm,20.4s,baz=88,slow=33						
PLCA	**Paso Flores**	**38.22**	**90**	LR	LR	00 06 45.4	
	comp=Z,138nm,20.8s,baz=228,slow=30						
H03S2	**Juan Fernandez**	**38.58**	**74**	T	T	00 35 24.1	
	baz=219,slow=74,SNR=36						
H03S1	**Juan Fernandez**	**38.59**	**74**	T	T	00 35 23.2	
	baz=219,slow=74,SNR=36						
H03S3	**Juan Fernandez**	**38.60**	**74**	T	T	00 35 24.6	
	baz=219,slow=74,SNR=51						
H03N3	**Juan Fernandez**	**38.88**	**74**	T	T	00 36 10.9	
	baz=222,slow=72,SNR=113						
H03N2	**Juan Fernandez**	**38.88**	**74**	T	T	00 35 41.8	
	baz=222,slow=72,SNR=136						
H03N1	**Juan Fernandez**	**38.89**	**74**	T	T	00 36 11.3	
	baz=222,slow=72,SNR=86						
URZ	**Urewera**	**41.80**	**270**	LR	LR	00 09 34.4	
	comp=Z,181nm,18.8s,baz=118,slow=31						
PPT	**Papeete**	**42.90**	**324**	LR	LR	00 08 58.0	
	comp=Z,233nm,21.4s,baz=169,slow=29						
SNAA	**Sanae**	**46.06**	**158**	LR	LR	00 14 43.6	
	comp=Z,208nm,19.7s,baz=228,slow=35						
MAW	**Mawson**	**56.24**	**184**	LR	LR	00 19 58.1	
	comp=Z,252nm,21.0s,baz=167,slow=34						
NNA	**Nana**	**57.68**	**60**	LR	LR	00 15 40.4	
	comp=Z,36nm,21.4s,baz=204,slow=29						
ATAH	**Atahualpa**	**61.19**	**55**	LR	LR	00 18 12.7	
	comp=Z,127nm,21.9s,baz=213,slow=30						
SIV	**San Ignacio**	**62.45**	**77**	LR	LR	00 22 06.3	
	comp=Z,50nm,18.6s,baz=282,slow=33						
STKA	**Stephens Creek**	**65.88**	**249**	LR	LR	00 23 17.9	
	comp=Z,119nm,18.9s,baz=195,slow=32						
BDFB	**Brasilia**	**69.94**	**88**	LR	LR	00 26 40.4	
	comp=Z,140nm,20.6s,baz=207,slow=33						
ROSC	**El Rosal**	**73.63**	**54**	LR	LR	00 26 08.8	
	comp=Z,81nm,18.1s,baz=155,slow=31						
JTS	**Las Juntas de**	**74.22**	**41**	LR	LR	00 25 02.7	
	comp=Z,68nm,19.9s,baz=266,slow=30						
H01W1	**Cape Leeuwin H**	**76.21**	**227**	T	T	01 25 19.3	
	baz=149,slow=76,SNR=116						
H01W2	**Cape Leeuwin H**	**76.21**	**227**	T	T	01 25 19.1	
	baz=149,slow=76,SNR=130						
H01W3	**Cape Leeuwin H**	**76.22**	**227**	T	T	01 25 10.9	
	baz=149,slow=76,SNR=115						
ASAR	**Alice Springs**	**76.49**	**248**	P	P	23 59 49.9	+1.4
	0.3nm,0.7s,baz=149,slow=5.3,SNR=2.2						
ASAR				LR	LR	00 28 20.1	
	comp=Z,110nm,20.9s,baz=116,slow=32						
	0.3nm,0.7s						
NWAO	**Narrogin (SRO)**	**76.62**	**230**	LR	LR	00 25 25.9	
	comp=Z,100nm,19.2s,baz=70,slow=29						
SDV	**Santo Domingo**	**78.88**	**55**	LR	LR	00 28 59.4	
	comp=Z,54nm,21.0s,baz=232,slow=31						
WRA	**Warramunga Arr**	**79.34**	**250**	P	P	00 00 03.1	-1.3
	1.0nm,1.0s,baz=145,slow=5.1,SNR=4.4						
	1.0nm,1.0s						
PMG	**Port Moresby**	**81.03**	**267**	LR	LR	00 31 55.4	
	comp=Z,80nm,19.5s,baz=134,slow=33						
LPIG	**La Paz**	**81.08**	**14**	LR	LR	00 28 19.5	
	comp=Z,70nm,18.7s,baz=252,slow=30						
MDP	**Montagnes des**	**84.58**	**73**	LR	LR	00 32 16.4	
	comp=Z,57nm,20.4s,baz=146,slow=31						
RCBR	**Riachuelo**	**84.72**	**93**	LR	LR	00 33 28.2	
	comp=Z,27nm,21.2s,baz=48,slow=32						
FITZ	**Fitzroy Crossi**	**85.34**	**244**	LR	LR	00 33 26.9	
	comp=Z,87nm,21.3s,baz=176,slow=32						
SUR	**Sutherland**	**86.99**	**152**	LR	LR	00 37 12.6	
	comp=Z,62nm,18.6s,baz=183,slow=34						
SJG	**San Juan**	**89.02**	**55**	LR	LR	00 37 15.1	
	comp=Z,26nm,18.5s,baz=141,slow=33						
PFO	**Pinyon Flats O**	**89.88**	**7**	LR	LR	00 31 34.1	
	comp=Z,90nm,18.1s,baz=200,slow=29						
BOSA	**Boshof**	**91.70**	**154**	LR	LR	00 36 59.6	
	comp=Z,96nm,19.2s,baz=196,slow=32						
ANMO	**Albuquerque**	**92.28**	**15**	LR	LR	00 33 55.7	
	comp=Z,39nm,20.0s,baz=199,slow=30						
BATI	**Baumata**	**93.03**	**247**	LR	LR	00 38 21.2	
	comp=Z,152nm,20.9s,baz=129,slow=32						
H11S2	**WAKE ISLAND Hy**	**93.78**	**298**	T	T	01 45 31.4	
	baz=148,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**93.79**	**298**	T	T	01 45 28.9	
	baz=148,slow=76,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**93.80**	**298**	T	T	01 45 38.7	
	baz=148,slow=76,SNR=3.1						
NVAR	**Mina Array Bea**	**94.56**	**5**	LR	LR	00 33 27.5	
	comp=Z,85nm,21.6s,baz=192,slow=29						
H11N3	**WAKE ISLAND Hy**	**94.72**	**299**	T	T	01 46 40.5	
	baz=148,slow=76,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**94.73**	**299**	T	T	01 46 35.1	
	baz=148,slow=76,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**94.74**	**299**	T	T	01 46 41.8	
	baz=148,slow=76,SNR=4.0						
LBTB	**Lobatse**	**95.23**	**153**	LR	LR	00 36 50.9	
	comp=Z,73nm,19.7s,baz=190,slow=31						
SONM	**Songino Array**	**147.96**	**277**	PKPbc	PKPbc	00 07 42.7	-0.4
	0.4nm,0.8s,baz=126,slow=2.3,SNR=2.7						
EKA	**Eskdalemuir Ar**	**148.18**	**67**	PKPbc	PKPbc	00 07 42.5	-0.7
	1.5nm,0.9s,baz=248,slow=3.0,SNR=2.6						

ISK 05 23:48:00.6, 38°.46N×**26°.69E, h5**km**, ML2.1**/12**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBN	**Karaburun**	**0.17**	**322**	Pg	Pg	23 48 04.4	+0.4
KRBN				Sg	Sg	23 48 07.7	+1.4
FOCM	**Foa**	**0.26**	**8**	Pg	Pg	23 48 06.0	+0.4
FOCM				Sg	Sg	23 48 09.9	+0.9
BLCB	**Balcova**	**0.29**	**105**	Pg	Pg	23 48 06.8	+0.6
BLCB				Sg	Sg	23 48 11.3	+1.3
GMLD	**Gumuldur**	**0.42**	**155**	Pg	Pg	23 48 09.4	+0.7
GMLD				Sg	Sg	23 48 15.1	+0.8
GCAM	**G?zelcaml?**	**0.87**	**150**	Pg	Pg	23 48 17.2	-0.1
GCAM				Sg	Sb	23 48 29.9	-0.2
AKS	**Akhisar**	**0.98**	**64**	Pg	Pb	23 48 19.8	-0.2
AYDB	**Zeytinkoy-Aydi**	**1.08**	**118**	Pg	Pb	23 48 21.6	-0.2
ODEM	**Odemis-Izmir**	**1.11**	**99**	Pn	Pb	23 48 22.4	+0.2
YAYO	**Edremit-Balk**	**1.19**	**15**	Pn	Pn	23 48 24.0	+0.1
GORD	**Gordes-Manisa**	**1.25**	**68**	Pn	Pn	23 48 25.3	+0.5
NAZL	**Nazilli-Aydin**	**1.36**	**111**	Pn	Pg	23 48 26.9	+0.3
KULA	**Kula-Manisa**	**1.55**	**87**	Pn	Pb	23 48 29.9	+0.1

AFAD 05 23:48:35.7, 38°.98N×**27°.89E, h7**km±5km**, ML1.3, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.12**	**212**	P	Pg	23 48 35.5	-2.8
AKHS				S	Sg	23 48 40.2	+0.1
KTTT	**Salihli**	**0.33**	**152**	P	Pg	23 48 42.2	0.0
STEP	**BALIKESIR_Sava**	**0.42**	**341**	P	Pg	23 48 41.1	-2.8
STEP				S	Sg	23 48 49.3	-0.2
STEP				IAML		23 48 50.0	
	comp=N,28nm,0.3s						
STEP				IAML		23 48 50.0	
	comp=E,30nm,0.3s						
CAMT	**Merkez**	**0.51**	**243**	P	Pb	23 48 46.2	-0.7
ZEDA	**zmir-Bergama**	**0.64**	**269**	P	Pg	23 48 48.2	+0.3
ZEDA				IAML		23 49 14.0	
	comp=N,19nm,1.8s						
DEMI	**Demirci**	**0.65**	**84**	P	Pg	23 48 48.5	+0.3
DEMI				S	Sg	23 48 56.5	0.0
DEMI				IAML		23 48 58.0	
	comp=E,12nm,0.7s						
DEMI				IAML		23 49 17.0	
	comp=N,17nm,1.6s						
MANT	**Manisa**	**0.71**	**133**	P	Pg	23 48 47.6	-1.8
MANT				IAML		23 49 02.0	
	comp=E,18nm,2.5s						

*IDC **06** 00:09:03.5±3.6, 6°.38S×127°.99E, h406km±39km, mb2.9/2, mbtmp3.8/5, Error ellipse: s-maj=71.0km s-min=13.4km az=69.0*
ISC 06 00:09:02.8±1.4**, 6°.3S**±0°.1×**128°.1E**±0°.3**, h400**km**, n5,**
σ**0s.82**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.93**	**191**	P	**P**	**00 11 41.4**	**-0.4**
	1.0nm,0.4s,baz=359,slow=12,SNR=1.8						
FITZ				S	**S**	**00 13 53.3**	**+0.1**
	4.7nm,1.0s,baz=23,slow=13,SNR=2.3						
WRA	**Warramunga Arr**	**14.81**	**157**	P	**P**	**00 12 13.7**	**+0.3**
	0.6nm,0.3s,baz=331,slow=12,SNR=14						
WRA				S	**S**	**00 14 49.9**	**-1.1**
	0.7nm,0.8s,baz=331,slow=18,SNR=4.8						
ASAR	**Alice Springs**	**18.10**	**163**	P	**P**	**00 12 49.4**	**+0.8**
	1.5nm,0.3s,baz=342,slow=12,SNR=25						
ASAR				S	**S**	**00 15 56.1**	**+1.0**
	0.7nm,0.7s,baz=348,slow=21,SNR=5.5						
MKAR	**Makanchi Array**	**66.66**	**328**	P	**P**	**00 19 12.3**	**+0.1**
	0.3nm,0.5s,baz=123,slow=7.5,SNR=9.7						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**70.98**	**329**	P	**P**	**00 19 38.0**	**-0.3**
	0.4nm,0.5s,baz=130,slow=5.1,SNR=8.2						
	0.4nm,0.5s						

NNC 06 00:23:30.0±4.9**, 36°.84N**×**70°.26E, h0**km**, mb3.7, mpv3.3,**
1C-3D, Error ellipse: s-maj=52.5km s-min=30.0km
az=145.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.26**	**2**	P	Pn	00 25 05.0	+1.3
	1.4nm,0.4s,baz=186,slow=13,SNR=32						
KK31				⇓S	Sn	00 26 17.3	+1.4
	0.4nm,0.3s,baz=188,slow=24,SNR=5.7						
AAK	**Ala-Archa**	**6.65**	**28**	⇓P	Pn	00 25 08.7	-0.4
	0.7nm,0.4s						
AAK				⇑S	Sn	00 26 26.5	+0.9
	1.8nm,0.8s						
AB31	**Akbulak array**	**14.50**	**332**	⇓P	Pn	00 26 54.7	-1.8
	0.5nm,0.3s,baz=164,slow=12,SNR=31						

*NNC **06** 00:25:13.4±0.7, 44°.39N×81°.15E, h0km, mb3.5, mpv3.5, Error ellipse: s-maj=5.2km s-min=3.6km az=110.0*
*SOME **06** 00:25:14.2, 44°.42N×81°.18E, h20km*
ISC 06 00:25:10.7±1.2**, 44°.39N**±0°.04×**81°.39E**±0°.04**, h9**km±10km**,**
n36, σ**1s.55**/55**, 7C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.15**	**268**	P	**Pg**	**00 25 32.4**	**-0.3**
	61nm,0.1s						
DJR				S	**Sg**	**00 25 46.2**	**-1.6**
	40nm,0.4s						
DJR	**Jarkent**	**1.15**	**268**	*e*P	**Pg**	**00 25 32.4**	**-0.3**
	61nm,0.1s						
DJR				*e*S	**Sg**	**00 25 46.0**	**-1.8**
	40nm,0.4s						
KTMS	**Ketmen**	**1.20**	**219**	P	**Pg**	**00 25 34.4**	**+0.6**
	2.6nm,0.0s						
KTMS				S	**Sg**	**00 25 48.8**	**-0.6**
	74nm,0.1s						
KTMS	**Ketmen**	**1.20**	**219**	*e*P	**Pg**	**00 25 34.2**	**+0.4**
	2.6nm,0.0s						
KTMS				*e*S	**Sg**	**00 25 48.8**	**-0.6**
	74nm,0.1s						
KNOS	**Konyrlen**	**1.59**	**270**	P	**Pb**	**00 25 40.6**	**+0.4**
	30nm,0.3s						
KNOS				S	**Sn**	**00 25 59.5**	**-0.3**
	94nm,0.2s						
KAPS	**Kapalarasan**	**1.71**	**303**	P	**Pb**	**00 25 42.7**	**+0.5**
	46nm,0.1s						
KAPS				S	**Sn**	**00 26 03.3**	**+0.7**
	175nm,0.1s						
PDGK	**Podgornoye**	**1.74**	**233**	⇓P	**Pn**	**00 25 42.6**	**+1.5**
	6.3nm,0.3s						
PDGK				⇑S	**Sn**	**00 26 04.8**	**+1.4**
	67nm,0.5s						
SHLS	**Shalkode**	**1.86**	**229**	P	**Pn**	**00 25 41.5**	**-1.3**
	25nm,0.1s						
SHLS				S	**Sn**	**00 26 02.4**	**-4.1**
	84nm,0.2s						
SHLS	**Shalkode**	**1.86**	**229**	*e*P	**Pn**	**00 25 41.5**	**-1.3**
	25nm,0.1s						
SHLS				*e*S	**Sn**	**00 26 02.4**	**-4.1**
	84nm,0.2s						
UZB	**Uzynbulak**	**2.12**	**235**	P	**Pb**	**00 25 50.1**	**+0.8**
	6.3nm,0.1s						
UZB				S	**Sb**	**00 26 15.9**	**+0.2**
	73nm,0.2s						
UZB	**Uzynbulak**	**2.12**	**235**	*e*P	**Pb**	**00 25 50.1**	**+0.8**
	6.3nm,0.1s						
UZB				*e*S	**Sb**	**00 26 15.9**	**+0.2**
	73nm,0.2s						
KPKS	**Kokpek**	**2.16**	**246**	Pg	**Pb**	**00 25 51.1**	**+1.1**
	0.1nm,0.1s						
KPKS				Lg	Lg	00 26 17.4	
	238nm,0.5s						
KPKS	**Kokpek**	**2.16**	**246**	*e*P	**Pb**	**00 25 51.1**	**+1.1**
	0.1nm,0.1s						
KPKS				*e*S	**Sb**	**00 26 17.7**	**+0.8**
	238nm,0.5s						
TDK	**Taldyqorghan**	**2.22**	**287**	Pg	**Pb**	**00 25 51.2**	**+0.2**
	44nm,0.4s						
TDK				Lg	Lg	00 26 18.4	
	186nm,0.2s						
TDK	**Taldyqorghan**	**2.22**	**287**	*e*P	**Pb**	**00 25 51.1**	**+0.2**
	44nm,0.4s						
TDK				*e*S	**Sb**	**00 26 18.4**	**-0.1**
	186nm,0.2s						
MK31	**Makanchi Array**	**2.49**	**14**	⇑Pn	**Pn**	**00 25 54.7**	**+3.3**
	0.2nm,0.2s,baz=203,slow=14,SNR=32						
MK31				⇑Pg	**Pg**	**00 25 59.3**	**+0.9**
	0.3nm,0.2s,baz=199,slow=16,SNR=18						
MK31				⇓Sn	**Sn**	**00 26 17.9**	**-4.0**
	0.4nm,0.2s,baz=199,slow=16,SNR=4.0						
MK31				⇑Lg	Lg	00 26 27.3	
	3.0nm,0.2s,baz=191,slow=28,SNR=20						
KURS	**Kuram**	**2.50**	**250**	Pg	**Pb**	**00 25 56.7**	**+1.0**
	1.0nm,0.1s						
KURS				Lg	Lg	00 26 27.0	
	15nm,0.3s						
SATY	**Saty**	**2.54**	**240**	Pg	**Pb**	**00 25 56.7**	**+0.3**
	7.9nm,0.1s						
SATY				Lg	Lg	00 26 28.0	
	70nm,0.3s						
ARXS	**Arharly**	**2.57**	**267**	Pg	**Pb**	**00 25 56.4**	**-0.5**
	6.7nm,0.1s						
ARXS				Lg	Lg	00 26 28.5	
	155nm,0.3s						
ARXS	**Arharly**	**2.57**	**267**	*e*P	**Pb**	**00 25 56.4**	**-0.5**
	6.7nm,0.1s						
ARXS				*e*S	**Sb**	**00 26 27.1**	**-1.4**
	155nm,0.3s						
KOTS	**Kotyrbulak**	**3.31**	**251**	Pg	**Pb**	**00 26 10.9**	**+1.3**
	12nm,0.4s						
KOTS				Lg	Lg	00 26 51.7	
	49nm,0.4s						
KOTS	**Kotyrbulak**	**3.31**	**251**	*e*P	**Pb**	**00 26 10.9**	**+1.3**
	12nm,0.4s						
KOTS				*e*S	**Sb**	**00 26 51.7**	**+1.8**
	49nm,0.4s						
MDOK	**Medeo**	**3.38**	**250**	Pg	**Pb**	**00 26 11.8**	**+1.0**
	12nm,0.5s						
MDOK				Lg	Lg	00 26 53.2	
	15nm,0.3s						
KTBS	**Karatobe**	**3.46**	**260**	Pg	**Pb**	**00 26 12.7**	**+0.5**
	4.1nm,0.3s						
KTBS				Lg	Lg	00 26 54.8	
	13nm,0.2s						
KTBS	**Karatobe**	**3.46**	**260**	*e*P	**Pb**	**00 26 12.7**	**+0.5**
	4.1nm,0.3s						
KTBS				*e*S	**Sb**	**00 26 54.8**	**+0.4**
	13nm,0.2s						
TNSS	**Tian-Shan**	**3.50**	**249**	Pg	**Pb**	**00 26 14.0**	**+1.1**
	0.8nm,0.2s						
TNSS				Lg	Lg	00 26 57.0	
	2.4nm,0.3s						
TNSS	**Tian-Shan**	**3.50**	**249**	*e*P	**Pb**	**00 26 14.0**	**+1.1**
	0.8nm,0.2s						
TNSS				*e*S	**Sb**	**00 26 57.0**	**+1.4**
	2.4nm,0.3s						
MTBS	**Maitube**	**3.81**	**253**	Pg	**Pb**	**00 26 19.1**	**+1.1**
	6.7nm,0.3s						
MTBS				Lg	Lg	00 27 05.8	
	26nm,0.3s						
MTBS	**Maitube**	**3.81**	**253**	*e*P	**Pb**	**00 26 19.1**	**+1.1**
	6.7nm,0.3s						
MTBS				*e*S	**Sb**	**00 27 05.8**	**+1.5**
	26nm,0.3s						

ZSN	Zaisan	3.91	37	Pg	Pg	00 26 24.6	-0.8
	3.7nm,0.3s						
ZSN				Lg	Lg	00 27 14.7	
	9.3nm,0.2s						
ZSN	Zaisan	3.91	37	eP	Pg	00 26 24.6	-0.8
	3.7nm,0.3s						
ZSN				eS	Sg	00 27 14.7	-1.4
	9.3nm,0.2s						
KST	Kastek	4.16	253	Pg	Pb	00 26 26.0	+1.9
	2.4nm,0.3s						
KST				Lg	Lg	00 27 17.6	
	11nm,0.5s						
KST	Kastek	4.16	253	eP	Pb	00 26 26.0	+1.9
	2.4nm,0.3s						
KST				eS	Sb	00 27 17.6	+3.1
	11nm,0.5s						
KURBB	Kurchatov Arra	6.54	344	⇑Lg	Lg	00 28 40.1	
	9.1nm,0.6s						
KURK	Kurchatov	6.61	344	⇑Lg	Lg	00 28 41.2	
	0.9nm,0.5s						
KK31	Karatay Array	7.99	265	⇑Lg	Lg	00 29 17.8	
	1.3nm,0.5s,baz=74,slow=27,SNR=6.6						

*IDC **06** 00:28:13.5±0.9, 17.06N×94.18W, h74km±22km, mb2.9/3, mbtmp3.2/5, Error ellipse: s-maj=64.3km s-min=10.7km az=29.0*
*MEX **06** 00:28:14.4±0.6, 16.62N×94.66W, h99km±7km, MD4.6*
*GCG **06** 00:28:14.2±2.9, 16.36N×94.55W, h73km±93km, MD4.9, Presumed earthquake*
ISC 06 00:28:12.9±0.8, **16.67N**±0.04×**94.55W**±0.03, **h100**km±7km, **n71**, σ**2.63**/123, **mb3.3**/3, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.53	323	LR	LR	00 28 18.3	
	comp=Z,30nm,21.2s,baz=330,slow=7.0						
CMIG				P	Pn	00 28 29.5	+0.6
	1µm,0.2s,baz=137,slow=6.4,SNR=3687						
CMIG				S	Sn	00 28 41.1	+0.2
	1µm,0.6s,baz=90,slow=20,SNR=25						
CARR	Arriaga	0.74	124	eP	Pn	00 28 31.8	+1.1
CARR				eS	Sn	00 28 45.5	+1.5
UXUV	UXUV	0.75	31	eP	Pn	00 28 32.1	+1.3
UXUV				eS	Sn	00 28 45.5	+1.2
TUIG	Tuzandepetl	1.36	5	eP	Pn	00 28 38.6	+1.0
TUIG				eS	Sn	00 28 55.3	-0.8
TGIG		1.37	85	eP	Pn	00 28 39.1	+1.4
TGIG				eS	Sn	00 28 56.6	+0.2
TGIG		1.37	85	iP	Pn	00 28 39.0	+1.4
TGIG				iS	Sn	00 28 57.2	+0.7
TGBT	Tuxtla Gutierr	1.41	85	eP	Pn	00 28 39.5	+1.5
TGBT				eS	Sn	00 28 58.1	+1.1
NEUV	Arroyo Zacate	1.58	311	eP	Pn	00 28 40.1	-0.1
NEUV				eS	Sn	00 28 59.9	-1.0
PCIG		1.60	127	eP	Pn	00 28 41.8	+1.4
PCIG				eS	Sn	00 29 02.4	+1.1
HUIG	Huatulco	1.74	239	eP	Pn	00 28 40.4	-1.8
HUIG				eS	Sn	00 29 02.1	-2.4
HUIG	Huatulco	1.74	239	iP	Pn	00 28 40.4	-1.8
HUIG				iS	Sn	00 29 01.6	-2.9
PMUV	Sontecomapan	1.94	344	eP	Pn	00 28 44.2	-0.7
PMUV				eS	Sn	00 29 06.4	-2.8
OXLC	Oaxaca	2.10	281	eP	Pn	00 28 47.3	+0.3
OXLC				eS	Sn	00 29 12.6	-0.3
OXBJ	Oaxaca	2.12	281	eP	Pn	00 28 56.6	+9.4
OXBJ				eS	Sn	00 29 21.4	+8.0
VHO	Vista Hermosa	2.13	281	eP	Pn	00 28 48.4	+1.1
VHO				eS	Sn	00 29 13.3	-0.4
CCIG	Comitan	2.35	99	eP	Pn	00 28 52.3	+2.1
CCIG				eS	Sn	00 29 14.8	-4.0
CCIG	Comitan	2.35	99	iP	Pn	00 28 52.3	+2.1
CCIG				iS	Sn	00 29 13.3	-5.4
PEIG	Puerto Escondi	2.58	255	eP	Pn	00 28 51.2	-1.9
PEIG				eS	Sn	00 29 21.3	-2.7
PATR	El Naranjo	2.71	124	eP	Pn	00 28 56.9	+1.8
PATR				eS	Sn	00 29 24.0	-3.4
PAVE	Pavencul	2.71	122	eP	Pn	00 28 57.0	+2.0
PAVE				eS	Sn	00 29 22.7	-4.8
TOIG	Toxpalan	2.79	301	eP	Pn	00 28 56.7	+0.7
TOIG				eS	Sn	00 29 23.8	-5.3
THIG		2.81	128	eP	Pn	00 28 57.4	+1.3
THIG				eS	Sn	00 29 31.0	+1.5
CHUJ	Union Juarez	2.82	123	eP	Pn	00 28 58.5	+2.0
CHUJ				eS	Sn	00 29 25.0	-5.1
YOIG	Yosondua	2.88	274	eP	Pn	00 28 57.4	+0.1
YOIG				eS	Sn	00 29 23.1	-8.3
TXIG	Tlaxiaco	3.13	281	eP	Pn	00 29 01.6	+0.9
TXIG				eS	Sn	00 29 27.9	-10
TPIG	Tehuac#an	3.20	303	eP	Pn	00 29 03.0	+1.5
TPIG				eS	Sn	00 29 36.1	-2.8
HUEH	Huehuetenango	3.22	114	eP	Pn	00 28 55.4	-6.5
HUEH				eS	Sn	00 29 37.7	-2.0
HLIG	Huajuapan de L	3.32	291	eP	Pn	00 29 04.4	+1.3
HLIG				eS	Sn	00 29 40.0	-1.8
JAUV	Jalcomulco	3.44	322	eP	Pn	00 29 03.5	-1.1
JAUV				eS	Sn	00 29 41.0	-3.4
PNIG	Pinotepa	3.44	266	eP	Pn	00 29 03.2	-1.4
PNIG				eS	Sn	00 29 39.9	-4.7
RTAL	Retalhuleu	3.48	127	eP	Pn	00 29 01.9	-3.3
RTAL				eS	Sn	00 29 47.0	+1.5
LVIG	Laguna Verde	3.52	330	eP	Pn	00 29 04.2	-1.4
LVIG				eS	Sn	00 29 40.3	-6.0
FTIG	Fresnillo de T	3.64	290	eP	Pn	00 29 08.7	+1.4
FTIG				eS	Sn	00 29 46.1	-3.4
STG5	El Palmar, Qui	3.82	126	eP	Pn	00 29 06.8	-3.0
SCIG	Sabancuy	3.94	54	eP	Pn	00 29 10.7	-0.6
SCIG				eS	Sn	00 29 54.1	-2.3
SCIG	Sabancuy	3.94	54	eP	Pn	00 29 10.8	-0.5
TLIG	Tlapa	3.94	284	eP	Pn	00 29 12.5	+1.1
TLIG				eS	Sn	00 29 54.2	-2.6
MGIG	Malinaltepec	3.95	279	eP	Pn	00 29 12.1	+0.5
MGIG				eS	Sn	00 29 53.1	-3.9
APG	El Apazote	4.27	112	P	Pn	00 29 16.2	+0.2
	1.2nm,0.2s,baz=195,slow=12,SNR=24						
APG				S	Sn	00 30 01.1	-3.7
	3.5nm,0.3s,baz=85,slow=16,SNR=6.2						
APG	El Apazote	4.27	112	eP	Pn	00 29 15.9	0.0
CRIG	Cruz Grande	4.39	272	eP	Pn	00 29 16.3	-1.1
CRIG				eS	Sn	00 30 01.8	-5.6
PPSX	Xalitzintla	4.47	303	eP	Pn	00 29 21.7	+2.9
PPSX				eS	Sn	00 30 10.2	+0.3
PETF	Flores	4.49	86	eP	Pn	00 29 19.5	+0.7
PETF				eS	Sn	00 30 09.3	-0.7
PETF	Flores	4.49	86	eP	Pn	00 29 19.4	+0.7
PETF				iS	Sn	00 30 08.5	-1.5
CXUV	Coxquihui	4.53	321	eP	Pn	00 29 18.3	-0.9
CXUV				eS	Sn	00 30 07.9	-2.9
PBXN	Popocatepetl	4.55	301	eP	Pn	00 29 19.1	-1.0
PBXN				eP		00 29 22.8	
PBXN				eS	Sn	00 30 11.2	-0.9
PBXN				eS		00 30 12.6	
PPM	Popocatepetl	4.56	302	eP	Pn	00 29 23.8	+3.7
PPM				eS	Sn	00 30 10.2	-2.0
YAIG	Yautepec	4.83	298	eP	Pn	00 29 25.6	+2.2
YAIG				eS	Sn	00 30 14.1	-4.1
DAIG	Los Arroyos	4.90	275	eP	Pn	00 29 23.6	-0.7
DAIG				eS	Sn	00 30 12.1	-7.7
MEIG	Mezcala	5.00	285	eP	Pn	00 29 27.1	+1.3
MEIG				eS	Sn	00 30 13.5	-8.9
PLIG	Platanillo	5.03	291	eP	Pn	00 29 27.8	+1.7
PLIG				eS	Sn	00 30 14.6	-8.4
MCRU	Las Cruces	5.20	301	eS	Sn	00 30 25.6	-1.9
AOVM	Tlapan	5.22	300	eP	Pn	00 29 31.2	+2.0
AOVM				eS	Sn	00 30 31.2	+2.7
MAVM	Malinalco, Edo	5.23	297	eP	Pn	00 29 31.6	+2.7
MAVM				eS	Sn	00 30 22.8	-5.4
INVM	La Marquesa	5.29	300	eP	Pn	00 29 34.0	+4.1
INVM				eS	Sn	00 30 27.4	-2.3
CAIG	El Cayaco	5.49	275	eP	Pn	00 29 31.4	-0.8
CAIG				eS	Sn	00 30 24.6	-9.5
DEIG	Demacu	5.58	311	eP	Pn	00 29 36.7	+2.9
DEIG				eS	Sn	00 30 34.1	-2.6
ARIG	Puente Sto Nin	5.76	287	eP	Pn	00 29 37.9	+1.9
ARIG				eS	Sn	00 30 32.1	-8.7
MYIG	Merida	6.24	46	eP	Pn	00 29 43.6	+1.1
MYIG				eS	Sn	00 30 47.4	-5.1
ZIIG	Zihuatanejo	6.68	279	eP	Pn	00 29 48.8	+0.4
ZIIG				eP		00 29 49.0	
ZIIG				eS	Sn	00 30 56.9	-6.2
ZIIG				eS		00 30 58.3	
TEIG	Tepich	6.93	58	eP	Pn	00 29 50.8	-1.0
TEIG				eS	Sn	00 31 04.5	-4.6
MOIG	Morelia	6.98	296	eP	Pn	00 29 53.5	+0.6
MMIG	Aquila	8.55	282	eP	Pn	00 30 14.8	+0.9
MMIG				eS	Sn	00 31 43.1	-5.5
INCO	Volcan de Coli	9.07	290	eP	Pn	00 30 24.6	+3.3
CEGR	Campo Tres	9.26	288	eP	Pn	00 30 27.5	+3.8
CEGR				eS	Sn	00 32 07.9	+1.7
CDAR	Ciudad de Arme	9.29	285	eP	Pn	00 30 26.5	+2.5
CJM	Chamela	10.37	287	eP	Pn	00 30 41.1	+2.4
TXAR	Lajitas Array	15.13	328	P	Pn	00 31 41.5	0.0
	0.4nm,0.7s,baz=173,slow=13,SNR=3.7						
NVAR	Mina Array Bea	30.06	321	P	P	00 34 14.2	+1.2
	0.2nm,0.4s,baz=135,slow=9.3,SNR=1.9						
	0.2nm,0.4s						
YKA	Yellowknife Ar	47.89	348	P	P	00 36 41.5	+0.8
	0.2nm,0.8s,baz=155,slow=6.9,SNR=3.8						
YKA				pP	pP	00 37 03.0	-1.4
	0.4nm,0.7s,baz=154,slow=7.1,SNR=4.0						
	0.2nm,0.8s						
ILAR	Eielson Array	59.43	337	P	P	00 38 07.1	+2.3
	0.1nm,0.5s,baz=116,slow=6.1,SNR=1.2						
ILAR				pP	pP	00 38 30.0	+0.5
	0.3nm,0.6s,baz=156,slow=4.7,SNR=7.7						
	0.1nm,0.5s						

*KOLA **06** 00:37:27.3, 73.64N×9.00E, h0km, ML2.1, Error ellipse: s-maj=93.3km s-min=31.8km az=140.0, Norwegian sea, Mohn ridge*
*BER **06** 00:37:30.5±3.0, 73.85N×9.29E, h10km, Mw3.7, Confirmed Earthquake*
ISC 06 00:37:27.0±1.4, **73.78N**±0.06×**9.6E**±0.1, **h10**km, **n16**, σ**3.38**/19, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	3.57	22	eP	Pn	00 38 23.1	+0.9
BRBA	Barentsburg A	4.45	12	eP	Pn	00 38 35.0	+0.7
BRBB	Barentsburg B	4.48	12	eP	Pn	00 38 36.2	+1.4
SPA0	Spitsbergen Ar	4.71	17	eP	Pn	00 38 40.0	+2.0
SPA0				IAML		00 38 48.0	
	comp=Z,3.0nm,0.5s						
HOPEN	Hopen	4.80	48	eP	Pn	00 38 41.2	+2.0
HOPEN				eS	Sn	00 39 31.6	-3.2
HOPEN				IAML		00 39 39.9	
	comp=Z,5.5nm,0.8s						
TRO	Tromso	5.09	140	eS	Sn	00 39 40.4	-1.4
KBS	Kingsbay	5.21	5	eP	Pn	00 38 44.5	-0.2
KBS				IAML		00 38 47.2	
	comp=Z,2.1nm,0.3s						
KIF	Kilpisjarvi	5.97	138	eP	Pn	00 38 56.7	+1.5
KTK1	Kautokeino	6.46	131	eP	Pn	00 39 06.3	+4.4
ARA0	ARCESS Array S	6.56	123	eP	Pn	00 39 08.5	+5.1
ARA0				eS	Sn	00 40 17.3	-0.8
ARCES	ARCESS Array B	6.56	123	P	Pn	00 39 04.7	+1.4
ARCES				S	Sn	00 40 17.6	-0.5
FAUS	Fauske	6.70	161	S	Sn	00 40 16.8	-4.7
KEV	Kevo	6.76	118	eP	Pn	00 39 10.8	+4.7
VADS	Vadso	7.12	111	S	Sn	00 40 30.2	-1.6
LEIR	Leirfjorden	7.80	169	eP	Pn	00 39 24.3	+4.0
LEIR				eS	Sn	00 40 41.8	-6.7
LEIR				IAML		00 40 47.3	
	comp=Z,2.7nm,0.7s						
APA0	Apatity Array	9.83	117	S	Sn	00 41 33.0	-5.4

*GUC **06** 00:52:01.5±0.7, 30.38S×72.19W, h31km±41km, ML3.3*
*SJA **06** 00:52:01.9±1.4, 30.28S×72.19W, h10km, ML3.3, MW3.7*
ISC 06 00:51:59.0±3.0, **30.34S**±0.05×**72.33W**±0.10, **h8**km±15km, **n25**, σ**2.81**/35, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	1.33	83	iP	Pb	00 52 24.6	+0.3
GO04				eS	Sg	00 52 42.5	+0.6
GO04				IAML		00 52 52.1	
	comp=E,2µm,0.7s						
CO02	Combarbal	1.43	127	iP	Pn	00 52 26.3	+0.9
CO02				eS	Sn	00 52 44.0	-0.4
CO02				IAML		00 52 45.7	
	comp=N,2µm,0.3s						
CO03	El Pedregal	1.50	110	iP	Pb	00 52 27.5	+0.4
CO03				eS	Sb	00 52 45.2	-1.0
CO03				IAML		00 52 50.1	
	comp=E,679nm,0.4s						
CO01	Juntas del Tor	1.97	80	iP	Pb	00 52 34.9	-0.3
CO01				IAML		00 53 02.6	
	comp=N,243nm,0.2s						
CO04	Los Peladeros	2.06	146	iP	Pn	00 52 36.2	+2.1
CO04				IAML		00 53 10.3	
	comp=N,262nm,0.6s						
AC05	El Transito	2.33	51	iP	Pn	00 52 39.9	+2.2
AC05				IAML		00 53 20.5	
	comp=N,139nm,0.3s						
VA06	Catapilco	2.39	159	IAML		00 53 20.2	
	comp=E,217nm,0.4s						
AC04	Llanos de Chal	2.39	28	iP	Pn	00 52 39.4	+1.0
AC04				IAML		00 53 26.3	
	comp=E,133nm,0.8s						
AROD	Rodeo	2.48	87	eP	Pb	00 52 44.0	+0.1
AROD				eS	Sg	00 53 15.8	-2.8
ACDV	Cuesta del Vie	2.78	87	eP	Pb	00 52 47.8	-1.2
ACDV				IAML		00 53 31.2	
	comp=Z,104nm,0.6s						
ACCO	Cerro Coronel	2.83	96	eP	Pb	00 52 49.6	-0.3
ACCO				eS	Sg	00 53 31.1	+1.2
VA03	San Esteban	2.86	148	IAML		00 53 36.1	
	comp=E,185nm,0.1s						
RTLS	Leoncito	2.98	120	eP	Pb	00 52 51.9	-0.6
RTLS				eS	Sb	00 53 30.8	+1.6
RTLS				IAML		00 53 41.0	
	comp=Z,252nm,0.6s						
AUSP	Uspallata	3.14	128	eP	Pb	00 52 54.0	-1.2
AUSP				eS	Sb	00 53 32.3	-1.5
ZON	Zonda	3.36	112	eP	Pn	00 52 55.3	+3.5
ZON				eP	Pb	00 52 56.6	-2.2
ZON				eP		00 52 58.3	
ZON				IAML		00 53 54.2	
	comp=Z,37nm,0.6s						
MT09	Talagante	3.61	162	IAML		00 53 59.5	
	comp=E,59nm,0.2s						
MT08	Bocatoma Ro	3.67	148	IAML		00 54 08.3	
	comp=E,40nm,0.7s						
ASAL	Salagasta	3.74	128	eP	Pb	00 53 02.7	-2.6
ASAL				eS	Sb	00 53 52.3	+1.6
ARCO	CERRO ARCO	3.83	132	eP	Pb	00 53 04.5	-2.3
ARCO				eS	Sb	00 53 55.3	+1.9
ARCO				IAML		00 54 10.3	
	comp=Z,45nm,0.7s						
VCA	Vinchina	3.93	67	eP	Pb	00 53 05.6	-3.0
VCA				eS	Sb	00 53 58.3	+1.9
VCA				IAML		00 54 13.9	
	comp=Z,75nm,0.6s						
AAGR	Agrelo	4.05	134	eP	Pb	00 53 07.3	-3.3
AAGR				IAML		00 54 20.2	
	comp=Z,38nm,1.9s						
AVFE	Valle Fertil	4.22	96	eP	Pn	00 53 07.4	+3.8
AVFE				eS	Sn	00 53 44.6	-8.5
AVFE				IAML		00 54 20.2	
	comp=Z,32nm,0.6s						
TINO	Tinogasta	4.74	63	eP	Pn	00 53 14.6	+3.9
ACLC	CERRO LA CRUZ	4.75	80	eP	Pn	00 53 14.8	+3.7
ACLC				eS	Sb	00 54 15.8	-4.4
ACLC				IAML		00 54 23.4	
	comp=Z,22nm,2.0s						
ACHE	Chepes	4.94	101	eP	Pn	00 53 17.3	+3.6
ACHE				eS	Sn	00 54 14.0	+2.9

IDC 06 00:59:22.6±1.8, **6.71N**×**125.88E**, **h35**km±20km, **mb3.3**/4, **mbtmp3.5**/4, **Error ellipse: s-maj=28.0km s-min=18.0km az=127.0**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.46	320	Pg	Pb	00 59 32.0	-0.8
	199nm,0.3s,baz=259,slow=12,SNR=7.4						
DAV				Lg	Lg	00 59 41.5	
	324nm,0.3s,baz=141,slow=23,SNR=4.7						
FITZ	Fitzroy Crossi	24.65	181	P	P	01 04 39.5	-0.8
	1.7nm,0.6s,baz=12,slow=9.3,SNR=1.5						
	1.7nm,0.6s						
WRA	Warramunga Arr	27.77	163	P	P	01 05 08.9	+0.5
	0.3nm,0.5s,baz=346,slow=9.6,SNR=6.5						
	0.3nm,0.5s						
ASAR	Alice Springs	31.19	166	P	P	01 05 39.4	+0.6
	0.1nm,0.3s,baz=337,slow=8.6,SNR=4.2						
	0.1nm,0.3s						
MKAR	Makanchi Array	54.64	324	P	P	01 08 47.9	-0.2
	0.6nm,1.0s,baz=114,slow=8.6,SNR=2.6						
	0.6nm,1.0s						

*IDC **06** 01:03:15.8±0.8, 3.49S×140.26E, h0km, mb3.8/9, mbtmp3.9/11, ML4.0/1, MS3.1/6, Error ellipse: s-maj=23.6km s-min=8.3km az=110.0*
*DJA **06** 01:03:22.1±0.8, 3°S±4°×14°0E±°, h26km±8km, M4.5/6, mB6.2/1, mb4.8/1, MLv4.4/6, Mw(mB)5.9/1*
ISC 06 01:03:20.9±0.7, **3.47S**±0.05×**140.44E**±0.07, **h39**km, **n20**, σ**2.05**/22, **mb3.7**/7, **MS3.0**/3, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.92	342	P	Pn	01 03 36.8	-0.5
GENI				S	Sn	01 03 49.8	+0.5
JAY	Jayapura	0.99	15	Pg	Pn	01 03 37.1	-1.2
	44nm,0.3s,baz=195,slow=11,SNR=89						
JAY				Lg	Lg	01 03 50.5	
	116nm,0.3s,baz=288,slow=20,SNR=12						
JAY	Jayapura	0.99	15	P	Pn	01 03 38.0	-0.3
JAY				S	Sn	01 03 50.3	-0.7
WAMI	Wamena	1.78	257	P	Pn	01 03 49.6	+0.5
WAMI				S	Sn	01 04 10.3	-0.2
SMPI	Sarmi	2.27	310	P	Pn	01 03 58.7	+2.8
PMG	Port Moresby	8.90	132	Pn	Pn	01 05 28.1	+1.1
	3.1nm,0.3s,baz=320,slow=7.9,SNR=4.0						
SIJI	Sorong	9.53	286	LR	LR	01 09 54.5	
	comp=Z,85nm,20.3s,baz=249,slow=43						
WRA	Warramunga Arr	17.42	200	P	Pn	01 07 19.8	-1.3
	0.5nm,0.3s,baz=16,slow=12,SNR=9.6						
WRA				S	Sn	01 10 35.7	+1.5
	1.1nm,0.5s,baz=9.3,slow=23,SNR=5.6						
	1.3nm,0.5s						
GUMO	Guam	17.51	14	LR	LR	01 13 35.9	
	comp=Z,87nm,20.5s,baz=130,slow=35						
DAV	Davao City (W)	18.16	305	LR	LR	01 13 16.0	
	comp=Z,23nm,20.2s,baz=165,slow=33						
HNR	Honiara	20.26	108	P	P	01 07 54.3	+1.1
	14nm,0.9s,baz=287,slow=2.3,SNR=3.7						
	14nm,0.9s						
FITZ	Fitzroy Crossi	20.53	224	P	P	01 07 56.0	-0.1
	2.7nm,0.9s,baz=38,slow=12,SNR=1.4						
FITZ				S	S	01 11 36.2	-7.6
	2.5nm,0.5s,baz=348,slow=22,SNR=1.7						
	2.7nm,0.9s						
ASAR	Alice Springs	21.05	197	P	P	01 08 02.1	+0.4
	6.0nm,0.8s,baz=28,slow=9.5,SNR=31						
ASAR				S	S	01 11 55.2	+1.1
	0.7nm,0.6s,baz=20,slow=23,SNR=5.8						
ASAR				LR	LR	01 17 19.0	
	comp=Z,61nm,19.9s,baz=113,slow=40						
	6.0nm,0.8s						
STKA	Stephens Creek	28.28	178	LR	LR	01 21 43.8	
	comp=Z,97nm,20.0s,baz=27,slow=39						
MJAR	Matsushiro Arr	39.86	357	P	P	01 10 50.9	0.0
	1.8nm,0.7s,baz=178,slow=7.2,SNR=4.1						
	1.8nm,0.7s						
KSRS	Korea Array	42.35	345	P	P	01 11 10.7	-0.5
	0.8nm,0.6s,baz=158,slow=7.6,SNR=1.7						
KSRS				LR	LR	01 28 38.8	
	comp=Z,20nm,18.8s,baz=105,slow=36						
	0.8nm,0.6s						
CMAR	Chiang Mai Arr	46.32	300	P	P	01 11 42.2	-1.2
	1.9nm,0.3s,baz=116,slow=8.7,SNR=1.5						
	1.9nm,0.3s						
MKAR	Makanchi Array	71.45	322	P	P	01 14 37.8	+0.4
	0.1nm,0.4s,baz=113,slow=8.0,SNR=4.1						
	0.1nm,0.4s						
BVAR	Borovoye Array	80.92	325	P	P	01 15 31.3	+0.2
	0.3nm,0.4s,baz=110,slow=6.6,SNR=2.7						
	0.3nm,0.4s						
ILAR	Eielson Array	85.81	24	P	P	01 15 57.3	+1.3
	0.3nm,0.8s,baz=269,slow=5.2,SNR=2.3						
	0.3nm,0.8s						

*IDC **06** 01:29:02.2±1.9, 11.34S×166.37E, h0km, mb4.3/7, mbtmp4.2/8, ML3.5/1, MS3.3/6, Error ellipse: s-maj=47.5km s-min=26.6km az=100.0*
*NEIC **06** 01:29:08.0±1.5, 11.4S±0.1×166.5E±0.2, h35km±2km, mb4.6/10, Error ellipse: s-maj=28.4km s-min=17.8km az=86.0*
ISC 06 01:29:09.8±1.3, **11.47S**±0.10×**166.4E**±0.2, **h59**km, **n28**, σ**0.84**/28, **mb4.3**/12, **MS3.0**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.64	287	LR	LR	01 32 51.2	
	comp=Z,5.4nm,20.1s,baz=292,slow=35						
DZM	Mont Dzumac	10.54	180	Pn	Pn	01 31 37.0	-1.4
	0.4nm,0.3s,baz=342,slow=20,SNR=1.6						
DZM				Sn	Sn	01 33 36.5	+1.5
	0.4nm,0.3s,baz=226,slow=24,SNR=1.7						
	4.9nm,0.8s						
DZM	Mont Dzumac	10.54	180		Pn	01 31 32.8	-5.6
DZM					Sn	01 33 35.9	+0.9
PMG	Port Moresby	19.02	274	LR	LR	01 40 04.8	
	comp=Z,111nm,18.1s,baz=159,slow=35						
EIDS	Eidsvold	20.02	224	P	P	01 33 38.1	+0.3
CTA	Charters Tower	21.16	244	P	P	01 33 49.7	-0.6
	3.9nm,0.8s,baz=61,slow=12,SNR=6.0						
CTA				LR	LR	01 40 28.9	
	comp=Z,61nm,20.4s,baz=53,slow=32						
	3.9nm,0.8s						
COEN	Coen	22.77	261	P	P	01 34 06.8	-0.8
HIZ	Hauiti	27.98	166	P	P	01 34 55.8	+0.9
STKA	Stephens Creek	30.57	225	P	P	01 35 19.4	+1.4
	2.7nm,0.7s,baz=48,slow=12,SNR=4.5						
	2.7nm,0.7s						
STKA	Stephens Creek	30.57	225	P	P	01 35 18.8	+0.8
STKA				IAmb	IAmb	01 35 20.2	
	comp=Z,18nm,0.9s						
KHZ	Kahutara	31.46	170	P	P	01 35 26.0	+0.4
KHZ				IAmb	IAmb	01 35 26.4	
	comp=Z,23nm,1.2s						
WR8	Warramunga Arr	31.78	251	P	P	01 35 28.2	-0.7
WR8				IAmb	IAmb	01 35 29.2	
	comp=Z,4.9nm,1.1s						
WB0	Warramunga Arr	31.85	251	P	P	01 35 29.2	-0.3
WB0				IAmb	IAmb	01 35 30.8	
	comp=Z,8.1nm,0.8s						
WRA	Warramunga Arr	31.93	251	P	P	01 35 30.0	-0.2
	comp=Z,2.9nm,0.8s,baz=82,slow=9.0,SNR=17						
WRA				PcP	PcP	01 38 20.4	+0.8
	comp=Z,0.7nm,1.1s,baz=95,slow=2.0,SNR=2.4						
	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	31.93	251	P	P	01 35 29.7	-0.4
WRA					PcP	01 38 20.2	+0.7
TOO	Toolangi	32.04	212	P	P	01 35 29.5	-1.5
ASAR	Alice Springs	33.17	244	P	P	01 35 40.6	-0.3
	comp=Z,2.6nm,0.7s,baz=75,slow=9.3,SNR=24						
ASAR				PcP	PcP	01 38 23.2	+0.3
	comp=Z,0.6nm,0.6s,baz=90,slow=1.9,SNR=5.0						
ASAR				LR	LR	01 48 19.2	
	comp=Z,46nm,19.1s,baz=94,slow=35						
	comp=Z,2.6nm,0.7s						
ODZ	Otahua Downs	33.66	175	P	P	01 35 43.7	-1.2
KNRA	Kununurra	36.77	259	P	P	01 36 11.9	-0.2
KNRA				IAmb	IAmb	01 36 15.3	
	comp=Z,4.3nm,1.1s						
PPT	Papeete	42.99	103	LR	LR	01 51 01.6	
	comp=Z,23nm,21.9s,baz=183,slow=31						
MORW	Morawa	49.97	242	P	P	01 37 58.7	+0.4
MORW				IAmb	IAmb	01 38 00.2	
	comp=Z,16nm,1.2s						
CMAR	Chiang Mai Arr	72.85	293	P	P	01 40 33.4	+0.5
	comp=Z,2.3nm,0.3s,baz=106,slow=6.3,SNR=8.2						
CMAR				LR	LR	02 14 53.8	
	comp=Z,7.2nm,18.2s,baz=275,slow=38						
	comp=Z,2.3nm,0.3s						
CMAR	Chiang Mai Arr	72.85	293	P	P	01 40 33.2	+0.2
KDAK	Kodiak Island	76.74	21	LR	LR	02 11 02.0	
	comp=Z,63nm,20.8s,baz=240,slow=33						
MKAR	Makanchi Array	94.25	317	P	P	01 42 23.5	+0.8
	comp=Z,1.1nm,0.8s,baz=101,slow=6.2,SNR=12						
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	94.25	317	P	P	01 42 23.2	+0.6
ZALV	Zalesovo Beam	94.26	324	P	P	01 42 21.9	-0.5
	comp=Z,0.3nm,0.3s,baz=92,slow=5.1,SNR=3.9						
	comp=Z,0.3nm,0.3s						

ZALV	**Zalesovo Beam**	**94.26**	**324**	P	**P**	**01 42 21.8**	**-0.7**

*CRAAG **06** 01:29:12.8, 36.°60N×0.°86E, Ml3.2, Algrie 23km NW El-Marsa*

*MDD **06** 01:29:14.4±1.0, 36.°48N×0.°94E, h29km, mb_Lg2.7/11, Error ellipse: s-maj=8.5km s-min=4.8km az=146.0*

ISC 06 01:29:11.1±1.3**, 36.°87N**±0.°03×**0.°85E**±0.°04**, h2**km±12km**, n34,** σ**1.s68**/50**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKMS	**Oued Kramis**	**0.58**	**197**	P	**Pg**	**01 29 22.5**	**+0.4**
EBNH	**Beni Haoua**	**0.67**	**121**	P	**Pb**	**01 29 25.3**	**-0.2**
EBNR	**Beni Rached**	**0.80**	**136**	P	**Pg**	**01 29 26.6**	**+0.3**
EANR	**'Ain N'Sour**	**0.94**	**167**	P	**Pg**	**01 29 27.3**	**-1.7**
EARB	**Arib**	**1.09**	**121**	P	**Pg**	**01 29 31.8**	**-0.2**
EHRZ	**Djelida**	**1.22**	**123**	P	**Pb**	**01 29 34.5**	**-0.3**
ABKD	**Sidi Amar**	**1.22**	**105**	P	**Pg**	**01 29 38.5**	**+4.0**
ESMB	**Sidi M'hamed B**	**1.31**	**190**	P	**Pn**	**01 29 34.2**	**-2.2**
EDDR	**Deurdeur**	**1.40**	**128**	P	**Pg**	**01 29 40.2**	**+2.3**
OFRG	**Douar Fergoug**	**1.50**	**206**	P	**Pn**	**01 29 38.3**	**-0.7**
EBGR	**Bougara**	**1.57**	**146**	P	**Pn**	**01 29 39.9**	**-0.2**
CART	**Cartagena**	**1.64**	**297**	Pn	**Pb**	**01 29 42.4**	**+0.3**
CART				Sn	**Sn**	**01 30 02.4**	**-0.3**
ODJA	**Bouhanifia**	**1.73**	**208**	P	**Pb**	**01 29 45.2**	**+1.5**
EMUR	**La Murta**	**1.93**	**301**	Pn	**Pb**	**01 29 47.3**	**+0.3**
EMUR				Sn	**Sb**	**01 30 10.9**	**-0.7**
EMUR	**La Murta**	**1.93**	**301**	Pn	**Pb**	**01 29 47.3**	**+0.3**
EMUR				Sn	**Sb**	**01 30 11.2**	**-0.4**
EMUR				*i* IVmb_Lg		01 30 19.0	
AFDJ	**Sidi Ladjel**	**2.02**	**136**	P	**Pb**	**01 29 49.3**	**+0.7**
EADEB	**Ain Deheb**	**2.09**	**164**	P	**Pn**	**01 29 48.5**	**+1.3**
EIBI	**Ibiza**	**2.19**	**10**	Pn	**Pg**	**01 29 53.6**	**+0.4**
EIBI				Sn	**Sg**	**01 30 19.4**	**-2.1**
EIBI	**Ibiza**	**2.19**	**10**	Pn	**Pg**	**01 29 53.5**	**+0.4**
EIBI				Sn	**Sg**	**01 30 20.0**	**-1.5**
EIBI				*i* IVmb_Lg		01 30 24.3	
ABRIN	**Birine**	**2.22**	**123**	P	**Pg**	**01 29 54.3**	**+0.7**
EZEK	**Zmalet El Emir**	**2.32**	**149**	P	**Pb**	**01 29 54.4**	**+0.7**
ETOB	**Tobarra**	**2.60**	**314**	Pn	**Pb**	**01 29 58.5**	**0.0**
ETOB				Sn	**Sb**	**01 30 29.7**	**-1.3**
ETOB	**Tobarra**	**2.60**	**314**	Pn	**Pb**	**01 29 58.3**	**-0.2**
ETOB				Sn	**Sb**	**01 30 30.2**	**-0.7**
ETOB				*i* IVmb_Lg		01 30 35.2	
EVIV	**Cofrentes, Val**	**2.85**	**328**	Pn	**Pb**	**01 30 02.7**	**-0.1**
EVIV				Sn	**Sb**	**01 30 38.6**	**+0.4**
EVIV				*i* IVmb_Lg		01 30 41.6	
ADCK	**Dar Chioukh**	**2.87**	**132**	P	**Pg**	**01 30 07.4**	**+1.2**
ECHE	**Chera**	**3.07**	**333**	Pn	**Pb**	**01 30 05.9**	**-0.7**
ECHE				Sn	**Sb**	**01 30 42.4**	**-2.1**
ECHE	**Chera**	**3.07**	**333**	Pn	**Pb**	**01 30 05.5**	**-1.0**
ECHE				Sn	**Sb**	**01 30 43.3**	**-1.2**
EQES	**Quesada**	**3.26**	**288**	Pn	**Pn**	**01 30 06.5**	**+3.1**
EQES				Sn	**Sn**	**01 30 45.1**	**+2.3**
EQES				*i* IVmb_Lg		01 30 49.2	
ELGU	**Los Guajares,**	**3.59**	**271**	Sn	**Sn**	**01 30 50.3**	**-0.5**
ELGU	**Los Guajares,**	**3.59**	**271**	Pn	**Pn**	**01 30 08.7**	**+0.9**
ELGU				Sn	**Sn**	**01 30 47.9**	**-3.0**
ELGU				*i* IVmb_Lg		01 30 55.7	
EMOS	**Mosqueruela**	**3.64**	**344**	Pn	**Pb**	**01 30 14.0**	**-2.3**
EMOS				Sn	**Sb**	**01 30 57.1**	**-3.9**
PSIM	**Granatula de C**	**4.13**	**300**	Pn	**Pn**	**01 30 18.6**	**+3.2**
PSIM				Sn	**Sn**	**01 31 04.7**	**+0.5**
PAB	**San Pablo**	**4.89**	**305**	Pn	**Pn**	**01 30 28.6**	**+2.9**
PAB				Sn	**Sn**	**01 31 23.9**	**+1.0**
ECAB	**El Cabril**	**5.13**	**285**	Pn	**Pn**	**01 30 31.7**	**+2.7**
ECAB				Sn	**Sn**	**01 31 27.5**	**-1.3**

*IDC **06** 01:30:31.8±0.9, 1.°10S×15.°77W, h0km, mb4.0/15, mbtmp4.0/16, ML3.5/1, MS3.6/42, Error ellipse: s-maj=28.9km s-min=20.2km az=148.0*

*NEIC **06** 01:30:34.0±1.4, 1.°0S±0.°1×15.°90W±0.°10, h10km±1km, mb4.6/21, Error ellipse: s-maj=21.5km s-min=15.2km az=152.0*

ISC 06 01:30:34.8±0.5**, 1.°1S**±0.°1×**15.°86W**±0.°08**, h20**km**, n92,** σ**0.s68**/55**, mb4.4**/24**, MS3.7**/41**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.84**	**169**	T	T	01 38 53.3	
	baz=348,slow=74,SNR=746						
H10N3	**ASCENSION HYDR**	**6.85**	**169**	T	T	01 38 54.7	
	baz=348,slow=74,SNR=658						
H10N1	**ASCENSION HYDR**	**6.86**	**169**	T	T	01 38 54.8	
	baz=348,slow=74,SNR=1085						
H10S3	**ASCENSION HYDR**	**7.91**	**171**	T	T	01 40 13.4	
	baz=351,slow=74,SNR=422						
H10S2	**ASCENSION HYDR**	**7.92**	**171**	T	T	01 40 14.1	
	baz=229,slow=74,SNR=173						
DBIC	**Dimbokro**	**13.41**	**55**	Pn	**Pn**	**01 33 43.0**	**-1.1**
	0.3nm,0.3s,baz=270,slow=15,SNR=8.6						
DBIC				Sn	**Sn**	**01 36 13.3**	**+0.7**
	baz=187,slow=13,SNR=2.4						
DBIC				LR	LR	01 37 56.6	
	comp=Z,360nm,21.3s,baz=214,slow=33						
	11nm,1.1s						
DBIC	**Dimbokro**	**13.41**	**55**		**Pn**	**01 33 44.1**	**+0.1**
DBIC					**Sn**	**01 36 12.3**	**-0.3**
ACRG	**Accra**	**16.99**	**67**	Pn	**Pn**	**01 34 31.0**	**-0.5**
ACRG				IAmb	IAmb	01 34 37.9	
	comp=Z,51nm,1.2s						
RCBR	**Riachuelo**	**20.55**	**256**	LR	LR	01 40 45.4	
	comp=Z,78nm,21.6s,baz=81,slow=30						
TORD	**Torodi Ar. Bea**	**22.42**	**50**	P	**P**	**01 35 31.9**	**-0.6**
	comp=Z,14nm,1.1s,baz=232,slow=10,SNR=33						
TORD				LR	LR	01 43 29.4	
	comp=Z,248nm,18.4s,baz=222,slow=35						
	comp=Z,14nm,1.1s						
TORD	**Torodi Ar. Bea**	**22.42**	**50**	P	**P**	**01 35 31.6**	**-0.9**
EDA	**Edea**	**26.44**	**79**	P	**P**	**01 36 11.1**	**+0.5**
EDA				IAmb	IAmb	01 36 57.4	
	comp=Z,7.7nm,0.7s						
MACI	**Morro de la Ar**	**29.17**	**359**	P	**P**	**01 36 35.2**	**+0.1**
BDFB	**Brasilia**	**34.87**	**244**	P	**P**	**01 37 25.9**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=85,slow=12,SNR=3.2						
BDFB				LR	LR	01 49 05.0	
	comp=Z,55nm,19.8s,baz=50,slow=32						
	comp=Z,1.0nm,0.4s						
BDFB	**Brasilia**	**34.87**	**244**	P	**P**	**01 37 24.6**	**-0.6**
MDT	**Midelt**	**35.34**	**16**	LR	LR	01 51 21.2	
	comp=Z,51nm,21.1s,baz=212,slow=35						
MDP	**Montagnes des**	**37.26**	**280**	LR	LR	01 49 31.6	
	comp=Z,130nm,21.9s,baz=120,slow=30						
TSUM	**Tsumeb**	**37.38**	**121**	LR	LR	01 49 43.5	
	comp=Z,106nm,21.6s,baz=302,slow=31						
PESTR	**Estremoz**	**40.47**	**10**	P	**P**	**01 38 11.0**	**-1.2**
PESTR				IAmb	IAmb	01 38 26.8	
	comp=Z,18nm,1.3s						
KOOLE	**Kule**	**41.22**	**125**	P	**P**	**01 38 18.6**	**-0.2**
ESDC	**Sonseca Array**	**41.99**	**14**	P	**P**	**01 38 24.2**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=187,slow=7.2,SNR=2.0						
ESDC				PcP	**PcP**	**01 40 20.7**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=182,slow=3.9,SNR=4.4						
ESDC				LR	LR	01 56 41.4	
	comp=Z,52nm,18.0s,baz=196,slow=37						
	comp=Z,0.2nm,0.7s						
ESDC	**Sonseca Array**	**41.99**	**14**	P	**P**	**01 38 24.7**	**0.0**
ESDC					**PcP**	**01 40 20.4**	**+0.6**
KGCAE	**Kacgae**	**42.83**	**123**	P	**P**	**01 38 32.6**	**+0.7**
KGCAE				IAmb	IAmb	01 38 39.3	
	comp=Z,22nm,1.4s						
KEST	**Kesra**	**43.52**	**30**	LR	LR	01 57 37.4	
	comp=Z,126nm,19.1s,baz=335,slow=37						
BOAV	**Boa Vista**	**44.79**	**274**	P	**P**	**01 38 47.9**	**+0.2**
BOAV				IAmb	IAmb	01 38 53.9	
	comp=Z,13nm,1.5s						
LSZ	**Lusaka**	**45.69**	**110**	LR	LR	01 54 49.5	
	comp=Z,76nm,21.0s,baz=308,slow=32						
SUR	**Sutherland**	**46.48**	**136**	LR	LR	01 53 54.2	
	comp=Z,82nm,20.6s,baz=314,slow=30						
LBTB	**Lobatse**	**46.55**	**124**	LR	LR	01 56 35.9	
	comp=Z,55nm,18.1s,baz=280,slow=34						
MBAR	**Mbarara**	**46.59**	**90**	LR	LR	01 56 52.4	
	comp=Z,163nm,19.0s,baz=266,slow=34						
H05S1	**Guadeloupe/Mar**	**47.11**	**291**	T	T	02 29 28.8	
	SNR=5.0						
CPUP	**Villa Florida**	**47.12**	**234**	LR	LR	01 58 48.1	
	comp=Z,71nm,18.0s,baz=58,slow=36						
VAE	**Valguarnera**	**47.49**	**33**	LR	LR	01 58 08.9	
	comp=Z,79nm,18.3s,baz=358,slow=35						
BOSA	**Boshof**	**47.84**	**129**	P	**P**	**01 39 10.3**	**-1.3**
	comp=Z,3.7nm,0.9s,baz=281,slow=6.0,SNR=6.0						
BOSA				LR	LR	01 55 32.4	
	comp=Z,37nm,21.6s,baz=270,slow=31						
	comp=Z,3.7nm,0.9s						
BOSA	**Boshof**	**47.84**	**129**	P	**P**	**01 39 11.9**	**+0.3**
SJG	**San Juan**	**53.01**	**294**	LR	LR	01 56 60.0	
	comp=Z,81nm,21.4s,baz=180,slow=30						
LPAZ	**La Paz**	**53.65**	**251**	LR	LR	02 02 04.9	
	comp=Z,109nm,18.9s,baz=57,slow=35						
FURI	**Furi**	**55.22**	**78**	LR	LR	02 03 10.1	
	comp=Z,60nm,18.1s,baz=268,slow=36						
SDV	**Santo Domingo**	**55.46**	**281**	LR	LR	02 01 34.5	
	comp=Z,26nm,19.4s,baz=80,slow=34						
GERES	**GERESS Array B**	**55.91**	**23**	P	**P**	**01 40 11.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=197,slow=9.9,SNR=2.1						
	comp=Z,0.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**57.18**	**9**	P	**P**	**01 40 19.6**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=175,slow=8.6,SNR=4.5						
	comp=Z,2.3nm,0.9s						
EIL	**Elat**	**57.27**	**53**	LR	LR	02 05 53.2	
	comp=Z,113nm,18.8s,baz=183,slow=37						
VRAC	**Vranov**	**57.45**	**25**	LR	LR	02 06 21.7	
	comp=Z,42nm,18.0s,baz=196,slow=37						
ROSC	**El Rosal**	**58.70**	**276**	LR	LR	02 03 48.1	
	comp=Z,91nm,19.7s,baz=75,slow=34						
MMAI	**Mount Meron Ar**	**58.96**	**50**	LR	LR	02 07 22.5	
	comp=Z,26nm,18.1s,baz=262,slow=38						
ASF	**Jabal al Asfar**	**59.78**	**51**	LR	LR	02 08 34.3	
	comp=Z,36nm,18.3s,baz=209,slow=38						
BRTR	**Keskin Array B**	**60.73**	**42**	P	**P**	**01 40 45.5**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=232,slow=6.1,SNR=3.6						
	comp=Z,0.7nm,0.3s						
BRTR	**Keskin Array B**	**60.73**	**42**	P	**P**	**01 40 46.3**	**+1.0**
ATAH	**Atahualpa**	**62.62**	**263**	LR	LR	02 07 17.8	
	comp=Z,127nm,20.3s,baz=85,slow=35						
PLCA	**Paso Flores**	**63.18**	**224**	LR	LR	02 06 51.1	
	comp=Z,38nm,18.1s,baz=132,slow=34						
AKASG	**Malin Array Be**	**64.24**	**30**	P	**P**	**01 41 08.4**	**0.0**
	comp=Z,1.0nm,0.6s,baz=235,slow=6.6,SNR=4.7						
AKASG				LR	LR	02 10 41.1	
	comp=Z,43nm,18.1s,baz=194,slow=38						
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**64.24**	**30**	P	**P**	**01 41 09.0**	**+0.6**
AKASG				IAmb	IAmb	01 41 15.3	
	comp=Z,5.4nm,1.2s						
RAYN	**Ar Rayn**	**64.37**	**63**	P	**P**	**01 41 11.1**	**+1.2**
NOA	**NORSAR Array B**	**65.36**	**14**	LR	LR	02 10 39.1	
	comp=Z,17nm,20.0s,baz=260,slow=37						
GNI	**Garni**	**68.64**	**46**	LR	LR	02 14 25.5	
	comp=Z,28nm,18.0s,baz=24,slow=38						
KBZ	**Khabaz**	**68.71**	**42**	P	**P**	**01 41 37.7**	**+0.6**
	comp=Z,4.0nm,1.0s,baz=216,slow=8.7,SNR=4.1						
	comp=Z,4.0nm,1.0s						
JTS	**Las Juntas de**	**69.65**	**281**	LR	LR	02 10 58.7	
	comp=Z,21nm,18.5s,baz=88,slow=35						
FINES	**FINESS Array B**	**70.06**	**20**	P	**P**	**01 41 45.3**	**+0.2**
	comp=Z,4.8nm,1.1s,baz=195,slow=5.9,SNR=5.9						
	comp=Z,4.8nm,1.1s						
FINES	**FINESS Array B**	**70.06**	**20**	P	**P**	**01 41 45.5**	**+0.3**
SADO	**Sadowa**	**72.12**	**318**	LR	LR	02 06 46.6	
	comp=Z,54nm,20.4s,baz=112,slow=30						
TKL	**Tuckaleechee C**	**72.83**	**308**	LR	LR	02 06 16.3	
	comp=Z,43nm,21.4s,baz=121,slow=29						
UOSS	**Minazif**	**74.23**	**64**		**P**	**01 42 10.6**	**-0.3**
UOSS				IAmb	IAmb	01 42 13.9	
	comp=Z,5.6nm,0.9s						
CCM	**Cathedral Cave**	**79.19**	**309**	P	**P**	**01 42 38.3**	**-0.3**
CCM				IAmb	IAmb	01 42 38.7	
	comp=Z,6.4nm,0.8s						
CMIG	**Matias Romero**	**79.83**	**287**	LR	LR	02 17 58.3	
	comp=Z,19nm,18.2s,baz=13,slow=36						
S39A	**Bolivar**	**80.75**	**308**	P	**P**	**01 42 46.2**	**-0.9**
S39A				IAmb	IAmb	01 42 47.5	
	comp=Z,5.7nm,0.8s						
P38A	**Dawn**	**81.20**	**310**	P	**P**	**01 42 49.2**	**-0.3**
P38A				IAmb	IAmb	01 42 50.5	
	comp=Z,15nm,1.4s						
AGMN	**Agassiz Nation**	**84.15**	**319**	P	**P**	**01 43 04.9**	**+0.3**
ULM	**Lac du Bonnet**	**84.44**	**321**	LR	LR	02 13 55.2	
	comp=Z,57nm,21.8s,baz=25,slow=31						
APMT	**Aspermont**	**85.79**	**303**	P	**P**	**01 43 12.8**	**-0.5**
APMT				IAmb	IAmb	01 43 14.8	
	comp=Z,6.0nm,1.0s						
MSTX	**Muleshoe**	**88.03**	**304**	P	**P**	**01 43 24.3**	**0.0**
RES	**Resolute Bay**	**88.14**	**345**	P	**P**	**01 43 24.0**	**+0.3**
	comp=Z,6.6nm,0.3s,baz=102,slow=8.4,SNR=42						
BVAR	**Borovoye Array**	**88.58**	**37**	P	**P**	**01 43 26.7**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=270,slow=3.0,SNR=6.5						
	comp=Z,1.4nm,0.8s						
TXAR	**Lajitas Array**	**88.61**	**299**	P	**P**	**01 43 28.1**	**+1.1**
	comp=Z,1.0nm,1.0s,baz=124,slow=6.2,SNR=5.3						
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	**88.61**	**299**	P	**P**	**01 43 26.7**	**-0.4**
QSPA	**South Pole Qui**	**89.00**	**180**	P	**P**	**01 43 28.4**	**+0.3**
AAK	**Ala-Archa**	**90.98**	**48**	LR	LR	02 29 14.6	
	comp=Z,26nm,18.2s,baz=327,slow=39						
RPN	**Rapa Nui**	**92.61**	**243**	LR	LR	02 18 43.1	
	comp=Z,51nm,19.7s,baz=103,slow=31						
PDAR	**Pinedale Array**	**93.45**	**313**	P	**P**	**01 43 49.6**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=96,slow=3.1,SNR=2.3						
PDAR				LR	LR	02 19 48.2	
	comp=Z,43nm,20.0s,baz=54,slow=32						
	comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**93.45**	**313**	P	**P**	**01 43 48.6**	**-0.9**
YKA	**Yellowknife Ar**	**95.00**	**333**	P	**P**	**01 43 56.3**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=86,slow=4.7,SNR=5.0						
	comp=Z,0.4nm,0.9s						
YKA	**Yellowknife Ar**	**95.00**	**333**	P	**P**	**01 43 55.4**	**-0.4**
NRIK	**Noril'sk**	**95.72**	**20**	LR	LR	02 29 47.7	
	comp=Z,28nm,18.4s,baz=2.5,slow=37						
MKAR	**Makanchi Array**	**96.37**	**43**	P	**P**	**01 44 02.4**	**0.0**
	comp=Z,0.7nm,0.8s,baz=289,slow=4.5,SNR=5.3						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**96.37**	**43**	P	**P**	**01 44 01.7**	**-0.8**
ZALV	**Zalesovo Beam**	**97.15**	**36**	LR	LR	02 30 50.0	
	comp=Z,22nm,18.1s,baz=46,slow=37						
NEW	**Newport**	**98.30**	**319**	LR	LR	02 24 12.7	
	comp=Z,49nm,19.0s,baz=49,slow=33						
PFO	**Pinyon Flats O**	**99.43**	**304**	LR	LR	02 26 00.3	
	comp=Z,44nm,19.0s,baz=101,slow=33						
NVAR	**Mina Array Bea**	**100.42**	**309**	P	**Pdif**	**01 44 21.4**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=150,slow=3.5,SNR=2.3						
NVAR	**Mina Array Bea**	**100.42**	**309**		**Pdif**	**01 44 20.7**	**-0.4**
ASAR	**Alice Springs**	**141.68**	**132**	PKhKP	PKPpre	01 49 58.5	
	comp=Z,0.9nm,0.8s,baz=215,slow=3.1,SNR=8.5						
ASAR				PKP	**PKPdf**	**01 50 04.9**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=221,slow=2.8,SNR=6.7						
ASAR	**Alice Springs**	**141.68**	**132**		**PKPdf**	**01 50 05.6**	**-0.3**
WRA	**Warramunga Arr**	**144.08**	**127**	PKhKP	PKPpre	01 50 06.5	
	comp=Z,0.5nm,0.4s,baz=232,slow=2.5,SNR=11						
WRA				PKP	**PKiKP**	**01 50 11.7**	**-2.0**
	comp=Z,0.6nm,0.9s,baz=224,slow=2.4,SNR=4.6						
WRA	**Warramunga Arr**	**144.08**	**127**		**PKPdf**	**01 50 10.5**	**+0.4**

*IDC **06** 02:01:09.6±14.0, 19.°06S×177.°59W, h281km±144km, mb3.3/10, mbtmp3.9/10, Error ellipse: s-maj=72.7km s-min=31.6km az=162.0*

ISC 06 02:01:11.4±1.6**, 19.°1S**±0.°4×**177.°6W**±0.°2**, h300**km**, n11,** σ**1.s15**/11**, mb3.5**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.22**	**261**	P	**P**	**02 08 59.4**	**-0.3**
	0.9nm,0.3s,baz=97,slow=7.6,SNR=7.7						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**45.25**	**255**	P	**P**	**02 08 59.5**	**-0.5**
	2.3nm,0.8s,baz=88,slow=8.8,SNR=14						
	2.3nm,0.8s						
PETK	**Petropavlovsk-**	**75.07**	**345**	P	**P**	**02 12 18.7**	**-1.6**
	2.6nm,0.9s,baz=171,slow=6.4,SNR=2.5						
	2.6nm,0.9s						
NVAR	**Mina Array Bea**	**79.75**	**43**	P	**P**	**02 12 47.7**	**+0.9**
	0.2nm,0.4s,baz=233,slow=3.4,SNR=2.0						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**85.97**	**57**	P	**P**	**02 13 18.2**	**-0.4**
	0.1nm,0.6s,baz=218,slow=7.9,SNR=2.1						
	0.1nm,0.6s						
ILAR	**Eielson Array**	**86.90**	**13**	P	**P**	**02 13 22.8**	**+0.6**
	0.4nm,0.9s,baz=215,slow=5.8,SNR=4.6						
	0.4nm,0.9s						
PDAR	**Pinedale Array**	**87.69**	**43**	P	**P**	**02 13 27.0**	**+0.3**
	0.2nm,0.6s,baz=224,slow=4.1,SNR=2.6						
	0.2nm,0.6s						
HILR	**Hailar Array B**	**87.98**	**325**	P	**P**	**02 13 28.4**	**+0.8**
	0.6nm,0.3s,baz=90,slow=3.3,SNR=1.9						
	0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**90.05**	**289**	P	**P**	**02 13 39.4**	**+1.4**
	1.1nm,0.3s,baz=107,slow=4.8,SNR=1.7						
	1.1nm,0.3s						
LZDM	**Lanzhou Array**	**92.34**	**307**	P	**P**	**02 13 49.0**	**+0.3**
	0.3nm,0.3s,baz=108,slow=4.7,SNR=1.4						
	0.3nm,0.3s						
GERES	**GERESS Array B**	**149.00**	**345**	PKPbc	**PKPbc**	**02 20 22.3**	**-1.9**
	0.3nm,0.7s,baz=17,slow=1.0,SNR=3.9						

*IDC **06** 02:01:57.1±1.4, 8.°86S×124.°65E, h0km, mb3.8/2, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=41.4km s-min=21.3km az=79.0*

*NEIC **06** 02:02:06.7±1.5, 9.°4S±0.°1×123.°6E±0.°1, h119km±7km, mb4.2/6, Error ellipse: s-maj=17.9km s-min=15.2km az=185.0*

ISC 06 02:02:06.3±0.8**, 9.°53S**±0.°08×**123.°65E**±0.°08**, h100**km**, n22,** σ**2.s79**/25**, mb4.0**/5**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.65**	**110**		**Pn**	**02 02 27.2**	**+3.7**
SOEI					**Sn**	**02 02 40.8**	**+4.5**
BATI	**Baumata**	**0.67**	**179**	Pn	**Pn**	**02 02 27.0**	**+3.4**
	195nm,0.3s,baz=359,slow=5.2,SNR=46						
BATI				Sn	**Sn**	**02 02 41.7**	**+5.2**
	88nm,0.3s,baz=336,slow=20,SNR=14						
MMRI	**Maumere**	**1.66**	**302**	Pn	**Pn**	**02 02 35.4**	**+0.8**
KNRA	**Kununurra**	**7.89**	**141**	Pn	**Pn**	**02 04 00.6**	**+2.3**
MTN	**Manton Dam**	**8.04**	**115**	Pn	**Pn**	**02 04 01.4**	**+0.9**
FITZ	**Fitzroy Crossi**	**8.73**	**167**	Pn	**Pn**	**02 04 12.2**	**+2.4**
	0.6nm,0.3s,baz=0.7,slow=11,SNR=8.9						
FITZ				Sn	**Sn**	**02 05 46.6**	**0.0**
	2.1nm,0.3s,baz=270,slow=20,SNR=17						
	1.6nm,0.3s						
WB0	**Warramunga Arr**	**14.54**	**136**	Pn	**Pn**	**02 05 28.6**	**+1.3**
WRA	**Warramunga Arr**	**14.62**	**136**	Pn	Pn	02 05 23.1	-5.2
	0.1nm,0.3s,baz=317,slow=13,SNR=5.0						
WRA				Sn	**Sn**	**02 08 04.6**	**-5.0**
	0.4nm,0.3s,baz=330,slow=35,SNR=7.9						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**14.62**	**136**	P	**Pn**	**02 05 29.6**	**+1.2**
WR8	**Warramunga Arr**	**14.74**	**136**	Pn	**Pn**	**02 05 30.4**	**+0.6**
BBJI	**Bungbulang**	**15.96**	**276**		**Pn**	**02 05 44.0**	**-1.3**
BBJI				IAmb	IAmb	02 06 11.6	
	comp=Z,10.0nm,1.1s						
ASAR	**Alice Springs**	**17.14**	**146**	P	**P**	**02 05 59.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=320,slow=11,SNR=5.9						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**17.14**	**146**	P	**P**	**02 05 58.9**	**-0.9**
COEN	**Coen**	**19.61**	**105**	P	**P**	**02 06 26.0**	**-1.0**
FORT	**Forrest**	**21.54**	**170**	P	**P**	**02 06 47.7**	**+0.1**
FORT				IAmb	IAmb	02 06 53.1	
	comp=Z,8.2nm,1.0s						
PMG	**Port Moresby**	**23.18**	**92**	P	**P**	**02 07 02.7**	**-1.9**
PMG				IAmb	IAmb	02 07 11.1	
	comp=Z,13nm,0.9s						
IPM	**Ipoh**	**26.50**	**301**	P	**P**	**02 07 30.5**	**-4.1**
IPM				IAmb	IAmb	02 07 54.2	
	comp=Z,11nm,1.0s						
CASY	**Casey**	**57.38**	**186**	P	**P**	**02 11 40.8**	**-3.2**
MKAR	**Makanchi Array**	**67.10**	**330**	P	**P**	**02 12 52.7**	**+3.5**
	comp=Z,0.4nm,0.5s,baz=146,slow=6.3,SNR=9.4						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.10**	**330**	P	**P**	**02 12 51.8**	**+2.7**
ZALV	**Zalesovo Beam**	**71.25**	**337**	P	**P**	**02 13 15.7**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=132,slow=4.4,SNR=2.4						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**71.25**	**337**	P	**P**	**02 13 16.0**	**+1.4**

*ISK **06** 02:10:37.3, 39.°09N×27.°81E, h8km, ML3.6/16*

*AFAD **06** 02:10:37.5, 39.°10N×27.°80E, h7km±3km, MW3.8*

*THE **06** 02:10:40.0, 39°N±3°×2°8E±°, h29km±20km, M3.4/9, MLh3.4/9*

*ATH **06** 02:10:39.5, 39.°09N×27.°78E, h22km±5km, ML3.6/6, Manual Solution by A.Agalos First location: 2020/02/06 02:12:08, This location: 2020/02/06 02:17:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*

ISC 06 02:10:37.8±0.8**, 39.°07N**±0.°02×**27.°80E**±0.°02**, h16**km±5km**, n102,** σ**0.s92**/140**, 7C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.19**	**178**	P	**Pg**	**02 10 42.6**	**+0.2**
AKHS				S	**Sg**	**02 10 46.5**	**+1.0**
AKS	**Akhisar**	**0.19**	**178**	Pg	**Pg**	**02 10 42.0**	**-0.4**
AKS				Sg	**Sg**	**02 10 45.7**	**+0.3**
SOMA	**Soma-Manisa**	**0.23**	**292**	Pg	**Pg**	**02 10 42.5**	**-0.4**
SOMA				Sg	**Sg**	**02 10 45.9**	**-0.5**
STEP	**BALIKESIR_Sava**	**0.31**	**348**	P	**Pg**	**02 10 43.4**	**-1.0**
STEP				S	**Sg**	**02 10 48.2**	**-0.7**
GORD	**Gordes-Manisa**	**0.33**	**119**	Pg	**Pg**	**02 10 44.6**	**-0.1**
GORD				Sg	**Sg**	**02 10 49.7**	**+0.2**
GOMA	**Golmarmara-Man**	**0.37**	**166**	Pg	**Pb**	**02 10 45.5**	**-0.6**
GOMA				Sg	**Sb**	**02 10 51.4**	**-0.2**
KTTT	**Salihli**	**0.44**	**149**	P	**Pb**	**02 10 46.7**	**-0.6**
CAMT	**Merkez**	**0.50**	**230**	P	**Pb**	**02 10 48.4**	**+0.2**
CAMT				S	**Sb**	**02 10 56.1**	**+0.8**
BALB	**Balikesir**	**0.57**	**6**	Pg	**Pg**	**02 10 48.6**	**-0.5**
ZEDA	**zmir-Bergama**	**0.57**	**260**	P	**Pb**	**02 10 49.6**	**+0.1**
ZEDA				S	**Sb**	**02 10 57.1**	**-0.3**
BKES	**Balkesir-Mer**	**0.67**	**8**	P	**Pg**	**02 10 50.0**	**-0.9**
BKES				S	**Sg**	**02 10 58.6**	**-1.2**
BALY	**Balya**	**0.68**	**348**	P	**Pg**	**02 10 50.4**	**-0.8**
BALY				S	**Sg**	**02 10 58.9**	**-1.3**
IZMD	**zmir-Dikili-**	**0.69**	**263**	P	**Pb**	**02 10 51.6**	**+0.2**
IZMD				P	**Pb**	**02 10 51.7**	**+0.2**
IZMD				S	**Sb**	**02 11 00.6**	**-0.2**
BUHA	**Balikesir, Bur**	**0.71**	**308**	P	**Pg**	**02 10 51.3**	**-0.3**
YAYO	**Edremit-Balk**	**0.78**	**314**	Pg	**Pg**	**02 10 52.6**	**-0.4**
BLKS	**Balkesir-Sus**	**0.81**	**9**	P	**Pg**	**02 10 52.5**	**-1.2**
BLKS				P	**Pb**	**02 10 52.7**	**-0.9**
BLKS				S	**Sg**	**02 11 02.7**	**-1.6**
ODEM	**Odemis-Izmir**	**0.82**	**165**	Pg	**Pn**	**02 10 54.4**	**-0.4**
DST	**Dursunbey**	**0.83**	**50**	Pg	**Pg**	**02 10 52.7**	**-1.2**
MANT	**Manisa**	**0.83**	**134**	P	**Pb**	**02 10 53.7**	**-0.3**
MANT				S	**Sg**	**02 11 03.9**	**-1.0**
BAGT	**Foa**	**0.85**	**241**	P	**Pn**	**02 10 54.6**	**-0.5**
BAGT				S	**Sn**	**02 11 06.4**	**-0.9**
KULA	**Kula-Manisa**	**0.87**	**129**	Pg	**Pg**	**02 10 54.4**	**-0.3**
DUVT	**Torbali**	**0.89**	**198**	P	**Pn**	**02 10 55.5**	**-0.2**
DUVT				S	**Sb**	**02 11 06.8**	**+0.2**
AYVA	**Ayvalik**	**0.90**	**286**	P	**Pb**	**02 10 55.3**	**+0.3**
AYVA				S	**Sb**	**02 11 07.6**	**+0.9**
BLCB	**Balcova**	**0.91**	**221**	Pg	**Pn**	**02 10 55.7**	**-0.2**
FOCM	**Foa**	**0.91**	**247**	Pg	**Pn**	**02 10 55.5**	**-0.4**
SUSR	**Susurluk-Balik**	**0.92**	**14**	Pg	**Pg**	**02 10 54.7**	**-0.9**
SMAA	**Simav-Kutahya**	**0.92**	**88**	Pg	**Pg**	**02 10 55.4**	**-0.2**
SIMA	**Simav-Kutahya**	**0.92**	**89**	Pg	**Pg**	**02 10 55.3**	**-0.3**
IZMR	**zmir-demi**	**0.94**	**173**	P	**Pb**	**02 10 55.6**	**-0.1**
IZMR				P	**Pn**	**02 10 55.9**	**-0.5**
CMHT	**Manyas**	**0.95**	**8**	P	**Pg**	**02 10 55.3**	**-0.9**
CMHT				S	**Sg**	**02 11 06.7**	**-1.9**
YENI	**Yenice-Canakka**	**0.97**	**333**	Pg	**Pg**	**02 10 56.1**	**-0.4**
GONE	**Gonen-Balikesi**	**0.98**	**355**	Pg	**Pg**	**02 10 56.4**	**-0.3**
KIRA	**zmir-Kiraz**	**0.99**	**152**	P	**Pb**	**02 10 56.9**	**+0.2**
KIRA				S	**Sn**	**02 11 10.7**	**-0.2**
USAK	**Uak-Merkez**	**1.01**	**110**	P	**Pg**	**02 10 56.9**	**-0.5**
USAK				S	**Sg**	**02 11 08.8**	**-1.9**
ATIT	**Gnen**	**1.03**	**350**	P	**Pg**	**02 10 56.9**	**-0.8**
ATIT				S	**Sg**	**02 11 10.5**	**-0.6**
KRBN	**Karaburun**	**1.09**	**244**	Pn	**Pn**	**02 10 59.0**	**+0.6**
CANM	**Can-anakkale**	**1.10**	**329**	Pn	**Pg**	**02 10 58.4**	**-0.7**
SHAP	**Saphane-Kutahy**	**1.11**	**92**	Pn	**Pg**	**02 10 58.9**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.12**	**176**	Pn	**Pn**	**02 10 59.3**	**+0.3**
KARB	**zmir-Karabur**	**1.16**	**250**	P	**Pn**	**02 11 00.1**	**+0.7**
KARB				S	**Sb**	**02 11 14.3**	**0.0**
NAZL	**Nazilli-Aydin**	**1.17**	**161**	Pn	**Pn**	**02 11 00.1**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**1.18**	**305**	P	**Pb**	**02 10 59.7**	**-0.2**
BAYC				S	**Sb**	**02 11 14.6**	**-0.4**
PRK	**Paraskevi**	**1.20**	**279**	P	**Pg**	**02 11 00.7**	**-0.3**
PRK				S	**Sn**	**02 11 16.0**	**0.0**
PRK	**Paraskevi**	**1.20**	**279**	P	**Pg**	**02 11 00.8**	**-0.3**
PRK				S	**Sn**	**02 11 16.3**	**+0.3**
GMLD	**Gumuldur**	**1.21**	**215**	Pn	**Pg**	**02 11 00.8**	**-0.4**
EMET	**Ktahya-Emet**	**1.22**	**75**	P	**Pn**	**02 11 00.6**	**+0.3**
DGB	**zmir**	**1.25**	**216**	P	**Pg**	**02 11 01.1**	**-0.7**
GEDZ	**Gediz**	**1.25**	**91**	Pn	**Pg**	**02 11 01.7**	**-0.2**
SULTU	**Buldan**	**1.27**	**143**	P	**Pb**	**02 11 01.3**	**0.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SULTU				S	Sb	02 11 17.0	-0.4
ORLT	Orhaneli	1.29	41	P	Pn	02 11 01.6	+0.4
BAND	Balkesir-Ban	1.30	10	⇓P	Pn	02 11 02.0	+0.7
BAND				⇓S	Sg	02 11 20.4	+0.6
GDZ	Gediz	1.31	89	P	Pn	02 11 02.0	+0.4
ZEYE	Izmir, Urla-Ze	1.31	231	P	Pg	02 11 02.0	-1.1
ZEYE				S	Sn	02 11 19.8	+1.0
ESEN	Aydn-Nazilli	1.34	161	P	Pb	02 11 02.4	-0.2
ESEN				S	Sn	02 11 19.9	+0.5
KOCA	Canakkale, Ayv	1.36	289	P	Pb	02 11 02.8	-0.1
EZN	Ezine	1.37	304	P	Pn	02 11 02.7	+0.4
EZN				S	Sb	02 11 20.6	+0.3
EAG2	Marmaro, Chios	1.43	249	P	Pg	02 11 04.4	-0.8
EAG2				S	Sg	02 11 22.4	-1.4
GCAM	G?zelcaml?	1.44	198	Pn	Pb	02 11 03.9	-0.3
GCAM	G?zelcaml?	1.44	198	P	Pn	02 11 03.3	+0.1
PASA	Karahalli, USA	1.50	118	P	Pb	02 11 05.2	-0.2
SIGR	SIGRI	1.52	276	P	Pb	02 11 05.0	-0.6
SIGR				S	Sn	02 11 24.1	+0.2
SIGR	SIGRI	1.52	276	P	Pn	02 11 04.9	+0.5
SIGR				S	Sb	02 11 24.4	-0.3
CHOS	Chios island	1.53	244	P	Pb	02 11 05.4	-0.4
CHOS				S	Sg	02 11 25.4	-1.7
CHOS	Chios island	1.53	244	P	Pb	02 11 05.3	-0.5
KRL1	Karlovasi Samo	1.54	214	P	Pg	02 11 05.9	-1.4
SMG	Samos	1.56	209	P	Pn	02 11 05.2	+0.3
SMG				S	Sg	02 11 26.4	-1.6
SMG	Samos	1.56	209	P	Pb	02 11 05.6	-0.6
DDIM	Aydin, Didim	1.67	196	P	Pg	02 11 10.3	+0.4
GADA	Gvkgeada	1.85	308	P	Pn	02 11 09.3	+0.5
GADA				S	Sn	02 11 33.5	+1.6
YER	Yerkesik	1.97	169	P	Pn	02 11 10.6	0.0
BODT	Bodrum	2.04	191	P	Pb	02 11 12.9	-1.6
CAVK	Edirne/Enez-Ca	2.05	323	⇓P	Pn	02 11 12.7	+1.1
CAVK				⇓S	Sn	02 11 38.3	+1.4
ENEZ	Enez	2.09	323	P	Pn	02 11 12.9	+0.7
LIA	Limnos Island	2.19	293	P	Pn	02 11 14.3	+0.8
LIA	Limnos Island	2.19	293	P	Pn	02 11 14.3	+0.8
SMTH	Samothraki Isl	2.24	309	P	Pn	02 11 14.6	+0.3
SMTH	Samothraki Isl	2.24	309	P	Pn	02 11 14.8	+0.5
ALN	Alexandroupoli	2.27	324	P	Pn	02 11 15.1	+0.4
ALN	Alexandroupoli	2.27	324	P	Pn	02 11 15.1	+0.4
ALEX	Alexandroupoli	2.30	321	P	Pn	02 11 16.2	+1.1
ISP	Isparta	2.47	119	P	Pn	02 11 19.4	+1.8
RDO	Rodhopi	2.70	321	P	Pn	02 11 21.4	+0.7
THAS	Thassos island	2.83	304	P	Pn	02 11 22.6	+0.3
KARY	Karystos	2.84	250	P	Pn	02 11 24.0	+1.5
ARG	Arkhangelos	2.86	175	P	Pn	02 11 23.7	+0.9
KYMI	Kymi, Euboea I	2.92	263	P	Pn	02 11 24.8	+1.1
KAVA	Kavala	3.17	308	P	Pn	02 11 27.8	+0.7
NVR	Nevrokopi	3.78	308	P	Pn	02 11 36.2	+0.7
VLI	Veliai	4.51	240	P	Pn	02 11 46.1	+0.6
THL	Klokotos Trika	4.52	278	P	Pn	02 11 46.9	+1.4
KIRS	Kirsehir-Merke	4.76	87	⇑P	Pn	02 11 50.7	+1.8
PLVB	Pleven	4.93	332	⇓P	Pn	02 11 52.2	+0.9
BOVS	Bovan	6.47	317	⇑P	Pn	02 12 14.0	+1.7
COVR	Voineasa-Covas	6.87	351	⇑P	Pn	02 12 19.4	+1.5
LOT	Lotru	7.04	336	⇑P	Pn	02 12 21.2	+0.9
HERR	Herculane	7.06	327	⇓P	Pn	02 12 20.7	+0.3
DOPR	Dopca	7.12	346	⇑P	Pn	02 12 23.3	+2.0
BZS	Buzias	7.98	327	⇑P	Pn	02 12 33.1	-0.1
DRGR		8.57	336	⇓P	Pn	02 12 42.1	+0.9
BURAR	Bucovina Array	8.74	348	⇑P	Pn	02 12 46.1	+2.4
KECS	Kecovo	10.79	333	ePN	Pn	02 13 16.0	+4.5
MODS	Modra-Piesok	12.01	324	ePN	Pn	02 13 35.3	+7.1

*IDC **06** 02:24:13.9±0.9, 28°.36N×142°.65E, h0km, mb3.9/14, mbtmp3.9/16, ML3.4/2, MS3.0/4, Error ellipse: s-maj=32.7km s-min=15.6km az=77.0*
*NEIC **06** 02:24:16.8±1.1, 28°.43N±0°.04×142°.6E±0°.1, h10km±1km, mb4.6/28, Error ellipse: s-maj=19.7km s-min=6.9km az=86.0*
ISC 06 02:24:16.0±0.6**, 28°.41N**±0°.06×**142°.7E**±0°.1**, h10km, n59, σ0.s81**/57**, mb4.4**/28**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.38	198	Pn	Pn	02 24 29.7	-12
	27nm,0.3s,baz=338,slow=11,SNR=8.4						
JCJ				Sn	Sb	02 24 47.6	-12
	72nm,0.3s,baz=94,slow=23,SNR=16						
JCJ	Chichijima	1.38	198	Pn	Pn	02 24 42.5	+1.2
JCJ				Sn	Sb	02 25 00.4	+0.9
MJAR	Matsushiro Arr	8.94	336	Pn	Pn	02 26 24.7	-0.5
	0.3nm,0.3s,baz=156,slow=11,SNR=6.8						
MJAR				Sn	Sn	02 28 06.5	+0.6
	0.1nm,0.3s,baz=260,slow=20,SNR=1.6						
	2.8nm,0.5s						
MJAR	Matsushiro Arr	8.94	336		Pn	02 26 25.5	+0.4
JNU	Nakatsue	11.17	298	LR	LR	02 30 45.9	
	comp=Z,68nm,21.1s,baz=107,slow=35						
KSRS	Korea Array	15.30	310	LR	LR	02 33 42.1	
	comp=Z,44nm,18.2s,baz=105,slow=37						
USRK	Ussuriysk Ar.	17.93	334	P	P	02 28 26.8	+0.8
	0.2nm,0.3s,baz=171,slow=10,SNR=3.1						
	2.8nm,0.7s						
HILR	Hailar Array B	27.43	327	P	P	02 30 03.1	+1.3
	2.8nm,0.5s,baz=140,slow=7.8,SNR=3.9						
	2.8nm,0.5s						
ENH	Enshi	28.92	282	IAmb	IAmb	02 30 15.1	
	comp=Z,7.0nm,1.0s						
ENH				P	P	02 30 15.1	-0.3
ULN	Ulaanbaatar	33.68	315	P	P	02 30 57.3	0.0
SONM	Songino Array	34.08	315	P	P	02 31 00.4	-0.3
	comp=Z,0.9nm,0.8s,baz=128,slow=8.1,SNR=4.9						
	comp=Z,0.9nm,0.8s						
SONM	Songino Array	34.08	315	P	P	02 31 01.0	+0.3
CMAR	Chiang Mai Arr	41.13	266	LR	LR	02 50 05.8	
	comp=Z,14nm,18.2s,baz=85,slow=38						
COEN	Coen	42.12	179	P	P	02 32 08.8	+0.2
WB0	Warramunga Arr	48.56	190	P	P	02 32 59.6	0.0
WB0				IAmb	IAmb	02 33 26.3	
	comp=Z,7.4nm,1.1s						
ANM	Nome	48.60	27	P	P	02 32 59.6	+0.2
ANM				IAmb	IAmb	02 33 12.4	
	comp=Z,3.8nm,1.1s						
J14K	Nanvaranak Lak	48.72	30	P	P	02 33 01.1	+0.8
WR8	Warramunga Arr	48.73	190	P	P	02 33 01.0	+0.1
WR8				IAmb	IAmb	02 33 02.8	
	comp=Z,4.0nm,0.6s						
WB2	Warramunga Arr	48.74	190	P	P	02 33 00.8	-0.2
WB2				IAmb	IAmb	02 33 22.1	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	48.74	190	P	P	02 33 00.8	-0.2
	comp=Z,2.6nm,0.5s,baz=12,slow=8.4,SNR=39						
	comp=Z,2.6nm,0.5s						
WRA	Warramunga Arr	48.74	190	P	P	02 32 59.8	-1.1
ZALV	Zalesovo Beam	48.78	318	P	P	02 32 59.1	-1.9
	comp=Z,1.2nm,0.4s,baz=97,slow=8.5,SNR=5.3						
	comp=Z,1.2nm,0.4s						
ZALV	Zalesovo Beam	48.78	318	P	P	02 32 59.4	-1.6
K15K	Wolf Creek Mou	49.47	31	P	P	02 33 06.6	+0.4
K15K				IAmb	IAmb	02 33 21.2	
	comp=Z,11nm,1.4s						
MK31	Makanchi Array	49.97	309	P	P	02 33 10.2	-0.1
MKAR	Makanchi Array	49.97	309	P	P	02 33 09.9	-0.4
	comp=Z,0.8nm,0.6s,baz=94,slow=8.7,SNR=9.2						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	49.97	309	P	P	02 33 09.6	-0.7
K17K	Iditarod	51.03	31	P	P	02 33 17.9	-0.1
K17K				IAmb	IAmb	02 33 38.8	
	comp=Z,9.4nm,1.4s						
H18K	Honhosa River	51.62	28	P	P	02 33 22.1	-0.3
C18K	Utukok River	51.67	23	P	P	02 33 23.7	+0.9
O18K	Koktuh Hills	51.94	35	P	P	02 33 24.8	-0.1
O18K				IAmb	IAmb	02 33 48.6	
	comp=Z,7.3nm,1.2s						
KURK	Kurchatov	52.38	314		P	02 33 28.3	+0.1
KURK				IAmb	IAmb	02 33 29.5	
	comp=Z,8.7nm,1.0s						
C19K	Lookout Ridge	52.38	23	P	P	02 33 28.2	+0.2
C19K				IAmb	IAmb	02 33 40.2	
	comp=Z,4.4nm,0.8s						
KURBB	Kurchatov Arra	52.43	314	P	P	02 33 28.5	-0.1
	comp=Z,5.4nm,0.9s,baz=90,slow=7.3,SNR=31						
	comp=Z,5.4nm,0.9s						
ASAR	Alice Springs	52.46	190	P	P	02 33 28.8	-0.3
	comp=Z,0.4nm,0.5s,baz=4.5,slow=6.2,SNR=7.0						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	52.46	190	P	P	02 33 28.6	-0.4
ILAR	Eielson Array	56.36	29	P	P	02 33 57.5	+0.5
	comp=Z,0.4nm,0.8s,baz=259,slow=6.6,SNR=5.3						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	56.36	29	P	P	02 33 56.9	-0.1
BVAR	Borovoye Array	57.37	317	P	P	02 34 04.5	+0.1
	comp=Z,2.4nm,0.5s,baz=86,slow=7.0,SNR=14						
	comp=Z,2.4nm,0.5s						
BORK	Borovoye	57.41	317		P	02 34 04.8	+0.2
BORK				IAmb	IAmb	02 34 06.1	
	comp=Z,2.6nm,0.7s						
KK31	Karatay Array	58.66	305		P	02 34 13.8	+0.1
KK31				IAmb	IAmb	02 34 14.9	
	comp=Z,4.2nm,0.6s						
KKAR	Karatay Array	58.66	305		P	02 34 13.7	0.0
STKA	Stephens Creek	59.96	181	P	P	02 34 20.1	-2.4
	comp=Z,1.5nm,0.7s,baz=31,slow=4.8,SNR=3.0						
	comp=Z,1.5nm,0.7s						
CHGR	Chuyangaron	60.64	301		P	02 34 27.6	+0.2
AB31	Akbulak array	64.49	314		P	02 34 52.9	+0.1
AB31				IAmb	IAmb	02 34 54.6	
	comp=Z,5.4nm,1.2s						
ABKAR	Akbulak array	64.49	314	P	P	02 34 52.5	-0.3
YKA	Yellowknife Ar	70.79	29	P	P	02 35 32.2	-0.1
	comp=Z,0.1nm,0.4s,baz=296,slow=6.6,SNR=1.9						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	70.79	29	P	P	02 35 32.9	+0.6
FINES	FINESS Array B	76.96	334	P	P	02 36 07.4	-1.1
	comp=Z,2.0nm,0.9s,baz=77,slow=4.1,SNR=5.2						
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	76.96	334	P	P	02 36 07.6	-0.8
NOA	NORSAR Array B	82.55	338	P	P	02 36 37.9	-1.0
	comp=Z,0.5nm,0.6s,baz=62,slow=6.6,SNR=1.3						
	comp=Z,0.5nm,0.6s						
RAYN	Ar Rayn	85.00	294		P	02 36 53.0	+0.8
BRTR	Keskin Array B	85.42	313	P	P	02 36 53.1	-1.0
	comp=Z,0.7nm,0.8s,baz=72,slow=4.7,SNR=2.3						
BRTR				LR	LR	03 19 55.4	
	comp=Z,17nm,18.2s,baz=284,slow=39						
	comp=Z,0.7nm,0.8s						
BRTR	Keskin Array B	85.42	313	P	P	02 36 53.5	-0.6
PV21	Cone Mtn., Par	85.63	48	P	P	02 36 55.9	+0.6
PV23	Carpenter Ridg	85.66	48	P	P	02 36 55.6	+0.1
PV10	Paradox Valley	85.69	48	P	P	02 36 57.0	+1.4
PV10				IAmb	IAmb	02 37 03.4	
	comp=Z,3.9nm,0.7s						
PV20	West Nyswonger	85.75	48	P	P	02 36 57.8	+2.0
PV19	Morning Glory	85.76	48	P	P	02 36 57.3	+1.4

IDC 06 02:33:11.2±1.9**, 5°.15N**×**126°.45E, h0km, mb3.6**/4**, mbtmp3.6**/4**, MS3.2**/1**, Error ellipse: s-maj=171.5km s-min=22.1km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	15.51	190	LR	LR	02 43 26.1	
	comp=Z,78nm,18.0s,baz=358,slow=40						
WRA	Warramunga Arr	26.12	163	P	P	02 38 46.1	-0.9
	0.8nm,0.6s,baz=342,slow=10,SNR=9.6						
	0.8nm,0.6s						
ASAR	Alice Springs	29.55	166	P	P	02 39 19.2	+1.4
	0.3nm,0.8s,baz=348,slow=7.3,SNR=1.9						
	0.3nm,0.8s						
MKAR	Makanchi Array	56.24	325	P	P	02 42 53.8	+0.4
	0.3nm,0.3s,baz=112,slow=7.3,SNR=11						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	60.40	327	P	P	02 43 21.6	-0.7
	0.6nm,0.6s,baz=126,slow=5.6,SNR=5.2						
	0.6nm,0.6s						

*SJA **06** 02:35:41.8±1.1, 22°.95S×66°.56W, h258km±20km, ML3.6, MW3.5*
*GUC **06** 02:35:43.7±0.7, 22°.91S×66°.48W, h240km, ML4.2*
ISC 06 02:35:44.7±1.6**, 22°.95S**±0°.07×**66°.57W**±0°.09**, h222km, n30, σ1.s00**/32**, 4C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		1.28	171	iP	Pn	02 36 20.0	+0.7
SALTA				IAML		02 37 51.9	
	comp=Z,9.6nm,1.1s						
SLA	San Lorenzo	2.01	151	eP	Pn	02 36 25.0	-0.2
PB09	IPOC Station P	2.73	294	⇑iP	Pn	02 36 33.7	+1.0
PB09				eS	S	02 37 11.7	+1.6
PB09	IPOC Station P	2.73	294	iP	Pn	02 36 33.1	+0.4
PB09				IAML		02 37 13.4	
	comp=Z,79nm,0.5s						
PB06	IPOC Station P	2.78	274	eP	Pn	02 36 33.8	+0.6
PB06				eS	S	02 37 12.2	+1.2
PB06				IAML		02 37 14.4	
	comp=N,187nm,0.1s						
PB03	IPOC Station P	3.08	286	⇑iP	Pn	02 36 36.8	+0.2
PB03				IAML		02 37 19.8	
	comp=E,161nm,0.1s						
PB03	IPOC Station P	3.08	286	iP	Pn	02 36 36.2	-0.5
PB03				IAML		02 37 20.7	
	comp=Z,145nm,0.2s						
FSA	Cafayete	3.19	170	iP	Pn	02 36 37.3	-0.6
PB07	IPOC Station P	3.31	291	⇑iP	Pn	02 36 39.3	0.0
PB07	IPOC Station P	3.31	291	iP	Pn	02 36 38.6	-0.6
PB07				IAML		02 37 25.8	
	comp=Z,98nm,0.2s						
PB01	IPOC Station P	3.31	304	eP	Pn	02 36 39.0	-0.2
PB01	IPOC Station P	3.31	304	iP	Pn	02 36 38.5	-0.7
PB01				IAML		02 37 24.3	
	comp=Z,84nm,0.2s						
PB05	IPOC Station P	3.35	271	⇑iP	Pn	02 36 39.8	+0.1
PB05	IPOC Station P	3.35	271	iP	Pn	02 36 39.2	-0.5
PB05				IAML		02 37 24.5	
	comp=Z,31nm,0.4s						
PB02	IPOC Station P	3.49	297	eP	Pn	02 36 40.8	-0.5
PB02	IPOC Station P	3.49	297	iP	Pn	02 36 40.5	-0.8
PB02				IAML		02 37 28.1	
	comp=Z,182nm,0.2s						
PB08	IPOC Station P	3.69	319	eP	Pn	02 36 44.4	+0.4
PB08	IPOC Station P	3.69	319	iP	Pn	02 36 43.9	-0.1
PB08				IAML		02 37 33.5	
	comp=Z,41nm,0.7s						
PB14	IPOC Station P	3.89	244	eP	Pn	02 36 46.0	-0.2
PB14	IPOC Station P	3.89	244	iP	Pn	02 36 45.9	-0.4
PB14				IAML		02 37 37.7	
	comp=Z,123nm,0.2s						
HMBC	Humberstone	4.08	310	eP	Pn	02 36 46.9	-1.4
HMBC	Humberstone	4.08	310	iP	Pn	02 36 47.0	-1.4
HMBC				IAML		02 37 41.5	
	comp=Z,102nm,0.6s						
GO01	Chusmiza	4.08	323	eP	Pn	02 36 47.6	-1.2
PB11	IPOC Station P	4.29	317	eP	Pn	02 36 49.7	-1.3
PB11	IPOC Station P	4.29	317	iP	Pn	02 36 49.2	-1.8
PB11				IAML		02 37 43.4	
	comp=Z,62nm,0.3s						
AC02	Maricunga	4.51	210	iP	Pn	02 36 53.3	-0.8
AC02				IAML		02 37 59.8	
	comp=Z,24nm,0.8s						
AC01	Pan de Azucar	4.86	228	⇓eP	Pn	02 36 56.2	-1.6
AC01	Pan de Azucar	4.86	228	iP	Pn	02 36 55.7	-2.2
AC01				IAML		02 37 55.3	
	comp=Z,49nm,0.1s						
TINO	Tinogasta	5.17	190	iP	Pn	02 37 01.5	-0.4
PB16	IPOC Station P	5.36	329	iP	Pn	02 37 03.7	-1.1
PB16				IAML		02 38 46.1	
	comp=Z,63nm,0.9s						

*ISK **06** 03:17:23.6, 38°.92N×27°.70E, h5km, ML1.1/3*
AFAD 06 03:17:22.1, 38°.97N×27°.95E, h7km±4km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.14	230	P	Pg	03 17 26.4	+1.3
AKHS				S	Sg	03 17 28.6	+1.5
AKS	Akhisar	0.14	231	Pg	Pg	03 17 25.8	+0.7
AKS				Sg	Sg	03 17 27.4	+0.3
GORD	Gordes-Manisa	0.18	109	Pg	Pg	03 17 32.2	+6.3
SOMA	Soma-Manisa	0.38	300	Pg	Pb	03 17 30.4	-0.7
SOMA				Sg	Sg	03 17 35.3	+0.9
STEP	BALIKESIR_Sava	0.45	336	P	Pg	03 17 31.1	+0.3
STEP				S	Sg	03 17 37.3	+0.6
STEP				IAML		03 17 44.0	
	comp=N,34nm,2.3s						
CAMT	Merkez	0.55	246	P	Pb	03 17 34.0	-0.1
CAMT				S	Sg	03 17 40.7	+1.0
ZEDA	zmir-Bergama	0.68	270	P	Pb	03 17 35.9	-0.4
ZEDA				S	Sg	03 17 43.3	-0.8
ZEDA				IAML		03 17 53.0	
	comp=N,26nm,2.6s						
KIRA	zmir-Kiraz	0.85	155	P	Pg	03 17 38.0	-0.3
BAGT	Foa	0.92	250	P	Pg	03 17 38.3	-1.3

NNC 06 03:32:10.0±2.3**, 36°.77N**×**71°.06E, h120km**±**34km, mb3.1, mpv3.6, 1C-4D, Error ellipse: s-maj=23.5km s-min=17.7km az=131.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.34	356	⇓P	Pn	03 33 41.2	+0.3
	5.3nm,0.2s,baz=181,slow=13,SNR=86						
KK31				⇓S	Sn	03 34 52.3	+0.3
	2.4nm,0.3s,baz=190,slow=25,SNR=5.2						
AAK	Ala-Archa	6.43	23	⇓P	Pn	03 33 42.0	-0.3
	0.6nm,0.4s						
AAK				⇓S	Sn	03 34 55.0	+0.6
	5.2nm,0.5s						
AB31	Akbulak array	14.87	331	P	Pn	03 35 33.8	-0.1
	0.7nm,0.3s,baz=141,slow=13,SNR=52						
AKTO	Aktyubinsk	16.57	330	⇑P	Pn	03 35 55.2	+0.1
	1.6nm,0.7s						

*GUC **06** 03:33:23.0±0.8, 32°.54S×70°.48W, h94km±3km, ML3.7*
*SJA **06** 03:33:23.0±1.5, 32°.53S×70°.47W, h80km, ML3.4, MW3.5*
ISC 06 03:33:22.6±1.5**, 32°.55S**±0°.03×**70°.50W**±0°.05**, h108km**±9km**, n57, σ0.s65**/71**, 3C-11D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.22	192	⇓iP	Pn	03 33 37.6	-0.4
VA03				eS	Sn	03 33 48.7	-0.8
VA03				IAML		03 33 49.9	
	comp=E,11μm,0.1s						
VA03	San Esteban	0.22	192	iP	Pn	03 33 37.0	-1.0
VA03				IAML		03 33 50.1	
	comp=Z,3μm,0.1s						
ROCH	El Roble	0.60	226	⇑iP	Pn	03 33 40.4	+0.1
ROCH				eS	Sn	03 33 53.6	0.0
ROCH				IAML		03 33 54.8	
	comp=N,5μm,0.3s						
PEL	Peldehue	0.61	195	eP	Pn	03 33 39.8	-0.4
PEL				eS	Sn	03 33 52.4	-1.0
PEL				IAML		03 33 53.9	
	comp=N,3μm,0.4s						
CO04	Los Peladeros	0.65	321	⇑iP	Pn	03 33 40.8	+0.1
CO04				eS	Sn	03 33 54.2	-0.1
VA06	Catapilco	0.68	269	⇑iP	Pn	03 33 40.7	+0.1
VA06				eS	Sn	03 33 53.7	-0.4
VA06				IAML		03 33 54.7	
	comp=N,4μm,0.1s						
MT10	Hacienda Santa	0.72	183	⇓iP	Pn	03 33 41.6	+0.4
MT10				eS	Sn	03 33 55.4	+0.3
MT10				IAML		03 33 57.3	
	comp=N,6μm,0.2s						
MT14	Cerro Cal¡n	0.84	182	⇓iP	Pn	03 33 42.7	+0.5
MT14				eS	Sn	03 33 57.3	+0.3
MT14				IAML		03 33 58.4	
	comp=E,5μm,0.5s						
MT05	Renca	0.86	193	eP	Pn	03 33 42.7	+0.3
MT05				eS	Sn	03 33 57.9	+0.6
MT05				IAML		03 33 59.2	
	comp=E,7μm,0.5s						
MT05	Renca	0.86	193	iP	Pn	03 33 42.2	-0.1
MT05				IAML		03 33 59.0	
	comp=Z,2μm,0.1s						
MT16	CCHEN	0.88	181	⇓iP	Pn	03 33 42.9	+0.4
MT16				IAML		03 33 58.9	
	comp=N,1μm,0.2s						
MT02	Curacav	0.89	217	eP	Pn	03 33 42.6	0.0
MT02	Curacav	0.89	217	iP	Pn	03 33 41.9	-0.6
MT02				IAML		03 34 00.1	
	comp=Z,546nm,0.1s						
MT04	Ro Olivares	0.91	161	⇓iP	Pn	03 33 43.2	+0.3
MT04				eS	Sn	03 33 58.6	+0.3
MT04				IAML		03 34 00.0	
	comp=N,1μm,0.1s						
MT04	Ro Olivares	0.91	161	iP	Pn	03 33 42.5	-0.4
MT04				IAML		03 34 02.8	
	comp=Z,817nm,0.1s						
MT03	Universidad Ad	0.94	181	⇓iP	Pn	03 33 43.8	+0.6
MT03				eS	Sn	03 33 59.7	+1.0
MT03				IAML		03 34 00.4	
	comp=E,6μm,0.3s						
MT03	Universidad Ad	0.94	181	iP	Pn	03 33 43.1	-0.1
MT03				IAML		03 34 00.8	
	comp=Z,2μm,0.2s						
MT08	Bocatoma Ro	0.98	156	⇓iP	Pn	03 33 44.3	+0.6
MT08				IAML		03 34 03.6	
	comp=E,561nm,0.3s						
MT08	Bocatoma Ro	0.98	156	iP	Pn	03 33 43.8	+0.1
MT08				IAML		03 34 03.3	
	comp=Z,305nm,0.3s						
MT15	Las Vizcachas	1.05	180	⇓iP	Pn	03 33 44.8	+0.6
MT15				eS	Sn	03 34 01.3	+0.8
MT15				IAML		03 34 02.7	
	comp=E,6μm,0.4s						
VA01	Torpederas	1.08	244	iP	Pn	03 33 45.0	+0.6
VA01				IAML		03 34 03.3	
	comp=Z,772nm,0.1s						
MT12	Pirque	1.18	182	⇓iP	Pn	03 33 46.3	+0.6
MT12				eS	Sn	03 34 04.1	+1.0
MT12				IAML		03 34 05.1	
	comp=E,2μm,0.3s						
MT13	San Alfonso	1.20	172	eP	Pn	03 33 46.6	+0.6
MT13				IAML		03 34 06.2	
	comp=N,2μm,0.2s						
MT13	San Alfonso	1.20	172	iP	Pn	03 33 46.3	+0.3
MT13				IAML		03 34 06.2	
	comp=Z,624nm,0.1s						
RTLS	Leoncito	1.26	54	iP	Pn	03 33 47.3	+0.5
RTLS				IAML		03 34 07.0	
	comp=Z,3μm,0.4s						
MT09	Talagante	1.29	198	⇓iP	Pn	03 33 47.3	+0.3
MT09				IAML		03 34 07.6	
	comp=E,1μm,0.3s						
LMEL	Las Melosas	1.32	169	eP	Pn	03 33 48.0	+0.7
LMEL				IAML		03 34 12.2	
	comp=N,2μm,0.1s						
ASAL	Salagasta	1.41	92	iP	Pn	03 33 49.0	+0.8
ASAL				IAML		03 34 10.3	
	comp=Z,0.2nm,1.2s						
CO02	Combarbal	1.41	342	iP	Pn	03 33 48.2	-0.2
CO02				IAML		03 34 11.1	
	comp=Z,3μm,0.2s						
BO04	La Punta	1.44	184	iP	Pn	03 33 49.2	+0.6
BO04				eS	Sn	03 34 09.1	+0.7
BO04				IAML		03 34 11.2	
	comp=N,1μm,0.2s						
MT01	Popeta	1.46	206	⇓iP	Pn	03 33 49.1	+0.3
MT01				IAML		03 34 10.3	
	comp=N,1μm,0.1s						
MT01	Popeta	1.46	206	iP	Pn	03 33 48.5	-0.3
MT01				IAML		03 34 10.1	
	comp=Z,703nm,0.1s						
CO03	El Pedregal	1.71	354	iP	Pn	03 33 52.4	+0.3
CO03				IAML		03 34 16.6	
	comp=Z,894nm,0.1s						
ZON	Zonda	1.84	58	iP	Pn	03 33 53.1	-0.4
ZON				IAML		03 34 19.6	
	comp=Z,284nm,0.4s						
BO01	Tunca	1.90	195	iP	Pn	03 33 53.9	-0.3
BO01				IAML		03 34 22.3	
	comp=Z,161nm,0.3s						
SJA	San Juan	1.94	59	iP	Pn	03 33 55.7	+1.0
SJA				IAML		03 34 25.1	
	comp=Z,224nm,0.2s						
RTLL	Cerro Villicun	2.11	55	iP	Pn	03 33 56.6	-0.4
RTLL				IAML		03 34 24.4	
	comp=Z,343nm,0.3s						
ACCO	Cerro Coronel	2.31	32	iP	Pn	03 34 00.7	+0.9
GO04	Tololo Observa	2.38	354	iP	Pn	03 34 01.0	+0.3
GO04				IAML		03 34 34.5	
	comp=Z,493nm,0.2s						
AROD	Rodeo	2.53	21	iP	Pn	03 34 04.8	+2.1
CO01	Juntas del Tor	2.59	8	iP	Pn	03 34 04.6	+1.2
CO01				IAML		03 34 39.2	
	comp=Z,92nm,0.3s						
ACDV	Cuesta del Vie	2.65	27	iP	Pn	03 34 05.7	+1.6
ACDV				IAML		03 34 42.4	
	comp=Z,64nm,0.1s						
GO05	Hualane	2.73	206	iP	Pn	03 34 04.5	-0.4
GO05				IAML		03 34 59.9	

	comp=Z,80nm,0.7s						
RFA	**San Rafael**	**2.79**	**143**	*i* P	**Pn**	**03 34 05.4**	**-0.4**
RFA				IAML		03 34 57.6	
	comp=Z,25nm,1.1s						
AVFE	**Valle Fertil**	**3.21**	**55**	*i* P	**Pn**	**03 34 11.3**	**-0.1**
AVFE				IAML		03 34 50.6	
	comp=Z,100nm,0.4s						
ML02	**Panimavida**	**3.29**	**193**	*i* P	**Pn**	**03 34 12.1**	**-0.3**
ML02				IAML		03 34 52.1	
	comp=Z,55nm,1.6s						
LCO	**Las Campanas**	**3.53**	**357**	*i* P	**Pn**	**03 34 15.5**	**-0.4**
LCO				IAML		03 35 01.9	
	comp=Z,254nm,0.1s						
ACHE	**Chepes**	**3.54**	**68**	*i* P	**Pn**	**03 34 15.5**	**-0.5**
AC05	**El Transito**	**3.71**	**3**	*i* P	**Pn**	**03 34 18.4**	**+0.2**
AC05				IAML		03 35 02.5	
	comp=Z,114nm,0.7s						
MRA	**San Martin**	**4.04**	**89**	*i* P	**Pn**	**03 34 21.6**	**-1.0**
MRA				IAML		03 35 07.8	
	comp=Z,49nm,0.5s						
BI02	**San Fabin de**	**4.15**	**189**	*i* P	**Pn**	**03 34 23.9**	**-0.1**
BI02				IAML		03 35 14.9	
	comp=Z,25nm,0.7s						
VCA	**Vinchina**	**4.28**	**28**	*i* P	**Pn**	**03 34 25.6**	**-0.3**
VCA				IAML		03 35 20.5	
	comp=Z,172nm,0.9s						
ACLC	**CERRO LA CRUZ**	**4.36**	**45**	*i* P	**Pn**	**03 34 26.1**	**-0.8**
ACLC				IAML		03 35 35.5	
	comp=Z,66nm,0.5s						
AC04	**Llanos de Chal**	**4.36**	**353**	*i* P	**Pn**	**03 34 26.6**	**-0.2**
GO03	**Copiapo**	**4.95**	**3**	*i* P	**Pn**	**03 34 34.2**	**-0.6**
GO03				IAML		03 35 59.3	
	comp=Z,31nm,0.5s						
GO03				IAML		03 35 59.3	
	comp=Z,31nm,0.5s						
TINO	**Tinogasta**	**5.14**	**30**	*i* P	**Pn**	**03 34 37.4**	**0.0**
TINO				*i* P	**Pn**	**03 34 37.4**	**0.0**
TCA	**Tanti**	**5.16**	**78**	*i* P	**Pn**	**03 34 36.3**	**-1.4**
TCA				IAML		03 36 08.3	
	comp=Z,32nm,0.5s						
TCA				IAML		03 36 08.3	
	comp=Z,32nm,0.5s						
TCA				IAML		03 36 08.3	
	comp=Z,32nm,0.5s						

*IDC **06** 03:41:30.8±1.3, 9°.28S×125°.39E, h0km, mb3.9/4, mbtmp4.0/7, ML4.1/3, Error ellipse: s-maj=30.0km s-min=21.7km az=86.0*

*DJA **06** 03:41:36.2±0.5, 9°S±2°×12°5E±°, h10km, M4.2/10, mb4.5/2, MLv4.0/10*

ISC 06 03:41:32.5±1.1**, 9°.46S**±0°.08×**125°.31E**±0°.09**, h10km, n13, σ1ˢ.56**/15**, mb4.0**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.07**	**254**	P	**Pn**	**03 41 54.6**	**+1.0**
BATI	**Baumata**	**1.78**	**245**	Pn	**Pn**	**03 42 05.0**	**+1.6**
	47nm,0.3s,baz=115,slow=4.3,SNR=9.9						
BATI				Sn	**Sg**	**03 42 29.2**	**-0.7**
	37nm,0.3s,baz=72,slow=16,SNR=4.1						
BATI	**Baumata**	**1.78**	**245**	P	**Pn**	**03 42 04.8**	**+1.4**
MMRI	**Maumere**	**3.14**	**285**	P	**Pn**	**03 42 23.4**	**+1.3**
BASI	**Baing, Sumba**	**4.72**	**260**	P	**Pn**	**03 42 45.4**	**+1.6**
PLAI	**Plampang**	**7.46**	**274**	P	**Pn**	**03 43 22.4**	**+0.9**
FITZ	**Fitzroy Crossi**	**8.60**	**178**	Pn	**Pn**	**03 43 39.5**	**+2.4**
	2.2nm,0.3s,baz=359,slow=10,SNR=32						
FITZ				Sn	**Sn**	**03 45 11.3**	**-2.8**
	5.5nm,0.3s,baz=338,slow=19,SNR=12						
	5.8nm,0.3s						
WRA	**Warramunga Arr**	**13.60**	**141**	Pn	**Pn**	**03 44 46.5**	**+0.9**
	0.9nm,0.3s,baz=320,slow=13,SNR=35						
WRA				Sn	Sn	03 47 14.0	-2.8
	0.8nm,0.3s,baz=322,slow=24,SNR=7.6						
	4.2nm,0.7s						
ASAR	**Alice Springs**	**16.35**	**151**	Pn	**Pn**	**03 45 23.1**	**+0.8**
	0.8nm,0.3s,baz=328,slow=12,SNR=38						
ASAR				Sn	Sn	03 48 17.6	-6.2
	0.3nm,0.3s,baz=313,slow=19,SNR=6.9						
	1.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.03**	**317**	P	**P**	**03 48 50.8**	**-0.5**
	0.8nm,0.3s,baz=130,slow=9.0,SNR=4.9						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**67.85**	**330**	P	**P**	**03 52 30.5**	**-0.5**
	0.8nm,0.5s,baz=132,slow=7.9,SNR=13						
	0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**71.83**	**336**	P	**P**	**03 52 54.1**	**-1.1**
	0.7nm,0.5s,baz=123,slow=5.3,SNR=2.3						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**72.27**	**331**	P	**P**	**03 52 56.9**	**-1.1**
	0.3nm,0.5s,baz=141,slow=5.5,SNR=4.2						
	0.3nm,0.5s						

*BER **06** 04:06:51.9±3.0, 83°.23N×0°.45E, h10km, Mw3.6, Confirmed Earthquake*

ISC 06 04:06:42.6±4.1**, 82°.9N**±0°.2×**11°.9E**±0°.2**, h10km, n8, σ2ˢ.20**/12**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**4.00**	**180**	*e*P	**Pg**	**04 07 58.6**	**-0.4**
KBS				BAZ		04 07 58.9	
	baz=341,slow=9.3						
KBS				*e*		04 07 58.9	
KBS				*e*S	**Sg**	**04 08 51.2**	**+0.5**
KBS				IAML		04 08 55.5	
	comp=Z,4.2nm,0.4s						
SPA0	**Spitsbergen Ar**	**4.80**	**169**	*e*P	**Pg**	**04 08 12.1**	**-2.3**
SPA0				*e*		04 08 20.9	
SPA0	**Spitsbergen Ar**	**4.80**	**169**	*e*P	**Pg**	**04 08 10.7**	**-3.7**
SPA0				*e*S	**Sg**	**04 09 16.1**	**-0.4**
BRBB	**Barentsburg B**	**4.85**	**174**	*e*P	**Pg**	**04 08 15.3**	**0.0**
BRBA	**Barentsburg A**	**4.88**	**174**	*e*P	**Pg**	**04 08 14.8**	**-1.2**
ZFI2	**Zemlya Franca-**	**5.40**	**94**	*e*P	**Pg**	**04 08 23.8**	**-2.0**
	comp=Z,18nm,3.2s						
ZFI2				*e*S	**Sg**	**04 09 38.2**	**+2.5**
OMEGA	**Omega**	**5.43**	**94**	*e*P	**Pg**	**04 08 23.8**	**-2.5**
	comp=Z,1.0nm,0.2s						
OMEGA				*e*S	**Sg**	**04 09 38.2**	**+1.7**
	comp=Z,21nm,2.3s						
HSPB	**Hornsund (broa**	**5.96**	**172**	*e*P	**Pb**	**04 08 28.1**	**+1.7**
HSPB				IAML		04 08 28.8	
	comp=Z,2.7nm,0.5s						

*IDC **06** 04:10:10.2±0.7, 44°.23N×16°.00E, h0km, mb3.7/13, mbtmp3.8/28, ML3.4/12, MS3.3/19, Error ellipse: s-maj=12.7km s-min=9.2km az=60.0*

*PDG **06** 04:10:11.6±0.7, 44°.20N×15°.98E, h12km±2km, ML4.0/9, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

*NAO **06** 04:10:11.5, 44°.21N×16°.00E, h10km, MB3.8*

*BGR **06** 04:10:12.0±0.6, 44°.16N×16°.28E, h10km, ML4.3/27, Error ellipse: s-maj=10.0km s-min=6.7km az=20.0*

*BEO **06** 04:10:12.6±0.3, 44°.18N×16°.02E, h2km±2km, ML4.1/8*

*LDG **06** 04:10:13.6±0.2, 44°.19N×16°.12E, h10km, Ml4.0/38, Error ellipse: s-maj=4.3km s-min=3.5km az=109.0*

*PRU **06** 04:10:13.4, 44°.18N×15°.98E, h15km, M4.0*

*NEIC **06** 04:10:14.5±2.0, 44°.22N±0°.04×16°.06E±0°.04, h25km±6km, mb4.0/13, Error ellipse: s-maj=6.9km s-min=1.9km az=149.0*

ISC 06 04:10:11.2±0.4**, 44°.18N**±0°.02×**16°.02E**±0°.02**, h10km, n322, σ2ˢ.08**/453**, mb3.8**/15**, MS3.3**/9**, 28C-20D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIJV	**Kijevo**	**0.33**	**122**	*i* Pg	**Pg**	**04 10 18.5**	**+0.8**
KIJV				Sg	**Sb**	**04 10 23.8**	**-0.8**
MORI	**Morici**	**0.39**	**215**	*i* Pg	**Pb**	**04 10 20.2**	**+0.1**
MORI				Sg	**Sb**	**04 10 27.1**	**+1.0**
UDBI	**Udbina**	**0.39**	**332**	*i* Pg	**Pb**	**04 10 20.2**	**-0.1**
UDBI				Sg	**Sb**	**04 10 26.0**	**-0.4**
ZIRJ	**Zirje**	**0.59**	**207**	*i* Pg	**Pb**	**04 10 23.7**	**+0.1**
ZIRJ				Sg	**Sb**	**04 10 33.6**	**+1.6**
VIRC	**Vir**	**0.70**	**279**	*e*Pg	**Pb**	**04 10 25.4**	**-0.1**
VIRC				Sg	**Sn**	**04 10 36.9**	**-1.1**
DUGI	**Dugi Otok**	**0.72**	**255**	*i* Pg	**Pb**	**04 10 25.9**	**+0.2**
DUGI				Sg	**Sn**	**04 10 37.6**	**-0.8**
PLIT	**Plitvice**	**0.75**	**338**	*i* Pg	**Pg**	**04 10 26.1**	**+0.5**
PLIT				Sg	**Sb**	**04 10 36.5**	**-0.1**
NVLJ	**Novalja**	**0.91**	**295**	*e*Pg	**Pb**	**04 10 29.0**	**+0.1**
NVLJ				Sg	**Sn**	**04 10 42.8**	**-0.2**
BLY	**Banja Luka**	**1.01**	**55**	⇑P	**Pg**	**04 10 30.7**	**+0.1**
BLY				⇑S	**Sb**	**04 10 44.6**	**+0.6**
BLY	**Banja Luka**	**1.01**	**55**	*e*Pg	**Pg**	**04 10 30.7**	**+0.1**
BLY				*e*Sg	**Sn**	**04 10 45.0**	**-0.6**
RABC	**Rab**	**1.05**	**303**	*e*Pg	**Pn**	**04 10 31.9**	**0.0**
RABC				Sg	**Sn**	**04 10 47.5**	**+0.9**
HVAR	**Hvar**	**1.05**	**163**	*i* Pg	**Pg**	**04 10 31.3**	**0.0**
BOJS	**Bojanci**	**1.43**	**338**	⇑*i*Pg	**Pb**	**04 10 38.2**	**+0.3**
BOJS				*e*Sg	**Sg**	**04 10 57.0**	**-0.1**
BOJS				IAML		04 11 04.7	
	comp=Z,2µm,0.4s						
BOJS	**Bojanci**	**1.43**	**338**	*e*Pg	**Pg**	**04 10 38.6**	**0.0**
BOJS				*e*Sg	**Sg**	**04 10 58.2**	**+1.1**
OZLJ	**Ozalj**	**1.48**	**345**	*e*Pn	**Pb**	**04 10 39.3**	**+0.5**
OZLJ				Sn	**Sg**	**04 10 59.0**	**0.0**
MOSL	**Moslavina**	**1.52**	**20**	*i* Pn	**Pn**	**04 10 38.5**	**+0.1**
MOSL				Sn	**Sb**	**04 10 59.2**	**+0.3**
LSTV	**Lastovo**	**1.55**	**155**	*i* Pn	**Pb**	**04 10 40.5**	**+0.6**
LSTV				Sn	**Sg**	**04 11 01.3**	**+0.3**
RIY	**Rijeka**	**1.58**	**317**	*i* Pn	**Pg**	**04 10 41.2**	**-0.3**
RIY				Sn	**Sg**	**04 11 02.1**	**+0.1**
RIY	**Rijeka**	**1.58**	**317**	*e*Pg	**Pg**	**04 10 41.7**	**+0.2**
RIY				*e*Sg	**Sg**	**04 11 03.5**	**+1.5**
ZAG	**Zagreb**	**1.64**	**359**	*i* Pn	**Pb**	**04 10 41.2**	**-0.3**
ZAG				Sn	**Sb**	**04 11 02.1**	**-0.2**
CRES	**Cresnjevec Ost**	**1.69**	**347**	⇑*i*Pn	**Pb**	**04 10 42.1**	**-0.3**
CRES				*e*Sn	**Sb**	**04 11 04.6**	**+0.9**
CRES				IAML		04 11 10.6	
	comp=Z,720nm,0.3s						
PTJ	**Puntijarka**	**1.73**	**359**	*e*Pn	**Pn**	**04 10 41.8**	**+0.5**
PTJ				Sn	**Sn**	**04 11 04.0**	**+0.5**
STON	**Ston**	**1.79**	**136**	*e*Pn	**Pb**	**04 10 43.5**	**-0.6**
STON				Sn	**Sb**	**04 11 06.2**	**-0.4**
STON	**Ston**	**1.79**	**136**	*e*Pg	**Pb**	**04 10 44.2**	**+0.1**
STON				*e*Sg	**Sg**	**04 11 09.5**	**+0.7**
CEY	**Cerknica**	**1.92**	**325**	*e*Pn	**Pb**	**04 10 46.5**	**+0.2**
CEY				*e*Sn	**Sg**	**04 11 12.0**	**-0.9**
SKDS	**Skadanscina**	**1.97**	**314**	*e*Pn	**Pb**	**04 10 46.8**	**-0.4**
SKDS				*e*Sn	**Sb**	**04 11 11.1**	**-0.7**
KALN	**Kalnik**	**1.97**	**9**	*i* Pn	**Pn**	**04 10 44.9**	**+0.2**
KALN				Sn	**Sn**	**04 11 09.5**	**0.0**
LOBO	**Lobor**	**1.97**	**1**	*i* Pn	**Pn**	**04 10 45.3**	**+0.7**
LOBO				Sn	**Sn**	**04 11 10.3**	**+0.8**
LJU	**Ljubljana**	**2.14**	**331**	*e*Pn	**Pb**	**04 10 49.1**	**-0.9**
LJU				*e*Sn	**Sb**	**04 11 16.1**	**-0.5**
DBRK	**Dubrovnik**	**2.17**	**134**	*i* Pn	**Pb**	**04 10 49.2**	**-1.2**
DBRK				Sn	**Sb**	**04 11 16.1**	**-1.3**
TRI	**Trieste**	**2.21**	**314**		**Pn**	**04 10 48.4**	**+0.5**
TRI				Sn	**Sn**	**04 11 16.0**	**+0.7**
BRY	**Bratogost**	**2.24**	**124**	⇓*i*Pn	**Pb**	**04 10 50.6**	**-1.1**
BRY				*i* Sn	**Sb**	**04 11 19.6**	**+0.1**
TREB	**Trebinje**	**2.24**	**130**	*e*Pn	**Pb**	**04 10 50.5**	**-1.3**
TREB				*e*Sn	**Sb**	**04 11 18.9**	**-0.7**
GUMA	**Gualdo di Mace**	**2.25**	**241**		**Pn**	**04 10 50.1**	**+1.7**
GUMA				Sn	**Sb**	**04 11 18.7**	**-1.0**
CRNS	**Crni Vrh**	**2.27**	**327**	⇑*e*Pn	**Pb**	**04 10 50.8**	**-1.4**
KOGS	**Kog**	**2.27**	**4**	*i* Pn	**Pn**	**04 10 49.2**	**+0.5**
KOGS				*i*		04 10 54.4	
BEHE	**Becsehely**	**2.35**	**13**		**Pn**	**04 10 50.7**	**+0.9**
MOZS	**Mozjanca**	**2.39**	**333**	⇑*i*Pn	**Pb**	**04 10 52.5**	**-1.7**
MOZS				*e*Sn	**Sb**	**04 11 22.1**	**-1.7**
FDMO	**Fiordimonte**	**2.42**	**243**		**Pn**	**04 10 52.1**	**+1.3**
BBLS	**Lazi&#263i**	**2.46**	**96**	*e*Pn	**Pn**	**04 10 53.4**	**+2.0**
BBLS				*e*Sn	**Sb**	**04 11 24.1**	**-1.9**
SABO	**M.te Sabotino**	**2.48**	**317**		**Pn**	**04 10 53.0**	**+1.4**
RUDO	**Rudo**	**2.49**	**102**	*e*Pn	**Pn**	**04 10 53.5**	**+1.8**
RUDO				*e*Sn	**Sb**	**04 11 26.4**	**-0.2**
HCY	**Herceg Novi**	**2.50**	**133**	⇑*i*Pn	**Pn**	**04 10 53.7**	**+1.8**
HCY				*i* Sn	**Sb**	**04 11 26.3**	**-0.8**
NRCA	**Norcia**	**2.51**	**238**		**Pn**	**04 10 53.6**	**+1.6**
CAMP	**Campotosto**	**2.52**	**230**		**Pn**	**04 10 54.0**	**+1.8**
PERS	**Pernice**	**2.53**	**346**	⇑*i*Pn	**Pn**	**04 10 53.6**	**+1.2**
OBKA	**Obir**	**2.55**	**337**		**Pn**	**04 10 54.0**	**+1.4**
OBKA					**Sb**	**04 11 27.2**	**-1.2**
OBKA	**Obir**	**2.55**	**337**	*i* Pn	**Pn**	**04 10 54.0**	**+1.4**
	comp=Z,162nm,0.4s,SNR=52						
OBKA				*e*Sn	**Sb**	**04 11 27.2**	**-1.2**
	comp=Z,748nm,0.4s						
OBKA	**Obir**	**2.55**	**337**	*e*Pn	**Pn**	**04 10 54.2**	**+1.6**
NKME	**Niksic**	**2.56**	**122**	⇑*i*Pn	**Pb**	**04 10 55.2**	**-2.0**
NKME				*e*Sn	**Sb**	**04 11 28.1**	**-0.7**
PLE	**Pljevlja**	**2.59**	**108**	⇓*i*Pn	**Pb**	**04 10 55.8**	**-1.9**
PLE				*i* Sn	**Sb**	**04 11 28.0**	**-1.6**
SOKA	**Soboth**	**2.59**	**345**		**Pn**	**04 10 54.4**	**+1.2**
SOKA					**Sn**	**04 11 26.4**	**+1.6**
SOKA	**Soboth**	**2.59**	**345**	*e*Pn	**Pn**	**04 10 54.4**	**+1.2**
	comp=Z,70nm,0.3s,SNR=30						
SOKA				*e*Sn	**Sn**	**04 11 26.4**	**+1.6**
	comp=Z,265nm,0.6s						
INTR	**Introdacqua**	**2.67**	**216**		**Pn**	**04 10 55.1**	**+0.9**
MURB	**Monte Urbino**	**2.69**	**251**		**Pn**	**04 10 56.6**	**+2.0**
MORH	**Mrgy, Hungar**	**2.75**	**41**	⇓P	**Pn**	**04 10 56.2**	**+0.9**
MORH				⇓S	**Sn**	**04 11 30.9**	**+2.3**
BUM	**Brajici-Budva**	**2.82**	**131**	⇓*i*Pn	**Pn**	**04 10 58.7**	**+2.4**
BUM				*i* Sn	**Sb**	**04 11 34.3**	**-1.9**
PRED	**Cave del Predi**	**2.85**	**323**		**Pn**	**04 10 57.9**	**+1.2**
DIVS	**Divibare**	**2.86**	**90**	*e*Pn	**Pn**	**04 10 58.7**	**+1.8**
DIVS				*e*Sn	**Sn**	**04 11 34.2**	**+2.7**
KOME	**Kolasin**	**2.87**	**116**	⇓*i*Pn	**Pn**	**04 10 59.9**	**+2.8**
KOME				*e*Sn	**Sb**	**04 11 35.6**	**-2.1**
FRGS	**Fruska Gora**	**2.88**	**69**	*e*Pn	**Pn**	**04 10 59.9**	**+2.8**
FRGS				*e*Sn	**Sn**	**04 11 34.3**	**+2.6**
PDG	**Podgorica**	**2.94**	**125**		**Pn**	**04 10 59.6**	**+1.7**
PDG	**Podgorica**	**2.94**	**125**	⇑P	**Pn**	**04 11 00.7**	**+2.8**
PDG				⇓S	**Sb**	**04 11 38.7**	**-1.0**
PDG	**Podgorica**	**2.94**	**125**	⇓*i*Pn	**Pn**	**04 10 59.7**	**+1.8**
PDG				*i* Sn	**Sb**	**04 11 37.4**	**-2.2**
PDG	**Podgorica**	**2.94**	**125**	*e*Pn	**Pn**	**04 11 00.9**	**+3.0**
PDG				*e*Sn	**Sn**	**04 11 35.5**	**+2.2**
CESX	**Cesi**	**2.96**	**239**		**Pn**	**04 10 59.3**	**+1.2**
MYKA	**Terra Mystica**	**2.96**	**326**		**Pn**	**04 11 00.7**	**+2.3**
MYKA					**Sn**	**04 11 37.2**	**+3.2**
MYKA	**Terra Mystica**	**2.96**	**326**	*e*Pn	**Pn**	**04 11 00.7**	**+2.3**
	comp=Z,38nm,0.4s,SNR=23						
MYKA				*i* Sn	**Sn**	**04 11 37.2**	**+3.2**
	comp=Z,265nm,0.4s						
ARSA	**Arzberg**	**3.09**	**354**		**Pn**	**04 11 00.8**	**+0.8**
ARSA					**Sn**	**04 11 36.4**	**-0.6**
ARSA	**Arzberg**	**3.09**	**354**	*i* Pn	**Pn**	**04 11 01.1**	**+1.1**
	comp=Z,64nm,0.4s,SNR=36						
ARSA				*i* Sn	**Sn**	**04 11 38.6**	**+1.6**
	comp=Z,81nm,0.5s						
ARSA	**Arzberg**	**3.09**	**354**	*e*Pn	**Pn**	**04 11 01.1**	**+1.1**
IVA	**Berane**	**3.11**	**114**	⇓*i*Pn	**Pn**	**04 11 02.8**	**+2.5**
IVA				*i* Sn	**Sn**	**04 11 40.7**	**+3.1**
STAL	**STALIGIAL**	**3.13**	**313**	Pn	**Pn**	**04 11 01.4**	**+0.9**
TRUS	**Trudelj**	**3.16**	**88**	*e*Pn	**Pn**	**04 11 02.9**	**+2.0**
SUBS	**Subotica**	**3.21**	**52**	*e*Pn	**Pn**	**04 11 04.6**	**+2.9**
ULC	**Ulcinj**	**3.24**	**132**	⇓*i*Pn	**Pn**	**04 11 04.3**	**+2.2**
ULC				*i* Sn	**Sn**	**04 11 44.3**	**+3.5**
BEO	**Beograd**	**3.25**	**77**	*e*Pn	**Pn**	**04 11 04.3**	**+2.2**
AVAS	**Avala Beograd**	**3.26**	**79**	*e*Pn	**Pn**	**04 11 04.2**	**+1.9**
TEOL	**Teolo**	**3.31**	**292**		**Pn**	**04 11 04.5**	**+1.5**
PAOL	**Paolisi**	**3.33**	**199**		**Pn**	**04 11 04.4**	**+1.1**
ACER	**Acerenza**	**3.39**	**181**		**Pn**	**04 11 05.8**	**+1.6**
GRUS	**Gruza**	**3.40**	**93**	*e*Pn	**Pn**	**04 11 05.6**	**+1.4**
KBA	**Koelnbreinsper**	**3.45**	**328**		**Pn**	**04 11 07.3**	**+2.2**
KBA					**Sn**	**04 11 49.1**	**+3.0**
KBA	**Koelnbreinsper**	**3.45**	**328**	*i* Pn	**Pn**	**04 11 07.3**	**+2.2**
	comp=Z,29nm,0.4s,SNR=14						
KBA				*i* Sn	**Sn**	**04 11 49.1**	**+3.0**
	comp=Z,97nm,0.4s						
KBA	**Koelnbreinsper**	**3.45**	**328**	*e*Pn	**Pn**	**04 11 07.3**	**+2.2**
KBA				*e*Sn	**Sn**	**04 11 49.8**	**+3.7**
OSSC	**Osservatorio P**	**3.51**	**261**		**Pn**	**04 11 07.3**	**+1.5**
SOP	**Sopron**	**3.52**	**6**	*e*Pn	**Pn**	**04 11 06.6**	**+0.7**
RONA	**Rosalia, Austr**	**3.52**	**3**		**Pn**	**04 11 07.1**	**+1.1**
RONA	**Rosalia, Austr**	**3.52**	**3**	*i* Pn	**Pn**	**04 11 07.1**	**+1.1**
	comp=Z,69nm,0.4s,SNR=41						
ABTA	**Abfaltersbach**	**3.56**	**317**		**Pn**	**04 11 08.2**	**+1.6**
ABTA					**Sg**	**04 12 06.7**	**+1.3**
ABTA	**Abfaltersbach**	**3.56**	**317**	*i* Pn	**Pn**	**04 11 08.1**	**+1.6**
	comp=Z,12nm,0.2s,SNR=10						
ABTA				*e*Sn	**Sg**	**04 12 06.7**	**+1.3**
	comp=Z,352nm,0.5s						
MATE	**Matera**	**3.57**	**172**	⇑P	**Pb**	**04 11 11.4**	**-2.9**
CTI	**Castel Tesino**	**3.61**	**303**		**Pn**	**04 11 08.8**	**+1.6**
ZCCA	**Zocca**	**3.62**	**274**		**Pn**	**04 11 08.2**	**+0.9**
SVIS	**Svilajnac**	**3.74**	**87**	*e*Pn	**Pn**	**04 11 11.3**	**+2.4**
CONA	**Conrad Observa**	**3.75**	**358**	*i* Pn	**Pn**	**04 11 10.2**	**+1.1**
	comp=Z,101nm,0.3s,SNR=38						
CONA				*i* Sn	**Sn**	**04 11 55.2**	**+1.9**
	comp=Z,109nm,0.4s						
MOA	**Molln**	**3.87**	**342**		**Pn**	**04 11 13.0**	**+2.4**
MOA					**Sn**	**04 11 59.0**	**+2.8**
MOA	**Molln**	**3.87**	**342**	*i* Pn	**Pn**	**04 11 13.0**	**+2.4**
	comp=Z,152nm,0.4s,SNR=92						
MOA				*i* Sn	**Sn**	**04 11 59.0**	**+2.8**
	comp=Z,230nm,0.4s						
MOA	**Molln**	**3.87**	**342**	*e*Pn	**Pn**	**04 11 13.1**	**+2.5**
MOA				*e*Sn	**Sn**	**04 11 58.9**	**+2.7**
BIOA	**Bad Ischl, Aus**	**3.88**	**336**		**Pn**	**04 11 13.1**	**+2.2**
BIOA					**Sn**	**04 12 01.2**	**+4.7**
BIOA	**Bad Ischl, Aus**	**3.88**	**336**	*i* Pn	**Pn**	**04 11 13.1**	**+2.2**
	comp=Z,112nm,0.4s,SNR=50						
BIOA				*i* Sn	**Sn**	**04 12 01.2**	**+4.7**
	comp=Z,138nm,0.4s						
VRSS	**Vrsac**	**3.90**	**74**	*e*Pn	**Pn**	**04 11 14.8**	**+3.7**
BUD	**Budapest**	**3.91**	**31**	*e*Pn	**Pn**	**04 11 12.1**	**+0.8**
SRO	**Srobarova**	**3.97**	**23**	*e*PN	**Pn**	**04 11 13.2**	**+1.2**
SRO				*e*SN	**Sn**	**04 12 01.6**	**+3.0**
LESA	**Schwarzleotal**	**4.00**	**325**		**Pn**	**04 11 14.8**	**+2.3**
LESA					**Sn**	**04 12 03.0**	**+3.6**
LESA	**Schwarzleotal**	**4.00**	**325**	*i* Pn	**Pn**	**04 11 14.8**	**+2.3**
	comp=Z,6.6nm,0.4s,SNR=42						
LESA				*i* Sn	**Sn**	**04 12 03.1**	**+3.6**
	comp=Z,213nm,0.6s						
KUBS	**Kucevo**	**4.07**	**85**	*e*Pn	**Pn**	**04 11 15.4**	**+2.0**
ZST	**Bratislava**	**4.08**	**10**	*e*PN	**Pn**	**04 11 13.9**	**+0.3**
ZST				*e*SN	**Sn**	**04 12 01.8**	**+0.3**
MDVR	**Moldovita**	**4.12**	**80**	⇑P	**Pn**	**04 11 15.6**	**+1.4**
PRMA	**PARMA**	**4.12**	**280**		**Pn**	**04 11 15.3**	**+1.2**
BOVS	**Bovan**	**4.15**	**96**	⇓P	**Pn**	**04 11 16.5**	**+2.0**
BOVS				⇑S	**Sn**	**04 12 06.1**	**+3.1**
BOVS	**Bovan**	**4.15**	**96**	*e*Pn	**Pn**	**04 11 15.7**	**+1.2**
CUC	**Castrocucco**	**4.19**	**182**		**Pn**	**04 11 16.6**	**+1.4**
BZS	**Buzias**	**4.23**	**68**	⇑P	**Pn**	**04 11 17.8**	**+2.2**
MODS	**Modra-Piesok**	**4.28**	**11**	*e*PN	**Pn**	**04 11 16.6**	**+0.2**
MODS				*e*SN	**Sn**	**04 12 05.2**	**-1.2**
BSZH	**Besenyszg**	**4.31**	**42**	⇑S	**Sn**	**04 12 08.4**	**+1.4**
BORS2	**Bor- Borsko je**	**4.32**	**89**	*e*Pn	**Pn**	**04 11 18.4**	**+1.5**
WTTA	**Wattenberg**	**4.35**	**317**		**Pn**	**04 11 20.1**	**+2.6**
WTTA					**Sn**	**04 12 12.0**	**+3.7**
WTTA	**Wattenberg**	**4.35**	**317**	*i* Pn	**Pn**	**04 11 20.0**	**+2.6**
	comp=Z,50nm,0.3s,SNR=16						
WTTA				*e*Sn	**Sn**	**04 12 12.0**	**+3.7**
	comp=Z,174nm,0.3s						
WTTA	**Wattenberg**	**4.35**	**317**	*e*Pn	**Pn**	**04 11 20.1**	**+2.6**
WTTA				*e*Sn	**Sn**	**04 12 11.6**	**+3.4**
WATA	**Walderalm**	**4.43**	**317**		**Pn**	**04 11 21.1**	**+2.6**
WATA					**Sn**	**04 12 12.9**	**+2.7**
WATA	**Walderalm**	**4.43**	**317**	*i* Pn	**Pn**	**04 11 21.1**	**+2.6**
	comp=Z,43nm,0.2s,SNR=29						
WATA				*i* Sn	**Sn**	**04 12 12.9**	**+2.7**
	comp=Z,147nm,0.3s						
BARS	**Barje**	**4.43**	**106**	*e*Pn	**Pn**	**04 11 20.8**	**+2.3**
SIRR	**Siria**	**4.50**	**60**	⇑P	**Pn**	**04 11 21.3**	**+1.9**
ZAGS	**Zajecar**	**4.50**	**93**	*e*Pn	**Pn**	**04 11 20.8**	**+1.5**
SQTA	**Sankt Quirin**	**4.54**	**314**		**Pn**	**04 11 22.8**	**+2.8**
SQTA					**Sn**	**04 12 15.3**	**+2.5**
SQTA	**Sankt Quirin**	**4.54**	**314**	*i* Pn	**Pn**	**04 11 22.8**	**+2.8**
	comp=Z,17nm,0.2s,SNR=14						
SQTA				*i* Sn	**Sn**	**04 12 15.3**	**+2.5**
	comp=Z,134nm,0.4s						
SQTA	**Sankt Quirin**	**4.54**	**314**	*e*Pn	**Pn**	**04 11 23.0**	**+3.0**
KW1	**Garching a.d.**	**4.60**	**330**	*e*Pn	**Pn**	**04 11 23.3**	**+2.6**
KW1				*e*Sn	**Sn**	**04 12 17.5**	**+3.3**
PSZ	**Piszkesteto**	**4.61**	**34**		**Pn**	**04 11 20.7**	**-0.3**
PSZ	**Piszkesteto**	**4.61**	**34**	⇓P	**Pn**	**04 11 21.3**	**+0.4**
PSZ	**Piszkesteto**	**4.61**	**34**	*e*Pn	**Pn**	**04 11 20.9**	**-0.1**
HERR	**Herculane**	**4.63**	**79**	⇑P	**Pn**	**04 11 22.4**	**+1.3**
MOTA	**Moosalm**	**4.67**	**314**		**Pn**	**04 11 24.5**	**+2.7**
MOTA					**Sn**	**04 12 19.5**	**+3.3**
MOTA	**Moosalm**	**4.67**	**314**	*i* Pn	**Pn**	**04 11 24.5**	**+2.7**
	comp=Z,17nm,0.2s,SNR=19						
MOTA				*i* Sn	**Sn**	**04 12 19.5**	**+3.3**
	comp=Z,101nm,0.3s						
MOTA	**Moosalm**	**4.67**	**314**	*e*Pn	**Pn**	**04 11 24.4**	**+2.5**
MOTA				*e*Sn	**Sn**	**04 12 20.8**	**+4.6**
FETA	**Feichten**	**4.67**	**309**		**Pn**	**04 11 24.5**	**+2.6**
FETA	**Feichten**	**4.67**	**309**	*i* Pn	**Pn**	**04 11 24.5**	**+2.6**
	comp=Z,7.4nm,0.4s						
FETA				Sn	**Sg**	**04 12 42.4**	**+1.2**
	comp=Z,153nm,0.9s						
OHR	**Ohrid**	**4.67**	**129**	*i* Pn	**Pn**	**04 11 25.1**	**+3.3**
FUORN	**Ofenpass-Fuorn**	**4.73**	**303**		**Pn**	**04 11 24.2**	**+1.4**
PART	**Garmisch-Parte**	**4.77**	**316**	*e*Pn	**Pn**	**04 11 26.2**	**+3.1**
PART				*e*Sn	**Sn**	**04 12 21.5**	**+3.1**
ZUGS	**Zugspitze, Sch**	**4.78**	**314**	*e*Pn	**Pn**	**04 11 26.3**	**+2.8**
CKRC	**Cesky Krumlov**	**4.79**	**346**	*e*PN	**Pn**	**04 11 25.0**	**+1.7**
CKRC				*e*SN	**Sn**	**04 12 18.2**	**-0.6**
JAVC	**Velka Javorina**	**4.81**	**13**	*e*PN	**Pn**	**04 11 24.4**	**+0.7**
BLKB	**Belogradchik**	**4.84**	**94**	⇓S	**Sn**	**04 12 24.8**	**+4.5**
KRUC	**Moravsky**	**4.89**	**3**	*e*PN	**Pn**	**04 11 25.3**	**+0.6**
KRUC				*e*SN	**Sn**	**04 12 20.8**	**-0.5**
GEC2	**GERESS Array S**	**4.93**	**342**		**Pn**	**04 11 26.5**	**+1.2**
GEC2	**GERESS Array S**	**4.93**	**342**	*e*Pn	**Pn**	**04 11 26.7**	**+1.4**
GEC2				*e*Sn	**Sn**	**04 12 21.8**	**-0.6**
GERES	**GERESS Array B**	**4.93**	**342**	Pn	**Pn**	**04 11 26.8**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=155,slow=13,SNR=187						
GERES				Sn	**Sn**	**04 12 21.9**	**-0.6**
	comp=Z,5.7nm,0.3s,baz=151,slow=23,SNR=15						
GERES				LR	LR	04 13 52.2	
	comp=Z,253nm,19.1s,baz=206,slow=46						
	comp=Z,40nm,0.6s						
RETA	**Reutte**	**4.94**	**314**		**Pn**	**04 11 27.6**	**+2.2**
RETA					**Sn**	**04 12 25.0**	**+2.3**
RETA	**Reutte**	**4.94**	**314**	*i* Pn	**Pn**	**04 11 27.6**	**+2.2**
	comp=Z,14nm,0.3s,SNR=7.6						
RETA				*i* Sn	**Sn**	**04 12 25.0**	**+2.3**
	comp=Z,226nm,0.5s						
RETA	**Reutte**	**4.94**	**314**	*e*Pn	**Pn**	**04 11 27.8**	**+2.3**
PUNG	**Punghina**	**4.97**	**86**	⇑P	**Pn**	**04 11 29.0**	**+3.2**
BE1	**Monatshausen**	**5.00**	**320**	*e*Pn	**Pn**	**04 11 28.4**	**+2.1**
BOSS	**Bosilegrad**	**5.01**	**107**	*e*Pn	**Pn**	**04 11 27.6**	**+1.3**
TIP	**Timpagrande**	**5.03**	**173**		**Pn**	**04 11 28.8**	**+2.1**
TIP	**Timpagrande**	**5.03**	**173**	⇑P	**Pn**	**04 11 31.3**	**+4.6**
DAVOX	**Davos/Dischmat**	**5.04**	**303**	Pn	**Pn**	**04 11 28.3**	**+1.4**
	comp=Z,6.9nm,0.3s,baz=123,slow=12,SNR=58						
DAVOX				Sn	**Sn**	**04 12 28.6**	**+3.3**
	comp=Z,6.5nm,0.3s,baz=134,slow=9.2,SNR=4.2						
DAVOX				Lg	Lg	04 12 53.5	
	comp=Z,6.5nm,0.3s,baz=27,slow=16,SNR=3.8						
DAVOX				LR	LR	04 13 36.1	
	comp=Z,47nm,18.5s,baz=104,slow=41						
	comp=Z,28nm,0.4s						
TREC	**Trest**	**5.13**	**356**	*e*PN	**Pn**	**04 11 29.8**	**+1.8**
VRAC	**Vranov**	**5.14**	**4**	Pn	**Pn**	**04 11 29.0**	**+0.8**
	comp=Z,16nm,0.5s,baz=191,slow=14,SNR=31						
VRAC				Sn	**Sn**	**04 12 26.8**	**-0.7**
	comp=Z,6.6nm,0.3s,baz=252,slow=20,SNR=7.4						
VRAC	**Vranov**	**5.14**	**4**	⇑P	**Pn**	**04 11 28.8**	**+0.6**
VRAC				⇓S	**Sn**	**04 12 29.0**	**+1.4**
VRAC	**Vranov**	**5.14**	**4**	*e*PN	**Pn**	**04 11 28.6**	**+0.4**
VRAC				*e*SN	**Sn**	**04 12 26.2**	**-1.4**
FUR	**Furstenfeldbru**	**5.17**	**322**	*e*Sn	**Sn**	**04 12 29.3**	**+1.1**
DEV	**Deva**	**5.17**	**68**	⇑P	**Pn**	**04 11 30.3**	**+1.8**
SRE	**Strehaia**	**5.17**	**82**	⇑P	**Pn**	**04 11 30.5**	**+1.9**
KHC	**Kasperske Hory**	**5.23**	**342**	*e*PN	**Pn**	**04 11 30.0**	**+0.6**
KHC				*e*SN	**Sn**	**04 12 26.5**	**-3.2**
TUE	**Stuetta**	**5.23**	**298**		**Pn**	**04 11 31.7**	**+2.1**
KEK	**Kerkira**	**5.28**	**146**	Pn	**Pn**	**04 11 31.5**	**+1.4**
KECS	**Kecovo**	**5.30**	**34**	*e*PN	**Pn**	**04 11 31.8**	**+1.5**
KECS				*e*SN	**Sn**	**04 12 29.5**	**-1.9**
DAVA	**Damuels**	**5.30**	**308**		**Pn**	**04 11 32.7**	**+2.2**
DAVA					**Sn**	**04 12 35.9**	**+4.2**
DAVA	**Damuels**	**5.30**	**308**	*i* Pn	**Pn**	**04 11 32.7**	**+2.2**
	comp=Z,0.9nm,0.2s						
DAVA				*e*Sn	**Sn**	**04 12 35.9**	**+4.2**
	comp=Z,58nm,0.3s						
DAVA	**Damuels**	**5.30**	**308**	*e*Sn	**Sn**	**04 12 34.6**	**+2.9**
MAUC	**Maruska**	**5.33**	**13**	*e*PN	**Pn**	**04 11 32.4**	**+1.6**
PGF	**Pioggiola**	**5.37**	**255**	*e*Pn	**Pn**	**04 11 32.9**	**+1.5**
PGF				*e*Sn	**Sn**	**04 12 31.6**	**-1.8**
	comp=Z,15nm,0.5s						
DRGR		**5.38**	**59**	⇓P	**Pn**	**04 11 33.7**	**+2.2**
ZVC	**Zvikov**	**5.41**	**347**	*e*PN	**Pn**	**04 11 33.3**	**+1.5**
ZVC				*e*SN	**Sn**	**04 12 32.6**	**-1.4**
WET	**Wettzell**	**5.41**	**338**	*e*Pn	**Pn**	**04 11 33.2**	**+1.2**
MARR	**Marisel-Cluj**	**5.58**	**61**	⇓P	**Pn**	**04 11 36.4**	**+2.0**
LOT	**Lotru**	**5.66**	**74**	⇑P	**Pn**	**04 11 37.0**	**+1.7**
MESR	**Meseseni**	**5.69**	**56**	⇑P	**Pn**	**04 11 38.2**	**+2.5**
MORC	**Moravsky Berou**	**5.69**	**10**		**Pn**	**04 11 36.6**	**+0.8**
MORC	**Moravsky Berou**	**5.69**	**10**	⇓P	**Pn**	**04 11 37.1**	**+1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MORC	**Moravsky Berou**	**5.69**	**10**	*e*PN	**Pn**	**04 11 36.3**	**+0.5**
MORC				*e*SN	**Sn**	**04 12 42.0**	**+0.8**
OKC	**Ostrava-Krasne**	**5.84**	**14**	*e*PN	**Pn**	**04 11 38.7**	**+0.9**
STEB	**Steborice**	**5.88**	**11**	*e*PN	**Pn**	**04 11 39.3**	**+1.0**
STEB				*e*SN	**Sn**	**04 12 45.2**	**-0.5**
PRU	**Pruhonice**	**5.89**	**351**	*e*PN	**Pn**	**04 11 39.6**	**+1.1**
PRU				*e*SN	**Sn**	**04 12 44.4**	**-1.7**
CEL	**Celeste**	**5.92**	**181**	Pn	**Pn**	**04 11 41.3**	**+2.4**
PRA	**Prague**	**5.99**	**350**	*e*PN	**Pn**	**04 11 41.4**	**+1.6**
ROTZ	**Rotzenmuhle**	**6.16**	**336**	*e*Pn	**Pn**	**04 11 42.9**	**+0.7**
DPC	**Dobruska-Polom**	**6.17**	**2**	*e*PN	**Pn**	**04 11 43.8**	**+1.4**
SBF	**Sospel**	**6.20**	**270**	*e*Pn	**Pn**	**04 11 43.0**	**+0.3**
SBF				*e*Sn	**Sn**	**04 12 52.7**	**-0.9**
	comp=Z,89nm,0.5s						
ARR	**Arges**	**6.25**	**76**	⇓P	**Pn**	**04 11 45.7**	**+2.3**
OSTC	**Ostas**	**6.38**	**1**	*e*PN	**Pn**	**04 11 46.6**	**+1.4**
MANZ	**Manzenberg**	**6.39**	**337**	*e*Pn	**Pn**	**04 11 46.3**	**+1.0**
MANZ				*e*Sn	**Sn**	**04 12 57.2**	**-1.1**
GRA1	**Grafenberg Arr**	**6.41**	**331**		**Pn**	**04 11 46.7**	**+1.0**
TGMR	**Targu Mures**	**6.43**	**66**	⇑P	**Pn**	**04 11 47.4**	**+1.5**
NKC	**Novy Kostel**	**6.52**	**339**	*e*PN	**Pn**	**04 11 47.5**	**+0.4**
SENIN	**Lac Senin/Sane**	**6.53**	**293**		**Pn**	**04 11 48.6**	**+1.2**
VOIR		**6.55**	**76**	⇑P	**Pn**	**04 11 49.3**	**+1.8**
OJC	**Ojcow**	**6.56**	**22**	Pn	**Pn**	**04 11 48.7**	**+1.0**
STU	**Stuttgart**	**6.58**	**317**		**Pn**	**04 11 47.9**	**0.0**
STU	**Stuttgart**	**6.58**	**317**	*e*Sn	**Sn**	**04 13 01.0**	**-1.9**
MBDF	**Montbardon**	**6.64**	**278**	*e*Pn	**Pn**	**04 11 47.8**	**-1.1**
MBDF				*e*Sn	**Sn**	**04 13 03.0**	**-1.7**
	comp=Z,46nm,0.5s						
HSKC	**Hora Svate Kat**	**6.66**	**346**	*e*PN	**Pn**	**04 11 49.1**	**0.0**
LPG	**La Plagne**	**6.72**	**285**	*e*Pn	**Pn**	**04 11 50.9**	**+0.8**
LPG				*e*Sn	**Sn**	**04 13 04.4**	**-2.4**
	comp=Z,31nm,0.4s						
BNI	**Bardonecchia**	**6.72**	**281**		**Pn**	**04 11 50.2**	**+0.2**
LPL	**La Plagne**	**6.73**	**285**	*e*Pn	**Pn**	**04 11 51.2**	**+1.0**
LPL				*e*Sn	**Sn**	**04 13 04.8**	**-2.3**
	comp=Z,77nm,0.4s						
BFO	**Black Forest**	**6.75**	**311**		**Pn**	**04 11 50.7**	**+0.4**
BFO	**Black Forest**	**6.75**	**311**	*e*Pn	**Pn**	**04 11 50.7**	**+0.4**
VAE	**Valguarnera**	**6.81**	**191**	Pn	**Pn**	**04 11 53.2**	**+2.0**
	comp=Z,9.6nm,0.8s,baz=58,slow=7.0,SNR=3.0						
VAE				LR	LR	04 15 12.2	
	comp=Z,388nm,18.0s,baz=355,slow=44						
VSL	**Villasalto**	**6.82**	**229**	Pn	**Pn**	**04 11 53.2**	**+2.0**
BRG	**Berggiesshubel**	**6.84**	**349**	Pn	**Pn**	**04 11 52.2**	**+0.7**
BRG				r		04 12 00.0	
BRG	**Berggiesshubel**	**6.84**	**349**	Sn	**Sn**	**04 13 07.5**	**-1.8**
BRG				r		04 13 35.0	
BRG	**Berggiesshubel**	**6.84**	**349**	Sg	**Sg**	**04 13 46.9**	**-3.7**
BRG				Amp		04 13 58.0	
	comp=Z,33nm,0.7s						
DOPR	**Dopca**	**6.87**	**72**	⇓P	**Pn**	**04 11 53.8**	**+1.9**
LMR	**La Mourre**	**6.94**	**266**	*e*Pn	**Pn**	**04 11 53.5**	**+0.7**
LMR				*e*Sn	**Sn**	**04 13 08.7**	**-3.1**
	comp=Z,19nm,0.5s						
MOX	**Moxa**	**7.12**	**337**	*e*Pn	**Pn**	**04 11 56.3**	**+1.0**
MLR	**Muntele Rosu**	**7.18**	**76**	LR	LR	04 15 06.8	
	comp=Z,174nm,20.2s,baz=69,slow=41						
ELND	**Elena**	**7.27**	**97**	⇑P	**Pn**	**04 11 59.3**	**+1.9**
BURAR	**Bucovina Array**	**7.28**	**59**	Pn	**Pn**	**04 12 00.0**	**+2.5**
BURAR	**Bucovina Array**	**7.28**	**59**	⇓P	**Pn**	**04 11 58.3**	**+0.7**
BUR08	**Bucovina Ar. S**	**7.28**	**58**		**Pn**	**04 11 58.5**	**+0.9**
ORIF	**Oris-en-Rattie**	**7.28**	**279**	*e*Pn	**Pn**	**04 11 58.6**	**+1.0**
ORIF				*e*Sn	**Sn**	**04 13 18.2**	**-2.2**
	comp=Z,57nm,0.5s						
HINF	**Hinteralfeld**	**7.34**	**303**	*e*Pn	**Pn**	**04 11 59.4**	**+1.0**
HINF				*e*Sn	**Sn**	**04 13 18.8**	**-3.0**
	comp=Z,38nm,0.4s						
ECH	**Echery**	**7.35**	**306**		**Pn**	**04 11 59.3**	**+0.8**
CDF	**Champ du Feu**	**7.38**	**308**	*e*Pn	**Pn**	**04 11 59.7**	**+0.7**
CDF				*e*Sn	**Sn**	**04 13 19.3**	**-3.6**
	comp=Z,8.2nm,0.3s						
CABF	**La Chapelle**	**7.40**	**293**	*e*Pn	**Pn**	**04 12 00.0**	**+0.7**
CABF				*e*Sn	**Sn**	**04 13 20.6**	**-2.7**
	comp=Z,18nm,0.6s						
CLL	**Collm**	**7.41**	**345**		**Pn**	**04 12 00.0**	**+0.7**
CLL	**Collm**	**7.41**	**345**	*e*Pn	**Pn**	**04 12 00.0**	**+0.7**
CLL				*e*Pg	**Pg**	**04 12 33.0**	**0.0**
CLL				*e*Sn	**Sn**	**04 13 19.0**	**-4.4**
CLL				*e*x	x	04 13 23.0	
CLL				*e*x	x	04 13 28.0	
CLL				*e*Sb	**Sb**	**04 13 49.0**	**+0.8**
CLL				*e*Sg	**Sg**	**04 14 03.0**	**-5.9**
	comp=Z,93nm,1.1s						
CLL				AMS	AMS	08 22 00.0	
	comp=N,300nm,19.2s						
CLL				AMS	AMS	08 22 00.0	
	comp=E,200nm,19.5s						
CLL				AMS	AMS	08 22 00.0	
	comp=Z,400nm,19.4s						
NEHR	**Nehoiu**	**7.42**	**77**	⇑P	**Pn**	**04 12 02.1**	**+2.6**
SMRF	**Simiane la Rot**	**7.52**	**272**	*e*Pn	**Pn**	**04 12 01.5**	**+0.6**
SMRF				*e*Sn	**Sn**	**04 13 23.6**	**-2.7**
	comp=Z,12nm,0.5s						
HAU	**Haudompre**	**7.73**	**303**	*e*Pn	**Pn**	**04 12 04.6**	**+0.9**
HAU				*e*Sn	**Sn**	**04 13 28.0**	**-3.3**
	comp=Z,51nm,0.5s						
TNS	**Taunus Mts**	**7.94**	**322**	*e*Pn	**Pn**	**04 12 08.3**	**+1.7**
VIVF	**Saint-Julien-l**	**8.14**	**279**	*e*Pn	**Pn**	**04 12 08.7**	**-0.6**
VIVF				*e*Sn	**Sn**	**04 13 36.4**	**-4.9**
	comp=Z,10nm,0.4s						
SSB	**Saint Sauveur**	**8.25**	**282**		**Pn**	**04 12 12.0**	**+1.1**
PAGF	**Fort de Pagny**	**8.35**	**305**	*e*Sn	**Sn**	**04 13 43.5**	**-3.0**
	comp=Z,20nm,0.5s						
SFTF	**Sexfontaines**	**8.61**	**302**	*e*Pn	**Pn**	**04 12 17.7**	**+1.9**
SFTF				*e*Sn	**Sn**	**04 13 49.0**	**-3.9**
	comp=Z,23nm,0.6s						
MEZF	**Maizieres J'vi**	**8.73**	**304**	*e*Pn	**Pn**	**04 12 17.4**	**0.0**
MEZF				*e*Sn	**Sn**	**04 13 50.4**	**-5.3**
	comp=Z,8.1nm,0.4s						
SAVF	**Savonnieres en**	**8.73**	**304**	*e*Pn	**Pn**	**04 12 18.5**	**+1.1**
LASF	**Ste Croix**	**8.75**	**274**	*e*Pn	**Pn**	**04 12 18.7**	**+1.0**
LASF				*e*Sn	**Sn**	**04 13 53.7**	**-2.7**
	comp=Z,4.3nm,0.3s						
SMF	**Signal de Mont**	**8.91**	**290**	*e*Pn	**Pn**	**04 12 19.6**	**-0.3**
SMF				*e*Sn	**Sn**	**04 13 56.7**	**-3.6**
	comp=Z,22nm,0.5s						
LOR	**Lormes**	**9.05**	**294**	*e*Pn	**Pn**	**04 12 21.7**	**-0.1**
	baz=108						
LOR				*e*Sn	**Sn**	**04 13 58.5**	**-5.2**
	comp=Z,28nm,0.4s						
SSF	**Saint Saulge**	**9.23**	**293**	*e*Pn	**Pn**	**04 12 24.2**	**0.0**
SSF				*e*Sn	**Sn**	**04 14 02.8**	**-5.3**
	comp=Z,18nm,0.5s						
AVF	**Avril sur Loir**	**9.27**	**291**	*e*Pn	**Pn**	**04 12 24.9**	**+0.1**
AVF				*e*Sn	**Sn**	**04 14 03.8**	**-5.3**
	comp=Z,21nm,0.7s						
BGF	**Bois d'Agland**	**9.57**	**289**	*e*Pn	**Pn**	**04 12 29.7**	**+0.8**
BGF				*e*Sn	**Sn**	**04 14 12.4**	**-4.1**
	comp=Z,29nm,0.6s						
GIVF	**Givet**	**9.65**	**312**	*e*Pn	**Pn**	**04 12 29.6**	**-0.4**
GIVF				*e*Sn	**Sn**	**04 14 12.1**	**-6.3**
	comp=Z,5.7nm,0.4s						
HYF	**Humbligny**	**9.85**	**293**	*e*Pn	**Pn**	**04 12 33.7**	**+0.9**
HYF				*e*Sn	**Sn**	**04 14 19.4**	**-4.0**
	comp=Z,53nm,0.3s						
KEST	**Kesra**	**9.87**	**213**	Pn	Pn	04 12 42.1	+9.0
	comp=Z,0.5nm,0.3s,baz=33,slow=5.8,SNR=9.3						
KEST				LR	LR	04 16 45.5	
	comp=Z,141nm,19.8s,baz=332,slow=40						
KEST	**Kesra**	**9.87**	**213**	Pn	**Pn**	**04 12 36.6**	**+3.5**
BAIF	**Baives**	**9.96**	**310**	*e*Pn	**Pn**	**04 12 34.9**	**+0.7**
TCF	**Toulx Ste Croi**	**9.97**	**287**	*e*Pn	**Pn**	**04 12 33.4**	**-1.0**
TCF				*e*Sn	**Sn**	**04 14 20.3**	**-5.9**
	comp=Z,17nm,0.5s						
CAF	**Calviac**	**9.99**	**279**	*e*Pn	**Pn**	**04 12 35.2**	**+0.5**
CAF				*e*Sn	**Sn**	**04 14 21.1**	**-5.8**
	comp=Z,1.2nm,0.2s						
MTLF	**Montolieu**	**10.02**	**270**	*e*Pn	**Pn**	**04 12 35.7**	**+0.6**
MTLF				*e*Sn	**Sn**	**04 14 24.3**	**-3.3**
	comp=Z,0.6nm,0.2s						
RJF	**Les Rejaudoux**	**10.38**	**281**	*e*Sn	**Sn**	**04 14 31.5**	**-4.9**
	comp=Z,3.4nm,0.4s						
SUW	**Suwalki**	**10.89**	**23**	Pn	**Pn**	**04 12 48.0**	**+1.0**
AKASG	**Malin Array Be**	**11.06**	**49**	Pn	**Pn**	**04 12 50.3**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=243,slow=12,SNR=4.2						
AKASG				LR	LR	04 17 31.8	
	comp=Z,130nm,19.2s,baz=239,slow=40						
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**11.06**	**49**		**Pn**	**04 12 49.9**	**+0.7**
IDI	**Anoyia**	**11.20**	**139**	Pn	**Pn**	**04 12 50.3**	**-1.0**
	comp=Z,8.6nm,0.9s,baz=332,slow=17,SNR=1.6						
IDI				Sn	**Sn**	**04 14 49.1**	**-7.4**
	comp=Z,0.2nm,0.3s,baz=60,slow=20,SNR=3.4						
IDI	**Anoyia**	**11.20**	**139**		**Pn**	**04 12 51.8**	**+0.5**
EPF	**Esparros**	**11.43**	**270**	*e*Pn	**Pn**	**04 12 54.6**	**+0.2**
MFF	**Saint Martin d**	**11.62**	**288**	*e*Pn	**Pn**	**04 12 57.2**	**+0.2**
MFF				*e*Sn	**Sn**	**04 15 00.0**	**-6.7**
	comp=Z,2.2nm,0.3s						
MFF				*e*Sn	Sn	04 15 00.3	-6.4
	comp=Z,4.3nm,0.3s						
LDF	**La Druitiere**	**11.98**	**297**	*e*Pn	**Pn**	**04 13 02.4**	**+0.5**
FLN	**La Foliniere**	**12.26**	**298**	*e*Pn	**Pn**	**04 13 06.5**	**+0.8**
GRR	**Gorron**	**12.40**	**296**	*e*Pn	**Pn**	**04 13 08.2**	**+0.5**
SGMF	**Saint Gilles**	**13.48**	**294**	*e*Pn	**Pn**	**04 13 22.8**	**+0.4**
QUIF	**Quistinic**	**13.83**	**292**	*e*Pn	**Pn**	**04 13 27.7**	**+0.6**
QUIF				*e*Sn	**Sn**	**04 15 54.6**	**-6.1**
	comp=Z,1.9nm,0.3s						
BRTR	**Keskin Array B**	**13.85**	**103**	Pn	**Pn**	**04 13 30.7**	**+3.2**
	baz=294,slow=11,SNR=2.3						
BRTR				Sn	**Sn**	**04 15 54.9**	**-6.5**
	comp=Z,0.1nm,0.3s,baz=313,slow=38,SNR=1.7						
	comp=Z,0.7nm,1.0s						
BRTR	**Keskin Array B**	**13.85**	**103**		**Pn**	**04 13 29.1**	**+1.6**
ROSF	**Rostrenen**	**13.97**	**294**	*e*Pn	**Pn**	**04 13 29.2**	**+0.1**
ESBB	**Sonseca Array**	**15.53**	**260**	Pn	**Pn**	**04 13 52.3**	**+2.1**
ESDC	**Sonseca Array**	**15.53**	**260**	Pn	**P**	**04 13 53.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=79,slow=12,SNR=28						
ESDC	**Sonseca Array**	**15.53**	**260**		**Pn**	**04 13 50.5**	**+0.3**
PAB	**San Pablo**	**15.86**	**260**	Pn	**Pn**	**04 13 55.1**	**+0.6**
HFS	**Hagfors**	**16.04**	**356**	Pn	**Pn**	**04 13 56.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=187,slow=10,SNR=4.4						
HFS				LR	LR	04 19 45.2	
	comp=Z,110nm,18.9s,baz=222,slow=36						
	comp=Z,8.6nm,1.2s						
EKA	**Eskdalemuir Ar**	**16.61**	**319**	Pn	**Pn**	**04 14 04.2**	**+0.3**
	baz=131,slow=14						
EKA				Sn	**Sn**	**04 17 04.1**	**-4.1**
	baz=117,slow=25						
	comp=Z,1.0nm,0.8s						
NC602	**NORSAR Array S**	**16.80**	**352**		**P**	**04 14 08.1**	**-0.3**
NC602				IAmb	IAmb	04 14 24.9	
	comp=Z,33nm,1.4s						
NAO01	**NORSAR Array S**	**16.97**	**351**	Pn	**P**	**04 14 09.6**	**-0.8**
NAO01				IAmb	IAmb	04 14 18.5	
	comp=Z,9.5nm,0.9s						
NB2	**NORSAR Subarra**	**17.13**	**352**	P	**P**	**04 14 12.5**	**+0.4**
	comp=Z,6.2nm,1.0s,baz=168,slow=11						
NOA	**NORSAR Array B**	**17.13**	**352**	P	**Pn**	**04 14 10.4**	**0.0**
	baz=167,slow=11,SNR=5.1						
NOA				LR	LR	04 21 26.8	
	comp=Z,80nm,18.5s,baz=260,slow=40						
	comp=Z,0.6nm,0.8s						
OBN	**Obninsk**	**17.16**	**43**	LR	LR	04 21 53.4	
	comp=Z,186nm,18.9s,baz=54,slow=41						
NC204	**NORSAR Array S**	**17.41**	**351**		**P**	**04 14 15.7**	**+0.5**
NC204				IAmb	IAmb	04 14 53.3	
	comp=Z,38nm,1.5s						
FINES	**FINESS Array B**	**18.29**	**16**	P	**Pn**	**04 14 24.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=168,slow=9.8,SNR=8.0						
FINES				LR	LR	04 22 39.0	
	comp=Z,120nm,19.8s,baz=237,slow=41						
	comp=Z,7.8nm,0.8s						
FIA1	**FINESS Array S**	**18.29**	**16**		**Pn**	**04 14 24.7**	**0.0**
MMAI	**Mount Meron Ar**	**18.76**	**120**	P	**Pn**	**04 14 33.1**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=321,slow=13,SNR=1.8						
	comp=Z,0.3nm,0.3s						
KVAR	**Kislovodsk Arr**	**19.15**	**81**	P	**Pn**	**04 14 37.0**	**+1.5**
	baz=288,slow=16						
	comp=Z,4.1nm,0.9s						
KBZ	**Khabaz**	**19.33**	**82**	P	**Pn**	**04 14 39.0**	**+1.5**
	baz=254,slow=18,SNR=1.1						
	comp=Z,0.8nm,0.7s						
MDT	**Midelt**	**19.68**	**242**	P	**Pn**	**04 14 42.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=75,slow=13,SNR=4.3						
	comp=Z,1.4nm,0.8s						
MD01	**Midelt array s**	**19.74**	**242**	P	**Pn**	**04 14 42.4**	**-0.2**
MD31	**MD31**	**19.74**	**242**	P	**Pn**	**04 14 42.6**	**+0.1**
MD31				IAmb	IAmb	04 15 05.2	
	comp=Z,5.5nm,1.3s						
KIRV	**Kirov**	**25.01**	**43**	LR	LR	04 26 12.0	
	comp=Z,93nm,18.2s,baz=285,slow=38						
ARCES	**ARCESS Array B**	**25.88**	**8**	P	**P**	**04 15 42.0**	**-0.8**
	comp=Z,16nm,1.3s,baz=183,slow=8.4,SNR=3.8						
ARCES				LR	LR	04 26 39.1	
	comp=Z,124nm,20.6s,baz=26,slow=38						
	comp=Z,16nm,1.3s						
ARCES	**ARCESS Array B**	**25.88**	**8**	P	**P**	**04 15 41.9**	**-0.8**
AKTO	**Aktyubinsk**	**28.85**	**62**	LR	LR	04 30 05.4	
	comp=Z,72nm,18.4s,baz=194,slow=41						
ARTI	**Arti**	**29.21**	**50**	LR	LR	04 29 55.1	
	comp=Z,51nm,18.7s,baz=352,slow=41						
TORD	**Torodi Ar. Bea**	**33.28**	**206**	P	**P**	**04 16 49.0**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=5.9,slow=7.8,SNR=8.2						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**33.28**	**206**	P	**P**	**04 16 48.1**	**-0.7**
TORD				IAmb	IAmb	04 16 53.0	
	comp=Z,1.4nm,0.7s						
SPITS	**Spitsbergen Ar**	**34.11**	**0**	P	**P**	**04 16 55.9**	**+0.4**
	comp=Z,6.3nm,1.0s,baz=155,slow=6.4,SNR=1.6						
	comp=Z,6.3nm,1.0s						
BORK	**Borovoye**	**36.18**	**56**	P	**P**	**04 17 14.5**	**+0.9**
BVAR	**Borovoye Array**	**36.23**	**56**	P	**P**	**04 17 14.8**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=267,slow=5.9,SNR=6.3						
	comp=Z,0.6nm,0.4s						
KKAR	**Karatay Array**	**38.84**	**72**	P	**P**	**04 17 38.0**	**+1.8**
FURI	**Furi**	**40.29**	**144**	LR	LR	04 36 01.4	
	comp=Z,12nm,20.2s,baz=94,slow=38						
KURBB	**Kurchatov Arra**	**41.67**	**58**	P	**P**	**04 17 59.9**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=291,slow=9.9,SNR=4.1						
	comp=Z,0.7nm,0.7s						
KURK	**Kurchatov**	**41.70**	**58**	P	**P**	**04 17 59.1**	**-0.7**
KURK				IAmb	IAmb	04 18 12.8	
	comp=Z,1.3nm,0.7s						
AAK	**Ala-Archa**	**41.73**	**71**	LR	LR	04 38 08.5	
	comp=Z,42nm,21.8s,baz=284,slow=40						
NRIK	**Noril'sk**	**43.10**	**30**	LR	LR	04 38 48.8	
	comp=Z,60nm,18.8s,baz=345,slow=40						
ZALV	**Zalesovo Beam**	**44.44**	**52**	P	**P**	**04 18 21.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=278,slow=8.9,SNR=6.2						
ZALV				LR	LR	04 38 30.3	
	comp=Z,25nm,19.7s,baz=221,slow=38						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**44.44**	**52**	P	**P**	**04 18 21.9**	**0.0**
MKAR	**Makanchi Array**	**45.29**	**62**	P	**P**	**04 18 28.4**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=286,slow=6.2,SNR=8.4						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**45.29**	**62**	P	**P**	**04 18 29.1**	**+0.3**
SONM	**Songino Array**	**59.33**	**52**	P	**P**	**04 20 12.4**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=295,slow=8.9,SNR=6.3						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**59.33**	**52**	P	**P**	**04 20 12.5**	**-0.8**
SONM				IAmb	IAmb	04 20 19.9	
	comp=Z,3.0nm,1.2s						
TSUM	**Tsumeb**	**63.09**	**178**	LR	LR	04 50 40.4	
	comp=Z,26nm,19.4s,baz=338,slow=38						
HHC	**Hu-ho-hao-te**	**66.44**	**55**	*e*P	**P**	**04 21 02.4**	**+1.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YKA	**Yellowknife Ar**	**66.57**	**337**	P	**P**	**04 21 00.5**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=33,slow=6.6,SNR=5.0						
	comp=Z,0.1nm,0.4s						
PZH	**PanZhiHua**	**69.12**	**73**	P	**P**	**04 21 19.8**	**+2.0**
ILAR	**Eielson Array**	**70.56**	**352**	P	**P**	**04 21 24.9**	**-0.9**
	comp=Z,0.2nm,0.9s,baz=1.4,slow=8.1,SNR=1.8						
	comp=Z,0.2nm,0.9s						
ILAR	**Eielson Array**	**70.56**	**352**	P	**P**	**04 21 27.1**	**+1.2**
PETK	**Petropavlovsk-**	**77.65**	**22**	P	**P**	**04 22 07.6**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=305,slow=5.1,SNR=2.2						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	**80.70**	**323**	P	**P**	**04 22 23.9**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=34,slow=3.9,SNR=2.3						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**80.70**	**323**	P	**P**	**04 22 24.5**	**-0.1**
TXAR	**Lajitas Array**	**88.43**	**311**	P	**P**	**04 23 04.7**	**+0.9**
	comp=Z,0.3nm,0.9s,baz=37,slow=4.8,SNR=3.6						
	comp=Z,0.3nm,0.9s						
TXAR	**Lajitas Array**	**88.43**	**311**	P	**P**	**04 23 04.3**	**+0.5**

*SSNC **06** 04:21:57.4±0.9, 17°.94N×76°.76W, h25km±15km, MD3.1, ML1.4, Presumed earthquake*
*JSN **06** 04:21:58.1±0.3, 18°.04N×76°.50W, h6km±4km, MD2.3, Confirmed Earthquake*
ISC 06 04:21:58.2±1.5**, 18°.2N**±0°.2×**76°.6W**±0°.1**, h12**km±29km**, n7, σ0s.91**/12**, 2C-2D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GWJ	**Greenwich**	**0.19**	**216**	⇑*i*P	**Pg**	**04 22 02.5**	**+0.1**
STH	**Stony Hill**	**0.24**	**231**	⇑*i*P	**Pg**	**04 22 03.8**	**+0.5**
HOJ	**Hope**	**0.26**	**210**	⇓*i*P	**Pg**	**04 22 02.9**	**-0.7**
LMGC	**Las Mercedes**	**1.86**	**349**	*e*P	**Pn**	**04 22 30.1**	**+0.3**
LMGC				*e*S	**Sn**	**04 22 53.2**	**-0.1**
LMGC				*e*Sg	**Sb**	**04 22 54.6**	**-0.8**
LMGC				IAML		04 22 55.6	
	comp=N,8.7nm,0.0s						
LMGC				IAML		04 22 55.8	
	comp=E,4.7nm,0.1s						
RCC	**Rio Carpintero**	**1.96**	**26**	*e*P	**Pn**	**04 22 31.9**	**+0.8**
RCC				*e*S	**Sb**	**04 22 57.5**	**-0.7**
RCC				IAML		04 22 58.9	
	comp=E,0.3nm,0.1s						
RCC				IAML		04 22 58.9	
	comp=N,0.9nm,0.1s						
GTBY	**Guantanamo Bay**	**2.21**	**40**	*e*P	**Pn**	**04 22 35.4**	**+0.7**
GTBY				*e*S	**Sn**	**04 23 03.3**	**+1.5**
GTBY				IAML		04 23 05.2	
	comp=N,1.5nm,0.1s						
GTBY				IAML		04 23 05.3	
	comp=N,1.4nm,0.1s						
QMBU	**Quimbuelo**	**2.59**	**41**	*e*P	**Pn**	**04 22 39.9**	**-0.1**
QMBU				⇓*e*S	**Sn**	**04 23 10.3**	**-1.2**

*TAP **06** 04:23:39.3, 21°.96N×119°.48E, h68km, ML4.3, D*
ISC 06 04:23:37.8±1.4**, 21°.88N**±0°.05×**119°.34E**±0°.04**, h64**km±18km**, n141, σ1s.10**/240**, 11C-8D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWP	**Hsiaoliuchiu**	**1.05**	**64**	P	**Pn**	**04 23 57.0**	**+0.3**
TWP				*e*S	**Sn**	**04 24 10.9**	**+0.2**
WLCH	**Liuqiu**	**1.07**	**64**	P	**Pn**	**04 23 57.5**	**+0.6**
WLCH				S	**Sn**	**04 24 11.3**	**+0.3**
KAU	**Kaohsiung**	**1.13**	**53**	P	**Pn**	**04 23 58.5**	**+0.9**
KAU				*e*S	**Sn**	**04 24 13.2**	**+0.8**
WSSB	**Gushan**	**1.14**	**48**	P	**Pn**	**04 23 58.5**	**+0.6**
WSSB				S	**Sn**	**04 24 12.6**	**-0.1**
SCZT	**Fangliau**	**1.28**	**67**	⇓*i*P	**Pn**	**04 24 00.1**	**+0.4**
SCZT				*i* S	**Sn**	**04 24 15.4**	**-0.6**
HEN	**Hengchun**	**1.30**	**84**	P	**Pn**	**04 24 00.7**	**+0.7**
HEN				S	**Sn**	**04 24 17.1**	**+0.5**
VCHM	**Qimei**	**1.32**	**4**	⇑*e*P	**Pn**	**04 23 59.7**	**-0.5**
VCHM				*e*S	**Sn**	**04 24 15.5**	**-1.5**
SGLT	**Jiouru**	**1.35**	**52**	*e*P	**Pn**	**04 24 01.6**	**+0.9**
SGLT				*e*S	**Sn**	**04 24 18.7**	**+0.9**
TAI	**Tainan**	**1.36**	**35**	*e*P	**Pn**	**04 24 01.6**	**+0.9**
TAI				*e*S	**Sn**	**04 24 17.5**	**-0.4**
TWK1	**Hengchun**	**1.36**	**87**	*i* P	**Pn**	**04 24 01.2**	**+0.5**
TWK1				S	**Sn**	**04 24 17.8**	**-0.2**
TWKBT	**Hengchun**	**1.37**	**87**	P	**Pn**	**04 24 01.1**	**+0.3**
TWKBT				S	**Sn**	**04 24 17.8**	**-0.3**
TWM1	**Shoushan**	**1.37**	**47**	P	**Pn**	**04 24 02.5**	**+1.6**
TWM1				*e*S	**Sn**	**04 24 17.0**	**-1.2**
SLIU	**Shizi**	**1.39**	**76**	⇓*i*P	**Pn**	**04 24 01.5**	**+0.3**
SLIU				*i* S	**Sn**	**04 24 18.2**	**-0.5**
SMST	**Manzhou Townsh**	**1.40**	**84**	⇓P	**Pn**	**04 24 01.6**	**+0.5**
SMST				S	**Sn**	**04 24 18.6**	**-0.1**
MASBT	**Mashibuluo**	**1.40**	**59**	P	**Pn**	**04 24 01.6**	**+0.4**
MASBT				S	**Sn**	**04 24 17.6**	**-1.2**
TAI1	**Yung-k'ang**	**1.41**	**35**	*e*P	**Pn**	**04 24 02.0**	**+0.7**
TAI1				*e*S	**Sn**	**04 24 19.0**	**-0.1**
TSCK	**Chigu Township**	**1.43**	**29**	⇑P	**Pn**	**04 24 02.0**	**+0.3**
TSCK				*e*S	**Sn**	**04 24 18.8**	**-0.9**
TSEB	**Hengchuen, Pin**	**1.45**	**89**	P	**Pn**	**04 24 01.9**	**+0.1**
TSEB				S	**Sn**	**04 24 19.0**	**-1.0**
SHHT	**Tainan City**	**1.47**	**39**	*e*P	**Pn**	**04 24 03.3**	**+1.2**
SHHT				*e*S	**Sn**	**04 24 20.6**	**+0.1**
SSD	**Sandimen**	**1.47**	**54**	P	**Pn**	**04 24 02.9**	**+0.7**
SSD				S	**Sn**	**04 24 19.8**	**-0.8**
EAST	**Anshuo**	**1.48**	**70**	⇓P	**Pn**	**04 24 03.0**	**+0.6**
EAST				S	**Sn**	**04 24 20.1**	**-0.8**
TAWH	**Dawu Township**	**1.50**	**72**	⇓*i*P	**Pn**	**04 24 03.0**	**+0.4**
TAWH				S	**Sn**	**04 24 20.4**	**-1.0**
SCLT	**Jiali**	**1.51**	**31**	*e*P	**Pn**	**04 24 03.0**	**+0.3**
SCLT				S	**Sn**	**04 24 21.0**	**-0.4**
TAW	**Tawu**	**1.52**	**72**	P	**Pn**	**04 24 03.2**	**+0.4**
TAW				S	**Sn**	**04 24 20.6**	**-1.1**
PHUB	**P'eng-hu**	**1.64**	**7**	⇑*i*P	**Pn**	**04 24 04.1**	**-0.3**
PHUB				*e*S	**Sn**	**04 24 22.5**	**-2.0**
ECL	**Taimali**	**1.66**	**64**	⇓*i*P	**Pn**	**04 24 05.3**	**+0.6**
ECL				S	**Sn**	**04 24 23.1**	**-1.9**
SGST	**Jiashian**	**1.66**	**44**	⇑P	**Pn**	**04 24 04.8**	**+0.1**
SGST				*e*S	**Sn**	**04 24 23.6**	**-1.4**
CHN8	**Yiju**	**1.66**	**29**	*e*P	**Pn**	**04 24 05.4**	**+0.6**
PNG	**Penghu**	**1.69**	**7**	⇑*i*P	**Pn**	**04 24 04.9**	**-0.2**
CHN1	**Nanshi**	**1.70**	**40**	⇑*i*P	**Pn**	**04 24 06.0**	**+0.7**
CHN1				*e*S	**Sn**	**04 24 25.0**	**-1.0**
SNST	**Tainan City**	**1.71**	**39**	⇑*e*P	**Pn**	**04 24 06.9**	**+1.5**
SNST				S	**Sn**	**04 24 25.6**	**-0.7**
TWK	**Hsinying**	**1.74**	**37**	⇑*i*P	**Pn**	**04 24 06.5**	**+0.7**
TWK				S	**Sn**	**04 24 26.2**	**-0.8**
WTP	**Ta-pu**	**1.80**	**41**	P	**Pn**	**04 24 07.3**	**+0.6**
WTP				S	**Sn**	**04 24 27.4**	**-1.0**
WSL	**Shuilin Townsh**	**1.83**	**27**	*e*P	**Pn**	**04 24 07.5**	**+0.5**
WSL				*e*S	**Sn**	**04 24 28.7**	**-0.4**
STYT	**Tauyuan**	**1.83**	**46**	P	**Pn**	**04 24 07.8**	**+0.7**
STYH	**Taoyuan**	**1.84**	**46**	*e*P	**Pn**	**04 24 07.8**	**+0.7**
STYH				*e*S	**Sn**	**04 24 28.7**	**-0.8**
TPUB	**Ta-pu**	**1.85**	**40**	P	**Pn**	**04 24 08.0**	**+0.7**
TPUB	**Ta-pu**	**1.85**	**40**	⇑*e*P	**Pn**	**04 24 07.5**	**+0.2**
TPUB				*e*S	**Sn**	**04 24 27.3**	**-2.3**
TWG	**Pinlang**	**1.85**	**59**	*e*P	**Pn**	**04 24 08.5**	**+1.2**
TWG				S	**Sn**	**04 24 28.1**	**-1.7**
TWGBT	**Beinan**	**1.86**	**60**	P	**Pn**	**04 24 09.2**	**+1.8**
TWGBT	**Beinan**	**1.86**	**60**	*e*P	**Pn**	**04 24 08.5**	**+1.1**
TWGBT				*e*S	**Sn**	**04 24 27.9**	**-2.0**
CHN4	**Tsaushan**	**1.86**	**38**	⇑*i*P	**Pn**	**04 24 08.1**	**+0.6**
CHN4				*e*S	**Sn**	**04 24 29.1**	**-0.9**
TTN	**Taitung**	**1.88**	**62**	*e*P	**Pn**	**04 24 07.8**	**0.0**
CHY	**Chiayi**	**1.89**	**32**	*e*P	**Pn**	**04 24 08.6**	**+0.7**
CHY				*e*S	**Sn**	**04 24 30.2**	**-0.5**
WSF	**Szhu**	**1.93**	**25**	P	**Pn**	**04 24 08.8**	**+0.5**
WSF				*e*S	**Sn**	**04 24 30.6**	**-0.9**
WCKO	**Fanlu**	**1.94**	**37**	*e*P	**Pn**	**04 24 09.0**	**+0.5**
WCKO				*e*S	**Sn**	**04 24 30.6**	**-1.3**
CHN2	**Minshiung**	**1.95**	**32**	*e*P	**Pn**	**04 24 09.4**	**+0.8**
CHN2				*e*S	**Sn**	**04 24 31.6**	**-0.4**
ELDTW	**Lidau**	**2.02**	**50**	*e*P	**Pn**	**04 24 10.5**	**+0.7**
ELDTW				*e*S	**Sn**	**04 24 32.9**	**-1.2**
LAY	**Lan-yu**	**2.06**	**85**	*e*P	**Pn**	**04 24 09.6**	**-0.5**
LAY				*e*S	**Sn**	**04 24 33.0**	**-1.8**
LYUB	**Lan-yu**	**2.09**	**86**	*e*P	**Pn**	**04 24 09.1**	**-1.4**
LYUB				*e*S	**Sn**	**04 24 31.9**	**-3.6**
CHN5	**Tsauling**	**2.10**	**36**	*e*P	**Pn**	**04 24 11.4**	**+0.5**
CHN5				*e*S	**Sn**	**04 24 34.7**	**-1.3**
WDLH	**Douliu**	**2.11**	**31**	*e*P	**Pn**	**04 24 11.4**	**+0.6**
WDLH				*e*S	**Sn**	**04 24 35.2**	**-0.8**
ALS	**Alishan**	**2.11**	**40**	⇑P	**Pn**	**04 24 11.8**	**+0.7**
ALS				*e*S	**Sn**	**04 24 35.2**	**-1.2**
ECS	**Chishang**	**2.12**	**55**	*e*P	**Pn**	**04 24 11.7**	**+0.8**
ECS				*e*S	**Sn**	**04 24 36.4**	**+0.2**
WGK	**Gukeng**	**2.12**	**32**	*e*P	**Pn**	**04 24 12.0**	**+1.0**
WGK				*e*S	**Sn**	**04 24 35.5**	**-0.7**
EHD	**Haiduan**	**2.14**	**54**	*e*P	**Pn**	**04 24 12.2**	**+1.0**
EHD				*e*S	**Sn**	**04 24 35.9**	**-0.7**
YUS	**Yu-Shan**	**2.18**	**43**	*e*P	**Pn**	**04 24 13.2**	**+1.0**
YUS				*e*S	**Sn**	**04 24 37.4**	**-1.1**
RLNB	**Erlin**	**2.21**	**25**	P	**Pn**	**04 24 13.2**	**+1.1**
RLNB				S	**Sn**	**04 24 37.7**	**-0.6**
WRL	**Guolierlin Hig**	**2.22**	**25**	*e*P	**Pn**	**04 24 13.3**	**+0.9**
WRL				*e*S	**Sn**	**04 24 37.7**	**-1.1**
CHKT	**Chengkung**	**2.23**	**57**	*e*P	**Pn**	**04 24 13.4**	**+1.0**
CHKT				*e*S	**Sn**	**04 24 38.7**	**-0.2**
FULB	**Fuli**	**2.23**	**54**	*e*P	**Pn**	**04 24 14.5**	**+2.0**
FULB				*e*S	**Sn**	**04 24 39.6**	**+0.6**
WHYT	**Xinyi Township**	**2.28**	**37**	*e*P	**Pn**	**04 24 13.8**	**+0.6**
WHYT				*e*S	**Sn**	**04 24 39.0**	**-1.2**
CHKH	**Chenggong**	**2.30**	**55**	*e*P	**Pn**	**04 24 13.8**	**+0.4**
CHKH				*e*S	**Sn**	**04 24 40.5**	**-0.2**
TWF1	**Yuli**	**2.33**	**51**	*e*P	**Pn**	**04 24 15.1**	**+1.3**
TWF1				*e*S	**Sn**	**04 24 40.1**	**-1.2**
WNT	**Mingjian**	**2.34**	**32**	*e*P	**Pn**	**04 24 14.9**	**+1.0**
WNT				*e*S	**Sn**	**04 24 41.2**	**-0.4**
YULB	**Yu-li**	**2.35**	**50**	P	**Pn**	**04 24 15.8**	**+1.7**
YULB	**Yu-li**	**2.35**	**50**	⇓*e*P	**Pn**	**04 24 15.5**	**+1.4**
YULB				*e*S	**Sn**	**04 24 40.8**	**-1.1**
WNT1	**Nantou City**	**2.36**	**31**	*e*P	**Pn**	**04 24 14.8**	**+0.6**
SSLB	**Suanglung**	**2.41**	**38**	P	**Pn**	**04 24 16.1**	**+1.2**
SSLB	**Suanglung**	**2.41**	**38**	P	**Pn**	**04 24 15.6**	**+0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SSLB				eS	Sn	04 24 41.8	-1.6
ECBN	Changbin	2.42	53	eP	Pn	04 24 15.9	+0.9
EHY	Hungye	2.44	48	eP	Pn	04 24 16.3	+1.0
EHY				eS	Sn	04 24 42.7	-1.4
WCH1	Changhua City	2.44	27	eP	Pn	04 24 16.5	+1.2
WCH1				S	Sn	04 24 44.5	+0.3
TYC	Yuchr	2.45	35	P	Pn	04 24 16.5	+1.0
TYC				eS	Sn	04 24 43.3	-0.9
SMLT	Sun Moon Lake	2.46	36	eP	Pn	04 24 16.3	+0.7
SMLT				S	Sn	04 24 43.8	-0.8
WCHH	Zhanghua	2.46	27	eP	Pn	04 24 16.8	+1.2
WCHH				S	Sn	04 24 44.8	+0.3
VWDT	VWDT	2.50	41	P	Pn	04 24 17.4	+1.4
VWDT				eS	Sn	04 24 44.6	-0.7
HGSD	Ruisui	2.50	50⇓	eP	Pn	04 24 18.5	+2.3
HGSD				eS	Sn	04 24 45.3	-0.2
ZPLA	Ao Xicun	2.51	325	eP	Pn	04 24 16.4	+0.2
DSXP	Dongshan	2.53	316	eP	Pn	04 24 17.8	+1.2
TCU	Taichung	2.57	28	eP	Pn	04 24 18.3	+1.3
TCU				eS	Sn	04 24 46.0	-1.2
WPL	Puli Township	2.59	35	eP	Pn	04 24 18.2	+0.9
WPL				eS	Sn	04 24 46.5	-1.2
DPDB	Guoxing	2.59	34	eP	Pn	04 24 18.1	+0.6
DPDB				eS	Sn	04 24 46.6	-1.3
WARBT	Fenglin Townsh	2.63	46	eP	Pn	04 24 19.2	+1.3
WARBT				eS	Sn	04 24 47.4	-1.2
KNM	Kinmen	2.66	342	eP	Pn	04 24 18.8	+0.6
OWD	Renai	2.67	39	eP	Pn	04 24 19.9	+1.4
OWD				eS	Sn	04 24 48.2	-1.6
VDOS	Pratas Island	2.70	245	eP	Pn	04 24 19.9	+1.1
KNMB	Chin-men Tao	2.71	341	eP	Pn	04 24 18.9	-0.1
ESL	Shilin	2.72	45	eP	Pn	04 24 20.3	+1.1
ESL				eS	Sn	04 24 50.1	-0.9
TWQ1	Liyutan	2.79	28	eP	Pn	04 24 21.2	+1.2
TWQ1				eS	Sn	04 24 53.1	+0.6
SHUL	Shoufeng	2.79	47	eP	Pn	04 24 21.8	+1.7
WHP	Taichung City	2.80	32	eP	Pn	04 24 21.8	+1.5
WHP				eS	Sn	04 24 52.8	-0.2
LXIB	Xiulin Townshi	2.86	42	eP	Pn	04 24 22.1	+0.9
LXIB				eS	Sn	04 24 54.0	-0.5
WHF	Hehuan Shan	2.87	38	eP	Pn	04 24 23.2	+1.7
WHF				eS	Sn	04 24 54.5	-0.5
ETM	Tongmen	2.87	43	eP	Pn	04 24 22.2	+1.0
TDCB	Techi	2.89	35	eP	Pn	04 24 22.9	+1.3
TDCB				eS	Sn	04 24 54.4	-0.9
TWT	Tachien	2.90	35	eP	Pn	04 24 23.0	+1.3
TWT				eS	Sn	04 24 53.3	-2.3
FUSS	Fushou	2.93	36	eP	Pn	04 24 23.6	+1.3
FUSS				eS	Sn	04 24 55.8	-0.7
NMLH	Miaoli	2.96	27	eP	Pn	04 24 23.3	+0.9
TWD	Chiawan	3.02	43	eP	Pn	04 24 24.3	+1.2
ETLH	Xiulin Townshi	3.04	40	eP	Pn	04 24 25.4	+1.9
ETLH				eS	Sn	04 24 57.9	-0.9
NACB	Ninganchiao	3.08	42	P	Pn	04 24 25.8	+1.7
NACB	Ninganchiao	3.08	42	S	Sn	04 25 00.0	+0.2
NACB	Ninganchiao	3.08	42	eP	Pn	04 24 25.4	+1.3
NACB				eS	Sn	04 24 58.2	-1.6
ETL	Fush Village	3.09	42	eP	Pn	04 24 26.2	+1.9
NSTT	Nanjuang	3.13	29	eP	Pn	04 24 25.6	+0.9
NSTT				eS	Sn	04 25 00.0	-1.0
LIOB	Emei	3.15	29	eP	Pn	04 24 26.1	+1.0
LIOB				eS	Sn	04 25 00.4	-1.0
NNSB	Datong	3.15	36	eP	Pn	04 24 26.6	+1.5
NNSB				eS	Sn	04 25 01.1	-0.6
NNS	Nan Shan	3.16	36	eP	Pn	04 24 26.9	+1.7
NNS				eS	Sn	04 25 01.0	-0.8
NFF	Wufeng Townshi	3.19	31	eP	Pn	04 24 26.5	+1.0
NFF				eS	Sn	04 25 01.4	-1.0
AXDP	Jialang	3.26	338	eP	Pn	04 24 26.6	+0.1
AXDP				eS	Sn	04 25 03.0	-1.0
NJD	Zhudong	3.26	29	eP	Pn	04 24 27.4	+0.9
EAHA	Aohua	3.29	42	eP	Pn	04 24 28.2	+1.4
EAHA				eS	Sn	04 25 04.2	-0.5
LATG	Datong	3.32	37	eP	Pn	04 24 29.1	+1.7
LATG				eS	Sn	04 25 05.5	-0.2
KSHI	Guanxi Townshi	3.34	30	eP	Pn	04 24 28.7	+1.1
KSHI				eS	Sn	04 25 05.7	-0.3
NSK	Sanguang	3.34	33	eP	Pn	04 24 29.0	+1.3
NSK				eS	Sn	04 25 04.4	-1.8
YHNB	Yeheng	3.35	34	P	Pn	04 24 29.2	+1.5
YHNB	Yeheng	3.35	34	eP	Pn	04 24 28.9	+1.2
YHNB				eS	Sn	04 25 05.1	-1.2
ENA	Nanau	3.36	41	eP	Pn	04 24 29.3	+1.4
ENTT	Nioudou	3.42	36	eP	Pn	04 24 31.0	+2.3
NWLT	Wulai	3.50	34	eP	Pn	04 24 31.1	+1.3
NWLT				eS	Sn	04 25 09.2	-0.8
NDS	Dongshan	3.50	38	eP	Pn	04 24 31.5	+1.7
FUSB	Fushanzhiwuyua	3.53	35	eP	Pn	04 24 31.9	+1.7
FUSB				eS	Sn	04 25 10.0	-0.8
EOS4	EOS4	3.53	50	eP	Pn	04 24 31.0	+1.1
TWE	Neicheng	3.54	37	eP	Pn	04 24 32.8	+2.4
TWC	Suao	3.56	40	eP	Pn	04 24 32.9	+2.3
TWC				eS	Sn	04 25 11.7	+0.3
EOS3	EOS3	3.64	48	eP	Pn	04 24 32.4	+0.9
TATO	Taipei	3.66	32	P	Pn	04 24 33.4	+1.5
TATO	Taipei	3.66	32	eP	Pn	04 24 32.2	+0.3
EOS2	EOS2	3.67	46	eP	Pn	04 24 33.5	+1.6
TWS1	Kuangyinshan	3.73	30	eP	Pn	04 24 33.8	+0.9
TIPB	Shuangxi	3.83	36	eP	Pn	04 24 36.0	+1.7
TIPB				eS	Sn	04 25 17.4	-0.7
YM01	YM01	3.84	32	eP	Pn	04 24 35.5	+1.0
TWB1	Santiao Chiao	3.95	38	eP	Pn	04 24 37.7	+1.8
SXI1	Grass Mountain	3.95	36	eP	Pn	04 24 37.1	+1.1
SXI1				eS	Sn	04 25 19.2	-2.0
MHZQ	Yeshan	4.21	356	eP	Pn	04 24 40.2	+0.8
MATB	Ma-tsu	4.29	7	eP	Pn	04 24 41.2	+0.7
LYJJ	Jianjiangzhen	4.66	5	eP	Pn	04 24 46.7	+1.0
SXFK	Yanhouchang	4.75	341	eP	Pn	04 24 47.1	+0.1
HKPS	Hong Kong Po S	4.84	276	eP	Pn	04 24 49.3	+1.2
XPSS	Dashiqiu	5.08	9	eP	Pn	04 24 52.2	+0.7

*IDC **06** 04:27:56.2±5.8, 18°.17S×177°.94W, h595km±72km, mb3.1/7, mbtmp4.0/7, Error ellipse: s-maj=44.4km s-min=24.4km az=170.0*

*NEIC **06** 04:27:58.3±0.6, 17°.73S±0°.08×178°.2W±0°.2, h607km±8km, mb4.0/25, Error ellipse: s-maj=25.5km s-min=11.4km az=97.0*

ISC 06 04:27:56.5±0.7, **18°.0S**±0°.2×**178°.0W**±0°.2, **h590**km, **n37**, σ**0.s93**/41, **mb4.0**/19, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.75	273	P	P	04 29 21.3	+1.7
URZ	Urewera	20.64	191	P	P	04 31 53.5	-2.7
	4.8nm,0.9s,baz=61,slow=19,SNR=1.9						
	4.8nm,0.9s						
KHLH	Kahului Airpor	44.06	30	P	P	04 35 12.2	-1.3
WR8	Warramunga Arr	44.83	260	P	P	04 35 18.8	-0.7
WR8				IAmb	IAmb	04 35 27.5	
	comp=Z,9.3nm,1.4s						
WB0	Warramunga Arr	44.95	260	P	P	04 35 19.8	-0.6
WB0				IAmb	IAmb	04 35 20.2	
	comp=Z,4.5nm,1.0s						
WRA	Warramunga Arr	44.98	260	P	P	04 35 20.1	-0.6
	comp=Z,1.2nm,0.5s,baz=96,slow=7.5,SNR=34						
WRA				PcP	PcP	04 36 48.5	-0.5
	comp=Z,0.2nm,0.4s,baz=92,slow=2.8,SNR=1.6						
	comp=Z,1.2nm,0.5s						
WRA	Warramunga Arr	44.98	260	P	P	04 35 19.2	-1.5
WRA					PcP	04 36 48.2	-0.8
AS31	Alice Springs	45.12	254	P	P	04 35 21.0	-0.8
ASAR	Alice Springs	45.12	254	P	P	04 35 21.4	-0.4
	comp=Z,4.2nm,0.6s,baz=87,slow=8.9,SNR=51						
ASAR				PcP	PcP	04 36 48.9	-0.6
	comp=Z,0.2nm,0.4s,baz=103,slow=3.9,SNR=5.6						
	comp=Z,4.2nm,0.6s						
ASAR	Alice Springs	45.12	254	P	P	04 35 21.0	-0.8
ASAR					PcP	04 36 48.5	-1.0
FITZ	Fitzroy Crossi	53.38	261	P	P	04 36 23.3	+0.9
	comp=Z,4.9nm,1.1s,baz=84,slow=9.2,SNR=3.0						
	comp=Z,4.9nm,1.1s						
QSPA	South Pole Qui	72.07	180	P	P	04 38 23.9	+2.2
QSPA				IAmb	IAmb	04 38 46.8	
	comp=Z,3.0nm,0.8s						
SKT	Skwentna	82.43	12	P	P	04 39 18.0	+0.6
SKT				IAmb	IAmb	04 39 43.9	
	comp=Z,4.1nm,1.1s						
GHO	Glory Hole Cre	82.80	13	P	P	04 39 19.1	-0.3
J18K	Innoko River	82.88	9	P	P	04 39 19.3	-0.3
L22K	Petersville	83.08	12	P	P	04 39 19.8	-0.9
L22K				IAmb	IAmb	04 40 02.0	
	comp=Z,7.1nm,1.4s						
K20K	Telida	83.21	11	P	P	04 39 21.1	-0.2
SCM	Sheep Creek Mo	83.21	14	P	P	04 39 21.2	-0.2
J19K	Poorman	83.55	10	P	P	04 39 23.4	+0.5
J19K				IAmb	IAmb	04 39 48.4	
	comp=Z,6.4nm,1.4s						
N25K	Chitina, Valde	83.68	15	P	P	04 39 23.2	-0.5
GLB	Gilahina Butte	83.74	16	P	P	04 39 23.3	-0.7
J20K	Nowinta River	83.96	10	P	P	04 39 24.6	-0.4
TRF	Thorofare Moun	84.01	12	P	P	04 39 24.7	-0.7
TRF				IAmb	IAmb	04 39 25.9	
	comp=Z,4.1nm,0.8s						
O28M	Mount Upton	84.17	18	P	P	04 39 26.3	-0.2
RND	Reindeer	84.27	13	P	P	04 39 26.3	-0.3
RND				IAmb	IAmb	04 39 46.5	
	comp=Z,6.5nm,1.3s						
DHY	Denali Highway	84.29	13	P	P	04 39 26.3	-0.6
DHY				IAmb	IAmb	04 39 29.2	
	comp=Z,9.6nm,1.4s						
WRH	Wood River Hil	85.37	13	P	P	04 39 31.3	-0.5
WRH				IAmb	IAmb	04 40 02.9	
	comp=Z,8.2nm,1.5s						
CCB	Clear Creek Bu	85.58	13	P	P	04 39 32.1	-0.7
I23K	Minto, Yukon-K	85.71	12	P	P	04 39 33.0	-0.4
I23K				IAmb	IAmb	04 39 49.1	
	comp=Z,6.2nm,1.5s						
TXAR	Lajitas Array	85.73	57	P	P	04 39 35.6	+1.1
	comp=Z,0.4nm,0.7s,baz=227,slow=5.8,SNR=5.1						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	85.73	57	P	P	04 39 35.3	+0.8
IL31		85.88	13	P	P	04 39 34.1	-0.1
IL31				IAmb	IAmb	04 39 46.7	
	comp=Z,3.1nm,1.2s						
ILAR	Eielson Array	85.88	13	P	P	04 39 33.6	-0.6
	comp=Z,0.4nm,0.4s,baz=220,slow=5.1,SNR=18						
	comp=Z,0.4nm,0.4s						
F19K	Shaleruckik Mo	85.91	8	P	P	04 39 34.2	-0.1
F19K				IAmb	IAmb	04 39 40.7	
	comp=Z,4.2nm,1.4s						
PDAR	Pinedale Array	87.16	43	P	P	04 39 41.2	+0.1
	comp=Z,0.1nm,0.5s,baz=232,slow=4.2,SNR=2.0						
	comp=Z,0.1nm,0.5s						
PDAR	Pinedale Array	87.16	43	P	P	04 39 40.8	-0.3
GERES	GERESS Array B	147.78	345	PKPbc	PKPdf	04 46 33.1	+1.1
	comp=Z,0.4nm,0.5s,baz=9.6,slow=2.5,SNR=3.6						

*FUNV **06** 04:50:06.6, 10°.21N×62°.22W, h5km, MW2.8, Presumed earthquake*

*TRN **06** 04:50:11.5, 10°.53N×61°.08W, h83km, MD3.3, Trinidad.*

ISC 06 04:49:58.8±2.9, **9°.8N**±0°.1×**61°.9W**±0°.1, **h131**km±23km, **n9**, σ**3.s94**/16, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGH	Port of Spain	0.91	24	eP	Pn	04 50 25.1	+4.1
PSMG	Mucurapo Girls	0.91	23	eP	Pn	04 50 25.6	+4.6
PSKH	Kent House, Po	0.92	23	eP	Pn	04 50 25.4	+4.3
PSKH				eS	Sn	04 50 34.2	-3.8
TRN	Trinidad (W)	0.94	30	eP	Pn	04 50 23.2	+1.9
TRN				eS	Sn	04 50 37.0	-1.5
TRN	Trinidad (W)	0.94	30	eP	Pn	04 50 23.1	+1.9
TRN				eS	Sn	04 50 34.1	-4.3
GRGR	Grenville	2.30	6	eP	Pn	04 50 38.6	+2.0
GRGR				eS	Sn	04 51 00.1	-5.5
PCRV	Puerto La Cruz	2.73	277	eP	Pn	04 50 45.0	+2.9
PCRV				eS	Sn	04 51 13.6	-1.8
TACV	Tcata	5.07	274	eP	Pn	04 51 16.6	+3.6
TACV				eS	Sn	04 52 09.3	-1.4
CACV	CAICARA DEL OR	5.12	244	eP	Pn	04 51 14.5	+0.9
CACV				eS	Sn	04 52 06.8	-5.0

*IDC **06** 04:53:49.5±0.8, 32°.70N×34°.73E, h0km, mb3.7/11, mbtmp3.7/15, ML3.5/3, MS3.2/6, Error ellipse: s-maj=11.4km s-min=8.7km az=164.0*

*GRAL **06** 04:53:50.6±0.3, 32°.67N×34°.67E, h7km±5km, MD4.3*

*GII **06** 04:53:51.9±0.0, 32°.754N±0°.002×34°.776E±0°.001, h0km, confirmed*

*HLW **06** 04:53:51.6, 32°.76N×34°.78E, h13km±1km, Md3.6, Ml4.0*

*ISK **06** 04:53:51.6, 32°.70N×34°.99E, h56km, ML4.1/26*

*NEIC **06** 04:53:51.5±1.1, 32°.73N±0°.06×34°.67E±0°.08, h10km±1km, mb4.5/12, Error ellipse: s-maj=12.8km s-min=7.8km az=239.0*

*NIC **06** 04:53:53.0, 32°.80N×34°.89E, h32km±56km, Ml3.6/10*

*AFAD **06** 04:53:57.0, 33°.20N×34°.73E, h15km±66km, MW4.4*

ISC 06 04:53:51.9±0.8, **32°.76N**±0°.02×**34°.78E**±0°.03, **h17**km±5km, **n174**, σ**1.s64**/227, **mb4.1**/17, **MS3.3**/5, **Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTOR	Bet Oren	0.19	98	P	Pb	04 53 56.6	-0.4
BTOR				S	Sg	04 53 59.7	-0.2
HTEC	Technion Haifa	0.21	84	P	Pg	04 53 56.7	-0.1
HTEC				S	Sg	04 54 00.1	-0.1
OFRI	`Ofer	0.22	128	P	Pb	04 53 57.0	-0.5
OFRI				S	Sg	04 54 00.5	-0.1
YGR	Yagur	0.25	94	P	Pg	04 53 57.2	-0.3
YGR				S	Sg	04 54 00.9	-0.4
KMKB	Kefar Hamakabi	0.28	84	P	Pg	04 53 57.9	-0.2
KMKB				S	Sg	04 54 02.2	-0.1
AFK	Afek	0.31	75	P	Pg	04 53 58.3	-0.1
AFK				S	Sg	04 54 03.0	+0.1
ALON	ALONIM	0.31	97	P	Pg	04 53 58.3	-0.2
ALON				S	Sg	04 54 02.7	-0.3
BLGI	Bet Lehem HaGe	0.35	94	P	Pg	04 53 58.9	-0.3
BLGI				S	Sg	04 54 03.9	-0.3
HYGV	Hayogev	0.39	112	P	Pg	04 53 59.5	-0.4
HYGV				S	Sg	04 54 05.1	-0.1
HNTI	Hanita	0.47	46	P	Pg	04 54 01.3	0.0
HNTI				S	Sb	04 54 08.1	-0.2
IZRL	Izrael	0.50	113	P	Pg	04 54 01.3	-0.6
IZRL				S	Sg	04 54 08.0	-0.6
ZRT	Zar'it	0.55	51	P	Pg	04 54 02.5	-0.4
SLTI	Sal'it	0.56	157	P	Pg	04 54 02.8	-0.3
SLTI				S	Sb	04 54 10.7	-0.3
MMA0B	Mount Meron ar	0.58	64	P	Pg	04 54 03.0	-0.6
MMA0B				S	Sg	04 54 11.2	-0.2
MMAI	Mount Meron Ar	0.58	64	Pg	Pg	04 54 02.9	-0.7
	519nm,0.3s,baz=283,slow=14,SNR=706						
MMAI				Lg	Lg	04 54 10.9	
	4µm,0.3s,baz=233,slow=29,SNR=51						
MMLI	Mount Malkishu	0.63	120	Pg	Pg	04 54 03.2	-1.1
MMLI				Sg	Sg	04 54 11.7	-1.1
MMLI	Mount Malkishu	0.63	120	P	Pg	04 54 03.5	-0.9
MMLI				S	Sg	04 54 11.3	-1.5
MMLI	Mount Malkishu	0.63	120	P	Pg	04 54 03.4	-0.9
MNHA	Menahamia	0.66	98	P	Pg	04 54 04.1	-0.8
MNHA				S	Sg	04 54 13.0	-0.6
GOLA	Golan Heights	0.74	93	P	Pg	04 54 05.8	-0.5
GOLA				S	Sg	04 54 15.7	-0.3
HMDT	Nahal Hemdat	0.81	128	P	Pg	04 54 06.8	-0.9
HMDT				S	Sg	04 54 17.6	-0.7
GEM	Giv'at Ha'Em	0.87	59	P	Pg	04 54 08.2	-0.7
GEM				S	Sg	04 54 19.9	-0.4
KSHT	Keshet	0.90	75	P	Pg	04 54 08.5	-0.9
KSHT				S	Sg	04 54 20.5	-0.7
NATI	Neve Ativ	0.95	58	P	Pb	04 54 09.3	-0.6
NATI				S	Sg	04 54 21.8	-1.0
UJAP	Al Uja	0.99	144	Pg	Pb	04 54 09.4	-1.2
QRWL	Qaraoun	1.09	44	eP	Pb	04 54 12.0	-0.4
RCY	Rachaya	1.15	50	eP	Pb	04 54 13.0	-0.5
DQRL	Deir Qamar	1.16	35	eP	Pb	04 54 13.0	-0.4
DQRL				eS	Sn	04 54 29.4	+0.6
AMAZ	Amatzia	1.23	175	P	Pn	04 54 14.2	-0.1
AMAZ				S	Sn	04 54 30.7	+0.2
AMAZ	Amatzia	1.23	175	P	Pn	04 54 14.2	-0.1
AMAZ				S	Sg	04 54 31.2	-0.5
BEYL	Beirut	1.26	28	eP	Pn	04 54 14.7	-0.1
DSI	Dead Sea	1.29	157	P	Pn	04 54 14.4	-0.7
BHL	Bhannes	1.36	32	eP	Pn	04 54 16.2	0.0
BHL				eS	Sg	04 54 35.4	-0.5
YTIR	Yattir	1.42	168	P	Pn	04 54 16.8	-0.2
YTIR				S	Sb	04 54 36.2	+0.4
ZAHL	Zahle	1.44	40	eP	Pn	04 54 17.8	+0.5
MSBI	Mazada	1.52	161	P	Pn	04 54 18.3	0.0
MSBI				S	Sn	04 54 38.3	+0.6
GHAJ	Ghor Haditha	1.60	155	Pn	Pn	04 54 20.0	+0.6
GHAJ				Sn	Sb	04 54 41.4	+0.5
HWQ	Hawqa	1.80	32	eP	Pn	04 54 22.5	+0.2
KZIT	Kziot	1.87	190	P	Pn	04 54 23.3	+0.1
KZIT				S	Sb	04 54 48.6	-0.3
KZIT	Kziot	1.87	190	P	Pn	04 54 23.4	+0.1
ASF	Jabal al Asfar	1.88	107	Pn	Pn	04 54 23.7	+0.3
	365nm,0.3s,baz=273,slow=7.4,SNR=1809						
ASF				Lg	Lg	04 54 48.3	
	110nm,0.3s,baz=342,slow=20,SNR=4.2						
BEIL	Beino	2.13	33	eP	Pn	04 54 27.1	+0.3
OSC2	CSNet OBS 4	2.13	279	P	Pn	04 54 27.2	+0.4
OSC2				S	Sn	04 54 53.9	+1.1
PARAL	Paralimni	2.31	345	P	Pn	04 54 28.9	-0.4
PARAL				S	Sn	04 54 56.1	-1.2
PARAL				AML	AML	04 55 08.5	
	0.5nm,0.9s						
PARAL				AML	AML	04 55 11.5	
	0.9nm,0.9s						
ASGA	Asgata	2.39	328	P	Pn	04 54 30.6	+0.3
ASGA				S	Sn	04 54 58.2	-1.0
ASGA				AML	AML	04 55 00.0	
	0.8nm,0.4s						
ASGA				AML	AML	04 55 01.1	
	0.8nm,0.4s						
MVOU	Mavrovouni	2.45	337	P	Pn	04 54 30.4	-0.7
MVOU				S	Sn	04 54 58.8	-1.8
MVOU				AML	AML	04 55 04.5	
	0.6nm,0.4s						
MVOU				AML	AML	04 55 05.2	
	0.7nm,0.5s						
APOL	The Sanctuary	2.49	321	P	Pb	04 54 34.3	-1.8
APOL				S	Sn	04 55 01.9	+0.4
APOL				AML	AML	04 55 07.4	
	0.8nm,0.3s						
APOL				AML	AML	04 55 10.8	
	0.6nm,0.4s						
CSS	Mathiatis	2.51	332	Pn	Pn	04 54 32.2	+0.3
CSS	Mathiatis	2.51	332	Pn	Pn	04 54 32.6	+0.7
CSS				Sn	Sn	04 55 03.5	+1.4
CSS	Mathiatis	2.51	332	P	Pn	04 54 32.5	+0.6
CSS				S	Sn	04 55 02.5	+0.5
CSS				AML	AML	04 55 05.1	
	0.6nm,0.8s						
CSS				AML	AML	04 55 06.7	
	0.7nm,0.6s						
CSS	Mathiatis	2.51	332	P	Pn	04 54 32.5	+0.6
KRMI	Paran Flat	2.63	181	P	Pn	04 54 33.5	-0.1
ATHAL	Athalassa	2.64	335	P	Pn	04 54 34.1	+0.4
ATHAL				S	Sn	04 55 05.6	+0.2
ATHAL				AML	AML	04 55 15.1	
	1.7nm,0.4s						
ATHAL				AML	AML	04 55 16.7	
	1.6nm,0.4s						
XYLS	Xyliatos	2.67	328	P	Pn	04 54 34.3	+0.1
XYLS				S	Sn	04 55 05.8	-0.4
XYLS				AML	AML	04 55 10.0	
	1.3nm,0.4s						
XYLS				AML	AML	04 55 10.4	
	1.0nm,0.4s						
LFK	Lefkose	2.72	338	Pn	Pn	04 54 35.5	+0.6
NATA	Nata	2.73	318	P	Pn	04 54 36.1	+1.2
NATA				S	Sn	04 55 09.1	+1.5
NATA				AML	AML	04 55 18.3	
	2.0nm,0.5s						
NATA				AML	AML	04 55 23.6	
	1.1nm,0.5s						
ALFC	Alefka	3.00	323	P	Pn	04 54 39.9	+1.2
ALFC				S	Sn	04 55 14.5	+0.2
ALFC				AML	AML	04 55 19.0	
	2.6nm,0.5s						
ALFC				AML	AML	04 55 19.4	
	2.5nm,0.4s						
OSC1	CSNet OBS 1	3.03	285	P	Pn	04 54 39.8	+0.7
OSC1				S	Sn	04 55 16.7	+1.8
AKMS	Akamas	3.04	319	P	Pn	04 54 40.8	+1.6
AKMS				S	Sn	04 55 15.2	+0.1
AKMS				AML	AML	04 55 26.3	
	0.7nm,0.4s						
AKMS				AML	AML	04 55 27.7	
	0.6nm,0.6s						
EIL	Elat	3.08	177	Pn	Pn	04 54 39.4	-0.4
	4.5nm,0.3s,baz=17,slow=6.0,SNR=25						
EIL				Pg	Pb	04 54 44.9	-1.4
	55nm,0.3s,baz=354,slow=16,SNR=42						
EIL				Lg	Lg	04 55 25.8	
	81nm,0.3s,baz=311,slow=20,SNR=9.2						
EIL				LR	LR	04 55 48.8	
	comp=Z,140nm,19.1s,baz=70,slow=40						
	17nm,0.3s						
EIL	Elat	3.08	177	P	Pn	04 54 39.4	-0.4
TISA	Tisan-Mersin	3.52	345	Pn	Pn	04 54 47.3	+1.6
AKK2	Akkuyu-Mersin	3.52	344	Pn	Pn	04 54 47.5	+1.7
AKK1	Akkuyu-Mersin	3.53	344	Pn	Pn	04 54 47.5	+1.6
HBST	Basata	3.53	181	P	Pn	04 54 45.8	-0.2
BECE	Buyukeceli-Mer	3.54	344	Pn	Pn	04 54 47.8	+1.8
KARG	Kargicak-Mersi	3.55	346	Pn	Pn	04 54 47.7	+1.5
YESI	Yesilovacik-Me	3.56	345	Pn	Pn	04 54 48.0	+1.7
GULN	MERSIN_Gulnar	3.57	344	P	Pn	04 54 47.2	+0.7
GULN				S	Sn	04 55 24.4	-3.8
YORU	Yoruktepe-Mers	3.57	342	Pn	Pn	04 54 48.4	+1.8
IKL	Isikli	3.59	346	Pn	Pn	04 54 48.6	+1.9
TEPK	Tepekoy-MERSIN	3.60	344	Pn	Pn	04 54 48.6	+1.6
OREN	Orenkoy-Mersin	3.61	343	Pn	Pn	04 54 48.8	+1.8
ASUZ	Hatay-Arsuz	3.62	13	P	Pn	04 54 46.7	-0.5
ASUZ				S	Sn	04 55 25.9	-3.6
TEKE	Tekeli-Mersin	3.65	338	Pn	Pn	04 54 49.4	+1.9
BOZY	Bozyazi-Mersin	3.66	336	Pn	Pn	04 54 49.7	+2.0
SILI	Silifke-Mersin	3.67	349	Pn	Pn	04 54 49.4	+1.6
SLFK	Silifke-Mersin	3.69	350	Pn	Pn	04 54 49.7	+1.6
NUB	Nuweibaa	3.72	182	P	Pn	04 54 49.0	+0.4
ZNM	Zenema	3.75	206	S	Sn	04 55 30.5	-2.1
KIZK	Mersin	3.75	352	Pn	Pn	04 54 50.4	+1.4
KIZK	Mersin	3.75	352	P	Pn	04 54 48.5	-0.4
KIZK				S	Sn	04 55 23.8	-8.9
KEBE	Keben-Mersin	3.78	347	Pn	Pn	04 54 50.1	+0.6
KOT	Kottamia	3.79	223	P	Pn	04 54 49.1	-0.4
KOT				S	Sn	04 55 31.4	-2.2
TAHT	Tahtakopru-Hat	3.79	17	Pn	Pn	04 54 49.5	0.0
RHAN	Hatay/Reyhanl	3.80	23	P	Pn	04 54 49.4	-0.3
RHAN				S	Sn	04 55 32.7	-1.3
TEVE	Tevekalti-Mers	3.83	344	Pn	Pn	04 54 51.8	+1.6
ZAF	Zafarana	3.96	209	P	Pn	04 54 51.6	-0.2
ZAF				S	Sn	04 55 35.6	-2.3
GAZI	Gazipasa	4.02	330	Pn	Pn	04 54 55.2	+2.5
GAZI	Gazipasa	4.02	330	P	Pn	04 54 53.2	+0.5
GAZI	Gazipasa	4.02	330	P	Pn	04 54 50.2	-2.5
HDHB	Dhahab	4.03	182	P	Pn	04 54 52.3	-0.5
YURE	YUREGIR	4.12	10	P	Pn	04 54 54.2	+0.1
YURE				S	Sn	04 55 37.9	-4.0
HASA	Hatay-Hassa-Ha	4.22	19	P	Pn	04 54 55.6	0.0
HASA				S	Sn	04 55 41.6	-2.8
HKAT	Jabal Katrina	4.28	189	P	Pn	04 54 56.3	-0.1
CEYT	Ceyhan	4.32	10	Pn	Pn	04 54 57.7	+1.0
ALAN	Alanya-ANTALYA	4.41	330	Pn	Pn	04 55 00.7	+2.6
TR2	Tor 2	4.45	192	P	Pn	04 54 58.6	-0.1
KARA	Karaisali	4.50	3	Pn	Pn	04 54 59.7	+0.4
HMYD	Mayadein	4.51	230	P	Pn	04 54 59.4	0.0
GULE	Gulek	4.51	360	P	Pn	04 55 00.0	+0.4
KRMN	Karaman	4.58	345	Pn	Pn	04 55 02.4	+2.0
HDMB	Hadim	4.60	336	Pn	Pn	04 55 03.1	+2.2
KERG	Konya-Eregli	4.68	354	P	Pn	04 55 01.9	+0.1
KERG				S	Sn	04 55 51.1	-4.7
KAMA	Osmaniye	4.68	19	P	Pn	04 55 01.4	-0.5
KAMA				S	Sn	04 55 44.6	-11
KKBE	Karaman, Kazim	4.70	342	P	Pn	04 55 02.8	+0.6
KKBE				S	Sn	04 55 47.3	-9.0
KOZT	Kozan	4.79	10	Pn	Pn	04 55 04.3	+1.0
TR1	Tor 1	4.79	189	P	Pn	04 55 02.9	-0.4
GAZ	Gaziantep	4.84	24	Pn	Pn	04 55 05.2	+1.2
CMRD	Camardi-Nigde	4.90	2	Pn	Pn	04 55 06.2	+1.4
ANDN	Andirin	4.98	14	P	Pn	04 55 06.7	+0.7
ANDN				S	Sn	04 55 57.1	-6.1
KMRS	Kahramanmaras	5.04	20	Pn	Pn	04 55 07.4	+0.6
NIDE	Nigde/Merkez-G	5.23	360	P	Pn	04 55 10.1	+0.7
SEDI	Konya, Seydise	5.30	333	P	Pn	04 55 14.2	+3.9
SEDI				S	Sn	04 56 09.2	-1.8
RYAN	Fayoum	5.33	228	P	Pn	04 55 10.7	0.0
RYAN				S	Sn	04 56 08.5	-3.1
YAHY	KAYSERI_Yahyal	5.35	5	P	Pn	04 55 11.3	+0.3
AKAS	Kas	5.50	310	Pn	Pn	04 55 13.6	+0.4
BSIR	Belisirma, Guz	5.51	356	P	Pn	04 55 16.6	+3.3
BSIR				S	Sn	04 56 07.7	-8.7
KONT	Konya--Tatoy	5.54	340	P	Pn	04 55 15.6	+2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KONT				S	Sn	04 56 08.7	-8.2
KORT	Korkueli	5.58	321	P	Pn	04 55 18.4	+4.1
KORT				S	Sn	04 56 10.1	-8.0
HHRG	Al Ghardaqah	5.62	191	P	Pn	04 55 17.0	+2.3
ELL	Elmali	5.65	316	Pn	Pn	04 55 15.5	+0.4
DOGA	KONYA_Doganhis	5.91	335	P	Pn	04 55 20.1	+1.3
KNIK	Mula-Seydike	5.91	315	P	Pn	04 55 20.1	+1.3
KNIK				S	Sn	04 56 18.8	-7.4
ISP	Isparta	6.13	327	Pn	Pn	04 55 20.9	-1.0
BNN	Bunyan	6.14	8	Pn	Pn	04 55 23.0	+1.0
BAGO	Egridir - ISPA	6.15	329	P	Pn	04 55 24.9	+2.8
YVAC	Isparta, Yalva	6.21	333	P	Pn	04 55 25.7	+2.8
YVAC				S	Sn	04 56 24.3	-9.2
AFYN	Afyon-Dinar-K	6.51	329	P	Pn	04 55 29.5	+2.5
MARD	Mardin	6.70	46	Pn	Pn	04 55 30.7	+1.1
BRTR	Keskin Array B	7.01	353	Pn	Pn	04 55 36.0	+2.1
	0.5nm,0.3s,baz=170,slow=15,SNR=5.9						
	1.8nm,0.4s						
BRTR	Keskin Array B	7.01	353	Pn	Pn	04 55 35.1	+1.2
BR131	Keskin Array S	7.01	353	Pn	Pn	04 55 33.9	0.0
MANT	Manisa	7.64	320	Pn	Pn	04 55 41.8	-0.8
BORA	Eskisehir	7.92	335	Pn	Pn	04 55 47.0	+0.7
ILGA	Ilgaz	8.32	354	Pn	Pn	04 55 53.7	+1.7
IDI	Anoyia	8.59	290	Pn	Pn	04 55 55.6	+0.1
	6.9nm,0.8s,baz=8.8,slow=9.8,SNR=6.3						
IDI				Sn	Sn	04 57 29.3	-2.6
	1.2nm,0.3s,baz=204,slow=15,SNR=1.8						
IDI	Anoyia	8.59	290	Pn	Pn	04 55 55.4	-0.1
GEVA	Gevas	8.73	48	Pn	Pn	04 55 58.8	+1.3
KIEV	Kiev	18.39	349	P	P	04 58 05.9	+0.1
AKASG	Malin Array Be	18.39	349	P	P	04 58 05.0	-0.8
	0.5nm,0.3s,baz=166,slow=10,SNR=4.2						
	0.4nm,0.4s						
AKBB	Malin Array Si	18.39	349	P	P	04 58 05.7	-0.2
NRCA	Norcia	19.80	307	P	P	04 58 19.9	-1.6
NRCA				IAmb	IAmb	04 58 38.8	
	comp=Z,38nm,1.4s						
MODS	Modra-Piesok	20.42	325	eP	P	04 58 29.1	+1.0
VRAC	Vranov	21.39	326	LR	LR	05 09 04.0	
	comp=Z,75nm,18.2s,baz=358,slow=43						
BELG	Belogornoye	21.72	22	P	P	04 58 44.0	+2.0
	comp=Z,7.2nm,0.9s,baz=142,slow=1.9,SNR=4.3						
	comp=Z,7.2nm,0.9s						
GERES	GERESS Array B	22.53	322	P	P	04 58 53.0	+2.1
	comp=Z,0.5nm,0.5s,baz=123,slow=7.1,SNR=8.9						
	comp=Z,0.5nm,0.5s						
AB31	Akbulak array	24.97	41	P	P	04 59 15.2	+0.8
AB31				IAmb	IAmb	04 59 23.7	
	comp=Z,6.1nm,1.5s						
ABKAR	Akbulak array	24.97	41	P	P	04 59 15.3	+0.9
BFO	Black Forest	25.24	316	P	P	04 59 17.3	+0.4
BFO				IAmb	IAmb	04 59 27.3	
	comp=Z,3.9nm,0.7s						
CORI	Orista	27.45	299	P	P	04 59 35.9	-1.0
CORI				IAmb	IAmb	04 59 40.7	
	comp=Z,32nm,1.3s						
TAM	Tamanrasset	27.64	256	P	P	04 59 36.7	-2.3
CHGR	Chuyangaron	28.42	68	P	P	04 59 46.6	+0.9
CHGR				IAmb	IAmb	05 00 27.8	
	comp=Z,8.3nm,1.2s						
ARTI	Arti	28.72	28	P	P	04 59 49.2	+1.1
FINES	FINESS Array B	29.25	351	P	P	04 59 53.5	+0.8
	comp=Z,1.4nm,0.8s,baz=168,slow=14,SNR=1.8						
	comp=Z,1.4nm,0.8s						
HFS	Hagfors	30.71	339	P	P	05 00 05.3	-0.4
	comp=Z,4.0nm,0.9s,baz=179,slow=9.5,SNR=2.3						
	comp=Z,4.0nm,0.9s						
KONO	Kongsberg	31.66	336	P	P	05 00 14.5	+0.5
NC204	NORSAR Array S	32.51	339	P	P	05 00 21.6	0.0
NC204				IAmb	IAmb	05 01 04.3	
	comp=Z,33nm,1.4s						
BVAR	Borovoye Array	32.55	41	P	P	05 00 22.7	+0.8
	comp=Z,0.3nm,0.5s,baz=254,slow=10,SNR=1.3						
	comp=Z,0.3nm,0.5s						
KSH2	Kashi	33.42	67	P	P	05 00 32.4	+2.5
EKA	Eskdalemuir Ar	34.75	322	P	P	05 00 41.4	+0.4
	comp=Z,0.4nm,0.6s,baz=118,slow=8.9,SNR=4.8						
	comp=Z,0.4nm,0.6s						
KURBB	Kurchatov Arra	36.60	48	P	P	05 00 57.4	+0.4
	comp=Z,0.3nm,0.6s,baz=264,slow=8.5,SNR=4.7						
	comp=Z,0.3nm,0.6s						
KURK	Kurchatov	36.67	48	P	P	05 00 58.6	+1.0
MKAR	Makanchi Array	38.53	54	P	P	05 01 14.1	+0.7
	comp=Z,0.2nm,0.7s,baz=261,slow=6.6,SNR=1.2						
	comp=Z,0.2nm,0.7s						
MKAR	Makanchi Array	38.53	54	P	P	05 01 14.5	+1.1
ZALV	Zalesovo Beam	41.04	44	P	P	05 01 33.8	-0.4
	comp=Z,0.3nm,0.3s,baz=252,slow=7.6,SNR=1.4						
	comp=Z,0.3nm,0.3s						
SPITS	Spitsbergen Ar	46.23	355	P	P	05 02 14.8	-0.8
	comp=Z,6.2nm,1.2s,baz=162,slow=11,SNR=0.9						
	comp=Z,6.2nm,1.2s						
NRIK	Noril'sk	46.81	23	LR	LR	05 25 50.9	
	comp=Z,28nm,18.0s,baz=42,slow=41						
PZH	PanZhiHua	57.69	77	P	P	05 03 44.2	+2.3
CMAR	Chiang Mai Arr	58.80	87	LR	LR	05 32 59.0	
	comp=Z,9.3nm,18.5s,baz=185,slow=40						
HHC	Hu-ho-hao-te	60.20	58	eP	P	05 04 00.8	+1.7
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MA2	Magadan	74.00	28	LR	LR	05 42 51.2	
	comp=Z,18nm,18.8s,baz=88,slow=40						
YKA	Yellowknife Ar	81.94	346	LR	LR	05 42 49.5	
	comp=Z,39nm,19.2s,baz=304,slow=36						
PDAR	Pinedale Array	98.03	334	P	P	05 07 26.6	-1.1
	comp=Z,0.2nm,0.4s,baz=24,slow=6.0,SNR=2.2						
	comp=Z,0.2nm,0.4s						

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*IDC **06** 05:06:21.7±1.5, 38.°03N×22.°37E, h0km, mb3.5/7, mbtmp3.5/7, MS2.8/2, Error ellipse: s-maj=34.0km s-min=24.1km az=155.0*
*THE **06** 05:06:23.2, 38.°1N±0.°5×22.°3E±0.°6, h8km±3km, M3.2/22, MLh3.2/22*
*ATH **06** 05:06:23.2, 38.°10N×22.°29E, h6km, ML3.3/31, Manual Solution by F.Xalaris First location: 2020/02/06 05:07:12, This location: 2021/04/13 06:22:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 06 05:06:23.3±0.8**, 38.°09N**±0.°02×**22.°27E**±0.°02**, h10**km±5km**, n92,** σ**0.s55**/120**, mb3.7**/5**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KLV	Kalavryta, Ach	0.11	244	P	Pg	05 06 25.9	-0.2
KLV				S	Sg	05 06 27.7	-0.3
KLV	Kalavryta, Ach	0.11	244	P	Pg	05 06 25.9	-0.2
KLV				S	Sg	05 06 27.8	-0.3
KLV1	Kalavrita	0.14	246	P	Pg	05 06 26.5	-0.1
KLV1				S	Sg	05 06 28.9	0.0
GUR	Goura	0.16	161	P	Pg	05 06 27.0	0.0
GUR	Goura	0.16	161	P	Pg	05 06 26.9	0.0
GUR				S	Sg	05 06 29.5	0.0
TEME	Temeni, Aigial	0.19	319	P	Pg	05 06 27.0	-0.3
TEME				S	Sg	05 06 29.5	-0.5
AGEO	AgiosGiorgios,	0.24	316	P	Pg	05 06 28.1	-0.1
AGEO				S	Sg	05 06 31.2	-0.3
TRIZ	Trizonia	0.32	330	P	Pg	05 06 29.4	-0.3
KALE	Kalithea	0.32	340	P	Pg	05 06 29.5	-0.3
KALE				S	Sg	05 06 34.2	+0.2
KALE	Kalithea	0.32	340	P	Pg	05 06 29.6	-0.1
KALE				S	Sg	05 06 33.7	-0.3
ZIRI	Ziria, Aigiali	0.33	310	P	Pg	05 06 29.8	-0.2
SERG	Sergoula	0.36	332	P	Pg	05 06 30.3	-0.3
SERG				S	Sg	05 06 35.6	+0.1
SERG	Sergoula	0.36	332	P	Pg	05 06 30.4	-0.2
SERG				S	Sg	05 06 35.3	-0.1
MG00	Magoula, Dorid	0.41	321	P	Pg	05 06 31.1	-0.4
MG00				S	Sg	05 06 36.9	0.0
DLFA	Delphi	0.42	24	P	Pg	05 06 31.2	-0.5
UPR	University Cam	0.43	297	P	Pg	05 06 31.7	-0.1
UPR				S	Sg	05 06 37.7	+0.3
UPR	University Cam	0.43	297	P	Pg	05 06 31.6	-0.1
UPR				S	Sg	05 06 37.6	+0.1
RIOA	Rio	0.43	298	P	Pg	05 06 31.6	-0.2
MALA	Malamata, Dori	0.44	314	P	Pg	05 06 31.6	-0.3
MALA				S	Sg	05 06 37.7	0.0
PATC	Patra C	0.44	294	P	Pg	05 06 31.9	-0.1
EFP	Efpalio	0.44	319	P	Pg	05 06 31.6	-0.4
EFP				S	Sg	05 06 38.4	+0.5
EFP	Efpalio	0.44	319	P	Pg	05 06 31.6	-0.4
EFP				S	Sg	05 06 37.9	0.0
PATG	Patra B	0.46	289	P	Pg	05 06 32.1	-0.2
DRO	Drossia	0.47	253	P	Pg	05 06 32.0	-0.5
DRO				S	Sg	05 06 39.3	+0.7
DRO	Drossia	0.47	253	P	Pg	05 06 31.9	-0.5
DRO				S	Sg	05 06 39.0	+0.4
AGRP	Agrapidokambos	0.53	305	P	Pg	05 06 33.2	-0.5
AGRP				S	Sg	05 06 40.8	+0.1
LTK	Loutraki	0.55	97	P	Pg	05 06 34.1	0.0
LTK				S	Sg	05 06 41.8	+0.5
LTK	Loutraki	0.55	97	P	Pg	05 06 34.1	0.0
ANX	Ano Chora	0.57	331	P	Pg	05 06 33.9	-0.6
ANX				S	Sg	05 06 42.5	+0.4
ANX	Ano Chora	0.57	331	P	Pg	05 06 33.9	-0.6
ANX				S	Sg	05 06 42.0	-0.1
ARS1	Argos	0.58	142	P	Pg	05 06 34.8	+0.1
RLS	Riolos of Patr	0.64	267	P	Pg	05 06 34.7	-1.0
RLS				S	Sg	05 06 44.3	+0.2
RLS	Riolos of Patr	0.64	267	P	Pg	05 06 34.6	-1.0
RLS				S	Sg	05 06 44.5	+0.4
AMT	Artemida-Makis	0.72	219	P	Pg	05 06 36.7	-0.5
AMT				S	Sb	05 06 47.6	-0.3
AMT	Artemida-Makis	0.72	219	P	Pg	05 06 36.6	-0.6
AMT				S	Sb	05 06 47.6	-0.3
AXS	Araxos	0.72	279	P	Pg	05 06 36.3	-0.9
AXS				S	Sg	05 06 47.3	+0.8
AXS	Araxos	0.72	279	P	Pg	05 06 36.5	-0.7
AXS				S	Sg	05 06 47.1	+0.6
VLX	Vlachokerasia	0.72	173	P	Pg	05 06 36.5	-0.8
VLX				S	Sb	05 06 47.7	-0.5
AXAR	Agios Charalam	0.74	24	P	Pg	05 06 37.1	-0.5
AXAR				S	Sb	05 06 48.6	+0.1
AXAR	Agios Charalam	0.74	24	P	Pg	05 06 36.9	-0.7
ZARO	Zacharo	0.78	220	P	Pg	05 06 38.2	-0.2
PVO	Paravola	0.79	312	P	Pg	05 06 38.2	-0.4
PVO	Paravola	0.79	312	P	Pg	05 06 38.2	-0.4
VIL2	Platees	0.79	81	P	Pb	05 06 39.4	+0.2
LKR	Lokris	0.80	45	P	Pg	05 06 38.0	-0.8
LKR	Lokris	0.80	45	P	Pg	05 06 37.9	-0.8
VILL	Villia	0.82	85	P	Pb	05 06 39.3	-0.5
ATAL	Atalanti	0.84	44	P	Pg	05 06 38.8	-0.7
ATAL	Atalanti	0.84	44	P	Pg	05 06 38.7	-0.8
EVR	Evrytania	0.90	336	P	Pg	05 06 39.8	-0.9
EVR	Evrytania	0.90	336	P	Pg	05 06 40.0	-0.7
CLEM	Kyllini,Ilia,G	0.92	258	P	Pg	05 06 40.6	-0.6
MAKR	Makrakomi, Fth	0.93	353	P	Pg	05 06 40.3	-0.9
MAKR	Makrakomi, Fth	0.93	353	P	Pg	05 06 41.0	-0.2
AGG	Agios Georgios	0.93	3	P	Pg	05 06 39.8	-1.5
AGG	Agios Georgios	0.93	3	P	Pg	05 06 39.6	-1.6
ITM	Ithomi	0.95	197	P	Pg	05 06 40.2	-1.4
ITM	Ithomi	0.95	197	P	Pg	05 06 40.5	-1.2
MET2	Kameni Chora,	0.96	119	P	Pg	05 06 41.6	-0.3
AIDA	Aidipsos	0.97	38	P	Pn	05 06 42.9	-0.2
MET5	Makryloggos,Me	0.98	118	P	Pb	05 06 42.3	-0.1
MAGU	Magoula	0.98	90	P	Pn	05 06 42.9	-0.2
STFN	Stefani	1.00	85	P	Pb	05 06 43.0	+0.1
MET1	Methana Town,	1.02	120	P	Pg	05 06 42.4	-0.5
ATH	Athens Observa	1.15	96	P	Pn	05 06 45.8	+0.4
NOAC	Athens-Thissio	1.15	95	P	Pn	05 06 45.8	+0.3
KYPS	Kipseli, Zakin	1.18	257	P	Pb	05 06 46.1	+0.3
RTZL	Ratzakli, Kefa	1.19	270	P	Pg	05 06 45.3	-0.9
ATHU	Athens Univers	1.20	96	P	Pg	05 06 45.2	-1.2
LTHK	Lithakia	1.20	252	P	Pb	05 06 46.5	+0.3
YDRA	Hydra	1.20	128	P	Pn	05 06 46.9	+0.7
VLY	Voula,Athens	1.23	101	P	Pg	05 06 46.4	-0.5
PTL	Penteli	1.26	91	P	Pn	05 06 47.3	+0.3
PYL1	Pylos	1.26	202	P	Pn	05 06 46.5	-0.6
PYL	PYLOS	1.27	200	P	Pn	05 06 46.1	-1.0
ORTH	Orthonies,Zaky	1.27	260	P	Pn	05 06 47.2	-0.1
VLS	Valsamata	1.33	274	P	Pn	05 06 47.1	-1.0
MTHA	Methoni	1.35	200	P	Pb	05 06 49.0	+0.3
EVGI	Lefkada island	1.38	293	P	Pn	05 06 49.2	+0.5
NYDR	Nydri-Lefkada	1.39	297	P	Pn	05 06 48.9	+0.1
FSK	Fiskardo	1.40	286	P	Pn	05 06 49.4	+0.4
NEO	Neokhori	1.42	31	P	Pn	05 06 49.6	+0.3
LKD2	Lefkada island	1.45	299	P	Pb	05 06 50.5	0.0
MLR	Muntele Rosu	7.88	19	LR	LR	05 12 10.4	
	comp=Z,63nm,18.4s,baz=118,slow=44						
ESDC	Sonseca Array	20.47	283	P	P	05 11 01.9	+0.7
	0.4nm,0.6s,baz=78,slow=10,SNR=4.7						
	0.4nm,0.6s						
FINES	FINESS Array B	23.50	5	P	P	05 11 33.6	+0.6
	2.2nm,0.9s,baz=196,slow=14,SNR=1.7						
	2.2nm,0.9s						
NOA	NORSAR Array B	24.00	347	P	P	05 11 39.2	+1.2
	1.0nm,0.8s,baz=161,slow=11,SNR=1.7						
	1.0nm,0.8s						
EKA	Eskdalemuir Ar	24.31	323	P	P	05 11 41.0	+0.2
	0.7nm,0.5s,baz=127,slow=10,SNR=6.9						
	0.7nm,0.5s						
TORD	Torodi Ar. Bea	30.86	222	P	P	05 12 40.0	+0.1
	0.3nm,0.7s,baz=25,slow=6.2,SNR=1.7						
	0.3nm,0.7s						
MBAR	Mbarara	39.29	167	LR	LR	05 29 28.8	
	comp=Z,16nm,19.8s,baz=144,slow=35						
MKAR	Makanchi Array	44.17	59	P	P	05 14 31.5	-0.7
	0.6nm,0.4s,baz=271,slow=8.0,SNR=16						
	0.6nm,0.4s						
ZALV	Zalesovo Beam	44.72	48	P	P	05 14 36.4	-0.1
	0.5nm,0.4s,baz=282,slow=8.9,SNR=2.5						
	0.5nm,0.4s						

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*CNRM **06** 05:17:43.0, 36.°15N×8.°81W, h0km*
*SFS **06** 05:17:45.8, 36.°28N×9.°04W, h4km, ML2.9/7, ML2.9/7, MLv2.9/7*
*IGIL **06** 05:17:47.7, 36.°41N×9.°34W, h11km, ML1.4*
*INMG **06** 05:17:48.0±1.6, 36.°42N×9.°33W, h15km±7km, ML1.6, Error ellipse: s-maj=14.6km s-min=8.2km az=104.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Cabo S.Vicente*
ISC 06 05:17:42.4±2.0**, 36.°17N**±0.°05×**9.°15W**±0.°09**, h16**km±10km**, n28,** σ**1.s42**/48**, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.99	15	P	Pb	05 18 02.0	+0.8
PFVI				S	Sb	05 18 13.4	-0.7
PFVI	Vila Bisbo	0.99	15	eP	Pn	05 18 02.9	+1.1
PFVI				eS	Sb	05 18 13.8	-0.3
PFVI				i IAML		05 18 15.1	
PFVI				i IAML		05 18 15.7	
PFVI				i IAML		05 18 16.6	
PFVI	Vila Bisbo	0.99	15	P	Pg	05 18 01.3	-0.3
PFVI				S	Sb	05 18 13.6	-0.5
MORF	Marmelete	1.20	19	eS	Sg	05 18 19.6	-1.6
MORF				IAML		05 18 21.2	
	comp=N,9.8nm,0.1s						
MORF	Marmelete	1.20	19	eP	Pn	05 18 06.6	+2.0
MORF				eS	Sn	05 18 21.0	+0.4
MORF				i IAML		05 18 21.9	
MORF				i IAML		05 18 22.2	
MORF				i IAML		05 18 22.5	
PTEO	Sao Teotonio	1.41	14	eP	Pn	05 18 08.3	+0.9
PTEO				eS	Sb	05 18 24.4	-1.7
PTEO				i IAML		05 18 26.4	
PTEO				i IAML		05 18 26.4	
PTEO				i IAML		05 18 26.6	
PBDV	Barranco-do-Ve	1.45	42	P	Pb	05 18 10.5	+1.5
PBDV				S	Sg	05 18 28.3	-0.9
PBDV	Barranco-do-Ve	1.45	42	eP	Pg	05 18 11.3	+1.0
PBDV				eS	Sg	05 18 29.1	-0.1
PBDV				i IAML		05 18 32.5	
PBDV				i IAML		05 18 36.5	
PVAQ	Vaqueiros	1.68	43	eP	Pg	05 18 15.1	+0.3
PVAQ				eS	Sb	05 18 34.2	+0.2
PVAQ				i IAML		05 18 36.4	
PVAQ				i IAML		05 18 36.9	
PVAQ				i IAML		05 18 37.6	
PVAQ	Vaqueiros	1.68	43	P	Pn	05 18 12.0	+0.8
PVAQ				S	Sg	05 18 35.0	-1.7
PCVE	Castro Verde	1.71	31	P	Pn	05 18 12.5	+1.0
PCVE				S	Sn	05 18 33.1	+0.1
PCVE	Castro Verde	1.71	31	eP	Pn	05 18 12.5	+1.0
PCVE				eS	Sg	05 18 35.7	-1.7
PCVE				i IAML		05 18 36.5	
PCVE				i IAML		05 18 40.5	
PCVE				i IAML		05 18 42.5	
MESJ	Messejana	1.82	24	eP	Pb	05 18 15.5	+0.1
MESJ				eS	Sn	05 18 35.3	-0.6
MESJ				IAML		05 18 39.8	
	comp=E,2.4nm,0.2s						
MESJ	Messejana	1.82	24	eP	Pb	05 18 15.6	+0.1
MESJ				eS	Sn	05 18 35.2	-0.6
MESJ				i IAML		05 18 41.1	
MESJ				i IAML		05 18 41.5	
MESJ				i IAML		05 18 42.7	
MOE	Montemor	2.43	15	eP	Pn	05 18 23.9	+2.4
EMIN	Mina Concepcio	2.54	51	S	Sn	05 18 53.6	-0.1
PBAR	Barrancos	2.62	40	P	Pn	05 18 26.0	+2.0
PBAR				S	Sn	05 18 54.6	-0.9
PBAR	Barrancos	2.62	40	eP	Pn	05 18 26.0	+2.0
PBAR				eS	Sn	05 18 55.0	-0.5
PARRA	Arraiolos	2.78	18	eP	Pn	05 18 28.0	+1.7
PESTR	Estremoz	2.96	24	S	Sn	05 19 04.5	+0.5
PMTG	Montargil	2.98	14	eP	Pn	05 18 30.5	+1.5
PMTG				eS	Sn	05 19 02.4	-2.1
EBAD	Badajoz	3.09	33	P	Pn	05 18 31.4	+0.9
EBAD				S	Sn	05 19 05.8	-1.3
PSARD	Sardoal	3.51	13	eS	Sn	05 19 15.3	-2.2
PMRV	Marv??o	3.54	23	eP	Pn	05 18 38.3	+1.6
PMRV				eS	Sn	05 19 15.9	-2.3
ECAB	El Cabril	3.54	56	P	Pn	05 18 38.4	+1.6
EADA	Adamuz	4.16	60	P	Pn	05 18 46.6	+1.3
MD31	MD31	4.90	131	P	Pn	05 18 57.9	+2.4
MD31				S	Sn	05 19 49.5	-2.5
MDT	Midelt	5.03	130	P	Pn	05 18 57.9	+0.6
MDT				S	Sn	05 19 52.7	-2.6

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*VIE **06** 05:29:29.1±0.3, 50.°28N×18.°74E, h0km, mb2.7/2, ml2.4/4, ms3.6/1, Error ellipse: s-maj=3.4km s-min=2.1km az=164.0 18 km W of Katowice Suspected Mining induced.*
*IPEC **06** 05:29:29.4±0.1, 50.°21N×18.°78E, h1km, ML2.3/6, Error ellipse: s-maj=1.9km s-min=0.9km az=172.0*
*PRU **06** 05:29:30.4, 50.°22N×18.°72E, h0km*
ISC 06 05:29:28.3±0.9**, 50.°29N**±0.°04×**18.°84E**±0.°03**, h0**km**, n28,** σ**1.s34**/47**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.62	96	ePg	Pb	05 29 42.2	+0.3
OJC				eSg	Sb	05 29 51.5	+0.3
OKC	Ostrava-Krasne	0.63	225	ePG	Pg	05 29 40.4	0.0
OKC				eSG	Sg	05 29 48.4	-0.2
STEB	Steborice	0.77	243	ePG	Pg	05 29 43.3	+0.3
STEB				eSG	Sg	05 29 52.9	-0.2
ANAC	Anensky vrch	0.96	258	ePg	Pg	05 29 46.9	+0.2
	baz=81						
ANAC				eSg	Sg	05 29 58.1	-1.1
	105nm,0.4s,baz=81						
MORC	Moravsky Berou	0.98	239	ePg	Pg	05 29 46.5	-0.5
	baz=61						
MORC				eSg	Sg	05 29 57.9	-1.8
	30nm,0.4s,baz=61						
MORC	Moravsky Berou	0.98	239	ePG	Pg	05 29 46.6	-0.5
MORC				eSG	Sg	05 29 58.0	-1.8
MAUC	Maruska	1.13	216	ePG	Pg	05 29 49.7	-0.2
MAUC				eSG	Sg	05 30 04.3	-0.3
LOSC	Losov	1.16	236	ePg	Pg	05 29 50.0	-0.4
	baz=57						
LOSC				eSg	Sg	05 30 03.4	-2.1
	46nm,0.5s,baz=57						
NIE	Niedzica	1.28	132	ePg	Pn	05 29 53.9	+0.4
NIE				eSg	Sn	05 30 11.7	+0.3
DPC	Dobruska-Polom	1.62	273	ePG	Pn	05 29 57.9	-0.2
DPC				eSG	Sg	05 30 20.0	-0.1
	comp=Z,26nm,0.3s						
JAVC	Velka Javorina	1.62	209	ePn	Pn	05 29 57.7	-0.4
	baz=28						
OSTC	Ostas	1.70	280	ePG	Pg	05 30 00.6	-0.2
OSTC				eSG	Sg	05 30 22.5	-0.4
KSP	Ksiaz	1.72	290	ePg	Pg	05 30 02.0	+0.8
KSP				eSg	Sg	05 30 22.8	-0.6
VRAC	Vranov	1.75	237	ePn	Pn	05 29 59.8	-0.1
	baz=57						
VRAC				eSg	Sn	05 30 22.1	-0.9
	25nm,0.5s,baz=57						
CHVC	Chvalec	1.81	281	ePG	Pb	05 30 02.2	0.0
KRUC	Moravsky	2.01	233	ePn	Pn	05 30 02.9	-0.4
	baz=53						
KRUC				eSg	Sn	05 30 29.6	+0.4
	12nm,0.4s,baz=53						
KRUC	Moravsky	2.01	233	ePN	Pn	05 30 03.0	-0.4
KRUC				eSG	Sn	05 30 29.7	+0.5
KECS	Kecovo	2.10	149	ePN	Pb	05 30 07.1	-0.1
KECS				eSN	Sn	05 30 29.6	-1.9
KECS				eLG	Lg	05 30 39.8	
MODS	Modra-Piesok	2.17	209	ePN	Pn	05 30 05.4	-0.2
MODS				eSG	Sg	05 30 38.1	+0.2
PRU	Pruhonice	2.78	265	eSG	Sb	05 30 54.8	+1.4
	comp=Z,6.5nm,0.4s						
CONA	Conrad Observa	3.07	221	ePn	Pn	05 30 17.1	-0.9
	0.8nm,0.3s						
CONA				eSn	Sn	05 30 55.4	-0.1
	2.1nm,0.4s						
RONA	Rosalia, Austr	3.08	214	ePn	Pn	05 30 18.4	+0.1
	0.6nm,0.2s						
CKRC	Cesky Krumlov	3.30	245	eSG	Sb	05 31 09.6	+1.4
	comp=Z,4.4nm,0.3s						
KHC	Kasperske Hory	3.61	253	ePN	Pn	05 30 24.0	-1.4
KHC				eSG	Sb	05 31 20.0	+2.8
MOA	Molln	3.87	233	Sg	Sg	05 31 37.3	+4.7
	4.8nm,0.5s						
NKC	Novy Kostel	4.10	272	eSG	Sg	05 31 37.6	-2.4
LESA	Schwarzleotal	4.98	237	Sg	Sg	05 32 04.2	-3.8
	2.2nm,0.5s						
MOTA	Moosalm	5.90	243	Sg	Sg	05 32 39.3	+1.7
	3.0nm,0.5s						

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*IDC **06** 05:29:48.6±2.4, 38.°59N×142.°74E, h0km, mb3.6/4, mbtmp3.5/5, ML2.3/1, Error ellipse: s-maj=49.4km s-min=31.5km az=83.0*
*JMA **06** 05:29:58.3±0.1, 38.°3N±0.°3×141.°9E±0.°6, h46km, MV3.5/37, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
ISC 06 05:29:57.5±1.7**, 38.°29N**±0.°06×**142.°0E**±0.°1**, h43**km±13km**, n23,** σ**0.s85**/25**, mb3.6**/4**, 15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.38	273	⇓iP	Pn	05 30 07.1	+0.3
JIKH				⇓S	Sn	05 30 13.3	-0.1
JIO	Ouri	0.50	289	⇓iP	Pn	05 30 08.5	+0.2
JIO				⇓S	Sn	05 30 15.6	-0.3
JKMT	Kesennumamotoy	0.64	325	⇓iP	Pn	05 30 10.5	+0.4
JKMT				⇓S	Sn	05 30 19.0	-0.2
OFUJ	Ofunato	0.82	345	⇓iP	Pn	05 30 13.0	+0.4
OFUJ				⇓S	Sn	05 30 23.5	-0.1
JMK	Ichinoseki	0.87	319	⇓iP	Pn	05 30 13.8	+0.5
JMM	Marumori	1.00	245	⇓iP	Pn	05 30 14.7	-0.5
JOU	Okura	1.01	275	⇓iP	Pn	05 30 15.4	+0.1
JOU				⇓S	Sn	05 30 27.9	-0.4
JFK	Kawauchi	1.25	223	P	Pn	05 30 18.4	-0.2
JFK				S	Sn	05 30 33.3	-1.0
JOM	Ohasama	1.28	337	⇓iP	Pn	05 30 19.8	+0.8
JYK	Kaneyama	1.39	297	i P	Pn	05 30 20.7	+0.3
JOTO	OTAMA OYAMA	1.47	241	P	Pn	05 30 22.1	+0.5
JOTO				S	Sn	05 30 39.6	0.0
JYS	Shirataka	1.48	268	⇓iP	Pn	05 30 21.9	+0.2
JYS				⇓S	Sn	05 30 39.9	0.0
MJAR	Matsushiro Arr	3.45	241	Pn	Pn	05 30 52.1	+3.4
	0.2nm,0.3s,baz=58,slow=10,SNR=5.3						
MJAR				Sn	Sn	05 31 44.3	+16
	0.2nm,0.3s,baz=49,slow=26,SNR=2.5						
	1.8nm,0.4s						
H11N2	WAKE ISLAND Hy	28.46	123	T	T	06 06 02.5	
	baz=316,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	28.47	124	T	T	06 06 02.3	
	baz=316,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	28.48	123	T	T	06 06 03.9	
	baz=316,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	29.21	126	T	T	06 07 00.9	
	baz=318,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	29.22	126	T	T	06 07 01.0	
	baz=318,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	29.23	126	T	T	06 07 00.4	
	baz=318,slow=76,SNR=21						
ZALV	Zalesovo Beam	41.39	311	P	P	05 37 39.0	-0.3
	0.4nm,0.3s,baz=78,slow=7.7,SNR=2.4						
	0.4nm,0.3s						
MKAR	Makanchi Array	43.82	301	P	P	05 37 58.8	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.4nm,0.6s,baz=85,slow=9.6,SNR=4.7						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**45.57**	**307**	P	**P**	**05 38 12.4**	**-0.7**
	1.2nm,0.7s,baz=82,slow=8.3,SNR=8.5						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**58.36**	**188**	P	**P**	**05 39 48.3**	**-0.1**
	0.4nm,0.7s,baz=6.5,slow=6.8,SNR=2.0						
	0.4nm,0.7s						

*NEIC **06** 05:33:10.5±1.2, 17°.82N±0°.03×67°.17W±0°.02, h10km±1km, ML2.6/31, Md2.7/11(RSPR), Error ellipse: s-maj=5.5km s-min=2.8km az=28.0*
*RSPR **06** 05:33:11.6, 17°.88N×67°.14W, h6km, MD2.7/11*
*SDD **06** 05:33:11.7±1.0, 17°.86N×67°.07W, h12km±8km, MD3.1, ML2.5, MW2.9, Presumed earthquake*
ISC 06 05:33:11.6±1.1**, 17°.88N**±0°.06×**67°.12W**±0°.03**, h12**km±5km**, n37,** σ**0s.64**/58**, 13C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.11**	**37**		**Pg**	**05 33 14.6**	**0.0**
MLPR				Sg	**Sg**	**05 33 16.4**	**-0.5**
MLPR				IAML		05 33 17.4	
	2μm,0.1s						
MLPR				IAML		05 33 17.9	
	3μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.13**	**3**	Sg	**Sg**	**05 33 16.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.13**	**3**		**Pg**	**05 33 14.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.13**	**3**	*e*Pg	**Pg**	**05 33 14.9**	**0.0**
CRPR				IAML		05 33 16.8	
	comp=N,5μm,0.2s						
CRPR				⇓*e*Sg	**Sg**	**05 33 16.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.13**	**3**	⇑*e*P	**Pg**	**05 33 14.8**	**0.0**
CRPR				*e*S	**Sg**	**05 33 16.7**	**-0.5**
GBPR	**Guanica, Bosqu**	**0.24**	**67**		**Pg**	**05 33 17.2**	**+0.4**
GBPR					**Sg**	**05 33 21.6**	**+1.3**
GBPR	**Guanica, Bosqu**	**0.24**	**67**	⇓*e*P	**Pg**	**05 33 17.2**	**+0.4**
GBPR				*e*S	**Sg**	**05 33 21.6**	**+1.3**
LSP	**Las Mesas**	**0.30**	**6**		**Pg**	**05 33 17.9**	**+0.2**
LSP					**Sg**	**05 33 22.5**	**+0.7**
LSP	**Las Mesas**	**0.30**	**6**	⇑*e*P	**Pg**	**05 33 17.9**	**+0.2**
LSP				*e*S	**Sg**	**05 33 22.5**	**+0.7**
PRSN	**Puerto Rico Se**	**0.34**	**355**		**Pg**	**05 33 18.4**	**-0.1**
PRSN				IAML		05 33 25.3	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.34**	**355**		**Sg**	**05 33 23.9**	**+0.9**
PRSN	**Puerto Rico Se**	**0.34**	**355**	*e*Pg	**Pg**	**05 33 18.3**	**-0.1**
PRSN				⇑*e*Sg	**Sg**	**05 33 23.6**	**+0.5**
PRSN				IAML		05 33 26.4	
	comp=N,885nm,0.2s						
PRSN	**Puerto Rico Se**	**0.34**	**355**	⇑*e*P	**Pg**	**05 33 18.3**	**-0.1**
PRSN				*e*S	**Sg**	**05 33 23.9**	**+0.9**
OBIP	**Obispado Ponce**	**0.51**	**71**		**Pg**	**05 33 21.6**	**0.0**
OBIP	**Obispado Ponce**	**0.51**	**71**	⇑*e*P	**Pg**	**05 33 21.7**	**0.0**
OBIP				*e*S	**Sg**	**05 33 29.7**	**+1.2**
UUPR	**Utuado, UPR, P**	**0.53**	**45**		**Pg**	**05 33 21.6**	**-0.4**
CELP	**Cerrillos**	**0.55**	**69**		**Pg**	**05 33 22.3**	**0.0**
CELP				IAML		05 33 30.6	
	comp=N,237nm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**0**		**Pg**	**05 33 22.6**	**-0.5**
AGPR	**Aguadilla, PR**	**0.58**	**0**	⇓*e*Pg	**Pg**	**05 33 22.7**	**-0.4**
AGPR				⇓*e*Sg	**Sg**	**05 33 31.0**	**+0.2**
AGPR				IAML		05 33 33.5	
	comp=N,150nm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**0**	⇑*e*P	**Pg**	**05 33 22.5**	**-0.5**
AGPR				*e*S	**Sb**	**05 33 32.1**	**0.0**
IDE	**Isla Desecheo**	**0.61**	**326**		**Pg**	**05 33 23.0**	**-0.5**
IDE					**Sg**	**05 33 31.2**	**-0.3**
IDE	**Isla Desecheo**	**0.61**	**326**	⇑*e*P	**Pg**	**05 33 23.0**	**-0.5**
IDE				*e*S	**Sg**	**05 33 31.2**	**-0.3**
EMPR	**Esperanza - Ma**	**0.81**	**43**		**Pg**	**05 33 27.1**	**-0.3**
EMPR					**Sg**	**05 33 38.8**	**+0.7**
EMPR	**Esperanza - Ma**	**0.81**	**43**	⇑*e*P	**Pg**	**05 33 27.1**	**-0.3**
EMPR				*e*S	**Sg**	**05 33 38.8**	**+0.7**
ECPR	**Experimental S**	**0.84**	**58**		**Pg**	**05 33 27.2**	**-0.7**
ECPR				IAML		05 33 39.3	
	comp=N,369nm,0.2s						
ECPR				IAML		05 33 40.9	
	comp=N,322nm,0.3s						
ECPR	**Experimental S**	**0.84**	**58**	⇑*e*P	**Pg**	**05 33 27.0**	**-0.8**
ECPR				*e*S	**Sg**	**05 33 38.2**	**-0.7**
SJG	**San Juan**	**0.95**	**76**		**Pg**	**05 33 29.2**	**-0.8**
SJG				IAML		05 33 47.6	
	comp=N,79nm,0.2s						
SJG	**San Juan**	**0.95**	**76**	⇑*e*P	**Pg**	**05 33 29.0**	**-0.9**
PDPR	**Patillas Dam,**	**1.05**	**82**		**Pg**	**05 33 31.3**	**-0.5**
PDPR				IAML		05 33 48.4	
	comp=N,96nm,0.4s						
GCPR	**Guaynabo City**	**1.07**	**66**		**Pb**	**05 33 31.3**	**-0.8**
GCPR				IAML		05 33 49.3	
	comp=N,77nm,0.5s						
GCPR	**Guaynabo City**	**1.07**	**66**	⇑*e*P	**Pb**	**05 33 31.1**	**-1.0**
GCPR				*e*S	**Sg**	**05 33 45.5**	**-0.7**
HUMP	**Col San Antoni**	**1.23**	**78**		**Pn**	**05 33 33.8**	**-0.8**
HUMP				IAML		05 33 55.3	
	comp=N,77nm,0.2s						
HUMP				IAML		05 33 56.2	
	comp=N,86nm,0.2s						
HUMP	**Col San Antoni**	**1.23**	**78**	⇑*e*P	**Pn**	**05 33 34.0**	**-0.6**
HUMP				*e*S	**Sn**	**05 33 52.7**	**+1.5**
HIDR	**Higuey Centro**	**1.68**	**295**	*e*Pg	**Pn**	**05 33 41.0**	**+0.2**
HIDR				⇓*e*Sg	**Sb**	**05 34 03.5**	**0.0**
HIDR				IAML		05 34 14.0	
	comp=N,30nm,1.8s						
CUPR	**Culebra, Puert**	**1.79**	**76**	Pn	**Pn**	**05 33 42.9**	**+0.5**
DR12	**Loma Pena Alta**	**2.33**	**293**	Pn	**Pn**	**05 33 50.8**	**+0.9**
HATOM	**Hato Mayor del**	**2.33**	**293**	⇓*e*Pg	**Pb**	**05 33 53.3**	**-0.4**
HATOM				⇑*e*Sg	**Sb**	**05 34 22.9**	**+0.5**
HATOM				IAML		05 35 08.0	
	comp=N,22nm,1.8s						

*DNK **06** 05:33:51.9±2.5, 81°.83N×3°.39W, h34km±30km, ML1.0, Presumed earthquake*
*BER **06** 05:33:52.0±1.9, 81°.91N×4°.22W, h8km±23km, Mw2.8, ML2.6(DNK), Confirmed Earthquake*
ISC 06 05:33:39.3±2.6**, 82°.2N**±0°.2×**1°.01W**±0°.10**, h10**km**, n9,** σ**1s.92**/13**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.30**	**262**	*i* P	**Pg**	**05 34 22.0**	**-1.3**
NOR				*i* S	**Sn**	**05 34 43.5**	**-1.9**
NOR	**Nord**	**2.30**	**262**	*i* P	**Pg**	**05 34 23.0**	**-0.3**
NOR				*i* S	**Sn**	**05 34 45.1**	**-0.3**
NOR				IAML		05 34 46.7	
	comp=Z,1.9nm,0.2s						
KBS	**Kingsbay**	**3.94**	**141**	*e*P	**Pg**	**05 34 51.0**	**-3.6**
KBS				IAML		05 34 52.8	
	comp=Z,1.3nm,0.2s						
KBS				*i* S	**Sb**	**05 35 36.0**	**-0.3**
KBS	**Kingsbay**	**3.94**	**141**	*i* P	**Pb**	**05 34 49.7**	**+1.1**
KBS				*i* S	**Sn**	**05 35 29.5**	**+3.7**
BRBB	**Barentsburg B**	**4.89**	**140**	*e*P	**Pb**	**05 35 05.8**	**+1.0**
SPA0	**Spitsbergen Ar**	**5.01**	**135**	*e*P	**Pb**	**05 35 07.6**	**+0.7**
SPA0				IAML		05 35 20.0	
	comp=Z,2.1nm,0.9s						
DBG	**Daneborg**	**8.79**	**216**	*i* P	**Pn**	**05 35 47.3**	**+1.2**
DBG				*i* S	Sn	05 37 15.0	-10
DBG	**Daneborg**	**8.79**	**216**	*i* P	**Pn**	**05 35 46.3**	**+0.2**
DBG				*i* S	Sn	05 37 12.0	-13
DBG				IAML		05 37 20.0	
	comp=Z,0.4nm,0.2s						
NEEM	**North Greenlan**	**9.66**	**268**	*i* P	**Pn**	**05 35 59.1**	**+0.7**

*IDC **06** 05:48:09.6±0.8, 0°.58N×129°.36E, h0km, mb3.8/8, mbtmp3.9/10, ML3.5/2, MS3.5/1, Error ellipse: s-maj=45.0km s-min=14.9km az=63.0*
*DJA **06** 05:48:11.4±0.3, 1°N±4°×12°9E±°, h10km, M4.3/16, mb4.7/1, MLv4.1/16*
ISC 06 05:48:14.6±0.8**, 0°.57N**±0°.08×**129°.43E**±0°.07**, h35**km**, n24,** σ**2s.24**/20**, mb3.9**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.07**	**276**	P	**Pn**	**05 48 46.3**	**-0.5**
SWI	**Sorong**	**2.32**	**128**	P	**Pn**	**05 48 50.6**	**+0.3**
SWI				S	**Sn**	**05 49 19.9**	**+2.2**
SIJI	**Sorong**	**2.33**	**128**	Pn	**Pn**	**05 48 50.1**	**-0.3**
	24nm,0.3s,baz=336,slow=18,SNR=22						
SIJI				Sn	**Sn**	**05 49 19.6**	**+1.7**
	28nm,0.3s,baz=29,slow=22,SNR=18						
	76nm,0.4s						
SIJI	**Sorong**	**2.33**	**128**	P	**Pn**	**05 48 50.8**	**+0.3**
MSAI	**Masohi**	**3.92**	**187**	P	**Pn**	**05 49 14.7**	**+2.3**
KRAI	**Karang Ratu**	**4.00**	**195**	P	**Pn**	**05 49 14.9**	**+1.5**
SANI	**Sanana**	**4.31**	**233**	P	**Pn**	**05 49 18.8**	**+1.1**
FAKI	**Fak Fak**	**4.47**	**141**	P	**Pn**	**05 49 20.1**	**+0.2**
FITZ	**Fitzroy Crossi**	**18.92**	**191**	P	**P**	**05 52 30.7**	**-1.8**
	0.1nm,0.3s,baz=0.5,slow=22,SNR=1.1						
	3.0nm,0.9s						
WRA	**Warramunga Arr**	**20.95**	**167**	P	**P**	**05 52 54.0**	**-0.6**
	0.7nm,0.5s,baz=345,slow=11,SNR=10						
WRA				S	**S**	**05 56 38.5**	**-7.8**
	0.2nm,0.7s,baz=357,slow=20,SNR=1.4						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**24.48**	**170**	P	**P**	**05 53 32.0**	**+1.4**
	0.9nm,0.5s,baz=349,slow=11,SNR=11						
	0.9nm,0.5s						
CTA	**Charters Tower**	**26.33**	**142**	LR	LR	06 05 34.9	
	comp=Z,94nm,18.6s,baz=56,slow=40						
H11S3	**WAKE ISLAND Hy**	**40.68**	**62**	T	T	06 38 37.6	
	baz=248,slow=75,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**40.70**	**62**	T	T	06 39 06.1	
	baz=248,slow=75,SNR=5.2						
H11S1	**WAKE ISLAND Hy**	**40.70**	**62**	T	T	06 39 05.3	
	baz=248,slow=75,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**41.32**	**60**	T	T	06 39 50.3	
	baz=246,slow=75,SNR=26						
H11N2	**WAKE ISLAND Hy**	**41.33**	**60**	T	T	06 39 25.8	
	baz=246,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**41.34**	**60**	T	T	06 39 27.1	
	baz=246,slow=75,SNR=51						
LZDM	**Lanzhou Array**	**42.55**	**329**	P	**P**	**05 56 08.3**	**+0.8**
	0.2nm,0.3s,baz=123,slow=5.3,SNR=3.5						
	0.2nm,0.3s						
SONM	**Songino Array**	**51.15**	**340**	P	**P**	**05 57 14.4**	**+0.2**
	0.6nm,0.7s,baz=148,slow=8.5,SNR=4.1						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**61.67**	**325**	P	**P**	**05 58 29.0**	**-0.1**
	1.2nm,0.5s,baz=122,slow=8.6,SNR=13						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**65.83**	**327**	P	**P**	**05 58 56.3**	**-0.1**
	2.6nm,0.6s,baz=126,slow=5.9,SNR=20						
	2.6nm,0.6s						
BVAR	**Borovoye Array**	**71.42**	**327**	P	**P**	**05 59 31.2**	**-0.1**
	0.7nm,0.6s,baz=141,slow=7.1,SNR=3.2						
	0.7nm,0.6s						
NRIK	**Noril'sk**	**74.13**	**346**	P	**P**	**05 59 47.1**	**+0.2**
	1.9nm,0.8s,baz=139,slow=7.6,SNR=3.9						
	1.9nm,0.8s						

NNC 06 05:50:56.9±14.0**, 36°.73N**×**70°.43E, h0**km**, mb3.5, mpv3.1, 2C-3D, Error ellipse: s-maj=119.3km s-min=92.5km az=159.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.37**	**1**	⇑P	Pn	05 52 32.3	+0.3
	0.6nm,0.2s,baz=176,slow=12,SNR=16						
KK31				⇓S	Sn	05 53 46.0	+0.6
	0.4nm,0.3s,baz=176,slow=22						
AAK	**Ala-Archa**	**6.68**	**27**	⇑P	Pn	05 52 38.4	+2.0
	0.6nm,0.5s						
AAK				⇓S	Sn	05 53 55.1	+1.8
	1.1nm,0.5s						
AB31	**Akbulak array**	**14.66**	**332**	⇓P	Pn	05 54 18.9	-6.5
	0.6nm,0.5s,baz=163,slow=12,SNR=13						

*ASRS **06** 05:53:29.0±0.8, 54°.73N×83°.72E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 06 05:53:31.0±1.6**, 54°.69N**×**83°.81E, h0**km**, mbtmp2.9**/3**, ML2.7**/2**, Error ellipse: s-maj=14.9km s-min=10.0km az=10.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**141**	I	I	05 58 57.9	
	baz=320,slow=329,SNR=4.7						
ZALV	**Zalesovo Beam**	**0.95**	**141**	Pg	Pg	05 53 48.8	-0.3
	1.8nm,0.3s,baz=324,slow=18,SNR=20						
ZALV				Lg	Lg	05 54 03.4	
	6.0nm,0.3s,baz=319,slow=29,SNR=12						
KURBB	**Kurchatov Arra**	**5.19**	**220**	Pn	Pn	05 54 50.1	+0.3
	0.3nm,0.4s,baz=42,slow=14,SNR=0.9						
KURBB				Lg	Lg	05 56 19.1	
	0.1nm,0.3s,baz=40,slow=27,SNR=5.1						
MKAR	**Makanchi Array**	**7.96**	**188**	Pn	Pn	05 55 26.4	-1.6
	0.1nm,0.3s,baz=11,slow=11,SNR=2.4						
MKAR				Lg	Lg	05 57 46.0	
	0.1nm,0.3s,baz=6.7,slow=26,SNR=3.3						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**8.11**	**264**	Pn	Pn	05 55 29.4	-0.6
	0.1nm,0.3s,baz=68,slow=14,SNR=5.2						
	0.9nm,0.4s						

IDC 06 06:03:51.5±1.8**, 54°.69N**×**83°.76E, h0**km**, mbtmp2.9**/3**, ML2.2**/3**, Error ellipse: s-maj=16.4km s-min=10.6km az=10.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**140**	I	I	06 09 29.8	
	baz=321,slow=326,SNR=1.2						
ZALV	**Zalesovo Beam**	**0.97**	**140**	Pg	Pg	06 04 09.6	-0.4
	1.2nm,0.3s,baz=324,slow=15,SNR=14						
ZALV				Lg	Lg	06 04 24.1	
	3.8nm,0.3s,baz=318,slow=28,SNR=17						
KURBB	**Kurchatov Arra**	**5.17**	**220**	Pn	Pn	06 05 09.4	-0.6
	baz=37,slow=13,SNR=1.8						
KURBB				Lg	Lg	06 06 36.9	
	0.1nm,0.3s,baz=38,slow=34,SNR=2.3						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	**7.96**	**187**	Pn	Pn	06 05 48.6	+0.2
	baz=10,slow=12,SNR=1.8						
MKAR				Lg	Lg	06 08 05.0	
	0.1nm,0.3s,baz=10,slow=31,SNR=3.7						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**8.08**	**264**	Pn	Pn	06 05 49.5	-0.5
	baz=72,slow=15,SNR=2.9						
	0.5nm,0.4s						

*IDC **06** 06:44:10.6±0.6, 32°.23N×141°.74E, h0km, mb4.0/23, mbtmp4.0/26, ML3.5/3, MS3.2/6, Error ellipse: s-maj=18.3km s-min=14.4km az=48.0*
*NIED **06** 06:44:10.1, 32°.34N×141°.91E, h0km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.77; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-0.85; $M_{r\theta}$1.58; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.71; Fault plane solution: $M_0$1.84000×10^{15} NP1:ϕ_s5.00000°, δ18.00000°, λ149.00000°. NP2:ϕ_s124.00000°, δ81.00000°, λ75.00000°.*
*JMA **06** 06:44:10.1±0.3, 32°.3N±0°.9×14°2E±°, h0km, MV4.1/22, E OFF HACHIJOJIMA ISLAND*
*NEIC **06** 06:44:12.4±0.7, 32°.24N±0°.07×141°.8E±0°.1, h10km±1km, mb4.4/14, Error ellipse: s-maj=17.7km s-min=7.8km az=54.0*
ISC 06 06:44:14.8±0.5**, 32°.23N**±0°.06×**141°.77E**±0°.07**, h29**km**, n73,** σ**0s.70**/78**, mb4.3**/31**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.71**	**278**	*e*P	**Pn**	**06 44 43.2**	**+0.5**
JHCJ	**Hachijojimakas**	**1.86**	**297**	*e*P	**Pn**	**06 44 44.4**	**-0.2**
JHJ2	**Mitsune**	**1.86**	**299**	Pn	**Pn**	**06 44 44.8**	**+0.1**
JHJ2	**Mitsune**	**1.86**	**299**	*e*P	**Pn**	**06 44 44.8**	**+0.1**
JHJ2				*e*S	**Sb**	**06 45 10.0**	**-1.0**
JHJ	**Hachijo jima 2**	**1.89**	**298**	Pn	**Pn**	**06 44 43.9**	**-1.2**
	73nm,0.3s,baz=174,slow=23,SNR=13						
JHJ				Sn	**Sn**	**06 45 08.9**	**+0.9**
	66nm,0.3s,baz=48,slow=20,SNR=4.9						
BSO1	**Boso 1**	**2.50**	**345**	P	**Pn**	**06 44 52.1**	**-0.9**
BSO1				*e*S	**Sn**	**06 45 23.5**	**+1.2**
BSO2	**Boso 2**	**2.65**	**342**	*e*S	**Sn**	**06 45 26.7**	**+0.4**
BSO3	**Boso 3**	**2.77**	**338**	P	**Pn**	**06 44 56.4**	**-0.5**
BSO3				*e*S	**Sn**	**06 45 30.3**	**+1.1**
JOD2	**Odawara 2**	**3.76**	**324**	*e*P	**Pn**	**06 45 10.8**	**+0.1**
JOD2				*e*S	**Sn**	**06 45 56.0**	**+2.0**
JYN	**Shimob**	**4.22**	**321**	*e*P	**Pn**	**06 45 18.2**	**+1.0**
JRY	**Ryogami san**	**4.46**	**329**	*e*P	**Pn**	**06 45 21.4**	**+0.9**
JAG	**Ashikaga**	**4.60**	**336**	*e*P	**Pn**	**06 45 21.6**	**-0.8**
JAG				*e*S	**Sn**	**06 46 13.7**	**-1.0**
JGF	**Kuroka**	**4.97**	**314**	Pn	**Pn**	**06 45 28.5**	**+1.0**
JCJ	**Chichijima**	**5.13**	**176**	Pn	Pn	06 45 17.4	-12
	22nm,0.3s,baz=280,slow=20,SNR=6.7						
JCJ				Sn	Sn	06 46 12.3	-16
	35nm,0.3s,baz=74,slow=23,SNR=5.0						
JCJ	**Chichijima**	**5.13**	**176**	Pn	**Pn**	**06 45 28.9**	**-0.8**
MJAR	**Matsushiro Arr**	**5.21**	**327**	Pn	**Pn**	**06 45 30.0**	**-0.7**
	0.6nm,0.3s,baz=25,slow=11,SNR=13						
MJAR				Sn	**Sn**	**06 46 30.3**	**+0.5**
	baz=171,slow=25						
MJAR				LR	LR	06 47 58.6	
	comp=Z,213nm,18.9s,baz=144,slow=44						
	3.3nm,0.4s						
MAJO	**Matsushiro**	**5.21**	**327**		**Pn**	**06 45 30.4**	**-0.3**
MJB9	**Matsu-Tunnel**	**5.21**	**327**		**Pn**	**06 45 30.8**	**0.0**
JMN	**Monobe**	**6.79**	**285**	Pn	**Pn**	**06 45 52.1**	**-0.5**
JKA	**Kamikawa-asahi**	**11.88**	**3**		**Pn**	**06 47 00.9**	**-1.3**
ASAJ	**Asahikawa**	**11.88**	**3**	Pn	**Pn**	**06 47 01.1**	**-1.0**
	0.7nm,0.3s,baz=108,slow=21,SNR=1.7						
	1.9nm,0.3s						
KSRS	**Korea Array**	**12.51**	**298**	Pn	**Pn**	**06 47 10.9**	**+0.2**
	0.3nm,0.3s,baz=106,slow=15,SNR=1.4						
KSRS				LR	LR	06 52 36.5	
	comp=Z,63nm,18.2s,baz=100,slow=40						
	0.6nm,0.6s						
JOW	**Kunigami**	**12.92**	**249**	LR	LR	06 52 12.6	
	comp=Z,124nm,18.1s,baz=190,slow=37						
KLR	**Kul'dur**	**18.57**	**339**	LR	LR	06 56 36.0	
	comp=Z,18nm,18.2s,baz=74,slow=40						
HILR	**Hailar Array B**	**23.87**	**323**	P	**P**	**06 49 24.2**	**-1.4**
	1.1nm,0.4s,baz=125,slow=13,SNR=3.8						
	1.1nm,0.4s						
YAK	**Yakutsk**	**30.82**	**349**	LR	LR	07 03 33.8	
	comp=Z,54nm,18.0s,baz=88,slow=38						
SONM	**Songino Array**	**30.93**	**311**	P	**P**	**06 50 30.4**	**+1.3**
	1.6nm,0.7s,baz=106,slow=8.6,SNR=10						
SONM				PcP	**PcP**	**06 53 26.0**	**+0.9**
	0.2nm,0.6s,baz=120,slow=1.6,SNR=2.2						
	1.6nm,0.7s						
SONM	**Songino Array**	**30.93**	**311**	P	**P**	**06 50 29.6**	**+0.5**
LZDM	**Lanzhou Array**	**31.61**	**287**	P	**P**	**06 50 33.6**	**-1.9**
	0.4nm,0.3s,baz=115,slow=6.5,SNR=1.7						
	0.4nm,0.3s						
TIXI	**Tiksi**	**40.08**	**354**	P	**P**	**06 51 46.9**	**-0.2**
	1.9nm,0.3s,baz=139,slow=8.7,SNR=3.7						
	1.9nm,0.3s						
TIXI	**Tiksi**	**40.08**	**354**	P	**P**	**06 51 46.4**	**-0.7**
ZALV	**Zalesovo Beam**	**45.46**	**316**	P	**P**	**06 52 31.1**	**+0.1**
	0.7nm,0.3s,baz=103,slow=6.5,SNR=4.9						
ZALV				PcP	**PcP**	**06 54 09.6**	**0.0**
	0.9nm,0.6s,baz=93,slow=4.1,SNR=3.5						
	0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**45.46**	**316**	P	**P**	**06 52 30.9**	**-0.2**
COEN	**Coen**	**45.95**	**178**	P	**P**	**06 52 35.4**	**+0.2**
COEN				IAmb	IAmb	06 53 03.1	
	comp=Z,6.6nm,1.2s						
MKAR	**Makanchi Array**	**47.05**	**306**	P	**P**	**06 52 44.1**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=92,slow=9.5,SNR=30						
MKAR				PcP	**PcP**	**06 54 15.2**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=83,slow=3.5,SNR=1.5						
	comp=Z,2.6nm,0.7s						
MKAR	**Makanchi Array**	**47.05**	**306**	P	**P**	**06 52 43.6**	**0.0**
MAKZ	**Makanchi**	**47.26**	**306**		**P**	**06 52 45.1**	**-0.2**
MAKZ				IAmb	IAmb	06 52 46.6	
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**49.22**	**311**		**P**	**06 53 00.4**	**+0.1**
KURK				IAmb	IAmb	06 53 16.3	
	comp=Z,3.2nm,0.6s						
KURBB	**Kurchatov Arra**	**49.29**	**311**	P	**P**	**06 53 00.9**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=86,slow=7.7,SNR=14						
	comp=Z,1.8nm,0.4s						
WB0	**Warramunga Arr**	**52.19**	**189**		**P**	**06 53 23.0**	**0.0**
WB0				IAmb	IAmb	06 53 23.5	
	comp=Z,5.8nm,0.7s						
WR8	**Warramunga Arr**	**52.36**	**189**		**P**	**06 53 24.2**	**0.0**
WRA	**Warramunga Arr**	**52.37**	**189**	P	**P**	**06 53 24.0**	**-0.2**
	comp=Z,4.1nm,0.6s,baz=6.4,slow=7.5,SNR=60						
	comp=Z,4.1nm,0.6s						
WRA	**Warramunga Arr**	**52.37**	**189**		**P**	**06 53 23.9**	**-0.4**
ILAR	**Eielson Array**	**53.43**	**30**	P	**P**	**06 53 31.7**	**0.0**
	comp=Z,0.5nm,0.8s,baz=266,slow=5.9,SNR=5.7						
	comp=Z,0.5nm,0.8s						
BVAR	**Borovoye Array**	**54.09**	**315**	P	**P**	**06 53 37.1**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=89,slow=7.6,SNR=5.5						
	comp=Z,0.5nm,0.3s						
KK31	**Karatay Array**	**55.88**	**303**		**P**	**06 53 50.0**	**+0.1**
KK31				IAmb	IAmb	06 53 51.1	
	comp=Z,3.4nm,0.8s						
KKAR	**Karatay Array**	**55.88**	**303**		**P**	**06 53 50.6**	**+0.7**
ASAR	**Alice Springs**	**56.09**	**189**	P	**P**	**06 53 51.6**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=13,slow=6.6,SNR=15						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**56.09**	**189**	P	**P**	**06 53 51.1**	**-0.3**
MANEM	**Manem**	**56.53**	**296**	P	**P**	**06 53 54.8**	**-0.1**
MANEM				IAmb	IAmb	06 53 56.7	
	comp=Z,7.3nm,0.6s						
GAR	**Garm**	**57.13**	**298**		**P**	**06 53 57.8**	**-1.1**
AB31	**Akbulak array**	**61.32**	**312**		**P**	**06 54 27.9**	**+0.4**
AB31				IAmb	IAmb	06 54 28.6	
	comp=Z,2.4nm,0.9s						
SPITS	**Spitsbergen Ar**	**65.28**	**349**	P	**P**	**06 54 53.2**	**-0.1**
	comp=Z,6.8nm,1.0s,baz=44,slow=8.6,SNR=1.3						
	comp=Z,6.8nm,1.0s						
YKAW3	**Yellowknife Wh**	**67.79**	**29**	P	**P**	**06 55 10.3**	**+0.7**
YKAW3				IAmb	IAmb	06 55 38.7	
	comp=Z,1.6nm,1.0s						
YKA	**Yellowknife Ar**	**67.83**	**29**	P	**P**	**06 55 10.2**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=303,slow=7.2,SNR=8.7						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**67.83**	**29**	P	**P**	**06 55 09.6**	**-0.2**
FINES	**FINESS Array B**	**73.20**	**333**	P	**P**	**06 55 42.7**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=104,slow=3.9,SNR=5.1						
	comp=Z,2.1nm,0.8s						
FINES	**FINESS Array B**	**73.20**	**333**	P	**P**	**06 55 42.4**	**-0.2**
KBZ	**Khabaz**	**74.28**	**312**	P	**P**	**06 55 50.0**	**+0.8**
	comp=Z,2.9nm,0.8s,baz=65,slow=8.8,SNR=4.5						
	comp=Z,2.9nm,0.8s						
JMIC	**Jan Mayen**	**74.91**	**350**	LR	LR	07 30 56.9	
	comp=Z,98nm,18.4s,baz=98,slow=38						
NVAR	**Mina Array Bea**	**77.66**	**52**	P	**P**	**06 56 09.7**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=308,slow=3.5,SNR=1.7						
	comp=Z,0.5nm,0.8s						
AKASG	**Malin Array Be**	**78.28**	**323**	P	**P**	**06 56 11.5**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=50,slow=5.7,SNR=6.0						
	comp=Z,0.5nm,0.4s						
HFS	**Hagfors**	**78.58**	**336**	P	**P**	**06 56 13.1**	**-0.2**
	comp=Z,6.5nm,1.1s,baz=126,slow=7.3,SNR=1.9						
	comp=Z,6.5nm,1.1s						
NB2	**NORSAR Subarra**	**78.72**	**338**	P	**P**	**06 56 14.0**	**-0.2**
	comp=Z,8.7nm,1.1s,baz=41,slow=5.3						
NOA	**NORSAR Array B**	**78.72**	**338**	P	**P**	**06 56 14.2**	**0.0**
	comp=Z,1.7nm,0.8s,baz=42,slow=5.4,SNR=4.3						
	comp=Z,1.7nm,0.8s						
PDAR	**Pinedale Array**	**80.83**	**45**	P	**P**	**06 56 27.1**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=309,slow=3.1,SNR=3.6						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**80.83**	**45**	P	**P**	**06 56 25.9**	**-0.3**
BRTR	**Keskin Array B**	**82.27**	**312**	P	**P**	**06 56 34.3**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=84,slow=5.9,SNR=2.6						
	comp=Z,0.8nm,0.5s						
BRTR	**Keskin Array B**	**82.27**	**312**	P	**P**	**06 56 33.7**	**-0.1**
SRU	**San Rafael Swe**	**82.36**	**48**	P	**P**	**06 56 34.7**	**+0.5**
SRU				IAmb	IAmb	06 56 37.3	
	comp=Z,2.8nm,0.8s						
MMAI	**Mount Meron Ar**	**85.00**	**306**	P	**P**	**06 56 48.0**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=34,slow=5.6,SNR=2.9						
	comp=Z,0.7nm,0.3s						
TXAR	**Lajitas Array**	**92.81**	**53**	P	**P**	**06 57 25.9**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=312,slow=1.8,SNR=1.4						
	comp=Z,0.3nm,0.7s						
LPAZ	**La Paz**	**148.60**	**67**	PKPbc	**PKiKP**	**07 04 01.2**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=4.9,slow=6.2,SNR=5.7						

*PRU **06** 06:48:43.2, 44°.10N×16°.33E, h1km*
*BEO **06** 06:48:47.0±0.4, 44°.25N×15°.96E, h6km±4km, ML3.0/10*
ISC 06 06:48:45.7±1.2**, 44°.20N**±0°.03×**16°.11E**±0°.03**, h4**km±10km**, n53,** σ**1s.43**/74**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIJV	**Kijevo**	**0.29**	**132**	*e*Pg	**Pb**	**06 48 51.9**	**-1.5**
KIJV				Sg	**Sb**	**06 48 57.3**	**-1.3**
UDBI	**Udbina**	**0.41**	**324**	*e*Pg	**Pg**	**06 48 53.0**	**-0.6**
UDBI				Sg	**Sg**	**06 48 58.5**	**-0.5**
MORI	**Morici**	**0.44**	**221**	*e*Pg	**Pg**	**06 48 53.2**	**-0.9**
MORI				Sg	**Sg**	**06 48 59.9**	**+0.1**
ZIRJ	**Zirje**	**0.64**	**212**	*e*Pg	**Pg**	**06 48 56.8**	**-1.1**

PLIT	Plitvice	0.76	333	ePg	Pg	06 48 59.4	-0.9
DUGI	Dugi Otok	0.78	255	ePg	Pg	06 48 58.8	-1.9
BLY	Banja Luka	0.95	54	ePg	Pn	06 49 04.8	-1.0
BLY				eSg	Sn	06 49 19.6	-0.2
NVLJ	Novalja	0.96	293	ePg	Pg	06 49 01.6	-2.4
HVAR	Hvar	1.05	166	ePg	Pg	06 49 04.6	-1.2
HVAR				Sg	Sn	06 49 21.1	-1.2
RABC	Rab	1.10	301	ePg	Pg	06 49 05.1	-1.6
BOJS	Bojanci	1.44	335	ePn	Pn	06 49 11.4	-1.1
BOJS	Bojanci	1.44	335	ePg	Pn	06 49 11.7	-0.9
BOJS				eSg	Sb	06 49 30.7	-1.1
MOSL	Moslavina	1.49	18	ePn	Pn	06 49 11.8	-1.5
OZLJ	Ozalj	1.49	342	ePn	Pn	06 49 12.4	-0.7
LSTV	Lastovo	1.54	158	ePn	Pg	06 49 13.9	-1.2
RIY	Rijeka	1.61	315	ePn	Pn	06 49 14.6	-0.4
RIY	Rijeka	1.61	315	ePg	Pn	06 49 14.5	-0.4
RIY				eSg	Sn	06 49 34.1	-2.1
GBRS	Gornja Briga	1.62	326	ePn	Pn	06 49 14.9	-0.2
GBRS				i Sn	Sn	06 49 36.2	-0.3
CRES	Cresnjevec Ost	1.69	344	i Pn	Pn	06 49 15.1	-0.9
STON	Ston	1.76	138	ePn	Pb	06 49 17.0	-1.4
STON	Ston	1.76	138	ePg	Pg	06 49 20.2	+0.8
STON				eSg	Sg	06 49 47.5	+5.3
BRJN	Brijuni	1.83	294	ePn	Pn	06 49 16.6	-1.2
BRJN				Sn	Sn	06 49 39.2	-2.2
CEY	Cerknica	1.95	323	ePg	Pn	06 49 20.1	+0.5
CEY				eSg	Sn	06 49 45.8	+1.3
KALN	Kalnik	1.95	7	ePn	Pn	06 49 17.5	-2.1
LOBO	Lobor	1.96	359	ePn	Pn	06 49 18.2	-1.4
SKDS	Skadanscina	2.01	313	ePg	Pn	06 49 20.4	0.0
SKDS				eSg	Sn	06 49 46.5	+0.5
TREB	Trebinje	2.20	131	ePn	Pb	06 49 25.5	-0.6
BBLS	Lazi&#263i	2.40	97	ePn	Pb	06 49 29.1	-0.4
RUDO	Rudo	2.43	103	ePn	Pb	06 49 29.3	-0.6
PERS	Pernice	2.54	344	i Pn	Pn	06 49 26.8	-0.8
OBKA	Obir	2.56	335	ePn	Pn	06 49 28.1	0.0
	7.9nm,0.4s,SNR=10						
OBKA				eSn	Sn	06 49 60.0	+0.3
	21nm,0.6s						
SOKA	Soboth	2.59	343	i Pn	Pn	06 49 27.7	-0.8
	6.0nm,0.5s						
SOKA				ePg	Pb	06 49 34.0	+1.2
	10.0nm,0.4s						
SOKA				eSn	Sn	06 49 58.8	-1.7
	5.7nm,0.4s						
SOKA				eSg	Sb	06 50 06.2	+1.2
	6.8nm,0.4s						
FRGS	Fruska Gora	2.81	69	ePn	Pn	06 49 32.5	+1.1
MYKA	Terra Mystica	2.99	325	ePg	Pb	06 49 40.2	+0.8
	5.3nm,0.4s						
MYKA				Sg	Sb	06 50 18.1	+1.7
	10nm,0.5s						
ARSA	Arzberg	3.08	353	i Pn	Pn	06 49 34.4	-0.7
	2.4nm,0.3s						
ARSA	Arzberg	3.08	353	ePn	Pn	06 49 35.8	+0.7
TRUS	Trudelj	3.09	88	ePn	Pb	06 49 38.6	-2.6
RONA	Rosalia, Austr	3.51	2	i Pn	Pn	06 49 40.2	-0.8
	1.9nm,0.4s						
ABTA	Abfaltersbach	3.59	317	i Pn	Pn	06 49 43.0	+0.8
	0.8nm,0.2s						
ABTA				ePg	Pb	06 49 52.1	+2.3
	5.1nm,0.5s						
ABTA				eSn	Sn	06 50 25.5	+0.4
	7.5nm,0.6s						
ABTA				eSg	Sg	06 50 41.2	+0.2
	29nm,0.8s						
CONA	Conrad Observa	3.74	357	i Pn	Pn	06 49 43.6	-0.6
	1.4nm,0.2s						
MOA	Molln	3.87	341	i Pn	Pn	06 49 46.2	+0.3
	5.1nm,0.3s,SNR=8.3						
MOA	Molln	3.87	341	ePn	Pn	06 49 46.3	+0.3
BIOA	Bad Ischl, Aus	3.90	335	i Pn	Pn	06 49 47.3	+1.0
	5.0nm,0.4s						
LESA	Schwarzleotal	4.02	325	i Pn	Pn	06 49 48.1	0.0
	2.9nm,0.3s						
MODS	Modra-Piesok	4.25	11	ePN	Pn	06 49 51.0	-0.3
MODS				eSN	Sn	06 50 39.9	-1.5
BARS	Barje	4.38	106	ePn	Pn	06 49 54.2	+1.3
WTTA	Wattenberg	4.38	316	i Pn	Pn	06 49 53.8	+0.6
	2.5nm,0.2s						
ZAGS	Zajecar	4.44	93	ePn	Pn	06 49 57.5	+3.8
WATA	Walderalm	4.46	316	i Pn	Pn	06 49 55.8	+1.6
	1.9nm,0.3s						
SQTA	Sankt Quirin	4.57	313	ePn	Pn	06 49 56.8	+1.1
	2.0nm,0.4s						
FETA	Feichten	4.71	309	ePg	Pb	06 50 11.8	+2.8
	1.4nm,0.4s						
CKRC	Cesky Krumlov	4.79	346	eSN	Sn	06 50 54.7	+0.2
ZAPS	Zavoj	4.82	99	ePn	Pn	06 49 59.8	+0.8

*SJA **06** 06:51:15.7±0.8, 29°.32S×70°.73W, h77km±2km, ML3.8, MW3.7*
*GUC **06** 06:51:16.7±0.7, 29°.34S×70°.63W, h78km±3km, ML4.1*
ISC 06 06:51:17.4±1.3, **29°.31S**±0°.02×**70°.74W**±0°.04, **h77**km±7km, **n42**, σ1§**32**/69, **5C-3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.30	7	i P	Pn	06 51 29.4	-0.3
LCO				eS	Sn	06 51 39.5	+0.8
LCO	Las Campanas	0.30	7	eP	Pn	06 51 29.0	-0.7
LCO				eS	Sn	06 51 39.9	+1.2
LCO				IAML		06 51 40.3	
	comp=Z,12μm,0.2s						
AC05	El Transito	0.62	41⇓	iP	Pn	06 51 32.0	-0.2
AC05				eS	Sn	06 51 43.2	+0.1
AC05				IAML		06 51 43.9	
	comp=N,34μm,0.1s						
AC05	El Transito	0.62	41	eP	Pn	06 51 31.1	-1.1
AC05				eS	Sn	06 51 43.5	+0.4
AC05				IAML		06 51 43.9	
	comp=Z,7μm,0.1s						
CO05	La Serena	0.75	215	i P	Pn	06 51 33.7	+0.4
CO05				eS	Sn	06 51 46.2	+1.1
CO05				IAML		06 51 47.4	
	comp=N,7μm,0.3s						
GO04	Tololo Observa	0.86	183	eP	Pn	06 51 34.4	-0.5
GO04				i S	Sn	06 51 48.2	+0.3
GO04				IAML		06 51 49.8	
	comp=N,6μm,0.1s						
GO04	Tololo Observa	0.86	183	eP	Pn	06 51 34.0	-0.9
GO04				eS	Sn	06 51 45.9	-2.1
GO04				IAML		06 51 48.9	
	comp=Z,3μm,0.2s						
CO01	Juntas del Tor	0.87	140⇓	iP	Pn	06 51 34.0	-1.1
CO01				eS	Sn	06 51 47.1	-1.0
CO01	Juntas del Tor	0.87	140	eP	Pn	06 51 34.0	-1.1
CO01				eP		06 51 34.1	
CO01				eS	Sn	06 51 47.3	-0.8
CO01				eS		06 51 47.5	
CO01				IAML		06 51 47.5	
	comp=Z,1μm,0.1s						
AC04	Llanos de Chal	1.14	345⇑	eP	Pn	06 51 38.2	+0.2
AC04				IAML		06 52 01.7	
	comp=E,3μm,0.2s						
AC04	Llanos de Chal	1.14	345	eP	Pn	06 51 37.5	-0.5
AC04				eS	Sn	06 51 56.2	+2.9
AC04				IAML		06 51 58.6	
	comp=Z,929nm,0.1s						
AROD	Rodeo	1.40	128	eP	Pn	06 51 41.8	+0.2
AROD				eS	Sn	06 52 00.7	+1.0
CO03	El Pedregal	1.53	178	i P	Pn	06 51 42.6	-0.4
CO03				eS	Sn	06 52 02.2	-0.2
CO03				IAML		06 52 03.8	
	comp=E,5μm,0.3s						
CO03	El Pedregal	1.53	178	eP	Pn	06 51 42.6	-0.4
CO03				eS	Sn	06 52 02.6	+0.3
CO03				IAML		06 52 03.7	
	comp=Z,2μm,0.2s						
ACDV	Cuesta del Vie	1.65	122	eP	Pn	06 51 45.0	+0.2
ACDV				eS	Sn	06 52 09.6	+4.1
GO03	Copiapo	1.77	15⇑	iP	Pn	06 51 45.9	-0.3
GO03				eS	Sn	06 52 08.8	+0.8
GO03				IAML		06 52 11.9	
	comp=N,1μm,0.3s						
GO03	Copiapo	1.77	15	eP	Pn	06 51 46.1	-0.1
GO03				eS	Sn	06 52 10.8	+2.9
GO03				IAML		06 52 16.3	
	comp=Z,614nm,0.5s						
CO02	Combarbal	1.90	187⇑	iP	Pn	06 51 47.3	-0.7
CO02				IAML		06 52 16.3	
	comp=E,3μm,0.4s						
CO02	Combarbal	1.90	187	eP	Pn	06 51 47.3	-0.7
CO02				eS	Sn	06 52 11.6	+0.3
CO02				IAML		06 52 15.2	
	comp=Z,650nm,0.3s						
ACCO	Cerro Coronel	1.93	132	eP	Pn	06 51 49.1	+0.4
ACCO				eS	Sn	06 52 14.3	+2.0
VCA	Vinchina	2.29	76⇓	eP	Pn	06 51 54.9	+1.6
VCA	Vinchina	2.29	76	eP	Pn	06 51 54.3	+1.0
VCA				eS	Sn	06 52 18.9	-1.9
VCA				IAML		06 52 28.4	
	comp=Z,821nm,0.3s						
CO04	Los Peladeros	2.73	184	i P	Pn	06 51 58.6	-0.7
CO04				IAML		06 52 34.0	
	comp=N,882nm,0.4s						
RTLS	Leoncito	2.78	154	eP	Pn	06 52 01.4	+1.4
RTLS				eS	Sn	06 52 35.8	+3.1
RTLS				IAML		06 52 39.4	
	comp=Z,540nm,0.2s						
RTLL	Cerro Villicun	2.81	136	eP	Pn	06 52 00.2	0.0
RTLL				eS	Sn	06 52 34.0	+0.9
RTLL				IAML		06 52 38.0	
	comp=Z,162nm,0.3s						
AC02	Maricunga	2.85	30⇑	eP	Pn	06 52 00.9	-0.2
AC02				IAML		06 52 42.3	
	comp=E,421nm,0.3s						
AC02	Maricunga	2.85	30	eP	Pn	06 52 01.2	+0.2
AC02				eS	Sn	06 52 19.4	-15
AC02				IAML		06 52 36.4	
	comp=Z,176nm,0.2s						
ZON	Zonda	2.85	142	eP	Pn	06 52 00.8	+0.1
ZON				eS	Sn	06 52 35.1	+1.0
TINO	Tinogasta	3.05	67	eP	Pn	06 52 03.5	0.0
TINO				eS	Sn	06 52 34.4	-4.7
AC01	Pan de Azucar	3.15	2⇑	eP	Pn	06 52 03.1	-1.7
AC01				IAML		06 53 00.6	
	comp=E,197nm,0.4s						
AC01	Pan de Azucar	3.15	2	eP	Pn	06 52 03.3	-1.5
AC01				eS	Sn	06 52 41.4	0.0
AC01				IAML		06 52 53.8	
	comp=Z,173nm,0.6s						
AVFE	Valle Fertil	3.15	116	eP	Pn	06 52 04.3	-0.5
AVFE				eS	Sn	06 52 40.8	-0.7
AVFE				IAML		06 52 41.0	
	comp=Z,126nm,0.3s						
VA06	Catapilco	3.28	188	eP	Pn	06 52 05.3	-1.1
VA06				IAML		06 52 58.8	
	comp=E,904nm,0.5s						
ACLC	CERRO LA CRUZ	3.31	93	eP	Pn	06 52 06.4	-0.7
ACLC				eS	Sn	06 52 44.9	-0.5
VA03	San Esteban	3.45	177	eP	Pn	06 52 08.6	-0.3
VA03				IAML		06 53 00.2	
	comp=E,611nm,0.4s						
VA03	San Esteban	3.45	177	eP	Pn	06 52 08.8	-0.1
VA03				eS	Sn	06 52 48.9	+0.2
VA03				IAML		06 53 00.2	
	comp=Z,248nm,0.5s						
ROCH	El Roble	3.66	184	eP	Pn	06 52 10.7	-1.2
MT02	Curacav	3.95	185	eP	Pn	06 52 14.2	-1.5
MT02				IAML		06 53 13.7	
	comp=Z,132nm,0.5s						
ACHE	Chepes	3.98	119	eP	Pn	06 52 15.3	-0.9
AAGR	Agrelo	4.11	157	eP	Pn	06 52 18.8	+1.0
MT04	Ro Olivares	4.12	173	eP	Pn	06 52 18.5	+0.4
MT13	San Alfonso	4.44	175	eP	Pn	06 52 22.5	+0.1
MT13				IAML		06 53 31.3	
	comp=Z,83nm,0.7s						

*BJI **06** 07:10:45.1, 3°.52S×139°.71E, h30km, mB5.2/17, mb4.8/64, Ms4.7/30, Ms7 4.6/35*
*IDC **06** 07:10:48.4±0.5, 2°.75S×139°.32E, h0km, mb4.6/17, mbtmp4.6/20, ML4.8/4, MS4.4/45, Error ellipse: s-maj=11.5km s-min=9.6km az=102.0*
*DJA **06** 07:10:53.7±0.5, 3°S±3°×13°9E±°, h29km±5km, M5.1/46, mB5.5/27, mb5.1/46, MLv5.3/15, Mw5.0/38, Mw(mB)5.0/27, MwMwp4.8/6, Mwp5.2/6*
*GCMT **06** 07:10:54.4±0.3, 2°.56S±0°.02×139°.42E±0°.02, h33km±1km, MW5.1/75, Moment Tensor Solution. s53,c67; s75,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.84±.20; $M_{\theta\theta}$-3.25±.14; $M_{\phi\phi}$-0.59±.15; $M_{r\theta}$-2.78±.15; $M_{\theta\phi}$1.37±.09; $M_{\phi r}$0.97±.18; Best double couple: $M_0$4.83400×10^{16} NP1:ϕ_s115.00000°, δ26.00000°, λ94.00000°. NP2: ϕ_s291.00000°, δ64.00000°, λ88.00000°. Principal axes: T 4.8420, Plg71.0000°, Azm196.0000°; N -0.0230, Plg2.0000°, Azm292.0000°; P -4.8260, Plg19.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **06** 07:10:54.4±1.7, 2°.85S±0°.09×139°.14E±0°.08, h35km±2km, mb4.9/57 Error ellipse: s-maj=15.5km s-min=12.7km az=195.0*
ISC 06 07:10:54.0±0.3, **2°.85S**±0°.04×**139°.27E**±0°.04, **h35**km, **n242**, σ1§**65**/224, **mb4.8**/72, **MS4.4**/54, **1C-5D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.93	74	P	Pn	07 11 08.8	-1.8
GENI	Genyem	0.93	74	S	Sn	07 11 21.6	-1.1
GENI	Genyem	0.93	74	P	Pn	07 11 08.0	-2.5
WAMI	Wamena	1.17	209	P	Pn	07 11 19.5	+5.6
JAY	Jayapura	1.47	77	Pg	Pn	07 11 14.9	-3.1
	83nm,0.3s,baz=226,slow=10,SNR=104						
JAY				Lg	Lg	07 11 32.6	
	263nm,0.3s,baz=121,slow=16,SNR=7.4						
JAY	Jayapura	1.47	77	P	Pn	07 11 14.9	-3.1
SRPI	Serui, Papua	3.18	288	P	Pn	07 11 42.5	+0.9
SRPI				S	Sn	07 12 20.6	+2.3
BAKI	Biak	3.57	297	P	Pn	07 11 47.9	+1.0
BAKI				S	Sn	07 12 29.8	+2.0
RKPI	Ransiki, Papua	5.26	285	P	Pn	07 12 11.0	+0.8
	2.4nm290nm,0.6s						
MWPI	Manokwari, Pap	5.57	290	P	Pn	07 12 15.9	+1.5
	1.7nm15μm406nm,0.8s						
KMPI	Kaimana, Papua	5.62	262	P	Pn	07 12 18.2	+3.1
	2.7nm5μm372nm,0.7s						
MMPI	Merauke	5.69	169	P	Pn	07 12 21.0	+4.9
FAKI	Fak Fak	7.01	269		Pn	07 12 34.9	+0.6
FAKI	Fak Fak	7.01	269	P	Pn	07 12 35.5	+1.2
FAKI	Fak Fak	7.01	269	P	Pn	07 12 37.5	+3.2
	0.6nm3μm1μm93nm,0.9s						
MANU	Manus Island	8.13	85		Pn	07 12 52.4	+2.8
SIJI	Sorong	8.24	284	Pn	Pn	07 12 51.1	-0.1
	7.8nm,0.3s,baz=353,slow=24,SNR=7.9						
SIJI				Sn	Sn	07 14 18.4	-4.7
	2.3nm,0.3s,baz=144,slow=13,SNR=3.6						
SIJI				LR	LR	07 16 47.3	
	comp=Z,3μm,19.0s,baz=94,slow=44						
	12nm,0.3s						
SIJI	Sorong	8.24	284	P	Pn	07 12 52.7	+1.6
	1μm45nm,0.8s						
SWI	Sorong	8.25	284	P	Pn	07 12 53.0	+1.8
	74nm,0.8s						
BNDI	Bandanaira	9.49	260	P	Pn	07 13 10.2	+1.9
PMG	Port Moresby	10.19	130	Pn	Pn	07 13 19.7	+1.8
	1.0nm,0.3s,baz=306,slow=11,SNR=4.6						
PMG				LR	LR	07 18 24.4	
	comp=Z,2μm,21.5s,baz=295,slow=45						
PMG	Port Moresby	10.19	130		Pn	07 13 20.4	+2.6
PMG	Port Moresby	10.19	130	P	Pn	07 13 19.2	+1.3
	1μm70nm,0.9s						
MSAI	Masohi	10.34	267	P	Pn	07 13 22.2	+2.3
	3μm191nm,1.0s						
KRAI	Karang Ratu	10.87	267	P	Pn	07 13 28.1	+0.9
	7μm59nm,0.6s						
COEN	Coen	11.69	161	P	Pn	07 13 40.0	+1.6
	comp=Z,54nm,0.7s						
COEN	Coen	11.69	161		Pn	07 13 40.0	+1.6
COEN	Coen	11.69	161	P	Pn	07 13 40.3	+1.9
KDU	Kakadu	11.87	214	P	Pn	07 13 41.2	+0.3
	comp=Z,51nm,0.9s						
NLAI	Namlea	12.16	268	P	Pn	07 13 45.7	+0.8
	comp=Z,133nm,0.8s						
DRS	Darwin Rock St	12.62	221	P	Pn	07 13 52.5	+1.3
MTN	Manton Dam	12.79	219	P	Pn	07 13 53.1	-0.3
	comp=Z,77nm,0.4s						
MTN	Manton Dam	12.79	219		Pn	07 13 53.0	-0.4
SANI	Sanana	13.30	273	P	Pn	07 14 00.6	+0.2
MTSU	Mount Surprise	15.98	162	P	P	07 14 39.9	+0.5
	comp=Z,25nm,0.7s						
SOEI	Soe	16.41	245		Pn	07 14 39.4	-2.4
SOEI	Soe	16.41	245	P	P	07 14 46.5	+2.1
KNRA	Kununurra	16.42	218	P	Pn	07 14 41.9	0.0
	comp=Z,117nm,0.9s						
KNRA	Kununurra	16.42	218		Pn	07 14 40.3	-1.5
KNRA				IAmb	IAmb	07 14 47.1	
	comp=Z,47nm,0.7s						
LUWI	Luwuk	16.59	276	P	Pn	07 14 42.9	-1.1
LUWI				IAmb	IAmb	07 14 48.4	
	comp=Z,101nm,1.3s						
DAV	Davao City (W)	16.85	306	LR	LR	07 21 39.7	
	comp=Z,695nm,18.7s,baz=157,slow=39						
BATI	Baumata	17.14	244	P	P	07 14 52.3	0.0
	comp=Z,20nm,0.3s,baz=30,slow=1.5,SNR=12						
BATI				S	Sn	07 18 02.4	+1.8
	comp=Z,17nm,0.4s,baz=37,slow=16,SNR=1.5						
BATI	Baumata	17.14	244	P	P	07 14 54.7	+2.4
GUMO	Guam	17.25	19	LR	LR	07 21 20.2	
	comp=Z,1μm,18.7s,baz=202,slow=37						
WB0	Warramunga Arr	17.48	195		Pn	07 14 54.7	-0.4
QIS	Mount Isa	17.61	179	P	P	07 14 59.1	+1.6
	comp=Z,81nm,1.0s						
QIS	Mount Isa	17.61	179	P	Pn	07 14 57.0	+0.3
WR0	Warramunga Arr	17.62	195	P	Pn	07 14 55.2	-1.7
WR0				IAmb	IAmb	07 15 02.7	
	comp=Z,334nm,1.9s						
WR8	Warramunga Arr	17.63	195		Pn	07 14 55.5	-1.5
WR8				IAmb	IAmb	07 15 08.2	
	comp=Z,168nm,1.6s						
MRSI	Marisa	17.64	281	P	P	07 15 07.0	+9.2
WRAB	Tennant Creek	17.65	195	P	Pn	07 14 56.4	-0.8
WB2	Warramunga Arr	17.66	195	P	Pn	07 14 56.1	-1.2
WRA	Warramunga Arr	17.66	195	P	Pn	07 14 55.8	-1.6
	comp=Z,2.5nm,0.3s,baz=10,slow=13,SNR=33						
WRA				S	Sn	07 18 05.7	-7.5
	comp=Z,12nm,0.9s,baz=17,slow=22,SNR=4.6						
WRA				Lg	Lg	07 20 13.7	
	baz=42,slow=21						
	comp=Z,9.3nm,0.5s						
WRA	Warramunga Arr	17.66	195		Pn	07 14 56.3	-1.1
APSI	Ampana	17.72	276	P	P	07 15 01.2	+2.5
	comp=Z,2μmcomp=Z,104nm,1.4s						
CTA	Charters Tower	18.44	159	P	Pn	07 15 08.1	+1.1
	comp=Z,1.3nm,0.3s,baz=335,slow=12,SNR=12						
CTA				Lg	Lg	07 20 29.8	
	comp=Z,0.2nm,0.3s,baz=36,slow=19,SNR=3.8						
CTA				LR	LR	07 22 46.1	
	comp=Z,5μm,18.2s,baz=334,slow=39						
	comp=Z,1.7nm,0.4s						
CTAO	Charters Tower	18.44	159		P	07 15 05.7	-0.9
CTAO	Charters Tower	18.44	159	P	Pn	07 15 08.2	+1.3
EDFI	Ende, Flores	18.44	251	P	Pn	07 15 08.9	+1.8
TOLI2	Tolitoli	18.90	282		P	07 15 08.6	-3.2
TOLI2	Tolitoli	18.90	282	P	Pn	07 15 12.4	-0.1
BSSI	Bau Bau, Buton	19.01	259	P	Pn	07 15 17.4	+3.6
	comp=Z,2μmcomp=Z,75nm,1.5s						
TTSI	Tana Toraja	19.43	269	P	Pn	07 15 19.9	+1.0
	comp=Z,2μmcomp=Z,52nm,1.1s						
SPSI	Sidrap Palu	19.50	266	P	Pn	07 15 19.4	-0.4
	comp=Z,47nm,0.8s						
KAPI	Kappang	19.59	263	P	Pn	07 15 21.4	+0.5
FITZ	Fitzroy Crossi	20.21	220	P	P	07 15 25.4	-0.5
	comp=Z,15nm,0.5s,baz=37,slow=13,SNR=24						
FITZ				S	S	07 19 05.4	-5.6
	comp=Z,43nm,1.0s,baz=20,slow=14,SNR=6.7						
FITZ				Lg	Lg	07 21 29.1	
	comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=1.0						
FITZ				LR	LR	07 24 05.2	
	comp=Z,4μm,18.7s,baz=42,slow=39						
	comp=Z,15nm,0.5s						
AS31	Alice Springs	21.34	194		P	07 15 37.1	-1.1
ASAR	Alice Springs	21.34	194	P	P	07 15 38.6	+0.4
	comp=Z,7.7nm,0.5s,baz=17,slow=11,SNR=113						
ASAR				S	Sn	07 19 38.2	-3.7
	comp=Z,14nm,1.0s,baz=12,slow=24,SNR=6.1						
ASAR				Lg	Lg	07 22 04.7	
	baz=12,slow=28						
ASAR				LR	LR	07 24 30.8	
	comp=Z,4μm,19.3s,baz=12,slow=38						
	comp=Z,7.7nm,0.5s						
ASAR	Alice Springs	21.34	194		P	07 15 37.5	-0.8
DBNI	Kabupaten Domp	21.59	254	P	P	07 15 43.0	+2.0
PLAI	Plampang	22.18	254	P	P	07 15 47.0	-0.4
MYLDM	Lahad Datu	22.23	291	P	P	07 15 44.8	-3.1
MYLDM				IAmb	IAmb	07 15 60.0	
	comp=Z,125nm,1.4s						
MYLDM	Lahad Datu	22.23	291	P	P	07 15 47.9	0.0
	comp=Z,1μmcomp=Z,92nm,1.6s						
NGOA	Tingoa Renbel	22.35	114	P	P	07 15 49.9	+0.8
TWSI	Taliwang, Sumb	23.02	254	P	P	07 15 57.8	+1.6
	comp=Z,41nm,1.1s						
QLP	Quilpie	24.07	169	P	P	07 16 10.4	+4.2
	comp=Z,67nm,0.9s						
KHKI	Kahang-Kahang	24.17	256	P	P	07 16 07.9	+0.6
	comp=Z,60nm,1.1s						
BBKI	Banjar Baru	24.40	268	P	P	07 16 13.3	+3.9
	comp=Z,147nm,1.6s						
MTKI	Muara Teweh, K	24.44	274	P	P	07 15 53.0	-17
WRKA	Warakurna	24.46	205	P	P	07 16 10.5	+0.6
	comp=Z,16nm,0.7s						
KKM	Kota Kinabalu	24.66	291	P	P	07 16 10.2	-1.7
KKM				IAmb	IAmb	07 16 41.3	
	comp=Z,24nm,1.0s						
KKM	Kota Kinabalu	24.66	291	P	P	07 16 14.3	+2.4
TGY	Tagaytay City	24.78	313	LR	LR	07 26 18.6	
	comp=Z,543nm,18.6s,baz=133,slow=38						
INKA	Innaminka	24.79	177	P	P	07 16 13.5	+0.8
INKA				IAmb	IAmb	07 16 36.1	
	comp=Z,66nm,1.6s						
EIDS	Eidsvold	25.11	154	P	P	07 16 19.9	+4.2
	comp=Z,56nm,1.1s						
EIDS	Eidsvold	25.11	154	P	P	07 16 15.8	+0.1
EIDS				IAmb	IAmb	07 16 21.2	
	comp=Z,54nm,1.1s						
KMMI	Kalianget	25.55	260	P	P	07 16 24.5	+4.7
MBWA	Marble Bar	26.33	225	P	P	07 16 24.9	-1.9
MBWA	Marble Bar	26.33	225	P	P	07 16 28.8	+2.0
PSA00	Pilbara Seismi	26.52	224		P	07 16 27.7	-0.8
PSA00				IAmb	IAmb	07 16 45.8	
	comp=Z,64nm,1.6s						
PSA00	Pilbara Seismi	26.52	224	P	P	07 16 26.0	-2.5
PSA00				IAmb	IAmb	07 16 40.6	
	comp=Z,21nm,0.8s						
PSA00	Pilbara Seismi	26.52	224	P	P	07 16 29.9	+1.4
STKA	Stephens Creek	28.96	176	P	P	07 16 52.8	+2.6
	comp=Z,47nm,0.9s						
STKA	Stephens Creek	28.96	176	P	P	07 16 50.9	+0.7
	comp=Z,6.8nm,0.7s,baz=342,slow=7.3,SNR=13						
STKA				LR	LR	07 29 43.6	
	comp=Z,3μm,18.2s,baz=355,slow=39						
	comp=Z,6.8nm,0.7s						
STKA	Stephens Creek	28.96	176	P	P	07 16 49.5	-0.7
STKA	Stephens Creek	28.96	176	P	P	07 16 52.5	+2.3
CMSA	Cobar Meteorol	29.17	169	P	P	07 16 55.9	+3.8
	comp=Z,22nm,1.1s						
FORT	Forrest	29.73	200	P	P	07 16 58.7	+1.6
	comp=Z,12nm,0.9s						
FORT	Forrest	29.73	200	P	P	07 16 56.3	-0.8
FORT				IAmb	IAmb	07 17 53.5	
	comp=Z,22nm,0.7s						
ARMA	Armidale	29.81	158	P	P	07 16 58.7	+0.8
JCJ	Chichijima	29.90	5	LR	LR	07 27 09.7	
	comp=Z,626nm,19.1s,baz=147,slow=33						
BBOO	Buckleboo	29.96	185	P	P	07 16 57.9	-1.1
BBOO	Buckleboo	29.96	185	P	P	07 17 00.0	+0.9
JOW	Kunigami	31.36	341	LR	LR	07 27 37.8	
	comp=Z,720nm,20.1s,baz=154,slow=32						
YNG	Young	32.42	166	P	P	07 17 24.3	+3.5
	comp=Z,20nm,1.1s						
DZM	Mont Dzumac	32.58	128	eP	P	07 17 21.2	-1.2
	comp=Z,71nm,30.0s						
DZM				eS	S	07 22 37.4	+1.5
	comp=Z,263nm,27.3s						
DZM				eLR	LR	07 26 06.6	
	comp=Z,870nm,29.4s						
CAN	Canberra	33.55	166	P	P	07 17 33.5	+2.9
	comp=Z,29nm,2.1s						
CAN	Canberra	33.55	166	P	P	07 17 30.8	+0.2
CAN				IAmb	IAmb	07 17 36.2	
	comp=Z,32nm,1.1s						
KNMB	Chin-men Tao	33.90	324	P	P	07 17 33.0	-0.7
MORW	Morawa	34.18	218	P	P	07 17 35.7	-0.4
MORW				IAmb	IAmb	07 17 55.5	
	comp=Z,42nm,1.4s						
MGBR	Mount Gambier	34.73	178	P	P	07 17 40.5	-0.3
TPRI	Tanjung Pinang	34.94	276	P	P	07 17 51.4	+8.5
TOO	Toolangi	35.02	171	P	P	07 17 43.7	+0.3

TOO IAmb IAmb 07 18 44.2
comp=Z,24nm,1.9s
MDSI Maura Dua 35.06 266 P **P** **07 17 44.5 +0.5**
JHJ Hachijo jima 2 35.78 1 LR LR 07 29 24.5
comp=Z,989nm,21.8s,baz=112,slow=31
QIZ Qiongzhong 36.20 308 P **P** **07 17 53.8 +0.1**
QIZ S **S** **07 23 32.7 +0.9**
QIZ LR LR
comp=Z,250nm,13.4s
QIZ LR LR
comp=Z,400nm,16.2s
QIZ LR LR
comp=Z,500nm,20.2s
NWAO Narrogin (SRO) 36.36 212 LR LR 07 34 05.8
comp=Z,5μm,18.0s,baz=64,slow=38
JNU Nakatsue 36.65 348 LR LR 07 30 35.9
comp=Z,611nm,20.9s,baz=160,slow=32
PPI Padang Panjang 38.93 273 P P 07 18 22.4 +5.5
MJAR Matsushiro Arr 39.20 359 P **P** **07 18 17.9 -0.9**
comp=Z,1.4nm,0.6s,baz=187,slow=8.6,SNR=1.9
MJAR LR LR 07 32 27.9
comp=Z,681nm,19.6s,baz=149,slow=33
comp=Z,1.4nm,0.6s
NJ2 Nanjing 39.76 332 *e*P **P** **07 18 26.9 +3.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
NJ2 LR LR
comp=Z,450nm,16.1s
NJ2 LR LR
comp=Z,500nm,14.2s
NJ2 LR LR
comp=Z,570nm,13.3s
CNSH ChangSha 39.92 322 P **P** **07 18 25.4 +0.5**
CNSH pmax pmax
comp=Z,15nm,0.7s
RPSI Rantau Prapat 40.71 277 **P** **07 18 29.4 -2.3**
RPSI IAmb IAmb 07 18 48.5
comp=Z,22nm,1.1s
WHN Wuhan 40.85 326 P **P** **07 18 33.3 +0.8**
KSRS Korea Array 41.46 346 P **P** **07 18 36.8 -0.7**
comp=Z,1.3nm,0.6s,baz=155,slow=7.6,SNR=4.6
KSRS LR LR 07 33 36.5
comp=Z,381nm,21.5s,baz=170,slow=33
comp=Z,1.3nm,0.6s
ENH Enshi 43.52 321 P **P** **07 18 53.6 -0.8**
ENH x x 07 19 01.4
TIA Tai'an 44.02 334 P **P** **07 18 57.8 -0.5**
TIA pmax pmax
comp=Z,11nm,0.8s
TIA LR LR
comp=Z,400nm,21.7s
TIA LR LR
comp=Z,330nm,16.8s
TIA LR LR
comp=Z,650nm,18.8s
LYN LuoYang 44.93 328 P **P** **07 19 05.3 -0.3**
LYN pP pP 07 19 11.8 -4.3
LYN pmax pmax
comp=Z,17nm,0.8s
CM31 Chiang Mai Arr 44.99 300 P **P** **07 19 05.4 -1.0**
CMAR Chiang Mai Arr 44.99 300 P **P** **07 19 05.3 -1.1**
comp=Z,1.2nm,0.3s,baz=120,slow=6.2,SNR=15
CMAR PcP **PcP** **07 20 48.0 +0.7**
comp=Z,3.7nm,0.9s,baz=121,slow=3.7,SNR=6.0
CMAR LR LR 07 37 26.1
comp=Z,109nm,21.8s,baz=135,slow=36
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 44.99 300 **P** **07 19 05.1 -1.3**
KMI2 Kunming 45.05 310 P **P** **07 19 10.6 +3.7**
KMI2 pP pP 07 19 18.4 +0.9
KMI2 pmax pmax
comp=Z,11nm,1.7s
KMI2 LR LR
comp=Z,230nm,16.0s
KMI2 LR LR
comp=Z,270nm,27.2s
KMI2 LR LR
comp=Z,370nm,21.6s
CHTO Chiang Mai 45.14 300 P **P** **07 19 06.3 -1.2**
CHTO IAmb IAmb 07 19 11.2
comp=Z,26nm,1.9s
HNS HongShan 46.09 333 ⇓P **P** **07 19 13.9 -0.8**
HNS pmax pmax
comp=Z,14nm,1.0s
HNS LR LR
comp=Z,520nm,17.7s
HNS LR LR
comp=Z,270nm,16.8s
HNS LR LR
comp=Z,610nm,19.2s
XAN Xi'an 46.51 325 ⇓P **P** **07 19 17.4 -0.8**
XAN pP pP 07 19 24.0 -4.7
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN Xi'an 46.51 325 P **P** **07 19 17.2 -1.0**
XAN x x 07 19 24.9
PZH PanZhiHua 46.54 311 P **P** **07 19 20.2 +1.6**
SNY Shenyang 46.70 344 ⇓P **P** **07 19 18.9 -0.5**
SNY S S 07 26 16.2 +10
SNY pmax pmax
comp=Z,11nm,2.0s
SNY pmax pmax
comp=Z,200nm,4.5s
SNY LR LR
comp=Z,350nm,20.5s
SNY LR LR
comp=Z,360nm,13.5s
SNY LR LR
comp=Z,460nm,20.7s
ASAJ Asahikawa 46.85 3 P **P** **07 19 20.9 +0.4**
comp=Z,14nm,1.1s,baz=218,slow=6.6,SNR=2.8
ASAJ LR LR 07 36 32.3
comp=Z,229nm,21.1s,baz=194,slow=33
comp=Z,14nm,1.1s
BJI2 Beijing 47.63 336 P **P** **07 19 26.3 -0.4**
BJI2 S **S** **07 26 19.4 -0.7**
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
BJI2 LR LR
comp=Z,200nm,19.4s
BJI2 LR LR
comp=Z,170nm,19.5s
BJI2 LR LR
comp=Z,320nm,20.4s
CD2 Chengdu 47.66 318 P **P** **07 19 26.5 -0.7**
CD2 pP pP 07 19 37.6 -0.2
CD2 sP sP 07 19 41.5 -0.5
CD2 S **S** **07 26 21.4 +0.5**
CD2 sS sS 07 26 39.8 +1.6
CD2 SS **SS** **07 29 51.5 +1.9**
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 LR LR
comp=Z,450nm,14.0s
CD2 LR LR
comp=Z,570nm,14.3s
CD2 LR LR
comp=Z,490nm,14.4s
MDJ Mudanjiang 48.04 351 P **P** **07 19 31.6 +1.8**
MDJ S **S** **07 26 27.7 +2.0**
MDJ pmax pmax
comp=Z,12nm,1.8s
MDJ LR LR
comp=Z,650nm,17.9s
MDJ LR LR
comp=Z,350nm,15.8s
MDJ LR LR
comp=Z,800nm,22.7s
URZ Urewera 49.35 140 LR LR 07 42 45.8
comp=Z,405nm,18.1s,baz=301,slow=39
BNX BinXian 49.51 349 ⇑P **P** **07 19 40.6 -0.5**
BNX pmax pmax
comp=Z,9.0nm,1.0s
HHC Hu-ho-hao-te 50.31 333 ⇓*i*P **P** **07 19 47.4 0.0**
HHC pP pP 07 19 54.8 -3.2
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,78nm,8.5s
LZH Lanzhou 50.93 323 *e*P **P** **07 19 52.1 -0.1**
LZH sP sP 07 20 07.2 +0.1
LZH pmax pmax
comp=Z,25nm,1.2s
LZH LR LR
comp=Z,240nm,12.7s
LZH LR LR
comp=Z,320nm,13.4s
LZH LR LR
comp=Z,490nm,14.4s
LZDM Lanzhou Array 50.93 323 P **P** **07 19 52.4 -0.1**
comp=Z,1.2nm,0.4s,baz=144,slow=6.4,SNR=9.1
LZDM LR LR 07 39 35.5
comp=Z,194nm,21.9s,baz=25,slow=34
comp=Z,1.2nm,0.4s
BTO2 Baotou 51.02 331 *e*P **P** **07 19 52.1 -0.7**
BTO2 sP **sP** **07 20 06.7 -0.9**
BTO2 S **S** **07 27 06.9 -0.9**
BTO2 pmax pmax
comp=Z,18nm,0.8s
BTO2 pmax pmax
comp=Z,190nm,5.8s
BTO2 LR LR
comp=Z,820nm,20.0s
BTO2 LR LR
comp=Z,830nm,17.3s
BTO2 LR LR
comp=Z,1μm,19.1s
KLR Kul'dur 52.28 354 LR LR 07 38 40.8
comp=Z,83nm,20.9s,baz=200,slow=32
BRDH Bariadhala 52.93 301 LR LR 07 43 15.8
comp=Z,71nm,19.5s,baz=174,slow=37
HEH HeiHe 53.87 351 *e*P **P** **07 20 13.0 -0.6**
HEH LR LR
comp=Z,270nm,16.7s
HEH LR LR
comp=Z,410nm,14.6s
HEH LR LR
comp=Z,480nm,16.6s
SHL Shillong 53.88 305 **P** **07 20 13.2 -1.1**
SHL IAmb IAmb 07 20 25.8
comp=Z,23nm,1.3s
HILR Hailar Array B 54.86 345 P **P** **07 20 20.6 -0.3**
comp=Z,1.7nm,0.4s,baz=133,slow=10,SNR=5.4
comp=Z,1.7nm,0.4s
GTA2 Gaotai 55.60 323 *e*P **P** **07 20 26.2 -0.3**
GTA2 pP pP 07 20 31.1 -6.1
GTA2 pmax pmax
comp=Z,7.0nm,0.8s
GTA2 LR LR
comp=Z,220nm,19.5s
GTA2 LR LR
comp=Z,230nm,17.5s
GTA2 LR LR
comp=Z,260nm,17.9s
LSA Lhasa 56.24 309 P **P** **07 20 27.9 -3.7**
LSA Lhasa 56.24 309 P **P** **07 20 31.6 0.0**
LSA PcP **PcP** **07 21 27.5 -1.5**
GOMU GeErMu 56.80 317 P **P** **07 20 35.1 -0.3**
GOMU S **S** **07 28 27.5 +0.8**
GOMU pmax pmax
comp=Z,3.0nm,1.3s
PETK Petropavlovsk- 57.87 13 LR LR 07 42 00.1
comp=Z,321nm,21.9s,baz=196,slow=32
SONM Songino Array 58.09 334 LR LR 07 46 15.1
comp=Z,654nm,19.1s,baz=140,slow=37
RAR Rarotonga 61.95 112 LR LR 07 46 57.5
comp=Z,52nm,20.1s,baz=256,slow=35
SHEM Shemya Is, Ala 62.65 23 LR LR 07 45 01.6
comp=Z,387nm,20.3s,baz=270,slow=33
YAK Yakutsk 65.12 355 LR LR 07 48 25.7
comp=Z,290nm,18.9s,baz=136,slow=35
WMQ Urumqi 65.47 321 *e*P **P** **07 21 33.8 +0.1**
WMQ pP sP 07 21 47.0 -1.6
WMQ pmax pmax
comp=Z,27nm,1.7s
WMQ pmax pmax
comp=Z,83nm,3.7s
WMQ Urumqi 65.47 321 P **P** **07 21 32.6 -1.1**
WMQ x x 07 21 43.0
CASY Casey 66.46 192 P **P** **07 21 38.7 -0.8**
ZSN Zaisan 69.00 324 *e*P **P** **07 21 56.0 +0.1**
WUS Wushi 69.89 316 P **P** **07 22 01.1 -0.7**
WUS IAmb IAmb 07 22 13.0
comp=Z,10nm,1.1s
MKAR Makanchi Array 70.24 322 P **P** **07 22 03.1 -0.5**
comp=Z,10nm,0.8s,baz=110,slow=8.3,SNR=66
MKAR LR LR 07 55 20.9
comp=Z,120nm,18.4s,baz=136,slow=38
comp=Z,10nm,0.8s
MKAR Makanchi Array 70.24 322 **P** **07 22 03.6 -0.1**
MAKZ Makanchi 70.44 322 **P** **07 22 04.5 -0.3**
MAKZ IAmb IAmb 07 22 05.8
comp=Z,13nm,0.7s
MAKZ Makanchi 70.44 322 P **P** **07 22 04.3 -0.6**
MAKZ x x 07 22 15.6
SHLS Shalkode 70.50 318 *e*P **P** **07 22 03.5 -1.9**
comp=Z,4.2nm,0.5s
UZB Uzynbulak 70.79 318 *e*P **P** **07 22 07.0 -0.2**
comp=Z,7.1nm,0.8s
KPKS Kokpek 71.14 318 *e*P **P** **07 22 09.0 -0.3**
SATY Saty 71.17 317 *e*P **P** **07 22 09.3 -0.2**
comp=Z,6.6nm,0.8s
PPT2 Papeete2 71.18 108 *e*LR LR 07 43 54.5
comp=Z,228nm,34.5s
PPT2 *e*LR LR 07 44 00.3
comp=Z,320nm,25.8s
TBI Tubuai 71.68 114 *e*LR LR 07 44 12.7
comp=Z,696nm,26.8s
KSH2 Kashi 71.76 313 P **P** **07 22 13.3 +0.1**
KSH2 pP pP 07 22 23.6 -0.5
KSH2 pmax pmax
comp=Z,10.0nm,1.1s
NIL Nilore 71.86 307 P **P** **07 22 11.9 -1.8**
NIL IAmb IAmb 07 22 14.2
comp=Z,12nm,0.8s
TDK Taldyqorghan 71.93 319 *e*P **P** **07 22 13.8 -0.1**
comp=Z,7.0nm,0.5s
MDOK Medeo 72.13 317 *e*P **P** **07 22 15.2 -0.1**
TNSS Tian-Shan 72.15 317 *e*P **P** **07 22 15.1 -0.6**
ZAA0 Zalesovo Array 72.34 330 **P** **07 22 15.0 -1.1**
ZALV Zalesovo Beam 72.34 330 P **P** **07 22 14.6 -1.5**
comp=Z,4.6nm,0.6s,baz=109,slow=6.4,SNR=19
ZALV LR LR 07 53 41.9
comp=Z,186nm,21.5s,baz=110,slow=36
comp=Z,4.6nm,0.6s
ZALV Zalesovo Beam 72.34 330 **P** **07 22 14.8 -1.3**
CCD Concordia, Ant 72.78 184 P **P** **07 22 20.4 +1.5**
AAK Ala-Archa 73.70 316 LR LR 07 57 17.2
comp=Z,109nm,18.8s,baz=102,slow=38
AAK Ala-Archa 73.70 316 **P** **07 22 23.8 -0.8**
AAK IAmb IAmb 07 22 32.2
comp=Z,15nm,1.6s
AAK Ala-Archa 73.70 316 P **P** **07 22 23.9 -0.8**
KURK Kurchatov 74.15 325 **P** **07 22 26.5 -0.4**
KURK Kurchatov 74.15 325 P **P** **07 22 25.7 -1.2**
KURBB Kurchatov Arra 74.16 325 P **P** **07 22 26.2 -0.7**
comp=Z,2.9nm,0.5s,baz=116,slow=5.3,SNR=18
comp=Z,2.9nm,0.5s
TIXI Tiksi 74.67 357 LR LR 07 53 08.7
comp=Z,187nm,21.2s,baz=191,slow=34
TIXI Tiksi 74.67 357 **P** **07 22 29.5 +0.1**
VNDA Vanda 75.59 175 P **P** **07 22 36.2 +1.5**
comp=Z,22nm,0.8s,baz=323,slow=6.2,SNR=42
VNDA LR LR 07 56 03.4
comp=Z,686nm,18.6s,baz=352,slow=36
comp=Z,22nm,0.8s
VNDA Vanda 75.59 175 **P** **07 22 36.2 +1.5**
VNDA Vanda 75.59 175 P **P** **07 22 36.2 +1.5**
GAR Garm 75.61 311 **P** **07 22 35.2 -0.6**
DZA Taraz 75.98 315 *e*P **P** **07 22 37.6 -0.1**
comp=Z,3.9nm,0.4s
CHGR Chuyangaron 76.39 311 **P** **07 22 39.5 -0.7**
CHGR IAmb IAmb 07 22 41.1
comp=Z,20nm,1.0s
KKAR Karatay Array 76.62 315 P **P** **07 22 40.6 -0.6**
IUG Iuzhnay 76.69 314 *e*P **P** **07 22 41.6 -0.2**
CHM Chimkent 77.04 314 *e*P **P** **07 22 43.5 -0.1**
comp=Z,2.3nm,0.2s
BRLS Borolday 77.08 315 *e*P **P** **07 22 43.8 -0.1**
ANM Nome 78.42 21 **P** **07 22 51.7 +0.8**
ANM IAmb IAmb 07 25 33.9
comp=Z,15nm,1.7s
L16K Owhat River 79.31 25 P **P** **07 22 56.2 +0.4**
L16K IAmb IAmb 07 23 05.8
comp=Z,26nm,1.7s
ACHA Angle Creek He 79.73 29 P **P** **07 22 57.6 -0.7**
BVAR Borovoye Array 79.75 325 P **P** **07 22 57.8 -0.6**
comp=Z,12nm,0.7s,baz=113,slow=7.1,SNR=47
BVAR LR LR 08 01 13.8
comp=Z,144nm,18.4s,baz=93,slow=38
comp=Z,12nm,0.7s
BORK Borovoye 79.79 325 **P** **07 22 58.2 -0.4**
BORK IAmb IAmb 07 22 59.3
comp=Z,11nm,0.7s
BORK Borovoye 79.79 325 P **P** **07 22 57.8 -0.7**
BORK x x 07 23 03.2
G16K Koyuk River 79.95 21 P **P** **07 23 00.5 +1.4**
NRIK Noril'sk 80.01 344 P **P** **07 22 58.8 -0.7**
comp=Z,4.5nm,0.8s,baz=120,slow=3.3,SNR=4.8
NRIK LR LR 07 58 00.1
comp=Z,191nm,20.6s,baz=130,slow=35
comp=Z,4.5nm,0.8s
NRIK Noril'sk 80.01 344 **P** **07 22 59.9 +0.5**
NRIK IAmb IAmb 07 23 07.3
comp=Z,8.7nm,0.9s
KDAK Kodiak Island 80.94 30 LR LR 07 55 18.0
comp=Z,490nm,20.9s,baz=240,slow=33
MAW Mawson 82.21 202 LR LR 07 57 41.5
comp=Z,722nm,18.9s,baz=62,slow=34
J20K Nowinta River 82.56 24 **P** **07 23 13.1 +0.1**
L22K Petersville 83.39 26 **P** **07 23 16.4 -1.1**
DHY Denali Highway 85.05 26 P **P** **07 23 26.5 +0.5**
WRH Wood River Hil 85.14 25 **P** **07 23 26.0 -0.2**
WRH IAmb IAmb 07 23 37.7
comp=Z,8.6nm,1.1s
AB31 Akbulak array 85.19 320 **P** **07 23 25.4 -1.4**
AB31 IAmb IAmb 07 23 28.1
comp=Z,9.7nm,1.2s
ABKAR Akbulak array 85.19 320 P **P** **07 23 25.1 -1.7**
ILAR Eielson Array 85.73 24 P **P** **07 23 27.6 -1.5**
comp=Z,3.9nm,0.8s,baz=260,slow=4.8,SNR=35
ILAR LR LR 07 59 12.1
comp=Z,124nm,19.4s,baz=239,slow=34
comp=Z,3.9nm,0.8s
QSPA South Pole Qui 87.10 180 P **P** **07 23 36.7 +0.7**
comp=Z,24nm,0.8s,baz=316,slow=1.1,SNR=25
QSPA LR LR 08 03 37.6
comp=Z,526nm,19.1s,baz=9.5,slow=36
comp=Z,24nm,0.8s
QSPA South Pole Qui 87.10 180 **P** **07 23 36.2 +0.1**
QSPA South Pole Qui 87.10 180 P **P** **07 23 36.8 +0.7**
ARTI Arti 87.31 327 LR LR 08 04 36.3
comp=Z,126nm,20.3s,baz=58,slow=37
BMAR Burnt Mountain 87.32 22 **P** **07 23 37.3 +0.4**
DAWY Dawson 88.75 26 P **P** **07 23 43.7 -0.1**
F28M Old Crow 89.13 22 P **P** **07 23 45.4 -0.1**
F28M IAmb IAmb 07 23 58.4
comp=Z,19nm,1.9s
INK Inuvik 91.59 22 LR LR 08 04 07.6
comp=Z,133nm,19.8s,baz=240,slow=35
KIRV Kirov 92.33 328 LR LR 08 07 13.9
comp=Z,215nm,19.9s,baz=81,slow=37
ELIB Princess Elisa 95.12 196 *d*P **P** **07 24 13.7 +0.4**
comp=Z,3.3nm,1.2s
GNI Garni 95.29 310 LR LR 08 11 22.2
comp=Z,24nm,20.9s,baz=83,slow=38
SPITS Spitsbergen Ar 99.22 350 LR LR 08 08 29.7
comp=Z,226nm,21.4s,baz=44,slow=35
OBN Obninsk 99.59 325 LR LR 08 12 56.9
comp=Z,119nm,19.1s,baz=309,slow=38
YKA Yellowknife Ar 99.93 27 LR LR 08 05 54.1
comp=Z,320nm,20.3s,baz=282,slow=33
MNK Minsk 104.63 326 *i* P **Pdif** **07 24 55.0 -1.0**
baz=74
MNK *i* PP **PP** **07 29 14.8 -0.7**
MNK *i* PPP PPP 07 31 27.9
MNK *i* SKS 07 36 20.8
MNK *i* SS **SS** **07 44 05.4 +0.7**
MNK *i* SKKS **SKKSdf** **07 47 57.0 -5.0**
MNK *i* SSS SSS 07 48 03.2
MNK *i* LRM MLR 08 13 38.5
comp=N,33nm,15.4s
MNK *i* LQ LQ 08 14 11.8
MNK *i* LRM MLR 08 17 04.8
comp=Z,1μm,23.7s
MNK *i* LRM MLR 08 17 10.1
comp=E,973nm,22.1s
TORD Torodi Ar. Bea 136.83 286 PKP **PKPdf** **07 30 13.6 -0.4**
comp=E,3.5nm,0.7s,baz=217,slow=0.9,SNR=21
DBIC Dimbokro 144.06 277 PKP PKPab 07 30 24.4 -0.2
comp=E,8.5nm,0.7s,baz=118,slow=4.3,SNR=14
ROSC El Rosal 146.43 86 PKPbc **PKPdf** **07 30 31.8 +0.1**
comp=E,6.2nm,0.6s,baz=120,slow=22,SNR=1.7
CPUP Villa Florida 146.84 152 PKPbc **PKPdf** **07 30 31.6 +0.1**
comp=E,2.7nm,0.7s,baz=226,slow=2.5,SNR=8.6
LPAZ La Paz 146.91 126 PKPbc **PKPdf** **07 30 33.6 +0.9**
comp=E,3.6nm,0.7s,baz=205,slow=1.9,SNR=9.3

BEO ***06*** *07:16:03.0±0.3,44.16N×15.95E,h0km,ML3.0/10*
ISC 06 07:16:02.4±1.1,44.16N±0.02×15.99E±0.03,h5km±10km,
n44,σ1s22/66,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KIJV	**Kijevo**	**0.34**	**117**	*e*Pg		**Pg**	**07 16 08.9**	**0.0**
KIJV					Sg	**Sg**	**07 16 14.3**	**+0.9**
MORI	**Morici**	**0.36**	**215**	*e*Pg		**Pb**	**07 16 10.2**	**-1.1**
MORI					Sg	**Sb**	**07 16 16.5**	**-0.7**
UDBI	**Udbina**	**0.40**	**336**	*e*Pg		**Pg**	**07 16 09.8**	**-0.3**
UDBI					Sg	**Sg**	**07 16 15.3**	**-0.1**
ZIRJ	**Zirje**	**0.56**	**206**	*e*Pg		**Pb**	**07 16 13.7**	**-1.1**
ZIRJ					Sg	**Sb**	**07 16 23.4**	**+0.2**
DUGI	**Dugi Otok**	**0.69**	**256**	*e*Pg		**Pb**	**07 16 15.7**	**-1.3**
DUGI					Sg	**Sb**	**07 16 26.6**	**-0.2**
PLIT	**Plitvice**	**0.76**	**340**	*e*Pg		**Pg**	**07 16 16.2**	**-0.8**
PLIT					Sg	**Sg**	**07 16 25.9**	**-1.0**
NVLJ	**Novalja**	**0.90**	**297**	*e*Pg		**Pg**	**07 16 18.8**	**-0.8**
HVAR	**Hvar**	**1.04**	**161**	*e*Pg		**Pg**	**07 16 21.5**	**-0.8**
HVAR					Sg	**Sb**	**07 16 37.3**	**+0.6**
BLY	**Banja Luka**	**1.04**	**55**	*e*Pg		**Pg**	**07 16 21.5**	**-0.8**
BLY					*e*Sg	**Sg**	**07 16 37.3**	**+1.6**
BOJS	**Bojanci**	**1.44**	**339**	*i* Pn		**Pn**	**07 16 29.0**	**-0.2**
BOJS	**Bojanci**	**1.44**	**339**	*e*Pg		**Pn**	**07 16 29.0**	**-0.2**
BOJS					*e*Sg	**Sn**	**07 16 49.5**	**+1.0**
OZLJ	**Ozalj**	**1.50**	**346**	*e*Pn		**Pn**	**07 16 29.3**	**-0.7**
LSTV	**Lastovo**	**1.54**	**154**	*e*Pn		**Pn**	**07 16 30.7**	**+0.2**
MOSL	**Moslavina**	**1.55**	**20**	*e*Pn		**Pn**	**07 16 28.6**	**-2.1**
RIY	**Rijeka**	**1.58**	**318**	*e*Pn		**Pn**	**07 16 31.5**	**+0.4**
RIY	**Rijeka**	**1.58**	**318**	*e*Pg		**Pb**	**07 16 31.9**	**-0.3**
RIY					*e*Sg	**Sg**	**07 16 53.1**	**-0.2**
GBRS	**Gornja Briga**	**1.61**	**329**	*i* Pn		**Pn**	**07 16 31.7**	**+0.2**
GBRS					*e*Sn	**Sb**	**07 16 53.4**	**+0.1**
GBRS					IAML		07 16 55.5	
comp=Z,73nm,0.7s								
PTJ	**Puntijarka**	**1.75**	**359**	*e*Pn		**Pn**	**07 16 31.7**	**-1.8**
BRJN	**Brijuni**	**1.77**	**296**	*e*Pn		**Pn**	**07 16 33.9**	**+0.3**
STON	**Ston**	**1.79**	**135**	*e*Pn		**Pn**	**07 16 34.3**	**+0.3**
STON	**Ston**	**1.79**	**135**	*e*Pg		**Pb**	**07 16 35.4**	**-0.3**
STON					*e*Sg	**Sg**	**07 16 59.6**	**-0.3**
VISS	**Visnje**	**1.83**	**334**	*i* Pn		**Pn**	**07 16 34.6**	**0.0**
VISS					*e*Sn	**Sn**	**07 16 58.8**	**+0.5**
CEY	**Cerknica**	**1.93**	**325**	*e*Pg		**Pn**	**07 16 37.1**	**+1.2**
CEY					*e*Sg	**Sb**	**07 17 03.0**	**+0.5**
SKDS	**Skadanscina**	**1.97**	**315**	*e*Pg		**Pn**	**07 16 37.2**	**+0.7**
SKDS					*e*Sg	**Sb**	**07 17 04.4**	**+0.7**
LJU	**Ljubljana**	**2.15**	**332**	*e*Pn		**Pn**	**07 16 39.5**	**+0.6**
TREB	**Trebinje**	**2.24**	**129**	*e*Pn		**Pb**	**07 16 42.4**	**-1.0**
BBLS	**Lazi&#263i**	**2.48**	**96**	*e*Pn		**Pn**	**07 16 45.7**	**+2.1**
RUDO	**Rudo**	**2.50**	**101**	*e*Pn		**Pn**	**07 16 46.1**	**+2.3**
OBKA	**Obir**	**2.56**	**337**	*e*Pn		**Pn**	**07 16 44.9**	**+0.2**
comp=Z,3.6nm,0.2s								
OBKA					*e*Sn	**Sn**	**07 17 14.8**	**-1.4**
comp=Z,30nm,0.6s								
SOKA	**Soboth**	**2.61**	**345**	*e*Pn		**Pn**	**07 16 44.5**	**-0.8**
comp=Z,1.9nm,0.2s								
SOKA					*e*Sn	**Sn**	**07 17 15.6**	**-1.7**
comp=Z,8.5nm,0.6s								
FRGS	**Fruska Gora**	**2.90**	**69**	*e*Pn		**Pn**	**07 16 51.7**	**+2.4**
MYKA	**Terra Mystica**	**2.97**	**327**	Pg		**Pb**	**07 16 57.3**	**+1.4**
comp=Z,6.7nm,0.6s								
MYKA					*e*Sn	**Sn**	**07 17 27.2**	**+0.8**
comp=Z,2.4nm,0.3s								
ARSA	**Arzberg**	**3.11**	**354**	*e*Pn		**Pn**	**07 16 51.5**	**-0.7**
comp=Z,2.1nm,0.2s								
RONA	**Rosalia, Austr**	**3.55**	**3**	*i* Pn		**Pn**	**07 16 57.4**	**-0.8**
comp=Z,1.8nm,0.2s								
CONA	**Conrad Observa**	**3.77**	**359**	*e*Pn		**Pn**	**07 17 00.3**	**-0.9**
comp=Z,3.5nm,0.3s								
CONA					*e*Sn	**Sn**	**07 17 44.0**	**-2.1**
comp=Z,2.2nm,0.3s								
MOA	**Molln**	**3.88**	**343**	*e*Pg		**Pn**	**07 17 03.6**	**+0.9**
comp=Z,2.6nm,0.2s								
LESA	**Schwarzleotal**	**4.00**	**326**	*i* Pn		**Pn**	**07 17 06.2**	**+1.7**
comp=Z,3.0nm,0.3s								
LESA					*e*Sn	**Sn**	**07 17 51.1**	**-0.7**
comp=Z,2.5nm,0.3s								

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOVS	Bovan	4.16	95	ePn	Pn	07 17 06.7	+0.1
MODS	Modra-Piesok	4.31	12	ePN	Pn	07 17 07.6	-1.0
MODS				eSN	Sn	07 17 56.5	-2.7
WATA	Walderalm	4.43	317	i Pn	Pn	07 17 13.5	+3.1
	comp=Z,2.1nm,0.2s						
BARS	Barje	4.45	106	ePn	Pn	07 17 11.3	+0.8
ZAGS	Zajecar	4.52	92	ePn	Pn	07 17 12.9	+1.4
FETA	Feichten	4.67	310	i Pn	Pb	07 17 27.8	+3.0
	comp=Z,1.2nm,0.5s						
FETA				i Sn	Sn	07 18 09.7	+1.3
	comp=Z,2.0nm,0.6s						
ZAPS	Zavoj	4.90	98	ePn	Pn	07 17 17.1	+0.4

*IDC **06** 07:22:26.1±0.7, 7°.23S×122°.51E, h531km±9km, mb3.2/6, mbtmp4.0/10, Error ellipse: s-maj=42.7km s-min=10.5km az=63.0*
*NEIC **06** 07:22:26.1±1.7, 7°.24S±0°.06×122°.5E±0°.1, h530km±12km, mb4.5/12, Error ellipse: s-maj=21.6km s-min=4.9km az=69.0*
*DJA **06** 07:22:26.6±0.4, 7°S±4°×12°2E±°, h519km±6km, M4.4/25, mB4.9/4, mb4.4/13, MLv4.4/25, Mw(mB)4.2/4*
ISC 06 07:22:26.4±0.5, **7°.33S**±0°.07×**122°.43E**±0°.09, **h550km, n53,** σ2s.03/61, **mb4.0**/11, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.32	188	P	P	07 23 30.4	-3.2
MMRI				S	S	07 24 21.6	-6.5
MMRI	Maumere	1.32	188	P	P	07 23 31.0	-2.6
MMRI				S	S	07 24 22.9	-5.2
EDFI	Ende, Flores	1.59	207	P	P	07 23 31.9	-2.7
EDFI				S	S	07 24 24.5	-5.5
BSSI	Bau Bau, Buton	2.26	301	P	P	07 23 35.8	-1.6
SOEI	Soe	3.02	143	P	P	07 23 40.4	-1.4
SOEI	Soe	3.02	143	P	P	07 23 41.0	-0.7
BATI	Baumata	3.11	157	P	P	07 23 41.2	-1.0
	77nm,0.3s,baz=279,slow=6.2,SNR=4.1						
BATI				S	S	07 24 41.0	-2.9
	126nm,0.5s,baz=34,slow=24,SNR=15						
BATI	Baumata	3.11	157	P	P	07 23 39.6	-2.6
WSI	Waingapu	3.14	222	P	P	07 23 40.2	-2.2
BASI	Baing, Sumba	3.41	212	P	P	07 23 42.0	-2.1
KAPI	Kappang	3.52	311	P	P	07 23 44.6	-0.2
	16nm,0.4s,baz=131,slow=6.3,SNR=12						
KAPI	Kappang	3.52	311	P	P	07 23 43.4	-1.5
KAPI	Kappang	3.52	311	P	P	07 23 44.1	-0.8
WBSI	Waikabubak, Su	3.79	232	P	P	07 23 44.3	-2.5
DBNI	Kabupaten Domp	4.25	254	P	P	07 23 48.2	-2.0
PLAI	Plampang	4.85	252	P	P	07 23 53.7	-1.3
TWSI	Taliwang, Sumb	5.67	255	P	P	07 24 00.6	-1.5
	0.4nm2µm62nm,0.7s						
NLAI	Namlea	6.17	49	P	P	07 24 05.3	-1.4
LUWI	Luwuk	6.25	3	P	P	07 24 05.3	-2.1
SANI	Sanana	6.33	34	P	P	07 24 06.4	-1.7
	0.3nm86nm,0.7s						
KLNI	Mataram	6.37	260	P	P	07 24 08.3	-0.2
	0.4nm2µm111nm,1.0s						
KHKI	Kahang-Kahang	6.84	261	P	P	07 24 13.2	+0.3
	0.3nm92nm,0.6s						
KRAI	Karang Ratu	7.15	56	P	P	07 24 12.8	-3.1
	27nm,0.6s						
IGBI	Denpasar	7.37	258	P	P	07 24 17.5	-0.5
RTBI	Rangdo, Negare	7.51	261	P	P	07 24 18.9	-0.5
	0.2nm66nm,1.1s						
JAGI	Jajag, Banyuwa	8.28	262	P	P	07 24 25.6	-1.4
JAGI	Jajag, Banyuwa	8.28	262	P	P	07 24 26.7	-0.3
TOLI2	Tolitoli	8.54	349	P	P	07 24 27.7	-1.9
KNRA	Kununurra	10.36	144	P	P	07 24 48.4	+0.4
FAKI	Fak Fak	10.71	66	P	P	07 24 48.8	-3.0
MBWA	Marble Bar	14.00	190	P	P	07 25 25.2	-0.4
PSA00	Pilbara Seismi	14.38	190	P	P	07 25 31.0	+1.4
PSA00	Pilbara Seismi	14.38	190	P	P	07 25 29.9	+0.4
WB0	Warramunga Arr	16.96	138	P	P	07 25 55.3	+0.5
WB0				IAmb	IAmb	07 26 03.4	
	comp=Z,19nm,1.3s						
WRA	Warramunga Arr	17.05	139	P	P	07 25 56.3	+0.6
	comp=Z,1.5nm,0.5s,baz=310,slow=8.9,SNR=19						
WRA				S	S	07 28 47.4	+1.2
	comp=Z,1.4nm,0.9s,baz=314,slow=18,SNR=4.0						
WRA	Warramunga Arr	17.05	139	P	P	07 25 55.5	-0.1
AS31	Alice Springs	19.63	147	P	P	07 26 19.6	+0.4
ASAR	Alice Springs	19.63	147	P	P	07 26 21.0	+1.8
	comp=Z,0.4nm,0.3s,baz=322,slow=8.8,SNR=7.5						
ASAR				S	S	07 29 31.1	+3.1
	comp=Z,0.4nm,0.8s,baz=324,slow=22,SNR=2.6						
ASAR				PcP	PcP	07 30 13.7	+1.3
	comp=Z,0.2nm,0.5s,baz=339,slow=3.1,SNR=1.7						
ASAR				ScP	ScP	07 32 58.7	+1.9
	comp=Z,0.3nm,0.6s,baz=344,slow=2.3,SNR=3.0						
COEN	Coen	21.41	110	P	P	07 26 34.8	-0.6
COEN				IAmb	IAmb	07 26 47.1	
	comp=Z,9.8nm,1.4s						
MORW	Morawa	22.45	195	P	P	07 26 45.4	+0.8
MORW				IAmb	IAmb	07 27 14.3	
	comp=Z,24nm,1.4s						
FORT	Forrest	23.92	168	P	P	07 26 58.6	+1.1
FORT				IAmb	IAmb	07 27 01.9	
	comp=Z,22nm,1.2s						
NWAO	Narrogin (SRO)	25.93	190	P	P	07 27 15.7	+0.4
BBOO	Buckleboo	28.34	155	P	P	07 27 37.8	+1.4
USRK	Ussuriysk Ar.	52.01	9	P	P	07 30 45.1	+0.1
	comp=Z,4.4nm,0.7s,baz=191,slow=6.6,SNR=5.7						
	comp=Z,4.4nm,0.7s						
HILR	Hailar Array B	56.69	358	P	P	07 31 18.2	+0.4
	comp=Z,1.6nm,0.5s,baz=170,slow=8.9,SNR=4.0						
	comp=Z,1.6nm,0.5s						
SONM	Songino Array	56.72	347	P	P	07 31 18.5	+0.3
	comp=Z,0.6nm,0.4s,baz=170,slow=8.8,SNR=3.7						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	56.72	347	P	P	07 31 18.4	+0.3
BKZ	Black Stump Fm	57.84	132	P	P	07 31 27.5	+1.5
BKZ				IAmb	IAmb	07 31 59.0	
	comp=Z,15nm,1.2s						
MKAR	Makanchi Array	64.60	331	P	P	07 32 10.9	+0.9
	comp=Z,0.7nm,0.5s,baz=136,slow=8.8,SNR=12						
	comp=Z,0.7nm,0.5s						
PEA0B	Petropavlovsk-	67.22	22	P	P	07 32 26.7	+0.7
PETK	Petropavlovsk-	67.22	22	P	P	07 32 26.9	+0.9
	comp=Z,1.1nm,0.5s,baz=225,slow=2.0,SNR=5.5						
	comp=Z,1.1nm,0.5s						
ZALV	Zalesovo Beam	68.76	337	P	P	07 32 35.2	-0.1
	comp=Z,0.8nm,0.5s,baz=107,slow=3.6,SNR=4.4						
	comp=Z,0.8nm,0.5s						
L14K	Kuka Creek	89.21	28	P	P	07 34 24.9	+1.4
L14K				IAmb	IAmb	07 34 28.6	
	comp=Z,10nm,1.4s						

*MEX **06** 07:51:34.5±0.6, 27°.20N×111°.50W, h16km±999km, MD4.2*
*IDC **06** 07:51:36.4±1.5, 27°.38N×111°.23W, h0km, mb3.4/2, mbtmp3.2/7, ML3.2/4, MS3.5/5, Error ellipse: s-maj=20.2km s-min=15.2km az=67.0*
ISC 06 07:51:32.1±1.2, **27°.25N**±0°.04×**111°.52W**±0°.03, **h15**km±9km, **n25,** σ1s.**90**/32, **7C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.65	276	eP	Pg	07 51 45.3	+0.5
SRIG				eS	Sb	07 51 55.0	+1.1
SRIG				⇑e		07 51 58.0	
SRIG				IAML		07 51 58.0	
	comp=N,3µm,0.6s						
SRIG	Santa Rosalia	0.65	276	eP	Pg	07 51 45.3	+0.5
SRIG				eS	Sb	07 51 54.8	+0.8
SNIRB	San Nicol¡s	0.71	182	eP	Pb	07 51 46.3	+0.1
SNIRB				eS	Sb	07 51 55.9	+0.2
SNIRB				⇓e		07 52 04.2	
SNIRB				IAML		07 52 04.2	
	comp=E,2µm,1.1s						
GUYB	Guaymas	0.86	42	⇑eP	Pg	07 51 48.6	-0.3
GUYB				eS	Sg	07 51 59.5	-0.8
GUYB	Guaymas	0.86	42	i P	Pg	07 51 48.5	-0.4
GUYB				eS	Sg	07 51 59.4	-0.8
NE77	Loreto B.C.S	1.24	173	eP	Pn	07 51 54.5	-0.4
NE77				eS	Sb	07 52 09.2	-1.8
CDOB	Cd. Obregon	1.25	82	⇑eP	Pn	07 51 54.4	-0.6
CDOB				eS	Sb	07 52 10.6	-0.7
CDOB				IAML		07 52 15.0	
	comp=E,1µm,0.9s						
CDOB				⇑e		07 52 15.0	
CDOB				IAML		07 52 19.9	
	comp=N,1µm,1.1s						
CDOB				⇑e		07 52 19.9	
SFQB	San Francisqui	1.65	314	⇑eP	Pn	07 52 00.0	-0.6
SFQB				eS	Sn	07 52 20.1	-1.6
BKIRB	Bahia Kino	1.66	345	eP	Pn	07 52 00.2	-0.5
BKIRB				eS	Sn	07 52 19.8	-1.9
HSIG		1.83	16	eP	Pn	07 52 03.9	+0.7
HSIG				eS	Sn	07 52 25.8	-0.4
HSIG				IAML		07 52 33.5	
	comp=E,670nm,0.9s						
HSIG				⇑e		07 52 33.5	
HSIG		1.83	16	eP	Pn	07 52 03.7	+0.6
HSIG				eS	Sn	07 52 24.0	-2.1
NOVRB	El Novillo Son	2.36	44	eP	Pn	07 52 11.2	+0.7
NOVRB				eS	Sn	07 52 38.3	-1.0
LAPR	La Primavera	3.31	348	eP	Pn	07 52 22.7	-0.8
LPIG	La Paz	3.32	161	Pn	Pb	07 52 30.4	-0.4
	comp=E,7.2nm,0.4s,baz=323,slow=5.1,SNR=1.3						
LPIG				Lg	Lg	07 53 23.8	
	comp=E,0.9nm,0.3s,baz=197,slow=22,SNR=1.2						
LPIG				LR	LR	07 53 39.2	
	comp=E,822nm,19.3s,baz=7.0,slow=36						
NZIG	Nacozari, Sono	3.56	29	eP	Pn	07 52 29.1	+2.1
TXAR	Lajitas Array	7.23	71	Pn	Pn	07 53 20.1	+2.7
	comp=E,0.1nm,0.3s,baz=242,slow=13,SNR=11						
TXAR				Lg	Lg	07 55 16.5	
	comp=E,0.3nm,0.3s,baz=246,slow=19,SNR=7.0						
	comp=E,0.5nm,0.7s						
PFO	Pinyon Flats O	7.64	327	LR	LR	07 55 48.6	
	comp=E,283nm,21.9s,baz=168,slow=33						
ANMO	Albuquerque	8.81	28	Pn	Pn	07 53 40.1	+0.9
	baz=103,slow=16,SNR=1.5						
ANMO				Lg	Lg	07 56 07.6	
	baz=340,slow=23,SNR=3.2						
	comp=E,0.3nm,0.5s						
NVAR	Mina Array Bea	12.52	335	Pn	P	07 54 38.3	-3.4
	comp=E,0.1nm,0.3s,baz=156,slow=11,SNR=1.7						
	comp=E,0.3nm,0.6s						
PDAR	Pinedale Array	15.56	5	Pn	P	07 55 20.4	+4.9
	baz=171,slow=10,SNR=7.0						
	comp=E,1.2nm,0.9s						
CMIG	Matias Romero	18.41	120	LR	LR	08 03 09.1	
	comp=E,277nm,20.7s,baz=358,slow=38						
NEW	Newport	21.43	350	P	P	07 56 25.1	+5.5
	comp=E,1.9nm,0.9s,baz=140,slow=7.9,SNR=3.4						
	comp=E,1.9nm,0.9s						
TKL	Tuckaleechee C	25.05	64	LR	LR	08 07 40.5	
	comp=E,202nm,18.4s,baz=274,slow=39						
SJG	San Juan	42.65	92	LR	LR	08 21 03.8	
	comp=E,30nm,18.3s,baz=168,slow=42						
ILAR	Eielson Array	43.73	339	P	P	07 59 42.2	+5.7
	comp=E,0.6nm,1.1s,baz=136,slow=7.1,SNR=3.2						
	comp=E,0.6nm,1.1s						

IDC 06 07:55:01.2±2.5, **54°.75N**×**83°.74E, h0km, mbtmp2.6**/2, **ML2.2**/2, **Error ellipse: s-maj=19.6km s-min=11.6km az=164.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.02	141	I	I	08 00 30.0	
	baz=321,slow=336,SNR=1.0						
ZALV	Zalesovo Beam	1.02	141	Pg	Pg	07 55 20.4	-0.4
	1.7nm,0.3s,baz=322,slow=20,SNR=18						
ZALV				Lg	Lg	07 55 35.3	
	6.2nm,0.3s,baz=322,slow=29,SNR=12						
KURBB	Kurchatov Arra	5.21	220	Pn	Pn	07 56 19.8	-0.4
	baz=34,slow=17,SNR=1.6						
KURBB				Pg	Pb	07 56 36.8	+3.8
	baz=39,slow=15						
KURBB				Lg	Lg	07 57 47.9	
	0.1nm,0.3s,baz=42,slow=32,SNR=4.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	8.02	187	Pn	Pn	07 56 59.0	+0.1
	0.1nm,0.3s,baz=3.3,slow=11,SNR=3.7						
MKAR				Sn	Sn	07 58 29.9	-0.4
	0.1nm,0.3s,baz=15,slow=23,SNR=1.3						
MKAR				Lg	Lg	07 59 14.4	
	baz=20,slow=30,SNR=3.5						
	0.2nm,0.5s						

*CRAAG **06** 08:00:01.8, 36°.09N×1°.28E, Ml3.2, Algrie 07km SE Oued-Sly*
*MDD **06** 08:00:06.2±1.1, 36°.12N×1°.25E, h30km, Mb4.0/10, M_mb3.3/10, Error ellipse: s-maj=9.1km s-min=5.9km az=142.0*
ISC 06 08:00:02.3±1.2, **36°.12N**±0°.04×**1°.24E**±0°.05, **h12**km±9km, **n31,** σ1s.**47**/42, **6C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECHA	Ech Chlef	0.11	73	P	Pg	08 00 04.4	-0.9
EANR	'Ain N'Sour	0.20	214	P	Pb	08 00 07.1	-0.9
EBNR	Beni Rached	0.29	54	P	Pg	08 00 09.4	+1.1
EBNH	Beni Haoua	0.48	32	P	Pg	08 00 12.2	+0.5
EKMS	Oued Kramis	0.52	292	P	Pn	08 00 15.3	-0.3
EARB	Arib	0.65	73	P	Pg	08 00 15.2	+0.3
EHRZ	Djelida	0.70	83	P	Pg	08 00 16.1	+0.1
ESMB	Sidi M'hamed B	0.76	225	P	Pn	08 00 18.4	-0.5
EBGR	Bougara	0.79	134	P	Pg	08 00 17.5	-0.1
EDDR	Deurdeur	0.80	98	P	Pg	08 00 17.9	+0.2
ABKD	Sidi Amar	0.96	64	P	Pg	08 00 20.9	+0.1
EADEB	Ain Deheb	1.28	168	P	Pg	08 00 28.1	+1.1
EZEK	Zmalet El Emir	1.52	145	P	Pb	08 00 30.5	0.0
ABRIN	Birine	1.61	107	P	Pb	08 00 32.9	+1.0
CART	Cartagena	2.32	310	Pn	Pn	08 00 40.0	-0.3
CART				Sn	Sn	08 01 06.5	-2.1
EMUR	La Murta	2.63	312	Pn	Pn	08 00 44.8	+0.2
EMUR	La Murta	2.63	312	Pn	Pn	08 00 44.8	+0.2
EMUR				Sn	Sn	08 01 14.5	-1.8
EBEN2	Beniarda presa	2.80	336	Pn	Pn	08 00 47.1	+0.3
EBEN2				⇑iIVmb_VC		08 00 51.7	
	295nm,SNR=1.3						
EBEN2				Sn	Sn	08 01 19.7	-0.8
EIBI	Ibiza	2.90	2	Pn	Pn	08 00 49.3	+1.0
EIBI				Sn	Sn	08 01 21.0	-2.1
EIBI	Ibiza	2.90	2	Pn	Pn	08 00 49.3	+1.0
EIBI				⇑iIVmb_VC		08 00 58.2	
	275nm,SNR=1.8						
EIBI				Sn	Sn	08 01 20.6	-2.5
ENIJ	Nijar	2.90	288	Pn	Pn	08 00 49.7	+1.4
AFON	Font Roja	2.91	331	Sn	Sn	08 01 21.8	-1.7
ETOB	Tobarra	3.36	319	Pn	Pn	08 00 56.6	+1.9
ETOB				Sn	Sn	08 01 33.3	-1.2
ETOB	Tobarra	3.36	319	Pn	Pn	08 00 56.5	+1.9
ETOB				⇑iIVmb_VC		08 01 03.5	
	200nm,SNR=1.6						
ETOB				Sn	Sn	08 01 33.4	-1.2
EVIV	Cofrentes, Val	3.66	330	Sn	Sn	08 01 40.4	-1.4
EQES	Quesada	3.84	297	Pn	Pn	08 01 03.9	+2.6
EQES				⇑iIVmb_VC		08 01 06.8	
	207nm,SNR=2.0						
EQES				Sn	Sn	08 01 49.0	+2.6
ETOS	Mallorca	3.85	18	Sn	Sn	08 01 44.8	-1.7
ETOS	Mallorca	3.85	18	Sn	Sn	08 01 43.8	-2.7
ECHE	Chera	3.88	334	Pn	Pn	08 01 03.6	+1.8
ECHE				Sn	Sn	08 01 47.0	-0.3
ECHE	Chera	3.88	334	Pn	Pn	08 01 02.6	+0.8
ECHE				⇑iIVmb_VC		08 01 04.5	
	95nm,SNR=0.8						
ECHE				Sn	Sn	08 01 45.4	-1.9
EMOS	Mosqueruela	4.45	343	Pn	Pn	08 01 11.6	+1.9
EMOS				⇑iIVmb_VC		08 01 18.4	
	113nm,SNR=1.2						
EMOS				Sn	Sn	08 01 59.5	-2.0

*NEIC **06** 08:20:24.8, 40°.30N×124°.37W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-0.59; Mθθ-1.20; Mφφ1.79; Mrθ1.08; Mθφ-4.91; Mφr1.59; Fault plane solution: M0 5.51000×10^14 NP1:φs186.81000°, δ80.31000°, λ-19.18000°. NP2:φs280.16000°, δ71.10000°, λ-169.75000°. Principal axes: T 5.5024, Plg6.0000°, Azm235.0000°; N 0.0106, Plg69.0000°, Azm341.0000°; P -5.5130, Plg20.0000°, Azm142.0000°;*
*NEIC **06** 08:20:24.8, 40°.30N×124°.37W, h8km*
*NCEDC **06** 08:20:24.6±3.9, 40°.30N±0°.02×124°.38W±0°.05, h9km±7km, Error ellipse: s-maj=5.4km s-min=3.1km az=100.0*
NEIC 06 08:20:18.6±2.1, **40°.20N**±0°.03×**124°.82W**±0°.05, **h10**km±2km, **ML3.4**/77, **Mwr3.8**/5(NCEDC), **Error ellipse: s-maj=6.6km s-min=4.9km az=271.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETL	Petrolia	0.38	76		Pg	08 20 26.6	+0.5
KCTM	Capetown	0.47	53		Pb	08 20 29.2	+0.3
KMPM	Mount Pierce	0.58	68		Pg	08 20 30.0	+0.1
KCRM	Chalk Rock	0.80	73		Pb	08 20 34.9	+0.2
KMRM	Mail Ridge	0.85	88		Pb	08 20 35.7	0.0
JCC	Jacoby Creek,	0.86	44		Pb	08 20 36.0	+0.3
JCC				IAML		08 20 47.4	
	comp=E,2µm,0.8s						
DMOR	Dinsmores, CA	1.00	59		Pn	08 20 38.5	-0.3
KCSM	Cold Springs	1.06	71		Pn	08 20 41.6	+1.9
KHMM	Horse Mountain	1.07	51		Pb	08 20 39.6	+0.2
KCPM	Cahto Peak	1.08	118		Pn	08 20 40.7	+0.7
KIPM	Iron Peak	1.10	110		Pn	08 20 41.1	+0.8
KPPM	Pickett Peak	1.13	82		Pn	08 20 41.1	+0.4
KRPM	Rodgers	1.14	32		Pn	08 20 41.7	+1.0
KRPM				IAML		08 20 59.3	
	comp=N,983nm,0.9s						
KRPM				IAML		08 21 06.6	
	comp=E,1µm,0.9s						
KFPM	Farley Peak	1.21	117		Pg	08 20 42.5	+0.6
MNDO	Woodland Fire	1.21	136		Pg	08 20 43.6	+1.6
KBNM	Bluenose Ridge	1.29	103		Pg	08 20 43.5	+0.1
KHBM	Hayfork Bally	1.31	69		Pn	08 20 43.1	-0.1
KHBM				IAML		08 21 01.6	
	comp=E,1µm,0.5s						
DCMP	DeCamp, Califo	1.36	122		Pb	08 20 44.3	+0.1
DCMP				IAML		08 21 06.5	
	comp=N,668nm,0.5s						
GNAM	Navarro Ridge	1.36	137		Pg	08 20 45.6	+0.8
KRKM	Rackout Spring	1.42	116		Pb	08 20 45.4	+0.2
KRMB	Red Mountain	1.49	27		Pb	08 20 46.5	-0.1
WEAV	Weaverville	1.51	68		Pn	08 20 45.3	-0.5
GHOM	Hamilton Openi	1.52	139		Pg	08 20 47.9	+0.1
GWRM	Wonder Ranch	1.54	130		Pb	08 20 47.6	+0.4
O02D	Mt. Diablo Mer	1.56	90		Pb	08 20 47.2	-0.4
O02D				IAML		08 21 10.1	
	comp=N,928nm,1.1s						
O02D				IAML		08 21 11.0	
	comp=E,663nm,1.1s						
BONV	Boonville, CA	1.66	136		Pb	08 20 49.6	+0.2
GROM	Round Mountain	1.68	99		Pn	08 20 48.3	+0.2
GVV	Valley View	1.70	104		Pn	08 20 49.0	+0.4
SIGP	Signal Peak, C	1.77	19		Pb	08 20 51.1	-0.1
KSXB	Camp Six Broad	1.78	23		Pb	08 20 51.0	-0.4
KSXB				IAML		08 21 27.1	
	comp=E,208nm,1.0s						
GSNM	Snow Mountain	1.78	134		Pb	08 20 51.5	+0.1
N02D	Trinity Center	1.79	64		Pn	08 20 49.6	-0.1
N02D				IAML		08 21 23.4	
	comp=E,771nm,0.7s						
HOPS	Hopland Field	1.81	131		Pb	08 20 51.1	-0.7
HOPS				IAML		08 21 28.2	
	comp=E,214nm,1.2s						
LBKM	Bonanza King	1.87	61		Pn	08 20 50.6	-0.1
GHGM	Hogback Ridge	1.88	124		Pb	08 20 52.2	-0.9
M02C	Callahan	1.91	51		Pn	08 20 51.2	-0.2
M02C				IAML		08 21 20.6	
	comp=N,310nm,1.0s						
M02C				IAML		08 21 28.8	
	comp=E,236nm,1.0s						
GDXM	Geysers	2.10	131		Pb	08 20 56.8	0.0
L02F	Cave Junction	2.14	26		Pb	08 20 56.0	-1.5
LSHM	Sage Hen Hill	2.21	73		Pn	08 20 56.0	+0.6
YBH	Yreka Blue Hor	2.21	46		Pn	08 20 56.8	+1.2
O03E	Paynes Creek	2.31	87		Pn	08 20 57.1	+0.2
O03E				IAML		08 21 37.3	
	comp=N,213nm,1.0s						
O03E				IAML		08 21 37.5	
	comp=E,312nm,0.9s						
M03C	McCloud	2.32	62		Pn	08 20 58.0	+1.0
M03C				IAML		08 21 47.5	
	comp=N,476nm,1.0s						
CVS	Carmenet Viney	2.61	134		Pb	08 21 03.6	-1.9
HATC	Hat Creek Radi	2.64	75		Pn	08 21 01.9	+0.6
K02D	Willamette Mer	2.64	19		Pn	08 21 02.9	+1.5
K02D				IAML		08 22 09.8	
	comp=E,72nm,1.1s						
L04D	Klamath Falls	2.77	42		Pn	08 21 05.3	+2.1
L04D				IAML		08 22 00.7	
	comp=E,130nm,1.7s						
L04D				IAML		08 22 09.3	
	comp=N,121nm,1.1s						
BBOR	Butler Butte	3.13	30		Pn	08 21 09.2	+1.0
BBOR				IAML		08 22 14.3	
	comp=E,54nm,1.4s						
BBOR				IAML		08 22 15.5	
	comp=N,47nm,1.3s						
AFDM	Forest Hills D	3.23	112		Pn	08 21 08.5	-0.9
K04D	Chiloquin, OR	3.35	43		Pn	08 21 11.2	+0.1
K04D				IAML		08 22 12.1	
	comp=N,186nm,1.5s						
K04D				IAML		08 22 34.6	
	comp=E,148nm,1.4s						
J04A	Umpqua Nationa	3.66	33		Pn	08 21 16.1	+0.6
J04A				IAML		08 22 25.4	
	comp=N,143nm,1.6s						
MPK	Martis Peak	3.80	102		Pn	08 21 18.7	+1.1
MPK				IAML		08 22 29.2	
	comp=E,140nm,1.4s						
MPK				IAML		08 22 29.6	
	comp=N,135nm,1.5s						
K05A	Summer Lake	3.88	48		Pn	08 21 19.6	+1.1
K05A				IAML		08 22 38.4	
	comp=E,41nm,1.9s						
K05A				IAML		08 22 50.0	
	comp=N,40nm,2.3s						
I04A	Tendick Farm,	4.02	26		Pn	08 21 22.4	+2.2
I04A				IAML		08 22 40.9	
	comp=N,30nm,2.9s						
I04A				IAML		08 22 50.1	
	comp=E,40nm,4.4s						
J05D	Fort Rock, OR	4.09	40		Pn	08 21 23.0	+1.6
J05D				IAML		08 22 49.7	
	comp=E,37nm,2.0s						
J05D				IAML		08 23 07.2	
	comp=N,38nm,3.9s						
PNTR	Pine Nut	4.18	104		Pn	08 21 23.8	+1.1
PNTR				IAML		08 22 52.2	
	comp=E,101nm,1.3s						
PAHR	Pah Rah Range	4.21	95		Pn	08 21 23.6	+0.6
PAHR				IAML		08 22 41.6	
	comp=E,22nm,1.6s						
PAHR				IAML		08 22 44.7	
	comp=N,23nm,3.6s						
SAO	San Andreas Ge	4.33	141	Pn	Pn	08 21 25.3	+0.7
BCGM	Cienega Road	4.43	141		Pn	08 21 28.4	+2.6
PINE	Pine Mountain	4.61	38		Pn	08 21 28.2	-0.4
I05D	Terrebonne, OR	4.88	31		Pn	08 21 34.4	+2.3
HULI	Fort Hunter Li	5.04	145	Pn	Pn	08 21 35.2	+1.0
WVOR	Wild Horse Val	5.17	62		Pn	08 21 37.6	+1.5
WVOR				IAML		08 23 17.4	
	comp=N,16nm,2.9s						
WVOR				IAML		08 23 25.9	
	comp=N,15nm,1.9s						
NVAR	Mina Array Bea	5.36	107	Pn	Pn	08 21 39.2	+0.3
PKD	Bear Valley Ra	5.43	140	Pn	Pn	08 21 41.2	+1.6
I07A	Izee	5.54	44		Pn	08 21 43.1	+1.9
MTUM	Tungsten Hills	5.66	118		Pn	08 21 46.3	+3.3
VES	Vestal, Richgr	6.28	132		Pn	08 21 54.9	+3.6
ISA	Isabella, Lake	6.76	130		Pn	08 22 00.2	+2.2
CLC	China Lake	7.19	125	Pn	Pn	08 22 04.7	+0.8
TPO	Tropico Hills	7.46	133		Pn	08 22 09.0	+1.4
DUG	Dugway, Tooele	9.19	86	Pn	Pn	08 22 34.2	+2.8

ISC 06 08:21:16.8±1.3, **49°.15N**±0°.08×**18°.84E**±0°.05, **h10km, n5,** σ0s.**25**/7, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAVC	Velka Javorina	0.83	250	ePG	Pg	08 21 32.3	-0.4
MORC	Moravsky Berou	1.05	307	ePG	Pg	08 21 36.9	-0.1
KECS	Kecovo	1.27	121	ePG	Pb	08 21 40.9	0.0
KECS				eSG	Sb	08 21 57.4	+0.1
MODS	Modra-Piesok	1.30	234	ePG	Pg	08 21 41.6	0.0
MODS				eSG	Sb	08 21 58.1	+0.2
VRAC	Vranov	1.48	277	ePG	Pb	08 21 44.6	+0.2

*IDC **06** 08:24:23.9±0.6, 54°.50N×161°.62W, h0km, mb4.3/32,*

mbtmp4.3/36, ML3.9/4, MS3.5/22, Error ellipse: s-maj=16.8km s-min=10.5km az=169.0

*NEIC **06** 08:24:27.1, 54.38N×161.36W, h10km*

*AEIC **06** 08:24:27.3±1.8, 54.38N±0.04×161.40W±0.04, h7km±4km, Error ellipse: s-maj=5.8km s-min=3.5km az=171.0*

*NEIC **06** 08:24:30.2±2.1, 54.45N±0.03×161.37W±0.05, h34km±5km, mb4.6/23, ML4.3/32, Mwr4.2/46, ML4.1(AEIC), Error ellipse: s-maj=5.0km s-min=4.3km az=169.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.27; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$-0.74; $M_{r\theta}$1.50; $M_{\theta\phi}$-1.12; $M_{\phi r}$-0.47; Fault plane solution: $M_0$2.22000×10^{15} NP1:ϕ_s76.88000°, δ67.87000°, λ125.63000°. NP2:ϕ_s194.61000°, δ41.15000°, λ34.92000°. Principal axes: T 2.4280, Plg53.0000°, Azm30.0000°; N -0.4868, Plg33.0000°, Azm242.0000°; P -1.9413, Plg15.0000°, Azm142.0000°;*

ISC 06 08:24:29.1±0.5**, 54.49N**±0.06×**161.37W**±0.03**, h35**km±2km**, n267**, σ1.**83**/266**, mb4.5**/48**, MS3.6**/19**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.72**	**337**		**Pn**	**08 24 43.0**	**+0.2**
DOL					**Sn**	**08 24 54.2**	**+1.6**
DT1	**Dutton Round H**	**0.81**	**320**		**Pn**	**08 24 44.0**	**0.0**
DT1					**Sn**	**08 24 55.8**	**+0.8**
DTNA	**Dutton South F**	**0.84**	**323**		**Pn**	**08 24 44.6**	**+0.2**
DTNA					**Sn**	**08 24 56.5**	**+1.0**
HAG	**Hague Volcano**	**0.89**	**340**		**Pn**	**08 24 46.1**	**+1.0**
PS4A	**Pavlof South-4**	**0.91**	**342**		**Pn**	**08 24 46.3**	**+1.0**
PS4A					**Sn**	**08 24 58.3**	**+1.1**
PS1A	**Pavlof South-1**	**0.96**	**347**		**Pn**	**08 24 47.5**	**+1.4**
PS1A					**Sn**	**08 25 01.0**	**+2.5**
SDPT	**Sand Point**	**1.01**	**30**		**Pn**	**08 24 47.8**	**+1.1**
SDPT				IAML		08 25 04.1	
	comp=E,14μm,0.4s						
SDPT	**Sand Point**	**1.01**	**30**		**Sn**	**08 25 03.3**	**+3.6**
SDPT	**Sand Point**	**1.01**	**30**	P	**Pn**	**08 24 48.1**	**+1.4**
SDPT	**Sand Point**	**1.01**	**30**	S	**Sn**	**08 25 03.2**	**+3.6**
PN7A	**Pavlof North-7**	**1.01**	**339**		**Pn**	**08 24 48.5**	**+1.6**
CNBA	**Chernabura Isl**	**1.09**	**71**		**Pn**	**08 24 47.8**	**0.0**
CNBA	**Chernabura Isl**	**1.09**	**71**		**Sn**	**08 25 01.3**	**-0.3**
CHNA	**Chernabura Isl**	**1.09**	**71**	P	**Pn**	**08 24 48.1**	**+0.3**
FALS	**False Pass**	**1.25**	**288**		**Pn**	**08 24 49.7**	**-0.3**
FALS	**False Pass**	**1.25**	**288**		**Sn**	**08 25 05.6**	**+0.1**
FALS	**False Pass**	**1.25**	**288**	P	**Pn**	**08 24 50.3**	**+0.3**
FALS	**False Pass**	**1.25**	**288**	S	**Sn**	**08 25 09.3**	**+3.8**
ISNN	**Isanotski Nort**	**1.44**	**285**		**Pn**	**08 24 53.7**	**+1.0**
SSLN	**Shishaldin Nor**	**1.56**	**283**		**Pn**	**08 24 56.0**	**+1.6**
SSLN					**Sn**	**08 25 17.0**	**+3.6**
SSBA	**Shishaldin**	**1.63**	**281**		**Pn**	**08 24 56.4**	**+1.1**
SSBA					**Sn**	**08 25 18.2**	**+3.2**
VNSW	**Veniaminof 7**	**1.90**	**32**		**Sn**	**08 25 28.2**	**+6.5**
VNKR	**Veniaminof 5**	**1.93**	**36**		**Pn**	**08 25 02.1**	**+2.7**
VNSS	**Veniaminof 8**	**2.06**	**31**		**Pn**	**08 25 04.5**	**+3.1**
VNFG	**Fog Glacier, M**	**2.08**	**29**		**Pn**	**08 25 05.3**	**+3.8**
AKSA	**Akutan Strait**	**2.56**	**264**		**Pn**	**08 25 08.9**	**+0.9**
AKSA					**Sn**	**08 25 38.5**	**+0.6**
AKUT	**Akutan**	**2.60**	**264**		**Pn**	**08 25 09.5**	**+0.9**
AKUT				IAML		08 25 55.9	
	comp=E,570nm,0.8s						
AKUT	**Akutan**	**2.60**	**264**	P	**Pn**	**08 25 10.8**	**+2.2**
AHB	**Akutan Harbor**	**2.63**	**264**		**Pn**	**08 25 09.9**	**+0.9**
AHB					**Sn**	**08 25 42.2**	**+2.5**
AKLV	**Akutan Long Va**	**2.71**	**265**		**Pn**	**08 25 11.0**	**+0.9**
AKV	**Akutan Volcano**	**2.71**	**264**		**Pn**	**08 25 11.4**	**+1.2**
AKV					**Sn**	**08 25 43.7**	**+1.8**
ZRO	**Akutan Zero**	**2.73**	**264**		**Pn**	**08 25 11.3**	**+0.9**
ZRO					**Sn**	**08 25 43.4**	**+1.3**
AKMO	**Akutan Morgan**	**2.75**	**264**		**Pn**	**08 25 11.4**	**+0.8**
AKMO					**Sn**	**08 25 43.3**	**+0.7**
LVA	**Lava Point**	**2.75**	**265**		**Pn**	**08 25 11.8**	**+1.2**
LVA				IAML		08 26 07.5	
	comp=N,746nm,0.9s						
ANPB	**Aniakchak Plen**	**2.91**	**36**		**Pn**	**08 25 15.5**	**+2.6**
ANNW	**Aniakchak Nort**	**3.06**	**34**		**Pn**	**08 25 18.0**	**+3.0**
UNV	**Unalaska Valle**	**3.08**	**260**		**Pn**	**08 25 15.3**	**+0.1**
UNV	**Unalaska Valle**	**3.08**	**260**		**Sn**	**08 25 50.8**	**0.0**
MNAT	**Makushin Natee**	**3.18**	**261**		**Pn**	**08 25 17.0**	**+0.4**
MGOD	**Makushin Gods**	**3.31**	**260**		**Pn**	**08 25 18.6**	**+0.2**
CHIR	**Chirikof Islan**	**3.56**	**66**		**Pn**	**08 25 22.2**	**+0.5**
CHIR				IAML		08 26 25.2	
	comp=N,644nm,1.0s						
CHIR				IAML		08 26 35.2	
	comp=E,947nm,1.0s						
CHIR	**Chirikof Islan**	**3.56**	**66**	P	**Pn**	**08 25 23.0**	**+1.2**
R16K	**Pilot Point**	**3.75**	**33**		**Pn**	**08 25 26.4**	**+2.0**
R16K				IAML		08 26 41.8	
	comp=N,665nm,1.0s						
R16K				IAML		08 26 55.4	
	comp=E,595nm,1.1s						
OKTU	**Okmok Mt. Tuli**	**4.09**	**257**		**Pn**	**08 25 30.4**	**+1.3**
PLBL	**Peulik Blue Cr**	**4.11**	**37**		**Pn**	**08 25 31.8**	**+2.5**
PLK4	**Peulik 4**	**4.22**	**40**		**Pn**	**08 25 33.2**	**+2.3**
PLK4				IAML		08 26 37.4	
	comp=N,685nm,0.8s						
PLK1	**Peulik 1**	**4.26**	**37**		**Pn**	**08 25 33.7**	**+2.4**
PLK5	**Peulik 5**	**4.32**	**34**		**Pn**	**08 25 35.1**	**+2.9**
PLK2	**Peulik 2**	**4.33**	**39**		**Pn**	**08 25 35.6**	**+3.2**
SII	**Sitkinak Islan**	**4.58**	**60**		**Pn**	**08 25 36.3**	**+0.5**
SII	**Sitkinak Islan**	**4.58**	**60**	P	**Pn**	**08 25 37.1**	**+1.3**
SII	**Sitkinak Islan**	**4.58**	**60**	S	**Sn**	**08 26 30.9**	**+3.1**
NIKH	**Nikolski High**	**4.70**	**254**	Pn	**Pn**	**08 25 36.7**	**-0.7**
NIKH				IAML		08 26 55.6	
	comp=E,195nm,0.9s						
NIKH				IAML		08 26 58.9	
	comp=N,147nm,1.2s						
NIKH	**Nikolski High**	**4.70**	**254**	P	**Pn**	**08 25 38.5**	**+1.1**
O15K	**Ungalikthiuk R**	**4.78**	**10**		**Pn**	**08 25 40.5**	**+2.0**
O15K	**Ungalikthiuk R**	**4.78**	**10**	IAML		08 26 56.2	
	comp=E,169nm,0.8s						
O15K				IAML		08 27 10.3	
	comp=N,152nm,1.0s						
O14K	**Tigyukauivet M**	**4.78**	**1**		**Pn**	**08 25 40.6**	**+2.1**
O14K	**Tigyukauivet M**	**4.78**	**1**	IAML		08 27 12.6	
	comp=E,168nm,1.2s						
O14K				IAML		08 27 13.2	
	comp=N,205nm,1.0s						
CNTC	**Contact Creek**	**4.86**	**37**		**Pn**	**08 25 42.0**	**+2.3**
P16K	**Nushagak River**	**4.92**	**21**		**Pn**	**08 25 42.8**	**+2.4**
Q16K	**King Salmon**	**4.94**	**30**		**Pn**	**08 25 43.6**	**+2.9**
ANCK	**Angle Creek**	**4.95**	**39**		**Pn**	**08 25 43.5**	**+2.5**
ACHA	**Angle Creek He**	**5.02**	**40**		**Pn**	**08 25 43.6**	**+1.6**
KABU	**Katmai Buttres**	**5.08**	**39**		**Pn**	**08 25 45.2**	**+2.4**
KAKN	**Katmai Knife C**	**5.18**	**40**		**Pn**	**08 25 46.5**	**+2.4**
OHAK	**Old Harbor**	**5.32**	**56**		**Pn**	**08 25 45.8**	**-0.1**
OHAK				IAML		08 27 15.2	
	comp=N,214nm,1.2s						
OHAK				IAML		08 27 15.5	
	comp=E,223nm,1.8s						
OHAK	**Old Harbor**	**5.32**	**56**	P	**Pn**	**08 25 46.4**	**+0.6**
KAWH	**Katmai**	**5.34**	**40**		**Pn**	**08 25 48.0**	**+1.7**
O16K	**Kokwok River B**	**5.42**	**18**		**Pn**	**08 25 49.5**	**+2.1**
P17K	**Kvichak River**	**5.44**	**28**		**Pn**	**08 25 50.8**	**+3.2**
N14K	**Kuskokwak Cree**	**5.46**	**358**		**Pn**	**08 25 49.9**	**+2.1**
KARR	**Katmai Rainbow**	**5.46**	**40**		**Pn**	**08 25 49.7**	**+1.8**
KAHG	**Katmai Hook Gl**	**5.51**	**40**		**Pn**	**08 25 50.4**	**+1.8**
N15K	**Kwethluk River**	**5.74**	**6**		**Pn**	**08 25 54.1**	**+2.4**
O17K	**Koliganek Bris**	**5.79**	**22**		**Pn**	**08 25 54.1**	**+1.7**
KDAK	**Kodiak Island**	**5.92**	**53**	Pn	**Pn**	**08 25 54.7**	**+0.5**
	comp=E,4.8nm,0.3s,baz=128,slow=0.6,SNR=100						
KDAK				Sn	**Sn**	**08 26 56.5**	**-4.1**
	baz=74,slow=23						
KDAK				LR	LR	08 28 27.9	
	comp=E,415nm,19.9s,baz=216,slow=40						
	comp=E,14nm,0.4s						
KDAK	**Kodiak Island**	**5.92**	**53**		**Pn**	**08 25 54.2**	**+0.1**
P18K	**Big Mountain,**	**5.96**	**32**		**Pn**	**08 25 56.9**	**+2.2**
M13K	**Dall Lake**	**6.04**	**351**		**Pn**	**08 25 57.6**	**+1.9**
Q19K	**Cape Douglas,**	**6.16**	**41**		**Pn**	**08 25 59.2**	**+1.8**
N16K	**Nishlik Lake**	**6.17**	**12**		**Pn**	**08 26 00.1**	**+2.6**
M15K	**Kasigluk River**	**6.24**	**3**		**Pn**	**08 25 60.0**	**+1.5**
M14K	**Bethel**	**6.29**	**357**		**Pn**	**08 26 01.0**	**+1.8**
O18K	**Koktuh Hills**	**6.34**	**29**		**Pn**	**08 26 02.6**	**+2.7**
SYI	**Shuyak Island**	**6.46**	**47**		**Pn**	**08 26 02.5**	**+1.0**
M11K	**Mekoryuk**	**6.46**	**338**		**Pn**	**08 26 03.5**	**+2.0**
N17K	**Nushagak Hills**	**6.46**	**19**		**Pn**	**08 26 03.1**	**+1.5**
P19K	**Oil Pt**	**6.82**	**37**		**Pn**	**08 26 10.1**	**+3.6**
N18K	**Kilae Creek**	**6.87**	**23**		**Pn**	**08 26 09.1**	**+1.9**
O19K	**Port Alsworth**	**6.88**	**31**		**Pn**	**08 26 09.5**	**+2.3**
ILSW	**Iliamna Southw**	**7.09**	**36**		**Pn**	**08 26 13.2**	**+2.9**
IVE	**Iliamna Volcan**	**7.16**	**36**		**Pn**	**08 26 13.4**	**+2.2**
L15K	**Ungalak Mounta**	**7.21**	**360**		**Pn**	**08 26 13.2**	**+1.3**
M17K	**Holitna River**	**7.24**	**15**		**Pn**	**08 26 14.1**	**+1.8**
L16K	**Owhat River**	**7.31**	**7**		**Pn**	**08 26 15.1**	**+1.9**
N19K	**Bonanza Creek**	**7.34**	**27**		**Pn**	**08 26 15.8**	**+2.1**
CNPM	**China Poot**	**7.49**	**43**		**Pn**	**08 26 16.7**	**+1.0**
RED	**Redoubt Volcan**	**7.54**	**34**		**Pn**	**08 26 17.9**	**+1.5**
RDWB	**Redoubt West**	**7.57**	**34**		**Pn**	**08 26 19.7**	**+2.8**
RDSO	**Redoubt South**	**7.57**	**34**		**Pn**	**08 26 20.1**	**+3.2**
NCT	**North Crescent**	**7.59**	**33**		**Pn**	**08 26 20.1**	**+2.9**
M18K	**Stony River**	**7.61**	**20**		**Pn**	**08 26 19.1**	**+1.7**
K13K	**Kusilvak Mount**	**7.67**	**348**		**Pn**	**08 26 20.1**	**+2.1**
RDT	**Redoubt**	**7.77**	**35**		**Pn**	**08 26 21.4**	**+1.7**
BRSE	**Bradley Lake S**	**7.82**	**43**		**Pn**	**08 26 20.9**	**+0.6**
K15K	**Wolf Creek Mou**	**7.83**	**359**		**Pn**	**08 26 22.3**	**+2.0**
L17K	**Donlin**	**7.84**	**11**		**Pn**	**08 26 21.8**	**+1.3**
L18K	**Granite Mounta**	**8.13**	**16**		**Pn**	**08 26 26.1**	**+1.6**
CKL	**Chakachamna La**	**8.27**	**32**		**Pn**	**08 26 28.8**	**+2.3**
SPNN	**North Nagishla**	**8.29**	**30**		**Pn**	**08 26 29.9**	**+3.1**
SPU	**Mount Spurr**	**8.35**	**33**		**Pn**	**08 26 29.9**	**+2.4**
J14K	**Nanvaranak Lak**	**8.37**	**353**		**Pn**	**08 26 29.8**	**+2.2**
K17K	**Iditarod**	**8.41**	**10**		**Pn**	**08 26 30.1**	**+1.8**
SLKM	**Skilak Lake**	**8.51**	**40**		**Pn**	**08 26 31.2**	**+1.6**
SEW	**Seward**	**8.56**	**44**		**Pn**	**08 26 31.7**	**+1.4**
M20K	**Styx River**	**8.59**	**27**		**Pn**	**08 26 34.5**	**+3.6**
J16K	**Anvik River**	**8.83**	**2**		**Pn**	**08 26 35.4**	**+1.3**
SUA	**Susitna One**	**8.98**	**35**		**Pn**	**08 26 37.0**	**+0.8**
J17K	**VABM Dome**	**9.02**	**7**		**Pn**	**08 26 37.4**	**+0.8**
RC01	**Rabbit Creek A**	**9.07**	**38**		**Pn**	**08 26 37.2**	**-0.1**
SKT	**Skwentna**	**9.12**	**31**		**Pn**	**08 26 40.6**	**+2.5**
P23K	**Montague Islan**	**9.36**	**48**		**Pn**	**08 26 42.3**	**+1.0**
I17K	**Unalakleet**	**9.44**	**2**		**Pn**	**08 26 43.8**	**+1.5**
PMR	**Palmer**	**9.62**	**37**		**Pn**	**08 26 45.1**	**+0.2**
PPLA	**Purkeypile**	**9.68**	**26**		**Pn**	**08 26 49.6**	**+3.7**
KNK	**Knik Glacier**	**9.75**	**39**		**Pn**	**08 26 46.2**	**-0.4**
L22K	**Petersville**	**9.77**	**30**		**Pn**	**08 26 48.5**	**+1.6**
GHO	**Glory Hole Cre**	**9.82**	**37**		**Pn**	**08 26 47.6**	**0.0**
HIN	**Hinchinbrook I**	**9.95**	**47**		**Pn**	**08 26 50.0**	**+0.5**
J19K	**Poorman**	**9.97**	**15**		**Pn**	**08 26 51.2**	**+1.5**
SML	**Sawmill**	**10.05**	**38**		**Pn**	**08 26 50.3**	**-0.5**
ANM	**Nome**	**10.31**	**350**		**Pn**	**08 26 56.7**	**+2.4**
SCM	**Sheep Creek Mo**	**10.43**	**39**		**Pn**	**08 26 56.1**	**0.0**
KTH	**Kantishna Hill**	**10.55**	**26**		**Pn**	**08 26 59.1**	**+1.4**
TRF	**Thorofare Moun**	**10.63**	**28**		**Pn**	**08 26 59.8**	**+0.9**
DIV	**Divide**	**10.64**	**45**		**Pn**	**08 26 59.3**	**+0.5**
KLU	**Klutina**	**10.77**	**43**		**Pn**	**08 27 00.6**	**-0.1**
RND	**Reindeer**	**11.01**	**31**		**Pn**	**08 27 03.3**	**-0.7**
M24K	**Tolsona, Glenn**	**11.03**	**40**		**Pn**	**08 27 04.5**	**+0.3**
BMRM	**Bremner River**	**11.05**	**47**		**Pn**	**08 27 05.3**	**+0.8**
DHY	**Denali Highway**	**11.24**	**34**		**Pn**	**08 27 05.8**	**-1.3**
MCK	**McKinley**	**11.24**	**29**		**Pn**	**08 27 07.2**	**+0.3**
N25K	**Chitina, Valde**	**11.37**	**44**		**Pn**	**08 27 09.2**	**+0.4**
TNA	**Tin City**	**11.57**	**346**		**Pn**	**08 27 14.6**	**+3.1**
CRQM	**Cirque**	**11.59**	**50**		**Pn**	**08 27 12.9**	**+0.8**
GLB	**Gilahina Butte**	**11.61**	**46**		**Pn**	**08 27 12.5**	**+0.3**
VRDI	**Verde Repeater**	**11.66**	**47**		**Pn**	**08 27 13.7**	**+0.7**
PAX	**Paxson**	**11.82**	**38**		**Pn**	**08 27 15.6**	**+0.6**
ISLE	**Juniper Island**	**11.89**	**51**		**Pn**	**08 27 16.8**	**+0.7**
H21K	**Melozitna Rive**	**11.98**	**17**		**Pn**	**08 27 19.1**	**+2.0**
HDA	**Harding Lake**	**12.32**	**30**		**Pn**	**08 27 20.7**	**-1.1**
BARN	**Barnard Glacie**	**12.38**	**50**		**Pn**	**08 27 22.9**	**+0.2**
MENT	**Mentasta**	**12.44**	**40**		**Pn**	**08 27 23.6**	**+0.1**
CTGM	**Chitina Glacie**	**12.49**	**51**		**Pn**	**08 27 25.0**	**+0.8**
RIDG	**Independent Ri**	**12.53**	**36**		**Pn**	**08 27 24.5**	**-0.1**
LOGN	**Logan Glacier**	**12.58**	**52**		**Pn**	**08 27 26.4**	**+0.8**
ILAR	**Eielson Array**	**12.61**	**29**	Pn	Pn	08 27 21.2	-4.5
	comp=E,0.2nm,0.3s,baz=225,slow=13,SNR=13						
ILAR				Sn	**Sn**	**08 29 37.0**	**-7.6**
	baz=200,slow=11,SNR=0.8						
ILAR				LR	LR	08 32 36.8	
	comp=E,324nm,19.9s,baz=244,slow=39						
	comp=E,0.9nm,0.6s						
L26K	**Log Cabin Wild**	**12.63**	**40**		**Pn**	**08 27 27.9**	**+1.9**
DOT	**Dot Lake**	**12.74**	**37**		**Pn**	**08 27 27.2**	**-0.3**
SCRK	**Sand Creek**	**12.97**	**36**		**Pn**	**08 27 29.2**	**-1.6**
L27K	**Beaver Creek,**	**13.23**	**42**		**Pn**	**08 27 34.5**	**+0.2**
PRP	**Porcupine Dome**	**13.55**	**29**		**Pn**	**08 27 37.7**	**-1.0**
COLD	**Coldfoot**	**13.86**	**18**		**Pn**	**08 27 44.0**	**+1.3**
FYU	**Fort Yukon**	**14.42**	**27**		**Pn**	**08 27 51.1**	**+0.9**
DAWY	**Dawson**	**14.69**	**40**		**Pn**	**08 27 54.2**	**+0.2**
TOLK	**Toolik Lake Re**	**15.22**	**17**		**Pn**	**08 28 02.3**	**+1.2**
TOLK				IAmb	IAmb	08 28 08.2	
	comp=Z,22nm,0.8s						
DLBC	**Dease Lake**	**17.67**	**64**	P	**P**	**08 28 33.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=245,slow=14,SNR=5.5						
DLBC				S	**Sn**	**08 31 41.9**	**-5.9**
	comp=Z,0.7nm,0.9s,baz=143,slow=21,SNR=0.8						
DLBC				LR	LR	08 34 36.4	
	comp=Z,80nm,20.5s,baz=282,slow=34						
	comp=Z,1.9nm,0.8s						
INK	**Inuvik**	**18.96**	**32**	P	**P**	**08 28 45.7**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=248,slow=9.6,SNR=38						
INK				S	**Sn**	**08 32 08.8**	**-10**
	comp=Z,1.2nm,1.0s,baz=297,slow=32,SNR=1.7						
INK				LR	LR	08 36 57.5	
	comp=Z,367nm,18.7s,baz=310,slow=40						
	comp=Z,11nm,0.9s						
C36M	**Paulatuk**	**22.49**	**34**	P	**P**	**08 29 23.2**	**-1.8**
C36M				IAmb	IAmb	08 29 27.4	
	comp=Z,8.6nm,0.6s						
A36M	**Sachs Harbour**	**23.30**	**28**		**P**	**08 29 31.9**	**-1.4**
A36M				IAmb	IAmb	08 29 33.3	
	comp=Z,18nm,0.8s						
PETK	**Petropavlovsk-**	**23.98**	**284**	P	**P**	**08 29 38.9**	**-1.1**
	comp=Z,10nm,0.7s,baz=82,slow=13,SNR=38						
	comp=Z,10nm,0.7s						
YKAW3	**Yellowknife Wh**	**25.19**	**52**	P	**P**	**08 29 51.6**	**+0.7**
YKA	**Yellowknife Ar**	**25.20**	**53**	P	**P**	**08 29 51.6**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=271,slow=7.4,SNR=43						
YKA				PcP	**PcP**	**08 33 23.7**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=287,slow=2.9,SNR=6.4						
YKA				LR	LR	08 40 46.0	
	comp=Z,100nm,20.1s,baz=276,slow=39						
	comp=Z,1.7nm,0.6s						
YKAW1	**Yellowknife Wh**	**25.25**	**53**	P	**P**	**08 29 52.2**	**+0.7**
MA2	**Magadan**	**26.06**	**301**	P	**P**	**08 29 59.2**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=88,slow=8.4,SNR=3.5						
	comp=Z,4.8nm,0.8s						
WAH2	**Wahluke Slope**	**27.28**	**89**	P	**P**	**08 30 11.8**	**+1.8**
HAWA	**Hanford**	**27.50**	**90**	P	**P**	**08 30 13.1**	**+1.3**
HAWA				IAmb	IAmb	08 30 15.1	
	comp=Z,8.5nm,0.8s						
EDM	**Edmonton**	**27.92**	**73**	P	**P**	**08 30 16.5**	**+0.9**
EDM				IAmb	IAmb	08 30 18.2	
	comp=Z,14nm,0.9s						
YBH	**Yreka Blue Hor**	**28.41**	**101**	LR	LR	08 39 09.5	
	comp=Z,5.9nm,18.9s,baz=311,slow=31						
F10A	**Beach Ranch, E**	**29.07**	**89**	P	**P**	**08 30 25.5**	**-0.5**
HLID	**Hailey**	**32.09**	**90**	P	**P**	**08 30 53.1**	**+0.3**
NVAR	**Mina Array Bea**	**33.12**	**101**	P	**P**	**08 31 03.9**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=286,slow=6.8,SNR=6.0						
NVAR				LR	LR	08 41 17.4	
	comp=Z,56nm,22.0s,baz=209,slow=30						
	comp=Z,0.8nm,0.8s						
BLKN	**Baker Lake**	**33.18**	**46**	P	**P**	**08 31 02.5**	**+0.6**
BLKN				IAmb	IAmb	08 31 03.5	
	comp=Z,8.0nm,0.7s						
TIXI	**Tiksi**	**33.46**	**327**	P	**P**	**08 31 03.3**	**-0.9**
	comp=Z,2.8nm,0.3s,baz=90,slow=7.4,SNR=6.7						
TIXI				PcP	**PcP**	**08 33 43.4**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=67,slow=3.0,SNR=5.2						
TIXI				LR	LR	08 45 32.2	
	comp=Z,93nm,18.4s,baz=184,slow=38						
	comp=Z,2.8nm,0.3s						
PDAR	**Pinedale Array**	**35.41**	**88**	P	**P**	**08 31 23.0**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=307,slow=3.8,SNR=6.6						
	comp=Z,0.3nm,0.6s						
YAK	**Yakutsk**	**35.41**	**311**	LR	LR	08 46 33.8	
	comp=Z,103nm,20.9s,baz=115,slow=38						
FCC	**Fort Churchill**	**35.85**	**55**	P	**P**	**08 31 25.8**	**+0.8**
ASAJ	**Asahikawa**	**37.04**	**277**	LR	LR	08 47 10.0	
	comp=Z,29nm,19.4s,baz=90,slow=37						
ILON	**Igloolik, Nuna**	**37.16**	**35**	P	**P**	**08 31 36.2**	**+0.3**
ILON				IAmb	IAmb	08 31 37.8	
	comp=Z,12nm,1.0s						
SRU	**San Rafael Swe**	**37.17**	**93**	P	**P**	**08 31 38.0**	**+1.3**
SRU				IAmb	IAmb	08 31 39.8	
	comp=Z,11nm,1.4s						
PFO	**Pinyon Flats O**	**37.60**	**105**	LR	LR	08 44 12.0	
	comp=Z,87nm,19.1s,baz=283,slow=32						
ULM	**Lac du Bonnet**	**38.92**	**68**	P	**P**	**08 31 52.2**	**+1.1**
	comp=Z,9.2nm,0.8s,baz=303,slow=9.1,SNR=11						
ULM				LR	LR	08 47 05.5	
	comp=Z,58nm,18.5s,baz=8.0,slow=35						
	comp=Z,9.2nm,0.8s						
AGMN	**Agassiz Nation**	**40.00**	**71**	P	**P**	**08 32 00.5**	**+0.4**
AGMN				IAmb	IAmb	08 32 01.9	
	comp=Z,13nm,0.8s						
KLR	**Kul'dur**	**40.23**	**291**	LR	LR	08 49 12.6	
	comp=Z,11nm,21.1s,baz=67,slow=37						
H11N2	**WAKE ISLAND Hy**	**42.27**	**227**	T	T	09 17 10.6	
	baz=27,slow=76,SNR=59						
H11N3	**WAKE ISLAND Hy**	**42.27**	**227**	T	T	09 17 10.6	
	baz=27,slow=76,SNR=50						
H11N1	**WAKE ISLAND Hy**	**42.28**	**227**	T	T	09 17 11.2	
	baz=27,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**43.44**	**227**	T	T	09 18 30.2	
	baz=26,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	**43.45**	**227**	T	T	09 18 30.5	
	baz=26,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**43.45**	**227**	T	T	09 18 37.0	
	baz=26,slow=76,SNR=18						
FRB	**Frobisher Bay**	**44.39**	**39**	LR	LR	08 52 24.4	
	comp=Z,161nm,20.4s,baz=233,slow=38						
MJAR	**Matsushiro Arr**	**44.49**	**272**	P	**P**	**08 32 34.3**	**-2.5**
	comp=Z,1.7nm,0.8s,baz=66,slow=5.8,SNR=3.0						
	comp=Z,1.7nm,0.8s						
I40A	**Norwalk**	**45.56**	**73**	P	**P**	**08 32 45.2**	**0.0**
N38A	**Joes South For**	**46.09**	**78**	P	**P**	**08 32 49.6**	**+0.2**
HILR	**Hailar Array B**	**46.40**	**298**	P	**P**	**08 32 49.8**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=68,slow=9.4,SNR=2.2						
	comp=Z,0.8nm,0.6s						
P38A	**Dawn**	**46.70**	**79**	P	**P**	**08 32 53.8**	**-0.4**
P38A				IAmb	IAmb	08 32 55.3	
	comp=Z,7.1nm,0.8s						
NRIK	**Noril'sk**	**46.78**	**333**	P	**P**	**08 32 53.5**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=63,slow=9.0,SNR=6.5						
NRIK				LR	LR	08 54 10.0	
	comp=Z,69nm,19.6s,baz=26,slow=38						
	comp=Z,2.5nm,0.7s						
SPITS	**Spitsbergen Ar**	**47.59**	**1**	P	**P**	**08 32 59.8**	**-0.9**
	comp=Z,10nm,1.1s,baz=11,slow=9.6,SNR=1.7						
	comp=Z,10nm,1.1s						
TXAR	**Lajitas Array**	**48.08**	**97**	P	**P**	**08 33 06.5**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=297,slow=5.6,SNR=7.0						
TXAR				PcP	**PcP**	**08 34 32.8**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=325,slow=2.5,SNR=7.2						
	comp=Z,0.4nm,0.6s						
HDIL	**Hopedale**	**48.49**	**76**	P	**P**	**08 33 08.0**	**0.0**
P43A	**Skaggs, Pawnee**	**48.97**	**77**	P	**P**	**08 33 11.8**	**0.0**
KSRS	**Korea Array**	**49.82**	**281**	P	**P**	**08 33 18.4**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=50,slow=6.8,SNR=14						
	comp=Z,4.7nm,0.8s						
SCHQ	**Schefferville**	**50.53**	**48**	P	**P**	**08 33 23.8**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=288,slow=9.6,SNR=3.8						
	comp=Z,4.4nm,0.7s						
JNU	**Nakatsue**	**51.17**	**274**	LR	LR	08 56 52.4	
	comp=Z,24nm,18.8s,baz=40,slow=38						
XLT	**XiLinHaoTe**	**51.98**	**295**	*e*P	**P**	**08 33 34.5**	**-0.1**
XLT				pP	pP	08 33 46.6	+1.5
XLT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	**Ulaanbaatar**	**53.87**	**304**	P	**P**	**08 33 48.2**	**-0.3**
ULN				IAmb	IAmb	08 33 49.3	
	comp=Z,4.3nm,0.9s						
SONM	**Songino Array**	**54.21**	**304**	P	**P**	**08 33 50.5**	**-0.5**
	comp=Z,3.4nm,0.9s,baz=49,slow=7.6,SNR=11						
SONM				PcP	**PcP**	**08 34 54.9**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=46,slow=4.3,SNR=4.4						
SONM				LR	LR	08 59 24.9	
	comp=Z,66nm,18.2s,baz=17,slow=39						
	comp=Z,3.4nm,0.9s						
ARCES	**ARCESS Array B**	**56.19**	**357**	P	**P**	**08 34 05.0**	**+0.3**
	comp=Z,8.6nm,0.9s,baz=4.1,slow=7.3,SNR=2.7						
ARCES				LR	LR	09 02 23.2	
	comp=Z,16nm,18.6s,baz=46,slow=41						
	comp=Z,8.6nm,0.9s						
HHC	**Hu-ho-hao-te**	**56.51**	**295**	*e*P	**P**	**08 34 09.5**	**+1.9**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	**Zalesovo Beam**	**58.95**	**321**	LR	LR	09 02 23.3	
	comp=Z,81nm,18.1s,baz=41,slow=39						
KURBB	**Kurchatov Arra**	**63.92**	**322**	P	**P**	**08 34 57.6**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=29,slow=6.5,SNR=4.5						
KURBB				LR	LR	09 05 13.3	
	comp=Z,87nm,19.8s,baz=182,slow=38						
	comp=Z,1.1nm,0.8s						
LZH	**Lanzhou**	**64.10**	**296**	*e*P	**P**	**08 34 59.6**	**0.0**
LZH				sP	pP	08 35 14.3	+4.0
LZH				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FINES	**FINESS Array B**	**64.26**	**356**	P	**P**	**08 34 59.5**	**-0.5**
	comp=Z,6.3nm,0.8s,baz=16,slow=7.3,SNR=18						
	comp=Z,6.3nm,0.8s						
LZDM	**Lanzhou Array**	**64.28**	**296**	P	**P**	**08 35 00.0**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=66,slow=3.9,SNR=1.8						
	comp=Z,0.5nm,0.4s						
BVAR	**Borovoye Array**	**64.59**	**328**	P	**P**	**08 35 02.5**	**+0.1**
	comp=Z,7.4nm,0.6s,baz=38,slow=7.5,SNR=32						
BVAR				LR	LR	09 05 19.9	
	comp=Z,70nm,18.2s,baz=16,slow=38						
	comp=Z,7.4nm,0.6s						
BORK	**Borovoye**	**64.59**	**328**	P	**P**	**08 35 02.3**	**-0.1**
BORK				IAmb	IAmb	08 35 03.0	
	comp=Z,5.0nm,0.6s						
NB2	**NORSAR Subarra**	**64.67**	**4**	P	**P**	**08 35 02.8**	**0.0**
	comp=Z,1.2nm,0.6s,baz=356,slow=6.5						
NOA	**NORSAR Array B**	**64.67**	**4**	P	**P**	**08 35 02.5**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=356,slow=6.6,SNR=7.0						
	comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**65.66**	**317**	P	**P**	**08 35 08.3**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=45,slow=7.9,SNR=8.3						
MKAR				LR	LR	09 04 26.0	
	comp=Z,54nm,19.9s,baz=340,slow=37						
	comp=Z,0.3nm,0.3s						
HFS	**Hagfors**	**65.66**	**3**	P	**P**	**08 35 08.7**	**-0.4**
	comp=Z,4.7nm,0.4s,baz=26,slow=3.8,SNR=29						
	comp=Z,4.7nm,0.4s						
EKA	**Eskdalemuir Ar**	**69.09**	**13**	P	**P**	**08 35 31.3**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=339,slow=5.3,SNR=12						
	comp=Z,4.8nm,0.7s						
AAK	**Ala-Archa**	**72.15**	**320**	LR	LR	09 08 33.3	
	comp=Z,79nm,18.3s,baz=36,slow=37						
PZH	**PanZhiHua**	**72.68**	**291**	P	**P**	**08 35 54.3**	**+1.0**
CLL	**Collm**	**74.47**	**4**	*e*P	**P**	**08 36 03.0**	**-0.3**
AK21	**Malin Array Si**	**74.75**	**353**	P	**P**	**08 36 03.8**	**-1.1**
KSH2	**Kashi**	**74.75**	**318**	P	**P**	**08 36 06.1**	**+0.8**
KSH2				sP	pP	08 36 21.4	+5.2
KSH2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AK22	**Malin Array Si**	**74.76**	**353**	P	**P**	**08 36 03.9**	**-1.1**
AK20	**Malin Array Si**	**74.78**	**353**	P	**P**	**08 36 04.1**	**-1.0**
AK03	**Malin Array Si**	**74.78**	**353**	P	**P**	**08 36 04.0**	**-1.1**
AK04	**Malin Array Si**	**74.79**	**353**	P	**P**	**08 36 04.3**	**-0.8**
AK18	**Malin Array Si**	**74.80**	**353**	P	**P**	**08 36 04.3**	**-0.9**
AK19	**Malin Array Si**	**74.80**	**353**	P	**P**	**08 36 04.3**	**-0.9**
AKASG	**Malin Array Be**	**74.81**	**353**	P	**P**	**08 36 04.6**	**-0.6**
	comp=Z,6.3nm,0.7s,baz=8.4,slow=5.7,SNR=18						
	comp=Z,6.3nm,0.7s						
AKBB	**Malin Array Si**	**74.81**	**353**	P	**P**	**08 36 04.3**	**-0.9**
AK01	**Malin Array Si**	**74.82**	**353**	P	**P**	**08 36 04.4**	**-0.9**
AK11	**Malin Array Si**	**74.83**	**353**	P	**P**	**08 36 04.5**	**-0.9**
AK17	**Malin Array Si**	**74.84**	**353**	P	**P**	**08 36 04.5**	**-0.9**
AK16	**Malin Array Si**	**74.85**	**353**	P	**P**	**08 36 04.5**	**-1.0**
AK02	**Malin Array Si**	**74.85**	**353**	P	**P**	**08 36 04.6**	**-0.9**
AK12	**Malin Array Si**	**74.87**	**353**	P	**P**	**08 36 04.7**	**-0.9**
MORC	**Moravsky Berou**	**76.11**	**1**	*e*P	**P**	**08 36 12.7**	**-0.1**
VRAC	**Vranov**	**76.56**	**1**	*e*P	**P**	**08 36 15.6**	**+0.2**
GERES	**GERESS Array B**	**76.96**	**3**	P	**P**	**08 36 17.9**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=344,slow=4.3,SNR=6.3						
	comp=Z,1.9nm,0.7s						
JAVC	**Velka Javorina**	**77.02**	**1**	*e*P	**P**	**08 36 18.9**	**+0.9**
SORM	**Soroca**	**77.42**	**353**	P	**P**	**08 36 19.2**	**-0.9**
	comp=Z,16nm,0.9s						
BRIU	**Brid**	**77.48**	**357**	P	**P**	**08 36 20.8**	**+0.3**
MODS	**Modra-Piesok**	**77.51**	**1**	*e*P	**P**	**08 36 21.8**	**+1.1**
ZST	**Bratislava**	**77.68**	**1**	*e*P	**P**	**08 36 22.6**	**+1.0**
KBZ	**Khabaz**	**79.99**	**342**	P	**P**	**08 36 35.0**	**+0.7**
	comp=Z,6.8nm,0.9s,baz=331,slow=2.6,SNR=8.5						
	comp=Z,6.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**80.65**	**289**	P	**P**	**08 36 38.4**	**0.0**
	comp=Z,4.6nm,0.9s,baz=18,slow=5.6,SNR=18						
	comp=Z,4.6nm,0.9s						
ESDC	**Sonseca Array**	**84.22**	**17**	P	**P**	**08 36 57.0**	**+0.3**
	comp=Z,3.2nm,1.0s,baz=342,slow=4.8,SNR=9.6						
	comp=Z,3.2nm,1.0s						
BRTR	**Keskin Array B**	**85.28**	**348**	P	**P**	**08 37 02.6**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=50,slow=1.9,SNR=8.4						
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**92.13**	**238**	P	**P**	**08 37 33.6**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=35,slow=5.6,SNR=4.9						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**95.49**	**236**	P	**P**	**08 37 49.5**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.6nm,0.8s,baz=34,slow=5.3,SNR=4.6						
	comp=Z,0.6nm,0.8s						
H03N2	**Juan Fernandez**	**112.41**	**116**	T	T	10 45 07.8	
	baz=323,slow=77,SNR=21						
H03N1	**Juan Fernandez**	**112.42**	**116**	T	T	10 45 11.0	
	baz=323,slow=77,SNR=22						
H03N3	**Juan Fernandez**	**112.43**	**116**	T	T	10 45 10.4	
	baz=323,slow=77,SNR=21						

*MOS **06** 08:25:54.3±1.1, 42.36N×145.06E, h41km, mb4.4/1, Error ellipse: s-maj=22.0km s-min=9.1km az=78.2*
*SKHL **06** 08:25:56.9±0.1, 42.60N×145.10E, h69km±2km, mb4.9/3*
*IDC **06** 08:25:57.4±3.2, 42.47N×145.02E, h52km±26km, mb3.2/4, mbtmp3.5/8, ML3.2/4, Error ellipse: s-maj=27.0km s-min=22.6km az=36.0*
*NIED **06** 08:25:57.5, 42.68N×144.94E, h50km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.27; $M_{\theta\theta}$0.98; $M_{\phi\phi}$1.29; $M_{r\theta}$1.23; $M_{\theta\phi}$-2.51; $M_{\phi r}$-0.08; Fault plane solution: $M_0$3.33000×10^{14} NP1: ϕ_s165.00000°, δ44.00000°, λ-46.00000°. NP2: ϕ_s292.00000°, δ60.00000°, λ-124.00000°.*
*JMA **06** 08:25:57.5±0.1, 42.7N±0.3×144.9E±0.5, h50km±1km, MV3.6/39, OFF NEMURO PENINSULA*
ISC 06 08:25:58.1±1.2**, 42.64N**±0.07×**144.99E**±0.04**, h42**km±10km**, n41,** σ1s**15**/52**, mb3.5**/4**, 3C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKK	**Akkeshi**	**0.39**	**344**	*e*P	**Pn**	**08 26 07.0**	**-0.5**
AKK				*e*S	**Sn**	**08 26 14.5**	**+0.4**
JAK	**Akkeshi**	**0.41**	**329**	P	**Pn**	**08 26 07.1**	**-0.7**
JAK				S	**Sn**	**08 26 14.2**	**-0.4**
JKHN	**Kushirohamanak**	**0.46**	**16**	P	**Pn**	**08 26 08.2**	**-0.2**
JKHN				S	**Sn**	**08 26 16.0**	**+0.4**
JOB	**Onbets**	**0.89**	**288**	P	**Pn**	**08 26 13.4**	**-0.7**
JOB				S	**Sn**	**08 26 25.0**	**-0.8**
NMR	**Nemuro--Hokkai**	**0.91**	**36**	⇑*i*PN	**Pn**	**08 26 13.8**	**-0.6**
NMR				*i* S	**Sn**	**08 26 25.9**	**-0.4**
NMR	**Nemuro--Hokkai**	**0.91**	**36**	*i* P	**Pn**	**08 26 13.5**	**-0.9**
NMR				*i* S	**Sn**	**08 26 26.0**	**-0.4**
NEM2	**Nemuro 2**	**0.91**	**37**	P	**Pn**	**08 26 13.8**	**-0.6**
NEM2				S	**Sn**	**08 26 25.8**	**-0.6**
JNK	**Nakash**	**0.96**	**348**	P	**Pn**	**08 26 14.2**	**-1.0**
JNK				S	**Sn**	**08 26 26.0**	**-1.8**
JAR	**Ashorobuto**	**1.11**	**307**	P	**Pn**	**08 26 16.2**	**-1.0**
JAR				A	A	08 26 16.2	
	comp=E,3.0nm,0.2s						
JAR				S	**Sn**	**08 26 30.6**	**-0.6**
GLVR	**Golovnino**	**1.17**	**19**	⇑*i*PN	**Pn**	**08 26 17.5**	**-0.4**
GLVR				*i* S	**Sn**	**08 26 32.5**	**-0.1**
GLVR				pmax	pmax		
	comp=Z,753nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
GLVR	**Golovnino**	**1.17**	**19**	*i* P	**Pn**	**08 26 17.5**	**-0.4**
GLVR				AMB	AMB	08 26 27.9	
	comp=E,530nm,0.4s						
GLVR				*i* S	**Sn**	**08 26 32.5**	**-0.1**
GLVR				A	A	08 26 33.5	
	comp=E,1μm,0.3s						
GLVR				A	A	08 26 33.5	
	comp=E,3μm,0.3s						
JCH	**Churui**	**1.20**	**269**	P	**Pn**	**08 26 17.7**	**-0.6**
JCH				S	**Sn**	**08 26 33.1**	**-0.3**
JRA	**Rausu**	**1.30**	**4**	P	**Pn**	**08 26 19.1**	**-0.6**
JRA				S	**Sn**	**08 26 34.8**	**-1.2**
RUSJ	**Misakicho**	**1.48**	**7**	*e*PN	**Pn**	**08 26 21.8**	**-0.4**
RUSJ				S	**Sn**	**08 26 41.0**	**+0.7**
JEM	**Erimo**	**1.49**	**246**	P	**Pn**	**08 26 23.5**	**+1.2**
YUK	**Yuzh-Kuril'sk**	**1.53**	**24**	*c i*PN	**Pn**	**08 26 22.5**	**-0.5**
YUK				*i* S	**Sn**	**08 26 41.0**	**-0.7**
YUK				pmax	pmax		
	comp=N,136nm,0.2s						
YUK				pmax	pmax		
	comp=E,103nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,550nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**24**	*i* P	**Pn**	**08 26 22.5**	**-0.5**
YUK				AMB	AMB	08 26 22.8	
	comp=E,370nm,0.4s						
YUK				*i* S	**Sn**	**08 26 41.0**	**-0.7**
YUK				A	A	08 26 42.5	
	comp=E,1μm,0.3s						
YUK				A	A	08 26 42.5	
	comp=E,550nm,0.3s						
JTKR	**Abashiri--Toko**	**1.55**	**330**	P	**Pn**	**08 26 23.1**	**-0.1**
JTKR				S	**Sn**	**08 26 42.2**	**+0.2**
JKA	**Kamikawa-asahi**	**2.28**	**311**	*e*P	**Pn**	**08 26 34.6**	**+1.4**
ASAJ	**Asahikawa**	**2.28**	**311**	P	**Pn**	**08 26 34.6**	**+1.3**
	comp=E,6.3nm,0.3s,baz=127,slow=14,SNR=30						
ASAJ				S	**Sn**	**08 27 03.5**	**+3.4**
	comp=E,69nm,0.4s,baz=26,slow=31,SNR=21						
	comp=E,17nm,0.3s						
KUR	**Kuril'sk**	**3.33**	**38**	*e*PN	**Pn**	**08 26 49.0**	**+1.5**
KUR				*e*S	**Sn**	**08 27 28.3**	**+2.5**
KUR				pmax	pmax		
	comp=Z,125nm,0.4s						
KUR				smax	smax		
	comp=N,58nm,0.2s						
KUR				smax	smax		
	comp=E,102nm,0.2s						
KUR	**Kuril'sk**	**3.33**	**38**	*e*P	**Pn**	**08 26 47.2**	**-0.3**
KUR				AMB	AMB	08 26 50.2	
	comp=E,130nm,0.3s						
KUR				*e*S	**Sn**	**08 27 25.7**	**-0.1**
KUR				A	A	08 27 31.4	
	comp=E,120nm,0.3s						
KUR				A	A	08 27 31.4	
	comp=E,140nm,0.3s						
MJAR	**Matsushiro Arr**	**8.03**	**223**	P	**Pn**	**08 27 49.3**	**-2.8**
	comp=E,0.1nm,0.3s,baz=30,slow=14,SNR=2.8						
	comp=E,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**13.49**	**35**	P	**Pn**	**08 29 08.5**	**+1.8**
	comp=E,0.2nm,0.3s,baz=200,slow=10,SNR=5.3						
	comp=E,1.2nm,0.7s						
MA2	**Magadan**	**17.33**	**10**	*de*P	**P**	**08 30 00.2**	**+2.6**
MA2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HILR	**Hailar Array B**	**18.76**	**300**	P	**P**	**08 30 13.2**	**-0.3**
	baz=93,slow=8.6						
	comp=Z,0.7nm,0.4s						
SONM	**Songino Array**	**27.46**	**294**	P	**P**	**08 31 39.7**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=96,slow=7.5,SNR=2.4						
	comp=Z,0.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.38**	**134**	T	T	09 03 03.3	
	baz=327,slow=76,SNR=116						
H11N1	**WAKE ISLAND Hy**	**29.39**	**134**	T	T	09 03 04.1	
	baz=327,slow=76,SNR=78						
H11N3	**WAKE ISLAND Hy**	**29.40**	**134**	T	T	09 03 04.6	
	baz=327,slow=76,SNR=76						
H11S1	**WAKE ISLAND Hy**	**30.29**	**136**	T	T	09 04 13.0	
	baz=328,slow=76,SNR=112						
H11S3	**WAKE ISLAND Hy**	**30.30**	**136**	T	T	09 04 14.5	
	baz=328,slow=76,SNR=76						
H11S2	**WAKE ISLAND Hy**	**30.31**	**136**	T	T	09 04 15.1	
	baz=328,slow=76,SNR=74						
ILAR	**Eielson Array**	**43.31**	**35**	P	**P**	**08 33 54.1**	**-1.4**
	comp=Z,0.1nm,0.6s,baz=266,slow=6.5,SNR=0.8						
	comp=Z,0.1nm,0.6s						
KURK	**Kurchatov**	**44.84**	**304**	P	**P**	**08 34 07.3**	**-0.6**
KURK	**Kurchatov**	**44.84**	**304**	*e*P	**P**	**08 34 07.3**	**-0.6**
KURBB	**Kurchatov Arra**	**44.92**	**304**	P	**P**	**08 34 07.3**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=75,slow=9.6,SNR=2.7						
	comp=Z,0.3nm,0.3s						
BVAR	**Borovoye Array**	**48.98**	**309**	P	**P**	**08 34 39.4**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=96,slow=7.9,SNR=5.3						
	comp=Z,0.5nm,0.4s						
H03N2	**Juan Fernandez**	**144.55**	**90**	T	T	11 27 00.6	
	baz=303						
H03N3	**Juan Fernandez**	**144.56**	**90**	T	T	11 27 02.8	
	baz=303						
H03N1	**Juan Fernandez**	**144.57**	**90**	T	T	11 27 02.6	
	baz=303						

*NEIC **06** 08:58:02.5±1.0, 17.77N±0.02×66.86W±0.01, h10km±2km, ML2.9/31, Md3.2/4(RSPR), Error ellipse: s-maj=4.3km s-min=2.8km az=11.0*
*RSPR **06** 08:58:03.5, 17.82N×66.87W, h8km±1km, MD3.2/4*
*OSPL **06** 08:58:03.6±0.3, 17.79N×66.87W, h9km±3km, ML2.3, Presumed earthquake*
*SDD **06** 08:58:04.0±1.0, 17.85N×66.85W, h23km±8km, MD3.2, ML2.7, MW3.5, Presumed earthquake*
ISC 06 08:58:03.7±1.1**, 17.87N**±0.07×**66.85W**±0.02**, h16**km±6km**, n42,** σ0s**43**/61**, 11C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.11**	**347**		**Pg**	**08 58 07.1**	**-0.1**
GBPR					**Sb**	**08 58 10.0**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.11**	**347**	⇓*e*P	**Pg**	**08 58 07.1**	**-0.1**
GBPR				*e*S	**Sb**	**08 58 10.0**	**-0.1**
MLPR	**Magueyes Islan**	**0.21**	**300**		**Pg**	**08 58 08.2**	**-0.3**
MLPR				IAML		08 58 12.2	
	2μm,0.3s						
MLPR				IAML		08 58 12.4	
	3μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.28**	**300**		**Pg**	**08 58 09.4**	**-0.3**
CRPR				IAML		08 58 15.8	
	1μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.28**	**300**		**Sg**	**08 58 14.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.28**	**300**	⇑*e*Pg	**Pg**	**08 58 09.7**	**-0.1**
CRPR				⇓*e*Sg	**Sg**	**08 58 14.0**	**+0.1**
CRPR				IAML		08 58 14.0	
	comp=N,2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.28**	**300**	⇑*e*P	**Pg**	**08 58 09.5**	**-0.3**
CRPR				*e*S	**Sg**	**08 58 14.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.28**	**300**	*i* P	**Pg**	**08 58 09.5**	**-0.2**
CRPR				*e*S	**Sg**	**08 58 13.7**	**-0.2**
CRPR				IAML		08 58 14.5	
	comp=Z,2μm,0.1s						
OBIP	**Obispado Ponce**	**0.29**	**53**		**Sb**	**08 58 15.3**	**0.0**
OBIP	**Obispado Ponce**	**0.29**	**53**		**Pg**	**08 58 09.8**	**-0.1**
OBIP				IAML		08 58 15.5	
	comp=N,466nm,0.5s						
OBIP	**Obispado Ponce**	**0.29**	**53**	⇓*e*P	**Pg**	**08 58 10.1**	**+0.1**
OBIP				*e*S	**Sb**	**08 58 15.3**	**0.0**
OBIP	**Obispado Ponce**	**0.29**	**53**	*i* P	**Pg**	**08 58 10.1**	**+0.2**
OBIP				*e*S	**Sb**	**08 58 15.1**	**-0.2**
OBIP				IAML		08 58 15.3	
	comp=Z,362nm,0.7s						
CELP	**Cerrillos**	**0.33**	**51**		**Pg**	**08 58 10.9**	**+0.2**
CELP				IAML		08 58 16.7	
	comp=Z,925nm,0.5s						
CELP				IAML		08 58 17.0	
	comp=Z,1μm,0.5s						
LSP	**Las Mesas**	**0.38**	**324**		**Pg**	**08 58 11.5**	**-0.1**
LSP					**Sb**	**08 58 17.7**	**-0.2**
LSP	**Las Mesas**	**0.38**	**324**	⇑*e*P	**Pg**	**08 58 11.5**	**-0.1**
LSP				*e*S	**Sb**	**08 58 17.7**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.41**	**18**		**Pg**	**08 58 11.8**	**-0.2**
PRSN	**Puerto Rico Se**	**0.45**	**322**		**Sb**	**08 58 19.5**	**-0.3**
PRSN	**Puerto Rico Se**	**0.45**	**322**	Pg	**Pg**	**08 58 12.4**	**-0.3**
PRSN				IAML		08 58 20.4	
	comp=Z,2μm,0.2s						
PRSN				IAML		08 58 20.7	
	comp=Z,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.45**	**322**	⇓*e*Pg	**Pg**	**08 58 12.7**	**-0.1**
PRSN				⇓*e*Sg	**Sb**	**08 58 20.0**	**+0.3**
PRSN				IAML		08 58 22.7	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**322**	⇑*e*P	**Pg**	**08 58 12.6**	**-0.1**
PRSN				*e*S	**Sb**	**08 58 19.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.65**	**338**		**Pg**	**08 58 16.0**	**-0.4**
AGPR				IAML		08 58 25.8	
	comp=N,225nm,0.3s						
AGPR				IAML		08 58 28.9	
	comp=N,326nm,0.4s						
AGPR	**Aguadilla, PR**	**0.65**	**338**	⇑*e*Pg	**Pg**	**08 58 16.0**	**-0.4**
AGPR				⇑*e*Sg	**Sg**	**08 58 24.8**	**-0.3**
AGPR				IAML		08 58 28.9	
	comp=N,270nm,0.3s						
AGPR	**Aguadilla, PR**	**0.65**	**338**	⇓*e*P	**Pg**	**08 58 16.0**	**-0.4**
AGPR				*e*S	**Sb**	**08 58 26.3**	**+0.8**
ECPR	**Experimental S**	**0.65**	**46**		**Pg**	**08 58 16.1**	**-0.3**
ECPR	**Experimental S**	**0.65**	**46**	⇓*e*P	**Pg**	**08 58 16.2**	**-0.3**
ECPR				*e*S	**Sb**	**08 58 25.5**	**0.0**
SJG	**San Juan**	**0.71**	**70**		**Pg**	**08 58 16.9**	**-0.7**
SJG	**San Juan**	**0.71**	**70**	Pg	**Pg**	**08 58 16.8**	**-0.8**
SJG	**San Juan**	**0.71**	**70**	⇑*e*P	**Pg**	**08 58 17.2**	**-0.5**
SJG				*e*S	**Sb**	**08 58 27.5**	**+0.2**
SJG	**San Juan**	**0.71**	**70**	*i* P	**Pg**	**08 58 17.1**	**-0.5**
SJG				*e*S	**Sb**	**08 58 27.3**	**0.0**
SJG				IAML		08 58 29.2	
	comp=Z,121nm,0.3s						
IDE	**Isla Desecheo**	**0.79**	**311**		**Pg**	**08 58 18.2**	**-0.8**
IDE	**Isla Desecheo**	**0.79**	**311**	⇑*e*P	**Pg**	**08 58 18.2**	**-0.8**
PDPR	**Patillas Dam,**	**0.80**	**79**		**Pb**	**08 58 18.5**	**-0.9**
GCPR	**Guaynabo City**	**0.85**	**59**		**Sb**	**08 58 31.5**	**0.0**
GCPR	**Guaynabo City**	**0.85**	**59**		**Pb**	**08 58 19.4**	**-0.8**
GCPR	**Guaynabo City**	**0.85**	**59**	*e*S	**Sb**	**08 58 31.5**	**0.0**
HUMP	**Col San Antoni**	**0.99**	**74**		**Pb**	**08 58 22.0**	**-0.5**
HUMP					**Sg**	**08 58 36.3**	**+0.3**
HUMP	**Col San Antoni**	**0.99**	**74**	IAML		08 58 40.2	
	comp=Z,129nm,0.2s						
HUMP				IAML		08 58 41.5	
	comp=Z,135nm,0.2s						
HUMP	**Col San Antoni**	**0.99**	**74**	⇑*e*P	**Pb**	**08 58 22.0**	**-0.5**
HUMP				*e*S	**Sg**	**08 58 36.3**	**+0.3**
CUPR	**Culebra, Puert**	**1.56**	**73**	Pn	**Pb**	**08 58 31.8**	**-0.4**
HIDR	**Higuey Centro**	**1.91**	**292**	*e*Pg	**Pn**	**08 58 36.1**	**+0.4**
HIDR				⇑*e*Sg	**Sn**	**08 58 59.6**	**+0.1**
HIDR				IAML		08 59 06.2	
	comp=N,52nm,0.2s						
DR12	**Loma Pena Alta**	**2.57**	**291**	Pn	**Pn**	**08 58 45.7**	**+0.9**
HATOM	**Hato Mayor del**	**2.57**	**291**	*e*Pg	**Pn**	**08 58 45.8**	**+1.0**
HATOM				⇑*e*Sg	**Sn**	**08 59 16.6**	**+0.8**
HATOM				IAML		08 59 35.6	
	comp=N,29nm,3.4s						

*CATAC **06** 09:05:10.8±0.8, 14°N±4°×9°2W±°, h29km±5km, M3.0/6, MLv3.0/6, Error ellipse: s-maj=12.3km s-min=6.6km az=53.0, confirmed*
*GCG **06** 09:05:12.8±1.3, 14.19N×91.83W, h43km±20km, MD3.7, ML3.6, Presumed earthquake*
ISC 06 09:05:11.1±3.2**, 14.07N**±0.09×**91.8W**±0.1**, h24**km±20km**, n17,** σ1s**90**/27**, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.47**	**16**	P	**Pn**	**09 05 22.9**	**+0.4**
RTAL				S	**Sn**	**09 05 31.9**	**+1.9**
STG2	**El Palmar, Qui**	**0.57**	**50**	*i* P	**Pn**	**09 05 24.6**	**+0.7**
STG5	**El Palmar, Qui**	**0.57**	**54**	*i* P	**Pn**	**09 05 24.5**	**+0.6**
STG5				*i* S	**Sn**	**09 05 33.4**	**+0.8**
STG8	**El Palmar, Qui**	**0.60**	**50**	*i* P	**Pn**	**09 05 25.2**	**+0.8**
STG8				*i* S	Sn	09 05 35.5	+2.1
SMCA	**Catarina**	**0.82**	**343**	*i* P	**Pn**	**09 05 25.5**	**-1.8**
SOKI	**Kika Raxquin**	**0.85**	**29**	*i* P	**Pn**	**09 05 27.8**	**-0.2**
SOKI				*i* S	**Sn**	**09 05 39.8**	**-0.2**
HUEH	**Huehuetenango**	**1.28**	**14**	P	**Pn**	**09 05 34.1**	**+0.3**
HUEH				S	**Sb**	**09 05 51.7**	**+0.8**
HUEH	**Huehuetenango**	**1.28**	**14**	*i* P	**Pn**	**09 05 34.0**	**+0.3**
HUEH				*i* S	**Sb**	**09 05 50.8**	**-0.1**
FG16	**Alotenango, Sa**	**1.29**	**81**	*i* P	**Pn**	**09 05 30.7**	**-3.3**
FG16				*i* S	**Sn**	**09 05 44.2**	**-6.4**
FG16				IAML		09 05 50.0	
	comp=E,3μm,0.2s						
PCG5	**San Vicente Pa**	**1.41**	**84**	*i* P	**Pn**	**09 05 33.5**	**-2.1**
FAME	**Alcaldia de Sa**	**1.77**	**97**	P	**Pn**	**09 05 40.9**	**+0.6**
FAME				S	**Sb**	**09 06 04.5**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.98**	**91**	P	**Pn**	**09 05 45.2**	**+1.9**
SLOZ				S	**Sb**	**09 06 11.1**	**+0.2**
NUBE	**Las Nubes**	**1.99**	**94**	P	**Pn**	**09 05 44.9**	**+1.4**
NUBE				S	**Sn**	**09 06 09.4**	**+1.6**
NUBE	**Las Nubes**	**1.99**	**94**	*i* P	**Pn**	**09 05 45.0**	**+1.5**
CEVE	**Cerro Verde**	**2.15**	**96**	S	**Sb**	**09 06 14.9**	**-1.0**
JAYA	**Jayaque - finc**	**2.34**	**100**	P	**Pn**	**09 05 49.8**	**+1.5**
JAYA				S	**Sn**	**09 06 17.7**	**+1.2**
JAYA	**Jayaque - finc**	**2.34**	**100**	*i* P	**Pn**	**09 05 49.6**	**+1.3**

*ISK **06** 09:06:06.3, 38.42N×39.21E, h6km, ML2.5/5*
AFAD 06 09:06:04.8, 38.37N×39.06E, h13km±2km**, ML2.6, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.14**	**337**	P	Pg	09 06 08.1	-0.4
ELZG				IAML		09 06 11.0	
	comp=N,7μm,0.1s						
ELZG				IAML		09 06 11.0	
	comp=E,1μm,0.3s						
ELZG				S	Sg	09 06 11.1	0.0
ELZ	**Elazig**	**0.34**	**20**	P	Pg	09 06 11.1	-0.7
ELZ				IAML		09 06 17.0	
	comp=N,514nm,0.3s						
ELZ				S	Sg	09 06 17.1	+0.6
ELZ				IAML		09 06 21.0	
	comp=E,652nm,0.4s						
MDNT	**Maden**	**0.49**	**87**	P	Pg	09 06 11.8	-2.7
MDNT				S	Sb	09 06 22.3	-0.2
MDNT				IAML		09 06 34.0	
	comp=N,311nm,0.7s						
MAYA	**Malatya/Merkez**	**0.50**	**265**	P	Pb	09 06 15.6	+0.1
MAYA				S	Sb	09 06 23.1	+0.4
MAYA				IAML		09 06 38.0	
	comp=N,671nm,0.3s						
MAYA				IAML		09 06 38.0	
	comp=E,493nm,0.1s						
NARI	**Adyaman-Kaht**	**0.54**	**206**	P	Pg	09 06 15.6	+0.2
NARI				S	Sg	09 06 23.1	+0.5
KAHTU	**Kahta**	**0.66**	**212**	P	Pg	09 06 17.8	+0.1
KAHTU				IAML		09 06 34.0	
	comp=N,243nm,0.4s						
KAHTU				IAML		09 06 42.0	
	comp=E,372nm,0.8s						
KOVA	**Elazig, Kovanc**	**0.68**	**60**	P	Pb	09 06 18.6	0.0
KOVA				S	Sn	09 06 31.3	+0.5
MCKZ	**Bingol**	**0.75**	**355**	P	Pg	09 06 18.6	-0.8
MCKZ				S	Sb	09 06 29.8	-0.2
MCKZ				IAML		09 06 32.0	
	comp=N,113nm,0.5s						
MCKZ				IAML		09 06 44.0	
	comp=E,325nm,0.4s						
HANM	**anlurfa/Hi**	**0.80**	**190**	P	Pg	09 06 20.1	-0.2
HANM				IAML		09 06 49.0	
	comp=E,179nm,0.4s						
HANM				IAML		09 06 50.0	
	comp=N,315nm,0.2s						
AZEY	**Adyaman-Merk**	**0.85**	**229**	P	Pb	09 06 21.6	+0.2
AZEY				IAML		09 06 40.0	
	comp=N,135nm,0.3s						
AZEY				IAML		09 06 40.0	
	comp=E,170nm,0.6s						
DYBB	**Diyarbakir**	**0.95**	**116**	Pg	Pg	09 06 23.4	+0.2
DYBB				Sg	Sb	09 06 35.7	0.0
AKCA	**Adyaman/G¶l**	**1.22**	**242**	P	Pg	09 06 29.0	+0.7
ERZN	**Erzincan**	**1.32**	**23**	Pn	Pg	09 06 30.1	-0.1
BNGB	**Bingl**	**1.41**	**63**	Pn	Pb	09 06 31.4	+0.3
SVAN	**Silvan-Diyarba**	**1.70**	**97**	Pn	Pb	09 06 35.7	-0.2
GAZ	**Gaziantep**	**1.89**	**231**	Pn	Pg	09 06 41.7	+0.7
GAZ				Sn	Sg	09 07 07.4	+1.9

*CATAC **06** 09:07:43.5±0.7, 14°N±4°×9°2W±°, h31km±5km, M3.0/6, MLv3.0/6, Error ellipse: s-maj=10.8km s-min=5.2km az=39.2, confirmed*
*GCG **06** 09:07:45.1±1.1, 14.25N×91.83W, h55km±14km, MD3.9, ML3.7, Presumed earthquake*
ISC 06 09:07:39.9±2.3**, 13.81N**±0.09×**91.88W**±0.10**, h27**km±15km**, n18,** σ1s**43**/25**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.73**	**14**	P	**Pn**	**09 07 55.5**	**+1.0**
RTAL				S	**Sb**	**09 08 03.7**	**0.0**
STG5	**El Palmar, Qui**	**0.78**	**41**	*i* P	**Pn**	**09 07 57.2**	**+1.9**
STG5				*i* S	**Sn**	**09 08 06.1**	**0.0**
STG2	**El Palmar, Qui**	**0.79**	**38**	*i* P	**Pn**	**09 07 57.1**	**+1.7**
STG8	**El Palmar, Qui**	**0.81**	**39**	*i* P	**Pn**	**09 07 57.8**	**+2.0**
STG8				*i* S	**Sn**	**09 08 08.5**	**+1.3**
STG8				IAML		09 08 10.8	
	comp=E,3μm,0.2s						
SMCA	**Catarina**	**1.06**	**350**	*i* P	**Pb**	**09 07 58.2**	**-1.5**
SOKI	**Kika Raxquin**	**1.10**	**24**	*i* P	**Pn**	**09 08 00.5**	**+0.5**
ESSJ	**San Jos, E**	**1.36**	**100**	*i* P	**Pn**	**09 08 03.5**	**+0.4**
FG16	**Alotenango, Sa**	**1.40**	**71**	*i* P	**Pn**	**09 08 03.1**	**-0.8**
FG16				*i* S	**Sn**	**09 08 17.1**	**-4.5**
FG16				IAML		09 08 24.1	
	comp=E,5μm,0.2s						
PCG5	**San Vicente Pa**	**1.51**	**74**	*i* P	**Pn**	**09 08 05.8**	**+0.4**
HUEH	**Huehuetenango**	**1.54**	**14**	S	**Sn**	**09 08 24.1**	**-1.0**
FAME	**Alcaldia de Sa**	**1.81**	**89**	P	**Pb**	**09 08 13.1**	**+0.7**
FAME				S	**Sb**	**09 08 34.7**	**+0.1**
APG	**El Apazote**	**1.81**	**49**	*i* P	**Pb**	**09 08 12.0**	**-0.5**
NUBE	**Las Nubes**	**2.04**	**87**	P	**Pb**	**09 08 16.9**	**+0.5**
NUBE				S	**Sb**	**09 08 41.2**	**-0.2**
NUBE	**Las Nubes**	**2.04**	**87**	*i* P	**Pb**	**09 08 16.9**	**+0.5**
SLOZ	**Alcaldia de Sa**	**2.04**	**84**	P	**Pb**	**09 08 17.4**	**+1.1**
JAYA	**Jayaque - finc**	**2.36**	**93**	P	**Pb**	**09 08 22.2**	**+0.2**
JAYA				S	**Sb**	**09 08 50.4**	**-0.4**
JAYA	**Jayaque - finc**	**2.36**	**93**	*i* P	**Pb**	**09 08 22.0**	**+0.1**
CCIG	**Comitan**	**2.47**	**354**	P	**Pn**	**09 08 20.1**	**+1.5**

*LVSN **06** 09:23:38.2±3.9, 58.51N×23.98E, h0km±123km, ML1.3, Presumed earthquake*
HEL 06 09:23:36.1±0.3**, 60.50N×27.65E, h0**km**, ML1.3, Suspected explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.06**	**308**	PG	Pg	09 23 37.1	-0.1
VJF				SG	Sg	09 23 37.7	-0.3
PVF	**Pernaja**	**0.88**	**274**	PB	Pg	09 23 52.9	-0.1
	baz=93						
PVF				smax	smax	09 24 03.3	
	comp=Z,2.5nm,0.2s						
PVF				SB	Sg	09 24 05.0	+0.6
RUF	**Ruokolahti**	**1.12**	**34**	PG	Pg	09 23 56.4	-1.2
	baz=219						
RUF				smax	smax	09 24 10.3	
	comp=Z,2.1nm,0.2s						
RUF				SN	Sn	09 24 16.1	+0.9
FIA0	**FINESS Array S**	**1.22**	**322**	PG	Pg	09 23 58.1	-1.3
	baz=143						
FIA0				smax	smax	09 24 12.9	
	comp=Z,2.6nm,0.2s						
FIA0				SB	Sg	09 24 14.2	-0.9
ARBE	**Arbavere**	**1.36**	**219**	*e*P	Pb	09 24 03.6	+1.2
ARBE				*e*S	Sn	09 24 21.7	+0.7
NUR	**Nurmijarvi**	**1.48**	**272**	smax	smax	09 24 20.7	
	comp=Z,2.7nm,0.2s						
NUR				SN	Sg	09 24 23.5	-0.2
MEF	**Metsahovi**	**1.64**	**261**	*e*P	Pn	09 24 05.8	-0.3
MEF				*e*S	Sb	09 24 28.2	-0.2
MEF				AML	AML	09 24 31.6	
	comp=E,5.6nm,0.5s						
MEF				AML	AML	09 24 33.4	
	comp=N,6.3nm,0.8s						
MEF				AML	AML	09 24 51.7	
	comp=Z,5.3nm,0.7s						
KEF	**Keuruu**	**2.14**	**322**	smax	smax	09 24 39.6	
	comp=Z,1.5nm,0.2s						
KEF				SG	Sb	09 24 42.2	-0.6
SUF	**Sumiainen**	**2.34**	**343**	PG	Pn	09 24 17.3	+1.6
SUF				smax	smax	09 24 45.3	
	comp=Z,0.5nm,0.2s						
SUF				SG	Sb	09 24 48.2	-0.2
RAF	**Rauma**	**2.93**	**283**	AML	AML	09 24 41.1	
	comp=E,2.8nm,0.6s						
RAF				*e*S	Sn	09 24 55.1	-4.7
RAF				AML	AML	09 24 56.8	
	comp=N,2.8nm,0.7s						
RAF				AML	AML	09 25 01.4	
	comp=Z,3.4nm,0.7s						
JOF	**Joensuu**	**2.99**	**34**	PB	Pn	09 24 25.8	+1.2
KPF	**Kankaanpaa**	**3.01**	**299**	PN	Pn	09 24 24.0	-1.0
KPF				smax	smax	09 25 04.7	
	comp=Z,0.5nm,0.2s						

*BJI **06** 09:24:11.7, 38.88N×21.10E, h22km, mB5.3/25, mb5.1/79, Ms4.8/22, Ms7 4.6/25*
*GII **06** 09:24:13.9±0.0, 38.959N±0.003×21.359E±0.001, h0km, Mws5.5, confirmed*
*MOS **06** 09:24:14.1±1.0, 39.25N×21.48E, h9km, mb5.4/58, MS4.5/13, Error ellipse: s-maj=4.5km s-min=2.7km az=79.4*
*MED_RC **06** 09:24:14.0±0.5, 39.02N×21.39E, h12km±2km, MW4.8/25,*

Moment Tensor Solution.Mantle waves: s25,c29; Duration: 1s4 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.58±.11; $M_{\theta\theta}$0.16±.05; $M_{\phi\phi}$0.42±.07; $M_{r\theta}$-1.59±.40; $M_{\theta\phi}$-0.19±.05; $M_{\phi r}$1.21±.30; Best double couple: $M_0$2.07000×10^{16} NP1:ϕ_s342.00000°,δ9.00000°, λ-57.00000°. NP2:ϕ_s128.00000°,δ83.00000°, λ-95.00000°. Principal axes: T 2.0000, Plg38.0000°, Azm223.0000°; N 0.1400, Plg5.0000°, Azm129.0000°; P -2.1400, Plg52.0000°, Azm33.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.

*ATH **06** 09:24:15.3,39.°21N×21.°45E,h10km,Mw4.7,Moment Tensor Solution. s8 Moment tensor: M_{rr}-0.68; $M_{\theta\theta}$0.13; $M_{\phi\phi}$0.55; $M_{r\theta}$-1.05; $M_{\theta\phi}$-0.54; $M_{\phi r}$0.83; Fault plane solution: NP1:ϕ_s348.00000°,δ18.00000°,λ-53.00000°. NP2:ϕ_s130.00000°,δ75.00000°,λ-101.00000°.*

*NAO **06** 09:24:15.3,39.°18N×21.°44E,h10km,MB4.8*

*SOF **06** 09:24:15.5,39.°26N±0.°03×21.°61E±0.°04,h11km±5km, MD5.1/8*

*PDG **06** 09:24:15.3±0.5,39.°22N×21.°54E,h10km,MD5.0/7, ML4.9/9,Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

*THE **06** 09:24:15.0,39°N±1°×2°1E±°,h11km±3km,M4.7/16, MLh4.7/16*

*NEIC **06** 09:24:16.9±1.8,39.°25N±0.°02×21.°50E±0.°06,h10km±1km, mb5.3/475,Mwr4.7/21,Error ellipse: s-maj=8.4km s-min=3.4km az=253.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.09; $M_{\theta\theta}$0.67; $M_{\phi\phi}$0.42; $M_{r\theta}$0.20; $M_{\theta\phi}$-0.84; $M_{\phi r}$0.41; Fault plane solution: $M_0$1.35000×10^{16} NP1:ϕ_s152.74000°,δ52.48000°, λ-59.25000°. NP2:ϕ_s288.41000°,δ47.03000°, λ-123.66000°. Principal axes: T 1.3979, Plg3.0000°, Azm222.0000°; N -0.1059, Plg24.0000°, Azm313.0000°; P -1.2920, Plg66.0000°, Azm125.0000°;*

*IDC **06** 09:24:16.8±1.4,39.°22N×21.°54E,h16km±8km,mb4.9/35, mbtmp4.9/50,ML4.4/11,MS4.1/75 Error ellipse: s-maj=8.6km s-min=8.0km az=76.0*

*NEIC **06** 09:24:16.7,39.°24N×21.°49E,h10km*

*MCSM **06** 09:24:16.9±0.4,39°N±3°×2°2E±°,h10km±3km,mb4.9, mB5.4,MLv5.2,Mw(mB)4.8*

ISC 06 09:24:16.2±0.6,**39.°20N**±0.°01×**21.°49E**±0.°01,**h14**km±3km, **n1468**,σ1s**55**/1378,**mb5.2**/354,**MS4.2**/84,**85C-93D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TETR	**Tetrakomo, Epi**	**0.22**	**311**	P	**Pg**	**09 24 19.8**	**-1.4**
TETR				S	**Sg**	**09 24 23.2**	**-1.3**
TETR	**Tetrakomo, Epi**	**0.22**	**311**	P	**Pg**	**09 24 19.6**	**-1.5**
TETR				S	**Sg**	**09 24 22.3**	**-2.2**
AMPL	**Ampelaki**	**0.35**	**218**	P	**Pg**	**09 24 21.7**	**-1.7**
AMPL				S	**Sg**	**09 24 26.3**	**-2.0**
EVR	**Evrytania**	**0.38**	**139**	P	**Pg**	**09 24 22.8**	**-1.1**
EVR				S	**Sg**	**09 24 28.8**	**-0.3**
EVR	**Evrytania**	**0.38**	**139**	P	**Pg**	**09 24 23.1**	**-0.8**
EVR				S	**Sg**	**09 24 28.8**	**-0.3**
ART2	**Arta**	**0.39**	**262**	P	**Pg**	**09 24 22.2**	**-1.8**
ART2				S	**Sg**	**09 24 27.6**	**-1.7**
ARTB	**Arta**	**0.40**	**264**	P	**Pg**	**09 24 22.4**	**-1.8**
TRKA	**Trikala**	**0.41**	**31**	P	**Pg**	**09 24 23.8**	**-0.7**
PRMD	**Pramanda**	**0.45**	**317**	P	**Pg**	**09 24 23.9**	**-1.3**
SOFA	**Sofades**	**0.49**	**74**	P	**Pg**	**09 24 25.6**	**-0.4**
SOFA				S	**Sg**	**09 24 33.0**	**+0.4**
MAKR	**Makrakomi, Fth**	**0.54**	**110**	P	**Pg**	**09 24 26.1**	**-0.7**
MAKR				S	**Sg**	**09 24 32.8**	**-1.1**
MAKR	**Makrakomi, Fth**	**0.54**	**110**	P	**Pg**	**09 24 26.2**	**-0.5**
MAKR				S	**Sb**	**09 24 34.7**	**-0.3**
THL	**Klokotos Trika**	**0.55**	**48**	P	**Pg**	**09 24 26.0**	**-0.9**
THL	**Klokotos Trika**	**0.55**	**48**	P	**Pg**	**09 24 25.6**	**-1.4**
THL				S	**Sg**	**09 24 33.9**	**-0.3**
PVO	**Paravola**	**0.58**	**177**	P	**Pg**	**09 24 26.3**	**-1.4**
PVO				S	**Sg**	**09 24 35.5**	**0.0**
PVO	**Paravola**	**0.58**	**177**	P	**Pg**	**09 24 26.3**	**-1.4**
PVO				S	**Sg**	**09 24 35.0**	**-0.4**
MSVA	**Metsovo**	**0.61**	**337**	P	**Pg**	**09 24 27.2**	**-1.1**
JAN	**Janina**	**0.67**	**313**	P	**Pg**	**09 24 27.5**	**-1.9**
JAN				S	**Sg**	**09 24 37.2**	**-1.0**
JAN	**Janina**	**0.67**	**313**	P	**Pg**	**09 24 28.0**	**-1.4**
JAN				S	**Sg**	**09 24 37.5**	**-0.8**
ANX	**Ano Chora**	**0.69**	**151**	P	**Pg**	**09 24 28.4**	**-1.5**
ANX	**Ano Chora**	**0.69**	**151**	P	**Pg**	**09 24 28.6**	**-1.2**
ANX				S	**Sg**	**09 24 39.3**	**+0.3**
TSLK	**Tsoukalades, L**	**0.75**	**240**	P	**Pg**	**09 24 29.6**	**-1.2**
TSLK	**Tsoukalades, L**	**0.75**	**240**	P	**Pg**	**09 24 29.7**	**-1.1**
KPRO	**Kipourio**	**0.76**	**353**	P	**Pg**	**09 24 29.0**	**-2.0**
KPRO	**Kipourio**	**0.76**	**353**	P	**Pg**	**09 24 29.4**	**-1.6**
LKD2	**Lefkada island**	**0.77**	**238**	P	**Pg**	**09 24 29.7**	**-1.4**
LKD2	**Lefkada island**	**0.77**	**238**	P	**Pg**	**09 24 29.8**	**-1.4**
LKD2				S	**Sg**	**09 24 39.8**	**-1.4**
NYDR	**Nydri-Lefkada**	**0.79**	**232**	P	**Pg**	**09 24 30.0**	**-1.5**
NYDR	**Nydri-Lefkada**	**0.79**	**232**	P	**Pg**	**09 24 30.2**	**-1.3**
LAM2	**Lamia**	**0.79**	**112**	P	**Pg**	**09 24 31.0**	**-0.6**
MSL1	**Messolongi**	**0.83**	**183**	P	**Pg**	**09 24 31.9**	**-0.5**
GINA	**Giannouli**	**0.84**	**56**	P	**Pg**	**09 24 31.7**	**-0.8**
EFP	**Efpalio**	**0.84**	**157**	P	**Pg**	**09 24 31.2**	**-1.4**
EFP	**Efpalio**	**0.84**	**157**	P	**Pg**	**09 24 31.1**	**-1.4**
EFP				S	**Sg**	**09 24 43.4**	**-0.1**
PRGA	**Parga**	**0.85**	**276**	P	**Pg**	**09 24 32.1**	**-0.6**
EVGI	**Lefkada island**	**0.87**	**228**	P	**Pb**	**09 24 31.3**	**-1.8**
DRAG	**Dragano-Lefkad**	**0.88**	**234**	P	**Pb**	**09 24 31.5**	**-1.8**
SERG	**Sergoula**	**0.90**	**150**	P	**Pb**	**09 24 32.1**	**-1.5**
SERG	**Sergoula**	**0.90**	**150**	P	**Pb**	**09 24 32.7**	**-1.0**
KALE	**Kalithea**	**0.96**	**148**	P	**Pb**	**09 24 33.1**	**-1.5**
KALE	**Kalithea**	**0.96**	**148**	P	**Pb**	**09 24 33.4**	**-1.2**
AXS	**Araxos**	**1.01**	**185**	P	**Pb**	**09 24 34.3**	**-1.1**
AXAR	**Agios Charalam**	**1.01**	**115**	P	**Pb**	**09 24 33.9**	**-1.6**
AXAR	**Agios Charalam**	**1.01**	**115**	P	**Pb**	**09 24 35.2**	**-0.3**
PENT	**Pentalofos**	**1.03**	**345**	P	**Pb**	**09 24 34.6**	**-1.3**
FSK	**Fiskardo**	**1.04**	**225**	P	**Pb**	**09 24 34.2**	**-1.6**
FSK				S	**Sb**	**09 24 48.9**	**-0.4**
DLFA	**Delphi**	**1.07**	**132**	P	**Pb**	**09 24 35.7**	**-0.8**
KZN	**Kozani**	**1.12**	**11**	P	**Pb**	**09 24 35.2**	**-2.2**
KZN	**Kozani**	**1.12**	**11**	P	**Pb**	**09 24 35.9**	**-1.6**
RLS	**Riolos of Patr**	**1.14**	**181**	P	**Pb**	**09 24 36.9**	**-0.8**
RLS	**Riolos of Patr**	**1.14**	**181**	P	**Pb**	**09 24 36.9**	**-0.8**
VOL2	**Volos**	**1.15**	**81**	P	**Pb**	**09 24 37.6**	**-0.2**
VLS	**Valsamata**	**1.24**	**215**	P	**Pn**	**09 24 37.4**	**-1.8**
VLS	**Valsamata**	**1.24**	**215**	P	**Pn**	**09 24 37.3**	**-1.8**
VLS				S	**Sn**	**09 24 55.5**	**-0.1**
NEST	**Nestorio**	**1.26**	**345**	P	**Pn**	**09 24 39.0**	**-0.4**
RTZL	**Ratzakli, Kefa**	**1.26**	**207**	P	**Pn**	**09 24 38.2**	**-1.1**
RTZL	**Ratzakli, Kefa**	**1.26**	**207**	P	**Pn**	**09 24 38.4**	**-0.9**
DRO	**Drossia**	**1.26**	**172**	P	**Pn**	**09 24 39.2**	**-0.2**
AIDA	**Aidipsos**	**1.26**	**105**	P	**Pn**	**09 24 39.3**	**-0.1**
KLV1	**Kalavrita**	**1.27**	**157**	P	**Pb**	**09 24 39.7**	**-0.1**
KLV	**Kalavryta, Ach**	**1.27**	**156**	P	**Pn**	**09 24 39.1**	**-0.4**
ARG2	**Argostoli**	**1.29**	**218**	P	**Pn**	**09 24 38.0**	**-1.7**
KFL1	**Kefalonia,Entr**	**1.29**	**217**	P	**Pn**	**09 24 38.4**	**-1.4**
ATAL	**Atalanti**	**1.30**	**113**	P	**Pn**	**09 24 39.8**	**-0.2**
DMLN	**Damoulianata-K**	**1.30**	**223**	P	**Pn**	**09 24 38.8**	**-1.1**
LKR	**Lokris**	**1.30**	**115**	P	**Pn**	**09 24 39.9**	**0.0**
LKR				S	**Sg**	**09 24 58.1**	**-0.1**
CLEM	**Kyllini,Ilia,G**	**1.34**	**192**	P	**Pn**	**09 24 40.6**	**+0.2**
KEK	**Kerkira**	**1.40**	**292**		**Pb**	**09 24 42.6**	**+0.4**
KEK	**Kerkira**	**1.40**	**292**	*e*P	**Pg**	**09 24 43.1**	**-0.1**
KEK	**Kerkira**	**1.40**	**292**	⇓P	**Pn**	**09 24 41.5**	**+0.1**
KEK	**Kerkira**	**1.40**	**292**	P	**Pn**	**09 24 40.4**	**-0.9**
GUR	**Goura**	**1.43**	**152**	P	**Pn**	**09 24 41.9**	**+0.1**
KYPS	**Kipseli, Zakin**	**1.48**	**201**	P	**Pn**	**09 24 42.6**	**+0.3**
ORTH	**Orthonies,Zaky**	**1.48**	**205**	P	**Pb**	**09 24 43.0**	**-0.5**
NASA	**Naoussa**	**1.50**	**17**	P	**Pn**	**09 24 42.7**	**+0.1**
LTK	**Loutraki**	**1.65**	**135**	P	**Pb**	**09 24 45.8**	**-0.6**
AMT	**Artemida-Makis**	**1.68**	**174**	P	**Pn**	**09 24 46.0**	**+0.8**
VIL2	**Platees**	**1.71**	**125**	P	**Pb**	**09 24 46.9**	**-0.5**
PLN1	**Chaniotis**	**1.80**	**63**	P	**Pn**	**09 24 46.4**	**-0.4**
THE	**Thessaloniki**	**1.82**	**38**	P	**Pn**	**09 24 46.6**	**-0.5**
HORT	**Hortiatis**	**1.86**	**41**	P	**Pn**	**09 24 46.9**	**-0.9**
GRG	**Griva**	**1.89**	**21**	P	**Pn**	**09 24 47.8**	**-0.2**
PLG	**Polygyros**	**1.91**	**52**	P	**Pn**	**09 24 47.7**	**-0.7**
OHR	**Ohrid**	**1.98**	**345**	*i* Pn	**Pb**	**09 24 51.4**	**-0.7**
OHR				*i* Sn	**Sg**	**09 25 21.3**	**+1.4**
ITM	**Ithomi**	**2.05**	**170**		**Pb**	**09 24 52.2**	**-1.0**
ITM	**Ithomi**	**2.05**	**170**	*e*P	**Pb**	**09 24 53.5**	**+0.3**
ITM	**Ithomi**	**2.05**	**170**	⇓P	**Pb**	**09 24 53.4**	**+0.2**
ATH	**Athens Observa**	**2.13**	**124**	P	**Pn**	**09 24 51.9**	**+0.6**
OUR	**Ouranopolis**	**2.23**	**59**	*e*P	**Pn**	**09 24 52.4**	**-0.3**
VAY	**Valandovo**	**2.27**	**21**	*i* Pn	**Pn**	**09 24 53.4**	**+0.1**
VAY				*i* Sn	**Sg**	**09 25 32.1**	**+2.8**
SCTE	**Santa Cesarea**	**2.49**	**291**		**Pn**	**09 24 57.3**	**+1.0**
SKO	**Skopje**	**2.77**	**359**	*i* Pn	**Pn**	**09 25 01.2**	**+1.1**
MMB	**Musomishta**	**2.91**	**36**	P	**Pn**	**09 25 02.4**	**+0.3**
KKB	**Krupnik**	**2.92**	**25**	P	**Pn**	**09 25 02.4**	**+0.2**
ULC	**Ulcinj**	**3.25**	**329**	⇑*i*Pn	**Pn**	**09 25 08.6**	**+1.9**
ULC				*i* Sn	**Sn**	**09 25 46.7**	**+1.6**
SIGR	**SIGRI**	**3.39**	**88**	*e*P	**Pn**	**09 25 08.8**	**+0.1**
RZN	**Rozhen**	**3.51**	**44**	P	**Pn**	**09 25 10.7**	**+0.2**
GADA	**Gvkgeada**	**3.54**	**72**	*e*P	**Pn**	**09 25 10.2**	**-0.5**
PVY	**Plav**	**3.58**	**342**	⇓*i*Pn	**Pn**	**09 25 13.7**	**+2.3**
PVY				*i* Sn	**Sn**	**09 25 54.7**	**+1.1**
PLNA	**Plana**	**3.58**	**24**	P	**Pn**	**09 25 12.1**	**+0.6**
BOZC	**Bozcaada**	**3.59**	**78**	*e*P	**Pn**	**09 25 10.7**	**-0.7**
PDG	**Podgorica**	**3.64**	**333**		**Pn**	**09 25 14.0**	**+1.9**
PDG	**Podgorica**	**3.64**	**333**	⇑P	**Pn**	**09 25 14.0**	**+1.9**
PDG				⇓S	**Sn**	**09 25 57.2**	**+2.4**
PDG	**Podgorica**	**3.64**	**333**	⇑*i*Pn	**Pn**	**09 25 13.8**	**+1.7**
PDG				*i* Sn	**Sn**	**09 25 57.3**	**+2.4**
PDG	**Podgorica**	**3.64**	**333**	⇓P	**Pn**	**09 25 14.0**	**+1.9**
RDO	**Rodhopi**	**3.66**	**57**		**Pn**	**09 25 11.9**	**-0.4**
RDO	**Rodhopi**	**3.66**	**57**	⇓P	**Pn**	**09 25 11.9**	**-0.4**
VTS	**Vitosha**	**3.66**	**21**	P	**Pn**	**09 25 13.0**	**+0.5**
BUM	**Brajici-Budva**	**3.67**	**328**	⇓*i*Pn	**Pn**	**09 25 14.0**	**+1.4**
TIP	**Timpagrande**	**3.68**	**271**		**Pn**	**09 25 13.1**	**+0.5**
TIP	**Timpagrande**	**3.68**	**271**	⇓P	**Pn**	**09 25 13.6**	**+0.9**
TIP				⇑S	**Sn**	**09 25 57.3**	**+1.5**
TIP	**Timpagrande**	**3.68**	**271**	P	**Pn**	**09 25 13.7**	**+1.1**
TIP	**Timpagrande**	**3.68**	**271**	⇑P	**Pn**	**09 25 13.1**	**+0.5**
EZN	**Ezine**	**3.79**	**79**	*e*P	**Pn**	**09 25 14.3**	**+0.1**
EZN	**Ezine**	**3.79**	**79**	P	**Pn**	**09 25 15.4**	**+1.2**
EZN	**Ezine**	**3.79**	**79**	P	**Pn**	**09 25 14.4**	**+0.2**
IVA	**Berane**	**3.86**	**342**	⇑*i*Pn	**Pn**	**09 25 16.8**	**+1.6**
IVA				*i* Sn	**Sn**	**09 26 01.9**	**+1.6**
PGB	**Panagyurishte**	**3.88**	**31**	P	**Pn**	**09 25 16.1**	**+0.6**
ALN	**Alexandroupoli**	**3.88**	**63**		**Pn**	**09 25 14.9**	**-0.6**
ALN	**Alexandroupoli**	**3.88**	**63**	P	**Pn**	**09 25 14.9**	**-0.6**
ALN	**Alexandroupoli**	**3.88**	**63**	⇓P	**Pn**	**09 25 15.1**	**-0.3**
KOME	**Kolasin**	**3.94**	**338**	⇑*i*Pn	**Pn**	**09 25 17.3**	**+1.0**
KOME				*e*Sn	**Sn**	**09 26 04.6**	**+2.3**
COMU	**Canakkale**	**3.95**	**75**	*e*P	**Pn**	**09 25 19.5**	**+3.1**
MATE	**Matera**	**3.95**	**293**	⇑P	**Pn**	**09 25 17.7**	**+1.4**
MATE	**Matera**	**3.95**	**293**	⇓P	**Pn**	**09 25 17.8**	**+1.4**
HCY	**Herceg Novi**	**3.96**	**326**	⇓*i*Pn	**Pn**	**09 25 17.3**	**+0.8**
HCY				*i* Sn	**Sn**	**09 26 03.8**	**+1.1**
GELI	**Tayfur-Gelibol**	**4.02**	**71**	*e*P	**Pn**	**09 25 14.9**	**-2.4**
NKME	**Niksic**	**4.04**	**332**	⇓*i*Pn	**Pn**	**09 25 19.0**	**+1.3**
NKME				*e*Sn	**Sn**	**09 26 05.9**	**+1.0**
DIM	**Dimitrovgrad**	**4.21**	**46**	P	**Pn**	**09 25 19.8**	**-0.1**
LPK	**Lapseki**	**4.23**	**72**	*e*P	**Pn**	**09 25 19.9**	**-0.2**
KNDR	**Palaiochora Ch**	**4.31**	**156**	*e*P	**Pn**	**09 25 23.6**	**+2.3**
BRY	**Bratogost**	**4.32**	**330**	⇑*i*Pn	**Pn**	**09 25 22.8**	**+1.3**
BRY				*i* Sn	**Sn**	**09 26 12.1**	**+0.4**
YAYO	**Edremit-Balk**	**4.34**	**83**	*e*P	**Pn**	**09 25 22.6**	**+0.8**
CANM	**Can-anakkale**	**4.37**	**78**	*e*P	**Pn**	**09 25 22.4**	**+0.2**
BLCB	**Balcova**	**4.42**	**99**	*e*P	**Pn**	**09 25 22.7**	**0.0**
PLE	**Pljevlja**	**4.42**	**340**	⇑*i*Pn	**Pn**	**09 25 24.8**	**+1.9**
PLE				*i* Sn	**Sn**	**09 26 14.6**	**+0.5**
BOVS	**Bovan**	**4.43**	**2**	⇑P	**Pn**	**09 25 23.7**	**+0.8**
CEL	**Celeste**	**4.47**	**260**		**Pn**	**09 25 23.3**	**-0.3**
CEL	**Celeste**	**4.47**	**260**	P	**Pn**	**09 25 24.7**	**+1.1**
CEL	**Celeste**	**4.47**	**260**	⇑P	**Pn**	**09 25 23.8**	**+0.2**
ACER	**Acerenza**	**4.54**	**292**		**Pn**	**09 25 25.2**	**+0.7**
KRBG	**Karabiga-Canak**	**4.63**	**73**	*e*P	**Pn**	**09 25 25.3**	**-0.4**
SOMA	**Soma-Manisa**	**4.70**	**89**	*e*P	**Pn**	**09 25 27.9**	**+1.3**
VALD	**Valchedram**	**4.72**	**17**	P	**Pn**	**09 25 27.3**	**+0.5**
GCAM	**G?zelcaml?**	**4.75**	**107**	*e*P	**Pn**	**09 25 28.7**	**+1.3**
IDI	**Anoyia**	**4.76**	**144**	Pn	**Pn**	**09 25 28.8**	**+1.3**
	29nm,0.4s,baz=320,slow=15,SNR=27						
IDI				Sn	**Sn**	**09 26 24.0**	**+1.5**
	27nm,0.3s,baz=243,slow=21,SNR=3.5						
IDI	**Anoyia**	**4.76**	**144**	P	**Pn**	**09 25 28.4**	**+0.9**
IDI				S	**Sn**	**09 26 23.4**	**+0.9**
IDI	**Anoyia**	**4.76**	**144**		**Pn**	**09 25 29.3**	**+1.8**
IDI	**Anoyia**	**4.76**	**144**	*e*P	**Pn**	**09 25 29.4**	**+1.9**
PLVB	**Pleven**	**4.80**	**28**	⇓P	**Pn**	**09 25 29.4**	**+1.4**
GVD	**Gavdhos**	**4.83**	**154**	*e*P	**Pn**	**09 25 31.5**	**+3.1**
BALB	**Balikesir**	**4.97**	**83**	*e*P	**Pn**	**09 25 31.8**	**+1.5**
JMB	**Yambol**	**5.04**	**48**	P	**Pn**	**09 25 30.5**	**-0.8**
EDC	**Edincik**	**5.04**	**75**	*e*P	**Pn**	**09 25 30.6**	**-0.8**
BODT	**Bodrum**	**5.06**	**113**	*e*P	**Pn**	**09 25 34.7**	**+3.0**
SUSR	**Susurluk-Balik**	**5.15**	**79**	*e*P	**Pn**	**09 25 33.7**	**+0.8**
PUNG	**Punghina**	**5.19**	**12**	⇑P	**Pn**	**09 25 33.8**	**+0.5**
GORD	**Gordes-Manisa**	**5.21**	**91**	*e*P	**Pn**	**09 25 35.8**	**+2.0**
ODEM	**Odemis-Izmir**	**5.23**	**98**	*e*P	**Pn**	**09 25 36.1**	**+2.1**
VLAD	**Vladila**	**5.27**	**24**	⇓P	**Pn**	**09 25 36.9**	**+2.5**
MLSB	**Milas**	**5.30**	**109**	*e*P	**Pn**	**09 25 37.3**	**+2.3**
KCTX	**Karacabey (Bur**	**5.40**	**76**	*e*P	**Pn**	**09 25 36.4**	**+0.1**
NAZL	**Nazilli-Aydin**	**5.47**	**101**	*e*P	**Pn**	**09 25 39.7**	**+2.4**
DJES	**Djerdap**	**5.51**	**8**	⇑P	**Pn**	**09 25 39.5**	**+1.6**
ZKR	**Zakros**	**5.56**	**136**	*e*P	**Pn**	**09 25 42.8**	**+4.3**
MANT	**Manisa**	**5.56**	**95**		**Pn**	**09 25 40.1**	**+1.4**
SRE	**Strehaia**	**5.60**	**13**	⇓P	**Pn**	**09 25 40.8**	**+1.7**
SRE	**Strehaia**	**5.60**	**13**	P	**Pn**	**09 25 40.7**	**+1.7**
PAOL	**Paolisi**	**5.61**	**291**		**Pn**	**09 25 40.9**	**+1.6**
KULA	**Kula-Manisa**	**5.64**	**95**	*e*P	**Pn**	**09 25 41.1**	**+1.4**
CTYL	**Yalikoy Yolu**	**5.67**	**64**	P	**Pn**	**09 25 40.0**	**0.0**
	1.6nm5μm531nm,0.9s						
HERR	**Herculane**	**5.72**	**7**	⇑P	**Pn**	**09 25 41.3**	**+0.7**
YER	**Yerkesik**	**5.74**	**109**	*e*P	**Pn**	**09 25 43.0**	**+2.0**
RAZG	**Razgrad**	**5.77**	**39**	⇓P	**Pn**	**09 25 42.7**	**+1.4**
KARP	**Karpathos**	**5.81**	**127**		**Pn**	**09 25 44.9**	**+3.0**
KARP	**Karpathos**	**5.81**	**127**	*e*P	**Pn**	**09 25 43.1**	**+1.2**
KARP	**Karpathos**	**5.81**	**127**	*e*P	Pn	09 25 47.6	+5.7
KARP	**Karpathos**	**5.81**	**127**	⇑P	Pn	09 25 46.9	+5.0
MDNY	**Mudanya-Bursa**	**5.81**	**76**	*e*P	**Pn**	**09 25 42.7**	**+0.8**
VAE	**Valguarnera**	**5.82**	**255**	Pn	**Pn**	**09 25 42.5**	**+0.3**
	48nm,0.8s,baz=222,slow=10,SNR=4.5						
VAE				Sn	**Sn**	**09 26 51.1**	**+2.4**
	11nm,0.3s,baz=158,slow=2.9,SNR=3.8						
VAE				LR	LR	09 28 55.6	
	comp=Z,1μm,18.8s,baz=110,slow=47						
SIMA	**Simav-Kutahya**	**5.83**	**89**	*e*P	**Pn**	**09 25 44.1**	**+1.9**
ARMT	**Armutlu**	**5.83**	**74**	*e*P	**Pn**	**09 25 44.6**	**+2.4**
HUMR	**Humele**	**5.92**	**25**	⇓P	**Pn**	**09 25 44.3**	**+0.8**
RAFF	**Raffo Rosso**	**5.95**	**253**		**Pn**	**09 25 43.6**	**-0.2**
SGRR	**Singureni**	**6.04**	**32**	⇑P	**Pn**	**09 25 45.9**	**+1.0**
ARG	**Arkhangelos**	**6.05**	**117**		**Pn**	**09 25 47.3**	**+2.1**
ARG	**Arkhangelos**	**6.05**	**117**	*e*P	**Pn**	**09 25 49.5**	**+4.3**
ARG	**Arkhangelos**	**6.05**	**117**	P	**Pn**	**09 25 47.3**	**+2.1**
DALY	**Dalyan (Mula)**	**6.14**	**111**	*e*P	**Pn**	**09 25 47.5**	**+1.1**
GEDZ	**Gediz**	**6.16**	**89**	*e*P	**Pn**	**09 25 47.8**	**+1.0**
BANR	**Banloc**	**6.18**	**358**	⇑P	**Pn**	**09 25 48.0**	**+1.0**
TVSB	**Tavsanli**	**6.19**	**85**	*e*P	**Pn**	**09 25 49.2**	**+2.0**
APMY	**Acipayam-Deniz**	**6.38**	**103**	*e*P	**Pn**	**09 25 52.5**	**+2.7**
BLY	**Banja Luka**	**6.40**	**331**	⇑P	**Pn**	**09 25 51.5**	**+1.5**
BLY	**Banja Luka**	**6.40**	**331**	⇓P	**Pn**	**09 25 51.5**	**+1.5**
BZS	**Buzias**	**6.41**	**1**	P	**Pn**	**09 25 49.5**	**-0.6**
BZS	**Buzias**	**6.41**	**1**	⇑P	**Pn**	**09 25 49.6**	**-0.6**
INTR	**Introdacqua**	**6.42**	**298**		**Pn**	**09 25 51.5**	**+1.2**
LOT	**Lotru**	**6.47**	**14**	⇓P	**Pn**	**09 25 51.7**	**+0.7**
WDD	**Wied Dalam**	**6.47**	**241**		**Pn**	**09 25 50.6**	**-0.4**
WDD	**Wied Dalam**	**6.47**	**241**	⇑P	**Pn**	**09 25 51.1**	**+0.1**
SULR		**6.52**	**31**	⇑P	**Pn**	**09 25 53.1**	**+1.5**
FETY	**Fethiye**	**6.53**	**111**	*e*P	Pn	09 25 45.5	-6.3
CAME	**Cameli-Denizli**	**6.56**	**108**	*e*P	**Pn**	**09 25 56.3**	**+3.9**
ARR	**Arges**	**6.59**	**20**	⇓P	**Pn**	**09 25 53.2**	**+0.6**
CLTB	**Caltabellotta**	**6.70**	**259**	⇑P	**Pn**	**09 25 55.0**	**+0.8**
DEV	**Deva**	**6.76**	**8**	⇑P	**Pn**	**09 25 56.7**	**+1.8**
DEV	**Deva**	**6.76**	**8**	P	**Pn**	**09 25 56.6**	**+1.8**
TNR	**Turnu Rosu**	**6.77**	**17**	⇑P	**Pn**	**09 25 56.1**	**+1.1**
TNR	**Turnu Rosu**	**6.77**	**17**	P	**Pn**	**09 25 56.1**	**+1.1**
VOIR		**6.77**	**22**	⇓P	**Pn**	**09 25 55.9**	**+0.7**
VOIR		**6.77**	**22**	P	**Pn**	**09 25 55.8**	**+0.7**
VOIR		**6.77**	**22**	P	**Pn**	**09 25 56.0**	**+0.9**
	1.0nm3μm275nm,0.5s						
ICOR	**Ion Corvin**	**6.81**	**42**	⇑P	**Pn**	**09 25 57.5**	**+1.8**
AQU	**L'Aquila**	**6.90**	**300**	P	**Pn**	**09 25 57.5**	**+0.6**
AQU				S	**Sn**	**09 27 15.5**	**+0.3**
AQU	**L'Aquila**	**6.90**	**300**	P	**Pn**	**09 25 58.4**	**+1.5**
	1.5nm4μm420nm,0.9s						
AQU	**L'Aquila**	**6.90**	**300**	⇓P	**Pn**	**09 25 59.8**	**+2.9**
BORA	**Eskisehir**	**6.96**	**82**		**Pn**	**09 25 59.3**	**+1.5**
CAMP	**Campotosto**	**6.97**	**301**		**Pn**	**09 25 59.1**	**+1.2**
MANR	**Mangalia**	**7.04**	**47**	⇓P	**Pn**	**09 26 00.1**	**+1.3**
SIRR	**Siria**	**7.06**	**1**	⇓P	**Pn**	**09 26 01.1**	**+2.0**
AKAS	**Kas**	**7.08**	**112**		**Pn**	**09 26 03.2**	**+3.7**
ELL	**Elmali**	**7.09**	**108**		**Pn**	**09 26 03.4**	**+3.8**
ELL	**Elmali**	**7.09**	**108**	P	**Pn**	**09 26 03.4**	**+3.8**
ELL	**Elmali**	**7.09**	**108**	⇑P	**Pn**	**09 26 04.3**	**+4.7**
MLR	**Muntele Rosu**	**7.10**	**26**	Pn	**Pn**	**09 26 00.9**	**+1.2**
	74nm,0.5s,baz=134,slow=18,SNR=30						
MLR				Sn	**Sn**	**09 27 19.0**	**-1.1**
	baz=127,slow=19						
MLR				LR	LR	09 29 22.3	
	comp=Z,4μm,19.3s,baz=180,slow=43						
MLR	**Muntele Rosu**	**7.10**	**26**	⇓P	**Pn**	**09 26 01.5**	**+1.9**
MLR	**Muntele Rosu**	**7.10**	**26**	P	**Pn**	**09 26 00.9**	**+1.2**
	1.7nm4μm639nm,0.8s						
NEHR	**Nehoiu**	**7.17**	**28**	⇓P	**Pn**	**09 26 01.9**	**+1.4**
ISP	**Isparta**	**7.22**	**98**		**Pn**	**09 26 03.4**	**+2.1**
ISP	**Isparta**	**7.22**	**98**	⇓*e*P	**Pn**	**09 26 03.7**	**+2.4**
ISP	**Isparta**	**7.22**	**98**	P	**Pn**	**09 25 59.7**	**-1.6**
ISP	**Isparta**	**7.22**	**98**	*e*P	**Pn**	**09 26 05.7**	**+4.3**
ISP	**Isparta**	**7.22**	**98**	⇓P	**Pn**	**09 26 03.9**	**+2.5**
MDB	**Medias**	**7.25**	**16**	⇓P	**Pn**	**09 26 03.9**	**+2.1**
MDB	**Medias**	**7.25**	**16**	P	**Pn**	**09 26 03.8**	**+2.1**
GUMA	**Gualdo di Mace**	**7.26**	**305**		**Pn**	**09 26 02.8**	**+1.0**
NRCA	**Norcia**	**7.30**	**302**		**Pn**	**09 26 02.6**	**+0.3**
MORH	**Mrgy, Hungar**	**7.31**	**344**	⇓P	**Pn**	**09 26 03.2**	**+0.7**
MORH	**Mrgy, Hungar**	**7.31**	**344**	P	**Pn**	**09 26 03.0**	**+0.5**
	0.4nm1μm132nm,0.7s						
DOPR	**Dopca**	**7.35**	**22**	⇓P	**Pn**	**09 26 04.2**	**+1.1**
TIRR	**Tirgusor**	**7.37**	**42**		**Pn**	**09 26 03.8**	**+0.6**
TIRR	**Tirgusor**	**7.37**	**42**	⇑P	**Pn**	**09 26 04.2**	**+1.0**
TIRR	**Tirgusor**	**7.37**	**42**	P	**Pn**	**09 26 04.2**	**+1.0**
TIRR	**Tirgusor**	**7.37**	**42**	⇑P	**Pn**	**09 26 07.4**	**+4.2**
SAHE	**Sakarya_HENDEK**	**7.37**	**74**	⇓P	**Pn**	**09 26 04.6**	**+1.2**
FDMO	**Fiordimonte**	**7.41**	**304**		**Pn**	**09 26 05.1**	**+1.3**
COVR	**Voineasa-Covas**	**7.50**	**26**	⇑P	**Pn**	**09 26 06.6**	**+1.5**
BOSR	**Bodos**	**7.52**	**23**	⇓P	**Pn**	**09 26 06.4**	**+0.9**
CESX	**Cesi**	**7.56**	**300**		**Pn**	**09 26 07.4**	**+1.5**
MARR	**Marisel-Cluj**	**7.56**	**9**	⇑P	**Pn**	**09 26 07.1**	**+1.1**
MDUB	**Mudurnu**	**7.58**	**77**		**Pn**	**09 26 07.7**	**+1.4**
OZUR		**7.58**	**23**	⇓P	**Pn**	**09 26 07.3**	**+1.0**
TURR	**Turia**	**7.62**	**24**	⇑P	**Pn**	**09 26 09.0**	**+2.3**
DRGR		**7.64**	**6**	⇑P	**Pn**	**09 26 09.1**	**+2.1**
DRGR		**7.64**	**6**	P	**Pn**	**09 26 09.1**	**+2.1**
TPGR	**Topolog**	**7.65**	**40**	⇓P	**Pn**	**09 26 08.8**	**+1.7**
PLOR	**Plostina**	**7.66**	**28**	⇓P	**Pn**	**09 26 09.1**	**+1.7**
PLOR	**Plostina**	**7.66**	**28**	P	**Pn**	**09 26 09.0**	**+1.7**
CJR	**Cluj-Napoca**	**7.67**	**11**	⇑P	**Pn**	**09 26 08.7**	**+1.2**
CJR	**Cluj-Napoca**	**7.67**	**11**	P	**Pn**	**09 26 08.6**	**+1.2**
VRI	**Vrincioaia**	**7.70**	**28**	⇑P	**Pn**	**09 26 09.8**	**+2.0**
VRI	**Vrincioaia**	**7.70**	**28**	P	**Pn**	**09 26 09.8**	**+2.0**
VRI	**Vrincioaia**	**7.70**	**28**	P	**Pn**	**09 26 09.5**	**+1.7**
	1.5nm4μm470nm,0.9s						
ODBI	**Odobesti**	**7.74**	**30**	⇓P	**Pn**	**09 26 10.7**	**+2.3**
CFR	**Carcaliu**	**7.75**	**37**	⇑P	**Pn**	**09 26 09.4**	**+0.9**
CFR	**Carcaliu**	**7.75**	**37**	P	**Pn**	**09 26 09.3**	**+0.9**
BOJS	**Bojanci**	**7.81**	**326**	*i* Pn	**Pn**	**09 26 09.7**	**+0.4**
BOJS				*e*Sn	**Sn**	**09 27 34.3**	**-3.1**
BOJS				IAML		09 27 37.8	
	comp=Z,849nm,1.7s						
MURB	**Monte Urbino**	**7.88**	**304**		**Pn**	**09 26 11.6**	**+1.2**
ONER	**Baraj Valea Uz**	**7.99**	**25**	⇑P	**Pn**	**09 26 13.6**	**+1.8**
MGAB	**Montegabbione**	**8.00**	**301**	⇓P	**Pn**	**09 26 13.7**	**+1.8**
GBRS	**Gornja Briga**	**8.03**	**324**	*i* Pn	**Pn**	**09 26 13.1**	**+0.8**
GBRS				*e*Sn	**Sn**	**09 27 41.0**	**-1.9**
GBRS				IAML		09 27 44.8	
	comp=Z,448nm,0.7s						
BEHE	**Becsehely**	**8.04**	**336**		**Pn**	**09 26 13.3**	**+0.7**
TLCR		**8.08**	**40**	⇑P	**Pn**	**09 26 14.8**	**+1.8**
TLCR		**8.08**	**40**	P	**Pn**	**09 26 14.8**	**+1.8**
GHRR		**8.12**	**31**	⇑P	**Pn**	**09 26 15.6**	**+2.0**
GHRR		**8.12**	**31**	P	**Pn**	**09 26 15.3**	**+1.7**
BSZH	**Besenyszg**	**8.14**	**354**	⇑P	**Pn**	**09 26 15.9**	**+2.1**
KOGS	**Kog**	**8.20**	**334**	*e*Pn	**Pn**	**09 26 15.3**	**+0.6**
TESR	**Tescani**	**8.23**	**26**	⇓P	**Pn**	**09 26 17.5**	**+2.5**
TESR	**Tescani**	**8.23**	**26**	P	**Pn**	**09 26 16.5**	**+1.4**
	comp=Z,146nm,0.9s						
MPLH	**Magyarpolny**	**8.47**	**341**	P	**Pn**	**09 26 19.7**	**+1.3**
	comp=Z,6μmcomp=Z,723nm,0.8s						
GROS	**Grobnik**	**8.48**	**331**	*e*Pn	**Pn**	**09 26 18.6**	**0.0**
BMR	**Baia Mare**	**8.59**	**9**	⇓P	**Pn**	**09 26 21.6**	**+1.6**
BMR	**Baia Mare**	**8.59**	**9**	P	**Pn**	**09 26 21.6**	**+1.6**
TRI	**Trieste**	**8.65**	**321**		**Pn**	**09 26 21.0**	**+0.1**
TRI	**Trieste**	**8.65**	**321**	P	**Pn**	**09 26 21.0**	**+0.1**
PERS	**Pernice**	**8.78**	**330**	*i* Pn	**Pn**	**09 26 23.9**	**+1.3**
PSZ	**Piszkesteto**	**8.79**	**353**		**Pn**	**09 26 23.1**	**+0.3**
PSZ	**Piszkesteto**	**8.79**	**353**	⇑P	**Pn**	**09 26 23.4**	**+0.6**
PSZ	**Piszkesteto**	**8.79**	**353**	P	**Pn**	**09 26 23.1**	**+0.3**
PSZ	**Piszkesteto**	**8.79**	**353**	*e*P	**Pn**	**09 26 23.6**	**+0.8**
PSZ	**Piszkesteto**	**8.79**	**353**	⇑P	**Pn**	**09 26 23.4**	**+0.6**
OSSC	**Osservatorio P**	**8.83**	**303**		**Pn**	**09 26 24.2**	**+0.9**
VOJS	**Vojsko**	**8.83**	**323**	*e*Pn	**Pn**	**09 26 23.6**	**+0.2**
VOJS				*e*Sn	**Sn**	**09 27 58.1**	**-4.6**
BURAR	**Bucovina Array**	**8.83**	**17**		**Pn**	**09 26 24.1**	**+0.7**
BURAR	**Bucovina Array**	**8.83**	**17**	⇑P	**Pn**	**09 26 24.9**	**+1.3**
BURAR	**Bucovina Array**	**8.83**	**17**	P	**Pn**	**09 26 24.8**	**+1.3**
SOKA	**Soboth**	**8.84**	**330**	*i* Pn	**Pn**	**09 26 25.0**	**+1.4**
	comp=Z,57nm,0.4s,SNR=27						
SOKA				*e*Sn	**Sn**	**09 28 01.2**	**-1.8**
	comp=Z,64nm,0.8s						
BUR08	**Bucovina Ar. S**	**8.86**	**17**		**Pn**	**09 26 24.4**	**+0.6**
OBKA	**Obir**	**8.90**	**327**	*i* Pn	**Pn**	**09 26 25.1**	**+0.7**
	comp=Z,44nm,0.4s						
OBKA				*e*Sn	**Sn**	**09 28 04.7**	**+0.2**
	comp=Z,176nm,0.8s						
SRO	**Srobarova**	**8.91**	**346**	*e*P	**Pn**	**09 26 27.2**	**+2.8**
SRO				*e*		09 28 04.7	
SRO	**Srobarova**	**8.91**	**346**	*e*PN	**Pn**	**09 26 27.2**	**+2.8**
SRO				*e*SN	**Sn**	**09 28 04.7**	**+0.2**
SABO	**M.te Sabotino**	**8.93**	**322**		**Pn**	**09 26 24.6**	**-0.1**
KORU	**Korolevo**	**9.03**	**7**	P	**Pn**	**09 26 27.9**	**+1.9**
RAKU	**Rahkiv**	**9.03**	**12**	P	**Pn**	**09 26 29.8**	**+3.7**
BERU	**Beregovo**	**9.07**	**5**	P	**Pn**	**09 26 28.1**	**+1.6**
ARSA	**Arzberg**	**9.14**	**334**	*i* Pn	**Pn**	**09 26 29.7**	**+2.0**
	comp=Z,61nm,0.4s,SNR=33						
ARSA				*e*Sn	**Sn**	**09 28 10.1**	**-0.2**
	comp=Z,26nm,0.5s						
BRIU	**Brid**	**9.20**	**6**	P	**Pn**	**09 26 29.9**	**+1.5**
NSLU	**Nyzhne Selyshc**	**9.24**	**12**	P	**Pn**	**09 26 28.7**	**-0.3**
MUKU	**Mukachevo**	**9.29**	**5**	P	**Pn**	**09 26 31.0**	**+1.4**
RONA	**Rosalia, Austr**	**9.29**	**338**	*i* Pn	**Pn**	**09 26 30.3**	**+0.6**
	comp=Z,15nm,0.4s,SNR=14						
RONA				*i* Sn	**Sn**	**09 28 13.1**	**-0.8**
	comp=Z,48nm,0.5s						
KECS	**Kecovo**	**9.31**	**356**	*e*P	**Pn**	**09 26 31.6**	**+1.8**
KECS				*e*		09 28 13.1	
KECS	**Kecovo**	**9.31**	**356**	*e*PN	**Pn**	**09 26 31.6**	**+1.8**
KECS				*e*SN	**Sn**	**09 28 13.1**	**-1.1**
ZCCA	**Zocca**	**9.38**	**307**		**Pn**	**09 26 32.9**	**+1.9**
VSL	**Villasalto**	**9.39**	**276**		**Pn**	**09 26 30.1**	**-0.9**
VSL	**Villasalto**	**9.39**	**276**	⇑P	**Pn**	**09 26 31.1**	**+0.1**
MYKA	**Terra Mystica**	**9.39**	**325**	*i* Pn	**Pn**	**09 26 32.5**	**+1.4**
	comp=Z,22nm,0.4s,SNR=6.6						
MYKA				*e*Sn	**Sn**	**09 28 16.4**	**0.0**
	comp=Z,99nm,1.0s						
BR105	**Keskin Array S**	**9.40**	**83**	P	**Pn**	**09 26 32.6**	**+1.3**
	comp=Z,328nmcomp=Z,37nm,0.9s						
BR106	**Keskin Array S**	**9.40**	**83**	P	**Pn**	**09 26 32.6**	**+1.3**
	comp=Z,249nmcomp=Z,33nm,1.0s						
BR131	**Keskin Array S**	**9.41**	**83**		**Pn**	**09 26 33.0**	**+1.5**
BR131	**Keskin Array S**	**9.41**	**83**	*d i*P	**Pn**	**09 26 33.3**	**+1.8**
BRTR	**Keskin Array B**	**9.41**	**83**	Pn	**Pn**	**09 26 33.4**	**+1.9**
	comp=Z,5.9nm,0.3s,baz=265,slow=13,SNR=85						
BRTR				Sn	**Sn**	**09 28 13.6**	**-3.6**
	comp=Z,0.4nm,0.3s,baz=267,slow=23,SNR=1.9						
	comp=Z,12nm,0.4s						
BRTR	**Keskin Array B**	**9.41**	**83**		**Pn**	**09 26 32.8**	**+1.3**
BR104	**Keskin Array S**	**9.41**	**83**	P	**Pn**	**09 26 32.9**	**+1.4**
	comp=Z,284nmcomp=Z,34nm,1.0s						
TEOL	**Teolo**	**9.53**	**313**		**Pn**	**09 26 33.7**	**+0.9**
ZST	**Bratislava**	**9.53**	**342**	*e*P	**Pn**	**09 26 34.2**	**+1.3**
ZST				*e*		09 28 16.3	
ZST	**Bratislava**	**9.53**	**342**	*e*PN	**Pn**	**09 26 34.2**	**+1.3**
ZST				*e*SN	**Sn**	**09 28 16.3**	**-3.5**
ILGA	**Ilgaz**	**9.55**	**75**		**Pn**	**09 26 34.0**	**+0.6**
CONA	**Conrad Observa**	**9.63**	**337**	*i* Pn	**Pn**	**09 26 36.4**	**+2.1**
	comp=Z,9.1nm,0.4s,SNR=9.2						
CONA				*i* Sn	**Sn**	**09 28 23.1**	**+0.8**
	comp=Z,41nm,0.6s						
KIRS	**Kirsehir-Merke**	**9.65**	**86**	⇑P	**Pn**	**09 26 37.3**	**+2.5**
MODS	**Modra-Piesok**	**9.66**	**343**	*e*P	**Pn**	**09 26 35.9**	**+1.2**
MODS				*e*		09 28 22.7	
MODS	**Modra-Piesok**	**9.66**	**343**	*e*PN	**Pn**	**09 26 35.9**	**+1.2**
MODS				*e*SN	**Sn**	**09 28 22.7**	**-0.2**
VLC	**Villacollemand**	**9.67**	**304**	P	**Pn**	**09 26 36.7**	**+1.9**
VLC	**Villacollemand**	**9.67**	**304**	⇑P	**Pn**	**09 26 38.3**	**+3.4**
SMOL	**Smolenice**	**9.76**	**344**	*e*P	**Pn**	**09 26 37.6**	**+1.6**
SMOL				*e*		09 28 23.8	
KBA	**Koelnbreinsper**	**9.86**	**326**	*i* Pn	**Pn**	**09 26 39.1**	**+1.4**

comp=Z,24nm,0.4s,SNR=16
KBA *i* Sn **Sn** **09 28 26.6 -1.6**
comp=Z,58nm,0.7s
ABTA Abfaltersbach 10.00 322 *e*Pn **Pn** **09 26 40.7 +1.2**
comp=Z,49nm,0.6s,SNR=24
ABTA *i* Sn **Sn** **09 28 28.7 -2.7**
comp=Z,237nm,0.8s
PRMA PARMA 10.00 307 **Pn** **09 26 40.2 +0.9**
KMPD K-Podol'skiy 10.02 19 P P 09 26 41.3
KMPD P **Pn** **09 26 41.1 +1.5**
PGF Pioggiola 10.03 293 ⇑P **Pn** **09 26 42.6 +2.7**
JAVC Velka Javorina 10.04 345 *e*PN **Pn** **09 26 41.1 +1.2**
MOA Molln 10.11 331 *i* Pn **Pn** **09 26 43.0 +2.2**
comp=Z,26nm,0.4s,SNR=20
MOA *e*Sn **Sn** **09 28 34.1 +0.2**
comp=Z,43nm,0.5s
SORM Soroca 10.21 27 ⇓P **Pn** **09 26 43.1 +0.8**
SORM Soroca 10.21 27 P **Pn** **09 26 43.0 +0.8**
SORM Soroca 10.21 27 P **Pn** **09 26 44.2 +1.9**
comp=Z,34nm,0.8s
BIOA Bad Ischl, Aus 10.22 329 *i* Pn **Pn** **09 26 44.3 +1.9**
comp=Z,76nm,0.9s,SNR=28
BIOA *e*Sn **Sn** **09 28 35.1 -1.6**
comp=Z,68nm,0.7s
NIE Niedzica 10.25 356 P **Pn** **09 26 44.8 +2.0**
comp=Z,53nm,1.1s
KEST Kesra 10.25 254 Pn **Pn** **09 26 44.5 +1.5**
comp=Z,1.3nm,0.3s,baz=4.1,slow=2.6,SNR=32
KEST LR LR 09 32 11.1
comp=Z,2µm,18.2s,baz=68,slow=46
comp=Z,68nm,0.8s
KEST Kesra 10.25 254 **Pn** **09 26 44.7 +1.7**
CSS Mathiatis 10.36 110 P **Pn** **09 26 42.1 -2.2**
CSS S **Sn** **09 28 37.6 -2.7**
LESA Schwarzleotal 10.42 325 *i* Pn **Pn** **09 26 45.9 +0.7**
comp=Z,36nm,0.5s,SNR=18
LESA *i* Sn **Sn** **09 28 39.0 -2.7**
comp=Z,100nm,0.6s
KWP Kalwaria Pacla 10.46 4 P **Pn** **09 26 47.8 +2.1**
comp=Z,107nm,1.1s
MAUC Maruska 10.49 347 *e*PN **Pn** **09 26 48.2 +2.1**
KRUC Moravsky 10.51 341 *e*PN **Pn** **09 26 46.7 +0.4**
KRUC *e*SN **Sn** **09 28 45.2 +1.4**
BAL3X Bal3x, Balta 10.52 31 P **Pn** **09 26 48.0 +1.5**
BOB Bobbio (Coli) 10.54 306 ⇑P **Pn** **09 26 49.4 +2.5**
VRAC Vranov 10.69 342 Pn **Pn** **09 26 49.4 +0.6**
comp=Z,2.8nm,0.3s,baz=167,slow=13,SNR=65
VRAC Sn **Sn** **09 28 47.2 -1.1**
comp=Z,1.7nm,0.3s,baz=206,slow=15,SNR=3.6
VRAC LR LR 09 32 19.4
comp=Z,459nm,20.2s,baz=171,slow=45
comp=Z,80nm,0.7s
VRAC Vranov 10.69 342 ⇓P **Pn** **09 26 49.5 +0.6**
VRAC Vranov 10.69 342 *e*PN **Pn** **09 26 49.4 +0.6**
VRAC Vranov 10.69 342 *e*SN **Sn** **09 28 50.0 +1.7**
WTTA Wattenberg 10.79 321 *i* Pn **Pn** **09 26 51.2 +0.9**
comp=Z,29nm,0.3s,SNR=30
WTTA *i* Sn **Sn** **09 28 47.4 -3.5**
comp=Z,226nm,0.6s
WATA Walderalm 10.87 322 *i* Pn **Pn** **09 26 52.4 +1.0**
comp=Z,93nm,0.7s,SNR=34
WATA *e*Sn **Sn** **09 28 49.2 -3.6**
comp=Z,197nm,0.9s
OKC Ostrava-Krasne 10.90 348 AMS AMS 09 32 00.0
comp=Z,2µm,10.3s
CKRC Cesky Krumlov 10.91 334 *e*P **Pn** **09 26 53.8 +2.0**
CKRC *e* 09 28 51.0
CKRC MLR MLR
comp=Z,5µm,11.9s
CKRC Cesky Krumlov 10.91 334 *e*PN **Pn** **09 26 53.8 +2.0**
CKRC *e*SN **Sn** **09 28 51.0 -2.6**
CKRC AMS AMS 09 31 30.0
comp=Z,5µm,11.9s
MORC Moravsky Berou 10.94 346 **Pn** **09 26 52.4 +0.1**
MORC Moravsky Berou 10.94 346 ⇓P **Pn** **09 26 53.5 +1.2**
MORC Moravsky Berou 10.94 346 P **Pn** **09 26 52.4 +0.1**
MORC Moravsky Berou 10.94 346 ⇑P **Pn** **09 26 53.6 +1.4**
MORC Moravsky Berou 10.94 346 *e*PN **Pn** **09 26 53.3 +1.1**
MORC *e*SN **Sn** **09 28 53.4 -1.0**
TREC Trest 10.96 339 *e*P **Pn** **09 26 53.7 +1.1**
TREC MLR MLR
comp=Z,7µm,9.6s
TREC Trest 10.96 339 *e*PN **Pn** **09 26 53.7 +1.1**
TREC AMS AMS 09 31 30.0
comp=Z,7µm,9.6s
SQTA Sankt Quirin 10.97 320 *i* Pn **Pn** **09 26 54.1 +1.4**
comp=Z,42nm,0.4s,SNR=21
SQTA *e*Sn **Sn** **09 28 52.8 -2.5**
comp=Z,87nm,0.7s
SIM Simferopol' 11.00 54 *e*P **Pn** **09 26 55.0 +2.0**
SIM *e*S **Sn** **09 28 55.0 -0.7**
SIM pmax pmax
comp=Z,53nm,0.6s
SIM smax smax
comp=E,131nm,1.0s
SIM smax smax
comp=N,98nm,1.0s
SIM MLR MLR
comp=Z,600nm,15.0s
STEB Steborice 11.05 347 *e*PN **Pn** **09 26 51.7 -2.0**
FUORN Ofenpass-Fuorn 11.07 316 **Pn** **09 26 54.2 0.0**
FETA Feichten 11.08 318 *e*Pn **Pn** **09 26 55.4 +1.1**
comp=Z,41nm,0.7s,SNR=27
FETA *e*Sn **Sn** **09 28 54.4 -3.6**
comp=Z,86nm,0.9s
OJC Ojcow 11.08 354 P **Pn** **09 26 55.7 +1.6**
comp=Z,35nm,0.7s
OJC Ojcow 11.08 354 ⇓P **Pn** **09 26 56.7 +2.5**
MOTA Moosalm 11.11 320 *i* Pn **Pn** **09 26 55.3 +0.7**
comp=Z,155nm,0.7s,SNR=62
MOTA *e*Sn **Sn** **09 28 56.0 -2.6**
comp=Z,226nm,0.7s
GEC2 GERESS Array S 11.14 332 **Pn** **09 26 56.5 +1.4**
GERES GERESS Array B 11.14 332 Pn **Pn** **09 26 54.7 -0.4**
comp=Z,0.4nm,0.3s,baz=156,slow=13,SNR=40
GERES Sn **Sn** **09 28 59.7 +0.2**
comp=Z,0.6nm,0.3s,baz=151,slow=21,SNR=8.4
GERES LR LR 09 32 15.4
comp=Z,2µm,19.8s,baz=144,slow=43
GERES ScP **ScP** **09 36 22.6 -0.6**
comp=Z,2.2nm,1.0s,baz=103,slow=3.1,SNR=5.5
comp=Z,7.5nm,0.5s
RETA Reutte 11.37 320 *e*Sn **Sn** **09 29 02.0 -3.0**
comp=Z,125nm,0.7s
DAVOX Davos/Dischmat 11.38 315 Pn **Pn** **09 26 58.5 +0.2**
comp=Z,4.5nm,0.3s,baz=135,slow=15,SNR=22
DAVOX Sn **Sn** **09 28 58.7 -6.6**
comp=Z,4.1nm,0.3s,baz=270,slow=17,SNR=5.6
DAVOX LR LR 09 32 56.9
comp=Z,398nm,18.4s,baz=110,slow=46
comp=Z,14nm,0.5s
KHC Kasperske Hory 11.43 333 *e*P **Pn** **09 27 00.0 +1.1**
KHC *e* 09 29 00.0
KHC Kasperske Hory 11.43 333 *e*PN **Pn** **09 27 00.0 +1.1**
KHC *e*SN **Sn** **09 29 00.0 -6.3**
ZVC Zvikov 11.48 335 *e*PN **Pn** **09 27 00.9 +1.3**
ZVC AMS AMS 09 31 50.0
comp=Z,6µm,11.0s
TUE Stuetta 11.49 313 **Pn** **09 27 00.1 +0.2**
TUE Stuetta 11.49 313 P **Pn** **09 27 01.3 +1.4**
comp=Z,4µmcomp=Z,275nm,0.6s
LUBAR Lubar, Ukraine 11.61 21 P **Pn** **09 27 02.9 +1.6**
DAVA Damuels 11.69 317 *e*Pn **Pn** **09 27 05.8 +3.1**
comp=Z,31nm,0.7s,SNR=12
DAVA *e*Sn **Sn** **09 29 07.1 -5.8**
comp=Z,94nm,0.6s
DPC Dobruska-Polom 11.73 344 *e*P **Pn** **09 27 04.2 +1.1**
DPC MLR MLR
comp=Z,2µm,8.9s
DPC Dobruska-Polom 11.73 344 *e*PN **Pn** **09 27 04.2 +1.1**
DPC AMS AMS 09 32 40.0
comp=Z,2µm,8.9s
PRU Pruhonice 11.86 338 *e*P **Pn** **09 27 05.6 +0.8**
PRU MLR MLR
comp=Z,6µm,10.2s
PRU Pruhonice 11.86 338 *e*PN **Pn** **09 27 05.6 +0.8**
PRU AMS AMS 09 32 00.0
comp=Z,6µm,10.2s
UPC Upice 11.95 343 AMS AMS 09 32 20.0
comp=Z,3µm,9.0s
OSTC Ostas 11.95 344 *e*P **Pn** **09 27 06.5 +0.5**
OSTC MLR MLR
comp=Z,3µm,13.4s
OSTC Ostas 11.95 344 *e*PN **Pn** **09 27 06.5 +0.5**
CHVC Chvalec 12.01 343 *e*P **Pn** **09 27 07.8 +0.9**
CHVC MLR MLR
comp=Z,2µm,9.6s
CHVC Chvalec 12.01 343 *e*PN **Pn** **09 27 07.8 +0.9**
CHVC AMS AMS 09 32 20.0
comp=Z,2µm,9.6s
KSP Ksiaz 12.20 344 P **Pn** **09 27 10.7 +1.2**
comp=Z,34nm,1.1s
KSP Ksiaz 12.20 344 ⇑P **Pn** **09 27 10.9 +1.4**
PVCC Panska Ves 12.34 339 AMS AMS 09 32 20.0
comp=Z,5µm,10.3s
RNPP5 Staryi Chortor 12.42 13 P **Pn** **09 27 13.5 +1.1**
BNI Bardonecchia 12.45 303 **Pn** **09 27 14.8 +1.9**
BNI Bardonecchia 12.45 303 P **Pn** **09 27 14.8 +1.9**
BNI Bardonecchia 12.45 303 ⇑P **Pn** **09 27 17.6 +4.7**
RICC Richard 12.48 338 AMS AMS 09 32 30.0
comp=Z,6µm,10.4s
MI28 Mi28,Pidlybu 12.51 18 P **Pn** **09 27 14.7 +1.1**
AK07 Malin Array Si 12.59 23 P **Pn** **09 27 15.8 +1.1**
AK13 Malin Array Si 12.60 23 P **Pn** **09 27 15.5 +0.6**
AK06 Malin Array Si 12.62 23 P **Pn** **09 27 15.8 +0.7**
AK14 Malin Array Si 12.63 23 P **Pn** **09 27 15.9 +0.6**
SENIN Lac Senin/Sane 12.63 309 **Pn** **09 27 15.7 +0.1**
AK10 Malin Array Si 12.64 23 P **Pn** **09 27 15.7 +0.2**
AK05 Malin Array Si 12.65 23 P **Pn** **09 27 16.2 +0.7**
AK12 Malin Array Si 12.65 23 P **Pn** **09 27 16.4 +0.8**
AK17 Malin Array Si 12.66 22 P **Pn** **09 27 16.5 +0.8**
AK01 Malin Array Si 12.71 23 P **Pn** **09 27 16.2 -0.2**
KIEV Kiev 12.72 23 ⇓P **Pn** **09 27 17.6 +1.1**
KIEV Kiev 12.72 23 *i* P **Pn** **09 27 16.4 -0.1**
SNR=12
KIEV Kiev 12.72 23 P **Pn** **09 27 17.5 +1.1**
KIEV Kiev 12.72 23 P **Pn** **09 27 16.8 +0.4**
comp=Z,119nm,1.2s
KIEV Kiev 12.72 23 ⇑P **Pn** **09 27 17.1 +0.6**
AKASG Malin Array Be 12.73 23 Pn **Pn** **09 27 16.7 +0.1**
comp=Z,2.4nm,0.3s,baz=215,slow=12,SNR=18
AKASG PcP **PcP** **09 32 51.9 -0.9**
comp=Z,0.5nm,0.4s,baz=238,slow=1.0,SNR=4.1
AKASG ScP **ScP** **09 36 23.9 -1.5**
comp=Z,1.8nm,0.7s,baz=233,slow=0.6,SNR=4.8
comp=Z,5.0nm,0.6s
AKASG Malin Array Be 12.73 23 **Pn** **09 27 15.9 -0.7**
AKBB Malin Array Si 12.73 23 **Pn** **09 27 16.4 -0.1**
AKBB Malin Array Si 12.73 23 ⇑*i*P **Pn** **09 27 16.8 +0.2**
AKBB Malin Array Si 12.73 23 P **Pn** **09 27 16.8 +0.2**
AK22 Malin Array Si 12.73 22 P **Pn** **09 27 16.9 +0.2**
AK21 Malin Array Si 12.74 22 P **Pn** **09 27 16.9 +0.1**
HSKC Hora Svate Kat 12.74 336 AMS AMS 09 32 40.0
comp=Z,6µm,10.5s
AK03 Malin Array Si 12.75 23 P **Pn** **09 27 17.1 +0.2**
AK23 Malin Array Si 12.75 22 P **Pn** **09 27 17.1 +0.2**
NKC Novy Kostel 12.75 333 AMS AMS 09 32 40.0
comp=Z,4µm,11.7s
BRG Berggiesshubel 12.82 338 *i* P **Pn** **09 27 18.2 +0.3**
BRG Amp 09 27 19.5
comp=Z,24nm,1.2s
BRG PP **PnPn** **09 27 25.3 -0.4**
BRG Amp 09 27 26.2
comp=Z,23nm,1.0s
MMAI Mount Meron Ar 12.83 114 Pn **Pn** **09 27 18.5 +0.3**
comp=Z,6.5nm,0.5s,baz=313,slow=15,SNR=8.5
MMAI Sn **Sn** **09 29 39.6 -1.1**
comp=Z,1.7nm,0.3s,baz=179,slow=38,SNR=1.3
GEM Giv'at Ha'Em 12.91 113 P **Pn** **09 27 16.2 -3.0**
GEM S **Sn** **09 29 39.3 -3.3**
STU Stuttgart 13.02 321 **Pn** **09 27 19.5 -1.1**
STU Stuttgart 13.02 321 P **Pn** **09 27 19.5 -1.1**
STU Stuttgart 13.02 321 *e*P **Pn** **09 27 23.4 +2.8**
ANN Anapa 13.11 60 *e*P **Pn** **09 27 21.3 -0.5**
ANN *e*S **Sn** **09 29 46.8 -0.4**
ANN pmax pmax
comp=Z,96nm,1.0s
KSHT Keshet 13.13 114 P **Pn** **09 27 19.5 -2.8**
KSHT S **Sn** **09 29 45.3 -2.9**
BFO Black Forest 13.16 318 **Pn** **09 27 20.9 -1.7**
BFO Black Forest 13.16 318 P **Pn** **09 27 20.9 -1.7**
BFO Black Forest 13.16 318 ⇓P **Pn** **09 27 21.6 -1.0**
SALP Salfit 13.22 118 P **Pn** **09 27 20.1 -3.3**
SALP S **Sn** **09 29 47.3 -2.9**
MAHO Mahon 13.31 278 P **Pn** **09 27 26.6 +2.0**
HMDT Nahal Hemdat 13.34 117 P **Pn** **09 27 21.5 -3.6**
HMDT S **Sn** **09 29 50.3 -2.8**
KZIT Kziot 13.42 124 P **Pn** **09 27 22.9 -3.2**
KZIT S **Sn** **09 29 51.3 -3.8**
CLL Collm 13.49 337 *e*P **Pn** **09 27 28.0 +1.0**
CLL Collm 13.49 337 *e*P **Pn** **09 27 28.0 +1.0**
CLL *ex* x 09 27 30.0
CLL *ex* x 09 27 32.0
CLL *i* x x 09 27 38.1
comp=Z,59nm,1.0s
CLL *i* x x 09 27 40.8
comp=Z,170nm,1.1s
CLL *e*Sx Sx 09 30 26.0
CLL AMS AMS 09 33 00.0
YTIR Yattir 13.59 121 P **Pn** **09 27 25.8 -2.8**
YTIR S **Sn** **09 29 56.0 -3.5**
DSI Dead Sea 13.64 120 P **Pn** **09 27 26.8 -2.4**
DSI S **Sn** **09 29 57.3 -3.3**
ECH Echery 13.71 316 **Pn** **09 27 29.1 -1.0**
ECH Echery 13.71 316 P **Pn** **09 27 29.2 -1.0**
ECH Echery 13.71 316 ⇑P **Pn** **09 27 30.1 -0.1**
MSBI Mazada 13.79 121 P **Pn** **09 27 27.8 -3.3**
MSBI S **Sn** **09 30 00.3 -3.7**
GHAJ Ghor Haditha 13.93 120 **Pn** **09 27 34.2 +1.1**
GHAJ Ghor Haditha 13.93 120 P **Pn** **09 27 30.5 -2.6**
GHAJ S **Sn** **09 30 04.3 -3.3**
SSB Saint Sauveur 13.94 301 **Pn** **09 27 35.8 +2.6**
SSB Saint Sauveur 13.94 301 P **Pn** **09 27 35.8 +2.6**
KRMI Paran Flat 14.16 126 P **Pn** **09 27 33.2 -3.1**
KRMI S **Sn** **09 30 08.3 -4.8**
PRNI Paran 14.18 124 P **Pn** **09 27 33.5 -3.0**
PRNI S **Sn** **09 30 09.3 -4.3**
RUE Ruedersdorf 14.31 341 *e*P **P** **09 27 44.9 -0.4**
ASF Jabal al Asfar 14.34 115 Pn **Pn** **09 27 38.6 -0.3**
comp=Z,0.2nm,0.3s,baz=288,slow=14,SNR=5.2
comp=Z,8.8nm,1.1s
SOC Sochi 14.36 66 *e*P **Pn** **09 27 39.9 +0.9**
SOC *e* 09 30 20.3
SOC MLR MLR
comp=Z,470nm,15.0s
HRFI Mount Harif 14.41 125 P **Pn** **09 27 35.8 -3.9**
HRFI S **Sn** **09 30 14.9 -4.4**
ETOS Mallorca 14.44 278 P **Pn** **09 27 41.3 +1.2**
MBRI Mt Berech 14.50 126 P **Pn** **09 27 37.5 -3.5**
MBRI S **Sn** **09 30 16.6 -4.9**
EIL Elat 14.61 127 Pn **Pn** **09 27 41.0 -1.4**
comp=Z,1.2nm,0.3s,baz=338,slow=13,SNR=7.9
EIL Sn **Sn** **09 30 17.3 -6.8**
comp=Z,2.0nm,0.3s,baz=62,slow=3.2,SNR=4.5
comp=Z,7.4nm,0.5s
EIL Elat 14.61 127 P **Pn** **09 27 38.5 -3.9**
EIL S **Sn** **09 30 19.3 -4.8**
SUW Suwalki 14.86 4 **Pn** **09 27 46.6 +0.9**
SUW Suwalki 14.86 4 P **Pn** **09 27 46.6 +0.9**
SUW Suwalki 14.86 4 *e*P **Pn** **09 27 48.4 +2.7**
WLF Walferdange 15.12 319 P **Pn** **09 27 50.1 +1.0**
WLF Walferdange 15.12 319 *d*P **P** **09 27 52.5 -1.8**
LOR Lormes 15.15 308 ⇓P **Pn** **09 27 51.1 +1.5**
LABN Labinsk 15.30 63 *e*P **Pn** **09 27 52.9 +1.2**
LABN *e*S **Sn** **09 30 42.9 +2.0**
LABN pmax pmax
comp=Z,31nm,0.7s
LABN MLR MLR
comp=E,1µm,12.0s
LABN MLR MLR
comp=Z,848nm,17.0s
LABN MLR MLR
comp=N,410nm,13.0s
ERBR Yeremizino-Bor 15.44 59 *e*P **Pn** **09 27 54.8 +1.3**
ERBR *e*S **Sn** **09 30 46.4 +2.2**
ERBR pmax pmax
comp=Z,46nm,1.1s
ERBR MLR MLR
comp=Z,363nm,11.0s
ERBR MLR MLR
comp=N,945nm,11.0s
ERBR MLR MLR
comp=E,1µm,12.0s
EIBI Ibiza 15.64 276 P **Pn** **09 27 57.0 +0.8**
BTNL Ternell 15.71 321 *d*P **P** **09 28 02.8 +1.8**
comp=Z,25nm,1.2s
BTNL *d*S Sn 09 30 36.8 -14
MEM Membach 15.78 321 *d*P **P** **09 28 02.9 +1.2**
comp=Z,39nm,1.1s
MEM *d*S **Sn** **09 30 42.7 -10**
RCHB Rochefort 15.89 319 *d*P **P** **09 28 01.2 -1.7**
comp=Z,18nm,1.4s
RCHB *d*S **Sn** **09 30 46.0 -9.0**
MNK Minsk 15.91 14 *i* P **Pn** **09 27 57.7 -1.8**
comp=E,89nm,1.0s
MNK *i* P **Pn** **09 27 57.7 -1.8**
comp=N,18nm,0.7s
MNK *i* P **Pn** **09 27 57.7 -1.8**
comp=Z,74nm,1.0s,baz=198
MNK *i* PP **pP** **09 28 06.4 -1.1**
MNK *i* PPP PPP 09 28 14.0
MNK *i* S **Sn** **09 30 52.5 -3.0**
MNK *i* SS **SnSn** **09 31 06.4 -1.9**
MNK *i* SSS SSS 09 31 19.6
MNK *i* LQ LQ 09 32 38.8
MNK *i* LR LR 09 33 36.5
MNK *i* LRM MLR 09 34 48.5
comp=Z,1µm,18.4s
MNK *i* LRM MLR 09 34 58.6
comp=E,831nm,15.1s
MNK *i* LRM MLR 09 35 00.9
comp=N,327nm,14.0s
MNK Minsk 15.91 14 *i* P **Pn** **09 27 57.6 -1.8**
MNK *i* S **Sn** **09 30 52.4 -3.0**
MNK pmax pmax
comp=N,18nm,0.7s
MNK pmax pmax
comp=Z,74nm,1.0s
MNK pmax pmax
comp=E,89nm,1.0s
MNK MLR MLR
comp=Z,1µm,18.0s
MNK MLR MLR
comp=E,831nm,15.0s
MNK MLR MLR
comp=N,327nm,14.0s
BSTI Sart Tilman 15.98 321 *d*P **P** **09 28 07.1 +3.1**
BCLA Clavier 16.01 320 *d*P **P** **09 28 04.6 +0.3**
comp=Z,15nm,1.0s
BCLA *d*S **Sn** **09 30 48.7 -9.4**
BGES Gesves 16.10 319 *d*P **Pn** **09 28 03.3 +1.4**
comp=Z,12nm,0.9s
BGES *d*S **Sn** **09 30 50.8 -9.4**
NACGM Naroch 16.11 11 *e*P **Pn** **09 28 01.6 -0.5**
comp=E,31nm,0.9s
DOU Dourbes 16.18 318 *d*P **P** **09 28 05.6 -0.6**
comp=Z,22nm,1.0s
DOU *d*S **Sn** **09 30 54.7 -7.4**
BMRD Maredsous 16.21 319 *d*P **P** **09 28 08.6 +2.1**
comp=Z,16nm,1.2s
BMRD *d*S **Sn** **09 30 54.1 -8.9**
PABE Paberze 16.40 5 *e*P **Pn** **09 28 05.8 +0.1**
CLF Chambon-Foret 16.45 309 P **P** **09 28 08.4 -0.7**
SHA1 Shidzhatmaz 16.49 67 ⇓*e*P **Pn** **09 28 07.8 +0.6**
BSD Bornholm Skovb 16.52 347 *i* P **Pn** **09 28 06.8 -0.5**
BSD IAmb IAmb 09 28 14.5
comp=Z,61nm,0.8s
BSD Bornholm Skovb 16.52 347 *e*P **P** **09 28 08.8 -1.0**
KIV Kislovodsk 16.55 66 *i* P **P** **09 28 12.1 +1.7**
SNR=6.6
KIV Kislovodsk 16.55 66 P **Pn** **09 28 08.2 +0.4**
KBZ Khabaz 16.66 67 Pn **Pn** **09 28 09.2 +0.1**
comp=Z,1.0nm,0.3s,baz=249,slow=10,SNR=14
KBZ PcP **PcP** **09 32 60.0 +1.7**
comp=Z,5.6nm,0.9s,baz=180,slow=2.0,SNR=3.7
KBZ ScP **ScP** **09 36 31.4 -1.1**
comp=Z,2.6nm,0.8s,baz=260,slow=2.0,SNR=3.1
comp=Z,4.4nm,1.1s
UCC Uccle 16.72 319 P **P** **09 28 11.7 -0.4**
UCC Uccle 16.72 319 P **P** **09 28 11.7 -0.4**
UCC pmax pmax
comp=Z,75nm,1.4s
UCC Uccle 16.72 319 *d*P **P** **09 28 11.7 -0.4**
comp=Z,29nm,1.1s
GEVA Gevas 16.85 86 P **P** **09 28 15.4 +1.6**
GOF Gofitskoye 17.00 63 *ce*P **P** **09 28 17.7 +2.4**
VORD Divnogorie 17.16 41 *e*P **P** **09 28 17.6 +0.6**
VORD pmax pmax
comp=Z,30nm,0.8s
VSR Storozhevoye 17.25 40 *e*P **P** **09 28 19.5 +1.6**
VSR pmax pmax
comp=Z,40nm,0.7s
LUNU Lund 17.29 345 *i* P **Pn** **09 28 16.0 -1.0**
ECHE Chera 17.36 278 P **Pn** **09 28 17.4 -0.6**
MFF Saint Martin d 17.46 302 ⇑P **P** **09 28 22.4 +2.1**
VORR Voronezh 17.55 39 *e*P **Pn** **09 28 17.6 -2.6**
VORR pmax pmax
comp=Z,73nm,0.4s
BJUU Bjuv 17.79 344 *i* P **P** **09 28 24.8 +0.9**
EMUR La Murta 17.83 273 P **Pn** **09 28 23.5 -0.4**
GNI Garni 17.92 80 P **Pn** **09 28 25.1 0.0**
comp=Z,1.0nm,0.3s,baz=246,slow=8.8,SNR=5.1
comp=Z,13nm,0.7s
GNI Garni 17.92 80 P **P** **09 28 28.8 +3.2**
GNI Garni 17.92 80 ⇑*e*P **P** **09 28 29.1 +3.5**
GNI pmax pmax
comp=Z,62nm,0.9s
GNI Garni 17.92 80 P **Pn** **09 28 24.2 -0.9**
ETOB Tobarra 17.93 276 P **P** **09 28 27.7 +2.1**
DEL Delary 18.00 346 *i* P **Pn** **09 28 24.0 -1.7**
LPSR Galich'ya Gora 18.01 36 *e*P **Pn** **09 28 24.5 -1.4**
LPSR pmax pmax
comp=Z,130nm,0.9s
VRH Novokhopyorsk 18.56 43 *e*P **Pn** **09 28 33.1 +0.5**
VRH pmax pmax
comp=Z,80nm,0.8s
OBN Obninsk 18.87 28 P **Pn** **09 28 37.1 +0.8**
OBN IAmb IAmb 09 28 38.2
comp=Z,99nm,0.5s
OBN Obninsk 18.87 28 *e*P **Pn** **09 28 36.1 -0.2**
OBN pmax pmax
comp=Z,124nm,1.1s
OBN MLR MLR
comp=Z,2µm,13.0s
UCM Universidad Co 19.04 281 P **P** **09 28 38.1 +0.3**
ONAU Onsala 19.25 344 *i* P **P** **09 28 38.5 -1.4**
BORU Boraas 19.30 346 *i* P **P** **09 28 39.2 -1.2**
VSU Vasula 19.57 8 *d i*P **P** **09 28 42.4 -1.0**
VSU pmax pmax
comp=Z,193nm,0.7s
VSU Vasula 19.57 8 *e*P **P** **09 28 42.6 -0.8**
VSU Vasula 19.57 8 ⇑P **P** **09 28 42.7 -0.7**
MTSE Matsula 19.59 4 *e*P **P** **09 28 43.2 -0.4**
JSA Saint Aubin 19.61 308 *e*P **Pn** **09 28 44.7 -0.5**
JSA IAmb IAmb 09 28 48.1
comp=Z,50nm,0.7s
JSA Saint Aubin 19.61 308 ⇓P **Pn** **09 28 45.6 +0.3**
ESDC Sonseca Array 19.65 279 P **P** **09 28 45.0 +0.5**
comp=Z,0.9nm,0.3s,baz=73,slow=11,SNR=84
ESDC PcP **PcP** **09 33 03.8 +0.3**
comp=Z,0.8nm,0.6s,baz=62,slow=1.1,SNR=3.4
ESDC LR LR 09 36 22.6
comp=Z,418nm,18.2s,baz=78,slow=37
ESDC ScP **ScP** **09 36 38.4 -0.6**
comp=Z,0.9nm,0.7s,baz=56,slow=2.3,SNR=5.0
comp=Z,18nm,0.9s
MOS Moscow 19.73 28 *e*P **P** **09 28 44.3 -0.9**
MOS pmax pmax
comp=Z,99nm,0.9s
MOS MLR MLR
comp=Z,1µm,9.0s
TJOU Tjoern 19.90 344 *i* P **P** **09 28 45.5 -1.4**
MAK Makhachkala 19.94 71 *c i*P **P** **09 28 44.0 -3.5**
MAK *e*S **S** **09 32 27.7 -3.7**
MAK pmax pmax
comp=Z,279nm,1.2s
MAK MLR MLR
comp=Z,559nm,10.0s
ROSF Rostrenen 20.01 305 ⇑P Pn 09 28 50.6 +0.6
AKT Akhty 20.11 75 *e*P Pn 09 28 50.9 -0.5
AKT *e* 09 29 07.0
AKT *e*S Sn 09 32 38.9 +1.5
AKT *e* 09 33 06.7
AKT pmax pmax
comp=Z,136nm,1.0s
AKT MLR MLR
comp=Z,630nm,23.0s
ARBE Arbavere 20.45 7 *e*P **P** **09 28 52.6 -0.4**
EMAL Malaga-Limoner 20.55 271 P **P** **09 28 52.9 -1.4**
HOMB Homborsund 20.85 341 *e*P **P** **09 28 57.5 +0.3**
HOMB Homborsund 20.85 341 *i* P **P** **09 28 56.5 -0.7**
STRU Stroemstad 20.92 345 *i* P **P** **09 28 57.1 -0.9**
AAL Aland 21.02 358 *e*P **P** **09 28 57.8 -1.3**
MEF Metsahovi 21.12 4 *e*P **P** **09 28 59.2 -1.0**

SNART **Snartemo** 21.25 339 *e*P P 09 29 03.7 +2.1
SNART **Snartemo** 21.25 339 *i* P P 09 29 01.0 -0.6
MCH1 **Michaelchurch** 21.26 315 *e*P P 09 29 02.3 +0.6
MCH1 IAmb IAmb 09 29 04.5
comp=Z,32nm,0.7s
MCH1 **Michaelchurch** 21.26 315 ⇑P P 09 29 02.5 +0.7
TAM **Tamanrasset** 21.27 224 P P 09 29 02.9 +0.6
TAM IAmb IAmb 09 29 08.6
comp=Z,96nm,1.1s
TAM **Tamanrasset** 21.27 224 P P 09 29 02.9 +0.6
TAM pmax pmax
comp=Z,96nm,1.1s
LBWR **Ladybower, Pea** 21.29 319 *e*P P 09 29 02.4 +0.3
LBWR IAmb IAmb 09 29 03.6
comp=Z,28nm,0.8s
PUL **Pulkovo** 21.34 12⇑ *i*P P 09 29 02.3 -0.2
PUL pmax pmax
comp=Z,264nm,0.5s
HLM1 **Long Mynd** 21.44 316 *e*P P 09 29 04.4 +0.6
HFS **Hagfors** 21.52 349 P P 09 29 03.5 -1.0
comp=Z,45nm,0.5s,baz=160,slow=13,SNR=52
HFS S S 09 32 57.5 -5.1
comp=Z,16nm,0.9s,baz=172,slow=22,SNR=5.0
HFS LR LR 09 38 05.1
comp=Z,557nm,20.0s,baz=169,slow=38
comp=Z,45nm,0.5s
HPK **Haverah Park** 21.54 321 *e*P P 09 29 04.7 -0.1
PBRG **Braganca** 21.59 286 *e*P P 09 29 06.6 +1.2
PBRG *i* IAmb IAmb 09 29 08.0
comp=Z,64nm,1.4s
FOEL **Foel Wylfa** 21.79 317 *e*P P 09 29 07.6 +0.1
KONO **Kongsberg** 21.81 344 P P 09 29 06.6 -1.1
KONO IAmb IAmb 09 29 11.9
comp=Z,159nm,1.2s
KONO **Kongsberg** 21.81 344 *e*P P 09 29 07.0 -0.7
KONO **Kongsberg** 21.81 344⇑ *i*P P 09 29 07.0 -0.7
KONO pmax pmax
comp=Z,172nm,1.3s
KONO **Kongsberg** 21.81 344 ⇑P P 09 29 07.0 -0.7
MVO **Moncorvo** 21.84 284 *e*P P 09 29 09.2 +1.1
MVO *i* IAmb IAmb 09 29 11.9
comp=Z,50nm,2.7s
MVO *e*S S 09 33 10.6 +1.4
MVO *e*LR LR 09 37 40.3
MVO *i* IAMs_20 IAMs_20 09 38 23.7
comp=Z,333nm,18.0s
OSL **Oslo** 21.84 345 *e*P P 09 29 06.6 -1.3
RAF **Rauma** 21.85 0 *e*P P 09 29 07.1 -0.9
MDT **Midelt** 22.01 261 LR LR 09 38 56.6
comp=Z,147nm,20.6s,baz=66,slow=40
MD01 **Midelt array s** 22.11 262 P P 09 29 11.4 +0.2
IFR **Ifrane** 22.13 263 P P 09 29 11.6 +0.1
EDMD **Edmundbyers** 22.20 322 *e*P P 09 29 10.8 -1.0
EDMD IAmb IAmb 09 29 15.7
comp=Z,24nm,0.6s
PBAR **Barrancos** 22.26 276 *e*P P 09 29 12.2 -0.4
PBAR *i* IAmb IAmb 09 29 25.6
comp=Z,101nm,1.3s
MTE **Manteigas** 22.30 282 P P 09 29 13.8 +0.7
MTE **Manteigas** 22.30 282 *e*P P 09 29 15.1 +1.9
MTE *i* IAmb IAmb 09 29 24.2
comp=Z,45nm,1.4s
MTE *e*S S 09 33 18.9 +1.0
MTE *e*LR LR 09 37 48.9
MTE *i* IAMs_20 IAMs_20 09 38 47.1
comp=Z,607nm,16.0s
PMRV **Marv??o** 22.31 280 *e*P P 09 29 14.5 +1.3
PMRV *i* IAmb IAmb 09 29 20.1
comp=Z,70nm,1.6s
PMRV *e*LR LR 09 37 47.5
PMRV *i* IAMs_20 IAMs_20 09 38 45.1
comp=Z,445nm,16.0s
PCBR **Castelo Branco** 22.32 281 *e*P P 09 29 15.3 +2.0
PCBR *i* IAmb IAmb 09 29 34.4
comp=Z,47nm,1.3s
BELG **Belogornoye** 22.34 45⇓ *e*P P 09 29 13.3 -0.1
BELG pmax pmax
comp=Z,33nm,1.0s
BLS5 **Blasjo** 22.38 340 *e*P P 09 29 14.3 +0.4
POLO **Lamas de Olo** 22.40 285 *e*P P 09 29 16.7 +2.4
POLO *i* IAmb IAmb 09 29 30.2
comp=Z,31nm,1.3s
NC602 **NORSAR Array S** 22.43 347 IAmb IAmb 09 29 17.1
comp=Z,104nm,0.8s
NC602 **NORSAR Array S** 22.43 347 *e*P P 09 29 13.4 -0.9
FINES **FINESS Array B** 22.45 6 P P 09 29 12.9 -1.5
comp=Z,17nm,0.5s,baz=167,slow=11,SNR=75
FINES PcP PcP 09 33 08.6 +0.2
comp=Z,4.9nm,0.7s,baz=160,slow=2.1,SNR=6.9
FINES ScP ScP 09 36 43.8 -1.6
comp=Z,3.7nm,0.7s,baz=170,slow=0.8,SNR=5.4
FINES LR LR 09 39 17.2
comp=Z,617nm,19.6s,baz=192,slow=40
comp=Z,17nm,0.5s
FINES **FINESS Array B** 22.45 6 P P 09 29 12.8 -1.6
FIA1 **FINESS Array S** 22.45 6 P P 09 29 13.0 -1.4
PVIS **Viseu** 22.53 283 *e*P P 09 29 15.7 0.0
PCAB **Cabril** 22.55 286 *e*P P 09 29 17.4 +1.6
PCAB *i* IAmb IAmb 09 29 20.7
comp=Z,68nm,1.3s
PESTR **Estremoz** 22.55 278 P P 09 29 16.0 +0.2
PESTR **Estremoz** 22.55 278 *e*P P 09 29 15.8 0.0
PESTR *i* IAmb IAmb 09 29 40.4
comp=Z,40nm,1.4s
KESW **Keswick, Cumbr** 22.62 321 *e*P P 09 29 15.9 -0.4
KESW IAmb IAmb 09 29 17.2
comp=Z,37nm,0.7s
NAO01 **NORSAR Array S** 22.65 346 IAmb IAmb 09 29 22.8
comp=Z,145nm,1.1s
PGAV **Gavieira, Arco** 22.72 287 *e*P P 09 29 19.4 +1.7
PGAV *i* IAmb IAmb 09 29 30.0
comp=Z,63nm,1.3s
PGAV *e*LR LR 09 38 42.6
PGAV *i* IAMs_20 IAMs_20 09 39 10.4
comp=Z,148nm,16.0s
ODD1 **Odda** 22.76 340 *e*P P 09 29 18.9 +1.1
NC405 **NORSAR Array S** 22.76 348 IAmb IAmb 09 29 22.9
comp=Z,101nm,0.7s
NB2 **NORSAR Subarra** 22.78 347 P P 09 29 17.4 -0.6
comp=Z,42nm,0.8s,baz=159,slow=11
NB2 **NORSAR Subarra** 22.78 347 P P 09 29 17.4 -0.6
NB2 AMP 09 29 17.4
comp=Z,42nm,0.8s
NOA **NORSAR Array B** 22.78 347 P P 09 29 17.1 -0.9
comp=Z,45nm,1.0s,baz=156,slow=9.0,SNR=94
NOA PcP PcP 09 33 09.6 +0.5
comp=Z,2.6nm,0.8s,baz=144,slow=2.6,SNR=4.7
NOA LR LR 09 39 02.7
comp=Z,286nm,19.7s,baz=170,slow=39
comp=Z,45nm,1.0s
NBO00 **NORSAR Array S** 22.85 347 P P 09 29 18.6 -0.1
PSARD **Sardoal** 22.87 280 *e*P P 09 29 18.9 -0.3
PSARD *i* IAmb IAmb 09 29 48.7
comp=Z,59nm,1.3s
PARRA **Arraiolos** 22.91 278 *e*P P 09 29 19.0 -0.6
PARRA *i* IAmb IAmb 09 29 34.9
comp=Z,40nm,1.8s
NC303 **NORSAR Array S** 22.93 347 IAmb IAmb 09 29 28.2
comp=Z,94nm,0.9s
PBEJ **Beja** 22.93 276 *e*P P 09 29 18.6 -1.1
PBEJ *i* IAmb IAmb 09 29 28.0
comp=Z,73nm,1.3s
EVO **Evora** 22.94 278 P P 09 29 18.5 -1.3
EVO **Evora** 22.94 278 *e*P P 09 29 19.6 -0.2
EVO *i* IAmb IAmb 09 29 50.1
comp=Z,54nm,1.7s
PVAQ **Vaqueiros** 22.95 275 *e*P P 09 29 20.3 +0.3
PVAQ *i* IAmb IAmb 09 29 20.6
comp=Z,107nm,1.1s
PMTG **Montargil** 23.01 279 *e*P P 09 29 19.4 -1.1
PMTG *i* IAmb IAmb 09 29 40.0
comp=Z,44nm,1.4s
PTO **Porto** 23.02 284 *e*P P 09 29 23.2 +2.5
PTO *i* IAmb IAmb 09 29 26.7
comp=Z,90nm,1.3s
SKAR **Skarslia** 23.03 343 *e*P P 09 29 21.1 +0.5
EKA **Eskdalemuir Ar** 23.05 323 P P 09 29 20.5 -0.4
comp=Z,29nm,0.6s,baz=121,slow=10,SNR=155
EKA PcP PcP 09 33 10.1 +0.4
comp=Z,3.8nm,0.8s,baz=104,slow=2.7,SNR=4.2
EKA ScP ScP 09 36 45.2 -1.8
comp=Z,1.0nm,0.6s,baz=134,slow=2.1,SNR=3.9
EKA LR LR 09 40 08.7
comp=Z,539nm,21.5s,baz=132,slow=41
comp=Z,29nm,0.6s

ESK **Eskdalemuir** 23.07 322 P P 09 29 20.7 -0.3
ESK IAmb IAmb 09 29 24.3
comp=Z,80nm,0.9s
ESK **Eskdalemuir** 23.07 322 *e*P P 09 29 20.8 -0.2
ESK IAmb IAmb 09 29 21.9
comp=Z,51nm,0.6s
ESK **Eskdalemuir** 23.07 322 P P 09 29 20.7 -0.3
ESK pmax pmax
comp=Z,80nm,1.0s
ESK **Eskdalemuir** 23.07 322 ⇑P P 09 29 20.8 -0.2
PCAS **Casmilo, Conde** 23.07 282 *e*P P 09 29 23.0 +1.8
PCAS *i* IAmb IAmb 09 29 42.9
comp=Z,68nm,1.4s
KEF **Keuruu** 23.09 4 *e*P P 09 29 20.2 -0.9
PCVE **Castro Verde** 23.15 275 *e*P P 09 29 21.3 -0.7
PBDV **Barranco-do-Ve** 23.15 274 *e*P P 09 29 22.0 -0.1
PBDV *i* IAmb IAmb 09 29 23.4
comp=Z,156nm,1.0s
WIM **Isle of Man** 23.17 319 *e*P P 09 29 22.0 -0.1
IOMK **Kirk Michael** 23.18 319 *e*P P 09 29 21.5 -0.6
MOE **Montemor** 23.20 278 *e*P P 09 29 24.0 +1.5
MOE *i* IAmb IAmb 09 29 37.3
comp=Z,65nm,1.6s
MESJ **Messejana** 23.24 276 *e*P P 09 29 21.9 -1.1
MESJ IAmb IAmb 09 29 25.3
comp=Z,34nm,1.1s
MESJ **Messejana** 23.24 276 P P 09 29 22.1 -0.8
MESJ **Messejana** 23.24 276 *e*P P 09 29 22.4 -0.5
MESJ *i* IAmb IAmb 09 29 26.8
comp=Z,68nm,1.8s
MESJ **Messejana** 23.24 276 P P 09 29 22.1 -0.8
MESJ pmax pmax
comp=Z,28nm,1.0s
BER **Bergen** 23.50 340 *e*P P 09 29 25.8 +0.5
IWEX **Carrickbyrne,** 23.52 313 P P 09 29 27.7 +2.1
GAL1 **Galloway** 23.55 320 *e*P P 09 29 25.6 -0.3
GAL1 IAmb IAmb 09 29 28.7
comp=Z,15nm,0.8s
ASK **Askoy** 23.62 340 *e*P P 09 29 26.7 +0.2
DSB **Dublin** 23.66 316 P P 09 29 26.5 -0.4
DSB **Dublin** 23.66 316 P P 09 29 30.5 +3.6
DRUM **Mains of Drumt** 23.68 326 *e*P P 09 29 26.8 -0.3
DRUM IAmb IAmb 09 29 31.2
comp=Z,34nm,0.7s
PTEO **Sao Teotonio** 23.70 276 *e*P P 09 29 28.1 +0.6
PTEO *i* IAmb IAmb 09 30 31.9
comp=Z,83nm,1.4s
SUF **Sumiainen** 23.72 5 *e*P P 09 29 26.1 -1.3
PFVI **Vila Bisbo** 23.87 275 *e*P P 09 29 29.3 +0.1
PFVI *i* IAmb IAmb 09 29 47.5
comp=Z,173nm,1.6s
VAF **Ylistaro** 23.88 1 *e*P P 09 29 28.1 -0.8
HYA **Hoyanger** 23.95 342 *e*P P 09 29 29.7 +0.1
ILTH **Belurgan, Co L** 23.98 317 P P 09 29 33.8 +3.8
INVG **Invergeldie, C** 24.09 324 *e*P P 09 29 31.0 0.0
INVG IAmb IAmb 09 29 34.7
comp=Z,27nm,0.7s
DOMB **Dombas** 24.10 346 *e*P P 09 29 31.4 +0.3
CLGH **Cloghs, Cushen** 24.36 320 *e*P P 09 29 34.4 +0.9
CLGH IAmb IAmb 09 29 38.1
comp=Z,23nm,0.8s
KLMR **Klimovskoe** 24.41 22 *e*P P 09 29 32.1 -1.8
KLMR pmax pmax
comp=Z,107nm,1.2s
MCD **Coleburn Disti** 24.43 327 *e*P P 09 29 33.6 -0.5
MCD IAmb IAmb 09 29 34.6
comp=Z,35nm,0.7s
JOF **Joensuu** 24.48 11 *e*P P 09 29 33.6 -0.8
LAWE **Loch Awe, Argy** 24.62 323 *e*P P 09 29 36.2 +0.4
LAWE IAmb IAmb 09 29 38.0
comp=Z,12nm,0.6s
AKN **Aaknes** 24.65 344 *e*P P 09 29 36.1 +0.1
TIO **Tiouine** 24.86 259 P P 09 29 39.3 +0.8
IDGL **Inch Island, C** 25.07 319 P P 09 29 41.2 +1.3
KPL **Plockton** 25.33 325 *e*P P 09 29 42.2 0.0
KPL IAmb IAmb 09 29 42.9
comp=Z,24nm,0.6s
LRW **Lerwick** 25.34 333 *e*P P 09 29 41.4 -0.9
LRW **Lerwick** 25.34 333 ⇑P P 09 29 41.8 -0.4
VAL **Valentia** 25.38 311 P P 09 29 45.7 +3.0
RAYN **Ar Rayn** 25.67 120 P P 09 29 46.5 +0.7
RAYN **Ar Rayn** 25.67 120 *i* P P 09 29 46.1 +0.4
SNR=24
RAYN **Ar Rayn** 25.67 120 P P 09 29 46.5 +0.7
RAYN pmax pmax
comp=Z,22nm,0.9s
RAYN **Ar Rayn** 25.67 120 P P 09 29 46.5 +0.7
RAYN **Ar Rayn** 25.67 120 ⇓P P 09 29 46.8 +1.0
NSS **Namsos** 25.98 351 *e*P P 09 29 47.5 -0.6
LEWI **Lewis, Hebride** 26.32 325 *e*P P 09 29 50.5 -0.8
KIRV **Kirov** 26.39 34 P P 09 29 51.1 -0.6
comp=Z,28nm,0.5s,baz=230,slow=6.7,SNR=11
KIRV LR LR 09 41 15.3
comp=Z,454nm,20.6s,baz=240,slow=39
comp=Z,28nm,0.5s
MOR8 **Moi Rana** 27.31 354 *e*P P 09 30 00.1 0.0
LEIR **Leirfjorden** 27.38 353 *e*P P 09 30 01.1 +0.4
STOK **Stokkvaagen** 27.60 353 *e*P P 09 30 02.7 +0.1
RAUS **Rausandaksla** 27.61 354 *e*P P 09 30 02.1 -0.6
SAKB **Bahrain** 27.67 110 P P 09 30 04.2 +0.6
AKTO **Aktyubinsk** 27.96 54 LR LR 09 43 16.9
comp=Z,628nm,18.0s,baz=278,slow=41
VAGH **Vaagaholmen** 27.97 353 *e*P P 09 30 04.6 -1.2
SHMA **Al-Shehemyia** 28.05 109 P P 09 30 07.6 +0.5
SNR=5.9
SHMA S S 09 34 49.7 -1.5
SMRA **Abu-Samra** 28.61 112 P P 09 30 12.1 +0.1
SNR=6.4
TRNA **Turayna** 28.89 111 P P 09 30 14.8 +0.3
TRNA S S 09 35 02.8 -1.7
STEI **Steigen** 28.99 355 *e*P P 09 30 14.9 0.0
AB31 **Akbulak array** 29.05 57 *e*P P 09 30 15.8 +0.1
ABKAR **Akbulak array** 29.05 57 P P 09 30 15.9 +0.2
APA **Apatity** 29.18 9⇓ *e*P P 09 30 15.4 -1.3
APA *e* 09 31 10.2
APA pmax pmax
comp=Z,10.0nm,1.5s
APA MLR MLR
comp=Z,2μm,5.9s
SLWR **Sila** 29.64 112 P P 09 30 21.4 +0.2
LVZ **Lovozero** 29.66 10⇑ *i*P P 09 30 21.2 +0.2
LVZ pmax pmax
comp=Z,85nm,1.6s
ARTI **Arti** 29.69 42 P P 09 30 20.6 -0.7
ARTI IAmb IAmb 09 30 22.6
comp=Z,50nm,0.9s
ARTI **Arti** 29.69 42 P P 09 30 20.6 -0.7
ARTI pmax pmax
comp=Z,50nm,0.9s
ARTI **Arti** 29.69 42 ⇓P P 09 30 20.6 -0.7
KTK1 **Kautokeino** 29.88 1 *e*P P 09 30 23.0 +0.1
JRN **Qarnain Island** 29.97 109 P P 09 30 24.5 +0.4
ARA0 **ARCESS Array S** 30.47 3 *e*P P 09 30 27.4 -0.7
ARCES **ARCESS Array B** 30.47 3 P P 09 30 27.6 -0.6
comp=Z,15nm,0.6s,baz=190,slow=9.8,SNR=50
ARCES PcP PcP 09 33 26.2 -0.7
comp=Z,1.4nm,0.4s,baz=195,slow=2.7,SNR=7.0
ARCES LR LR 09 45 12.6
comp=Z,71nm,19.0s,baz=184,slow=41
comp=Z,15nm,0.6s
ARCES **ARCESS Array B** 30.47 3 P P 09 30 27.7 -0.4
ARCES **ARCESS Array B** 30.47 3 P P 09 30 27.7 -0.4
ARCES pmax pmax
comp=Z,162nm,2.0s
TRO **Tromso** 30.52 358 *e*P P 09 30 28.3 -0.2
GHWR **Ruwais** 30.57 110 P P 09 30 29.9 +0.5
SVE **Sverdlovsk** 31.01 42 *e*P P 09 30 33.6 +0.6
SVE pmax pmax
comp=E,42nm,1.0s
SVE MLR MLR
comp=E,951nm,12.0s
VADS **Vadso** 31.26 5 *e*P P 09 30 35.5 +0.4
TORD **Torodi Ar. Bea** 31.30 219 P P 09 30 36.1 +0.2
comp=E,29nm,0.7s,baz=27,slow=6.4,SNR=162
TORD PcP PcP 09 33 30.7 +0.7
comp=E,2.8nm,0.9s,baz=124,slow=0.5,SNR=4.0
TORD ScP ScP 09 37 11.7 -0.8
comp=E,2.3nm,0.8s,baz=22,slow=1.6,SNR=8.2
TORD LR LR 09 46 11.0
comp=E,293nm,18.0s,baz=32,slow=42
comp=E,29nm,0.7s
MZWR **Madinat Zayed** 31.42 110 P P 09 30 37.4 +0.4
MZR **Muzera** 31.59 111 P P 09 30 38.9 +0.4
SNR=8.7

UMQ **Umm Al-Quwin** 31.72 105 P P 09 30 38.7 -0.9
SHME **Shamm** 31.80 104 *i* P P 09 30 39.0 -1.2
SNR=9.9
SHME **Shamm** 31.80 104 P P 09 30 39.5 -0.7
SNR=6.4
ASUD **Al Ashush, Dub** 31.98 107 P P 09 30 42.0 +0.1
ASUD **Al Ashush, Dub** 31.98 107 P P 09 30 41.8 -0.1
BANOM **Banah** 31.98 104 *i* P P 09 30 41.0 -0.9
SNR=17
BANOM **Banah** 31.98 104 P P 09 30 41.4 -0.6
NAZ **Nazwa, Dubai** 32.02 106 *i* P P 09 30 42.0 -0.2
SNR=8.5
NAZ **Nazwa, Dubai** 32.02 106 P P 09 30 41.9 -0.4
SNR=8.8
FAQ **Al Faqa, Dubai** 32.11 106 P P 09 30 43.0 -0.1
SNR=5.8
MASF **Masafi** 32.18 105 P P 09 30 43.5 -0.2
SNR=8.8
MSFE **Esma-Masafi** 32.19 105 *i* P P 09 30 43.0 -0.8
SNR=11
MDH **Madha** 32.33 105 *i* P P 09 30 43.8 -1.1
SNR=10
MDH **Madha** 32.33 105 P P 09 30 44.5 -0.4
SNR=6.9
UOSS **Minazif** 32.45 106 P P 09 30 45.4 -0.6
UOSS IAmb IAmb 09 30 48.9
comp=Z,34nm,0.8s
UOSS **Minazif** 32.45 106 *i* P P 09 30 44.8 -1.2
SNR=6.3
UOSS **Minazif** 32.45 106 P P 09 30 45.4 -0.6
UOSS **Minazif** 32.45 106 ⇑P P 09 30 45.0 -1.0
HATD **Hatta, Dubai** 32.47 106 *i* P P 09 30 45.3 -0.8
SNR=17
HATD **Hatta, Dubai** 32.47 106 P P 09 30 45.9 -0.3
SNR=14
ASHO **Ashiyiah** 32.49 106 *i* P P 09 30 45.6 -0.9
SNR=32
ASHO **Ashiyiah** 32.49 106 P P 09 30 46.0 -0.4
SNR=20
ALNE **Al Ain** 32.63 107 *i* P P 09 30 47.3 -0.3
SNR=12
ALNE **Al Ain** 32.63 107 P P 09 30 47.7 +0.1
SNR=24
HRA **Herat** 32.79 86 P P 09 30 49.7 +0.6
HRA IAmb IAmb 09 30 50.9
comp=Z,32nm,1.0s
UMZA **Um Al Zommool** 32.99 110 P P 09 30 50.9 +0.1
SOHO **SOHO** 33.16 106 *i* P P 09 30 52.1 -0.1
SNR=38
SOHO **SOHO** 33.16 106 P P 09 30 52.1 -0.1
FURI **Furi** 33.88 148 LR LR 09 46 32.6
comp=Z,376nm,21.2s,baz=347,slow=39
HOQ **Hoqain** 34.06 107 P P 09 31 00.1 0.0
SNR=9.9
BSY **Bisya** 34.47 108 P P 09 31 03.3 -0.3
SNR=6.8
BIDO **Bidbid** 34.70 106 P P 09 31 05.2 -0.5
SNR=9.4
DOK **Doka** 34.89 117 P P 09 31 07.0 -0.2
SNR=7.7
DOK S S 09 36 36.5 -1.7
SMDO **Samad** 34.92 107 P P 09 31 06.8 -0.8
SNR=11
ABTO **Aybut** 35.19 119 P P 09 31 10.2 +0.2
JMDO **Jabal Madar** 35.36 107 P P 09 31 10.9 -0.4
SNR=8.2
JMIC **Jan Mayen** 35.38 344 P P 09 31 11.2 +0.2
comp=Z,247nm,1.1s,baz=141,slow=2.3,SNR=3.9
comp=Z,247nm,1.1s
BJO1 **Bjornoya** 35.41 359 *e*P P 09 31 13.3 +2.1
BORG **Borgarnes** 35.60 330 LR LR 09 49 14.9
comp=Z,353nm,18.1s,baz=131,slow=42
RBK **Rabkut** 35.71 118 P P 09 31 14.6 +0.2
SNR=7.6
BORK **Borovoye** 35.84 51 P P 09 31 15.7 +0.6
BORK IAmb IAmb 09 31 17.3
comp=Z,25nm,0.8s
BORK **Borovoye** 35.84 51 *d i*P P 09 31 15.4 +0.3
BORK pmax pmax
comp=Z,40nm,0.9s
BORK **Borovoye** 35.84 51 ⇑P P 09 31 15.9 +0.8
WBK **Wadi Bani Khal** 35.87 106 P P 09 31 15.8 +0.2
SNR=5.5
WBK P P 09 31 15.8 +0.2
SNR=5.5
BVAR **Borovoye Array** 35.88 51 P P 09 31 16.5 +1.0
comp=Z,15nm,0.8s,baz=266,slow=5.9,SNR=55
BVAR PcP PcP 09 33 42.0 -0.4
comp=Z,5.0nm,0.6s,baz=256,slow=1.4,SNR=4.6
BVAR ScP ScP 09 37 27.8 -0.3
comp=Z,1.3nm,0.7s,baz=241,slow=2.6,SNR=4.0
BVAR LR LR 09 46 29.6
comp=Z,156nm,20.5s,baz=267,slow=37
comp=Z,15nm,0.8s
DMTO **DMTO** 36.07 117 P P 09 31 17.1 -0.3
SNR=5.8
MHTO **MHTO** 36.10 109 P P 09 31 18.0 +0.3
SNR=28
MHTO S S 09 36 54.5 -2.3
CHM **Chimkent** 36.20 69 *e*P P 09 31 18.5 +0.2
CHM pmax pmax
comp=Z,11nm,0.5s
CHM **Chimkent** 36.20 69 *e*P P 09 31 18.6 +0.2
comp=Z,11nm,0.5s
BRLS **Borolday** 36.23 68 *e*P P 09 31 18.8 +0.2
BRLS **Borolday** 36.23 68 *e*P P 09 31 18.9 +0.2
SHAA **Shahritus** 36.28 77 IAmb IAmb 09 32 09.3
comp=Z,48nm,0.9s
SHAO **Shalim** 36.34 116 *i* P P 09 31 19.1 -0.6
SNR=9.5
SHAO **Shalim** 36.34 116 P P 09 31 19.7 0.0
DQM **DQM** 36.45 111 P P 09 31 20.2 -0.5
SNR=7.0
JLN **Jalan Bani Buh** 36.47 107 P P 09 31 20.8 0.0
JLN P P 09 31 20.8 0.0
IUG **Iuzhnay** 36.54 69 *e*P P 09 31 21.5 +0.1
IUG pmax pmax
comp=Z,42nm,1.0s
IUG **Iuzhnay** 36.54 69 *e*P P 09 31 21.6 +0.1
comp=Z,42nm,1.0s
KK31 **Karatay Array** 36.70 68 *i* P P 09 31 23.2 +0.6
KKAR **Karatay Array** 36.70 68 P P 09 31 23.0 +0.4
KKAR **Karatay Array** 36.70 68 P P 09 31 23.0 +0.4
EDA **Edea** 36.73 199 P P 09 31 24.6 +1.5
DZA **Taraz** 37.33 68 *e*P P 09 31 28.2 +0.2
DZA **Taraz** 37.33 68 *e*P P 09 31 28.3 +0.2
LODK **Lodwar** 37.78 157 P P 09 31 33.0 +1.0
KBL **Kabul** 37.98 82 P P 09 31 34.7 +0.9
KBL IAmb IAmb 09 31 36.1
comp=Z,37nm,0.9s
KBL **Kabul** 37.98 82 P P 09 31 34.7 +0.9
KBL pmax pmax
comp=Z,37nm,1.0s
KBL **Kabul** 37.98 82 P P 09 31 34.7 +0.9
SNR=14
DRK **Karamyk** 38.49 73 IAmb IAmb 09 31 44.7
comp=Z,68nm,1.2s
SCO **Scoresbysund** 38.51 338 IAmb IAmb 09 31 40.4
comp=Z,53nm,0.8s
SCO **Scoresbysund** 38.51 338 *i* P P 09 31 37.2 -0.3
SCO IAmb IAmb 09 31 40.5
comp=Z,47nm,0.7s
SCO **Scoresbysund** 38.51 338 ⇑P P 09 31 39.5 +2.0
BTLS **Baital** 38.84 64 *e*P P 09 31 43.4 +2.7
ARSB **Arslanbob** 38.88 70 IAmb IAmb 09 31 49.2
comp=Z,133nm,1.4s
MANEM **Manem** 38.98 76 IAmb IAmb 09 31 51.5
comp=Z,44nm,0.8s
EKS2 **Erkin-Say** 39.14 68 P P 09 31 44.3 +1.0
SNR=49
SPB2 **Spitsbergen Ar** 39.14 358 IAmb IAmb 09 32 05.3
comp=Z,59nm,1.1s
SPA0 **Spitsbergen Ar** 39.14 358 *e*P P 09 31 43.4 +0.6
SPITS **Spitsbergen Ar** 39.14 358 P P 09 31 43.3 +0.5
comp=Z,9.6nm,0.5s,baz=153,slow=11,SNR=153
SPITS PcP PcP 09 33 51.9 -0.1
comp=Z,11nm,0.7s,baz=134,slow=4.2,SNR=5.9
SPITS LR LR 09 49 34.5
comp=Z,346nm,19.1s,baz=168,slow=39
comp=Z,9.6nm,0.5s
SPITS **Spitsbergen Ar** 39.14 358 P P 09 31 43.6 +0.8
SPITS pmax pmax
comp=Z,112nm,1.3s
SGDS **Sogindy** 39.57 66 *e*P P 09 31 47.1 +0.2
AAK **Ala-Archa** 39.66 67 LR LR 09 51 21.9
comp=Z,134nm,18.9s,baz=276,slow=41

AAK Ala-Arcka 39.66 67 P P 09 31 49.2 +1.4
SNR=16
AAK Ala-Arcka 39.66 67 P P 09 31 48.9 +1.2
AAK Ala-Arcka 39.66 67 *i* P P 09 31 48.6 +0.8
SNR=7.9
AAK Ala-Arcka 39.66 67*d i* P P 09 31 48.8 +1.1
AAK pmax pmax
comp=Z,38nm,1.3s
AAK Ala-Arcka 39.66 67 P P 09 31 49.2 +1.4
AAK Ala-Arcka 39.66 67 ⇓P P 09 31 48.1 +0.3
CHMS Chumysh 39.76 67 P P 09 31 49.4 +0.9
SNR=10
UCH Uchtor 39.77 68 P P 09 31 50.3 +1.3
SNR=25
KBK Karagaybulak 39.98 67 P P 09 31 51.8 +1.4
SNR=15
KBS Kingsbay 40.02 357 *e*P P 09 31 51.2 +1.1
KBS Kingsbay 40.02 357 *i* P P 09 31 50.5 +0.4
DBIC Dimbokro 40.16 223 P P 09 31 51.9 0.0
comp=Z,23nm,0.7s,baz=53,slow=8.7,SNR=35
DBIC LR LR 09 49 44.7
comp=Z,527nm,18.5s,baz=44,slow=38
comp=Z,23nm,0.7s
DBIC Dimbokro 40.16 223 P P 09 31 51.9 0.0
DBIC Dimbokro 40.16 223 P P 09 31 51.9 0.0
DBIC pmax pmax
comp=Z,26nm,0.8s
DBIC Dimbokro 40.16 223 ⇑P P 09 31 51.9 0.0
DBG Daneborg 40.22 344 *i* P P 09 31 51.9 +0.1
DBG IAmb IAmb 09 31 53.9
comp=Z,8.3nm,0.8s
DBG Daneborg 40.22 344 ⇑P P 09 31 53.1 +1.4
TKM2 Tokmak 2 40.38 67 P P 09 31 54.5 +0.8
SNR=8.4
MBAR Mbarara 40.51 166 LR LR 09 49 46.7
comp=Z,282nm,21.4s,baz=356,slow=38
KUU Kurty 40.68 65 *e*P P 09 31 56.3 +0.3
KUU Kurty 40.68 65 *e*P P 09 31 56.3 +0.3
ULHL Ulahol 41.01 68 P P 09 32 00.4 +1.4
SNR=20
KURBB Kurchatov Arra 41.02 55 P P 09 31 59.2 +0.5
comp=Z,36nm,0.8s,baz=283,slow=8.8,SNR=152
KURBB PP PP 09 33 34.4 +1.3
comp=Z,6.3nm,1.0s,baz=280,slow=11,SNR=5.4
KURBB PcP PcP 09 33 57.9 -0.5
comp=Z,14nm,0.9s,baz=281,slow=3.8,SNR=14
KURBB ScP ScP 09 37 47.4 -0.2
comp=Z,1.6nm,0.8s,baz=291,slow=4.3,SNR=3.4
KURBB LR LR 09 53 02.0
comp=Z,186nm,19.0s,baz=168,slow=42
comp=Z,36nm,0.8s
KURK Kurchatov 41.06 54 P P 09 31 59.0 0.0
KURK IAmb IAmb 09 32 00.6
comp=Z,45nm,1.1s
KURK Kurchatov 41.06 54*d i* P P 09 31 58.7 -0.3
KURK pmax pmax
comp=Z,62nm,1.1s
KURK Kurchatov 41.06 54 P P 09 31 59.4 +0.4
TNSS Tian-Shan 41.31 66 *e*P P 09 32 01.6 -0.1
TNSS Tian-Shan 41.31 66 *e*P P 09 32 01.6 -0.1
MDOK Medeo 41.36 66 *e*P P 09 32 02.2 +0.4
MDOK Medeo 41.36 66 *e*P P 09 32 02.2 +0.4
KSH2 Kashi 41.39 72 P P 09 32 02.4 +0.4
KSH2 pP pP 09 32 07.6 +0.7
KSH2 PcP PcP 09 34 00.5 +0.4
KSH2 ScP ScP 09 37 50.0 +0.5
KSH2 pmax pmax
comp=Z,22nm,1.2s
KSH2 pmax pmax
comp=Z,220nm,5.8s
KSH2 LR LR
comp=Z,260nm,15.8s
KSH2 LR LR
comp=Z,330nm,14.1s
KSH2 LR LR
comp=Z,340nm,13.7s
NIL Nilore 41.55 81 P P 09 32 04.7 +1.4
NIL IAmb IAmb 09 32 08.4
comp=Z,78nm,0.8s
NIL Nilore 41.55 81 P P 09 32 04.7 +1.4
NIL pmax pmax
comp=Z,79nm,0.8s
NIL Nilore 41.55 81 P P 09 32 04.8 +1.4
ARXS Arharly 41.66 64 *e*P P 09 32 04.5 +0.4
TDK Taldyqorghan 41.88 63 *e*P P 09 32 06.1 +0.3
TDK pmax pmax
comp=Z,25nm,0.5s
TDK Taldyqorghan 41.88 63 *e*P P 09 32 06.2 +0.3
comp=Z,25nm,0.5s
TARG Taragay, Kyrgy 42.27 68 IAmb IAmb 09 32 18.2
comp=Z,57nm,1.3s
SATY Saty 42.34 66 *e*P P 09 32 10.2 +0.4
SATY Saty 42.34 66 *e*P P 09 32 10.2 +0.4
KPKS Kokpek 42.44 65 *e*P P 09 32 10.7 +0.2
KPKS Kokpek 42.44 65 *e*P P 09 32 10.7 +0.2
PRZ Przheval'sk 42.49 67 IAmb IAmb 09 32 13.9
comp=Z,70nm,1.5s
UZB Uzynbulak 42.76 65 *e*P P 09 32 13.2 0.0
UZB Uzynbulak 42.76 65 *e*P P 09 32 13.3 0.0
PDGK Podgornoye 43.04 65 P P 09 32 15.2 -0.3
SHLS Shalkode 43.07 65 *e*P P 09 32 18.3 +2.6
SHLS Shalkode 43.07 65 *e*P P 09 32 18.3 +2.6
WUS Wushi 43.44 68 IAmb IAmb 09 32 25.6
comp=Z,69nm,1.2s
MAKZ Makanchi 43.91 60 P P 09 32 22.4 +0.1
MAKZ Makanchi 43.91 60 P P 09 32 22.4 +0.1
MAKZ pmax pmax
comp=Z,26nm,0.9s
MAKZ Makanchi 43.91 60 ⇓P P 09 32 22.1 -0.2
MK31 Makanchi Array 44.12 59*d i* P P 09 32 23.7 -0.3
MKAR Makanchi Array 44.12 59 P P 09 32 23.9 -0.1
comp=Z,46nm,0.5s,baz=278,slow=7.2,SNR=538
MKAR PcP PcP 09 34 08.0 -0.9
comp=Z,7.3nm,0.8s,baz=277,slow=3.6,SNR=3.5
MKAR ScP ScP 09 37 59.9 -0.4
comp=Z,2.8nm,0.8s,baz=290,slow=3.9,SNR=7.0
MKAR LR LR 09 53 40.2
comp=Z,254nm,20.6s,baz=292,slow=40
comp=Z,46nm,0.5s
MKAR Makanchi Array 44.12 59 P P 09 32 24.1 +0.1
SUMG Summit 44.15 338 P P 09 32 21.5 -2.8
SUMG Summit 44.15 338 P P 09 32 24.7 +0.4
SUMG Summit 44.15 338 P P 09 32 24.7 +0.4
SUMG pmax pmax
comp=Z,26nm,1.0s
SUMG Summit 44.15 338 *i* P P 09 32 23.9 -0.4
SUMG IAmb IAmb 09 32 27.3
comp=Z,11nm,0.7s
SUMG Summit 44.15 338 ⇑P P 09 32 24.9 +0.6
ZAA0 Zalesovo Array 44.45 49 P P 09 32 26.3 -0.1
ZALV Zalesovo Beam 44.45 49 P P 09 32 26.2 -0.3
comp=Z,80nm,0.6s,baz=276,slow=8.7,SNR=276
ZALV PcP PcP 09 34 09.5 -0.3
comp=Z,6.1nm,0.8s,baz=278,slow=5.7,SNR=2.1
ZALV ScP ScP 09 38 01.0 -0.4
comp=Z,0.5nm,0.4s,baz=258,slow=2.8,SNR=2.2
ZALV LR LR 09 53 38.7
comp=Z,322nm,19.9s,baz=266,slow=40
comp=Z,80nm,0.6s
ZALV Zalesovo Beam 44.45 49 P P 09 32 26.4 0.0
NOR Nord 44.56 353 *i* P P 09 32 27.0 0.0
NOR IAmb IAmb 09 32 28.1
comp=Z,57nm,0.6s
NRIK Noril'sk 45.54 27 P P 09 32 36.2 +1.2
comp=Z,32nm,0.9s,baz=245,slow=4.9,SNR=55
NRIK PcP PcP 09 34 13.2 -0.1
comp=Z,6.4nm,0.8s,baz=297,slow=2.5,SNR=2.7
NRIK LR LR 09 54 26.7
comp=Z,403nm,18.2s,baz=270,slow=40
comp=Z,32nm,0.9s
NRIK Noril'sk 45.54 27 P P 09 32 36.1 +1.2
NRIK IAmb IAmb 09 32 37.1
comp=Z,47nm,1.1s
NRIK Noril'sk 45.54 27*d i* P P 09 32 35.9 +1.0
NRIK pmax pmax
comp=Z,51nm,1.1s
ZSN Zaisan 45.68 58 *e*P P 09 32 36.9 +0.5
ZSN pmax pmax
comp=Z,6.0nm,0.5s
ZSN Zaisan 45.68 58 *e*P P 09 32 36.9 +0.5
comp=Z,6.5nm,0.5s
DGZ Jazzator, Alta 46.81 54*d i* P P 09 32 46.0 +0.6
DGZ pmax pmax
comp=Z,50nm,0.7s
SFJD Kangerlussuaq 47.73 330 LR LR 09 54 19.1
comp=Z,284nm,18.2s,baz=88,slow=38
SFJD Kangerlussuaq 47.73 330 *i* P P 09 32 51.5 -0.5
SFJD IAmb IAmb 09 32 53.7
comp=Z,22nm,0.9s
ILULI Ilulissat 47.85 333 P P 09 32 52.5 -0.5
ILULI IAmb IAmb 09 32 56.1
comp=Z,46nm,1.3s
ILULI Ilulissat 47.85 333 P P 09 32 52.6 -0.5
ILULI pmax pmax
comp=Z,47nm,1.3s
SAATT Saattut 48.03 335 *i* P P 09 32 54.5 +0.2
SAATT IAmb IAmb 09 32 55.9
comp=Z,22nm,0.8s
SAQQ Saqqaq 48.14 334 *i* P P 09 32 55.3 +0.1
SAQQ IAmb IAmb 09 32 59.3
comp=Z,23nm,0.9s
NEEM North Greenlan 48.30 344 *i* P P 09 32 57.3 +0.5
NEEM IAmb IAmb 09 32 58.7
comp=Z,18nm,0.6s
NUUG Nuugaatsiaq 48.54 336 *i* P P 09 32 57.9 -0.4
NUUG IAmb IAmb 09 32 59.0
comp=Z,13nm,0.5s
WMQ Urumqi 48.60 62 ⇓P P 09 33 00.0 +0.7
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ pmax pmax
comp=Z,130nm,3.8s
WMQ LR LR
comp=Z,150nm,17.3s
NIAQ Niaqornat 48.71 335 *i* P P 09 32 59.3 -0.3
NIAQ IAmb IAmb 09 33 04.2
comp=Z,73nm,1.3s
GDH Godhavn 48.72 333 *i* P P 09 32 59.3 -0.4
GDH IAmb IAmb 09 33 03.5
comp=Z,37nm,0.8s
UPNV Upernavik 49.42 337 *i* P P 09 33 05.5 +0.5
UPNV IAmb IAmb 09 33 06.7
comp=Z,14nm,0.8s
KULLO Kullorsuaq 49.66 340 *i* P P 09 33 07.2 +0.3
KULLO IAmb IAmb 09 33 08.9
comp=Z,15nm,0.6s
TULEG Thule 52.34 343 IAmb IAmb 09 33 33.0
comp=Z,34nm,0.9s
TULEG Thule 52.34 343 *i* P P 09 33 27.5 +0.6
TULEG IAmb IAmb 09 33 32.6
comp=Z,38nm,1.0s
TULEG Thule 52.34 343 ⇑P P 09 33 27.2 +0.3
KNGR Kungurtug, Tuv 52.79 51 ⇑*i* P P 09 33 31.8 +0.9
KNGR pmax pmax
comp=Z,37nm,1.2s
MOY Mondy 54.50 49 *e*P P 09 33 43.5 +0.1
MOY pmax pmax
comp=Z,31nm,1.9s
LSZ Lusaka 54.55 172 LR LR 09 58 08.7
comp=Z,226nm,19.7s,baz=340,slow=37
DRLN Deer Lake 55.06 308 P P 09 33 48.2 +1.0
TLY Talaya 56.04 48 P P 09 33 55.1 +0.8
TLY IAmb IAmb 09 33 56.9
comp=Z,34nm,0.9s
TLY Talaya 56.04 48*d i* P P 09 33 55.1 +0.8
TLY pmax pmax
comp=Z,64nm,1.3s
TLY Talaya 56.04 48 P P 09 33 56.0 +1.7
IRK Irkutsk 56.19 47 *e*P P 09 33 54.5 -0.9
IRK pmax pmax
comp=Z,59nm,2.6s
ZAK Zakamensk 56.32 50 *e*P P 09 33 56.7 +0.3
ZAK pmax pmax
comp=Z,36nm,1.1s
GOMU GeErMu 56.60 68 P P 09 33 58.2 -0.8
GOMU PcP PcP 09 34 55.0 -0.4
GOMU pmax pmax
comp=Z,11nm,0.8s
LSA Lhasa 56.96 77 P P 09 33 57.5 -4.2
LSA pmax pmax
comp=Z,55nm,0.7s
LSA Lhasa 56.96 77 P P 09 34 01.7 0.0
KUQ Kuujjuuaa 57.71 321 IAmb IAmb 09 34 10.7
comp=Z,29nm,1.3s
TSUM Tsumeb 58.21 184 LR LR 10 01 50.2
comp=Z,284nm,18.9s,baz=331,slow=39
SCHQ Schefferville 58.22 317 P P 09 34 10.2 +0.5
comp=Z,24nm,0.6s,baz=66,slow=5.3,SNR=43
SCHQ LR LR 10 01 00.3
comp=Z,102nm,18.5s,baz=46,slow=38
comp=Z,24nm,0.6s
ILON Igloolik, Nuna 58.31 336 IAmb IAmb 09 34 14.5
comp=Z,47nm,1.1s
TIXI Tiksi 58.43 21 LR LR 10 02 56.8
comp=Z,2μm,18.1s,baz=4.5,slow=40
TIXI Tiksi 58.43 21 P P 09 34 11.1 +0.3
TIXI Tiksi 58.43 21 ⇓*i* P P 09 34 10.9 +0.1
TIXI pmax pmax
comp=Z,15nm,1.1s
GTA2 Gaotai 58.60 63 P P 09 34 12.3 -0.5
GTA2 pmax pmax
comp=Z,28nm,0.9s
GTA2 LR LR
comp=Z,220nm,15.1s
GTA2 LR LR
comp=Z,200nm,15.9s
GTA2 LR LR
comp=Z,290nm,18.7s
RES Resolute Bay 59.00 344 LR LR 10 01 15.6
comp=Z,102nm,19.1s,baz=9.5,slow=38
RES Resolute Bay 59.00 344 P P 09 34 15.8 +1.0
RES IAmb IAmb 09 34 21.4
comp=Z,18nm,1.0s
RES Resolute Bay 59.00 344 P P 09 34 15.8 +1.0
RES pmax pmax
comp=Z,18nm,1.0s
RES Resolute Bay 59.00 344 ⇓P P 09 34 15.9 +1.2
BOD Bodaibo 59.10 39 *e*P P 09 34 14.6 -1.1
BOD pmax pmax
comp=Z,21nm,1.0s
SONM Songino Array 59.23 51 P P 09 34 17.3 +0.3
comp=Z,20nm,0.9s,baz=288,slow=8.5,SNR=86
SONM ScP ScP 09 39 05.3 -0.1
comp=Z,0.7nm,0.7s,baz=274,slow=3.8,SNR=3.1
SONM LR LR 10 02 15.4
comp=Z,252nm,18.6s,baz=334,slow=38
comp=Z,20nm,0.9s
SONM Songino Array 59.23 51 P P 09 34 17.0 0.0
SONM IAmb IAmb 09 34 18.1
comp=Z,34nm,1.1s
SONM Songino Array 59.23 51 P P 09 34 17.0 0.0
SONM pmax pmax
comp=Z,33nm,1.1s
ULN Ulaanbaatar 59.61 51 P P 09 34 20.0 +0.3
ULN IAmb IAmb 09 34 20.7
comp=Z,20nm,0.8s
ULN Ulaanbaatar 59.61 51*d i* P P 09 34 19.7 +0.1
ULN pmax pmax
comp=Z,25nm,0.9s
ULN Ulaanbaatar 59.61 51 P P 09 34 19.6 0.0
SHL Shillong 59.62 80 P P 09 34 18.5 -1.6
SHL Shillong 59.62 80 P P 09 34 18.5 -1.6
SHL pmax pmax
comp=Z,72nm,1.3s
SHL Shillong 59.62 80 P P 09 34 18.5 -1.6
SNR=16
BROLN Tlhalogang 60.23 174 *i* P P 09 34 24.9 +0.9
GRTLG Ghanzi 60.25 180 IAmb IAmb 09 35 00.9
comp=Z,52nm,1.8s
GRTLG Ghanzi 60.25 180 *i* P P 09 34 25.2 +1.1
MALK Mahakanadarawa 60.88 104 P P 09 34 26.9 -1.7
LMN Caledonia Moun 60.97 307 IAmb IAmb 09 34 32.6
comp=Z,38nm,1.1s
BRDH Bariadhala 60.99 83 LR LR 10 07 06.8
comp=Z,126nm,18.1s,baz=78,slow=42
BATG Bathurst New B 61.08 309 IAmb IAmb 09 34 34.2
comp=Z,30nm,0.9s
PALK Pallekele 61.73 105 LR LR 10 05 31.9
comp=Z,93nm,18.2s,baz=318,slow=40
PALK Pallekele 61.73 105 P P 09 34 33.9 -0.5
PALK IAmb IAmb 09 34 40.9
comp=Z,30nm,0.9s
PALK Pallekele 61.73 105 P P 09 34 33.0 -1.3
PALK Pallekele 61.73 105 P P 09 34 33.9 -0.5
PALK pmax pmax
comp=Z,30nm,1.0s
PALK Pallekele 61.73 105 P P 09 34 33.8 -0.5
PALK P P 09 34 33.8 -0.5
PALK Pallekele 61.73 105 P P 09 34 33.2 -1.1
LPHEP Lephephe 62.37 175 P P 09 34 39.5 +1.1
LPHEP Lephephe 62.37 175 *i* P P 09 34 39.3 +0.9
LZDM Lanzhou Array 63.03 64 P P 09 34 42.7 -0.5
comp=Z,7.4nm,0.6s,baz=291,slow=4.6,SNR=22
LZDM LR LR 10 07 50.3
comp=Z,63nm,19.3s,baz=345,slow=42
comp=Z,7.4nm,0.6s
LZH Lanzhou 63.07 64 *e*P P 09 34 43.5 +0.2
LZH sP sP 09 34 53.9 +3.7
LZH pmax pmax
comp=Z,30nm,1.2s
LZH LR LR
comp=Z,150nm,13.7s
LZH LR LR
comp=Z,210nm,14.4s
LZH LR LR
comp=Z,310nm,14.8s
E62A Clayton Lake 63.47 310 IAmb IAmb 09 34 49.9
comp=Z,30nm,1.1s
YAK Yakutsk 63.85 30 LR LR 10 05 06.8
comp=E,160nm,19.1s,baz=299,slow=38
YAK Yakutsk 63.85 30 *e*P P 09 34 47.5 -0.2
YAK pmax pmax
comp=Z,12nm,0.7s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.0s
LBTB Lobatse 64.00 176 LR LR 10 04 51.5
comp=E,224nm,20.4s,baz=356,slow=38
LBTB Lobatse 64.00 176 P P 09 34 50.7 +1.5
LBTB Lobatse 64.00 176 P P 09 34 50.7 +1.5
LBTB pmax pmax
comp=Z,61nm,1.8s
PKME Peaks-Kenny Pk 64.01 308 ⇓P P 09 34 52.9 +3.8
BTO2 Baotou 64.79 57 *e*P P 09 34 54.0 -0.5
BTO2 S S 09 43 32.8 -2.1
BTO2 pmax pmax
comp=Z,30nm,0.9s
BTO2 pmax pmax
comp=Z,270nm,3.9s
BTO2 LR LR
comp=Z,320nm,4.7s
BTO2 LR LR
comp=Z,350nm,5.7s
BTO2 LR LR
comp=Z,240nm,5.7s
TNCH TengChong 64.97 77 ⇓P P 09 34 55.4 -0.5
TNCH sP pP 09 35 01.5 +0.5
TNCH pmax pmax
comp=Z,40nm,0.9s
TNCH LR LR
comp=Z,2μm,22.6s
TNCH LR LR
comp=Z,1μm,30.3s
TNCH LR LR
comp=Z,390nm,38.2s
VOI Vohitsoka 65.24 154 P P 09 35 00.9 +3.5
CD2 Chengdu 65.69 69 P P 09 34 59.7 -0.7
CD2 S S 09 43 43.6 -2.4
CD2 pmax pmax
comp=Z,70nm,0.7s
CD2 pmax pmax
comp=Z,110nm,4.8s
BLKN Baker Lake 65.78 335 IAmb IAmb 09 35 04.0
comp=Z,18nm,0.8s
HHC Hu-ho-hao-te 65.83 56 ⇑*i* P P 09 35 01.2 0.0
HHC pP pP 09 35 05.4 -0.9
HHC pmax pmax
comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,140nm,7.6s
HHC LR LR
comp=Z,170nm,13.3s
HHC LR LR
comp=Z,230nm,12.3s
HHC LR LR
comp=Z,270nm,12.3s
HILR Hailar Array B 66.11 45 P P 09 35 03.0 +0.2
comp=Z,3.9nm,0.8s,baz=253,slow=1.5,SNR=8.7
comp=Z,3.9nm,0.8s
HIA Hailar 66.26 45 IAmb IAmb 09 35 05.0
comp=Z,24nm,1.0s
HIA Hailar 66.26 45 P P 09 35 03.7 0.0
PZH PanZhiHua 66.59 74 P P 09 35 05.0 -1.3
PZH pmax pmax
comp=Z,8.0nm,1.0s
PZH pmax pmax
comp=Z,170nm,4.3s
TRQ Mont Tremblant 66.66 311 IAmb IAmb 09 35 10.7
comp=Z,21nm,1.1s
A36M Sachs Harbour 66.66 349 P P 09 35 06.8 +1.0
baz=28,SNR=82
XLT XiLinHaoTe 67.05 51 *e*P P 09 35 09.1 +0.2
XLT pmax pmax
comp=Z,19nm,1.0s
XLT LR LR
comp=Z,230nm,11.7s
XLT LR LR
comp=Z,370nm,14.7s
VLDQ Val d'Or 67.28 314 P P 09 35 12.6 +2.5
VLDQ IAmb IAmb 09 35 15.2
comp=Z,30nm,1.3s
LONY Lake Ozonia 67.54 310 IAmb IAmb 09 35 16.8
comp=Z,25nm,1.2s
BOSA Boshof 67.56 176 P P 09 35 13.2 +1.1
comp=Z,7.5nm,0.6s,baz=3.8,slow=6.8,SNR=14
BOSA LR LR 10 07 08.4
comp=Z,305nm,19.2s,baz=16,slow=38
comp=Z,7.5nm,0.6s
BOSA Boshof 67.56 176 P P 09 35 13.4 +1.3
BOSA IAmb IAmb 09 35 22.9
comp=Z,37nm,1.3s
BOSA Boshof 67.56 176 P P 09 35 13.4 +1.3
BOSA pmax pmax
comp=Z,37nm,1.3s
ZEA Zeya 67.60 38 *e*P P 09 35 21.0 +8.9
ZEA *e*S S 09 44 25.3 +17
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ZEA smax smax
comp=E,300nm,16.2s
ZEA MLR MLR
comp=E,200nm,15.0s
ZEA MLR MLR
comp=N,100nm,10.0s
ZEA MLR MLR
comp=Z,300nm,14.0s
XAN Xi'an 67.69 64 ⇓P P 09 35 12.3 -0.7
XAN pmax pmax
comp=Z,29nm,1.2s
XAN pmax pmax
comp=Z,290nm,4.4s
KMI2 Kunming 68.09 75 P P 09 35 14.9 -1.1
KMI2 sP pP 09 35 21.5 +0.5
KMI2 pmax pmax
comp=Z,15nm,1.0s
FCC Fort Churchill 68.75 330 IAmb IAmb 09 35 24.1
comp=Z,19nm,0.9s
CHTO Chiang Mai 68.80 83 P P 09 35 18.6 -1.5
CHTO IAmb IAmb 09 35 20.4
comp=Z,18nm,1.0s
CHTO Chiang Mai 68.80 83 P P 09 35 18.3 -1.9
CHTO Chiang Mai 68.80 83 P P 09 35 18.7 -1.5
CHTO pmax pmax
comp=Z,18nm,1.0s
CHTO Chiang Mai 68.80 83 P P 09 35 19.5 -0.7
CHTO Chiang Mai 68.80 83 P P 09 35 19.0 -1.2
comp=Z,19nm,1.0s
C36M Paulatuk 68.83 348 IAmb IAmb 09 35 26.3
comp=Z,26nm,0.9s
C36M Paulatuk 68.83 348 P P 09 35 20.1 +0.7
baz=28,SNR=26
CMAR Chiang Mai Arr 69.00 83 P P 09 35 20.1 -1.3
comp=Z,4.8nm,0.7s,baz=304,slow=7.7,SNR=42
CMAR LR LR 10 13 38.9
comp=Z,38nm,18.2s,baz=300,slow=43
comp=Z,4.8nm,0.7s
CMAR Chiang Mai Arr 69.00 83 P P 09 35 20.5 -0.9
CMAR Chiang Mai Arr 69.00 83 P P 09 35 20.5 -0.9
BJT Baijiatuan 69.24 55 P P 09 35 21.7 -0.9
BJI2 Beijing 69.24 55 P P 09 35 21.3 -1.3
BJI2 pP pP 09 35 26.3 -1.4
BJI2 S S 09 44 24.3 -3.9
BJI2 pmax pmax
comp=Z,6.0nm,1.2s
BJI2 pmax pmax
comp=Z,58nm,6.2s
BJI2 LR LR
comp=Z,110nm,11.8s

BJI2 LR LR
comp=Z,85nm,15.1s
BJI2 LR LR
comp=Z,190nm,17.6s
NBPV Pedro Velho 69.32 243 *e*P **P 09 35 24.8 +1.5**
RCBR Riachuelo 69.32 244 LR LR 10 06 44.8
comp=Z,82nm,18.6s,baz=72,slow=37
RCBR Riachuelo 69.32 244 P **P 09 35 24.5 +1.1**
RCBR IAmb IAmb 09 35 33.0
comp=Z,20nm,0.9s
RCBR Riachuelo 69.32 244 P **P 09 35 24.5 +1.1**
RCBR pmax pmax
comp=Z,20nm,0.9s
HNS HongShan 69.76 58 ⇑P **P 09 35 25.5 -0.3**
HNS pmax pmax
comp=Z,15nm,1.1s
HEH HeiHe 69.77 41 *e*P **P 09 35 24.9 -0.7**
HEH pmax pmax
comp=Z,18nm,0.9s
HEH LR LR
comp=Z,380nm,13.0s
HEH LR LR
comp=Z,430nm,12.4s
HEH LR LR
comp=Z,850nm,13.3s
A21K Barrow 69.77 359 P **P 09 35 26.2 +0.9**
baz=1.6
BILL Bilibino 69.85 13 P **P 09 35 26.0 +0.1**
BILL IAmb IAmb 09 35 27.2
comp=Z,30nm,0.9s
BILL Bilibino 69.85 13 *d i*P **P 09 35 26.1 +0.2**
BILL pmax pmax
comp=Z,38nm,1.0s
LYN LuoYang 69.85 62 P **P 09 35 25.8 -0.7**
LYN pmax pmax
comp=Z,14nm,0.8s
SADO Sadowa 70.14 312 LR LR 10 05 13.7
comp=Z,114nm,20.3s,baz=136,slow=35
ENH Enshi 70.17 67 IAmb IAmb 09 35 28.4
comp=Z,26nm,0.7s
ENH Enshi 70.17 67 P **P 09 35 26.9 -1.6**
GYA Guiyang 70.27 72 ⇑P **P 09 35 28.3 -1.0**
GYA pmax pmax
comp=Z,20nm,1.0s
D28M Stokes Point 70.80 353 P **P 09 35 33.3 +1.7**
baz=16,SNR=10
SEY Seymchan 70.91 21 LR LR 10 10 34.7
comp=Z,471nm,18.6s,baz=332,slow=39
SEY Seymchan 70.91 21 ⇓ *i*P **P 09 35 33.2 +0.8**
SEY pmax pmax
comp=Z,9.0nm,0.8s
C27K Jago River 70.94 355 IAmb IAmb 09 35 39.6
comp=Z,24nm,0.9s
C27K Jago River 70.94 355 P **P 09 35 33.9 +1.4**
baz=12
D27M Malcolm River 71.09 353 P **P 09 35 34.8 +1.2**
baz=14
INK Inuvik 71.18 350 P **P 09 35 34.2 +0.2**
comp=Z,6.2nm,0.5s,baz=18,slow=7.0,SNR=74
comp=Z,6.2nm,0.5s
INK Inuvik 71.18 350 P **P 09 35 34.4 +0.4**
INK IAmb IAmb 09 35 40.0
comp=Z,21nm,1.2s
INK Inuvik 71.18 350 P **P 09 35 34.4 +0.4**
INK pmax pmax
comp=Z,21nm,1.3s
INK Inuvik 71.18 350 P **P 09 35 34.8 +0.8**
baz=20,SNR=9.3
SUR Sutherland 71.22 181 LR LR 10 09 34.6
comp=Z,404nm,18.8s,baz=352,slow=38
D25K Kavik River 71.42 355 IAmb IAmb 09 35 42.3
comp=Z,22nm,1.1s
D25K Kavik River 71.42 355 P **P 09 35 36.7 +1.3**
baz=9.9
E28M Babbage River 71.58 353 IAmb IAmb 09 35 43.3
comp=Z,28nm,1.2s
E28M Babbage River 71.58 353 P **P 09 35 37.8 +1.4**
baz=15
E29M Blow River 71.62 352 P **P 09 35 37.8 +1.2**
baz=17
D23K Nanushuk River 71.99 357 IAmb IAmb 09 35 46.1
comp=Z,39nm,1.1s
D23K Nanushuk River 71.99 357 P **P 09 35 40.5 +1.6**
baz=6.4
C19K Lookout Ridge 72.01 0 IAmb IAmb 09 35 46.3
comp=Z,26nm,1.1s
C19K Lookout Ridge 72.01 0 P **P 09 35 40.5 +1.4**
baz=359
F31M Tsiigehtchic 72.03 350 P **P 09 35 39.7 +0.6**
baz=20,SNR=47
TIA Tai'an 72.03 58 P **P 09 35 38.7 -1.0**
TIA pmax pmax
comp=Z,19nm,1.1s
E46A Sault Ste Mari 72.08 316 IAmb IAmb 09 35 44.5
comp=Z,33nm,1.3s
F30M Barrier River 72.13 351 IAmb IAmb 09 35 58.3
comp=Z,18nm,0.8s
F30M Barrier River 72.13 351 P **P 09 35 40.5 +0.8**
baz=18
NBPS Pedro II - PI 72.27 249 *e*P **P 09 35 42.8 +1.4**
TOLK Toolik Lake Re 72.27 357 P **P 09 35 41.8 +1.2**
TOLK IAmb IAmb 09 36 01.6
comp=Z,25nm,0.9s
TOLK Toolik Lake Re 72.27 357 P **P 09 35 42.0 +1.4**
baz=7.3,SNR=12
D20K Etivluk River 72.39 359 IAmb IAmb 09 35 44.6
comp=Z,33nm,0.9s
D20K Etivluk River 72.39 359 P **P 09 35 42.7 +1.4**
baz=1.5
C18K Utukok River 72.45 1 P **P 09 35 42.9 +1.2**
baz=358
BNX BinXian 72.53 45 ⇑P **P 09 35 42.1 -0.4**
BNX pmax pmax
comp=Z,20nm,0.9s
E25K Arctic Village 72.56 355 P **P 09 35 43.5 +1.2**
baz=10,SNR=12
F28M Old Crow 72.57 353 IAmb IAmb 09 35 47.4
comp=Z,16nm,0.8s
F28M Old Crow 72.57 353 P **P 09 35 43.1 +0.7**
baz=15,SNR=22
G31M Satah River 72.59 350 IAmb IAmb 09 35 46.4
comp=Z,20nm,0.9s
G31M Satah River 72.59 350 P **P 09 35 42.8 +0.4**
baz=20
KLR Kul'dur 72.60 40 LR LR 10 11 03.3
comp=Z,40nm,18.7s,baz=310,slow=39
KLR Kul'dur 72.60 40 *de*P **P 09 35 42.2 -0.7**
KLR pmax pmax
comp=Z,16nm,1.5s
E21K Killik River 72.62 358 IAmb IAmb 09 37 37.3
comp=Z,16nm,0.5s
E21K Killik River 72.62 358 P **P 09 35 43.7 +1.0**
baz=3.7
YKAW3 Yellowknife Wh 72.63 340 IAmb IAmb 09 35 50.1
comp=Z,27nm,1.0s
CN2 Changchun 72.63 47 P **P 09 35 42.6 -0.5**
CN2 pP pP 09 35 47.4 -0.8
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 LR LR
comp=Z,300nm,12.0s
CN2 LR LR
comp=Z,300nm,12.0s
CN2 LR LR
comp=Z,400nm,12.0s
YKAW1 Yellowknife Wh 72.66 340 IAmb IAmb 09 35 50.2
comp=Z,22nm,1.1s
YKA Yellowknife Ar 72.69 340 P **P 09 35 43.0 -0.1**
comp=Z,5.2nm,0.7s,baz=116,slow=3.1,SNR=88
YKA LR LR 10 09 43.7
comp=Z,166nm,18.1s,baz=26,slow=38
comp=Z,5.2nm,0.7s
YKA Yellowknife Ar 72.69 340 P **P 09 35 43.7 +0.6**
E24K Your Creek 72.78 356 P **P 09 35 44.7 +1.1**
baz=8.1
E23K Chandalar 72.85 357 IAmb IAmb 09 35 47.2
comp=Z,76nm,1.8s
E23K Chandalar 72.85 357 P **P 09 35 45.4 +1.3**
baz=7.2
F26K Sheenjek River 72.87 354 IAmb IAmb 09 35 51.5
comp=Z,26nm,1.3s
F26K Sheenjek River 72.87 354 P **P 09 35 45.7 +1.5**
baz=12
RDOG Red Dog Mine 73.01 2 IAmb IAmb 09 35 47.2
comp=Z,32nm,1.0s
RDOG Red Dog Mine 73.01 2 P **P 09 35 45.9 +0.9**
baz=356,SNR=14

MA2 Magadan 73.05 24 LR LR 10 11 47.2
comp=Z,244nm,18.3s,baz=310,slow=39
MA2 Magadan 73.05 24 P **P 09 35 46.0 +0.7**
MA2 IAmb IAmb 09 35 58.5
comp=Z,22nm,0.8s
MA2 Magadan 73.05 24 P **P 09 35 46.1 +0.7**
MA2 Magadan 73.05 24 ⇓ *e*P **P 09 35 45.7 +0.4**
MA2 pmax pmax
comp=Z,23nm,0.8s
G29M Pine Creek 73.06 352 IAmb IAmb 09 35 51.6
comp=Z,38nm,0.9s
G29M Pine Creek 73.06 352 P **P 09 35 46.1 +0.8**
baz=16
F25K Christian Rive 73.08 355 P **P 09 35 46.8 +1.3**
baz=10
BMAR Burnt Mountain 73.17 354 P **P 09 35 47.8 +1.8**
DL2 Dalian 73.32 53 P **P 09 35 46.3 -1.0**
DL2 S **SKiKP 09 45 17.6 -0.5**
DL2 pmax pmax
comp=Z,23nm,0.8s
DL2 LR LR
comp=Z,370nm,16.9s
DL2 LR LR
comp=Z,380nm,19.4s
DL2 LR LR
comp=Z,440nm,16.5s
D17K Noatak River 73.37 2 P **P 09 35 48.2 +1.1**
baz=356,SNR=60
R58B Mineral 73.40 306 IAmb IAmb 09 35 53.0
comp=Z,29nm,1.4s
EPYK Eagle Plains 73.42 351 IAmb IAmb 09 35 53.5
comp=Z,63nm,1.6s
EPYK Eagle Plains 73.42 351 P **P 09 35 48.1 +0.6**
baz=18
WHN Wuhan 73.45 64 P **P 09 35 50.9 +2.7**
G27K Doyon Strip 73.53 353 P **P 09 35 49.5 +1.4**
baz=14
Q56A Snyder Ridge, 73.57 307 IAmb IAmb 09 35 53.6
comp=Z,32nm,1.0s
G26K Porcupine Rive 73.58 354 IAmb IAmb 09 35 55.8
comp=Z,52nm,1.5s
G26K Porcupine Rive 73.58 354 P **P 09 35 50.2 +2.0**
baz=12
H31M Peel River 73.66 350 IAmb IAmb 09 35 55.2
comp=Z,28nm,1.2s
H31M Peel River 73.66 350 P **P 09 35 49.4 +0.6**
baz=19,SNR=7.2
E19K Redstone River 73.66 359 P **P 09 35 50.1 +1.3**
baz=1.0
GULI GuiLin 73.67 71 P **P 09 35 48.8 -0.7**
GULI pmax pmax
comp=Z,19nm,1.2s
E18K Tukpahlearik C 73.69 1 IAmb IAmb 09 35 51.4
comp=Z,36nm,1.0s
E18K Tukpahlearik C 73.69 1 P **P 09 35 50.2 +1.2**
baz=358,SNR=29
COLD Coldfoot 73.71 357 IAmb IAmb 09 37 17.7
comp=Z,18nm,0.6s
COLD Coldfoot 73.71 357 P **P 09 35 50.3 +1.2**
baz=6.7,SNR=26
CNSH ChangSha 73.83 67 P **P 09 35 49.6 -0.8**
CNSH pmax pmax
comp=Z,30nm,0.8s
F21K Alatna River 73.83 358 IAmb IAmb 09 35 57.0
comp=Z,22nm,0.8s
F21K Alatna River 73.83 358 P **P 09 35 51.5 +1.6**
baz=4.1
E17K Hotham Inlet 74.01 1 P **P 09 35 51.6 +0.8**
baz=357,SNR=17
F20K Avaraart Lake 74.06 359 P **P 09 35 52.3 +1.2**
baz=2.2
FYU Fort Yukon 74.07 355 IAmb IAmb 09 35 54.5
comp=Z,68nm,1.6s
H27K Steamboat Moun 74.08 353 P **P 09 35 52.8 +1.4**
baz=14
G24K Hadweenzic Riv 74.09 355 IAmb IAmb 09 37 13.7
comp=Z,20nm,0.8s
G24K Hadweenzic Riv 74.09 355 P **P 09 35 52.9 +1.6**
baz=8.9,SNR=9.9
WRGLY Wrigley 74.14 344 IAmb IAmb 09 35 57.2
comp=Z,42nm,1.1s
WRGLY Wrigley 74.14 344 P **P 09 35 53.2 +1.6**
baz=28,SNR=19
G23K Bananza Creek 74.21 357 P **P 09 35 53.3 +1.2**
baz=6.8,SNR=8.2
F19K Shaleruckik Mo 74.29 360 IAmb IAmb 09 35 55.0
comp=Z,37nm,1.0s
F19K Shaleruckik Mo 74.29 360 P **P 09 35 53.3 +0.9**
baz=0.6,SNR=42
MDJ Mudanjiang 74.44 45 P **P 09 35 54.5 +0.7**
MDJ Mudanjiang 74.44 45 P **P 09 35 53.6 -0.2**
MDJ pmax pmax
comp=Z,13nm,1.3s
I30M Mount Dempster 74.48 351 IAmb IAmb 09 35 58.4
comp=Z,23nm,0.7s
I30M Mount Dempster 74.48 351 P **P 09 35 54.5 +0.7**
baz=18,SNR=26
MDP Montagnes des 74.50 264 LR LR 10 08 16.4
comp=Z,37nm,18.7s,baz=306,slow=35
F18K Selawik 74.52 0 P **P 09 35 54.8 +1.0**
baz=359,SNR=27
O52A Adamsville 74.53 309 IAmb IAmb 09 35 58.9
comp=Z,40nm,1.2s
G21K Allakaket 74.54 358 IAmb IAmb 09 36 00.9
comp=Z,28nm,0.9s
G21K Allakaket 74.54 358 P **P 09 35 55.3 +1.4**
baz=4.0
I29M Ogilvie Camp, 74.58 351 IAmb IAmb 09 35 59.1
comp=Z,30nm,1.0s
I29M Ogilvie Camp, 74.58 351 P **P 09 35 55.2 +1.0**
baz=16,SNR=13
F17K Baldwin Pennin 74.66 1 IAmb IAmb 09 35 56.8
comp=Z,26nm,0.9s
F17K Baldwin Pennin 74.66 1 P **P 09 35 55.8 +1.2**
baz=358,SNR=20
FFC Flin Flon 74.68 330 P **P 09 35 55.5 +0.5**
FFC Flin Flon 74.68 330 P **P 09 35 55.5 +0.5**
FFC pmax pmax
comp=Z,13nm,0.9s
I28M Miner Creek 74.68 352 IAmb IAmb 09 35 59.4
comp=Z,27nm,1.2s
I28M Miner Creek 74.68 352 P **P 09 35 55.5 +0.6**
baz=15
I27K Kandik River 74.70 353 P **P 09 35 56.3 +1.4**
baz=14
EPLO Experimental L 74.72 322 IAmb IAmb 09 35 59.6
comp=Z,24nm,1.0s
H24K Noodor Dome 74.97 355 P **P 09 35 57.9 +1.4**
baz=8.5,SNR=5.9
G19K Purcell Mounta 74.98 359 IAmb IAmb 09 36 03.5
comp=Z,31nm,0.8s
G19K Purcell Mounta 74.98 359 P **P 09 35 57.9 +1.4**
baz=1.1
P52A Coning 75.01 309 IAmb IAmb 09 36 05.7
comp=Z,21nm,1.0s
H22K Ishtalitna Cre 75.09 357 P **P 09 35 59.3 +2.1**
baz=5.7
J30M Hart River 75.09 350 IAmb IAmb 09 36 03.0
comp=Z,47nm,1.0s
J30M Hart River 75.09 350 P **P 09 35 58.6 +1.3**
baz=18,SNR=44
PRP Porcupine Dome 75.12 354 P **P 09 35 58.9 +1.4**
baz=10,SNR=6.5
G18K Tagagawik 75.23 0 IAmb IAmb 09 36 00.4
comp=Z,42nm,1.1s
G18K Tagagawik 75.23 0 P **P 09 35 59.2 +1.3**
baz=360
TNA Tin City 75.31 4 IAmb IAmb 09 36 00.4
comp=Z,33nm,1.0s
TNA Tin City 75.31 4 P **P 09 35 59.4 +1.0**
baz=352,SNR=20
F15K North Star Dit 75.31 3 IAmb IAmb 09 36 00.8
comp=Z,43nm,1.1s
F15K North Star Dit 75.31 3 P **P 09 35 59.7 +1.3**
baz=355
ULM Lac du Bonnet 75.32 324 P **P 09 35 59.3 +0.5**
comp=Z,30nm,0.9s,baz=48,slow=6.0,SNR=21
ULM LR LR 10 09 11.3
comp=Z,159nm,19.0s,baz=12,slow=36
comp=Z,30nm,0.9s
ULM Lac du Bonnet 75.32 324 IAmb IAmb 09 36 03.4
comp=Z,42nm,1.0s
H21K Melozitna Rive 75.38 358 IAmb IAmb 09 36 06.5
comp=Z,33nm,0.9s
H21K Melozitna Rive 75.38 358 P **P 09 36 00.8 +2.0**
baz=4.6
J29N Klondike Camp 75.45 351 P **P 09 36 00.8 +1.5**
baz=16,SNR=10

F14K Arctic Creek 75.48 3 P **P 09 36 00.2 +0.8**
baz=354
Q52A Bidwell 75.51 309 IAmb IAmb 09 36 04.4
comp=Z,25nm,1.1s
H20K Anotleneega Mo 75.60 358 P **P 09 36 01.6 +1.5**
baz=2.9
G17K Kiwalik Mounta 75.62 1 P **P 09 36 01.1 +0.9**
baz=358
NJ2 Nanjing 75.65 60 *e*P **P 09 36 00.7 -0.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
POKR Poker Plat Res 75.65 355 IAmb IAmb 09 37 28.6
comp=Z,22nm,0.7s
POKR Poker Plat Res 75.65 355 P **P 09 36 01.8 +1.3**
baz=8.8
G16K Koyuk River 75.69 2 IAmb IAmb 09 36 03.1
comp=Z,48nm,1.1s
G16K Koyuk River 75.69 2 P **P 09 36 02.0 +1.4**
baz=357
I23K Minto, Yukon-K 75.74 356 P **P 09 36 02.1 +1.3**
baz=7.3,SNR=14
I21K Tanana 75.83 357 P **P 09 36 03.4 +2.0**
I21K Tanana 75.83 357 P **P 09 36 02.8 +1.4**
baz=5.2,SNR=17
COLA College 75.92 355 P **P 09 36 03.7 +1.8**
COLA College 75.92 355 P **P 09 36 03.1 +1.2**
COLA College 75.92 355 ⇑ *e*P **P 09 36 03.3 +1.4**
COLA pmax pmax
comp=Z,10.0nm,0.9s
COLA College 75.92 355 P **P 09 36 02.9 +1.0**
baz=8.5
K29M Barlow Dome 75.95 351 P **P 09 36 03.4 +1.1**
baz=17,SNR=12
ILAR Eielson Array 75.96 355 P **P 09 36 03.0 +0.8**
comp=Z,5.7nm,1.0s,baz=5.4,slow=4.8,SNR=27
ILAR LR LR 10 11 10.8
comp=Z,64nm,19.4s,baz=326,slow=37
comp=Z,5.7nm,1.0s
ILAR Eielson Array 75.96 355 P **P 09 36 03.1 +0.9**
ILAR Eielson Array 75.96 355 P **P 09 36 03.1 +0.9**
DAWY Dawson 75.96 351 IAmb IAmb 09 36 07.7
comp=Z,33nm,1.1s
DAWY Dawson 75.96 351 P **P 09 36 03.5 +1.2**
baz=15,SNR=27
J26L Joseph Creek 75.96 353 P **P 09 36 03.4 +1.1**
baz=12,SNR=13
MAYO Mayo, Yukon 75.97 350 P **P 09 36 03.7 +1.5**
baz=18,SNR=12
H18K Honhosa River 75.98 360 IAmb IAmb 09 36 05.0
comp=Z,29nm,1.2s
H18K Honhosa River 75.98 360 P **P 09 36 03.7 +1.5**
baz=0.1
J25K Salcha River, 76.00 354 P **P 09 36 03.0 +0.5**
baz=10
USRK Ussuriysk Ar. 76.02 44 P **P 09 36 02.3 -0.5**
comp=Z,18nm,0.8s,baz=290,slow=4.5,SNR=14
comp=Z,18nm,0.8s
G15K Niukluk 76.05 2 P **P 09 36 03.7 +1.0**
baz=356
NEA2 Nenana 76.28 356 P **P 09 36 04.8 +0.8**
baz=7.5,SNR=7.2
I20K Naaghedeneel 76.29 358 P **P 09 36 05.0 +1.1**
baz=3.2
HDA Harding Lake 76.32 355 P **P 09 36 04.9 +0.7**
baz=9.2,SNR=14
GCSA Galena City Sc 76.38 359 P **P 09 36 05.6 +1.1**
baz=1.3,SNR=13
PSTR Posyet 76.39 46 *c i*P **P 09 36 03.8 -1.1**
ANM Nome 76.43 3 IAmb IAmb 09 36 06.8
comp=Z,41nm,1.0s
ANM Nome 76.43 3 P **P 09 36 05.6 +0.8**
baz=354,SNR=32
H16K Elim 76.46 2 P **P 09 36 06.0 +1.1**
baz=357,SNR=52
SCRK Sand Creek 76.52 353 P **P 09 36 06.7 +1.3**
baz=12,SNR=6.4
VLA Vladivostok 76.68 45 ⇓ *e*P **P 09 36 06.7 +0.1**
VLA pmax pmax
comp=Z,23nm,0.8s
L29M L29M 76.73 351 P **P 09 36 07.6 +0.9**
baz=16
U54A Nelsons Funny 76.77 306 IAmb IAmb 09 36 12.3
comp=Z,29nm,1.0s
RIDG Independent Ri 76.82 354 P **P 09 36 08.5 +1.3**
baz=11,SNR=7.5
GAMB Gambell 76.83 6 P **P 09 36 07.0 -0.1**
baz=350
K24K Donnelly Dome 76.84 354 P **P 09 36 08.0 +0.8**
baz=10,SNR=8.7
DOT Dot Lake 76.85 353 IAmb IAmb 09 38 05.4
comp=Z,23nm,0.6s
BPAW Bear Paw Mtn. 76.86 357 P **P 09 36 07.9 +0.6**
baz=6.0,SNR=12
J20K Nowinta River 76.90 358 P **P 09 36 08.8 +1.3**
baz=3.5,SNR=9.9
SJG San Juan 77.00 283 LR LR 10 03 44.5
comp=Z,52nm,21.9s,baz=166,slow=31
KOTAN Kotaneelee Air 77.04 343 P **P 09 36 09.3 +1.0**
baz=27
M30M Minto, Yukon 77.07 350 P **P 09 36 09.4 +0.8**
baz=17
M31M Drury Creek, Y 77.08 349 IAmb IAmb 09 36 16.4
comp=Z,82nm,2.0s
M31M Drury Creek, Y 77.08 349 P **P 09 36 09.9 +1.3**
baz=19,SNR=8.0
J19K Poorman 77.12 359 P **P 09 36 10.1 +1.3**
baz=2.3
MCK McKinley 77.12 356 P **P 09 36 09.5 +0.7**
baz=7.6,SNR=13
CHUM Lake Minchumin 77.14 357 P **P 09 36 10.2 +1.5**
baz=4.9,SNR=8.7
BCAR Beaver Creek A 77.20 352 P **P 09 36 10.9 +1.7**
L27K Beaver Creek, 77.21 352 IAmb IAmb 09 36 15.2
comp=Z,27nm,1.1s
L27K Beaver Creek, 77.21 352 P **P 09 36 10.9 +1.6**
baz=13
I17K Unalakleet 77.24 1 IAmb IAmb 09 36 11.9
comp=Z,31nm,1.2s
I17K Unalakleet 77.24 1 P **P 09 36 10.6 +1.3**
baz=358,SNR=12
L26K Log Cabin Wild 77.39 353 IAmb IAmb 09 37 55.0
comp=Z,25nm,0.6s
L26K Log Cabin Wild 77.39 353 P **P 09 36 11.8 +1.4**
baz=12,SNR=5.1
M29M Somme Creek 77.42 351 IAmb IAmb 09 36 16.4
comp=Z,38nm,1.0s
M29M Somme Creek 77.42 351 P **P 09 36 11.8 +1.3**
baz=16,SNR=23
TRF Thorofare Moun 77.48 356 P **P 09 36 11.9 +0.9**
baz=6.5
MENT Mentasta 77.51 353 P **P 09 36 13.2 +2.2**
PAX Paxson 77.64 354 P **P 09 36 12.9 +1.1**
baz=10
J18K Innoko River 77.67 359 P **P 09 36 13.5 +1.7**
baz=1.4
DHY Denali Highway 77.68 355 P **P 09 36 13.1 +1.1**
baz=8.8,SNR=16
K20K Telida 77.72 358 P **P 09 36 13.2 +1.1**
baz=3.5,SNR=15
BVCY Beaver Creek 77.73 352 P **P 09 36 14.3 +2.0**
baz=14,SNR=12
J17K VABM Dome 77.74 0 IAmb IAmb 09 36 15.4
comp=Z,50nm,1.2s
J17K VABM Dome 77.74 0 P **P 09 36 13.6 +1.4**
baz=360
J16K Anvik River 77.84 1 IAmb IAmb 09 36 15.2
comp=Z,41nm,1.1s
J16K Anvik River 77.84 1 P **P 09 36 13.7 +0.9**
baz=358,SNR=21
N32M Quiet Lake 77.87 348 IAmb IAmb 09 36 24.8
comp=Z,36nm,1.1s
N32M Quiet Lake 77.87 348 P **P 09 36 14.5 +1.5**
baz=20
M27K Edge Creek, AK 77.90 352 IAmb IAmb 09 36 22.5
comp=Z,50nm,1.7s
M27K Edge Creek, AK 77.90 352 P **P 09 36 15.1 +1.8**
baz=13
BLO Bloomington 77.92 311 IAmb IAmb 09 36 18.4
comp=Z,15nm,0.7s
N31M Braeburn, Yuko 77.97 349 IAmb IAmb 09 36 18.6
comp=Z,27nm,1.2s
N31M Braeburn, Yuko 77.97 349 P **P 09 36 15.1 +1.5**
baz=18
M26K Nabesna, AK 77.97 353 IAmb IAmb 09 37 43.0
comp=Z,19nm,0.7s
M26K Nabesna, AK 77.97 353 P **P 09 36 14.8 +1.2**
baz=12
WAT1 Susitna Watana 78.00 355 P **P 09 36 14.8 +1.1**

baz=7.9
KS19 **Wonju Array Si** 78.03 51 IAmb IAmb 09 36 15.2
comp=Z,34nm,1.1s
WTLY **Watson Lake, Y** 78.06 345 IAmb IAmb 09 36 20.0
comp=Z,23nm,1.0s
WTLY **Watson Lake, Y** 78.06 345 P **P** **09 36 15.7 +1.6**
baz=23,SNR=11
KSAR **Wonju Array Be** 78.08 51 P **P** **09 36 14.0 -0.6**
KSAR **Wonju Array Be** 78.08 51 P **P** **09 36 14.0 -0.6**
KSRS **Korea Array** 78.10 51 P **P** **09 36 14.2 -0.4**
comp=Z,16nm,0.9s,baz=314,slow=4.9,SNR=32
KSRS LR LR 10 14 48.7
comp=Z,187nm,18.1s,baz=315,slow=39
comp=Z,16nm,0.9s
PPLA **Purkeypile** 78.12 357 P **P** **09 36 15.5 +1.0**
baz=5.0
HARP **HAARP** 78.17 354 P **P** **09 36 16.0 +1.3**
baz=10
WAT6 **Susitna Watana** 78.19 355 P **P** **09 36 16.1 +1.1**
baz=8.5,SNR=7.8
YUK3 **Moose Creek** 78.31 351 P **P** **09 36 16.5 +0.8**
baz=14,SNR=12
J14K **Nanvaranak Lak** 78.31 2 IAmb IAmb 09 36 17.5
comp=Z,35nm,1.2s
J14K **Nanvaranak Lak** 78.31 2 P **P** **09 36 16.4 +1.1**
baz=356
K17K **Iditarod** 78.43 360 IAmb IAmb 09 36 18.5
comp=Z,44nm,1.1s
K17K **Iditarod** 78.43 360 P **P** **09 36 17.4 +1.3**
baz=0.2
TJN **Taejon** 78.45 52 P **P** **09 36 16.1 -0.5**
TOAD **Toad River Com** 78.46 343 P **P** **09 36 17.8 +1.5**
baz=26,SNR=14
I37A **Lemond, Waseca** 78.47 318 IAmb IAmb 09 36 21.1
comp=Z,38nm,1.1s
YUK4 **Talbot Arm** 78.50 350 P **P** **09 36 17.5 +0.8**
baz=16
CUT **Chulitna** 78.52 356 P **P** **09 36 18.2 +1.7**
baz=6.5
TKL **Tuckaleechee C** 78.53 307 LR LR 10 12 18.8
comp=Z,64nm,18.1s,baz=46,slow=37
M24K **Tolsona, Glenn** 78.55 354 P **P** **09 36 18.3 +1.5**
baz=9.7
CMC01 **Camacan, BA** 78.60 239 *e*P **P** **09 36 19.8 +2.2**
WHY **Whitehorse** 78.62 348 IAmb IAmb 09 36 22.2
comp=Z,34nm,1.2s
WHY **Whitehorse** 78.62 348 P **P** **09 36 18.2 +1.0**
baz=18
L40A **Anamosa** 78.65 316 IAmb IAmb 09 36 22.1
comp=Z,44nm,1.3s
O30N **Mendenhall** 78.70 349 IAmb IAmb 09 36 19.1
comp=Z,30nm,1.4s
O30N **Mendenhall** 78.70 349 P **P** **09 36 18.9 +1.2**
baz=18,SNR=5.0
YUK8 **Steele Glacier** 78.70 351 P **P** **09 36 18.9 +1.0**
baz=15
P33M **Teslin, Yukon** 78.71 347 P **P** **09 36 18.9 +1.1**
baz=20
K15K **Wolf Creek Mou** 78.82 1 IAmb IAmb 09 36 20.7
comp=Z,28nm,1.1s
K15K **Wolf Creek Mou** 78.82 1 P **P** **09 36 19.7 +1.5**
baz=358
HYT **Haines Junctio** 78.85 350 IAmb IAmb 09 36 23.8
comp=Z,20nm,0.9s
HYT **Haines Junctio** 78.85 350 P **P** **09 36 19.9 +1.3**
baz=16
YUK6 **Outpost Mounta** 78.85 350 P **P** **09 36 20.0 +1.3**
baz=16,SNR=6.9
SCM **Sheep Creek Mo** 78.91 355 P **P** **09 36 19.6 +0.8**
baz=8.8
N25K **Chitina, Valde** 78.91 353 P **P** **09 36 19.6 +0.8**
baz=11
L18K **Granite Mounta** 78.92 359 P **P** **09 36 20.1 +1.4**
baz=1.4,SNR=14
L19K **White Mountain** 78.92 358 P **P** **09 36 19.8 +1.0**
baz=2.9
M23K **Glacier View** 78.97 355 P **P** **09 36 19.7 +0.6**
baz=8.5,SNR=8.9
MCARA **McCarthy VSAT** 78.97 352 P **P** **09 36 19.6 +0.5**
baz=12
SML **Sawmill** 79.00 355 P **P** **09 36 20.0 +0.7**
baz=8.0
SKT **Skwentna** 79.01 357 P **P** **09 36 19.4 +0.1**
baz=5.5,SNR=11
L17K **Donlin** 79.01 360 P **P** **09 36 20.3 +1.1**
baz=0.2,SNR=19
K13K **Kusilvak Mount** 79.09 3 IAmb IAmb 09 36 21.5
comp=Z,37nm,1.0s
K13K **Kusilvak Mount** 79.09 3 P **P** **09 36 20.6 +1.0**
baz=355
KLU **Klutina** 79.13 354 P **P** **09 36 20.7 +0.7**
baz=9.9
R33M **Jennings River** 79.14 346 IAmb IAmb 09 36 29.2
comp=Z,30nm,1.0s
R33M **Jennings River** 79.14 346 P **P** **09 36 21.9 +1.7**
baz=21,SNR=12
M22K **Willow** 79.16 356 P **P** **09 36 20.5 +0.5**
baz=6.6
M20K **Styx River** 79.17 357 P **P** **09 36 20.2 0.0**
baz=4.2,SNR=8.4
CTG **Chitna Glacier** 79.20 352 P **P** **09 36 20.8 +0.3**
baz=14
O28M **Mount Upton** 79.25 351 IAmb IAmb 09 36 26.5
comp=Z,24nm,1.0s
O28M **Mount Upton** 79.25 351 P **P** **09 36 21.6 +0.6**
baz=14
PMR **Palmer** 79.27 355 P **P** **09 36 22.1 +1.5**
PMR **Palmer** 79.27 355 P **P** **09 36 21.4 +0.8**
baz=7.4,SNR=5.6
LOGN **Logan Glacier** 79.30 351 IAmb IAmb 09 36 26.6
comp=Z,32nm,1.0s
KNK **Knik Glacier** 79.40 355 P **P** **09 36 22.5 +1.1**
baz=7.9
L16K **Owhat River** 79.43 0 P **P** **09 36 22.7 +1.2**
baz=359,SNR=9.0
L15K **Ungalak Mounta** 79.44 1 P **P** **09 36 22.9 +1.3**
baz=358
P32M **Atlin** 79.45 347 P **P** **09 36 22.3 +0.6**
baz=19
P30M **Million Dollar** 79.45 349 P **P** **09 36 23.1 +1.4**
baz=17
GRNC **Granite Creek** 79.47 352 IAmb IAmb 09 36 27.4
comp=Z,44nm,1.0s
SUA **Susitna One** 79.48 356 P **P** **09 36 22.9 +0.9**
baz=6.1,SNR=8.4
YSS **Yuzhno-Sakhali** 79.49 37 P **P** **09 36 22.3 +0.2**
YSS IAmb IAmb 09 36 23.3
comp=Z,31nm,1.1s
YSS **Yuzhno-Sakhali** 79.49 37 P **P** **09 36 22.3 +0.2**
YSS **Yuzhno-Sakhali** 79.49 37 *e*P **P** **09 36 20.1 -2.0**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=N,300nm,15.0s
YSS MLR MLR
comp=E,400nm,12.0s
O29M **Mount Kennedy** 79.50 350 IAmb IAmb 09 36 29.9
comp=Z,24nm,1.1s
O29M **Mount Kennedy** 79.50 350 P **P** **09 36 22.5 +0.4**
baz=16
BMRM **Bremner River** 79.53 353 P **P** **09 36 23.3 +1.1**
baz=11
CRQE **Cirque** 79.60 352 P **P** **09 36 23.8 +1.2**
baz=12
PRPB **Parauapebas** 79.61 253 *e*P **P** **09 36 24.7 +1.4**
M18K **Stony River** 79.63 359 P **P** **09 36 24.3 +1.7**
baz=2.1
GUA01 **Guaratinga, BA** 79.67 239 *e*P **P** **09 36 25.0 +1.6**
T47A **Sharon Grove** 79.70 310 IAmb IAmb 09 36 27.7
comp=Z,26nm,1.0s
M17K **Holitna River** 79.74 359 P **P** **09 36 25.1 +1.9**
baz=0.8
L14K **Kuka Creek** 79.75 2 P **P** **09 36 24.2 +1.0**
baz=357
SMTB **Santa Maria do** 79.75 250 *e*P **P** **09 36 25.2 +1.2**
W50A **Signal Mountai** 79.79 307 IAmb IAmb 09 36 28.7
comp=Z,32nm,1.1s
Q32M **Nakina River** 79.79 347 IAmb IAmb 09 36 40.4
comp=Z,28nm,1.2s
Q32M **Nakina River** 79.79 347 P **P** **09 36 24.6 +0.8**
baz=20
RC01 **Rabbit Creek A** 79.80 356 P **P** **09 36 24.2 +0.6**
baz=6.9,SNR=9.7
SPCR **Spurr Chakacha** 79.82 357 P **P** **09 36 25.0 +1.2**
baz=5.0
SPU **Mount Spurr** 79.83 357 IAmb IAmb 09 37 18.9
comp=Z,39nm,0.8s
SKAG **Skagway** 79.83 348 P **P** **09 36 24.7 +1.0**
baz=18
DLBC **Dease Lake** 79.85 345 P **P** **09 36 25.7 +1.7**
comp=Z,4.1nm,0.7s,baz=40,slow=8.2,SNR=13
DLBC LR LR 10 12 17.1
comp=Z,156nm,19.2s,baz=294,slow=36
comp=Z,4.1nm,0.7s
DLBC **Dease Lake** 79.85 345 P **P** **09 36 25.6 +1.6**
baz=22
PCA **Pinnacle** 79.92 351 IAmb IAmb 09 36 33.1
comp=Z,50nm,0.9s
PINM **Pinnacle** 79.92 351 P **P** **09 36 25.8 +1.5**
baz=14
EDM **Edmonton** 80.00 334 IAmb IAmb 09 36 29.0
comp=Z,18nm,0.7s
MESA **MESA** 80.04 352 P **P** **09 36 26.5 +1.4**
baz=13
M16K **Timber Creek** 80.13 0 IAmb IAmb 09 36 28.2
comp=Z,32nm,0.9s
M16K **Timber Creek** 80.13 0 P **P** **09 36 27.2 +1.8**
baz=360
E28A **Huff** 80.20 324 IAmb IAmb 09 36 30.6
comp=Z,54nm,1.2s
SDBA **SAO DESIDERIO** 80.24 245 *e*P **P** **09 36 28.0 +1.4**
N19K **Bonanza Creek** 80.28 358 P **P** **09 36 27.3 +1.0**
baz=3.2,SNR=8.0
ECSD **EROS Data Cent** 80.31 320 P **P** **09 36 27.8 +1.1**
DGMT **Dagmar** 80.31 327 IAmb IAmb 09 36 31.6
comp=Z,36nm,1.4s
M14K **Bethel** 80.36 2 P **P** **09 36 27.9 +1.4**
baz=357,SNR=16
O22K **Cooper Landing** 80.41 356 P **P** **09 36 28.7 +1.9**
baz=6.9
M15K **Kasigluk River** 80.44 1 P **P** **09 36 28.3 +1.3**
baz=358
N18K **Kilae Creek** 80.45 359 P **P** **09 36 28.6 +1.5**
baz=2.1
PETK **Petropavlovsk-** 80.56 25 P **P** **09 36 27.4 -0.4**
comp=Z,4.2nm,0.8s,baz=358,slow=4.5,SNR=6.9
PETK LR LR 10 16 50.1
comp=Z,156nm,19.9s,baz=318,slow=39
comp=Z,4.2nm,0.8s
S34M **Telegraph Cree** 80.56 346 IAmb IAmb 09 36 34.0
comp=Z,29nm,1.2s
S34M **Telegraph Cree** 80.56 346 P **P** **09 36 27.9 +0.2**
baz=21
M11K **Mekoryuk** 80.56 4 P **P** **09 36 28.7 +1.1**
baz=354,SNR=10
N17K **Nushagak Hills** 80.62 359 IAmb IAmb 09 38 30.5
comp=Z,21nm,0.8s
N17K **Nushagak Hills** 80.62 359 P **P** **09 36 28.1 +0.2**
baz=1.0
RED **Redoubt Volcan** 80.62 357 IAmb IAmb 09 37 39.3
comp=Z,43nm,0.8s
M13K **Dall Lake** 80.66 2 IAmb IAmb 09 36 31.0
comp=Z,50nm,1.0s
M13K **Dall Lake** 80.66 2 P **P** **09 36 28.3 +0.2**
baz=356
N16K **Nishlik Lake** 80.68 0 P **P** **09 36 28.0 -0.3**
baz=360
P23K **Montague Islan** 80.73 354 P **P** **09 36 28.4 -0.1**
baz=8.7
SEW **Seward** 80.77 355 P **P** **09 36 28.9 +0.1**
baz=7.1
R32K **Eaglecrest** 80.83 347 P **P** **09 36 29.7 +0.5**
baz=19
O19K **Port Alsworth** 80.90 358 IAmb IAmb 09 36 31.1
comp=Z,28nm,1.0s
O19K **Port Alsworth** 80.90 358 P **P** **09 36 29.5 +0.1**
baz=3.3,SNR=6.8
N15K **Kwethluk River** 80.97 1 IAmb IAmb 09 36 32.7
comp=Z,32nm,1.1s
N15K **Kwethluk River** 80.97 1 P **P** **09 36 31.0 +1.1**
baz=359,SNR=7.9
N14K **Kuskokwak Cree** 81.19 2 IAmb IAmb 09 36 33.1
comp=Z,31nm,0.9s
N14K **Kuskokwak Cree** 81.19 2 P **P** **09 36 31.8 +0.8**
baz=358
BRSE **Bradley Lake S** 81.20 356 P **P** **09 36 31.8 +0.7**
baz=6.1
Q23K **Middleton Isla** 81.21 354 P **P** **09 36 31.5 +0.4**
baz=9.5
T35M **Bob Quinn** 81.25 345 P **P** **09 36 32.0 +0.5**
baz=22
O18K **Koktuh Hills** 81.26 358 P **P** **09 36 32.7 +1.2**
baz=2.6,SNR=15
HOM **Homer** 81.33 356 P **P** **09 36 32.6 +0.8**
baz=5.4
X48A **Hartselle** 81.35 308 IAmb IAmb 09 36 36.7
comp=Z,23nm,1.1s
O17K **Koliganek Bris** 81.37 359 P **P** **09 36 32.7 +0.8**
baz=1.1,SNR=12
P19K **Oil Pt** 81.41 357 P **P** **09 36 32.8 +0.5**
baz=4.1
S31K **Pelican** 81.41 348 P **P** **09 36 33.0 +0.8**
baz=17
ASAJ **Asahikawa** 81.52 39 LR LR 10 15 48.9
comp=Z,42nm,18.9s,baz=332,slow=38
O16K **Kokwok River B** 81.56 360 P **P** **09 36 34.4 +1.5**
baz=0.3
P38A **Dawn** 81.60 315 IAmb IAmb 09 36 38.4
comp=Z,17nm,0.7s
S32K **Killisnoo** 81.61 347 P **P** **09 36 34.7 +1.5**
baz=18
JANB **Januaria** 81.65 243 *e*P **P** **09 36 36.0 +1.9**
P18K **Big Mountain,** 81.72 358 P **P** **09 36 34.6 +0.7**
baz=2.6
PBMO **Poplar Bluff** 81.81 311 IAmb IAmb 09 39 00.9
comp=Z,31nm,1.6s
O14K **Tigyukauivet M** 81.88 1 IAmb IAmb 09 36 36.9
comp=Z,28nm,0.8s
O14K **Tigyukauivet M** 81.88 1 P **P** **09 36 36.0 +1.3**
baz=358
T33K **Petersburg** 81.94 346 P **P** **09 36 35.9 +0.9**
baz=20
P17K **Kvichak River** 81.94 359 P **P** **09 36 35.4 +0.4**
baz=1.6
O15K **Ungalikthiuk R** 81.97 1 IAmb IAmb 09 36 37.6
comp=Z,31nm,0.9s
O15K **Ungalikthiuk R** 81.97 1 P **P** **09 36 36.0 +0.8**
baz=359,SNR=7.6
SJMB **Sao Joao De Ma** 82.10 238 *e*P **P** **09 36 38.3 +1.9**
P16K **Nushagak River** 82.12 360 P **P** **09 36 36.6 +0.7**
baz=0.4
SIT **Sitka** 82.13 347 P **P** **09 36 37.1 +1.1**
baz=18
Q19K **Cape Douglas,** 82.14 357 P **P** **09 36 36.7 +0.5**
baz=3.8
WRAK **Wrangell Islan** 82.19 346 P **P** **09 36 37.3 +0.9**
baz=20
U35K **Hyder** 82.20 344 P **P** **09 36 36.7 +0.3**
baz=22
LRAL **Lakeview Retre** 82.26 306 IAmb IAmb 09 36 41.8
comp=Z,31nm,1.1s
BOAV **Boa Vista** 82.30 267 P **P** **09 36 39.2 +1.6**
BOAV IAmb IAmb 09 36 41.6
comp=Z,23nm,1.4s
BOAV **Boa Vista** 82.30 267 *e*P **P** **09 36 39.5 +1.9**
Q20K **Shuyak Island** 82.41 357 P **P** **09 36 38.0 +0.5**
baz=4.8,SNR=5.6
Q16K **King Salmon** 82.47 359 P **P** **09 36 38.0 +0.2**
baz=1.4
LAO **LASA Array** 82.56 327 IAmb IAmb 09 36 43.9
comp=Z,37nm,1.1s
MGMO **Mountain Grove** 82.62 312 IAmb IAmb 09 36 43.4
comp=Z,23nm,1.1s
U33K **Whale Pass** 82.63 346 P **P** **09 36 39.2 +0.6**
baz=20
JNU **Nakatsue** 82.77 53 LR LR 10 18 42.7
comp=Z,181nm,19.5s,baz=331,slow=40
Q17K **Contact Creek** 82.87 359 P **P** **09 36 40.5 +0.4**
baz=2.0
ITTB **Itaituba** 82.89 259 *e*P **P** **09 36 42.3 +1.6**
ACHA **Angle Creek He** 82.91 358 IAmb IAmb 09 36 41.5
comp=Z,24nm,1.3s
V35K **Ketchikan** 83.07 345 P **P** **09 36 42.2 +1.2**
baz=21
CRAG **Craig** 83.24 346 P **P** **09 36 43.0 +1.2**
baz=20
KDAK **Kodiak Island** 83.25 357 P **P** **09 36 43.3 +1.4**
comp=Z,31nm,0.8s,baz=12,slow=4.6,SNR=23
KDAK LR LR 10 17 10.8
comp=Z,69nm,18.8s,baz=273,slow=38
comp=Z,31nm,0.8s
KDAK **Kodiak Island** 83.25 357 P **P** **09 36 43.2 +1.4**
KDAK **Kodiak Island** 83.25 357 *c* *i*P **P** **09 36 42.8 +1.0**
KDAK pmax pmax
comp=Z,70nm,1.3s
KDAK **Kodiak Island** 83.25 357 P **P** **09 36 42.3 +0.5**
baz=4.6
SPIA **Saint Paul Isl** 83.47 6 P **P** **09 36 43.1 +0.1**
baz=351
R17L **Mt. Peulik Vol** 83.51 359 P **P** **09 36 43.3 0.0**
baz=1.7
R16K **Pilot Point** 83.59 359 P **P** **09 36 43.8 +0.2**
baz=0.7
RSSD **Black Hills** 83.59 324 P **P** **09 36 45.8 +1.6**
RSSD **Black Hills** 83.59 324 P **P** **09 36 45.8 +1.6**
RSSD pmax pmax
comp=Z,9.0nm,0.9s
OHAK **Old Harbor** 83.84 357 P **P** **09 36 45.5 +0.7**
baz=4.1
P08K **Saint George I** 84.11 6 P **P** **09 36 46.1 -0.1**
baz=351
U38A **Gravette** 84.33 313 IAmb IAmb 09 36 53.6
comp=Z,22nm,1.0s
SII **Sitkinak Islan** 84.53 358 P **P** **09 36 47.9 -0.6**
baz=3.4
SNDB **Serra Nova Dou** 84.53 250 *e*P **P** **09 36 50.8 +1.8**
BDFB **Brasilia** 84.64 245 P **P** **09 36 51.1 +1.4**
comp=Z,6.5nm,0.6s,baz=38,slow=9.5,SNR=7.5
BDFB LR LR 10 15 53.3
comp=Z,226nm,18.6s,baz=315,slow=37
comp=Z,6.5nm,0.6s
MJB9 **Matsu-Tunnel** 84.72 46 IAmb IAmb 09 36 51.6
comp=Z,30nm,1.1s
MAJO **Matsushiro** 84.73 46 P **P** **09 36 49.4 -0.5**
MAJO IAmb IAmb 09 36 50.6
comp=Z,30nm,1.1s
MAJO **Matsushiro** 84.73 46 P **P** **09 36 49.4 -0.5**
MAJO **Matsushiro** 84.73 46 ⇑*i*P **P** **09 36 49.4 -0.5**
MAJO pmax pmax
comp=Z,28nm,1.0s
MJAR **Matsushiro Arr** 84.73 46 P **P** **09 36 49.7 -0.1**
comp=Z,24nm,0.8s,baz=315,slow=4.4,SNR=39
comp=Z,24nm,0.8s
MJAR **Matsushiro Arr** 84.73 46 P **P** **09 36 49.6 -0.3**
MJAR IAmb IAmb 09 36 51.0
comp=Z,19nm,0.9s
MJAR **Matsushiro Arr** 84.73 46 P **P** **09 36 49.6 -0.3**
MJAR pmax pmax
comp=Z,19nm,0.9s
MIAR **Mount Ida** 85.20 311 IAmb IAmb 09 36 57.3
comp=Z,27nm,1.0s
BBB **Bella Bella** 85.21 342 LR LR 10 17 17.6
comp=Z,89nm,19.8s,baz=48,slow=37
JOW **Kunigami** 85.29 59 LR LR 10 20 18.2
comp=Z,112nm,18.6s,baz=152,slow=39
CHIR **Chirikof Islan** 85.31 358 P **P** **09 36 52.3 -0.1**
baz=2.2
SHEM **Shemya Is, Ala** 85.40 16 LR LR 10 19 46.7
comp=Z,80nm,18.2s,baz=292,slow=39
NEW **Newport** 85.48 334 LR LR 10 16 37.0
comp=Z,146nm,19.0s,baz=26,slow=37
NEW **Newport** 85.48 334 IAmb IAmb 09 36 57.9
comp=Z,41nm,1.6s
YNE **Yellowstone No** 85.50 328 IAmb IAmb 09 36 59.3
comp=Z,27nm,0.9s
MSO **Missoula** 85.55 331 IAmb IAmb 09 36 58.0
comp=Z,16nm,1.2s
Z41A **Richland Creek** 85.65 310 IAmb IAmb 09 36 59.6
comp=Z,34nm,1.1s
KAN01 **Angonia South** 85.68 316 IAmb IAmb 09 36 59.4
comp=Z,26nm,0.8s
KAN08 **Anthony NE Sta** 85.75 316 IAmb IAmb 09 36 59.5
comp=Z,21nm,0.9s
SDPT **Sand Point** 85.80 1 P **P** **09 36 55.0 +0.2**
baz=358
K22A **Casper** 85.88 324 IAmb IAmb 09 36 59.2
comp=Z,13nm,0.9s
MACA **Manacapuru-AM** 85.92 263 *e*P **P** **09 36 57.8 +1.7**
SDV **Santo Domingo** 86.09 278 LR LR 10 11 43.1
comp=Z,18nm,18.5s,baz=205,slow=33
SDV **Santo Domingo** 86.09 278 P **P** **09 36 58.1 +0.9**
SDV IAmb IAmb 09 37 02.3
comp=Z,15nm,0.8s
SDV **Santo Domingo** 86.09 278 *e*P **P** **09 36 58.3 +1.2**
B08A **Colville Reser** 86.14 335 IAmb IAmb 09 39 13.3
comp=Z,16nm,0.6s
YMR **Madison River** 86.17 328 IAmb IAmb 09 37 02.5
comp=Z,20nm,1.1s
DLMT **Dillon** 86.25 330 IAmb IAmb 09 37 02.9
comp=Z,30nm,1.2s
CHNA **Chernabura Isl** 86.33 1 P **P** **09 36 57.1 -0.3**
baz=359
W35A **Tecumseh** 86.66 314 IAmb IAmb 09 37 04.4
comp=Z,22nm,1.0s
OK038 **West end E0370** 86.71 316 IAmb IAmb 09 37 05.1
comp=Z,45nm,1.4s
UNV **Unalaska Valle** 87.07 5 P **P** **09 37 01.0 -0.1**
baz=354
PDAR **Pinedale Array** 87.12 326 P **P** **09 37 01.9 +0.1**
comp=Z,2.6nm,0.8s,baz=69,slow=4.3,SNR=24
PDAR PP PP **09 40 27.1 +2.4**
comp=Z,1.1nm,0.9s,baz=22,slow=6.8,SNR=4.3
PDAR LR LR 10 15 46.1
comp=Z,113nm,21.9s,baz=25,slow=36
comp=Z,2.6nm,0.8s
PDAR **Pinedale Array** 87.12 326 P **P** **09 37 01.7 -0.2**
CLDB **Colider** 87.13 254 *e*P **P** **09 37 03.1 +1.1**
MDSI **Maura Dua** 87.15 98 P **P** **09 37 00.3 -1.8**
comp=Z,780nmcomp=Z,15nm,1.1s
E09A **Wood Farm, Sta** 87.34 333 IAmb IAmb 09 37 07.3
comp=Z,17nm,0.9s
ELIS **Ellis County** 87.39 316 IAmb IAmb 09 38 30.9
comp=Z,57nm,2.0s
WAH2 **Wahluke Slope** 87.61 334 IAmb IAmb 09 37 08.6
comp=Z,12nm,0.8s
E08A **Dider Farm, El** 87.67 334 IAmb IAmb 09 37 09.2
comp=Z,10nm,0.9s
NIKH **Nikoski High** 87.76 6 P **P** **09 37 05.0 +0.6**
baz=352
HAWA **Hanford** 87.92 334 IAmb IAmb 09 37 10.6
comp=Z,18nm,0.8s
GNW **Green Mountain** 87.95 337 IAmb IAmb 09 37 10.7
comp=Z,14nm,0.9s
WMOK **Wichita Mounta** 88.02 315 IAmb IAmb 09 37 09.6
comp=Z,9.7nm,0.8s
PDRB **Porto dos Gac** 88.31 254 *e*P **P** **09 37 09.6 +2.0**
SMWD **Samnorwood** 88.55 316 IAmb IAmb 09 37 13.8
comp=Z,11nm,1.0s
O20A **White River Ci** 88.66 324 IAmb IAmb 09 37 13.4
comp=Z,22nm,1.3s
RDMU **Red Mountain** 88.91 325 IAmb IAmb 09 37 14.7
comp=Z,26nm,1.0s
HWUT **Hardware Ranch** 88.93 327 IAmb IAmb 09 37 14.9
comp=Z,16nm,0.9s
SBUM **Sibu** 89.04 88 P **P** **09 37 11.5 +0.4**
SBUM **Sibu** 89.04 88 P **P** **09 37 10.9 -0.2**
TEFE **Tefe** 89.19 265 *e*P **P** **09 37 13.9 +2.2**
TCUT **Toone Canyon** 89.27 326 IAmb IAmb 09 37 16.3
comp=Z,10nm,0.9s
APMT **Aspermont** 89.81 315 IAmb IAmb 09 37 19.6
comp=Z,38nm,1.5s
HKT **Hockley** 89.82 310 ⇑*i*P **P** **09 37 16.9 +2.4**
HKT pmax pmax
comp=Z,72nm,3.2s
ABTX **Abilene, Hawle** 90.07 314 IAmb IAmb 09 37 21.7
comp=Z,32nm,1.1s
PV22 **Blue Mesa, Par** 90.19 323 IAmb IAmb 09 37 20.9
comp=Z,17nm,1.0s
PV15 **Paradox Valley** 90.20 323 IAmb IAmb 09 37 21.0
comp=Z,19nm,0.9s
PV07 **Paradox Valley** 90.21 323 IAmb IAmb 09 37 20.5
comp=Z,20nm,1.0s
SALV **Santo Antonio** 90.32 250 *e*P **P** **09 37 19.1 +2.1**
PV04 **Paradox Valley** 90.36 323 IAmb IAmb 09 37 22.1
comp=Z,38nm,1.4s
PV01 **Paradox Valley** 90.41 323 IAmb IAmb 09 37 22.1
comp=Z,14nm,0.9s
SN07 **Snyder 07** 90.42 315 IAmb IAmb 09 37 19.8
comp=Z,9.3nm,0.8s
PV02 **Paradox Valley** 90.43 323 IAmb IAmb 09 37 21.7
comp=Z,19nm,1.0s
PV14 **Lion Creek, Pa** 90.43 323 IAmb IAmb 09 37 22.2
comp=Z,20nm,1.0s
PV16 **Nyswonger Mesa** 90.43 323 IAmb IAmb 09 37 22.3
comp=Z,29nm,1.1s
PV03 **Paradox Valley** 90.45 323 IAmb IAmb 09 37 22.3
comp=Z,17nm,1.1s
PV17 **East Wray Mesa** 90.48 323 IAmb IAmb 09 37 22.5
comp=Z,20nm,1.0s
SRU **San Rafael Swe** 90.52 325 IAmb IAmb 09 37 21.9
comp=Z,18nm,0.9s
BRDY **Brady** 90.70 312 IAmb IAmb 09 37 23.7

comp=Z,18nm,1.1s
PV05 Paradox Valley 90.71 323 IAmb IAmb 09 37 22.4
comp=Z,14nm,0.9s
MSTX Muleshoe 90.77 317 IAmb IAmb 09 37 23.5
comp=Z,12nm,1.1s
Q16A Castle Valley 90.97 325 IAmb IAmb 09 37 24.3
comp=Z,12nm,1.0s
ELK Elko 91.18 329 LR LR 10 19 56.9
comp=Z,205nm,18.2s,baz=30,slow=37
J05D Fort Rock, OR 91.23 334 IAmb IAmb 09 37 24.2
comp=Z,7.9nm,0.7s
LEM Lembang 91.28 98 LR LR 10 23 36.8
comp=Z,36nm,18.3s,baz=325,slow=39
SGCY Sterling City 91.43 314 IAmb IAmb 09 37 27.8
comp=Z,12nm,1.0s
ROSC El Rosal 91.47 277 LR LR 10 15 46.6
comp=Z,56nm,18.4s,baz=249,slow=34
TCRU Three Creeks R 91.79 326 IAmb IAmb 09 37 29.1
comp=Z,17nm,1.1s
ANMO Albuquerque 91.92 320 LR LR 10 18 25.7
ANMO Albuquerque 91.92 320 *i*P **P 09 37 24.5 0.0**
ANMO pmax pmax
comp=Z,27nm,5.1s
ODSA Odessa 92.06 315 IAmb IAmb 09 37 29.8
comp=Z,13nm,0.9s
MTPU Mount Pierson 92.14 325 IAmb IAmb 09 37 31.0
comp=Z,11nm,1.0s
HNDO Hondo 92.16 311 IAmb IAmb 09 37 31.1
comp=Z,16nm,1.3s
PTLB Pontes e Lacer 92.56 252 *e*P **P 09 37 28.7 +1.4**
MNHN Monahans 92.77 315 IAmb IAmb 09 37 32.7
comp=Z,9.5nm,0.8s
DRIO Del Rio 93.02 312 IAmb IAmb 09 37 32.8
comp=Z,16nm,0.8s
PECS Pecos 93.35 316 IAmb IAmb 09 37 36.4
comp=Z,22nm,1.2s
TPB05 Hovey Rd 93.40 315 IAmb IAmb 09 37 36.5
comp=Z,10nm,1.0s
WUAZ Wupatki 93.85 323 IAmb IAmb 09 37 38.5
comp=Z,14nm,1.1s
NVAR Mina Array Bea 94.38 329 P **P 09 37 36.7 +0.9**
comp=Z,1.4nm,0.8s,baz=46,slow=4.0,SNR=8.9
NVAR PP **PP 09 41 21.8 -0.4**
comp=Z,0.8nm,0.9s,baz=71,slow=6.8,SNR=3.5
NVAR PKKPbc **PKKPbc 09 54 34.7 +0.2**
comp=Z,1.3nm,1.0s,baz=216,slow=5.1,SNR=4.6
NVAR LR LR 10 22 18.7
comp=Z,190nm,19.2s,baz=7.0,slow=37
comp=Z,1.4nm,0.8s
LHV Little Huntoon 94.61 329 IAmb IAmb 09 37 42.2
comp=Z,13nm,1.1s
TXAR Lajitas Array 94.81 314 P **P 09 37 39.2 +1.5**
comp=Z,6.3nm,0.8s,baz=66,slow=3.9,SNR=56
TXAR PP **PP 09 41 24.2 -1.5**
comp=Z,0.5nm,0.9s,baz=51,slow=7.2,SNR=2.7
TXAR LR LR 10 22 46.3
comp=Z,83nm,18.1s,baz=34,slow=37
comp=Z,6.3nm,0.8s
TXAR Lajitas Array 94.81 314 P **P 09 37 38.9 +1.1**
DUN6 Lazy B Ranch 95.15 320 IAmb IAmb 09 37 44.4
comp=Z,22nm,1.2s
GWY Greenwater Val 95.64 327 IAmb IAmb 09 37 46.8
comp=Z,7.5nm,0.9s
JTS Las Juntas de 96.01 288 LR LR 10 18 01.4
comp=Z,43nm,18.9s,baz=65,slow=34
BLYC Blythe 96.76 324 IAmb IAmb 09 37 51.1
comp=Z,8.9nm,1.3s
PMD Palm Desert 97.67 326 IAmb IAmb 09 37 55.7
comp=Z,6.1nm,1.0s
PFO Pinyon Flats O 97.74 326 LR LR 10 25 23.3
comp=Z,128nm,18.9s,baz=28,slow=38
CPUP Villa Florida 98.19 243 LR LR 10 23 56.7
comp=Z,198nm,18.8s,baz=70,slow=36
LPAZ La Paz 99.82 257 LR LR 10 23 50.6
comp=Z,42nm,20.7s,baz=55,slow=36
PLCA Paso Flores 115.48 237 PKP **PKiKP 09 42 58.2 +0.8**
comp=Z,1.7nm,0.8s,baz=4.7,slow=3.6,SNR=6.3
WRA Warramunga Arr 119.82 92 PKP **PKPdf 09 43 05.5 -0.8**
comp=Z,2.8nm,0.8s,baz=301,slow=2.0,SNR=15
ASAR Alice Springs 121.53 96 PKP **PKPdf 09 43 09.2 -0.3**
comp=Z,5.6nm,0.7s,baz=307,slow=1.5,SNR=71
ASAR PKKPbc **PKKPab 09 53 09.8 +0.2**
comp=Z,0.5nm,0.9s,baz=129,slow=3.5,SNR=5.1
ASAR Alice Springs 121.53 96 PKPdf 09 43 09.0 -0.5
COEN Coen 123.17 81 PKPdf 09 43 10.7 -2.1
STKA Stephens Creek 131.48 101 PKP **PKPdf 09 43 26.1 -2.2**
comp=Z,2.8nm,0.7s,baz=339,slow=5.3,SNR=6.3
TAOE Nuku Hiva Isla 145.59 327 *e*LR LR 10 31 31.2
comp=Z,407nm,26.6s
DZM Mont Dzumac 145.61 71 PKPab 09 43 55.3 +0.4
DZM Mont Dzumac 145.61 71 P **PKPab 09 43 56.4 +1.5**
DZM Mont Dzumac 145.61 71 P **PKPab 09 43 55.9 +1.0**

RSNC 06 09:25:52.2±0.3,1˚N±1˚×7˚9W±˚,h7km±2km,M2.8,mb3.5, ML2.4,Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAC1	**Pacto, Paraso**	**0.68**	**177**	P	Pg	09 26 05.4	0.0
PAC1				S	Sg	09 26 14.9	+0.6
CUSE	**Cuicocha Este**	**0.77**	**146**	P	Pb	09 26 07.7	-0.5
CUSE				S	Sb	09 26 18.4	-0.7
OTAV	**Otavalo**	**0.80**	**152**	P	Pg	09 26 07.7	0.0
OTAV				S	Sb	09 26 19.5	-0.5
CMBC	**Cumbal**	**1.00**	**91**	P	Pg	09 26 10.3	-1.3
CMBC				S	Sg	09 26 24.1	-0.6
TULM	**Tulcn-Chalpat**	**1.07**	**103**	P	Pg	09 26 12.7	-0.1
BONI	**La Bonita**	**1.39**	**111**	P	Pn	09 26 17.1	-1.2
CASC	**Dorado de Casc**	**1.70**	**118**	P	Pb	09 26 23.3	-0.5
CASC				S	Sb	09 26 46.1	+0.7
BBAC	**Balboa, Cauca**	**1.91**	**56**	P	Pn	09 26 23.3	-2.1
CRUC	**La Cruz**	**1.98**	**72**	P	Pn	09 26 27.1	+0.7
CRUC				S	Sn	09 26 51.3	-0.4
POPC	**Popayan, Colom**	**2.67**	**54**	P	Pn	09 26 35.7	-0.2
JAMC	**Jamundi, Valle**	**3.12**	**44**	P	Pn	09 26 38.8	-3.2
PPLP	**Puerto Lpez**	**3.15**	**218**	P	Pn	09 26 44.9	+2.6
PPLP				S	Sn	09 27 21.7	+1.5
FLOC	**Florencia**	**3.24**	**79**	P	Pb	09 26 48.7	-1.4
COHC	**Cochancay**	**3.42**	**187**	P	Pn	09 26 45.5	-0.5
COHC				S	Sn	09 27 24.8	-2.0
GARC	**Garzon, Huila**	**3.56**	**70**	P	Pn	09 26 50.3	+2.2
YOTC	**Yotoco, Valle**	**3.90**	**39**	P	Pn	09 26 48.5	-4.3
ORTC	**Ortega, Tolima**	**4.63**	**51**	P	Pn	09 27 02.0	-0.7
PRAC	**Prado**	**4.80**	**55**	P	Pn	09 27 05.2	+0.1
URMC	**La Uribe, Meta**	**5.00**	**63**	P	Pn	09 27 08.4	+0.6
MCRA	**Macar, Loja** 4.1nm,1.1s	**5.40**	**192**	P	Pn	09 27 13.2	-0.1
CBOC	**Ciudad Bolivar** 5.0nm,0.9s	**5.63**	**30**	P	Pn	09 27 15.7	-0.9
CHIC	**Chingaza**	**6.27**	**54**	P	Pn	09 27 26.1	+0.6
SJG	**San Juan**	**21.12**	**35**	P	P	09 30 34.8	-2.9

NEIC ***06*** *09:36:15.0±0.6,63˚.08N±0˚.04×150˚.69W±0˚.08, h121km±4km,ML3.1/193,ML2.9(AEIC),Error ellipse: s-maj=5.6km s-min=5.1km az=47.0*
IDC ***06*** *09:36:14.3±2.1,63˚.11N×150˚.78W,h110km±17km,mb3.5/4, mbtmp3.7/8,MS4.1/1,Error ellipse: s-maj=21.8km s-min=15.3km az=79.0*
AEIC ***06*** *09:36:15.3±1.0,63˚.08N±0˚.04×150˚.72W±0˚.07, h114km±4km,Error ellipse: s-maj=5.4km s-min=4.4km az=174.0*

ISC 06 09:36:15.0±0.8,63˚.07N±0˚.03×150˚.73W±0˚.03, h123km±5km,n194,σ0.81/148,mb3.8/4,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.43**	**27**		**Pn**	**09 36 32.9**	**-0.2**
TRF					**Sn**	**09 36 46.2**	**-0.6**
TRF	**Thorofare Moun** comp=E,1μm,0.6s	**0.43**	**27**	IAML		09 36 47.1	
TRF				IAML		09 36 47.2	
	comp=N,961nm,0.6s						
KTH	**Kantishna Hill**	**0.50**	**350**		**Pn**	**09 36 33.2**	**-0.1**
KTH					**Sn**	**09 36 46.2**	**-0.9**
KTH	**Kantishna Hill** comp=N,704nm,0.5s	**0.50**	**350**	IAML		09 36 46.7	
L22K	**Petersville**	**0.54**	**182**		**Pn**	**09 36 33.3**	**-0.2**
L22K					**Sn**	**09 36 46.7**	**-0.9**
L22K	**Petersville** comp=E,1μm,0.5s	**0.54**	**182**	IAML		09 36 47.2	
L22K				IAML		09 36 47.7	
	comp=N,1μm,0.5s						

PPLA	**Purkeypile**	**0.69**	**256**		**Pn**	**09 36 34.8 +0.1**
PPLA					**Sn**	**09 36 49.4 -0.1**
PPLA	**Purkeypile** comp=N,622nm,0.8s	**0.69**	**256**	IAML		09 36 50.0
PPLA				IAML		09 36 50.2
	comp=E,557nm,0.5s					
CUT	**Chulitna**	**0.70**	**162**		**Pn**	**09 36 34.5 -0.1**
CUT	**Chulitna**	**0.70**	**162**		**Sn**	**09 36 49.1 -0.2**
WAT7	**Susitna Watana**	**0.89**	**104**		**Pn**	**09 36 35.9 -0.5**
WAT7					**Sn**	**09 36 51.5 -1.0**
RND	**Reindeer**	**0.92**	**67**		**Pn**	**09 36 36.2 -0.3**
RND	**Reindeer** comp=E,114nm,0.4s	**0.92**	**67**	IAML		09 36 53.6
RND				IAML		09 36 53.7
	comp=N,164nm,1.0s					
WAT1	**Susitna Watana**	**1.02**	**102**		**Pn**	**09 36 37.1 -0.3**
WAT1					**Sn**	**09 36 54.0 -0.6**
BPAW	**Bear Paw Mtn.**	**1.04**	**354**		**Pn**	**09 36 37.3 -0.4**
BPAW					**Sn**	**09 36 53.4 -1.5**
BPAW	**Bear Paw Mtn.** comp=N,496nm,0.9s	**1.04**	**354**	IAML		09 36 54.2
BPAW				IAML		09 36 54.4
	comp=E,638nm,0.5s					
MCK	**McKinley**	**1.05**	**50**		**Pn**	**09 36 37.5 -0.2**
MCK	**McKinley** comp=E,136nm,0.8s	**1.05**	**50**	IAML		09 36 54.8
MCK				IAML		09 36 55.6
	comp=N,132nm,0.8s					
CHUM	**Lake Minchumin**	**1.08**	**320**		**Pn**	**09 36 38.0 -0.1**
CHUM					**Sn**	**09 36 54.5 -1.0**
SKT	**Skwentna**	**1.15**	**199**		**Sn**	**09 36 56.2 -0.6**
SKT	**Skwentna** comp=E,622nm,0.3s	**1.15**	**199**	IAML		09 36 56.9
SKT				IAML		09 36 57.2
	comp=N,544nm,0.5s					
M22K	**Willow**	**1.35**	**168**		**Pn**	**09 36 40.7 -0.2**
M22K	**Willow** comp=E,798nm,0.7s	**1.35**	**168**	IAML		09 37 06.5
M22K				IAML		09 37 07.6
	comp=N,1μm,0.6s					
DHY	**Denali Highway**	**1.53**	**88**		**Pn**	**09 36 42.9 -0.1**
DHY					**Sn**	**09 37 04.0 -0.3**
DHY	**Denali Highway** comp=E,352nm,1.0s	**1.53**	**88**	IAML		09 37 05.0
DHY				IAML		09 37 05.3
	comp=N,302nm,0.6s					
K20K	**Telida**	**1.54**	**282**		**Pn**	**09 36 42.9 -0.1**
K20K	**Telida** comp=E,129nm,0.9s	**1.54**	**282**	IAML		09 37 03.9
GHO	**Glory Hole Cre**	**1.55**	**146**		**Pn**	**09 36 43.1 -0.1**
GHO					**Sn**	**09 37 04.6 -0.1**
GHO	**Glory Hole Cre** comp=N,814nm,0.5s	**1.55**	**146**	IAML		09 37 08.4
GHO				IAML		09 37 08.8
	comp=E,426nm,0.6s					
SUA	**Susitna One**	**1.61**	**180**		**Pn**	**09 36 44.1 +0.1**
SUA	**Susitna One** comp=N,248nm,0.7s	**1.61**	**180**	IAML		09 37 09.8
SUA				IAML		09 37 10.9
	comp=E,173nm,0.5s					
M20K	**Styx River**	**1.63**	**224**		**Pn**	**09 36 43.8 -0.4**
M20K					**Sn**	**09 37 05.2 -1.1**
M20K	**Styx River** comp=N,171nm,0.6s	**1.63**	**224**	IAML		09 37 06.4
M20K				IAML		09 37 06.9
	comp=E,194nm,0.5s					
PMR	**Palmer**	**1.66**	**153**		**Sn**	**09 37 05.8 -1.0**
PMR	**Palmer** comp=E,234nm,0.4s	**1.66**	**153**	IAML		09 37 12.4
PMR				IAML		09 37 15.5
	comp=N,163nm,0.7s					
SML	**Sawmill**	**1.69**	**138**		**Pn**	**09 36 44.1 -0.7**
SML					**Sn**	**09 37 07.0 -0.5**
SML	**Sawmill** comp=E,385nm,0.8s	**1.69**	**138**	IAML		09 37 12.6
SML				IAML		09 37 13.9
	comp=N,239nm,0.6s					
NEA2	**Nenana**	**1.70**	**25**		**Pn**	**09 36 44.3 -0.6**
NEA2					**Sn**	**09 37 05.5 -2.2**
NEA2	**Nenana** comp=E,234nm,0.9s	**1.70**	**25**	IAML		09 37 06.6
NEA2				IAML		09 37 08.2
	comp=N,98nm,0.9s					
WRH	**Wood River Hil**	**1.83**	**39**		**Pn**	**09 36 46.1 -0.3**
WRH	**Wood River Hil** comp=N,88nm,0.6s	**1.83**	**39**	IAML		09 37 10.3
WRH				IAML		09 37 10.3
	comp=E,70nm,0.9s					
SPCG	**Spurr Capps Gl**	**1.88**	**199**		**Pn**	**09 36 47.1 -0.1**
J20K	**Nowinta River**	**1.89**	**308**		**Pn**	**09 36 47.0 -0.1**
J20K					**Sn**	**09 37 10.4 -1.3**
J20K	**Nowinta River** comp=N,192nm,0.6s	**1.89**	**308**	IAML		09 37 11.9
J20K				IAML		09 37 14.4
	comp=E,158nm,0.8s					
SPNN	**North Nagishla**	**1.94**	**209**		**Pn**	**09 36 47.9 0.0**
SPBG	**Spurr Blockage**	**1.97**	**204**		**Pn**	**09 36 49.5 +1.3**
KNIK	**Knik Glacier**	**1.97**	**146**		**Pn**	**09 36 47.8 -0.4**
SPU	**Mount Spurr**	**1.99**	**199**		**Pn**	**09 36 48.2 -0.2**
SCM	**Sheep Creek Mo**	**2.01**	**127**		**Pn**	**09 36 48.2 -0.6**
SCM					**Sn**	**09 37 14.2 -0.3**
SCM	**Sheep Creek Mo** comp=E,307nm,0.7s	**2.01**	**127**	IAML		09 37 15.7
SCM				IAML		09 37 15.8
	comp=N,229nm,0.5s					
RC01	**Rabbit Creek A**	**2.04**	**166**		**Pn**	**09 36 48.6 -0.4**
RC01	**Rabbit Creek A** comp=E,114nm,0.5s	**2.04**	**166**	IAML		09 37 20.8
RC01				IAML		09 37 23.3
	comp=N,172nm,0.5s					
CCB	**Clear Creek Bu**	**2.05**	**38**		**Sn**	**09 37 13.4 -1.8**
CCB	**Clear Creek Bu** comp=N,56nm,0.7s	**2.05**	**38**	IAML		09 37 15.0
CCB				IAML		09 37 15.6
	comp=E,77nm,0.9s					
L19K	**White Mountain**	**2.10**	**247**		**Pn**	**09 36 49.5 -0.4**
L19K	**White Mountain** comp=E,64nm,0.7s	**2.10**	**247**	IAML		09 37 17.3
L19K				IAML		09 37 24.2
	comp=N,70nm,0.8s					
HDA	**Harding Lake**	**2.16**	**50**		**Pn**	**09 36 49.9 -0.5**
HDA	**Harding Lake** comp=E,158nm,0.4s	**2.16**	**50**	IAML		09 37 17.4
HDA				IAML		09 37 21.7
	comp=N,132nm,0.4s					
I23K	**Minto, Yukon-K** comp=N,67nm,1.2s	**2.17**	**15**	IAML		09 37 18.4
I21K	**Tanana**	**2.19**	**346**		**Pn**	**09 36 50.6 -0.2**
I21K	**Tanana** comp=E,107nm,0.9s	**2.19**	**346**	IAML		09 37 17.7
I21K				IAML		09 37 19.0
	comp=N,82nm,1.2s					
COLA	**College**	**2.21**	**34**		**Pn**	**09 36 50.8 -0.3**
COLA	**College** comp=N,141nm,0.6s	**2.21**	**34**	IAML		09 37 19.2
M24K	**Tolsona, Glenn**	**2.32**	**113**		**Pn**	**09 36 52.6 0.0**
J19K	**Poorman**	**2.38**	**295**		**Pn**	**09 36 53.3 0.0**
J19K	**Poorman** comp=E,70nm,0.8s	**2.38**	**295**	IAML		09 37 22.5
J19K				IAML		09 37 23.1
	comp=N,102nm,0.5s					
I20K	**Naaghedeneel**	**2.40**	**318**		**Pn**	**09 36 53.6 +0.1**
I20K	**Naaghedeneel** comp=E,434nm,0.4s	**2.40**	**318**	IAML		09 37 23.6
I20K				IAML		09 37 23.9
	comp=N,435nm,0.7s					
PAX	**Paxson**	**2.40**	**90**		**Pn**	**09 36 53.7 0.0**
PAX				IAML		09 37 24.3
	comp=E,143nm,0.5s					
PAX				IAML		09 37 31.8
	comp=N,76nm,0.6s					
ILAR	**Eielson Array** comp=N,17nm,0.5s,baz=224,slow=12,SNR=114	**2.41**	**43**	P	**Pn**	**09 36 53.1 -0.5**
ILAR				S	**Sn**	**09 37 21.8 -1.6**
	comp=N,2.6nm,0.4s,baz=226,slow=21,SNR=5.3					
POKR	**Poker Plat Res**	**2.52**	**34**		**Pn**	**09 36 54.7 -0.3**
SLKM	**Skilak Lake**	**2.58**	**174**		**Pn**	**09 36 55.6 -0.3**
SLKM	**Skilak Lake** comp=E,105nm,0.5s	**2.58**	**174**	IAML		09 37 38.2
SLKM				IAML		09 37 48.0
	comp=N,74nm,0.7s					
RDT	**Redoubt**	**2.62**	**198**		**Pn**	**09 36 56.6 +0.1**
HARP	**HAARP**	**2.65**	**102**		**Pn**	**09 36 57.0 +0.2**
RDJH	**Redoubt Jeurge**	**2.67**	**203**		**Pn**	**09 36 57.6 +0.4**
RIDG	**Independent Ri**	**2.73**	**73**		**Pn**	**09 36 58.0 +0.1**
RIDG	**Independent Ri** comp=E,64nm,0.9s	**2.73**	**73**	IAML		09 37 35.5
RIDG				IAML		09 37 39.8
	comp=N,69nm,0.7s					
J18K	**Innoko River**	**2.73**	**281**		**Pn**	**09 36 57.8 -0.1**
J18K				IAML		09 37 31.8
	comp=N,19nm,0.8s					
J18K				IAML		09 37 32.5
	comp=E,24nm,0.9s					
KLU	**Klutina**	**2.75**	**123**		**Pn**	**09 36 57.1 -1.0**
KLU				IAML		09 37 44.8
	comp=E,100nm,0.6s					
H21K	**Melozitna Rive**	**2.75**	**342**		**Pn**	**09 36 57.8 -0.3**
H21K	**Melozitna Rive** comp=E,37nm,0.7s	**2.75**	**342**	IAML		09 37 29.4
H21K				IAML		09 37 31.7
	comp=N,45nm,1.2s					
RED	**Redoubt Volcan**	**2.83**	**201**	Pn	**Pn**	**09 36 59.3 +0.1**
RED				IAML		09 37 42.3
	comp=N,34nm,0.5s					
RED				IAML		09 37 57.7
	comp=E,41nm,1.0s					
J25K	**Salcha River,** comp=N,91nm,0.5s	**2.84**	**54**	IAML		09 37 35.7
J25K				IAML		09 37 36.0
	comp=E,85nm,0.8s					
H22K	**Ishtalitna Cre**	**2.85**	**355**		**Pn**	**09 36 59.1 -0.2**
H22K				IAML		09 37 34.4
	comp=N,55nm,1.1s					
M18K	**Stony River**	**2.86**	**239**		**Pn**	**09 36 59.1 -0.3**
N19K	**Bonanza Creek**	**2.87**	**220**		**Pn**	**09 37 00.1 +0.3**
N19K				IAML		09 37 55.0
	comp=N,40nm,1.5s					
N19K				IAML		09 37 58.5
	comp=E,35nm,0.9s					
L18K	**Granite Mounta** comp=E,37nm,1.3s	**2.88**	**255**	IAML		09 37 50.6
SEW	**Seward**	**3.04**	**168**		**Pn**	**09 37 01.2 -0.6**
SEW	**Seward** comp=N,84nm,0.8s	**3.04**	**168**	IAML		09 37 38.4
DIV	**Divide**	**3.04**	**128**		**Pn**	**09 37 00.5 -1.4**
H24K	**Noodor Dome**	**3.04**	**23**		**Pn**	**09 37 01.4 -0.5**
DOT	**Dot Lake**	**3.06**	**76**		**Pn**	**09 37 01.7 -0.4**
DOT				IAML		09 37 42.1
	comp=N,51nm,0.5s					
DOT				IAML		09 37 42.5
	comp=E,55nm,0.8s					
SCRK	**Sand Creek**	**3.16**	**70**		**Pn**	**09 37 02.7 -0.7**
SCRK	**Sand Creek** comp=N,28nm,0.5s	**3.16**	**70**	IAML		09 37 46.9
SCRK				IAML		09 37 47.1
	comp=E,35nm,0.7s					
MENT	**Mentasta**	**3.20**	**89**		**Pn**	**09 37 03.9 -0.1**
MENT				IAML		09 37 50.7
	comp=N,61nm,0.7s					
MENT				IAML		09 37 53.7
	comp=E,84nm,0.6s					
N25K	**Chitina, Valde**	**3.21**	**114**		**Pn**	**09 37 03.8 -0.4**
N25K	**Chitina, Valde** comp=E,60nm,0.5s	**3.21**	**114**	IAML		09 37 42.7
N25K				IAML		09 37 44.1
	comp=N,66nm,0.7s					
IVE	**Iliamna Volcan**	**3.25**	**201**		**Pn**	**09 37 05.5 +0.8**
BRLK	**Bradley Lake**	**3.31**	**181**		**Pn**	**09 37 05.5 0.0**
BRLK				IAML		09 37 56.7
	comp=N,56nm,0.6s					
BRLK				IAML		09 37 59.4
	comp=E,65nm,1.4s					
BRSE	**Bradley Lake S**	**3.34**	**180**		**Pn**	**09 37 05.4 -0.4**
PRP	**Porcupine Dome**	**3.35**	**40**		**Pn**	**09 37 05.5 -0.4**
PRP	**Porcupine Dome** comp=N,24nm,0.7s	**3.35**	**40**	IAML		09 37 45.0
PRP				IAML		09 37 51.0
	comp=E,21nm,0.9s					
HIN	**Hinchinbrook I**	**3.35**	**141**		**Pn**	**09 37 04.9 -1.0**
O19K	**Port Alsworth**	**3.35**	**212**		**Pn**	**09 37 06.4 +0.5**
O19K				IAML		09 37 46.2
	comp=N,69nm,0.4s					
L26K	**Log Cabin Wild**	**3.36**	**87**		**Pn**	**09 37 05.9 -0.2**
L26K	**Log Cabin Wild** comp=E,61nm,0.5s	**3.36**	**87**	IAML		09 37 53.2
L26K				IAML		09 37 53.2
	comp=N,66nm,0.5s					
N18K	**Kilae Creek**	**3.42**	**228**		**Pn**	**09 37 06.8 0.0**
N18K	**Kilae Creek** comp=N,38nm,1.0s	**3.42**	**228**	IAML		09 37 48.0
N18K				IAML		09 37 48.7
	comp=E,28nm,0.9s					
P23K	**Montague Islan**	**3.47**	**151**		**Pn**	**09 37 06.4 -1.1**
K17K	**Iditarod**	**3.48**	**268**		**Pn**	**09 37 07.6 0.0**
K17K	**Iditarod** comp=N,22nm,0.8s	**3.48**	**268**	IAML		09 38 15.6
K17K				IAML		09 38 18.0
	comp=E,27nm,0.8s					
J26L	**Joseph Creek**	**3.49**	**62**		**Pn**	**09 37 07.8 0.0**
J26L	**Joseph Creek** comp=N,84nm,0.5s	**3.49**	**62**	IAML		09 37 53.1
J26L				IAML		09 37 53.5
	comp=E,86nm,0.6s					
M17K	**Holitna River**	**3.56**	**245**		**Pn**	**09 37 08.2 -0.4**
M17K	**Holitna River** comp=N,38nm,1.0s	**3.56**	**245**	IAML		09 38 11.6
M17K				IAML		09 38 24.2
	comp=E,40nm,1.1s					
CNPM	**China Poot**	**3.56**	**184**		**Pn**	**09 37 09.0 +0.2**
BMRM	**Bremner River**	**3.57**	**123**		**Pn**	**09 37 07.5 -1.4**
BMRM	**Bremner River** comp=N,88nm,1.1s	**3.57**	**123**	IAML		09 38 08.3
BMRM				IAML		09 38 09.1
	comp=E,63nm,0.8s					
L17K	**Donlin**	**3.62**	**258**		**Pn**	**09 37 09.2 -0.2**
GLB	**Gilahina Butte**	**3.62**	**114**		**Pn**	**09 37 08.9 -0.6**
GLB	**Gilahina Butte** comp=E,29nm,0.4s	**3.62**	**114**	IAML		09 37 52.2
P19K	**Oil Pt**	**3.63**	**200**		**Pn**	**09 37 10.1 +0.4**
P19K	**Oil Pt** comp=E,49nm,0.6s	**3.63**	**200**	IAML		09 37 59.4
P19K				IAML		09 38 04.5
	comp=N,39nm,1.0s					
G21K	**Allakaket**	**3.66**	**342**		**Pn**	**09 37 09.9 -0.1**
G21K	**Allakaket** comp=E,18nm,1.2s	**3.66**	**342**	IAML		09 38 04.8
G23K	**Bananza Creek** comp=E,43nm,0.9s	**3.67**	**4**	IAML		09 37 51.9
G23K				IAML		09 37 52.7
	comp=N,37nm,0.6s					
J17K	**VABM Dome**	**3.79**	**279**		**Pn**	**09 37 11.4 -0.2**
VRDI	**Verde Repeater**	**3.88**	**115**		**Pn**	**09 37 12.2 -0.9**
VRDI	**Verde Repeater** comp=N,41nm,1.1s	**3.88**	**115**	IAML		09 37 58.6
VRDI				IAML		09 38 00.9
	comp=E,34nm,0.9s					
N17K	**Nushagak Hills**	**3.98**	**233**		**Pn**	**09 37 14.2 -0.1**
N17K	**Nushagak Hills** comp=N,18nm,0.7s	**3.98**	**233**	IAML		09 38 32.1
N17K				IAML		09 38 33.0
	comp=E,15nm,1.1s					
BC01	**Beaver Creek A**	**4.05**	**86**		**Pn**	**09 37 14.2 -1.0**
L27K	**Beaver Creek,**	**4.05**	**86**		**Pn**	**09 37 14.3 -0.9**
M27K	**Edge Creek, AK**	**4.14**	**96**		**Pn**	**09 37 16.8 +0.4**
M27K	**Edge Creek, AK** comp=E,13nm,1.4s	**4.14**	**96**	IAML		09 38 25.6
M27K				IAML		09 38 26.4
	comp=N,19nm,1.2s					
FYU	**Fort Yukon** comp=E,17nm,1.2s	**4.23**	**31**	IAML		09 38 06.1
FYU				IAML		09 38 06.9
	comp=N,17nm,1.1s					
L16K	**Owhat River**	**4.29**	**255**		**Pn**	**09 37 18.7 +0.3**
L16K				IAML		09 38 27.8
	comp=E,10nm,1.1s					
L16K				IAML		09 38 34.0
	comp=N,10nm,1.4s					
F21K	**Alatna River**	**4.33**	**346**		**Pn**	**09 37 19.1 +0.2**
M16K	**Timber Creek**	**4.38**	**246**		**Pn**	**09 37 19.6 0.0**
M16K	**Timber Creek** comp=E,12nm,1.4s	**4.38**	**246**	IAML		09 38 31.6
TGL	**Tana Glacier**	**4.40**	**118**		**Pn**	**09 37 18.8 -1.1**
TGL	**Tana Glacier** comp=N,33nm,0.5s	**4.40**	**118**	IAML		09 38 28.1
BALM	**Baldy**	**4.44**	**114**		**Pn**	**09 37 19.5 -1.0**
J16K	**Anvik River**	**4.48**	**277**		**Pn**	**09 37 21.0 +0.1**
O17K	**Koliganek Bris**	**4.50**	**226**		**Pn**	**09 37 21.2 0.0**
F20K	**Avaraart Lake**	**4.52**	**334**		**Pn**	**09 37 21.5 +0.1**
I17K	**Unalakleet**	**4.54**	**285**		**Pn**	**09 37 22.5 +0.8**
SYI	**Shuyak Island**	**4.54**	**191**		**Pn**	**09 37 21.6 -0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SYI	Shuyak Island	4.54	191	IAML		09 38 14.9	
	comp=N,30nm,1.1s						
BVCY	Beaver Creek	4.59	94		Pn	09 37 22.0	-0.3
ISLE	Juniper Island	4.68	118		Pn	09 37 22.5	-1.2
YUK2	White River	4.77	101		Pn	09 37 24.9	+0.1
GRNC	Granite Creek	4.85	115		Pn	09 37 25.1	-0.9
GRNC	Granite Creek	4.85	115	IAML		09 38 41.6	
	comp=E,12nm,1.1s						
GRNC				IAML		09 38 47.8	
	comp=N,26nm,1.1s						
G26K	Porcupine Rive	4.88	34		Pn	09 37 25.4	-0.8
G26K	Porcupine Rive	4.88	34	IAML		09 38 21.7	
	comp=N,16nm,1.4s						
G26K				IAML		09 38 55.3	
	comp=E,9.3nm,1.4s						
YUK3	Moose Creek	4.95	101		Pn	09 37 27.5	+0.1
KAHG	Katmai Hook Gl	4.95	204		Pn	09 37 27.7	+0.4
O16K	Kokwok River B	4.97	229		Pn	09 37 27.4	0.0
O16K	Kokwok River B	4.97	229	IAML		09 38 59.8	
	comp=E,9.4nm,1.3s						
KARR	Katmai Rainbow	4.98	205		Pn	09 37 28.0	+0.3
F25K	Christian Rive	5.02	23		Pn	09 37 27.8	-0.3
E23K	Chandalar	5.04	5	IAML		09 38 25.2	
	comp=E,7.8nm,1.4s						
K15K	Wolf Creek Mou	5.04	266		Pn	09 37 28.4	0.0
H27K	Steamboat Moun	5.07	47		Pn	09 37 28.4	-0.4
BMAR	Burnt Mountain	5.08	28		Pn	09 37 28.6	-0.4
KAWH	Katmai	5.11	205		Pn	09 37 29.4	0.0
E24K	Your Creek	5.12	9		Pn	09 37 29.4	0.0
E24K	Your Creek	5.12	9	IAML		09 38 27.9	
	comp=N,9.4nm,0.9s						
DAWY	Dawson	5.17	74		Pn	09 37 29.8	-0.3
E19K	Redstone River	5.18	331		Pn	09 37 30.3	0.0
E19K	Redstone River	5.18	331	IAML		09 39 02.1	
	comp=N,8.9nm,1.1s						
L15K	Ungalak Mounta	5.20	259		Pn	09 37 30.4	-0.1
KAKN	Katmai Knife C	5.24	206		Pn	09 37 31.5	+0.4
I28M	Miner Creek	5.28	58		Pn	09 37 31.9	+0.2
I28M	Miner Creek	5.28	58	IAML		09 38 35.6	
	comp=E,14nm,0.8s						
I28M				IAML		09 38 35.9	
	comp=N,8.8nm,1.3s						
KABU	Katmai Buttres	5.31	207		Pn	09 37 32.5	+0.5
KDAK	Kodiak Island	5.38	191	P	Pn	09 37 31.8	-1.2
	comp=N,7.3nm,0.3s,baz=9.0,slow=11,SNR=72						
KDAK				S	Sn	09 38 28.0	-5.7
	comp=N,16nm,0.8s,baz=308,slow=21,SNR=5.6						
F26K	Sheenjek River	5.40	28		Pn	09 37 32.9	-0.3
ANCK	Angle Creek	5.42	208		Pn	09 37 34.1	+0.6
E25K	Arctic Village	5.51	21		Pn	09 37 34.5	-0.1
E21K	Killik River	5.56	348		Pn	09 37 36.7	+1.3
L14K	Kuka Creek	5.85	258		Pn	09 37 40.0	+0.7
J14K	Nanvaranak Lak	5.87	273		Pn	09 37 40.0	+0.5
D20K	Etivluk River	6.16	340		Pn	09 37 43.7	+0.3
F28M	Old Crow	6.43	40		Pn	09 37 46.5	-0.7
INK	Inuvik	8.81	46	P	Pn	09 38 18.4	-0.7
	comp=N,1.3nm,0.8s,baz=243,slow=11,SNR=1.5						
YKA	Yellowknife Ar	16.40	76	P	Pn	09 39 58.0	+0.4
	comp=N,0.6nm,0.8s,baz=290,slow=10,SNR=4.5						
PDAR	Pinedale Array	31.27	111	P	P	09 42 25.0	+1.9
	comp=N,0.4nm,0.8s,baz=332,slow=6.8,SNR=3.1						
	comp=N,0.4nm,0.8s						
FRB	Frobisher Bay	34.42	51	LR	LR	09 58 28.0	
	comp=N,284nm,19.2s,baz=80,slow=39						
SPITS	Spitsbergen Ar	38.77	4	P	P	09 43 25.8	-0.9
	comp=N,7.6nm,1.1s,baz=2.3,slow=7.2,SNR=8.3						
	comp=N,7.6nm,1.1s						
TXAR	Lajitas Array	45.19	116	P	P	09 44 21.1	+1.6
	comp=N,0.2nm,0.6s,baz=339,slow=7.8,SNR=2.7						
	comp=N,0.2nm,0.6s						
FINES	FINESS Array B	55.78	2	P	P	09 45 38.3	-0.2
	comp=N,5.9nm,1.1s,baz=8.8,slow=10.0,SNR=3.2						
	comp=N,5.9nm,1.1s						

*CATAC **06** 09:38:16.9±0.6, 17°N±2°×9°1W±°, h7km±4km, M3.8/10, MLv3.8/10, Error ellipse: s-maj=4.4km s-min=3.9km az=159.9, confirmed*
*GCG **06** 09:38:18.1±1.8, 16°.68N×91°.09W, h13km±11km, MD4.0, ML4.1, Presumed earthquake*
*MEX **06** 09:38:24.4±0.3, 16°.54N×91°.37W, h15km, MD4.2*
ISC 06 09:38:16.7±1.3**, 16°.70N**±0°.03×**91°.10W**±0°.02**, h16**km±9km**, n35,** σ1s**86**/59**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	1.08	248	P	Pg	09 38 37.3	-0.4
CCIG				S	Sg	09 38 52.0	+0.2
CCIG	Comitan	1.08	248	i P	Pg	09 38 37.2	-0.4
CCIG				IAML		09 38 57.4	
	comp=Z,746nm,0.9s						
CCIG	Comitan	1.08	248	eP	Pg	09 38 37.3	-0.4
CCIG				eS	Sb	09 38 53.0	+1.8
PETF	Flores	1.20	79	P	Pg	09 38 38.9	-0.9
PETF	Flores	1.20	79	eP	Pg	09 38 38.9	-0.9
PETF				i S	Sb	09 38 56.1	+1.7
PETF				IAML		09 39 04.7	
	comp=N,5µm,0.5s						
PETF	Flores	1.20	79	eP	Pg	09 38 38.7	-1.1
PETF				eS	Sn	09 38 56.5	+1.7
AVCB	Coban	1.39	151	i P	Pn	09 38 42.8	+1.2
AVCB				i S	Sb	09 39 01.1	+1.0
AVCB				IAML		09 39 07.8	
	comp=E,12µm,0.6s						
HUEH	Huehuetenango	1.43	196	P	Pn	09 38 43.2	+1.0
HUEH				S	Sb	09 39 03.1	+1.9
HUEH	Huehuetenango	1.43	196	i P	Pn	09 38 43.1	+1.0
HUEH				i S	Sb	09 39 00.8	-0.4
HUEH				IAML		09 39 04.9	
	comp=E,4µm,0.4s						
HUEH	Huehuetenango	1.43	196	eP	Pn	09 38 43.2	+1.0
HUEH				eS	Sb	09 39 02.0	+0.8
APG	El Apazote	1.79	160	eP	Pn	09 38 47.7	+0.4
APG				i S	Sn	09 39 10.6	+0.7
PAVE	Pavencul	1.82	215	eP	Pn	09 38 48.2	+0.5
PAVE				eS	Sn	09 39 11.3	+0.7
CHUJ	Union Juarez	1.87	212	eP	Pn	09 38 48.9	+0.5
CHUJ				eS	Sn	09 39 12.2	+0.4
SOKI	Kika Raxquin	1.89	189	i P	Pn	09 38 50.6	+1.8
SOKI				IAML		09 39 21.9	
	comp=E,1µm,0.6s						
PATR	El Naranjo	1.92	215	eP	Pn	09 38 49.4	+0.4
PATR				eS	Sn	09 39 13.6	+0.7
TGIG		1.94	273	i P	Pn	09 38 50.0	+0.8
TGIG		1.94	273	eP	Pn	09 38 50.0	+0.8
TGIG				eS	Sn	09 39 15.3	+1.9
SMCA	Catarina	2.06	207	i P	Pn	09 38 52.6	+1.8
THIG		2.11	212	eP	Pn	09 38 53.3	+1.9
THIG				eS	Sn	09 39 19.5	+2.2
STG8	El Palmar, Qui	2.25	186	i P	Pn	09 38 51.8	-1.8
SCIG	Sabancuy	2.26	358	P	Pn	09 38 55.4	+1.9
SCIG				S	Sn	09 39 23.3	+2.3
SCIG	Sabancuy	2.26	358	i P	Pn	09 38 55.2	+1.7
SCIG	Sabancuy	2.26	358	eP	Pn	09 38 54.4	+1.0
SCIG				eS	Sn	09 39 19.7	-1.4
STG2	El Palmar, Qui	2.26	187	i P	Pn	09 38 52.4	-1.3
STG2				i S	Sn	09 39 18.0	-3.4
PCIG		2.27	244	eP	Pn	09 38 54.2	+0.6
PCIG				eS	Sn	09 39 19.8	-1.4
PCIG				eS	Sb	09 39 20.4	-4.7
STG5	El Palmar, Qui	2.29	186	i P	Pn	09 38 53.1	-1.0
IZABA	Izabal, Puerto	2.60	111	P	Pn	09 38 56.8	-1.3
ZAFR2	Estanzuela, Za	2.70	141	i P	Pn	09 38 53.6	-5.9
ESQI	Esquipulas	2.72	141	S	Sb	09 39 38.7	+0.5
MTO3	Montecristo	2.83	144	P	Pn	09 39 01.5	-0.1
MTO3				S	Sb	09 39 46.0	+4.3
FAME	Alcaldia de Sa	3.02	160	P	Pn	09 39 05.6	+1.5
FAME				S	Sb	09 39 51.9	+4.9
NUBE	Las Nubes	3.06	155	P	Pn	09 39 05.5	+0.9
NUBE				S	Sb	09 39 51.0	+3.0
JAYA	Jayaque - finc	3.42	152	P	Pg	09 39 21.1	-1.2
JAYA				S	Sb	09 39 57.8	-0.7
SOR	Soroa	9.73	50	eP	Pn	09 40 36.9	+0.7
SOR				e		09 40 36.9	
	baz=339,slow=28						
SOR				IVmB_BB		09 40 39.7	
	comp=Z,93nm,0.2s						
SOR				eS	Sn	09 42 22.3	-3.0
SOR				IAML		09 42 26.5	
	comp=N,7.9nm,0.3s						
SOR				IAML		09 42 29.2	
	comp=E,15nm,0.3s						
MGV	Manicaragua	11.79	61	eP	Pn	09 41 05.1	+0.8
MGV				eS	Sn	09 43 11.0	-4.6

*ISU **06** 09:41:31, 40°.77N×69°.68E, h7km*
*KRNET **06** 09:41:32.7±0.1, 40°.85N×69°.90E, mb2.7*
ISC 06 09:41:31.0±1.6**, 40°.88N**±0°.05×**69°.86E**±0°.06**, h12**km±12km**, n9,** σ0s**92**/15**, 7C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NZBK	Nazarbek	0.66	302	S	Sn	09 41 56.1	-0.4
CHMG	Chimgan	0.68	9	P	Pg	09 41 44.1	-0.2
CHMG				S	Sb	09 41 56.1	+1.8
TVKS	Tavaksay	0.72	347	P	Pg	09 41 44.1	-0.8
CHRV	Charvak	0.77	5	P	Pg	09 41 46.1	+0.2
BTK	Batken	1.09	138	⇓iP	Pn	09 41 52.6	+0.4
BTK				⇓iS	Sn	09 42 06.7	-0.5
TRKS	Terek-Say	1.17	55	⇑iP	Pg	09 41 53.7	+0.3
TRKS				⇑iS	Sn	09 42 09.5	+0.4
DRK	Karamyk	2.04	133	⇑iP	Pb	09 42 08.0	0.0
DRK				⇑iS	Sb	09 42 33.7	+0.3
KK31	Karatay Array	2.28	12	⇑Pn	Pb	09 42 12.0	-0.1
	0.7nm,0.1s,baz=203,slow=16,SNR=38						
KK31				⇓Sn	Sg	09 42 44.9	+0.7
	1.8nm,0.2s,baz=195,slow=28,SNR=11						
MNAS	Manas	2.55	50	⇑iP	Pb	09 42 15.5	-1.2
MNAS				⇑iS	Sb	09 42 46.5	-1.6

*NOU **06** 09:44:31.6, 38°.05S×175°.79E, h249km, MLv3.6/18, North Island, New Zealand*
*WEL **06** 09:44:33.8±0.7, 38°S±4°×17°6E±°, h235km±6km, M2.9/40, MLv2.9/40, Error ellipse: s-maj=5.8km s-min=5.5km az=45.0*
ISC 06 09:44:27.8±2.0**, 37°.92S**±0°.06×**175°.93E**±0°.06**, h279**km±12km**, n119,** σ1s**96**/133**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARZ	Kaharoa	0.27	111	P	Pn	09 45 05.1	+1.5
TGRZ	Tauranga	0.33	54	P	Pn	09 45 05.0	+1.3
TOZ	Tahuroa Road	0.39	299	P	Pn	09 45 05.4	+1.6
OMRZ	Omania	0.40	118	P	Pn	09 45 05.5	+1.7
HSRZ	Hossack Road	0.46	147	P	Pn	09 45 06.0	+2.1
OPRZ	Ohinepanea	0.50	81	P	Pn	09 45 05.4	+1.3
HRRZ	Handcock Road	0.54	149	P	Pn	09 45 06.1	+1.9
TARZ	Mount Tarawera	0.55	125	P	Pn	09 45 06.1	+1.9
MARZ	Manawahe	0.59	96	P	Pn	09 45 06.0	+1.7
RRRZ	Republican Roa	0.62	132	P	Pn	09 45 06.0	+1.6
WPRZ	Whakapapatarin	0.62	163	P	Pn	09 45 06.4	+2.0
EDRZ	Edgecumbe	0.67	106	P	Pn	09 45 06.1	+1.5
PRRZ	Plateau Road	0.68	148	P	Pn	09 45 06.2	+1.7
PRRZ				S	S	09 45 31.9	-1.8
ALRZ	Allen Road	0.72	153	P	Pn	09 45 06.4	+1.7
WATZ	Wairara	0.80	191	P	Pn	09 45 07.1	+2.1
MUGZ	Murupara	0.86	130	P	Pn	09 45 06.5	+1.3
MUGZ				S	S	09 45 31.5	-3.4
MRHZ	Matea Rd	0.99	157	P	Pn	09 45 07.5	+1.6
MRHZ				S	S	09 45 33.9	-2.2
URZ	Urewera	0.99	110	P	Pn	09 45 07.0	+1.2
URZ	Urewera	0.99	110	S	S	09 45 33.5	-2.5
URZ	Urewera	0.99	110	P	Pn	09 45 06.8	+1.0
URZ				S	S	09 45 33.2	-2.7
MKAZ	Moumakai	1.02	323	P	Pn	09 45 07.7	+1.6
HIZ	Hauiti	1.03	235	P	Pn	09 45 08.4	+2.4
KATZ	Kakaramea	1.07	190	P	Pn	09 45 08.7	+2.3
RTZ	Ruatahuna	1.08	130	P	Pn	09 45 07.9	+1.5
RTZ				S	S	09 45 34.9	-2.0
MTHZ	Maungataniwha	1.17	143	P	Pn	09 45 08.6	+1.7
MTHZ				S	S	09 45 35.8	-2.0
KUZ	Kuaotunu	1.19	352	P	Pn	09 45 08.3	+1.3
KUZ	Kuaotunu	1.19	352	P	Pn	09 45 08.2	+1.2
NTVZ	North Tongarir	1.19	190	P	Pn	09 45 09.4	+2.3
KRVZ	Karewarewa	1.19	191	P	Pn	09 45 09.1	+2.1
TMVZ	Te Maari	1.20	188	P	Pn	09 45 09.3	+2.2
TWVZ	Taurewa	1.21	198	P	Pn	09 45 09.0	+1.9
WTVZ	West Tongariro	1.22	192	P	Pn	09 45 09.1	+1.9
NNVZ	North Ngauruho	1.23	191	P	Pn	09 45 09.3	+2.0
ETAZ	East Tamaki Re	1.25	320	P	Pn	09 45 08.8	+1.5
OTVZ	Oturere	1.26	189	P	Pn	09 45 09.7	+2.3
NGZ	Ngauruhoe	1.28	191	P	Pn	09 45 09.7	+2.1
SNVZ	South Ngauruho	1.28	190	P	Pn	09 45 09.9	+2.3
WIAZ	Waiheke Island	1.29	330	P	Pn	09 45 09.2	+1.6
RAGZ	Rawiri	1.30	116	P	Pn	09 45 09.6	+1.9
COVZ	Chateau Observ	1.31	193	P	Pn	09 45 09.7	+2.0
BKZ	Black Stump Fm	1.32	161	P	Pn	09 45 09.6	+1.8
BKZ	Black Stump Fm	1.32	161	S	S	09 45 36.9	-2.5
BKZ	Black Stump Fm	1.32	161	P	Pn	09 45 09.5	+1.8
BKZ				S	S	09 45 37.3	-2.1
MWZ	Matawai	1.33	109	P	Pn	09 45 09.1	+1.3
AWAZ	Awhitu Peninsu	1.33	310	P	Pn	09 45 09.5	+1.7
RAHZ	Arahi	1.35	138	P	Pn	09 45 10.2	+2.4
NMHZ	Naumai	1.36	150	P	Pn	09 45 10.8	+2.8
TUVZ	Tukino	1.36	189	P	Pn	09 45 10.1	+2.0
TUVZ				S	S	09 45 40.2	+0.1
FWVZ	Far West T-bar	1.36	192	P	Pn	09 45 10.3	+2.1
RUGZ	Raukumara Rang	1.38	92	P	Pn	09 45 08.5	+0.2
SNGZ	Shannon Statio	1.40	128	P	Pn	09 45 10.5	+2.2
TRVZ	Turoa	1.41	192	P	Pn	09 45 10.9	+2.4
MBAZ	Motutapu North	1.42	324	P	Pn	09 45 09.9	+1.6
WNVZ	Wahianoa	1.43	190	P	Pn	09 45 10.4	+1.9
WNVZ				S	S	09 45 40.9	0.0
PKVZ	Pokaka	1.44	198	P	Pn	09 45 10.6	+2.1
WTAZ	Waiatarua	1.46	312	P	Pn	09 45 10.6	+1.9
HAZ	Te Kaha	1.48	84	P	Pn	09 45 09.3	+0.6
HAZ				S	S	09 45 38.2	-2.9
MOVZ	Moawhango	1.49	185	P	Pn	09 45 10.5	+1.6
MTVZ	Mangateitei	1.50	194	P	Pn	09 45 11.1	+2.2
VRZ	Vera Road	1.51	217	P	Pn	09 45 11.6	+2.7
WHHZ	Waihua	1.54	139	P	Pn	09 45 11.7	+2.6
KWHZ	Kaweka Forest	1.55	166	P	Pn	09 45 11.8	+2.6
RVAZ	Riverhead Bore	1.57	317	P	Pn	09 45 11.1	+1.6
ARHZ	Aropaoanui	1.58	148	P	Pn	09 45 12.1	+2.7
ARHZ				S	S	09 45 41.8	-0.6
ABAZ	Army Bay	1.58	326	P	Pn	09 45 11.4	+1.9
TKGZ	Te Karaka	1.60	109	P	Pn	09 45 11.6	+2.1
TKGZ				S	S	09 45 41.5	-1.1
MCHZ	McNeill Hill	1.63	159	P	Pn	09 45 12.6	+2.9
TWGZ	Tauwhareparae	1.64	100	P	Pn	09 45 11.9	+1.9
TWGZ				S	S	09 45 42.7	-0.6
RIGZ	Rimuhau	1.64	119	P	Pn	09 45 12.3	+2.4
PKGZ	Pakihiroa	1.70	89	P	Pn	09 45 11.8	+1.4
PKGZ				S	S	09 45 42.9	-1.3
GRZ	Great Barrier	1.71	347	P	Pn	09 45 11.9	+1.4
KRHZ	Kereru	1.75	169	P	Pn	09 45 13.0	+2.3
KNZ	Kokohu	1.75	129	P	Pn	09 45 13.0	+2.3
PRGZ	Paritu Road	1.83	124	P	Pn	09 45 13.6	+2.2
PUZ	Puketiti	1.85	95	P	Pn	09 45 12.9	+1.4
CNGZ	Carnagh Statio	1.88	108	P	Pn	09 45 14.4	+2.7
MXZ	Matakaoa Point	1.92	80	P	Pn	09 45 13.8	+1.8
MXZ	Matakaoa Point	1.92	80	P	Pn	09 45 13.4	+1.4
CKHZ	Cape Kidnapper	1.95	153	P	Pn	09 45 15.1	+2.9
WMGZ	Waiomatatini S	1.97	88	P	Pn	09 45 14.1	+1.6
WAZ	Wanganui	1.97	202	P	Pn	09 45 14.6	+2.1
MHGZ	Mahia Peninsul	1.98	129	P	Pn	09 45 15.1	+2.6
PNHZ	Pukenui	2.00	174	P	Pn	09 45 14.7	+2.0
KAHZ	Kahuranaki	2.01	159	P	Pn	09 45 15.5	+2.7
KHEZ	Kahui Hut	2.03	227	P	Pn	09 45 16.1	+3.0
NBEZ	Newall Road No	2.10	230	P	Pn	09 45 16.6	+3.1
TSZ	Takapari Road	2.13	179	P	Pn	09 45 15.7	+1.9
WPHZ	Waipukurau	2.18	170	P	Pn	09 45 16.2	+2.1
PXZ	Pawanui	2.23	161	P	Pn	09 45 17.0	+2.5
OHWZ	Ohakea	2.33	192	P	Pn	09 45 18.0	+2.5
WCZ	Waipu Caves	2.35	327	P	Pn	09 45 17.6	+1.7
DVHZ	Dannevirke	2.38	176	P	Pn	09 45 17.7	+1.7
PRHZ	Porangahau	2.40	167	P	Pn	09 45 18.4	+2.2
POWZ	Post Office Ro	2.47	183	P	Pn	09 45 18.8	+2.0
ANWZ	Angora Road	2.57	171	P	Pn	09 45 19.9	+2.2
PRWZ	Pori Road	2.63	179	P	Pn	09 45 20.3	+1.9
MRZ	Mangatainoka R	2.75	186	P	Pn	09 45 21.0	+1.5
BFZ	Birch Farm	2.77	175	P	Pn	09 45 21.5	+1.8
BFZ	Birch Farm	2.77	175	S	S	09 45 58.7	-2.3
BFZ	Birch Farm	2.77	175	P	Pn	09 45 21.5	+1.8
TIWZ	Tintock	2.85	181	P	Pn	09 45 22.5	+1.9
OGWZ	Otaki Gorge	2.95	191	P	Pn	09 45 23.3	+1.8
HOWZ	Holdsworth Sta	2.99	186	P	Pn	09 45 23.4	+1.5
KIW	Kapiti Island	3.04	195	P	Pn	09 45 23.9	+1.4
TMWZ	Te Maipa	3.18	181	P	Pn	09 45 25.6	+1.6
MTW	Mount Morrison	3.25	186	P	Pn	09 45 25.7	+1.1
CAW	Cannon Point	3.25	192	P	Pn	09 45 26.1	+1.4
DUWZ	D'Urville Isla	3.27	208	P	Pn	09 45 26.3	+1.4
OUZ	Omahuta	3.29	324	P	Pn	09 45 26.8	+1.6
SNZO	South Karori	3.51	195	P	Pn	09 45 28.5	+1.1
SNZO	South Karori	3.51	195	S	S	09 46 12.6	-2.4
TCW	Tory Channel	3.52	201	P	Pn	09 45 28.8	+1.3
MSWZ	Moikau Station	3.53	188	P	Pn	09 45 28.7	+1.1
QRZ	Quartz Range	3.92	221	P	Pn	09 45 31.9	0.0
KHZ	Kahutara	4.85	201	P	Pn	09 45 43.6	+1.0
KHZ	Kahutara	4.85	201	S	S	09 46 40.5	-2.0
RPZ	Rata Peaks	6.87	211	P	Pn	09 46 07.4	+0.3
ODZ	Otahua Downs	8.14	207	P	Pn	09 46 24.2	+1.3
JCZ	Jackson Bay	8.18	219	P	Pn	09 46 24.9	+1.5

AFAD 06 09:50:16.9, 38°.08N×**26°.40E, h6**km±5km**, ML1.7, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARB	zmir-Karabur	0.58	1	P	Pg	09 50 27.6	-0.5
KARB				S	Sb	09 50 37.4	-0.6
KARB				IAML		09 50 39.0	
	comp=N,27nm,0.6s						
KARB				IAML		09 50 41.0	
	comp=E,65nm,0.6s						
CAMT	Merkez	0.98	47	P	Pn	09 50 40.7	+3.5
CAMT				S	Sg	09 50 48.9	+0.5
ZEDA	zmir-Bergama	1.03	31	P	Pn	09 50 40.7	+2.8
ZEDA				S	Sb	09 50 50.5	-0.5
IZMR	zmir-demi	1.23	87	P	Pn	09 50 45.6	+5.0
IZMR				S	Sn	09 50 58.7	+1.2
BUHA	Balikesir, Bur	1.51	20	P	Pb	09 50 45.6	+0.2
BUHA				IAML		09 51 22.0	
	comp=E,24nm,2.0s						

ISK 06 09:50:29.2, 38°.96N×**27°.88E, h6**km**, ML2.0**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.09	213	P	Pg	09 50 32.5	+1.3
AKS	Akhisar	0.09	213	Pg	Pg	09 50 32.5	+1.3
GORD	Gordes-Manisa	0.24	102	Pg	Pg	09 50 34.3	+0.4
GORD				Sg	Sg	09 50 38.4	+1.4
KTTT	Salihli	0.32	148	P	Pb	09 50 36.6	-0.7
SOMA	Soma-Manisa	0.33	307	Pg	Pg	09 50 36.1	+0.4
SOMA				Sg	Sg	09 50 41.4	+1.3
STEP	BALIKESIR_Sava	0.44	344	P	Pg	09 50 36.6	-1.1
STEP				S	Sg	09 50 44.8	+1.4
BALB	Balikesir	0.68	0	Pg	Pg	09 50 42.9	+0.6
ODEM	Odemis-Izmir	0.70	167	Pg	Pg	09 50 42.9	+0.3
ODEM				Sg	Sb	09 50 53.0	-0.7
KULA	Kula-Manisa	0.76	126	Pg	Pb	09 50 44.4	-0.4
DST	Dursunbey	0.86	41	Pg	Pb	09 50 46.6	-0.1
BLCB	Balcova	0.87	229	Pg	Pb	09 50 46.5	-0.2
SIMA	Simav-Kutahya	0.87	81	Pg	Pb	09 50 46.7	-0.1
YAYO	Edremit-Balk	0.91	317	Pg	Pb	09 50 47.3	0.0
AYDB	Zeytinkoy-Aydi	1.01	179	Pg	Pb	09 50 48.9	-0.3
SUSR	Susurluk-Balik	1.02	9	Pg	Pg	09 50 48.8	+0.1
NAZL	Nazilli-Aydin	1.04	162	Pg	Pb	09 50 49.7	0.0
SHAP	Saphane-Kutahy	1.05	86	Pg	Pg	09 50 49.5	+0.2
TVSB	Tavsanli	1.32	68	Pn	Pg	09 50 55.1	+0.5
KCTX	Karacabey (Bur	1.36	16	Pn	Pg	09 50 55.2	-0.1

HEL 06 10:00:11.1±0.1**, 67°.45N**×**23°.40E, h0**km**, ML1.4, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLF	Kolari	0.31	134	PG	Pg	10 00 16.6	-0.4
	baz=319						
KLF				SG	Sg	10 00 21.0	+0.1
HEF	Hetta	0.97	6	PB	Pg	10 00 29.1	-0.6
HEF				smax	smax	10 00 40.7	
	comp=Z,3.4nm,0.2s						
HEF				SB	Sg	10 00 42.2	+0.1
RNF	Rovaniemi	1.33	128	PG	Pg	10 00 35.2	-1.3
RNF				SG	Sg	10 00 51.8	-1.8
TOF	Tornio	1.42	165	PG	Pn	10 00 36.8	-1.4
TOF				smax	smax	10 00 53.9	
	comp=Z,1.6nm,0.2s						
TOF				SG	Sg	10 00 54.7	-2.1
KTK1	Kautokeino	1.57	358	eP	Pn	10 00 39.0	-1.3
KTK1	Kautokeino	1.57	358	PG	Pn	10 00 39.3	-0.9
KTK1				SG	Sn	10 00 55.4	-5.9
KIF	Kilpisjarvi	1.84	329	PG	Pn	10 00 44.5	+0.7
KIF				smax	smax	10 01 06.8	
	comp=Z,3.2nm,0.2s						
SALU	Saltoluokta	1.89	270	eP	Pn	10 00 44.3	-0.3
RANF	Ranua	1.97	135	PG	Pn	10 00 46.1	+0.4
RANF				SG	Sb	10 01 12.0	-0.9
RAJF	Raja-Jooseppi	2.12	59	PG	Pn	10 00 48.9	+1.1
ARA0	ARCESS Array S	2.23	19	PG	Pn	10 00 49.7	+0.4
ARA0				SG	Sb	10 01 19.6	-0.9
VRF	Varrio	2.40	80	PG	Pb	10 00 55.2	+0.1
VRF				smax	smax	10 01 21.8	
	comp=Z,1.8nm,0.2s						
OLKF	Oulanka, Finla	2.62	113	smax	smax	10 01 28.6	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	10 01 32.9	+1.3
OLKF	Oulanka, Finla	2.62	113	smax	smax	10 01 32.5	
	comp=Z,1.1nm,0.2s						
OLKF				SB	Sb	10 01 32.9	+1.3
KEV	Kevo	2.67	28	PB	Pn	10 00 57.2	+2.0
MSF	Maaselka	2.72	122	SG	Sb	10 01 36.4	+1.8
OUF	Merijarvi	3.14	169	PG	Pb	10 01 07.4	-0.3
OUF				smax	smax	10 01 43.3	
	comp=Z,1.0nm,0.2s						

HEL 06 10:00:19.9±0.1**, 63°.94N**×**28°.08E, h0**km**, ML1.1, Suspected explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIF	Nilsia	0.57	192	PG	Pg	10 00 29.9	-0.9
NIF				SG	Sg	10 00 37.1	-0.9
NIF				smax	smax	10 00 38.1	
	comp=Z,1.8nm,0.2s						
RMF	Romuvaara	0.86	70	PG	Pg	10 00 35.4	-1.0
RMF				smax	smax	10 00 46.4	
	comp=Z,1.3nm,0.2s						
OUL	Oulu	1.49	322	PG	Pn	10 00 46.5	-1.3
SUF	Sumiainen	1.50	216	eP	Pn	10 00 47.1	-0.9
SUF	Sumiainen	1.50	216	PG	Pn	10 00 47.2	-0.9
SUF				smax	smax	10 01 05.0	
	comp=Z,0.7nm,0.2s						
OUF	Merijarvi	1.53	288	PG	Pn	10 00 47.1	-1.3
OUF				smax	smax	10 01 05.8	
	comp=Z,1.2nm,0.2s						
OBF0	Syolatti, Pyha	1.77	290	PG	Pn	10 00 51.8	0.0
OBF0				smax	smax	10 01 12.8	
	comp=Z,1.3nm,0.2s						
OBF0				SG	Sn	10 01 14.3	-0.6
JOF	Joensuu	1.78	124	eP	Pn	10 00 51.7	-0.2
JOF	Joensuu	1.78	124	PG	Pn	10 00 51.7	-0.2
	baz=305						
JOF				SG	Sn	10 01 14.1	-1.0
RANF	Ranua	2.15	346	SG	Sg	10 01 28.6	-0.4
KEF	Keuruu	2.30	221	eP	Pn	10 00 58.8	-0.2
KEF	Keuruu	2.30	221	smax	smax	10 01 28.1	
	comp=Z,1.1nm,0.2s						
KEF				SG	Sb	10 01 30.8	-0.5
RUF	Ruokolahti	2.56	171	smax	smax	10 01 35.3	
	comp=Z,0.6nm,0.2s						
RUF				SG	Sb	10 01 38.9	+0.4
VAF	Ylistaro	2.59	252	eP	Pn	10 01 04.6	+1.6
VAF	Ylistaro	2.59	252	smax	smax	10 01 36.3	
	comp=Z,0.6nm,0.2s						
VAF				SG	Sb	10 01 38.3	-1.1
FIA0	FINESS Array S	2.67	201	smax	smax	10 01 38.7	
	comp=Z,0.6nm,0.2s						
FIA0				SG	Sb	10 01 40.3	-1.5
VRF	Varrio	3.88	9	PB	Pn	10 01 24.6	+3.9

*IDC **06** 10:09:26.3±1.4, 19°.17N×67°.49W, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=62.8km s-min=19.4km az=42.0*
*OSPL **06** 10:09:27.4±0.9, 19°.16N×67°.50W, h0km±5km, ML3.6, Presumed earthquake*
*NEIC **06** 10:09:27.1±1.1, 19°.04N±0°.05×67°.57W±0°.03, h10km±1km,*

ML3.7/39, Md3.7/7(RSPR), Error ellipse: s-maj=9.0km s-min=2.9km az=201.0
*SDD **06** 10:09:29.1±1.6, 19.°02N×67.°64W, h20km±68km, MD3.6, ML3.6, MW4.0, Presumed earthquake*
*RSPR **06** 10:09:30.2, 18.°89N×67.°65W, h7km±31km, MD3.7/7*
ISC 06 10:09:28.2±1.2**, 18.°97N**±0.°05×**67.°65W**±0.°03**, h20**km±5km**, n66,** σ**1.s14**/99**, mb3.4**/3**, 18C-10D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.60	164		Pg	10 09 40.1	-0.2
IDE					Sg	10 09 48.1	-0.3
IDE	Isla Desecheo	0.60	164	⇓eP	Pg	10 09 40.1	-0.2
IDE				eS	Sg	10 09 48.1	-0.3
AGPR	Aguadilla, PR	0.72	134		Pb	10 09 41.9	-0.1
AGPR				IAML		10 09 53.1	
	2μm,0.4s						
AGPR	Aguadilla, PR	0.72	134	⇑ePg	Pb	10 09 42.1	+0.1
AGPR				⇑eSg	Sg	10 09 52.6	+0.7
AGPR				IAML		10 09 53.0	
	comp=N,2μm,0.2s						
AGPR	Aguadilla, PR	0.72	134	⇑iP	Pb	10 09 41.9	-0.1
AGPR				eS	Sg	10 09 52.2	+0.3
PCDR	Punta Cana, DR	0.83	237	ePg	Pn	10 09 44.4	-0.3
PCDR				IAML		10 09 59.3	
	comp=N,2μm,0.8s						
PRSN	Puerto Rico Se	0.89	147		Pb	10 09 44.4	-0.6
PRSN					Sg	10 09 57.3	-0.1
PRSN	Puerto Rico Se	0.89	147	IAML		10 10 05.1	
	comp=N,4μm,0.3s						
PRSN	Puerto Rico Se	0.89	147	⇑ePg	Pb	10 09 44.8	-0.2
PRSN				⇓eSg	Sn	10 09 57.9	-0.1
PRSN				IAML		10 10 07.5	
	comp=N,3μm,0.2s						
PRSN	Puerto Rico Se	0.89	147	⇑eP	Pb	10 09 44.4	-0.6
PRSN				eS	Sg	10 09 57.3	-0.1
LSP	Las Mesas	0.95	146		Pb	10 09 45.9	-0.2
LSP					Sb	10 09 58.4	0.0
LSP	Las Mesas	0.95	146	⇑eP	Pb	10 09 45.9	-0.2
LSP				eS	Sb	10 09 58.4	0.0
HIDR	Higuey Centro	1.08	250	⇓ePg	Pb	10 09 47.9	-0.3
HIDR				⇑eSg	Sn	10 10 02.3	-0.3
HIDR				IAML		10 10 04.8	
	comp=N,2μm,0.2s						
HIDR	Higuey Centro	1.08	250	⇑eP	Pb	10 09 47.6	-0.6
HIDR				eS	Sb	10 10 01.5	-0.3
CRPR	Cabo Rojo, PR	1.09	152		Pb	10 09 47.7	-0.7
CRPR					Sn	10 10 02.4	-0.4
CRPR	Cabo Rojo, PR	1.09	152	IAML		10 10 07.1	
	comp=N,2μm,0.5s						
CRPR				IAML		10 10 13.6	
	comp=N,2μm,0.8s						
CRPR	Cabo Rojo, PR	1.09	152	ePg	Pb	10 09 47.8	-0.5
CRPR				⇑eSg	Sg	10 10 04.7	+1.0
CRPR				IAML		10 10 07.0	
	comp=N,2μm,0.5s						
CRPR	Cabo Rojo, PR	1.09	152	⇑eP	Pb	10 09 47.7	-0.7
CRPR				eS	Sn	10 10 02.4	-0.4
CRPR	Cabo Rojo, PR	1.09	152	iP	Pn	10 09 48.5	+0.2
CRPR				eS	Sg	10 10 05.3	+1.6
CRPR				IAML		10 10 06.8	
	comp=Z,2μm,0.4s						
UUPR	Utuado, UPR, P	1.14	129		Pn	10 09 48.4	-0.6
MLPR	Magueyes Islan	1.15	150		Pn	10 09 48.7	-0.5
MLPR				IAML		10 10 07.8	
	comp=Z,989nm,0.4s						
MLPR				IAML		10 10 08.9	
	comp=Z,2μm,0.4s						
GBPR	Guanica, Bosqu	1.23	143		Pn	10 09 50.3	0.0
GBPR					Sb	10 10 04.1	-2.1
GBPR	Guanica, Bosqu	1.23	143	⇓eP	Pn	10 09 50.3	0.0
GBPR				eS	Sb	10 10 04.1	-2.1
CELP	Cerrillos	1.35	131		Pn	10 09 51.7	-0.2
CELP				IAML		10 10 15.4	
	comp=Z,948nm,0.3s						
CELP				IAML		10 10 16.8	
	comp=Z,1μm,0.4s						
OBIP	Obispado Ponce	1.35	133		Pn	10 09 51.8	-0.2
OBIP					Sn	10 10 09.3	-0.1
OBIP	Obispado Ponce	1.35	133	⇑eP	Pn	10 09 51.8	-0.2
OBIP				eS	Sn	10 10 09.3	-0.1
OBIP	Obispado Ponce	1.35	133	iP	Pn	10 09 51.9	-0.1
OBIP				eS	Sb	10 10 10.5	+0.6
OBIP				IAML		10 10 16.2	
	comp=Z,638nm,0.3s						
ECPR	Experimental S	1.38	118		Pn	10 09 51.8	-0.6
ECPR	Experimental S	1.38	118	⇑eP	Pn	10 09 51.8	-0.6
ECPR				eS	Sn	10 10 09.2	-1.0
SMDR	Samana, DR	1.49	283		Pb	10 09 55.0	-0.1
SMDR					Sg	10 10 15.3	-1.1
SMDR	Samana, DR	1.49	283	⇑eP	Pb	10 09 55.0	-0.1
SMDR				eS	Sg	10 10 15.3	-1.1
GCPR	Guaynabo City	1.62	114		Pn	10 09 55.5	-0.2
GCPR					Sn	10 10 16.9	+0.8
GCPR	Guaynabo City	1.62	114	⇓eP	Pn	10 09 55.5	-0.2
GCPR				eS	Sn	10 10 16.9	+0.8
DR12	Loma Pena Alta	1.65	264		Pb	10 09 57.5	-0.4
HATOM	Hato Mayor del	1.65	264	⇓ePg	Pb	10 09 57.4	-0.6
HATOM				⇓eSg	Sb	10 10 19.4	+1.1
HATOM				IAML		10 10 26.2	
	comp=N,635nm,0.3s						
SJG	San Juan	1.66	121	Pn	Pn	10 09 56.3	+0.1
	comp=N,60nm,0.3s,baz=308,slow=12,SNR=24						
SJG				Sn	Sg	10 10 20.4	-1.5
	comp=N,162nm,0.3s,baz=73,slow=16,SNR=12						
SJG	San Juan	1.66	121		Pn	10 09 55.8	-0.4
SJG	San Juan	1.66	121	IAML		10 10 21.5	
	comp=N,899nm,0.5s						
SJG				IAML		10 10 27.0	
	comp=N,567nm,0.5s						
SJG	San Juan	1.66	121	⇑eP	Pn	10 09 55.8	-0.4
SJG				eS	Sn	10 10 16.5	-0.5
SJG	San Juan	1.66	121	iP	Pn	10 09 56.3	+0.1
SJG				IAML		10 10 23.1	
	comp=Z,433nm,0.8s						
PDPR	Patillas Dam,	1.81	121		Pn	10 09 58.6	+0.3
HUMP	Col San Antoni	1.90	115		Pn	10 09 59.6	+0.1
HUMP					Sn	10 10 23.6	+0.7
HUMP	Col San Antoni	1.90	115	IAML		10 10 28.2	
	comp=Z,429nm,0.3s						
HUMP	Col San Antoni	1.90	115	⇓eP	Pn	10 09 59.6	+0.1
HUMP				eS	Sn	10 10 23.6	+0.7
NADR	Nagua	2.12	281	⇑ePg	Pb	10 10 05.0	-1.0
NADR				⇑eSg	Sb	10 10 33.3	+1.5
NADR				IAML		10 10 46.7	
	comp=N,2μm,0.3s						
SDD	Santo Domingo	2.20	257	Pn	Pb	10 10 05.5	-1.8
SDD				IAML		10 10 42.7	
	comp=N,659nm,0.9s						
SDD				IAML		10 10 45.7	
	comp=E,608nm,0.7s						
SDD	Santo Domingo	2.20	257	iP	Pb	10 10 06.3	-1.1
SDD				eS	Sb	10 10 34.4	+0.1
DR08	Loma La Naviza	2.24	270	ePg	Pb	10 10 07.9	-0.2
DR08				⇑eSg	Sb	10 10 35.9	+0.4
DR08				IAML		10 10 39.5	
	comp=N,9μm,0.2s						
CUPR	Culebra, Puert	2.34	106	Pn	Pn	10 10 05.0	-0.6
SFDR	San Fco. de Ma	2.47	278	ePg	Pb	10 10 12.3	+0.4
SFDR				⇑eSg	Sb	10 10 43.4	+1.5
SFDR				IAML		10 10 58.5	
	comp=N,1μm,0.4s						
BANI	BANI	2.63	258	Pn	Pb	10 10 13.3	-1.4
BANI	BANI	2.63	258	ePg	Pb	10 10 14.8	+0.1
BANI				⇓eSg	Sb	10 10 48.3	+1.6
BANI				IAML		10 11 01.2	
	comp=N,408nm,0.3s						
ABDR	Alto Bandera	2.82	267	⇓ePg	Pb	10 10 18.3	+0.1
ABDR				IAML		10 11 29.2	
	comp=N,0.2nm,0.5s						
SC01	Santiago de lo	2.94	279	Pn	Pb	10 10 21.1	+1.1
SDDR	Presa de Saban	3.44	271		Pn	10 10 23.3	+2.5
SDDR	Presa de Saban	3.44	271	IAML		10 11 23.2	
	comp=N,238nm,1.2s						
SDDR	Presa de Saban	3.44	271	⇑eP	Pn	10 10 23.3	+2.5
SDDR				eS	Sn	10 11 04.0	+3.0
GRTK	Grand Turk	4.13	308	iP	Pn	10 10 29.8	-0.4
GRTK				eS	Sn	10 11 15.8	-2.1
GRTK				IAML		10 11 19.9	
	comp=Z,100nm,2.8s						
MASC	Masc	6.32	282	eP	Pn	10 10 58.9	-1.4
MASC				eS	Sn	10 12 08.9	-3.0
MASC				IAML		10 12 13.6	
	comp=E,9.3nm,0.2s						
MASC				IAML		10 12 20.2	
	comp=N,7.3nm,0.2s						
QMBU	Quimbuelo	6.86	281	eP	Pn	10 11 06.4	-1.3
QMBU				eS	Sn	10 12 22.1	-3.2
QMBU				IAML		10 12 24.5	
	comp=E,17nm,0.3s						
QMBU				IAML		10 12 25.5	
	comp=N,14nm,0.2s						
GTBY	Guantanamo Bay	7.10	279	eP	Pn	10 11 04.4	-6.6
RCC	Rio Carpintero	7.66	279	eP	Pn	10 11 16.3	-2.3
RCC				eS	Sn	10 12 40.5	-4.4
RCC				IAML		10 12 44.7	
	comp=N,5.5nm,0.4s						
RCC				IAML		10 12 46.2	
	comp=E,3.1nm,0.2s						
PINC	Pinares de May	7.81	282	eP	Pn	10 11 14.6	-6.2
TXAR	Lajitas Array	34.32	294	P	P	10 16 15.7	+1.9
	comp=E,0.2nm,0.6s,baz=94,slow=8.6,SNR=4.4						
	comp=E,0.2nm,0.6s						
YKA	Yellowknife Ar	54.12	335	P	P	10 18 51.7	+0.2
	comp=E,0.2nm,0.6s,baz=119,slow=6.4,SNR=4.8						
	comp=E,0.2nm,0.6s						
ILAR	Eielson Array	68.43	333	P	P	10 20 28.9	+0.5
	comp=E,0.4nm,0.9s,baz=87,slow=6.7,SNR=4.3						
	comp=E,0.4nm,0.9s						

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*NOU **06** 10:19:54.8, 30.°58S×175.°24W, h148km, mb5.0/12, Kermadec Islands Region*
*MOS **06** 10:20:28.0±0.9, 32.°32S×179.°15W, h10km, mb5.2/16, Error ellipse: s-maj=13.4km s-min=10.3km az=105.0*
*NEIC **06** 10:20:29.9±2.6, 32.°17S±0.°06×179.°0W±0.°1, h10km±1km, mb5.1/84, Error ellipse: s-maj=17.5km s-min=9.6km az=105.0*
*BJI **06** 10:20:29.7, 32.°10S×178.°90W, h10km, mB5.2/1, mb5.0/11, Ms4.8/1, Ms7 4.7/1*
*WEL **06** 10:20:32.5±0.5, 32°S±5°×17°8W±1°3, h150km, M5.3/30, mB5.7/20, ML5.5/20, MLv5.8/30, Mw(mB)5.2/20, Error ellipse: s-maj=18.1km s-min=3.2km az=108.9*
*GCMT **06** 10:20:39.6±0.3, 32.°28S±0.°02×179.°08W±0.°02, h12km, MW5.2/88, Moment Tensor Solution. s26,c29; s88,c118; Duration: 1.s0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.07±.10; $M_{\theta\theta}$-1.08±.08; $M_{\phi\phi}$1.01±.08; $M_{r\theta}$-5.88±.23; $M_{\theta\phi}$-0.00±.09; $M_{\phi r}$-5.59±.23; Best double couple: $M_0$8.18000×10^{16} NP1:ϕ_s134.00000°, δ7.00000°, λ178.00000°. NP2:ϕ_s226.00000°, δ90.00000°, λ83.00000°. Principal axes: T 8.1700, Plg45.0000°, Azm129.0000°; N 0.0220, Plg7.0000°, Azm226.0000°; P -8.1900, Plg44.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **06** 10:20:45.1±2.2, 32.°13S×179.°18W, h135km±18km, mb4.3/22, mbtmp4.6/23, MS3.5/19 Error ellipse: s-maj=13.9km s-min=10.8km az=5.0*
ISC 06 10:20:28.9±0.3**, 32.°11S**±0.°04×**178.°83W**±0.°07**, h10**km**, n348,** σ**1.s65**/282**, mb5.1**/66**, MS3.6**/18**, 8C-16D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.94	16	P	Pb	10 21 21.2	-0.3
GLKZ				S	Sb	10 21 57.4	-0.1
RAO	Raoul Island	2.95	16	P	Pb	10 21 21.9	+0.2
	2μm,0.4s,baz=202,slow=3.1,SNR=20						
RAO				S	Sb	10 21 57.5	-0.3
	5μm,0.3s,baz=292,slow=22,SNR=5.7						
RAO				LR	LR	10 22 11.9	
	comp=Z,732nm,18.5s,baz=166,slow=28						
RAO	Raoul Island	2.95	16		Pb	10 21 21.6	-0.1
RAO					Sn	10 21 52.7	+1.3
RAO	Raoul Island	2.95	16	P	Pb	10 21 21.6	-0.1
RAO						10 21 52.7	
RIZ	Raoul Island	2.96	15	P	Pn	10 21 16.9	+1.0
RIZ				S	Sn	10 21 53.6	+2.1
MXZ	Matakaoa Point	5.93	203		Pn	10 21 59.1	+2.3
MXZ	Matakaoa Point	5.93	203	P	Pn	10 21 59.1	+2.3
MXZ	Matakaoa Point	5.93	203	P	Pn	10 21 59.2	+2.5
MXZ				S	Sn	10 23 04.7	0.0
WMGZ	Waiomatatini S	6.13	201	P	Pn	10 22 01.8	+2.3
WMGZ				S	Sn	10 23 10.6	+0.9
PKGZ	Pakihiroa	6.28	203	P	Pn	10 22 03.8	+2.2
PKGZ				S	Sn	10 23 13.8	+0.4
GRZ	Great Barrier	6.28	227	P	Pn	10 22 09.0	+7.4
HAZ	Te Kaha	6.28	205	P	Pn	10 22 03.3	+1.7
HAZ				S	Sn	10 23 16.3	+2.9
WSRZ	White Island S	6.32	210	P	Pn	10 22 09.7	+7.6
WIZ	White Island	6.32	210	P	Pn	10 22 06.9	+4.9
WIZ				S	Sn	10 23 15.9	+1.6
PUZ	Puketiti	6.41	201	P	Pn	10 22 04.9	+1.6
PUZ				S	Sn	10 23 17.2	+0.6
KUZ	Kuaotunu	6.45	223	P	Pn	10 22 11.2	+7.2
KUZ	Kuaotunu	6.45	223	P	Pn	10 22 10.6	+6.6
RUGZ	Raukumara Rang	6.51	205	P	Pn	10 22 06.9	+2.1
RUGZ				S	Sn	10 23 20.9	+1.8
MYRZ	Mayor Island	6.56	217	P	Pb	10 22 14.2	-9.0
TWGZ	Tauwhareparae	6.59	202	P	Pn	10 22 08.2	+2.3
TWGZ				S	Sn	10 23 22.7	+1.5
WHRZ	Whale Island	6.69	210	P	Pn	10 22 12.3	+5.1
CNGZ	Carnagh Statio	6.81	200	P	Pn	10 22 10.5	+1.7
CNGZ				S	Sn	10 23 26.0	-0.3
OPRZ	Ohinepanea	6.86	212	P	Pn	10 22 12.8	+3.3
TKGZ	Te Karaka	6.88	202	P	Pn	10 22 11.3	+1.6
MWZ	Matawai	6.89	205	P	Pn	10 22 11.1	+1.2
TGRZ	Tauranga	6.91	214	P	Pn	10 22 16.3	+6.2
MARZ	Manawahe	6.92	211	P	Pn	10 22 13.7	+3.3
URZ	Urewera	6.98	207	P	Pn	10 22 12.6	+1.5
	114nm,0.3s,baz=258,slow=4.1,SNR=83						
URZ				S	Sn	10 23 29.8	-0.7
	577nm,0.6s,baz=201,slow=21,SNR=10						
URZ	Urewera	6.98	207	P	Pn	10 22 13.3	+2.1
URZ	Urewera	6.98	207	P	Pn	10 22 12.7	+1.5
EDRZ	Edgecumbe	7.00	210	P	Pn	10 22 16.6	+5.1
OUZ	Omahuta	7.04	242	P	Pn	10 22 19.9	+7.9
OUZ	Omahuta	7.04	242	P	Pn	10 22 18.8	+6.9
LIRZ	Lichensteins R	7.07	212	P	Pn	10 22 17.2	+4.8
RAGZ	Rawiri	7.07	205	P	Pn	10 22 14.1	+1.6
MKRZ	Makatiti	7.14	211	P	Pn	10 22 22.2	+8.7
RIGZ	Rimuhau	7.14	202	P	Pn	10 22 14.4	+0.9
KARZ	Kaharoa	7.15	213	P	Pn	10 22 17.8	+4.3
KMRZ	Kaimai	7.15	215	P	Pn	10 22 19.4	+5.8
OMRZ	Omania	7.16	212	P	Pn	10 22 18.9	+5.2
TARZ	Mount Tarawera	7.21	211	P	Pn	10 22 20.6	+6.2
NGRZ	Ngongotaha	7.24	213	P	Pn	10 22 22.0	+7.2
HLRZ	Highlands Stat	7.29	211	P	Pn	10 22 20.7	+5.3
TOZ	Tahuroa Road	7.29	218		Pn	10 22 21.0	+5.5
TOZ	Tahuroa Road	7.29	218	P	Pn	10 22 22.9	+7.5
RRRZ	Republican Roa	7.29	210	P	Pn	10 22 20.7	+5.2
UTU	Utuhina	7.30	213	P	Pb	10 22 25.4	-10
MUGZ	Murupara	7.30	208	P	Pn	10 22 17.4	+1.8
PRGZ	Paritu Road	7.31	201	P	Pn	10 22 16.8	+1.1
RTZ	Ruatahuna	7.34	207		Pn	10 22 17.3	+1.1
RTZ	Ruatahuna	7.34	207	P	Pn	10 22 17.7	+1.5
SNGZ	Shannon Statio	7.35	204	P	Pn	10 22 17.6	+1.3
HSRZ	Hossack Road	7.38	212	P	Pn	10 22 22.5	+5.8
HRRZ	Handcock Road	7.43	211	P	Pn	10 22 23.1	+5.7
KNZ	Kokohu	7.46	201	P	Pn	10 22 19.2	+1.4
PRRZ	Plateau Road	7.47	210	P	Pn	10 22 22.4	+4.4
MHGZ	Mahia Peninsul	7.51	200	P	Pn	10 22 19.4	+0.9
ALRZ	Allen Road	7.55	210	P	Pn	10 22 21.5	+2.5
RAHZ	Arahi	7.56	205	P	Pn	10 22 20.1	+0.9
WPRZ	Whakapapatarin	7.59	211	P	Pn	10 22 26.1	+6.5
MTHZ	Maungataniwha	7.60	206	P	Pn	10 22 21.3	+1.6
WHHZ	Waihua	7.66	204	P	Pn	10 22 24.9	+4.5
KUTZ	Kaahu Road	7.72	213	P	Pn	10 22 27.3	+5.9
TLZ	Tolley Road	7.73	215	P	Pn	10 22 28.7	+7.2
MRHZ	Matea Rd	7.75	209	P	Pn	10 22 23.8	+2.0
WHTZ	Whakaora	7.80	212	P	Pn	10 22 28.3	+5.7
NMHZ	Naumai	7.83	206	P	Pn	10 22 23.9	+1.0
ARHZ	Aropaoanui	7.90	204	P	Pn	10 22 25.2	+1.4
WATZ	Wairara	7.94	212	P	Pn	10 22 29.3	+4.9
BKZ	Black Stump Fm	8.00	207		Pn	10 22 25.4	+0.1
BKZ	Black Stump Fm	8.00	207	P	Pn	10 22 25.9	+0.6
BKZ	Black Stump Fm	8.00	207	P	Pn	10 22 25.6	+0.3
RATZ	Rangitukua	8.05	212	P	Pn	10 22 31.1	+5.2
RITZ	Rihia Road	8.10	211	P	Pn	10 22 30.1	+3.5
MCHZ	McNeill Hill	8.17	205	P	Pn	10 22 28.0	+0.5
KATZ	Kakaramea	8.17	212	P	Pn	10 22 33.8	+6.1
HIZ	Hauiti	8.21	217		Pn	10 22 26.9	-1.2
HIZ	Hauiti	8.21	217	P	Pn	10 22 34.8	+6.7
HIZ	Hauiti	8.21	217	P	Pn	10 22 34.5	+6.4
CKHZ	Cape Kidnapper	8.23	203	P	Pn	10 22 29.2	+0.8
KWHZ	Kaweka Forest	8.26	207	P	Pn	10 22 28.7	-0.1
NTVZ	North Tongarir	8.28	211	P	Pn	10 22 31.0	+1.7
TMVZ	Te Maari	8.29	211	P	Pn	10 22 31.1	+1.8
KRVZ	Karewarewa	8.30	211	P	Pn	10 22 32.2	+2.8
ETVZ	East Tongariro	8.30	211	P	Pn	10 22 31.0	+1.6
WTVZ	West Tongariro	8.34	211	P	Pn	10 22 33.2	+3.2
NNVZ	North Ngauruho	8.34	211	P	Pn	10 22 32.7	+2.8
OTVZ	Oturere	8.34	211	P	Pn	10 22 31.4	+1.3
TWVZ	Taurewa	8.37	212	P	Pn	10 22 33.4	+3.1
SNVZ	South Ngauruho	8.37	211	P	Pn	10 22 32.5	+2.1
NGZ	Ngauruhoe	8.38	211	P	Pn	10 22 32.6	+2.0
KAHZ	Kahuranaki	8.42	203	P	Pn	10 22 30.5	-0.5
COVZ	Chateau Observ	8.43	211	P	Pn	10 22 35.1	+3.9
TUVZ	Tukino	8.43	211	P	Pn	10 22 34.6	+3.3
KRHZ	Kereru	8.47	206	P	Pn	10 22 30.7	-0.9
FWVZ	Far West T-bar	8.47	211	P	Pn	10 22 35.5	+3.7
WHVZ	Whangaehu Hut	8.47	211	P	Pn	10 22 35.5	+3.6
TRVZ	Turoa	8.51	211	P	Pn	10 22 35.8	+3.5
MOVZ	Moawhango	8.51	210	P	Pn	10 22 33.4	+1.2
WNVZ	Wahianoa	8.51	211	P	Pn	10 22 34.1	+1.8
PKVZ	Pokaka	8.59	212	P	Pn	10 22 35.9	+2.5
MTVZ	Mangateitei	8.61	211	P	Pn	10 22 36.9	+3.3
PWZ	Pawanui	8.64	203	P	Pn	10 22 33.5	-0.4
PXZ	Pawanui	8.64	203	P	Pn	10 22 32.6	-1.3
VRZ	Vera Road	8.73	215	P	Pn	10 22 42.4	+7.2
PNHZ	Pukenui	8.77	206	P	Pn	10 22 34.2	-1.5
WPHZ	Waipukurau	8.81	204	P	Pn	10 22 36.0	-0.4
PRHZ	Porangahau	8.93	203	P	Pn	10 22 36.5	-1.4
TSZ	Takapari Road	8.98	207	P	Pn	10 22 37.4	-1.3
DREZ	Durham Road	9.06	217	P	Pn	10 22 45.8	+6.1
DVHZ	Dannevirke	9.12	205	P	Pn	10 22 39.0	-1.5
WAZ	Wanganui	9.13	212	P	Pn	10 22 43.5	+2.9
ANWZ	Angora Road	9.15	203	P	Pn	10 22 39.9	-1.1
PKE	Pukeiti	9.17	218	P	Pn	10 22 47.8	+6.6
KHEZ	Kahui Hut	9.23	217	P	Pn	10 22 47.6	+5.4
KHEZ	Kahui Hut	9.23	217	P	Pn	10 22 47.8	+5.6
NBEZ	Newall Road No	9.29	218	P	Pn	10 22 48.7	+5.8
POWZ	Post Office Ro	9.34	206	P	Pn	10 22 44.5	+0.9
PRWZ	Pori Road	9.41	205	P	Pn	10 22 43.9	-0.7
BFZ	Birch Farm	9.43	203		Pn	10 22 43.2	-1.5
BFZ	Birch Farm	9.43	203	P	Pn	10 22 43.3	-1.5
BFZ	Birch Farm	9.43	203	P	Pn	10 22 43.5	-1.3
TIWZ	Tintock	9.64	205	P	Pn	10 22 47.7	0.0
CPWZ	Castlepoint	9.65	203	P	Pn	10 22 48.9	+1.1
MRZ	Mangatainoka R	9.65	206		Pn	10 22 45.8	-2.0
MSWZ	Moikau Station	10.43	205		Pn	10 22 56.3	-2.2
WEL	Wellington	10.50	207	P	Pn	10 22 57.9	-1.5
SNZO	South Karori	10.54	208	P	Pn	10 22 59.1	-0.9
BHW	Baring Head	10.56	207		Pn	10 22 57.3	-3.0
BHW	Baring Head	10.56	207	P	Pn	10 22 59.2	-1.2
TCW	Tory Channel	10.63	209		Pn	10 22 58.9	-2.4
TUWZ	Tuamarina	10.96	210		Pn	10 23 04.1	-1.6
TKNZ	Takaka Hill	11.08	214		Pn	10 23 06.5	-1.0
QRZ	Quartz Range	11.13	216	P	Pn	10 23 07.5	-0.6
MRNZ	Matariki Terra	11.46	214		Pn	10 23 09.8	-2.8
THZ	Tophouse	11.68	212		Pn	10 23 13.8	-1.9
CTZ	Chatham Island	11.74	172		Pn	10 23 18.7	+2.4
KHZ	Kahutara	11.94	208		Pn	10 23 16.5	-2.7
KHZ	Kahutara	11.94	208	P	Pn	10 23 16.8	-2.4
OXZ	Oxford	13.32	210		Pn	10 23 33.3	-4.7
RPZ	Rata Peaks	14.06	212	P	Pn	10 23 44.4	-3.7
MSVF	Nonsavu	14.59	348	Pn	Pn	10 23 58.1	+2.5
MSVF	Nonsavu	14.59	348	d iP	P	10 23 59.5	-2.6
NIUE	Niue	15.25	34	Pn	Pn	10 24 02.9	-1.5
NIUE	Niue	15.25	34	P	Pn	10 24 02.0	-2.3
DZM	Mont Dzumac	16.47	304	P	P	10 24 25.4	+2.5
	40nm,1.0s,baz=112,slow=14,SNR=8.0						
DZM				LR	LR	10 29 24.8	
	comp=Z,494nm,21.2s,baz=166,slow=32						
DZM	Mont Dzumac	16.47	304		Pn	10 24 19.1	-1.1
WHZ	Wether Hill Ro	17.14	213	Pn	Pn	10 24 23.1	-5.4
AFI	Afiamalu	19.23	21	P	P	10 24 52.0	-1.4
AFI				IAmb	IAmb	10 24 57.7	
	comp=Z,92nm,1.1s						
AFI	Afiamalu	19.23	21	P	P	10 24 52.0	-1.4
AFI				pmax	pmax		
	comp=Z,92nm,1.1s						
RAR	Rarotonga	20.16	62	LR	LR	10 32 53.6	
	comp=Z,62nm,19.5s,baz=228,slow=36						
EIDS	Eidsvold	27.17	277	P	P	10 26 11.8	-0.8
HNR	Honiara	29.93	314	LR	LR	10 36 26.7	
	comp=Z,11nm,20.8s,baz=312,slow=32						
PPT	Papeete	30.12	68	LR	LR	10 37 31.2	
	comp=Z,75nm,18.3s,baz=152,slow=33						
CTA	Charters Tower	33.42	282	P	P	10 27 08.9	+0.9
	comp=Z,5.5nm,0.5s,baz=111,slow=9.8,SNR=18						
CTA				LR	LR	10 39 19.2	
	comp=Z,42nm,19.2s,baz=85,slow=34						
	comp=Z,5.5nm,0.5s						
CTAO	Charters Tower	33.42	282		P	10 27 07.2	-0.8
CTAO	Charters Tower	33.42	282	P	P	10 27 07.2	-0.8
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STKA	Stephens Creek	33.44	260	P	P	10 27 10.1	+2.1
	comp=Z,2.3nm,0.6s,baz=87,slow=12,SNR=6.7						
	comp=Z,2.3nm,0.6s						
STKA	Stephens Creek	33.44	260	P	P	10 27 06.4	-1.6
STKA				IAmb	IAmb	10 27 28.2	
	comp=Z,25nm,0.9s						
STKA	Stephens Creek	33.44	260	P	P	10 27 06.4	-1.6
STKA				pmax	pmax		
	comp=Z,25nm,1.0s						
BBOO	Buckleboo	37.85	256	P	P	10 27 46.1	+0.1
BBOO				IAmb	IAmb	10 28 09.9	
	comp=Z,37nm,1.1s						
PMG	Port Moresby	38.74	298	LR	LR	10 41 29.3	
	comp=Z,93nm,19.1s,baz=143,slow=32						
PMG	Port Moresby	38.74	298	⇓eP	P	10 27 53.7	+0.2
PMG				pmax	pmax		
	comp=Z,34nm,1.8s						
AS31	Alice Springs	42.34	269	P	P	10 28 22.4	-1.0
ASAR	Alice Springs	42.34	269	P	P	10 28 23.5	+0.1
	comp=Z,6.2nm,0.6s,baz=108,slow=7.6,SNR=43						
ASAR				S	S	10 34 32.8	-12
	comp=Z,2.6nm,1.0s,baz=111,slow=15,SNR=7.3						
ASAR				LR	LR	10 45 07.9	
	comp=Z,84nm,18.3s,baz=116,slow=35						
	comp=Z,6.2nm,0.6s						
WR0	Warramunga Arr	43.31	274	P	P	10 28 31.1	-0.1
WR0				IAmb	IAmb	10 28 54.2	
	comp=Z,29nm,1.0s						
WR8	Warramunga Arr	43.34	274	P	P	10 28 31.9	+0.5
WR8				IAmb	IAmb	10 28 55.0	
	comp=Z,28nm,0.8s						
WB2	Warramunga Arr	43.48	274	P	P	10 28 32.3	-0.2
WB2				IAmb	IAmb	10 28 55.6	
	comp=Z,37nm,0.8s						
WRAB	Tennant Creek	43.48	274	P	P	10 28 30.1	-2.5
WRAB				IAmb	IAmb	10 28 55.5	
	comp=Z,35nm,0.8s						
WRAB	Tennant Creek	43.48	274	⇓eP	P	10 28 30.7	-1.9
WRAB				pmax	pmax		
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	43.48	274	P	P	10 28 32.5	-0.2
	comp=Z,7.1nm,0.3s,baz=115,slow=7.7,SNR=19						
WRA				ScP	ScP	10 34 01.0	-11
	comp=Z,2.0nm,0.7s,baz=117,slow=3.5,SNR=5.2						
WRA				S	S	10 34 49.5	-12
	comp=Z,1.4nm,0.9s,baz=112,slow=14,SNR=5.0						
	comp=Z,7.1nm,0.3s						
WRA	Warramunga Arr	43.48	274	P	P	10 28 31.8	-0.9
WRA	Warramunga Arr	43.48	274	P	P	10 28 31.8	-0.9
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WB0	Warramunga Arr	43.52	275	P	P	10 28 32.0	-0.9
WB0				IAmb	IAmb	10 28 55.9	
	comp=Z,37nm,0.8s						
FORT	Forrest	44.95	257	P	P	10 28 43.5	-0.8
FORT				IAmb	IAmb	10 29 08.8	
	comp=Z,38nm,1.2s						
VNDA	Vanda	46.33	186	P	P	10 28 56.5	+2.0
	comp=Z,1.8nm,0.7s,baz=346,slow=7.9,SNR=6.1						
VNDA				LR	LR	10 45 17.1	
	comp=Z,55nm,20.6s,baz=304,slow=32						
	comp=Z,1.8nm,0.7s						
VNDA	Vanda	46.33	186	P	P	10 28 54.4	-0.1
VNDA	Vanda	46.33	186	P	P	10 28 54.4	-0.1
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JAY	Jayapura	48.08	299	P	P	10 29 09.1	+0.1
	comp=Z,12nm,0.7s,baz=90,slow=18,SNR=2.3						
JAY				LR	LR	10 47 15.3	
	comp=Z,68nm,21.0s,baz=172,slow=33						
	comp=Z,12nm,0.7s						
MTN	Manton Dam	49.58	281	P	P	10 29 19.8	-0.6
MTN				IAmb	IAmb	10 29 43.4	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	51.67	272	P	P	10 29 36.1	-0.2
	comp=Z,5.6nm,0.6s,baz=166,slow=13,SNR=3.7						
FITZ				LR	LR	10 50 49.2	
	comp=Z,106nm,19.0s,baz=122,slow=35						
	comp=Z,5.6nm,0.6s						
BATI	Baumata	57.19	279	LR	LR	10 54 49.4	
	comp=Z,96nm,18.8s,baz=125,slow=36						
GUMO	Guam	57.21	317	LR	LR	10 53 15.8	
	comp=Z,46nm,18.1s,baz=68,slow=34						
QSPA	South Pole Qui	58.01	180	P	P	10 30 23.6	+2.0
	comp=Z,25nm,0.8s,baz=32,slow=1.7,SNR=25						
	comp=Z,25nm,0.8s						
QSPA	South Pole Qui	58.01	180		P	10 30 22.1	+0.4
RPN	Rapa Nui	59.68	105	LR	LR	10 53 09.1	
	comp=Z,40nm,18.3s,baz=232,slow=32						
KAPI	Kappang	63.23	282	LR	LR	10 59 50.0	
	comp=Z,49nm,18.0s,baz=117,slow=37						
DAV	Davao City (W)	65.72	296	LR	LR	11 01 07.5	
	comp=Z,26nm,18.4s,baz=120,slow=37						
BELA	Belgrano 2	68.19	172	P	P	10 31 29.0	0.0
MAW	Mawson	70.46	201	P	P	10 31 42.9	-0.2
	comp=Z,7.7nm,1.0s,baz=144,slow=6.3,SNR=1.9						
MAW				LR	LR	11 00 10.2	
	comp=Z,71nm,21.8s,baz=137,slow=34						
	comp=Z,7.7nm,1.0s						
LEM	Lembang	72.48	273	LR	LR	11 06 09.4	
	comp=Z,38nm,18.1s,baz=180,slow=38						
MG05	Puerto Natales	74.61	142	IAmb	IAmb	10 32 10.6	
	comp=Z,20nm,0.9s						
GO09	Cerro Castillo	74.92	141	IAmb	IAmb	10 32 12.2	
	comp=Z,16nm,0.8s						
ELIB	Princess Elisa	75.07	187	*d*P	P	10 32 10.2	-0.4
	comp=Z,19nm,0.8s						
GO08	Villa O'Higgin	76.32	139	IAmb	IAmb	10 32 20.9	
	comp=Z,13nm,0.9s						
SNAA	Sanae	76.47	179	*de*P	P	10 32 17.0	-1.5
SNAA				pmax	pmax		
	comp=Z,44nm,1.7s						
VNA3	Neumayer Olymp	76.65	176	⇑P	P	10 32 20.0	+0.5
	comp=Z,70nm,0.7s						
AY03	Cochrane	76.96	138	IAmb	IAmb	10 32 25.0	
	comp=Z,20nm,0.9s						
VNA2	Neumayer--Watz	77.08	177	⇑P	P	10 32 22.7	+0.8
	comp=Z,56nm,0.6s,baz=172,slow=5.1						
NVL	N'lazarevskaya	77.13	184	*e*P	P	10 32 19.7	-2.5
NVL				pmax	pmax		
	comp=Z,29nm,1.1s						
AY01	Puyuhuapi	78.49	135	IAmb	IAmb	10 32 33.1	
	comp=Z,12nm,0.9s						
MJAR	Matsushiro Arr	79.25	326	P	P	10 32 33.1	-1.2
	comp=Z,1.1nm,0.4s,baz=176,slow=6.2,SNR=4.8						
	comp=Z,1.1nm,0.4s						
MJAR	Matsushiro Arr	79.25	326	IAmb	IAmb	10 32 36.2	
	comp=Z,2.1nm,0.7s						
MJAR	Matsushiro Arr	79.25	326	P	P	10 32 33.1	-1.2
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LL02	Futaleuf	79.66	135		P	10 32 38.2	+1.5
LL02				IAmb	IAmb	10 32 39.6	
	comp=Z,22nm,0.8s						
H03S2	Juan Fernandez	80.11	124	T	T	12 01 21.6	
	baz=236,slow=74,SNR=152						
H03S1	Juan Fernandez	80.12	124	T	T	12 01 22.9	
	baz=236,slow=74,SNR=193						
H03S3	Juan Fernandez	80.13	124	T	T	12 01 15.0	
	baz=236,slow=74,SNR=61						
H03N3	Juan Fernandez	80.32	123	T	T	12 01 34.4	
	baz=240,slow=72,SNR=452						
H03N2	Juan Fernandez	80.32	123	T	T	12 01 30.8	
	baz=240,slow=72,SNR=250						
H03N1	Juan Fernandez	80.33	123	T	T	12 01 27.0	
	baz=240,slow=72,SNR=784						
LR05	Currie	81.24	132	P	P	10 32 46.5	+1.2
LR05				IAmb	IAmb	10 32 48.3	
	comp=Z,26nm,1.0s						
PLCA	Paso Flores	81.86	133	P	P	10 32 50.8	+2.2
	comp=Z,23nm,0.9s,baz=234,slow=4.9,SNR=59						
PLCA				LR	LR	11 03 38.7	
	comp=Z,38nm,18.7s,baz=222,slow=31						
	comp=Z,23nm,0.9s						
PLCA	Paso Flores	81.86	133		P	10 32 50.4	+1.8
PLCA	Paso Flores	81.86	133	P	P	10 32 50.4	+1.8
PLCA				pmax	pmax		
	comp=Z,30nm,1.1s						
GO06	Curarrehue	81.95	132	IAmb	IAmb	10 32 52.1	
	comp=Z,14nm,0.9s						
ASAJ	Asahikawa	83.63	333	P	P	10 32 58.0	+0.8
	comp=Z,1.5nm,0.3s,baz=61,slow=10,SNR=4.7						
	comp=Z,1.5nm,0.3s						
BI02	San Fabin de	83.76	130		P	10 33 00.3	+1.7
KSRS	Korea Array	85.19	320	P	P	10 33 05.5	+0.2
	comp=Z,2.4nm,0.7s,baz=136,slow=5.9,SNR=9.5						
	comp=Z,2.4nm,0.7s						
YSS	Yuzhno-Sakhali	85.98	335	*e*P	P	10 33 10.8	+1.8
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,200nm,15.0s						
MT08	Bocatoma Ro	86.48	128	IAmb	IAmb	10 33 15.6	
	comp=Z,11nm,0.9s						
NJ2	Nanjing	86.82	311	*e*P	P	10 33 15.6	+2.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ESJX	Sierra Juarez	87.15	49	IAmb	IAmb	10 33 19.2	
	comp=Z,13nm,1.0s						
DPP	Dos Picos Cty	87.17	48	IAmb	IAmb	10 33 18.4	
	comp=Z,7.9nm,1.0s						
PEA0B	Petropavlovsk-	87.29	346	⇓*e*P	P	10 33 14.2	-1.1
PETK	Petropavlovsk-	87.29	346	P	P	10 33 16.5	+1.1
	comp=Z,5.0nm,0.8s,baz=106,slow=6.9,SNR=12						
	comp=Z,5.0nm,0.8s						
BFSC	Mount Baldy Ra	87.55	47	IAmb	IAmb	10 33 20.3	
	comp=Z,13nm,1.0s						
PSTR	Posyet	87.58	325	⇑*e*P	P	10 33 16.4	-0.6
YUH	Yuha Desert	87.59	49	IAmb	IAmb	10 33 20.7	
	comp=Z,10nm,1.1s						
BORC	Borrego Spring	87.68	48	IAmb	IAmb	10 33 21.2	
	comp=Z,12nm,1.0s						
VES	Vestal, Richgr	87.76	45	IAmb	IAmb	10 33 45.6	
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	87.88	48	P	P	10 33 20.9	+2.1
	comp=Z,5.1nm,0.8s,baz=288,slow=4.2,SNR=5.8						
	comp=Z,5.1nm,0.8s						
PFO	Pinyon Flats O	87.88	48	⇓*i*P	P	10 33 21.6	+2.7
PFO				pmax	pmax		
	comp=Z,11nm,0.9s						
ISA	Isabella, Lake	88.01	45	IAmb	IAmb	10 33 22.6	
	comp=Z,12nm,1.1s						
USRK	Ussuriysk Ar.	88.20	327	P	P	10 33 20.6	+0.7
	comp=Z,1.5nm,0.6s,baz=114,slow=6.5,SNR=2.7						
	comp=Z,1.5nm,0.6s						
BC3	Big Chuckawall	88.54	48	IAmb	IAmb	10 33 25.9	
	comp=Z,18nm,1.2s						
CLC	China Lake	88.64	45	IAmb	IAmb	10 33 25.5	
	comp=Z,9.4nm,1.0s						
GSC	Goldstone, Bar	88.78	46	P	P	10 33 24.5	+1.5
GSC				IAmb	IAmb	10 33 26.3	
	comp=Z,9.8nm,1.1s						
GSC	Goldstone, Bar	88.78	46	P	P	10 33 24.5	+1.5
GSC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
113A	Mohawk Valley,	89.05	50	IAmb	IAmb	10 33 27.9	
	comp=Z,9.3nm,1.1s						
BLYC	Blythe	89.19	49	IAmb	IAmb	10 33 28.6	
	comp=Z,12nm,1.0s						
TYV	Tymovskoe	89.33	337	*e*P	P	10 33 23.9	-1.2
TYV				pmax	pmax		
	comp=Z,100nm,3.2s						
TYV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SHOC	Shoshone, Teco	89.50	46	IAmb	IAmb	10 33 51.2	
	comp=Z,11nm,1.1s						
MPK	Martis Peak	89.57	42	IAmb	IAmb	10 33 32.9	
	comp=Z,13nm,1.2s						
NEE2	Needles Airpor	89.79	48	IAmb	IAmb	10 33 32.0	
	comp=Z,15nm,0.9s						
NVAR	Mina Array Bea	89.97	43	P	P	10 33 30.2	+1.5
	comp=Z,2.1nm,0.8s,baz=251,slow=5.2,SNR=13						
	comp=Z,2.1nm,0.8s						
NVAR	Mina Array Bea	89.97	43	P	P	10 33 29.4	+0.7
Y14A	Wickenburg	90.29	49	IAmb	IAmb	10 33 33.5	
	comp=Z,12nm,1.2s						
TUC	Tucson	90.73	52		P	10 33 30.9	-1.3
TUC				IAmb	IAmb	10 33 36.2	
	comp=Z,8.4nm,0.9s						
TUC	Tucson	90.73	52	P	P	10 33 30.9	-1.3
TUC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AC02	Maricunga	91.04	123	IAmb	IAmb	10 33 39.7	
	comp=Z,10nm,0.9s						
CN2	Changchun	91.08	323	P	P	10 33 32.6	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KDAK	Kodiak Island	92.23	14	P	P	10 33 40.3	+2.0
	comp=Z,8.7nm,0.8s,baz=243,slow=2.3,SNR=2.5						
	comp=Z,8.7nm,0.8s						
KDAK	Kodiak Island	92.23	14	P	P	10 33 40.3	+2.0
KDAK				pmax	pmax		
	comp=Z,52nm,1.5s						
U15A	North Rim	92.31	48	IAmb	IAmb	10 33 43.1	
	comp=Z,5.4nm,0.9s						
KNB	Kanab	92.34	47		P	10 33 41.4	+1.7
KNB	Kanab	92.34	47	P	P	10 33 41.4	+1.7
KNB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
N15K	Kwethluk River	93.23	9	P	P	10 33 44.3	+1.3
TX31	Lajitas Ar. Si	93.90	58		P	10 33 47.1	+0.2
TXAR	Lajitas Array	93.90	58	P	P	10 33 48.7	+1.7
	comp=Z,1.9nm,1.0s,baz=205,slow=6.2,SNR=10.0						
	comp=Z,1.9nm,1.0s						
XAN	Xi'an	94.58	307	P	P	10 33 47.8	-2.1
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ANMO	Albuquerque	95.19	52	⇓*e*P	P	10 33 54.6	+1.7
ANMO				pmax	pmax		
	comp=Z,18nm,4.3s						
PZH	PanZhiHua	95.47	298	P	P	10 33 55.4	+1.1
HHC	Hu-ho-hao-te	96.91	314	*e*P	P	10 34 01.4	+0.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PDAR	Pinedale Array	97.86	44	P	Pdif	10 34 05.8	+0.9
	comp=Z,0.4nm,0.8s,baz=271,slow=5.7,SNR=2.8						
	comp=Z,0.4nm,0.8s						
BTO2	Baotou	97.88	313	*e*P	Pdif	10 34 07.2	+2.3
BTO2				S	S	10 45 33.6	+2.4
BTO2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPAZ	La Paz	98.08	115	P	Pdif	10 34 08.3	+1.2
	comp=Z,1.5nm,1.0s,baz=230,slow=2.4,SNR=3.8						
	comp=Z,1.5nm,1.0s						
LPAZ	La Paz	98.08	115	IAmb	IAmb	10 34 09.6	
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	99.75	13	P	Pdif	10 34 14.1	+1.7
	comp=Z,0.4nm,0.7s,baz=227,slow=6.2,SNR=5.1						
ILAR				PKiKP	PKiKP	10 38 41.5	+0.6
	comp=Z,0.4nm,0.6s,baz=198,slow=4.7,SNR=3.1						
	comp=Z,0.4nm,0.7s						
BILL	Bilibino	100.47	354	*ce*P	Pdif	10 34 17.0	+1.4
BILL				pmax	pmax		
	comp=Z,7.0nm,1.8s						
YKA	Yellowknife Ar	107.29	26	PKiKP	PKiKP	10 38 53.6	-1.0
	comp=Z,0.4nm,0.6s,baz=274,slow=2.0,SNR=9.0						
WMQ	Urumqi	113.72	308	*e*PKP	PKiKP	10 39 08.5	+0.9
BOSA	Boshof	115.41	203	PKP	PKiKP	10 39 10.6	-1.0
	comp=Z,3.8nm,0.9s,baz=158,slow=2.7,SNR=2.5						
DGZ	Jazzator, Alta	115.99	314	⇑*i*PKIKP	PKPdf	10 39 10.4	-1.5
MCWV	Mont Chateau	116.01	58		PKPdf	10 39 11.9	-0.1
MK31	Makanchi Array	118.32	310	*c i*PKIKP	PKPdf	10 39 15.2	-1.1
MKAR	Makanchi Array	118.32	310	PKP	PKPdf	10 39 15.2	-1.0
	comp=Z,1.1nm,0.6s,baz=204,slow=1.4,SNR=16						
MAKZ	Makanchi	118.53	309		PKPdf	10 39 15.8	-0.9
MAKZ	Makanchi	118.53	309	PKIKP	PKPdf	10 39 15.8	-0.9
ZALV	Zalesovo Beam	118.83	318	PKP	PKPdf	10 39 16.2	-0.7
	comp=Z,1.2nm,0.5s,baz=156,slow=2.8,SNR=7.1						
ZALV	Zalesovo Beam	118.83	318		PKPdf	10 39 16.5	-0.4
ZALV	Zalesovo Beam	118.83	318	PKIKP	PKPdf	10 39 16.5	-0.4
NRIK	Noril'sk	120.90	336	PKP	PKPdf	10 39 20.3	-0.2
	comp=Z,1.9nm,0.7s,baz=160,slow=1.8,SNR=4.3						
KURK	Kurchatov	121.70	313		PKPdf	10 39 21.8	-0.8
KURK	Kurchatov	121.70	313	*d i*PKIKP	PKPdf	10 39 22.0	-0.6
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURBB	Kurchatov Arra	121.74	313	PKP	PKPdf	10 39 21.1	-1.5
	comp=Z,1.8nm,0.5s,baz=115,slow=2.0,SNR=15						
BVAR	Borovoye Array	127.12	315	PKP	PKPdf	10 39 32.0	-0.9
	comp=Z,3.2nm,0.6s,baz=151,slow=2.3,SNR=16						
BORK	Borovoye	127.16	315		PKPdf	10 39 33.0	+0.1
BORK	Borovoye	127.16	315	⇓*e*PKIKP	PKPdf	10 39 31.9	-1.1
SCHQ	Schefferville	127.98	43	PKP	PKPdf	10 39 34.4	-0.1
	comp=Z,1.6nm,0.6s,baz=220,slow=5.9,SNR=3.9						
SPA0	Spitsbergen Ar	133.35	356	*e*P	PKiKP	10 39 45.1	-0.2
SPITS	Spitsbergen Ar	133.35	356	PKP	PKPdf	10 39 43.6	-0.5
	comp=Z,3.2nm,0.6s,baz=88,slow=5.1,SNR=9.9						
ARTI	Arti	134.04	319		PKPdf	10 39 46.6	+0.7
ARTI	Arti	134.04	319	⇓*e*PKIKP	PKPdf	10 39 45.2	-0.7
ARCES	ARCESS Array B	140.10	347	PKhKP	PKPpre	10 39 50.1	
	comp=Z,3.3nm,0.8s,baz=28,slow=2.4,SNR=5.1						
ARCES				PKP	PKPdf	10 39 55.6	-1.2
	comp=Z,2.3nm,0.5s,baz=96,slow=1.2,SNR=7.9						
STEI	Steigen	143.21	351	*e*P	PKPdf	10 40 01.3	-1.0
VAGH	Vaagaholmen	144.60	352	*e*P	PKPdf	10 40 05.0	+0.2
VRH	Novokhopyorsk	144.77	315	*e*PKIKP	PKiKP	10 40 09.9	+0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
RAUS	Rausandaksla	144.78	351	*e*P	PKPab	10 40 03.5	-0.6
KONS	Konsvik	144.84	352	*e*P	PKPab	10 40 03.8	-0.4
NCK	Nalchik	144.95	301	⇓*e*PKIKP	PKPbc	10 40 05.7	+0.2
MOR8	Moi Rana	144.98	351	*e*P	PKPbc	10 40 03.4	-1.5
STOK	Stokkvaagen	145.01	352	*e*P	PKPbc	10 40 04.4	-0.4
LEIR	Leirfjorden	145.21	352	*e*P	PKPbc	10 40 05.2	-0.4
MOS	Moscow	145.31	324	*i* PKHKP	PKPpre	10 39 59.3	
KBZ	Khabaz	145.44	302	PKPbc	PKPbc	10 40 06.2	-0.7
	comp=Z,5.2nm,0.8s,baz=106,slow=3.3,SNR=8.6						
KBZ	Khabaz	145.44	302	⇑*e*PKIKP	PKPbc	10 40 05.9	-1.0
SHA1	Shidzhatmaz	145.61	302	⇓*e*PKIKP	PKPdf	10 40 07.9	+0.3
LPSR	Galich'ya Gora	145.94	318	*e*PKIKP	PKPdf	10 40 06.9	-0.6
LPSR				pmax	pmax		
	comp=Z,37nm,0.7s						
VORR	Voronezh	146.11	317	*e*PKIKP	PKPdf	10 40 07.0	-0.8
VORR				pmax	pmax		
	comp=Z,90nm,0.4s						
OBN	Obninsk	146.14	323	*e*PKIKP	PKPdf	10 40 06.8	-1.0
OBN				*e*		10 43 30.2	
OBN				*e*PPP	PPP	10 46 47.0	
OBN				pmax	pmax		
	comp=Z,11nm,0.8s						
VSR	Storozhevoye	146.29	316	*e*PKP2	PKPdf	10 40 08.3	+0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD	Divnogorie	146.30	315	*e*PKP2	PKPdf	10 40 08.6	+0.4
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FIA1	FINESS Array S	146.49	338		PKPdf	10 40 08.5	+0.4
FINES	FINESS Array B	146.49	338	PKPbc	PKPdf	10 40 08.1	-0.1
	comp=Z,11nm,0.5s,baz=40,slow=4.6,SNR=54						
FINES	FINESS Array B	146.49	338		PKPdf	10 40 08.4	+0.2
FINES	FINESS Array B	146.49	338	PKIKP	PKPdf	10 40 08.4	+0.2
NSS	Namsos	146.87	351	*e*P	PKPab	10 40 11.9	-0.1
VSU	Vasula	148.47	334	⇓*e*PKIKP	PKPdf	10 40 12.5	+0.9
DOMB	Dombas	149.62	353	*e*P	PKPbc	10 40 17.6	-0.4
AKN	Aaknes	149.68	355	*e*P	PKiKP	10 40 19.5	+0.4
NB2	NORSAR Subarra	150.32	350	PKP	PKPbc	10 40 19.3	-0.4
	comp=Z,4.8nm,0.6s,baz=17,slow=2.6						
NB2	NORSAR Subarra	150.32	350	PKP	PKPbc	10 40 19.3	-0.4
NB2				AMP		10 40 19.3	
	comp=Z,4.8nm,0.6s						
NOA	NORSAR Array B	150.32	350	PKPbc	PKPbc	10 40 18.6	-1.2
	comp=Z,4.8nm,0.6s,baz=16,slow=4.2,SNR=17						
NAO01	NORSAR Array S	150.55	350	PKPdf	PKPdf	10 40 17.0	+2.1
NC602	NORSAR Array S	150.56	350	*e*P	PKiKP	10 40 21.2	+0.3
EDA	Edea	150.58	198		PKPbc	10 40 20.1	-1.7
HFS	Hagfors	150.76	347	PKPbc	PKPbc	10 40 19.3	-1.4
	comp=Z,8.4nm,0.6s,baz=90,slow=2.9,SNR=14						
HFS				PP	PP	10 43 57.1	-0.3
	comp=Z,6.9nm,0.9s,baz=166,slow=2.4,SNR=3.9						
SKAR	Skarslia	151.03	353	*e*P	PKiKP	10 40 22.5	+0.5
MMAI	Mount Meron Ar	151.21	281	PKPbc	PKPbc	10 40 22.1	-0.6
	comp=Z,2.1nm,0.4s,baz=80,slow=7.9,SNR=1.6						
ASK	Askoy	151.49	356	*e*P	PKPbc	10 40 22.4	+0.1
KONO	Kongsberg	151.88	351	*e*P	PKiKP	10 40 24.7	+1.0
ODD1	Odda	151.95	354	*e*P	PKPbc	10 40 23.5	0.0
AKASG	Malin Array Be	152.19	320	PKPbc	PKPbc	10 40 23.5	-0.8
	comp=Z,1.3nm,0.3s,baz=49,slow=2.9,SNR=14						
AKASG	Malin Array Be	152.19	320		PKPbc	10 40 24.6	+0.2
AKASG	Malin Array Be	152.19	320	*c i*PKIKP	PKPbc	10 40 23.7	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	152.19	320	⇓*i*PKIKP	PKPbc	10 40 21.8	-2.5
BLS5	Blasjo	152.45	354	*e*	PKiKP	10 40 27.5	+2.5
BR131	Keskin Array S	152.74	295	⇓*i*PKIKP	PKPbc	10 40 25.0	-1.1
BRTR	Keskin Array B	152.74	295	PKPbc	PKPbc	10 40 25.4	-0.8
	comp=Z,1.4nm,0.5s,baz=143,slow=3.2,SNR=6.4						
DBIC	Dimbokro	154.07	166	PKP	PKPdf	10 40 21.1	-0.5
	comp=Z,3.4nm,0.6s,baz=356,slow=2.4,SNR=4.0						
DBIC				PKPbc	PKPbc	10 40 29.2	-0.3
	comp=Z,2.0nm,0.3s,baz=243,slow=1.4,SNR=5.6						
EKA	Eskdalemuir Ar	156.58	6	PKPab	PKPab	10 40 53.5	+0.9
	comp=Z,0.3nm,0.4s,baz=331,slow=3.1,SNR=3.6						
CLL	Collm	158.93	339	*i* PKP2	PKPab	10 40 59.4	-3.4
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	Collm	158.93	339	*i* PKPab	PKPab	10 40 59.4	-3.4
	comp=Z,5.0nm,0.8s						
MODS	Modra-Piesok	159.69	328	*e*PKP2	PKPab	10 41 06.7	+0.4
MODS	Modra-Piesok	159.69	328	*e*PKP	PKPab	10 41 06.6	+0.3
TORD	Torodi Ar. Bea	161.12	182	PKP	PKPdf	10 40 29.2	-1.0
	comp=Z,2.4nm,1.0s,baz=207,slow=4.2,SNR=3.6						
TORD				PKPab	PKPab	10 41 12.7	-0.5
	comp=Z,10.0nm,0.8s,baz=192,slow=5.2,SNR=28						
ESDC	Sonseca Array	171.38	27	PKP	PKPdf	10 40 36.9	-0.7
	comp=Z,0.7nm,0.9s,baz=260,slow=2.3,SNR=4.4						
ESDC				PKPab	PKPab	10 41 58.7	+0.7
	comp=Z,0.5nm,0.4s,baz=335,slow=5.0,SNR=2.8						

IDC 06 10:20:53.4±1.6**, 54°.26N×162°.70E, h0km, mb3.1**/2**, mbtmp3.1**/2**, ML1.6**/1**, Error ellipse: s-maj=108.6km s-min=18.3km az=160.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	3.19	251	Pn	Pn	10 21 44.4	-0.4
	0.3nm,0.3s,baz=64,slow=19,SNR=16						
PETK				Lg	Lg	10 22 34.9	
	0.5nm,0.3s,baz=68,slow=39,SNR=6.6						
H11N2	WAKE ISLAND Hy	34.61	173	T	T	11 05 52.0	
	baz=359						
H11N3	WAKE ISLAND Hy	34.63	173	T	T	11 05 53.5	
	baz=359						
H11N1	WAKE ISLAND Hy	34.63	173	T	T	11 05 58.0	
	baz=359						
PDAR	Pinedale Array	55.61	63	P	P	10 30 30.2	-0.7
	0.2nm,0.5s,baz=311,slow=8.4,SNR=3.9						
	0.2nm,0.5s						
TXAR	Lajitas Array	68.77	69	P	P	10 31 59.9	+0.7
	0.1nm,0.7s,baz=312,slow=5.7,SNR=1.3						
	0.1nm,0.7s						

IDC ***06*** *10:21:48.9±2.1, 6°.84S×132°.20E, h0km, mb3.7/2, mbtmp3.8/6, ML3.8/4, MS3.6/1, Error ellipse: s-maj=97.2km s-min=24.6km az=85.0*

ISC 06 10:21:51.6±1.2**, 6°.81S**±0°.07×**132°.4E**±0°.3**, h35km, n7, σ3s.36**/8**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.02	349	Pn	Pn	10 23 19.4	+1.1
	0.6nm,0.3s,baz=196,slow=23,SNR=2.6						
SIJI				Sn	Sn	10 24 20.8	-5.2
	4.5nm,0.3s,baz=275,slow=20,SNR=7.5						
	2.9nm,0.2s						
FITZ	Fitzroy Crossi	13.03	210	Pn	Pn	10 24 53.8	-0.6
	0.9nm,0.3s,baz=32,slow=11,SNR=15						
FITZ				Sn	Sn	10 27 04.4	-14
	0.3nm,0.3s,baz=172,slow=17,SNR=1.7						
	1.9nm,0.3s						
WRA	Warramunga Arr	13.18	172	Pn	Pn	10 24 57.9	+1.5
	0.5nm,0.3s,baz=353,slow=12,SNR=18						
WRA				Sn	Sn	10 27 18.1	-3.8
	0.9nm,0.3s,baz=358,slow=23,SNR=6.4						
	0.7nm,0.5s						
ASAR	Alice Springs	16.82	175	Pn	Pn	10 25 45.2	+0.7
	0.4nm,0.3s,baz=354,slow=8.6,SNR=25						
	0.7nm,0.6s						
STKA	Stephens Creek	26.36	162	LR	LR	10 39 23.0	
	comp=Z,130nm,18.1s,baz=72,slow=40						
MKAR	Makanchi Array	69.42	326	P	P	10 32 59.3	+3.2
	0.4nm,0.7s,baz=125,slow=8.0,SNR=4.5						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	72.51	333	P	P	10 33 15.7	+1.0
	0.9nm,0.7s,baz=142,slow=7.3,SNR=4.2						
	0.9nm,0.7s						

FUNV ***06*** *10:32:09.8, 6°.78N×73°.20W, h159km, MW4.0, Presumed earthquake*

RSNC ***06*** *10:32:11.0±0.0, 7°N±1°×7°3W±°, h148km±1km, M3.5, ML3.2*

ISC 06 10:32:09.1±1.3**, 6°.85N**±0°.03×**73°.15W**±0°.04**, h156km**±8km**, n38, σ1s.34**/66**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	187	P	Pn	10 32 30.9	+0.3
BARC				S	Sn	10 32 46.1	-0.9
BRJC	Barrancabermej	0.60	282	P	Pn	10 32 32.6	+0.9
BRJC				S	Sn	10 32 49.6	+0.7
PAMC	Pamplona, Colo	0.66	43	P	Pn	10 32 33.8	+1.2
PAMC				S	Sn	10 32 51.0	+0.5
RUSC	La Rusia	0.95	176	P	Pn	10 32 34.7	0.0
RUSC				S	Sn	10 32 53.7	-0.6
RUSC	La Rusia	0.95	176	*e*P	Pn	10 32 34.5	-0.2
RUSC				*e*S	Sn	10 32 52.0	-2.3
CAPV	Capacho	1.30	39	*e*P	Pn	10 32 39.0	+1.5
CAPV				*e*S	Sn	10 32 59.2	0.0
PTBC	PUERTO BERRIO,	1.34	257	P	Pn	10 32 37.2	-0.3
PTBC				S	Sn	10 32 58.1	-1.2
OCAC	Ocana	1.39	353	P	Pn	10 32 39.0	+0.8
OCAC				S	Sn	10 33 00.9	+0.3
SPBC	San Pablo de B	1.50	218	P	Pn	10 32 39.6	+0.3
SPBC				S	Sn	10 33 01.7	-0.8
CHIC	Chingaza	2.28	195	P	Pn	10 32 48.8	+0.4
CHIC				S	Sn	10 33 18.2	-0.4
ROSC	El Rosal	2.31	210	P	Pn	10 32 50.4	+1.7
ROSC				S	Sn	10 33 20.2	+1.0
CVER	Cruz Verde, Cu	2.49	202	P	Pn	10 32 52.3	+1.3
CVER				S	Sn	10 33 24.7	+1.5
UREC	San Jos de Ur	2.53	291	P	Pn	10 32 50.6	-0.3
UREC				S	Sn	10 33 21.4	-1.8
VILC	Villavicencio,	2.77	191	P	Pn	10 32 54.6	+0.5
VILC				S	Sn	10 33 28.1	-0.8
CBOC	Ciudad Bolivar	3.01	251	P	Pn	10 32 58.4	+1.3
CBOC				S	Sn	10 33 32.7	-1.4
DBBC	Dabeiba	3.04	273	P	Pn	10 32 58.3	+0.9
DBBC				S	Sn	10 33 33.1	-1.6
ARGC	Ariguani, Magd	3.18	340	P	Pn	10 33 02.1	+3.1
ARGC				S	Sn	10 33 39.4	+1.6
SDV	Santo Domingo	3.21	51	P	Pn	10 33 00.6	+1.0
SDV				S	Sn	10 33 37.2	-1.5
SDV	Santo Domingo	3.21	51	*e*P	Pn	10 33 00.6	+1.0
SDV				*e*S	Sn	10 33 37.4	-1.3
MCQV	Machiques	3.23	11	*e*P	Pn	10 33 01.0	+1.2
MCQV				*e*S	Sn	10 33 38.1	-1.0
ANIL	Santa Ana	3.25	224	P	Pn	10 33 02.1	+1.9
ANIL				S	Sn	10 33 41.1	+1.4
APAC	Apartado, Choc	3.56	287	P	Pn	10 33 04.8	+0.9
APAC				S	Sn	10 33 45.6	-0.8
PRAC	Prado	3.56	209	P	Pn	10 33 04.3	+0.3
PRAC				S	Sn	10 33 46.2	-0.5
ORTC	Ortega, Tolima	3.59	216	P	Pn	10 33 05.3	+0.9
ORTC				S	Sn	10 33 47.5	+0.2
SJCC	San Jacinto, C	3.63	327	P	Pn	10 33 05.1	+0.2
SJCC				S	Sn	10 33 45.7	-2.5
SJCC	San Jacinto, C	3.63	327	*e*P	Pn	10 33 04.6	-0.3
SJCC				*e*S	Sn	10 33 45.0	-3.2
URMC	La Uribe, Meta	3.79	199	P	Pn	10 33 08.1	+1.2
URMC				S	Sn	10 33 50.7	-1.1
YOTC	Yotoco, Valle	4.27	228	P	Pn	10 33 13.4	+0.1
YOTC				S	Sn	10 34 06.1	+2.9
PIZC	Pizarro, Choco	4.59	246	P	Pn	10 33 19.7	+2.4
PTAC	Punta Ardita,	4.63	274	P	Pn	10 33 18.0	+0.1
MACC	Macarena, Meta	4.73	189	P	Pn	10 33 18.5	-0.7
MACC				S	Sn	10 34 10.2	-3.6
URIC	Uribia, Colomb	4.95	13	*e*P	Pn	10 33 21.3	-0.8
TEPV	Terepaima	4.99	51	*e*P	Pn	10 33 22.7	+0.1
MAPV	Macapo	5.50	57	*e*P	Pn	10 33 29.2	-0.2
BENV	Beln	6.30	60	*e*P	Pn	10 33 39.9	-0.1
TURV	Turiamo	6.35	55	*e*P	Pn	10 33 40.5	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CACV	**CAICARA DEL OR**	**6.59**	**83**	*e*P	Pn	10 33 49.3	+5.5
TACV	**Tcata**	**6.88**	**61**	*e*P	**Pn**	**10 33 46.8**	**-0.9**

*CATAC **06** 10:35:19.9, 13°N±4°×8°9W±°, h54km±10km, M3.5/7, MLv3.5/7, confirmed*
*SNET **06** 10:35:19.7±0.8, 12°.99N×89°.14W, h41km, ML3.2, Presumed earthquake*
*GCG **06** 10:35:20.8±0.6, 13°.09N×89°.16W, h57km±9km, MD3.9, Presumed earthquake*
ISC 06 10:35:20.8±2.0**, 13°.0N**±0°.1×**89°.12W**±0°.05**, h42**km±26km**, n43, σ0s.65**/62**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.51**	**337**	*e*P	**Pn**	**10 35 31.6**	**-0.2**
LALI				*e*S	**Sn**	**10 35 40.2**	**+0.6**
LALI	**Alcalda de L**	**0.51**	**337**	*i* P	**Pn**	**10 35 31.5**	**-0.3**
TECO	**Alcaldia de Te**	**0.61**	**32**	P	**Pn**	**10 35 32.5**	**-0.8**
TECO				S	**Sn**	**10 35 42.0**	**-0.1**
TECO	**Alcaldia de Te**	**0.61**	**32**	*e*P	**Pn**	**10 35 32.4**	**-0.8**
UDBS	**Universidad Do**	**0.69**	**357**	*e*P	**Pn**	**10 35 33.9**	**-0.4**
UESV	**Universidad de**	**0.69**	**27**	P	**Pn**	**10 35 33.4**	**-1.0**
UESV				S	**Sn**	**10 35 44.0**	**0.0**
UESV	**Universidad de**	**0.69**	**27**	*e*P	**Pn**	**10 35 33.7**	**-0.6**
UESS	**Universidad de**	**0.70**	**353**	*e*P	**Pn**	**10 35 34.0**	**-0.5**
UESS				*e*S	**Sn**	**10 35 44.7**	**+0.4**
UEES	**Universidad Ev**	**0.71**	**350**	*e*P	**Pn**	**10 35 34.0**	**-0.5**
UEES				*e*S	**Sn**	**10 35 44.9**	**+0.5**
JAYA	**Jayaque - finc**	**0.71**	**333**	P	**Pn**	**10 35 34.1**	**-0.6**
JAYA	**Jayaque - finc**	**0.71**	**333**	*e*P	**Pn**	**10 35 33.9**	**-0.8**
JAYA	**Jayaque - finc**	**0.71**	**333**	*i* P	**Pn**	**10 35 34.1**	**-0.6**
JAYA				*i* S	**Sn**	**10 35 44.2**	**-0.4**
PAVA	**Las Pavas**	**0.71**	**14**	P	**Pn**	**10 35 34.1**	**-0.6**
PAVA				S	**Sn**	**10 35 45.5**	**+0.9**
PAVA	**Las Pavas**	**0.71**	**14**	*e*P	**Pn**	**10 35 34.1**	**-0.6**
PMON	**Piamonte**	**0.72**	**344**	P	**Pn**	**10 35 34.3**	**-0.5**
PMON	**Piamonte**	**0.72**	**344**	*e*P	**Pn**	**10 35 34.2**	**-0.5**
PMON				*e*S	**Sn**	**10 35 45.2**	**+0.6**
LBRS	**Las Brisas**	**0.72**	**6**	*e*P	**Pn**	**10 35 34.2**	**-0.5**
LFU	**La Fuente**	**0.73**	**0**	*e*P	**Pn**	**10 35 34.4**	**-0.4**
LFU				*e*S	**Sn**	**10 35 45.2**	**+0.3**
BOQS	**Boqueron**	**0.73**	**347**	*e*P	**Pn**	**10 35 34.7**	**-0.3**
BOQS				*e*S	**Sn**	**10 35 45.7**	**+0.5**
PIC2	**El Picacho**	**0.74**	**349**	*e*P	**Pn**	**10 35 34.7**	**-0.4**
TECA	**Tecapa**	**0.76**	**51**	*e*P	**Pn**	**10 35 34.8**	**-0.6**
TECA				*e*S	**Sn**	**10 35 46.4**	**+0.5**
SCLA	**Alcaldia de Sa**	**0.78**	**29**	*e*P	**Pn**	**10 35 35.1**	**-0.4**
SCLA				*e*S	**Sn**	**10 35 46.8**	**+0.8**
PACA	**Pacayal**	**0.89**	**60**	P	**Pn**	**10 35 36.7**	**-0.4**
PACA	**Pacayal**	**0.89**	**60**	*e*P	**Pn**	**10 35 36.7**	**-0.4**
PACA				*e*S	**Sn**	**10 35 50.4**	**+1.5**
LCY	**Lacayo**	**0.90**	**63**	*e*P	**Pn**	**10 35 36.6**	**-0.5**
RANC	**El Ranchito**	**0.91**	**63**	*e*P	**Pn**	**10 35 36.8**	**-0.5**
RANC				*e*S	**Sn**	**10 35 50.4**	**+1.1**
VSM	**San Miguel**	**0.92**	**63**	*e*P	**Pn**	**10 35 37.2**	**-0.3**
CEVE	**Cerro Verde**	**0.95**	**329**	*e*P	**Pn**	**10 35 37.8**	**-0.1**
CEVE				*e*S	**Sn**	**10 35 51.6**	**+1.2**
BLLM	**Bellamira**	**0.95**	**64**	*e*P	**Pn**	**10 35 37.4**	**-0.5**
SBLS	**San Blas**	**0.95**	**329**	*e*P	**Pn**	**10 35 37.7**	**-0.4**
SBLS				*e*S	**Sn**	**10 35 51.8**	**+1.2**
SNJE	**San Jose**	**0.97**	**331**	*e*P	**Pn**	**10 35 37.9**	**-0.3**
SNJE				*e*S	**Sn**	**10 35 51.8**	**+0.8**
RTR	**El Retiro**	**1.02**	**330**	*e*P	**Pn**	**10 35 38.7**	**-0.1**
UNIC	**Universidad Ca**	**1.05**	**336**	*e*P	**Pn**	**10 35 38.7**	**-0.4**
NUBE	**Las Nubes**	**1.09**	**324**	P	**Pn**	**10 35 39.4**	**-0.5**
NUBE	**Las Nubes**	**1.09**	**324**	*e*P	**Pn**	**10 35 39.3**	**-0.6**
NUBE	**Las Nubes**	**1.09**	**324**	*i* P	**Pn**	**10 35 39.3**	**-0.5**
NUBE				*i* S	**Sn**	**10 35 53.7**	**-0.1**
LLGN	**La Laguna**	**1.15**	**8**	*e*P	**Pn**	**10 35 39.9**	**-0.7**
RBDL	**Robledal**	**1.22**	**333**	*e*P	**Pn**	**10 35 41.2**	**-0.5**
LCND	**La Caada**	**1.23**	**76**	*e*P	**Pn**	**10 35 40.7**	**-0.9**
CNCH	**Conchagua**	**1.28**	**78**	*e*P	**Pn**	**10 35 41.5**	**-0.9**
CNCH				*e*S	**Sn**	**10 35 59.4**	**+1.0**
MTO3	**Montecristo**	**1.39**	**350**	*e*P	**Pn**	**10 35 43.2**	**-0.9**
MTO3	**Montecristo**	**1.39**	**350**	*i* P	**Pn**	**10 35 43.4**	**-0.7**
ESQI	**Esquipulas**	**1.55**	**352**	*e*P	**Pn**	**10 35 45.6**	**-0.5**

*IDC **06** 10:41:51.0±3.1, 64°.71N×31°.77E, h0km, mbtmp3.0/4, ML2.3/4, Error ellipse: s-maj=43.7km s-min=10.0km az=101.0*
*HEL **06** 10:41:51.8±0.2, 64°.77N×30°.77E, h0km, ML2.1, Suspected explosion*
*KOLA **06** 10:41:53.2, 64°.78N×30°.87E, h0km, ML2.4, Error ellipse: s-maj=16.4km s-min=10.8km az=160.0, Kostomuksha, Karelia*
ISC 06 10:41:52.4±0.9**, 64°.84N**±0°.03×**30°.81E**±0°.05**, h0**km**, n37, σ1s.49**/55**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.73**	**212**	PB	**Pg**	**10 42 04.6**	**-1.8**
	baz=28						
RMF				smax	smax	10 42 12.8	
	comp=Z,36nm,0.2s						
KU1	**Kurvinen**	**0.90**	**325**	PG	**Pg**	**10 42 08.9**	**-0.8**
KU6	**Riekki**	**1.25**	**343**	PG	**Pg**	**10 42 15.5**	**-1.0**
	baz=163						
KU6				smax	smax	10 42 31.5	
	comp=Z,11nm,0.2s						
KU6				SG	**Sg**	**10 42 32.6**	**-0.1**
MSF	**Maaselka**	**1.31**	**326**	PG	**Pg**	**10 42 16.0**	**-1.5**
	baz=148						
KU2	**Taivalkoski**	**1.40**	**310**	PG	**Pn**	**10 42 17.4**	**-1.8**
KU2				SN	**Sb**	**10 42 38.3**	**+0.6**
OLKF	**Oulanka, Finla**	**1.60**	**339**	PG	**Pn**	**10 42 21.4**	**-0.6**
OLKF				smax	smax	10 42 41.3	
	comp=Z,12nm,0.2s						
JOF	**Joensuu**	**1.94**	**173**	PG	**Pn**	**10 42 25.3**	**-1.3**
NIF	**Nilsia**	**1.96**	**224**	PG	**Pn**	**10 42 26.2**	**-0.7**
	baz=39						
NIF				smax	smax	10 42 48.3	
	comp=Z,18nm,0.2s						
NIF				SG	**Sn**	**10 42 51.5**	**-0.6**
KVDA	**Kovda**	**2.05**	**24**	P	**Pn**	**10 42 28.5**	**+0.5**
KVDA				S	**Sg**	**10 42 57.6**	**-0.5**
RANF	**Ranua**	**2.06**	**307**	PG	**Pn**	**10 42 28.5**	**+0.3**
	baz=127						
OUF	**Merijarvi**	**2.66**	**263**	PB	**Pn**	**10 42 36.8**	**+0.3**
	baz=83						
OUF				smax	smax	10 43 09.5	
	comp=Z,19nm,0.2s						
OUF				SG	**Sn**	**10 43 11.5**	**+2.1**
RNF	**Rovaniemi**	**2.66**	**314**	PB	**Pn**	**10 42 36.8**	**+0.3**
OBF0	**Syolatti, Pyha**	**2.85**	**266**	PB	**Pn**	**10 42 38.8**	**-0.3**
OBF0				smax	smax	10 43 15.0	
	comp=Z,9.1nm,0.2s						
OBF0				SG	**Sb**	**10 43 19.3**	**-0.1**
APA0	**Apatity Array**	**2.92**	**17**	P	**Pn**	**10 42 41.1**	**+1.1**
APA0				S	**Sn**	**10 43 17.1**	**+1.4**
APA	**Apatity**	**2.94**	**20**	S	**Sn**	**10 43 16.1**	**-0.1**
VRF	**Varrio**	**2.96**	**351**	PN	**Pn**	**10 42 41.6**	**+0.9**
	baz=171						
VRF				smax	smax	10 43 20.7	
	comp=Z,2.9nm,0.2s						
VRF				SG	**Sb**	**10 43 24.2**	**+1.5**
SUF	**Sumiainen**	**2.97**	**226**	PB	**Pn**	**10 42 41.4**	**+0.7**
	baz=39						
SUF				smax	smax	10 43 17.3	
	comp=Z,3.7nm,0.2s						
TOF	**Tornio**	**2.98**	**298**	PB	**Pn**	**10 42 41.4**	**+0.6**
TOF				smax	smax	10 43 19.9	
	comp=Z,3.4nm,0.2s						
TOF				SB	**Sb**	**10 43 21.2**	**-2.0**
LVZ	**Lovozero**	**3.44**	**25**	S	**Sn**	**10 43 28.4**	**-0.3**
RUF	**Ruokolahti**	**3.53**	**195**	PN	**Pn**	**10 42 48.2**	**-0.2**
KLF	**Kolari**	**3.69**	**314**	PN	**Pn**	**10 42 51.1**	**+0.5**
	baz=133						
KEF	**Keuruu**	**3.78**	**228**	PB	**Pn**	**10 42 54.0**	**+2.2**
KEF				SG	**Sb**	**10 43 48.0**	**+1.9**
RAJF	**Raja-Jooseppi**	**3.79**	**346**	PN	**Pn**	**10 42 52.4**	**+0.4**
ERTU	**Ertsjaerv**	**3.96**	**300**	PN	**Pn**	**10 42 54.8**	**+0.4**
	baz=109						
VAF	**Ylistaro**	**4.02**	**247**	PN	**Pn**	**10 42 55.7**	**+0.6**
	baz=56						
FIA0	**FINESS Array S**	**4.03**	**214**	PN	**Pn**	**10 42 54.8**	**-0.4**
	baz=28						
FINES	**FINESS Array B**	**4.03**	**214**	Pn	**Pn**	**10 42 54.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=33,slow=13,SNR=7.5						
FINES				Pg	**Pb**	**10 43 03.9**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=23,slow=15,SNR=11						
FINES				Sn	**Sn**	**10 43 42.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=39,slow=23,SNR=2.2						
FINES				Lg	Lg	10 43 57.0	
	comp=Z,2.2nm,0.3s,baz=32,slow=27,SNR=15						
	comp=Z,0.7nm,0.4s						
BURU	**Burvik**	**4.06**	**271**	PN	**Pn**	**10 42 54.8**	**-0.9**
BURU				SG	**Sb**	**10 43 57.5**	**+3.3**
UMAU	**Umeaa**	**4.51**	**262**	PN	**Pn**	**10 43 01.4**	**-0.4**
UMAU				SG	**Sb**	**10 44 10.4**	**+3.4**
VJF	**Virojoki**	**4.57**	**201**	SG	**Sb**	**10 44 11.4**	**+2.6**
HEF	**Hetta**	**4.58**	**325**	PN	**Pn**	**10 43 02.4**	**-0.4**
HEF				SG	**Sb**	**10 44 14.8**	**+5.6**
ARCES	**ARCESS Array B**	**5.15**	**339**	Pn	**Pn**	**10 43 10.9**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=151,slow=13,SNR=28						
ARCES				Sn	**Sn**	**10 44 10.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=152,slow=23,SNR=1.6						
ARCES				Lg	Lg	10 44 29.9	
	comp=Z,0.4nm,0.3s,baz=150,slow=33,SNR=1.7						
	comp=Z,1.1nm,0.3s						
ARCES	**ARCESS Array B**	**5.15**	**339**	P	**Pn**	**10 43 10.4**	**-0.3**
ARCES				S	**Sn**	**10 44 07.5**	**-3.2**
VADS	**Vadso**	**5.34**	**355**	P	**Pn**	**10 43 13.7**	**+0.5**
VADS				S	**Sn**	**10 44 14.0**	**-1.3**
FAUS	**Fauske**	**6.80**	**299**	S	**Sn**	**10 44 50.7**	**-0.5**
HFS	**Hagfors**	**9.20**	**247**	Pn	**Pn**	**10 44 05.1**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=59,slow=13,SNR=7.2						
	comp=Z,0.5nm,0.3s						
NOA	**NORSAR Array B**	**9.69**	**256**	Pn	**Pn**	**10 44 12.4**	**-0.6**
	baz=56,slow=13,SNR=4.8						
	comp=Z,0.1nm,0.3s						

*BJI **06** 11:19:54.8, 36°.35N×141°.48E, h10km, mB5.4/59, mb5.5/84, Ms5.6, Ms7 5.6/98*
*IDC **06** 11:19:54.3±0.4, 36°.26N×141°.74E, h0km, mb5.1/33, mbtmp5.2/36, ML4.7/3, MS5.0/72, Error ellipse: s-maj=11.8km s-min=10.3km az=133.0*
*NIED **06** 11:19:56.6, 36°.34N×141°.73E, h54km, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; Mrr-1.04; Mθθ0.00; Mφφ1.03; Mrθ-0.22; Mθφ-0.12; Mφr0.70; Fault plane solution: M0 1.28000×10^{17} NP1: φs360.00000°, δ28.00000°, λ-79.00000°. NP2: φs167.00000°, δ63.00000°, λ-96.00000°.*
*NEIC **06** 11:19:56.4±1.9, 36°.28N±0°.05×141°.80E±0°.07, h10km±1km, mb5.7/764, Mww5.3/30 Error ellipse: s-maj=10.3km s-min=8.1km az=103.0*
*NEIC **06** 11:19:56.6, 36°.13N×142°.19E, h14km, Moment Tensor Solution. Duration: 2s.2 Moment tensor: Scale 10^{17}Nm; Mrr-1.03; Mθθ0.01; Mφφ1.01; Mrθ-0.18; Mθφ0.11; Mφr0.10; Fault plane solution: M0 1.05000×10^{17} NP1:φs16.26000°, δ43.55000°, λ-75.10000°. NP2:φs176.09000°, δ48.25000°, λ-103.74000°. Principal axes: T 1.0284, Plg2.0000°, Azm276.0000°; N 0.0366, Plg10.0000°, Azm185.0000°; P -1.0650, Plg80.0000°, Azm19.0000°;*
*GFZ **06** 11:19:56.5, 36°.30N×141°.81E, h21km, MW5.4, Moment Tensor Solution. s56 Moment tensor: Mrr-1.33; Mθθ0.18; Mφφ1.14; Mrθ0.10; Mθφ0.07; Mφr0.62; Fault plane solution: NP1:φs186.00000°, δ58.00000°, λ-87.00000°. NP2:φs3.00000°, δ32.00000°, λ-92.00000°. Principal axes: T 1.3000, Plg13.0000°, Azm275.0000°; N 0.1800, Plg2.0000°, Azm5.0000°; P -1.4800, Plg76.0000°, Azm102.0000°;*
*JMA **06** 11:19:56.6±0.4, 36°.3N±0°.6×14°2E±°, h54km, MD5.7/39, MW5.3/39, FAR E OFF IBARAKI PREF*
JMA Felt II J1 at FAR E OFF IBARAKI PREF .
*MOS **06** 11:19:56.0±1.0, 36°.32N×141°.76E, h20km, mb5.7/75, MS5.3/29, Error ellipse: s-maj=6.8km s-min=3.9km az=121.2*
*NEIC **06** 11:19:56.6, 36°.33N×141°.82E, h14km*
*GCMT **06** 11:19:59.4±0.1, 36°.29N±0°.01×141°.60E±0°.01, h12km, MW5.4/154, Moment Tensor Solution. s113,c206; s154,c283; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; Mrr-0.93±.01; Mθθ-0.00±.01; Mφφ0.93±.01; Mrθ-0.04±.03; Mθφ0.05±.01; Mφr1.35±.03; Best double couple: M0 1.64100×10^{17} NP1:φs7.00000°, δ17.00000°, λ-82.00000°. NP2:φs179.00000°, δ73.00000°, λ-92.00000°. Principal axes: T 1.6400, Plg28.0000°, Azm271.0000°; N 0.0010, Plg2.0000°, Azm180.0000°; P -1.6420, Plg62.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **06** 11:20:04.7, 37°.58N×141°.18E, h20km, mb5.4, Ms5.2*
ISC 06 11:19:57.1±0.4**, 36°.34N**±0°.03×**141°.71E**±0°.03**, h16**km±2km**, h16**km**:pP-P, n1555, σ1s.62**/1175**, mb5.7**/549**, MS5.3**/126**, 44C-45D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.91**	**270**	P	**Pb**	**11 20 13.6**	**-0.9**
JHYU				A	A	11 20 13.6	
	comp=N,210nm,2.4s,comp=E,572nm,3.9s						
JHO	**Hitachi**	**0.96**	**287**	P	**Pb**	**11 20 13.9**	**-1.5**
JHO				A	A	11 20 13.9	
	comp=N,169nm,2.2s,comp=E,145nm,2.9s						
JIHU	**Itakohorinouch**	**1.03**	**249**	P	**Pb**	**11 20 15.5**	**-1.1**
JIHU				A	A	11 20 15.5	
	comp=N,777nm,6.6s,comp=E,1µm,2.5s						
ONAJ	**Iwakimizuishiy**	**1.06**	**316**	*e*P	**Pb**	**11 20 15.3**	**-1.8**
ONAJ				A	A	11 20 15.3	
	comp=N,94nm,2.4s,comp=E,115nm,2.1s						
JFFD	**Fukushimafurud**	**1.19**	**309**	A	A	11 20 17.4	
	comp=N,77nm,2.6s,comp=E,64nm,5.7s						
JFK	**Kawauchi**	**1.23**	**327**	P	**Pn**	**11 20 17.8**	**-1.9**
JFK				A	A	11 20 17.8	
	comp=N,148nm,2.3s,comp=E,111nm,4.7s						
JYT	**Yasato**	**1.23**	**265**	A	A	11 20 18.1	
	comp=N,204nm,4.3s,comp=E,167nm,4.6s						
JSMT	**Sammumatsuo**	**1.24**	**236**	A	A	11 20 18.1	
	comp=N,717nm,3.7s,comp=E,660nm,3.3s						
JCCN	**Chibachonan**	**1.53**	**232**	A	A	11 20 22.3	
	comp=N,483nm,3.6s,comp=E,666nm,7.9s						
JMST	**Minamisoumatoc**	**1.53**	**335**	A	A	11 20 22.1	
	comp=N,193nm,1.8s,comp=E,142nm,1.5s						
I30JP	**ISUMI INFRASON**	**1.53**	**228**	Pn	**Pn**	**11 20 23.0**	**-0.8**
	baz=68,slow=25						
JSB	**Shiboa**	**1.57**	**294**	A	A	11 20 22.9	
	comp=N,288nm,3.6s,comp=E,321nm,3.0s						
JOTO	**OTAMA OYAMA**	**1.64**	**318**	P	**Pn**	**11 20 24.8**	**-0.6**
JOTO				A	A	11 20 24.8	
	comp=N,224nm,1.8s,comp=E,273nm,3.2s						
JMM	**Marumori**	**1.69**	**335**	P	**Pn**	**11 20 24.7**	**-1.4**
JMM				A	A	11 20 24.7	
	comp=N,88nm,2.9s,comp=E,99nm,4.5s						
JKUC	**kamogawauchiur**	**1.70**	**227**	A	A	11 20 24.7	
	comp=N,269nm,7.0s,comp=E,174nm,4.9s						
TOK	**Tokyo**	**1.71**	**248**	A	A	11 20 24.9	
	comp=N,374nm,2.9s,comp=E,398nm,4.9s						
BSO1	**Boso 1**	**1.79**	**200**	*e*P	**Pn**	**11 20 26.3**	**-0.5**
BSO3	**Boso 3**	**1.82**	**213**	*e*P	**Pn**	**11 20 27.4**	**-0.1**
JAG	**Ashikaga**	**1.82**	**273**	P	**Pn**	**11 20 26.3**	**-1.5**
JAG				A	A	11 20 26.3	
	comp=N,115nm,5.2s,comp=E,92nm,4.9s						
JFY	**Yanaizu**	**1.93**	**304**	P	**Pn**	**11 20 28.8**	**-0.6**
JFY				A	A	11 20 28.8	
	comp=N,58nm,9.9s,comp=E,67nm,5.1s						
TATJ	**Tateyama 2**	**1.98**	**229**	A	A	11 20 28.6	
	comp=N,386nm,3.2s,comp=E,303nm,4.1s						
JIKH	**Ishinomakikobu**	**1.98**	**354**	A	A	11 20 28.4	
	comp=N,41nm,6.7s,comp=E,79nm,5.7s						
JYO	**Yokosk**	**2.00**	**237**	A	A	11 20 29.0	
	comp=N,230nm,2.4s,comp=E,294nm,8.5s						
JYAR	**Yonezawaarcadi**	**2.01**	**322**	A	A	11 20 28.9	
	comp=N,258nm,0.7s,comp=E,233nm,1.3s						
JKT	**Katashina**	**2.03**	**283**	*e*P	**Pn**	**11 20 30.1**	**-0.6**
JKT				A	A	11 20 30.1	
	comp=N,70nm,4.6s,comp=E,85nm,3.9s						
JIO	**Ouri**	**2.13**	**352**	A	A	11 20 30.6	
	comp=N,41nm,4.7s,comp=E,63nm,5.4s						
JOU	**Okura**	**2.19**	**338**	A	A	11 20 31.5	
	comp=N,213nm,2.3s,comp=E,182nm,2.8s						
JYS	**Shirataka**	**2.29**	**326**	A	A	11 20 33.0	
	comp=N,153nm,4.0s,comp=E,156nm,2.4s						
JRY	**Ryogami san**	**2.30**	**263**	P	**Pn**	**11 20 33.0**	**-1.4**
JRY				A	A	11 20 33.0	
	comp=N,57nm,2.0s,comp=E,77nm,7.5s						
JUON	**Uonuma**	**2.30**	**293**	A	A	11 20 33.2	
	comp=N,46nm,4.4s,comp=E,49nm,8.2s						
JOFO	**Osakifurukawao**	**2.35**	**344**	A	A	11 20 33.7	
	comp=N,448nm,4.0s,comp=E,567nm,3.3s						
JOD2	**Odawara 2**	**2.39**	**244**	A	A	11 20 34.4	
	comp=N,105nm,4.7s,comp=E,110nm,2.7s						
JNS	**Sasagawa**	**2.42**	**308**	A	A	11 20 34.8	
	comp=N,52nm,6.6s,comp=E,42nm,9.1s						
JIM2	**Oshima 3**	**2.47**	**230**	A	A	11 20 35.5	
	comp=N,110nm,7.4s,comp=E,122nm,6.1s						
JKMT	**Kesennumamotoy**	**2.47**	**356**	A	A	11 20 35.4	
	comp=N,26nm,3.2s,comp=E,63nm,3.7s						
JGK	**Kuni**	**2.49**	**276**	A	A	11 20 35.9	
	comp=N,158nm,4.1s,comp=E,102nm,3.6s						
JHTM	**Izuhatsuma**	**2.60**	**239**	A	A	11 20 37.4	
	comp=N,156nm,1.4s,comp=E,123nm,2.3s						
JMK	**Ichinoseki**	**2.64**	**352**	A	A	11 20 37.8	
	comp=N,36nm,6.5s,comp=E,74nm,3.3s						
JIZZ	**Izumozaki**	**2.68**	**297**	A	A	11 20 38.6	
	comp=N,191nm,3.2s,comp=E,199nm,6.8s						
JTHY	**Toshimahigashi**	**2.68**	**228**	A	A	11 20 38.6	
	comp=N,110nm,5.3s,comp=E,114nm,6.7s						
JYN	**Shimob**	**2.71**	**253**	A	A	11 20 38.9	
	comp=N,71nm,8.8s,comp=E,86nm,10.5s						
JFNN	**Fujinakano**	**2.71**	**246**	A	A	11 20 39.0	
	comp=N,174nm,4.2s,comp=E,150nm,4.3s						
OFUJ	**Ofunato**	**2.74**	**359**	A	A	11 20 39.2	
	comp=N,30nm,2.5s,comp=E,39nm,3.8s						
JYA	**Atsumi**	**2.75**	**325**	A	A	11 20 39.5	
	comp=N,97nm,1.6s,comp=E,83nm,1.0s						
JYK	**Kaneyama**	**2.79**	**338**	A	A	11 20 40.0	
	comp=N,48nm,7.2s,comp=E,56nm,3.9s						
JIZS	**Izushimoda**	**2.82**	**236**	A	A	11 20 40.6	
	comp=N,46nm,2.5s,comp=E,47nm,7.2s						
MJAR	**Matsushiro Arr**	**2.83**	**275**	Pn	**Pn**	**11 20 41.3**	**-0.4**
	comp=E,25nm,0.3s,baz=54,slow=14,SNR=203						
MJAR				Sn	**Sn**	**11 21 15.1**	**-0.4**
	comp=E,34nm,0.3s,baz=86,slow=20,SNR=5.5						
MJAR				LR	LR	11 22 08.2	
	comp=E,49µm,18.6s,baz=138,slow=47						
	comp=E,920nm,0.6s						
MJAR	**Matsushiro Arr**	**2.83**	**275**		**Pn**	**11 20 41.7**	**0.0**
MAJO	**Matsushiro**	**2.83**	**275**		**Pn**	**11 20 42.3**	**+0.6**
MAJO	**Matsushiro**	**2.83**	**275**	P	**Pn**	**11 20 42.3**	**+0.6**
MAJO	**Matsushiro**	**2.83**	**275**	P	**Pn**	**11 20 43.2**	**+1.4**
MAJO	**Matsushiro**	**2.83**	**275**	*c i*P	**Pn**	**11 20 42.3**	**+0.6**
MJB9	**Matsu-Tunnel**	**2.84**	**275**		**Pn**	**11 20 43.1**	**+1.3**
JSKK	**Shikinejimakit**	**2.86**	**226**	A	A	11 20 41.1	
	comp=N,64nm,5.0s,comp=E,66nm,4.5s						
JAW	**Awa shima**	**2.88**	**318**	A	A	11 20 41.4	
	comp=N,87nm,3.8s,comp=E,69nm,5.1s						
JMYK	**Miyake Tsubota**	**2.88**	**219**	A	A	11 20 41.4	
	comp=N,79nm,5.7s,comp=E,79nm,4.0s						
JNG	**Nsakai**	**2.92**	**272**	A	A	11 20 41.9	
	comp=N,61nm,3.9s,comp=E,69nm,3.5s						
JNT	**Takato**	**2.93**	**262**	A	A	11 20 42.2	
	comp=N,50nm,3.6s,comp=E,55nm,7.6s						
JJN	**Nakama**	**2.95**	**286**	A	A	11 20 42.4	
	comp=N,75nm,4.0s,comp=E,87nm,5.3s						
JMKN	**Mikurajimanish**	**3.00**	**216**	A	A	11 20 43.0	
	comp=N,49nm,6.3s,comp=E,48nm,7.4s						
JYYZ	**Yamagatayuza**	**3.02**	**333**	A	A	11 20 43.3	
	comp=N,207nm,4.1s,comp=E,232nm,4.9s						
SHZ3	**Shizuoka 3**	**3.12**	**247**	A	A	11 20 44.8	
	comp=N,68nm,4.1s,comp=E,55nm,3.6s						
JOM	**Ohasama**	**3.15**	**354**	A	A	11 20 45.0	
	comp=N,32nm,2.6s,comp=E,74nm,3.1s						
JRG	**Rokugo**	**3.17**	**345**	A	A	11 20 45.3	
	comp=N,46nm,3.6s,comp=E,100nm,7.0s						
MIYJ	**Miyakonagasawa**	**3.23**	**1**	A	A	11 20 46.1	
	comp=N,26nm,5.3s,comp=E,37nm,5.1s						
JSD	**Sado**	**3.24**	**303**	A	A	11 20 46.4	
	comp=N,28nm,2.8s,comp=E,31nm,4.6s						
JNY	**Yasuok**	**3.28**	**254**	A	A	11 20 47.0	
	comp=N,71nm,5.5s,comp=E,40nm,3.6s						
JSG	**Sagara**	**3.32**	**241**		**Pn**	**11 20 49.8**	**+1.4**
JSG	**Sagara**	**3.32**	**241**	P	**Pn**	**11 20 51.9**	**+3.5**
JSG	**Sagara**	**3.32**	**241**	P	**Pn**	**11 20 51.4**	**+3.0**
JSG	**Sagara**	**3.32**	**241**	A	A	11 20 47.6	
	comp=N,119nm,4.5s,comp=E,175nm,3.5s						
JTB	**Tobi-shima**	**3.32**	**330**	A	A	11 20 47.5	
	comp=N,132nm,3.3s,comp=E,97nm,3.2s						
JYW	**Yuwa**	**3.41**	**340**	A	A	11 20 48.7	
	comp=N,145nm,2.3s,comp=E,110nm,5.0s						
JSZI	**Iwateshizukuis**	**3.45**	**350**	A	A	11 20 49.2	
	comp=N,105nm,3.6s,comp=E,131nm,4.2s						
JTT	**Ttatey**	**3.54**	**276**	A	A	11 20 50.7	
	comp=N,49nm,2.4s,comp=E,65nm,3.0s						
JGN	**Niukaw**	**3.56**	**269**	A	A	11 20 50.9	
	comp=N,31nm,4.6s,comp=E,25nm,6.8s						
JHJ2	**Mitsune**	**3.58**	**206**		**Pn**	**11 20 51.3**	**-0.7**
JHJ2	**Mitsune**	**3.58**	**206**	P	**Pn**	**11 20 52.3**	**+0.3**
JHJ2	**Mitsune**	**3.58**	**206**	S	**Sn**	**11 21 34.5**	**+0.6**
JHJ2	**Mitsune**	**3.58**	**206**	P	**Pn**	**11 20 51.8**	**-0.2**
JHJ2	**Mitsune**	**3.58**	**206**	A	A	11 20 51.1	
	comp=N,42nm,8.0s,comp=E,50nm,4.4s						
JHJ	**Hachijo jima 2**	**3.58**	**207**	Pn	**Pn**	**11 20 51.4**	**-0.7**
	comp=E,879nm,0.3s,baz=293,slow=3.2,SNR=64						
JHJ				Sn	**Sn**	**11 21 32.0**	**-2.0**
	comp=E,1µm,0.3s,baz=67,slow=22,SNR=9.0						
	comp=E,2µm,0.3s						
JTH	**Tanohata**	**3.59**	**2**	A	A	11 20 51.3	
	comp=N,20nm,6.2s,comp=E,40nm,5.0s						
JGF	**Kuroka**	**3.61**	**259**		**Pn**	**11 20 53.7**	**+1.2**
JGF	**Kuroka**	**3.61**	**259**	P	**Pn**	**11 20 54.4**	**+2.0**
JGF	**Kuroka**	**3.61**	**259**	P	**Pn**	**11 20 54.3**	**+1.9**
JGF	**Kuroka**	**3.61**	**259**	A	A	11 20 51.7	
	comp=N,45nm,5.1s,comp=E,44nm,5.9s						
JHCJ	**Hachijojimakas**	**3.62**	**206**	A	A	11 20 51.8	
	comp=N,35nm,7.1s,comp=E,28nm,8.0s						
JKZ	**Kuzumaki**	**3.65**	**355**	A	A	11 20 52.1	
	comp=N,26nm,3.3s,comp=E,52nm,7.6s						
JSZ	**Suzu**	**3.66**	**289**	A	A	11 20 52.4	
	comp=N,35nm,2.9s,comp=E,40nm,3.0s						
JSSY	**Shinshiroyabe**	**3.71**	**249**	A	A	11 20 53.0	
	comp=N,34nm,4.1s,comp=E,25nm,4.4s						
JAO	**Obara**	**3.77**	**255**	A	A	11 20 54.0	
	comp=N,61nm,4.5s,comp=E,33nm,7.5s						
JKEN	**Kujiedanarisaw**	**3.86**	**360**	A	A	11 20 55.0	
	comp=N,34nm,1.6s,comp=E,44nm,1.7s						
TTO5	**TONANKAI O.B.S**	**3.88**	**239**	A	A	11 20 55.4	
	comp=N,170nm,3.7s,comp=E,185nm,4.6s						
JAH	**Hinai**	**3.94**	**348**	A	A	11 20 56.1	
	comp=N,36nm,6.0s,comp=E,57nm,3.3s						
INU	**Inuyama**	**3.94**	**257**		**Pn**	**11 20 58.3**	**+1.3**
INU	**Inuyama**	**3.94**	**257**	P	**Pn**	**11 20 59.0**	**+2.1**
JJH	**Hakui**	**4.01**	**280**	A	A	11 20 57.3	
	comp=N,53nm,4.7s,comp=E,35nm,3.8s						
JANG	**Nango**	**4.03**	**358**	A	A	11 20 57.4	
	comp=N,19nm,4.5s,comp=E,25nm,6.0s						
JICN	**Ichinomiyachia**	**4.09**	**257**	A	A	11 20 58.4	
	comp=N,66nm,2.0s,comp=E,41nm,2.5s						
JAA	**Atsumi**	**4.10**	**247**	A	A	11 20 58.5	
	comp=N,35nm,7.6s,comp=E,25nm,8.4s						
JYTA	**Yamagatataniai**	**4.11**	**261**	A	A	11 20 58.6	
	comp=N,29nm,5.7s,comp=E,34nm,7.4s						
JNTW	**Noshirotokiwa**	**4.11**	**343**	A	A	11 20 58.5	
	comp=N,171nm,4.1s,comp=E,256nm,4.9s						
JHG	**Hegura jima**	**4.12**	**293**	A	A	11 20 58.8	
	comp=N,27nm,3.7s,comp=E,27nm,7.6s						
JOG3	**Oga3**	**4.13**	**331**	A	A	11 20 55.3	
	comp=N,87nm,2.9s,comp=E,122nm,3.2s						
TTO4	**TONANKAI O.B.S**	**4.13**	**237**	A	A	11 20 59.0	
	comp=N,88nm,5.0s,comp=E,118nm,5.2s						
JAOM	**Aogashimamukai**	**4.19**	**203**	A	A	11 20 59.7	
	comp=N,40nm,6.9s,comp=E,43nm,3.8s						
TTO3	**TONANKAI O.B.S**	**4.32**	**236**	A	A	11 21 01.5	
	comp=N,170nm,6.6s,comp=E,140nm,8.4s						
JKG	**Kaga**	**4.35**	**271**	A	A	11 21 02.0	
	comp=N,25nm,4.4s,comp=E,26nm,4.2s						
JHHS	**Hirosakihyakuz**	**4.43**	**347**	A	A	11 21 03.1	
	comp=N,91nm,4.1s,comp=E,115nm,4.5s						
JIW	**Iwasaki**	**4.45**	**343**	A	A	11 21 03.4	
	comp=N,21nm,3.7s,comp=E,33nm,3.3s						
JTM	**Tenmabayashi**	**4.47**	**354**	A	A	11 21 03.6	
	comp=N,19nm,8.2s,comp=E,32nm,3.1s						
JEG	**Eigenji**	**4.49**	**256**	A	A	11 21 04.1	
	comp=N,27nm,5.9s,comp=E,27nm,5.9s						
JIE	**Ise**	**4.53**	**246**	A	A	11 21 04.6	
	comp=N,35nm,5.2s,comp=E,27nm,5.8s						
TSUJ	**Tsu 2**	**4.61**	**251**	A	A	11 21 05.7	
	comp=N,29nm,4.1s,comp=E,38nm,5.4s						
JARK	**Aomorirokkasho**	**4.67**	**357**	A	A	11 21 06.3	
	comp=N,26nm,4.5s,comp=E,35nm,3.7s						
JSI2	**Shiura 2**	**4.82**	**348**	A	A	11 21 08.5	
	comp=N,25nm,4.0s,comp=E,45nm,3.7s						
JAHD	**Aomorihigashid**	**4.93**	**357**	A	A	11 21 09.9	
	comp=N,37nm,1.2s,comp=E,48nm,2.5s						
JOT	**Ohata**	**5.06**	**354**	A	A	11 21 11.9	
	comp=N,18nm,3.2s,comp=E,22nm,4.7s						

JNTK Naratenkawa 5.19 248 A A 11 21 13.9
comp=N,18nm,4.8s,comp=E,14nm,10.0s
JHE Heguri 5.20 253 A A 11 21 13.9
comp=N,46nm,5.9s,comp=E,39nm,4.7s
JWT Wachi 5.24 260 A A 11 21 14.5
comp=N,26nm,3.8s,comp=E,15nm,6.5s
JMMH Miemihama 5.30 243 A A 11 21 15.3
comp=N,15nm,6.1s,comp=E,14nm,5.8s
JKY Yasaka 5.41 264 A A 11 21 16.8
comp=N,32nm,4.2s,comp=E,19nm,6.3s
JKB Kayabe 5.57 355 A A 11 21 18.9
comp=N,16nm,4.8s,comp=E,25nm,3.5s
JTNC Tanabenakahech 5.60 245 A A 11 21 19.5
comp=N,18nm,4.8s,comp=E,23nm,5.0s
JWKM Wakayamakushim 5.68 241 A A 11 21 20.6
comp=N,16nm,7.2s,comp=E,16nm,4.3s
JKSM Kasumi 5.77 265 A A 11 21 21.9
comp=N,14nm,5.8s,comp=E,16nm,7.9s
JWM Minabe 5.77 246 A A 11 21 22.0
comp=N,13nm,6.8s,comp=E,13nm,7.2s
JEM Erimo 5.78 11 P **Pn 11 21 20.2 -2.0**
JEM Erimo 5.78 11 S **Sn 11 22 27.0 -1.1**
JEM Erimo 5.78 11 P **Pn 11 21 20.7 -1.5**
JEM Erimo 5.78 11 S **Sn 11 22 28.9 +0.8**
JEM Erimo 5.78 11 A A 11 21 21.8
comp=N,18nm,4.4s,comp=E,17nm,5.6s
JAWN Awajishima-nag 5.86 254 A A 11 21 23.2
comp=N,32nm,4.3s,comp=E,25nm,8.9s
JYM2 Yakumo 2 5.86 350 A A 11 21 23.1
comp=N,17nm,6.3s,comp=E,20nm,3.1s
JNBK Urakawa-nobuka 5.99 7 A A 11 21 24.7
comp=N,35nm,4.6s,comp=E,24nm,3.1s
JSHD Hidakashinhida 6.09 5 A A 11 21 26.2
comp=N,34nm,3.8s,comp=E,38nm,2.8s
JHST Hiyamasetana 6.24 347 A A 11 21 28.3
comp=N,16nm,3.9s,comp=E,26nm,7.3s
JIAM Iburiatsuma 6.28 1 A A 11 21 28.8
comp=N,39nm,5.8s,comp=E,33nm,3.7s
JMN Monobe 6.93 250 **Pn 11 21 39.7 +1.6**
JMN Monobe 6.93 250 P **Pn 11 21 39.7 +1.6**
JMN Monobe 6.93 250 P **Pn 11 21 39.8 +1.7**
NMR Nemuro--Hokkai 7.67 22 ⇓*i*P **Pn 11 21 44.7 -3.4**
JKA Kamikawa-asahi 7.80 5 **Pn 11 21 48.7 -1.2**
JKA Kamikawa-asahi 7.80 5 **Sn 11 23 16.1 -1.7**
ASAJ Asahikawa 7.80 5 Pn **Pn 11 21 49.4 -0.5**
comp=E,13nm,0.3s,baz=220,slow=11,SNR=76
ASAJ Sn **Sn 11 23 16.1 -1.7**
comp=E,13nm,0.3s,baz=164,slow=18,SNR=4.3
ASAJ LR LR 11 25 26.3
comp=E,9μm,19.6s,baz=191,slow=42
comp=E,63nm,0.6s
GLVR Golovnino 7.95 20 *e*P **Pn 11 21 48.7 -3.2**
GLVR pmax pmax
comp=Z,536nm,0.4s
GLVR pmax pmax
comp=N,143nm,0.3s
RUSJ Misakicho 8.21 18 *e*P **Pn 11 21 53.0 -2.6**
RUSJ *e*S **Sn 11 23 22.4 -5.6**
YUK Yuzh-Kuril'sk 8.31 21 *e*P **Pn 11 21 53.7 -3.3**
YUK pmax pmax
comp=N,150nm,0.2s
YUK pmax pmax
comp=E,127nm,0.2s
YUK pmax pmax
comp=Z,435nm,0.2s
JCJ Chichijima 9.22 177 Pn Pn 11 21 53.5 -16
comp=Z,57nm,0.3s,baz=58,slow=19,SNR=19
JCJ Sn Sn 11 23 29.0 -24
comp=Z,143nm,0.3s,baz=298,slow=22,SNR=6.2
JCJ Chichijima 9.22 177 **Pn 11 22 06.5 -3.0**
JCJ Chichijima 9.22 177 P **Pn 11 22 08.3 -1.2**
JCJ Chichijima 9.22 177 P **Pn 11 22 07.3 -2.2**
JNU Nakatsue 9.48 253 Pn **Pn 11 22 14.6 +1.5**
comp=Z,4.2nm,0.3s,baz=69,slow=8.9,SNR=30
TEY Ternei 9.51 338 *e*P **Pn 11 22 16.1 +2.7**
TEY pmax pmax
comp=N,60nm,0.7s
TEY pmax pmax
comp=E,10.0nm,0.7s
TEY pmax pmax
comp=Z,50nm,0.7s
TEY MLR MLR
comp=E,100nm,15.0s
TEY MLR MLR
comp=N,400nm,12.0s
TEY MLR MLR
comp=Z,700nm,12.0s
KUR Kuril'sk 10.03 26 *e*P **Pn 11 22 16.3 -4.2**
KUR pmax pmax
comp=Z,218nm,0.5s
KUR pmax pmax
comp=E,81nm,0.6s
KUR pmax pmax
comp=N,66nm,0.4s
KUR MLR MLR
comp=Z,7μm,19.0s
VLA Vladivostok 10.15 315 *c i*P Pn 11 22 27.2 +5.1
JSU Suzuyama 10.52 246 **Pn 11 22 29.1 +1.9**
JSU Suzuyama 10.52 246 P **Pn 11 22 30.2 +2.9**
JSU Suzuyama 10.52 246 P **Pn 11 22 29.2 +1.9**
PSTR Posyet 10.52 310 *i*P **Pn 11 22 30.5 +3.3**
YSS Yuzhno-Sakhali 10.63 4 **Pn 11 22 27.6 -1.2**
YSS Yuzhno-Sakhali 10.63 4 P **Pn 11 22 29.0 +0.3**
YSS Yuzhno-Sakhali 10.63 4 P **Pn 11 22 28.3 -0.4**
YSS Yuzhno-Sakhali 10.63 4 *e*P **Pn 11 22 27.1 -1.6**
YSS *e*S **Sn 11 24 23.1 -4.3**
YSS pmax pmax
comp=Z,700nm,4.5s
YSS pmax pmax
comp=N,700nm,4.0s
YSS pmax pmax
comp=Z,140nm,0.7s
YSS pmax pmax
comp=N,100nm,0.9s
YSS pmax pmax
comp=E,50nm,0.6s
YSS MLR MLR
comp=N,11μm,15.0s
YSS MLR MLR
comp=Z,15μm,15.0s
USRK Ussuriysk Ar. 10.80 320 Pn **Pn 11 22 34.1 +3.0**
comp=Z,2.5nm,0.3s,baz=133,slow=12,SNR=29
KSRS Korea Array 11.10 280 Pn **Pn 11 22 39.1 +4.0**
comp=Z,3.6nm,0.3s,baz=92,slow=14,SNR=96
KSRS LR LR 11 26 59.0
comp=Z,7μm,18.5s,baz=90,slow=38
KSRS PcP **PcP 11 28 32.8 +0.9**
comp=Z,2.4nm,0.8s,baz=52,slow=0.6,SNR=4.2
KSAR Wonju Array Be 11.13 280 **Pn 11 22 37.9 +2.3**
KSAR Wonju Array Be 11.13 280 P **Pn 11 22 37.9 +2.3**
KS19 Wonju Array Si 11.15 280 **Pn 11 22 38.2 +2.4**
TJN Taejon 11.57 274 **Pn 11 22 42.7 +1.1**
TJN Taejon 11.57 274 P **Pn 11 22 45.2 +3.6**
TJN Taejon 11.57 274 P **Pn 11 22 42.7 +1.1**
INCN Inchon 12.13 280 **Pn 11 22 51.1 +1.8**
INCN Inchon 12.13 280 P **Pn 11 22 52.9 +3.7**
INCN Inchon 12.13 280 P **Pn 11 22 51.1 +1.8**
INCN Inchon 12.13 280 P Pn 11 22 55.6 +6.3
INCN S **Sn 11 25 04.9 +0.8**
MDJ Mudanjiang 12.38 316 **Pn 11 22 55.9 +3.3**
MDJ Mudanjiang 12.38 316 P **Pn 11 22 54.8 +2.2**
MDJ Mudanjiang 12.38 316 P **Pn 11 22 56.4 +3.8**
MDJ pP P 11 22 58.7 -5.9
MDJ PP **PnPn 11 23 04.2 +3.8**
MDJ S **Sn 11 25 14.0 +3.8**
MDJ SS **SnSn 11 25 27.7 +5.5**
MDJ pmax pmax
comp=Z,87nm,1.6s
MDJ pmax pmax
comp=Z,1μm,3.5s
MDJ LR LR
comp=Z,10μm,13.1s
MDJ LR LR
comp=Z,15μm,13.1s
MDJ LR LR
comp=Z,19μm,16.5s
UGL Uglegorsk 12.73 1 *d*P **Pn 11 22 55.3 -2.1**
UGL pmax pmax
comp=Z,46nm,0.7s
UGL pmax pmax
comp=Z,800nm,5.3s
UGL MLR MLR
comp=Z,9μm,15.0s
UGL MLR MLR
comp=N,8μm,16.0s
UGL MLR MLR
comp=E,16μm,15.0s
JMZ Minamidaito 2 13.80 223 **Pn 11 23 13.0 +0.9**
JMZ Minamidaito 2 13.80 223 P **Pn 11 23 16.1 +4.0**
BNX BinXian 14.29 315 ⇓P **Pn 11 23 19.3 +0.6**
BNX S **Sn 11 25 57.9 +1.1**
BNX pmax pmax
comp=E,31nm,1.0s
BNX pmax pmax
comp=E,800nm,8.9s
BNX LR LR
comp=E,11μm,13.8s
BNX LR LR
comp=E,9μm,14.6s
BNX LR LR
comp=E,13μm,14.8s
CN2 Changchun 14.50 306 P **Pn 11 23 21.3 -0.3**
CN2 pP P 11 23 24.7 -3.5
CN2 sP 11 23 28.4
CN2 PP **PnPn 11 23 33.0 +3.5**
CN2 S **Sn 11 26 04.0 +2.1**
CN2 pmax pmax
comp=E,30nm,0.9s
CN2 pmax pmax
comp=E,800nm,8.0s
CN2 LR LR
comp=E,14μm,13.0s
CN2 LR LR
comp=E,11μm,13.0s
CN2 LR LR
comp=E,12μm,14.0s
TYV Tymovskoe 14.53 2 *e*P **P 11 23 29.6 +1.1**
TYV pmax pmax
comp=Z,600nm,2.5s
TYV pmax pmax
comp=Z,69nm,1.4s
TYV MLR MLR
comp=N,15μm,15.0s
TYV MLR MLR
comp=Z,15μm,15.0s
KLR Kul'dur 14.80 334 LR LR 11 29 06.3
comp=Z,2μm,18.7s,baz=151,slow=37
KLR Kul'dur 14.80 334 ⇑*i*P **Pn 11 23 25.3 -0.3**
KLR pmax pmax
comp=Z,1.0nm,0.6s
JOW Kunigami 14.85 234 LR LR 11 29 32.5
comp=Z,5μm,18.6s,baz=59,slow=39
JOW Kunigami 14.85 234 **Pn 11 23 26.4 -0.1**
GRNR Gornyy 14.92 347 ⇓*i*P **Pn 11 23 24.4 -2.9**
GRNR pmax pmax
comp=N,7.0nm,0.7s
GRNR pmax pmax
comp=Z,10.0nm,0.8s
GRNR MLR MLR
comp=E,3μm,14.0s
GRNR MLR MLR
comp=N,6μm,15.0s
GRNR MLR MLR
comp=Z,7μm,14.0s
SNY Shenyang 15.10 297 ⇑P **Pn 11 23 29.3 -0.5**
SNY S **Sn 11 26 22.3 +5.6**
SNY pmax pmax
comp=Z,36nm,1.0s
SNY pmax pmax
comp=Z,720nm,6.0s
SNY LR LR
comp=Z,15μm,13.0s
SNY LR LR
comp=Z,11μm,15.4s
SNY LR LR
comp=Z,14μm,15.6s
DL2 Dalian 16.12 285 ⇑P **Pn 11 23 43.2 +0.2**
DL2 S **Sn 11 26 36.1 -5.3**
DL2 pmax pmax
comp=Z,180nm,0.8s
DL2 pmax pmax
comp=Z,2μm,8.0s
DL2 LR LR
comp=Z,16μm,12.6s
DL2 LR LR
comp=Z,21μm,14.4s
DL2 LR LR
comp=Z,24μm,14.7s
OKH Okha 17.23 2 *c i*P Pn 11 23 49.3 -7.6
OKH pmax pmax
comp=Z,500nm,14.7s
OKH MLR MLR
comp=N,18μm,16.0s
OKH MLR MLR
comp=E,16μm,17.0s
OKH MLR MLR
comp=Z,10μm,16.0s
HEH HeiHe 17.33 328 *e*P **Pn 11 23 55.0 -3.2**
HEH sP **pP 11 24 01.9 -1.6**
HEH S **Sn 11 27 10.0 -0.5**
HEH LR LR
comp=Z,7μm,16.5s
HEH LR LR
comp=Z,8μm,16.7s
HEH LR LR
comp=Z,10μm,15.8s
SKR Severo-Kuril's 17.69 31 *e*P **Pn 11 24 02.0 -0.7**
SKR pmax pmax
comp=Z,300nm,3.4s
SKR pmax pmax
comp=Z,188nm,1.1s
SKR MLR MLR
comp=Z,6μm,15.0s
SSE Sheshan 17.85 259 P **Pn 11 23 59.0 -5.8**
SSE S **Sn 11 27 16.1 -7.3**
SSE pmax pmax
comp=Z,40nm,0.8s
SSE pmax pmax
comp=Z,610nm,4.8s
SSE LR LR
comp=Z,5μm,13.1s
SSE LR LR
comp=Z,6μm,12.4s
JMJ Miyako jima 2 18.19 235 P **Pn 11 24 08.8 -0.2**
NJ2 Nanjing 19.38 264 *e*P **P 11 24 20.5 -1.7**
NJ2 pP **Pn 11 24 24.6 +1.3**
NJ2 sP **sP 11 24 27.6 -0.5**
NJ2 S **S 11 28 01.2 +0.4**
NJ2 SS Sn 11 28 22.1 +22
NJ2 pmax pmax
comp=Z,42nm,0.8s
NJ2 LR LR
comp=Z,8μm,15.5s
NJ2 LR LR
comp=Z,8μm,12.6s
NJ2 LR LR
comp=Z,7μm,11.9s
TIA Tai'an 19.82 277 P **P 11 24 25.4 -1.6**
TIA S **S 11 28 02.9 -6.8**
TIA pmax pmax
comp=Z,80nm,1.4s
TIA pmax pmax
comp=Z,830nm,6.2s
TIA LR LR
comp=Z,12μm,13.9s
TIA LR LR
comp=Z,6μm,11.6s
TIA LR LR
comp=Z,11μm,12.3s
YOJ Yonaguni jima 19.97 239 P **Pn 11 24 32.0 +1.6**
ZEA Zeya 20.11 334 *e*P **P 11 24 29.0 -1.0**
ZEA *e* 11 24 51.7
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,40nm,0.7s
ZEA pmax pmax
comp=Z,200nm,5.9s
ZEA MLR MLR
comp=N,4μm,14.0s
ZEA MLR MLR
comp=Z,4μm,14.0s
PEA0B Petropavlovsk- 20.17 29 *d i*P **P 11 24 30.8 +0.1**
PETK Petropavlovsk- 20.17 29 P **P 11 24 30.7 0.0**
comp=Z,52nm,1.0s,baz=206,slow=8.1,SNR=42
PETK LR LR 11 32 07.6
comp=Z,2μm,20.5s,baz=210,slow=36
comp=Z,52nm,1.0s
PETK Petropavlovsk- 20.17 29 P **P 11 24 30.4 -0.3**
PETK Petropavlovsk- 20.17 29 P **P 11 24 30.4 -0.3**
BJI2 Beijing 20.39 288 P **P 11 24 31.9 -1.3**
BJI2 sP **sP 11 24 39.2 +0.1**
BJI2 S **S 11 28 13.6 -7.4**
BJI2 pmax pmax
comp=Z,35nm,0.9s
BJI2 pmax pmax
comp=Z,260nm,7.5s
BJI2 LR LR
comp=Z,2μm,13.1s
BJI2 LR LR
comp=Z,4μm,11.2s
BJI2 LR LR
comp=Z,4μm,11.4s
BJT Baijiatuau 20.39 288 P **P 11 24 31.6 -1.6**
PET Petropavlovsk 20.49 30 P **P 11 24 34.2 +0.1**
PET IAmb IAmb 11 24 36.0
comp=Z,397nm,1.3s
PET Petropavlovsk 20.49 30 P **P 11 24 33.7 -0.4**
PET Petropavlovsk 20.49 30 *e*P **P 11 24 34.7 +0.6**
PET *e*S **S 11 28 23.3 +0.6**
PET pmax pmax
comp=Z,268nm,1.3s
PET pmax pmax
comp=Z,3μm,5.9s
PET pmax pmax
comp=Z,2μm,15.8s
PET MLR MLR
comp=Z,3μm,16.0s
PET MLR MLR
comp=Z,4μm,18.0s
PET Petropavlovsk 20.49 30 P **P 11 24 33.2 -0.9**
comp=Z,5μmcomp=Z,226nm,1.4s
HIA Hailar 20.57 316 P **P 11 24 34.5 -0.6**
HILR Hailar Array B 20.71 316 P **P 11 24 33.2 -3.5**
comp=Z,23nm,0.5s,baz=119,slow=12,SNR=44
HILR LR LR 11 32 48.9
comp=Z,4μm,19.4s,baz=100,slow=37
XLT XiLinHaoTe 20.95 299 *e*P **P 11 24 36.7 -2.7**
XLT sP pP 11 24 43.9 +0.5
XLT PP **PnPn 11 24 59.5 +1.5**
XLT S **S 11 28 25.7 -6.6**
XLT sS Sn 11 28 34.0 -4.3
XLT pmax pmax
comp=Z,89nm,1.4s
XLT LR LR
comp=Z,12μm,13.4s
XLT LR LR
comp=Z,14μm,13.7s
YHNB Yeheng 20.98 242 P **P 11 24 37.2 -2.6**
YHNB IAmb IAmb 11 24 48.7
comp=Z,517nm,1.9s
NACB Ninganchiao 21.14 241 P **P 11 24 39.8 -1.6**
HNS HongShan 21.61 281 ⇑P **P 11 24 42.8 -3.6**
HNS S **S 11 28 36.8 -8.4**
HNS pmax pmax
comp=Z,58nm,0.8s
HNS LR LR
comp=Z,9μm,16.6s
HNS LR LR
comp=Z,9μm,15.1s
HNS LR LR
comp=Z,13μm,12.6s
SSLB Suanglung 21.84 241 P **P 11 24 49.8 +0.8**
YULB Yu-li 21.85 239 P **P 11 24 50.5 +1.4**
TPUB Ta-pu 22.38 240 P **P 11 24 51.4 -3.4**
TPUB IAmb IAmb 11 25 02.4
comp=Z,169nm,0.9s
TPUB Ta-pu 22.38 240 P **P 11 24 56.3 +1.6**
TWGBT Beinan 22.38 239 P **P 11 24 56.1 +1.4**
TWG Pinlang 22.38 239 P **P 11 24 50.9 -3.9**
GUMO Guam 22.83 172 P **P 11 25 00.8 +1.3**
QZH2 Quanzhou 22.84 247 P **P 11 24 56.3 -3.3**
QZH2 S **S 11 29 10.6 +2.1**
QZH2 pmax pmax
comp=Z,120nm,0.8s
QZH2 LR LR
comp=Z,3μm,17.4s
QZH2 LR LR
comp=Z,8μm,16.7s
QZH2 LR LR
comp=Z,10μm,19.1s
KNMB Chin-men Tao 23.28 246 P **P 11 25 00.4 -3.7**
TIY Taiyuan 23.38 282 *e*P **P 11 25 02.2 -2.9**
TIY S **S 11 29 17.8 +0.3**
TIY pmax pmax
comp=Z,300nm,8.3s
TIY LR LR
comp=Z,7μm,14.1s
TIY LR LR
comp=Z,12μm,14.4s
TIY LR LR
comp=Z,16μm,15.1s
WHN Wuhan 23.51 264 ⇓P **P 11 25 04.1 -2.3**
WHN sP **pwP 11 25 14.6 +1.7**
WHN PP **PnPn 11 25 33.0 -0.1**
WHN S **S 11 29 13.5 -6.1**
WHN pmax pmax
comp=Z,210nm,0.7s
WHN LR LR
comp=Z,33μm,11.8s
WHN LR LR
comp=Z,22μm,11.2s
WHN LR LR
comp=Z,32μm,11.4s
LYN LuoYang 23.86 274 ⇓P **P 11 25 06.6 -3.1**
LYN sP pP 11 25 14.8 +0.9
LYN S **S 11 29 19.8 -5.3**
LYN pmax pmax
comp=Z,130nm,0.8s
LYN pmax pmax
comp=Z,910nm,5.1s
LYN LR LR
comp=Z,9μm,14.8s
LYN LR LR
comp=Z,10μm,15.1s
LYN LR LR
comp=Z,16μm,14.8s
HHC Hu-ho-hao-te 23.93 290 ⇓*i*P **P 11 25 07.1 -3.4**
HHC pP pP 11 25 11.8 -3.0
HHC PP **PnPn 11 25 40.4 +1.6**
HHC S **S 11 29 23.0 -3.4**
HHC sS pS 11 29 31.5 +0.4
HHC pmax pmax
comp=Z,240nm,6.6s
HHC LR LR
comp=Z,3μm,11.0s
HHC LR LR
comp=Z,5μm,14.8s
HHC LR LR
comp=Z,7μm,14.4s
MA2 Magadan 23.98 11 P **P 11 25 09.8 -0.9**
MA2 Magadan 23.98 11 P **P 11 25 09.8 -0.9**
MA2 Magadan 23.98 11 *d i*P **P 11 25 10.4 -0.3**
MA2 pmax pmax
comp=Z,301nm,2.0s
MA2 Magadan 23.98 11 P **P 11 25 10.1 -0.6**
comp=Z,3μmcomp=Z,139nm,1.1s
BTO2 Baotou 25.21 290 *e*P **P 11 25 20.0 -2.2**
BTO2 sP **sP 11 25 27.8 -0.5**
BTO2 S **S 11 29 45.6 -1.4**
BTO2 pmax pmax
comp=Z,33nm,1.4s
BTO2 pmax pmax
comp=Z,990nm,5.9s
BTO2 LR LR
comp=Z,10μm,13.0s
BTO2 LR LR
comp=Z,16μm,14.1s
BTO2 LR LR
comp=Z,17μm,13.9s
CIT Chita 25.35 317 *e*P **P 11 25 22.2 -1.0**
CIT *e* 11 26 09.4
CIT *e*S **S 11 29 44.0 -4.8**
CIT *e* 11 30 47.2
CIT *e* 11 31 06.8
CIT pmax pmax
comp=Z,327nm,2.5s
CNSH ChangSha 25.59 260 P **P 11 25 25.4 -0.2**
CNSH S **S 11 29 51.8 -1.2**
CNSH LR LR
comp=Z,5μm,16.4s
CNSH LR LR
comp=Z,7μm,13.0s
CNSH LR LR
comp=Z,9μm,14.1s

YAK	Yakutsk	26.80	347	LR	LR	11 36 15.0	
	comp=Z,2µm,21.3s,baz=152,slow=36						
YAK	Yakutsk	26.80	347	P	P	11 25 35.8	-0.3
YAK	Yakutsk	26.80	347	*d i*P	P	11 25 35.4	-0.8
YAK				*e**PP	pwP	11 25 44.8	+1.9
YAK				*e*PPP	PPP	11 26 25.0	
YAK				*e*S	S	11 30 08.5	-2.9
YAK				*e*SSS	SSS	11 31 29.3	
YAK				*e*		11 36 25.3	
YAK				pmax	pmax		
	comp=Z,220nm,1.3s						
YAK				pmax	pmax		
	comp=N,110nm,1.4s						
YAK				pmax	pmax		
	comp=E,34nm,1.5s						
YAK				pmax	pmax		
	comp=Z,156nm,1.5s						
YAK				pmax	pmax		
	comp=N,128nm,1.6s						
YAK				pmax	pmax		
	comp=E,98nm,1.7s						
YAK				smax	smax		
	comp=E,1µm,5.6s						
YAK				smax	smax		
	comp=N,2µm,3.7s						
YAK				MLR	MLR		
	comp=Z,5µm,13.0s						
YAK				MLR	MLR		
	comp=N,2µm,14.0s						
YAK				MLR	MLR		
	comp=E,4µm,16.0s						
XAN	Xi'an	26.83	275	⇑P	P	11 25 35.1	-1.7
XAN				pP	pP	11 25 39.7	-1.4
XAN				S	S	11 30 10.6	-2.0
XAN				pmax	pmax		
	comp=E,130nm,0.7s						
XAN				pmax	pmax		
	comp=E,880nm,3.7s						
XAN				LR	LR		
	comp=E,7µm,15.1s						
XAN				LR	LR		
	comp=E,2µm,12.4s						
XAN				LR	LR		
	comp=E,9µm,13.7s						
GZH2	Guangzhou	27.29	250	P	P	11 25 40.7	-0.2
GZH2				S	S	11 30 19.9	+0.1
GZH2				pmax	pmax		
	comp=E,82nm,0.8s						
GZH2				LR	LR		
	comp=E,4µm,12.7s						
GZH2				LR	LR		
	comp=E,6µm,13.8s						
GZH2				LR	LR		
	comp=E,8µm,14.1s						
SEY	Seymchan	27.43	11	⇓*i*P	P	11 25 42.7	+0.9
SEY				pmax	pmax		
	comp=Z,115nm,1.0s						
ENH	Enshi	27.52	267	P	P	11 25 41.6	-1.5
H11N2	WAKE ISLAND Hy	27.59	120	T	T	11 54 29.6	
	baz=313,slow=75,SNR=250						
H11N1	WAKE ISLAND Hy	27.60	120	T	T	11 54 28.9	
	baz=313,slow=75,SNR=527						
H11N3	WAKE ISLAND Hy	27.61	120	T	T	11 54 30.9	
	baz=313,slow=75,SNR=157						
ULN	Ulaanbaatar	27.95	305	P	P	11 25 46.5	-0.3
ULN				IAmb	IAmb	11 25 56.3	
	comp=Z,113nm,0.9s						
ULN	Ulaanbaatar	27.95	305	*ce*P	P	11 25 47.3	+0.4
ULN				pmax	pmax		
	comp=Z,128nm,1.0s						
ULN	Ulaanbaatar	27.95	305	P	P	11 25 48.0	+1.2
ULN				S	S	11 30 23.0	-7.2
ULN	Ulaanbaatar	27.95	305	P	P	11 25 47.1	+0.2
SHEM	Shemya Is, Ala	27.99	44	LR	LR	11 36 37.2	
	comp=Z,2µm,18.9s,baz=245,slow=36						
BOD	Bodaibo	28.25	328	*e*P	P	11 25 49.2	0.0
BOD				pmax	pmax		
	comp=Z,86nm,1.5s						
H11S1	WAKE ISLAND Hy	28.28	122	T	T	11 55 19.6	
	baz=314,slow=76,SNR=297						
H11S3	WAKE ISLAND Hy	28.28	122	T	T	11 55 23.8	
	baz=314,slow=76,SNR=349						
H11S2	WAKE ISLAND Hy	28.30	122	T	T	11 55 27.3	
	baz=314,slow=76,SNR=328						
SONM	Songino Array	28.38	305	P	P	11 25 50.3	-0.3
	comp=Z,79nm,0.8s,baz=110,slow=9.2,SNR=86						
SONM				PcP	PcP	11 29 03.3	+0.4
	comp=Z,18nm,1.3s,baz=91,slow=2.8,SNR=2.7						
SONM				LR	LR	11 37 37.4	
	comp=Z,3µm,19.1s,baz=97,slow=37						
	comp=Z,79nm,0.8s						
SONM	Songino Array	28.38	305	P	P	11 25 50.5	-0.1
SONM				IAmb	IAmb	11 26 01.8	
	comp=Z,95nm,0.8s						
SONM	Songino Array	28.38	305	P	P	11 25 50.5	-0.1
SONM				pmax	pmax		
	comp=Z,95nm,0.8s						
GULI	GuiLin	28.97	256	P	P	11 25 56.3	+0.4
GULI				S	S	11 30 46.3	0.0
GULI				pmax	pmax		
	comp=Z,69nm,0.9s						
GULI				pmax	pmax		
	comp=Z,450nm,4.1s						
GULI				LR	LR		
	comp=Z,5µm,13.2s						
GULI				LR	LR		
	comp=Z,8µm,11.5s						
GULI				LR	LR		
	comp=Z,9µm,11.5s						
LZH	Lanzhou	30.43	281	*e*P	P	11 26 08.0	-1.0
LZH				sP	pwP	11 26 16.7	+0.9
LZH				S	S	11 31 03.1	-6.3
LZH				pmax	pmax		
	comp=Z,52nm,1.2s						
LZH				pmax	pmax		
	comp=Z,530nm,4.1s						
LZH				LR	LR		
	comp=Z,9µm,13.4s						
LZH				LR	LR		
	comp=Z,7µm,13.7s						
LZH				LR	LR		
	comp=Z,10µm,13.4s						
LZDM	Lanzhou Array	30.57	281	P	P	11 26 10.3	-0.1
	comp=Z,22nm,0.7s,baz=108,slow=4.8,SNR=48						
LZDM				PcP	PcP	11 29 09.4	+0.4
	comp=Z,1.8nm,0.5s,baz=66,slow=3.6,SNR=1.4						
LZDM				LR	LR	11 39 30.7	
	comp=Z,5µm,18.7s,baz=75,slow=38						
	comp=Z,22nm,0.7s						
IRK	Irkutsk	30.75	313	*e*P	P	11 26 11.6	+0.2
IRK				*e*S	S	11 31 19.3	+5.6
IRK				pmax	pmax		
	comp=Z,83nm,2.6s						
ZAK	Zakamensk	30.89	309	*e*P	P	11 26 12.7	-0.2
ZAK				pmax	pmax		
	comp=Z,62nm,1.7s						
TLY	Talaya	30.97	312	P	P	11 26 13.9	+0.4
TLY	Talaya	30.97	312	*c i*P	P	11 26 13.9	+0.4
TLY				pmax	pmax		
	comp=Z,43nm,0.8s						
TLY	Talaya	30.97	312	P	P	11 26 15.0	+1.5
TLY				S	S	11 31 09.4	-7.8
GYA	Guiyang	31.35	262	⇑P	P	11 26 15.7	-1.5
GYA				sP	pwP	11 26 24.2	+0.4
GYA				S	S	11 31 17.7	-6.2
GYA				pmax	pmax		
	comp=Z,160nm,1.0s						
GYA				LR	LR		
	comp=Z,6µm,12.2s						
GYA				LR	LR		
	comp=Z,6µm,13.5s						
GYA				LR	LR		
	comp=Z,10µm,13.5s						
CD2	Chengdu	31.92	271	P	P	11 26 20.5	-1.6
CD2				pP	pP	11 26 25.5	-0.9
CD2				sP	sP	11 26 26.7	-1.5
CD2				S	S	11 31 30.3	-2.3
CD2				sS	sS	11 31 39.2	-0.6
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
CD2				pmax	pmax		
	comp=Z,440nm,5.7s						
CD2				LR	LR		
	comp=Z,10µm,14.7s						
CD2				LR	LR		
	comp=Z,10µm,12.6s						
CD2				LR	LR		
	comp=Z,9µm,13.7s						
MOY	Mondy	32.57	311	*e*P	P	11 26 27.9	+0.3
MOY				pmax	pmax		
	comp=Z,66nm,2.3s						
DAV	Davao City (W)	32.66	211	LR	LR	11 38 30.9	
	comp=Z,2µm,20.4s,baz=58,slow=34						
QIZ	Qiongzhong	32.87	247	P	P	11 26 32.3	+1.9
QIZ	Qiongzhong	32.87	247	P	P	11 26 33.5	+3.1
QIZ				S	S	11 31 49.8	+2.4
QIZ				PcS	PcS	11 32 58.1	-2.4
QIZ				pmax	pmax		
	comp=Z,610nm,9.3s						
QIZ				LR	LR		
	comp=Z,2µm,14.1s						
QIZ				LR	LR		
	comp=Z,3µm,16.2s						
QIZ				LR	LR		
	comp=Z,4µm,13.5s						
GTA2	Gaotai	33.03	288	P	P	11 26 31.5	-0.3
GTA2				sP	pwP	11 26 40.0	+1.4
GTA2				PcP	PcP	11 29 16.5	+1.2
GTA2				S	S	11 31 49.7	-0.3
GTA2				PcS	PcS	11 33 02.6	+1.8
GTA2				SS	SnSn	11 33 48.3	+0.2
GTA2				ScS	ScS	11 36 57.5	-1.7
GTA2				pmax	pmax		
	comp=Z,52nm,0.8s						
GTA2				pmax	pmax		
	comp=Z,390nm,7.6s						
GTA2				LR	LR		
	comp=Z,3µm,16.7s						
GTA2				LR	LR		
	comp=Z,6µm,17.5s						
GTA2				LR	LR		
	comp=Z,8µm,17.5s						
KNGR	Kungurtug, Tuv	34.56	308	⇓*i*P	P	11 26 45.7	+0.8
KNGR				pmax	pmax		
	comp=Z,41nm,1.1s						
BILL	Bilibino	34.62	16	P	P	11 26 44.3	-0.9
BILL	Bilibino	34.62	16	*d i*P	P	11 26 44.6	-0.6
BILL				pmax	pmax		
	comp=Z,137nm,2.5s						
KMI2	Kunming	35.08	263	⇑P	P	11 26 48.7	-1.2
KMI2				sP	pwP	11 26 57.1	+0.6
KMI2				S	S	11 32 17.2	-4.9
KMI2				pmax	pmax		
	comp=Z,82nm,1.6s						
KMI2				LR	LR		
	comp=Z,5µm,15.9s						
KMI2				LR	LR		
	comp=Z,3µm,15.0s						
KMI2				LR	LR		
	comp=Z,7µm,13.9s						
PZH	PanZhiHua	35.28	265	P	P	11 26 50.2	-1.2
PZH				PP	PP	11 28 13.1	+1.6
PZH				S	S	11 32 20.0	-4.8
PZH				PcS	PcS	11 33 07.8	-1.4
PZH				pmax	pmax		
	comp=Z,80nm,1.1s						
PZH				pmax	pmax		
	comp=Z,480nm,4.2s						
PZH				LR	LR		
	comp=Z,2µm,13.7s						
PZH				LR	LR		
	comp=Z,2µm,14.2s						
PZH				LR	LR		
	comp=Z,4µm,12.7s						
SGSI	Sangihe	35.76	208	P	P	11 26 56.7	+1.3
TIXI	Tiksi	36.01	353	P	P	11 26 56.7	-0.3
TIXI	Tiksi	36.01	353	⇓*i*P	P	11 26 56.6	-0.3
TIXI				pmax	pmax		
	comp=Z,65nm,2.0s						
GOMU	GeErMu	37.52	284	P	P	11 27 10.6	-0.2
GOMU				S	S	11 32 59.6	+0.2
GOMU				LR	LR		
	comp=Z,3µm,15.5s						
GOMU				LR	LR		
	comp=Z,3µm,15.1s						
GOMU				LR	LR		
	comp=Z,5µm,14.7s						
MYLDM	Lahad Datu	37.63	220	P	P	11 27 12.2	+0.9
MYLDM				IAmb	IAmb	11 27 24.3	
	comp=Z,167nm,1.1s						
MYLDM	Lahad Datu	37.63	220	P	P	11 27 11.8	+0.4
MYLDM	Lahad Datu	37.63	220	P	P	11 27 13.1	+1.7
	comp=Z,2µmcomp=Z,145nm,1.1s						
MWPI	Manokwari, Pap	37.76	193	P	P	11 27 11.5	-1.0
	comp=Z,156nm,0.9s						
TNTI	Ternate	37.81	204	P	P	11 27 13.3	+0.4
TNTI				IAmb	IAmb	11 27 27.8	
	comp=Z,209nm,1.1s						
TNTI	Ternate	37.81	204	P	P	11 27 13.4	+0.5
TNTI	Ternate	37.81	204	P	P	11 27 14.6	+1.7
	comp=Z,3µmcomp=Z,199nm,1.1s						
SPIA	Saint Paul Isl	37.92	41	P	P	11 27 12.5	-0.9
	baz=258						
NIKH	Nikolski High	38.05	48	P	P	11 27 13.2	-1.4
	baz=264						
MNI	Manado	38.08	208	P	P	11 27 16.5	+1.3
	comp=Z,5µmcomp=Z,369nm,1.0s						
KKM	Kota Kinabalu	38.14	224	P	P	11 27 17.8	+2.0
KKM	Kota Kinabalu	38.14	224	P	P	11 27 18.9	+3.1
P08K	Saint George I	38.18	42	P	P	11 27 15.7	+0.1
	baz=259						
SWI	Sorong	38.27	197	P	P	11 27 17.1	+0.3
	comp=Z,2µmcomp=Z,159nm,0.8s						
SIJI	Sorong	38.27	197	LR	LR	11 41 18.7	
	comp=Z,2µm,18.2s,baz=356,slow=34						
SIJI	Sorong	38.27	197	P	P	11 27 17.1	+0.3
	comp=Z,2µmcomp=Z,125nm,0.8s						
TNCH	TengChong	38.53	265	⇑P	P	11 27 18.9	-0.3
TNCH				pP	pP	11 27 22.6	-1.0
TNCH				sP	pwP	11 27 26.1	0.0
TNCH				PP	PP	11 28 43.6	-3.8
TNCH				S	S	11 33 10.0	-4.6
TNCH				sS	sS	11 33 23.1	+1.1
TNCH				pmax	pmax		
	comp=Z,160nm,0.9s						
TNCH				LR	LR		
	comp=Z,4µm,11.0s						
TNCH				LR	LR		
	comp=Z,4µm,13.2s						
TNCH				LR	LR		
	comp=Z,6µm,12.9s						
JAY	Jayapura	38.66	182	P	P	11 27 19.5	-0.6
GENI	Genyem	38.76	182	P	P	11 27 22.2	+1.3
GENI	Genyem	38.76	182	P	P	11 27 20.4	-0.5
	comp=Z,153nm,0.9s						
GAMB	Gambell	39.19	31	P	P	11 27 24.5	+0.5
	baz=248						
UNV	Unalaska Valle	39.53	47	P	P	11 27 27.7	+0.7
	baz=265						
FAKI	Fak Fak	40.04	195	P	P	11 27 33.2	+1.6
FAKI	Fak Fak	40.04	195	P	P	11 27 31.8	+0.2
	comp=Z,2µmcomp=Z,98nm,0.9s						
TOLI2	Tolitoli	40.06	214	P	P	11 27 30.7	-1.1
MRSI	Marisa	40.12	212	P	P	11 27 32.5	+0.2
	comp=Z,5µmcomp=Z,344nm,0.9s						
M11K	Mekoryuk	40.67	37	P	P	11 27 37.0	+0.7
	baz=258,SNR=8.7						
SANI	Sanana	40.91	204	P	P	11 27 37.9	-0.9
SANI	Sanana	40.91	204	P	P	11 27 37.5	-1.3
DGZ	Jazzator, Alta	40.99	307	*c i*P	P	11 27 40.4	+1.0
DGZ				pmax	pmax		
	comp=Z,148nm,0.9s						
MPSI	Mapaga	41.15	214	P	P	11 27 41.0	+0.3
	comp=Z,1µmcomp=Z,78nm,0.8s						
LUWI	Luwuk	41.16	210	P	P	11 27 38.8	-2.0
LUWI	Luwuk	41.16	210	P	P	11 27 40.0	-0.8
LUWI	Luwuk	41.16	210	P	P	11 27 40.3	-0.5
	comp=Z,3µmcomp=Z,257nm,0.7s						
MOKO	MOKOCHONG	41.19	270	*e*P	P	11 27 43.9	+2.7
MOKO				IAmb	IAmb	11 27 51.7	
	comp=Z,126nm,0.8s						
MOKO				*e*S	S	11 33 58.9	+4.7
ZIRO	ZIRO	41.21	272	*e*S	S	11 33 59.0	+4.3
MSAI	Masohi	41.25	200	P	P	11 27 42.2	+0.7
	comp=Z,5µmcomp=Z,281nm,0.9s						
TNA	Tin City	41.34	29	P	P	11 27 42.5	+0.7
	baz=250,SNR=8.0						
CHTO	Chiang Mai	41.36	257	P	P	11 27 42.0	-0.5
CHTO	Chiang Mai	41.36	257	P	P	11 27 42.3	-0.3
	comp=Z,37nm,1.3s						
CHTO	Chiang Mai	41.36	257	P	P	11 27 42.0	-0.5
CHTO				pmax	pmax		
	comp=Z,39nm,0.9s						
CHTO	Chiang Mai	41.36	257	P	P	11 27 41.2	-1.4
CHTO				S	S	11 33 48.1	-8.5
CHTO	Chiang Mai	41.36	257	P	P	11 27 42.2	-0.3
KRAI	Karang Ratu	41.37	200	P	P	11 27 43.3	+0.8
	comp=Z,2µmcomp=Z,6µmcomp=Z,354nm,1.2s						
WMQ	Urumqi	41.37	298	⇑P	P	11 27 43.7	+1.2
WMQ				S	S	11 33 59.6	+3.1
WMQ				pmax	pmax		
	comp=Z,85nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,300nm,3.6s						
WMQ				LR	LR		
	comp=Z,6µm,16.7s						
WMQ				LR	LR		
	comp=Z,4µm,15.5s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
FALS	False Pass	41.41	46	P	P	11 27 42.8	+0.4
	baz=267						
ITAN	ITANAGAR	41.47	271	*e*P	P	11 27 45.7	+2.3
ITAN				IAmb	IAmb	11 27 55.9	
	comp=Z,243nm,1.1s						
ITAN				*e*S	S	11 34 02.3	+4.1
APSI	Ampana	41.50	211	P	P	11 27 43.2	-0.4
	comp=Z,5µmcomp=Z,624nm,1.2s						
CMAR	Chiang Mai Arr	41.56	256	P	P	11 27 43.9	-0.3
	comp=Z,23nm,0.7s,baz=48,slow=6.2,SNR=124						
CMAR				PcP	PcP	11 29 41.2	-0.2
	comp=Z,4.4nm,1.0s,baz=31,slow=2.3,SNR=1.9						
CMAR				LR	LR	11 44 57.0	
	comp=Z,1µm,20.6s,baz=55,slow=36						
	comp=Z,23nm,0.7s						
CMAR	Chiang Mai Arr	41.56	256	P	P	11 27 43.5	-0.6
NLAI	Namlea	41.67	202	P	P	11 27 47.1	+2.1
	comp=Z,4µmcomp=Z,315nm,1.0s						
K13K	Kusilvak Mount	41.73	35	P	P	11 27 45.6	+0.6
	baz=258,SNR=16						
AAI	Ambon	41.78	200	P	P	11 27 46.7	+0.8
	comp=Z,5µmcomp=Z,322nm,0.7s						
F14K	Arctic Creek	41.94	29	P	P	11 27 48.2	+1.5
	baz=252						
ANM	Nome	42.06	31	P	P	11 27 48.9	+1.2
	baz=254,SNR=33						
M13K	Dall Lake	42.06	37	IAmb	IAmb	11 27 50.8	
	comp=Z,202nm,1.5s						
M13K	Dall Lake	42.06	37	P	P	11 27 48.8	+1.1
	baz=260,SNR=9.0						
BNDI	Bandanaira	42.12	198	P	P	11 27 50.6	+1.9
BNDI	Bandanaira	42.12	198	P	P	11 27 49.3	+0.6
	comp=Z,6µmcomp=Z,398nm,0.9s						
PCI	Palu	42.27	214	P	P	11 27 51.6	+1.6
	comp=Z,4µmcomp=Z,271nm,1.1s						
IMP	Imphal	42.31	268	*e*P	P	11 27 52.9	+2.5
IMP				IAmb	IAmb	11 28 06.3	
	comp=Z,44nm,1.1s						
IMP				*e*S	S	11 34 14.5	+3.7
J14K	Nanvaranak Lak	42.41	34	P	P	11 27 51.1	+0.6
	baz=258,SNR=12						
BULU	Kimbe	42.43	167	P	P	11 27 54.1	+2.9
TEZP	TEZPUR	42.44	271	*e*P	P	11 27 52.0	+0.7
TEZP				*e*P	pP	11 27 53.0	-2.7
TEZP				IAmb	IAmb	11 28 00.9	
	comp=Z,56nm,0.6s						
TEZP				IAmb	IAmb	11 28 13.4	
	comp=E,172nm,1.5s						
TEZP				*e*S	S	11 34 17.4	+4.9
LSA	Lhasa	42.52	276	IAmb	IAmb	11 28 05.6	
	comp=Z,85nm,0.8s						
LSA	Lhasa	42.52	276	P	P	11 27 49.2	-3.3
LSA				S	S	11 34 11.3	-3.2
LSA				pmax	pmax		
	comp=Z,30nm,0.9s						
LSA				LR	LR		
	comp=Z,2µm,13.7s						
LSA				LR	LR		
	comp=Z,4µm,13.7s						
LSA				LR	LR		
	comp=Z,6µm,14.1s						
LSA	Lhasa	42.52	276	P	P	11 27 53.4	+0.9
L14K	Kuka Creek	42.54	36	P	P	11 27 52.7	+1.1
	baz=260						
ZALV	Zalesovo Beam	42.56	313	P	P	11 27 52.0	+0.1
	comp=Z,67nm,0.9s,baz=92,slow=7.0,SNR=127						
ZALV				PcP	PcP	11 29 44.8	+0.6
	comp=Z,6.8nm,0.7s,baz=102,slow=4.7,SNR=1.4						
ZALV				ScP	ScP	11 33 33.3	-0.9
	comp=Z,5.9nm,1.1s,baz=100,slow=3.2,SNR=4.1						
ZALV				LR	LR	11 46 17.6	
	comp=Z,2µm,20.5s,baz=88,slow=37						
	comp=Z,67nm,0.9s						
ZALV	Zalesovo Beam	42.56	313	P	P	11 27 52.1	+0.2
F15K	North Star Dit	42.68	29	P	P	11 27 53.8	+1.1
	baz=253,SNR=19						
G15K	Niukluk	42.73	31	P	P	11 27 54.2	+1.1
	baz=255,SNR=22						
TAWA	Tawang	42.78	273	*e*P	P	11 27 56.1	+1.6
TAWA				IAmb	IAmb	11 27 59.3	
	comp=Z,164nm,0.2s						
TAWA				*e*S	S	11 34 21.3	+3.0
M14K	Bethel	42.80	37	IAmb	IAmb	11 27 56.3	
	comp=Z,292nm,1.6s						
M14K	Bethel	42.80	37	P	P	11 27 54.9	+1.2
	baz=261,SNR=23						
N14K	Kuskokwak Cree	42.82	38	IAmb	IAmb	11 27 56.5	
	comp=Z,219nm,1.6s						
N14K	Kuskokwak Cree	42.82	38	P	P	11 27 54.8	+0.9
	baz=263,SNR=7.5						
ZSN	Zaisan	42.86	303	*e*P	P	11 27 55.7	+1.2
ZSN				*e*S	S	11 34 21.8	+3.5
ZSN	Zaisan	42.86	303	*e*P	P	11 27 55.8	+1.2
ZSN				*e*S	S	11 34 21.8	+3.5
O14K	Tigyukauivet M	42.95	39	P	P	11 27 55.5	+0.6
	baz=264						
SDPT	Sand Point	43.12	45	P	P	11 27 56.5	+0.1
	baz=269						
L15K	Ungalak Mounta	43.16	36	P	P	11 27 57.5	+0.8
	baz=261,SNR=8.1						
K15K	Wolf Creek Mou	43.24	35	P	P	11 27 58.5	+1.2
	baz=260,SNR=10						
SILR	SILCHAR	43.26	269	*e*P	P	11 27 59.9	+2.0
SILR				IAmb	IAmb	11 28 03.8	
	comp=Z,119nm,0.8s						
SILR				*e*S	S	11 34 29.4	+5.0
SBUM	Sibu	43.35	226	P	P	11 27 59.2	+0.5
SBUM	Sibu	43.35	226	P	P	11 27 59.0	+0.3
H16K	Elim	43.39	31	P	P	11 27 59.7	+1.2
	baz=257,SNR=29						
M15K	Kasigluk River	43.41	37	P	P	11 27 58.7	0.0
	baz=263						
G16K	Koyuk River	43.52	30	P	P	11 28 00.4	+0.9
	baz=256,SNR=7.5						
GUWA	GUWAHATI	43.52	271	*e*P	P	11 28 02.3	+2.2
GUWA				IAML		11 28 15.3	
	comp=Z,45nm,0.6s						
GUWA				*e*S	S	11 34 33.2	+4.8
CHNA	Chernabura Isl	43.62	46	P	P	11 27 59.6	-0.8
	baz=270						
N15K	Kwethluk River	43.64	38	P	P	11 28 01.6	+1.0
	baz=264,SNR=12						
SHL	Shillong	43.64	270	*e*P	P	11 28 02.3	+1.0
SHL				IAmb	IAmb	11 28 15.1	
	comp=Z,29nm,0.7s						
SHL				*e*S	S	11 34 32.9	+2.3
SHL	Shillong	43.64	270	P	P	11 28 02.1	+0.8
	SNR=16						
O15K	Ungalikthiuk R	43.68	39	IAmb	IAmb	11 28 03.1	
	comp=Z,94nm,1.1s						
O15K	Ungalikthiuk R	43.68	39	P	P	11 28 01.8	+0.9
	baz=265,SNR=14						
J16K	Anvik River	43.83	33	P	P	11 28 03.1	+1.0
	baz=260,SNR=10						
D17K	Noatak River	43.85	27	P	P	11 28 03.1	+1.0
	baz=253,SNR=37						
I17K	Unalakleet	43.90	33	P	P	11 28 03.8	+1.2
	baz=259,SNR=19						
BKB	Balikpapan	43.96	217	P	P	11 28 03.5	-0.1
BKB	Balikpapan	43.96	217	P	P	11 28 04.1	+0.5
BKB	Balikpapan	43.96	217	P	P	11 28 05.1	+1.5
	comp=Z,5µmcomp=Z,477nm,0.9s						
NRIK	Noril'sk	44.00	336	P	P	11 28 03.5	+0.2
	comp=Z,4.5nm,0.5s,baz=98,slow=8.1,SNR=10						
NRIK				LR	LR	11 47 14.1	
	comp=Z,3µm,18.5s,baz=102,slow=37						
	comp=Z,4.5nm,0.5s						
NRIK	Noril'sk	44.00	336	P	P	11 28 03.1	-0.2

NRIK **Noril'sk** 44.00 336 *d iP* **P** 11 28 03.4 +0.1
NRIK pmax pmax
comp=Z,45nm,1.8s
RDOG **Red Dog Mine** 44.02 26 P **P** 11 28 04.8 +1.3
baz=253,SNR=6.7
L16K **Owhat River** 44.12 36 IAmb IAmb 11 28 06.7
comp=Z,121nm,1.6s
L16K **Owhat River** 44.12 36 P **P** 11 28 05.2 +0.9
baz=263,SNR=17
E17K **Hotham Inlet** 44.15 28 P **P** 11 28 05.7 +1.1
baz=255,SNR=22
TTSI **Tana Toraja** 44.19 212 P **P** 11 28 08.1 +2.6
comp=Z,85nm,1.4s
F17K **Baldwin Pennin** 44.21 29 IAmb IAmb 11 28 07.9
comp=Z,138nm,1.7s
F17K **Baldwin Pennin** 44.21 29 P **P** 11 28 06.4 +1.3
baz=256
G17K **Kiwalik Mounta** 44.24 30 P **P** 11 28 06.4 +1.1
baz=258,SNR=40
MMSI **Mamuju** 44.27 214 P **P** 11 28 08.2 +2.0
comp=Z,2µmcomp=Z,145nm,0.9s
M16K **Timber Creek** 44.28 37 IAmb IAmb 11 28 08.1
comp=Z,150nm,1.6s
M16K **Timber Creek** 44.28 37 P **P** 11 28 06.9 +1.1
baz=264,SNR=10
N16K **Nishlik Lake** 44.32 38 P **P** 11 28 07.4 +1.3
baz=265
KKSI **Kolaka, Sulawe** 44.45 209 P **P** 11 28 11.5 +3.9
J17K **VABM Dome** 44.53 33 IAmb IAmb 11 28 10.5
comp=Z,128nm,1.4s
J17K **VABM Dome** 44.53 33 P **P** 11 28 09.2 +1.5
baz=261
O16K **Kokwok River B** 44.59 39 P **P** 11 28 09.1 +0.9
baz=266,SNR=14
P16K **Nushagak River** 44.61 40 P **P** 11 28 09.6 +1.2
baz=267,SNR=17
E18K **Tukpahlearik C** 44.69 28 P **P** 11 28 10.1 +1.2
baz=256
MK31 **Makanchi Array** 44.69 303 *i P* **P** 11 28 09.3 0.0
MKAR **Makanchi Array** 44.69 303 P **P** 11 28 09.4 +0.2
comp=Z,30nm,0.7s,baz=88,slow=9.7,SNR=159
MKAR ScP **ScP** 11 33 42.1 -1.0
comp=Z,4.8nm,1.1s,baz=64,slow=3.4,SNR=3.3
MKAR LR LR 11 47 11.4
comp=Z,3µm,20.2s,baz=92,slow=37
comp=Z,30nm,0.7s
MKAR **Makanchi Array** 44.69 303 P **P** 11 28 09.7 +0.4
MTKI **Muara Teweh, K** 44.70 220 P **P** 11 28 10.9 +1.4
L17K **Donlin** 44.72 35 P **P** 11 28 10.7 +1.5
baz=263,SNR=26
R16K **Pilot Point** 44.78 42 P **P** 11 28 10.9 +1.2
baz=269
K17K **Iditarod** 44.79 35 IAmb IAmb 11 28 12.6
comp=Z,97nm,1.1s
K17K **Iditarod** 44.79 35 P **P** 11 28 11.2 +1.4
baz=263,SNR=40
C18K **Utukok River** 44.79 26 P **P** 11 28 10.5 +0.7
baz=254
F18K **Selawik** 44.87 29 P **P** 11 28 11.3 +1.1
baz=258,SNR=29
MAKZ **Makanchi** 44.90 303 P **P** 11 28 11.4 +0.4
MAKZ **Makanchi** 44.90 303 P **P** 11 28 11.4 +0.4
MAKZ pmax pmax
comp=Z,43nm,0.9s
AGT **Agartala** 44.93 268 *eP* **P** 11 28 12.5 +1.2
AGT IAmb IAmb 11 28 14.8
comp=Z,78nm,0.3s
AGT *eS* **S** 11 34 55.5 +6.6
PMSI **Majene** 44.99 213 P **P** 11 28 12.4 +0.5
comp=Z,3µmcomp=Z,261nm,0.9s
SPSI **Sidrap Palu** 45.04 212 P **P** 11 28 13.5 +1.3
comp=Z,2µmcomp=Z,159nm,1.0s
M17K **Holitna River** 45.05 36 IAmb IAmb 11 28 14.6
comp=Z,65nm,0.9s
M17K **Holitna River** 45.05 36 P **P** 11 28 13.0 +1.1
baz=265,SNR=20
BELO **BELONIA** 45.07 268 *eP* **P** 11 28 14.2 +1.7
BELO IAmb IAmb 11 28 32.2
comp=Z,131nm,0.5s
BELO *eS* **S** 11 34 54.8 +3.8
N17K **Nushagak Hills** 45.11 38 IAmb IAmb 11 28 15.2
comp=Z,151nm,1.5s
N17K **Nushagak Hills** 45.11 38 P **P** 11 28 13.5 +1.2
baz=266,SNR=21
O17K **Koliganek Bris** 45.11 39 P **P** 11 28 13.4 +1.1
baz=267,SNR=14
H18K **Honhosa River** 45.11 31 IAmb IAmb 11 28 14.7
comp=Z,168nm,1.5s
H18K **Honhosa River** 45.11 31 P **P** 11 28 13.5 +1.2
baz=260,SNR=50
G18K **Tagagawik** 45.12 30 IAmb IAmb 11 28 14.8
comp=Z,172nm,1.6s
G18K **Tagagawik** 45.12 30 P **P** 11 28 13.1 +0.7
baz=259,SNR=64
BRDH **Bariadhala** 45.19 267 LR LR 11 48 56.9
comp=Z,2µm,18.4s,baz=86,slow=38
Q16K **King Salmon** 45.29 40 P **P** 11 28 14.9 +1.2
baz=268,SNR=12
P17K **Kvichak River** 45.42 40 IAmb IAmb 11 28 17.7
comp=Z,60nm,0.9s
P17K **Kvichak River** 45.42 40 P **P** 11 28 15.6 +0.9
baz=268,SNR=8.3
R17L **Mt. Peulik Vol** 45.43 42 P **P** 11 28 14.7 -0.3
baz=270
C19K **Lookout Ridge** 45.48 25 IAmb IAmb 11 28 18.1
comp=Z,190nm,1.5s
C19K **Lookout Ridge** 45.48 25 P **P** 11 28 16.4 +1.2
baz=255
GTK **Tadong** 45.53 274 *eP* **P** 11 28 18.2 +1.9
GTK IAmb IAmb 11 28 29.2
comp=Z,68nm,1.1s
J18K **Innoko River** 45.59 34 P **P** 11 28 16.8 +0.7
baz=264,SNR=17
F19K **Shaleruckik Mo** 45.65 29 P **P** 11 28 16.7 +0.3
baz=259
GCSA **Galena City Sc** 45.68 32 P **P** 11 28 16.9 +0.2
baz=262,SNR=15
Q17K **Contact Creek** 45.69 41 P **P** 11 28 16.5 -0.6
baz=270,SNR=10
N18K **Kilae Creek** 45.76 38 P **P** 11 28 18.8 +1.3
baz=267,SNR=18
PMG **Port Moresby** 45.79 172 LR LR 11 47 27.5
comp=Z,230nm,19.5s,baz=356,slow=36
PMG **Port Moresby** 45.79 172 P **P** 11 28 18.2 +0.2
PMG **Port Moresby** 45.79 172 P **P** 11 28 18.3 +0.2
PMG **Port Moresby** 45.79 172 *d iP* **P** 11 28 17.8 -0.3
PMG pmax pmax
comp=Z,57nm,1.0s
PMG **Port Moresby** 45.79 172 P **P** 11 28 17.8 -0.3
G19K **Purcell Mounta** 45.80 30 P **P** 11 28 18.3 +0.5
baz=261
M18K **Stony River** 45.83 36 P **P** 11 28 19.3 +1.2
baz=266,SNR=18
CHIR **Chirikof Islan** 45.87 44 P **P** 11 28 18.4 +0.1
baz=272
E19K **Redstone River** 45.97 28 P **P** 11 28 19.9 +0.8
baz=259
ACHA **Angle Creek He** 45.99 41 P **P** 11 28 19.1 -0.3
KAPI **Kappang** 45.99 211 LR LR 11 46 34.8
comp=Z,694nm,21.2s,baz=18,slow=35
KAPI **Kappang** 45.99 211 P **P** 11 28 20.4 +0.7
KAPI **Kappang** 45.99 211 P **P** 11 28 20.6 +0.8
KAPI **Kappang** 45.99 211 P **P** 11 28 20.4 +0.7
KAPI pmax pmax
comp=Z,618nm,1.3s
KAPI **Kappang** 45.99 211 P **P** 11 28 23.1 +3.4
KAPI S **S** 11 35 01.3 -2.9
KAPI **Kappang** 45.99 211 P **P** 11 28 20.7 +0.9
comp=Z,3µmcomp=Z,201nm,1.2s
P18K **Big Mountain,** 46.05 39 IAmb IAmb 11 28 22.0
comp=Z,102nm,1.1s
P18K **Big Mountain,** 46.05 39 P **P** 11 28 20.7 +0.9
baz=269,SNR=16
O18K **Koktuh Hills** 46.07 39 IAmb IAmb 11 28 22.6
comp=Z,125nm,1.4s
O18K **Koktuh Hills** 46.07 39 P **P** 11 28 20.8 +0.9
baz=268,SNR=17
J19K **Poorman** 46.13 33 IAmb IAmb 11 28 22.5
comp=Z,98nm,1.2s
J19K **Poorman** 46.13 33 P **P** 11 28 21.2 +0.8
baz=264,SNR=37
PKKI **Palangkaraya** 46.28 220 P **P** 11 28 23.2 +1.2
MKS **Makassar** 46.29 211 P **P** 11 28 24.2 +2.1
L19K **White Mountain** 46.34 35 IAmb IAmb 11 28 24.6
comp=Z,75nm,1.4s
L19K **White Mountain** 46.34 35 P **P** 11 28 23.1 +1.1
baz=267

D20K **Etivluk River** 46.44 26 IAmb IAmb 11 28 24.5
comp=Z,52nm,1.1s
D20K **Etivluk River** 46.44 26 P **P** 11 28 23.4 +0.7
baz=259
N19K **Bonanza Creek** 46.45 37 P **P** 11 28 24.1 +1.1
baz=268,SNR=8.0
F20K **Avaraart Lake** 46.48 29 P **P** 11 28 23.6 +0.6
baz=261
O19K **Port Alsworth** 46.52 38 IAmb IAmb 11 28 25.9
comp=Z,108nm,1.4s
O19K **Port Alsworth** 46.52 38 P **P** 11 28 24.1 +0.6
baz=269,SNR=16
KURK **Kurchatov** 46.55 309 P **P** 11 28 23.6 -0.2
KURK **Kurchatov** 46.55 309 *c iP* **P** 11 28 23.4 -0.4
KURK pmax pmax
comp=Z,121nm,0.8s
KURK **Kurchatov** 46.55 309 P **P** 11 28 24.2 +0.3
KURK S S 11 35 02.5 -9.2
H20K **Anotleneega Mo** 46.61 31 P **P** 11 28 25.1 +1.0
baz=263,SNR=36
KURBB **Kurchatov Arra** 46.62 309 P **P** 11 28 24.5 +0.1
comp=Z,74nm,0.8s,baz=85,slow=8.5,SNR=12
KURBB LR LR 11 46 20.2
comp=Z,1µm,21.4s,baz=91,slow=34
comp=Z,74nm,0.8s
SII **Sitkinak Islan** 46.64 43 P **P** 11 28 24.5 0.0
baz=272
I20K **Naaghedeneel** 46.70 32 IAmb IAmb 11 28 27.5
comp=Z,122nm,1.1s
I20K **Naaghedeneel** 46.70 32 P **P** 11 28 26.1 +1.3
baz=264
K20K **Telida** 46.77 34 IAmb IAmb 11 28 27.4
comp=Z,41nm,0.9s
K20K **Telida** 46.77 34 P **P** 11 28 26.7 +1.3
baz=266,SNR=37
J20K **Nowinta River** 46.79 33 IAmb IAmb 11 28 28.1
comp=Z,7nm,1.1s
J20K **Nowinta River** 46.79 33 P **P** 11 28 26.5 +0.9
baz=265,SNR=31
Q19K **Cape Douglas,** 46.86 40 IAmb IAmb 11 28 26.9
comp=Z,64nm,0.6s
Q19K **Cape Douglas,** 46.86 40 P **P** 11 28 25.9 -0.3
baz=271,SNR=5.6
BBKI **Banjar Baru** 46.88 218 P **P** 11 28 26.6 -0.2
comp=Z,6µmcomp=Z,443nm,1.1s
A21K **Barrow** 47.00 23 P **P** 11 28 28.1 +1.0
baz=256,SNR=50
P19K **Oil Pt** 47.06 39 IAmb IAmb 11 28 29.7
comp=Z,64nm,0.9s
P19K **Oil Pt** 47.06 39 P **P** 11 28 28.3 +0.5
baz=270,SNR=6.6
OHAK **Old Harbor** 47.10 42 IAmb IAmb 11 28 30.3
comp=Z,32nm,0.7s
OHAK **Old Harbor** 47.10 42 P **P** 11 28 28.0 0.0
OHAK **Old Harbor** 47.10 42 P **P** 11 28 27.9 -0.1
baz=256
M20K **Styx River** 47.13 36 P **P** 11 28 29.4 +1.1
baz=268
G21K **Allakaket** 47.28 30 IAmb IAmb 11 28 31.9
comp=Z,133nm,1.7s
G21K **Allakaket** 47.28 30 P **P** 11 28 30.2 +0.9
baz=264
PDGK **Podgornoye** 47.31 299 P **P** 11 28 30.4 +0.3
E21K **Killik River** 47.35 27 IAmb IAmb 11 28 32.0
comp=Z,43nm,0.9s
E21K **Killik River** 47.35 27 P **P** 11 28 30.1 +0.2
baz=262
F21K **Alatna River** 47.37 29 P **P** 11 28 30.4 +0.4
baz=263,SNR=9.3
SHLS **Shalkode** 47.38 298 *eP* **P** 11 28 28.9 -1.6
SHLS pmax pmax
comp=Z,26nm,0.9s
SHLS **Shalkode** 47.38 298 *eP* **P** 11 28 29.0 -1.6
comp=Z,26nm,0.9s
A22K **Sinclair Lake** 47.45 23 P **P** 11 28 31.7 +1.2
baz=258
KDAK **Kodiak Island** 47.46 42 P **P** 11 28 30.9 +0.1
comp=Z,78nm,0.7s,baz=265,slow=4.5,SNR=51
comp=Z,78nm,0.7s
KDAK **Kodiak Island** 47.46 42 P **P** 11 28 30.8 +0.1
KDAK **Kodiak Island** 47.46 42 P **P** 11 28 30.8 +0.1
KDAK pmax pmax
comp=Z,100nm,0.8s
KDAK **Kodiak Island** 47.46 42 P **P** 11 28 30.6 -0.1
baz=273
H21K **Melozitna River** 47.48 31 IAmb IAmb 11 28 33.5
comp=Z,94nm,1.4s
H21K **Melozitna River** 47.48 31 P **P** 11 28 32.2 +1.3
baz=265,SNR=32
Q20K **Shuyak Island** 47.52 40 P **P** 11 28 31.5 +0.2
baz=272,SNR=6.8
SYI **Shuyak Island** 47.52 40 P **P** 11 28 31.3 0.0
SYI IAmb IAmb 11 28 32.1
comp=Z,77nm,0.8s
SPCR **Spurr Chakacha** 47.57 37 P **P** 11 28 32.8 +1.1
baz=270,SNR=19
CHUM **Lake Minchumin** 47.58 33 P **P** 11 28 33.3 +1.6
baz=267,SNR=18
PPLA **Purkeypile** 47.60 35 P **P** 11 28 33.1 +1.0
baz=268,SNR=16
SPU **Mount Spurr** 47.64 37 IAmb IAmb 11 28 34.6
comp=Z,96nm,1.3s
UZB **Uzunbulak** 47.69 298 *eP* **P** 11 28 33.7 +0.7
UZB *eS* **S** 11 35 31.3 +2.9
UZB pmax pmax
comp=Z,27nm,0.9s
UZB **Uzunbulak** 47.69 298 *eP* **P** 11 28 33.8 +0.7
comp=Z,26nm,0.9s
UZB *eS* **S** 11 35 31.4 +2.9
TDK **Taldyqorghan** 47.69 301 *eP* **P** 11 28 33.9 +1.0
TDK pmax pmax
comp=Z,38nm,0.6s
TDK MLR MLR
comp=Z,4µm,15.0s
TDK **Taldyqorghan** 47.69 301 *eP* **P** 11 28 33.9 +1.0
comp=Z,38nm,0.6s
TDK LR LR 11 49 07.2
comp=Z,4µm,15.1s
I21K **Tanana** 47.79 31 IAmb IAmb 11 28 37.3
comp=Z,118nm,1.5s
I21K **Tanana** 47.79 31 P **P** 11 28 34.6 +1.3
baz=266,SNR=20
KPKS **Kokpek** 47.85 299 *eP* **P** 11 28 35.2 +1.0
KPKS *eS* **S** 11 35 33.7 +3.1
KPKS **Kokpek** 47.85 299 *eP* **P** 11 28 35.3 +1.0
KPKS *eS* **S** 11 35 33.8 +3.1
HOM **Homer** 47.87 39 P **P** 11 28 34.5 +0.5
baz=272
SKT **Skwentna** 47.89 36 P **P** 11 28 34.2 0.0
baz=270,SNR=11
CAPN **Captain Cook N** 48.09 37 P **P** 11 28 35.7 +0.1
baz=271
H22K **Ishtalitna Cre** 48.09 31 P **P** 11 28 36.6 +0.9
baz=266
G22K **Bettles** 48.11 29 P **P** 11 28 36.3 +0.5
baz=265
SATY **Saty** 48.15 298 *eP* **P** 11 28 37.4 +0.9
SATY *eS* **S** 11 35 37.9 +3.0
SATY **Saty** 48.15 298 *eP* **P** 11 28 37.5 +0.9
SATY *eS* **S** 11 35 37.9 +3.0
BPAW **Bear Paw Mtn.** 48.17 33 IAmb IAmb 11 28 39.0
comp=Z,120nm,1.8s
BPAW **Bear Paw Mtn.** 48.17 33 P **P** 11 28 36.8 +0.5
baz=268,SNR=10
KTH **Kantishna Hill** 48.19 34 IAmb IAmb 11 28 39.0
comp=Z,95nm,1.2s
L22K **Petersville** 48.25 35 IAmb IAmb 11 28 38.4
comp=Z,44nm,0.8s
BRLK **Bradley Lake** 48.25 39 IAmb IAmb 11 28 39.2
comp=Z,56nm,1.2s
SUA **Susitna One** 48.27 36 P **P** 11 28 36.9 -0.4
baz=271,SNR=15
ARXS **Arharly** 48.27 300 *eP* **P** 11 28 37.6 +0.1
BRSE **Bradley Lake S** 48.33 39 P **P** 11 28 38.0 +0.4
baz=272,SNR=7.6
SAVO **Savo Central** 48.35 156 P **P** 11 28 37.7 -0.4
TRF **Thorofare Moun** 48.47 34 P **P** 11 28 39.1 +0.3
baz=270,SNR=12
CUT **Chulitna** 48.48 35 IAmb IAmb 11 29 29.3
comp=Z,54nm,0.6s
CUT **Chulitna** 48.48 35 P **P** 11 28 38.5 -0.1
baz=270
SLKM **Skilak Lake** 48.55 38 IAmb IAmb 11 28 40.3
comp=Z,100nm,1.4s
M22K **Willow** 48.56 36 IAmb IAmb 11 30 05.7
comp=Z,54nm,1.0s
M22K **Willow** 48.56 36 P **P** 11 28 39.1 -0.1
baz=271
D23K **Nanushuk River** 48.60 26 P **P** 11 28 40.8 +1.2
baz=264
COLD **Coldfoot** 48.64 29 P **P** 11 28 40.6 +0.7
baz=266,SNR=17
EDFI **Ende, Flores** 48.64 207 P **P** 11 28 41.7 +1.2
comp=Z,3µmcomp=Z,154nm,1.3s
KULM **Kulim** 48.68 241 P **P** 11 28 41.4 +0.6
KULM **Kulim** 48.68 241 P **P** 11 28 42.4 +1.6
G23K **Bananza Creek** 48.68 29 IAmb IAmb 11 28 42.8
comp=Z,102nm,1.8s
G23K **Bananza Creek** 48.68 29 P **P** 11 28 41.0 +0.8
baz=267
SOEI **Soe** 48.70 203 P **P** 11 28 41.6 +0.6
SOEI **Soe** 48.70 203 P **P** 11 28 42.1 +1.1
RC01 **Rabbit Creek A** 48.77 37 IAmb IAmb 11 28 42.2
comp=Z,92nm,1.1s
RC01 **Rabbit Creek A** 48.77 37 P **P** 11 28 40.7 -0.2
baz=272,SNR=12
O22K **Cooper Landing** 48.80 38 P **P** 11 28 40.8 -0.3
baz=273,SNR=5.7
I23K **Minto, Yukon-K** 48.90 32 IAmb IAmb 11 28 44.6
comp=Z,156nm,1.6s
I23K **Minto, Yukon-K** 48.90 32 P **P** 11 28 43.2 +1.4
baz=269,SNR=29
E23K **Chandalar** 48.92 28 IAmb IAmb 11 28 44.8
comp=Z,75nm,0.9s
E23K **Chandalar** 48.92 28 P **P** 11 28 43.2 +1.1
baz=266
TARG **Taragay, Kyrgy** 48.93 297 IAmb IAmb 11 28 53.3
comp=Z,65nm,0.8s
SEW **Seward** 48.95 38 IAmb IAmb 11 28 43.5
comp=Z,152nm,1.5s
SEW **Seward** 48.95 38 P **P** 11 28 42.3 0.0
baz=273,SNR=6.3
TOLK **Toolik Lake Re** 48.98 27 P **P** 11 28 43.3 +0.8
baz=266,SNR=33
IPM **Ipoh** 48.99 239 P **P** 11 28 42.5 -0.7
IPM IAmb IAmb 11 28 51.8
comp=Z,54nm,0.9s
IPM **Ipoh** 48.99 239 P **P** 11 28 43.2 0.0
IPM **Ipoh** 48.99 239 P **P** 11 28 42.6 -0.6
NEA2 **Nenana** 49.02 32 P **P** 11 28 43.5 +0.8
baz=270,SNR=60
PMR **Palmer** 49.04 36 IAmb IAmb 11 28 44.2
comp=Z,98nm,1.3s
PMR **Palmer** 49.04 36 P **P** 11 28 43.2 +0.3
PMR **Palmer** 49.04 36 P **P** 11 28 43.0 +0.1
baz=272,SNR=18
MCK **McKinley** 49.08 33 P **P** 11 28 43.4 +0.1
baz=270,SNR=17
MDOK **Medeo** 49.08 299 *eP* **P** 11 28 44.8 +1.0
MDOK *eS* **S** 11 35 51.3 +3.2
MDOK **Medeo** 49.08 299 *eP* **P** 11 28 44.8 +1.0
MDOK *eS* **S** 11 35 51.4 +3.2
MDOK LR LR 11 50 02.1
RND **Reindeer** 49.12 34 IAmb IAmb 11 28 45.0
comp=Z,83nm,1.1s
TNSS **Tian-Shan** 49.19 299 *eP* **P** 11 28 45.5 +0.6
TNSS **Tian-Shan** 49.19 299 *eP* **P** 11 28 45.5 +0.6
TPRI **Tanjung Pinang** 49.27 233 P P 11 28 54.1 +8.8
WAT1 **Susitna Watana** 49.27 35 P **P** 11 28 44.5 -0.2
baz=272
BATI **Baumata** 49.32 204 P **P** 11 28 48.0 +2.4
E24K **Your Creek** 49.34 28 IAmb IAmb 11 28 48.2
comp=Z,56nm,1.0s
E24K **Your Creek** 49.34 28 P **P** 11 28 46.6 +1.2
baz=267
KNK **Knik Glacier** 49.37 37 P **P** 11 28 45.6 +0.1
baz=273,SNR=8.7
KUU **Kurty** 49.39 300 *eP* **P** 11 28 47.0 +1.0
KUU MLR MLR
comp=Z,2µm,14.0s
KUU **Kurty** 49.39 300 *eP* **P** 11 28 47.0 +1.0
KUU LR LR 11 50 22.2
comp=Z,2µm,13.8s
SML **Sawmill** 49.41 36 IAmb IAmb 11 28 47.6
comp=Z,50nm,0.8s
SML **Sawmill** 49.41 36 P **P** 11 28 46.1 +0.2
baz=273,SNR=14
BTDF **Bukit Timah Da** 49.42 234 P P 11 28 55.7 +9.3
H24K **Noodor Dome** 49.52 31 IAmb IAmb 11 28 49.6
comp=Z,97nm,1.3s
H24K **Noodor Dome** 49.52 31 P **P** 11 28 48.2 +1.5
baz=270,SNR=27
KDU **Kakadu** 49.53 192 P **P** 11 28 46.8 -0.4
comp=Z,69nm,1.0s
COLA **College** 49.54 32 P **P** 11 28 47.4 +0.7
COLA **College** 49.54 32 P **P** 11 28 47.7 +1.0
COLA **College** 49.54 32 P **P** 11 28 47.4 +0.7
COLA pmax pmax
comp=Z,30nm,1.1s
COLA **College** 49.54 32 P **P** 11 28 47.1 +0.4
baz=270
DRS **Darwin Rock St** 49.57 194 P **P** 11 28 48.4 +1.0
WAT6 **Susitna Watana** 49.65 35 P **P** 11 28 47.9 +0.1
baz=272,SNR=10
G24K **Hadweenzic Riv** 49.70 30 IAmb IAmb 11 28 51.2
comp=Z,183nm,1.5s
G24K **Hadweenzic Riv** 49.70 30 P **P** 11 28 49.6 +1.7
baz=269,SNR=52
M23K **Glacier View** 49.70 36 P **P** 11 28 48.0 0.0
baz=273,SNR=12
POKR **Poker Plat Res** 49.71 32 P **P** 11 28 49.3 +1.2
baz=271,SNR=31
DBNI **Kabupaten Domp** 49.74 211 P **P** 11 28 49.5 +0.7
comp=Z,1µmcomp=Z,3µmcomp=Z,156nm,1.5s
DHY **Denali Highway** 49.80 34 IAmb IAmb 11 28 50.6
comp=Z,148nm,1.9s
DHY **Denali Highway** 49.80 34 P **P** 11 28 48.9 0.0
baz=272,SNR=8.4
SCM **Sheep Creek Mo** 49.88 36 IAmb IAmb 11 28 51.5
comp=Z,103nm,1.2s
SCM **Sheep Creek Mo** 49.88 36 P **P** 11 28 50.2 +0.7
baz=274,SNR=15
ULHL **Ulahol** 49.90 298 P **P** 11 28 51.0 +0.9
SNR=13
MTN **Manton Dam** 49.93 194 P **P** 11 28 50.0 -0.2
comp=Z,88nm,1.0s
MTN **Manton Dam** 49.93 194 IAmb IAmb 11 29 01.3
comp=Z,73nm,0.9s
HDA **Harding Lake** 49.94 33 IAmb IAmb 11 28 51.0
comp=Z,57nm,1.0s
HDA **Harding Lake** 49.94 33 P **P** 11 28 49.4 -0.4
baz=272,SNR=33
IL31 49.95 32 IAmb IAmb 11 28 51.3
comp=Z,55nm,0.9s
ILAR **Eielson Array** 49.95 32 P **P** 11 28 49.6 -0.3
comp=Z,30nm,0.8s,baz=267,slow=5.9,SNR=272
ILAR LR LR 11 49 52.6
comp=Z,719nm,21.9s,baz=264,slow=36
comp=Z,30nm,0.8s
P23K **Montague Islan** 49.99 38 IAmb IAmb 11 28 51.6
comp=Z,84nm,1.0s
P23K **Montague Islan** 49.99 38 P **P** 11 28 50.8 +0.6
baz=275
COEN **Coen** 50.04 178 P **P** 11 28 51.3 +0.3
comp=Z,82nm,0.9s
COEN **Coen** 50.04 178 IAmb IAmb 11 29 03.8
comp=Z,64nm,0.9s
COEN **Coen** 50.04 178 P **P** 11 28 51.1 0.0
comp=Z,82nm,0.9s
BOOM **Boomskoye usch** 50.05 298 IAmb IAmb 11 29 23.8
comp=Z,83nm,1.2s
D25K **Kavik River** 50.17 26 P **P** 11 28 52.1 +0.6
baz=268
TKM2 **Tokmak 2** 50.17 299 P **P** 11 28 53.6 +1.4
SNR=51
TPI **Tanjungpandan** 50.21 227 P **P** 11 28 53.1 +0.7
comp=Z,3µmcomp=Z,264nm,1.0s
PLAI **Plampang** 50.25 211 P **P** 11 28 52.6 -0.2
comp=Z,157nm,0.9s
PLAI **Plampang** 50.25 211 P **P** 11 28 52.5 -0.2
comp=Z,3µmcomp=Z,220nm,1.0s
DSRI **Dabo** 50.30 232 P P 11 29 02.1 +9.0
WBSI **Waikabubak, Su** 50.33 209 P **P** 11 28 52.2 -1.1
KMMI **Kalianget** 50.41 217 P **P** 11 28 56.9 +3.0
comp=Z,4µmcomp=Z,357nm,1.1s
M24K **Tolsona, Glenn** 50.41 36 IAmb IAmb 11 28 56.0
comp=Z,189nm,1.5s
M24K **Tolsona, Glenn** 50.41 36 P **P** 11 28 54.4 +1.0
baz=274,SNR=8.8
F25K **Christian Rive** 50.41 28 IAmb IAmb 11 28 57.0
comp=Z,248nm,1.9s
F25K **Christian Rive** 50.41 28 P **P** 11 28 55.0 +1.6
baz=270
E25K **Arctic Village** 50.44 28 IAmb IAmb 11 28 56.8

comp=Z,212nm,1.8s
E25K Arctic Village 50.44 28 P P 11 28 55.3 +1.7
baz=270,SNR=42
K24K Donnelly Dome 50.48 33 IAmb IAmb 11 28 55.4
comp=Z,79nm,1.1s
K24K Donnelly Dome 50.48 33 P P 11 28 54.2 +0.3
baz=273,SNR=15
PRP Porcupine Dome 50.50 31 P P 11 28 54.5 +0.3
baz=272,SNR=19
TWSI Taliwang, Sumb 50.55 213 P P 11 28 55.3 +0.3
comp=Z,1µmcomp=Z,2µmcomp=Z,215nm,1.1s
Q23K Middleton Isla 50.58 39 P P 11 28 55.8 +1.2
baz=276
KLU Klutina 50.58 36 IAmb IAmb 11 28 56.9
comp=Z,95nm,1.2s
KLU Klutina 50.58 36 P P 11 28 55.5 +0.7
baz=275,SNR=14
J25K Salcha River, 50.61 32 P P 11 28 56.0 +1.0
baz=273,SNR=8.6
KLNI Mataram 50.62 214 P P 11 28 56.5 +1.0
PPBI Pangkal Pinang 50.64 229 P P 11 28 57.7 +2.0
PAX Paxson 50.67 34 P P 11 28 55.5 0.0
baz=274,SNR=12
NGOA Tingoa Renbel 50.68 156 P P 11 28 56.4 +0.5
BTLS Baital 50.68 302 *e*P P 11 28 52.8 -2.9
DIV Divide 50.69 37 IAmb IAmb 11 28 57.8
comp=Z,143nm,1.2s
KBK Karagaybulak 50.71 299 P P 11 28 57.1 +0.9
SNR=58
EYAK Cordova Ski Ar 50.76 37 IAmb IAmb 11 28 58.2
comp=Z,61nm,0.9s
EYAK Cordova Ski Ar 50.76 37 P P 11 28 56.7 +0.7
baz=276
KHKI Kahang-Kahang 50.79 214 P P 11 28 58.4 +1.7
BMAR Burnt Mountain 50.83 29 P P 11 28 58.0 +1.5
USP Ospenovka 50.85 300 P P 11 28 57.4 +0.4
SNR=24
HARP HAARP 50.86 35 P P 11 28 57.5 +0.7
baz=275,SNR=10
RIDG Independent Ri 50.89 33 P P 11 28 57.1 0.0
baz=274,SNR=9.3
ABJI Asem Bagus 50.93 216 P P 11 29 04.1 +6.3
F26K Sheenjek River 50.98 28 P P 11 28 59.7 +2.0
baz=272
AAK Ala-Archa 51.03 299 LR LR 11 52 02.8
comp=Z,6µm,18.1s,baz=78,slow=38
AAK Ala-Archa 51.03 299 P P 11 28 59.4 +0.8
SNR=36
AAK Ala-Archa 51.03 299 P P 11 28 58.9 +0.3
AAK Ala-Archa 51.03 299 *i* P P 11 28 58.7 +0.1
SNR=7.7
AAK Ala-Archa 51.03 299 *ce*P P 11 28 59.1 +0.5
AAK pmax pmax
comp=Z,48nm,0.9s
AAK Ala-Archa 51.03 299 P P 11 28 57.1 -1.5
AAK S S 11 36 12.8 -2.6
C27K Jago River 51.11 26 IAmb IAmb 11 29 01.7
comp=Z,236nm,1.8s
C27K Jago River 51.11 26 P P 11 28 59.9 +1.3
baz=270,SNR=38
UCH Uchtor 51.14 298 P P 11 29 01.4 +1.6
SNR=29
G26K Porcupine Rive 51.15 29 IAmb IAmb 11 29 02.3
comp=Z,144nm,1.4s
G26K Porcupine Rive 51.15 29 P P 11 29 00.6 +1.7
baz=272
RTBI Rangdo, Negare 51.18 215 P P 11 29 09.3 +10
BLJI Banyuglugur 51.19 217 P P 11 29 09.1 +9.3
N25K Chitina, Valde 51.20 36 P P 11 29 00.4 +0.9
baz=276,SNR=6.5
BVAR Borovoye Array 51.22 313 P P 11 28 59.7 +0.1
comp=Z,20nm,0.8s,baz=79,slow=8.0,SNR=47
BVAR LR LR 11 51 46.6
comp=Z,3µm,18.8s,baz=74,slow=37
comp=Z,20nm,0.8s
BORK Borovoye 51.26 313 P P 11 28 60.0 +0.1
BORK Borovoye 51.26 313 P P 11 29 00.0 +0.1
BORK pmax pmax
comp=Z,29nm,0.8s
SCRK Sand Creek 51.26 33 IAmb IAmb 11 29 01.5
comp=Z,74nm,1.0s
SCRK Sand Creek 51.26 33 P P 11 28 59.9 0.0
baz=275,SNR=49
BMRM Bremner River 51.27 37 IAmb IAmb 11 29 02.2
comp=Z,81nm,1.0s
BMRM Bremner River 51.27 37 P P 11 29 00.6 +0.7
baz=276,SNR=15
KSH2 Kashi 51.33 294 P P 11 29 02.1 +1.2
KSH2 sP pwP 11 29 09.8 +2.0
KSH2 S S 11 36 21.8 +2.3
KSH2 SS SS 11 39 52.0 -2.9
KSH2 pmax pmax
comp=Z,27nm,0.8s
KSH2 pmax pmax
comp=Z,510nm,5.6s
KSH2 LR LR
comp=Z,3µm,17.9s
KSH2 LR LR
comp=Z,4µm,18.5s
KSH2 LR LR
comp=Z,6µm,16.3s
J26L Joseph Creek 51.40 32 P P 11 29 00.4 -0.5
baz=275
MENT Mentasta 51.47 34 P P 11 29 02.4 +1.0
EKS2 Erkin-Say 51.53 299 P P 11 29 02.8 +0.5
SNR=33
JAGI Jajag, Banyuwa 51.56 216 P P 11 29 03.3 +0.8
JAGI Jajag, Banyuwa 51.56 216 P P 11 29 07.6 +5.1
GLB Gilahina Butte 51.59 36 IAmb IAmb 11 29 04.8
comp=Z,121nm,1.5s
L26K Log Cabin Wild 51.63 34 IAmb IAmb 11 29 05.2
comp=Z,73nm,1.0s
L26K Log Cabin Wild 51.63 34 P P 11 29 03.6 +1.0
baz=276,SNR=40
PSI Prapat 51.65 240 P P 11 29 02.9 -0.5
PSI Prapat 51.65 240 P P 11 29 03.2 -0.2
GMJI Gumukmas 51.72 217 P P 11 29 10.0 +6.3
VRDI Verde Repeater 51.79 36 IAmb IAmb 11 29 06.3
comp=Z,117nm,1.4s
M26K Nabesna, AK 51.86 35 IAmb IAmb 11 29 07.1
comp=Z,87nm,1.3s
M26K Nabesna, AK 51.86 35 P P 11 29 05.5 +1.2
baz=277
NGJI Ngawi 51.93 219 P P 11 29 12.2 +6.9
KCSI Kotacane, Aceh 51.95 242 P P 11 29 04.5 -1.1
MCARA McCarthy VSAT 51.98 36 IAmb IAmb 11 29 07.6
comp=Z,70nm,0.9s
MCARA McCarthy VSAT 51.98 36 P P 11 29 06.3 +1.1
baz=278,SNR=14
BKNI Bangkinang 52.00 236 P P 11 29 05.8 -0.1
BKNI Bangkinang 52.00 236 P P 11 29 07.0 +1.1
BKNI Bangkinang 52.00 236 P P 11 29 14.7 +8.8
G27K Doyon Strip 52.00 29 P P 11 29 06.9 +1.5
baz=274
CRQM Cirque 52.01 37 IAmb IAmb 11 29 08.1
comp=Z,131nm,1.0s
CRQE Cirque 52.03 37 P P 11 29 06.6 +0.9
baz=278,SNR=19
PMBI Palembang 52.08 230 P P 11 29 07.8 +1.3
SJI Sawahan 52.09 219 P P 11 29 06.7 +0.1
comp=Z,5µmcomp=Z,260nm,1.8s
D27M Malcolm River 52.09 26 P P 11 29 07.2 +1.2
baz=273
H27K Steamboat Moun 52.10 30 P P 11 29 07.5 +1.4
baz=275
I27K Kandik River 52.12 31 P P 11 29 06.9 +0.7
baz=275,SNR=16
SNJI Sawahan-Nganju 52.13 219 P P 11 29 07.9 +0.9
comp=Z,3µmcomp=Z,220nm,1.5s
TGL Tana Glacier 52.16 37 IAmb IAmb 11 29 08.9
comp=Z,86nm,1.1s
L27K Beaver Creek, 52.31 34 IAmb IAmb 11 29 10.4
comp=Z,85nm,1.2s
L27K Beaver Creek, 52.31 34 P P 11 29 08.8 +1.1
baz=277,SNR=40
BCAR Beaver Creek A 52.33 34 P P 11 29 08.6 +0.7
M27K Edge Creek, AK 52.38 35 P P 11 29 09.2 +0.8
baz=278,SNR=22
ISLE Juniper Island 52.42 37 IAmb IAmb 11 29 10.7
comp=Z,186nm,1.5s
MLSI Meulaboh, Aceh 52.42 243 P P 11 29 17.6 +8.6
F28M Old Crow 52.62 28 IAmb IAmb 11 29 13.0
comp=Z,136nm,1.3s
F28M Old Crow 52.62 28 P P 11 29 11.5 +1.6
baz=275,SNR=72
MNSI Mandailing Nat 52.64 238 P P 11 29 10.9 +0.3
E28M Babbage River 52.66 27 IAmb IAmb 11 29 13.3
comp=Z,167nm,1.6s
E28M Babbage River 52.66 27 P P 11 29 11.6 +1.5
baz=275
MESA MESA 52.67 38 P P 11 29 11.8 +1.2
baz=279
BARN Barnard Glacie 52.68 37 IAmb IAmb 11 29 12.8
comp=Z,109nm,1.4s
GRNC Granite Creek 52.68 37 IAmb IAmb 11 29 12.7
comp=Z,56nm,0.9s
PCJI Pacitan 52.78 219 P P 11 29 20.1 +8.5
CTJI Waduk Cacaban 52.83 222 P P 11 29 19.5 +7.5
I28M Miner Creek 52.83 31 IAmb IAmb 11 29 15.3
comp=Z,172nm,1.6s
I28M Miner Creek 52.83 31 P P 11 29 12.4 +0.8
baz=277
BVCY Beaver Creek 52.84 35 P P 11 29 12.7 +1.1
baz=278,SNR=26
CTG Chitna Glacier 52.84 37 P P 11 29 12.5 +0.7
baz=279,SNR=11
CTGM Chitina Glacie 52.85 37 IAmb IAmb 11 29 13.9
comp=Z,84nm,1.2s
D28M Stokes Point 52.88 26 P P 11 29 13.1 +1.5
baz=275
UGM Wanagama 52.88 220 P P 11 29 13.3 +0.9
UGM Wanagama 52.88 220 P P 11 29 15.7 +3.3
comp=Z,6µmcomp=Z,357nm,1.2s
YOGI Yogyakarta 52.91 220 P P 11 29 20.2 +7.6
PPI Padang Panjang 53.01 236 P P 11 29 21.2 +7.9
YUK3 Moose Creek 53.13 36 P P 11 29 14.7 +0.7
baz=279,SNR=18
KNRA Kununurra 53.16 196 P P 11 29 14.7 +0.3
comp=Z,157nm,0.8s
KNRA Kununurra 53.16 196 IAmb IAmb 11 29 24.1
comp=Z,104nm,0.8s
DZA Taraz 53.18 300 *e*P P 11 29 15.4 +1.0
DZA Taraz 53.18 300 *e*P P 11 29 15.4 +1.0
KPJI Karang Pucung 53.23 222 P P 11 29 15.6 +0.6
comp=Z,3µmcomp=Z,199nm,1.1s
DAWY Dawson 53.26 33 P P 11 29 15.3 +0.7
baz=278,SNR=12
E29M Blow River 53.28 27 IAmb IAmb 11 29 17.8
comp=Z,114nm,1.1s
E29M Blow River 53.28 27 P P 11 29 16.1 +1.5
baz=277,SNR=80
PDSI Padang 53.30 235 P P 11 29 23.2 +7.6
G29M Pine Creek 53.41 29 P P 11 29 17.6 +1.9
baz=278
O28M Mount Upton 53.43 37 P P 11 29 16.9 +0.6
baz=280,SNR=6.3
I29M Ogilvie Camp, 53.52 31 IAmb IAmb 11 29 19.0
comp=Z,125nm,1.1s
I29M Ogilvie Camp, 53.52 31 P P 11 29 17.6 +1.1
baz=278,SNR=70
PINM Pinnacle 53.53 38 P P 11 29 17.4 +0.6
baz=281
LEM Lembang 53.54 224 LR LR 11 52 04.1
comp=Z,864nm,20.7s,baz=25,slow=36
YUK8 Steele Glacier 53.54 36 P P 11 29 17.9 +0.8
baz=280
KLI Kotabumi 53.55 228 P P 11 29 20.3 +2.9
GSI Gunungsitoli 53.66 240 P P 11 29 18.0 -0.2
GSI Gunungsitoli 53.66 240 P P 11 29 17.8 -0.4
GSI Gunungsitoli 53.66 240 P P 11 29 18.2 0.0
MDSI Maura Dua 53.67 229 P P 11 29 17.6 -0.6
KK31 Karatay Array 53.68 301 IAmb IAmb 11 30 01.6
comp=Z,69nm,1.1s
KK31 Karatay Array 53.68 301 *i* P P 11 29 18.6 +0.5
KKAR Karatay Array 53.68 301 P P 11 29 18.4 +0.3
KKAR Karatay Array 53.68 301 P P 11 29 18.4 +0.3
J29N Klondike Camp 53.70 32 IAmb IAmb 11 29 20.5
comp=Z,154nm,1.8s
J29N Klondike Camp 53.70 32 P P 11 29 19.1 +1.2
baz=279,SNR=13
BLSI Bandar Lampung 53.72 227 P P 11 29 26.7 +8.1
SNSI Sinabang, Aceh 53.76 242 P P 11 29 20.6 +1.7
DBJI Dramaga 53.80 225 P P 11 29 27.2 +8.0
MASI Maura Aman, Be 53.83 232 P P 11 29 24.3 +4.9
comp=Z,4µmcomp=Z,344nm,1.0s
M29M Somme Creek 53.94 34 IAmb IAmb 11 29 22.7
comp=Z,49nm,0.8s
M29M Somme Creek 53.94 34 P P 11 29 21.5 +1.7
baz=280,SNR=33
L29M L29M 53.97 34 P P 11 29 21.7 +1.7
baz=280
EPYK Eagle Plains 54.01 30 P P 11 29 21.4 +1.3
baz=279
BBJI Bungbulang 54.04 223 P P 11 29 19.7 -1.3
BBJI Bungbulang 54.04 223 P P 11 29 24.8 +3.8
YUK4 Talbot Arm 54.06 36 P P 11 29 22.0 +1.2
baz=281,SNR=18
K29M Barlow Dome 54.11 33 IAmb IAmb 11 29 23.9
comp=Z,98nm,1.1s
K29M Barlow Dome 54.11 33 P P 11 29 22.2 +1.2
baz=280
LWLI Liwa 54.16 229 P P 11 29 22.7 +0.8
F30M Barrier River 54.17 28 P P 11 29 22.8 +1.6
baz=279
BRLS Borolday 54.17 301 *e*P P 11 29 23.8 +2.1
BRLS Borolday 54.17 301 *e*P P 11 29 23.8 +2.1
MTSU Mount Surprise 54.23 177 P P 11 29 22.2 0.0
comp=Z,19nm,1.0s
MTSU Mount Surprise 54.23 177 P P 11 29 22.1 -0.1
YUK6 Outpost Mounta 54.28 36 P P 11 29 23.3 +0.9
baz=282,SNR=8.9
KASI Kota Agung 54.29 228 P P 11 29 23.8 +1.0
comp=Z,111nm,0.9s
O29M Mount Kennedy 54.31 37 IAmb IAmb 11 29 25.6
comp=Z,98nm,0.9s
O29M Mount Kennedy 54.31 37 P P 11 29 24.1 +1.6
baz=282,SNR=24
IUG luzhnay 54.33 300 *e*P P 11 29 23.9 +1.0
IUG *e*S S 11 37 03.3 +3.0
IUG pmax pmax
comp=Z,36nm,1.0s
IUG luzhnay 54.33 300 *e*P P 11 29 23.9 +1.0
comp=Z,36nm,1.0s
IUG *e*S S 11 37 03.3 +3.0
I30M Mount Dempster 54.34 31 P P 11 29 23.8 +1.1
baz=280
J30M Hart River 54.48 32 P P 11 29 24.8 +1.1
baz=281,SNR=20
CHM Chimkent 54.57 300 *e*P P 11 29 25.6 +1.0
CHM MLR MLR
comp=Z,1µm,15.0s
CHM Chimkent 54.57 300 *e*P P 11 29 25.7 +1.0
CHM LR LR 11 53 32.6
comp=Z,1µm,15.1s
M30M Minto, Yukon 54.67 34 P P 11 29 26.2 +1.2
baz=282,SNR=28
HYT Haines Junctio 54.71 36 P P 11 29 27.0 +1.6
baz=282,SNR=37
MANEM Manem 54.75 294 IAmb IAmb 11 29 42.7
comp=Z,117nm,0.8s
MAYO Mayo, Yukon 54.87 33 P P 11 29 27.9 +1.6
baz=282,SNR=24
G31M Satah River 54.87 29 IAmb IAmb 11 29 27.9
comp=Z,68nm,0.8s
G31M Satah River 54.87 29 P P 11 29 27.1 +0.8
baz=281
INK Inuvik 54.89 27 LR LR 11 55 58.2
comp=Z,691nm,19.5s,baz=272,slow=39
INK Inuvik 54.89 27 IAmb IAmb 11 29 28.5
comp=Z,131nm,1.3s
INK Inuvik 54.89 27 P P 11 29 27.2 +0.8
baz=280,SNR=67
F31M Tsiigehtchic 54.98 28 P P 11 29 27.4 +0.4
baz=281,SNR=57
PPSI Pulau Pagai 54.98 234 P P 11 29 35.7 +7.9
NIL Nilore 55.06 289 P P 11 29 29.1 +0.8
NIL IAmb IAmb 11 29 38.7
comp=Z,61nm,0.8s
NIL Nilore 55.06 289 P P 11 29 29.1 +0.8
NIL pmax pmax
comp=Z,61nm,0.9s
NIL Nilore 55.06 289 P P 11 29 27.5 -0.8
H31M Peel River 55.06 30 P P 11 29 29.0 +1.2
baz=282,SNR=82
P30M Million Dollar 55.13 37 P P 11 29 29.7 +1.3
baz=283
N31M Braeburn, Yuko 55.38 35 IAmb IAmb 11 29 33.2
comp=Z,100nm,1.0s
N31M Braeburn, Yuko 55.38 35 P P 11 29 31.6 +1.5
baz=283,SNR=20
O30N Mendenhall 55.40 36 P P 11 29 31.4 +1.1
baz=284,SNR=12
SVE Sverdlovsk 55.83 319 *e*P P 11 29 34.7 +1.3
SVE pmax pmax
comp=E,28nm,0.8s
M31M Drury Creek, Y 55.85 34 IAmb IAmb 11 29 36.1
comp=Z,55nm,0.9s
M31M Drury Creek, Y 55.85 34 P P 11 29 34.8 +1.3
baz=284,SNR=29
WHY Whitehorse 56.00 36 P P 11 29 36.1 +1.4
baz=285,SNR=25
S31K Pelican 56.04 40 P P 11 29 37.0 +2.2
baz=285
SKAG Skagway 56.10 38 P P 11 29 37.9 +2.7
SKAG Skagway 56.10 38 P P 11 29 36.9 +1.7
baz=285
WB0 Warramunga Arr 56.23 188 IAmb IAmb 11 29 47.0
comp=Z,81nm,0.9s
CTA Charters Tower 56.28 175 LR LR 11 52 47.8
comp=Z,204nm,21.2s,baz=356,slow=35
CTA Charters Tower 56.28 175 P P 11 29 36.3 -0.7
CTAO Charters Tower 56.28 175 P P 11 29 36.3 -0.7
CTAO Charters Tower 56.28 175 P P 11 29 36.3 -0.7
CTAO Charters Tower 56.28 175 P P 11 29 36.3 -0.7
CTAO pmax pmax
comp=Z,22nm,1.0s
WRAB Tennant Creek 56.40 188 P P 11 29 36.5 -1.3
WRAB IAmb IAmb 11 29 55.6
comp=Z,79nm,1.1s
WRAB Tennant Creek 56.40 188 P P 11 29 36.3 -1.5
WRAB Tennant Creek 56.40 188 *d* P P 11 29 36.4 -1.3
WRAB pmax pmax
comp=Z,69nm,1.0s
WR8 Warramunga Arr 56.40 188 IAmb IAmb 11 29 57.6
comp=Z,76nm,0.9s
WRA Warramunga Arr 56.41 188 P P 11 29 36.7 -1.2
comp=Z,24nm,0.9s,baz=5.5,slow=6.7,SNR=83
comp=Z,24nm,0.9s
WRA Warramunga Arr 56.41 188 P P 11 29 35.8 -2.0
WRA Warramunga Arr 56.41 188 *i* P P 11 29 36.7 -1.2
WRA pmax pmax
comp=Z,18nm,0.8s
BESE Bessie Mountai 56.57 39 IAmb IAmb 11 29 41.5
comp=Z,127nm,1.4s
QIS Mount Isa 56.62 182 P P 11 29 38.5 -0.8
comp=Z,44nm,0.8s
QIS Mount Isa 56.62 182 P P 11 29 38.1 -1.3
N32M Quiet Lake 56.72 35 IAmb IAmb 11 29 42.1
comp=Z,60nm,0.9s
N32M Quiet Lake 56.72 35 P P 11 29 40.9 +1.1
baz=286,SNR=13
SIT Sitka 56.76 40 P P 11 29 41.5 +1.5
baz=287
A36M Sachs Harbour 56.81 22 P P 11 29 41.3 +1.2
baz=285,SNR=118
R32K Eaglecrest 56.83 39 P P 11 29 41.8 +1.4
baz=286,SNR=5.3
P32M Atlin 56.85 37 IAmb IAmb 11 29 43.5
comp=Z,82nm,1.1s
P32M Atlin 56.85 37 P P 11 29 42.2 +1.4
baz=286,SNR=14
JIS Juneau Island 56.89 39 P P 11 29 42.7 +1.8
DAH Dandelion 56.98 89 P P 11 29 41.3 -1.3
OVEH Oceanview Est 57.00 90 P P 11 29 42.2 -0.3
OVEH IAmb IAmb 11 29 44.6
comp=Z,344nm,1.4s
S32K Killisnoo 57.03 40 P P 11 29 42.4 +0.5
baz=287
P33M Teslin, Yukon 57.11 36 P P 11 29 44.1 +1.5
baz=286,SNR=41
MLH Mauna Loa 57.13 89 IAmb IAmb 11 30 09.9
comp=Z,94nm,1.0s
ARTI Arti 57.15 319 LR LR 11 56 29.5
comp=Z,2µm,19.1s,baz=73,slow=38
ARTI Arti 57.15 319 P P 11 29 42.6 -0.1
ARTI Arti 57.15 319 *ce*P P 11 29 42.4 -0.4
ARTI pmax pmax
comp=Z,68nm,0.7s
SHAA Shahritus 57.36 295 IAmb IAmb 11 29 55.8
comp=Z,235nm,0.9s
XMI Christmas Isla 57.59 223 P P 11 29 47.5 +1.1
Q32M Nakina River 57.75 38 P P 11 29 48.7 +1.5
baz=288
KBL Kabul 57.89 292 P P 11 29 48.7 0.0
KBL Kabul 57.89 292 P P 11 29 48.7 0.0
KBL pmax pmax
comp=Z,45nm,0.9s
KBL Kabul 57.89 292 P P 11 29 48.9 +0.3
SNR=29
KBL S S 11 37 39.0 -9.1
C36M Paulatuk 57.96 25 IAmb IAmb 11 29 50.1
comp=Z,86nm,0.8s
C36M Paulatuk 57.96 25 P P 11 29 48.9 +0.6
baz=288,SNR=93
T33K Petersburg 58.07 40 P P 11 29 50.5 +1.3
baz=288
U33K Whale Pass 58.21 41 P P 11 29 51.1 +0.9
baz=289
R33M Jennings River 58.25 37 IAmb IAmb 11 29 53.9
comp=Z,76nm,1.3s
R33M Jennings River 58.25 37 P P 11 29 52.4 +1.7
baz=288,SNR=16
CRAG Craig 58.42 42 P P 11 29 51.9 +0.2
baz=289
HYB Hyderabad 58.43 269 *e*P P 11 29 52.7 +0.3
HYB *e*PP PP 11 32 02.0 +0.3
HYB *e*S S 11 37 57.1 +2.1
WRAK Wrangell Islan 58.52 41 P P 11 29 53.6 +1.3
baz=289
AB31 Akbulak array 58.57 311 IAmb IAmb 11 30 02.6
comp=Z,52nm,0.8s
AB31 Akbulak array 58.57 311 *i* P P 11 29 52.5 -0.4
ABKAR Akbulak array 58.57 311 P P 11 29 52.7 -0.1
S34M Telegraph Cree 58.65 39 IAmb IAmb 11 29 56.5
comp=Z,84nm,1.3s
S34M Telegraph Cree 58.65 39 P P 11 29 55.1 +1.8
baz=289,SNR=11
DLBC Dease Lake 59.02 38 P P 11 29 57.7 +1.7
baz=290,SNR=20
WTLY Watson Lake, Y 59.05 36 IAmb IAmb 11 29 58.9
comp=Z,92nm,1.2s
WTLY Watson Lake, Y 59.05 36 P P 11 29 57.6 +1.4
baz=290,SNR=20
V35K Ketchikan 59.27 42 P P 11 29 57.5 -0.1
baz=290
AKTO Aktyubinsk 59.32 312 LR LR 11 56 35.8
comp=Z,2µm,19.8s,baz=46,slow=37
T35M Bob Quinn 59.41 39 P P 11 30 00.6 +2.0
baz=290,SNR=13
U35K Hyder 59.91 41 P P 11 30 02.9 +0.9
baz=291
AS31 Alice Springs 60.13 188 P P 11 30 03.1 -0.8
ASAR Alice Springs 60.14 188 P P 11 30 02.8 -1.1
comp=Z,12nm,1.0s,baz=6.7,slow=5.2,SNR=52
ASAR LR LR 11 55 43.3
comp=Z,556nm,19.5s,baz=0.5,slow=36
ASAR PKP2bc P'P'bc 11 59 38.4 +7.9
comp=Z,4.3nm,1.0s,baz=194,slow=2.3,SNR=13
comp=Z,12nm,1.0s
ASAR Alice Springs 60.14 188 P P 11 30 02.7 -1.2
WRGLY Wrigley 60.31 31 P P 11 30 06.2 +1.5
baz=292,SNR=69
MBWA Marble Bar 60.85 204 P P 11 30 08.5 -0.3
MBWA IAmb IAmb 11 30 15.0
comp=Z,56nm,0.8s
MBWA Marble Bar 60.85 204 P P 11 30 10.1 +1.3
MBWA Marble Bar 60.85 204 P P 11 30 12.3 +3.6
KIRV Kirov 60.95 323 LR LR 11 59 11.9
comp=Z,1µm,18.5s,baz=55,slow=39
KIRV Kirov 60.95 323 *d* P P 11 30 09.9 +0.9
PSA00 Pilbara Seismi 61.20 203 P P 11 30 10.3 -0.9
PSA00 Pilbara Seismi 61.20 203 P P 11 30 11.3 +0.2
TOAD Toad River Com 61.21 36 P P 11 30 12.0 +1.1
baz=293,SNR=26
SPITS Spitsbergen Ar 61.25 349 P P 11 30 11.3 +0.4
comp=Z,14nm,1.0s,baz=70,slow=7.2,SNR=11
SPITS LR LR 11 59 53.1
comp=Z,2µm,18.0s,baz=31,slow=39
comp=Z,14nm,1.0s
SPITS Spitsbergen Ar 61.25 349 P P 11 30 11.9 +1.0
SPITS pmax pmax
comp=Z,47nm,1.2s
KOTAN Kotaneelee Air 61.26 35 P P 11 30 12.8 +1.6
baz=293,SNR=9.6
KBS Kingsbay 61.38 350 *e*P P 11 30 12.5 +0.8
KBS Kingsbay 61.38 350 *i* P P 11 30 11.7 0.0
NOR Nord 61.76 356 *i* P P 11 30 14.0 -0.3
NOR IAmb IAmb 11 30 15.5
comp=Z,18nm,1.1s

EIDS	Eidsvold	62.01	170	P	P	11 30 16.4	-0.1
BBB	Bella Bella	62.39	44	LR	LR	11 55 44.7	
	comp=Z,449nm,19.4s,baz=298,slow=34						
PALK	Pallekele	62.46	258	LR	LR	11 58 20.5	
	comp=Z,652nm,21.9s,baz=48,slow=37						
PALK	Pallekele	62.46	258	P	P	11 30 20.3	+0.4
PALK				IAmb	IAmb	11 30 35.3	
	comp=Z,45nm,1.1s						
PALK	Pallekele	62.46	258	P	P	11 30 20.3	+0.4
PALK	Pallekele	62.46	258	P	P	11 30 20.3	+0.4
PALK				pmax	pmax		
	comp=Z,45nm,1.1s						
PALK	Pallekele	62.46	258	P	P	11 30 21.0	+1.1
PALK	Pallekele	62.46	258	P	P	11 30 29.0	+9.0
DZM	Mont Dzumac	62.62	154	IAmb	IAmb	11 30 39.7	
	comp=Z,72nm,1.2s						
DZM	Mont Dzumac	62.62	154	P	P	11 30 21.0	+0.2
QLP	Quilpie	62.63	177	P	P	11 30 19.5	-1.2
LVZ	Lovozero	62.84	336⇑	eP	P	11 30 21.6	-0.1
LVZ				pmax	pmax		
	comp=Z,159nm,2.8s						
HRA	Herat	63.02	294	IAmb	IAmb	11 30 36.7	
	comp=Z,34nm,0.8s						
RES	Resolute Bay	63.21	14	LR	LR	11 57 26.5	
	comp=Z,534nm,21.8s,baz=346,slow=36						
APA	Apatity	63.42	336⇓	eP	P	11 30 24.8	-0.7
APA				eS	S	11 38 55.3	-2.0
APA				eSS	SS	11 43 02.3	-1.0
APA				pmax	pmax		
	comp=Z,25nm,0.8s						
APA				MLR	MLR		
	comp=Z,4µm,19.8s						
ADZR	Andozero	63.49	331	eP	P	11 30 24.4	-1.6
ADZR				pmax	pmax		
	comp=Z,62nm,0.8s						
ADZR				MLR	MLR		
	comp=Z,4µm,17.0s						
MSVF	Nonsavu	63.81	141	P	P	11 30 29.2	+0.4
MSVF				IAmb	IAmb	11 30 31.0	
	comp=Z,37nm,1.0s						
MSVF	Nonsavu	63.81	141	P	P	11 30 29.2	+0.4
MSVF				pmax	pmax		
	comp=Z,37nm,1.0s						
COCO	West Island	64.17	230	P	P	11 30 31.1	0.0
TW1H	Toowoomba 1 Ha	64.27	170	P	P	11 30 31.9	+0.3
YKA	Yellowknife Ar	64.29	30	P	P	11 30 31.3	-0.1
	comp=Z,25nm,0.9s,baz=302,slow=7.3,SNR=263						
YKA				PKP2bc		11 59 27.0	
	comp=Z,0.3nm,0.8s,baz=118,slow=0.7,SNR=3.8						
YKA				LR	LR	11 59 33.7	
	comp=Z,496nm,21.8s,baz=298,slow=37						
	comp=Z,25nm,0.9s						
YKA	Yellowknife Ar	64.29	30	i P	P	11 30 31.2	-0.1
YKA				pmax	pmax		
	comp=Z,26nm,0.9s						
AUWSH	Wavell State H	64.29	169	P	P	11 30 32.0	+0.4
YKAW1	Yellowknife Wh	64.34	30	IAmb	IAmb	11 30 33.3	
	comp=Z,73nm,1.0s						
KLMR	Klimovskoe	64.47	328	eP	P	11 30 32.0	-0.5
KLMR				e		11 31 05.7	
KLMR				S	S	11 39 11.8	+1.3
KLMR				SS	SS	11 43 21.9	+2.0
KLMR				pmax	pmax		
	comp=Z,42nm,0.7s						
KLMR				MLR	MLR		
	comp=Z,2µm,17.0s						
BELG	Belogornoye	64.47	317c	i P	P	11 30 33.3	+0.7
BELG				pmax	pmax		
	comp=Z,22nm,1.1s						
ARA0	ARCESS Array S	64.73	340	eP	P	11 30 35.2	+1.1
ARCES	ARCESS Array B	64.73	340	P	P	11 30 34.9	+0.8
	comp=Z,12nm,0.8s,baz=59,slow=8.2,SNR=28						
ARCES				LR	LR	12 02 36.5	
	comp=Z,1µm,19.1s,baz=29,slow=40						
	comp=Z,12nm,0.8s						
ARCES	ARCESS Array B	64.73	340	P	P	11 30 34.9	+0.8
ARCES	ARCESS Array B	64.73	340	P	P	11 30 34.9	+0.8
ARCES				pmax	pmax		
	comp=Z,179nm,1.9s						
AULRC	Lightning Ridg	65.69	174	P	P	11 30 39.2	-1.5
KTK1	Kautokeino	65.69	340	eP	P	11 30 41.2	+0.9
TULEG	Thule	65.76	8	IAmb	IAmb	11 30 41.8	
	comp=Z,108nm,1.2s						
TULEG	Thule	65.76	8	i P	P	11 30 39.9	-0.8
TULEG				IAmb	IAmb	11 30 41.4	
	comp=Z,125nm,1.3s						
CLRS	Cowichan Lake	66.17	46	IAmb	IAmb	11 30 45.9	
	comp=Z,98nm,1.5s						
NEEM	North Greenlan	66.21	3	i P	P	11 30 43.8	-0.2
NEEM				IAmb	IAmb	11 30 45.2	
	comp=Z,56nm,1.0s						
MEEK	Meekatharra	66.32	203	P	P	11 30 46.3	+1.4
LLLB	Lillooet	66.59	44	IAmb	IAmb	11 30 48.5	
	comp=Z,70nm,1.2s						
PGC	Sidney	66.64	46	IAmb	IAmb	11 30 48.8	
	comp=Z,51nm,1.2s						
A04D	Lummi Island	67.04	46	P	P	11 30 50.8	+1.5
A04D				IAmb	IAmb	11 30 51.0	
	comp=Z,51nm,1.1s						
ARMA	Armidale	67.06	171	P	P	11 30 50.0	+0.3
ARMA				IAmb	IAmb	11 30 51.0	
	comp=Z,56nm,1.1s						
ARMA	Armidale	67.06	171	P	P	11 30 49.9	+0.3
CMSA	Cobar Meteorol	67.62	176	P	P	11 30 52.7	-0.3
AUPHS	Peel High Scho	67.64	171	P	P	11 30 53.4	+0.3
POIN	Pond Inlet	67.85	12	IAmb	IAmb	11 30 55.2	
	comp=Z,41nm,0.9s						
STKA	Stephens Creek	67.86	180	P	P	11 30 53.9	-0.6
	comp=Z,19nm,0.9s,baz=350,slow=8.0,SNR=24						
	comp=Z,19nm,0.9s						
STKA	Stephens Creek	67.86	180	P	P	11 30 54.6	+0.1
MOS	Moscow	67.95	324	eP	P	11 30 53.5	-1.4
MOS				e		11 33 23.4	
MOS				eS	S	11 39 51.6	-1.3
MOS				eSS	SS	11 44 16.4	+2.3
MOS				pmax	pmax		
	comp=Z,103nm,0.9s						
MOS				MLR	MLR		
	comp=Z,3µm,16.0s						
MOS				MLR	MLR		
	comp=E,4µm,19.0s						
FORT	Forrest	67.98	193	IAmb	IAmb	11 31 12.0	
	comp=Z,54nm,0.8s						
VRH	Novokhopyorsk	68.26	318	eP	P	11 30 56.0	-0.9
VRH				pmax	pmax		
	comp=Z,30nm,0.4s						
AUDCS	Dubbo College	68.52	174	P	P	11 30 59.6	+1.0
STEI	Steigen	68.60	341	eP	P	11 30 59.5	+0.8
KULLO	Kullorsuaq	68.64	5	i P	P	11 30 58.5	-0.4
KULLO				IAmb	IAmb	11 30 59.9	
	comp=Z,39nm,0.9s						
OBN	Obninsk	68.80	323⇑	eP	P	11 31 00.8	+0.6
OBN				e*PP	pP	11 31 04.7	-0.1
OBN				e		11 31 25.9	
OBN				e		11 33 33.7	
OBN				ePPP	PPP	11 35 12.2	
OBN				eS	S	11 40 05.7	+2.7
OBN				eSS	SS	11 44 31.9	+4.8
OBN				pmax	pmax		
	comp=Z,200nm,2.0s						
OBN				MLR	MLR		
	comp=Z,4µm,16.0s						
PUL	Pulkovo	68.91	330⇑	eP	P	11 31 00.7	-0.1
PUL				pmax	pmax		
	comp=Z,64nm,0.3s						
FAUS	Fauske	68.98	341	eP	P	11 31 02.3	+1.1
LPSR	Galich'ya Gora	68.99	320	eP	P	11 31 01.2	-0.3
LPSR				pmax	pmax		
	comp=Z,69nm,0.8s						
BBOO	Buckleboo	68.99	185	P	P	11 31 01.4	-0.2
BBOO				IAmb	IAmb	11 31 02.7	
	comp=Z,31nm,0.8s						
BBOO	Buckleboo	68.99	185	P	P	11 31 01.9	+0.3
	comp=Z,42nm,1.0s						
MAK	Makhachkala	69.08	308	eP	P	11 30 59.2	-3.0
MAK				e		11 33 35.2	
MAK				ePPP	PPP	11 35 15.6	
MAK				eS	S	11 40 04.2	-2.5
MAK				eSS	SS	11 44 30.9	-1.2
MAK				pmax	pmax		
	comp=Z,34nm,0.4s						
MAK				MLR	MLR		
	comp=Z,2µm,16.0s						
B08A	Colville Reser	69.16	45	IAmb	IAmb	11 31 04.7	
	comp=Z,95nm,1.2s						
AUJCS	Jamestown Cent	69.24	183	P	P	11 31 03.4	+0.3
	comp=Z,26nm,0.9s						
VORR	Voronezh	69.34	319	eP	P	11 31 02.9	-0.8
VORR				pmax	pmax		
	comp=Z,100nm,0.5s						
MORW	Morawa	69.40	204	P	P	11 31 02.4	-1.8
HTT	Hallett	69.46	182	P	P	11 31 04.2	-0.3
MXC	Moxie City	69.53	47	IAmb	IAmb	11 31 07.3	
	comp=Z,94nm,1.1s						
EPH	Ephrata	69.53	46	IAmb	IAmb	11 31 06.7	
	comp=Z,129nm,1.3s						
FINES	FINESS Array B	69.54	332	P	P	11 31 05.1	+0.4
	comp=Z,35nm,0.9s,baz=62,slow=8.9,SNR=36						
FINES				LR	LR	12 03 42.1	
	comp=Z,1µm,19.0s,baz=32,slow=38						
	comp=Z,35nm,0.9s						
FINES	FINESS Array B	69.54	332	P	P	11 31 04.6	-0.2
FINES	FINESS Array B	69.54	332	i P	P	11 31 05.0	+0.3
FINES				pmax	pmax		
	comp=Z,34nm,0.9s						
VSR	Storozhevoye	69.61	319	eP	P	11 31 04.8	-0.6
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
G05A	Wamic	69.62	48	IAmb	IAmb	11 31 16.5	
	comp=Z,77nm,1.0s						
VORD	Divnogorie	69.68	319	eP	P	11 31 05.2	-0.6
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
AKT	Akhty	69.69	307	eP	P	11 31 08.8	+2.6
AKT				e		11 31 31.0	
AKT				e		11 33 39.3	
AKT				pmax	pmax		
	comp=Z,254nm,2.1s						
AKT				MLR	MLR		
	comp=Z,3µm,15.0s						
KSXB	Camp Six Broad	69.78	53	IAmb	IAmb	11 31 09.4	
	comp=Z,89nm,1.3s						
L02F	Cave Junction	69.83	52	IAmb	IAmb	11 31 09.4	
	comp=Z,53nm,1.2s						
WAH2	Wahluke Slope	69.86	46	IAmb	IAmb	11 31 09.2	
	comp=Z,131nm,1.5s						
KRMB	Red Mountain	69.92	53	IAmb	IAmb	11 31 10.4	
	comp=Z,114nm,1.5s						
VAGH	Vaagaholmen	70.00	341	eP	P	11 31 08.2	+0.7
HAWA	Hanford	70.08	47	IAmb	IAmb	11 31 10.6	
	comp=Z,69nm,1.2s						
D08A	Wollman Farm,	70.08	46	IAmb	IAmb	11 31 10.2	
	comp=Z,98nm,1.2s						
MOR8	Moi Rana	70.10	340	eP	P	11 31 07.8	-0.4
F07A	Phinny Hill Vi	70.11	47	IAmb	IAmb	11 31 10.9	
	comp=Z,97nm,1.1s						
SYDH	Sydney Hard Ro	70.25	172	P	P	11 31 10.2	+0.9
E08A	Dider Farm, El	70.30	46	IAmb	IAmb	11 31 11.2	
	comp=Z,48nm,0.9s						
KHMM	Horse Mountain	70.37	53	IAmb	IAmb	11 31 13.3	
	comp=Z,129nm,1.4s						
NEW	Newport	70.46	44	P	P	11 31 11.3	+0.6
	comp=Z,34nm,1.0s,baz=303,slow=5.0,SNR=52						
	comp=Z,34nm,1.0s						
NEW	Newport	70.46	44	IAmb	IAmb	11 31 12.6	
	comp=Z,86nm,1.2s						
YBH	Yreka Blue Hor	70.58	52	LR	LR	11 59 00.5	
	comp=Z,17nm,19.6s,baz=290,slow=33						
YBH	Yreka Blue Hor	70.58	52	IAmb	IAmb	11 31 14.3	
	comp=Z,73nm,1.3s						
YPT	Yellepit	70.59	47	IAmb	IAmb	11 31 13.7	
	comp=Z,67nm,1.1s						
PINE	Pine Mountain	70.60	50	P	P	11 31 13.5	+1.7
BLDU	Ballidu	70.62	203	P	P	11 31 12.2	+0.6
M02C	Callahan	70.66	53	IAmb	IAmb	11 31 15.0	
	comp=Z,66nm,1.3s						
GOF	Gofitskoye	70.73	312c	eP	P	11 31 20.5	+8.1
KHBM	Hayfork Bally	70.81	53	IAmb	IAmb	11 31 15.7	
	comp=Z,88nm,1.4s						
JMIC	Jan Mayen	70.87	350	LR	LR	12 04 09.5	
	comp=Z,475nm,18.0s,baz=290,slow=37						
AUMAR	Marden Senior	70.92	183	P	P	11 31 12.9	-0.5
N02D	Trinity Center	70.98	53	IAmb	IAmb	11 31 16.6	
	comp=Z,57nm,1.1s						
G08A	Pilot Rock	71.00	47	IAmb	IAmb	11 31 16.4	
	comp=Z,78nm,1.5s						
AUMBR	Murray Bridge	71.14	182	P	P	11 31 14.7	0.0
VSU	Vasula	71.17	330⇑	eP	P	11 31 14.4	-0.4
VSU				pmax	pmax		
	comp=Z,70nm,0.9s						
KLBR	Kellerberrin	71.21	201	P	P	11 31 14.6	-0.6
JLN	Jalan Bani Buh	71.25	284	P	P	11 31 16.4	+0.6
	SNR=5.3						
WSAR	Wadi Sarin	71.28	285	LR	LR	12 07 12.6	
	comp=Z,5.3nm,18.1s,baz=88,slow=40						
O02D	Mt. Diablo Mer	71.35	54	IAmb	IAmb	11 31 18.9	
	comp=Z,106nm,1.4s						
WBK	Wadi Bani Khal	71.35	285	P	P	11 31 17.5	+1.0
	SNR=6.2						
SUMG	Summit	71.38	0	IAmb	IAmb	11 31 28.9	
	comp=Z,60nm,1.1s						
SUMG	Summit	71.38	0	i P	P	11 31 17.0	+0.7
SUMG				IAmb	IAmb	11 31 18.4	
	comp=Z,88nm,1.3s						
BIDO	Bidbid	71.52	286	P	P	11 31 18.9	+1.4
	SNR=16						
KBZ	Khabaz	71.54	311	P	P	11 31 18.4	+1.1
	comp=Z,18nm,0.9s,baz=149,slow=1.9,SNR=22						
KBZ				LR	LR	12 05 03.0	
	comp=Z,1µm,19.0s,baz=42,slow=38						
	comp=Z,18nm,0.9s						
KBZ	Khabaz	71.54	311d	eP	P	11 31 17.8	+0.6
KBZ				pmax	pmax		
	comp=Z,64nm,0.9s						
KIV	Kislovodsk	71.54	311	P	P	11 31 18.3	+0.9
KIV	Kislovodsk	71.54	311	⇓P	P	11 31 18.8	+1.3
KIV	Kislovodsk	71.54	311	i P	P	11 31 17.8	+0.4
	SNR=9.0						
KIV	Kislovodsk	71.54	311	P	P	11 31 18.7	+1.3
KIV	Kislovodsk	71.54	311	P	P	11 31 19.6	+2.1
KIV	Kislovodsk	71.54	311	P	P	11 31 17.5	+0.1
	comp=Z,1µmcomp=Z,97nm,1.0s						
AUDAR	Daramalan Coll	71.56	174	P	P	11 31 18.0	+0.7
AUMTS	Mt Stromlo	71.62	174	P	P	11 31 18.1	+0.5
CAN	Canberra	71.62	174	P	P	11 31 18.0	+0.4
BANOM	Banah	71.66	289	i P	P	11 31 19.3	+1.0
	SNR=13						
BANOM	Banah	71.66	289	P	P	11 31 19.6	+1.3
SHA1	Shidzhatmaz	71.68	311⇓	eP	P	11 31 19.3	+0.9
SHME	Shamm	71.71	289	i P	P	11 31 19.2	+0.6
	SNR=10						
SHME	Shamm	71.71	289	P	P	11 31 19.5	+0.9
	SNR=14						
SMDO	Samad	71.83	286	P	P	11 31 20.9	+1.5
	SNR=12						
ERBR	Yeremizino-Bor	71.89	314	eP	P	11 31 19.8	+0.4
ERBR				e*PP	pP	11 31 23.1	-0.9
ERBR				eS	S	11 40 41.7	+2.1
ERBR				pmax	pmax		
	comp=Z,39nm,0.8s						
ERBR				MLR	MLR		
	comp=Z,2µm,17.0s						
ERBR				MLR	MLR		
	comp=E,2µm,18.0s						
NUUG	Nuugaatsiaq	71.90	5	i P	P	11 31 18.8	-0.1
NUUG				IAmb	IAmb	11 31 20.2	
	comp=Z,14nm,0.8s						
MDH	Madha	71.99	288	i P	P	11 31 20.5	+0.2
	SNR=8.9						
MDH	Madha	71.99	288	P	P	11 31 21.2	+0.9
NSS	Namsos	72.02	340	eP	P	11 31 19.9	+0.1
MASF	Masafi	72.06	289	P	P	11 31 21.5	+0.7
	SNR=8.5						
MSFE	Esma-Masafi	72.06	289	i P	P	11 31 21.6	+0.8
	SNR=8.5						
GDXM	Geysers	72.07	55	IAmb	IAmb	11 31 23.3	
	comp=Z,85nm,1.4s						
HOQ	Hoqain	72.12	286	P	P	11 31 21.5	+0.4
	SNR=11						
JMDO	Jabal Madar	72.16	285	P	P	11 31 21.0	-0.3
	SNR=8.1						
BMO	Blue Mountains	72.22	47	IAmb	IAmb	11 31 23.7	
	comp=Z,103nm,1.4s						
UOSS	Minazif	72.25	288	P	P	11 31 22.6	+0.8
UOSS	Minazif	72.25	288	i P	P	11 31 23.0	+1.1
	SNR=7.4						
UOSS	Minazif	72.25	288	P	P	11 31 22.8	+1.0
MNRC	McLaughlin Min	72.26	55	IAmb	IAmb	11 31 24.5	
	comp=Z,98nm,1.1s						
GNI	Garni	72.31	307	LR	LR	12 05 44.0	
	comp=Z,908nm,18.3s,baz=71,slow=38						
GNI	Garni	72.31	307	i P	P	11 31 24.9	+2.7
GNI				pmax	pmax		
	comp=Z,155nm,2.1s						
LABN	Labinsk	72.35	313	eP	P	11 31 23.0	+0.9
LABN				e*PP	pP	11 31 26.0	-0.7
LABN				eS	S	11 40 47.2	+2.4
LABN				pmax	pmax		
	comp=Z,25nm,0.7s						
LABN				MLR	MLR		
	comp=E,1µm,14.0s						
LABN				MLR	MLR		
	comp=Z,2µm,16.0s						
LABN				MLR	MLR		
	comp=N,6µm,15.0s						
J08A	Circle Bar Ran	72.35	49	IAmb	IAmb	11 31 24.8	
	comp=Z,111nm,1.3s						
HATD	Hatta, Dubai	72.37	288	i P	P	11 31 23.3	+0.7
	SNR=14						
HATD	Hatta, Dubai	72.37	288	P	P	11 31 23.3	+0.7
	SNR=19						
SOHO	SOHO	72.43	287	i P	P	11 31 23.5	+0.6
	SNR=8.4						
SOHO	SOHO	72.43	287	P	P	11 31 23.8	+0.9
ASHO	Ashiyiah	72.50	288	i P	P	11 31 24.0	+0.6
	SNR=8.5						
ASHO	Ashiyiah	72.50	288	P	P	11 31 24.0	+0.6
	SNR=17						
SUTB	Sutter Butte	72.51	54	IAmb	IAmb	11 31 24.8	
	comp=Z,163nm,1.7s						
ORV	Oroville	72.52	54	IAmb	IAmb	11 31 24.7	
	comp=Z,65nm,1.2s						
CVS	Carmenet Viney	72.54	55	IAmb	IAmb	11 31 25.3	
	comp=Z,96nm,1.3s						
NIAQ	Niaqornat	72.60	5	i P	P	11 31 23.2	+0.1
NIAQ				IAmb	IAmb	11 31 25.9	
	comp=Z,69nm,1.2s						
NWAO	Narrogin (SRO)	72.61	201	P	P	11 31 23.4	-0.2
NWAO				IAmb	IAmb	11 31 51.6	
	comp=Z,38nm,0.8s						
NWAO	Narrogin (SRO)	72.61	201	P	P	11 31 24.5	+0.9
NWAO	Narrogin (SRO)	72.61	201	P	P	11 31 23.4	-0.2
NWAO				pmax	pmax		
	comp=Z,38nm,0.9s						
NAZ	Nazwa, Dubai	72.64	288	i P	P	11 31 24.7	+0.5
	SNR=11						
NAZ	Nazwa, Dubai	72.64	288	P	P	11 31 25.4	+1.2
	SNR=10						
BSY	Bisya	72.66	286	P	P	11 31 24.9	+0.6
	SNR=13						
SAATT	Saattut	72.72	5	i P	P	11 31 24.1	+0.3
SAATT				IAmb	IAmb	11 31 25.3	
	comp=Z,152nm,1.4s						
WVOR	Wild Horse Val	72.76	50	IAmb	IAmb	11 31 27.2	
	comp=Z,161nm,1.7s						
FAQ	Al Faqa, Dubai	72.83	288	i P	P	11 31 26.2	+0.9
	SNR=8.2						
FAQ	Al Faqa, Dubai	72.83	288	P	P	11 31 26.4	+1.1
	SNR=5.6						
PLID	Pearl Lake	72.86	46	IAmb	IAmb	11 31 27.2	
	comp=Z,138nm,1.7s						
MHTO	MHTO	73.01	284	P	P	11 31 27.0	+0.6
	SNR=26						
MSO	Missoula	73.05	44	IAmb	IAmb	11 31 28.1	
	comp=Z,86nm,1.3s						
ALNE	Al Ain	73.07	288	i P	P	11 31 27.3	+0.5
	SNR=11						
ALNE	Al Ain	73.07	288	P	P	11 31 27.4	+0.6
	SNR=20						
ASUD	Al Ashush, Dub	73.09	288	P	P	11 31 27.5	+0.7
ASUD	Al Ashush, Dub	73.09	288	P	P	11 31 28.0	+1.1
AFDM	Forest Hills D	73.19	54	IAmb	IAmb	11 31 29.2	
	comp=Z,66nm,1.5s						
MNK	Minsk	73.20	326	i LRM	MLR	12 07 30.9	
	comp=Z,3µm,17.5s						
MNK	Minsk	73.20	326	i P	P	11 31 28.1	+1.1
MNK				i		11 34 08.9	
MNK				i PPP	PPP	11 35 54.3	
MNK				i S	SKiKP	11 40 57.6	-0.4
MNK				i SS	SS	11 45 40.1	+5.4
MNK				pmax	pmax		
	comp=Z,62nm,0.9s						
MNK				pmax	pmax		
	comp=E,51nm,0.9s						
MNK				pmax	pmax		
	comp=N,28nm,1.1s						
MNK				MLR	MLR		
	comp=N,2µm,17.0s						
MNK				MLR	MLR		
	comp=E,2µm,17.0s						
MNK				MLR	MLR		
	comp=Z,3µm,18.0s						
MNK	Minsk	73.20	326	i P	P	11 31 28.1	+1.1
	comp=E,51nm,0.9s						
MNK	Minsk	73.20	326	i P	P	11 31 28.1	+1.1
	comp=N,28nm,1.1s						
MNK	Minsk	73.20	326	i P	P	11 31 28.1	+1.1
	comp=Z,62nm,0.9s,baz=50						
MNK	Minsk	73.20	326	i PP	PP	11 34 09.0	-0.5
MNK	Minsk	73.20	326	i PPP	PPP	11 35 54.4	
MNK	Minsk	73.20	326	i S	SKiKP	11 40 57.7	-0.4
MNK	Minsk	73.20	326	i SS	SS	11 45 40.1	+5.4
MNK	Minsk	73.20	326	i SSS	SSS	11 49 00.7	
MNK	Minsk	73.20	326	i LQ	LQ	11 58 27.6	
MNK	Minsk	73.20	326	i LR	LR	12 04 12.6	
MNK	Minsk	73.20	326	i LRM	MLR	12 06 51.4	
	comp=N,2µm,17.0s						
MNK	Minsk	73.20	326	i LRM	MLR	12 07 02.8	
	comp=E,2µm,16.8s						
AJN	Ajban	73.39	288	i P	P	11 31 29.4	+0.8
	SNR=8.7						
VSLR	Vesyoloye	73.42	312⇓	eP	P	11 31 28.5	0.0
VSLR				pmax	pmax		
	comp=Z,102nm,1.1s						
NACGM	Naroch	73.44	327⇑	iP	P	11 31 29.3	+0.9
	comp=Z,83nm,1.0s,baz=50						
SAQQ	Saqqaq	73.49	5	i P	P	11 31 28.8	+0.4
SAQQ				IAmb	IAmb	11 31 29.9	
	comp=Z,127nm,1.3s						
SOC	Sochi	73.54	312	eP	P	11 31 30.1	+0.9
SOC				e		11 34 09.0	
SOC				ePPP	PPP	11 36 00.1	
SOC				eS	SKiKP	11 41 01.8	+2.9
SOC				eSSS	SSS	11 48 59.5	
SOC				MLR	MLR		
	comp=Z,2µm,20.0s						
BRAT	Ballarat	73.55	178	P	P	11 31 30.0	+1.0
BCA	Borcka	73.58	309	⇑P	P	11 31 31.0	+1.4
MHC	Mount Hamilton	73.63	56	IAmb	IAmb	11 31 32.1	
	comp=Z,121nm,1.6s						
PAHR	Pah Rah Range	73.80	53	IAmb	IAmb	11 31 33.0	
	comp=Z,97nm,1.3s						
PNTR	Pine Nut	74.00	53	IAmb	IAmb	11 31 34.6	
	comp=Z,157nm,1.5s						
CMB	Columbia Colle	74.08	54	IAmb	IAmb	11 31 34.5	
	comp=Z,101nm,1.3s						
GDH	Godhavn	74.12	6	i P	P	11 31 32.2	+0.1
GDH				IAmb	IAmb	11 31 34.0	
	comp=Z,59nm,1.1s						
FFC	Flin Flon	74.16	33	P	P	11 31 32.6	0.0
FFC				IAmb	IAmb	11 31 34.2	
	comp=Z,108nm,1.4s						
FFC	Flin Flon	74.16	33	P	P	11 31 32.6	0.0
FFC				pmax	pmax		
	comp=Z,108nm,1.4s						
ANN	Anapa	74.19	314	eP	P	11 31 32.7	-0.2
ANN				e*PP	pP	11 31 36.9	-0.6
ANN				e		11 34 17.6	
ANN				eS	S	11 41 06.7	+1.1
ANN				pmax	pmax		
	comp=Z,41nm,1.0s						
ILULI	Ilulissat	74.33	5	IAmb	IAmb	11 31 35.2	
	comp=Z,91nm,1.2s						
ILULI	Ilulissat	74.33	5	i P	P	11 31 33.6	+0.3
ILULI				IAmb	IAmb	11 31 34.8	
	comp=Z,50nm,0.9s						
BBGB	Big Mountain B	74.45	56	IAmb	IAmb	11 31 37.0	
	comp=Z,91nm,1.2s						
FCC	Fort Churchill	74.51	27	IAmb	IAmb	11 31 35.9	
	comp=Z,89nm,1.1s						
NC405	NORSAR Array S	74.71	337	IAmb	IAmb	11 31 46.1	
	comp=Z,65nm,0.8s						
NC303	NORSAR Array S	74.73	338	IAmb	IAmb	11 31 47.0	
	comp=Z,88nm,1.2s						
DOMB	Dombas	74.78	339	eP	P	11 31 37.1	+0.9
JRN	Qarnain Island	74.81	290	P	P	11 31 37.0	+0.1
HFS	Hagfors	74.82	336	P	P	11 31 36.8	+0.5

comp=Z,30nm,0.9s,baz=42,slow=4.6,SNR=21
HFS LR LR 12 07 11.1
comp=Z,3µm,19.6s,baz=36,slow=38
comp=Z,30nm,0.9s
NC204 NORSAR Array S 74.87 338 IAmb IAmb 11 31 47.2
comp=Z,96nm,0.8s
NB2 NORSAR Subarra 74.92 337 P **P** **11 31 37.1 +0.1**
comp=Z,75nm,1.1s,baz=40,slow=5.9
NB2 NORSAR Subarra 74.92 337 P **P** **11 31 37.1 +0.1**
NB2 AMP 11 31 37.1
comp=Z,75nm,1.1s
NOA NORSAR Array B 74.92 337 P **P** **11 31 37.2 +0.2**
comp=Z,30nm,0.9s,baz=39,slow=5.8,SNR=49
NOA LR LR 12 08 06.0
comp=Z,2µm,19.4s,baz=35,slow=39
comp=Z,30nm,0.9s
AK03 Malin Array Si 74.98 323 P **P** **11 31 37.2 -0.2**
AKASG Malin Array Be 74.99 323 P **P** **11 31 37.3 -0.2**
comp=Z,12nm,0.6s,baz=46,slow=6.1,SNR=53
AKASG LR LR 12 07 31.3
comp=Z,2µm,18.9s,baz=50,slow=38
comp=Z,12nm,0.6s
AKASG Malin Array Be 74.99 323 P **P** **11 31 37.7 +0.2**
AKASG IAmb IAmb 11 31 48.4
comp=Z,92nm,1.6s
AKBB Malin Array Si 74.99 323 IAmb IAmb 11 31 47.8
comp=Z,73nm,0.9s
AKBB Malin Array Si 74.99 323⇓ *e*P **P** **11 31 37.3 -0.3**
AKBB pmax pmax
comp=Z,74nm,0.9s
AKBB Malin Array Si 74.99 323 P **P** **11 31 37.2 -0.3**
AK23 Malin Array Si 75.00 323 P **P** **11 31 37.8 +0.2**
AK01 Malin Array Si 75.00 323 P **P** **11 31 37.8 +0.2**
KIEV Kiev 75.00 323 P **P** **11 31 37.2 -0.4**
KIEV IAmb IAmb 11 31 47.9
comp=Z,66nm,0.9s
KIEV Kiev 75.00 323⇓P **P** **11 31 38.1 +0.5**
KIEV Kiev 75.00 323 *i* P **P** **11 31 37.4 -0.2**
SNR=12
KIEV Kiev 75.00 323 P **P** **11 31 37.2 -0.4**
KIEV pmax pmax
comp=Z,66nm,0.9s
KIEV Kiev 75.00 323 P **P** **11 31 37.2 -0.4**
comp=Z,7µmcomp=Z,415nm,0.9s
AK04 Malin Array Si 75.01 323 P **P** **11 31 37.8 +0.2**
AK09 Malin Array Si 75.02 322 P **P** **11 31 37.9 +0.2**
AK08 Malin Array Si 75.02 322 P **P** **11 31 37.9 +0.2**
AK02 Malin Array Si 75.03 323 P **P** **11 31 38.0 +0.3**
AK22 Malin Array Si 75.03 323 P **P** **11 31 38.0 +0.3**
AK11 Malin Array Si 75.03 323 P **P** **11 31 38.0 +0.2**
AK21 Malin Array Si 75.03 323 P **P** **11 31 38.0 +0.3**
AK10 Malin Array Si 75.05 322 P **P** **11 31 38.1 +0.3**
AK15 Malin Array Si 75.05 323 P **P** **11 31 38.1 +0.3**
NC602 NORSAR Array S 75.05 337 IAmb IAmb 11 32 53.0
comp=Z,178nm,1.9s
NC602 NORSAR Array S 75.05 337 *e*P **P** **11 31 38.3 +0.6**
AK05 Malin Array Si 75.06 322 P **P** **11 31 38.1 +0.2**
AK18 Malin Array Si 75.06 323 P **P** **11 31 38.1 +0.2**
NBO00 NORSAR Array S 75.06 338 IAmb IAmb 11 31 48.6
comp=Z,72nm,1.0s
AK12 Malin Array Si 75.06 323 P **P** **11 31 38.2 +0.3**
AK16 Malin Array Si 75.07 323 P **P** **11 31 38.2 +0.2**
BOZ Bozeman (W) 75.07 44 IAmb IAmb 11 31 40.3
comp=Z,151nm,1.6s
PKD Bear Valley Ra 75.14 56 IAmb IAmb 11 31 40.7
comp=Z,107nm,1.3s
NVAR Mina Array Bea 75.21 53 P **P** **11 31 40.1 +0.8**
comp=Z,42nm,0.9s,baz=284,slow=6.0,SNR=186
NVAR LR LR 12 00 06.1
comp=Z,428nm,19.7s,baz=312,slow=32
comp=Z,42nm,0.9s
NVAR Mina Array Bea 75.21 53 P **P** **11 31 39.5 +0.2**
AKN Aaknes 75.26 340 *e*P **P** **11 31 40.3 +1.4**
NV11 Mina Array Sit 75.31 53 IAmb IAmb 11 31 42.0
comp=Z,103nm,1.4s
MZR Muzera 75.39 288 *i* P **P** **11 31 41.2 +0.9**
SNR=10
RAO Raoul Island 75.48 144 LR LR 11 58 56.0
comp=Z,465nm,21.1s,baz=327,slow=31
SHMA Al-Shehemyia 75.74 292 P **P** **11 31 42.8 +0.6**
SNR=5.4
YHL Hebgen Lake 75.77 45 IAmb IAmb 11 31 44.9
comp=Z,119nm,1.5s
YHB Horse Butte 75.83 45 IAmb IAmb 11 31 45.1
comp=Z,150nm,1.6s
SIM Simferopol' 75.99 316 P **P** **11 31 44.5 +1.1**
SIM pmax pmax
comp=Z,93nm,0.9s
SIM MLR MLR
comp=Z,750nm,21.0s
DSP Deep Springs 76.03 54 IAmb IAmb 11 31 46.3
comp=Z,80nm,1.2s
TIN Tinemaha, Big 76.04 54 IAmb IAmb 11 31 46.2
comp=Z,70nm,1.0s
YNM Yellowstone No 76.12 44 IAmb IAmb 11 31 47.5
comp=Z,58nm,1.2s
RNPP9 Sopachiv 76.13 325 P **P** **11 31 43.9 -0.1**
YNR Norris Junctio 76.14 44 IAmb IAmb 11 31 47.6
comp=Z,108nm,1.5s
TRNA Turayna 76.17 291 P **P** **11 31 45.3 +0.6**
SLWR Sila 76.17 290 P **P** **11 31 45.2 +0.4**
RNPP8 Varash 76.20 324 P **P** **11 31 44.4 0.0**
YFT Old Faithful 76.21 45 IAmb IAmb 11 31 50.1
comp=Z,150nm,1.6s
LUBAR Lubar, Ukraine 76.22 323 P **P** **11 31 44.6 +0.1**
RNPP5 Staryi Chortor 76.25 324 P **P** **11 31 44.7 0.0**
YPP Pitchstone Pla 76.34 45 IAmb IAmb 11 31 49.3
comp=Z,123nm,1.8s
YMP Mirror Lake Pl 76.42 44 IAmb IAmb 11 31 49.1
comp=Z,141nm,1.6s
SMRA Abu-Samra 76.45 291 P **P** **11 31 47.0 +0.7**
SNR=6.9
MARD Mardin 76.47 306 IAmb IAmb 11 31 57.7
comp=Z,120nm,1.5s
SHAO Shalim 76.48 282 P **P** **11 31 47.0 +0.4**
SHAO Shalim 76.48 282 P **P** **11 31 47.2 +0.6**
KONO Kongsberg 76.51 337 P **P** **11 31 47.0 +1.0**
SFJD Kangerlussuaq 76.56 5 LR LR 12 05 20.7
comp=Z,888nm,21.5s,baz=348,slow=36
SFJD Kangerlussuaq 76.56 5 P **P** **11 31 47.0 +0.9**
SFJD IAmb IAmb 11 31 47.9
comp=Z,52nm,1.1s
SFJD Kangerlussuaq 76.56 5 P **P** **11 31 47.1 +0.9**
SFJD pmax pmax
comp=Z,52nm,1.1s
SFJD Kangerlussuaq 76.56 5 *i* P **P** **11 31 46.8 +0.6**
SFJD IAmb IAmb 11 31 47.6
comp=Z,48nm,1.1s
RLMT Red Lodge 76.68 43 IAmb IAmb 11 31 50.1
comp=Z,99nm,1.4s
MOOW Moose Ponds 76.69 45 IAmb IAmb 11 31 50.5
comp=Z,113nm,1.6s
SORM Soroca 77.08 321⇓P **P** **11 31 50.0 +0.5**
SORM Soroca 77.08 321 P **P** **11 31 49.9 +0.5**
AHID Auburn Hatcher 77.09 46 IAmb IAmb 11 31 52.0
comp=Z,80nm,1.5s
GLAD Gladstone 77.17 175 P **P** **11 31 50.4 +0.7**
CLC China Lake 77.17 55 IAmb IAmb 11 31 52.1
comp=Z,80nm,1.4s
FURC Furnace Creek, 77.28 54 IAmb IAmb 11 31 52.9
comp=Z,116nm,1.2s
S11A Rachel 77.31 53 IAmb IAmb 11 31 53.4
comp=Z,93nm,1.2s
LRMC Laurel Mtn Rad 77.31 55 IAmb IAmb 11 31 52.9
comp=Z,67nm,1.4s
DOK Doka 77.32 284 P **P** **11 31 51.1 -0.2**
SNR=5.8
FRB Frobisher Bay 77.39 13 LR LR 12 07 37.5
comp=Z,508nm,21.9s,baz=346,slow=37
CCCA Chr Cany lake 77.50 55 IAmb IAmb 11 31 54.2
comp=Z,89nm,1.4s
QSM Queen of Sheba 77.57 55 IAmb IAmb 11 31 54.3
comp=Z,116nm,1.2s
GWY Greenwater Val 77.57 54 IAmb IAmb 11 31 54.5
comp=Z,121nm,1.4s
DUG Dugway, Tooele 77.63 49 IAmb IAmb 11 31 55.3
comp=Z,100nm,1.1s
PASC Pasadena Art C 77.73 57 IAmb IAmb 11 31 55.1
comp=Z,67nm,1.5s
MWC Mount Wilson 77.79 57 IAmb IAmb 11 31 55.7
comp=Z,73nm,1.4s
RBK Rabkut 77.89 283 P **P** **11 31 54.4 -0.1**
PRN Pahroc Range 77.90 52 IAmb IAmb 11 31 56.7
comp=Z,48nm,1.0s
CTU Camp Tracy 77.97 48 IAmb IAmb 11 31 56.9
comp=Z,56nm,1.2s

PDAR Pinedale Array 77.98 45 P **P** **11 31 54.9 -0.1**
comp=Z,9.8nm,0.7s,baz=278,slow=1.3,SNR=98
comp=Z,9.8nm,0.7s
PDAR Pinedale Array 77.98 45 P **P** **11 31 55.0 +0.1**
PSUT Pine Spring 77.98 51 IAmb IAmb 11 31 57.1
comp=Z,83nm,1.2s
BORG Borgarnes 78.37 353 LR LR 12 08 39.4
comp=Z,452nm,18.1s,baz=9.1,slow=37
ANGG Ammassalik, Gr 78.37 360 *i* P **P** **11 31 57.1 +0.8**
ANGG IAmb IAmb 11 31 58.0
comp=Z,33nm,1.0s
MPU Maple Canyon 78.45 49 IAmb IAmb 11 31 59.8
comp=Z,110nm,1.2s
ELS Elsinore Mount 78.55 57 IAmb IAmb 11 31 59.8
comp=Z,145nm,1.8s
ILGA Ilgaz 78.62 313 IAmb IAmb 11 32 10.1
comp=Z,53nm,1.0s
ABTO Aybut 78.68 283 P **P** **11 31 58.6 -0.3**
SNR=7.0
MTPC Mountain Pass 78.71 54 IAmb IAmb 11 32 01.0
comp=Z,68nm,1.3s
TCRU Three Creeks R 78.81 50 IAmb IAmb 11 32 02.2
comp=Z,213nm,2.0s
GAZ Gaziantep 78.84 308 IAmb IAmb 11 32 10.7
comp=Z,50nm,0.9s
CCUT Cedar City 78.89 52 IAmb IAmb 11 32 02.4
comp=Z,75nm,1.3s
BURAR Bucovina Array 79.00 322 P **P** **11 32 00.7 +0.4**
BURAR Bucovina Array 79.00 322⇑P **P** **11 32 01.0 +0.6**
BURAR Bucovina Array 79.00 322 P **P** **11 32 00.9 +0.6**
TESR Tescani 79.02 320⇓P **P** **11 32 01.3 +1.0**
V12A Nelson 79.03 54 IAmb IAmb 11 32 02.8
comp=Z,68nm,1.3s
DNR Dunn Ranch,Anz 79.14 56 IAmb IAmb 11 32 03.2
comp=Z,88nm,1.2s
TPGR Topolog 79.19 318⇑P **P** **11 32 02.2 +1.0**
CPE Camp Elliot 79.22 57 IAmb IAmb 11 32 03.3
comp=Z,59nm,1.1s
PFO Pinyon Flats O 79.22 56 LR LR 12 06 21.2
comp=Z,1µm,18.1s,baz=302,slow=35
NUUK Nuuk 79.25 6 *i* P **P** **11 32 01.7 +0.6**
NUUK IAmb IAmb 11 32 03.5
comp=Z,52nm,0.9s
PMD Palm Desert 79.26 56 IAmb IAmb 11 32 03.4
comp=Z,68nm,1.2s
ONER Baraj Valea Uz 79.27 320⇑P **P** **11 32 02.7 +1.1**
LCMT Little Creek M 79.29 52 IAmb IAmb 11 32 04.5
comp=Z,71nm,1.1s
MTPU Mount Pierson 79.33 51 IAmb IAmb 11 32 05.4
comp=Z,95nm,1.4s
VRI Vrincioaia 79.41 320⇑P **P** **11 32 03.9 +1.5**
VRI Vrincioaia 79.41 320 P **P** **11 32 03.9 +1.5**
Q16A Castle Valley 79.41 49 IAmb IAmb 11 32 05.3
comp=Z,180nm,1.5s
PLOR Plostina 79.46 320⇑P **P** **11 32 04.0 +1.3**
PLOR Plostina 79.46 320 P **P** **11 32 04.0 +1.3**
BR131 Keskin Array S 79.49 312 *de*P **P** **11 32 04.6 +1.4**
BRTR Keskin Array B 79.49 312 P **P** **11 32 03.9 +0.7**
comp=Z,13nm,0.9s,baz=94,slow=3.7,SNR=22
BRTR LR LR 12 12 45.4
comp=Z,780nm,18.3s,baz=38,slow=40
comp=Z,13nm,0.9s
BRTR Keskin Array B 79.49 312 P **P** **11 32 03.5 +0.4**
BRTR Keskin Array B 79.49 312 P **P** **11 32 03.6 +0.4**
P18A Preston Nutter 79.53 48 IAmb IAmb 11 32 06.0
comp=Z,59nm,1.0s
RAR Rarotonga 79.56 126 LR LR 12 02 11.9
comp=Z,1µm,18.8s,baz=288,slow=32
SRU San Rafael Swe 79.69 49 IAmb IAmb 11 32 06.2
comp=Z,81nm,0.9s
KIRS Kirsehir-Merke 79.69 311⇓P **P** **11 32 06.4 +2.2**
COVR Voineasa-Covas 79.70 320⇑P **P** **11 32 05.2 +1.2**
OZUR 79.74 321⇓P **P** **11 32 06.4 +2.2**
K22A Casper 79.78 44 IAmb IAmb 11 32 07.4
comp=Z,84nm,1.3s
BOSR Bodos 79.82 321⇓P **P** **11 32 06.9 +2.2**
CBX Cerro Bola 79.86 57 IAmb IAmb 11 32 07.0
comp=Z,96nm,1.1s
MDND Maddock 79.92 37 IAmb IAmb 11 32 06.8
comp=Z,170nm,1.4s
ULM Lac du Bonnet 79.95 33 P **P** **11 32 04.8 -0.5**
comp=Z,22nm,1.0s,baz=302,slow=6.1,SNR=18
ULM LR LR 12 08 25.9
comp=Z,325nm,21.0s,baz=358,slow=36
comp=Z,22nm,1.0s
ULM Lac du Bonnet 79.95 33 IAmb IAmb 11 32 06.2
comp=Z,157nm,1.8s
DOPR Dopca 80.03 321⇑P **P** **11 32 07.6 +1.8**
MLR Muntele Rosu 80.07 320 LR LR 12 10 49.5
comp=Z,30nm,18.4s,baz=46,slow=38
RSSD Black Hills 80.19 42 P **P** **11 32 06.6 -0.3**
RSSD Black Hills 80.19 42 P **P** **11 32 06.6 -0.3**
RSSD pmax pmax
comp=Z,39nm,1.2s
HMU Henry Mountain 80.28 50 IAmb IAmb 11 32 09.5
comp=Z,95nm,1.1s
O20A White River Ci 80.41 47 IAmb IAmb 11 32 09.9
comp=Z,73nm,1.1s
CJR Cluj-Napoca 80.43 322⇑P **P** **11 32 10.0 +1.9**
CJR Cluj-Napoca 80.43 322 P **P** **11 32 09.9 +1.9**
BLYC Blythe 80.43 55 IAmb IAmb 11 32 10.2
comp=Z,72nm,1.2s
MDUB Mudurnu 80.47 314 IAmb IAmb 11 32 19.2
comp=Z,68nm,0.9s
ESJX Sierra Juarez 80.53 57 IAmb IAmb 11 32 10.9
comp=Z,93nm,1.1s
VOIR 80.57 320⇓P **P** **11 32 10.8 +1.9**
VOIR 80.57 320 P **P** **11 32 10.7 +1.9**
RUE Ruedersdorf 80.61 331 *e*P **P** **11 32 09.5 +0.8**
comp=Z,88nm,1.2s,baz=38,slow=5.2
GLA Glamis 80.65 56 IAmb IAmb 11 32 11.4
comp=Z,84nm,1.1s
MARR Marisel-Cluj 80.69 322⇑P **P** **11 32 10.6 +1.1**
CPBX Cerro Prieto 80.71 57 IAmb IAmb 11 32 27.6
comp=Z,206nm,1.9s
OKC Ostrava-Krasne 80.76 327 AMS AMS 12 11 10.0
comp=Z,2µm,17.3s
BSEG Bad Segeberg 80.79 333 *e*P **P** **11 32 10.4 +0.8**
comp=Z,35nm,1.1s,baz=38,slow=5.2
ARR Arges 80.83 321⇓P **P** **11 32 12.3 +2.2**
STEB Steborice 80.85 327 *e*P **P** **11 32 11.1 +1.0**
STEB *ex* x 11 32 14.4
PV21 Cone Mtn., Par 80.97 49 IAmb IAmb 11 32 13.3
comp=Z,84nm,1.0s
VTX Valle De La Tr 81.01 58 IAmb IAmb 11 32 13.3
comp=Z,70nm,1.2s
OSTC Ostas 81.06 328 *e*S **S** **11 42 19.5 -0.5**
OSTC AMS AMS 12 12 30.0
comp=Z,3µm,13.4s
MORC Moravsky Berou 81.07 327⇑P **P** **11 32 12.5 +1.2**
MORC Moravsky Berou 81.07 327 P **P** **11 32 12.5 +1.2**
MORC Moravsky Berou 81.07 327 *e*P **P** **11 32 11.8 +0.4**
PV22 Blue Mesa, Par 81.10 48 IAmb IAmb 11 32 14.0
comp=Z,109nm,1.2s
CHVC Chvalec 81.11 328 AMS AMS 12 12 30.0
comp=Z,3µm,13.7s
URZ Urewera 81.12 153 LR LR 12 02 09.8
comp=Z,431nm,21.0s,baz=330,slow=31
RAYN Ar Rayn 81.14 293 P **P** **11 32 12.5 +0.3**
RAYN Ar Rayn 81.14 293 *i* P **P** **11 32 12.7 +0.5**
SNR=12
RAYN Ar Rayn 81.14 293 P **P** **11 32 12.5 +0.3**
RAYN pmax pmax
comp=Z,27nm,0.9s
RAYN Ar Rayn 81.14 293 P **P** **11 32 13.2 +1.0**
GORT1 Trebel 81.17 332 *e*P **P** **11 32 12.6 +1.0**
comp=Z,120nm,1.6s,baz=38,slow=5.2
DPC Dobruska-Polom 81.17 328 *e*P **P** **11 32 12.9 +1.0**
DPC *e* 11 42 19.7
DPC MLR MLR
comp=Z,2µm,15.0s
DPC Dobruska-Polom 81.17 328 *e*P **P** **11 32 12.9 +1.0**
DPC *e*S **S** **11 42 19.7 -1.5**
DPC AMS AMS 12 15 50.0
comp=Z,2µm,15.0s
UPC Upice 81.19 328 *e*P **P** **11 32 13.2 +1.3**
UPC MLR MLR
comp=Z,3µm,14.1s
UPC Upice 81.19 328 *e*P **P** **11 32 13.2 +1.3**
UPC AMS AMS 12 12 30.0
comp=Z,3µm,14.1s
LOT Lotru 81.22 321⇑P **P** **11 32 13.9 +1.6**
PV07 Paradox Valley 81.25 48 IAmb IAmb 11 32 14.8
comp=Z,73nm,1.3s
EPLO Experimental L 81.32 33 IAmb IAmb 11 32 13.4
comp=Z,73nm,1.1s

PSZ Piszkesteto 81.36 325 IAmb IAmb 11 32 24.5
comp=Z,84nm,1.2s
PSZ Piszkesteto 81.36 325⇑P **P** **11 32 14.2 +1.2**
PSZ Piszkesteto 81.36 325 P **P** **11 32 14.2 +1.2**
RTZ Ruatahuna 81.39 153 P **P** **11 32 11.7 -1.2**
RTZ IAmb IAmb 11 32 12.6
comp=Z,58nm,1.1s
WUAZ Wupatki 81.40 52 IAmb IAmb 11 32 15.7
comp=Z,64nm,1.0s
PV01 Paradox Valley 81.49 49 IAmb IAmb 11 32 16.1
comp=Z,96nm,1.1s
JAVC Velka Javorina 81.69 326 *e*P **P** **11 32 15.8 +1.1**
SIRR Siria 81.70 323⇓P **P** **11 32 16.0 +1.3**
FLTG Flechtingen 81.71 332 *e*P **P** **11 32 14.4 -0.2**
comp=Z,41nm,0.8s,baz=38,slow=5.2
BRG Berggiesshubel 81.77 330 *e*P **P** **11 32 14.9 -0.1**
comp=Z,40nm,1.0s,baz=38,slow=5.2
BRG Berggiesshubel 81.77 330 *i* P **P** **11 32 15.6 +0.7**
BRG Amp 11 32 16.7
comp=Z,15nm,1.1s
BRG Berggiesshubel 81.77 330 P P 11 32 24.4 +9.4
BRG Amp 11 32 26.1
comp=Z,40nm,1.0s
BRG Berggiesshubel 81.77 330 S **S** **11 42 30.0 +2.8**
PVCC Panska Ves 81.78 329 *e*P **P** **11 32 15.9 +0.9**
PVCC *e* 11 32 24.8
PVCC MLR MLR
comp=Z,4µm,14.8s
PVCC Panska Ves 81.78 329 *e*P **P** **11 32 15.9 +0.9**
PVCC *ex* x 11 32 24.8
PVCC AMS AMS 12 13 30.0
comp=Z,4µm,14.8s
CLL Collm 81.82 330 IAmb IAmb 11 32 25.3
comp=Z,44nm,0.8s
CLL Collm 81.82 330 *i* P **P** **11 32 15.3 +0.1**
CLL *i* 11 32 19.7
CLL *i* 11 32 23.6
CLL *e*S **S** **11 42 29.0 +1.4**
CLL pmax pmax
comp=Z,30nm,1.1s
CLL MLR MLR
comp=Z,2µm,18.4s
CLL Collm 81.82 330 *i* P **P** **11 32 15.3 +0.1**
comp=Z,30nm,1.1s
CLL *i* x x 11 32 19.7
CLL *i* x x 11 32 23.6
comp=Z,50nm,0.9s
CLL *e*PPP PPP 11 37 18.0
CLL *e*S **S** **11 42 29.0 +1.4**
CLL *e*PS **PnS** **11 43 18.0 +2.1**
CLL *e*SS **SS** **11 47 48.0 +3.5**
CLL *e*SSS SSS 11 51 18.0
CLL *e*SSSS 11 53 54.0
CLL AMS AMS 12 09 00.0
comp=N,1µm,18.6s
CLL AMS AMS 12 09 00.0
comp=E,2µm,20.4s
CLL AMS AMS 12 15 00.0
comp=Z,2µm,18.4s
CLL Collm 81.82 330 *e*P **P** **11 32 15.1 -0.1**
comp=Z,46nm,0.8s,baz=38,slow=5.2
CLL *e*sP **pwP** **11 32 23.6 +1.2**
VRAC Vranov 81.83 327 LR LR 12 12 28.1
comp=Z,2µm,18.5s,baz=43,slow=38
VRAC Vranov 81.83 327⇑P **P** **11 32 16.7 +1.3**
VRAC Vranov 81.83 327 P **P** **11 32 16.6 +1.3**
VRAC Vranov 81.83 327 *e*P **P** **11 32 15.8 +0.4**
ELND Elena 81.84 318⇓P **P** **11 32 17.1 +1.6**
SFX San Felipe 81.86 57 IAmb IAmb 11 32 17.5
comp=Z,70nm,1.3s
SMOL Smolenice 82.05 326 *e*P **P** **11 32 18.2 +1.7**
SMOL *e* 11 32 26.7
SMOL pmax pmax
comp=Z,14nm,1.3s
ASSE Asse, Remlinge 82.08 332 *e*P **P** **11 32 16.9 +0.4**
comp=Z,24nm,1.0s,baz=38,slow=5.2
RETH Rethem/Aller, 82.09 333 *e*P **P** **11 32 16.7 +0.1**
comp=Z,53nm,1.3s,baz=38,slow=5.2
ASF Jabal al Asfar 82.09 304 LR LR 12 10 56.7
comp=Z,434nm,19.7s,baz=27,slow=37
KRUC Moravsky 82.10 327 *e*P **P** **11 32 17.0 +0.2**
MVCO Mesa Verde 82.12 49 IAmb IAmb 11 32 19.5
comp=Z,64nm,1.1s
SRO Srobarova 82.17 325 *e*P P 11 32 27.5 +10
SRO Srobarova 82.17 325 *e* P 11 32 27.5 +10
BZS Buzias 82.18 322⇑P **P** **11 32 17.8 +0.6**
BZS Buzias 82.18 322 P **P** **11 32 17.8 +0.6**
HSKC Hora Svate Kat 82.18 330 *e*P **P** **11 32 17.8 +0.6**
HSKC *ex* x 11 32 22.4
HSKC *e*S **S** **11 42 30.3 -1.3**
HSKC AMS AMS 12 12 40.0
comp=Z,3µm,15.6s
PLVB Pleven 82.20 319⇑P **P** **11 32 17.8 +0.4**
PRU Pruhonice 82.20 329 *e*P **P** **11 32 18.0 +0.8**
PRU *e* 11 32 26.6
PRU *e* 11 42 29.1
PRU MLR MLR
comp=N,2µm,14.2s
PRU Pruhonice 82.20 329 *e*P **P** **11 32 18.0 +0.8**
PRU *ex* x 11 32 26.6
PRU *e*S **S** **11 42 29.1 -2.5**
PRU AMS AMS 12 13 00.0
MODS Modra-Piesok 82.23 326 *e*P **P** **11 32 18.4 +0.9**
MODS *e* 11 32 27.8
MODS pmax pmax
comp=Z,53nm,1.3s
MODS Modra-Piesok 82.23 326 *e*P **P** **11 32 18.4 +0.9**
MODS *e* 11 32 27.8
TREC Trest 82.32 328 AMS AMS 12 13 20.0
comp=Z,3µm,14.9s
NEUB Neuenburg 82.38 331 *e*P **P** **11 32 18.5 +0.4**
comp=Z,51nm,0.8s,baz=38,slow=5.2
CLZ Clausthal 82.42 332 *e*P **P** **11 32 19.2 +0.8**
comp=Z,40nm,1.0s,baz=38,slow=5.2
ZST Bratislava 82.44 326 *e*P **P** **11 32 22.1 +3.6**
ZST *e* 11 32 28.5
ZST Bratislava 82.44 326 *e*P **P** **11 32 22.1 +3.6**
ZST *e* 11 32 28.5
PIX Pinacate 82.48 56 IAmb IAmb 11 32 20.8
comp=Z,98nm,1.4s
MMAI Mount Meron Ar 82.56 306 P **P** **11 32 20.0 +0.4**
comp=Z,4.3nm,0.7s,baz=194,slow=13,SNR=4.7
MMAI LR LR 12 12 02.2
comp=Z,1µm,20.3s,baz=32,slow=38
comp=Z,4.3nm,0.7s
MRZ Mangatainoka R 82.70 155 P **P** **11 32 19.1 -0.6**
MRZ IAmb IAmb 11 32 20.0
comp=Z,84nm,1.2s
MDVR Moldovita 82.72 322⇓P **P** **11 32 20.8 +0.7**
TANN Tannenbergstha 82.73 330 *e*P **P** **11 32 20.6 +0.5**
comp=Z,73nm,1.7s,baz=38,slow=5.2
TANN *e*sP **pwP** **11 32 28.7 +1.3**
ZVC Zvikov 82.77 329 AMS AMS 12 16 50.0
comp=Z,3µm,14.8s
PLN Plauen 82.79 330 *e*P **P** **11 32 20.9 +0.5**
comp=Z,20nm,1.6s,baz=38,slow=5.2
GTTG Gottingen 82.81 332 *e*P **P** **11 32 20.8 +0.4**
comp=Z,28nm,0.9s,baz=38,slow=5.2
NKC Novy Kostel 82.87 330 AMS AMS 12 13 00.0
comp=Z,3µm,16.6s
MOX Moxa 82.89 331 *e*P **P** **11 32 20.8 0.0**
comp=Z,83nm,1.7s,baz=38,slow=5.2
MOX *e*L L 12 10 26.4
comp=Z,997nm,20.5s
X18A Snowflake 82.92 52 IAmb IAmb 11 32 23.8
comp=Z,72nm,1.5s
IBBN Ibbenburen 83.02 334 *e*P **P** **11 32 21.7 +0.3**
comp=Z,150nm,1.6s,baz=38,slow=5.2
RONA Rosalia, Austr 83.17 326 *i* pP **P** **11 32 23.8 +1.4**
comp=Z,58nm,1.4s,SNR=7.6
MORH Mrgy, Hungar 83.19 324⇑P **P** **11 32 23.0 +0.5**
CKRC Cesky Krumlov 83.19 328 *e*P **P** **11 32 23.4 +0.9**
CKRC *e* 11 32 27.3
CKRC *e* 11 42 40.4
CKRC MLR MLR
comp=Z,2µm,12.8s
CKRC Cesky Krumlov 83.19 328 *e*P **P** **11 32 23.4 +0.9**
CKRC *ex* x 11 32 27.3
CKRC *e*S **S** **11 42 40.4 -1.5**
CKRC AMS AMS 12 14 30.0
comp=Z,2µm,12.8s
CONA Conrad Observa 83.19 327 *e*pP **P** **11 32 23.9 +1.4**
comp=Z,27nm,1.1s,SNR=8.4
MANZ Manzenberg 83.20 330 *e*P **P** **11 32 23.3 +0.8**
comp=Z,8.7nm,1.0s,baz=38,slow=5.2

Code	Station	Δ°	AZ°	Op	ISC	Time	Res
RDO	Rodhopi	83.24	317	IAmb	IAmb	11 32 34.2	
	comp=Z,79nm,1.3s						
KHC	Kasperske Hory	83.26	329	eP	P	11 32 23.0	+0.2
KHC				e		11 32 31.5	
KHC	Kasperske Hory	83.26	329	eP	P	11 32 23.0	+0.2
KHC				ex	x	11 32 31.5	
ROTZ	Rotzenmuhle	83.33	330	eP	P	11 32 23.5	+0.3
	comp=Z,6.0nm,0.9s,baz=38,slow=5.2						
UBBA	Unterbreizbach	83.38	332	eP	P	11 32 23.8	+0.6
	comp=Z,13nm,1.0s,baz=38,slow=5.2						
GEC2	GERESS Array S	83.43	328	eP	P	11 32 23.8	0.0
	comp=Z,24nm,1.0s,baz=38,slow=5.2						
GERES	GERESS Array B	83.43	328	P	P	11 32 24.1	+0.3
	comp=Z,5.0nm,0.7s,baz=35,slow=4.9,SNR=17						
GERES				PKKPbc	PKKPbc	11 50 41.5	-0.7
	comp=Z,0.5nm,0.5s,baz=219,slow=3.4,SNR=3.9						
GERES				LR	LR	12 11 49.0	
	comp=Z,1µm,20.0s,baz=20,slow=37						
	comp=Z,5.0nm,0.7s						
WET	Wettzell	83.54	329	eP	P	11 32 25.0	+0.8
	comp=Z,64nm,1.6s,baz=38,slow=5.2						
EYMN	Ely	83.59	33	IAmb	IAmb	11 32 25.5	
	comp=Z,47nm,1.1s						
KASTN	Kahler Asten	83.67	333	eP	P	11 32 25.2	+0.3
	comp=Z,15nm,0.9s,baz=38,slow=5.2						
TUC	Tucson	83.79	54	P	P	11 32 26.0	+0.1
TUC				IAmb	IAmb	11 32 27.9	
	comp=Z,56nm,1.3s						
TUC	Tucson	83.79	54	P	P	11 32 26.0	+0.1
TUC				pmax	pmax		
	comp=Z,56nm,1.3s						
GRF	Grafenberg Arr	83.79	330	eP	P	11 32 26.4	+0.9
	comp=Z,67nm,1.2s,baz=38,slow=5.2						
GRF				eL	L	12 12 42.7	
	comp=Z,1µm,18.0s						
ARSA	Arzberg	83.85	326	i pP	P	11 32 26.7	+0.8
	comp=Z,16nm,1.1s						
EKA	Eskdalemuir Ar	83.86	341	P	P	11 32 26.6	+0.8
	comp=Z,5.1nm,0.7s,baz=37,slow=4.5,SNR=12						
EKA				LR	LR	12 13 48.9	
	comp=Z,2µm,18.3s,baz=40,slow=38						
	comp=Z,5.1nm,0.7s						
BUG	Bochum--Univer	83.90	333	eP	P	11 32 26.1	+0.1
	comp=Z,23nm,0.9s,baz=38,slow=5.2						
MOA	Molln	83.95	327	i pP	P	11 32 27.7	+1.3
	comp=Z,16nm,1.2s						
OXZ	Oxford	83.96	158	P	P	11 32 25.8	-0.3
OXZ				IAmb	IAmb	11 32 26.4	
	comp=Z,47nm,1.2s						
PPT	Papeete	84.11	117	LR	LR	12 03 30.5	
	comp=Z,722nm,19.6s,baz=348,slow=31						
ECSD	EROS Data Cent	84.31	38	IAmb	IAmb	11 32 29.3	
	comp=Z,39nm,1.1s						
BIOA	Bad Ischl, Aus	84.34	328	eP	P	11 32 28.5	+0.1
	comp=Z,20nm,1.0s,SNR=5.4						
TNS	Taunus Mts	84.45	332	eP	P	11 32 29.4	+0.5
	comp=Z,20nm,1.1s,baz=38,slow=5.2						
SOKA	Soboth	84.50	326	eP	P	11 32 29.9	+0.6
	comp=Z,20nm,1.2s,SNR=6.8						
E38A	The Farm, Brul	84.58	34	IAmb	IAmb	11 32 30.2	
	comp=Z,57nm,1.1s						
T25A	Trinidad	84.63	47	IAmb	IAmb	11 32 32.3	
	comp=Z,56nm,1.0s						
VAY	Valandovo	84.73	319	i P	P	11 32 30.5	+0.1
ANMO	Albuquerque	84.85	50	P	P	11 32 31.8	+0.4
ANMO				IAmb	IAmb	11 32 33.6	
	comp=Z,47nm,1.1s						
ANMO	Albuquerque	84.85	50	P	P	11 32 31.8	+0.4
ANMO				pmax	pmax		
	comp=Z,47nm,1.1s						
OBKA	Obir	84.85	326	ePcP	P	11 32 32.1	+1.1
	comp=Z,14nm,1.2s						
KBA	Koelnbreinsper	84.94	327	eP	P	11 32 31.7	+0.1
	comp=Z,23nm,0.8s						
EIL	Elat	84.96	303	LR	LR	12 13 41.2	
	comp=Z,536nm,18.6s,baz=358,slow=38						
LESA	Schwarzleotal	84.96	328	i P	P	11 32 32.0	+0.4
	comp=Z,18nm,1.5s						
FUR	Furstenfeldbru	84.97	329	eP	P	11 32 32.0	+0.5
	comp=Z,48nm,0.8s,baz=38,slow=5.2						
BTNL	Ternell	85.01	333	dP	P	11 32 31.8	+0.1
MEM	Membach	85.04	333	dP	P	11 32 30.5	-1.3
	comp=Z,18nm,0.9s						
SPMN	Marine on St.	85.06	35	IAmb	IAmb	11 32 33.1	
	comp=Z,82nm,1.5s						
MYKA	Terra Mystica	85.16	327	eP	P	11 32 32.5	-0.1
	comp=Z,2.5nm,0.4s						
IDGL	Inch Island, C	85.20	343	P	P	11 32 33.4	+0.9
STU	Stuttgart	85.33	331	IAmb	IAmb	11 32 43.5	
	comp=Z,55nm,0.9s						
STU	Stuttgart	85.33	331	eP	P	11 32 33.8	+0.5
	comp=Z,126nm,0.8s,baz=38,slow=5.2						
319A	Douglas	85.37	54	IAmb	IAmb	11 32 35.8	
	comp=Z,74nm,1.1s						
BCLA	Clavier	85.45	334	dP	P	11 32 34.0	+0.2
BCLA				dx	x	11 32 42.7	
WATA	Walderalm	85.50	329	ePcP	P	11 32 34.7	+0.4
	comp=Z,5.8nm,0.7s						
WTTA	Wattenberg	85.53	328	ePcP	P	11 32 35.0	+0.4
	comp=Z,19nm,1.5s						
BGES	Gesves	85.55	334	dP	P	11 32 32.6	-1.8
	comp=Z,18nm,1.0s						
ABTA	Abfaltersbach	85.56	328	i P	P	11 32 33.9	-0.7
	comp=Z,14nm,1.3s						
121A	Cookes Peak, D	85.59	53	IAmb	IAmb	11 32 37.3	
	comp=Z,71nm,1.2s						
PDG	Podgorica	85.65	321	IAmb	IAmb	11 32 45.2	
	comp=Z,60nm,0.9s						
PDG	Podgorica	85.65	321	⇑P	P	11 32 35.5	+0.5
MOTA	Moosalm	85.69	329	ePcP	P	11 32 35.6	+0.3
	comp=Z,15nm,1.2s						
RCHB	Rochefort	85.69	334	dP	P	11 32 34.1	-0.9
RETA	Reutte	85.72	329	ePcP	P	11 32 35.7	+0.3
	comp=Z,18nm,0.9s,SNR=6.9						
BMRD	Maredsous	85.73	334	dP	P	11 32 34.5	-0.7
	comp=Z,27nm,0.9s						
SQTA	Sankt Quirin	85.74	329	eP	P	11 32 33.6	-1.9
	comp=Z,7.7nm,1.2s						
HSIG		85.76	57	IAmb	IAmb	11 32 37.4	
	comp=Z,51nm,1.2s						
WLF	Walferdange	85.76	333	IAmb	IAmb	11 32 46.9	
	comp=Z,46nm,1.3s						
WLF	Walferdange	85.76	333	dP	P	11 32 36.2	+0.7
WLF	Walferdange	85.76	333	eP	P	11 32 36.5	+1.0
	comp=Z,128nm,2.0s,baz=38,slow=5.2						
OHR	Ohrid	85.81	319	i P	P	11 32 36.7	+0.7
UBR	Ueberruh	85.83	330	eP	P	11 32 36.9	+0.9
	baz=38,slow=5.2						
UBR				esP	pwP	11 32 44.9	+1.7
ILTH	Belurgan, Co L	85.86	342	P	P	11 32 36.6	+0.8
SCHQ	Schefferville	85.94	16	P	P	11 32 36.4	+0.2
	comp=Z,22nm,1.0s,baz=355,slow=3.0,SNR=12						
SCHQ				LR	LR	12 11 31.5	
	comp=Z,988nm,22.0s,baz=346,slow=36						
	comp=Z,22nm,1.0s						
DOU	Dourbes	85.97	334	dP	P	11 32 35.1	-1.3
BFO	Black Forest	86.03	331	P	P	11 32 36.6	-0.2
BFO				IAmb	IAmb	11 32 46.7	
	comp=Z,38nm,0.8s						
BFO	Black Forest	86.03	331	P	P	11 32 36.6	-0.2
BFO				pmax	pmax		
	comp=Z,38nm,0.8s						
BFO	Black Forest	86.03	331	eP	P	11 32 37.2	+0.3
	comp=Z,38nm,0.8s,baz=38,slow=5.2						
FETA	Feichten	86.10	329	i PcP	P	11 32 37.6	+0.2
	comp=Z,13nm,1.2s						
CBKS	Cedar Bluff	86.17	43	IAmb	IAmb	11 32 38.4	
	comp=Z,88nm,1.2s						
G40A	Rib Lake	86.21	34	IAmb	IAmb	11 32 38.9	
	comp=Z,56nm,1.2s						
DAVA	Damuels	86.24	329	ePcP	P	11 32 38.5	+0.4
	comp=Z,22nm,1.0s						
DSB	Dublin	86.58	341	P	P	11 32 40.5	+1.1
DAVOX	Davos/Dischmat	86.65	329	LR	LR	12 14 45.9	
	comp=Z,1µm,18.6s,baz=28,slow=38						
F42A	Maple Grove Fa	86.74	32	IAmb	IAmb	11 32 41.6	
	comp=Z,41nm,1.1s						
I40A	Norwalk	87.08	35	IAmb	IAmb	11 32 43.0	
	comp=Z,56nm,1.2s						
TUE	Stuetta	87.11	329	IAmb	IAmb	11 32 53.4	
	comp=Z,70nm,1.9s						
IGLA	Glengowla, Co	87.16	343	P	P	11 32 43.5	+1.3
PH02	Texas Public H	87.28	47	IAmb	IAmb	11 32 44.5	
	comp=Z,50nm,1.2s						
IWEX	Carrickbyrne,	87.47	341	P	P	11 32 44.7	+1.0
MNTX	Cornudas Mount	87.67	52	IAmb	IAmb	11 32 46.9	
	comp=Z,48nm,1.7s						
AMTX	Amarillo	87.79	47	IAmb	IAmb	11 32 47.6	
	comp=Z,53nm,1.1s						
I42A	Draeger Farm,	87.86	34	IAmb	IAmb	11 32 46.9	
	comp=Z,47nm,1.0s						
JFWS	Jewell Farm	88.01	35	IAmb	IAmb	11 32 47.2	
	comp=Z,31nm,0.9s						
FDMO	Fiordimonte	88.19	325	IAmb	IAmb	11 32 57.7	
	comp=Z,53nm,1.1s						
NRCA	Norcia	88.33	325	IAmb	IAmb	11 32 58.2	
	comp=Z,26nm,0.8s						
OK038	West end E0370	88.38	45	IAmb	IAmb	11 32 50.1	
	comp=Z,70nm,1.2s						
SMWD	Samnorwood	88.48	46	IAmb	IAmb	11 32 50.9	
	comp=Z,68nm,1.4s						
INTR	Introdacqua	88.59	324	IAmb	IAmb	11 32 58.7	
	comp=Z,57nm,1.2s						
VAL	Valentia	88.73	343	P	P	11 32 49.3	-0.4
128A	Castleberry Fa	88.86	49	IAmb	IAmb	11 32 52.2	
	comp=Z,21nm,1.5s						
P38A	Dawn	88.90	39	IAmb	IAmb	11 32 52.0	
	comp=Z,69nm,1.2s						
VLDQ	Val d'Or	88.95	25	IAmb	IAmb	11 32 51.2	
	comp=Z,73nm,1.4s						
L42A	Oliver, Polo	88.98	36	IAmb	IAmb	11 32 51.7	
	comp=Z,37nm,0.9s						
TPB06	Permian Basin	89.07	51	IAmb	IAmb	11 32 52.7	
	comp=Z,18nm,1.0s						
DKNS	Dickens	89.08	48	IAmb	IAmb	11 32 53.9	
	comp=Z,29nm,1.0s						
T35A	Sooner Cattle	89.31	43	IAmb	IAmb	11 32 54.2	
	comp=Z,65nm,1.2s						
LPIG	La Paz	89.32	60	LR	LR	12 13 47.4	
	comp=Z,421nm,18.0s,baz=312,slow=36						
N41A	Harden Midland	89.41	37	IAmb	IAmb	11 32 54.3	
	comp=Z,74nm,1.1s						
OK048	Pawnee Station	89.43	44	IAmb	IAmb	11 32 54.8	
	comp=Z,40nm,1.1s						
TPB05	Hovey Rd	89.50	51	IAmb	IAmb	11 32 54.7	
	comp=Z,12nm,0.9s						
WMOK	Wichita Mounta	89.59	46	IAmb	IAmb	11 32 55.6	
	comp=Z,76nm,1.7s						
QUOK	Quay	89.74	44	IAmb	IAmb	11 32 56.2	
	comp=Z,58nm,1.1s						
APMT	Aspermont	89.80	48	IAmb	IAmb	11 32 56.6	
	comp=Z,60nm,1.4s						
OK052	Battle Ridge R	89.81	44	IAmb	IAmb	11 32 56.6	
	comp=Z,88nm,1.4s						
SLBS	Sierra La Lagu	89.84	60	P	P	11 32 56.4	+0.8
SLBS				IAmb	IAmb	11 32 58.1	
	comp=Z,93nm,1.6s						
FNO	Franklin	90.01	45	IAmb	IAmb	11 32 57.1	
	comp=Z,42nm,1.1s						
DEOK	Depew	90.09	44	IAmb	IAmb	11 32 57.9	
	comp=Z,84nm,1.2s						
J47A	Sunmer	90.18	32	IAmb	IAmb	11 32 58.4	
	comp=Z,75nm,1.2s						
ATD	Arta Tunnel	90.28	284	LR	LR	12 19 23.6	
	comp=Z,12nm,18.3s,baz=40,slow=40						
HDIL	Hopedale	90.28	36	IAmb	IAmb	11 32 58.4	
	comp=Z,59nm,1.1s						
TXAR	Lajitas Array	90.35	53	P	P	11 32 58.0	+0.1
	comp=Z,16nm,0.9s,baz=292,slow=3.1,SNR=132						
TXAR				PKKPbc	PKKPbc	11 50 25.6	+0.4
	comp=Z,0.2nm,0.6s,baz=136,slow=3.4,SNR=4.5						
TXAR				LR	LR	12 13 03.6	
	comp=Z,756nm,18.1s,baz=312,slow=35						
	comp=Z,16nm,0.9s						
TXAR	Lajitas Array	90.35	53	P	P	11 32 58.0	+0.1
TUL3	Leonard	90.44	43	IAmb	IAmb	11 32 59.4	
	comp=Z,75nm,1.3s						
S39A	Bolivar	90.45	41	IAmb	IAmb	11 32 58.5	
	comp=Z,30nm,0.9s						
WTFS	Witchita Falls	90.46	46	IAmb	IAmb	11 32 59.4	
	comp=Z,50nm,1.3s						
BUKO	Buck Lake	90.53	28	IAmb	IAmb	11 32 59.4	
	comp=Z,49nm,1.3s						
R40A	Maddies Statio	90.55	40	IAmb	IAmb	11 32 59.4	
	comp=Z,52nm,1.2s						
ABTX	Abilene, Hawle	90.58	48	IAmb	IAmb	11 33 00.3	
	comp=Z,75nm,1.4s						
RLO	Rose Lookout	90.67	43	IAmb	IAmb	11 33 00.4	
	comp=Z,66nm,1.3s						
U38A	Gravette	90.82	42	IAmb	IAmb	11 33 00.8	
	comp=Z,48nm,1.1s						
P43A	Skaggs, Pawnee	90.89	37	IAmb	IAmb	11 33 01.2	
	comp=Z,57nm,1.2s						
HHAR	Hobbs	91.17	42	IAmb	IAmb	11 33 02.2	
	comp=Z,31nm,1.0s						
SADO	Sadowa	91.20	28	LR	LR	12 15 44.6	
	comp=Z,472nm,21.5s,baz=12,slow=37						
CCM	Cathedral Cave	91.25	39	P	P	11 33 01.2	-0.6
CCM	Cathedral Cave	91.25	39	P	P	11 33 01.2	-0.6
CCM				pmax	pmax		
	comp=Z,66nm,1.2s						
MGMO	Mountain Grove	91.41	40	IAmb	IAmb	11 33 03.2	
	comp=Z,45nm,1.0s						
SFIN	Lafayette	91.46	35	IAmb	IAmb	11 33 04.0	
	comp=Z,45nm,1.3s						
TRQ	Mont Tremblant	91.57	24	IAmb	IAmb	11 33 04.3	
	comp=Z,53nm,1.5s						
LMQ	La Malbaie	91.70	21	IAmb	IAmb	11 33 05.1	
	comp=Z,46nm,1.3s						
N47A	Urbana	91.70	34	IAmb	IAmb	11 33 04.7	
	comp=Z,46nm,1.3s						
Q44A	Meyer Farm, Va	91.71	37	IAmb	IAmb	11 33 05.0	
	comp=Z,54nm,1.2s						
FVM	French Village	91.72	39	IAmb	IAmb	11 33 05.1	
	comp=Z,35nm,1.1s						
VAE	Valguarnera	91.82	321	LR	LR	12 19 30.7	
	comp=Z,2µm,18.5s,baz=58,slow=39						
BRDY	Brady	91.91	48	IAmb	IAmb	11 33 06.4	
	comp=Z,48nm,1.2s						
P46A	Rosedale	92.01	36	IAmb	IAmb	11 33 06.5	
	comp=Z,57nm,1.4s						
T42A	Van Buren	92.11	40	IAmb	IAmb	11 33 06.7	
	comp=Z,52nm,1.2s						
DRIO	Del Rio	92.22	51	IAmb	IAmb	11 33 07.7	
	comp=Z,63nm,1.5s						
N49A	Columbus Grove	92.34	33	IAmb	IAmb	11 33 07.4	
	comp=Z,21nm,0.9s						
O48B	Farmland	92.45	34	IAmb	IAmb	11 33 08.1	
	comp=Z,21nm,0.8s						
D62A	Allapoint, All	92.49	20	IAmb	IAmb	11 33 08.9	
	comp=Z,53nm,1.6s						
S44A	Carbondale	92.53	38	IAmb	IAmb	11 33 08.8	
	comp=Z,49nm,1.2s						
SIUC	Southern Illin	92.53	38	IAmb	IAmb	11 33 08.8	
	comp=Z,55nm,1.2s						
PBMO	Poplar Bluff	92.64	39	IAmb	IAmb	11 33 09.4	
	comp=Z,50nm,1.1s						
LCAR	Lake Charles	92.81	40	IAmb	IAmb	11 33 10.0	
	comp=Z,30nm,1.2s						
X40A	Basin Creek Fa	93.11	42	IAmb	IAmb	11 33 11.8	
	comp=Z,39nm,1.3s						
BATG	Bathurst New B	93.12	19	IAmb	IAmb	11 33 11.9	
	comp=Z,25nm,1.0s						
UALR	University of	93.16	42	IAmb	IAmb	11 33 11.9	
	comp=Z,34nm,1.3s						
ACSO	Alum Creek Sta	93.43	33	IAmb	IAmb	11 33 12.8	
	comp=Z,20nm,0.8s						
WCI	Wyandotte Cave	93.55	36	P	P	11 33 11.6	-0.8
WCI				IAmb	IAmb	11 33 13.4	
	comp=Z,31nm,1.2s						
WCI	Wyandotte Cave	93.55	36	P	P	11 33 11.6	-0.8
WCI				pmax	pmax		
	comp=Z,31nm,1.3s						
WLAR	White Oak Lake	93.56	43	IAmb	IAmb	11 33 14.0	
	comp=Z,56nm,1.2s						
PAMR	Moraine State	94.06	30	IAmb	IAmb	11 33 15.9	
	comp=Z,38nm,1.2s						
EF04	Eagle Ford 04	94.12	49	IAmb	IAmb	11 33 16.1	
	comp=Z,35nm,0.9s						
T47A	Sharon Grove	94.14	37	IAmb	IAmb	11 33 16.2	
	comp=Z,25nm,1.0s						
O53A	New Philadelph	94.17	32	IAmb	IAmb	11 33 16.7	
	comp=Z,29nm,1.1s						
Q51A	Peebles	94.26	34	IAmb	IAmb	11 33 16.6	
	comp=Z,26nm,1.0s						
O54A	Avella	94.58	31	IAmb	IAmb	11 33 18.1	
	comp=Z,25nm,1.0s						
FURI	Furi	95.12	285	LR	LR	12 21 30.8	
	comp=Z,473nm,20.1s,baz=24,slow=39						
T50A	Nancy	95.20	36	IAmb	IAmb	11 33 20.8	
	comp=Z,16nm,0.8s						
Q54A	Coxs Mills	95.39	32	IAmb	IAmb	11 33 22.0	
	comp=Z,44nm,1.4s						
ZAIG	Zacatecas	95.53	57	IAmb	IAmb	11 33 24.4	
	comp=Z,34nm,1.3s						
KEST	Kesra	95.72	323	LR	LR	12 22 02.8	
	comp=Z,1µm,19.4s,baz=23,slow=39						
SWET	Sewanee	96.13	37	IAmb	IAmb	11 33 24.1	
	comp=Z,23nm,1.2s						
TKL	Tuckaleechee C	96.81	36	LR	LR	12 23 33.2	
	comp=Z,292nm,18.7s,baz=345,slow=39						
TKL	Tuckaleechee C	96.81	36	IAmb	IAmb	11 33 28.0	
	comp=Z,17nm,1.1s						
M65A	Busby, Falmout	97.00	24	P	P	11 33 28.9	+0.9
	baz=334						
ESDC	Sonseca Array	98.02	334	P	P	11 33 32.5	-0.3
	comp=Z,1.1nm,0.7s,baz=14,slow=4.3,SNR=5.5						
ESDC				LR	LR	12 23 28.3	
	comp=Z,2µm,18.8s,baz=21,slow=39						
	comp=Z,1.1nm,0.7s						
LSZ	Lusaka	117.74	271	PKP	PKPdf	11 38 43.2	-0.1
	comp=Z,4.0nm,0.5s,baz=36,slow=2.8,SNR=5.8						
TORD	Torodi Ar. Bea	117.99	315	PKP	PKPdf	11 38 42.8	-0.8
	comp=Z,2.2nm,0.8s,baz=248,slow=1.4,SNR=11						
TORD				PP	PP	11 39 52.4	-4.8
	comp=Z,4.7nm,1.0s,baz=14,slow=5.4,SNR=6.8						
TORD				PKKPbc	PKKPbc	11 49 02.1	-0.2
	comp=Z,1.1nm,1.0s,baz=222,slow=6.0,SNR=4.6						
LBTB	Lobatse	124.79	263	PKP	PKPdf	11 38 56.2	-0.3
	comp=Z,12nm,0.8s,baz=106,slow=3.0,SNR=9.1						
LBTB	Lobatse	124.79	263		PKPdf	11 38 56.3	-0.2
LBTB	Lobatse	124.79	263	PKIKP	PKPdf	11 38 56.3	-0.2
SDV	Santo Domingo	125.70	41		PKPdf	11 38 55.0	-3.8
QSPA	South Pole Qui	126.08	180	PKP	PKPdf	11 38 57.1	-0.5
	comp=Z,5.6nm,0.6s,baz=271,slow=0.4,SNR=7.5						
QSPA	South Pole Qui	126.08	180		PKPdf	11 38 57.3	-0.4
KGCAE	Kacgae	126.49	267		PKiKP	11 39 00.4	+0.1
BOSA	Boshof	126.68	259	PKP	PKPdf	11 38 59.8	-0.3
	comp=Z,8.9nm,1.1s,baz=78,slow=3.4,SNR=6.4						
ROSC	El Rosal	126.96	47	PKP	PKPdf	11 39 00.9	-0.4
	comp=Z,6.5nm,0.4s,baz=127,slow=4.5,SNR=7.1						
ROSC	El Rosal	126.96	47	PKIKP	PKPdf	11 39 01.0	-0.4
DBIC	Dimbokro	126.96	317	PKP	PKPdf	11 39 00.2	-0.7
	comp=Z,4.0nm,0.7s,baz=141,slow=1.0,SNR=5.6						
DBIC				PP	PP	11 40 59.6	+1.7
	comp=Z,8.0nm,1.0s,baz=14,slow=4.2,SNR=4.3						
TSUM	Tsumeb	128.39	274	PKP	PKPdf	11 39 03.5	-0.1
	comp=Z,3.9nm,0.7s,baz=48,slow=5.1,SNR=5.1						
TSUM	Tsumeb	128.39	274		PKPdf	11 38 59.4	-4.2
NVL	N'lazarevskaya	136.74	202	ePKIKP	PKPdf	11 39 17.0	-0.6
NVL				e		11 41 59.8	
NVL				ePPP	PPP	11 44 58.0	
NVL				e		11 46 28.0	
NVL				eSS	SS	12 00 00.8	-2.3
NVL				eSSS	SSS	12 05 09.5	
NVL				pmax	pmax		
	comp=Z,12nm,0.8s						
NVL				MLR	MLR		
	comp=Z,468nm,20.0s						
ITTB	Itaituba	144.36	31	eP	PKPab	11 39 30.7	-0.4
H03N2	Juan Fernandez	146.71	97	T	T	14 23 28.8	
	baz=291,slow=76,SNR=99						
H03N3	Juan Fernandez	146.72	97	T	T	14 23 28.8	
	baz=291,slow=76,SNR=111						
H03N1	Juan Fernandez	146.72	97	T	T	14 23 33.2	
	baz=291,slow=76,SNR=127						
LPAZ	La Paz	146.83	61	PKPbc	PKPdf	11 39 38.7	+0.7
	comp=Z,29nm,0.8s,baz=337,slow=4.2,SNR=65						
RCBR	Riachuelo	149.55	355	PKP	PKPdf	11 39 40.8	-1.1
	comp=Z,4.9nm,1.0s,baz=89,slow=23,SNR=2.6						
RCBR				PKPbc	PKPbc	11 39 45.9	-0.5
	comp=Z,5.3nm,0.7s,baz=318,slow=9.3,SNR=9.7						
PB06	IPOC Station P	149.72	72		PKPbc	11 39 45.9	-0.8
SIV	San Ignacio	151.34	51	PKP	PKPdf	11 39 43.6	-1.0
	comp=Z,4.6nm,0.9s,baz=107,slow=2.9,SNR=12						
SIV				PKPbc	pPKPdf	11 39 49.5	+0.1
	comp=Z,37nm,1.0s,baz=307,slow=2.0,SNR=53						
MG04	Isla Riesco	151.45	136		PKiKP	11 39 50.6	+0.6
LCO	Las Campanas	151.85	84		PKPbc	11 39 51.6	-0.1
LCO	Las Campanas	151.85	84	PKIKP	PKPbc	11 39 51.6	-0.1
PLCA	Paso Flores	154.47	110	PKPab	PKPab	11 40 12.0	+0.7
	comp=Z,3.1nm,0.7s,baz=203,slow=10,SNR=4.0						
BDFB	Brasilia	157.64	25	PKPab	PKPab	11 40 24.6	-0.7
	comp=Z,6.4nm,0.8s,baz=346,slow=6.2,SNR=6.8						
BDFB	Brasilia	157.64	25		PKPab	11 40 24.9	-0.4
BDFB	Brasilia	157.64	25	PKP2	PKPab	11 40 24.9	-0.4
CPUP	Villa Florida	160.95	64	PKPab	PKPab	11 40 38.7	-0.9
	comp=Z,4.4nm,1.1s,baz=289,slow=3.5,SNR=3.2						

HEL 06 11:29:16.2±0.1, 62°.72N×24°.87E, h0km, ML1.1, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF	Keuruu	0.56	180	smax	smax	11 29 34.1	
	comp=Z,2.3nm,0.2s						
KEF				SG	Sb	11 29 36.1	-1.1
SUF	Sumiainen	0.59	90	PG	Pg	11 29 27.2	-0.2
SUF				smax	smax	11 29 34.9	
	comp=Z,1.4nm,0.2s						
SUF				SG	Sg	11 29 35.0	0.0
VAF	Ylistaro	1.06	289	PG	Pg	11 29 35.7	-0.8
VAF				smax	smax	11 29 48.6	
	comp=Z,1.0nm,0.2s						
FIA0	FINESS Array S	1.40	156	PN	Pn	11 29 42.8	-0.2
	baz=336						
FIA0				smax	smax	11 29 58.5	
	comp=Z,1.1nm,0.2s						
FIA0				SN	Sn	11 30 02.4	+0.3
NIF	Nilsia	1.50	62	smax	smax	11 30 01.0	
	comp=Z,0.9nm,0.2s						
NIF				SB	Sg	11 30 01.9	-2.3
KPF	Kankaanpaa	1.58	237	smax	smax	11 30 03.6	
	comp=Z,0.8nm,0.2s						
KPF				SN	Sb	11 30 06.8	-0.1
OBF0	Syolatti, Pyha	1.81	351	PG	Pn	11 29 49.2	+0.7
OBF0				smax	smax	11 30 10.1	
	comp=Z,2.0nm,0.2s						
OBF0				SG	Sn	11 30 11.2	-0.9
UMAU	Umeaa	2.23	303	SG	Sb	11 30 23.9	-1.3
RAF	Rauma	2.25	222	smax	smax	11 30 22.8	
	comp=Z,0.8nm,0.2s						
RAF				SG	Sb	11 30 26.6	+0.5
RUF	Ruokolahti	2.32	122	PG	Pb	11 29 57.9	-0.9
	baz=301						
RUF				smax	smax	11 30 24.9	
	comp=Z,0.7nm,0.2s						
OUL	Oulu	2.42	10	SB	Sn	11 30 28.2	+1.0
BURU	Burvik	2.44	322	SG	Sb	11 30 29.9	-1.4
RMF	Romuvaara	2.72	54	smax	smax	11 30 36.3	
	comp=Z,1.6nm,0.2s						
RMF				SB	Sn	11 30 36.7	+2.0
JOF	Joensuu	2.96	83	SB	Sb	11 30 43.6	-2.9
KU2	Taivalkoski	3.34	25	SB	Sb	11 30 55.3	-2.1
TOF	Tornio	3.38	356	SN	Sn	11 30 50.8	-0.1
RNF	Rovaniemi	3.94	7	SG	Sb	11 31 16.6	+2.1
MTSE	Matsula	4.05	188	SG	Sb	11 31 21.8	+4.0

*IDC **06** 11:47:25.1±1.1, 11°.35N×85°.68W, h0km, mb3.2/4, mbtmp3.3/5, ML2.6/2, Error ellipse: s-maj=82.4km s-min=15.7km az=54.0*

*CATAC **06** 11:47:28.0±0.4, 11°N±2°×8°6W±°, h21km±3km, M4.3/33, MLv4.3/33, Error ellipse: s-maj=5.6km s-min=3.0km az=51.4, confirmed*

*UCR **06** 11:47:27.7±0.9, 10°.72N×86°.24W, h19km±6km, MW4.4, Presumed earthquake*

ISC 06 11:47:26.7±1.1, 10°.69N±0°.03×86°.26W±0°.04, h18km±3km, n121, σ0s.90/161, mb3.5/3, 15C-25D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELI1	Hacienda Flor	0.70	94	P	Pn	11 47 42.0	+0.4
ELI1				S	Sn	11 47 53.1	+1.1
ELI1	Hacienda Flor	0.70	94	⇑eP	Pn	11 47 42.0	+0.4
ELI1				eS	Sn	11 47 52.8	+0.8
ALIBA	Liberia Airpor	0.71	98	⇓iP	Pn	11 47 42.2	+0.3
ALIBA				eS	Sn	11 47 52.5	+0.2
LCRUZ	La Cruz	0.73	58	⇑eP	Pg	11 47 41.5	+0.4
LCRUZ				eS	Sn	11 47 52.3	-0.5
DELF	Filadelfia	0.74	109	⇓iP	Pg	11 47 42.1	+0.9
DELF				eS	Sn	11 47 52.9	0.0
SACU	Santa Cruz	0.79	122	⇓iP	Pb	11 47 42.6	+0.7
SACU				eS	Sb	11 47 52.3	+0.1
ERIA	Liberia	0.81	94	⇓iP	Pn	11 47 43.5	+0.3
ERIA				eS	Sn	11 47 54.7	-0.1
LAPC	Finca la Perla	0.82	85	⇑iP	Pb	11 47 42.9	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAPC				eS	Sg	11 47 53.8	+0.2
ARIN	Rivas	0.87	29	⇑iP	Pn	11 47 51.7	+7.7
JUD3	Juan Diaz 3	0.88	126	⇓iP	Pb	11 47 43.9	+0.4
GPS3	Bodega del ICE	0.88	86	eP	Pn	11 47 46.6	+2.4
VRLE	La Escondida,	0.89	84	⇑iP	Pb	11 47 44.1	+0.5
GPS2	Hotel Rincn d	0.90	86	⇑iP	Pb	11 47 44.2	+0.5
GPS2				eS	Sg	11 47 56.1	0.0
GPS1	Guardaparques	0.90	85	⇑iP	Pb	11 47 44.3	+0.5
GPS1				eS	Sg	11 47 56.1	-0.1
VORI	VORI	0.91	82	⇑iP	Pb	11 47 44.5	+0.4
VORI				eS	Sg	11 47 56.6	+0.1
BUAI	Buenos Aires	0.93	78	⇑iP	Pg	11 47 45.1	+0.3
BUAI				eS	Sn	11 47 58.0	+0.1
ELVJ	El Viejo (Barb	0.95	104	⇓iP	Pb	11 47 43.5	-1.1
PEJA	Penjamo Buenos	0.95	78	⇑iP	Pg	11 47 45.4	+0.1
PEJA				eS	Sn	11 47 58.4	0.0
PLVR	Palo Verde	0.96	111	⇓iP	Pb	11 47 45.2	+0.3
PLVR				eS	Sn	11 47 59.8	+1.1
BAGA	Bagaces	1.00	99	⇓iP	Pb	11 47 46.1	+0.6
BAGA				eS	Sn	11 47 59.6	+0.2
MORN	Al O del Volca	1.04	35	P	Pn	11 47 46.6	+0.2
MORN				S	Sg	11 48 00.6	-0.1
MESS	Mesas	1.05	87	⇓iP	Pb	11 47 46.6	+0.3
MESS				eS	Sn	11 48 00.4	-0.4
CMARA	Lajas Hojancha	1.06	129	P	Pb	11 47 46.3	-0.3
CMARA				S	Sb	11 48 00.2	0.0
CMARA	Lajas Hojancha	1.06	129	⇓eP	Pb	11 47 46.3	-0.3
HORNC	Hornillas	1.07	89	⇓iP	Pb	11 47 46.8	+0.1
HORNC				eS	Sb	11 48 00.4	+0.2
NADN	Granada	1.08	12	P	Pb	11 47 46.8	+0.1
NADN				S	Sg	11 48 01.9	+0.2
NADN	Granada	1.08	12	⇑eP	Pb	11 47 46.9	+0.1
NADN				eS	Sg	11 48 01.7	-0.1
CUI	Cuipilapa	1.08	92	⇓iP	Pb	11 47 47.2	+0.3
CUI				eS	Sn	11 48 01.5	0.0
VMAR	Armenia, Volca	1.14	84	⇓iP	Pn	11 47 48.3	+0.6
VMAR				eS	Sg	11 48 03.8	+0.2
CNAS	Canas	1.18	103	⇑eP	Pg	11 47 49.8	+0.2
CNAS				eS	Sg	11 48 05.3	+0.3
NYURE	Nandayure	1.21	125	⇓eP	Pn	11 47 48.3	-0.3
TIMP	Tierras Morena	1.23	95	⇓eP	Pn	11 47 49.2	+0.2
UPAL	Upala	1.25	80	P	Pn	11 47 49.7	+0.5
UPAL	Upala	1.25	80	eP	Pn	11 47 49.7	+0.5
UPAL				eS	Sg	11 48 06.3	-0.8
NANN	Nandasmo	1.25	6	P	Pg	11 47 51.0	+0.2
NANN				S	Sg	11 48 07.3	+0.1
SABN	Sabanita	1.26	4	P	Pn	11 47 49.3	-0.1
TENO	El Achiote	1.26	89	⇓eP	Pn	11 47 49.4	-0.1
TENO				eS	Sb	11 48 05.5	-0.5
TILA	Tilaran	1.29	100	⇓eP	Pn	11 47 50.0	+0.2
MASN	Masaya	1.29	5	P	Pb	11 47 50.8	+0.3
MASN	Masaya	1.29	5	⇓eP	Pb	11 47 50.7	+0.3
MAS3	Al N del Volca	1.33	4	P	Pn	11 47 50.9	+0.6
MAS3				S	Sb	11 48 08.8	+1.0
JUNT	Juntas	1.34	107	eP	Pn	11 47 50.8	+0.3
QUEB	Quebradon, Cot	1.34	93	eP	Pn	11 47 51.2	+0.6
JTS	Las Juntas de	1.35	107	Pn	Pn	11 47 50.6	0.0
	120nm,0.3s,baz=317,slow=18,SNR=260						
JTS				Sn	Sb	11 48 08.6	+0.3
	181nm,0.3s,baz=338,slow=15,SNR=12						
JTS				LR	LR	11 48 27.0	
	comp=Z,165nm,21.3s,baz=267,slow=49						
JTS	Las Juntas de	1.35	107	P	Pn	11 47 50.3	-0.3
JTS				S	Sb	11 48 08.7	+0.3
JTS	Las Juntas de	1.35	107	⇓eP	Pn	11 47 50.7	0.0
CHIK	Chiripa	1.35	100	eP	Pb	11 47 51.8	+0.2
CHIK				eS	Sg	11 48 10.8	+0.2
UNAN	Cigeo UNAN	1.41	360	P	Pn	11 47 52.5	+1.0
UNAN				S	Sb	11 48 11.3	+1.1
ABCN	Banco Central	1.42	358	P	Pb	11 47 53.1	+0.4
ABCN				S	Sb	11 48 11.2	+0.7
TISN	Laguna Tiscapa	1.44	360	P	Pn	11 47 51.0	-0.9
MGAN	Managua	1.45	1	P	Pn	11 47 52.7	+0.8
MGAN				S	Sb	11 48 11.9	+0.7
MGAN	Managua	1.45	1	⇓eP	Pn	11 47 53.0	+1.0
AERN	Aeropuerto Man	1.45	4	P	Pn	11 47 52.7	+0.7
AERN				S	Sb	11 48 11.6	+0.4
ALLN	Telcor Managua	1.46	360	P	Pn	11 47 53.2	+1.1
ALLN				S	Sb	11 48 12.1	+0.7
SAPS	Ciudad Sandino	1.48	355	P	Pn	11 47 53.4	+1.0
TABAC	Tabacon	1.48	97	⇓eP	Pn	11 47 53.2	+0.7
APQ2	Apoyeque	1.50	358	P	Pn	11 47 53.6	+1.0
APQ2				S	Sb	11 48 12.7	0.0
COPN	Copaltepe	1.52	348	P	Pn	11 47 53.6	+0.7
COPN	Copaltepe	1.52	348	eP	Pn	11 47 53.2	+0.3
CASO	Castillo	1.52	100	eP	Pn	11 47 53.8	+0.7
ARE1	Arenal 1	1.54	98	⇓eP	Pn	11 47 54.1	+0.9
VARE2	V. Arenal	1.54	98	⇓iP	Pn	11 47 54.1	+0.8
APYN	Apoyeque	1.54	357	P	Pb	11 47 54.7	0.0
AMTN	Mateare	1.54	354	P	Pb	11 47 54.8	0.0
AMTN				S	Sb	11 48 14.2	+0.2
CEDE	Laguna Cedeo	1.55	97	⇓iP	Pn	11 47 54.2	+0.8
CEDE				eS	Sg	11 48 16.5	-0.2
PAQE	Paquera	1.57	123	eP	Pn	11 47 53.8	+0.2
VACR	Volcan Arenal	1.57	98	⇑iP	Pn	11 47 54.7	+1.0
FORC	Fortuna	1.58	98	eP	Pb	11 47 56.6	+1.2
ARZA	Esparza	1.72	114	eP	Pn	11 47 55.7	+0.1
BOAB	BOACO BROADBAN	1.84	18	P	Pn	11 47 58.1	+0.7
BOAB				S	Sb	11 48 21.6	-1.0
CNGA	Al SSO del Vol	1.84	347	P	Pn	11 47 58.6	+1.2
CNGN	Cerro Negro	1.85	347	P	Pn	11 47 58.5	+1.0
CNGN	Cerro Negro	1.85	347	eP	Pn	11 47 58.3	+0.8
RAMO	San Ramon	1.87	109	eP	Pn	11 47 59.0	+1.2
PALD	Palmares	1.91	109	eP	Pn	11 47 59.8	+1.4
NARAN	Naranjo de Ala	1.95	107	eP	Pb	11 48 02.2	+0.5
ATEO	Atenas	1.98	111	eP	Pn	11 48 00.4	+1.1
HERN	Volcan Telica	1.99	344	P	Pn	11 48 01.1	+1.7
HERN				S	Sn	11 48 25.6	+1.7
POLN	Al Sur del Vol	2.02	345	P	Pn	11 48 01.3	+1.4
ARTO	Ro Cuarto	2.04	100	eP	Pn	11 48 00.5	+0.3
VPS8	V Poas	2.05	104	eP	Pn	11 48 01.7	+1.1
CRIN	San Cristobal	2.14	339	P	Pn	11 48 03.0	+1.5
CRIN	San Cristobal	2.14	339	eP	Pn	11 48 03.2	+1.6
BELE	Belen	2.16	109	eP	Pn	11 48 02.6	+0.7
HEME	Heredia, Merce	2.20	108	eP	Pn	11 48 04.4	+2.0
HDC	Heredia	2.22	108	eP	Pb	11 48 05.9	-0.5
ACOS	Acosta	2.25	113	eP	Pn	11 48 04.3	+1.2
MATN	Matagalpa	2.25	8	P	Pn	11 48 02.8	-0.3
PICV	PH. Pirrs	2.29	117	eP	Pn	11 48 04.4	+0.7
AMPA	Desamparados	2.31	110	eP	Pb	11 48 08.4	+0.6
LIMN	Finca el Limon	2.36	358	P	Pn	11 48 05.6	+1.0
TRIO	Tres Rios	2.37	109	eP	Pn	11 48 06.1	+1.3
VICA	Volcano Irazu	2.48	106	eP	Pn	11 48 08.2	+1.6
TRT2	Tortugero	2.49	93	P	Pn	11 48 07.7	+1.4
TRT2	Tortugero	2.49	93	eP	Pn	11 48 06.1	-0.1
PIEC	Cerro El Cedra	2.50	115	eP	Pn	11 48 08.2	+1.4
CARI	Cariari	2.51	97	eP	Pn	11 48 07.6	+1.1
CVTG	V. Turrialba,	2.51	102	eP	Pn	11 48 08.7	+2.1
CVTQ	Turrialba Volc	2.55	105	⇑iP	Pn	11 48 08.7	+1.3
VTR0	Volcan Turrial	2.55	105	eP	Pn	11 48 08.6	+1.0
CVTR	Volcan Turrial	2.55	105	⇓eP	Pn	11 48 08.4	+0.9
VTCV	VTCV, Calle Va	2.59	106	eP	Pn	11 48 09.3	+1.4
ABRB	Las Abras (San	2.59	105	⇑eP	Pn	11 48 09.0	+1.1
CSGN	Cosiguina Volc	2.60	331	P	Pn	11 48 08.7	+0.8
CSGN	Cosiguina Volc	2.60	331	eP	Pn	11 48 09.2	+1.2
VERB	Verbena	2.63	106	eP	Pn	11 48 09.8	+1.4
BUS1	Rivas	2.72	114	eP	Pn	11 48 10.5	+0.6
LCOCO	El Coco	2.73	103	eP	Pn	11 48 11.8	+2.2
EDPE	Pejibaye, P	3.06	120	eP	Pn	11 48 16.0	+1.8
DRK0	Durika	3.29	115	eP	Pn	11 48 16.8	-0.7
LAES	El Progreso Va	3.29	106	eP	Pn	11 48 19.3	+1.9
FIMO	Fila Mora	3.33	120	eP	Pn	11 48 20.9	+3.0
BRU2	Volcan	3.99	118	eP	Pn	11 48 28.1	+0.9
BQTLY	Boquete Panama	4.21	117	eP	Pn	11 48 31.1	+1.0
APG	El Apazote	5.93	317	Pn	Pn	11 48 54.5	+0.7
	baz=186,slow=11,SNR=3.6						
CMIG	Matias Romero	10.51	308	Pn	Pn	11 49 58.3	+1.8
	0.4nm,0.3s,baz=110,slow=12,SNR=2.3						
	1.0nm,0.3s						
TXAR	Lajitas Array	24.66	321	P	P	11 52 47.2	+0.6
	0.9nm,0.5s,baz=132,slow=7.5,SNR=17						
	0.9nm,0.5s						
PDAR	Pinedale Array	37.86	332	P	P	11 54 41.5	-1.3
	0.2nm,0.6s,baz=142,slow=8.4,SNR=1.9						
	0.2nm,0.6s						
YKA	Yellowknife Ar	55.61	345	P	P	11 56 58.7	-2.3
	baz=154,slow=7.6,SNR=1.9						
ILAR	Eielson Array	68.09	336	P	P	11 58 23.8	-1.3
	0.2nm,0.6s,baz=102,slow=6.6,SNR=1.6						
	0.2nm,0.6s						
WRA	Warramunga Arr	139.87	252	PKP	PKPdf	12 06 54.9	+0.2
	0.5nm,0.9s,baz=104,slow=2.2,SNR=2.1						

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*IDC **06** 11:48:30.4±1.1, 36°.23N×141°.75E, h0km, mb3.6/8, mbtmp3.7/11, ML3.4/3, Error ellipse: s-maj=24.5km s-min=18.7km az=94.0*

*JMA **06** 11:48:34.3±0.3, 36°.4N±0°.6×14°2E±°, h45km, MV3.5/35, FAR E OFF IBARAKI PREF*

ISC 06 11:48:33.9±1.0**, 36°.25N**±0°.06×**141°.7E**±0°.1**, h26**km**, n28,** σ**1**s**11**/24**, mb3.6**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.92	276	P	Pn	11 48 49.8	-1.3
JHO	Hitachi	0.99	292	i P	Pn	11 48 50.3	-1.9
ONAJ	Iwakimizuishiy	1.13	319	eP	Pn	11 48 51.6	-2.5
JFK	Kawauchi	1.31	329	P	Pn	11 48 55.9	-0.6
BSO1	Boso 1	1.70	201	P	Pb	11 49 02.4	-1.8
JOTO	OTAMA OYAMA	1.72	320	P	Pn	11 49 01.2	-1.0
BSO3	Boso 3	1.75	215	eP	Pb	11 49 03.6	-1.5
JMM	Marumori	1.78	336	eP	Pn	11 49 02.4	-0.6
JAG	Ashikaga	1.84	276	P	Pn	11 49 03.1	-0.7
JFY	Yanaizu	1.99	306	P	Pn	11 49 05.4	-0.5
JKT	Katashina	2.06	285	P	Pn	11 49 06.6	-0.3
MJAR	Matsushiro Arr	2.84	277	Pn	Pn	11 49 18.0	+0.3
	1.5nm,0.3s,baz=160,slow=4.4,SNR=67						
MJAR				Sn	Sn	11 49 51.5	+0.4
	0.9nm,0.3s,baz=76,slow=15,SNR=4.2						
	7.6nm,0.3s						
JHJ	Hachijo jima 2	3.50	208	Pn	Pn	11 49 27.9	+1.2
	66nm,0.3s,baz=94,slow=23,SNR=8.6						
JHJ				Sn	Sn	11 50 07.2	-0.1
	47nm,0.3s,baz=102,slow=22,SNR=5.5						
	120nm,0.3s						
ASAJ	Asahikawa	7.89	5	Pn	Pn	11 50 25.9	-1.0
	0.4nm,0.3s,baz=222,slow=10,SNR=5.7						
	3.0nm,0.4s						
H11N2	WAKE ISLAND Hy	27.54	120	T	T	12 23 06.4	
	baz=313,slow=75,SNR=7.4						
H11N1	WAKE ISLAND Hy	27.55	120	T	T	12 23 06.7	
	baz=313,slow=75,SNR=7.8						
H11N3	WAKE ISLAND Hy	27.56	120	T	T	12 23 06.2	
	baz=313,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	28.23	122	T	T	12 23 58.5	
	baz=54,slow=75,SNR=8.0						
H11S3	WAKE ISLAND Hy	28.23	122	T	T	12 23 59.5	
	baz=54,slow=75,SNR=9.4						
H11S2	WAKE ISLAND Hy	28.25	122	T	T	12 23 58.2	
	baz=54,slow=75,SNR=9.8						
SONM	Songino Array	28.43	305	P	P	11 54 27.3	+0.7
	1.0nm,0.7s,baz=104,slow=9.9,SNR=5.8						
	1.0nm,0.7s						
CMAR	Chiang Mai Arr	41.54	256	P	P	11 56 20.4	+0.9
	0.4nm,0.3s,baz=64,slow=7.4,SNR=4.7						
	0.4nm,0.3s						
ZALV	Zalesovo Beam	42.63	313	P	P	11 56 28.4	+0.6
	0.6nm,0.5s,baz=101,slow=7.7,SNR=3.8						
	0.6nm,0.5s						
MKAR	Makanchi Array	44.75	303	P	P	11 56 45.6	+0.6
	0.6nm,0.7s,baz=90,slow=9.7,SNR=7.7						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	46.68	309	P	P	11 57 00.3	+0.1
	0.8nm,0.4s,baz=82,slow=7.7,SNR=8.5						
	0.8nm,0.4s						
WRA	Warramunga Arr	56.32	188	P	P	11 58 12.2	-0.3
	0.3nm,0.4s,baz=15,slow=6.8,SNR=3.3						
	0.3nm,0.4s						
ASAR	Alice Springs	60.05	188	P	P	11 58 38.6	0.0
	0.3nm,0.9s,baz=3.3,slow=6.2,SNR=2.0						
	0.3nm,0.9s						
YKA	Yellowknife Ar	64.36	30	P	P	11 59 08.3	+1.2
	0.2nm,0.8s,baz=304,slow=7.7,SNR=5.4						
	0.2nm,0.8s						

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*BEO **06** 11:59:39.8±0.4, 44°.16N×15°.97E, h0km±4km, ML3.0/13*

*VIE **06** 11:59:40.7±0.9, 44°.30N×16°.28E, h10km, mb2.7/13, ml2.6/13, Error ellipse: s-maj=8.0km s-min=7.0km az=21.0 88 km N of Split*

ISC 06 11:59:39.5±1.2**, 44°.22N**±0°.03×**16°.13E**±0°.03**, h2**km±10km**, n52,** σ**1**s**15**/67**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIJV	Kijevo	0.29	138	ePg	Pg	11 59 45.6	+0.5
KIJV				Sg	Sg	11 59 51.2	+2.3
UDBI	Udbina	0.41	319	ePg	Pg	11 59 46.6	-0.7
UDBI				Sg	Sg	11 59 51.9	-0.6
MORI	Morici	0.47	221	ePg	Pg	11 59 46.9	-1.6
MORI				Sg	Sg	11 59 53.6	-1.0
ZIRJ	Zirje	0.67	212	ePg	Pg	11 59 50.4	-1.9
ZIRJ				Sg	Sg	12 00 00.2	-0.7
DUGI	Dugi Otok	0.81	254	ePg	Pg	11 59 52.4	-2.6
DUGI				Sg	Sg	12 00 03.7	-1.7
BLY	Banja Luka	0.92	55	ePg	Pn	11 59 58.3	-1.1
BLY				eSg	Sn	12 00 14.2	+1.0
NVLJ	Novalja	0.97	291	ePg	Pg	11 59 55.7	-2.4
HVAR	Hvar	1.07	167	ePg	Pb	11 59 58.4	-2.2
BOJS	Bojanci	1.43	334	ePg	Pn	12 00 05.3	-1.1
BOJS				eSg	Sn	12 00 23.6	-2.1
BOJS	Bojanci	1.43	334	ePg	Pn	12 00 05.4	-1.0
BOJS				eSg	Sg	12 00 25.9	+0.6
MOSL	Moslavina	1.46	17	ePn	Pn	12 00 05.3	-1.5
OZLJ	Ozalj	1.47	342	ePn	Pn	12 00 06.1	-0.8
LSTV	Lastovo	1.55	159	ePn	Pn	12 00 07.4	-0.7
GBRS	Gornja Briga	1.61	325	i Pg	Pn	12 00 08.8	-0.2
GBRS				i Sg	Sn	12 00 29.3	-1.1
GBRS				IAML		12 00 32.7	
	comp=Z,68nm,0.6s						
RIY	Rijeka	1.61	314	ePn	Pn	12 00 07.9	-1.0
RIY	Rijeka	1.61	314	ePg	Pn	12 00 08.8	-0.1
RIY				eSg	Sn	12 00 30.1	-0.1
CRES	Cresnjevec Ost	1.68	344	i Pn	Pn	12 00 09.1	-0.7
PTJ	Puntijarka	1.69	356	ePn	Pn	12 00 08.5	-1.6
STON	Ston	1.77	139	ePn	Pn	12 00 10.6	-0.4
STON	Ston	1.77	139	ePg	Pn	12 00 11.7	+0.7
STON				eSg	Sg	12 00 36.6	+0.4
VISS	Visnje	1.83	330	ePn	Pn	12 00 11.4	-0.5
VISS				eSn	Sn	12 00 35.6	0.0
BRJN	Brijuni	1.83	293	ePn	Pn	12 00 10.3	-1.6
LOBO	Lobor	1.94	359	ePn	Pn	12 00 12.0	-1.3
CEY	Cerknica	1.94	322	ePg	Pn	12 00 14.0	+0.5
CEY				eSg	Sb	12 00 40.7	+0.5
SKDS	Skadanscina	2.01	312	ePg	Pn	12 00 14.6	+0.2
SKDS				eSg	Sb	12 00 42.5	+0.4
DBRK	Dubrovnik	2.13	136	ePn	Pn	12 00 15.1	-1.0
TREB	Trebinje	2.21	132	ePn	Pb	12 00 19.3	-0.8
BBLS	Lazi&#263i	2.39	97	ePn	Pb	12 00 22.5	-0.7
OBKA	Obir	2.55	335	Pn	Pn	12 00 21.1	-0.7
	comp=Z,14nm,0.6s						
OBKA				Sn	Sn	12 00 54.3	+0.8
	comp=Z,30nm,0.7s						
SOKA	Soboth	2.58	343	ePn	Pn	12 00 21.5	-0.7
	comp=Z,6.7nm,0.4s						
SOKA				eSn	Sn	12 00 52.7	-1.5
	comp=Z,7.9nm,0.5s						
DIVS	Divibare	2.78	91	ePn	Pb	12 00 28.1	-1.8
FRGS	Fruska Gora	2.79	69	ePn	Pb	12 00 28.0	-1.9
IVAS	Ivanjica	2.98	101	ePn	Pn	12 00 29.0	+1.3
MYKA	Terra Mystica	2.98	325	Pg	Pb	12 00 34.2	+0.9
	comp=Z,3.9nm,0.4s						
ARSA	Arzberg	3.06	352	i Pn	Pn	12 00 28.6	-0.3
	comp=Z,5.8nm,0.5s						
ARSA	Arzberg	3.06	352	ePn	Pn	12 00 28.4	-0.5
KBA	Koelnbreinsper	3.46	327	eSn	Sn	12 01 16.3	+0.1
	comp=Z,8.5nm,0.7s						
RONA	Rosalia, Austr	3.48	2	ePn	Pn	12 00 33.9	-0.8
	comp=Z,3.4nm,0.3s						
CONA	Conrad Observa	3.71	357	i Pn	Pn	12 00 37.2	-0.7
	comp=Z,5.0nm,0.5s						
SELS	Selova	3.75	104	ePn	Pn	12 00 40.2	+1.9
MOA	Molln	3.85	341	ePn	Pn	12 00 39.9	+0.1
LESA	Schwarzleotal	4.01	324	i Pn	Pn	12 00 43.2	+1.2
	comp=Z,3.9nm,0.4s						
BOVS	Bovan	4.07	96	ePn	Pn	12 00 43.4	+0.7
MODS	Modra-Piesok	4.23	10	ePN	Pn	12 00 44.8	-0.1
MODS				eSN	Sn	12 01 34.2	-0.6
BARS	Barje	4.37	107	ePn	Pn	12 00 48.1	+1.3
WTTA	Wattenberg	4.38	316	i Pn	Pn	12 00 48.8	+1.7
	comp=Z,2.6nm,0.4s						
ZAGS	Zajecar	4.42	93	ePn	Pn	12 00 48.8	+1.3
WATA	Walderalm	4.46	316	i Pn	Pn	12 00 48.3	+0.2
	comp=Z,4.1nm,0.5s						
SQTA	Sankt Quirin	4.57	313	ePn	Pn	12 00 50.8	+1.1
	comp=Z,1.0nm,0.2s						
MOTA	Moosalm	4.70	313	ePn	Pn	12 00 52.6	+1.0
	comp=Z,1.1nm,0.2s						
FETA	Feichten	4.71	308	ePg	Pb	12 01 05.7	+2.8
	comp=Z,3.5nm,0.6s						
FETA				eSn	Sn	12 01 48.6	+1.7
	comp=Z,4.5nm,0.9s						
FETA				eSg	Sg	12 02 11.5	+0.7
	comp=Z,7.0nm,0.9s						
ZAPS	Zavoj	4.80	99	ePn	Pn	12 00 53.8	+1.0

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*NEIC **06** 12:00:54.6±1.7, 17°.9S±0°.1×179°.1W±0°.1, h601km±7km, mb4.6/48, Error ellipse: s-maj=18.6km s-min=15.3km az=129.0*

*BGR **06** 12:00:54.4, 17°.93S×178°.79W, h600km*

*IDC **06** 12:00:56.4±3.2, 17°.97S×179°.23W, h626km±36km, mb3.4/15, mbtmp4.4/15, Error ellipse: s-maj=21.4km s-min=15.8km az=121.0*

*NOU **06** 12:00:57.6, 17°.87S×179°.02W, h600km, MLv3.5/4, Fiji Islands Region*

ISC 06 12:00:54.2±0.4**, 17°.97S**±0°.09×**179°.16W**±0°.08**, h600**km**, n177,** σ**1**s**26**/172**, mb4.5**/45**, 11C-14D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.42	129	P	P	12 02 08.1	+3.6
TAVE	Taveuni	1.44	330	P	P	12 02 10.3	+3.6
DGTI	Dogotuki	1.97	327	P	P	12 02 11.5	+3.0
MSVF	Nonsavu	2.67	275		P	12 02 13.4	+1.7
MSVF	Nonsavu	2.67	275	P	P	12 02 15.6	+3.9
AFI	Afiamalu	8.16	61	P	P	12 02 53.5	-1.8
NIUE	Niue	8.82	99	P	P	12 03 01.7	+0.2
FUNA	Funafuti	9.52	350	P	P	12 03 08.6	+0.3
BFZ	Birch Farm	22.98	189	P	P	12 05 15.2	+0.8
QRZ	Quartz Range	23.88	196	P	P	12 05 23.6	+1.3
WKZ	Wanaka	28.55	198	P	P	12 06 02.9	-0.4
EIDS	Eidsvold	28.58	250	P	P	12 06 04.1	+0.3
EIDS				IAmb	IAmb	12 06 15.4	
	comp=Z,18nm,1.2s						
ARMA	Armidale	29.30	240	P	P	12 06 11.1	+1.0
ARMA				IAmb	IAmb	12 06 13.9	
	comp=Z,28nm,1.4s						
MLZ	Mavora Lakes	29.31	198	P	P	12 06 10.8	+0.9
WHZ	Wether Hill Ro	29.84	198	P	P	12 06 15.0	+0.6
CTAO	Charters Tower	32.73	261		P	12 06 39.4	0.0
CTAO				IAmb	IAmb	12 06 40.1	
	comp=Z,11nm,0.8s						
PMG	Port Moresby	33.77	280	P	P	12 06 48.2	+0.1
	comp=Z,25nm,0.9s,baz=65,slow=4.7,SNR=9.6						
	comp=Z,25nm,0.9s						
PMG	Port Moresby	33.77	280		P	12 06 49.1	+1.0
COEN	Coen	36.40	271		P	12 07 10.3	+0.4
COEN				IAmb	IAmb	12 07 11.1	
	comp=Z,17nm,0.8s						
TOO	Toolangi	36.58	230	P	P	12 07 11.7	+0.6
TOO				IAmb	IAmb	12 07 12.7	
	comp=Z,6.7nm,0.9s						
STKA	Stephens Creek	37.98	241	P	P	12 07 23.1	+0.6
	comp=Z,14nm,0.8s,baz=95,slow=8.2,SNR=18						
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	37.98	241		P	12 07 23.2	+0.7
INKA	Innaminka	38.06	248		P	12 07 24.1	+0.9
INKA				IAmb	IAmb	12 07 25.0	
	comp=Z,7.3nm,0.8s						
BBOO	Buckleboo	42.76	241	P	P	12 08 00.4	0.0
BBOO				IAmb	IAmb	12 08 01.2	
	comp=Z,20nm,0.7s						
WR8	Warramunga Arr	43.77	260	P	P	12 08 07.9	-0.6
WR8				IAmb	IAmb	12 08 08.4	
	comp=Z,12nm,1.1s						
WB0	Warramunga Arr	43.89	260		P	12 08 08.6	-0.8
WB0				IAmb	IAmb	12 08 09.2	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	43.91	260	P	P	12 08 08.9	-0.7
WRAB				IAmb	IAmb	12 08 09.4	
	comp=Z,9.5nm,0.7s						
WRA	Warramunga Arr	43.92	260	P	P	12 08 08.7	-0.9
	comp=Z,5.9nm,0.5s,baz=93,slow=7.1,SNR=118						
WRA				PcP	PcP	12 09 41.5	-0.5
	comp=Z,2.5nm,0.8s,baz=88,slow=3.8,SNR=6.7						
	comp=Z,5.9nm,0.5s						
WRA	Warramunga Arr	43.92	260		P	12 08 08.5	-1.1
AS31	Alice Springs	44.09	254		P	12 08 10.6	-0.3
AS31				IAmb	IAmb	12 08 11.6	
	comp=Z,20nm,0.7s						
ASAR	Alice Springs	44.09	254	P	P	12 08 10.6	-0.4
	comp=Z,80nm,0.7s,baz=86,slow=8.4,SNR=528						
ASAR				PcP	PcP	12 09 42.1	-0.6
	comp=Z,2.9nm,0.5s,baz=100,slow=4.2,SNR=6.1						
ASAR				S	S	12 13 56.7	-4.6
	comp=Z,1.4nm,0.9s,baz=89,slow=16,SNR=7.5						
ASAR	Alice Springs	44.09	254		P	12 08 10.9	0.0
MTN	Manton Dam	48.09	269		P	12 08 40.2	-0.9
MTN				IAmb	IAmb	12 08 40.9	
	comp=Z,11nm,0.8s						
FORT	Forrest	49.34	245	P	P	12 08 49.5	-0.6
FORT				IAmb	IAmb	12 08 50.1	
	comp=Z,13nm,0.7s						
KNRA	Kununurra	49.78	264	P	P	12 08 53.2	-0.4
KNRA				IAmb	IAmb	12 08 53.6	
	comp=Z,20nm,0.7s						
SOEI	Soe	55.36	270		P	12 09 34.3	+0.9
SOEI				IAmb	IAmb	12 09 35.3	
	comp=Z,36nm,0.7s						
PSA00	Pilbara Seismi	57.21	256	P	P	12 09 45.5	-0.3
MBWA	Marble Bar	57.37	256	P	P	12 09 46.5	-0.5
MBWA				IAmb	IAmb	12 10 29.3	
	comp=Z,25nm,1.2s						
MORW	Morawa	59.81	246	P	P	12 10 02.5	-0.7
MJAR	Matsushiro Arr	67.53	324	P	P	12 10 50.5	-1.6
	comp=Z,2.3nm,0.6s,baz=163,slow=5.6,SNR=6.6						
	comp=Z,2.3nm,0.6s						
MJAR	Matsushiro Arr	67.53	324	P	P	12 10 51.5	-0.5
UGM	Wanagama	68.93	268	P	P	12 11 00.8	-0.2
JKA	Kamikawa-asahi	70.99	332	P	P	12 11 13.8	+1.3
JKA				IAmb	IAmb	12 11 20.9	
	comp=Z,40nm,1.4s						
ASAJ	Asahikawa	70.99	332	P	P	12 11 14.1	+1.7
	comp=Z,2.2nm,0.4s,baz=180,slow=20,SNR=9.7						
	comp=Z,2.2nm,0.4s						
SSLB	Suanglung	71.67	303	P	P	12 11 15.9	-1.1
TPUB	Ta-pu	71.69	303	P	P	12 11 15.9	-1.1
BBJI	Bungbulang	71.79	268		P	12 11 17.1	-0.8
BBJI				IAmb	IAmb	12 11 17.6	
	comp=Z,16nm,0.7s						
QSPA	South Pole Qui	72.08	180	P	P	12 11 19.2	+0.5
	comp=Z,5.7nm,0.7s,baz=82,slow=0.8,SNR=5.6						
	comp=Z,5.7nm,0.7s						
QSPA	South Pole Qui	72.08	180		P	12 11 19.4	+0.7
UNV	Unalaska Valle	72.34	8	P	P	12 11 18.7	-1.3
PETK	Petropavlovsk-	73.56	346	P	P	12 11 26.6	-0.4
	comp=Z,1.8nm,0.6s,baz=124,slow=7.6,SNR=14						
	comp=Z,1.8nm,0.6s						
PETK	Petropavlovsk-	73.56	346	P	P	12 11 27.0	0.0
KSRS	Korea Array	74.28	319	P	P	12 11 31.9	+0.5
	comp=Z,0.8nm,0.7s,baz=132,slow=6.4,SNR=2.9						
	comp=Z,0.8nm,0.7s						
P17K	Kvichak River	79.11	12	P	P	12 11 57.1	0.0
P17K				IAmb	IAmb	12 11 57.4	
	comp=Z,17nm,0.7s						
N15K	Kwethluk River	79.38	10	P	P	12 11 59.0	+0.3
N15K				IAmb	IAmb	12 12 25.3	
	comp=Z,28nm,1.5s						
P18K	Big Mountain,	79.53	12	P	P	12 11 59.1	-0.4
CN2	Changchun	79.64	323	P	P	12 12 00.3	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX	BinXian	79.74	325	⇑P	P	12 12 00.9	+0.1
BNX				pmax	pmax		
	comp=Z,5.0nm,0.7s						
O18K	Koktuh Hills	79.96	12	P	P	12 12 01.6	-0.1
NVAR	Mina Array Bea	79.96	44	P	P	12 12 02.9	+0.4
	comp=Z,1.1nm,0.7s,baz=219,slow=8.1,SNR=8.4						
	comp=Z,1.1nm,0.7s						
M16K	Timber Creek	80.38	10	P	P	12 12 04.8	+1.0
O19K	Port Alsworth	80.45	12	P	P	12 12 03.7	-0.4
O19K				IAmb	IAmb	12 12 04.5	
	comp=Z,21nm,1.2s						
L16K	Owhat River	80.95	9	P	P	12 12 07.2	+0.5
M17K	Holitna River	80.99	10	P	P	12 12 06.9	-0.1
M17K				IAmb	IAmb	12 12 08.9	
	comp=Z,8.8nm,0.8s						
K15K	Wolf Creek Mou	81.20	8		P	12 12 09.1	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
K15K				IAmb	IAmb	12 12 09.7	
	comp=Z,9.0nm,0.7s						
J14K	Nanvaranak Lak	81.39	7	P	P	12 12 09.3	+0.4
LYN	LuoYang	83.31	309	P	P	12 12 20.2	+0.9
LYN				pmax	pmax		
	comp=Z,21nm,0.8s						
ENH	Enshi	83.72	304		P	12 12 21.7	+0.2
ENH				IAmb	IAmb	12 12 22.7	
	comp=Z,15nm,0.9s						
HLID	Hailey	85.14	41	P	P	12 12 28.2	-0.2
ILAR	Eielson Array	86.11	13	P	P	12 12 31.1	-1.0
	comp=Z,0.8nm,0.5s,baz=216,slow=5.2,SNR=27						
	comp=Z,0.8nm,0.5s						
TXAR	Lajitas Array	86.63	58	P	P	12 12 36.6	+1.0
	comp=Z,2.1nm,0.9s,baz=218,slow=5.6,SNR=15						
	comp=Z,2.1nm,0.9s						
PDAR	Pinedale Array	87.89	44	P	P	12 12 41.9	+0.5
	comp=Z,0.6nm,0.6s,baz=228,slow=2.8,SNR=8.7						
	comp=Z,0.6nm,0.6s						
CMAR	Chiang Mai Arr	88.24	290	P	P	12 12 44.1	+0.9
	comp=Z,2.9nm,0.9s,baz=113,slow=3.0,SNR=18						
	comp=Z,2.9nm,0.9s						
CMAR	Chiang Mai Arr	88.24	290		P	12 12 42.7	-0.5
ELIB	Princess Elisa	89.02	187	dP	P	12 12 45.6	-0.4
	comp=Z,8.1nm,0.8s						
LZH	Lanzhou	90.37	308	eP	P	12 12 53.8	+0.9
LZH				pP	PcP	12 13 08.0	+14
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZDM	Lanzhou Array	90.43	308	P	P	12 12 54.0	+0.6
	comp=Z,0.7nm,0.4s,baz=88,slow=8.0,SNR=5.7						
	comp=Z,0.7nm,0.4s						
OK051	E0350 and S346	94.54	53	P	P	12 13 09.1	-2.7
YKA	Yellowknife Ar	94.68	25	P	P	12 13 10.8	-1.0
	comp=Z,0.2nm,0.5s,baz=240,slow=4.7,SNR=5.2						
	comp=Z,0.2nm,0.5s						
ZALV	Zalesovo Beam	107.84	322	PKiKP	PKiKP	12 18 12.3	-1.8
	comp=Z,1.0nm,0.6s,baz=97,slow=2.3,SNR=5.1						
MKAR	Makanchi Array	108.67	314	PKiKP	PKiKP	12 18 14.3	-1.6
	comp=Z,0.8nm,0.5s,baz=128,slow=1.1,SNR=18						
KURBB	Kurchatov Arra	111.45	318	PKiKP	PKiKP	12 18 19.2	-1.8
	comp=Z,0.9nm,0.2s,baz=104,slow=1.7,SNR=7.0						
BVAR	Borovoye Array	116.44	321	PKP	PKPdf	12 18 29.3	-1.2
	comp=Z,2.3nm,0.5s,baz=97,slow=2.8,SNR=11						
SPITS	Spitsbergen Ar	119.28	356	PKP	PKPdf	12 18 34.2	-1.2
	comp=Z,1.7nm,0.7s,baz=69,slow=4.8,SNR=1.3						
ARCES	ARCESS Array B	126.25	350	PKP	PKPdf	12 18 47.8	-1.1
	comp=Z,0.9nm,0.4s,baz=30,slow=1.8,SNR=8.4						
FINES	FINESS Array B	133.05	344	PKP	PKPdf	12 18 59.5	-2.5
	comp=Z,1.2nm,0.6s,baz=48,slow=2.8,SNR=5.8						
HFS	Hagfors	136.88	351	PKhKP	PKPpre	12 19 03.5	
	comp=Z,2.8nm,0.9s,baz=69,slow=8.4,SNR=4.4						
AKASG	Malin Array Be	140.28	332	PKP	PKPdf	12 19 13.9	-1.8
	comp=Z,0.3nm,0.3s,baz=47,slow=2.5,SNR=4.3						
EKA	Eskdalemuir Ar	142.58	4	PKhKP	PKPpre	12 19 15.7	
	comp=Z,1.0nm,0.5s,baz=342,slow=2.8,SNR=4.4						
BNN	Bunyan	143.16	312		PKPab	12 19 19.6	+0.1
LODK	Lodwar	143.23	251		PKPab	12 19 20.5	+0.2
BR131	Keskin Array S	144.32	314		PKPbc	12 19 21.2	-2.2
BRTR	Keskin Array B	144.32	314	PKP	PKPbc	12 19 22.3	-1.1
	comp=Z,5.1nm,0.8s,baz=132,slow=3.0,SNR=12						
BRTR	Keskin Array B	144.32	314		PKPbc	12 19 22.1	-1.3
BURAR	Bucovina Array	144.33	331	⇓P	PKPdf	12 19 23.6	+0.5
KIRS	Kirsehir-Merke	144.40	313	⇑P	PKPdf	12 19 23.1	-0.4
TPGR	Topolog	144.65	325	⇑P	PKPdf	12 19 23.9	+0.3
RETH	Rethem/Aller,	144.67	351	ePKPbc	PKPdf	12 19 23.6	+0.4
	baz=18,slow=2.7						
ONER	Baraj Valea Uz	144.70	329	⇓P	PKPbc	12 19 24.2	+0.1
FLTG	Flechtingen	144.75	349	ePKPbc	PKPdf	12 19 23.2	-0.2
	baz=18,slow=2.7						
VRI	Vrincioaia	144.86	328	⇑P	PKPdf	12 19 22.4	-1.5
ASSE	Asse, Remlinge	145.04	349	ePKPbc	PKPbc	12 19 24.9	0.0
	baz=18,slow=2.7						
TURR	Turia	145.08	329	⇓P	PKPab	12 19 26.9	+0.5
COVR	Voineasa-Covas	145.13	328	⇑P	PKPdf	12 19 25.1	+0.7
OSTC	Ostas	145.24	343	ePKP	PKPdf	12 19 25.1	+0.7
CHVC	Chvalec	145.26	343	ePKP	PKPdf	12 19 23.0	-1.5
IBBN	Ibbenburen	145.31	353	ePKPbc	PKPbc	12 19 25.9	+0.2
	baz=18,slow=2.7						
STEB	Steborice	145.33	341	ePKP	PKPbc	12 19 25.6	-0.3
UPC	Upice	145.34	343	ePKP	PKPdf	12 19 25.0	+0.4
CLL	Collm	145.36	347	i PKPbc	PKPdf	12 19 25.4	+0.9
	comp=Z,25nm,0.8s						
CLL				epPKPdf	pPKPdf	12 21 47.0	+3.7
CLL	Collm	145.36	347	ePKPbc	PKPdf	12 19 25.4	+0.9
	baz=18,slow=2.7						
CLZ	Clausthal	145.37	350	ePKPbc	PKPbc	12 19 25.7	-0.3
	baz=18,slow=2.7						
DPC	Dobruska-Polom	145.40	342	ePKP	PKPbc	12 19 26.4	+0.3
DOPR	Dopca	145.45	329	⇑P	PKPbc	12 19 26.8	+0.5
CEI	Carei	145.48	334	⇓P	PKiKP	12 19 36.6	+7.4
MORC	Moravsky Berou	145.54	341	⇓P	PKPbc	12 19 26.1	-0.4
MORC	Moravsky Berou	145.54	341	ePKP	PKPbc	12 19 26.4	-0.1
BRG	Berggiesshubel	145.55	345	ePKPbc	PKPbc	12 19 26.4	0.0
	baz=18,slow=2.7						
BRG	Berggiesshubel	145.55	345	ePKP	PKPbc	12 19 26.4	0.0
BRG				Amp		12 19 27.2	
	comp=Z,9.4nm,0.9s						
MMAI	Mount Meron Ar	145.58	303	PKPbc	PKPbc	12 19 27.4	+0.2
	comp=Z,3.3nm,0.4s,baz=46,slow=14,SNR=6.5						
PVCC	Panska Ves	145.71	344	ePKP	PKPbc	12 19 26.6	-0.3
GTTG	Gottingen	145.73	350	ePKPbc	PKPbc	12 19 26.6	-0.3
	baz=18,slow=2.7						
MAUC	Maruska	145.81	340	ePKP	PKPdf	12 19 26.3	+0.9
HSKC	Hora Svate Kat	145.92	346	ePKP	PKPdf	12 19 25.7	+0.1
MARR	Marisel-Cluj	145.98	332	⇑P	PKPbc	12 19 27.5	-0.5
VOIR		146.00	329	⇑P	PKPdf	12 19 26.5	+0.6
PRU	Pruhonice	146.21	344	ePKP	PKPbc	12 19 28.0	-0.3
VRAC	Vranov	146.24	341	⇓P	PKPdf	12 19 27.5	+1.4
VRAC	Vranov	146.24	341	ePKP	PKPbc	12 19 28.2	-0.3
ARR	Arges	146.25	329	⇑P	PKPbc	12 19 29.3	+0.6
JAVC	Velka Javorina	146.30	340	ePKP	PKPbc	12 19 29.6	+0.9
KASTN	Kahler Asten	146.30	351	ePKPbc	PKPbc	12 19 27.9	-0.7
	baz=18,slow=2.7						
PLN	Plauen	146.32	347	ePKPbc	PKPbc	12 19 28.3	-0.3
	baz=18,slow=2.7						
TANN	Tannenbergstha	146.32	347	ePKPbc	PKPbc	12 19 28.6	-0.1
	baz=18,slow=2.7						
UBBA	Unterbreizbach	146.42	349	ePKPbc	PKPbc	12 19 28.8	0.0
	baz=18,slow=2.7						
NKC	Novy Kostel	146.49	346	ePKP	PKPdf	12 19 23.3	-3.3
KRUC	Moravsky	146.52	341	ePKP	PKPbc	12 19 29.0	-0.2
MANZ	Manzenberg	146.80	347	ePKPbc	PKPbc	12 19 29.9	0.0
	baz=18,slow=2.7						
ZVC	Zvikov	146.81	344	ePKP	PKPbc	12 19 29.1	-0.9
MODS	Modra-Piesok	146.85	340	ePKP	PKPbc	12 19 30.8	+0.7
SIRR	Siria	146.93	333	⇑P	PKPbc	12 19 30.4	-0.1
ROTZ	Rotzenmuhle	146.98	346	ePKPbc	PKPbc	12 19 30.3	-0.2
	baz=18,slow=2.7						
ZST	Bratislava	147.06	340	ePKP	PKPbc	12 19 29.6	-1.1
BSTI	Sart Tilman	147.24	354	dPKP	PKPbc	12 19 30.9	-0.1
KHC	Kasperske Hory	147.25	344	ePKP	PKPbc	12 19 30.5	-0.7
TNS	Taunus Mts	147.25	351	ePKPbc	PKPbc	12 19 30.9	-0.3
	baz=18,slow=2.7						
CKRC	Cesky Krumlov	147.34	343	ePKP	PKPbc	12 19 31.3	-0.1
BZS	Buzias	147.46	332	⇑P	PKPbc	12 19 30.6	-1.2
GEC2	GERESS Array S	147.48	344	ePKPbc	PKPbc	12 19 31.3	-0.6
	baz=18,slow=2.7						
GERES	GERESS Array B	147.48	344	PKPbc	PKPbc	12 19 31.7	-0.2
	comp=Z,2.6nm,0.5s,baz=27,slow=3.3,SNR=13						
BMRD	Maredsous	147.59	355	dPKP	PKPbc	12 19 31.6	-0.4
CONA	Conrad Observa	147.69	341	ePKiKP	PKPbc	12 19 32.5	0.0
	comp=Z,5.9nm,0.6s						
RCHB	Rochefort	147.70	355	dPKP	PKPbc	12 19 32.0	-0.3
RONA	Rosalia, Austr	147.76	340	ePKiKP	PKPbc	12 19 32.2	-0.4
	comp=Z,5.0nm,0.8s						
DOU	Dourbes	147.81	355	dPKP	PKPbc	12 19 32.3	-0.2
WLF	Walferdange	148.09	353	dPKP	PKPbc	12 19 33.4	+0.1
WLF	Walferdange	148.09	353	ePKPbc	PKPbc	12 19 33.6	+0.3
	baz=18,slow=2.7						
MORH	Mrgy, Hungar	148.21	336	⇓P	PKPdf	12 19 26.6	-2.8
MOA	Molln	148.24	343	ePKiKP	PKPbc	12 19 33.4	-0.3
	comp=Z,8.7nm,1.3s						
BIOA	Bad Ischl, Aus	148.56	343	i PKiKP	PKPbc	12 19 34.2	-0.3
	comp=Z,2.8nm,0.5s						
BOVS	Bovan	148.94	330	⇓P	PKPbc	12 19 33.8	-1.8
LESA	Schwarzleotal	149.06	344	ePKiKP	PKPbc	12 19 35.5	-0.3
	comp=Z,3.0nm,0.4s						
BFO	Black Forest	149.11	350		PKPbc	12 19 34.9	-0.9
BFO	Black Forest	149.11	350	ePKPbc	PKPbc	12 19 35.7	-0.2
	baz=18,slow=2.7						
UBR	Ueberruh	149.41	348	ePKPbc	PKPbc	12 19 36.3	-0.3
	baz=18,slow=2.7						
WATA	Walderalm	149.41	346	ePKiKP	PKPbc	12 19 36.2	-0.5
	comp=Z,10.0nm,0.9s						
RETA	Reutte	149.46	347	ePKiKP	PKPbc	12 19 36.7	-0.1
	comp=Z,6.1nm,0.9s						
WTTA	Wattenberg	149.47	345	ePKiKP	PKPbc	12 19 36.5	-0.4
	comp=Z,11nm,0.7s						
MOTA	Moosalm	149.51	346	ePKiKP	PKPbc	12 19 36.8	-0.2
	comp=Z,15nm,1.1s						
MYKA	Terra Mystica	149.52	342	ePKP	PKPdf	12 19 33.5	+1.8
	comp=Z,4.2nm,0.5s						
SQTA	Sankt Quirin	149.61	346	ePKiKP	PKPbc	12 19 36.9	-0.3
	comp=Z,12nm,0.9s						
ABTA	Abfaltersbach	149.73	344	i PKP	PKPbc	12 19 36.5	-0.9
	comp=Z,9.7nm,0.8s						
DAVA	Damuels	149.83	348	ePKiKP	PKPbc	12 19 37.8	0.0
	comp=Z,11nm,1.2s						
FETA	Feichten	149.90	346	ePKiKP	PKPbc	12 19 37.5	-0.4
	comp=Z,8.6nm,1.0s						
FUORN	Ofenpass-Fuorn	150.38	347		PKPbc	12 19 39.1	-0.1
TUE	Stuetta	150.72	348		PKPbc	12 19 39.2	-0.7
TORD	Torodi Ar. Bea	175.14	190	PKP	PKPdf	12 19 54.4	-2.6
	comp=Z,1.3nm,0.9s,baz=143,slow=1.4,SNR=5.0						

*BEO **06** 12:22:32.0±0.4, 44.°21N×15.°98E, h8km±5km, ML2.8/9*

ISC 06 12:22:30.6±1.2**, 44.°21N**±0.°02×**16.°00E**±0.°02**, h1**km±10km**,**
n39, σ**1.s10**/62**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDBI	Udbina	0.36	332	ePg	Pg	12 22 38.4	+0.9
UDBI				Sg	Sb	12 22 43.9	-2.2
KIJV	Kijevo	0.36	125	ePg	Pg	12 22 37.5	0.0
KIJV				Sg	Sg	12 22 42.8	+0.7
MORI	Morici	0.40	211	ePg	Pg	12 22 38.7	+0.4
MORI				Sg	Sb	12 22 45.5	-1.7
ZIRJ	Zirje	0.61	205	ePg	Pg	12 22 42.2	-0.1
ZIRJ				Sg	Sb	12 22 52.1	-1.1
DUGI	Dugi Otok	0.71	252	ePg	Pg	12 22 44.2	0.0
DUGI				Sg	Sb	12 22 55.5	-0.6
PLIT	Plitvice	0.72	338	ePg	Pg	12 22 44.7	+0.3
PLIT				Sg	Sg	12 22 54.5	+0.7
NVLJ	Novalja	0.88	294	ePg	Pg	12 22 47.2	-0.3
NVLJ				Sg	Sb	12 23 00.7	-0.2
BLY	Banja Luka	1.01	57	ePg	Pg	12 22 49.6	-0.3
BLY				eSg	Sb	12 23 05.8	+1.2
RABC	Rab	1.02	302	ePg	Pb	12 22 50.4	-0.7
HVAR	Hvar	1.08	162	ePg	Pg	12 22 50.0	-1.3
RICI	Ricice	1.09	131	ePg	Pg	12 22 50.3	-1.2
RICI				Sg	Sb	12 23 07.5	+0.5
BOJS	Bojanci	1.40	338	ePg	Pg	12 22 57.4	0.0
BOJS				eSg	Sn	12 23 16.4	+0.1
OZLJ	Ozalj	1.45	345	ePg	Pn	12 22 57.9	-0.1
RIY	Rijeka	1.55	316	ePn	Pn	12 22 59.3	-0.1
RIY	Rijeka	1.55	316	ePg	Pg	12 23 00.5	+0.2
RIY				eSg	Sg	12 23 22.6	+2.2
LSTV	Lastovo	1.58	155	ePn	Pn	12 22 59.2	-0.5
LSTV				Sn	Sn	12 23 20.6	-0.2
PTJ	Puntijarka	1.70	359	ePn	Pn	12 23 00.2	-1.3
BRJN	Brijuni	1.75	294	ePn	Pb	12 23 02.6	-0.9
STON	Ston	1.82	137	ePn	Pn	12 23 02.8	-0.3
STON	Ston	1.82	137	ePg	Pb	12 23 05.4	+0.7
STON				eSg	Sb	12 23 29.1	+1.1
CEY	Cerknica	1.89	324	ePg	Pb	12 23 05.5	-0.5
CEY				eSg	Sg	12 23 31.7	+0.3
SKDS	Skadanscina	1.94	314	ePg	Pb	12 23 06.7	-0.1
SKDS				eSg	Sg	12 23 32.3	-0.7
KALN	Kalnik	1.95	9	ePn	Pn	12 23 03.4	-1.5
DBRK	Dubrovnik	2.20	134	ePn	Pn	12 23 08.9	+0.7
TREB	Trebinje	2.27	130	ePn	Pn	12 23 10.7	+1.4
OBKA	Obir	2.52	337	ePn	Pn	12 23 13.4	+0.7
	4.8nm,0.3s						
OBKA				Sn	Sb	12 23 48.3	+0.2
	11nm,0.3s						
SOKA	Soboth	2.56	345	ePn	Pn	12 23 13.1	-0.2
	2.9nm,0.3s						
FRGS	Fruska Gora	2.88	69	ePn	Pn	12 23 18.0	+0.3
MYKA	Terra Mystica	2.93	326	ePn	Pg	12 23 25.3	-1.5
	2.8nm,0.3s						
MYKA				eSn	Sg	12 24 03.4	-1.5
	5.8nm,0.4s						
IVAS	Ivanjica	3.07	100	ePn	Pn	12 23 20.3	0.0
RONA	Rosalia, Austr	3.50	3	ePn	Pn	12 23 27.1	+0.9
	1.8nm,0.2s						
ABTA	Abfaltersbach	3.53	317	i Pn	Pn	12 23 28.3	+1.7
	0.8nm,0.3s						
ABTA				i Sn	Sn	12 24 10.9	+1.9
	6.1nm,0.6s						
ABTA				Sg	Sg	12 24 26.0	+2.1
	11nm,0.6s						
CONA	Conrad Observa	3.72	359	i Pn	Pn	12 23 28.9	-0.4
	1.8nm,0.2s						
CONA				i Sn	Sn	12 24 12.0	-1.7
	2.8nm,0.5s						
MOA	Molln	3.83	342	ePn	Pn	12 23 32.0	+1.2
	3.0nm,0.3s						
MOA	Molln	3.83	342	ePn	Pn	12 23 30.2	-0.6
LESA	Schwarzleotal	3.96	325	i Pn	Pn	12 23 34.8	+2.2
	2.5nm,0.3s						
LESA				eSn	Sn	12 24 20.1	+0.3
	7.7nm,0.7s						
MODS	Modra-Piesok	4.26	12	ePN	Pn	12 23 36.4	-0.2
MODS				eSN	Sn	12 24 26.3	-0.6
WTTA	Wattenberg	4.32	317	i Pn	Pn	12 23 40.0	+2.5
	1.7nm,0.2s						
WTTA				i Sn	Sn	12 24 30.0	+1.4
	9.5nm,0.7s						
FETA	Feichten	4.64	309	ePn	Pg	12 23 57.8	-1.8
	2.5nm,0.5s						

NOU 06 12:23:08.1, 16.°90S×167.°49E, h38km, MLv4.4/20,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	1.06	141	P	Pn	12 23 27.1	+0.7
DVP	Devils Point	1.06	141	S	Sn	12 23 40.7	+0.8
RTV	Rentapao	1.26	135	P	Pn	12 23 30.2	+1.1
RTV	Rentapao	1.26	135	S	Sn	12 23 45.7	+0.9
MARNC	Mare, Loyalty	4.58	174	P	Pn	12 24 14.4	-0.5
KOUNC	Koumac, New Ca	4.73	219	P	Pn	12 24 17.6	+0.7
KOUNC	Koumac, New Ca	4.73	219	S	Sn	12 25 11.6	+1.0
YATNC	Mamie plateau,	5.16	186	P	Pn	12 24 22.6	-0.3
DZM	Mont Dzumac	5.24	191	P	Pn	12 24 24.5	+0.5
DZM	Mont Dzumac	5.24	191	S	Sn	12 25 23.3	+0.1
ONTNC	Ouen Toro	5.47	190	P	Pn	12 24 27.7	+0.7
OUENC	Ouen Island, N	5.52	186	P	Pn	12 24 29.4	+1.6
PINNC	Pines Island,	5.68	180	P	Pn	12 24 31.4	+1.4

*IDC **06** 12:23:24.9±4.2, 26.°45S×179.°08E, h538km±47km, mb3.0/4, mbtmp4.0/5, Error ellipse: s-maj=42.0km s-min=24.1km az=8.0*

*NEIC **06** 12:23:29.9±1.2, 26.°7S±0.°1×179.°01E±0.°09, h591km±11km, mb4.3/10, Error ellipse: s-maj=20.3km s-min=10.5km az=198.0*

ISC 06 12:23:29.6±0.6**, 26.°70S**±0.°08×**179.°1E**±0.°1**, h600**km**, n54,**
σ**2.s23**/71**, mb4.0**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.65	135	P	P	12 24 52.5	-0.1
WCZ	Waipu Caves	10.07	203	P	P	12 25 50.0	+1.1
KUZ	Kuaotunu	10.42	195	P	P	12 25 52.0	-0.4
MXZ	Matakaoa Point	10.85	183	P	P	12 25 54.7	-2.0
MXZ	Matakaoa Point	10.85	183	P	P	12 25 54.8	-1.9
HAZ	Te Kaha	11.08	186	P	P	12 25 56.7	-2.2
HAZ				S	S	12 28 00.1	-1.5
RUGZ	Raukumara Rang	11.30	186	P	P	12 25 59.6	-1.7
RUGZ				S	S	12 28 03.6	-2.2
PUZ	Puketiti	11.36	183	P	P	12 25 59.6	-2.2
PUZ				S	S	12 28 07.1	+0.2
TOZ	Tahuroa Road	11.42	195	P	P	12 26 02.6	+0.4
TOZ	Tahuroa Road	11.42	195	P	P	12 26 02.7	+0.4
URZ	Urewera	11.65	188	P	P	12 26 01.9	-2.7
	15nm,0.5s,baz=344,slow=2.0,SNR=37						
URZ				S	S	12 28 09.5	-2.5
	7.1nm,0.5s,baz=65,slow=21,SNR=16						
URZ	Urewera	11.65	188	P	P	12 26 01.7	-3.0
URZ				S	S	12 28 10.0	-2.0
MWZ	Matawai	11.68	186	P	P	12 26 02.2	-2.8
MWZ				S	S	12 28 13.4	+0.7
TKGZ	Te Karaka	11.76	185	P	P	12 26 03.1	-2.6
RAGZ	Rawiri	11.85	187	P	P	12 26 03.7	-3.0
MUGZ	Murupara	11.91	189	P	P	12 26 05.4	-1.9
MUGZ				S	S	12 28 17.2	+0.3
RIGZ	Rimuhau	12.03	185	P	P	12 26 07.7	-0.8
RIGZ				S	S	12 28 17.4	-1.7
SNGZ	Shannon Statio	12.14	187	P	P	12 26 08.7	-0.9
MTHZ	Maungataniwha	12.27	188	P	P	12 26 08.7	-2.2
MTHZ				S	S	12 28 24.6	+1.1
NMHZ	Naumai	12.51	188	P	P	12 26 11.6	-1.8
NMHZ				S	S	12 28 34.3	+6.2
BKZ	Black Stump Fm	12.62	189	P	P	12 26 11.9	-2.6
BKZ				S	S	12 28 34.9	+4.8
NIUE	Niue	12.62	55	P	P	12 26 15.1	+0.4
OTVZ	Oturere	12.76	192	P	P	12 26 14.0	-2.0
SNVZ	South Ngauruho	12.79	192	P	P	12 26 14.9	-1.4
MCHZ	McNeill Hill	12.87	188	P	P	12 26 15.5	-1.4
MCHZ				S	S	12 28 43.2	+8.7
KWHZ	Kaweka Forest	12.89	189	P	P	12 26 15.2	-1.9
KWHZ				S	S	12 28 33.6	-1.3
WNVZ	Wahianoa	12.93	192	P	P	12 26 15.0	-2.8
KRHZ	Kereru	13.11	189	P	P	12 26 15.6	-3.8
KRHZ				S	S	12 28 40.3	+1.4
KAHZ	Kahuranaki	13.19	188	P	P	12 26 17.4	-2.8
KAHZ				S	S	12 28 44.3	+3.9
PNHZ	Pukenui	13.40	190	P	P	12 26 19.8	-2.6
PNHZ				S	S	12 28 46.1	+1.9
DVHZ	Dannevirke	13.78	190	P	P	12 26 23.2	-3.0
DVHZ				S	S	12 28 50.2	-0.6
TCW	Tory Channel	15.02	194	P	P	12 26 36.7	-1.1
TUWZ	Tuamarina	15.30	195	P	P	12 26 40.4	+0.1
GVZ	Greta Valley S	16.97	195	P	P	12 26 55.9	+0.2
LTZ	Lake Taylor	16.99	197	P	P	12 26 56.4	+0.5
LTZ				IAmb	IAmb	12 27 15.9	
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	33.02	252	P	P	12 29 17.2	+0.2
COEN	Coen	35.88	284	P	P	12 29 40.0	-1.0
COEN				IAmb	IAmb	12 30 01.4	
	comp=Z,4.6nm,1.2s						
BBOO	Buckleboo	37.68	250	P	P	12 29 55.4	-0.1
BBOO				IAmb	IAmb	12 30 29.5	
	comp=Z,19nm,1.2s						
ASAR	Alice Springs	40.87	264	P	P	12 30 20.6	-0.5
	comp=Z,1.0nm,0.4s,baz=94,slow=7.4,SNR=13						
ASAR				PcP	pwP	12 32 06.7	-0.8
	comp=Z,0.2nm,0.7s,baz=107,slow=2.9,SNR=1.6						
	comp=Z,1.0nm,0.4s						
WR8	Warramunga Arr	41.35	270	P	P	12 30 23.8	-1.2
WR8				IAmb	IAmb	12 30 36.5	
	comp=Z,7.1nm,1.4s						
WRA	Warramunga Arr	41.50	270	P	P	12 30 24.9	-1.3
	comp=Z,0.4nm,0.3s,baz=104,slow=7.7,SNR=7.6						
	comp=Z,0.4nm,0.3s						
WRA	Warramunga Arr	41.50	270	IAmb	IAmb	12 30 25.8	
	comp=Z,0.6nm,1.4s						
WB0	Warramunga Arr	41.51	270	P	P	12 30 25.2	-1.0
FORT	Forrest	44.64	252	P	P	12 30 50.5	+0.1
FORT				IAmb	IAmb	12 31 29.6	
	comp=Z,8.7nm,0.9s						
KNRA	Kununurra	47.95	273	P	P	12 31 14.6	-0.8
KNRA				IAmb	IAmb	12 31 45.9	
	comp=Z,13nm,1.3s						
NVAR	Mina Array Bea	87.31	44	P	P	12 35 14.2	+0.2
	comp=Z,0.3nm,0.6s,baz=234,slow=5.3,SNR=2.5						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	92.58	58	P	P	12 35 39.4	+1.0
	comp=Z,0.4nm,0.8s,baz=184,slow=7.4,SNR=3.9						
	comp=Z,0.4nm,0.8s						
BVAR	Borovoye Array	121.98	318	PKP	PKiKP	12 41 16.9	+0.2
	comp=Z,1.3nm,0.4s,baz=109,slow=2.0,SNR=10.0						
NB2	NORSAR Subarra	144.70	350	PKP	PKPdf	12 41 58.5	+0.1
	comp=Z,2.4nm,0.5s,baz=23,slow=4.0						
NOA	NORSAR Array B	144.70	350	PKP	PKPdf	12 41 58.8	+0.4
	comp=Z,2.2nm,0.6s,baz=21,slow=2.7,SNR=10						
HFS	Hagfors	145.11	347	PKP	PKPdf	12 41 59.4	+0.3
	comp=Z,3.2nm,0.4s,baz=79,slow=3.2,SNR=32						
AKASG	Malin Array Be	146.83	324	PKPbc	PKPbc	12 42 05.1	-0.1
	comp=Z,0.7nm,0.5s,baz=45,slow=3.8,SNR=4.8						
EKA	Eskdalemuir Ar	151.34	3	PKPbc	PKPbc	12 42 15.9	-0.1
	comp=Z,0.4nm,0.4s,baz=346,slow=2.6,SNR=4.9						
TORD	Torodi Ar. Bea	166.30	191	PKPab	PKPab	12 43 35.9	+2.8
	comp=Z,0.6nm,0.7s,baz=190,slow=3.2,SNR=3.6						

*IDC **06** 12:39:34.1±2.5, 6.°05S×149.°06E, h0km, mb3.7/2, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=121.5km s-min=23.1km az=115.0*

ISC 06 12:39:40.9±2.1**, 5.°9S**±0.°2×**148.°5E**±0.°6**, h50**km**, n6,** σ**3.s48**/7**,**
New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.71	201	Pn	Pn	12 40 35.5	-0.2
	27nm,0.5s,baz=37,slow=15,SNR=29						
PMG				Sn	Sn	12 41 17.8	-0.3
	9.1nm,0.3s,baz=18,slow=22,SNR=12						
WRA	Warramunga Arr	19.59	223	P	Pn	12 44 07.0	+0.2
	0.5nm,0.3s,baz=50,slow=11,SNR=28						
	3.4nm,0.6s						
ASAR	Alice Springs	22.55	217	P	P	12 44 37.9	+0.9
	0.6nm,0.5s,baz=54,slow=9.3,SNR=15						
	0.6nm,0.5s						
PETK	Petropavlovsk-	59.33	6	P	P	12 49 38.1	+0.4
	1.9nm,0.9s,baz=161,slow=7.6,SNR=7.6						
	1.9nm,0.9s						
LSTV	Lastovo	123.77	319	ePn	Pdif	12 54 59.8	-6.8
TORD	Torodi Ar. Bea	146.52	285	PKPbc	PKPab	12 59 19.9	+1.0
	0.3nm,0.4s,baz=64,slow=3.3,SNR=4.8						

*PDG **06** 12:59:27.6±0.2, 43.°03N×18.°19E, h11km±2km, MD2.5/2, ML2.4/10, Error ellipse: s-maj=0.7km s-min=0.3km az=90.0*

ISC 06 12:59:27.8±1.3**, 43.°03N**±0.°05×**18.°18E**±0.°04**, h12**km±9km**,**
n12, σ**1.s10**/24**, 4C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRY	Bratogost	0.29	116	⇓iPg	Pg	12 59 32.8	-1.0
BRY				i Sg	Sg	12 59 37.7	-0.1
DBRK	Dubrovnik	0.36	184	ePg	Pg	12 59 35.1	+0.1
DBRK				Sg	Sb	12 59 41.0	-0.8
STON	Ston	0.39	246	ePg	Pg	12 59 35.3	-0.2
STON				Sg	Sg	12 59 41.6	+0.9
NKME	Niksic	0.62	114	⇓iPg	Pg	12 59 39.1	-0.8
NKME				i Sg	Sb	12 59 49.4	0.0
HCY	Herceg Novi	0.62	158	⇓iPg	Pg	12 59 39.4	-0.5
HCY				i Sg	Sb	12 59 49.6	+0.2
BUM	Brajici-Budva	0.90	144	⇓iPg	Pg	12 59 44.5	-0.6
BUM				i Sg	Sn	12 59 58.6	-0.7
PLE	Pljevlja	0.93	71	⇑iPg	Pg	12 59 45.4	-0.4
PLE				i Sg	Sb	12 59 58.7	+0.3
PDG	Podgorica	0.99	127	⇑iPg	Pg	12 59 45.9	-1.0
PDG				i Sg	Sn	13 00 01.9	+0.4
KOME	Kolasin	0.99	100	⇑iPg	Pg	12 59 46.5	-0.5
KOME				i Sg	Sn	13 00 02.2	+0.4
IVA	Berane	1.27	96	⇑iPg	Pn	12 59 50.6	-0.8
IVA				i Sg	Sn	13 00 10.5	+2.1
ULC	Ulcinj	1.32	143	ePg	Pb	12 59 52.3	-0.3
ULC				i Sg	Sg	13 00 12.9	+2.5
PVY	Plav	1.38	108	ePg	Pn	12 59 52.2	-0.8
PVY				i Sg	Sg	13 00 14.6	+2.5

*JSN **06** 13:04:21.5±0.5, 19.°18N×80.°12W, h26km±32km, MW4.4, Presumed earthquake*

*SSNC **06** 13:04:23.6±1.2, 19.°18N×80.°26W, h35km±999km, MD3.4, ML2.8, Presumed earthquake*

ISC 06 13:04:20.1±3.2**, 19.°1N**±0.°1×**80.°3W**±0.°2**, h35**km**, n5,** σ**1.s74**/6**,**
1C-1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGV	Manicaragua	3.03	5	eP	Pn	13 05 06.2	+0.7
MGV				eS	Sn	13 05 39.0	-1.6
MGV				IAML		13 05 39.8	
	comp=N,7.3nm,0.6s						
MGV				IAML		13 05 42.4	
	comp=E,66nm,0.2s						
CCCC	Cccc	3.16	48	eP	Pn	13 05 13.3	+5.9
CCCC				eS	Sn	13 05 53.4	+10
STH	Stony Hill	3.44	106	⇓iP	Pn	13 05 11.3	+0.1
GWJ	Greenwich	3.51	106	⇑iP	Pn	13 05 12.4	+0.1
YAR	Yar	3.91	70	eP	Pn	13 05 19.7	+2.0
YAR				eS	Sn	13 06 00.9	-1.4

WEL 06 13:12:27.8±0.9, 32°S±7°×17°9W±2°0, h12km, M4.2/7, mB4.8/7, ML4.4/9, MLv4.5/7, Mw(mB)4.0/7, Error ellipse: s-maj=27.9km s-min=5.0km az=107.8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.16	11	P	Pn	13 13 15.8	-1.5
GLKZ				S	Sn	13 13 49.8	-5.1
RUGZ	Raukumara Rang	6.35	208	P	Pn	13 14 02.4	+1.1
RUGZ				S	Sn	13 15 14.9	+1.0
TWGZ	Tauwhareparae	6.43	205	P	Pn	13 14 05.4	+3.2
CNGZ	Carnagh Statio	6.63	202	P	Pn	13 14 07.8	+2.9
CNGZ				S	Sn	13 15 19.9	-0.5
TKGZ	Te Karaka	6.71	205	P	Pn	13 14 07.8	+1.8
TKGZ				S	Sn	13 15 19.3	-3.1
MWZ	Matawai	6.73	207	P	Pn	13 14 08.0	+1.6
MWZ				S	Sn	13 15 21.7	-1.4
URZ	Urewera	6.83	210	P	Pn	13 14 08.7	+0.9
URZ				S	Sn	13 15 23.2	-2.3
RAGZ	Rawiri	6.92	207	P	Pn	13 14 11.2	+2.2
RIGZ	Rimuhau	6.98	204	P	Pn	13 14 11.6	+1.8
RIGZ				S	Sn	13 15 26.1	-2.9
OUZ	Omahuta	7.08	244	P	Pn	13 14 15.6	+4.4
PRGZ	Paritu Road	7.13	203	P	Pn	13 14 15.0	+3.1
PRGZ				S	Sn	13 15 30.8	-2.1
SNGZ	Shannon Statio	7.20	206	P	Pn	13 14 14.8	+2.0
SNGZ				S	Sn	13 15 34.0	-0.5

*SSNC **06** 13:19:07.9±2.2, 19°00N×80°27W, h23km±32km, MD3.6, ML3.0, Presumed earthquake*
*JSN **06** 13:19:09.5±1.4, 19°31N×79°90W, h14km±40km, MW4.8, Presumed earthquake*
ISC 06 13:19:05.2±2.6, 18°86N±0°10×80°4W±0°1, h35km, n12, σ2^{s}69/20, 1C-3D, North of Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTDJ	Mount Denham	2.76	103	eP	Pn	13 19 48.5	+1.4
MTDJ				eS	Sn	13 20 17.3	-2.0
MTDJ				IAML		13 20 18.7	
	comp=Z,89nm,0.6s						
MTDJ				IAML		13 20 20.4	
	122nm,0.3s						
MTDJ	Mount Denham	2.76	103	⇑iP	Pn	13 19 48.9	+1.9
MTDJ				⇓iS	Sn	13 20 18.0	-1.3
MGV	Manicaragua	3.25	6	eP	Pn	13 19 53.0	-0.7
MGV				eS	Sn	13 20 27.5	-3.8
MGV				IAML		13 20 29.1	
	comp=N,28nm,0.3s						
CCCC	Cccc	3.38	46	eP	Pn	13 19 59.5	+4.0
CCCC				eS	Sn	13 20 37.2	+2.9
CCCC				IAML		13 20 44.0	
	comp=E,7.0nm,0.3s						
CCCC				IAML		13 20 47.4	
	comp=N,6.0nm,0.4s						
LMGC	Las Mercedes	3.39	69	eP	Pn	13 19 56.1	+0.5
LMGC				eS	Sn	13 20 31.4	-3.3
LMGC				eSg		13 20 33.2	
LMGC				IAML		13 20 33.5	
	comp=N,26nm,0.1s						
LMGC				IAML		13 20 35.1	
	comp=E,23nm,0.1s						
LMGC				IAML		13 20 35.6	
	comp=N,27nm,0.1s						
STH	Stony Hill	3.47	102	⇓iP	Pn	13 19 58.1	+1.4
GWJ	Greenwich	3.54	102	⇓iP	Pn	13 19 59.3	+1.5
CAIB	Caibarien	3.71	13	eP	Pn	13 20 02.3	+2.3
CAIB				eS	Sn	13 20 41.4	-1.1
CAIB				IAML		13 20 43.6	
	comp=E,24nm,0.2s						
CAIB				IAML		13 20 45.7	
	comp=N,19nm,0.3s						
YAR	Yar	4.07	68	eP	Pn	13 20 06.5	+1.6
YAR				eS	Sn	13 20 49.2	-2.1
YAR				IAML		13 20 51.7	
	comp=E,23nm,1.0s						
YAR				IAML		13 20 58.6	
	comp=N,15nm,1.0s						
HLGC	Holguin	4.53	63	iP	Pn	13 20 13.2	+1.9
RCC	Rio Carpintero	4.55	75	iS	Sn	13 20 57.4	-5.9
PINC	Pinares de May	4.61	69	eP	Pn	13 20 14.7	+2.4
PINC				eS	Sn	13 21 04.2	-0.4
PINC				IAML		13 21 12.8	
	comp=N,8.3nm,0.7s						
PINC				IAML		13 21 17.0	
	comp=E,13nm,1.0s						

*IDC **06** 13:20:48.1±1.4, 17°92N×66°94W, h0km, mb3.3/4, mbtmp3.4/5, ML2.9/1, Error ellipse: s-maj=34.1km s-min=10.1km az=174.0*
*NEIC **06** 13:20:49.8±1.2, 17°79N±0°03×66°81W±0°02, h10km±1km, ML3.8/35, ML3.5/5(RSPR), Error ellipse: s-maj=4.9km s-min=2.8km az=7.0*
*RSPR **06** 13:20:50.9, 17°86N×66°86W, h7km, MD3.4/5*
*OSPL **06** 13:20:50.3±0.4, 17°77N×66°85W, h2km±999km, ML3.5, Presumed earthquake*
*SDD **06** 13:20:50.2±0.9, 17°82N×66°88W, h23km±8km, MD3.4, ML3.5, MW3.9, Presumed earthquake*
ISC 06 13:20:49.6±0.9, 17°79N±0°05×66°85W±0°02, h17km±6km, n57, σ1^{s}02/84, mb3.4/4, 7C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.18	351		Pg	13 20 54.1	-0.2
GBPR	Guanica, Bosqu	0.18	351	⇓eP	Pg	13 20 54.1	-0.2
MLPR	Magueyes Islan	0.26	314		Pg	13 20 55.4	0.0
MLPR				Sg	Sg	13 20 59.4	+0.1
MLPR				IAML		13 20 59.7	
	13µm,0.7s						
MLPR				IAML		13 20 59.8	
	9µm,0.4s						
CRPR	Cabo Rojo, PR	0.33	311		Pg	13 20 56.5	0.0
CRPR	Cabo Rojo, PR	0.33	311	IAML		13 21 01.5	
	11µm,0.4s						
CRPR				IAML		13 21 02.1	
	7µm,0.3s						
CRPR	Cabo Rojo, PR	0.33	311	ePg	Pg	13 20 56.6	0.0
CRPR				eSg	Sg	13 21 01.3	0.0
CRPR				IAML		13 21 01.4	
	comp=N,9µm,0.5s						
CRPR	Cabo Rojo, PR	0.33	311	⇑eP	Pg	13 20 56.6	0.0
CRPR				eS	Sg	13 21 01.4	+0.1
CRPR	Cabo Rojo, PR	0.33	311	iP	Pg	13 20 56.5	-0.1
CRPR				eS	Sg	13 21 01.1	-0.2
CRPR				IAML		13 21 01.8	
	comp=Z,7µm,0.2s						
OBIP	Obispado Ponce	0.34	43		Pg	13 20 56.6	-0.3
OBIP				Sg	Sg	13 21 01.5	-0.2
OBIP	Obispado Ponce	0.34	43	⇓eP	Pg	13 20 56.7	-0.1
OBIP				eS	Sg	13 21 01.5	-0.2
OBIP	Obispado Ponce	0.34	43	iP	Pg	13 20 56.7	-0.1
OBIP				eS	Sg	13 21 01.4	-0.3
OBIP				IAML		13 21 01.6	
	comp=Z,4µm,0.6s						
CELP	Cerrillos	0.38	42		Pg	13 20 57.4	-0.2
CELP				Sg	Sg	13 21 02.6	-0.3
LSP	Las Mesas	0.44	330		Pg	13 20 58.4	-0.3
LSP					Sg	13 21 04.6	-0.2
LSP	Las Mesas	0.44	330	⇓eP	Pg	13 20 58.4	-0.3
LSP				eS	Sg	13 21 04.6	-0.2
UUPR	Utuado, UPR, P	0.47	15		Pg	13 20 58.6	-0.7
UUPR				Sg	Sg	13 21 04.2	-1.5
PRSN	Puerto Rico Se	0.51	327		Pg	13 20 59.4	-0.4
PRSN				IAML		13 21 07.0	
	comp=Z,11µm,0.2s						
PRSN				IAML		13 21 10.0	
	comp=Z,13µm,0.3s						
PRSN	Puerto Rico Se	0.51	327		Sg	13 21 06.3	-0.4
PRSN	Puerto Rico Se	0.51	327	ePg	Pg	13 20 59.4	-0.4
PRSN				eSg	Sg	13 21 06.3	-0.4
PRSN				IAML		13 21 10.0	
	comp=N,8µm,0.3s						
PRSN	Puerto Rico Se	0.51	327	⇑eP	Pg	13 20 59.4	-0.4
PRSN				eS	Sg	13 21 06.3	-0.4
ECPR	Experimental S	0.70	41		Pb	13 21 02.5	-0.8
ECPR				Sg	Sb	13 21 12.0	-0.7
ECPR				IAML		13 21 13.7	
	comp=N,6µm,0.2s						
ECPR				IAML		13 21 15.0	
	comp=N,5µm,0.2s						
ECPR	Experimental S	0.70	41	⇑eP	Pb	13 21 02.6	-0.8
ECPR				eS	Sb	13 21 12.1	-0.6
AGPR	Aguadilla, PR	0.72	340		Pb	13 21 02.9	-0.8
AGPR				Sg	Sb	13 21 12.3	-0.9
AGPR				IAML		13 21 15.2	
	comp=N,5µm,0.5s						
AGPR	Aguadilla, PR	0.72	340	ePg	Pb	13 21 02.9	-0.8
AGPR				eSg	Sb	13 21 12.0	-1.2
AGPR				IAML		13 21 15.1	
	comp=N,4µm,0.3s						
AGPR	Aguadilla, PR	0.72	340	⇓eP	Pb	13 21 03.0	-0.7
AGPR				eS	Sb	13 21 12.1	-1.2
SJG	San Juan	0.74	64	Pg	Pb	13 21 03.6	-0.4
	comp=N,144nm,0.3s,baz=257,slow=16,SNR=74						
SJG				Lg	Lg	13 21 13.6	
	comp=N,774nm,0.3s,baz=42,slow=18,SNR=27						
SJG	San Juan	0.74	64		Pb	13 21 03.6	-0.4
SJG				IAML		13 21 16.7	
	comp=N,3µm,0.5s						
SJG				IAML		13 21 16.9	
	comp=N,3µm,0.4s						
SJG	San Juan	0.74	64	ePg	Pb	13 21 03.6	-0.4
SJG				eSg	Sg	13 21 14.2	+0.3
SJG	San Juan	0.74	64	⇑eP	Pb	13 21 03.7	-0.3
SJG				eS	Sg	13 21 14.8	+0.9
SJG	San Juan	0.74	64	iP	Pb	13 21 03.6	-0.4
SJG				eS	Sg	13 21 13.9	0.0
SJG				IAML		13 21 16.7	
	comp=Z,2µm,0.3s						
EMPR	Esperanza - Ma	0.75	24		Pb	13 21 03.8	-0.3
EMPR					Sb	13 21 14.1	0.0
EMPR	Esperanza - Ma	0.75	24	⇑eP	Pb	13 21 03.8	-0.3
EMPR				eS	Sb	13 21 14.1	0.0
PDPR	Patillas Dam,	0.82	74		Pb	13 21 05.3	-0.1
PDPR				IAML		13 21 19.6	
	comp=Z,3µm,0.7s						
IDE	Isla Desecheo	0.84	315		Pb	13 21 05.2	-0.6
IDE	Isla Desecheo	0.84	315	⇑eP	Pb	13 21 05.2	-0.6
GCPR	Guaynabo City	0.89	55		Pb	13 21 05.8	-0.9
GCPR	Guaynabo City	0.89	55		Sb	13 21 17.9	-0.4
GCPR	Guaynabo City	0.89	55	⇓eP	Pb	13 21 06.1	-0.6
GCPR				eS	Sb	13 21 17.9	-0.4
HUMP	Col San Antoni	1.01	70		Pb	13 21 08.2	-0.4
HUMP				IAML		13 21 25.3	
	comp=Z,2µm,0.2s						
HUMP				IAML		13 21 25.7	
	comp=Z,2µm,0.4s						
HUMP	Col San Antoni	1.01	70		Sg	13 21 22.2	-0.4
HUMP	Col San Antoni	1.01	70	⇑eP	Pb	13 21 08.3	-0.4
HUMP				eS	Sg	13 21 22.2	-0.4
CUPR	Culebra, Puert	1.58	71		Pb	13 21 17.9	-0.4
PCDR	Punta Cana, DR	1.62	296	ePg	Pn	13 21 17.9	+0.4
PCDR				eSg	Sn	13 21 37.2	-0.7
PCDR				IAML		13 21 53.6	
	comp=N,520nm,1.8s						
DR12	Loma Pena Alta	2.60	293		Pn	13 21 32.7	+1.7
HATOM	Hato Mayor del	2.60	293	ePg	Pn	13 21 32.5	+1.6
HATOM				eSg	Sn	13 22 04.3	+2.1
HATOM				IAML		13 22 22.5	
	comp=N,97nm,1.0s						
BANI	BANI	3.39	281	Pn	Pn	13 21 42.7	+0.8
SMRT	St. Maarten	3.60	85		Pn	13 21 45.1	+0.4
SC01	Santiago de lo	4.02	294	Pn	Pn	13 21 52.6	+2.2
SDDR	Presa de Saban	4.38	286		Pn	13 21 57.0	+1.7
GDHS	Morne Mazeau,	5.09	106	Pn	Pn	13 22 05.2	-0.1
GDHS				IAML		13 23 08.3	
	comp=N,119nm,0.5s						
BIM	Bigot	6.44	120	Pn	Pn	13 22 22.7	-1.0
MPOM	Morne Pois Mar	6.65	119	Pn	Pn	13 22 27.2	+0.6
SDV	Santo Domingo	9.59	203	Pn	Pn	13 23 08.5	+1.4
	comp=N,1.2nm,0.3s,baz=87,slow=11,SNR=6.0						
SDV				Sn	Sn	13 24 48.3	-6.2
	comp=N,0.4nm,0.3s,baz=341,slow=20,SNR=1.6						
	comp=N,3.0nm,0.3s						
SDV	Santo Domingo	9.59	203	Pn	Pn	13 23 08.9	+1.8
TXAR	Lajitas Array	35.51	296	P	P	13 27 46.7	+0.9
	comp=N,0.2nm,0.5s,baz=107,slow=9.6,SNR=4.3						
	comp=N,0.2nm,0.5s						
YKA	Yellowknife Ar	55.50	335	P	P	13 30 23.9	+0.5
	comp=N,0.1nm,0.4s,baz=111,slow=7.1,SNR=3.8						
	comp=N,0.1nm,0.4s						
ESDC	Sonseca Array	58.11	54	P	P	13 30 43.2	+0.8
	comp=N,0.4nm,0.7s,baz=267,slow=7.4,SNR=4.9						
	comp=N,0.4nm,0.7s						
ILAR	Eielson Array	69.82	333	P	P	13 31 58.4	-0.5
	comp=N,0.2nm,0.6s,baz=87,slow=4.5,SNR=4.8						
	comp=N,0.2nm,0.6s						

*IDC **06** 13:23:03.5±7.8, 19°60S×178°17W, h557km±79km, mb2.8/5, mbtmp3.7/5, Error ellipse: s-maj=104.4km s-min=28.5km az=148.0*
ISC 06 13:23:02.5±1.8, 19°6S±0°7×178°2W±0°4, h550km, n8, σ1^{s}17/10, mb3.3/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.58	261	P	P	13 30 26.1	-0.2
	0.2nm,0.3s,baz=92,slow=6.0,SNR=7.0						
WRA				PcP	PcP	13 31 58.1	+0.7
	0.3nm,0.6s,baz=96,slow=3.1,SNR=2.1						
	0.2nm,0.3s						
ASAR	Alice Springs	44.58	256	P	P	13 30 26.7	+0.5
	0.6nm,0.6s,baz=102,slow=7.8,SNR=7.7						
ASAR				PcP	PcP	13 31 58.0	+0.7
	0.4nm,0.4s,baz=102,slow=3.9,SNR=6.1						
	0.6nm,0.6s						
TXAR	Lajitas Array	86.71	57	P	P	13 34 49.0	+0.2
	0.4nm,0.7s,baz=237,slow=4.0,SNR=3.6						
	0.4nm,0.7s						
ILAR	Eielson Array	87.49	13	P	P	13 34 52.0	+0.7
	0.5nm,0.4s,baz=219,slow=5.5,SNR=17						
	0.5nm,0.4s						
PDAR	Pinedale Array	88.43	43	P	P	13 34 56.7	+0.1
	0.3nm,0.6s,baz=236,slow=3.8,SNR=4.1						
	0.3nm,0.6s						
BVAR	Borovoye Array	118.31	320	PKP	PKPdf	13 40 46.8	-0.6
	0.4nm,0.4s,baz=90,slow=1.5,SNR=3.8						
AKASG	Malin Array Be	142.17	332	PKP	PKPdf	13 41 29.5	-2.7
	0.7nm,0.3s,baz=44,slow=4.3,SNR=6.3						
GERES	GERESS Array B	149.31	345	PKPbc	PKPbc	13 41 49.9	+0.4
	0.7nm,0.8s,baz=17,slow=1.0,SNR=2.8						

*BJI **06** 13:39:56.6, 4°85N×126°69E, h10km, mB5.9/73, mb5.8/90, Ms5.9, Ms7 5.7/98*
*MOS **06** 13:40:03.1±0.9, 5°51N×126°36E, h16km, mb6.2/78, MS5.6/61, Error ellipse: s-maj=7.5km s-min=3.8km az=115.2*
*ISC-PP **06** 13:40:05, 5°45N×126°57E, h26km, Mwppsm6.3, Moment Tensor Solution. s43 Moment tensor: Scale 10^{18}Nm; M_{rr}0.10±.17; $M_{\theta\theta}$-0.38±.39; $M_{\phi\phi}$-0.35±.20; $M_{r\theta}$0.43±.17; $M_{\theta\phi}$-0.01±.22; $M_{\phi r}$-0.42±.15; Fault plane solution: $M_0$3.89000×10^{18} NP1:ϕ_s78.90000°, δ71.80000°, λ126.90000°. NP2:ϕ_s191.50000°, δ40.50000°, λ28.80000°.*
*NEIC **06** 13:40:05.8±2.4, 5°45N±0°06×126°57E±0°04, h19km±1km, mb5.8/335, Ms_20 5.8/542, Mwb5.9/95, Mww6.0/45 Error ellipse: s-maj=9.9km s-min=6.3km az=200.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}5.27; $M_{\theta\theta}$0.71; $M_{\phi\phi}$-5.98; $M_{r\theta}$4.01; $M_{\theta\phi}$-0.10; $M_{\phi r}$4.85; Fault plane solution: $M_0$8.47000×10^{17} NP1:ϕ_s27.25000°, δ70.30000°, λ110.56000°. NP2:ϕ_s159.21000°, δ28.18000°, λ45.57000°. Principal axes: T 8.8139, Plg60.0000°, Azm327.0000°; N -0.7465, Plg19.0000°, Azm200.0000°; P -8.0674, Plg23.0000°, Azm102.0000°;*
*NEIC **06** 13:40:06.9, 5°45N×126°51E, h22km*
*NEIC **06** 13:40:06.6, 5°44N×126°51E, h21km*
*NEIC **06** 13:40:06.9, 5°35N×127°01E, h22km, Moment Tensor Solution. Duration: 5^{s}1 Moment tensor: Scale 10^{18}Nm; M_{rr}1.14; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$-1.14; $M_{r\theta}$0.16; $M_{\theta\phi}$0.07; $M_{\phi r}$0.70; Fault plane solution: $M_0$1.35000×10^{18} NP1: ϕ_s168.41000°, δ29.88000°, λ75.61000°. NP2:ϕ_s4.89000°, δ61.15000°, λ98.13000°. Principal axes: T 1.3616, Plg73.0000°, Azm294.0000°; N -0.0249, Plg7.0000°, Azm181.0000°; P -1.3367, Plg16.0000°, Azm89.0000°;*
*IDC **06** 13:40:06.5±1.5, 5°43N×126°38E, h26km±9km, mb5.4/34, mbtmp5.5/38, ML5.0/4, MS5.5/68 Error ellipse: s-maj=15.8km s-min=8.5km az=79.0*
*GFZ **06** 13:40:07.5, 5°51N×126°50E, h28km, MW6.1, Moment Tensor Solution. s176 Moment tensor: M_{rr}0.62; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-0.89; $M_{r\theta}$0.39; $M_{\theta\phi}$0.01; $M_{\phi r}$1.23; Fault plane solution: NP1:ϕ_s155.00000°, δ19.00000°, λ51.00000°. NP2:ϕ_s16.00000°, δ76.00000°, λ102.00000°. Principal axes: T 1.4200, Plg58.0000°, Azm302.0000°; N 0.1800, Plg12.0000°, Azm193.0000°; P -1.5900, Plg30.0000°, Azm97.0000°;*
*DJA **06** 13:40:08.5±0.3, 6°N±2°×12°7E±°, h36km±3km, M6.0/207, mB6.3/192, mb5.9/207, MLv6.3/19, Mw6.1/92, Mw(mB)6.0/192, MwMwp5.8/186, Mwp5.9/186*
*GCMT **06** 13:40:09.8±0.1, 5°41N×126°58E, h29km, MW6.1/159, Moment Tensor Solution. s153,c338; s159,c557; Duration: 2^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}1.23±.01; $M_{\theta\theta}$0.23±.01; $M_{\phi\phi}$-1.46±.01; $M_{r\theta}$0.52±.01; $M_{\theta\phi}$-0.07±.01; $M_{\phi r}$1.05±.02; Best double couple: $M_0$1.79300×10^{18} NP1:ϕ_s164.00000°, δ28.00000°, λ59.00000°. NP2:ϕ_s19.00000°, δ66.00000°, λ106.00000°. Principal axes: T 1.7360, Plg65.0000°, Azm316.0000°; N 0.1180, Plg14.0000°, Azm192.0000°; P -1.8490, Plg20.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*PTWC **06** 13:40:10, 5°50N×126°60E, h42km, Mwp6.0/13*
ISC 06 13:40:08.2±0.3, 5°44N±0°02×126°50E±0°03, h41km±2km, h42km:pP-P, n1772, σ1^{s}80/1638, mb5.8/372, MS5.8/412, 102C-96D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.86	331	Pn	Pn	13 40 36.1	-1.5
	928nm,0.3s,baz=167,slow=1.6,SNR=135						
DAV				Sn	Sn	13 41 00.9	+0.9
	3µm,0.3s,baz=177,slow=19,SNR=10						
DAV				LR	LR	13 41 37.5	
	comp=Z,452µm,18.2s,baz=152,slow=50						
DAV	Davao City (W)	1.86	331		Pn	13 40 37.6	0.0
DAV	Davao City (W)	1.86	331	P	Pn	13 40 39.8	+2.1
DAV	Davao City (W)	1.86	331	P	Pn	13 40 42.2	+4.5
DAV				S	Sn	13 41 06.5	+6.5
DAV	Davao City (W)	1.86	331	P	Pn	13 40 38.9	+1.2
DAV	Davao City (W)	1.86	331	⇓P	Pn	13 40 38.7	+1.0
DAV	Davao City (W)	1.86	331	P	Pn	13 40 38.9	+1.2
DAV	Davao City (W)	1.86	331	P	Pn	13 40 38.0	+0.3
SGSI	Sangihe	1.99	209	P	Pn	13 40 38.9	-0.5
MNI	Manado	4.30	203	P	Pn	13 41 11.5	+0.3
TNTI	Ternate	4.71	169		Pn	13 41 16.5	-0.4
TNTI	Ternate	4.71	169	P	Pn	13 41 20.5	+3.6
TNTI	Ternate	4.71	169	P	Pn	13 41 18.6	+1.7
TNTI	Ternate	4.71	169	⇓P	Pn	13 41 17.8	+1.0
TNTI	Ternate	4.71	169	P	Pn	13 41 17.7	+0.8
MRSI	Marisa	6.71	223	P	Pn	13 41 45.4	+1.2
TOLI2	Tolitoli	7.14	233		Pn	13 41 48.9	-1.3
TOLI2	Tolitoli	7.14	233	P	Pn	13 41 49.4	-0.8
LUWI	Luwuk	7.43	210	P	Pn	13 41 56.4	+2.2
LUWI	Luwuk	7.43	210		Pn	13 41 56.6	+2.4
LUWI	Luwuk	7.43	210	P	Pn	13 41 57.1	+2.9
LUWI	Luwuk	7.43	210	⇓P	Pn	13 41 56.6	+2.4
LUWI	Luwuk	7.43	210	P	Pn	13 41 57.8	+3.6
SANI	Sanana	7.45	184	P	Pn	13 41 52.6	-1.9
SANI				S	Sn	13 43 14.5	-3.3
SANI	Sanana	7.45	184	P	Pn	13 41 53.3	-1.2
SANI	Sanana	7.45	184	⇑P	Pn	13 41 52.6	-1.9
SANI	Sanana	7.45	184	P	Pn	13 41 53.4	-1.1
	5.5nm37µm11µm935nm,0.7s						
SWI	Sorong	7.86	143	P	Pn	13 42 00.3	+0.2
	12µm572nm,1.3s						
SIJI	Sorong	7.87	143	Pn	Pn	13 42 00.7	+0.5
	29nm,0.3s,baz=332,slow=15,SNR=29						
SIJI				Sn	Sn	13 43 26.1	-1.9
	11nm,0.3s,baz=145,slow=22,SNR=6.9						
SIJI				ScP	ScP	13 52 07.2	+1.4
	24nm,1.1s,baz=272,slow=2.9,SNR=4.9						
	84nm,0.4s						
SIJI	Sorong	7.87	143	P	Pn	13 41 59.8	-0.4
	356nm,1.0s						
APSI	Ampana	7.95	218	P	Pn	13 42 04.6	+3.3
MYLDM	Lahad Datu	7.97	269		Pn	13 42 04.3	+2.7
MYLDM	Lahad Datu	7.97	269	P	Pn	13 42 05.4	+3.8
MYLDM	Lahad Datu	7.97	269	P	Pn	13 42 04.3	+2.7
MYLDM	Lahad Datu	7.97	269	⇑P	Pn	13 42 04.0	+2.4
MYLDM	Lahad Datu	7.97	269	P	Pn	13 42 02.6	+1.0
	37µm2µm,1.7s						
MPSI	Mapaga	8.31	233	P	Pn	13 42 05.5	-0.8
	471nm,1.1s						
NLAI	Namlea	8.64	176	P	Pn	13 42 09.7	-1.1
	37µm15µm1µm,0.9s						
KRAI	Karang Ratu	8.90	168	P	Pn	13 42 15.1	+0.7
	64µm13µm600nm,1.1s						
MSAI	Masohi	9.05	164	P	Pn	13 42 19.0	+2.5
	68µm25µm992nm,1.4s						
TARAI	Tarakan	9.14	257	P	Pn	13 42 20.2	+2.5
	23µm471nm,0.8s						
PCI	Palu	9.16	227	P	Pn	13 42 19.1	+1.1
	12µm1µm,1.1s						
AAI	Ambon	9.22	169	P	Pn	13 42 19.2	+0.5
	44µm10µm953nm,0.8s						
MWPI	Manokwari, Pap	9.83	130	P	Pn	13 42 29.6	+2.4
	19µm687nm,0.9s						
FAKI	Fak Fak	10.09	145		Pn	13 42 31.4	+0.7
FAKI	Fak Fak	10.09	145	P	Pn	13 42 30.4	-0.3
FAKI	Fak Fak	10.09	145	P	Pn	13 42 32.3	+1.6
FAKI	Fak Fak	10.09	145	⇓P	Pn	13 42 30.2	-0.5
FAKI	Fak Fak	10.09	145	P	Pn	13 42 31.4	+0.7
	9µm518nm,1.5s						
TGY	Tagaytay City	10.21	328	Pn	Pn	13 42 36.6	+4.3
	86nm,0.3s,baz=195,slow=15,SNR=14						
TGY				LR	LR	13 47 02.9	
	comp=Z,25µm,20.3s,baz=160,slow=41						
KKM	Kota Kinabalu	10.25	274		Pn	13 42 36.8	+3.8
KKM	Kota Kinabalu	10.25	274	P	Pn	13 42 34.8	+1.8
KKM	Kota Kinabalu	10.25	274	P	Pn	13 42 37.2	+4.2
KKM	Kota Kinabalu	10.25	274	⇓P	Pn	13 42 36.2	+3.2
KKM	Kota Kinabalu	10.25	274	P	Pn	13 42 36.4	+3.4
	16µm619nm,1.2s						
RKPI	Ransiki, Papua	10.32	132	P	Pn	13 42 35.7	+1.9
	22µm567nm,1.8s						
BNDI	Bandanaira	10.46	161	P	Pn	13 42 35.4	-0.3
BNDI	Bandanaira	10.46	161	P	Pn	13 42 37.6	+1.9
	44µm29µm1µm,2.1s						
KKSI	Kolaka, Sulawe	10.70	207	P	Pn	13 42 41.5	+2.5
	26µm8µm547nm,1.2s						
TTSI	Tana Toraja	10.75	219	P	Pn	13 42 41.6	+1.9
	39µm15µm996nm,1.8s						
MMSI	Mamuju	11.07	223	P	Pn	13 42 45.8	+1.6
	49µm8µm597nm,1.9s						
SPSI	Sidrap Palu	11.51	216	P	Pn	13 42 52.6	+2.6
	34µm8µm276nm,0.7s						
KMPI	Kaimana, Papua	11.55	141	P	Pn	13 42 51.0	+0.3
	64µm17µm557nm,1.2s						
BAKI	Biak	11.64	124	P	Pn	13 42 53.1	+1.2
PMSI	Majene	11.67	221	P	Pn	13 42 55.2	+2.9
	39µm24µm884nm,1.9s						
BKB	Balikpapan	11.67	236		Pn	13 42 52.3	0.0
BKB	Balikpapan	11.67	236	P	Pn	13 42 55.0	+2.7
BKB	Balikpapan	11.67	236	⇑P	Pn	13 42 55.0	+2.7
BKB	Balikpapan	11.67	236	P	Pn	13 42 55.8	+3.5
	15µm929nm,1.2s						
SRPI	Serui, Papua	12.14	126	P	Pn	13 43 02.0	+3.3
	48µm16µm485nm,1.1s						
KAPI	Kappang	12.38	213	Pn	Pn	13 43 04.2	+2.3
	3.9nm,0.3s,baz=6.9,slow=10.0,SNR=20						
KAPI				LR	LR	13 48 43.9	
	comp=Z,42µm,19.5s,baz=45,slow=42						
KAPI				ScP	ScP	13 52 13.9	+2.6
	11nm,0.4s,baz=212,slow=6.0,SNR=4.5						
KAPI	Kappang	12.38	213		Pn	13 43 04.0	+2.0
KAPI	Kappang	12.38	213	P	Pn	13 43 04.9	+3.0
KAPI	Kappang	12.38	213	P	Pn	13 43 04.0	+2.0
KAPI	Kappang	12.38	213	P	Pn	13 43 05.4	+3.4
KAPI				P	Pn	13 43 05.4	+3.4
KAPI				S	Sn	13 45 25.4	+6.8
KAPI				S	Sn	13 45 25.4	+6.8
KAPI	Kappang	12.38	213	P	Pn	13 43 05.5	+3.6
KAPI	Kappang	12.38	213	⇓P	Pn	13 43 03.9	+2.0
KAPI	Kappang	12.38	213	P	Pn	13 43 05.4	+3.4
	381nm,1.2s						
MTKI	Muara Teweh, K	13.21	242	P	Pn	13 43 16.3	+3.0
	43µm16µm486nm,1.5s						
SAUI	Saumlaki	14.16	160		Pn	13 43 28.1	+1.7
SAUI	Saumlaki	14.16	160	P	Pn	13 43 28.7	+2.3

SAUI **Saumlaki** 14.16 160 ⇓P Pn 13 43 24.7 -1.6
SAUI **Saumlaki** 14.16 160 P Pn 13 43 29.6 +3.2
33µm14µm1µm,1.3s
SBUM **Sibu** 14.55 259 P 13 43 35.4 -1.9
SBUM **Sibu** 14.55 259 P P 13 43 35.0 -2.3
SBUM **Sibu** 14.55 259 P P 13 43 35.2 -2.2
SBUM **Sibu** 14.55 259 ⇓P P 13 43 35.1 -2.2
SBUM **Sibu** 14.55 259 P P 13 43 35.4 -1.9
22µm9µm328nm,1.2s
MMRI **Maumere** 14.61 197 Pn Pn 13 43 34.4 +2.0
MMRI **Maumere** 14.61 197 P Pn 13 43 34.7 +2.3
MMRI **Maumere** 14.61 197 P Pn 13 43 34.2 +1.8
12µm1µm,1.5s
BBKI **Banjar Baru** 14.62 233 P P 13 43 38.3 +0.2
36µm25µm1µm,1.4s
PKKI **Palangkaraya** 14.65 239 P P 13 43 37.5 -1.0
EDFI **Ende, Flores** 14.88 199 P Pn 13 43 37.4 +1.3
8µm357nm,1.3s
SOEI **Soe** 15.25 188 P Pn 13 43 41.6 +0.6
SOEI **Soe** 15.25 188 P Pn 13 43 42.3 +1.3
SOEI **Soe** 15.25 188 P Pn 13 43 41.1 +0.1
SOEI **Soe** 15.25 188 P Pn 13 43 42.0 +1.0
SOEI **Soe** 15.25 188 ⇓P Pn 13 43 41.9 +0.9
SOEI **Soe** 15.25 188 P P 13 43 43.8 -1.5
16µm16µm803nm,1.6s
BATI **Baumata** 15.79 190 Pn Pn 13 43 48.8 +0.9
15nm,0.3s,baz=282,slow=2.4,SNR=11
BATI Sn Sn 13 46 47.1 +5.1
5.2nm,0.3s,baz=144,slow=18,SNR=1.2
BATI LR LR 13 50 43.2
comp=Z,14µm,21.3s,baz=360,slow=40
126nm,0.9s
BATI **Baumata** 15.79 190 P P 13 43 52.2 +1.0
9µm759nm,0.9s
GENI **Genyem** 15.81 120 P Pn 13 43 49.6 +1.5
GENI **Genyem** 15.81 120 P Pn 13 43 48.3 +0.2
15µm250nm,0.9s
DBNI **Kabupaten Domp** 16.07 211 P Pn 13 43 52.7 +1.3
WSI **Waingapu** 16.23 202 P P 13 43 57.1 +1.1
17µm20µm884nm,1.3s
JAY **Jayapura** 16.24 119 Pn Pn 13 43 54.6 +1.0
1.4nm,0.3s,baz=264,slow=5.5,SNR=4.6
JAY LR LR 13 49 56.9
comp=Z,26µm,21.9s,baz=312,slow=36
17nm,0.8s
JAY **Jayapura** 16.24 119 P Pn 13 43 53.0 -0.6
WBSI **Waikabubak, Su** 16.57 205 P Pn 13 43 58.7 +1.0
14µm10µm827nm,1.4s
PLAI **Plampang** 16.62 212 P Pn 13 43 59.3 +0.9
PLAI **Plampang** 16.62 212 P P 13 43 59.6 -0.8
20µm8µm665nm,0.8s
KSM **Kuching** 16.63 257 P P 13 44 00.7 +0.2
BASI **Baing, Sumba** 16.63 201 P P 13 43 59.5 -1.0
16µm16µm1µm,1.6s
TWSI **Taliwang, Sumb** 17.03 214 P P 13 44 05.5 +0.6
21µm9µm878nm,1.2s
KHKI **Kahang-Kahang** 17.49 218 P P 13 44 12.4 +2.4
25µm7µm353nm,0.9s
KMMI **Kalianget** 17.61 225 P P 13 44 16.9 +5.6
27µm9µm452nm,1.5s
DNP **Denpasar** 17.98 219 P P 13 44 20.4 +5.0
25µm34µm2µm,1.8s
RTBI **Rangdo, Negare** 17.98 220 P P 13 44 20.7 +5.3
26µm10µm464nm,1.1s
TWGBT **Beinan** 18.06 344 P P 13 44 17.0 +0.8
TWG **Pinlang** 18.06 344 Pn 13 44 16.1 -0.1
TWG **Pinlang** 18.06 344 P P 13 44 18.6 +2.4
IGBI **Denpasar** 18.13 219 P Pn 13 44 21.1 +4.1
29µm14µm506nm,0.8s
DRS **Darwin Rock St** 18.28 166 P P 13 44 17.7 -1.0
BLJI **Banyuglugur** 18.36 225 P Pn 13 44 25.0 +5.1
JAGI **Jajag, Banyuwa** 18.50 222 Pn 13 44 23.2 +1.6
JAGI **Jajag, Banyuwa** 18.50 222 P Pn 13 44 22.5 +0.9
JAGI **Jajag, Banyuwa** 18.50 222 P Pn 13 44 23.7 +2.1
JAGI **Jajag, Banyuwa** 18.50 222 ⇑P Pn 13 44 21.6 0.0
JAGI **Jajag, Banyuwa** 18.50 222 P Pn 13 44 24.3 +2.7
24µm368nm,0.9s
YULB **Yu-li** 18.54 345 P P 13 44 20.4 -1.1
YULB **Yu-li** 18.54 345 P P 13 44 19.8 -1.8
TPUB **Ta-pu** 18.64 343 P P 13 44 22.6 -0.1
TPUB **Ta-pu** 18.64 343 P P 13 44 22.5 -0.1
MTN **Manton Dam** 18.73 166 P P 13 44 21.7 -2.0
MTN **Manton Dam** 18.73 166 P 13 44 21.7 -2.0
GMJI **Gumukmas** 18.84 224 P Pn 13 44 29.3 +3.6
KDU **Kakadu** 18.96 162 P P 13 44 25.1 -1.0
comp=Z,153nm,0.8s,comp=Z,0.0nm
SSLB **Suanglung** 19.01 344 P P 13 44 26.9 +0.2
SSLB **Suanglung** 19.01 344 P Pn 13 44 27.9 +0.2
YOJ **Yonaguni jima** 19.21 350 P Pn 13 44 31.1 +1.0
NACB **Ninganchiao** 19.22 346 P Pn 13 44 30.1 0.0
NACB **Ninganchiao** 19.22 346 P Pn 13 44 31.8 +1.6
JMJ **Miyako jima 2** 19.30 357 P Pn 13 44 32.0 +0.8
NGJI **Ngawi** 19.67 230 P Pn 13 44 39.6 +4.0
comp=Z,13µmcomp=Z,451nm,1.0s
SJI **Sawahan** 19.68 228 P Pn 13 44 36.6 +0.8
SNJI **Sawahan-Nganju** 19.71 228 P Pn 13 44 39.2 +2.9
comp=Z,33µmcomp=Z,7µmcomp=Z,512nm,1.1s
YHNB **Yeheng** 19.75 346 P P 13 44 35.4 +0.6
GUMO **Guam** 19.83 65 P Pn 13 44 36.8 -0.8
comp=Z,5.7nm,0.3s,baz=193,slow=16,SNR=5.9
GUMO LR LR 13 50 57.4
comp=Z,32µm,21.7s,baz=228,slow=33
comp=Z,45nm,0.5s
TATO **Taipei** 20.02 347 P P 13 44 35.9 -1.7
TATO **Taipei** 20.02 347 P Pn 13 44 41.7 +2.2
SMRI **Semarang** 20.26 232 P Pn 13 44 42.9 +0.3
comp=Z,30µmcomp=Z,19µmcomp=Z,898nm,1.5s
PCJI **Pacitan** 20.42 229 P Pn 13 44 47.7 +3.3
KNMB **Chin-men Tao** 20.46 338 P P 13 44 43.3 +0.9
TPI **Tanjungpandan** 20.51 247 P Pn 13 44 46.0 +0.5
comp=Z,34µmcomp=Z,9µmcomp=Z,588nm,1.5s
HKPS **Hong Kong Po S** 20.57 326 P P 13 44 44.3 +0.6
HKPS IAmb IAmb 13 44 57.5
comp=Z,468nm,1.0s
HKPS IAMs_20 IAMs_20 13 53 25.5
comp=Z,28µm,19.0s
HKPS **Hong Kong Po S** 20.57 326 P Pn 13 44 45.0 -1.2
UGM **Wanagama** 20.73 230 P Pn 13 44 47.3 -0.8
UGM **Wanagama** 20.73 230 P Pn 13 44 47.2 -0.9
UGM **Wanagama** 20.73 230 P Pn 13 44 49.3 +1.2
comp=Z,17µmcomp=Z,9µmcomp=Z,336nm,1.2s
JMZ **Minamidaito 2** 20.77 12 P Pn 13 44 47.1 -1.3
MCO **Taipa Grande** 20.78 324 P Pn 13 44 48.0 -0.6
QZH2 **Quanzhou** 20.83 339 ⇑*i*P P 13 44 47.0 +0.6
QZH2 S S 13 48 38.0 +1.4
QZH2 pmax pmax
comp=Z,700nm,1.2s
QZH2 LR LR
comp=Z,22µm,26.4s
QZH2 LR LR
comp=Z,25µm,23.1s
QZH2 LR LR
comp=Z,32µm,24.4s
YOGI **Yogyakarta** 20.85 231 P Pn 13 44 51.2 +1.7
comp=Z,28µmcomp=Z,11µmcomp=Z,690nm,0.9s
KNRA **Kununurra** 21.10 174 P P 13 44 49.7 +0.3
comp=Z,857nm,0.8s,comp=Z,0.0nm
KNRA **Kununurra** 21.10 174 P 13 44 50.2 +0.8
QIZ **Qiongzhong** 21.12 311 P P 13 44 49.6 0.0
QIZ IAmb IAmb 13 44 56.0
comp=Z,1µm,1.5s
QIZ **Qiongzhong** 21.12 311 IAMs_20 IAMs_20 13 51 55.7
comp=Z,31µm,21.0s
QIZ **Qiongzhong** 21.12 311 P P 13 44 51.5 +1.8
QIZ **Qiongzhong** 21.12 311 P P 13 44 51.2 +1.5
QIZ S S 13 48 44.6 +2.0
QIZ pmax pmax
comp=Z,240nm,1.1s
QIZ pmax pmax
comp=Z,3µm,4.5s
QIZ LR LR
comp=Z,12µm,18.6s
QIZ LR LR
comp=Z,16µm,19.6s
QIZ LR LR
comp=Z,30µm,21.0s
CTJI **Waduk Cacaban** 21.25 235 P P 13 44 53.6 +2.6
comp=Z,14µmcomp=Z,560nm,1.7s
JOW **Kunigami** 21.35 4 P P 13 44 52.2 +0.3
comp=Z,81nm,1.0s,baz=200,slow=8.0,SNR=13
JOW S S 13 48 48.2 +1.3
comp=Z,15nm,0.9s,baz=95,slow=29,SNR=0.9
JOW LR LR 13 53 55.4
comp=Z,11µm,19.4s,baz=176,slow=39
comp=Z,81nm,1.0s

JOW **Kunigami** 21.35 4 P P 13 44 53.6 +1.6
JOW IAmb IAmb 13 45 05.1
comp=Z,226nm,0.8s
JOW **Kunigami** 21.35 4 ⇑P P 13 44 52.4 +0.3
KPJI **Karang Pucung** 21.64 234 P P 13 44 59.4 +4.2
comp=Z,32µmcomp=Z,8µmcomp=Z,493nm,1.6s
PPBI **Pangkal Pinang** 21.69 250 P P 13 45 00.5 +4.7
GZH2 **Guangzhou** 21.93 327 P P 13 44 58.8 +0.5
GZH2 S S 13 49 01.6 +3.2
GZH2 pmax pmax
comp=Z,270nm,1.2s
GZH2 pmax pmax
comp=Z,6µm,7.0s
GZH2 LR LR
comp=Z,13µm,17.0s
GZH2 LR LR
comp=Z,19µm,18.4s
GZH2 LR LR
comp=Z,41nm,18.2s
TPRI **Tanjung Pinang** 22.39 259 P P 13 45 06.3 +3.0
comp=Z,31µmcomp=Z,9µmcomp=Z,368nm,1.5s
LEM **Lembang** 22.44 237 LR LR 13 56 06.3
comp=Z,15µm,18.2s,baz=41,slow=43
DSRI **Dabo** 22.66 256 P P 13 45 09.4 +3.1
comp=Z,28µmcomp=Z,11µmcomp=Z,595nm,1.4s
BBJI **Bungbulang** 22.76 236 P P 13 45 07.1 -0.2
BBJI IAmb IAmb 13 45 27.4
comp=Z,610nm,1.6s
BBJI **Bungbulang** 22.76 236 P P 13 45 07.1 -0.2
BBJI **Bungbulang** 22.76 236 P P 13 45 07.6 +0.3
MYKOM **Kota Tinggi** 22.89 262 P P 13 45 08.2 -0.4
MYKOM **Kota Tinggi** 22.89 262 P P 13 45 11.3 +2.7
MYKOM **Kota Tinggi** 22.89 262 ⇑P P 13 45 09.6 +1.0
MYKOM **Kota Tinggi** 22.89 262 P P 13 45 10.9 +2.3
comp=Z,30µmcomp=Z,12µmcomp=Z,692nm,1.5s
DBJI **Dramaga** 23.03 239 P P 13 45 12.1 +2.0
comp=Z,27µmcomp=Z,15µmcomp=Z,549nm,1.1s
BTDF **Bukit Timah Da** 23.04 261 P P 13 45 12.4 +2.2
BTDF **Bukit Timah Da** 23.04 261 P P 13 45 12.1 +1.9
comp=Z,18µmcomp=Z,7µmcomp=Z,575nm,1.5s
PMBI **Palembang** 23.24 250 P P 13 45 16.1 +4.0
SBJI **Serang** 23.35 241 P P 13 45 17.8 +4.6
comp=Z,27µmcomp=Z,16µmcomp=Z,691nm,1.2s
FITZ **Fitzroy Crossi** 23.40 182 LR LR 13 57 00.7
comp=Z,6µm,18.0s,baz=354,slow=43
BLSI **Bandar Lampung** 23.78 244 P P 13 45 22.9 +5.6
comp=Z,19µmcomp=Z,8µmcomp=Z,525nm,1.6s
JMBI **JAMBI** 23.89 254 P P 13 45 24.4 +6.1
comp=Z,28µmcomp=Z,13µmcomp=Z,818nm,0.9s
KLI **Kotabumi** 23.91 245 P P 13 45 21.8 +3.3
comp=Z,22µmcomp=Z,12µmcomp=Z,946nm,1.1s
MDSI **Mapa Dua** 24.37 247 P P 13 45 24.3 +1.5
comp=Z,8µmcomp=Z,465nm,1.2s
KASI **Kota Agung** 24.52 244 P P 13 45 25.8 +1.7
comp=Z,16µmcomp=Z,6µmcomp=Z,418nm,1.2s
LWLI **Liwa** 24.70 246 P P 13 45 28.0 +2.1
GULI **GuiLin** 25.08 324 P P 13 45 29.9 +0.8
GULI pmax pmax
comp=Z,71nm,1.4s
GULI pmax pmax
comp=Z,5µm,13.8s
GULI LR LR
comp=Z,13µm,18.8s
GULI LR LR
comp=Z,16µm,19.8s
GULI LR LR
comp=Z,21µm,17.6s
PMG **Port Moresby** 25.32 126 LR LR 13 56 22.8
comp=Z,8µm,20.9s,baz=276,slow=38
PMG **Port Moresby** 25.32 126 P P 13 45 30.5 -0.9
PMG **Port Moresby** 25.32 126 P P 13 45 32.0 +0.6
PMG **Port Moresby** 25.32 126 P P 13 45 31.7 +0.3
PMG **Port Moresby** 25.32 126*d* iP P 13 45 28.7 -2.7
PMG pmax pmax
comp=Z,7µm,17.2s
PMG **Port Moresby** 25.32 126 ⇓P P 13 45 27.9 -3.5
IPM **Ipoh** 25.39 269 P P 13 45 32.0 -0.1
IPM **Ipoh** 25.39 269 P P 13 45 33.0 +0.9
IPM **Ipoh** 25.39 269 ⇑P P 13 45 32.2 +0.1
IPM **Ipoh** 25.39 269 P P 13 45 32.8 +0.7
comp=Z,20µmcomp=Z,6µmcomp=Z,264nm,1.2s
COEN **Coen** 25.40 139 P P 13 45 32.7 +0.6
comp=Z,167nm,2.2s,comp=Z,0.0nm
COEN **Coen** 25.40 139 P P 13 45 30.8 -1.3
COEN IAmb IAmb 13 45 42.2
comp=Z,789nm,1.9s
COEN **Coen** 25.40 139 P P 13 45 30.2 -1.9
COEN **Coen** 25.40 139 ⇓P P 13 45 29.6 -2.5
MNAI **Manna** 25.45 248 P P 13 45 34.9 +2.4
MNAI **Manna** 25.45 248 ⇑P P 13 45 32.9 +0.3
MNAI **Manna** 25.45 248 P P 13 45 35.9 +3.4
KSI **Kapahiang** 25.53 250 P P 13 45 37.3 +4.0
MASI **Maura Aman, Be** 25.68 251 P P 13 45 37.2 +2.4
KULM **Kulim** 25.73 271 P P 13 45 36.2 +1.1
KULM **Kulim** 25.73 271 P P 13 45 35.6 +0.4
KULM **Kulim** 25.73 271 ⇑P P 13 45 35.4 +0.3
KULM **Kulim** 25.73 271 P P 13 45 36.1 +0.9
comp=Z,20µmcomp=Z,7µmcomp=Z,467nm,1.6s
UBSI **University, Be** 25.86 250 P P 13 45 40.2 +3.9
BKNI **Bangkinang** 25.92 260 P P 13 45 37.2 +0.3
BKNI **Bangkinang** 25.92 260 P P 13 45 39.5 +2.7
comp=Z,21µmcomp=Z,636nm,1.0s
SSE **Sheshan** 26.01 350 P P 13 45 38.5 +1.1
SSE pP pP 13 45 48.8 +0.9
SSE S S 13 50 04.4 -1.1
SSE sS sS 13 50 22.7 +0.2
SSE pmax pmax
comp=Z,220nm,1.3s
SSE pmax pmax
comp=Z,2µm,3.4s
SSE LR LR
comp=Z,5µm,17.8s
CNSH **ChangSha** 26.03 332 P P 13 45 37.6 -0.1
CNSH S S 13 50 05.8 -0.1
CNSH LR LR
comp=Z,21µm,20.8s
CNSH LR LR
comp=Z,21µm,24.1s
CNSH LR LR
comp=Z,34µm,25.5s
XMI **Christmas Isla** 26.05 233 P P 13 45 40.0 +2.0
KRJI **Kerinci** 26.10 254 P P 13 45 41.2 +2.6
comp=Z,22µmcomp=Z,15µmcomp=Z,772nm,1.8s
JSU **Suzuyama** 26.20 8 P P 13 45 37.9 -1.3
JCJ **Chichijima** 26.22 33 LR LR 13 54 08.6
comp=Z,6µm,21.7s,baz=226,slow=32
JCJ **Chichijima** 26.22 33 P 13 45 38.6 -0.8
JCJ **Chichijima** 26.22 33 P P 13 45 37.9 -1.5
JCJ **Chichijima** 26.22 33 ⇑P P 13 45 39.1 -0.3
WRAB **Tennant Creek** 26.37 163 P P 13 45 41.8 +1.0
WRAB **Tennant Creek** 26.37 163 P P 13 45 41.6 +0.8
WRAB **Tennant Creek** 26.37 163*d* iP P 13 45 41.3 +0.5
WRAB pmax pmax
comp=Z,645nm,1.4s
WRAB MLR MLR
comp=Z,13µm,21.0s
WRA **Warramunga Arr** 26.37 163 P P 13 45 40.5 -0.3
comp=Z,61nm,0.7s,baz=343,slow=9.8,SNR=74
WRA S S 13 50 09.2 -2.3
comp=Z,22nm,1.1s,baz=327,slow=17,SNR=5.0
WRA ScP ScP 13 52 44.4 +1.6
comp=Z,61nm,1.1s,baz=338,slow=3.1,SNR=9.0
WRA ScS ScS 13 56 31.2 -2.0
comp=Z,4.3nm,0.9s,baz=319,slow=2.8,SNR=5.4
WRA PKiKP PKiKP 13 56 44.9 -0.4
comp=Z,2.5nm,0.9s,baz=281,slow=1.1,SNR=5.0
WRA LR LR 13 57 40.9
comp=Z,13µm,21.1s,baz=348,slow=40
WRA P3KPbc 14 18 22.3
comp=Z,4.4nm,0.8s,baz=166,slow=4.2,SNR=17
comp=Z,61nm,0.7s
WRA **Warramunga Arr** 26.37 163 P 13 45 39.9 -0.9
WRA **Warramunga Arr** 26.37 163 *i* P P 13 45 40.5 -0.3
WRA pmax pmax
comp=Z,71nm,0.7s
EGSI **Enggano, Bengk** 26.45 246 P P 13 45 42.5 +0.8
comp=Z,20µmcomp=Z,7µmcomp=Z,363nm,1.0s
PPI **Padang Panjang** 26.71 258 P P 13 45 45.0 +1.0
comp=Z,19µmcomp=Z,7µmcomp=Z,503nm,1.3s
PDSI **Padang** 26.76 257 P P 13 45 45.8 +1.4
MBWA **Marble Bar** 27.25 194 P P 13 45 49.8 +1.1
comp=Z,265nm,0.9s,comp=Z,0.0nm
MBWA **Marble Bar** 27.25 194 P 13 45 48.3 -0.4
MBWA IAmb IAmb 13 46 06.5
comp=Z,184nm,0.8s

MBWA **Marble Bar** 27.25 194 P P 13 45 49.4 +0.7
MBWA **Marble Bar** 27.25 194 P P 13 45 50.1 +1.4
MBWA S S 13 50 24.2 -1.1
MBWA **Marble Bar** 27.25 194 ⇑P P 13 45 48.4 -0.4
MNSI **Mandailing Nat** 27.26 261 P P 13 45 49.0 0.0
comp=Z,141nm,1.0s
NJ2 **Nanjing** 27.43 346 ⇑P P 13 45 50.9 +0.7
NJ2 pP pP 13 46 00.1 -0.7
NJ2 PP PnPn 13 46 40.2 +4.1
NJ2 S S 13 50 30.2 +2.3
NJ2 sS sS 13 50 46.8 +1.9
NJ2 pmax pmax
comp=Z,45nm,1.1s
NJ2 pmax pmax
comp=Z,3µm,6.7s
NJ2 LR LR
comp=Z,9µm,18.0s
NJ2 LR LR
comp=Z,10µm,17.5s
NJ2 LR LR
comp=Z,10µm,18.0s
WHN **Wuhan** 27.47 337 ⇓P P 13 45 51.2 +0.6
WHN ScP ScP 13 52 46.8 +0.9
WHN ScS ScS 13 56 38.5 +0.9
WHN pmax pmax
comp=Z,600nm,1.2s
WHN pmax pmax
comp=Z,7µm,10.2s
WHN LR LR
comp=Z,40µm,21.2s
WHN LR LR
comp=Z,44µm,17.3s
WHN LR LR
comp=Z,96µm,21.1s
PSAC1 **Pilbara Seismi** 27.59 194 P P 13 45 53.5 +1.7
comp=Z,396nm,1.0s
PSAC2 **Pilbara Seismi** 27.60 193 P P 13 45 52.3 +0.5
comp=Z,424nm,1.0s
PSA00 **Pilbara Seismi** 27.62 193 P P 13 45 51.2 -0.8
comp=Z,398nm,1.3s
PSA00 **Pilbara Seismi** 27.62 193 P P 13 45 51.4 -0.6
PSA00 **Pilbara Seismi** 27.62 193 P P 13 45 52.1 +0.1
PSI **Prapat** 27.62 266 P P 13 45 53.1 +0.8
PSI **Prapat** 27.62 266 P P 13 45 52.4 +0.1
comp=Z,18µmcomp=Z,4µmcomp=Z,182nm,1.6s
RPSI **Rantau Prapat** 27.64 265 IAmb IAmb 13 45 57.5
comp=Z,156nm,1.0s
PSAB3 **Pilbara Seismi** 27.64 193 P P 13 45 51.0 -1.2
comp=Z,448nm,1.3s
PPSI **Pulau Pagai** 27.68 254 P P 13 45 54.9 +2.2
comp=Z,6µmcomp=Z,257nm,1.7s
JNU **Nakatsue** 27.85 8 LR LR 13 57 18.8
comp=Z,6µm,20.2s,baz=178,slow=37
TSI **Tuntungan** 27.91 267 P P 13 45 56.6 +1.8
comp=Z,18µmcomp=Z,216nm,1.6s
GYA **Guiyang** 28.21 320 ⇓P P 13 45 58.0 +0.6
GYA S S 13 50 50.7 +10
GYA pmax pmax
comp=Z,51nm,1.2s
GYA LR LR
comp=Z,13µm,21.4s
GYA LR LR
comp=Z,18µm,20.5s
GYA LR LR
comp=Z,28µm,20.8s
PBSI **Pulau Batu** 28.70 260 P P 13 46 00.1 -1.7
comp=Z,17µmcomp=Z,5µmcomp=Z,168nm,0.8s
KCSI **Kotacane, Aceh** 28.70 267 P P 13 46 01.1 -0.7
comp=Z,12µmcomp=Z,3µmcomp=Z,218nm,1.5s
QIS **Mount Isa** 28.86 154 P P 13 46 03.1 0.0
comp=Z,287nm,1.4s,comp=Z,0.0nm
QIS **Mount Isa** 28.86 154 P P 13 46 02.9 -0.2
JMN **Monobe** 28.98 13 IAmb IAmb 13 46 30.4
comp=Z,147nm,1.0s
JMN **Monobe** 28.98 13 P P 13 46 04.5 +0.4
JMN **Monobe** 28.98 13 ⇑P P 13 46 04.4 +0.4
JTU **Tsushima** 29.07 5 P P 13 46 07.1 +2.3
GSI **Gunungsitoli** 29.16 263 P P 13 46 05.8 -0.1
GSI **Gunungsitoli** 29.16 263 ⇑P P 13 46 04.8 -1.1
GSI **Gunungsitoli** 29.16 263 P P 13 46 05.2 -0.7
comp=Z,6µmcomp=Z,431nm,1.0s
MTSU **Mount Surprise** 29.28 143 P P 13 46 07.5 +0.6
comp=Z,67nm,0.8s
ENH **Enshi** 29.45 329 IAMs_20 IAMs_20 13 59 21.4
comp=Z,25µm,19.0s
ENH **Enshi** 29.45 329 P P 13 46 07.5 -0.8
ASAR **Alice Springs** 29.81 166 P P 13 46 11.9 +0.3
comp=Z,10nm,0.7s,baz=338,slow=5.5,SNR=44
ASAR PcP PcP 13 49 15.4 +1.0
comp=Z,21nm,0.6s,baz=344,slow=2.3,SNR=9.0
ASAR S S 13 51 04.5 -1.1
comp=Z,3.7nm,0.9s,baz=348,slow=15,SNR=2.2
ASAR ScP ScP 13 52 55.3 +1.9
comp=Z,31nm,0.9s,baz=4.0,slow=2.9,SNR=11
ASAR PKiKP PKiKP 13 56 48.2 +0.9
comp=Z,4.4nm,1.0s,baz=357,slow=1.8,SNR=4.4
ASAR P3KPbc 14 18 11.4
comp=Z,1.7nm,0.9s,baz=160,slow=4.0,SNR=18
comp=Z,10nm,0.7s
ASAR **Alice Springs** 29.81 166 P 13 46 12.4 +0.8
CM31 **Chiang Mai Arr** 29.84 298 IAmb IAmb 13 46 18.8
comp=Z,171nm,1.4s
CMAR **Chiang Mai Arr** 29.84 298 P P 13 46 12.3 +0.5
comp=Z,23nm,0.8s,baz=118,slow=7.0,SNR=126
CMAR PcP PcP 13 49 15.4 +0.8
comp=Z,43nm,1.1s,baz=118,slow=0.7,SNR=10.0
CMAR S S 13 51 07.1 +0.9
comp=Z,0.4nm,0.3s,baz=130,slow=16,SNR=1.1
CMAR ScP ScP 13 52 55.4 +1.7
comp=Z,25nm,0.9s,baz=123,slow=1.5,SNR=19
CMAR LR LR 13 58 32.5
comp=Z,14µm,18.5s,baz=115,slow=37
comp=Z,23nm,0.8s
CMAR **Chiang Mai Arr** 29.84 298 P 13 46 11.9 0.0
CHTO **Chiang Mai** 29.98 299 P 13 46 12.9 -0.2
CHTO **Chiang Mai** 29.98 299 P P 13 46 13.2 +0.1
CHTO **Chiang Mai** 29.98 299 P P 13 46 12.9 -0.2
CHTO pmax pmax
comp=Z,62nm,0.8s
CHTO MLR MLR
comp=Z,13µm,20.0s
CHTO **Chiang Mai** 29.98 299 P P 13 46 13.8 +0.7
CHTO P P 13 46 13.8 +0.7
CHTO S S 13 51 07.9 -0.4
CHTO S S 13 51 07.9 -0.4
CHTO **Chiang Mai** 29.98 299 ⇑P P 13 46 12.7 -0.4
CHTO **Chiang Mai** 29.98 299 P P 13 46 12.8 -0.2
MLSI **Meulaboh, Aceh** 30.01 269 P P 13 46 13.4 0.0
comp=Z,18µmcomp=Z,390nm,1.0s
KMI2 **Kunming** 30.05 313 ⇑P P 13 46 14.5 +0.6
KMI2 pP pP 13 46 24.6 +0.2
KMI2 pmax pmax
comp=Z,230nm,1.2s
KMI2 pmax pmax
comp=Z,2µm,14.5s
KMI2 LR LR
comp=Z,11µm,21.6s
KMI2 LR LR
comp=Z,12µm,20.0s
KMI2 LR LR
comp=Z,26µm,23.8s
JHJ **Hachijo jima 2** 30.20 23 LR LR 13 57 30.6
comp=Z,6µm,21.5s,baz=228,slow=34
SNSI **Sinabang, Aceh** 30.25 265 P P 13 46 15.7 +0.2
comp=Z,16µmcomp=Z,5µmcomp=Z,315nm,1.1s
WRKA **Warakurna** 30.34 177 P P 13 46 22.3 +6.1
GIRL **Giralia** 30.38 203 P P 13 46 20.4 +3.9
GIRL **Giralia** 30.38 203 P P 13 46 16.0 -0.5
GIRL IAmb IAmb 13 46 27.2
comp=Z,316nm,1.3s
INU **Inuyama** 31.31 17 P P 13 46 23.9 -0.7
INU **Inuyama** 31.31 17 ⇓P P 13 46 23.1 -1.6
PZH **PanZhiHua** 31.58 314 P P 13 46 27.4 +0.1
PZH S S 13 51 33.4 -0.1
PZH sS sS 13 51 47.3 -3.4
PZH pmax pmax
comp=Z,120nm,1.2s
PZH pmax pmax
comp=Z,1µm,8.3s
PZH LR LR
comp=Z,3µm,22.1s
PZH LR LR
comp=Z,3µm,21.1s
PZH LR LR
comp=Z,3µm,21.4s
JGF **Kuroka** 31.64 17 P P 13 46 28.7 +1.1

JGF	**Kuroka**	**31.64**	**17**	⇑P	**P**	**13 46 27.8**	**+0.2**
PATS	**Pohnpei**	**31.66**	**86**	IAMs_20	IAMs_20	13 56 30.0	
	comp=Z,17µm,21.0s						
LYN	**LuoYang**	**31.75**	**338**	⇑P	**P**	**13 46 28.5**	**0.0**
LYN				sP	pP	13 46 36.6	-2.5
LYN				PcP	**PcP**	**13 49 20.7**	**+1.4**
LYN				S	**S**	**13 51 40.2**	**+4.5**
LYN				ScP	**ScP**	**13 53 00.2**	**+0.6**
LYN				pmax	pmax		
	comp=Z,93nm,1.2s						
LYN				pmax	pmax		
	comp=Z,4µm,11.9s						
LYN				LR	LR		
	comp=Z,19µm,27.1s						
LYN				LR	LR		
	comp=Z,19µm,22.0s						
LYN				LR	LR		
	comp=Z,32µm,22.0s						
TIA	**Tai'an**	**31.82**	**346**	P	**P**	**13 46 29.1**	**0.0**
TIA				S	**S**	**13 51 38.7**	**+2.0**
TIA				ScP	**ScP**	**13 53 01.2**	**+1.4**
TIA				PcS	**PcS**	**13 53 04.4**	**+0.3**
TIA				SS	**SnSn**	**13 53 37.5**	**+10**
TIA				pmax	pmax		
	comp=Z,89nm,1.2s						
TIA				pmax	pmax		
	comp=Z,2µm,7.5s						
TIA				LR	LR		
	comp=Z,5µm,19.6s						
TIA				LR	LR		
	comp=Z,14µm,24.3s						
TIA				LR	LR		
	comp=Z,12µm,19.6s						
KSAR	**Wonju Array Be**	**31.88**	**2**		**P**	**13 46 29.4**	**-0.2**
KSAR	**Wonju Array Be**	**31.88**	**2**	P	**P**	**13 46 29.4**	**-0.2**
KSRS	**Korea Array**	**31.90**	**2**	P	**P**	**13 46 30.0**	**+0.3**
	comp=Z,20nm,0.8s,baz=187,slow=9.9,SNR=52						
KSRS				PcP	**PcP**	**13 49 21.3**	**+1.7**
	comp=Z,13nm,0.6s,baz=182,slow=2.2,SNR=15						
KSRS				ScP	**ScP**	**13 53 02.2**	**+2.2**
	comp=Z,9.5nm,1.1s,baz=188,slow=3.2,SNR=9.3						
KSRS				LR	LR	13 59 55.4	
	comp=Z,9µm,20.4s,baz=170,slow=37						
	comp=Z,20nm,0.8s						
INCN	**Inchon**	**31.90**	**0**	S	**S**	**13 51 36.1**	**-1.9**
KS19	**Wonju Array Si**	**31.94**	**2**	P	**P**	**13 46 29.4**	**-0.8**
CTA	**Charters Tower**	**31.95**	**143**	LR	LR	14 01 58.6	
	comp=Z,9µm,18.2s,baz=320,slow=41						
CTAO	**Charters Tower**	**31.95**	**143**	P	**P**	**13 46 29.2**	**-1.2**
CTAO				IAmb	IAmb	13 46 42.2	
	comp=Z,294nm,1.5s						
CTAO	**Charters Tower**	**31.95**	**143**	P	**P**	**13 46 29.2**	**-1.2**
CTAO	**Charters Tower**	**31.95**	**143**	P	**P**	**13 46 29.2**	**-1.2**
CTAO				pmax	pmax		
	comp=Z,293nm,1.5s						
CTAO				MLR	MLR		
	comp=Z,8µm,20.0s						
MAJO	**Matsushiro**	**32.77**	**18**		**P**	**13 46 35.9**	**-1.6**
MAJO	**Matsushiro**	**32.77**	**18**	P	**P**	**13 46 36.9**	**-0.6**
MAJO	**Matsushiro**	**32.77**	**18**	⇓*i*P	**P**	**13 46 36.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,43nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,8µm,18.0s						
MAJO	**Matsushiro**	**32.77**	**18**	⇓P	**P**	**13 46 36.7**	**-0.7**
MJAR	**Matsushiro Arr**	**32.77**	**18**	P	**P**	**13 46 35.9**	**-1.5**
	comp=Z,16nm,0.9s,baz=192,slow=9.0,SNR=23						
MJAR				PcP	**PcP**	**13 49 23.8**	**+1.7**
	comp=Z,9.2nm,0.8s,baz=165,slow=3.1,SNR=4.1						
MJAR				ScP	**ScP**	**13 53 05.1**	**+2.0**
	comp=Z,31nm,1.1s,baz=202,slow=3.5,SNR=17						
MJAR				LR	LR	13 59 00.9	
	comp=Z,13µm,21.5s,baz=208,slow=35						
	comp=Z,16nm,0.9s						
MJAR	**Matsushiro Arr**	**32.77**	**18**		**P**	**13 46 35.9**	**-1.5**
MJAR				PcP	**PcP**	**13 49 24.1**	**+2.0**
MJAR				ScP	**ScP**	**13 53 04.7**	**+1.7**
MEEK	**Meekatharra**	**32.78**	**193**	P	**P**	**13 46 36.6**	**-1.1**
	comp=Z,201nm,1.0s,comp=Z,0.0nm						
MEEK	**Meekatharra**	**32.78**	**193**	P	**P**	**13 46 36.9**	**-0.8**
XAN	**Xi'an**	**32.80**	**332**	⇓P	**P**	**13 46 36.0**	**-1.8**
XAN				pP	pP	13 46 47.8	-0.6
XAN				PP	**PP**	**13 47 50.2**	**-2.3**
XAN				pmax	pmax		
	comp=Z,220nm,1.2s						
XAN				pmax	pmax		
	comp=Z,770nm,3.9s						
XAN				LR	LR		
	comp=Z,22µm,20.6s						
XAN				LR	LR		
	comp=Z,15µm,24.0s						
XAN				LR	LR		
	comp=Z,28µm,23.4s						
CD2	**Chengdu**	**33.15**	**323**	P	**P**	**13 46 40.1**	**-0.8**
CD2				PP	**PP**	**13 47 56.1**	**-0.3**
CD2				S	**S**	**13 52 00.4**	**+2.7**
CD2				pmax	pmax		
	comp=Z,360nm,1.0s						
CD2				pmax	pmax		
	comp=Z,570nm,4.7s						
CD2				LR	LR		
	comp=Z,29µm,19.0s						
CD2				LR	LR		
	comp=Z,21µm,19.0s						
CD2				LR	LR		
	comp=Z,23µm,18.2s						
TNCH	**TengChong**	**33.16**	**309**	⇑P	**P**	**13 46 40.6**	**-0.6**
TNCH				pP	pP	13 46 50.5	-1.4
TNCH				S	**S**	**13 52 00.1**	**+1.9**
TNCH				sS	sS	13 52 10.5	-4.9
TNCH				ScP	**ScP**	**13 53 05.1**	**+0.2**
TNCH				ScS	**ScS**	**13 57 07.8**	**+2.1**
TNCH				pmax	pmax		
	comp=Z,150nm,1.4s						
TNCH				pmax	pmax		
	comp=Z,1µm,4.0s						
TNCH				LR	LR		
	comp=Z,2µm,18.8s						
TNCH				LR	LR		
	comp=Z,6µm,19.1s						
TNCH				LR	LR		
	comp=Z,16µm,26.7s						
PYAG	**Pyongyang**	**33.47**	**359**	S	**S**	**13 52 06.8**	**+4.5**
HNS	**HongShan**	**33.59**	**343**	⇑P	**P**	**13 46 44.6**	**+0.1**
HNS				S	**S**	**13 52 04.4**	**+0.2**
HNS				ScP	**ScP**	**13 53 07.6**	**+1.8**
HNS				pmax	pmax		
	comp=Z,70nm,1.2s						
HNS				pmax	pmax		
	comp=Z,2µm,7.6s						
HNS				LR	LR		
	comp=Z,5µm,17.6s						
HNS				LR	LR		
	comp=Z,6µm,17.0s						
HNS				LR	LR		
	comp=Z,10µm,18.0s						
DL2	**Dalian**	**33.61**	**353**	P	**P**	**13 46 44.9**	**+0.2**
DL2				PP	**PP**	**13 48 04.3**	**+3.0**
DL2				PcP	**PcP**	**13 49 26.7**	**+2.3**
DL2				S	**S**	**13 52 06.0**	**+1.5**
DL2				ScP	**ScP**	**13 53 07.9**	**+2.0**
DL2				ScS	**ScS**	**13 57 08.7**	**+1.6**
DL2				pmax	pmax		
	comp=Z,780nm,1.0s						
DL2				pmax	pmax		
	comp=Z,3µm,5.1s						
DL2				LR	LR		
	comp=Z,9µm,19.5s						
DL2				LR	LR		
	comp=Z,2µm,15.4s						
DL2				LR	LR		
	comp=Z,10µm,18.3s						
PBA	**Port Blair**	**33.92**	**283**	*e*P	**P**	**13 46 43.2**	**-4.5**
PBA				IAmb	IAmb	13 46 56.0	
	comp=Z,196nm,1.3s						
PBA				*e*S	**S**	**13 52 08.0**	**-2.0**
PBA	**Port Blair**	**33.92**	**283**	P	**P**	**13 46 48.2**	**+0.4**
DGPR	**DIGLIPUR**	**33.97**	**285**	*e*P	P	13 46 43.2	-5.0
DGPR				IAmb	IAmb	13 47 07.3	
	comp=Z,46nm,0.9s						
DGPR				*e*S	**S**	**13 52 08.0**	**-2.8**
HHU	**Hamhung**	**34.35**	**1**	P	**P**	**13 46 53.4**	**+2.3**
HHU				S	**S**	**13 52 20.3**	**+4.4**
HHU				AmB			
	comp=Z,686nm,1.5s						
HHU				AMS	AMS		
	comp=Z,6µm,16.8s						
SUJ	**Sinuiju**	**34.56**	**357**	P	**P**	**13 46 55.7**	**+2.8**
TIY	**Taiyuan**	**34.59**	**340**	*e*P	**P**	**13 46 54.0**	**+0.6**
TIY				PP	**PP**	**13 48 16.0**	**+3.6**
TIY				S	**S**	**13 52 23.8**	**+3.9**
TIY				SS	**SS**	**13 54 44.5**	**-6.7**
TIY				pmax	pmax		
	comp=Z,97nm,1.1s						
TIY				pmax	pmax		
	comp=Z,2µm,5.2s						
TIY				LR	LR		
	comp=Z,5µm,20.6s						
TIY				LR	LR		
	comp=Z,5µm,20.6s						
TIY				LR	LR		
	comp=Z,8µm,20.6s						
BJI2	**Beijing**	**35.67**	**346**	P	**P**	**13 47 03.0**	**+0.5**
BJI2				PP	**PP**	**13 48 25.9**	**+1.8**
BJI2				S	**S**	**13 52 35.7**	**-0.5**
BJI2				ScS	**ScS**	**13 57 14.5**	**-3.6**
BJI2				pmax	pmax		
	comp=Z,150nm,1.2s						
BJI2				pmax	pmax		
	comp=Z,1µm,5.1s						
BJI2				LR	LR		
	comp=Z,3µm,20.0s						
BJI2				LR	LR		
	comp=Z,2µm,24.0s						
BJI2				LR	LR		
	comp=Z,4µm,20.5s						
BJT	**Baijiatuau**	**35.67**	**346**		**P**	**13 47 02.2**	**-0.3**
BJT	**Baijiatuau**	**35.67**	**346**	P	**P**	**13 47 02.7**	**+0.2**
BJT	**Baijiatuau**	**35.67**	**346**	P	**P**	**13 47 02.2**	**-0.3**
BJT				pmax	pmax		
	comp=Z,730nm,1.5s						
BJT				MLR	MLR		
	comp=Z,7µm,20.0s						
MORW	**Morawa**	**35.75**	**196**	P	**P**	**13 47 02.9**	**-0.4**
	comp=Z,108nm,1.0s,comp=Z,0.0nm						
MORW	**Morawa**	**35.75**	**196**	IAmb	IAmb	13 47 09.1	
	comp=Z,131nm,1.1s						
MORW	**Morawa**	**35.75**	**196**	P	**P**	**13 47 02.2**	**-1.1**
MORW	**Morawa**	**35.75**	**196**	⇑P	**P**	**13 47 01.9**	**-1.4**
TATA	**Tatamba Isabel**	**35.94**	**112**	P	**P**	**13 47 06.8**	**+1.6**
FORT	**Forrest**	**36.04**	**178**	P	**P**	**13 47 06.5**	**+0.7**
	comp=Z,105nm,1.0s,comp=Z,0.0nm						
FORT	**Forrest**	**36.04**	**178**	IAmb	IAmb	13 47 31.3	
	comp=Z,69nm,0.7s						
MORE	**Moreh**	**36.15**	**304**	IAMs_20	IAMs_20	14 03 44.7	
	comp=Z,10µm,21.0s						
QLP	**Quilpie**	**36.17**	**152**	P	**P**	**13 47 06.8**	**-0.2**
	comp=Z,262nm,1.4s,comp=Z,0.0nm						
QLP	**Quilpie**	**36.17**	**152**	P	**P**	**13 47 07.0**	**+0.1**
QLP	**Quilpie**	**36.17**	**152**	⇓P	**P**	**13 47 06.5**	**-0.4**
SNY	**Shenyang**	**36.33**	**356**	⇓P	**P**	**13 47 07.5**	**-0.6**
SNY				pmax	pmax		
	comp=Z,610nm,1.1s						
SNY				pmax	pmax		
	comp=Z,2µm,6.5s						
SNY				LR	LR		
	comp=Z,7µm,18.5s						
SNY				LR	LR		
	comp=Z,2µm,14.2s						
SNY				LR	LR		
	comp=Z,9µm,18.7s						
HNR	**Honiara**	**36.46**	**114**	LR	LR	14 00 40.6	
	comp=Z,426nm,20.8s,baz=16,slow=34						
SAIH	**SAIHA**	**36.53**	**301**	*e*P	P	13 47 03.3	-7.0
SAIH				IAmb	IAmb	13 47 13.2	
	comp=Z,838nm,0.8s						
SAIH				*e*S	**S**	**13 52 47.1**	**-3.1**
IMP	**Imphal**	**36.70**	**305**	*e*P	P	13 47 06.5	-5.2
IMP				IAmb	IAmb	13 47 13.4	
	comp=Z,100nm,0.6s						
IMP				*e*S	**S**	**13 52 48.3**	**-4.3**
KMBL	**Kambalda**	**36.86**	**187**	P	**P**	**13 47 12.4**	**-0.3**
	comp=Z,132nm,1.4s						
LZDM	**Lanzhou Array**	**36.91**	**328**	P	**P**	**13 47 14.2**	**+0.6**
	comp=Z,117nm,0.9s,baz=153,slow=10.0,SNR=113						
LZDM				PcP	**PcP**	**13 49 36.1**	**+1.6**
	comp=Z,7.4nm,0.3s,baz=131,slow=28,SNR=7.2						
LZDM				ScS	ScS	13 57 25.7	-0.2
	comp=Z,29nm,1.2s,baz=194,slow=18,SNR=9.7						
LZDM				LR	LR	14 04 27.0	
	comp=Z,18µm,19.3s,baz=115,slow=40						
	comp=Z,117nm,0.9s						
MOKO	**MOKOCHONG**	**36.93**	**308**	*e*P	P	13 47 08.6	-5.1
MOKO				IAmb	IAmb	13 47 15.7	
	comp=Z,110nm,0.7s						
MOKO				*e*S	**S**	**13 52 54.1**	**-2.1**
LZH	**Lanzhou**	**36.93**	**329**	P	**P**	**13 47 13.8**	**+0.3**
LZH				S	S	13 53 06.2	+10
LZH				PcS	**PcS**	**13 53 23.4**	**+0.7**
LZH				SS	**SnSn**	**13 55 32.6**	**+1.4**
LZH				pmax	pmax		
	comp=Z,440nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,4.1s						
LZH				LR	LR		
	comp=Z,16µm,14.4s						
LZH				LR	LR		
	comp=Z,21µm,15.5s						
LZH				LR	LR		
	comp=Z,31µm,16.8s						
KOHI	**KOHIMA**	**36.97**	**307**	*e*P	P	13 47 07.4	-6.6
KOHI				IAmb	IAmb	13 47 15.6	
	comp=Z,146nm,1.1s						
KOHI				*e*S	**S**	**13 52 55.1**	**-1.7**
BLDU	**Ballidu**	**37.05**	**194**	P	**P**	**13 47 14.6**	**+0.2**
	comp=Z,160nm,1.0s						
BLDU	**Ballidu**	**37.05**	**194**	P	**P**	**13 47 13.5**	**-0.9**
PSTR	**Posyet**	**37.26**	**5**	⇑*i*P	**P**	**13 47 17.0**	**+1.0**
NGOA	**Tingoa Renbel**	**37.42**	**117**	P	**P**	**13 47 18.5**	**+0.8**
SILR	**SILCHAR**	**37.61**	**304**	⇓*e*P	**P**	**13 47 15.6**	**-3.7**
SILR				IAmb	IAmb	13 47 26.6	
	comp=Z,131nm,0.9s						
SILR				*e*S	**S**	**13 53 04.1**	**-2.2**
HHC	**Hu-ho-hao-te**	**37.72**	**341**	⇑*i*P	**P**	**13 47 20.4**	**+0.3**
HHC				S	**S**	**13 53 09.0**	**+1.3**
HHC				pmax	pmax		
	comp=Z,99nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2µm,5.2s						
HHC				LR	LR		
	comp=Z,7µm,22.9s						
HHC				LR	LR		
	comp=Z,4µm,18.0s						
HHC				LR	LR		
	comp=Z,8µm,22.1s						
KLBR	**Kellerberrin**	**37.75**	**192**	P	**P**	**13 47 20.8**	**+0.5**
	comp=Z,377nm,1.1s						
KLBR	**Kellerberrin**	**37.75**	**192**	P	**P**	**13 47 19.0**	**-1.3**
BRDH	**Bariadhala**	**37.76**	**300**	LR	LR	14 04 18.1	
	comp=Z,6µm,18.3s,baz=139,slow=39						
VLA	**Vladivostok**	**37.83**	**6**	*de*P	**P**	**13 47 21.6**	**+0.8**
VLA				pmax	pmax		
	comp=Z,190nm,1.0s						
VLA				MLR	MLR		
	comp=Z,3µm,15.0s						
ITAN	**ITANAGAR**	**37.95**	**308**	*e*P	P	13 47 15.6	-6.5
ITAN				IAmb	IAmb	13 47 26.7	
	comp=Z,130nm,0.8s						
ITAN				*e*S	**S**	**13 53 10.8**	**-0.5**
ZIRO	**ZIRO**	**38.03**	**309**	⇓*e*P	P	13 47 17.7	-5.3
ZIRO				IAmb	IAmb	13 47 24.4	
	comp=Z,61nm,1.0s						
ZIRO				*e*S	**S**	**13 53 09.7**	**-3.3**
BELO	**BELONIA**	**38.14**	**301**	*e*P	P	13 47 18.7	-5.0
BELO				IAmb	IAmb	13 47 27.8	
	comp=Z,80nm,1.4s						
BELO				*e*S	**S**	**13 53 12.6**	**-1.7**
BTO2	**Baotou**	**38.19**	**339**	*e*P	**P**	**13 47 23.2**	**-0.9**
BTO2				sP	**pP**	**13 47 30.1**	**-4.8**
BTO2				S	**S**	**13 53 14.0**	**-0.9**
BTO2				SS	**SS**	**13 55 58.1**	**-5.0**
BTO2				pmax	pmax		
	comp=Z,52nm,1.1s						
BTO2				pmax	pmax		
	comp=Z,4µm,5.7s						
BTO2				LR	LR		
	comp=Z,24µm,19.8s						
BTO2				LR	LR		
	comp=Z,7µm,17.5s						
BTO2				LR	LR		
	comp=Z,24µm,19.6s						
CN2	**Changchun**	**38.22**	**359**	P	**P**	**13 47 25.2**	**+1.1**
CN2				pP	pP	13 47 29.6	-5.1
CN2				sP	pwP	13 47 32.3	-6.1
CN2				PP	**PnPn**	**13 48 56.1**	**+2.1**
CN2				PcP	**PcP**	**13 49 40.3**	**+2.3**
CN2				S	**S**	**13 53 19.1**	**+4.1**
CN2				ScP	**ScP**	**13 53 22.8**	**+0.1**
CN2				SS	**SnSn**	**13 55 58.3**	**-3.6**
CN2				ScS	**ScS**	**13 57 34.4**	**+2.2**
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
CN2				pmax	pmax		
	comp=Z,2µm,9.0s						
CN2				LR	LR		
	comp=Z,6µm,18.0s						
CN2				LR	LR		
	comp=Z,3µm,18.0s						
CN2				LR	LR		
	comp=Z,8µm,19.0s						
TEZP	**TEZPUR**	**38.43**	**307**	⇓*e*P	**P**	**13 47 21.7**	**-4.4**
TEZP				IAmb	IAmb	13 47 27.2	
	comp=Z,71nm,0.7s						
TEZP				*e*S	**S**	**13 53 13.5**	**-5.1**
MUN	**Mundaring**	**38.48**	**194**	P	**P**	**13 47 26.8**	**+0.4**
	comp=Z,144nm,0.8s,comp=Z,0.0nm						
MUN	**Mundaring**	**38.48**	**194**	P	**P**	**13 47 25.4**	**-1.0**
MTKN	**Mount Kenneth**	**38.54**	**195**	P	**P**	**13 47 28.3**	**+1.4**
	comp=Z,235nm,1.0s						
AGT	**Agartala**	**38.55**	**302**	*e*P	P	13 47 19.7	-7.5
AGT				IAmb	IAmb	13 47 30.1	
	comp=Z,75nm,0.7s						
AGT				*e*S	**S**	**13 53 18.7**	**-1.8**
SHL	**Shillong**	**38.70**	**305**	P	**P**	**13 47 28.1**	**-0.6**
SHL	**Shillong**	**38.70**	**305**	*e*P	P	13 47 22.3	-6.3
SHL				IAmb	IAmb	13 47 31.9	
	comp=Z,85nm,0.6s						
SHL				*e*S	**S**	**13 53 19.1**	**-4.1**
SHL	**Shillong**	**38.70**	**305**	P	**P**	**13 47 28.1**	**-0.6**
SHL				pmax	pmax		
	comp=Z,481nm,0.7s						
SHL	**Shillong**	**38.70**	**305**	P	**P**	**13 47 28.7**	**+0.1**
	SNR=133						
EIDS	**Eidsvold**	**38.84**	**143**	P	**P**	**13 47 29.9**	**+0.4**
	comp=Z,116nm,1.9s,comp=Z,0.0nm						
EIDS	**Eidsvold**	**38.84**	**143**	P	**P**	**13 47 29.4**	**-0.2**
EIDS	**Eidsvold**	**38.84**	**143**	⇑P	**P**	**13 47 29.3**	**-0.3**
USRK	**Ussuriysk Ar.**	**38.91**	**6**	P	**P**	**13 47 29.8**	**-0.1**
	comp=Z,22nm,0.5s,baz=194,slow=6.8,SNR=26						
	comp=Z,22nm,0.5s						
BBOO	**Buckleboo**	**39.10**	**167**	P	**P**	**13 47 33.6**	**+2.0**
	comp=Z,187nm,1.2s,comp=Z,0.0nm						
BBOO	**Buckleboo**	**39.10**	**167**	IAmb	IAmb	13 47 49.4	
	comp=Z,120nm,0.8s						
BBOO	**Buckleboo**	**39.10**	**167**	P	**P**	**13 47 32.5**	**+0.8**
MDJ	**Mudanjiang**	**39.12**	**4**	IAmb	IAmb	13 47 37.4	
	comp=Z,194nm,1.0s						
MDJ	**Mudanjiang**	**39.12**	**4**	P	**P**	**13 47 33.2**	**+1.5**
MDJ	**Mudanjiang**	**39.12**	**4**	P	**P**	**13 47 32.5**	**+0.8**
MDJ				S	**S**	**13 53 31.1**	**+2.6**
MDJ				ScS	**ScS**	**13 57 39.8**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,230nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,2µm,10.5s						
MDJ				LR	LR		
	comp=Z,6µm,19.2s						
MDJ				LR	LR		
	comp=Z,6µm,19.9s						
MDJ				LR	LR		
	comp=Z,8µm,23.2s						
GUWA	**GUWAHATI**	**39.13**	**306**	*e*P	P	13 47 26.9	-5.1
GUWA				IAmb	IAmb	13 47 34.8	
	comp=Z,36nm,0.3s						
GUWA				*e*S	**S**	**13 53 26.8**	**-2.4**
NWAO	**Narrogin (SRO)**	**39.15**	**192**	P	**P**	**13 47 33.1**	**+1.0**
	comp=Z,206nm,1.1s,comp=Z,0.0nm						
NWAO	**Narrogin (SRO)**	**39.15**	**192**	LR	LR	14 05 49.1	
	comp=Z,4µm,19.4s,baz=22,slow=39						
NWAO	**Narrogin (SRO)**	**39.15**	**192**		**P**	**13 47 31.5**	**-0.6**
NWAO				IAmb	IAmb	13 47 51.1	
	comp=Z,214nm,1.0s						
NWAO	**Narrogin (SRO)**	**39.15**	**192**	P	**P**	**13 47 32.6**	**+0.5**
NWAO	**Narrogin (SRO)**	**39.15**	**192**	P	**P**	**13 47 31.5**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,214nm,1.0s						
NWAO	**Narrogin (SRO)**	**39.15**	**192**	P	**P**	**13 47 32.5**	**+0.4**
NWAO				S	**S**	**13 53 28.1**	**-1.2**
XLT	**XiLinHaoTe**	**39.39**	**348**	*e*P	**P**	**13 47 34.3**	**+0.2**
XLT				PP	**PnPn**	**13 49 07.9**	**-0.2**
XLT				S	**S**	**13 53 34.1**	**+1.2**
XLT				SS	**SS**	**13 56 24.2**	**-4.0**
XLT				pmax	pmax		
	comp=Z,380nm,1.3s						
XLT				pmax	pmax		
	comp=Z,2µm,4.6s						
XLT				LR	LR		
	comp=Z,380nm,16.7s						
XLT				LR	LR		
	comp=Z,3µm,18.1s						
XLT				LR	LR		
	comp=Z,6µm,17.0s						
TAWA	**Tawang**	**39.61**	**308**	*e*P	P	13 47 27.9	-8.6
TAWA				IAmb	IAmb	13 47 41.9	
	comp=Z,70nm,0.2s						
TAWA				*e*S	**S**	**13 53 33.2**	**-4.0**
STKA	**Stephens Creek**	**39.80**	**160**	P	**P**	**13 47 38.3**	**+0.9**
	comp=Z,739nm,0.8s,comp=Z,0.0nm						
STKA	**Stephens Creek**	**39.80**	**160**	P	**P**	**13 47 37.7**	**+0.3**
	comp=Z,54nm,0.5s,baz=334,slow=8.8,SNR=54						
STKA				S	**S**	**13 53 34.2**	**-4.8**
	comp=Z,22nm,0.8s,baz=335,slow=17,SNR=5.5						
STKA				LR	LR	14 06 27.4	
	comp=Z,6µm,20.5s,baz=327,slow=40						
	comp=Z,54nm,0.5s						
STKA	**Stephens Creek**	**39.80**	**160**	P	**P**	**13 47 37.4**	**-0.1**
STKA	**Stephens Creek**	**39.80**	**160**	P	**P**	**13 47 37.8**	**+0.3**
STKA	**Stephens Creek**	**39.80**	**160**	P	**P**	**13 47 37.4**	**-0.1**
STKA				pmax	pmax		
	comp=Z,751nm,0.9s						
BNX	**BinXian**	**40.16**	**1**	⇑P	**P**	**13 47 39.2**	**-1.1**
BNX				pP	pP	13 47 43.0	-8.6
BNX				S	**S**	**13 53 40.9**	**-3.1**
BNX				pmax	pmax		
	comp=Z,1µm,7.7s						
BNX				LR	LR		
	comp=Z,9µm,18.5s						
BNX				LR	LR		
	comp=Z,6µm,16.4s						
BNX				LR	LR		
	comp=Z,10µm,18.7s						
HTT	**Hallett**	**40.41**	**164**	P	**P**	**13 47 44.5**	**+1.9**
	comp=Z,37nm,1.5s						
HTT	**Hallett**	**40.41**	**164**	P	**P**	**13 47 43.7**	**+1.1**
HTT	**Hallett**	**40.41**	**164**	⇑P	**P**	**13 47 44.4**	**+1.8**
TEY	**Ternei**	**40.42**	**11**	⇑*e*P	**P**	**13 47 42.2**	**-0.2**
TEY				pmax	pmax		
	comp=Z,30nm,0.7s						
TEY				pmax	pmax		
	comp=N,20nm,0.7s						
TEY				MLR	MLR		
	comp=E,400nm,16.0s						
TEY				MLR	MLR		
	comp=N,2µm,19.0s						
TEY				MLR	MLR		
	comp=Z,2µm,17.0s						
DHUB	**DHUBRI**	**40.44**	**304**	*e*P	P	13 47 36.0	-6.9
DHUB				IAmb	IAmb	13 47 45.9	
	comp=Z,92nm,0.5s						
DHUB				*e*S	**S**	**13 53 46.3**	**-2.5**
CAL	**Calcutta**	**40.58**	**299**	*e*P	P	13 47 38.6	-5.5
CAL				IAmb	IAmb	13 47 48.2	
	comp=Z,67nm,0.3s						
CAL				*e*S	**S**	**13 53 46.9**	**-4.1**
RKGY	**Rocky Gully**	**40.83**	**192**	P	**P**	**13 47 48.1**	**+2.1**
	comp=Z,377nm,0.9s,comp=Z,0.0nm						
ASAJ	**Asahikawa**	**41.04**	**18**	P	**P**	**13 47 49.1**	**+1.5**
	comp=Z,91nm,0.7s,baz=235,slow=11,SNR=28						
ASAJ				LR	LR	14 03 40.8	
	comp=Z,9µm,21.9s,baz=219,slow=34						
	comp=Z,91nm,0.7s						
ASAJ	**Asahikawa**	**41.04**	**18**	P	**P**	**13 47 48.3**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,124nm,0.8s						
JKA	**Kamikawa-asahi**	**41.04**	**18**	P	**P**	**13 47 48.3**	**+0.6**
JKA				IAmb	IAmb	13 47 59.6	
	comp=Z,124nm,0.8s						

CMSA Cobar Meteorol 41.08 155 P **P** **13 47 48.8 +0.8**
comp=Z,111nm,1.8s,comp=Z,0.0nm
CMSA Cobar Meteorol 41.08 155 P **P** **13 47 48.5 +0.5**
LSA Lhasa 41.16 310 IAmb IAmb 13 47 52.1
comp=Z,339nm,1.4s
LSA Lhasa 41.16 310 P **P** **13 47 45.7 -3.7**
LSA pmax pmax
comp=Z,120nm,1.4s
LSA LR LR
comp=Z,3μm,21.3s
LSA LR LR
comp=Z,4μm,22.0s
LSA Lhasa 41.16 310 P **P** **13 47 49.3 -0.1**
LSA Lhasa 41.16 310 P **P** **13 47 50.7 +1.3**
LSA P **P** **13 47 50.7 +1.3**
H11S3 WAKE ISLAND Hy 41.29 68 T T 14 31 48.5
baz=257,slow=75,SNR=112
H11S1 WAKE ISLAND Hy 41.30 68 T T 14 31 46.4
baz=257,slow=75,SNR=106
H11S2 WAKE ISLAND Hy 41.30 68 T T 14 31 46.4
baz=257,slow=75,SNR=154
GTA2 Gaotai 41.61 328 ⇑P **P** **13 47 52.1 -0.5**
GTA2 pP pP 13 48 01.9 -1.5
GTA2 PP **PP** **13 49 33.3 +4.0**
GTA2 PcP **PcP** **13 49 50.7 +1.6**
GTA2 PcS **PcS** **13 53 39.4 -1.2**
GTA2 S **S** **13 54 04.9 -1.3**
GTA2 SS **SS** **13 57 17.9 +5.4**
GTA2 ScS **ScS** **13 57 52.0 -0.9**
GTA2 pmax pmax
comp=Z,170nm,1.3s
GTA2 pmax pmax
comp=Z,2μm,11.5s
GTA2 LR LR
comp=Z,15μm,21.9s
GTA2 LR LR
comp=Z,10μm,23.5s
GTA2 LR LR
comp=Z,22μm,24.7s
H01W3 Cape Leeuwin H 41.76 195 P **P** **13 47 52.4 -0.9**
baz=22,slow=6.0,SNR=5.4
H11N1 WAKE ISLAND Hy 41.76 66 T T 14 32 24.8
baz=254,slow=75,SNR=206
H01W1 Cape Leeuwin H 41.77 195 P **P** **13 47 53.6 +0.2**
baz=22,slow=6.0,SNR=6.2
H11N2 WAKE ISLAND Hy 41.77 66 T T 14 32 24.3
baz=254,slow=75,SNR=141
H01W2 Cape Leeuwin H 41.78 195 P **P** **13 47 55.4 +1.9**
baz=22,slow=6.0,SNR=4.3
H11N3 WAKE ISLAND Hy 41.78 66 T T 14 32 25.2
baz=254,slow=75,SNR=173
YUK Yuzh-Kuril'sk 42.05 21 P **P** **13 47 52.4 -3.4**
YUK 13 49 33.6
YUK *e*PPP PPP 13 50 08.3
YUK *e*S **S** **13 54 05.5 -6.6**
YUK SSS SSS 13 57 53.6
YUK pmax pmax
comp=Z,329nm,1.2s
YUK pmax pmax
comp=E,186nm,1.0s
YUK pmax pmax
comp=N,460nm,1.2s
SHBG Sahibganj 42.10 302 *e*P **P** **13 47 52.8 -3.8**
SHBG IAmb IAmb 13 47 58.8
comp=Z,288nm,0.5s
SHBG *e*S **S** **13 54 09.7 -3.9**
BWNR Bhubaneshwar 42.16 294 *e*P **P** **13 47 54.0 -3.1**
BWNR IAmb IAmb 13 48 12.7
comp=Z,119nm,1.0s
BWNR *e*S **S** **13 54 12.4 -2.1**
GOMU GeErMu 42.22 321 P **P** **13 47 57.8 0.0**
GOMU PcP **PcP** **13 49 51.1 -0.4**
GOMU S **S** **13 54 16.9 +1.2**
GOMU pmax pmax
comp=Z,190nm,1.3s
GOMU LR LR
comp=Z,8μm,18.6s
GOMU LR LR
comp=Z,14μm,18.8s
ARMA Armidale 43.01 147 P **P** **13 48 05.5 +1.4**
comp=Z,130nm,0.8s,comp=Z,0.0nm
ARMA Armidale 43.01 147 P **P** **13 48 02.2 -1.8**
ARMA IAmb IAmb 13 48 25.4
comp=Z,460nm,1.8s
ARMA Armidale 43.01 147 P **P** **13 48 04.3 +0.3**
ARMA Armidale 43.01 147 ⇑P **P** **13 48 04.9 +0.8**
YSS Yuzhno-Sakhali 43.67 16 P **P** **13 48 08.6 -0.4**
YSS IAmb IAmb 13 48 13.2
comp=Z,106nm,0.7s
YSS Yuzhno-Sakhali 43.67 16 P **P** **13 48 10.1 +1.1**
YSS Yuzhno-Sakhali 43.67 16 *e*P **P** **13 48 09.1 +0.1**
YSS *e* 13 49 57.7
YSS *e*S **S** **13 54 33.5 -2.5**
YSS *e*SS **SS** **13 57 49.1 -3.3**
YSS pmax pmax
comp=Z,600nm,5.8s
YSS pmax pmax
comp=Z,110nm,0.8s
YSS smax smax
comp=N,1μm,15.0s
YSS smax smax
comp=E,1μm,14.1s
YSS MLR MLR
comp=N,3μm,20.0s
YSS MLR MLR
comp=E,3μm,20.0s
YSS MLR MLR
comp=Z,4μm,20.0s
YSS Yuzhno-Sakhali 43.67 16 ⇑P **P** **13 48 09.6 +0.6**
KUR Kuril'sk 43.81 22 *e*P **P** **13 48 10.3 +0.3**
KUR *i*S **S** **13 54 38.0 +0.1**
KUR MLR MLR
comp=Z,3μm,19.0s
KLR Kul'dur 43.87 5 LR LR 14 09 40.6
comp=Z,752nm,18.1s,baz=195,slow=40
KLR Kul'dur 43.87 5*c i*P **P** **13 48 09.6 -0.9**
KLR pmax pmax
comp=Z,108nm,0.9s
KLR MLR MLR
comp=Z,5μm,16.0s
VIS Vishakhapatnam 43.90 290 *e*P **P** **13 48 08.2 -3.0**
VIS IAmb IAmb 13 48 17.7
comp=Z,152nm,1.8s
VIS *e*S **S** **13 54 37.7 -2.5**
HIA Hailar 44.05 354 IAMs_20 IAMs_20 14 10 11.2
comp=Z,9μm,19.0s
HIA Hailar 44.05 354 P **P** **13 48 13.5 +1.5**
RAGD RAYAGADA 44.09 292 *e*P **P** **13 48 08.2 -4.5**
RAGD IAmb IAmb 13 48 30.9
comp=Z,135nm,0.9s
RAGD *e*S **S** **13 54 39.2 -3.7**
HILR Hailar Array B 44.34 354 P **P** **13 48 15.7 +1.4**
comp=Z,72nm,0.6s,baz=169,slow=12,SNR=96
HILR PcP **PP** **13 49 59.1 +0.9**
comp=Z,20nm,0.5s,baz=165,slow=3.9,SNR=6.2
HILR LR LR 14 10 41.3
comp=Z,5μm,18.1s,baz=115,slow=41
comp=Z,72nm,0.6s
ARPS Mount Arapiles 44.37 162 P **P** **13 48 16.1 +1.5**
comp=Z,179nm,1.3s,comp=Z,0.0nm
YNG Young 44.61 154 P **P** **13 48 18.6 +2.0**
HEH HeiHe 44.67 1 *e*P **P** **13 48 16.0 -0.9**
HEH sP **pwP** **13 48 29.8 +1.5**
HEH ScP **ScP** **13 53 49.0 +0.9**
HEH S **S** **13 54 46.8 -3.6**
HEH ScS **SS** **13 58 12.4 +0.5**
HEH pmax pmax
comp=Z,81nm,1.4s
HEH pmax pmax
comp=Z,2μm,8.9s
HEH LR LR
comp=Z,6μm,21.8s
HEH LR LR
comp=Z,5μm,20.6s
HEH LR LR
comp=Z,11μm,19.4s
MGBR Mount Gambier 44.90 164 P **P** **13 48 19.6 +0.8**
MGBR IAmb IAmb 13 48 39.7
comp=Z,188nm,1.1s
ULN Ulaanbaatar 45.44 342 P **P** **13 48 22.5 -0.8**
ULN Ulaanbaatar 45.44 342*c i*P **P** **13 48 23.3 +0.1**
ULN pmax pmax
comp=Z,306nm,1.2s
ULN MLR MLR
comp=Z,7μm,21.0s
ULN Ulaanbaatar 45.44 342 P **P** **13 48 24.0 +0.8**
ULN P **P** **13 48 24.0 +0.8**
ULN S **S** **13 55 01.5 -0.5**
ULN *S* **S** **13 55 01.5 -0.5**
ULN Ulaanbaatar 45.44 342 ⇑P **P** **13 48 23.3 +0.1**
ULN Ulaanbaatar 45.44 342 P **P** **13 48 23.1 -0.2**
UGL Uglegorsk 45.45 14 *e*P **P** **13 48 24.1 +1.0**
UGL *e* 13 50 15.0
UGL *e*S **S** **13 55 00.2 -1.5**
UGL *e*SS **ScS** **13 58 15.5 -0.6**
UGL pmax pmax
comp=Z,200nm,1.0s
UGL smax smax
comp=E,4μm,7.4s
UGL smax smax
comp=N,3μm,8.2s
UGL MLR MLR
comp=E,4μm,17.0s
UGL MLR MLR
comp=N,4μm,19.0s
UGL MLR MLR
comp=Z,3μm,19.0s
PALK Pallekele 45.54 275 LR LR 14 09 20.2
comp=Z,4μm,19.9s,baz=93,slow=39
PALK Pallekele 45.54 275 P **P** **13 48 24.2 -0.2**
PALK IAmb IAmb 13 48 43.1
comp=Z,152nm,1.6s
PALK Pallekele 45.54 275 P **P** **13 48 21.9 -2.6**
PALK Pallekele 45.54 275 P **P** **13 48 24.2 -0.2**
PALK pmax pmax
comp=Z,152nm,1.7s
PALK MLR MLR
comp=Z,5μm,20.0s
PALK Pallekele 45.54 275 P P 13 48 30.0 +5.6
SONM Songino Array 45.62 341 P **P** **13 48 25.0 +0.4**
comp=Z,107nm,1.2s,baz=164,slow=7.3,SNR=163
SONM PcP **PcP** **13 50 03.9 +1.4**
comp=Z,42nm,0.7s,baz=181,slow=2.8,SNR=9.7
SONM LR LR 14 09 44.1
comp=Z,9μm,21.0s,baz=156,slow=39
SONM PKPPKP P'P'df 14 19 46.4 -11
comp=Z,0.6nm,0.7s,baz=219,slow=0.9,SNR=5.4
comp=Z,107nm,1.2s
SONM Songino Array 45.62 341 P **P** **13 48 24.2 -0.5**
SONM IAmb IAmb 13 48 27.8
comp=Z,213nm,1.4s
SONM PcP **PcP** **13 50 04.5 +2.0**
SONM Songino Array 45.62 341 P **P** **13 48 24.2 -0.5**
SONM 13 50 04.5
SONM pmax pmax
comp=Z,213nm,1.4s
MALK Mahakanadarawa 45.70 276 P **P** **13 48 24.3 -1.4**
MALK Mahakanadarawa 45.70 276 ⇑P **P** **13 48 24.6 -1.0**
CAN Canberra 45.73 154 P **P** **13 48 28.9 +3.3**
CAN Canberra 45.73 154 P **P** **13 48 26.7 +1.1**
CAN Canberra 45.73 154 P **P** **13 48 27.0 +1.4**
CAN Canberra 45.73 154 P **P** **13 48 26.7 +1.1**
CAN pmax pmax
comp=Z,416nm,1.6s
CAN Canberra 45.73 154 ⇑P **P** **13 48 27.7 +2.1**
CNB Canberra Magne 45.89 154 P **P** **13 48 29.0 +2.1**
GRNR Gornyy 45.94 9⇑*i*P **P** **13 48 27.0 0.0**
GRNR pmax pmax
comp=N,8.0nm,1.0s
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR MLR MLR
comp=E,450nm,16.0s
GRNR MLR MLR
comp=N,2μm,18.0s
GRNR MLR MLR
comp=Z,3μm,17.0s
VJD Vijayawada 46.23 288 *e*P P 13 48 23.4 -6.4
VJD IAmb IAmb 13 48 42.5
comp=Z,182nm,1.3s
VJD *e*S **S** **13 55 11.3 -2.6**
TOO Toolangi 46.30 159 P **P** **13 48 32.1 +2.1**
comp=Z,49nm,1.2s,comp=Z,0.0nm
TOO Toolangi 46.30 159 P **P** **13 48 31.0 +0.9**
TOO Toolangi 46.30 159 P **P** **13 48 31.0 +0.9**
TOO pmax pmax
comp=Z,74nm,1.3s
TOO Toolangi 46.30 159 ⇑P **P** **13 48 31.7 +1.6**
TARA Tarawa 46.51 93 IAMs_20 IAMs_20 14 03 59.6
comp=Z,11μm,21.0s
TYV Tymovskoe 47.25 14 *e*P **P** **13 48 38.5 +1.3**
TYV *e*S **S** **13 55 31.7 +4.2**
TYV pmax pmax
comp=Z,600nm,4.2s
TYV pmax pmax
comp=Z,39nm,1.1s
TYV smax smax
comp=N,3μm,7.7s
TYV smax smax
comp=E,2μm,7.7s
TYV smax smax
comp=N,10.0nm,2.2s
TYV smax smax
comp=E,13nm,2.2s
MILA Mila 47.27 155 P **P** **13 48 39.7 +2.0**
comp=Z,29nm,1.3s,comp=Z,0.0nm
MILA Mila 47.27 155 ⇓P **P** **13 48 40.4 +2.8**
CIT Chita 47.66 349 *e*P **P** **13 48 41.6 +1.1**
CIT *e* 13 48 50.0
CIT *e* 13 50 11.0
CIT *e* 13 50 31.4
CIT *e*S **S** **13 55 37.6 +4.2**
CIT pmax pmax
comp=Z,861nm,1.4s
DZM Mont Dzumac 47.71 126 LR LR 14 09 17.9
comp=Z,5μm,21.7s,baz=315,slow=37
DZM Mont Dzumac 47.71 126 P **P** **13 48 40.2 -1.2**
DZM IAmb IAmb 13 49 03.4
comp=Z,62nm,0.9s
DZM Mont Dzumac 47.71 126 P **P** **13 48 41.3 -0.1**
SALM Salem 48.15 281 *e*P P 13 48 38.7 -6.2
SALM IAmb IAmb 13 48 50.6
comp=Z,176nm,0.6s
SALM *e*S **S** **13 55 38.3 -3.1**
ZEA Zeya 48.16 1 *e*P **P** **13 48 42.7 -1.5**
ZEA *e* 13 50 39.0
ZEA *e*S **S** **13 55 32.3 -8.0**
ZEA *e* 13 55 57.1
ZEA *e* 13 58 35.2
ZEA pmax pmax
comp=N,200nm,6.2s
ZEA pmax pmax
comp=Z,600nm,7.9s
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,70nm,0.9s
ZEA pmax pmax
comp=N,300nm,14.0s
ZEA pmax pmax
comp=Z,700nm,10.1s
ZEA smax smax
comp=E,300nm,6.8s
ZEA smax smax
comp=N,300nm,6.9s
ZEA MLR MLR
comp=E,2μm,18.0s
ZEA MLR MLR
comp=N,2μm,20.0s
ZEA MLR MLR
comp=Z,4μm,21.0s
HYB Hyderabad 48.34 288 *e*P **P** **13 48 46.4 +0.1**
HYB IVmBBB 13 48 48.1
comp=Z,688nm,3.7s
HYB *e*sP **pP** **13 48 55.2 -2.1**
HYB *e*PcP **PcP** **13 50 13.2 +0.5**
HYB *e*PP **PP** **13 50 40.9 +1.8**
HYB *e*ScP **ScP** **13 54 06.2 +1.9**
HYB *e*S **S** **13 55 46.9 +2.9**
HYB IVmS_BB IVmS_BB 14 06 04.6
comp=Z,2μm,23.5s
PINNC Pines Island, 48.79 126 P **P** **13 48 51.1 +1.6**
ZAK Zakamensk 48.85 340 *e*P **P** **13 48 48.9 -0.8**
ZAK pmax pmax
comp=Z,75nm,1.4s
TRD Trivandrum 49.24 277 *e*P P 13 48 46.7 -6.5
TRD IAmb IAmb 13 49 11.2
comp=Z,154nm,0.8s
TRD *e*S **S** **13 55 51.6 -5.2**
TLY Talaya 49.85 342 P **P** **13 48 57.1 -0.1**
TLY Talaya 49.85 342*c i*P **P** **13 48 57.6 +0.4**
TLY pmax pmax
comp=Z,115nm,1.0s
TLY MLR MLR
comp=Z,5μm,19.0s
TLY Talaya 49.85 342 P **P** **13 48 58.3 +1.1**
TLY P **P** **13 48 58.3 +1.1**
TLY S **S** **13 56 05.1 +1.0**
TLY S **S** **13 56 05.1 +1.0**
TLY Talaya 49.85 342 ⇑P **P** **13 48 57.6 +0.4**
IRK Irkutsk 50.14 342 *e*P **P** **13 48 57.9 -1.6**
IRK *e*S **S** **13 56 16.4 +8.2**
IRK *e* 13 58 47.3
IRK pmax pmax
comp=Z,354nm,1.6s
GLAD Gladstone 50.23 159 P **P** **13 49 02.9 +2.7**
MOY Mondy 50.71 340 *e*P **P** **13 49 03.8 -0.1**
MOY pmax pmax
comp=Z,312nm,1.6s
KNGR Kungurtug, Tuv 51.14 337*d i*P **P** **13 49 07.8 +0.7**
KNGR pmax pmax
comp=Z,221nm,1.3s
KNGR MLR MLR
comp=Z,3μm,16.0s
WMQ Urumqi 51.21 324 ⇑P **P** **13 49 07.3 -0.4**
WMQ PcP **PcP** **13 50 22.6 0.0**
WMQ ScP **ScP** **13 54 15.9 -0.1**
WMQ S **S** **13 56 22.6 -0.8**
WMQ ScS **ScS** **13 58 55.3 +0.3**
WMQ pmax pmax
comp=Z,160nm,1.5s
WMQ pmax pmax
comp=Z,1μm,3.7s
WMQ LR LR
comp=Z,15μm,24.5s
WMQ LR LR
comp=Z,11μm,23.5s
WMQ LR LR
comp=Z,16μm,22.5s
MOO Moorlands 51.23 160 P **P** **13 49 11.2 +3.4**
MOO Moorlands 51.23 160 P **P** **13 49 09.3 +1.5**
SKR Severo-Kuril's 51.45 24 *e*P P 13 49 18.9 +10
SKR *e*PPP PPP 13 51 06.9
SKR *e*S S 13 56 38.0 +12
SKR *e*SS **ScS** **13 58 48.8 -7.4**
SKR pmax pmax
comp=Z,300nm,3.0s
SKR MLR MLR
comp=Z,2μm,17.0s
TAU Tasmania Unive 51.70 161 P **P** **13 49 11.6 +0.4**
TAU IAmb IAmb 13 49 15.1
comp=Z,124nm,1.2s
TAU Tasmania Unive 51.70 161 P **P** **13 49 13.8 +2.6**
TAU Tasmania Unive 51.70 161 P **P** **13 49 11.6 +0.4**
TAU pmax pmax
comp=Z,124nm,1.2s
TAU Tasmania Unive 51.70 161 ⇓P **P** **13 49 14.1 +2.9**
BOD Bodaibo 53.16 352 *e*P **P** **13 49 22.8 +1.0**
BOD pmax pmax
comp=Z,603nm,1.3s
KAAM Kaadhehdhoo 53.63 267 P **P** **13 49 26.4 +0.3**
comp=Z,166nm,1.3s
PEA0B Petropavlovsk- 53.95 23 IAmb IAmb 13 50 05.4
comp=Z,168nm,1.1s
PEA0B Petropavlovsk- 53.95 23*d i*P **P** **13 49 28.4 +0.6**
PETK Petropavlovsk- 53.95 23 P **P** **13 49 28.2 +0.4**
comp=Z,56nm,0.8s,baz=191,slow=3.9,SNR=36
PETK ScP **ScP** **13 54 29.8 +2.1**
comp=Z,3.7nm,0.8s,baz=220,slow=7.5,SNR=2.5
PETK LR LR 14 11 02.2
comp=Z,3μm,21.7s,baz=224,slow=34
comp=Z,56nm,0.8s
PETK Petropavlovsk- 53.95 23 P **P** **13 49 27.5 -0.3**
PET Petropavlovsk 54.26 23 P **P** **13 49 30.7 +0.7**
PET IAmb IAmb 13 49 39.9
comp=Z,149nm,1.1s
PET Petropavlovsk 54.26 23 P **P** **13 49 30.9 +0.9**
PET Petropavlovsk 54.26 23 *e*P **P** **13 49 29.4 -0.6**
PET *e*S **S** **13 57 05.3 +0.8**
PET pmax pmax
comp=Z,900nm,18.9s
PET pmax pmax
comp=Z,149nm,1.0s
PET MLR MLR
comp=Z,2μm,19.0s
PET MLR MLR
comp=Z,2μm,19.0s
PET Petropavlovsk 54.26 23 P **P** **13 49 29.8 -0.2**
comp=Z,2μmcomp=Z,127nm,1.2s
PET Petropavlovsk 54.26 23 ⇑P **P** **13 49 30.7 +0.7**
ZSN Zaisan 54.96 327*c i*P **P** **13 49 34.4 -0.8**
ZSN *e*S **S** **13 57 14.6 +0.4**
ZSN Zaisan 54.96 327⇑*i*P **P** **13 49 34.5 -0.8**
ZSN *e*S **S** **13 57 14.7 +0.4**
DGZ Jazzator, Alta 55.01 330*c i*P **P** **13 49 35.4 -0.3**
DGZ pmax pmax
comp=Z,163nm,1.3s
WUS Wushi 55.15 318 IAmb IAmb 13 49 42.1
comp=Z,127nm,0.9s
DGAR Diego Garcia 55.41 257*de*P **P** **13 49 37.5 -1.5**
DGAR pmax pmax
comp=Z,324nm,1.3s
MSVF Nonsavu 55.84 116 P **P** **13 49 43.0 +0.9**
MSVF IAmb IAmb 13 49 55.0
comp=Z,144nm,1.0s
MSVF Nonsavu 55.84 116 IAMs_20 IAMs_20 14 10 30.1
comp=Z,8μm,22.0s
MSVF Nonsavu 55.84 116*de*P **P** **13 49 41.8 -0.3**
MSVF pmax pmax
comp=Z,170nm,1.0s
MSVF MLR MLR
comp=Z,5μm,20.0s
SHLS Shalkode 55.90 320*c i*P **P** **13 49 39.4 -2.8**
SHLS pmax pmax
comp=Z,183nm,1.1s
SHLS Shalkode 55.90 320⇑*i*P **P** **13 49 39.5 -2.8**
comp=Z,183nm,1.1s
PDGK Podgornoye 55.96 320 P **P** **13 49 41.1 -1.6**
MK31 Makanchi Array 56.03 325 *e*P **P** **13 49 41.7 -1.3**
MKAR Makanchi Array 56.03 325 P **P** **13 49 42.6 -0.4**
comp=Z,97nm,0.5s,baz=122,slow=8.2,SNR=852
MKAR PcP **PcP** **13 50 41.0 +0.2**
comp=Z,61nm,0.7s,baz=104,slow=5.1,SNR=6.0
MKAR ScP **ScP** **13 54 38.2 +1.2**
comp=Z,15nm,0.8s,baz=112,slow=4.7,SNR=7.7
MKAR S **S** **13 57 27.6 -1.1**
comp=Z,2.0nm,0.9s,baz=123,slow=12,SNR=2.4
MKAR ScS **ScS** **13 59 25.5 -3.5**
comp=Z,2.2nm,1.1s,baz=133,slow=7.0,SNR=1.7
MKAR LR LR 14 14 40.1
comp=Z,15μm,21.5s,baz=102,slow=37
MKAR PKPPKP **P'P'df** **14 19 35.7 -7.8**
comp=Z,4.8nm,1.3s,baz=319,slow=3.5,SNR=4.0
MKAR P4KPbc 14 26 55.2
comp=Z,2.0nm,0.8s,baz=116,slow=4.4,SNR=10
comp=Z,97nm,0.5s
MKAR Makanchi Array 56.03 325 P **P** **13 49 42.7 -0.3**
UZB Uzynbulak 56.18 320*c i*P **P** **13 49 43.4 -0.8**
UZB pmax pmax
comp=Z,160nm,1.4s
UZB Uzynbulak 56.18 320⇑*i*P **P** **13 49 43.4 -0.8**
comp=Z,160nm,1.4s
MAKZ Makanchi 56.22 325 P **P** **13 49 43.6 -0.7**
MAKZ Makanchi 56.22 325 P **P** **13 49 43.6 -0.7**
MAKZ pmax pmax
comp=Z,219nm,0.9s
MAKZ MLR MLR
comp=Z,18μm,22.0s
MAKZ Makanchi 56.22 325 ⇑P **P** **13 49 43.4 -0.9**
TARG Taragay, Kyrgy 56.34 318 P **P** **13 49 45.6 -0.1**
TARG Taragay, Kyrgy 56.34 318 P **P** **13 49 45.6 -0.1**
TARG pmax pmax
comp=Z,235nm,1.3s
YAK Yakutsk 56.52 2 S **S** **13 57 31.3 -3.2**
comp=Z,5.0nm,0.4s,baz=243,slow=0.7,SNR=1.8
YAK ScS **ScS** **13 59 28.7 -2.9**
comp=Z,5.6nm,0.3s,baz=52,slow=22,SNR=1.6
YAK Yakutsk 56.52 2 P **P** **13 49 46.0 0.0**
YAK Yakutsk 56.52 2 *e*P **P** **13 49 45.5 -0.6**
YAK *e**PP **pP** **13 49 53.1 -4.7**
YAK *e* 13 50 43.5
YAK *e* 13 51 57.5
YAK *e*PPP PPP 13 53 04.1
YAK *e*S **S** **13 57 35.9 +1.5**
YAK *e**SS **pS** **13 57 42.4 -4.9**

YAK				e		13 59 28.1	
YAK				eSS	SS	14 01 24.8	+2.5
YAK				eSSS	SSS	14 03 39.1	
YAK				pmax	pmax		
	comp=Z,543nm,0.9s						
YAK				pmax	pmax		
	comp=N,300nm,1.3s						
YAK				pmax	pmax		
	comp=E,105nm,1.4s						
YAK				pmax	pmax		
	comp=Z,354nm,3.3s						
YAK				pmax	pmax		
	comp=N,236nm,3.5s						
YAK				pmax	pmax		
	comp=E,76nm,2.5s						
YAK				smax	smax		
	comp=E,480nm,3.5s						
YAK				smax	smax		
	comp=N,229nm,2.4s						
YAK	**Yakutsk**	**56.52**	**2**	⇑P	**P**	**13 49 45.8**	**-0.3**
SATY	**Saty**	**56.54**	**319**	c iP	**P**	**13 49 45.9**	**-0.8**
SATY				eS	**S**	**13 57 35.8**	**+0.2**
SATY				pmax	pmax		
	comp=Z,171nm,1.0s						
SATY	**Saty**	**56.54**	**319**	⇑iP	**P**	**13 49 46.0**	**-0.8**
	comp=Z,171nm,1.0s						
SATY				eS	**S**	**13 57 35.9**	**+0.2**
KPKS	**Kokpek**	**56.55**	**320**	eP	**P**	**13 49 45.9**	**-0.9**
KPKS				eS	**S**	**13 57 35.8**	**+0.1**
KPKS	**Kokpek**	**56.55**	**320**	eP	**P**	**13 49 46.0**	**-0.9**
KPKS				eS	**S**	**13 57 35.9**	**+0.1**
NIL	**Nilore**	**56.71**	**307**	P	**P**	**13 49 47.4**	**-0.7**
NIL	**Nilore**	**56.71**	**307**	IAMs_20	IAMs_20	14 15 54.9	
	comp=Z,7μm,22.0s						
NIL	**Nilore**	**56.71**	**307**	P	**P**	**13 49 47.4**	**-0.7**
NIL				pmax	pmax		
	comp=Z,956nm,1.2s						
NIL				MLR	MLR		
	comp=Z,7μm,22.0s						
NIL	**Nilore**	**56.71**	**307**	P	**P**	**13 49 48.3**	**+0.3**
KSH2	**Kashi**	**56.83**	**314**	P	**P**	**13 49 48.5**	**-0.5**
KSH2				S	**S**	**13 57 35.0**	**-4.8**
KSH2				pmax	pmax		
	comp=Z,310nm,1.2s						
KSH2				pmax	pmax		
	comp=Z,1μm,9.4s						
KSH2				LR	LR		
	comp=Z,8μm,18.6s						
KSH2				LR	LR		
	comp=Z,12μm,19.6s						
KSH2				LR	LR		
	comp=Z,15μm,21.1s						
DGTI	**Dogotuki**	**56.91**	**113**	P	**P**	**13 49 50.8**	**+1.1**
KDJ	**Kajisay**	**56.93**	**318**	P	**P**	**13 49 49.4**	**-0.3**
KDJ	**Kajisay**	**56.93**	**318**	P	**P**	**13 49 49.4**	**-0.3**
KDJ				pmax	pmax		
	comp=Z,525nm,1.4s						
MA2	**Magadan**	**57.12**	**14**	P	**P**	**13 49 51.4**	**+1.0**
MA2				IAmb	IAmb	13 50 01.4	
	comp=Z,58nm,0.7s						
MA2	**Magadan**	**57.12**	**14**	P	**P**	**13 49 52.0**	**+1.6**
MA2	**Magadan**	**57.12**	**14**	c iP	**P**	**13 49 49.9**	**-0.5**
MA2				pmax	pmax		
	comp=Z,78nm,0.9s						
MA2				MLR	MLR		
	comp=Z,3μm,18.0s						
MA2	**Magadan**	**57.12**	**14**	P	**P**	**13 49 50.6**	**+0.2**
	comp=Z,2μmcomp=Z,95nm,0.8s						
MA2	**Magadan**	**57.12**	**14**	⇓P	**P**	**13 49 50.8**	**+0.4**
NRN	**Naryn**	**57.44**	**316**	P	**P**	**13 49 52.5**	**-0.9**
NRN	**Naryn**	**57.44**	**316**	P	**P**	**13 49 52.5**	**-0.9**
NRN				pmax	pmax		
	comp=Z,319nm,1.4s						
ARXS	**Arharly**	**57.44**	**320**	eP	**P**	**13 49 52.0**	**-1.1**
TDK	**Taldyqorghan**	**57.45**	**321**	eP	**P**	**13 49 52.3**	**-0.7**
TDK				MLR	MLR		
	comp=Z,6μm,19.0s						
TDK	**Taldyqorghan**	**57.45**	**321**	eP	**P**	**13 49 52.4**	**-0.7**
TDK				LR	LR	14 15 23.7	
	comp=Z,6μm,19.0s						
MDOK	**Medeo**	**57.47**	**319**	eP	**P**	**13 49 52.6**	**-0.8**
MDOK				eS	**S**	**13 57 48.3**	**+0.3**
MDOK	**Medeo**	**57.47**	**319**	eP	**P**	**13 49 52.6**	**-0.8**
MDOK				eS	**S**	**13 57 48.3**	**+0.3**
MDOK				LR	LR	14 15 54.5	
TNSS	**Tian-Shan**	**57.48**	**319**	eP	**P**	**13 49 52.6**	**-1.2**
TNSS	**Tian-Shan**	**57.48**	**319**	eP	**P**	**13 49 52.6**	**-1.2**
ULHL	**Ulahol**	**57.61**	**317**	P	**P**	**13 49 54.1**	**-0.4**
	SNR=179						
MIDW	**Midway**	**57.73**	**60**	IAMs_20	IAMs_20	14 09 14.2	
	comp=Z,8μm,22.0s						
BOOM	**Boomskoye usch**	**57.92**	**318**	P	**P**	**13 49 55.5**	**-1.1**
BOOM				IAmb	IAmb	13 49 58.1	
	comp=Z,240nm,1.4s						
BOOM	**Boomskoye usch**	**57.92**	**318**	P	**P**	**13 49 55.5**	**-1.1**
BOOM				pmax	pmax		
	comp=Z,240nm,1.4s						
KUU	**Kurty**	**58.26**	**319**	eP	**P**	**13 49 58.1**	**-0.6**
KUU				pmax	pmax		
	comp=Z,123nm,1.0s						
KUU				MLR	MLR		
	comp=Z,4μm,20.0s						
KUU	**Kurty**	**58.26**	**319**	eP	**P**	**13 49 58.1**	**-0.6**
	comp=Z,123nm,1.0s						
KUU				LR	LR	14 16 25.4	
	comp=Z,4μm,20.1s						
TKM2	**Tokmak 2**	**58.33**	**318**	P	**P**	**13 49 58.9**	**-0.6**
	SNR=227						
KBK	**Karagaybulak**	**58.65**	**317**	P	**P**	**13 50 01.5**	**-0.2**
	SNR=167						
UCH	**Uchtor**	**58.77**	**317**	P	**P**	**13 50 02.7**	**-0.2**
	SNR=451						
CHMS	**Chumysh**	**58.92**	**318**	P	**P**	**13 50 03.1**	**-0.3**
	SNR=102						
AAK	**Ala-Archa**	**58.95**	**317**	LR	LR	14 19 16.6	
	comp=Z,5μm,18.7s,baz=96,slow=40						
AAK	**Ala-Archa**	**58.95**	**317**	P	**P**	**13 50 03.2**	**-0.6**
	SNR=51						
AAK	**Ala-Archa**	**58.95**	**317**	P	**P**	**13 50 02.8**	**-1.0**
AAK	**Ala-Archa**	**58.95**	**317**	IAMs_20	IAMs_20	14 19 55.6	
	comp=Z,7μm,19.0s						
AAK	**Ala-Archa**	**58.95**	**317**	i P	**P**	**13 50 02.7**	**-1.0**
	SNR=108						
AAK	**Ala-Archa**	**58.95**	**317**	c iP	**P**	**13 50 03.3**	**-0.6**
AAK				pmax	pmax		
	comp=Z,196nm,1.4s						
AAK				MLR	MLR		
	comp=Z,6μm,19.0s						
AAK	**Ala-Archa**	**58.95**	**317**	P	**P**	**13 50 04.0**	**+0.2**
AAK				P	**P**	**13 50 04.0**	**+0.2**
AAK	**Ala-Archa**	**58.95**	**317**	⇑P	**P**	**13 50 03.2**	**-0.6**
ZAA0	**Zalesovo Array**	**58.98**	**333**	IAmb	IAmb	13 50 53.5	
	comp=Z,138nm,1.1s						
ZALV	**Zalesovo Beam**	**58.98**	**333**	P	**P**	**13 50 02.7**	**-0.8**
	comp=Z,61nm,0.7s,baz=116,slow=6.8,SNR=143						
ZALV				LR	LR	14 17 06.4	
	comp=Z,5μm,21.3s,baz=134,slow=38						
ZALV				PKPPKP	**P'P'df**	**14 19 36.0**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=319,slow=4.3,SNR=4.6						
ZALV				P4KPbc		14 27 07.0	
	comp=Z,0.4nm,0.3s,baz=146,slow=3.4,SNR=4.1						
	comp=Z,61nm,0.7s						
ZALV	**Zalesovo Beam**	**58.98**	**333**	P	**P**	**13 50 01.9**	**-1.6**
ZALV	**Zalesovo Beam**	**58.98**	**333**	i P	**P**	**13 50 02.7**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,51nm,0.6s						
SGDS	**Sogindy**	**59.19**	**318**	eP	**P**	**13 50 04.2**	**-1.1**
USP	**Ospenovka**	**59.20**	**318**	P	**P**	**13 50 04.7**	**-0.7**
	SNR=215						
EKS2	**Erkin-Say**	**59.45**	**317**	P	**P**	**13 50 06.8**	**-0.3**
	SNR=309						
OUZ	**Omahuta**	**59.94**	**136**	IAMs_20	IAMs_20	14 14 02.4	
	comp=Z,6μm,22.0s						
OUZ	**Omahuta**	**59.94**	**136**	P	**P**	**13 50 11.7**	**+1.2**
OUZ	**Omahuta**	**59.94**	**136**	P	**P**	**13 50 10.5**	**0.0**
KURBB	**Kurchatov Arra**	**60.19**	**327**	P	**P**	**13 50 11.5**	**-0.4**
	comp=Z,142nm,0.6s,baz=122,slow=6.9,SNR=389						
KURBB				LR	LR	14 17 34.4	
	comp=Z,6μm,20.9s,baz=129,slow=37						
KURBB				PKPPKP	**P'P'df**	**14 19 29.2**	**-7.7**
	comp=Z,4.5nm,1.1s,baz=273,slow=3.8,SNR=14						
KURBB				P4KPbc		14 27 14.8	
	comp=Z,0.3nm,0.3s,baz=129,slow=4.1,SNR=4.2						
	comp=Z,142nm,0.6s						
KURK	**Kurchatov**	**60.19**	**327**	P	**P**	**13 50 11.0**	**-0.9**
KURK	**Kurchatov**	**60.19**	**327**	IAMs_20	IAMs_20	14 17 12.3	

	comp=Z,7μm,22.0s						
KURK	**Kurchatov**	**60.19**	**327**	c iP	**P**	**13 50 10.8**	**-1.1**
KURK				pmax	pmax		
	comp=Z,353nm,0.7s						
KURK				MLR	MLR		
	comp=Z,2μm,15.0s						
KURK	**Kurchatov**	**60.19**	**327**	P	**P**	**13 50 11.4**	**-0.5**
KURK				P	**P**	**13 50 11.4**	**-0.5**
KURK				S	**S**	**13 58 22.1**	**-0.6**
KURK				S	**S**	**13 58 22.1**	**-0.6**
BTLS	**Baital**	**60.23**	**320**	eP	**P**	**13 50 07.6**	**-4.7**
KBU	**Kabul Universi**	**60.24**	**307**	P	**P**	**13 50 11.3**	**-1.5**
KBL	**Kabul**	**60.32**	**307**	P	**P**	**13 50 12.5**	**-0.9**
	SNR=80						
KBL				P	**P**	**13 50 12.5**	**-0.9**
	SNR=80						
KBL				S	**S**	**13 58 21.9**	**-3.5**
KBL				S	**S**	**13 58 21.9**	**-3.5**
SEY	**Seymchan**	**60.44**	**13**	P	**P**	**13 50 14.2**	**+0.8**
	comp=Z,44nm,1.1s,baz=216,slow=6.6,SNR=51						
	comp=Z,44nm,1.1s						
SEY	**Seymchan**	**60.44**	**13**	⇓iP	**P**	**13 50 14.5**	**+1.1**
SEY				pmax	pmax		
	comp=Z,80nm,1.2s						
SEY				MLR	MLR		
	comp=Z,3μm,19.0s						
SHEM	**Shemya Is, Ala**	**61.12**	**31**	LR	LR	14 13 49.7	
	comp=Z,2μm,21.7s,baz=235,slow=33						
DZA	**Taraz**	**61.20**	**316**	eP	**P**	**13 50 18.3**	**-0.7**
DZA				pmax	pmax		
	comp=Z,150nm,1.1s						
DZA	**Taraz**	**61.20**	**316**	eP	**P**	**13 50 18.4**	**-0.7**
	comp=Z,150nm,1.1s						
CHGR	**Chuyangaron**	**61.37**	**311**	P	**P**	**13 50 19.3**	**-1.0**
CHGR	**Chuyangaron**	**61.37**	**311**	P	**P**	**13 50 19.3**	**-1.0**
CHGR				pmax	pmax		
	comp=Z,549nm,1.3s						
SHAA	**Shahritus**	**61.84**	**310**	P	**P**	**13 50 21.2**	**-2.3**
SHAA				IAmb	IAmb	13 50 46.4	
	comp=Z,245nm,1.1s						
KK31	**Karatay Array**	**61.84**	**316**	i P	**P**	**13 50 21.9**	**-1.4**
KKAR	**Karatay Array**	**61.84**	**316**	P	**P**	**13 50 22.0**	**-1.3**
KKAR	**Karatay Array**	**61.84**	**316**	P	**P**	**13 50 22.0**	**-1.3**
IUG	**Iuzhnay**	**61.84**	**315**	c iP	**P**	**13 50 22.6**	**-0.8**
IUG	**Iuzhnay**	**61.84**	**315**	⇑iP	**P**	**13 50 22.7**	**-0.8**
MSZ	**Milford Sound**	**62.18**	**148**	P	**P**	**13 50 26.3**	**+0.8**
CHM	**Chimkent**	**62.20**	**315**	eP	**P**	**13 50 25.1**	**-0.6**
CHM				pmax	pmax		
	comp=Z,111nm,1.2s						
CHM				MLR	MLR		
	comp=Z,4μm,21.0s						
CHM	**Chimkent**	**62.20**	**315**	eP	**P**	**13 50 25.2**	**-0.6**
	comp=Z,111nm,1.2s						
CHM				LR	LR	14 18 43.6	
	comp=Z,4μm,20.6s						
JCZ	**Jackson Bay**	**62.25**	**147**	P	**P**	**13 50 27.2**	**+1.1**
JCZ	**Jackson Bay**	**62.25**	**147**	P	**P**	**13 50 27.4**	**+1.3**
BRLS	**Borolday**	**62.28**	**316**	eP	**P**	**13 50 25.4**	**-0.9**
BRLS				pmax	pmax		
	comp=Z,158nm,1.2s						
BRLS	**Borolday**	**62.28**	**316**	eP	**P**	**13 50 25.4**	**-0.9**
	comp=Z,158nm,1.2s						
DCZ	**Deep Cove**	**62.31**	**149**	IAMs_20	IAMs_20	14 15 18.0	
	comp=Z,5μm,21.0s						
DCZ	**Deep Cove**	**62.31**	**149**	P	**P**	**13 50 30.4**	**+4.1**
QRZ	**Quartz Range**	**62.40**	**142**	IAMs_20	IAMs_20	14 16 49.5	
	comp=Z,7μm,22.0s						
QRZ	**Quartz Range**	**62.40**	**142**	P	**P**	**13 50 29.0**	**+1.9**
QRZ	**Quartz Range**	**62.40**	**142**	P	**P**	**13 50 28.8**	**+1.7**
DSZ	**Denniston Nort**	**62.51**	**143**	IAMs_20	IAMs_20	14 18 39.3	
	comp=Z,6μm,21.0s						
DSZ	**Denniston Nort**	**62.51**	**143**	P	**P**	**13 50 28.4**	**+0.6**
PYZ	**Puysegur Point**	**62.55**	**150**	IAMs_20	IAMs_20	14 16 25.3	
	comp=Z,8μm,22.0s						
HIZ	**Hauiti**	**62.57**	**139**	IAMs_20	IAMs_20	14 15 21.0	
	comp=Z,5μm,22.0s						
HIZ	**Hauiti**	**62.57**	**139**	P	**P**	**13 50 29.0**	**+0.8**
TOZ	**Tahuroa Road**	**62.58**	**138**	P	**P**	**13 50 28.2**	**-0.1**
TOZ				IAMs_20	IAMs_20	14 15 40.3	
	comp=Z,7μm,20.0s						
TOZ	**Tahuroa Road**	**62.58**	**138**	P	**P**	**13 50 30.1**	**+1.9**
WVZ	**Waitaha Valley**	**62.70**	**145**	P	**P**	**13 50 31.8**	**+2.8**
MLZ	**Mavora Lakes**	**62.75**	**148**	IAMs_20	IAMs_20	14 16 52.5	
	comp=Z,6μm,22.0s						
VRZ	**Vera Road**	**62.84**	**139**	P	**P**	**13 50 33.2**	**+3.2**
WKZ	**Wanaka**	**62.87**	**147**	P	**P**	**13 50 33.3**	**+3.2**
INZ	**Inchbonnie**	**62.90**	**144**	IAMs_20	IAMs_20	14 19 47.4	
	comp=Z,6μm,20.0s						
INZ	**Inchbonnie**	**62.90**	**144**	P	**P**	**13 50 34.2**	**+3.9**
WHZ	**Wether Hill Ro**	**63.01**	**149**	IAmb	IAmb	13 51 04.6	
	comp=Z,161nm,1.6s						
WHZ				IAMs_20	IAMs_20	14 15 38.5	
	comp=Z,6μm,22.0s						
WHZ	**Wether Hill Ro**	**63.01**	**149**	P	**P**	**13 50 30.3**	**-0.7**
NNZ	**Nelson**	**63.15**	**142**	IAMs_20	IAMs_20	14 19 26.3	
	comp=Z,6μm,20.0s						
NNZ	**Nelson**	**63.15**	**142**	P	**P**	**13 50 33.9**	**+1.9**
BRZS	**Berezniki**	**63.18**	**324**	eP	**P**	**13 50 31.3**	**-0.8**
BRZS				eS	**S**	**13 59 00.9**	**+0.3**
BRZS	**Berezniki**	**63.18**	**324**	eP	**P**	**13 50 31.4**	**-0.7**
BRZS				eS	**S**	**13 59 00.9**	**+0.3**
THZ	**Tophouse**	**63.18**	**143**	P	**P**	**13 50 32.4**	**+0.1**
THZ				IAmb	IAmb	13 50 53.2	
	comp=Z,51nm,0.7s						
THZ				IAMs_20	IAMs_20	14 19 44.1	
	comp=Z,6μm,20.0s						
THZ	**Tophouse**	**63.18**	**143**	P	**P**	**13 50 32.6**	**+0.3**
LBZ	**Lake Benmore**	**63.22**	**146**	P	**P**	**13 50 31.6**	**-0.9**
LBZ				IAmb	IAmb	13 51 12.1	
	comp=Z,147nm,1.2s						
LBZ				IAMs_20	IAMs_20	14 17 17.0	
	comp=Z,5μm,20.0s						
LBZ	**Lake Benmore**	**63.22**	**146**	P	**P**	**13 50 32.4**	**-0.1**
RPZ	**Rata Peaks**	**63.28**	**145**	IAMs_20	IAMs_20	14 19 58.7	
	comp=Z,7μm,20.0s						
RPZ	**Rata Peaks**	**63.28**	**145**	P	**P**	**13 50 33.6**	**+0.7**
RPZ	**Rata Peaks**	**63.28**	**145**	P	**P**	**13 50 33.9**	**+1.1**
WTVZ	**West Tongariro**	**63.38**	**139**	P	**P**	**13 50 36.2**	**+2.4**
NNVZ	**North Ngauruho**	**63.41**	**139**	P	**P**	**13 50 36.3**	**+2.3**
LTZ	**Lake Taylor**	**63.41**	**144**	IAmb	IAmb	13 51 13.3	
	comp=Z,124nm,1.4s						
LTZ				IAMs_20	IAMs_20	14 20 14.2	
	comp=Z,6μm,20.0s						
LTZ	**Lake Taylor**	**63.41**	**144**	P	**P**	**13 50 34.9**	**+1.1**
NGZ	**Ngauruhoe**	**63.42**	**139**	P	**P**	**13 50 35.3**	**+1.2**
OTVZ	**Oturere**	**63.46**	**139**	P	**P**	**13 50 36.3**	**+2.1**
RAO	**Raoul Island**	**63.51**	**126**	LR	LR	14 18 11.9	
	comp=Z,912nm,19.4s,baz=298,slow=36						
RAO	**Raoul Island**	**63.51**	**126**	IAMs_20	IAMs_20	14 11 30.8	
	comp=Z,5μm,20.0s						
OXZ	**Oxford**	**63.61**	**144**	IAmb	IAmb	13 50 56.5	
	comp=Z,38nm,0.7s						
OXZ				IAMs_20	IAMs_20	14 20 30.3	
	comp=Z,7μm,20.0s						
OXZ	**Oxford**	**63.61**	**144**	P	**P**	**13 50 35.5**	**+0.5**
TMZ	**Timaru**	**63.67**	**146**	P	**P**	**13 50 37.3**	**+1.9**
ODZ	**Otahua Downs**	**63.89**	**147**	IAMs_20	IAMs_20	14 18 44.8	
	comp=Z,5μm,21.0s						
ODZ	**Otahua Downs**	**63.89**	**147**	P	**P**	**13 50 37.9**	**+1.1**
ODZ	**Otahua Downs**	**63.89**	**147**	P	**P**	**13 50 36.5**	**-0.3**
TUZ	**Tuapeka**	**63.93**	**148**	P	**P**	**13 50 38.8**	**+1.7**
URZ	**Urewera**	**63.94**	**137**	LR	LR	14 16 48.3	
	comp=Z,9μm,21.9s,baz=310,slow=34						
URZ	**Urewera**	**63.94**	**137**	P	**P**	**13 50 37.8**	**+0.6**
KHZ	**Kahutara**	**63.95**	**143**	IAMs_20	IAMs_20	14 20 09.4	
	comp=Z,6μm,19.0s						
KHZ	**Kahutara**	**63.95**	**143**	P	**P**	**13 50 38.3**	**+1.1**
KHZ	**Kahutara**	**63.95**	**143**	P	**P**	**13 50 37.2**	**0.0**
GVZ	**Greta Valley S**	**63.97**	**144**	IAMs_20	IAMs_20	14 20 42.0	
	comp=Z,6μm,21.0s						
GVZ	**Greta Valley S**	**63.97**	**144**	P	**P**	**13 50 38.4**	**+0.9**
BKZ	**Black Stump Fm**	**64.00**	**139**	IAMs_20	IAMs_20	14 16 28.8	
	comp=Z,7μm,21.0s						
BKZ	**Black Stump Fm**	**64.00**	**139**	P	**P**	**13 50 37.5**	**-0.3**
BKZ	**Black Stump Fm**	**64.00**	**139**	P	**P**	**13 50 37.5**	**-0.3**
SNZO	**South Karori**	**64.03**	**141**	IAMs_20	IAMs_20	14 17 28.4	
	comp=Z,7μm,22.0s						
SNZO	**South Karori**	**64.03**	**141**	P	**P**	**13 50 38.5**	**+0.7**
RTZ	**Ruatahuna**	**64.04**	**138**	P	**P**	**13 50 37.6**	**-0.4**
RTZ				IAmb	IAmb	13 51 00.9	
	comp=Z,126nm,1.0s						
RTZ				IAMs_20	IAMs_20	14 16 19.8	
	comp=Z,8μm,22.0s						
MTHZ	**Maungataniwha**	**64.07**	**138**	P	**P**	**13 50 38.9**	**+0.7**
KWHZ	**Kaweka Forest**	**64.09**	**139**	P	**P**	**13 50 38.8**	**+0.5**

HAZ	**Te Kaha**	**64.14**	**137**	P	**P**	**13 50 39.7**	**+1.1**
NMHZ	**Naumai**	**64.17**	**138**	P	**P**	**13 50 40.6**	**+1.7**
KRHZ	**Kereru**	**64.17**	**139**	P	**P**	**13 50 39.8**	**+0.9**
MQZ	**McQueen's Vall**	**64.19**	**144**	IAMs_20	IAMs_20	14 20 46.8	
	comp=Z,4μm,20.0s						
MQZ	**McQueen's Vall**	**64.19**	**144**	P	**P**	**13 50 39.9**	**+1.1**
MRZ	**Mangatainoka R**	**64.22**	**140**	P	**P**	**13 50 39.1**	**0.0**
MRZ				IAmb	IAmb	13 51 00.6	
	comp=Z,79nm,1.1s						
MRZ				IAMs_20	IAMs_20	14 16 58.4	
	comp=Z,6μm,22.0s						
MRZ	**Mangatainoka R**	**64.22**	**140**	P	**P**	**13 50 38.2**	**-0.9**
MWZ	**Matawai**	**64.26**	**137**	P	**P**	**13 50 39.9**	**+0.5**
MCHZ	**McNeill Hill**	**64.28**	**139**	P	**P**	**13 50 40.9**	**+1.4**
SNGZ	**Shannon Statio**	**64.36**	**138**	P	**P**	**13 50 41.3**	**+1.2**
MXZ	**Matakaoa Point**	**64.40**	**136**	IAMs_20	IAMs_20	14 16 53.5	
	comp=Z,7μm,22.0s						
WMGZ	**Waiomatatini S**	**64.61**	**136**	P	**P**	**13 50 42.2**	**+0.6**
PUZ	**Puketiti**	**64.62**	**137**	P	**P**	**13 50 42.5**	**+0.7**
BFZ	**Birch Farm**	**64.65**	**140**	IAMs_20	IAMs_20	14 22 07.0	
	comp=Z,5μm,18.0s						
BFZ	**Birch Farm**	**64.65**	**140**	P	**P**	**13 50 42.8**	**+0.9**
PXZ	**Pawanui**	**64.70**	**139**	P	**P**	**13 50 42.6**	**+0.4**
HRA	**Herat**	**65.76**	**305**	IAmb	IAmb	13 50 49.6	
	comp=Z,72nm,1.0s						
BVAR	**Borovoye Array**	**65.78**	**327**	P	**P**	**13 50 49.0**	**0.0**
	comp=Z,85nm,0.6s,baz=124,slow=8.0,SNR=322						
BVAR				PKPPKP	**P'P'df**	**14 19 24.9**	**-2.9**
	comp=Z,4.6nm,1.1s,baz=299,slow=1.5,SNR=12						
BVAR				LR	LR	14 22 01.8	
	comp=Z,7μm,20.5s,baz=113,slow=38						
BVAR				P4KPbc		14 27 39.0	
	comp=Z,2.0nm,1.0s,baz=128,slow=4.5,SNR=6.4						
	comp=Z,85nm,0.6s						
BORK	**Borovoye**	**65.82**	**327**	P	**P**	**13 50 48.5**	**-0.8**
BORK	**Borovoye**	**65.82**	**327**	c iP	**P**	**13 50 48.6**	**-0.8**
BORK				pmax	pmax		
	comp=Z,334nm,0.9s						
BORK				MLR	MLR		
	comp=Z,7μm,20.0s						
BORK	**Borovoye**	**65.82**	**327**	⇑P	**P**	**13 50 48.2**	**-1.1**
TIXI	**Tiksi**	**66.15**	**1**	P	**P**	**13 50 50.5**	**-0.6**
TIXI	**Tiksi**	**66.15**	**1**	IAMs_20	IAMs_20	14 19 11.2	
	comp=Z,7μm,22.0s						
TIXI	**Tiksi**	**66.15**	**1**	deP	**P**	**13 50 50.6**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,349nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,7μm,18.0s						
TIXI	**Tiksi**	**66.15**	**1**	⇑P	**P**	**13 50 50.3**	**-0.7**
JLN	**Jalan Bani Buh**	**66.76**	**292**	P	**P**	**13 50 54.7**	**-1.2**
	SNR=5.4						
JLN				S	**S**	**13 59 42.1**	**-3.4**
WBK	**Wadi Bani Khal**	**67.19**	**292**	P	**P**	**13 50 57.9**	**-0.8**
	SNR=9.4						
ATKA	**Atka Island**	**67.24**	**35**	P	**P**	**13 51 00.1**	**+1.8**
WSAR	**Wadi Sarin**	**67.55**	**293**	LR	LR	14 19 43.6	
	comp=Z,7.1nm,21.9s,baz=108,slow=35						
BILL	**Bilibino**	**67.98**	**15**	P	**P**	**13 51 03.5**	**+0.8**
BILL				IAmb	IAmb	13 51 30.6	
	comp=Z,79nm,1.2s						
BILL	**Bilibino**	**67.98**	**15**	c iP	**P**	**13 51 01.9**	**-0.8**
BILL				pmax	pmax		
	comp=Z,65nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2μm,20.0s						
JMDO	**Jabal Madar**	**67.98**	**292**	P	**P**	**13 51 02.6**	**-1.1**
	SNR=14						
JMDO				P	**P**	**13 51 02.6**	**-1.1**
	SNR=14						
BIDO	**Bidbid**	**68.03**	**293**	P	**P**	**13 51 03.0**	**-0.9**
	SNR=22						
BIDO				P	**P**	**13 51 03.0**	**-0.9**
	SNR=22						
MHTO	**MHTO**	**68.04**	**290**	P	**P**	**13 51 02.6**	**-1.4**
	SNR=21						
MHTO				P	**P**	**13 51 02.6**	**-1.4**
	SNR=21						
MHTO				S	**S**	**13 59 55.8**	**-5.1**
MHTO				S	**S**	**13 59 55.8**	**-5.1**
SMDO	**Samad**	**68.07**	**293**	P	**P**	**13 51 03.2**	**-1.1**
	SNR=8.9						
SMDO				P	**P**	**13 51 03.2**	**-1.1**
	SNR=8.9						
DQM	**DQM**	**68.40**	**289**	P	**P**	**13 51 05.4**	**-0.8**
	SNR=15						
DQM				S	**S**	**14 00 01.5**	**-3.8**
NRIK	**Noril'sk**	**68.73**	**346**	P	**P**	**13 51 07.6**	**+0.2**
	comp=Z,271nm,0.8s,baz=132,slow=6.2,SNR=205						
NRIK				S	**S**	**14 00 02.4**	**-5.1**
	comp=Z,7.3nm,0.9s,baz=338,slow=18,SNR=3.7						
NRIK				PKPPKP	**P'P'df**	**14 19 19.6**	**-2.5**
	comp=Z,2.8nm,1.0s,baz=342,slow=2.3,SNR=5.8						
NRIK				LR	LR	14 23 59.6	
	comp=Z,4μm,19.8s,baz=149,slow=38						
	comp=Z,271nm,0.8s						
NRIK	**Noril'sk**	**68.73**	**346**	c iP	**P**	**13 51 07.2**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,923nm,1.4s						
NRIK				MLR	MLR		
	comp=Z,7μm,18.0s						
HOQ	**Hoqain**	**68.78**	**293**	P	**P**	**13 51 07.7**	**-0.9**
	SNR=15						
BSY	**Bisya**	**68.83**	**292**	P	**P**	**13 51 08.0**	**-1.0**
	SNR=17						
BSY				P	**P**	**13 51 08.0**	**-1.0**
	SNR=17						
SOHO	**SOHO**	**69.52**	**294**	i P	**P**	**13 51 10.9**	**-2.3**
	SNR=6.2						
SOHO	**SOHO**	**69.52**	**294**	P	**P**	**13 51 12.8**	**-0.3**
MDH	**Madha**	**69.80**	**295**	P	**P**	**13 51 14.8**	**-0.1**
BANOM	**Banah**	**69.84**	**296**	i P	**P**	**13 51 13.7**	**-1.5**
	SNR=6.8						
BANOM	**Banah**	**69.84**	**296**	P	**P**	**13 51 15.0**	**-0.2**
BANOM				P	**P**	**13 51 15.0**	**-0.2**
UOSS	**Minazif**	**69.87**	**294**	P	**P**	**13 51 12.8**	**-2.5**
UOSS	**Minazif**	**69.87**	**294**	P	**P**	**13 51 15.2**	**-0.2**
UOSS				S	**S**	**14 00 18.9**	**-3.6**
HATD	**Hatta, Dubai**	**69.92**	**294**	i P	**P**	**13 51 13.2**	**-2.5**
	SNR=6.4						
HATD	**Hatta, Dubai**	**69.92**	**294**	P	**P**	**13 51 15.0**	**-0.7**
	SNR=10						
MSFE	**Esma-Masafi**	**69.93**	**295**	i P	**P**	**13 51 15.1**	**-0.7**
	SNR=8.3						
MASF	**Masafi**	**69.93**	**295**	P	**P**	**13 51 15.9**	**+0.1**
	SNR=12						
MASF				S	**S**	**14 00 19.7**	**-3.7**
ASHO	**Ashiyiah**	**69.98**	**294**	i P	**P**	**13 51 13.9**	**-2.2**
	SNR=12						
ASHO	**Ashiyiah**	**69.98**	**294**	P	**P**	**13 51 15.9**	**-0.2**
	SNR=13						
SHME	**Shamm**	**69.99**	**296**	i P	**P**	**13 51 13.5**	**-2.5**
	SNR=7.1						
SHME	**Shamm**	**69.99**	**296**	P	**P**	**13 51 16.0**	**0.0**
	SNR=8.4						
SHAO	**Shalim**	**70.16**	**287**	i P	**P**	**13 51 15.6**	**-1.6**
	SNR=15						
SHAO	**Shalim**	**70.16**	**287**	P	**P**	**13 51 16.8**	**-0.4**
	SNR=9.0						
SHAO				S	**S**	**14 00 22.5**	**-3.6**
ALNE	**Al Ain**	**70.23**	**293**	i P	**P**	**13 51 15.2**	**-2.4**
	SNR=15						
ALNE	**Al Ain**	**70.23**	**293**	P	**P**	**13 51 16.9**	**-0.7**
	SNR=25						
NAZ	**Nazwa, Dubai**	**70.36**	**294**	P	**P**	**13 51 15.8**	**-2.5**
NAZ	**Nazwa, Dubai**	**70.36**	**294**	P	**P**	**13 51 18.0**	**-0.4**
	SNR=8.6						
NAZ				S	**S**	**14 00 25.3**	**-3.0**
FAQ	**Al Faqa, Dubai**	**70.41**	**294**	P	**P**	**13 51 16.3**	**-2.3**
NIKH	**Nikolski High**	**70.56**	**35**	P	**P**	**13 51 20.0**	**+1.0**
NIKH	**Nikolski High**	**70.56**	**35**	P	**P**	**13 51 18.1**	**-0.9**
	baz=253						
ASUD	**Al Ashush, Dub**	**70.64**	**294**	P	**P**	**13 51 17.9**	**-2.1**
AB31	**Akbulak array**	**70.69**	**320**	P	**P**	**13 51 17.6**	**-2.3**
ABKAR	**Akbulak array**	**70.69**	**320**	P	**P**	**13 51 18.4**	**-1.5**
UMZA	**Um Al Zommool**	**70.71**	**292**	P	**P**	**13 51 17.9**	**-2.6**
UMZA				S	**S**	**14 00 27.8**	**-4.6**
CTZ	**Chatham Island**	**70.77**	**140**	IAMs_20	IAMs_20	14 20 58.5	
	comp=Z,5μm,22.0s						
DMTO	**DMTO**	**70.81**	**287**	P	**P**	**13 51 20.0**	**-1.2**
DMTO				S	**S**	**14 00 29.8**	**-3.8**
AJN	**Ajban**	**70.95**	**294**	i P	**P**	**13 51 19.7**	**-2.2**
	SNR=8.3						
AJN	**Ajban**	**70.95**	**294**	P	**P**	**13 51 21.1**	**-0.8**
AJN				S	**S**	**14 00 29.6**	**-5.6**
SPIA	**Saint Paul Isl**	**71.16**	**31**	P	**P**	**13 51 21.7**	**-0.8**

baz=250
P08K Saint George I 71.33 32 P P 13 51 22.6 -0.9
baz=251
RBK Rabkut 71.52 287 P P 13 51 24.5 -1.1
SNR=6.2
RBK S S 14 00 37.9 -4.1
DOK Doka 71.59 288 P P 13 51 24.8 -1.1
SNR=10
DOK S S 14 00 38.3 -4.4
MZWR Madinat Zayed 71.93 293 P P 13 51 27.2 -0.7
UNV Unalaska Valle 72.16 35 P P 13 51 28.7 +0.1
UNV Unalaska Valle 72.16 35 P P 13 51 27.7 -0.9
baz=254
AKTO Aktyubinsk 72.19 321 LR LR 14 26 32.3
comp=Z,10μm,19.5s,baz=108,slow=39
MZR Muzera 72.27 292 *i* P P 13 51 27.6 -2.3
SNR=41
MZR Muzera 72.27 292 P P 13 51 29.1 -0.8
SNR=44
MZR S S 14 00 47.0 -3.5
ABTO Aybut 72.38 286 P P 13 51 29.7 -1.1
SNR=8.5
SVE Sverdlovsk 72.40 328 *e*P P 13 51 29.9 -0.1
SVE *e*S S 14 00 47.7 -2.9
SVE pmax pmax
comp=E,113nm,0.9s
SVE MLR MLR
comp=E,5μm,23.0s
AKUT Akutan 72.66 35 P P 13 51 31.9 +0.3
GHWR Ruwais 72.85 293 P P 13 51 32.3 -1.1
GHWR S S 14 00 52.7 -4.3
JRN Qarnain Island 72.91 294 P P 13 51 32.7 -1.0
SNR=8.9
GAMB Gambell 72.94 24 P P 13 51 32.4 -0.6
baz=247,SNR=16
ARTI Arti 73.47 327 P P 13 51 34.6 -1.7
ARTI IAMs_20 IAMs_20 14 26 31.1
comp=Z,6μm,22.0s
ARTI Arti 73.47 327 *d i*P P 13 51 35.4 -0.9
ARTI pmax pmax
comp=Z,288nm,1.2s
ARTI MLR MLR
comp=Z,6μm,23.0s
SLWR Sila 73.94 293 P P 13 51 39.0 -0.8
SLWR S **SKiKP** 14 01 05.8 +0.3
FALS False Pass 74.17 34 P P 13 51 39.7 -0.7
baz=257
M11K Mekoryuk 74.19 28 P P 13 51 40.2 -0.3
baz=253
TRNA Turayna 74.39 294 P P 13 51 41.6 -0.8
SNR=9.9
TRNA S **SKiKP** 14 01 10.0 +3.8
SHMA Al-Shehemyia 74.64 295 P P 13 51 43.7 -0.1
SNR=6.7
SHMA S S 14 01 12.9 -4.2
SMRA Abu-Samra 74.74 294 P P 13 51 43.4 -1.0
SNR=11
SMRA S S 14 01 14.3 -4.0
SAKB Bahrain 75.03 295 P P 13 51 44.9 -1.1
SAKB S S 14 01 17.8 -3.6
TNA Tin City 75.12 23 P P 13 51 45.6 -0.2
baz=250,SNR=5.9
K13K Kusilvak Mount 75.36 27 IAmb IAmb 13 52 00.0
comp=Z,62nm,0.9s
K13K Kusilvak Mount 75.36 27 P P 13 51 46.3 -0.9
baz=254
M13K Dall Lake 75.56 29 IAmb IAmb 13 52 13.6
comp=Z,80nm,1.0s
M13K Dall Lake 75.56 29 P P 13 51 47.8 -0.5
baz=255
F14K Arctic Creek 75.72 23 P P 13 51 49.5 +0.3
baz=251
ANM Nome 75.82 24 P P 13 51 49.4 -0.4
baz=252,SNR=14
SDPT Sand Point 75.92 34 P P 13 51 51.6 +1.1
SDPT Sand Point 75.92 34 P P 13 51 49.5 -1.0
baz=259
XMAS Kiritimati 75.93 89 IAMs_20 IAMs_20 14 21 47.4
comp=Z,5μm,20.0s
J14K Nanvaranak Lak 76.07 26 P P 13 51 51.5 +0.2
baz=254
L14K Kuka Creek 76.11 28 IAmb IAmb 13 52 17.9
comp=Z,140nm,1.1s
L14K Kuka Creek 76.11 28 P P 13 51 51.7 +0.3
baz=256
N14K Kuskokwak Cree 76.25 30 IAmb IAmb 13 52 17.5
comp=Z,150nm,1.1s
N14K Kuskokwak Cree 76.25 30 P P 13 51 51.7 -0.6
baz=257,SNR=9.1
M14K Bethel 76.30 29 IAmb IAmb 13 52 05.3
comp=Z,108nm,0.9s
M14K Bethel 76.30 29 P P 13 51 52.1 -0.5
baz=256
O14K Tigyukauivet M 76.30 30 IAmb IAmb 13 52 17.7
comp=Z,89nm,1.2s
O14K Tigyukauivet M 76.30 30 P P 13 51 52.1 -0.6
baz=257
CHNA Chernabura Isl 76.33 35 P P 13 51 51.9 -0.9
baz=260
F15K North Star Dit 76.45 23 P P 13 51 53.2 -0.2
baz=253,SNR=21
G15K Niukluk 76.49 24 P P 13 51 53.1 -0.5
baz=254,SNR=14
L15K Ungalak Mounta 76.74 28 P P 13 51 55.6 +0.5
baz=257
K15K Wolf Creek Mou 76.87 27 IAmb IAmb 13 52 21.4
comp=Z,88nm,1.2s
K15K Wolf Creek Mou 76.87 27 P P 13 51 56.7 +0.9
baz=256
M15K Kasigluk River 76.90 29 P P 13 51 56.2 +0.2
baz=258
RAR Rarotonga 76.91 113 LR LR 14 22 24.7
comp=Z,813nm,21.0s,baz=270,slow=33
O15K Ungalikthiuk R 77.01 30 P P 13 51 56.5 -0.2
baz=259
MLH Mauna Loa 77.02 71 P P 13 51 56.4 -1.4
N15K Kwethluk River 77.08 29 IAmb IAmb 13 52 25.9
comp=Z,75nm,0.9s
N15K Kwethluk River 77.08 29 P P 13 51 57.1 0.0
baz=258
H16K Elim 77.14 25 P P 13 51 57.1 -0.1
baz=255,SNR=33
KNHH Kane Nui o Ham 77.23 71 P P 13 52 00.9 +2.1
G16K Koyuk River 77.28 24 P P 13 51 57.9 -0.2
baz=255
J16K Anvik River 77.51 26 IAmb IAmb 13 52 26.3
comp=Z,68nm,1.0s
J16K Anvik River 77.51 26 P P 13 52 00.2 +0.8
baz=257
I17K Unalakleet 77.61 26 IAmb IAmb 13 52 17.9
comp=Z,83nm,1.2s
I17K Unalakleet 77.61 26 P P 13 52 00.3 +0.4
baz=257,SNR=27
D17K Noatak River 77.62 22 P P 13 52 00.6 +0.7
baz=254
L16K Owhat River 77.69 28 IAmb IAmb 13 52 03.4
comp=Z,105nm,1.3s
L16K Owhat River 77.69 28 P P 13 52 00.4 0.0
baz=258
N16K Nishlik Lake 77.78 29 P P 13 52 01.5 +0.5
baz=259
RDOG Red Dog Mine 77.79 21 P P 13 52 01.2 +0.3
baz=254
M16K Timber Creek 77.80 29 IAmb IAmb 13 52 19.3
comp=Z,57nm,0.9s
M16K Timber Creek 77.80 29 P P 13 52 01.4 +0.4
baz=259
R16K Pilot Point 77.89 32 P P 13 52 01.3 -0.3
baz=261
P16K Nushagak River 77.92 31 IAmb IAmb 13 52 41.0
comp=Z,68nm,0.9s
P16K Nushagak River 77.92 31 P P 13 52 01.3 -0.4
baz=260
E17K Hotham Inlet 77.93 22 P P 13 52 01.4 -0.3
baz=255
O16K Kokwok River B 77.96 30 IAmb IAmb 13 52 27.1
comp=Z,72nm,1.1s
O16K Kokwok River B 77.96 30 P P 13 52 01.4 -0.5
baz=260
F17K Baldwin Pennin 77.99 23 P P 13 52 02.1 +0.2
baz=256
G17K Kiwalik Mounta 78.00 24 P P 13 52 02.0 -0.1
baz=257
AKT Akhty 78.01 311 *e*P P 13 52 01.0 -1.8
AKT *e* 13 52 10.4
AKT *e* 13 54 57.4
AKT *e*S S 14 01 53.6 -0.2
AKT pmax pmax
comp=Z,269nm,2.0s
AKT MLR MLR
comp=Z,5μm,21.0s
J17K VABM Dome 78.21 26 P P 13 52 03.0 -0.2
baz=258
MAK Makhachkala 78.26 313 *c i*P P 13 52 00.8 -3.2
MAK *e* 13 54 59.5
MAK *e*PPP PPP 13 56 53.8
MAK *e*S S 14 01 51.4 -4.8
MAK *e*SS SS 14 07 04.5 +5.5
MAK *e*SSS SSS 14 10 21.0
MAK pmax pmax
comp=Z,187nm,1.4s
MAK MLR MLR
comp=Z,5μm,20.0s
SBV Sambava 78.28 255 P P 13 52 04.7 +0.1
SNR=5.9
L17K Donlin 78.32 28 P P 13 52 03.8 -0.1
baz=259
K17K Iditarod 78.42 27 IAmb IAmb 13 52 29.3
comp=Z,83nm,0.8s
K17K Iditarod 78.42 27 P P 13 52 04.9 +0.4
baz=259
E18K Tukpahlearik C 78.47 22 IAmb IAmb 13 52 29.5
comp=Z,65nm,0.9s
E18K Tukpahlearik C 78.47 22 P P 13 52 04.9 +0.3
baz=256
O17K Koliganek Bris 78.49 30 P P 13 52 04.3 -0.6
baz=261,SNR=18
Q16K King Salmon 78.55 31 P P 13 52 04.5 -0.7
baz=262
R17L Mt. Peulik Vol 78.55 32 P P 13 52 04.6 -0.8
baz=262
PLK4 Peulik 4 78.55 32 IAmb IAmb 13 52 29.5
comp=Z,129nm,0.9s
PLK4 IAMs_20 IAMs_20 14 22 37.8
comp=Z,4μm,22.0s
C18K Utukok River 78.56 21 IAmb IAmb 13 52 28.0
comp=Z,266nm,2.0s
C18K Utukok River 78.56 21 P P 13 52 05.2 0.0
baz=255
N17K Nushagak Hills 78.56 29 IAmb IAmb 13 52 31.1
comp=Z,86nm,1.2s
N17K Nushagak Hills 78.56 29 P P 13 52 05.1 -0.2
baz=261
M17K Holitna River 78.59 28 P P 13 52 04.7 -0.8
baz=260
F18K Selawik 78.65 23 P P 13 52 05.9 +0.3
baz=257,SNR=30
KIRV Kirov 78.65 329 *d i*P P 13 52 05.3 -0.5
P17K Kvichak River 78.73 31 IAmb IAmb 13 52 19.2
comp=Z,150nm,1.1s
P17K Kvichak River 78.73 31 P P 13 52 06.0 -0.3
baz=262,SNR=8.4
H18K Honhosa River 78.86 25 P P 13 52 06.6 -0.3
baz=259
Q17K Contact Creek 78.89 32 P P 13 52 06.6 -0.6
baz=262
G18K Tagagawik 78.89 24 P P 13 52 06.8 -0.3
baz=258
BELG Belogornoye 78.92 322 *d i*P P 13 52 06.6 -0.8
BELG pmax pmax
comp=Z,78nm,0.9s
BELG MLR MLR
comp=Z,669nm,18.0s
L18K Granite Mounta 79.07 28 P P 13 52 08.3 +0.3
baz=261
N18K Kilae Creek 79.22 29 P P 13 52 08.9 -0.1
baz=262,SNR=10
C19K Lookout Ridge 79.23 21 IAmb IAmb 13 52 19.4
comp=Z,181nm,1.2s
C19K Lookout Ridge 79.23 21 P P 13 52 09.2 +0.3
baz=257
J18K Innoko River 79.26 26 P P 13 52 09.1 0.0
baz=261
M18K Stony River 79.37 28 P P 13 52 09.4 -0.3
baz=262,SNR=16
P18K Big Mountain, 79.38 31 P P 13 52 09.3 -0.5
baz=263
GCSA Galena City Sc 79.41 25 P P 13 52 09.9 +0.1
baz=260,SNR=24
F19K Shaleruckik Mo 79.42 23 P P 13 52 09.9 0.0
baz=259
O18K Koktuh Hills 79.44 30 IAmb IAmb 13 52 20.4
comp=Z,100nm,0.9s
O18K Koktuh Hills 79.44 30 P P 13 52 09.9 -0.3
baz=263,SNR=19
G19K Purcell Mounta 79.57 24 IAmb IAmb 13 52 34.3
comp=Z,68nm,0.8s
G19K Purcell Mounta 79.57 24 P P 13 52 10.6 -0.1
baz=260
SII Sitkinak Islan 79.60 34 IAmb IAmb 13 52 39.0
comp=Z,165nm,1.2s
SII Sitkinak Islan 79.60 34 P P 13 52 13.0 +1.9
SII Sitkinak Islan 79.60 34 P P 13 52 10.4 -0.7
baz=264
RAYN Ar Rayn 79.61 293 P P 13 52 09.8 -2.1
RAYN Ar Rayn 79.61 293 *i* P P 13 52 10.1 -1.7
SNR=11
RAYN Ar Rayn 79.61 293 P P 13 52 09.8 -2.1
RAYN pmax pmax
comp=Z,58nm,0.9s
RAYN Ar Rayn 79.61 293 P P 13 52 10.8 -1.1
E19K Redstone River 79.75 22 IAmb IAmb 13 52 18.6
comp=Z,119nm,1.1s
E19K Redstone River 79.75 22 P P 13 52 11.8 +0.1
baz=259
J19K Poorman 79.83 26 P P 13 52 11.9 -0.2
baz=262,SNR=22
L19K White Mountain 79.92 28 P P 13 52 12.2 -0.5
baz=262
N19K Bonanza Creek 79.92 29 IAmb IAmb 13 52 32.2
comp=Z,100nm,1.0s
N19K Bonanza Creek 79.92 29 P P 13 52 12.2 -0.6
baz=263
O19K Port Alsworth 79.93 30 IAmb IAmb 13 52 24.3
comp=Z,159nm,1.6s
O19K Port Alsworth 79.93 30 P P 13 52 12.2 -0.5
baz=263,SNR=11
Q19K Cape Douglas, 80.13 31 IAmb IAmb 13 52 42.0
comp=Z,128nm,0.9s
Q19K Cape Douglas, 80.13 31 P P 13 52 13.4 -0.6
baz=264
OHAK Old Harbor 80.15 33 P P 13 52 15.6 +1.6
OHAK Old Harbor 80.15 33 P P 13 52 13.4 -0.6
baz=265
D20K Etivluk River 80.21 21 IAmb IAmb 13 52 18.0
comp=Z,148nm,1.1s
D20K Etivluk River 80.21 21 P P 13 52 13.9 -0.3
baz=260
GNI Garni 80.22 310 LR LR 14 33 00.1
comp=Z,2μm,21.0s,baz=89,slow=40
GNI Garni 80.22 310 P P 13 52 13.4 -1.6
GNI Garni 80.22 310 *de*P P 13 52 12.7 -2.3
GNI pmax pmax
comp=Z,96nm,0.9s
GNI MLR MLR
comp=Z,5μm,26.0s
F20K Avaraart Lake 80.26 23 P P 13 52 14.8 +0.4
F20K IAmb IAmb 13 52 17.7
comp=Z,104nm,1.4s
F20K Avaraart Lake 80.26 23 P P 13 52 14.6 +0.2
baz=261
H20K Anotleneega Mo 80.36 25 P P 13 52 15.0 0.0
baz=262
P19K Oil Pt 80.42 31 P P 13 52 15.0 -0.4
baz=264
K20K Telida 80.43 27 P P 13 52 15.3 -0.1
baz=263
I20K Naaghedeneel 80.43 25 IAmb IAmb 13 52 41.0
comp=Z,121nm,0.9s
I20K Naaghedeneel 80.43 25 P P 13 52 15.9 +0.5
baz=262
J20K Nowinta River 80.50 26 IAmb IAmb 13 52 19.9
comp=Z,172nm,1.6s
J20K Nowinta River 80.50 26 P P 13 52 15.7 0.0
baz=263
KDAK Kodiak Island 80.58 32 P P 13 52 16.7 +0.4
comp=Z,42nm,0.9s,baz=353,slow=0.9,SNR=24
KDAK LR LR 14 26 56.3
comp=Z,1μm,20.2s,baz=246,slow=35
comp=Z,42nm,0.9s
KDAK Kodiak Island 80.58 32 P P 13 52 17.1 +0.8
KDAK IAmb IAmb 13 52 28.6
comp=Z,75nm,1.0s
KDAK Kodiak Island 80.58 32 P P 13 52 17.1 +0.8
KDAK pmax pmax
comp=Z,75nm,1.0s
KDAK Kodiak Island 80.58 32 P P 13 52 15.9 -0.4
baz=265
A21K Barrow 80.69 19 P P 13 52 16.5 -0.1
baz=259
M20K Styx River 80.69 28 IAmb IAmb 13 52 29.9
comp=Z,76nm,0.8s
M20K Styx River 80.69 28 P P 13 52 17.0 +0.1
baz=264
Q20K Shuyak Island 80.75 32 P P 13 52 16.9 -0.3
baz=265
SYI Shuyak Island 80.75 32 IAmb IAmb 13 52 25.5
comp=Z,87nm,1.0s
SYI IAMs_20 IAMs_20 14 23 49.9
comp=Z,4μm,21.0s
G21K Allakaket 81.05 24 IAmb IAmb 13 52 22.6
comp=Z,84nm,1.1s
G21K Allakaket 81.05 24 P P 13 52 18.7 0.0
baz=263
SPCR Spurr Chakacha 81.06 29 P P 13 52 18.8 -0.2
baz=265,SNR=7.2
NCK Nalchik 81.14 313 ⇑ *i*P P 13 52 19.5 -0.1
NCK pmax pmax
comp=Z,103nm,1.0s
NCK MLR MLR
comp=Z,3μm,20.0s
F21K Alatna River 81.15 23 P P 13 52 19.6 +0.4
baz=263
A22K Sinclair Lake 81.16 19 P P 13 52 19.7 +0.6
baz=261
HOM Homer 81.22 31 P P 13 52 19.5 -0.2
baz=266
PPLA Purkeypile 81.23 27 IAmb IAmb 13 52 31.6
comp=Z,100nm,1.2s
PPLA Purkeypile 81.23 27 P P 13 52 19.6 -0.2
baz=265,SNR=11
H21K Melozitna Rive 81.24 24 IAmb IAmb 13 52 23.7
comp=Z,87nm,1.1s
H21K Melozitna Rive 81.24 24 P P 13 52 19.6 -0.1
baz=264,SNR=56
CHUM Lake Minchumin 81.26 26 P P 13 52 19.5 -0.3
baz=264,SNR=22
CNPM China Poot 81.42 31 IAmb IAmb 13 52 54.9
comp=Z,68nm,1.0s
SKT Skwentna 81.45 28 P P 13 52 20.7 -0.2
baz=266,SNR=36
GEVA Gevas 81.51 308 IAmb IAmb 13 52 35.8
comp=Z,78nm,0.9s
I21K Tanana 81.53 25 IAmb IAmb 13 52 46.2
comp=Z,94nm,1.0s
I21K Tanana 81.53 25 P P 13 52 21.5 +0.3
baz=265,SNR=87
CAPN Captain Cook N 81.54 29 P P 13 52 21.1 -0.3
baz=266
GOF Gofitskoye 81.56 315 *ce*P P 13 52 21.5 -0.3
BRLK Bradley Lake 81.61 30 IAmb IAmb 13 52 44.4
comp=Z,110nm,1.1s
KBZ Khabaz 81.65 313 P P 13 52 21.3 -1.0
comp=Z,42nm,1.0s,baz=125,slow=2.2,SNR=34
KBZ S S 14 02 29.0 -2.8
comp=Z,8.2nm,1.2s,baz=210,slow=23,SNR=5.8
KBZ LR LR 14 33 28.0
comp=Z,4μm,20.2s,baz=72,slow=39
comp=Z,42nm,1.0s
KBZ Khabaz 81.65 313 *c i*P P 13 52 21.0 -1.3
KBZ pmax pmax
comp=Z,55nm,1.0s
ABPO Ambohimpanom 81.67 250 P P 13 52 23.1 0.0
ABPO IAmb IAmb 13 52 26.8
comp=Z,66nm,0.9s
ABPO Ambohimpanom 81.67 250 P P 13 52 23.1 0.0
ABPO pmax pmax
comp=Z,66nm,1.0s
BRSE Bradley Lake S 81.68 31 P P 13 52 21.4 -0.7
baz=266,SNR=8.5
NEUR Neytrino 81.79 313 *ce*P P 13 52 23.2 -0.1
NEUR pmax pmax
comp=Z,89nm,1.2s
NEUR MLR MLR
comp=Z,5μm,21.0s
SUA Susitna One 81.79 29 IAmb IAmb 13 52 46.8
comp=Z,123nm,0.9s
SUA Susitna One 81.79 29 P P 13 52 21.9 -0.9
baz=266,SNR=39
KIV Kislovodsk 81.80 313 IAMs_20 IAMs_20 14 34 38.5
comp=Z,4μm,19.0s
KIV Kislovodsk 81.80 313 ⇓ P P 13 52 24.0 +0.7
KIV Kislovodsk 81.80 313 *i* P P 13 52 21.7 -1.5
SNR=13
KIV Kislovodsk 81.80 313 ⇓ P P 13 52 24.0 +0.7
KIV Kislovodsk 81.80 313 P P 13 52 23.7 +0.4
KIV Kislovodsk 81.80 313 P P 13 52 23.3 +0.1
comp=Z,1μmcomp=Z,105nm,1.0s
SHA1 Shiddzhmaz 81.82 313 *ce*P P 13 52 22.2 -1.3
H22K Ishtalitna Cre 81.85 24 P P 13 52 22.4 -0.5
baz=265
L22K Petersville 81.85 28 P P 13 52 22.3 -0.7
L22K IAmb IAmb 13 52 41.7
comp=Z,87nm,0.8s
BPAW Bear Paw Mtn. 81.87 26 IAmb IAmb 13 52 26.5
comp=Z,134nm,1.1s
BPAW Bear Paw Mtn. 81.87 26 P P 13 52 22.6 -0.4
baz=266,SNR=22
G22K Bettles 81.89 23 P P 13 52 22.5 -0.5
baz=265
SLKM Skilak Lake 81.99 30 IAmb IAmb 13 53 00.5
comp=Z,63nm,0.8s
CUT Chulitna 82.07 28 IAmb IAmb 13 53 11.2
comp=Z,153nm,1.1s
CUT Chulitna 82.07 28 P P 13 52 23.6 -0.5
baz=267,SNR=10
M22K Willow 82.11 28 P P 13 52 23.8 -0.5
baz=267
TRF Thorofare Moun 82.13 27 IAmb IAmb 13 52 27.5
comp=Z,94nm,1.1s
TRF Thorofare Moun 82.13 27 P P 13 52 23.6 -1.1
baz=266,SNR=25
RC01 Rabbit Creek A 82.25 29 IAmb IAmb 13 52 49.3
comp=Z,86nm,1.1s
RC01 Rabbit Creek A 82.25 29 P P 13 52 24.3 -0.8
baz=267,SNR=15
SEW Seward 82.35 30 P P 13 52 25.6 0.0
SEW IAmb IAmb 13 52 37.3
comp=Z,120nm,1.1s
SEW Seward 82.35 30 P P 13 52 25.2 -0.4
baz=268
D23K Nanushuk River 82.38 21 IAmb IAmb 13 52 30.1
comp=Z,101nm,1.1s
D23K Nanushuk River 82.38 21 P P 13 52 25.8 +0.1
baz=265
COLD Coldfoot 82.42 23 IAmb IAmb 13 52 34.6
comp=Z,90nm,1.1s
COLD Coldfoot 82.42 23 P P 13 52 25.5 -0.4
baz=266
G23K Bananza Creek 82.45 23 IAmb IAmb 13 52 29.8
comp=Z,139nm,1.4s
G23K Bananza Creek 82.45 23 P P 13 52 26.5 +0.4
baz=266
VOI Vohitsoka 82.51 247 P P 13 52 26.1 -1.3
VOI IAmb IAmb 13 52 28.4
comp=Z,108nm,1.0s
VOI IAMs_20 IAMs_20 14 24 43.3
comp=Z,3μm,22.0s
VOI Vohitsoka 82.51 247 P P 13 52 26.7 -0.7
SNR=8.5
VRH Novokhopyorsk 82.52 321 *e*P P 13 52 24.6 -2.1
VRH *e*S S 14 02 38.2 -2.3
VRH pmax pmax
comp=Z,155nm,0.7s
VRH pmax pmax
comp=Z,600nm,15.9s
VRH smax smax
comp=E,600nm,1.7s
PMR Palmer 82.57 29 IAmb IAmb 13 53 01.4
comp=Z,83nm,1.0s
PMR Palmer 82.57 29 P P 13 52 25.9 -0.8
baz=268,SNR=18
BCA Borcka 82.59 311 ⇑ P P 13 52 27.0 -0.3
I23K Minto, Yukon-K 82.63 25 P P 13 52 26.8 -0.2
baz=267,SNR=54
GHO Glory Hole Cre 82.67 29 IAmb IAmb 13 52 51.8
comp=Z,55nm,0.8s
E23K Chandalar 82.70 22 IAmb IAmb 13 52 31.9
comp=Z,179nm,1.2s
E23K Chandalar 82.70 22 P P 13 52 27.6 +0.1
baz=266
ATD Arta Tunnel 82.73 281 LR LR 14 30 02.0

comp=Z,24nm,19.1s,baz=71,slow=36
NEA2 Nenana 82.73 26 IAmb IAmb 13 52 52.5
comp=Z,77nm,1.1s
NEA2 Nenana 82.73 26 P **P** **13 52 27.1 -0.4**
baz=267,SNR=61
MCK McKinley 82.75 27 P **P** **13 52 26.9 -0.8**
baz=268,SNR=69
RND Reindeer 82.77 27 IAmb IAmb 13 52 30.4
comp=Z,130nm,1.2s
FOMA Nahampoana Res 82.83 244 P **P** **13 52 27.4 -1.4**
FOMA IAmb IAmb 13 52 31.3
comp=Z,160nm,1.2s
KNK Knik Glacier 82.89 29 P **P** **13 52 27.6 -0.8**
baz=268,SNR=16
WAT1 Susitna Watana 82.89 27 P **P** **13 52 27.6 -0.8**
baz=268
SML Sawmill 82.96 28 IAmb IAmb 13 52 54.0
comp=Z,110nm,1.0s
SML Sawmill 82.96 28 P **P** **13 52 28.1 -0.8**
baz=268,SNR=22
E24K Your Creek 83.12 22 IAmb IAmb 13 52 33.8
comp=Z,79nm,1.1s
E24K Your Creek 83.12 22 P **P** **13 52 29.8 +0.3**
baz=267
LABN Labinsk 83.21 314 *e*P **P** **13 52 30.1 -0.3**
LABN *e**PP **pP** **13 52 40.9 -1.2**
LABN *e*S **S** **14 02 48.0 +0.2**
LABN pmax pmax
comp=Z,60nm,0.9s
LABN MLR MLR
comp=E,9μm,20.0s
LABN MLR MLR
comp=N,4μm,23.0s
LABN MLR MLR
comp=Z,6μm,20.0s
M23K Glacier View 83.24 28 P **P** **13 52 29.7 -0.6**
baz=269,SNR=11
WAT6 Susitna Watana 83.25 28 P **P** **13 52 29.6 -0.9**
baz=269,SNR=52
COLA College 83.26 25 P **P** **13 52 29.0 -1.2**
COLA College 83.26 25*c i*P **P** **13 52 30.1 -0.1**
COLA pmax pmax
comp=Z,54nm,1.1s
COLA MLR MLR
comp=Z,2μm,20.0s
COLA College 83.26 25 P **P** **13 52 29.3 -0.9**
baz=268
CCB Clear Creek Bu 83.28 26 IAmb IAmb 13 52 32.8
comp=Z,146nm,1.3s
H24K Noodor Dome 83.28 24 P **P** **13 52 29.3 -1.1**
baz=268
MARD Mardin 83.34 307 IAmb IAmb 13 52 44.3
comp=Z,74nm,1.0s
ERBR Yeremizino-Bor 83.36 315 *e*P **P** **13 52 29.9 -1.3**
ERBR *e**PP **pP** **13 52 40.0 -2.9**
ERBR *e*S **S** **14 02 47.5 -1.8**
ERBR pmax pmax
comp=Z,145nm,0.9s
P23K Montague Islan 83.37 30 IAmb IAmb 13 52 43.4
comp=Z,121nm,1.0s
P23K Montague Islan 83.37 30 P **P** **13 52 29.6 -1.3**
baz=269
DHY Denali Highway 83.43 27 IAmb IAmb 13 52 34.8
comp=Z,236nm,2.0s
DHY Denali Highway 83.43 27 P **P** **13 52 30.3 -1.1**
baz=269,SNR=11
SCM Sheep Creek Mo 83.43 28 P **P** **13 52 30.4 -0.9**
baz=269,SNR=24
POKR Poker Plat Res 83.45 25 IAmb IAmb 13 52 48.4
comp=Z,136nm,1.6s
POKR Poker Plat Res 83.45 25 P **P** **13 52 30.5 -0.8**
baz=269,SNR=8.8
G24K Hadweenzic Riv 83.47 24 P **P** **13 52 31.0 -0.3**
baz=268
KOPT Kop Dagi 83.48 310 IAmb IAmb 13 53 09.5
comp=Z,94nm,1.1s
HDA Harding Lake 83.64 26 IAmb IAmb 13 52 49.0
comp=Z,68nm,0.9s
HDA Harding Lake 83.64 26 P **P** **13 52 31.6 -0.7**
baz=269,SNR=38
ILAR Eielson Array 83.67 25 P **P** **13 52 31.4 -0.9**
comp=Z,33nm,1.0s,baz=258,slow=3.7,SNR=47
ILAR PKKP **PKKPdf** **14 10 42.6 -0.4**
comp=Z,1.4nm,0.9s,baz=22,slow=2.3,SNR=5.9
ILAR PKPPKP 14 18 51.1
comp=Z,2.5nm,1.1s,baz=152,slow=1.6,SNR=4.7
ILAR LR LR 14 29 40.2
comp=Z,747nm,20.0s,baz=242,slow=36
comp=Z,33nm,1.0s
ILAR Eielson Array 83.67 25 P **P** **13 52 31.3 -1.1**
VSLR Vesyoloye 83.73 313*d i*P **P** **13 52 32.2 -1.0**
VSLR pmax pmax
comp=Z,81nm,1.0s
VSLR MLR MLR
comp=Z,2μm,18.0s
KLMR Klimovskoe 83.82 331 *e*P **P** **13 52 32.4 -0.8**
KLMR *e**PP **pP** **13 52 42.1 -2.8**
KLMR *e* 13 55 44.2
KLMR S **SKSac** **14 02 50.8 -1.9**
KLMR pmax pmax
comp=Z,426nm,1.1s
KLMR MLR MLR
comp=Z,4μm,18.0s
HIN Hinchinbrook I 83.83 30 IAMs_20 IAMs_20 14 26 33.1
comp=Z,4μm,22.0s
Q23K Middleton Isla 83.91 31 P **P** **13 52 32.8 -0.9**
baz=270
D25K Kavik River 83.93 21 P **P** **13 52 33.5 -0.2**
baz=269
SOC Sochi 83.96 313 *e*P **P** **13 52 36.6 +2.3**
SOC *e* 13 55 40.9
SOC *e*PPP PPP 13 57 41.1
SOC *e*S **SKSac** **14 02 55.0 +0.6**
SOC pmax pmax
comp=Z,86nm,1.4s
M24K Tolsona, Glenn 83.98 28 P **P** **13 52 33.6 -0.5**
baz=270,SNR=19
VORD Divnogorie 84.05 321 *e*P **P** **13 52 32.8 -1.8**
VORD pmax pmax
comp=Z,130nm,0.7s
VORR Voronezh 84.09 321 *e*P **P** **13 52 32.7 -2.1**
VORR pmax pmax
comp=Z,222nm,0.7s
KLU Klutina 84.10 29 IAmb IAmb 13 52 52.9
comp=Z,110nm,1.2s
KLU Klutina 84.10 29 P **P** **13 52 34.0 -0.8**
baz=270,SNR=17
VSR Storozhevoye 84.13 321 *e*P **P** **13 52 33.5 -1.5**
VSR pmax pmax
comp=Z,100nm,0.6s
K24K Donnelly Dome 84.15 26 IAmb IAmb 13 53 14.7
comp=Z,92nm,1.0s
K24K Donnelly Dome 84.15 26 P **P** **13 52 34.6 -0.3**
baz=270,SNR=31
F25K Christian Rive 84.19 23 IAmb IAmb 13 52 39.6
comp=Z,81nm,1.1s
F25K Christian Rive 84.19 23 P **P** **13 52 34.7 -0.4**
baz=270
EYAK Cordova Ski Ar 84.20 30 IAMs_20 IAMs_20 14 26 45.0
comp=Z,4μm,22.0s
EYAK Cordova Ski Ar 84.20 30 P **P** **13 52 34.6 -0.5**
baz=271
E25K Arctic Village 84.22 22 P **P** **13 52 34.6 -0.5**
baz=270
LPSR Galich'ya Gora 84.24 322 *e*P **P** **13 52 33.5 -2.0**
LPSR *e*S **SKSac** **14 02 52.5 -3.3**
LPSR pmax pmax
comp=Z,193nm,0.9s
LPSR pmax pmax
comp=Z,500nm,17.2s
LPSR smax smax
comp=E,1μm,5.1s
PRP Porcupine Dome 84.25 25 IAmb IAmb 13 52 49.0
comp=Z,130nm,2.0s
PRP Porcupine Dome 84.25 25 P **P** **13 52 34.7 -0.8**
baz=270,SNR=11
PAX Paxson 84.30 27 IAmb IAmb 13 52 39.2
comp=Z,115nm,1.2s
PAX IAMs_20 IAMs_20 14 26 28.5
comp=Z,3μm,22.0s
PAX Paxson 84.30 27 P **P** **13 52 35.0 -0.7**
baz=271,SNR=42
J25K Salcha River, 84.33 26 P **P** **13 52 35.1 -0.7**
baz=271
ADZR Andozero 84.37 334*c i*P **P** **13 52 35.6 -0.3**
ADZR *e*S **SKSac** **14 02 54.8 -1.3**
ADZR pmax pmax
comp=Z,529nm,1.6s
ADZR MLR MLR
comp=Z,7μm,19.0s
HARP HAARP 84.45 28 P **P** **13 52 35.9 -0.5**
baz=271,SNR=16
RIDG Independent Ri 84.57 27 P **P** **13 52 36.4 -0.7**
baz=271,SNR=56
BMAR Burnt Mountain 84.60 23 P **P** **13 52 37.6 +0.4**
N25K Chitina, Valde 84.73 29 IAmb IAmb 13 52 57.1
comp=Z,119nm,1.2s
N25K Chitina, Valde 84.73 29 P **P** **13 52 37.6 -0.4**
baz=272,SNR=25
BMRM Bremner River 84.75 29 P **P** **13 52 37.9 -0.1**
baz=272,SNR=19
F26K Sheenjek River 84.77 23 IAmb IAmb 13 52 41.8
comp=Z,138nm,1.4s
F26K Sheenjek River 84.77 23 P **P** **13 52 37.6 -0.4**
baz=272
C27K Jago River 84.87 21 IAMs_20 IAMs_20 14 37 41.4
comp=Z,2μm,18.0s
C27K Jago River 84.87 21 P **P** **13 52 38.8 +0.4**
baz=272
KAIM Kayak Island 84.88 30 P **P** **13 52 38.4 -0.2**
baz=272
MOS Moscow 84.91 325 *e*P **P** **13 52 37.1 -1.7**
MOS *e* 13 55 53.7
MOS *e*PPP PPP 13 57 46.1
MOS *e*S **SKSac** **14 02 58.4 -1.6**
MOS *e* 14 03 04.1
MOS *e*SS **SS** **14 08 36.2 -1.1**
MOS pmax pmax
comp=Z,550nm,1.1s
MOS pmax pmax
comp=N,200nm,1.0s
MOS pmax pmax
comp=Z,500nm,1.2s
MOS pmax pmax
comp=N,300nm,1.3s
MOS pmax pmax
comp=E,200nm,1.0s
MOS MLR MLR
comp=E,4μm,20.0s
MOS MLR MLR
comp=Z,4μm,20.0s
DOT Dot Lake 84.92 27 IAmb IAmb 13 52 41.9
comp=Z,56nm,1.1s
G26K Porcupine Rive 84.93 23 P **P** **13 52 39.2 +0.5**
baz=272
SCRK Sand Creek 84.94 26 IAmb IAmb 13 52 58.1
comp=Z,43nm,1.0s
SCRK Sand Creek 84.94 26 P **P** **13 52 38.6 -0.4**
baz=272,SNR=37
MENT Mentasta 85.10 27 IAmb IAmb 13 52 48.7
comp=Z,50nm,1.0s
J26L Joseph Creek 85.11 26 IAmb IAmb 13 52 57.4
comp=Z,40nm,0.9s
J26L Joseph Creek 85.11 26 P **P** **13 52 39.1 -0.7**
baz=272
VNDA Vanda 85.14 173 P **P** **13 52 39.9 +0.4**
comp=Z,34nm,1.0s,baz=313,slow=5.8,SNR=24
VNDA S **SKSac** **14 02 54.6 -5.9**
comp=Z,1.1nm,0.9s,baz=31,slow=12,SNR=1.0
VNDA PKKP **PKKPdf** **14 10 42.0 +0.4**
comp=Z,2.1nm,0.9s,baz=293,slow=0.6,SNR=6.1
VNDA LR LR 14 30 28.0
comp=Z,4μm,21.4s,baz=346,slow=36
comp=Z,34nm,1.0s
VNDA Vanda 85.14 173 P **P** **13 52 39.8 +0.4**
VNDA IAmb IAmb 13 53 08.8
comp=Z,49nm,1.1s
ARPR Arapgir-MALATY 85.19 309 IAMs_20 IAMs_20 14 36 02.3
comp=Z,4μm,21.0s
BERG Berg Lake 85.22 30 IAMs_20 IAMs_20 14 25 37.9
comp=Z,3μm,22.0s
MAW Mawson 85.27 200 P **P** **13 52 40.5 +0.3**
comp=Z,22nm,0.8s,baz=80,slow=5.4,SNR=13
MAW LR LR 14 27 37.8
comp=Z,1μm,21.0s,baz=64,slow=34
comp=Z,22nm,0.8s
L26K Log Cabin Wild 85.27 27 IAmb IAmb 13 52 52.3
comp=Z,47nm,1.1s
L26K Log Cabin Wild 85.27 27 P **P** **13 52 40.0 -0.5**
baz=273,SNR=19
VRDI Verde Repeater 85.30 29 IAmb IAmb 13 52 49.8
comp=Z,76nm,1.1s
M26K Nabesna, AK 85.46 28 IAmb IAmb 13 52 45.1
comp=Z,59nm,1.3s
M26K Nabesna, AK 85.46 28 P **P** **13 52 40.9 -0.6**
baz=273
CRQE Cirque 85.50 30 P **P** **13 52 41.6 -0.3**
baz=273
MCARA McCarthy VSAT 85.50 29 IAmb IAmb 13 53 00.7
comp=Z,107nm,1.2s
MCARA McCarthy VSAT 85.50 29 P **P** **13 52 41.6 -0.1**
baz=273,SNR=9.8
OBN Obninsk 85.54 325 IAMs_20 IAMs_20 14 33 34.6
comp=Z,4μm,19.0s
OBN Obninsk 85.54 325 ⇑P **P** **13 52 41.5 -0.4**
OBN Obninsk 85.54 325*c i*P **P** **13 52 40.8 -1.2**
OBN *e**PP **pP** **13 52 51.4 -2.3**
OBN *e* 13 55 59.2
OBN *e*PPP PPP 13 57 54.2
OBN *e*S **SKSac** **14 03 02.4 -1.5**
OBN *e*SS **SS** **14 08 47.4 +0.8**
OBN *e*SSS SSS 14 12 16.6
OBN pmax pmax
comp=Z,617nm,1.0s
OBN MLR MLR
comp=Z,4μm,16.0s
OBN Obninsk 85.54 325 P **P** **13 52 41.2 -0.8**
comp=Z,6μmcomp=Z,550nm,1.2s
ANN Anapa 85.55 314 *e*P **P** **13 52 40.8 -1.4**
ANN *e**PP **pP** **13 52 51.0 -3.1**
ANN *e* 13 56 03.5
ANN *e*S **SKSac** **14 03 02.3 -2.1**
ANN pmax pmax
comp=N,107nm,1.1s
ANN pmax pmax
comp=Z,349nm,1.2s
ANN pmax pmax
comp=E,46nm,0.8s
ANN MLR MLR
comp=E,7μm,21.0s
WAX Waxell Ridge 85.63 30 IAmb IAmb 13 53 09.3
comp=Z,71nm,0.8s
G27K Doyon Strip 85.77 23 P **P** **13 52 43.2 +0.2**
baz=274
K27K Chicken 85.78 26 IAmb IAmb 13 52 47.5
comp=Z,129nm,1.3s
PPT Papeete 85.86 108 LR LR 14 23 29.4
comp=Z,2μm,20.4s,baz=276,slow=30
D27M Malcolm River 85.86 21 IAmb IAmb 13 53 01.3
comp=Z,52nm,0.9s
D27M Malcolm River 85.86 21 P **P** **13 52 43.5 +0.1**
baz=274
H27K Steamboat Moun 85.86 24 IAmb IAmb 13 52 47.9
comp=Z,87nm,1.2s
H27K Steamboat Moun 85.86 24 P **P** **13 52 43.6 +0.1**
baz=274
I27K Kandik River 85.87 25 IAmb IAmb 13 52 47.8
comp=Z,144nm,1.2s
I27K Kandik River 85.87 25 P **P** **13 52 43.2 -0.3**
baz=274,SNR=54
ISLE Juniper Island 85.88 30 IAmb IAmb 13 53 02.7
comp=Z,77nm,0.9s
L27K Beaver Creek, 85.96 27 P **P** **13 52 43.3 -0.7**
baz=274,SNR=24
BCAR Beaver Creek A 85.97 27 P **P** **13 52 43.4 -0.7**
M27K Edge Creek, AK 85.98 28 P **P** **13 52 43.1 -1.1**
M27K Edge Creek, AK 85.98 28 P **P** **13 52 43.6 -0.7**
baz=274,SNR=9.4
KHAM Kharkiv 86.04 320 P **P** **13 52 44.4 -0.2**
MESA MESA 86.10 30 IAMs_20 IAMs_20 14 26 37.2
comp=Z,5μm,22.0s
MESA MESA 86.10 30 P **P** **13 52 44.0 -0.9**
baz=274
GRNC Granite Creek 86.16 29 IAmb IAmb 13 52 54.8
comp=Z,88nm,1.0s
GRNC IAMs_20 IAMs_20 14 26 23.7
comp=Z,3μm,22.0s
BARN Barnard Glacie 86.18 29 IAmb IAmb 13 53 27.6
comp=Z,69nm,1.0s
APA Apatity 86.20 337⇓*i*P **P** **13 52 42.5 -2.5**
APA *i* S **SKSac** **14 03 12.5 +4.9**
APA *i* SS **SS** **14 09 00.8 +5.1**
APA pmax pmax
comp=Z,85nm,1.2s
APA MLR MLR
comp=Z,11μm,21.5s
CTG Chitna Glacier 86.34 29 P **P** **13 52 45.3 -0.7**
baz=275,SNR=15
CTGM Chitina Glacie 86.34 29 IAmb IAmb 13 53 27.9
comp=Z,110nm,1.2s
F28M Old Crow 86.40 23 IAmb IAmb 13 53 12.2
comp=Z,59nm,0.9s
F28M Old Crow 86.40 23 P **P** **13 52 45.5 -0.5**
baz=275,SNR=50
E28M Babbage River 86.43 22 IAmb IAmb 13 53 03.8
comp=Z,68nm,1.2s
E28M IAMs_20 IAMs_20 14 37 15.7
comp=Z,3μm,20.0s
E28M Babbage River 86.43 22 P **P** **13 52 45.8 -0.4**
baz=276
BVCY Beaver Creek 86.45 28 P **P** **13 52 45.7 -0.7**
baz=275,SNR=6.6
TABL Table Mountain 86.48 30 IAmb IAmb 13 53 07.6
comp=Z,62nm,1.0s
TABL IAMs_20 IAMs_20 14 28 01.3
comp=Z,3μm,21.0s
LOGN Logan Glacier 86.52 29 IAmb IAmb 13 52 59.5
comp=Z,68nm,1.0s
LOGN IAMs_20 IAMs_20 14 26 47.2
comp=Z,4μm,22.0s
TOKA Tokat 86.54 310 IAmb IAmb 13 52 48.4
comp=Z,94nm,1.1s
I28M Miner Creek 86.58 25 IAmb IAmb 13 53 04.7
comp=Z,61nm,0.8s
I28M Miner Creek 86.58 25 P **P** **13 52 46.3 -0.8**
baz=276
D28M Stokes Point 86.64 21 P **P** **13 52 46.7 -0.4**
baz=276
YUK3 Moose Creek 86.69 28 P **P** **13 52 46.6 -1.2**
baz=275
ASF Jabal al Asfar 86.81 302 LR LR 14 36 53.4
comp=Z,2μm,21.2s,baz=72,slow=39
O28M Mount Upton 86.92 29 IAMs_20 IAMs_20 14 27 55.8
comp=Z,4μm,22.0s
O28M Mount Upton 86.92 29 P **P** **13 52 47.9 -1.2**
baz=276
PINM Pinnacle 86.95 30 P **P** **13 52 47.9 -1.1**
baz=276
DAWY Dawson 86.95 26 P **P** **13 52 48.5 -0.4**
baz=276,SNR=19
FURI Furi 87.03 279 LR LR 14 30 12.5
comp=Z,2μm,21.7s,baz=72,slow=35
FURI Furi 87.03 279 IAMs_20 IAMs_20 14 27 34.9
comp=Z,4μm,22.0s
E29M Blow River 87.06 22 P **P** **13 52 48.5 -0.7**
baz=277
YUK8 Steele Glacier 87.07 29 P **P** **13 52 48.8 -1.0**
baz=276
G29M Pine Creek 87.19 23 IAmb IAmb 13 52 53.9
comp=Z,84nm,1.1s
G29M Pine Creek 87.19 23 P **P** **13 52 49.7 -0.2**
baz=277
I29M Ogilvie Camp, 87.27 25 P **P** **13 52 50.0 -0.3**
baz=277,SNR=17
VADS Vadso 87.36 340 *e*P **P** **13 52 49.7 -0.8**
VADS IVmB_BB 13 52 51.6
comp=Z,2μm,1.8s
VADS *e*SKSac **SKSac** **14 03 15.0 +0.3**
J29N Klondike Camp 87.42 26 IAMs_20 IAMs_20 14 29 59.9
comp=Z,3μm,22.0s
J29N Klondike Camp 87.42 26 P **P** **13 52 50.5 -0.7**
baz=277
HOPEN Hopen 87.43 347 *e*P **P** **13 52 53.1 +2.3**
HOPEN *e*SKSac **SKSac** **14 03 18.1 +3.2**
M29M Somme Creek 87.56 28 P **P** **13 52 50.7 -1.2**
baz=277
YUK4 Talbot Arm 87.60 29 P **P** **13 52 51.3 -0.9**
baz=277
L29M L29M 87.63 27 IAmb IAmb 13 53 10.2
comp=Z,33nm,0.8s
L29M L29M 87.63 27 P **P** **13 52 51.4 -0.8**
baz=277
O29M Mount Kennedy 87.76 30 P **P** **13 52 52.2 -0.7**
baz=277
EPYK Eagle Plains 87.78 24 IAmb IAmb 13 53 17.4
comp=Z,37nm,0.8s
EPYK Eagle Plains 87.78 24 P **P** **13 52 52.0 -0.8**
baz=278,SNR=17
YUK6 Outpost Mounta 87.79 29 P **P** **13 52 51.6 -1.6**
baz=277
K29M Barlow Dome 87.80 26 IAMs_20 IAMs_20 14 28 19.5
comp=Z,3μm,22.0s
K29M Barlow Dome 87.80 26 P **P** **13 52 52.1 -1.0**
baz=278
SIM Simferopol' 87.89 315 *e*P **P** **13 52 53.6 -0.1**
SIM *e*S **S** **14 03 30.0 -3.8**
SIM pmax pmax
comp=Z,250nm,4.8s
SIM pmax pmax
comp=Z,86nm,1.1s
F30M Barrier River 87.95 22 IAmb IAmb 13 53 25.6
comp=Z,49nm,1.0s
F30M Barrier River 87.95 22 P **P** **13 52 53.0 -0.5**
baz=279
MMAI Mount Meron Ar 87.99 303 P **P** **13 52 53.8 -0.7**
comp=Z,7.6nm,0.6s,baz=187,slow=12,SNR=11
MMAI LR LR 14 36 37.4
comp=Z,3μm,21.4s,baz=63,slow=39
comp=Z,7.6nm,0.6s
I30M Mount Dempster 88.09 25 IAMs_20 IAMs_20 14 32 43.8
comp=Z,3μm,21.0s
I30M Mount Dempster 88.09 25 P **P** **13 52 53.7 -0.7**
baz=279
J30M Hart River 88.21 25 P **P** **13 52 53.8 -1.2**
baz=279
HYT Haines Junctio 88.22 29 P **P** **13 52 53.6 -1.5**
baz=278
M30M Minto, Yukon 88.31 27 P **P** **13 52 54.5 -0.9**
baz=278,SNR=12
PUL Pulkovo 88.45 330⇑*e*P **P** **13 52 56.4 +0.4**
PUL pmax pmax
comp=Z,437nm,1.1s
PUL MLR MLR
comp=Z,10μm,22.0s
MAYO Mayo, Yukon 88.56 26 P **P** **13 52 55.7 -0.7**
baz=279,SNR=7.7
ILGA Igaz 88.57 311 IAmb IAmb 13 53 12.3
comp=Z,38nm,0.9s
KIRS Kirsehir-Merke 88.61 309⇓P **P** **13 52 55.7 -1.6**
G31M Satah River 88.65 23 IAmb IAmb 13 52 59.1
comp=Z,40nm,1.0s
G31M Satah River 88.65 23 P **P** **13 52 55.8 -1.0**
baz=281,SNR=30
INK Inuvik 88.67 21 LR LR 14 34 01.1
comp=Z,2μm,22.0s,baz=269,slow=36
INK Inuvik 88.67 21 IAmb IAmb 13 52 59.9
comp=Z,45nm,1.1s
INK Inuvik 88.67 21 P **P** **13 52 55.7 -1.2**
baz=281,SNR=51
KIBK Kibwezi 88.68 268 P **P** **13 52 56.9 -1.2**
KIBK Kibwezi 88.68 268 P **P** **13 52 57.8 -0.4**
SNR=15
EIL Elat 88.69 300 LR LR 14 39 53.9
comp=Z,2μm,19.4s,baz=74,slow=40
F31M Tsiigehtchic 88.76 22 IAmb IAmb 13 53 04.6
comp=Z,43nm,0.8s
F31M Tsiigehtchic 88.76 22 P **P** **13 52 56.5 -0.7**
baz=281,SNR=27
BR131 Keskin Array S 88.76 310*d i*P **P** **13 52 56.1 -2.0**
BRTR Keskin Array B 88.76 310 P **P** **13 52 56.5 -1.6**
comp=Z,20nm,1.0s,baz=120,slow=4.4,SNR=31
BRTR LR LR 14 40 31.0
comp=Z,1μm,19.0s,baz=86,slow=41
comp=Z,20nm,1.0s
BRTR Keskin Array B 88.76 310 P **P** **13 52 56.9 -1.2**
SPB2 Spitsbergen Ar 88.77 349 P **P** **13 52 57.9 +0.6**
SPA0 Spitsbergen Ar 88.77 349 *e*P **P** **13 52 57.9 +0.6**
SPITS Spitsbergen Ar 88.77 349 P **P** **13 52 57.7 +0.5**
comp=Z,48nm,0.7s,baz=101,slow=7.2,SNR=43
SPITS LR LR 14 39 15.5
comp=Z,2μm,18.1s,baz=59,slow=40
comp=Z,48nm,0.7s
SPITS Spitsbergen Ar 88.77 349 P **P** **13 52 57.6 +0.4**
SPITS pmax pmax
comp=Z,133nm,1.1s
ARA0 ARCESS Array S 88.78 340 *e*P **P** **13 52 57.1 -0.3**
ARCES ARCESS Array B 88.78 340 P **P** **13 52 56.8 -0.6**
comp=Z,89nm,0.6s,baz=84,slow=5.2,SNR=56
ARCES LR LR 14 37 31.8
comp=Z,4μm,18.0s,baz=84,slow=39
comp=Z,89nm,0.6s
ARCES ARCESS Array B 88.78 340 P **P** **13 52 56.7 -0.6**

ARCES ARCESS Array B 88.78 340 P **P** **13 52 56.7 -0.7**
ARCES pmax pmax
comp=Z,319nm,1.1s
BR106 Keskin Array S 88.78 310 P **P** **13 52 56.9 -1.3**
comp=Z,146nmcomp=Z,23nm,0.9s
BR105 Keskin Array S 88.78 310 P **P** **13 52 56.9 -1.3**
comp=Z,179nmcomp=Z,27nm,1.0s
H31M Peel River 88.83 24 P **P** **13 52 56.9 -0.9**
baz=281
O30N Mendenhall 88.91 29 P **P** **13 52 57.3 -1.0**
baz=279
N31M Braeburn, Yuko 88.95 28 IAmb IAmb 13 53 03.4
comp=Z,52nm,1.2s
N31M IAMs_20 IAMs_20 14 28 32.4
comp=Z,3µm,22.0s
N31M Braeburn, Yuko 88.95 28 P **P** **13 52 57.7 -0.7**
baz=279,SNR=8.5
HAMF Hammerfest 89.14 341 *e*P **P** **13 52 58.9 -0.1**
HAMF IVmB_BB 13 53 04.6
comp=Z,3µm,3.9s
HAMF *e*SKSac **SKSac** **14 03 27.5 +2.1**
S31K Pelican 89.29 32 IAMs_20 IAMs_20 14 27 34.6
comp=Z,3µm,21.0s
S31K Pelican 89.29 32 P **P** **13 52 59.0 -0.9**
baz=279
KBS Kingsbay 89.29 350 *e*P **P** **13 53 02.0 +2.4**
KBS *e*SKSac **SKSac** **14 03 25.8 -0.3**
KBS Kingsbay 89.29 350 *i* P **P** **13 53 02.1 +2.4**
BJO1 Bjornoya 89.42 345 *e*P **P** **13 53 00.7 +0.4**
M31M Drury Creek, Y 89.47 28 IAMs_20 IAMs_20 14 30 20.3
comp=Z,3µm,21.0s
M31M Drury Creek, Y 89.47 28 P **P** **13 52 59.9 -0.9**
baz=281
SKAG Skagway 89.51 30 P **P** **13 53 00.4 -0.6**
baz=280
WHY Whitehorse 89.52 29 IAmb IAmb 13 53 05.0
comp=Z,48nm,1.1s
WHY Whitehorse 89.52 29 P **P** **13 53 00.5 -0.7**
baz=280,SNR=8.2
KTK1 Kautokeino 89.69 339 *e*P **P** **13 53 00.9 -0.7**
KTK1 IVmB_BB 13 53 07.5
comp=Z,2µm,2.9s
BESE Bessie Mountai 89.90 31 IAMs_20 IAMs_20 14 28 08.8
comp=Z,4µm,22.0s
R32K Eaglecrest 90.13 31 IAMs_20 IAMs_20 14 28 14.9
comp=Z,3µm,22.0s
R32K Eaglecrest 90.13 31 P **P** **13 53 02.6 -1.3**
baz=280
FINES FINESS Array B 90.23 332 P **P** **13 53 03.8 -0.5**
comp=Z,56nm,0.8s,baz=72,slow=4.9,SNR=62
FINES LR LR 14 37 10.7
comp=Z,9µm,20.7s,baz=82,slow=38
comp=Z,56nm,0.8s
FINES FINESS Array B 90.23 332 P **P** **13 53 03.7 -0.6**
FINES FINESS Array B 90.23 332 P **P** **13 53 03.7 -0.6**
S32K Killisnoo 90.25 32 IAMs_20 IAMs_20 14 27 50.0
comp=Z,4µm,21.0s
S32K Killisnoo 90.25 32 P **P** **13 53 03.2 -1.3**
baz=280
N32M Quiet Lake 90.29 28 IAmb IAmb 13 53 08.9
comp=Z,55nm,1.1s
N32M Quiet Lake 90.29 28 P **P** **13 53 04.0 -0.7**
baz=282
P32M Atlin 90.29 30 P **P** **13 53 04.3 -0.5**
baz=281
AK09 Malin Array Si 90.41 321 P **P** **13 53 04.1 -1.3**
AK08 Malin Array Si 90.42 321 P **P** **13 53 04.6 -0.8**
AKASG Malin Array Be 90.43 321 P **P** **13 53 04.0 -1.5**
comp=Z,35nm,0.9s,baz=70,slow=4.3,SNR=59
AKASG S **SKSac** **14 03 30.9 -2.8**
comp=Z,0.3nm,0.3s,baz=82,slow=6.4,SNR=4.1
AKASG ScS **S** **14 03 57.2 -0.2**
comp=Z,0.7nm,0.6s,baz=77,slow=9.7,SNR=5.1
AKASG LR LR 14 35 49.4
comp=Z,4µm,21.9s,baz=72,slow=37
comp=Z,35nm,0.9s
AKBB Malin Array Si 90.43 321 *d i*P **P** **13 53 04.0 -1.5**
AKBB pmax pmax
comp=Z,128nm,1.3s
AKBB MLR MLR
comp=Z,5µm,23.0s
A36M Sachs Harbour 90.44 17 P **P** **13 53 04.2 -0.8**
baz=289,SNR=12
AK01 Malin Array Si 90.44 321 P **P** **13 53 03.8 -1.7**
KIEV Kiev 90.44 321 P **P** **13 53 04.2 -1.3**
KIEV IAmb IAmb 13 53 06.6
comp=Z,116nm,1.2s
KIEV Kiev 90.44 321 IAMs_20 IAMs_20 14 35 38.2
comp=Z,4µm,22.0s
KIEV Kiev 90.44 321 ⇓P **P** **13 53 04.2 -1.3**
KIEV Kiev 90.44 321 *i* P **P** **13 53 03.6 -2.0**
SNR=30
KIEV Kiev 90.44 321 ⇓P **P** **13 53 04.2 -1.3**
AK02 Malin Array Si 90.45 321 P **P** **13 53 03.9 -1.7**
AK05 Malin Array Si 90.46 321 P **P** **13 53 03.9 -1.7**
AK04 Malin Array Si 90.47 321 P **P** **13 53 04.0 -1.6**
AK06 Malin Array Si 90.47 321 P **P** **13 53 04.0 -1.7**
AK07 Malin Array Si 90.47 321 P **P** **13 53 04.0 -1.7**
AK11 Malin Array Si 90.47 321 P **P** **13 53 04.0 -1.7**
AK23 Malin Array Si 90.48 321 P **P** **13 53 04.0 -1.7**
AK12 Malin Array Si 90.48 321 P **P** **13 53 04.0 -1.7**
AK15 Malin Array Si 90.50 321 P **P** **13 53 04.1 -1.7**
VSU Vasula 90.50 329 *de*P **P** **13 53 04.1 -1.5**
VSU pmax pmax
comp=Z,273nm,1.5s
VSU MLR MLR
comp=Z,7µm,18.0s
JETT Jettan, Norway 90.51 340 *e*P **P** **13 53 05.2 -0.4**
AK16 Malin Array Si 90.51 321 P **P** **13 53 04.4 -1.5**
AK14 Malin Array Si 90.52 321 P **P** **13 53 04.4 -1.5**
AK22 Malin Array Si 90.52 321 P **P** **13 53 04.4 -1.5**
MDUB Mudurnu 90.53 311 IAmb IAmb 13 53 18.5
comp=Z,66nm,1.0s
MNK Minsk 90.60 325 *i* P **P** **13 53 05.0 -1.2**
comp=E,53nm,1.1s
MNK *i* P **P** **13 53 05.0 -1.2**
comp=N,108nm,1.1s
MNK *i* P **P** **13 53 05.0 -1.2**
comp=Z,176nm,1.1s,baz=80
MNK *i* PP **PP** **13 56 43.4 +2.0**
MNK *i* PPP PPP 13 58 39.6
MNK *i* S **SKSac** **14 03 33.5 -1.0**
MNK *i* SS **SS** **14 10 01.7 +1.3**
MNK *i* SSS SSS 14 13 39.7
MNK *i* LQ LQ 14 27 20.4
MNK *i* LRM MLR 14 34 50.3
comp=E,3µm,22.9s
MNK *i* LRM MLR 14 35 32.8
comp=N,3µm,19.7s
MNK *i* LRM MLR 14 35 32.8
comp=Z,4µm,21.0s
MNK Minsk 90.60 325 *i* P **P** **13 53 05.0 -1.2**
MNK *i* 13 56 43.3
MNK *i* PPP PPP 13 58 39.6
MNK *i* S **SKSac** **14 03 33.5 -1.0**
MNK *i* SS **SS** **14 10 01.6 +1.3**
MNK *i* SSS SSS 14 13 39.7
MNK pmax pmax
comp=Z,176nm,1.1s
MNK pmax pmax
comp=N,108nm,1.1s
MNK pmax pmax
comp=E,53nm,1.1s
MNK MLR MLR
comp=E,3µm,23.0s
MNK MLR MLR
comp=Z,4µm,21.0s
MNK MLR MLR
comp=N,3µm,20.0s
P33M Teslin, Yukon 90.61 29 P **P** **13 53 05.3 -1.0**
baz=282
LODK Lodwar 90.81 273 P **P** **13 53 08.1 -0.1**
SNR=5.7
TRO Tromso 90.98 340 *e*P **P** **13 53 06.8 -0.8**
Q32M Nakina River 91.15 31 P **P** **13 53 07.9 -1.0**
baz=282
BORA Eskisehir 91.18 310 IAmb IAmb 13 53 19.0
comp=Z,48nm,1.0s
U33K Whale Pass 91.29 33 P **P** **13 53 08.1 -1.2**
baz=282
NOR Nord 91.38 355 *i* P **P** **13 53 10.0 +0.7**
NOR IAmb IAmb 13 53 20.0
comp=Z,48nm,1.1s
SORM Soroca 91.41 318 ⇑P **P** **13 53 08.1 -2.0**
SORM Soroca 91.41 318 ⇑P **P** **13 53 08.1 -2.0**
CRAG Craig 91.42 34 P **P** **13 53 08.8 -1.1**
baz=282
TLCR 91.58 315 ⇓P **P** **13 53 09.4 -1.5**
TLCR 91.58 315 ⇓P **P** **13 53 09.4 -1.5**
WRAK Wrangell Islan 91.65 33 P **P** **13 53 09.9 -1.1**
baz=282
C36M Paulatuk 91.69 20 IAmb IAmb 13 53 15.0
comp=Z,66nm,1.3s
C36M Paulatuk 91.69 20 P **P** **13 53 10.0 -0.9**
baz=290,SNR=42
R33M Jennings River 91.70 30 IAMs_20 IAMs_20 14 29 04.4
comp=Z,4µm,22.0s
R33M Jennings River 91.70 30 P **P** **13 53 10.2 -1.2**
baz=284
S34M Telegraph Cree 91.96 31 IAMs_20 IAMs_20 14 29 21.4
comp=Z,4µm,22.0s
S34M Telegraph Cree 91.96 31 P **P** **13 53 11.2 -1.3**
baz=283
VLDR Vladesti 91.98 316 ⇑P **P** **13 53 12.8 0.0**
TIRR Tirgusor 91.98 315 IAMs_20 IAMs_20 14 38 52.7
comp=Z,4µm,22.0s
CFR Carcaliu 92.06 316 ⇓P **P** **13 53 11.8 -1.3**
CFR Carcaliu 92.06 316 ⇓P **P** **13 53 11.8 -1.3**
V35K Ketchikan 92.29 34 P **P** **13 53 12.7 -1.3**
baz=283
TUDR 92.31 316 ⇑P **P** **13 53 14.5 +0.2**
RNPP9 Sopachiv 92.37 322 P **P** **13 53 13.8 -0.7**
DLBC Dease Lake 92.41 31 LR LR 14 30 57.5
comp=Z,2µm,21.8s,baz=263,slow=33
DLBC Dease Lake 92.41 31 P **P** **13 53 13.2 -1.4**
baz=284
RNPP8 Varash 92.41 322 P **P** **13 53 13.4 -1.3**
RNPP5 Staryi Chortor 92.41 322 P **P** **13 53 13.6 -1.1**
HORU Horodok 92.47 320 P **P** **13 53 13.9 -1.1**
WTLY Watson Lake, Y 92.59 29 IAmb IAmb 13 53 18.8
comp=Z,54nm,1.2s
WTLY Watson Lake, Y 92.59 29 P **P** **13 53 14.2 -1.2**
baz=286
PABE Paberze 92.61 326 IAmb IAmb 13 53 16.8
comp=Z,40nm,0.8s
PANC Panciu 92.62 316 ⇑P **P** **13 53 15.9 +0.1**
T35M Bob Quinn 92.65 32 IAmb IAmb 13 53 48.0
comp=Z,67nm,1.9s
T35M IAMs_20 IAMs_20 14 28 03.3
comp=Z,3µm,22.0s
T35M Bob Quinn 92.65 32 P **P** **13 53 14.5 -1.2**
baz=284
STEI Steigen 92.83 339 *e*P **P** **13 53 15.1 -1.1**
STEI *e*SKSac **SKSac** **14 03 47.7 +1.2**
GRER 92.83 316 ⇑P **P** **13 53 17.7 +1.0**
TESR Tescani 92.84 317 ⇓P **P** **13 53 15.5 -1.3**
MANT Manisa 92.84 309 IAmb IAmb 13 53 27.8
comp=Z,70nm,1.2s
VRI Vrincioaia 92.91 316 ⇓P **P** **13 53 16.9 -0.2**
VRI Vrincioaia 92.91 316 ⇓P **P** **13 53 16.9 -0.2**
PLOR Plostina 92.97 316 ⇑P **P** **13 53 16.9 -0.5**
PLOR Plostina 92.97 316 ⇑P **P** **13 53 16.9 -0.5**
FAUS Fauske 93.01 339 *e*P **P** **13 53 16.2 -0.9**
FAUS IVmB_BB 13 53 20.7
comp=Z,2µm,2.3s
FAUS *e*SKSac **SKSac** **14 03 48.5 +0.9**
ONER Baraj Valea Uz 93.05 317 ⇑P **P** **13 53 17.4 -0.4**
COVR Voineasa-Covas 93.27 316 ⇑P **P** **13 53 17.6 -1.3**
LOF Lofoten 93.34 340 *e*P **P** **13 53 18.0 -0.5**
LOF *e*SKSac **SKSac** **14 03 53.8 +4.4**
TUR Turia 93.36 317 ⇑P **P** **13 53 18.6 -0.7**
SULR 93.46 315 ⇑P **P** **13 53 19.4 -0.2**
MLR Muntele Rosu 93.52 316 LR LR 14 41 08.2
comp=Z,3µm,20.9s,baz=64,slow=39
MLR Muntele Rosu 93.52 316 ⇓P **P** **13 53 19.4 -0.7**
BURAR Bucovina Array 93.58 318 P **P** **13 53 17.9 -2.4**
BURAR IAmb IAmb 13 53 22.1
comp=Z,47nm,1.1s
BURAR Bucovina Array 93.58 318 ⇓P **P** **13 53 19.6 -0.7**
BURAR Bucovina Array 93.58 318 ⇓P **P** **13 53 19.6 -0.7**
BUR08 Bucovina Ar. S 93.59 318 IAmb IAmb 13 53 22.4
comp=Z,94nm,1.4s
MOR8 Moi Rana 93.78 338 *e*P **P** **13 53 18.6 -2.0**
MOR8 IVmB_BB 13 53 25.9
comp=Z,2µm,3.8s
MOR8 *e*SKSac **SKSac** **14 03 51.9 0.0**
DOPR Dopca 93.81 317 ⇑P **P** **13 53 20.9 -0.3**
RAUS Rausandaksla 93.83 338 *e*P **P** **13 53 19.7 -1.2**
RAUS *e*SKSac **SKSac** **14 03 53.3 +1.2**
SYO Syowa Base 93.92 201 ⇑*e*P **P** **13 53 20.6 -0.6**
VAGH Vaagaholmen 93.99 339 *e*P **P** **13 53 20.9 -0.7**
VAGH *e*SKSac **SKSac** **14 03 55.2 +2.2**
WRGLY Wrigley 94.05 25 P **P** **13 53 20.8 -1.1**
baz=290
ELND Elena 94.07 314 ⇓P **P** **13 53 20.9 -1.6**
KONS Konsvik 94.14 338 *e*P **P** **13 53 22.1 -0.2**
VOIR 94.15 316 ⇓P **P** **13 53 21.1 -1.5**
VOIR 94.15 316 ⇓P **P** **13 53 21.4 -1.5**
STOK Stokkvaagen 94.25 338 *e*P **P** **13 53 21.4 -1.3**
COPA Copaceanca 94.30 315 ⇑P **P** **13 53 22.7 -0.8**
LEIR Leirfjorden 94.30 338 *e*P **P** **13 53 21.8 -1.2**
HUMR Humele 94.38 315 ⇓P **P** **13 53 22.8 -1.1**
ARR Arges 94.45 316 ⇑P **P** **13 53 23.7 -0.6**
RDO Rodhopi 94.66 312 IAmb IAmb 13 53 37.0
comp=Z,43nm,1.0s
TOAD Toad River Com 94.69 30 P **P** **13 53 24.1 -1.0**
baz=288
BMR Baia Mare 94.70 319 ⇓P **P** **13 53 24.9 -0.4**
BMR Baia Mare 94.70 319 ⇓P **P** **13 53 24.9 -0.4**
KOTAN Kotaneelee Air 94.85 28 P **P** **13 53 24.3 -1.3**
baz=290
CJR Cluj-Napoca 94.86 318 ⇑P **P** **13 53 25.3 -0.8**
CJR Cluj-Napoca 94.86 318 ⇑P **P** **13 53 25.3 -0.8**
BBB Bella Bella 95.08 37 LR LR 14 27 39.2
comp=Z,706nm,21.7s,baz=286,slow=30
MARR Marisel-Cluj 95.19 318 ⇑P **P** **13 53 27.2 -0.5**
QSPA South Pole Qui 95.33 180 P **P** **13 53 27.1 -0.7**
comp=Z,15nm,1.0s,baz=52,slow=1.0,SNR=14
QSPA S **SKSac** **14 03 60.0 -0.3**
comp=Z,1.3nm,0.5s,baz=32,slow=23,SNR=6.9
QSPA PKKPbc **PKKPdf** **14 10 22.0 -2.0**
comp=Z,4.7nm,0.7s,baz=291,slow=2.0,SNR=5.6
comp=Z,15nm,1.0s
QSPA South Pole Qui 95.33 180 P **P** **13 53 28.1 +0.2**
QSPA IAmb IAmb 13 53 49.9
comp=Z,34nm,1.1s
QSPA South Pole Qui 95.33 180 IAMs_20 IAMs_20 14 39 01.6
comp=Z,3µm,21.0s
NSS Namsos 95.39 337 *e*P **P** **13 53 26.3 -1.8**
DRGR 95.43 318 ⇓P **P** **13 53 28.4 -0.4**
DRGR 95.43 318 ⇓P **P** **13 53 28.4 -0.4**
MBAR Mbarara 95.79 270 LR LR 14 34 50.1
comp=Z,1µm,22.0s,baz=69,slow=34
DJES Djerdap 96.07 316 ⇑P **P** **13 53 30.4 -1.2**
HERR Herculane 96.09 316 ⇓P **P** **13 53 31.1 -0.6**
RES Resolute Bay 96.19 10 LR LR 14 38 10.8
comp=Z,1µm,21.9s,baz=336,slow=36
SIRR Siria 96.26 318 ⇑P **P** **13 53 31.9 -0.6**
IDI Anoyia 96.30 306 LR LR 14 44 21.8
comp=Z,709nm,20.2s,baz=80,slow=40
IDI Anoyia 96.30 306 PKP **PKiKP** **13 58 11.2 +0.3**
HFS Hagfors 96.41 332 P **P** **13 53 31.8 -1.0**
comp=Z,38nm,0.8s,baz=77,slow=3.2,SNR=39
HFS LR LR 14 40 51.4
comp=Z,5µm,20.2s,baz=68,slow=38
comp=Z,38nm,0.8s
BZS Buzias 96.45 317 ⇓P **P** **13 53 30.4 -3.0**
KECS Kecovo 96.46 320 *e*P **P** **13 53 33.2 -0.1**
KECS Kecovo 96.46 320 *e*PDIFF **P** **13 53 33.2 -0.1**
MDVR Moldovita 96.60 316 ⇓P **P** **13 53 33.1 -1.0**
VAY Valandovo 96.81 313 *i* P **P** **13 53 33.0 -2.0**
BOVS Bovan 96.88 315 ⇓P **P** **13 53 34.3 -1.0**
PSZ Piszkesteto 96.99 320 IAmb IAmb 13 53 37.6
comp=Z,44nm,1.3s
PSZ IAMs_20 IAMs_20 14 44 17.9
comp=Z,3µm,18.0s
PSZ Piszkesteto 96.99 320 ⇑P **P** **13 53 35.3 -0.5**
PSZ Piszkesteto 96.99 320 ⇑P **P** **13 53 35.3 -0.5**
NC602 NORSAR Array S 97.15 333 *e*P **P** **13 53 35.3 -0.9**
NB2 NORSAR Subarra 97.17 334 P **P** **13 53 35.0 -1.3**
comp=Z,175nm,1.7s,baz=65,slow=4.6
NB2 NORSAR Subarra 97.17 334 P **P** **13 53 35.0 -1.3**
NB2 AMP 13 53 35.0
comp=Z,175nm,1.7s
NOA NORSAR Array B 97.17 334 P **P** **13 53 35.1 -1.1**
comp=Z,22nm,0.8s,baz=66,slow=4.6,SNR=58
NOA LR LR 14 41 52.5
comp=Z,6µm,21.6s,baz=65,slow=38
comp=Z,22nm,0.8s
NEEM North Greenlan 97.23 359 *i* P Pdif 13 53 37.0 +0.4
NEEM IAmb IAmb 13 53 39.6
comp=Z,22nm,0.6s
DOMB Dombas 97.65 335 *e*P **P** **13 53 37.8 -0.7**
TULEG Thule 97.67 4 IAMs_20 IAMs_20 14 46 17.5
comp=Z,2µm,19.0s
DBG Daneborg 97.81 351 *i* P Pdif 13 53 43.2 +4.3
DBG IAmb IAmb 13 53 45.8
comp=Z,28nm,0.9s
OSL Oslo 97.86 333 *e*P **P** **13 53 39.1 -0.2**
OSL IVmB_BB 13 53 56.9
comp=Z,2µm,4.4s
MORC Moravsky Berou 97.93 322 ⇓P Pdif 13 53 40.0 0.0
MORC Moravsky Berou 97.93 322 ⇓P Pdif 13 53 40.0 0.0
MORC Moravsky Berou 97.93 322 *e*PDIFF **P** **13 53 39.6 -0.4**
MOL Molde 98.03 336 *e*P **P** **13 53 40.0 -0.1**
MOL IVmB_BB 13 53 43.5
comp=Z,4µm,3.9s
YKA Yellowknife Ar 98.05 24 P **P** **13 53 40.1 0.0**
comp=Z,4.9nm,0.9s,baz=303,slow=5.4,SNR=47
YKA PKiKP **PKiKP** **13 58 13.8 +0.7**
comp=Z,0.4nm,0.5s,baz=315,slow=2.1,SNR=10
YKA S S 14 04 06.9 -57
comp=Z,1.3nm,1.1s,baz=308,slow=6.8,SNR=3.7
YKA PKPPKP **P'P'df** **14 18 34.9 +5.9**
comp=Z,0.7nm,1.1s,baz=122,slow=5.0,SNR=4.9
YKA LR LR 14 41 30.1
comp=Z,1µm,20.2s,baz=288,slow=38
comp=Z,4.9nm,0.9s
YKA Yellowknife Ar 98.05 24 P **P** **13 53 39.6 -0.5**
YKA Yellowknife Ar 98.05 24 *i* P **P** **13 53 40.0 -0.1**
YKA pmax pmax
comp=Z,5.0nm,0.9s
JAVC Velka Javorina 98.14 321 *e*PDIFF Pdif 13 53 41.2 +0.2
JMIC Jan Mayen 98.15 346 LR LR 14 44 21.3
comp=Z,3µm,19.3s,baz=78,slow=39
OHR Ohrid 98.16 313 *i* P **P** **13 53 39.1 -2.1**
MORH Mrgy, Hungar 98.29 318 ⇑P **P** **13 53 40.5 -1.1**
AKN Aaknes 98.45 336 *e*P Pdif 13 53 42.0 0.0
KONO Kongsberg 98.49 333 P **P** **13 53 40.2 -1.9**
KONO IAmb IAmb 13 53 52.7
comp=Z,55nm,1.2s
KONO Kongsberg 98.49 333 *e*P **P** **13 53 41.1 -1.1**
KONO IVmB_BB 13 53 42.6
comp=Z,699nm,1.9s
KONO Kongsberg 98.49 333 ⇑P **P** **13 53 40.9 -1.3**
OSTC Ostas 98.49 323 *e*P Pdif 13 53 44.6 +2.1
OSTC *e*SS SS 14 12 00.2 +7.4
OSTC MLR MLR
comp=Z,3µm,25.0s
OSTC Ostas 98.49 323 *e*PDIFF Pdif 13 53 44.6 +2.1
OSTC *e*SS SS 14 12 00.2 +7.4
OSTC AMS AMS 14 39 00.0
comp=Z,3µm,25.0s
DPC Dobruska-Polom 98.50 323 *e*P Pdif 13 53 42.7 +0.2
DPC MLR MLR
comp=Z,4µm,24.8s
DPC Dobruska-Polom 98.50 323 *e*PDIFF Pdif 13 53 42.7 +0.2
DPC AMS AMS 14 38 30.0
comp=Z,4µm,24.8s
MODS Modra-Piesok 98.53 320 *e*P **P** **13 53 42.5 -0.2**
MODS Modra-Piesok 98.53 320 *e*PDIFF **P** **13 53 42.5 -0.2**
SKAR Skarslia 98.60 334 *e*P **P** **13 53 42.6 -0.2**
SKAR *e*SKSac **SKSac** **14 04 20.8 +3.3**
UPC Upice 98.63 323 *e*P **P** **13 53 42.9 -0.1**
UPC MLR MLR
comp=Z,4µm,24.5s
UPC Upice 98.63 323 *e*PDIFF **P** **13 53 42.9 -0.1**
UPC AMS AMS 14 38 30.0
comp=Z,4µm,24.5s
VRAC Vranov 98.67 322 LR LR 14 40 43.4
comp=Z,2µm,21.8s,baz=66,slow=37
VRAC Vranov 98.67 322 *e*PDIFF **P** **13 53 43.0 -0.3**
KRUC Moravsky 98.87 321 *e*PDIFF **P** **13 53 43.8 -0.3**
PDG Podgorica 98.93 314 IAMs_20 IAMs_20 14 43 35.7
comp=Z,3µm,21.0s
NLWA Neilton Lookou 99.10 40 IAMs_20 IAMs_20 14 37 52.9
comp=Z,2µm,20.0s
ELIB Princess Elisa 99.21 198 *d*P **Pdif** **13 53 46.9 +1.6**
comp=Z,17nm,1.3s
ELIB *d*PP **PP** **13 57 48.6 +0.5**
RUE Ruedersdorf 99.25 325 *e*Pdiff **Pdif** **13 53 45.6 -0.1**
baz=68,slow=4.6
RONA Rosalia, Austr 99.37 320 *e*Pdiff **Pdif** **13 53 45.8 -0.7**
comp=Z,9.4nm,1.5s
RONA *e*PP **PP** **13 57 47.9 -1.8**
comp=Z,16nm,1.0s
LSZ Lusaka 99.41 255 LR LR 14 35 54.9
comp=Z,3µm,21.6s,baz=92,slow=34
CONA Conrad Observa 99.58 320 *e*Pdiff **Pdif** **13 53 47.1 -0.3**
comp=Z,12nm,1.4s
CONA *e*PP **PP** **13 57 54.4 +3.1**
comp=Z,26nm,1.2s
HOMB Homborsund 99.62 332 *e*Pdif **Pdif** **13 53 48.5 +1.3**
ODD1 Odda 99.70 334 *e*Pdif **Pdif** **13 53 47.7 0.0**
BLY Banja Luka 99.71 317 ⇑P **Pdif** **13 53 47.5 -0.5**
BRG Berggiesshubel 99.74 324 *e*Pdiff **Pdif** **13 53 47.7 -0.2**
baz=68,slow=4.6
BRG Berggiesshubel 99.74 324 ⇓*i*Pif 13 53 48.1
BRG Amp 13 53 50.0
comp=Z,44nm,1.0s
BRG Berggiesshubel 99.74 324 P **Pdif** **13 53 58.3 +10**
BRG Amp 13 54 00.3
comp=Z,32nm,0.9s
BRG Berggiesshubel 99.74 324 S **S** **14 05 25.0 +6.4**
RICC Richard 99.77 323 *e*PDIFF **Pdif** **13 53 48.0 -0.1**
ARSA Arzberg 100.01 320 *i* Pdiff **Pdif** **13 53 49.1 -0.3**
comp=Z,6.5nm,1.0s
ARSA *e*PP **PP** **13 57 57.0 +2.5**
comp=Z,14nm,1.1s
BLS5 Blasjo 100.02 333 *e*Pdif **Pdif** **13 53 49.6 +0.5**
KULLO Kullorsuaq 100.09 1 *i* P **Pdif** **13 53 49.0 -0.1**
KULLO IAmb IAmb 13 53 49.9
comp=Z,8.5nm,0.9s
ZVC Zvikov 100.10 322 *e*PDIFF **Pdif** **13 53 49.5 -0.1**
ZVC AMS AMS 14 42 20.0
comp=Z,3µm,18.9s
CLL Collm 100.13 324 *i* P **Pdif** **13 53 49.1 -0.6**
CLL *i* 13 53 59.6
CLL *e* 14 04 26.0
CLL *eS* **Sdif** **14 05 24.0 +2.2**
CLL pmax pmax
comp=Z,32nm,1.0s
CLL MLR MLR
comp=Z,4µm,21.6s
CLL Collm 100.13 324 *i* Pdif **Pdif** **13 53 49.1 -0.6**
comp=Z,32nm,1.0s
CLL *i* x x 13 53 59.6
comp=Z,56nm,1.3s
CLL *ex* x 13 57 08.0
CLL *e*PP **PP** **13 57 56.0 +0.8**
CLL *ex* **PKiKP** **13 58 19.0 +1.9**
CLL *e*PPP PPP 14 00 03.0
CLL *e*SKSac **SKSac** **14 04 26.0 +0.7**
CLL *e*Sdif **Sdif** **14 05 24.0 +2.2**
CLL *e*PS **PS** **14 06 56.0 +0.6**
CLL *e*PPS PPS 14 07 38.0
CLL *e*SS **SS** **14 12 24.0 +8.5**
CLL *e*SSS SSS 14 16 18.0
CLL *e*SSSS 14 19 06.0
CLL AMS AMS 14 43 00.0
comp=N,3µm,20.4s
CLL AMS AMS 14 43 00.0
comp=E,3µm,21.0s
CLL AMS AMS 14 43 00.0
comp=Z,4µm,21.6s
CLL Collm 100.13 324 *e*Pdiff **Pdif** **13 53 49.3 -0.3**
baz=68,slow=4.6
HSKC Hora Svate Kat 100.14 323 *e*PDIFF **Pdif** **13 53 50.7 +0.9**
HSKC AMS AMS 14 42 20.0
comp=Z,4µm,18.0s
CKRC Cesky Krumlov 100.25 322 *e*P **Pdif** **13 53 50.7 +0.4**
CKRC *e* 13 57 56.8
CKRC Cesky Krumlov 100.25 322 *e*PDIFF **Pdif** **13 53 50.7 +0.4**
CKRC *e*PP **PP** **13 57 56.8 +0.5**
CKRC *ex* x 14 12 45.3
GORT1 Trebel 100.44 326 *e*Pdiff **Pdif** **13 53 51.6 +0.6**
baz=68,slow=4.6
SOKA Soboth 100.52 319 *i* Pdiff **Pdif** **13 53 51.1 -0.6**
comp=Z,19nm,1.4s
SOKA *e*PP **PP** **13 58 01.2 +2.7**
comp=Z,37nm,1.2s
KHC Kasperske Hory 100.59 322 *e*P **Pdif** **13 53 51.0 -0.8**
KHC Kasperske Hory 100.59 322 *e*PDIF **Pdif** **13 53 51.0 -0.8**
KHC *ex* x 13 56 19.0
BSEG Bad Segeberg 100.59 327 *e*Pdiff **Pdif** **13 53 52.0 +0.3**

baz=68,slow=4.6
GEC2 **GERESS Array S** 100.61 322 *e*Pdiff **Pdif** 13 53 51.7 -0.4
baz=68,slow=4.6
GERES **GERESS Array B** 100.61 322 P **Pdif** 13 53 51.6 -0.4
comp=Z,6.2nm,0.8s,baz=67,slow=4.8,SNR=25
GERES PP **PP** 13 57 58.6 -0.5
comp=Z,3.8nm,1.0s,baz=77,slow=5.9,SNR=4.9
MOA **Molln** 100.61 321 *e*Pdiff **Pdif** 13 53 51.8 -0.2
comp=Z,40nm,1.4s
KMY **Karmoy** 100.66 333 *e*P **Pdif** 13 53 52.0 +0.2
KMY *e*SKSac **SKSac** 14 04 23.9 -3.6
FLTG **Flechtingen** 100.74 326 *e*Pdiff **Pdif** 13 53 52.3 -0.1
baz=68,slow=4.6
FLTG *ep*Pdiff **pPdif** 13 54 01.9 -2.4
baz=64,slow=4.9
TANN **Tannenbergstha** 100.78 324 *e*Pdiff **Pdif** 13 53 52.8 0.0
baz=68,slow=4.6
TANN *ep*Pdiff **pPdif** 13 54 02.8 -1.8
baz=64,slow=4.9
KSXB **Camp Six Broad** 100.80 46 IAMs_20 IAMs_20 14 35 39.3
comp=Z,3µm,20.0s
KRMB **Red Mountain** 100.87 46 IAMs_20 IAMs_20 14 36 44.2
comp=Z,3µm,20.0s
NEUB **Neuenburg** 100.88 324 *e*Pdiff **Pdif** 13 53 53.0 -0.1
baz=68,slow=4.6
NEUB *ep*Pdiff **pPdif** 13 54 03.6 -1.3
baz=64,slow=4.9
KRPM **Rodgers** 100.89 46 IAMs_20 IAMs_20 14 29 23.9
comp=Z,3µm,22.0s
OBKA **Obir** 100.89 319 *e*Pdiff **Pdif** 13 53 52.4 -1.0
comp=Z,14nm,1.1s
OBKA *i* PP **PP** 13 57 58.0 -3.3
comp=Z,19nm,1.8s
PLN **Plauen** 100.94 324 *e*Pdiff **Pdif** 13 53 53.3 -0.1
baz=68,slow=4.6
WET **Wettzell** 101.01 322 *e*Pdiff **Pdif** 13 53 53.8 +0.1
baz=68,slow=4.6
BIOA **Bad Ischl, Aus** 101.06 321 *e*Pdiff **Pdif** 13 53 53.9 -0.1
comp=Z,14nm,1.3s
ASSE **Asse, Remlinge** 101.14 326 *e*Pdiff **Pdif** 13 53 54.4 +0.3
baz=68,slow=4.6
MANZ **Manzenberg** 101.16 323 *e*Pdiff **Pdif** 13 53 54.8 +0.4
baz=68,slow=4.6
ROTZ **Rotzenmuhle** 101.18 323 *e*Pdiff **Pdif** 13 53 54.7 +0.2
baz=68,slow=4.6
KHMM **Horse Mountain** 101.19 47 IAMs_20 IAMs_20 14 35 12.6
comp=Z,3µm,20.0s
MOX **Moxa** 101.19 324 *e*Pdiff **Pdif** 13 53 54.5 0.0
baz=68,slow=4.6
MOX *ep*Pdiff **pPdif** 13 54 04.8 -1.5
baz=64,slow=4.9
MOX *e*L L 14 44 28.7
comp=Z,5µm,20.7s
CLZ **Clausthal** 101.43 325 *e*Pdiff **Pdif** 13 53 56.0 +0.5
baz=68,slow=4.6
MYKA **Terra Mystica** 101.44 320 *e*PP **PP** 13 58 08.5 +3.1
comp=Z,26nm,1.5s
KBA **Koelnbreinsper** 101.47 320 *i* Pdiff **Pdif** 13 53 55.9 -0.1
comp=Z,14nm,1.2s
KBA *e*PP **PP** 13 58 10.9 +5.1
comp=Z,23nm,1.5s
RETH **Rethem/Aller,** 101.62 326 *e*Pdiff **Pdif** 13 53 56.5 +0.3
baz=68,slow=4.6
RETH *ep*Pdiff **pPdif** 13 54 06.5 -1.5
baz=64,slow=4.9
YBH **Yreka Blue Hor** 101.66 46 PKKPbc PKKPbc 14 10 05.6 +0.8
comp=Z,0.1nm,0.8s,baz=193,slow=13,SNR=1.7
M02C **Callahan** 101.66 46 IAMs_20 IAMs_20 14 33 45.2
comp=Z,3µm,21.0s
LESA **Schwarzleotal** 101.77 321 *e*Pdiff **Pdif** 13 53 56.2 -1.0
comp=Z,28nm,1.6s,SNR=7.3
LESA *e*PP **PP** 13 58 13.2 +5.3
comp=Z,21nm,1.0s
GTTG **Gottingen** 101.78 325 *e*Pdiff **Pdif** 13 53 57.5 +0.5
baz=68,slow=4.6
GRF **Grafenberg Arr** 101.80 323 *e*Pdiff **Pdif** 13 53 57.4 +0.2
baz=68,slow=4.6
GRF *e*L L 14 43 56.8
comp=Z,4µm,20.7s
N02D **Trinity Center** 101.90 46 IAMs_20 IAMs_20 14 34 02.5
comp=Z,3µm,21.0s
UBBA **Unterbreizbach** 102.06 325 *e*Pdiff **Pdif** 13 53 58.4 +0.2
baz=68,slow=4.6
UBBA *ep*Pdiff **pPdif** 13 54 08.9 -1.2
baz=64,slow=4.9
CUC **Castrocucco** 102.12 313 IAMs_20 IAMs_20 14 47 21.3
comp=Z,3µm,21.0s
ABTA **Abfaltersbach** 102.12 320 *i* Pdiff **Pdif** 13 53 56.4 -2.4
comp=Z,14nm,1.3s
HAWA **Hanford** 102.24 40 IAMs_20 IAMs_20 14 37 16.9
comp=Z,2µm,21.0s
BOSA **Boshof** 102.44 242 P **Pdif** 13 53 59.4 -1.2
comp=Z,2.6nm,0.8s,baz=176,slow=1.7,SNR=3.1
WTTA **Wattenberg** 102.48 321 *i* Pdiff **Pdif** 13 53 59.3 -1.2
comp=Z,19nm,0.9s,SNR=6.8
WTTA *e*PP **PP** 13 58 09.6 -3.7
comp=Z,24nm,1.2s
WATA **Walderalm** 102.50 321 *i* Pdiff **Pdif** 13 53 59.6 -0.9
comp=Z,24nm,1.4s
WATA *e*PKiKP **PP** 13 58 17.3 +3.9
comp=Z,24nm,1.2s
CEL **Celeste** 102.58 311 IAMs_20 IAMs_20 14 47 38.7
comp=Z,2µm,22.0s
MCCM **Marconi Confer** 102.63 49 IAMs_20 IAMs_20 14 30 08.0
comp=Z,3µm,22.0s
FARB **Farallon Islan** 102.67 50 IAMs_20 IAMs_20 14 39 32.1
comp=Z,3µm,20.0s
IBBN **Ibbenburen** 102.69 327 *e*Pdiff **Pdif** 13 54 01.4 +0.4
baz=68,slow=4.6
O03E **Paynes Creek** 102.76 47 IAMs_20 IAMs_20 14 35 17.4
comp=Z,3µm,20.0s
SQTA **Sankt Quirin** 102.77 321 *i* Pdiff **Pdif** 13 54 01.2 -0.6
comp=Z,31nm,1.5s
MOTA **Moosalm** 102.79 321 *i* Pdiff **Pdif** 13 54 00.9 -0.9
comp=Z,17nm,1.0s,SNR=6.6
MOTA *e*PP **PP** 13 58 16.7 +1.1
comp=Z,25nm,1.0s
KASTN **Kahler Asten** 102.81 325 *e*Pdiff **Pdif** 13 54 02.1 +0.5
baz=68,slow=4.6
KASTN *ep*Pdiff **pPdif** 13 54 12.4 -1.1
baz=64,slow=4.9
HATC **Hat Creek Radi** 102.84 46 IAMs_20 IAMs_20 14 33 54.4
comp=Z,2µm,21.0s
CVS **Carmenet Viney** 102.88 49 IAMs_20 IAMs_20 14 30 39.8
comp=Z,3µm,22.0s
RETA **Reutte** 102.95 321 *i* Pdiff **Pdif** 13 54 02.9 +0.4
comp=Z,7.8nm,1.1s
RETA *e*PP **PP** 13 58 17.8 +1.1
comp=Z,20nm,1.3s
SUTB **Sutter Butte** 103.11 48 IAMs_20 IAMs_20 14 30 32.7
comp=Z,3µm,22.0s
FETA **Feichten** 103.15 321 *i* Pdiff **Pdif** 13 54 03.0 -0.4
comp=Z,22nm,1.4s,SNR=6.5
TNS **Taunus Mts** 103.22 324 *e*Pdiff **Pdif** 13 54 03.8 +0.3
baz=68,slow=4.6
ORV **Oroville** 103.22 47 IAMs_20 IAMs_20 14 30 51.5
comp=Z,3µm,22.0s
UBR **Ueberruh** 103.28 322 *e*Pdiff **Pdif** 13 54 03.2 -0.7
baz=68,slow=4.6
JRSC **Jasper Ridge** 103.33 50 IAMs_20 IAMs_20 14 39 52.7
comp=Z,3µm,19.0s
BUG **Bochum--Univer** 103.35 326 *e*Pdiff **Pdif** 13 54 03.9 0.0
baz=68,slow=4.6
DAVA **Damuels** 103.58 321 *i* Pdiff **Pdif** 13 54 06.0 +0.6
comp=Z,12nm,1.1s
DAVA *e*PP **PP** 13 58 19.3 -2.2
comp=Z,37nm,1.4s
MHC **Mount Hamilton** 103.80 50 IAMs_20 IAMs_20 14 32 29.2
comp=Z,2µm,22.0s
WELL **Weller Preserv** 104.15 48 IAMs_20 IAMs_20 14 34 18.2
comp=Z,3µm,20.0s
TUE **Stuetta** 104.24 321 IAMs_20 IAMs_20 14 45 36.6
comp=Z,3µm,22.0s
BTNL **Ternell** 104.38 325 *d*Pdif **Pdif** 13 54 09.6 +0.9
BTNL *dx* x 13 54 18.9
BTNL *d*PP **PP** 13 58 27.3 +0.2
MEM **Membach** 104.44 325 *d*Pdif **Pdif** 13 54 09.1 +0.3
comp=Z,14nm,1.3s
MEM *dx* x 13 54 19.4
VLC **Villacollemand** 104.48 318 PKP **PP** 13 58 27.7 -0.4
HULI **Fort Hunter Li** 104.52 51 IAMs_20 IAMs_20 14 35 31.3
comp=Z,2µm,20.0s
CMB **Columbia Colle** 104.53 49 IAMs_20 IAMs_20 14 34 38.3
comp=Z,3µm,21.0s
BHOU **Houvegnez** 104.56 325 *d*Pdif **Pdif** 13 54 08.9 -0.6
BHOU *dx* x 13 54 20.2
BSTI **Sart Tilman** 104.70 326 *d*Pdif **Pdif** 13 54 10.8 +0.8
WLF **Walferdange** 104.79 325 PKP **PKiKP** 13 58 27.4 +1.7
WLF **Walferdange** 104.79 325 *d*Pdif **Pdif** 13 54 11.3 +0.8
WLF *dx* x 13 54 21.9
WLF **Walferdange** 104.79 325 *e*Pdiff **Pdif** 13 54 11.4 +1.0
baz=68,slow=4.6
BCLA **Clavier** 104.92 326 *d*Pdif **Pdif** 13 54 11.5 +0.5
BCLA *dx* x 13 54 21.7
PLID **Pearl Lake** 105.03 41 IAMs_20 IAMs_20 14 36 29.6
comp=Z,2µm,21.0s
BGES **Gesves** 105.06 326 *d*Pdif **Pdif** 13 54 12.3 +0.7
PKD **Bear Valley Ra** 105.08 51 IAMs_20 IAMs_20 14 36 58.1
comp=Z,2µm,20.0s
RCHB **Rochefort** 105.09 325 *d*Pdif **Pdif** 13 54 12.5 +0.7
UCC **Uccle** 105.27 326 *d*Pdif **Pdif** 13 54 12.7 +0.2
BMRD **Maredsous** 105.28 326 *d*P **Pdif** 13 54 12.3 -0.3
BMRD *dx* x 13 54 23.1
BMRD *d*PKiKP **PKiKP** 13 58 28.2 +1.6
DOU **Dourbes** 105.48 325 *d*Pdif **Pdif** 13 54 14.4 +0.9
DOU *dx* x 13 54 24.8
DOU *d*PKiKP **PKiKP** 13 58 29.1 +2.2
SENIN **Lac Senin/Sane** 105.57 321 IAMs_20 IAMs_20 14 49 03.8
comp=Z,3µm,20.0s
MFID **Camas Ranch** 105.81 42 IAMs_20 IAMs_20 14 33 33.6
comp=Z,3µm,22.0s
NVAR **Mina Array Bea** 105.94 48 Pdiff **Pdif** 13 54 17.4 +1.3
comp=Z,1.3nm,0.7s,baz=283,slow=4.7,SNR=9.6
NVAR PKiKP **PKiKP** 13 58 29.8 +1.3
comp=Z,1.1nm,0.7s,baz=255,slow=2.1,SNR=5.1
NVAR PKKPbc **PKKPbc** 14 09 51.8 -0.3
comp=Z,1.8nm,0.7s,baz=130,slow=4.5,SNR=13
TIN **Tinemaha, Big** 106.47 49 IAMs_20 IAMs_20 14 33 53.8
comp=Z,3µm,22.0s
EKA **Eskdalemuir Ar** 106.61 333 Pdiff **Pdif** 13 54 17.4 -1.0
comp=Z,4.4nm,0.9s,baz=29,slow=2.1,SNR=8.7
EKA PKiKP **PKiKP** 13 58 29.7 +0.8
comp=Z,1.7nm,0.8s,baz=132,slow=1.1,SNR=4.3
EKA PKKPbc **PKKPbc** 14 09 49.1 -1.2
comp=Z,1.6nm,0.7s,baz=238,slow=3.9,SNR=5.0
HLID **Hailey** 106.69 42 IAMs_20 IAMs_20 14 41 11.8
comp=Z,2µm,20.0s
ISA **Isabella, Lake** 106.76 50 IAMs_20 IAMs_20 14 36 41.6
comp=Z,3µm,21.0s
SNAA **Sanae** 106.79 195 PKKP 14 10 01.1
comp=Z,5.1nm,0.8s,baz=213,slow=5.5,SNR=4.0
SNAA **Sanae** 106.79 195 IAMs_20 IAMs_20 14 38 52.8
comp=Z,2µm,22.0s
CWC **Cottonwood Cre** 106.80 50 IAMs_20 IAMs_20 14 35 02.4
comp=Z,2µm,21.0s
ELK **Elko** 107.28 44 PKKPbc PKKPbc 14 09 47.0 -1.0
comp=Z,0.7nm,0.4s,baz=114,slow=3.3,SNR=4.0
ELK **Elko** 107.28 44 IAMs_20 IAMs_20 14 42 40.6
comp=Z,2µm,20.0s
LRMC **Laurel Mtn Rad** 107.43 50 IAMs_20 IAMs_20 14 38 52.3
comp=Z,2µm,20.0s
PASC **Pasadena Art C** 107.48 52 IAMs_20 IAMs_20 14 35 58.8
comp=Z,2µm,21.0s
MWC **Mount Wilson** 107.56 52 IAMs_20 IAMs_20 14 36 01.9
comp=Z,3µm,21.0s
SSB **Saint Sauveur** 107.78 321 IAMs_20 IAMs_20 14 47 55.3
comp=Z,3µm,20.0s
FFC **Flin Flon** 107.83 27 IAMs_20 IAMs_20 14 38 55.6
comp=Z,2µm,22.0s
BFSC **Mount Baldy Ra** 107.87 52 IAMs_20 IAMs_20 14 36 11.0
comp=Z,3µm,21.0s
SHOC **Shoshone, Teco** 108.35 50 IAMs_20 IAMs_20 14 39 06.7
comp=Z,2µm,20.0s
CPE **Camp Elliot** 108.76 53 IAMs_20 IAMs_20 14 40 20.7
comp=Z,2µm,20.0s
FLWY **Flagg Ranch** 108.87 40 IAMs_20 IAMs_20 14 41 31.3
comp=Z,2µm,21.0s
MOOW **Mose Ponds** 109.00 40 IAMs_20 IAMs_20 14 41 58.7
comp=Z,2µm,20.0s
PFO **Pinyon Flats O** 109.02 52 PKKP 14 09 53.4
comp=Z,12nm,1.1s,baz=135,slow=3.9,SNR=7.8
SNOW **Snow King Moun** 109.12 40 IAMs_20 IAMs_20 14 42 48.1
comp=Z,2µm,20.0s
LOHW **Long Hollow** 109.15 40 IAMs_20 IAMs_20 14 42 02.8
comp=Z,2µm,20.0s
BAR **Barrett** 109.17 53 IAMs_20 IAMs_20 14 37 50.7
comp=Z,3µm,21.0s
AHID **Auburn Hatcher** 109.22 41 IAMs_20 IAMs_20 14 37 30.7
comp=Z,2µm,20.0s
BC3 **Big Chuckawall** 109.79 51 IAMs_20 IAMs_20 14 37 42.9
comp=Z,2µm,20.0s
WIN **Windhoek** 109.97 248 IAMs_20 IAMs_20 14 42 56.2
comp=Z,3µm,21.0s
BW06 **Boulder Array** 110.22 41 IAMs_20 IAMs_20 14 36 26.2
comp=Z,2µm,21.0s
PDAR **Pinedale Array** 110.22 41 PKiKP **PKiKP** 13 58 37.0 +0.7
comp=Z,0.6nm,0.5s,baz=134,slow=2.0,SNR=14
PDAR PKKPbc **PKKPbc** 14 09 35.8 -3.0
comp=Z,1.2nm,0.7s,baz=123,slow=4.0,SNR=6.4
LAO **LASA Array** 110.30 36 IAMs_20 IAMs_20 14 37 22.6
comp=Z,2µm,21.0s
DGMT **Dagmar** 110.45 33 IAMs_20 IAMs_20 14 39 56.5
comp=Z,3µm,22.0s
GLA **Glamis** 110.50 52 IAMs_20 IAMs_20 14 41 48.6
comp=Z,2µm,20.0s
WUAZ **Wupatki** 112.18 48 IAMs_20 IAMs_20 14 40 14.8
comp=Z,3µm,21.0s
K22A **Casper** 112.23 40 IAMs_20 IAMs_20 14 45 58.1
comp=Z,2µm,20.0s
MDND **Maddock** 113.29 32 IAMs_20 IAMs_20 14 43 12.5
comp=Z,2µm,22.0s
E28A **Huff** 113.49 33 IAMs_20 IAMs_20 14 41 08.8
comp=Z,3µm,22.0s
ULM **Lac du Bonnet** 113.58 28 PKiKP **PKiKP** 13 58 42.3 +0.1
comp=Z,3.7nm,0.7s,baz=288,slow=1.2,SNR=9.6
ECHE **Chera** 114.09 318 PKP **PKiKP** 13 58 46.2 +2.6
ISCO **Idaho Springs** 114.27 42 IAMs_20 IAMs_20 14 40 13.4
comp=Z,3µm,22.0s
AGMN **Agassiz Nation** 114.91 30 IAMs_20 IAMs_20 14 51 08.1
comp=Z,2µm,20.0s
CART **Cartagena** 115.11 316 IAMs_20 IAMs_20 14 53 15.7
comp=Z,2µm,19.0s
EMUR **La Murta** 115.15 316 PKP **PKPdf** 13 58 46.7 +1.1
UCM **Universidad Co** 115.22 319 PKP **PKPdf** 13 58 47.4 +1.8
EDA **Edea** 115.77 277 IAMs_20 IAMs_20 14 50 38.9
comp=Z,2µm,20.0s
OGNE **Ogallala** 115.97 39 IAMs_20 IAMs_20 14 46 00.2
comp=Z,2µm,20.0s
ESDC **Sonseca Array** 116.03 319 PKP **PKPdf** 13 58 47.2 0.0
comp=Z,2.8nm,1.1s,baz=66,slow=3.2,SNR=8.8
ESDC PP **PP** 13 59 50.9 -0.7
comp=Z,4.8nm,1.0s,baz=49,slow=5.8,SNR=6.5
ESDC PKKPbc **PKKPbc** 14 09 19.7 +0.7
comp=Z,1.0nm,0.9s,baz=246,slow=2.9,SNR=4.5
ANMO **Albuquerque** 116.04 47 PKKPbc PKKPbc 14 09 20.9 +2.0
comp=Z,3.3nm,0.9s,baz=123,slow=5.3,SNR=5.8
ANMO **Albuquerque** 116.04 47 IAMs_20 IAMs_20 14 42 23.9
comp=Z,2µm,20.0s
ANMO **Albuquerque** 116.04 47 IAMs_20 IAMs_20 14 42 23.9
comp=Z,2µm,20.0s
ANMO **Albuquerque** 116.04 47 IAMs_20 IAMs_20 14 42 23.9
comp=Z,2µm,20.0s
PAB **San Pablo** 116.35 319 IAMs_20 IAMs_20 14 53 27.2
comp=Z,2µm,21.0s
PBRG **Braganca** 116.58 322 *e*PKPdf **PKiKP** 13 58 50.2 +1.9
MVO **Moncorvo** 117.13 322 *e*PKPdf **PKiKP** 13 58 51.8 +2.4
MVO *i* x **SP** 14 09 34.9 -3.2
MVO *e*LQ LQ 14 37 12.5
MVO *e*LR LR 14 40 02.5
EYMN **Ely** 117.25 28 IAMs_20 IAMs_20 14 48 37.7
comp=Z,2µm,20.0s
PGAV **Gavieira, Arco** 117.40 323 *e*PKPdf **PKiKP** 13 58 52.2 +2.3
PGAV *i* x **SP** 14 09 34.7 -5.8
PGAV *e*LR LR 14 39 33.0
PGAV *e*LQ LQ 14 39 52.4
PCAB **Cabril** 117.41 323 *e*PKPdf **PKiKP** 13 58 52.5 +2.7
POLO **Lamas de Olo** 117.47 323 *e*PKPdf **PKiKP** 13 58 51.5 +1.4
ECSD **EROS Data Cent** 117.52 34 IAMs_20 IAMs_20 14 45 14.4
comp=Z,2µm,21.0s
MTE **Manteigas** 117.89 322 IAMs_20 IAMs_20 14 55 30.7
comp=Z,3µm,20.0s
MTE **Manteigas** 117.89 322 *e*PKPdf **PKiKP** 13 58 53.5 +2.6
MTE *i* x **SP** 14 09 45.3 +0.3
MTE *e*LQ LQ 14 38 16.8
MTE *e*LR LR 14 40 47.5
PVIS **Viseu** 117.92 322 *e*PKPdf **PKiKP** 13 58 53.4 +2.5
PCBR **Castelo Branco** 118.18 321 *e*PKPdf **PKiKP** 13 58 53.7 +2.4
E38A **The Farm, Brul** 118.19 29 IAMs_20 IAMs_20 14 52 46.7
comp=Z,3µm,22.0s
PMRV **Marv??o** 118.36 321 *e*PKPdf **PKiKP** 13 58 52.9 +1.1
PMRV *i* x **SP** 14 09 47.7 -1.6
PMRV *e*LQ LQ 14 38 28.0
PMRV *e*LR LR 14 41 08.5
PCAS **Casmilo, Conde** 118.69 322 *e*PKPdf **PKiKP** 13 58 54.5 +2.1
PSARD **Sardoal** 118.75 321 *e*PKPdf **PKiKP** 13 58 55.0 +2.5
L34A **Svendsen Farm,** 118.78 35 IAMs_20 IAMs_20 14 47 16.0
comp=Z,2µm,21.0s
PESTR **Estremoz** 118.81 320 *e*PKPdf **PKiKP** 13 58 54.7 +2.1
PBAR **Barrancos** 118.85 319 *e*PKPdf **PKiKP** 13 58 54.8 +2.1
SCHQ **Schefferville** 118.93 9 PKP **PKiKP** 13 58 52.4 0.0
comp=Z,23nm,0.9s,baz=328,slow=1.1,SNR=31
I37A **Lemond, Waseca** 119.07 32 IAMs_20 IAMs_20 14 52 23.4
comp=Z,2µm,20.0s
PMTG **Montargil** 119.10 321 *e*PKPdf **PKiKP** 13 58 54.5 +1.3
PARRA **Arraiolos** 119.13 320 *e*PKPdf **PKiKP** 13 58 54.4 +1.1
MSTX **Muleshoe** 119.18 46 IAMs_20 IAMs_20 14 43 43.8
comp=Z,2µm,20.0s
EVO **Evora** 119.28 320 PKP **PKiKP** 13 58 53.5 0.0
EVO **Evora** 119.28 320 *e*PKPdf **PKiKP** 13 58 54.3 +0.7
PBEJ **Beja** 119.47 320 *e*PKPdf **PKiKP** 13 58 56.2 +2.2
AMTX **Amarillo** 119.48 45 IAMs_20 IAMs_20 14 41 20.8
comp=Z,2µm,22.0s
MOE **Montemor** 119.50 320 *e*PKPdf **PKiKP** 13 58 56.3 +2.3
PVAQ **Vaqueiros** 119.73 319 *i* x **PS** 14 10 05.8 -1.4
PVAQ *e*LQ LQ 14 36 11.2
PVAQ *e*LR LR 14 43 02.0
G40A **Rib Lake** 119.81 29 IAMs_20 IAMs_20 14 53 44.5
comp=Z,2µm,22.0s
MESJ **Messejana** 119.81 320 *e*PKPdf **PKiKP** 13 58 55.5 +0.9
MESJ *e*PP **PP** 14 00 19.1 +1.5
MESJ IAMs_20 IAMs_20 14 47 28.8
comp=Z,2µm,25.7s
MESJ **Messejana** 119.81 320 *e*PKPdf **PKiKP** 13 58 55.6 +0.9
MESJ **Messejana** 119.81 320 *e*PKIKP **PKiKP** 13 58 55.5 +0.9
MESJ *e* 14 00 19.1
PCVE **Castro Verde** 119.81 319 *e*PKPdf **PKiKP** 13 58 57.0 +2.4
LIS **Lisbon** 119.89 321 *e*PP **PP** 14 00 19.8 +1.6
LIS IAMs_20 IAMs_20 14 54 54.6
comp=Z,3µm,22.1s
IFR **Ifrane** 120.05 314 PKP **PKiKP** 13 58 57.6 +2.2
MD01 **Midelt array s** 120.11 313 **PKiKP** 13 58 57.3 +1.8
MORF **Marmelete** 120.40 319 *e*PKPdf **PKiKP** 13 58 56.5 +0.7
MORF *e*PP **PP** 14 00 23.1 +1.3
MORF IAMs_20 IAMs_20 14 57 10.3
comp=Z,3µm,19.6s
MORF **Marmelete** 120.40 319 *e*PKIKP **PKiKP** 13 58 56.5 +0.7
MORF *e* 14 00 23.1
F42A **Maple Grove Fa** 120.42 27 IAMs_20 IAMs_20 14 50 53.6
comp=Z,3µm,22.0s
KSU1 **Kansas State U** 120.43 38 IAMs_20 IAMs_20 14 45 11.9
comp=Z,2µm,21.0s
I40A **Norwalk** 120.59 30 IAMs_20 IAMs_20 14 51 02.5
comp=Z,2µm,21.0s
SCIA **State Center** 120.60 34 IAMs_20 IAMs_20 14 53 23.0
comp=Z,2µm,21.0s
OK038 **West end E0370** 120.62 42 IAMs_20 IAMs_20 14 46 29.4
comp=Z,2µm,20.0s
TXAR **Lajitas Array** 120.73 51 PKP **PKiKP** 13 58 57.3 +0.5
comp=Z,2.4nm,0.8s,baz=305,slow=4.4,SNR=19
TXAR PKKPbc **PKKPbc** 14 09 00.7 -1.1
comp=Z,7.1nm,0.8s,baz=126,slow=6.5,SNR=14
TXAR SKKPbc SKKPbc 14 12 48.9 +2.3
comp=Z,1.8nm,1.0s,baz=111,slow=6.9,SNR=3.6
N38A **Joes South For** 121.34 35 IAMs_20 IAMs_20 14 46 38.6
comp=Z,2µm,22.0s
I42A **Draeger Farm,** 121.44 29 IAMs_20 IAMs_20 14 46 42.8
comp=Z,2µm,22.0s
JFWS **Jewell Farm** 121.48 31 IAMs_20 IAMs_20 14 46 34.5
comp=Z,2µm,21.0s
H43A **Windswept, Lux** 121.56 28 IAMs_20 IAMs_20 14 50 53.8
comp=Z,2µm,22.0s
L40A **Anamosa** 121.57 32 IAMs_20 IAMs_20 14 46 17.7
comp=Z,2µm,21.0s
E46A **Sault Ste Mari** 121.62 25 IAMs_20 IAMs_20 14 48 21.6
comp=Z,3µm,21.0s
AVE **Averroes** 121.79 315 PKP **PKiKP** 13 58 59.6 +1.0
OK048 **Pawnee Station** 121.83 41 IAMs_20 IAMs_20 14 44 54.9
comp=Z,3µm,21.0s
P38A **Dawn** 121.94 36 IAMs_20 IAMs_20 14 44 45.6
comp=Z,2µm,22.0s
ABTX **Abilene, Hawle** 122.11 46 IAMs_20 IAMs_20 14 46 45.6
comp=Z,2µm,21.0s
TORD **Torodi Ar. Bea** 122.16 289 PKP **PKPdf** 13 58 58.8 -0.8
comp=Z,16nm,0.7s,baz=237,slow=0.7,SNR=73
TORD PKKPbc **PKKPab** 14 08 57.3 +0.5
comp=Z,3.8nm,1.0s,baz=255,slow=5.6,SNR=8.0
OK052 **Battle Ridge R** 122.17 41 IAMs_20 IAMs_20 14 45 23.9
comp=Z,2µm,21.0s
L42A **Oliver, Polo** 122.43 31 IAMs_20 IAMs_20 14 46 27.3
comp=Z,2µm,22.0s
K43A **Burlington** 122.60 30 IAMs_20 IAMs_20 14 47 14.6
comp=Z,2µm,22.0s
GLMI **Grayling** 122.71 26 IAMs_20 IAMs_20 14 52 52.2
comp=Z,2µm,20.0s
N41A **Harden Midland** 122.72 33 IAMs_20 IAMs_20 14 43 11.0
comp=Z,2µm,22.0s
P40A **Paris** 122.86 35 IAMs_20 IAMs_20 14 46 48.9
comp=Z,2µm,20.0s
TUL3 **Leonard** 122.88 41 IAMs_20 IAMs_20 14 45 25.6
comp=Z,3µm,22.0s
TIO **Tiouine** 122.93 312 PKP **PKiKP** 13 59 02.7 +1.6
L44A **Lake County Fo** 123.20 30 IAMs_20 IAMs_20 14 47 31.5
comp=Z,3µm,22.0s
S39A **Bolivar** 123.32 37 IAMs_20 IAMs_20 14 51 46.4
comp=Z,2µm,22.0s
Z35A **Perchaven, San** 123.41 44 IAMs_20 IAMs_20 14 51 27.6
comp=Z,2µm,20.0s
R40A **Maddies Statio** 123.56 36 IAMs_20 IAMs_20 14 50 47.6
comp=Z,2µm,20.0s
M44A **Midewin, Midew** 123.72 31 IAMs_20 IAMs_20 14 51 49.7
comp=Z,3µm,21.0s
WHTX **Lake Whitney,** 124.01 45 IAMs_20 IAMs_20 14 50 08.8
comp=Z,2µm,21.0s
P43A **Skaggs, Pawnee** 124.19 33 IAMs_20 IAMs_20 14 43 17.5
comp=Z,2µm,22.0s
I49A **Point Hope** 124.19 25 IAMs_20 IAMs_20 14 48 49.8
comp=Z,2µm,22.0s
CCM **Cathedral Cave** 124.31 36 **PKiKP** 13 59 06.0 +2.5
CCM **Cathedral Cave** 124.31 36 IAMs_20 IAMs_20 14 47 22.5
comp=Z,2µm,22.0s
CCM **Cathedral Cave** 124.31 36 PKIKP **PKiKP** 13 59 06.0 +2.5
SFIN **Lafayette** 124.94 31 IAMs_20 IAMs_20 14 49 56.7
comp=Z,2µm,20.0s
Q44A **Meyer Farm, Va** 124.99 34 IAMs_20 IAMs_20 14 48 32.2
comp=Z,2µm,21.0s
T42A **Van Buren** 125.09 37 IAMs_20 IAMs_20 14 52 52.2
comp=Z,2µm,20.0s
AAM **Ann Arbor** 125.14 27 IAMs_20 IAMs_20 14 58 11.4
comp=Z,3µm,21.0s
MIAR **Mount Ida** 125.15 41 **PKiKP** 13 59 06.0 +0.8
MIAR **Mount Ida** 125.15 41 PKIKP **PKiKP** 13 59 06.0 +0.8
K50A **Casco** 125.22 26 IAMs_20 IAMs_20 14 55 50.5
comp=Z,2µm,21.0s
P46A **Rosedale** 125.45 32 IAMs_20 IAMs_20 14 46 12.1
comp=Z,2µm,22.0s
S44A **Carbondale** 125.71 35 IAMs_20 IAMs_20 14 51 19.3
comp=Z,2µm,20.0s
N49A **Columbus Grove** 125.97 29 IAMs_20 IAMs_20 15 02 23.7
comp=Z,2µm,21.0s
O48B **Farmland** 126.01 30 IAMs_20 IAMs_20 14 49 16.9
comp=Z,3µm,22.0s
M50A **Fremont** 126.13 27 IAMs_20 IAMs_20 15 00 10.7
comp=Z,2µm,21.0s
P48A **Milroy** 126.48 31 IAMs_20 IAMs_20 14 53 30.4
comp=Z,2µm,21.0s
T45A **Paducah** 126.52 35 IAMs_20 IAMs_20 15 00 55.0
comp=Z,2µm,20.0s
J55A **Hilton** 126.76 22 IAMs_20 IAMs_20 15 05 24.5
comp=Z,2µm,22.0s
M52A **Chesterland** 126.77 26 IAMs_20 IAMs_20 14 52 33.5
comp=Z,2µm,21.0s
N51A **Ashland** 126.82 27 IAMs_20 IAMs_20 15 00 37.9
comp=Z,2µm,21.0s
ERPA **Erie** 126.88 25 IAMs_20 IAMs_20 14 58 25.7
comp=Z,2µm,20.0s
WCI **Wyandotte Cave** 126.95 32 IAMs_20 IAMs_20 14 58 21.0
comp=Z,2µm,21.0s
ACSO **Alum Creek Sta** 127.08 28 IAMs_20 IAMs_20 14 50 08.5
comp=Z,2µm,22.0s
J57A **Williamstown** 127.29 21 IAMs_20 IAMs_20 14 49 57.4
comp=Z,2µm,22.0s
T47A **Sharon Grove** 127.41 34 IAMs_20 IAMs_20 14 51 35.4
comp=Z,2µm,21.0s
R49A **Shelbyville** 127.49 31 IAMs_20 IAMs_20 14 50 35.2
comp=Z,2µm,22.0s
N53A **Lisbon** 127.59 26 IAMs_20 IAMs_20 14 55 16.4
comp=Z,3µm,22.0s
WVT **Waverly** 127.61 35 **PKiKP** 13 59 12.4 +2.3
WVT IAMs_20 IAMs_20 14 52 38.9
comp=Z,2µm,21.0s
WVT **Waverly** 127.61 35 PKIKP **PKiKP** 13 59 12.4 +2.3

WVT MLR MLR
comp=Z,2µm,21.0s
O52A Adamsville 127.71 27 IAMs_20 IAMs_20 15 01 27.1
comp=Z,2µm,19.0s
J59A Piesco 127.75 19 IAMs_20 IAMs_20 14 50 29.5
comp=Z,2µm,22.0s
OXF Oxford 127.79 38 IAMs_20 IAMs_20 15 04 27.9
comp=Z,1µm,20.0s
L56A Greenwood 127.83 23 IAMs_20 IAMs_20 14 58 59.7
comp=Z,2µm,21.0s
R50A Paris 127.94 31 IAMs_20 IAMs_20 14 48 13.8
comp=Z,2µm,22.0s
V48A Smith Brothers 128.47 35 IAMs_20 IAMs_20 14 55 16.4
comp=Z,2µm,22.0s
J61A Chester 128.47 18 IAMs_20 IAMs_20 14 54 32.5
comp=Z,2µm,22.0s
T50A Nancy 128.62 32 IAMs_20 IAMs_20 14 48 23.2
comp=Z,2µm,22.0s
L59A Walton 128.70 20 IAMs_20 IAMs_20 15 03 42.7
comp=Z,2µm,20.0s
SSPA Standing Stone 128.98 24 PKPdf 13 59 12.3 +0.3
SSPA IAMs_20 IAMs_20 14 49 57.3
comp=Z,2µm,22.0s
X48A Hartselle 129.25 36 IAMs_20 IAMs_20 14 55 18.3
comp=Z,2µm,21.0s
MG01 Puerto William 129.35 170 IAMs_20 IAMs_20 14 51 36.6
comp=Z,2µm,21.0s
W50A Signal Mountai 129.71 34 IAMs_20 IAMs_20 14 54 26.1
comp=Z,2µm,21.0s
S54A Dingess, Beckl 129.80 29 IAMs_20 IAMs_20 14 51 24.5
comp=Z,2µm,22.0s
P57A Homestead Farm 129.90 25 IAMs_20 IAMs_20 14 56 33.8
comp=Z,2µm,21.0s
DBIC Dimbokro 129.98 283 PKP **PKPdf 13 59 14.9 +0.3**
comp=Z,17nm,0.6s,baz=102,slow=2.2,SNR=22
DBIC SKPbc SKPbc 14 02 34.9 +0.7
comp=Z,156nm,0.8s,baz=98,slow=4.3,SNR=30
DBIC Dimbokro 129.98 283 PKiKP 13 59 15.0 -0.4
DBIC Dimbokro 129.98 283 PKIKP **PKiKP 13 59 15.0 -0.4**
Y49A Blount Mountai 130.04 36 IAMs_20 IAMs_20 15 06 56.2
comp=Z,2µm,20.0s
PAL Palisades 130.14 20 IAMs_20 IAMs_20 14 56 09.8
comp=Z,2µm,20.0s
WSPT Westport, CT 130.19 20 IAMs_20 IAMs_20 14 56 00.1
comp=Z,2µm,22.0s
LRAL Lakeview Retre 130.27 37 IAMs_20 IAMs_20 15 03 34.2
comp=Z,2µm,21.0s
M63A Gales Ferry 130.39 18 IAMs_20 IAMs_20 14 52 02.4
comp=Z,2µm,20.0s
X51A Calhoun 130.43 34 IAMs_20 IAMs_20 15 00 30.2
comp=Z,2µm,21.0s
U54A Nelsons Funny 130.56 30 IAMs_20 IAMs_20 14 54 59.3
comp=Z,2µm,22.0s
M65A Busby, Falmout 130.67 17 IAMs_20 IAMs_20 15 04 15.7
comp=Z,2µm,20.0s
BLA Blacksburg 130.70 28 IAMs_20 IAMs_20 14 58 42.7
comp=Z,2µm,22.0s
V53A Saluda 130.71 32 IAMs_20 IAMs_20 14 55 17.4
comp=Z,2µm,21.0s
S57A Dark Hollow, R 130.93 27 IAMs_20 IAMs_20 14 52 55.6
comp=Z,2µm,22.0s
P61A Hammonton 131.00 22 IAMs_20 IAMs_20 14 53 01.7
comp=Z,2µm,22.0s
R58B Mineral 131.23 26 IAMs_20 IAMs_20 15 01 52.6
comp=Z,2µm,21.0s
CBN Corbin Frederi 131.25 25 IAMs_20 IAMs_20 14 57 32.4
comp=Z,2µm,21.0s
152A Waverly Hall 131.88 36 IAMs_20 IAMs_20 14 59 00.9
comp=Z,2µm,20.0s
GOGA Godfrey 132.06 34 IAMs_20 IAMs_20 15 01 55.3
comp=Z,2µm,21.0s
W57A Gilead 132.55 30 IAMs_20 IAMs_20 15 05 36.9
comp=Z,2µm,20.0s
154A Montrose 132.85 35 IAMs_20 IAMs_20 15 07 24.4
comp=Z,2µm,20.0s
Y57A Sumter 133.25 31 IAMs_20 IAMs_20 14 51 50.5
comp=Z,2µm,21.0s
TIGA Tifton 133.43 36 IAMs_20 IAMs_20 15 03 48.9
comp=Z,2µm,21.0s
NHSC New Hope 134.07 32 IAMs_20 IAMs_20 15 09 42.3
comp=Z,2µm,20.0s
257A Skidaway Islan 134.49 33 IAMs_20 IAMs_20 15 10 21.6
comp=Z,2µm,21.0s
456A Hilliard 134.87 35 IAMs_20 IAMs_20 14 51 44.9
comp=Z,2µm,22.0s
DWPF Disney Wildern 137.13 37 IAMs_20 IAMs_20 14 56 46.1
comp=Z,2µm,20.0s
AY01 Puyuhuapi 137.69 160 IAMs_20 IAMs_20 14 58 42.9
comp=Z,1µm,22.0s
060A Indiantown 138.56 38 IAMs_20 IAMs_20 15 05 29.0
comp=Z,2µm,21.0s
061Z Ochoppi 139.07 39 IAMs_20 IAMs_20 14 53 49.6
comp=Z,2µm,21.0s
BBSR BB Station 140.92 15 IAMs_20 IAMs_20 15 03 52.9
comp=Z,1µm,20.0s
TGUH Tegucigalpa,Un 141.30 60 IAMs_20 IAMs_20 14 54 47.8
comp=Z,2µm,21.0s
PLCA Paso Flores 141.67 159 PKhKP PKPpre 13 59 31.8
comp=Z,19nm,1.1s,baz=199,slow=5.7,SNR=9.8
PLCA PKP **PKiKP 13 59 37.5 -1.1**
comp=Z,44nm,0.9s,baz=214,slow=2.3,SNR=16
PLCA SKPbc **SKiKP 14 03 11.0 -0.7**
comp=Z,38nm,1.2s,baz=188,slow=4.4,SNR=8.1
PLCA SKKPbc **SKKPab 14 11 30.6 -1.9**
comp=Z,8.9nm,1.1s,baz=0.9,slow=6.3,SNR=3.4
PLCA Paso Flores 141.67 159 *eP* **PKPdf 13 59 33.3 -2.4**
CCCC Cccc 144.40 41 *eP* **PKPdf 13 59 41.9 +1.0**
BI02 San Fabin de 144.91 155 PKPbc 13 59 40.8 +0.1
BI02 IAMs_20 IAMs_20 15 05 44.8
comp=Z,1µm,21.0s
ML02 Panimavida 145.61 154 IAMs_20 IAMs_20 15 06 12.3
comp=Z,1µm,18.0s
HLGC Holguin 145.72 40 *eP* **PKiKP 13 59 46.1 -1.3**
YAR Yar 145.91 41 *eP* **PKPab 13 59 45.9 +1.1**
GO05 Hualane 146.00 152 IAMs_20 IAMs_20 14 55 50.9
comp=Z,1µm,20.0s
CHIV Chivirico 146.16 41 *eP* **PKPbc 13 59 45.0 0.0**
MTDJ Mount Denham 146.61 45 IAMs_20 IAMs_20 15 03 00.2
comp=Z,1µm,21.0s
MTDJ Mount Denham 146.61 45 *eP* **PKPbc 13 59 46.7 +0.2**
QMBU Quimbuelo 147.02 39 *eP* **PKPbc 13 59 48.0 +0.5**
GTBY Guantanamo Bay 147.03 40 IAMs_20 IAMs_20 15 01 00.7
comp=Z,2µm,20.0s
VA01 Torpederas 147.76 151 IAMs_20 IAMs_20 14 55 34.8
comp=Z,2µm,21.0s
MT02 Curacav 147.81 152 PKPbc **13 59 49.7 +0.4**
MT02 IAMs_20 IAMs_20 14 55 45.0
comp=Z,2µm,21.0s
VA03 San Esteban 148.50 152 IAMs_20 IAMs_20 14 56 31.1
comp=Z,2µm,22.0s
CO04 Los Peladeros 148.89 150 IAMs_20 IAMs_20 14 57 44.5
comp=Z,2µm,21.0s
CO02 Combarbal 149.55 149 IAMs_20 IAMs_20 15 05 04.2
comp=Z,2µm,22.0s
CO03 El Pedregal 150.00 149 IAMs_20 IAMs_20 15 10 57.2
comp=Z,2µm,20.0s
SDDR Presa de Saban 150.07 35 PKiKP **13 59 56.5 +0.1**
SDDR IAMs_20 IAMs_20 15 20 15.7
comp=Z,2µm,22.0s
LCO Las Campanas 151.45 147 **PKiKP 14 00 00.1 +0.8**
LCO Las Campanas 151.45 147 PKIKP **PKiKP 14 00 00.1 +0.8**
SJG San Juan 153.48 28 IAMs_20 IAMs_20 15 08 15.3
comp=Z,2µm,22.0s
PLTB Pedras Altas 153.81 180 *eP* **PKPdf 13 59 57.0 +1.2**
PSAL Palomas, Salto 154.20 172 *eP* **PKPdf 13 59 56.1 -0.2**
OTAV Otavalo 154.46 78 *eP* **PKPdf 13 59 57.1 -0.6**
SMRT St. Maarten 154.82 22 IAMs_20 IAMs_20 15 19 48.2
comp=Z,1µm,20.0s
PB14 IPOC Station P 154.95 141 PKP **PKPdf 13 59 58.5 +0.6**
CPSB Cacapava Do Su 155.16 180 *eP* **PKPdf 13 59 57.9 +0.2**
ROSC El Rosal 156.84 64 PKP **PKPdf 13 59 60.0 -0.9**
comp=Z,54nm,1.2s,baz=287,slow=19,SNR=15
ROSC El Rosal 156.84 64 PKIKP **PKPdf 14 00 00.0 -0.9**
ABD La Joyeuse, An 156.84 20 IAMs_20 IAMs_20 15 04 37.5
comp=Z,2µm,21.0s
SDV Santo Domingo 157.77 50 *eP* **PKPdf 14 00 01.8 0.0**
ITAB Concordia 158.28 183 *eP* **PKPdf 14 00 02.1 +0.4**
BIM Bigot 158.80 21 IAMs_20 IAMs_20 15 16 21.6
comp=Z,1µm,20.0s
PB08 IPOC Station P 158.90 135 PKP **PKPdf 14 00 05.0 +1.8**
CPUP Villa Florida 158.90 170 PKP **PKPdf 14 00 02.6 +0.1**
comp=Z,32nm,1.1s,baz=56,slow=1.2,SNR=21
CPUP PKPab **PKPab 14 00 39.5 +1.1**
comp=Z,22nm,1.0s,baz=210,slow=5.8,SNR=7.0
CPUP SKKPbc 14 10 19.4
comp=Z,2.6nm,0.9s,baz=29,slow=5.6,SNR=3.5
CPUP Villa Florida 158.90 170 *eP* **PKPdf 14 00 02.8 +0.2**

MPOM Morne Pois Mar 158.94 20 IAMs_20 IAMs_20 15 05 12.2
comp=Z,2µm,21.0s
ALF01 Guarapari-ES 160.46 218 *eP* **PKPdf 14 00 04.2 -0.2**
PTGB Pitanga 160.78 184 *eP* **PKPdf 14 00 04.9 +0.1**
CZSB Cruzeiro do Su 160.79 98 *eP* **PKPdf 14 00 04.5 -0.5**
RIB01 Linhares ES 161.20 222 *eP* **PKPdf 14 00 05.6 +0.3**
BSFB Barra de Sao F 161.84 222 *eP* **PKPdf 14 00 05.4 -0.5**
NBPV Pedro Velho 161.86 266 *eP* **PKPdf 14 00 05.6 -0.5**
LDASE Londrina, Braz 162.00 187 *eP* **PKPdf 14 00 05.5 -0.6**
LPAZ La Paz 162.05 128 PKP **PKPdf 14 00 07.8 +0.8**
comp=Z,28nm,1.1s,baz=339,slow=1.4,SNR=46
LPAZ La Paz 162.05 128 *eP* **PKPdf 14 00 05.1 -1.9**
SJMB Sao Joao De Ma 162.16 221 *eP* **PKPdf 14 00 05.5 -0.7**
BSCB Bom Sucesso 162.36 208 *eP* **PKPdf 14 00 06.3 -0.2**
RCBR Riachuelo 162.48 268 *eP* **PKPdf 14 00 06.3 -0.5**
AMBA Amambai (Brazi 162.55 175 *eP* **PKPdf 14 00 06.6 0.0**
GUA01 Guaratinga, BA 162.59 229 *eP* **PKPdf 14 00 06.8 0.0**
TRCB Terra Rica 162.72 183 *eP* **PKPdf 14 00 06.8 0.0**
CMC01 Camacan, BA 163.09 233 *eP* **PKPdf 14 00 06.9 -0.3**
NBIT Itapeh - BA 163.26 235 *eP* **PKPdf 14 00 06.0 -1.4**
NBPA Parau_RN 163.69 268 *eP* **PKPdf 14 00 08.0 +0.1**
BB19B Bebedouro 163.73 197 *eP* **PKPdf 14 00 07.7 -0.1**
PCMB Pacaembu 163.78 187 *eP* **PKPdf 14 00 07.7 -0.1**
DIAM Diamantina, MG 164.01 216 *eP* **PKPdf 14 00 08.0 -0.3**
BDQN Bodoquena, MS 164.75 168 *eP* **PKPdf 14 00 08.7 0.0**
AQDB Aquidauana 164.90 172 *eP* **PKPdf 14 00 08.4 -0.3**
PMNB Patos De Minas 165.26 207 *eP* **PKPdf 14 00 09.2 -0.1**
ITRB Iturama 165.49 192 *eP* **PKPdf 14 00 10.1 +0.8**
IPMB Ipameri, GO 166.50 202 *eP* **PKPdf 14 00 10.1 -0.1**
C2SB Chapadao do Su 166.73 183 *eP* **PKPdf 14 00 10.6 +0.3**
JANB Januaria 166.84 223 *eP* **PKPdf 14 00 09.9 -0.7**
PP1B Ponte de Pedra 167.84 174 *eP* **PKPdf 14 00 11.1 -0.1**
NBPS Pedro II - PI 167.94 274 *eP* **PKPdf 14 00 11.5 +0.1**
BDFB Brasilia 168.51 208 PKP **PKPdf 14 00 11.3 -0.5**
comp=Z,22nm,1.0s,baz=354,slow=2.4,SNR=17
BDFB PKPab **PKPab 14 01 20.8 -0.2**
comp=Z,24nm,1.0s,baz=77,slow=3.8,SNR=6.0
BDFB PP **PP 14 05 11.4 +2.5**
comp=Z,19nm,1.1s,baz=51,slow=1.0,SNR=4.3
PTLB Pontes e Lacer 168.61 151 *eP* **PKPdf 14 00 11.7 0.0**
TEFE Tefe 168.74 81 *eP* **PKPdf 14 00 11.2 -0.7**
SDBA SAO DESIDERIO 169.04 230 *eP* **PKPdf 14 00 11.6 -0.5**
SALV Santo Antonio 169.38 168 *eP* **PKPdf 14 00 12.6 +0.4**
BOAV Boa Vista 169.53 42 *eP* **PKPdf 14 00 12.0 -0.4**
ARAG Araguaiana, MT 169.66 189 *eP* **PKPdf 14 00 12.4 0.0**
VILB Vilhena 170.03 139 *eP* **PKPdf 14 00 12.5 -0.2**
MACA Manacapuru-AM 172.49 73 *eP* **PKPdf 14 00 13.7 -0.3**
PDRB Porto dos Gac 173.08 153 *eP* **PKPdf 14 00 14.0 -0.2**
SNDB Serra Nova Dou 173.15 198 *eP* **PKPdf 14 00 13.6 -0.6**
SMTB Santa Maria do 173.22 240 *eP* **PKPdf 14 00 13.9 -0.3**
CLDB Colider 174.14 157 *eP* **PKPdf 14 00 13.7 -0.8**
PRPB Parauapebas 176.26 259 *eP* **PKPdf 14 00 14.6 -0.6**
ITTB Itaituba 177.53 65 *eP* **PKPdf 14 00 14.6 -0.8**
NPGB Novo Progresso 177.56 131 *eP* **PKPdf 14 00 15.3 -0.1**

*NEIC **06** 13:45:37.8±2.5,5.°49N±0.°04×126.°6E±0.°1,h10km±1km, mb5.1/59,Error ellipse: s-maj=20.2km s-min=2.8km az=72.0*
*IDC **06** 13:45:42.0±1.7,5.°40N×126.°32E,h38km±14km,mb4.6/31, mbtmp4.8/34,ML4.6/2,Error ellipse: s-maj=19.5km s-min=10.2km az=76.0*
*DJA **06** 13:45:42.7±0.7,5.°N±2.°×12.°6E±.°,h17km±6km,M5.3/30, mb5.1/30,mB4.4/1,MLv5.4/20,Mw(mB)3.5/1,MwMwp5.3/1, Mwp5.5/1*

ISC 06 13:45:44.0±0.8,5.°40N±0.°04×126.°43E±0.°05,h65km±7km, n177,σ1°65/178,mb5.0/82,2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.86**	**333**		Pn	**Pn**		**13 46 10.8**	**-2.8**
	471nm,0.3s,baz=267,slow=8.0,SNR=7.7								
DAV	**Davao City (W)**	**1.86**	**333**			**Pn**		**13 46 14.0**	**+0.3**
DAV				Sn		**Sn**		**13 46 38.8**	**+2.6**
DAV	**Davao City (W)**	**1.86**	**333**	P		**Pn**		**13 46 13.9**	**+0.3**
DAV				S		**Sn**		**13 46 38.5**	**+2.3**
SGSI	**Sangihe**	**1.93**	**208**	P		**Pn**		**13 46 13.3**	**-1.2**
SGSI				S		**Sn**		**13 46 39.0**	**+1.2**
MNI	**Manado**	**4.24**	**202**	P		**Pn**		**13 46 45.6**	**-0.5**
MNI				S		**Sn**		**13 47 36.6**	**+2.2**
TNTI	**Ternate**	**4.69**	**168**	Pn		**Pn**		**13 46 50.2**	**-2.2**
TNTI	**Ternate**	**4.69**	**168**	P		**Pn**		**13 46 50.4**	**-1.9**
MRSI	**Marisa**	**6.63**	**223**	P		**Pn**		**13 47 19.4**	**+0.5**
TOLI2	**Tolitoli**	**7.07**	**233**	Pn		**Pn**		**13 47 23.7**	**-1.1**
LUWI	**Luwuk**	**7.37**	**210**	P		**Pn**		**13 47 31.9**	**+2.9**
	2.2nm357nm,1.2s								
SANI	**Sanana**	**7.42**	**183**	P		**Pn**		**13 47 27.6**	**-2.0**
	0.8nm104nm,1.7s								
SWI	**Sorong**	**7.87**	**142**	P		**Pn**		**13 47 36.2**	**+0.3**
	0.7nm48nm,0.6s								
APSI	**Ampana**	**7.88**	**217**	P		**Pn**		**13 47 36.7**	**+0.7**
	460nm,1.8s								
SIJI	**Sorong**	**7.88**	**142**	Pn		**Pn**		**13 47 33.8**	**-2.2**
	4.8nm,0.3s,baz=254,slow=23,SNR=7.0								
SIJI						**Sn**		**13 49 00.9**	**-2.9**
	baz=180,slow=23								
	9.6nm,0.3s								
SIJI	**Sorong**	**7.88**	**142**	P		**Pn**		**13 47 35.3**	**-0.7**
MYLDM	**Lahad Datu**	**7.90**	**269**	Pn		**Pn**		**13 47 37.6**	**+1.4**
MYLDM	**Lahad Datu**	**7.90**	**269**	P		**Pn**		**13 47 38.3**	**+2.1**
MPSI	**Mapaga**	**8.24**	**233**	P		**Pn**		**13 47 39.3**	**-1.5**
	72nm,1.3s								
NLAI	**Namlea**	**8.61**	**176**	P		**Pn**		**13 47 45.2**	**-0.7**
	117nm,0.5s								
KRAI	**Karang Ratu**	**8.88**	**167**	P		**Pn**		**13 47 50.5**	**+0.8**
	63nm,0.6s								
PCI	**Palu**	**9.09**	**227**	P		**Pn**		**13 47 53.3**	**+0.8**
	152nm,1.1s								
AAI	**Ambon**	**9.20**	**169**	P		**Pn**		**13 47 55.2**	**+1.2**
	80nm,1.1s								
FAKI	**Fak Fak**	**10.11**	**145**	P		**Pn**		**13 48 05.4**	**-1.0**
	20nm,1.0s								
KKM	**Kota Kinabalu**	**10.18**	**274**	P		**Pn**		**13 48 09.5**	**+1.9**
	31nm,0.4s								
TTSI	**Tana Toraja**	**10.68**	**218**	P		**Pn**		**13 48 15.9**	**+1.7**
	79nm,1.0s								
MMSI	**Mamuju**	**11.00**	**223**	P		**Pn**		**13 48 20.0**	**+1.3**
	74nm,1.4s								
SPSI	**Sidrap Palu**	**11.44**	**216**	P		**Pn**		**13 48 27.1**	**+2.5**
	37nm,0.8s								
KAPI	**Kappang**	**12.31**	**213**	Pn		**Pn**		**13 48 35.0**	**-1.5**
	13nm,0.4s,baz=18,slow=9.7,SNR=1.2								
KAPI	**Kappang**	**12.31**	**213**	P		**Pn**		**13 48 38.0**	**+1.5**
SBUM	**Sibu**	**14.47**	**259**	Pn		**Pn**		**13 49 02.0**	**-3.6**
SBUM	**Sibu**	**14.47**	**259**	P		**Pn**		**13 49 07.3**	**+1.7**
EDFI	**Ende, Flores**	**14.83**	**199**	P		**Pn**		**13 49 10.9**	**+0.6**
BATI	**Baumata**	**15.75**	**190**	Pn		**Pn**		**13 49 22.3**	**+0.4**
	4.4nm,0.3s,baz=94,slow=19,SNR=1.4								
	31nm,0.6s								
YULB	**Yu-li**	**18.56**	**345**	P		**P**		**13 49 54.7**	**-1.0**
TPUB	**Ta-pu**	**18.65**	**343**	P		**P**		**13 49 55.3**	**-1.5**
MTN	**Manton Dam**	**18.72**	**166**	P		**P**		**13 49 54.1**	**-3.3**
KNMB	**Chin-men Tao**	**20.47**	**339**	P		**P**		**13 50 15.1**	**-1.4**
KNRA	**Kununurra**	**21.07**	**174**	P		**P**		**13 50 20.7**	**-2.3**
KNRA						IAmb	IAmb	13 50 25.8	
	comp=Z,76nm,0.7s								
JOW	**Kunigami**	**21.38**	**5**	P		**P**		**13 50 27.1**	**+0.9**
	comp=Z,25nm,0.8s,baz=289,slow=19,SNR=2.5								
	comp=Z,25nm,0.8s								
JOW	**Kunigami**	**21.38**	**5**	P		**P**		**13 50 24.9**	**-1.4**
MYKOM	**Kota Tinggi**	**22.82**	**262**	P		**P**		**13 50 42.5**	**+0.8**
COEN	**Coen**	**25.42**	**139**	P		**P**		**13 51 05.5**	**-0.3**
KULM	**Kulim**	**25.67**	**271**	P		**P**		**13 51 08.0**	**0.0**
WB0	**Warramunga Arr**	**26.21**	**163**	P		**P**		**13 51 12.6**	**-0.3**
WB0						IAmb	IAmb	13 51 18.2	
	comp=Z,68nm,0.9s								
JCJ	**Chichijima**	**26.29**	**33**	P		**P**		**13 51 10.1**	**-3.4**
WRA	**Warramunga Arr**	**26.36**	**163**	P		**P**		**13 51 15.5**	**+1.2**
	comp=Z,7.7nm,0.6s,baz=342,slow=10,SNR=9.1								
WRA						PcP	**PcP**	**13 54 39.3**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=333,slow=2.5,SNR=3.7								
WRA						ScP	**ScP**	**13 58 17.7**	**+4.4**
	comp=Z,2.5nm,0.8s,baz=344,slow=3.0,SNR=5.0								
	comp=Z,7.7nm,0.6s								
PSA00	**Pilbara Seismi**	**27.57**	**193**	P		**P**		**13 51 25.1**	**0.0**
GSI	**Gunungsitoli**	**29.08**	**263**	P		**P**		**13 51 38.6**	**-0.1**
GSI						IAmb	IAmb	13 51 42.4	
	comp=Z,38nm,0.9s								
ENH	**Enshi**	**29.44**	**329**	P		**P**		**13 51 41.0**	**-0.8**
ENH						IAmb	IAmb	13 51 43.2	
	comp=Z,38nm,0.9s								
ASAR	**Alice Springs**	**29.80**	**166**	P		**P**		**13 51 46.0**	**+1.1**
	comp=Z,12nm,1.0s,baz=348,slow=8.2,SNR=6.8								

ASAR PcP **PcP 13 54 48.3 +1.0**
comp=Z,9.3nm,0.7s,baz=349,slow=2.3,SNR=12
ASAR ScP **ScP 13 58 28.6 +4.7**
comp=Z,3.5nm,0.8s,baz=345,slow=2.8,SNR=6.4
comp=Z,12nm,1.0s
ASAR Alice Springs 29.80 166 P **P 13 51 45.3 +0.4**
CMAR Chiang Mai Arr 29.80 298 P **P 13 51 46.1 +1.2**
comp=Z,3.4nm,0.5s,baz=96,slow=7.2,SNR=15
comp=Z,3.4nm,0.5s
CMAR Chiang Mai Arr 29.80 298 P **P 13 51 45.7 +0.7**
CHTO Chiang Mai 29.93 299 P **P 13 51 46.6 +0.5**
CHTO IAmb IAmb 13 51 49.2
comp=Z,12nm,0.6s
GIRL Giralia 30.32 203 P **P 13 51 50.5 +1.1**
GIRL IAmb IAmb 13 51 56.6
comp=Z,39nm,1.1s
KSRS Korea Array 31.93 2 P **P 13 52 05.8 +2.3**
comp=Z,5.4nm,0.7s,baz=186,slow=9.7,SNR=14
comp=Z,5.4nm,0.7s
CMBY CAMPBELL BAY 32.35 275 *eP* P 13 51 59.3 -8.2
CMBY IAmb IAmb 13 52 11.5
comp=Z,56nm,1.3s
CMBY *eS* **S 13 57 15.1 -2.1**
MJAR Matsushiro Arr 32.82 18 P **P 13 52 12.3 +0.9**
comp=Z,2.8nm,0.9s,baz=193,slow=8.2,SNR=1.8
MJAR PcP **PcP 13 54 55.8 +0.6**
comp=Z,1.9nm,0.7s,baz=188,slow=3.0,SNR=2.1
comp=Z,2.8nm,0.9s
DL2 Dalian 33.64 353 P **P 13 52 18.5 +0.1**
DL2 pmax pmax
comp=Z,98nm,0.7s
PBA Port Blair 33.87 283 *eP* P 13 52 10.7 -10
PBA IAmb IAmb 13 52 22.9
comp=Z,43nm,2.4s
PBA *eS* **S 13 57 37.2 -3.5**
DGPR DIGLIPUR 33.92 286 *eP* P 13 52 13.9 -7.2
DGPR IAmb IAmb 13 52 19.5
comp=Z,69nm,1.5s
DGPR *eS* **S 13 57 38.5 -3.0**
BJT Baijiatuau 35.68 346 P **P 13 52 36.5 +0.4**
MORW Morawa 35.70 196 P **P 13 52 35.5 -0.9**
MORW IAmb IAmb 13 52 45.1
comp=Z,24nm,1.1s
IMP Imphal 36.66 305 *eP* P 13 52 37.0 -7.8
IMP IAmb IAmb 13 53 21.7
comp=Z,74nm,0.8s
IMP *eS* **S 13 58 20.3 -3.3**
MOKO MOKOCHONG 36.90 308 *eP* P 13 52 40.2 -6.6
MOKO *eS* **S 13 58 25.5 -1.7**
LZDM Lanzhou Array 36.90 329 P **P 13 52 47.9 +1.0**
comp=Z,7.8nm,0.6s,baz=162,slow=10,SNR=8.5
LZDM PcP **PcP 13 55 09.0 +1.6**
comp=Z,2.4nm,0.4s,baz=198,slow=4.4,SNR=7.9
comp=Z,7.8nm,0.6s
LZH Lanzhou 36.92 329 *eP* **P 13 52 48.2 +1.3**
LZH sP pP 13 52 58.6 -3.6
LZH pmax pmax
comp=Z,19nm,1.4s
KOHI KOHIMA 36.94 307 *eP* P 13 52 37.0 -10
KOHI IAmb IAmb 13 53 02.4
comp=Z,80nm,0.2s
PASG PASIGHAT 37.14 311 *eP* P 13 52 39.8 -8.9
PASG IAmb IAmb 13 52 49.6
comp=Z,75nm,0.2s
JORH JORHAT 37.30 308 *eP* P 13 52 42.3 -7.8
JORH IAmb IAmb 13 52 45.8
comp=Z,42nm,0.6s
JORH ⇑*eS* **S 13 58 29.4 -3.8**
ITAN ITANAGAR 37.91 308 *eP* P 13 52 46.2 -9.0
ITAN IAmb IAmb 13 53 19.7
comp=Z,56nm,1.4s
ITAN *eS* **S 13 58 39.7 -2.7**
ZIRO ZIRO 38.00 309 *eP* P 13 52 46.2 -10
ZIRO IAML 13 53 25.6
comp=Z,63nm,1.8s
ZIRO *eS* **S 13 58 41.4 -2.6**
BELO BELONIA 38.09 301 *eP* P 13 52 48.2 -8.5
BELO IAmb IAmb 13 53 28.9
comp=Z,83nm,1.5s
BELO *eS* **S 13 58 43.3 -1.9**
CN2 Changchun 38.25 359 P **P 13 52 58.9 +1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
TEZP TEZPUR 38.39 307 *eP* P 13 52 50.2 -9.0
TEZP IAmb IAmb 13 53 25.7
comp=Z,45nm,1.9s
AGT Agartala 38.51 302 *eP* P 13 52 51.5 -8.7
AGT IAmb IAmb 13 52 54.1
AGT *eS* **S 13 58 51.2 -0.3**
SHL Shillong 38.66 305 P **P 13 53 02.8 +1.0**
SHL Shillong 38.66 305 *eP* P 13 52 50.6 -11
SHL IAmb IAmb 13 53 30.4
comp=Z,59nm,2.0s
SHL *eS* **S 13 58 49.8 -4.3**
EIDS Eidsvold 38.85 143 P **P 13 53 01.8 -1.3**
USRK Ussuriysk Ar. 38.95 6 P **P 13 53 04.1 +0.4**
comp=Z,9.0nm,0.7s,baz=195,slow=6.3,SNR=6.3
comp=Z,9.0nm,0.7s
GUWA GUWAHATI 39.09 306 *eP* P 13 52 57.8 -7.3
GUWA IAmb IAmb 13 53 33.3
comp=Z,51nm,2.1s
GUWA *eS* **S 13 58 57.2 -3.0**
NWAO Narrogin (SRO) 39.10 192 P **P 13 53 06.0 +0.9**
NWAO IAmb IAmb 13 53 24.4
comp=Z,36nm,1.1s
MDJ Mudanjiang 39.16 4 P **P 13 53 07.7 +2.4**
XLT XiLinHaoTe 39.41 348 *eP* **P 13 53 08.9 +1.3**
XLT pP pP 13 53 13.4 -10
XLT sP sP 13 53 17.4 -13
XLT PcP **PcP 13 55 14.5 -0.2**
XLT pmax pmax
comp=Z,41nm,0.9s
STKA Stephens Creek 39.79 160 P **P 13 53 11.3 +0.6**
comp=Z,11nm,0.7s,baz=333,slow=9.1,SNR=4.9
STKA PcP **PcP 13 55 17.2 +1.2**
comp=Z,4.4nm,0.5s,baz=323,slow=5.1,SNR=1.5
comp=Z,11nm,0.7s
STKA Stephens Creek 39.79 160 P **P 13 53 11.0 +0.2**
BNX BinXian 40.19 1 ⇑P **P 13 53 16.2 +2.3**
BNX pmax pmax
comp=Z,13nm,0.6s
DHUB DHUBRI 40.40 304 *eP* P 13 53 07.4 -8.5
DHUB IAmb IAmb 13 53 34.9
comp=Z,46nm,0.8s
DHUB *eS* **S 13 59 16.3 -3.4**
ASAJ Asahikawa 41.10 18 P **P 13 53 21.9 +0.5**
comp=Z,11nm,0.7s,baz=240,slow=12,SNR=9.6
comp=Z,11nm,0.7s
JKA Kamikawa-asahi 41.10 18 P **P 13 53 20.4 -1.0**
H11S3 WAKE ISLAND Hy 41.36 68 T T 14 37 16.1
baz=256,slow=75,SNR=12
H11S1 WAKE ISLAND Hy 41.38 68 T T 14 37 16.3
baz=256,slow=75,SNR=17
H11S2 WAKE ISLAND Hy 41.38 68 T T 14 37 15.6
baz=256,slow=75,SNR=16
GTA2 Gaotai 41.61 328 P **P 13 53 26.6 +0.7**
GTA2 sP pP 13 53 38.0 -3.4
GTA2 pmax pmax
comp=Z,25nm,0.8s
H11N1 WAKE ISLAND Hy 41.84 66 T T 14 37 54.6
baz=254,slow=75,SNR=46
H11N2 WAKE ISLAND Hy 41.85 66 T T 14 37 55.3
baz=254,slow=75,SNR=43
H11N3 WAKE ISLAND Hy 41.86 66 T T 14 37 56.0
baz=254,slow=75,SNR=33
SHBG Sahibganj 42.06 302 *eP* P 13 53 21.9 -7.7
SHBG IAmb IAmb 13 53 44.2
comp=Z,58nm,1.5s
SHBG *eS* **S 13 59 43.4 -1.0**
BWNR Bhubaneshwar 42.11 294 *eP* P 13 53 21.4 -8.7
BWNR IAmb IAmb 13 53 43.1
comp=Z,38nm,2.0s
BWNR *eS* **S 13 59 44.1 -1.2**
ARMA Armidale 43.02 147 P **P 13 53 38.0 +0.5**
ARMA IAmb IAmb 13 53 48.3
comp=Z,30nm,0.8s
HIA Hailar 44.08 354 P **P 13 53 47.3 +1.7**
HIA IAmb IAmb 13 53 49.8
comp=Z,20nm,1.0s
HILR Hailar Array B 44.36 354 P **P 13 53 49.1 +1.3**
comp=Z,13nm,0.5s,baz=169,slow=9.9,SNR=13
HILR PcP **PP 13 55 31.7 -0.7**
comp=Z,3.1nm,0.5s,baz=153,slow=4.1,SNR=5.9
comp=Z,13nm,0.5s
ULN Ulaanbaatar 45.45 342 P **P 13 53 53.7 -2.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULN				IAmb	IAmb	13 53 58.4	
	comp=Z,29nm,0.9s						
SONM	Songino Array	45.63	341	P	P	13 53 57.5	-0.5
	comp=Z,6.9nm,0.7s,baz=153,slow=7.5,SNR=7.6						
SONM				PcP	PcP	13 55 36.9	+1.5
	comp=Z,6.4nm,0.7s,baz=169,slow=4.0,SNR=6.2						
	comp=Z,6.9nm,0.7s						
SONM	Songino Array	45.63	341	P	P	13 53 53.6	-4.4
SONM				IAmb	IAmb	13 53 57.1	
	comp=Z,20nm,1.1s						
CAN	Canberra	45.73	154	P	P	13 53 55.5	-3.4
VJD	Vijayawada	46.18	288	eP	P	13 53 55.0	-7.7
VJD				IAmb	IAmb	13 54 04.7	
	comp=Z,29nm,1.3s						
VJD				eS	S	14 00 43.6	-0.9
TOO	Toolangi	46.30	159	P	P	13 54 00.7	-2.6
HYB	Hyderabad	48.29	288	eP	P	13 54 19.9	+0.7
TRD	Trivandrum	49.18	277	IAmb	IAmb	13 54 13.1	
	comp=Z,40nm,1.1s						
TRD				eP	P	13 54 17.5	-8.5
TRD				eS	S	14 01 24.6	-2.6
TLY	Talaya	49.86	342	P	P	13 54 30.0	-0.6
TLY				IAmb	IAmb	13 54 32.8	
	comp=Z,10nm,0.7s						
PETK	Petropavlovsk-	54.01	23	P	P	13 55 02.1	+0.6
	comp=Z,5.8nm,0.7s,baz=186,slow=4.4,SNR=8.4						
	comp=Z,5.8nm,0.7s						
PETK	Petropavlovsk-	54.01	23	P	P	13 54 59.0	-2.5
MKAR	Makanchi Array	56.02	325	P	P	13 55 16.5	+0.4
	comp=Z,29nm,0.5s,baz=120,slow=7.8,SNR=44						
MKAR				PcP	PcP	13 56 14.0	+0.2
	comp=Z,9.3nm,0.7s,baz=106,slow=3.3,SNR=4.5						
MKAR				ScP	ScP	14 00 10.9	+3.4
	comp=Z,0.9nm,0.7s,baz=118,slow=3.5,SNR=3.9						
	comp=Z,29nm,0.5s						
MKAR	Makanchi Array	56.02	325	P	P	13 55 15.9	-0.2
PRZ	Przheval'sk	56.26	319	P	P	13 55 17.4	-0.6
TARG	Taragay, Kyrgy	56.32	318	P	P	13 55 19.4	+0.6
TARG				IAmb	IAmb	13 55 28.3	
	comp=Z,13nm,0.8s						
YAK	Yakutsk	56.56	2	P	P	13 55 19.1	-0.4
NIL	Nilore	56.68	307	P	P	13 55 21.4	+0.4
KSH2	Kashi	56.81	314	P	P	13 55 22.6	+0.6
KSH2				pmax	pmax		
	comp=Z,14nm,1.0s						
KDJ	Kajisay	56.91	318	P	P	13 55 22.7	0.0
KDJ				IAmb	IAmb	13 55 24.2	
	comp=Z,19nm,0.8s						
NRN	Naryn	57.41	317	P	P	13 55 25.2	-1.2
NRN				IAmb	IAmb	13 55 27.5	
	comp=Z,12nm,0.7s						
AAK	Ala-Archa	58.93	317	P	P	13 55 37.2	+0.4
AAK				IAmb	IAmb	13 55 52.3	
	comp=Z,14nm,1.1s						
ZAA0	Zalesovo Array	58.97	333	P	P	13 55 35.9	-0.8
ZAA0				IAmb	IAmb	13 55 39.1	
	comp=Z,13nm,0.6s						
ZALV	Zalesovo Beam	58.97	333	P	P	13 55 36.3	-0.4
	comp=Z,11nm,0.5s,baz=125,slow=6.7,SNR=18						
ZALV				PcP	PcP	13 56 25.1	0.0
	comp=Z,7.4nm,0.7s,baz=177,slow=2.9,SNR=4.0						
	comp=Z,11nm,0.5s						
ZALV	Zalesovo Beam	58.97	333	P	P	13 55 36.1	-0.6
KURBB	Kurchatov Arra	60.18	327	P	P	13 55 45.2	+0.2
	comp=Z,31nm,0.6s,baz=124,slow=6.9,SNR=52						
	comp=Z,31nm,0.6s						
KURK	Kurchatov	60.18	327	P	P	13 55 45.0	-0.1
KBL	Kabul	60.28	307	P	P	13 55 44.8	-1.5
KBL				IAmb	IAmb	13 55 47.1	
	comp=Z,17nm,0.7s						
SEY	Seymchan	60.48	13	P	P	13 55 48.9	+2.1
	comp=Z,2.4nm,0.7s,baz=262,slow=22,SNR=4.8						
	comp=Z,2.4nm,0.7s						
GAR	Garm	60.58	312	P	P	13 55 46.3	-1.9
BVAR	Borovoye Array	65.77	327	P	P	13 56 22.1	+0.1
	comp=Z,12nm,0.7s,baz=48,slow=6.1,SNR=15						
	comp=Z,12nm,0.7s						
NRIK	Noril'sk	68.75	346	P	P	13 56 41.9	+1.3
	comp=Z,42nm,0.6s,baz=117,slow=7.2,SNR=34						
	comp=Z,42nm,0.6s						
NRIK	Noril'sk	68.75	346	P	P	13 56 41.0	+0.4
ABKAR	Akbulak array	70.68	320		P	13 56 52.6	-0.2
D20K	Etivluk River	80.27	21	IAmb	IAmb	13 57 56.9	
	comp=Z,15nm,0.9s						
KDAK	Kodiak Island	80.65	32	P	P	13 57 50.6	+0.9
	comp=Z,4.1nm,0.6s,baz=82,slow=2.1,SNR=7.9						
	comp=Z,4.1nm,0.6s						
KDAK	Kodiak Island	80.65	32	P	P	13 57 50.4	+0.8
I21K	Tanana	81.59	25	IAmb	IAmb	13 58 05.5	
	comp=Z,14nm,0.8s						
KBZ	Khabaz	81.62	313	P	P	13 57 55.4	+0.3
	comp=Z,6.3nm,0.9s,baz=172,slow=7.4,SNR=2.8						
	comp=Z,6.3nm,0.9s						
SUA	Susitna One	81.85	29	IAmb	IAmb	13 58 05.3	
	comp=Z,17nm,0.8s						
L22K	Petersville	81.91	28	IAmb	IAmb	13 58 05.3	
	comp=Z,19nm,0.9s						
COLD	Coldfoot	82.48	23	IAmb	IAmb	13 58 09.4	
	comp=Z,11nm,0.7s						
MCK	McKinley	82.81	27	IAmb	IAmb	13 58 09.8	
	comp=Z,18nm,0.9s						
H24K	Noodor Dome	83.34	24	P	P	13 58 05.0	+1.3
H24K				IAmb	IAmb	13 58 13.9	
	comp=Z,9.3nm,0.8s						
G24K	Hadweenzic Riv	83.53	24	P	P	13 58 06.6	+2.0
G24K				IAmb	IAmb	13 58 15.4	
	comp=Z,12nm,0.8s						
HDA	Harding Lake	83.70	26	P	P	13 58 05.4	-0.2
HDA				IAmb	IAmb	13 58 13.2	
	comp=Z,13nm,0.9s						
ILAR	Eielson Array	83.73	25	P	P	13 58 06.7	+0.9
	comp=Z,1.3nm,0.6s,baz=257,slow=4.9,SNR=11						
	comp=Z,1.3nm,0.6s						
ILAR	Eielson Array	83.73	25	P	P	13 58 04.2	-1.5
BMAR	Burnt Mountain	84.66	23		P	13 58 10.7	+0.3
VNDA	Vanda	85.11	173	P	P	13 58 13.2	+0.8
	comp=Z,4.7nm,0.8s,baz=328,slow=5.8,SNR=2.2						
	comp=Z,4.7nm,0.8s						
VNDA	Vanda	85.11	173	P	P	13 58 12.7	+0.3
VNDA				IAmb	IAmb	13 58 26.8	
	comp=Z,10nm,1.1s						
OBN	Obninsk	85.53	325		P	13 58 13.8	-1.1
I28M	Miner Creek	86.64	25	P	P	13 58 20.9	+0.6
I28M				IAmb	IAmb	13 58 30.1	
	comp=Z,10nm,0.8s						
BRTR	Keskin Array B	88.73	310	P	P	13 58 30.1	-0.9
	comp=Z,3.5nm,0.8s,baz=90,slow=4.9,SNR=3.9						
	comp=Z,3.5nm,0.8s						
ARCES	ARCESS Array B	88.79	340	P	P	13 58 31.0	+0.6
	comp=Z,21nm,0.6s,baz=81,slow=6.5,SNR=30						
	comp=Z,21nm,0.6s						
ARCES	ARCESS Array B	88.79	340		P	13 58 30.5	+0.1
SPITS	Spitsbergen Ar	88.79	349	P	P	13 58 31.1	+0.8
	comp=Z,3.4nm,0.3s,baz=89,slow=7.8,SNR=52						
	comp=Z,3.4nm,0.3s						
FINES	FINESS Array B	90.23	332	P	P	13 58 37.4	+0.1
	comp=Z,8.3nm,0.5s,baz=52,slow=5.7,SNR=23						
	comp=Z,8.3nm,0.5s						
FINES	FINESS Array B	90.23	332	P	P	13 58 36.9	-0.3
AKASG	Malin Array Be	90.42	321	P	P	13 58 37.5	-0.8
	comp=Z,0.9nm,0.5s,baz=66,slow=4.9,SNR=3.4						
	comp=Z,0.9nm,0.5s						
HFS	Hagfors	96.41	332	P	P	13 59 04.7	-1.0
	comp=Z,4.6nm,0.6s,baz=112,slow=4.9,SNR=5.1						
	comp=Z,4.6nm,0.6s						
NB2	NORSAR Subarra	97.17	334	P	P	13 59 08.1	-1.1
	comp=Z,3.0nm,0.6s,baz=64,slow=4.6						
NB2	NORSAR Subarra	97.17	334	P	P	13 59 08.1	-1.1
NB2				AMP		13 59 08.1	
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	97.17	334	P	P	13 59 08.7	-0.6
	comp=Z,4.5nm,0.7s,baz=66,slow=4.5,SNR=8.1						
	comp=Z,4.5nm,0.7s						
YKA	Yellowknife Ar	98.11	24	P	Pdif	13 59 13.9	+0.6
	comp=Z,0.7nm,0.8s,baz=302,slow=4.9,SNR=1.6						
YKA				PKiKP	PKiKP	14 03 45.9	-0.1
	comp=Z,0.2nm,0.5s,baz=312,slow=2.3,SNR=4.3						
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	120.81	51	PKP	PKiKP	14 04 31.3	+1.5
	comp=Z,0.8nm,0.8s,baz=313,slow=3.0,SNR=2.1						
TORD	Torodi Ar. Bea	122.11	289	PKP	PKiKP	14 04 33.2	+0.7
	comp=Z,3.1nm,0.7s,baz=62,slow=2.2,SNR=14						
DBIC	Dimbokro	129.92	283	SKPbc	SKPbc	14 08 06.0	+1.5
	comp=Z,10nm,1.2s,baz=104,slow=6.3,SNR=3.7						
TKL	Tuckaleechee C	130.28	32	PKP	PKiKP	14 04 49.6	+1.3
	comp=Z,3.4nm,0.6s,baz=98,slow=7.2,SNR=2.1						
PLCA	Paso Flores	141.66	159	PKhKP	PKPpre	14 05 05.5	
	comp=Z,5.2nm,0.6s,baz=208,slow=2.0,SNR=7.9						
JTS	Las Juntas de	145.07	64	PKPbc	PKPdf	14 05 15.6	+0.5
	comp=Z,9.3nm,0.8s,baz=332,slow=21,SNR=4.0						
MT01	Popeta	147.26	152		PKiKP	14 05 22.8	-0.2
MT13	San Alfonso	147.81	153		PKPab	14 05 24.9	+0.2
MT02	Curacav	147.82	152		PKPab	14 05 24.7	0.0
VA03	San Esteban	148.50	152		PKiKP	14 05 25.8	+0.1
CO04	Los Peladeros	148.89	151		PKPab	14 05 27.5	-1.9

JMA 06 14:07:04.7±0.2, 24°N±1°×122°.5E±0°.7, h24km, MV3.9/14, NW OFF ISHIGAKIJIMA IS
TAP 06 14:07:05.0, 23°.86N×122°.48E, h26km, ML4.2, D
IDC 06 14:07:23.0±5.2, 24°.87N×122°.19E, h138km±50km, mb3.3/10, mbtmp3.7/12, Error ellipse: s-maj=29.3km s-min=15.0km az=67.0
ISC 06 14:07:03.5±1.0, 23°.79N±0°.02×122°.52E±0°.02, h29km±8km, n167, σ1.03/265, mb3.6/10, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.38	331	iP	Pb	14 07 11.9	+0.1
EOS4				S	Sb	14 07 17.1	-0.3
EOS3	EOS3	0.53	340	iP	Pn	14 07 14.9	-0.2
EOS3				S	Sb	14 07 21.6	-0.1
EOS2	EOS2	0.68	338	iP	Pn	14 07 17.8	+0.7
EOS2				eS	Sn	14 07 26.9	+0.2
JYNG	Yonagunijimaku	0.77	30	P	Pn	14 07 18.8	+0.4
JYNG				eS	Sb	14 07 28.1	-0.5
YOJ	Yonaguni jima	0.81	34	P	Pn	14 07 19.8	+0.8
YOJ	Yonaguni jima	0.81	34	S	Sb	14 07 29.4	-0.3
YOJ	Yonaguni jima	0.81	34	P	Pn	14 07 19.6	+0.6
YOJ				eS	Sb	14 07 28.3	-1.4
TEYL	Yanliau Villag	0.85	276	P	Pn	14 07 19.9	+0.4
TEYL				S	Sn	14 07 31.5	+0.6
HWA	Hwalien	0.86	283	eP	Pn	14 07 20.1	+0.5
HWA				eS	Sn	14 07 32.0	+0.9
SHUL	Shoufeng	0.88	270	eP	Pn	14 07 20.5	+0.6
SHUL				eS	Sn	14 07 32.3	+0.7
TWD	Chiawan	0.89	289	P	Pb	14 07 20.1	-0.3
TWD				S	Sb	14 07 31.5	-0.5
EAHA	Aohua	0.90	307	P	Pn	14 07 20.8	+0.6
ETL	Fush Village	0.90	295	eP	Pn	14 07 20.3	0.0
TEGC	Jichi Village	0.90	265	P	Pb	14 07 20.9	+0.4
TEGC				S	Sn	14 07 32.8	+0.5
NACB	Ninganchiao	0.93	295	P	Pn	14 07 20.6	0.0
NACB	Ninganchiao	0.93	295	P	Pn	14 07 20.6	0.0
NACB				eS	Sb	14 07 32.8	-0.3
EWUT	Wuta	0.94	314	eP	Pb	14 07 21.2	-0.1
EWUT				eS	Sn	14 07 34.4	+1.1
ETM	Tongmen	0.96	281	P	Pn	14 07 20.9	-0.1
ETM				eS	Sb	14 07 33.4	-0.5
ESL	Shilin	0.99	272	P	Pn	14 07 21.4	-0.1
ESL				eS	Sn	14 07 35.0	+0.5
EGFH	Guangfu	1.01	264	P	Pb	14 07 22.7	+0.4
EGFH				eS	Sn	14 07 35.5	+0.6
TWC	Suao	1.02	323	iP	Pb	14 07 22.3	-0.3
TWC				eS	Sb	14 07 34.7	-1.0
ETLH	Xiulin Townshi	1.04	294	P	Pb	14 07 22.5	-0.5
ETLH				eS	Sb	14 07 35.4	-0.8
LXIB	Xiulin Townshi	1.04	283	P	Pn	14 07 22.3	+0.1
LXIB				eS	Sb	14 07 35.7	-0.6
WARBT	Fenglin Townsh	1.04	267	P	Pn	14 07 22.2	0.0
WARBT				S	Sb	14 07 35.4	-0.9
HGSD	Ruisui	1.04	254	P	Pb	14 07 22.7	-0.3
HGSD				S	Sn	14 07 35.8	0.0
ECBN	Changbin	1.08	245	P	Pb	14 07 23.8	+0.1
ECBN				S	Sb	14 07 37.4	-0.1
NDS	Dongshan	1.12	319	eP	Pb	14 07 24.4	+0.1
NDS				eS	Sb	14 07 38.9	+0.4
EHY	Hungye	1.13	256	iP	Pb	14 07 24.0	-0.4
EHY				eS	Sn	14 07 38.2	+0.2
LATG	Datong	1.18	310	P	Pb	14 07 24.8	-0.5
EGS		1.18	333	eP	Pb	14 07 25.7	+0.3
YULB	Yu-li	1.19	251	P	Pb	14 07 25.1	-0.3
YULB	Yu-li	1.19	251	S	Sb	14 07 40.6	+0.2
YULB	Yu-li	1.19	251	P	Pb	14 07 25.2	-0.3
YULB				S	Sb	14 07 40.4	0.0
CHKH	Chenggong	1.19	240	eP	Pb	14 07 24.7	-0.7
CHKH				S	Sn	14 07 39.0	-0.3
TWF1	Yuli	1.20	249	P	Pb	14 07 25.4	-0.3
TWF1				S	Sb	14 07 40.9	0.0
WHF	Hehuan Shan	1.20	288	P	Pb	14 07 25.5	-0.5
WHF				eS	Sb	14 07 40.9	-0.4
ILA	Ilan	1.20	324	P	Pb	14 07 24.9	-0.7
HATJ	Hateruma jima	1.21	77	eP	Pb	14 07 26.8	+1.1
HATJ				eS	Sb	14 07 42.3	+1.3
TWE	Neicheng	1.21	320	P	Pb	14 07 26.1	+0.2
TWE				eS	Sb	14 07 41.3	+0.1
ENTT	Nioudou	1.22	315	P	Pb	14 07 25.8	-0.1
NNSB	Datong	1.22	302	iP	Pb	14 07 25.7	-0.4
NNS	Nan Shan	1.23	302	P	Pb	14 07 25.6	-0.6
IRIF	Iriomote-Funau	1.24	63	P	Pb	14 07 27.6	+1.4
IRIF				eS	Sb	14 07 43.2	+1.4
OWD	Renai	1.24	278	P	Pb	14 07 25.6	-0.8
OWD				S	Sn	14 07 40.9	0.0
FUSS	Fushou	1.25	292	iP	Pb	14 07 26.3	-0.4
CHKT	Chengkung	1.26	237	P	Pb	14 07 25.8	-0.8
CHKT				S	Sn	14 07 40.9	-0.2
VWDT	VWDT	1.26	269	P	Pb	14 07 26.4	-0.3
VWDT				S	Sn	14 07 41.6	+0.5
FULB	Fuli	1.27	243	eP	Pb	14 07 26.2	-0.5
FULB				eS	Sn	14 07 41.4	0.0
FUSB	Fushanzhiwuyua	1.29	319	P	Pb	14 07 27.0	-0.2
WUSB	Renai	1.30	279	iP	Pb	14 07 26.9	-0.5
WUSB				eS	Sb	14 07 43.1	-0.6
TWB1	Santiao Chiao	1.31	338	P	Pb	14 07 26.8	-0.7
TWT	Tachien	1.31	291	P	Pb	14 07 27.4	-0.2
TDCB	Techi	1.33	291	P	Pb	14 07 27.3	-0.6
TIPB	Shuangxi	1.34	332	eP	Pb	14 07 27.8	-0.3
TIPB				eS	Sb	14 07 45.4	+0.5
NWLT	Wulai	1.35	317	eP	Pb	14 07 27.9	-0.4
NWLT				eS	Sb	14 07 45.1	-0.1
YHNB	Yeheng	1.37	310	P	Pb	14 07 28.4	-0.1
YHNB	Yeheng	1.37	310	P	Pb	14 07 27.9	-0.6
ECS	Chishang	1.38	240	eP	Pb	14 07 28.5	-0.1
ECS				eS	Sn	14 07 44.8	+0.8
NSK	Sanguang	1.38	310	P	Pb	14 07 28.2	-0.6
SXI1	Grass Mountain	1.43	336	P	Pn	14 07 28.4	+0.8
SXI1				eS	Sb	14 07 49.2	+1.8
SSLB	Suanglung	1.43	270	P	Pb	14 07 28.9	-0.7
SSLB	Suanglung	1.43	270	S	Sn	14 07 46.3	+0.8
SSLB	Suanglung	1.43	270	P	Pb	14 07 28.6	-1.0
SSLB				S	Sn	14 07 45.9	+0.4
JKRS	Kuro-shima	1.44	71	eP	Pb	14 07 30.3	+0.6
NWF	Wu-fen Shan	1.45	332	eP	Pb	14 07 28.8	-1.1
NWF				eS	Sb	14 07 47.4	-0.5
WFSB	Wu-fen Shan	1.45	332	eP	Pb	14 07 28.9	-0.9
WFSB				eS	Sb	14 07 48.5	+0.7
TWA	Mucha	1.46	325	P	Pb	14 07 30.1	-0.1
TWA				eS	Sb	14 07 49.0	+0.6
NHDH	Xindian Distri	1.48	323	eP	Pb	14 07 30.1	-0.3
NHDH				eS	Sb	14 07 48.7	-0.2
SMLT	Sun Moon Lake	1.48	274	P	Pb	14 07 29.8	-0.8
SMLT				eS	Sb	14 07 48.0	-1.0
WCS	Beigang Elemen	1.50	281	eP	Pb	14 07 30.0	-0.6
ELDTW	Lidau	1.50	247	P	Pn	14 07 29.5	+0.9
ELDTW				eS	Sn	14 07 47.7	+0.4
TATO	Taipei	1.51	322	P	Pb	14 07 30.4	-0.5
TATO	Taipei	1.51	322	S	Sb	14 07 50.7	+1.0
WHP	Taichung City	1.52	289	P	Pb	14 07 30.8	-0.4
WHP				eS	Sb	14 07 51.2	+1.2
TNOU	National Taiwa	1.52	334	eP	Pb	14 07 30.9	-0.2
TYC	Yuchr	1.53	275	eP	Pb	14 07 30.1	-1.1
TYC				eS	Sn	14 07 48.4	+0.7
WHYT	Xinyi Township	1.53	267	eP	Pb	14 07 30.7	-0.6
WHYT				eS	Sb	14 07 49.8	-0.5
NFF	Wufeng Townshi	1.53	304	P	Pb	14 07 30.8	-0.5
NFF				eS	Sb	14 07 50.6	+0.3
KSHI	Guanxi Townshi	1.57	309	P	Pb	14 07 31.8	-0.1
JIJ	Ishigaki jima	1.59	68	eP	Pb	14 07 32.0	-0.3
JIJ				eS	Sb	14 07 51.6	-0.4
ALS	Alishan	1.59	260	P	Pb	14 07 31.8	-0.7
ALS				S	Sn	14 07 51.0	+1.2
YM01	YM01	1.61	328	P	Pb	14 07 31.9	-0.7
LIOB	Emei	1.62	302	P	Pb	14 07 32.4	-0.3
LIOB				eS	Sb	14 07 52.6	-0.2
NSTT	Nanjuang	1.62	302	P	Pb	14 07 32.6	-0.2
NSTT				eS	Sb	14 07 52.1	-0.8
YM08	YM08	1.63	329	eP	Pb	14 07 32.1	-0.9
ZUZH	Zhuzihu	1.63	327	P	Pb	14 07 32.4	-0.6
ZUZH				eS	Sb	14 07 52.4	-0.8
TWGBT	Beinan	1.64	234	P	Pb	14 07 35.1	+2.1
TWGBT	Beinan	1.64	234	P	Pn	14 07 31.5	+1.2
TWGBT				S	Sn	14 07 51.7	+1.3
TWG	Pinlang	1.64	234	P	Pb	14 07 31.8	-1.4
TWG				iS	Sn	14 07 51.7	+1.2
TWS1	Kuangyinshan	1.65	323	eP	Pb	14 07 32.3	-1.0
ANP	Anpu	1.67	327	eP	Pb	14 07 32.7	-0.9
WNT	Mingjian	1.68	274	eP	Pb	14 07 33.6	-0.2
NTST	Danshui	1.68	325	eP	Pb	14 07 33.3	-0.6
TWQ1	Liyutan	1.69	290	P	Pb	14 07 33.8	-0.2
TWQ1				eS	Sb	14 07 55.8	+1.0
NCUH	Zhongli	1.69	314	eP	Pb	14 07 32.7	-1.3
NCUH				eS	Sb	14 07 55.0	+0.1
CHN5	Tsauling	1.70	264	eP	Pb	14 07 33.4	-0.7
CHN5				eS	Sb	14 07 54.8	-0.4
TWY	Chenhua	1.70	331	eP	Pb	14 07 34.0	-0.2
STYH	Taoyuan	1.71	249	eP	Pb	14 07 33.6	-0.7
STYH				eS	Sb	14 07 54.4	-1.0
SBCB	Hsinchu	1.72	306	eP	Pb	14 07 33.6	-0.9
TCU	Taichung	1.72	282	P	Pb	14 07 34.7	+0.2
TCU				eS	Sb	14 07 56.7	+0.9
NMLH	Miaoli	1.75	296	eP	Pb	14 07 34.3	-0.6
NMLH				eS	Sb	14 07 56.6	+0.1
WCKO	Fanlu	1.79	259	eP	Pb	14 07 34.0	-1.6
WCKO				eS	Sn	14 07 55.9	+1.7
WGK	Gukeng	1.80	267	eP	Pb	14 07 35.6	-0.1
TPUB	Ta-pu	1.80	255	P	Pb	14 07 35.6	-0.2
TPUB	Ta-pu	1.80	255	eP	Pb	14 07 35.9	+0.1
TPUB				eS	Sb	14 07 58.9	+0.9
WCHH	Zhanghua	1.82	280	P	Pb	14 07 35.5	-0.6
WCHH				eS	Sb	14 07 58.9	+0.4
WDLH	Douliu	1.82	267	eP	Pb	14 07 36.3	+0.2
WDLH				eS	Sb	14 07 58.6	+0.2
JISG	Ishigakijimahi	1.82	64	eP	Pb	14 07 34.8	-1.4
JISG				eS	Sb	14 07 56.8	-1.8
WCH1	Changhua City	1.83	279	eP	Pb	14 07 36.1	-0.2
WCH1				eS	Sb	14 07 59.5	+0.8
WTP	Ta-pu	1.83	253	eP	Pb	14 07 35.7	-0.7
WTP				eS	Sb	14 07 58.5	-0.3
ECL	Taimali	1.86	231	eP	Pn	14 07 34.2	+0.8
ECL				eS	Sn	14 07 56.0	0.0
PCYT	Pengchaiyu	1.88	348	eP	Pn	14 07 34.9	+1.2
CHN2	Minshiung	1.89	263	eP	Pb	14 07 37.8	+0.5
CHN2				eS	Sb	14 08 01.3	+0.7
SGST	Jiashian	1.91	249	P	Pb	14 07 36.4	-1.3
SGST				eS	Sb	14 08 00.8	-0.4
CHN1	Nanshi	1.92	252	P	Pb	14 07 37.6	-0.3
CHN1				S	Sb	14 08 01.7	+0.1
TWK	Hsinying	1.93	255	eP	Pb	14 07 37.6	-0.6
TWK				eS	Sb	14 08 01.8	-0.1
SNST	Tainan City	1.94	254	eP	Pb	14 07 38.8	+0.6
SNST				eS	Sb	14 08 01.9	0.0
CHY	Chiayi	1.94	262	eP	Pb	14 07 37.7	-0.5
CHY				eS	Sb	14 08 01.4	-0.7
LAY	Lan-yu	1.95	207	eP	Pn	14 07 34.9	+0.1
WRL	Guolierlin Hig	1.96	274	P	Pb	14 07 38.0	-0.6
WRL				S	Sb	14 08 02.6	-0.1
LYUB	Lan-yu	1.97	206	P	Pn	14 07 35.2	+0.2
LYUB				S	Sn	14 07 58.1	-0.6
SSD	Sandimen	2.02	240	eP	Pb	14 07 39.2	-0.4
SSD				eS	Sn	14 08 01.7	+1.8
WTCT	Ta-ch'eng	2.05	273	eP	Pb	14 07 39.1	-0.9
WTCT				eS	Sb	14 08 05.0	-0.2
MASBT	Mashibuluo	2.09	236	P	Pb	14 07 38.7	-2.0
MASBT				eS	Sn	14 08 03.6	+1.9
CHN3	Shinhua	2.10	251	eS	Sb	14 08 07.7	+1.1
WSF	Szhu	2.11	266	eP	Pb	14 07 40.2	-0.9
WSF				eS	Sb	14 08 06.0	-0.9
WSL	Shuilin Townsh	2.12	263	eP	Pb	14 07 39.8	-1.4
WSL				eS	Sb	14 08 05.9	-1.2
TWM1	Shoushan	2.15	244	eS	Sb	14 08 11.7	+3.6
CHN8	Yiju	2.16	259	eP	Pb	14 07 40.5	-1.5
CHN8				eS	Sb	14 08 07.7	-0.6
JTJ	Tarama	2.17	66	eP	Pb	14 07 39.8	-2.3
SCLT	Jiali	2.22	255	eS	Sb	14 08 09.4	-0.6
SLIU	Shizi	2.22	226	eP	Pn	14 07 40.3	+1.9
SLIU				eS	Sn	14 08 06.0	+1.0
SCZT	Fangliau	2.24	232	eP	Pb	14 07 41.7	-1.7
SCZT				eS	Sb	14 08 08.3	-2.4
TSCK	Chigu Township	2.32	255	P	Pb	14 07 43.4	-1.3
TSCK				S	Sb	14 08 11.1	-1.9
SMST	Manzhou Townsh	2.34	222	P	Pn	14 07 41.9	+1.9
SMST				S	Sn	14 08 09.3	+1.4
TSEB	Hengchuen, Pin	2.40	219	eS	Sb	14 08 13.3	-1.8
HEN	Hengchun	2.42	223	eP	Pb	14 07 43.8	-2.5
HEN				eS	Sb	14 08 12.9	-2.7
TWKBT	Hengchun	2.42	221	P	Pn	14 07 43.4	+2.3
TWKBT				eS	Sn	14 08 12.0	+2.3
TWK1	Hengchun	2.42	221	eP	Pb	14 07 43.8	-2.6
TWK1				S	Sn	14 08 11.4	+1.6
TWP	Hsiaoliuchiu	2.45	235	eS	Sb	14 08 18.3	+1.7
WDGT	Dungji	2.67	259	eP	Pn	14 07 47.0	+2.4
WDGT				eS	Sn	14 08 17.0	+0.9
PHUB	P'eng-hu	2.71	265	P	Pn	14 07 47.1	+1.9
PHUB				S	Sn	14 08 19.0	+2.0
PNG	Penghu	2.73	266	P	Pn	14 07 47.6	+2.3
PNG				S	Sn	14 08 19.7	+2.4
VCHM	Qimei	2.89	259	eP	Pn	14 07 50.5	+2.8
VCHM				eS	Sn	14 08 23.0	+1.5
VWUC	VWUC	3.04	294	P	Pn	14 07 50.7	+1.0
VWUC				S	Sn	14 08 24.2	-1.0
MATB	Ma-tsu	3.32	316	P	Pn	14 07 53.8	+0.4
LYJJ	Jianjiangzhen	3.72	318	eP	Pn	14 07 59.2	+0.3
XPSS	Dashiqiu	3.77	327	P	Pn	14 08 00.6	+0.8
KNM	Kinmen	3.79	280	P	Pn	14 08 03.3	+3.4
KNM				eS	Sn	14 08 45.4	+1.9
KNMB	Chin-men Tao	3.83	281	P	Pn	14 08 02.0	+1.4
KNMB				eS	Sn	14 08 43.5	-1.1
MHZQ	Yeshan	3.92	307	P	Pn	14 08 02.1	+0.4
AXDP	Jialang	4.29	286	P	Pn	14 08 08.0	+1.1
AXDP				eS	Sn	14 08 54.7	-1.3
ZPLA	Ao Xicun	4.37	273	P	Pn	14 08 09.4	+1.4
ZPLA				S	Sn	14 08 56.5	-1.3
DSXP	Dongshan	4.67	270	P	Pn	14 08 13.1	+1.1
DSXP				S	Sn	14 09 04.8	-0.4
SXFK	Yanhouchang	5.13	302	P	Pn	14 08 19.0	+0.6
KSRS	Korea Array	14.39	18	P	P	14 10 28.8	-3.1
	2.9nm,0.7s,baz=197,slow=11,SNR=12						
LZDM	Lanzhou Array	20.29	311	P	Pn	14 11 39.0	-0.5
	0.2nm,0.3s,baz=161,slow=10,SNR=3.5						
CMAR	Chiang Mai Arr	22.61	261	P	P	14 12 10.0	+7.9
	0.3nm,0.4s,baz=74,slow=11,SNR=1.8						
	0.3nm,0.4s						
SONM	Songino Array	27.22	336	P	P	14 12 43.7	-1.2
	0.9nm,0.6s,baz=148,slow=8.6,SNR=5.3						
	0.9nm,0.6s						
MKAR	Makanchi Array	39.47	316	P	P	14 14 32.4	+1.1
	2.1nm,0.9s,baz=102,slow=9.6,SNR=14						
	2.1nm,0.9s						
ZALV	Zalesovo Beam	41.24	327	P	P	14 14 45.1	-0.7
	1.0nm,0.7s,baz=101,slow=7.9,SNR=4.9						
	1.0nm,0.7s						
KURBB	Kurchatov Arra	43.20	320	P	P	14 15 01.0	-0.8
	0.2nm,0.3s,baz=115,slow=7.4,SNR=5.6						
	0.2nm,0.3s						
WRA	Warramunga Arr	44.96	164	P	P	14 15 33.1	+17
	0.5nm,0.7s,baz=345,slow=8.6,SNR=5.6						
	0.5nm,0.7s						
ASAR	Alice Springs	48.45	166	P	P	14 16 00.6	+17
	0.3nm,0.5s,baz=344,slow=7.3,SNR=8.5						
	0.3nm,0.5s						
BVAR	Borovoye Array	48.75	321	P	P	14 15 46.3	+0.7
	0.8nm,0.5s,baz=102,slow=8.7,SNR=5.3						
	0.8nm,0.5s						
FINES	FINESS Array B	72.40	330	P	P	14 18 28.2	+1.5
	3.5nm,1.0s,baz=66,slow=4.6,SNR=6.2						
	3.5nm,1.0s						
YKA	Yellowknife Ar	82.86	23	P	P	14 19 26.3	+1.3
	0.2nm,0.6s,baz=308,slow=5.6,SNR=5.4						
	0.2nm,0.6s						

TAP 06 14:07:03.4, 22°.96N×120°.15E, h13km, ML2.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAI	Tainan	0.06	56	iP	Pg	14 07 06.8	+0.8
TAI				iS	Sg	14 07 09.7	+2.0
TAI1	Yung-k'ang	0.11	45	P	Pb	14 07 07.8	+0.5

TAI1				S	Sb	14 07 11.9	+2.0
TSCK	Chigu Township	0.19	343	eS	Sb	14 07 13.2	+0.8
SHHT	Tainan City	0.19	73	P	Pb	14 07 09.0	+0.2
SCLT	Jiali	0.21	12	eS	Sb	14 07 14.6	+1.6
CHN3	Shinhua	0.23	61	eS	Sb	14 07 15.2	+1.7
TWM1	Shoushan	0.29	119	P	Pb	14 07 11.2	+0.8
WSSB	Gushan	0.34	162	eP	Pb	14 07 12.0	+0.7
WSSB				eS	Sn	14 07 18.6	-2.1
CHN1	Nanshi	0.41	58	eP	Pb	14 07 13.1	+0.5
SGST	Jiashian	0.42	74	eP	Pb	14 07 12.3	-0.3
SGST				eS	Sn	14 07 21.8	-0.9
WDGT	Dungji	0.54	303	P	Pg	14 07 14.3	+0.3
WDGT				eS	Sb	14 07 22.2	-0.1
TPUB	Ta-pu	0.56	53	eP	Pb	14 07 15.1	+0.1
MASBT	Mashibuluo	0.57	128	eP	Pb	14 07 16.0	+0.8

IDC 06 14:10:03.8±3.2, 13°.82N×120°.76E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=346.8km s-min=29.5km az=62.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.12	158	P	P	14 17 07.0	-0.8
	0.2nm,0.5s,baz=336,slow=9.0,SNR=1.4						
	0.2nm,0.5s						
ASAR	Alice Springs	39.41	161	P	P	14 17 36.0	+0.3
	0.3nm,0.4s,baz=341,slow=6.8,SNR=9.3						
	0.3nm,0.4s						
MKAR	Makanchi Array	45.97	324	P	P	14 18 28.6	-0.1
	0.2nm,0.8s,baz=108,slow=7.7,SNR=1.3						
	0.2nm,0.8s						

IDC 06 14:14:50.4±1.4, 6°.63S×145°.15E, h0km, mb3.7/3, mbtmp3.7/6, ML3.7/2, Error ellipse: s-maj=42.7km s-min=26.2km az=89.0

ISC 06 14:14:55.3±1.2, 6°.8S±0°.1×145°.2E±0°.2, h35km, n6, σ1.s38/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.26	143	Pn	Pn	14 15 45.6	+1.7
	6.1nm,0.3s,baz=25,slow=6.0,SNR=15						
PMG				Sn	Sn	14 16 19.6	-1.9
	5.1nm,0.3s,baz=356,slow=19,SNR=7.9						
CTA	Charters Tower	13.25	176	Pn	Pn	14 18 01.4	+0.3
	0.2nm,0.3s,baz=0.0,slow=10,SNR=2.5						
	2.2nm,0.7s						
WRA	Warramunga Arr	16.76	218	Pn	Pn	14 18 47.0	-0.6
	0.4nm,0.3s,baz=42,slow=12,SNR=16						
	1.4nm,0.7s						
ASAR	Alice Springs	19.95	212	P	Pn	14 19 26.2	-0.3
	7.1nm,0.8s,baz=42,slow=8.5,SNR=59						
	7.1nm,0.8s						
MKAR	Makanchi Array	76.96	321	P	P	14 26 44.7	+0.3
	0.4nm,0.8s,baz=111,slow=6.6,SNR=3.6						
	0.4nm,0.8s						
ILAR	Eielson Array	86.94	23	P	P	14 27 35.6	-0.8
	0.2nm,0.7s,baz=249,slow=4.6,SNR=4.1						
	0.2nm,0.7s						

NEIC 06 14:18:36.6±1.2, 17°.82N±0°.03×66°.833W±0°.008, h10km±1km, ML2.5/33, ML2.4(RSPR), Error ellipse: s-maj=5.1km s-min=2.8km az=359.0
RSPR 06 14:18:37.6, 17°.89N×66°.84W, h12km

ISC 06 14:18:36.6±1.3, 17°.89N±0°.07×66°.83W±0°.02, h18km±3km, n30, σ0.s44/47, 11C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.10	334		Pg	14 18 40.5	+0.2
GBPR					Sg	14 18 42.7	0.0
GBPR	Guanica, Bosqu	0.10	334	⇑eP	Pg	14 18 40.5	+0.2
GBPR				eS	Sg	14 18 42.7	0.0
MLPR	Magueyes Islan	0.22	292		Pg	14 18 42.0	+0.2
MLPR				IAML		14 18 46.0	
	850nm,0.3s						
OBIP	Obispado Ponce	0.27	54		Pg	14 18 43.1	+0.6
OBIP					Sg	14 18 47.7	+1.0
OBIP	Obispado Ponce	0.27	54	IAML		14 18 48.0	
	comp=N,137nm,0.4s						
OBIP	Obispado Ponce	0.27	54	⇑eP	Pg	14 18 43.1	+0.6
OBIP				eS	Sg	14 18 47.7	+1.0
CRPR	Cabo Rojo, PR	0.29	294		Pb	14 18 43.5	+0.4
CRPR					Sg	14 18 47.5	+0.2
CRPR	Cabo Rojo, PR	0.29	294	IAML		14 18 47.8	
	comp=N,734nm,0.2s						
CRPR				IAML		14 18 48.7	
	comp=N,553nm,0.3s						
CRPR	Cabo Rojo, PR	0.29	294	⇑eP	Pb	14 18 43.5	+0.4
CRPR				eS	Sg	14 18 47.5	+0.2
CELP	Cerrillos	0.31	52		Pb	14 18 43.9	+0.4
CELP				IAML		14 18 49.4	
	comp=N,839nm,0.2s						
LSP	Las Mesas	0.38	320		Pb	14 18 44.9	+0.2
LSP					Sb	14 18 50.9	+0.6
LSP	Las Mesas	0.38	320	⇑eP	Pb	14 18 44.9	+0.2
LSP				eS	Sb	14 18 50.9	+0.6
UUPR	Utuado, UPR, P	0.38	16		Pb	14 18 44.8	0.0
PRSN	Puerto Rico Se	0.44	318		Pb	14 18 45.8	-0.1
ECPR	Experimental S	0.62	46		Pg	14 18 49.0	+0.1
ECPR	Experimental S	0.62	46	⇑eP	Pg	14 18 49.0	+0.1
ECPR				eS	Sg	14 18 57.8	+0.6
AGPR	Aguadilla, PR	0.64	335		Pb	14 18 48.9	-0.1
AGPR				IAML		14 18 59.1	
	comp=N,121nm,1.1s						
AGPR				IAML		14 19 02.2	
	comp=N,130nm,1.2s						
AGPR	Aguadilla, PR	0.64	335	⇑eP	Pg	14 18 49.1	0.0
AGPR				eS	Sb	14 18 57.4	-0.2
EMPR	Esperanza - Ma	0.65	26		Pg	14 18 50.0	+0.5
EMPR					Sn	14 18 59.6	-1.2
EMPR	Esperanza - Ma	0.65	26	⇑eP	Pg	14 18 50.0	+0.5
EMPR				eS	Sn	14 18 59.6	-1.2
SJG	San Juan	0.69	71		Pb	14 18 49.7	-0.3
SJG	San Juan	0.69	71	⇑eP	Pb	14 18 49.7	-0.3
SJG				eS	Sb	14 18 59.1	0.0
PDPR	Patillas Dam,	0.78	80		Pg	14 18 51.9	0.0
IDE	Isla Desecheo	0.79	309		Pg	14 18 51.8	-0.2
IDE					Sg	14 19 02.5	+0.1
IDE	Isla Desecheo	0.79	309	⇑eP	Pg	14 18 51.8	-0.2
IDE				eS	Sg	14 19 02.5	+0.1
GCPR	Guaynabo City	0.83	59		Pg	14 18 52.6	-0.1
GCPR					Sg	14 19 03.5	-0.2
GCPR	Guaynabo City	0.83	59	⇑eP	Pg	14 18 52.6	-0.1
GCPR				eS	Sg	14 19 03.5	-0.2
HUMP	Col San Antoni	0.97	75		Sg	14 19 08.5	+0.3
HUMP	Col San Antoni	0.97	75	Pg	Pb	14 18 54.7	-0.1
HUMP					Pb	14 18 54.9	+0.1
HUMP				IAML		14 19 11.9	
	comp=N,83nm,0.2s						
HUMP	Col San Antoni	0.97	75	⇑eP	Pb	14 18 54.9	+0.1
HUMP				eS	Sg	14 19 08.5	+0.3

SDD 06 14:19:08.6±2.4, 17°.97N×66°.88W, h0km±11km, MD2.6, ML2.5, MW3.2, 9C, Presumed earthquake, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	0.22	279	ePg	Pg	14 19 11.9	-0.9
CRPR				eSg	Sg	14 19 15.4	-0.2
CRPR				IAML		14 19 16.1	
	comp=N,1μm,0.6s						
CRPR	Cabo Rojo, PR	0.22	279	⇑iP	Pg	14 19 11.8	-0.9
CRPR				⇑iS	Sg	14 19 14.7	-0.9
CRPR				IAML		14 19 16.1	
	comp=N,1μm,0.6s						
PRSN	Puerto Rico Se	0.35	314	ePg	Pg	14 19 15.0	-0.3
PRSN				eSg	Sb	14 19 21.8	-2.0
PRSN				IAML		14 19 22.5	
	comp=N,1μm,0.2s						
PRSN	Puerto Rico Se	0.35	314	⇑iP	Pg	14 19 14.6	-0.7
PRSN				⇑iS	Sg	14 19 20.8	+1.0
PRSN				IAML		14 19 22.5	
	comp=N,1μm,0.2s						
AGPR	Aguadilla, PR	0.54	336	ePg	Pg	14 19 18.4	-0.5
AGPR				eSg	Sb	14 19 27.8	-1.4
AGPR				IAML		14 19 28.5	
	comp=N,285nm,0.2s						
AGPR	Aguadilla, PR	0.54	336	⇑iP	Pg	14 19 16.6	-2.4
AGPR				⇑iS	Sg	14 19 26.3	+0.4
AGPR				IAML		14 19 28.5	
	comp=N,285nm,0.2s						
SJG	San Juan	0.71	79	ePg	Pg	14 19 21.6	-0.6
SJG				eSg	Sb	14 19 33.5	-0.8
HIDR	Higuey Centro	1.85	290	⇑iP	Pn	14 19 40.3	-1.3
HIDR				⇑iS	Sn	14 20 01.3	-4.3
HATOM	Hato Mayor del	2.51	289	⇑iP	Pn	14 19 49.7	-1.0
HATOM				i S	Sn	14 20 18.6	-3.4

NEIC 06 14:20:38.3±2.6, 5°.3N±0°.1×126°.3E±0°.3, h10km±1km, mb4.7/21, Error ellipse: s-maj=44.7km s-min=9.8km az=70.0
IDC 06 14:20:41.4±2.1, 5°.47N×126°.38E, h28km±14km, mb4.2/24, mbtmp4.4/26, ML4.3/2, MS3.9/1, Error ellipse: s-maj=26.1km s-min=9.8km az=70.0
DJA 06 14:20:41.3±0.8, 5°N±4°×12°6E±°, h11km±8km, M4.8/18, mB5.3/7, mb4.9/16, MLv4.8/18, Mw(mB)4.8/7
BJI 06 14:20:44.0, 5°.06N×126°.19E, h84km, mB5.3/2, mb4.5/44

ISC 06 14:20:40.9±1.3, 5°.44N±0°.04×126°.45E±0°.08, h26km±9km, n97, σ1.s51/110, mb4.5/49, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.83	332	Pn	Pn	14 21 09.1	-1.6
	130nm,0.3s,baz=185,slow=2.7,SNR=7.2						
DAV				Sn	Sb	14 21 34.6	-1.7
	200nm,0.3s,baz=298,slow=8.3,SNR=6.4						
DAV	Davao City (W)	1.83	332		Pn	14 21 11.0	+0.2
DAV	Davao City (W)	1.83	332	P	Pn	14 21 12.3	+1.6
SGSI	Sangihe	1.97	208	P	Pb	14 21 14.2	-2.0
SGSI				S	Sb	14 21 39.5	-0.8
TNTI	Ternate	4.73	169		Pn	14 21 49.2	-1.4
TNTI	Ternate	4.73	169	P	Pn	14 21 53.9	+3.3
MRSI	Marisa	6.68	223	P	Pn	14 22 19.4	+2.0
	0.6nm2μm150nm,0.6s						
TOLI2	Tolitoli	7.11	233		Pn	14 22 23.7	+0.4
LUWI	Luwuk	7.42	210	P	Pn	14 22 31.9	+4.4
	2μm126nm,0.8s						
SANI	Sanana	7.46	184	P	Pn	14 22 27.9	-0.2
SWI	Sorong	7.89	142	P	Pn	14 22 35.7	+1.6
	0.1nm26nm,0.8s						
SIJI	Sorong	7.90	142	Pn	Pn	14 22 35.2	+1.0
	2.4nm,0.3s,baz=320,slow=17,SNR=9.3						
SIJI				Sn	Sn	14 24 00.3	-2.5
	baz=343,slow=21						
SIJI				LR	LR	14 25 35.4	
	comp=Z,871nm,20.3s,baz=345,slow=37						
	4.2nm,0.3s						
SIJI	Sorong	7.90	142	P	Pn	14 22 34.8	+0.6
MYLDM	Lahad Datu	7.92	268	P	Pn	14 22 38.5	+4.1
	0.2nm31nm,0.9s						
APSI	Ampana	7.93	217	P	Pn	14 22 37.9	+3.4
	0.3nm70nm,1.4s						
MPSI	Mapaga	8.28	232	P	Pn	14 22 40.3	+1.0
NLAI	Namlea	8.65	176	P	Pn	14 22 45.3	+0.9
KRAI	Karang Ratu	8.92	167	P	Pn	14 22 50.6	+2.5
	24nm,0.5s						
FAKI	Fak Fak	10.13	145	Pn	Pn	14 23 07.6	+2.8
BATI	Baumata	15.79	190	Pn	Pn	14 24 22.3	+0.6
	2.2nm,0.3s,baz=278,slow=15,SNR=1.2						
	15nm,0.6s						
TPUB	Ta-pu	18.62	343	P	P	14 24 54.8	-1.8
KNRA	Kununurra	21.11	174		P	14 25 23.1	-0.6
KNRA				IAmb	IAmb	14 25 35.7	
	comp=Z,22nm,0.6s						
FITZ	Fitzroy Crossi	23.41	182	P	P	14 25 47.8	-0.2
	comp=Z,2.7nm,0.4s,baz=16,slow=9.9,SNR=12						
FITZ				PcP	PcP	14 29 34.8	+0.6
	comp=Z,3.7nm,1.0s,baz=344,slow=7.4,SNR=2.0						
	comp=Z,2.7nm,0.4s						
COEN	Coen	25.44	139	P	P	14 26 06.0	-0.7
WB0	Warramunga Arr	26.24	163		P	14 26 12.6	-1.5
WB0				IAmb	IAmb	14 26 20.2	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	26.39	163	P	P	14 26 16.0	+0.6
	comp=Z,1.6nm,0.5s,baz=339,slow=10,SNR=23						
WRA				PcP	PcP	14 29 41.0	+0.1
	comp=Z,1.0nm,0.6s,baz=332,slow=2.3,SNR=5.1						
WRA				ScP	ScP	14 33 19.0	-0.2
	comp=Z,0.6nm,0.6s,baz=340,slow=2.9,SNR=5.7						
	comp=Z,1.6nm,0.5s						
NJ2	Nanjing	27.41	346	eP	P	14 26 26.7	+2.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ENH	Enshi	29.42	329	P	P	14 26 40.5	-1.9
ENH				IAmb	IAmb	14 26 56.1	
	comp=Z,9.5nm,1.1s						
CMAR	Chiang Mai Arr	29.80	298	P	P	14 26 46.2	+0.3
	comp=Z,1.0nm,0.4s,baz=105,slow=7.3,SNR=11						
CMAR				PcP	PcP	14 29 50.1	+0.9
	comp=Z,0.9nm,0.7s,baz=133,slow=1.5,SNR=6.7						
CMAR				ScP	ScP	14 33 30.1	+0.3
	comp=Z,0.2nm,0.3s,baz=152,slow=1.5,SNR=6.0						
	comp=Z,1.0nm,0.4s						
AS31	Alice Springs	29.83	166	P	P	14 26 45.6	-0.6
ASAR	Alice Springs	29.83	166	P	P	14 26 46.9	+0.7
	comp=Z,0.9nm,0.7s,baz=340,slow=6.8,SNR=18						
ASAR				PcP	PcP	14 29 49.6	+0.3
	comp=Z,2.3nm,0.6s,baz=350,slow=2.6,SNR=16						
ASAR				ScP	ScP	14 33 29.3	-0.5
	comp=Z,1.3nm,0.7s,baz=348,slow=2.9,SNR=15						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	29.83	166	P	P	14 26 47.1	+1.0
ASAR				PcP	PcP	14 29 49.6	+0.3
PZH	PanZhiHua	31.54	314	P	P	14 27 02.6	+1.3
KSRS	Korea Array	31.89	2	P	P	14 27 05.7	+1.6
	comp=Z,1.2nm,0.5s,baz=188,slow=9.0,SNR=9.3						
	comp=Z,1.2nm,0.5s						
CTA	Charters Tower	31.98	143	P	P	14 27 05.9	+0.8
	comp=Z,2.9nm,1.0s,baz=330,slow=12,SNR=2.2						
	comp=Z,2.9nm,1.0s						
XAN	Xi'an	32.77	332	⇓P	P	14 27 11.4	-0.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CD2	Chengdu	33.11	323	P	P	14 27 15.1	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HNS	HongShan	33.57	343	⇑P	P	14 27 21.8	+3.0
HNS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DL2	Dalian	33.60	353	P	P	14 27 21.3	+2.3
DL2				pmax	pmax		
	comp=Z,32nm,0.7s						
BJI2	Beijing	35.65	346	P	P	14 27 37.9	+1.2
BJI2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FORT	Forrest	36.05	178	P	P	14 27 38.5	-1.8
FORT				IAmb	IAmb	14 27 41.3	
	comp=Z,6.1nm,0.7s						
LZDM	Lanzhou Array	36.87	328	P	P	14 27 48.5	+0.8
	comp=Z,2.0nm,0.5s,baz=141,slow=9.6,SNR=10						
LZDM				PcP	PcP	14 30 09.7	+0.5
	comp=Z,0.7nm,0.3s,baz=224,slow=8.3,SNR=4.1						
	comp=Z,2.0nm,0.5s						
LZH	Lanzhou	36.90	329	eP	P	14 27 49.1	+1.4
LZH				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC	Hu-ho-hao-te	37.69	341	eP	P	14 27 56.6	+2.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ	Mudanjiang	39.11	4	P	P	14 28 09.4	+3.3
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BBOO	Buckleboo	39.12	167	P	P	14 28 07.0	+0.7
XLT	XiLinHaoTe	39.37	348	eP	P	14 28 09.3	+0.9
XLT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STKA	Stephens Creek	39.82	160	P	P	14 28 12.9	+0.7
	comp=Z,5.7nm,0.9s,baz=340,slow=9.9,SNR=7.8						
	comp=Z,5.7nm,0.9s						
STKA	Stephens Creek	39.82	160	P	P	14 28 12.2	+0.1
STKA				IAmb	IAmb	14 28 14.3	
	comp=Z,24nm,0.9s						
BNX	BinXian	40.15	1	⇑P	P	14 28 17.9	+3.2
BNX				pmax	pmax		
	comp=Z,4.0nm,0.6s						
H11S3	WAKE ISLAND Hy	41.33	68	T	T	15 12 15.3	
	baz=257,slow=75,SNR=7.4						
H11S1	WAKE ISLAND Hy	41.35	68	T	T	15 12 16.4	
	baz=257,slow=75,SNR=7.5						
H11S2	WAKE ISLAND Hy	41.35	68	T	T	15 12 16.2	
	baz=257,slow=75,SNR=8.7						
GTA2	Gaotai	41.58	328	eP	P	14 28 27.2	+0.4
GTA2				PcP	PcP	14 30 24.8	+1.1
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
H11N1	WAKE ISLAND Hy	41.81	66	T	T	15 12 55.2	
	baz=254,slow=75,SNR=9.8						
H11N2	WAKE ISLAND Hy	41.81	66	T	T	15 12 55.8	
	baz=254,slow=75,SNR=7.0						
H11N3	WAKE ISLAND Hy	41.82	66	T	T	15 12 55.8	
	baz=254,slow=75,SNR=8.2						
GOMU	GeErMu	42.18	321	P	P	14 28 32.7	+0.7
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARMA	Armidale	43.05	147	P	P	14 28 39.0	+0.2
ARMA				IAmb	IAmb	14 28 48.1	
	comp=Z,14nm,1.0s						
HILR	Hailar Array B	44.32	354	P	P	14 28 49.2	+0.5
	comp=Z,2.9nm,0.5s,baz=167,slow=13,SNR=6.9						
	comp=Z,2.9nm,0.5s						
HEH	HeiHe	44.66	1	eP	P	14 28 52.5	+1.2
SONM	Songino Array	45.60	341	P	P	14 28 58.8	-0.1
	comp=Z,1.9nm,0.9s,baz=155,slow=9.8,SNR=11						
SONM				PcP	PcP	14 30 37.7	+0.6
	comp=Z,1.4nm,0.6s,baz=158,slow=4.0,SNR=6.3						
	comp=Z,1.9nm,0.9s						
SONM	Songino Array	45.60	341	P	P	14 28 59.6	+0.6
SONM				PcP	PcP	14 30 37.0	-0.1
WMQ	Urumqi	51.17	324	eP	P	14 29 42.7	+0.7
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
PETK	Petropavlovsk-	53.96	23	P	P	14 30 02.4	0.0
	comp=Z,2.0nm,0.8s,baz=216,slow=7.3,SNR=1.9						
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	56.00	325	P	P	14 30 17.1	-0.2
	comp=Z,8.3nm,0.5s,baz=119,slow=7.8,SNR=197						
MKAR				PcP	PcP	14 31 15.3	-0.2
	comp=Z,2.7nm,0.6s,baz=115,slow=4.3,SNR=7.1						
MKAR				ScP	ScP	14 35 11.7	-1.4
	comp=Z,0.6nm,0.7s,baz=122,slow=4.6,SNR=5.3						
	comp=Z,8.3nm,0.5s						
MKAR	Makanchi Array	56.00	325		P	14 30 16.4	-0.9
MKAR				ScP	ScP	14 35 11.4	-1.7
MAKZ	Makanchi	56.19	325		P	14 30 17.3	-1.4
MAKZ				IAmb	IAmb	14 30 18.9	
	comp=Z,7.6nm,0.6s						
KSH2	Kashi	56.79	314	P	P	14 30 23.5	+0.3
KSH2				pP	pwP	14 30 43.0	+8.9
KSH2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KDJ	Kajisay	56.89	318	P	P	14 30 23.2	-0.7
KDJ				IAmb	IAmb	14 30 24.7	
	comp=Z,7.2nm,0.8s						
ZAA0	Zalesovo Array	58.95	333		P	14 30 36.0	-1.8
ZAA0				IAmb	IAmb	14 30 39.7	
	comp=Z,2.9nm,0.5s						
ZALV	Zalesovo Beam	58.95	333	P	P	14 30 36.6	-1.2
	comp=Z,2.5nm,0.4s,baz=129,slow=6.5,SNR=12						
ZALV				PcP	PcP	14 31 26.1	-0.7
	comp=Z,2.3nm,0.7s,baz=146,slow=2.9,SNR=5.1						
	comp=Z,2.5nm,0.4s						
ZALV	Zalesovo Beam	58.95	333		P	14 30 35.4	-2.5
KURBB	Kurchatov Arra	60.16	327	P	P	14 30 45.8	-0.5
	comp=Z,7.4nm,0.6s,baz=124,slow=6.8,SNR=45						
	comp=Z,7.4nm,0.6s						
KURK	Kurchatov	60.16	327		P	14 30 43.4	-2.9
KBL	Kabul	60.27	307		P	14 30 45.4	-2.3
KBL				IAmb	IAmb	14 30 47.7	
	comp=Z,6.0nm,0.6s						
GAR	Garm	60.57	312	P	P	14 30 47.7	-1.8
KKAR	Karatay Array	61.80	316		P	14 30 55.9	-1.7
BVAR	Borovoye Array	65.74	327	P	P	14 31 22.8	-0.6
	comp=Z,2.2nm,0.5s,baz=139,slow=8.6,SNR=18						
	comp=Z,2.2nm,0.5s						
BORK	Borovoye	65.79	327	P	P	14 31 22.7	-1.0
BORK				IAmb	IAmb	14 31 34.1	
	comp=Z,7.3nm,0.8s						
TIXI	Tiksi	66.14	1		P	14 31 26.0	+0.4
NRIK	Noril'sk	68.71	346	P	P	14 31 42.5	+0.6
	comp=Z,13nm,0.7s,baz=122,slow=6.2,SNR=29						
	comp=Z,13nm,0.7s						
NRIK	Noril'sk	68.71	346		P	14 31 42.1	+0.2
ABKAR	Akbulak array	70.66	320		P	14 31 52.8	-1.5
KDAK	Kodiak Island	80.60	32	P	P	14 32 51.3	+0.2
	comp=Z,4.5nm,0.8s,baz=140,slow=12,SNR=1.3						
	comp=Z,4.5nm,0.8s						
ILAR	Eielson Array	83.69	25	P	P	14 33 06.5	-0.7
	comp=Z,0.6nm,0.8s,baz=244,slow=5.1,SNR=10						
	comp=Z,0.6nm,0.8s						
ARCES	ARCESS Array B	88.75	340	P	P	14 33 31.4	-0.5
	comp=Z,5.6nm,0.6s,baz=73,slow=6.4,SNR=16						
	comp=Z,5.6nm,0.6s						
ARCES	ARCESS Array B	88.75	340	P	P	14 33 30.8	-1.2
SPITS	Spitsbergen Ar	88.75	349	P	P	14 33 32.1	+0.3
	comp=Z,1.2nm,0.3s,baz=84,slow=8.7,SNR=48						
	comp=Z,1.2nm,0.3s						
FINES	FINESS Array B	90.20	332	P	P	14 33 37.9	-1.0
	comp=Z,7.4nm,0.9s,baz=36,slow=5.7,SNR=25						
	comp=Z,7.4nm,0.9s						
FINES	FINESS Array B	90.20	332	P	P	14 33 37.6	-1.3
HFS	Hagfors	96.38	332	P	P	14 34 06.2	-1.2
	comp=Z,2.0nm,0.7s,baz=149,slow=10,SNR=5.6						
	comp=Z,2.0nm,0.7s						
NB2	NORSAR Subarra	97.14	334	P	P	14 34 09.1	-1.7
	comp=Z,0.9nm,0.7s,baz=66,slow=4.8						
NOA	NORSAR Array B	97.14	334	P	P	14 34 08.9	-1.9
	comp=Z,1.2nm,0.7s,baz=66,slow=4.6,SNR=5.3						
	comp=Z,1.2nm,0.7s						
YKA	Yellowknife Ar	98.06	24	P	P	14 34 14.8	-0.1
	comp=Z,0.1nm,0.4s,baz=297,slow=5.3,SNR=2.2						
	comp=Z,0.1nm,0.4s						
TORD	Torodi Ar. Bea	122.11	289	PKP	PKPdf	14 39 33.8	-0.5
	comp=Z,0.5nm,0.3s,baz=60,slow=2.1,SNR=10						
PLCA	Paso Flores	141.70	159	PKP	PKPdf	14 40 10.6	0.0
	comp=Z,1.0nm,0.5s,baz=193,slow=3.0,SNR=3.8						

JMA 06 14:33:58.7±0.2, 24°N±1°×122°.5E±0°.7, h23km, MV3.0/13, NW OFF ISHIGAKIJIMA IS
TAP 06 14:33:59.1, 23°.86N×122°.48E, h27km, ML3.4, C

ISC 06 14:33:57.1±1.1, 23°.81N±0°.02×122°.49E±0°.02, h14km±9km, n108, σ0.s72/174, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.35	334	P	Pn	14 34 06.0	-1.5
EOS4				eS	Sb	14 34 11.2	+1.1
EOS3	EOS3	0.50	342	P	Pn	14 34 08.9	-0.8
EOS3				S	Sn	14 34 15.9	-2.2
EOS2	EOS2	0.65	339	P	Pn	14 34 11.9	0.0
JYNG	Yonagunijimaku	0.77	33	P	Pb	14 34 12.9	+0.7
JYNG				eS	Sb	14 34 22.2	-0.4
YOJ	Yonaguni jima	0.81	36	eP	Pn	14 34 13.7	-0.5
YOJ				eS	Sg	14 34 23.2	-0.3
YOJ	Yonaguni jima	0.81	36	i P	Pn	14 34 13.7	-0.5
YOJ				S	Sg	14 34 23.2	-0.3
TEYL	Yanliau Villag	0.81	274	eP	Pn	14 34 14.3	+0.1
TEYL				eS	Sn	14 34 25.7	-0.4
HWA	Hwalien	0.82	282	eS	Sn	14 34 26.2	0.0
SHUL	Shoufeng	0.84	269	S	Sn	14 34 26.0	-0.8
EAHA	Aohua	0.86	308	eP	Pn	14 34 15.1	+0.3
EAHA				eS	Sn	14 34 27.4	+0.2
TWD	Chiawan	0.86	289	eP	Pb	14 34 14.3	+0.5
TWD				eS	Sb	14 34 25.6	+0.5
ETL	Fush Village	0.86	294	eP	Pn	14 34 14.8	-0.1
TEGC	Jichi Village	0.87	264	eS	Sb	14 34 26.6	+1.1
NACB	Ninganchiao	0.89	294	P	Pb	14 34 14.6	+0.2
NACB				eS	Sb	14 34 26.5	+0.3
EWUT	Wuta	0.91	315	eP	Pn	14 34 15.4	-0.1
EWUT				eS	Sn	14 34 28.5	+0.1
ETM	Tongmen	0.92	280	eP	Pb	14 34 15.0	+0.1
ETM				eS	Sg	14 34 26.9	-0.2
ESL	Shilin	0.96	271	P	Pb	14 34 15.3	-0.4
ESL				eS	Sb	14 34 27.3	-0.9
EGFH	Guangfu	0.98	262	eS	Sg	14 34 29.2	+0.4
TWC	Suao	0.99	324	P	Pn	14 34 16.4	-0.1
TWC				eS	Sg	14 34 28.9	-0.3
ETLH	Xiulin Townshi	1.00	294	P	Pg	14 34 16.6	+0.1
ETLH				eS	Sg	14 34 29.7	+0.2
LXIB	Xiulin Townshi	1.00	282	P	Pb	14 34 16.4	0.0
LXIB				S	Sg	14 34 29.9	+0.2
WARBT	Fenglin Townsh	1.01	265	P	Pb	14 34 16.3	-0.1
WARBT				S	Sb	14 34 29.5	-0.1
HGSD	Ruisui	1.02	252	P	Pb	14 34 16.8	+0.2
HGSD				S	Sb	14 34 29.7	-0.2
ECBN	Changbin	1.07	243	P	Pb	14 34 17.8	+0.4
ECBN				i S	Sb	14 34 31.4	+0.2

NDS	**Dongshan**	**1.08**	**320**	P		**Pb**	**14 34 17.5**	**-0.1**
NDS				*e*S		**Sn**	**14 34 32.4**	**-0.4**
EHY	**Hungye**	**1.11**	**255**	P		**Pb**	**14 34 18.3**	**+0.2**
EHY				*e*S		**Sb**	**14 34 32.6**	**+0.2**
LATG	**Datong**	**1.14**	**310**	P		**Pg**	**14 34 19.0**	**0.0**
YULB	**Yu-li**	**1.17**	**250**	P		**Pn**	**14 34 19.3**	**+0.2**
YULB				S		**Sb**	**14 34 34.5**	**+0.4**
WHF	**Hehuan Shan**	**1.17**	**287**	P		**Pb**	**14 34 19.3**	**0.0**
CHKH	**Chenggong**	**1.17**	**239**	*e*S		**Sb**	**14 34 32.6**	**-1.6**
TWE	**Neicheng**	**1.18**	**321**	P		**Pg**	**14 34 19.7**	**-0.1**
TWE				*e*S		**Sn**	**14 34 35.6**	**+0.5**
ENTT	**Nioudou**	**1.18**	**315**	P		**Pg**	**14 34 19.9**	**+0.1**
TWF1	**Yuli**	**1.18**	**248**	P		**Pn**	**14 34 19.5**	**+0.2**
TWF1				S		**Sb**	**14 34 34.5**	**0.0**
NNSB	**Datong**	**1.18**	**302**	*i* P		**Pn**	**14 34 19.6**	**+0.2**
NNS	**Nan Shan**	**1.20**	**302**	P		**Pn**	**14 34 19.8**	**+0.2**
OWD	**Renai**	**1.21**	**277**	*e*P		**Pb**	**14 34 20.1**	**+0.3**
OWD				*e*S		**Sb**	**14 34 35.1**	**-0.3**
FUSS	**Fushou**	**1.22**	**291**	P		**Pg**	**14 34 20.5**	**-0.1**
VWDT	**VWDT**	**1.23**	**268**	*i* P		**Pb**	**14 34 20.6**	**+0.4**
VWDT				S		**Sb**	**14 34 36.2**	**+0.2**
HATJ	**Hateruma jima**	**1.23**	**78**	*e*S		**Sn**	**14 34 36.8**	**+0.4**
CHKT	**Chengkung**	**1.25**	**236**	*e*S		**Sb**	**14 34 34.8**	**-1.5**
FULB	**Fuli**	**1.25**	**241**	*e*P		**Pn**	**14 34 20.4**	**+0.2**
FULB				*e*S		**Sb**	**14 34 35.0**	**-1.5**
FUSB	**Fushanzhiwuyua**	**1.25**	**319**	*e*P		**Pg**	**14 34 21.0**	**-0.2**
IRIF	**Iriomote-Funau**	**1.25**	**65**	*e*S		**Sn**	**14 34 37.5**	**+0.6**
WUSB	**Renai**	**1.27**	**279**	*i* P		**Pb**	**14 34 21.1**	**+0.2**
WUSB				*e*S		**Sg**	**14 34 38.1**	**+0.2**
TWT	**Tachien**	**1.28**	**291**	*e*P		**Pg**	**14 34 21.6**	**-0.2**
TWB1	**Santiao Chiao**	**1.28**	**339**	*e*P		**Pg**	**14 34 22.1**	**+0.4**
TDCB	**Techi**	**1.29**	**290**	*e*P		**Pg**	**14 34 21.3**	**0.0**
TIPB	**Shuangxi**	**1.31**	**333**	P		**Pg**	**14 34 21.9**	**0.4**
TIPB				*e*S		**Sg**	**14 34 39.4**	**+0.1**
NWLT	**Wulai**	**1.32**	**317**	*e*P		**Pg**	**14 34 22.2**	**-0.2**
YHNB	**Yeheng**	**1.33**	**311**	*e*P		**Pb**	**14 34 21.9**	**0.0**
NSK	**Sanguang**	**1.34**	**310**	*e*P		**Pg**	**14 34 22.4**	**-0.5**
NSK				*e*S		**Sg**	**14 34 39.5**	**-1.0**
ECS	**Chishang**	**1.36**	**239**	*e*P		**Pn**	**14 34 22.7**	**+0.9**
ECS				*e*S		**Sn**	**14 34 39.7**	**+0.1**
SXI1	**Grass Mountain**	**1.40**	**337**	*e*P		**Pb**	**14 34 22.5**	**-0.6**
SSLB	**Suanglung**	**1.40**	**270**	*e*P		**Pn**	**14 34 23.0**	**+0.7**
SSLB				S		**Sn**	**14 34 40.0**	**-0.7**
NWF	**Wu-fen Shan**	**1.41**	**333**	*e*P		**Pg**	**14 34 24.0**	**-0.3**
NWF				*e*S		**Sg**	**14 34 43.8**	**+1.1**
WFSB	**Wu-fen Shan**	**1.41**	**333**	*e*P		**Pg**	**14 34 24.8**	**+0.5**
WFSB				*e*S		**Sg**	**14 34 42.9**	**+0.3**
TWA	**Mucha**	**1.43**	**325**	*e*P		**Pg**	**14 34 24.6**	**0.0**
SMLT	**Sun Moon Lake**	**1.45**	**273**	*e*P		**Pb**	**14 34 24.2**	**+0.1**
SMLT				*e*S		**Sb**	**14 34 42.3**	**-0.1**
JKRS	**Kuro-shima**	**1.46**	**73**	*e*P		**Pb**	**14 34 24.5**	**+0.5**
WCS	**Beigang Elemen**	**1.46**	**280**	*e*P		**Pb**	**14 34 24.3**	**+0.2**
ELDTW	**Lidau**	**1.48**	**246**	P		**Pn**	**14 34 23.5**	**0.0**
ELDTW				*e*S		**Sn**	**14 34 41.4**	**-1.3**
WHP	**Taichung City**	**1.48**	**289**	*e*P		**Pg**	**14 34 26.2**	**+0.6**
WHP				*e*S		**Sg**	**14 34 45.3**	**+0.3**
NFF	**Wufeng Townshi**	**1.49**	**304**	*e*P		**Pg**	**14 34 25.5**	**-0.4**
NFF				*e*S		**Sg**	**14 34 44.8**	**-0.5**
TYC	**Yuchr**	**1.49**	**274**	*e*P		**Pb**	**14 34 24.4**	**-0.2**
TYC				*e*S		**Sn**	**14 34 43.0**	**+0.2**
WHYT	**Xinyi Township**	**1.50**	**266**	*e*P		**Pb**	**14 34 24.8**	**0.0**
WHYT				*e*S		**Sb**	**14 34 43.6**	**-0.1**
KSHI	**Guanxi Townshi**	**1.54**	**309**	*e*P		**Pg**	**14 34 26.0**	**-0.6**
ALS	**Alishan**	**1.57**	**260**	P		**Pb**	**14 34 26.3**	**+0.2**
ALS				S		**Sn**	**14 34 45.6**	**+0.5**
YM01	**YM01**	**1.57**	**328**	*e*P		**Pg**	**14 34 26.8**	**-0.6**
YM01				*e*S		**Sg**	**14 34 47.5**	**-0.3**
LIOB	**Emei**	**1.58**	**302**	P		**Pg**	**14 34 26.9**	**-0.6**
NSTT	**Nanjuang**	**1.58**	**302**	P		**Pg**	**14 34 26.8**	**-0.8**
NSTT				*e*S		**Sb**	**14 34 46.5**	**+0.4**
ZUZH	**Zhuzihu**	**1.60**	**328**	*e*P		**Pb**	**14 34 26.5**	**0.0**
JJJ	**Ishigaki jima**	**1.61**	**70**	*e*P		**Pb**	**14 34 26.7**	**0.0**
JJJ				*e*S		**Sn**	**14 34 46.8**	**+1.0**
TWGBT	**Beinan**	**1.62**	**233**	P		**Pn**	**14 34 25.5**	**+0.2**
TWGBT				S		**Sn**	**14 34 45.7**	**-0.4**
TWG	**Pinlang**	**1.63**	**233**	P		**Pn**	**14 34 25.5**	**+0.1**
TWG				S		**Sn**	**14 34 45.3**	**-0.9**
WNT	**Mingjian**	**1.65**	**273**	P		**Pb**	**14 34 27.9**	**+0.5**
TWQ1	**Liyutan**	**1.66**	**289**	P		**Pb**	**14 34 28.0**	**+0.6**
TWQ1				*e*S		**Sg**	**14 34 49.7**	**-0.7**
CHN5	**Tsauling**	**1.67**	**263**	P		**Pb**	**14 34 28.2**	**+0.5**
CHN5				*e*S		**Sb**	**14 34 48.5**	**-0.2**
STYH	**Taoyuan**	**1.69**	**248**	*e*P		**Pn**	**14 34 27.5**	**+1.2**
STYH				*e*S		**Sn**	**14 34 48.2**	**+0.4**
WCKO	**Fanlu**	**1.76**	**258**	*e*P		**Pn**	**14 34 28.1**	**+0.9**
WCKO				*e*S		**Sn**	**14 34 50.5**	**+1.0**
TPUB	**Ta-pu**	**1.78**	**254**	*i* P		**Pb**	**14 34 29.6**	**+0.2**
TPUB				S		**Sb**	**14 34 51.9**	**+0.3**
WCHH	**Zhanghua**	**1.78**	**279**	*e*P		**Pb**	**14 34 29.9**	**+0.3**
WCHH				*e*S		**Sg**	**14 34 53.5**	**-1.0**
WDLH	**Douliu**	**1.79**	**267**	*e*P		**Pg**	**14 34 31.3**	**-0.1**
WDLH				*e*S		**Sb**	**14 34 52.6**	**+0.7**
WTP	**Ta-pu**	**1.81**	**252**	*e*P		**Pb**	**14 34 29.5**	**-0.5**
WTP				*e*S		**Sb**	**14 34 52.2**	**-0.4**
JISG	**Ishigakijimahi**	**1.84**	**65**	*e*P		**Pn**	**14 34 29.1**	**+0.8**
ECL	**Taimali**	**1.85**	**230**	*e*P		**Pn**	**14 34 28.3**	**-0.2**
ECL				*e*S		**Sn**	**14 34 50.7**	**-1.0**
SGST	**Jiashian**	**1.89**	**248**	*e*P		**Pn**	**14 34 30.5**	**+1.5**
SGST				*e*S		**Sb**	**14 34 54.9**	**0.0**
CHN1	**Nanshi**	**1.90**	**251**	*e*P		**Pb**	**14 34 31.7**	**+0.1**
CHN1				*e*S		**Sb**	**14 34 56.6**	**+1.3**
TWK	**Hsinying**	**1.91**	**254**	*e*P		**Pb**	**14 34 31.6**	**-0.1**
TWK				*e*S		**Sb**	**14 34 54.9**	**-0.6**
CHY	**Chiayi**	**1.92**	**261**	*e*S		**Sb**	**14 34 55.7**	**+0.1**
SNST	**Tainan City**	**1.92**	**253**	*e*P		**Pb**	**14 34 32.9**	**+1.0**
SNST				S		**Sb**	**14 34 56.9**	**+1.2**
WRL	**Guolierlin Hig**	**1.93**	**273**	*e*P		**Pb**	**14 34 31.8**	**-0.3**
WRL				*e*S		**Sb**	**14 34 56.2**	**0.0**
LAY	**Lan-yu**	**1.96**	**206**	*e*P		**Pn**	**14 34 29.4**	**-0.6**
LAY				*e*S		**Sn**	**14 34 52.0**	**-2.4**
LYUB	**Lan-yu**	**1.98**	**205**	*e*P		**Pn**	**14 34 29.3**	**-1.0**
LYUB				*e*S		**Sn**	**14 34 52.1**	**-2.7**
SSD	**Sandimen**	**2.00**	**239**	*e*P		**Pn**	**14 34 31.6**	**+1.0**
EAST	**Anshuo**	**2.07**	**227**	*e*P		**Pn**	**14 34 31.7**	**+0.2**
MASBT	**Mashibuluo**	**2.08**	**235**	P		**Pn**	**14 34 32.6**	**+1.1**
MASBT				S		**Sn**	**14 34 57.4**	**+0.1**
WSL	**Shuilin Townsh**	**2.09**	**263**	*e*P		**Pb**	**14 34 33.9**	**-0.9**
WSL				*e*S		**Sb**	**14 35 00.2**	**-0.5**
CHN8	**Yiju**	**2.14**	**258**	*e*S		**Sb**	**14 35 01.9**	**0.0**
SCCF	**Fangliau**	**2.23**	**231**	*e*P		**Pn**	**14 34 32.4**	**+1.7**
TSCK	**Chigu Township**	**2.30**	**254**	*e*P		**Pn**	**14 34 36.3**	**+1.7**
TSCK				*e*S		**Sn**	**14 35 05.0**	**+2.3**
SMST	**Manzhou Townsh**	**2.34**	**221**	*e*P		**Pn**	**14 34 36.4**	**+1.2**
SMST				*e*S		**Sn**	**14 35 03.4**	**-0.4**
TWKBT	**Hengchun**	**2.41**	**220**	*e*P		**Pn**	**14 34 38.2**	**+2.0**
PHUB	**P'eng-hu**	**2.69**	**264**	*e*S		**Sn**	**14 35 12.5**	**+0.2**
VWUC	**VWUC**	**3.01**	**294**	*e*P		**Pn**	**14 34 44.8**	**+0.4**
VWUC				*e*S		**Sn**	**14 35 18.9**	**-1.4**
XPSS	**Dashiqiu**	**3.74**	**327**	*e*P		**Pn**	**14 34 54.8**	**+0.4**
KNMB	**Chin-men Tao**	**3.80**	**281**	*e*P		**Pn**	**14 34 55.7**	**+0.5**
MHZQ	**Yeshan**	**3.88**	**307**	*e*P		**Pn**	**14 34 56.5**	**+0.1**
AXDP	**Jialang**	**4.26**	**286**	*e*P		**Pn**	**14 35 02.3**	**+0.8**

*SSNC **06** 14:36:03.6±1.2, 18°.90N×80°.96W, h20km±17km, mb4.1, MD3.4, ML3.5, Presumed earthquake*
*JSN **06** 14:36:03.5±1.8, 19°.86N×80°.63W, h50km±999km, MD4.4, MW4.5, Presumed earthquake*

ISC 06 14:36:02.7±2.1, 18°.90N±0°.10×80°.94W±0°.09, h35km, n12, σ1°90/19, 1C, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTDJ	**Mount Denham**	**3.30**	**101**	*e*P	**Pn**	**14 36 52.2**	**+0.3**
MTDJ				*e*S	**Sn**	**14 37 29.2**	**-0.9**
MTDJ				IAML		14 37 32.8	
	comp=Z,60nm,0.1s						
MTDJ				IAML		14 37 34.6	
	119nm,0.8s						
MTDJ	**Mount Denham**	**3.30**	**101**	*i* P	**Pn**	**14 36 52.3**	**+0.3**
MGV	**Manicaragua**	**3.32**	**16**	*e*P	**Pn**	**14 36 52.2**	**0.0**
MGV				*e*S	**Sn**	**14 37 29.0**	**-1.5**
MGV				IAML		14 37 31.6	
	comp=E,98nm,0.2s						
MGV				IAML		14 37 32.0	
	comp=N,44nm,0.4s						
CCCC	**Cccc**	**3.76**	**52**	*e*P	Pn	14 37 03.6	+5.3
CCCC				*e*S	Sn	14 37 50.2	+9.0
CAIB	**Caibarien**	**3.83**	**21**	*e*P	**Pn**	**14 37 00.4**	**+1.2**
CAIB				*e*S	**Sn**	**14 37 41.5**	**-1.6**
LMGC	**Las Mercedes**	**3.89**	**72**	*e*P	**Pn**	**14 37 01.2**	**+1.2**
LMGC				*e*S	**Sn**	**14 37 43.4**	**-1.1**
LMGC				*e*Sg		14 37 45.7	
STH	**Stony Hill**	**4.00**	**101**	*i* P	**Pn**	**14 37 02.1**	**+0.5**
SOR	**Soroa**	**4.33**	**334**	*e*P	**Pn**	**14 37 08.0**	**+1.9**
SOR				*e*S	**Sn**	**14 37 53.0**	**-2.4**
SOR				IAML		14 38 02.3	
	comp=N,24nm,0.3s						
YAR	**Yar**	**4.56**	**70**	*e*P	**Pn**	**14 37 11.4**	**+2.2**
YAR				*e*S	**Sn**	**14 38 02.0**	**+1.0**
YAR				IAmb	IAmb	14 38 03.7	
	comp=N,31nm,1.0s						
YAR				IAmb	IAmb	14 38 08.2	
	comp=E,37nm,0.5s						
HLGC	**Holguin**	**5.00**	**66**	*e*P	**Pn**	**14 37 17.5**	**+2.2**
RCC	**Rio Carpintero**	**5.07**	**77**	*e*P	**Pn**	**14 37 15.4**	**-0.8**
RCC				*e*S	**Sn**	**14 38 08.8**	**-4.7**
RCC				IAmb	IAmb	14 38 16.2	
	comp=E,21nm,1.0s						
RCC				IAmb	IAmb	14 38 20.3	
	comp=N,32nm,1.2s						
PINC	**Pinares de May**	**5.10**	**71**	*e*P	**Pn**	**14 37 17.9**	**+1.3**
PINC				*e*S	**Sn**	**14 38 16.3**	**+1.9**
PINC				IAmb	IAmb	14 38 17.6	
	comp=N,22nm,0.4s						
PINC				IAmb	IAmb	14 38 20.1	
	comp=E,30nm,1.1s						

*IDC **06** 14:37:18.3±2.0, 2°.25N×126°.71E, h0km, mb3.2/4, mbtmp3.2/4, MS3.6/1, Error ellipse: s-maj=193.2km s-min=22.4km az=67.0*
*DJA **06** 14:37:28.6±1.4, 2°.N±3°×12°.6E±°, h25km±13km, M3.2/10, mB5.7/1, MLv3.2/10, Mw(mB)5.2/1*

ISC 06 14:37:31.5±2.1, 1°.3N±0°.2×126°.4E±0°.1, h47km, n8, σ0°88/6, mb3.1/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.11**	**118**	P	**Pn**	**14 37 50.2**	**-0.4**
MNI	**Manado**	**1.56**	**275**	P	**Pn**	**14 37 56.0**	**-0.7**
MNI				S	**Sn**	**14 38 16.3**	**+0.6**
KRAI	**Karang Ratu**	**5.00**	**156**	P	**Pn**	**14 38 43.4**	**-0.7**
WRA	**Warramunga Arr**	**22.50**	**160**	P	**P**	**14 42 27.8**	**+0.5**
	0.4nm,0.5s,baz=340,slow=11,SNR=9.4						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**25.87**	**164**	P	**P**	**14 42 59.8**	**+0.8**
	0.2nm,0.4s,baz=346,slow=8.5,SNR=7.3						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.87**	**304**	LR	LR	14 58 09.4	
	comp=Z,102nm,18.1s,baz=285,slow=40						
MKAR	**Makanchi Array**	**59.36**	**326**	P	P	14 47 18.8	-10
	0.1nm,0.6s,baz=118,slow=7.6,SNR=1.2						
	0.1nm,0.6s						
KURBB	**Kurchatov Arra**	**63.60**	**328**	P	P	14 47 46.1	-11
	0.3nm,0.7s,baz=114,slow=6.7,SNR=4.7						
	0.3nm,0.7s						

IDC 06 15:15:09.3±2.3, 5°.66S×148°.68E, h0km, mb3.6/2, mbtmp3.6/4, ML2.9/2, Error ellipse: s-maj=113.6km s-min=21.1km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.02**	**202**	Pn	Pn	15 16 13.8	+1.7
	9.9nm,0.3s,baz=357,slow=4.1,SNR=40						
PMG				Sn	Sn	15 16 58.9	-1.1
	12nm,0.3s,baz=48,slow=19,SNR=7.2						
	20nm,0.3s						
WRA	**Warramunga Arr**	**19.90**	**223**	P	P	15 19 43.1	+0.5
	0.1nm,0.3s,baz=49,slow=10,SNR=12						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**22.87**	**217**	P	P	15 20 13.8	-0.9
	0.4nm,0.6s,baz=48,slow=11,SNR=26						
	0.4nm,0.6s						
PETK	**Petropavlovsk-**	**59.04**	**6**	P	P	15 25 10.7	-0.3
	1.0nm,0.5s,baz=148,slow=5.7,SNR=9.9						
	1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**146.62**	**285**	PKPbc	PKPbc	15 34 53.8	-0.3
	0.2nm,0.4s,baz=59,slow=3.3,SNR=2.5						

*IDC **06** 15:25:16.0±1.0, 43°.47N×45°.90E, h0km, mb3.7/4, mbtmp3.6/9, ML3.0/5, MS4.1/1, Error ellipse: s-maj=18.2km s-min=11.6km az=163.0*
*MOS **06** 15:25:16.0, 43°.20N×46°.03E, h6km, MPVA4.2*
*NORS **06** 15:25:16.0, 43°.19N×46°.06E, h7km, MPVA4.2*
*DRS **06** 15:25:17.5, 43°.21N×45°.98E, h15km*
*TIF **06** 15:25:17.7, 43°.15N×45°.98E, h7km±1km*
*NEIC **06** 15:25:17.0±2.5, 43°.40N±0°.05×46°.05E±0°.10, h10km±1km, mb4.3/6, Error ellipse: s-maj=11.8km s-min=8.1km az=93.0*

ISC 06 15:25:17.3±0.8, 43°.18N±0°.02×46°.00E±0°.01, h16km±5km, n101, σ1°66/166, mb3.9/7, 2C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.15**	**278**	*e*PG	**Pg**	**15 25 21.2**	**-0.1**
GROC	**Groznyy**	**0.15**	**278**	*e*Pg	**Pg**	**15 25 21.2**	**-0.1**
GROC				*e*Sg	**Sg**	**15 25 24.2**	**+0.2**
DVE	**Vedeno**	**0.24**	**158**	*d i*PG	**Pg**	**15 25 22.5**	**-0.2**
DVE				pmax	pmax		
	comp=Z,155nm,0.5s						
DVE	**Vedeno**	**0.24**	**158**	*e*Pg	**Pg**	**15 25 22.6**	**0.0**
DVE				*e*Sg	**Sg**	**15 25 26.9**	**+0.6**
DLMR	**Dylym**	**0.47**	**103**	*e*PG	**Pb**	**15 25 27.7**	**+0.5**
DLMR				*e*S	**Sb**	**15 25 35.3**	**+1.3**
DLMR	**Dylym**	**0.47**	**103**	*e*Pg	**Pb**	**15 25 27.7**	**+0.5**
DLMR				*e*Sg	**Sb**	**15 25 35.3**	**+1.3**
BTLR	**Botlikh**	**0.54**	**163**	*e*PG	**Pb**	**15 25 28.9**	**+0.5**
BTLR				*e*S	**Sb**	**15 25 37.6**	**+1.6**
BTLR	**Botlikh**	**0.54**	**163**	*e*Pg	**Pb**	**15 25 28.9**	**+0.5**
BTLR				*e*Sg	**Sb**	**15 25 37.6**	**+1.6**
DBC	**Dubki**	**0.63**	**105**	*e*PG	**Pb**	**15 25 29.9**	**0.0**
DBC				*e*S	**Sb**	**15 25 39.9**	**+1.4**
DBC	**Dubki**	**0.63**	**105**	*e*Pg	**Pb**	**15 25 29.9**	**0.0**
DBC				*e*Sg	**Sb**	**15 25 39.9**	**+1.4**
UNCR	**Uncukul**	**0.74**	**129**	*e*PG	**Pb**	**15 25 32.5**	**+0.6**
UNCR				*e*S	**Sn**	**15 25 43.9**	**-0.4**
UNCR	**Uncukul**	**0.74**	**129**	*e*Pg	**Pb**	**15 25 32.5**	**+0.6**
UNCR				*e*Sg	**Sn**	**15 25 43.9**	**-0.4**
KRNR	**Karanay**	**0.75**	**118**	*e*PG	**Pb**	**15 25 32.5**	**+0.5**
KRNR				*e*S	**Sn**	**15 25 44.0**	**-0.5**
KRNR	**Karanay**	**0.75**	**118**	*e*Pg	**Pb**	**15 25 32.5**	**+0.5**
KRNR				*e*Sg	**Sn**	**15 25 44.0**	**-0.5**
HNZR	**Khunzah**	**0.81**	**140**	*e*PG	**Pn**	**15 25 34.2**	**-0.1**
HNZR				*e*S	**Sn**	**15 25 46.3**	**+0.2**
SHTL	**Shatili**	**0.82**	**230**	P	Pg	**15 25 33.4**	**+0.3**
SHTL				S	**Sn**	**15 25 49.0**	**+2.9**
XNZR	**Khunzakh**	**0.82**	**141**	*e*Pg	**Pb**	**15 25 34.1**	**+0.9**
XNZR				*e*Sg	**Sn**	**15 25 46.3**	**0.0**
KMGR	**Komgaron**	**0.84**	**262**	*e*PG	**Pn**	**15 25 35.5**	**+0.9**
KMGR				*e*S	**Sn**	**15 25 50.0**	**+3.4**
KMGR	**Komgaron**	**0.84**	**262**	*e*Pg	**Pn**	**15 25 35.5**	**+0.9**
KMGR				*e*Sg	**Sn**	**15 25 50.0**	**+3.4**
BUJR	**Buynaksk**	**0.89**	**113**	*e*PG	**Pn**	**15 25 35.9**	**+0.8**
BUJR				*e*S	**Sn**	**15 25 49.7**	**+2.0**
ARKR	**Arakani**	**0.93**	**128**	*e*PG	**Pn**	**15 25 36.0**	**+0.2**
ARKR				*e*S	**Sn**	**15 25 49.9**	**+1.1**
ARKR	**Arakani**	**0.93**	**128**	*e*Pg	**Pn**	**15 25 36.0**	**+0.2**
ARKR				*e*Sg	**Sn**	**15 25 49.9**	**+1.1**
VLKR	**Vladikavkaz**	**0.98**	**263**	*e*PG	**Pn**	**15 25 38.0**	**+1.6**
VLKR				*e*S	**Sn**	**15 25 54.1**	**+4.0**
VLKR	**Vladikavkaz**	**0.98**	**263**	*e*Pg	**Pn**	**15 25 38.0**	**+1.6**
VLKR				*e*Sg	**Sn**	**15 25 54.1**	**+4.0**
GNBR	**Gunib**	**1.06**	**138**	*e*PG	**Pg**	**15 25 38.5**	**+0.7**
GNBR				*e*S	**Sn**	**15 25 54.1**	**+2.1**
GNBR	**Gunib**	**1.06**	**138**	*e*Pg	**Pg**	**15 25 38.5**	**+0.7**
GNBR				*e*Sg	**Sn**	**15 25 54.1**	**+2.1**
BTKR	**Batakoyurt**	**1.08**	**281**	*e*PG	**Pg**	**15 25 39.9**	**+1.7**
BTKR				*e*S	**Sn**	**15 25 58.0**	**+5.4**
BTKR	**Batakoyurt**	**1.08**	**281**	*e*Pg	**Pg**	**15 25 39.9**	**+1.7**
BTKR				*e*Sg	**Sn**	**15 25 58.0**	**+5.4**
KANR	**Karaman**	**1.09**	**89**	*e*PG	**Pg**	**15 25 40.7**	**+2.5**
KANR				*i* S	**Sn**	**15 25 55.5**	**+2.9**
TLTR	**Tlyarata**	**1.10**	**166**	*e*PG	**Pb**	**15 25 38.5**	**+0.4**
TLTR	**Tlyarata**	**1.10**	**166**	*e*Pg	**Pb**	**15 25 38.5**	**+0.4**
TLTR				*e*Sg	**Sn**	**15 25 54.2**	**+1.0**
MAK	**Makhachkala**	**1.12**	**101**	*i*PG	**Pg**	**15 25 40.5**	**+1.6**
MAK				*e*S	**Sn**	**15 25 56.9**	**+3.5**
MAK				pmax	pmax		
	comp=Z,128nm,0.2s						
MAK				smax	smax		
	comp=N,850nm,0.5s						
MAK				smax	smax		
	comp=N,695nm,0.5s						
MAK	**Makhachkala**	**1.12**	**101**	*e*Pg	**Pg**	**15 25 40.6**	**+1.6**
MAK				*e*Sg	**Sn**	**15 25 57.3**	**+3.9**
CHRG	**Chargali**	**1.16**	**223**	P	**Pb**	**15 25 39.9**	**+0.8**
ARNR	**Ardon**	**1.26**	**271**	*e*PG	**Pn**	**15 25 40.4**	**+0.2**
ARNR				*e*S	**Sg**	**15 26 00.2**	**+2.3**
ARNR	**Ardon**	**1.26**	**271**	*e*Pg	**Pn**	**15 25 40.4**	**+0.2**
ARNR				*e*Sg	**Sg**	**15 26 00.2**	**+2.3**
LACR	**Lac**	**1.30**	**255**	*e*PG	**Pb**	**15 25 42.1**	**+0.7**
LACR				*e*S	**Sg**	**15 26 00.3**	**+1.0**
LACR	**Lac**	**1.30**	**255**	*e*Pg	**Pb**	**15 25 42.1**	**+0.7**
LACR				*e*Sg	**Sg**	**15 26 00.3**	**+1.0**
KMKR	**Kumukh**	**1.32**	**142**	*e*PG	**Pg**	**15 25 43.0**	**+0.2**
KMKR				*e*S	**Sg**	**15 26 02.3**	**+2.2**
KMKR	**Kumukh**	**1.32**	**142**	*e*Pg	**Pg**	**15 25 43.0**	**+0.2**
KMKR				*e*Sg	**Sg**	**15 26 02.3**	**+2.2**
GUDG	**Gudauri**	**1.33**	**238**	P	**Pg**	**15 25 43.2**	**+0.2**
GUDG				S	**Sg**	**15 26 00.7**	**+0.4**
GUDG	**Gudauri**	**1.33**	**238**	*e*PG	**Pb**	**15 25 42.8**	**+0.8**
GUDG	**Gudauri**	**1.33**	**238**	*e*Pg	**Pb**	**15 25 42.8**	**+0.8**
GUDG				*e*Sg	**Sg**	**15 26 00.8**	**+0.4**
LGD	**Lagodekhi**	**1.36**	**172**	P	**Pg**	**15 25 43.9**	**+0.5**
PRTR	**Priterechnaya**	**1.38**	**295**	*e*PG	**Pg**	**15 25 43.8**	**0.0**
PRTR				*e*S	**Sg**	**15 26 04.0**	**+2.3**
SGKR	**Sergokala**	**1.42**	**120**	*e*PG	**Pg**	**15 25 44.4**	**-0.1**
SGKR				*e*S	**Sg**	**15 26 05.0**	**+2.1**
KORR	**Kora**	**1.42**	**267**	*e*PG	**Pg**	**15 25 44.9**	**+0.3**
KORR				*e*S	**Sg**	**15 26 06.6**	**+3.5**
KORR	**Kora**	**1.42**	**267**	*e*Pg	**Pg**	**15 25 44.9**	**+0.3**
KORR				*e*Sg	**Sg**	**15 26 06.6**	**+3.5**
STDR	**Stavd-Durt**	**1.43**	**278**	*e*PG	**Pg**	**15 25 45.1**	**+0.3**
STDR				*e*S	**Sg**	**15 26 05.9**	**+2.5**
STDR	**Stavd-Durt**	**1.43**	**278**	*e*Pg	**Pg**	**15 25 45.1**	**+0.3**
STDR				*e*Sg	**Sg**	**15 26 05.9**	**+2.5**
URKR	**Urkarakh**	**1.57**	**130**	*e*PN	**Pg**	**15 25 48.1**	**+0.6**
URKR				*e*S	**Sg**	**15 26 10.8**	**+2.8**
URKR	**Urkarakh**	**1.57**	**130**	*e*Pg	**Pg**	**15 25 48.1**	**+0.6**
URKR				*e*Sg	**Sg**	**15 26 10.8**	**+2.8**
LSNR	**Lesken**	**1.59**	**274**	*e*PN	**Pg**	**15 25 47.3**	**-0.6**
LSNR				*e*S	**Sg**	**15 26 11.1**	**+2.4**
LSNR	**Lesken**	**1.59**	**274**	*e*Pg	**Pg**	**15 25 47.3**	**-0.6**
LSNR				*e*Sg	**Sg**	**15 26 11.1**	**+2.4**
TBLG	**Delisi**	**1.73**	**213**	P	**Pg**	**15 25 50.6**	**+0.2**
TBLG				S	**Sg**	**15 26 15.2**	**+2.3**
NCK	**Nalchik**	**1.79**	**281**	*e*PN	**Pn**	**15 25 48.6**	**+1.1**
NCK				*e*S	**Sg**	**15 26 15.1**	**+0.4**
NCK	**Nalchik**	**1.79**	**281**	*e*Pg	**Pn**	**15 25 48.6**	**+1

*UCR **06** 15:25:36.6±1.3, 11°.54N×85°.82W, h10km±10km, MW4.0, Presumed earthquake*
*CATAC **06** 15:25:38.7±0.2, 12°N±1°×8°.6W±°, h3km±1km, M3.3/19, MLv3.3/19, Error ellipse: s-maj=3.2km s-min=1.7km az=54.5, confirmed*
ISC 06 15:25:37.1±1.0, **11°.58N**±0°.03×**85°.79W**±0°.04, **h14**km±8km, **n41**, σ0°.90/66, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORN	**Al O del Volca**	**0.14**	**105**	P	**Pb**	**15 25 41.4**	**-0.2**
MORN				S	**Sb**	**15 25 44.4**	**-0.2**
NADN	**Granada**	**0.29**	**304**	P	**Pb**	**15 25 44.0**	**-0.2**
NADN				S	**Sg**	**15 25 47.9**	**+0.5**
CARN	**Rivas**	**0.47**	**147**	P	**Pb**	**15 25 47.6**	**+0.4**
CARN				S	**Sb**	**15 25 55.0**	**+0.9**
CARN	**Rivas**	**0.47**	**147**	*eP*	**Pg**	**15 25 46.1**	**-0.4**
CARN				*eS*	**Sg**	**15 25 53.6**	**+0.8**
NANN	**Nandasmo**	**0.48**	**317**	P	**Pb**	**15 25 47.3**	**-0.2**
NANN				S	**Sb**	**15 25 55.0**	**+0.5**
LCRUZ	**La Cruz**	**0.52**	**163**	*eP*	**Pg**	**15 25 47.2**	**-0.3**
LCRUZ				*eS*	**Sb**	**15 25 55.6**	**-0.1**
MASN	**Masaya**	**0.54**	**318**	P	**Pb**	**15 25 49.1**	**+0.6**
MASN				S	**Sb**	**15 25 56.4**	**+0.3**
MAS3	**Al N del Volca**	**0.58**	**319**	P	**Pb**	**15 25 49.1**	**-0.1**
MAS3				S	**Sb**	**15 25 56.6**	**-0.7**
UNAN	**Cigeo UNAN**	**0.71**	**318**	P	**Pb**	**15 25 51.0**	**-0.3**
UNAN				S	**Sb**	**15 26 01.2**	**+0.2**
MGAN	**Managua**	**0.72**	**321**	S	**Sb**	**15 26 01.3**	**0.0**
TISN	**Laguna Tiscapa**	**0.73**	**320**	P	**Pg**	**15 25 50.5**	**-0.8**
PEJA	**Penjamo Buenos**	**0.83**	**146**	*eP*	**Pb**	**15 25 52.0**	**-1.3**
SAPS	**Ciudad Sandino**	**0.84**	**314**	P	**Pn**	**15 25 53.9**	**-0.7**
SAPS				S	**Sn**	**15 26 06.4**	**-0.5**
BOAB	**BOACO BROADBAN**	**0.87**	**8**	P	**Pn**	**15 25 55.5**	**+0.4**
BOAB				S	**Sn**	**15 26 07.6**	**+0.1**
VORI	**VORI**	**0.87**	**150**	*eP*	**Pb**	**15 25 53.7**	**-0.6**
LAPC	**Finca la Perla**	**0.88**	**157**	*eP*	**Pb**	**15 25 53.2**	**-1.0**
VRLE	**La Escondida,**	**0.89**	**152**	*eP*	**Pb**	**15 25 53.8**	**-0.7**
GPS1	**Guardaparques**	**0.91**	**152**	*eP*	**Pb**	**15 25 54.3**	**-0.5**
GPS2	**Hotel Rincn d**	**0.93**	**153**	*eP*	**Pb**	**15 25 54.6**	**-0.5**
GPS2				*eS*	**Sn**	**15 26 08.9**	**-0.2**
ELI1	**Hacienda Flor**	**0.96**	**166**	P	**Pn**	**15 25 58.3**	**+2.0**
ELI1				S	**Sn**	**15 26 11.5**	**+1.8**
COPN	**Copaltepe**	**0.99**	**307**	P	**Pn**	**15 25 57.7**	**+1.0**
COPN	**Copaltepe**	**0.99**	**307**	*eP*	**Pb**	**15 25 54.1**	**-2.0**
COPN				*eS*	**Sb**	**15 26 08.5**	**-0.5**
VMAR	**Armenia, Volca**	**1.01**	**139**	*eP*	**Pb**	**15 25 54.5**	**-2.0**
VMAR				*eS*	**Sb**	**15 26 09.3**	**-0.4**
ALIBA	**Liberia Airpor**	**1.01**	**167**	*eP*	**Pb**	**15 25 55.4**	**-1.1**
MESS	**Mesas**	**1.02**	**145**	*eP*	**Pb**	**15 25 54.5**	**-2.2**
MESS				*eS*	**Sb**	**15 26 10.0**	**+0.1**
UPAL	**Upala**	**1.02**	**132**	P	**Pg**	**15 25 58.9**	**+2.1**
UPAL				S	**Sn**	**15 26 12.4**	**+1.2**
UPAL	**Upala**	**1.02**	**132**	*eP*	**Pb**	**15 25 55.6**	**-1.0**
UPAL				*eS*	**Sb**	**15 26 09.4**	**-0.5**
HORNC	**Hornillas**	**1.05**	**145**	*eP*	**Pb**	**15 25 55.7**	**-1.5**
HORNC				*eS*	**Sb**	**15 26 10.4**	**-0.5**
CUI	**Cuipilapa**	**1.10**	**146**	*eP*	**Pb**	**15 25 56.7**	**-1.4**
CUI				*eS*	**Sb**	**15 26 11.5**	**-0.9**
BAGA	**Bagaces**	**1.17**	**154**	*eP*	**Pn**	**15 25 58.8**	**-0.4**
TENO	**El Achiote**	**1.18**	**138**	*eP*	**Pn**	**15 25 58.9**	**-0.4**
ELVJ	**El Viejo (Barb**	**1.21**	**158**	*eP*	**Pb**	**15 26 00.2**	**+0.3**
QUEB	**Quebradon, Cot**	**1.29**	**137**	*eS*	**Sn**	**15 26 18.1**	**+0.1**
MATN	**Matagalpa**	**1.34**	**354**	P	**Pg**	**15 26 02.7**	**-0.4**
MATN				S	**Sg**	**15 26 21.4**	**+0.8**
JTS	**Las Juntas de**	**1.52**	**147**	*eP*	**Pn**	**15 26 02.7**	**-1.3**
ARE1	**Arenal 1**	**1.53**	**137**	*eP*	**Pb**	**15 26 04.7**	**-0.7**
VARE2	**V. Arenal**	**1.53**	**137**	*eP*	**Pb**	**15 26 04.7**	**-0.7**
LIMN	**Finca el Limon**	**1.57**	**339**	P	**Pg**	**15 26 07.1**	**-0.3**
LIMN				S	**Sg**	**15 26 28.0**	**+0.1**
PKGN	**Cerro Pekin**	**1.59**	**313**	P	**Pb**	**15 26 06.6**	**+0.3**
PKGN				S	**Sg**	**15 26 28.7**	**+0.3**
INDI	**Punta indio, G**	**1.73**	**171**	P	**Pg**	**15 26 10.1**	**-0.2**
INDI				S	**Sg**	**15 26 33.0**	**+0.1**
CSGN	**Cosiguina Volc**	**2.22**	**309**	P	**Pb**	**15 26 16.6**	**-0.6**
CSGN				S	**Sb**	**15 26 45.4**	**+0.8**

*IDC **06** 15:28:04.7±2.0, 0°.96N×132°.79E, h0km, mb3.2/3, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=47.4km s-min=27.5km az=91.0*
*DJA **06** 15:28:13.1±0.2, 0°.5×3°×12°.9E±°, h10km, M3.4/12, MLv3.4/12*
ISC 06 15:28:13.3±1.1, **0°.17S**±0°.10×**129°.39E**±0°.06, **h10**km, **n10, σ0°.98/13, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.99**	**110**	P	**Pn**	**15 28 47.5**	**+0.4**
SWI				S	**Sn**	**15 29 13.7**	**+1.6**
SIJI	**Sorong**	**2.00**	**110**	Pn	**Pn**	**15 28 46.8**	**-0.5**
	11nm,0.3s,baz=332,slow=21,SNR=34						
SIJI				Sn	**Sb**	**15 29 14.5**	**-0.4**
	7.3nm,0.3s,baz=106,slow=21,SNR=11						
	28nm,0.3s						
SIJI	**Sorong**	**2.00**	**110**	P	**Pn**	**15 28 47.2**	**0.0**
SIJI				S	**Sn**	**15 29 13.5**	**+1.1**
TNTI	**Ternate**	**2.23**	**295**	P	**Pn**	**15 28 50.6**	**+0.2**
AAI	**Ambon**	**3.69**	**199**	P	**Pn**	**15 29 10.6**	**+0.1**
NLAI	**Namlea**	**3.81**	**217**	P	**Pn**	**15 29 12.9**	**+0.7**
FAKI	**Fak Fak**	**3.95**	**134**	P	**Pn**	**15 29 14.4**	**+0.3**
WRA	**Warramunga Arr**	**20.24**	**166**	P	**P**	**15 32 46.8**	**-2.1**
	0.5nm,0.8s,baz=351,slow=9.9,SNR=2.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**23.76**	**170**	P	**P**	**15 33 25.9**	**-0.3**
	0.9nm,0.7s,baz=351,slow=9.9,SNR=18						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**62.25**	**325**	P	**P**	**15 38 35.6**	**0.0**
	0.3nm,0.8s,baz=110,slow=7.3,SNR=2.2						
	0.3nm,0.8s						

*IDC **06** 15:38:01.6±1.2, 1°.16S×128°.94E, h0km, mb3.5/3, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=27.8km s-min=21.1km az=59.0*
ISC 06 15:38:03.0±1.2, **1°.2S**±0°.2×**128°.9E**±0°.1, **h10**km, **n6**, σ1°.04/7, **mb3.6/3, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.36**	**82**	Pn	**Pn**	**15 38 41.6**	**-0.2**
	31nm,0.3s,baz=108,slow=11,SNR=98						
SIJI				Sn	**Sn**	**15 39 10.9**	**+0.1**
	18nm,0.3s,baz=109,slow=24,SNR=18						
	75nm,0.3s						
FITZ	**Fitzroy Crossi**	**17.09**	**191**	P	**P**	**15 42 03.0**	**-1.0**
	0.1nm,0.3s,baz=13,slow=12,SNR=1.7						
	2.2nm,0.9s						
WRA	**Warramunga Arr**	**19.36**	**164**	P	**P**	**15 42 28.5**	**-0.4**
	0.3nm,0.3s,baz=346,slow=12,SNR=12						
WRA				S	Sn	15 45 53.7	-14
	0.3nm,0.4s,baz=347,slow=26,SNR=2.7						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**22.84**	**168**	P	**P**	**15 43 07.8**	**+1.3**
	1.2nm,0.5s,baz=347,slow=10,SNR=22						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**62.84**	**326**	P	**P**	**15 48 28.4**	**-0.7**
	0.2nm,0.5s,baz=129,slow=5.9,SNR=6.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**67.06**	**328**	P	**P**	**15 48 57.3**	**+0.9**
	0.2nm,0.5s,baz=125,slow=6.3,SNR=4.4						
	0.2nm,0.5s						

*IDC **06** 15:38:43.5±2.4, 1°.20S×128°.94E, h0km, mb3.7/3, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=203.8km s-min=23.7km az=69.0*
*DJA **06** 15:38:47.3±1.3, 1°.5×2°×12°.9E±°, h13km±10km, M4.0/13, MLv4.0/13*
ISC 06 15:38:45.6±1.1, **1°.03S**±0°.08×**128°.97E**±0°.07, **h10**km, **n10, σ1°.83/10, mb3.8/3, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.30**	**86**	Sn	**Sn**	**15 39 52.3**	**+0.2**
	20nm,0.3s,baz=125,slow=12,SNR=6.0						
TNTI	**Ternate**	**2.40**	**318**	P	**Pn**	**15 39 26.1**	**+1.0**
AAI	**Ambon**	**2.75**	**196**	P	**Pn**	**15 39 31.6**	**+1.7**
SANI	**Sanana**	**3.15**	**251**	P	**Pn**	**15 39 36.3**	**+1.0**
BNDI	**Bandanaira**	**3.59**	**165**	P	**Pn**	**15 39 42.9**	**+1.5**
FAKI	**Fak Fak**	**3.77**	**120**	P	**Pn**	**15 39 45.2**	**+1.3**
WRA	**Warramunga Arr**	**19.52**	**165**	P	**P**	**15 43 09.9**	**-3.4**
	0.4nm,0.3s,baz=348,slow=12,SNR=6.5						
	2.2nm,0.7s						
ASAR	**Alice Springs**	**23.00**	**168**	P	**P**	**15 43 49.4**	**-1.5**
	1.8nm,0.5s,baz=344,slow=9.5,SNR=9.1						
	1.8nm,0.5s						
MKAR	**Makanchi Array**	**62.72**	**326**	P	**P**	**15 49 10.5**	**-0.5**
	0.4nm,0.8s,baz=126,slow=7.7,SNR=2.8						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**66.93**	**328**	P	**P**	**15 49 39.1**	**+0.8**
	0.5nm,0.7s,baz=127,slow=5.3,SNR=5.4						
	0.5nm,0.7s						

*IDC **06** 15:42:51.2±2.5, 6°.16S×130°.14E, h150km±22km, mb3.2/3, mbtmp3.8/6, Error ellipse: s-maj=39.1km s-min=20.6km az=118.0*
*DJA **06** 15:42:51.2±0.4, 6°.5×3°×13°.0E±°, h178km±6km, M3.6/14, mB4.9/1, mb3.3/7, MLv3.8/14, Mw(mB)4.2/1*
ISC 06 15:42:51.1±1.0, **6°.19S**±0°.06×**130°.33E**±0°.09, **h200**km, **n12, σ3°.37/14, mb3.6/3, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.71**	**346**	P	**Pn**	**15 43 26.0**	**-0.8**
BNDI				S	**Sn**	**15 43 52.6**	**-2.0**
SAUI	**Saumlaki**	**2.02**	**152**	P	**Pn**	**15 43 28.0**	**-1.8**
KRAI	**Karang Ratu**	**3.45**	**326**	P	**Pn**	**15 43 47.0**	**+0.9**
FAKI	**Fak Fak**	**3.77**	**31**	P	**Pn**	**15 43 48.6**	**-1.5**
KMPI	**Kaimana, Papua**	**4.20**	**53**	P	**Pn**	**15 43 55.2**	**-0.1**
SIJI	**Sorong**	**5.37**	**10**	P	**Pn**	**15 44 09.5**	**-0.8**
	5.1nm,0.3s,baz=36,slow=23,SNR=7.6						
SIJI				S	**Sn**	**15 45 05.9**	**-6.9**
	13nm,0.2s,baz=250,slow=23,SNR=12						
SIJI	**Sorong**	**5.37**	**10**	P	**Pn**	**15 44 09.5**	**-0.8**
	2µm8.0nm,1.1s						
BATI	**Baumata**	**7.71**	**238**	P	**Pn**	**15 44 39.5**	**-1.2**
	19nm,0.7s,baz=96,slow=20,SNR=2.0						
BATI				S	**Sn**	**15 46 03.3**	**-4.6**
	8.3nm,0.4s,baz=150,slow=23,SNR=1.7						
ASAR	**Alice Springs**	**17.71**	**169**	P	**Pn**	**15 46 48.2**	**+2.4**
	0.7nm,0.5s,baz=352,slow=9.9,SNR=4.3						
MKAR	**Makanchi Array**	**67.74**	**326**	P	P	15 53 32.2	+5.1
	0.4nm,0.3s,baz=116,slow=8.1,SNR=14						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**71.01**	**334**	P	**P**	**15 53 50.8**	**+3.9**
	0.5nm,0.3s,baz=125,slow=9.4,SNR=1.6						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**72.00**	**328**	P	**P**	**15 53 57.5**	**+4.6**
	0.1nm,0.4s,baz=123,slow=4.6,SNR=2.0						
	0.1nm,0.4s						

*KRNET **06** 15:50:26.4±0.1, 39°.93N×77°.16E, h15km, mb3.2*
*SOME **06** 15:50:26.5, 39°.97N×77°.17E, h5km*
*NNC **06** 15:50:28.5±0.8, 40°.04N×77°.22E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=5.6km s-min=4.4km az=177.0*
ISC 06 15:50:27.1±1.8, **39°.86N**±0°.09×**77°.25E**±0°.05, **h10**km, **n39, σ1°.48/60, 16C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.72**	**315**	⇑*eP*	**Pn**	**15 50 56.3**	**-1.0**
JNKS				⇑*eS*	**Sn**	**15 51 18.0**	**-1.5**
NRN	**Naryn**	**1.84**	**329**	⇓*eP*	**Pn**	**15 50 58.6**	**-0.4**
NRN				⇓*eS*	**Sn**	**15 51 22.1**	**-0.4**
TARG	**Taragay, Kyrgy**	**1.92**	**13**	⇑*eP*	**Pn**	**15 51 00.7**	**+0.5**
TARG				⇑*eS*	**Sb**	**15 51 25.8**	**-0.8**
KDJ	**Kajisay**	**2.27**	**359**	⇑*eP*	**Pn**	**15 51 05.4**	**+0.6**
KDJ				⇑*eS*	**Sn**	**15 51 34.0**	**+1.0**
ULHL	**Ulahol**	**2.51**	**343**	⇑*eP*	**Pn**	**15 51 08.6**	**+0.5**
ULHL				⇑*eS*	**Sn**	**15 51 39.3**	**+0.5**
BOOM	**Boomskoye usch**	**2.81**	**340**	⇓*eP*	**Pn**	**15 51 12.7**	**+0.5**
BOOM				⇓*eS*	**Sn**	**15 51 46.6**	**+0.3**
SFK	**Sufi-Kurgan**	**2.88**	**274**	⇑*eP*	**Pn**	**15 51 14.1**	**+0.8**
SFK				⇑*eS*	**Sn**	**15 51 48.9**	**+0.8**
UCH	**Uchtor**	**3.15**	**320**	⇑*eP*	**Pn**	**15 51 17.5**	**+0.4**
UCH				⇑*eS*	**Sn**	**15 51 54.8**	**-0.1**
TNSS	**Tian-Shan**	**3.19**	**356**	Pg	**Pb**	**15 51 24.0**	**0.0**
	1.6nm,0.4s						
TNSS				Lg	Lg	15 52 05.1	
	2.4nm,0.5s						
TNSS	**Tian-Shan**	**3.19**	**356**	*eP*	**Pb**	**15 51 24.0**	**0.0**
	1.6nm,0.4s						
TNSS				*eS*	**Sb**	**15 52 05.1**	**+2.0**
	2.4nm,0.5s						
MDOK	**Medeo**	**3.31**	**357**	Pg	**Pb**	**15 51 26.0**	**0.0**
	5.7nm,0.3s						
MDOK				Lg	Lg	15 52 08.6	
	20nm,0.7s						
SATY	**Saty**	**3.32**	**15**	Pg	**Pb**	**15 51 26.3**	**+0.2**
	4.7nm,0.3s						
SATY				Lg	Lg	15 52 09.1	
	17nm,0.6s						
KST	**Kastek**	**3.33**	**344**	Pg	**Pb**	**15 51 26.0**	**-0.2**
	4.1nm,0.4s						
KST				Lg	Lg	15 52 08.6	
	5.6nm,0.5s						
KST	**Kastek**	**3.33**	**344**	*eP*	**Pb**	**15 51 26.0**	**-0.2**
	4.1nm,0.4s						
KST				*eS*	**Sb**	**15 52 08.6**	**+1.8**
	5.6nm,0.5s						
MTBS	**Maitube**	**3.33**	**350**	Pg	**Pb**	**15 51 26.6**	**+0.3**
	1.5nm,0.3s						
MTBS				Lg	Lg	15 52 09.6	
	5.3nm,0.2s						
MTBS	**Maitube**	**3.33**	**350**	*eP*	**Pb**	**15 51 26.6**	**+0.3**
	1.5nm,0.3s						
MTBS				*eS*	**Sb**	**15 52 09.7**	**+2.8**
	5.3nm,0.2s						
KOTS	**Kotyrbulak**	**3.38**	**358**	Pg	**Pb**	**15 51 27.2**	**+0.1**
	4.4nm,0.2s						
KOTS				Lg	Lg	15 52 10.6	
	19nm,0.4s						
KOTS	**Kotyrbulak**	**3.38**	**358**	*eP*	**Pb**	**15 51 27.2**	**+0.1**
	4.4nm,0.2s						
KOTS				*eS*	**Sb**	**15 52 10.6**	**+2.3**
	19nm,0.4s						
AAK	**Ala-Archa**	**3.47**	**324**	⇑Pg	**Pb**	**15 51 28.5**	**-0.2**
	2.6nm,0.6s						
AAK				⇑Lg	Lg	15 52 13.8	
	1.3nm,0.5s						
AAK	**Ala-Archa**	**3.47**	**324**	⇑*eP*	**Pn**	**15 51 21.8**	**+0.5**
AAK				⇑*eS*	**Sn**	**15 52 02.2**	**-0.3**
UZB	**Uzunbulak**	**3.55**	**21**	Pg	**Pb**	**15 51 29.9**	**-0.1**
	2.5nm,0.2s						
UZB				Lg	Lg	15 52 15.1	
	5.8nm,0.6s						
UZB	**Uzunbulak**	**3.55**	**21**	*eP*	**Pb**	**15 51 29.9**	**-0.1**
	2.5nm,0.2s						
UZB				*eS*	**Sb**	**15 52 15.1**	**+1.9**
	5.8nm,0.6s						
DGS	**Degeres**	**3.56**	**342**	Pg	**Pb**	**15 51 29.7**	**-0.5**
	4.8nm,0.5s						
DGS				Lg	Lg	15 52 15.0	
	5.3nm,0.4s						
DGS	**Degeres**	**3.56**	**342**	*eP*	**Pb**	**15 51 29.7**	**-0.5**
	4.8nm,0.5s						
DGS				*eS*	**Sb**	**15 52 15.0**	**+1.5**
	5.3nm,0.4s						
KURS	**Kuram**	**3.69**	**10**	Pg	**Pb**	**15 51 32.2**	**-0.2**
	2.7nm,0.5s						
KURS				Lg	Lg	15 52 19.5	
	3.2nm,0.5s						
SHLS	**Shalkode**	**3.69**	**26**	Pg	**Pg**	**15 51 36.0**	**-1.9**
	1.3nm,0.1s						
SHLS				Lg	Lg	15 52 25.8	
	3.5nm,0.2s						
SHLS	**Shalkode**	**3.69**	**26**	*eP*	**Pg**	**15 51 36.0**	**-1.9**
	1.3nm,0.1s						
SHLS				*eS*	**Sg**	**15 52 25.8**	**+0.1**
	3.5nm,0.2s						
KPKS	**Kokpek**	**3.77**	**16**	Pg	**Pb**	**15 51 33.4**	**-0.2**
	1.5nm,0.3s						
KPKS				Lg	Lg	15 52 21.4	
	6.0nm,0.5s						
KPKS	**Kokpek**	**3.77**	**16**	*eP*	**Pb**	**15 51 33.4**	**-0.2**
	1.5nm,0.3s						
KPKS				*eS*	**Sb**	**15 52 21.4**	**+2.0**
	6.0nm,0.5s						
PDGK	**Podgornoye**	**3.86**	**25**	⇓Pg	**Pb**	**15 51 34.3**	**-1.0**
	1.2nm,0.4s						
PDGK				⇓Lg	Lg	15 52 25.4	
	9.7nm,0.7s						
KTBS	**Karatobe**	**3.88**	**354**	Pg	**Pb**	**15 51 35.9**	**+0.3**
	2.4nm,0.3s						
KTBS				Lg	Lg	15 52 25.7	
	3.0nm,0.5s						
KTBS	**Karatobe**	**3.88**	**354**	*eP*	**Pb**	**15 51 35.9**	**+0.3**
	2.4nm,0.3s						
KTBS				*eS*	**Sb**	**15 52 25.7**	**+3.2**
	3.0nm,0.5s						
KRBS	**Karabastau**	**4.01**	**343**	Pg	**Pb**	**15 51 37.7**	**-0.2**
	1.4nm,0.2s						
KRBS				Lg	Lg	15 52 28.1	
	0.9nm,0.5s						
KRBS	**Karabastau**	**4.01**	**343**	*eP*	**Pb**	**15 51 37.6**	**-0.2**
	1.4nm,0.2s						
KRBS				*eS*	**Sb**	**15 52 29.0**	**+2.5**
	0.9nm,0.5s						
ARXS	**Arharly**	**4.38**	**5**	Pg	**Pb**	**15 51 44.9**	**+0.8**
	2.8nm,0.6s						
ARXS				Lg	Lg	15 52 41.3	
	8.5nm,0.5s						
ARXS	**Arharly**	**4.38**	**5**	*eP*	**Pb**	**15 51 44.9**	**+0.8**
	2.8nm,0.6s						
ARXS				*eS*	**Sb**	**15 52 41.3**	**+4.3**
	8.5nm,0.5s						
KNOS	**Konyrlen**	**4.72**	**17**	Pg	**Pb**	**15 51 51.6**	**+1.6**
	1.1nm,0.6s						
KNOS				Lg	Lg	15 52 52.7	
	1.2nm,0.2s						
DJR	**Jarkent**	**4.86**	**22**	Pg	**Pb**	**15 51 54.8**	**+2.5**
	0.2nm,0.1s						
DJR				Lg	Lg	15 52 57.9	
	1.6nm,0.3s						
DJR	**Jarkent**	**4.86**	**22**	*eP*	**Pb**	**15 51 54.8**	**+2.5**
	0.2nm,0.1s						
DJR				*eS*	**Sg**	**15 52 57.9**	**-5.1**
	1.6nm,0.3s						

*MEX **06** 16:03:32.6±1.0, 14°.68N×92°.62W, h80km±10km, MD4.0*
*CATAC **06** 16:03:33.1±0.5, 15°.N±3°×9°.3W±°, h34km±4km, M3.7/13, MLv3.7/13, Error ellipse: s-maj=7.9km s-min=3.8km az=43.7, confirmed*
*GCG **06** 16:03:33.6±1.8, 14°.68N×92°.62W, h55km±16km, MD4.1, ML4.0, Presumed earthquake*
ISC 06 16:03:31.6±1.2, **14°.60N**±0°.05×**92°.72W**±0°.03, **h58**km±11km, **n45**, σ2°.04/72, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.54**	**54**	*i* P	**Pn**	**16 03 44.2**	**+0.5**
THIG				*i* S	**Sn**	**16 03 53.6**	**+1.0**
THIG		**0.54**	**54**	*i* P	**Pn**	**16 03 44.2**	**+0.5**
THIG				IAML		16 03 54.1	
	comp=E,5µm,0.3s						
SMCA	**Catarina**	**0.67**	**67**	*i* P	**Pn**	**16 03 45.9**	**+0.5**
SMCA				*i* S	**Sn**	**16 03 55.6**	**+0.1**
SMCA				IAML		16 03 56.7	
	comp=N,5µm,0.3s						
PATR	**El Naranjo**	**0.70**	**42**	*i* P	**Pn**	**16 03 45.6**	**-0.4**
PATR				*i* S	**Sn**	**16 03 55.5**	**-0.9**
CHUJ	**Union Juarez**	**0.77**	**50**	*i* P	**Pn**	**16 03 46.6**	**-0.2**
CHUJ				*i* S	**Sn**	**16 03 57.2**	**-0.8**
PAVE	**Pavencul**	**0.79**	**41**	*i* P	**Pn**	**16 03 46.9**	**-0.2**
PAVE				*i* S	**Sn**	**16 03 57.7**	**-0.7**
RTAL	**Retalhuleu**	**0.99**	**94**	*eP*	**Pn**	**16 03 50.3**	**+0.8**
RTAL				*eS*	**Sn**	**16 04 03.6**	**+0.9**
RTAL	**Retalhuleu**	**0.99**	**94**	P	**Pn**	**16 03 50.7**	**+1.2**
PCIG		**1.21**	**336**	*i* P	**Pn**	**16 03 52.6**	**+0.3**
PCIG				*i* S	**Sn**	**16 04 07.3**	**-0.4**
SOKI	**Kika Raxquin**	**1.29**	**80**	*i* P	**Pn**	**16 03 56.0**	**+2.2**
STG2	**El Palmar, Qui**	**1.31**	**97**	*i* P	**Pn**	**16 03 50.9**	**-2.9**
STG2				*i* S	**Sn**	**16 04 04.1**	**-6.3**
STG8	**El Palmar, Qui**	**1.33**	**96**	*i* P	**Pn**	**16 03 51.5**	**-2.7**
STG8				*i* S	**Sn**	**16 04 05.5**	**-5.5**
STG5	**El Palmar, Qui**	**1.34**	**98**	*i* P	**Pn**	**16 03 52.0**	**-2.2**
HUEH	**Huehuetenango**	**1.38**	**58**	*eP*	**Pn**	**16 03 56.4**	**+1.6**
HUEH				*eS*	**Sn**	**16 04 13.8**	**+1.7**
HUEH	**Huehuetenango**	**1.38**	**58**	P	**Pn**	**16 03 54.4**	**-0.4**
HUEH				S	**Sn**	**16 04 12.9**	**+0.8**
HUEH	**Huehuetenango**	**1.38**	**58**	*i* S	**Sn**	**16 04 14.1**	**+1.9**
HUEH				IAML		16 04 16.3	
	comp=N,5µm,0.7s						
QUIS	**Sacapulas**	**1.71**	**66**	IAML		16 04 25.6	
	comp=E,1µm,0.4s						
CCIG	**Comitan**	**1.77**	**18**	*eP*	**Pn**	**16 04 01.5**	**+1.4**
CCIG				*eS*	**Sn**	**16 04 22.9**	**+1.3**
CCIG	**Comitan**	**1.77**	**18**	P	**Pn**	**16 04 01.8**	**+1.7**
CCIG	**Comitan**	**1.77**	**18**	*i* P	**Pn**	**16 04 01.8**	**+1.7**
ESSG	**Sabana Grande**	**1.84**	**96**	*i* P	**Pn**	**16 04 02.2**	**+1.3**
CARR	**Arriaga**	**2.01**	**325**	*i* P	**Pn**	**16 04 04.4**	**+1.3**
CARR				*i* S	**Sn**	**16 04 28.6**	**+1.4**
FG16	**Alotenango, Sa**	**2.16**	**98**	*i* P	**Pn**	**16 04 02.3**	**-3.1**
FG16				IAML		16 04 34.8	
	comp=N,4µm,0.2s						
TGIG		**2.21**	**350**	*eP*	**Pn**	**16 04 05.7**	**-0.2**
TGIG				*eS*	**Sn**	**16 04 30.3**	**-1.8**
TGIG		**2.21**	**350**	*i* P	**Pn**	**16 04 05.9**	**-0.1**
APG	**El Apazote**	**2.21**	**79**	*eP*	**Pn**	**16 04 07.1**	**+0.9**
PCG5	**San Vicente Pa**	**2.30**	**99**	*i* P	**Pn**	**16 04 05.7**	**-1.6**
FAME	**Alc

AS31	Alice Springs	43.90	257	P		P		16 26 36.9	+0.2
ASAR	Alice Springs	43.91	257	P		P		16 26 36.9	+0.2
	comp=Z,2.0nm,0.7s,baz=88,slow=7.0,SNR=55								
ASAR				ScP		ScP		16 31 00.5	-4.0
	comp=Z,0.2nm,0.8s,baz=102,slow=4.8,SNR=1.8								
	comp=Z,2.0nm,0.7s								
ASAR	Alice Springs	43.91	257	P		P		16 26 36.7	0.0
WRA	Warramunga Arr	44.03	263	P		P		16 26 37.3	-0.4
	comp=Z,1.1nm,0.3s,baz=92,slow=4.9,SNR=47								
	comp=Z,1.1nm,0.3s								
WRA	Warramunga Arr	44.03	263	P		P		16 26 36.5	-1.2
MTN	Manton Dam	48.68	271	P		P		16 27 11.9	-0.9
MTN				IAmb		IAmb		16 27 13.2	
	comp=Z,4.1nm,0.7s								
KNRA	Kununurra	50.13	267	P		P		16 27 23.0	-0.4
KNRA				IAmb		IAmb		16 28 02.1	
	comp=Z,19nm,1.3s								
MBWA	Marble Bar	57.24	258	P		P		16 28 12.8	-0.5
PETK	Petropavlovsk-	76.73	346	P		P		16 30 11.7	-0.1
	comp=Z,2.4nm,0.7s,baz=224,slow=6.2,SNR=4.9								
	comp=Z,2.4nm,0.7s								
BELA	Belgrano 2	79.03	173	P		P		16 30 24.0	+0.2
BELA				IAmb		IAmb		16 31 05.4	
	comp=Z,16nm,1.4s								
N15K	Kwethluk River	82.36	9	P		P		16 30 41.1	0.0
N15K				IAmb		IAmb		16 30 57.8	
	comp=Z,21nm,1.4s								
O18K	Koktuh Hills	82.89	12	P		P		16 30 43.5	-0.3
K15K	Wolf Creek Mou	84.21	8	P		P		16 30 50.9	+0.7
K15K				IAmb		IAmb		16 31 11.4	
	comp=Z,7.1nm,1.2s								
ILAR	Eielson Array	89.01	13	P		P		16 31 12.7	-0.2
	comp=Z,0.2nm,0.4s,baz=219,slow=6.3,SNR=4.9								
	comp=Z,0.2nm,0.4s								
AKASG	Malin Array Be	143.30	330	PKP		PKPab		16 37 45.8	-0.7
	comp=Z,1.5nm,0.4s,baz=46,slow=4.3,SNR=8.9								
AKBB	Malin Array Si	143.30	330	PKPdf		PKPab		16 37 45.5	-1.0
KIEV	Kiev	143.31	330	PKPdf		PKPab		16 37 45.4	-1.2
BURAR	Bucovina Array	147.34	330	PKPbc		PKPbc		16 37 58.6	0.0
GERES	GERESS Array B	150.64	343	PKPbc		PKPbc		16 38 06.3	-0.4
	comp=Z,0.3nm,0.3s,baz=53,slow=3.6,SNR=1.9								

IDC ***06*** *16:32:48.1±0.6, 1.°60N×128.°40E, h0km, mb3.9/14, mbtmp4.0/17, ML3.8/3, Error ellipse: s-maj=26.6km s-min=12.3km az=71.0*

DJA ***06*** *16:32:50.9±0.2, 2.°1S×12.°8E±.°, h10km, M4.5/24, mB5.0/4, mb4.7/7, MLv4.4/24, Mw(mB)4.4/4*

NEIC ***06*** *16:32:52.0±1.6, 1.°42N±0.°07×128.°17E±0.°05, h25km±5km, mb4.5/28, Error ellipse: s-maj=10.5km s-min=6.8km az=168.0*

ISC 06 16:32:49.3±0.4, 1.°48N±0.°05×128.°27E±0.°05, h10km, n75, σ1§54/76, mb4.4/30, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.14	232		Pb	16 33 09.5	-1.7
TNTI					Sb	16 33 24.0	-2.0
TNTI	Ternate	1.14	232	P	Pb	16 33 10.3	-0.8
TNTI				S	Sb	16 33 27.6	+1.6
MNI	Manado	3.43	269	P	Pn	16 33 46.1	+3.3
SGSI	Sangihe	3.51	309	P	Pn	16 33 44.5	+0.6
SWI	Sorong	3.79	128	P	Pn	16 33 49.7	+1.9
SIJI	Sorong	3.80	128	Pn	Pn	16 33 49.2	+1.3
	13nm,0.3s,baz=306,slow=23,SNR=30						
SIJI				Sn	Sn	16 34 32.4	-0.3
	4.9nm,0.3s,baz=29,slow=24,SNR=3.7						
	30nm,0.3s						
SIJI	Sorong	3.80	128	P	Pn	16 33 50.5	+2.6
SANI	Sanana	4.18	213	P	Pn	16 33 55.3	+2.1
KRAI	Karang Ratu	4.77	178	P	Pn	16 34 04.8	+3.6
NLAI	Namlea	4.83	194	P	Pn	16 34 04.6	+2.5
MSAI	Masohi	4.84	172	P	Pn	16 34 05.5	+3.3
FAKI	Fak Fak	5.91	138		Pn	16 34 18.1	+1.2
FAKI				Sn	Sn	16 35 22.8	-2.0
FAKI	Fak Fak	5.91	138	P	Pn	16 34 18.2	+1.2
LUWI	Luwuk	6.04	246		Pn	16 34 17.8	-0.9
LUWI	Luwuk	6.04	246	P	Pn	16 34 22.1	+3.4
	0.3nm2µm84nm,1.1s						
MWPI	Manokwari, Pap	6.25	112	P	Pn	16 34 22.4	+0.8
	0.3nm51nm,1.2s						
APSI	Ampana	7.03	250	P	Pn	16 34 35.8	+3.4
	0.3nm803nm61nm,1.0s						
MYLDM	Lahad Datu	10.42	291	Pn	Pn	16 35 18.0	-0.9
KAPI	Kappang	10.68	233	Pn	Pn	16 35 24.8	+2.4
	0.6nm,0.3s,baz=74,slow=19,SNR=1.0						
	3.1nm,0.6s						
KAPI	Kappang	10.68	233	Pn	Pn	16 35 21.4	-1.0
SOEI	Soe	11.85	200	Pn	Pn	16 35 35.0	-3.5
MTN	Manton Dam	14.51	169	Pn	Pn	16 36 11.9	-2.9
KNRA	Kununurra	17.05	178	Pn	Pn	16 36 44.1	-3.9
FITZ	Fitzroy Crossi	19.62	187	P	P	16 37 19.1	+1.1
	0.2nm,0.3s,baz=29,slow=6.0,SNR=6.7						
	4.7nm,0.6s						
COEN	Coen	21.29	137		P	16 37 36.7	+0.4
WB0	Warramunga Arr	21.95	164		P	16 37 44.5	+1.2
WB0				IAmb	IAmb	16 37 46.2	
	comp=Z,15nm,1.0s						
WRA	Warramunga Arr	22.11	165	P	P	16 37 46.6	+1.7
	comp=Z,8.0nm,0.8s,baz=343,slow=11,SNR=53						
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	22.11	165	P	P	16 37 43.8	-1.2
WR8	Warramunga Arr	22.16	164		P	16 37 46.6	+1.1
TPUB	Ta-pu	22.92	342		P	16 37 55.8	+2.2
AS31	Alice Springs	25.59	168		P	16 38 17.8	-1.1
ASAR	Alice Springs	25.59	168	P	P	16 38 20.1	+1.2
	comp=Z,2.6nm,0.8s,baz=353,slow=7.8,SNR=24						
ASAR				PcP	PcP	16 41 49.6	-0.4
	comp=Z,0.3nm,0.8s,baz=3.9,slow=2.4,SNR=1.4						
	comp=Z,2.6nm,0.8s						
ASAR	Alice Springs	25.59	168		P	16 38 18.3	-0.5
NJ2	Nanjing	31.68	345	eP	P	16 39 13.9	+0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FORT	Forrest	32.08	180	P	P	16 39 16.5	0.0
FORT				IAmb	IAmb	16 39 47.9	
	comp=Z,8.4nm,0.9s						
CMAR	Chiang Mai Arr	33.35	302	P	P	16 39 29.4	+1.6
	comp=Z,0.9nm,0.9s,baz=116,slow=6.9,SNR=7.3						
	comp=Z,0.9nm,0.9s						
CMAR	Chiang Mai Arr	33.35	302	P	P	16 39 28.3	+0.4
ENH	Enshi	33.73	330	P	P	16 39 31.8	+0.7
BBOO	Buckleboo	34.89	168	P	P	16 39 42.0	+0.9
STKA	Stephens Creek	35.50	160	P	P	16 39 47.7	+1.4
	comp=Z,6.9nm,0.9s,baz=333,slow=9.2,SNR=7.6						
	comp=Z,6.9nm,0.9s						
STKA	Stephens Creek	35.50	160	P	P	16 39 46.3	0.0
KSRS	Korea Array	35.80	360	P	P	16 39 48.9	0.0
	comp=Z,0.4nm,0.4s,baz=173,slow=10,SNR=2.2						
	comp=Z,0.4nm,0.4s						
MJAR	Matsushiro Arr	36.08	14	P	P	16 39 50.0	-1.3
	comp=Z,1.4nm,0.8s,baz=180,slow=10,SNR=4.4						
	comp=Z,1.4nm,0.8s						
XAN	Xi'an	37.11	333	⇑P	P	16 40 00.9	+0.8
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
ARMA	Armidale	38.75	147	P	P	16 40 14.4	+0.3
LZDM	Lanzhou Array	41.18	329	P	P	16 40 35.0	+0.5
	comp=Z,0.2nm,0.3s,baz=154,slow=11,SNR=10.0						
	comp=Z,0.2nm,0.3s						
TOO	Toolangi	42.00	159	P	P	16 40 41.5	+0.6
HHC	Hu-ho-hao-te	42.01	341	eP	P	16 40 44.2	+3.2
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSA	Lhasa	45.07	312	P	P	16 41 05.1	-1.2
LSA				IAmb	IAmb	16 41 31.8	
	comp=Z,4.4nm,1.0s						
LSA	Lhasa	45.07	312	P	P	16 41 04.8	-1.5
GTA2	Gaotai	45.89	329	eP	P	16 41 13.4	+1.2
GTA2				pP	sP	16 41 18.5	+2.2
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GOMU	GeErMu	46.39	322	P	P	16 41 24.7	+8.2
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ULN	Ulaanbaatar	49.73	341	P	P	16 41 41.2	-0.7
ULN				IAmb	IAmb	16 41 49.0	
	comp=Z,4.5nm,0.9s						
SONM	Songino Array	49.91	341	P	P	16 41 43.7	+0.4
	comp=Z,1.2nm,0.7s,baz=142,slow=7.5,SNR=6.8						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	49.91	341	P	P	16 41 42.6	-0.7
SONM				IAmb	IAmb	16 41 52.1	
	comp=Z,5.8nm,1.4s						
PETK	Petropavlovsk-	56.95	21	P	P	16 42 34.4	-0.4
	comp=Z,2.3nm,0.9s,baz=225,slow=7.8,SNR=1.9						
	comp=Z,2.3nm,0.9s						
PETK	Petropavlovsk-	56.95	21	P	P	16 42 34.9	+0.2
MKAR	Makanchi Array	60.27	325	P	P	16 42 58.4	+0.3
	comp=Z,1.4nm,0.5s,baz=117,slow=8.6,SNR=32						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	60.27	325		P	16 42 57.6	-0.4
YAK	Yakutsk	60.41	1		P	16 42 59.0	+0.4
MAKZ	Makanchi	60.45	325	P	P	16 42 59.4	+0.1
MAKZ				IAmb	IAmb	16 43 05.2	
	comp=Z,3.9nm,1.1s						
KDJ	Kajisay	61.04	319	P	P	16 43 03.2	-0.4
KDJ				IAmb	IAmb	16 43 37.2	
	comp=Z,4.4nm,0.9s						
KURBB	Kurchatov Arra	64.45	327	P	P	16 43 26.0	+0.1
	comp=Z,2.5nm,0.7s,baz=128,slow=6.1,SNR=21						
	comp=Z,2.5nm,0.7s						
KURK	Kurchatov	64.45	328		P	16 43 25.5	-0.4
GAR	Garm	64.57	313	P	P	16 43 26.6	-0.5
BVAR	Borovoye Array	70.03	327	P	P	16 43 59.9	-1.4
	comp=Z,0.5nm,0.6s,baz=139,slow=7.0,SNR=3.6						
	comp=Z,0.5nm,0.6s						
BORK	Borovoye	70.08	327		P	16 44 00.9	-0.6
BORK				IAmb	IAmb	16 44 14.4	
	comp=Z,2.8nm,0.8s						
NRIK	Noril'sk	72.97	346	P	P	16 44 18.4	-0.3
	comp=Z,0.8nm,0.4s,baz=169,slow=10,SNR=2.1						
	comp=Z,0.8nm,0.4s						
NRIK	Noril'sk	72.97	346	IAmb	IAmb	16 44 34.4	
	comp=Z,6.2nm,1.4s						
L16K	Owhat River	80.35	27	P	P	16 45 00.8	+0.2
L16K				IAmb	IAmb	16 45 37.5	
	comp=Z,9.0nm,1.4s						
J18K	Innoko River	82.01	26	P	P	16 45 09.5	+0.1
J18K				IAmb	IAmb	16 45 52.9	
	comp=Z,7.4nm,1.5s						
G19K	Purcell Mounta	82.47	23	P	P	16 45 12.7	+1.0
G19K				IAmb	IAmb	16 45 37.0	
	comp=Z,3.8nm,1.1s						
E19K	Redstone River	82.72	22	P	P	16 45 13.7	+0.6
E19K				IAmb	IAmb	16 45 29.0	
	comp=Z,4.3nm,1.0s						
KDAK	Kodiak Island	82.97	32	P	P	16 45 15.0	+0.5
ILAR	Eielson Array	86.47	25	P	P	16 45 30.5	-1.5
	comp=Z,0.1nm,0.6s,baz=265,slow=4.7,SNR=1.0						
	comp=Z,0.1nm,0.6s						

DNK ***06*** *16:36:35.1±0.8, 82.°03N×4.°87W, h0km±13km, ML2.3, Presumed earthquake*

BER ***06*** *16:36:38.2±2.9, 82.°15N×5.°03W, h31km, Mw3.4, ML2.9(NAO), Confirmed Earthquake*

FCIAR ***06*** *16:36:40.0, 82.°17N×1.°76E, h10km, station OMEGA has station magnitude of 3.60 station ZFI2 has station magnitude of 3.60*

KOLA ***06*** *16:36:41.0, 81.°59N×5.°40W, h0km, ML1.2, Error ellipse: s-maj=92.5km s-min=11.2km az=40.0, Greenland sea, Arctic Ocean, Knipovich ridge, north*

ISC 06 16:36:33.7±1.5, 81.°8N±0.°1×5.°32W±0.°06, h10km, n29, σ2§70/50, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	Nord	1.66	267	Pb	Pn	16 37 05.8	+3.0
NOR				Sb	Sn	16 37 24.7	+0.6
NOR	Nord	1.66	267	eP	Pn	16 37 05.8	+3.0
NOR				eS	Sn	16 37 24.7	+0.6
NOR	Nord	1.66	267	i P	Pn	16 37 06.0	+3.2
NOR				IAML		16 37 28.9	
	comp=Z,63nm,0.5s						
KBS	Kingsbay	4.10	127	Pn	Pn	16 37 39.0	+2.8
KBS				Sn	Sn	16 38 21.8	-2.3
KBS	Kingsbay	4.10	127	eP	Pn	16 37 38.9	+2.6
KBS				eS	Sn	16 38 21.8	-2.3
KBS				IAML		16 38 25.7	
	comp=Z,4.2nm,0.4s						
KBS	Kingsbay	4.10	127	P	Pn	16 37 38.6	+2.4
KBS				S	Sn	16 38 22.0	-2.1
KBS	Kingsbay	4.10	127	i P	Pn	16 37 39.2	+2.9
BRBB	Barentsburg B	5.04	128	Pn	Pn	16 37 53.3	+4.1
BRBB				Sn	Sn	16 38 45.7	-1.8
BRBB	Barentsburg B	5.04	128	eP	Pn	16 37 53.3	+4.1
BRBB				eS	Sn	16 38 45.6	-1.8
BRBB	Barentsburg B	5.04	128	P	Pn	16 37 52.6	+3.4
BRBB				S	Sn	16 38 46.8	-0.6
BRBA	Barentsburg A	5.08	128	Pn	Pn	16 37 53.4	+3.8
BRBA				Sn	Sn	16 38 46.8	-1.4
BRBA	Barentsburg A	5.08	128	eP	Pn	16 37 53.5	+3.8
BRBA				eS	Sn	16 38 48.2	0.0
SPA0	Spitsbergen Ar	5.23	123	Pn	Pn	16 37 54.1	+2.4
	baz=319,slow=8.6						
SPA0				Sn	Sn	16 38 50.0	-2.0
	baz=329,slow=18						
SPA0	Spitsbergen Ar	5.23	123	Pn	Pn	16 37 54.1	+2.4
SPA0				Sn	Sn	16 38 50.0	-2.0
SPA0	Spitsbergen Ar	5.23	123	eP	Pn	16 37 53.6	+1.9
SPA0				eS	Sn	16 38 49.1	-2.9
SPITS	Spitsbergen Ar	5.23	123	P	Pn	16 37 54.1	+2.4
SPITS				S	Sn	16 38 50.2	-1.8
HSPB	Hornsund (broa	6.14	131	Pn	Pn	16 38 07.8	+3.6
HSPB	Hornsund (broa	6.14	131	eP	Pn	16 38 07.6	+3.4
HSPB				eS	Sn	16 39 14.9	+0.6
HSPB				IAML		16 39 21.6	
	comp=Z,1.0nm,0.3s						
HSPB	Hornsund (broa	6.14	131	eP	Pn	16 38 05.3	+1.1
HSPB				eS	Sn	16 39 12.2	-2.1
HSPB	Hornsund (broa	6.14	131	P	Pn	16 38 07.6	+3.4
HSPB				S	Sn	16 39 13.2	-1.1
HOPEN	Hopen	7.68	118	Pn	Pn	16 38 27.3	+2.0
HOPEN				Sn	Sn	16 39 48.2	-4.0
HOPEN	Hopen	7.68	118	eP	Pn	16 38 27.8	+2.4
ZFI2	Zemlya Franca-	7.82	71	eP	Pn	16 38 26.7	-0.6
ZFI2				eS	Sn	16 39 44.6	-11
	comp=Z,18nm,3.1s						
OMEGA	Omega	7.84	71	eP	Pn	16 38 26.7	-0.9
	comp=Z,18nm,3.6s						
OMEGA				eS	Sn	16 39 44.6	-12
	comp=Z,18nm,3.6s						
DBG	Daneborg	8.13	210	Pn	Pn	16 38 34.4	+2.8
DBG				Sn	Sn	16 40 00.2	-3.0
DBG	Daneborg	8.13	210	eP	Pn	16 38 34.3	+2.8
DBG				eS	Sn	16 40 01.0	-2.3
DBG	Daneborg	8.13	210	i P	Pn	16 38 35.0	+3.5
DBG				i S	Sn	16 40 02.7	-0.6
DBG				IAML		16 40 09.8	
	comp=Z,4.8nm,0.5s						
NEEM	North Greenlan	9.04	266	i P	Pn	16 38 44.9	+0.6
NEEM				i S	Sn	16 40 21.9	-4.1
NEEM	North Greenlan	9.04	266	i P	Pn	16 38 44.9	+0.6
NEEM				i S	Sn	16 40 21.9	-4.1

SJA ***06*** *16:55:24.4±0.6, 24.°27S×67.°12W, h200km±6km, ML3.6, MW3.6*

GUC ***06*** *16:55:25.7±0.7, 24.°05S×67.°15W, h193km±8km, ML3.7*

ISC 06 16:55:25.9±1.2, 24.°13S±0.°04×67.°20W±0.°04, h181km, n27, σ1§49/41, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		0.79	97	⇓eP	Pn	16 55 53.1	+0.2
SALTA		0.79	97	eP	Pn	16 55 53.1	+0.2
SALTA				eP		16 55 53.1	
SALTA				eP		16 55 53.2	
AF01	San Pedro de A	1.47	322	eP	Pn	16 56 00.4	+2.4
AF01				eS	Sn	16 56 26.5	+3.6
AF01				IAML		16 56 35.1	
	comp=Z,159nm,0.3s						
SLA	San Lorenzo	1.66	111	⇑eP	Pn	16 56 00.4	+0.8
SLA				eS	Sn	16 56 26.1	+0.4
SLA	San Lorenzo	1.66	111	eP	Pn	16 55 43.5	-16
AZAP	Zapla	1.95	93	eP	Pn	16 56 03.0	+0.3
AZAP				eS	Sn	16 56 27.2	-4.1
FSA	Cafayete	2.27	151	eP	Pn	16 56 06.9	+0.8
YJA	Yavi	2.48	39	eP	Pn	16 56 10.6	+1.7
PB14	IPOC Station P	2.96	260	eP	Pn	16 56 15.0	+0.6
PB14				eS	Sn	16 56 51.0	-1.2
PB14				IAML		16 56 54.0	
	comp=E,74nm,0.2s						
PB14	IPOC Station P	2.96	260	eP	Pn	16 56 15.2	+0.7
PB14				IAML		16 56 54.3	
	comp=Z,77nm,0.2s						
PB09	IPOC Station P	2.99	321	⇑eP	Pn	16 56 16.0	+1.4
PB09				eS	Sn	16 56 52.9	+0.4
PB09				IAML		16 56 57.6	
	comp=E,172nm,0.5s						
PB09	IPOC Station P	2.99	321	eP	Pn	16 56 16.2	+1.6
PB09				IAML		16 56 59.0	
	comp=Z,117nm,0.3s						
PB05	IPOC Station P	3.03	294	⇑eP	Pn	16 56 15.6	+0.6
PB05				eS	Sn	16 56 51.7	-1.7
PB05				IAML		16 56 53.4	
	comp=E,125nm,0.5s						
PB05	IPOC Station P	3.03	294	eP	Pn	16 56 15.7	+0.6
PB05				IAML		16 57 01.3	
	comp=Z,59nm,0.2s						
AC02	Maricunga	3.21	212	⇑eP	Pn	16 56 19.0	+1.4
AC02				eS	Sn	16 57 00.1	+2.1
AC02				IAML		16 57 18.5	
	comp=E,52nm,0.3s						
AC02	Maricunga	3.21	212	eP	Pn	16 56 19.2	+1.6
PB07	IPOC Station P	3.44	313	⇑eP	Pn	16 56 20.6	+0.5
PB07				eS	Sn	16 57 00.5	-2.0
PB07	IPOC Station P	3.44	313	eP	Pn	16 56 20.7	+0.5
PB07				eS	Sn	16 57 01.8	-0.8
PB07				IAML		16 57 03.5	
	comp=Z,165nm,0.2s						
AC01	Pan de Azucar	3.68	236	⇑eP	Pn	16 56 22.7	-0.2
AC01				eS	Sn	16 57 05.9	-1.7
AC01	Pan de Azucar	3.68	236	eP	Pn	16 56 22.7	-0.2
AC01				IAML		16 57 10.9	
	comp=Z,50nm,0.4s						
PB01	IPOC Station P	3.73	325	⇑eP	Pn	16 56 23.7	0.0
PB01				eS	Sn	16 57 07.4	-1.4
PB01	IPOC Station P	3.73	325	eP	Pn	16 56 23.9	+0.2
PB01				IAML		16 57 13.2	
	comp=Z,105nm,0.2s						
PB02	IPOC Station P	3.74	318	⇑eP	Pn	16 56 23.9	0.0
PB02				eS	Sn	16 57 08.5	-0.7
PB02	IPOC Station P	3.74	318	eP	Pn	16 56 24.2	+0.3
PB02				eS	Sn	16 57 07.5	-1.7
PB02				IAML		16 57 13.1	
	comp=Z,242nm,0.4s						
GO03	Copiapo	4.40	218	eP	Pn	16 56 32.0	-0.2
GO03				IAML		16 57 25.1	
	comp=Z,55nm,0.3s						
HMBC	Humberstone	4.57	326	eP	Pn	16 56 33.6	-0.9
HMBC				eS	Sn	16 57 25.4	-2.8
HMBC				IAML		16 57 33.5	
	comp=Z,97nm,0.4s						
GO01	Chusmiza	4.81	337	eP	Pn	16 56 38.7	+0.8
GO01				eS	Sn	16 57 35.5	+1.3
GO01				IAML		16 57 42.1	
	comp=Z,18nm,0.3s						

DJA 06 17:38:53.6±0.2, 1.°S±2.°×12.°2E±.°, h10km, M4.0/25, mb4.2/4, MLv3.9/25, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APSI	Ampana	0.15	114	P	Pg	17 38 56.8	-0.2
LUWI	Luwuk	1.28	99	P	Pn	17 39 17.4	-0.1
LUWI				S	Sg	17 39 34.8	+0.1
MRSI	Marisa	1.39	18	P	Pn	17 39 18.8	-0.2
PCI	Palu	1.67	268	P	Pn	17 39 22.1	-0.9
MPSI	Mapaga	2.00	306	P	Pn	17 39 25.1	-2.3
TTSI	Tana Toraja	2.76	218	P	Pn	17 39 37.9	0.0
MMSI	Mamuju	3.18	235	P	Pn	17 39 44.8	+1.1
SPSI	Sidrap Palu	3.55	209	P	Pn	17 39 49.3	+0.5
SANI	Sanana	4.63	105	P	Pn	17 40 01.7	-2.0
NLAI	Namlea	6.07	113	P	Pn	17 40 22.5	-1.0
	0.1nm19nm,0.7s						

IDC ***06*** *17:41:17.1±2.6, 11.°30S×79.°38W, h0km, mb3.8/2, mbtmp3.7/5, ML3.4/3, MS3.4/4, Error ellipse: s-maj=68.9km s-min=24.9km az=38.0*

ISC 06 17:41:20.0±1.8, 11.°2S±0.°1×79.°2W±0.°2, h10km, n11, σ1§15/7, MS3.4/3, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.43	109	Pn	Pn	17 41 59.6	-0.2
	14nm,0.3s,baz=284,slow=5.4,SNR=24						
NNA				Sn	Sb	17 42 32.8	-1.0
	31nm,0.3s,baz=344,slow=8.5,SNR=7.9						
	37nm,0.2s						
ATAH	Atahualpa	4.11	11	Pn	Pn	17 42 23.8	+0.5
	1.7nm,0.3s,baz=124,slow=2.2,SNR=12						
ATAH				Sn	Sn	17 43 11.6	-0.2
	4.6nm,0.3s,baz=306,slow=16,SNR=3.8						
	3.9nm,0.3s						
LPAZ	La Paz	11.87	116	Pn	Pn	17 44 11.7	+1.7
	0.1nm,0.3s,baz=292,slow=10,SNR=1.5						
LPAZ				LR	LR	17 48 17.4	
	comp=Z,47nm,18.3s,baz=312,slow=35						
	0.4nm,0.4s						
SDV	Santo Domingo	21.69	23	LR	LR	17 56 23.8	
	comp=Z,119nm,18.9s,baz=263,slow=42						
H03N2	Juan Fernandez	22.14	179	T	T	18 09 28.5	
	baz=0.2,slow=75,SNR=39						
H03N1	Juan Fernandez	22.14	179	T	T	18 09 31.9	
	baz=0.2,slow=75,SNR=44						
H03N3	Juan Fernandez	22.15	179	T	T	18 09 30.5	
	baz=0.2,slow=75,SNR=44						
MDP	Montagnes des	30.99	60	LR	LR	18 00 54.8	
	comp=Z,157nm,18.6s,baz=100,slow=38						
RPN	Rapa Nui	32.46	236	LR	LR	17 57 05.9	
	comp=Z,81nm,20.4s,baz=260,slow=29						
YKA	Yellowknife Ar	78.44	344	P	P	17 53 19.8	-0.9
	0.3nm,0.6s,baz=147,slow=5.1,SNR=7.1						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	83.81	75	P	P	17 53 49.9	-0.4
	1.3nm,0.9s,baz=269,slow=6.8,SNR=5.8						
	1.3nm,0.9s						

IDC ***06*** *17:42:37.7±1.7, 38.°42N×21.°99E, h0km, mb3.9/4, mbtmp3.8/5, ML3.2/1, MS3.2/1, Error ellipse: s-maj=105.

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRO	**Drossia**	**0.45**	**254**	P	**Pg**	17 42 47.9	-0.4
DRO				S	**Sg**	17 42 55.1	+0.7
AGRP	**Agrapidokambos**	**0.53**	**307**	P	**Pg**	17 42 49.1	-0.7
AGRP				S	**Sg**	17 42 56.2	-0.6
LTK	**Loutraki**	**0.56**	**96**	P	**Pg**	17 42 50.0	-0.3
LTK				S	**Sg**	17 42 58.0	+0.3
LTK	**Loutraki**	**0.56**	**96**	P	**Pg**	17 42 49.9	-0.4
LTK				S	**Sg**	17 42 56.5	-1.2
ANX	**Ano Chora**	**0.58**	**333**	P	**Pg**	17 42 50.0	-0.7
ANX				S	**Sb**	17 42 59.2	-0.5
ANX	**Ano Chora**	**0.58**	**333**	P	**Pg**	17 42 50.0	-0.7
ANX				S	**Sg**	17 42 58.5	+0.1
RLS	**Riolos of Patr**	**0.63**	**268**	P	**Pg**	17 42 50.8	-0.9
RLS				S	**Sb**	17 43 00.8	-0.3
RLS	**Riolos of Patr**	**0.63**	**268**	P	**Pg**	17 42 50.7	-0.9
RLS				S	**Sg**	17 42 59.5	-0.4
AMT	**Artemida-Makis**	**0.70**	**219**	P	**Pg**	17 42 52.6	-0.3
AMT				S	**Sb**	17 43 03.5	+0.4
AXS	**Araxos**	**0.71**	**280**	P	**Pg**	17 42 52.5	-0.6
AXS				S	**Sb**	17 43 03.3	-0.1
AXS	**Araxos**	**0.71**	**280**	P	**Pg**	17 42 52.3	-0.8
AXS				S	**Sg**	17 43 02.4	0.0
VLX	**Vlachokerasia**	**0.71**	**172**	P	**Pg**	17 42 52.7	-0.5
VLX				S	**Sb**	17 43 04.1	+0.5
AXAR	**Agios Charalam**	**0.75**	**24**	P	**Pg**	17 42 53.0	-1.0
AXAR				S	**Sb**	17 43 04.5	-0.2
AXAR	**Agios Charalam**	**0.75**	**24**	P	**Pg**	17 42 53.0	-1.0
AXAR				S	**Sg**	17 43 03.9	0.0
PVO	**Paravola**	**0.79**	**313**	P	**Pg**	17 42 54.4	-0.2
PVO	**Paravola**	**0.79**	**313**	P	**Pg**	17 42 54.0	-0.6
PVO				S	**Sg**	17 43 03.9	-1.1
VIL2	**Platees**	**0.80**	**80**	P	**Pb**	17 42 55.1	-0.2
VIL2				S	**Sb**	17 43 06.3	+0.2
LKR	**Lokris**	**0.81**	**45**	P	**Pg**	17 42 54.0	-1.1
LKR				S	**Sb**	17 43 06.2	-0.2
LKR	**Lokris**	**0.81**	**45**	P	**Pg**	17 42 54.1	-1.0
LKR				S	**Sg**	17 43 05.5	-0.3
VILL	**Villia**	**0.83**	**84**	P	**Pg**	17 42 55.1	-0.4
VILL				S	**Sb**	17 43 06.9	-0.1
ATAL	**Atalanti**	**0.85**	**44**	P	**Pg**	17 42 54.8	-1.1
ATAL				S	**Sb**	17 43 07.9	+0.4
ATAL	**Atalanti**	**0.85**	**44**	P	**Pg**	17 42 54.8	-1.1
ATAL				S	**Sg**	17 43 06.9	-0.2
EVR	**Evrytania**	**0.91**	**337**	P	**Pg**	17 42 56.2	-0.7
EVR				S	**Sg**	17 43 08.4	-0.5
CLEM	**Kyllini,Ilia,G**	**0.91**	**258**	P	**Pg**	17 42 56.3	-0.7
ITM	**Ithomi**	**0.94**	**197**	P	**Pg**	17 42 56.8	-0.6
ITM				S	**Sb**	17 43 11.3	+1.4
ITM	**Ithomi**	**0.94**	**197**	P	**Pg**	17 42 56.4	-1.0
ITM				S	**Sg**	17 43 08.4	-1.3
MAKR	**Makrakomi, Fth**	**0.94**	**354**	P	**Pg**	17 42 57.1	-0.4
MAKR				S	**Sb**	17 43 10.4	+0.4
MAKR	**Makrakomi, Fth**	**0.94**	**354**	P	**Pg**	17 42 57.1	-0.4
MAKR				S	**Sb**	17 43 09.7	-0.4
AGG	**Agios Georgios**	**0.94**	**3**	P	**Pg**	17 42 56.8	-0.8
AGG	**Agios Georgios**	**0.94**	**3**	P	**Pg**	17 42 55.9	-1.7
MET2	**Kameni Chora,**	**0.96**	**119**	P	**Pg**	17 42 57.3	-0.7
MET2				S	**Sb**	17 43 10.7	0.0
MET5	**Makryloggos,Me**	**0.98**	**117**	P	**Pg**	17 42 57.6	-0.7
MET5				S	**Sg**	17 43 10.7	-0.4
MAGU	**Magoula**	**0.99**	**90**	P	**Pg**	17 42 58.0	-0.4
MAGU				S	**Sb**	17 43 12.1	+0.8
MAGU	**Magoula**	**0.99**	**90**	P	**Pg**	17 42 58.0	-0.4
MAGU				S	**Sb**	17 43 11.3	-0.1
STFN	**Stefani**	**1.02**	**84**	P	**Pg**	17 42 58.7	-0.3
STFN				S	**Sb**	17 43 13.1	+0.9
STFN	**Stefani**	**1.02**	**84**	P	**Pb**	17 42 59.1	+0.2
STFN				S	**Sg**	17 43 12.0	-0.2
ATH	**Athens Observa**	**1.15**	**95**	P	**Pb**	17 43 01.3	0.0
ATH				S	**Sg**	17 43 15.7	-0.9
KYPS	**Kipseli, Zakin**	**1.17**	**258**	P	**Pg**	17 43 01.5	-0.3
KYPS				S	**Sg**	17 43 16.2	-0.8
RTZL	**Ratzakli, Kefa**	**1.18**	**270**	P	**Pb**	17 43 01.3	-0.3
RTZL				S	**Sg**	17 43 16.7	-0.6
AMPL	**Ampelaki**	**1.18**	**316**	P	**Pb**	17 43 01.7	0.0
LTHK	**Lithakia**	**1.19**	**252**	P	**Pb**	17 43 01.7	-0.1
ATHU	**Athens Univers**	**1.21**	**95**	P	**Pb**	17 43 00.9	-1.3
ATHU				S	**Sg**	17 43 16.7	-1.6
VLY	**Voula,Athens**	**1.23**	**100**	P	**Pn**	17 43 02.1	-0.3
PYL	**PYLOS**	**1.25**	**199**	P	**Pn**	17 43 01.8	-0.9
PYL				S	**Sb**	17 43 18.5	-0.5
ORTH	**Orthonies,Zaky**	**1.26**	**260**	P	**Pn**	17 43 02.7	-0.1
PTL	**Penteli**	**1.27**	**91**	P	**Pn**	17 43 02.8	-0.1
DION	**Dionisos Attik**	**1.32**	**90**	P	**Pn**	17 43 03.8	+0.2
VLS2	**Valsamata**	**1.32**	**275**	P	**Pn**	17 43 02.7	-0.9
EVGI	**Lefkada island**	**1.37**	**294**	P	**Pn**	17 43 04.6	+0.2
FSK	**Fiskardo**	**1.39**	**286**	P	**Pn**	17 43 04.6	+0.1
LKD2	**Lefkada island**	**1.45**	**300**	P	**Pn**	17 43 05.7	+0.3
VLI	**Veliai**	**1.46**	**158**	P	**Pb**	17 43 06.3	-0.2
TETR	**Tetrakomo, Epi**	**1.48**	**329**	P	**Pg**	17 43 07.4	-0.4
THL	**Klokotos Trika**	**1.50**	**353**	P	**Pn**	17 43 06.5	+0.4
DMLN	**Damoulianata-K**	**1.50**	**277**	P	**Pg**	17 43 07.6	-0.5
KYMI	**Kymi, Euboea I**	**1.55**	**68**	P	**Pn**	17 43 07.0	+0.2
AOS2	**Alonissos-2**	**1.64**	**49**	P	**Pn**	17 43 07.5	-0.4
BRTR	**Keskin Array B** 0.2nm,0.3s,baz=266,slow=12,SNR=2.4 0.9nm,0.5s	**9.02**	**76**	Pn	**Pn**	17 44 53.7	+4.1
ESDC	**Sonseca Array** comp=Z,62nm,18.1s,baz=344,slow=41	**20.46**	**283**	LR	LR	17 56 17.9	
TORD	**Torodi Ar. Bea** 0.1nm,0.3s,baz=16,slow=6.9,SNR=2.8 0.1nm,0.3s	**30.84**	**222**	P	**P**	17 48 56.5	+1.1
KURBB	**Kurchatov Arra** 0.7nm,0.3s,baz=280,slow=8.6,SNR=5.0 0.7nm,0.3s	**41.18**	**54**	P	**P**	17 50 23.8	+0.3
MKAR	**Makanchi Array** 2.1nm,0.5s,baz=274,slow=7.5,SNR=62 2.1nm,0.5s	**44.18**	**59**	P	**P**	17 50 48.0	+0.1
ZALV	**Zalesovo Beam** 0.8nm,0.4s,baz=276,slow=7.9,SNR=5.2 0.8nm,0.4s	**44.73**	**48**	P	**P**	17 50 51.5	-0.7

*JMA **06** 18:04:44.1±0.2,24°.7N±1°.0×122°.3E±0°.4,h72km±2km, MV2.6/14,TAIWAN REGION*
*TAP **06** 18:04:44.6,24°.68N×122°.24E,h75km,ML3.7,C*
ISC 06 18:04:44.4±1.2,24°.68N±0°.03×122°.30E±0°.02,h72km±6km, n138,σ0s97/236,3C-10D,Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.27**	**193**	*i* P	**Pn**	18 04 56.0	+0.5
EOS2				*e*S	**Sn**	18 05 04.9	+1.3
EGS		**0.37**	**296**	P	**Pn**	18 04 56.8	+0.5
EGS				S	**Sn**	18 05 05.3	+0.2
EOS3	**EOS3**	**0.39**	**177**	P	**Pn**	18 04 57.1	+0.8
EOS3				*i* S	**Sn**	18 05 06.8	+1.7
TWC	**Suao**	**0.41**	**260**	⇓P	**Pn**	18 04 56.4	-0.3
TWC				*i* S	**Sn**	18 05 04.9	-0.8
TWB1	**Santiao Chiao**	**0.43**	**319**	*i* P	**Pn**	18 04 56.0	-0.8
TWB1				*i* S	**Sn**	18 05 05.2	-0.8
ILA	**Ilan**	**0.51**	**280**	P	**Pn**	18 04 56.2	-1.3
ILA				S	**Sn**	18 05 06.3	-0.8
TIPB	**Shuangxi**	**0.52**	**304**	⇑*i*P	**Pn**	18 04 57.7	0.0
TIPB				S	**Sn**	18 05 07.2	-0.2
EWUT	**Wuta**	**0.53**	**244**	P	**Pn**	18 04 58.0	+0.3
EWUT				S	**Sn**	18 05 07.2	-0.3
NDS	**Dongshan**	**0.53**	**265**	P	**Pn**	18 04 57.9	+0.2
NDS				*e*S	**Sn**	18 05 06.9	-0.6
EOS4	**EOS4**	**0.56**	**178**	*e*P	**Pn**	18 04 58.1	+0.5
SXI1	**Grass Mountain**	**0.56**	**317**	P	**Pn**	18 04 58.0	-0.1
SXI1				S	**Sn**	18 05 08.5	+0.3
TWE	**Neicheng**	**0.57**	**274**	⇓*i*P	**Pn**	18 04 58.2	+0.1
TWE				S	**Sn**	18 05 07.5	-0.8
NWF	**Wu-fen Shan**	**0.61**	**310**	*i* P	**Pn**	18 04 59.0	+0.3
NWF				*i* S	**Sn**	18 05 09.4	+0.4
WFSB	**Wu-fen Shan**	**0.61**	**310**	⇓*i*P	**Pn**	18 04 58.7	+0.2
WFSB				*i* S	**Sn**	18 05 09.1	+0.2
EAHA	**Aohua**	**0.62**	**236**	P	**Pn**	18 04 58.8	+0.2
EAHA				*i* S	**Sn**	18 05 09.6	+0.6
JYNG	**Yonagunijimaku**	**0.63**	**111**	P	**Pn**	18 04 58.8	0.0
JYNG				S	**Sn**	18 05 09.1	-0.2
FUSB	**Fushanzhiwuyua**	**0.65**	**277**	⇓*i*P	**Pn**	18 04 59.2	+0.2
FUSB				*e*S	**Sn**	18 05 09.6	-0.2
ENTT	**Nioudou**	**0.67**	**267**	*i* P	**Pn**	18 04 59.8	+0.6
ENTT				*e*S	**Sn**	18 05 10.4	+0.4
TNOU	**National Taiwa**	**0.67**	**315**	*e*P	**Pn**	18 04 59.4	+0.2
TNOU				S	**Sn**	18 05 10.1	+0.1
YOJ	**Yonaguni jima**	**0.69**	**108**	P	**Pn**	18 04 59.4	+0.1
YOJ	**Yonaguni jima**	**0.69**	**108**	S	**Sn**	18 05 09.5	-0.8
YOJ	**Yonaguni jima**	**0.69**	**108**	*e*P	**Pn**	18 04 59.4	+0.1
YOJ				*e*S	**Sn**	18 05 10.0	-0.3
YOJ	**Yonaguni jima**	**0.69**	**108**	⇑P	**Pn**	18 04 59.5	+0.1
YOJ				*i* S	**Sn**	18 05 10.2	-0.1
TWA	**Mucha**	**0.71**	**295**	⇓*i*P	**Pn**	18 04 59.8	+0.1
TWA				*i* S	**Sn**	18 05 10.3	-0.6
LATG	**Datong**	**0.72**	**259**	P	**Pn**	18 05 00.1	+0.4
LATG				*e*S	**Sn**	18 05 11.9	+0.7
NWLT	**Wulai**	**0.73**	**278**	*i* P	**Pn**	18 05 00.0	+0.2
NWLT				*i* S	**Sn**	18 05 11.0	-0.3
NHY	**Taipei**	**0.75**	**299**	*e*P	**Pn**	18 05 00.3	+0.3
NHY				S	**Sn**	18 05 11.8	+0.2
NHDH	**Xindian Distri**	**0.76**	**292**	*i* P	**Pn**	18 05 00.3	+0.2
NHDH				*i* S	**Sn**	18 05 11.8	+0.1
TATO	**Taipei**	**0.79**	**292**	P	**Pn**	18 05 00.4	-0.1
ETL	**Fush Village**	**0.81**	**230**	*e*P	**Pn**	18 05 00.5	-0.3
ETL				*e*S	**Sn**	18 05 12.1	-0.6
YM01	**YM01**	**0.81**	**305**	⇓P	**Pn**	18 05 00.8	0.0
YM01				*i* S	**Sn**	18 05 12.7	-0.1
NACB	**Ninganchiao**	**0.81**	**232**	P	**Pn**	18 05 00.4	-0.4
NACB	**Ninganchiao**	**0.81**	**232**	P	**Pn**	18 05 00.3	-0.4
NACB				S	**Sn**	18 05 12.4	-0.5
YM08	**YM08**	**0.82**	**308**	*e*P	**Pn**	18 05 00.7	-0.2
YM08				S	**Sn**	18 05 12.5	-0.5
ZUZH	**Zhuzihu**	**0.83**	**305**	*i* P	**Pn**	18 05 01.0	-0.1
ZUZH				S	**Sn**	18 05 13.0	-0.5
YHNB	**Yeheng**	**0.84**	**269**	P	**Pn**	18 05 01.4	+0.3
YHNB	**Yeheng**	**0.84**	**269**	⇓P	**Pn**	18 05 01.7	+0.5
YHNB				*i* S	**Sn**	18 05 14.0	+0.5
NSK	**Sanguang**	**0.85**	**270**	⇓*i*P	**Pn**	18 05 01.7	+0.4
NSK				*i* S	**Sn**	18 05 14.1	+0.2
ANP	**Anpu**	**0.87**	**306**	*e*P	**Pn**	18 05 01.4	-0.1
TWY	**Chenhua**	**0.87**	**313**	*i* P	**Pn**	18 05 01.9	0.0
TWY				S	**Sn**	18 05 14.0	+0.2
NNSB	**Datong**	**0.87**	**253**	⇓P	**Pn**	18 05 01.7	+0.2
NNSB				*e*S	**Sn**	18 05 14.4	+0.1
NNS	**Nan Shan**	**0.88**	**254**	⇑P	**Pn**	18 05 01.8	+0.2
NNS				*i* S	**Sn**	18 05 14.3	-0.1
TWD	**Chiawan**	**0.88**	**227**	*e*P	**Pn**	18 05 01.5	0.0
TWD				*e*S	**Sn**	18 05 13.7	-0.4
ETLH	**Xiulin Townshi**	**0.88**	**238**	P	**Pn**	18 05 01.4	-0.3
ETLH				S	**Sn**	18 05 13.7	-0.7
TWS1	**Kuangyinshan**	**0.90**	**298**	⇓*i*P	**Pn**	18 05 02.1	+0.3
TWS1				*i* S	**Sn**	18 05 15.3	+0.5
NTST	**Danshui**	**0.91**	**302**	P	**Pn**	18 05 02.2	+0.3
NTST				S	**Sn**	18 05 15.3	+0.4
HWA	**Hwalien**	**0.94**	**222**	*e*P	**Pn**	18 05 02.4	0.0
HWA				*e*S	**Sn**	18 05 15.2	-0.4
PCYT	**Pengchaiyu**	**0.97**	**348**	*e*P	**Pn**	18 05 03.3	+0.6
ETM	**Tongmen**	**1.02**	**226**	P	**Pn**	18 05 02.8	-0.5
ETM				*e*S	**Sn**	18 05 16.4	-1.0
KSHI	**Guanxi Townshi**	**1.02**	**276**	P	**Pn**	18 05 04.1	+0.8
KSHI				*i* S	**Sn**	18 05 18.6	+1.2
TEYL	**Yanliau Villag**	**1.03**	**218**	*e*P	**Pn**	18 05 03.0	-0.4
TEYL				*i* S	**Sn**	18 05 17.2	-0.4
LXIB	**Xiulin Townshi**	**1.04**	**231**	P	**Pn**	18 05 03.1	-0.6
LXIB				*e*S	**Sn**	18 05 16.8	-1.2
NCU	**National Centr**	**1.05**	**286**	*e*P	**Pn**	18 05 02.2	-1.5
NCU				*i* S	**Sn**	18 05 18.0	0.0
NCUH	**Zhongli**	**1.05**	**286**	*e*P	**Pn**	18 05 04.0	+0.4
NCUH				*e*S	**Sn**	18 05 19.1	+1.1
FUSS	**Fushou**	**1.05**	**246**	*e*P	**Pn**	18 05 04.3	+0.4
FUSS				*e*S	**Sn**	18 05 19.1	+0.7
NFF	**Wufeng Townshi**	**1.07**	**268**	P	**Pn**	18 05 04.4	+0.4
NFF				*i* S	**Sn**	18 05 19.3	+0.7
WHF	**Hehuan Shan**	**1.08**	**241**	P	**Pn**	18 05 04.4	0.0
WHF				*e*S	**Sn**	18 05 18.6	-0.8
TWT	**Tachien**	**1.11**	**248**	*i* P	**Pn**	18 05 05.5	+1.0
TWT				S	**Sn**	18 05 20.1	+0.6
SHUL	**Shoufeng**	**1.11**	**217**	*e*P	**Pn**	18 05 04.7	+0.2
SHUL				S	**Sn**	18 05 20.0	+0.6
TDCB	**Techi**	**1.12**	**248**	P	**Pn**	18 05 05.2	+0.5
TDCB				S	**Sn**	18 05 19.6	-0.2
LIOB	**Emei**	**1.17**	**269**	*i* P	**Pn**	18 05 05.7	+0.5
LIOB				S	**Sn**	18 05 21.3	+0.7
ESL	**Shilin**	**1.17**	**223**	P	**Pn**	18 05 04.3	-0.8
ESL				*e*S	**Sn**	18 05 18.3	-2.4
NSTT	**Nanjuang**	**1.18**	**268**	P	**Pn**	18 05 05.7	+0.4
NSTT				*i* S	**Sn**	18 05 21.4	+0.5
SBCB	**Hsinchu**	**1.20**	**276**	*e*P	**Pn**	18 05 06.1	+0.6
SBCB				*e*S	**Sn**	18 05 22.7	+1.4
HSN	**Hsinchu**	**1.21**	**276**	P	**Pn**	18 05 05.6	-0.1
HSN				*i* S	**Sn**	18 05 21.9	+0.2
OWD	**Renai**	**1.25**	**235**	P	**Pn**	18 05 06.3	0.0
OWD				*e*S	**Sn**	18 05 21.7	-1.1
WARBT	**Fenglin Townsh**	**1.27**	**221**	*i* P	**Pn**	18 05 21.4	-1.1
WARBT				*e*S	**Sn**	18 05 20.9	-2.2
WUSB	**Renai**	**1.28**	**238**	*i* P	**Pn**	18 05 06.9	+0.2
WUSB				S	**Sn**	18 05 23.1	-0.2
EGFH	**Guangfu**	**1.28**	**218**	*e*P	**Pn**	18 05 06.0	-0.6
WHP	**Taichung City**	**1.29**	**252**	P	**Pn**	18 05 08.0	+1.1
WHP				*i* S	**Sn**	18 05 24.5	+0.8
IRIF	**Iriomote-Funau**	**1.35**	**104**	P	**Pn**	18 05 07.3	-0.1
IRIF				*e*S	**Sn**	18 05 24.8	0.0
NMLH	**Miaoli**	**1.38**	**264**	*e*P	**Pn**	18 05 08.1	+0.2
NMLH				*i* S	**Sn**	18 05 25.5	0.0
VWDT	**VWDT**	**1.40**	**229**	P	**Pn**	18 05 08.3	+0.1
VWDT				S	**Sn**	18 05 25.4	-0.6
WCS	**Beigang Elemen**	**1.41**	**244**	P	**Pn**	18 05 09.2	+1.0
WCS				*i* S	**Sn**	18 05 27.6	+1.4
NSY	**Sanyi**	**1.42**	**260**	*e*S	**Sn**	18 05 27.6	+1.0
HGSD	**Ruisui**	**1.43**	**214**	*e*P	**Pn**	18 05 09.6	+1.1
HGSD				S	**Sn**	18 05 25.9	-0.7
TWQ1	**Liyutan**	**1.43**	**257**	*e*P	**Pn**	18 05 09.8	+0.5
TWQ1				*e*S	**Sn**	18 05 26.6	-0.7
EHY	**Hungye**	**1.47**	**218**	*e*P	**Pn**	18 05 08.8	-0.2
EHY				*e*S	**Sn**	18 05 25.3	-2.3
SMLT	**Sun Moon Lake**	**1.50**	**238**	*i* P	**Pn**	18 05 10.8	+1.3
SMLT				S	**Sn**	18 05 30.3	+1.7
HATJ	**Hateruma jima**	**1.51**	**114**	*e*P	**Pn**	18 05 09.9	+0.3
SSLB	**Suanglung**	**1.52**	**234**	P	**Pn**	18 05 09.9	+0.2
SSLB	**Suanglung**	**1.52**	**234**	S	**Sn**	18 05 29.5	+0.8
SSLB	**Suanglung**	**1.52**	**234**	*e*P	**Pn**	18 05 10.2	+0.6
SSLB				*e*S	**Sn**	18 05 28.9	+0.2
TYC	**Yuchr**	**1.52**	**240**	P	**Pn**	18 05 10.7	+1.0
TYC				*e*S	**Sn**	18 05 30.3	+1.4
ECBN	**Changbin**	**1.56**	**210**	*e*S	**Sn**	18 05 28.0	-1.8
TCU	**Taichung**	**1.57**	**251**	*e*P	**Pn**	18 05 10.5	+0.2
YULB	**Yu-li**	**1.57**	**216**	P	**Pn**	18 05 09.7	-0.8
YULB	**Yu-li**	**1.57**	**216**	*e*P	**Pn**	18 05 09.7	-0.8
YULB				*e*S	**Sn**	18 05 28.0	-2.2
TWF1	**Yuli**	**1.61**	**215**	P	**Pn**	18 05 09.7	-1.0
JKRS	**Kuro-shima**	**1.62**	**105**	P	**Pn**	18 05 11.6	+0.6
JKRS				*e*S	**Sn**	18 05 31.7	+0.5
WHYT	**Xinyi Township**	**1.64**	**234**	*e*P	**Pn**	18 05 12.3	+1.0
WHYT				S	**Sn**	18 05 33.2	+1.4
WNT	**Mingjian**	**1.68**	**242**	P	**Pn**	18 05 12.9	+1.1
WNT				*e*S	**Sn**	18 05 33.8	+1.3
WCHH	**Zhanghua**	**1.69**	**250**	*e*P	**Pn**	18 05 11.4	-0.6
WCHH				*e*S	**Sn**	18 05 33.1	+0.2
JIJ	**Ishigaki jima**	**1.71**	**100**	P	**Pn**	18 05 12.2	0.0
JIJ				S	**Sn**	18 05 31.4	-1.9
FULB	**Fuli**	**1.74**	**212**	*e*P	**Pn**	18 05 13.3	+0.7
FULB				*e*S	**Sn**	18 05 35.2	+1.2
ALS	**Alishan**	**1.79**	**230**	P	**Pn**	18 05 15.0	+1.3
CHN5	**Tsauling**	**1.83**	**234**	*e*P	**Pn**	18 05 15.2	+1.3
CHN5				S	**Sn**	18 05 37.1	+0.7
JISG	**Ishigakijimahi**	**1.83**	**92**	P	**Pn**	18 05 14.2	+0.3
JISG				*e*S	**Sn**	18 05 37.4	+1.1
WGK	**Gukeng**	**1.87**	**238**	*e*P	**Pn**	18 05 15.5	+1.2
WGK				S	**Sn**	18 05 39.0	+1.9
WDL	**Douliou City**	**1.87**	**239**	*e*P	**Pn**	18 05 14.9	+0.6
WDL				*e*S	**Sn**	18 05 39.1	+2.0
WDLH	**Douliu**	**1.89**	**239**	*e*P	**Pn**	18 05 14.0	-0.5
WDLH				*e*S	**Sn**	18 05 37.9	+0.4
ELDTW	**Lidau**	**1.89**	**219**	*e*P	**Pn**	18 05 13.9	-0.8
ELDTW				*e*S	**Sn**	18 05 35.7	-2.1
WRL	**Guolierlin Hig**	**1.92**	**247**	*e*P	**Pn**	18 05 15.0	0.0
WRL				*e*S	**Sn**	18 05 37.5	-0.7
WCKO	**Fanlu**	**1.98**	**232**	*e*P	**Pn**	18 05 16.0	+0.1
WCKO				*e*S	**Sn**	18 05 41.8	+2.0
STYH	**Taoyuan**	**2.05**	**223**	*e*P	**Pn**	18 05 18.6	+1.8
STYH				S	**Sn**	18 05 41.7	+0.3
TPUB	**Ta-pu**	**2.05**	**228**	P	**Pn**	18 05 18.3	+1.5
TPUB	**Ta-pu**	**2.05**	**228**	S	**Sn**	18 05 42.5	+0.9
TPUB	**Ta-pu**	**2.05**	**228**	P	**Pn**	18 05 18.7	+1.9
TPUB				*e*S	**Sn**	18 05 43.6	+2.1
CHY	**Chiayi**	**2.08**	**236**	*e*P	**Pn**	18 05 18.1	+0.9
CHY				*e*S	**Sn**	18 05 43.2	+1.1
WTP	**Ta-pu**	**2.10**	**228**	*e*P	**Pn**	18 05 19.3	+1.8
WTP				*e*S	**Sn**	18 05 44.7	+2.0
TWGBT	**Beinan**	**2.16**	**211**	P	**Pn**	18 05 19.0	+0.7
TWG	**Pinlang**	**2.17**	**211**	*e*P	**Pn**	18 05 18.2	-0.2
TWG				*e*S	**Sn**	18 05 41.4	-2.8
TWK	**Hsinying**	**2.17**	**230**	*e*P	**Pn**	18 05 20.9	+2.4
JTJ	**Tarama**	**2.19**	**91**	*e*P	**Pn**	18 05 20.0	+1.4
SNST	**Tainan City**	**2.20**	**229**	*e*P	**Pn**	18 05 21.7	+2.9
SNST				*e*S	**Sn**	18 05 47.3	+2.3
CHN1	**Nanshi**	**2.20**	**228**	*e*P	**Pn**	18 05 21.6	+2.8
CHN1				*e*S	**Sn**	18 05 46.4	+1.3
WSL	**Shuilin Townsh**	**2.21**	**239**	*e*P	**Pn**	18 05 19.5	+0.5
WSL				*e*S	**Sn**	18 05 46.0	+0.5
SGST	**Jiashian**	**2.23**	**225**	P	**Pn**	18 05 20.0	+0.7
CHN8	**Yiju**	**2.33**	**236**	*e*P	**Pn**	18 05 19.9	-0.6
ECL	**Taimali**	**2.41**	**211**	*e*P	**Pn**	18 05 20.3	-1.4
SSD	**Sandimen**	**2.46**	**219**	*e*P	**Pn**	18 05 24.5	+2.2
SSD				S	**Sn**	18 05 52.5	+1.2
TSCK	**Chigu Township**	**2.54**	**233**	*e*P	**Pn**	18 05 23.2	-0.1
MASBT	**Mashibuluo**	**2.56**	**217**	*e*P	**Pn**	18 05 25.6	+1.9
MATB	**Ma-tsu**	**2.58**	**305**	*e*P	**Pn**	18 05 23.7	-0.2
VWUC	**VWUC**	**2.61**	**277**	P	**Pn**	18 05 23.8	-0.4
LAY	**Lan-yu**	**2.72**	**195**	*e*P	**Pn**	18 05 25.2	-0.6
PNG	**Penghu**	**2.74**	**247**	*e*P	**Pn**	18 05 25.7	-0.3
PHUB	**P'eng-hu**	**2.75**	**246**	*e*P	**Pn**	18 05 25.2	-1.0
PHUB				S	**Sn**	18 05 55.8	-2.5
SCZT	**Fangliau**	**2.77**	**214**	*e*P	**Pn**	18 05 28.2	+1.7
WDGT	**Dungji**	**2.80**	**240**	*e*P	**Pn**	18 05 27.6	+0.7
SLIU	**Shizi**	**2.81**	**210**	*e*P	**Pn**	18 05 27.6	+0.4
XPSS	**Dashiqiu**	**2.94**	**320**	*e*P	**Pn**	18 05 28.3	-0.5
LYJJ	**Jianjiangzhen**	**2.95**	**310**	*e*P	**Pn**	18 05 28.3	-0.7
SMST	**Manzhou Townsh**	**2.97**	**207**	*e*P	**Pn**	18 05 29.6	+0.4
SMST				*i* S	**Sn**	18 06 02.8	-0.9
MHQ	**Yeshan**	**3.28**	**296**	*e*P	**Pn**	18 05 33.3	-0.3
KNMB	**Chin-men Tao**	**3.57**	**267**	*e*P	**Pn**	18 05 36.7	-0.6
AXDP	**Jialang**	**3.94**	**274**	*i* P	**Pn**	18 05 42.2	-0.3
DSXP	**Dongshan**	**4.55**	**259**	*e*P	**Pn**	18 05 50.4	-0.4
DSXP				*e*S	**Sn**	18 06 39.3	-3.2

*MOS **06** 18:06:53.5±1.0,38°.09N×22°.25E,h11km,mb4.6/16,Error ellip

STFN Stefani 1.00 85 P **Pg** **18 07 13.9 -0.2**
STFN S **Sn** **18 07 29.2 +0.2**
STFN Stefani 1.00 85 P **Pb** **18 07 14.5 +0.3**
STFN S **Sb** **18 07 27.5 +0.1**
ATH Athens Observa 1.14 96 P **Pn** **18 07 17.1 +0.4**
ATH S **Sg** **18 07 31.9 +0.2**
NOAC Athens-Thissio 1.14 96 P **Pn** **18 07 16.8 +0.1**
NOAC S **Sg** **18 07 31.6 -0.1**
ACHAR Athens-Acharne 1.16 91 P **Pn** **18 07 17.3 +0.4**
ACHAR S **Sb** **18 07 30.9 -0.9**
ATH5 Athens Parliam 1.16 96 P **Pb** **18 07 16.2 -0.6**
ATH5 S **Sb** **18 07 31.6 -0.2**
AMPL Ampelaki 1.17 315 P **Pg** **18 07 17.3 -0.1**
KYPS Kipseli, Zakin 1.18 257 P **Pb** **18 07 17.1 -0.2**
ATHP Athens-Neo Psi 1.18 94 P **Pb** **18 07 17.1 -0.2**
RTZL Ratzakli, Kefa 1.19 269 P **Pb** **18 07 16.6 -0.8**
RTZL S **Sn** **18 07 33.3 -0.2**
ATHU Athens Univers 1.20 96 P **Pb** **18 07 16.6 -0.8**
ATHU S **Sn** **18 07 33.8 +0.1**
ATHU Athens Univers 1.20 96 P **Pb** **18 07 16.7 -0.8**
ATHU S **Sb** **18 07 32.5 -0.4**
YDRA Hydra 1.20 128 P **Pn** **18 07 17.5 0.0**
YDRA S **Sb** **18 07 32.4 -0.6**
VLY Voula,Athens 1.22 101 P **Pn** **18 07 17.6 -0.3**
VLY S **Sn** **18 07 34.5 +0.2**
VLY Voula,Athens 1.22 101 P **Pn** **18 07 17.6 -0.3**
VLY S **Sb** **18 07 33.5 -0.2**
SOFA Sofades 1.25 354 P **Pg** **18 07 19.0 +0.2**
PTL Penteli 1.25 92 P **Pn** **18 07 18.2 -0.1**
PTL S **Sn** **18 07 35.4 +0.3**
PTL Penteli 1.25 92 P **Pn** **18 07 18.4 +0.1**
PTL S **Sb** **18 07 34.7 +0.1**
PYL1 Pylos 1.27 202 P **Pn** **18 07 17.4 -1.1**
PYL PYLOS 1.27 200 P **Pn** **18 07 17.3 -1.2**
ORTH Orthonies,Zaky 1.27 259 P **Pb** **18 07 18.8 0.0**
DION Dionisos Attik 1.31 90 P **Pn** **18 07 18.9 -0.1**
VLS Valsamata 1.33 274 P **Pn** **18 07 18.3 -1.1**
MTHA Methoni 1.35 200 P **Pn** **18 07 19.8 +0.2**
EVGI Lefkada island 1.38 293 P **Pn** **18 07 20.1 +0.1**
NYDR Nydri-Lefkada 1.39 297 P **Pn** **18 07 20.1 0.0**
FSK Fiskardo 1.40 286 P **Pn** **18 07 20.1 -0.2**
KFL1 Kefalonia,Entr 1.41 273 P **Pn** **18 07 19.6 -0.7**
ARG2 Argostoli 1.41 274 P **Pn** **18 07 19.5 -1.0**
NEO Neokhori 1.42 31 P **Pn** **18 07 20.4 -0.2**
LKD2 Lefkada island 1.45 299 P **Pn** **18 07 21.1 +0.1**
LVRA Laurium 1.46 105 P **Pb** **18 07 21.6 -0.3**
DRAG Dragano-Lefkad 1.46 294 P **Pn** **18 07 21.4 +0.2**
VLI Veliai 1.47 159 P **Pn** **18 07 21.3 0.0**
TETR Tetrakomo, Epi 1.47 328 P **Pn** **18 07 21.8 -0.5**
THL Klokotos Trika 1.48 352 P **Pb** **18 07 21.8 -0.5**
DMLN Damoulianata-K 1.51 276 P **Pn** **18 07 21.7 -0.6**
KYMI Kymi, Euboea I 1.53 69 P **Pn** **18 07 22.5 +0.4**
MNVA Monemvasia 1.53 157 P **Pn** **18 07 22.4 +0.4**
AOS2 Alonissos-2 1.61 49 P **Pn** **18 07 22.8 -0.4**
NPS1 Neapolis Lacon 1.70 158 P **Pb** **18 07 25.2 -0.8**
KARY Karystos 1.71 91 P **Pn** **18 07 25.1 +0.6**
MHLO Agia Marina, M 2.20 129 P **Pn** **18 07 30.5 -0.7**
KZN Kozani 2.24 350 P **Pn** **18 07 32.0 0.0**
PLG Polygyros 2.45 21 P **Pn** **18 07 34.4 -0.4**
NEST Nestorio 2.50 338 P **Pn** **18 07 36.2 +0.6**
KEK Kerkira 2.52 311 **Pn** **18 07 37.6 +1.9**
HORT Hortiatis 2.58 14 P **Pn** **18 07 35.9 -0.6**
THE Thessaloniki 2.59 12 P **Pn** **18 07 36.0 -0.6**
OUR Ouranopolis 2.60 30 P **Pn** **18 07 36.2 -0.6**
LIA Limnos Island 2.89 51 P **Pn** **18 07 40.1 -0.7**
VAM Vamos 3.10 150 P **Pn** **18 07 44.2 +0.6**
THAS Thassos island 3.10 36 P **Pn** **18 07 40.6 -0.6**
OHR Ohrid 3.22 340 *i* Pn **Pb** **18 07 48.9 -3.2**
VAY Valandovo 3.23 4 *i* Pn **Pn** **18 07 46.5 +1.0**
PRK Paraskevi 3.33 69 P **Pn** **18 07 46.6 -0.2**
KAVA Kavala 3.37 30 P **Pn** **18 07 46.4 -1.0**
SMTH Samothraki Isl 3.46 46 P **Pn** **18 07 47.9 -0.8**
IDI Anoyia 3.50 142 Pn **Pn** **18 07 49.6 +0.3**
22nm,0.3s,baz=320,slow=5.5,SNR=29
IDI **Sn** **18 08 26.8 -3.9**
20nm,0.3s,baz=31,slow=10,SNR=6.2
IDI Anoyia 3.50 142 **Pn** **18 07 49.2 0.0**
IDI Anoyia 3.50 142 P **Pn** **18 07 49.1 -0.1**
SMG Samos 3.63 95 P **Pn** **18 07 51.2 +0.3**
MMB Musomishta 3.63 18 *i* P **Pn** **18 07 51.8 +0.8**
KKB Krupnik 3.80 18 *e*P **Pn** **18 07 55.5 +2.2**
NPS Neapolis 3.90 136 P **Pn** **18 07 55.5 +0.9**
SKO Skopje 3.92 351 *i* Pn **Pb** **18 08 01.2 -2.8**
RDO Rodhopi 3.95 39 **Pn** **18 07 54.9 -0.5**
RDO Rodhopi 3.95 39 P **Pn** **18 07 54.6 -0.7**
ALN Alexandroupoli 4.04 45 **Pn** **18 07 56.2 -0.3**
ALN Alexandroupoli 4.04 45 P **Pn** **18 07 56.3 -0.3**
ALN Alexandroupoli 4.04 45 P **Pn** **18 07 55.8 -0.7**
RZN Rozhen 4.06 27 *i* P **Pn** **18 07 57.5 +0.5**
ZKR Zakros 4.35 132 P **Pn** **18 08 01.1 +0.3**
TIP Timpagrande 4.46 286 **Pn** **18 08 04.5 +2.1**
TIP Timpagrande 4.46 286 ⇓P **Pn** **18 08 05.3 +3.0**
TIP Timpagrande 4.46 286 P **Pn** **18 08 02.9 +0.5**
PLNA Plana 4.46 11 *e*P **Pn** **18 08 04.7 +2.2**
VTS Vitosha 4.58 9 *e*P **Pn** **18 08 06.0 +1.9**
BALB Balikesir 4.64 69 **Pn** **18 08 05.4 +0.6**
KARP Karpathos 4.67 122 **Pn** **18 08 06.4 +1.1**
KARP Karpathos 4.67 122 P **Pn** **18 08 06.0 +0.8**
BLSH Balsha 4.82 9 *e*P **Pn** **18 08 09.0 +2.3**
NOCI Noci 4.85 305 P **Pn** **18 08 08.5 +0.8**
PDG Podgorica 4.91 333 **Pn** **18 08 10.3 +1.9**
MANT Manisa 4.96 84 **Pn** **18 08 09.3 0.0**
MATE Matera 5.01 302 ⇓P **Pn** **18 08 11.8 +1.9**
CEL Celeste 5.03 274 Pn **Pn** **18 08 12.0 +1.7**
ARG Arkhangelos 5.03 110 **Pn** **18 08 10.3 +0.1**
ARG Arkhangelos 5.03 110 P **Pn** **18 08 10.3 +0.1**
CUC Castrocucco 5.38 293 **Pn** **18 08 17.3 +2.3**
BOVS Bovan 5.55 356 ⇓P **Pn** **18 08 18.9 +1.6**
ELND Elena 5.55 28 ⇑P **Pn** **18 08 18.9 +1.5**
ACER Acerenza 5.59 301 **Pn** **18 08 19.9 +1.9**
SZH Strazhitsa 5.88 27 *e*P **Pn** **18 08 24.0 +2.2**
LOZB Loznitsa 6.20 31 ⇓P **Pn** **18 08 28.8 +2.5**
ELL Elmali 6.22 100 **Pn** **18 08 31.2 +4.5**
ELL Elmali 6.22 100 P **Pn** **18 08 31.2 +4.5**
VAE Valguarnera 6.26 267 Pn **Pn** **18 08 31.6 +4.4**
0.6nm,0.3s,baz=76,slow=5.5,SNR=3.1
VAE **Sn** **18 09 45.3 +6.6**
1.4nm,0.3s,baz=108,slow=18,SNR=4.1
RAFF Raffo Rosso 6.34 265 Pn **Pn** **18 08 30.4 +2.2**
PAOL Paolisi 6.64 299 **Pn** **18 08 35.0 +2.7**
MDVR Moldovita 6.69 357 ⇑P **Pn** **18 08 35.9 +2.8**
MDUB Mudurnu 7.31 68 **Pn** **18 08 41.8 +0.1**
LOT Lotru 7.43 8 ⇓P **Pn** **18 08 45.9 +2.7**
ARR Arges 7.47 13 ⇑P **Pn** **18 08 46.5 +2.7**
INTR Introdacqua 7.52 304 **Pn** **18 08 47.1 +2.6**
BZS Buzias 7.53 356 ⇑P **Pn** **18 08 46.8 +2.3**
BZS Buzias 7.53 356 P **Pn** **18 08 46.7 +2.3**
VOIR 7.62 15 ⇑P **Pn** **18 08 48.0 +2.2**
VOIR 7.62 15 P **Pn** **18 08 48.0 +2.2**
MLR Muntele Rosu 7.88 19 Pn **Pn** **18 08 51.2 +1.8**
0.8nm,0.3s,baz=288,slow=20,SNR=2.0
MLR LR LR 18 12 12.4
comp=Z,237nm,19.7s,baz=102,slow=40
4.0nm,0.4s
MLR Muntele Rosu 7.88 19 Pn **Pn** **18 08 49.9 +0.5**
MLR Muntele Rosu 7.88 19 ⇓P **Pn** **18 08 51.8 +2.4**
MLR Muntele Rosu 7.88 19 P **Pn** **18 08 49.9 +0.5**
CAMP Campotosto 8.10 306 **Pn** **18 08 54.9 +2.5**
SIRR Siria 8.18 357 ⇓P **Pn** **18 08 55.6 +2.2**
DOPR Dopca 8.20 15 ⇑P **Pn** **18 08 55.9 +2.2**
COVR Voineasa-Covas 8.28 19 ⇑P **Pn** **18 08 57.5 +2.7**
PLOR Plostina 8.40 21 ⇑P **Pn** **18 08 59.2 +2.6**
PLOR Plostina 8.40 21 P **Pn** **18 08 59.1 +2.6**
TURR Turia 8.42 18 ⇑P **Pn** **18 08 59.1 +2.3**
NRCA Norcia 8.44 307 **Pn** **18 08 58.9 +1.9**
VRI Vrincioaia 8.44 22 ⇓P **Pn** **18 08 59.9 +2.9**
VRI Vrincioaia 8.44 22 P **Pn** **18 08 59.9 +2.9**
FDMO Fiordimonte 8.56 308 **Pn** **18 09 00.7 +2.1**
MARR Marisel-Cluj 8.60 4 ⇑P **Pn** **18 09 00.5 +1.3**
BR131 Keskin Array S 9.01 76 **Pn** **18 09 06.3 +1.4**
BR131 Keskin Array S 9.01 76*d* *i*P **Pn** **18 09 07.6 +2.7**
BRTR Keskin Array B 9.01 76 Pn **Pn** **18 09 06.8 +2.0**
0.8nm,0.3s,baz=255,slow=13,SNR=12
BRTR LR LR 18 13 23.1
comp=Z,312nm,18.4s,baz=256,slow=43
4.5nm,0.6s
TESR Tescani 9.01 20 ⇓P **Pn** **18 09 06.3 +1.5**
CRES Cresnjevec Ost 9.24 329 *i* Pn **Pn** **18 09 07.2 -0.8**
GBRS Gornja Briga 9.28 326 *i* Pn **Pn** **18 09 08.3 -0.3**
ILGA Ilgaz 9.31 68 Pn **Pn** **18 09 10.3 +1.1**

BURAR Bucovina Array 9.75 12 Pn **Pn** **18 09 16.9 +1.8**
BURAR Bucovina Array 9.75 12 ⇑P **Pn** **18 09 17.8 +2.7**
BURAR Bucovina Array 9.75 12 P **Pn** **18 09 17.8 +2.7**
VNDS Vrh nad Dolski 9.78 327 *i* Pn **Pn** **18 09 14.7 -0.7**
BUR08 Bucovina Ar. S 9.78 12 Pn **Pn** **18 09 16.9 +1.4**
PSZ Piszkesteto 9.97 351 ⇓P **Pn** **18 09 20.5 +2.4**
PSZ Piszkesteto 9.97 351 P **Pn** **18 09 20.4 +2.4**
SOKA Soboth 10.11 330 *i* Pn **Pn** **18 09 21.2 +1.3**
2.0nm,0.5s
SOKA *i* Sn **Sn** **18 11 13.1 -0.1**
1.5nm,0.5s
OBKA Obir 10.16 328 *e*Pn **Pn** **18 09 22.2 +1.5**
2.5nm,0.5s
OBKA *e*Sn **Sn** **18 11 13.4 -1.3**
5.6nm,0.7s
SABO M.te Sabotino 10.18 323 Pn **Pn** **18 09 19.7 -1.2**
ARSA Arzberg 10.41 334 *e*Pn Pn 18 09 32.5 +8.5
1.3nm,0.3s
ARSA *e*Sn **Sn** **18 11 20.5 0.0**
1.4nm,0.5s
KEST Kesra 10.62 261 LR LR 18 13 59.6
comp=Z,146nm,18.9s,baz=217,slow=40
MODS Modra-Piesok 10.90 342 *e*P **Pn** **18 09 34.1 +3.5**
MODS Modra-Piesok 10.90 342 *e*PN **Pn** **18 09 34.1 +3.5**
MODS *e* 18 41 10.5
LANS Liptovska Anna 11.23 350 *e*P **Pn** **18 09 38.2 +2.9**
LANS Liptovska Anna 11.23 350 *e*PN **Pn** **18 09 38.2 +2.9**
ABTA Abfaltersbach 11.25 323 *i* Pn **Pn** **18 09 35.9 +0.3**
1.2nm,0.3s
ABTA *e*Sn **Sn** **18 11 39.2 -2.2**
6.0nm,0.6s
MMAI Mount Meron Ar 11.83 111 Pn **Pn** **18 09 44.0 +0.5**
0.6nm,0.3s,baz=327,slow=16,SNR=3.0
2.9nm,0.7s
VRAC Vranov 11.93 342 LR LR 18 15 51.6
comp=Z,68nm,19.3s,baz=174,slow=45
WTTA Wattenberg 12.04 323 *i* Pn **Pn** **18 09 47.8 +1.4**
3.0nm,0.4s
WTTA *e*Sn **Sn** **18 11 59.2 -1.5**
4.9nm,0.5s
WATA Walderalm 12.12 323 *i* Pn **Pn** **18 09 49.0 +1.4**
8.6nm,0.7s
WATA *e*Sn **Sn** **18 12 00.1 -2.5**
2.8nm,0.4s
SQTA Sankt Quirin 12.22 322 *e*Pn **Pn** **18 09 48.2 -0.6**
1.2nm,0.3s
SQTA *e*Sn **Sn** **18 12 04.9 -0.1**
4.3nm,0.5s
FUORN Ofenpass-Fuorn 12.30 318 Pn **Pn** **18 09 51.5 +1.5**
FETA Feichten 12.32 320 *i* Sn **Sn** **18 12 07.7 +0.2**
2.5nm,0.7s
GERES GERESS Array B 12.41 333 Pn **Pn** **18 09 53.9 +2.5**
baz=149,slow=14,SNR=2.1
GERES LR LR 18 15 38.9
comp=Z,380nm,18.1s,baz=194,slow=42
0.3nm,0.4s
DAVOX Davos/Dischmat 12.60 317 Pn Pn 18 09 59.2 +5.0
0.3nm,0.3s,baz=343,slow=19,SNR=3.0
DAVOX Sn Sn 18 12 04.7 -10
0.2nm,0.3s,baz=135,slow=18,SNR=2.4
ASF Jabal al Asfar 13.34 112 Pn **Pn** **18 10 06.7 +2.6**
0.2nm,0.3s,baz=0.0,slow=20,SNR=1.1
1.4nm,0.6s
EIL Elat 13.46 125 Pn **Pn** **18 10 06.7 +1.0**
0.5nm,0.3s,baz=360,slow=18,SNR=2.4
EIL Sn **Sn** **18 12 29.6 -5.8**
0.5nm,0.3s,baz=90,slow=20,SNR=1.7
9.1nm,1.0s
AKASG Malin Array Be 13.54 19 Pn **Pn** **18 10 08.8 +2.1**
0.2nm,0.3s,baz=209,slow=12,SNR=1.8
AKASG LR LR 18 15 31.0
comp=Z,54nm,20.8s,baz=230,slow=38
0.2nm,0.3s
SENIN Lac Senin/Sane 13.82 311 Pn **Pn** **18 10 12.9 +2.2**
MARD Mardin 14.67 87 Pn **Pn** **18 10 21.4 -0.9**
KBZ Khabaz 16.56 64 LR LR 18 18 24.6
comp=Z,47nm,18.9s,baz=256,slow=42
KBZ Khabaz 16.56 64 ⇓*e*P **P** **18 10 48.6 -0.8**
MNK Minsk 16.85 11 *i* P **Pn** **18 10 50.1 -0.4**
comp=E,19nm,0.9s
MNK *i* P **Pn** **18 10 50.1 -0.4**
comp=N,18nm,1.6s
MNK *i* P **Pn** **18 10 50.1 -0.4**
comp=Z,10.0nm,0.9s,baz=195
MNK *i* PP **PnPn** **18 10 59.7 -0.3**
MNK *i* PPP PPP 18 11 08.1
MNK *i* S **Sn** **18 13 56.4 -1.2**
MNK *i* SS **SnSn** **18 14 10.8 +0.1**
MNK *i* SSS SSS 18 14 23.9
MNK *i* LQ LQ 18 15 34.7
MNK *i* LRM MLR 18 18 14.5
comp=E,316nm,19.7s
MNK *i* LRM MLR 18 18 18.1
comp=Z,272nm,18.8s
MNK Minsk 16.85 11 *i* P **Pn** **18 10 50.0 -0.4**
MNK *i* S **Sn** **18 13 56.3 -1.2**
MNK pmax pmax
comp=N,18nm,1.6s
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK pmax pmax
comp=E,19nm,0.9s
MNK MLR MLR
comp=E,316nm,20.0s
MNK MLR MLR
comp=Z,272nm,17.0s
GNI Garni 17.55 76 LR LR 18 19 31.1
comp=Z,45nm,21.1s,baz=272,slow=43
VORD Divnogorie 17.63 38 *e*P **Pn** **18 10 53.4 -6.8**
VORD pmax pmax
comp=Z,4.0nm,0.7s
VSR Storozhevoye 17.73 37 *e*P **Pn** **18 10 58.2 -3.3**
VSR pmax pmax
comp=Z,3.0nm,0.4s
VORR Voronezh 18.05 36 *e*P **Pn** **18 11 00.9 -4.5**
VORR pmax pmax
comp=Z,30nm,0.4s
LPSR Galich'ya Gora 18.57 33 *e*P **Pn** **18 11 12.4 +0.7**
LPSR pmax pmax
comp=Z,9.0nm,0.7s
VRH Novokhopyorsk 18.98 40 *e*P **Pn** **18 11 16.5 -0.2**
VRH pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 19.58 25 *e*P **Pn** **18 11 24.4 +0.5**
OBN pmax pmax
comp=Z,5.0nm,0.9s
ESBB Sonseca Array 20.47 283 P Pn 18 11 34.0 -0.6
ESBB IAmb IAmb 18 11 39.4
comp=Z,18nm,1.3s
ESDC Sonseca Array 20.47 283 P **P** **18 11 33.3 +0.8**
comp=Z,2.9nm,0.8s,baz=75,slow=11,SNR=18
comp=Z,2.9nm,0.8s
ESDC Sonseca Array 20.47 283 Pn 18 11 33.7 -1.0
ESDC IAmb IAmb 18 11 39.3
comp=Z,13nm,1.4s
VSU Vasula 20.59 7⇓*e*P **P** **18 11 34.0 +0.5**
VSU pmax pmax
comp=Z,42nm,0.8s
TAM Tamanrasset 20.96 228 Pn 18 11 39.7 -0.9
TAM Tamanrasset 20.96 228 P Pn 18 11 39.7 -0.8
TAM pmax pmax
comp=Z,50nm,0.2s
MDT Midelt 22.49 265 LR LR 18 20 27.6
comp=Z,64nm,21.4s,baz=51,slow=36
MD01 Midelt array s 22.59 265 P **P** **18 11 54.8 -0.7**
MD31 MD31 22.59 265 P **P** **18 11 55.2 -0.2**
BELG Belogornoye 22.71 43⇓*e*P **P** **18 11 57.3 +1.0**
BELG pmax pmax
comp=Z,3.0nm,1.1s
HFS Hagfors 22.72 349 P **P** **18 11 55.4 -1.1**
comp=Z,2.0nm,0.6s,baz=154,slow=11,SNR=9.4
HFS LR LR 18 20 56.9
comp=Z,102nm,18.5s,baz=98,slow=37
comp=Z,2.0nm,0.6s
FINES FINESS Array B 23.49 5 P **P** **18 12 02.6 -1.7**
comp=Z,1.2nm,0.5s,baz=170,slow=9.9,SNR=5.9
FINES LR LR 18 22 08.1
comp=Z,141nm,18.3s,baz=228,slow=39
comp=Z,1.2nm,0.5s
FINES FINESS Array B 23.49 5 *i* P **P** **18 12 03.0 -1.3**
FINES pmax pmax
comp=Z,1.0nm,0.5s
NB201 NORSAR Array S 23.99 347 P **P** **18 12 06.0 -3.2**
NB2 NORSAR Subarra 23.99 347 P **P** **18 12 08.4 -0.8**
comp=Z,1.6nm,0.8s,baz=160,slow=11
NOA NORSAR Array B 23.99 347 P **P** **18 12 08.1 -1.1**
comp=Z,0.5nm,0.5s,baz=160,slow=10.0,SNR=6.0

NOA LR LR 18 24 36.4
comp=Z,48nm,18.3s,baz=170,slow=44
comp=Z,0.5nm,0.5s
EKA Eskdalemuir Ar 24.31 323 P **P** **18 12 11.8 -0.4**
comp=Z,3.0nm,0.5s,baz=126,slow=9.5,SNR=23
comp=Z,3.0nm,0.5s
EKB Eskdalemuir 24.32 323 P **P** **18 12 14.1 +1.8**
EKB IAmb IAmb 18 12 18.3
comp=Z,15nm,1.1s
RAYN Ar Rayn 24.59 120 **P** **18 12 16.8 +1.8**
RAYN Ar Rayn 24.59 120 P **P** **18 12 16.8 +1.8**
RAYN pmax pmax
comp=Z,2.0nm,0.8s
KLMR Klimovskoe 25.23 20 *e*P **P** **18 12 21.1 +0.8**
KLMR pmax pmax
comp=Z,21nm,1.1s
KIRV Kirov 26.98 32 LR LR 18 23 40.7
comp=Z,104nm,19.8s,baz=247,slow=37
KIRV Kirov 26.98 32⇓*e*P **P** **18 12 36.3 +0.1**
AB31 Akbulak array 29.15 55 P **P** **18 12 55.1 -0.6**
ARTI Arti 30.10 41 LR LR 18 25 51.6
comp=Z,54nm,18.0s,baz=226,slow=38
ARTI Arti 30.10 41⇓*e*P **P** **18 13 05.8 +1.7**
ARTI pmax pmax
comp=Z,14nm,2.8s
TORD Torodi Ar. Bea 30.87 222 P **P** **18 13 11.1 -0.1**
comp=Z,1.3nm,0.7s,baz=28,slow=6.3,SNR=13
comp=Z,1.3nm,0.7s
TORD Torodi Ar. Bea 30.87 222 P **P** **18 13 11.9 +0.7**
BVAR Borovoye Array 36.11 50 P **P** **18 13 55.9 -0.7**
comp=Z,1.1nm,0.6s,baz=284,slow=6.0,SNR=8.6
comp=Z,1.1nm,0.6s
KK31 Karatay Array 36.56 67 **P** **18 14 00.3 -0.2**
KK31 IAmb IAmb 18 14 07.7
comp=Z,2.1nm,0.6s
KK31 Karatay Array 36.56 67 P **P** **18 14 00.3 -0.2**
KK31 pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 36.56 67 P **P** **18 13 58.1 -2.4**
KKAR Karatay Array 36.56 67 P **P** **18 13 58.1 -2.4**
MBAR Mbarara 39.29 167 LR LR 18 32 29.9
comp=Z,43nm,18.2s,baz=326,slow=39
AAK Ala-Archa 39.52 66⇑*e*P **P** **18 14 28.4 +2.7**
AAK pmax pmax
comp=Z,4.0nm,1.9s
DBIC Dimbokro 39.79 225 P **P** **18 14 27.9 0.0**
comp=Z,2.5nm,0.6s,baz=57,slow=8.7,SNR=5.3
DBIC LR LR 18 32 55.5
comp=Z,53nm,18.0s,baz=34,slow=39
comp=Z,2.5nm,0.6s
DBIC Dimbokro 39.79 225 P **P** **18 14 28.9 +0.9**
DBIC IAmb IAmb 18 14 34.6
comp=Z,7.4nm,1.1s
DBIC Dimbokro 39.79 225 P **P** **18 14 28.9 +0.9**
DBIC pmax pmax
comp=Z,7.0nm,1.1s
SPB2 Spitsbergen Ar 40.26 358 P **P** **18 14 31.0 -0.2**
SPITS Spitsbergen Ar 40.27 358 P **P** **18 14 31.8 +0.5**
comp=Z,11nm,1.2s,baz=158,slow=12,SNR=9.9
SPITS PcP **PcP** **18 16 35.0 +0.3**
comp=Z,2.8nm,0.9s,baz=131,slow=4.4,SNR=5.8
comp=Z,11nm,1.2s
SPITS Spitsbergen Ar 40.27 358 P **P** **18 14 32.2 +0.9**
SPITS pmax pmax
comp=Z,18nm,1.3s
BOOM Boomskoye usch 40.60 66 P **P** **18 14 34.7 +0.1**
BOOM Boomskoye usch 40.60 66 P **P** **18 14 34.7 +0.1**
BOOM pmax pmax
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 41.16 54 P **P** **18 14 39.0 0.0**
comp=Z,6.0nm,0.7s,baz=279,slow=8.6,SNR=48
comp=Z,6.0nm,0.7s
KURK Kurchatov 41.21 53 **P** **18 14 38.6 -0.8**
KURK IAmb IAmb 18 14 40.6
comp=Z,3.8nm,0.7s
KURK Kurchatov 41.21 53⇑*e*P **P** **18 14 39.0 -0.4**
KURK pmax pmax
comp=Z,11nm,1.7s
MAKZ Makanchi 43.95 59 **P** **18 15 01.1 -0.6**
MAKZ IAmb IAmb 18 15 02.9
comp=Z,3.3nm,0.7s
MAKZ Makanchi 43.95 59 P **P** **18 15 01.1 -0.6**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 44.16 59*c* *i*P **P** **18 15 03.1 -0.3**
MKAR Makanchi Array 44.16 59 P **P** **18 15 03.3 -0.2**
comp=Z,13nm,0.6s,baz=280,slow=7.1,SNR=143
comp=Z,13nm,0.6s
MKAR Makanchi Array 44.16 59 **P** **18 15 02.9 -0.5**
ZAA0 Zalesovo Array 44.71 48 IAmb IAmb 18 15 17.5
comp=Z,4.1nm,0.7s
ZALV Zalesovo Beam 44.71 48 P **P** **18 15 06.9 -0.7**
comp=Z,3.0nm,0.4s,baz=277,slow=8.7,SNR=17
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 44.71 48 **P** **18 15 06.7 -1.0**
ZALV Zalesovo Beam 44.71 48 *i* P **P** **18 15 07.0 -0.7**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
NRIK Noril'sk 46.25 27 P **P** **18 15 19.5 -0.1**
comp=Z,2.2nm,0.4s,baz=198,slow=5.3,SNR=5.9
NRIK LR LR 18 34 46.6
comp=Z,40nm,19.7s,baz=302,slow=36
comp=Z,2.2nm,0.4s
NRIK Noril'sk 46.25 27 P **P** **18 15 19.6 0.0**
NRIK IAmb IAmb 18 15 21.0
comp=Z,4.0nm,1.0s
NRIK Noril'sk 46.25 27⇓*e*P **P** **18 15 20.5 +0.9**
NRIK pmax pmax
comp=Z,4.0nm,1.0s
DGZ Jazzator, Alta 46.96 54⇑*e*P **P** **18 15 25.4 -0.3**
DGZ pmax pmax
comp=Z,4.0nm,0.6s
KNGR Kungurtug, Tuv 53.01 50⇑*e*P **P** **18 16 11.7 +0.1**
KNGR pmax pmax
comp=Z,6.0nm,1.7s
LSZ Lusaka 53.38 173 LR LR 18 39 09.7
comp=Z,37nm,18.0s,baz=316,slow=36
TSUM Tsumeb 57.16 185 LR LR 18 43 44.7
comp=Z,89nm,19.4s,baz=334,slow=39
TIXI Tiksi 59.24 21 LR LR 18 46 05.9
comp=Z,73nm,18.1s,baz=17,slow=40
SONM Songino Array 59.44 51 P **P** **18 16 56.5 -1.0**
comp=Z,0.6nm,0.5s,baz=290,slow=9.2,SNR=6.8
comp=Z,0.6nm,0.5s
SONM Songino Array 59.44 51 IAmb IAmb 18 17 02.5
comp=Z,4.9nm,1.4s
SONM Songino Array 59.44 51 P **P** **18 16 56.5 -1.0**
SONM pmax pmax
comp=Z,5.0nm,1.4s
SCHQ Schefferville 59.45 318 P **P** **18 16 58.0 +0.6**
comp=Z,2.2nm,0.5s,baz=61,slow=6.6,SNR=4.2
comp=Z,2.2nm,0.5s
YAK Yakutsk 64.49 30⇓*e*P **P** **18 17 31.3 +0.2**
YAK pmax pmax
comp=Z,5.0nm,0.8s
HHC Hu-ho-hao-te 65.93 56 *e*P **P** **18 17 41.9 +0.9**
HHC pmax pmax
comp=Z,3.0nm,0.6s
BOSA Boshof 66.42 177 P **P** **18 17 44.1 +0.1**
comp=Z,1.8nm,0.9s,baz=359,slow=12,SNR=1.3
comp=Z,1.8nm,0.9s
BOSA Boshof 66.42 177 P **P** **18 17 44.1 +0.1**
BOSA pmax pmax
comp=Z,25nm,1.5s
CMAR Chiang Mai Arr 68.53 83 P **P** **18 17 57.1 -0.5**
comp=Z,0.4nm,0.7s,baz=313,slow=6.3,SNR=4.4
comp=Z,0.4nm,0.7s
CMAR Chiang Mai Arr 68.53 83 *i* P **P** **18 18 01.2 +3.6**
SEY Seymchan 71.71 22 P **P** **18 18 15.1 -1.2**
comp=Z,0.8nm,0.6s,baz=300,slow=20,SNR=6.7
comp=Z,0.8nm,0.6s
INK Inuvik 72.37 351 P **P** **18 18 20.5 +0.3**
comp=Z,0.4nm,0.4s,baz=2.0,slow=4.1,SNR=2.4
comp=Z,0.4nm,0.4s
INK Inuvik 72.37 351 P **P** **18 18 20.5 +0.3**
INK pmax pmax
comp=Z,7.0nm,1.5s
MA2 Magadan 73.80 25 P **P** **18 18 29.2 +0.3**
comp=Z,2.9nm,0.6s,baz=326,slow=8.9,SNR=4.6
comp=Z,2.9nm,0.6s
MA2 Magadan 73.80 25 IAmb IAmb 18 18 29.9
comp=Z,4.1nm,0.8s
MA2 Magadan 73.80 25 P **P** **18 18 29.2 +0.3**
MA2 pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 73.93 341 P **P** **18 18 29.4 -0.2**
comp=Z,0.2nm,0.4s,baz=28,slow=5.4,SNR=4.2

comp=Z,0.2nm,0.4s
YKA Yellowknife Ar 73.93 341 ceP P 18 18 31.0 +1.4
ILAR Eielson Array 77.11 355 P P 18 18 48.5 +0.7
comp=Z,0.3nm,0.6s,baz=351,slow=3.2,SNR=7.3
comp=Z,0.3nm,0.6s
KSRS Korea Array 78.30 51 LR LR 18 57 35.7
comp=Z,30nm,18.6s,baz=225,slow=39
PETK Petropavlovsk- 81.29 25 LR LR 18 58 57.8
comp=Z,40nm,19.3s,baz=216,slow=38
PDAR Pinedale Array 88.39 327 P P 18 19 46.1 -0.9
comp=Z,0.4nm,0.6s,baz=61,slow=6.2,SNR=4.6
comp=Z,0.4nm,0.6s
WRA Warramunga Arr 119.15 93 PKP PKPdf 18 25 41.2 -2.9
comp=Z,0.4nm,0.8s,baz=308,slow=2.0,SNR=2.1
ASAR Alice Springs 120.79 97 PKP PKPdf 18 25 45.6 -1.6
comp=Z,0.2nm,0.3s,baz=330,slow=1.7,SNR=5.8

TAP 06 18:11:30.4, 24°.17N × 122°.19E, h30 km, ML2.5, 1C-1D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.12	111 ⇑	*i* P	Pb	18 11 35.4	0.0
EOS4				*i* S	Sb	18 11 39.3	+0.5
EOS3	EOS3	0.17	43 ⇓	*i* P	Pb	18 11 35.8	-0.2
EOS3				*i* S	Sb	18 11 39.9	-0.1
EOS2	EOS2	0.26	8	*i* P	Pb	18 11 37.0	-0.1
EOS2				*i* S	Sb	18 11 42.1	+0.4
EAHA	Aohua	0.44	292	P	Pb	18 11 40.0	+0.1
EWUT	Wuta	0.47	307	*e*P	Pn	18 11 40.8	-0.3
TWC	Suao	0.54	325	*i* P	Pb	18 11 41.0	-0.5
TWC				*i* S	Sb	18 11 47.9	-1.2
TWC	Suao	0.54	325	P	Pb	18 11 40.8	-0.7
TWC				S	Sb	18 11 48.1	-1.0
NACB	Ninganchiao	0.55	271	*e*P	Pb	18 11 41.1	-0.5
NDS	Dongshan	0.64	317	P	Pb	18 11 43.1	+0.1
NDS				S	Sb	18 11 52.0	+0.3
ETLH	Xiulin Townshi	0.65	274	*e*P	Pn	18 11 45.4	+1.8
ETLH				*e*S	Sn	18 11 54.0	+1.1
ETM	Tongmen	0.67	253	*e*P	Pn	18 11 43.0	-0.1
LATG	Datong	0.71	301	P	Pb	18 11 45.0	+0.5
LATG				S	Sn	18 11 54.8	+0.3
LXIB	Xiulin Townshi	0.73	259	P	Pb	18 11 44.5	-0.1
LXIB				*e*S	Sn	18 11 56.0	+1.1
TWE	Neicheng	0.73	319	P	Pn	18 11 45.4	+0.7
TWE				S	Sn	18 11 55.9	+1.0
ENTT	Nioudou	0.74	310	*i* P	Pb	18 11 44.7	-0.1
ENTT				*i* S	Sn	18 11 54.9	-0.2
ESL	Shilin	0.78	243	*e*P	Pn	18 11 44.4	-0.9
NNSB	Datong	0.78	290	*e*P	Pb	18 11 45.6	0.0
NNSB				*e*S	Sn	18 11 57.3	+1.0
NNS	Nan Shan	0.80	290	*e*P	Pn	18 11 45.6	-0.1
NNS				*e*S	Sn	18 11 57.0	+0.4
YOJ	Yonaguni jima	0.80	68	*e*P	Pn	18 11 45.6	-0.1
YOJ				*e*S	Sn	18 11 56.9	+0.3
FUSB	Fushanzhiwuyua	0.81	317	*e*P	Pb	18 11 46.2	+0.3
FUSB				*e*S	Sn	18 11 57.1	+0.2
WHF	Hehuan Shan	0.85	269	S	Sn	18 11 59.0	+0.7
WARBT	Fenglin Townsh	0.86	239	*e*P	Pn	18 11 45.5	-1.0
TIPB	Shuangxi	0.87	338	*e*P	Pb	18 11 47.2	+0.3
TIPB				*e*S	Sb	18 11 58.1	-0.2
NWLT	Wulai	0.88	314	*e*P	Pb	18 11 46.9	-0.2
NWLT				*e*S	Sn	18 11 59.6	+1.1
YHNB	Yeheng	0.90	304	*e*P	Pb	18 11 48.6	+1.2
YHNB				*e*S	Sb	18 12 00.9	+1.8
NSK	Sanguang	0.92	304	P	Pb	18 11 48.9	+1.2
NSK				S	Sb	18 12 00.8	+1.2
SXI1	Grass Mountain	0.97	343	*e*P	Pb	18 11 49.0	+0.3
SXI1				*e*S	Sb	18 12 03.3	+2.1
TWA	Mucha	0.98	326	*e*P	Pb	18 11 49.5	+0.7
TWA				*e*S	Sn	18 12 00.8	-0.2

TAP 06 18:11:31.6, 24°.27N × 121°.61E, h22 km ± 1 km, ML1.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.10	187	P	Pb	18 11 35.8	+0.1
NACB				*i* S	Sb	18 11 39.4	+0.9
ETL	Fush Village	0.11	173	*i* P	Pb	18 11 36.1	-1.5
ETL				*i* S	Sb	18 11 39.5	-2.4
ETLH	Xiulin Townshi	0.13	241	P	Pb	18 11 36.7	-0.8
ETLH				S	Sb	18 11 40.0	-1.7
EAHA	Aohua	0.13	64	P	Pb	18 11 36.3	-1.1
TWD	Chiawan	0.19	183	*i* P	Pb	18 11 37.2	-0.1
TWD				*i* S	Sb	18 11 41.4	+0.1
EWUT	Wuta	0.23	42	P	Pb	18 11 37.4	-0.2
NNSB	Datong	0.26	307	P	Pb	18 11 38.1	+0.2
NNSB				S	Sb	18 11 42.3	0.0
NNS	Nan Shan	0.27	308	P	Pb	18 11 38.6	+0.5
LATG	Datong	0.27	344	P	Pb	18 11 38.1	0.0
LATG				S	Sn	18 11 44.4	-1.6
LXIB	Xiulin Townshi	0.31	216	P	Pb	18 11 39.4	+0.9
ETM	Tongmen	0.32	199	P	Pb	18 11 39.1	+0.5
ETM				S	Sb	18 11 44.6	+1.2
WHF	Hehuan Shan	0.34	248	P	Pb	18 11 39.8	+0.6
ENTT	Nioudou	0.37	354	*i* P	Pb	18 11 39.6	+0.2
ESL	Shilin	0.48	199	P	Pb	18 11 41.9	+0.6

DJA 06 18:13:29.9 ± 0.5, 6°S ± 3° × 13°4E ± °, h10 km, M3.6/9, mB4.7/1, mb3.8/3, MLv3.5/9, Mw(mB)4.0/1, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	2.04	350	P	Pb	18 14 06.0	-1.0
FAKI	Fak Fak	3.28	327	P	Pn	18 14 19.5	-2.0
BNDI	Bandanaira	4.30	285	P	Pn	18 14 34.6	-0.8
SIJI	Sorong	5.53	330	P	Pn	18 14 51.8	-0.6
	0.1nm719nm9.7nm,1.2s						
SWI	Sorong	5.54	330	P	Pn	18 14 52.2	-0.3
	0.1nm15nm,1.1s						

*IDC **06** 18:15:49.9 ± 0.8, 29°.43S × 178°.36W, h207 km ± 8 km, mb3.2/3, mbtmp3.8/4, Error ellipse: s-maj=41.1km s-min=20.5km az=157.0*

ISC 06 18:15:49.8 ± 0.7, 29°.53S ± 0°.08 × 178°.5W ± 0°.1, h204 km, n41, σ1§59/49, mb3.5/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	0.58	63	P	Pn	18 16 17.8	+0.2
GLKZ				S	S	18 16 45.2	+5.9
RAO	Raoul Island	0.59	62	P	Pn	18 16 18.0	+0.2
	818nm,0.3s,baz=110,slow=3.8,SNR=7.3						
RAO				S	S	18 16 37.2	-2.1
	463nm,0.3s,baz=241,slow=23,SNR=6.0						
RAO	Raoul Island	0.59	62	P	Pn	18 16 17.9	+0.2
MXZ	Matakaoa Point	8.44	197	S	S	18 19 23.5	-0.1
WMGZ	Waiomatatini S	8.65	196	P	Pn	18 17 51.4	0.0
WMGZ				S	S	18 19 27.9	-0.8
HAZ	Te Kaha	8.77	200	P	Pn	18 17 53.6	+0.7
HAZ				S	S	18 19 33.7	+2.3
WCZ	Waipu Caves	8.78	221	P	Pn	18 17 52.7	-0.3
PKGZ	Pakihiroa	8.79	198	P	Pn	18 17 54.8	+1.6
PKGZ				S	S	18 19 29.6	-2.3
PUZ	Puketiti	8.93	197	S	S	18 19 35.3	-0.1
RUGZ	Raukumara Rang	8.99	200	P	Pn	18 17 55.4	-0.5
RUGZ				S	S	18 19 33.9	-3.0
TWGZ	Tauwhareparae	9.10	198	S	S	18 19 41.7	+2.1
MWZ	Matawai	9.38	199	P	Pn	18 18 00.6	-0.2
MWZ				S	S	18 19 45.5	-0.5
TKGZ	Te Karaka	9.38	198	S	S	18 19 46.9	+0.8
URZ	Urewera	9.44	201	P	Pn	18 18 03.6	+2.1
	1.4nm,0.3s,baz=15,slow=2.8,SNR=6.8						
URZ				S	S	18 19 44.0	-3.3
	13nm,0.3s,baz=273,slow=21,SNR=19						
URZ	Urewera	9.44	201	S	S	18 19 47.9	+0.6
RAGZ	Rawiri	9.56	200	S	S	18 19 50.3	-0.1
RIGZ	Rimuhau	9.66	198	S	S	18 19 53.4	+0.7
MUGZ	Murupara	9.74	202	S	S	18 19 55.9	+1.2
PRGZ	Paritu Road	9.83	197	S	S	18 19 57.7	+0.8
SNGZ	Shannon Statio	9.85	199	S	S	18 19 57.5	+0.4
KNZ	Kokohu	9.98	197	S	S	18 19 59.2	-1.1
BKZ	Black Stump Fm	10.46	202	P	Pn	18 18 16.4	+1.6
BKZ				S	S	18 20 10.7	-1.3
BFZ	Birch Farm	11.92	200	P	Pn	18 18 33.9	+0.4
MRZ	Mangatainoka R	12.11	202	P	Pn	18 18 35.4	-0.5
HOWZ	Holdsworth Sta	12.34	202	P	Pn	18 18 37.7	-1.1
OGWZ	Otaki Gorge	12.38	203	P	Pn	18 18 39.0	-0.3
THZ	Tophouse	14.05	207	P	Pn	18 19 01.4	+1.3
KHZ	Kahutara	14.37	204	P	Pn	18 19 02.1	-1.8
DZM	Mont Dzumac	15.44	295	P	P	18 19 26.9	+9.4
	8.6nm,0.7s,baz=130,slow=16,SNR=9.6						
CTA	Charters Tower	33.23	278	P	P	18 22 09.6	+1.8
	2.4nm,0.9s,baz=114,slow=9.4,SNR=5.7						
	2.4nm,0.9s						
ASAR	Alice Springs	42.72	266	P	P	18 23 27.5	+0.5
	0.4nm,0.6s,baz=102,slow=6.5,SNR=16						
	0.4nm,0.6s						
WRA	Warramunga Arr	43.62	272	P	P	18 23 34.3	0.0
	0.5nm,0.3s,baz=110,slow=8.0,SNR=8.9						
	0.5nm,0.3s						
MKAR	Makanchi Array	116.87	311	PKP	PKPdf	18 34 07.0	-2.8
	0.4nm,0.9s,baz=106,slow=3.1,SNR=1.9						
KURBB	Kurchatov Arra	120.16	314	PKP	PKPdf	18 34 14.9	-1.0
	0.3nm,0.4s,baz=100,slow=1.5,SNR=1.9						
BVAR	Borovoye Array	125.47	316	PKP	PKiKP	18 34 26.3	-0.1
	0.7nm,0.6s,baz=129,slow=3.9,SNR=3.1						
SPITS	Spitsbergen Ar	130.81	356	PKP	PKiKP	18 34 35.8	-0.7
	3.5nm,0.9s,baz=343,slow=4.5,SNR=1.5						
FINES	FINESS Array B	144.18	340	PKP	PKPab	18 34 58.1	-0.6
	2.5nm,0.6s,baz=68,slow=2.8,SNR=19						
NOA	NORSAR Array B	147.83	351	PKPbc	PKPbc	18 35 09.5	-0.4
	1.2nm,0.8s,baz=15,slow=4.1,SNR=5.0						
HFS	Hagfors	149.31	348	PKPbc	PKPbc	18 35 09.8	-1.4
	1.8nm,0.6s,baz=90,slow=1.9,SNR=8.2						
AKASG	Malin Array Be	150.34	323	PKPbc	PKPbc	18 35 15.7	-0.8
	1.4nm,0.5s,baz=48,slow=3.0,SNR=8.7						
MMAI	Mount Meron Ar	150.88	286	PKPbc	PKiKP	18 35 19.9	+1.0
	1.4nm,0.4s,baz=59,slow=8.0,SNR=6.2						

IDC 06 18:26:00.8 ± 4.0, 47°.75N × 92°.49W, h0 km, mbtmp2.6/2, ML0.9/1, Error ellipse: s-maj=47.7km s-min=18.7km az=76.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULM	Lac du Bonnet	3.35	320	Pn	Pn	18 26 52.0	-2.4
	0.2nm,0.3s,baz=135,slow=8.6,SNR=1.7						
ULM				Pg	Pb	18 27 01.4	+0.4
	0.5nm,0.3s,baz=138,slow=15,SNR=2.6						
ULM				Sn	Sn	18 27 29.4	-5.4
	0.5nm,0.3s,baz=149,slow=18,SNR=3.4						
ULM				Lg	Lg	18 27 44.0	
	4.1nm,0.3s,baz=52,slow=19,SNR=21						
	0.8nm,0.5s						
I10CA	LAC DU BONNET	3.38	318	I	I	18 48 20.0	
	baz=144,slow=339,SNR=0.6						
PDAR	Pinedale Array	13.01	254	Pn	Pn	18 29 04.8	-2.2
	0.1nm,0.5s,baz=70,slow=13,SNR=3.8						
PDAR				Lg	Lg	18 32 32.9	
	baz=74,slow=32,SNR=2.2						
I56US	NEWPORT INFRAS	16.48	281	I	I	20 08 15.0	
	baz=88,slow=323,SNR=2.1						

*NEIC **06** 18:27:16.4 ± 2.3, 5°.51N ± 0°.06 × 126°.46E ± 0°.08, h10 km ± 1 km, mb4.7/57, Error ellipse: s-maj=15.2km s-min=8.4km az=64.0*

*BJI **06** 18:27:18.1, 4°.97N × 126°.23E, h67 km, mB4.8/2, mb4.4/26*

*IDC **06** 18:27:18.1 ± 2.0, 5°.43N ± 126°.37E, h26 km ± 12 km, mb4.3/20, mbtmp4.4/21, ML4.0/1, MS3.5/18, Error ellipse: s-maj=30.6km s-min=11.7km az=68.0*

*DJA **06** 18:27:20.5 ± 0.8, 5°N ± 2° × 12°6E ± °, h16 km ± 7 km, M4.7/17, mB5.2/6, mb4.8/15, MLv4.8/17, Mw(mB)4.5/6*

ISC 06 18:27:19.1 ± 1.2, 5°.49N ± 0°.04 × 126°.47E ± 0°.07, h33 km ± 7 km, n129, σ1§36/117, mb4.6/53, MS3.5/18, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.80	331	Pn	Pb	18 27 50.2	-1.3
	42nm,0.3s,baz=79,slow=3.0,SNR=16						
DAV				Sn	Sb	18 28 15.1	+1.3
	80nm,0.3s,baz=260,slow=23,SNR=7.6						
DAV				LR	LR	18 28 39.5	
	comp=Z,1μm,20.1s,baz=167,slow=45						
DAV	Davao City (W)	1.80	331		Pn	18 27 48.1	+0.3
DAV					Sn	18 28 09.8	+0.2
DAV	Davao City (W)	1.80	331	P	Pb	18 27 50.6	-0.9
DAV				S	Sb	18 28 14.6	+0.9
SGSI	Sangihe	2.02	208	P	Pn	18 27 51.1	+0.3
MNI	Manado	4.33	202	P	Pn	18 28 25.3	+2.6
MNI				S	Sn	18 29 15.7	+3.6
TNTI	Ternate	4.77	169	P	Pn	18 28 28.7	0.0
TNTI	Ternate	4.77	169	P	Pn	18 28 32.2	+3.5
MRSI	Marisa	6.72	222	P	Pn	18 28 56.8	+1.3
TOLI2	Tolitoli	7.15	233		Pn	18 29 00.9	-0.5
TOLI2				Sn	Sn	18 30 18.2	-3.3
LUWI	Luwuk	7.46	210		Pn	18 29 08.8	+3.1
LUWI	Luwuk	7.46	210	P	Pn	18 29 10.2	+4.5
	2μm114nm,0.7s						
SWI	Sorong	7.92	143	P	Pn	18 29 14.3	+2.3
SIJI	Sorong	7.93	143	Pn	Pn	18 29 12.6	+0.5
	2.1nm,0.3s,baz=203,slow=24,SNR=12						
SIJI				Sn	Sn	18 30 37.8	-2.9
	0.5nm,0.3s,baz=167,slow=19,SNR=1.2						
	7.1nm,0.5s						
SIJI	Sorong	7.93	143	P	Pn	18 29 14.5	+2.4
MYLDM	Lahad Datu	7.94	268		Pn	18 29 14.6	+2.4
MYLDM	Lahad Datu	7.94	268	P	Pn	18 29 14.8	+2.6
	0.2nm35nm,0.9s						
MPSI	Mapaga	8.32	232	P	Pn	18 29 19.3	+1.9
	16nm,0.8s						
NLAI	Namlea	8.69	176	P	Pn	18 29 23.1	+0.5
	70nm,0.8s						
KRAI	Karang Ratu	8.96	168	P	Pn	18 29 28.8	+2.6
	18nm,0.5s						
FAKI	Fak Fak	10.15	145	Pn	Pn	18 29 44.5	+1.9
KAPI	Kappang	12.40	213	LR	LR	18 35 12.6	
	comp=Z,216nm,20.9s,baz=60,slow=39						
SBUM	Sibu	14.53	259		P	18 30 48.4	-0.3
SOEI	Soe	15.30	188		Pn	18 30 52.1	-0.8
SOEI				IAmb	IAmb	18 31 27.7	
	comp=Z,43nm,1.0s						
BATI	Baumata	15.84	190	Pn	P	18 31 02.4	-0.8
	comp=Z,2.2nm,0.3s,baz=158,slow=5.2,SNR=7.5						
JAGI	Jajag, Banyuwa	18.52	222	P	Pn	18 31 33.6	+0.4
MTN	Manton Dam	18.79	166		P	18 31 34.1	-1.7
KNRA	Kununurra	21.15	174		P	18 32 01.9	+0.4
KNRA				IAmb	IAmb	18 32 03.2	
	comp=Z,28nm,0.7s						
LEM	Lembang	22.44	237	LR	LR	18 42 02.1	
	comp=Z,112nm,20.5s,baz=1.5,slow=40						
MYKOM	Kota Tinggi	22.86	262	P	P	18 32 21.2	+1.3
MYKOM				IAmb	IAmb	18 32 24.3	
	comp=Z,21nm,0.9s						
IPM	Ipoh	25.36	269		P	18 32 43.2	-0.3
PMG	Port Moresby	25.38	126	LR	LR	18 42 14.7	
	comp=Z,112nm,20.3s,baz=315,slow=35						
COEN	Coen	25.46	140	P	P	18 32 44.5	+0.3
WB0	Warramunga Arr	26.28	163		P	18 32 51.3	-0.4
WB0				IAmb	IAmb	18 33 03.5	
	comp=Z,17nm,1.1s						
WRA	Warramunga Arr	26.43	163	P	P	18 32 53.0	0.0
	comp=Z,4.5nm,0.6s,baz=344,slow=10,SNR=40						
WRA				ScP	ScP	18 39 56.1	+0.4
	comp=Z,0.7nm,0.7s,baz=342,slow=3.2,SNR=9.1						
	comp=Z,4.5nm,0.6s						
WRA	Warramunga Arr	26.43	163	P	P	18 32 52.4	-0.6
WR8	Warramunga Arr	26.49	163		P	18 32 53.0	-0.6
WR8				IAmb	IAmb	18 32 58.7	
	comp=Z,22nm,1.4s						
WHN	Wuhan	27.41	337	P	P	18 33 10.7	+9.0
PSA00	Pilbara Seismi	27.66	193	P	P	18 33 02.6	-1.5
PSA00	Pilbara Seismi	27.66	193	P	P	18 33 04.4	+0.3
PSA00				IAmb	IAmb	18 33 17.9	
	comp=Z,13nm,1.1s						
ENH	Enshi	29.39	329	P	P	18 33 19.4	-0.1
ENH				IAmb	IAmb	18 33 33.1	
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	29.79	298	P	P	18 33 23.8	+0.7
	comp=Z,1.3nm,0.7s,baz=105,slow=7.2,SNR=15						
CMAR				PcP	PcP	18 36 27.9	+1.5
	comp=Z,1.3nm,0.8s,baz=119,slow=1.1,SNR=11						
CMAR				ScP	ScP	18 40 08.7	+2.6
	comp=Z,3.6nm,1.1s,baz=137,slow=1.5,SNR=12						
CMAR				LR	LR	18 45 43.0	
	comp=Z,58nm,18.2s,baz=110,slow=37						
	comp=Z,1.3nm,0.7s						
AS31	Alice Springs	29.87	166	P	P	18 33 22.3	-1.5
ASAR	Alice Springs	29.87	166	P	P	18 33 23.1	-0.6
	comp=Z,0.9nm,0.7s,baz=341,slow=6.9,SNR=17						
ASAR				PcP	PcP	18 36 26.6	+0.1
	comp=Z,1.3nm,0.6s,baz=347,slow=2.3,SNR=10						
ASAR				ScP	ScP	18 40 06.5	+0.3
	comp=Z,2.6nm,0.9s,baz=355,slow=3.0,SNR=16						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	29.87	166	P	P	18 33 23.9	+0.1
CHTO	Chiang Mai	29.92	299		P	18 33 25.5	+1.2
JHJ	Hachijo jima 2	30.16	23	LR	LR	18 44 52.5	
	comp=Z,39nm,21.4s,baz=215,slow=35						
KSRS	Korea Array	31.84	2	P	P	18 33 42.5	+1.6
	comp=Z,1.6nm,0.7s,baz=191,slow=9.5,SNR=7.2						
KSRS				LR	LR	18 47 04.8	
	comp=Z,40nm,20.7s,baz=185,slow=37						
	comp=Z,1.6nm,0.7s						
CTA	Charters Tower	32.01	143	LR	LR	18 48 00.1	
	comp=Z,98nm,19.1s,baz=358,slow=39						
CTAO	Charters Tower	32.01	143	P	P	18 33 43.0	+0.4
CTAO				IAmb	IAmb	18 34 10.8	
	comp=Z,13nm,1.4s						
BJT	Baijiatuau	35.61	346		P	18 34 14.5	+0.9
BJT				IAmb	IAmb	18 34 16.5	
	comp=Z,7.5nm,0.8s						
INKA	Innaminka	35.80	158		P	18 34 15.7	+0.3
LZDM	Lanzhou Array	36.85	328	P	P	18 34 25.3	+0.6
	comp=Z,0.6nm,0.3s,baz=159,slow=8.9,SNR=7.6						
LZDM				PcP	PcP	18 36 46.7	+0.5
	comp=Z,0.4nm,0.3s,baz=116,slow=3.4,SNR=2.1						
	comp=Z,0.6nm,0.3s						
LZH	Lanzhou	36.87	329	*e*P	P	18 34 25.7	+1.0
LZH				pP	pwP	18 34 37.8	+0.9
LZH				sP	sP	18 34 45.1	+7.5
LZH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CN2	Changchun	38.17	359	P	P	18 34 37.9	+2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SHL	Shillong	38.65	305		P	18 34 39.7	-0.2
XLT	XiLinHaoTe	39.33	348	*e*P	P	18 34 46.8	+1.5
XLT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
STKA	Stephens Creek	39.86	160	P	P	18 34 49.2	-0.4
	comp=Z,5.0nm,0.7s,baz=330,slow=9.8,SNR=8.2						
STKA				ScP	ScP	18 40 42.4	+0.6
	comp=Z,2.0nm,0.7s,baz=311,slow=9.3,SNR=3.6						
STKA				LR	LR	18 55 02.8	
	comp=Z,38nm,19.8s,baz=24,slow=42						
	comp=Z,5.0nm,0.7s						
STKA	Stephens Creek	39.86	160	P	P	18 34 49.0	-0.7
BNX	BinXian	40.10	1 ⇑	P	P	18 34 54.9	+3.4
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	41.10	310	P	P	18 34 57.6	-3.0
H11S3	WAKE ISLAND Hy	41.30	68	T	T	19 18 58.3	
	baz=257,slow=75,SNR=6.7						
H11S1	WAKE ISLAND Hy	41.31	68	T	T	19 18 56.0	
	baz=257,slow=75,SNR=8.9						
H11S2	WAKE ISLAND Hy	41.31	68	T	T	19 18 56.4	
	baz=257,slow=75,SNR=13						
GTA2	Gaotai	41.55	328	P	P	18 35 04.2	+0.4
GTA2				PcP	PcP	18 37 02.0	+1.2
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
H11N1	WAKE ISLAND Hy	41.77	66	T	T	19 19 30.9	
	baz=255,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	41.78	66	T	T	19 19 33.0	
	baz=255,slow=75,SNR=8.2						
H11N3	WAKE ISLAND Hy	41.79	66	T	T	19 19 35.8	
	baz=255,slow=75,SNR=8.7						
GOMU	GeErMu	42.16	321	P	P	18 35 10.0	+0.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KLR	Kul'dur	43.82	5	LR	LR	18 56 55.8	
	comp=Z,4.9nm,18.1s,baz=202,slow=40						
HILR	Hailar Array B	44.28	354	P	P	18 35 26.8	+1.2
	comp=Z,3.2nm,0.7s,baz=165,slow=12,SNR=5.0						
	comp=Z,3.2nm,0.7s						
ULN	Ulaanbaatar	45.38	342	P	P	18 35 34.5	0.0
PALK	Pallekele	45.50	275	LR	LR	18 56 10.9	
	comp=Z,32nm,18.1s,baz=99,slow=38						
SONM	Songino Array	45.56	341	P	P	18 35 36.6	+0.7
	comp=Z,2.3nm,0.9s,baz=152,slow=8.2,SNR=5.4						
SONM				PcP	PcP	18 37 15.1	+1.0
	comp=Z,1.0nm,0.7s,baz=173,slow=2.5,SNR=3.8						
SONM				ScP	ScP	18 41 05.4	+0.7
	comp=Z,0.4nm,0.7s,baz=130,slow=4.5,SNR=3.2						
	comp=Z,2.3nm,0.9s						
SONM	Songino Array	45.56	341	P	P	18 35 36.2	+0.3
PETK	Petropavlovsk-	53.92	23	P	P	18 36 39.5	+0.2
	comp=Z,4.4nm,0.9s,baz=202,slow=13,SNR=3.0						
	comp=Z,4.4nm,0.9s						
WUS	Wushi	55.09	317	IAmb	IAmb	18 36 56.6	
	comp=Z,4.6nm,0.8s						
MKAR	Makanchi Array	55.97	325	P	P	18 36 54.1	-0.2
	comp=Z,6.4nm,0.6s,baz=120,slow=8.2,SNR=125						
MKAR				PcP	PcP	18 37 52.5	0.0
	comp=Z,3.3nm,0.7s,baz=113,slow=4.3,SNR=7.1						
MKAR				ScP	ScP	18 41 48.4	-1.0
	comp=Z,1.0nm,0.8s,baz=114,slow=5.4,SNR=9.1						
MKAR				LR	LR	19 01 51.0	
	comp=Z,91nm,18.9s,baz=130,slow=37						
	comp=Z,6.4nm,0.6s						
MKAR	Makanchi Array	55.97	325		P	18 36 53.0	-1.3
MAKZ	Makanchi	56.16	325		P	18 36 54.7	-1.0
MAKZ				IAmb	IAmb	18 36 56.0	
	comp=Z,6.6nm,0.7s						
PRZ	Przheval'sk	56.22	319		P	18 36 56.1	-0.2
TARG	Taragay, Kyrgy	56.28	317		P	18 36

D23K	**Nanushuk River**	**82.34**	**21**	IAmb	IAmb	18 39 46.6	
	comp=Z,5.0nm,0.9s						
H24K	**Noodor Dome**	**83.25**	**24**	IAmb	IAmb	18 39 51.6	
	comp=Z,3.9nm,0.8s						
G24K	**Hadweenzic Riv**	**83.43**	**24**	IAmb	IAmb	18 39 52.2	
	comp=Z,7.5nm,0.9s						
ILAR	**Eielson Array**	**83.64**	**25**	P	**P**	**18 39 44.8**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=251,slow=5.1,SNR=8.7						
	comp=Z,1.0nm,1.1s						
D25K	**Kavik River**	**83.90**	**21**	IAmb	IAmb	18 39 56.1	
	comp=Z,6.8nm,1.1s						
E25K	**Arctic Village**	**84.19**	**22**		**P**	**18 39 47.4**	**+0.6**
E25K				IAmb	IAmb	18 39 58.8	
	comp=Z,7.6nm,1.1s						
C27K	**Jago River**	**84.83**	**21**	IAmb	IAmb	18 39 59.3	
	comp=Z,6.6nm,0.9s						
SPITS	**Spitsbergen Ar**	**88.72**	**349**	P	**P**	**18 40 07.8**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=79,slow=7.5,SNR=9.5						
	comp=Z,2.9nm,0.7s						
ARCES	**ARCESS Array B**	**88.72**	**340**	P	**P**	**18 40 08.9**	**-0.1**
	comp=Z,8.8nm,0.8s,baz=76,slow=6.4,SNR=8.8						
	comp=Z,8.8nm,0.8s						
ARCES	**ARCESS Array B**	**88.72**	**340**	P	**P**	**18 40 08.6**	**-0.4**
FINES	**FINESS Array B**	**90.17**	**332**	P	**P**	**18 40 15.0**	**-0.9**
	comp=Z,3.7nm,0.7s,baz=53,slow=5.6,SNR=14						
	comp=Z,3.7nm,0.7s						
FINES	**FINESS Array B**	**90.17**	**332**	P	**P**	**18 40 15.3**	**-0.6**
DLBC	**Dease Lake**	**92.38**	**31**	LR	LR	19 16 25.2	
	comp=Z,56nm,20.6s,baz=265,slow=32						
MLR	**Muntele Rosu**	**93.46**	**316**	LR	LR	19 30 49.6	
	comp=Z,20nm,18.9s,baz=40,slow=41						
MBAR	**Mbarara**	**95.76**	**270**	LR	LR	19 24 16.6	
	comp=Z,16nm,18.2s,baz=119,slow=36						
NB2	**NORSAR Subarra**	**97.11**	**334**	P	**P**	**18 40 46.3**	**-1.5**
	comp=Z,7.6nm,1.1s,baz=68,slow=4.6						
NB2	**NORSAR Subarra**	**97.11**	**334**	P	**P**	**18 40 46.3**	**-1.5**
NB2				AMP		18 40 46.3	
	comp=Z,7.6nm,1.1s						
NOA	**NORSAR Array B**	**97.11**	**334**	P	**P**	**18 40 46.1**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=66,slow=4.6,SNR=6.4						
NOA				LR	LR	19 27 55.7	
	comp=Z,49nm,20.0s,baz=5.0,slow=38						
	comp=Z,1.8nm,0.8s						
LSZ	**Lusaka**	**99.39**	**255**	LR	LR	19 21 58.5	
	comp=Z,28nm,19.1s,baz=136,slow=33						
TORD	**Torodi Ar. Bea**	**122.11**	**289**	PKP	**PKPdf**	**18 46 10.7**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=160,slow=0.5,SNR=7.5						
TORD	**Torodi Ar. Bea**	**122.11**	**289**		**PKPdf**	**18 46 11.0**	**-0.4**

*CATAC **06** 18:34:03.0±0.5, 14˚N±3˚×9˚1W±˚, h24km±4km, M3.8/24, MLv3.8/24, Error ellipse: s-maj=6.5km s-min=2.9km az=34.6, confirmed*
*SNET **06** 18:34:02.2±2.0, 13˚.78N×91˚.44W, h49km, ML3.7, Presumed earthquake*
*GCG **06** 18:34:03.9±2.0, 13˚.94N×91˚.36W, h41km±39km, MD4.0, ML4.2, Presumed earthquake*

ISC 06 18:34:04.5±1.6, 13°.88N±0°.08×91°.34W±0°.06, h62km±14km, n46, σ1°59/70, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.52**	**359**	*i* P	**Pn**	**18 34 18.5**	**+1.5**
STG2	**El Palmar, Qui**	**0.55**	**356**	*i* P	**Pn**	**18 34 19.3**	**+2.0**
STG2				*i* S	**Sn**	**18 34 30.5**	**+3.8**
STG8	**El Palmar, Qui**	**0.57**	**358**	*i* P	**Pn**	**18 34 19.6**	**+2.0**
STG8				*i* S	**Sn**	**18 34 31.4**	**+4.3**
STG8				IAML		18 34 33.6	
	comp=N,11μm,0.1s						
ESSG	**Sabana Grande**	**0.70**	**44**	*i* P	**Pn**	**18 34 17.2**	**-1.8**
RTAL	**Retalhuleu**	**0.73**	**331**	*i* P	**Pn**	**18 34 17.3**	**-1.9**
RTAL				S	**Sn**	**18 34 28.2**	**-1.8**
ESSJ	**San Jos, E**	**0.87**	**111**	*i* P	Pn	18 34 16.1	-4.8
FG16	**Alotenango, Sa**	**0.89**	**64**	*i* P	**Pn**	**18 34 18.1**	**-3.3**
FG16				*i* S	**Sn**	**18 34 29.3**	**-4.5**
FG16				IAML		18 34 32.0	
	comp=N,59μm,0.2s						
SOKI	**Kika Raxquin**	**0.94**	**356**	*i* P	**Pn**	**18 34 20.7**	**-1.5**
SOKI				*i* S	**Sn**	**18 34 32.6**	**-2.6**
SOKI				IAML		18 34 38.3	
	comp=N,4μm,0.5s						
PCG5	**San Vicente Pa**	**0.99**	**70**	*i* P	**Pn**	**18 34 19.5**	**-3.1**
PCG5				*i* S	**Sn**	**18 34 31.5**	**-4.5**
SMCA	**Catarina**	**1.21**	**324**	*i* P	**Pn**	**18 34 23.4**	**-1.9**
FAME	**Alcaldia de Sa**	**1.28**	**92**	P	**Pn**	**18 34 25.2**	**-1.1**
THIG		**1.36**	**319**	*i* S	**Sn**	**18 34 42.5**	**-2.0**
APG	**El Apazote**	**1.40**	**37**	*i* P	**Pn**	**18 34 28.2**	**0.0**
APG				*i* S	**Sn**	**18 34 47.2**	**+1.4**
QUIS	**Sacapulas**	**1.42**	**10**	*i* P	**Pn**	**18 34 28.6**	**+0.3**
QUIS				IAML		18 34 49.3	
	comp=E,3μm,0.5s						
HUEH	**Huehuetenango**	**1.44**	**354**	P	**Pn**	**18 34 28.8**	**+0.2**
HUEH				S	**Sn**	**18 34 47.3**	**+0.6**
HUEH	**Huehuetenango**	**1.44**	**354**	*e*P	**Pn**	**18 34 28.9**	**+0.3**
HUEH	**Huehuetenango**	**1.44**	**354**	*i* P	**Pn**	**18 34 29.0**	**+0.3**
NUBE	**Las Nubes**	**1.51**	**89**	P	**Pn**	**18 34 29.0**	**-0.5**
NUBE				S	**Sn**	**18 34 48.1**	**-0.2**
NUBE	**Las Nubes**	**1.51**	**89**	*i* P	**Pn**	**18 34 28.9**	**-0.6**
NUBE				*i* S	**Sn**	**18 34 47.0**	**-1.3**
SLOZ	**Alcaldia de Sa**	**1.51**	**84**	P	**Pn**	**18 34 29.8**	**+0.3**
SLOZ				S	**Sn**	**18 34 49.2**	**+0.9**
LOAL	**Lomas de Alarc**	**1.51**	**85**	P	**Pn**	**18 34 29.5**	**+0.1**
LOAL				S	**Sn**	**18 34 48.7**	**+0.4**
CEVE	**Cerro Verde**	**1.66**	**92**	P	**Pn**	**18 34 31.8**	**+0.2**
CEVE	**Cerro Verde**	**1.66**	**92**	*e*P	**Pn**	**18 34 31.6**	**0.0**
CEVE				*e*S	**Sn**	**18 34 52.6**	**+0.4**
UNIC	**Universidad Ca**	**1.74**	**86**	P	**Pn**	**18 34 32.4**	**-0.1**
UNIC				S	**Sn**	**18 34 54.8**	**+1.1**
JAYA	**Jayaque - finc**	**1.85**	**97**	P	**Pn**	**18 34 33.5**	**-0.6**
JAYA	**Jayaque - finc**	**1.85**	**97**	*e*P	**Pn**	**18 34 33.3**	**-0.8**
JAYA				*e*S	**Sn**	**18 34 56.9**	**+0.4**
JAYA	**Jayaque - finc**	**1.85**	**97**	*i* P	**Pn**	**18 34 33.5**	**-0.6**
JAYA				*i* S	**Sn**	**18 34 56.0**	**-0.5**
CEDA	**San Andres**	**1.89**	**92**	S	**Sn**	**18 34 58.3**	**+1.0**
PMON	**Piamonte**	**1.97**	**95**	P	**Pn**	**18 34 36.2**	**+0.5**
PMON				S	**Sn**	**18 35 00.4**	**+1.0**
MTO3	**Montecristo**	**1.98**	**75**	P	**Pn**	**18 34 35.7**	**-0.3**
MTO3				S	**Sn**	**18 35 01.3**	**+1.4**
MTO3	**Montecristo**	**1.98**	**75**	*i* P	**Pn**	**18 34 35.5**	**-0.4**
LALI	**Alcalda de L**	**2.00**	**101**	P	**Pn**	**18 34 35.8**	**-0.1**
LALI				S	**Sn**	**18 35 00.4**	**+0.5**
BOQS	**Boqueron**	**2.00**	**94**	*e*P	**Pn**	**18 34 36.8**	**+0.6**
UEES	**Universidad Ev**	**2.04**	**94**	S	**Sn**	**18 35 01.5**	**+0.4**
ESQI	**Esquipulas**	**2.05**	**71**	P	**Pn**	**18 34 36.6**	**-0.1**
ESQI	**Esquipulas**	**2.05**	**71**	*e*P	**Pn**	**18 34 36.7**	**-0.1**
PANCS	**Alcalda de**	**2.11**	**97**	S	**Sn**	**18 35 03.4**	**+0.6**
PAVA	**Las Pavas**	**2.34**	**94**	P	**Pn**	**18 34 41.0**	**+0.4**
PAVA				S	**Sn**	**18 35 10.0**	**+1.6**
LLGN	**La Laguna**	**2.34**	**83**	P	**Pn**	**18 34 40.1**	**-0.5**
LLGN				S	**Sn**	**18 35 10.2**	**+1.9**
COEG	**Centro de Oper**	**2.40**	**96**	P	**Pn**	**18 34 40.0**	**-1.5**
COEG				S	**Sn**	**18 35 10.6**	**+0.8**
TECO	**Alcaldia de Te**	**2.51**	**98**	P	**Pn**	**18 34 42.8**	**-0.1**
TECO				S	**Sn**	**18 35 13.4**	**+1.1**
CCIG	**Comitan**	**2.51**	**342**	P	**Pn**	**18 34 43.5**	**+0.4**
SCLA	**Alcaldia de Sa**	**2.54**	**94**	P	**Pn**	**18 34 43.0**	**-0.4**
PQSS	**Presa 15 de Se**	**2.71**	**95**	P	**Pn**	**18 34 45.0**	**-0.6**
PACA	**Pacayal**	**2.96**	**98**	P	**Pn**	**18 34 49.5**	**+0.3**
PACA				S	**Sn**	**18 35 25.6**	**+2.0**
RANC	**El Ranchito**	**3.00**	**98**	P	**Pn**	**18 34 50.1**	**+0.4**
RANC				S	**Sn**	**18 35 26.1**	**+1.6**

*CATAC **06** 19:11:07.8±0.9, 8˚N±5˚×8˚3W±˚, h26km±3km, M3.2/6, MLv3.2/6, Error ellipse: s-maj=13.1km s-min=5.9km az=147.8, confirmed*
*UPA **06** 19:11:08.1±0.9, 8˚.38N×82˚.90W, h44km±5km, MW3.4, Presumed earthquake*

ISC 06 19:11:09.1±1.1, 8°.39N±0°.04×82°.89W±0°.03, h34km±3km, n22, σ1°12/33, 3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDITO	**Canoas**	**0.18**	**5**	P	**Pb**	**19 11 15.2**	**-0.5**
CDITO				S	**Sb**	**19 11 19.7**	**-0.4**
PTPM	**Petroterminale**	**0.18**	**177**	*e*P	**Pb**	**19 11 15.2**	**-0.5**
PTPM				*e*S	**Sb**	**19 11 21.3**	**+1.2**
LIMO3	**Limones**	**0.29**	**175**	*i* P	**Pb**	**19 11 16.5**	**-0.3**
LIMO3				*e*S	**Sb**	**19 11 22.3**	**+0.4**
MLIR3	**Monte Lirio, C**	**0.41**	**9**	*e*P	**Pb**	**19 11 18.6**	**+0.1**
PTJ1	**Puerto Jimnez**	**0.43**	**290**	P	**Pb**	**19 11 17.4**	**-1.3**
PTJ1				S	**Sb**	**19 11 27.1**	**+1.8**
DVD	**David**	**0.44**	**84**	*e*P	**Pb**	**19 11 18.1**	**-0.7**
PIRO	**Carate, Puerto**	**0.44**	**272**	P	**Pb**	**19 11 18.2**	**-0.7**
PIRO				S	**Sb**	**19 11 26.1**	**+0.5**
PIRO	**Carate, Puerto**	**0.44**	**272**	*e*P	**Pb**	**19 11 18.0**	**-0.9**
BRU2	**Volcan**	**0.45**	**26**	P	**Pb**	**19 11 18.8**	**-0.3**
BRU2				S	**Sb**	**19 11 26.9**	**+0.9**
BRU2	**Volcan**	**0.45**	**26**	*i*,*i* P	**Pb**	**19 11 18.8**	**-0.3**
BRU2				*e*S	**Sb**	**19 11 27.6**	**+1.7**
LOCO3	**Loma Colorada,**	**0.47**	**87**	*e*P	**Pb**	**19 11 19.1**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.49**	**52**	*i*,*i* P	**Pb**	**19 11 19.2**	**-0.5**
PTAR3				*e*S	**Sb**	**19 11 27.3**	**+0.3**
LOMA3	**Las Lomas, Chi**	**0.49**	**85**	*e*P	**Pb**	**19 11 21.6**	**+2.0**
BQSF3	**Alto Boquete,**	**0.57**	**52**	*e*P	**Pb**	**19 11 20.1**	**-0.9**
LNBQ3	**Los Naranjos,**	**0.60**	**48**	*e*P	**Pb**	**19 11 20.1**	**-1.2**
PSOM3	**Paja de Sombre**	**0.63**	**62**	*i*,*i* P	**Pb**	**19 11 20.7**	**-1.2**
PSOM3				*e*S	**Sb**	**19 11 30.6**	**0.0**
CHGR2	**Aguacate**	**0.92**	**53**	*e*P	**Pn**	**19 11 25.3**	**-0.3**
DRK0	**Durika**	**0.94**	**338**	P	**Pn**	**19 11 24.8**	**-1.3**
DRK0				S	**Sn**	**19 11 38.0**	**-0.4**
DRK0	**Durika**	**0.94**	**338**	*e*P	**Pn**	**19 11 24.7**	**-1.4**
OCHAL	**Ojochal**	**1.03**	**313**	P	**Pn**	**19 11 27.3**	**+0.1**
OCHAL				S	**Sn**	**19 11 41.3**	**+0.9**
LCR2	**La Lucha 2**	**1.74**	**321**	P	Pn	19 11 32.5	-4.6
LCR2				S	**Sn**	**19 12 01.3**	**+3.0**
GMAL	**Guarumal, Vera**	**1.75**	**111**	*e*P	**Pn**	**19 11 35.9**	**-1.3**

*IDC **06** 19:21:57.4±1.6, 44˚.03N×140˚.97E, h206km±16km, mb3.5/14, mbtmp4.0/20, Error ellipse: s-maj=16.3km s-min=12.1km az=155.0*
*MOS **06** 19:21:57.1±1.1, 43˚.99N×140˚.99E, h224km, mb4.2/6, Error ellipse: s-maj=11.5km s-min=7.5km az=98.0*
*JMA **06** 19:21:58.2±0.3, 44˚.0N±0˚.8×14˚1E±˚, h223km±2km, MV3.3/29, NW OFF HOKKAIDO*
*SKHL **06** 19:21:58.0±0.3, 44˚.00N×140˚.90E, h204km±4km, mb5.1/3, mbv5.1/2, msh5.1/2, msha5.0/3*

ISC 06 19:21:58.4±0.6, 43°.96N±0°.05×140°.88E±0°.04, h221km±5km, n76, σ1°38/93, mb3.9/17, 7C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHR	**Hokuryu**	**0.65**	**109**	*e*P	**Pn**	**19 22 29.2**	**+0.7**
JHR				*e*S	**S**	**19 22 52.8**	**+0.9**
JISS	**Ishikarishitsu**	**0.78**	**150**	*e*P	**Pn**	**19 22 29.8**	**+0.7**
JISS				S	**S**	**19 22 53.6**	**+0.6**
JAB	**Ashibetsu**	**1.07**	**114**	P	**Pn**	**19 22 31.3**	**+0.5**
JAB				S	**S**	**19 22 56.8**	**+0.9**
JEW	**Eniwo**	**1.19**	**159**	P	**Pn**	**19 22 32.1**	**+0.5**
JEW				S	**S**	**19 22 57.9**	**+0.5**
ASAJ	**Asahikawa**	**1.25**	**82**	P	**Pn**	**19 22 32.4**	**+0.5**
	20nm,0.3s,baz=249,slow=6.7,SNR=140						
ASAJ				S	**S**	**19 22 57.2**	**-0.8**
	20nm,0.7s,baz=151,slow=33,SNR=9.8						
JKK2	**Kamakawa 2**	**1.35**	**93**	*i* P	**Pn**	**19 22 33.0**	**+0.2**
JKK2				S	**S**	**19 22 58.9**	**-0.5**
JRBN	**Rebuntou**	**1.47**	**5**	*e*P	**Pn**	**19 22 33.6**	**0.0**
JWK2	**Keihoku**	**1.54**	**28**	*e*P	**Pn**	**19 22 35.0**	**+0.8**
JWK2				*e*S	**S**	**19 23 02.9**	**+0.7**
JSE	**Soyaes**	**1.58**	**50**	*e*P	**Pn**	**19 22 34.8**	**+0.3**
JSE				*e*S	**S**	**19 23 02.8**	**+0.2**
JNBK	**Urakawa-nobuka**	**2.16**	**140**	P	**Pn**	**19 22 40.0**	**0.0**
JTKR	**Abashiri--Toko**	**2.18**	**89**	P	**Pn**	**19 22 40.6**	**+0.4**
JAR	**Ashorobuto**	**2.20**	**106**	*i* P	**Pn**	**19 22 40.8**	**+0.4**
JAR				*e*S	**S**	**19 23 14.4**	**+1.3**
JCH	**Churui**	**2.25**	**126**	*i* P	**Pn**	**19 22 39.8**	**-1.2**
JCH				*e*S	**S**	**19 23 10.7**	**-3.4**
JOT	**Ohata**	**2.58**	**177**	P	**Pn**	**19 22 44.2**	**-0.3**
JAK	**Akkeshi**	**2.94**	**108**	*e*P	**Pn**	**19 22 47.3**	**-1.0**
JAK				*e*S	**S**	**19 23 24.9**	**-2.4**
AKK	**Akkeshi**	**3.03**	**107**	*e*P	**Pn**	**19 22 48.5**	**-0.9**
AKK				*e*S	**S**	**19 23 26.7**	**-2.5**
TEY	**Ternei**	**3.25**	**291**	*e*PN	Pn	19 22 47.3	-4.6
TEY	**Ternei**	**3.25**	**291**	*e*P	**Pn**	**19 22 51.0**	**-0.9**
TEY				*e*S	**S**	**19 23 30.8**	**-2.9**
YSS	**Yuzhno-Sakhali**	**3.27**	**23**	*e*PN	**Pn**	**19 22 51.9**	**-0.2**
YSS				*e*S	**S**	**19 23 32.1**	**-2.2**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				smax	smax		
	comp=N,80nm,0.9s						
YSS				smax	smax		
	comp=E,90μm,0.6s						
YSS	**Yuzhno-Sakhali**	**3.27**	**23**	*e*P	**Pn**	**19 22 51.9**	**-0.2**
YSS				AMB	AMB	19 22 52.5	
	comp=E,40nm,0.6s						
YSS				*e*S	**S**	**19 23 32.8**	**-1.5**
YSS				A	A	19 23 34.0	
	comp=E,50nm,0.6s						
YSS				A	A	19 23 34.0	
	comp=E,40nm,0.6s						
YSS				A	A	19 23 34.2	
	comp=E,150nm,2.0s						
YSS				A	A	19 23 34.2	
	comp=E,260nm,2.0s						
GLVR	**Golovnino**	**3.36**	**92**	PN	Pn	19 23 00.4	+7.2
GLVR				*e*S	**S**	**19 23 40.5**	**+4.4**
GLVR				smax	smax		
	comp=E,84nm,0.3s						
GLVR				smax	smax		
	comp=N,181nm,0.5s						
GLVR	**Golovnino**	**3.36**	**92**	*e*P	Pn	19 23 00.4	+7.2
GLVR				*e*S	**S**	**19 23 40.5**	**+4.4**
GLVR				A	A	19 23 48.1	
	comp=N,180nm,0.4s						
GLVR				A	A	19 23 48.1	
	comp=N,80nm,0.4s						
NMR	**Nemuro--Hokkai**	**3.56**	**98**	*e*PN	**Pn**	**19 22 54.1**	**-1.5**
NMR				*e*S	**S**	**19 23 36.0**	**-4.4**
NMR	**Nemuro--Hokkai**	**3.56**	**98**	*e*P	**Pn**	**19 22 55.4**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**3.59**	**87**	PN	Pn	19 23 07.1	+11
YUK				pmax	pmax		
	comp=Z,51nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.59**	**87**	*e*P	**Pn**	**19 22 56.6**	**+0.7**
YUK				AMB	AMB	19 22 57.9	
	comp=Z,820nm,2.0s						
YUK				AMB	AMB	19 22 58.5	
	comp=Z,80nm,0.3s						
YUK				*e*S	**S**	**19 23 42.4**	**+1.4**
YUK				A	A	19 23 45.6	
	comp=Z,110nm,0.3s						
YUK				A	A	19 23 45.6	
	comp=Z,120nm,0.3s						
YUK				A	A	19 23 48.2	
	comp=Z,2μm,2.0s						
YUK				A	A	19 23 48.2	
	comp=Z,2μm,2.0s						
USRK	**Ussuriysk Ar.**	**6.41**	**275**	P	**Pn**	**19 23 31.0**	**-0.1**
	comp=Z,9.7nm,0.8s,baz=80,slow=13,SNR=9.2						
TYV	**Tymovskoe**	**7.01**	**9**	*e*PN	**Pn**	**19 23 40.0**	**+1.3**
TYV				*e*S	**S**	**19 25 01.3**	**+2.5**
TYV				pmax	pmax		
	comp=Z,20nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,4.3s						
TYV				smax	smax		
	comp=N,200nm,3.7s						
TYV				smax	smax		
	comp=E,100nm,3.7s						
TYV				smax	smax		
	comp=N,4.0nm,1.4s						
TYV				smax	smax		
	comp=E,5.0nm,1.4s						
TYV	**Tymovskoe**	**7.01**	**9**	*e*P	**Pn**	**19 23 39.7**	**+1.0**
TYV				AMB	AMB	19 23 44.3	
	comp=E,300nm,4.3s						
MJA0	**Matsu Arr-Jizo**	**7.67**	**196**	*e*PN	**Pn**	**19 23 47.9**	**+0.4**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	**Matsushiro**	**7.68**	**196**	*e*PN	**Pn**	**19 23 47.6**	**+0.1**
MJAR	**Matsushiro Arr**	**7.68**	**196**	P	**Pn**	**19 23 47.1**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=7.7,slow=13,SNR=10.0						
KLR	**Kul'dur**	**8.21**	**313**	*e*PN	**Pn**	**19 23 53.7**	**-0.3**
KLR	**Kul'dur**	**8.21**	**313**	*e*P	**Pn**	**19 23 53.8**	**-0.3**
NKL	**Nikolayevsk**	**9.20**	**359**	*e*P	**Pn**	**19 24 05.9**	**-0.9**
KSRS	**Korea Array**	**11.78**	**241**	P	**Pn**	**19 24 40.5**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=55,slow=12,SNR=5.5						
KSRS	**Korea Array**	**11.78**	**241**	*e*PN	**Pn**	**19 24 42.0**	**+2.2**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	**Korea Array**	**11.78**	**241**	*e*P	**Pn**	**19 24 42.0**	**+2.2**
ZEA	**Zeya**	**13.26**	**322**	*e*PN	**Pn**	**19 24 56.8**	**-1.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PETK	**Petropavlovsk-**	**14.39**	**45**	P	**Pn**	**19 25 11.0**	**-1.0**
	comp=Z,5.6nm,0.9s,baz=194,slow=5.6,SNR=4.3						
HILR	**Hailar Array B**	**15.51**	**299**	P	**Pn**	**19 25 25.6**	**0.0**
	comp=Z,1.8nm,0.4s,baz=101,slow=10.0,SNR=7.9						
YAK	**Yakutsk**	**19.27**	**344**	P	**P**	**19 26 03.6**	**-2.5**
	comp=Z,5.1nm,0.4s,baz=354,slow=3.7,SNR=6.3						
YAK	**Yakutsk**	**19.27**	**344**	*de*P	**P**	**19 26 04.0**	**-2.0**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SEY	**Seymchan**	**20.15**	**15**	P	**P**	**19 26 14.9**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=207,slow=12,SNR=6.9						
	comp=Z,0.7nm,0.5s						
ULN	**Ulaanbaatar**	**23.75**	**291**	*e*P	**P**	**19 26 51.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,8.0nm,3.4s						
ULN	**Ulaanbaatar**	**23.75**	**291**	*e*P	**P**	**19 26 51.5**	**+0.8**
SONM	**Songino Array**	**24.19**	**291**	P	**P**	**19 26 55.6**	**+0.9**
	comp=Z,1.3nm,0.4s,baz=90,slow=8.5,SNR=14						
	comp=Z,1.3nm,0.4s						
SONM	**Songino Array**	**24.19**	**291**	*e*P	**P**	**19 26 55.2**	**+0.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TLY	**Talaya**	**25.94**	**301**	*e*P	**P**	**19 27 11.3**	**+1.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TLY	**Talaya**	**25.94**	**301**	*e*P	**P**	**19 27 11.4**	**+1.2**
DGZ	**Jazzator, Alta**	**36.36**	**298**	*i*P	**P**	**19 28 43.5**	**+2.2**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**37.23**	**306**	P	**P**	**19 28 49.0**	**+0.7**
	comp=Z,3.8nm,0.3s,baz=91,slow=8.9,SNR=20						
	comp=Z,3.8nm,0.3s						
ZALV	**Zalesovo Beam**	**37.23**	**306**	*e*P	**P**	**19 28 48.9**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MK31	**Makanchi Array**	**40.43**	**295**	*d*P	**P**	**19 29 15.4**	**+0.3**
MKAR	**Makanchi Array**	**40.43**	**295**	P	**P**	**19 29 15.5**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=82,slow=10,SNR=19						
MKAR				ScP	**ScP**	**19 34 41.5**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=64,slow=3.4,SNR=2.6						
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**40.43**	**295**	*e*P	**P**	**19 29 15.7**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**40.43**	**295**	*e*P	**P**	**19 29 15.8**	**+0.7**
KURK	**Kurchatov**	**41.62**	**302**	*de*P	**P**	**19 29 25.0**	**+0.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	**Kurchatov**	**41.62**	**302**	*e*P	**P**	**19 29 25.1**	**+0.5**
KURBB	**Kurchatov Arra**	**41.70**	**302**	P	**P**	**19 29 25.7**	**+0.5**
	comp=Z,4.8nm,0.4s,baz=73,slow=9.0,SNR=4.3						
	comp=Z,4.8nm,0.4s						
ILAR	**Eielson Array**	**43.99**	**36**	P	**P**	**19 29 43.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=285,slow=9.0,SNR=10						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**43.99**	**36**	*e*P	**P**	**19 29 44.1**	**+0.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**45.82**	**307**	P	**P**	**19 29 58.8**	**+0.8**
	comp=Z,3.8nm,0.4s,baz=79,slow=9.0,SNR=20						
	comp=Z,3.8nm,0.4s						
BORK	**Borovoye**	**45.85**	**307**	*e*P	**P**	**19 29 59.5**	**+1.3**
BORK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
AAK	**Ala-Archa**	**47.14**	**293**	*e*P	**P**	**19 30 09.1**	**+0.6**
AAK				pmax	pmax		
	comp=Z,10.0nm,4.5s						
AAK	**Ala-Archa**	**47.14**	**293**	*e*P	**P**	**19 30 09.2**	**+0.7**
ARTI	**Arti**	**51.15**	**315**	*i*P	**P**	**19 30 38.9**	**+0.5**
ARTI				pmax	pmax		
	comp=Z,51nm,4.9s						
SPITS	**Spitsbergen Ar**	**53.67**	**348**	P	**P**	**19 30 55.2**	**-1.4**
	comp=Z,5.7nm,1.1s,baz=71,slow=14,SNR=1.5						
	comp=Z,5.7nm,1.1s						
YKA	**Yellowknife Ar**	**58.09**	**32**	P	**P**	**19 31 27.6**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=309,slow=6.7,SNR=7.4						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**58.09**	**32**	*e*P	**P**	**19 31 27.4**	**-0.7**
FINES	**FINESS Array B**	**62.55**	**331**	P	**P**	**19 31 58.7**	**+0.5**
	comp=Z,1.8nm,0.4s

*NEIC **06** 19:55:14.0±1.0, 18°.03N±0°.01×66°.875W±0°.009, h10km±1km, ML3.0/33, Md2.7/6(RSPR), Error ellipse: s-maj=2.9km s-min=1.4km az=191.0*

ISC 06 19:55:12.6±1.3, 17°.96N±0°.05×66°.87W±0°.02, h20km±2km, n41, σ0s36/64, 8C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.02**	**320**			**Pb**	**19 55 16.3**	**+0.2**
GBPR						**Sb**	**19 55 18.4**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.02**	**320**	⇑*i*P		**Pb**	**19 55 16.3**	**+0.2**
GBPR				*e*S		**Sb**	**19 55 18.4**	**-0.2**
MLPR	**Magueyes Islan**	**0.17**	**273**			**Pb**	**19 55 17.5**	**-0.3**
MLPR				IAML			19 55 21.1	
	4μm,0.3s							
MLPR				IAML			19 55 21.4	
	3μm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.23**	**281**			**Pb**	**19 55 18.5**	**+0.1**
CRPR						**Sb**	**19 55 22.1**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.23**	**281**	IAML			19 55 22.3	
	2μm,0.2s							
CRPR				IAML			19 55 22.4	
	6μm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.23**	**281**	⇓*e*Pg		**Pb**	**19 55 18.5**	**+0.1**
CRPR				⇑*e*Sg		**Sb**	**19 55 22.0**	**-0.4**
CRPR				IAML			19 55 22.3	
	comp=N,5μm,0.7s							
CRPR	**Cabo Rojo, PR**	**0.23**	**281**	⇓*i*P		**Pb**	**19 55 18.5**	**+0.1**
CRPR				*e*S		**Sb**	**19 55 22.1**	**-0.3**
OBIP	**Obispado Ponce**	**0.26**	**72**			**Pb**	**19 55 19.1**	**+0.3**
OBIP						**Sb**	**19 55 23.1**	**+0.1**
OBIP	**Obispado Ponce**	**0.26**	**72**	IAML			19 55 23.6	
	comp=N,381nm,0.4s							
OBIP	**Obispado Ponce**	**0.26**	**72**	⇓*i*P		**Pb**	**19 55 19.1**	**+0.3**
OBIP				*e*S		**Sb**	**19 55 23.1**	**+0.1**
CELP	**Cerrillos**	**0.30**	**67**			**Pb**	**19 55 19.4**	**+0.1**
CELP				IAML			19 55 24.5	
	comp=N,3μm,0.2s							
CELP				IAML			19 55 24.7	
	comp=N,1μm,0.1s							
LSP	**Las Mesas**	**0.30**	**316**			**Pb**	**19 55 19.4**	**+0.1**
LSP						**Sb**	**19 55 23.9**	**0.0**
LSP	**Las Mesas**	**0.30**	**316**	⇓*i*P		**Pb**	**19 55 19.4**	**+0.1**
LSP				*e*S		**Sb**	**19 55 23.9**	**0.0**
UUPR	**Utuado, UPR, P**	**0.32**	**26**			**Pb**	**19 55 19.6**	**-0.1**
PRSN	**Puerto Rico Se**	**0.37**	**314**	Pg		**Pb**	**19 55 20.4**	**0.0**
PRSN	**Puerto Rico Se**	**0.37**	**314**			**Sb**	**19 55 25.5**	**-0.1**
PRSN	**Puerto Rico Se**	**0.37**	**314**	⇑*e*Pg		**Pb**	**19 55 20.4**	**0.0**
PRSN				⇑*e*Sg		**Sb**	**19 55 24.7**	**-0.9**
PRSN				IAML			19 55 28.0	
	comp=N,3μm,0.3s							
PRSN	**Puerto Rico Se**	**0.37**	**314**	⇑*i*P		**Pb**	**19 55 20.4**	**0.0**
PRSN				*e*S		**Sb**	**19 55 25.5**	**-0.1**
AGPR	**Aguadilla, PR**	**0.56**	**335**			**Pb**	**19 55 23.5**	**-0.2**
AGPR	**Aguadilla, PR**	**0.56**	**335**	⇑*e*Pg		**Pb**	**19 55 23.5**	**-0.2**
AGPR				*e*Sg		**Sb**	**19 55 31.0**	**-0.3**
AGPR				IAML			19 55 35.1	
	comp=N,396nm,0.3s							
AGPR	**Aguadilla, PR**	**0.56**	**335**	⇑*i*P		**Pb**	**19 55 23.5**	**-0.2**
AGPR				*e*S		**Sb**	**19 55 30.3**	**-1.0**
ECPR	**Experimental S**	**0.60**	**53**			**Pb**	**19 55 24.2**	**-0.2**
ECPR						**Sb**	**19 55 32.4**	**-0.1**
ECPR	**Experimental S**	**0.60**	**53**	⇑*i*P		**Pb**	**19 55 24.3**	**-0.2**
ECPR				*e*S		**Sb**	**19 55 32.4**	**-0.1**
EMPR	**Esperanza - Ma**	**0.60**	**32**			**Pb**	**19 55 24.9**	**+0.3**
EMPR						**Sb**	**19 55 33.0**	**+0.3**
EMPR	**Esperanza - Ma**	**0.60**	**32**	⇑*i*P		**Pb**	**19 55 24.9**	**+0.3**
EMPR				*e*S		**Sb**	**19 55 33.0**	**+0.3**
SJG	**San Juan**	**0.70**	**77**			**Pb**	**19 55 26.1**	**-0.1**
SJG	**San Juan**	**0.70**	**77**	IAML			19 55 37.9	
	comp=N,378nm,0.2s							
SJG	**San Juan**	**0.70**	**77**	⇓*e*Pg		**Pb**	**19 55 26.0**	**-0.1**
SJG				⇑*e*Sg		**Sb**	**19 55 35.6**	**+0.2**
SJG	**San Juan**	**0.70**	**77**	⇑*i*P		**Pb**	**19 55 26.1**	**-0.1**
SJG				*e*S		**Sb**	**19 55 35.6**	**+0.2**
IDE	**Isla Desecheo**	**0.72**	**306**			**Pb**	**19 55 26.4**	**0.0**
IDE						**Sb**	**19 55 36.0**	**+0.1**
IDE	**Isla Desecheo**	**0.72**	**306**	⇑*i*P		**Pb**	**19 55 26.4**	**0.0**
IDE				*e*S		**Sb**	**19 55 36.0**	**+0.1**
PDPR	**Patillas Dam,**	**0.81**	**86**			**Pb**	**19 55 28.0**	**0.0**
GCPR	**Guaynabo City**	**0.82**	**65**			**Pb**	**19 55 28.1**	**-0.1**
GCPR						**Sb**	**19 55 38.5**	**-0.3**
GCPR	**Guaynabo City**	**0.82**	**65**	⇓*e*P		**Pb**	**19 55 28.1**	**-0.1**
GCPR				*e*S		**Sb**	**19 55 38.5**	**-0.3**
HUMP	**Col San Antoni**	**0.98**	**79**			**Pb**	**19 55 30.5**	**-0.5**
HUMP						**Sb**	**19 55 43.4**	**-0.1**
HUMP	**Col San Antoni**	**0.98**	**79**	Pg		**Pb**	**19 55 30.3**	**-0.7**
HUMP				IAML			19 55 48.3	
	comp=N,281nm,0.2s							
HUMP				IAML			19 55 48.3	
	comp=N,184nm,0.2s							
HUMP	**Col San Antoni**	**0.98**	**79**	⇑*e*P		**Pb**	**19 55 30.5**	**-0.5**
HUMP				*e*S		**Sb**	**19 55 43.4**	**-0.1**
PCDR	**Punta Cana, DR**	**1.54**	**291**	IAML			19 56 19.6	
	comp=N,217nm,2.1s							
CUPR	**Culebra, Puert**	**1.55**	**77**			**Pb**	**19 55 40.0**	**-0.6**
CUPR				Sn		**Sb**	**19 55 59.9**	**+0.2**
DR12	**Loma Pena Alta**	**2.52**	**289**	Pn		**Pn**	**19 55 52.8**	**+0.3**
HATOM	**Hato Mayor del**	**2.52**	**289**	⇑*e*Pg		**Pb**	**19 55 56.5**	**-0.8**
HATOM				⇑*e*Sg		**Sb**	**19 56 29.4**	**+1.4**
HATOM				IAML			19 56 53.1	
	comp=N,48nm,3.0s							

*PGC **06** 20:05:45.5±0.0, 50°.00N×114°.58W, h0km, ML3.0/5, 25km east of Elkford, Bc Alberta, Canada Mining explosion.*
*IDC **06** 20:05:47.5±1.2, 50°.15N×115°.17W, h0km, mbtmp2.9/3, ML3.4/3, Error ellipse: s-maj=20.7km s-min=8.6km az=112.0*

ISC 06 20:05:43.5±0.9, 50°.05N±0°.05×114°.61W±0°.05, h0km, n12, σ1s54/13, Alberta

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
HSPGA	**Hill Springs,**	**0.93**	**138**	P		**Pg**	**20 06 00.4**	**-0.9**
MKRVA	**Milk River, Al**	**2.06**	**115**	Sn		**Sn**	**20 06 46.3**	**+0.5**
NEW	**Newport**	**2.43**	**224**	Pn		**Pb**	**20 06 27.7**	**-0.5**
	4.5nm,0.3s,baz=40,slow=14,SNR=48							
NEW				Lg		Lg	20 06 58.3	
	3.3nm,0.3s,baz=56,slow=22,SNR=4.2							
	11nm,0.3s							
I56US	**NEWPORT INFRAS**	**2.44**	**224**	I		I	20 19 40.0	
	0.1nm,0.8s,baz=40,slow=320,SNR=5.4							
EDM	**Edmonton**	**3.27**	**13**	Pn		**Pn**	**20 06 38.4**	**+2.3**
EDM				Sg		**Sg**	**20 07 27.8**	**-0.8**
PNT	**Penticton**	**3.33**	**259**	Pn		**Pn**	**20 06 38.6**	**+1.7**
PNT				Sn		**Sn**	**20 07 16.8**	**-0.5**
LLLB	**Lillooet**	**4.69**	**280**	Pn		**Pn**	**20 06 57.6**	**+2.0**
LLLB				Sn		**Sn**	**20 07 49.8**	**-1.0**
WSLR	**Whistler**	**5.35**	**274**	Pn		**Pn**	**20 07 06.6**	**+1.9**
STPRA	**Salt Prairie L**	**5.67**	**353**	Sn		**Sn**	**20 08 14.1**	**-0.7**
SHB	**Sechelt**	**6.02**	**269**	Pn		**Pn**	**20 07 15.6**	**+1.8**
PDAR	**Pinedale Array**	**8.08**	**153**	Pn		Pn	20 07 52.0	+10
	0.1nm,0.3s,baz=344,slow=18,SNR=2.5							
	0.2nm,0.6s							
YKA	**Yellowknife Ar**	**12.47**	**0**	Pn		**Pn**	**20 08 41.1**	**-1.0**
	0.2nm,0.3s,baz=187,slow=12,SNR=6.3							
YKA				Sn		Sn	20 10 52.5	-9.1
	0.1nm,0.3s,baz=181,slow=24,SNR=2.8							
YKA				Lg		Lg	20 12 10.0	
	baz=178,slow=27,SNR=5.2							
	0.2nm,0.5s							

*NEIC **06** 20:08:37.6±1.1, 55°.9S±0°.1×27°.7W±0°.2, h59km±7km, mb4.6/12, Error ellipse: s-maj=21.9km s-min=15.5km az=48.0*
*IDC **06** 20:08:40.1±7.2, 55°.92S×27°.77W, h81km±65km, mb4.1/6, mbtmp4.4/7, ML4.4/1, MS3.1/3, Error ellipse: s-maj=34.1km s-min=17.9km az=65.0*

ISC 06 20:08:36.8±0.7, 55°.9S±0°.1×27°.9W±0°.1, h50km, n45, σ1s08/39, mb4.6/9, 1C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
HOPE	**Hope Point**	**5.19**	**285**	Pn		**Pn**	**20 09 53.8**	**+2.2**
HOPE				Sn		**Sn**	**20 10 46.8**	**-3.4**
VNA3	**Neumayer Olymp**	**17.28**	**160**	⇓P		**P**	**20 12 35.1**	**+0.2**
	comp=Z,1.6nm,0.4s							
VNA2	**Neumayer--Watz**	**17.49**	**157**	⇑P		**P**	**20 12 37.1**	**-0.2**
	comp=Z,2.4nm,0.4s,baz=316,slow=12							
SNAA	**Sanae**	**19.05**	**156**	⇓P		**P**	**20 12 54.0**	**-0.5**
	comp=Z,64nm,0.4s							
SNAA	**Sanae**	**19.05**	**156**	P		**P**	**20 12 53.8**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=301,slow=9.3,SNR=7.6							
SNAA				LR		LR	20 20 07.5	
	comp=Z,56nm,18.1s,baz=10,slow=36							
	comp=Z,6.4nm,0.6s							
SNAA	**Sanae**	**19.05**	**156**	P		**P**	**20 12 53.8**	**-0.6**
BELA	**Belgrano 2**	**22.21**	**184**	P		**P**	**20 13 28.7**	**+0.3**
BELA				IAmb		IAmb	20 13 30.4	
	comp=Z,14nm,0.7s							
PLTB	**Pedras Altas**	**30.09**	**313**	P		**P**	**20 14 42.8**	**+1.5**
PLTB				IAmb		IAmb	20 15 15.4	
	comp=Z,20nm,1.5s							
PLCA	**Paso Flores**	**31.58**	**281**	LR		LR	20 26 51.4	
	comp=Z,34nm,18.6s,baz=162,slow=34							
QSPA	**South Pole Qui**	**34.36**	**180**	P		**P**	**20 15 19.1**	**+0.6**
	comp=Z,6.0nm,0.5s,baz=300,slow=5.6,SNR=6.9							
	comp=Z,6.0nm,0.5s							
QSPA	**South Pole Qui**	**34.36**	**180**	P		**P**	**20 15 18.9**	**+0.4**
CPUP	**Villa Florida**	**36.41**	**312**	P		**P**	**20 15 36.5**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=139,slow=8.2,SNR=6.7							
	comp=Z,3.5nm,0.8s							
CPUP	**Villa Florida**	**36.41**	**312**	P		**P**	**20 15 36.3**	**+0.1**
PB01	**IPOC Station P**	**46.48**	**301**	P		**P**	**20 16 59.4**	**+0.5**
VNDA	**Vanda**	**46.71**	**183**	P		**P**	**20 17 00.3**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=186,slow=6.8,SNR=14							
	comp=Z,3.5nm,0.7s							
VNDA	**Vanda**	**46.71**	**183**	P		**P**	**20 16 59.9**	**-0.1**
PTLB	**Pontes e Lacer**	**46.90**	**317**	P		**P**	**20 17 02.4**	**+0.4**
PTLB				IAmb		IAmb	20 17 03.5	
	comp=Z,8.0nm,1.0s							
GO01	**Chusmiza**	**47.52**	**303**	P		**P**	**20 17 08.1**	**+0.6**
H10S2	**ASCENSION HYDR**	**47.97**	**18**	T		T	21 08 50.6	
	SNR=26							
H10S3	**ASCENSION HYDR**	**47.97**	**18**	T		T	21 08 51.5	
	SNR=21							
PB16	**IPOC Station P**	**48.82**	**303**	P		**P**	**20 17 18.5**	**+1.0**
PB16				IAmb		IAmb	20 18 00.3	
	comp=Z,7.9nm,1.3s							
H10N1	**ASCENSION HYDR**	**49.09**	**18**	T		T	21 10 13.7	
	baz=194,slow=74,SNR=7.7							
H10N3	**ASCENSION HYDR**	**49.09**	**18**	T		T	21 10 09.9	
	baz=194,SNR=18							
H10N2	**ASCENSION HYDR**	**49.10**	**18**	T		T	21 10 14.9	
	baz=194,slow=74,SNR=9.9							
LPAZ	**La Paz**	**49.96**	**306**	P		**P**	**20 17 27.2**	**+0.9**
	comp=Z,3.9nm,0.5s,baz=116,slow=4.7,SNR=17							
	comp=Z,3.9nm,0.5s							
LPAZ	**La Paz**	**49.96**	**306**	P		**P**	**20 17 27.4**	**+1.1**
LPAZ				IAmb		IAmb	20 17 27.8	
	comp=Z,4.0nm,0.6s							
BOAV	**Boa Vista**	**63.91**	**323**	P		**P**	**20 19 03.6**	**-0.7**
BOAV				IAmb		IAmb	20 19 08.8	
	comp=Z,6.0nm,1.1s							
TORD	**Torodi Ar. Bea**	**73.12**	**30**	P		**P**	**20 20 01.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=198,slow=6.3,SNR=20							
	comp=Z,1.2nm,0.5s							
SDV	**Santo Domingo**	**73.61**	**316**	LR		LR	20 53 27.3	
	comp=Z,11nm,20.4s,baz=310,slow=36							
ASAR	**Alice Springs**	**99.26**	**163**	P		**Pdif**	**20 22 10.8**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=193,slow=4.9,SNR=3.4							
	comp=Z,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**135.78**	**318**	PKP		**PKPdf**	**20 27 48.0**	**-2.1**
	comp=Z,0.1nm,0.5s,baz=123,slow=1.8,SNR=5.2							
ILAR	**Eielson Array**	**149.71**	**312**	PKPbc		**PKPbc**	**20 28 18.5**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=128,slow=2.9,SNR=36							
F25K	**Christian Rive**	**149.72**	**318**	PKPbc		**PKPbc**	**20 28 19.6**	**+0.2**
E25K	**Arctic Village**	**149.77**	**319**	PKPbc		**PKPbc**	**20 28 18.9**	**-0.6**
GHO	**Glory Hole Cre**	**149.87**	**306**	PKPdf		**PKPdf**	**20 28 15.9**	**+0.9**
CCB	**Clear Creek Bu**	**150.07**	**312**			**PKPbc**	**20 28 19.3**	**-0.9**
SLKM	**Skilak Lake**	**150.11**	**303**	PKPbc		**PKPbc**	**20 28 19.7**	**-0.8**
WRH	**Wood River Hil**	**150.15**	**311**	PKPbc		**PKPbc**	**20 28 19.6**	**-0.8**
D25K	**Kavik River**	**150.20**	**321**	PKPbc		**PKPbc**	**20 28 19.6**	**-0.8**
BRLK	**Bradley Lake**	**150.20**	**301**	PKPbc		**PKPbc**	**20 28 19.7**	**-1.0**
RND	**Reindeer**	**150.25**	**309**	PKPbc		**PKPbc**	**20 28 20.1**	**-0.7**
CNPM	**China Poot**	**150.30**	**301**	PKPbc		**PKPbc**	**20 28 20.5**	**-0.5**
G24K	**Hadweenzic Riv**	**150.30**	**316**	PKPbc		**PKPbc**	**20 28 20.3**	**-0.4**
KDAK	**Kodiak Island**	**150.39**	**297**	PKPbc		**PKPbc**	**20 28 20.6**	**-0.5**
SONM	**Songino Array**	**151.12**	**87**	PKPbc		**PKPbc**	**20 28 22.6**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=225,slow=2.9,SNR=10.0							

RSNC 06 20:15:11.0±0.0, 9°N±2°×7°W±°, h43km±3km, M2.3, mb4.0, ML2.3, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CAPC	**Capurgana**	**0.23**	**173**	P		Pn	20 15 17.7	-1.2
CAPC				S		Sn	20 15 24.5	+0.1
PTAC	**Punta Ardita,**	**1.76**	**194**	P		Pn	20 15 38.0	-1.1
PTAC				S		Sn	20 16 00.3	0.0
UREC	**San Jos de Ur**	**2.14**	**121**	P		Pn	20 15 44.0	-0.3
UREC				S		Sn	20 16 08.9	-0.7
SJCC	**San Jacinto, C**	**2.40**	**65**	P		Pn	20 15 47.6	-0.3
SJCC				S		Sn	20 16 10.7	-5.4
BCIP	**Isla Barro Col**	**2.44**	**277**	P		Pn	20 15 47.6	-0.8
BCIP				S		Sn	20 16 13.0	-4.1
URIC	**Uribia, Colomb**	**6.00**	**62**	P		Pn	20 16 36.3	-1.0

*NEIC **06** 20:31:21.9±1.3, 43°.99N±0°.07×105°.45W±0°.04, h0km±1km, ML3.0/28, Error ellipse: s-maj=13.0km s-min=5.1km az=345.0*
*IDC **06** 20:31:22.6±1.8, 44°.25N×105°.81W, h0km, mbtmp3.2/2, ML2.1/1, Error ellipse: s-maj=64.2km s-min=11.0km az=147.0*

ISC 06 20:31:22.2±0.9, 43°.97N±0°.08×105°.36W±0°.06, h0km, n20, σ0s85/23, Wyoming

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
RSSD	**Black Hills**	**0.97**	**80**			**Pg**	**20 31 41.0**	**+0.2**
RSSD					Sg	**Sb**	**20 31 55.4**	**0.0**
K22A	**Casper**	**1.57**	**213**			**Pb**	**20 31 51.7**	**-0.4**
K22A				IAML			20 32 17.0	
	136nm,0.3s							
K22A				IAML			20 32 20.3	
	154nm,0.3s							
LAO	**LASA Array**	**2.79**	**348**	Pn		**Pn**	**20 32 09.8**	**+1.6**
RLMT	**Red Lodge**	**3.02**	**294**	Pn		**Pn**	**20 32 11.3**	**-0.3**
RLMT				IAML			20 33 04.3	
	38nm,1.1s							
RLMT				IAML			20 33 11.5	
	44nm,1.8s							
BW06	**Boulder Array**	**3.29**	**250**			**Pn**	**20 32 16.7**	**+1.5**
BW06						**Sn**	**20 32 54.4**	**-0.8**
PD31	**Pinedale Array**	**3.29**	**250**			**Pn**	**20 32 15.9**	**+0.6**
PD31						**Sn**	**20 32 55.2**	**+0.1**
PDAR	**Pinedale Array**	**3.29**	**250**	Pn		**Pn**	**20 32 15.8**	**+0.6**
	2.0nm,0.3s,baz=62,slow=17,SNR=23							
PDAR				Lg		Lg	20 32 59.7	
	3.9nm,0.3s,baz=61,slow=31,SNR=14							
PDAR	**Pinedale Array**	**3.29**	**250**	Pn		**Pn**	**20 32 16.9**	**+1.6**
PDAR						**Sn**	**20 32 56.0**	**+0.8**
YNE	**Yellowstone No**	**3.49**	**289**	Pn		**Pn**	**20 32 18.0**	**0.0**
YNE				IAML			20 33 20.3	
	comp=N,29nm,0.6s							
YNE				IAML			20 33 27.4	
	comp=E,23nm,1.1s							
YMP	**Mirror Lake Pl**	**3.53**	**284**	Pn		**Pn**	**20 32 18.6**	**0.0**
YMP				IAML			20 33 14.4	
	comp=E,35nm,1.0s							
YMP				IAML			20 33 14.7	
	comp=N,34nm,1.0s							
HAYD	**Hayden**	**3.72**	**203**			**Pn**	**20 32 21.0**	**-0.2**
HAYD				IAML			20 33 29.3	
	comp=E,29nm,2.1s							
H17A	**Grant Village**	**3.78**	**278**	Pn		**Pn**	**20 32 22.2**	**+0.2**
H17A				IAML			20 33 28.4	
	comp=N,20nm,1.2s							
H17A				IAML			20 33 28.5	
	comp=E,23nm,2.4s							
LOHW	**Long Hollow**	**3.81**	**267**			**Pn**	**20 32 23.3**	**+0.8**
LOHW				IAML			20 34 05.0	
	comp=E,19nm,1.6s							
FLWY	**Flagg Ranch**	**3.85**	**274**			**Pn**	**20 32 23.0**	**0.0**
MOOW	**Moose Ponds**	**3.90**	**269**	Pn		**Pn**	**20 32 23.2**	**-0.4**
YHH	**Holmes Hill**	**4.02**	**284**	Pn		**Pn**	**20 32 25.6**	**+0.3**
YHL	**Hebgen Lake**	**4.27**	**284**	Pn		**Pn**	**20 32 28.4**	**-0.3**
YHL				IAML			20 33 46.4	
	comp=N,21nm,1.1s							
YHL				IAML			20 33 48.7	
	comp=E,20nm,1.4s							
HWUT	**Hardware Ranch**	**5.14**	**245**	Pn		**Pn**	**20 32 39.1**	**-1.5**
ULM	**Lac du Bonnet**	**9.01**	**42**	Pn		**Pn**	**20 33 32.4**	**-1.2**
	comp=E,0.4nm,0.3s,baz=228,slow=12,SNR=1.9							
ULM				Lg		Lg	20 35 56.1	
	comp=E,0.1nm,0.3s,baz=119,slow=22,SNR=3.2							
	comp=E,0.7nm,0.3s							
I56US	**NEWPORT INFRAS**	**9.23**	**302**	I		I	21 30 20.0	
	baz=119,slow=327,SNR=1.7							

IDC 06 20:35:07.5±4.5, 15°.02S×177°.12W, h0km, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=204.8km s-min=31.3km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
STKA	**Stephens Creek**	**41.14**	**239**	P		P	20 42 53.6	-0.1
	3.2nm,1.1s,baz=82,slow=12,SNR=4.0							
	3.2nm,1.1s							
WRA	**Warramunga Arr**	**46.44**	**257**	P		P	20 43 36.2	-0.2
	0.7nm,0.3s,baz=88,slow=7.6,SNR=21							
	0.7nm,0.3s							
ASAR	**Alice Springs**	**46.82**	**252**	P		P	20 43 39.4	-0.1
	9.3nm,0.4s,baz=86,slow=7.5,SNR=193							
	9.3nm,0.4s							
ILAR	**Eielson Array**	**82.81**	**13**	P		P	20 47 33.2	0.0
	0.5nm,0.6s,baz=227,slow=5.3,SNR=8.9							
	0.5nm,0.6s							

*IDC **06** 20:36:55.4±1.3, 34°.97N×26°.51E, h0km, mb3.6/5, mbtmp3.6/6, ML3.5/1, MS2.7/1, Error ellipse: s-maj=47.1km s-min=20.8km az=159.0*
*ISK **06** 20:36:59.2, 35°.10N×26°.58E, h5km, ML3.2/27*
*ATH **06** 20:37:00.2, 35°.14N×26°.60E, h7km±2km, ML3.3/7, Manual Solution by G.Panopoulou First location: 2020/02/06 20:38:10, This location: 2020/02/06 20:49:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*
*AFAD **06** 20:37:01.9, 35°.21N×26°.91E, h16km±2km, ML2.9*

ISC 06 20:36:59.5±1.1, 35°.09N±0°.06×26°.59E±0°.03, h13km±7km, n86, σ1s55/100, mb3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ZKR	**Zakros**	**0.31**	**274**	Pg		**Pg**	**20 37 05.6**	**-0.2**
ZKR				Sg		**Sg**	**20 37 10.1**	**0.0**
ZKR	**Zakros**	**0.31**	**274**	P		**Pg**	**20 37 05.7**	**-0.2**
ZKR				S		**Sg**	**20 37 10.7**	**+0.7**
SIT2	**Siteia**	**0.41**	**286**	P		**Pg**	**20 37 06.4**	**-1.3**
SIT2				S		**Sg**	**20 37 14.0**	**+0.7**
KARP	**Karpathos**	**0.65**	**45**	Pg		**Pg**	**20 37 12.5**	**+0.3**
KARP				Sg		**Sb**	**20 37 21.6**	**-0.2**
KARP	**Karpathos**	**0.65**	**45**	P		**Pg**	**20 37 12.3**	**+0.1**
KARP				S		**Sg**	**20 37 20.3**	**-0.5**
NPS	**Neapolis**	**0.82**	**282**	P		**Pg**	**20 37 14.8**	**-0.5**
NPS				S		**Sg**	**20 37 26.2**	**0.0**
IACM	**Heraklion**	**1.27**	**280**	P		**Pg**	**20 37 24.6**	**+0.8**
IDI	**Anoyia**	**1.41**	**279**	Pn		**Pn**	**20 37 26.1**	**+1.1**
IDI				Sn		**Sg**	**20 37 45.7**	**+0.8**
IDI	**Anoyia**	**1.41**	**279**	P		**Pn**	**20 37 26.1**	**+1.1**
IDI				S		**Sn**	**20 37 45.1**	**+1.7**
THERA	**Ancient Thera,**	**1.56**	**325**	P		**Pn**	**20 37 27.3**	**+0.3**
THR6	**Thira Island,**	**1.59**	**323**	P		**Pn**	**20 37 27.5**	**+0.1**
SNT5	**Nea Kammeni, S**	**1.63**	**324**	P		**Pn**	**20 37 28.4**	**+0.5**
ARG	**Arkhangelos**	**1.68**	**48**	Pn		**Pb**	**20 37 30.5**	**+0.2**
ARG				Sn		**Sg**	**20 37 53.1**	**-0.4**
ARG	**Arkhangelos**	**1.68**	**48**	P		**Pb**	**20 37 30.2**	**0.0**
SAP3	**Santorini-Thir**	**1.68**	**323**	P		**Pn**	**20 37 29.5**	**+0.9**
YAZI	**Mula-Dat§a-**	**1.73**	**24**	P		**Pn**	**20 37 30.4**	**+1.1**
YAZI				S		**Sn**	**20 37 51.6**	**+0.2**
DAT	**Datca**	**1.82**	**26**	Pn		**Pb**	**20 37 32.4**	**-0.3**
DAT				Sn		**Sb**	**20 37 55.7**	**+0.2**
DAT	**Datca**	**1.82**	**26**	P		**Pn**	**20 37 32.3**	**+1.6**
DAT				S		**Sn**	**20 37 54.4**	**+0.8**
DAT				IAML			20 38 04.0	
	comp=N,167nm,0.5s							
DAT				IAML			20 38 04.0	
	comp=E,123nm,0.5s							
DATC	**Datca-Mugla**	**1.88**	**27**	Pn		**Pn**	**20 37 32.8**	**+1.5**
VAM	**Vamos**	**1.98**	**280**	P		**Pn**	**20 37 34.4**	**+1.6**
VAM				S		**Sn**	**20 37 59.5**	**+2.0**
BODT	**Bodrum**	**2.05**	**16**	Pn		**Pn**	**20 37 35.4**	**+1.7**
GVD	**Gavdhos**	**2.07**	**264**	Pn	

MKAR	**Makanchi Array**	**42.83**	**57**	P		**P**	**20 44 56.1**	**-1.0**
	0.7nm,0.7s,baz=270,slow=8.7,SNR=18							
	0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**44.20**	**46**	P		**P**	**20 45 06.3**	**-1.7**
	0.6nm,0.5s,baz=269,slow=7.9,SNR=4.3							
	0.6nm,0.5s							

JMA ***06*** *20:41:09.3±1.6,* **38°87N**±0°.06×**142°.0E**±0°.1**, h44**km±12km**, n22,** σ0°**86**/20**, mb3.7**/3**, 9D, Near east coast of eastern Honshu*

JMA Felt I J1 at KINKAZAN REGION .

IDC ***06*** *20:41:11.9±3.3, 38°.88N×142°.06E, h70km±28km, mb3.3/4/3, mbtmp3.5/5, MS3.6/1, Error ellipse: s-maj=48.3km s-min=25.4km az=92.0*

ISC 06 20:41:09.7±1.6**, 38°87N**±0°.06×**142°.0E**±0°.1**, h44**km±12km**, n22,** σ0°**86**/20**, mb3.7**/3**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.36**	**306**	⇓P		**Pn**	**20 41 18.9**	**0.0**
OFUJ				⇓S		**Sn**	**20 41 25.4**	**0.0**
JKMT	**Kesennumamotoy**	**0.45**	**263**	⇓P		**Pn**	**20 41 20.0**	**+0.1**
JKMT				⇓S		**Sn**	**20 41 27.4**	**+0.1**
JMK	**Ichinoseki**	**0.65**	**277**	⇓P		**Pn**	**20 41 22.6**	**+0.1**
JMK				⇓S		**Sn**	**20 41 32.1**	**+0.3**
JIO	**Ouri**	**0.69**	**233**	⇓P		**Pn**	**20 41 22.9**	**-0.1**
JIO				⇓S		**Sn**	**20 41 32.3**	**-0.3**
JOM	**Ohasama**	**0.84**	**316**	P		**Pn**	**20 41 25.1**	**0.0**
JOM				S		**Sn**	**20 41 36.3**	**0.0**
JTH	**Tanohata**	**1.08**	**353**	*e*P		**Pn**	**20 41 27.7**	**-0.7**
JOU	**Okura**	**1.19**	**245**	P		**Pn**	**20 41 30.2**	**+0.2**
JRG	**Rokugo**	**1.22**	**296**	⇓P		**Pn**	**20 41 30.5**	**+0.2**
JYK	**Kaneyama**	**1.32**	**273**	P		**Pn**	**20 41 32.0**	**+0.4**
JMM	**Marumori**	**1.41**	**225**	P		**Pn**	**20 41 32.6**	**-0.2**
MJAR	**Matsushiro Arr**	**3.83**	**234**	P		**Pn**	**20 42 08.5**	**+2.4**
	1.6nm,0.5s,baz=33,slow=13,SNR=18							
ASAJ	**Asahikawa**	**5.26**	**4**	P		**Pn**	**20 42 27.7**	**+2.0**
	3.3nm,0.8s,baz=251,slow=18,SNR=4.5							
H11N2	**WAKE ISLAND Hy**	**28.72**	**125**	T		T	21 17 25.7	
	baz=317,slow=75,SNR=76							
H11N1	**WAKE ISLAND Hy**	**28.73**	**125**	T		T	21 17 26.4	
	baz=317,slow=75,SNR=100							
H11N3	**WAKE ISLAND Hy**	**28.73**	**125**	T		T	21 17 27.1	
	baz=317,slow=75,SNR=92							
H11S1	**WAKE ISLAND Hy**	**29.49**	**126**	T		T	21 18 22.3	
	baz=319,slow=76,SNR=20							
H11S3	**WAKE ISLAND Hy**	**29.49**	**127**	T		T	21 18 23.6	
	baz=319,slow=76,SNR=25							
H11S2	**WAKE ISLAND Hy**	**29.51**	**126**	T		T	21 18 25.4	
	baz=319,slow=76,SNR=30							
MKAR	**Makanchi Array**	**43.59**	**301**	P		**P**	**20 49 09.3**	**-0.1**
	0.3nm,0.5s,baz=87,slow=9.5,SNR=7.8							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**45.29**	**307**	P		**P**	**20 49 22.4**	**-0.4**
	1.4nm,0.6s,baz=80,slow=7.9,SNR=12							
	1.4nm,0.6s							
WRA	**Warramunga Arr**	**58.95**	**188**	P		**P**	**20 51 03.6**	**-0.9**
	0.2nm,0.3s,baz=6.3,slow=6.4,SNR=2.4							
	0.2nm,0.3s							
KIRV	**Kirov**	**59.09**	**322**	LR		LR	21 16 17.5	
	comp=Z,57nm,20.5s,baz=115,slow=36							

IDC ***06*** *20:45:10.3±0.9, 27°.05N×103°.00E, h0km, mb3.8/14, mbtmp3.8/15, ML4.1/1, MS3.6/19, Error ellipse: s-maj=28.9km s-min=16.9km az=56.0*

BJI ***06*** *20:45:10.9, 27°.11N×103°.05E, h6km, mb4.0/23, ML4.0/16, Ms3.9/18, Ms7 3.9/19*

NEIC ***06*** *20:45:12.8±2.3, 27°.13N±0°.08×103°.26E±0°.08, h10km±1km, mb4.2/24, Error ellipse: s-maj=13.7km s-min=11.6km az=140.0*

ISC 06 20:45:12.7±0.5**, 27°12N**±0°.04×**103°17E**±0°.04**, h10**km**, n75,** σ1°**71**/72**, mb4.0**/24**, MS3.6**/19**, 2C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	**1.42**	**245**	Pg		Pn	20 45 34.5	-4.2
PZH				Sg		**Sn**	**20 45 54.6**	**-2.9**
PZH				smax		smax		
	comp=N,910nm,0.8s							
PZH				smax		smax		
	comp=E,880nm,0.8s							
KMI2	**Kunming**	**2.00**	**191**	⇑Pn		**Pn**	**20 45 47.0**	**+0.2**
KMI2				Sn		**Sn**	**20 46 13.5**	**+1.6**
KMI2				smax		smax		
	comp=N,600nm,1.4s							
KMI2				smax		smax		
	comp=E,430nm,1.4s							
CD2	**Chengdu**	**3.81**	**8**	Pn		**Pn**	**20 46 13.1**	**+1.5**
CD2				Pg		**Pb**	**20 46 22.7**	**+2.5**
CD2				Sg		**Sg**	**20 47 11.6**	**-3.7**
CD2				smax		smax		
	comp=N,810nm,0.7s							
CD2				smax		smax		
	comp=E,830nm,0.9s							
TNCH	**TengChong**	**4.67**	**245**	Pn		**Pn**	**20 46 23.9**	**+0.4**
TNCH				Pg		**Pb**	**20 46 35.5**	**+0.6**
TNCH				Sn		**Sn**	**20 47 14.4**	**-3.5**
TNCH				Sg		**Sb**	**20 47 35.6**	**+4.3**
TNCH				smax		smax		
	comp=N,520nm,1.5s							
TNCH				smax		smax		
	comp=E,360nm,1.2s							
TNCH				LR		LR		
	comp=N,790nm,4.0s							
TNCH				LR		LR		
	comp=Z,2μm,9.0s							
ENH	**Enshi**	**6.38**	**59**			**Pn**	**20 46 45.6**	**-1.1**
CRAI	**Chiangrai**	**7.32**	**201**	Pn		Pn	20 46 55.0	-4.7
MORE	**Moreh**	**8.50**	**252**	Pn		**Pn**	**20 47 14.7**	**-1.3**
CNSH	**ChangSha**	**8.72**	**81**	P		**Pn**	**20 47 21.4**	**+2.5**
CNSH				S		**Sn**	**20 48 58.0**	**+0.7**
CNSH				smax		smax		
	comp=N,52nm,1.2s							
CNSH				smax		smax		
	comp=E,35nm,1.0s							
LZDM	**Lanzhou Array**	**8.82**	**3**	Pn		**Pn**	**20 47 21.4**	**+0.7**
	baz=178,slow=13							
LZDM				Lg		Lg	20 49 59.0	
	baz=184,slow=35							
	1.6nm,0.4s							
LZH	**Lanzhou**	**8.96**	**3**	P		**Pn**	**20 47 24.6**	**+2.2**
LZH				S		**Sn**	**20 49 05.0**	**+1.5**
LZH				smax		smax		
	comp=N,28nm,1.3s							
LZH				smax		smax		
	comp=E,42nm,1.3s							
LZH				LR		LR		
	comp=N,560nm,11.0s							
LZH				LR		LR		
	comp=Z,460nm,11.7s							
CHTO	**Chiang Mai**	**9.13**	**206**			**Pn**	**20 47 24.1**	**-0.5**
CM31	**Chiang Mai Arr**	**9.46**	**205**	Pn		**Pn**	**20 47 27.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**9.46**	**205**	Pn		**Pn**	**20 47 32.0**	**+2.9**
	0.1nm,0.3s,baz=18,slow=12,SNR=6.6							
CMAR				Lg		Lg	20 50 12.2	
	0.1nm,0.3s,baz=34,slow=30,SNR=4.1							
CMAR				LR		LR	20 51 33.9	
	comp=Z,124nm,21.1s,baz=20,slow=41							
QIZ	**Qiongzhong**	**10.12**	**141**	P		**Pn**	**20 47 36.9**	**-1.3**
QIZ				S		**Sn**	**20 49 32.2**	**+0.4**
QIZ				LR		LR		
	comp=N,970nm,7.4s							
QIZ				LR		LR		
	comp=E,900nm,6.9s							
QIZ				LR		LR		
	comp=Z,580nm,10.9s							
LSA	**Lhasa**	**10.89**	**286**	Pn		**Pn**	**20 47 52.3**	**+3.1**
LSA	**Lhasa**	**10.89**	**286**	P		**Pn**	**20 47 48.9**	**-0.3**
BTO2	**Baotou**	**14.68**	**20**	*e*P		**Pn**	**20 48 40.1**	**-0.5**
BTO2				S		**Sn**	**20 51 22.4**	**-1.0**
BTO2				pmax		pmax		
	comp=Z,11nm,0.6s							
BTO2				LR		LR		
	comp=Z,600nm,8.9s							
HHC	**Hu-ho-hao-te**	**15.35**	**25**	*e*P		**Pn**	**20 48 50.4**	**+0.8**
HHC				pmax		pmax		
	comp=Z,2.0nm,0.7s							
BJT	**Baijiatuan**	**16.79**	**37**	P		**P**	**20 49 08.8**	**-1.4**
XLT	**XiLinHaoTe**	**19.73**	**29**	*e*P		**Pn**	**20 49 44.0**	**0.0**
XLT				sP		sP	20 49 57.4	+10
XLT				PcP		**PcP**	**20 53 58.5**	**-2.6**
XLT				pmax		pmax		
	comp=Z,4.0nm,0.8s							
XLT				LR		LR		
	comp=E,220nm,10.2s							
XLT				LR		LR		
	comp=Z,180nm,6.6s							
SONM	**Songino Array**	**20.84**	**6**	P		**P**	**20 49 54.7**	**+0.1**
	4.7nm,1.0s,baz=189,slow=8.1,SNR=17							
	4.7nm,1.0s							
SONM	**Songino Array**	**20.84**	**6**	P		**P**	**20 49 54.9**	**+0.3**
WMQ	**Urumqi**	**20.84**	**327**	*e*P		**P**	**20 49 55.2**	**+0.6**
WMQ				PP		**PnPn**	**20 50 20.1**	**+7.2**
WMQ				pmax		pmax		
	comp=Z,14nm,1.1s							
ULN	**Ulaanbaatar**	**20.93**	**7**	P		**P**	**20 49 55.0**	**-0.7**
KSRS	**Korea Array**	**23.26**	**58**	P		**P**	**20 50 19.6**	**-0.8**
	0.8nm,0.5s,baz=240,slow=9.9,SNR=5.1							
KSRS				LR		LR	21 00 36.6	
	comp=Z,84nm,21.3s,baz=245,slow=40							
	0.8nm,0.5s							
WUS	**Wushi**	**24.19**	**312**	P		**P**	**20 50 29.6**	**0.0**
WUS				IAmb		IAmb	20 50 40.0	
	comp=Z,8.9nm,1.4s							
JNU	**Nakatsue**	**24.66**	**69**	LR		LR	21 00 27.8	
	comp=Z,76nm,18.5s,baz=266,slow=37							
PRZ	**Przheval'sk**	**25.35**	**314**	P		**P**	**20 50 40.5**	**+0.4**
PRZ				IAmb		IAmb	20 50 43.5	
	comp=Z,8.3nm,0.9s							
TARG	**Taragay, Kyrgy**	**25.38**	**312**			**P**	**20 50 40.6**	**-0.1**
TARG				IAmb		IAmb	20 50 43.6	
	comp=Z,9.6nm,1.2s							
MKAR	**Makanchi Array**	**25.63**	**326**	P		**P**	**20 50 41.4**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=133,slow=11,SNR=20							
MKAR				LR		LR	21 01 50.6	
	comp=Z,203nm,20.1s,baz=154,slow=39							
	comp=Z,1.4nm,0.5s							
MKAR	**Makanchi Array**	**25.63**	**326**			**P**	**20 50 41.0**	**-1.4**
HILR	**Hailar Array B**	**25.79**	**25**	P		**P**	**20 50 44.0**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=183,slow=9.8,SNR=2.4							
	comp=Z,1.5nm,0.6s							
MAKZ	**Makanchi**	**25.80**	**325**	P		**P**	**20 50 42.8**	**-1.2**
MAKZ				IAmb		IAmb	20 50 49.9	
	comp=Z,4.2nm,1.0s							
KSH2	**Kashi**	**25.94**	**305**	P		**P**	**20 50 45.5**	**+0.1**
KSH2				pmax		pmax		
	comp=Z,4.0nm,1.0s							
KSH2				LR		LR		
	comp=Z,230nm,13.4s							
KSH2				LR		LR		
	comp=Z,160nm,13.4s							
NRN	**Naryn**	**26.48**	**310**	P		**P**	**20 50 49.5**	**-1.0**
NRN				IAmb		IAmb	20 50 57.8	
	comp=Z,8.5nm,1.4s							
NIL	**Nilore**	**26.56**	**291**	P		**P**	**20 50 50.8**	**-0.2**
BNX	**BinXian**	**26.77**	**40**	⇑P		**P**	**20 50 52.9**	**+0.3**
BNX				pmax		pmax		
	comp=Z,4.0nm,2.0s							
AAK	**Ala-Archa**	**27.99**	**311**	P		**P**	**20 51 02.3**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=92,slow=7.6,SNR=4.4							
AAK				LR		LR	21 03 10.6	
	comp=Z,93nm,18.0s,baz=122,slow=39							
	comp=Z,0.7nm,0.5s							
AAK	**Ala-Archa**	**27.99**	**311**	P		**P**	**20 51 04.9**	**+1.0**
AAK				IAmb		IAmb	20 51 17.3	
	comp=Z,4.6nm,1.5s							
DRK	**Karamyk**	**28.83**	**303**	P		**P**	**20 51 10.6**	**-1.0**
DRK				IAmb		IAmb	20 51 54.1	
	comp=Z,6.0nm,1.3s							
PALK	**Pallekele**	**29.06**	**231**	LR		LR	21 04 24.4	
	comp=Z,35nm,18.2s,baz=46,slow=40							
DAV	**Davao City (W)**	**29.16**	**129**	LR		LR	21 02 34.9	
	comp=Z,96nm,19.8s,baz=330,slow=36							
ZAA0	**Zalesovo Array**	**30.03**	**338**	P		**P**	**20 51 20.1**	**-1.6**
ZALV	**Zalesovo Beam**	**30.03**	**338**	P		**P**	**20 51 20.2**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=115,slow=10.0,SNR=4.1							
ZALV				LR		LR	21 04 01.6	
	comp=Z,134nm,19.2s,baz=134,slow=38							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**30.05**	**328**	P		**P**	**20 51 21.2**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=132,slow=10.0,SNR=13							
KURBB				LR		LR	21 04 52.8	
	comp=Z,87nm,19.5s,baz=170,slow=39							
	comp=Z,2.0nm,0.8s							
KURK	**Kurchatov**	**30.07**	**328**			**P**	**20 51 20.1**	**-2.0**
KURK				IAmb		IAmb	20 51 23.2	
	comp=Z,4.2nm,0.9s							
MJAR	**Matsushiro Arr**	**31.07**	**64**	LR		LR	21 05 24.6	
	comp=Z,140nm,19.2s,baz=226,slow=39							
KLR	**Kul'dur**	**31.19**	**37**	LR		LR	21 05 33.9	
	comp=Z,11nm,18.8s,baz=230,slow=39							
BVAR	**Borovoye Array**	**35.52**	**326**	LR		LR	21 07 43.2	
	comp=Z,168nm,21.0s,baz=123,slow=38							
AB31	**Akbulak array**	**39.82**	**316**	P		**P**	**20 52 46.0**	**-0.1**
ABKAR	**Akbulak array**	**39.82**	**316**	P		**P**	**20 52 46.0**	**-0.1**
AKTO	**Aktyubinsk**	**41.37**	**317**	LR		LR	21 11 46.1	
	comp=Z,99nm,19.2s,baz=246,slow=39							
ARTI	**Arti**	**43.23**	**325**	LR		LR	21 12 26.3	
	comp=Z,133nm,19.4s,baz=111,slow=38							
NRIK	**Noril'sk**	**43.24**	**352**	P		**P**	**20 53 13.6**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=129,slow=8.1,SNR=3.5							
NRIK				LR		LR	21 12 21.8	
	comp=Z,84nm,20.9s,baz=164,slow=38							
	comp=Z,1.1nm,0.4s							
NRIK	**Noril'sk**	**43.24**	**352**	IAmb		IAmb	20 53 19.3	
	comp=Z,2.6nm,0.8s							
PETK	**Petropavlovsk-**	**47.66**	**42**	LR		LR	21 16 10.4	
	comp=Z,69nm,20.1s,baz=189,slow=39							
KIV	**Kislovodsk**	**50.90**	**306**	P		**P**	**20 54 15.4**	**+1.3**
WRAB	**Tennant Creek**	**55.68**	**144**	P		**P**	**20 54 49.0**	**-0.4**
WRA	**Warramunga Arr**	**55.68**	**144**	P		**P**	**20 54 48.7**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=314,slow=10,SNR=5.5							
	comp=Z,1.5nm,0.9s							
WRA	**Warramunga Arr**	**55.68**	**144**	P		**P**	**20 54 48.9**	**-0.6**
WR8	**Warramunga Arr**	**55.78**	**144**	P		**P**	**20 54 48.6**	**-1.5**
ASAR	**Alice Springs**	**58.57**	**147**	P		**P**	**20 55 09.4**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=330,slow=6.5,SNR=6.6							
	comp=Z,0.7nm,0.7s							
AKASG	**Malin Array Be**	**59.56**	**315**	P		**P**	**20 55 14.6**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=71,slow=7.3,SNR=3.7							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**59.56**	**315**	IAmb		IAmb	20 55 45.7	
	comp=Z,3.0nm,1.1s							
FINES	**FINESS Array B**	**60.45**	**327**	P		**P**	**20 55 20.7**	**-1.6**
	comp=Z,0.0nm,0.8s,baz=66,slow=5.6,SNR=1.5							
	comp=Z,2.0nm,0.8s							
FINES	**FINESS Array B**	**60.45**	**327**	P		**P**	**20 55 21.8**	**-0.5**
BURAR	**Bucovina Array**	**62.63**	**312**	P		**P**	**20 55 37.2**	**-0.2**
BURAR				IAmb		IAmb	20 56 08.0	
	comp=Z,1.7nm,1.1s							
HFS	**Hagfors**	**66.64**	**327**	LR		LR	21 26 57.8	
	comp=Z,118nm,18.0s,baz=308,slow=38							
NOA	**NORSAR Array B**	**67.59**	**328**	P		**P**	**20 56 07.8**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=79,slow=2.2,SNR=1.5							
	comp=Z,0.5nm,0.8s							
E19K	**Redstone River**	**68.84**	**24**	P		**P**	**20 56 16.4**	**-0.6**
H18K	**Honhosa River**	**69.18**	**27**	P		**P**	**20 56 18.7**	**-0.5**
H18K				IAmb		IAmb	20 56 25.1	
	comp=Z,1.4nm,1.0s							
K17K	**Iditarod**	**70.03**	**29**	P		**P**	**20 56 24.8**	**+0.4**
YKA	**Yellowknife Ar**	**85.73**	**17**	P		**P**	**20 57 52.7**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=319,slow=5.4,SNR=5.1							
	comp=Z,0.3nm,0.7s							
FRB	**Frobisher Bay**	**89.21**	**356**	LR		LR	21 40 00.8	
	comp=Z,33nm,18.7s,baz=280,slow=37							
NEW	**Newport**	**96.72**	**26**	LR		LR	21 44 41.7	
	comp=Z,88nm,18.4s,baz=122,slow=37							

NOU ***06*** *20:45:56.7, 12°.71S×168°.56E, h275km, mb4.5/8, Santa Cruz Islands Region*

IDC ***06*** *20:46:20.1±7.0, 14°.39S×167°.35E, h159km±72km, mb3.5/5, mbtmp4.0/6, Error ellipse: s-maj=60.0km s-min=30.2km az=155.0*

ISC 06 20:46:20.9±1.5**, 14°5S**±0°.1×**167°.5E**±0°.2**, h170**km**, n9,** σ0°**82**/10**, mb3.8**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.31**	**168**	P		**Pn**	**20 47 12.6**	**-0.3**
YATNC	**Mamie plateau,**	**7.56**	**184**	P		**Pn**	**20 48 07.6**	**-0.9**
DZM	**Mont Dzumac**	**7.62**	**187**	P		**Pn**	**20 48 09.7**	**+0.5**
	7.9nm,0.4s,baz=49,slow=20,SNR=3.5							
DZM				S		**Sn**	**20 49 35.0**	**+0.2**
	5.4nm,0.5s,baz=127,slow=20,SNR=1.6							
DZM	**Mont Dzumac**	**7.62**	**187**	P		**Pn**	**20 48 09.5**	**+0.3**
CTA	**Charters Tower**	**20.99**	**252**	P		**P**	**20 50 51.8**	**+0.7**
	2.5nm,0.8s,baz=80,slow=8.5,SNR=3.7							
	2.5nm,0.8s							
STKA	**Stephens Creek**	**29.29**	**229**	P		**P**	**20 52 08.2**	**+0.8**
	3.2nm,0.5s,baz=46,slow=10.0,SNR=12							
	3.2nm,0.5s							
WRA	**Warramunga Arr**	**32.06**	**256**	P		**P**	**20 52 30.9**	**-1.0**
	0.6nm,0.3s,baz=83,slow=8.1,SNR=9.9							
	0.6nm,0.3s							
ASAR	**Alice Springs**	**32.93**	**249**	P		**P**	**20 52 38.4**	**-1.2**
	1.0nm,0.4s,baz=79,slow=9.0,SNR=26							
	1.0nm,0.4s							
ILAR	**Eielson Array**	**86.23**	**18**	P		**P**	**20 58 43.1**	**+0.3**
	0.4nm,0.8s,baz=238,slow=5.2,SNR=4.7							
	0.4nm,0.8s							

IDC 06 21:00:10.8±1.3**, 6°46N**×**125°33E, h0**km**, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=42.3km s-min=10.1km az=105.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.65**	**22**	Pg		Pg	21 00 23.0	-0.3
	157nm,0.3s,baz=118,slow=1.9,SNR=9.5							
DAV				Lg		Lg	21 00 32.8	
	121nm,0.3s,baz=258,slow=23,SNR=3.7							
FITZ	**Fitzroy Crossi**	**24.41**	**179**	P		P	21 05 31.0	-0.1
	2.0nm,0.8s,baz=0.0,slow=10,SNR=1.7							
	2.0nm,0.8s							
WRA	**Warramunga Arr**	**27.70**	**162**	P		P	21 06 01.0	+0.1
	0.3nm,0.4s,baz=341,slow=8.0,SNR=1.3							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**31.09**	**165**	P		P	21 06 30.9	-0.1
	0.2nm,0.5s,baz=341,slow=6.6,SNR=4.0							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**54.53**	**325**	P		P	21 09 40.8	+0.1
	0.4nm,0.8s,baz=135,slow=9.0,SNR=4.0							
	0.4nm,0.8s							

IDC ***06*** *21:00:56.8±1.0, 6°.46N×125°.19E, h0km, mb3.6/6, mbtmp3.6/6, MS3.6/2, Error ellipse: s-maj=25.8km s-min=10.2km az=117.0*

ISC 06 21:00:58.1±1.0**, 6°5N**±0°.1×**125°3E**±0°.2**, h10**km**, n9,** σ1°**49**/7**, mb3.5**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.66**	**28**	Pg		**Pg**	**21 01 10.0**	**-0.9**
	217nm,0.3s,baz=248,slow=20,SNR=3.8							
DAV				Lg		Lg	21 01 20.6	
	254nm,0.3s,baz=289,slow=6.0,SNR=7.0							
BATI	**Baumata**	**16.66**	**186**	LR		LR	21 13 43.3	
	comp=Z,353nm,19.0s,baz=295,slow=46							
FITZ	**Fitzroy Crossi**	**24.43**	**179**	P		**P**	**21 06 16.6**	**-0.5**
	3.8nm,0.9s,baz=0.0,slow=8.1,SNR=2.4							
	3.8nm,0.9s							
WRA	**Warramunga Arr**	**27.73**	**161**	P		**P**	**21 06 47.8**	**+0.7**
	0.2nm,0.3s,baz=329,slow=10.0,SNR=2.1							
	0.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**28.28**	**297**	P		**P**	**21 06 52.1**	**+0.1**
	0.4nm,0.8s,baz=104,slow=9.3,SNR=4.2							
	0.4nm,0.8s							
ASAR	**Alice Springs**	**31.13**	**165**	P		**P**	**21 07 16.4**	**-0.7**
	0.3nm,0.5s,baz=345,slow=7.0,SNR=4.9							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**54.48**	**325**	P		**P**	**21 10 25.2**	**-0.8**
	0.2nm,0.5s,baz=120,slow=7.5,SNR=5.0							
	0.2nm,0.5s							
ILAR	**Eielson Array**	**83.26**	**26**	P		**P**	**21 13 27.2**	**+2.5**
	0.4nm,0.9s,baz=237,slow=4.5,SNR=4.9							
	0.4nm,0.9s							
MMAI	**Mount Meron Ar**	**86.40**	**303**	LR		LR	21 57 42.9	
	comp=Z,15nm,18.3s,baz=192,slow=39							

NEIC ***06*** *21:06:31.6±2.8, 9°.67S±0°.08×117°.66E±0°.06, h35km±1km, mb4.9/79, Error ellipse: s-maj=14.2km s-min=10.0km az=190.0*

IDC ***06*** *21:06:33.5±1.9, 9°.54S×117°.73E, h57km±16km, mb4.4/25, mbtmp4.7/28, MS3.4/16, Error ellipse: s-maj=17.2km s-min=10.4km az=63.0*

DJA ***06*** *21:06:33.9±0.2, 10°.5S±2°.×11°.8E±°, h70km, 2km, M4.8/91, mB5.4/61, mb5.2/91, MLv5.2/43, Mw4.5/72, Mw(mB)4.8/61*

ISC 06 21:06:33.2±0.5**, 9°81S**±0°.04×**117°80E**±0°.03**, h63**km±4km**, n299,** σ1°**95**/313**, mb4.8**/81**, 1C-5D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.98**	**359**	P		**Pn**	**21 06 52.9**	**+1.8**
PLAI	**Plampang**	**0.98**	**359**	S		**Sn**	**21 07 05.4**	**+1.1**
PLAI	**Plampang**	**0.98**	**359**	P		**Pn**	**21 06 52.9**	**+1.8**
DBNI	**Kabupaten Domp**	**1.40**	**21**	P		**Pn**	**21 06 59.3**	**+2.7**
DBNI				S		**Sn**	**21 07 17.1**	**+2.9**
WBSI	**Waikabubak, Su**	**1.58**	**84**	P		**Pn**	**21 07 00.9**	**+1.8**
WBSI				S		**Sn**	**21 07 21.9**	**+3.2**
WSI	**Waingapu**	**2.47**	**87**	P		**Pn**	**21 07 13.1**	**+2.0**
KHKI	**Kahang-Kahang**	**2.59**	**303**	P		**Pn**	**21 07 15.7**	**+2.9**
KHKI				S		**Sn**	**21 07 45.6**	**+2.4**
BASI	**Baing, Sumba**	**2.77**	**99**	P		**Pn**	**21 07 16.9**	**+1.7**
DNP	**Denpasar**	**2.79**	**294**	P		**Pn**	**21 07 17.7**	**+2.2**
DNP				S		**Sn**	**21 07 51.2**	**+3.2**
IGBI	**Denpasar**	**2.79**	**290**	P		**Pn**	**21 07 16.8**	**+1.3**
IGBI				S		**Sn**	**21 07 48.9**	**+0.8**
RTBI	**Rangdo, Negare**	**3.12**	**295**	P		**Pn**	**21 07 22.0**	**+2.0**
JAGI	**Jajag, Banyuwa**	**3.84**	**290

780nm89nm,0.8s
MPSI Mapaga 10.29 12 P Pn 21 09 03.8 +5.6
BBJI Bungbulang 10.30 282 **Pn** **21 08 56.8 -1.5**
BBJI Bungbulang 10.30 282 P **Pn** **21 08 56.9 -1.5**
BBJI Bungbulang 10.30 282 P **Pn** **21 08 56.9 -1.5**
1µm144nm,0.8s
LEM Lembang 10.50 286 P **Pn** **21 09 00.1 -1.1**
68nm,0.7s,baz=45,slow=11,SNR=13
LEM Lembang 10.50 286 P **Pn** **21 09 01.8 +0.6**
88nm,0.8s
MRSI Marisa 11.02 22 P **Pn** **21 09 12.0 +3.9**
SANI Sanana 11.21 47 P **Pn** **21 09 14.4 +3.6**
SANI Sanana 11.21 47 P **Pn** **21 09 14.6 +3.8**
FITZ Fitzroy Crossi 11.21 138 P **Pn** **21 09 11.5 +0.7**
29nm,0.4s,baz=315,slow=7.4,SNR=78
FITZ S **Sn** **21 11 06.4 -8.2**
92nm,0.6s,baz=194,slow=18,SNR=6.1
FITZ LR LR 21 13 58.7
comp=Z,144nm,19.5s,baz=346,slow=39
TOLI2 Tolitoli 11.25 15 P **Pn** **21 09 13.0 +1.7**
TOLI2 Tolitoli 11.25 15 S **Sn** **21 11 19.3 +3.8**
DBJI Dramaga 11.40 286 P **Pn** **21 09 13.2 -0.2**
MBWA Marble Bar 11.44 171 P **Pn** **21 09 14.0 +0.2**
comp=Z,37nm,0.9s
MBWA Marble Bar 11.44 171 Pn **Pn** **21 09 14.0 +0.2**
MBWA Marble Bar 11.44 171 P **Pn** **21 09 13.8 0.0**
PSAC1 Pilbara Seismi 11.82 171 P **Pn** **21 09 20.3 +1.3**
comp=Z,36nm,1.6s
PSA00 Pilbara Seismi 11.86 171 Pn **Pn** **21 09 19.1 -0.5**
PSA00 Pilbara Seismi 11.86 171 P **Pn** **21 09 19.4 -0.2**
XMI Christmas Isla 11.94 266 P **Pn** **21 09 17.9 -2.8**
KNRA Kununurra 12.18 120 P **Pn** **21 09 24.4 +0.4**
comp=Z,234nm,0.8s
KNRA Kununurra 12.18 120 **Pn** **21 09 23.8 -0.2**
DRS Darwin Rock St 13.12 103 P **Pn** **21 09 36.0 -0.8**
GIRL Giralia 13.21 195 Pn **Pn** **21 09 37.4 -0.6**
SBUM Sibu 13.39 335 Pn **Pn** **21 09 41.0 +0.6**
SBUM Sibu 13.39 335 P **P** **21 09 44.8 -3.0**
MTN Manton Dam 13.42 104 P **Pn** **21 09 38.7 -2.2**
comp=Z,189nm,0.8s
MTN Manton Dam 13.42 104 **Pn** **21 09 39.0 -1.9**
SAUI Saumlaki 13.46 83 **Pn** **21 09 41.2 -0.3**
SAUI Saumlaki 13.46 83 P **Pn** **21 09 42.4 +0.9**
KASI Kota Agung 13.85 287 P **Pn** **21 09 44.5 -2.1**
comp=Z,1µmcomp=Z,69nm,1.3s
TNTI Ternate 14.19 43 Pn **Pn** **21 09 52.0 +0.9**
MDSI Maura Dua 14.51 290 P **Pn** **21 09 53.5 -1.8**
KDU Kakadu 14.68 103 P **Pn** **21 09 55.9 -1.6**
comp=Z,17nm,1.0s
MYLDM Lahad Datu 14.91 3 P **P** **21 10 06.2 +1.5**
MYLDM Lahad Datu 14.91 3 P **P** **21 10 06.6 +1.9**
MNAI Manna 15.69 289 Pn **Pn** **21 10 06.6 -3.8**
MNAI Manna 15.69 289 P **Pn** **21 10 08.8 -1.7**
KKM Kota Kinabalu 15.83 354 **Pn** **21 10 12.1 -0.2**
KKM Kota Kinabalu 15.83 354 P **P** **21 10 14.9 -0.1**
KKM Kota Kinabalu 15.83 354 P **P** **21 10 16.0 +1.0**
comp=Z,27nm,0.4s
FAKI Fak Fak 15.90 65 Pn **Pn** **21 10 11.8 -1.5**
FAKI Fak Fak 15.90 65 P **Pn** **21 10 13.8 +0.6**
FAKI Fak Fak 15.90 65 P **Pn** **21 10 12.0 -1.2**
comp=Z,38nm,0.7s
SIJI Sorong 16.07 57 P **Pn** **21 10 13.9 -1.5**
comp=Z,15nm,0.6s,baz=307,slow=17,SNR=8.7
SIJI S **Sn** **21 13 06.7 -6.3**
comp=Z,2.9nm,0.5s,baz=150,slow=20,SNR=1.1
SIJI Sorong 16.07 57 P **P** **21 10 19.3 +1.6**
MEEK Meekatharra 16.76 177 P **P** **21 10 26.0 +0.9**
comp=Z,37nm,0.6s
MEEK Meekatharra 16.76 177 P **P** **21 10 24.8 -0.4**
MASI Maura Aman, Be 16.81 292 P **Pn** **21 10 23.5 -1.1**
comp=Z,2µmcomp=Z,162nm,1.0s
BTDF Bukit Timah Da 17.84 308 P **Pn** **21 10 39.6 +2.4**
comp=Z,46nm,0.9s
KRJI Kerinci 17.95 294 P **P** **21 10 38.5 -0.1**
MYKOM Kota Tinggi 18.05 309 P **P** **21 10 38.5 -0.9**
MYKOM IAmb IAmb 21 10 41.9
comp=Z,123nm,1.8s
WRKA Warakurna 18.14 148 P **Pn** **21 10 44.0 +3.2**
comp=Z,8.3nm,1.2s
WB0 Warramunga Arr 18.84 124 P **Pn** **21 10 50.0 +0.6**
WB0 IAmb IAmb 21 10 53.6
comp=Z,47nm,0.9s
WRA Warramunga Arr 18.88 124 P **Pn** **21 10 50.2 +0.4**
comp=Z,6.1nm,0.3s,baz=301,slow=11,SNR=57
WRA S **S** **21 14 10.0 -10**
comp=Z,2.3nm,0.5s,baz=295,slow=23,SNR=3.8
WRA Warramunga Arr 18.88 124 P **Pn** **21 10 50.1 +0.2**
WRAB Tennant Creek 18.88 124 P **Pn** **21 10 50.2 +0.3**
WRAB Tennant Creek 18.88 124 P **Pn** **21 10 51.1 +1.2**
WR8 Warramunga Arr 19.02 124 P **Pn** **21 10 51.8 +0.3**
WR8 Warramunga Arr 19.02 124 P **Pn** **21 10 51.7 +0.2**
MORW Morawa 19.23 185 P **P** **21 10 53.1 +0.8**
comp=Z,220nm,0.9s
MORW Morawa 19.23 185 **Pn** **21 10 54.1 +0.2**
MORW Morawa 19.23 185 P **Pn** **21 10 55.1 +1.2**
PDSI Padang 19.38 296 P **P** **21 10 52.5 -1.6**
comp=Z,1µmcomp=Z,76nm,0.5s
PPI Padang Panjang 19.65 297 P **P** **21 10 56.0 -1.0**
comp=Z,1µmcomp=Z,167nm,0.9s
AS31 Alice Springs 20.65 134 P Pn 21 11 10.7 -0.1
ASAR Alice Springs 20.65 134 P Pn 21 11 10.1 -0.7
comp=Z,17nm,0.7s,baz=314,slow=11,SNR=17.2
ASAR S **S** **21 14 50.8 -4.6**
comp=Z,11nm,0.9s,baz=313,slow=24,SNR=6.3
ASAR PcP **PcP** **21 15 17.9 +1.6**
comp=Z,1.8nm,0.4s,baz=340,slow=1.2,SNR=4.5
comp=Z,17nm,0.7s
ASAR Alice Springs 20.65 134 P Pn 21 11 10.5 -0.2
BLDU Ballidu 20.73 183 P Pn 21 11 10.2 -1.3
MNSI Mandailing Nat 20.97 299 P **P** **21 11 12.7 +1.3**
KLBR Kellerberrin 21.68 180 P **P** **21 11 22.0 +3.2**
comp=Z,38nm,0.7s
KLBR Kellerberrin 21.68 180 P **P** **21 11 20.7 +2.0**
IPM Ipoh 21.93 310 **P** **21 11 21.6 0.0**
MUN Mundaring 22.11 184 P **P** **21 11 26.1 +2.7**
RPSI Rantau Prapat 22.53 303 **P** **21 11 23.4 -4.7**
RPSI IAmb IAmb 21 11 30.1
comp=Z,39nm,1.1s
PSI Prapat 22.59 303 P **P** **21 11 28.6 -0.3**
comp=Z,39nm,1.0s
KULM Kulim 22.73 311 P **P** **21 11 28.7 -1.5**
KULM IAmb IAmb 21 11 49.4
comp=Z,53nm,2.0s
FORT Forrest 22.95 157 P **P** **21 11 30.7 -1.6**
comp=Z,12nm,0.8s
FORT Forrest 22.95 157 P **P** **21 11 34.1 +1.8**
GSI Gunungsitoli 22.96 298 P **P** **21 11 32.1 -0.5**
GSI IAmb IAmb 21 11 40.6
comp=Z,23nm,0.6s
NWAO Narrogin (SRO) 23.01 181 P **P** **21 11 35.5 +2.6**
comp=Z,12nm,0.8s,baz=357,slow=10,SNR=6.6
NWAO S **S** **21 15 38.2 -0.5**
comp=Z,24nm,0.6s,baz=276,slow=10,SNR=5.5
comp=Z,12nm,0.8s
NWAO Narrogin (SRO) 23.01 181 P **P** **21 11 35.3 +2.4**
NWAO IAmb IAmb 21 11 57.0
comp=Z,137nm,1.8s
NWAO Narrogin (SRO) 23.01 181 P **P** **21 11 37.1 +4.2**
TSI Tuntungan 23.28 304 P **P** **21 11 36.4 +0.7**
comp=Z,240nm,1.4s
QIS Mount Isa 23.57 119 P **P** **21 11 41.0 +2.6**
KCSI Kotacane, Aceh 23.95 303 P **P** **21 11 41.0 -0.8**
comp=Z,37nm,1.2s
TGY Tagaytay City 23.96 8 P **P** **21 11 42.2 +0.3**
comp=Z,180nm,0.4s,baz=238,slow=6.2,SNR=4.1
COEN Coen 25.17 102 P **P** **21 11 55.3 +2.4**
comp=Z,14nm,1.2s
COEN Coen 25.17 102 P **P** **21 11 55.3 +2.4**
COEN Coen 25.17 102 P **P** **21 11 56.8 +3.9**
INKA Innaminka 28.02 133 P **P** **21 12 21.2 +2.8**
BBOO Buckleboo 28.42 146 P **P** **21 12 22.2 +0.1**
BBOO Buckleboo 28.42 146 P **P** **21 12 22.7 +0.7**
BBOO IAmb IAmb 21 13 22.5
comp=Z,105nm,1.9s
PMG Port Moresby 28.95 92 LR LR 21 25 20.5
comp=Z,66nm,18.8s,baz=340,slow=39
CTA Charters Tower 29.28 114 P **P** **21 12 33.0 +3.1**
comp=Z,3.2nm,0.7s,baz=267,slow=11,SNR=6.1
CTA LR LR 21 26 27.8
comp=Z,55nm,18.1s,baz=6.0,slow=40
comp=Z,3.2nm,0.7s
CTAO Charters Tower 29.28 114 P **P** **21 12 32.4 +2.6**
QIZ Qiongzhong 29.71 345 P **P** **21 12 32.2 -1.3**
QIZ IAmb IAmb 21 12 40.4
comp=Z,65nm,1.6s

HTT Hallett 30.50 144 P **P** **21 12 42.5 +2.0**
comp=Z,4.6nm,1.8s
HTT Hallett 30.50 144 P **P** **21 12 44.1 +3.6**
STKA Stephens Creek 31.11 138 P **P** **21 12 48.2 +2.4**
comp=Z,47nm,1.1s
STKA Stephens Creek 31.11 138 P **P** **21 12 48.7 +2.9**
comp=Z,7.7nm,0.7s,baz=318,slow=8.0,SNR=14
comp=Z,7.7nm,0.7s
STKA Stephens Creek 31.11 138 P **P** **21 12 48.2 +2.4**
STKA IAmb IAmb 21 12 49.5
comp=Z,34nm,0.9s
STKA Stephens Creek 31.11 138 P **P** **21 12 48.6 +2.8**
CMAR Chiang Mai Arr 33.69 326 P **P** **21 13 07.9 -0.6**
comp=Z,1.1nm,0.7s,baz=154,slow=6.5,SNR=9.3
CMAR PcP **PcP** **21 15 49.0 +1.7**
comp=Z,1.5nm,0.7s,baz=178,slow=2.7,SNR=9.1
CMAR ScP **ScP** **21 19 25.9 -0.7**
comp=Z,0.8nm,0.4s,baz=156,slow=3.2,SNR=8.5
CMAR LR LR 21 26 40.8
comp=Z,42nm,20.1s,baz=150,slow=36
comp=Z,1.1nm,0.7s
YHNB Yeheng 34.45 6 P **P** **21 13 14.3 -0.7**
YHNB Yeheng 34.45 6 P **P** **21 13 15.8 +0.7**
RABL Rabaul 34.55 83 P **P** **21 13 16.8 +0.7**
YNG Young 37.13 136 P **P** **21 13 41.5 +3.5**
comp=Z,21nm,1.5s
TOO Toolangi 37.23 142 P **P** **21 13 39.7 +0.9**
comp=Z,4.8nm,0.8s
TOO Toolangi 37.23 142 P **P** **21 13 40.8 +2.0**
TOO IAmb IAmb 21 14 33.8
comp=Z,18nm,1.6s
KMI Kunming 37.70 337 P **P** **21 13 44.0 +1.0**
KMI x **pP** **21 13 58.6 +0.6**
KMI2 Kunming 37.72 337 P **P** **21 13 43.9 +0.7**
KMI2 pmax pmax
comp=Z,18nm,0.8s
CAN Canberra 38.11 137 P **P** **21 13 49.7 +3.4**
CAN IAmb IAmb 21 14 20.7
comp=Z,41nm,1.5s
PZH PanZhiHua 39.32 337 P **P** **21 13 58.7 +2.2**
TNCH TengChong 39.40 332 ⇑P **P** **21 13 57.1 -0.2**
TNCH pP pwP 21 14 15.2 -0.1
TNCH S **S** **21 19 52.7 -1.9**
TNCH sS sS 21 20 22.3 +2.7
TNCH pmax pmax
comp=Z,11nm,0.9s
TNCH pmax pmax
comp=Z,140nm,3.6s
WHN Wuhan 40.26 355 ⇓P **P** **21 14 04.2 +0.2**
ENH Enshi 40.64 349 **P** **21 14 06.5 -0.8**
ENH IAmb IAmb 21 14 07.2
comp=Z,16nm,0.7s
ENH Enshi 40.64 349 P **P** **21 14 06.5 -0.8**
PALK Pallekele 40.66 293 LR LR 21 31 46.4
comp=Z,18nm,20.5s,baz=129,slow=37
PALK Pallekele 40.66 293 P **P** **21 14 07.5 -0.2**
PALK IAmb IAmb 21 14 47.1
comp=Z,67nm,1.8s
TATA Tatamba Isabel 41.48 92 P **P** **21 14 18.7 +4.2**
NJ2 Nanjing 41.64 1 *e*P **P** **21 14 16.0 +0.6**
NJ2 pmax pmax
comp=Z,12nm,0.7s
CD2 Chengdu 42.67 342 P **P** **21 14 22.8 -1.1**
CD2 sP pP 21 14 39.7 +0.7
CD2 pmax pmax
comp=Z,40nm,0.8s
LYN LuoYang 44.41 354 P **P** **21 14 36.9 -0.8**
LYN PP **PP** **21 16 21.8 -0.7**
LYN pmax pmax
comp=Z,18nm,0.7s
XAN Xi'an 44.41 349 ⇓P **P** **21 14 36.4 -1.5**
XAN pmax pmax
comp=Z,21nm,0.7s
XAN pmax pmax
comp=Z,220nm,4.0s
XAN Xi'an 44.41 349 P **P** **21 14 36.5 -1.3**
XAN x **pP** **21 14 51.5 -1.6**
XAN PcP **PcP** **21 16 20.5 -0.2**
JNU Nakatsue 44.48 16 LR LR 21 34 59.3
comp=Z,27nm,18.0s,baz=190,slow=39
H08S2 Diego Garcia H 44.80 269 T T 22 01 54.3
baz=95
H08S3 Diego Garcia H 44.82 269 T T 22 01 57.3
baz=95,SNR=3.8
H08S1 Diego Garcia H 44.82 269 T T 22 01 47.0
baz=95,slow=74,SNR=3.2
TIA Tai'an 45.78 359 P **P** **21 14 47.1 -1.5**
TIA PcP **PcP** **21 16 26.3 +1.0**
TIA pmax pmax
comp=Z,16nm,0.8s
JMN Monobe 45.92 19 P **P** **21 14 49.1 -0.7**
TJN Taejon 46.81 11 **P** **21 14 56.3 -0.4**
LSA Lhasa 46.92 328 **P** **21 14 57.5 -0.8**
LSA Lhasa 46.92 328 P **P** **21 14 53.5 -4.8**
HNS HongShan 47.05 357 ⇓P **P** **21 14 57.2 -1.3**
HNS pmax pmax
comp=Z,10.0nm,0.9s
LZDM Lanzhou Array 47.42 344 P **P** **21 15 00.9 -0.9**
comp=Z,1.1nm,0.3s,baz=186,slow=13,SNR=14
LZDM PcP **PcP** **21 16 32.1 +0.5**
comp=Z,3.7nm,0.8s,baz=141,slow=7.3,SNR=5.0
LZDM ScP **ScP** **21 20 20.3 -0.1**
comp=Z,0.2nm,0.3s,baz=168,slow=7.6,SNR=3.7
comp=Z,1.1nm,0.3s
KSAR Wonju Array Be 47.95 11 **P** **21 15 05.3 -0.1**
KSRS Korea Array 47.96 11 P **P** **21 15 05.5 -0.1**
comp=Z,21nm,0.9s,baz=190,slow=8.1,SNR=64
comp=Z,21nm,0.9s
JGF Kuroka 48.80 21 P **P** **21 15 10.3 -1.9**
BJT Baijiatuau 49.60 358 IAmb IAmb 21 15 17.9
comp=Z,12nm,0.8s
BJT Baijiatuau 49.60 358 P **P** **21 15 17.0 -1.1**
BJT PcP **PcP** **21 16 40.1 +1.2**
BJI2 Beijing 49.60 358 P **P** **21 15 17.2 -0.9**
BJI2 PcP **PcP** **21 16 39.7 +0.8**
BJI2 pmax pmax
comp=Z,8.0nm,0.8s
MAJO Matsushiro 49.95 22 **P** **21 15 19.3 -1.5**
MAJO IAmb IAmb 21 15 19.6
comp=Z,15nm,0.9s
MJAR Matsushiro Arr 49.95 22 P **P** **21 15 18.5 -2.3**
comp=Z,12nm,0.9s,baz=197,slow=7.7,SNR=30
comp=Z,12nm,0.9s
MJAR Matsushiro Arr 49.95 22 **P** **21 15 19.1 -1.7**
MJAR IAmb IAmb 21 15 20.1
comp=Z,11nm,1.1s
HHC Hu-ho-hao-te 50.73 354 ⇓*i*P **P** **21 15 25.7 -1.1**
HHC pmax pmax
comp=Z,8.0nm,1.1s
GTA2 Gaotai 51.83 342 P **P** **21 15 34.8 -0.3**
GTA2 PcP **PcP** **21 16 48.3 +0.9**
GTA2 pmax pmax
comp=Z,9.0nm,1.0s
XLT XiLinHaoTe 53.48 358 *e*P **P** **21 15 45.8 -1.3**
XLT pmax pmax
comp=Z,14nm,1.0s
CN2 Changchun 53.81 7 P **P** **21 15 46.8 -2.6**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
MDJ Mudanjiang 55.21 10 **P** **21 15 58.8 -0.8**
MDJ IAmb IAmb 21 16 00.2
comp=Z,25nm,0.9s
MDJ Mudanjiang 55.21 10 P **P** **21 15 59.1 -0.5**
MDJ pmax pmax
comp=Z,34nm,1.0s
MDJ Mudanjiang 55.21 10 P **P** **21 15 58.8 -0.8**
USRK Ussuriysk Ar. 55.27 12 P **P** **21 15 59.7 -0.4**
comp=Z,11nm,0.6s,baz=193,slow=5.9,SNR=14
comp=Z,11nm,0.6s
BNX BinXian 55.97 8 ⇓P **P** **21 16 04.5 -0.5**
BNX pmax pmax
comp=Z,5.0nm,1.1s
JKA Kamikawa-asahi 58.20 21 P **P** **21 16 20.6 -0.2**
ULN Ulaanbaatar 58.21 352 P **P** **21 16 20.4 -0.6**
ULN IAmb IAmb 21 16 20.9
comp=Z,14nm,1.5s
ULN Ulaanbaatar 58.21 352 P **P** **21 16 19.9 -1.1**
SONM Songino Array 58.27 351 P **P** **21 16 20.2 -1.2**
comp=Z,6.0nm,0.6s,baz=171,slow=8.8,SNR=52
SONM LR LR 21 43 24.6
comp=Z,37nm,18.1s,baz=12,slow=38
comp=Z,6.0nm,0.6s
SONM Songino Array 58.27 351 **P** **21 16 20.5 -0.9**
SONM IAmb IAmb 21 16 22.4
comp=Z,5.8nm,0.6s

HILR Hailar Array B 59.14 1 P **P** **21 16 25.9 -1.4**
comp=Z,3.7nm,0.4s,baz=178,slow=8.0,SNR=10
comp=Z,3.7nm,0.4s
WMQ Urumqi 59.98 335 *e*P **P** **21 16 32.8 -0.4**
WMQ pP pP 21 16 50.5 +1.5
WMQ pmax pmax
comp=Z,13nm,0.9s
URZ Urewera 59.98 129 LR LR 21 41 38.4
comp=Z,51nm,20.0s,baz=248,slow=35
HEH HeiHe 60.40 7 *e*P **P** **21 16 34.4 -1.4**
HEH pmax pmax
comp=Z,13nm,0.9s
NIL Nilore 60.49 318 P **P** **21 16 35.0 -1.9**
NIL IAmb IAmb 21 17 27.3
comp=Z,16nm,1.8s
WUS Wushi 61.94 328 IAmb IAmb 21 16 49.5
comp=Z,3.6nm,0.7s
WUS Wushi 61.94 328 P **P** **21 16 46.3 -0.4**
KSH2 Kashi 62.55 324 P **P** **21 16 50.2 -0.6**
KSH2 pmax pmax
comp=Z,7.0nm,0.8s
TARG Taragay, Kyrgy 63.07 327 P **P** **21 16 55.0 +0.5**
KDJ Kajisay 63.68 327 P **P** **21 16 58.0 -0.3**
KDJ IAmb IAmb 21 18 06.4
comp=Z,5.5nm,1.0s
NRN Naryn 63.84 326 P **P** **21 16 58.3 -1.3**
KBL Kabul 63.84 316 **P** **21 16 58.2 -1.4**
KBL IAmb IAmb 21 16 59.0
comp=Z,6.3nm,0.6s
BOOM Boomskoye usch 64.59 327 P **P** **21 17 03.6 -0.7**
MKAR Makanchi Array 64.64 334 P **P** **21 17 03.1 -1.2**
comp=Z,7.9nm,0.4s,baz=142,slow=6.1,SNR=150
MKAR LR LR 21 47 56.7
comp=Z,49nm,18.6s,baz=136,slow=39
comp=Z,7.9nm,0.4s
MAKZ Makanchi 64.79 334 **P** **21 17 03.6 -1.7**
MAKZ Makanchi 64.79 334 P **P** **21 17 04.1 -1.1**
ARSB Arslanbob 65.47 324 P **P** **21 17 09.0 -0.9**
ARSB IAmb IAmb 21 17 10.5
comp=Z,15nm,0.7s
AAK Ala-Archa 65.48 326 P **P** **21 17 08.9 -1.1**
comp=Z,4.5nm,0.6s,baz=140,slow=5.3,SNR=25
AAK LR LR 21 52 25.9
comp=Z,36nm,18.5s,baz=86,slow=42
comp=Z,4.5nm,0.6s
AAK Ala-Archa 65.48 326 **P** **21 17 09.0 -1.0**
AAK IAmb IAmb 21 17 10.3
comp=Z,5.0nm,0.8s
AAK Ala-Archa 65.48 326 P **P** **21 17 09.0 -1.0**
AAK x x 21 17 21.7
AAK PcP **PcP** **21 17 42.0 +0.6**
BTK Batken 65.95 322 IAmb IAmb 21 17 13.1
comp=Z,6.6nm,1.0s
CHGR Chuyangaron 66.13 320 **P** **21 17 12.3 -1.9**
KK31 Karatay Array 68.01 325 P **P** **21 17 24.1 -1.8**
KKAR Karatay Array 68.01 325 P **P** **21 17 24.1 -1.9**
KURBB Kurchatov Arra 69.17 334 P **P** **21 17 31.9 -1.1**
comp=Z,5.9nm,0.6s,baz=143,slow=5.6,SNR=73
KURBB PcP **sP** **21 17 54.9 -0.6**
comp=Z,4.4nm,0.7s,baz=144,slow=4.2,SNR=14
comp=Z,5.9nm,0.6s
KURK Kurchatov 69.20 335 **P** **21 17 31.9 -1.3**
KURK IAmb IAmb 21 17 33.1
comp=Z,12nm,0.9s
KURK Kurchatov 69.20 335 P **P** **21 17 31.7 -1.4**
KURK PcP **PcP** **21 17 54.7 -1.8**
ZAA0 Zalesovo Array 69.38 340 IAmb IAmb 21 17 33.3
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 69.38 340 P **P** **21 17 31.9 -2.2**
comp=Z,13nm,0.5s,baz=146,slow=4.9,SNR=85
comp=Z,13nm,0.5s
PEA0B Petropavlovsk- 71.29 24 P **P** **21 17 46.1 +0.2**
PETK Petropavlovsk- 71.29 24 P **P** **21 17 46.0 +0.1**
comp=Z,6.3nm,0.7s,baz=244,slow=1.6,SNR=17
comp=Z,6.3nm,0.7s
PETK Petropavlovsk- 71.29 24 P **P** **21 17 46.2 +0.3**
VNDA Vanda 71.38 171 P **P** **21 17 48.9 +2.8**
comp=Z,2.6nm,1.1s,baz=327,slow=5.5,SNR=2.1
comp=Z,2.6nm,1.1s
MA2 Magadan 74.03 17 LR LR 21 53 53.0
comp=Z,27nm,18.2s,baz=90,slow=38
BVAR Borovoye Array 74.45 333 P **P** **21 18 03.7 -0.9**
comp=Z,7.9nm,0.8s,baz=134,slow=6.4,SNR=40
BVAR LR LR 21 53 21.2
comp=Z,30nm,18.4s,baz=153,slow=38
comp=Z,7.9nm,0.8s
BORK Borovoye 74.50 332 **P** **21 18 03.8 -1.0**
BORK IAmb IAmb 21 18 04.4
comp=Z,7.2nm,0.8s
BORK Borovoye 74.50 332 P **P** **21 18 03.3 -1.5**
BORK PcP **PcP** **21 18 18.4 -0.7**
AB31 Akbulak array 77.54 325 **P** **21 18 21.4 -0.9**
AB31 IAmb IAmb 21 18 22.4
comp=Z,8.2nm,0.8s
ABKAR Akbulak array 77.54 325 P **P** **21 18 21.3 -1.0**
RAYN Ar Rayn 78.00 297 **P** **21 18 24.7 -0.7**
RAYN Ar Rayn 78.00 297 P **P** **21 18 25.2 -0.2**
RAYN x **PcP** **21 18 35.8 +0.8**
AKTO Aktyubinsk 79.22 326 P **P** **21 18 31.0 -0.5**
comp=Z,8.6nm,0.8s,baz=97,slow=4.0,SNR=22
AKTO LR LR 22 00 26.1
comp=Z,46nm,19.0s,baz=264,slow=41
comp=Z,8.6nm,0.8s
TIXI Tiksi 81.62 4 P **P** **21 18 42.9 -1.0**
TIXI IAmb IAmb 21 18 43.0
comp=Z,17nm,0.8s
TIXI Tiksi 81.62 4 P **P** **21 18 42.0 -1.9**
NRIK Noril'sk 81.72 350 P **P** **21 18 42.5 -2.0**
comp=Z,2.4nm,0.6s,baz=130,slow=4.0,SNR=5.9
comp=Z,2.4nm,0.6s
NRIK Noril'sk 81.72 350 **P** **21 18 43.3 -1.2**
NRIK IAmb IAmb 21 18 44.7
comp=Z,34nm,2.0s
ARTI Arti 82.05 331 P **P** **21 18 43.7 -2.7**
comp=Z,5.5nm,0.6s,baz=135,slow=1.2,SNR=14
ARTI Arti 82.05 331 P **P** **21 18 45.0 -1.5**
GEVA Gevas 84.28 310 P **P** **21 18 58.9 +0.2**
GEVA IAmb IAmb 21 19 00.2
comp=Z,12nm,0.8s
GRHM Grahamstown, E 85.87 237 P **P** **21 19 07.3 +0.6**
KBZ Khabaz 86.01 315 P **P** **21 19 06.8 -0.1**
comp=Z,6.7nm,0.8s,baz=130,slow=3.0,SNR=13
comp=Z,6.7nm,0.8s
KOPT Kop Dagi 86.67 311 **P** **21 19 12.2 +1.5**
LSZ Lusaka 87.09 255 **P** **21 19 15.3 +2.3**
LSZ IAmb IAmb 21 19 40.6
comp=Z,8.9nm,0.8s
BOSA Boshof 87.58 242 P **P** **21 19 17.1 +1.9**
comp=Z,4.2nm,1.0s,baz=129,slow=6.2,SNR=4.1
BOSA LR LR 21 52 24.8
comp=Z,24nm,19.0s,baz=184,slow=31
comp=Z,4.2nm,1.0s
BOSA Boshof 87.58 242 P **P** **21 19 16.6 +1.5**
LBTB Lobatse 87.89 245 LR LR 21 51 30.4
comp=Z,19nm,20.3s,baz=155,slow=31
GHAJ Ghor Haditha 88.48 302 P **P** **21 19 20.6 +1.5**
MMAI Mount Meron Ar 88.98 304 P **P** **21 19 23.1 +1.5**
comp=Z,1.6nm,0.5s,baz=55,slow=12,SNR=6.8
comp=Z,1.6nm,0.5s
BRTR Keskin Array B 91.74 310 P **P** **21 19 33.9 -0.5**
comp=Z,1.4nm,0.6s,baz=90,slow=1.4,SNR=3.6
BRTR LR LR 22 06 35.2
comp=Z,18nm,19.4s,baz=154,slow=39
comp=Z,1.4nm,0.6s
C16K Lisburne Hills 94.23 21 **P** **21 19 45.3 +0.4**
C16K IAmb IAmb 21 19 46.0
comp=Z,8.1nm,0.9s
G16K Koyuk River 94.65 24 IAmb IAmb 21 19 47.9
comp=Z,6.5nm,0.8s
H17K Granite Mounta 95.56 25 P **P** **21 19 50.9 -0.2**
H17K IAmb IAmb 21 19 52.3
comp=Z,6.6nm,0.9s
J17K VABM Dome 95.63 27 P **P** **21 19 51.9 +0.5**
E18K Tukpahlearik C 95.77 23 **P** **21 19 52.2 +0.2**
E18K IAmb IAmb 21 19 53.7
comp=Z,18nm,1.6s
C18K Utukok River 95.80 21 P **P** **21 19 50.0 -2.2**
C18K IAmb IAmb 21 19 53.2
comp=Z,8.5nm,1.3s
PLK4 Peulik 4 95.99 33 P **P** **21 19 52.2 -1.1**
FINES FINESS Array B 99.36 331 P **Pdif** **21 20 07.1 -1.2**
comp=Z,3.8nm,0.7s,baz=103,slow=4.1,SNR=9.5
comp=Z,3.8nm,0.7s
SPITS Spitsbergen Ar 101.88 348 P **Pdif** **21 20 17.8 -1.5**
comp=Z,2.8nm,0.7s,baz=91,slow=8.5,SNR=5.8
H27K Steamboat Moun 103.22 24 Pdif **Pdif** **21 20 26.7 +1.1**

I27K	**Kandik River**	**103.25**	**25**		**Pdif**	**21 20 26.7**	**+1.1**
I28M	**Miner Creek**	**103.96**	**25**	Pdif	**Pdif**	**21 20 30.2**	**+1.3**
G29M	**Pine Creek**	**104.52**	**23**	Pdif	**Pdif**	**21 20 31.8**	**+0.5**
HFS	**Hagfors**	**105.47**	**330**	Pdiff	**Pdif**	**21 20 34.1**	**-1.5**
	comp=Z,1.4nm,0.8baz=145,slow=5.4,SNR=4.2						
EKA	**Eskdalemuir Ar**	**115.38**	**327**	PKP	**PKiKP**	**21 25 07.1**	**-0.5**
	comp=Z,0.2nm,0.3baz=24,slow=2.5,SNR=3.8						
YKA	**Yellowknife Ar**	**115.41**	**24**	PKP	**PKPdf**	**21 25 08.1**	**+0.6**
	comp=Z,1.0nm,0.4baz=45,slow=7.0,SNR=26						
TORD	**Torodi Ar. Bea**	**117.43**	**280**	PKP	**PKiKP**	**21 25 13.8**	**+1.0**
	comp=Z,0.4nm,0.3baz=189,slow=1.0,SNR=12						
ESDC	**Sonseca Array**	**120.53**	**310**	PKP	**PKPdf**	**21 25 17.6**	**-0.5**
	comp=Z,0.5nm,0.7baz=35,slow=5.9,SNR=5.0						
NVAR	**Mina Array Bea**	**122.45**	**51**	PKP	**PKiKP**	**21 25 24.2**	**+1.9**
	comp=Z,1.3nm,0.7baz=236,slow=2.4,SNR=6.0						
DBIC	**Dimbokro**	**123.21**	**272**	PKP	**PKiKP**	**21 25 24.8**	**+0.7**
	comp=Z,2.5nm,0.5baz=82,slow=2.4,SNR=6.9						
FCC	**Fort Churchill**	**125.49**	**20**		**PKiKP**	**21 25 27.4**	**+0.1**
PDAR	**Pinedale Array**	**127.32**	**43**	PKP	**PKiKP**	**21 25 32.4**	**+0.6**
	comp=Z,0.3nm,0.4baz=98,slow=0.2,SNR=7.2						
ULM	**Lac du Bonnet**	**131.02**	**28**	PKP	**PKPdf**	**21 25 38.0**	**+0.3**
	comp=Z,0.8nm,0.3baz=306,slow=2.7,SNR=4.8						
SCHQ	**Schefferville**	**134.94**	**4**	PKP	**PKiKP**	**21 25 46.2**	**-0.3**
	comp=Z,2.4nm,0.6baz=330,slow=3.7,SNR=3.7						
TXAR	**Lajitas Array**	**136.67**	**57**	PKP	**PKiKP**	**21 25 50.9**	**0.0**
	comp=Z,0.3nm,0.5baz=4.6,slow=5.7,SNR=2.6						
CPUP	**Villa Florida**	**143.76**	**187**	PKP	**PKPdf**	**21 26 01.1**	**-0.9**
	comp=Z,1.8nm,0.4baz=162,slow=5.5,SNR=6.2						
BDFB	**Brasília**	**151.07**	**209**	PKPbc	**PKiKP**	**21 26 22.4**	**+1.6**
	comp=Z,6.4nm,0.6baz=198,slow=2.3,SNR=7.5						
LPAZ	**La Paz**	**153.41**	**167**	PKPbc	**PKiKP**	**21 26 27.9**	**+1.6**
	comp=Z,1.3nm,0.5baz=301,slow=2.8,SNR=5.3						

*IDC **06** 21:10:50.6±0.6, 16˚.86N×60˚.84W, h0km, mb4.1/14, mbtmp4.1/16, ML3.4/2, MS3.1/7, Error ellipse: s-maj=15.4km s-min=7.3km az=109.0*
*TRN **06** 21:10:51.8, 16˚.77N×60˚.88W, h30km, MD4.2, North-east of Guadeloupe.*
*NEIC **06** 21:10:53.9±1.6, 16˚.71N±0˚.04×60˚.98W±0˚.05, h29km±6km, mb4.6/12, Error ellipse: s-maj=7.4km s-min=5.2km az=222.0*

ISC 06 21:10:51.7±1.5, **16˚.76N**±0˚.03×**60˚.92W**±0˚.05, **h15**km±9km, **n93**, σ1§**19**/107, **mb4.3**/19, **MS3.2**/4, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**0.46**	**196**	Pg	Pn	**21 11 02.9**	**-0.9**
H05N1				Lg	Lg	21 11 09.2	
DSDZ	**La Diserade, G**	**0.46**	**197**	*eP*	**Pn**	**21 11 02.9**	**-1.0**
DSDZ				*eS*	**Sn**	**21 11 12.0**	**+0.2**
GDSD	**La Dsirade Is**	**0.46**	**197**		**Pb**	**21 11 02.6**	**+1.0**
GDSD					**Sb**	**21 11 08.9**	**+0.6**
ABD	**La Joyeuse, An**	**0.61**	**243**		**Pn**	**21 11 05.0**	**-0.8**
ABD					**Sn**	**21 11 13.7**	**-1.8**
MAGL	**Barre de l'ile**	**0.87**	**203**		**Pn**	**21 11 09.2**	**-0.3**
MAGL					**Sn**	**21 11 21.1**	**-0.9**
DHSZ	**Broadband at M**	**0.94**	**239**	*eP*	**Pn**	**21 11 10.6**	**+0.1**
DHSZ				*eS*	**Sn**	**21 11 26.0**	**+2.3**
GDHS	**Morne Mazeau,**	**0.94**	**239**		**Pn**	**21 11 10.3**	**-0.2**
CBE	**Ff, Capester**	**0.95**	**224**		**Pn**	**21 11 11.1**	**+0.5**
CBE				Sn	**Sn**	**21 11 22.1**	**-1.7**
MMLZ	**Guadeloupe Bro**	**1.01**	**226**	*eP*	**Pn**	**21 11 12.7**	**+1.3**
MMLZ				*eS*	**Sn**	**21 11 27.5**	**+2.2**
ATGZ	**Broadband at L**	**1.01**	**230**	*eP*	**Pn**	**21 11 12.4**	**+0.9**
ATGZ				*eS*	**Sn**	**21 11 26.9**	**+1.5**
TDBA	**Terre de Bas,**	**1.13**	**217**		**Pg**	**21 11 13.8**	**+0.2**
TBG	**Guadaloupe-3**	**1.14**	**218**	*eP*	**Pg**	**21 11 14.3**	**+0.7**
TBG				*eS*	**Sg**	**21 11 29.9**	**+1.5**
MBWH	**Windy Hill**	**1.22**	**270**	*eP*	**Pg**	**21 11 14.7**	**-0.4**
MBWH				*eS*	**Sg**	**21 11 31.2**	**+0.2**
ANWB	**Willy Bob**	**1.23**	**318**		**Pn**	**21 11 14.0**	**-0.4**
ANWB	**Willy Bob**	**1.23**	**318**	*eP*	**Pn**	**21 11 14.2**	**-0.2**
ANWB				*eS*	**Sn**	**21 11 30.9**	**+0.1**
MBFL	**Flemmings, Mon**	**1.24**	**270**	*eP*	**Pg**	**21 11 15.2**	**-0.3**
MBFL				*eS*	**Sg**	**21 11 32.0**	**+0.3**
DWS	**Wesley**	**1.24**	**198**	*eP*	**Pb**	**21 11 14.9**	**+0.1**
DWS				*eS*	**Sg**	**21 11 31.3**	**-0.4**
DSLB	**Salisbury**	**1.39**	**200**	*eP*	**Pb**	**21 11 17.1**	**-0.5**
DSLB				*eS*	**Sg**	**21 11 35.5**	**-1.3**
DLPL	**La Plaine**	**1.45**	**192**	*eP*	**Pn**	**21 11 17.4**	**-0.1**
DLPL				*eS*	**Sn**	**21 11 35.7**	**-0.0**
SKI	**Saint Kitts**	**1.83**	**289**	*eP*	**Pb**	**21 11 24.0**	**-1.0**
SKI				*eS*	**Sb**	**21 11 46.2**	**-1.5**
SVN	**Savane Anatole**	**1.92**	**187**		**Pn**	**21 11 23.4**	**-0.5**
SVN	**Savane Anatole**	**1.92**	**187**	*eP*	**Pn**	**21 11 24.2**	**+0.2**
SVN				*eS*	**Sb**	**21 11 49.0**	**-1.3**
CXM	**Morne La Croix**	**1.95**	**187**		**Pn**	**21 11 24.0**	**-0.4**
ILAM	**Ilet Lapin Mar**	**1.97**	**179**		**Pn**	**21 11 24.4**	**-0.3**
ILAM				Sn	**Sn**	**21 11 49.4**	**+0.3**
SEUS	**St. Eustatius**	**2.10**	**291**		**Pn**	**21 11 27.5**	**+1.0**
BIM	**Bigot**	**2.23**	**184**		**Pn**	**21 11 28.1**	**-0.1**
BIM				Sn	**Sn**	**21 11 56.7**	**+1.1**
BIM	**Bigot**	**2.23**	**184**	*eP*	**Pn**	**21 11 29.2**	**+1.0**
BIM				*eS*	**Sn**	**21 11 54.3**	**-1.3**
MPOM	**Morne Pois Mar**	**2.30**	**178**		**Pn**	**21 11 29.6**	**+0.4**
H05S1	**Guadeloupe/Mar**	**2.32**	**178**	Pn	**Pn**	**21 11 30.1**	**+0.6**
H05S1				Sn	**Sn**	**21 11 57.1**	**-0.6**
SABA	**Saba**	**2.38**	**292**		**Pn**	**21 11 30.7**	**+0.5**
SMRT	**St. Maarten**	**2.42**	**302**		**Pn**	**21 11 31.0**	**+0.1**
SMRT				Sn	**Sn**	**21 11 59.7**	**-0.7**
SLBI	**Saint Lucia, B**	**2.72**	**181**	*eP*	**Pn**	**21 11 35.5**	**+0.6**
SLBI				*eS*	**Sn**	**21 12 07.2**	**-0.4**
SLAC	**Saint Lucia, A**	**2.84**	**179**	*eP*	**Pn**	**21 11 37.8**	**+1.2**
MCLT	**Moule a Chique**	**3.03**	**180**	*eP*	**Pn**	**21 11 40.6**	**+1.4**
SVB	**Belmont**	**3.48**	**185**	*eP*	**Pn**	**21 11 46.6**	**+1.2**
BBGH	**Gun Hill**	**3.83**	**160**	Pn	**Pn**	**21 11 50.8**	**+0.6**
CUPR	**Culebra, Puert**	**4.44**	**291**		**Pn**	**21 11 58.4**	**-0.1**
GRGR	**Grenville**	**4.65**	**189**	*eP*	**Pn**	**21 12 03.1**	**+1.6**
HUMP	**Col San Antoni**	**4.90**	**287**		**Pn**	**21 12 04.8**	**-0.1**
PDPR	**Patillas Dam,**	**5.03**	**285**		**Pn**	**21 12 06.8**	**0.0**
GCPR	**Guaynabo City**	**5.16**	**288**		**Pn**	**21 12 08.9**	**+0.3**
SJG	**San Juan**	**5.17**	**286**	Pn	**Pn**	**21 12 11.0**	**+2.4**
	8.6nm,0.3s,baz=96,slow=9.7,SNR=16						
SJG				Sn	**Sn**	**21 13 12.7**	**+4.6**
	2.3nm,0.3s,baz=313,slow=19,SNR=1.3						
SJG				LR	LR	21 14 26.4	
	comp=Z,515nm,18.9s,baz=118,slow=41						
	62nm,0.7s						
SJG	**San Juan**	**5.17**	**286**		**Pn**	**21 12 08.3**	**-0.3**
ECPR	**Experimental S**	**5.42**	**287**		**Pn**	**21 12 12.7**	**+0.6**
CELP	**Cerrillos**	**5.56**	**284**		**Pn**	**21 12 13.5**	**-0.5**
OBIP	**Obispado Ponce**	**5.58**	**284**		**Pn**	**21 12 14.6**	**+0.3**
UUPR	**Utuado, UPR, P**	**5.73**	**286**		**Pn**	**21 12 17.6**	**+1.2**
MLPR	**Magueyes Islan**	**5.97**	**283**		**Pn**	**21 12 18.4**	**-1.2**
CRPR	**Cabo Rojo, PR**	**6.04**	**283**	Pn	**Pn**	**21 12 19.0**	**-1.5**
AGPR	**Aguadilla, PR**	**6.14**	**287**	Pn	**Pn**	**21 12 23.8**	**+1.7**
DR12	**Loma Pena Alta**	**8.31**	**285**	Pn	**Pn**	**21 12 51.9**	**0.0**
SDDR	**Presa de Saban**	**10.12**	**284**		**Pn**	**21 13 16.2**	**-0.4**
SDV	**Santo Domingo**	**12.28**	**232**	Pn	**Pn**	**21 13 47.6**	**+1.2**
	0.4nm,0.3s,baz=4.5,slow=9.4,SNR=5.4						
SDV				LR	LR	21 18 22.9	
	comp=Z,67nm,20.3s,baz=272,slow=36						
	3.4nm,0.6s						
SDV	**Santo Domingo**	**12.28**	**232**	Pn	**Pn**	**21 13 44.4**	**-2.0**
MDP	**Montagnes des**	**14.14**	**144**	LR	LR	21 19 41.8	
	comp=Z,35nm,19.3s,baz=47,slow=38						
R58B	**Mineral**	**25.86**	**328**	P	**P**	**21 16 20.3**	**-2.6**
R58B				IAmb	IAmb	21 16 39.6	
	comp=Z,26nm,1.4s						
TKL	**Tuckaleechee C**	**27.72**	**317**	LR	LR	21 29 49.8	
	comp=Z,27nm,18.3s,baz=144,slow=41						
CMIG	**Matias Romero**	**32.47**	**276**	LR	LR	21 30 20.5	
	comp=Z,40nm,21.2s,baz=160,slow=36						
SCHQ	**Schefferville**	**38.27**	**354**	P	**P**	**21 18 13.3**	**+1.9**
	comp=Z,10nm,1.3s,baz=180,slow=11,SNR=1.6						
	comp=Z,10nm,1.3s						
POST	**Post**	**39.95**	**302**	P	**P**	**21 18 24.1**	**-1.7**
POST				IAmb	IAmb	21 18 26.8	
	comp=Z,7.8nm,0.7s						
TXAR	**Lajitas Array**	**41.06**	**296**	P	**P**	**21 18 35.6**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=99,slow=6.5,SNR=4.3						
	comp=Z,0.9nm,0.8s						
VHRN	**Van Horn**	**42.41**	**297**	P	**P**	**21 18 44.6**	**-1.6**
ULM	**Lac du Bonnet**	**43.63**	**328**	P	**P**	**21 18 55.8**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=125,slow=7.3,SNR=7.0						
	comp=Z,3.5nm,0.6s						
PDAR	**Pinedale Array**	**48.69**	**313**	P	**P**	**21 19 37.2**	**+1.3**
	comp=Z,2.1nm,0.6s,baz=106,slow=9.4,SNR=4.4						
	comp=Z,2.1nm,0.6s						
SFJD	**Kangerlussuaq**	**50.66**	**5**	LR	LR	21 43 37.8	
	comp=Z,24nm,18.0s,baz=12,slow=39						
HVU	**Hansel Valley**	**50.74**	**311**	P	**P**	**21 19 49.8**	**-1.6**
HVU				IAmb	IAmb	21 19 53.1	
	comp=Z,6.7nm,0.8s						
H10N3	**ASCENSION HYDR**	**52.01**	**114**	T	T	22 15 51.7	
	baz=298,slow=75,SNR=14						
H10N2	**ASCENSION HYDR**	**52.02**	**114**	T	T	22 15 52.2	
	baz=298,slow=75,SNR=29						
H10N1	**ASCENSION HYDR**	**52.03**	**114**	T	T	22 15 53.3	
	baz=298,slow=75,SNR=46						
H10S3	**ASCENSION HYDR**	**52.40**	**116**	T	T	22 16 11.0	
	baz=295,slow=74,SNR=16						
H10S2	**ASCENSION HYDR**	**52.42**	**116**	T	T	22 16 11.1	
	baz=285,slow=74,SNR=11						
TPNV	**Topopah Spring**	**52.55**	**304**	P	**P**	**21 20 03.2**	**-1.8**
TPNV				IAmb	IAmb	21 20 08.1	
	comp=Z,5.3nm,1.1s						
ESDC	**Sonseca Array**	**54.17**	**53**	P	**P**	**21 20 17.3**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=264,slow=8.2,SNR=3.2						
	comp=Z,0.5nm,0.9s						
NVAR	**Mina Array Bea**	**54.34**	**305**	P	**P**	**21 20 19.0**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=99,slow=6.2,SNR=6.1						
TPNV	comp=Z,1.7nm,0.8s						
DBIC	**Dimbokro**	**55.65**	**93**	P	**P**	**21 20 28.3**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=304,slow=8.8,SNR=4.0						
	comp=Z,1.4nm,0.5s						
ORV	**Oroville**	**56.94**	**307**	P	**P**	**21 20 34.7**	**-1.9**
YKA	**Yellowknife Ar**	**58.85**	**334**	P	**P**	**21 20 50.3**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=106,slow=6.8,SNR=23						
	comp=Z,1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**60.40**	**84**	P	**P**	**21 21 01.1**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=276,slow=7.6,SNR=12						
	comp=Z,2.4nm,0.9s						
BBB	**Bella Bella**	**62.97**	**320**	LR	LR	21 47 13.8	
	comp=Z,30nm,21.8s,baz=356,slow=35						
KEST	**Kesra**	**64.55**	**58**	P	**P**	**21 21 28.4**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=156,slow=12,SNR=4.1						
	comp=Z,4.2nm,0.8s						
NOA	**NORSAR Array B**	**66.84**	**30**	P	**P**	**21 21 45.2**	**+2.3**
	comp=Z,0.7nm,0.8s,baz=276,slow=4.9,SNR=3.5						
	comp=Z,0.7nm,0.8s						
GERES	**GERESS Array B**	**67.49**	**44**	P	**P**	**21 21 48.6**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=258,slow=6.7,SNR=3.8						
	comp=Z,0.5nm,0.6s						
MENT	**Mentasta**	**71.96**	**331**	P	**P**	**21 22 15.7**	**+1.2**
MENT				IAmb	IAmb	21 22 17.2	
	comp=Z,5.3nm,0.7s						
BMRM	**Bremner River**	**72.45**	**329**	P	**P**	**21 22 19.0**	**+1.5**
ILAR	**Eielson Array**	**73.28**	**333**	P	**P**	**21 22 22.7**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=113,slow=3.7,SNR=14						
	comp=Z,0.8nm,0.6s						
ILAR	**Eielson Array**	**73.28**	**333**	P	**P**	**21 22 23.0**	**+0.7**
FINES	**FINESS Array B**	**74.02**	**30**	P	**P**	**21 22 26.8**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=223,slow=4.5,SNR=9.5						
	comp=Z,4.3nm,0.9s						
FINES	**FINESS Array B**	**74.02**	**30**	P	**P**	**21 22 27.2**	**+0.5**
TRF	**Thorofare Moun**	**74.89**	**332**	P	**P**	**21 22 32.8**	**+0.8**
BPAW	**Bear Paw Mtn.**	**75.11**	**333**	P	**P**	**21 22 33.2**	**+0.2**
BPAW				IAmb	IAmb	21 22 38.4	
	comp=Z,5.3nm,1.2s						
HHC	**Hu-ho-hao-te**	**122.27**	**7**	*eP*	**PKPdf**	**21 29 44.2**	**-2.5**
NJ2	**Nanjing**	**131.47**	**0**	*eP*	**PKPdf**	**21 30 03.4**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PZH	**PanZhiHua**	**133.82**	**22**	PKP	**PKPdf**	**21 30 07.2**	**-1.9**

*IDC **06** 21:22:03.5±1.6, 3˚.91S×126˚.36E, h0km, mb3.5/2, mbtmp3.9/6, ML4.0/4, Error ellipse: s-maj=30.6km s-min=26.4km az=83.0*
*DJA **06** 21:22:06.4±0.5, 4˚S±3˚×12˚6E±˚, h23km±5km, M4.4/27, mB5.1/6, mb4.6/14, MLv4.2/27, Mw(mB)4.5/6*

ISC 06 21:22:05.5±0.9, **3.75S**±0.06×**126˚.26E**±0.05, **h33**km, **n22**, σ1§**40**/25, **Buru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.98**	**59**	P	**Pb**	**21 22 23.9**	**-0.2**
NLAI				S	**Sb**	**21 22 37.0**	**+0.2**
SANI	**Sanana**	**1.71**	**351**	P	**Pn**	**21 22 32.0**	**-1.1**
SANI				S	**Sn**	**21 22 53.4**	**-0.5**
AAI	**Ambon**	**1.93**	**88**	P	**Pn**	**21 22 35.8**	**-0.3**
KRAI	**Karang Ratu**	**2.17**	**79**	P	**Pb**	**21 22 42.6**	**-1.7**
MSAI	**Masohi**	**2.69**	**81**	P	**Pb**	**21 22 52.2**	**-0.9**
BNDI	**Bandanaira**	**3.71**	**102**	P	**Pn**	**21 23 03.2**	**+2.6**
LUWI	**Luwuk**	**4.40**	**308**	P	**Pn**	**21 23 07.8**	**-2.3**
TNTI	**Ternate**	**4.63**	**14**	P	**Pn**	**21 23 15.5**	**+2.3**
APSI	**Ampana**	**5.40**	**301**	P	**Pn**	**21 23 23.9**	**+0.1**
	0.4nm1µm85nm,0.6s						
SWI	**Sorong**	**5.76**	**60**	P	**Pn**	**21 23 30.8**	**+2.0**
	0.2nm29nm,0.7s						
SIJI	**Sorong**	**5.76**	**60**	Pn	**Pn**	**21 23 28.9**	**0.0**
	6.9nm,0.3s,baz=244,slow=9.1,SNR=23						
SIJI				Sn	**Sn**	**21 24 33.7**	**-0.2**
	1.7nm,0.3s,baz=130,slow=23,SNR=6.7						
	11nm,0.3s						
SIJI	**Sorong**	**5.76**	**60**	P	**Pn**	**21 23 30.6**	**+1.8**
	0.1nm755nm21nm,0.6s						
MRSI	**Marisa**	**6.02**	**314**	P	**Pn**	**21 23 32.4**	**0.0**
	0.3nm67nm,0.5s						
TTSI	**Tana Toraja**	**6.47**	**276**	P	**Pn**	**21 23 39.5**	**+1.0**
SPSI	**Sidrap Palu**	**6.48**	**268**	P	**Pn**	**21 23 39.2**	**+0.6**
	0.1nm18nm,0.6s						
KAPI	**Kappang**	**6.61**	**259**	Pn	**Pn**	**21 23 41.8**	**+1.4**
	7.4nm,0.3s,baz=76,slow=9.4,SNR=6.6						
KAPI				Sn	**Sn**	**21 24 53.1**	**-1.6**
	2.7nm,0.3s,baz=190,slow=22,SNR=7.3						
	20nm,0.4s						
EDFI	**Ende, Flores**	**6.73**	**222**	P	**Pn**	**21 23 43.7**	**+1.6**
	0.1nm32nm,0.6s						
BATI	**Baumata**	**6.91**	**202**	Pn	**Pn**	**21 23 44.8**	**+0.2**
	4.3nm,0.3s,baz=130,slow=6.7,SNR=4.9						
	6.7nm,0.4s						
MPSI	**Mapaga**	**7.54**	**302**	P	**Pn**	**21 23 55.0**	**+1.7**
WRA	**Warramunga Arr**	**17.92**	**155**	P	**Pn**	**21 26 11.2**	**-1.1**
	0.2nm,0.3s,baz=327,slow=11,SNR=6.5						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**21.13**	**160**	P	**P**	**21 26 49.0**	**+1.2**
	2.8nm,0.7s,baz=341,slow=11,SNR=29						
	2.8nm,0.7s						
MKAR	**Makanchi Array**	**63.50**	**328**	P	P	21 32 37.5	+4.9
	0.2nm,0.7s,baz=136,slow=6.9,SNR=2.6						
	0.2nm,0.7s						

IDC 06 21:46:39.4±6.6, **20˚.00S×139˚.97E, h0km, mbtmp2.3**/2, **ML2.3**/2, **Error ellipse: s-maj=45.8km s-min=33.2km az=81.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**5.30**	**270**	Pn	Pn	21 48 01.1	+1.1
	0.1nm,0.3s,baz=94,slow=14,SNR=1.6						
WRA				Sn	Sn	21 49 03.5	+1.7
	0.1nm,0.3s,baz=93,slow=21,SNR=1.9						
WRA				Lg	Lg	21 49 31.1	
	0.1nm,0.3s,baz=88,slow=28,SNR=1.9						
	0.2nm,0.5s						
I07AU	**WARRAMUNGA INF**	**5.31**	**270**	I	I	22 22 40.0	
	baz=95,slow=313,SNR=5.0						
ASAR	**Alice Springs**	**6.72**	**236**	Pn	Pn	21 48 17.9	-1.4
	0.1nm,0.3s,baz=60,slow=11,SNR=2.1						
ASAR				Sn	Sn	21 49 37.5	+0.9
	0.1nm,0.3s,baz=53,slow=23,SNR=1.8						
ASAR				Lg	Lg	21 50 09.2	
	0.1nm,0.3s,baz=54,slow=29,SNR=4.2						
	0.1nm,0.4s						

IDC 06 21:48:09.8±379.0, **46˚.80N×65˚.14E, h0km, Error ellipse: s-maj=202.8km s-min=136.4km az=169.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**5.93**	**310**	I	I	22 23 21.1	
	0.1nm,0.9s,baz=128,slow=320,SNR=7.9						
I46RU	**ZALESOVO INFRA**	**14.42**	**53**	I	I	23 15 48.2	
	0.2nm,1.6s,baz=247,slow=310,SNR=4.4						
I43RU	**DUBNA INFRASON**	**19.79**	**310**	I	I	00 01 38.1	
	baz=103,slow=335,SNR=2.7						
I34MN	**SONGINO INFRAS**	**27.77**	**73**	I	I	00 37 40.0	
	0.1nm,1.4s,baz=285,slow=334,SNR=1.2						

*ISK **06** 22:02:37.8, 38˚.28N×38˚.80E, h5km, ML3.4/16*
*IDC **06** 22:02:39.7±1.1, 38˚.29N×38˚.77E, h0km, mb3.3/4, mbtmp3.4/8, ML3.3/4, MS2.3/1, Error ellipse: s-maj=20.5km s-min=16.0km az=165.0*
*AFAD **06** 22:02:39.0, 38˚.30N×38˚.81E, h5km±2km, MW3.7*

ISC 06 22:02:39.4±1.1, **38˚.29N**±0˚.02×**38˚.82E**±0˚.02, **h3**km±9km, **n65**, σ0§**70**/70, **mb3.6**/3, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.25**	**31**	P	**Pg**	**22 02 44.5**	**+0.4**
ELZG				S	**Sg**	**22 02 47.8**	**+0.4**
ELZG				IAML		22 02 48.0	
	comp=E,2µm,0.5s						
ELZG				IAML		22 02 50.0	
	comp=N,9µm,0.4s						
MAYA	**Malatya/Merkez**	**0.31**	**277**	P	**Pg**	**22 02 45.5**	**0.0**
MAYA				S	**Sg**	**22 02 50.0**	**+0.4**
MAYA				IAML		22 02 51.0	
	comp=N,10µm,0.4s						
MAYA				IAML		22 02 51.0	
	comp=E,8µm,0.3s						
SVRC	**Sivrice-ELAZID**	**0.39**	**77**	Pg	**Pg**	**22 02 46.5**	**-0.5**
NARI	**Adyaman-Kaht**	**0.41**	**187**	P	**Pg**	**22 02 47.3**	**+0.1**
ELZ	**Elazig**	**0.50**	**37**	P	**Pg**	**22 02 49.0**	**-0.1**
ELZ				S	**Sg**	**22 02 55.8**	**+0.2**
ELZ				IAML		22 02 57.0	
	comp=E,4µm,0.3s						
ELZ				IAML		22 02 58.0	
	comp=N,3µm,0.6s						
KAHTU	**Kahta**	**0.51**	**199**	P	**Pg**	**22 02 49.5**	**+0.3**
AZEY	**Adyaman-Merk**	**0.66**	**224**	P	**Pb**	**22 02 52.5**	**-0.9**
MDNT	**Maden**	**0.69**	**81**	P	**Pg**	**22 02 52.2**	**-0.4**
AKCD	**Akcadag**	**0.71**	**271**	P	**Pg**	**22 02 52.9**	**0.0**
HANM	**anlurfa/Hi**	**0.71**	**176**	P	**Pg**	**22 02 52.9**	**-0.1**
MCKZ	**Bingol**	**0.84**	**8**	P	**Pg**	**22 02 55.1**	**-0.4**
KOVA	**Elazig, Kovanc**	**0.88**	**62**	P	**Pg**	**22 02 55.9**	**-0.4**
ARPR	**Arapgir-MALATY**	**0.89**	**335**	Pg	**Pg**	**22 02 56.3**	**-0.1**
ARPR				Sg	**Sb**	**22 03 09.7**	**-0.1**
HEKM	**Malatya_Hekimh**	**0.90**	**311**	P	**Pg**	**22 02 56.3**	**-0.2**
ATAB	**Bozova**	**0.92**	**207**	P	**Pb**	**22 02 57.3**	**-0.6**
AKCA	**Adyaman/G¶l**	**1.02**	**241**	P	**Pb**	**22 02 58.8**	**-0.9**
DIYA	**Diyarbakir**	**1.09**	**109**	P	**Pg**	**22 03 00.3**	**0.0**
DYBB	**Diyarbakir**	**1.09**	**107**	Pn	**Pg**	**22 03 00.1**	**-0.2**
DYBB				Sn	**Sn**	**22 03 16.8**	**-0.4**
SANL	**SANLIURFA_Merk**	**1.12**	**173**	P	**Pn**	**22 03 01.3**	**-0.7**
ILIC	**ilic-Erzincan**	**1.18**	**350**	Pn	**Pg**	**22 03 01.7**	**-0.3**
ILIC				Sn	**Sn**	**22 03 18.4**	**-1.1**
MDIV		**1.20**	**330**	P	Pn	22 03 02.7	-0.4
MIMR	**Divri**	**1.20**	**330**	P	Pn	22 03 11.3	+8.2
MAYK		**1.29**	**69**	P	**Pb**	**22 03 04.4**	**+0.1**
GZT	**Gaziantep**	**1.36**	**227**	P	**Pn**	**22 03 04.8**	**-0.6**
SURC	**SANLIURFA_SURC**	**1.42**	**187**	P	**Pg**	**22 03 06.3**	**-0.2**
ERZN	**Erzincan**	**1.48**	**28**	Pn	**Pn**	**22 03 06.2**	**-0.7**
NZIP	**Nizip/Gaziante**	**1.54**	**217**	P	**Pn**	**22 03 07.3**	**-0.4**
EUZM	**Uzumlu**	**1.57**	**25**	P	**Pb**	**22 03 08.5**	**-0.7**
KHMN	**Narli-Kahraman**	**1.59**	**236**	Pn	**Pn**	**22 03 07.9**	**-0.5**
KHMN	**Narli-Kahraman**	**1.59**	**236**	P	**Pn**	**22 03 08.0**	**-0.5**
BNGB	**Bingl**	**1.62**	**64**	Pn	**Pb**	**22 03 09.1**	**-0.8**
GAZ	**Gaziantep**	**1.69**	**229**	Pn	**Pn**	**22 03 09.3**	**-0.6**
KMRS	**Kahramanmaras**	**1.71**	**243**	Pn	**Pn**	**22 03 09.5**	**-0.5**
YEDI	**Yedisu-Bingol**	**1.77**	**49**	Pn	**Pn**	**22 03 11.0**	**0.0**
MBOZ		**1.77**	**356**	P	**Pg**	**22 03 12.5**	**-0.9**
MARD	**Mardin**	**1.83**	**121**	P	**Pn**	**22 03 12.2**	**+0.4**
SLHN	**Bingol, Solhan**	**1.85**	**68**	P	**Pb**	**22 03 13.4**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.88**	**93**	Pn	**Pn**	**22 03 11.7**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.88**	**93**

CSS					S	Sn	22 04 55.0	-1.3	
ASGA	**Asgata**	**0.53**	**129**	⇑*i*P	Pn	22 04 48.6	+0.3		
ASGA				S	Sn	22 04 58.2	+1.4		
ASGA				AML	AML	22 04 59.5			
	1.0nm,0.2s								
ASGA				AML	AML	22 04 59.9			
	1.7nm,0.2s								
ATHAL	**Athalassa**	**0.53**	**87**	P	Pn	22 04 48.2	-0.1		
ATHAL				S	Sn	22 04 57.8	+0.9		
ATHAL				AML	AML	22 05 01.7			
	1.2nm,0.5s								
ATHAL				AML	AML	22 05 08.7			
	1.5nm,1.2s								
MVOU	**Mavrovouni**	**0.73**	**98**	P	Pn	22 04 51.0	+0.3		
MVOU				S	Sn	22 05 02.1	+1.0		
MVOU				AML	AML	22 05 03.4			
	0.4nm,0.8s								
MVOU				AML	AML	22 05 04.0			
	0.3nm,0.2s								
YORU	**Yoruktepe-Mers**	**1.16**	**27**	Pg	Pn	22 04 55.8	-0.6		
YORU				Sg	Sn	22 05 11.1	-0.3		
GAZI	**Gazipasa**	**1.17**	**342**	Pg	Pn	22 04 55.8	-0.7		
GAZI				Sg	Sn	22 05 10.9	-0.6		
AKK1	**Akkuyu-Mersin**	**1.21**	**32**	Pn	Pn	22 04 56.4	-0.6		
AKK1				Sn	Sn	22 05 12.4	0.0		
BECE	**Buyukeceli-Mer**	**1.23**	**32**	Pn	Pn	22 04 56.8	-0.5		
BECE				Sn	Sn	22 05 12.5	-0.4		
TEPK	**Tepekoy-MERSIN**	**1.28**	**30**	Pn	Pn	22 04 57.7	-0.3		
TISA	**Tisan-Mersin**	**1.29**	**36**	Pn	Pn	22 04 57.9	-0.2		
YESI	**Yesilovacik-Me**	**1.30**	**34**	Pn	Pn	22 04 57.9	-0.3		
YESI				Sn	Sn	22 05 15.2	+0.7		
IKL	**Isikli**	**1.35**	**34**	Pn	Pn	22 04 58.8	-0.2		
KEBE	**Keben-Mersin**	**1.54**	**30**	Pn	Pn	22 05 01.5	-0.1		
ALAN	**Alanya-ANTALYA**	**1.55**	**338**	Pn	Pn	22 05 01.6	-0.1		
SILI	**Silifke-Mersin**	**1.57**	**37**	Pn	Pn	22 05 02.0	+0.1		
SLFK	**Silifke-Mersin**	**1.60**	**37**	Pn	Pn	22 05 02.4	+0.1		
HDMB	**Hadim**	**1.85**	**353**	Pn	Pn	22 05 06.1	+0.1		
KRMN	**Karaman**	**2.09**	**11**	Pn	Pn	22 05 09.4	+0.3		
SEYD	**Seydisehir-KON**	**2.40**	**342**	Pn	Pn	22 05 13.6	+0.3		
ELL	**Elmali**	**2.82**	**306**	Pn	Pn	22 05 20.3	+1.2		
KARA	**Karaisali**	**2.83**	**40**	Pn	Pn	22 05 20.1	+0.9		
KONT	**Konya--Tatoy**	**2.84**	**354**	Pn	Pn	22 05 19.9	+0.6		
HNTI	**Hanîta**	**2.86**	**135**	P	Pn	22 05 19.8	+0.3		
HNTI				S	Sn	22 05 51.8	-0.9		
MMC7	**Mount Meron ar**	**3.03**	**133**	P	Pn	22 05 22.2	+0.3		
MMA0B	**Mount Meron ar**	**3.04**	**133**	P	Pn	22 05 22.3	+0.2		
MMA0B				S	Sn	22 05 56.8	-0.5		
GEM	**Giv'at Ha'Em**	**3.07**	**127**	P	Pn	22 05 22.8	+0.3		
GEM				S	Sn	22 05 57.4	-0.6		
NATI	**Neve Ativ**	**3.09**	**126**	P	Pn	22 05 22.9	+0.3		
NATI				S	Sn	22 05 58.1	-0.2		
LADK	**Ladik-KONYA**	**3.09**	**354**	Pn	Pn	22 05 23.5	+0.7		
OFRI	**`Ofer**	**3.11**	**143**	P	Pn	22 05 22.4	-0.6		
OFRI				S	Sn	22 05 57.8	-1.1		
CMRD	**Camardi-Nigde**	**3.12**	**35**	Pn	Pn	22 05 24.1	+1.0		
BLGI	**Bet Lehem HaGe**	**3.12**	**139**	P	Pn	22 05 23.4	+0.2		
BLGI				S	Sn	22 05 58.5	-0.7		
KSHT	**Keshet**	**3.31**	**129**	P	Pn	22 05 25.5	-0.3		
KSHT				S	Sn	22 06 03.5	-0.5		
SLTI	**Sal'it**	**3.45**	**146**	P	Pn	22 05 27.4	-0.2		
SLTI				S	Sn	22 06 05.9	-1.2		
MMLI	**Mount Malkishu**	**3.48**	**140**	Pn	Pn	22 05 29.6	+1.6		
MMLI	**Mount Malkishu**	**3.48**	**140**	P	Pn	22 05 28.4	+0.3		
MMLI				S	Sn	22 06 07.2	-0.8		
HMDT	**Nahal Hemdat**	**3.68**	**140**	P	Pn	22 05 30.9	+0.2		
HMDT				S	Sn	22 06 12.4	-0.4		
AMAZ	**Amatzia**	**4.01**	**153**	P	Pn	22 05 35.7	+0.4		
AMAZ				S	Sn	22 06 20.3	-0.7		
DSI	**Dead Sea**	**4.17**	**147**	P	Pn	22 05 37.4	-0.1		
DSI				S	Sn	22 06 23.7	-1.2		
YTIR	**Yattir**	**4.24**	**151**	P	Pn	22 05 38.8	+0.3		
YTIR				S	Sn	22 06 26.0	-0.8		
MSBI	**Mazada**	**4.38**	**149**	P	Pn	22 05 41.6	+1.3		
MSBI				S	Sn	22 06 30.3	+0.3		
KZIT	**Kziot**	**4.42**	**161**	P	Pn	22 05 41.2	+0.2		
KZIT				S	Sn	22 06 29.9	-1.2		
PRNI	**Paran**	**5.12**	**158**	P	Pn	22 05 50.7	+0.2		
PRNI				S	Sn	22 06 47.7	-0.6		
KRMI	**Paran Flat**	**5.26**	**161**	P	Pn	22 05 52.7	+0.3		
KRMI				S	Sn	22 06 50.8	-1.0		
HRFI	**Mount Harif**	**5.42**	**159**	P	Pn	22 05 55.0	+0.3		
HRFI				S	Sn	22 06 54.5	-1.2		
MBRI	**Mt Berech**	**5.61**	**160**	P	Pn	22 05 57.6	+0.2		
MBRI				S	Sn	22 07 00.2	-0.4		

*IDC **06** 22:13:43.0±2.0, 1°.56N×125°.89E, h0km, mb3.3/3, mbtmp3.3/3, MS3.4/1, Error ellipse: s-maj=181.0km s-min=25.3km az=65.0*
*DJA **06** 22:13:49.9±1.0, 2°.N±3°×12°.7E±°, h36km±20km, M3.3/8, MLv3.3/8*
ISC 06 22:13:48.4±1.3, **1°.5N**±0°.2×**126°.3E**±0°.2, **h35**km, **n5**, σ1$, **68**/6, **mb3.3**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.32**	**125**	P	**Pn**	**22 14 11.2**	**+0.8**
TNTI				S	**Sn**	**22 14 26.2**	**-0.6**
SGSI	**Sangihe**	**2.26**	**340**	P	Pn	22 14 24.6	+1.2
WRA	**Warramunga Arr**	**22.77**	**160**	P	**P**	**22 18 47.9**	**0.0**
	0.7nm,0.6s,baz=337,slow=11,SNR=7.2						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**26.13**	**164**	P	**P**	**22 19 21.0**	**+1.6**
	0.2nm,0.4s,baz=346,slow=12,SNR=4.4						
ASAR				LR	LR	22 29 19.6	
	comp=Z,70nm,18.6s,baz=42,slow=36						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**22 23 43.6**	**-1.9**
	0.1nm,0.4s,baz=127,slow=7.3,SNR=7.5						
	0.1nm,0.4s						

*MDD **06** 22:17:38.6±0.6, 36°.28N×8°.14W, h16km±3km, mb_Lg3.0/6, Error ellipse: s-maj=4.4km s-min=3.3km az=50.0*
*CNRM **06** 22:17:38.8, 36°.19N×8°.14W, h30km, ML3.1*
*SFS **06** 22:17:39.8, 36°.23N×8°.16W, h42km, mb3.7/7, ML3.3/20, ML3.6/27, MLv2.9/27*
*IGIL **06** 22:17:40.8, 36°.35N×8°.12W, h15km, ML2.5*
*INMG **06** 22:17:40.6±1.6, 36°.24N×8°.16W, h31km±8km, ML2.6, Error ellipse: s-maj=4.3km s-min=2.4km az=79.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Faro*
ISC 06 22:17:38.7±1.2, **36°.28N**±0°.03×**8°.11W**±0°.03, **h72**km±13km, **n83**, σ1$**38**/157, **1C-3D**, **West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.98**	**9**	Pn	**Pn**	**22 17 57.3**	**+0.3**
PBDV				Sn	**Sn**	**22 18 09.5**	**-1.1**
PBDV	**Barranco-do-Ve**	**0.98**	**9**	⇑*i*P	**Pn**	**22 17 57.3**	**+0.3**
PBDV				*e*S	**Sn**	**22 18 09.6**	**-1.1**
PBDV				*i* IAML		22 18 10.2	
PBDV				*i* IAML		22 18 10.4	
PBDV				*i* IAML		22 18 10.9	
PFVI	**Vila Bisbo**	**1.03**	**326**	Pn	**Pn**	**22 17 57.4**	**-0.2**
PFVI	**Vila Bisbo**	**1.03**	**326**	⇓*i*P	**Pn**	**22 17 57.4**	**-0.2**
PFVI				*e*S	**Sn**	**22 18 10.2**	**-1.5**
PFVI				*i* IAML		22 18 13.2	
PFVI				*i* IAML		22 18 14.5	
PFVI				*i* IAML		22 18 15.3	
PFVI	**Vila Bisbo**	**1.03**	**326**	S	**Sn**	**22 18 13.9**	**+2.2**
EXAYA	**Ayamonte**	**1.10**	**31**	Pg	**Pn**	**22 17 59.1**	**+0.5**
EXAYA				Sg	**Sn**	**22 18 12.7**	**-0.7**
MORF	**Marmelete**	**1.11**	**337**	*e*P	**Pn**	**22 17 58.9**	**+0.2**
MORF				*e*S	**Sn**	**22 18 12.8**	**-0.9**
MORF				IAML		22 18 14.7	
	comp=E,59nm,0.1s						
MORF	**Marmelete**	**1.11**	**337**	*e*P	**Pn**	**22 17 58.9**	**+0.2**
MORF				*e*S	**Sn**	**22 18 12.8**	**-0.9**
MORF				*i* IAML		22 18 15.2	
MORF				*i* IAML		22 18 17.8	
MORF				*i* IAML		22 18 19.8	
PVAQ	**Vaqueiros**	**1.17**	**16**	*e*P	**Pn**	**22 17 59.9**	**+0.5**
PVAQ				*e*S	**Sn**	**22 18 14.0**	**-0.9**
PVAQ				*i* IAML		22 18 14.9	
PVAQ				*i* IAML		22 18 15.6	
PVAQ				*i* IAML		22 18 16.2	
PVAQ	**Vaqueiros**	**1.17**	**16**	P	**Pn**	**22 17 59.9**	**+0.5**
PVAQ				S	**Sn**	**22 18 17.8**	**+2.8**
PCVE	**Castro Verde**	**1.35**	**3**	Pn	**Pn**	**22 18 02.8**	**+1.0**
PCVE				Sn	**Sn**	**22 18 18.7**	**-0.5**
PCVE	**Castro Verde**	**1.35**	**3**	*e*P	**Pn**	**22 18 02.8**	**+1.0**
PCVE				*e*S	**Sn**	**22 18 18.8**	**-0.4**
PCVE				*i* IAML		22 18 19.6	
PCVE				*i* IAML		22 18 19.8	
PCVE				*i* IAML		22 18 19.9	
PTEO	**Sao Teotonio**	**1.36**	**339**	⇓*e*P	**Pn**	**22 18 02.5**	**+0.7**
PTEO				*e*S	**Sn**	**22 18 19.2**	**-0.1**
PTEO				*i* IAML		22 18 19.8	
PTEO				*i* IAML		22 18 20.1	
PTEO				*i* IAML		22 18 24.1	
ARNO	**Arenosillo**	**1.38**	**53**	Pn	**Pn**	**22 18 03.2**	**+1.0**
ARNO				Sn	**Sn**	**22 18 20.0**	**+0.3**
MESJ	**Messejana**	**1.56**	**357**	*e*P	**Pn**	**22 18 05.3**	**+0.7**
MESJ				*e*S	**Sn**	**22 18 23.4**	**-0.7**
MESJ				IAML		22 18 24.7	
	comp=N,66nm,0.1s						
MESJ	**Messejana**	**1.56**	**357**	*e*P	**Pn**	**22 18 05.5**	**+0.9**
MESJ				*e*S	**Sn**	**22 18 23.7**	**-0.4**
MESJ				*i* IAML		22 18 24.7	
MESJ				*i* IAML		22 18 24.7	
MESJ				*i* IAML		22 18 24.8	
PBEJ	**Beja**	**1.76**	**6**	*e*P	**Pn**	**22 18 08.0**	**+0.9**
PBEJ				*e*S	**Sn**	**22 18 28.2**	**-0.5**
PBEJ				*i* IAML		22 18 30.5	
PBEJ				*i* IAML		22 18 30.9	
PBEJ				*i* IAML		22 18 31.0	
EMIN	**Mina Concepcio**	**1.88**	**37**	Pn	**Pn**	**22 18 09.3**	**+0.5**
EMIN				Sn	**Sn**	**22 18 30.6**	**-1.1**
EMIN				*i* IVmb_Lg		22 18 35.2	
ESPR	**Espera**	**1.91**	**71**	Pn	**Pn**	**22 18 10.1**	**+0.9**
ESPR				Sn	**Sn**	**22 18 32.5**	**+0.1**
ESPR	**Espera**	**1.91**	**71**	Pn	**Pn**	**22 18 09.6**	**+0.4**
ESPR				Sn	**Sn**	**22 18 32.3**	**-0.1**
ESPR				*i* IVmb_Lg		22 18 35.9	
PBAR	**Barrancos**	**2.08**	**24**	Pn	**Pn**	**22 18 12.3**	**+0.9**
PBAR				Sn	**Sn**	**22 18 35.6**	**-0.9**
PBAR	**Barrancos**	**2.08**	**24**	*e*P	**Pn**	**22 18 12.3**	**+0.9**
PBAR				*e*S	**Sn**	**22 18 35.9**	**-0.5**
PBAR				*i* IAML		22 18 37.1	
PBAR				*i* IAML		22 18 37.2	
PBAR				*i* IAML		22 18 37.3	
EJIF	**Jimena Fronter**	**2.14**	**85**	Pn	**Pn**	**22 18 14.1**	**+1.8**
EJIF				Sn	**Sn**	**22 18 40.3**	**+2.4**
ECEU	**Ceuta**	**2.25**	**99**	Pn	**Pn**	**22 18 14.8**	**+1.1**
ECEU	**Ceuta**	**2.25**	**99**	Pn	**Pn**	**22 18 14.5**	**+0.8**
ECEU				Sn	**Sn**	**22 18 41.9**	**+1.4**
MOE	**Montemor**	**2.25**	**355**	*e*P	**Pn**	**22 18 14.9**	**+1.1**
MOE				*e*S	**Sn**	**22 18 40.1**	**-0.4**
MOE				*i* IAML		22 18 41.4	
MOE				*i* IAML		22 18 41.5	
MOE				*i* IAML		22 18 41.5	
EVO	**Evora**	**2.25**	**2**	Pn	**Pn**	**22 18 14.8**	**+1.0**
EVO				Sn	**Sn**	**22 18 39.7**	**-0.9**
EVO	**Evora**	**2.25**	**2**	*e*P	**Pn**	**22 18 14.8**	**+1.0**
EVO				*e*S	**Sn**	**22 18 40.0**	**-0.6**
EVO				*i* IAML		22 18 40.9	
EVO				*i* IAML		22 18 40.9	
EVO				*i* IAML		22 18 41.0	
SMIR	**Smir Dam**	**2.29**	**104**	P	**Pn**	**22 18 14.5**	**+0.1**
SMIR				S	**Sn**	**22 18 42.5**	**+0.9**
E1302	**La Puebla de C**	**2.46**	**69**	Pn	**Pn**	**22 18 18.0**	**+1.4**
E1302				Sn	**Sn**	**22 18 44.3**	**-1.3**
E1302				*i* IVmb_Lg		22 18 49.1	
PARRA	**Arraiolos**	**2.54**	**1**	⇓*e*P	**Pn**	**22 18 18.6**	**+1.0**
PARRA				*e*S	**Sn**	**22 18 46.8**	**-0.7**
PARRA				*i* IAML		22 18 47.9	
PARRA				*i* IAML		22 18 47.9	
PARRA				*i* IAML		22 18 49.0	
CHEFC	**Chefchaouen**	**2.54**	**116**	P	**Pn**	**22 18 18.1**	**+0.3**
CHEFC				S	**Sn**	**22 18 48.2**	**+0.5**
PESTR	**Estremoz**	**2.62**	**9**	Pn	**Pn**	**22 18 19.7**	**+0.9**
PESTR				Sn	**Sn**	**22 18 48.1**	**-1.4**
PESTR	**Estremoz**	**2.62**	**9**	*e*P	**Pn**	**22 18 20.3**	**+1.5**
PESTR				*e*S	**Sn**	**22 18 49.0**	**-0.6**
PESTR				*i* IAML		22 18 50.3	
PESTR				*i* IAML		22 18 50.9	
PESTR				*i* IAML		22 18 51.1	
PESTR	**Estremoz**	**2.62**	**9**	P	**Pn**	**22 18 19.6**	**+0.9**
PESTR				S	**Sn**	**22 18 51.6**	**+2.1**
EBAD	**Badajoz**	**2.63**	**19**	Pn	**Pn**	**22 18 19.6**	**+0.8**
EBAD				Sn	**Sn**	**22 18 48.7**	**-0.9**
EBAD	**Badajoz**	**2.63**	**19**	Pn	**Pn**	**22 18 19.1**	**+0.3**
EBAD				Sn	**Sn**	**22 18 48.4**	**-1.2**
EBAD				*i* IVmb_Lg		22 18 50.5	
PMTG	**Montargil**	**2.79**	**358**	*e*P	**Pn**	**22 18 22.0**	**+1.0**
PMTG				*e*S	**Sn**	**22 18 52.4**	**-1.2**
PMTG				*i* IAML		22 18 54.4	
PMTG				*i* IAML		22 18 54.4	
PMTG				*i* IAML		22 18 55.5	
ECAB	**El Cabril**	**2.80**	**49**	Pn	**Pn**	**22 18 22.0**	**+0.7**
ECAB				Sn	**Sn**	**22 18 53.8**	**-0.2**
ECAB	**El Cabril**	**2.80**	**49**	Pn	**Pn**	**22 18 21.9**	**+0.7**
ECAB				Sn	**Sn**	**22 18 53.9**	**-0.2**
ECAB				*i* IVmb_Lg		22 18 55.7	
EXCBR	**El Cabril**	**2.81**	**49**	Pn	**Pn**	**22 18 21.9**	**+0.6**
EXCBR				Sn	**Sn**	**22 18 54.4**	**+0.4**
PMAFR	**Mafra**	**2.83**	**341**	Sn	**Sn**	**22 18 54.9**	**+0.3**
PMAFR	**Mafra**	**2.83**	**341**	*e*P	**Pn**	**22 18 23.2**	**+1.6**
PMAFR				*e*S	**Sn**	**22 18 55.1**	**+0.5**
PMAFR				*i* IAML		22 18 56.7	
PMAFR				*i* IAML		22 18 56.7	
EMAL	**Malaga-Limoner**	**3.01**	**80**	Pn	**Pn**	**22 18 25.0**	**+1.1**
EMAL				Sn	**Sn**	**22 18 59.4**	**+0.5**
AVE	**Averroes**	**3.03**	**169**	Pn	**Pn**	**22 18 24.3**	**0.0**
AVE				Sn	**Sn**	**22 18 56.5**	**-2.9**
AVE	**Averroes**	**3.03**	**169**	P	**Pn**	**22 18 24.4**	**+0.1**
AVE				S	**Sn**	**22 18 59.7**	**+0.3**
SICH	**Sidi Chahed**	**3.15**	**133**	P	**Pn**	**22 18 26.1**	**+0.1**
SICH				S	**Sn**	**22 19 03.6**	**+1.1**
PSBE	**So Bento**	**3.28**	**351**	*e*P	**Pn**	**22 18 29.6**	**+1.9**
PSBE				*e*S	**Sn**	**22 19 05.1**	**-0.4**
PSBE				*i* IAML		22 19 06.9	
PSBE				*i* IAML		22 19 07.3	
PSBE				*i* IAML		22 19 07.5	
PSARD	**Sardoal**	**3.32**	**359**	*e*P	**Pn**	**22 18 29.5**	**+1.2**
PSARD				*e*S	**Sn**	**22 19 06.7**	**+0.1**
PSARD				*i* IAML		22 19 08.1	
PSARD				*i* IAML		22 19 08.4	
PSARD				*i* IAML		22 19 09.0	
EGOR	**Sierra Gorda,**	**3.32**	**74**	Pn	**Pn**	**22 18 30.1**	**+1.6**
EGOR				Sn	**Sn**	**22 19 04.9**	**-2.0**
EADA	**Adamuz**	**3.40**	**55**	Pn	**Pn**	**22 18 30.5**	**+1.2**
EADA				Sn	**Sn**	**22 19 07.2**	**-1.3**
PALE	**Palemas**	**3.56**	**106**	P	**Pn**	**22 18 32.1**	**+0.6**
PALE				S	**Sn**	**22 19 13.8**	**+1.4**
PCBR	**Castelo Branco**	**3.59**	**8**	*e*P	**Pn**	**22 18 33.4**	**+1.4**
PCBR				*e*S	**Sn**	**22 19 12.6**	**-0.6**
PCBR				*i* IAML		22 19 13.8	
PCBR				*i* IAML		22 19 14.2	
PCBR				*i* IAML		22 19 14.3	
ELGU	**Los Guajares,**	**3.66**	**79**	Pn	**Pn**	**22 18 33.4**	**+0.4**
ELGU				Sn	**Sn**	**22 19 12.5**	**-2.5**
IFR	**Ifrane**	**3.69**	**137**	Pn	**Pn**	**22 18 33.2**	**-0.2**
LCRM	**LCR**	**3.72**	**133**	P	**Pn**	**22 18 33.9**	**0.0**
LCRM				S	**Sn**	**22 19 17.4**	**+0.9**
PCAS	**Casmilo, Conde**	**3.78**	**356**	*e*P	**Pn**	**22 18 36.3**	**+1.4**
PCAS				*e*S	**Sn**	**22 19 16.0**	**-1.9**
PCAS				*i* IAML		22 19 18.7	
PCAS				*i* IAML		22 19 19.2	
SRHM	**Skhour des Reh**	**3.80**	**177**	P	**Pn**	**22 18 37.7**	**+2.8**
SRHM				S	**Sn**	**22 19 24.2**	**+5.8**
EQTA	**Presa de Quent**	**3.87**	**75**	Pn	**Pn**	**22 18 37.8**	**+2.1**
AKLM	**AKL**	**3.89**	**116**	P	**Pn**	**22 18 34.9**	**-1.3**
AKLM				S	**Sn**	**22 19 18.3**	**-2.4**
MTE	**Manteigas**	**4.14**	**6**	*e*P	**Pn**	**22 18 40.9**	**+1.3**
MTE				*e*S	**Sn**	**22 19 25.4**	**-1.4**
MTE				*i* IAML		22 19 27.2	
MTE				*i* IAML		22 19 27.3	
MTE				*i* IAML		22 19 27.5	
MD31	**MD31**	**4.38**	**140**	P	**Pn**	**22 18 42.3**	**-0.5**
MD31				S	**Sn**	**22 19 33.0**	**+0.2**
PVIS	**Viseu**	**4.44**	**2**	*e*P	**Pn**	**22 18 44.9**	**+1.4**
PVIS				*e*S	**Sn**	**22 19 32.5**	**-1.3**
MDT	**Midelt**	**4.50**	**139**	P	**Pn**	**22 18 44.0**	**-0.6**
MDT				S	**Sn**	**22 19 36.0**	**+0.3**
TISM	**Timmit**	**4.75**	**163**	P	**Pn**	**22 18 47.4**	**-0.4**
TISM				S	**Sn**	**22 19 41.7**	**+0.1**
TAF	**Taforalt**	**4.87**	**106**	P	**Pn**	**22 18 49.3**	**-0.2**
TAF				S	**Sn**	**22 19 45.5**	**+0.9**
JBK	**JBK**	**4.93**	**111**	P	**Pn**	**22 18 49.5**	**-0.9**
JBK				S	**Sn**	**22 19 44.2**	**-2.1**
MVO	**Moncorvo**	**4.96**	**10**	*e*P	**Pn**	**22 18 52.0**	**+1.4**
MVO				*e*S	**Sn**	**22 19 44.3**	**-2.3**
MVO				*i* IAML		22 19 46.8	
MVO				*i* IAML		22 19 46.9	
MVO				*i* IAML		22 19 47.2	
PVRL	**Vila Real**	**5.00**	**3**	*e*S	**Sn**	**22 19 46.3**	**-1.4**
PVRL				*i* IAML		22 19 47.9	
PVRL				*i* IAML		22 19 48.0	
PVRL				*i* IAML		22 19 48.8	
POLO	**Lamas de Olo**	**5.10**	**3**	*e*P	**Pn**	**22 18 54.0**	**+1.4**
POLO				*e*S	**Sn**	**22 19 47.9**	**-2.3**
POLO				*i* IAML		22 19 50.3	
POLO				*i* IAML		22 19 50.3	
POLO				*i* IAML		22 19 50.4	
TIO	**Tiouine**	**5.38**	**172**	Pn	**Pn**	**22 18 56.1**	**-0.5**
TIO				Sn	**Sn**	**22 19 51.9**	**-5.4**
TIO	**Tiouine**	**5.38**	**172**	P	**Pn**	**22 18 55.9**	**-0.7**
TIO				S	**Sn**	**22 19 56.8**	**-0.4**
PCAB	**Cabril**	**5.43**	**1**	*e*P	**Pn**	**22 18 58.5**	**+1.4**
PCAB				*e*S	**Sn**	**22 19 55.5**	**-2.6**
PCAB				*i* IAML		22 19 58.5	
PCAB				*i* IAML		22 19 58.8	
PCAB				*i* IAML		22 19 59.1	
OUZM	**OUZ**	**5.47**	**168**	P	**Pn**	**22 18 58.3**	**+0.5**
OUZM				S	**Sn**	**22 20 00.8**	**+1.4**
UCM	**Universidad Co**	**5.56**	**42**	Pn	**Pn**	**22 19 00.7**	**+1.9**
UCM				Sn	**Sn**	**22 19 58.4**	**-2.9**
PBRG	**Braganca**	**5.62**	**11**	*e*P	**Pn**	**22 19 00.9**	**+1.2**
PBRG				*e*S	**Sn**	**22 20 00.6**	**-2.4**
PBRG				*i* IAML		22 20 03.6	
PBRG				*i* IAML		22 20 03.7	
PGAV	**Gavieira, Arco**	**5.68**	**359**	*e*P	**Pn**	**22 19 02.0**	**+1.4**
PGAV				*e*S	**Sn**	**22 20 01.9**	**-2.6**
PGAV				*i* IAML		22 20 03.4	
PGAV				*i* IAML		22 20 05.8	
EMUR	**La Murta**	**5.71**	**72**	Pn	**Pn**	**22 19 02.2**	**+1.2**
ETOB	**Tobarra**	**5.73**	**64**	Pn	**Pn**	**22 19 01.7**	**+0.5**
ETOB				Sn	**Sn**	**22 20 04.0**	**-1.7**
ECAL	**Calabor**	**5.76**	**10**	Pn	**Pn**	**22 19 03.0**	**+1.4**
ECAL				Sn	**Sn**	**22 20 04.6**	**-1.7**
CART	**Cartagena**	**5.85**	**75**	Pn	**Pn**	**22 19 02.9**	**+0.2**
TZRR	**Tazzarine**	**5.87**	**158**	P	**Pn**	**22 19 03.3**	**0.0**
TZRR				S	**Sn**	**22 20 09.2**	**-0.1**
ECHE	**Chera**	**6.55**	**57**	Pn	**Pn**	**22 19 13.2**	**+0.8**
ECHE				Sn	**Sn**	**22 20 22.6**	**-3.0**

*IDC **06** 22:25:54.1±3.0, 29°.78S×178°.51W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=166.1km s-min=35.8km az=158.0*
ISC 06 22:26:18.9±3.0, **30°.S**±1°×**179°.0W**±0°.5, **h200**km, **n7**, σ0$**67**/7, **mb4.0**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**33.80**	**256**	P	**P**	**22 32 41.8**	**-0.2**
	2.0nm,0.5s,baz=101,slow=9.0,SNR=5.1						
	2.0nm,0.5s						
ASAR	**Alice Springs**	**42.26**	**266**	P	**P**	**22 33 52.9**	**0.0**
	0.6nm,0.4s,baz=103,slow=7.2,SNR=11						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**43.17**	**272**	P	**P**	**22 34 00.4**	**+0.2**
	1.4nm,0.3s,baz=110,slow=8.2,SNR=31						
	1.4nm,0.3s						
FINES	**FINESS Array B**	**144.06**	**340**	PKP	**PKPdf**	**22 45 29.3**	**-0.6**
	4.2nm,0.9s,baz=64,slow=4.4,SNR=9.6						
NOA	**NORSAR Array B**	**147.79**	**351**	PKPbc	**PKiKP**	**22 45 40.9**	**-0.4**
	0.3nm,0.4s,baz=18,slow=2.6,SNR=2.0						
HFS	**Hagfors**	**148.25**	**348**	PKPbc	**PKiKP**	**22 45 42.2**	**0.0**
	1.6nm,0.7s,baz=117,slow=1.7,SNR=5.7						
MMAI	**Mount Meron Ar**	**150.44**	**286**	PKPbc	**PKiKP**	**22 45 48.8**	**+1.1**
	1.7nm,0.7s,baz=109,slow=6.2,SNR=4.2						

*NEIC **06** 22:28:29.6±0.7, 17°.75N±0°.02×66°.875W±0°.009, h3km±12km, ML2.6/33, Md2.4/8(RSPR), Error ellipse: s-maj=3.7km s-min=1.0km az=194.0*
*RSPR **06** 22:28:30.4, 17°.82N×66°.88W, h3km, MD2.4/8*
*SDD **06** 22:28:30.8±1.4, 17°.79N×66°.91W, h12km±21km, MD3.5, ML2.7, MW3.4, Presumed earthquake*
ISC 06 22:28:30.3±1.5, **17°.79N**±0°.07×**66°.88W**±0°.02, **h8**km±10km, **n36**, σ0$**46**/62, **13C-5D**, **Puerto

GCPR	**Guaynabo City**	**0.91**	**56**	⌇	*eP*	**Pg**	**22 28 47.2**	**-0.6**
GCPR					*eS*	**Sb**	**22 29 00.3**	**-0.3**
HUMP	**Col San Antoni**	**1.03**	**70**		Pg	**Pg**	**22 28 49.4**	**-0.7**
HUMP					IAML		22 29 06.8	
	comp=N,98nm,0.2s							
HUMP					IAML		22 29 10.5	
	comp=N,94nm,0.2s							
HUMP	**Col San Antoni**	**1.03**	**70**			**Sb**	**22 29 04.3**	**+0.1**
HUMP	**Col San Antoni**	**1.03**	**70**	⌇	*eP*	**Pg**	**22 28 49.5**	**-0.7**
HUMP					*eS*	**Sb**	**22 29 04.3**	**+0.1**
CUPR	**Culebra, Puert**	**1.60**	**71**			**Pn**	**22 28 59.2**	**+0.4**
MIDR	**Miches**	**2.38**	**300**	⌇	*e*Pg	**Pb**	**22 29 13.3**	**-0.1**
MIDR					IAML		22 30 12.6	
	comp=N,35nm,2.5s							

*IDC **06** 22:35:17.4±1.8,0.˚66S×127.˚44E, h0km, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=159.2km s-min=22.2km az=67.0*
*DJA **06** 22:35:28.1±0.5,1.˚5S±2.˚2×12.˚7E±.˚7, h32km±8km, M4.3/20, mB5.7/1, mb5.1/1, MLv3.9/20, Mw(mB)5.2/1*
ISC 06 22:35:24.1±0.9,**0.˚92S**±0.˚05×**127.˚39E**±0.˚06,**h31**km,**n14,** σ**2**s**31**/14,**mb3.7**/3,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.68**	**359**	P	**Pb**	**22 35 54.5**	**0.0**
SANI	**Sanana**	**1.80**	**231**	P	**Pb**	**22 35 56.5**	**+0.1**
NLAI	**Namlea**	**2.32**	**187**	P	**Pb**	**22 36 05.8**	**+0.5**
KRAI	**Karang Ratu**	**2.58**	**157**	P	**Pb**	**22 36 09.5**	**-0.3**
MSAI	**Masohi**	**2.85**	**148**	P	**Pb**	**22 36 13.6**	**-0.8**
AAI	**Ambon**	**2.86**	**164**	P	**Pb**	**22 36 13.7**	**-0.8**
MNI	**Manado**	**3.47**	**313**	P	**Pn**	**22 36 18.8**	**+2.8**
SWI	**Sorong**	**3.87**	**89**	P	**Pn**	**22 36 24.8**	**+3.3**
SIJI	**Sorong**	**3.87**	**89**	P	**Pn**	**22 36 24.5**	**+2.9**
LUWI	**Luwuk**	**4.62**	**268**	P	**Pn**	**22 36 34.7**	**+2.8**
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=340,slow=11,SNR=15 0.6nm,0.4s	**20.09**	**161**	P	**P**	**22 39 55.2**	**-0.1**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=347,slow=12,SNR=3.2 0.3nm,0.6s	**23.48**	**165**	P	**P**	**22 40 31.4**	**+0.1**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=115,slow=8.3,SNR=16 0.2nm,0.3s	**61.75**	**326**	P	**P**	**22 45 36.5**	**-3.3**
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=133,slow=5.7,SNR=2.3 0.2nm,0.3s	**66.00**	**328**	P	**P**	**22 46 04.3**	**-3.3**

*RSNC **06** 22:41:47.1±0.0,7.˚N±1.˚×7.˚3W±.˚, h145km±2km, M2.2, ML2.0*
*FUNV **06** 22:41:50.6, 7.˚02N×73.˚38W, h5km, MW3.2, Presumed earthquake*
ISC 06 22:41:46.1±1.7,**6.˚87N**±0.˚04×**73.˚17W**±0.˚06,**h149**km±10km, **n20,** σ**1**s**14**/40,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**182**	P	**Pn**	**22 42 06.6**	**-0.3**
BARC				S	**Sn**	**22 42 22.1**	**-0.5**
BRJC	**Barrancabermej**	**0.58**	**280**	P	**Pn**	**22 42 08.4**	**+0.6**
BRJC				S	**Sn**	**22 42 25.4**	**+1.1**
PAMC	**Pamplona, Colo**	**0.66**	**45**	P	**Pn**	**22 42 09.6**	**+0.7**
PAMC				S	**Sn**	**22 42 26.7**	**+0.5**
RUSC	**La Rusia**	**0.98**	**175**	P	**Pn**	**22 42 10.6**	**-0.6**
RUSC				S	**Sn**	**22 42 29.8**	**-0.6**
RUSC	**La Rusia**	**0.98**	**175**	*e*P	**Pn**	**22 42 10.8**	**-0.4**
RUSC				*e*S	**Sn**	**22 42 28.1**	**-2.3**
CAPV	**Capacho**	**1.30**	**41**	*e*P	**Pn**	**22 42 15.8**	**+1.9**
CAPV				*e*S	**Sn**	**22 42 34.2**	**-0.8**
PTBC	**PUERTO BERRIO,**	**1.32**	**256**	P	**Pn**	**22 42 13.4**	**-0.4**
PTBC				S	**Sn**	**22 42 34.5**	**-0.4**
SPBC	**San Pablo de B**	**1.51**	**216**	P	**Pn**	**22 42 15.4**	**-0.4**
SPBC				S	**Sn**	**22 42 38.7**	**+0.1**
NORC	**Norcasia**	**2.13**	**232**	P	**Pn**	**22 42 23.3**	**+0.5**
NORC				S	**Sn**	**22 42 50.8**	**-0.2**
CHIC	**Chingaza**	**2.30**	**194**	P	**Pn**	**22 42 25.0**	**-0.2**
CHIC				S	**Sn**	**22 42 54.7**	**-0.5**
ROSC	**El Rosal**	**2.32**	**210**	P	**Pn**	**22 42 27.3**	**+1.9**
ROSC				S	**Sn**	**22 42 57.8**	**+2.1**
HELC	**Santa Helena**	**2.44**	**254**	P	**Pn**	**22 42 28.7**	**+1.9**
HELC				S	**Sn**	**22 42 58.8**	**+0.7**
HELC	**Santa Helena**	**2.44**	**254**	*e*P	**Pn**	**22 42 28.3**	**+1.5**
HELC				*e*S	**Sn**	**22 42 57.5**	**-0.6**
URCC	**San Jos de Ur**	**2.50**	**291**	P	**Pn**	**22 42 26.4**	**-0.8**
URCC				S	**Sn**	**22 42 57.4**	**-1.5**
CVER	**Cruz Verde, Cu**	**2.50**	**201**	P	**Pn**	**22 42 28.8**	**+1.1**
CVER				S	**Sn**	**22 43 00.5**	**+0.7**
DBBC	**Dabeiba**	**3.02**	**273**	P	**Pn**	**22 42 34.9**	**+1.1**
DBBC				S	**Sn**	**22 43 10.5**	**-0.1**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**22 42 40.7**	**-0.2**
PRAC				S	**Sn**	**22 43 22.0**	**-1.4**
SJCC	**San Jacinto, C**	**3.60**	**327**	P	**Pn**	**22 42 40.8**	**-0.5**
SJCC				S	**Sn**	**22 43 23.0**	**-1.0**
SJCC	**San Jacinto, C**	**3.60**	**327**	*e*P	**Pn**	**22 42 42.4**	**+1.1**
SJCC				*e*S	**Sn**	**22 43 21.7**	**-2.3**
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	**22 42 44.0**	**+0.2**
URMC				S	**Sn**	**22 43 27.3**	**-1.4**

*JMA **06** 23:02:39.8±0.3,24.˚N×12.˚2×12.˚3E±.˚, h0km, MV2.0/8, NW OFF ISHIGAKIJIMA IS*
*TAP **06** 23:02:40.2, 24.˚19N×122.˚64E, h12km, ML2.7, D*
ISC 06 23:02:40.1±1.2,**24.˚16N**±0.˚04×**122.˚64E**±0.˚02,**h10**km±11km, **n35,** σ**0**s**37**/60,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.29**	**262**	*i* P	**Pb**	**23 02 47.0**	**-0.3**
EOS4				*i* S	**Sb**	**23 02 52.1**	**0.0**
EOS3	**EOS3**	**0.32**	**293**	*i* P	**Pb**	**23 02 47.3**	**-0.5**
EOS3				*i* S	**Sb**	**23 02 52.5**	**-0.4**
JYNG	**Yonagunijimaku**	**0.40**	**44**	P	**Pg**	**23 02 48.6**	**+0.5**
JYNG				S	**Sb**	**23 02 55.7**	**0.0**
EOS2	**EOS2**	**0.45**	**305**	*e*P	**Pb**	**23 02 49.9**	**-0.2**
EOS2				*e*S	**Sb**	**23 02 56.3**	**-0.5**
YOJ	**Yonaguni jima**	**0.46**	**49**	*e*P	**Pb**	**23 02 49.9**	**-0.4**
YOJ				S	**Sb**	**23 02 57.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.46**	**49**	*i* P	**Pb**	**23 02 49.8**	**-0.4**
YOJ				S	**Sb**	**23 02 56.7**	**-0.5**
TWC	**Suao**	**0.84**	**302**	P	**Pg**	**23 02 56.4**	**0.0**
TWC				*e*S	**Sg**	**23 03 08.0**	**+0.6**
ENA	**Nanau**	**0.86**	**288**	*e*P	**Pg**	**23 02 56.7**	**0.0**
ENA				*e*S	**Sb**	**23 03 08.6**	**-0.1**
NACB	**Ninganchiao**	**0.95**	**271**	*e*P	**Pb**	**23 02 59.0**	**+0.2**
NDS	**Dongshan**	**0.96**	**299**	*e*P	**Pg**	**23 02 58.2**	**-0.5**
IRIF	**Iriomote-Funau**	**1.01**	**80**	*e*P	**Pb**	**23 03 00.3**	**+0.5**
IRIF				*e*S	**Sn**	**23 03 15.0**	**+0.2**
TWE	**Neicheng**	**1.04**	**302**	*e*P	**Pg**	**23 03 00.2**	**0.0**
TWE				*e*S	**Sg**	**23 03 14.1**	**+0.3**
ETLH	**Xiulin Townshi**	**1.05**	**273**	*e*P	**Pb**	**23 03 00.9**	**+0.3**
ETM	**Tongmen**	**1.06**	**260**	*e*P	**Pg**	**23 03 00.4**	**-0.2**
LATG	**Datong**	**1.08**	**290**	*e*P	**Pg**	**23 03 00.5**	**-0.4**
LATG				*e*S	**Sg**	**23 03 15.2**	**+0.3**
ENTT	**Nioudou**	**1.08**	**296**	P	**Pg**	**23 03 00.8**	**-0.2**
ENTT				*e*S	**Sb**	**23 03 15.8**	**+0.5**
TIPB	**Shuangxi**	**1.09**	**318**	*e*P	**Pb**	**23 03 01.4**	**+0.2**
TIPB				*e*S	**Sg**	**23 03 15.5**	**+0.1**
FUSB	**Fushanzhiwuyua**	**1.12**	**302**	*e*P	**Pg**	**23 03 01.8**	**0.0**
FUSB				*e*S	**Sg**	**23 03 16.2**	**-0.2**
LXIB	**Xiulin Townshi**	**1.12**	**263**	P	**Pg**	**23 03 01.6**	**-0.2**
LXIB				S	**Sb**	**23 03 17.4**	**+0.8**
SXI1	**Grass Mountain**	**1.16**	**323**	*e*P	**Pg**	**23 03 02.5**	**0.0**
NNSB	**Datong**	**1.17**	**283**	*e*P	**Pb**	**23 03 02.8**	**+0.1**
NNSB				*e*S	**Sg**	**23 03 17.1**	**-0.2**
NNSH	**Datong**	**1.17**	**283**	*e*P	**Pg**	**23 03 02.5**	**-0.2**
NNSH				*e*S	**Sb**	**23 03 18.7**	**+0.8**
NNS	**Nan Shan**	**1.18**	**284**	*e*P	**Pg**	**23 03 02.9**	**0.0**
NNS				*e*S	**Sg**	**23 03 18.3**	**-0.1**
NWLT	**Wulai**	**1.20**	**301**	*e*P	**Pg**	**23 03 02.7**	**-0.5**
NWLT				*e*S	**Sg**	**23 03 18.4**	**-0.5**
WHF	**Hehuan Shan**	**1.25**	**270**	*e*P	**Pb**	**23 03 04.4**	**+0.3**
YHNB	**Yeheng**	**1.25**	**294**	*e*P	**Pg**	**23 03 04.1**	**-0.2**
NSK	**Sanguang**	**1.27**	**294**	*e*P	**Pn**	**23 03 04.4**	**+0.3**
NSK				*e*S	**Sg**	**23 03 20.4**	**-0.7**
OWD	**Renai**	**1.35**	**261**	*e*P	**Pn**	**23 03 05.2**	**0.0**
OWD				*e*S	**Sb**	**23 03 23.2**	**+0.2**
EHY	**Hungye**	**1.37**	**242**	*e*P	**Pn**	**23 03 05.0**	**-0.4**
EHY				*e*S	**Sb**	**23 03 23.2**	**-0.3**
YM01	**YM01**	**1.38**	**316**	*e*P	**Pn**	**23 03 05.7**	**+0.1**
YM01				*e*S	**Sb**	**23 03 23.1**	**-0.6**

JIJ	**Ishigaki jima**	**1.39**	**81**		*eP*	**Pg**	**23 03 06.6**	**-0.2**
JIJ					*eS*	**Sg**	**23 03 24.7**	**-0.2**
WUSB	**Renai**	**1.40**	**263**		*eP*	**Pn**	**23 03 06.2**	**+0.3**
WUSB					*eS*	**Sb**	**23 03 24.3**	**-0.1**
VWDT	**VWDT**	**1.43**	**254**		*eP*	**Pn**	**23 03 06.7**	**+0.5**
YULB	**Yu-li**	**1.45**	**238**		*eP*	**Pn**	**23 03 06.0**	**-0.4**
NFF	**Wufeng Townshi**	**1.46**	**289**		*eP*	**Pn**	**23 03 07.0**	**+0.3**

*IDC **06** 23:20:44.6±2.5,5.˚26N×126.˚11E, h72km±22km, mb3.8/15, mbtmp4.1/15, Error ellipse: s-maj=41.1km s-min=13.3km az=72.0*
*NEIC **06** 23:20:45.0±1.0,5.˚31N±0.˚06×126.˚0E±0.˚2, h67km±9km, mb4.2/13, Error ellipse: s-maj=23.1km s-min=6.6km az=101.0*
ISC 06 23:20:44.5±1.8,**5.˚25N**±0.˚07×**126.˚0E**±0.˚1,**h70**km±15km, **n38,** σ**0**s**71**/40,**mb4.2**/20,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.85**	**347**	P	**Pn**	**23 21 14.9**	**+0.6**
	163nm,0.3s,baz=281,slow=15,SNR=3.8						
DAV				LR	LR	23 22 08.9	
	comp=Z,405nm,18.1s,baz=164,slow=45						
DAV	**Davao City (W)**	**1.85**	**347**		**Pn**	**23 21 13.8**	**-0.4**
TOLI2	**Tolitoli**	**6.65**	**232**	Pn	**Pn**	**23 22 20.9**	**+1.3**
MYLDM	**Lahad Datu**	**7.48**	**270**	Pn	**Pn**	**23 22 29.7**	**-1.3**
KNRA	**Kununurra**	**20.97**	**173**	P	**P**	**23 25 22.4**	**+0.3**
KNRA				IAmb	IAmb	23 25 34.4	
	comp=Z,20nm,1.2s						
FITZ	**Fitzroy Crossi**	**23.21**	**181**	P	**P**	**23 25 45.8**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=5.3,slow=12,SNR=1.5 comp=Z,2.6nm,0.7s						
WB0	**Warramunga Arr**	**26.20**	**162**	P	**P**	**23 26 13.4**	**+0.6**
WB0				IAmb	IAmb	23 26 23.8	
	comp=Z,6.7nm,1.1s						
WRA	**Warramunga Arr**	**26.34**	**162**	P	**P**	**23 26 14.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=341,slow=10,SNR=17 comp=Z,0.8nm,0.6s						
WR8	**Warramunga Arr**	**26.41**	**162**	P	**P**	**23 26 15.0**	**+0.3**
WR8				IAmb	IAmb	23 26 46.2	
	comp=Z,14nm,1.5s						
CMAR	**Chiang Mai Arr**	**29.50**	**299**	P	**P**	**23 26 43.4**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=112,slow=6.3,SNR=4.0 comp=Z,0.4nm,0.3s						
ASAR	**Alice Springs**	**29.76**	**165**	P	**P**	**23 26 43.1**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=348,slow=6.8,SNR=4.5						
ASAR				PcP	**PcP**	**23 29 47.2**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=340,slow=3.0,SNR=4.3 comp=Z,0.2nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**42.28**	**66**	T	T	00 12 55.7	
	baz=255,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**42.29**	**66**	T	T	00 12 56.4	
	baz=255,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**42.30**	**66**	T	T	00 12 57.1	
	baz=255,slow=75,SNR=11						
HILR	**Hailar Array B**	**44.47**	**354**	P	**P**	**23 28 49.9**	**+1.2**
	comp=Z,1.1nm,0.4s,baz=173,slow=13,SNR=4.2						
HILR				PcP	**PcP**	**23 30 31.6**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=167,slow=3.8,SNR=4.8 comp=Z,1.1nm,0.4s						
SONM	**Songino Array**	**45.63**	**342**	P	**P**	**23 28 58.0**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=152,slow=10,SNR=5.3						
SONM				PcP	**PcP**	**23 30 36.0**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=161,slow=4.4,SNR=9.0 comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**45.63**	**342**	P	**P**	**23 28 57.5**	**-0.6**
SONM				IAmb	IAmb	23 29 01.2	
	comp=Z,2.8nm,1.2s						
MKAR	**Makanchi Array**	**55.90**	**325**	P	**P**	**23 30 15.3**	**0.0**
	comp=Z,1.2nm,0.4s,baz=118,slow=7.2,SNR=36						
MKAR				PcP	**PcP**	**23 31 13.7**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=106,slow=5.7,SNR=6.1 comp=Z,1.2nm,0.4s						
MKAR	**Makanchi Array**	**55.90**	**325**		**P**	**23 30 15.7**	**+0.4**
MAKZ	**Makanchi**	**56.09**	**325**		**P**	**23 30 16.9**	**+0.3**
MAKZ				IAmb	IAmb	23 30 29.0	
	comp=Z,2.4nm,1.1s						
MAKZ				PcP	**PcP**	**23 31 14.5**	**+0.6**
ZALV	**Zalesovo Beam**	**58.91**	**333**	P	**P**	**23 30 35.6**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=139,slow=7.2,SNR=6.6 comp=Z,1.0nm,0.4s						
ARSB	**Arslanbob**	**59.27**	**316**	P	**P**	**23 30 39.2**	**0.0**
ARSB				IAmb	IAmb	23 30 40.3	
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**60.08**	**327**	P	**P**	**23 30 44.2**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=126,slow=6.3,SNR=7.5 comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**60.08**	**327**	P	**P**	**23 30 42.7**	**-1.6**
BVAR	**Borovoye Array**	**65.66**	**327**	P	**P**	**23 31 21.5**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=127,slow=9.4,SNR=6.7 comp=Z,0.8nm,0.5s						
BORK	**Borovoye**	**65.71**	**327**	P	**P**	**23 31 21.4**	**-0.3**
BORK				IAmb	IAmb	23 31 34.0	
	comp=Z,3.7nm,1.0s						
NRIK	**Noril'sk**	**68.79**	**346**	P	**P**	**23 31 40.6**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=126,slow=5.3,SNR=9.6 comp=Z,4.5nm,0.7s						
NRIK	**Noril'sk**	**68.79**	**346**	P	**P**	**23 31 40.5**	**-0.4**
AB31	**Akbulak array**	**70.53**	**321**	P	**P**	**23 31 51.7**	**-0.3**
ABKAR	**Akbulak array**	**70.53**	**321**	P	**P**	**23 31 51.8**	**-0.2**
ILAR	**Eielson Array**	**84.04**	**25**	P	**P**	**23 33 05.6**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=268,slow=6.6,SNR=4.3 comp=Z,0.3nm,0.6s						
D25K	**Kavik River**	**84.28**	**21**	P	**P**	**23 33 08.8**	**+0.4**
ARCES	**ARCESS Array B**	**88.78**	**340**	P	**P**	**23 33 30.1**	**-0.3**
	comp=Z,4.2nm,0.7s,baz=83,slow=6.1,SNR=10 comp=Z,4.2nm,0.7s						
ARCES	**ARCESS Array B**	**88.78**	**340**	P	**P**	**23 33 29.9**	**-0.5**
SPITS	**Spitsbergen Ar**	**88.86**	**349**	P	**P**	**23 33 31.0**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=94,slow=9.4,SNR=19 comp=Z,1.5nm,0.5s						
FINES	**FINESS Array B**	**90.16**	**332**	P	**P**	**23 33 36.6**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=61,slow=3.9,SNR=14 comp=Z,1.4nm,0.5s						
FINES	**FINESS Array B**	**90.16**	**332**	P	**P**	**23 33 36.8**	**-0.1**
TORD	**Torodi Ar. Bea**	**121.76**	**289**	PKP	**PKPdf**	**23 39 31.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=288,slow=0.3,SNR=2.2						

*IDC **06** 23:23:59.9±7.8, 32.˚43S×179.˚81E, h384km±89km, mb3.6/2, mbtmp4.5/3, Error ellipse: s-maj=107.7km s-min=29.1km az=7.0*
*WEL **06** 23:24:02.8±0.9, 32.˚5S±6.˚×18.˚0W±1.˚6, h287km±17km, M4.3/29, mB4.8/23, ML4.3/12, MLv5.0/29, Mw(mB)4.1/23, Error ellipse: s-maj=21.4km s-min=5.3km az=107.6*
*NOU **06** 23:24:23.7, 34.˚58S×179.˚65E, h388km, mb4.3/11, South of Kermadec Islands*
ISC 06 23:23:57.4±0.9,**32.˚11S**±0.˚08×**180.˚0W**±0.˚1,**h350**km,**n64,** σ**2**s**55**/69,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.35**	**33**	P	**Pn**	**23 25 00.7**	**+0.7**
GLKZ				S	**S**	**23 25 50.4**	**-0.1**
MXZ	**Matakaoa Point**	**5.62**	**194**	P	**Pn**	**23 25 27.4**	**+3.6**
MXZ	**Matakaoa Point**	**5.62**	**194**	P	**Pn**	**23 25 27.3**	**+3.6**
MXZ				S	**S**	**23 26 32.9**	**-0.8**
WMGZ	**Waiomatatini S**	**5.84**	**193**	P	**Pn**	**23 25 29.9**	**+3.6**
WMGZ				S	**S**	**23 26 39.8**	**+1.4**
HAZ	**Te Kaha**	**5.92**	**197**	P	**Pn**	**23 25 28.1**	**+0.9**
HAZ				S	**S**	**23 26 38.3**	**-1.7**
PKGZ	**Pakihiroa**	**5.96**	**195**	P	**Pn**	**23 25 30.2**	**+2.5**
PKGZ				S	**S**	**23 26 40.7**	**-0.1**
WCZ	**Waipu Caves**	**6.06**	**229**	P	**Pn**	**23 25 32.0**	**+3.2**
PUZ	**Puketiti**	**6.12**	**193**	P	**Pn**	**23 25 32.2**	**+2.8**
PUZ				S	**S**	**23 26 42.5**	**-1.7**
RUGZ	**Raukumara Rang**	**6.15**	**198**	P	**Pn**	**23 25 31.2**	**+1.3**
OUZ	**Omahuta**	**6.18**	**238**	P	**Pn**	**23 25 32.8**	**+2.6**
TWGZ	**Tauwhareparae**	**6.28**	**195**	P	**Pn**	**23 25 34.8**	**+3.4**
TWGZ				S	**S**	**23 26 48.1**	**+0.5**
OPRZ	**Ohinepanea**	**6.38**	**205**	P	**Pn**	**23 25 36.7**	**+4.2**
CNGZ	**Carnagh Statio**	**6.53**	**193**	P	**Pn**	**23 25 35.7**	**+1.6**
MWZ	**Matawai**	**6.53**	**197**	P	**Pn**	**23 25 34.9**	**+0.6**
TKGZ	**Te Karaka**	**6.56**	**195**	P	**Pn**	**23 25 37.5**	**+3.0**
URZ	**Urewera**	**6.58**	**200**	P	**Pn**	**23 25 35.2**	**+0.5**
	39nm,0.3s,baz=261,slow=4.3,SNR=104						
URZ				S	**S**	**23 26 50.5**	**-3.3**
	46nm,0.3s,baz=43,slow=23,SNR=20						
URZ	**Urewera**	**6.58**	**200**	P	**Pn**	**23 25 35.5**	**+0.8**
URZ	**Urewera**	**6.58**	**200**	P	**Pn**	**23 25 35.6**	**+0.8**
KMRZ	**Kaimai**	**6.62**	**209**	P	Pn	23 25 40.4	+5.0
KARZ	**Kaharoa**	**6.66**	**207**	P	**Pn**	**23 25 39.8**	**+4.1**
OMRZ	**Omania**	**6.68**	**205**	P	**Pn**	**23 25 40.5**	**+4.5**

RAGZ	**Rawiri**	**6.71**	**198**		P	**Pn**	**23 25 38.7**	**+2.3**
TOZ	**Tahuroa Road**	**6.72**	**212**		P	**Pn**	**23 25 40.7**	**+4.3**
TARZ	**Mount Tarawera**	**6.75**	**204**		P	**Pn**	**23 25 41.2**	**+4.3**
HLRZ	**Highlands Stat**	**6.82**	**205**		P	**Pn**	**23 25 41.6**	**+4.0**
RIGZ	**Rimuhau**	**6.83**	**195**		P	**Pn**	**23 25 40.8**	**+3.0**
RRRZ	**Republican Roa**	**6.84**	**204**		P	**Pn**	**23 25 42.0**	**+4.2**
MUGZ	**Murupara**	**6.88**	**202**		P	**Pn**	**23 25 41.0**	**+2.7**
HSRZ	**Hossack Road**	**6.91**	**205**		P	**Pn**	**23 25 42.1**	**+3.5**
RTZ	**Ruatahuna**	**6.95**	**200**		P	**Pn**	**23 25 40.6**	**+1.5**
HRRZ	**Handcock Road**	**6.97**	**205**		P	**Pn**	**23 25 43.1**	**+3.7**
SNGZ	**Shannon Statio**	**7.00**	**197**		P	**Pn**	**23 25 42.0**	**+2.3**
PRRZ	**Plateau Road**	**7.03**	**204**		P	**Pn**	**23 25 42.8**	**+2.8**
ALRZ	**Allen Road**	**7.10**	**204**		P	**Pn**	**23 25 43.3**	**+2.5**
WPRZ	**Whakapapatarin**	**7.13**	**205**		P	**Pn**	**23 25 44.5**	**+3.3**
KNZ	**Kokohu**	**7.15**	**195**		P	**Pn**	**23 25 44.1**	**+2.7**
RAHZ	**Arahi**	**7.20**	**199**		P	**Pn**	**23 25 42.6**	**+0.6**
MTHZ	**Maungataniwha**	**7.21**	**200**		P	**Pn**	**23 25 43.9**	**+1.7**
KUTZ	**Kaahu Road**	**7.23**	**207**		P	**Pn**	**23 25 46.1**	**+3.8**
MHGZ	**Mahia Peninsul**	**7.23**	**193**		P	**Pn**	**23 25 45.6**	**+3.2**
MRHZ	**Matea Rd**	**7.32**	**203**		P	**Pn**	**23 25 45.3**	**+1.9**
WHTZ	**Whakaora**	**7.33**	**206**		P	**Pn**	**23 25 47.1**	**+3.5**
NMHZ	**Naumai**	**7.44**	**200**		P	**Pn**	**23 25 46.1**	**+1.2**
WATZ	**Wairara**	**7.45**	**207**		P	**Pn**	**23 25 47.9**	**+3.0**
ARHZ	**Aropaoanui**	**7.55**	**198**		P	**Pn**	**23 25 47.8**	**+1.8**
HIZ	**Hauiti**	**7.65**	**212**		P	**Pn**	**23 25 51.6**	**+4.3**
KATZ	**Kakaramea**	**7.70**	**206**		P	**Pn**	**23 25 49.9**	**+1.9**
TMVZ	**Te Maari**	**7.82**	**205**		P	**Pn**	**23 25 50.8**	**+1.4**
KHEZ	**Kahui Hut**	**8.67**	**213**		P	**P**	**23 26 03.2**	**+1.2**
BFZ	**Birch Farm**	**9.07**	**198**		P	**Pn**	**23 26 04.0**	**-0.2**
SNZO	**South Karori**	**10.12**	**203**		P	**Pn**	**23 26 15.3**	**-1.3**
QRZ	**Quartz Range**	**10.57**	**213**		P	**Pn**	**23 26 20.9**	**-1.2**
KHZ	**Kahutara**	**11.50**	**205**		P	**Pn**	**23 26 31.3**	**-1.8**
RPZ	**Rata Peaks**	**13.56**	**209**		P	**P**	**23 26 56.3**	**+0.2**
ODZ	**Otahua Downs**	**14.83**	**207**		P	**P**	**23 27 10.9**	**+0.9**
JCZ	**Jackson Bay**	**14.84**	**213**		P	**P**	**23 27 09.3**	**-0.9**
ASAR	**Alice Springs** 1.3nm,0.3s,baz=105,slow=7.5,SNR=22 1.3nm,0.3s	**41.36**	**270**		P	**P**	**23 31 09.1**	**-1.6**
WRA	**Warramunga Arr** 3.0nm,0.3s,baz=112,slow=8.1,SNR=84 3.0nm,0.3s	**42.51**	**275**		P	**P**	**23 31 18.0**	**-1.9**
FINES	**FINESS Array B** 2.1nm,0.4s,baz=43,slow=4.4,SNR=20	**146.12**	**338**	PKPbc		**PKPdf**	**23 42 54.8**	**+0.4**
NB2	**NORSAR Subarra** comp=Z,0.7nm,0.5s,baz=18,slow=2.6	**150.14**	**349**	PKPbc		**PKPbc**	**23 43 05.3**	**-1.2**
NOA	**NORSAR Array B** comp=Z,0.8nm,0.6s,baz=13,slow=4.1,SNR=5.3	**150.14**	**349**	PKPbc		**PKPbc**	**23 43 05.6**	**-0.9**
HFS	**Hagfors** comp=Z,1.0nm,0.4s,baz=114,slow=3.5,SNR=8.4	**150.53**	**346**	PKPbc		**PKPbc**	**23 43 06.2**	**-1.2**
KECS	**Kecovo**	**157.50**	**323**	*e*PKP		PKPdf	23 43 26.9	+15
LANS	**Liptovska Anna**	**157.57**	**325**	*e*PKP		PKPdf	23 43 27.8	+16
LANS				*e*			23 43 58.7	

*IDC **06** 23:27:39.8±1.0,9.˚81S×118.˚36E, h0km, mb3.9/9, mbtmp4.0/13, ML4.1/4, MS3.1/8, Error ellipse: s-maj=45.7km s-min=15.5km az=51.0*
*NEIC **06** 23:27:46.5±2.3,9.˚71S±0.˚08×118.˚72E±0.˚06, h35km±1km, mb4.2/7, Error ellipse: s-maj=14.1km

CMAR			PcP	**PcP**	**23 37 05.5**	**+0.5**
	0.9nm,0.3s,baz=163,slow=2.5,SNR=4.6					
CMAR			LR	LR	23 49 36.7	
	comp=Z,32nm,19.2s,baz=35,slow=39					
	0.5nm,0.3s					
PALK	**Pallekele**	**41.49 293**	LR	LR	23 53 29.0	
	comp=Z,18nm,19.3s,baz=160,slow=38					
H08S2	**Diego Garcia H**	**45.77 269**	T	T	00 25 17.3	
	baz=96,slow=76,SNR=13					
H08S3	**Diego Garcia H**	**45.78 269**	T	T	00 25 14.9	
	baz=96,slow=76,SNR=23					
H08S1	**Diego Carcia H**	**45.79 269**	T	T	00 25 15.8	
	baz=96,slow=76,SNR=5.5					
LZDM	**Lanzhou Array**	**47.56 343**	P	**P**	**23 36 17.7**	**-1.2**
	0.3nm,0.3s,baz=182,slow=13,SNR=4.9					
	0.3nm,0.3s					
KSRS	**Korea Array**	**47.66 10**	LR	LR	23 56 12.4	
	comp=Z,12nm,19.1s,baz=165,slow=36					
SONM	**Songino Array**	**58.30 350**	P	**P**	**23 37 36.8**	**-0.9**
	1.2nm,0.6s,baz=168,slow=8.7,SNR=13					
	1.2nm,0.6s					
SONM	**Songino Array**	**58.30 350**	P	**P**	**23 37 37.0**	**-0.7**
SONM			IAmb	IAmb	23 37 42.2	
	comp=Z,1.0nm,0.7s					
KSH2	**Kashi**	**63.01 323**	P	**P**	**23 38 09.2**	**-0.8**
KSH2			pmax	pmax		
	comp=Z,3.0nm,0.9s					
MKAR	**Makanchi Array**	**64.95 333**	P	**P**	**23 38 21.0**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=145,slow=5.9,SNR=8.3					
	comp=Z,0.9nm,0.7s					
MAKZ	**Makanchi**	**65.10 333**	P	**P**	**23 38 22.4**	**-1.1**
MAKZ			IAmb	IAmb	23 38 42.4	
	comp=Z,3.1nm,1.4s					
ARSB	**Arslanbob**	**65.92 324**	P	**P**	**23 38 28.0**	**-1.1**
ARSB			IAmb	IAmb	23 38 35.6	
	comp=Z,3.2nm,0.9s					
BTK	**Batken**	**66.44 322**	P	**P**	**23 38 31.8**	**-0.5**
BTK			IAmb	IAmb	23 38 37.0	
	comp=Z,1.8nm,0.9s					
CHGR	**Chuyangaron**	**66.65 319**	P	**P**	**23 38 31.9**	**-1.8**
KKAR	**Karatay Array**	**68.47 324**	P	**P**	**23 38 44.3**	**-0.7**
KURBB	**Kurchatov Arra**	**69.47 334**	P	**P**	**23 38 48.8**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=152,slow=5.1,SNR=5.2					
	comp=Z,0.3nm,0.5s					
KURK	**Kurchatov**	**69.50 334**	IAmb	IAmb	23 38 50.9	
KURK	comp=Z,2.2nm,1.1s		P	**P**	**23 38 51.1**	**-0.1**
ZALV	**Zalesovo Beam**	**69.59 339**	P	**P**	**23 38 48.8**	**-2.8**
	comp=Z,1.0nm,0.6s,baz=156,slow=6.3,SNR=4.2					
	comp=Z,1.0nm,0.6s					
ZALV	**Zalesovo Beam**	**69.59 339**	P	**P**	**23 38 50.6**	**-1.0**
BVAR	**Borovoye Array**	**74.78 332**	P	**P**	**23 39 20.8**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=119,slow=8.9,SNR=4.4					
	comp=Z,0.9nm,0.8s					

*IDC **06** 23:35:55.0±1.9,5.˚23S×151.˚68E,h0km,mb3.7/5, mbtmp3.8/5, Error ellipse: s-maj=78.2km s-min=24.3km az=122.0*

ISC 06 23:36:07.7±2.1,5.˚3S±0.˚3×151.˚5E±0.˚5,h100km,n6, σ1§56/6,mb3.5/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.15**	**227**	P	**P**	**23 40 54.1**	**-1.5**
	1.6nm,0.6s,baz=53,slow=9.9,SNR=16						
	1.6nm,0.6s						
ASAR	**Alice Springs**	**24.92**	**221**	P	**P**	**23 41 21.4**	**-0.3**
	0.9nm,0.7s,baz=64,slow=8.2,SNR=8.6						
	0.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**28.27**	**241**	P	**P**	**23 41 52.1**	**+0.3**
	2.0nm,0.3s,baz=56,slow=9.5,SNR=21						
	2.0nm,0.3s						
SONM	**Songino Array**	**66.01**	**329**	P	**P**	**23 46 43.2**	**-0.5**
	0.1nm,0.3s,baz=120,slow=8.5,SNR=1.7						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**83.08**	**22**	P	**P**	**23 48 21.5**	**-0.5**
	0.4nm,0.7s,baz=252,slow=5.9,SNR=5.5						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.18**	**287**	PKPbc	**PKPbc**	**23 55 47.7**	**+2.1**
	0.9nm,0.6s,baz=78,slow=3.0,SNR=9.9						

*IDC **06** 23:39:51.1±2.5,6.˚81S×130.˚01E,h47km±36km,mb3.2/3, mbtmp3.5/6,ML3.9/4, Error ellipse: s-maj=71.7km s-min=24.3km az=93.0*

ISC 06 23:39:49.7±0.9,6.˚84S±0.˚06×130.˚4E±0.˚2,h50km,n7, σ3§14/10,mb3.3/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.99**	**8**	P	**Pn**	**23 41 17.6**	**+1.7**
	1.6nm,0.3s,baz=209,slow=23,SNR=13						
SIJI				S	**Sn**	**23 42 18.1**	**-5.2**
	7.5nm,0.3s,baz=134,slow=23,SNR=7.1						
	5.7nm,0.2s						
FITZ	**Fitzroy Crossi**	**12.12**	**202**	P	**Pn**	**23 42 41.4**	**+1.6**
	2.3nm,0.3s,baz=28,slow=9.5,SNR=28						
FITZ				S	**Sn**	**23 44 49.5**	**-4.1**
	3.2nm,0.3s,baz=173,slow=21,SNR=6.9						
WRA	**Warramunga Arr**	**13.57**	**164**	P	**Pn**	**23 43 01.1**	**+1.5**
	0.4nm,0.3s,baz=344,slow=13,SNR=11						
WRA				S	Sn	23 45 24.6	-4.4
	1.5nm,0.4s,baz=334,slow=22,SNR=11						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**17.06**	**169**	P	**Pn**	**23 43 47.6**	**+2.7**
	0.3nm,0.3s,baz=351,slow=10,SNR=10						
ASAR				S	**Sn**	**23 46 50.7**	**-3.1**
	0.9nm,0.7s,baz=356,slow=25,SNR=5.1						
	0.4nm,0.3s						
SONM	**Songino Array**	**58.42**	**341**	P	**P**	**23 49 41.3**	**+0.9**
	0.1nm,0.5s,baz=133,slow=5.3,SNR=2.4						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**68.32**	**327**	P	**P**	**23 50 46.0**	**+0.2**
	0.4nm,0.4s,baz=122,slow=7.8,SNR=12						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**72.59**	**328**	P	**P**	**23 51 11.8**	**+0.1**
	0.2nm,0.5s,baz=130,slow=4.8,SNR=2.8						
	0.2nm,0.5s						

*IDC **06** 23:41:10.7±4.9,37.˚00N×140.˚94E,h71km±39km,mb3.4/5, mbtmp3.8/7, ML3.4/2, MS2.0/1, Error ellipse: s-maj=42.5km s-min=12.6km az=58.0*

*NIED **06** 23:41:12.4,36.˚99N×140.˚66E,h73km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr4.55; Mθθ-1.39; Mφφ-3.16; Mrθ0.28; Mθφ-1.21; Mφr0.54; Fault plane solution: M₀4.21000×10¹⁴ NP1: φs207.00000°,δ41.00000°,λ90.00000°. NP2:φs27.00000°, δ49.00000°,λ,90.00000°.*

*JMA **06** 23:41:12.4±0.1,37.˚0N±0.˚3×140.˚7E±0.˚4,h73km,MV3.7/38, EASTERN FUKUSHIMA PREF*

JMA Felt II J1 at EASTERN FUKUSHIMA PREF .

ISC 06 23:41:12.0±0.9,36.˚98N±0.˚04×140.˚75E±0.˚05,h75km±6km, n30,σ0§76/36,mb3.7/5,2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.13**	**17**	P	**Pn**	**23 41 23.3**	**+0.3**
ONAJ				S	**Sn**	**23 41 31.2**	**+0.2**
JFFD	**Fukushimafurud**	**0.19**	**307**	P	**Pn**	**23 41 23.2**	**+0.1**
JFFD				S	**Sn**	**23 41 31.1**	**-0.2**
JHO	**Hitachi**	**0.39**	**202**	*i* P	**Pn**	**23 41 24.6**	**+0.2**
JHO				S	**Sn**	**23 41 33.2**	**-0.2**
JFK	**Kawauchi**	**0.40**	**14**	*i* P	**Pn**	**23 41 24.8**	**+0.3**
JFK				S	**Sn**	**23 41 33.8**	**+0.2**
JOTO	**OTAMA OYAMA**	**0.67**	**330**	*i* P	**Pn**	**23 41 26.8**	**-0.1**
JOTO				S	**Sn**	**23 41 37.6**	**-0.4**
JMM	**Marumori**	**0.89**	**2**	*i* P	**Pn**	**23 41 29.6**	**+0.2**
JMM				*e*S	**Sn**	**23 41 42.3**	**0.0**
JFY	**Yanaizu**	**0.94**	**298**	⇓P	**Pn**	**23 41 29.8**	**-0.2**
JFY				⇓S	**Sn**	**23 41 42.8**	**-0.7**
JAG	**Ashikaga**	**1.18**	**243**	P	**Pn**	**23 41 33.0**	**0.0**
JAG				*e*S	**Sn**	**23 41 47.8**	**-0.8**
JKT	**Katashina**	**1.22**	**261**	*e*P	**Pn**	**23 41 34.0**	**+0.4**
JKT				*e*S	**Sn**	**23 41 50.5**	**+0.7**
JYS	**Shirataka**	**1.36**	**337**	*i* P	**Pn**	**23 41 35.6**	**+0.4**
JYS				*e*S	**Sn**	**23 41 53.1**	**+0.3**
JUON	**Uonuma**	**1.38**	**280**	P	**Pn**	**23 41 35.3**	**-0.1**
JUON				*e*S	**Sn**	**23 41 52.2**	**-0.9**
JOU	**Okura**	**1.39**	**357**	*i* P	**Pn**	**23 41 36.1**	**+0.4**
JOU				*e*S	**Sn**	**23 41 54.6**	**+1.1**
JNS	**Sasagawa**	**1.42**	**307**	*e*P	**Pn**	**23 41 35.4**	**-0.6**
JIO	**Ouri**	**1.55**	**18**	*i* P	**Pn**	**23 41 37.9**	**+0.1**
JIO				S	**Sn**	**23 41 56.5**	**-0.7**
MJAR	**Matsushiro Arr**	**2.09**	**259**	P	**Pn**	**23 41 45.5**	**+0.6**
	2.7nm,0.3s,baz=83,slow=15,SNR=61						
MJAR				S	**Sn**	**23 42 12.4**	**+2.4**
	21nm,0.3s,baz=71,slow=30,SNR=7.0						
MJAR				LR	LR	23 42 26.3	
	comp=Z,36nm,21.3s,baz=12,slow=34						
JHJ	**Hachijo jima 2**	**3.93**	**192**	P	**Pn**	**23 42 10.1**	**+0.2**
	29nm,0.3s,baz=317,slow=23,SNR=7.8						
JHJ				S	**Sn**	**23 42 54.6**	**-0.2**
	82nm,0.3s,baz=314,slow=23,SNR=8.3						
	58nm,0.3s						
SONM	**Songino Array**	**27.38**	**304**	P	**P**	**23 46 51.5**	**+1.2**
	0.9nm,0.6s,baz=104,slow=8.9,SNR=9.0						
	0.9nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.58**	**120**	T	T	00 17 09.6	
	baz=313,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**28.58**	**120**	T	T	00 17 07.1	
	baz=313,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy**	**28.59**	**120**	T	T	00 17 07.2	
	baz=313,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**29.28**	**122**	T	T	00 17 55.4	
	baz=314,slow=75,SNR=47						
H11S3	**WAKE ISLAND Hy**	**29.28**	**122**	T	T	00 17 59.2	
	baz=314,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**29.29**	**122**	T	T	00 18 01.0	
	baz=314,slow=75,SNR=24						
ZALV	**Zalesovo Beam**	**41.56**	**312**	P	**P**	**23 48 52.9**	**+0.9**
	0.6nm,0.5s,baz=98,slow=7.4,SNR=3.5						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**43.70**	**302**	P	**P**	**23 49 08.9**	**-0.6**
	0.4nm,0.6s,baz=85,slow=8.6,SNR=6.4						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**45.62**	**308**	P	**P**	**23 49 22.6**	**-2.0**
	0.9nm,0.5s,baz=82,slow=7.6,SNR=9.3						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**56.93**	**187**	P	**P**	**23 50 49.1**	**-0.4**
	0.9nm,0.5s,baz=3.1,slow=7.3,SNR=14						
	0.9nm,0.5s						
H03N2	**Juan Fernandez**	**147.54**	**96**	T	T	02 45 51.7	
	baz=291,slow=76,SNR=3.1						
H03N3	**Juan Fernandez**	**147.56**	**96**	T	T	02 45 55.5	
	baz=291,slow=76,SNR=5.6						
H03N1	**Juan Fernandez**	**147.56**	**96**	T	T	02 45 48.0	
	baz=291,slow=76,SNR=5.7						

IDC 07 00:05:12.5±8.2,5.˚99S×146.˚91E,h81km±82km,mb3.1/2, mbtmp3.4/4,ML3.6/1,MS3.3/1,Error ellipse: s-maj=78.7km s-min=36.3km az=135.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.41**	**176**	P	Pn	00 06 03.7	+0.3
	29nm,0.5s,baz=10,slow=8.8,SNR=7.9						
PMG				S	Sn	00 06 43.4	+0.7
	32nm,0.4s,baz=165,slow=23,SNR=7.2						
WRA	**Warramunga Arr**	**18.49**	**220**	P	P	00 09 21.6	-0.7
	0.2nm,0.3s,baz=38,slow=11,SNR=11						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**21.58**	**214**	P	P	00 09 56.0	+0.2
	0.3nm,0.6s,baz=41,slow=10,SNR=5.0						
ASAR				LR	LR	00 19 31.4	
	comp=Z,78nm,18.2s,baz=335,slow=40						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**85.50**	**23**	P	P	00 17 41.0	-0.3
	0.6nm,0.7s,baz=257,slow=5.9,SNR=6.4						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**145.00**	**284**	PKPbc	PKPbc	00 24 40.6	-0.4
	0.4nm,0.7s,baz=81,slow=1.4,SNR=2.8						

*IDC **07** 00:12:38.4±0.5,48.˚73N×125.˚23E,h0km,mb4.0/25, mbtmp4.1/34,ML4.4/8,MS3.3/15,Error ellipse: s-maj=11.4km s-min=10.3km az=37.0*

*MOS **07** 00:12:39.3±1.0,48.˚76N×125.˚32E,h16km,mb4.6/25,Error ellipse: s-maj=9.8km s-min=6.7km az=93.2*

MOS Felt (II) at Blagoveshchensk, Konstantinovka.

*BJI **07** 00:12:39.2,48.˚72N×125.˚23E,h7km, mB4.6/6,mb4.1/32, ML4.5/13,Ms4.1/15,Ms7 4.0/16*

*NEIC **07** 00:12:40.7±0.9,48.˚76N±0.˚09×125.˚3E±0.˚1,h10km±1km, mb4.5/134, Error ellipse: s-maj=16.9km s-min=12.4km az=214.0*

*KEA **07** 00:13:08.6,47.˚17N×124.˚66E,h3km,ML4.1/4*

ISC 07 00:12:40.6±0.3,48.˚83N±0.˚03×125.˚22E±0.˚04,h10km,n250, σ1§53/261,mb4.5/106,MS3.4/13,5C-10D,Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEH	**HeiHe**	**2.02**	**44**	*e*Pn	**Pn**	**00 13 14.4**	**-0.3**
HEH				Sg	**Sg**	**00 13 44.5**	**-0.9**
HEH				smax	smax		
	comp=N,14μm,0.6s						
HEH				smax	smax		
	comp=E,11μm,0.4s						
BNX	**BinXian**	**3.43**	**154**	⇑Pn	**Pn**	**00 13 30.7**	**-3.4**
BNX				Pg	**Pb**	**00 13 42.9**	**+1.5**
BNX				Sg	**Sb**	**00 14 26.8**	**+3.6**
BNX				smax	smax		
	comp=N,840nm,0.7s						
BNX				smax	smax		
	comp=E,900nm,0.7s						
HIA	**Hailar**	**3.63**	**279**		**Pn**	**00 13 36.2**	**-0.6**
HIA	**Hailar**	**3.63**	**279**	P	**Pn**	**00 13 36.3**	**-0.6**
HILR	**Hailar Array B**	**3.66**	**283**	Pn	**Pn**	**00 13 36.9**	**-0.4**
	baz=94,slow=14						
HILR				Sn	**Sn**	**00 14 19.1**	**-1.5**
	baz=89,slow=25						
HILR				Lg	Lg	00 14 35.5	
	baz=92,slow=33						
HILR				LR	LR	00 15 18.9	
	comp=Z,362nm,20.1s,baz=115,slow=44						
	28nm,0.3s						
KLR	**Kul'dur**	**4.31**	**82**	LR	LR	00 15 51.9	
	comp=Z,48nm,18.0s,baz=283,slow=45						
KLR	**Kul'dur**	**4.31**	**82**	*c*P	**Pn**	**00 13 44.6**	**-1.6**
KLR				*e*S	**Sn**	**00 14 35.4**	**-1.2**
ZEA	**Zeya**	**5.08**	**14**	*e*P	**Pn**	**00 13 56.7**	**0.0**
ZEA				*e*S	**Sn**	**00 14 48.2**	**-7.1**
ZEA				pmax	pmax		
	comp=N,20nm,0.5s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.7s						
ZEA				smax	smax		
	comp=N,80nm,0.4s						
ZEA				MLR	MLR		
	comp=E,1μm,3.0s						
ZEA				MLR	MLR		
	comp=N,900nm,4.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,4.0s						
MDJ	**Mudanjiang**	**5.18**	**143**		**Pn**	**00 13 55.3**	**-2.8**
MDJ	**Mudanjiang**	**5.18**	**143**	Pn	**Pn**	**00 13 55.1**	**-3.0**
MDJ				Pg	**Pb**	**00 14 13.9**	**+2.7**
MDJ				Sg	**Sb**	**00 15 18.7**	**+5.3**
MDJ				smax	smax		
	comp=Z,480nm,0.8s						
MDJ				smax	smax		
	comp=Z,680nm,0.7s						
USRK	**Ussuriysk Ar.**	**6.58**	**132**	Pn	**Pn**	**00 14 14.8**	**-2.5**
	comp=Z,3.0nm,0.3s,baz=320,slow=14,SNR=23						
USRK				Lg	Lg	00 16 02.3	
	comp=Z,12nm,0.3s,baz=308,slow=29,SNR=12						
	comp=Z,7.2nm,0.4s						
SNY	**Shenyang**	**7.10**	**190**	⇓Pn	Pn	00 14 31.5	+7.1
SNY				⇑Pg	**Pb**	**00 14 45.5**	**+1.6**
SNY				Sn	**Sn**	**00 15 46.5**	**+1.4**
SNY				Sg	**Sb**	**00 16 12.0**	**+3.4**
SNY				smax	smax		
	comp=N,110nm,0.7s						
SNY				smax	smax		
	comp=E,250nm,0.9s						
XLT	**XiLinHaoTe**	**8.02**	**235**	*e*P	**Pn**	**00 14 34.3**	**-2.8**
XLT				S	**Sn**	**00 16 08.1**	**+0.3**
XLT				sS	Sb	00 16 12.2	-23
XLT				pmax	pmax		
	comp=E,4.0nm,0.8s						
XLT				LR	LR		
	comp=E,880nm,8.1s						
XLT				LR	LR		
	comp=E,920nm,9.8s						
SUJ	**Sinuiju**	**8.74**	**184**	Pg	**Pg**	**00 15 23.7**	**-4.2**
SUJ				Sg	Sg	00 17 06.0	-15
SUJ				AML	AML		
	comp=N,687nm,0.8s						
SUJ				AML	AML		
	comp=E,444nm,0.9s						
SUJ				AML	AML		
	comp=Z,77nm,1.0s						
HHU	**Hamhung**	**9.05**	**169**	Sg	Sn	00 17 21.2	+48
HHU				AML	AML		
	comp=N,63nm,0.7s						
HHU				AML	AML		
	comp=E,90nm,0.6s						
HHU				AML	AML		
	comp=Z,49nm,0.8s						
PYS	**Pyongsong**	**9.59**	**177**	Sg	Sn	00 17 30.2	+44
PYS				AML	AML		
	comp=N,284nm,0.9s						
PYS				AML	AML		
	comp=E,231nm,0.6s						
PYS				AML	AML		
	comp=Z,245nm,0.9s						
DL2	**Dalian**	**10.25**	**196**	P	**Pn**	**00 15 07.3**	**-0.4**
DL2				S	**Sn**	**00 17 06.4**	**+3.8**
DL2				pmax	pmax		
	comp=Z,26nm,1.7s						
DL2				pmax	pmax		
	comp=Z,130nm,7.6s						
DL2				LR	LR		
	comp=Z,510nm,7.3s						
DL2				LR	LR		
	comp=Z,420nm,7.0s						
HJU	**Haeju**	**10.79**	**178**	Sg	Sn	00 18 09.9	+54
HJU				AML	AML		
	comp=N,60nm,0.7s						
HJU				AML	AML		
	comp=E,121nm,1.2s						
HJU				AML	AML		
	comp=Z,62nm,0.7s						
BJI2	**Beijing**	**10.92**	**220**	P	**Pn**	**00 15 15.3**	**-1.6**
BJI2				pP		00 15 18.5	
BJI2				sP		00 15 21.6	
BJI2				PP	**PnPn**	**00 15 23.0**	**-1.4**
BJI2				S	**Sn**	**00 17 16.5**	**-2.6**
BJI2				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TYV	**Tymovskoe**	**11.44**	**73**	*e*P	Pn	00 15 33.2	+9.3
TYV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,3.6s						
KSRS	**Korea Array**	**11.54**	**169**	Pn	**Pn**	**00 15 24.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=349,slow=12,SNR=4.7						
KSRS				Lg	Lg	00 18 40.1	
	comp=Z,0.8nm,0.3s,baz=342,slow=29,SNR=9.9						
KSRS				LR	LR	00 20 34.9	
	comp=Z,79nm,18.7s,baz=335,slow=42						
	comp=Z,0.6nm,0.4s						
ULN	**Ulaanbaatar**	**12.13**	**272**	*e*P	**Pn**	**00 15 37.5**	**+4.0**
HHC	**Hu-ho-hao-te**	**12.54**	**236**	*e*P	**Pn**	**00 15 39.1**	**0.0**
HHC				S	**Sn**	**00 17 56.2**	**-2.7**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				LR	LR		
	comp=Z,470nm,7.3s						
HHC				LR	LR		
	comp=Z,780nm,7.9s						
SONM	**Songino Array**	**12.57**	**273**	Pn	**Pn**	**00 15 36.7**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=89,slow=12,SNR=15						
SONM				Sn	**Sn**	**00 17 54.3**	**-5.2**
	comp=Z,0.6nm,0.3s,baz=78,slow=23,SNR=5.4						
SONM				Lg	Lg	00 19 14.5	
	comp=Z,2.7nm,0.3s,baz=65,slow=34,SNR=11						
SONM				LR	LR	00 20 56.6	
	comp=Z,254nm,18.0s,baz=78,slow=40						
	comp=Z,0.9nm,0.4s						
ASAJ	**Asahikawa**	**12.87**	**105**	LR	LR	00 20 33.7	
	comp=Z,106nm,18.1s,baz=153,slow=37						
YAK	**Yakutsk**	**13.47**	**9**	Pn	**Pn**	**00 15 49.2**	**-2.2**
	comp=Z,3.3nm,0.3s,baz=176,slow=14,SNR=6.7						
YAK				Lg	Lg	00 19 34.6	
	comp=Z,2.4nm,0.3s,baz=195,slow=22,SNR=4.8						
	comp=Z,24nm,0.6s						
YAK	**Yakutsk**	**13.47**	**9**	*e*P	**Pn**	**00 15 49.4**	**-2.1**
YAK				*e*S	**Sn**	**00 18 19.6**	**-1.4**
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK				pmax	pmax		
	comp=Z,162nm,3.3s						
YAK				pmax	pmax		
	comp=N,60nm,3.0s						
YAK				pmax	pmax		
	comp=E,36nm,3.4s						
YAK				smax	smax		
	comp=E,4.0nm,0.8s						
YAK				smax	smax		
	comp=N,7.0nm,0.6s						
YAK				MLR	MLR		
	comp=Z,158nm,12.0s						
YAK				MLR	MLR		
	comp=N,104nm,14.0s						
YAK				MLR	MLR		
	comp=E,32nm,13.0s						
TIA	**Tai'an**	**13.94**	**208**	P	**Pn**	**00 15 59.5**	**+1.4**
TIA				pmax	pmax		
	comp=E,6.0nm,0.7s						
MJAR	**Matsushiro Arr**	**15.53**	**137**	Pn	**Pn**	**00 16 18.9**	**-0.7**
	comp=E,0.5nm,0.3s,baz=331,slow=9.7,SNR=1.6						
JNU	**Nakatsue**	**16.26**	**163**	Pn	**Pn**	**00 16 28.5**	**-0.5**
	comp=E,0.4nm,0.3s,baz=28,slow=12,SNR=4.5						
	comp=E,7.9nm,1.1s						
NJ2	**Nanjing**	**17.44**	**198**	*e*P	**Pn**	**00 16 43.6**	**-0.2**
NJ2				pmax	pmax		
	comp=E,5.0nm,0.6s						
KNGR	**Kungurtug, Tuv**	**17.96**	**286**	⇓*e*P	**P**	**00 16 53.0**	**+2.1**
MA2	**Magadan**	**18.28**	**44**	P	**P**	**00 16 55.7**	**+1.4**
	comp=E,0.5nm,0.3s,baz=210,slow=12,SNR=4.5						
MA2				LR	LR	00 24 32.6	
	comp=E,92nm,18.3s,baz=254,slow=39						
	comp=E,4.9nm,0.7s						
JHJ	**Hachijo jima 2**	**19.11**	**140**	P	**P**	**00 17 03.2**	**-0.3**
	comp=E,7.2nm,0.3s,baz=57,slow=16,SNR=1.2						
	comp=E,44nm,0.3s						
XAN	**Xi'an**	**19.11**	**225**	⇓P	**P**	**00 16 56.5**	**-7.1**
XAN				pmax	pmax		
	comp=Z,11nm,1.7s						
WHN	**Wuhan**	**20.05**	**208**	P	Pn	00 17 14.8	-0.7
LZH	**Lanzhou**	**20.19**	**239**	*e*P	Pn	00 17 17.3	0.0
LZH				sP	sP	00 17 26.8	+7.1
LZH				pmax	pmax		
	comp=E,6.0nm,1.2s						
LZH				LR	LR		
	comp=Z,350nm,12.4s						
LZH				LR	LR		
	comp=Z,530nm,12.0s						
LZDM	**Lanzhou Array**	**20.36**	**239**	P	**P**	**00 17 17.5**	**0.0**
	comp=Z,1.5nm,0.4s,baz=46,slow=6.4,SNR=9.7						
	comp=Z,1.5nm,0.4s						
GTA2	**Gaotai**	**20.43**	**252**	P	**P**	**00 17 19.0**	**+0.9**
GTA2				pP	sP	00 17 22.5	+0.2
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA2				LR	LR		
	comp=Z,200nm,10.8s						
GTA2				LR	LR		
	comp=Z,220nm,11.2s						
GTA2				LR	LR		
	comp=Z,200nm,10.4s						
SEY	**Seymchan**	**20.55**	**37**	P	Pn	00 17 20.5	-0.7
	comp=Z,14nm,0.7s,baz=248,slow=8.9,SNR=52						
	comp=Z,14nm,0.7s						
SEY	**Seymchan**	**20.55**

ZALV Zalesovo Beam 25.46 297 P **P** **00 18 09.7 +1.2**
comp=Z,0.3nm,0.3s,baz=101,slow=7.6,SNR=1.9
ZALV LR LR 00 29 04.2
comp=Z,40nm,18.1s,baz=115,slow=39
comp=Z,0.3nm,0.3s
GOMU GeErMu 25.54 252 P **P** **00 18 09.3 -0.4**
GOMU pmax pmax
comp=Z,6.0nm,1.0s
WMQ Urumqi 26.21 273 *e*P **P** **00 18 19.6 +4.2**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ LR LR
comp=Z,220nm,24.2s
GYA Guiyang 26.60 220 P **P** **00 18 19.4 +0.3**
GYA pmax pmax
comp=Z,6.0nm,0.6s
NRIK Noril'sk 27.46 332 LR LR 00 30 20.5
comp=Z,98nm,20.7s,baz=138,slow=39
NRIK Noril'sk 27.46 332‖ *e*P **P** **00 18 26.8 +0.5**
NRIK pmax pmax
comp=Z,3.0nm,1.1s
BILL Bilibino 28.01 32 **P** **00 18 32.0 +0.7**
BILL IAmb IAmb 00 18 32.4
comp=Z,7.1nm,1.0s
BILL Bilibino 28.01 32‖ *e*P **P** **00 18 31.3 0.0**
BILL pmax pmax
comp=Z,16nm,1.8s
MK31 Makanchi Array 28.62 282‖ *e*P **P** **00 18 38.4 +1.4**
MKAR Makanchi Array 28.62 282 P **P** **00 18 38.0 +1.0**
comp=Z,0.2nm,0.6s,baz=86,slow=11,SNR=4.5
MKAR LR LR 00 30 34.9
comp=Z,67nm,19.0s,baz=76,slow=38
comp=Z,0.2nm,0.6s
MKAR Makanchi Array 28.62 282 *i* P **P** **00 18 41.0 +4.0**
PZH PanZhiHua 28.81 228 P **P** **00 18 40.1 +1.2**
KURK Kurchatov 29.77 292‖ *e*P **P** **00 18 46.7 -0.4**
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURBB Kurchatov Arra 29.85 291 P **P** **00 18 48.1 +0.3**
comp=Z,1.0nm,0.6s,baz=81,slow=10,SNR=8.6
comp=Z,1.0nm,0.6s
SHEM Shemya Is, Ala 30.67 64 LR LR 00 32 30.3
comp=Z,52nm,19.2s,baz=296,slow=39
BVAR Borovoye Array 34.10 298 P **P** **00 19 25.0 -0.1**
comp=Z,0.5nm,0.6s,baz=81,slow=8.9,SNR=3.7
comp=Z,0.5nm,0.6s
AAK Ala-Archa 35.39 279 LR LR 00 35 55.0
comp=Z,43nm,18.3s,baz=92,slow=39
KSH2 Kashi 36.43 274 P **P** **00 19 47.8 +2.3**
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
CHTO Chiang Mai 36.69 225 **P** **00 19 46.6 -1.1**
CHTO IAmb IAmb 00 19 48.6
comp=Z,5.9nm,0.7s
CHTO Chiang Mai 36.69 225 P **P** **00 19 46.6 -1.1**
CHTO pmax pmax
comp=Z,6.0nm,0.7s
CMAR Chiang Mai Arr 37.00 224 P **P** **00 19 48.8 -1.6**
comp=Z,0.9nm,0.3s,baz=21,slow=6.9,SNR=11
CMAR LR LR 00 36 57.7
comp=Z,30nm,20.1s,baz=40,slow=40
comp=Z,0.9nm,0.3s
CMAR Chiang Mai Arr 37.00 224 *i* P **P** **00 19 49.5 -0.8**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
BRDH Bariadhala 37.23 238 LR LR 00 38 41.0
comp=Z,60nm,18.6s,baz=160,slow=42
TNA Tin City 37.76 39 **P** **00 19 56.2 0.0**
C16K Lisburne Hills 38.46 34 **P** **00 20 02.2 +0.1**
C16K IAmb IAmb 00 20 03.1
comp=Z,10.0nm,0.8s
ANM Nome 38.98 40 **P** **00 20 06.6 +0.1**
ANM Nome 38.98 40 P **P** **00 20 06.6 +0.1**
ANM pmax pmax
comp=Z,3.0nm,0.6s
F15K North Star Dit 39.08 38 **P** **00 20 07.4 0.0**
RDOG Red Dog Mine 39.39 34 P **P** **00 20 10.3 +0.4**
RDOG IAmb IAmb 00 20 10.9
comp=Z,7.9nm,0.6s
GAR Garm 39.96 277 P **P** **00 20 15.7 +0.5**
G16K Koyuk River 40.08 38 P **P** **00 20 16.4 +0.7**
F17K Baldwin Pennin 40.31 37 **P** **00 20 18.0 +0.4**
F17K IAmb IAmb 00 20 18.9
comp=Z,8.0nm,0.8s
C19K Lookout Ridge 40.43 32 P **P** **00 20 19.2 +0.5**
C19K IAmb IAmb 00 20 21.4
comp=Z,7.3nm,0.7s
CHGR Chuyangaron 40.91 277 **P** **00 20 23.9 +0.9**
CHGR Chuyangaron 40.91 277 P **P** **00 20 23.9 +0.9**
L14K Kuka Creek 40.93 44 P **P** **00 20 22.8 +0.1**
I17K Unalakleet 41.13 40 P **P** **00 20 24.8 +0.5**
H17K Granite Mounta 41.19 39 P **P** **00 20 25.3 +0.4**
H17K IAmb IAmb 00 20 26.0
comp=Z,5.5nm,0.7s
J16K Anvik River 41.33 41 P **P** **00 20 25.7 -0.3**
G18K Tagagawik 41.46 37 **P** **00 20 27.1 +0.1**
AB31 Akbulak array 41.58 296 **P** **00 20 29.2 +1.0**
ABKAR Akbulak array 41.58 296 P **P** **00 20 28.6 +0.4**
N14K Kuskokwak Cree 41.82 46 P **P** **00 20 29.6 -0.5**
G19K Purcell Mounta 42.01 36 P **P** **00 20 31.6 0.0**
SHAA Shahritus 42.19 277 P **P** **00 20 34.8 +1.3**
SHAA IAmb IAmb 00 20 36.7
comp=Z,9.6nm,1.1s
F20K Avaraart Lake 42.30 35 P **P** **00 20 34.3 +0.5**
K17K Iditarod 42.50 42 P **P** **00 20 35.7 +0.2**
M16K Timber Creek 42.74 44 P **P** **00 20 37.8 +0.2**
M16K IAmb IAmb 00 21 15.9
comp=Z,13nm,1.4s
D22K Ayikyak River 42.91 32 P **P** **00 20 39.5 +0.6**
D22K IAmb IAmb 00 20 41.5
comp=Z,14nm,1.4s
J18K Innoko River 42.95 40 P **P** **00 20 38.7 -0.6**
F21K Alatna River 43.09 34 P **P** **00 20 41.0 +0.6**
F21K IAmb IAmb 00 20 41.8
comp=Z,15nm,0.9s
J19K Poorman 43.24 39 P **P** **00 20 41.7 +0.1**
J19K IAmb IAmb 00 20 41.9
comp=Z,5.6nm,0.7s
M17K Holitna River 43.31 43 P **P** **00 20 42.3 +0.1**
M17K IAmb IAmb 00 21 01.7
comp=Z,18nm,1.3s
D23K Nanushuk River 43.57 31 P **P** **00 20 45.0 +0.8**
D23K IAmb IAmb 00 20 47.1
comp=Z,5.4nm,0.8s
J20K Nowinta River 43.79 39 P **P** **00 20 46.2 +0.2**
H21K Melozitna River 43.84 36 P **P** **00 20 46.6 +0.2**
H21K IAmb IAmb 00 20 47.5
comp=Z,8.0nm,1.1s
K20K Telida 44.10 40 P **P** **00 20 49.0 +0.4**
N18K Kilae Creek 44.27 44 P **P** **00 20 50.2 +0.3**
COLD Coldfoot 44.30 34 **P** **00 20 50.7 +0.6**
COLD IAmb IAmb 00 20 51.5
comp=Z,6.9nm,0.8s
H22K Ishtalitna Cre 44.31 36 P **P** **00 20 50.7 +0.5**
I21K Tanana 44.32 37 P **P** **00 20 50.4 +0.1**
I21K IAmb IAmb 00 20 51.5
comp=Z,7.1nm,0.8s
G23K Bananza Creek 44.54 34 P **P** **00 20 52.2 +0.1**
E24K Your Creek 44.63 32 P **P** **00 20 53.4 +0.6**
E24K IAmb IAmb 00 20 54.4
comp=Z,6.0nm,0.9s
N19K Bonanza Creek 44.86 43 P **P** **00 20 55.3 +0.6**
N19K IAmb IAmb 00 21 24.1
comp=Z,12nm,1.4s
O18K Koktuh Hills 44.90 45 P **P** **00 20 54.9 -0.1**
O18K IAmb IAmb 00 21 07.6
comp=Z,13nm,1.4s
M20K Styx River 45.05 41 P **P** **00 20 56.8 +0.6**
P18K Big Mountain, 45.07 45 P **P** **00 20 56.4 0.0**
P18K IAmb IAmb 00 20 59.8
comp=Z,12nm,1.4s
BPAW Bear Paw Mtn. 45.11 38 P **P** **00 20 57.2 +0.6**
BPAW IAmb IAmb 00 21 36.5
comp=Z,8.2nm,1.4s
KTH Kantishna Hill 45.35 39 P **P** **00 20 58.9 +0.4**
KTH IAmb IAmb 00 21 02.8
comp=Z,6.8nm,1.1s
G24K Hadweenzic Riv 45.49 34 P **P** **00 21 00.0 +0.4**
G24K IAmb IAmb 00 21 00.7
comp=Z,5.1nm,0.8s
TRF Thorofare Moun 45.65 39 P **P** **00 21 01.2 +0.1**
H24K Noodor Dome 45.67 35 P **P** **00 21 01.6 +0.5**
H24K IAmb IAmb 00 21 02.8
comp=Z,4.5nm,0.8s
C27K Jago River 45.67 29 P **P** **00 21 01.8 +0.8**
C27K IAmb IAmb 00 21 03.1
comp=Z,7.3nm,1.4s
NEA2 Nenana 45.70 37 P **P** **00 21 01.4 +0.2**
NEA2 IAmb IAmb 00 21 02.3
comp=Z,4.2nm,0.9s
SKT Skwentna 45.71 41 P **P** **00 21 00.8 -0.6**
SKT IAmb IAmb 00 21 10.6
comp=Z,8.6nm,1.4s
SPU Mount Spurr 45.80 42 P **P** **00 21 03.2 +1.1**
L22K Petersville 45.82 40 P **P** **00 21 01.9 -0.3**
P19K Oil Pt 45.90 44 P **P** **00 21 03.5 +0.6**
Q19K Cape Douglas, 46.01 45 P **P** **00 21 03.5 -0.3**
COLA College 46.06 36‖ *e*P **P** **00 21 04.4 +0.3**
COLA pmax pmax
comp=Z,12nm,1.8s
MCK McKinley 46.09 38 P **P** **00 21 04.8 +0.4**
MCK IAmb IAmb 00 21 05.8
comp=Z,6.2nm,1.1s
MCK McKinley 46.09 38 P **P** **00 21 04.8 +0.4**
MCK pmax pmax
comp=Z,6.0nm,1.1s
WRH Wood River Hil 46.13 37 **P** **00 21 04.7 0.0**
CCB Clear Creek Bu 46.17 37 **P** **00 21 05.0 +0.1**
CCB IAmb IAmb 00 21 06.0
comp=Z,5.5nm,0.8s
BMAR Burnt Mountain 46.25 32 P **P** **00 21 06.6 +1.0**
SUA Susitna One 46.26 41 P **P** **00 21 05.7 -0.1**
SUA IAmb IAmb 00 21 11.4
comp=Z,8.9nm,1.3s
FYU Fort Yukon 46.37 34 **P** **00 21 07.3 +0.9**
IL31 46.48 36 P **P** **00 21 07.2 -0.1**
IL31 IAmb IAmb 00 21 08.6
comp=Z,6.1nm,0.9s
ILAR Eielson Array 46.48 36 P **P** **00 21 07.2 -0.2**
comp=Z,4.3nm,0.9s,baz=289,slow=9.2,SNR=48
comp=Z,4.3nm,0.9s
ILAR Eielson Array 46.48 36 P **P** **00 21 07.6 +0.2**
HDA Harding Lake 46.61 37 P **P** **00 21 08.2 -0.3**
HDA IAmb IAmb 00 21 10.4
comp=Z,4.1nm,0.8s
PRP Porcupine Dome 46.70 35 **P** **00 21 09.7 +0.5**
G26K Porcupine Rive 46.73 33 P **P** **00 21 09.8 +0.6**
G26K IAmb IAmb 00 21 11.5
comp=Z,6.2nm,0.9s
GHO Glory Hole Cre 46.92 40 P **P** **00 21 10.8 -0.1**
DHY Denali Highway 47.01 38 P **P** **00 21 11.4 -0.3**
DHY IAmb IAmb 00 21 29.6
comp=Z,9.9nm,1.4s
J25K Salcha River, 47.14 36 P **P** **00 21 11.5 -1.2**
SML Sawmill 47.16 40 P **P** **00 21 12.7 -0.1**
KLMR Klimovskoe 47.26 318 *e*P **P** **00 21 12.4 -1.0**
KLMR pmax pmax
comp=Z,17nm,1.3s
KNK Knik Glacier 47.28 41 P **P** **00 21 13.3 -0.3**
SCM Sheep Creek Mo 47.57 40 P **P** **00 21 15.5 -0.5**
SCM Sheep Creek Mo 47.57 40 P **P** **00 21 15.5 -0.5**
SCM pmax pmax
comp=Z,15nm,1.2s
RIDG Independent Ri 47.73 37 P **P** **00 21 16.4 -0.9**
J26L Joseph Creek 47.89 36 P **P** **00 21 18.0 -0.5**
M24K Tolsona, Glenn 47.94 39 P **P** **00 21 20.1 +1.3**
SCRK Sand Creek 47.97 36 P **P** **00 21 18.3 -0.8**
SCRK IAmb IAmb 00 21 22.0
comp=Z,4.9nm,1.2s
DOT Dot Lake 48.09 37 P **P** **00 21 18.9 -1.0**
DOT IAmb IAmb 00 21 21.2
comp=Z,5.1nm,0.8s
E29M Blow River 48.10 30 P **P** **00 21 21.0 +1.1**
E29M IAmb IAmb 00 21 38.2
comp=Z,4.8nm,1.4s
I27K Kandik River 48.12 34 **P** **00 21 20.6 +0.4**
ARCES ARCESS Array B 48.44 332 P **P** **00 21 22.8 +0.2**
ARCES ARCESS Array B 48.44 332 P **P** **00 21 22.8 +0.2**
ARCES pmax pmax
comp=Z,20nm,1.3s
G29M Pine Creek 48.77 31 P **P** **00 21 25.8 +0.6**
N25K Chitina, Valde 48.83 39 P **P** **00 21 25.8 +0.1**
N25K IAmb IAmb 00 21 29.0
comp=Z,8.5nm,1.1s
BMRM Bremner River 49.14 40 P **P** **00 21 28.5 +0.4**
F30M Barrier River 49.18 30 P **P** **00 21 29.4 +1.2**
F30M IAmb IAmb 00 21 30.5
comp=Z,9.0nm,1.1s
GLB Gilahina Butte 49.24 39 P **P** **00 21 30.0 +1.2**
GLB IAmb IAmb 00 21 40.0
comp=Z,10nm,1.3s
L27K Beaver Creek, 49.25 37 P **P** **00 21 29.0 +0.1**
L27K IAmb IAmb 00 21 29.8
comp=Z,6.8nm,1.4s
BCAR Beaver Creek A 49.27 37 P **P** **00 21 29.6 +0.5**
I29M Ogilvie Camp, 49.44 33 P **P** **00 21 30.7 +0.4**
I29M IAmb IAmb 00 21 31.8
comp=Z,7.8nm,1.0s
INK Inuvik 49.55 29 **P** **00 21 31.5 +0.5**
INK Inuvik 49.55 29 P **P** **00 21 31.5 +0.5**
INK pmax pmax
comp=Z,3.0nm,0.9s
M27K Edge Creek, AK 49.58 38 P **P** **00 21 32.7 +1.1**
M27K IAmb IAmb 00 21 37.1
comp=Z,7.3nm,1.3s
MCARA McCarthy VSAT 49.60 39 P **P** **00 21 32.0 +0.5**
A36M Sachs Harbour 49.87 23 P **P** **00 21 33.9 +0.6**
F31M Tsiigehtchic 49.94 30 **P** **00 21 34.6 +0.6**
F31M IAmb IAmb 00 21 35.5
comp=Z,8.6nm,1.1s
I30M Mount Dempster 50.21 33 **P** **00 21 36.6 +0.3**
GRNC Granite Creek 50.46 40 P **P** **00 21 37.7 -0.6**
CTGM Chitina Glacie 50.52 39 P **P** **00 21 39.4 +0.7**
K29M Barlow Dome 50.52 35 P **P** **00 21 39.3 +0.7**
K29M IAmb IAmb 00 21 40.4
comp=Z,5.0nm,0.9s
J30M Hart River 50.57 34 P **P** **00 21 39.3 +0.3**
J30M IAmb IAmb 00 21 57.2
comp=Z,6.2nm,1.2s
H31M Peel River 50.62 32 **P** **00 21 39.3 +0.1**
H31M IAmb IAmb 00 21 40.1
comp=Z,5.0nm,0.8s
M29M Somme Creek 50.90 37 P **P** **00 21 42.5 +1.0**
M30M Minto, Yukon 51.48 36 P **P** **00 21 46.6 +0.8**
M30M IAmb IAmb 00 21 47.8
comp=Z,5.2nm,1.1s
HYT Haines Junctio 52.17 38 P **P** **00 21 51.8 +0.8**
HYT IAmb IAmb 00 21 57.2
comp=Z,9.7nm,1.4s
FINES FINESS Array B 52.57 323 P **P** **00 21 53.5 -0.3**
comp=Z,2.7nm,0.7s,baz=67,slow=5.0,SNR=9.2
FINES FINESS Array B 52.57 323 P **P** **00 21 54.1 +0.3**
FINES FINESS Array B 52.57 323 *e*P **P** **00 21 53.9 +0.1**
FINES pmax pmax
comp=Z,3.0nm,0.7s
M31M Drury Creek, Y 52.62 35 P **P** **00 21 55.3 +1.1**
M31M IAmb IAmb 00 22 14.9
comp=Z,9.3nm,1.5s
SHA1 Shidzhatmaz 54.62 298‖ *e*P **P** **00 22 09.9 +0.5**
R33M Jennings River 55.66 37 P **P** **00 22 17.8 +1.2**
R33M IAmb IAmb 00 22 54.1
comp=Z,8.9nm,1.4s
MNK Minsk 55.91 316 *i* P **P** **00 22 19.9 +1.6**
comp=E,6.0nm,0.9s
MNK *i* P **P** **00 22 19.9 +1.6**
comp=N,5.0nm,0.8s
MNK *i* P **P** **00 22 19.9 +1.6**
comp=Z,6.0nm,0.8s,baz=52
MNK *i* PcP **PcP** **00 23 17.8 +1.0**
MNK *i* PP **PP** **00 24 24.9 +2.4**
MNK *i* PPP PPP 00 25 38.7
MNK *i* S **S** **00 30 09.4 +3.8**
MNK *i* ScS **ScS** **00 32 09.2 +2.1**
MNK *i* SS **SS** **00 33 57.1 +6.4**
MNK *i* SSS SSS 00 36 11.1
MNK *i* LQ LQ 00 42 22.4
MNK *i* LR LR 00 46 54.2
MNK *i* LRM MLR 00 48 50.7
comp=E,413nm,22.3s
MNK *i* LRM MLR 00 48 50.7
comp=N,371nm,23.0s
MNK *i* LRM MLR 00 48 56.5
comp=Z,77nm,15.9s
MNK Minsk 55.91 316 *i* P **P** **00 22 19.8 +1.6**
MNK *i* 00 23 17.7
MNK *i* 00 24 24.9
MNK *i* PPP PPP 00 25 38.6
MNK *i* S **S** **00 30 09.4 +3.8**
MNK *i* 00 32 09.1
MNK *i* SS **SS** **00 33 57.0 +6.4**
MNK pmax pmax
comp=E,6.0nm,0.9s
MNK pmax pmax
comp=N,5.0nm,0.8s
MNK pmax pmax
comp=Z,6.0nm,0.8s
MNK MLR MLR
comp=N,371nm,23.0s
MNK MLR MLR
comp=E,413nm,22.0s
MNK MLR MLR
comp=Z,77nm,16.0s
AKASG Malin Array Be 57.63 312 P **P** **00 22 30.2 -0.3**
comp=Z,2.0nm,0.6s,baz=46,slow=8.1,SNR=11
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 57.63 312 *e*P **P** **00 22 30.6 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 57.63 312 P **P** **00 22 30.4 -0.1**
AKBB IAmb IAmb 00 22 36.1
comp=Z,6.2nm,1.2s
AKBB Malin Array Si 57.63 312 P **P** **00 22 30.4 -0.1**
AKBB pmax pmax
comp=Z,6.0nm,1.2s
KIEV Kiev 57.64 312 P **P** **00 22 30.4 -0.2**
KIEV IAmb IAmb 00 22 36.1
comp=Z,5.6nm,1.2s
KIEV Kiev 57.64 312 P **P** **00 22 30.4 -0.2**
KIEV pmax pmax
comp=Z,6.0nm,1.2s
HFS Hagfors 58.10 327 P **P** **00 22 33.4 -0.2**
comp=Z,1.5nm,0.4s,baz=68,slow=8.2,SNR=20
comp=Z,1.5nm,0.4s
NC405 NORSAR Array S 58.12 328 P **P** **00 22 34.0 +0.2**
NC303 NORSAR Array S 58.16 329 P **P** **00 22 34.5 +0.4**
NB201 NORSAR Array S 58.31 328 P **P** **00 22 34.6 -0.5**
NB2 NORSAR Subarra 58.34 329 P **P** **00 22 35.1 -0.3**
comp=Z,3.0nm,0.7s,baz=44,slow=6.9
NOA NORSAR Array B 58.34 329 P **P** **00 22 35.1 -0.3**
comp=Z,0.7nm,0.5s,baz=52,slow=8.1,SNR=10.0
comp=Z,0.7nm,0.5s
NC602 NORSAR Array S 58.45 328 P **P** **00 22 35.3 -0.8**
DIB Dawson Inlet, 59.01 43 P **P** **00 22 40.8 +0.7**
YKAW3 Yellowknife Wh 59.25 28 P **P** **00 22 40.8 -0.8**
YKAW3 IAmb IAmb 00 22 42.2
comp=Z,3.8nm,0.8s
YKA Yellowknife Ar 59.30 28 P **P** **00 22 41.5 -0.5**
comp=Z,9.9nm,1.0s,baz=318,slow=7.8,SNR=35
comp=Z,2.9nm,1.0s
YKA Yellowknife Ar 59.30 28 P **P** **00 22 41.2 -0.8**
YKAW1 Yellowknife Wh 59.34 28 **P** **00 22 42.7 +0.4**
YKAW1 IAmb IAmb 00 22 42.8
comp=Z,4.1nm,0.7s
BUR08 Bucovina Ar. S 61.63 311 P **P** **00 22 59.5 +1.2**
BUR08 IAmb IAmb 00 23 32.6
comp=Z,6.2nm,1.3s
BURAR Bucovina Array 61.64 311 P **P** **00 22 58.5 +0.2**
BBB Bella Bella 61.66 42 P **P** **00 22 58.6 +0.4**
BRTR Keskin Array B 62.37 300 P **P** **00 23 02.1 -1.4**
comp=Z,1.0nm,0.7s,baz=51,slow=5.6,SNR=2.3
comp=Z,1.0nm,0.7s
KNRA Kununurra 64.29 176 P **P** **00 23 15.3 -0.7**
COEN Coen 64.51 161 P **P** **00 23 17.2 -0.3**
COEN IAmb IAmb 00 23 38.9
comp=Z,6.2nm,1.2s
LLLB Lillooet 65.50 40 P **P** **00 23 24.1 +0.4**
LLLB IAmb IAmb 00 23 24.8
comp=Z,4.1nm,0.8s
ASF Jabal al Asfar 65.54 291 LR LR 00 55 56.2
comp=Z,23nm,18.4s,baz=190,slow=40
GERES GERESS Array B 66.21 318 P **P** **00 23 28.6 +0.2**
comp=Z,0.2nm,0.3s,baz=48,slow=4.7,SNR=2.1
comp=Z,0.2nm,0.3s
EDM Edmonton 66.89 34 **P** **00 23 33.0 +0.4**
EDM Edmonton 66.89 34 P **P** **00 23 33.0 +0.4**
EDM pmax pmax
comp=Z,10.0nm,1.0s
EKA Eskdalemuir Ar 67.57 331 P **P** **00 23 35.8 -1.0**
comp=Z,0.2nm,0.4s,baz=38,slow=6.3,SNR=1.5
comp=Z,0.2nm,0.4s
FCC Fort Churchill 68.03 21 **P** **00 23 38.8 -0.8**
FCC Fort Churchill 68.03 21 P **P** **00 23 38.8 -0.8**
FCC pmax pmax
comp=Z,6.0nm,0.9s
LTY Liberty 68.55 42 P **P** **00 23 43.2 0.0**
WB0 Warramunga Arr 68.78 171 P **P** **00 23 43.5 -1.1**
WRA Warramunga Arr 68.94 171 P **P** **00 23 44.4 -1.3**
comp=Z,2.3nm,0.7s,baz=352,slow=7.0,SNR=26
comp=Z,2.3nm,0.7s
WRA Warramunga Arr 68.94 171 P **P** **00 23 44.8 -1.0**
WR8 Warramunga Arr 68.97 171 P **P** **00 23 45.2 -0.7**
WR8 IAmb IAmb 00 23 45.8
comp=Z,2.9nm,0.8s
NEW Newport 69.30 39 P **P** **00 23 47.8 0.0**
comp=Z,0.7nm,0.3s,baz=358,slow=3.7,SNR=3.8
comp=Z,0.7nm,0.3s
FFC Flin Flon 69.45 27 **P** **00 23 47.9 -0.7**
FFC Flin Flon 69.45 27 P **P** **00 23 47.9 -0.7**
FFC pmax pmax
comp=Z,5.0nm,0.6s
BMO Blue Mountains 71.90 42 **P** **00 24 04.2 +0.4**
BMO IAmb IAmb 00 24 05.9
comp=Z,3.3nm,0.9s
BMO Blue Mountains 71.90 42 P **P** **00 24 04.2 +0.4**
BMO pmax pmax
comp=Z,3.0nm,1.0s
ASAR Alice Springs 72.58 172 P **P** **00 24 06.7 -1.1**
comp=Z,1.9nm,0.8s,baz=350,slow=4.9,SNR=15
comp=Z,1.9nm,0.8s
DLMT Dillon 73.49 38 **P** **00 24 13.5 +0.2**
DLMT IAmb IAmb 00 24 14.4
comp=Z,5.3nm,0.7s
MFID Camas Ranch 73.68 42 P **P** **00 24 15.1 +0.6**
MFID IAmb IAmb 00 24 15.7
comp=Z,3.5nm,0.8s
BOZ Bozeman (W) 73.69 38 P **P** **00 24 14.8 +0.3**
BOZ Bozeman (W) 73.69 38 P **P** **00 24 14.8 +0.3**
BOZ pmax pmax
comp=Z,5.0nm,1.5s
MCMT McKenzie Canyo 73.82 39 P **P** **00 24 16.2 +0.8**
HLID Hailey 74.18 41 P **P** **00 24 17.8 +0.4**
HLID IAmb IAmb 00 24 19.2
comp=Z,6.1nm,1.0s
BEKR Beckworth 74.40 47 P **P** **00 24 18.7 0.0**
ULM Lac du Bonnet 75.18 26 P **P** **00 24 21.3 -1.5**
comp=Z,3.2nm,0.6s,baz=344,slow=8.2,SNR=6.5
comp=Z,3.2nm,0.6s
ULM Lac du Bonnet 75.18 26 *e*P **P** **00 24 21.4 -1.4**
ULM pmax pmax
comp=Z,3.0nm,0.6s
ELK Elko 76.09 43 P **P** **00 24 28.8 +0.3**
comp=Z,1.1nm,0.6s,baz=297,slow=9.0,SNR=2.7
comp=Z,1.1nm,0.6s
NVAR Mina Array Bea 76.51 46 P **P** **00 24 31.3 +0.3**
comp=Z,0.4nm,0.4s,baz=341,slow=8.3,SNR=1.9
comp=Z,0.4nm,0.4s
PDAR Pinedale Array 76.87 38 P **P** **00 24 32.1 -0.8**
comp=Z,0.7nm,0.5s,baz=25,slow=2.3,SNR=15
comp=Z,0.7nm,0.5s
HWUT Hardware Ranch 76.99 40 **P** **00 24 33.9 +0.3**
BSUT Blindstream Ca 78.22 40 P **P** **00 24 41.1 +0.4**
BSUT IAmb IAmb 00 24 41.6
comp=Z,5.5nm,1.0s
RDMU Red Mountain 78.69 39 P **P** **00 24 43.4 +0.3**
HMU Henry Mountain 80.38 42 P **P** **00 24 52.6 +0.2**
HMU IAmb IAmb 00 24 53.2
comp=Z,3.6nm,0.7s
ESDC Sonseca Array 81.08 323 P **P** **00 24 55.8 -0.1**
comp=Z,0.3nm,0.8s,baz=11,slow=5.3,SNR=2.4
comp=Z,0.3nm,0.8s
FURI Furi 81.10 273 LR LR 01 08 06.5
comp=Z,22nm,19.3s,baz=87,slow=41
STKA Stephens Creek 81.67 166 *e*P **P** **00 24 59.6 +0.9**
STKA pmax pmax
comp=Z,2.0nm,0.8s
X16A Lo Mia Camp, P 82.99 44 P **P** **00 25 06.8 +0.6**
X16A IAmb IAmb 00 25 08.1
comp=Z,2.5nm,0.8s

*IGIL **07** 00:40:03.9, 37.°06N×15.°75W, h66km, ML2.1*
*MDD **07** 00:40:03.4± 1.0, 37.°18N×15.°60W, h23km±21km, Mb4.2/9, M_mb3.6/9, Error ellipse: s-maj=23.3km s-min=6.9km az=83.0*

*INMG **07** 00:40:05.5±1.0,37.°11N×15.°76W,h10km,ML2.1, Error ellipse: s-maj=6.9km s-min=5.9km az=141.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Madeira-Tore*

*CNRM **07** 00:40:09.1,37.°29N×15.°15W,h60km*

ISC 07 00:40:07.6±3.8,37.°36N±0.°09×15.°0W±0.°2,h10km,n49, σ1§38/89,8C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**4.77**	**69**	Pn	**Pn**	**00 41 20.7**	**+1.2**
PMAFR				Sn	**Sn**	**00 42 15.4**	**+0.5**
PMAFR	**Mafra**	**4.77**	**69**	*eP*	**Pn**	**00 41 20.9**	**+1.4**
PMAFR				*eS*	**Sn**	**00 42 17.1**	**+2.2**
PFVI	**Vila Bisbo**	**4.92**	**91**	Pn	**Pn**	**00 41 21.3**	**-0.2**
PFVI				Sn	**Sn**	**00 42 15.6**	**-3.0**
PFVI	**Vila Bisbo**	**4.92**	**91**	*eP*	**Pn**	**00 41 21.4**	**-0.2**
PFVI				*eS*	**Sn**	**00 42 17.8**	**-0.8**
PFVI	**Vila Bisbo**	**4.92**	**91**	P	**Pn**	**00 41 22.6**	**+1.0**
PFVI				S	**Sn**	**00 42 20.1**	**+1.5**
PTEO	**Sao Teotonio**	**4.99**	**86**	*eP*	**Pn**	**00 41 22.3**	**-0.2**
PTEO				*eS*	**Sn**	**00 42 18.9**	**-1.3**
MORF	**Marmelete**	**5.05**	**89**	*eP*	**Pn**	**00 41 23.2**	**-0.2**
MORF				*eS*	**Sn**	**00 42 21.2**	**-0.6**
MORF				IAML		00 42 23.6	
	comp=E,2.1nm,0.2s						
MORF	**Marmelete**	**5.05**	**89**	*eP*	**Pn**	**00 41 23.3**	**-0.2**
MORF				*eS*	**Sn**	**00 42 22.7**	**+0.9**
MORF				*i* IAML		00 42 25.9	
MORF				*i* IAML		00 42 28.3	
PSBE	**So Bento**	**5.32**	**64**	*eP*	**Pn**	**00 41 28.5**	**+1.4**
PSBE				*eS*	**Sn**	**00 42 32.1**	**+3.7**
MOE	**Montemor**	**5.37**	**75**	*eP*	**Pn**	**00 41 28.3**	**+0.5**
MOE				*eS*	**Sn**	**00 42 31.7**	**+2.0**
MOE				*i* IAML		00 42 32.9	
MOE				*i* IAML		00 42 33.9	
MESJ	**Messejana**	**5.39**	**83**	*eP*	**Pn**	**00 41 28.0**	**-0.2**
MESJ	**Messejana**	**5.39**	**83**	*eP*	**Pn**	**00 41 28.9**	**+0.7**
MESJ				*eS*	**Sn**	**00 42 31.5**	**+1.2**
PCVE	**Castro Verde**	**5.53**	**85**	Pn	**Pn**	**00 41 29.7**	**-0.3**
PCVE				Sn	**Sn**	**00 42 30.9**	**-2.7**
PCVE	**Castro Verde**	**5.53**	**85**	*eP*	**Pn**	**00 41 30.0**	**0.0**
PCVE				*eS*	**Sn**	**00 42 33.5**	**-0.2**
PMTG	**Montargil**	**5.59**	**70**	*eP*	**Pn**	**00 41 31.0**	**+0.2**
PMTG				*eS*	**Sn**	**00 42 36.2**	**+1.1**
PMTG				*i* IAML		00 42 39.3	
PMTG				*i* IAML		00 42 39.9	
PBDV	**Barranco-do-Ve**	**5.62**	**89**	Pn	**Pn**	**00 41 31.1**	**-0.2**
PBDV				Sn	**Sn**	**00 42 34.8**	**-1.2**
PBDV	**Barranco-do-Ve**	**5.62**	**89**	*eP*	**Pn**	**00 41 32.6**	**+1.3**
PBDV				*eS*	**Sn**	**00 42 36.5**	**+0.4**
EVO	**Evora**	**5.63**	**76**	Pn	**Pn**	**00 41 31.9**	**+0.4**
EVO				Sn	**Sn**	**00 42 34.7**	**-1.5**
EVO	**Evora**	**5.63**	**76**	*eP*	**Pn**	**00 41 32.3**	**+0.8**
EVO				*eS*	**Sn**	**00 42 36.7**	**+0.5**
EVO				*i* IAML		00 42 40.5	
EVO				*i* IAML		00 42 42.4	
PARRA	**Arraiolos**	**5.67**	**73**	*eP*	**Pn**	**00 41 32.0**	**+0.1**
PARRA				*eS*	**Sn**	**00 42 37.8**	**+0.7**
PARRA				*i* IAML		00 42 39.3	
PARRA				*i* IAML		00 42 39.9	
PARRA				*i* IAML		00 42 41.9	
PCAS	**Casmilo, Conde**	**5.74**	**60**	*eP*	**Pn**	**00 41 33.9**	**+1.0**
PCAS				*eS*	**Sn**	**00 42 40.1**	**+1.2**
PCAS				*i* IAML		00 42 43.0	
PVAQ	**Vaqueiros**	**5.79**	**87**	*eP*	**Pn**	**00 41 33.5**	**-0.1**
PVAQ				*eS*	**Sn**	**00 42 40.6**	**+0.5**
PVAQ	**Vaqueiros**	**5.79**	**87**	P	**Pn**	**00 41 33.8**	**+0.3**
PVAQ				S	**Sn**	**00 42 41.2**	**+1.2**
PSARD	**Sardoal**	**5.80**	**65**	*eP*	**Pn**	**00 41 34.7**	**+1.0**
PSARD				*eS*	**Sn**	**00 42 41.3**	**+0.9**
PSARD				*i* IAML		00 42 42.2	
PSARD				*i* IAML		00 42 46.1	
PSARD				*i* IAML		00 42 47.3	
PESTR	**Estremoz**	**6.02**	**73**	Sn	**Sn**	**00 42 43.0**	**-2.8**
PESTR	**Estremoz**	**6.02**	**73**	*eS*	**Sn**	**00 42 46.4**	**+0.6**
PBAR	**Barrancos**	**6.35**	**80**	Pn	**Pn**	**00 41 41.9**	**+0.6**
PBAR				Sn	**Sn**	**00 42 51.8**	**-2.0**
PBAR	**Barrancos**	**6.35**	**80**	*eP*	**Pn**	**00 41 42.1**	**+0.9**
PBAR				*eS*	**Sn**	**00 42 55.9**	**+2.1**
EBAD	**Badajoz**	**6.44**	**75**	Pn	**Pn**	**00 41 43.1**	**+0.5**
EBAD				Sn	**Sn**	**00 42 53.3**	**-2.8**
EBAD	**Badajoz**	**6.44**	**75**	Pn	**Pn**	**00 41 43.2**	**+0.6**
EBAD				⇑*i*Vmb_VC		00 41 43.9	
	comp=E,74nm,SNR=1.2						
EBAD				Sn	**Sn**	**00 42 55.1**	**-1.0**
PVIS	**Viseu**	**6.46**	**57**	*eS*	**Sn**	**00 42 55.9**	**-0.6**
EMIN	**Mina Concepcio**	**6.62**	**84**	Pn	**Pn**	**00 41 44.4**	**-0.5**
EMIN				⇑*i*IVmb_VC		00 41 51.1	
	comp=E,104nm,SNR=1.4						
POLO	**Lamas de Olo**	**6.86**	**52**	*eP*	**Pn**	**00 41 49.3**	**+0.9**
POLO				*eS*	**Sn**	**00 43 04.3**	**-2.3**
PCAB	**Cabril**	**6.91**	**49**	*eP*	**Pn**	**00 41 49.7**	**+0.7**
PCAB				*eS*	**Sn**	**00 43 06.3**	**-1.5**
PGAV	**Gavieira, Arco**	**6.93**	**46**	*eP*	**Pn**	**00 41 49.3**	**+0.1**
PGAV				*eS*	**Sn**	**00 43 06.6**	**-1.6**
ELOB	**Lobios**	**6.99**	**48**	Pn	**Pn**	**00 41 50.7**	**+0.6**
ELOB				⇑*i*IVmb_VC		00 41 52.5	
	comp=E,166nm,SNR=1.8						
ELOB				Sn	**Sn**	**00 43 07.3**	**-2.3**
MVO	**Moncorvo**	**7.25**	**56**	*eP*	**Pn**	**00 41 54.0**	**+0.3**
MVO				*eS*	**Sn**	**00 43 13.8**	**-2.2**
EAGO	**Agolada(Pontev**	**7.58**	**42**	Pn	**Pn**	**00 41 58.7**	**+0.5**
EAGO				⇑*i*IVmb_VC		00 42 00.5	
	comp=E,176nm,SNR=1.2						
EAGO				Sn	**Sn**	**00 43 20.0**	**-4.2**
ECAB	**El Cabril**	**7.62**	**82**	Pn	**Pn**	**00 41 58.8**	**+0.1**
ECAB				Sn	**Sn**	**00 43 21.2**	**-3.8**
ECAB	**El Cabril**	**7.62**	**82**	Pn	**Pn**	**00 41 58.6**	**-0.1**
ECAB				⇑*i*IVmb_VC		00 42 04.8	
	comp=E,40nm,SNR=0.7						
ECAB				Sn	**Sn**	**00 43 25.6**	**+0.5**
PBRG	**Braganca**	**7.76**	**53**	*eP*	**Pn**	**00 42 02.3**	**+1.7**
CIBOR	**Castaar de Ib**	**7.83**	**70**	Pn	**Pn**	**00 42 03.7**	**+2.1**
CIBOR				Sn	**Sn**	**00 43 29.3**	**-1.2**
ECAL	**Calabor**	**7.84**	**52**	Pn	**Pn**	**00 42 02.3**	**+0.5**
ECAL				⇑*i*IVmb_VC		00 42 09.6	
	comp=E,139nm,SNR=1.2						
ECAL				Sn	**Sn**	**00 43 29.3**	**-1.3**
EADA	**Adamuz**	**8.28**	**81**	Pn	**Pn**	**00 42 08.3**	**+0.4**
EADA	**Adamuz**	**8.28**	**81**	Pn	**Pn**	**00 42 07.6**	**-0.2**
EADA				⇑*i*IVmb_VC		00 42 12.3	
	comp=E,76nm,SNR=1.6						
EADA				Sn	**Sn**	**00 43 42.7**	**+1.2**
PAB	**San Pablo**	**8.63**	**72**	Pn	**Pn**	**00 42 13.2**	**+0.6**
PAB				⇑*i*IVmb_VC		00 42 18.7	
	comp=E,62nm,SNR=1.1						
PSIM	**Granatula de C**	**8.97**	**77**	Pn	**Pn**	**00 42 18.2**	**+0.9**
MD31	**MD31**	**9.50**	**115**	P	**Pn**	**00 42 24.1**	**-0.5**
MD31				S	**Sn**	**00 44 10.9**	**-0.5**
MDT	**Midelt**	**9.64**	**115**	P	**Pn**	**00 42 26.2**	**-0.3**
MDT				S	**Sn**	**00 44 14.5**	**-0.3**

KRSC 07 01:02:14.7±0.8,50.°35N×157.°09E,h30km±11km,MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.70**	**299**	*eP*	Pb	01 02 28.3	-0.1
SKR				*eS*	Sb	01 02 38.0	+0.1
PAU	**Pauzhetka**	**1.13**	**351**	*eP*	Pb	01 02 35.9	+0.2
PAU				*eS*	Sb	01 02 51.4	+1.4
KDTR	**Khodutka, Kamc**	**1.59**	**23**	*eP*	Pb	01 02 42.2	-1.2
KDTR				*eS*	Sb	01 03 02.2	-0.8
ASAK	**Asacha**	**2.10**	**14**	*eP*	Pn	01 02 49.5	+1.7
MTVR	**Mutnovka**	**2.24**	**17**	*eP*	Pn	01 02 52.0	+2.2
MTVR				*eS*	Sb	01 03 19.3	-2.7
RUS	**Russkaya**	**2.27**	**23**	*eS*	Sn	01 03 18.9	+2.0
GRL	**Gorelyy**	**2.29**	**15**	*eP*	Pn	01 02 52.9	+2.4
KRMR	**Karymshinskiy**	**2.56**	**14**	*eP*	Pn	01 02 56.9	+2.8
KRMR				*eS*	Sb	01 03 27.9	-3.2
KOK	**Koryaka**	**3.10**	**17**	*eP*	Pn	01 03 05.3	+3.7
SDLR	**Sedlovina**	**3.13**	**20**	*eP*	Pn	01 03 05.8	+3.6
KRX	**Arik**	**3.16**	**17**	*eP*	Pb	01 03 06.8	-3.5

*RSNC **07** 01:05:36.5±0.0,7.°N±2.°×7.°3W±.°, h137km±2km, M2.1, ML1.9*
*FUNV **07** 01:05:40.4, 6.°98N×73.°25W, h15km, MW2.9, Presumed earthquake*

ISC 07 01:05:34.3±1.9,6.°81N±0.°04×73.°11W±0.°06,h148km±11km, n17,σ1§13/32,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**198**	P	**Pn**	**01 05 55.6**	**+0.9**
BARC				S	**Sn**	**01 06 09.1**	**-1.0**
BRJC	**Barrancabermej**	**0.65**	**285**	P	**Pn**	**01 05 56.7**	**+0.5**
BRJC				S	**Sn**	**01 06 13.4**	**+0.6**
PAMC	**Pamplona, Colo**	**0.67**	**38**	P	**Pn**	**01 05 57.9**	**+1.0**
PAMC				S	**Sn**	**01 06 14.9**	**+0.8**
RUSC	**La Rusia**	**0.91**	**178**	P	**Pn**	**01 05 58.6**	**-0.1**
RUSC				S	**Sn**	**01 06 16.4**	**-0.8**
RUSC	**La Rusia**	**0.91**	**178**	*eP*	**Pn**	**01 05 59.1**	**+0.4**
RUSC				*eS*	**Sn**	**01 06 15.3**	**-2.0**
CAPV	**Capacho**	**1.31**	**37**	*eP*	**Pn**	**01 06 02.8**	**+0.8**
CAPV				*eS*	**Sn**	**01 06 21.7**	**-1.5**
PTBC	**PUERTO BERRIO,**	**1.36**	**259**	P	**Pn**	**01 06 01.9**	**-0.3**
PTBC				S	**Sn**	**01 06 23.0**	**-0.6**
OCAC	**Ocana**	**1.44**	**352**	P	**Pn**	**01 06 04.3**	**+1.1**
OCAC				S	**Sn**	**01 06 25.2**	**-0.1**
SPBC	**San Pablo de B**	**1.49**	**220**	P	**Pn**	**01 06 03.8**	**+0.1**
SPBC				S	**Sn**	**01 06 25.5**	**-0.7**
CHIC	**Chingaza**	**2.25**	**196**	P	**Pn**	**01 06 13.5**	**+0.8**
HELC	**Santa Helena**	**2.48**	**256**	P	**Pn**	**01 06 15.5**	**+0.1**
HELC				S	**Sn**	**01 06 46.3**	**-0.7**
HELC	**Santa Helena**	**2.48**	**256**	*eP*	**Pn**	**01 06 18.8**	**+3.4**
HELC				*eS*	**Sn**	**01 06 47.5**	**+0.5**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**01 06 16.5**	**+0.2**
UREC				S	**Sn**	**01 06 47.4**	**-1.2**
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	**Pn**	**01 06 22.5**	**+0.4**
DBBC	**Dabeiba**	**3.08**	**274**	P	**Pn**	**01 06 23.8**	**+1.1**
DBBC				S	**Sn**	**01 06 59.2**	**-0.9**
PRAC	**Prado**	**3.54**	**210**	P	**Pn**	**01 06 29.9**	**+1.3**
PRAC				S	**Sn**	**01 07 09.8**	**-1.0**
SJCC	**San Jacinto, C**	**3.69**	**326**	P	**Pn**	**01 06 29.9**	**-0.6**
SJCC				S	**Sn**	**01 07 12.6**	**-1.5**

*OSPL **07** 01:07:43.9±0.6, 18.°31N×67.°76W, h150km±9km, ML3.5, Presumed earthquake*
*NEIC **07** 01:07:44.0±0.8, 18.°95N±0.°04×67.°60W±0.°04, h10km±2km, ML3.5/37, Error ellipse: s-maj=8.6km s-min=3.1km az=48.0*
*SDD **07** 01:07:44.4±2.2, 19.°04N×67.°64W, h15km±104km, MD3.6, ML3.5, MW3.8, Presumed earthquake*

ISC 07 01:07:40.9±1.4,19.°12N±0.°07×67.°59W±0.°03,h13km±10km, n29,σ0§75/37,14C-1D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.79**	**145**		**Pb**	**01 07 56.5**	**+0.1**
AGPR					**Sg**	**01 08 06.2**	**-0.5**
AGPR				IAML		01 08 09.6	
	2μm,0.4s						
AGPR				IAML		01 08 10.1	
	2μm,0.4s						
AGPR	**Aguadilla, PR**	**0.79**	**145**	⇑*ePg*	**Pn**	**01 07 57.8**	**0.0**
AGPR				⇑*eSg*	**Sn**	**01 08 08.5**	**-0.9**
AGPR				IAML		01 08 10.0	
	comp=N,1μm,0.6s						
PCDR	**Punta Cana, DR**	**0.96**	**231**	⇑*ePg*	**Pg**	**01 07 59.6**	**+0.2**
PCDR				⇑*eSg*	**Sg**	**01 08 10.3**	**-1.7**
PCDR				IAML		01 08 15.6	
	comp=N,1μm,0.4s						
PRSN	**Puerto Rico Se**	**0.99**	**155**		**Pn**	**01 08 00.3**	**-0.1**
PRSN					**Sb**	**01 08 11.9**	**-0.9**
PRSN	**Puerto Rico Se**	**0.99**	**155**	⇑*eSg*	**Sn**	**01 08 13.6**	**-0.7**
PRSN				IAML		01 08 22.4	
	comp=N,2μm,0.2s						
HIDR	**Higuey Centro**	**1.19**	**244**	⇑*ePg*	**Pn**	**01 08 03.1**	**0.0**
HIDR				⇑*eSg*	**Sb**	**01 08 17.5**	**-1.0**
HIDR				IAML		01 08 19.7	
	comp=N,644nm,0.5s						
UUPR	**Utuado, UPR, P**	**1.19**	**136**		**Pg**	**01 08 04.7**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.20**	**157**		**Pg**	**01 08 04.3**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.20**	**157**	IAML		01 08 22.9	
	comp=N,2μm,0.6s						
CRPR				IAML		01 08 23.3	
	comp=N,1μm,0.9s						
CRPR	**Cabo Rojo, PR**	**1.20**	**157**	⇑*ePg*	**Pg**	**01 08 04.3**	**+0.4**
CRPR				⇑*eSg*	**Sn**	**01 08 20.6**	**+1.2**
CRPR				IAML		01 08 22.8	
	comp=N,1μm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.20**	**157**	*i* P	**Pg**	**01 08 05.8**	**+1.9**
CRPR				IAML		01 08 22.8	
	comp=Z,1μm,0.4s						
MLPR	**Magueyes Islan**	**1.26**	**155**		**Pg**	**01 08 04.9**	**-0.2**
MLPR				IAML		01 08 24.1	
	comp=Z,1μm,0.7s						
MLPR				IAML		01 08 24.3	
	comp=Z,877nm,0.7s						
MIDR	**Miches**	**1.39**	**265**	⇑*ePg*	**Pg**	**01 08 08.0**	**+0.5**
MIDR				IAML		01 08 30.6	
	comp=N,256nm,0.7s						
ECPR	**Experimental S**	**1.41**	**124**		**Pg**	**01 08 08.4**	**+0.4**
ECPR				IAML		01 08 29.8	
	comp=N,849nm,0.2s						
ECPR				IAML		01 08 29.9	
	comp=N,796nm,0.2s						
CELP	**Cerrillos**	**1.42**	**137**		**Pg**	**01 08 08.1**	**0.0**
CELP				IAML		01 08 30.2	
	comp=N,956nm,0.4s						
OBIP	**Obispado Ponce**	**1.42**	**139**		**Pg**	**01 08 08.2**	**-0.1**
OBIP	**Obispado Ponce**	**1.42**	**139**	*i* P	**Pg**	**01 08 08.3**	**+0.1**
OBIP				*eS*	**Sg**	**01 08 26.9**	**+0.1**
OBIP				IAML		01 08 30.2	
	comp=Z,375nm,0.4s						
SMDR	**Samana, DR**	**1.52**	**277**	⇑*ePg*	**Pg**	**01 08 10.4**	**+0.4**
SMDR				IAML		01 08 37.1	
	comp=N,277nm,0.8s						
GCPR	**Guaynabo City**	**1.64**	**119**		**Pg**	**01 08 12.2**	**-0.3**
SJG	**San Juan**	**1.70**	**126**		**Pb**	**01 08 12.4**	**+0.5**
SJG				IAML		01 08 38.7	
	comp=N,541nm,0.4s						
SJG				IAML		01 08 38.9	
	comp=N,464nm,0.4s						
SJG	**San Juan**	**1.70**	**126**	⇑*ePg*	**Pg**	**01 08 12.7**	**-0.8**
SJG				*eSg*	**Sb**	**01 08 34.0**	**+0.9**
SJG	**San Juan**	**1.70**	**126**	*i* P	**Pg**	**01 08 12.7**	**-0.8**
SJG				IAML		01 08 38.7	
	comp=Z,340nm,0.4s						
DR12	**Loma Pena Alta**	**1.72**	**259**		**Pb**	**01 08 13.1**	**+0.7**
HATOM	**Hato Mayor del**	**1.72**	**259**	⇓*ePg*	**Pg**	**01 08 14.1**	**+0.2**
HATOM				⇑*eSg*	**Sg**	**01 08 36.4**	**0.0**
HATOM				IAML		01 08 38.2	
	comp=N,296nm,0.6s						
HUMP	**Col San Antoni**	**1.92**	**120**		**Pb**	**01 08 16.1**	**+0.4**
DR08	**Loma La Naviza**	**2.30**	**267**	*eSg*	**Sb**	**01 08 51.7**	**+0.9**
DR08				IAML		01 08 56.2	
	comp=N,4μm,0.2s						
BANI	**BANI**	**2.72**	**255**		**Pb**	**01 08 30.6**	**+1.1**
SC01	**Santiago de lo**	**2.98**	**276**		**Pg**	**01 08 37.4**	**-0.6**
SDDR	**Presa de Saban**	**3.50**	**268**		**Pb**	**01 08 42.2**	**-0.5**

*RSNC **07** 01:18:58.5±0.0, 7.°N±1.°×7.°3W±.°, h149km±2km, M3.5, mb3.7, ML3.1*
*FUNV **07** 01:18:59.9, 6.°79N×73.°02W, h14km, MW3.9, Presumed earthquake*

ISC 07 01:18:57.3±1.3,6.°85N±0.°03×73.°10W±0.°04,h152km±8km, n37,σ1§46/70,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**198**	P	**Pn**	**01 19 18.8**	**+0.6**
BARC				S	**Sn**	**01 19 34.4**	**+0.2**
PAMC	**Pamplona, Colo**	**0.63**	**39**	P	**Pn**	**01 19 21.6**	**+1.5**
PAMC				S	**Sn**	**01 19 38.8**	**+1.3**
BRJC	**Barrancabermej**	**0.65**	**281**	P	**Pn**	**01 19 20.3**	**+0.7**
BRJC				S	**Sn**	**01 19 37.2**	**+0.6**
RUSC	**La Rusia**	**0.95**	**179**	P	**Pn**	**01 19 22.6**	**+0.2**
RUSC				S	**Sn**	**01 19 41.4**	**-0.1**
CAPV	**Capacho**	**1.28**	**38**	*eS*	**Sn**	**01 19 41.4**	**-4.7**
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	P	**Pn**	**01 19 25.2**	**-0.5**
PTBC				S	**Sn**	**01 19 46.6**	**-0.9**
OCAC	**Ocana**	**1.40**	**351**	P	**Pn**	**01 19 26.9**	**+0.8**
OCAC				S	**Sn**	**01 19 49.1**	**+0.9**
SPBC	**San Pablo de B**	**1.53**	**219**	P	**Pn**	**01 19 27.5**	**+0.1**
SPBC				S	**Sn**	**01 19 50.2**	**-0.3**
NORC	**Norcasia**	**2.17**	**234**	P	**Pn**	**01 19 34.5**	**-0.1**
NORC				S	**Sn**	**01 20 02.5**	**-0.8**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**01 19 36.6**	**+0.2**
CHIC				S	**Sn**	**01 20 05.9**	**-0.6**
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**01 19 38.5**	**+1.6**
ROSC				S	**Sn**	**01 20 08.6**	**+1.3**
HELC	**Santa Helena**	**2.50**	**255**	P	**Pn**	**01 19 39.5**	**+0.7**
HELC				S	**Sn**	**01 20 09.5**	**-1.3**
HELC	**Santa Helena**	**2.50**	**255**	*eP*	**Pn**	**01 19 41.0**	**+2.2**
HELC				*eS*	**Sn**	**01 20 10.8**	**+0.1**
CVER	**Cruz Verde, Cu**	**2.50**	**203**	P	**Pn**	**01 19 40.1**	**+1.1**
CVER				S	**Sn**	**01 20 12.6**	**+1.4**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**01 19 38.4**	**-1.0**
UREC				S	**Sn**	**01 20 09.8**	**-2.1**
SOCV	**Socops**	**2.64**	**57**	*eP*	**Pn**	**01 19 41.9**	**+1.6**
SOCV				*eS*	**Sn**	**01 20 11.8**	**-1.7**
VILC	**Villavicencio,**	**2.78**	**192**	P	**Pn**	**01 19 42.2**	**+0.1**
VILC				S	**Sn**	**01 20 16.4**	**-0.4**
CBOC	**Ciudad Bolivar**	**3.05**	**252**	P	**Pn**	**01 19 46.1**	**+0.5**
CBOC				S	**Sn**	**01 20 23.1**	**+0.2**
DBBC	**Dabeiba**	**3.09**	**273**	P	**Pn**	**01 19 46.0**	**+0.1**
DBBC				S	**Sn**	**01 20 21.8**	**-1.8**
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**01 19 48.4**	**+1.3**
SDV				S	**Sn**	**01 20 25.5**	**-0.2**
SDV	**Santo Domingo**	**3.17**	**50**	*eP*	**Pn**	**01 19 48.5**	**+1.3**
SDV				*eS*	**Sn**	**01 20 24.5**	**-1.2**
ARGC	**Ariguani, Magd**	**3.20**	**339**	P	**Pn**	**01 19 49.5**	**+2.2**
ARGC				S	**Sn**	**01 20 27.8**	**+1.8**
MCQV	**Machiques**	**3.23**	**10**	*eP*	**Pn**	**01 19 49.0**	**+1.4**
MCQV				*eS*	**Sn**	**01 20 26.6**	**-0.1**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**01 19 52.5**	**+0.2**
PRAC				S	**Sn**	**01 20 34.1**	**-0.8**
APAC	**Apartado, Choc**	**3.61**	**287**	P	**Pn**	**01 19 52.5**	**0.0**
APAC				S	**Sn**	**01 20 35.3**	**-0.0**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	**01 19 52.8**	**+0.1**
ORTC				S	**Sn**	**01 20 35.9**	**+0.2**
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	**01 19 52.5**	**-0.8**
SJCC				S	**Sn**	**01 20 33.9**	**-2.8**
SJCC	**San Jacinto, C**	**3.66**	**326**	*eS*	**Sn**	**01 20 38.4**	**+1.6**
URMC	**La Uribe, Meta**	**3.80**	**200**	P	**Pn**	**01 19 55.7**	**+0.7**
URMC				S	**Sn**	**01 20 38.5**	**-1.4**
YOTC	**Yotoco, Valle**	**4.30**	**229**	P	**Pn**	**01 20 01.5**	**-0.2**
SMRC	**Santa Marta, M**	**4.43**	**346**	P	**Pn**	**01 20 04.2**	**+1.0**
SMRC				S	**Sn**	**01 20 52.1**	**-2.5**
PTAC	**Punta Ardita,**	**4.68**	**274**	P	**Pn**	**01 20 06.4**	**-0.1**
MACC	**Macarena, Meta**	**4.73**	**189**	P	**Pn**	**01 20 05.8**	**-1.4**
MACC				S	**Sn**	**01 20 57.5**	**-4.3**
URIC	**Uribia, Colomb**	**4.95**	**13**	P	**Pn**	**01 20 09.4**	**-0.6**
URIC				S	**Sn**	**01 21 05.2**	**-1.6**
POPC	**Popayan, Colom**	**5.57**	**220**	P	**Pn**	**01 20 20.8**	**+2.3**
POPC				S	**Sn**	**01 21 21.7**	**-0.3**
FLOC	**Florencia**	**5.82**	**206**	P	**Pn**	**01 20 21.7**	**+0.1**
FLOC				S	**Sn**	**01 21 26.8**	**-0.8**
BENV	**Beln**	**6.26**	**60**	*eP*	**Pn**	**01 20 29.0**	**+1.5**
BENV				*eS*	**Sn**	**01 21 34.9**	**-3.4**

*IDC **07** 01:24:53.6±4.6,23.°81S×179.°69W, h565km±51km, mb3.3/7, mbtmp4.3/8, Error ellipse: s-maj=51.8km s-min=28.2km az=175.0*
*NEIC **07** 01:24:53.3±1.7,23.°6S±0.°1×179.°8W±0.°1, h541km±14km, mb4.3/11, Error ellipse: s-maj=25.2km s-min=12.1km az=138.0*

ISC 07 01:24:52.3±0.7,23.°6S±0.°1×179.°7W±0.°1,h550km,n35, σ0§93/34,mb4.2/14,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.86**	**164**	P	**P**	**01 26 29.7**	**+0.2**
MSVF	**Nonsavu**	**6.20**	**340**	P	**P**	**01 26 32.7**	**-0.3**
URZ	**Urewera**	**14.86**	**190**	P	**P**	**01 27 58.8**	**-1.3**
	4.7nm,0.4s,baz=18,slow=4.2,SNR=11						
LTZ	**Lake Taylor**	**20.25**	**197**	P	**P**	**01 28 50.8**	**+0.3**
OXZ	**Oxford**	**20.82**	**197**	P	**P**	**01 28 57.1**	**+1.5**
WHZ	**Wether Hill Ro**	**24.38**	**201**	P	**P**	**01 29 29.8**	**+2.4**
WHZ				IAmb	IAmb	01 29 30.5	
	comp=Z,34nm,1.3s						
CTA	**Charters Tower**	**31.73**	**270**	P	**P**	**01 30 32.5**	**+0.7**
	comp=Z,8.0nm,0.4s,baz=87,slow=8.4,SNR=16						
	comp=Z,8.0nm,0.4s						
STKA	**Stephens Creek**	**35.07**	**248**	P	**P**	**01 30 59.8**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=135,slow=10.0,SNR=1.6						
	comp=Z,1.0nm,0.5s						
COEN	**Coen**	**36.32**	**279**	P	**P**	**01 31 10.5**	**+0.2**
COEN				IAmb	IAmb	01 31 19.1	
	comp=Z,9.1nm,1.5s						
AS31	**Alice Springs**	**42.34**	**260**	P	**P**	**01 31 59.0**	**+0.3**
ASAR	**Alice

INZ				IAmb	IAmb	01 48 55.9		
	comp=Z,37nm,1.3s							
CTAO	**Charters Tower**	**34.12**	**271**	P	**P**	**01 50 32.3**	**+1.0**	
CTAO				IAmb	IAmb	01 50 33.0		
	comp=Z,6.3nm,0.7s							
STKA	**Stephens Creek**	**36.84**	**249**	P	**P**	**01 50 54.0**	**-0.4**	
	comp=Z,1.1nm,0.5s,baz=40,slow=7.9,SNR=4.4							
	comp=Z,1.1nm,0.5s							
STKA	**Stephens Creek**	**36.84**	**249**	P	**P**	**01 50 54.0**	**-0.4**	
STKA				IAmb	IAmb	01 51 18.1		
	comp=Z,20nm,1.1s							
COEN	**Coen**	**38.87**	**279**	P	**P**	**01 51 11.8**	**+0.1**	
BBOO	**Buckleboo**	**41.51**	**248**	P	**P**	**01 51 32.3**	**-1.0**	
BBOO				IAmb	IAmb	01 51 52.2		
	comp=Z,26nm,1.5s							
ASAR	**Alice Springs**	**44.48**	**261**	P	**P**	**01 51 57.1**	**-0.3**	
	comp=Z,1.1nm,0.5s,baz=96,slow=7.9,SNR=14							
ASAR				PcP	**PcP**	**01 53 39.1**	**+0.3**	
	comp=Z,0.3nm,0.5s,baz=95,slow=3.6,SNR=2.5							
	comp=Z,1.1nm,0.5s							
WR8	**Warramunga Arr**	**44.82**	**266**	P	**P**	**01 51 58.7**	**-1.4**	
WRA	**Warramunga Arr**	**44.97**	**266**	P	**P**	**01 51 59.5**	**-1.7**	
	comp=Z,1.2nm,0.4s,baz=98,slow=7.1,SNR=63							
WRA				PcP	**PcP**	**01 53 40.5**	**+0.1**	
	comp=Z,0.6nm,0.8s,baz=100,slow=2.9,SNR=5.4							
	comp=Z,1.2nm,0.4s							
WRA	**Warramunga Arr**	**44.97**	**266**	P	**P**	**01 51 59.8**	**-1.5**	
KNRA	**Kununurra**	**51.32**	**269**	P	**P**	**01 52 49.2**	**-0.9**	
KNRA				IAmb	IAmb	01 53 33.1		
	comp=Z,8.3nm,1.0s							
VNDA	**Vanda**	**53.67**	**186**	P	P	01 53 10.5	+4.0	
VNDA				IAmb	IAmb	01 53 13.4		
	comp=Z,7.1nm,1.3s							
NWAO	**Narrogin (SRO)**	**57.24**	**246**	P	**P**	**01 53 34.8**	**+2.0**	
PSA00	**Pilbara Seismi**	**57.58**	**259**	P	**P**	**01 53 34.9**	**-0.4**	
PEA0B	**Petropavlovsk-**	**80.67**	**345**	P	**P**	**01 55 57.5**	**+0.6**	
PETK	**Petropavlovsk-**	**80.67**	**345**	P	**P**	**01 55 57.8**	**+0.9**	
	comp=Z,1.9nm,0.7s,baz=158,slow=6.1,SNR=1.3							
	comp=Z,1.9nm,0.7s							
PETK	**Petropavlovsk-**	**80.67**	**345**	P	**P**	**01 55 57.6**	**+0.7**	
CMAR	**Chiang Mai Arr**	**92.33**	**289**	P	**P**	**01 56 56.5**	**+1.5**	
	comp=Z,0.7nm,0.3s,baz=114,slow=4.8,SNR=4.2							
	comp=Z,0.7nm,0.3s							
ILAR	**Eielson Array**	**92.37**	**12**	P	**P**	**01 56 54.0**	**0.0**	
	comp=Z,0.3nm,0.7s,baz=226,slow=5.9,SNR=1.9							
	comp=Z,0.3nm,0.7s							
ARCES	**ARCESS Array B**	**133.34**	**349**	PKP	**PKPdf**	**02 02 59.5**	**+0.8**	
	comp=Z,10nm,1.2s,baz=30,slow=2.6,SNR=4.3							
FINES	**FINESS Array B**	**140.16**	**343**	PKP	**PKiKP**	**02 03 13.3**	**-0.7**	
	comp=Z,2.1nm,0.9s,baz=48,slow=2.1,SNR=1.5							
NOA	**NORSAR Array B**	**143.38**	**353**	PKhKP	PKPpre	02 03 13.9		
	comp=Z,0.6nm,0.8s,baz=9.2,slow=2.3,SNR=3.7							
HFS	**Hagfors**	**143.95**	**351**	PKP	**PKPab**	**02 03 16.2**	**+0.3**	
	comp=Z,2.8nm,0.4s,baz=67,slow=3.9,SNR=32							
KONO	**Kongsberg**	**144.91**	**354**	PKPdf	**PKPbc**	**02 03 18.4**	**-1.1**	
MARD	**Mardin**	**145.48**	**300**		**PKPdf**	**02 03 21.7**	**-0.2**	
AKASG	**Malin Array Be**	**147.18**	**329**	PKPbc	**PKPbc**	**02 03 25.9**	**-0.6**	
	comp=Z,2.1nm,0.6s,baz=44,slow=4.3,SNR=9.1							
EKA	**Eskdalemuir Ar**	**149.23**	**7**	PKPbc	**PKPbc**	**02 03 30.2**	**-1.5**	
	comp=Z,1.4nm,0.8s,baz=338,slow=1.7,SNR=2.0							
BRTR	**Keskin Array B**	**150.25**	**307**	PKPbc	**PKiKP**	**02 03 35.6**	**-0.1**	
	comp=Z,1.5nm,0.5s,baz=89,slow=5.2,SNR=4.0							
MMAI	**Mount Meron Ar**	**150.50**	**294**	PKPbc	**PKiKP**	**02 03 36.1**	**-0.2**	
	comp=Z,1.1nm,0.4s,baz=88,slow=7.4,SNR=4.6							
MMAI				PKPab	**PKPab**	**02 03 41.4**	**-1.3**	
	comp=Z,2.2nm,0.5s,baz=77,slow=6.4,SNR=8.7							
BURAR	**Bucovina Array**	**151.21**	**328**	PKPbc	**PKiKP**	**02 03 38.6**	**+1.2**	

*IDC **07** 01:49:00.8±1.1,35.˚18N×95.˚25W,h0km,mbtmp3.3/6, ML3.2/6, Error ellipse: s-maj=18.9km s-min=11.8km az=159.0*

*NEIC **07** 01:49:01.7±0.8,35.˚11N±0.˚01×95.˚39W±0.˚02,h5km±1km, mb_Lg3.5/140, ML3.6/20, ML3.2/8, Error ellipse: s-maj=2.9km s-min=2.6km az=17.0*

*NEIC **07** 01:49:01.9±0.8,35.˚10N±0.˚02×95.˚385W±0.˚009,h6km±4km, Error ellipse: s-maj=3.0km s-min=0.6km az=163.0*

ISC 07 01:49:01.2±1.2,35.˚13N±0.˚03×95.˚34W±0.˚02,h7km±11km, n95,σ1°53/57,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUL3	**Leonard**	**0.86**	**335**		**Pb**	**01 49 18.5**	**0.0**
TUL3					**Sb**	**01 49 30.1**	**-0.2**
TUL3				IAML		01 49 35.1	
	1μm,0.3s						
RLO	**Rose Lookout**	**1.06**	**14**		**Pn**	**01 49 22.6**	**+0.1**
RLO				Sg	**Sn**	**01 49 37.3**	**-0.3**
RLO				IAML		01 49 47.2	
	comp=N,2μm,0.2s						
DEOK	**Depew**	**1.19**	**307**		**Pg**	**01 49 23.9**	**-0.1**
DEOK					**Sg**	**01 49 39.4**	**+0.1**
DEOK				IAML		01 49 44.5	
	comp=E,2μm,0.2s						
W35A	**Tecumseh**	**1.26**	**271**		**Pg**	**01 49 24.7**	**-0.6**
W35A					**Sg**	**01 49 40.9**	**-0.8**
W35A				IAML		01 49 45.5	
	comp=N,2μm,0.7s						
W35A				IAML		01 49 45.8	
	comp=E,947nm,0.4s						
OK052	**Battle Ridge R**	**1.47**	**306**		**Pn**	**01 49 28.7**	**+0.5**
OK052					**Sg**	**01 49 48.8**	**+0.2**
U38A	**Gravette**	**1.52**	**30**		**Pg**	**01 49 30.4**	**+0.1**
U38A					**Sg**	**01 49 51.2**	**+1.2**
QUOK	**Quay**	**1.52**	**313**		**Pn**	**01 49 29.6**	**+0.7**
QUOK					**Sg**	**01 49 50.6**	**+0.3**
MIAR	**Mount Ida**	**1.56**	**111**		**Pg**	**01 49 31.1**	**0.0**
MIAR					**Sg**	**01 49 52.5**	**+1.2**
MIAR				IAmb_Lg		01 49 56.6	
	comp=Z,178nm,0.8s						
HHAR	**Hobbs**	**1.62**	**44**		**Pg**	**01 49 32.0**	**-0.2**
HHAR					**Sg**	**01 49 54.6**	**+1.4**
FNO	**Franklin**	**1.69**	**275**		**Pn**	**01 49 32.1**	**+0.9**
FNO					**Sb**	**01 49 54.9**	**+0.7**
FNO				IAmb_Lg		01 49 55.4	
	comp=Z,149nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**1.74**	**280**		**Pn**	**01 49 32.9**	**+1.0**
OKCSW					**Sb**	**01 49 56.4**	**+0.8**
OKCSW				IAmb_Lg		01 49 57.5	
	comp=Z,257nm,0.7s						
OKCFA	**Oklahoma City**	**1.75**	**280**		**Pn**	**01 49 33.0**	**+1.0**
OKCFA					**Sb**	**01 49 56.7**	**+0.8**
OK004	**Okla Sci Mus**	**1.79**	**283**		**Pn**	**01 49 33.6**	**+1.0**
OK004					**Sb**	**01 49 57.8**	**+0.8**
OK051	**E0350 and S346**	**1.83**	**319**		**Pb**	**01 49 34.8**	**-0.2**
Z38A	**Mt. Pleasant**	**1.89**	**171**		**Pb**	**01 49 35.6**	**-0.3**
Z38A				IAmb_Lg		01 50 05.7	
	comp=Z,340nm,0.7s						
LOOK	**Love County**	**1.90**	**234**		**Pn**	**01 49 35.2**	**+1.2**
T35A	**Sooner Cattle**	**2.02**	**332**		**Pb**	**01 49 37.6**	**-0.7**
X34A	**Smith Ranch, M**	**2.12**	**256**		**Pn**	**01 49 38.5**	**+1.5**
X34A				IAmb_Lg		01 50 08.9	
	comp=Z,232nm,1.0s						
X40A	**Basin Creek Fa**	**2.16**	**107**		**Pb**	**01 49 40.3**	**-0.2**
X40A				IAmb_Lg		01 50 13.8	
	comp=Z,305nm,0.8s						
WLAR	**White Oak Lake**	**2.33**	**127**		**Pb**	**01 49 43.0**	**-0.6**
WLAR				IAmb_Lg		01 50 15.2	
	comp=Z,107nm,0.7s						
Z35A	**Perchaven, San**	**2.40**	**222**		**Pn**	**01 49 42.1**	**+1.3**
Z35A				IAmb_Lg		01 50 21.3	
	comp=Z,116nm,0.7s						
UALR	**University of**	**2.48**	**97**		**Pb**	**01 49 44.6**	**-1.5**
UALR				IAmb_Lg		01 50 24.7	
	comp=Z,208nm,1.0s						
WHAR	**Wooly Hollow**	**2.50**	**85**		**Pb**	**01 49 44.7**	**-1.7**
WHAR				IAmb_Lg		01 50 26.4	
	comp=Z,126nm,1.0s						
FCAR	**Ozark Folk Cen**	**2.73**	**73**	IAmb_Lg		01 50 30.9	
	comp=Z,157nm,0.8s						
Z41A	**Richland Creek**	**2.81**	**131**		**Pn**	**01 49 49.0**	**+2.5**
Z41A				IAmb_Lg		01 50 36.4	
	comp=Z,100nm,0.7s						
KAN01	**Argonia South**	**2.81**	**317**	IAmb_Lg		01 50 34.6	
	comp=Z,148nm,0.8s						
FW06	**Azle**	**2.83**	**221**		**Pn**	**01 49 48.6**	**+1.8**
KAN08	**Anthony NE Sta**	**2.99**	**315**	IAmb_Lg		01 50 36.5	
	comp=Z,125nm,0.8s						
S39A	**Bolivar**	**3.03**	**32**	IAmb_Lg		01 50 40.0	
	comp=Z,88nm,0.7s						
OK038	**West end E0370**	**3.08**	**297**	IAmb_Lg		01 50 42.5	
	comp=Z,83nm,0.7s						
237A	**Washetta, Mont**	**3.15**	**187**		**Pn**	**01 49 52.4**	**+1.3**
237A				IAmb_Lg		01 50 48.0	
	comp=Z,96nm,0.8s						
CCAR	**Cane Creek**	**3.18**	**111**	IAmb_Lg		01 50 52.6	
	comp=Z,141nm,0.8s						
MGMO	**Mountain Grove**	**3.20**	**50**		**Pn**	**01 49 54.1**	**+2.2**
MGMO				IAmb_Lg		01 50 51.1	
	comp=Z,110nm,0.8s						
PLPT	**Palo Pinto**	**3.39**	**228**		**Pn**	**01 49 55.2**	**+0.7**
NATX	**Nacogdoches**	**3.41**	**170**	IAmb_Lg		01 50 57.7	
	comp=Z,128nm,0.8s						
LCAR	**Lake Charles**	**3.54**	**73**	IAmb_Lg		01 51 04.9	
	comp=Z,115nm,1.1s						
R40A	**Maddies Statio**	**4.00**	**37**		**Pn**	**01 50 05.4**	**+2.5**
SMWD	**Samnorwood**	**4.02**	**271**	IAmb_Lg		01 51 10.6	
	comp=Z,88nm,0.9s						
143A	**Socs Landing,**	**4.07**	**125**		**Pn**	**01 50 05.7**	**+1.9**
143A				IAmb_Lg		01 51 16.5	
	comp=Z,94nm,0.8s						
KSU1	**Kansas State U**	**4.09**	**346**	IAmb_Lg		01 51 12.1	
	comp=Z,184nm,0.8s						
HNVL	**Huntsville, TX**	**4.36**	**181**		**Pn**	**01 50 09.6**	**+1.7**
HNVL				IAmb_Lg		01 51 18.0	
	comp=Z,64nm,1.2s						
ABTX	**Abilene, Hawle**	**4.37**	**236**	IAmb_Lg		01 51 30.1	
	comp=Z,107nm,1.2s						
CCM	**Cathedral Cave**	**4.40**	**47**		**Pn**	**01 50 10.1**	**+1.7**
CCM	**Cathedral Cave**	**4.40**	**47**	IAmb_Lg		01 51 33.7	
	comp=Z,130nm,0.7s						
GNAR	**Gosnell**	**4.42**	**78**	IAmb_Lg		01 51 35.4	
	comp=Z,194nm,0.9s						
P38A	**Dawn**	**4.71**	**17**		**Pn**	**01 50 13.7**	**+1.0**
P38A				IAmb_Lg		01 51 33.5	
	comp=Z,106nm,0.7s						
DKNS	**Dickens**	**4.84**	**254**	IAmb_Lg		01 51 47.3	
	comp=Z,91nm,1.0s						
FVM	**French Village**	**4.87**	**53**	Pn	**Pn**	**01 50 17.2**	**+2.3**
OXF	**Oxford**	**4.92**	**96**	IAmb_Lg		01 51 48.9	
	comp=Z,57nm,0.8s						
HALT	**Halls**	**4.95**	**79**	IAmb_Lg		01 51 48.5	
	comp=Z,139nm,1.0s						
VBMS	**Vicksburg**	**4.96**	**124**	IAmb_Lg		01 51 43.6	
	comp=Z,55nm,1.0s						
SN07	**Snyder 07**	**5.04**	**248**	IAmb_Lg		01 51 37.8	
	comp=Z,55nm,1.0s						
GLAT	**Glass**	**5.05**	**75**	IAmb_Lg		01 51 57.3	
	comp=Z,162nm,0.8s						
CGM3	**Cape Girardeau**	**5.08**	**63**	IAmb_Lg		01 51 49.6	
	comp=Z,124nm,1.0s						
CBKS	**Cedar Bluff**	**5.09**	**318**	IAmb_Lg		01 51 53.0	
	comp=Z,161nm,0.8s						
P40A	**Paris**	**5.11**	**30**		**Pn**	**01 50 20.1**	**+1.9**
P40A				IAmb_Lg		01 51 53.3	
	comp=Z,116nm,0.7s						
AMTX	**Amarillo**	**5.21**	**269**	IAmb_Lg		01 51 55.9	
	comp=Z,59nm,0.8s						
SLM	**Saint Louis**	**5.38**	**48**	IAmb_Lg		01 52 00.3	
	comp=Z,148nm,0.8s						
PH02	**Texas Public H**	**5.42**	**275**	IAmb_Lg		01 51 59.9	
	comp=Z,48nm,0.9s						
POST	**Post**	**5.51**	**250**	IAmb_Lg		01 52 11.3	
	comp=Z,80nm,1.0s						
N35A	**Tabor**	**5.73**	**358**		**Pn**	**01 50 28.7**	**+2.1**
SGCY	**Sterling City**	**5.80**	**238**	IAmb_Lg		01 52 13.2	
	comp=Z,115nm,1.0s						
JCT	**Junction City**	**5.97**	**220**	IAmb_Lg		01 52 17.2	
	comp=Z,53nm,0.7s						
129A	**Stewart Farms,**	**5.97**	**247**	IAmb_Lg		01 52 15.3	
	comp=Z,12nm,0.8s						
WVT	**Waverly**	**6.20**	**79**	IAmb_Lg		01 52 21.0	
	comp=Z,38nm,0.7s						
MSTX	**Muleshoe**	**6.24**	**261**	IAmb_Lg		01 52 34.1	
	comp=Z,41nm,1.0s						
229A	**Bryant Ranch,**	**6.26**	**242**	IAmb_Lg		01 52 35.4	
	comp=Z,22nm,0.8s						
128A	**Castleberry Fa**	**6.45**	**249**	IAmb_Lg		01 52 43.5	
	comp=Z,14nm,1.0s						
T47A	**Sharon Grove**	**6.92**	**72**	IAmb_Lg		01 52 51.4	
	comp=Z,65nm,0.8s						
SCIA	**State Center**	**6.97**	**13**	IAmb_Lg		01 52 53.0	
	comp=Z,62nm,0.8s						
KSCO	**Kaye Shedlock'**	**7.00**	**306**	IAmb_Lg		01 52 59.7	
	comp=Z,96nm,0.9s						
TPB06	**Permian Basin**	**7.45**	**244**	IAmb_Lg		01 53 17.6	
	comp=Z,27nm,0.8s						
T25A	**Trinidad**	**7.61**	**288**	IAmb_Lg		01 53 20.3	
	comp=Z,57nm,0.9s						
L40A	**Anamosa**	**7.63**	**24**	IAmb_Lg		01 53 10.0	
	comp=Z,73nm,0.8s						
SWET	**Sewanee**	**7.70**	**87**	IAmb_Lg		01 53 18.1	
	comp=Z,30nm,0.8s						
OGNE	**Ogallala**	**7.85**	**320**	IAmb_Lg		01 53 15.7	
	comp=Z,96nm,0.8s						
U49A	**Red Boiling Sp**	**7.88**	**77**	IAmb_Lg		01 53 14.0	
	comp=Z,34nm,1.0s						
WCI	**Wyandotte Cave**	**7.90**	**64**	IAmb_Lg		01 53 18.9	
	comp=Z,69nm,0.7s						
TPB05	**Hovey Rd**	**7.91**	**240**	IAmb_Lg		01 53 25.5	
	comp=Z,46nm,1.1s						
L42A	**Oliver, Polo**	**8.17**	**31**	IAmb_Lg		01 53 28.0	
	comp=Z,77nm,0.8s						
TPB01	**Permian Basin**	**8.23**	**242**	IAmb_Lg		01 53 41.4	
	comp=Z,28nm,1.0s						
ECSD	**EROS Data Cent**	**8.65**	**354**		**Pn**	**01 51 06.5**	**-0.2**
ECSD				IAmb_Lg		01 53 37.8	
	comp=Z,23nm,0.9s						
JFWS	**Jewell Farm**	**8.72**	**25**	IAmb_Lg		01 53 44.8	
	comp=Z,84nm,0.8s						
I37A	**Lemond, Waseca**	**9.00**	**9**	IAmb_Lg		01 54 09.7	
	comp=Z,39nm,0.8s						
TXAR	**Lajitas Array**	**9.12**	**233**	Pn	**Pn**	**01 51 12.4**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=44,slow=13,SNR=10						
TXAR				Lg	Lg	01 53 45.8	
	comp=Z,0.8nm,0.3s,baz=55,slow=29,SNR=5.0						
	comp=Z,0.3nm,0.4s						
ANMO	**Albuquerque**	**9.12**	**272**	Pn	**Pn**	**01 51 16.4**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=200,slow=19,SNR=2.2						
ANMO				Pg		01 51 44.4	
	comp=Z,0.4nm,0.3s,baz=91,slow=17,SNR=6.1						
ANMO				Lg	Lg	01 53 52.2	
	comp=Z,0.6nm,0.3s,baz=350,slow=7.6,SNR=3.6						
	comp=Z,0.3nm,0.5s						
K43A	**Burlington**	**9.32**	**34**	IAmb_Lg		01 53 59.2	
	comp=Z,76nm,1.0s						
TKL	**Tuckaleechee C**	**9.46**	**83**	Pn	**Pn**	**01 51 16.6**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=251,slow=3.1,SNR=1.7						
TKL				Lg	Lg	01 53 47.5	
	comp=Z,1.9nm,0.3s,baz=179,slow=22,SNR=4.9						
	comp=Z,5.3nm,1.1s						
I40A	**Norwalk**	**9.48**	**21**	IAmb_Lg		01 54 04.9	
	comp=Z,36nm,0.8s						
SUSD	**Miller**	**9.71**	**344**	IAmb_Lg		01 54 20.9	
	comp=Z,53nm,0.8s						
PDAR	**Pinedale Array**	**13.43**	**309**	Pn	**Pn**	**01 52 13.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=115,slow=9.4,SNR=3.0						
PDAR				Lg	Lg	01 56 02.5	
	comp=Z,0.2nm,0.3s,baz=91,slow=31,SNR=4.2						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**13.43**	**309**		**Pn**	**01 52 13.2**	**+0.8**
ULM	**Lac du Bonnet**	**15.12**	**359**	Pn	**Pn**	**01 52 29.3**	**-5.7**
	comp=Z,0.3nm,0.3s,baz=197,slow=14,SNR=2.1						
ULM				Lg	Lg	01 56 49.3	
	comp=Z,0.3nm,0.3s,baz=55,slow=6.8,SNR=4.5						
	comp=Z,1.0nm,0.5s						
SADO	**Sadowa**	**15.69**	**47**	Lg	Lg	01 57 07.8	
	comp=Z,0.5nm,0.3s,baz=160,slow=20,SNR=6.6						
NVAR	**Mina Array Bea**	**18.68**	**287**	P	**Pn**	**01 53 23.0**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=96,slow=13,SNR=2.4						
	comp=Z,0.2nm,0.5s						

IDC 07 01:52:57.0±3.9,2.˚31S×12.˚20W,h0km,mb3.9/3, mbtmp4.0/4,ML3.7/1,MS3.5/28,Error ellipse: s-maj=164.8km s-min=55.2km az=135.0,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**5.94**	**202**	T	T	02 00 52.1	
	baz=17,slow=74,SNR=124						
H10N1	**ASCENSION HYDR**	**5.95**	**202**	T	T	02 00 53.1	
	baz=17,slow=74,SNR=161						
H10N3	**ASCENSION HYDR**	**5.96**	**203**	T	T	02 00 53.0	
	baz=17,slow=74,SNR=105						
H10S2	**ASCENSION HYDR**	**7.04**	**200**	T	T	02 02 38.1	
	baz=197,slow=74						
H10S3	**ASCENSION HYDR**	**7.04**	**200**	T	T	02 02 51.6	
	baz=23,slow=74						
DBIC	**Dimbokro**	**11.54**	**39**	Pn	Pn	01 55 43.4	+0.2
	0.5nm,0.3s,baz=254,slow=14,SNR=5.8						
DBIC				Sn	Sn	01 57 55.8	+2.8
	0.1nm,0.3s,baz=159,slow=12,SNR=1.8						
DBIC				LR	LR	01 59 30.0	
	comp=Z,484nm,20.1s,baz=220,slow=34						
	4.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**20.64**	**42**	P	P	01 57 37.7	-0.6
	6.9nm,0.9s,baz=226,slow=12,SNR=20						
TORD				LR	LR	02 04 54.9	
	comp=Z,244nm,20.0s,baz=237,slow=35						
	6.9nm,0.9s						
RCBR	**Riachuelo**	**23.89**	**261**	LR	LR	02 04 44.7	
	comp=Z,42nm,21.1s,baz=72,slow=30						
TSUM	**Tsumeb**	**33.63**	**122**	LR	LR	02 10 39.4	
	comp=Z,39nm,20.8s,baz=288,slow=32						
MDT	**Midelt**	**35.66**	**11**	LR	LR	02 14 17.8	
	comp=Z,142nm,18.5s,baz=199,slow=36						
BDFB	**Brasilia**	**37.69**	**247**	LR	LR	02 14 20.1	
	comp=Z,45nm,18.2s,baz=78,slow=34						
MDP	**Montagnes des**	**41.06**	**280**	LR	LR	02 14 12.2	
	comp=Z,30nm,18.3s,baz=271,slow=31						
LSZ	**Lusaka**	**41.85**	**110**	LR	LR	02 16 38.4	
	comp=Z,34nm,18.9s,baz=300,slow=34						
ESDC	**Sonseca Array**	**42.46**	**9**	LR	LR	02 18 28.4	
	comp=Z,72nm,18.6s,baz=177,slow=36						
LBTB	**Lobatse**	**42.85**	**125**	LR	LR	02 16 04.8	
	comp=Z,26nm,18.3s,baz=262,slow=32						
MBAR	**Mbarara**	**42.96**	**88**	LR	LR	02 17 20.7	
	comp=Z,104nm,20.1s,baz=262,slow=34						
CPUP	**Villa Florida**	**49.44**	**237**	LR	LR	02 19 46.8	
	comp=Z,71nm,20.8s,baz=60,slow=33						
FURI	**Furi**	**51.92**	**77**	LR	LR	02 21 57.5	
	comp=Z,44nm,21.7s,baz=328,slow=34						
DAVOX	**Davos/Dischmat**	**52.61**	**19**	LR	LR	02 25 13.0	
	comp=Z,101nm,19.7s,baz=154,slow=37						
EIL	**Eilat**	**55.13**	**51**	LR	LR	02 27 34.5	
	comp=Z,109nm,18.4s,baz=294,slow=38						
GERES	**GERESS Array B**	**55.69**	**20**	P	P	02 02 35.1	-0.1
	1.0nm,0.7s,baz=203,slow=6.3,SNR=8.1						
	1.0nm,0.7s						
LPAZ	**La Paz**	**56.72**	**252**	LR	LR	02 24 45.9	
	comp=Z,75nm,21.1s,baz=64,slow=34						
VRAC	**Vranov**	**57.12**	**22**	LR	LR	02 29 15.6	
	comp=Z,78nm,18.3s,baz=174,slow=38						
MLR	**Muntele Rosu**	**58.38**	**31**	LR	LR	02 29 39.7	
	comp=Z,154nm,18.5s,baz=229,slow=38						
AKASG	**Malin Array Be**	**63.54**	**28**	LR	LR	02 31 30.8	
	comp=Z,10nm,19.5s,baz=230,slow=36						
PLCA	**Paso Flores**	**64.89**	**226**	LR	LR	02 28 56.0	
	comp=Z,36nm,19.6s,baz=108,slow=33						
HFS	**Hagfors**	**65.46**	**14**	LR	LR	02 33 27.3	
	comp=Z,73nm,18.0s,baz=267,slow=37						
NOA	**NORSAR Array B**	**65.71**	**12**	LR	LR	02 31 43.5	
	comp=Z,8.6nm,20.4s,baz=210,slow=35						
JTS	**Las Juntas de**	**73.47**	**281**	LR	LR	02 37 54.6	
	comp=Z,17nm,18.2s,baz=97,slow=37						
ARCES	**ARCESS Array B**	**76.08**	**13**	LR	LR	02 37 53.5	
	comp=Z,36nm,19.6s,baz=256,slow=35						
AKTO	**Aktyubinsk**	**79.31**	**38**	LR	LR	02 44 04.0	
	comp=Z,43nm,18.0s,baz=54,slow=39						
AAK	**Ala-Archa**	**89.11**	**47**	LR	LR	02 49 55.4	
	comp=Z,58nm,18.2s,baz=258,slow=38						
MKAR	**Makanchi Array**	**94.75**	**43**	P	P	02 06 20.9	+0.2
	0.2nm,0.6s,baz=262,slow=5.0,SNR=2.5						
MKAR				LR	LR	02 53 18.7	
	comp=Z,16nm,20.7s,baz=320,slow=38						
	0.2nm,0.6s						
NRIK	**Noril'sk**	**95.59**	**21**	LR	LR	02 54 12.2	
	comp=Z,35nm,18.1s,baz=305,slow=38						

*NEIC **07** 02:03:31.3±2.5,5.˚44N±0.˚06×126.˚54E±0.˚09,h10km±1km, mb4.7/18, Error ellipse: s-maj=14.8km s-min=9.6km az=78.0*

*DJA **07** 02:03:34.1±1.1,5.˚N±8.˚×12.˚6E±.˚,h44km±48km,M4.6/16, mB5.1/6,mb4.7/8,MLv4.7/16,Mw(mB)4.5/6*

*IDC **07** 02:03:36.4±1.4,5.˚31N×126.˚38E,h55km±11km,mb4.0/22, mbtmp4.3/22,MS2.9/4, Error ellipse: s-maj=30.5km s-min=9.0km az=69.0*

ISC 07 02:03:37.9±0.4,5.˚31N±0.˚05×126.˚40E±0.˚09,h66km,n73, σ1°44/73,mb4.4/36,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.83**	**208**	P	**Pn**	**02 04 05.2**	**-1.9**
SGSI				S	**Sn**	**02 04 29.0**	**-0.3**
DAV	**Davao City (W)**	**1.93**	**335**	P	**Pn**	**02 04 07.0**	**-1.5**
	457nm,0.3s,baz=252,slow=15,SNR=4.0						
DAV				S	**Sn**	**02 04 31.3**	**-0.6**
	633nm,0.4s,baz=282,slow=18,S

USRK	**Ussuriysk Ar.**	**39.05**	**6**	P		**P**		**02 10 59.0**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=194,slow=5.2,SNR=4.0								
	comp=Z,2.4nm,0.7s								
USRK	**Ussuriysk Ar.**	**39.05**	**6**	P		**P**		**02 10 59.0**	**+0.7**
XLT	**XiLinHaoTe**	**39.50**	**348**	*eP*		**P**		**02 11 02.0**	**-0.1**
XLT				pP		pP		02 11 17.6	-0.3
XLT				pmax		pmax			
	comp=Z,5.0nm,0.9s								
STKA	**Stephens Creek**	**39.71**	**160**	P		**P**		**02 11 04.2**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=338,slow=8.7,SNR=6.8								
	comp=Z,3.2nm,0.6s								
STKA	**Stephens Creek**	**39.71**	**160**	IAmb		IAmb		02 11 25.9	
	comp=Z,26nm,1.0s								
H11N1	**WAKE ISLAND Hy**	**41.91**	**66**	T		T		02 55 50.4	
	baz=255,slow=74,SNR=18								
H11N2	**WAKE ISLAND Hy**	**41.92**	**66**	T		T		02 55 49.8	
	baz=255,slow=74,SNR=19								
H11N3	**WAKE ISLAND Hy**	**41.93**	**66**	T		T		02 55 51.0	
	baz=255,slow=74,SNR=19								
HILR	**Hailar Array B**	**44.45**	**354**	P		**P**		**02 11 42.9**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=169,slow=11,SNR=6.0								
	comp=Z,3.1nm,0.7s								
SONM	**Songino Array**	**45.71**	**341**	P		**P**		**02 11 51.7**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=151,slow=8.4,SNR=8.6								
SONM				PcP		**PcP**		**02 13 29.5**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=162,slow=2.6,SNR=5.0								
	comp=Z,0.9nm,0.6s								
SONM	**Songino Array**	**45.71**	**341**	IAmb		IAmb		02 11 52.5	
	comp=Z,1.7nm,1.0s								
WMQ	**Urumqi**	**51.25**	**325**	*eP*		**P**		**02 12 36.6**	**+1.5**
WMQ				PcP		**PcP**		**02 13 54.0**	**+4.5**
WMQ				PP		PP		02 14 40.2	+7.6
PETK	**Petropavlovsk-**	**54.11**	**23**	P		**P**		**02 12 56.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=220,slow=7.3,SNR=1.6								
	comp=Z,2.6nm,0.8s								
MKAR	**Makanchi Array**	**56.08**	**325**	P		**P**		**02 13 09.5**	**-0.8**
	comp=Z,4.6nm,0.5s,baz=120,slow=7.8,SNR=108								
MKAR				PcP		**PcP**		**02 14 07.0**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=111,slow=5.6,SNR=5.2								
MKAR				ScP		**ScP**		**02 18 02.2**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=130,slow=4.5,SNR=4.4								
	comp=Z,4.6nm,0.5s								
MKAR	**Makanchi Array**	**56.08**	**325**			**P**		**02 13 09.7**	**-0.6**
MAKZ	**Makanchi**	**56.27**	**325**			**P**		**02 13 10.9**	**-0.7**
MAKZ				IAmb		IAmb		02 13 11.3	
	comp=Z,4.1nm,0.6s								
KSH2	**Kashi**	**56.85**	**314**	P		**P**		**02 13 15.3**	**-0.8**
KSH2				pmax		pmax			
	comp=Z,3.0nm,1.0s								
ZALV	**Zalesovo Beam**	**59.04**	**333**	P		**P**		**02 13 29.2**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=134,slow=7.1,SNR=7.3								
	comp=Z,1.4nm,0.5s								
ZALV	**Zalesovo Beam**	**59.04**	**333**	P		**P**		**02 13 28.8**	**-2.1**
DRK	**Karamyk**	**59.69**	**313**	P		**P**		**02 13 35.0**	**-1.1**
DRK				IAmb		IAmb		02 13 36.9	
	comp=Z,7.1nm,1.0s								
KURBB	**Kurchatov Arra**	**60.24**	**327**	P		**P**		**02 13 38.1**	**-1.1**
	comp=Z,4.5nm,0.6s,baz=124,slow=6.8,SNR=56								
	comp=Z,4.5nm,0.6s								
KURK	**Kurchatov**	**60.24**	**327**			**P**		**02 13 38.2**	**-1.1**
GAR	**Garm**	**60.62**	**312**	P		**P**		**02 13 41.7**	**-0.6**
BVAR	**Borovoye Array**	**65.83**	**327**	P		**P**		**02 14 15.0**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=134,slow=8.5,SNR=13								
	comp=Z,2.4nm,0.8s								
BORK	**Borovoye**	**65.88**	**327**	P		**P**		**02 14 15.7**	**-0.9**
BORK				IAmb		IAmb		02 14 16.5	
	comp=Z,3.7nm,0.8s								
NRIK	**Noril'sk**	**68.83**	**346**	P		**P**		**02 14 34.7**	**-0.2**
	comp=Z,6.1nm,0.7s,baz=121,slow=6.7,SNR=15								
	comp=Z,6.1nm,0.7s								
NRIK	**Noril'sk**	**68.83**	**346**	P		**P**		**02 14 35.1**	**+0.2**
NRIK				IAmb		IAmb		02 14 35.6	
	comp=Z,5.9nm,0.7s								
AB31	**Akbulak array**	**70.73**	**320**	P		**P**		**02 14 45.5**	**-1.5**
AB31				IAmb		IAmb		02 14 46.7	
	comp=Z,2.0nm,0.7s								
ABKAR	**Akbulak array**	**70.73**	**320**	P		**P**		**02 14 45.8**	**-1.2**
ILAR	**Eielson Array**	**83.83**	**25**	P		**P**		**02 15 58.5**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=245,slow=5.2,SNR=5.9								
	comp=Z,0.3nm,0.6s								
BMAR	**Burnt Mountain**	**84.76**	**23**	P		**P**		**02 16 05.5**	**+0.8**
ARCES	**ARCESS Array B**	**88.86**	**340**	P		**P**		**02 16 23.6**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=90,slow=6.1,SNR=5.7								
	comp=Z,2.3nm,0.6s								
SPITS	**Spitsbergen Ar**	**88.88**	**349**	P		**P**		**02 16 24.6**	**+0.1**
	comp=Z,5.7nm,0.9s,baz=92,slow=9.2,SNR=19								
	comp=Z,5.7nm,0.9s								
FINES	**FINESS Array B**	**90.30**	**332**	P		**P**		**02 16 30.6**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=48,slow=4.7,SNR=15								
	comp=Z,1.5nm,0.6s								
HFS	**Hagfors**	**96.48**	**332**	P		**P**		**02 16 58.2**	**-1.7**
	comp=Z,1.3nm,0.8s,baz=134,slow=4.2,SNR=4.7								
	comp=Z,1.3nm,0.8s								
NOA	**NORSAR Array B**	**97.24**	**334**	P		**P**		**02 17 01.6**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=66,slow=4.4,SNR=2.3								
	comp=Z,0.5nm,0.7s								

*IDC **07** 02:15:59.9±0.7,35°.02N×26°.63E,h0km,mb4.0/18, mbtmp3.9/29,ML3.5/10,Error ellipse: s-maj=16.2km s-min=10.3km az=179.0*

*GII **07** 02:16:01.8±0.0,34°.958N±0°.003×26°.833E±0°.001,h0km, Mws4.2,confirmed*

*NEIC **07** 02:16:02.5±2.2,35°.01N±0°.05×26°.61E±0°.05,h10km±1km, mb4.1/22,Error ellipse: s-maj=9.3km s-min=5.0km az=148.0*

*ATH **07** 02:16:02.5,35°.00N×26°.64E,h7km±2km,ML3.9/7,Manual Solution by A.Papageorgiou First location: 2020/02/07 02:17:39, This location: 2020/02/07 02:24:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*

*ISK **07** 02:16:02.3,35°.00N×26°.58E,h15km,ML4.0/15*

*THE **07** 02:16:04.9,35°N±23°×2°7E±3°5,h0km±28km,M3.8/8, ML h3.8/8*

*AFAD **07** 02:16:05.7,35°.24N×26°.91E,h13km±1km,MW4.3*

ISC 07 02:16:01.0±1.1,34°.88N±0°.04×26°.64E±0°.02,h10km±7km, n208,σ1§28/247,mb4.1/27,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.42**	**304**	Pg	**Pg**	**02 16 09.5**	**+0.2**
ZKR				Sg	**Sg**	**02 16 14.5**	**-0.3**
ZKR	**Zakros**	**0.42**	**304**	P	**Pg**	**02 16 09.4**	**+0.2**
ZKR				S	**Sg**	**02 16 14.6**	**-0.3**
ZKR	**Zakros**	**0.42**	**304**	P	**Pg**	**02 16 09.1**	**-0.2**
ZKR				S	**Sg**	**02 16 14.6**	**-0.3**
SIT2	**Siteia**	**0.55**	**306**	P	**Pg**	**02 16 11.1**	**-0.5**
SIT2				S	**Sg**	**02 16 18.7**	**-0.2**
KARP	**Karpathos**	**0.79**	**32**		**Sg**	**02 16 16.0**	**-0.2**
KARP				Sg	**Sg**	**02 16 25.4**	**-1.2**
KARP	**Karpathos**	**0.79**	**32**	Pg	**Pg**	**02 16 15.9**	**-0.4**
KARP				Sg	**Sg**	**02 16 27.0**	**+0.5**
KARP	**Karpathos**	**0.79**	**32**	P	**Pg**	**02 16 15.8**	**-0.4**
KARP				S	**Sg**	**02 16 26.5**	**-0.1**
KARP	**Karpathos**	**0.79**	**32**	P	**Pg**	**02 16 15.9**	**-0.4**
KARP				S	**Sg**	**02 16 25.7**	**-0.8**
NPS	**Neapolis**	**0.93**	**294**	P	**Pg**	**02 16 18.3**	**-0.6**
NPS	**Neapolis**	**0.93**	**294**	P	**Pb**	**02 16 18.7**	**-0.5**
NPS				S	**Sg**	**02 16 31.3**	**+0.3**
IACM	**Heraklion**	**1.36**	**289**	P	**Pb**	**02 16 27.2**	**+0.7**
IACM	**Heraklion**	**1.36**	**289**	P	**Pb**	**02 16 27.7**	**+1.2**
IDI	**Anoyia**	**1.50**	**286**	Pn	**Pn**	**02 16 26.5**	**-1.4**
	29nm,0.3s,baz=106,slow=16,SNR=98						
IDI				Sn	**Sg**	**02 16 48.9**	**-0.2**
	88nm,0.3s,baz=149,slow=20,SNR=9.8						
IDI	**Anoyia**	**1.50**	**286**		**Pg**	**02 16 29.9**	**+0.2**
IDI	**Anoyia**	**1.50**	**286**	Pn	**Pn**	**02 16 28.1**	**+0.1**
IDI				Sn	**Sn**	**02 16 46.6**	**-1.0**
IDI	**Anoyia**	**1.50**	**286**	P	**Pg**	**02 16 29.4**	**-0.3**
IDI	**Anoyia**	**1.50**	**286**	P	**Pg**	**02 16 29.6**	**-0.1**
THERA	**Ancient Thera,**	**1.76**	**328**	P	**Pn**	**02 16 30.8**	**-0.8**
THERA	**Ancient Thera,**	**1.76**	**328**	P	**Pn**	**02 16 31.8**	**+0.1**
THR8	**Santorini-Mono**	**1.79**	**328**	P	**Pn**	**02 16 31.6**	**-0.4**
THR8	**Santorini-Mono**	**1.79**	**328**	P	**Pn**	**02 16 31.4**	**-0.6**
ARG	**Arkhangelos**	**1.80**	**42**		**Pg**	**02 16 34.8**	**-0.7**
ARG	**Arkhangelos**	**1.80**	**42**	Pn	**Pn**	**02 16 33.0**	**+0.9**
ARG	**Arkhangelos**	**1.80**	**42**	P	**Pb**	**02 16 34.0**	**0.0**
ARG				S	**Sn**	**02 16 55.0**	**0.0**
THR9	**Santorini-Faro**	**1.81**	**325**	P	**Pn**	**02 16 32.6**	**+0.3**
THR9	**Santorini-Faro**	**1.81**	**325**	P	**Pn**	**02 16 32.5**	**+0.3**
THRA	**Thira**	**1.82**	**328**	P	**Pn**	**02 16 33.1**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.83**	**327**	P	**Pn**	**02 16 32.6**	**+0.1**
SNT5	**Nea Kammeni, S**	**1.83**	**327**	P	**Pn**	**02 16 32.1**	**-0.4**
THR3	**Thira Island,**	**1.83**	**327**	P	**Pn**	**02 16 32.4**	**-0.2**
THR3	**Thira Island,**	**1.83**	**327**	P	**Pn**	**02 16 32.3**	**-0.2**
THR2	**Thira island,**	**1.85**	**328**	P	**Pn**	**02 16 32.7**	**-0.1**
SAP3	**Santorini-Thir**	**1.88**	**326**	P	**Pn**	**02 16 33.2**	**0.0**
SAP3	**Santorini-Thir**	**1.88**	**326**	P	**Pn**	**02 16 33.7**	**+0.5**
YAZI	**Mula-Dat§a-**	**1.91**	**20**	P	**Pn**	**02 16 33.8**	**+0.1**
YAZI				S	**Sn**	**02 16 54.1**	**-3.7**
YAZI				IAML		02 17 00.0	
	comp=E,479nm,0.8s						
YAZI				IAML		02 17 02.0	
	comp=N,574nm,0.7s						
DAT	**Datca**	**1.99**	**22**	P	**Pn**	**02 16 36.5**	**+1.6**
DAT				S	**Sn**	**02 16 57.5**	**-2.5**
DAT				IAML		02 17 07.0	
	comp=N,876nm,0.5s						
DAT				IAML		02 17 08.0	
	comp=E,661nm,0.7s						
RODB	**Rodos**	**2.02**	**39**	P	**Pn**	**02 16 36.0**	**+0.8**
RDI1	**Rhodes Town Ha**	**2.03**	**39**	P	**Pn**	**02 16 36.4**	**+1.2**
VAM	**Vamos**	**2.07**	**285**	P	**Pb**	**02 16 38.0**	**-0.7**
VAM	**Vamos**	**2.07**	**285**	P	**Pb**	**02 16 37.9**	**-0.7**
KLNA	**Kalymnos**	**2.09**	**7**	P	**Pn**	**02 16 35.1**	**-1.0**
GVD	**Gavdhos**	**2.10**	**270**	Pn	**Pn**	**02 16 36.8**	**+0.5**
GVD	**Gavdhos**	**2.10**	**270**	P	**Pg**	**02 16 40.0**	**-1.3**
GVD	**Gavdhos**	**2.10**	**270**	P	**Pb**	**02 16 38.3**	**-1.0**
CHNB	**Souda**	**2.20**	**287**	P	**Pn**	**02 16 38.8**	**+1.2**
BODA	**Bodrum-Mula**	**2.24**	**16**	Pn	**Pn**	**02 16 38.6**	**+0.4**
BODT	**Bodrum**	**2.24**	**14**	Pn	**Pn**	**02 16 38.5**	**+0.3**
BODT				Sn	**Sn**	**02 17 05.4**	**-0.6**
IMMV	**Iera Moni Meta**	**2.26**	**286**	P	**Pb**	**02 16 40.9**	**-1.0**
BDRM	**Kayabasi**	**2.27**	**16**	P	**Pn**	**02 16 39.5**	**+0.9**
TURN	**Turunc**	**2.29**	**34**	Pn	**Pn**	**02 16 39.9**	**+1.0**
TURN	**Turunc**	**2.29**	**34**	P	**Pn**	**02 16 40.8**	**+1.9**
TURN				S	**Sn**	**02 17 07.0**	**-0.2**
TURN				IAML		02 17 16.0	
	comp=N,474nm,0.5s						
YKAV	**Yalikavak-Bodr**	**2.30**	**13**	Pn	**Pn**	**02 16 39.3**	**+0.4**
KNDR	**Palaiochora Ch**	**2.50**	**279**	P	**Pn**	**02 16 43.4**	**+1.7**
DALY	**Dalyan (Mula)**	**2.53**	**40**	Pn	**Pn**	**02 16 43.7**	**+1.6**
MHLO	**Agia Marina, M**	**2.56**	**315**	P	**Pn**	**02 16 43.6**	**+1.0**
MLSB	**Milas**	**2.58**	**21**	Pn	**Pn**	**02 16 43.7**	**+0.9**
YER	**Yerkesik**	**2.61**	**30**	Pn	**Pn**	**02 16 44.3**	**+1.0**
IZZE	**Mula-Seydike**	**2.61**	**53**	P	**Pn**	**02 16 44.8**	**+1.5**
FETY	**Fethiye**	**2.65**	**48**	P	**Pn**	02 16 35.0	-8.7
SABU	**Mula-Dalaman**	**2.71**	**44**	P	**Pn**	**02 16 46.2**	**+1.6**
SABU				S	**Sn**	**02 17 20.2**	**+2.8**
SABU				IAML		02 17 32.0	
	comp=N,303nm,0.5s						
SABU				IAML		02 17 36.0	
	comp=E,318nm,1.1s						
KSL	**Kastellorizon**	**2.71**	**61**	P	**Pn**	**02 16 45.8**	**+1.2**
MULA	**Mugla, Merkez-**	**2.73**	**29**	P	**Pn**	**02 16 46.9**	**+1.9**
MULA				S	**Sn**	**02 17 16.0**	**-2.1**
MULA				IAML		02 17 27.0	
	comp=E,384nm,0.7s						
MULA				IAML		02 17 29.0	
	comp=N,205nm,0.9s						
AKAS	**Kas**	**2.77**	**60**		**Pn**	**02 16 47.2**	**+1.6**
AKAS	**Kas**	**2.77**	**60**	Pn	**Pn**	**02 16 47.1**	**+1.6**
AKAS	**Kas**	**2.77**	**60**	P	**Pn**	**02 16 47.0**	**+1.5**
SMG	**Samos**	**2.83**	**3**	P	**Pn**	**02 16 45.1**	**-1.2**
GCAM	**G?zelcaml?**	**2.85**	**9**	Pn	**Pn**	**02 16 46.8**	**+0.2**
GCAM	**G?zelcaml?**	**2.85**	**9**	P	**Pb**	**02 16 50.4**	**-1.6**
CAME	**Cameli-Denizli**	**2.98**	**46**	Pn	**Pn**	**02 16 50.3**	**+1.8**
DNZT	**Denizli-Tavas-**	**3.07**	**38**	P	**Pn**	**02 16 51.4**	**+1.7**
KNIK	**Mula-Seydike**	**3.08**	**50**	P	**Pn**	**02 16 51.7**	**+1.8**
CAEL	**Denizli, Camel**	**3.12**	**43**	P	**Pn**	**02 16 52.1**	**+1.9**
TAVA	**DENIZLI_Tavas**	**3.17**	**35**	P	**Pn**	**02 16 52.5**	**+1.9**
ESEN	**Aydn-Nazilli**	**3.22**	**25**	P	**Pn**	**02 16 52.9**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**3.22**	**18**	Pn	**Pn**	**02 16 52.6**	**+0.8**
ELL	**Elmali**	**3.24**	**54**		**Pn**	**02 16 54.5**	**+2.4**
ELL	**Elmali**	**3.24**	**54**	Pn	**Pn**	**02 16 53.9**	**+1.8**
GOLH	**Golhisar**	**3.33**	**44**	P	**Pn**	**02 16 55.3**	**+2.0**
AKUM	**Antalya-Kumluc**	**3.34**	**63**	P	**Pn**	**02 16 55.0**	**+1.7**
NAZL	**Nazilli-Aydin**	**3.35**	**23**	Pn	**Pn**	**02 16 54.6**	**+1.1**
DNIZ	**Denizli-Tavas-**	**3.35**	**35**	P	**Pn**	**02 16 55.5**	**+1.9**
IZMR	**zmir-demi**	**3.42**	**18**	P	**Pn**	**02 16 56.0**	**+1.6**
KIRA	**zmir-Kiraz**	**3.60**	**23**	P	**Pn**	**02 16 58.2**	**+1.3**
SULTU	**Buldan**	**3.60**	**28**	P	**Pn**	**02 16 58.7**	**+1.7**
KORT	**Korkueli**	**3.68**	**54**	P	**Pn**	**02 17 00.5**	**+2.4**
INCE	**Denizli-Bozkur**	**3.68**	**39**	P	**Pn**	**02 16 59.4**	**+1.3**
KARB	**zmir-Karabur**	**3.78**	**357**	P	**Pn**	**02 16 59.0**	**-0.4**
DION	**Dionisos Attik**	**3.87**	**326**	P	**Pn**	**02 17 01.8**	**+1.2**
CAMT	**Merkez**	**3.90**	**8**	P	**Pn**	**02 17 03.9**	**+3.0**
MANT	**Manisa**	**3.92**	**23**		**Pn**	**02 17 02.4**	**+0.9**
MANT	**Manisa**	**3.92**	**23**	P	**Pn**	**02 17 02.4**	**+0.9**
BRDR	**BURDUR-Merkez**	**3.94**	**44**	P	**Pn**	**02 17 03.1**	**+1.5**
ZEDA	**zmir-Bergama**	**4.09**	**5**	P	**Pn**	**02 17 04.5**	**+0.9**
AKHS	**Akhisar**	**4.10**	**13**	P	**Pn**	**02 17 05.8**	**+2.0**
IZMD	**zmir-Dikili-**	**4.10**	**3**	P	**Pn**	**02 17 04.0**	**+0.2**
STFN	**Stefani**	**4.13**	**324**	P	**Pn**	**02 17 05.8**	**+1.6**
PASA	**Karahalli, USA**	**4.15**	**33**	P	**Pn**	**02 17 05.0**	**+0.5**
VLX	**Vlachokerasia**	**4.25**	**307**	P	**Pn**	**02 17 06.9**	**+0.9**
USAK	**Uak-Merkez**	**4.27**	**26**	P	**Pn**	**02 17 07.5**	**+1.3**
ISP	**Isparta**	**4.29**	**46**		**Pn**	**02 17 07.7**	**+1.2**
ISP	**Isparta**	**4.29**	**46**	P	**Pn**	**02 17 07.1**	**+0.7**
ISP				S	**Sn**	**02 17 53.3**	**-3.3**
SIGR	**SIGRI**	**4.37**	**352**	P	**Pn**	**02 17 07.0**	**-0.4**
KZIL	**AFYON_Kizioren**	**4.39**	**39**	P	**Pn**	**02 17 08.0**	**+0.2**
ITM	**Ithomi**	**4.46**	**302**		**Pn**	**02 17 10.1**	**+1.4**
DEMI	**Demirci**	**4.47**	**21**	P	**Pn**	**02 17 10.4**	**+1.5**
BAGO	**Egridir - ISPA**	**4.56**	**46**	P	**Pn**	**02 17 10.6**	**+0.5**
AFYN	**Afyon-Dinar-K**	**4.59**	**41**	P	**Pn**	**02 17 11.4**	**+0.8**
BNAZ	**Uak-Banaz**	**4.59**	**33**	P	**Pn**	**02 17 11.1**	**+0.4**
GDZ	**Gediz**	**4.77**	**28**	P	**Pn**	**02 17 13.6**	**+0.4**
CSS	**Mathiatis**	**5.49**	**87**	Pn	**Pn**	**02 17 24.2**	**+1.3**
CSS	**Mathiatis**	**5.49**	**87**	P	**Pn**	**02 17 23.8**	**+0.9**
CSS				S	**Sn**	**02 18 23.6**	**-2.6**
ALN	**Alexandroupoli**	**6.02**	**356**	Pn	**Pn**	**02 17 30.5**	**+0.3**
RDO	**Rodhopi**	**6.32**	**352**	Pn	**Pn**	**02 17 34.2**	**0.0**
BR131	**Keskin Array S**	**7.38**	**47**		**Pn**	**02 17 49.9**	**+1.0**
BRTR	**Keskin Array B**	**7.38**	**47**	Pn	**Pn**	**02 17 49.7**	**+0.8**
	0.4nm,0.3s,baz=214,slow=14,SNR=10						
BRTR				Sn	**Sn**	**02 19 11.6**	**-1.1**
	0.1nm,0.3s,baz=223,slow=27,SNR=1.8						
	1.3nm,0.5s						
SLTI	**Sal'it**	**7.49**	**108**	P	**Pn**	**02 17 49.3**	**-0.9**
SLTI				S	**Sn**	**02 19 13.7**	**-1.6**
MMAI	**Mount Meron Ar**	**7.51**	**102**	Pn	**Pn**	**02 17 50.9**	**+0.1**
	3.6nm,0.3s,baz=299,slow=14,SNR=14						
MMAI				Sn	**Sn**	**02 19 17.1**	**+1.2**
	5.0nm,0.3s,baz=263,slow=36,SNR=6.7						
	1.1nm,0.3s						
QRWL	**Qaraoun**	**7.60**	**98**	*eP*	**Pn**	**02 17 52.3**	**+0.3**
KZIT	**Kziot**	**7.63**	**119**	P	**Pn**	**02 17 52.1**	**-0.2**
KZIT				S	**Sn**	**02 19 17.8**	**-1.1**
GEM	**Giv'at Ha'Em**	**7.67**	**100**	P	**Pn**	**02 17 51.8**	**-0.9**
GEM				S	**Sn**	**02 19 17.7**	**-2.1**
AMAZ	**Amatzia**	**7.69**	**113**	P	**Pn**	**02 17 52.3**	**-0.8**
AMAZ				S	**Sn**	**02 19 19.2**	**-1.2**
HWQ	**Hawqa**	**7.70**	**92**	*eP*	**Pn**	**02 17 54.4**	**+1.1**
MMLI	**Mount Malkishu**	**7.71**	**106**	P	**Pn**	**02 17 52.3**	**-1.1**
MMLI				S	**Sn**	**02 19 18.9**	**-1.9**
NATI	**Neve Ativ**	**7.71**	**100**	P	**Pn**	**02 17 52.6**	**-0.8**
NATI				S	**Sn**	**02 19 18.9**	**-1.9**
RCY	**Rachaya**	**7.74**	**98**	*eP*	**Pn**	**02 17 53.7**	**-0.2**
KSHT	**Keshet**	**7.85**	**101**	P	**Pn**	**02 17 54.8**	**-0.5**
KSHT				S	**Sn**	**02 19 22.2**	**-2.1**
HMDT	**Nahal Hemdat**	**7.86**	**107**	P	**Pn**	**02 17 54.3**	**-1.1**
HMDT				S	**Sn**	**02 19 22.7**	**-1.8**
BEIL	**Beino**	**7.86**	**90**	*eP*	**Pn**	**02 17 55.5**	**0.0**
YTIR	**Yattir**	**7.92**	**114**	P	**Pn**	**02 17 55.8**	**-0.5**
YTIR				S	**Sn**	**02 19 24.9**	**-1.2**
UJAP	**Al Uja**	**7.93**	**109**	P	**Pn**	**02 17 55.9**	**-0.7**
UJAP				S	**Sn**	**02 19 24.4**	**-1.7**
DSI	**Dead Sea**	**8.03**	**112**	P	**Pn**	**02 17 57.1**	**-0.6**
DSI				S	**Sn**	**02 19 26.7**	**-1.9**
RMNI	**Mount Ramon**	**8.06**	**120**	P	**Pn**	**02 17 57.6**	**-0.7**
RMNI				S	**Sn**	**02 19 28.7**	**-0.8**
MSBI	**Mazada**	**8.13**	**114**	P	**Pn**	**02 17 58.3**	**-0.7**
MSBI				S	**Sn**	**02 19 29.2**	**-1.8**
GHAJ	**Ghor Haditha**	**8.29**	**113**		**Pn**	**02 18 04.2**	**+2.8**
GHAJ	**Ghor Haditha**	**8.29**	**113**	P	**Pn**	**02 18 00.6**	**-0.7**
GHAJ				S	**Sn**	**02 19 33.4**	**-1.6**
IDAN	**Idan**	**8.30**	**117**	P	**Pn**	**02 18 01.1**	**-0.4**
IDAN				S	**Sn**	**02 19 33.9**	**-1.4**
KRMI	**Paran Flat**	**8.31**	**123**	P	**Pn**	**02 18 01.1**	**-0.6**
KRMI				S	**Sn**	**02 19 34.7**	**-1.0**
PRNI	**Paran**	**8.37**	**120**	P	**Pn**	**02 18 02.1**	**-0.4**
PRNI				S	**Sn**	**02 19 35.4**	**-1.6**
ZFRI	**Zfri**	**8.38**	**119**	P	**Pn**	**02 18 02.4**	**-0.2**
ZFRI				S	**Sn**	**02 19 35.9**	**-1.3**
HRFI	**Mount Harif**	**8.58**	**122**	P	**Pn**	**02 18 07.0**	**+1.7**
HRFI				S	**Sn**	**02 19 40.9**	**-1.2**
MBRI	**Mt Berech**	**8.64**	**124**	P	**Pn**	**02 18 07.1**	**+0.9**
MBRI				S	**Sn**	**02 19 42.4**	**-1.3**
EIL	**Elat**	**8.74**	**124**	Pn	**Pn**	**02 18 09.3**	**+1.8**
	1.1nm,0.3s,baz=244,slow=2.6,SNR=9.3						
EIL				Sn	**Sn**	**02 19 42.0**	**-4.1**
	3.0nm,0.3s,baz=96,slow=3.5,SNR=5.6						
	2.6nm,0.3s						
EIL	**Elat**	**8.74**	**124**	P	**Pn**	**02 18 07.5**	**-0.1**
EIL				S	**Sn**	**02 19 45.4**	**-0.7**
ASF	**Jabal al Asfar**	**8.98**	**105**	Pn	**Pn**	**02 18 11.5**	**+0.7**
	0.4nm,0.3s,baz=290,slow=6.9,SNR=9.6						
ASF				Sn	**Sn**	**02 19 54.6**	**+2.6**
	0.5nm,0.3s,baz=298,slow=20,SNR=1.5						
	1.3nm,0.3s						
TIP	**Timpagrande**	**8.99**	**301**	Pn	**Pn**	**02 18 09.6**	**-1.4**
CEL	**Celeste**	**9.28**	**294**	Pn	**Pn**	**02 18 15.0**	**+0.1**
CUC	**Castrocucco**	**10.01**	**304**	Pn	**Pn**	**02 18 23.8**	**-1.0**
RAFF	**Raffo Rosso**	**10.21**	**287**	Pn	**Pn**	**02 18 28.0**	**+0.3**
VAE	**Valguarnera**	**10.22**	**288**	Pn	**Pn**	**02 18 28.7**	**+0.9**
	8.1nm,0.8s,baz=121,slow=18,SNR=2.0						
VAE				Sn	**Sn**	**02 20 21.1**	**-1.4**
	1.0nm,0.3s,baz=53,slow=20,SNR=3.8						
KEST	**Kesra**	**14.15**	**278**	Pn	**Pn**	**02 19 24.3**	**+2.7**
	baz=199,slow=22,SNR=1.4						
GNI	**Garni**	**15.29**	**65**	Pn	**Pn**	**02 19 39.4**	**+2.4**
	0.4nm,0.3s,baz=221,slow=11,SNR=3.1						
	5.9nm,0.9s						
GNI	**Garni**	**15.29**	**65**	IAmb	IAmb	02 20 10.3	
	comp=Z,13nm,1.2s						
KBZ	**Khabaz**	**15.35**	**50**	Pn	**Pn**	**02 19 39.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=271,slow=9.2,SNR=5.3						
	comp=Z,3.1nm,0.9s						
MAUC	**Maruska**	**15.87**	**338**	*eP*	Pn	02 19 27.4	-17
KIEV	**Kiev**	**15.91**	**6**	Pn	**Pn**	**02 19 44.1**	**-0.8**
KIEV				IAmb	IAmb	02 19 48.4	
	comp=Z,16nm,1.4s						
AKASG	**Malin Array Be**	**15.92**	**6**	Pn	**Pn**	**02 19 44.4**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=194,slow=11,SNR=8.0						
	comp=Z

ellipse: s-maj=7.0km s-min=3.8km az=76.2
IDC ***07*** *02:23:56.3ₛ0.6, 35°.07Nₓ26°.56E, h0ᵏᵐ, mb4.2/26, mbtmp4.1/36, ML3.7/10, MS3.4/13, Error ellipse: s-maj=14.2km s-min=9.9km az=175.0*
MCSM ***07*** *02:23:57.3ₛ0.6, 35°.N±.6″ₓ2°.7E±°, h10ᵏᵐ±3ᵏᵐ, mb4.4, mB4.2, MLv4.2, Mw(mB)3.3*
NEIC ***07*** *02:23:58.4ₛ2.6, 35°.00N±0°.05ₓ26°.58E±0°.05, h10ᵏᵐ±1ᵏᵐ, mb4.4/40, Error ellipse: s-maj=9.6km s-min=6.0km az=159.0*
ISK ***07*** *02:23:58.6, 34°.99Nₓ26°.61E, h6ᵏᵐ, ML4.3/19*
HLW ***07*** *02:24:00.0, 34°.92Nₓ26°.82E, h11ᵏᵐ±3ᵏᵐ, Ml4.4*
GII ***07*** *02:24:00.5±0.0, 34°.862N±0°.002ₓ26°.860E±0°.001, h0ᵏᵐ, Mws4.4, confirmed*
THE ***07*** *02:24:01.8, 35°.N±.6″ₓ2°.6E±°, h2ᵏᵐ±15ᵏᵐ, M3.9/11, MLh3.9/11*
ATH ***07*** *02:24:01.2, 35°.25Nₓ26°.53E, h5ᵏᵐ, Mw4.0, Moment Tensor Solution. s6 Moment tensor: Mrr-8.26; Mθθ4.26; Mφφ4.00; Mrθ5.79; Mθφ-3.03; Mφr-8.16; Fault plane solution: NP1:φₛ322.00000°, δ71.00000°, λ-86.00000°. NP2:φₛ129.00000°, δ19.00000°, λ-103.00000°.*
AFAD ***07*** *02:24:02.6, 35°.25Nₓ26°.83E, h19ᵏᵐ±2ᵏᵐ, MW4.4*
ISC 07 02:23:58.9±0.8, **34°.94N**±0°.03ₓ**26°.59E**±0°.02, **h16**ᵏᵐ±5ᵏᵐ, **n394**,σ1°**67**/454, **mb4.4**/54, **MS3.4**/10, **21C-20D**, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.35**	**300**	Pg	**Pg**	**02 24 06.0**	**-0.3**
ZKR				Sg	**Sg**	**02 24 11.0**	**-0.2**
ZKR	**Zakros**	**0.35**	**300**	P	**Pg**	**02 24 05.9**	**-0.3**
ZKR				S	**Sg**	**02 24 10.8**	**-0.5**
SIT2	**Siteia**	**0.48**	**304**	P	**Pg**	**02 24 07.9**	**-0.6**
SIT2				S	**Sg**	**02 24 13.3**	**-1.6**
KARP	**Karpathos**	**0.77**	**37**		**Pg**	**02 24 12.6**	**-1.3**
KARP	**Karpathos**	**0.77**	**37**	Pg	**Pg**	**02 24 12.9**	**-1.1**
KARP				Sg	**Sg**	**02 24 23.5**	**-0.6**
KARP	**Karpathos**	**0.77**	**37**	P	**Pg**	**02 24 12.8**	**-1.2**
KARP				S	**Sg**	**02 24 22.2**	**-1.9**
NPS	**Neapolis**	**0.86**	**292**	P	**Pg**	**02 24 15.2**	**-0.5**
NPS				S	**Sg**	**02 24 25.8**	**-1.3**
NPS	**Neapolis**	**0.86**	**292**	P	**Pg**	**02 24 15.1**	**-0.6**
NPS				S	**Sg**	**02 24 26.0**	**-1.1**
IACM	**Heraklion**	**1.30**	**287**	P	**Pb**	**02 24 24.0**	**+1.1**
IDI	**Anoyia**	**1.44**	**285**	Pn	**Pn**	**02 24 24.4**	**0.0**
	133nm,0.3s,baz=86,slow=21,SNR=217						
IDI				Sn	**Sn**	**02 24 44.6**	**+1.7**
	156nm,0.3s,baz=338,slow=20,SNR=8.3						
IDI				LR	LR	02 25 16.2	
	comp=Z,2μm,20.6s,baz=64,slow=58						
IDI	**Anoyia**	**1.44**	**285**		**Pn**	**02 24 25.6**	**+1.3**
IDI	**Anoyia**	**1.44**	**285**	Pn	**Pn**	**02 24 26.2**	**+1.9**
IDI				Sn	**Sg**	**02 24 45.9**	**+0.6**
IDI	**Anoyia**	**1.44**	**285**	P	**Pn**	**02 24 25.6**	**+1.3**
IDI				S	**Sg**	**02 24 45.4**	**+0.1**
IDI	**Anoyia**	**1.44**	**285**	P	**Pn**	**02 24 26.2**	**+1.9**
IDI				S	**Sg**	**02 24 45.3**	**0.0**
THERA	**Ancient Thera,**	**1.69**	**328**	P	**Pn**	**02 24 27.5**	**-0.3**
THERA				S	**Sn**	**02 24 47.5**	**-1.6**
THERA	**Ancient Thera,**	**1.69**	**328**	P	**Pn**	**02 24 27.4**	**-0.3**
THR6	**Thira Island,**	**1.72**	**326**	P	**Pn**	**02 24 28.4**	**+0.2**
THR8	**Santorini-Mono**	**1.72**	**329**	P	**Pn**	**02 24 27.9**	**-0.3**
THR9	**Santorini-Faro**	**1.74**	**325**	P	**Pn**	**02 24 28.5**	**+0.1**
THRA	**Thira**	**1.75**	**328**	P	**Pn**	**02 24 28.6**	**0.0**
SNT5	**Nea Kammeni, S**	**1.76**	**327**	P	**Pn**	**02 24 28.7**	**0.0**
THR3	**Thira Island,**	**1.76**	**327**	P	**Pn**	**02 24 28.6**	**-0.1**
THR2	**Thira island,**	**1.77**	**328**	P	**Pn**	**02 24 27.9**	**-1.1**
ARG	**Arkhangelos**	**1.79**	**44**		**Pn**	**02 24 31.3**	**+2.2**
ARG	**Arkhangelos**	**1.79**	**44**	Pn	**Pn**	**02 24 30.6**	**+1.4**
ARG				Sn	**Sn**	**02 24 53.3**	**+1.8**
ARG	**Arkhangelos**	**1.79**	**44**	P	**Pn**	**02 24 31.3**	**+2.2**
ARG				S	**Sn**	**02 24 53.5**	**+2.0**
ARG	**Arkhangelos**	**1.79**	**44**	P	**Pn**	**02 24 31.3**	**+2.2**
ARG	**Arkhangelos**	**1.79**	**44**	P	**Pn**	**02 24 30.6**	**+1.4**
ARG				S	**Sn**	**02 24 52.8**	**+1.2**
SAP3	**Santorini-Thir**	**1.81**	**326**	P	**Pn**	**02 24 30.0**	**+0.6**
SAP3	**Santorini-Thir**	**1.81**	**326**	P	**Pn**	**02 24 29.2**	**-0.2**
SAP3				S	**Sn**	**02 24 49.5**	**-2.4**
YAZI	**Mula-Dat§a-**	**1.88**	**22**	P	**Pn**	**02 24 30.9**	**+0.6**
YAZI				S	**Sn**	**02 24 51.2**	**-2.4**
YAZI				IAML		02 24 58.0	
	comp=E,808nm,1.0s						
YAZI				IAML		02 24 59.0	
	comp=N,1μm,0.5s						
DAT	**Datca**	**1.96**	**24**	P	**Pn**	**02 24 32.7**	**+1.1**
DAT				S	**Sn**	**02 24 53.8**	**-2.2**
DAT				IAML		02 25 04.0	
	comp=N,2μm,0.5s						
DAT				IAML		02 25 04.0	
	comp=E,885nm,0.4s						
RODB	**Rodos**	**2.01**	**41**	P	**Pn**	**02 24 34.0**	**+1.8**
VAM	**Vamos**	**2.01**	**284**	P	**Pn**	**02 24 34.3**	**+2.1**
RDI1	**Rhodes Town Ha**	**2.01**	**41**	P	**Pn**	**02 24 33.8**	**+1.6**
KLNA	**Kalymnos**	**2.04**	**9**	P	**Pn**	**02 24 31.7**	**-0.8**
GVD	**Gavdhos**	**2.06**	**268**	Pn	**Pn**	**02 24 35.5**	**+2.7**
GVD	**Gavdhos**	**2.06**	**268**	P	**Pb**	**02 24 36.8**	**+0.9**
GVD				S	**Sb**	**02 25 02.4**	**+1.2**
GVD	**Gavdhos**	**2.06**	**268**	P	**Pb**	**02 24 36.4**	**+0.5**
CHNB	**Souda**	**2.14**	**286**	P	**Pn**	**02 24 35.8**	**+2.0**
CHAN	**Chania**	**2.16**	**286**	P	**Pn**	**02 24 36.5**	**+2.2**
BODT	**Bodrum**	**2.20**	**15**	Pn	**Pn**	**02 24 35.9**	**+1.1**
BODT	**Bodrum**	**2.20**	**15**	P	**Pn**	**02 24 36.6**	**+1.8**
BODT				S	**Sn**	**02 25 01.2**	**-0.5**
BODA	**Bodrum-Mula**	**2.20**	**18**	Pn	**Pn**	**02 24 35.9**	**+1.1**
BDRM	**Kayabasi**	**2.23**	**18**	P	**Pn**	**02 24 36.0**	**+0.7**
YKAV	**Yalıkavak-Bodr**	**2.25**	**14**	Pn	**Pn**	**02 24 37.1**	**+1.6**
TURN	**Turunc**	**2.27**	**36**	Pn	**Pn**	**02 24 37.3**	**+1.5**
TURN	**Turunc**	**2.27**	**36**	P	**Pn**	**02 24 37.3**	**+1.5**
TURN				S	**Sn**	**02 25 02.8**	**-0.6**
TURN				IAML		02 25 13.0	
	comp=N,923nm,0.5s						
TURN				IAML		02 25 18.0	
	comp=E,612nm,0.4s						
KNDR	**Palaiochora Ch**	**2.45**	**278**	P	**Pn**	**02 24 40.9**	**+2.7**
MHLO	**Agia Marina, M**	**2.49**	**315**	P	**Pn**	**02 24 38.3**	**-0.5**
MHLO	**Agia Marina, M**	**2.49**	**315**	P	**Pn**	**02 24 39.5**	**+0.7**
DALY	**Dalyan (Mula)**	**2.52**	**41**	Pn	**Pn**	**02 24 40.3**	**+1.2**
MLSB	**Milas**	**2.54**	**22**	Pn	**Pn**	**02 24 40.4**	**+0.9**
DDIM	**Aydin, Didim**	**2.57**	**12**	P	**Pb**	**02 24 46.1**	**+1.5**
YER	**Yerkesik**	**2.59**	**32**	Pn	**Pn**	**02 24 41.4**	**+1.2**
YER	**Yerkesik**	**2.59**	**32**	P	**Pn**	**02 24 41.4**	**+1.2**
YER				S	**Sn**	**02 25 10.0**	**-1.3**
IZZE	**Mula-Seydike**	**2.62**	**54**	P	**Pn**	**02 24 41.2**	**+0.7**
FETY	**Fethiye**	**2.64**	**49**	P	Pn	02 24 33.7	-7.2
SABU	**Mula-Dalaman**	**2.70**	**45**	P	**Pn**	**02 24 42.8**	**+1.2**
SABU				IAML		02 24 50.0	
	comp=Z,433nm,0.5s						
SABU				S	**Sn**	**02 25 16.8**	**+2.8**
SABU				IAML		02 25 28.0	
	comp=N,475nm,0.5s						
SABU				IAML		02 25 41.0	
	comp=E,495nm,0.6s						
MULA	**Mugla, Merkez-**	**2.71**	**31**	P	**Pn**	**02 24 43.5**	**+1.7**
MULA				S	**Sn**	**02 25 13.7**	**-0.6**
MULA				IAML		02 25 24.0	
	comp=N,428nm,1.1s						
MULA				IAML		02 25 24.0	
	comp=E,688nm,0.9s						
KSL	**Kastellorizon**	**2.73**	**63**	P	**Pn**	**02 24 42.3**	**+0.3**
KSL	**Kastellorizon**	**2.73**	**63**	P	**Pn**	**02 24 43.1**	**+1.1**
SMG	**Samos**	**2.77**	**4**	P	**Pn**	**02 24 42.3**	**-0.4**
SMG				S	**Sn**	**02 25 09.5**	**-6.3**
SMG	**Samos**	**2.77**	**4**	P	**Pn**	**02 24 42.2**	**-0.5**
AKAS	**Kas**	**2.78**	**61**		**Pn**	**02 24 43.9**	**+1.1**
AKAS	**Kas**	**2.78**	**61**	Pn	**Pn**	**02 24 43.9**	**+1.1**
AKAS	**Kas**	**2.78**	**61**	P	**Pn**	**02 24 44.1**	**+1.2**
GCAM	**G?zelcaml?**	**2.81**	**11**	Pn	**Pn**	**02 24 44.7**	**+1.6**
GCAM	**G?zelcaml?**	**2.81**	**11**	P	**Pn**	**02 24 45.6**	**+2.5**
CAME	**Cameli-Denizli**	**2.98**	**47**	Pn	**Pn**	**02 24 46.9**	**+1.3**
DEMR	**Demre-Antalya**	**3.00**	**63**	Pn	**Pn**	**02 24 47.3**	**+1.5**
DNZT	**Denizli-Tavas-**	**3.06**	**39**	P	**Pn**	**02 24 48.3**	**+1.7**
DNZT				S	**Sn**	**02 25 21.6**	**-1.4**
DNZT				IAML		02 25 37.0	
	comp=N,630nm,0.9s						
DNZT				IAML		02 25 41.0	
	comp=E,523nm,0.7s						
KNIK	**Mula-Seydike**	**3.08**	**51**	P	**Pn**	**02 24 48.5**	**+1.5**
CAEL	**Denizli, Camel**	**3.11**	**45**	P	**Pn**	**02 24 49.1**	**+1.7**
DGB	**zmir**	**3.12**	**4**	P	**Pn**	**02 24 48.5**	**+1.1**
GMLD	**Gumuldur**	**3.15**	**5**	Pn	**Pn**	**02 24 49.5**	**+1.8**
TAVA	**DENIZLI_Tavas**	**3.15**	**36**	P	**Pn**	**02 24 49.3**	**+1.4**
KTHA	**Kythira Island**	**3.16**	**296**	P	**Pn**	**02 24 49.4**	**+1.4**
KTHA	**Kythira Island**	**3.16**	**296**	P	**Pn**	**02 24 48.7**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**3.18**	**19**	Pn	**Pn**	**02 24 50.3**	**+1.9**
ESEN	**Aydn-Nazilli**	**3.19**	**26**	P	**Pn**	**02 24 49.9**	**+1.5**
ELL	**Elmali**	**3.25**	**55**		**Pn**	**02 24 51.2**	**+1.9**
ELL	**Elmali**	**3.25**	**55**	Pn	**Pn**	**02 24 51.1**	**+1.8**
ELL	**Elmali**	**3.25**	**55**	P	**Pn**	**02 24 51.2**	**+1.9**
NPS1	**Neapolis Lacon**	**3.27**	**300**	P	**Pn**	**02 24 50.6**	**+1.1**
ZEYE	**Izmir, Urla-Ze**	**3.30**	**359**	P	**Pn**	**02 24 50.4**	**+0.6**
NAZL	**Nazilli-Aydin**	**3.32**	**24**	Pn	**Pn**	**02 24 51.9**	**+1.7**
GOLH	**Golhisar**	**3.33**	**46**	P	**Pn**	**02 24 52.1**	**+1.7**
DNIZ	**Denizli-Tavas-**	**3.33**	**36**	P	**Pn**	**02 24 52.5**	**+2.1**
DUVT	**Torbali**	**3.35**	**12**	P	**Pn**	**02 24 54.3**	**+3.7**
AKUM	**Antalya-Kumluc**	**3.36**	**65**	P	**Pn**	**02 24 51.7**	**+1.0**
MNVA	**Monemvasia**	**3.37**	**302**	P	**Pn**	**02 24 51.8**	**+0.9**
IZMR	**zmir-demi**	**3.38**	**19**	P	**Pn**	**02 24 52.6**	**+1.6**
VLI	**Veliai**	**3.46**	**302**	P	**Pn**	**02 24 52.9**	**+0.8**
CHOS	**Chios island**	**3.47**	**353**	P	**Pn**	**02 24 52.3**	**0.0**
CHOS	**Chios island**	**3.47**	**353**	P	**Pn**	**02 24 52.0**	**-0.3**
KARY	**Karystos**	**3.54**	**331**	P	**Pn**	**02 24 53.6**	**+0.3**
KIRA	**zmir-Kiraz**	**3.56**	**24**	P	**Pn**	**02 24 55.1**	**+1.4**
SULTU	**Buldan**	**3.57**	**29**	P	**Pn**	**02 24 55.5**	**+1.7**
SLUM	**Salum**	**3.62**	**199**	P	**Pn**	**02 24 56.0**	**+1.7**
INCE	**Denizli-Bozkur**	**3.67**	**40**	P	**Pn**	**02 24 55.9**	**+0.8**
VLY	**Voula,Athens**	**3.68**	**323**	P	**Pn**	**02 24 54.9**	**-0.3**
KORT	**Korkueli**	**3.68**	**55**	P	**Pn**	**02 24 56.9**	**+1.6**
BAGT	**Foa**	**3.72**	**3**	P	**Pn**	**02 24 56.6**	**+1.0**
KARB	**zmir-Karabur**	**3.72**	**358**	P	**Pn**	**02 24 56.0**	**+0.3**
CAMT	**Merkez**	**3.85**	**8**	P	**Pn**	**02 24 59.1**	**+1.6**
MANT	**Manisa**	**3.88**	**23**		**Pn**	**02 24 58.9**	**+0.7**
MANT	**Manisa**	**3.88**	**23**	P	**Pn**	**02 24 59.4**	**+1.3**
BRDR	**BURDUR-Merkez**	**3.93**	**45**	P	**Pn**	**02 25 00.8**	**+2.1**
ZEDA	**zmir-Bergama**	**4.04**	**5**	P	**Pn**	**02 25 00.5**	**+0.4**
IZMD	**zmir-Dikili-**	**4.05**	**4**	P	**Pn**	**02 25 00.7**	**+0.4**
AKHS	**Akhisar**	**4.05**	**14**	P	**Pn**	**02 24 59.6**	**-0.7**
PASA	**Karahalli, USA**	**4.13**	**34**	P	**Pn**	**02 25 01.8**	**+0.5**
USAK	**Uak-Merkez**	**4.24**	**27**	P	**Pn**	**02 25 04.2**	**+1.3**
ISP	**Isparta**	**4.29**	**47**		**Pn**	**02 25 04.2**	**+0.6**
ISP	**Isparta**	**4.29**	**47**	P||	**eP**	**Pn**	**02 25 04.2**	**+0.6**
ISP	**Isparta**	**4.29**	**47**	P	**Pn**	**02 25 04.3**	**+0.7**
KZIL	**AFYON_Kizioren**	**4.38**	**40**	P	**Pn**	**02 25 05.0**	**+0.2**
ITM	**Ithomi**	**4.39**	**302**		**Pn**	**02 25 06.7**	**+1.8**
DEMI	**Demirci**	**4.44**	**22**	P	**Pn**	**02 25 07.5**	**+1.8**
BAGO	**Egridir - ISPA**	**4.55**	**47**	P	**Pn**	**02 25 07.9**	**+0.7**
BNAZ	**Uak-Banaz**	**4.57**	**34**	P	**Pn**	**02 25 08.0**	**+0.5**
AFYN	**Afyon-Dinar-K**	**4.58**	**42**	P	**Pn**	**02 25 08.3**	**+0.7**
GDZ	**Gediz**	**4.75**	**28**	P	**Pn**	**02 25 10.9**	**+1.0**
EZN	**Ezine**	**4.88**	**358**	P	**Pn**	**02 25 11.1**	**-0.6**
	65nm,0.8s						
CSS	**Mathiatis**	**5.54**	**88**		**Pn**	**02 25 20.9**	**+0.2**
CSS	**Mathiatis**	**5.54**	**88**	P	**Pn**	**02 25 20.4**	**-0.3**
	0.5nm64nm,0.8s						
CSS	**Mathiatis**	**5.54**	**88**	P	**Pn**	**02 25 20.1**	**-0.6**
CSS				S	**Sn**	**02 26 21.4**	**-2.7**
SWA2		**5.76**	**190**	P	**Pn**	**02 25 25.9**	**+2.2**
SWA2				S	**Sn**	**02 26 27.6**	**-1.8**
ALN	**Alexandroupoli**	**5.97**	**356**		**Pn**	**02 25 26.9**	**+0.4**
ALN	**Alexandroupoli**	**5.97**	**356**	P	**Pn**	**02 25 26.9**	**+0.4**
RDO	**Rodhopi**	**6.25**	**353**		**Pn**	**02 25 31.1**	**+0.6**
RYAN	**Fayoum**	**6.62**	**151**	P	**Pn**	**02 25 36.0**	**+0.4**
RYAN				S	**Sn**	**02 26 46.2**	**-4.6**
VAY	**Valandovo**	**7.12**	**335**	*i* Pn	**Pn**	02 25 48.6	+6.3
KIRS	**Kirsehir-Merke**	**7.20**	**52**	P||	**eP**	**Pn**	**02 25 43.8**	**+0.2**
KEK	**Kerkira**	**7.21**	**313**	Pn	**Pn**	**02 25 42.9**	**-0.7**
BR105	**Keskin Array S**	**7.36**	**47**	P	**Pn**	**02 25 47.1**	**+1.3**
	0.0nm120nm11nm,0.8s						
BR104	**Keskin Array S**	**7.36**	**48**	P	**Pn**	**02 25 45.2**	**-0.7**
	0.0nm97nm14nm,0.8s						
BR106	**Keskin Array S**	**7.37**	**47**	P	**Pn**	**02 25 45.9**	**0.0**
	0.0nm109nm10nm,0.9s						
HNTI	**Hanita**	**7.37**	**102**	P	**Pn**	**02 25 44.8**	**-1.0**
HNTI				S	**Sn**	**02 27 06.4**	**-2.6**
BR131	**Keskin Array S**	**7.37**	**48**		**Pn**	**02 25 46.4**	**+0.4**
BR131	**Keskin Array S**	**7.37**	**48**	*de*P	**Pn**	**02 25 46.4**	**+0.4**
BRTR	**Keskin Array B**	**7.37**	**48**	Pn	**Pn**	**02 25 45.6**	**-0.4**
	0.8nm,0.3s,baz=225,slow=14,SNR=17						
BRTR				Sn	**Sn**	**02 27 09.0**	**-0.4**
	0.3nm,0.3s,baz=217,slow=25,SNR=2.0						
BRTR				LR	LR	02 29 30.4	
	comp=Z,420nm,21.4s,baz=225,slow=46						
	3.3nm,0.5s						
BRTR	**Keskin Array B**	**7.37**	**48**	*i* P	**Pn**	**02 25 47.0**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BLGI	**Bet Lehem HaGe**	**7.49**	**105**	P	**Pn**	**02 25 46.8**	**-0.6**
BLGI				S	**Sn**	**02 27 09.4**	**-2.6**
SLTI	**Sal'it**	**7.55**	**108**	P	**Pn**	**02 25 47.8**	**-0.4**
SLTI				S	**Sn**	**02 27 10.7**	**-2.8**
MMAI	**Mount Meron Ar**	**7.57**	**102**	Pn	**Pn**	**02 25 47.5**	**-1.1**
	comp=Z,6.4nm,0.3s,baz=300,slow=12,SNR=18						
MMAI				Sn	**Sn**	**02 27 11.0**	**-3.2**
	comp=Z,5.4nm,0.3s,baz=275,slow=34,SNR=3.1						
	comp=Z,4.0nm,0.4s						
OHR	**Ohrid**	**7.67**	**325**	*i* Pn	**Pn**	**02 25 53.8**	**+3.9**
KZIT	**Kziot**	**7.70**	**119**	P	**Pn**	**02 25 49.8**	**-0.5**
GEM	**Giv'at Ha'Em**	**7.72**	**100**	P	**Pn**	**02 25 50.1**	**-0.6**
GEM				S	**Sn**	**02 27 15.4**	**-2.4**
SALP	**Salfit**	**7.73**	**109**	P	**Pn**	**02 25 49.8**	**-1.0**
SALP				S	**Sn**	**02 27 15.7**	**-2.5**
AMAZ	**Amatzia**	**7.76**	**114**	P	**Pn**	**02 25 50.6**	**-0.6**
AMAZ				S	**Sn**	**02 27 15.9**	**-2.8**
NATI	**Neve Ativ**	**7.77**	**100**	P	**Pn**	**02 25 50.6**	**-0.7**
NATI				S	**Sn**	**02 27 16.7**	**-2.2**
MMLI	**Mount Malkishu**	**7.77**	**106**	P	**Pn**	**02 25 51.1**	**-0.3**
MMLI				S	**Sn**	**02 27 16.7**	**-2.4**
KSHT	**Keshet**	**7.91**	**102**	P	**Pn**	**02 25 52.6**	**-0.7**
KSHT				S	**Sn**	**02 27 20.2**	**-2.3**
HMDT	**Nahal Hemdat**	**7.92**	**107**	P	**Pn**	**02 25 52.6**	**-0.8**
HMDT				S	**Sn**	**02 27 19.7**	**-3.0**
YTIR	**Yattir**	**7.99**	**114**	P	**Pn**	**02 25 53.8**	**-0.6**
YTIR				S	**Sn**	**02 27 22.4**	**-2.1**
UJAP	**Al Uja**	**7.99**	**109**	P	**Pn**	**02 25 53.8**	**-0.5**
UJAP				S	**Sn**	**02 27 22.2**	**-2.2**
ELND	**Elena**	**8.00**	**356**	P||	**eP**	**Pn**	**02 25 55.8**	**+1.3**
DSI	**Dead Sea**	**8.09**	**112**	P	**Pn**	**02 25 55.3**	**-0.4**
DSI				S	**Sn**	**02 27 24.2**	**-2.7**
RMNI	**Mount Ramon**	**8.13**	**120**	P	**Pn**	**02 25 56.1**	**-0.3**
RMNI				S	**Sn**	**02 27 25.7**	**-2.3**
MSBI	**Mazada**	**8.20**	**114**	P	**Pn**	**02 25 57.1**	**0.0**
MSBI				S	**Sn**	**02 27 26.7**	**-2.7**
GHAJ	**Ghor Haditha**	**8.36**	**113**		**Pn**	**02 26 00.1**	**+0.8**
GHAJ	**Ghor Haditha**	**8.36**	**113**	P	**Pn**	**02 25 58.8**	**-0.5**
GHAJ				S	**Sn**	**02 27 30.9**	**-2.4**
IDAN	**Idan**	**8.37**	**117**	P	**Pn**	**02 25 58.8**	**-0.7**
BNN	**Bunyan**	**8.38**	**60**		**Pn**	**02 26 01.3**	**+1.5**
KRMI	**Paran Flat**	**8.38**	**123**	P	**Pn**	**02 25 59.3**	**-0.4**
KRMI				S	**Sn**	**02 27 29.7**	**-4.4**
PRNI	**Paran**	**8.44**	**120**	P	**Pn**	**02 26 00.1**	**-0.5**
PRNI				S	**Sn**	**02 27 33.2**	**-2.3**
ZFRI	**Zfri**	**8.45**	**119**	P	**Pn**	**02 26 00.3**	**-0.3**
ZFRI				S	**Sn**	**02 27 33.2**	**-2.5**
GRB	**Gharib**	**8.49**	**140**	P	**Pn**	**02 26 01.8**	**+0.6**
PLVB	**Pleven**	**8.57**	**350**	⇑P	**Pn**	**02 26 04.0**	**+1.7**
HRFI	**Mount Harif**	**8.65**	**122**	P	**Pn**	**02 26 03.1**	**-0.3**
HRFI				S	**Sn**	**02 27 38.4**	**-2.2**
MBRI	**Mt Berech**	**8.71**	**124**	P	**Pn**	**02 26 04.1**	**-0.2**
MBRI				S	**Sn**	**02 27 39.4**	**-2.8**
EIL	**Elat**	**8.81**	**124**	Pn	**Pn**	**02 26 06.2**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=317,slow=2.4,SNR=18						
EIL				Sn	**Sn**	**02 27 39.7**	**-4.9**
	comp=Z,4.7nm,0.3s,baz=100,slow=18,SNR=5.2						
	comp=Z,9.6nm,0.4s						
EIL	**Elat**	**8.81**	**124**	P	**Pn**	**02 26 04.9**	**-0.8**
EIL				S	**Sn**	**02 27 42.2**	**-2.4**
TR2	**Tor 2**	**8.92**	**135**	P	**Pn**	**02 26 07.2**	**+0.1**
TIP	**Timpagrande**	**8.92**	**301**	Pn	**Pn**	**02 26 06.1**	**-1.1**
TIP	**Timpagrande**	**8.92**	**301**	P	**Pn**	**02 26 06.1**	**-1.1**
	comp=Z,16nm,0.8s						
HBST	**Basata**	**8.96**	**127**	P	**Pn**	**02 26 08.0**	**+0.4**
HKAT	**Jabal Katrina**	**8.98**	**133**	P	**Pn**	**02 26 07.9**	**-0.2**
ASF	**Jabal al Asfar**	**9.04**	**105**	Pn	**Pn**	**02 26 08.4**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=9.8,slow=3.0,SNR=6.8						
ASF				Sn	**Sn**	**02 27 53.0**	**+2.8**
	comp=Z,0.7nm,0.3s,baz=87,slow=18,SNR=1.8						
	comp=Z,1.6nm,0.4s						
ICOR	**Ion Corvin**	**9.22**	**5**	⇑P	**Pn**	**02 26 13.1**	**+2.0**
HDHB	**Dhahab**	**9.22**	**130**	P	**Pn**	**02 26 11.8**	**+0.6**
PDG	**Podgorica**	**9.42**	**325**	⇓P	**Pn**	**02 26 14.3**	**+0.4**
HHRG	**Al Ghardaqah**	**9.74**	**140**	P	**Pn**	**02 26 21.9**	**+3.5**
CUC	**Castrocucco**	**9.94**	**304**		**Pn**	**02 26 20.4**	**-0.6**
AKRG	**Al Kharijah**	**9.99**	**159**	P	**Pn**	**02 26 23.0**	**+1.2**
GTR	**Jabal at Tayr**	**10.00**	**159**	P	**Pn**	**02 26 23.1**	**+1.1**
VAE	**Valguarnera**	**10.16**	**288**	Sn	**Sn**	**02 28 11.4**	**-6.3**
	comp=Z,0.5nm,0.3s,baz=119,slow=17,SNR=1.6						
CFR	**Carcaliu**	**10.30**	**6**	⇑P	**Pn**	**02 26 27.4**	**+1.5**
CFR	**Carcaliu**	**10.30**	**6**	P	**Pn**	**02 26 27.4**	**+1.5**
HERR	**Herculane**	**10.43**	**343**	⇑P	**Pn**	**02 26 29.2**	**+1.4**
MDVR	**Moldovita**	**10.52**	**341**	⇑P	**Pn**	**02 26 30.6**	**+1.6**
VOIR		**10.55**	**354**	⇑P	**Pn**	**02 26 30.1**	**+0.6**
VOIR		**10.55**	**354**	P	**Pn**	**02 26 30.1**	**+0.6**
GZR	**Gura Zlata**	**10.84**	**346**	⇑P	**Pn**	**02 26 34.4**	**+0.9**
GZR	**Gura Zlata**	**10.84**	**346**	P	**Pn**	**02 26 34.3**	**+0.9**
COVR	**Voineasa-Covas**	**10.90**	**359**	⇑P	**Pn**	**02 26 36.9**	**+2.7**
VRI	**Vrincioaia**	**10.92**	**1**	⇑P	**Pn**	**02 26 37.0**	**+2.5**
VRI	**Vrincioaia**	**10.92**	**1**	P	**Pn**	**02 26 36.9**	**+2.5**
DOPR	**Dopca**	**11.06**	**356**	⇓P	**Pn**	**02 26 38.4**	**+2.0**
APRS	**Wahet Paris**	**11.12**	**160**	P	**Pn**	**02 26 38.7**	**+1.4**
DEV	**Deva**	**11.29**	**347**	⇓P	**Pn**	**02 26 40.6**	**+1.1**
DEV	**Deva**	**11.29**	**347**	P	**Pn**	**02 26 40.5**	**+1.1**
BZS	**Buzias**	**11.32**	**342**	⇑P	**Pn**	**02 26 41.0**	**+1.1**
BZS	**Buzias**	**11.32**	**342**	P	**Pn**	**02 26 41.0**	**+1.1**
ASHG	**Umm Shaghir**	**12.44**	**158**	P	**Pn**	**02 26 57.5**	**+2.1**
BURAR	**Bucovina Array**	**12.71**	**356**	⇑P	**Pn**	**02 27 01.2**	**+2.2**
BURAR	**Bucovina Array**	**12.71**	**356**	P	**Pn**	**02 27 01.1**	**+2.2**
ANN	**Anapa**	**12.89**	**37**	*e*P	**Pn**	**02 27 02.7**	**+1.4**
ANN				*e*S	**Sn**	**02 29 30.0**	**+5.7**
ANN				pmax	pmax		
	comp=Z,32nm,0.8s						
SOC	**Sochi**	**13.33**	**46**	*e*P	**Pn**	**02 27 07.5**	**+0.1**
SOC				pmax	pmax		
	comp=Z,12nm,0.9s						
SOC				MLR	MLR		
	comp=Z,139nm,14.0s						
MPLH	**Magyarpolny**	**13.98**	**334**	P	**

comp=Z,7.0nm,1.0s
SENIN Lac Senin/Sane 18.51 314 P **P** **02 28 13.2 -1.3**
VSR Storozhevoye 18.64 25 *e*P **Pn** **02 28 17.6 +1.5**
VSR pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 19.08 333 *i* P **Pn** **02 28 23.2 +1.8**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.08 333 *i* P **Pn** **02 28 23.2 +1.8**
comp=Z,5.0nm,0.8s
MNK Minsk 19.58 2 *i* P **P** **02 28 24.6 -1.4**
comp=E,13nm,1.0s
MNK *i* P **P** **02 28 24.6 -1.4**
comp=N,16nm,1.0s
MNK *i* P **P** **02 28 24.6 -1.4**
comp=Z,10.0nm,0.8s,baz=183
MNK *i* PP **PnPn** **02 28 39.0 -2.0**
MNK *i* PPP PPP 02 28 46.7
MNK *i* S **Sn** **02 32 04.3 -2.5**
MNK *i* SS **SnSn** **02 32 20.5 -0.6**
MNK *i* SSS SSS 02 32 34.2
MNK *i* LQ LQ 02 34 15.8
MNK *i* LR LR 02 35 44.4
MNK *i* LRM MLR 02 36 45.3
comp=Z,139nm,15.3s
MNK *i* LRM MLR 02 36 59.2
comp=E,952nm,20.6s
MNK *i* LRM MLR 02 37 00.5
comp=N,791nm,20.9s
MNK Minsk 19.58 2 *i* P **P** **02 28 24.6 -1.4**
MNK *i* S **Sn** **02 32 04.3 -2.5**
MNK pmax pmax
comp=N,16nm,1.0s
MNK pmax pmax
comp=E,13nm,1.0s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK MLR MLR
comp=Z,139nm,15.0s
MNK MLR MLR
comp=E,952nm,21.0s
MNK MLR MLR
comp=N,791nm,21.0s
VRH Novokhopyorsk 19.59 29 *e*P **P** **02 28 26.5 +0.3**
VRH pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 19.73 23 *e*P **Pn** **02 28 30.2 +1.1**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
RAYN Ar Rayn 20.01 120 P **P** **02 28 33.7 +2.7**
RAYN Ar Rayn 20.01 120 P **P** **02 28 33.7 +2.7**
RAYN pmax pmax
comp=Z,3.0nm,0.8s
WLF Walferdange 21.00 321 *d*P **P** **02 28 42.6 +1.1**
OBN Obninsk 21.33 16⇑ *e*P **P** **02 28 43.4 -1.6**
OBN *e* 02 29 04.9
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,87nm,15.0s
BTNL Ternell 21.57 323 *d*P **P** **02 28 50.6 +2.9**
comp=Z,6.7nm,1.0s
RCHB Rochefort 21.77 321 *d*P **P** **02 28 48.9 -0.9**
TAM Tamanrasset 22.01 242 P **P** **02 28 55.4 +2.6**
TAM IAmb IAmb 02 28 58.2
comp=Z,15nm,0.7s
TAM Tamanrasset 22.01 242 P **P** **02 28 55.4 +2.6**
TAM pmax pmax
comp=Z,15nm,0.7s
DOU Dourbes 22.07 320 *d*P **P** **02 28 52.5 -0.5**
UCC Uccle 22.60 321 *d*P **P** **02 28 57.4 -1.3**
BELG Belogornoye 23.01 34⇑ *e*P **P** **02 29 02.5 -0.4**
BELG pmax pmax
comp=Z,5.0nm,1.3s
ESBB Sonseca Array 24.69 290 P **P** **02 29 18.8 -0.4**
ESDC Sonseca Array 24.69 290 P **P** **02 29 18.6 -0.7**
comp=Z,3.0nm,0.7s,baz=80,slow=9.5,SNR=59
ESDC LR LR 02 39 07.6
comp=Z,40nm,19.1s,baz=112,slow=37
comp=Z,3.0nm,0.7s
ESDC Sonseca Array 24.69 290 P **P** **02 29 17.4 -1.9**
MDT Midelt 25.94 274 LR LR 02 41 57.6
comp=Z,121nm,18.8s,baz=98,slow=42
MD31 MD31 26.05 274 P **P** **02 29 30.6 -1.0**
MD31 IAmb IAmb 02 29 35.3
comp=Z,9.1nm,1.4s
FINES FINESS Array B 26.53 359 P **P** **02 29 33.6 -1.9**
comp=Z,3.9nm,0.9s,baz=161,slow=14,SNR=5.1
comp=Z,3.9nm,0.9s
HFS Hagfors 26.57 346 P **P** **02 29 33.8 -2.2**
comp=Z,1.8nm,0.8s,baz=153,slow=13,SNR=6.6
comp=Z,1.8nm,0.8s
KLMR Klimovskoe 27.24 14 *e*P **P** **02 29 40.1 -1.8**
KLMR pmax pmax
comp=Z,27nm,1.9s
UOSS Minazif 27.44 103 P **P** **02 29 44.4 +0.3**
UOSS IAmb IAmb 02 30 07.4
comp=Z,3.9nm,0.8s
PVAQ Vaqueiros 27.71 285 P **P** **02 29 45.2 -1.2**
NOA NORSAR Array B 27.92 344 P **P** **02 29 47.2 -0.9**
comp=Z,0.5nm,0.8s,baz=154,slow=8.9,SNR=1.4
NOA LR LR 02 43 16.0
comp=Z,48nm,18.0s,baz=325,slow=42
comp=Z,0.5nm,0.8s
KIRV Kirov 28.08 26⇓ *e*P **P** **02 29 51.7 +2.2**
AB31 Akbulak array 28.32 49 P **P** **02 29 51.8 0.0**
AB31 IAmb IAmb 02 30 31.1
comp=Z,5.1nm,1.1s
AB31 Akbulak array 28.32 49 *i* P **P** **02 29 51.1 -0.6**
ABKAR Akbulak array 28.32 49 P **P** **02 29 51.6 -0.1**
EKA Eskdalemuir Ar 28.90 324 P **P** **02 29 54.8 -2.0**
comp=Z,0.6nm,0.4s,baz=131,slow=11,SNR=8.3
comp=Z,0.6nm,0.4s
ARTI Arti 30.44 35 P **P** **02 30 08.2 -2.3**
comp=Z,2.1nm,0.7s,baz=248,slow=11,SNR=2.8
comp=Z,2.1nm,0.7s
ARTI Arti 30.44 35 P **P** **02 30 11.1 +0.6**
ARTI 02 31 09.4
ARTI S **S** **02 35 16.0 +5.4**
ARTI SS **SnSn** **02 36 48.8 +2.5**
TORD Torodi Ar. Bea 31.26 232 P **P** **02 30 19.1 +1.0**
comp=Z,9.1nm,0.7s,baz=34,slow=6.4,SNR=68
comp=Z,9.1nm,0.7s
TORD Torodi Ar. Bea 31.26 232 IAmb IAmb 02 30 20.0
comp=Z,5.4nm,0.8s
CHGR Chuyangaron 34.07 71⇓ *e*P **P** **02 30 43.6 +1.0**
CHGR pmax pmax
comp=Z,8.0nm,0.8s
ARCES ARCESS Array B 34.66 359 P **P** **02 30 44.8 -2.4**
comp=Z,2.2nm,0.9s,baz=169,slow=8.7,SNR=5.2
comp=Z,2.2nm,0.9s
ARCES ARCESS Array B 34.66 359 IAmb IAmb 02 30 53.9
comp=Z,10nm,1.1s
ARCES ARCESS Array B 34.66 359 P **P** **02 30 44.8 -2.4**
ARCES pmax pmax
comp=Z,11nm,1.2s
KK31 Karatay Array 34.76 63 P **P** **02 30 48.8 +0.4**
KK31 Karatay Array 34.76 63 P **P** **02 30 48.8 +0.4**
KK31 pmax pmax
comp=Z,9.0nm,1.1s
KKAR Karatay Array 34.76 63 P **P** **02 30 48.6 +0.1**
KKAR Karatay Array 34.76 63 P **P** **02 30 48.6 +0.1**
GAR Garm 34.92 70 P **P** **02 30 50.4 +0.3**
BORK Borovoye 35.62 46 P **P** **02 30 56.0 +0.3**
BORK Borovoye 35.62 46⇓ *i*P **P** **02 30 55.8 +0.1**
BORK pmax pmax
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 35.66 46 P **P** **02 30 55.5 -0.5**
comp=Z,1.5nm,0.5s,baz=250,slow=6.8,SNR=15
BVAR LR LR 02 49 04.1
comp=Z,54nm,18.4s,baz=254,slow=42
comp=Z,1.5nm,0.5s
AAK Ala-Archa 37.71 64 P **P** **02 31 14.7 +0.8**
AAK IAmb IAmb 02 31 15.8
comp=Z,4.4nm,0.6s
AAK Ala-Archa 37.71 64⇑ *e*P **P** **02 31 14.9 +1.1**
AAK pmax pmax
comp=Z,4.0nm,0.7s
BOOM Boomskoye usch 38.78 64 P **P** **02 31 24.3 +1.4**
BOOM IAmb IAmb 02 31 38.1
comp=Z,5.4nm,0.8s
BOOM Boomskoye usch 38.78 64 P **P** **02 31 24.3 +1.4**
BOOM pmax pmax
comp=Z,5.0nm,0.8s
KSH2 Kashi 38.94 69 P **P** **02 31 25.4 +1.1**
KSH2 sP pwP 02 31 32.0 +0.6
KSH2 pmax pmax
comp=Z,3.0nm,0.5s
KURBB Kurchatov Arra 40.35 51 P **P** **02 31 35.5 -0.1**
comp=Z,9.3nm,0.7s,baz=277,slow=8.8,SNR=60
KURBB ScP **ScP** **02 37 26.0 -1.3**
comp=Z,0.5nm,0.8s,baz=287,slow=3.8,SNR=4.3
comp=Z,9.3nm,0.7s
DBIC Dimbokro 40.36 233 P **P** **02 31 36.0 0.0**
comp=Z,5.7nm,0.6s,baz=59,slow=8.7,SNR=11
DBIC LR LR 02 49 11.5
comp=Z,50nm,18.2s,baz=83,slow=38
comp=Z,5.7nm,0.6s
DBIC Dimbokro 40.36 233 P **P** **02 31 36.2 +0.2**
DBIC IAmb IAmb 02 31 37.2
comp=Z,7.5nm,0.7s
DBIC Dimbokro 40.36 233 P **P** **02 31 36.2 +0.2**
DBIC pmax pmax
comp=Z,7.0nm,0.7s
KURK Kurchatov 40.41 51 P **P** **02 31 36.3 +0.1**
KURK IAmb IAmb 02 31 36.9
comp=Z,8.0nm,0.8s
KURK Kurchatov 40.41 51 **ScP** **02 37 26.0 -1.5**
KURK Kurchatov 40.41 51 *c i*P **P** **02 31 36.2 +0.1**
KURK pmax pmax
comp=Z,9.0nm,0.9s
PDGK Podgornoye 41.29 62 P **P** **02 31 43.3 -0.3**
WUS Wushi 41.38 65 IAmb IAmb 02 31 46.0
comp=Z,6.4nm,0.8s
MAKZ Makanchi 42.70 56 P **P** **02 31 55.5 +0.5**
MAKZ Makanchi 42.70 56 P **P** **02 31 55.5 +0.5**
MAKZ pmax pmax
comp=Z,6.0nm,1.2s
MK31 Makanchi Array 42.92 56 *c i*P **P** **02 31 57.0 +0.2**
MKAR Makanchi Array 42.92 56 P **P** **02 31 56.9 +0.1**
comp=Z,5.6nm,0.6s,baz=276,slow=7.5,SNR=68
MKAR PP **PP** **02 33 36.9 +0.6**
comp=Z,0.7nm,0.7s,baz=266,slow=11,SNR=1.3
comp=Z,5.6nm,0.6s
MKAR Makanchi Array 42.92 56 P **P** **02 31 57.1 +0.3**
MKAR Makanchi Array 42.92 56 *i* P **P** **02 31 57.0 +0.2**
MKAR pmax pmax
comp=Z,6.0nm,0.6s
SPITS Spitsbergen Ar 43.57 357 P **P** **02 32 00.4 -1.1**
comp=Z,8.2nm,1.0s,baz=153,slow=11,SNR=8.0
comp=Z,8.2nm,1.0s
ZAA0 Zalesovo Array 44.31 46 IAmb IAmb 02 32 09.4
comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 44.31 46 P **P** **02 32 07.2 -0.6**
comp=Z,5.0nm,0.4s,baz=269,slow=9.2,SNR=20
ZALV LR LR 02 54 39.0
comp=Z,32nm,18.4s,baz=250,slow=42
comp=Z,5.0nm,0.4s
ZALV Zalesovo Beam 44.31 46 P **P** **02 32 07.4 -0.4**
DGZ Jazzator, Alta 46.09 52⇑ *e*P **P** **02 32 22.6 +0.3**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
WMQ Urumqi 47.10 60 *e*P **P** **02 32 32.7 +2.6**
WMQ pmax pmax
comp=Z,8.0nm,0.6s
NRIK Noril'sk 47.59 25 P **P** **02 32 33.5 +0.1**
comp=Z,1.3nm,0.4s,baz=237,slow=4.7,SNR=4.6
comp=Z,1.3nm,0.4s
NRIK Noril'sk 47.59 25 IAmb IAmb 02 32 42.9
comp=Z,5.0nm,1.3s
NRIK Noril'sk 47.59 25⇓ *e*P **P** **02 32 34.2 +0.8**
NRIK pmax pmax
comp=Z,18nm,4.2s
KNGR Kungurtug, Tuv 52.38 49⇑ *e*P **P** **02 33 12.9 +2.6**
KNGR pmax pmax
comp=Z,8.0nm,1.1s
TSUM Tsumeb 54.52 190 LR LR 02 59 30.5
comp=Z,62nm,18.4s,baz=352,slow=39
TLY Talaya 55.90 47⇓ *e*P **P** **02 33 36.7 +0.9**
TLY pmax pmax
comp=Z,3.0nm,1.0s
SONM Songino Array 58.72 51 P **P** **02 33 56.3 +0.4**
comp=Z,1.8nm,0.6s,baz=282,slow=7.3,SNR=9.1
comp=Z,1.8nm,0.6s
SONM Songino Array 58.72 51 P **P** **02 33 56.0 +0.1**
SONM IAmb IAmb 02 34 06.9
comp=Z,4.8nm,1.4s
ULN Ulaanbaatar 59.13 51⇓ *e*P **P** **02 33 58.9 +0.1**
ULN pmax pmax
comp=Z,11nm,2.5s
TIXI Tiksi 60.96 21 P **P** **02 34 11.1 +0.4**
comp=Z,5.3nm,0.3s,baz=320,slow=3.5,SNR=4.4
comp=Z,5.3nm,0.3s
TIXI Tiksi 60.96 21⇑ *e*P **P** **02 34 10.7 0.0**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
LZDM Lanzhou Array 61.19 65 P **P** **02 34 13.6 +0.3**
comp=Z,0.4nm,0.3s,baz=268,slow=10,SNR=3.6
comp=Z,0.4nm,0.3s
BOSA Boshof 63.22 181 P **P** **02 34 27.0 +0.5**
comp=Z,2.2nm,1.0s,baz=21,slow=8.6,SNR=1.1
comp=Z,2.2nm,1.0s
BOSA Boshof 63.22 181 P **P** **02 34 27.0 +0.5**
BOSA pmax pmax
comp=Z,11nm,1.2s
PZH PanZhiHua 63.79 75 P **P** **02 34 31.9 +1.3**
ILON Igloolik, Nuna 63.82 338 P **P** **02 34 28.4 -1.5**
SCHQ Schefferville 64.11 320 P **P** **02 34 30.7 -1.4**
comp=Z,2.8nm,0.6s,baz=49,slow=8.7,SNR=7.3
comp=Z,2.8nm,0.6s
HHC Hu-ho-hao-te 64.78 57 *e*P **P** **02 34 37.1 +0.2**
HHC pmax pmax
comp=Z,5.0nm,0.7s
CMAR Chiang Mai Arr 65.43 84 P **P** **02 34 40.9 -0.4**
comp=Z,1.8nm,0.4s,baz=295,slow=8.3,SNR=13
CMAR LR LR 03 07 54.3
comp=Z,27nm,18.6s,baz=285,slow=40
comp=Z,1.8nm,0.4s
CMAR Chiang Mai Arr 65.43 84 *i* P **P** **02 34 41.5 +0.3**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
XLT XiLinHaoTe 66.47 52 *e*P **P** **02 34 49.5 +1.8**
XLT sP pwP 02 34 58.1 +3.1
XLT pmax pmax
comp=Z,3.0nm,1.1s
USRK Ussuriysk Ar. 76.16 46 P **P** **02 35 46.0 -0.1**
comp=Z,2.3nm,0.6s,baz=298,slow=3.1,SNR=2.7
comp=Z,2.3nm,0.6s
USRK Ussuriysk Ar. 76.16 46 P **P** **02 35 46.0 -0.1**
G31M Satah River 77.41 352 P **P** **02 35 51.1 -1.6**
G31M IAmb IAmb 02 35 56.1
comp=Z,6.1nm,1.3s
KSRS Korea Array 77.48 53 P **P** **02 35 53.2 -0.5**
comp=Z,1.0nm,0.4s,baz=301,slow=5.2,SNR=5.0
KSRS LR LR 03 13 08.0
comp=Z,24nm,19.0s,baz=5.0,slow=38
comp=Z,1.0nm,0.4s
YKA Yellowknife Ar 78.02 343 P **P** **02 35 54.8 -1.4**
comp=Z,0.2nm,0.5s,baz=25,slow=5.6,SNR=6.8
comp=Z,0.2nm,0.5s
YKA Yellowknife Ar 78.02 343 *i* P **P** **02 35 58.5 +2.3**
YKA pmax pmax
comp=Z,1.0nm,0.8s
ILAR Eielson Array 80.49 357 P **P** **02 36 08.9 -0.7**
comp=Z,0.2nm,0.8s,baz=346,slow=4.3,SNR=4.3
comp=Z,0.2nm,0.8s
ILAR Eielson Array 80.49 357 P **P** **02 36 09.0 -0.7**
DAWY Dawson 80.70 354 P **P** **02 36 10.7 -0.3**
DAWY IAmb IAmb 02 36 17.6
comp=Z,3.0nm,1.0s
WRH Wood River Hil 80.83 358 P **P** **02 36 10.4 -1.1**
WRH IAmb IAmb 02 36 18.5
comp=Z,3.1nm,0.7s
ULM Lac du Bonnet 81.14 327 P **P** **02 36 11.6 -1.8**
comp=Z,0.9nm,0.5s,baz=54,slow=8.7,SNR=1.8
comp=Z,0.9nm,0.5s
ULM Lac du Bonnet 81.14 327 P **P** **02 36 11.6 -1.8**
ULM pmax pmax
comp=Z,8.0nm,1.5s
BCAR Beaver Creek A 81.89 355 P **P** **02 36 17.4 +0.1**
PPLA Purkeypile 82.50 359 P **P** **02 36 20.0 -0.6**

CRAAG ***07*** *02:34:17.2,36˚.44N×2˚.95E, Ml2.9, Algrie 11km SW Hammam-Melouane*
MDD ***07*** *02:34:22.6±1.4, 36˚.70N×2˚.90E, h0km, Mb3.8/8, M_mb3.1/9, Error ellipse: s-maj=11.8km s-min=7.9km az=142.0*
ISC 07 02:34:19.5±1.0, 36˚.47N±0˚.04×2˚.94E±0˚.03, h18km, n21, σ1§48/28, 8C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABA	**Alger-Bouzarea**	**0.34**	**13**	P	**Pg**	**02 34 26.4**	**-0.4**
ABKD	**Sidi Amar**	**0.51**	**278**	P	**Pg**	**02 34 29.3**	**-0.5**
EHRZ	**Djelida**	**0.72**	**248**	P	**Pb**	**02 34 33.2**	**-0.4**
EDDR	**Deurdeur**	**0.75**	**232**	P	**Pb**	**02 34 33.3**	**-0.7**
EARB	**Arib**	**0.77**	**258**	P	**Pg**	**02 34 34.6**	**0.0**
ABRIN	**Birine**	**0.85**	**170**	P	**Pn**	**02 34 37.2**	**+0.6**
AKET	**Djebel Ketaf**	**0.87**	**118**	P	**Pb**	**02 34 36.7**	**+0.6**
ATKJ	**Tikjda**	**0.95**	**91**	P	**Pn**	**02 34 38.7**	**+0.6**
ATKB	**Taksebt**	**0.97**	**77**	P	**Pb**	**02 34 38.0**	**+0.2**
EBNH	**Beni Haoua**	**1.11**	**273**	P	**Pg**	**02 34 41.4**	**+0.3**
EBGR	**Bougara**	**1.21**	**222**	P	**Pb**	**02 34 42.5**	**+0.5**
ESMB	**Sidi M'hamed B**	**2.11**	**246**	P	**Pn**	**02 34 52.9**	**-1.0**
EIBI	**Ibiza**	**2.85**	**334**	Pn	**Pn**	**02 35 05.0**	**+0.9**
EIBI				⇑*i*Vmb_VC		02 35 06.2	
	230nm,SNR=1.0						
EIBI				Sn	**Sn**	**02 35 35.7**	**-2.3**
ETOS	**Mallorca**	**3.30**	**358**	Pn	**Pn**	**02 35 11.4**	**+1.1**
ETOS				⇑*i*Vmb_VC		02 35 14.7	
	303nm,SNR=1.7						
ETOS				Sn	**Sn**	**02 35 46.9**	**-2.1**
EBEN2	**Beniarda presa**	**3.33**	**313**	Pn	**Pn**	**02 35 12.2**	**+1.6**
EBEN2				⇑*i*Vmb_VC		02 35 15.2	
	460nm,SNR=1.7						
EBEN2				Sn	**Sn**	**02 35 47.7**	**-2.0**
AFON	**Font Roja**	**3.53**	**309**	Pn	**Pn**	**02 35 15.0**	**+1.4**
ETOB	**Tobarra**	**4.18**	**303**	Pn	**Pn**	**02 35 23.9**	**+1.5**
ETOB				⇑*i*Vmb_VC		02 35 24.7	
	118nm,SNR=1.2						
ETOB				Sn	**Sn**	**02 36 09.8**	**-1.0**
EVIV	**Cofrentes, Val**	**4.26**	**312**	Pn	**Pn**	**02 35 25.4**	**+2.0**
EVIV				⇑*i*Vmb_VC		02 35 26.3	
	84nm,SNR=0.8						
EVIV				Sn	**Sn**	**02 36 10.3**	**-2.4**
ECHE	**Chera**	**4.39**	**316**	Pn	**Pn**	**02 35 27.6**	**+2.4**
ECHE				⇑*i*Vmb_VC		02 35 29.5	
	127nm,SNR=1.9						
EMOS	**Mosqueruela**	**4.72**	**326**	Pn	**Pn**	**02 35 31.0**	**+1.0**
EMOS				⇑*i*Vmb_VC		02 35 37.4	
	107nm,SNR=1.4						
EMOS				Sn	**Sn**	**02 36 22.8**	**-1.6**
EQES	**Quesada**	**4.99**	**287**	Pn	**Pn**	**02 35 36.2**	**+2.6**
EQES				⇑*i*Vmb_VC		02 35 39.5	
	53nm,SNR=0.8						
EQES				Sn	**Sn**	**02 36 32.0**	**+1.2**

NEIC ***07*** *02:42:26.1±0.7,35˚.10N±0˚.03×95˚.39W±0˚.02,h6km±5km, Error ellipse: s-maj=4.3km s-min=2.3km az=150.0*
NEIC 07 02:42:25.9±0.9, 35˚.11N±0˚.02×95˚.39W±0˚.02, h5km±2km, mb_Lg3.4/124, ML3.2/9, ML3.6/20, Error ellipse: s-maj=4.1km s-min=2.9km az=129.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUL3	**Leonard**	**0.87**	**338**		Pg	02 42 42.7	+0.1
TUL3				Sg	Sg	02 42 54.6	+0.7
RLO	**Rose Lookout**	**1.10**	**16**		Pg	02 42 46.9	-0.1
RLO					Sg	02 43 01.6	+0.3
RLO				IAML		02 43 06.8	
	comp=E,2μm,0.2s						
RLO				IAML		02 43 08.1	
	comp=N,2μm,0.2s						
DEOK	**Depew**	**1.17**	**309**		Pg	02 42 48.1	-0.2
DEOK					Sb	02 43 03.8	-0.2
DEOK				IAML		02 43 08.7	
	comp=E,2μm,0.2s						
W35A	**Tecumseh**	**1.22**	**273**		Pg	02 42 48.9	-0.4
W35A					Sb	02 43 05.8	+0.3
W35A				IAML		02 43 09.6	
	comp=N,1μm,0.7s						
W35A				IAML		02 43 10.0	
	comp=E,988nm,0.4s						
OK052	**Battle Ridge R**	**1.46**	**308**		Pn	02 42 52.9	0.0
OK052					Sg	02 43 13.0	+0.3
QUOK	**Quay**	**1.51**	**315**		Pn	02 42 53.9	+0.2
QUOK					Sg	02 43 14.6	0.0
U38A	**Gravette**	**1.56**	**31**		Pn	02 42 54.7	+0.4
MIAR	**Mount Ida**	**1.59**	**110**		Pb	02 42 55.4	-0.3
MIAR				IAmb_Lg		02 43 20.9	
	comp=Z,156nm,0.8s						
FNO	**Franklin**	**1.66**	**276**		Pn	02 42 56.2	+0.6
FNO					Sg	02 43 18.9	-0.2
FNO				IAmb_Lg		02 43 20.8	
	comp=Z,125nm,0.8s						
HHAR	**Hobbs**	**1.66**	**45**		Pn	02 42 56.3	+0.6
HHAR					Sb	02 43 18.8	+0.5
OKCSW	**OKLAHOMA CITY**	**1.71**	**281**		Pb	02 42 57.1	-0.7
OKCSW				IAmb_Lg		02 43 21.7	
	comp=Z,206nm,0.8s						
ADOK	**Arcadia Dam**	**1.71**	**289**		Pn	02 42 56.8	+0.4
OKCFA	**Oklahoma City**	**1.72**	**281**		Pb	02 42 57.2	-0.7
OKCFA					Sg	02 43 20.8	-0.3
OK004	**Okla Sci Mus**	**1.76**	**284**		Pb	02 42 57.8	-0.8
OK004					Sg	02 43 21.9	-0.4
OK048	**Pawnee Station**	**1.82**	**316**		Pn	02 42 58.5	+0.7
OK048					Sb	02 43 23.2	+0.4
OK029	**Liberty Lake**	**1.82**	**293**		Pn	02 42 58.8	+0.9
OK029					Sg	02 43 24.0	-0.5
OK051	**E0350 and S346**	**1.83**	**320**		Pb	02 42 59.0	-0.8
LOOK	**Love County**	**1.85**	**234**		Pb	02 42 59.7	-0.5
LOOK				IAmb_Lg		02 43 28.6	
	comp=Z,357nm,0.8s						
Z38A	**Mt. Pleasant**	**1.87**	**170**		Pb	02 42 59.8	-0.8
Z38A				IAmb_Lg		02 43 27.9	
	comp=Z,264nm,0.8s						
W34A	**Bridge Creek,**	**1.96**	**274**		Pb	02 43 01.0	-1.1
W34A					Sb	02 43 27.5	+0.7
T35A	**Sooner Cattle**	**2.02**	**334**		Pn	02 43 01.6	+0.9
X34A	**Smith Ranch, M**	**2.07**	**257**		Pn	02 43 02.6	+1.3
X34A					Sg	02 43 31.7	-0.8
X34A				IAmb_Lg		02 43 32.6	
	comp=Z,135nm,0.8s						
X40A	**Basin Creek Fa**	**2.19**	**106**		Pn	02 43 04.2	+1.2
X40A				IAmb_Lg		02 43 38.1	
	comp=Z,214nm,0.7s						
Z35A	**Perchaven, San**	**2.35**	**222**		Pn	02 43 06.2	+1.1
Z35A				IAmb_Lg		02 43 44.6	
	comp=Z,107nm,1.0s						
WLAR	**White Oak Lake**	**2.35**	**126**		Pb	02 43 07.1	-1.6
WLAR				IAmb_Lg		02 43 42.1	
	comp=Z,172nm,0.7s						
UALR	**University of**	**2.52**	**97**		Pn	02 43 08.8	+1.3
UALR				IAmb_Lg		02 43 51.3	
	comp=Z,206nm,1.1s						
WHAR	**Wooly Hollow**	**2.54**	**85**		Pn	02 43 08.9	+1.1
WHAR				IAmb_Lg		02 43 48.2	
	comp=Z,83nm,0.7s						
FCAR	**Ozark Folk Cen**	**2.77**	**73**		Pn	02 43 11.8	+0.9
KAN01	**Argonia South**	**2.80**	**317**	IAmb_Lg		02 43 58.8	
	comp=Z,133nm,0.9s						
Z41A	**Richland Creek**	**2.83**	**130**		Pn	02 43 13.1	+1.4
Z41A				IAmb_Lg		02 43 58.3	
	comp=Z,82nm,0.7s						
WTFS	**Witchita Falls**	**2.87**	**243**		Pn	02 43 14.6	+2.2
KAN08	**Anthony NE Sta**	**2.98**	**316**	IAmb_Lg		02 43 59.5	
	comp=Z,70nm,0.7s						
S39A	**Bolivar**	**3.07**	**32**	IAmb_Lg		02 44 07.7	
	comp=Z,91nm,0.8s						
237A	**Washetta, Mont**	**3.12**	**187**		Pn	02 43 16.7	+1.0
237A				IAmb_Lg		02 44 10.5	
	comp=Z,75nm,0.9s						
CCAR	**Cane Creek**	**3.21**	**111**	IAmb_Lg		02 44 14.2	
	comp=Z,149nm,1.1s						
MGMO	**Mountain Grove**	**3.25**	**50**		Pn	02 43 18.8	+1.3
MGMO				IAmb_Lg		02 44 16.1	
	comp=Z,115nm,0.7s						
PLPT	**Palo Pinto**	**3.34**	**228**		Pn	02 43 19.7	+0.9
NATX	**Nacogdoches**	**3.39**	**169**		Pn	02 43 20.1	+0.6
NATX				IAmb_Lg		02 44 22.3	
	comp=Z,90nm,0.7s						
LCAR	**Lake Charles**	**3.58**	**73**		Pn	02 43 21.3	-0.8
LCAR				IAmb_Lg		02 44 20.7	
	comp=Z,53nm,0.8s						
SMWD	**Samnorwood**	**3.98**	**271**	IAmb_Lg		02 44 34.7	
	comp=Z,69nm,0.9s						
R40A	**Maddies Statio**	**4.05**	**37**		Pn	02 43 29.4	+0.9
143A	**Socs Landing,**	**4.09**	**125**	IAmb_Lg		02 44 46.6	
	comp=Z,71nm,0.7s						
KSU1	**Kansas State U**	**4.11**	**347**	IAmb_Lg		02 44 41.0	
	comp=Z,167nm,0.8s						
R32A	**Long Quarter,**	**4.25**	**322**	Pn	Pn	02 43 34.3	+3.0
R32A				IAmb_Lg		02 44 44.4	
	comp=Z,149nm,0.8s						

ABTX	**Abilene, Hawle**	**4.32**	**236**		Pn	02 43 33.1	+0.8
ABTX				IAmb_Lg		02 44 44.6	
	comp=Z,40nm,0.8s						
HNVL	**Huntsville, TX**	**4.34**	**181**		Pn	02 43 33.6	+1.2
CCM	**Cathedral Cave**	**4.45**	**47**		Pn	02 43 34.7	+0.7
CCM	**Cathedral Cave**	**4.45**	**47**	IAmb_Lg		02 44 50.2	
	comp=Z,101nm,0.7s						
GNAR	**Gosnell**	**4.46**	**77**	IAmb_Lg		02 44 51.0	
	comp=Z,120nm,0.9s						
435B	**Jarrell**	**4.69**	**204**	IAmb_Lg		02 45 05.0	
	comp=Z,42nm,0.8s						
P38A	**Dawn**	**4.75**	**18**		Pn	02 43 38.5	+0.4
P38A				IAmb_Lg		02 45 01.2	
	comp=Z,74nm,0.8s						
DKNS	**Dickens**	**4.80**	**254**	IAmb_Lg		02 45 08.0	
	comp=Z,55nm,0.8s						
BRDY	**Brady**	**4.87**	**219**		Pn	02 43 39.7	-0.1
BRDY				IAmb_Lg		02 45 09.0	
	comp=Z,35nm,1.0s						
OXF	**Oxford**	**4.95**	**95**	IAmb_Lg		02 45 13.2	
	comp=Z,37nm,0.8s						
SN07	**Snyder 07**	**4.99**	**248**	IAmb_Lg		02 45 01.4	
	comp=Z,40nm,1.0s						
HALT	**Halls**	**5.00**	**79**	IAmb_Lg		02 45 08.4	
	comp=Z,38nm,0.9s						
CBKS	**Cedar Bluff**	**5.08**	**318**	IAmb_Lg		02 45 08.2	
	comp=Z,50nm,0.7s						
CGM3	**Cape Girardeau**	**5.12**	**63**	IAmb_Lg		02 45 13.9	
	comp=Z,93nm,0.9s						
P40A	**Paris**	**5.16**	**30**		Pn	02 43 44.0	+0.3
P40A				IAmb_Lg		02 45 09.4	
	comp=Z,79nm,0.7s						
AMTX	**Amarillo**	**5.17**	**269**		Pn	02 43 44.9	+0.9
AMTX				IAmb_Lg		02 45 24.5	
	comp=Z,50nm,0.8s						
PH02	**Texas Public H**	**5.38**	**275**	IAmb_Lg		02 45 29.7	
	comp=Z,30nm,0.8s						
SLM	**Saint Louis**	**5.43**	**48**	IAmb_Lg		02 45 24.6	
	comp=Z,101nm,0.8s						
UTMT	**University of**	**5.45**	**75**	IAmb_Lg		02 45 29.7	
	comp=Z,114nm,0.7s						
POST	**Post**	**5.47**	**250**	IAmb_Lg		02 45 30.5	
	comp=Z,34nm,0.8s						
N35A	**Tabor**	**5.75**	**358**		Pn	02 43 52.4	+0.5
SGCY	**Sterling City**	**5.75**	**238**	IAmb_Lg		02 45 37.3	
	comp=Z,83nm,1.0s						
146A	**Union**	**5.81**	**113**	IAmb_Lg		02 45 43.2	
	comp=Z,59nm,1.2s						
JCT	**Junction City**	**5.92**	**220**	IAmb_Lg		02 45 37.5	
	comp=Z,38nm,0.8s						
129A	**Stewart Farms,**	**5.93**	**247**	IAmb_Lg		02 45 39.5	
	comp=Z,8.5nm,0.8s						
229A	**Bryant Ranch,**	**6.21**	**242**	IAmb_Lg		02 45 57.0	
	comp=Z,21nm,1.0s						
128A	**Castleberry Fa**	**6.40**	**249**	IAmb_Lg		02 46 02.0	
	comp=Z,7.5nm,0.8s						
T47A	**Sharon Grove**	**6.97**	**72**	IAmb_Lg		02 46 15.3	
	comp=Z,49nm,0.9s						
SCIA	**State Center**	**7.00**	**13**	IAmb_Lg		02 46 14.0	
	comp=Z,54nm,0.8s						
V48A	**Smith Brothers**	**7.02**	**82**	IAmb_Lg		02 46 23.6	
	comp=Z,23nm,0.9s						
TPB06	**Permian Basin**	**7.40**	**244**	IAmb_Lg		02 46 34.2	
	comp=Z,19nm,0.8s						
T25A	**Trinidad**	**7.58**	**288**	IAmb_Lg		02 46 30.4	
	comp=Z,44nm,0.7s						
L40A	**Anamosa**	**7.67**	**24**	IAmb_Lg		02 46 31.1	
	comp=Z,65nm,0.8s						
SWET	**Sewanee**	**7.75**	**86**	IAmb_Lg		02 46 41.2	
	comp=Z,22nm,0.8s						
OGNE	**Ogallala**	**7.84**	**320**	IAmb_Lg		02 46 40.7	
	comp=Z,75nm,0.8s						
TPB05	**Hovey Rd**	**7.86**	**240**	IAmb_Lg		02 46 57.5	
	comp=Z,27nm,0.9s						
WCI	**Wyandotte Cave**	**7.94**	**64**	IAmb_Lg		02 46 42.3	
	comp=Z,72nm,1.0s						
TPB01	**Permian Basin**	**8.18**	**242**	IAmb_Lg		02 47 03.1	
	comp=Z,16nm,0.8s						
L42A	**Oliver, Polo**	**8.21**	**31**	IAmb_Lg		02 46 59.7	
	comp=Z,57nm,0.8s						
JFWS	**Jewell Farm**	**8.76**	**26**	IAmb_Lg		02 47 09.1	
	comp=Z,58nm,0.8s						
I37A	**Lemond, Waseca**	**9.03**	**9**	IAmb_Lg		02 47 22.0	
	comp=Z,47nm,1.2s						
K43A	**Burlington**	**9.37**	**34**	IAmb_Lg		02 47 49.1	
	comp=Z,49nm,0.9s						
I40A	**Norwalk**	**9.52**	**21**	IAmb_Lg		02 47 27.1	
	comp=Z,33nm,0.9s						
SUSD	**Miller**	**9.72**	**345**	IAmb_Lg		02 47 44.3	
	comp=Z,38nm,0.9s						

RSNC 07 02:48:29.6±0.0,5°N±1′×7°7W±°, h87km±3km, M2.7, mb3.8, ML2.5, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	**Yotoco, Valle**	**0.68**	**167**	P	Pn	02 48 44.5	-1.3
YOTC				S	Sn	02 48 56.9	-0.9
PIZC	**Pizarro, Choco**	**0.91**	**290**	P	Pn	02 48 48.0	-0.1
PIZC				S	Sn	02 49 02.7	+0.8
NIZA	**Niza - Manizal**	**1.10**	**68**	P	Pn	02 48 50.1	-0.5
NIZA				S	Sn	02 49 07.5	+1.2
CBOC	**Ciudad Bolivar**	**1.30**	**22**	P	Pn	02 48 52.8	-0.1
CBOC				S	Sn	02 49 11.2	+0.8
JAMC	**Jamundi, Valle**	**1.44**	**187**	P	Pn	02 48 53.1	-1.6
JAMC				S	Sn	02 49 12.6	-0.9
ORTC	**Ortega, Tolima**	**1.45**	**120**	P	Pn	02 48 53.9	-0.7
ORTC				S	Sn	02 49 13.0	-0.6
SOLC	**Bahia Solano**	**1.81**	**330**	P	Pn	02 48 58.9	-0.3
SOLC				S	Sn	02 49 20.5	-1.2
HELC	**Santa Helena**	**1.81**	**32**	P	Pn	02 48 58.9	-0.7
HELC				S	Sn	02 49 21.6	-0.7
PRAC	**Prado**	**1.86**	**120**	P	Pn	02 48 59.2	-0.7
PRAC				S	Sn	02 49 22.4	-0.6
POPC	**Popayan, Colom**	**2.10**	**185**	P	Pn	02 49 02.7	-0.6
POPC				S	Sn	02 49 28.9	-0.1
DBBC	**Dabeiba**	**2.37**	**7**	P	Pn	02 49 06.8	+0.1
DBBC				S	Sn	02 49 36.6	+1.5
CVER	**Cruz Verde, Cu**	**2.42**	**93**	P	Pn	02 49 09.0	+1.2
URMC	**La Uribe, Meta**	**2.53**	**123**	P	Pn	02 49 08.1	-0.8
URMC				S	Sn	02 49 38.1	-0.9
GARC	**Garzon, Huila**	**2.65**	**158**	P	Pn	02 49 09.7	-0.9
GARC				S	Sn	02 49 41.5	-0.5
BBAC	**Balboa, Cauca**	**2.71**	**196**	P	Pn	02 49 10.4	-1.1
BBAC				S	Sn	02 49 43.5	-0.1
CHIC	**Chingaza**	**2.76**	**90**	P	Pn	02 49 13.1	+0.9
CHIC				S	Sn	02 49 44.4	-0.5
PTBC	**PUERTO BERRIO,**	**2.77**	**47**	P	Pn	02 49 11.4	-0.6
PTBC				S	Sn	02 49 43.4	-1.2
PTAC	**Punta Ardita,**	**2.80**	**332**	P	Pn	02 49 11.3	-1.1
PTAC				S	Sn	02 49 41.6	-3.8
VILC	**Villavicencio,**	**2.85**	**101**	P	Pn	02 49 14.1	+0.9
VILC				S	Sn	02 49 46.9	+0.2
FLOC	**Florencia**	**3.16**	**164**	P	Pn	02 49 16.3	-1.0
FLOC				S	Sn	02 49 53.0	-1.1
UREC	**San Jos de Ur**	**3.23**	**17**	P	Pn	02 49 17.6	-0.6
UREC				S	Sn	02 49 55.9	+0.2
RUSC	**La Rusia**	**3.62**	**70**	P	Pn	02 49 24.3	+0.4
MACC	**Macarena, Meta**	**3.63**	**133**	P	Pn	02 49 22.5	-1.2
CMBC	**Cumbal**	**3.92**	**200**	P	Pn	02 49 26.1	-1.8
OTAV	**Otavalo**	**4.80**	**204**	P	Pn	02 49 37.2	-2.7
PAC1	**Pacto, Paraso**	**4.92**	**208**	P	Pn	02 49 37.0	-4.3
PAC1				S	Sn	02 50 30.5	-6.6
SJCC	**San Jacinto, C** 9.5nm,1.3s	**5.38**	**14**	P	Pn	02 49 47.3	-0.1
BCIP	**Isla Barro Col**	**5.58**	**324**	P	Pn	02 49 48.7	-1.4
BCIP				S	Sn	02 50 51.8	-1.1

MEX 07 02:48:51.2±0.8, 15°.19N×94°.66W, h19km±11km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.48**	**70**	*eP*	Pn	02 49 13.6	-3.2
PCIG				*eS*	Sn	02 49 30.8	-4.9
HUIG	**Huatulco**	**1.51**	**293**	*eP*	Pn	02 49 14.8	-2.5
HUIG				*eS*	Sn	02 49 31.3	-5.1
CMIG	**Matias Romero**	**1.90**	**354**	*eP*	Pn	02 49 20.1	-2.6
CMIG				*eS*	Sn	02 49 41.9	-4.2
TGIG		**2.16**	**43**	*eP*	Pn	02 49 24.4	-2.0
TGIG				*eS*	Sn	02 49 51.0	-1.7
UXUV	**UXUV**	**2.17**	**13**	*eP*	Pn	02 49 24.4	-1.9
UXUV				*eS*	Sn	02 49 50.1	-2.6
PATR	**El Naranjo**	**2.34**	**91**	*eP*	Pn	02 49 26.0	-3.0
PATR				*eS*	Sn	02 49 52.6	-4.8
PAVE	**Pavencul**	**2.40**	**90**	*eP*	Pn	02 49 27.2	-2.5
PAVE				*eS*	Sn	02 49 54.5	-4.1
CHUJ	**Union Juarez**	**2.47**	**92**	*eP*	Pn	02 49 28.3	-2.4
CHUJ				*eS*	Sn	02 49 55.9	-4.5
CCIG	**Comitan**	**2.66**	**66**	*eP*	Pn	02 49 31.3	-2.0
CCIG				*eS*	Sn	02 50 05.4	+0.3
NEUV	**Arroyo Zacate**	**2.74**	**337**	*eP*	Pn	02 49 32.3	-1.9
NEUV				*eS*	Sn	02 50 05.8	-0.9

IDC 07 03:06:05.0±56.0, 16°.17S×176°.22W, h0km, mb4.1/3, mbtmp4.1/3, MS3.6/1, Error ellipse: s-maj=1044.0km s-min=169.8km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.30**	**240**	P	P	03 13 53.2	+0.7
	0.7nm,0.4s,baz=79,slow=10,SNR=4.6 0.7nm,0.4s						
WRA	**Warramunga Arr**	**47.03**	**258**	P	P	03 14 38.2	-0.4
	0.3nm,0.3s,baz=95,slow=8.2,SNR=16 0.3nm,0.3s						
ASAR	**Alice Springs**	**47.29**	**253**	P	P	03 14 40.1	-0.5
	3.5nm,0.4s,baz=89,slow=7.8,SNR=36 3.5nm,0.4s						
JCJ	**Chichijima**	**58.99**	**316**	LR	LR	03 36 25.6	
	comp=Z,49nm,18.9s,baz=83,slow=31						

*BJI **07** 03:11:42.5, 34°.72N×25°.97E, h29km, mB5.0/5, mb4.7/45, Ms4.3/1, Ms7 4.0/2*

*PDG **07** 03:11:43.2±0.1, 34°.90N×26°.37E, h14km±11km, ML4.6/11, Error ellipse: s-maj=9.5km s-min=11.7km az=0.0*

*MCSM **07** 03:11:45.0±0.5, 35°.N±5′×2°.7E±°, h11km±2km, mb4.7, mB4.4, MLv4.4, Mw(mB)3.5*

*MOS **07** 03:11:45.2±1.1, 34°.94N×26°.57E, h19km, mb4.9/38, Error ellipse: s-maj=5.3km s-min=3.0km az=81.2*

*NEIC **07** 03:11:46.6±2.6, 35°.03N±0°.05×26°.55E±0°.05, h10km±1km, mb4.7/145, Error ellipse: s-maj=9.1km s-min=5.3km az=149.0*

*GII **07** 03:11:46.3±0.0, 34°.848N±0°.003×26°.608E±0°.001, h0km, Mws4.4, confirmed*

*ISK **07** 03:11:46.7, 34°.99N×26°.59E, h10km, ML4.6/34*

*IDC **07** 03:11:47.0±2.2, 35°.11N×26°.57E, h17km±13km, mb4.3/28, mbtmp4.4/42, ML4.0/13, MS3.7/36, Error ellipse: s-maj=12.3km s-min=9.0km az=172.0*

*HLW **07** 03:11:47.8, 34°.96N×26°.75E, h15km±4km, Ml4.4*

*MED_RC **07** 03:11:47.0±0.3, 34°.88N×26°.46E, h10km, MW4.7/24, Moment Tensor Solution. Mantle waves: s24,c30; Duration: 1s1 Moment tensor: Scale 10^16 Nm; Mrr=0.17±.04; Mθθ=0.38±.04; Mϕϕ=0.55±.03; Mrθ=0.63±.12; Mrϕ=-0.09±.04; Mθϕ=-1.38±.07; Best double couple: M0=1.58000×10^16 NP1:ϕs=218.00000°, δ=13.00000°, λ=-26.00000°. NP2:ϕs=333.00000°, δ=85.00000°, λ=-102.00000°. Principal axes: T 1.7200, Plg=38.0000°, Azm=74.0000°; N -0.2800, Plg=11.0000°, Azm=335.0000°; P -1.4400, Plg=49.0000°, Azm=231.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*THE **07** 03:11:48.6, 35°.N±5′×2°.7E±°, h3km±4km, M4.4/16, MLh4.4/16*

*ATH **07** 03:11:48.1, 35°.17N×26°.57E, h5km, Mw4.4, Moment Tensor Solution. s7 Moment tensor: Mrr=4.01; Mθθ=1.59; Mϕϕ=2.42; Mrθ=0.78; Mθϕ=-2.77; Mrϕ=-3.67; Fault plane solution: NP1:ϕs=338.00000°, δ=66.00000°, λ=-72.00000°. NP2:ϕs=119.00000°, δ=30.00000°, λ=-125.00000°.*

*AFAD **07** 03:11:50.7, 35°.31N×26°.84E, h15km±1km, MW4.5*

*NAO **07** 03:11:50.2, 34°.95N×24°.51E, h10km, MB3.9*

ISC 07 03:11:47.9±0.7, 35°.04N±0°.03×26°.60E±0°.02, h23km±4km, n749, σ1s82/758, mb4.7/138, MS3.7/29, 44C-50D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.32**	**284**	Pg	Pb	03 11 53.8	-1.3
ZKR				Sg	Sb	03 11 58.8	-1.2
ZKR	**Zakros**	**0.32**	**284**	P	Pb	03 11 53.9	-1.3
ZKR	**Zakros**	**0.32**	**284**	P	Pb	03 11 53.4	-1.8
ZKR				S	Sb	03 11 58.3	-1.7
SIT2	**Siteia**	**0.43**	**293**	P	Pb	03 11 55.6	-1.4
SIT2				S	Sb	03 12 01.3	-1.8
KARP	**Karpathos**	**0.69**	**42**		Pb	03 12 00.4	-0.9
KARP					Sn	03 12 11.7	-0.6
KARP	**Karpathos**	**0.69**	**42**	Pg	Pb	03 12 00.8	-0.5
KARP				Sg	Sn	03 12 12.5	+0.2
KARP	**Karpathos**	**0.69**	**42**	P	Pb	03 12 00.6	-0.7
KARP				S	Sn	03 12 11.9	-0.4
KARP	**Karpathos**	**0.69**	**42**	*eP*	Pb	03 11 59.9	-1.4
KARP	**Karpathos**	**0.69**	**42**	P	Pb	03 12 00.6	-0.7
KARP				S	Sb	03 12 00.1	-1.4
NPS	**Neapolis**	**0.84**	**286**	P	Pb	03 12 02.9	-0.9
NPS				S	Sb	03 12 15.1	+0.5
NPS	**Neapolis**	**0.84**	**286**	P	Pb	03 12 02.6	-1.2
NPS				S	Sb	03 12 14.4	-0.2
IACM	**Heraklion**	**1.28**	**283**	P	Pb	03 12 11.6	+0.3
IACM				S	Sb	03 12 28.1	+0.9
IDI	**Anoyia**	**1.42**	**281**	Pn	Pn	03 12 13.0	+0.6
	793nm,0.3s,baz=109,slow=14,SNR=1451						
IDI				Sn	Sb	03 12 31.5	0.0
	842nm,0.3s,baz=341,slow=16,SNR=8.8						
IDI				LR	LR	03 13 03.9	
	comp=Z,7μm,20.2s,baz=58,slow=55						
IDI	**Anoyia**	**1.42**	**281**		Pb	03 12 13.4	-0.4
IDI	**Anoyia**	**1.42**	**281**	Pn	Pb	03 12 13.3	-0.5
IDI	**Anoyia**	**1.42**	**281**	P	Pb	03 12 13.6	-0.2
IDI				S	Sb	03 12 32.6	+1.1
IDI	**Anoyia**	**1.42**	**281**	P	Pb	03 12 14.0	+0.2
IDI				S	Sb	03 12 32.8	+1.4
THERA	**Ancient Thera,**	**1.61**	**326**	P	Pn	03 12 15.5	+0.5
THERA				S	Sn	03 12 35.9	+0.9
THERA	**Ancient Thera,**	**1.61**	**326**	P	Pn	03 12 15.3	+0.3
THERA				S	Sb	03 12 36.4	-0.5
THR8	**Santorini-Mono**	**1.64**	**327**	P	Pn	03 12 15.6	+0.3
THR9	**Santorini-Faro**	**1.66**	**323**	P	Pn	03 12 16.1	+0.5
THRA	**Thira**	**1.67**	**326**	P	Pn	03 12 16.3	+0.6
SNT5	**Nea Kammeni, S**	**1.68**	**325**	P	Pn	03 12 16.3	+0.5
THR3	**Thira island,**	**1.68**	**325**	P	Pn	03 12 16.3	+0.5
THR2	**Thira island,**	**1.69**	**326**	P	Pn	03 12 16.3	+0.2
THR5	**Thira Island,**	**1.71**	**324**	P	Pn	03 12 16.3	0.0
ARG	**Arkhangelos**	**1.71**	**46**		Pb	03 12 19.3	+0.5
ARG	**Arkhangelos**	**1.71**	**46**	Pn	Pb	03 12 17.9	-0.9
ARG	**Arkhangelos**	**1.71**	**46**	P	Pb	03 12 19.2	+0.4
ARG				S	Sb	03 12 42.9	+3.0
ARG	**Arkhangelos**	**1.71**	**46**	P	Pb	03 12 19.3	+0.5
ARG	**Arkhangelos**	**1.71**	**46**	P	Pb	03 12 18.6	-0.2
ARG				S	Sb	03 12 39.8	-0.1
SAP3	**Santorini-Thir**	**1.73**	**324**	P	Pn	03 12 17.4	+0.9
SAP3				S	Sb	03 12 42.2	+2.0
SAP3	**Santorini-Thir**	**1.73**	**324**	P	Pn	03 12 17.4	+0.9
SAP3				S	Sn	03 12 39.0	+1.1
YAZI	**Mula-Dat§a-**	**1.78**	**23**	P	Pn	03 12 18.3	+1.0
YAZI				S	Sn	03 12 37.7	-1.6
YAZI				IAML		03 12 47.0	
	comp=E,1μm,0.6s						
YAZI				IAML		03 12 48.0	
	comp=N,2μm,0.6s						
DAT	**Datca**	**1.87**	**25**	Pn	Pb	03 12 20.3	-1.1
DAT	**Datca**	**1.87**	**25**	P	Pb	03 12 21.5	0.0
DATC	**Datca-Mugla**	**1.93**	**26**	Pn	Pb	03 12 21.2	-1.1
RODB	**Rodos**	**1.93**	**43**	P	Pb	03 12 21.2	-1.2
RODB				S	Sb	03 12 45.0	-1.1
RDI1	**Rhodes Town Ha**	**1.94**	**43**	P	Pb	03 12 21.0	-1.5
RDI1				S	Sn	03 12 44.4	+1.4
KLNA	**Kalymnos**	**1.94**	**9**	P	Pn	03 12 19.7	+0.2
KLNA				S	Sn	03 12 43.2	+0.1
VAM	**Vamos**	**2.00**	**281**	P	Pb	03 12 22.4	-1.1
VAM				S	Sb	03 12 48.0	0.0
GVD	**Gavdhos**	**2.07**	**265**	Pn	Pn	03 12 22.7	+1.5
GVD	**Gavdhos**	**2.07**	**265**	P	Pb	03 12 24.4	-0.4
GVD	**Gavdhos**	**2.07**	**265**	P	Pb	03 12 24.7	-0.1
BODT	**Bodrum**	**2.10**	**16**	Pn	Pb	03 12 23.7	-1.7
BODT	**Bodrum**	**2.10**	**16**	P	Pn	03 12 23.5	+1.7
BODT				S	Sb	03 12 50.8	-0.2
BODA	**Bodrum-Mula**	**2.11**	**19**	Pn	Pb	03 12 24.1	-1.3
CHNB	**Souda**	**2.12**	**283**	P	Pb	03 12 24.7	-0.9
BDRM	**Kayabasi**	**2.14**	**19**	P	Pn	03 12 23.6	+1.4
CHAN	**Chania**	**2.14**	**284**	P	Pb	03 12 24.5	-1.5
YKAV	**Yalikavak-Bodr**	**2.16**	**15**	Pn	Pb	03 12 24.6	-1.7
CH01	**Chania**	**2.16**	**284**	P	Pn	03 12 24.1	+1.6
TURN	**Turunc**	**2.19**	**37**	Pn	Pn	03 12 24.8	+1.9
TURN	**Turunc**	**2.19**	**37**	P	Pb	03 12 25.2	-1.7
TURN				S	Sn	03 12 51.2	+2.0
TURN				IAML		03 13 03.0	
	comp=E,1μm,0.4s						
TURN				IAML		03 13 04.0	
	comp=N,991nm,0.8s						
NAX1	**Naxos Island**	**2.29**	**335**	P	Pn	03 12 24.1	-0.1
DIDI	**Didim-Aydin**	**2.39**	**12**	Pn	Pn	03 12 27.9	+2.2
MHLO	**Agia Marina, M**	**2.43**	**313**	P	Pn	03 12 28.1	+1.9
MHLO				S	Sn	03 12 56.1	+1.0
MHLO	**Agia Marina, M**	**2.43**	**313**	P	Pn	03 12 27.8	+1.6
DALY	**Dalyan (Mula)**	**2.44**	**43**	Pn	Pn	03 12 28.3	+2.0
KNDR	**Palaiochora Ch**	**2.44**	**276**	Pn	Pn	03 12 28.1	+1.7
KNDR	**Palaiochora Ch**	**2.44**	**276**	P	Pb	03 12 29.0	-2.1
MLSB	**Milas**	**2.45**	**23**	Pn	Pn	03 12 28.3	+1.8
DDIM	**Aydin, Didim**	**2.47**	**12**	P	Pb	03 12 29.3	-2.3
YER	**Yerkesik**	**2.50**	**33**	Pn	Pn	03 12 29.4	+2.2
YER	**Yerkesik**	**2.50**	**33**	P	Pn	03 12 29.2	+1.9
YER				S	Sn	03 12 59.7	+2.7
IZZE	**Mula-Seydike**	**2.56**	**56**	P	Pn	03 12 29.5	+1.5
FETY	**Fethiye**	**2.58**	**51**	P	Pn	03 12 20.1	-8.1
MULA	**Mugla, Merkez-**	**2.62**	**32**	P	Pb	03 12 31.7	-2.5
MULA				S	Sn	03 13 00.8	+0.8
MULA				IAML		03 13 10.0	
	comp=N,837nm,1.3s						
MULA				IAML		03 13 11.0	
	comp=E,1μm,0.8s						
SABU	**Mula-Dalaman**	**2.62**	**47**	P	Pn	03 12 31.1	+2.2
SABU				S	Sb	03 13 05.1	-1.0
SABU				IAML		03 13 18.0	
	comp=E,1μm,1.0s						
SABU				IAML		03 13 29.0	
	comp=N,1μm,0.9s						
SMG	**Samos**	**2.67**	**4**	P	Pn	03 12 30.0	+0.4
SMG				S	Sn	03 13 02.3	+1.0
SMG	**Samos**	**2.67**	**4**	P	Pn	03 12 30.0	+0.4
KSL	**Kastellorizon**	**2.68**	**65**	P	Pn	03 12 30.7	+1.2
KSL	**Kastellorizon**	**2.68**	**65**	P	Pn	03 12 30.6	+1.0
KSL				S	Sn	03 13 03.2	+1.9
GCAM	**G?zelcaml?**	**2.71**	**11**	Pn	Pn	03 12 32.3	+2.3
GCAM	**G?zelcaml?**	**2.71**	**11**	P	Pb	03 12 33.1	-2.6
AKAS	**Kas**	**2.73**	**63**		Pn	03 12 31.8	+1.4
AKAS	**Kas**	**2.73**	**63**	Pn	Pn	03 12 32.3	+1.9
AKAS	**Kas**	**2.73**	**63**	P	Pn	03 12 32.1	+1.7
TNSA	**Tinos**	**2.75**	**336**	P	Pn	03 12 31.1	+0.5
KRL1	**Karlovasi Samo**	**2.75**	**2**	P	Pn	03 12 30.9	+0.2
CAME	**Cameli-Denizli**	**2.91**	**48**	Pn	Pn	03 12 34.9	+2.0
DEMR	**Demre-Antalya**	**2.95**	**65**	Pn	Pn	03 12 35.9	+2.5
DNZT	**Denizli-Tavas-**	**2.98**	**41**	P	Pn	03 12 36.1	+2.3
KNIK	**Mula-Seydike**	**3.02**	**52**	P	Pn	03 12 36.5	+2.1
DGB	**zmir**	**3.02**	**4**	P	Pn	03 12 35.1	+0.8
CAEL	**Denizli, Camel**	**3.03**	**46**	P	Pn	03 12 36.7	+2.1
GMLD	**Gumuldur**	**3.04**	**5**	Pn	Pn	03 12 37.8	+3.2
TAVA	**DENIZLI_Tavas**	**3.06**	**37**	P	Pn	03 12 37.5	+2.4
TAVA				S	Sn	03 13 13.6	+2.6
TAVA				IAML		03 13 23.0	
	comp=N,704nm,1.6s						
TAVA				IAML		03 13 30.0	
	comp=E,704nm,1.4s						
AYDB	**Zeytinkoy-Aydi**	**3.09**	**19**	Pn	Pn	03 12 37.6	+2.2
ESEN	**Aydn-Nazilli**	**3.10**	**27**	P	Pn	03 12 37.7	+2.3
ESEN				S	Sn	03 13 11.5	-0.1
ESEN				IAML		03 13 23.0	
	comp=E,856nm,1.2s						
ESEN				IAML		03 13 28.0	
	comp=N,640nm,1.1s						
KTHA	**Kythira Island**	**3.12**	**294**	P	Pn	03 12 36.4	+0.7
ELL	**Elmali**	**3.19**	**57**		Pn	03 12 38.9	+2.2
ELL	**Elmali**	**3.19**	**57**	Pn	Pn	03 12 38.9	+2.2
ELL	**Elmali**	**3.19**	**57**	P	Pn	03 12 38.9	+2.2
ZEYE	**Izmir, Urla-Ze**	**3.20**	**359**	P	Pn	03 12 37.1	+0.4
NAZL	**Nazilli-Aydin**	**3.23**	**25**	Pn	Pn	03 12 39.6	+2.4
NPS1	**Neapolis Lacon**	**3.23**	**298**	P	Pn	03 12 38.6	+1.4
DNIZ	**Denizli-Tavas-**	**3.25**	**37**	P	Pn	03 12 39.5	+1.9
DUVT	**Torbali**	**3.25**	**12**	P	Pn	03 12 39.8	+2.3
GOLH	**Golhisar**	**3.25**	**47**	P	Pn	03 12 40.0	+2.4
APMY	**Acipayam-Deniz**	**3.27**	**41**	Pn	Pn	03 12 39.3	+1.5
IZMR	**zmir-demi**	**3.28**	**19**	P	Pn	03 12 41.0	+3.0
AKUM	**Antalya-Kumluc**	**3.31**	**66**	P	Pn	03 12 39.5	+1.3
MNVA	**Monemvasia**	**3.33**	**301**	P	Pn	03 12 39.8	+1.3
BLCB	**Balcova**	**3.36**	**6**	Pn	Pn	03 12 39.8	+1.5
BLCB	**Balcova**	**3.36**	**6**	P	Pn	03 12 39.9	+0.9
CHOS	**Chios island**	**3.37**	**353**	Pn	Pn	03 12 40.3	+1.1
CHOS	**Chios island**	**3.37**	**353**	P	Pn	03 12 39.6	+0.4
CHOS	**Chios island**	**3.37**	**353**	P	Pn	03 12 40.0	+0.8
VLI	**Veliai**	**3.41**	**301**	P	Pn	03 12 40.9	+1.2
VLI	**Veliai**	**3.41**	**301**	P	Pn

KEK Kerkira 7.14 313 Pn 03 13 30.9 -0.1
PLD Plovdiv 7.25 349 *e*P Pn 03 13 36.2 +3.9
BR105 Keskin Array S 7.29 48 P Pn 03 13 34.8 +1.8
0.1nm208nm27nm,0.8s
BR104 Keskin Array S 7.29 48 P Pn 03 13 33.5 +0.4
0.1nm174nm21nm,0.9s
BR106 Keskin Array S 7.29 48 P Pn 03 13 35.6 +2.4
0.1nm153nm18nm,0.7s
BRTR Keskin Array B 7.30 48 Pn Pn 03 13 34.5 +1.3
1.0nm,0.3s,baz=216,slow=15,SNR=18
BRTR Sn **Sn** 03 14 54.7 -0.8
baz=232,slow=18
BRTR LR LR 03 17 18.5
comp=Z,1µm,21.4s,baz=223,slow=46
4.0nm,0.6s
BRTR Keskin Array B 7.30 48 Pn 03 13 36.0 +2.7
BR131 Keskin Array S 7.30 48 Pn 03 13 34.9 +1.6
BR131 Keskin Array S 7.30 48 *e*P Pn 03 13 33.3 0.0
KKB Krupnik 7.32 339 *e*P Pn 03 13 38.1 +4.7
OFRI `Ofer 7.38 107 P Pn 03 13 32.2 -2.1
OFRI S **Sn** 03 14 55.7 -1.8
JMB Yambol 7.44 360 *e*P Pn 03 13 38.6 +3.5
BLGI Bet Lehem HaGe 7.51 105 P Pn 03 13 34.7 -1.3
BLGI S **Sn** 03 14 58.9 -1.5
NBNS Bani Suef 7.54 147 P Pn 03 13 35.9 -0.5
SLTI Sal'it 7.57 109 P Pn 03 13 34.9 -2.0
SLTI S **Sn** 03 14 59.7 -2.4
MMAI Mount Meron Ar 7.58 103 Pn Pn 03 13 36.2 -0.9
5.8nm,0.3s,baz=294,slow=12,SNR=23
MMAI Sn **Sn** 03 15 03.4 +1.0
12nm,0.3s,baz=306,slow=33,SNR=6.3
2.7nm,0.3s
OHR Ohrid 7.59 325 *i* Pn Pn 03 13 39.0 +1.8
ZAF Zafarana 7.64 137 P Pn 03 13 36.9 -0.9
QRWL Qaraoun 7.67 99 *e*P Pn 03 13 36.8 -1.4
GEM Giv'at Ha'Em 7.74 101 P Pn 03 13 37.3 -1.8
GEM S **Sn** 03 15 04.4 -1.6
HWQ Hawqa 7.74 93 *e*P Pn 03 13 38.8 -0.5
ZAHL Zahle 7.76 96 *e*P Pn 03 13 37.9 -1.7
NATI Neve Ativ 7.78 101 P Pn 03 13 38.2 -1.5
NATI S **Sn** 03 15 05.4 -1.7
AMAZ Amatzia 7.79 114 P Pn 03 13 38.1 -1.8
AMAZ S **Sn** 03 15 04.9 -2.5
MMLI Mount Malkishu 7.79 107 P Pn 03 13 37.8 -2.1
MMLI S **Sn** 03 15 04.9 -2.6
RCY Rachaya 7.80 99 *e*P Pn 03 13 38.4 -1.8
ELND Elena 7.90 356 ⇑P Pn 03 13 43.1 +1.7
BEIL Beino 7.91 91 *e*P Pn 03 13 38.8 -2.7
KSHT Keshet 7.92 102 P Pn 03 13 39.8 -1.9
KSHT S **Sn** 03 15 08.7 -2.0
HMDT Nahal Hemdat 7.95 108 P Pn 03 13 40.4 -1.6
HMDT S **Sn** 03 15 09.2 -2.0
VTS Vitosha 8.01 342 *e*P Pn 03 13 46.5 +3.5
UJAP Al Uja 8.02 110 P Pn 03 13 40.8 -2.2
UJAP S **Sn** 03 15 10.7 -2.3
YTIR Yattir 8.02 115 P Pn 03 13 41.1 -2.1
YTIR S **Sn** 03 15 10.7 -2.6
DSI Dead Sea 8.12 113 P Pn 03 13 42.3 -2.1
DSI S **Sn** 03 15 13.4 -2.1
RMNI Mount Ramon 8.17 121 P Pn 03 13 43.5 -1.7
RMNI S **Sn** 03 15 13.9 -3.0
TAMRE El Minia 8.21 152 P Pn 03 13 45.2 -0.4
MSBI Mazada 8.23 114 P Pn 03 13 43.8 -2.0
MSBI S **Sn** 03 15 15.7 -2.4
LOZB Loznitsa 8.32 360 ⇓P Pn 03 13 48.9 +1.7
GHAJ Ghor Haditha 8.39 114 Pn 03 13 47.6 -0.4
GHAJ Ghor Haditha 8.39 114 P Pn 03 13 47.0 -1.1
GHAJ S **Sn** 03 15 19.7 -2.4
IDAN Idan 8.41 117 P Pn 03 13 46.6 -1.8
IDAN S **Sn** 03 15 19.7 -2.9
KRMI Paran Flat 8.43 123 P Pn 03 13 45.6 -3.1
KRMI S **Sn** 03 15 20.7 -2.4
PLVB Pleven 8.48 350 ⇑P Pn 03 13 51.2 +2.0
PRNI Paran 8.49 121 P Pn 03 13 47.9 -1.5
PRNI S **Sn** 03 15 20.2 -4.3
ZFRI Zfri 8.49 119 P Pn 03 13 46.6 -2.9
ZFRI S **Sn** 03 15 21.2 -3.4
RAZG Razgrad 8.52 360 ⇓P Pn 03 13 51.8 +2.0
GRB Gharib 8.56 140 P Pn 03 13 49.3 -1.2
HRFI Mount Harif 8.70 123 P Pn 03 13 50.1 -2.2
HRFI S **Sn** 03 15 26.7 -3.0
ASUT 8.72 149 P Pn 03 13 52.2 -0.5
MBRI Mt Berech 8.76 124 P Pn 03 13 50.3 -2.9
MBRI S **Sn** 03 15 28.4 -2.9
EIL Elat 8.86 125 Pn Pn 03 13 53.6 -0.9
1.8nm,0.3s,baz=310,slow=2.8,SNR=23
EIL Sn **Sn** 03 15 30.0 -3.8
6.6nm,0.3s,baz=278,slow=22,SNR=6.0
18nm,0.6s
EIL Elat 8.86 125 P Pn 03 13 52.2 -2.4
EIL S **Sn** 03 15 28.7 -5.0
TIP Timpagrande 8.88 301 ⇑P Pn 03 13 54.0 -0.9
TIP Timpagrande 8.88 301 P Pn 03 13 53.7 -1.1
43nm,1.1s
VALD Valchedram 8.98 345 *e*P Pn 03 14 00.2 +4.1
ULC Ulcinj 9.00 322 *e*Pn Pn 03 13 55.1 -1.3
ULC *i* Sn **Sn** 03 13 33.4 -3.6
HBST Basata 9.01 128 P Pn 03 13 55.8 -0.9
ASF Jabal al Asfar 9.05 105 Pn Pn 03 13 56.0 -1.3
1.3nm,0.3s,baz=271,slow=3.8,SNR=18
1.3nm,0.3s
ASF Jabal al Asfar 9.05 105 P Pn 03 13 56.0 -1.3
VLAD Vladila 9.11 350 ⇑P Pn 03 14 00.5 +2.6
ICOR Ion Corvin 9.12 5 ⇑P Pn 03 14 00.4 +2.4
PVY Plav 9.15 328 *e*Pn Pn 03 13 57.5 -1.1
PVY *i* Sn **Sn** 03 15 37.5 -3.4
CEL Celeste 9.18 294 Pn 03 13 58.6 -0.3
CEL Celeste 9.18 294 P Pn 03 13 58.1 -0.9
55nm,0.7s
HDHB Dhahab 9.28 131 P Pn 03 13 60.0 -0.3
PDG Podgorica 9.34 324 Pn 03 13 59.8 -1.3
PDG Podgorica 9.34 324 ⇓P Pn 03 14 01.8 +0.7
PDG Podgorica 9.34 324 *e*Pn Pn 03 13 59.9 -1.3
PDG *i* Sn **Sn** 03 15 41.8 -3.6
BOVS Bovan 9.38 338 ⇑P Pn 03 14 04.5 +2.9
IVA Berane 9.40 328 *e*Pn Pn 03 14 00.6 -1.4
IVA *i* Sn **Sn** 03 15 43.5 -3.5
BUM Brajici-Budva 9.42 323 *e*Pn Pn 03 14 00.8 -1.5
BUM *i* Sn **Sn** 03 15 43.5 -4.0
TIRR Tirgusor 9.51 8 ⇑P Pn 03 14 06.6 +3.2
TIRR Tirgusor 9.51 8 ⇑P Pn 03 14 06.6 +3.2
KOME Kolasin 9.55 327 *e*Pn Pn 03 14 02.8 -1.3
KOME *e*Sn **Sn** 03 15 46.9 -3.8
TLR Topalu 9.56 6 ⇓P Pn 03 14 07.9 +3.5
CEME Cevo 9.60 324 *e*Pn Pn 03 14 03.4 -1.2
CEME *e*Sn **Sn** 03 15 47.9 -3.8
MATE Matera 9.62 309 *e*P Pn 03 14 01.9 -3.0
HCY Herceg Novi 9.73 322 *e*Pn Pn 03 14 05.2 -1.3
HCY *i* Sn **Sn** 03 15 50.8 -4.2
NKME Niksic 9.74 325 *e*Pn Pn 03 14 05.5 -1.2
NKME *e*Sn **Sn** 03 15 51.7 -3.7
HDK1 Dakhla 9.77 165 P Pn 03 14 07.8 +0.8
CUC Castrocucco 9.89 303 Pn 03 14 07.5 -1.2
TPGR Topolog 9.91 8 ⇓P Pn 03 14 12.4 +3.5
PLE Pljevlja 9.99 328 *e*Pn Pn 03 14 08.9 -1.2
PLE *i* Sn **Sn** 03 15 57.7 -3.8
BRY Bratogost 10.05 324 *e*Pn Pn 03 14 09.6 -1.3
BRY *i* Sn **Sn** 03 15 58.6 -4.3
GTR Jabal at Tayr 10.09 159 P Pn 03 14 11.1 -0.4
VAE Valguarnera 10.14 287 Pn Pn 03 14 12.7 +0.7
28nm,0.8s,baz=129,slow=4.7,SNR=9.7
VAE Sn **Sn** 03 16 00.1 -4.9
4.6nm,0.3s,baz=266,slow=12,SNR=3.6
VAE LR LR 03 18 29.2
comp=Z,421nm,21.6s,baz=112,slow=40
ACER Acerenza 10.18 307 Pn 03 14 09.7 -3.0
CFR Carcaliu 10.20 6 ⇓P Pn 03 14 15.9 +3.1
CFR Carcaliu 10.20 6 ⇓P Pn 03 14 15.9 +3.1
TLCR 10.28 9 ⇓P Pn 03 14 17.2 +3.3
TLCR 10.28 9 ⇓P Pn 03 14 17.2 +3.3
HERR Herculane 10.34 343 ⇑P Pn 03 14 18.0 +3.2
MDVR Moldovita 10.43 340 ⇓P Pn 03 14 19.0 +3.0
MLR Muntele Rosu 10.46 357 Pn Pn 03 14 16.8 +0.4
0.7nm,0.3s,baz=199,slow=9.1,SNR=4.7
MLR LR LR 03 18 34.3
comp=Z,300nm,19.8s,baz=144,slow=39
8.0nm,0.7s
MLR Muntele Rosu 10.46 357 Pn 03 14 17.6 +1.2
MLR Muntele Rosu 10.46 357 ⇑P Pn 03 14 19.9 +3.4
MLR Muntele Rosu 10.46 357 ⇑P Pn 03 14 19.9 +3.4
VOIR 10.46 354 ⇑P Pn 03 14 18.8 +2.4
VOIR 10.46 354 ⇑P Pn 03 14 18.8 +2.4

ODBI Odobesti 10.72 2 ⇑P Pn 03 14 23.2 +3.3
GZR Gura Zlata 10.75 345 ⇓P Pn 03 14 22.7 +2.3
GZR Gura Zlata 10.75 345 ⇓P Pn 03 14 22.7 +2.3
COVR Voineasa-Covas 10.80 359 ⇓P Pn 03 14 24.8 +3.7
PLOR Plostina 10.80 0 ⇓P Pn 03 14 24.9 +3.7
PLOR Plostina 10.80 0 ⇓P Pn 03 14 24.9 +3.7
VRI Vrincioaia 10.82 0 ⇑P Pn 03 14 25.0 +3.7
VRI Vrincioaia 10.82 0 ⇑P Pn 03 14 25.0 +3.7
DOPR Dopca 10.96 356 ⇑P Pn 03 14 26.6 +3.3
TURR Turia 11.02 358 ⇑P Pn 03 14 27.8 +3.7
DEV Deva 11.19 347 ⇑P Pn 03 14 29.6 +3.2
DEV Deva 11.19 347 ⇑P Pn 03 14 29.6 +3.2
APRS Wahet Paris 11.21 160 P Pn 03 14 27.0 +0.2
BZS Buzias 11.23 342 ⇑P Pn 03 14 29.7 +2.8
BZS Buzias 11.23 342 ⇑P Pn 03 14 29.7 +2.8
SIM Simferopol' 11.45 28 *e*P Pn 03 14 34.8 +4.8
SIM pmax pmax
comp=Z,43nm,1.0s
SIM MLR MLR
comp=Z,180nm,16.0s
MARD Mardin 11.69 75 Pn 03 14 35.3 +1.9
SIRR Siria 11.82 343 ⇓P Pn 03 14 37.7 +2.6
MARR Marisel-Cluj 11.92 348 ⇑P Pn 03 14 39.7 +3.2
BURAR Bucovina Array 12.61 356 ⇑P Pn 03 14 50.3 +4.4
BURAR Bucovina Array 12.61 356 ⇑P Pn 03 14 50.3 +4.4
BUR08 Bucovina Ar. S 12.64 356 Pn 03 14 50.7 +4.4
MORH Mrgy, Hungar 12.69 334 ⇓P Pn 03 14 48.7 +1.9
MORH Mrgy, Hungar 12.69 334 P Pn 03 14 48.6 +1.8
comp=Z,12nm,1.2s
ANN Anapa 12.80 37 *e*P Pn 03 14 46.9 -1.5
ANN *e*S **Sn** 03 17 10.4 +0.2
ANN pmax pmax
comp=Z,49nm,1.4s
BRNS Bernies 12.92 148 P Pn 03 14 51.0 +0.9
HMSM Jabal Masmas 12.96 158 P Pn 03 14 51.6 +0.8
SORM Soroca 13.15 5 ⇓P Pn 03 14 55.6 +2.4
SORM Soroca 13.15 5 ⇓P Pn 03 14 55.6 +2.4
SOC Sochi 13.26 46 *e*P Pn 03 14 53.7 -0.9
SOC *e*S **Sn** 03 17 24.2 +3.0
SOC MLR MLR
comp=Z,442nm,14.0s
PSZ Piszkesteto 13.81 341 Pn 03 15 06.0 +3.8
PSZ Piszkesteto 13.81 341 ⇑P Pn 03 15 05.8 +3.6
PSZ Piszkesteto 13.81 341 ⇑P Pn 03 15 05.8 +3.6
KEST Kesra 14.09 278 Pn Pn 03 15 07.6 +1.4
comp=Z,0.5nm,0.3s,baz=83,slow=8.0,SNR=6.8
comp=Z,8.1nm,0.9s
KEST Kesra 14.09 278 P P 03 15 10.8 -2.9
KARS Kars 14.17 62 Pn 03 15 06.7 -0.5
KARS Kars 14.17 62 P Pn 03 15 06.7 -0.5
VSL Villasalto 14.41 293 Pn 03 15 09.5 -1.0
LABN Labinsk 14.47 44 *e*P Pn 03 15 11.2 0.0
LABN *e*S **Sn** 03 17 51.6 +0.9
LABN pmax pmax
comp=Z,51nm,0.9s
SOKA Soboth 14.53 327 *e*Pn Pn 03 15 10.5 -1.6
comp=Z,1.0nm,0.5s
OBKA Obir 14.63 325 *e*Pn Pn 03 15 13.6 +0.2
comp=Z,1.9nm,0.5s
OBKA Obir 14.63 325 *e*P Pn 03 15 14.9 +1.5
comp=Z,17nm,1.2s,baz=137,slow=12
ARSA Arzberg 14.76 329 *e*Pn Pn 03 15 15.5 +0.3
comp=Z,0.3nm,0.2s
RONA Rosalia, Austr 14.81 332 *e*Pn Pn 03 15 16.6 +0.8
comp=Z,5.0nm,0.5s
KWP Kalwaria Pacla 14.86 350 *e*P P 03 15 27.1 +5.0
ERBR Yeremizino-Bor 15.00 41 *e*P Pn 03 15 19.4 +1.0
ERBR *e*S **Sn** 03 18 07.1 +3.3
ERBR pmax pmax
comp=Z,76nm,1.0s
ERBR MLR MLR
comp=Z,246nm,19.0s
MODS Modra-Piesok 15.02 335 *e*P P 03 15 31.3 +7.5
MODS pmax pmax
comp=Z,12nm,0.7s
MODS Modra-Piesok 15.02 335 *e*P P 03 15 31.3 +7.5
SMOL Smolenice 15.09 336 *e*P P 03 15 32.0 +7.4
SMOL pmax pmax
comp=Z,1.0nm,0.3s
NIE Niedzica 15.10 344 *e*P P 03 15 28.3 +3.5
SHA1 Shidzhatmaz 15.14 50 *e*P Pn 03 15 21.0 +0.6
CONA Conrad Observa 15.16 331 *e*Pn Pn 03 15 20.2 -0.5
comp=Z,0.9nm,0.4s
ZCCA Zocca 15.18 312 IAmb IAmb 03 16 04.1
comp=Z,28nm,1.2s
GNI Garni 15.26 65 Pn P 03 15 25.4 -1.3
comp=Z,0.5nm,0.3s,baz=106,slow=7.8,SNR=4.2
GNI LR LR 03 22 37.8
comp=Z,1µm,19.4s,baz=265,slow=43
comp=Z,12nm,0.9s
GNI Garni 15.26 65 IAmb IAmb 03 15 43.9
comp=Z,24nm,1.0s
GNI Garni 15.26 65 ⇓*e*P Pn 03 15 20.5 -1.5
GNI Garni 15.26 65 P Pn 03 15 22.8 +0.8
comp=Z,25nm,1.4s
KIV Kislovodsk 15.26 49 P P 03 15 27.4 +0.7
KIV IAmb IAmb 03 15 37.4
comp=Z,49nm,0.9s
KIV Kislovodsk 15.26 49 ⇓P P 03 15 28.3 +1.6
KIV Kislovodsk 15.26 49 ⇓P P 03 15 28.3 +1.6
KVAR Kislovodsk Arr 15.27 50 Pn P 03 15 25.4 -1.4
baz=255,slow=20
KVAR LR LR 03 23 04.6
comp=Z,181nm,18.9s,baz=158,slow=44
comp=Z,1.0nm,0.3s
KBZ Khabaz 15.29 51 Pn P 03 15 25.1 -1.6
comp=Z,0.3nm,0.3s,baz=259,slow=5.9,SNR=17
KBZ LR LR 03 23 02.3
comp=Z,198nm,19.2s,baz=241,slow=44
comp=Z,13nm,0.9s
KBZ Khabaz 15.29 51 *de*P Pn 03 15 22.1 0.0
TEOL Teolo 15.35 317 IAmb IAmb 03 15 48.3
comp=Z,21nm,0.6s
AK07 Malin Array Si 15.62 6 P P 03 15 29.3 -1.2
AK06 Malin Array Si 15.66 6 P P 03 15 29.7 -1.2
AK13 Malin Array Si 15.67 6 P P 03 15 29.8 -1.2
AK10 Malin Array Si 15.67 6 P P 03 15 30.0 -1.1
AK05 Malin Array Si 15.69 6 P P 03 15 30.2 -1.0
AK09 Malin Array Si 15.69 6 P P 03 15 30.2 -1.1
AK14 Malin Array Si 15.69 6 P P 03 15 30.2 -1.1
MAUC Maruska 15.71 338 *e*P P 03 15 33.2 +1.7
AK08 Malin Array Si 15.71 6 P P 03 15 29.8 -1.6
AK12 Malin Array Si 15.71 6 P P 03 15 30.0 -1.5
AK02 Malin Array Si 15.73 6 P P 03 15 30.3 -1.4
AK16 Malin Array Si 15.73 6 P P 03 15 30.3 -1.4
AK17 Malin Array Si 15.74 6 P Pn 03 15 29.6 +1.6
AK11 Malin Array Si 15.75 6 P Pn 03 15 29.7 +1.6
MOA Molln 15.76 328 *e*Pn Pn 03 15 28.9 +0.6
comp=Z,0.2nm,0.2s
MOA Molln 15.76 328 *e*P Pn 03 15 27.9 -0.5
comp=Z,20nm,1.2s,baz=137,slow=12
KIEV Kiev 15.77 6 P P 03 15 30.4 -1.6
KIEV Kiev 15.77 6 ⇓P P 03 15 32.3 +0.2
KIEV Kiev 15.77 6 ⇓P P 03 15 32.3 +0.2
AKASG Malin Array Be 15.77 6 Pn Pn 03 15 27.4 -1.0
comp=Z,2.1nm,0.3s,baz=193,slow=11,SNR=13
AKASG LR LR 03 22 03.5
comp=Z,219nm,19.8s,baz=196,slow=39
comp=Z,1.2nm,0.5s
AKASG Malin Array Be 15.77 6 P P 03 15 31.0 -1.2
AKASG Malin Array Be 15.77 6 P P 03 15 31.0 -1.2
AKASG pmax pmax
comp=Z,20nm,0.8s
AKBB Malin Array Si 15.77 6 P Pn 03 15 30.0 +1.6
AKBB Malin Array Si 15.77 6 P Pn 03 15 30.0 +1.6
AKBB pmax pmax
comp=Z,29nm,1.0s
AKBB Malin Array Si 15.77 6 P P 03 15 30.3 -1.9
ABTA Abfaltersbach 15.79 322 *e*Pn Pn 03 15 28.6 -0.2
comp=Z,4.2nm,0.6s
KRUC Moravsky 15.91 335 *e*PN P 03 15 32.8 -0.9
BIOA Bad Ischl, Aus 15.92 326 *e*Pn Pn 03 15 28.7 -1.7
comp=Z,1.5nm,0.3s
OJC Ojcow 15.96 344 *e*P P 03 15 39.4 +5.1
VRAC Vranov 16.05 336 Pn Pn 03 15 32.2 +0.1
comp=Z,0.9nm,0.3s,baz=146,slow=14,SNR=5.4
comp=Z,3.3nm,0.4s
VRAC Vranov 16.05 336 *e*Pn Pn 03 15 32.6 +0.6
GOF Gofitskoye 16.06 47 *de*P P 03 15 36.4 +1.0
MORC Moravsky Berou 16.16 338 ⇓P P 03 15 36.3 -0.2
MORC Moravsky Berou 16.16 338 ⇓P P 03 15 36.3 -0.2
MORC Moravsky Berou 16.16 338 *e*PN P 03 15 36.1 -0.4
LESA Schwarzleotal 16.18 324 *e*Pn Pn 03 15 33.4 -0.3
comp=Z,6.9nm,0.6s

RNPP5 Staryi Chortor 16.19 358 P P 03 15 35.9 -0.9
STEB Steborice 16.23 339 *e*P P 03 15 36.3 -0.9
RNPP8 Varash 16.30 358 P P 03 15 36.9 -1.1
RNPP9 Sopachiv 16.38 358 P P 03 15 38.1 -0.7
TREC Trest 16.43 334 *e*P P 03 15 38.5 -1.0
TREC Trest 16.43 334 *e*P P 03 15 38.5 -1.0
CKRC Cesky Krumlov 16.50 330 *e*P Pn 03 15 38.7 +0.9
CKRC Cesky Krumlov 16.50 330 *e*P Pn 03 15 38.7 +0.9
WTTA Wattenberg 16.58 322 *e*Pn Pn 03 15 40.0 +1.0
comp=Z,4.4nm,0.6s
WATA Walderalm 16.66 322 *e*Pn Pn 03 15 39.5 -0.5
comp=Z,3.9nm,0.6s
GEC2 GERESS Array S 16.77 329 *e*P P 03 15 42.9 -0.5
comp=Z,11nm,0.9s,baz=137,slow=12
GERES GERESS Array B 16.77 329 Pn Pn 03 15 41.9 +0.6
comp=Z,0.1nm,0.3s,baz=139,slow=11,SNR=13
GERES LR LR 03 22 41.0
comp=Z,152nm,18.9s,baz=146,slow=39
GERES ScP **ScP** 03 24 01.9 -0.3
comp=Z,0.2nm,0.3s,baz=232,slow=1.5,SNR=4.6
comp=Z,3.0nm,0.6s
SQTA Sankt Quirin 16.77 321 *e*Pn Pn 03 15 39.7 -1.6
comp=Z,8.4nm,0.6s
SQTA Sankt Quirin 16.77 321 *e*P Pn 03 15 38.6 -2.7
comp=Z,14nm,0.8s,baz=137,slow=12
FETA Feichten 16.89 320 *e*Pn Pn 03 15 42.4 -0.5
comp=Z,4.0nm,1.0s
ZUGS Zugspitze, Sch 17.02 321 *e*P Pn 03 15 43.8 -0.8
comp=Z,1.9nm,0.8s,baz=137,slow=12
ZVC Zvikov 17.04 331 *e*P Pn 03 15 44.8 +0.3
DPC Dobruska-Polom 17.04 337 *e*P Pn 03 15 44.7 +0.1
DPC Dobruska-Polom 17.04 337 *e*P Pn 03 15 44.7 +0.1
DPC Dobruska-Polom 17.04 337 P P 03 15 46.1 -0.2
comp=Z,21nm,1.0s
KHC Kasperske Hory 17.04 330 *e*P Pn 03 15 43.5 -1.1
KHC Kasperske Hory 17.04 330 *e*P Pn 03 15 43.5 -1.1
KHC *ex* x 03 16 07.5
RETA Reutte 17.18 321 *e*Pn Pn 03 15 46.6 +0.3
comp=Z,2.6nm,0.3s
RETA Reutte 17.18 321 *e*P Pn 03 15 45.0 -1.3
comp=Z,16nm,1.1s,baz=137,slow=12
DAVOX Davos/Dischmat 17.20 318 P Pn 03 15 46.2 -0.6
comp=Z,0.1nm,0.3s,baz=128,slow=15,SNR=7.9
DAVOX LR LR 03 24 36.8
comp=Z,144nm,21.4s,baz=117,slow=45
comp=Z,3.1nm,0.8s
BE1 Monatshausen 17.23 323 *e*P Pn 03 15 46.5 -0.4
comp=Z,12nm,0.7s,baz=137,slow=12
OSTC Ostas 17.25 337 *e*P P 03 15 48.0 -0.6
OSTC Ostas 17.25 337 *e*P P 03 15 48.0 -0.6
UPC Upice 17.27 337 *e*P Pn 03 15 47.5 0.0
UPC Upice 17.27 337 *e*P Pn 03 15 47.5 0.0
BEL Belsk 17.30 348 *e*P P 03 15 52.5 +3.4
TUE Stuetta 17.32 316 P P 03 15 49.4 -0.1
comp=Z,98nm,1.1s
WET Wettzell 17.35 329 *e*P Pn 03 15 47.8 -0.7
comp=Z,11nm,0.9s,baz=137,slow=12
PRU Pruhonice 17.35 333 *e*P Pn 03 15 47.1 -1.3
PRU Pruhonice 17.35 333 *e*P Pn 03 15 47.1 -1.3
PRA Prague 17.46 333 *e*P Pn 03 15 49.6 -0.1
PRA Prague 17.46 333 *e*P Pn 03 15 49.6 -0.1
KSP Ksiaz 17.48 338 *e*P P 03 15 54.0 +2.9
DAVA Damuels 17.51 319 *e*Pn Pn 03 15 50.8 +0.2
comp=Z,6.2nm,0.8s
DAVA Damuels 17.51 319 *e*P Pn 03 15 49.4 -1.2
comp=Z,14nm,0.7s,baz=137,slow=12
UBR Ueberruh 17.64 321 *e*P Pn 03 15 51.6 -0.5
comp=Z,17nm,0.6s,baz=137,slow=12
PVCC Panska Ves 17.79 334 *e*P Pn 03 15 53.6 -0.2
PVCC Panska Ves 17.79 334 *e*P Pn 03 15 53.6 -0.2
MAK Makhachkala 18.05 58 *d*P Pn 03 15 54.9 -2.1
MAK *e*S **Sn** 03 19 16.9 -0.7
MAK pmax pmax
comp=Z,264nm,1.3s
MAK MLR MLR
comp=Z,229nm,12.0s
BNI Bardonecchia 18.19 309 P P 03 15 59.6 +0.5
BNI Bardonecchia 18.19 309 P P 03 15 59.7 +0.5
BNI pmax pmax
comp=Z,17nm,1.0s
HSKC Hora Svate Kat 18.27 332 *e*P Pn 03 15 56.8 -3.0
BRG Berggiesshubel 18.30 334 *e*P Pn 03 15 59.5 -0.5
BRG Amp 03 16 03.3
comp=Z,2.3nm,0.7s
BRG Berggiesshubel 18.30 334 P P 03 16 01.9 +1.8
BRG Amp 03 16 03.3
comp=Z,6.2nm,0.7s
BRG Berggiesshubel 18.30 334 P P 03 16 05.0 +4.9
BRG Amp 03 16 06.7
comp=Z,12nm,1.1s
MANZ Manzenberg 18.31 329 *e*P P 03 15 58.6 -1.8
comp=Z,1.8nm,0.8s,baz=137,slow=12
NKC Novy Kostel 18.36 330 *e*P Pn 03 16 01.8 +0.9
NKC Novy Kostel 18.36 330 *e*P Pn 03 16 01.8 +0.9
VORD Divnogorie 18.39 26 *e*P Pn 03 16 01.6 +0.5
VORD pmax pmax
comp=Z,10.0nm,1.0s
SENIN Lac Sen/Sane 18.44 314 IAmb IAmb 03 16 20.2
comp=Z,28nm,0.8s
GRF Grafenberg Arr 18.48 327 *e*P P 03 16 01.0 -1.1
comp=Z,15nm,0.8s,baz=137,slow=12
GRF *e*L L 03 25 16.6
comp=Z,298nm,18.0s
VSR Storozhevoye 18.55 25 *e*P Pn 03 16 04.7 +1.6
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORR Voronezh 18.94 25 *e*P Pn 03 16 08.3 +0.4
VORR pmax pmax
comp=Z,10.0nm,0.8s
BFO Black Forest 18.98 320 P P 03 16 07.7 +0.1
BFO Black Forest 18.98 320 P P 03 16 07.7 +0.1
BFO pmax pmax
comp=Z,11nm,0.7s
CLL Collm 18.99 333 P 03 16 05.7 -2.0
CLL Collm 18.99 333 *i* P P 03 16 07.3 -0.4
CLL pmax pmax
comp=Z,9.0nm,0.6s
CLL Collm 18.99 333 *i* P P 03 16 07.3 -0.4
comp=Z,9.0nm,0.6s
CLL *e*S **S** 03 19 52.0 +10
MOX Moxa 19.02 330 *e*P Pn 03 16 09.1 +0.2
comp=Z,8.2nm,0.8s,baz=137,slow=12
MOX *e*L L 03 24 48.5
comp=Z,466nm,18.2s
SUW Suwalki 19.12 354 *e*P Pn 03 16 13.1 +3.1
SUW Suwalki 19.12 354 *e*P Pn 03 16 12.2 +2.1
GKP Gorka Klasztor 19.39 343 *e*P Pn 03 16 13.8 +0.5
GKP Gorka Klasztor 19.39 343 *e*P P 03 16 02.7 -9.4
MNK Minsk 19.48 2 *i* P P 03 16 10.8 -2.3
comp=E,16nm,0.9s
MNK *i* P P 03 16 10.8 -2.3
comp=N,12nm,1.0s
MNK *i* P P 03 16 10.8 -2.3
comp=Z,11nm,0.8s,baz=183
MNK *i* PP **sP** 03 16 24.5 +2.5
MNK *i* PPP PPP 03 16 32.3
MNK *i* S **S** 03 19 47.7 -4.0
MNK *i* SS **SnSn** 03 20 03.5 -3.1
MNK *i* SSS SSS 03 20 16.4
MNK *i* LQ LQ 03 21 56.9
MNK *i* LR LR 03 23 08.7
MNK *i* LRM MLR 03 24 10.5
comp=Z,77nm,12.6s
MNK *i* LRM MLR 03 24 12.5
comp=N,340nm,17.9s
MNK *i* LRM MLR 03 24 19.1
comp=E,382nm,17.3s
MNK Minsk 19.48 2 *i* P P 03 16 10.7 -2.3
MNK *i* S **S** 03 19 47.7 -4.0
MNK pmax pmax
comp=E,16nm,0.9s
MNK pmax pmax
comp=N,12nm,1.0s
MNK pmax pmax
comp=Z,11nm,0.8s
MNK MLR MLR
comp=Z,77nm,13.0s
MNK MLR MLR
comp=N,340nm,18.0s
MNK MLR MLR
comp=E,382nm,17.0s
VRH Novokhopyorsk 19.51 29 *e*P P 03 16 11.4 -1.9
VRH pmax pmax
comp=Z,30nm,0.9s
LPSR Galich'ya Gora 19.64 23 *e*P P 03 16 14.8 +0.1

LPSR pmax pmax
comp=Z,20nm,1.0s
NACGM **Naroch** 19.87 0 *e*P **Pn** 03 16 21.4 +2.5
comp=Z,30nm,0.9s,baz=181
RAYN Ar Rayn 20.05 120 P Pn 03 16 22.0 +0.5
RAYN Ar Rayn 20.05 120 ⇓P Pn 03 16 21.5 +0.1
TNS Taunus Mts 20.13 324 *e*P **P** 03 16 20.5 +0.3
comp=Z,13nm,0.6s,baz=137,slow=12
PABE Paberze 20.55 356 P **P** 03 16 25.4 +0.8
PABE IAmb IAmb 03 16 53.6
comp=Z,38nm,1.3s
PABE Paberze 20.55 356 *e*P Pn 03 16 27.2 +0.3
WLF Walferdange 20.93 321 P **P** 03 16 29.5 +0.7
WLF Walferdange 20.93 321 P **P** 03 16 29.5 +0.7
WLF pmax pmax
comp=Z,15nm,0.7s
WLF Walferdange 20.93 321 *d*P Pn 03 16 30.2 -1.2
CEST Esterri de Car 21.09 299 P **P** 03 16 30.6 -0.2
CEST IAmb IAmb 03 16 35.2
comp=Z,27nm,0.9s
PBUR Paburge 21.23 353 *e*P **P** 03 16 35.2 +3.2
OBN Obninsk 21.23 16 P **P** 03 16 32.3 +0.3
comp=Z,14nm,0.5s,baz=319,slow=23,SNR=4.6
comp=Z,14nm,0.5s
OBN Obninsk 21.23 16⇑ *e*P **P** 03 16 34.3 +2.3
OBN *i* 03 16 50.7
OBN *e*S Sn 03 20 40.2 +6.0
OBN pmax pmax
comp=Z,25nm,0.7s
OBN MLR MLR
comp=Z,184nm,15.0s
BHOU Houvegnez 21.42 322 *d*P **P** 03 16 36.3 +2.2
BTNL Ternell 21.50 323 *d*P **P** 03 16 33.4 -1.6
MEM Membach 21.57 322 *d*P **P** 03 16 34.4 -1.3
comp=Z,31nm,0.8s
BSD Bornholm Skovb 21.65 342 *i*P **P** 03 16 34.0 -2.4
BSD IAML 03 16 46.9
comp=Z,1.7nm,0.3s
BSD IAmb IAmb 03 16 46.9
comp=Z,1.7nm,0.3s
BSD Bornholm Skovb 21.65 342 *e*P **P** 03 16 35.8 -0.7
RCHB Rochefort 21.70 321 *d*P **P** 03 16 37.5 +0.4
BSTI Sart Tilman 21.78 322 *d*P **P** 03 16 37.6 -0.3
BGES Gesves 21.91 321 *d*P **P** 03 16 43.3 +4.0
comp=Z,9.4nm,0.9s
DOU Dourbes 22.00 320 *d*P **P** 03 16 38.7 -1.5
comp=Z,15nm,0.8s
BMRD Maredsous 22.02 321 *d*P **P** 03 16 40.6 0.0
MOS Moscow 22.05 17 *e*P **P** 03 16 41.1 +0.3
MOS *e*PPP PPP 03 17 10.9
MOS *e*S **S** 03 20 38.0 -4.7
MOS pmax pmax
comp=Z,39nm,0.8s
TAM Tamanrasset 22.06 242 P **P** 03 16 42.8 +1.4
TAM Tamanrasset 22.06 242 P **P** 03 16 42.8 +1.4
TAM pmax pmax
comp=Z,46nm,0.6s
CLF Chambon-Foret 22.25 313 P **P** 03 16 42.7 -0.4
LUNU Lund 22.50 340 *i*P **P** 03 16 43.0 -2.6
UCC Uccle 22.52 321 P **P** 03 16 45.2 -0.7
UCC IAmb IAmb 03 17 10.8
comp=Z,17nm,0.9s
UCC Uccle 22.52 321 P **P** 03 16 45.2 -0.7
UCC pmax pmax
comp=Z,17nm,0.9s
UCC Uccle 22.52 321 *d*P **P** 03 16 45.1 -0.8
BELG Belogornoye 22.93 34⇑ *e*P **P** 03 16 48.2 -1.9
BELG pmax pmax
comp=Z,13nm,1.2s
DEL Delary 23.13 342 *i*P **P** 03 16 48.0 -4.1
VSU Vasula 23.43 0⇑ *e*P **P** 03 16 53.5 -1.7
VSU pmax pmax
comp=Z,75nm,3.2s
VSU Vasula 23.43 0 *e*P **P** 03 16 58.6 +3.4
MTSE Matsula 23.76 356 *e*P **P** 03 17 01.6 +3.3
ARBE Arbavere 24.41 359 *e*P **P** 03 17 08.4 +4.0
BORU Boraas 24.44 342 *i*P **P** 03 17 01.1 -3.5
ONAU Onsala 24.46 341 *i*P **P** 03 17 04.7 -0.1
ESDC Sonseca Array 24.66 290 P **P** 03 17 06.3 -0.6
comp=Z,8.1nm,0.7s,baz=80,slow=9.4,SNR=141
ESDC ScP **ScP** 03 24 22.2 +0.9
comp=Z,0.6nm,0.9s,baz=71,slow=1.9,SNR=7.8
ESDC LR LR 03 27 29.6
comp=Z,123nm,20.3s,baz=109,slow=38
comp=Z,8.1nm,0.7s
ESDC Sonseca Array 24.66 290 P **P** 03 17 06.4 -0.6
PAB San Pablo 24.96 290 P **P** 03 17 09.3 -0.4
PAB IAmb IAmb 03 17 13.4
comp=Z,10nm,0.8s
PAB San Pablo 24.96 290 P **P** 03 17 09.3 -0.4
PAB pmax pmax
comp=Z,10.0nm,0.9s
MEF Metsahovi 25.24 357 *e*P **P** 03 17 11.7 -0.1
AAL Aland 25.52 352 *e*P **P** 03 17 13.0 -1.4
MDT Midelt 25.93 274 LR LR 03 29 45.7
comp=Z,322nm,21.1s,baz=88,slow=42
MD01 Midelt array s 26.05 274 P **P** 03 17 19.3 -0.3
MD31 MD31 26.05 274 P **P** 03 17 19.3 -0.3
RAF Rauma 26.19 355 *e*P **P** 03 17 18.4 -2.0
FINES FINESS Array B 26.43 359 P **P** 03 17 20.9 -1.7
comp=Z,2.0nm,0.7s,baz=164,slow=10,SNR=12
comp=Z,2.0nm,0.7s
HFS Hagfors 26.48 345 P **P** 03 17 21.7 -1.4
comp=Z,1.7nm,0.4s,baz=138,slow=12,SNR=16
comp=Z,1.7nm,0.4s
PBRG Braganca 26.86 295 *e*P **P** 03 17 26.0 -0.8
PBRG *i* IAmb IAmb 03 17 44.7
comp=Z,33nm,1.4s
MVO Moncorvo 27.05 293 *e*P **P** 03 17 27.9 -0.6
MVO *i* IAmb IAmb 03 17 49.1
comp=Z,39nm,1.6s
PBAR Barrancos 27.10 287 *e*P **P** 03 17 27.6 -1.3
PBAR *i* IAmb IAmb 03 17 39.0
comp=Z,30nm,1.5s
KLMR Klimovskoe 27.14 14 *e*P **P** 03 17 28.3 -0.7
KLMR pmax pmax
comp=Z,19nm,1.2s
KEF Keuruu 27.17 358 *e*P **P** 03 17 28.0 -1.3
PCBR Castelo Branco 27.37 290 *e*P **P** 03 17 32.5 +1.1
PCBR *i* IAmb IAmb 03 17 35.8
comp=Z,18nm,1.2s
MTE Manteigas 27.42 291 *e*P **P** 03 17 33.2 +1.3
UOSS Minazif 27.46 103 P **P** 03 17 32.3 +0.1
AKTO Aktyubinsk 27.48 46 LR LR 03 31 30.5
comp=Z,111nm,18.8s,baz=180,slow=43
PESTR Estremoz 27.49 288 IAmb IAmb 03 17 44.0
comp=Z,18nm,0.9s
PESTR Estremoz 27.49 288 *e*P **P** 03 17 31.1 -1.4
PESTR *i* IAmb IAmb 03 17 57.3
comp=Z,28nm,1.5s
PVRL Vila Real 27.57 293 *e*P **P** 03 17 32.7 -0.5
PVRL *i* IAmb IAmb 03 17 38.2
comp=Z,27nm,1.6s
POLO Lamas de Olo 27.63 294 *e*P **P** 03 17 33.3 -0.5
POLO *i* IAmb IAmb 03 17 34.6
comp=Z,16nm,2.0s
PVIS Viseu 27.69 292 *e*P **P** 03 17 33.0 -1.3
PVAQ Vaqueiros 27.70 285 *e*P **P** 03 17 32.8 -1.5
PVAQ *i* IAmb IAmb 03 17 34.8
comp=Z,52nm,1.5s
PBEJ Beja 27.76 286 *e*P **P** 03 17 34.5 -0.4
PBEJ *i* IAmb IAmb 03 17 40.4
comp=Z,27nm,1.1s
PCAB Cabril 27.82 294 *e*P **P** 03 17 35.1 -0.3
NB2 NORSAR Subarra 27.83 344 P **P** 03 17 35.7 +0.4
comp=Z,1.0nm,0.6s,baz=156,slow=9.3
NB2 NORSAR Subarra 27.83 344 P **P** 03 17 35.7 +0.4
NB2 AMP 03 17 35.7
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 27.83 344 P **P** 03 17 35.0 -0.3
comp=Z,0.5nm,0.5s,baz=142,slow=9.1,SNR=5.8
NOA LR LR 03 30 01.8
comp=Z,130nm,19.1s,baz=325,slow=40
comp=Z,0.5nm,0.5s
EVO Evora 27.84 287 *e*P **P** 03 17 36.5 +0.9
PARRA **Arraiolos** 27.84 288 *e*P **P** 03 17 34.7 -0.9
PBDV **Barranco-do-Ve** 27.88 285 *e*P **P** 03 17 35.1 -0.9
PSARD **Sardoal** 27.91 290 *e*P **P** 03 17 38.6 +2.4
PMTG **Montargil** 27.98 289 *e*P **P** 03 17 38.2 +1.4
PMTG *i* IAmb IAmb 03 18 02.6
comp=Z,21nm,2.1s
KIRV Kirov 27.99 26 LR LR 03 31 04.4
comp=Z,108nm,18.8s,baz=235,slow=42
KIRV Kirov 27.99 26 *de*P **P** 03 17 37.2 +0.5
MESJ Messejana 28.05 286 *e*P **P** 03 17 37.2 -0.3

JOF Joensuu 28.06 5 *e*P **P** 03 17 37.1 -0.1
MOE Montemor 28.10 287 *e*P **P** 03 17 37.8 -0.1
MOE *i* IAmb IAmb 03 17 42.0
comp=Z,34nm,1.6s
VAF Ylistaro 28.14 356 *e*P **P** 03 17 38.6 +0.7
PTO Porto 28.23 293 *e*P **P** 03 17 39.1 +0.1
AB31 Akbulak array 28.25 50 P **P** 03 17 39.4 +0.3
AB31 IAmb IAmb 03 18 03.4
comp=Z,8.2nm,0.8s
AB31 Akbulak array 28.25 50 *i*P **P** 03 17 38.5 -0.6
ABKAR Akbulak array 28.25 50 P **P** 03 17 39.6 +0.5
EKA Eskdalemuir Ar 28.83 324 P **P** 03 17 43.0 -1.2
comp=Z,1.5nm,0.5s,baz=132,slow=11,SNR=12
comp=Z,1.5nm,0.5s
EKA Eskdalemuir Ar 28.83 324 P **P** 03 17 43.0 -1.2
HRA Herat 29.22 81 P **P** 03 17 49.2 +1.1
ARTI Arti 30.36 35 LR LR 03 33 33.3
comp=Z,78nm,19.3s,baz=235,slow=43
ARTI Arti 30.36 35 P **P** 03 17 57.6 -0.2
ARTI Arti 30.36 35 ⇓*i*P **P** 03 17 57.0 -0.7
ARTI pmax pmax
comp=Z,8.0nm,0.8s
TORD Torodi Ar. Bea 31.33 232 P **P** 03 18 06.7 0.0
comp=Z,28nm,0.7s,baz=35,slow=6.1,SNR=215
TORD ScP **ScP** 03 24 42.1 +0.1
comp=Z,1.0nm,0.7s,baz=327,slow=1.3,SNR=5.8
comp=Z,28nm,0.7s
LODK Lodwar 32.49 164 P **P** 03 18 19.8 +2.9
APA Apatity 32.81 5⇓ *e*P **P** 03 18 14.4 -4.8
APA pmax pmax
comp=Z,10.0nm,1.0s
APA MLR MLR
comp=Z,1μm,5.9s
FAUS Fauske 33.04 352 *e*P **P** 03 18 22.8 +1.6
STEI Steigen 33.57 352 *e*P **P** 03 18 24.7 -1.1
CHGR Chuyangaron 34.03 71⇑ *e*P **P** 03 18 30.9 +0.6
CHGR pmax pmax
comp=Z,17nm,0.8s
KTK1 Kautokeino 34.08 358 *e*P **P** 03 18 28.7 -1.5
BRLS Borolday 34.22 63 *e*P **P** 03 18 32.1 +0.4
BRLS Borolday 34.22 63 *e*P **P** 03 18 32.1 +0.4
IUG luzhnay 34.39 65 *e*P **P** 03 18 34.2 +0.9
IUG pmax pmax
comp=Z,16nm,0.9s
IUG luzhnay 34.39 65 *e*P **P** 03 18 34.3 +0.9
comp=Z,16nm,0.9s
ARA0 ARCESS Array S 34.56 359 *e*P **P** 03 18 32.7 -1.7
ARCES ARCESS Array B 34.56 359 P **P** 03 18 32.7 -1.6
comp=Z,1.5nm,0.4s,baz=178,slow=7.3,SNR=12
comp=Z,1.5nm,0.4s
ARCES ARCESS Array B 34.56 359 IAmb IAmb 03 18 40.2
comp=Z,28nm,1.4s
ARCES ARCESS Array B 34.56 359 P **P** 03 18 32.7 -1.6
ARCES pmax pmax
comp=Z,28nm,1.5s
EDA Edea 34.64 210 P **P** 03 18 36.5 +0.9
EDA IAmb IAmb 03 18 46.0
comp=Z,13nm,1.2s
KK31 Karatay Array 34.71 63 *i*P **P** 03 18 36.2 +0.2
KKAR Karatay Array 34.71 63 P **P** 03 18 37.3 +1.3
KKAR Karatay Array 34.71 63 P **P** 03 18 37.3 +1.3
JETT Jettan, Norway 34.74 356 *e*P **P** 03 18 36.0 +0.1
GAR Garm 34.88 70 IAmb IAmb 03 18 50.0
comp=Z,17nm,1.0s
DZA Taraz 35.32 63 *e*P **P** 03 18 42.3 +1.1
DZA Taraz 35.32 63 *e*P **P** 03 18 42.3 +1.1
BORK Borovoye 35.55 46 P **P** 03 18 44.0 +0.9
BORK IAmb IAmb 03 18 46.3
comp=Z,6.4nm,0.8s
BORK Borovoye 35.55 46 *ce*P **P** 03 18 43.3 +0.2
BORK pmax pmax
comp=Z,14nm,1.3s
BVAR Borovoye Array 35.58 46 P **P** 03 18 42.9 -0.5
comp=Z,6.3nm,0.9s,baz=251,slow=7.2,SNR=26
BVAR LR LR 03 37 24.8
comp=Z,101nm,18.1s,baz=252,slow=43
comp=Z,6.3nm,0.9s
BRZS Berezniki 36.49 51 *e*P **P** 03 18 51.9 +0.7
BRZS Berezniki 36.49 51 *e*P **P** 03 18 51.1 -0.1
ARSB Arslanbob 36.65 66 IAmb IAmb 03 19 07.8
comp=Z,14nm,1.0s
EKS2 Erkin-Say 37.13 64 P **P** 03 18 58.2 +1.4
SNR=13
AAK Ala-Archa 37.66 64 LR LR 03 36 13.7
comp=Z,89nm,22.0s,baz=286,slow=39
AAK Ala-Archa 37.66 64 P **P** 03 19 02.7 +1.3
SNR=12
AAK Ala-Archa 37.66 64 P **P** 03 19 02.9 +1.5
AAK IAmb IAmb 03 19 03.8
comp=Z,15nm,1.0s
AAK Ala-Archa 37.66 64 *c i*P **P** 03 19 02.7 +1.3
AAK pmax pmax
comp=Z,17nm,1.0s
CHMS Chumysh 37.82 63 P **P** 03 19 04.1 +1.5
SNR=6.0
KBK Karagaybulak 37.99 64 P **P** 03 19 05.5 +1.3
SNR=7.7
TKM2 Tokmak 2 38.44 63 P **P** 03 19 09.0 +0.9
SNR=9.5
BOOM Boomskoye usch 38.73 64 IAmb IAmb 03 19 26.1
comp=Z,13nm,1.0s
KUU Kurty 38.90 61 *e*P **P** 03 19 12.8 +1.1
KUU Kurty 38.90 61 *e*P **P** 03 19 12.8 +1.1
KSH2 Kashi 38.90 69 P **P** 03 19 12.9 +1.0
KSH2 sP sP 03 19 20.3 -0.5
KSH2 pmax pmax
comp=Z,4.0nm,0.9s
TNSS Tian-Shan 39.42 63 *e*P **P** 03 19 17.0 +0.6
TNSS Tian-Shan 39.42 63 *e*P **P** 03 19 17.1 +0.6
MDOK Medeo 39.48 63 *e*P **P** 03 19 17.6 +0.9
MDOK Medeo 39.48 63 *e*P **P** 03 19 17.6 +0.9
KURBB Kurchatov Arra 40.28 51 P **P** 03 19 23.6 +0.5
comp=Z,19nm,0.9s,baz=277,slow=8.8,SNR=95
KURBB PP **PnPn** 03 21 01.6 +2.0
comp=Z,2.2nm,0.9s,baz=277,slow=11,SNR=6.9
KURBB ScP **ScP** 03 25 15.8 +1.6
comp=Z,1.5nm,0.9s,baz=272,slow=4.1,SNR=6.0
KURBB S **S** 03 25 29.2 +0.1
comp=Z,1.0nm,1.0s,baz=276,slow=17,SNR=4.8
KURBB LR LR 03 39 58.8
comp=Z,182nm,18.4s,baz=176,slow=42
comp=Z,19nm,0.9s
TDK Taldyqorghan 40.30 60 *e*P **P** 03 19 24.0 +0.8
TDK pmax pmax
comp=Z,11nm,0.8s
TDK Taldyqorghan 40.30 60 *e*P **P** 03 19 24.1 +0.8
comp=Z,11nm,0.8s
KURK Kurchatov 40.35 51 ScP **ScP** 03 25 15.8 +1.4
KURK Kurchatov 40.35 51 P **P** 03 19 24.2 +0.7
KURK IAmb IAmb 03 19 24.9
comp=Z,15nm,0.8s
KURK Kurchatov 40.35 51 *c i*P **P** 03 19 23.8 +0.3
KURK pmax pmax
comp=Z,22nm,0.9s
DBIC Dimbokro 40.42 233 P **P** 03 19 24.2 -0.3
comp=Z,18nm,0.7s,baz=56,slow=8.5,SNR=39
DBIC LR LR 03 39 46.7
comp=Z,151nm,18.8s,baz=44,slow=42
comp=Z,18nm,0.7s
DBIC Dimbokro 40.42 233 P **P** 03 19 24.3 -0.2
DBIC Dimbokro 40.42 233 P **P** 03 19 24.3 -0.2
DBIC pmax pmax
comp=Z,20nm,0.7s
SATY Saty 40.48 63 *e*P **P** 03 19 25.8 +0.9
SATY pmax pmax
comp=Z,15nm,1.6s
SATY Saty 40.48 63 *e*P **P** 03 19 25.8 +0.9
comp=Z,15nm,1.6s
KPKS Kokpek 40.63 62 *e*P **P** 03 19 26.9 +0.7
KPKS Kokpek 40.63 62 *e*P **P** 03 19 27.0 +0.7
UZB Uzynbulak 40.92 62 *e*P **P** 03 19 29.2 +0.6
UZB Uzynbulak 40.92 62 *e*P **P** 03 19 29.3 +0.6
BORG Borgarnes 41.22 331 LR LR 03 37 34.8
comp=Z,66nm,18.8s,baz=130,slow=38
SHLS Shalkode 41.23 62 *e*P **P** 03 19 34.4 +3.2
SHLS Shalkode 41.23 62 *e*P **P** 03 19 34.4 +3.2
WUS Wushi 41.33 65 IAmb IAmb 03 19 34.0
comp=Z,13nm,0.8s
SEM Semipalatinsk 41.38 51 *e*P **P** 03 19 32.7 +0.4
SEM Semipalatinsk 41.38 51 *e*P **P** 03 19 32.8 +0.4
MAKZ Makanchi 42.65 57 P **P** 03 19 43.3 +0.8
MAKZ Makanchi 42.65 57 P **P** 03 19 43.3 +0.8
MAKZ pmax pmax
comp=Z,9.0nm,1.1s
MK31 Makanchi Array 42.86 57 *c i*P **P** 03 19 44.9 +0.6

MKAR Makanchi Array 42.86 57 P **P** 03 19 44.9 +0.6
comp=Z,13nm,0.8s,baz=279,slow=6.0,SNR=106
MKAR LR LR 03 40 53.3
comp=Z,61nm,19.2s,baz=262,slow=41
comp=Z,13nm,0.8s
MKAR Makanchi Array 42.86 57 P **P** 03 19 45.0 +0.7
MKAR Makanchi Array 42.86 57 P **P** 03 19 45.0 +0.7
SPITS Spitsbergen Ar 43.47 357 P **P** 03 19 47.5 -1.3
comp=Z,3.8nm,0.7s,baz=160,slow=10,SNR=8.5
comp=Z,3.8nm,0.7s
SPITS Spitsbergen Ar 43.47 357 P **P** 03 19 47.7 -1.1
SPITS pmax pmax
comp=Z,64nm,1.5s
ZAA0 Zalesovo Array 44.24 46 IAmb IAmb 03 20 07.4
comp=Z,8.2nm,0.7s
ZALV Zalesovo Beam 44.24 46 P **P** 03 19 55.0 -0.2
comp=Z,6.9nm,0.4s,baz=266,slow=9.8,SNR=32
ZALV LR LR 03 42 27.8
comp=Z,85nm,18.4s,baz=265,slow=42
comp=Z,6.9nm,0.4s
ZALV Zalesovo Beam 44.24 46 P **P** 03 19 55.3 +0.1
ZALV Zalesovo Beam 44.24 46 P **P** 03 19 55.3 +0.1
ZSN Zaisan 44.55 55 *e*P **P** 03 19 58.5 +0.7
ZSN Zaisan 44.55 55 *e*P **P** 03 19 58.5 +0.7
DGZ Jazzator, Alta 46.03 52⇑ *e*P **P** 03 20 10.1 +0.4
DGZ pmax pmax
comp=Z,24nm,1.6s
WMQ Urumqi 47.05 60 *e*P **P** 03 20 19.2 +1.5
WMQ LR LR
comp=Z,140nm,24.3s
NRIK Noril'sk 47.49 25 P **P** 03 20 20.6 -0.1
comp=Z,4.3nm,0.9s,baz=247,slow=4.6,SNR=5.3
comp=Z,4.3nm,0.9s
NRIK Noril'sk 47.49 25 P **P** 03 20 22.1 +1.4
NRIK IAmb IAmb 03 20 30.9
comp=Z,4.1nm,0.7s
NRIK Noril'sk 47.49 25⇓ *e*P **P** 03 20 21.3 +0.6
NRIK pmax pmax
comp=Z,9.0nm,1.5s
NOR Nord 49.22 352 *i*P P 03 20 26.6 -7.2
NOR IAmb IAmb 03 20 41.5
comp=Z,3.2nm,0.9s
SUMG Summit 49.52 339 P **P** 03 20 36.2 -0.5
SUMG IAmb IAmb 03 20 44.5
comp=Z,17nm,1.3s
SUMG Summit 49.52 339 P **P** 03 20 36.2 -0.5
SUMG pmax pmax
comp=Z,17nm,1.3s
SUMG Summit 49.52 339 *i*P **P** 03 20 37.0 +0.3
SUMG IAmb IAmb 03 20 38.8
comp=Z,5.6nm,0.6s
KNGR Kungurtug, Tuv 52.31 50⇓ *e*P **P** 03 20 58.0 +0.3
KNGR pmax pmax
comp=Z,22nm,1.6s
SFJD Kangerlussuaq 53.35 331 LR LR 03 44 58.6
comp=Z,155nm,19.1s,baz=94,slow=37
LSA Lhasa 53.95 76 IAmb IAmb 03 21 39.3
comp=Z,4.8nm,0.6s
LSA Lhasa 53.95 76 P **P** 03 21 07.4 -3.1
TSUM Tsumeb 54.61 190 LR LR 03 47 41.8
comp=Z,180nm,18.2s,baz=5.0,slow=39
TLY Talaya 55.82 47⇑ *e*P **P** 03 21 24.0 +0.8
TLY pmax pmax
comp=Z,10.0nm,1.5s
ZAK Zakamensk 55.94 49 *e*P **P** 03 21 24.8 +0.6
ZAK pmax pmax
comp=Z,10.0nm,1.3s
GRTLG **Ghanzi** 56.32 186 P **P** 03 21 29.0 +1.9
PALK Pallekele 56.69 106 LR LR 03 47 48.6
comp=Z,163nm,21.4s,baz=312,slow=38
GTA2 Gaotai 56.91 62 P **P** 03 21 31.7 +0.4
GTA2 pmax pmax
comp=Z,7.0nm,0.9s
TULEG Thule 57.49 344 P **P** 03 21 34.4 -0.2
TULEG IAmb IAmb 03 21 46.0
comp=Z,9.4nm,0.8s
KGCAE **Kacgae** 57.72 185 P **P** 03 21 38.6 +1.7
SONM Songino Array 58.65 51 P **P** 03 21 44.2 +0.8
comp=Z,2.6nm,0.5s,baz=287,slow=8.6,SNR=19
comp=Z,2.6nm,0.5s
SONM Songino Array 58.65 51 P **P** 03 21 44.4 +1.0
SONM IAmb IAmb 03 21 46.7
comp=Z,5.9nm,1.2s
SONM Songino Array 58.65 51 P **P** 03 21 44.4 +1.0
SONM pmax pmax
comp=Z,6.0nm,1.2s
ULN Ulaanbaatar 59.06 51 ⇓*i*P **P** 03 21 47.3 +1.0
ULN pmax pmax
comp=Z,11nm,1.3s
ULN Ulaanbaatar 59.06 51 P **P** 03 21 48.4 +2.1
TIXI Tiksi 60.87 21 ⇓*i*P **P** 03 21 57.9 -0.1
TIXI pmax pmax
comp=Z,4.0nm,0.8s
POIN Pond Inlet 61.08 341 P **P** 03 21 58.0 -1.4
POIN IAmb IAmb 03 22 15.6
comp=Z,5.8nm,1.1s
LZDM Lanzhou Array 61.14 65 P **P** 03 22 01.4 +0.5
comp=Z,0.7nm,0.4s,baz=284,slow=6.0,SNR=7.2
comp=Z,0.7nm,0.4s
LZH Lanzhou 61.19 64 *e*P **P** 03 22 02.0 +0.9
LZH pP sP 03 22 10.0 -0.3
LZH pmax pmax
comp=Z,10.0nm,1.2s
FRB Frobisher Bay 61.37 330 LR LR 03 49 52.0
comp=Z,50nm,18.1s,baz=87,slow=37
BOSA Boshof 63.32 181 P **P** 03 22 16.6 +1.5
comp=Z,4.0nm,0.8s,baz=9.1,slow=8.2,SNR=7.4
comp=Z,4.0nm,0.8s
BOSA Boshof 63.32 181 P **P** 03 22 16.6 +1.5
BOSA pmax pmax
comp=Z,15nm,1.3s
CD2 Chengdu 63.33 70 P **P** 03 22 15.6 +0.3
CD2 pmax pmax
comp=Z,20nm,0.6s
BTO2 Baotou 63.61 57 *e*P **P** 03 22 17.7 +0.6
BTO2 pmax pmax
comp=Z,28nm,0.9s
BTO2 pmax pmax
comp=Z,190nm,5.3s
ILON Igloolik, Nuna 63.73 338 P **P** 03 22 16.0 -1.2
ILON IAmb IAmb 03 22 25.4
comp=Z,4.4nm,0.8s
SCHQ Schefferville 64.04 320 P **P** 03 22 18.9 -0.7
comp=Z,5.6nm,0.7s,baz=69,slow=6.0,SNR=9.3
comp=Z,5.6nm,0.7s
HHC Hu-ho-hao-te 64.72 57 ⇓*i*P **P** 03 22 25.6 +1.2
HHC pP pP 03 22 31.3 +0.2
HHC pmax pmax
comp=Z,10.0nm,1.3s
CHTO Chiang Mai 65.23 84 P **P** 03 22 26.5 -1.4
CHTO IAmb IAmb 03 22 31.1
comp=Z,7.0nm,1.0s
CHTO Chiang Mai 65.23 84 P **P** 03 22 26.5 -1.4
CHTO pmax pmax
comp=Z,7.0nm,1.0s
CHTO Chiang Mai 65.23 84 P **P** 03 22 30.3 +2.4
comp=Z,7.9nm,1.1s
CMAR Chiang Mai Arr 65.42 84 P **P** 03 22 29.4 +0.3
comp=Z,2.6nm,0.4s,baz=297,slow=8.1,SNR=30
CMAR LR LR 03 56 58.5
comp=Z,30nm,21.2s,baz=290,slow=41
comp=Z,2.6nm,0.4s
CMAR Chiang Mai Arr 65.42 84 *i*P **P** 03 22 29.3 +0.3
CMAR pmax pmax
comp=Z,5.0nm,0.6s
XAN Xi'an 65.83 64 P P 03 22 25.2 -6.4
XAN pmax pmax
comp=Z,6.0nm,2.5s
HIA Hailar 66.28 46⇓ *e*P **P** 03 22 35.6 +1.4
HIA pmax pmax
comp=Z,7.0nm,0.9s
XLT XiLinHaoTe 66.41 52 *e*P **P** 03 22 36.2 +1.0
XLT PcP **PcP** 03 23 06.2 +1.4
XLT pmax pmax
comp=Z,7.0nm,1.1s
SUR Sutherland 67.28 185 LR LR 03 55 22.4
comp=Z,42nm,18.5s,baz=358,slow=39
GYA Guiyang 67.66 73 P **P** 03 22 43.1 -0.4
GYA pmax pmax
comp=Z,6.0nm,0.8s
ENH Enshi 68.01 68 P **P** 03 22 45.7 +0.2
HEH HeiHe 70.16 42 *e*P **P** 03 22 58.4 -0.1
TIA Tai'an 70.73 59 P **P** 03 23 02.5 +0.3
TIA pmax pmax
comp=Z,5.0nm,0.9s
RCBR Riachuelo 71.38 249 LR LR 03 54 43.6

comp=Z,23nm,19.5s,baz=64,slow=36
BNX BinXian 72.53 46 ⇑P **P 03 23 11.2 -1.7**
BNX pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 72.89 15 *c*e*P* **P 03 23 13.2 -1.4**
BILL pmax pmax
comp=Z,8.0nm,1.5s
KLR Kul'dur 73.08 41 ⇓*e*P **P 03 23 17.2 +1.1**
KLR pmax pmax
comp=Z,4.0nm,1.1s
SEY Seymchan 73.22 23 ⇓*e*P **P 03 23 17.1 +0.5**
SEY pmax pmax
comp=Z,12nm,1.5s
C36M Paulatuk 73.71 350 IAmb IAmb 03 23 22.1
comp=Z,5.8nm,0.9s
NJ2 Nanjing 74.08 62 *e*P **P 03 23 22.5 +0.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.7s
C27K Jago River 75.40 357 IAmb IAmb 03 24 11.7
comp=Z,5.4nm,1.1s
SADO Sadowa 75.96 315 LR LR 03 56 19.4
comp=Z,40nm,19.4s,baz=340,slow=35
USRK Ussuriysk Ar. 76.09 46 P **P 03 23 32.5 -1.1**
comp=Z,3.1nm,0.7s,baz=327,slow=2.8,SNR=4.2
comp=Z,3.1nm,0.7s
E29M Blow River 76.24 354 IAmb IAmb 03 24 05.1
comp=Z,9.1nm,1.1s
D23K Nanushuk River 76.29 359 IAmb IAmb 03 23 46.9
comp=Z,4.1nm,0.8s
C18K Utukok River 76.46 3 IAmb IAmb 03 23 48.0
comp=Z,4.8nm,0.8s
F31M Tsiigehtchic 76.76 352 IAmb IAmb 03 23 39.9
comp=Z,9.3nm,0.9s
E25K Arctic Village 76.99 357 IAmb IAmb 03 23 42.7
comp=Z,5.5nm,1.1s
G31M Satah River 77.31 352 IAmb IAmb 03 24 17.8
comp=Z,12nm,1.4s
PDSI Padang 77.35 100 P **P 03 23 42.5 +1.3**
comp=Z,23nm,0.7s
KSAR Wonju Array Be 77.40 53 P **P 03 23 41.5 +0.3**
KSAR Wonju Array Be 77.40 53 P **P 03 23 41.5 +0.3**
KSRS Korea Array 77.42 53 P **P 03 23 41.0 -0.3**
comp=Z,3.8nm,0.8s,baz=306,slow=4.8,SNR=9.0
comp=Z,3.8nm,0.8s
KSRS Korea Array 77.42 53 P **P 03 23 41.0 -0.3**
G29M Pine Creek 77.69 354 IAmb IAmb 03 24 20.5
comp=Z,11nm,1.1s
E18K Tukpahlearik C 77.71 3 IAmb IAmb 03 24 00.9
comp=Z,4.8nm,1.0s
E19K Redstone River 77.78 2 IAmb IAmb 03 24 01.3
comp=Z,7.0nm,0.8s
YKAW3 Yellowknife Wh 77.86 343 IAmb IAmb 03 23 44.4
comp=Z,12nm,1.4s
YKAW1 Yellowknife Wh 77.90 343 IAmb IAmb 03 23 44.7
comp=Z,8.5nm,1.4s
YKA Yellowknife Ar 77.92 343 P **P 03 23 42.5 -1.1**
comp=Z,1.6nm,0.8s,baz=26,slow=5.7,SNR=23
comp=Z,1.6nm,0.8s
F21K Alatna River 78.06 0 IAmb IAmb 03 23 57.4
comp=Z,6.3nm,1.1s
G26K Porcupine Rive 78.07 356 IAmb IAmb 03 24 00.3
comp=Z,11nm,1.3s
MDP Montagnes des 78.28 268 LR LR 03 56 16.4
comp=Z,48nm,21.8s,baz=42,slow=34
F19K Shaleruckik Mo 78.40 2 P **P 03 23 45.9 -0.3**
F19K IAmb IAmb 03 24 09.2
comp=Z,9.9nm,1.3s
H31M Peel River 78.40 352 IAmb IAmb 03 24 01.8
comp=Z,4.6nm,0.8s
H27K Steamboat Moun 78.64 355 IAmb IAmb 03 23 59.9
comp=Z,4.3nm,0.8s
G21K Allakaket 78.77 0 IAmb IAmb 03 23 55.5
comp=Z,5.1nm,0.9s
G19K Purcell Mounta 79.10 2 IAmb IAmb 03 24 06.9
comp=Z,5.3nm,1.0s
I30M Mount Dempster 79.19 353 IAmb IAmb 03 24 05.0
comp=Z,6.3nm,0.8s
I29M Ogilvie Camp, 79.24 354 IAmb IAmb 03 23 54.4
comp=Z,14nm,1.2s
I27K Kandik River 79.27 355 IAmb IAmb 03 24 23.7
comp=Z,4.9nm,0.8s
G18K Tagagawik 79.31 2 IAmb IAmb 03 24 08.3
comp=Z,10nm,1.4s
H23K Yukon River 79.42 358 IAmb IAmb 03 24 05.6
comp=Z,5.3nm,0.8s
J30M Hart River 79.81 353 IAmb IAmb 03 23 57.4
comp=Z,7.4nm,0.7s
J29N Klondike Camp 80.12 353 IAmb IAmb 03 24 14.7
comp=Z,5.4nm,0.7s
ANM Nome 80.28 5 P **P 03 23 56.9 +0.4**
ANM IAmb IAmb 03 24 04.4
comp=Z,12nm,1.4s
ANM Nome 80.28 5 P **P 03 23 56.9 +0.4**
ANM pmax pmax
comp=Z,12nm,1.4s
FFC Flin Flon 80.29 333 P **P 03 23 55.0 -1.7**
FFC IAmb IAmb 03 24 10.1
comp=Z,4.9nm,0.8s
FFC Flin Flon 80.29 333 P **P 03 23 55.0 -1.7**
FFC pmax pmax
comp=Z,5.0nm,0.9s
ILAR Eielson Array 80.39 357 P **P 03 23 57.1 +0.1**
comp=Z,1.2nm,0.6s,baz=344,slow=3.5,SNR=17
comp=Z,1.2nm,0.6s
DAWY Dawson 80.61 354 IAmb IAmb 03 24 08.0
comp=Z,13nm,1.3s
WRH Wood River Hil 80.73 358 IAmb IAmb 03 24 04.2
comp=Z,6.2nm,0.8s
HDA Harding Lake 80.75 357 IAmb IAmb 03 24 02.6
comp=Z,5.9nm,0.8s
ULM Lac du Bonnet 81.06 327 P **P 03 23 59.8 -1.2**
comp=Z,2.4nm,0.6s,baz=31,slow=8.4,SNR=4.8
comp=Z,2.4nm,0.6s
ULM Lac du Bonnet 81.06 327 IAmb IAmb 03 24 09.7
comp=Z,6.8nm,1.0s
J20K Nowinta River 81.12 0 P **P 03 24 01.8 +0.9**
J20K IAmb IAmb 03 24 02.8
comp=Z,11nm,1.3s
J19K Poorman 81.29 1 IAmb IAmb 03 24 19.0
comp=Z,5.0nm,1.0s
K24K Donnelly Dome 81.31 357 IAmb IAmb 03 24 12.5
comp=Z,6nm,0.7s
DOT Dot Lake 81.37 356 IAmb IAmb 03 24 04.2
comp=Z,14nm,1.5s
L27K Beaver Creek, 81.80 355 IAmb IAmb 03 24 12.3
comp=Z,6.9nm,1.1s
M31M Drury Creek, Y 81.89 351 IAmb IAmb 03 24 13.9
comp=Z,12nm,1.4s
K20K Telida 81.94 0 IAmb IAmb 03 24 13.6
comp=Z,14nm,1.4s
SJG San Juan 82.00 286 LR LR 03 56 21.2
comp=Z,16nm,20.6s,baz=169,slow=33
DHY Denali Highway 82.11 357 IAmb IAmb 03 24 19.1
comp=Z,9.5nm,1.0s
MDSI Maura Dua 82.44 101 P **P 03 24 09.8 +1.1**
L22K Petersville 82.75 359 IAmb IAmb 03 24 37.1
comp=Z,6.0nm,1.1s
TKL Tuckaleechee C 84.31 310 LR LR 04 02 54.4
comp=Z,51nm,18.5s,baz=18,slow=36
L40A Anamosa 84.47 319 P **P 03 24 18.4 -0.4**
MJAR Matsushiro Arr 84.53 49 P **P 03 24 19.1 -0.1**
comp=Z,2.5nm,0.9s,baz=270,slow=7.3,SNR=5.4
comp=Z,2.5nm,0.9s
MJAR Matsushiro Arr 84.53 49 IAmb IAmb 03 24 31.1
comp=Z,6.1nm,1.2s
MJAR Matsushiro Arr 84.53 49 P **P 03 24 19.1 -0.1**
MJAR pmax pmax
comp=Z,6.0nm,1.3s
BDFB Brasilia 86.75 248 P **P 03 24 31.2 +0.7**
comp=Z,0.7nm,0.3s,baz=124,slow=3.6,SNR=3.6
BDFB LR LR 04 02 11.8
comp=Z,42nm,21.9s,baz=152,slow=35
comp=Z,0.7nm,0.3s
BDFB Brasilia 86.75 248 IAmb IAmb 03 24 37.9
comp=Z,4.8nm,1.1s
BDFB Brasilia 86.75 248 P **P 03 24 31.2 +0.7**
BDFB pmax pmax
comp=Z,5.0nm,1.1s
CCM Cathedral Cave 87.23 316 P **P 03 24 32.2 -0.3**
CCM Cathedral Cave 87.23 316 P **P 03 24 32.2 -0.3**
CCM pmax pmax
comp=Z,5.0nm,0.7s
R40A Maddies Statio 87.65 316 P **P 03 24 34.8 +0.2**
NEW Newport 90.96 337 LR LR 04 07 33.1
comp=Z,56nm,18.8s,baz=338,slow=37
YNE Yellowstone No 91.16 331 IAmb IAmb 03 24 53.0
comp=Z,6.5nm,1.4s
PDAR Pinedale Array 92.82 329 P **P 03 24 58.2 -0.7**
comp=Z,0.6nm,0.8s,baz=57,slow=5.7,SNR=5.9
PDAR LR LR 04 08 46.6
comp=Z,47nm,19.1s,baz=21,slow=37
comp=Z,0.6nm,0.8s

*THE **07** 03:12:00.8, 38.°1N±0.°7×2.°2E±.°, h3km±1km, M1.9/9, MLh1.9/9*
ATH 07 03:11:59.9, 38.°08N×22.°28E, h13km±1km, ML1.8/13, Manual Solution by A.Papageorgiou First location: 2020/02/07 03:13:00, This location: 2020/02/07 04:10:39 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLV	**Kalavryta, Ach**	**0.11**	**252**	P	Pg	03 12 03.1	+0.1
KLV				S	Sg	03 12 04.8	-0.5
KLV	**Kalavryta, Ach**	**0.11**	**252**	P	Pg	03 12 03.0	0.0
KLV				S	Sg	03 12 04.8	-0.6
KLV1	**Kalavrita**	**0.15**	**252**	P	Pg	03 12 03.8	+0.2
KLV1				S	Sg	03 12 06.2	+0.1
GUR	**Goura**	**0.15**	**162**	P	Pg	03 12 04.1	+0.5
GUR				S	Sg	03 12 06.6	+0.4
GUR	**Goura**	**0.15**	**162**	P	Pg	03 12 03.9	+0.3
GUR				S	Sg	03 12 06.6	+0.4
TEME	**Temeni, Aigial**	**0.20**	**320**	P	Pg	03 12 04.8	+0.4
TEME				S	Sg	03 12 07.4	0.0
AGEO	**AgiosGiorgios,**	**0.26**	**317**	P	Pg	03 12 05.4	+0.1
AGEO				S	Sg	03 12 09.3	+0.4
KALE	**Kalithea**	**0.33**	**340**	P	Pb	03 12 07.3	-0.5
KALE				S	Sg	03 12 11.4	+0.1
KALE	**Kalithea**	**0.33**	**340**	P	Pg	03 12 06.9	+0.1
KALE				S	Sg	03 12 11.5	+0.2
TRIZ	**Trizonia**	**0.33**	**330**	P	Pg	03 12 06.8	+0.1
ZIRI	**Ziria, Aigiali**	**0.35**	**311**	P	Pg	03 12 07.0	0.0
ZIRI				S	Sg	03 12 12.5	+0.7
SERG	**Sergoula**	**0.38**	**332**	P	Pg	03 12 07.8	+0.3
SERG				S	Sg	03 12 11.8	-0.9
SERG	**Sergoula**	**0.38**	**332**	P	Pg	03 12 07.7	+0.1
SERG				S	Sg	03 12 12.8	+0.1
MG00	**Magoula, Dorid**	**0.43**	**322**	P	Pg	03 12 08.4	0.0
MG00				S	Sg	03 12 14.7	+0.5
DLFA	**Delphi**	**0.43**	**22**	P	Pg	03 12 08.8	+0.2
DLFA				S	Sg	03 12 14.3	0.0
UPR	**University Cam**	**0.44**	**298**	P	Pb	03 12 09.3	-0.9
RIOA	**Rio**	**0.45**	**299**	P	Pg	03 12 08.7	0.0
MALA	**Malamata, Dori**	**0.45**	**314**	P	Pg	03 12 08.9	0.0
MALA				S	Sg	03 12 15.0	+0.1
PATC	**Patra C**	**0.46**	**295**	P	Pg	03 12 09.1	+0.1
EFP	**Efpalio**	**0.46**	**320**	P	Pg	03 12 09.3	+0.3
EFP				S	Sg	03 12 15.6	+0.5
EFP	**Efpalio**	**0.46**	**320**	P	Pg	03 12 09.1	+0.2
EFP				S	Sg	03 12 15.5	+0.4
PATG	**Patra B**	**0.47**	**290**	P	Pb	03 12 09.7	-0.3
PATG				S	Sb	03 12 16.6	-0.3
DRO	**Drossia**	**0.47**	**255**	P	Pg	03 12 09.6	+0.4
DRO				S	Sb	03 12 16.4	-0.5
DRO	**Drossia**	**0.47**	**255**	P	Pg	03 12 09.3	+0.1
DRO				S	Sb	03 12 16.3	-0.6
LTK	**Loutraki**	**0.54**	**96**	P	Pb	03 12 11.9	+0.6
LTK				S	Sg	03 12 18.4	+0.6
LTK	**Loutraki**	**0.54**	**96**	P	Pb	03 12 11.2	-0.1
AGRP	**Agrapidokambos**	**0.55**	**306**	P	Pg	03 12 10.4	-0.2
AGRP				S	Sg	03 12 17.9	+0.1
ANX	**Ano Chora**	**0.59**	**331**	P	Pg	03 12 11.5	+0.1
ANX				S	Sg	03 12 18.9	-0.4
ANX	**Ano Chora**	**0.59**	**331**	P	Pg	03 12 11.5	0.0
ANX				S	Sb	03 12 20.0	-0.5
RLS	**Riolos of Patr**	**0.65**	**269**	P	Pg	03 12 12.0	-0.5
RLS				S	Sg	03 12 20.5	-0.5
RLS	**Riolos of Patr**	**0.65**	**269**	P	Pg	03 12 12.1	-0.4
RLS				S	Sb	03 12 21.9	0.0
AMT	**Artemida-Makis**	**0.71**	**220**	P	Pg	03 12 13.5	-0.1
AMT				S	Sb	03 12 23.9	+0.1
AXAR	**Agios Charalam**	**0.75**	**23**	P	Pb	03 12 14.8	0.0
LKR	**Lokris**	**0.80**	**44**	P	Pg	03 12 15.4	-0.1
PVO	**Paravola**	**0.80**	**312**	P	Pg	03 12 15.6	+0.1

*VIE **07** 03:35:08.9±0.5, 44.°16N×16.°16E, h8km, mb2.5/11, ml2.4/12, Error ellipse: s-maj=5.0km s-min=3.8km az=59.0*
75 km NNW of Split
*PRU **07** 03:35:10.2, 44.°19N×16.°38E, h10km*
*BEO **07** 03:35:11.6±0.4, 44.°20N×15.°94E, h0km, ML2.0/5*
ISC 07 03:35:09.2±1.2, 44.°15N±0.°02×15.°96E±0.°02, h2km±10km, n57, σ1s26/86, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORI	**Morici**	**0.34**	**212**	*e*Pg	**Pb**	**03 35 16.4**	**-1.5**
MORI				Sg	**Sb**	**03 35 23.4**	**-0.4**
MORI	**Morici**	**0.34**	**212**	*e*Pg	**Pn**	**03 35 19.3**	**-1.8**
MORI				Sg	**Sb**	**03 35 26.1**	**+2.4**
KIJV	**Kijevo**	**0.36**	**114**	*e*Pg	**Pg**	**03 35 15.2**	**-0.9**
KIJV	**Kijevo**	**0.36**	**114**	*e*Pg	**Pb**	**03 35 18.1**	**-0.2**
KIJV				Sg	**Sb**	**03 35 23.7**	**-0.7**
UDBI	**Udbina**	**0.40**	**340**	*e*Pg	**Pg**	**03 35 16.0**	**-0.7**
UDBI	**Udbina**	**0.40**	**340**	*e*Pg	**Pb**	**03 35 19.2**	**+0.1**
UDBI				Sg	**Sb**	**03 35 25.5**	**-0.2**
ZIRJ	**Zirje**	**0.55**	**204**	*e*Pg	**Pg**	**03 35 19.9**	**+0.3**
ZIRJ				Sg	**Sb**	**03 35 30.2**	**+0.4**
ZIRJ	**Zirje**	**0.55**	**204**	*e*Pg	**Pn**	**03 35 22.9**	**-1.1**
ZIRJ				Sg	**Sn**	**03 35 32.7**	**-1.0**
DUGI	**Dugi Otok**	**0.67**	**256**	*e*Pg	**Pg**	**03 35 22.0**	**0.0**
DUGI	**Dugi Otok**	**0.67**	**256**	*e*Pg	**Pn**	**03 35 24.9**	**-0.8**
DUGI				Sg	**Sn**	**03 35 35.8**	**-0.9**
PLIT	**Plitvice**	**0.76**	**342**	*e*Pg	**Pg**	**03 35 22.5**	**-1.3**
PLIT	**Plitvice**	**0.76**	**342**	*e*Pg	**Pb**	**03 35 25.7**	**+0.4**
PLIT				Sg	**Sg**	**03 35 34.6**	**+0.9**
NVLJ	**Novalja**	**0.88**	**298**	*e*Pg	**Pg**	**03 35 25.1**	**-1.0**
NVLJ	**Novalja**	**0.88**	**298**	*e*Pg	**Pn**	**03 35 28.0**	**-0.6**
NVLJ				Sg	**Sn**	**03 35 42.2**	**+0.2**
RABC	**Rab**	**1.03**	**306**	*e*Pg	**Pg**	**03 35 28.4**	**-0.5**
HVAR	**Hvar**	**1.04**	**160**	*e*Pg	**Pg**	**03 35 27.9**	**-1.2**
HVAR	**Hvar**	**1.04**	**160**	*e*Pg	**Pn**	**03 35 30.7**	**-0.1**
HVAR				Sg	**Sn**	**03 35 46.0**	**+0.1**
BLY	**Banja Luka**	**1.06**	**56**	*e*Pg	**Pg**	**03 35 28.4**	**-1.2**
BLY				*e*Sg	**Sb**	**03 35 44.9**	**+0.2**
RICI	**Ricice**	**1.08**	**127**	*e*Pg	**Pg**	**03 35 28.3**	**-1.5**
RICI	**Ricice**	**1.08**	**127**	*e*Pg	**Pn**	**03 35 31.3**	**-0.1**
RICI				Sg	**Sn**	**03 35 47.5**	**+0.6**
OZLJ	**Ozalj**	**1.50**	**347**	*e*Pn	**Pn**	**03 35 35.6**	**-1.6**
OZLJ	**Ozalj**	**1.50**	**347**	*e*Pn	**Pg**	**03 35 38.5**	**+0.5**
LSTV	**Lastovo**	**1.54**	**153**	*e*Pn	**Pn**	**03 35 37.0**	**-0.7**
LSTV	**Lastovo**	**1.54**	**153**	*e*Pn	**Pg**	**03 35 39.6**	**+0.9**
LSTV				Sn	**Sg**	**03 36 01.4**	**+2.7**
MOSL	**Moslavina**	**1.57**	**21**	*e*Pn	**Pn**	**03 35 34.9**	**-3.3**
MOSL	**Moslavina**	**1.57**	**21**	*e*Pn	**Pb**	**03 35 39.0**	**0.0**
RIY	**Rijeka**	**1.57**	**319**	*e*Pn	**Pn**	**03 35 37.9**	**-0.2**
RIY	**Rijeka**	**1.57**	**319**	*e*Pn	**Pg**	**03 35 40.6**	**+1.2**
RIY	**Rijeka**	**1.57**	**319**	*e*Pg	**Pb**	**03 35 39.1**	**+0.1**
RIY				*e*Sg	**Sg**	**03 36 00.4**	**+0.7**
BRJN	**Brijuni**	**1.75**	**296**	*e*Pn	**Pn**	**03 35 40.3**	**-0.2**
PTJ	**Puntijarka**	**1.75**	**0**	*e*Pn	**Pn**	**03 35 38.5**	**-2.2**
PTJ	**Puntijarka**	**1.75**	**0**	*e*Pn	**Pn**	**03 35 40.9**	**+0.1**
STON	**Ston**	**1.80**	**135**	*e*Pn	**Pn**	**03 35 41.0**	**-0.3**
STON	**Ston**	**1.80**	**135**	*e*Pn	**Pg**	**03 35 43.9**	**+0.2**
STON				Sn	**Sg**	**03 36 06.4**	**-0.7**
STON	**Ston**	**1.80**	**135**	*e*Pg	**Pg**	**03 35 44.0**	**+0.2**
STON				*e*Sg	**Sg**	**03 36 08.4**	**+1.3**
LOBO	**Lobor**	**2.00**	**2**	*e*Pn	**Pn**	**03 35 41.9**	**-2.2**
LOBO	**Lobor**	**2.00**	**2**	*e*Pn	**Pn**	**03 35 44.5**	**+0.4**
DBRK	**Dubrovnik**	**2.18**	**132**	*e*Pn	**Pn**	**03 35 47.3**	**+0.8**
TREB	**Trebinje**	**2.26**	**129**	*e*Pn	**Pb**	**03 35 50.3**	**-0.4**
TREB				*e*Sn	**Sb**	**03 36 19.6**	**+0.5**
BBLS	**Lazi&#263i**	**2.51**	**95**	*e*Pn	**Pb**	**03 35 54.0**	**-1.0**
BBLS				*e*Sn	**Sb**	**03 36 26.7**	**+0.4**
RUDO	**Rudo**	**2.53**	**101**	*e*Pn	**Pb**	**03 35 54.3**	**-1.0**
RUDO				*e*Sn	**Sb**	**03 36 27.2**	**+0.4**
OBKA	**Obir**	**2.56**	**338**	Pn	**Pn**	**03 35 51.3**	**-0.5**
	0.6nm,0.3s						
OBKA				Sn	**Sn**	**03 36 22.9**	**-0.7**
	16nm,0.4s						
SOKA	**Soboth**	**2.61**	**346**	Pn	**Pn**	**03 35 52.8**	**+0.3**
	2.4nm,0.5s,SNR=6.3						
SOKA				Sn	**Sn**	**03 36 24.1**	**-0.7**
	2.8nm,0.6s						
FRGS	**Fruska Gora**	**2.93**	**69**	*e*Pn	**Pn**	**03 35 59.2**	**+2.4**
FRGS				*e*Sn	**Sn**	**03 36 35.0**	**+2.4**
PDG	**Podgorica**	**2.96**	**124**	*e*Pn	**Pb**	**03 36 00.3**	**-2.4**
PDG				*e*Sn	**Sb**	**03 36 37.1**	**-2.2**
ARSA	**Arzberg**	**3.11**	**355**	*e*Pn	**Pn**	**03 35 58.7**	**-0.7**
	1.5nm,0.3s						
ABTA	**Abfaltersbach**	**3.55**	**318**	*e*Pn	**Pn**	**03 36 05.8**	**+0.4**
	0.8nm,0.4s						
ABTA				*e*Sn	**Sn**	**03 36 51.5**	**+3.5**
	2.5nm,0.5s						
RONA	**Rosalia, Austr**	**3.56**	**4**	*i* Pn	**Pn**	**03 36 04.3**	**-1.2**
	1.2nm,0.4s						
CONA	**Conrad Observa**	**3.78**	**359**	*e*Pn	**Pn**	**03 36 07.8**	**-0.7**
	1.0nm,0.2s						
CONA				*e*Sn	**Sn**	**03 36 52.0**	**-1.7**
	1.2nm,0.4s						
SELS	**Selova**	**3.86**	**102**	*e*Pn	**Pn**	**03 36 11.7**	**+2.1**
MOA	**Molln**	**3.88**	**343**	*e*Pn	**Pn**	**03 36 09.5**	**-0.4**
	1.6nm,0.4s,SNR=5.7						
MOA				*e*Sn	**Sn**	**03 36 56.3**	**+0.2**
	1.1nm,0.3s						
BIOA	**Bad Ischl, Aus**	**3.89**	**336**	*e*Pn	**Pn**	**03 36 09.8**	**-0.2**
	3.8nm,0.6s						
LESA	**Schwarzleotal**	**3.99**	**326**	*e*Pn	**Pn**	**03 36 11.5**	**0.0**
	1.8nm,0.4s,SNR=4.7						
LESA				*e*Sn	**Sn**	**03 36 58.8**	**-0.1**
	2.0nm,0.4s						
WTTA	**Wattenberg**	**4.34**	**317**	*e*Pn	**Pn**	**03 36 16.1**	**-0.2**
	0.7nm,0.3s						
WTTA				*e*Sn	**Sn**	**03 37 08.7**	**+1.1**
	5.6nm,0.6s						
ZAGS	**Zajecar**	**4.54**	**92**	*e*Pn	**Pn**	**03 36 21.3**	**+2.3**
FETA	**Feichten**	**4.66**	**310**	*e*Pn	**Pn**	**03 36 21.2**	**+0.6**
	0.4nm,0.4s						
ZVC	**Zvikov**	**5.42**	**348**	*e*PN	**Pn**	**03 36 31.7**	**+0.6**
ZVC				*e*SN	**Sn**	**03 37 30.8**	**-3.3**

*IDC **07** 03:40:55.2±2.4, 21.°39S×69.°23W, h0km, mb3.6/2, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=59.0km*
s-min=52.6km az=158.0
*SJA **07** 03:41:11.5±0.5, 20.°17S×69.°03W, h116km±2km, ML3.5, MW3.4*
*GUC **07** 03:41:13.7±0.6, 20.°16S×69.°03W, h105km±2km, ML3.1*
ISC 07 03:41:13.2±0.9, 20.°19S±0.°03×69.°06W±0.°07, h107km±6km, n32, σ1s00/52, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.10**	**297**	*e*P	**Pn**	**03 41 28.5**	**0.0**
PB08				*e*S	**Sn**	**03 41 40.3**	**+0.4**
PB08				IAML		03 41 41.5	
	comp=N,1μm,0.2s						
PB08	**IPOC Station P**	**0.10**	**297**	*e*P	**Pn**	**03 41 28.4**	**0.0**
PB08				*e*S	**Sn**	**03 41 41.0**	**+1.1**
PB08				IAML		03 41 41.7	
	comp=Z,833nm,0.2s						
GO01	**Chusmiza**	**0.53**	**346**	*e*P	**Pn**	**03 41 30.5**	**-0.1**
GO01				*i* S	**Sn**	**03 41 43.5**	**+0.1**
GO01	**Chusmiza**	**0.53**	**346**	*e*P	**Pn**	**03 41 30.4**	**-0.1**
GO01				*e*S	**Sn**	**03 41 44.3**	**+0.8**
GO01				IAML		03 41 45.5	
	comp=Z,2μm,0.3s						
PB11	**IPOC Station P**	**0.70**	**307**	*e*P	**Pn**	**03 41 31.4**	**0.0**
PB11				*i* S	**Sn**	**03 41 45.0**	**-0.2**
PB11	**IPOC Station P**	**0.70**	**307**	*e*P	**Pn**	**03 41 31.3**	**-0.1**
PB11				*e*S	**Sn**	**03 41 46.0**	**+0.8**
PB11				IAML		03 41 47.6	
	comp=Z,895nm,0.4s						
PB01	**IPOC Station P**	**0.94**	**205**	*e*P	**Pn**	**03 41 33.9**	**+0.2**
PB01				*e*S	**Sn**	**03 41 49.8**	**+0.7**
PB01				IAML		03 41 52.0	
	comp=N,1μm,0.3s						
PB01	**IPOC Station P**	**0.94**	**205**	*e*P	**Pn**	**03 41 33.8**	**+0.2**
PB01				*e*S	**Sn**	**03 41 50.5**	**+1.5**
PB01				IAML		03 41 51.1	
	comp=Z,377nm,0.4s						
TA02	**Huaiquique**	**1.01**	**265**	*e*P	**Pn**	**03 41 34.3**	**+0.1**
TA02				*e*S	**Sn**	**03 41 50.3**	**+0.2**
TA02	**Huaiquique**	**1.01**	**265**	*e*P	**Pn**	**03 41 34.4**	**+0.2**
TA02				*e*S	**Sn**	**03 41 51.0**	**+0.9**
TA02				IAML		03 41 51.8	
	comp=Z,1μm,0.6s						
PB02	**IPOC Station P**	**1.37**	**215**	*e*P	**Pn**	**03 41 39.1**	**+0.7**
PB02				IAML		03 42 00.3	
	comp=E,554nm,0.5s						
PB02	**IPOC Station P**	**1.37**	**215**	*e*P	**Pn**	**03 41 38.4**	**-0.1**
PB02				*e*S	**Sn**	**03 41 58.7**	**+1.1**
PB02				IAML		03 41 59.1	
	comp=Z,387nm,1.2s						
PB09	**IPOC Station P**	**1.61**	**186** ⇑	*e*P	**Pn**	**03 41 42.0**	**+0.6**
PB09				*i* S	**Sn**	**03 42 04.0**	**+1.3**
PB09	**IPOC Station P**	**1.61**	**186**	*e*P	**Pn**	**03 41 41.1**	**-0.3**
PB09				*e*S	**Sn**	**03 42 04.5**	**+1.7**
PB07	**IPOC Station P**	**1.72**	**207**	*e*P	**Pn**	**03 41 42.7**	**+0.1**
PB07				*i* S	**Sn**	**03 42 05.3**	**+0.3**
PB07				IAML		03 42 09.1	
	comp=N,158nm,0.2s						
PB07	**IPOC Station P**	**1.72**	**207**	*e*P	**Pn**	**03 41 42.8**	**+0.1**
PB07				*e*S	**Sn**	**03 42 06.8**	**+1.8**
PB16	**IPOC Station P**	**1.89**	**347**	*e*P	**Pn**	**03 41 46.2**	**+0.9**
PB16				IAML		03 42 15.7	
	comp=N,100nm,0.4s						
PB16	**IPOC Station P**	**1.89**	**347**	*e*P	**Pn**	**03 41 45.6**	**+0.3**
PB16				*e*S	**Sn**	**03 42 12.3**	**+2.7**
PB03	**IPOC Station P**	**1.96**	**199**	*e*P	**Pn**	**03 41 45.9**	**+0.1**
PB03	**IPOC Station P**	**1.96**	**199**	*e*P	**Pn**	**03 41 45.9**	**+0.1**
PB03				*e*S	**Sn**	**03 42 10.9**	**+0.3**
PB12	**IPOC Station P**	**1.97**	**322**	*e*P	**Pn**	**03 41 45.4**	**-0.3**
PB12				*e*S	**Sn**	**03 42 10.1**	**-0.5**
PB12				IAML		03 42 12.1	
	comp=E,163nm,0.3s						
PB12	**IPOC Station P**	**1.97**	**322**	*e*P	**Pn**	**03 41 45.5**	**-0.3**
PB12				*e*S	**Sn**	**03 42 11.0**	**+0.4**
PB06	**IPOC Station P**	**2.55**	**191**	*e*P	**Pn**	**03 41 54.2**	**+0.8**
PB06				IAML		03 42 31.7	
	comp=N,73nm,0.5s						
PB06	**IPOC Station P**	**2.55**	**191**	*e*P	**Pn**	**03 41 53.3**	**-0.1**
PB06				*e*S	**Sn**	**03 42 23.5**	**-0.7**
PB05	**IPOC Station P**	**2.86**	**202**	*e*P	**Pn**	**03 41 57.2**	**-0.2**
PB05	**IPOC Station P**	**2.86**	**202**	*e*P	**Pn**	**03 41 57.4**	**0.0**
PB05				*e*S	**Sn**	**03 42 31.2**	**-0.1**
LPAZ	**La Paz**	**3.98**	**13**	Pn	**Pn**	**03 42 14.6**	**+1.8**
	comp=N,1.8nm,0.3s,baz=198,slow=5.4,SNR=33						
	comp=N,4.4nm,0.3s						
LPAZ	**La Paz**	**3.98**	**13**	*e*P	**Pn**	**03 42 14.6**	**+1.8**
SIV	**San Ignacio**	**8.66**	**63**	Pn	**Pn**	**03 43 12.5**	**-3.3**
	baz=257,slow=11,SNR=14						
	comp=N,1.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.05**	**71**	P	**P**	**03 52 53.3**	**-1.8**
	comp=N,0.2nm,0.4s,baz=242,slow=6.

*NEIC **07** 03:46:59.8±1.7, 19.°20N±0.°09×144.°9E±0.°1, h589km±6km, mb4.4/89, Error ellipse: s-maj=16.5km s-min=12.4km az=86.0*

*IDC **07** 03:46:59.1±0.6, 19.°19N×144.°88E, h587km±7km, mb3.4/26, mbtmp4.4/30, Error ellipse: s-maj=12.4km s-min=6.9km az=87.0*

ISC 07 03:46:59.9±0.3, 19.°15N±0.°05×144.°86E±0.°08, h600km, n147, σ1§01/129, mb4.2/71, 1C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
DPSS	**Saipan**	**3.99**	**167**			**P**	**P**	**03 48 21.9**	**-3.5**
GUMO	**Guam**	**5.53**	**180**	P		P	P	**03 48 35.1**	**-2.0**
	119nm,0.3s,baz=2.5,slow=23,SNR=4.1								
JCJ	**Chichijima**	**8.28**	**343**	P		P	P	03 48 47.5	-14
	55nm,0.3s,baz=270,slow=24,SNR=7.9								
JCJ				S		S	S	03 50 26.5	-15
	85nm,0.4s,baz=284,slow=23,SNR=7.3								
JCJ	**Chichijima**	**8.28**	**343**			**P**	**P**	**03 49 00.3**	**-1.5**
JHJ2	**Mitsune**	**14.62**	**343**			**P**	**P**	**03 50 02.9**	**-1.5**
JHJ	**Hachijo jima 2**	**14.63**	**343**	P		P	P	**03 50 03.9**	**-0.7**
	208nm,0.6s,baz=69,slow=20,SNR=6.3								
JSG	**Sagara**	**16.56**	**340**	P		P	P	**03 50 21.3**	**-0.9**
INU	**Inuyama**	**17.56**	**338**			**P**	**P**	**03 50 31.5**	**+0.2**
JGF	**Kuroka**	**17.68**	**339**			**P**	**P**	**03 50 31.9**	**-0.5**
MJAR	**Matsushiro Arr**	**18.29**	**343**	P		P	P	**03 50 36.8**	**-1.2**
	27nm,0.7s,baz=168,slow=10.0,SNR=62								
MJAR				S		S	S	03 53 37.0	+2.0
	3.6nm,0.8s,baz=220,slow=21,SNR=5.6								
MJAR				ScP		ScP	ScP	03 57 16.7	-1.0
	2.0nm,0.8s,baz=178,slow=2.9,SNR=6.9								
MJAR	**Matsushiro Arr**	**18.29**	**343**			**P**	**P**	**03 50 37.3**	**-0.7**
MAJO	**Matsushiro**	**18.29**	**343**			**P**	**P**	**03 50 37.3**	**-0.7**
JNU	**Nakatsue**	**18.71**	**321**	P		P	P	**03 50 41.3**	**-0.6**
	5.6nm,0.7s,baz=114,slow=5.2,SNR=3.6								
KSRS	**Korea Array**	**23.49**	**324**	P		P	P	**03 51 24.1**	**-0.4**
	3.5nm,0.5s,baz=144,slow=8.9,SNR=17								
	3.5nm,0.5s								
SIJI	**Sorong**	**23.96**	**215**	P		P	P	**03 51 28.8**	**-0.3**
	14nm,0.7s,baz=34,slow=8.7,SNR=5.9								
	14nm,0.7s								
JKA	**Kamikawa-asahi**	**24.96**	**356**			**P**	**P**	**03 51 38.2**	**+0.6**
ASAJ	**Asahikawa**	**24.96**	**356**	P		P	P	**03 51 37.7**	**+0.1**
	15nm,0.5s,baz=229,slow=10,SNR=23								
	15nm,0.5s								
FAKI	**Fak Fak**	**25.20**	**211**	P		P	P	**03 51 39.1**	**-0.9**
NJ2	**Nanjing**	**26.66**	**304**	*e*P		P	P	**03 51 53.2**	**+0.6**
NJ2				pmax		pmax	pmax		
	comp=Z,10.0nm,0.6s								
USRK	**Ussuriysk Ar.**	**27.20**	**339**	P		P	P	**03 51 56.9**	**-0.3**
	4.1nm,0.6s,baz=170,slow=10,SNR=6.4								
	4.1nm,0.6s								
CN2	**Changchun**	**29.48**	**331**	P		P	P	**03 52 16.4**	**-0.6**
TOLI2	**Tolitoli**	**29.63**	**236**			**P**	**P**	**03 52 19.2**	**+0.5**
BNX	**BinXian**	**30.19**	**335**	⇑P		P	P	**03 52 22.8**	**-0.2**
BNX				pmax		pmax	pmax		
	comp=Z,11nm,0.6s								
COEN	**Coen**	**32.94**	**183**			**P**	**P**	**03 52 48.1**	**+1.3**
HEH	**HeiHe**	**34.01**	**340**	*e*P		P	P	**03 52 54.9**	**-0.3**
HEH				ScP		ScP	ScP	**03 58 02.8**	**-1.1**
HEH				pmax		pmax	pmax		
	comp=Z,20nm,1.1s								
XLT	**XiLinHaoTe**	**34.48**	**322**	*e*P		P	P	**03 52 59.0**	**-0.4**
XLT				pmax		pmax	pmax		
	comp=Z,4.0nm,0.8s								
MTN	**Manton Dam**	**34.55**	**204**			**P**	**P**	**03 53 00.4**	**+0.2**
PETK	**Petropavlovsk-**	**35.33**	**13**	P		P	P	**03 53 07.0**	**+0.9**
	6.0nm,0.9s,baz=136,slow=3.6,SNR=7.6								
	6.0nm,0.9s								
PETK	**Petropavlovsk-**	**35.33**	**13**	P		P	P	**03 53 06.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**35.72**	**314**	*e*P		P	P	**03 53 07.6**	**-2.1**
HHC				pmax		pmax	pmax		
	comp=Z,5.0nm,0.9s								
SBUM	**Sibu**	**35.98**	**247**				**P**	**03 53 12.6**	**+0.4**
SBUM				IAmb		IAmb	IAmb	03 53 14.1	
	comp=Z,5.8nm,0.7s								
HILR	**Hailar Array B**	**36.40**	**332**	P		P	P	**03 53 15.6**	**+0.6**
	comp=Z,3.7nm,0.5s,baz=128,slow=8.2,SNR=8.8								
	comp=Z,3.7nm,0.5s								
CTA	**Charters Tower**	**39.02**	**178**	P		P	P	**03 53 37.4**	**+0.8**
	comp=Z,8.6nm,0.5s,baz=357,slow=9.0,SNR=19								
	comp=Z,8.6nm,0.5s								
CTAO	**Charters Tower**	**39.02**	**178**			**P**	**P**	**03 53 37.4**	**+0.8**
CTAO				IAmb		IAmb	IAmb	03 53 38.2	
	comp=Z,11nm,0.9s								
LZDM	**Lanzhou Array**	**39.82**	**303**	P		P	P	**03 53 43.9**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=147,slow=8.2,SNR=3.6								
	comp=Z,0.7nm,0.4s								
WRA	**Warramunga Arr**	**40.20**	**195**	P		P	P	**03 53 46.4**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=359,slow=8.6,SNR=37								
	comp=Z,1.3nm,0.3s								
PZH	**PanZhiHua**	**40.26**	**289**	P		P	P	**03 53 46.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**41.55**	**208**	P		P	P	**03 53 57.0**	**+0.3**
	comp=Z,7.1nm,0.6s,baz=13,slow=8.0,SNR=18								
	comp=Z,7.1nm,0.6s								
SONM	**Songino Array**	**42.30**	**321**	P		P	P	**03 54 02.7**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=132,slow=6.9,SNR=5.5								
SONM				ScP		ScP	ScP	**03 58 35.3**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=125,slow=4.9,SNR=5.2								
	comp=Z,0.7nm,0.5s								
CMAR	**Chiang Mai Arr**	**43.38**	**277**	P		P	P	**03 54 12.1**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=76,slow=7.4,SNR=1.6								
CMAR				pP		pP	pP	**03 55 53.4**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=69,slow=8.1,SNR=2.2								
	comp=Z,0.9nm,0.3s								
AS31	**Alice Springs**	**43.88**	**195**			**P**	**P**	**03 54 15.3**	**+0.5**
ASAR	**Alice Springs**	**43.88**	**195**	P		P	P	**03 54 15.1**	**+0.3**
	comp=Z,2.9nm,0.4s,baz=15,slow=6.7,SNR=53								
	comp=Z,2.9nm,0.4s								
KIWB	**Kanaga Island**	**44.12**	**33**	P		P	P	**03 54 17.1**	**+0.8**
YAK	**Yakutsk**	**44.13**	**350**	P		P	P	**03 54 15.9**	**-0.3**
ADK	**Adak**	**44.38**	**33**	P		P	P	**03 54 19.0**	**+0.8**
EIDS	**Eidsvold**	**44.66**	**172**	P		P	P	**03 54 21.2**	**+0.4**
EIDS				IAmb		IAmb	IAmb	03 54 39.5	
	comp=Z,19nm,1.4s								
ATKA	**Atka Island**	**45.85**	**34**	P		P	P	**03 54 29.9**	**+0.5**
DZM	**Mont Dzumac**	**46.09**	**152**	P		P	P	**03 54 33.0**	**+1.3**
DZM				IAmb		IAmb	IAmb	03 54 33.7	
	comp=Z,18nm,0.6s								
INKA	**Innaminka**	**46.78**	**185**			**P**	**P**	**03 54 37.0**	**+0.3**
INKA				IAmb		IAmb	IAmb	03 54 37.6	
	comp=Z,5.5nm,0.7s								
BILL	**Bilibino**	**50.71**	**10**	P		P	P	**03 55 05.3**	**+0.2**
BILL				IAmb		IAmb	IAmb	03 55 06.2	
	comp=Z,11nm,0.6s								
STKA	**Stephens Creek**	**50.83**	**184**	P		P	P	**03 55 06.8**	**+0.3**
	comp=Z,7.5nm,0.5s,baz=359,slow=7.1,SNR=22								
	comp=Z,7.5nm,0.5s								
FORT	**Forrest**	**52.21**	**198**	P		P	P	**03 55 17.1**	**+0.7**
FORT				IAmb		IAmb	IAmb	03 55 40.4	
	comp=Z,7.1nm,0.9s								
BBOO	**Buckleboo**	**52.35**	**189**	P		P	P	**03 55 17.7**	**+0.3**
BBOO				IAmb		IAmb	IAmb	03 55 38.0	
	comp=Z,19nm,1.3s								
WMQ	**Urumqi**	**53.41**	**311**	*e*P		P	P	**03 55 27.3**	**+2.3**
MORW	**Morawa**	**55.43**	**211**	P		P	P	**03 55 38.9**	**-0.2**
MORW				IAmb		IAmb	IAmb	03 55 53.1	
	comp=Z,18nm,1.3s								
ZALV	**Zalesovo Beam**	**57.17**	**322**	P		P	P	**03 55 50.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=113,slow=8.6,SNR=3.2								
ZALV				PcP		PcP	PcP	**03 56 36.1**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=92,slow=2.8,SNR=6.2								
ZALV				pP		pP	pP	**03 57 42.9**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=101,slow=12,SNR=2.5								
	comp=Z,0.4nm,0.3s								
MKAR	**Makanchi Array**	**57.58**	**314**	P		P	P	**03 55 54.2**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=89,slow=8.6,SNR=12								
MKAR				PcP		PcP	PcP	**03 56 38.5**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=94,slow=4.8,SNR=7.0								
MKAR				ScP		ScP	ScP	**03 59 41.8**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=80,slow=6.7,SNR=3.7								
	comp=Z,0.8nm,0.5s								
J20K	**Nowinta River**	**60.40**	**26**	P		P	P	**03 56 12.9**	**+0.8**
KURK	**Kurchatov**	**60.41**	**318**	P		P	P	**03 56 13.0**	**+0.6**
KURK	**Kurchatov**	**60.41**	**318**	IAmb		IAmb	IAmb	03 56 13.1	
	comp=Z,1.6nm,0.5s								
KURBB	**Kurchatov Arra**	**60.45**	**318**	P		P	P	**03 56 13.0**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=98,slow=7.0,SNR=26								
	comp=Z,4.1nm,0.6s								
NRIK	**Noril'sk**	**60.91**	**340**	P		P	P	**03 56 15.4**	**0.0**
	comp=Z,2.0nm,0.6s,baz=104,slow=6.8,SNR=3.6								
	comp=Z,2.0nm,0.6s								
NRIK	**Noril'sk**	**60.91**	**340**	IAmb		IAmb	IAmb	03 56 16.0	
	comp=Z,2.2nm,0.8s								
D20K	**Etivluk River**	**61.07**	**21**	IAmb		IAmb	IAmb	03 56 18.1	
	comp=Z,12nm,1.3s								
WCZ	**Waipu Caves**	**61.49**	**153**	P		P	P	**03 56 21.7**	**+2.1**
KSH2	**Kashi**	**62.29**	**305**	P		P	P	**03 56 26.6**	**+1.5**
D22K	**Ayikyak River**	**62.46**	**21**			P	P	**03 56 26.7**	**+1.2**
ILAR	**Eielson Array**	**63.59**	**26**	P		P	P	**03 56 31.6**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=247,slow=6.0,SNR=18								
ILAR				pP		pP	pP	**03 58 27.1**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=239,slow=7.0,SNR=1.6								
	comp=Z,1.1nm,0.7s								
VRZ	**Vera Road**	**64.37**	**155**	P		P	P	**03 56 40.0**	**+2.0**
HAZ	**Te Kaha**	**64.53**	**151**	P		P	P	**03 56 39.7**	**+0.7**
TWVZ	**Taurewa**	**64.61**	**154**	P		P	P	**03 56 41.2**	**+1.6**
KATZ	**Kakaramea**	**64.63**	**154**	P		P	P	**03 56 41.8**	**+2.0**
URZ	**Urewera**	**64.64**	**152**	P		P	P	**03 56 39.7**	**0.0**
RUGZ	**Raukumara Rang**	**64.65**	**152**	P		P	P	**03 56 39.1**	**-0.8**
WTVZ	**West Tongariro**	**64.71**	**154**	P		P	P	**03 56 41.6**	**+1.4**
NTVZ	**North Tongarir**	**64.73**	**154**	P		P	P	**03 56 41.6**	**+1.2**
NNVZ	**North Ngauruho**	**64.73**	**154**	P		P	P	**03 56 41.9**	**+1.5**
PKVZ	**Pokaka**	**64.75**	**154**	P		P	P	**03 56 41.8**	**+1.3**
TMVZ	**Te Maari**	**64.75**	**154**	P		P	P	**03 56 41.8**	**+1.3**
NGZ	**Ngauruhoe**	**64.76**	**154**	P		P	P	**03 56 41.7**	**+1.1**
ETVZ	**East Tongariro**	**64.77**	**154**	P		P	P	**03 56 41.8**	**+1.1**
OTVZ	**Oturere**	**64.78**	**154**	P		P	P	**03 56 42.0**	**+1.3**
SNVZ	**South Ngauruho**	**64.79**	**154**	P		P	P	**03 56 41.9**	**+1.1**
RTZ	**Ruatahuna**	**64.88**	**153**	P		P	P	**03 56 41.4**	**0.0**
RTZ				IAmb		IAmb	IAmb	03 56 42.0	
	comp=Z,35nm,0.9s								
RTZ	**Ruatahuna**	**64.88**	**153**	P		P	P	**03 56 41.3**	**0.0**
MWZ	**Matawai**	**64.89**	**152**	P		P	P	**03 56 41.4**	**+0.1**
RAGZ	**Rawiri**	**64.97**	**152**	P		P	P	**03 56 42.3**	**+0.5**
QRZ	**Quartz Range**	**64.98**	**157**	P		P	P	**03 56 42.7**	**+0.9**
MOVZ	**Moawhango**	**65.02**	**154**	P		P	P	**03 56 42.8**	**+0.6**
BKZ	**Black Stump Fm**	**65.13**	**153**	P		P	P	**03 56 42.7**	**-0.1**
BKZ				IAmb		IAmb	IAmb	03 56 43.6	
	comp=Z,16nm,0.6s								
BKZ	**Black Stump Fm**	**65.13**	**153**	P		P	P	**03 56 42.9**	**0.0**
DRK	**Karamyk**	**65.19**	**305**	IAmb		IAmb	IAmb	03 56 50.0	
	comp=Z,21nm,0.5s								
CNGZ	**Carnagh Statio**	**65.31**	**152**	P		P	P	**03 56 44.2**	**+0.3**
BVAR	**Borovoye Array**	**65.62**	**320**	P		P	P	**03 56 45.9**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=97,slow=6.3,SNR=11								
BVAR				pP		pP	pP	**03 58 41.2**	**-2.6**
	comp=Z,0.7nm,0.5s,baz=99,slow=8.9,SNR=2.5								
	comp=Z,2.4nm,0.6s								
NNZ	**Nelson**	**65.63**	**157**	P		P	P	**03 56 45.6**	**-0.3**
TSZ	**Takapari Road**	**65.66**	**154**	P		P	P	**03 56 46.2**	**+0.2**
THZ	**Tophouse**	**65.93**	**157**	P		P	P	**03 56 48.4**	**+0.6**
MRZ	**Mangatainoka R**	**66.01**	**155**	P		P	P	**03 56 48.6**	**+0.4**
BFZ	**Birch Farm**	**66.30**	**154**	P		P	P	**03 56 50.0**	**0.0**
WVZ	**Waitaha Valley**	**66.34**	**160**	P		P	P	**03 56 50.1**	**0.0**
AB31	**Akbulak array**	**72.47**	**317**	P		P	P	**03 57 26.7**	**0.0**
YKA	**Yellowknife Ar**	**77.96**	**28**	P		P	P	**03 57 57.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=296,slow=5.8,SNR=12								
YKA				pP		pP	pP	**04 00 00.0**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=298,slow=7.0,SNR=1.8								
	comp=Z,0.7nm,0.7s								
PINE	**Pine Mountain**	**79.94**	**47**	IAmb		IAmb	IAmb	03 58 11.1	
	comp=Z,7.8nm,0.8s								
G08A	**Pilot Rock**	**80.84**	**45**	IAmb		IAmb	IAmb	03 58 14.4	
	comp=Z,6.3nm,0.5s								
CMB	**Columbia Colle**	**82.06**	**53**	IAmb		IAmb	IAmb	03 58 20.2	
	comp=Z,5.0nm,0.8s								
PNTR	**Pine Nut**	**82.31**	**51**	P		P	P	**03 58 21.5**	**+1.2**
PNTR				IAmb		IAmb	IAmb	03 58 22.1	
	comp=Z,4.6nm,0.8s								
NVAR	**Mina Array Bea**	**83.48**	**52**	P		P	P	**03 58 27.1**	**+0.9**
	comp=Z,2.4nm,0.6s,baz=267,slow=6.0,SNR=19								
	comp=Z,2.4nm,0.6s								
MFID	**Camas Ranch**	**83.58**	**46**	IAmb		IAmb	IAmb	03 58 28.0	
	comp=Z,7.7nm,0.8s								
HLID	**Hailey**	**84.49**	**46**	P		P	P	**03 58 32.0**	**+1.0**
ELK	**Elko**	**84.92**	**49**	P		P	P	**03 58 33.6**	**+0.4**
ELK				IAmb		IAmb	IAmb	03 58 34.4	
	comp=Z,3.3nm,0.7s								
FURC	**Furnace Creek,**	**85.22**	**53**	IAmb		IAmb	IAmb	03 58 36.2	
	comp=Z,12nm,1.1s								
KBZ	**Khabaz**	**85.26**	**315**	P		P	P	**03 58 35.6**	**+1.2**
	comp=Z,3.1nm,0.9s,baz=135,slow=3.5,SNR=4.4								
	comp=Z,3.1nm,0.9s								
WCT	**Wildcat Mounta**	**85.29**	**53**	IAmb		IAmb	IAmb	03 58 36.5	
	comp=Z,6.2nm,1.1s								
QSM	**Queen of Sheba**	**85.39**	**54**	IAmb		IAmb	IAmb	03 58 36.9	
	comp=Z,6.7nm,1.1s								
GWY	**Greenwater Val**	**85.47**	**53**	IAmb		IAmb	IAmb	03 58 37.4	
	comp=Z,7.3nm,1.0s								
TPNV	**Topopah Spring**	**85.52**	**53**	IAmb		IAmb	IAmb	03 58 37.6	
	comp=Z,6.1nm,1.0s								
GSC	**Goldstone, Bar**	**85.67**	**54**	IAmb		IAmb	IAmb	03 58 38.8	
	comp=Z,5.8nm,1.1s								
FINES	**FINESS Array B**	**86.14**	**335**	P		P	P	**03 58 36.9**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=52,slow=3.6,SNR=10								
	comp=Z,1.3nm,0.6s								
PRN	**Pahroc Range**	**86.25**	**52**	IAmb		IAmb	IAmb	03 58 41.4	
	comp=Z,5.3nm,1.0s								
PMD	**Palm Desert**	**86.58**	**56**	IAmb		IAmb	IAmb	03 58 42.2	
	comp=Z,5.8nm,0.9s								
PSUT	**Pine Spring**	**86.72**	**50**	IAmb		IAmb	IAmb	03 58 43.4	
	comp=Z,5.3nm,1.0s								
DUG	**Dugway, Tooele**	**86.84**	**49**	IAmb		IAmb	IAmb	03 58 44.5	
	comp=Z,4.7nm,1.1s								
V12A	**Nelson**	**87.01**	**53**	IAmb		IAmb	IAmb	03 58 45.0	
	comp=Z,6.3nm,0.8s								
BC3	**Big Chuckawall**	**87.29**	**55**	IAmb		IAmb	IAmb	03 58 46.1	
	comp=Z,5.5nm,0.9s								
IRM	**Iron Mountain**	**87.35**	**55**	IAmb		IAmb	IAmb	03 58 45.8	
	comp=Z,3.9nm,0.9s								
KNB	**Kanab**	**88.05**	**51**	IAmb		IAmb	IAmb	03 58 50.2	
	comp=Z,6.8nm,1.0s								
PDAR	**Pinedale Array**	**88.07**	**45**	P		P	P	**03 58 48.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=68,slow=0.4,SNR=6.1								
	comp=Z,0.4nm,0.5s								
Y14A	**Wickenburg**	**89.08**	**54**	IAmb		IAmb	IAmb	03 58 54.5	
	comp=Z,4.8nm,0.8s								
HMU	**Henry Mountain**	**89.21**	**50**	IAmb		IAmb	IAmb	03 58 57.7	
	comp=Z,3.7nm,0.7s								
PV14	**Lion Creek, Pa**	**90.27**	**49**	IAmb		IAmb	IAmb	03 58 59.6	
	comp=Z,8.5nm,0.8s								
PV04	**Paradox Valley**	**90.34**	**49**	IAmb		IAmb	IAmb	03 58 59.9	
	comp=Z,5.7nm,0.9s								
PV16	**Nyswonger Mesa**	**90.37**	**49**	IAmb		IAmb	IAmb	03 58 60.0	
	comp=Z,5.9nm,0.7s								
PV03	**Paradox Valley**	**90.44**	**49**	IAmb		IAmb	IAmb	03 59 00.3	
	comp=Z,5.7nm,1.0s								
PV13	**Radium Mtn., P**	**90.50**	**49**	IAmb		IAmb	IAmb	03 59 00.4	
	comp=Z,4.6nm,0.7s								
PV01	**Paradox Valley**	**90.69**	**49**	IAmb		IAmb	IAmb	03 59 01.3	
	comp=Z,4.7nm,0.7s								
HFS	**Hagfors**	**91.67**	**338**	P		P	P	**03 59 02.3**	**-1.7**
	comp=Z,1.5nm,0.8s,baz=29,slow=3.4,SNR=5.5								
	comp=Z,1.5nm,0.8s								
TORD	**Torodi Ar. Bea**	**131.55**	**309**	PKP		**PKPdf**	**PKPdf**	**04 05 05.6**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=343,slow=0.6,SNR=11								
TORD				SKPbc		**SKPbc**	**SKPbc**	**04 07 35.9**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=349,slow=0.8,SNR=16								
DBIC	**Dimbokro**	**140.65**	**308**	PKhKP		PKPpre		04 05 17.5	
	comp=Z,1.5nm,0.7s,baz=64,slow=4.3,SNR=5.3								
LR05	**Currie**	**142.08**	**132**			**PKPdf**	**PKPdf**	**04 05 22.4**	**-2.4**
PLCA	**Paso Flores**	**142.89**	**133**	PKP		**PKPdf**	**PKPdf**	**04 05 25.1**	**-1.3**
	comp=Z,9.5nm,0.8s,baz=228,slow=3.9,SNR=20								
BI02	**San Fabin de**	**143.88**	**126**			**PKPdf**	**PKPdf**	**04 05 28.5**	**+0.2**
BO04	**La Punta**	**145.20**	**122**			**PKPab**	**PKPab**	**04 05 32.3**	**-0.7**
CO02	**Combarbal**	**145.55**	**117**			**PKPab**	**PKPab**	**04 05 33.5**	**-1.0**
AC05	**El Transito**	**146.59**	**114**			**PKiKP**	**PKiKP**	**04 05 36.9**	**-1.0**
BOAV	**Boa Vista**	**147.12**	**52**			**PKPbc**	**PKPbc**	**04 05 37.5**	**0.0**
LPAZ	**La Paz**	**148.47**	**90**	PKP		**PKPdf**	**PKPdf**	**04 05 37.5**	**+0.3**
	comp=Z,5.3nm,0.5s,baz=172,slow=6.0,SNR=4.6								
LPAZ				PKPbc		**PKiKP**	**PKiKP**	**04 05 42.3**	**-0.4**
	comp=Z,5.3nm,0.5s,baz=16,slow=5.5,SNR=16								
CPUP	**Villa Florida**	**158.34**	**113**	PKPab		**PKPab**	**PKPab**	**04 06 29.8**	**+1.2**
	comp=Z,2.0nm,1.0s,baz=255,slow=6.2,SNR=6.4								

*IDC **07** 03:50:33.5±0.5, 2.°68S×138.°38E, h0km, mb4.6/17, mbtmp4.6/22, ML4.2/4, MS4.2/38, Error ellipse: s-maj=14.8km s-min=11.2km az=60.0*

*MOS **07** 03:50:35.7±0.7, 2.°72S×138.°33E, h25km, mb5.2/31, Error ellipse: s-maj=11.3km s-min=5.7km az=117.1*

*GCMT **07** 03:50:36.9±0.2, 2.°56S±0.°01×138.°39E±0.°02, h20km, MW5.0/95, Moment Tensor Solution. s32,c40; s95,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.91±.20; $M_{\theta\theta}$-2.81±.13; $M_{\phi\phi}$-0.09±.13; $M_{r\theta}$-0.01±.19; $M_{\theta\phi}$2.07±.07; $M_{\phi r}$0.86±.24; Best double couple: M_o3.57600×10^{16} NP1:ϕs100.00000°, δ45.00000°, λ62.00000°. NP2: ϕs316.00000°, δ51.00000°, λ115.00000°. Principal axes: T 3.1970, Plg71.0000°, Azm289.0000°; N 0.7600, Plg19.0000°, Azm120.0000°; P -3.9540, Plg4.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **07** 03:50:38.1±0.2, 3.°S±3.°×13.°8E±.°, h10km, M4.8/44, mB5.3/33, mb5.1/44, MLv5.0/18, Mw(mB)4.8/33, MwMwp4.5/2, Mwp4.9/2*

*BJI **07** 03:50:38.7, 2.°78S×138.°71E, h69km, mB5.3/13, mb4.9/65, Ms4.7/31, Ms7 4.4/36*

*NEIC **07** 03:50:39.7, 2.°58S×138.°47E, h50km, Moment Tensor Solution. Duration: 1§6 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.33; $M_{\theta\theta}$-0.89; $M_{\phi\phi}$1.22; $M_{r\theta}$-1.85; $M_{\theta\phi}$2.47; $M_{\phi r}$0.88; Fault plane solution: M_o3.39000×10^{16} NP1: ϕs173.45000°, δ63.63000°, λ-161.66000°. NP2: ϕs75.07000°, δ73.62000°, λ-27.57000°. Principal axes: T 2.8797, Plg7.0000°, Azm126.0000°; N 0.8491, Plg58.0000°, Azm227.0000°; P -3.7288, Plg31.0000°, Azm32.0000°;*

*NEIC **07** 03:50:39.2±1.7, 2.°64S±0.°08×138.°33E±0.°06, h30km±3km, mb5.2/119, Mww5.0/11 Error ellipse: s-maj=11.1km s-min=9.1km az=185.0*

*NEIC **07** 03:50:39.7, 2.°68S×138.°27E, h50km*

ISC 07 03:50:38.6±0.5, 2.°67S±0.°04×138.°38E±0.°05, h32km±2km, h32km:pP-P, n295, σ1§54/249, mb5.0/122, MS4.3/46, 12C-9D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
GENI	**Genyem**	**1.79**	**88**	P		P	**Pn**	**03 51 07.1**	**-0.1**
SRPI	**Serui, Papua**	**2.28**	**290**	P		P	**Pn**	**03 51 13.6**	**-0.4**
JAY	**Jayapura**	**2.33**	**86**	Pn		Pn	**Pn**	**03 51 14.2**	**-0.5**
	181nm,0.6s,baz=270,slow=8.9								
JAY				Lg		Lg	Lg	03 51 47.4	
	baz=86,slow=17								
BAKI	**Biak**	**2.70**	**303**	P		P	**Pn**	**03 51 20.2**	**+0.4**
RKPI	**Ransiki, Papua**	**4.35**	**285**	P		P	**Pn**	**03 51 42.3**	**-0.2**
MWPI	**Manokwari, Pap**	**4.67**	**292**	P		P	**Pn**	**03 51 47.5**	**+0.7**
KMPI	**Kaimana, Papua**	**4.77**	**258**	P		P	**Pn**	**03 51 51.7**	**+3.4**
FAKI	**Fak Fak**	**6.13**	**268**			P	**Pn**	**03 52 05.7**	**-1.3**
FAKI	**Fak Fak**	**6.13**	**268**	P		P	**Pn**	**03 52 10.0**	**+3.1**
	0.5nm121nm,0.8s								
SIJI	**Sorong**	**7.33**	**284**	Pn		Pn	**Pn**	**03 52 22.1**	**-1.3**
	5.3nm,0.3s,baz=177,slow=22,SNR=11								
SIJI				LR		LR	LR	03 55 56.9	
	comp=Z,5μm,18.4s,baz=130,slow=44				

MYLDM Lahad Datu 21.33 291 P **P** **03 55 23.2 0.0**
MYLDM Lahad Datu 21.33 291 P **P** **03 55 26.7 +3.6**
comp=Z,2µmcomp=Z,117nm,1.9s
PLAI Plampang 21.38 253 P **P** **03 55 28.1 +4.4**
BBKI Banjar Baru 23.52 267 P **P** **03 55 48.9 +2.8**
KKM Kota Kinabalu 23.77 291 P **P** **03 55 48.3 -0.3**
TGY Tagaytay City 24.01 314 P **P** **03 55 51.0 +0.2**
comp=Z,133nm,0.4s,baz=323,slow=7.6,SNR=6.2
TGY Tagaytay City 24.01 314 P **P** **03 55 51.0 +0.2**
WRKA Warakurna 24.27 203 P **P** **03 55 52.4 -0.7**
comp=Z,56nm,0.9s
EIDS Eidsvold 25.67 153 P **P** **03 56 07.5 +1.8**
comp=Z,24nm,0.9s
EIDS Eidsvold 25.67 153 P **P** **03 56 06.9 +1.2**
EIDS IAmb IAmb 03 56 12.8
comp=Z,103nm,1.9s
PSAB3 Pilbara Seismi 26.05 222 P **P** **03 56 11.4 +2.2**
comp=Z,60nm,1.4s
STKA Stephens Creek 29.21 174 P **P** **03 56 37.8 +0.4**
comp=Z,42nm,1.8s
STKA Stephens Creek 29.21 174 P **P** **03 56 36.2 -1.2**
comp=Z,3.1nm,0.9s,baz=353,slow=7.4,SNR=2.9
comp=Z,3.1nm,0.9s
STKA Stephens Creek 29.21 174 IAmb IAmb 03 57 34.9
comp=Z,66nm,1.0s
STKA Stephens Creek 29.21 174 P **P** **03 56 36.2 -1.2**
STKA pmax pmax
comp=Z,65nm,1.0s
JCJ Chichijima 29.82 7 LR LR 04 07 26.2
comp=Z,557nm,19.8s,baz=126,slow=34
DZM Mont Dzumac 33.39 128 *e*LR LR 04 06 15.5
comp=Z,1µm,26.0s
MORW Morawa 33.78 217 P **P** **03 57 17.9 +0.2**
comp=Z,30nm,2.5s
ARPS Mount Arapiles 34.09 175 P **P** **03 57 20.2 +0.1**
comp=Z,17nm,1.4s
QIZ Qiongzhong 35.39 309 P **P** **03 57 30.9 -0.8**
QIZ S **S** **04 03 02.8 -1.7**
QIZ pmax pmax
comp=Z,29nm,1.5s
QIZ LR LR
comp=Z,280nm,17.9s
QIZ LR LR
comp=Z,340nm,14.6s
QIZ LR LR
comp=Z,500nm,15.9s
JHJ Hachijo jima 2 35.62 2 LR LR 04 08 43.0
comp=Z,467nm,21.7s,baz=242,slow=31
NWAO Narrogin (SRO) 36.05 211 LR LR 04 15 13.6
comp=Z,984nm,18.1s,baz=45,slow=41
JNU Nakatsue 36.29 349 P **P** **03 57 38.5 -0.7**
comp=Z,18nm,0.9s,baz=113,slow=4.4,SNR=8.6
JNU LR LR 04 10 01.4
comp=Z,494nm,21.6s,baz=166,slow=32
comp=Z,18nm,0.9s
IPM Ipoh 37.99 281 P **P** **03 57 53.3 -0.7**
IPM IAmb IAmb 03 58 00.4
comp=Z,34nm,1.3s
MJAR Matsushiro Arr 39.01 360 LR LR 04 13 39.1
comp=Z,297nm,18.4s,baz=160,slow=36
NJ2 Nanjing 39.19 333 *e*P **P** **03 58 06.8 +3.1**
NJ2 pmax pmax
comp=Z,11nm,0.5s
RPSI Rantau Prapat 39.80 277 P **P** **03 58 07.8 -1.3**
RPSI IAmb IAmb 03 58 09.6
comp=Z,26nm,0.9s
PSI Prapat 39.81 278 P **P** **03 58 07.8 -1.6**
PSI pmax pmax
comp=Z,26nm,0.9s
WHN Wuhan 40.20 327 ⇓P **P** **03 58 13.6 +1.4**
KSAR Wonju Array Be 41.08 347 P **P** **03 58 19.3 0.0**
KSAR Wonju Array Be 41.08 347 P **P** **03 58 19.3 0.0**
KSRS Korea Array 41.08 347 P **P** **03 58 18.6 -0.7**
comp=Z,5.7nm,0.8s,baz=160,slow=8.9,SNR=16
KSRS LR LR 04 13 01.5
comp=Z,340nm,21.1s,baz=170,slow=33
comp=Z,5.7nm,0.8s
GYA Guiyang 42.16 315 ⇓P **P** **03 58 29.3 +0.8**
GYA pmax pmax
comp=Z,16nm,1.6s
GYA LR LR
comp=Z,430nm,19.8s
ENH Enshi 42.82 322 P **P** **03 58 33.4 -0.3**
ENH IAmb IAmb 03 58 35.8
comp=Z,56nm,1.5s
CMAR Chiang Mai Arr 44.13 300 P **P** **03 58 44.9 +0.5**
comp=Z,9.0nm,1.1s,baz=118,slow=6.0,SNR=33
CMAR LR LR 04 17 01.2
comp=Z,128nm,21.3s,baz=130,slow=36
comp=Z,9.0nm,1.1s
CMAR Chiang Mai Arr 44.13 300 P **P** **03 58 44.1 -0.4**
KMI2 Kunming 44.25 311 ⇑P **P** **03 58 45.7 +0.1**
KMI2 pmax pmax
comp=Z,22nm,1.4s
KMI2 pmax pmax
comp=Z,110nm,3.1s
KMI2 LR LR
comp=Z,200nm,20.5s
KMI2 LR LR
comp=Z,290nm,16.3s
KMI2 LR LR
comp=Z,310nm,19.5s
CHTO Chiang Mai 44.27 300 P **P** **03 58 45.7 +0.1**
CHTO IAmb IAmb 03 58 52.5
comp=Z,49nm,1.6s
CHTO Chiang Mai 44.27 300 P **P** **03 58 45.7 +0.1**
CHTO pmax pmax
comp=Z,49nm,1.6s
LYN LuoYang 44.31 329 P **P** **03 58 45.7 +0.1**
LYN pP sP 03 58 59.7 +0.5
LYN pmax pmax
comp=Z,39nm,1.7s
LYN LR LR
comp=Z,280nm,16.5s
LYN LR LR
comp=Z,400nm,18.6s
LYN LR LR
comp=Z,420nm,20.6s
HNS HongShan 45.52 333 ⇑P **P** **03 58 54.6 -0.6**
HNS S **S** **04 05 27.1 -8.0**
HNS pmax pmax
comp=Z,10.0nm,1.0s
HNS LR LR
comp=Z,420nm,18.2s
HNS LR LR
comp=Z,360nm,18.6s
HNS LR LR
comp=Z,550nm,19.0s
PZH PanZhiHua 45.75 312 P **P** **03 58 59.6 +2.2**
XAN Xi'an 45.85 325 ⇓P **P** **03 58 57.9 0.0**
XAN pP sP 03 59 17.2 +5.6
XAN pmax pmax
comp=Z,42nm,1.3s
XAN Xi'an 45.85 325 P **P** **03 58 57.9 0.0**
XAN pP **pP** **03 59 06.7 -0.9**
ASAJ Asahikawa 46.73 4 LR LR 04 18 13.2
comp=Z,181nm,19.8s,baz=168,slow=36
TIY Taiyuan 46.83 332 *e*P **P** **03 59 07.0 +1.4**
TIY pmax pmax
comp=Z,270nm,4.5s
CD2 Chengdu 46.93 318 P **P** **03 59 06.7 +0.2**
CD2 pP sP 03 59 22.2 +2.1
CD2 S **S** **04 05 54.3 -1.4**
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 LR LR
comp=Z,510nm,15.9s
CD2 LR LR
comp=Z,590nm,14.6s
CD2 LR LR
comp=Z,570nm,16.5s
USRK Ussuriysk Ar. 47.01 354 P **P** **03 59 07.4 +0.6**
comp=Z,3.4nm,0.8s,baz=184,slow=3.8,SNR=2.1
comp=Z,3.4nm,0.8s
BJI2 Beijing 47.11 337 P **P** **03 59 06.6 -1.0**
BJI2 S **S** **04 05 55.5 -2.3**
BJI2 pmax pmax
comp=Z,4.0nm,1.3s
BJI2 pmax pmax
comp=Z,74nm,6.3s
BJI2 LR LR
comp=Z,140nm,20.2s
BJI2 LR LR
comp=Z,130nm,17.3s
BJI2 LR LR
comp=Z,200nm,18.8s
TNCH TengChong 47.45 308 P **P** **03 59 11.5 +0.7**
TNCH sP sP 03 59 35.8 +11
TNCH pmax pmax
comp=Z,29nm,0.6s
MDJ Mudanjiang 47.72 352 P **P** **03 59 12.7 +0.4**
MDJ sP sP 03 59 36.4 +10
MDJ S **S** **04 06 10.4 +4.0**
MDJ pmax pmax
comp=Z,12nm,0.8s
MDJ LR LR
comp=Z,440nm,18.6s
MDJ LR LR
comp=Z,400nm,16.2s
MDJ LR LR
comp=Z,520nm,20.6s
TOZ Tahuroa Road 48.73 140 P **P** **03 59 22.3 +2.1**
TOZ IAmb IAmb 03 59 23.2
comp=Z,31nm,1.2s
BNX BinXian 49.17 350 ⇓P **P** **03 59 23.4 -0.1**
BNX pmax pmax
comp=Z,16nm,0.9s
YSS Yuzhno-Sakhali 49.56 4 *e*P **P** **03 59 23.6 -2.8**
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,500nm,16.0s
HHC Hu-ho-hao-te 49.74 333 ⇑*i*P **P** **03 59 29.5 +1.4**
HHC pP sP 03 59 47.3 +5.6
HHC S **S** **04 06 40.3 +5.0**
HHC pmax pmax
comp=Z,9.0nm,1.3s
HHC pmax pmax
comp=Z,230nm,5.1s
HHC LR LR
comp=Z,310nm,18.7s
HHC LR LR
comp=Z,280nm,17.0s
HHC LR LR
comp=Z,380nm,20.3s
URZ Urewera 50.06 140 LR LR 04 21 00.3
comp=Z,306nm,18.9s,baz=306,slow=36
BKZ Black Stump Fm 50.20 141 P **P** **03 59 32.5 +0.9**
BKZ IAmb IAmb 03 59 34.4
comp=Z,18nm,1.1s
LZH Lanzhou 50.25 323 P **P** **03 59 33.2 +1.1**
LZH pP sP 03 59 48.8 +3.0
LZH sP pP 03 59 54.4 +13
LZH pmax pmax
comp=Z,57nm,1.3s
LZH pmax pmax
comp=Z,250nm,4.1s
LZH LR LR
comp=Z,190nm,13.4s
LZH LR LR
comp=Z,320nm,13.7s
LZH LR LR
comp=Z,380nm,14.4s
LZDM Lanzhou Array 50.25 323 P **P** **03 59 32.6 +0.4**
comp=Z,2.9nm,0.5s,baz=133,slow=8.7,SNR=21
comp=Z,2.9nm,0.5s
BTO2 Baotou 50.43 332 *e*P **P** **03 59 31.0 -2.3**
BTO2 pP **sP** **03 59 46.8 -0.2**
BTO2 sP pP 03 59 53.4 +10
BTO2 pmax pmax
comp=Z,11nm,1.0s
BTO2 pmax pmax
comp=Z,200nm,5.7s
BTO2 LR LR
comp=Z,710nm,15.8s
BTO2 LR LR
comp=Z,740nm,17.3s
BTO2 LR LR
comp=Z,860nm,18.2s
XLT XiLinHaoTe 50.49 339 *e*P **P** **03 59 33.2 -0.5**
XLT pP sP 03 59 47.4 +0.1
XLT pmax pmax
comp=Z,8.0nm,1.2s
MRZ Mangatainoka R 50.56 143 P **P** **03 59 34.2 0.0**
MRZ IAmb IAmb 03 59 39.3
comp=Z,28nm,0.9s
KLR Kul'dur 52.01 354 LR LR 04 18 39.5
comp=Z,89nm,21.5s,baz=190,slow=32
KLR Kul'dur 52.01 354 ⇓*e*P **P** **03 59 44.6 -0.2**
KLR pmax pmax
comp=Z,8.0nm,0.9s
BRDH Bariadhala 52.08 302 LR LR 04 25 20.1
comp=Z,100nm,18.1s,baz=160,slow=40
SHL Shillong 53.04 305 P **P** **03 59 53.1 0.0**
SHL Shillong 53.04 305 P **P** **03 59 53.1 0.0**
HEH HeiHe 53.55 351 *e*P **P** **03 59 56.0 -0.2**
HIA Hailar 54.19 345 *d*/P **P** **04 00 01.4 +0.5**
HIA pmax pmax
comp=Z,24nm,1.8s
HILR Hailar Array B 54.45 345 P **P** **04 00 03.2 +0.4**
comp=Z,2.5nm,0.5s,baz=145,slow=11,SNR=5.4
comp=Z,2.5nm,0.5s
GTA2 Gaotai 54.92 324 *e*P **P** **04 00 07.1 +0.5**
GTA2 pmax pmax
comp=Z,24nm,1.2s
GTA2 LR LR
comp=Z,230nm,19.5s
GTA2 LR LR
comp=Z,200nm,19.5s
GTA2 LR LR
comp=Z,240nm,19.9s
LSA Lhasa 55.43 309 IAmb IAmb 04 00 13.3
comp=Z,74nm,2.0s
LSA Lhasa 55.43 309 P **P** **04 00 09.6 -1.3**
GOMU GeErMu 56.06 318 P **P** **04 00 15.8 +0.7**
GOMU pmax pmax
comp=Z,6.0nm,0.8s
ZEA Zeya 56.97 352 *e*P **P** **04 00 20.5 -0.3**
ZEA *e* 04 08 39.6
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 57.29 335 *c*/P **P** **04 00 23.7 +0.3**
ULN pmax pmax
comp=Z,20nm,1.5s
SONM Songino Array 57.54 335 P **P** **04 00 25.1 0.0**
comp=Z,1.9nm,0.8s,baz=152,slow=8.1,SNR=12
SONM LR LR 04 25 27.7
comp=Z,441nm,19.2s,baz=134,slow=36
comp=Z,1.9nm,0.8s
SONM Songino Array 57.54 335 P **P** **04 00 26.2 +1.1**
SONM IAmb IAmb 04 00 27.8
comp=Z,27nm,1.7s
SONM Songino Array 57.54 335 P **P** **04 00 26.2 +1.1**
SONM pmax pmax
comp=Z,27nm,1.7s
PETK Petropavlovsk- 57.90 14 LR LR 04 21 46.7
comp=Z,181nm,21.7s,baz=199,slow=32
PALK Pallekele 58.39 280 LR LR 04 28 06.3
comp=Z,70nm,19.7s,baz=108,slow=39
CIT Chita 58.41 342 *e*P **P** **04 00 32.0 +1.0**
CIT *e* 04 00 37.8
CIT *e* 04 00 42.6
CIT pmax pmax
comp=Z,92nm,1.8s
ZAK Zakamensk 60.81 335 *e*P **P** **04 00 47.6 -0.1**
ZAK pmax pmax
comp=Z,45nm,1.6s
TLY Talaya 61.64 336 **P** **04 00 53.7 +0.5**
TLY IAmb IAmb 04 00 55.9
comp=Z,22nm,1.4s
TLY Talaya 61.64 336 *d*/P **P** **04 00 54.2 +1.0**
TLY pmax pmax
comp=Z,15nm,1.3s
HYB Hyderabad 62.25 291 *e*P **P** **04 00 57.9 0.0**
HYB *e*sP **sP** **04 01 10.9 -0.9**
MA2 Magadan 62.82 7 LR LR 04 26 29.8
comp=Z,57nm,20.3s,baz=158,slow=34
MA2 Magadan 62.82 7 ⇓*e*P **P** **04 01 02.0 +1.1**
MA2 pmax pmax
comp=Z,27nm,2.4s
SHEM Shemya Is, Ala 62.84 24 LR LR 04 22 51.6
comp=Z,265nm,21.9s,baz=161,slow=31
KNGR Kungurtug, Tuv 63.53 332 ⇑/P **P** **04 01 07.6 +1.7**
KNGR pmax pmax
comp=Z,16nm,1.2s
WMQ Urumqi 64.77 322 *e*P **P** **04 01 15.0 +0.8**
WMQ sP PcP 04 01 40.8 -6.7
WMQ PP **PP** **04 03 40.6 +3.6**
WMQ S **S** **04 09 52.5 -0.3**
WMQ pmax pmax
comp=Z,31nm,1.9s
WMQ LR LR
comp=Z,360nm,18.3s
WMQ LR LR
comp=Z,220nm,22.5s
WMQ Urumqi 64.77 322 P **P** **04 01 14.8 +0.7**
WMQ sP **sP** **04 01 27.6 -0.3**
YAK Yakutsk 64.86 355 LR LR 04 26 08.8
comp=Z,312nm,21.8s,baz=130,slow=33
YAK Yakutsk 64.86 355 *e*P **P** **04 01 14.2 0.0**
YAK *e**PP **pP** **04 01 25.3 +0.9**
YAK *e* 04 03 36.6
YAK *e*PPP PPP 04 05 12.4
YAK *e*S **S** **04 09 53.1 0.0**
YAK *e**SS sS 04 10 16.9 +7.2
YAK *e*SS **SS** **04 14 03.0 -2.1**
YAK pmax pmax
comp=Z,14nm,0.8s
YAK pmax pmax
comp=Z,188nm,4.5s
YAK pmax pmax
comp=E,138nm,5.2s
YAK pmax pmax
comp=N,138nm,4.7s
YAK smax smax
comp=E,144nm,4.5s
SEY Seymchan 66.28 7 ⇓*i*P **P** **04 01 24.2 +0.8**
SEY pmax pmax
comp=Z,21nm,2.0s
DGZ Jazzator, Alta 68.07 327 ⇑*e*P **P** **04 01 35.6 +0.4**
DGZ pmax pmax
comp=Z,19nm,1.3s
ZSN Zaisan 68.33 324 *e*P **P** **04 01 37.1 +0.4**
ZSN Zaisan 68.33 324 *e*P **P** **04 01 37.2 +0.4**
WUS Wushi 69.14 316 IAmb IAmb 04 01 44.8
comp=Z,49nm,1.6s
MK31 Makanchi Array 69.55 323 *c*/P **P** **04 01 44.7 +0.3**
MKAR Makanchi Array 69.55 323 P **P** **04 01 44.3 -0.1**
comp=Z,11nm,0.8s,baz=106,slow=6.9,SNR=6.9
comp=Z,11nm,0.8s
MKAR Makanchi Array 69.55 323 **P** **04 01 44.7 +0.3**
MKAR Makanchi Array 69.55 323 P **P** **04 01 44.7 +0.3**
MAKZ Makanchi 69.75 322 **P** **04 01 45.7 +0.1**
MAKZ Makanchi 69.75 322 P **P** **04 01 45.7 +0.1**
MAKZ pmax pmax
comp=Z,31nm,1.0s
MAKZ Makanchi 69.75 322 P **P** **04 01 46.1 +0.5**
MAKZ pP **pP** **04 01 54.8 -1.0**
MAKZ sP **sP** **04 01 58.6 -0.9**
SHLS Shalkode 69.76 318 *e*P **P** **04 01 44.5 -1.4**
SHLS pmax pmax
comp=Z,18nm,1.2s
SHLS Shalkode 69.76 318 *e*P **P** **04 01 44.5 -1.4**
comp=Z,18nm,1.2s
UZB Uzynbulak 70.05 318 *e*P **P** **04 01 47.9 +0.2**
UZB pmax pmax
comp=Z,23nm,1.3s
UZB Uzynbulak 70.05 318 *e*P **P** **04 01 47.9 +0.2**
comp=Z,23nm,1.3s
KPKS Kokpek 70.41 318 *e*P **P** **04 01 50.0 +0.2**
KPKS Kokpek 70.41 318 *e*P **P** **04 01 50.0 +0.2**
SATY Saty 70.43 318 *e*P **P** **04 01 50.4 +0.4**
SATY pmax pmax
comp=Z,13nm,0.9s
SATY Saty 70.43 318 *e*P **P** **04 01 50.4 +0.4**
comp=Z,13nm,0.9s
KSH2 Kashi 70.98 313 P **P** **04 01 54.5 +1.0**
KSH2 pmax pmax
comp=Z,15nm,1.5s
TDK Taldyqorghan 71.21 320 *e*P **P** **04 01 55.0 +0.5**
TDK pmax pmax
comp=Z,11nm,0.5s
TDK Taldyqorghan 71.21 320 *e*P **P** **04 01 55.1 +0.5**
comp=Z,11nm,0.5s
MDOK Medeo 71.39 317 *e*P **P** **04 01 56.0 +0.2**
MDOK Medeo 71.39 317 *e*P **P** **04 01 56.1 +0.2**
TNSS Tian-Shan 71.41 317 *e*P **P** **04 01 56.2 -0.1**
TNSS Tian-Shan 71.41 317 *e*P **P** **04 01 56.2 -0.1**
ZAA0 Zalesovo Array 71.73 330 IAmb IAmb 04 01 57.9
comp=Z,40nm,2.0s
ZALV Zalesovo Beam 71.73 330 P **P** **04 01 56.8 -0.7**
comp=Z,2.6nm,0.6s,baz=109,slow=7.5,SNR=7.8
ZALV LR LR 04 33 05.3
comp=Z,84nm,21.6s,baz=110,slow=36
comp=Z,2.6nm,0.6s
ZALV Zalesovo Beam 71.73 330 **P** **04 01 56.3 -1.1**
PPT Papeete 72.08 107 LR LR 04 31 02.8
comp=Z,117nm,21.4s,baz=214,slow=34
PPT2 Papeete2 72.08 108 *e*LR LR 04 24 07.2
comp=Z,217nm,22.8s
PPT2 *e*LR LR 04 24 14.5
comp=Z,218nm,24.5s
KUU Kurty 72.14 318 *e*P **P** **04 02 00.5 +0.3**
KUU Kurty 72.14 318 *e*P **P** **04 02 00.5 +0.3**
TBI Tubuai 72.57 114 *e*LR LR 04 24 21.1
comp=Z,771nm,31.5s
AAK Ala-Archa 72.94 316 **P** **04 02 05.2 +0.1**
AAK IAmb IAmb 04 02 12.7
comp=Z,36nm,1.6s
AAK Ala-Archa 72.94 316 *c**e*P **P** **04 02 06.2 +1.0**
AAK pmax pmax
comp=Z,20nm,1.7s
BILL Bilibino 73.19 11 *c**e*P **P** **04 02 08.2 +2.4**
BILL pmax pmax
comp=Z,11nm,1.7s
KURK Kurchatov 73.49 325 **P** **04 02 08.1 +0.1**
KURK IAmb IAmb 04 02 09.9
comp=Z,26nm,1.2s
KURK Kurchatov 73.49 325 *c**e*P **P** **04 02 08.4 +0.4**
KURK pmax pmax
comp=Z,39nm,1.7s
KURK Kurchatov 73.49 325 P **P** **04 02 08.0 0.0**
KURBB Kurchatov Arra 73.50 325 P **P** **04 02 07.7 -0.4**
comp=Z,9.0nm,1.1s,baz=125,slow=5.1,SNR=32
comp=Z,9.0nm,1.1s
ARSB Arslanbob 73.57 314 IAmb IAmb 04 02 20.0
comp=Z,52nm,1.4s
TIXI Tiksi 74.44 357 LR LR 04 34 45.3
comp=Z,200nm,19.5s,baz=190,slow=36
TIXI Tiksi 74.44 357 **P** **04 02 10.3 -2.8**
TIXI Tiksi 74.44 357 P **P** **04 02 10.3 -2.8**
TIXI pmax pmax
comp=Z,15nm,1.4s
BTK Batken 74.75 313 IAmb IAmb 04 02 18.3
comp=Z,60nm,1.8s
GAR Garm 74.82 312 IAmb IAmb 04 02 18.4
comp=Z,39nm,1.3s
DZA Taraz 75.23 316 *e*P **P** **04 02 18.7 +0.4**
DZA pmax pmax
comp=Z,7.0nm,0.7s
DZA Taraz 75.23 316 *e*P **P** **04 02 18.7 +0.4**
comp=Z,7.2nm,0.7s
CHGR Chuyangaron 75.60 311 IAmb IAmb 04 02 29.1
comp=Z,39nm,1.2s
VNDA Vanda 75.85 175 P **P** **04 02 20.9 -0.4**
comp=Z,7.3nm,0.8s,baz=333,slow=7.0,SNR=16
VNDA LR LR 04 36 06.4
comp=Z,248nm,20.7s,baz=344,slow=36
comp=Z,7.3nm,0.8s
VNDA Vanda 75.85 175 P **P** **04 02 21.6 +0.4**
VNDA Vanda 75.85 175 P **P** **04 02 21.6 +0.4**
VNDA pmax pmax
comp=Z,14nm,1.2s
VNDA Vanda 75.85 175 P **P** **04 02 21.9 +0.7**
KK31 Karatay Array 75.87 316 **P** **04 02 21.6 -0.4**
KK31 IAmb IAmb 04 02 24.3
comp=Z,30nm,1.6s
KK31 Karatay Array 75.87 316 P **P** **04 02 21.6 -0.4**
KK31 pmax pmax
comp=Z,30nm,1.6s
KKAR Karatay Array 75.87 316 P **P** **04 02 21.8 -0.2**
KKAR Karatay Array 75.87 316 P **P** **04 02 21.8 -0.2**
IUG Iuzhnay 75.92 315 *e*P **P** **04 02 22.5 +0.1**
IUG pmax pmax
comp=Z,26nm,1.4s
IUG Iuzhnay 75.92 315 *e*P **P** **04 02 22.6 +0.1**
comp=Z,26nm,1.4s
CHM Chimkent 76.28 315 *e*P **P** **04 02 24.5 +0.2**
CHM pmax pmax
comp=Z,12nm,0.8s
CHM Chimkent 76.28 315 *e*P **P** **04 02 24.6 +0.2**
comp=Z,12nm,0.8s
BRLS Boroldav 76.32 315 *e*P **P** **04 02 24.9 +0.3**
BRLS Boroldav 76.32 315 *e*P **P** **04 02 24.9 +0.3**
BRZS Berezniki 76.70 323 *e*P **P** **04 02 27.3 +0.8**
BRZS Berezniki 76.70 323 *e*P **P** **04 02 27.3 +0.8**
K13K Kusilvak Mount 77.48 24 IAmb IAmb 04 02 38.4
comp=Z,18nm,1.1s

M14K	**Bethel**	**78.02**	**26**	IAmb	IAmb	04 02 42.9		
	comp=Z,22nm,1.1s							
BVAR	**Borovoye Array**	**79.09**	**325**	P	**P**	**04 02 39.9**	**+0.1**	
	comp=Z,4.3nm,0.5s,baz=111,slow=8.1,SNR=27							
	comp=Z,4.3nm,0.5s							
BORK	**Borovoye**	**79.14**	**325**		**P**	**04 02 40.1**	**+0.1**	
BORK	**Borovoye**	**79.14**	**325**	*ce*P	**P**	**04 02 40.5**	**+0.5**	
BORK				pmax	pmax			
	comp=Z,37nm,1.7s							
BORK	**Borovoye**	**79.14**	**325**	P	**P**	**04 02 40.1**	**+0.1**	
BORK				PcP	**PcP**	**04 02 48.0**	**-0.3**	
BORK				sP	**sP**	**04 02 52.8**	**-1.2**	
NRIK	**Noril'sk**	**79.59**	**344**	P	**P**	**04 02 42.4**	**+0.3**	
	comp=Z,15nm,1.2s,baz=122,slow=5.2,SNR=15							
NRIK				LR	LR	04 37 30.5		
	comp=Z,180nm,20.8s,baz=126,slow=35							
	comp=Z,15nm,1.2s							
NRIK	**Noril'sk**	**79.59**	**344**	IAmb	IAmb	04 02 44.1		
	comp=Z,29nm,1.4s							
J16K	**Amvik River**	**79.77**	**24**	IAmb	IAmb	04 02 50.4		
	comp=Z,29nm,1.5s							
I17K	**Unalakleet**	**80.02**	**23**	IAmb	IAmb	04 02 52.5		
	comp=Z,37nm,1.6s							
N17K	**Nushagak Hills**	**80.04**	**27**	IAmb	IAmb	04 02 57.0		
	comp=Z,37nm,1.6s							
G16K	**Koyuk River**	**80.11**	**21**	IAmb	IAmb	04 02 51.4		
	comp=Z,61nm,2.0s							
K17K	**Iditarod**	**80.46**	**25**	IAmb	IAmb	04 02 54.7		
	comp=Z,33nm,1.2s							
H17K	**Granite Mounta**	**80.80**	**22**	IAmb	IAmb	04 03 25.9		
	comp=Z,29nm,1.7s							
KDAK	**Kodiak Island**	**81.23**	**30**	LR	LR	04 34 19.4		
	comp=Z,348nm,20.3s,baz=239,slow=32							
E18K	**Tukpahlearik C**	**81.70**	**20**	IAmb	IAmb	04 02 59.9		
	comp=Z,24nm,1.4s							
L19K	**White Mountain**	**81.72**	**26**	IAmb	IAmb	04 03 01.0		
	comp=Z,18nm,1.1s							
MAW	**Mawson**	**82.04**	**202**	LR	LR	04 38 38.3		
	comp=Z,207nm,18.9s,baz=72,slow=35							
M20K	**Styx River**	**82.37**	**26**	IAmb	IAmb	04 03 25.7		
	comp=Z,41nm,1.7s							
G19K	**Purcell Mounta**	**82.39**	**22**	IAmb	IAmb	04 03 05.3		
	comp=Z,18nm,1.2s							
F19K	**Shaleruckik Mo**	**82.43**	**21**	IAmb	IAmb	04 05 58.4		
	comp=Z,14nm,0.5s							
J20K	**Nowinta River**	**82.76**	**24**	IAmb	IAmb	04 03 06.5		
	comp=Z,58nm,2.0s							
C19K	**Lookout Ridge**	**82.82**	**19**	IAmb	IAmb	04 03 06.3		
	comp=Z,16nm,1.1s							
L22K	**Petersville**	**83.62**	**26**	IAmb	IAmb	04 03 20.1		
	comp=Z,45nm,1.9s							
BPAW	**Bear Paw Mtn.**	**84.03**	**25**	IAmb	IAmb	04 03 12.3		
	comp=Z,33nm,1.8s							
KNK	**Knik Glacier**	**84.34**	**28**	IAmb	IAmb	04 03 13.9		
	comp=Z,22nm,1.1s							
AB31	**Akbulak array**	**84.47**	**320**	IAmb	IAmb	04 03 10.1		
	comp=Z,38nm,1.8s							
ABKAR	**Akbulak array**	**84.47**	**320**	P	**P**	**04 03 08.1**	**-0.1**	
SML	**Sawmill**	**84.50**	**27**	IAmb	IAmb	04 03 14.6		
	comp=Z,24nm,1.2s							
RND	**Reindeer**	**84.72**	**26**	IAmb	IAmb	04 03 15.4		
	comp=Z,17nm,1.1s							
MCK	**McKinley**	**84.78**	**25**	P	**P**	**04 03 09.6**	**+0.1**	
MCK				IAmb	IAmb	04 03 16.0		
	comp=Z,13nm,1.2s							
MCK	**McKinley**	**84.78**	**25**	P	**P**	**04 03 09.6**	**+0.1**	
MCK				pmax	pmax			
	comp=Z,13nm,1.2s							
DHY	**Denali Highway**	**85.28**	**26**	IAmb	IAmb	04 03 19.1		
	comp=Z,10nm,0.9s							
WRH	**Wood River Hil**	**85.35**	**25**	P	**P**	**04 03 12.3**	**0.0**	
WRH				IAmb	IAmb	04 03 17.8		
	comp=Z,15nm,1.2s							
CCB	**Clear Creek Bu**	**85.52**	**25**	P	**P**	**04 03 13.3**	**+0.2**	
CCB				IAmb	IAmb	04 03 19.3		
	comp=Z,10nm,1.0s							
HDA	**Harding Lake**	**85.81**	**25**	IAmb	IAmb	04 05 52.1		
	comp=Z,22nm,1.4s							
ILAR	**Eielson Array**	**85.93**	**24**	P	**P**	**04 03 13.9**	**-1.2**	
	comp=Z,2.6nm,0.8s,baz=259,slow=4.7,SNR=24							
ILAR				LR	LR	04 35 16.0		
	comp=Z,112nm,21.4s,baz=227,slow=31							
	comp=Z,2.6nm,0.8s							
ILAR	**Eielson Array**	**85.93**	**24**	P	**P**	**04 03 14.1**	**-1.1**	
ILAR	**Eielson Array**	**85.93**	**24**	P	**P**	**04 03 14.1**	**-1.1**	
J25K	**Salcha River,**	**86.52**	**25**	IAmb	IAmb	04 03 19.9		
	comp=Z,30nm,1.8s							
RIDG	**Independent Ri**	**86.54**	**26**	IAmb	IAmb	04 03 25.9		
	comp=Z,17nm,1.2s							
QSPA	**South Pole Qui**	**87.28**	**180**	P	**P**	**04 03 21.4**	**-0.5**	
	comp=Z,17nm,0.9s,baz=343,slow=2.3,SNR=12							
QSPA				LR	LR	04 42 40.8		
	comp=Z,236nm,19.5s,baz=6.0,slow=36							
	comp=Z,17nm,0.9s							
QSPA	**South Pole Qui**	**87.28**	**180**		**P**	**04 03 22.4**	**+0.4**	
QSPA				IAmb	IAmb	04 03 25.8		
	comp=Z,16nm,0.9s							
QSPA	**South Pole Qui**	**87.28**	**180**	P	**P**	**04 03 22.0**	**0.0**	
QSPA				ScP		04 03 27.7		
BMAR	**Burnt Mountain**	**87.49**	**22**		**P**	**04 03 23.9**	**+1.1**	
L27K	**Beaver Creek,**	**87.74**	**27**	IAmb	IAmb	04 03 31.3		
	comp=Z,22nm,1.4s							
BCAR	**Beaver Creek A**	**87.76**	**27**	P	**P**	**04 03 25.2**	**+1.1**	
DAWY	**Dawson**	**88.97**	**26**	IAmb	IAmb	04 03 37.1		
	comp=Z,20nm,1.1s							
L29M	**L29M**	**89.41**	**27**	IAmb	IAmb	04 03 38.7		
	comp=Z,21nm,1.4s							
I29M	**Ogilvie Camp,**	**89.61**	**25**	IAmb	IAmb	04 03 39.8		
	comp=Z,30nm,1.6s							
K29M	**Barlow Dome**	**89.77**	**26**	IAmb	IAmb	04 03 41.1		
	comp=Z,20nm,1.3s							
J30M	**Hart River**	**90.36**	**25**	IAmb	IAmb	04 03 43.9		
	comp=Z,19nm,1.4s							
INK	**Inuvik**	**91.75**	**22**	LR	LR	04 43 51.8		
	comp=Z,118nm,19.3s,baz=296,slow=35							
DLBC	**Dease Lake**	**93.09**	**32**	LR	LR	04 43 11.3		
	comp=Z,120nm,19.3s,baz=279,slow=34							
BBB	**Bella Bella**	**94.25**	**38**	LR	LR	04 40 57.1		
	comp=Z,155nm,19.4s,baz=248,slow=32							
A36M	**Sachs Harbour**	**94.50**	**18**	IAmb	IAmb	04 06 21.7		
	comp=Z,5.1nm,0.7s							
SOC	**Sochi**	**98.11**	**313**	*e*P	Pdif	04 04 14.4	+2.1	
SOC				*e*S	**SKSac**	**04 14 45.7**	**-2.2**	
SOC				*e*SS	**SS**	**04 22 14.5**	**-5.8**	
SOC				pmax	pmax			
	comp=Z,36nm,0.9s							
YBH	**Yreka Blue Hor**	**98.42**	**48**	LR	LR	04 43 15.3		
	comp=Z,8.2nm,19.3s,baz=288,slow=32							
NVL	**N'lazarevskaya**	**98.83**	**196**	*e*P	**P**	**04 04 13.9**	**-1.0**	
NVL				*e*		04 08 15.5		
NVL				*e*PPP	PPP	04 10 21.3		
NVL				*e*S	**SKSac**	**04 14 46.5**	**-4.0**	
NVL				*e*SS	**SS**	**04 22 26.6**	**-2.0**	
NVL				*e*SSS	SSS	04 26 14.8		
NVL				pmax	pmax			
	comp=Z,50nm,2.3s							
SPITS	**Spitsbergen Ar**	**98.88**	**350**	LR	LR	04 47 35.6		
	comp=Z,196nm,21.8s,baz=45,slow=35							
YKA	**Yellowknife Ar**	**100.17**	**27**	P	**Pdif**	**04 04 21.7**	**+0.6**	
	comp=Z,0.3nm,0.9s,baz=291,slow=5.0,SNR=4.0							
TORD	**Torodi Ar. Bea**	**135.93**	**286**	PKP	**PKPdf**	**04 09 56.5**	**-0.8**	
	comp=Z,1.1nm,0.9s,baz=264,slow=0.6,SNR=4.2							
PB11	**IPOC Station P**	**144.58**	**130**		**PKPab**	**04 10 11.6**	**0.0**	
CPUP	**Villa Florida**	**147.42**	**153**	PKPbc	**PKPab**	**04 10 21.1**	**-0.8**	
	comp=Z,8.5nm,0.9s,baz=216,slow=5.1,SNR=15							
CPUP	**Villa Florida**	**147.42**	**153**		**PKPbc**	**04 10 20.5**	**+0.5**	
LPAZ	**La Paz**	**147.74**	**127**	PKPbc	**PKPbc**	**04 10 22.8**	**+0.9**	
	comp=Z,12nm,0.8s,baz=169,slow=1.0,SNR=20							
LPAZ	**La Paz**	**147.74**	**127**		**PKPdf**	**04 10 19.4**	**+0.4**	
SIV	**San Ignacio**	**153.29**	**135**	PKPbc	**PKPbc**	**04 10 34.0**	**-0.5**	
	comp=Z,1.3nm,0.8s,baz=132,slow=2.7,SNR=4.8							

MEX 07 04:05:27.5±0.8, 16°.83N×95°.64W, h8km±15km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matamoros**	**0.77**	**70**	*i* P	Pg	04 05 38.0	-4.3
CMIG				*i* S	Sg	04 05 47.4	-4.9
NEUV	**Arroyo Zacate**	**0.90**	**350**	*e*P	Pg	04 05 42.4	-2.4
NEUV				*e*S	Sg	04 05 53.9	-2.5
HUIG	**Huatulco**	**1.14**	**203**	*e*P	Pg	04 05 45.8	-3.7
HUIG				*e*S	Sg	04 06 01.3	-3.1
UXUV	**UXUV**	**1.51**	**71**	*e*P	Pn	04 05 51.4	-3.4
UXUV				*e*S	Sn	04 06 11.0	-3.7
PEIG	**Puerto Escondi**	**1.67**	**241**	*e*P	Pn	04 05 55.5	-1.5
PEIG				*e*S	Sn	04 06 16.8	-1.7
YOIG	**Yosondua**	**1.83**	**271**	*e*P	Pn	04 05 58.8	-0.7
YOIG				*e*S	Sn	04 06 21.7	-1.2
TOIG	**Toxpalan**	**1.86**	**313**	*e*P	Pn	04 05 57.1	-2.6
TOIG				*e*S	Sn	04 06 22.3	-1.1
TXIG	**Tlaxiaco**	**2.08**	**282**	*e*P	Pn	04 06 03.1	+0.1
TXIG				*e*S	Sn	04 06 29.6	+0.4
HLIG	**Huajuapan de L**	**2.30**	**296**	*e*P	Pn	04 06 06.2	+0.4
HLIG				*e*S	Sn	04 06 34.0	-0.5

HEL 07 04:05:44.1±0.4, 67°.61N×34°.05E, h0km, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**1.70**	**277**	PG	Pn	04 06 14.6	-0.4
VRF				SG	Sn	04 06 33.9	-3.6
VRF				smax	smax	04 06 34.9	
	comp=Z,2.9nm,0.2s						
OLKF	**Oulanka, Finla**	**2.24**	**237**	PG	Pb	04 06 24.1	-1.2
OLKF				smax	smax	04 06 50.4	
	comp=Z,1.4nm,0.2s						
OLKF				SG	Sb	04 06 52.7	-0.9
KU6	**Riekki**	**2.29**	**228**	PG	Pb	04 06 24.8	-1.4
	baz=46						
KU6				smax	smax	04 06 51.7	
	comp=Z,1.2nm,0.2s						
KU6				SG	Sb	04 06 54.5	-0.5
RAJF	**Raja-Jooseppi**	**2.33**	**295**	PG	Pn	04 06 24.4	+0.9
RAJF				SN	Sn	04 06 51.9	-1.0
MSF	**Maaselka**	**2.62**	**232**	PG	Pb	04 06 31.2	-0.6
MSF				SG	Sb	04 07 04.5	+0.1
RANF	**Ranua**	**3.29**	**244**	PG	Pb	04 06 42.3	-0.9
RANF				SG	Sb	04 07 22.9	-0.8
RNF	**Rovaniemi**	**3.30**	**256**	PN	Pn	04 06 36.6	-0.3
RNF				SN	Sn	04 07 15.7	-1.0
KEV	**Kevo**	**3.36**	**313**	PN	Pn	04 06 37.6	-0.1
KEV				SN	Sn	04 07 16.3	-1.9
ARA0	**ARCESS Array S**	**3.69**	**306**	PN	Pn	04 06 41.1	-1.1
ARA0				SG	Sb	04 07 36.0	+0.8
KLF	**Kolari**	**3.91**	**269**	PG	Pb	04 06 54.4	+0.6
TOF	**Tornio**	**4.13**	**253**	PG	Pb	04 06 58.5	+0.9
TOF				SG	Sg	04 07 52.6	-4.2
ERTU	**Ertsjaerv**	**4.76**	**263**	SN	Sn	04 07 49.8	-2.9

KOLA 07 04:06:23.3, 67°.67N×33°.76E, h0km, ML1.4, Error ellipse: s-maj=1.9km s-min=1.4km az=140.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.17**	**233**	P	Pg	04 06 26.3	-0.1
APA				S	Sg	04 06 28.7	+0.1
APA0	**Apatity Array**	**0.30**	**258**	P	Pg	04 06 28.6	-0.4
APA0				S	Sg	04 06 32.8	0.0

PRU 07 04:08:56.5, 51°.42N×16°.15E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.83**	**184**	*e*PG	Pg	04 09 11.8	-0.7
CHVC				*e*SG	Sg	04 09 23.5	+0.2
CHVC	**Chvalec**	**0.83**	**184**	*e*PKIKP	Pg	04 09 11.8	-0.7
OSTC	**Ostas**	**0.87**	**177**	*e*PG	Pg	04 09 12.9	-0.2
OSTC				*e*SG	Sg	04 09 24.7	+0.4
	comp=Z,6.9nm,0.3s						
OSTC	**Ostas**	**0.87**	**177**	*e*PKIKP	Pg	04 09 12.9	-0.2
UPC	**Upice**	**0.92**	**186**	*e*PKIKP	Pg	04 09 13.6	-0.5
UPC	**Upice**	**0.92**	**186**	*e*PG	Pg	04 09 13.6	-0.5
DPC	**Dobruska-Polom**	**1.08**	**174**	*e*PKIKP	Pg	04 09 15.2	-1.9
DPC	**Dobruska-Polom**	**1.08**	**174**	*e*PG	Pg	04 09 15.2	-1.9
DPC				*e*SG	Sg	04 09 30.6	-0.4
PVCC	**Panska Ves**	**1.34**	**229**	*e*SG	Sg	04 09 39.7	+0.2
	comp=Z,9.3nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**249**	Pg	Pn	04 09 23.5	+1.1
BRG				Sg		04 09 43.4	
BRG				Amp		04 09 44.5	
	comp=Z,4.8nm,0.4s						
STEB	**Steborice**	**1.81**	**145**	*e*SG	Sb	04 09 53.2	-0.5
MORC	**Moravsky Berou**	**1.87**	**151**	*e*PN	Pn	04 09 27.1	-2.7
MORC				*e*SG	Sn	04 09 53.2	-0.9
HSKC	**Hora Svate Kat**	**1.90**	**246**	*e*SG	Sn	04 09 54.8	0.0
VRAC	**Vranov**	**2.13**	**172**	*e*SG	Sb	04 10 02.2	-0.8
TREC	**Trest**	**2.17**	**192**	*e*SG	Sb	04 10 05.1	+1.0
KRUC	**Moravsky**	**2.37**	**176**	*e*SG	Sb	04 10 10.7	+1.0
NKC	**Novy Kostel**	**2.63**	**245**	*e*SG	Sg	04 10 20.9	-0.1
CKRC	**Cesky Krumlov**	**2.86**	**205**	*e*SG	Sg	04 10 26.2	-2.1

*IDC **07** 04:08:58.8±1.1, 2°.63S×138°.39E, h0km, mb3.7/4, mbtmp3.7/6, ML3.7/2, Error ellipse: s-maj=25.6km s-min=17.0km az=0.0*

ISC 07 04:09:02.9±1.0, 2°.7S±0°.1×138°.7E±0°.1, h32km, n6, σ0s77/6, mb3.8/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.05**	**84**	Pn	**Pb**	**04 09 39.4**	**-0.1**
	6.2nm,0.3s,baz=246,slow=9.9,SNR=13						
JAY				Lg	Lg	04 10 11.9	
	9.9nm,0.3s,baz=315,slow=20,SNR=6.4						
	31nm,0.5s						
WRA	**Warramunga Arr**	**17.63**	**194**	P	**Pn**	**04 13 05.6**	**-0.7**
	0.4nm,0.3s,baz=13,slow=12,SNR=15						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**21.32**	**192**	P	**P**	**04 13 48.1**	**+0.8**
	1.7nm,0.7s,baz=18,slow=11,SNR=14						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**69.77**	**322**	P	**P**	**04 20 09.5**	**-0.7**
	0.6nm,0.5s,baz=114,slow=7.9,SNR=12						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**79.30**	**325**	P	**P**	**04 21 05.7**	**+0.4**
	0.7nm,0.6s,baz=116,slow=5.4,SNR=4.5						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**85.86**	**24**	P	**P**	**04 21 39.6**	**+0.4**
	0.4nm,0.6s,baz=263,slow=4.5,SNR=9.6						
	0.4nm,0.6s						

IDC 07 04:32:54.2±2.8, 14°.77S×174°.36W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=175.2km s-min=24.5km az=148.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.09**	**256**	P	P	04 41 43.9	+0.1
	0.7nm,0.5s,baz=91,slow=7.5,SNR=23						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**49.43**	**251**	P	P	04 41 46.1	-0.3
	2.6nm,0.6s,baz=83,slow=7.8,SNR=30						
	2.6nm,0.6s						
NVAR	**Mina Array Bea**	**74.49**	**43**	P	P	04 44 35.5	+0.6
	0.4nm,0.5s,baz=238,slow=8.6,SNR=4.6						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**82.01**	**12**	P	P	04 45 16.1	+0.3
	0.3nm,0.9s,baz=204,slow=4.0,SNR=2.0						
	0.3nm,0.9s						
PDAR	**Pinedale Array**	**82.42**	**42**	P	P	04 45 17.9	-0.8
	0.4nm,0.8s,baz=225,slow=4.0,SNR=3.9						
	0.4nm,0.8s						

IDC 07 04:33:44.9±1.7, 2°.55S×138°.36E, h0km, mb3.0/2, mbtmp3.1/4, ML3.1/2, Error ellipse: s-maj=32.3km s-min=19.0km az=173.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.35**	**89**	Pn	Pn	04 34 25.8	+1.0
	1.9nm,0.3s,baz=260,slow=11,SNR=6.4						
JAY				Lg	Lg	04 34 59.0	
	1.6nm,0.3s,baz=348,slow=16,SNR=2.7						
	9.2nm,0.5s						
WRA	**Warramunga Arr**	**17.73**	**192**	P	Pn	04 37 53.1	-0.3
	0.1nm,0.3s,baz=17,slow=12,SNR=4.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**21.43**	**191**	P	P	04 38 34.5	-0.3
	0.2nm,0.4s,baz=23,slow=11,SNR=5.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**69.44**	**322**	P	P	04 44 55.1	0.0
	0.2nm,0.6s,baz=116,slow=8.2,SNR=2.6						
	0.2nm,0.6s						

*CATAC **07** 04:34:44.5±0.8, 14°.N±4°×9°.3W±°, h17km±4km, M3.3/7, MLv3.3/7, Error ellipse: s-maj=8.8km s-min=4.7km az=26.3, confirmed*

*MEX **07** 04:34:46.2±0.8, 14°.51N×92°.77W, h71km±21km, MD3.9*

*GCG **07** 04:34:47.3±1.6, 14°.53N×92°.63W, h56km±20km, MD4.0, ML3.8, Presumed earthquake*

ISC 07 04:34:42.7±1.7, 14°.34N±0°.05×92°.80W±0°.04, h25km±14km, n34, σ1s71/58, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.77**	**42**	*e*P	**Pn**	**04 34 58.8**	**+0.9**
THIG				*e*S	**Sn**	**04 35 08.8**	**+0.2**
THIG		**0.77**	**42**	*i* P	**Pn**	**04 34 58.4**	**+0.5**
THIG				*i* S	**Sn**	**04 35 08.8**	**+0.2**
SMCA	**Catarina**	**0.87**	**53**	*i* P	**Pn**	**04 35 00.5**	**+1.1**
SMCA				*i* S	**Sb**	**04 35 10.7**	**+0.3**
PATR	**El Naranjo**	**0.95**	**35**	*e*P	**Pb**	**04 35 00.8**	**+0.2**
PATR				*e*S	**Sb**	**04 35 12.1**	**-0.8**
CHUJ	**Union Juarez**	**1.00**	**41**	*e*P	**Pb**	**04 35 01.6**	**0.0**
CHUJ				*e*S	**Sb**	**04 35 14.3**	**-0.2**
PAVE	**Pavencul**	**1.04**	**35**	*e*P	**Pn**	**04 35 02.4**	**+0.4**
PAVE				*e*S	**Sb**	**04 35 14.7**	**-0.9**
RTAL	**Retalhuleu**	**1.08**	**80**	*e*P	**Pb**	**04 35 04.2**	**+1.5**
RTAL				*e*S	**Sn**	**04 35 18.2**	**+1.7**
RTAL	**Retalhuleu**	**1.08**	**80**	P	**Pb**	**04 35 04.3**	**+1.5**
RTAL				S	**Sn**	**04 35 17.4**	**+0.9**
STG2	**El Palmar, Qui**	**1.38**	**86**	*i* P	**Pn**	**04 35 05.2**	**-1.3**
STG5	**El Palmar, Qui**	**1.40**	**87**	*i* P	**Pn**	**04 35 05.6**	**-1.2**
STG5				*i* S	**Sn**	**04 35 20.2**	**-4.4**
STG8	**El Palmar, Qui**	**1.40**	**85**	*e*P	**Pn**	**04 35 05.7**	**-1.2**
STG8				*i* S	**Sn**	**04 35 20.8**	**-4.0**
PCIG		**1.42**	**343**	*e*P	**Pn**	**04 35 07.3**	**+0.3**
PCIG				*e*S	**Sn**	**04 35 22.8**	**-2.1**
SOKI	**Kika Raxquin**	**1.43**	**70**	*i* P	**Pb**	**04 35 09.8**	**+0.8**
HUEH	**Huehuetenango**	**1.59**	**52**	*e*P	**Pb**	**04 35 11.4**	**0.0**
HUEH				*e*S	**Sb**	**04 35 30.9**	**-0.4**
HUEH	**Huehuetenango**	**1.59**	**52**	P	**Pb**	**04 35 11.5**	**0.0**
HUEH				S	**Sb**	**04 35 31.2**	**-0.1**
ESSG	**Sabana Grande**	**1.91**	**88**	*e*P	**Pb**	**04 35 15.7**	**-1.1**
CCIG	**Comitan**	**2.04**	**18**	*e*P	**Pb**	**04 35 18.6**	**-0.6**
CCIG				*e*S	**Sn**	**04 35 40.6**	**+0.3**
CCIG	**Comitan**	**2.04**	**18**	P	**Pb**	**04 35 18.5**	**-0.7**
CCIG				S	**Sb**	**04 35 43.6**	**-0.6**
CCIG	**Comitan**	**2.04**	**18**	*i* P	**Pb**	**04 35 18.4**	**-0.7**
CARR	**Arriaga**	**2.19**	**331**	*e*P	**Pn**	**04 35 17.8**	**+0.4**
CARR				*e*S	**Sn**	**04 35 41.7**	**-2.0**
FG16	**Alotenango, Sa**	**2.21**	**91**	*i* P	Pn	04 35 15.7	-2.3
FG16				IAML		04 35 42.0	
	comp=E,1μm,0.3s						
APG	**El Apazote**	**2.35**	**73**	*e*P	**Pb**	**04 35 22.8**	**-1.7**
TGIG		**2.45**	**353**	*e*P	**Pn**	**04 35 22.9**	**+1.7**
TGIG				*e*S	**Sn**	**04 35 49.9**	**-0.5**
TGIG		**2.45**	**353**	*i* P	**Pn**	**04 35 22.5**	**+1.3**
TGIG				*i* S	**Sn**	**04 35 50.1**	**-0.2**
FAME	**Alcaldia de Sa**	**2.74**	**100**	P	**Pb**	**04 35 30.0**	**-1.1**
FAME				S	**Sn**	**04 35 56.7**	**-0.8**
NUBE	**Las Nubes**	**2.96**	**98**	P	**Pn**	**04 35 27.9**	**-0.3**
NUBE				S	**Sn**	**04 36 02.7**	**-0.3**
UXUV	**UXUV**	**3.24**	**336**	*e*P	**Pn**	**04 35 34.8**	**+2.8**
UXUV				*e*S	**Sn**	**04 36 10.8**	**+1.1**
JAYA	**Jayaque - finc**	**3.32**	**101**	P	**Pn**	**04 35 36.9**	**+3.7**
JAYA				S	**Sn**	**04 36 19.4**	**+1.5**
JAYA	**Jayaque - finc**	**3.32**	**101**	*e*P	**Pn**	**04 35 36.3**	**+3.1**
MTO3	**Montecristo**	**3.33**	**89**	P	**Pb**	**04 35 38.8**	**-2.5**
MTO3				S	**Sn**	**04 36 16.0**	**+3.7**
CMIG	**Matias Romero**	**3.40**	**324**	*e*P	**Pn**	**04 35 35.7**	**+1.5**
CMIG				*e*S	**Sn**	**04 36 12.1**	**-1.6**
NEUV	**Arroyo Zacate**	**4.43**	**320**	*e*P	**Pn**	**04 35 50.8**	**+2.5**
NEUV				*e*S	**Sn**	**04 36 38.5**	**-0.7**
TOIG	**Toxpalan**	**5.55**	**313**	*e*S	**Sn**	**04 37 03.0**	**-3.9**
TXIG	**Tlaxiaco**	**5.60**	**302**	*e*S	**Sn**	**04 37 09.3**	**+0.9**

MEX 07 04:43:49.7±0.5, 19°.44N×102°.15W, h10km±3km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.07**	**100**	*i* S	Sg	04 43 52.4	-1.6
INCO	**Volcan de Coli**	**1.37**	**274**	*e*P	Pn	04 44 11.4	-3.9
INCO				*e*S	Sb	04 44 30.1	-3.4
MMIG	**Aquila**	**1.61**	**225**	*e*P	Pn	04 44 14.9	-3.3
MMIG				*e*S	Sn	04 44 35.0	-3.9
CEGR	**Campo Tres**	**1.61**	**269**	*e*P	Pn	04 44 15.4	-3.0
CEGR				*e*S	Sn	04 44 35.3	-4.0
CDAR	**Ciudad de Arme**	**1.82**	**255**	*e*P	Pn	04 44 18.5	-2.7
CDAR				*e*S	Sn	04 44 40.9	-3.5
ARIG	**Puente Sto Nin**	**2.06**	**124**	*e*P	Pn	04 44 23.6	-0.8
ARIG				*e*S	Sn	04 44 51.4	+1.2

*IDC **07** 04:45:30.2±0.8, 38°.17N×22°.33E, h0km, mb3.7/16, mbtmp3.7/20,

AXAR	Agios Charalam	0.74	24	P		Pg	04 45 44.7	-1.2
VIL2	Platees	0.79	81	P		Pg	04 45 47.0	+0.1
PVO	Paravola	0.79	312	P		Pg	04 45 46.0	-1.0
LKR	Lokris	0.80	45	P		Pg	04 45 45.8	-1.3
ATAL	Atalanti	0.84	44	P		Pg	04 45 46.5	-1.4
EVR	Evrytania	0.90	336	P		Pg	04 45 48.0	-1.0
CLEM	Kyllini,Ilia,G	0.93	258	P		Pg	04 45 47.9	-1.7
MAKR	Makrakomi, Fth	0.93	353	P		Pg	04 45 48.7	-0.8
AGG	Agios Georgios	0.93	2	P		Pg	04 45 47.8	-1.8
ITM	Ithomi	0.95	197			Pg	04 45 48.8	-1.2
ITM						Sg	04 46 02.6	+0.3
ITM	Ithomi	0.95	197	P		Pg	04 45 48.2	-1.8
MET2	Kameni Chora,	0.96	120	P		Pg	04 45 49.4	-0.8
MAGU	Magoula	0.97	90	P		Pg	04 45 50.5	+0.1
MET5	Makryloggos,Me	0.97	118	P		Pg	04 45 50.2	-0.2
STFN	Stefani	1.00	85	P		Pg	04 45 50.4	-0.5
ATH	Athens Observa	1.14	96	P		Pg	04 45 53.0	-0.5
AMPL	Ampelaki	1.18	315	P		Pb	04 45 53.3	-1.0
ATHU	Athens Univers	1.19	96	P		Pb	04 45 52.5	-2.1
VLY	Voula,Athens	1.22	101	P		Pb	04 45 54.3	-0.7
PTL	Penteli	1.25	91	P		Pn	04 45 54.5	-0.9
PYL	PYLOS	1.27	200	P		Pn	04 45 53.8	-1.8
ORTH	Orthonies,Zaky	1.27	260	P		Pn	04 45 55.3	-0.5
DION	Dionisos Attik	1.30	90	P		Pn	04 45 55.5	-0.7
VLS	Valsamata	1.34	274	P		Pn	04 45 55.1	-1.5
FSK	Fiskardo	1.40	286	P		Pn	04 45 56.7	-0.8
NEO	Neokhori	1.42	31	P		Pn	04 45 56.8	-1.0
VLI	Veliai	1.47	159	P		Pn	04 45 58.1	-0.3
KEK	Kerkira	2.52	311			Pb	04 46 15.5	-1.7
OHR	Ohrid	3.23	340	*i* Pn		Pg	04 46 32.6	-0.9
VAY	Valandovo	3.23	4	*i* Pn		Pn	04 46 23.2	+0.5
IDI	Anoyia	3.50	142	Pn		Pn	04 46 26.8	+0.5
	13nm,0.6s,baz=322,slow=3.0,SNR=9.7							
IDI					Sn	Sn	04 47 09.1	+1.2
	10nm,0.3s,baz=287,slow=19,SNR=4.0							
IDI	Anoyia	3.50	142			Pn	04 46 26.1	-0.2
SKO	Skopje	3.93	351	*i* Pn		Pb	04 46 42.2	+1.0
RDO	Rodhopi	3.95	38			Pn	04 46 31.7	-0.9
ALN	Alexandroupoli	4.04	45			Pn	04 46 32.8	-1.0
TIP	Timpagrande	4.46	286			Pn	04 46 41.1	+1.6
PDG	Podgorica	4.91	333			Pn	04 46 46.7	+0.9
MANT	Manisa	4.96	83			Pn	04 46 47.6	+1.0
ARG	Arkhangelos	5.03	110			Pn	04 46 51.9	+4.5
CUC	Castrocucco	5.38	293			Pn	04 46 55.1	+2.9
ACER	Acerenza	5.60	301			Pn	04 46 57.2	+2.0
VAE	Valguarnera	6.26	267	Sn		Sn	04 48 19.9	+3.9
	baz=123,slow=17							
RAFF	Raffo Rosso	6.34	265			Pn	04 47 07.9	+2.5
PAOL	Paolisi	6.64	299			Pn	04 47 12.2	+2.6
INTR	Introdacqua	7.52	304			Pn	04 47 24.4	+2.7
MLR	Muntele Rosu	7.88	19	Pn		Pn	04 47 27.0	+0.4
	0.8nm,0.3s,baz=140,slow=20,SNR=2.0							
	2.5nm,0.4s							
CAMP	Campotosto	8.10	306			Pn	04 47 31.6	+1.9
NRCA	Norcia	8.44	307			Pn	04 47 35.7	+1.5
FDMO	Fiordimonte	8.56	308			Pn	04 47 37.0	+1.1
BR131	Keskin Array S	9.01	76			Pn	04 47 44.4	+2.4
BRTR	Keskin Array B	9.01	76	Pn		Pn	04 47 42.5	+0.4
	0.3nm,0.3s,baz=262,slow=12,SNR=4.9							
	1.6nm,0.6s							
CTI	Castel Tesino	11.20	319			Pn	04 48 18.6	+6.5
GERES	GERESS Array B	12.41	333	Pn		Pn	04 48 29.9	+1.3
	baz=156,slow=13,SNR=4.1							
	0.3nm,0.7s							
DAVOX	Davos/Dischmat	12.61	317	Pn		Pn	04 48 34.5	+3.1
	0.1nm,0.3s,baz=139,slow=20,SNR=1.3							
SENIN	Lac Senin/Sane	13.82	317			P	04 48 56.0	-0.5
MNK	Minsk	16.86	11	*i* P		P	04 49 29.7	-0.1
	comp=E,22nm,0.9s							
MNK				*i* P		P	04 49 29.7	-0.1
	comp=N,11nm,0.7s							
MNK				*i* P		P	04 49 29.7	-0.1
	comp=Z,6.0nm,0.7s,baz=195							
MNK				*i* PP		PnPn	04 49 39.0	+1.8
MNK				*i* PPP		PPP	04 49 46.8	
MNK				*i* S		Sn	04 52 36.0	+1.0
MNK				*i* SS		SnSn	04 52 49.0	+0.8
MNK				*i* SSS		SSS	04 53 03.2	
MNK				*i* LQ		LQ	04 54 19.7	
MNK				*i* LR		LR	04 55 39.0	
MNK				*i* LRM		MLR	04 56 11.4	
	comp=E,1μm,19.9s							
MNK				*i* LRM		MLR	04 56 18.0	
	comp=N,1μm,22.2s							
MNK				*i* LRM		MLR	04 57 15.2	
	comp=Z,198nm,16.0s							
ESBB	Sonseca Array	20.47	283	P		P	04 50 09.8	0.0
ESDC	Sonseca Array	20.47	283	P		P	04 50 10.5	+0.7
	comp=Z,1.5nm,0.8s,baz=77,slow=10,SNR=12							
	comp=Z,1.5nm,0.8s							
ESDC	Sonseca Array	20.47	283	P		P	04 50 09.3	-0.5
PAB	San Pablo	20.78	282	P		P	04 50 14.3	+1.1
PAB				IAmb		IAmb	04 50 21.3	
	comp=Z,15nm,1.4s							
MD01	Midelt array s	22.59	265	P		P	04 50 33.9	+1.2
HFS	Hagfors	22.73	349	P		P	04 50 31.6	-2.1
	comp=Z,0.7nm,0.5s,baz=145,slow=16,SNR=4.4							
	comp=Z,0.7nm,0.5s							
FINES	FINESS Array B	23.50	5	P		P	04 50 39.5	-2.1
	comp=Z,3.1nm,1.0s,baz=200,slow=16,SNR=1.5							
	comp=Z,3.1nm,1.0s							
NOA	NORSAR Array B	24.00	347	P		P	04 50 44.8	-1.8
	comp=Z,1.3nm,0.9s,baz=146,slow=9.4,SNR=8.4							
	comp=Z,1.3nm,0.9s							
EKA	Eskdalemuir Ar	24.31	323	P		P	04 50 48.6	-0.9
	comp=Z,0.7nm,0.5s,baz=123,slow=9.5,SNR=3.9							
	comp=Z,0.7nm,0.5s							
TORD	Torodi Ar. Bea	30.86	222	P		P	04 51 48.8	+0.4
	comp=Z,0.7nm,0.7s,baz=24,slow=6.0,SNR=7.6							
	comp=Z,0.7nm,0.7s							
BVAR	Borovoye Array	36.11	50	P		P	04 52 33.2	-0.7
	comp=Z,0.4nm,0.5s,baz=298,slow=3.2,SNR=5.2							
	comp=Z,0.4nm,0.5s							
DBIC	Dimbokro	39.79	225	P		P	04 53 05.5	+0.2
	comp=Z,2.2nm,1.0s,baz=98,slow=7.1,SNR=1.7							
	comp=Z,2.2nm,1.0s							
KURBB	Kurchatov Arra	41.16	54	P		P	04 53 15.8	-0.4
	comp=Z,1.8nm,0.6s,baz=278,slow=8.7,SNR=15							
	comp=Z,1.8nm,0.6s							
MK31	Makanchi Array	44.16	59	P		P	04 53 40.3	-0.5
MKAR	Makanchi Array	44.16	59	P		P	04 53 39.6	-1.2
	comp=Z,5.3nm,0.5s,baz=273,slow=7.5,SNR=109							
	comp=Z,5.3nm,0.5s							
MKAR	Makanchi Array	44.16	59			P	04 53 40.1	-0.6
ZAA0	Zalesovo Array	44.72	48			P	04 53 44.0	-0.9
ZAA0				IAmb		IAmb	04 53 51.0	
	comp=Z,4.1nm,0.7s							
ZALV	Zalesovo Beam	44.72	48	P		P	04 53 43.8	-1.2
	comp=Z,2.0nm,0.5s,baz=275,slow=8.1,SNR=11							
	comp=Z,2.0nm,0.5s							
ZALV	Zalesovo Beam	44.72	48			P	04 53 44.0	-1.0
SONM	Songino Array	59.44	51	P		P	04 55 34.1	-0.7
	comp=Z,0.4nm,0.5s,baz=299,slow=1.5,SNR=3.9							
	comp=Z,0.4nm,0.5s							
SCHQ	Schefferville	59.46	318	P		P	04 55 34.3	-0.4
	comp=Z,1.1nm,0.7s,baz=70,slow=10,SNR=4.4							
	comp=Z,1.1nm,0.7s							
A36M	Sachs Harbour	67.87	350	P		P	04 56 30.4	+0.5
F31M	Tsiigehtchic	73.22	351	P		P	04 57 02.5	-0.1
F31M				IAmb		IAmb	04 57 09.0	
	comp=Z,3.8nm,0.8s							
F28M	Old Crow	73.75	353	P		P	04 57 06.1	+0.3
F28M				IAmb		IAmb	04 57 11.4	
	comp=Z,5.1nm,1.5s							
YKA	Yellowknife Ar	73.94	341	P		P	04 57 06.2	-0.7
	comp=Z,0.1nm,0.5s,baz=30,slow=5.5,SNR=8.4							
	comp=Z,0.1nm,0.5s							
ULM	Lac du Bonnet	76.58	324	P		P	04 57 23.2	+0.8
	comp=Z,0.9nm,0.5s,baz=7.9,slow=6.6,SNR=3.1							
	comp=Z,0.9nm,0.5s							
PDAR	Pinedale Array	88.39	327	P		P	04 58 23.6	-0.9
	comp=Z,0.3nm,0.9s,baz=56,slow=3.8,SNR=7.5							
	comp=Z,0.3nm,0.9s							
ASAR	Alice Springs	120.78	97	PKP		PKPdf	05 04 24.4	-0.2
	comp=Z,0.5nm,0.7s,baz=335,slow=2.5,SNR=1.7							

*IDC **07** 04:45:36.3±0.8, 38.19N×22.26E, h0km, mb4.1/13, mbtmp4.0/16, ML3.1/2, Error ellipse: s-maj=17.8km s-min=16.9km az=162.0*

*UPSL **07** 04:45:37.7, 38.06N×22.22E, h12km, Mw3.9, Moment Tensor Solution. s5 Moment tensor: Mrr-9.27; Mθθ5.05; Mφφ4.22; Mrθ-1.10; Mθφ-4.42; Mφr0.01; Fault plane solution: NP1:ϕs128.00000°, δ48.00000°, λ-96.00000°. NP2:ϕs317.00000°, δ43.00000°, λ-84.00000°.*

*ATH **07** 04:45:37.7, 38.06N×22.22E, h12km±1km, ML3.9/13, Manual Solution by K.Orfanogiannaki First location: 2020/02/07 05:08:34, This location: 2020/02/07 05:19:25 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*NAO **07** 04:45:53.8, 40.14N×20.84E, h10km, MB3.9*

ISC 07 04:45:37.7±0.8, 38.05N±0.03×22.26E±0.03, h12km±5km, n75, σ0 93/79, mb4.1/13, 7C-8D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KLV	Kalavryta, Ach	0.08	263	P			Pg	04 45 40.0	-0.5
KLV				S			Sg	04 45 42.5	-0.1
KLV	Kalavryta, Ach	0.08	263	S			Pg	04 45 40.5	0.0
GUR	Goura	0.14	149	P			Pb	04 45 41.7	-0.5
GUR				S			Sg	04 45 44.4	+0.8
KALE	Kalithea	0.35	345	P			Pg	04 45 44.9	+0.1
DRO	Drossia	0.44	257	P			Pg	04 45 46.0	-0.4
EFP	Efpalio	0.46	324	P			Pg	04 45 46.6	-0.3
EFP				S			Sg	04 45 53.0	0.0
LTK	Loutraki	0.56	93	P			Pb	04 45 49.6	+0.1
LTK	Loutraki	0.56	93	S			Pb	04 45 49.9	+0.4
AXAR	Agios Charalam	0.78	24	P			Pb	04 45 53.1	-0.1
AXAR				S			Sg	04 46 03.1	+0.1
PVO	Paravola	0.80	315	P			Pb	04 45 53.7	+0.1
PVO				S			Sg	04 46 03.6	-0.2
VIL2	Platees	0.81	78	P			Pn	04 45 54.9	-0.1
LKR	Lokris	0.83	44	P			Pg	04 45 53.2	-0.7
ITM	Ithomi	0.91	197	P			Pb	04 45 55.8	+0.4
EVR	Evrytania	0.93	338	P			Pg	04 45 55.7	0.0
EVR				S			Sb	04 46 08.5	+0.4
MAKR	Makrakomi, Fth	0.96	354	P			Pg	04 45 56.1	-0.2
MAKR				S			Sg	04 46 08.5	+0.4
MAGU	Magoula	0.99	88	P			Pn	04 45 57.6	+0.3
STFN	Stefani	1.02	83	P			Pn	04 45 58.2	+0.3
VLY	Voula,Athens	1.23	99	P			Pg	04 46 01.4	0.0
VLS	Valsamata	1.32	276	P			Pn	04 46 01.4	-0.5
IDI	Anoyia	3.48	142	Pn			Pn	04 46 31.8	+0.2
	14nm,0.4s,baz=166,slow=15,SNR=2.6								
IDI						Sn	Sb	04 47 19.0	-2.5
	13nm,0.3s,baz=119,slow=22,SNR=3.8								
TIP	Timpagrande	4.45	286	⇓P			Pn	04 46 44.3	-0.7
PDG	Podgorica	4.94	333	⇓P			Pn	04 46 53.8	+2.2
MATE	Matera	5.02	303	⇑P			Pn	04 46 53.4	+0.6
BOVS	Bovan	5.59	356	⇑P			Pn	04 47 02.2	+1.6
ELND	Elena	5.60	28	⇓P			Pn	04 47 01.4	+0.7
PLVB	Pleven	5.62	18	⇓P			Pn	04 47 01.7	+0.7
MDVR	Moldovita	6.74	357	⇓P			Pn	04 47 17.4	+1.1
GZR	Gura Zlata	7.34	3	⇑P			Pn	04 47 26.3	+1.6
LOT	Lotru	7.47	8	⇓P			Pn	04 47 27.5	+1.0
ARR	Arges	7.52	13	⇑P			Pn	04 47 27.4	+0.2
BZS	Buzias	7.57	357	⇓P			Pn	04 47 30.2	+2.4
VOIR		7.67	15	⇑P			Pn	04 47 29.9	+0.7
MLR	Muntele Rosu	7.92	19	⇓P			Pn	04 47 33.5	+0.7
DOPR	Dopca	8.24	15	⇑P			Pn	04 47 37.8	+0.8
PLOR	Plostina	8.45	21	⇑P			Pn	04 47 40.3	+0.4
BRTR	Keskin Array B	9.03	76	Pn			Pn	04 47 49.5	+1.6
	0.6nm,0.3s,baz=263,slow=12,SNR=9.9								
	3.9nm,0.7s								
SOKA	Soboth	10.14	331	*e*Pn			Pn	04 48 02.6	-0.4
	0.6nm,0.2s								
OBKA	Obir	10.19	328	*e*Pn			Pn	04 48 03.0	-0.8
	1.1nm,0.4s								
ARSA	Arzberg	10.44	334	*e*Pn			Pn	04 48 06.0	-1.1
	0.2nm,0.2s								
CONA	Conrad Observa	10.92	337	*e*Pn			Pn	04 48 13.1	-0.6
	0.5nm,0.3s								
ABTA	Abfaltersbach	11.28	323	*e*Pn			Pn	04 48 17.9	-0.8
	1.0nm,0.6s								
MOA	Molln	11.40	332	*e*Pn			Pn	04 48 20.7	+0.4
	0.3nm,0.2s								
LESA	Schwarzleotal	11.71	326	*e*Pn			Pn	04 48 23.5	-1.0
	1.3nm,0.4s								
WTTA	Wattenberg	12.06	323	*e*Pn			Pn	04 48 28.3	-1.2
	3.5nm,0.5s								
SQTA	Sankt Quirin	12.24	322	*e*Pn			Pn	04 48 30.9	-0.9
	1.9nm,0.4s								
FETA	Feichten	12.34	320	*e*Pn			Pn	04 48 33.1	-0.2
	0.5nm,0.4s								
GERES	GERESS Array B	12.44	333	Pn			Pn	04 48 35.4	+0.8
	baz=109,slow=18,SNR=2.9								
	0.3nm,0.5s								
GERES	GERESS Array B	12.44	333				Pn	04 48 35.4	+0.8
CLL	Collm	14.78	337	*i* Px			Px	04 49 15.7	
HFS	Hagfors	22.76	349	P			P	04 50 37.7	-1.8
	2.7nm,0.6s,baz=160,slow=13,SNR=9.6								
	2.7nm,0.6s								
HFS	Hagfors	22.76	349	P			P	04 50 37.7	-1.8
FINES	FINESS Array B	23.54	5	P			P	04 50 45.7	-1.7
	3.8nm,1.0s,baz=178,slow=12,SNR=5.7								
	3.8nm,1.0s								
FINES	FINESS Array B	23.54	5	P			P	04 50 45.7	-1.7
NB2	NORSAR Subarra	24.03	347	P			P	04 50 44.9	-7.4
	comp=Z,7.3nm,1.2s,baz=160,slow=11								
NOA	NORSAR Array B	24.03	347	P			P	04 50 51.0	-1.3
	comp=Z,1.5nm,0.8s,baz=61,slow=12,SNR=9.1								
	comp=Z,1.5nm,0.8s								
NOA	NORSAR Array B	24.03	347	P			P	04 50 51.0	-1.3
EKA	Eskdalemuir Ar	24.33	323	P			P	04 50 54.4	-0.7
	comp=Z,3.6nm,0.5s,baz=125,slow=9.6,SNR=17								
	comp=Z,3.6nm,0.5s								
EKA	Eskdalemuir Ar	24.33	323	P			P	04 50 54.4	-0.7
TORD	Torodi Ar. Bea	30.82	222	P			P	04 51 55.5	+2.0
	comp=Z,1.8nm,0.8s,baz=24,slow=5.9,SNR=4.9								
	comp=Z,1.8nm,0.8s								
BVAR	Borovoye Array	36.15	50	P			P	04 52 40.5	+0.8
	comp=Z,1.2nm,0.7s,baz=256,slow=6.0,SNR=6.4								
	comp=Z,1.2nm,0.7s								
BVAR	Borovoye Array	36.15	50	P			P	04 52 40.5	+0.8
DBIC	Dimbokro	39.75	225	P			P	04 53 11.8	+1.5
	comp=Z,1.5nm,0.5s,baz=41,slow=6.9,SNR=3.8								
	comp=Z,1.5nm,0.5s								
KURBB	Kurchatov Arra	41.20	54	P			P	04 53 22.1	+0.1
	comp=Z,6.2nm,0.7s,baz=281,slow=8.6,SNR=33								
	comp=Z,6.2nm,0.7s								
KURK	Kurchatov	41.25	53	IAmb		IAmb		04 53 23.6	
	comp=Z,5.6nm,0.8s								
KURK	Kurchatov	41.25	53	P			P	04 53 22.1	-0.3
MKAR	Makanchi Array	44.20	59	P			P	04 53 46.4	-0.1
	comp=Z,11nm,0.6s,baz=276,slow=8.0,SNR=47								
	comp=Z,11nm,0.6s								
MKAR	Makanchi Array	44.20	59				P	04 53 46.4	-0.1
ZALV	Zalesovo Beam	44.76	48	P			P	04 53 50.4	-0.3
	comp=Z,3.9nm,0.5s,baz=287,slow=7.6,SNR=16								
	comp=Z,3.9nm,0.5s								
ZALV	Zalesovo Beam	44.76	48				P	04 53 50.4	-0.3
SONM	Songino Array	59.48	51	P			P	04 55 40.3	-0.2
	comp=Z,1.9nm,1.0s,baz=286,slow=9.2,SNR=7.7								
	comp=Z,1.9nm,1.0s								
SONM	Songino Array	59.48	51	P			P	04 55 40.3	-0.2
SONM	Songino Array	59.48	51	IAmb			IAmb	04 55 48.8	
	comp=Z,3.2nm,1.3s								
YKA	Yellowknife Ar	73.97	341	P			P	04 57 12.3	-0.2
	comp=Z,0.8nm,0.9s,baz=53,slow=8.1,SNR=3.7								
	comp=Z,0.8nm,0.9s								
PDAR	Pinedale Array	88.41	327	P			P	04 58 30.2	+0.3
	comp=Z,0.7nm,0.7s,baz=19,slow=4.4,SNR=6.1								
	comp=Z,0.7nm,0.7s								
ASAR	Alice Springs	120.80	97	PKP			PKPdf	05 04 29.4	-0.5
	comp=Z,0.4nm,0.5s,baz=334,slow=2.4,SNR=3.3								

*IDC **07** 04:48:31.3±0.8, 17.71N×40.06E, h0km, mb4.2/27, mbtmp4.2/28, ML3.3/1, MS3.9/47, Error ellipse: s-maj=19.7km s-min=14.4km az=167.0*

*SGS **07** 04:48:31.2, 17.82N×40.18E, h20km, MI3.5*

*MOS **07** 04:48:32.9±1.0, 17.73N×40.06E, h18km, mb4.6/23, Error ellipse: s-maj=22.2km s-min=7.1km az=79.1*

*NEIC **07** 04:48:33.7±2.2, 17.77N±0.10×40.2E±0.1, h10km±1km, mb4.6/38, Error ellipse: s-maj=19.5km s-min=13.9km az=132.0*

ISC 07 04:48:35.8±0.4, 17.79N±0.05×40.17E±0.04, h28km, n242, σ1 85/201, mb4.5/67, MS3.9/49, 12C-10D, Red Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRK01	Al Birk	1.41	70	P			Pn	04 48 53.8	-5.8
AMGES	AMGES	1.46	62	P			Pn	04 48 54.1	-6.2
BRK02	Al Birk	1.58	84	P			Pn	04 48 56.4	-5.6
BRK03	Al Birk	1.68	76	P			Pn	04 48 58.2	-5.2
BRK03				S			Sn	04 49 18.4	-5.8
BRK04	Al Birk	1.77	62	P			Pn	04 48 59.3	-5.4
QNF02	Al Qunfudhah	1.77	44	P			Pn	04 48 58.8	-5.9
FRSS2	Sair Farasan I	1.81	121	P			Pn	04 49 00.0	-5.1
FRSS2				S			Sn	04 49 21.9	-5.2
QNF01	Al Qunfudhah	1.91	33	P			Pn	04 49 01.1	-5.5
DRBS	Ad Darb	2.03	89	S			Sn	04 49 26.8	-5.8
DRBS				P			Pn	04 49 03.0	-5.2
QNFDS	Al Qunfudhah	2.13	20	P			Pn	04 49 04.1	-5.5
FRSS	Farasan al Kab	2.13	119	S			Sn	04 49 29.6	-5.5
FRSS				P			Pn	04 49 04.6	-4.9
ASIR3	ASIR3	2.27	66	P			Pn	04 49 07.7	-4.1
NAMS	An Nimas	2.37	54	P			Pn	04 49 08.9	-4.2
MKHL	Mahalah	2.43	100	P			Pn	04 49 08.0	-5.7
AKWA	Algayed	2.47	102	P			Pn	04 49 09.1	-5.1
LTHS	Al Lith	2.48	5	P			Pn	04 49 09.0	-5.5
ENMS	ENMS	2.61	60	P			Pn	04 49 13.2	-3.1
ASIR1	ASIR1	2.74	72	P			Pn	04 49 15.1	-3.0
ASIR4	ASIR4	2.81	48	P			Pn	04 49 16.0	-3.1
ASIR2	ASIR2	2.96	84	P			Pn	04 49 18.1	-3.2
ASIR5	ASIR5	3.14	68	P			Pn	04 49 22.4	-1.2
BAHS2	Abu Rakh	3.21	17	P			Pn	04 49 21.9	-2.5
DJNS	Zahran al Janu	3.21	91	P			Pn	04 49 21.6	-3.1
SHBS		3.23	352	P			Pn	04 49 20.6	-4.2
LBNS	Jabal Laban	3.25	356	P			Pn	04 49 21.4	-3.6
FRAS	Faraa	3.27	6	P			Pn	04 49 21.9	-3.6
RHWAS	RHWAS	3.91	70	P			Pn	04 49 33.8	-0.5
FDAS		4.03	2	P			Pn	04 49 33.1	-2.6
MDRAS	Madrakah	4.28	358	P			Pn	04 49 36.4	-2.8
KHLS	Khulais	4.32	349	P			Pn	04 49 36.8	-2.9
GHASH	GHASH	4.90	1	P			Pn	04 49 44.8	-3.1
HAJR	Hajar	5.11	355	P			Pn	04 49 47.4	-3.1
RAYN	Ar Rayn	7.58	40				Pn	04 50 22.1	-2.4
RAYN	Ar Rayn	7.58	40	Pn			Pn	04 50 21.8	-2.7
RAYN	Ar Rayn	7.58	40	P			Pn	04 50 23.3	-1.2
RAYN				S			Sn	04 51 46.4	-3.2
FURI	Furi	8.96	190	LR			LR	04 53 56.2	
	comp=Z,1μm,19.7s,baz=14,slow=37								
SMRA	Abu-Samra	12.10	53	P			Pn	04 51 28.4	+2.0
SMRA				S			Sn	04 53 41.9	+1.5
TRNA	Turayna	12.39	54	P			Pn	04 51 32.2	+1.8
ABTO	Aybut	12.52	90	P			Pn	04 51 37.6	+5.3
EIL	Elat	12.75	339	LR			LR	04 55 36.2	
	comp=Z,498nm,19.2s,baz=172,slow=33								
SHMA	Al-Shehemyia	12.83	49	P			Pn	04 51 37.5	+1.0
DOK	Doka	13.29	84	P			Pn	04 51 45.4	+2.6
GHWR	Ruwais	13.36	60	P			Pn	04 51 45.6	+1.8
MZR	Muzera	13.51	65	Pn			Pn	04 51 45.4	-0.4
MZR	Muzera	13.51	65	P			Pn	04 51 48.8	+3.0
	SNR=5.9								
DMTO	DMTO	14.08	88	P			Pn	04 51 57.1	+3.6
MZWR	Madinat Zayed	14.12	63	P			Pn	04 51 56.2	+2.0
ASF	Jabal al Asfar	14.62	349	Pn			Pn	04 52 01.2	+0.3
	0.1nm,0.3s,baz=178,slow=5.4,SNR=4.7								
ASF					LR		LR	04 57 03.8	
	comp=Z,261nm,18.9s,baz=175,slow=35								
	3.0nm,0.8s								
SHAO	Shalim	14.71	87	P			P	04 52 05.9	-2.1
LODK	Lodwar	15.04	199				Pn	04 52 05.6	-1.0
ASUD	Al Ashush, Dub	15.68	62	P			Pn	04 52 16.4	+1.5
ALNE	Al Ain	15.83	64	*i* Pn			Pn	04 52 16.6	-0.3
	SNR=6.5								
ALNE	Al Ain	15.83	64	P			P	04 52 19.8	-0.6
	SNR=19								
FAQ	Al Faqa, Dubai	15.94	62	P			Pn	04 52 19.2	+0.9
NAZ	Nazwa, Dubai	16.10	61	P			Pn	04 52 21.5	+1.2
ASHO	Ashiyiah	16.31	62	*

comp=Z,215nm,20.6s,baz=142,slow=38
MLR Muntele Rosu 30.06 340 P **P** 04 54 43.7 +0.9
comp=Z,5.2nm,0.6s,baz=135,slow=9.4,SNR=3.5
comp=Z,5.2nm,0.6s
MLR Muntele Rosu 30.06 340 IAmb IAmb 04 55 11.3
comp=Z,22nm,1.5s
MLR Muntele Rosu 30.06 340 ⇑P **P** 04 54 45.6 +2.8
VRI Vrincioaia 30.15 341 ⇑P **P** 04 54 46.1 +2.7
PLOR Plostina 30.16 341 ⇑P **P** 04 54 45.2 +1.7
VOIR 30.32 339 ⇑P **P** 04 54 46.3 +1.3
ARR Arges 30.40 338 ⇑P **P** 04 54 46.2 +0.5
KBL Kabul 30.67 51 P **P** 04 54 47.8 -0.6
KBL IAmb IAmb 04 54 56.3
comp=Z,14nm,1.3s
LOT Lotru 30.79 337 ⇓P **P** 04 54 50.0 +0.9
GZR Gura Zlata 31.12 336 ⇓P **P** 04 54 52.5 +0.5
BZS Buzias 31.76 335 ⇓P **P** 04 54 53.9 -3.7
SIRR Siria 32.28 336 ⇓P **P** 04 55 02.7 +0.5
KEST Kesra 32.62 309 LR LR 05 08 31.1
comp=Z,128nm,19.1s,baz=340,slow=37
CHGR Chuyangaron 32.71 45 P **P** 04 55 07.4 +1.3
CHGR IAmb IAmb 04 55 14.1
comp=Z,12nm,0.9s
TAM Tamanrasset 32.83 285 P **P** 04 55 07.6 +0.1
GAR Garm 33.66 45 P **P** 04 55 17.3 +2.8
MANEM Manem 33.91 48 P **P** 04 55 19.9 +3.1
AKASG Malin Array Be 33.98 348 P **P** 04 55 16.6 -0.3
comp=Z,0.3nm,0.4s,baz=164,slow=7.3,SNR=6.4
comp=Z,0.3nm,0.4s
AKASG Malin Array Be 33.98 348 IAmb IAmb 04 55 27.4
comp=Z,6.8nm,1.4s
AKASG Malin Array Be 33.98 348 *i* P **P** 04 55 16.6 -0.3
AKASG pmax pmax
comp=Z,2.0nm,0.7s
BTK Batken 34.53 44 P **P** 04 55 23.0 +1.0
BTK IAmb IAmb 04 55 31.1
comp=Z,8.5nm,0.9s
DRK Karamyk 34.90 45 P **P** 04 55 28.1 +2.7
DRK IAmb IAmb 04 55 34.9
comp=Z,8.5nm,0.8s
LSZ Lusaka 34.92 200 LR LR 05 09 56.9
comp=Z,583nm,18.1s,baz=14,slow=37
BELG Belogornoye 35.02 8 LR LR 05 10 46.3
comp=Z,148nm,18.1s,baz=122,slow=38
BELG Belogornoye 35.02 8 *i* P **P** 04 55 25.8 -0.1
BELG pmax pmax
comp=Z,3.0nm,1.0s
AB31 Akbulak array 35.23 23 P **P** 04 55 28.2 +0.4
ABKAR Akbulak array 35.23 23 P **P** 04 55 28.1 +0.4
SOKA Soboth 35.50 330 *eP* **P** 04 55 30.1 -0.1
comp=Z,0.9nm,0.5s
AKTO Aktyubinsk 35.57 20 LR LR 05 11 53.9
comp=Z,151nm,20.1s,baz=251,slow=39
ARSA Arzberg 35.69 331 P **P** 04 55 31.8 +0.1
ARSA IAmb IAmb 04 55 36.6
comp=Z,4.4nm,0.9s
ARSA Arzberg 35.69 331 *eP* **P** 04 55 31.8 +0.1
comp=Z,1.7nm,0.7s
MODS Modra-Piesok 35.75 334 *eP* **P** 04 55 32.7 +0.4
MODS pmax pmax
comp=Z,5.0nm,0.8s
MODS Modra-Piesok 35.75 334 *eP* **P** 04 55 32.7 +0.4
JAVC Velka Javorina 35.97 335 *eP* **P** 04 55 34.9 +0.7
KK31 Karatay Array 36.00 39 P **P** 04 55 37.1 +2.6
KKAR Karatay Array 36.00 39 P **P** 04 55 36.7 +2.2
KRUC Moravsky 36.66 334 *eP* **P** 04 55 40.2 +0.2
MOA Molln 36.71 331 *eP* **P** 04 55 40.5 0.0
comp=Z,1.1nm,0.4s
MORC Moravsky Berou 36.74 335 *eP* **P** 04 55 40.8 0.0
VRAC Vranov 36.76 334 *eP* **P** 04 55 40.7 -0.2
TORD Torodi Ar. Bea 37.33 268 P **P** 04 55 45.0 -1.1
comp=Z,7.2nm,1.0s,baz=95,slow=6.0,SNR=30
TORD LR LR 05 11 19.5
comp=Z,182nm,18.1s,baz=84,slow=37
comp=Z,7.2nm,1.0s
TORD Torodi Ar. Bea 37.33 268 P **P** 04 55 44.5 -1.6
TORD IAmb IAmb 04 55 49.7
comp=Z,9.5nm,1.2s
KSH2 Kashi 37.35 48 P **P** 04 55 48.3 +2.0
KSH2 sP pP 04 55 53.1 -1.1
KSH2 pmax pmax
comp=Z,2.0nm,0.7s
KSH2 LR LR
comp=Z,160nm,16.2s
KSH2 LR LR
comp=Z,280nm,15.8s
KSH2 LR LR
comp=Z,280nm,19.2s
OBN Obninsk 37.36 357 ⇓*eP* **P** 04 55 46.6 +0.8
OBN *e* 04 57 15.3
OBN *e*SS SS 05 04 03.4 -13
OBN pmax pmax
comp=Z,12nm,1.5s
OBN MLR MLR
comp=Z,129nm,15.0s
GERES GERESS Array B 37.69 331 P **P** 04 55 47.8 -1.0
comp=Z,1.7nm,0.8s,baz=142,slow=6.6,SNR=9.8
GERES PcP **PcP** 04 58 05.4 -0.4
comp=Z,0.6nm,0.7s,baz=190,slow=1.8,SNR=3.7
comp=Z,1.7nm,0.8s
FETA Feichten 37.90 327 *eP* **P** 04 55 50.8 +0.1
comp=Z,3.9nm,0.9s
MOS Moscow 37.93 358 *eP* **P** 04 55 50.8 +0.1
AAK Ala-Archa 38.22 42 LR LR 05 14 19.1
comp=Z,218nm,18.7s,baz=234,slow=40
DAVA Damuels 38.51 327 *eP* **P** 04 55 55.1 -0.8
comp=Z,2.2nm,0.5s
PALK Pallekele 40.83 100 LR LR 05 11 49.3
comp=Z,55nm,18.4s,baz=296,slow=34
ARTI Arti 40.91 15 LR LR 05 15 27.6
comp=Z,156nm,18.1s,baz=202,slow=39
ARTI Arti 40.91 15 P **P** 04 56 16.1 +0.6
ARTI IAmb IAmb 04 56 18.0
comp=Z,11nm,0.7s
ARTI Arti 40.91 15 *d iP* **P** 04 56 16.8 +1.3
ARTI S **S** 05 02 29.3 +4.0
ARTI SS **SnSn** 05 05 32.7 -2.5
ARTI pmax pmax
comp=Z,27nm,2.3s
KIRV Kirov 41.30 7 LR LR 05 14 25.4
comp=Z,146nm,18.4s,baz=188,slow=38
KIRV Kirov 41.30 7 *i* P **P** 04 56 19.0 +0.3
BORK Borovoye 42.31 27 *ceP* **P** 04 56 28.9 +1.9
BORK pmax pmax
comp=Z,8.0nm,2.5s
BVAR Borovoye Array 42.33 27 P **P** 04 56 28.1 +1.0
comp=Z,0.8nm,0.6s,baz=229,slow=5.7,SNR=4.7
BVAR LR LR 05 16 27.9
comp=Z,157nm,18.8s,baz=229,slow=40
comp=Z,0.8nm,0.6s
MEM Membach 42.58 328 *dP* **P** 04 56 29.7 +0.4
MDT Midelt 42.84 299 LR LR 05 15 57.2
comp=Z,77nm,19.6s,baz=80,slow=38
BGES Gesves 42.91 327 *dP* **P** 04 56 32.1 +0.2
TSUM Tsumeb 42.94 212 LR LR 05 13 31.9
comp=Z,89nm,18.9s,baz=36,slow=35
MD01 Midelt array s 42.97 299 P **P** 04 56 31.6 -1.4
MD31 MD31 42.97 299 P **P** 04 56 32.3 -0.6
DOU Dourbes 43.00 327 *dP* **P** 04 56 32.7 0.0
KLMR Klimovskoe 43.02 360 *eP* **P** 04 56 31.4 -1.2
KLMR pmax pmax
comp=Z,16nm,1.3s
ESDC Sonseca Array 43.88 309 P **P** 04 56 40.3 +0.3
comp=Z,3.4nm,1.0s,baz=102,slow=7.4,SNR=20
comp=Z,3.4nm,1.0s
ESDC Sonseca Array 43.88 309 P **P** 04 56 38.4 -1.6
FINES FINESS Array B 44.74 350 P **P** 04 56 45.8 -0.7
comp=Z,3.2nm,0.8s,baz=150,slow=8.1,SNR=5.3
FINES LR LR 05 18 17.9
comp=Z,114nm,20.0s,baz=236,slow=40
comp=Z,3.2nm,0.8s
FINES FINESS Array B 44.74 350 *i* P **P** 04 56 46.5 +0.1
FINES pmax pmax
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 44.77 34 P **P** 04 56 48.2 +1.3
comp=Z,2.1nm,0.8s,baz=237,slow=8.2,SNR=11
KURBB LR LR 05 17 54.9
comp=Z,179nm,20.4s,baz=182,slow=39
comp=Z,2.1nm,0.8s
LBTB Lobatse 44.85 199 LR LR 05 15 02.9
comp=Z,144nm,20.9s,baz=22,slow=36
KURK Kurchatov 44.87 34 P **P** 04 56 48.6 +0.9
KURK IAmb IAmb 04 57 00.6
comp=Z,8.2nm,1.2s
KURK Kurchatov 44.87 34 *ceP* **P** 04 56 48.5 +0.9
KURK pmax pmax
comp=Z,11nm,2.5s
MAKZ Makanchi 44.88 40 P **P** 04 56 49.5 +1.6
MAKZ IAmb IAmb 04 56 55.3
comp=Z,8.6nm,1.4s
MK31 Makanchi Array 45.07 41 *ceP* **P** 04 56 50.1 +0.7
MKAR Makanchi Array 45.07 41 P **P** 04 56 50.7 +1.3
comp=Z,1.0nm,0.7s,baz=234,slow=7.5,SNR=5.2
MKAR PcP **PcP** 04 58 28.9 -1.0
comp=Z,0.7nm,0.8s,baz=250,slow=4.2,SNR=2.5
MKAR LR LR 05 18 07.5
comp=Z,285nm,19.0s,baz=233,slow=39
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 45.07 41 P **P** 04 56 50.5 +1.1
DBIC Dimbokro 45.26 262 P **P** 04 56 50.0 -1.2
comp=Z,8.5nm,1.0s,baz=86,slow=11,SNR=8.5
DBIC LR LR 05 15 25.1
comp=Z,169nm,19.2s,baz=86,slow=36
comp=Z,8.5nm,1.0s
DBIC Dimbokro 45.26 262 P **P** 04 56 50.5 -0.7
DBIC IAmb IAmb 04 56 51.1
comp=Z,8.6nm,0.9s
HFS Hagfors 46.39 342 P **P** 04 56 58.4 -1.1
comp=Z,3.5nm,0.8s,baz=139,slow=9.2,SNR=5.1
comp=Z,3.5nm,0.8s
NC602 NORSAR Array S 47.52 341 P **P** 04 57 08.1 -0.3
WMQ Urumqi 47.53 46 *eP* **P** 04 57 05.7 -3.1
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ LR LR
comp=Z,120nm,23.8s
NAO01 NORSAR Array S 47.80 341 P **P** 04 57 11.0 +0.4
NB2 NORSAR Subarra 47.85 341 P **P** 04 57 10.0 -1.0
comp=Z,6.8nm,1.0s,baz=138,slow=7.9
NOA NORSAR Array B 47.85 341 P **P** 04 57 10.3 -0.7
comp=Z,3.8nm,0.9s,baz=138,slow=8.1,SNR=8.5
NOA LR LR 05 20 11.2
comp=Z,43nm,18.8s,baz=10.0,slow=40
comp=Z,3.8nm,0.9s
BOSA Boshof 48.33 198 LR LR 05 15 50.2
comp=Z,64nm,20.4s,baz=21,slow=34
BRDH Bariadhala 48.35 75 LR LR 05 19 00.4
comp=Z,129nm,19.1s,baz=150,slow=38
SHL Shillong 48.43 71 P **P** 04 57 14.6 -1.6
DGZ Jazzator, Alta 49.40 39 *i* P **P** 04 57 24.2 +1.0
DGZ pmax pmax
comp=Z,4.0nm,0.9s
ZAA0 Zalesovo Array 49.79 33 P **P** 04 57 25.9 0.0
ZAA0 IAmb IAmb 04 57 35.2
comp=Z,8.6nm,1.1s
ZALV Zalesovo Beam 49.79 33 P **P** 04 57 26.2 +0.3
comp=Z,4.6nm,0.8s,baz=246,slow=8.1,SNR=15
ZALV LR LR 05 22 15.9
comp=Z,98nm,18.6s,baz=247,slow=41
comp=Z,4.6nm,0.8s
ZALV Zalesovo Beam 49.79 33 P **P** 04 57 25.4 -0.5
EKA Eskdalemuir Ar 49.82 329 P **P** 04 57 25.2 -1.0
comp=Z,2.2nm,0.8s,baz=147,slow=8.5,SNR=3.6
comp=Z,2.2nm,0.8s
GOMU GeErMu 51.35 58 P **P** 04 57 40.0 +1.5
GOMU pmax pmax
comp=Z,7.0nm,1.2s
ARCES ARCESS Array B 52.52 354 LR LR 05 22 11.0
comp=Z,92nm,20.5s,baz=128,slow=38
SUR Sutherland 53.22 201 LR LR 05 20 38.4
comp=Z,329nm,18.3s,baz=28,slow=36
GTA2 Gaotai 55.56 54 P **P** 04 58 10.2 +1.1
GTA2 pP pP 04 58 13.7 -3.6
GTA2 pmax pmax
comp=Z,8.0nm,0.8s
CMAR Chiang Mai Arr 55.63 80 P **P** 04 58 10.5 +0.7
comp=Z,0.8nm,0.3s,baz=287,slow=8.2,SNR=8.2
CMAR LR LR 05 24 09.9
comp=Z,30nm,18.5s,baz=285,slow=38
comp=Z,0.8nm,0.3s
CMAR Chiang Mai Arr 55.63 80 P **P** 04 58 09.3 -0.5
KNGR Kungurtug, Tuv 55.83 40 *i* P **P** 04 58 11.9 +1.1
KNGR pmax pmax
comp=Z,5.0nm,0.9s
PZH PanZhiHua 57.23 70 P **P** 04 58 23.3 +2.1
KMI2 Kunming 58.26 71 P P 04 58 35.7 +7.1
KMI2 pmax pmax
comp=Z,5.0nm,0.7s
LZDM Lanzhou Array 58.52 58 P **P** 04 58 31.4 +1.1
comp=Z,0.2nm,0.3s,baz=317,slow=8.1,SNR=5.4
comp=Z,0.2nm,0.3s
LZH Lanzhou 58.64 58 *eP* P 04 58 35.8 +4.8
LZH sP sP 04 58 43.6 +1.2
LZH pmax pmax
comp=Z,10.0nm,1.2s
NRIK Noril'sk 59.15 18 P **P** 04 58 34.5 +0.8
comp=Z,3.6nm,0.8s,baz=214,slow=5.6,SNR=6.8
NRIK LR LR 05 28 38.7
comp=Z,112nm,19.8s,baz=244,slow=41
comp=Z,3.6nm,0.8s
NRIK Noril'sk 59.15 18 IAmb IAmb 04 58 36.3
comp=Z,7.3nm,1.1s
NRIK Noril'sk 59.15 18 *i* P **P** 04 58 34.6 +0.9
NRIK pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 61.10 45 P **P** 04 58 47.9 +0.3
comp=Z,2.4nm,0.8s,baz=258,slow=6.7,SNR=13
SONM LR LR 05 28 32.7
comp=Z,188nm,20.0s,baz=247,slow=39
comp=Z,2.4nm,0.8s
SONM Songino Array 61.10 45 IAmb IAmb 04 58 50.3
comp=Z,3.3nm,1.0s
SPB2 Spitsbergen Ar 61.51 355 P **P** 04 58 50.2 +0.4
SPITS Spitsbergen Ar 61.52 355 P **P** 04 58 49.7 -0.1
comp=Z,13nm,0.8s,baz=157,slow=11,SNR=6.3
comp=Z,13nm,0.8s
ULN Ulaanbaatar 61.55 45 *ceP* **P** 04 58 51.0 +0.3
ULN pmax pmax
comp=Z,3.0nm,1.3s
XAN Xi'an 62.87 60 ⇓P **P** 04 59 02.2 +2.5
XAN pmax pmax
comp=Z,10.0nm,1.3s
HHC Hu-ho-hao-te 64.63 53 *eP* **P** 04 59 12.1 +0.9
HHC pmax pmax
comp=Z,5.0nm,0.6s
XLT XiLinHaoTe 67.82 49 *eP* **P** 04 59 34.0 +2.4
XLT pmax pmax
comp=Z,4.0nm,0.8s
NOR Nord 67.86 352 *i* P **P** 04 59 29.9 -1.2
SUMG Summit 69.75 342 P **P** 04 59 43.5 +0.1
HILR Hailar Array B 69.96 43 P **P** 04 59 45.2 +0.4
comp=Z,4.4nm,0.8s,baz=236,slow=5.0,SNR=6.4
comp=Z,4.4nm,0.8s
NJ2 Nanjing 71.39 61 *eP* **P** 04 59 54.1 +0.4
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
TIXI Tiksi 72.85 19 LR LR 05 37 35.9
comp=Z,48nm,19.1s,baz=20,slow=40
TIXI Tiksi 72.85 19 *i* P **P** 05 00 02.3 +0.6
TIXI pmax pmax
comp=Z,4.0nm,0.9s
YAK Yakutsk 74.24 29 LR LR 05 36 10.2
comp=Z,80nm,18.5s,baz=242,slow=38
YAK Yakutsk 74.24 29 *i* P **P** 05 00 12.0 +2.0
YAK pmax pmax
comp=Z,7.0nm,0.8s
HEH HeiHe 74.79 42 *eP* **P** 05 00 13.9 +0.4
KSRS Korea Array 77.66 54 P **P** 05 00 31.0 +0.9
comp=Z,2.3nm,0.9s,baz=280,slow=5.7,SNR=4.5
KSRS LR LR 05 38 58.1
comp=Z,87nm,18.7s,baz=270,slow=39
comp=Z,2.3nm,0.9s
KLR Kul'dur 77.75 42 LR LR 05 37 49.5
comp=Z,25nm,18.4s,baz=255,slow=38
KLR Kul'dur 77.75 42 *ceP* **P** 05 00 31.0 +0.7
KLR pmax pmax
comp=Z,3.0nm,2.5s
JNU Nakatsue 81.07 58 LR LR 05 42 25.6
comp=Z,78nm,19.5s,baz=294,slow=40
SEY Seymchan 83.96 25 LR LR 05 43 16.6
comp=Z,84nm,18.9s,baz=324,slow=39
SEY Seymchan 83.96 25 *ceP* **P** 05 01 04.4 +1.2
SEY pmax pmax
comp=Z,9.0nm,1.7s
KUQ Kuujjuaa 84.48 330 P **P** 05 01 04.5 -1.4
MA2 Magadan 84.79 29 LR LR 05 45 50.8
comp=Z,44nm,18.1s,baz=82,slow=40
MA2 Magadan 84.79 29 *ceP* **P** 05 01 09.4 +1.9
MA2 pmax pmax
comp=Z,13nm,1.7s
SCHQ Schefferville 85.04 326 P **P** 05 01 08.0 -0.9
comp=Z,3.5nm,0.7s,baz=61,slow=7.6,SNR=4.0
comp=Z,3.5nm,0.7s
MJAR Matsushiro Arr 85.83 53 P **P** 05 01 13.3 +0.1
comp=Z,2.1nm,0.8s,baz=277,slow=4.1,SNR=5.0
MJAR LR LR 05 42 59.1
comp=Z,52nm,19.9s,baz=280,slow=38
comp=Z,2.1nm,0.8s
MJAR Matsushiro Arr 85.83 53 IAmb IAmb 05 01 19.6
comp=Z,5.0nm,1.1s
BILL Bilibino 85.97 18 *i* P **P** 05 01 14.2 +1.0
BILL pmax pmax
comp=Z,5.0nm,1.0s
ASAJ Asahikawa 86.39 45 LR LR 05 43 50.8
comp=Z,122nm,18.6s,baz=128,slow=38
MAW Mawson 86.77 171 LR LR 05 35 51.3
comp=Z,32nm,18.6s,baz=248,slow=33
JHJ Hachijo jima 2 88.19 56 LR LR 05 45 18.0
comp=Z,75nm,18.9s,baz=130,slow=39
NVL N'lazarevskaya 90.49 189 *eP* **P** 05 01 35.4 +0.9
NVL *e* 05 05 09.7
NVL *e*PPP PPP 05 07 07.1
NVL *e*S **SKSac** 05 12 06.4 +3.0
NVL *e*SS **SS** 05 18 32.6 +3.7
NVL *e*SSS SSS 05 22 09.3
NVL pmax pmax
comp=Z,40nm,2.6s
NVL MLR MLR
comp=Z,596nm,23.0s
PETK Petropavlovsk- 91.33 32 LR LR 05 46 49.3
comp=Z,74nm,21.2s,baz=245,slow=38
YKA Yellowknife Ar 97.54 348 P Pdif 05 02 07.3 +0.1
comp=Z,0.7nm,1.1s,baz=19,slow=3.1,SNR=4.7
comp=Z,0.7nm,1.1s
SHEM Shemya Is, Ala 99.26 26 LR LR 05 52 36.2
comp=Z,112nm,18.1s,baz=108,slow=39

PRU ***07*** *04:49:36.7, 44°.20N×15°.90E, h10km*
PDG ***07*** *04:49:37.6±0.3, 44°.27N×16°.09E, h13km±1km, ML3.2/11,*
Error ellipse: s-maj=1.0km s-min=1.3km az=0.0
BEO ***07*** *04:49:37.4±0.3, 44°.20N×16°.03E, h0km, ML3.1/5*
ISC 07 04:49:36.0±1.1, 44°.22N±0°.02×16°.07E±0°.02, h1km±10km,
n82, σ1.9 40/137, 7C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	A/Z°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIJV	**Kijevo**	**0.32**	**131**	*i* Pg	**Pb**	**04 49 43.2**	**-1.3**
KIJV				Sg	**Sb**	**04 49 48.9**	**-1.3**
UDBI	**Udbina**	**0.38**	**325**	*e*Pg	**Pg**	**04 49 44.3**	**+1.1**
UDBI				Sg	**Sg**	**04 49 49.7**	**+1.5**
MORI	**Morici**	**0.43**	**217**	*i* Pg	**Pg**	**04 49 44.5**	**+0.2**
MORI				Sg	**Sb**	**04 49 51.1**	**-2.3**
ZIRJ	**Zirje**	**0.64**	**209**	*i* Pg	**Pg**	**04 49 48.0**	**-0.2**
ZIRJ				Sg	**Sb**	**04 49 57.9**	**-1.3**
VIRC	**Vir**	**0.73**	**276**	*e*Pg	**Pg**	**04 49 49.5**	**-0.5**
VIRC				Sg	**Sg**	**04 50 00.5**	**+1.0**
PLIT	**Plitvice**	**0.73**	**335**	*i* Pg	**Pg**	**04 49 50.7**	**+0.6**
PLIT				Sg	**Sg**	**04 50 00.9**	**+1.3**
DUGI	**Dugi Otok**	**0.76**	**253**	*e*Pg	**Pg**	**04 49 50.0**	**-0.6**
DUGI				Sg	**Sb**	**04 50 01.2**	**-1.6**
NVLJ	**Novalja**	**0.93**	**292**	*e*Pg	**Pg**	**04 49 53.0**	**-0.7**
NVLJ				Sg	**Sb**	**04 50 06.9**	**-0.6**
BLY	**Banja Luka**	**0.96**	**56**	⇑P	**Pg**	**04 49 55.2**	**+0.9**
BLY				⇓S	**Sb**	**04 50 09.5**	**+1.0**
BLY	**Banja Luka**	**0.96**	**56**	*e*Pg	**Pg**	**04 49 55.3**	**+0.9**
BLY				*e*Sg	**Sb**	**04 50 09.4**	**+0.8**
RICI	**Ricice**	**1.06**	**133**	*e*Pg	**Pb**	**04 49 56.7**	**-0.3**
RICI				Sg	**Sn**	**04 50 13.6**	**+0.4**
RABC	**Rab**	**1.06**	**301**	*e*Pg	**Pg**	**04 49 56.6**	**+0.2**
RABC				Sg	**Sb**	**04 50 11.3**	**-0.2**
HVAR	**Hvar**	**1.07**	**165**	*e*Pg	**Pg**	**04 49 56.1**	**-0.4**
HVAR				Sg	**Sb**	**04 50 11.8**	**0.0**
OZLJ	**Ozalj**	**1.46**	**343**	*i* Pg	**Pn**	**04 50 03.7**	**+0.2**
OZLJ				Sg	**Sn**	**04 50 22.8**	**-0.4**
MOSL	**Moslavina**	**1.48**	**19**	*i* Pn	**Pn**	**04 50 02.9**	**-0.8**
MOSL				Sn	**Sn**	**04 50 23.5**	**-0.2**
LSTV	**Lastovo**	**1.57**	**157**	*e*Pn	**Pb**	**04 50 05.1**	**-0.5**
LSTV				Sn	**Sg**	**04 50 26.4**	**+0.1**
RIY	**Rijeka**	**1.58**	**315**	*e*Pn	**Pb**	**04 50 05.9**	**-0.1**
RIY				Sn	**Sg**	**04 50 27.3**	**+0.5**
RIY	**Rijeka**	**1.58**	**315**	*e*Pg	**Pb**	**04 50 05.9**	**-0.1**
RIY				*e*Sg	**Sg**	**04 50 27.3**	**+0.5**
GBRS	**Gornja Briga**	**1.59**	**326**	*i* Pn	**Pb**	**04 50 06.1**	**0.0**
GBRS				*i* Sn	**Sg**	**04 50 28.0**	**+1.0**
GBRS				IAML		04 50 30.1	
	comp=Z,44nm,0.3s						
PTJ	**Puntijarka**	**1.69**	**358**	*i* Pn	**Pn**	**04 50 06.2**	**-0.5**
PTJ				Sn	**Sg**	**04 50 31.0**	**+0.7**
STON	**Ston**	**1.79**	**138**	*i* Pn	**Pb**	**04 50 09.0**	**-0.5**
STON				Sn	**Sg**	**04 50 32.5**	**-1.0**
STON	**Ston**	**1.79**	**138**	*e*Pn	**Pb**	**04 50 08.6**	**-0.9**
STON				*e*Sn	**Sg**	**04 50 33.0**	**-0.1**
KALN	**Kalnik**	**1.94**	**8**	*e*Pn	**Pn**	**04 50 09.0**	**-0.9**
LOBO	**Lobor**	**1.94**	**0**	*i* Pn	**Pn**	**04 50 09.7**	**-0.3**
LOBO				Sn	**Sb**	**04 50 37.8**	**+1.0**
DBRK	**Dubrovnik**	**2.17**	**135**	*e*Pn	**Pb**	**04 50 15.1**	**-0.8**
DBRK				Sn	**Sg**	**04 50 44.1**	**-1.3**
BRY	**Bratogost**	**2.23**	**125**	*e*Pn	**Pb**	**04 50 15.6**	**-1.4**
BRY				*i* Sn	**Sb**	**04 50 44.8**	**-0.3**
TREB	**Trebinje**	**2.24**	**131**	*e*Pn	**Pb**	**04 50 16.6**	**-0.5**
TREB				*e*Sn	**Sb**	**04 50 44.5**	**-0.8**
BBLS	**Lazi&#263i**	**2.43**	**97**	*e*Pn	**Pb**	**04 50 19.6**	**-0.9**
BBLS				*e*Sn	**Sn**	**04 50 48.4**	**+1.2**
RUDO	**Rudo**	**2.46**	**103**	*e*Pn	**Pn**	**04 50 18.1**	**+0.9**
RUDO				*e*Sn	**Sb**	**04 50 50.0**	**-1.7**
HCY	**Herceg Novi**	**2.50**	**134**	*e*Pn	**Pn**	**04 50 19.2**	**+1.5**
HCY				*i* Sn	**Sb**	**04 50 51.7**	**-1.2**
OBKA	**Obir**	**2.53**	**336**	Pn	**Pn**	**04 50 18.9**	**+0.6**
	comp=Z,7.0nm,0.3s,SNR=7.2						
OBKA				Sn	**Sn**	**04 50 48.2**	**-1.5**
	comp=Z,23nm,0.4s						
NKME	**Niksic**	**2.55**	**124**	*e*Pn	**Pn**	**04 50 20.0**	**+1.5**
NKME				*e*Sn	**Sb**	**04 50 52.6**	**-1.8**
PLE	**Pljevlja**	**2.56**	**109**	*e*Pn	**Pn**	**04 50 20.0**	**+1.3**
PLE				*i* Sn	**Sb**	**04 50 52.7**	**-2.1**
SOKA	**Soboth**	**2.57**	**344**	Pn	**Pn**	**04 50 18.7**	**-0.1**
	comp=Z,4.4nm,0.5s						
SOKA				Sn	**Sn**	**04 50 49.8**	**-0.8**
	comp=Z,11nm,0.7s						
CEME	**Cevo**	**2.67**	**128**	*e*Pn	**Pn**	**04 50 21.6**	**+1.6**
CEME				*e*Sn	**Sb**	**04 50 55.5**	**-2.2**
MORH	**Mrgy, Hungar**	**2.70**	**41**	⇓P	**Pn**	**04 50 21.0**	**+0.5**
MORH				⇑S	**Sg**	**04 51 02.7**	**-0.1**
BUM	**Brajici-Budva**	**2.82**	**132**	*e*Pn	**Pn**	**04 50 23.9**	**+1.8**
BUM				*i* Sn	**Sb**	**04 50 59.2**	**-2.8**
DIVS	**Divibare**	**2.83**	**91**	*e*Pn	**Pn**	**04 50 24.3**	**+2.0**
FRGS	**Fruska Gora**	**2.83**	**69**	*e*Pn	**Pb**	**04 50 25.4**	**-1.9**
FRGS				*e*Sn	**Sb**	**04 51 00.3**	**-2.1**
KOME	**Kolasin**	**2.85**	**117**	*e*Pn	**Pn**	**04 50 24.1**	**+1.4**
KOME				*e*Sn	**Sn**	**04 50 59.9**	**+2.2**
PDG	**Podgorica**	**2.93**	**126**	⇑P	**Pb**	**04 50 29.7**	**+0.7**
PDG				⇑S	**Sb**	**04 51 03.6**	**-1.7**
PDG	**Podgorica**	**2.93**	**126**	*e*Pn	**Pn**	**04 50 25.3**	**+1.7**
PDG				*i* Sn	**Sn**	**04 51 01.9**	**+2.5**
PDG	**Podgorica**	**2.93**	**126**	*e*Pn	**Pn**	**04 50 25.0**	**+1.4**
PDG				*e*Sn	**Sn**	**04 51 01.8**	**+2.4**
MYKA	**Terra Mystica**	**2.96**	**326**	Pn	**Pn**	**04 50 25.5**	**+1.4**
	comp=Z,2.5nm,0.4s						
IVAS	**Ivanjica**	**3.02**	**101**	*e*Pn	**Pn**	**04 50 26.5**	**+1.6**
ARSA	**Arzberg**	**3.06**	**353**	*e*Pn	**Pn**	**04 50 25.4**	**0.0**
	comp=Z,5.4nm,0.4s						
ARSA				*e*Sn	**Sn**	**04 51 02.7**	**0.0**
	comp=Z,2.8nm,0.4s						
IVA	**Berane**	**3.09**	**114**	*e*Pn	**Pn**	**04 50 26.2**	**+0.3**
IVA				*i* Sn	**Sb**	**04 51 10.2**	**+0.3**
TRUS	**Trudelj**	**3.12**	**88**	*e*Pn	**Pn**	**04 50 27.6**	**+1.4**
ULC	**Ulcinj**	**3.24**	**133**	*e*Pn	**Pn**	**04 50 29.5**	**+1.6**
ULC				*i* Sn	**Sn**	**04 51 09.6**	**+2.6**
PVY	**Plav**	**3.27**	**118**	*e*Pn	**Pn**	**04 50 29.9**	**+1.5**
PVY				*i* Sn	**Sn**	**04 51 10.3**	**+2.4**
GRUS	**Gruza**	**3.37**	**94**	*e*Pn	**Pn**	**04 50 30.9**	**+1.3**
KBA	**Koelnbreinsper**	**3.44**	**327**	Sn	**Sg**	**04 51 32.5**	**+6.1**
	comp=Z,14nm,0.6s						
RONA	**Rosalia, Austr**	**3.49**	**3**	*i* Pn	**Pn**	**04 50 31.4**	**+0.1**
	comp=Z,3.6nm,0.5s						
ABTA	**Abfaltersbach**	**3.56**	**317**	Sn	**Sg**	**04 51 32.2**	**+2.0**
	comp=Z,26nm,0.8s						
CONA	**Conrad Observa**	**3.72**	**358**	*e*Pn	**Pn**	**04 50 34.2**	**-0.3**
	comp=Z,2.5nm,0.4s,SNR=7.2						
CONA				*e*Sn	**Sn**	**04 51 20.9**	**+2.0**
	comp=Z,3.2nm,0.4s						
SELS	**Selova**	**3.80**	**103**	*e*Pn	**Pn**	**04 50 37.2**	**+1.7**
SELS				*e*Sn	**Sn**	**04 51 21.9**	**+1.1**
MOA	**Molln**	**3.84**	**342**	*e*Pn	**Pn**	**04 50 36.5**	**+0.3**

	comp=Z,5.8nm,0.4s,SNR=5.7								
MOA					*e*Sn		**Sn**	**04 51 21.6**	**-0.4**
	comp=Z,11nm,0.6s								
BIOA	**Bad Ischl, Aus**	**3.87**	**335**		*e*Pn		**Pn**	**04 50 37.1**	**+0.6**
	comp=Z,4.6nm,0.4s,SNR=5.7								
BIOA					*e*Sn		**Sn**	**04 51 23.6**	**+1.0**
	comp=Z,7.2nm,0.5s								
LESA	**Schwarzleotal**	**3.99**	**325**		*e*Pn		**Pn**	**04 50 35.2**	**-3.0**
	comp=Z,1.0nm,0.3s								
LESA					*e*Sn		**Sn**	**04 51 25.9**	**+0.2**
	comp=Z,8.5nm,0.6s								
MDVR	**Moldovita**	**4.08**	**80**	⇑	*i*P		**Pb**	**04 50 49.8**	**+1.2**
BOVS	**Bovan**	**4.12**	**96**	⇑	*i*P		**Pn**	**04 50 40.9**	**+1.0**
BOVS				⇓	*i*Sg		**Sn**	**04 51 28.2**	**-0.4**
BOVS	**Bovan**	**4.12**	**96**		*e*Pn		**Pn**	**04 50 40.1**	**+0.2**
BZS	**Buzias**	**4.18**	**69**	⇑	*i*P		**Pg**	**04 50 54.6**	**-1.5**
MODS	**Modra-Piesok**	**4.24**	**11**		*e*PN		**Pn**	**04 50 41.2**	**-0.5**
MODS					*e*PG		**Pg**	**04 50 56.2**	**-1.0**
WTTA	**Wattenberg**	**4.35**	**316**		*e*Pn		**Pn**	**04 50 42.3**	**-1.0**
	comp=Z,2.1nm,0.5s								
WTTA					*e*Sn		**Sn**	**04 51 35.1**	**+0.5**
	comp=Z,21nm,0.7s								
BARS	**Barje**	**4.41**	**107**		*e*Pn		**Pn**	**04 50 45.4**	**+1.5**
WATA	**Walderalm**	**4.43**	**316**		*e*Pn		**Pn**	**04 50 45.7**	**+1.4**
	comp=Z,3.8nm,0.3s								
SIRR	**Siria**	**4.45**	**61**	⇓	*i*P		**Pg**	**04 50 58.5**	**-2.7**
ZAGS	**Zajecar**	**4.47**	**93**		*e*Pn		**Pn**	**04 50 46.1**	**+1.4**
SQTA	**Sankt Quirin**	**4.54**	**313**		*e*Sn		**Sn**	**04 51 41.2**	**+1.9**
	comp=Z,9.2nm,0.7s								
FETA	**Feichten**	**4.68**	**309**		*e*Pn		**Pn**	**04 50 47.4**	**-0.4**
	comp=Z,0.4nm,0.4s								
CKRC	**Cesky Krumlov**	**4.76**	**346**		*e*PN		**Pn**	**04 50 48.6**	**-0.2**
JAVC	**Velka Javorina**	**4.78**	**13**		*e*PN		**Pn**	**04 50 49.5**	**+0.5**
ZAPS	**Zavoj**	**4.85**	**99**		*e*Pn		**Pn**	**04 50 51.2**	**+1.2**
KRUC	**Moravsky**	**4.85**	**3**		*e*PN		**Pn**	**04 50 50.3**	**+0.3**
RETA	**Reutte**	**4.94**	**313**		*e*Pn		**Pn**	**04 50 53.9**	**+2.6**
	comp=Z,0.8nm,0.4s								
RETA					*e*Sn		**Sn**	**04 51 50.5**	**+1.4**
	comp=Z,8.8nm,0.6s								
VRAC	**Vranov**	**5.11**	**4**		*e*PN		**Pn**	**04 50 53.7**	**+0.2**
KHC	**Kasperske Hory**	**5.21**	**342**		*e*SN		**Sn**	**04 51 55.0**	**-0.6**
ZVC	**Zvikov**	**5.38**	**347**		*e*Pn		**Pn**	**04 50 57.0**	**-0.3**
ZVC					*e*SN		**Sn**	**04 51 57.2**	**-2.6**
MORC	**Moravsky Berou**	**5.65**	**10**		*e*PN		**Pn**	**04 51 01.8**	**+0.7**
NKC	**Novy Kostel**	**6.50**	**339**		*e*PN		**Pn**	**04 51 10.6**	**-2.1**
CLL	**Collm**	**7.39**	**345**		*i* Sg		**Sg**	**04 53 30.1**	**-3.0**

*SSNC **07** 05:01:52.5±0.8, 19°.85N×75°.52W, h23km±4km, MD2.6, ML2.2, Presumed earthquake*
*JSN **07** 05:01:52.8±0.8, 19°.52N×75°.61W, h0km±919km, MD3.8, MW4.5, Presumed earthquake*
*SDD **07** 05:01:53.1±1.5, 19°.90N×75°.52W, h31km±33km, MD3.3, ML2.5, MW2.8, Presumed earthquake*

ISC 07 05:01:50.6±1.2, **19°.83N**±0°.06×**75°.51W**±0°.03, **h33**km±3km, **n17**, σ0**966**/29, **2C-7D**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
RCC	**Rio Carpintero**	**0.24**	**313**		*e*P	**Pn**	**05 01 57.7**	**+0.2**
GTBY	**Guantanamo Bay**	**0.39**	**75**		*e*P	**Pn**	**05 02 00.2**	**+0.2**
GTBY					*e*S	**Sb**	**05 02 05.8**	**+0.1**
GTBY	**Guantanamo Bay**	**0.39**	**75**	⇓	*e*Pg	**Pn**	**05 02 00.4**	**+0.4**
GTBY					IAML		05 02 07.0	
	comp=N,464nm,0.6s							
GTBY				⇑	*e*Sg	**Sn**	**05 02 07.1**	**+1.0**
MARVS	**Santiago de Cu**	**0.40**	**295**		*e*P	**Pb**	**05 02 00.1**	**+0.3**
MARVS					*e*S	**Sb**	**05 02 05.9**	**-0.3**
MARVS					IAML		05 02 06.4	
	comp=N,291nm,0.1s							
MARVS					IAML		05 02 06.9	
	comp=E,199nm,0.2s							
PINC	**Pinares de May**	**0.71**	**338**		*e*P	**Pn**	**05 02 03.9**	**-0.4**
PINC					*e*S	**Sn**	**05 02 12.6**	**-1.4**
QMBU	**Quimbuelo**	**0.75**	**61**		*e*P	**Pn**	**05 02 04.8**	**-0.2**
QMBU					*e*S	**Sn**	**05 02 14.4**	**-0.9**
QMBU					IAML		05 02 14.8	
	comp=N,164nm,0.3s							
QMBU					IAML		05 02 15.1	
	comp=E,181nm,0.2s							
QMBU	**Quimbuelo**	**0.75**	**61**	⇓	*e*Pg	**Pn**	**05 02 05.0**	**0.0**
QMBU					IAML		05 02 16.3	
	comp=N,208nm,0.2s							
CHIV	**Chivirico**	**0.86**	**280**		*e*P	**Pn**	**05 02 06.9**	**+0.5**
CHIV					*e*S	**Sb**	**05 02 19.3**	**+0.7**
NMDO	**Nuevo Mundo**	**0.88**	**34**		*e*P	**Pn**	**05 02 06.7**	**0.0**
NMDO					*e*S	**Sn**	**05 02 17.8**	**-0.5**
NMDO					IAML		05 02 18.4	
	comp=E,104nm,0.2s							
NMDO					IAML		05 02 19.0	
	comp=N,93nm,0.2s							
NMDO	**Nuevo Mundo**	**0.88**	**34**		*e*Pg	**Pn**	**05 02 07.2**	**+0.5**
NMDO				⇓	*e*Sg	**Sn**	**05 02 18.0**	**-0.3**
NMDO					IAML		05 02 19.1	
	comp=N,129nm,0.4s							
MOAC	**Moa**	**0.98**	**32**		*e*P	**Pn**	**05 02 08.2**	**+0.2**
MOAC					*e*S	**Sn**	**05 02 20.4**	**-0.3**
HLGC	**Holguin**	**1.18**	**334**		*e*P	**Pb**	**05 02 13.0**	**+0.5**
MASC	**Masc**	**1.25**	**74**		*e*P	**Pn**	**05 02 12.4**	**+0.6**
MASC					*e*S	**Sn**	**05 02 27.7**	**+0.2**
MASC					IAML		05 02 31.1	
	comp=E,20nm,0.2s							
MASC					IAML		05 02 31.2	
	comp=N,38nm,0.2s							
MASC	**Masc**	**1.25**	**74**	⇓	*e*Pg	**Pb**	**05 02 14.0**	**+0.3**
MASC				⇑	*e*Sg	**Sn**	**05 02 27.7**	**+0.2**
MASC					IAML		05 02 31.8	
	comp=N,35nm,0.6s							
LMGC	**Las Mercedes**	**1.43**	**280**		*e*P	**Pn**	**05 02 14.6**	**+0.4**
LMGC					*e*S	**Sn**	**05 02 30.9**	**-0.9**
STH	**Stony Hill**	**2.13**	**215**	⇓	*i*P	**Pn**	**05 02 24.0**	**0.0**
REDR	**Restauracion**	**3.94**	**99**	⇓	*e*Pg	**Pn**	**05 02 47.0**	**-1.8**
REDR				⇓	*e*Sg	Sn	05 03 25.6	-8.2
REDR					IAML		05 03 38.0	
	comp=N,15nm,1.4s							

*RSNC **07** 05:05:44.7±0.0, 7°.1N×1°.7W, h147km±1km, M3.4, mB4.8, mb3.8, ML3.1, Mw(mB)4.1*
*FUNV **07** 05:05:46.3, 6°.93N×73°.20W, h125km, MW3.8, Presumed earthquake*

ISC 07 05:05:42.6±1.3, **6°.84N**±0°.03×**73°.12W**±0°.04, **h156**km±8km, **n36**, σ1**944**/66, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**193**		P	**Pn**	**05 06 04.6**	**+0.6**
BARC					S	**Sn**	**05 06 20.0**	**-0.3**
BRJC	**Barrancabermej**	**0.63**	**282**		P	**Pn**	**05 06 06.3**	**+1.1**
BRJC					S	**Sn**	**05 06 23.4**	**+0.9**
PAMC	**Pamplona, Colo**	**0.65**	**40**		P	**Pn**	**05 06 07.4**	**+1.4**
PAMC					S	**Sn**	**05 06 24.4**	**+0.6**
RUSC	**La Rusia**	**0.94**	**178**		P	**Pn**	**05 06 08.5**	**+0.5**
RUSC					S	**Sn**	**05 06 27.1**	**-0.4**
RUSC	**La Rusia**	**0.94**	**178**		*e*P	**Pn**	**05 06 08.7**	**+0.7**
RUSC					*e*S	**Sn**	**05 06 24.9**	**-2.6**
CAPV	**Capacho**	**1.30**	**38**		*e*P	**Pn**	**05 06 12.0**	**+1.2**
CAPV					*e*S	**Sn**	**05 06 29.7**	**-2.7**
PTBC	**PUERTO BERRIO,**	**1.36**	**257**		P	**Pn**	**05 06 11.2**	**+0.1**
PTBC					S	**Sn**	**05 06 32.3**	**-0.7**
OCAC	**Ocana**	**1.40**	**352**		P	**Pn**	**05 06 12.6**	**+0.8**
OCAC					S	**Sn**	**05 06 35.2**	**+1.0**
SPBC	**San Pablo de B**	**1.51**	**219**		P	**Pn**	**05 06 13.5**	**+0.7**
SPBC					S	**Sn**	**05 06 35.9**	**-0.1**
CHIC	**Chingaza**	**2.28**	**195**		P	**Pn**	**05 06 22.5**	**+0.7**
CHIC					S	**Sn**	**05 06 51.9**	**0.0**
ROSC	**El Rosal**	**2.32**	**211**		P	**Pn**	**05 06 24.3**	**+2.1**
ROSC					S	**Sn**	**05 06 52.0**	**-0.7**
CVER	**Cruz Verde, Cu**	**2.49**	**202**		P	**Pn**	**05 06 25.9**	**+1.5**
CVER					S	**Sn**	**05 06 57.1**	**+0.5**
UREC	**San Jos de Ur**	**2.56**	**291**		P	**Pn**	**05 06 24.4**	**-0.3**
UREC					S	**Sn**	**05 06 55.8**	**-1.4**
SOCV	**Socops**	**2.67**	**57**		*e*P	**Pn**	**05 06 27.9**	**+1.9**
VILC	**Villavicencio,**	**2.77**	**192**		P	**Pn**	**05 06 27.9**	**+0.4**
VILC					S	**Sn**	**05 07 02.3**	**+0.1**
CBOC	**Ciudad Bolivar**	**3.03**	**251**		P	**Pn**	**05 06 32.2**	**+1.5**
CBOC					S	**Sn**	**05 07 09.2**	**+1.2**
DBBC	**Dabeiba**	**3.07**	**273**		P	**Pn**	**05 06 32.1**	**+1.0**
DBBC					S	**Sn**	**05 07 07.9**	**-0.8**
SDV	**Santo Domingo**	**3.20**	**50**		P	**Pn**	**05 06 34.0**	**+1.2**
SDV					S	**Sn**	**05 07 11.1**	**-0.7**
SDV	**Santo Domingo**	**3.20**	**50**		*e*P	**Pn**	**05 06 34.3**	**+1.4**
ARGC	**Ariguani, Magd**	**3.20**	**340**		P	**Pn**	**05 06 34.6**	**+1.9**
ARGC					S	**Sn**	**05 07 13.0**	**+1.4**
MCQV	**Machiques**	**3.24**	**10**		*e*P	**Pn**	**05 06 34.8**	**+1.6**
PRAC	**Prado**	**3.57**	**210**		P	**Pn**	**05 06 37.6**	**+0.1**
PRAC					S	**Sn**	**05 07 19.4**	**-0.7**
APAC	**Apartado, Choc**	**3.59**	**287**		P	**Pn**	**05 06 37.9**	**+0.3**
APAC					S	**Sn**	**05 07 20.0**	**-0.4**
ORTC	**Ortega, Tolima**	**3.60**	**216**		P	**Pn**	**05 06 38.8**	**+0.9**
ORTC					S	**Sn**	**05 07 20.6**	**-0.2**
SJCC	**San Jacinto, C**	**3.66**	**326**		P	**Pn**	**05 06 38.2**	**-0.4**
SJCC					S	**Sn**	**05 07 19.9**	**-2.2**
SJCC	**San Jacinto, C**	**3.66**	**326**		*e*P	**Pn**	**05 06 38.9**	**+0.3**
URMC	**La Uribe, Meta**	**3.78**	**199**		P	**Pn**	**05 06 41.4**	**+1.1**
URMC					S	**Sn**	**05 07 24.5**	**-0.7**
YOTC	**Yotoco, Valle**	**4.28**	**229**		P	**Pn**	**05 06 47.1**	**+0.3**
MACC	**Macarena, Meta**	**4.72**	**189**		P	**Pn**	**05 06 51.6**	**-0.9**
MACC					S	**Sn**	**05 07 42.6**	**-4.4**
URIC	**Uribia, Colomb**	**4.96**	**13**		P	**Pn**	**05 06 54.4**	**-1.1**
URIC					S	**Sn**	**05 07 50.9**	**-1.7**
URIC	**Uribia, Colomb**	**4.96**	**13**		*e*P	**Pn**	**05 06 55.3**	**-0.2**
URIC					*e*S	**Sn**	**05 07 46.8**	**-5.8**
JAMC	**Jamundi, Valle**	**5.05**	**225**		P	**Pn**	**05 06 56.8**	**-0.2**
	6.7nm,0.4s							
JAMC					S	**Sn**	**05 07 55.6**	**+0.6**
	6.7nm,0.4s							
GARC	**Garzon, Huila**	**5.19**	**207**		P	**Pn**	**05 06 58.5**	**-0.4**
GARC					S	**Sn**	**05 07 56.5**	**-2.0**
POPC	**Popayan, Colom**	**5.55**	**220**		P	**Pn**	**05 07 04.2**	**+0.6**
	5.4nm,0.5s							
POPC					S	**Sn**	**05 08 05.9**	**-1.0**
	5.4nm,0.5s							
FLOC	**Florencia**	**5.80**	**206**		P	**Pn**	**05 07 07.0**	**+0.2**
	6.9nm,0.8s							
FLOC					S	**Sn**	**05 08 12.4**	**-0.3**
	6.9nm,0.8s							
BBAC	**Balboa, Cauca**	**6.31**	**221**		P	**Pn**	**05 07 15.1**	**+1.4**

IDC 07 05:06:35.1±1.3, **2°.64S×138°.39E, h0km, mb3.5/3, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=28.0km s-min=17.8km az=173.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.32**	**87**		Pn	Pn	05 07 15.1	+0.4
	3.1nm,0.3s,baz=237,slow=9.7,SNR=11							
JAY					Lg	Lg	05 07 47.5	
	6.3nm,0.3s,baz=140,slow=22,SNR=6.9							
	16nm,0.5s							
WRA	**Warramunga Arr**	**17.64**	**193**		P	Pn	05 10 42.8	+0.2
	0.3nm,0.3s,baz=1.4,slow=12,SNR=12							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**21.35**	**191**		P	P	05 11 23.9	-0.3
	1.2nm,0.7s,baz=21,slow=12,SNR=9.4							
	1.2nm,0.7s							
MKAR	**Makanchi Array**	**69.54**	**323**		P	P	05 17 46.6	+0.7
	0.4nm,0.6s,baz=117,slow=6.7,SNR=5.0							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**85.90**	**24**		P	P	05 19 16.3	-0.5
	0.5nm,0.9s,baz=258,slow=5.7,SNR=2.3							
	0.5nm,0.9s							

*KRSC **07** 05:18:36.9±1.1, 58°.74N×158°.68E, h14km±6km, Ml3.8*
*NERS **07** 05:18:46.1, 58°.96N×158°.22E, h33km*

ISC 07 05:18:39.4±1.1, **58°.71N**±0°.06×**158°.80E**±0°.03, **h10**km, **n13**, σ2**969**/25, **Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
PALN	**Palana**	**0.71**	**57**		*e*P	**Pg**	**05 18 51.0**	**-2.2**
PALN					*e*S	**Sg**	**05 19 00.9**	**-1.6**
OSSR	**Ossora**	**2.27**	**74**		*e*P	**Pn**	**05 19 16.9**	**0.0**
ESO	**Esso**	**2.79**	**181**		*e*P	**Pn**	**05 19 23.3**	**-0.8**
KBTR	**Krutoberegovo**	**3.32**	**137**		*e*P	**Pn**	**05 19 33.1**	**+1.7**
GADL	**Gadlja**	**3.97**	**287**		*e*P	**Pn**	**05 19 39.0**	**-1.2**
GADL					*e*Pg	**Pg**	**05 19 55.8**	**+0.4**
GADL					Pgmax		05 19 56.7	
	50nm,0.5s							
GADL					*e*Sg	**Sb**	**05 20 41.3**	**+4.0**
GADL					Sgmax		05 20 58.8	
	280nm,0.7s							
TLAR	**Talaya**	**4.04**	**310**		*e*P	**Pn**	**05 19 41.2**	**0.0**
TLAR					Pmax		05 19 43.3	
	10.0nm,0.6s							
TLAR					*e*Pg	**Pg**	**05 19 54.4**	**-2.3**
TLAR					Pgmax		05 19 57.5	
	30nm,0.6s							
TLAR					*e*Sg	**Sb**	**05 20 42.9**	**+3.5**
TLAR					Sgmax		05 20 49.5	
	100nm,0.5s							
OMS	**Omsukchan**	**4.10**	**340**		*e*Pg	**Pb**	**05 19 53.0**	**+1.4**
OMS					Pgmax		05 20 04.8	
	10.0nm,0.3s							
OMS					*e*Sg	**Sg**	**05 20 47.5**	**-3.4**
OMS					Sgmax		05 21 03.1	
	50nm,0.6s							
OMS					Sgmax		05 21 03.1	
	40nm,0.7s							
TILK	**Tilichiki**	**4.12**	**62**		*e*P	**Pn**	**05 19 44.6**	**+2.3**
MA2	**Magadan**	**4.23**	**285**		*e*P	**Pn**	**05 19 45.7**	**+1.8**
MA2					*e*Pg	**Pg**	**05 19 59.0**	**-1.4**
MA2					Pgmax		05 20 03.5	
	20nm,0.6s							
MA2					*e*Sg	**Sb**	**05 20 47.9**	**+3.0**
MA2					Sgmax		05 21 09.7	
	60nm,0.8s							
MA2					Sgmax		05 21 09.7	
	40nm,0.8s							
MGD	**Magadan 1**	**4.34**	**291**		*e*Pg	**Pg**	**05 20 00.9**	**-1.6**
MGD					Pgmax		05 20 01.2	
	10.0nm,0.4s							
MGD					*e*Sg	**Sb**	**05 20 52.3**	**+4.2**
MGD					Sgmax		05 21 04.0	
	60nm,0.6s							
SEY	**Seymchan**	**5.27**	**326**		*e*P	**Pn**	**05 20 00.0**	**+1.8**
SEY					*e*Pg	**Pg**	**05 20 18.3**	**-2.0**
SEY					Pgmax		05 20 26.0	
	10.0nm,0.6s							
SEY					*e*Sg	**Sg**	**05 21 24.7**	**-3.8**
SEY					Sgmax		05 21 40.5	
	20nm,0.8s							
SEY					Sgmax		05 21 40.5	
	10.0nm,0.7s							
TLON	**Talon**	**5.31**	**286**		*e*Sg	**Sg**	**05 21 24.8**	**-5.1**
TLON					Sgmax		05 21 30.2	
	70nm,0.6s							
SUUS	**Susuman**	**6.62**	**313**		*e*P	**Pn**	**05 20 18.3**	**+1.6**
SUUS					*e*Sg	**Sg**	**05 22 08.6**	**-3.0**
SUUS					Sgmax		05 22 30.6	
	40nm,0.9s							
SUUS					Sgmax		05 22 30.6	
	30nm,1.0s							

*RSPR **07** 05:20:47.0, 17°.83N×66°.90W, h3km, MD2.8/9*
*SDD **07** 05:20:47.4±2.1, 17°.75N×66°.94W, h21km±22km, MD3.3, ML2.5, MW2.6, Presumed earthquake*

ISC 07 05:20:43.8±1.5, **17°.68N**±0°.07×**66°.92W**±0°.03, **h14**km±9km, **n20**, σ0**962**/38, **15C-8D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.30**	**7**	⇑	*e*P	**Pg**	**05 20 50.4**	**+0.2**
GBPR					*e*S	**Sg**	**05 20 52.7**	**-1.7**
CRPR	**Cabo Rojo, PR**	**0.38**	**331**	⇑	*e*Pg	**Pb**	**05 20 52.8**	**+0.5**
CRPR					IAML		05 20 57.1	
	comp=N,375nm,0.3s							
CRPR				⇑	*e*Sg	**Sg**	**05 20 57.3**	**+0.7**
CRPR	**Cabo Rojo, PR**	**0.38**	**331**	⇓	*e*P	**Pb**	**05 20 52.9**	**+0.6**
CRPR					*e*S	**Sg**	**05 20 57.1**	**+0.4**
OBIP	**Obispado Ponce**	**0.47**	**39**	⇑	*e*P	**Pb**	**05 20 54.0**	**+0.2**
OBIP					*e*S	**Sb**	**05 21 00.3**	**-0.4**
LSP	**Las Mesas**	**0.52**	**342**	⇑	*e*P	**Pb**	**05 20 55.0**	**+0.1**
LSP					*e*S	**Sb**	**05 21 01.9**	**-0.3**
PRSN	**Puerto Rico Se**	**0.58**	**338**	⇓	*e*Pg	**Pb**	**05 20 56.1**	**+0.4**
PRSN				⇑	*e*Sg	**Sb**	**05 21 03.5**	**-0.3**
PRSN					IAML		05 21 03.7	
	comp=N,208nm,0.3s							
PRSN	**Puerto Rico Se**	**0.58**	**338**	⇓	*e*P	**Pb**	**05 20 56.0**	**+0.3**
PRSN					*e*S	**Sb**	**05 21 03.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.81**	**347**	⇓	*e*Pg	**Pg**	**05 20 59.9**	**+0.3**
AGPR				⇓	*e*Sg	**Sg**	**05 21 09.9**	**-0.3**
AGPR					IAML		05 21 46.8	
	comp=N,144nm,2.9s							
AGPR	**Aguadilla, PR**	**0.81**	**347**	⇑	*e*P	**Pg**	**05 20 59.7**	**+0.1**
AGPR					*e*S	**Sg**	**05 21 09.6**	**-0.6**
ECPR	**Experimental S**	**0.83**	**39**	⇑	*e*P	**Pb**	**05 21 00.3**	**+0.3**
ECPR					*e*S	**Sg**	**05 21 10.5**	**-0.4**
SJG	**San Juan**	**0.85**	**59**		*e*Pg	**Pn**	**05 21 01.2**	**-0.1**
SJG				⇓	*e*Sg	**Sn**	**05 21 13.0**	**-0.6**
SJG	**San Juan**	**0.85**	**59**	⇑	*e*P	**Pn**	**05 21 01.4**	**+0.1**
SJG					*e*S	**Sn**	**05 21 12.9**	**-0.6**
EMPR	**Esperanza - Ma**	**0.88**	**25**	⇑	*e*P	**Pg**	**05 21 01.5**	**+0.6**
EMPR					*e*S	**Sb**	**05 21 11.5**	**-0.9**
IDE	**Isla Desecheo**	**0.88**	**323**	⇑	*e*P	**Pn**	**05 21 02.0**	**+0.2**
IDE					*e*S	**Sg**	**05 21 13.0**	**+0.4**
GCPR	**Guaynabo City**	**1.01**	**51**	⇑	*e*P	**Pb**	**05 21 03.5**	**+0.4**
GCPR					*e*S	**Sg**	**05 21 17.1**	**+0.4**
HUMP	**Col San Antoni**	**1.12**	**65**	⇑	*e*P	**Pg**	**05 21 05.9**	**+0.5**
HUMP					*e*S	**Sn**	**05 21 21.5**	**+1.3**
HIDR	**Higuey Centro**	**1.94**	**298**	⇑	*e*Pg	**Pg**	**05 21 20.7**	**-0.3**
HIDR				⇓	*e*Sg	**Sb**	**05 21 44.1**	**+1.1**
HIDR					IAML		05 22 28.9	
	comp=N,39nm,2.4s							
MIDR	**Miches**	**2.41**	**303**		*e*Pg	**Pb**	**05 21 27.0**	**+0.1**
MIDR					IAML		05 22 24.7	
	comp=N,26nm,2.5s							
HATOM	**Hato Mayor del**	**2.59**	**296**	⇓	*e*Pg	**Pb**	**05 21 29.8**	**-0.3**
HATOM				⇑	*e*Sg	**Sb**	**05 22 00.7**	**-1.1**
HATOM					IAML		05 22 33.3	
	comp=N,31nm,2.5s							
DSLB	**Salisbury**	**5.72**	**112**		*e*P	**Pn**	**05 22 07.9**	**-0.4**

*JMA **07** 05:23:07.0±0.1, 23°.8N±0°.5×12°.2E±°, h41km±2km, MV3.3/13, TAIWAN REGION*
*TAP **07** 05:23:07.6, 23°.80N×121°.57E, h45km, ML3.7, C*

ISC 07 05:23:07.9±1.2, **23°.79N**±0°.02×**121°.61E**±0°.02, **h41**km±4km, **n151**, σ1**907**/262, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
SHUL	**Shoufeng**	**0.04**	**270**		*e*P	**Pn**	**05 23 15.1**	**+0.6**
SHUL					*e*S	**Sn**	**05 23 20.6**	**+1.5**
TEYL	**Yanliau Villag**	**0.08**	**355**		*i* P	**Pn**	**05 23 15.3**	**+0.6**
TEYL					S	**Sn**	**05 23 21.5**	**+2.2**
TEGC	**Jichi Village**	**0.10**	**218**		P	**Pn**	**05 23 15.1**	**+0.5**
TEGC					S	**Sn**	**05 23 22.6**	**+3.3**
ESL	**Shilin**	**0.16**	**280**		P	**Pn**	**05 23 14.6**	**-0.5**
ESL					*e*S	**Sn**	**05 23 19.4**	**-0.6**
HWA	**Hwalien**	**0.19**	**360**		P	**Pn**	**05 23 15.8**	**+0.5**
HWA					*e*S	**Sn**	**05 23 22.2**	**+1.8**
EGFH	**Guangfu**	**0.20**	**234**		*e*P	**Pn**	**05 23 15.0**	**-0.3**
EGFH					*e*S	**Sn**	**05 23 21.3**	**+0.8**
ETM	**Tongmen**	**0.21**	**330**		*i* P	**Pn**	**05 23 15.0**	**-0.4**
ETM					S	**Sn**	**05 23 20.4**	**-0.3**
WARBT	**Fenglin Townsh**	**0.21**	**251**		*i* P	**Pn**	**05 23 14.9**	**-0.6**
WARBT					S	**Sn**	**05 23 20.0**	**-0.7**
LXIB	**Xiulin Townshi**	**0.29**	**323**		*i* P	**Pn**	**05 23 15.2**	**-0.7**
LXIB					S	**Sn**	**05 23 21.5**	**-0.8**
TWD	**Chiawan**	**0.29**	**358**		*i* P	**Pn**	**05 23 15.9**	**-0.3**
TWD					S	**Sn**	**05 23 21.7**	**-0.2**
HGSD	**Ruisui**	**0.34**	**210**		*i* P	**Pn**	**05 23 17.1**	**+0.4**
HGSD					S	**Sn**	**05 23 24.6**	**+1.7**
ETL	**Fush Village**	**0.37**	**2**		P	**Pn**	**05 23 17.0**	**-0.2**
ETL					S	**Sn**	**05 23 22.9**	**-0.7**
EHY	**Hungye**	**0.38**	**223**		*i* P	**Pn**	**05 23 16.3**	**-0.9**
EHY					*i* S	**Sn**	**05 23 22.8**	**-0.9**
NACB	**Ninganchiao**	**0.39**	**358**		P	**Pn**	**05 23 16.7**	**-0.6**
NACB	**Ninganchiao**	**0.39**	**358**		S	**Sn**	**05 23 22.5**	**-1.3**
NACB	**Ninganchiao**	**0.39**	**358**		*i* P	**Pn**	**05 23 16.6**	**-0.7**
NACB					*i* S	**Sn**	**05 23 22.9**	**-0.9**
OWD	**Renai**	**0.43**	**293**		P	**Pn**	**05 23 17.7**	**-0.2**
OWD					S	**Sn**	**05 23 24.5**	**-0.5**
VWDT	**VWDT**	**0.43**	**266**		*i* P	**Pn**	**05 23 17.8**	**0.0**
VWDT					S	**Sn**	**05 23 24.8**	**+0.1**
ETLH	**Xiulin Townshi**	**0.43**	**345**		*i* P	**Pn**	**05 23 17.2**	**-0.7**
ETLH					S	**Sn**	**05 23 23.7**	**-1.3**
WHF	**Hehuan Shan**	**0.47**	**319**		P	**Pn**	**05 23 18.3**	**-0.5**
WHF					S

WDL	Douliou City	0.98	266	*e*P	Pn	05 23 24.9	-0.3
WDL				*e*S	Sn	05 23 40.2	+2.3
WCKO	Fanlu	0.98	250	*i* P	Pn	05 23 26.4	+1.1
WCKO				S	Sn	05 23 39.6	+1.6
WDLH	Douliu	0.98	264	P	Pn	05 23 25.9	+0.6
WDLH				S	Sn	05 23 40.0	+2.0
NWLT	Wulai	0.99	355	P	Pn	05 23 25.1	-0.3
NWLT				S	Sn	05 23 37.3	-0.9
NSY	Sanyi	0.99	309	P	Pn	05 23 26.0	+0.5
NSY				*i* S	Sn	05 23 39.7	+1.3
WCHH	Zhanghua	1.00	287	P	Pn	05 23 26.2	+0.7
WCHH				S	Sn	05 23 40.1	+1.7
NSTT	Nanjuang	1.01	327	P	Pn	05 23 26.4	+0.8
NSTT				S	Sn	05 23 39.3	+0.7
WCH1	Changhua City	1.01	286	P	Pn	05 23 26.7	+1.1
WCH1				S	Sn	05 23 40.9	+2.3
LIOB	Emei	1.01	328	P	Pn	05 23 26.5	+0.8
LIOB				*e*S	Sn	05 23 39.9	+1.1
TPUB	Ta-pu	1.02	242	P	Pn	05 23 26.4	+0.7
TPUB	Ta-pu	1.02	242	S	Sn	05 23 40.1	+1.2
TPUB	Ta-pu	1.02	242	P	Pn	05 23 26.5	+0.7
TPUB				S	Sn	05 23 40.2	+1.3
NMLH	Miaoli	1.05	315	P	Pn	05 23 26.8	+0.5
NMLH				S	Sn	05 23 40.7	+0.9
WTP	Ta-pu	1.06	240	P	Pn	05 23 26.9	+0.6
WTP				S	Sn	05 23 41.3	+1.4
KSHI	Guanxi Townshi	1.06	338	P	Pn	05 23 27.6	+1.2
KSHI				*e*S	Sn	05 23 41.5	+1.6
CHN2	Minshiung	1.07	256	S	Sn	05 23 42.2	+2.2
TWG	Pinlang	1.08	207	*e*P	Pn	05 23 24.7	-1.9
TWG				*e*S	Sn	05 23 38.4	-2.0
TWGBT	Beinan	1.08	207	P	Pn	05 23 26.8	+0.8
TWGBT	Beinan	1.08	207	P	Pn	05 23 26.8	-1.8
EGS		1.09	16	P	Pn	05 23 26.9	+0.2
TTN	Taitung	1.11	202	*e*P	Pn	05 23 26.3	-0.7
CHY	Chiayi	1.12	255	*e*P	Pn	05 23 27.7	+0.5
CHY				*e*S	Sn	05 23 42.5	+1.2
WRL	Guolierlin Hig	1.13	276	P	Pn	05 23 27.8	+0.5
WRL				S	Sn	05 23 43.1	+1.4
SBCB	Hsinchu	1.15	331	*e*P	Pn	05 23 29.0	+1.4
SBCB				*e*S	Sn	05 23 43.6	+1.5
TWK	Hsinying	1.15	243	P	Pn	05 23 28.4	+0.8
TWK				S	Sn	05 23 44.0	+1.8
CHN1	Nanshi	1.16	239	P	Pn	05 23 28.4	+0.7
CHN1				S	Sn	05 23 43.6	+1.3
SNST	Tainan City	1.16	241	*e*P	Pn	05 23 29.8	+2.0
SNST				*e*S	Sn	05 23 44.9	+2.4
HSN	Hsinchu	1.17	330	*e*P	Pn	05 23 28.4	+0.6
HSN				*e*S	Sn	05 23 44.2	+1.8
NHDH	Xindian Distri	1.17	356	*e*P	Pn	05 23 28.1	+0.2
SGST	Jiashian	1.17	233	P	Pn	05 23 27.9	0.0
SGST				S	Sn	05 23 43.7	+1.0
TATO	Taipei	1.19	355	P	Pn	05 23 28.8	+0.7
TWA	Mucha	1.19	359	P	Pn	05 23 28.4	+0.3
TWA				*e*S	Sn	05 23 43.0	0.0
TIPB	Shuangxi	1.20	10	*e*P	Pn	05 23 28.6	+0.4
TIPB				*e*S	Sn	05 23 43.0	-0.3
WTCT	Ta-ch'eng	1.22	274	P	Pn	05 23 29.1	+0.6
WTCT				*e*S	Sn	05 23 45.2	+1.5
NCUH	Zhongli	1.24	342	*e*P	Pn	05 23 29.0	+0.3
NCUH				*e*S	Sn	05 23 46.3	+2.0
NCU	National Centr	1.24	342	*e*P	Pn	05 23 27.4	-1.4
TWB1	Santiao Chiao	1.27	16	P	Pn	05 23 30.1	+1.0
TWB1				*e*S	Sn	05 23 46.6	+1.7
WSF	Szhu	1.28	264	P	Pn	05 23 29.7	+0.4
WSF				*e*S	Sn	05 23 46.8	+1.6
NWF	Wu-fen Shan	1.29	7	*e*P	Pn	05 23 29.7	+0.2
NWF				*e*S	Sn	05 23 45.9	+0.3
WFSB	Wu-fen Shan	1.29	7	P	Pn	05 23 29.8	+0.3
WFSB				*e*S	Sn	05 23 45.9	+0.4
WSL	Shuilin Townsh	1.29	259	P	Pn	05 23 29.7	+0.3
WSL				S	Sn	05 23 46.1	+0.6
TWS1	Kuangyinshan	1.32	353	P	Pn	05 23 30.1	+0.2
TWS1				S	Sn	05 23 47.8	+1.5
SXI1	Grass Mountain	1.32	11	*e*P	Pn	05 23 30.7	+0.6
SXI1				*e*S	Sn	05 23 48.5	+2.0
ECL	Taimali	1.33	207	*e*P	Pn	05 23 28.3	-1.7
ECL				*e*S	Sn	05 23 43.4	-3.1
CHN8	Yiju	1.35	251	P	Pn	05 23 30.6	+0.3
CHN8				S	Sn	05 23 48.4	+1.3
YM01	YM01	1.35	359	P	Pn	05 23 30.2	-0.2
YM01				*e*S	Sn	05 23 46.9	-0.2
SSD	Sandimen	1.37	221	*e*P	Pn	05 23 31.0	+0.4
SSD				*e*S	Sn	05 23 49.3	+1.8
ZUZH	Zhuzihu	1.37	358	P	Pn	05 23 30.1	-0.3
ZUZH				S	Sn	05 23 46.9	-0.7
NTST	Danshui	1.38	354	*e*P	Pn	05 23 30.7	0.0
NTST				*e*S	Sn	05 23 48.1	+0.4
JYNG	Yonagunijimaku	1.39	61	*e*S	Sn	05 23 48.6	+0.6
YM08	YM08	1.40	359	P	Pn	05 23 30.3	-0.6
YM08				S	Sn	05 23 47.2	-0.9
SCLT	Jiali	1.43	245	S	Sn	05 23 50.8	+1.7
YOJ	Yonaguni jima	1.45	62	*e*S	Sn	05 23 50.2	+0.8
YOJ	Yonaguni jima	1.45	62	*e*S	Sn	05 23 50.1	+0.6
TWM1	Shoushan	1.45	229	*e*P	Pn	05 23 34.5	+2.8
TWM1				*e*S	Sn	05 23 53.7	+4.1
MASBT	Mashibuluo	1.47	218	*e*P	Pn	05 23 32.1	+0.1
MASBT				S	Sn	05 23 51.8	+1.7
TSCK	Chigu Township	1.54	246	*e*P	Pn	05 23 32.8	0.0
TSCK				*e*S	Sn	05 23 52.0	+0.4
EAST	Anshuo	1.56	207	*e*P	Pn	05 23 34.1	+0.9
SCZT	Fangliau	1.68	213	P	Pn	05 23 35.4	+0.6
SCZT				*e*S	Sn	05 23 57.1	+2.0
WSSB	Gushan	1.68	228	S	Sn	05 23 57.7	+2.4
SLIU	Shizi	1.73	206	P	Pn	05 23 36.6	+1.1
SLIU				*e*S	Sn	05 23 56.5	0.0
LAY	Lan-yu	1.74	182	*e*P	Pn	05 23 34.3	-1.4
LYUB	Lan-yu	1.78	181	*e*P	Pn	05 23 34.0	-2.1
LYUB				*e*S	Sn	05 23 55.7	-1.8
WDGT	Dungji	1.86	254	*e*P	Pn	05 23 37.0	-0.3
WDGT				*e*S	Sn	05 23 58.2	-1.4
PHUB	P'eng-hu	1.89	262	P	Pn	05 23 37.3	-0.3
PHUB				*e*S	Sn	05 23 59.1	-1.1
PNG	Penghu	1.89	264	P	Pn	05 23 37.4	-0.3
PNG				*e*S	Sn	05 23 59.7	-0.7
SMST	Manzhou Townsh	1.90	202	*e*P	Pn	05 23 37.7	-0.1
SMST				*e*S	Sn	05 23 59.8	-0.7
TWK1	Hengchun	1.98	202	*e*P	Pn	05 23 40.3	+1.3
TWK1				*e*S	Sn	05 24 01.9	-0.6
TWKBT	Hengchun	1.98	202	*e*P	Pn	05 23 38.6	-0.4
TWKBT				*e*S	Sn	05 24 02.8	+0.3
IRIF	Iriomote-Funau	2.02	74	*e*P	Pn	05 23 40.0	+0.5
HATJ	Hateruma jima	2.03	82	*e*P	Pn	05 23 40.1	+0.5
HATJ				*e*S	Sn	05 24 04.6	+0.9
VCHM	Qimei	2.08	254	P	Pn	05 23 39.8	-0.5
VCHM				*e*S	Sn	05 24 04.2	-0.8
JKRS	Kuro-shima	2.24	78	*e*P	Pn	05 23 43.3	+0.8
VWUC	VWUC	2.30	302	*e*P	Pn	05 23 42.2	-1.2
JIJ	Ishigaki jima	2.39	76	*e*P	Pn	05 23 44.7	+0.1
JISG	Ishigakijimahi	2.59	72	*e*P	Pn	05 23 47.5	+0.1
JISG				*e*S	Sn	05 24 16.8	-0.9
MATB	Ma-tsu	2.79	328	*e*P	Pn	05 23 48.8	-1.4
KNM	Kinmen	2.97	283	*e*P	Pn	05 23 53.0	+0.5
KNMB	Chin-men Tao	3.02	284	*e*P	Pn	05 23 52.0	-1.2
LYJJ	Jianjiangzhen	3.22	329	*e*P	Pn	05 23 54.9	-1.1
MHZQ	Yeshan	3.28	315	*e*P	Pn	05 23 55.9	-0.9
MHZQ				*e*S	Sn	05 24 31.9	-2.8
XPSS	Dashiqiu	3.38	338	*e*P	Pn	05 23 56.9	-1.4
AXDP	Jialang	3.50	289	*e*P	Pn	05 23 58.9	-0.9
ZPLA	Ao Xicun	3.53	273	*e*P	Pn	05 23 59.7	-0.6
SXFK	Yanhouchang	4.43	307	*e*P	Pn	05 24 11.6	-1.2

*SJA **07** 05:27:25.9±1.5,26°.37S×71°.26W,h34km±11km,ML3.6, MW3.3*
*GUC **07** 05:27:31.1±0.5,26°.41S×70°.69W,h50km±2km,ML3.6*
ISC 07 05:27:29.1±1.3,**26°.41S**±0.04×**71.05W**±0.08,**h34**km,**n33, σ1s55/37,1C-1D,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**0.48**	**57**	*i* P	**Pn**	**05 27 00.0**	**+0.3**
AC01				*e*S	Sn	05 27 46.4	-0.6
AC01	**Pan de Azucar**	**0.48**	**57**	*i* P	**Pb**	**05 27 39.1**	**-0.4**
AC01				IAML		05 27 49.7	
	comp=Z,969nm,0.2s						
GO03	**Copiapo**	**1.38**	**148**	*i* P	**Pn**	**05 27 52.5**	**+0.3**
GO03				*i* S	Sn	05 28 08.0	-1.3
GO03				IAML		05 28 09.2	
	comp=E,2μm,0.2s						
GO03	**Copiapo**	**1.38**	**148**	*i* P	**Pn**	**05 27 51.9**	**-0.3**
GO03				IAML		05 28 12.3	
	comp=Z,682nm,0.2s						
AC02	**Maricunga**	**1.77**	**104**	*i* P	**Pn**	**05 27 56.8**	**-1.0**
AC02				*i* S	Sn	05 28 15.1	-4.4
AC02				IAML		05 28 16.9	
	comp=E,2μm,0.3s						
AC04	**Llanos de Chal**	**1.79**	**181**	*i* P	**Pn**	**05 27 58.1**	**+0.5**
AC04				IAML		05 28 28.8	
	comp=E,487nm,0.4s						
AC04	**Llanos de Chal**	**1.79**	**181**	*i* P	**Pn**	**05 27 57.7**	**+0.1**
AC04				IAML		05 28 33.0	
	comp=Z,234nm,0.6s						
PB14	**IPOC Station P**	**1.87**	**18**	*i* P	**Pn**	**05 28 00.4**	**+1.3**
PB14				*i* S	Sn	05 28 22.3	+0.6
PB14	**IPOC Station P**	**1.87**	**18**	*i* P	**Pn**	**05 27 59.8**	**+0.7**
PB14				IAML		05 28 35.7	
	comp=Z,244nm,0.5s						
AC05	**El Transito**	**2.51**	**164**	*i* P	**Pn**	**05 28 09.2**	**+1.5**
AC05				IAML		05 28 54.2	
	comp=E,246nm,0.3s						
AC05	**El Transito**	**2.51**	**164**	*i* P	**Pn**	**05 28 08.8**	**+1.1**
AC05				IAML		05 28 54.7	
	comp=Z,176nm,0.6s						
LCO	**Las Campanas**	**2.61**	**173**	*e*P	**Pn**	**05 28 10.0**	**+0.9**
LCO	**Las Campanas**	**2.61**	**173**	*i* P	**Pn**	**05 28 09.5**	**+0.3**
LCO				IAML		05 28 53.3	
	comp=Z,379nm,0.3s						
VCA	**Vinchina**	**3.43**	**133**	*i* P	**Pn**	**05 28 22.8**	**+2.4**
VCA				IAML		05 29 22.4	
	comp=Z,57nm,0.8s						
TINO	**Tinogasta**	**3.51**	**119**	*i* P	**Pn**	**05 28 24.3**	**+2.9**
PB05	**IPOC Station P**	**3.63**	**12**	*i* P	**Pn**	**05 28 23.6**	**+0.6**
PB05	**IPOC Station P**	**3.63**	**12**	*i* P	**Pn**	**05 28 22.9**	**-0.1**
PB05				IAML		05 29 25.6	
	comp=Z,80nm,0.4s						
CO01	**Juntas del Tor**	**3.65**	**167**	*i* P	**Pn**	**05 28 25.3**	**+1.8**
CO01	**Juntas del Tor**	**3.65**	**167**	*i* P	**Pn**	**05 28 24.9**	**+1.4**
CO01				IAML		05 29 20.8	
	comp=Z,65nm,0.8s						
GO04	**Tololo Observa**	**3.75**	**177**	*e*P	**Pn**	**05 28 26.1**	**+1.2**
PB06	**IPOC Station P**	**3.93**	**20**	*i* P	**Pn**	**05 28 27.6**	**+0.4**
PB06	**IPOC Station P**	**3.93**	**20**	*i* P	**Pn**	**05 28 27.2**	**0.0**
PB06				IAML		05 29 32.1	
	comp=Z,98nm,0.7s						
AF01	**San Pedro de A**	**4.32**	**38**	*e*P	**Pn**	**05 28 34.2**	**+1.5**
AF01	**San Pedro de A**	**4.32**	**38**	*i* P	**Pn**	**05 28 34.3**	**+1.5**
AF01				IAML		05 30 07.4	
	comp=Z,299nm,1.0s						
CO03	**El Pedregal**	**4.42**	**176**	*i* P	**Pn**	**05 28 34.7**	**+0.7**
CO03				IAML		05 29 46.4	
	comp=Z,63nm,1.0s						
PB03	**IPOC Station P**	**4.50**	**16**	*i* P	**Pn**	**05 28 34.9**	**-0.3**
PB03				IAML		05 29 52.7	
	comp=Z,87nm,0.3s						
ACCO	**Cerro Coronel**	**4.51**	**158**	*i* P	**Pn**	**05 28 38.8**	**+3.4**
FSA	**Cafayete**	**4.56**	**87**	*i* P	**Pn**	**05 28 39.3**	**+3.3**
ACLC	**CERRO LA CRUZ**	**4.71**	**131**	*i* P	**Pn**	**05 28 39.5**	**+1.5**
ACLC				IAML		05 29 43.3	
	comp=Z,9.4nm,0.5s						
CO02	**Combarbal**	**4.78**	**179**	*i* P	**Pn**	**05 28 39.0**	**+0.1**
CO02				IAML		05 30 02.6	
	comp=Z,113nm,0.7s						
PB07	**IPOC Station P**	**4.78**	**13**	*i* P	**Pn**	**05 28 39.2**	**+0.2**
PB07				IAML		05 30 02.8	
	comp=Z,74nm,0.4s						
PB09	**IPOC Station P**	**4.88**	**20**	*i* P	**Pn**	**05 28 41.0**	**+0.6**
PB09				IAML		05 30 07.0	
	comp=Z,102nm,0.6s						
PB02	**IPOC Station P**	**5.18**	**12**	*i* P	**Pn**	**05 28 44.4**	**0.0**
PB02				IAML		05 30 26.9	
	comp=Z,83nm,0.4s						

*NOU **07** 05:29:41.7,36°.65S×177°.51E,h225km,mB5.0/11,Off E. Coast of N. Island, N.Z.*
*WEL **07** 05:29:45.6±0.8,37°.5S±5'×17°.8E±°,h170km±9km,M3.1/23, ML3.0/25,MLv3.1/23,Error ellipse: s-maj=8.0km s-min=7.1km az=86.2*
ISC 07 05:29:40.1±2.9,**36.6S**±0.1×**177.64E**±0.09,**h220**km±15km, **n82,σ1s71/96,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.08**	**151**	P	**Pn**	**05 30 16.0**	**+3.6**
MXZ	**Matakaoa Point**	**1.08**	**151**	P	**Pn**	**05 30 15.3**	**+3.0**
HAZ	**Te Kaha**	**1.14**	**174**	P	**Pn**	**05 30 13.4**	**+0.7**
HAZ				S	**S**	**05 30 34.8**	**-3.5**
PKGZ	**Pakihiroa**	**1.29**	**164**	P	**Pn**	**05 30 15.9**	**+2.0**
RUGZ	**Raukumara Rang**	**1.34**	**179**	P	**Pn**	**05 30 14.6**	**+0.3**
RUGZ				S	**S**	**05 30 37.3**	**-3.9**
WMGZ	**Waiomatatini S**	**1.34**	**153**	P	**Pn**	**05 30 16.3**	**+2.1**
WMGZ				S	**S**	**05 30 39.3**	**-1.7**
PUZ	**Puketiti**	**1.53**	**161**	P	**Pn**	**05 30 16.2**	**+0.5**
PUZ				S	**S**	**05 30 41.6**	**-2.0**
KUZ	**Kuaotunu**	**1.55**	**265**	P	**Pn**	**05 30 16.0**	**+0.1**
KUZ	**Kuaotunu**	**1.55**	**265**	P	**Pn**	**05 30 16.0**	**+0.1**
TWGZ	**Tauwhareparae**	**1.57**	**170**	P	**Pn**	**05 30 18.3**	**+2.1**
TWGZ				S	**S**	**05 30 43.5**	**-0.9**
URZ	**Urewera**	**1.69**	**194**	P	**Pn**	**05 30 18.2**	**+1.1**
URZ	**Urewera**	**1.69**	**194**	P	**Pn**	**05 30 18.1**	**+1.1**
MWZ	**Matawai**	**1.71**	**183**	P	**Pn**	**05 30 18.7**	**+1.4**
MWZ				S	**S**	**05 30 43.8**	**-2.7**
GRZ	**Great Barrier**	**1.80**	**281**	P	**Pn**	**05 30 18.5**	**+0.4**
RAGZ	**Rawiri**	**1.88**	**185**	P	**Pn**	**05 30 20.9**	**+2.0**
CNGZ	**Carnagh Statio**	**1.91**	**167**	P	**Pn**	**05 30 21.7**	**+2.5**
WIAZ	**Waiheke Island**	**2.02**	**264**	P	**Pn**	**05 30 20.6**	**+0.3**
TOZ	**Tahuroa Road**	**2.03**	**236**	P	**Pn**	**05 30 21.8**	**+1.5**
MKAZ	**Moumakai**	**2.04**	**256**	P	**Pn**	**05 30 21.6**	**+1.2**
RTZ	**Ruatahuna**	**2.06**	**195**	P	**Pn**	**05 30 21.9**	**+1.3**
RIGZ	**Rimuhau**	**2.08**	**177**	P	**Pn**	**05 30 22.6**	**+1.7**
RIGZ				S	**S**	**05 30 52.2**	**-0.6**
SNGZ	**Shannon Statio**	**2.17**	**186**	P	**Pn**	**05 30 23.0**	**+1.3**
SNGZ				S	**S**	**05 30 53.8**	**-0.5**
ALRZ	**Allen Road**	**2.19**	**208**	P	**Pn**	**05 30 24.2**	**+2.3**
MBAZ	**Motutapu North**	**2.21**	**265**	P	**Pn**	**05 30 23.4**	**+1.2**
MTHZ	**Maungataniwha**	**2.31**	**196**	P	**Pn**	**05 30 25.2**	**+2.0**
RAHZ	**Arahi**	**2.33**	**191**	P	**Pn**	**05 30 25.0**	**+1.6**
RAHZ				S	**S**	**05 30 56.7**	**-0.5**
MRHZ	**Matea Rd**	**2.41**	**203**	P	**Pn**	**05 30 25.9**	**+1.7**
AWAZ	**Awhitu Peninsu**	**2.44**	**259**	P	**Pn**	**05 30 26.4**	**+1.8**
WHHZ	**Waihua**	**2.47**	**187**	P	**Pn**	**05 30 26.9**	**+2.0**
MHGZ	**Mahia Peninsul**	**2.53**	**175**	P	**Pn**	**05 30 27.6**	**+2.1**
NMHZ	**Naumai**	**2.56**	**195**	P	**Pn**	**05 30 27.9**	**+2.0**
ARHZ	**Aropaoanui**	**2.68**	**191**	P	**Pn**	**05 30 28.9**	**+1.7**
ARHZ				S	**S**	**05 31 03.3**	**-0.7**
BKZ	**Black Stump Fm**	**2.69**	**199**	P	**Pn**	**05 30 28.4**	**+1.1**
BKZ	**Black Stump Fm**	**2.69**	**199**	P	**Pn**	**05 30 28.3**	**+0.9**
WCZ	**Waipu Caves**	**2.75**	**283**	P	**Pn**	**05 30 28.7**	**+0.8**
KATZ	**Kakaramea**	**2.81**	**213**	P	**Pn**	**05 30 31.9**	**+3.2**
HIZ	**Hauiti**	**2.91**	**229**	P	**Pn**	**05 30 32.5**	**+2.8**
HIZ	**Hauiti**	**2.91**	**229**	P	**Pn**	**05 30 32.4**	**+2.7**
MCHZ	**McNeill Hill**	**2.91**	**195**	P	**Pn**	**05 30 31.7**	**+2.0**
NTVZ	**North Tongarir**	**2.92**	**212**	P	**Pn**	**05 30 32.6**	**+2.6**
TMVZ	**Te Maari**	**2.92**	**211**	P	**Pn**	**05 30 32.4**	**+2.4**
ETVZ	**East Tongariro**	**2.94**	**211**	P	**Pn**	**05 30 32.0**	**+1.9**
KWHZ	**Kaweka Forest**	**2.96**	**199**	P	**Pn**	**05 30 31.4**	**+1.1**
WTVZ	**West Tongariro**	**2.97**	**213**	P	**Pn**	**05 30 32.8**	**+2.4**
NNVZ	**North Ngauruho**	**2.97**	**212**	P	**Pn**	**05 30 33.1**	**+2.5**
OTVZ	**Oturere**	**2.98**	**211**	P	**Pn**	**05 30 33.0**	**+2.3**
TWVZ	**Taurewa**	**3.00**	**215**	P	**Pn**	**05 30 33.3**	**+2.5**
SNVZ	**South Ngauruho**	**3.01**	**211**	P	**Pn**	**05 30 32.0**	**+1.0**
SNVZ				S	**S**	**05 31 11.4**	**+0.7**
NGZ	**Ngauruhoe**	**3.01**	**212**	P	**Pn**	**05 30 33.6**	**+2.6**
CKHZ	**Cape Kidnapper**	**3.06**	**188**	P	**Pn**	**05 30 32.9**	**+1.5**
CKHZ				S	**S**	**05 31 08.9**	**-2.7**
TUVZ	**Tukino**	**3.07**	**210**	P	**Pn**	**05 30 33.9**	**+2.2**
FWVZ	**Far West T-bar**	**3.10**	**212**	P	**Pn**	**05 30 34.1**	**+2.0**
WNVZ	**Wahianoa**	**3.14**	**210**	P	**Pn**	**05 30 34.0**	**+1.4**
WNVZ				S	**S**	**05 31 15.2**	**+1.6**
MOVZ	**Moawhango**	**3.15**	**208**	P	**Pn**	**05 30 33.7**	**+1.1**
MOVZ				S	**S**	**05 31 12.7**	**-0.9**
KRHZ	**Kereru**	**3.17**	**198**	P	**Pn**	**05 30 33.8**	**+1.0**
KAHZ	**Kahuranaki**	**3.22**	**191**	P	**Pn**	**05 30 34.5**	**+1.2**
PXZ	**Pawanui**	**3.46**	**190**	P	**Pn**	**05 30 36.8**	**+0.9**
PNHZ	**Pukenui**	**3.47**	**199**	P	**Pn**	**05 30 37.0**	**+0.7**
TSZ	**Takapari Road**	**3.67**	**201**	P	**Pn**	**05 30 39.1**	**+0.5**
PRHZ	**Porangahau**	**3.72**	**192**	P	**Pn**	**05 30 40.0**	**+0.9**
WAZ	**Wanganui**	**3.76**	**213**	P	**Pn**	**05 30 42.3**	**+2.6**
DVHZ	**Dannevirke**	**3.85**	**197**	P	**Pn**	**05 30 40.8**	**+0.2**
KHEZ	**Kahui Hut**	**3.91**	**226**	P	**Pn**	**05 30 43.6**	**+2.0**
ANWZ	**Angora Road**	**3.94**	**193**	P	**Pn**	**05 30 42.6**	**+0.8**
PRWZ	**Pori Road**	**4.14**	**198**	P	**Pn**	**05 30 45.0**	**+0.9**
BFZ	**Birch Farm**	**4.20**	**195**	P	**Pn**	**05 30 45.2**	**+0.3**
BFZ	**Birch Farm**	**4.20**	**195**	P	**Pn**	**05 30 45.2**	**+0.3**
MRZ	**Mangatainoka R**	**4.34**	**201**	P	**Pn**	**05 30 46.4**	**-0.3**
TIWZ	**Tintock**	**4.37**	**198**	P	**Pn**	**05 30 47.3**	**+0.2**
CPWZ	**Castlepoint**	**4.42**	**194**	P	**Pn**	**05 30 48.6**	**+0.9**
HOWZ	**Holdsworth Sta**	**4.58**	**201**	P	**Pn**	**05 30 49.1**	**-0.5**
OGWZ	**Otaki Gorge**	**4.61**	**204**	P	**Pn**	**05 30 49.9**	**-0.1**
TMWZ	**Te Maipa**	**4.68**	**196**	P	**Pn**	**05 30 50.8**	**-0.1**
KIW	**Kapiti Island**	**4.74**	**206**	P	**Pn**	**05 30 51.2**	**-0.5**
MTW	**Mount Morrison**	**4.82**	**200**	P	**Pn**	**05 30 52.1**	**-0.6**
CAW	**Cannon Point**	**4.91**	**203**	P	**Pn**	**05 30 53.1**	**-0.6**
DUWZ	**D'Urville Isla**	**5.08**	**214**	P	**Pn**	**05 30 55.9**	**-0.1**
MSWZ	**Moikau Station**	**5.13**	**201**	P	**Pn**	**05 30 55.8**	**-0.8**
SNZO	**South Karori**	**5.21**	**205**	P	**Pn**	**05 30 58.1**	**+0.6**
QRZ	**Quartz Range**	**5.79**	**222**	P	**Pn**	**05 31 05.3**	**+0.4**
KHZ	**Kahutara**	**6.59**	**207**	P	**Pn**	**05 31 15.3**	**+0.2**
ODZ	**Otahua Downs**	**9.94**	**210**	P	**Pn**	**05 31 59.2**	**+1.1**

*IDC **07** 05:37:15.7±1.4,6°.70S×123°.01E,h0km,mb3.6/2, mbtmp3.5/6,ML3.4/4,MS3.3/2,Error ellipse: s-maj=72.6km s-min=22.0km az=57.0*
ISC 07 05:37:20.1±1.3,**6.9S**±0°.2×**122°.9E**±0°.3,**h35**km,**n8,σ1s21/6, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.42**	**167**	LR	LR	05 39 54.4	
	comp=Z,159nm,18.0s,baz=330,slow=45						
KAPI	**Kappang**	**3.62**	**300**	Pn	**Pn**	**05 38 13.1**	**-0.7**
	2.7nm,0.3s,baz=114,slow=14,SNR=4.9						
	7.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**11.50**	**167**	Pn	**Pn**	**05 40 01.7**	**-0.3**
	0.4nm,0.3s,baz=356,slow=6.5,SNR=7.0						
	2.0nm,0.7s						
WRA	**Warramunga Arr**	**17.11**	**141**	P	**Pn**	**05 41 15.4**	**-1.4**
	0.1nm,0.3s,baz=316,slow=12,SNR=7.9						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**19.79**	**149**	P	**Pn**	**05 41 49.9**	**+0.6**
	0.1nm,0.3s,baz=328,slow=12,SNR=9.7						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**64.41**	**330**	P	**P**	**05 47 54.1**	**+1.3**
	0.2nm,0.6s,baz=135,slow=7.7,SNR=2.9						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**68.50**	**337**	P	**P**	**05 48 18.7**	**-0.1**
	0.4nm,0.3s,baz=145,slow=5.3,SNR=1.1						
	0.4nm,0.3s						
MAW	**Mawson**	**72.57**	**200**	LR	LR	06 20 00.9	
	comp=Z,40nm,18.5s,baz=98,slow=35						

IDC 07 05:57:36.9±2.3,**4.76N×124.53E,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=228.9km s-min=27.1km az=64.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.38**	**159**	P	P	06 03 14.5	-0.6
	0.5nm,0.6s,baz=337,slow=11,SNR=7.3						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**29.70**	**162**	P	P	06 03 45.5	+0.6
	0.4nm,0.3s,baz=340,slow=8.6,SNR=11						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**55.47**	**326**	P	P	06 07 13.4	-0.2
	0.1nm,0.4

NNVZ	**North Ngauruho**	**2.88**	**22**	P	**Pn**	**06 04 52.3**	**+1.3**
WTVZ	**West Tongariro**	**2.89**	**22**	P	**Pb**	**06 04 54.6**	**-2.1**
TWVZ	**Taurewa**	**2.89**	**19**	P	**Pb**	**06 04 55.0**	**-1.7**
ETVZ	**East Tongariro**	**2.90**	**23**	P	**Pn**	**06 04 52.0**	**+0.8**
KWHZ	**Kaweka Forest**	**2.91**	**36**	P	**Pb**	**06 04 57.5**	**+0.4**
TMVZ	**Te Maari**	**2.92**	**23**	P	**Pn**	**06 04 52.2**	**+0.7**
KRVZ	**Karewarewa**	**2.92**	**22**	P	**Pb**	**06 04 54.9**	**-2.4**
NTVZ	**North Tongarir**	**2.93**	**23**	P	**Pn**	**06 04 52.5**	**+0.9**
RPZ	**Rata Peaks**	**3.01**	**230**	P	**Pn**	**06 04 52.1**	**-0.6**
RPZ	**Rata Peaks**	**3.01**	**230**	P	**Pn**	**06 04 52.4**	**-0.4**
KATZ	**Kakaramea**	**3.05**	**22**	P	**Pb**	**06 04 58.1**	**-1.4**
RITZ	**Rihia Road**	**3.09**	**24**	P	**Pb**	**06 04 59.2**	**-1.0**
ARCZ	**Arundel**	**3.10**	**225**	P	**Pn**	**06 04 53.4**	**-0.5**
BKZ	**Black Stump Fm**	**3.16**	**34**	P	**Pn**	**06 04 54.8**	**+0.1**
BKZ	**Black Stump Fm**	**3.16**	**34**	P	**Pn**	**06 04 53.7**	**-1.1**
RATZ	**Rangitukua**	**3.17**	**22**	P	**Pb**	**06 05 02.1**	**+0.6**
WATZ	**Wairara**	**3.31**	**21**	P	**Pb**	**06 05 03.6**	**-0.2**
HIZ	**Hauiti**	**3.33**	**9**	P	**Pn**	**06 04 58.6**	**+1.6**
HIZ	**Hauiti**	**3.33**	**9**	P	**Pn**	**06 04 59.7**	**+2.7**
TMZ	**Timaru**	**3.49**	**221**	P	**Pn**	**06 04 58.7**	**-0.6**
ODZ	**Otahua Downs**	**4.15**	**218**	P	**Pn**	**06 05 07.9**	**-0.5**
ODZ	**Otahua Downs**	**4.15**	**218**	P	**Pn**	**06 05 07.3**	**-1.1**
JCZ	**Jackson Bay**	**4.59**	**239**	P	**Pn**	**06 05 16.2**	**+1.7**
JCZ	**Jackson Bay**	**4.59**	**239**	P	**Pn**	**06 05 17.9**	**+3.4**

*IDC **07** 06:08:49.4±1.1,2.7°70S×138.3°39E, h0km, mb3.6/4, mbtmp3.7/6, ML3.7/2, MS3.3/7, Error ellipse: s-maj=25.5km s-min=17.0km az=178.0*

ISC 07 06:08:56.8±1.0, 2.9S±0.1×138.6E±0.2, h62km, n13, σ1s09/6, mb3.5/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.11**	**80**	Pn	**Pn**	**06 09 29.8**	**-0.1**
	7.0nm,0.3s,baz=230,slow=11,SNR=16						
JAY				Lg	Lg	06 10 02.7	
	16nm,0.3s,baz=97,slow=10,SNR=6.7						
	18nm,0.3s						
SIJI	**Sorong**	**7.62**	**285**	LR	LR	06 14 23.8	
	comp=Z,383nm,18.4s,baz=237,slow=46						
WRA	**Warramunga Arr**	**17.47**	**194**	P	**Pn**	**06 12 55.8**	**-0.6**
	0.4nm,0.3s,baz=13,slow=12,SNR=18						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**21.17**	**192**	P	**P**	**06 13 37.8**	**+0.7**
	0.9nm,0.5s,baz=17,slow=11,SNR=22						
	0.9nm,0.5s						
JHJ	**Hachijo jima 2**	**35.81**	**2**	LR	LR	06 29 16.9	
	comp=Z,73nm,19.6s,baz=236,slow=34						
NWAO	**Narrogin (SRO)**	**35.99**	**211**	LR	LR	06 32 31.4	
	comp=Z,91nm,19.2s,baz=246,slow=40						
JNU	**Nakatsue**	**36.54**	**349**	LR	LR	06 28 38.0	
	comp=Z,42nm,19.7s,baz=140,slow=33						
ASAJ	**Asahikawa**	**46.91**	**4**	LR	LR	06 34 47.9	
	comp=Z,25nm,19.8s,baz=163,slow=33						
KLR	**Kul'dur**	**52.23**	**354**	LR	LR	06 38 52.8	
	comp=Z,7.3nm,19.0s,baz=260,slow=35						
MKAR	**Makanchi Array**	**69.86**	**322**	P	**P**	**06 20 00.0**	**-1.1**
	0.5nm,0.5s,baz=111,slow=8.1,SNR=12						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**72.03**	**330**	LR	LR	06 52 38.4	
	comp=Z,16nm,18.5s,baz=302,slow=37						
BVAR	**Borovoye Array**	**79.39**	**325**	P	**P**	**06 20 57.4**	**+1.2**
	0.5nm,0.5s,baz=98,slow=6.8,SNR=4.0						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**86.02**	**24**	P	**P**	**06 21 30.3**	**0.0**
	0.2nm,0.6s,baz=261,slow=4.4,SNR=5.5						
	0.2nm,0.6s						

*ATH **07** 06:13:59.3, 40.09N×19.70E, h11km±4km, ML2.7/6, Manual Solution by A.Moschou First location: 2020/02/07 06:15:31, This location: 2020/02/07 06:41:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 4 km*

*TIR **07** 06:14:00.0, 40.04N×19.97E, h2km±2km, Ml2.6/4*

*THE **07** 06:14:03.5, 40°N±3'×2°0E±°, h23km±9km, M2.5/12, MLh2.5/12*

ISC 07 06:14:00.3±1.1, 40.08N±0.02×19.98E±0.03, h9km±9km, n28, σ1s89/51, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.39**	**201**	P	**Pg**	**06 14 06.4**	**-1.5**
KEK				S	**Sg**	**06 14 12.2**	**-0.8**
VLO	**Vlora**	**0.54**	**317**	Pg	**Pg**	**06 14 10.5**	**-0.2**
VLO				Sg	**Sb**	**06 14 19.0**	**-0.7**
VLO				AML	AML	06 14 23.7	
	4.5nm,0.4s						
JAN	**Janina**	**0.79**	**122**	P	**Pn**	**06 14 16.9**	**-0.7**
JAN				S	**Sn**	**06 14 28.8**	**-0.7**
KBN	**Korca**	**0.82**	**48**	Pn	**Pb**	**06 14 16.3**	**-0.5**
KBN				Sn	**Sn**	**06 14 29.3**	**-1.2**
KBN				AML	AML	06 14 33.4	
	0.4nm,0.4s						
KBN	**Korca**	**0.82**	**48**	P	**Pg**	**06 14 15.6**	**-0.6**
KBN				S	**Sg**	**06 14 24.5**	**-2.5**
NEST	**Nestorio**	**0.89**	**67**	Pg	**Pb**	**06 14 17.5**	**-0.4**
NEST				Sg	**Sn**	**06 14 32.2**	**+0.2**
NEST	**Nestorio**	**0.89**	**67**	P	**Pb**	**06 14 17.5**	**-0.4**
NEST				S	**Sg**	**06 14 25.9**	**-3.0**
PRMD	**Pramanda**	**1.02**	**122**	P	**Pb**	**06 14 20.1**	**0.0**
PRMD				S	**Sg**	**06 14 33.4**	**+0.3**
PRMD	**Pramanda**	**1.02**	**122**	P	**Pn**	**06 14 20.9**	**+0.1**
PRMD				S	**Sn**	**06 14 37.9**	**+2.6**
KPRO	**Kipourio**	**1.07**	**96**	P	**Pb**	**06 14 20.5**	**-0.5**
OHR	**Ohrid**	**1.21**	**31**	*i* Pn	**Pg**	**06 14 23.9**	**+0.5**
OHR				*i* Sn	**Sn**	**06 14 43.5**	**+3.6**
TETR	**Tetrakomo, Epi**	**1.24**	**126**	P	**Pg**	**06 14 24.2**	**+0.2**
TETR				S	**Sb**	**06 14 40.0**	**0.0**
TETR	**Tetrakomo, Epi**	**1.24**	**126**	P	**Pg**	**06 14 24.9**	**+0.8**
TETR				S	**Sn**	**06 14 44.1**	**+3.4**
TIR	**Tirane**	**1.27**	**356**	Pn	**Pb**	**06 14 24.0**	**-0.4**
TIR				Sn	**Sg**	**06 14 45.1**	**+3.8**
TIR				AML	AML	06 14 52.7	
	0.3nm,0.5s						
TSLK	**Tsoukalades, L**	**1.35**	**157**	P	**Pg**	**06 14 26.2**	**0.0**
TSLK				S	**Sn**	**06 14 43.6**	**+0.2**
LKD2	**Lefkada island**	**1.39**	**158**	Pn	**Pg**	**06 14 27.0**	**+0.1**
LKD2				Sn	**Sg**	**06 14 47.1**	**+2.2**
LKD2	**Lefkada island**	**1.39**	**158**	P	**Pb**	**06 14 26.5**	**+0.1**
LKD2				S	**Sg**	**06 14 45.1**	**+0.2**
KZN	**Kozani**	**1.39**	**80**	P	**Pb**	**06 14 25.9**	**-0.6**
KZN				S	**Sn**	**06 14 38.9**	**-5.6**
KZN	**Kozani**	**1.39**	**80**	P	**Pg**	**06 14 27.8**	**+0.8**
KZN				S	**Sg**	**06 14 49.3**	**+4.3**
NYDR	**Nydri-Lefkada**	**1.47**	**157**	P	**Pn**	**06 14 27.2**	**+0.3**
AMPL	**Ampelaki**	**1.50**	**140**	P	**Pb**	**06 14 28.2**	**0.0**
AMPL				S	**Sb**	**06 14 47.3**	**0.0**
AMPL	**Ampelaki**	**1.50**	**140**	P	**Pb**	**06 14 28.3**	**+0.1**
AMPL				S	**Sg**	**06 14 49.5**	**+1.2**
EVGI	**Lefkada island**	**1.54**	**160**	P	**Pb**	**06 14 29.4**	**+0.4**
PHP	**Peshkopia**	**1.65**	**12**	Pn	**Pg**	**06 14 31.9**	**0.0**
PHP				Sn	**Sg**	**06 14 56.3**	**+3.2**
PHP				AML	AML	06 15 06.3	
	0.2nm,1.0s						
PHP	**Peshkopia**	**1.65**	**12**	P	**Pn**	**06 14 28.6**	**-0.8**
THL	**Klokotos Trika**	**1.65**	**107**	Sn	**Sg**	**06 14 54.7**	**+1.5**
THL	**Klokotos Trika**	**1.65**	**107**	P	**Pn**	**06 14 28.8**	**-0.6**
THL				S	**Sn**	**06 14 45.5**	**-5.2**
THL	**Klokotos Trika**	**1.65**	**107**	P	**Pb**	**06 14 31.2**	**+0.4**
THL				S	**Sg**	**06 14 53.9**	**+0.6**

*ASRS **07** 06:23:40.0±1.9, 53.72N×91.03E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 07 06:23:46.4±3.7, 53.65N×90.92E, h0km, mbtmp2.8/3, ML2.4/3, Error ellipse: s-maj=29.6km s-min=25.0km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**3.63**	**277**	Pn	Pn	06 24 45.8	+2.0
	0.5nm,0.3s,baz=94,slow=16,SNR=9.8						
ZALV				Lg	Lg	06 25 38.8	
	1.1nm,0.3s,baz=93,slow=25,SNR=11						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**8.20**	**253**	Pn	Pn	06 25 45.8	-0.8
	0.1nm,0.3s,baz=65,slow=14,SNR=2.3						
KURBB				Sn	Sn	06 27 19.1	-0.7
	baz=68,slow=27,SNR=6.2						
KURBB				Lg	Lg	06 28 06.4	
	0.1nm,0.3s,baz=62,slow=32,SNR=7.5						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**8.81**	**222**	Pn	Pn	06 25 55.5	+0.5
	0.1nm,0.3s,baz=34,slow=10,SNR=4.0						
MKAR				Sn	Sn	06 27 34.3	-0.6
	baz=40,slow=25,SNR=1.6						
MKAR				Lg	Lg	06 28 24.9	
	0.1nm,0.3s,baz=41,slow=31,SNR=5.4						
	0.3nm,0.7s						
SONM	**Songino Array**	**11.39**	**114**	Lg	Lg	06 29 33.8	
	0.1nm,0.3s,baz=306,slow=27,SNR=3.7						
I34MN	**SONGINO INFRAS**	**11.42**	**115**	I	I	07 30 40.0	
	baz=312,slow=336,SNR=1.9						

*SCB **07** 06:31:11.5±1.3, 22.40S×67.45W, h148km±13km, MB5.8, ML3.0/4, Error ellipse: s-maj=5.5km s-min=3.4km az=0.0*

*GUC **07** 06:31:13.7±0.6, 22.20S×67.81W, h204km±12km, ML2.9*

ISC 07 06:31:11.2±1.3, 22.27S±0.05×67.42W±0.03, h6km±12km, n29, σ1s21/38, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.76**	**285**	*eP*	**Pg**	**06 31 46.4**	**+1.6**
PB09	**IPOC Station P**	**1.76**	**285**	Pg	**Pg**	**06 31 45.4**	**+0.5**
YJA	**Yavi**	**1.77**	**87**	Pg	**Pg**	**06 31 45.6**	**+0.5**
MOCB	**Mochara**	**1.94**	**59**	Pg	**Pg**	**06 31 48.3**	**-0.1**
MOCB				Sg	**Sg**	**06 32 15.4**	**+1.8**
MOCB				IAML		06 32 16.6	
	56nm,0.3s						
PB06	**IPOC Station P**	**2.04**	**257**	*eP*	**Pg**	**06 31 50.1**	**-0.2**
PB06				*eS*	**Sg**	**06 32 16.7**	**0.0**
PB06				IAML		06 32 18.2	
	comp=N,35nm,0.2s						
PB06	**IPOC Station P**	**2.04**	**257**	Pg	**Pn**	**06 31 46.9**	**+0.7**
PB03	**IPOC Station P**	**2.17**	**275**	*eP*	**Pb**	**06 31 50.1**	**-1.0**
PB03				*eS*	**Sb**	**06 32 18.9**	**+0.6**
PB03				IAML		06 32 20.8	
	comp=E,40nm,0.2s						
PB01	**IPOC Station P**	**2.28**	**302**	*eP*	**Pb**	**06 31 51.5**	**-1.3**
PB01				IAML		06 32 23.9	
	comp=E,60nm,0.1s						
PB01	**IPOC Station P**	**2.28**	**302**	Pg	**Pb**	**06 31 51.5**	**-1.3**
PB01				Sg	**Sb**	**06 32 21.0**	**-0.3**
PB01				IAML		06 32 23.5	
	comp=E,65nm,0.2s						
PB07	**IPOC Station P**	**2.35**	**283**	*eP*	**Pb**	**06 31 52.3**	**-1.8**
PB07				IAML		06 32 22.5	
	comp=N,45nm,0.2s						
PB02	**IPOC Station P**	**2.49**	**292**	*eP*	**Pn**	**06 31 53.6**	**+1.3**
PB02				*eS*	**Sn**	**06 32 24.2**	**+1.1**
PB02				IAML		06 32 26.5	
	comp=N,51nm,0.2s						
PB02	**IPOC Station P**	**2.49**	**292**	Pg	**Pn**	**06 31 53.8**	**+1.5**
PB02				Sg	**Sn**	**06 32 25.2**	**+2.1**
PB02				IAML		06 32 31.3	
	comp=N,33nm,0.2s						
AOVT	**TarijaAcel**	**2.62**	**74**	Pg	**Pn**	**06 31 55.7**	**+1.4**
PB05	**IPOC Station P**	**2.64**	**257**	*eP*	**Pn**	**06 31 55.9**	**+1.5**
PB05				*eS*	**Sn**	**06 32 27.5**	**+0.7**
PB05				IAML		06 32 28.4	
	comp=N,35nm,0.4s						
PB08	**IPOC Station P**	**2.67**	**322**	*eP*	**Pb**	**06 31 57.5**	**-2.0**
PB08				*eS*	**Sb**	**06 32 31.2**	**-1.5**
PB08				IAML		06 32 34.0	
	comp=E,32nm,0.2s						
PB08	**IPOC Station P**	**2.67**	**322**	Pg	**Pb**	**06 31 57.6**	**-2.0**
GO01	**Chusmiza**	**3.07**	**327**	*eP*	**Pn**	**06 32 02.2**	**+1.4**
GO01	**Chusmiza**	**3.07**	**327**	Pg	**Pn**	**06 32 02.0**	**+1.3**
PB11	**IPOC Station P**	**3.25**	**320**	*eP*	**Pn**	**06 32 02.9**	**-0.1**
PB11	**IPOC Station P**	**3.25**	**320**	Pg	**Pn**	**06 32 03.3**	**+0.4**
PB11				Sg	**Sn**	**06 32 42.4**	**+0.3**
PB11				IAML		06 32 44.3	
	comp=E,46nm,0.2s						
PB14	**IPOC Station P**	**3.61**	**229**	Pg	**Pn**	**06 32 05.8**	**-2.1**
PB16	**IPOC Station P**	**4.38**	**333**	*eP*	**Pn**	**06 32 18.9**	**+0.1**
PB16				IAML		06 33 11.6	
	comp=N,8.3nm,0.3s						
PB16	**IPOC Station P**	**4.38**	**333**	Pg	**Pn**	**06 32 18.7**	**-0.1**
SOET	**ToroToro**	**4.40**	**20**	Pg	**Pn**	**06 32 18.4**	**-0.5**
BBOJ	**La Paz, Jacaqu**	**5.32**	**352**	Pg	**Pn**	**06 32 31.7**	**+0.1**
SOEJ	**Jacaque**	**5.32**	**352**	Pg	**Pn**	**06 32 32.0**	**+0.4**
BBOE	**La Paz, Chanca**	**5.45**	**354**	Pg	**Pn**	**06 32 33.8**	**+0.2**
LPAZ	**La Paz**	**5.99**	**353**	Pg	**Pn**	**06 32 40.1**	**-0.8**
BBOB	**La Paz, Bander**	**6.13**	**354**	Pg	**Pn**	**06 32 41.5**	**-1.3**

*IDC **07** 06:31:33.5±1.2, 39.00N×27.81E, h0km, mb3.6/3, mbtmp3.6/7, ML3.7/3, MS3.1/5, Error ellipse: s-maj=20.1km s-min=16.7km az=164.0*

*ISK **07** 06:31:34.3, 39.03N×27.85E, h10km, ML3.9/16*

*AFAD **07** 06:31:34.5, 39.02N×27.87E, h10km±1km, MW4.0*

*THE **07** 06:31:36.5, 39°N±4'×2°8E±°, h11km±21km, M3.8/8, MLh3.8/8*

ISC 07 06:31:35.0±0.8, 39.01N±0.02×27.86E±0.02, h12km±5km, n87, σ0s79/121, 8C-16D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.14**	**194**	P	**Pg**	**06 31 38.4**	**0.0**
AKHS				S	**Sg**	**06 31 41.0**	**+0.2**
AKS	**Akhisar**	**0.14**	**194**	Pg	**Pg**	**06 31 37.9**	**-0.4**
AKS				Sg	**Sg**	**06 31 40.7**	**0.0**
GORD	**Gordes-Manisa**	**0.27**	**112**	Pg	**Pg**	**06 31 40.5**	**-0.1**
GORD				Sg	**Sg**	**06 31 44.8**	**+0.4**
SOMA	**Soma-Manisa**	**0.29**	**300**	Pg	**Pg**	**06 31 40.7**	**-0.2**
GOMA	**Golmarmara-Man**	**0.31**	**171**	Pg	**Pg**	**06 31 41.2**	**0.0**
GOMA				Sg	**Sb**	**06 31 46.2**	**-1.2**
KTTT	**Salihli**	**0.37**	**150**	P	**Pg**	**06 31 42.4**	**0.0**
KTTT				S	**Sg**	**06 31 47.4**	**0.0**
STEP	**BALIKESIR_Sava**	**0.38**	**344**	P	**Pg**	**06 31 42.1**	**-0.5**
STEP				S	**Sb**	**06 31 48.1**	**-1.5**
CAMT	**Merkez**	**0.50**	**238**	P	**Pb**	**06 31 45.1**	**-0.6**
CAMT				S	**Sb**	**06 31 53.3**	**+0.4**
ZEDA	**zmir-Bergama**	**0.61**	**266**	P	**Pb**	**06 31 47.0**	**-0.6**
ZEDA				S	**Sb**	**06 31 55.8**	**-0.3**
DEMI	**Demirci**	**0.67**	**87**	P	**Pg**	**06 31 47.7**	**-0.3**
DEMI				S	**Sg**	**06 31 56.6**	**+0.3**
BKES	**Balkesir-Mer**	**0.72**	**5**	P	**Pg**	**06 31 48.4**	**-0.6**
BKES				S	**Sb**	**06 31 58.5**	**-0.9**
IZMD	**zmir-Dikili-**	**0.72**	**268**	P	**Pb**	**06 31 49.2**	**-0.4**
IZMD				P	**Pb**	**06 31 49.2**	**-0.4**
IZMD				S	**Sb**	**06 31 58.6**	**-0.9**
IZMD				S	**Sg**	**06 31 59.0**	**+0.4**
BALY	**Balya**	**0.75**	**346**	P	**Pg**	**06 31 48.9**	**-0.6**
ODEM	**Odemis-Izmir**	**0.75**	**167**	Pg	**Pb**	**06 31 49.7**	**-0.4**
MANT	**Manisa**	**0.76**	**133**	P	**Pg**	**06 31 49.2**	**-0.4**
MANT				S	**Sg**	**06 31 59.3**	**-0.3**
DURS	**Dursunbey**	**0.76**	**39**	P	**Pg**	**06 31 48.8**	**-0.9**
DURS				S	**Sg**	**06 31 59.2**	**-0.5**
BUHA	**Balikesir, Bur**	**0.78**	**309**	P	**Pg**	**06 31 49.7**	**-0.3**
BUHA				S	**Sb**	**06 32 00.5**	**-0.5**
KULA	**Kula-Manisa**	**0.80**	**128**	Pg	**Pg**	**06 31 50.1**	**-0.4**
DST	**Dursunbey**	**0.84**	**45**	Pg	**Pg**	**06 31 50.7**	**-0.5**
DST				Sg	**Sb**	**06 32 02.9**	**+0.1**
DUVT	**Torbali**	**0.85**	**202**	P	**Pg**	**06 31 51.2**	**-0.3**
YAYO	**Edremit-Balk**	**0.85**	**315**	Pg	**Pg**	**06 31 51.1**	**-0.4**
YAYO				Sg	**Sb**	**06 32 02.9**	**-0.2**
BAGT	**Foa**	**0.86**	**246**	P	**Pb**	**06 31 51.9**	**0.0**
BAGT				S	**Sb**	**06 32 03.3**	**0.0**
BLKS	**Balkesir-Sus**	**0.87**	**6**	P	**Pg**	**06 31 51.0**	**-0.8**
BLKS				P	**Pg**	**06 31 51.0**	**-0.8**
IZMR	**zmir-demi**	**0.88**	**175**	P	**Pb**	**06 31 51.7**	**-0.4**
IZMR				P	**Pg**	**06 31 51.9**	**0.0**
IZMR				S	**Sg**	**06 32 02.5**	**-0.9**
IZMR				S	**Sg**	**06 32 02.5**	**-0.9**
SIMA	**Simav-Kutahya**	**0.88**	**85**	Pg	**Pb**	**06 31 51.8**	**-0.5**
SMAA	**Simav-Kutahya**	**0.88**	**84**	Pg	**Pg**	**06 31 51.7**	**-0.3**
SMAA				Sg	**Sb**	**06 32 04.3**	**+0.3**
BLCB	**Balcova**	**0.89**	**226**	Pg	**Pb**	**06 31 52.1**	**-0.3**
BLCB	**Balcova**	**0.89**	**226**	P	**Pg**	**06 31 51.8**	**-0.4**
BLCB				S	**Sg**	**06 32 03.1**	**-0.8**
KIRA	**zmir-Kiraz**	**0.92**	**152**	P	**Pg**	**06 31 52.2**	**-0.5**
FOCM	**Foa**	**0.93**	**252**	Pg	**Pb**	**06 31 52.8**	**-0.2**
FOCM				Sg	**Sb**	**06 32 05.9**	**+0.7**
AYVA	**Ayvalik**	**0.95**	**288**	P	**Pb**	**06 31 53.3**	**-0.1**
USAK	**Uak-Merkez**	**0.95**	**108**	P	**Pg**	**06 31 52.7**	**-0.7**
SUSR	**Susurluk-Balik**	**0.97**	**10**	Pg	**Pg**	**06 31 52.7**	**-0.9**
CMHT	**Manyas**	**1.00**	**5**	P	**Pg**	**06 31 53.5**	**-0.8**
YENI	**Yenice-Canakka**	**1.04**	**333**	Pg	**Pg**	**06 31 54.4**	**-0.6**
GONE	**Gonen-Balikesi**	**1.04**	**353**	Pg	**Pg**	**06 31 54.4**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.06**	**179**	Pg	**Pg**	**06 31 54.9**	**-0.6**
SHAP	**Saphane-Kutahy**	**1.06**	**89**	Pg	**Pb**	**06 31 55.1**	**-0.3**
KRBN	**Karaburun**	**1.10**	**248**	Pn	**Pn**	**06 31 55.9**	**-0.3**
KRBN				Sn	**Sn**	**06 32 11.4**	**+0.1**
NAZL	**Nazilli-Aydin**	**1.10**	**162**	Pn	**Pg**	**06 31 55.8**	**-0.4**
KARB	**zmir-Karabur**	**1.18**	**253**	P	**Pb**	**06 31 56.9**	**-0.4**
KARB				S	**Sn**	**06 32 13.7**	**+0.4**
SULTU	**Buldan**	**1.19**	**143**	S	**Sb**	**06 32 12.6**	**-0.5**
DGB	**zmir**	**1.23**	**219**	P	**Pn**	**06 31 57.0**	**-0.8**
KUSD	**Kusadasi-Aydin**	**1.23**	**201**	Pn	**Pn**	**06 31 57.7**	**-0.3**
PRK	**Paraskevi**	**1.25**	**281**	P	**Pb**	**06 31 58.4**	**-0.2**
PRK				S	**Sb**	**06 32 12.3**	**-2.4**
ESEN	**Aydn-Nazilli**	**1.27**	**162**	P	**Pn**	**06 31 57.3**	**-1.2**
BAND	**Balkesir-Ban**	**1.35**	**8**	⇑P	**Pg**	**06 32 00.5**	**-0.5**
BAND				⇓S	**Sg**	**06 32 18.3**	**-0.3**
EZN	**Ezine**	**1.44**	**305**	P	**Pn**	**06 32 00.8**	**-0.1**
EZN				S	**Sn**	**06 32 19.3**	**-0.4**
SMG	**Samos**	**1.53**	**212**	P	**Pn**	**06 32 01.9**	**-0.2**
SMG				S	**Sg**	**06 32 23.4**	**-0.7**
CHOS	**Chios island**	**1.54**	**247**	P	**Pn**	**06 32 02.3**	**-0.1**
CHOS				S	**Sn**	**06 32 21.8**	**-0.5**
SIGR	**SIGRI**	**1.57**	**278**	P	**Pb**	**06 32 03.4**	**-0.5**
SIGR				S	**Sg**	**06 32 25.7**	**+0.2**
YER	**Yerkesik**	**1.90**	**170**	P	**Pn**	**06 32 06.8**	**-0.5**
YER				S	**Sb**	**06 32 32.6**	**-0.8**
GADA	**Gvkgeada**	**1.92**	**309**	P	**Pn**	**06 32 07.5**	**0.0**
GADA				S	**Sn**	**06 32 32.3**	**+0.8**
BODT	**Bodrum**	**1.99**	**193**	P	**Pn**	**06 32 08.6**	**+0.1**
BODT				S	**Sn**	**06 32 33.9**	**+0.5**
CAVK	**Edirne/Enez-Ca**	**2.12**	**323**	⇑P	**Pn**	**06 32 10.7**	**+0.5**
SILT	**Sile**	**2.54**	**32**	⇓P	**Pn**	**06 32 16.9**	**+0.9**
ELND	**Elena**	**4.19**	**340**	⇓P	**Pn**	**06 32 39.1**	**+0.4**
IDI	**Anoyia**	**4.41**	**213**	Pn	**Pn**	**06 32 40.5**	**-1.3**
	15nm,0.8s,baz=64,slow=5.7,SNR=2.2						
BRTR	**Keskin Array B**	**4.54**	**79**	Pn	**Pn**	**06 32 44.2**	**+0.6**
	0.8nm,0.3s,baz=257,slow=12,SNR=12						
BRTR				Pg	**Pg**	**06 32 59.1**	**-2.8**
	1.8nm,0.3s,baz=259,slow=15,SNR=20						
BRTR				Lg	Lg	06 33 59.4	
	0.8nm,0.3s,baz=264,slow=23,SNR=14						
BRTR				LR	LR	06 35 03.2	
	comp=Z,107nm,18.7s,baz=273,slow=46						
	2.8nm,0.5s						
KIRS	**Kirsehir-Merke**	**4.72**	**87**	⇑P	**Pn**	**06 32 47.0**	**+0.9**
PLVB	**Pleven**	**5.01**	**332**	⇓P	**Pn**	**06 32 50.7**	**+0.8**
CFR	**Carcaliu**	**6.17**	**2**	⇓P	**Pn**	**06 33 08.2**	**+2.4**
MLR	**Muntele Rosu**	**6.63**	**348**	Pn	**Pn**	**06 33 12.8**	**+0.5**
	1.1nm,0.3s,baz=129,slow=7.6,SNR=6.1						
	4.2nm,0.5s						
MLR	**Muntele Rosu**	**6.63**	**348**	⇓P	**Pn**	**06 33 13.8**	**+1.5**
VOIR		**6.75**	**343**	⇓P	**Pn**	**06 33 14.3**	**+0.3**
VLDR	**Vladesti**	**6.83**	**1**	⇑P	**Pn**	**06 33 16.8**	**+1.8**
PLOR	**Plostina**	**6.89**	**353**	⇓P	**Pn**	**06 33 17.2**	**+1.3**
VRI	**Vrincioaia**	**6.90**	**353**	⇓P	**Pn**	**06 33 17.7**	**+1.8**
COVR	**Voineasa-Covas**	**6.94**	**350**	⇓P	**Pn**	**06 33 17.9**	**+1.4**
HERR	**Herculane**	**7.13**	**327**	⇓P	**Pn**	**06 33 19.0**	**0.0**
TURR	**Turia**	**7.17**	**350**	⇓P	**Pn**	**06 33 21.4**	**+1.8**
DOPR	**Dopca**	**7.19**	**346**	⇓P	**Pn**	**06 33 20.9**	**+1.1**
MDVR	**Moldovita**	**7.36**	**324**	⇑P	**Pn**	**06 33 22.3**	**0.0**
ONER	**Baraj Valea Uz**	**7.40**	**352**	⇓P	**Pn**	**06 33 23.7**	**+1.0**
GZR	**Gura Zlata**	**7.41**	**331**	⇑P	**Pn**	**06 33 22.7**	**-0.3**
TESR	**Tescani**	**7.55**	**354**	⇓P	**Pn**	**06 33 25.2**	**+0.4**
MMAI	**Mount Meron Ar**	**8.55**	**132**	Pn	**Pn**	**06 33 39.4**	**+0.8**
	0.9nm,0.3s,baz=328,slow=10,SNR=1.3						
	1.1nm,0.4s						
SIRR	**Siria**	**8.57**	**330**	⇑P	**Pn**	**06 33 39.7**	**+0.9**
BURAR	**Bucovina Array**	**8.81**	**348**	⇑P	**Pn**	**

H11S3	**WAKE ISLAND Hy**	**27.36**	**21**	T		T	08 00 01.8		
	baz=202,slow=76,SNR=58								
H11S2	**WAKE ISLAND Hy**	**27.36**	**21**	T		T	08 00 00.5		
	baz=202,slow=76,SNR=64								
H11S1	**WAKE ISLAND Hy**	**27.38**	**21**	T		T	08 00 01.6		
	baz=202,slow=76,SNR=32								
ASAR	**Alice Springs**	**27.45**	**231**	P		**P**	**07 31 29.7**	**+1.5**	
	0.3nm,0.4s,baz=56,slow=10.0,SNR=6.0								
	0.3nm,0.4s								
FITZ	**Fitzroy Crossi**	**32.29**	**248**	P		**P**	**07 32 10.8**	**-0.3**	
	3.5nm,1.0s,baz=68,slow=11,SNR=7.9								
	3.5nm,1.0s								
CMAR	**Chiang Mai Arr**	**62.62**	**295**	P		**P**	**07 36 07.0**	**+0.3**	
	0.9nm,0.3s,baz=126,slow=4.6,SNR=4.8								
	0.9nm,0.3s								
SONM	**Songino Array**	**70.61**	**327**	P		**P**	**07 36 57.3**	**+0.1**	
	0.6nm,0.7s,baz=120,slow=5.7,SNR=2.7								
	0.6nm,0.7s								
MKAR	**Makanchi Array**	**84.88**	**318**	P		**P**	**07 38 16.2**	**-0.3**	
	0.3nm,0.5s,baz=90,slow=5.8,SNR=2.8								
	0.3nm,0.5s								

*IDC **07** 07:27:35.2±1.4,55.08N×164.05E,h0km,mb3.2/3, mbtmp3.3/4,ML2.7/1,MS3.1/1,Error ellipse: s-maj=102.2km s-min=24.9km az=139.0*
*KRSC **07** 07:27:40.6±1.1,56.38N×161.50E,h80km±8km,Ml3.9*
ISC 07 07:27:42.3±0.9,56.40N±0.06×161.54E±0.04,h71km±7km, n33,σ0§93/41,mb3.0/3,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMKR	**Semkarok**	**0.19**	**348**	*eP*		**Pn**		**07 27 53.2**	**+0.1**
SMKR				*eS*		**Sn**		**07 28 02.1**	**+1.1**
KLY	**Klyuchi**	**0.50**	**260**	*eP*		**Pn**		**07 27 53.7**	**-1.5**
KLY				*eS*		**Sn**		**07 28 03.3**	**-1.4**
CIRR	**Tsirk**	**0.53**	**237**	*eP*		**Pn**		**07 27 55.1**	**-0.5**
ZLN	**Zelenaya**	**0.56**	**227**	*eP*		**Pn**		**07 27 55.8**	**-0.1**
LGNR	**Loginova**	**0.57**	**236**	*eP*		**Pn**		**07 27 56.0**	**-0.2**
LGNR				*eS*		**Sn**		**07 28 06.6**	**+0.1**
KBG	**Krutoberegovo**	**0.67**	**102**	*eP*		**Pn**		**07 27 56.6**	**-0.2**
KBG				*eS*		**Sn**		**07 28 09.3**	**+1.7**
BZWR	**Bezymyannyi-We**	**0.73**	**234**	*eP*		**Pn**		**07 27 57.5**	**-0.3**
KBTR	**Krutoberegovo**	**0.74**	**105**	*eP*		**Pn**		**07 27 57.4**	**-0.3**
KBTR				*eS*		**Sn**		**07 28 10.1**	**+1.0**
BZP	**Bezymyannyi-Pe**	**0.74**	**229**	*eP*		**Pn**		**07 27 57.5**	**-0.4**
BZP				*eS*		**Sn**		**07 28 09.9**	**+0.4**
KIRR	**Kirishev**	**0.81**	**237**	*eP*		**Pn**		**07 27 58.3**	**-0.4**
KMNR	**Kamenistaya**	**0.97**	**229**	*eP*		**Pn**		**07 28 00.4**	**-0.2**
KOZ	**Kozyrevsk**	**0.99**	**250**	*eP*		**Pn**		**07 28 00.4**	**-0.3**
SRDR	**Sredinnyy**	**1.02**	**266**	*eP*		**Pn**		**07 28 00.9**	**-0.2**
SRDR				*eS*		**Sn**		**07 28 15.5**	**+0.4**
TUMD	**Tumrok D**	**1.36**	**209**	*eP*		**Pn**		**07 28 05.1**	**-0.4**
TUMD				*eS*		**Sn**		**07 28 22.2**	**-0.7**
ESO	**Esso**	**1.66**	**254**	*eP*		**Pn**		**07 28 09.0**	**-0.4**
MKZ	**Mys Kozlova**	**1.85**	**177**	*eP*		**Pn**		**07 28 10.8**	**-1.2**
BKI	**Bering**	**2.77**	**114**	*eP*		**Pn**		**07 28 23.8**	**-0.6**
BKI				*eS*		**Sn**		**07 28 55.5**	**-1.3**
GNL	**Ganaly**	**3.41**	**219**	*eP*		**Pn**		**07 28 33.3**	**+0.2**
SPN	**Mys Shipunski**	**3.42**	**195**	*eP*		**Pn**		**07 28 31.8**	**-1.4**
SDLR	**Sedlovina**	**3.49**	**207**	*eP*		**Pn**		**07 28 35.0**	**+0.8**
SMAR	**Somma**	**3.52**	**208**	*eP*		**Pn**		**07 28 35.6**	**+0.9**
AVH	**Avacha**	**3.54**	**208**	*eP*		**Pn**		**07 28 36.6**	**+1.8**
DALK	**Dalny**	**3.74**	**207**	*eP*		**Pn**		**07 28 38.6**	**+1.1**
PETK	**Petropavlovsk-**	**3.98**	**216**	Pn		**Pn**		**07 28 41.0**	**+0.2**
	2.3nm,0.3s,baz=60,slow=17,SNR=41								
PETK						Sn		07 29 39.0	+13
	baz=90,slow=18								
	9.6nm,0.5s								
KRMR	**Karymshinskiy**	**4.09**	**210**	*eP*		**Pn**		**07 28 42.8**	**+0.5**
APC	**Apacha**	**4.31**	**218**	*eP*		**Pn**		**07 28 45.9**	**+0.5**
GRL	**Gorelyy**	**4.35**	**209**	*eP*		**Pn**		**07 28 47.5**	**+1.5**
MTVR	**Mutnovka**	**4.39**	**208**	*eP*		**Pn**		**07 28 48.0**	**+1.5**
ASAK	**Asacha**	**4.55**	**209**	*eP*		**Pn**		**07 28 50.8**	**+2.1**
ILAR	**Eielson Array**	**25.96**	**50**	P		**P**		**07 33 08.1**	**+0.4**
	0.3nm,0.5s,baz=258,slow=8.2,SNR=4.5								
	0.3nm,0.5s								
YKA	**Yellowknife Ar**	**40.20**	**46**	P		**P**		**07 35 11.1**	**-0.1**
	0.1nm,0.6s,baz=304,slow=8.9,SNR=4.8								
	0.1nm,0.6s								
FRB	**Frobisher Bay**	**54.14**	**25**	LR		LR		08 01 09.4	
	comp=Z,19nm,21.1s,baz=60,slow=37								
WRA	**Warramunga Ar**	**79.44**	**206**	P		**P**		**07 39 40.1**	**-0.5**
	0.2nm,0.4s,baz=21,slow=4.7,SNR=1.4								
	0.2nm,0.4s								

IDC 07 07:39:00.4±2.2,51.15N×81.73E,h0km,mbtmp1.9/2, ML1.5/2,Error ellipse: s-maj=21.5km s-min=15.7km az=15.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.10**	**257**			Pg	Pn	07 39 37.6	+0.8
	baz=70,slow=18,SNR=4.1								
KURBB						Lg	Lg	07 40 08.3	
	0.1nm,0.3s,baz=71,slow=34,SNR=7.9								
ZALV	**Zalesovo Beam**	**3.38**	**33**			Pn	Pn	07 39 55.7	+1.3
	0.1nm,0.3s,baz=223,slow=9.5,SNR=2.5								
	0.3nm,0.3s								
I46RU	**ZALESOVO INFRA**	**3.38**	**33**	I		I		07 56 20.0	
	0.1nm,0.8s,baz=209,slow=307,SNR=1.1								
MKAR	**Makanchi Array**	**4.37**	**175**	Pn		Pn		07 40 09.1	+1.0
	0.1nm,0.3s,baz=7.2,slow=12,SNR=1.7								
MKAR						Lg	Lg	07 41 19.4	
	0.1nm,0.3s,baz=358,slow=25,SNR=1.7								
	0.1nm,0.3s								

IDC 07 07:44:50.3±2.7,6.34S×129.74E,h116km±38km,mb2.9/1, mbtmp3.5/5,Error ellipse: s-maj=67.2km s-min=20.0km az=94.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.65**	**16**	P		Pn		07 46 12.0	0.0
	5.7nm,0.3s,baz=186,slow=19,SNR=15								
SIJI						S	Sn	07 47 09.9	-5.7
	11nm,0.2s,baz=269,slow=23,SNR=6.2								
FITZ	**Fitzroy Crossi**	**12.35**	**199**	P		Pn		07 47 43.4	+1.1
	1.8nm,0.9s,baz=23,slow=12,SNR=1.5								
FITZ						S	Sn	07 49 56.1	-2.1
	2.0nm,0.6s,baz=187,slow=16,SNR=6.0								
WRA	**Warramunga Arr**	**14.24**	**162**	P		Pn		07 48 05.9	-0.9
	0.5nm,0.4s,baz=351,slow=13,SNR=12								
WRA						S	Sn	07 50 34.5	-10
	0.3nm,0.5s,baz=340,slow=26,SNR=2.6								
ASAR	**Alice Springs**	**17.69**	**167**	P		Pn		07 48 49.6	+0.2
	0.4nm,0.7s,baz=341,slow=9.1,SNR=7.4								
MKAR	**Makanchi Array**	**67.53**	**327**	P		P		07 55 34.0	-0.1
	0.1nm,0.3s,baz=122,slow=5.8,SNR=1.7								
	0.1nm,0.3s								

IDC 07 07:49:08.5±2.9,7.17S×129.77E,h133km±37km,mb3.4/1, mbtmp3.9/5,Error ellipse: s-maj=62.8km s-min=19.1km az=86.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.43**	**14**	P		Pn		07 50 40.7	-0.2
	3.8nm,0.3s,baz=166,slow=23,SNR=1.5								
SIJI						S	Sn	07 51 46.9	-6.4
	6.5nm,0.3s,baz=221,slow=23,SNR=7.0								
FITZ	**Fitzroy Crossi**	**11.58**	**200**	P		Pn		07 51 50.4	+0.5
	1.6nm,0.3s,baz=19,slow=10.0,SNR=9.6								
FITZ						S	Sn	07 53 50.6	-7.1
	4.9nm,0.3s,baz=173,slow=23,SNR=8.2								
WRA	**Warramunga Arr**	**13.45**	**161**	P		Pn		07 52 14.1	0.0
	2.1nm,0.4s,baz=342,slow=13,SNR=22								
WRA						S	Sn	07 54 36.9	-5.9
	1.8nm,0.5s,baz=334,slow=21,SNR=6.5								
ASAR	**Alice Springs**	**16.88**	**167**	P		Pn		07 52 58.2	+1.3
	0.9nm,0.4s,baz=339,slow=8.5,SNR=24								
ASAR						S	Sn	07 56 02.8	-2.5
	0.7nm,0.5s,baz=346,slow=25,SNR=4.7								
MKAR	**Makanchi Array**	**68.24**	**327**	P		P		07 59 54.8	-0.1
	0.5nm,0.4s,baz=111,slow=8.1,SNR=10								
	0.5nm,0.4s								

*IDC **07** 07:50:41.2±1.6,38.22N×144.80E,h0km,mb3.7/7, mbtmp3.7/9,ML3.4/2,MS2.7/2,Error ellipse: s-maj=36.6km s-min=24.1km az=91.0*

*NIED **07** 07:50:45.6,38.37N×144.52E,h35km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; Mrr=3.96; Mθθ=2.55; Mφφ=1.42; Mrθ=0.61; Mrφ=1.10; Mθφ=1.89; Fault plane solution: Mo=4.06000×10^{14} NP1:φ=68.00000°, δ=34.00000°,λ=-68.00000°. NP2:φ=223.00000°,δ=58.00000°, λ=-104.00000°.*
*JMA **07** 07:50:45.6±0.2,38.4N±0.8×144.5E±1.0,h35km,MV3.9/31, FAR E OFF NORTH HONSHU*
ISC 07 07:50:45.7±1.1,38.39N±0.06×144.70E±0.08,h29km,n27, σ1§56/30,mb3.6/7,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.46**	**287**	P		**Pn**		**07 51 23.1**	**-0.8**
OFUJ				S		**Sn**		**07 51 51.2**	**-1.9**
MIYJ	**Miyakonagasawa**	**2.54**	**299**	P		**Pn**		**07 51 24.0**	**-0.9**
MIYJ				S		**Sn**		**07 51 52.5**	**-2.3**
JIKH	**Ishinomakikobu**	**2.54**	**269**	P		**Pn**		**07 51 23.8**	**-1.2**
JIKH				S		**Sn**		**07 51 52.0**	**-2.8**
JKMT	**Kesennumamotoy**	**2.56**	**281**	P		**Pn**		**07 51 24.4**	**-0.8**
JMK	**Ichinoseki**	**2.78**	**283**	P		**Pn**		**07 51 28.0**	**-0.2**
JOM	**Ohasama**	**2.87**	**293**	P		**Pn**		**07 51 29.1**	**-0.4**
JANG	**Nango**	**3.16**	**310**	P		**Pn**		**07 51 32.9**	**-0.6**
JYK	**Kaneyama**	**3.44**	**280**	P		**Pn**		**07 51 37.5**	**+0.2**
JOTO	**OTAMA OYAMA**	**3.54**	**258**	P		**Pn**		**07 51 38.7**	**-0.1**
JOTO				S		**Sn**		**07 52 18.5**	**-1.2**
JOT	**Ohata**	**4.10**	**318**	P		**Pn**		**07 51 47.6**	**+1.2**
JCH	**Churui**	**4.34**	**347**	P		**Pn**		**07 51 48.4**	**-1.3**
BSO1	**Boso 1**	**4.78**	**220**	S		**Sn**		**07 52 47.3**	**-2.1**
NEM2	**Nemuro 2**	**5.04**	**9**	*eP*		**Pn**		**07 51 56.1**	**-3.1**
JRY	**Ryogami san**	**5.19**	**245**	P		**Pn**		**07 52 00.4**	**-1.1**
MJAR	**Matsushiro Arr**	**5.48**	**252**	Pn		**Pn**		**07 52 04.8**	**-0.6**
	0.3nm,0.3s,baz=76,slow=14,SNR=7.5								
	2.2nm,0.3s								
JTKR	**Abashiri--Toko**	**5.61**	**354**	P		**Pn**		**07 52 05.4**	**-1.7**
JHR	**Hokuryu**	**5.80**	**338**	S		**Sn**		**07 53 15.1**	**-0.2**
ASAJ	**Asahikawa**	**5.94**	**345**	Pn		**Pn**		**07 52 11.9**	**+0.3**
	1.7nm,0.3s,baz=184,slow=11,SNR=7.8								
ASAJ						Sn		**07 53 15.2**	**-3.4**
	1.4nm,0.3s,baz=296,slow=32,SNR=4.7								
	5.2nm,0.4s								
KLR	**Kul'dur**	**14.29**	**323**	LR		LR		07 59 25.2	
	comp=Z,8.9nm,19.0s,baz=110,slow=36								
HILR	**Hailar Array B**	**21.04**	**310**	P		**P**		**07 55 27.8**	**+0.7**
	1.1nm,0.5s,baz=106,slow=11,SNR=2.7								
	1.1nm,0.5s								
SEY	**Seymchan**	**25.02**	**8**	P		**P**		**07 56 08.3**	**+1.5**
	2.6nm,0.6s,baz=198,slow=8.1,SNR=12								
	2.6nm,0.6s								
SONM	**Songino Array**	**29.25**	**301**	P		**P**		**07 56 46.8**	**+1.6**
	0.2nm,0.5s,baz=76,slow=6.1,SNR=2.0								
	0.2nm,0.5s								
NRIK	**Noril'sk**	**43.16**	**334**	LR		LR		08 20 08.7	
	comp=Z,24nm,18.2s,baz=330,slow=41								
MKAR	**Makanchi Array**	**45.62**	**302**	P		**P**		**07 59 04.5**	**+1.2**
	0.6nm,0.7s,baz=85,slow=8.2,SNR=8.3								
	0.6nm,0.7s								
KURBB	**Kurchatov Arra**	**47.23**	**307**	P		**P**		**07 59 16.8**	**+1.0**
	1.4nm,0.5s,baz=81,slow=8.1,SNR=11								
	1.4nm,0.5s								
BVAR	**Borovoye Array**	**51.59**	**312**	P		**P**		**07 59 50.2**	**+1.1**
	0.7nm,0.6s,baz=74,slow=11,SNR=2.4								
	0.7nm,0.6s								
WRA	**Warramunga Arr**	**58.83**	**191**	P		**P**		**08 00 40.3**	**-1.3**
	0.4nm,0.8s,baz=8.0,slow=7.2,SNR=6.3								
	0.4nm,0.8s								

*ISK **07** 08:06:54.6,38.98N×27.85E,h10km,ML3.5/28*
*AFAD **07** 08:06:54.8,38.98N×27.88E,h10km±1km,ML3.1*
*THE **07** 08:06:56.3,39.N±2.2°E±°,h12km±12km,M3.0/11, MLh3.0/11*
ISC 07 08:06:54.9±0.8,38.98N±0.01×27.86E±0.02,h12km±5km, n82,σ0§51/134,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.11**	**198**	P		**Pg**		**08 06 58.0**	**+0.1**
AKHS				IAML				08 07 00.0	
	comp=E,10μm,0.4s								
AKHS				S		**Sg**		**08 07 00.2**	**+0.2**
AKS	**Akhisar**	**0.11**	**199**	Pg		**Pg**		**08 06 57.5**	**-0.4**
AKS				Sg		**Sg**		**08 06 59.8**	**-0.2**
GORD	**Gordes-Manisa**	**0.26**	**106**	Pg		**Pg**		**08 07 00.4**	**0.0**
GORD				Sg		**Sg**		**08 07 04.7**	**+0.7**
GOMA	**Golmarmara-Man**	**0.28**	**170**	Pg		**Pg**		**08 07 00.8**	**+0.2**
SOMA	**Soma-Manisa**	**0.31**	**305**	Pg		**Pg**		**08 07 01.0**	**-0.2**
KTTT	**Salihli**	**0.34**	**148**	P		**Pg**		**08 07 02.0**	**+0.1**
KTTT				S		**Sg**		**08 07 06.7**	**+0.2**
KTTT				IAML				08 07 07.0	
	comp=N,2μm,0.3s								
STEP	**BALIKESIR_Sava**	**0.41**	**345**	P		**Pg**		**08 07 03.2**	**+0.1**
STEP				S		**Sg**		**08 07 09.4**	**+0.9**
STEP				IAML				08 07 10.0	
	comp=E,7μm,0.3s								
STEP				IAML				08 07 11.0	
	comp=N,5μm,0.4s								
CAMT	**Merkez**	**0.48**	**242**	P		**Pb**		**08 07 05.1**	**-0.3**
CAMT				S		**Sb**		**08 07 13.1**	**+0.6**
CAMT				IAML				08 07 14.0	
	comp=E,2μm,0.3s								
CAMT				IAML				08 07 16.0	
	comp=N,4μm,0.4s								
ZEDA	**zmir-Bergama**	**0.61**	**269**	P		**Pb**		**08 07 07.5**	**0.0**
ZEDA				S		**Sb**		**08 07 16.0**	**0.0**
ZEDA				IAML				08 07 18.0	
	comp=E,742nm,0.3s								
ZEDA				IAML				08 07 18.0	
	comp=N,965nm,0.3s								
BALB	**Balikesir**	**0.66**	**2**	Pg		**Pb**		**08 07 08.2**	**-0.2**
BALB				Sg		**Sb**		**08 07 17.4**	**-0.1**
DEMI	**Demirci**	**0.67**	**84**	P		**Pg**		**08 07 08.0**	**0.0**
DEMI				S		**Sg**		**08 07 16.7**	**-0.2**
DEMI				IAML				08 07 17.0	
	comp=E,1μm,0.2s								
IZMD	**zmir-Dikili-**	**0.72**	**271**	P		**Pb**		**08 07 09.1**	**-0.4**
IZMD				S		**Sb**		**08 07 19.9**	**+0.4**
IZMD				IAML				08 07 20.0	
	comp=N,367nm,0.6s								
IZMD				IAML				08 07 24.0	
	comp=E,329nm,0.4s								
ODEM	**Odemis-Izmir**	**0.72**	**166**	Pg		**Pb**		**08 07 09.5**	**0.0**
MANT	**Manisa**	**0.73**	**132**	P		**Pg**		**08 07 08.9**	**-0.3**
MANT				S		**Sg**		**08 07 18.5**	**-0.4**
MANT				IAML				08 07 21.0	
	comp=N,688nm,0.6s								
MANT				IAML				08 07 22.0	
	comp=E,726nm,0.3s								
BKES	**Balkesir-Mer**	**0.75**	**4**	P		**Pg**		**08 07 08.9**	**-0.6**
BKES				S		**Sg**		**08 07 19.9**	**+0.5**
BKES				IAML				08 07 23.0	
	comp=N,457nm,0.7s								
BALY	**Balya**	**0.78**	**346**	P		**Pb**		**08 07 10.2**	**-0.3**
BALY				S		**Sb**		**08 07 20.9**	**-0.1**
BALY				IAML				08 07 22.0	
	comp=E,1μm,0.3s								
BALY				IAML				08 07 24.0	
	comp=N,1μm,0.4s								
KULA	**Kula-Manisa**	**0.78**	**126**	Pg		**Pg**		**08 07 09.9**	**-0.2**
DURS	**Dursunbey**	**0.78**	**38**	P		**Pg**		**08 07 09.5**	**-0.6**
DURS				S		**Sn**		**08 07 23.6**	**0.0**
DURS				IAML				08 07 24.0	
	comp=E,1μm,0.2s								
DURS				IAML				08 07 25.0	
	comp=N,951nm,0.3s								
BUHA	**Balikesir, Bur**	**0.80**	**311**	P		**Pb**		**08 07 10.5**	**-0.3**
BUHA				S		**Sb**		**08 07 21.5**	**0.0**
BUHA				IAML				08 07 25.0	
	comp=N,462nm,0.3s								
BUHA				IAML				08 07 26.0	
	comp=E,506nm,0.3s								
DUVT	**Torbali**	**0.82**	**203**	P		**Pb**		**08 07 11.2**	**0.0**
DUVT				S		**Sb**		**08 07 21.9**	**-0.3**
DUVT				IAML				08 07 24.0	
	comp=E,558nm,0.3s								
IZMR	**zmir-demi**	**0.85**	**175**	P		**Pg**		**08 07 11.1**	**-0.2**
IZMR				S		**Sb**		**08 07 22.6**	**-0.3**
IZMR				IAML				08 07 25.0	
	comp=E,1μm,0.4s								
IZMR				IAML				08 07 25.0	
	comp=N,369nm,0.5s								
BAGT	**Foa**	**0.85**	**248**	P		**Pb**		**08 07 12.1**	**+0.4**
BAGT				S		**Sn**		**08 07 24.3**	**-0.8**
BAGT				IAML				08 07 27.0	
	comp=E,2μm,0.4s								
BAGT				IAML				08 07 27.0	
	comp=N,2μm,0.8s								
DST	**Dursunbey**	**0.86**	**43**	Pg		**Pg**		**08 07 11.6**	**+0.1**
BLCB	**Balcova**	**0.87**	**227**	Pg		**Pb**		**08 07 11.8**	**-0.2**
BLCB	**Balcova**	**0.87**	**227**	P		**Pb**		**08 07 12.0**	**0.0**
BLCB				S		**Sb**		**08 07 24.1**	**+0.5**
YAYO	**Edremit-Balk**	**0.88**	**316**	Pg		**Pb**		**08 07 11.9**	**-0.2**
YAYO				Sg		**Sb**		**08 07 24.2**	**+0.5**
SIMA	**Simav-Kutahya**	**0.88**	**83**	Pg		**Pb**		**08 07 12.3**	**0.0**
SMAA	**Simav-Kutahya**	**0.88**	**82**	Pg		**Pb**		**08 07 12.3**	**+0.1**
KIRA	**zmir-Kiraz**	**0.89**	**151**	P		**Pb**		**08 07 12.2**	**-0.2**
KIRA				S		**Sg**		**08 07 23.8**	**-0.1**
KIRA				IAML				08 07 26.0	
	comp=E,488nm,0.2s								
BLKS	**Balkesir-Sus**	**0.90**	**5**	P		**Pg**		**08 07 11.8**	**-0.5**
BLKS				S		**Sg**		**08 07 23.8**	**-0.2**
BLKS				IAML				08 07 24.0	
	comp=E,478nm,0.4s								
BLKS				IAML				08 07 25.0	
	comp=N,361nm,0.7s								
FOCM	**Foa**	**0.92**	**253**	Pg		**Pb**		**08 07 12.5**	**-0.3**
FOCM				Sg		**Sn**		**08 07 26.0**	**-0.8**
USAK	**Uak-Merkez**	**0.94**	**106**	P		**Pg**		**08 07 12.7**	**-0.4**
USAK				S		**Sg**		**08 07 24.2**	**-1.3**
USAK				IAML				08 07 29.0	
	comp=N,172nm,0.5s								
USAK				IAML				08 07 31.0	
	comp=E,214nm,0.7s								
AYVA	**Ayvalik**	**0.96**	**290**	P		**Pb**		**08 07 13.4**	**-0.2**
AYVA				S		**Sn**		**08 07 27.3**	**-0.6**
AYVA				IAML				08 07 30.0	
	comp=E,964nm,0.5s								
SUSR	**Susurluk-Balik**	**1.00**	**10**	Pg		**Pg**		**08 07 14.1**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**179**	Pg		**Pb**		**08 07 14.7**	**-0.1**
CMHT	**Manyas**	**1.03**	**5**	P		**Pg**		**08 07 14.7**	**-0.1**
CMHT				S		**Sg**		**08 07 27.8**	**-0.6**
CMHT				IAML				08 07 31.0	
	comp=E,1μm,0.5s								
CMHT				IAML				08 07 31.0	
	comp=N,928nm,0.5s								
SHAP	**Saphane-Kutahy**	**1.06**	**87**	Pg		**Pb**		**08 07 15.5**	**+0.1**
YENI	**Yenice-Canakka**	**1.07**	**334**	Pg		**Pg**		**08 07 15.1**	**-0.4**
NAZL	**Nazilli-Aydin**	**1.07**	**161**	Pg		**Pb**		**08 07 15.4**	**0.0**
GONE	**Gonen-Balikesi**	**1.07**	**353**	Pg		**Pn**		**08 07 15.8**	**0.0**
KRBN	**Karaburun**	**1.09**	**250**	Pn		**Pn**		**08 07 15.8**	**-0.2**
ATIT	**Gnen**	**1.12**	**348**	P		**Pg**		**08 07 16.5**	**-0.1**
ATIT				S		**Sg**		**08 07 31.5**	**+0.3**
ATIT				IAML				08 07 34.0	
	comp=N,1μm,0.7s								
ATIT				IAML				08 07 34.0	
	comp=E,712nm,0.3s								
GMLD	**Gumuldur**	**1.17**	**220**	Pn		**Pg**		**08 07 17.1**	**-0.3**
SULTU	**Buldan**	**1.17**	**142**	P		**Pn**		**08 07 17.4**	**+0.2**
SULTU				S		**Sn**		**08 07 33.1**	**-0.1**
SULTU				IAML				08 07 37.0	
	comp=E,193nm,0.6s								
SULTU				IAML				08 07 38.0	
	comp=N,212nm,0.6s								
KARB	**zmir-Karabur**	**1.17**	**255**	P		**Pg**		**08 07 19.3**	**+1.8**
KARB				S		**Sn**		**08 07 33.4**	**+0.3**
DGB	**zmir**	**1.20**	**220**	P		**Pg**		**08 07 17.8**	**-0.2**
DGB				S		**Sn**		**08 07 34.3**	**+0.5**
DGB				IAML				08 07 37.0	
	comp=E,295nm,0.4s								
CANM	**Can-anakkale**	**1.20**	**329**	Pn		**Pb**		**08 07 17.5**	**-0.2**
EMET	**Ktahya-Emet**	**1.20**	**70**	P		**Pn**		**08 07 17.9**	**+0.2**
EMET				S		**Sb**		**08 07 33.5**	**+0.1**
EMET				IAML				08 07 36.0	
	comp=E,642nm,0.3s								
EMET				IAML				08 07 36.0	
	comp=N,778nm,0.6s								
KUSD	**Kusadasi-Aydin**	**1.21**	**202**	Pn		**Pn**		**08 07 17.7**	**+0.1**
GEDZ	**Gediz**	**1.21**	**87**	Pn		**Pg**		**08 07 18.6**	**+0.3**
ESEN	**Aydn-Nazilli**	**1.24**	**162**	P		**Pn**		**08 07 17.6**	**-0.5**
ESEN				S		**Sb**		**08 07 34.0**	**-0.3**
ESEN				IAML				08 07 36.0	
	comp=N,127nm,0.4s								
ESEN				IAML				08 07 39.0	
	comp=E,156nm,0.4s								
PRK	**Paraskevi**	**1.26**	**283**	P		**Pg**		**08 07 19.0**	**-0.2**
PRK				S		**Sn**		**08 07 36.6**	**+1.3**
BAYC	**CANAKKALE_Bayr**	**1.27**	**307**	P		**Pn**		**08 07 18.2**	**-0.3**
BAYC				S		**Sn**		**08 07 35.9**	**+0.4**
BAYC	

SONM	**Songino Array**	**12.98**	**11**	Pn		**Pn**	**08 10 41.5**	**+0.1**
	0.5nm,0.3s,baz=190,slow=15,SNR=16							
SONM				Lg		Lg	08 14 28.9	
	0.2nm,0.3s,baz=204,slow=28,SNR=5.5							
	1.1nm,0.4s							
CMAR	**Chiang Mai Arr**	**16.96**	**193**	Pn		**Pn**	**08 11 33.4**	**-0.7**
	0.7nm,0.3s,baz=6.9,slow=9.3,SNR=6.0							
HILR	**Hailar Array B**	**19.01**	**35**	P		**Pn**	**08 11 59.4**	**+0.3**
	baz=206,slow=9.9							
	1.0nm,0.7s							
MKAR	**Makanchi Array**	**19.37**	**313**	P		**P**	**08 12 02.5**	**+0.3**
	0.1nm,0.3s,baz=112,slow=12,SNR=4.8							
	0.4nm,0.7s							
ZALV	**Zalesovo Beam**	**22.68**	**332**	P		**P**	**08 12 38.5**	**+0.7**
	0.6nm,0.5s,baz=150,slow=12,SNR=1.6							
	0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**23.48**	**319**	P		**P**	**08 12 44.8**	**-1.0**
	2.4nm,0.8s,baz=124,slow=11,SNR=12							
	2.4nm,0.8s							
KLR	**Kul'dur**	**25.44**	**47**	LR		LR	08 23 54.0	
	comp=Z,14nm,18.6s,baz=162,slow=38							
BVAR	**Borovoye Array**	**29.06**	**318**	P		**P**	**08 13 36.1**	**-0.2**
	0.4nm,0.5s,baz=127,slow=11,SNR=2.2							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**62.38**	**146**	P		**P**	**08 17 59.4**	**+0.6**
	0.8nm,1.0s,baz=342,slow=6.9,SNR=4.6							
	0.8nm,1.0s							
ILAR	**Eielson Array**	**66.68**	**26**	P		**P**	**08 18 26.9**	**+0.5**
	0.5nm,1.0s,baz=278,slow=7.3,SNR=4.4							
	0.5nm,1.0s							

*RSPR **07** 08:10:57.0, 17°.92N×66°.60W,h6km,MD3.1/7*
*NEIC **07** 08:10:56.8±0.7, 17°.93N±0°.04×66°.596W±0°.008, h10km±1km, ML3.1/33, Md3.1/7(RSPR), Error ellipse: s-maj=6.5km s-min=2.9km az=355.0*
*SDD **07** 08:10:57.5±1.8, 17°.87N×66°.61W,h18km±25km, MD3.4, ML2.9, MW3.6, Presumed earthquake*
ISC 07 08:10:56.7±1.0, 17°.93N±0°.05×66°.60W±0°.02, h14km±6km, n37, σ0°.46/61, 13C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.12**	**357**		**Pg**	**08 10 59.9**	**-0.1**
OBIP	**Obispado Ponce**	**0.12**	**357**		**Sg**	**08 11 01.9**	**-0.3**
OBIP				IAML		08 11 03.9	
	comp=N,1μm,0.4s						
OBIP	**Obispado Ponce**	**0.12**	**357**	↑*e*P	**Pg**	**08 10 59.9**	**-0.1**
OBIP				*e*S	**Sg**	**08 11 02.1**	**-0.1**
CELP	**Cerrillos**	**0.15**	**8**		**Pg**	**08 11 00.6**	**+0.1**
CELP				IAML		08 11 03.5	
	comp=N,6μm,0.6s						
CELP				IAML		08 11 03.7	
	comp=N,5μm,0.5s						
GBPR	**Guanica, Bosqu**	**0.27**	**280**		**Pg**	**08 11 02.6**	**+0.2**
GBPR					**Sb**	**08 11 07.6**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.27**	**280**	↓*e*P	**Pg**	**08 11 02.6**	**+0.2**
GBPR				*e*S	**Sb**	**08 11 07.6**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.34**	**341**		**Pg**	**08 11 03.7**	**0.0**
MLPR	**Magueyes Islan**	**0.42**	**276**		**Pg**	**08 11 05.2**	**+0.1**
ECPR	**Experimental S**	**0.45**	**30**		**Pg**	**08 11 05.7**	**+0.1**
ECPR				IAML		08 11 13.5	
	comp=N,3μm,0.2s						
ECPR				IAML		08 11 14.0	
	comp=N,3μm,0.2s						
ECPR	**Experimental S**	**0.45**	**30**	↓*e*P	**Pg**	**08 11 06.0**	**+0.3**
ECPR				*e*S	**Sb**	**08 11 12.8**	**-0.2**
SJG	**San Juan**	**0.47**	**67**		**Pg**	**08 11 06.2**	**+0.3**
SJG				IAML		08 11 14.1	
	comp=N,1μm,0.4s						
SJG				IAML		08 11 14.7	
	comp=N,927nm,0.3s						
SJG	**San Juan**	**0.47**	**67**	↓*e*Pg	**Pb**	**08 11 06.5**	**-0.2**
SJG				↑*e*Sg	**Sb**	**08 11 13.7**	**+0.3**
SJG	**San Juan**	**0.47**	**67**	↑*e*P	**Pg**	**08 11 06.2**	**+0.3**
SJG				*e*S	**Sb**	**08 11 13.7**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.49**	**279**		**Pg**	**08 11 06.2**	**-0.1**
CRPR					**Sg**	**08 11 13.3**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.49**	**279**	↑*e*Pg	**Pg**	**08 11 06.5**	**+0.2**
CRPR				↑*e*Sg	**Sg**	**08 11 13.4**	**+0.5**
CRPR				IAML		08 11 17.8	
	comp=N,650nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.49**	**279**	↓*e*P	**Pg**	**08 11 06.3**	**-0.1**
CRPR				*e*S	**Sg**	**08 11 13.7**	**+0.7**
LSP	**Las Mesas**	**0.52**	**298**		**Pg**	**08 11 07.0**	**0.0**
LSP					**Sb**	**08 11 15.9**	**+0.7**
LSP	**Las Mesas**	**0.52**	**298**	↓*e*P	**Pg**	**08 11 07.0**	**0.0**
LSP				*e*S	**Sb**	**08 11 15.9**	**+0.7**
PDPR	**Patillas Dam,**	**0.56**	**81**		**Pg**	**08 11 07.6**	**0.0**
PRSN	**Puerto Rico Se**	**0.59**	**299**		**Pg**	**08 11 08.2**	**+0.1**
PRSN					**Sb**	**08 11 17.2**	**+0.2**
PRSN	**Puerto Rico Se**	**0.59**	**299**	↑*e*Pg	**Pg**	**08 11 07.7**	**-0.6**
PRSN				↓*e*Sg	**Sn**	**08 11 19.0**	**-1.1**
PRSN				IAML		08 11 23.0	
	comp=N,1μm,0.3s						
PRSN	**Puerto Rico Se**	**0.59**	**299**	↑*e*P	**Pg**	**08 11 08.2**	**-0.1**
PRSN				*e*S	**Sb**	**08 11 17.2**	**+0.2**
GCPR	**Guaynabo City**	**0.62**	**52**		**Pg**	**08 11 08.8**	**0.0**
GCPR					**Sg**	**08 11 17.6**	**+0.5**
GCPR				IAML		08 11 18.6	
	comp=N,875nm,0.6s						
GCPR	**Guaynabo City**	**0.62**	**52**	↓*e*P	**Pg**	**08 11 09.1**	**+0.3**
GCPR				*e*S	**Sb**	**08 11 17.9**	**0.0**
AGPR	**Aguadilla, PR**	**0.72**	**318**		**Pg**	**08 11 10.6**	**-0.2**
AGPR				IAML		08 11 27.1	
	comp=N,594nm,0.5s						
AGPR				IAML		08 11 30.9	
	comp=N,565nm,0.4s						
AGPR	**Aguadilla, PR**	**0.72**	**318**	↓*e*Pg	**Pg**	**08 11 10.7**	**-0.1**
AGPR				↑*e*Sg	**Sg**	**08 11 20.8**	**+0.5**
AGPR				IAML		08 11 30.9	
	comp=N,504nm,0.3s						
AGPR	**Aguadilla, PR**	**0.72**	**318**	↓*e*P	**Pg**	**08 11 10.7**	**-0.1**
AGPR				*e*S	**Sb**	**08 11 21.1**	**+0.2**
HUMP	**Col San Antoni**	**0.75**	**73**		**Pg**	**08 11 11.0**	**-0.1**
HUMP					**Sb**	**08 11 21.6**	**+0.1**
HUMP	**Col San Antoni**	**0.75**	**73**	↓*e*P	**Pg**	**08 11 11.0**	**-0.1**
HUMP				*e*S	**Sb**	**08 11 21.6**	**+0.1**
IDE	**Isla Desecheo**	**0.95**	**299**		**Pb**	**08 11 14.9**	**0.0**
IDE					**Sg**	**08 11 28.2**	**+0.8**
IDE	**Isla Desecheo**	**0.95**	**299**	↑*e*P	**Pb**	**08 11 14.9**	**0.0**
IDE				*e*S	**Sg**	**08 11 28.2**	**+0.8**
CUPR	**Culebra, Puert**	**1.31**	**73**		**Pn**	**08 11 20.7**	**+0.2**
PCDR	**Punta Cana, DR**	**1.79**	**289**	*e*Pg	**Pn**	**08 11 27.5**	**+0.3**
PCDR				IAML		08 12 05.5	
	comp=N,270nm,2.4s						
HIDR	**Higuey Centro**	**2.12**	**289**	↑*e*Pg	**Pb**	**08 11 34.2**	**-0.7**
HIDR				↑*e*Sg	**Sb**	**08 12 02.4**	**+1.4**
HIDR				IAML		08 12 12.8	
	comp=N,55nm,0.2s						
MIDR	**Miches**	**2.55**	**295**	*e*Pg	**Pb**	**08 11 42.2**	**-0.1**
MIDR				IAML		08 12 58.2	
	comp=N,42nm,4.1s						
DR12	**Loma Pena Alta**	**2.77**	**288**	Pn	**Pn**	**08 11 41.2**	**+0.4**
HATOM	**Hato Mayor del**	**2.78**	**288**	*e*Pg	**Pb**	**08 11 44.5**	**-1.6**
HATOM				↓*e*Sg	**Sb**	**08 12 19.4**	**-0.6**
HATOM				IAML		08 12 27.2	
	comp=N,42nm,3.1s						

*NEIC **07** 08:11:27.5±1.1, 18°.91N±0°.09×145°.5E±0°.2, h232km±10km, mb4.4/24, Error ellipse: s-maj=23.0km s-min=13.6km az=89.0*
*IDC **07** 08:11:27.7±0.8, 18°.98N×145°.39E, h243km±8km, mb3.5/11, mbtmp4.1/13, Error ellipse: s-maj=22.9km s-min=11.1km az=94.0*
ISC 07 08:11:25.3±0.5, 18°.95N±0°.06×145°.4E±0°.1, h214km, n40, σ1§28/43, mb4.2/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.71**	**175**	Pn	**Pn**	**08 12 26.4**	**+2.3**
GUMO	**Guam**	**5.36**	**186**	P	**Pn**	**08 12 47.6**	**+2.9**
	37nm,0.3s,baz=287,slow=22,SNR=8.7						
GUMO	**Guam**	**5.36**	**186**	Pn	**Pn**	**08 12 47.1**	**+2.4**
PATS	**Pohnpei**	**17.38**	**132**	P	**Pn**	**08 15 14.6**	**-0.9**
JOW	**Kunigami**	**17.63**	**300**	P	**Pn**	**08 15 19.8**	**+1.4**
JGF	**Kuroka**	**18.06**	**338**	P	**Pn**	**08 15 22.4**	**-0.8**
JGF				IAmb	IAmb	08 15 24.1	
	comp=Z,7.0nm,0.8s						
MJAR	**Matsushiro Arr**	**18.64**	**342**	P	**P**	**08 15 28.1**	**+1.0**
	comp=Z,1.9nm,0.5s,baz=162,slow=10,SNR=7.5						
MJAR	**Matsushiro Arr**	**18.64**	**342**	P	**P**	**08 15 27.2**	**+0.1**
MANU	**Manus Island**	**20.95**	**175**	P	**P**	**08 15 51.2**	**-0.8**
MANU				IAmb	IAmb	08 16 23.2	
	comp=Z,23nm,0.9s						
FAKI	**Fak Fak**	**25.31**	**212**	P	**P**	**08 16 31.8**	**-0.7**
PMG	**Port Moresby**	**28.23**	**176**	P	**P**	**08 16 56.5**	**-2.1**
PMG				IAmb	IAmb	08 17 24.5	
	comp=Z,11nm,0.8s						
COEN	**Coen**	**32.77**	**184**	P	**P**	**08 17 38.0**	**-0.5**
MTN	**Manton Dam**	**34.59**	**205**	P	**P**	**08 17 54.4**	**+0.3**
MTN				IAmb	IAmb	08 17 58.0	
	comp=Z,7.8nm,0.9s						
KNRA	**Kununurra**	**38.12**	**207**	P	**P**	**08 18 23.9**	**-0.1**
KNRA				IAmb	IAmb	08 18 26.6	
	comp=Z,6.4nm,0.6s						
CTAO	**Charters Tower**	**38.81**	**179**	P	**P**	**08 18 29.1**	**-0.6**
WRA	**Warramunga Arr**	**40.15**	**196**	P	**P**	**08 18 41.0**	**+0.2**
	comp=Z,4.2nm,0.4s,baz=18,slow=8.9,SNR=112						
	comp=Z,4.2nm,0.4s						
WRA	**Warramunga Arr**	**40.15**	**196**	P	**P**	**08 18 40.2**	**-0.5**
AS31	**Alice Springs**	**43.82**	**195**	P	**P**	**08 19 09.9**	**-0.5**
ASAR	**Alice Springs**	**43.82**	**195**	P	**P**	**08 19 10.3**	**-0.1**
	comp=Z,3.3nm,0.5s,baz=17,slow=7.6,SNR=48						
	comp=Z,2.3nm,0.5s						
ASAR	**Alice Springs**	**43.82**	**195**	P	**P**	**08 19 09.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**43.93**	**277**	P	**P**	**08 19 10.8**	**-0.6**
	comp=Z,0.8nm,0.2s,baz=92,slow=4.8,SNR=4.6						
	comp=Z,0.8nm,0.2s						
DZM	**Mont Dzumac**	**45.66**	**152**	P	**P**	**08 19 24.5**	**-0.4**
DZM				IAmb	IAmb	08 19 26.3	
	comp=Z,33nm,1.4s						
MSVF	**Nonsavu**	**48.55**	**137**	P	**P**	**08 19 47.8**	**+0.5**
MSVF				IAmb	IAmb	08 20 20.9	
	comp=Z,24nm,1.4s						
UNV	**Unalaska Valle**	**50.60**	**35**	P	**P**	**08 20 01.7**	**-0.4**
STKA	**Stephens Creek**	**50.67**	**184**	P	**P**	**08 20 02.4**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=21,slow=8.6,SNR=6.9						
	comp=Z,1.7nm,0.4s						
LVA	**Lava Point**	**50.98**	**35**	P	**P**	**08 20 05.0**	**-0.1**
FORT	**Forrest**	**52.19**	**199**	P	**P**	**08 20 13.7**	**-0.6**
FORT				IAmb	IAmb	08 20 56.6	
	comp=Z,6.8nm,0.9s						
BBOO	**Buckleboo**	**52.24**	**190**	P	**P**	**08 20 14.2**	**-0.4**
BBOO				IAmb	IAmb	08 20 15.6	
	comp=Z,23nm,1.5s						
O15K	**Ungalikthiuk R**	**56.08**	**30**	P	**P**	**08 20 42.2**	**+0.2**
O15K				IAmb	IAmb	08 20 43.9	
	comp=Z,20nm,1.2s						
N15K	**Kwethluk River**	**56.33**	**29**	P	**P**	**08 20 44.4**	**+0.6**
N15K				IAmb	IAmb	08 20 51.9	
	comp=Z,26nm,1.4s						
P16K	**Nushagak River**	**56.92**	**31**	P	**P**	**08 20 49.1**	**+1.2**
J16K	**Anvik River**	**57.35**	**26**	P	**P**	**08 20 50.8**	**0.0**
J16K				IAmb	IAmb	08 21 12.4	
	comp=Z,9.7nm,1.5s						
KURBB	**Kurchatov Arra**	**60.96**	**318**	P	**P**	**08 21 15.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=92,slow=8.1,SNR=2.1						
	comp=Z,0.3nm,0.3s						
I21K	**Tanana**	**61.54**	**25**	P	**P**	**08 21 20.0**	**+0.6**
ILAR	**Eielson Array**	**63.53**	**26**	P	**P**	**08 21 31.4**	**-1.2**
	comp=Z,1.2nm,1.1s,baz=263,slow=5.7,SNR=6.7						
	comp=Z,1.2nm,1.1s						
BVAR	**Borovoye Array**	**66.12**	**320**	P	**P**	**08 21 48.8**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=104,slow=6.1,SNR=7.0						
BVAR				pP	**pwP**	**08 22 45.0**	**+2.4**
	comp=Z,0.6nm,0.4s,baz=89,slow=8.0,SNR=2.8						
	comp=Z,0.9nm,0.5s						
YKA	**Yellowknife Ar**	**77.89**	**28**	P	**P**	**08 22 59.2**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=292,slow=5.7,SNR=7.1						
YKA				pP	**pwP**	**08 23 55.6**	**+3.0**
	comp=Z,0.1nm,0.5s,baz=297,slow=6.1,SNR=2.4						
	comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**83.19**	**52**	P	**P**	**08 23 27.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=267,slow=5.5,SNR=5.6						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**86.55**	**335**	P	**P**	**08 23 41.1**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=76,slow=4.6,SNR=14						
FINES				pP	**pwP**	**08 24 40.6**	**+1.2**
	comp=Z,2.9nm,0.9s,baz=74,slow=8.1,SNR=1.9						
	comp=Z,0.9nm,0.3s						
HFS	**Hagfors**	**92.06**	**338**	P	**P**	**08 24 07.9**	**-1.9**
	comp=Z,0.9nm,0.6s,baz=50,slow=9.5,SNR=4.3						
	comp=Z,0.9nm,0.6s						

*IDC **07** 08:15:03.4±0.8, 19°.23N×146°.01E, h108km±6km, mb3.6/15, mbtmp4.0/17, MS2.9/2, Error ellipse: s-maj=19.6km s-min=11.3km az=96.0*
*NEIC **07** 08:15:03.4±1.6, 19°.22N±0°.08×146°.1E±0°.2, h100km±4km, mb4.4/17, Error ellipse: s-maj=24.3km s-min=10.9km az=81.0*
ISC 07 08:15:03.5±0.5, 19°.21N±0°.06×146°.1E±0°.1, h109km, n50, σ0§77/45, mb4.0/23, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.96**	**184**		**Pn**	**08 16 01.1**	**-1.2**
GUMO	**Guam**	**5.71**	**192**	P	**Pn**	**08 16 26.9**	**+0.9**
	120nm,0.3s,baz=303,slow=5.7,SNR=23						
GUMO				S	**Sn**	**08 17 31.3**	**+1.0**
	46nm,0.3s,baz=168,slow=23,SNR=1.4						
GUMO	**Guam**	**5.71**	**192**		**Pn**	**08 16 27.1**	**+1.1**
JCJ	**Chichijima**	**8.62**	**336**	P	Pn	08 16 52.7	-13
	55nm,0.3s,baz=248,slow=18,SNR=5.2						
JCJ	**Chichijima**	**8.62**	**336**	Pn	**Pn**	**08 17 04.9**	**-0.5**
PATS	**Pohnpei**	**17.12**	**134**		**P**	**08 18 55.2**	**-1.0**
JGF	**Kuroka**	**18.05**	**337**	P	**P**	**08 19 06.5**	**+0.2**
JGF				IAmb	IAmb	08 19 26.8	
	comp=Z,8.5nm,0.8s						
MJAR	**Matsushiro Arr**	**18.60**	**340**	P	**P**	**08 19 12.4**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=163,slow=9.3,SNR=10						
MJAR	**Matsushiro Arr**	**18.60**	**340**	P	**P**	**08 19 12.3**	**0.0**
MAJO	**Matsushiro**	**18.60**	**340**	P	**P**	**08 19 12.9**	**+0.6**
MAJO				IAmb	IAmb	08 19 23.4	
	comp=Z,11nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**19.52**	**89**	T	T	08 40 17.3	
	baz=275,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**19.54**	**89**	T	T	08 40 14.6	
	baz=275,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**19.54**	**89**	T	T	08 40 16.1	
	baz=275,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**19.64**	**85**	T	T	08 40 59.1	
	baz=267,slow=74,SNR=7.8						
H11N2	**WAKE ISLAND Hy**	**19.64**	**85**	T	T	08 40 38.7	
	baz=267,slow=74,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**19.66**	**85**	T	T	08 40 42.2	
	baz=267,slow=74,SNR=6.7						
KSRS	**Korea Array**	**24.12**	**323**	P	**P**	**08 20 10.3**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=148,slow=9.2,SNR=5.0						
	comp=Z,1.5nm,0.6s						
KLR	**Kul'dur**	**32.09**	**342**	LR	LR	08 35 20.4	
	comp=Z,6.3nm,18.3s,baz=77,slow=38						
HILR	**Hailar Array B**	**36.89**	**331**	P	**P**	**08 22 02.1**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=133,slow=10,SNR=5.6						
	comp=Z,1.4nm,0.6s						
WB0	**Warramunga Arr**	**40.40**	**197**	P	**P**	**08 22 30.6**	**-0.4**
WB0				IAmb	IAmb	08 22 55.8	
	comp=Z,7.0nm,1.2s						
WRA	**Warramunga Arr**	**40.58**	**197**	P	**P**	**08 22 31.8**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=17,slow=8.8,SNR=9.1						
	comp=Z,2.1nm,0.7s						
WRA	**Warramunga Arr**	**40.58**	**197**	P	**P**	**08 22 31.7**	**-0.8**
SONM	**Songino Array**	**42.97**	**321**	P	**P**	**08 22 52.4**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=143,slow=7.6,SNR=3.3						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**42.97**	**321**	P	**P**	**08 22 52.2**	**+0.3**
AS31	**Alice Springs**	**44.24**	**196**	P	**P**	**08 23 01.8**	**-0.4**
ASAR	**Alice Springs**	**44.24**	**196**	P	**P**	**08 23 02.4**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=18,slow=12,SNR=9.6						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**44.24**	**196**	P	**P**	**08 23 01.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**44.50**	**277**	pP	pP	08 23 29.9	+1.1
	comp=Z,1.4nm,0.5s,baz=79,slow=8.2,SNR=1.6						
O14K	**Tigyukauivet M**	**54.90**	**30**	P	**P**	**08 24 23.1**	**+0.5**
O14K				IAmb	IAmb	08 24 59.9	
	comp=Z,18nm,1.2s						
M14K	**Bethel**	**55.19**	**28**	P	**P**	**08 24 25.7**	**+1.0**
O15K	**Ungalikthiuk R**	**55.55**	**30**	P	**P**	**08 24 27.8**	**+0.5**
ANM	**Nome**	**55.59**	**23**	P	**P**	**08 24 27.5**	**0.0**
ANM				IAmb	IAmb	08 24 39.7	
	comp=Z,3.6nm,1.3s						
N15K	**Kwethluk River**	**55.80**	**29**	P	**P**	**08 24 29.6**	**+0.5**
N15K				IAmb	IAmb	08 25 09.8	
	comp=Z,16nm,1.4s						
F15K	**North Star Dit**	**56.44**	**22**	P	**P**	**08 24 34.1**	**+0.5**
F15K				IAmb	IAmb	08 24 35.0	
	comp=Z,1.6nm,0.9s						
ZALV	**Zalesovo Beam**	**57.83**	**322**	P	**P**	**08 24 42.3**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=100,slow=6.2,SNR=3.6						
ZALV				LR	LR	08 48 17.0	
	comp=Z,27nm,18.9s,baz=53,slow=34						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**58.36**	**314**	P	**P**	**08 24 46.3**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=97,slow=7.9,SNR=4.7						
MKAR				pP	**pP**	**08 25 12.8**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=94,slow=9.1,SNR=4.7						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.36**	**314**	P	**P**	**08 24 47.1**	**-0.4**
D20K	**Etivluk River**	**60.60**	**21**	P	**P**	**08 25 03.3**	**+0.8**
D20K				IAmb	IAmb	08 25 04.4	
	comp=Z,4.1nm,0.6s						
KURBB	**Kurchatov Arra**	**61.18**	**318**	P	**P**	**08 25 05.7**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=91,slow=7.5,SNR=5.5						
	comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**63.03**	**26**	P	**P**	**08 25 18.1**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=254,slow=6.0,SNR=16						
ILAR				pP	**pP**	**08 25 44.9**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=259,slow=5.9,SNR=3.8						
	comp=Z,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**77.37**	**28**	P	**P**	**08 26 46.5**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=292,slow=6.3,SNR=16						
YKA				pP	**pP**	**08 27 14.0**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=295,slow=6.1,SNR=4.4						
	comp=Z,1.2nm,0.8s						
YKA	**Yellowknife Ar**	**77.37**	**28**	P	**P**	**08 26 46.0**	**-0.2**
PNTR	**Pine Nut**	**81.38**	**52**		**P**	**08 27 09.0**	**+0.3**
PNTR				IAmb	IAmb	08 27 10.7	
	comp=Z,5.0nm,0.8s						
ARCES	**ARCESS Array B**	**82.11**	**342**	P	**P**	**08 27 11.8**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=64,slow=5.5,SNR=3.8						
	comp=Z,2.9nm,0.8s						
NVAR	**Mina Array Bea**	**82.55**	**52**	P	**P**	**08 27 16.1**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=265,slow=5.9,SNR=28						
	comp=Z,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**82.55**	**52**	P	**P**	**08 27 15.6**	**+0.7**
FINES	**FINESS Array B**	**86.57**	**335**	P	**P**	**08 27 33.1**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=54,slow=4.4,SNR=9.2						
	comp=Z,0.5nm,0.3s						
PDAR	**Pinedale Array**	**87.22**	**46**	P	**P**	**08 27 38.2**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=232,slow=1.2,SNR=6.5						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**87.22**	**46**	P	**P**	**08 27 36.8**	**-1.4**
ULM	**Lac du Bonnet**	**91.98**	**35**	P	**P**	**08 27 60.0**	**0.0**
	comp=Z,2.4nm,0.8s,baz=355,slow=3.4,SNR=4.4						
	comp=Z,2.4nm,0.8s						

*IDC **07** 08:20:13.5±1.0, 50°.03S×162°.20E, h0km, mb4.5/5, mbtmp4.5/6, ML4.6/1, MS3.7/17, Error ellipse: s-maj=44.3km s-min=24.5km az=59.0*
*NEIC **07** 08:20:15.3±1.6, 50°.1S±0°.1×161°.8E±0°.2, h10km±2km, mb4.7/9, Error ellipse: s-maj=22.1km s-min=18.6km az=166.0*
*GCMT **07** 08:20:19.3±0.4, 50°.18S±0°.02×161°.68E±0°.04, h30km±1km, MW4.8/67, Moment Tensor Solution. s18,c20; s67,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_rr0.47±.18; $M_{\theta\theta}$1.08±.12; $M_{\phi\phi}$-1.55±.14; $M_{r\theta}$-0.02±.15; $M_{r\phi}$-1.98±.10; $M_{\theta\phi}$0.31±.15; Best double couple: M_o2.39600×10^{16} NP1:ϕ_s253.00000°,δ83.00000°,λ180.00000°. NP2: ϕ_s343.00000°,δ90.00000°,λ7.00000°. Principal axes: T 2.1570, Plg5.0000°, Azm209.0000°; N 0.4730, Plg83.0000°, Azm347.0000°; P -2.6340, Plg5.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 08:20:18.8±0.7, 50°.06S±0°.09×161°.98E±0°.06, h33km, n152, σ1§42/148, mb4.6/11, MS3.7/18, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**5.01**	**41**		**Pn**	**08 21 31.4**	**-0.2**
PYZ	**Puysegur Point**	**5.01**	**41**	P	**Pn**	**08 21 31.4**	**-0.2**
PYZ	**Puysegur Point**	**5.01**	**41**	P	**Pn**	**08 21 31.6**	**0.0**
PYZ				S	**Sn**	**08 22 28.7**	**+0.4**
APZ	**The Paps**	**5.14**	**53**	P	**Pn**	**08 21 33.2**	**-0.2**
APZ				S	**Sn**	**08 22 29.6**	**-2.0**
DCZ	**Deep Cove**	**5.77**	**39**		**Pn**	**08 21 41.4**	**-0.7**
WHZ	**Wether Hill Ro**	**5.78**	**46**		**Pn**	**08 21 42.0**	**-0.2**
WHZ	**Wether Hill

GLAD	Gladstone	13.34	308	P		Pn	08 23 24.6	-1.1
MRZ	Mangatainoka R	13.39	51	P		Pn	08 23 26.2	-0.1
NBEZ	Newall Road No	13.69	42	P		Pn	08 23 29.6	-0.9
BFZ	Birch Farm	13.71	52	P		Pn	08 23 31.2	+0.5
BFZ	Birch Farm	13.71	52	P		Pn	08 23 31.8	+1.1
KHEZ	Kahui Hut	13.73	43	P		Pn	08 23 31.0	-0.2
KHEZ	Kahui Hut	13.73	43	P		Pn	08 23 30.3	-0.9
PREZ	Palmer Road	13.76	43	P		Pn	08 23 31.0	-0.5
PKE	Pukeiti	13.80	43	P		Pn	08 23 31.8	-0.2
DVHZ	Dannevirke	13.95	51	P		Pn	08 23 34.0	-0.1
PKVZ	Pokaka	14.34	46	P		Pn	08 23 40.3	+0.8
WNVZ	Wahianoa	14.43	47	P		Pn	08 23 42.5	+1.8
ETVZ	East Tongariro	14.63	47	P		Pn	08 23 44.6	+1.1
TMVZ	Te Maari	14.65	47	P		Pn	08 23 44.8	+1.1
HIZ	Hauiti	14.75	43	P		Pn	08 23 43.5	-1.4
HIZ	Hauiti	14.75	43	P		Pn	08 23 43.1	-1.8
BKZ	Black Stump Fm	14.98	49	P		Pn	08 23 47.9	-0.2
BKZ	Black Stump Fm	14.98	49	P		Pn	08 23 49.5	+1.4
AWAZ	Awhitu Peninsu	15.87	40	P		Pn	08 24 01.1	+1.4
MILA	Mila	15.95	320	P		Pn	08 23 60.0	-0.8
WTAZ	Waiatarua	15.96	39	P		P	08 24 04.1	+0.1
URZ	Urewera	15.99	48	Pn		Pn	08 23 58.1	-3.0
	2.3nm,0.3s,baz=148,slow=3.1,SNR=11							
URZ				LR		LR	08 30 34.0	
	comp=Z,567nm,18.7s,baz=220,slow=39							
	20nm,0.8s							
URZ	Urewera	15.99	48	P		Pn	08 24 01.1	-0.1
URZ	Urewera	15.99	48	P		Pn	08 24 02.6	+1.5
MKAZ	Moumakai	16.06	41	P		P	08 24 05.7	+0.6
MWZ	Matawai	16.14	49	P		Pn	08 24 03.8	+0.7
RUGZ	Raukumara Rang	16.50	49	P		Pn	08 24 08.3	+0.6
PUZ	Puketiti	16.70	50	P		Pn	08 24 10.6	+0.4
WCZ	Waipu Caves	16.73	37	P		P	08 24 13.3	+0.8
OUZ	Omahuta	17.08	34	P		P	08 24 17.2	+0.8
OUZ	Omahuta	17.08	34	P		P	08 24 18.4	+1.9
CNB	Canberra Magne	17.38	323	P		P	08 24 19.3	-0.5
CAN	Canberra	17.51	322	P		P	08 24 20.8	-0.5
CAN	Canberra	17.51	322	P		P	08 24 21.0	-0.2
STKA	Stephens Creek	23.68	312	P		P	08 25 27.7	+0.3
	4.3nm,0.7s,baz=138,slow=14,SNR=6.2							
STKA				LR		LR	08 34 40.5	
	comp=Z,129nm,18.1s,baz=170,slow=36							
	4.3nm,0.7s							
BBOO	Buckleboo	25.78	302	P		P	08 25 46.8	+0.3
BBOO				IAmb		IAmb	08 25 50.2	
	comp=Z,36nm,1.1s							
VNDA	Vanda	27.56	180	LR		LR	08 35 25.3	
	comp=Z,94nm,18.1s,baz=12,slow=33							
DZM	Mont Dzumac	28.16	9	P		P	08 26 08.0	0.0
DZM				IAmb		IAmb	08 26 12.7	
	comp=Z,17nm,1.0s							
ASAR	Alice Springs	34.25	310	P		P	08 27 01.8	+0.1
	comp=Z,9.1nm,0.8s,baz=145,slow=8.4,SNR=91							
ASAR				PcP		PcP	08 29 38.9	+1.2
	comp=Z,0.4nm,0.7s,baz=141,slow=2.9,SNR=4.4							
	comp=Z,9.1nm,0.8s							
ASAR	Alice Springs	34.25	310	P		P	08 27 00.4	-1.3
AS31	Alice Springs	34.25	310	P		P	08 27 01.2	-0.5
AS31				IAmb		IAmb	08 27 02.5	
	comp=Z,3.6nm,0.7s							
WRA	Warramunga Arr	37.22	314	P		P	08 27 25.9	-1.1
	comp=Z,5.6nm,0.9s,baz=147,slow=8.0,SNR=27							
WRA				PcP		PcP	08 29 47.3	+0.9
	comp=Z,1.2nm,0.8s,baz=156,slow=2.4,SNR=5.9							
	comp=Z,5.6nm,0.9s							
WRA	Warramunga Arr	37.22	314			P	08 27 25.6	-1.5
WRAB	Tennant Creek	37.22	314	P		P	08 27 26.3	-0.8
WB0	Warramunga Arr	37.34	314	P		P	08 27 27.5	-0.7
H01W1	Cape Leeuwin H	37.71	275	T		T	09 07 45.6	
	baz=130,slow=75,SNR=14							
H01W2	Cape Leeuwin H	37.72	275	T		T	09 07 45.9	
	baz=130,slow=75,SNR=14							
H01W3	Cape Leeuwin H	37.73	275	T		T	09 07 47.0	
	baz=130,slow=75,SNR=12							
QSPA	South Pole Qui	40.06	180	P		P	08 27 50.0	-0.7
	comp=Z,7.4nm,0.7s,baz=350,slow=4.1,SNR=6.3							
QSPA				LR		LR	08 42 45.3	
	comp=Z,96nm,18.1s,baz=26,slow=34							
	comp=Z,7.4nm,0.7s							
QSPA	South Pole Qui	40.06	180			P	08 27 50.1	-0.5
QSPA				IAmb		IAmb	08 27 55.4	
	comp=Z,21nm,1.4s							
HNR	Honiara	40.54	357	LR		LR	08 41 35.5	
	comp=Z,7.4nm,19.3s,baz=238,slow=32							
RAR	Rarotonga	41.64	60	LR		LR	08 43 39.3	
	comp=Z,36nm,18.1s,baz=238,slow=34							
PMG	Port Moresby	42.36	338	LR		LR	08 44 03.7	
	comp=Z,112nm,18.2s,baz=124,slow=34							
FITZ	Fitzroy Crossi	43.13	304	LR		LR	08 46 09.8	
	comp=Z,148nm,18.6s,baz=146,slow=36							
KNRA	Kununurra	43.56	310	P		P	08 28 19.0	-0.5
KNRA				IAmb		IAmb	08 28 57.8	
	comp=Z,20nm,1.4s							
PSA00	Pilbara Seismi	43.59	295	P		P	08 28 18.3	-1.4
MBWA	Marble Bar	43.97	295	P		P	08 28 21.9	-1.0
MBWA	Marble Bar	43.97	295	P		P	08 28 22.2	-0.6
MAW	Mawson	48.16	211	LR		LR	08 46 21.4	
	comp=Z,151nm,21.5s,baz=100,slow=32							
BATI	Baumata	50.78	308	LR		LR	08 49 53.6	
	comp=Z,274nm,20.8s,baz=204,slow=35							
KAPI	Kappang	57.20	307	LR		LR	08 53 38.8	
	comp=Z,63nm,22.0s,baz=145,slow=35							
SNAA	Sanae	58.09	186	LR		LR	08 54 32.7	
	comp=Z,69nm,19.6s,baz=188,slow=35							
H03S2	Juan Fernandez	80.62	133	T		T	10 01 23.4	
	baz=213,slow=74,SNR=14							
H03S1	Juan Fernandez	80.62	133	T		T	10 01 25.1	
	baz=213,slow=74,SNR=11							
H03S3	Juan Fernandez	80.64	133	T		T	10 01 46.1	
	baz=213,slow=74,SNR=12							
H03N3	Juan Fernandez	80.93	132	T		T	10 01 54.1	
	baz=216,slow=72,SNR=18							
H03N2	Juan Fernandez	80.94	132	T		T	10 01 58.6	
	baz=216,slow=72,SNR=45							
H03N1	Juan Fernandez	80.95	132	T		T	10 01 55.9	
	baz=216,slow=72,SNR=11							
H08S2	Diego Garcia H	83.87	265	T		T	10 04 45.0	
	baz=140,slow=76,SNR=4.3							
H08S1	Diego Garcia H	83.89	265	T		T	10 04 44.4	
	baz=140,slow=76,SNR=4.1							
H08S3	Diego Garcia H	83.89	265	T		T	10 04 39.8	
	baz=140,slow=76,SNR=13							
CMAR	Chiang Mai Arr	87.90	302	P		P	08 33 05.9	+0.9
	comp=Z,0.6nm,0.3s,baz=166,slow=3.7,SNR=6.8							
CMAR				LR		LR	09 14 47.4	
	comp=Z,13nm,18.2s,baz=165,slow=37							
	comp=Z,0.6nm,0.3s							
PALK	Pallekele	89.96	281	LR		LR	09 06 05.6	
	comp=Z,34nm,20.4s,baz=116,slow=31							
NJ2	Nanjing	90.25	325	*eP*		P	08 33 17.0	+1.3
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.7s							
SUR	Sutherland	90.99	212	LR		LR	09 11 04.3	
	comp=Z,25nm,18.5s,baz=166,slow=34							
BOSA	Boshof	92.77	217	LR		LR	09 11 39.1	
	comp=Z,26nm,18.1s,baz=198,slow=33							
ASAJ	Asahikawa	95.31	346	LR		LR	09 11 08.7	
	comp=Z,26nm,19.6s,baz=168,slow=32							
LBTB	Lobatse	95.84	219	LR		LR	09 08 15.9	
	comp=Z,23nm,21.4s,baz=176,slow=30							
XAN	Xi'an	95.99	318	P		P	08 33 43.7	+1.5
XAN				pmax		pmax		
	comp=Z,5.0nm,2.0s							
CN2	Changchun	98.77	334	P		Pdif	08 33 55.0	+0.6
HHC	Hu-ho-hao-te	100.76	323	*eP*		Pdif	08 34 05.5	+2.0
HHC				pmax		pmax		
	comp=Z,6.0nm,0.6s							
WMQ	Urumqi	113.66	310	PKP		PKiKP	08 38 53.7	+0.7
WMQ				sPKP			08 39 00.4	
WMQ				PP		PP	08 39 52.9	+6.5
WMQ				LR		LR		
	comp=E,780nm,24.2s							
WMQ				LR		LR		
	comp=Z,150nm,24.3s							
ILAR	Eielson Array	121.16	23	PKP		PKPdf	08 39 05.2	-1.5
	comp=Z,0.8nm,1.1s,baz=270,slow=3.0,SNR=4.4							
TORD	Torodi Ar. Bea	139.81	211	PKP		PKPdf	08 39 43.8	+0.3
	comp=Z,1.2nm,0.9s,baz=205,slow=4.1,SNR=5.3							
ARCES	ARCESS Array B	151.66	329	PKPbc		PKiKP	08 40 08.8	+0.2
	comp=Z,3.3nm,0.9s,baz=24,slow=3.3,SNR=3.9							
FINES	FINESS Array B	153.25	312	PKPbc		PKPbc	08 40 11.6	-0.3
	comp=Z,1.9nm,0.8s,baz=116,slow=4.4,SNR=6.3							

*ISK **07** 08:41:03.3, 38°.98N×27°.87E, h4km, ML2.9/11*

*AFAD **07** 08:41:03.6, 38°.97N×27°.87E, h8km±1km, MW3.5*
ISC 07 08:41:03.8±0.8, 38°.97N±0°.02×27°.87E±0°.02, h11km±5km, n43, σ0°.47/74, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	Akhisar	0.10	207	P	Pg	08 41 06.7	0.0
AKHS				S	Sg	08 41 08.8	+0.1
AKHS				IAML		08 41 09.0	
	comp=E,9μm,0.3s						
AKS	Akhisar	0.10	207	Pg	Pg	08 41 06.3	-0.4
AKS				Sg	Sg	08 41 08.4	-0.3
GORD	Gordes-Manisa	0.24	104	Pg	Pg	08 41 09.1	+0.1
GOMA	Golmarmara-Man	0.26	172	Pg	Pg	08 41 09.5	+0.2
GOMA				Sg	Sb	08 41 14.0	-1.1
SOMA	Soma-Manisa	0.32	305	Pg	Pg	08 41 10.4	0.0
SOMA				Sg	Sg	08 41 15.4	+0.7
KTTT	Salihli	0.33	148	P	Pg	08 41 10.5	0.0
KTTT				S	Sg	08 41 15.3	+0.4
KTTT				IAML		08 41 16.0	
	comp=N,714nm,0.3s						
STEP	BALIKESIR_Sava	0.42	344	P	Pg	08 41 11.6	-0.7
STEP				S	Sg	08 41 18.5	+0.6
STEP				IAML		08 41 19.0	
	comp=E,1μm,0.3s						
STEP				IAML		08 41 20.0	
	comp=N,1μm,0.3s						
CAMT	Merkez	0.49	243	P	Pg	08 41 13.6	+0.2
CAMT				S	Sb	08 41 21.6	0.0
CAMT				IAML		08 41 24.0	
	comp=E,1μm,0.4s						
CAMT				IAML		08 41 25.0	
	comp=N,1μm,0.4s						
ZEDA	zmir-Bergama	0.62	270	P	Pb	08 41 16.1	-0.5
ZEDA				S	Sb	08 41 24.9	-0.5
ZEDA				IAML		08 41 25.0	
	comp=N,483nm,0.5s						
ZEDA				IAML		08 41 26.0	
	comp=E,239nm,0.3s						
DEMI	Demirci	0.66	83	P	Pg	08 41 16.6	-0.1
DEMI				S	Sg	08 41 25.8	+0.4
DEMI				IAML		08 41 27.0	
	comp=N,266nm,0.3s						
BALB	Balikesir	0.67	0	Pg	Pg	08 41 16.7	-0.1
BALB				Sg	Sb	08 41 26.8	0.0
ODEM	Odemis-Izmir	0.71	167	Pg	Pb	08 41 18.1	-0.1
MANT	Manisa	0.72	132	P	Pg	08 41 17.8	0.0
MANT				S	Sg	08 41 27.0	-0.3
MANT				IAML		08 41 29.0	
	comp=E,186nm,0.3s						
MANT				IAML		08 41 30.0	
	comp=N,203nm,0.4s						
IZMD	zmir-Dikili-	0.74	271	P	Pb	08 41 18.3	-0.4
IZMD				S	Sb	08 41 28.9	+0.1
IZMD				IAML		08 41 29.0	
	comp=N,110nm,0.6s						
IZMD				IAML		08 41 33.0	
	comp=E,82nm,0.7s						
BKES	Balkesir-Mer	0.76	3	P	Pb	08 41 18.5	-0.6
BKES				S	Sb	08 41 29.0	-0.5
BKES				IAML		08 41 36.0	
	comp=E,147nm,0.5s						
BKES				IAML		08 41 37.0	
	comp=N,159nm,0.6s						
KULA	Kula-Manisa	0.77	126	Pg	Pg	08 41 18.5	-0.2
DURS	Dursunbey	0.78	36	P	Pg	08 41 18.5	-0.6
BALY	Balya	0.79	346	P	Pb	08 41 19.3	-0.4
BALY				S	Sb	08 41 30.4	-0.1
BALY				IAML		08 41 31.0	
	comp=E,395nm,0.4s						
BALY				IAML		08 41 33.0	
	comp=N,338nm,0.4s						
BUHA	Balikesir, Bur	0.81	311	P	Pg	08 41 19.3	-0.3
BUHA				S	Sn	08 41 33.0	-0.3
BUHA				IAML		08 41 35.0	
	comp=E,126nm,0.4s						
DUVT	Torbali	0.82	204	P	Pg	08 41 19.5	-0.2
DUVT				S	Sb	08 41 30.9	-0.2
DUVT				IAML		08 41 34.0	
	comp=E,291nm,0.3s						
IZMR	zmir-demi	0.83	176	P	Pb	08 41 20.1	-0.2
IZMR				S	Sg	08 41 30.5	-0.4
IZMR				IAML		08 41 33.0	
	comp=E,517nm,0.4s						
IZMR				IAML		08 41 34.0	
	comp=N,147nm,0.7s						
DST	Dursunbey	0.86	42	Pg	Pb	08 41 20.6	-0.2
SIMA	Simav-Kutahya	0.87	82	Pg	Pb	08 41 20.7	-0.3
SMAA	Simav-Kutahya	0.87	81	Pg	Pb	08 41 20.8	-0.2
BLCB	Balcova	0.87	228	Pg	Pb	08 41 20.7	-0.3
KIRA	zmir-Kiraz	0.88	152	P	Pb	08 41 21.0	-0.1
KIRA				S	Sb	08 41 32.8	-0.1
KIRA				IAML		08 41 34.0	
	comp=E,196nm,0.3s						
KIRA				IAML		08 41 34.0	
	comp=N,147nm,0.2s						
YAYO	Edremit-Balk	0.89	316	Pg	Pb	08 41 20.9	-0.4
BLKS	Balkesir-Sus	0.91	5	P	Pg	08 41 21.0	-0.4
BLKS				S	Sg	08 41 33.0	-0.2
BLKS				IAML		08 41 38.0	
	comp=E,134nm,0.7s						
BLKS				IAML		08 41 38.0	
	comp=N,63nm,0.7s						
FOCM	Foa	0.93	254	Pg	Pb	08 41 21.9	0.0
USAK	Uak-Merkez	0.93	106	P	Pg	08 41 21.3	-0.5
USAK				S	Sg	08 41 33.1	-0.8
USAK				IAML		08 41 37.0	
	comp=E,70nm,0.6s						
AYVA	Ayvalik	0.98	291	P	Pb	08 41 22.8	0.0
AYVA				S	Sb	08 41 36.7	+1.0
AYVA				IAML		08 41 39.0	
	comp=E,291nm,0.8s						
AYVA				IAML		08 41 40.0	
	comp=N,323nm,0.5s						
AYDB	Zeytinkoy-Aydi	1.02	179	Pg	Pb	08 41 23.7	+0.1
CMHT	Manyas	1.04	4	P	Pg	08 41 23.4	-0.6
CMHT				S	Sb	08 41 37.4	-0.2
CMHT				IAML		08 41 40.0	
	comp=E,359nm,0.4s						
CMHT				IAML		08 41 42.0	
	comp=N,186nm,0.5s						
NAZL	Nazilli-Aydin	1.06	162	Pg	Pb	08 41 24.4	+0.3
ATIT	Gnen	1.14	348	P	Pn	08 41 25.8	+0.1
ATIT				S	Sb	08 41 41.0	+0.8
ATIT				IAML		08 41 42.0	
	comp=N,340nm,0.7s						
ATIT				IAML		08 41 43.0	
	comp=E,288nm,0.4s						
SULTU	Buldan	1.15	142	P	Pg	08 41 25.4	-0.6
SULTU				S	Sn	08 41 42.1	+0.4
SULTU				IAML		08 41 46.0	
	comp=E,69nm,0.4s						
SULTU				IAML		08 41 48.0	
	comp=N,62nm,0.8s						
EMET	Ktahya-Emet	1.20	70	P	Pb	08 41 26.6	0.0
EMET				S	Sg	08 41 42.0	-0.5
EMET				IAML		08 41 44.0	
	comp=E,217nm,0.5s						
EMET				IAML		08 41 47.0	
	comp=N,243nm,0.5s						
DGB	zmir	1.20	221	P	Pg	08 41 26.4	-0.5
DGB				S	Sn	08 41 43.6	+0.9
DGB				IAML		08 41 46.0	
	comp=E,102nm,0.3s						
ESEN	Aydn-Nazilli	1.23	162	P	Pg	08 41 26.2	-1.2
ESEN				S	Sg	08 41 42.4	-1.0
ESEN				IAML		08 41 48.0	
	comp=E,56nm,1.0s						
ESEN				IAML		08 41 48.0	
	comp=N,57nm,0.3s						
GDZ	Gediz	1.26	84	P	Pn	08 41 28.3	+0.9
GDZ				S	Sb	08 41 44.2	+0.3
BAYC	CANAKKALE_Bayr	1.28	307	P	Pn	08 41 27.8	+0.1
BAYC				S	Sn	08 41 45.5	+0.7
BAYC				IAML		08 41 47.0	
	comp=N,171nm,0.3s						
BAYC				IAML		08 41 48.0	
	comp=E,120nm,0.4s						
BAND	Balkesir-Ban	1.40	7	P	Pn	08 41 29.1	-0.1
BAND				S	Sn	08 41 48.3	+0.7
PASA	Karahalli, USA	1.41	116	P	Pg	08 41 30.9	0.0
PASA				S	Sg	08 41 49.8	+0.6

*DJA **07** 08:44:25.6±0.3, 0°.N±3°.×12°.4E±°, h127km±5km, M4.2/20, ML4.2/20*
ISC 07 08:44:25.3±1.3, 0°.04S±0°.08×123°.65E±0°.08, h157km, n15, σ2°.29/16, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	1.32	221	P	Pn	08 44 50.8	-2.9
LUWI	Luwuk	1.32	221	P	Pn	08 44 50.6	-3.1
LUWI				S	Sn	08 45 16.0	+0.6
MRSI	Marisa	1.78	287	P	Pn	08 44 55.0	-3.4
APSI	Ampana	2.18	247	P	Pn	08 45 00.7	-2.2
SANI	Sanana	3.07	130	P	Pn	08 45 13.1	-0.8
SANI	Sanana	3.07	130	P	Pn	08 45 12.9	-1.0
TOLI2	Tolitoli	3.09	292	P	Pn	08 45 11.6	-2.5
MPSI	Mapaga	3.77	276	P	Pn	08 45 21.3	-1.5
TNTI	Ternate	3.81	78	P	Pn	08 45 24.0	+0.7
KDI	Kendari	4.02	195	P	Pn	08 45 28.1	+2.0
GAMI	Galela, Maluku	4.54	66	P	Pn	08 45 33.1	+0.2
NLAI	Namlea	4.69	133	P	Pn	08 45 36.3	+1.5
TTSI	Tana Toraja	4.85	232	P	Pn	08 45 37.1	+0.2
MYLDM	Lahad Datu	7.30	315	P	Pn	08 46 13.5	+4.0
FAKI	Fak Fak	9.06	108	P	Pn	08 46 32.6	-0.3

IDC 07 09:00:57.4±349.0, 66°.21N×44°.13E, h0km, Error ellipse: s-maj=168.2km s-min=123.1km az=49.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	I37NO	10.10	298	I	I	09 40 00.0	
	baz=89,slow=329,SNR=1.3						
I31KZ	AKTYUBINSK INF	17.37	149	I	I	10 45 10.0	
	baz=336,slow=328,SNR=1.1						
I46RU	ZALESOVO INFRA	23.21	102	I	I	11 22 18.1	
	baz=312,slow=330,SNR=1.6						
I18DK	QAANAAQ INFRAS	31.04	337	I	I	12 10 40.0	
	baz=45,slow=330,SNR=1.0						
I34MN	SONGINO INFRAS	36.65	89	I	I	12 46 30.0	
	baz=320,slow=330,SNR=0.6						

KRSC 07 09:11:59.1±0.9, 53°.13N×163°.13E, h40km±19km, Ml3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.87	270	*eP*	Pn	09 12 30.5	+2.0
SPN				*eS*	Sn	09 12 53.7	+2.7
NLC	Nalytchevo	2.28	272	*eP*	Pn	09 12 36.6	+2.4
NLC				*eS*	Sn	09 13 04.1	+3.2
KII	Karymskiy	2.37	294	*eP*	Pn	09 12 37.8	+2.3
KII				*eS*	Sn	09 13 05.9	+2.6
SDLR	Sedlovina	2.56	275	*eP*	Pn	09 12 41.0	+2.9
UGLR	Uglovaya	2.59	273	*eP*	Pn	09 12 41.8	+3.2
SMAR	Somma	2.60	275	*eP*	Pn	09 12 41.9	+3.0
KRER	Koryakskii	2.64	275	*eP*	Pn	09 12 42.6	+3.3
DALK	Dalny	2.64	270	*eS*	Sn	09 13 14.1	+4.3
AVH	Avacha	2.64	275	*eP*	Pn	09 12 42.7	+3.4
KRX	Arik	2.70	277	*eP*	Pn	09 12 43.0	+2.9
KRX				*eS*	Sn	09 13 14.9	+3.4
PET	Petropavlovsk	2.70	269	*eP*	Pn	09 12 43.2	+3.3
PET				*eS*	Sn	09 13 15.3	+3.9
KOK	Koryaka	2.70	275	*eP*	Pn	09 12 42.9	+2.8
KRMR	Karymshinskiy	3.04	266	*eP*	Pn	09 12 47.6	+3.1
KRMR				*eS*	Sn	09 13 22.3	+2.7
MTVR	Mutnovka	3.07	260	*eP*	Pn	09 12 48.4	+3.2
MTVR				*eS*	Sn	09 13 24.5	+3.8
GRL	Gorelyy	3.12	261	*eP*	Pn	09 12 49.5	+3.7
GNL	Ganaly	3.15	282	*eP*	Pn	09 12 49.9	+3.6
ASAK	Asacha	3.26	259	*eP*	Pn	09 12 51.5	+3.7

*AFAD **07** 09:23:48.8, 38°.99N×27°.73E, h7km±4km, ML1.3*
ISK 07 09:23:48.8, 39°.02N×27°.88E, h5km, ML1.7/8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	Akhisar	0.15	200	P	Pg	09 23 51.6	-0.2
AKHS				IAML		09 23 55.0	
	comp=E,112nm,0.2s						
AKHS				S	Sg	09 23 55.2	+1.4
AKHS	Akhisar	0.15	200	P	Pg	09 23 51.8	0.0
AKHS				IAML		09 23 55.0	
	comp=E,107nm,0.2s						
AKHS				S	Sg	09 23 55.1	+1.4
AKS	Akhisar	0.15	200	Pg	Pg	09 23 52.3	+0.5
AKS				Sg	Sg	09 23 55.0	+1.2
GORD	Gordes-Manisa	0.26	115	Pg	Pg	09 23 54.5	+0.7
SOMA	Soma-Manisa	0.30	297	Pg	Pg	09 23 55.3	+0.6
KTTT	Salihli	0.37	153	P	Pg	09 23 56.5	+0.5
KTTT				S	Sg	09 24 01.4	+0.5
KTTT				IAML		09 24 02.0	
	comp=N,17nm,0.4s						
KTTT	Salihli	0.37	153	P	Pg	09 23 56.3	+0.4
KTTT				IAML		09 24 01.0	
	comp=N,17nm,0.3s						
KTTT				S	Sg	09 24 01.5	+0.6
STEP	BALIKESIR_Sava	0.38	341	P	Pg	09 23 56.9	+0.8
STEP				IAML		09 24 02.0	
	comp=E,152nm,0.2s						
STEP				S	Sg	09 24 02.2	+1.0
STEP				IAML		09 24 03.0	
	comp=N,67nm,0.3s						
ODEM	Odemis-Izmir	0.76	168	Pg	Pg	09 24 03.9	+0.6
KULA	Kula-Manisa	0.79	129	Pg	Pg	09 24 04.3	+0.3
SIMA	Simav-Kutahya	0.86	85	Pg	Pg	09 24 05.8	+0.4
AYDB	Zeytinkoy-Aydi	1.07	179	Pg	Pb	09 24 09.9	0.0
NAZL	Nazilli-Aydin	1.10	163	Pn	Pb	09 24 10.5	+0.1

*IDC **07** 09:25:55.7±3.2, 30°.50S×177°.62W, h0km, mb3.8/3, mbtmp3.9/4, ML3.1/1, Error ellipse: s-maj=69.3km s-min=27.9km az=110.0*
ISC 07 09:25:55.9±2.5, 30°.53S±0°.08×177°.3W±0°.3, h24km, n6, σ1°.56/8, mb3.9/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.40	335	Pn	Pn	09 26 20.4	+0.5
	79nm,0.3s,baz=70,slow=22,SNR=1.8						
RAO				Sn	Sn	09 26 35.7	-2.0
	254nm,0.3s,baz=276,slow=23,SNR=5.0						
URZ	Urewera	9.01	210	Pn	P

*SDD **07** 09:38:32.0±1.9, 17.94N×67.00W, h18km±8km, MD3.5, ML3.6, MW3.6, Presumed earthquake*

ISC 07 09:38:31.2±0.9, 17.95N±0.05×66.99W±0.02, h18km±4km, n47, σ0§64/69, 10C-12D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.06**	**290**		**Pg**	**09 38 34.5**	**+0.1**
MLPR				Sg	**Sg**	**09 38 36.4**	**-0.2**
MLPR				IAML		09 38 36.7	
	67μm,0.4s						
MLPR				IAML		09 38 36.8	
	31μm,0.1s						
GBPR	**Guanica, Bosqu**	**0.10**	**76**		**Pg**	**09 38 35.2**	**+0.3**
GBPR					**Sg**	**09 38 37.7**	**+0.4**
GBPR	**Guanica, Bosqu**	**0.10**	**76**	*eP*	**Pg**	**09 38 35.2**	**+0.3**
GBPR				*eS*	**Sg**	**09 38 37.7**	**+0.4**
CRPR	**Cabo Rojo, PR**	**0.13**	**296**		**Pg**	**09 38 35.3**	**+0.1**
CRPR				Sg	**Sg**	**09 38 37.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.13**	**296**	IAML		09 38 38.0	
	56μm,0.2s						
CRPR				IAML		09 38 38.6	
	45μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.13**	**296**	*eP*	**Pg**	**09 38 35.5**	**+0.4**
CRPR				IAML		09 38 37.7	
	comp=N,35μm,0.2s						
CRPR				*eS*	**Sg**	**09 38 37.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.13**	**296**	*eP*	**Pg**	**09 38 35.3**	**+0.1**
CRPR				*eS*	**Sg**	**09 38 37.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.13**	**296**	*iP*	**Pg**	**09 38 35.3**	**+0.1**
CRPR				*eS*	**Sg**	**09 38 37.5**	**-0.3**
CRPR				IAML		09 38 37.8	
	comp=Z,44μm,0.2s						
LSP	**Las Mesas**	**0.24**	**337**		**Pg**	**09 38 37.0**	**+0.1**
LSP	**Las Mesas**	**0.24**	**337**	*eP*	**Pg**	**09 38 37.0**	**+0.1**
PRSN	**Puerto Rico Se**	**0.31**	**331**		**Pg**	**09 38 37.9**	**+0.1**
PRSN				IAML		09 38 44.0	
	comp=Z,21μm,0.3s						
PRSN				IAML		09 38 48.1	
	comp=Z,17μm,0.2s						
PRSN	**Puerto Rico Se**	**0.31**	**331**		**Sb**	**09 38 43.0**	**+0.1**
PRSN	**Puerto Rico Se**	**0.31**	**331**	*ePg*	**Pg**	**09 38 38.0**	**+0.1**
PRSN				*eSg*	**Sb**	**09 38 43.3**	**+0.4**
PRSN				IAML		09 38 46.6	
	comp=N,11μm,0.2s						
PRSN	**Puerto Rico Se**	**0.31**	**331**	*eP*	**Pg**	**09 38 37.9**	**+0.1**
PRSN				*eS*	**Sb**	**09 38 43.0**	**+0.1**
OBIP	**Obispado Ponce**	**0.37**	**75**		**Pb**	**09 38 39.2**	**-0.1**
OBIP					**Sb**	**09 38 44.8**	**-0.1**
OBIP	**Obispado Ponce**	**0.37**	**75**	*eP*	**Pb**	**09 38 39.2**	**-0.1**
OBIP				*eS*	**Sb**	**09 38 44.8**	**-0.1**
OBIP	**Obispado Ponce**	**0.37**	**75**	*i P*	**Pb**	**09 38 39.3**	**0.0**
OBIP				*eS*	**Sb**	**09 38 44.6**	**-0.2**
OBIP				IAML		09 38 44.9	
	comp=Z,2μm,0.5s						
UUPR	**Utuado, UPR, P**	**0.39**	**40**		**Pg**	**09 38 39.3**	**0.0**
CELP	**Cerrillos**	**0.41**	**72**		**Pb**	**09 38 39.8**	**-0.1**
CELP				IAML		09 38 46.4	
	comp=Z,5μm,0.3s						
AGPR	**Aguadilla, PR**	**0.53**	**347**		**Pg**	**09 38 41.7**	**-0.1**
AGPR				IAML		09 38 49.2	
	comp=Z,4μm,0.4s						
AGPR				IAML		09 38 49.2	
	comp=Z,6μm,0.4s						
AGPR	**Aguadilla, PR**	**0.53**	**347**	*ePg*	**Pg**	**09 38 41.9**	**0.0**
AGPR				*eSg*	**Sg**	**09 38 48.7**	**-0.3**
AGPR				IAML		09 38 53.7	
	comp=N,3μm,0.1s						
AGPR	**Aguadilla, PR**	**0.53**	**347**	*eP*	**Pg**	**09 38 41.7**	**-0.1**
AGPR				*eS*	**Sg**	**09 38 49.1**	**+0.1**
ECPR	**Experimental S**	**0.70**	**58**		**Pb**	**09 38 44.4**	**-0.4**
ECPR				IAML		09 38 56.1	
	comp=N,4μm,0.2s						
ECPR				IAML		09 38 56.6	
	comp=N,5μm,0.2s						
ECPR	**Experimental S**	**0.70**	**58**	*eP*	**Pb**	**09 38 44.5**	**-0.4**
ECPR				*eS*	**Sg**	**09 38 54.4**	**+0.2**
SJG	**San Juan**	**0.81**	**78**		**Pb**	**09 38 46.3**	**-0.5**
SJG	**San Juan**	**0.81**	**78**	*ePg*	**Pb**	**09 38 46.5**	**-0.3**
SJG				*eSg*	**Sg**	**09 38 58.2**	**+0.4**
SJG	**San Juan**	**0.81**	**78**	*eP*	**Pb**	**09 38 46.3**	**-0.5**
SJG				*eS*	**Sb**	**09 38 57.0**	**-0.4**
SJG	**San Juan**	**0.81**	**78**	*i P*	**Pb**	**09 38 46.4**	**-0.3**
SJG				*eS*	**Sg**	**09 38 57.6**	**-0.2**
SJG				IAML		09 38 59.2	
	comp=Z,837nm,0.3s						
PDPR	**Patillas Dam,**	**0.92**	**86**		**Pb**	**09 38 48.4**	**-0.3**
GCPR	**Guaynabo City**	**0.93**	**67**		**Pb**	**09 38 48.3**	**-0.6**
GCPR					**Sb**	**09 39 00.3**	**-0.6**
GCPR	**Guaynabo City**	**0.93**	**67**	*eP*	**Pb**	**09 38 48.2**	**-0.6**
GCPR				*eS*	**Sb**	**09 39 00.7**	**-0.2**
HUMP	**Col San Antoni**	**1.10**	**80**		**Pn**	**09 38 50.8**	**-0.8**
HUMP				IAML		09 39 09.5	
	comp=Z,2μm,0.3s						
HUMP				IAML		09 39 09.7	
	comp=Z,2μm,0.4s						
HUMP	**Col San Antoni**	**1.10**	**80**		**Sg**	**09 39 07.5**	**+0.6**
HUMP	**Col San Antoni**	**1.10**	**80**	*eP*	**Pn**	**09 38 50.9**	**-0.8**
HUMP				*eS*	**Sg**	**09 39 07.5**	**+0.6**
PCDR	**Punta Cana, DR**	**1.44**	**293**	IAML		09 39 32.7	
	comp=N,479nm,0.7s						
CUPR	**Culebra, Puert**	**1.66**	**77**		**Pn**	**09 39 00.2**	**+0.8**
HIDR	**Higuey Centro**	**1.76**	**292**	*ePg*	**Pn**	**09 39 01.4**	**+0.5**
HIDR				*eSg*	**Sb**	**09 39 26.4**	**+1.5**
HIDR				IAML		09 39 38.0	
	comp=N,418nm,0.2s						
MIDR	**Miches**	**2.21**	**298**	*ePg*	**Pn**	**09 39 08.5**	**+1.5**
MIDR				IAML		09 39 48.4	
	comp=N,129nm,0.7s						
DR12	**Loma Pena Alta**	**2.42**	**291**		**Pn**	**09 39 11.5**	**+1.6**
HATOM	**Hato Mayor del**	**2.42**	**291**	*ePg*	**Pb**	**09 39 13.0**	**-1.3**
HATOM				*eSg*	**Sb**	**09 39 43.5**	**-0.4**
HATOM				IAML		09 39 49.3	
	comp=N,80nm,0.9s						
DR08	**Loma La Naviza**	**3.05**	**290**	*ePg*	**Pb**	**09 39 23.3**	**-1.7**
DR08				IAML		09 40 12.8	
	comp=N,2μm,0.2s						
NADR	**Nagua**	**3.06**	**298**	*ePg*	**Pb**	**09 39 24.7**	**-0.4**
NADR				IAML		09 40 20.8	
	comp=N,371nm,0.8s						
BANI	**BANI**	**3.24**	**278**	*ePg*	**Pb**	**09 39 27.1**	**-1.1**
BANI				*eSg*	**Sb**	**09 40 08.2**	**+0.8**
BANI				IAML		09 40 21.8	
	comp=N,119nm,0.3s						
SC01	**Santiago de lo**	**3.84**	**293**	Pn	**Pn**	**09 39 30.8**	**+1.3**
GDHS	**Morne Mazeau,**	**5.26**	**108**	Pn	**Pn**	**09 39 49.8**	**+0.7**
CBE	**Ff, Capester**	**5.47**	**109**	Pn	**Pn**	**09 39 52.8**	**+0.8**
MPOM	**Morne Pois Mar**	**6.84**	**120**	Pn	**Pn**	**09 40 09.0**	**-1.6**

*IDC **07** 09:49:02.9±1.1, 5.43S×151.62E, h0km, mb4.0/7, mbtmp4.1/8, ML2.7/1, MS3.3/9, Error ellipse: s-maj=45.4km s-min=20.6km az=113.0*

*NEIC **07** 09:49:11.3±1.0, 5.5S±0.1×151.21E±0.08, h35km±2km, mb4.6/12, Error ellipse: s-maj=21.0km s-min=9.4km az=148.0*

ISC 07 09:49:11.0±0.9, 5.5S±0.1×151.4E±0.2, h57km, n36, σ0§81/28, mb4.5/13, MS3.3/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.52**	**29**		**Pn**	**09 49 36.7**	**+0.7**
PMG	**Port Moresby**	**5.72**	**227**	Pn	**Pn**	**09 50 34.2**	**+0.8**
	12nm,0.3s,baz=22,slow=6.1,SNR=26						
PMG				Sn	**Sn**	**09 51 39.1**	**+1.4**
	32nm,0.3s,baz=136,slow=19,SNR=18						
PMG				LR	LR	09 52 41.5	
	comp=Z,137nm,20.5s,baz=322,slow=37						
	29nm,0.4s						
PMG	**Port Moresby**	**5.72**	**227**		**Pn**	**09 50 32.1**	**-1.3**
HNR	**Honiara**	**9.29**	**115**	LR	LR	09 54 07.5	
	comp=Z,7.2nm,19.6s,baz=32,slow=33						
COEN	**Coen**	**11.67**	**224**	Pn	**Pn**	**09 51 53.6**	**-1.3**
CTA	**Charters Tower**	**15.32**	**199**	LR	LR	09 57 41.5	
	comp=Z,66nm,21.8s,baz=248,slow=34						
MTN	**Manton Dam**	**21.30**	**249**	P	**P**	**09 53 53.0**	**-0.1**
WB0	**Warramunga Arr**	**21.79**	**228**	P	**P**	**09 53 58.6**	**+0.2**
WB0				IAmb	IAmb	09 54 01.9	
	comp=Z,16nm,0.7s						
WR0	**Warramunga Arr**	**21.80**	**227**	P	**P**	**09 53 58.9**	**+0.3**
WR0				IAmb	IAmb	09 54 02.0	
	comp=Z,18nm,0.7s						
WR8	**Warramunga Arr**	**21.83**	**227**	P	**P**	**09 53 59.5**	**+0.7**
WRAB	**Tennant Creek**	**21.93**	**228**	P	**P**	**09 53 59.1**	**-0.7**
WRAB				IAmb	IAmb	09 54 03.1	
	comp=Z,24nm,0.6s						
WB2	**Warramunga Arr**	**21.93**	**228**	P	**P**	**09 54 00.3**	**+0.5**
WRA	**Warramunga Arr**	**21.94**	**228**	P	**P**	**09 53 60.0**	**0.0**
	comp=Z,20nm,0.5s,baz=53,slow=9.8,SNR=121						
	comp=Z,20nm,0.5s						
DZM	**Mont Dzumac**	**21.94**	**140**	LR	LR	10 01 11.8	
	comp=Z,113nm,19.3s,baz=17,slow=33						
INKA	**Innaminka**	**24.31**	**204**	P	**P**	**09 54 24.4**	**+1.1**
AS31	**Alice Springs**	**24.69**	**221**	P	**P**	**09 54 28.1**	**+1.2**
AS31				IAmb	IAmb	09 54 29.7	
	comp=Z,5.3nm,0.5s						
ASAR	**Alice Springs**	**24.69**	**221**	P	**P**	**09 54 27.2**	**+0.3**
	comp=Z,9.6nm,0.5s,baz=58,slow=8.7,SNR=174						
	comp=Z,9.6nm,0.5s						
ASAR	**Alice Springs**	**24.69**	**221**	P	**P**	**09 54 27.7**	**+0.7**
STKA	**Stephens Creek**	**27.78**	**198**	P	**P**	**09 54 55.2**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=53,slow=13,SNR=3.9						
	comp=Z,1.5nm,0.6s						
FORT	**Forrest**	**33.36**	**218**	P	**P**	**09 55 43.9**	**0.0**
FORT				IAmb	IAmb	09 56 09.4	
	comp=Z,7.6nm,0.9s						
JCJ	**Chichijima**	**33.65**	**345**	LR	LR	10 08 35.3	
	comp=Z,39nm,20.4s,baz=120,slow=35						
MBWA	**Marble Bar**	**34.42**	**240**	P	**P**	**09 55 53.0**	**-0.3**
JHJ	**Hachijo jima 2**	**40.00**	**345**	LR	LR	10 09 41.0	
	comp=Z,49nm,21.9s,baz=144,slow=31						
BBJI	**Bungbulang**	**43.52**	**265**	P	**P**	**09 57 09.0**	**-0.6**
BBJI				IAmb	IAmb	09 57 12.9	
	comp=Z,9.0nm,1.0s						
KSRS	**Korea Array**	**48.05**	**335**	LR	LR	10 15 33.2	
	comp=Z,15nm,21.1s,baz=160,slow=33						
SONM	**Songino Array**	**66.22**	**329**	P	**P**	**09 59 54.5**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=143,slow=4.9,SNR=3.3						
	comp=Z,0.8nm,0.8s						
SONM	**Songino Array**	**66.22**	**329**	P	**P**	**09 59 54.2**	**+1.0**
MKAR	**Makanchi Array**	**79.98**	**319**	P	**P**	**10 01 14.0**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=91,slow=7.2,SNR=1.9						
	comp=Z,0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**81.00**	**327**	P	**P**	**10 01 18.5**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=113,slow=5.6,SNR=2.2						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**81.00**	**327**	P	**P**	**10 01 19.2**	**-0.4**
ILAR	**Eielson Array**	**83.35**	**22**	P	**P**	**10 01 30.6**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=246,slow=5.4,SNR=6.1						
	comp=Z,0.3nm,0.6s						
DLBC	**Dease Lake**	**88.71**	**31**	LR	LR	10 37 30.0	
	comp=Z,23nm,18.8s,baz=251,slow=33						
BVAR	**Borovoye Array**	**89.01**	**323**	LR	LR	10 40 40.9	
	comp=Z,20nm,21.2s,baz=328,slow=35						
ARTI	**Arti**	**96.26**	**326**	LR	LR	10 48 16.8	
	comp=Z,25nm,18.2s,baz=306,slow=37						
TORD	**Torodi Ar. Bea**	**149.22**	**286**	PKPbc	**PKPbc**	**10 08 54.4**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=143,slow=1.3,SNR=30						
BDFB	**Brasilia**	**151.48**	**138**	PKPbc	**PKiKP**	**10 09 00.2**	**-0.1**
	comp=Z,3.4nm,0.5s,baz=256,slow=3.4,SNR=5.4						

*BJI **07** 09:50:40.4, 12.97S×170.41E, h619km, mB4.8/11, mb4.5/52*

*NOU **07** 09:50:41.8, 13.37S×170.43E, h643km, mb4.7/43, Vanuatu Islands Region*

*NEIC **07** 09:50:41.7±2.2, 13.3S±0.1×170.4E±0.1, h624km±8km, mb4.6/218, Error ellipse: s-maj=17.5km s-min=16.0km az=151.0*

*IDC **07** 09:50:42.3±1.4, 13.43S×170.45E, h648km±15km, mb4.0/29, mbtmp4.9/31, Error ellipse: s-maj=14.4km s-min=9.7km az=101.0*

ISC 07 09:50:41.3±0.3, 13.37S±0.05×170.44E±0.05, h635km, n610, σ1§00/532, mb4.6/188, 4C-4D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**4.81**	**204**	P	**P**	**09 52 16.3**	**+1.3**
RTV	**Rentapao**	**4.81**	**204**	S	**S**	**09 53 32.4**	**+0.9**
DVP	**Devils Point**	**4.85**	**206**	P	**P**	**09 52 15.7**	**+0.5**
DVP	**Devils Point**	**4.85**	**206**	S	**S**	**09 53 31.8**	**-0.2**
MARNC	**Mare, Loyalty**	**8.39**	**196**		**P**	**09 52 44.8**	**-0.7**
MARNC	**Mare, Loyalty**	**8.39**	**196**	P	**P**	**09 52 45.4**	**-0.1**
MARNC	**Mare, Loyalty**	**8.39**	**196**	P	**P**	**09 52 45.1**	**-0.3**
	356nm,0.6s						
MSVF	**Nonsavu**	**8.52**	**122**		**P**	**09 52 47.9**	**+1.0**
MSVF	**Nonsavu**	**8.52**	**122**	P	**P**	**09 52 48.3**	**+1.5**
MSVF	**Nonsavu**	**8.52**	**122**	P	**P**	**09 52 48.1**	**+1.3**
	79nm,0.6s						
KOUNC	**Koumac, New Ca**	**9.26**	**219**	P	**P**	**09 52 55.6**	**+2.0**
KOUNC	**Koumac, New Ca**	**9.26**	**219**	P	**P**	**09 52 54.7**	**+1.1**
	142nm,1.2s						
YATNC	**Mamie plateau,**	**9.28**	**201**	P	**P**	**09 52 54.7**	**+0.8**
	31nm,0.6s						
DGTI	**Dogotuki**	**9.45**	**109**	P	**P**	**09 52 55.5**	**-0.1**
DGTI	**Dogotuki**	**9.45**	**109**	P	**P**	**09 52 55.7**	**+0.1**
	75nm,0.6s						
DZM	**Mont Dzumac**	**9.46**	**203**	P	**P**	**09 52 56.5**	**+0.8**
	8.0nm,0.4s,baz=286,slow=13,SNR=26						
DZM	**Mont Dzumac**	**9.46**	**203**		**P**	**09 52 56.8**	**+1.2**
PINNC	**Pines Island,**	**9.63**	**197**		**P**	**09 52 58.3**	**+1.2**
PINNC	**Pines Island,**	**9.63**	**197**	P	**P**	**09 52 58.0**	**+0.9**
OUENC	**Ouen Island, N**	**9.63**	**200**	P	**P**	**09 52 58.3**	**+1.1**
	54nm,1.0s						
ONTNC	**Ouen Toro**	**9.67**	**203**		**P**	**09 52 59.0**	**+1.5**
ONTNC	**Ouen Toro**	**9.67**	**203**	P	**P**	**09 52 58.8**	**+1.2**
	61nm,0.6s						
TAVE	**Taveuni**	**9.90**	**111**	P	**P**	**09 53 00.7**	**+0.8**
TAVE	**Taveuni**	**9.90**	**111**	P	**P**	**09 53 00.2**	**+0.3**
	98nm,0.9s						
NGOA	**Tingoa Renbel**	**10.29**	**279**	P	**P**	**09 53 03.7**	**-0.1**
	279nm,0.8s						
HNR	**Honiara**	**11.01**	**290**	P	**P**	**09 53 10.5**	**-0.2**
	12nm,0.5s,baz=98,slow=7.1,SNR=3.3						
HNR	**Honiara**	**11.01**	**290**		**P**	**09 53 08.1**	**-2.6**
HNR	**Honiara**	**11.01**	**290**	P	**P**	**09 53 08.6**	**-2.1**
	389nm,1.2s						
SAVO	**Savo Central**	**11.23**	**291**	P	**P**	**09 53 12.8**	**-0.1**
SAVO	**Savo Central**	**11.23**	**291**	P	**P**	**09 53 12.3**	**-0.6**
	316nm,0.7s						
LKBA	**Tubou, Lakemba**	**11.41**	**116**	P	**P**	**09 53 14.2**	**-0.3**
LKBA	**Tubou, Lakemba**	**11.41**	**116**	P	**P**	**09 53 14.6**	**+0.1**
	2.9nm,0.8s						
TATA	**Tatamba Isabel**	**11.56**	**294**	P	**P**	**09 53 15.7**	**-0.3**
TATA	**Tatamba Isabel**	**11.56**	**294**	P	**S**	**09 55 24.5**	**+1.9**
TATA	**Tatamba Isabel**	**11.56**	**294**	P	**P**	**09 53 15.6**	**-0.4**
	289nm,0.6s						
AFI	**Afiamalu**	**17.29**	**94**	P	**P**	**09 54 10.6**	**+1.4**
NIUE	**Niue**	**19.68**	**109**	P	**P**	**09 54 34.3**	**+3.6**
NIUE	**Niue**	**19.68**	**109**	P	**P**	**09 54 31.3**	**+0.6**
	181nm,0.6s						
NIUE	**Niue**	**19.68**	**109**	P	**P**	**09 54 33.3**	**+2.7**
EIDS	**Eidsvold**	**21.79**	**234**		**P**	**09 54 49.8**	**+0.3**
EIDS	**Eidsvold**	**21.79**	**234**	P	**P**	**09 54 49.7**	**+0.3**
EIDS	**Eidsvold**	**21.79**	**234**	P	**P**	**09 54 49.6**	**+0.2**
	39nm,1.0s						
TW1H	**Toowoomba 1 Ha**	**22.28**	**228**	P	**P**	**09 54 55.0**	**+1.1**
PMG	**Port Moresby**	**23.16**	**277**	P	**P**	**09 55 02.3**	**+0.6**
	20nm,0.7s,baz=83,slow=6.1,SNR=5.6						
	20nm,0.7s						
PMG	**Port Moresby**	**23.16**	**277**	P	**P**	**09 55 01.7**	**-0.1**
PMG	**Port Moresby**	**23.16**	**277**	P	**P**	**09 55 01.9**	**+0.2**
	40nm,0.9s						
MKAZ	**Moumakai**	**24.02**	**171**	P	**P**	**09 55 09.8**	**+0.9**
CTA	**Charters Tower**	**24.09**	**251**	P	**P**	**09 55 10.5**	**+0.5**
	12nm,0.5s,baz=77,slow=11,SNR=28						
CTA				PcP	**PcP**	**09 58 28.4**	**+0.4**
	1.5nm,0.4s,baz=76,slow=4.2,SNR=1.5						
	12nm,0.5s						
CTA	**Charters Tower**	**24.09**	**251**	P	**P**	**09 55 10.5**	**+0.5**
CTA	**Charters Tower**	**24.09**	**251**	S	**S**	**09 58 46.8**	**+1.5**
CTA	**Charters Tower**	**24.09**	**251**	P	**P**	**09 55 10.3**	**+0.3**
	0.8nm,0.9s						
CTAO	**Charters Tower**	**24.09**	**251**		**P**	**09 55 10.7**	**+0.8**
CTAO	**Charters Tower**	**24.09**	**251**	P	**P**	**09 55 10.6**	**+0.6**
CTAO	**Charters Tower**	**24.09**	**251**	S	**S**	**09 58 46.8**	**+1.5**
CTAO	**Charters Tower**	**24.09**	**251**	P	**P**	**09 55 10.3**	**+0.3**
	11nm,0.9s						
ARMA	**Armidale**	**24.28**	**223**	P	**P**	**09 55 12.2**	**+0.6**
	27nm,0.9s						
MXZ	**Matakaoa Point**	**25.10**	**165**	P	**P**	**09 55 17.2**	**-1.4**
HAZ	**Te Kaha**	**25.16**	**166**	P	**P**	**09 55 18.3**	**-0.7**
RUGZ	**Raukumara Rang**	**25.33**	**167**	P	**P**	**09 55 19.3**	**-1.5**
HIZ	**Hauiti**	**25.35**	**172**	P	**P**	**09 55 21.9**	**+1.2**
	39nm,1.6s						
HIZ	**Hauiti**	**25.35**	**172**	P	**P**	**09 55 21.7**	**+0.9**
URZ	**Urewera**	**25.49**	**168**	P	**P**	**09 55 21.6**	**-0.4**
	20nm,1.5s						
URZ	**Urewera**	**25.49**	**168**	P	**P**	**09 55 21.3**	**-0.7**
MTSU	**Mount Surprise**	**25.57**	**256**	P	**P**	**09 55 23.7**	**+0.6**
TWGZ	**Tauwhareparae**	**25.61**	**166**	P	**P**	**09 55 21.4**	**-1.7**
MWZ	**Matawai**	**25.65**	**167**	P	**P**	**09 55 22.4**	**-1.1**
TKGZ	**Te Karaka**	**25.82**	**167**	P	**P**	**09 55 23.6**	**-1.2**
VRZ	**Vera Road**	**25.94**	**172**	P	**P**	**09 55 28.7**	**+2.9**
MTHZ	**Maungataniwha**	**26.01**	**169**	P	**P**	**09 55 24.4**	**-2.2**
SNGZ	**Shannon Statio**	**26.04**	**168**	P	**P**	**09 55 25.9**	**-1.0**
WTVZ	**West Tongariro**	**26.05**	**171**	P	**P**	**09 55 27.8**	**+0.8**
RIGZ	**Rimuhau**	**26.06**	**167**	P	**P**	**09 55 25.7**	**-1.3**
NNVZ	**North Ngauruho**	**26.07**	**171**	P	**P**	**09 55 27.6**	**+0.4**
NGZ	**Ngauruhoe**	**26.11**	**171**	P	**P**	**09 55 28.0**	**+0.4**
RAHZ	**Arahi**	**26.12**	**168**	P	**P**	**09 55 26.9**	**-0.7**
PKVZ	**Pokaka**	**26.18**	**171**	P	**P**	**09 55 29.6**	**+1.5**
AULRC	**Lightning Ridg**	**26.24**	**229**	P	**P**	**09 55 28.7**	**0.0**
BKZ	**Black Stump Fm**	**26.25**	**169**	P	**P**	**09 55 27.6**	**-1.1**
	20nm,0.6s						
BKZ	**Black Stump Fm**	**26.25**	**169**	P	**P**	**09 55 28.0**	**-0.7**
KNZ	**Kokohu**	**26.34**	**167**	P	**P**	**09 55 27.6**	**-1.8**
COEN	**Coen**	**26.50**	**265**	P	**P**	**09 55 31.9**	**+0.7**
COEN	**Coen**	**26.50**	**265**	P	**P**	**09 55 31.7**	**+0.6**
	37nm,0.9s						
WAZ	**Wanganui**	**26.59**	**172**	P	**P**	**09 55 32.4**	**+0.8**
PXZ	**Pawanui**	**27.16**	**169**	P	**P**	**09 55 34.9**	**-1.5**
AUDCS	**Dubbo College**	**27.41**	**223**	P	**P**	**09 55 39.8**	**+0.9**
QRZ	**Quartz Range**	**27.42**	**177**	P	**P**	**09 55 39.9**	**+1.2**
QRZ	**Quartz Range**	**27.42**	**177**	P	**P**	**09 55 40.1**	**+1.3**
	34nm,1.9s						
QRZ	**Quartz Range**	**27.42**	**177**	P	**P**	**09 55 40.0**	**+1.2**
MRZ	**Mangatainoka R**	**27.56**	**172**	P	**P**	**09 55 38.4**	**-1.6**
BFZ	**Birch Farm**	**27.68**	**170**	P	**P**	**09 55 39.4**	**-1.7**
	39nm,1.4s						
BFZ	**Birch Farm**	**27.68**	**170**	P	**P**	**09 55 39.2**	**-1.9**
QLP	**Quilpie**	**27.85**	**238**	P	**P**	**09 55 42.7**	**0.0**
QLP	**Quilpie**	**27.85**	**238**	P	**P**	**09 55 43.0**	**+0.3**
	156nm,0.6s						
NNZ	**Nelson**	**27.87**	**175**	P	**P**	**09 55 43.0**	**+0.3**
SNZO	**South Karori**	**28.09**	**173**	P	**P**	**09 55 43.3**	**-1.2**
	30nm,1.1s						
DSZ	**Denniston Nort**	**28.30**	**178**	P	**P**	**09 55 47.1**	**+0.6**
THZ	**Tophouse**	**28.37**	**176**	P	**P**	**09 55 46.8**	**-0.3**
CNB	**Canberra Magne**	**28.97**	**217**	P	**P**	**09 55 53.4**	**+1.0**
CNB	**Canberra Magne**	**28.97**	**217**	P	**P**	**09 55 53.2**	**+0.8**
	55nm,1.6s						
CMSA	**Cobar Meteorol**	**29.04**	**227**	P	**P**	**09 55 53.0**	**0.0**
CMSA	**Cobar Meteorol**	**29.04**	**227**	P	**P**	**09 55 53.4**	**+0.4**
	45nm,0.9s						
KHZ	**Kahutara**	**29.07**	**175**	P	**P**	**09 55 51.5**	**-1.5**
	29nm,0.9s						
KHZ	**Kahutara**	**29.07**	**175**	P	**P**	**09 55 51.6**	**-1.5**
CAN	**Canberra**	**29.19**	**218**	P	**P**	**09 55 54.9**	**+0.6**
	37nm,1.1s						
INZ	**Inchbonnie**	**29.27**	**178**	P	**P**	**09 55 54.7**	**0.0**
LTZ	**Lake Taylor**	**29.35**	**177**	P	**P**	**09 55 55.2**	**-0.3**
GVZ	**Greta Valley S**	**29.58**	**176**	P	**P**	**09 55 56.3**	**-1.1**
WVZ	**Waitaha Valley**	**29.61**	**180**	P	**P**	**09 55 57.8**	**+0.2**
OXZ	**Oxford**	**29.89**	**178**	P	**P**	**09 55 59.5**	**-0.5**
MQZ	**McQueen's Vall**	**30.30**	**177**	P	**P**	**09 56 03.4**	**0.0**
QIS	**Mount Isa**	**30.31**	**252**	P	**P**	**09 56 04.1**	**+0.1**
QIS	**Mount Isa**	**30.31**	**252**	P	**P**	**09 56 04.2**	**+0.2**
	33nm,0.9s						
LBZ	**Lake Benmore**	**30.91**	**180**	P	**P**	**09 56 08.6**	**-0.2**
TMZ	**Timaru**	**30.92**	**179**	P	**P**	**09 56 07.8**	**-1.0**
INKA	**Innaminka**	**31.16**	**238**		**P**	**09 56 11.9**	**+0.8**
INKA				IAmb	IAmb	09 56 12.7	
	comp=Z,12nm,0.7s						
WKZ	**Wanaka**	**31.38**	**182**	P	**P**	**09 56 12.9**	**+0.2**
ODZ	**Otahua Downs**	**31.57**	**180**	P	**P**	**09 56 14.1**	**-0.2**
	comp=Z,36nm,2.4s						
ODZ	**Otahua Downs**	**31.57**	**180**	P	**P**	**09 56 13.6**	**-0.8**
STKA	**Stephens Creek**	**32.22**	**230**	P	**P**	**09 56 21.0**	**+0.9**
	comp=Z,29

JMN IAmb IAmb 09 59 44.4
comp=Z,32nm,1.4s
JMN Monobe 58.36 324 P **P** **09 59 39.1 +1.2**
comp=Z,15nm,1.1s
TPUB Ta-pu 60.85 306 P **P** **09 59 53.9 -0.6**
TPUB Ta-pu 60.85 306 P **P** **09 59 53.9 -0.6**
comp=Z,56nm,0.8s
SSLB Suanglung 60.85 307 P **P** **09 59 54.1 -0.5**
SSLB IAmb IAmb 09 59 54.7
comp=Z,22nm,0.5s
SSLB Suanglung 60.85 307 P **P** **09 59 54.1 -0.5**
comp=Z,32nm,1.7s
JTU Tsushima 61.54 322 P **P** **09 59 58.7 -0.1**
comp=Z,46nm,1.7s
JKA Kamikawa-asahi 62.58 338 P **P** **10 00 06.9 +1.6**
JKA IAmb IAmb 10 00 08.1
comp=Z,20nm,0.7s
ASAJ Asahikawa 62.58 338 P **P** **10 00 06.9 +1.6**
comp=Z,17nm,0.6s,baz=224,slow=6.3,SNR=18
comp=Z,17nm,0.6s
VNDA Vanda 64.31 182 P **P** **10 00 16.0 +0.3**
comp=Z,2.4nm,0.8s,baz=348,slow=8.2,SNR=7.1
comp=Z,2.4nm,0.8s
VNDA Vanda 64.31 182 P **P** **10 00 16.2 +0.5**
KSRS Korea Array 64.42 323 P **P** **10 00 18.2 +1.2**
comp=Z,6.4nm,0.9s,baz=136,slow=6.0,SNR=14
comp=Z,6.4nm,0.9s
YSS Yuzhno-Sakhali 64.97 339 P **P** **10 00 21.2 +0.9**
PET Petropavlovsk 66.89 352 P **P** **10 00 32.8 +0.8**
PET Petropavlovsk 66.89 352 P **P** **10 00 32.4 +0.4**
comp=Z,172nm,1.0s
NJ2 Nanjing 66.91 314 ⇓P **P** **10 00 33.5 +0.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
PEA0B Petropavlovsk- 67.10 352 P **P** **10 00 34.4 +1.0**
PETK Petropavlovsk- 67.10 352 P **P** **10 00 34.2 +0.9**
comp=Z,14nm,0.6s,baz=129,slow=5.3,SNR=56
comp=Z,14nm,0.6s
PETK Petropavlovsk- 67.10 352 P **P** **10 00 34.5 +1.1**
USRK Ussuriysk Ar. 67.13 331 P **P** **10 00 33.8 +0.1**
comp=Z,4.3nm,0.7s,baz=108,slow=9.3,SNR=4.8
comp=Z,4.3nm,0.7s
NIKH Nikolski High 68.43 13 P **P** **10 00 41.3 0.0**
comp=Z,142nm,0.9s
NIKH Nikolski High 68.43 13 P **P** **10 00 41.1 -0.2**
baz=202
MDJ Mudanjiang 68.59 330 P **P** **10 00 43.9 +1.4**
MDJ Mudanjiang 68.59 330 P **P** **10 00 43.2 +0.7**
MDJ pmax pmax
comp=Z,14nm,1.1s
WHN Wuhan 69.37 310 P **P** **10 00 47.9 +0.4**
WHN pmax pmax
comp=Z,34nm,0.7s
UNV Unalaska Valle 69.78 14 P **P** **10 00 49.1 -0.2**
UNV Unalaska Valle 69.78 14 P **P** **10 00 48.8 -0.5**
baz=204
LVA Lava Point 70.18 14 P **P** **10 00 51.5 -0.2**
AKUT Akutan 70.22 15 P **P** **10 00 51.5 -0.5**
comp=Z,173nm,1.7s
TIA Tai'an 70.42 316 P **P** **10 00 53.9 +0.3**
TIA pmax pmax
comp=Z,12nm,0.7s
BNX BinXian 70.47 330 ⇑P **P** **10 00 53.6 -0.1**
BNX pmax pmax
comp=Z,11nm,0.7s
FALS False Pass 71.47 16 P **P** **10 00 58.8 -0.4**
baz=207
SPIA Saint Paul Isl 72.08 11 P **P** **10 01 02.7 0.0**
baz=200
CHNA Chernabura Isl 72.51 18 P **P** **10 01 05.0 -0.2**
baz=211
HNS HongShan 72.69 316 ⇑P **P** **10 01 07.8 +1.1**
HNS pmax pmax
comp=Z,23nm,0.8s
SDPT Sand Point 72.71 17 P **P** **10 01 05.9 -0.4**
comp=Z,121nm,2.2s
SDPT Sand Point 72.71 17 P **P** **10 01 06.6 +0.2**
baz=210
LYN LuoYang 72.76 313 ⇑*i*P **P** **10 01 08.2 +1.0**
LYN pmax pmax
comp=Z,80nm,0.7s
ENH Enshi 72.93 308 P **P** **10 01 08.2 -0.1**
BJI2 Beijing 73.18 319 P **P** **10 01 10.2 +0.8**
BJI2 pmax pmax
comp=Z,5.0nm,1.0s
GYA Guiyang 73.52 303 ⇓P **P** **10 01 12.7 +0.9**
GYA pmax pmax
comp=Z,12nm,0.8s
HEH HeiHe 73.70 333 *e*P **P** **10 01 12.8 +0.7**
HEH pmax pmax
comp=Z,11nm,1.0s
MA2 Magadan 74.41 350 P **P** **10 01 15.6 -0.3**
comp=Z,9.3nm,0.8s,baz=173,slow=3.7,SNR=11
comp=Z,9.3nm,0.8s
MA2 Magadan 74.41 350 **P** **10 01 15.8 -0.2**
MA2 IAmb IAmb 10 01 16.6
comp=Z,12nm,1.0s
MA2 Magadan 74.41 350 P **P** **10 01 15.6 -0.3**
CHIR Chirikof Islan 74.57 19 P **P** **10 01 17.0 +0.2**
comp=Z,84nm,1.5s
CHIR Chirikof Islan 74.57 19 P **P** **10 01 16.8 0.0**
baz=214
XAN Xi'an 75.08 311 ⇑P **P** **10 01 21.2 +0.9**
XAN pmax pmax
comp=Z,22nm,0.8s
R16K Pilot Point 75.44 17 P **P** **10 01 21.2 -0.4**
baz=212
XLT XiLinHaoTe 75.45 323 *e*P **P** **10 01 23.1 +0.9**
XLT pmax pmax
comp=Z,11nm,0.9s
SII Sitkinak Islan 75.64 19 P **P** **10 01 22.7 -0.1**
baz=216
R17L Mt. Peulik Vol 75.85 18 P **P** **10 01 24.2 +0.3**
baz=213
M11K Mekoryuk 75.85 12 P **P** **10 01 24.1 +0.3**
baz=203
O14K Tigyukauivet M 75.92 15 P **P** **10 01 24.0 -0.3**
baz=208
O15K Ungalikthiuk R 76.22 15 P **P** **10 01 25.3 -0.5**
baz=210
N14K Kuskokwak Cree 76.41 14 P **P** **10 01 27.6 +0.7**
N14K Kuskokwak Cree 76.41 14 P **P** **10 01 27.3 +0.4**
baz=208
OHAK Old Harbor 76.46 19 P **P** **10 01 27.9 +0.7**
comp=Z,53nm,0.9s
OHAK Old Harbor 76.46 19 P **P** **10 01 27.6 +0.3**
baz=216
M13K Dall Lake 76.47 13 P **P** **10 01 27.4 +0.2**
baz=206
Q17K Contact Creek 76.52 18 P **P** **10 01 27.4 -0.3**
baz=214
P16K Nushagak River 76.57 16 P **P** **10 01 27.5 -0.3**
baz=212
HHC Hu-ho-hao-te 76.59 318 ⇓*i*P **P** **10 01 29.8 +1.3**
HHC pmax pmax
comp=Z,6.0nm,1.3s
ACHA Angle Creek He 76.64 18 IAmb IAmb 10 01 30.1
comp=Z,10nm,0.6s
Q16K King Salmon 76.64 17 P **P** **10 01 27.9 -0.3**
baz=213
QSPA South Pole Qui 76.66 180 P **P** **10 01 28.6 +0.1**
comp=Z,9.2nm,0.7s,baz=34,slow=1.0,SNR=9.6
comp=Z,9.2nm,0.7s
QSPA South Pole Qui 76.66 180 P **P** **10 01 28.8 +0.3**
QSPA IAmb IAmb 10 01 29.4
comp=Z,14nm,0.9s
HILR Hailar Array B 76.87 329 P **P** **10 01 30.3 +0.6**
comp=Z,4.1nm,0.5s,baz=137,slow=6.2,SNR=11
comp=Z,4.1nm,0.5s
N15K Kwethluk River 77.01 15 P **P** **10 01 31.4 +1.2**
N15K Kwethluk River 77.01 15 P **P** **10 01 30.0 -0.2**
baz=209
O16K Kokwok River B 77.03 16 P **P** **10 01 29.7 -0.6**
baz=211
M14K Bethel 77.08 13 P **P** **10 01 30.8 +0.2**
baz=208
KDAK Kodiak Island 77.14 19 P **P** **10 01 31.1 +0.2**
baz=217
P17K Kvichak River 77.14 17 P **P** **10 01 30.9 0.0**
baz=213
CMAR Chiang Mai Arr 77.24 293 P **P** **10 01 33.8 +1.4**
comp=Z,6.4nm,0.8s,baz=119,slow=3.8,SNR=28
comp=Z,6.4nm,0.8s
CMAR Chiang Mai Arr 77.24 293 P **P** **10 01 32.8 +0.4**
M15K Kasigluk River 77.33 14 P **P** **10 01 32.1 +0.3**
baz=209
SEY Seymchan 77.35 352 P **P** **10 01 32.5 +0.6**
comp=Z,19nm,0.5s,baz=153,slow=6.1,SNR=141
comp=Z,19nm,0.5s
CHTO Chiang Mai 77.35 293 P **P** **10 01 34.1 +1.1**
CHTO Chiang Mai 77.35 293 P **P** **10 01 34.1 +1.1**
comp=Z,11nm,1.0s
O17K Koliganek Bris 77.45 16 P **P** **10 01 32.4 -0.1**
baz=212
L14K Kuka Creek 77.45 13 P **P** **10 01 32.9 +0.4**
baz=207
K13K Kusilvak Mount 77.58 12 P **P** **10 01 33.7 +0.5**
baz=205
PZH PanZhiHua 77.59 301 P **P** **10 01 34.6 +0.3**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,130nm,4.8s
N16K Nishlik Lake 77.61 15 P **P** **10 01 33.7 +0.3**
baz=211
BTO2 Baotou 77.64 317 *e*P **P** **10 01 34.9 +0.7**
BTO2 pmax pmax
comp=Z,15nm,1.3s
BTO2 pmax pmax
comp=Z,280nm,5.0s
P18K Big Mountain, 77.65 17 P **P** **10 01 33.4 -0.3**
baz=214
Q19K Cape Douglas, 77.73 18 P **P** **10 01 33.9 -0.3**
baz=216
Q20K Shuyak Island 77.86 19 P **P** **10 01 34.5 -0.3**
baz=217
L15K Ungalak Mounta 78.02 13 P **P** **10 01 35.9 +0.3**
baz=208
M16K Timber Creek 78.03 15 P **P** **10 01 36.2 +0.5**
baz=210
O18K Koktuh Hills 78.04 17 P **P** **10 01 35.8 0.0**
baz=214
N17K Nushagak Hills 78.06 16 P **P** **10 01 36.2 +0.4**
baz=212
GAMB Gambell 78.12 8 IAmb IAmb 10 01 37.7
comp=Z,16nm,0.9s
GAMB Gambell 78.12 8 P **P** **10 01 36.5 +0.5**
baz=198,SNR=7.4
P19K Oil Pt 78.45 18 P **P** **10 01 38.0 +0.1**
baz=216
L16K Owhat River 78.51 14 P **P** **10 01 38.8 +0.6**
baz=210
J14K Nanvaranak Lak 78.54 12 P **P** **10 01 39.3 +1.1**
baz=206
N18K Kilae Creek 78.54 16 P **P** **10 01 38.8 +0.4**
baz=213
K15K Wolf Creek Mou 78.55 13 P **P** **10 01 38.9 +0.5**
baz=208
O19K Port Alsworth 78.57 17 IAmb IAmb 10 01 39.4
comp=Z,22nm,0.9s
O19K Port Alsworth 78.57 17 P **P** **10 01 39.2 +0.7**
baz=215
M17K Holitna River 78.74 15 P **P** **10 01 40.5 +1.0**
baz=212
ILSW Iliamna Southw 78.74 18 IAmb IAmb 10 01 40.3
comp=Z,19nm,0.8s
N19K Bonanza Creek 79.03 17 P **P** **10 01 41.5 +0.4**
baz=215
L17K Donlin 79.16 14 P **P** **10 01 42.7 +1.1**
baz=211
M18K Stony River 79.23 16 P **P** **10 01 43.0 +1.0**
baz=213
BRSE Bradley Lake S 79.28 19 P **P** **10 01 43.0 +0.7**
baz=218
L18K Granite Mounta 79.62 15 IAmb IAmb 10 01 46.4
comp=Z,25nm,1.1s
L18K Granite Mounta 79.62 15 P **P** **10 01 45.0 +1.0**
baz=212
J16K Anvik River 79.63 13 P **P** **10 01 44.9 +0.8**
baz=209
K17K Iditarod 79.66 14 P **P** **10 01 45.1 +1.0**
baz=211
LZH Lanzhou 79.72 311 *e*P **P** **10 01 45.6 +0.2**
LZH pmax pmax
comp=Z,20nm,1.3s
LZDM Lanzhou Array 79.78 311 P **P** **10 01 47.0 +1.1**
comp=Z,2.1nm,0.6s,baz=119,slow=5.2,SNR=11
comp=Z,2.1nm,0.6s
ANM Nome 79.85 10 P **P** **10 01 45.9 +0.8**
baz=204,SNR=8.7
SEW Seward 79.97 19 P **P** **10 01 46.7 +0.8**
baz=220
SPCR Spurr Chakacha 80.00 17 P **P** **10 01 46.8 +0.7**
baz=217
J17K VABM Dome 80.06 13 P **P** **10 01 47.5 +1.3**
baz=210
L19K White Mountain 80.07 16 P **P** **10 01 47.7 +1.3**
baz=214
I17K Unalakleet 80.14 13 P **P** **10 01 47.3 +0.7**
baz=208
O22K Cooper Landing 80.18 19 P **P** **10 01 47.6 +0.7**
baz=219
M20K Styx River 80.29 17 IAmb IAmb 10 01 49.6
comp=Z,14nm,0.7s
M20K Styx River 80.29 17 P **P** **10 01 48.3 +0.7**
baz=216
TNA Tin City 80.36 9 IAmb IAmb 10 01 49.6
comp=Z,18nm,1.1s
TNA Tin City 80.36 9 P **P** **10 01 48.5 +0.8**
baz=201,SNR=12
G15K Niukluk 80.48 11 P **P** **10 01 49.3 +0.9**
baz=205
H16K Elim 80.50 12 P **P** **10 01 49.2 +0.8**
baz=207,SNR=22
F14K Arctic Creek 80.53 10 P **P** **10 01 49.6 +1.0**
baz=203
P23K Montague Islan 80.56 20 P **P** **10 01 49.6 +0.7**
baz=221
SUA Susitna One 80.64 18 P **P** **10 01 49.9 +0.5**
baz=218
RC01 Rabbit Creek A 80.65 18 P **P** **10 01 50.0 +0.6**
baz=219
J18K Innoko River 80.67 14 P **P** **10 01 50.4 +0.9**
baz=212
SKT Skwentna 80.82 17 P **P** **10 01 50.5 +0.3**
F15K North Star Dit 81.02 10 IAmb IAmb 10 01 52.8
comp=Z,20nm,1.5s
F15K North Star Dit 81.02 10 P **P** **10 01 52.0 +0.8**
baz=204,SNR=6.3
M22K Willow 81.05 18 P **P** **10 01 51.9 +0.5**
baz=219
G16K Koyuk River 81.15 11 P **P** **10 01 52.8 +1.0**
baz=207
MHC Mount Hamilton 81.20 48 IAmb IAmb 10 01 55.2
comp=Z,24nm,1.1s
PMR Palmer 81.22 18 IAmb IAmb 10 01 53.5
comp=Z,16nm,0.7s
PMR Palmer 81.22 18 P **P** **10 01 52.9 +0.7**
PMR Palmer 81.22 18 P **P** **10 01 52.8 +0.5**
comp=Z,26nm,0.8s
PMR Palmer 81.22 18 P **P** **10 01 52.9 +0.7**
baz=220
H17K Granite Mounta 81.23 12 P **P** **10 01 52.9 +0.6**
baz=209
BILL Bilibino 81.24 358 P **P** **10 01 52.2 0.0**
BILL IAmb IAmb 10 01 53.2
comp=Z,22nm,1.1s
K20K Telida 81.24 15 P **P** **10 01 52.9 +0.6**
baz=215
KNK Knik Glacier 81.29 19 IAmb IAmb 10 01 54.1
comp=Z,23nm,0.8s
KNK Knik Glacier 81.29 19 P **P** **10 01 52.9 +0.2**
baz=220
PPLA Purkeypile 81.37 16 P **P** **10 01 53.6 +0.4**
baz=217
J19K Poorman 81.38 14 P **P** **10 01 53.8 +0.8**
baz=213
GHO Glory Hole Cre 81.43 18 IAmb IAmb 10 01 54.8
comp=Z,16nm,0.7s
L22K Petersville 81.47 17 IAmb IAmb 10 01 54.4
comp=Z,14nm,0.6s
CUT Chulitna 81.52 17 P **P** **10 01 54.0 +0.3**
baz=218,SNR=5.7
EYAK Cordova Ski Ar 81.52 20 P **P** **10 01 54.1 +0.3**
comp=Z,24nm,1.1s
EYAK Cordova Ski Ar 81.52 20 P **P** **10 01 53.5 -0.2**
baz=223
KAIM Kayak Island 81.53 21 P **P** **10 01 54.7 +0.9**
baz=224
O02D Mt. Diablo Mer 81.58 45 IAmb IAmb 10 01 57.8
comp=Z,12nm,0.8s
G17K Kiwalik Mounta 81.58 12 P **P** **10 01 54.8 +0.8**
baz=208
SML Sawmill 81.63 18 IAmb IAmb 10 01 56.6
comp=Z,14nm,0.7s
SML Sawmill 81.63 18 P **P** **10 01 54.9 +0.4**
baz=220
YAK Yakutsk 81.66 342 P **P** **10 01 53.5 -1.0**
comp=Z,14nm,0.4s,baz=94,slow=0.8,SNR=6.0
comp=Z,14nm,0.4s
YAK Yakutsk 81.66 342 P **P** **10 01 54.0 -0.5**
GCSA Galena City Sc 81.72 14 P **P** **10 01 55.2 +0.5**
baz=212,SNR=22
H18K Honhosa River 81.74 13 P **P** **10 01 55.5 +0.6**
H18K Honhosa River 81.74 13 P **P** **10 01 55.5 +0.6**
baz=211
M23K Glacier View 81.81 19 P **P** **10 01 56.0 +0.7**
baz=221
J20K Nowinta River 81.90 15 P **P** **10 01 56.3 +0.7**
baz=215,SNR=22
DIV Divide 81.94 20 IAmb IAmb 10 01 57.2
comp=Z,18nm,0.7s
SCM Sheep Creek Mo 81.97 19 IAmb IAmb 10 01 57.5
comp=Z,19nm,0.7s
SCM Sheep Creek Mo 81.97 19 P **P** **10 01 56.2 +0.1**
baz=221
M02C Callahan 82.05 44 IAmb IAmb 10 01 59.7
comp=Z,9.5nm,0.8s
CHUM Lake Minchumin 82.13 16 P **P** **10 01 57.1 +0.3**
baz=216,SNR=12
KLU Klutina 82.16 20 IAmb IAmb 10 02 34.8
comp=Z,11nm,0.6s
KLU Klutina 82.16 20 P **P** **10 01 57.5 +0.3**
baz=223
BMRM Bremner River 82.22 20 IAmb IAmb 10 01 58.5
comp=Z,15nm,0.9s
BMRM Bremner River 82.22 20 P **P** **10 01 57.5 +0.1**
baz=224
KTH Kantishna Hill 82.24 16 IAmb IAmb 10 01 57.8
comp=Z,14nm,0.7s
F17K Baldwin Pennin 82.29 11 P **P** **10 01 58.5 +0.9**
baz=208
O03E Paynes Creek 82.31 46 IAmb IAmb 10 02 00.2
comp=Z,13nm,0.8s
G18K Tagagawik 82.33 12 P **P** **10 01 58.1 +0.3**
baz=210
I20K Naaghedeneel 82.33 14 P **P** **10 01 59.0 +1.3**
baz=214
TRF Thorofare Moun 82.33 17 IAmb IAmb 10 01 58.6
comp=Z,12nm,0.6s
TRF Thorofare Moun 82.33 17 P **P** **10 01 57.7 -0.4**
baz=218,SNR=7.6
WAT1 Susitna Watana 82.35 18 P **P** **10 01 58.0 0.0**
baz=220
WAT6 Susitna Watana 82.40 18 P **P** **10 01 58.7 +0.2**
baz=221,SNR=5.5
M03C McCloud 82.50 45 IAmb IAmb 10 02 01.4
comp=Z,23nm,0.9s
VES Vestal, Richgr 82.51 51 IAmb IAmb 10 02 00.4
comp=Z,16nm,1.3s
M24K Tolsona, Glenn 82.53 19 P **P** **10 01 59.3 +0.3**
baz=222
CRQE Cirque 82.58 21 P **P** **10 01 59.3 0.0**
baz=225
MESA MESA 82.59 22 P **P** **10 01 59.3 -0.1**
baz=226
BPAW Bear Paw Mtn. 82.66 16 P **P** **10 01 59.4 -0.1**
baz=218
N25K Chitina, Valde 82.68 20 IAmb IAmb 10 02 01.1
comp=Z,17nm,0.7s
N25K Chitina, Valde 82.68 20 P **P** **10 01 59.7 0.0**
baz=224,SNR=8.8
MWC Mount Wilson 82.69 52 IAmb IAmb 10 02 02.3
comp=Z,18nm,1.2s
F18K Selawik 82.74 12 P **P** **10 02 00.2 +0.4**
baz=209
ISLE Juniper Island 82.74 21 IAmb IAmb 10 02 01.8
comp=Z,18nm,0.9s
HATC Hat Creek Radi 82.76 45 IAmb IAmb 10 02 02.8
comp=Z,20nm,0.8s
L04D Klamath Falls 82.78 44 IAmb IAmb 10 02 02.3
comp=Z,13nm,0.7s
VRDI Verde Repeater 82.79 21 IAmb IAmb 10 02 01.5
comp=Z,9.0nm,0.6s
TPO Tropico Hills 82.80 52 IAmb IAmb 10 02 03.2
comp=Z,17nm,1.2s
H20K Anotleneega Mo 82.81 14 P **P** **10 02 00.8 +0.5**
baz=214
GLB Gilahina Butte 82.82 20 IAmb IAmb 10 02 01.6
comp=Z,14nm,0.7s
G19K Purcell Mounta 82.87 13 P **P** **10 02 01.5 +1.0**
baz=212
DHY Denali Highway 82.89 18 P **P** **10 02 01.2 +0.4**
baz=221
ULN Ulaanbaatar 82.89 323 P **P** **10 02 01.1 -0.1**
ULN Ulaanbaatar 82.89 323 P **P** **10 02 01.8 +0.6**
comp=Z,26nm,0.9s
MCK McKinley 82.94 17 P **P** **10 02 01.0 +0.1**
baz=220,SNR=5.6
BFSC Mount Baldy Ra 83.00 53 IAmb IAmb 10 02 03.2
comp=Z,8.0nm,0.6s
MCARA McCarthy VSAT 83.05 21 IAmb IAmb 10 02 04.5
comp=Z,11nm,0.9s
MCARA McCarthy VSAT 83.05 21 P **P** **10 02 01.6 +0.1**
baz=225
HARP HAARP 83.07 19 P **P** **10 02 02.1 +0.5**
baz=223
D17K Noatak River 83.10 10 P **P** **10 02 02.2 +0.6**
baz=206
MPK Martis Peak 83.15 47 IAmb IAmb 10 02 05.0
comp=Z,12nm,0.8s
PINM Pinnacle 83.15 22 P **P** **10 02 02.4 +0.2**
baz=228
MDPB Devils Postpil 83.19 49 IAmb IAmb 10 02 05.1
comp=Z,10nm,0.7s
SIT Sitka 83.20 27 P **P** **10 02 02.7 +0.4**
baz=233
CRAG Craig 83.25 29 P **P** **10 02 02.9 +0.4**
baz=235
I21K Tanana 83.26 15 P **P** **10 02 02.8 +0.4**
baz=217,SNR=26
C16K Lisburne Hills 83.26 9 P **P** **10 02 03.0 +0.7**
baz=204
SONM Songino Array 83.27 322 P **P** **10 02 03.1 +0.1**
comp=Z,2.7nm,0.6s,baz=132,slow=5.4,SNR=17
comp=Z,2.7nm,0.6s
SONM Songino Array 83.27 322 P **P** **10 02 03.4 +0.3**
E18K Tukpahlearik C 83.28 11 P **P** **10 02 03.7 +1.2**
baz=208
BARN Barnard Glacie 83.30 21 IAmb IAmb 10 02 04.4
comp=Z,16nm,0.9s
F19K Shaleruckik Mo 83.32 12 **P** **10 02 03.8 +1.2**
F19K Shaleruckik Mo 83.32 12 P **P** **10 02 03.4 +0.7**
baz=211
CTG Chitna Glacier 83.35 21 P **P** **10 02 03.5 +0.4**
baz=227
CTGM Chitina Glacie 83.35 21 IAmb IAmb 10 02 05.1
comp=Z,26nm,1.3s
S31K Pelican 83.37 25 P **P** **10 02 03.5 +0.4**
baz=232
PNTR Pine Nut 83.38 47 IAmb IAmb 10 02 06.1
comp=Z,9.6nm,0.8s
PAX Paxson 83.39 19 P **P** **10 02 03.7 +0.4**
baz=223
H21K Melozitna Rive 83.44 14 IAmb IAmb 10 02 06.0
comp=Z,8.5nm,0.9s
H21K Melozitna Rive 83.44 14 P **P** **10 02 04.0 +0.6**
baz=216,SNR=7.8
RDOG Red Dog Mine 83.45 10 IAmb IAmb 10 02 05.3
comp=Z,14nm,0.9s
RDOG Red Dog Mine 83.45 10 P **P** **10 02 04.3 +1.0**
baz=206
NEA2 Nenana 83.56 16 P **P** **10 02 04.0 0.0**
baz=220,SNR=7.6
CLC China Lake 83.62 51 P **P** **10 02 06.3 +1.3**
CLC IAmb IAmb 10 02 06.7
comp=Z,7.4nm,0.6s
U33K Whale Pass 83.62 28 P **P** **10 02 04.3 0.0**
baz=235
O28M Mount Upton 83.63 22 P **P** **10 02 04.7 -0.1**
baz=228
WRH Wood River Hil 83.74 17 IAmb IAmb 10 02 05.4
comp=Z,12nm,0.9s
M26K Nabesna, AK 83.78 20 P **P** **10 02 05.3 +0.2**
baz=225
LHV Little Huntoon 83.85 49 IAmb IAmb 10 02 08.4
comp=Z,12nm,0.9s
V35K Ketchikan 83.88 29 P **P** **10 02 05.8 +0.2**
baz=236
DSP Deep Springs 83.91 49 IAmb IAmb 10 02 08.7
comp=Z,12nm,0.9s
K24K Donnelly Dome 83.91 18 IAmb IAmb 10 02 07.1

	comp=Z,18nm,0.8s								
K24K	**Donnelly Dome**	83.91	18	P	P	10 02 05.9	+0.2		
	baz=223								
I23K	**Minto, Yukon-K**	83.92	16	P	P	10 02 05.7	+0.1		
	baz=219								
MENT	**Mentasta**	83.92	19	P	P	10 02 05.3	-0.5		
	comp=Z,5.6nm,1.1s								
F20K	**Avaraart Lake**	83.93	13	P	P	10 02 06.4	+0.8		
	baz=213								
K05A	**Summer Lake**	83.94	44	IAmb	IAmb	10 02 08.8			
	comp=Z,15nm,1.0s								
J05D	**Fort Rock, OR**	83.94	43	IAmb	IAmb	10 02 08.6			
	comp=Z,12nm,0.7s								
CCB	**Clear Creek Bu**	83.96	17	IAmb	IAmb	10 02 06.3			
	comp=Z,14nm,1.0s								
E19K	**Redstone River**	83.96	12	P	P	10 02 06.7	+0.9		
	baz=212								
G21K	**Allakaket**	83.98	14	P	P	10 02 06.5	+0.5		
	baz=215								
H22K	**Ishtalitna Cre**	83.98	15	P	P	10 02 06.5	+0.5		
	baz=217								
HDA	**Harding Lake**	84.02	17	P	P	10 02 06.5	+0.3		
	baz=222,SNR=23								
GTA2	**Gaotai**	84.05	313	P	P	10 02 08.2	+1.1		
GTA2				pmax	pmax				
	comp=Z,47nm,0.8s								
NVAR	**Mina Array Bea**	84.06	48	P	P	10 02 08.3	+1.0		
	comp=Z,6.1nm,0.7s,baz=232,slow=8.3,SNR=56								
	comp=Z,6.1nm,0.7s								
NVAR	**Mina Array Bea**	84.06	48	P	P	10 02 08.5	+1.2		
L26K	**Log Cabin Wild**	84.11	19	IAmb	IAmb	10 02 08.1			
	comp=Z,16nm,1.4s								
L26K	**Log Cabin Wild**	84.11	19	P	P	10 02 06.6	-0.1		
	baz=225,SNR=6.7								
COLA	**College**	84.12	17	P	P	10 02 06.2	-0.4		
COLA				IAmb	IAmb	10 02 07.3			
	comp=Z,22nm,1.1s								
COLA	**College**	84.12	17	P	P	10 02 06.0	-0.7		
COLA	**College**	84.12	17	P	P	10 02 05.9	-0.7		
	comp=Z,10nm,0.8s								
COLA	**College**	84.12	17	P	P	10 02 06.2	-0.4		
	baz=221								
M27K	**Edge Creek, AK**	84.12	20	IAmb	IAmb	10 02 08.5			
	comp=Z,8.9nm,0.9s								
M27K	**Edge Creek, AK**	84.12	20	P	P	10 02 07.5	+0.5		
	baz=226,SNR=5.6								
YUK8	**Steele Glacier**	84.13	22	P	P	10 02 07.4	+0.2		
	baz=228								
RIDG	**Independent Ri**	84.15	18	IAmb	IAmb	10 02 08.2			
	comp=Z,11nm,0.9s								
RIDG	**Independent Ri**	84.15	18	P	P	10 02 07.1	+0.1		
	baz=224,SNR=8.7								
YUK3	**Moose Creek**	84.21	21	P	P	10 02 08.1	+0.6		
	baz=228,SNR=5.8								
C18K	**Utukok River**	84.27	10	P	P	10 02 08.3	+0.9		
	baz=208								
IL31		84.31	17	IAmb	IAmb	10 02 08.2			
	comp=Z,14nm,0.8s								
ILAR	**Eielson Array**	84.31	17	P	P	10 02 06.4	-1.2		
	comp=Z,14nm,0.6s,baz=236,slow=5.2,SNR=148								
	comp=Z,14nm,0.6s								
DOT	**Dot Lake**	84.32	19	IAmb	IAmb	10 02 08.9			
	comp=Z,9.7nm,0.7s								
PINE	**Pine Mountain**	84.34	43	IAmb	IAmb	10 02 11.2			
	comp=Z,11nm,1.1s								
H23K	**Yukon River**	84.40	15	P	P	10 02 08.7	+0.7		
	baz=219								
FURC	**Furnace Creek,**	84.41	51	IAmb	IAmb	10 02 11.0			
	comp=Z,12nm,1.0s								
POKR	**Poker Plat Res**	84.42	17	P	P	10 02 08.0	-0.1		
	baz=221								
YUK6	**Outpost Mounta**	84.42	22	P	P	10 02 08.7	+0.2		
	baz=230								
P30M	**Million Dollar**	84.42	24	P	P	10 02 08.1	-0.3		
	baz=231								
BVCY	**Beaver Creek**	84.50	21	P	P	10 02 09.0	+0.3		
	baz=227,SNR=6.7								
F21K	**Alatna River**	84.56	13	P	P	10 02 09.3	+0.5		
	baz=215								
YUK4	**Talbot Arm**	84.58	22	P	P	10 02 09.9	+0.6		
	baz=229								
SCRK	**Sand Creek**	84.58	18	P	P	10 02 09.3	+0.2		
	baz=224,SNR=5.6								
L27K	**Beaver Creek,**	84.63	20	P	P	10 02 09.7	+0.4		
	baz=226,SNR=5.8								
J25K	**Salcha River,**	84.63	18	IAmb	IAmb	10 02 10.4			
	comp=Z,13nm,0.9s								
J25K	**Salcha River,**	84.63	18	P	P	10 02 09.6	+0.4		
	baz=223,SNR=12								
HYT	**Haines Junctio**	84.66	23	P	P	10 02 09.6	0.0		
	baz=230								
WCT	**Wildcat Mounta**	84.70	50	IAmb	IAmb	10 02 12.0			
	comp=Z,6.6nm,0.7s								
H24K	**Noodor Dome**	84.84	16	P	P	10 02 10.9	+0.6		
	baz=220								
G23K	**Bananza Creek**	84.97	15	P	P	10 02 11.1	+0.2		
	baz=218								
TPNV	**Topopah Spring**	85.04	50	IAmb	IAmb	10 02 13.7			
	comp=Z,6.8nm,0.7s								
J26L	**Joseph Creek**	85.09	18	P	P	10 02 12.0	+0.4		
	baz=225								
D20K	**Etivluk River**	85.16	11	P	P	10 02 12.3	+0.6		
	baz=212								
O30N	**Mendenhall**	85.17	23	P	P	10 02 11.5	-0.4		
	baz=232								
PRP	**Porcupine Dome**	85.25	17	P	P	10 02 12.0	-0.4		
	baz=223								
BLYC	**Blythe**	85.28	54	IAmb	IAmb	10 02 15.6			
	comp=Z,11nm,1.2s								
COLD	**Coldfoot**	85.33	14	P	P	10 02 12.8	+0.3		
	baz=218								
M29M	**Somme Creek**	85.36	21	P	P	10 02 13.2	+0.4		
	baz=229								
P32M	**Atlin**	85.40	25	P	P	10 02 13.6	+0.5		
	baz=234								
I07A	**Izee**	85.41	43	IAmb	IAmb	10 02 15.6			
	comp=Z,6.0nm,0.7s								
S34M	**Telegraph Cree**	85.54	27	P	P	10 02 13.9	+0.2		
	baz=236								
WHY	**Whitehorse**	85.57	24	P	P	10 02 13.4	-0.5		
	baz=233								
G24K	**Hadweenzic Riv**	85.61	16	P	P	10 02 13.6	-0.3		
	baz=221								
SHL	**Shillong**	85.65	297	P	P	10 02 14.7	-0.6		
SHL				IAmb	IAmb	10 02 16.2			
	comp=Z,14nm,1.1s								
N31M	**Braeburn, Yuko**	85.73	23	P	P	10 02 14.0	-0.5		
	baz=232								
L29M	**L29M**	85.91	21	P	P	10 02 15.0	-0.4		
	baz=230								
M30M	**Minto, Yukon**	86.04	22	P	P	10 02 15.4	-0.6		
	baz=231								
PRN	**Pahroc Range**	86.10	50	IAmb	IAmb	10 02 19.5			
	comp=Z,12nm,0.8s								
DAWY	**Dawson**	86.11	20	P	P	10 02 15.9	-0.4		
	baz=228								
E23K	**Chandalar**	86.12	14	P	P	10 02 16.6	+0.3		
	baz=219								
P33M	**Teslin, Yukon**	86.13	25	P	P	10 02 16.0	-0.6		
	baz=235								
W13A	**Hualapai Mount**	86.22	53	IAmb	IAmb	10 02 20.0			
	comp=Z,7.1nm,0.9s								
HAWA	**Hanford**	86.31	41	IAmb	IAmb	10 02 19.8			
	comp=Z,8.4nm,0.9s								
DLBC	**Dease Lake**	86.32	27	P	P	10 02 17.4	0.0		
	baz=237								
E24K	**Your Creek**	86.41	14	P	P	10 02 17.9	+0.3		
	baz=220								
R33M	**Jennings River**	86.44	26	P	P	10 02 18.0	0.0		
	baz=236								
I27K	**Kandik River**	86.45	18	P	P	10 02 17.5	-0.4		
	baz=226								
N32M	**Quiet Lake**	86.57	24	P	P	10 02 18.2	-0.4		
	baz=234								
K29M	**Barlow Dome**	86.59	20	P	P	10 02 18.3	-0.4		
	baz=230								
D23K	**Nanushuk River**	86.60	13	P	P	10 02 18.5	+0.1		
	baz=218								
TLY	**Talaya**	86.62	325	P	P	10 02 19.1	+0.2		
TLY				IAmb	IAmb	10 02 20.1			
	comp=Z,8.6nm,1.2s								
LLLB	**Lillooet**	86.65	36	IAmb	IAmb	10 02 21.1			
	comp=Z,10nm,1.1s								
E08A	**Dider Farm, El**	86.65	41	IAmb	IAmb	10 02 21.4			
	comp=Z,13nm,0.9s								
EPH	**Ephrata**	86.66	40	IAmb	IAmb	10 02 21.0			
	comp=Z,9.7nm,1.0s								
M31M	**Drury Creek, Y**	86.69	23	P	P	10 02 17.8	-1.2		
	baz=233								
J29N	**Klondike Camp**	86.75	20	P	P	10 02 19.4	0.0		
	baz=230								
F25K	**Christian Rive**	86.75	15	P	P	10 02 19.5	+0.3		
	baz=223								
G26K	**Porcupine Rive**	86.78	16	P	P	10 02 19.7	+0.4		
	baz=224								
I28M	**Miner Creek**	86.86	19	P	P	10 02 20.3	+0.4		
	baz=228								
H27K	**Steamboat Moun**	86.92	18	P	P	10 02 20.1	+0.1		
	baz=226								
D08A	**Wollman Farm,**	86.96	40	IAmb	IAmb	10 02 22.7			
	comp=Z,9.1nm,1.0s								
MAYO	**Mayo, Yukon**	87.00	21	P	P	10 02 20.4	0.0		
	baz=232								
ELK	**Elko**	87.10	47	IAmb	IAmb	10 02 23.9			
	comp=Z,11nm,1.2s								
E25K	**Arctic Village**	87.16	15	P	P	10 02 21.1	0.0		
	baz=223								
F26K	**Sheenjek River**	87.22	16	P	P	10 02 21.5	0.0		
	baz=224								
B08A	**Colville Reser**	87.22	39	IAmb	IAmb	10 02 23.4			
	comp=Z,12nm,1.1s								
G27K	**Doyon Strip**	87.28	17	P	P	10 02 21.8	+0.1		
	baz=226								
I29M	**Ogilvie Camp,**	87.32	19	P	P	10 02 22.1	+0.1		
	baz=229								
LCMT	**Little Creek M**	87.33	51	IAmb	IAmb	10 02 25.1			
	comp=Z,9.9nm,0.9s								
A21K	**Barrow**	87.38	10	P	P	10 02 22.3	+0.3		
	baz=212								
A22K	**Sinclair Lake**	87.40	11	P	P	10 02 22.6	+0.5		
	baz=214								
CCUT	**Cedar City**	87.41	51	IAmb	IAmb	10 02 26.0			
	comp=Z,7.3nm,0.9s								
F10A	**Beach Ranch, E**	87.63	42	IAmb	IAmb	10 02 25.4			
	comp=Z,13nm,0.8s								
MFID	**Camas Ranch**	87.63	44	IAmb	IAmb	10 02 26.0			
	comp=Z,7.4nm,0.9s								
SZCU	**Shurtz Canyon**	87.63	51	IAmb	IAmb	10 02 26.8			
	comp=Z,9.1nm,1.2s								
KNB	**Kanab**	87.65	51	IAmb	IAmb	10 02 26.9			
	comp=Z,12nm,1.1s								
WTLY	**Watson Lake, Y**	87.75	26	P	P	10 02 23.7	-0.3		
	baz=238								
TUC	**Tucson**	87.81	56	P	P	10 02 26.7	+1.6		
I30M	**Mount Dempster**	87.85	20	P	P	10 02 24.1	-0.4		
	baz=231								
D25K	**Kavik River**	87.86	14	P	P	10 02 24.1	-0.4		
	baz=222								
X16A	**Lo Mia Camp, P**	87.91	54	IAmb	IAmb	10 02 28.3			
	comp=Z,11nm,0.9s								
PLID	**Pearl Lake**	88.11	43	IAmb	IAmb	10 02 27.7			
	comp=Z,7.2nm,0.8s								
F28M	**Old Crow**	88.34	17	P	P	10 02 26.2	-0.4		
	baz=228								
G29M	**Pine Creek**	88.41	18	P	P	10 02 27.1	+0.1		
	baz=230								
MTPU	**Mount Pierson**	88.45	50	IAmb	IAmb	10 02 31.2			
	comp=Z,6.0nm,0.9s								
EPYK	**Eagle Plains**	88.47	19	P	P	10 02 27.3	0.0		
	baz=231								
NEW	**Newport**	88.55	40	IAmb	IAmb	10 02 30.0			
	comp=Z,9.8nm,1.1s								
TOAD	**Toad River Com**	88.68	28	P	P	10 02 28.4	-0.1		
	baz=241								
C27K	**Jago River**	88.72	15	P	P	10 02 28.3	-0.1		
	baz=224								
H31M	**Peel River**	88.88	20	P	P	10 02 28.4	-0.8		
	baz=233								
E28M	**Babbage River**	89.10	16	P	P	10 02 30.1	-0.1		
	baz=228								
X18A	**Snowflake**	89.12	54	IAmb	IAmb	10 02 33.6			
	comp=Z,5.4nm,0.9s								
D27M	**Malcolm River**	89.15	16	P	P	10 02 30.3	-0.1		
	baz=227								
HVU	**Hansel Valley**	89.20	47	IAmb	IAmb	10 02 33.5			
	comp=Z,7.4nm,0.9s								
TIXI	**Tiksi**	89.27	348	P	P	10 02 30.3	-0.5		
	comp=Z,3.8nm,0.3s,baz=112,slow=3.4,SNR=8.2								
	comp=Z,3.8nm,0.3s								
TIXI	**Tiksi**	89.27	348		P	10 02 31.2	+0.4		
TIXI				IAmb	IAmb	10 02 32.2			
	comp=Z,5.1nm,0.8s								
E29M	**Blow River**	89.41	17	P	P	10 02 30.9	-0.7		
	baz=230								
W18A	**Petrified Fore**	89.46	54	IAmb	IAmb	10 02 35.0			
	comp=Z,7.8nm,0.8s								
F30M	**Barrier River**	89.53	18	P	P	10 02 32.0	-0.2		
	baz=232								
G31M	**Salt River**	89.58	19	P	P	10 02 32.4	+0.1		
	baz=233								
CTU	**Camp Tracy**	89.59	48	IAmb	IAmb	10 02 35.1			
	comp=Z,4.4nm,0.7s								
D28M	**Stokes Point**	89.79	16	P	P	10 02 33.3	0.0		
	baz=229								
HWUT	**Hardware Ranch**	90.01	47	IAmb	IAmb	10 02 36.5			
	comp=Z,3.6nm,0.7s								
F31M	**Tsiigehtchic**	90.05	19	P	P	10 02 34.2	-0.3		
	baz=234								
BSUT	**Blindstream Ca**	90.26	48	IAmb	IAmb	10 02 38.5			
	comp=Z,7.6nm,0.7s								
P18A	**Preston Nutter**	90.37	49	IAmb	IAmb	10 02 38.8			
	comp=Z,4.2nm,0.6s								
INK	**Inuvik**	90.63	18	P	P	10 02 36.8	-0.4		
	baz=234								
PV21	**Cone Mtn., Par**	91.02	51	IAmb	IAmb	10 02 41.9			
	comp=Z,6.6nm,0.6s								
PV22	**Blue Mesa, Par**	91.15	51	IAmb	IAmb	10 02 42.2			
	comp=Z,5.7nm,0.6s								
WRGLY	**Wrigley**	91.50	24	P	P	10 02 41.2	-0.1		
	baz=243								
PDAR	**Pinedale Array**	91.77	47	P	P	10 02 43.4	0.0		
	comp=Z,1.2nm,0.7s,baz=222,slow=3.1,SNR=13								
	comp=Z,1.2nm,0.7s								
ELIB	**Princess Elisa**	92.09	190	*d*P	P	10 02 44.2	0.0		
	comp=Z,4.6nm,0.8s								
TXAR	**Lajitas Array**	92.93	61	P	P	10 02 49.8	+1.0		
	comp=Z,1.0nm,0.5s,baz=220,slow=5.6,SNR=11								
	comp=Z,1.0nm,0.5s								
TXAR	**Lajitas Array**	92.93	61	P	P	10 02 50.1	+1.3		
WMQ	**Urumqi**	93.99	314	*e*P	P	10 02 54.0	+0.8		
WMQ				pP	pP	10 05 03.7	-4.9		
C36M	**Paulatuk**	94.10	19	P	P	10 02 52.2	-0.8		
	baz=243								
YKA	**Yellowknife Ar**	94.94	27	P	P	10 02 56.8	-0.2		
	comp=Z,3.2nm,0.7s,baz=264,slow=5.2,SNR=82								
YKA				PKiKP	PKiKP	10 07 33.6	-0.6		
	comp=Z,0.1nm,0.5s,baz=271,slow=1.5,SNR=5.3								
	comp=Z,3.2nm,0.7s								
YKAW1	**Yellowknife Wh**	94.99	27		P	10 02 57.3	+0.1		
A36M	**Sachs Harbour**	94.99	16	P	P	10 02 56.6	-0.4		
	baz=242								
ZALV	**Zalesovo Beam**	98.13	323	P	Pdif	10 03 11.0	-0.4		
	comp=Z,1.8nm,0.7s,baz=104,slow=4.7,SNR=11								
	comp=Z,1.8nm,0.7s								
MKAR	**Makanchi Array**	98.36	316	P	P	10 03 13.1	+0.3		
	comp=Z,2.5nm,0.7s,baz=90,slow=6.2,SNR=19								
MKAR				PKiKP	PKiKP	10 07 40.0	-0.8		
	comp=Z,0.3nm,0.4s,baz=204,slow=1.4,SNR=5.9								
	comp=Z,2.5nm,0.7s								
BVAR	**Borovoye Array**	106.60	322	PKiKP	PKiKP	10 07 54.9	-0.6		
	comp=Z,0.8nm,0.4s,baz=104,slow=1.4,SNR=6.4								
ARTI	**Arti**	113.21	326	PKiKP	PKiKP	10 08 07.5	-0.4		
	comp=Z,5.2nm,0.6s,baz=352,slow=2.5,SNR=9.3								
SPITS	**Spitsbergen Ar**	113.91	354	PKiKP	PKiKP	10 08 08.0	-0.8		
	comp=Z,5.9nm,0.9s,baz=104,slow=6.1,SNR=5.4								
AKTO	**Aktyubinsk**	114.46	320	PKP	PKPdf	10 08 10.2	-0.3		
	comp=Z,1.8nm,0.5s,baz=95,slow=1.8,SNR=5.2								
CPUP	**Villa Florida**	119.06	131	PKP	PKPdf	10 08 18.9	-1.3		
	comp=Z,0.8nm,0.5s,baz=347,slow=3.0,SNR=3.7								
SCHQ	**Schefferville**	119.46	34	PKP	PKPdf	10 08 17.7	-2.3		
	comp=Z,2.5nm,0.5s,baz=225,slow=3.7,SNR=9.5								
ARCES	**ARCESS Array B**	119.68	347	PKP	PKPdf	10 08 19.6	-0.4		
	comp=Z,5.8nm,0.3s,baz=78,slow=2.1,SNR=78								
KTK1	**Kautokeino**	120.60	347	*e*P	PKPdf	10 08 20.9	-0.9		
STEI	**Steigen**	123.13	349	*e*P	PKPdf	10 08 26.2	-0.4		
KONS	**Konsvik**	124.79	349	*e*P	PKPdf	10 08 27.8	-2.0		
LEIR	**Leirfjorden**	125.13	349	*e*P	PKPdf	10 08 30.5	0.0		
FINES	**FINESS Array B**	125.56	340	PKP	PKPdf	10 08 31.3	-0.2		
	comp=Z,3.1nm,0.4s,baz=81,slow=1.6,SNR=25								
BOSA	**Boshof**	126.38	219	PKP	PKPdf	10 08 34.3	0.0		
	comp=Z,2.8nm,0.9s,baz=188,slow=2.0,SNR=5.9								
MOL	**Molde**	129.37	350	*e*P	PKPdf	10 08 38.9	+0.2		
DSLB	**Salisbury**	129.82	81	*e*P	PKiKP	10 08 43.6	+1.8		
NB2	**NORSAR Subarra**	130.06	347	PKPdf	PKPdf	10 08 39.4	-0.8		
	comp=Z,0.9nm,0.4s,baz=31,slow=1.9								
NB2				pPKP	pPKPdf	10 11 07.0	+2.4		
	comp=Z,0.9nm,0.6s,baz=34,slow=4.3								
NB2	**NORSAR Subarra**	130.06	347	PKPdf	PKPdf	10 08 39.4	-0.8		
NB2				AMP		10 08 39.4			
	comp=Z,0.9nm,0.4s								
NOA	**NORSAR Array B**	130.06	347	PKP	PKPdf	10 08 39.8	-0.4		
	comp=Z,2.1nm,0.6s,baz=31,slow=2.1,SNR=11								
NOA				SKPbc	SKPbc	10 11 03.4	-1.7		
	comp=Z,1.2nm,0.7s,baz=30,slow=2.8,SNR=5.0								
NC602	**NORSAR Array S**	130.26	347	*e*P	PKPdf	10 08 39.9	-0.6		
HFS	**Hagfors**	130.27	345	PKP	PKPdf	10 08 40.7	+0.2		
	comp=Z,1.6nm,0.4s,baz=107,slow=5.1,SNR=8.8								
HFS				SKPbc	SKPbc	10 11 03.8	-2.0		
	comp=Z,0.9nm,0.4s,baz=125,slow=2.3,SNR=5.0								
OSL	**Oslo**	131.15	347	*e*P	PKPdf	10 08 35.1	-7.0		
AKASG	**Malin Array Be**	131.28	328	PKP	PKPdf	10 08 42.6	0.0		
	comp=Z,1.2nm,0.4s,baz=58,slow=2.2,SNR=7.3								
OSTC	**Ostas**	137.39	336	*e*PKP	PKiKP	10 08 57.0	+0.8		
DPC	**Dobruska-Polom**	137.50	336	*e*PKP	PKiKP	10 08 57.0	+0.5		
EKA	**Eskdalemuir Ar**	137.83	355	PKiKP	PKPpre	10 08 46.8			
	comp=Z,0.5nm,0.3s,baz=11,slow=3.1,SNR=3.6								
EKA				PKP	PKPdf	10 08 53.0	-1.8		
	comp=Z,0.5nm,0.3s,baz=14,slow=2.1,SNR=2.3								
CLL	**Collm**	137.98	339	*i* PKPdf	PKiKP	10 08 57.5	+0.1		
	comp=Z,5.0nm,0.7s								
ZVC	**Zvikov**	139.07	336	*e*PKP	PKiKP	10 09 00.1	+0.4		
CKRC	**Cesky Krumlov**	139.52	336	*e*PKP	PKPdf	10 08 58.4	+0.3		
RONA	**Rosalia, Austr**	139.55	333	*i* PKP	PKiKP	10 08 59.6	-1.2		
	comp=Z,4.2nm,0.5s,SNR=4.2								
CONA	**Conrad Observa**	139.57	334	*e*PKP	PKPdf	10 08 53.6	-4.8		
	comp=Z,3.2nm,0.5s								
GERES	**GERESS Array B**	139.74	336	PKP	PKPdf	10 08 57.6	-1.0		
	comp=Z,1.6nm,0.6s,baz=46,slow=3.9,SNR=8.6								
OBKA	**Obir**	141.23	333	*e*PKP	PKPdf	10 08 56.9	-4.4		
	comp=Z,0.8nm,0.4s								
LESA	**Schwarzleotal**	141.29	336	*e*PKP	PKPdf	10 08 57.4	-4.0		
	comp=Z,0.6nm,0.2s								
KBA	**Koelnbreinsper**	141.30	335	*e*PKP	PKPdf	10 08 58.9	-2.7		
	comp=Z,2.9nm,0.4s								
WTTA	**Wattenberg**	141.83	337	*e*PKP	PKPdf	10 09 00.1	-2.5		
	comp=Z,0.8nm,0.2s								
GBRS	**Gornja Briga**	141.86	332	*i* PKPbc	PKPdf	10 08 59.3	-3.1		
CEY	**Cerknica**	141.88	333	*i* PKPbc	PKPdf	10 08 59.1	-3.4		
MOTA	**Moosalm**	141.97	337	*e*PKP	PKPdf	10 08 59.8	-3.0		
	comp=Z,0.3nm,0.1s								
SQTA	**Sankt Quirin**	142.03	337	*e*PKP	PKPdf	10 08 59.8	-3.0		
	comp=Z,0.4nm,0.2s								
IDI	**Anoyia**	142.06	311	PKP	PKPdf	10 09 00.6	-2.6		
	comp=Z,11nm,0.4s,baz=315,slow=2.9,SNR=11								
FETA	**Feichten**	142.38	337	*e*PKP	PKPdf	10 09 00.8	-2.6		
	comp=Z,1.4nm,0.5s								
DAVA	**Damuels**	142.47	338	*i* PKP	PKPdf	10 09 00.9	-2.7		
	comp=Z,2.4nm,0.2s,SNR=4.5								
FUORN	**Ofenpass-Fuorn**	142.89	337		PKPdf	10 09 03.3	-1.2		
DAVOX	**Davos/Dischmat**	142.90	338	PKP	PKPdf	10 09 02.9	-1.5		
	comp=Z,15nm,0.6s,baz=44,slow=1.6,SNR=38								
CLF	**Chambon-Foret**	144.07	346		PKPab	10 09 07.0	+0.7		
SENIN	**Lac Senin/Sane**	144.17	340		PKPab	10 09 07.1	0.0		
ZCCA	**Zocca**	144.48	334		PKPab	10 09 08.8	+0.7		
CAMP	**Campotosto**	144.79	330		PKPbc	10 09 08.7	+0.2		
BNI	**Bardonecchia**	145.53	340		PKPab	10 09 11.4	-0.8		
SSB	**Saint Sauveur**	146.01	342		PKPbc	10 09 12.5	+0.7		
VSL	**Villasalto**	149.07	331		PKPbc	10 09 19.9	+0.1		
KEST	**Kesra**	151.97	326	PKPbc	PKiKP	10 09 26.9	+0.2		
	comp=Z,8.0nm,0.7s,baz=46,slow=2.2,SNR=9.2								
ESDC	**Sonseca Array**	153.33	350	PKPbc	PKPbc	10 09 29.2	-0.2		
	comp=Z,0.7nm,0.6s,baz=13,slow=2.9,SNR=5.6								
ESDC				PKPab	PKPab	10 09 45.3	+0.6		
	comp=Z,4.3nm,0.9s,baz=20,slow=3.6,SNR=8.5								
EDA	**Edea**	158.33	246		PKPab	10 10 06.7	-0.4		
TORD	**Torodi Ar. Bea**	169.04	270	PKP	PKPdf	10 09 36.7	-1.3		
	comp=Z,2.6nm,1.0s,baz=253,slow=1.9,SNR=5.7								
TORD				PKPab	PKPab	10 10 53.8	-0.6		
	comp=Z,1.7nm,0.6s,baz=118,slow=3.6,SNR=7.5								
DBIC	**Dimbokro**	171.90	215	PKP	PKPdf	10 09 37.1	-2.4		
	comp=Z,3.0nm,0

IUG	**Iuzhnay**	**3.21**	**295**	Pg		**Pb**	**10 00 02.9**	**+0.6**
	14nm,0.4s							
IUG				Lg		Lg	10 00 47.6	
	18nm,0.5s							
IUG	**Iuzhnay**	**3.21**	**295**	*eP*		**Pb**	**10 00 02.9**	**+0.6**
	14nm,0.4s							
IUG				*eS*		**Sg**	**10 00 47.6**	**+0.1**
	18nm,0.5s							
MDOK	**Medeo**	**3.26**	**44**	Pg		**Pb**	**10 00 02.8**	**-0.3**
	5.0nm,0.3s							
MDOK				Lg		Lg	10 00 47.2	
	9.1nm,0.5s							
KK31	**Karatay Array**	**3.41**	**312**	⇑Pg		**Pb**	**10 00 05.1**	**-0.5**
	2.6nm,0.5s,baz=138,slow=17,SNR=24							
KK31				⇑Lg		Lg	10 00 52.4	
	6.4nm,0.6s,baz=128,slow=29,SNR=8.7							
KTBS	**Karatobe**	**3.50**	**35**	Pg		**Pb**	**10 00 06.5**	**-0.6**
	3.0nm,0.4s							
KTBS				Lg		Lg	10 00 53.6	
	0.5nm,0.5s							
KTBS	**Karatobe**	**3.50**	**35**	*eP*		**Pb**	**10 00 06.5**	**-0.6**
	3.0nm,0.4s							
KTBS				*eS*		**Sb**	**10 00 53.6**	**+3.4**
	0.5nm,0.5s							
BRLS	**Borolday**	**3.76**	**307**	Pg		**Pb**	**10 00 12.2**	**+0.7**
	2.7nm,0.3s							
BRLS				Lg		Lg	10 01 03.9	
	3.8nm,0.3s							
BRLS	**Borolday**	**3.76**	**307**	*eP*		**Pb**	**10 00 12.2**	**+0.7**
	2.7nm,0.3s							
BRLS				*eS*		**Sg**	**10 01 03.9**	**-1.1**
	3.8nm,0.3s							

*IDC **07** 10:02:05.4±3.3,24°.30S×179°.68W,h492km±32km,mb3.6/6, mbtmp4.4/7,Error ellipse: s-maj=37.5km s-min=27.6km az=144.0*
*NEIC **07** 10:02:06.6±1.2,24°.05S±0°.07×179°.6W±0°.2,h506km±17km, mb4.0/18,Error ellipse: s-maj=31.4km s-min=6.4km az=74.0*

ISC 07 10:02:06.4±1.0,**24°.21S**±0°.09×**179°.6W**±0°.2,**h512**km,**n32,** σ1ᵍ**19/33,mb4.0/15,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.24**	**164**	P	**P**	**10 03 37.1**	**+1.1**
MSVF	**Nonsavu**	**6.81**	**341**	P	**P**	**10 03 48.8**	**-2.5**
URZ	**Urewera**	**14.28**	**191**	P	**P**	**10 05 06.6**	**-2.1**
	15nm,1.2s,baz=165,slow=17,SNR=1.2						
URZ				S	**S**	**10 07 37.5**	**-1.6**
	8.0nm,0.8s,baz=207,slow=22,SNR=6.2						
ARMA	**Armidale**	**26.25**	**250**	P	**P**	**10 07 02.8**	**+2.4**
ARMA				IAmb	IAmb	10 07 19.8	
	comp=Z,5.7nm,1.1s						
EIDS	**Eidsvold**	**26.61**	**261**	P	**P**	**10 07 04.1**	**+0.6**
EIDS				IAmb	IAmb	10 07 21.3	
	comp=Z,6.1nm,1.1s						
CAN	**Canberra**	**29.30**	**241**	P	**P**	**10 07 29.2**	**+2.2**
CTA	**Charters Tower**	**31.84**	**271**	P	**P**	**10 07 49.1**	**+0.1**
	comp=Z,6.6nm,0.5s,baz=94,slow=10.0,SNR=21						
	comp=Z,6.6nm,0.5s						
CTAO	**Charters Tower**	**31.84**	**271**	P	**P**	**10 07 49.1**	**+0.1**
CTAO				IAmb	IAmb	10 07 49.8	
	comp=Z,9.2nm,0.9s						
TOO	**Toolangi**	**32.58**	**238**	P	**P**	**10 07 56.7**	**+1.5**
COEN	**Coen**	**36.52**	**279**	P	**P**	**10 08 27.7**	**-0.7**
COEN				IAmb	IAmb	10 08 29.2	
	comp=Z,2.3nm,0.8s						
BBOO	**Buckleboo**	**39.66**	**247**	P	**P**	**10 08 53.5**	**-0.3**
AS31	**Alice Springs**	**42.34**	**261**	P	**P**	**10 09 15.3**	**0.0**
ASAR	**Alice Springs**	**42.34**	**261**	P	**P**	**10 09 15.1**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=96,slow=7.2,SNR=26						
ASAR				ScP	**ScP**	**10 14 00.2**	**+1.2**
	comp=Z,1.0nm,1.2s,baz=89,slow=4.4,SNR=4.8						
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**42.34**	**261**	P	**P**	**10 09 14.7**	**-0.6**
WR8	**Warramunga Arr**	**42.60**	**266**	P	**P**	**10 09 16.4**	**-0.9**
WR8				IAmb	IAmb	10 09 17.1	
	comp=Z,3.5nm,0.8s						
WRAB	**Tennant Creek**	**42.74**	**266**	P	**P**	**10 09 17.6**	**-0.8**
WRAB				IAmb	IAmb	10 09 17.9	
	comp=Z,3.5nm,0.6s						
WB0	**Warramunga Arr**	**42.74**	**267**	P	**P**	**10 09 17.6**	**-0.9**
WRA	**Warramunga Arr**	**42.75**	**266**	P	**P**	**10 09 17.6**	**-0.9**
	comp=Z,4.4nm,0.6s,baz=103,slow=8.1,SNR=56						
	comp=Z,4.4nm,0.6s						
WRA	**Warramunga Arr**	**42.75**	**266**	P	**P**	**10 09 17.6**	**-0.9**
FORT	**Forrest**	**46.54**	**250**	P	**P**	**10 09 47.4**	**-0.3**
FORT				IAmb	IAmb	10 10 00.4	
	comp=Z,7.2nm,1.1s						
KNRA	**Kununurra**	**49.05**	**270**	P	**P**	**10 10 06.3**	**-0.3**
KNRA				IAmb	IAmb	10 10 33.1	
	comp=Z,2.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.16**	**266**	P	**P**	**10 10 21.6**	**-0.5**
	comp=Z,5.8nm,0.9s,baz=117,slow=9.0,SNR=6.6						
	comp=Z,5.8nm,0.9s						
PSA00	**Pilbara Seismi**	**55.46**	**260**	P	**P**	**10 10 52.6**	**0.0**
MBWA	**Marble Bar**	**55.67**	**260**	P	**P**	**10 10 54.1**	**0.0**
MORW	**Morawa**	**57.11**	**250**	P	**P**	**10 11 04.1**	**+0.2**
MORW				IAmb	IAmb	10 11 14.3	
	comp=Z,9.6nm,1.1s						
TOLI2	**Tolitoli**	**63.00**	**285**	P	**P**	**10 11 42.5**	**-0.8**
TOLI2				IAmb	IAmb	10 11 53.9	
	comp=Z,3.9nm,0.9s						
PETK	**Petropavlovsk-**	**79.48**	**346**	P	**P**	**10 13 19.8**	**+0.6**
	comp=Z,5.3nm,0.9s,baz=110,slow=7.8,SNR=5.7						
	comp=Z,5.3nm,0.9s						
PETK	**Petropavlovsk-**	**79.48**	**346**	P	**P**	**10 13 19.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**89.97**	**290**	P	**P**	**10 14 13.8**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=122,slow=6.8,SNR=4.6						
	comp=Z,0.7nm,0.7s						
HFS	**Hagfors**	**142.92**	**349**	PKhKP	PKPpre	10 20 38.7	
	comp=Z,1.8nm,0.5s,baz=33,slow=3.4,SNR=12						
AKASG	**Malin Array Be**	**145.43**	**327**	PKPbc	**PKPbc**	**10 20 46.2**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=44,slow=4.2,SNR=7.0						
EKA	**Eskdalemuir Ar**	**148.80**	**4**	PKPbc	**PKiKP**	**10 20 57.6**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=346,slow=5.6,SNR=3.9						

*JSN **07** 10:15:59.9±1.5,18°.73N×81°.03W,h0km±999km,MD4.4, MW4.6,Presumed earthquake*
*SSNC **07** 10:16:03.0±2.7,18°.96N×81°.03W,h25km±43km,MD3.6, ML3.1,Presumed earthquake*

ISC 07 10:15:59.1±1.9,**19°.04N**±0°.07×**80°.94W**±0°.07,**h10**km,**n14,** σ2ᵍ**.57/24,1C,Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.02**	**52**	*eP*	**Pn**	**10 16 21.0**	**+1.6**
LCCY				*eS*	**Sg**	**10 16 32.1**	**+0.1**
LCCY				IAML		10 16 48.2	
	comp=N,227nm,0.3s						
LCCY				IAML		10 16 48.7	
	comp=E,273nm,0.6s						
CBCY	**The Bluff, Cay**	**1.31**	**58**	*eP*	**Pg**	**10 16 24.5**	**+0.3**
CBCY				*eS*	**Sg**	**10 16 43.0**	**+1.6**
CBCY				IAML		10 16 50.1	
	comp=E,161nm,0.2s						
CBCY				IAML		10 16 50.8	
	comp=N,329nm,0.2s						
MGV	**Manicaragua**	**3.18**	**16**	*eP*	**Pn**	**10 16 50.3**	**+1.1**
MGV				*eS*	**Sn**	**10 17 27.6**	**+0.3**
MGV				*eSg*	**Sb**	**10 17 30.6**	**-4.0**
MTDJ	**Mount Denham**	**3.33**	**104**	*eP*	**Pn**	**10 16 50.9**	**-0.4**
MTDJ				*eS*	**Sn**	**10 17 29.6**	**-1.4**
MTDJ	**Mount Denham**	**3.33**	**104**	*i* P	**Pn**	**10 16 51.8**	**+0.5**
MTDJ				*i* S	**Sn**	**10 17 31.4**	**+0.5**
CCCC	**Cccc**	**3.67**	**54**	*eP*	**Pb**	**10 17 03.1**	**-1.0**
CCCC				*eS*	**Sb**	**10 17 48.7**	**0.0**
LMGC	**Las Mercedes**	**3.84**	**74**	*eP*	**Pn**	**10 17 01.3**	**+3.0**
LMGC				*eS*	**Sn**	**10 17 45.2**	**+1.6**
LMGC				*eSg*	**Sb**	**10 17 47.6**	**-6.1**
CAMR	**Camarioca**	**4.02**	**354**	*eP*	**Pn**	**10 17 01.8**	**+1.0**
STH	**Stony Hill**	**4.03**	**103**	⇑*iP*	**Pn**	**10 17 02.7**	**+1.8**
SOR	**Soroa**	**4.20**	**333**	*eP*	**Pn**	**10 17 05.1**	**+1.8**
SOR				IAML		10 17 55.1	
	comp=E,29nm,0.2s						
SOR				IAML		10 17 55.2	
	comp=N,17nm,0.4s						
CHIV	**Chivirico**	**4.37**	**77**	*eP*	**Pn**	**10 17 09.6**	**+4.1**
HLGC	**Holguin**	**4.94**	**67**	*eP*	**Pn**	**10 17 17.8**	**+4.4**
HLGC				*eS*	**Sn**	**10 18 09.1**	**-1.6**
RCC	**Rio Carpintero**	**5.03**	**78**	*eP*	**Pn**	**10 17 17.6**	**+2.9**
PINC	**Pinares de May**	**5.05**	**73**	*eP*	**Pn**	**10 17 18.0**	**+3.1**

*IDC **07** 10:26:06.8±1.6,18°.51N×121°.81E,h0km,mb3.6/4, mbtmp3.6/4,ML4.5/1,Error ellipse: s-maj=73.5km s-min=19.7km az=70.0*

ISC 07 10:26:09.5±1.6,**18°.5N**±0°.1×**121°.9E**±0°.3,**h19**km,**n5,** σ0ᵍ**50/6,mb3.4/4,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**4.50**	**192**	Pn	**Pn**	**10 27 16.9**	**+0.2**
	26nm,0.3s,baz=215,slow=7.0,SNR=1.6						
TGY				Sn	**Sn**	**10 28 08.4**	**-0.2**
	27nm,0.3s,baz=139,slow=3.9,SNR=3.3						
WRA	**Warramunga Arr**	**40.14**	**162**	P	**P**	**10 33 43.9**	**-0.5**
	0.5nm,0.9s,baz=341,slow=9.1,SNR=4.6						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**42.96**	**320**	P	**P**	**10 34 07.4**	**+0.1**
	1.0nm,0.8s,baz=120,slow=8.5,SNR=7.7						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**43.55**	**164**	P	**P**	**10 34 12.9**	**+0.6**
	0.2nm,0.4s,baz=340,slow=8.3,SNR=9.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**46.92**	**323**	P	**P**	**10 34 38.6**	**-0.2**
	0.7nm,0.5s,baz=122,slow=8.4,SNR=5.3						
	0.7nm,0.5s						

*IDC **07** 10:36:33.6±2.2,9°.37S×110°.30E,h0km,mb3.8/5, mbtmp3.8/5,MS3.3/8,Error ellipse: s-maj=113.9km s-min=23.0km az=49.0*
*DJA **07** 10:36:44.4±0.3,9°.5±5°.5×11°.1E±°,h102km±6km,M4.3/37, mb4.4/4,MLv4.2/37*

ISC 07 10:36:41.3±1.1,**9°.27S**±0°.08×**110°.53E**±0°.06,**h50**km,**n34,** σ1ᵍ**47/29,mb3.5/5,MS3.3/6,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.24**	**31**	P	**Pn**	**10 37 04.9**	**+2.6**
PCJI				S	**Sn**	**10 37 20.5**	**+2.5**
UGM	**Wanagama**	**1.35**	**360**	P	**Pn**	**10 37 06.2**	**+2.5**
UGM				S	**Sn**	**10 37 18.1**	**-2.4**
SNJI	**Sawahan-Nganju**	**1.91**	**40**	P	**Pn**	**10 37 12.3**	**+0.7**
SNJI				S	**Sn**	**10 37 33.6**	**-1.0**
SJI	**Sawahan**	**1.95**	**39**	P	**Pn**	**10 37 12.7**	**+0.6**
NGJI	**Ngawi**	**2.10**	**26**	P	**Pn**	**10 37 14.4**	**+0.4**
SMRI	**Semarang**	**2.21**	**358**	P	**Pn**	**10 37 16.4**	**+0.9**
KPJI	**Karang Pucung**	**2.49**	**320**	P	**Pn**	**10 37 21.0**	**+1.7**
CTJI	**Waduk Cacaban**	**2.61**	**329**	P	**Pn**	**10 37 22.5**	**+1.5**
GMJI	**Gumukmas**	**3.05**	**71**	P	**Pn**	**10 37 27.6**	**+0.6**
BBJI	**Bungbulang**	**3.37**	**302**	P	**Pn**	**10 37 32.8**	**+1.4**
BLJI	**Banyuglugur**	**3.39**	**64**	P	**Pn**	**10 37 32.9**	**+1.2**
JAGI	**Jajag, Banyuwa**	**3.67**	**78**	P	**Pn**	**10 37 37.5**	**+2.0**
LEM	**Lembang**	**3.77**	**310**	Sn	**Sn**	**10 38 18.1**	**-2.1**
	6.6nm,0.3s,baz=308,slow=23,SNR=8.7						
LEM				LR	LR	10 39 12.4	
	comp=Z,156nm,20.6s,baz=174,slow=43						
ABJI	**Asem Bagus**	**3.95**	**69**	P	**Pn**	**10 37 39.2**	**-0.1**
KMMI	**Kalianget**	**4.05**	**57**	P	**Pn**	**10 37 39.0**	**-1.8**
RTBI	**Rangdo, Negare**	**4.43**	**80**	P	**Pn**	**10 37 47.8**	**+1.7**
IGBI	**Denpasar**	**4.58**	**85**	P	**Pn**	**10 37 48.6**	**+0.5**
KHKI	**Kahang-Kahang**	**5.10**	**80**	P	**Pn**	**10 37 56.9**	**+1.7**
TWSI	**Taliwang, Sumb**	**6.30**	**86**	P	**Pn**	**10 38 11.4**	**-0.2**
	0.3nm40nm,1.1s						
PLAI	**Plampang**	**7.17**	**87**	P	**Pn**	**10 38 23.0**	**-0.6**
	57nm,0.8s						
DBNI	**Kabupaten Domp**	**7.73**	**85**	P	**Pn**	**10 38 31.0**	**-0.3**
KAPI	**Kappang**	**10.08**	**66**	LR	LR	10 43 31.5	
	comp=Z,110nm,20.9s,baz=305,slow=40						
DAV	**Davao City (W)**	**22.10**	**43**	LR	LR	10 51 36.7	
	comp=Z,82nm,18.3s,baz=300,slow=40						
WRA	**Warramunga Arr**	**25.33**	**117**	P	**P**	**10 42 03.2**	**-0.4**
	1.1nm,0.8s,baz=290,slow=11,SNR=11						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**26.54**	**125**	P	**P**	**10 42 14.6**	**0.0**
	1.2nm,0.8s,baz=297,slow=8.5,SNR=14						
ASAR				LR	LR	10 52 43.6	
	comp=Z,41nm,20.4s,baz=330,slow=36						
	1.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.83**	**337**	LR	LR	10 55 50.9	
	comp=Z,32nm,18.3s,baz=150,slow=39						
STKA	**Stephens Creek**	**36.54**	**132**	P	**P**	**10 43 42.4**	**+0.1**
	1.3nm,0.5s,baz=328,slow=15,SNR=3.3						
STKA				LR	LR	10 58 33.3	
	comp=Z,70nm,20.8s,baz=23,slow=36						
	1.3nm,0.5s						
H08S2	**Diego Garcia H**	**37.65**	**269**	T	T	11 24 12.7	
	baz=94						
H08S3	**Diego Garcia H**	**37.66**	**270**	T	T	11 24 02.8	
	baz=94						
H08S1	**Diego Carcia H**	**37.66**	**269**	T	T	11 24 06.8	
	baz=94						
JOW	**Kunigami**	**39.80**	**25**	LR	LR	11 00 24.8	
	comp=Z,102nm,21.2s,baz=64,slow=36						
ZALV	**Zalesovo Beam**	**66.63**	**344**	P	**P**	**10 47 26.4**	**0.0**
	0.3nm,0.3s,baz=148,slow=8.4,SNR=2.3						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**70.83**	**336**	P	**P**	**10 47 51.6**	**-1.0**
	0.3nm,0.5s,baz=119,slow=5.1,SNR=2.6						
	0.3nm,0.5s						
BOSA	**Boshof**	**81.50**	**242**	LR	LR	11 16 53.5	
	comp=Z,27nm,21.7s,baz=202,slow=30						

*IDC **07** 10:38:00.4±1.9,21°.27S×178°.47W,h534km±19km, mb4.0/24,mbtmp4.8/26,Error ellipse: s-maj=13.9km s-min=12.0km az=132.0*
*NOU **07** 10:38:00.9,21°.33S×178°.33W,h548km,mb4.7/31,Fiji Islands Region*
*NEIC **07** 10:38:02.3±1.5,21°.2S±0°.1×178°.5W±0°.1,h549km±5km, mb4.5/72,Error ellipse: s-maj=18.1km s-min=15.0km az=147.0*

ISC 07 10:38:00.4±0.3,**21°.31S**±0°.05×**178°.46W**±0°.06,**h536**km, **n504,**σ1ᵍ**13/502,mb4.5/79,26C-27D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.08**	**354**	P	**P**	**10 39 17.8**	**+2.9**
LKBA	**Tubou, Lakemba**	**3.08**	**354**	S	**S**	**10 40 18.6**	**+3.2**
TAVE	**Taveuni**	**4.77**	**343**	P	**P**	**10 39 30.0**	**+2.3**
TAVE	**Taveuni**	**4.77**	**343**	S	**S**	**10 40 42.0**	**+3.3**
MSVF	**Nonsavu**	**4.84**	**317**		**P**	**10 39 30.9**	**+2.6**
MSVF	**Nonsavu**	**4.84**	**317**	P	**P**	**10 39 30.4**	**+2.1**
MSVF	**Nonsavu**	**4.84**	**317**	S	**S**	**10 40 43.6**	**+3.7**
DGTI	**Dogotuki**	**5.26**	**341**	P	**P**	**10 39 33.7**	**+1.8**
RAO	**Raoul Island**	**7.93**	**177**	S	**S**	**10 41 29.3**	**-3.2**
	146nm,0.3s,baz=67,slow=22,SNR=1.5						
GLKZ	**Green Lake**	**7.94**	**177**	P	**P**	**10 39 59.6**	**+2.6**
GLKZ				S	**S**	**10 41 31.4**	**-1.3**
NIUE	**Niue**	**8.32**	**76**	P	**P**	**10 39 58.8**	**-2.2**
NIUE				S	**S**	**10 41 46.2**	**+6.3**
AFI	**Afiamalu**	**9.73**	**42**	P	**P**	**10 40 14.7**	**-1.0**
AFI	**Afiamalu**	**9.73**	**42**	P	**P**	**10 40 14.2**	**-1.4**
AFI	**Afiamalu**	**9.73**	**42**	P	**P**	**10 40 14.4**	**-1.2**
AFI				S	**S**	**10 42 00.3**	**-6.3**
MARNC	**Mare, Loyalty**	**12.58**	**267**	P	**P**	**10 40 46.4**	**+1.4**
ONTNC	**Ouen Toro**	**14.05**	**263**	P	**P**	**10 41 00.7**	**+0.4**
DZM	**Mont Dzumac**	**14.05**	**264**	P	**P**	**10 41 00.8**	**+0.4**
	6.8nm,0.4s,baz=104,slow=16						
DZM	**Mont Dzumac**	**14.05**	**264**		**P**	**10 41 01.5**	**+1.1**
OUZ	**Omahuta**	**15.52**	**205**	P	**P**	**10 41 17.5**	**+2.2**
GRZ	**Great Barrier**	**15.81**	**198**	P	**P**	**10 41 19.5**	**+1.2**
WCZ	**Waipu Caves**	**15.88**	**202**	P	**P**	**10 41 20.5**	**+1.5**
KUZ	**Kuaotunu**	**16.20**	**197**	P	**P**	**10 41 23.5**	**+1.4**
WIAZ	**Waiheke Island**	**16.41**	**198**	P	**P**	**10 41 26.9**	**+2.7**
MBAZ	**Mototapu North**	**16.46**	**199**	P	**P**	**10 41 27.1**	**+2.5**
ETAZ	**East Tamaki Re**	**16.62**	**199**	P	**P**	**10 41 28.7**	**+2.5**
WMGZ	**Waiomatatini S**	**16.68**	**189**	P	**P**	**10 41 27.8**	**+1.2**
MKAZ	**Moumakai**	**16.69**	**198**	P	**P**	**10 41 29.5**	**+2.7**
HAZ	**Te Kaha**	**16.71**	**190**	P	**P**	**10 41 27.7**	**+0.7**
AWAZ	**Awhitu Peninsu**	**16.81**	**199**	P	**P**	**10 41 30.3**	**+2.4**
RUGZ	**Raukumara Rang**	**16.93**	**191**	P	**P**	**10 41 30.2**	**+1.0**
PUZ	**Puketiti**	**16.95**	**189**	P	**P**	**10 41 30.5**	**+1.3**
PUZ				S	**S**	**10 44 16.4**	**-3.2**
TGRZ	**Tauranga**	**16.99**	**194**	P	**P**	**10 41 31.8**	**+2.2**
TWGZ	**Tauwhareparae**	**17.09**	**190**	P	**P**	**10 41 32.0**	**+1.4**
TOZ	**Tahuroa Road**	**17.18**	**196**	P	**P**	**10 41 34.3**	**+3.0**
MWZ	**Matawai**	**17.32**	**191**	P	**P**	**10 41 30.4**	**-2.2**
URZ	**Urewera**	**17.32**	**192**	P	**P**	**10 41 32.0**	**-0.7**
	50nm,0.7s,baz=17,slow=3.7,SNR=26						
URZ				S	**S**	**10 44 20.4**	**-5.3**
	4.7nm,0.7s,baz=9.3,slow=22,SNR=1.3						
URZ	**Urewera**	**17.32**	**192**	P	**P**	**10 41 31.9**	**-0.7**
URZ	**Urewera**	**17.32**	**192**	P	**P**	**10 41 31.9**	**-0.7**

OMRZ	**Omania**	**17.33**	**194**	P		**P**	**10 41 34.9**	**+2.2**
CNGZ	**Carnagh Statio**	**17.36**	**189**	P		**P**	**10 41 33.9**	**+0.9**
HSRZ	**Hossack Road**	**17.55**	**194**	P		**P**	**10 41 34.6**	**-0.1**
RIGZ	**Rimuhau**	**17.64**	**190**	P		**P**	**10 41 36.5**	**+0.9**
PRRZ	**Plateau Road**	**17.70**	**193**	P		**P**	**10 41 36.6**	**+0.5**
TLZ	**Tolley Road**	**17.74**	**196**	P		**P**	**10 41 39.8**	**+3.3**
MTHZ	**Maungataniwha**	**17.95**	**192**	P		**P**	**10 41 39.5**	**+1.1**
RAHZ	**Arahi**	**17.96**	**191**	P		**P**	**10 41 36.5**	**-2.0**
HIZ	**Hauiti**	**18.09**	**197**	P		**P**	**10 41 42.3**	**+2.7**
NMHZ	**Naumai**	**18.19**	**192**	P		**P**	**10 41 39.8**	**-0.9**
BKZ	**Black Stump Fm**	**18.32**	**193**	P		**P**	**10 41 41.0**	**-0.9**
NTVZ	**North Tongarir**	**18.43**	**195**	P		**P**	**10 41 44.2**	**+1.3**
NGZ	**Ngauruhoe**	**18.52**	**195**	P		**P**	**10 41 44.4**	**+0.6**
VRZ	**Vera Road**	**18.69**	**197**	P		**P**	**10 41 46.5**	**+1.4**
PXZ	**Pawanui**	**19.09**	**191**	P		**P**	**10 41 48.7**	**0.0**
QRZ	**Quartz Range**	**20.91**	**199**	P		**P**	**10 42 05.8**	**+0.5**
KHZ	**Kahutara**	**22.09**	**196**	P		**P**	**10 42 15.8**	**-0.1**
WHZ	**Wether Hill Ro**	**26.93**	**201**	P		**P**	**10 43 00.9**	**+2.2**
EIDS	**Eidsvold**	**28.22**	**256**	P		**P**	**10 43 10.9**	**+0.5**
EIDS				IAmb	IAmb		10 43 11.5	
	comp=Z,6.7nm,0.6s							
ARMA	**Armidale**	**28.33**	**245**	P		**P**	**10 43 12.7**	**+1.3**
ARMA				IAmb	IAmb		10 43 13.7	
	comp=Z,12nm,0.9s							
CTA	**Charters Tower**	**32.99**	**266**	P		**P**	**10 43 51.5**	**+0.1**
	comp=Z,9.9nm,0.5s,baz=88,slow=10.0,SNR=50							
CTA				PcP		**PcP**	**10 46 19.6**	**0.0**
	comp=Z,3.6nm,0.8s,baz=72,slow=3.5,SNR=4.1							
	comp=Z,9.9nm,0.5s							
CTA	**Charters Tower**	**32.99**	**266**	P		**P**	**10 43 51.5**	**+0.1**
CTAO	**Charters Tower**	**32.99**	**266**			**P**	**10 43 51.9**	**+0.4**
CTAO				IAmb	IAmb		10 43 52.5	
	comp=Z,18nm,1.1s							
CTAO	**Charters Tower**	**32.99**	**266**	P		**P**	**10 43 51.5**	**+0.1**
CMSA	**Cobar Meteorol**	**33.55**	**245**	P		**P**	**10 43 56.8**	**+0.8**
QLP	**Quilpie**	**34.41**	**254**	P		**P**	**10 44 03.5**	**+0.2**
PMG	**Port Moresby**	**35.11**	**284**	P		**P**	**10 44 08.8**	**-0.5**
	comp=Z,57nm,0.8s,baz=101,slow=5.7,SNR=19							
	comp=Z,57nm,0.8s							
PMG	**Port Moresby**	**35.11**	**284**			**P**	**10 44 09.2**	**-0.1**
PMG	**Port Moresby**	**35.11**	**284**	P		**P**	**10 44 09.3**	**0.0**
PMG	**Port Moresby**	**35.11**	**284**	P		**P**	**10 44 09.2**	**-0.1**
PMG	**Port Moresby**	**35.11**	**284**	P		**P**	**10 44 09.3**	**0.0**
	comp=Z,699nmcomp=Z,83nm,0.9s							
MTSU	**Mount Surprise**	**35.13**	**269**	P		**P**	**10 44 09.5**	**+0.1**
STKA	**Stephens Creek**	**37.05**	**245**	P		**P**	**10 44 25.9**	**+0.8**
	comp=Z,7.5nm,0.8s,baz=99,slow=9.2,SNR=8.4							
	comp=Z,7.5nm,0.8s							
STKA	**Stephens Creek**	**37.05**	**245**	P		**P**	**10 44 26.0**	**+0.9**
COEN	**Coen**	**37.21**	**275**			**P**	**10 44 27.3**	**+0.6**
COEN	**Coen**	**37.21**	**275**	P		**P**	**10 44 27.2**	**+0.6**
INKA	**Innaminka**	**37.53**	**252**			**P**	**10 44 30.4**	**+1.3**
BBOO	**Buckleboo**	**41.80**	**244**	P		**P**	**10 45 03.5**	**+0.1**
BBOO				IAmb	IAmb		10 45 03.8	
	comp=Z,15nm,0.8s							
JAY	**Jayapura**	**43.90**	**290**	P		**P**	**10 45 19.9**	**-0.1**
	comp=Z,75nm,0.6s,baz=143,slow=3.7,SNR=18							
	comp=Z,75nm,0.6s							
JAY	**Jayapura**	**43.90**	**290**	P		**P**	**10 45 20.1**	**+0.1**
	comp=Z,97nm,0.7s							
WR8	**Warramunga Arr**	**43.91**	**263**	P		**P**	**10 45 19.6**	**-0.5**
WR8				IAmb	IAmb		10 45 22.0	
	comp=Z,8.6nm,0.7s							
AS31	**Alice Springs**	**43.92**	**258**			**P**	**10 45 20.2**	**+0.1**
AS31				IAmb	IAmb		10 45 20.6	
	comp=Z,7.1nm,0.7s							
ASAR	**Alice Springs**	**43.92**	**258**	P		**P**	**10 45 19.9**	**-0.2**
	comp=Z,30nm,0.8s,baz=98,slow=7.8,SNR=301							
ASAR				PcP		**PcP**	**10 46 54.2**	**-0.1**
	comp=Z,5.2nm,0.6s,baz=108,slow=3.5,SNR=15							
ASAR				ScP		**ScP**	**10 49 56.3**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=94,slow=4.1,SNR=5.0							
ASAR				S		**S**	**10 51 06.9**	**-6.0**
	comp=Z,2.8nm,0.9s,baz=94,slow=15,SNR=13

BELA Belgrano 2 78.82 173 P P 10 49 08.5 +1.2
USRK Ussuriysk Ar. 79.39 326 P P 10 49 11.7 +0.9
comp=Z,12nm,0.8s,baz=125,slow=2.9,SNR=20
comp=Z,12nm,0.8s
NJ2 Nanjing 80.06 310 ⇓P P 10 49 15.7 +1.1
NJ2 pmax pmax
comp=Z,12nm,0.7s
R16K Pilot Point 80.49 11 P P 10 49 15.5 -0.7
baz=200
R17L Mt. Peulik Vol 80.78 12 P P 10 49 17.3 -0.5
baz=201
CLC China Lake 80.88 46 P P 10 49 19.6 +0.7
M02C Callahan 80.89 39 P P 10 49 20.4 +1.6
M02C IAmb IAmb 10 49 21.6
comp=Z,13nm,0.8s
MDJ Mudanjiang 80.93 325 P P 10 49 18.9 +0.1
MDJ Mudanjiang 80.93 325 P P 10 49 19.7 +0.9
MDJ pmax pmax
comp=Z,12nm,0.9s
OHAK Old Harbor 81.03 14 P P 10 49 18.9 -0.1
baz=204
Q17K Contact Creek 81.46 12 P P 10 49 20.9 -0.5
baz=201
O14K Tigyukauivet M 81.50 9 P P 10 49 20.7 -0.7
baz=196
O15K Ungalikthiuk R 81.64 10 P P 10 49 21.4 -0.8
baz=198
Q16K King Salmon 81.71 11 P P 10 49 21.4 -1.1
baz=201
P16K Nushagak River 81.80 11 P P 10 49 22.9 -0.1
baz=199
NVAR Mina Array Bea 81.91 43 P P 10 49 25.2 +0.9
comp=Z,5.3nm,0.7s,baz=223,slow=8.3,SNR=33
comp=Z,5.3nm,0.7s
NVAR Mina Array Bea 81.91 43 P P 10 49 25.4 +1.2
M11K Mekoryuk 82.01 6 P P 10 49 24.2 +0.3
baz=192
N14K Kuskokwak Cree 82.09 8 P P 10 49 24.5 +0.2
baz=196
P17K Kvichak River 82.23 11 P P 10 49 25.2 +0.1
baz=201,SNR=5.4
O16K Kokwok River B 82.32 10 P P 10 49 25.0 -0.5
baz=199
M13K Dall Lake 82.35 8 P P 10 49 25.8 +0.2
baz=194
N15K Kwethluk River 82.55 9 P P 10 49 26.9 +0.1
baz=197,SNR=5.1
WHN Wuhan 82.57 307 P P 10 49 27.8 +0.3
P18K Big Mountain, 82.64 12 P P 10 49 27.0 -0.3
baz=202
O17K Koliganek Bris 82.66 11 P P 10 49 26.5 -0.8
baz=200
IPM Ipoh 82.81 278 P P 10 49 29.6 +0.4
IPM Ipoh 82.81 278 P P 10 49 29.5 +0.4
comp=Z,42nm,0.8s
BNX BinXian 82.83 325 ⇑P P 10 49 28.5 0.0
BNX pmax pmax
comp=Z,21nm,0.8s
M14K Bethel 82.85 8 P P 10 49 28.2 0.0
baz=196
M15K Kasigluk River 82.97 9 P P 10 49 28.5 -0.3
baz=197
N16K Nishlik Lake 83.05 10 P P 10 49 29.0 -0.3
baz=199
O18K Koktuh Hills 83.08 12 P P 10 49 28.7 -0.7
baz=202,SNR=7.1
P19K Oil Pt 83.27 13 P P 10 49 30.3 -0.1
baz=204
L14K Kuka Creek 83.33 8 P P 10 49 30.6 0.0
baz=195
TIA Tai'an 83.50 313 P P 10 49 32.2 +0.1
TIA pmax pmax
comp=Z,10.0nm,0.5s
M16K Timber Creek 83.54 9 P P 10 49 31.3 -0.4
baz=198
O19K Port Alsworth 83.56 12 P P 10 49 31.2 -0.5
baz=203,SNR=7.0
K13K Kusilvak Mount 83.68 7 P P 10 49 32.2 -0.1
baz=193
L15K Ungalak Mounta 83.81 8 P P 10 49 32.8 -0.1
baz=196
BRSE Bradley Lake S 83.88 14 P P 10 49 33.0 -0.4
baz=206
RPSI Rantau Prapat 84.09 275 P P 10 49 35.5 0.0
RPSI IAmb IAmb 10 49 35.9
comp=Z,18nm,0.9s
N19K Bonanza Creek 84.10 12 P P 10 49 34.0 -0.6
N19K Bonanza Creek 84.10 12 P P 10 49 33.9 -0.6
baz=202
L16K Owhat River 84.12 9 P P 10 49 34.2 -0.2
baz=198
PSI Prapat 84.13 275 P P 10 49 35.2 -0.7
PSI Prapat 84.13 275 P P 10 49 35.6 -0.3
M17K Holitna River 84.14 10 P P 10 49 34.6 -0.1
baz=200
K15K Wolf Creek Mou 84.40 8 P P 10 49 35.7 -0.2
baz=196
MA2 Magadan 84.44 345 P P 10 49 34.7 -1.5
comp=Z,9.3nm,1.2s
M18K Stony River 84.49 11 P P 10 49 36.0 -0.4
baz=201
SEW Seward 84.50 14 P P 10 49 36.7 +0.3
baz=207
L17K Donlin 84.70 9 P P 10 49 37.4 +0.1
baz=199
GAMB Gambell 84.96 3 P P 10 49 38.4 -0.1
baz=186
K17K Iditarod 85.25 9 P P 10 49 39.9 -0.1
baz=199
L19K White Mountain 85.31 11 P P 10 49 40.1 -0.3
baz=202
RC01 Rabbit Creek A 85.32 14 P P 10 49 40.0 -0.3
baz=207
SUA Susitna One 85.44 13 P P 10 49 40.2 -0.9
baz=206
J16K Anvik River 85.47 8 P P 10 49 40.6 -0.4
baz=197
SKT Skwentna 85.75 12 P P 10 49 42.0 -0.5
baz=205
HEH HeiHe 85.77 329 *e*P P 10 49 42.4 -0.4
HEH pmax pmax
comp=Z,18nm,0.6s
HNS HongShan 85.77 313 ⇓P P 10 49 43.6 +0.5
HNS pmax pmax
comp=Z,14nm,1.0s
J17K VABM Dome 85.79 9 P P 10 49 41.9 -0.7
baz=198
ELIB Princess Elisa 85.80 187 *d*P P 10 49 43.5 +0.6
comp=Z,6.9nm,0.8s
M22K Willow 85.83 13 P P 10 49 42.4 -0.4
baz=206,SNR=5.0
HAWA Hanford 85.85 36 IAmb IAmb 10 49 45.4
comp=Z,10nm,0.9s
KNK Knik Glacier 85.89 14 P P 10 49 42.8 -0.4
baz=208
PMR Palmer 85.90 14 P P 10 49 42.8 -0.3
baz=207
LYN LuoYang 85.93 309 P P 10 49 44.8 +0.9
LYN pmax pmax
comp=Z,33nm,0.8s
I17K Unalakleet 86.04 8 P P 10 49 42.9 -0.9
baz=197
V35K Ketchikan 86.10 25 P P 10 49 43.6 -0.7
baz=223
U33K Whale Pass 86.11 24 P P 10 49 44.0 -0.2
baz=222
ENH Enshi 86.13 304 P P 10 49 45.1 0.0
BJI2 Beijing 86.15 316 P P 10 49 45.1 +0.2
BJI2 pmax pmax
comp=Z,3.0nm,0.7s
ANM Nome 86.19 6 P P 10 49 44.7 +0.2
baz=192
J18K Innoko River 86.20 10 P P 10 49 44.4 -0.1
baz=200
CUT Chulitna 86.39 13 P P 10 49 44.9 -0.5
baz=206
M23K Glacier View 86.39 14 P P 10 49 45.1 -0.4
baz=209
BMRM Bremner River 86.42 16 P P 10 49 44.7 -1.0
baz=212
MESA MESA 86.46 17 P P 10 49 45.6 -0.5
baz=214
SCM Sheep Creek Mo 86.52 14 P P 10 49 46.0 -0.1
baz=209
K20K Telida 86.53 11 P P 10 49 45.8 -0.4
baz=203
KLU Klutina 86.55 15 P P 10 49 46.0 -0.4
baz=210
H16K Elim 86.58 7 P P 10 49 46.0 -0.3
baz=195
WRAK Wrangell Islan 86.62 24 P P 10 49 46.1 -0.5
baz=222
GYA Guiyang 86.67 300 ⇑P P 10 49 48.5 +0.7
GYA pmax pmax
comp=Z,8.0nm,0.8s
G15K Niukluk 86.74 6 P P 10 49 46.8 -0.2
baz=194
J19K Poorman 86.87 10 P P 10 49 47.3 -0.4
baz=201
TNA Tin City 86.97 4 P P 10 49 48.0 -0.1
baz=190
N25K Chitina, Valde 86.97 15 P P 10 49 47.3 -1.1
baz=211
F14K Arctic Creek 87.00 5 P P 10 49 47.7 -0.6
baz=191
M24K Tolsona, Glenn 87.02 15 P P 10 49 48.0 -0.6
baz=210
WAT6 Susitna Watana 87.08 14 P P 10 49 48.1 -0.8
baz=209,SNR=6.0
WAT1 Susitna Watana 87.13 13 P P 10 49 47.9 -1.1
baz=208
H17K Granite Mounta 87.15 8 P P 10 49 48.2 -0.8
baz=197
MCARA McCarthy VSAT 87.18 16 P P 10 49 48.6 -0.6
baz=213
J20K Nowinta River 87.28 10 P P 10 49 49.3 -0.4
baz=203
CTG Chitna Glacier 87.28 17 P P 10 49 49.3 -0.6
baz=214
G16K Koyuk River 87.30 7 P P 10 49 49.6 -0.1
baz=195
TRF Thorofare Moun 87.32 12 P P 10 49 49.2 -0.8
baz=206,SNR=12
CHUM Lake Minchumin 87.33 11 P P 10 49 48.7 -1.1
baz=204
F15K North Star Dit 87.38 6 P P 10 49 49.2 -0.8
baz=193
GCSA Galena City Sc 87.38 9 P P 10 49 49.4 -0.7
baz=200
O28M Mount Upton 87.45 18 P P 10 49 50.1 -0.8
baz=215
HARP HAARP 87.52 15 P P 10 49 50.3 -0.5
baz=211
O29M Mount Kennedy 87.53 19 P P 10 49 50.6 -0.5
baz=217
DHY Denali Highway 87.60 14 P P 10 49 50.7 -0.6
baz=209
G17K Kiwalik Mounta 87.60 7 P P 10 49 50.8 -0.3
baz=197
BPAW Bear Paw Mtn. 87.78 12 P P 10 49 51.0 -1.0
baz=206
I20K Naaghedeneel 87.80 10 P P 10 49 51.6 -0.4
baz=202
T35M Bob Quinn 87.83 24 P P 10 49 52.0 -0.4
baz=224
MCK McKinley 87.85 13 P P 10 49 51.6 -0.8
baz=208,SNR=9.1
TXAR Lajitas Array 87.85 57 P P 10 49 54.6 +1.4
comp=Z,4.4nm,0.9s,baz=219,slow=6.0,SNR=40
comp=Z,4.4nm,0.9s
TXAR Lajitas Array 87.85 57 P 10 49 55.1 +1.8
P30M Million Dollar 87.88 19 P P 10 49 52.7 0.0
baz=218
SKAG Skagway 87.88 20 P P 10 49 52.7 +0.2
baz=220
PAX Paxson 87.94 14 P P 10 49 52.4 -0.4
baz=211
YUK8 Steele Glacier 87.99 18 P P 10 49 52.9 -0.4
baz=216,SNR=5.7
PV19 Morning Glory 88.04 47 IAmb IAmb 10 49 55.1
comp=Z,10nm,1.2s
M26K Nabesna, AK 88.05 16 IAmb IAmb 10 49 54.4
comp=Z,8.1nm,1.0s
M26K Nabesna, AK 88.05 16 P P 10 49 53.4 +0.1
baz=213
YUK6 Outpost Mounta 88.11 18 P P 10 49 53.9 +0.1
baz=217
S34M Telegraph Cree 88.17 23 IAmb IAmb 10 49 55.5
comp=Z,9.6nm,0.9s
S34M Telegraph Cree 88.17 23 P P 10 49 54.5 +0.5
baz=223,SNR=5.2
YUK3 Moose Creek 88.19 17 P P 10 49 54.4 +0.2
baz=215,SNR=12
G18K Tagagawik 88.23 8 P P 10 49 53.7 -0.3
baz=198
XLT XiLinHaoTe 88.26 319 *e*P P 10 49 54.8 0.0
XLT pP pwP 10 51 55.1 -0.2
XLT pmax pmax
comp=Z,9.0nm,0.5s
HYT Haines Junctio 88.27 19 P P 10 49 54.5 0.0
baz=218
XAN Xi'an 88.28 308 ⇓P P 10 49 55.6 +0.5
XAN pmax pmax
comp=Z,30nm,0.8s
M27K Edge Creek, AK 88.30 16 P P 10 49 54.8 +0.2
baz=214,SNR=8.1
ALPN Alpine 88.33 57 IAmb IAmb 10 49 57.6
comp=Z,7.6nm,0.8s
YUK4 Talbot Arm 88.35 18 P P 10 49 55.1 +0.1
baz=217
H20K Anotleneega Mo 88.39 10 P P 10 49 54.7 -0.1
baz=202
F17K Baldwin Pennin 88.44 7 IAmb IAmb 10 49 55.6
comp=Z,6.1nm,0.9s
F17K Baldwin Pennin 88.44 7 P P 10 49 54.8 -0.1
baz=196
L26K Log Cabin Wild 88.49 15 P P 10 49 55.5 +0.1
baz=212
P32M Atlin 88.52 21 P P 10 49 55.5 -0.1
baz=221
Q32M Nakina River 88.54 22 P P 10 49 56.2 +0.3
baz=222
I21K Tanana 88.58 11 IAmb IAmb 10 49 56.0
comp=Z,11nm,0.9s
I21K Tanana 88.58 11 P P 10 49 55.5 -0.1
baz=205
NEA2 Nenana 88.59 12 IAmb IAmb 10 49 55.2
comp=Z,5.4nm,0.9s
NEA2 Nenana 88.59 12 P P 10 49 55.6 -0.2
baz=207
BVCY Beaver Creek 88.61 17 P P 10 49 55.9 0.0
baz=215,SNR=6.2
O30N Mendenhall 88.66 19 P P 10 49 56.3 0.0
baz=219
G19K Purcell Mounta 88.67 9 P P 10 49 56.3 +0.2
baz=200
RIDG Independent Ri 88.75 14 P P 10 49 56.4 -0.2
baz=211
F18K Selawik 88.78 7 P P 10 49 56.2 -0.3
baz=198
HDA Harding Lake 88.86 13 P P 10 49 56.5 -0.5
baz=209
H21K Melozitna Rive 88.87 10 P P 10 49 56.6 -0.4
baz=204
L27K Beaver Creek, 88.90 16 P P 10 49 57.0 -0.3
baz=214
WHY Whitehorse 88.95 20 P P 10 49 57.5 -0.2
baz=220
DLBC Dease Lake 88.96 23 P P 10 49 57.9 +0.2
baz=224
I23K Minto, Yukon-K 89.03 12 P P 10 49 57.0 -0.7
baz=207
COLA College 89.08 13 P P 10 49 57.6 -0.4
COLA College 89.08 13 P P 10 49 57.1 -0.9
COLA College 89.08 13 P P 10 49 57.4 -0.6
baz=208
SCRK Sand Creek 89.15 14 IAmb IAmb 10 49 59.1
comp=Z,7.7nm,1.1s
SCRK Sand Creek 89.15 14 P P 10 49 58.2 -0.3
baz=212
IL31 89.19 13 IAmb IAmb 10 49 57.9
comp=Z,4.1nm,0.7s
IL31 P P 10 49 57.9 -0.6
ILAR Eielson Array 89.19 13 P P 10 49 57.4 -1.1
comp=Z,3.3nm,0.7s,baz=217,slow=5.2,SNR=55
comp=Z,3.3nm,0.7s
ILAR Eielson Array 89.19 13 P 10 49 57.0 -1.5
F19K Shaleruckik Mo 89.23 8 P 10 49 58.6 0.0
F19K IAmb IAmb 10 49 59.0
comp=Z,6.1nm,0.8s
F19K Shaleruckik Mo 89.23 8 P P 10 49 58.4 -0.3
baz=199
HILR Hailar Array B 89.26 325 P P 10 49 58.8 -0.4
comp=Z,5.8nm,0.6s,baz=123,slow=5.5,SNR=9.9
comp=Z,5.8nm,0.6s
P33M Teslin, Yukon 89.28 21 P P 10 49 59.0 -0.1
baz=222
M29M Somme Creek 89.29 17 IAmb IAmb 10 50 00.3
comp=Z,8.0nm,0.7s
M29M Somme Creek 89.29 17 P P 10 49 58.9 -0.3
baz=217
N31M Braeburn, Yuko 89.31 19 P P 10 49 59.2 0.0
baz=219
R33M Jennings River 89.31 22 P P 10 49 59.2 -0.2
baz=224
KMI2 Kunming 89.33 297 P P 10 50 01.9 +1.5
KMI2 pmax pmax
comp=Z,13nm,0.8s
J25K Salcha River, 89.38 14 IAmb IAmb 10 49 59.8
comp=Z,4.1nm,0.7s
J25K Salcha River, 89.38 14 P P 10 49 58.8 -0.7
baz=211
POKR Poker Plat Res 89.38 13 P P 10 49 58.5 -0.9
baz=209
E18K Tukpahlearik C 89.45 7 IAmb IAmb 10 50 00.3
comp=Z,5.1nm,0.8s
E18K Tukpahlearik C 89.45 7 P P 10 49 59.3 -0.4
baz=197
D17K Noatak River 89.47 6 P P 10 49 59.6 -0.2
baz=194
G21K Allakaket 89.55 10 IAmb IAmb 10 50 00.8
comp=Z,7.5nm,0.8s
G21K Allakaket 89.55 10 P P 10 50 00.1 -0.1
baz=203
LOHW Long Hollow 89.60 42 IAmb IAmb 10 50 02.8
comp=Z,4.3nm,0.7s
H23K Yukon River 89.60 11 P P 10 50 00.6 +0.1
baz=207
HHC Hu-ho-hao-te 89.61 315 *e*P P 10 50 03.9 +2.7
HHC pmax pmax
comp=Z,5.0nm,0.7s
J26L Joseph Creek 89.69 14 P P 10 50 01.0 0.0
baz=212
F20K Avaraart Lake 89.72 9 IAmb IAmb 10 50 01.6
comp=Z,6.0nm,0.9s
F20K Avaraart Lake 89.72 9 P P 10 50 00.7 -0.1
baz=201
RDOG Red Dog Mine 89.83 6 P P 10 50 02.0 +0.6
baz=195
C16K Lisburne Hills 89.84 5 P P 10 50 01.3 -0.1
baz=192
PDAR Pinedale Array 89.84 43 P P 10 50 02.7 +0.3
comp=Z,4.6nm,0.7s,baz=212,slow=2.8,SNR=49
comp=Z,4.6nm,0.7s
PDAR Pinedale Array 89.84 43 P P 10 50 03.1 +0.8
M30M Minto, Yukon 89.87 18 P 10 50 02.0 +0.2
M30M IAmb IAmb 10 50 03.3
comp=Z,6.5nm,0.8s
M30M Minto, Yukon 89.87 18 P P 10 50 01.9 +0.2
baz=218,SNR=6.8
E19K Redstone River 89.89 8 P 10 50 01.9 +0.2
E19K Redstone River 89.89 8 P P 10 50 01.9 +0.2
baz=200
L29M L29M 89.92 17 P P 10 50 02.8 +0.8
L29M L29M 89.92 17 P P 10 50 02.5 +0.5
baz=217
CMAR Chiang Mai Arr 89.98 290 P P 10 50 04.5 +1.3
comp=Z,9.2nm,0.9s,baz=129,slow=3.1,SNR=58
comp=Z,9.2nm,0.9s
CHTO Chiang Mai 90.11 290 P P 10 50 05.2 +1.3
CHTO Chiang Mai 90.11 290 P P 10 50 04.8 +0.9
PRP Porcupine Dome 90.13 13 P P 10 50 03.2 +0.2
baz=211
F21K Alatna River 90.21 9 P P 10 50 02.9 -0.4
baz=203
M31M Drury Creek, Y 90.29 19 P P 10 50 03.9 +0.2
baz=220
DAWY Dawson 90.35 16 IAmb IAmb 10 50 04.9
comp=Z,7.0nm,1.0s
DAWY Dawson 90.35 16 P P 10 50 03.6 -0.4
baz=216,SNR=5.8
C18K Utukok River 90.58 6 P P 10 50 04.3 -0.6
baz=196
WTLY Watson Lake, Y 90.60 22 P P 10 50 05.1 -0.1
baz=225
K29M Barlow Dome 90.67 17 P P 10 50 05.4 -0.2
baz=218
PZH PanZhiHua 90.70 298 P P 10 50 07.8 +1.2
COLD Coldfoot 90.75 11 P P 10 50 05.8 +0.1
baz=206
MAYO Mayo, Yukon 90.92 18 P P 10 50 07.0 +0.4
baz=219
J29N Klondike Camp 90.97 16 P P 10 50 06.7 -0.1
baz=217
TOAD Toad River Com 91.06 25 P P 10 50 07.4 +0.1
baz=228,SNR=6.0
I27K Kandik River 91.07 14 P P 10 50 07.2 -0.1
baz=214
D20K Etivluk River 91.16 8 P P 10 50 07.9 +0.3
baz=200
I28M Miner Creek 91.34 15 IAmb IAmb 10 50 08.9
comp=Z,4.0nm,0.8s
I28M Miner Creek 91.34 15 P P 10 50 08.0 -0.6
baz=216
J30M Hart River 91.57 17 P P 10 50 09.0 -0.7
baz=219
E23K Chandalar 91.59 10 P P 10 50 09.3 -0.4
baz=207
H27K Steamboat Moun 91.61 14 P P 10 50 09.2 -0.6
baz=214
I29M Ogilvie Camp, 91.67 16 P P 10 50 09.7 -0.3
baz=217
G26K Porcupine Rive 91.72 13 P P 10 50 10.2 0.0
baz=212
E24K Your Creek 91.80 11 P P 10 50 09.7 -0.9
baz=208
F25K Christian Rive 91.90 12 P P 10 50 10.5 -0.6
baz=210
I30M Mount Dempster 92.06 16 P P 10 50 11.3 -0.7
baz=219
D23K Nanushuk River 92.24 10 P P 10 50 11.9 -0.6
baz=206
F26K Sheenjek River 92.29 12 P P 10 50 12.3 -0.6
baz=212
E25K Arctic Village 92.38 12 P P 10 50 13.1 -0.1
baz=211
EPYK Eagle Plains 92.87 16 P P 10 50 15.3 -0.3
baz=218
LZH Lanzhou 92.91 308 *e*P P 10 50 17.6 +1.0
LZH pmax pmax
comp=Z,19nm,1.3s
LZDM Lanzhou Array 92.97 307 P P 10 50 16.6 -0.5
comp=Z,1.4nm,0.5s,baz=104,slow=4.9,SNR=6.6
comp=Z,1.4nm,0.5s
G29M Pine Creek 92.98 15 P P 10 50 15.7 -0.3
baz=217
F28M Old Crow 93.12 14 P P 10 50 16.5 -0.1
baz=216
D25K Kavik River 93.27 11 P P 10 50 17.1 -0.3
baz=210
G31M Satah River 93.92 16 P P 10 50 19.9 -0.3
baz=221
E28M Babbage River 94.01 13 P P 10 50 20.0 -0.6
baz=216
C27K Jago River 94.02 12 P P 10 50 20.4 -0.2
baz=212
F30M Barrier River 94.07 15 P P 10 50 20.9 0.0
baz=219
E29M Blow River 94.19 14 P P 10 50 21.6 +0.1
baz=218
D27M Malcolm River 94.23 13 P P 10 50 21.6 -0.1
baz=215
F31M Tsiigehtchic 94.45 16 P P 10 50 22.7 +0.1
baz=221
D28M Stokes Point 94.76 13 P P 10 50 23.5 -0.4
baz=217
INK Inuvik 95.16 15 P P 10 50 25.8 0.0
baz=222
SONM Songino Array 96.08 319 P P 10 50 30.0 -0.6
comp=Z,0.3nm,0.5s,baz=110,slow=3.7,SNR=3.8
comp=Z,0.3nm,0.5s
SONM Songino Array 96.08 319 P P 10 50 30.5 -0.1
YKA Yellowknife Ar 97.42 25 P Pdif 10 50 35.5 -0.6
comp=Z,0.4nm,0.9s,baz=253,slow=4.8,SNR=7.3
comp=Z,0.4nm,0.9s
A36M Sachs Harbour 99.76 15 P Pdif 10 50 46.1 -0.2
baz=229
WMQ Urumqi 107.13 311 Pdif Pdif 10 51 16.3 -3.5
WMQ LR LR
comp=Z,160nm,23.9s
ZALV Zalesovo Beam 110.84 321 PKiKP PKiKP 10 55 30.8 -1.5
comp=Z,2.0nm,0.7s,baz=139,slow=1.4,SNR=11
ZALV Zalesovo Beam 110.84 321 PKiKP 10 55 31.0 -1.3

MKAR	**Makanchi Array**	**111.43**	**313**	PKiKP	**PKiKP**	**10 55 32.3**	**-1.4**		
	comp=Z,1.2nm,0.6s,baz=66,slow=1.8,SNR=16								
MKAR				PKKPbc	**PKKPbc**	**11 06 30.2**	**-0.9**		
	comp=Z,0.1nm,0.5s,baz=289,slow=4.4,SNR=3.8								
KURBB	**Kurchatov Arra**	**114.34**	**317**	PKP	PKPdf	10 55 37.5	-1.6		
	comp=Z,0.5nm,0.3s,baz=88,slow=2.0,SNR=12								
KKAR	**Karatay Array**	**119.41**	**308**		**PKPdf**	**10 55 48.0**	**-1.1**		
BVAR	**Borovoye Array**	**119.41**	**320**	PKP	**PKPdf**	**10 55 47.8**	**-1.0**		
	comp=Z,4.4nm,0.4s,baz=120,slow=0.4,SNR=25								
BORK	**Borovoye**	**119.45**	**320**		**PKPdf**	**10 55 48.1**	**-0.8**		
KBL	**Kabul**	**119.89**	**298**		**PKPdf**	**10 55 50.3**	**-0.2**		
SPITS	**Spitsbergen Ar**	**122.64**	**356**	PKP	**PKPdf**	**10 55 53.6**	**-0.7**		
	comp=Z,9.9nm,0.7s,baz=64,slow=3.8,SNR=14								
ARTI	**Arti**	**125.72**	**325**		**PKPdf**	**10 56 00.8**	**+0.1**		
AB31	**Akbulak array**	**126.37**	**316**		**PKPdf**	**10 56 01.8**	**-0.5**		
ABKAR	**Akbulak array**	**126.37**	**316**		**PKPdf**	**10 56 01.6**	**-0.6**		
ARCES	**ARCESS Array B**	**129.63**	**349**	PKP	**PKPdf**	**10 56 07.0**	**-0.8**		
	comp=Z,4.4nm,0.6s,baz=20,slow=1.3,SNR=17								
ARCES	**ARCESS Array B**	**129.63**	**349**		**PKPdf**	**10 56 07.6**	**-0.3**		
FINES	**FINESS Array B**	**136.42**	**343**	PKP	**PKPdf**	**10 56 18.3**	**-2.5**		
	comp=Z,4.2nm,0.7s,baz=98,slow=2.8,SNR=4.9								
NB2	**NORSAR Subarra**	**139.72**	**353**	PKP	PKPpre	10 56 18.5			
	comp=Z,1.6nm,0.5s,baz=12,slow=3.2								
NOA	**NORSAR Array B**	**139.72**	**353**	PKhKP	PKPpre	10 56 18.6			
	comp=Z,0.8nm,0.5s,baz=50,slow=1.7,SNR=9.7								
NOA				PKP	**PKPdf**	**10 56 26.4**	**-0.5**		
	comp=Z,2.3nm,0.7s,baz=14,slow=4.1,SNR=5.7								
HFS	**Hagfors**	**140.26**	**351**	PKhKP	PKPpre	10 56 21.2			
	comp=Z,5.8nm,0.4s,baz=64,slow=3.4,SNR=38								
AK03	**Malin Array Si**	**143.48**	**330**	PKP	PKPab	10 56 30.9	-1.4		
AKASG	**Malin Array Be**	**143.50**	**330**	PKP	PKPab	10 56 31.1	-1.3		
	comp=Z,27nm,0.5s,baz=44,slow=4.2,SNR=162								
AKASG	**Malin Array Be**	**143.50**	**330**		PKPab	10 56 31.6	-0.8		
AKBB	**Malin Array Si**	**143.50**	**330**	PKP	PKPab	10 56 30.9	-1.5		
AK23	**Malin Array Si**	**143.50**	**330**	PKP	PKPab	10 56 31.0	-1.4		
AK01	**Malin Array Si**	**143.51**	**330**	PKP	PKPab	10 56 31.1	-1.3		
AK04	**Malin Array Si**	**143.51**	**330**	PKP	PKPab	10 56 31.0	-1.4		
KIEV	**Kiev**	**143.51**	**330**		PKPab	10 56 31.8	-0.7		
KIEV	**Kiev**	**143.51**	**330**	⇓P	PKPab	10 56 31.3	-1.1		
KIEV	**Kiev**	**143.51**	**330**	PKP	PKPab	10 56 31.2	-1.2		
AK22	**Malin Array Si**	**143.53**	**330**	PKP	PKPab	10 56 31.2	-1.3		
AK09	**Malin Array Si**	**143.53**	**330**	PKP	PKPab	10 56 30.9	-1.6		
AK08	**Malin Array Si**	**143.53**	**330**	PKP	PKPab	10 56 31.2	-1.3		
AK21	**Malin Array Si**	**143.53**	**330**	PKP	PKPab	10 56 31.0	-1.5		
AK02	**Malin Array Si**	**143.54**	**330**	PKP	PKPab	10 56 31.1	-1.4		
AK11	**Malin Array Si**	**143.54**	**330**	PKP	PKPab	10 56 31.1	-1.4		
MCD	**Coleburn Disti**	**143.60**	**4**	*e*P	PKPab	10 56 30.7	-1.8		
MI28	**Mi28,Pidlybu**	**144.04**	**332**	PKP	PKPbc	10 56 32.3	-2.0		
RNPP9	**Sopachiv**	**144.45**	**334**	PKP	PKPbc	10 56 34.4	-1.1		
RNPP8	**Varash**	**144.53**	**334**	PKP	**PKPdf**	**10 56 34.9**	**-0.8**		
RNPP5	**Staryi Chortor**	**144.59**	**333**	PKP	**PKPdf**	**10 56 34.8**	**-1.0**		
INVG	**Invergeldie, C**	**144.68**	**5**	*e*P	**PKPdf**	**10 56 34.8**	**-0.9**		
LAWE	**Loch Awe, Argy**	**144.71**	**7**	*e*P	**PKPdf**	**10 56 35.2**	**-0.6**		
LUBAR	**Lubar, Ukraine**	**144.72**	**330**	PKP	**PKPdf**	**10 56 34.6**	**-1.5**		
SORM	**Soroca**	**145.66**	**328**	⇓P	**PKPdf**	**10 56 38.1**	**+0.4**		
EKA	**Eskdalemuir Ar**	**145.84**	**5**	PKPbc	**PKPbc**	**10 56 38.8**	**-0.7**		
	comp=Z,9.0nm,0.7s,baz=346,slow=2.6,SNR=18								
GAL1	**Galloway**	**146.16**	**6**	*e*P	**PKPbc**	**10 56 39.5**	**-0.9**		
EDMD	**Edmundbyers**	**146.42**	**4**	*e*P	**PKPbc**	**10 56 40.0**	**-1.2**		
BR131	**Keskin Array S**	**147.05**	**311**		**PKPbc**	**10 56 43.0**	**-0.5**		
BR131				PKPab	**PKPab**	**10 56 47.8**	**+0.9**		
BRTR	**Keskin Array B**	**147.05**	**311**	PKPbc	**PKPbc**	**10 56 42.8**	**-0.8**		
	comp=Z,8.2nm,0.6s,baz=137,slow=4.0,SNR=22								
BRTR	**Keskin Array B**	**147.05**	**311**		**PKPbc**	**10 56 43.0**	**-0.6**		
KIRS	**Kirsehir-Merke**	**147.09**	**310**	⇑P	**PKPbc**	**10 56 43.4**	**-0.2**		
TLCR		**147.30**	**323**	⇑P	**PKPdf**	**10 56 41.8**	**+1.3**		
HPK	**Haverah Park**	**147.31**	**3**	*e*P	**PKPbc**	**10 56 42.5**	**-1.0**		
BURAR	**Bucovina Array**	**147.54**	**330**		**PKPbc**	**10 56 44.7**	**+0.2**		
TESR	**Tescani**	**147.60**	**327**	⇑P	**PKPbc**	**10 56 42.8**	**-1.8**		
CFR	**Carcaliu**	**147.68**	**324**	⇓P	**PKPbc**	**10 56 43.4**	**-1.3**		
TPGR	**Topolog**	**147.72**	**323**	⇑P	**PKPbc**	**10 56 43.8**	**-1.1**		
WLF1	**Llynfaes**	**147.75**	**7**	*e*P	**PKPbc**	**10 56 43.9**	**-0.8**		
MMAI	**Mount Meron Ar**	**147.82**	**298**	PKPbc	**PKPbc**	**10 56 46.1**	**+0.4**		
	comp=Z,18nm,0.6s,baz=49,slow=6.7,SNR=19								
ONER	**Baraj Valea Uz**	**147.85**	**327**	⇓P	**PKPbc**	**10 56 45.5**	**+0.2**		
VRI	**Vrincioaia**	**148.00**	**326**	⇓P	**PKPbc**	**10 56 45.0**	**-0.7**		
PLOR	**Plostina**	**148.05**	**326**	⇓P	**PKPbc**	**10 56 45.2**	**-0.6**		
MANR	**Mangalia**	**148.25**	**321**	⇑P	**PKPbc**	**10 56 46.4**	**+0.1**		
FOEL	**Foel Wylfa**	**148.26**	**5**	*e*P	**PKPbc**	**10 56 44.7**	**-1.3**		
COVR	**Voineasa-Covas**	**148.28**	**326**	⇑P	**PKPbc**	**10 56 46.0**	**-0.4**		
NEHR	**Nehoiu**	**148.51**	**326**	⇓P	**PKPbc**	**10 56 47.1**	**+0.2**		
ISR	**Istrita**	**148.59**	**325**	⇑P	**PKiKP**	**10 56 47.8**	**-0.5**		
OSTC	**Ostas**	**148.60**	**342**	⇑*e*PKP	**PKiKP**	**10 56 47.8**	**-0.3**		
DOPR	**Dopca**	**148.62**	**327**	⇓P	**PKPbc**	**10 56 47.4**	**+0.3**		
MLR	**Muntele Rosu**	**148.66**	**326**	⇑P	**PKiKP**	**10 56 48.2**	**-0.3**		
HLM1	**Long Mynd**	**148.66**	**5**	*e*P	**PKPbc**	**10 56 46.3**	**-0.7**		
STEB	**Steborice**	**148.67**	**340**	⇑*e*PKP	**PKPbc**	**10 56 47.1**	**0.0**		
CLL	**Collm**	**148.74**	**346**	⇓*i*PKPbc	**PKPbc**	**10 56 47.0**	**-0.2**		
	comp=Z,25nm,0.7s								
CLL				*i* PKPab	**PKPab**	**10 56 52.3**	**-0.8**		
	comp=Z,13nm,0.7s								
DPC	**Dobruska-Polom**	**148.76**	**342**	⇑*e*PKP	**PKPbc**	**10 56 47.7**	**+0.3**		
DPC				*e*PKPAB	**PKPab**	**10 56 53.5**	**+0.2**		
MORC	**Moravsky Berou**	**148.88**	**340**	⇓P	**PKPbc**	**10 56 47.7**	**0.0**		
MORC	**Moravsky Berou**	**148.88**	**340**	*e*PKP	**PKPbc**	**10 56 47.5**	**-0.2**		
BRG	**Berggiesshubel**	**148.92**	**345**	⇑*i*PKPb		10 56 47.7			
BRG				Amp		10 56 48.2			
	comp=Z,11nm,0.6s								
BRG				PKPab	**PKPab**	**10 56 53.5**	**-0.4**		
BRG				Amp		10 56 54.2			
	comp=Z,9.5nm,0.8s								
CJR	**Cluj-Napoca**	**148.96**	**330**	⇑P	**PKPbc**	**10 56 48.1**	**0.0**		
PVCC	**Panska Ves**	**149.08**	**344**	⇑*e*PKP	**PKPbc**	**10 56 48.0**	**-0.1**		
MAUC	**Maruska**	**149.15**	**339**	⇑*e*PKP	**PKiKP**	**10 56 48.8**	**-0.4**		
VOIR		**149.15**	**327**	⇓P	**PKPbc**	**10 56 48.6**	**+0.1**		
MCH1	**Michaelchurch**	**149.16**	**5**	*e*P	**PKPbc**	**10 56 46.7**	**-1.5**		
MARR	**Marisel-Cluj**	**149.21**	**330**	⇓P	**PKPbc**	**10 56 48.8**	**+0.2**		
HSKC	**Hora Svate Kat**	**149.29**	**345**	⇑*e*PKP	**PKPbc**	**10 56 48.6**	**-0.1**		
DRGR		**149.31**	**331**	P	**PKPbc**	**10 56 48.7**	**-0.2**		
MONM	**Monmouth**	**149.34**	**5**	*e*P	**PKPbc**	**10 56 47.2**	**-1.4**		
TNR	**Turnu Rosu**	**149.40**	**328**	⇑P	**PKPbc**	**10 56 49.1**	**0.0**		
ARR	**Arges**	**149.41**	**327**	⇑P	**PKiKP**	**10 56 49.8**	**-0.2**		
PRU	**Pruhonice**	**149.58**	**343**	⇑*e*PKP	**PKPbc**	**10 56 49.1**	**-0.2**		
PRU				*e*PKPAB	**PKPab**	**10 56 55.5**	**-1.1**		
VRAC	**Vranov**	**149.59**	**340**	*e*PKP	**PKPbc**	**10 56 49.0**	**-0.4**		
PSZ	**Piszkesteto**	**149.61**	**335**	⇓P	**PKPbc**	**10 56 49.8**	**+0.3**		
JAVC	**Velka Javorina**	**149.63**	**339**	*e*PKP	**PKiKP**	**10 56 50.4**	**+0.1**		
NKC	**Novy Kostel**	**149.87**	**346**	⇑*e*PKP	**PKPbc**	**10 56 50.3**	**+0.3**		
KRUC	**Moravsky**	**149.87**	**340**	*e*PKP	**PKPbc**	**10 56 49.5**	**-0.6**		
SIRR	**Siria**	**150.18**	**331**	⇓P	**PKPbc**	**10 56 50.5**	**-0.4**		
ZVI	**Zvikov**	**150.18**	**343**	⇑*e*PKP	**PKPbc**	**10 56 51.0**	**+0.2**		
MODS	**Modra-Piesok**	**150.19**	**339**	*e*PKP	**PKPbc**	**10 56 50.8**	**0.0**		
MODS				*e*		10 56 59.7			
GZR	**Gura Zlata**	**150.31**	**329**	⇓P	**PKPbc**	**10 56 50.6**	**-0.7**		
SBD	**Saint Breward**	**150.39**	**8**	*e*P	**PKPbc**	**10 56 50.2**	**-1.0**		
ZST	**Bratislava**	**150.40**	**339**	*e*PKP	**PKiKP**	**10 56 52.5**	**+0.7**		
UCC	**Uccle**	**150.48**	**356**	*d*PKP	**PKPbc**	**10 56 51.2**	**-0.2**		
BTNL	**Ternell**	**150.56**	**354**	*d*PKP	**PKPbc**	**10 56 51.5**	**-0.1**		
KHC	**Kasperske Hory**	**150.62**	**344**	⇑*e*PKP	**PKPbc**	**10 56 51.0**	**-0.8**		
KHC				*e*PKPAB	**PKPab**	**10 57 00.0**	**-1.1**		
BZS	**Buzias**	**150.69**	**331**	⇓P	**PKPbc**	**10 56 51.8**	**-0.3**		
PLVB	**Pleven**	**150.76**	**324**	⇑P	**PKPbc**	**10 56 52.1**	**-0.2**		
GERES	**GERESS Array B**	**150.85**	**343**	PKPbc	**PKPbc**	**10 56 52.0**	**-0.5**		
	comp=Z,7.4nm,0.8s,baz=14,slow=1.7,SNR=37								
GERES				PKPab	**PKPab**	**10 57 01.4**	**-0.7**		
	comp=Z,0.8nm,0.6s,baz=343,slow=2.8,SNR=4.0								
HERR	**Herculane**	**150.86**	**329**	⇓P	**PKPbc**	**10 56 51.9**	**-0.5**		
CONA	**Conrad Observa**	**151.04**	**340**	*i* PKP	**PKPbc**	**10 56 52.8**	**-0.1**		
	comp=Z,16nm,0.7s,SNR=10								
CONA				*e*PKP	**PKPab**	**10 57 02.7**	**-0.2**		
	comp=Z,4.1nm,0.7s								
RONA	**Rosalia, Austr**	**151.10**	**339**	*i* PKP	**PKPbc**	**10 56 52.7**	**-0.3**		
	comp=Z,17nm,0.6s,SNR=9.2								
RONA				*e*PKP	**PKPab**	**10 57 03.3**	**+0.1**		
	comp=Z,5.8nm,0.7s								
DOU	**Dourbes**	**151.17**	**356**	*d*PKPdf	**PKPbc**	**10 56 46.0**	**-0.5**		
DOU				*d*PKP	**PKPbc**	**10 56 52.7**	**-0.3**		
MDVR	**Moldovita**	**151.27**	**329**	⇓P	**PKPbc**	**10 56 53.0**	**-0.5**		
WLF	**Walferdange**	**151.47**	**354**	*d*PKP	**PKiKP**	**10 56 54.2**	**+0.2**		
MORH	**Mrgy, Hungar**	**151.50**	**335**	⇑P	**PKPbc**	**10 56 53.3**	**-0.5**		
MOA	**Molln**	**151.60**	**342**	*e*PKP	**PKPbc**	**10 56 53.2**	**-0.9**		
	comp=Z,5.5nm,0.6s								
ARSA	**Arzberg**	**151.75**	**340**	*e*PKP	**PKPbc**	**10 56 53.7**	**-0.7**		
	comp=Z,1.0nm,0.4s								
BIOA	**Bad Ischl, Aus**	**151.92**	**342**	*e*PKP	**PKPbc**	**10 56 53.6**	**-1.2**		
	comp=Z,3.2nm,0.6s								
BIOA				*e*PKP	**PKPab**	**10 57 05.3**	**-1.2**		
	comp=Z,8.0nm,0.8s								
BOVS	**Bovan**	**152.12**	**328**	⇑P	**PKPbc**	**10 56 54.2**	**-1.1**		
SOKA	**Soboth**	**152.41**	**340**	*i* PKP	**PKPbc**	**10 56 54.6**	**-1.4**		
	comp=Z,20nm,1.3s,SNR=6.5								
LESA	**Schwarzleotal**	**152.43**	**344**	*e*PKP	**PKPbc**	**10 56 54.8**	**-1.2**		
	comp=Z,3.8nm,0.5s								
LESA				*e*PKP	**PKPab**	**10 57 08.9**	**+0.1**		
	comp=Z,9.5nm,1.1s								
KBA	**Koelnbreinsper**	**152.56**	**342**	*e*PKP	**PKPbc**	**10 56 55.4**	**-1.0**		
	comp=Z,3.6nm,0.8s								
OBKA	**Obir**	**152.71**	**340**	*e*PKP	**PKPbc**	**10 56 55.4**	**-1.3**		
	comp=Z,2.5nm,0.6s								
OBKA				*e*PKP	**PKPab**	**10 57 08.4**	**-1.7**		
	comp=Z,6.4nm,1.0s								
WATA	**Walderalm**	**152.79**	**345**	*e*PKP	**PKPbc**	**10 56 55.9**	**-0.9**		
	comp=Z,3.9nm,0.6s								
WATA				*e*PKP	**PKPab**	**10 57 10.5**	**+0.1**		
	comp=Z,11nm,1.2s								
RETA	**Reutte**	**152.84**	**346**	*e*PKP	**PKPbc**	**10 56 56.2**	**-0.7**		
	comp=Z,1.2nm,0.2s								
RETA				*e*PKP	**PKPab**	**10 57 10.2**	**-0.3**		
	comp=Z,3.9nm,0.4s								
WTTA	**Wattenberg**	**152.84**	**345**	*e*PKP	**PKPbc**	**10 56 56.2**	**-0.9**		
	comp=Z,12nm,0.9s								
WTTA				*e*PKP	**PKPab**	**10 57 10.8**	**+0.1**		
	comp=Z,5.2nm,0.6s								
MYKA	**Terra Mystica**	**152.88**	**342**	*e*PKP	**PKPbc**	**10 56 55.5**	**-1.5**		
	comp=Z,5.3nm,0.6s								
MYKA				*e*PKP	**PKPab**	**10 57 09.6**	**-1.2**		
	comp=Z,4.8nm,0.8s								
MOTA	**Moosalm**	**152.89**	**346**	*e*PKP	**PKPbc**	**10 56 56.0**	**-1.1**		
	comp=Z,7.0nm,0.8s								
MOTA				*e*PKP	**PKPab**	**10 57 10.7**	**-0.2**		
	comp=Z,5.0nm,0.6s								
SQTA	**Sankt Quirin**	**152.98**	**345**	*e*PKP	**PKPbc**	**10 56 56.4**	**-0.8**		
	comp=Z,8.5nm,0.9s								
SQTA				*e*PKP	**PKPab**	**10 57 10.3**	**-1.0**		
	comp=Z,6.7nm,0.8s								
VNDS	**Vrh nad Dolski**	**153.03**	**340**	*i* PKPbc	**PKPbc**	**10 56 56.5**	**-0.8**		
ABTA	**Abfaltersbach**	**153.09**	**343**	*e*PKP	**PKPbc**	**10 56 56.2**	**-1.3**		
	comp=Z,17nm,1.1s								
ABTA				*e*PKP	**PKPab**	**10 57 10.4**	**-1.2**		
	comp=Z,7.5nm,0.7s								
LJU	**Ljubljana**	**153.13**	**340**	*i* PKPbc	**PKPbc**	**10 56 56.8**	**-0.7**		
DAVA	**Damuels**	**153.21**	**347**	*e*PKP	**PKPbc**	**10 56 56.3**	**-1.5**		
	comp=Z,5.2nm,0.9s								
DAVA				*e*PKP	**PKPab**	**10 57 11.1**	**-1.1**		
	comp=Z,3.6nm,0.5s								
FETA	**Feichten**	**153.28**	**346**	*e*PKP	**PKPbc**	**10 56 57.1**	**-0.9**		
	comp=Z,5.4nm,0.8s								
FETA				*e*PKP	**PKPab**	**10 57 12.1**	**-0.4**		
	comp=Z,8.2nm,1.1s								
ESDC	**Sonseca Array**	**161.10**	**13**	PKPab	**PKPab**	**10 57 45.3**	**-1.2**		
	comp=Z,2.3nm,1.0s,baz=335,slow=3.7,SNR=7.9								
KEST	**Kesra**	**164.08**	**336**	PKP	**PKPdf**	**10 57 00.7**	**-2.1**		
	comp=Z,3.2nm,0.9s,baz=329,slow=5.9,SNR=1.8								
KEST				PKPab	**PKPab**	**10 57 59.4**	**-0.4**		
	comp=Z,7.9nm,0.9s,baz=346,slow=4.2,SNR=5.0								
DBIC	**Dimbokro**	**164.19**	**156**	PKP	**PKPdf**	**10 57 02.7**	**-0.7**		
	comp=Z,3.4nm,0.8s,baz=180,slow=3.0,SNR=3.4								
TORD	**Torodi Ar. Bea**	**171.88**	**181**	PKP	**PKPdf**	**10 57 07.0**	**-1.5**		
	comp=Z,2.3nm,0.9s,baz=242,slow=3.5,SNR=9.7								
TORD				PKPab	**PKPab**	**10 58 34.2**	**-0.3**		
	comp=Z,1.2nm,0.9s,baz=206,slow=4.2,SNR=5.2								

*SOME **07** 10:42:23.4, 39.˚63N × 77.˚07E, h5km*
*NNC **07** 10:42:31.3 ± 2.2, 39.˚95N × 77.˚26E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=15.5km s-min=13.3km az=170.0
*KRNET **07** 10:42:32.7 ± 0.1, 39.˚97N × 77.˚25E, h15km, mb3.8*

ISC 07 10:42:32.2 ± 2.0, 39.˚98N ± 0.˚07 × 77.˚10E ± 0.˚04, h4km ± 15km, n56, σ1 8 51/84, 22C-13D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.55**	**314**	⇑	*e*P	**Pg**	**10 43 03.2**	**+1.3**
JNKS				⇑	*e*S	**Sg**	**10 43 25.5**	**+3.5**
NRN	**Naryn**	**1.67**	**330**	⇑	*e*P	**Pg**	**10 43 05.3**	**+1.0**
NRN				⇑	*e*S	**Sg**	**10 43 29.1**	**+3.2**
TARG	**Taragay, Kyrgy**	**1.82**	**17**	⇓	*e*P	**Pb**	**10 43 06.4**	**0.0**
TARG				⇓	*e*S	**Sg**	**10 43 31.1**	**+0.2**
KDJ	**Kajisay**	**2.14**	**2**	⇑	*e*P	**Pb**	**10 43 11.9**	**+0.2**
KDJ				⇑	*e*S	**Sg**	**10 43 40.5**	**-0.7**
ULHL	**Ulahol**	**2.35**	**344**	P		**Pg**	**10 43 16.7**	**-0.5**
	SNR=22							
ULHL	**Ulahol**	**2.35**	**344**	⇑	*e*P	**Pb**	**10 43 15.2**	**0.0**
ULHL				⇑	*e*S	**Sb**	**10 43 46.3**	**+1.6**
BOOM	**Boomskoye usch**	**2.65**	**341**	⇓	*e*P	**Pb**	**10 43 19.5**	**-0.9**
BOOM				⇓	*e*S	**Sb**	**10 43 53.7**	**+0.4**
PRZ	**Przheval'sk**	**2.68**	**21**	⇑	*e*P	**Pb**	**10 43 19.1**	**-1.8**
PRZ				⇑	*e*S	**Sb**	**10 43 52.9**	**-1.4**
SFK	**Sufi-Kurgan**	**2.76**	**272**	⇑	*e*P	**Pb**	**10 43 21.9**	**-0.3**
SFK				⇑	*e*S	**Sb**	**10 43 57.8**	**+1.3**
ARLS	**Aral**	**2.81**	**313**	⇑	*e*P	**Pb**	**10 43 22.2**	**-1.0**
ARLS				⇑	*e*S	**Sb**	**10 43 58.4**	**+0.4**
UCH	**Uchtor**	**2.97**	**320**	P		**Pb**	**10 43 26.1**	**+0.1**
	SNR=24							
UCH	**Uchtor**	**2.97**	**320**	⇓	*e*P	**Pb**	**10 43 24.6**	**-1.4**
UCH				⇓	*e*S	**Sb**	**10 44 02.4**	**-0.4**
TNSS	**Tian-Shan**	**3.05**	**358**	Pg		**Pb**	**10 43 25.7**	**-1.6**
	4.1nm,0.5s							
TNSS				Lg		Lg	10 44 11.7	
	25nm,0.5s							
TNSS	**Tian-Shan**	**3.05**	**358**	*e*P		**Pb**	**10 43 26.3**	**-1.0**
	4.1nm,0.5s							
TNSS				*e*S		**Sg**	**10 44 11.7**	**+1.4**
	25nm,0.5s							
IZV	**Izvestkoviy**	**3.07**	**353**	Pg		**Pb**	**10 43 26.3**	**-1.2**
	6.4nm,0.4s							
IZV				Lg		Lg	10 44 12.4	
	66nm,0.5s							
IZV	**Izvestkoviy**	**3.07**	**353**	*e*P		**Pb**	**10 43 26.7**	**-0.8**
	15nm,0.5s							
IZV				*e*S		**Sg**	**10 44 12.4**	**+1.5**
	66nm,0.5s							
KBK	**Karagaybulak**	**3.12**	**329**	P		**Pb**	**10 43 28.0**	**-0.4**
	SNR=33							
KBK	**Karagaybulak**	**3.12**	**329**	⇓	*e*P	**Pb**	**10 43 26.2**	**-2.2**
KBK				⇓	*e*S	**Sb**	**10 44 05.3**	**-1.5**
TKM2	**Tokmak 2**	**3.14**	**339**	P		**Pb**	**10 43 28.1**	**-0.6**
	SNR=12							
KST	**Kastek**	**3.17**	**345**	Pg		**Pb**	**10 43 28.8**	**-0.5**
	17nm,0.3s							
KST				Lg		Lg	10 44 16.2	
	32nm,0.4s							
KST	**Kastek**	**3.17**	**345**	*e*P		**Pb**	**10 43 28.9**	**-0.3**
	17nm,0.3s							
KST				*e*S		**Sg**	**10 44 16.2**	**+2.1**
	32nm,0.4s							
MDOK	**Medeo**	**3.18**	**359**	Pg		**Pb**	**10 43 27.9**	**-1.4**
	23nm,0.7s							
MDOK				Lg		Lg	10 44 14.7	
	107nm,0.5s							
MTBS	**Maitube**	**3.18**	**351**	Pg		**Pb**	**10 43 28.4**	**-0.9**
	6.7nm,0.5s							
MTBS				Lg		Lg	10 44 15.4	
	54nm,0.4s							
MTBS	**Maitube**	**3.18**	**351**	*e*P		**Pb**	**10 43 28.5**	**-0.9**
	6.7nm,0.5s							
MTBS				*e*S		**Sg**	**10 44 15.4**	**+1.0**
	54nm,0.4s							
SATY	**Saty**	**3.23**	**17**	Pg		**Pb**	**10 43 28.7**	**-1.5**
	27nm,0.8s							
SATY				Lg		Lg	10 44 15.8	
	156nm,0.5s							
KOTS	**Kotyrbulak**	**3.25**	**0**	Pg		**Pb**	**10 43 29.7**	**-0.8**
	20nm,0.3s							
KOTS				Lg		Lg	10 44 18.1	
	278nm,0.6s							
KOTS	**Kotyrbulak**	**3.25**	**0**	*e*P		**Pb**	**10 43 30.0**	**-0.5**
	20nm,0.3s							
KOTS				*e*S		**Sg**	**10 44 18.1**	**+1.6**
	278nm,0.6s							
AAK	**Ala-Archa**	**3.30**	**324**	P		**Pb**	**10 43 30.1**	**-1.2**
	SNR=9.4							
AAK	**Ala-Archa**	**3.30**	**324**	⇑	Pn	**Pb**	**10 43 30.3**	**-1.0**
	21nm,0.8s							
AAK				⇑	Lg	Lg	10 44 19.4	
	5.8nm,0.5s							
AAK	**Ala-Archa**	**3.30**	**324**	⇑	*e*P	**Pb**	**10 43 28.8**	**-2.5**
AAK				⇑	*e*S	**Sb**	**10 44 09.7**	**-2.2**
DGS	**Degeres**	**3.40**	**343**	Pg		**Pb**	**10 43 32.8**	**-0.4**
	16nm,0.5s							
DGS				Lg		Lg	10 44 23.8	
	44nm,0.6s							
DGS	**Degeres**	**3.40**	**343**	*e*P		**Pb**	**10 43 33.4**	**+0.2**
	16nm,0.5s							
DGS				*e*S		**Sg**	**10 44 23.8**	**+2.3**
	44nm,0.6s							
UZB	**Uzynbulak**	**3.48**	**24**	Pg		**Pb**	**10 43 32.2**	**-2.1**
	4.0nm,0.3s							
UZB				Lg		Lg	10 44 21.9	
	30nm,0.5s							
UZB	**Uzynbulak**	**3.48**	**24**	*e*P		**Pb**	**10 43 32.2**	**-2.1**
	4.0nm,0.3s							
UZB				*e*S		**Sg**	**10 44 21.9**	**-2.0**
	30nm,0.5s							
CHMS	**Chumysh**	**3.49**	**330**	P		**Pb**	**10 43 32.7**	**-1.8**
	SNR=7.4							
KURS	**Kuram**	**3.59**	**13**	Pg		**Pb**	**10 43 34.8**	**-1.6**
	13nm,0.6s							
KURS				Lg		Lg	10 44 26.5	
	24nm,0.6s							
SHLS	**Shalkode**	**3.63**	**28**	Pg		**Pb**	**10 43 38.2**	**+1.1**
	18nm,0.6s							
SHLS				Lg		Lg	10 44 32.0	
	41nm,0.5s							
SHLS	**Shalkode**	**3.63**	**28**	*e*P		**Pb**	**10 43 38.1**	**+1.1**
	18nm,0.6s							
SHLS				*e*S		**Sg**	**10 44 32.0**	**+3.1**
	41nm,0.5s							
EKS2	**Erkin-Say**	**3.66**	**318**	P		**Pb**	**10 43 35.9**	**-1.6**
	SNR=17	

CMAR Chiang Mai Arr 9.03 35 P Pn 11 02 46.6 +0.6
comp=E,10nm,0.8s,baz=226,slow=14,SNR=73
CMAR Chiang Mai Arr 9.03 35 Pn 11 02 47.2 +1.2
CHTO Chiang Mai 9.32 33 Pn Pn 11 02 51.6 +1.7
VIS Vishakhapatnam 11.94 305 eP Pn 11 03 25.1 +0.2
VIS eS Sn 11 05 24.3 -12
VIS IAML 11 05 30.8
comp=N,98nm,0.6s
VIS IAML 11 05 31.8
comp=E,80nm,0.6s
RAGD RAYAGADA 12.72 311 eP Pn 11 03 35.7 +0.6
RAGD eS Sn 11 05 42.7 -13
RAGD IAML 11 05 47.9
comp=E,57nm,1.3s
RAGD IAML 11 05 48.1
comp=N,52nm,0.8s
AGT Agartala 12.98 351 eP Pn 11 03 38.1 -0.3
AGT IAML 11 04 30.1
comp=E,95nm,0.5s
AGT eS Sn 11 05 50.1 -11
AGT IAML 11 05 57.0
comp=N,86nm,0.0s
MORE Moreh 13.16 3 Pn 11 03 39.9 -0.8
MDRS Chennai 13.18 280 eP Pn 11 03 41.8 +0.6
MDRS eS Sn 11 05 54.2 -12
MDRS IAML 11 06 05.1
comp=N,68nm,0.0s
MDRS IAML 11 06 46.5
comp=E,86nm,0.3s
PALK Pallekele 13.23 255 P Pn 11 03 43.4 +1.6
comp=E,2.6nm,0.4s,baz=72,slow=14,SNR=2.2
PALK S Sn 11 05 57.5 -10
comp=E,21nm,0.6s,baz=164,slow=16,SNR=9.7
PALK Pallekele 13.23 255 Pn Pn 11 03 42.7 +0.8
MYKOM Kota Tinggi 13.73 131 Pn 11 03 49.7 +1.5
IMP Imphal 13.73 1 eP Pn 11 03 50.4 +2.1
IMP eS Sn 11 06 09.6 -10
IMP IAML 11 06 29.8
comp=N,33nm,0.0s
IMP IAML 11 06 33.0
comp=E,36nm,0.3s
SHL Shillong 14.55 354 Pn 11 03 57.0 -1.8
KOHI KOHIMA 14.62 2 eP P 11 04 02.7 +0.1
KOHI eS Sn 11 06 30.3 -11
KOHI IAML 11 06 52.5
comp=N,87nm,0.8s
KOHI IAML 11 06 54.9
comp=E,92nm,0.6s
TNCH TengChong 14.70 18 P Pn 11 04 01.0 +0.3
TNCH pmax pmax
comp=E,25nm,0.8s
KMI2 Kunming 16.52 31 P P 11 04 26.1 +2.3
KMI2 pmax pmax
comp=E,22nm,0.9s
PZH PanZhiHua 17.22 26 P Pn 11 04 33.5 +1.8
LSA Lhasa 18.71 353 P 11 04 47.1 -1.0
LSA Lhasa 18.71 353 P P 11 04 44.6 -3.5
SBUM Sibu 20.38 113 P 11 05 06.3 +0.6
LZDM Lanzhou Array 26.46 19 PcP PcP 11 09 26.8 +0.1
comp=Z,0.8nm,0.4s,baz=186,slow=1.4,SNR=4.3
LZH Lanzhou 26.63 19 eP P 11 06 08.3 +2.5
LZH pP pP 11 06 29.2 -2.7
LZH sP sP 11 06 49.0 +2.9
LZH pmax pmax
comp=E,8.0nm,1.2s
H08S3 Diego Garcia H 27.99 229 T T 11 34 48.1
baz=48,slow=74
H08S2 Diego Garcia H 28.00 229 T T 11 34 43.6
baz=48,slow=74
H08S1 Diego Carcia H 28.01 229 T T 11 34 44.6
baz=48
KSH2 Kashi 32.27 333 P P 11 06 55.5 -0.2
KSH2 Kashi 32.27 333 P P 11 07 03.4 +7.7
KSH2 pP pP 11 07 23.8 +1.5
KSH2 pmax pmax
comp=E,3.0nm,0.6s
KSH2 pmax pmax
comp=E,1.0nm,0.7s
KBL Kabul 32.37 320 P P 11 06 56.5 -0.2
KBL IAmb IAmb 11 06 58.0
comp=E,5.4nm,1.1s
MANEM Manem 32.92 327 P 11 07 03.0 +1.5
MANEM IAmb IAmb 11 07 04.0
comp=E,17nm,0.6s
WMQ Urumqi 33.07 352 eP P 11 07 03.0 +0.5
WMQ pP pP 11 07 21.5 -7.6
WMQ pmax pmax
comp=E,8.0nm,0.7s
TARG Taragay, Kyrgy 33.56 338 P P 11 07 06.2 -1.0
TARG IAmb IAmb 11 07 09.3
comp=E,3.0nm,0.7s
HHC Hu-ho-hao-te 33.68 25 eP P 11 07 10.3 +2.4
HHC pmax pmax
comp=E,9.0nm,0.6s
DRK Karamyk 34.31 329 P P 11 07 13.9 +0.3
GAR Garm 34.71 327 P P 11 07 16.7 -0.2
GAR IAmb IAmb 11 07 17.8
comp=E,11nm,1.0s
CHGR Chuyangaron 35.09 326 P 11 07 20.0 -0.2
ARSB Arslanbob 35.19 333 P P 11 07 21.7 +0.7
AAK Ala-Archa 35.61 336 P P 11 07 24.9 +0.3
MKAR Makanchi Array 36.91 347 P PcP 11 07 35.1 -0.3
comp=Z,0.9nm,0.3s,baz=165,slow=9.1,SNR=29
MKAR PcP PcP 11 09 54.2 -0.1
comp=Z,0.3nm,0.3s,baz=155,slow=2.1,SNR=2.5
comp=Z,0.9nm,0.3s
MAKZ Makanchi 36.99 347 P P 11 07 36.0 -0.1
XLT XiLinHaoTe 38.10 27 eP P 11 07 47.2 +1.6
XLT pP pwP 11 08 19.5 +4.8
XLT pmax pmax
comp=E,3.0nm,0.8s
SONM Songino Array 38.24 14 P P 11 07 46.0 -0.7
comp=Z,0.4nm,0.3s,baz=202,slow=8.9,SNR=4.8
SONM PcP PcP 11 09 59.0 +0.4
comp=Z,2.5nm,0.6s,baz=197,slow=3.5,SNR=15
comp=Z,0.4nm,0.3s
KSRS Korea Array 40.53 44 P P 11 08 05.0 -0.7
comp=Z,0.8nm,0.4s,baz=242,slow=8.7,SNR=5.1
comp=Z,0.8nm,0.4s
FAKI Fak Fak 40.91 108 P P 11 08 08.8 -0.4
KURBB Kurchatov Arra 41.37 346 P P 11 08 11.8 -0.6
comp=Z,1.2nm,0.6s,baz=160,slow=7.9,SNR=7.2
KURBB PcP PcP 11 10 08.1 -0.2
comp=Z,0.4nm,0.2s,baz=166,slow=2.6,SNR=5.6
comp=Z,1.2nm,0.6s
KURK Kurchatov 41.43 346 P P 11 08 12.0 -0.9
ZAA0 Zalesovo Array 43.38 352 P 11 08 28.9 +0.4
ZAA0 IAmb IAmb 11 08 29.2
comp=Z,8.8nm,0.4s
ZALV Zalesovo Beam 43.38 352 P P 11 08 28.7 +0.1
comp=Z,8.5nm,0.3s,baz=167,slow=8.5,SNR=46
comp=Z,8.5nm,0.3s
KNRA Kununurra 43.80 127 P P 11 08 33.1 +0.7
KNRA IAmb IAmb 11 08 48.9
comp=Z,8.1nm,1.1s
MTN Manton Dam 44.19 121 P P 11 08 34.8 -0.9
MTN IAmb IAmb 11 08 38.5
comp=Z,13nm,1.2s
BVAR Borovoye Array 45.84 341 P P 11 08 46.8 -1.4
comp=Z,1.1nm,0.4s,baz=136,slow=8.1,SNR=7.8
BVAR PcP PcP 11 10 23.4 0.0
comp=Z,1.3nm,0.5s,baz=158,slow=4.8,SNR=4.8
comp=Z,1.1nm,0.4s
BORK Borovoye 45.88 341 P P 11 08 48.3 -0.2
BORK IAmb IAmb 11 08 48.6
comp=Z,3.2nm,0.6s
AB31 Akbulak array 47.22 330 P 11 08 58.9 0.0
ABKAR Akbulak array 47.22 330 P P 11 08 59.2 +0.3
RAYN Ar Rayn 47.34 292 P P 11 09 01.6 +1.2
RAYN IAmb IAmb 11 09 02.1
comp=Z,2.4nm,0.5s
AKTO Aktyubinsk 48.93 330 P P 11 09 11.8 -0.3
comp=Z,2.6nm,0.4s,baz=89,slow=3.6,SNR=12
AKTO PcP PcP 11 10 34.4 -0.2
comp=Z,2.0nm,0.4s,baz=116,slow=2.3,SNR=5.0
comp=Z,2.6nm,0.4s
WB0 Warramunga Arr 50.52 127 P P 11 09 24.3 -0.4
WB0 IAmb IAmb 11 09 24.5
comp=Z,10nm,1.4s
WRA Warramunga Arr 50.58 127 P P 11 09 24.2 -0.9
comp=Z,1.6nm,0.5s,baz=306,slow=8.1,SNR=42
comp=Z,1.6nm,0.5s
WRAB Tennant Creek 50.58 127 P P 11 09 24.9 -0.2
WRAB IAmb IAmb 11 09 51.1
comp=Z,5.9nm,1.2s
WR8 Warramunga Arr 50.71 127 P P 11 09 25.7 -0.4
WR8 IAmb IAmb 11 09 25.8
comp=Z,2.8nm,0.7s
AS31 Alice Springs 52.39 131 P P 11 09 38.0 -0.6
ASAR Alice Springs 52.39 131 P P 11 09 37.6 -0.9
comp=Z,1.4nm,0.7s,baz=306,slow=6.9,SNR=16
comp=Z,1.4nm,0.7s
ASAR Alice Springs 52.39 131 P P 11 09 39.1 +0.6
ARTI Arti 52.83 336 P P 11 09 40.7 -0.5
comp=Z,1.9nm,0.4s,baz=170,slow=11,SNR=3.1
comp=Z,1.9nm,0.4s
KBZ Khabaz 54.41 316 P P 11 09 51.9 -1.0
comp=Z,3.1nm,0.8s,baz=122,slow=5.3,SNR=3.6
comp=Z,3.1nm,0.8s
NRIK Noril'sk 58.39 358 P P 11 10 20.5 -0.2
comp=Z,1.9nm,0.5s,baz=154,slow=6.4,SNR=5.7
comp=Z,1.9nm,0.5s
NRIK Noril'sk 58.39 358 P P 11 10 20.6 0.0
NRIK IAmb IAmb 11 10 21.2
comp=Z,5.6nm,1.2s
BR131 Keskin Array S 59.97 310 P P 11 10 31.2 -1.2
BR131 IAmb IAmb 11 10 31.7
comp=Z,6.4nm,0.8s
BRTR Keskin Array B 59.97 310 P P 11 10 31.1 -1.2
comp=Z,3.0nm,0.6s,baz=126,slow=7.4,SNR=9.5
comp=Z,3.0nm,0.6s
BRTR Keskin Array B 59.97 310 P P 11 10 31.6 -0.8
ELL Elmali 62.41 306 P P 11 10 48.4 -0.4
KARP Karpathos 64.50 304 P P 11 11 01.9 -0.6
BURAR Bucovina Array 67.35 317 P P 11 11 20.5 -0.1
H04N2 CROZET ISLANDS 68.14 210 T T 12 25 12.5
baz=44
H04N1 CROZET ISLANDS 68.15 210 T T 12 25 14.1
baz=44
H04N3 CROZET ISLANDS 68.16 210 T T 12 25 13.9
baz=44
ITM Ithomi 68.81 306 P P 11 11 28.1 -1.8
FIA1 FINESS Array S 69.68 332 P P 11 11 33.8 -0.8
FINES FINESS Array B 69.68 332 P P 11 11 33.8 -0.9
comp=Z,2.6nm,0.5s,baz=100,slow=5.7,SNR=19
comp=Z,2.6nm,0.5s
FINES FINESS Array B 69.68 332 P P 11 11 34.0 -0.7
OJC Ojcow 71.22 319 P P 11 11 43.9 -0.4
ARCES ARCESS Array B 72.13 340 P P 11 11 49.3 0.0
comp=Z,1.3nm,0.4s,baz=86,slow=5.1,SNR=12
comp=Z,1.3nm,0.4s
ARCES ARCESS Array B 72.13 340 P P 11 11 49.1 -0.2
GERES GERESS Array B 75.12 318 P P 11 12 06.9 -0.4
comp=Z,1.3nm,0.5s,baz=86,slow=4.1,SNR=9.2
comp=Z,1.3nm,0.5s
LBTB Lobatse 75.27 240 P P 11 12 09.4 +0.8
LBTB IAmb IAmb 11 12 22.3
comp=Z,12nm,1.4s
HFS Hagfors 75.47 329 P P 11 12 08.1 -0.8
comp=Z,1.0nm,0.3s,baz=90,slow=6.3,SNR=9.9
comp=Z,1.0nm,0.3s
STAL STALIGIAL 75.81 315 P P 11 12 10.6 -0.6
STAL IAmb IAmb 11 12 11.0
comp=Z,7.0nm,1.1s
SPB2 Spitsbergen Ar 76.65 348 P P 11 12 15.3 -0.1
SPITS Spitsbergen Ar 76.65 348 P P 11 12 14.8 -0.6
comp=Z,3.5nm,0.5s,baz=95,slow=10,SNR=33
comp=Z,3.5nm,0.5s
NOA NORSAR Array B 76.72 330 P P 11 12 14.2 -2.0
comp=Z,0.9nm,0.7s,baz=93,slow=5.6,SNR=3.4
comp=Z,0.9nm,0.7s
BOSA Boshof 76.79 237 P P 11 12 17.7 +0.5
comp=Z,1.8nm,0.5s,baz=67,slow=3.0,SNR=5.7
comp=Z,1.8nm,0.5s
BOSA Boshof 76.79 237 P P 11 12 17.9 +0.7
BOSA IAmb IAmb 11 12 27.3
comp=Z,9.0nm,1.3s
FUORN Ofenpass-Fuorn 77.49 315 P P 11 12 20.5 -0.5
FUORN IAmb IAmb 11 12 42.8
comp=Z,5.7nm,1.3s
KGCAE Kacgae 77.52 244 P P 11 12 22.6 +1.2
KGCAE IAmb IAmb 11 13 05.2
comp=Z,16nm,1.3s
TUE Stuetta 78.13 315 P P 11 12 23.7 -0.7
TUE IAmb IAmb 11 12 27.7
comp=Z,3.5nm,0.8s
KEST Kesra 78.99 304 P P 11 12 28.5 -0.7
comp=Z,3.7nm,0.5s,baz=218,slow=3.0,SNR=4.5
comp=Z,3.7nm,0.5s
KEST Kesra 78.99 304 IAmb IAmb 11 12 32.1
comp=Z,19nm,1.4s
TORD Torodi Ar. Bea 89.33 283 P P 11 13 21.4 -0.4
comp=Z,0.5nm,0.6s,baz=108,slow=4.7,SNR=3.6
comp=Z,0.5nm,0.6s
ILAR Eielson Array 92.05 22 P P 11 13 32.1 -1.3
comp=Z,0.3nm,0.6s,baz=289,slow=4.3,SNR=5.7
comp=Z,0.3nm,0.6s
ILAR Eielson Array 92.05 22 P P 11 13 32.7 -0.8
YKA Yellowknife Ar 103.50 13 Pdiff Pdif 11 14 22.6 -2.6
comp=Z,0.1nm,0.5s,baz=307,slow=4.3,SNR=1.8
SCHQ Schefferville 112.34 348 Pdiff Pdif 11 15 03.2 -1.4
comp=Z,1.6nm,0.8s,baz=11,slow=5.2,SNR=1.7
ULM Lac du Bonnet 118.43 7 PKP PKPdf 11 19 09.8 -1.9
comp=Z,1.7nm,0.6s,baz=54,slow=6.4,SNR=3.3
ULM Lac du Bonnet 118.43 7 PKPdf 11 19 10.9 -0.8
PDAR Pinedale Array 122.43 20 PKP PKPdf 11 19 19.4 -0.6
comp=Z,1.2nm,0.4s,baz=132,slow=0.5,SNR=20
NVAR Mina Array Bea 122.50 29 PKP PKPdf 11 19 20.9 +0.7
comp=Z,1.9nm,0.6s,baz=324,slow=2.4,SNR=21
TXAR Lajitas Array 136.57 22 PKP PKPdf 11 19 47.0 0.0
comp=Z,1.2nm,0.4s,baz=206,slow=0.5,SNR=41
PLCA Paso Flores 147.26 203 PKPbc PKPdf 11 20 08.0 +2.4
comp=Z,2.8nm,0.8s,baz=197,slow=3.9,SNR=8.0
CPUP Villa Florida 148.61 237 PKPbc PKPbc 11 20 11.4 -0.5
comp=Z,2.0nm,0.7s,baz=187,slow=2.2,SNR=5.6
TEIG Tepich 148.89 3 PKPbc PKPbc 11 20 12.7 -0.1
TLIG Tlapa 149.17 23 PKPbc PKPbc 11 20 14.5 +0.8
BOAV Boa Vista 150.97 296 PKPbc PKPbc 11 20 17.9 -0.1
BI02 San Fabin de 151.04 206 PKPbc PKPbc 11 20 18.4 +0.8
BI02 PKPab PKPab 11 20 24.6 -0.9

IDC 07 11:07:55.3±283.0, 66°31N×41°61E, h0km, Error ellipse: s-maj=163.5km s-min=115.1km az=36.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	I37NO	9.15	298	I	I	11 56 00.0	
	baz=92,slow=322,SNR=0.9						
I31KZ	AKTYUBINSK INF	18.02	144	I	I	12 58 50.0	
	baz=338,slow=324,SNR=2.1						
I46RU	ZALESOVO INFRA	24.23	100	I	I	13 34 50.0	
	baz=314,slow=326,SNR=1.8						
I18DK	QAANAAQ INFRAS	30.55	336	I	I	14 19 50.0	
	baz=46,slow=321,SNR=1.1						

IDC 07 11:11:47.3±999.0, 51°39N×44°31E, h0km, Error ellipse: s-maj=1372.0km s-min=206.8km az=86.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	8.74	91	I	I	12 08 23.7	
	0.4nm,0.7s,baz=280,slow=301,SNR=3.1						
I46RU	ZALESOVO INFRA	24.46	68	I	I	13 40 00.0	
	baz=278,slow=299,SNR=0.9						
I34MN	SONGINO INFRAS	39.35	70	I	I	15 10 20.0	
	baz=301,slow=325,SNR=0.4						

STR 07 11:13:15.1±0.4, 47°N×3°×±°, h0km, MLv1.6/6, LOCSAT earthModelID haslach_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOUC	Bouclans	0.13	51	Pg	Pg	11 13 17.3	-0.3
FOURG	Fourg	0.21	253	Pg	Pg	11 13 18.6	-0.7
FOURG				Sg	Sg	11 13 22.5	+0.5
BRANT	Les Verrieres	0.34	133	Pg	Pg	11 13 21.4	-0.2
CHMF	Charmoille	0.38	77	Pg	Pg	11 13 22.2	-0.2
CHMF				Sg	Sg	11 13 28.3	+1.1
RIVEL	MONT RIVEL	0.43	198	Pg	Pg	11 13 22.8	-0.5
RIVEL				Sg	Sg	11 13 29.6	+0.8
FAHY	Fahy-L¨s-Autr	0.56	308	Sg	Sg	11 13 33.0	0.0
BOURR	Bourrignon	0.80	73	Pg	Pg	11 13 30.7	+0.3
BOURR				Sn	Sb	11 13 44.2	+1.0
ETNF	Estrennes	1.09	358	Pg	Pg	11 13 36.0	-0.1
ETNF				Sg	Sb	11 13 51.8	-0.1
OGMY	Moye	1.29	187	Pg	Pg	11 13 39.6	-0.4
OGMY				Sg	Sb	11 13 58.0	+0.4

DNK ***07*** *11:15:11.7±1.4, 51°.44N×16°.07E, h18km±58km, ML2.0, Presumed earthquake*
IPEC ***07*** *11:15:13.0±0.2, 51°.59N×16°.24E, h1km, ML2.9/6, Error ellipse: s-maj=2.7km s-min=1.4km az=76.0*
BGR ***07*** *11:15:14.6±0.4, 51°.54N×16°.17E, h1km, ML3.2/17, Error ellipse: s-maj=5.6km s-min=2.2km az=16.0*
VIE ***07*** *11:15:14.8±0.5, 51°.47N×15°.94E, h0km, mb2.9/18, ml2.9/16, ms3.6/2, Error ellipse: s-maj=4.7km s-min=2.5km az=43.0 85 km WNW of Wroclaw Suspected Mining induced.*
IDC ***07*** *11:15:14.7±1.2, 51°.50N×16°.21E, h0km, mbtmp3.4/4, ML2.7/4, Error ellipse: s-maj=17.8km s-min=10.1km az=128.0*
PRU ***07*** *11:15:16.1, 51°.47N×16°.15E, h0km*
ISC 07 11:15:12.2±0.7, 51°.61N±0°.03×16°.15E±0°.02, h0km, n71, σ1s02/133, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.77	173	eSg	Sg	11 15 37.3	+0.3
KSP	Ksiaz	0.77	173	ePg	Pg	11 15 27.7	+0.7
KSP				eSg	Sg	11 15 37.8	+0.7
KSP	Ksiaz	0.77	173	ePg	Pg	11 15 27.7	+0.7
CHVC	Chvalec	1.03	183	ePG	Pb	11 15 32.6	-0.3
CHVC				eSG	Sg	11 15 44.7	-0.4
OSTC	Ostas	1.06	178	ePG	Pb	11 15 33.1	-0.3
OSTC				eSG	Sg	11 15 46.3	+0.2
comp=Z,133nm,0.7s							
UPC	Upice	1.11	185	ePG	Pg	11 15 33.7	+0.3
UPC				eSG	Sg	11 15 47.8	0.0
comp=Z,142nm,0.4s							
DPC	Dobruska-Polom	1.27	175	ePG	Pg	11 15 36.6	+0.1
DPC				eSG	Sg	11 15 52.4	-0.5
comp=Z,92nm,0.5s							
DPC	Dobruska-Polom	1.27	175	ePn	Pg	11 15 36.5	+0.1
DPC				eSg	Sg	11 15 52.6	-0.3
PIVO	Bartosovice	1.45	170	ePg	Pn	11 15 39.0	-0.7
baz=352							
PIVO				eSg	Sg	11 15 57.2	-1.5
112nm,0.4s,baz=352							
PVCC	Panska Ves	1.47	223	ePG	Pb	11 15 40.8	+0.3
PVCC				eSG	Sn	11 16 00.3	+0.3
comp=Z,482nm,1.0s							
BRG	Berggiesshubel	1.57	243	ePn	Pb	11 15 42.0	-0.2
BRG				eSg	Sg	11 16 04.0	+1.3
BRG	Berggiesshubel	1.57	243	Pn	Pn	11 15 41.5	+0.1
BRG				Pg	Pg	11 15 43.1	+0.8
BRG				Sg	Sg	11 16 03.8	+1.1
BRG				Amp		11 16 04.9	
comp=Z,93nm,0.4s							
RICC	Richard	1.68	231	ePG	Pg	11 15 44.3	-0.1
RICC				eSG	Sg	11 16 06.4	+0.3
comp=Z,325nm,0.9s							
RYBC	Ceska Rybna	1.81	182	ePn	Pn	11 15 44.7	+0.1
baz=3.5							
RYBC				eSg	Sn	11 16 08.7	+0.5
comp=Z,63nm,0.2s,baz=3.5							
FBE	Freiberg	1.89	250	ePn	Pg	11 15 48.7	+0.3
FBE				eSg	Sg	11 16 13.4	+0.5
PRU	Pruhonice	1.92	213	ePN	Pn	11 15 46.2	+0.1
PRU				ePG	Pb	11 15 48.2	+0.1
PRU				eSG	Sb	11 16 12.8	+0.3
comp=Z,48nm,0.6s							
STEB	Steborice	1.97	148	ePN	Pn	11 15 46.9	+0.1
STEB				ePG	Pg	11 15 49.5	-0.4
STEB				eSG	Sb	11 16 14.3	+0.3
comp=Z,186nm,0.6s							
HSKC	Hora Svate Kat	1.99	241	ePG	Pb	11 15 49.5	+0.2
HSKC				eSG	Sg	11 16 15.6	-0.4
comp=Z,116nm,0.6s							
CLL	Collm	1.99	262	ePn	Pn	11 15 47.4	+0.2
CLL				eSg	Sg	11 16 18.2	+1.9
CLL	Collm	1.99	262	*i* Pn	Pn	11 15 47.3	+0.2
comp=Z,16nm,0.5s							
CLL				*i* Pg	Pg	11 15 50.5	+0.1
CLL				*i* x	x	11 15 54.5	
CLL				*i* Sg	Sg	11 16 18.0	+1.8
comp=Z,42nm,0.3s							
MORC	Moravsky Berou	2.04	154	ePn	Pn	11 15 47.8	-0.1
MORC				eSg	Sb	11 16 16.7	+0.6
MORC	Moravsky Berou	2.04	154	ePn	Pn	11 15 47.5	-0.3
baz=336							
MORC				eSg	Sb	11 16 15.4	-0.6
comp=Z,69nm,0.7s,baz=336							
OKC	Ostrava-Krasne	2.18	144	ePg	Pg	11 15 53.8	-0.2
OKC				eSg	Sb	11 16 20.1	-0.1
VRAC	Vranov	2.32	173	Pn	Pn	11 15 51.9	+0.2
comp=Z,2.8nm,0.3s,baz=354,slow=17,SNR=15							
VRAC				Lg	Lg	11 16 24.7	
comp=Z,6.6nm,0.3s,baz=254,slow=10,SNR=7.0							
comp=Z,11nm,0.4s							
VRAC	Vranov	2.32	173	ePn	Pn	11 15 51.8	+0.1
baz=354							
VRAC				eSg	Sb	11 16 24.6	+0.4
comp=Z,66nm,0.6s,baz=354							
VRAC	Vranov	2.32	173	ePN	Pn	11 15 51.9	+0.2
VRAC				eSG	Sb	11 16 24.7	+0.5
TREC	Trest	2.36	191	ePN	Pn	11 15 52.7	+0.5
TREC				ePG	Pb	11 15 56.2	+0.6
TREC				eSG	Sb	11 16 26.4	+1.2
comp=Z,69nm,0.6s							
KRUC	Moravsky	2.56	176	ePn	Pn	11 15 55.2	+0.3
baz=358							
KRUC				eSg	Sb	11 16 31.9	+1.0
comp=Z,79nm,1.1s,baz=358							
TANN	Tannenbergstha	2.62	244	ePn	Pn	11 15 56.6	+0.8
TANN				eSg	Sg	11 16 37.3	+0.9
WERD	Werda	2.69	246	ePn	Pn	11 15 57.3	+0.5
WERD				eSg	Sg	11 16 40.2	+1.5
OJC	Ojcow	2.70	120	ePg	Pg	11 16 05.2	+1.3
OJC				eSg	Sg	11 16 39.7	+0.9
OJC	Ojcow	2.70	120	eSg	Sg	11 16 40.3	+1.5
NKC	Novy Kostel	2.72	241	ePN	Pn	11 15 58.2	+1.0
NKC				ePG	Pg	11 16 04.6	+0.3
NKC				eSG	Sg	11 16 41.1	+1.6
comp=Z,267nm,1.0s							
JAVC	Velka Javorina	2.92	160	ePn	Pn	11 15 59.9	-0.1
baz=342							
KHC	Kasperske Hory	2.98	215	ePN	Pn	11 16 00.0	-0.8
KHC				ePG	Pb	11 16 07.0	+0.8
KHC				eSN	Sn	11 16 34.5	-2.7
KHC				eSG	Sg	11 16 46.5	-1.4
MOX	Moxa	3.02	253	eSg	Sg	11 16 50.7	+1.6
CKRC	Cesky Krumlov	3.04	204	ePN	Pn	11 16 02.4	+0.9
CKRC				ePG	Pb	11 16 08.7	+1.6
CKRC				eSG	Sb	11 16 46.5	+1.8
comp=Z,47nm,0.6s							
MANZ	Manzenberg	3.04	239	ePn	Pn	11 16 02.8	+1.2
MANZ				eSg	Sg	11 16 50.8	+1.0
ROTZ	Rotzenmuhle	3.12	235	ePn	Pn	11 16 03.1	+0.5
ROTZ				eSg	Sg	11 16 50.5	-1.7
GEC2	GERESS Array S	3.19	211	ePn	Pn	11 16 05.0	+1.3
GEC2				eSg	Sg	11 16 54.1	-0.4
GERES	GERESS Array B	3.19	211	Pn	Pn	11 16 04.6	+1.0
comp=Z,0.2nm,0.3s,baz=30,slow=13,SNR=28							
GERES				Pg	Pg	11 16 12.5	-0.7
comp=Z,0.7nm,0.3s,baz=29,slow=16,SNR=37							
GERES				Lg	Lg	11 16 51.6	
comp=Z,0.6nm,0.3s,baz=28,slow=30,SNR=8.5							
comp=Z,4.1nm,0.4s							
WET	Wettzell	3.24	222	ePn	Pn	11 16 05.0	+0.7
MODS	Modra-Piesok	3.32	167	ePG	Pg	11 16 17.2	+1.4
MODS				eSG	Sg	11 16 59.1	+0.2
MODS				eLG	Lg	11 17 02.4	
NIE	Niedzica	3.44	128	ePg	Pg	11 16 20.4	+2.3
NIE				eSg	Sg	11 17 03.0	+0.4
BSD	Bornholm Skovb	3.59	349	*i* P	Pn	11 16 09.0	0.0
BSD				*i* S	Sn	11 16 52.2	+0.2
BSD				IAML		11 16 59.9	
comp=Z,1.3nm,0.2s							
CLZ	Clausthal	3.60	276	ePn	Pn	11 16 09.6	+0.3
GRF	Grafenberg Arr	3.68	240	eSg	Sg	11 17 10.7	+0.3
CONA	Conrad Observa	3.69	183	ePn	Pn	11 16 11.0	+0.5
comp=Z,0.3nm,0.1s							
CONA				*i* Sn	Sn	11 16 55.1	+0.3
comp=Z,40nm,0.8s							
RONA	Rosalia, Austr	3.92	179	*i* Pn	Pn	11 16 14.2	+0.6
comp=Z,1.8nm,0.7s							
RONA				Sg	Sg	11 17 19.5	+1.6
comp=Z,17nm,0.6s							
MOA	Molln	3.96	199	*i* Pn	Pn	11 16 14.6	+0.4

comp=Z,0.6nm,0.1s,SNR=14
MOA *e*Sg **Sg** 11 17 19.6 **+0.3**
comp=Z,0.9nm,0.1s
BIOA **Bad Ischl, Aus** **4.25 204** *i* Pn **Pn** 11 16 18.7 **+0.5**
comp=Z,0.1nm,0.1s
BIOA *e*Sn **Sn** 11 17 07.1 **-1.4**
comp=Z,23nm,0.6s
LUNU **Lund** **4.34 339** *i* P **Pn** 11 16 19.8 **+0.5**
LUNU *i* S **Sn** 11 17 08.5 **-2.1**
ARSA **Arzberg** **4.38 186** *i* Pn **Pn** 11 16 20.0 **-0.1**
comp=Z,4.0nm,1.0s
ARSA *e*Sn **Sn** 11 17 11.5 **-0.3**
comp=Z,17nm,0.6s
LESA **Schwarzleotal** **4.76 210** *i* Pn **Pn** 11 16 25.4 **+0.1**
comp=Z,0.4nm,0.2s
LESA *i* Sn **Sn** 11 17 19.6 **-1.6**
comp=Z,3.4nm,0.6s
BJUU **Bjuv** **4.84 339** *i* S **Sn** 11 17 20.7 **-2.2**
KBA **Koelnbreinsper** **4.89 203** *i* Pn **Pn** 11 16 28.0 **+0.8**
comp=Z,7.3nm,0.5s,SNR=11
KBA Sg **Sg** 11 17 48.9 **-0.4**
comp=Z,7.2nm,0.5s
SOKA **Soboth** **4.99 189** *e*Pg **Pg** 11 16 45.5 **-2.3**
comp=Z,3.0nm,0.9s
SOKA *e*Sg **Sg** 11 17 52.7 **+0.2**
comp=Z,17nm,1.0s
DEL **Delary** **5.05 345** *i* P **Pn** 11 16 29.1 **0.0**
DEL *i* S **Sn** 11 17 25.8 **-2.3**
OBKA **Obir** **5.21 192** *e*Pg **Pg** 11 16 51.8 **-0.3**
comp=Z,0.3nm,0.2s
OBKA *e*Sg **Sg** 11 18 02.2 **+2.6**
comp=Z,21nm,0.7s
WATA **Walderalm** **5.21 217** *e*Pn **Pn** 11 16 30.5 **-1.1**
comp=Z,3.7nm,0.3s,SNR=5.1
WATA *i* Sn **Sn** 11 17 30.7 **-1.8**
comp=Z,1.3nm,0.2s
MYKA **Terra Mystica** **5.25 199** *e*Sg **Sg** 11 18 01.3 **+0.5**
comp=Z,9.0nm,1.5s
WTTA **Wattenberg** **5.25 216** *i* Pn **Pn** 11 16 32.3 **+0.2**
comp=Z,5.9nm,0.7s
MOTA **Moosalm** **5.39 220** *i* Pn **Pn** 11 16 33.2 **-0.8**
comp=Z,1.1nm,0.2s
MOTA *i* Sn **Sn** 11 17 34.5 **-2.3**
comp=Z,0.2nm,0.2s
RETA **Reutte** **5.42 222** *i* Pn **Pn** 11 16 34.1 **-0.1**
comp=Z,0.9nm,0.6s
ABTA **Abfaltersbach** **5.42 208** *e*Sg **Sg** 11 18 07.0 **+0.7**
comp=Z,22nm,1.0s
SQTA **Sankt Quirin** **5.45 218** *i* Pn **Pn** 11 16 33.6 **-1.2**
comp=Z,0.2nm,0.1s
SQTA *i* Sn **Sn** 11 17 37.1 **-1.1**
comp=Z,0.8nm,0.3s
FETA **Feichten** **5.80 220** *e*Pn **Pn** 11 16 41.5 **+1.8**
comp=Z,1.7nm,0.5s
FETA *e*Sg **Sg** 11 18 17.6 **-0.9**
comp=Z,1.3nm,0.5s
DAVA **Damuels** **5.95 226** *e*Sg **Sg** 11 18 25.6 **+2.2**
comp=Z,3.6nm,0.6s
AKASG **Malin Array Be** **8.27 91** Pn **Pn** 11 17 11.5 **-1.8**
comp=Z,0.7nm,0.3s,baz=282,slow=12,SNR=4.4
comp=Z,1.8nm,0.7s
FINES **FINESS Array B** **11.26 25** Pn **Pn** 11 17 53.3 **-0.9**
comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=2.3
comp=Z,1.9nm,0.8s
EKA **Eskdalemuir Ar** **12.09 296** Pn **Pn** 11 18 05.0 **-0.5**
baz=104,slow=13

*SOME **07** 11:25:34.8, 39°.73N×74°.85E, h5km*
*KRNET **07** 11:25:36.0±0.1, 39°.83N×74°.93E, h25km, mb2.8*
*NNC **07** 11:25:37.1±1.5, 39°.72N×75°.27E, h0km, mb3.6, mpv3.1,*
Error ellipse: s-maj=80.9km s-min=10.1km az=96.0

ISC 07 11:25:34.0±2.6, 39.7N±0.1×74.91E±0.09, h10km, n10, σ0:90/17, 8C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.12**	**285**	⇑*e*P		**Pn**	**11 25 56.6**	**+0.5**
SFK				⇑*e*S		**Sn**	**11 26 11.8**	**+0.1**
SALK	**Salom-Alik**	**1.43**	**325**	⇑*e*P		**Pb**	**11 26 00.9**	**0.0**
SALK				⇑*e*S		**Sn**	**11 26 19.0**	**-0.2**
JNKS	**Jany-Kuch**	**1.44**	**22**	⇑*e*P		**Pn**	**11 26 00.8**	**+0.4**
JNKS				⇑*e*S		**Sn**	**11 26 18.8**	**-0.6**
NRN	**Naryn**	**1.90**	**25**	⇑*e*P		**Pn**	**11 26 07.9**	**+1.1**
NRN				⇑*e*S		**Sn**	**11 26 31.2**	**+0.2**
KST	**Kastek**	**3.41**	**13**	Pg		**Pg**	**11 26 38.2**	**-1.2**
	1.9nm,0.2s							
KST				Lg		Lg	11 27 23.9	
	8.4nm,0.7s							
KST	**Kastek**	**3.41**	**13**	*e*P		**Pg**	**11 26 38.2**	**-1.2**
	1.9nm,0.2s							
KST				*e*S		**Sg**	**11 27 23.9**	**+0.3**
	8.4nm,0.7s							
DGS	**Degeres**	**3.58**	**10**	Pg		**Pg**	**11 26 41.9**	**-0.6**
	5.4nm,0.5s							
DGS				Lg		Lg	11 27 29.8	
DGS	**Degeres**	**3.58**	**10**	*e*P		**Pg**	**11 26 41.9**	**-0.6**
	4.7nm,0.4s							
DGS				*e*S		**Sg**	**11 27 30.3**	**+1.4**
	4.9nm,0.6s							
KRBS	**Karabastau**	**4.01**	**8**	Pg		**Pg**	**11 26 49.6**	**-1.3**
	1.5nm,0.6s							
KRBS				Lg		Lg	11 27 43.3	
	3.7nm,0.5s							
KRBS	**Karabastau**	**4.01**	**8**	*e*P		**Pg**	**11 26 49.6**	**-1.3**
	1.5nm,0.6s							
KRBS				*e*S		**Sg**	**11 27 43.3**	**+0.5**
	3.7nm,0.5s							

IDC 07 11:34:39.4±5.4, 2°.69S×138°.53E, h0km, mb3.3/2, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=223.0km s-min=32.0km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.63**	**193**	P	P	Pn	11 38 46.4	-0.3
	0.1nm,0.3s,baz=15,slow=12,SNR=6.2							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**21.33**	**192**	P	P	P	11 39 28.3	+0.1
	0.7nm,0.8s,baz=12,slow=11,SNR=2.9							
	0.7nm,0.8s							
MKAR	**Makanchi Array**	**69.66**	**322**	P	P	P	11 45 51.0	+0.1
	0.3nm,0.6s,baz=102,slow=7.9,SNR=4.5							
	0.3nm,0.6s							

IDC 07 11:45:37.4±2.2, 4°.39N×123°.27E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=359.0km s-min=23.7km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.52**	**41**	Sn	Sn	Sn	11 47 10.9	-4.9
	47nm,0.3s,baz=266,slow=23,SNR=5.7							
WRA	**Warramunga Arr**	**26.52**	**156**	P	P	P	11 51 16.6	-0.3
	0.4nm,0.9s,baz=334,slow=9.9,SNR=1.7							
	0.4nm,0.9s							
ASAR	**Alice Springs**	**29.75**	**160**	P	P	P	11 51 46.2	+0.4
	0.2nm,0.9s,baz=343,slow=8.6,SNR=1.4							
	0.2nm,0.9s							
MKAR	**Makanchi Array**	**55.08**	**327**	P	P	P	11 55 11.8	+0.6
	0.4nm,0.4s,baz=122,slow=7.5,SNR=14							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**59.35**	**329**	P	P	P	11 55 40.2	-1.1
	0.5nm,0.3s,baz=128,slow=6.0,SNR=2.4							
	0.5nm,0.3s							

IDC 07 11:47:32.4±999.0, 51°.18N×49°.44E, h0km, Error ellipse: s-maj=758.6km s-min=130.2km az=94.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**5.51**	**95**	I	I	I	12 23 10.0	
	0.4nm,0.7s,baz=280,slow=296,SNR=4.7							
I46RU	**ZALESOVO INFRA**	**21.55**	**69**	I	I	I	13 57 00.0	
	baz=278,slow=304,SNR=1.0							
I34MN	**SONGINO INFRAS**	**36.37**	**72**	I	I	I	15 27 10.7	
	baz=302,slow=328							

*BKK **07** 11:50:40.1±0.6, 20°N±2°×10°1E±°, h1km, M3.5/7,*
Mjma3.3/7, ML3.5/7, MLv3.5/7
*IDC **07** 11:50:41.2±1.6, 19°.42N×101°.31E, h0km, mb3.4/3,*
mbtmp3.4/4, ML3.4/1, MS2.5/1, Error ellipse: s-maj=20.5km
s-min=19.0km az=111.0

ISC 07 11:50:46.7±1.4, 19°.5N±0°.2×101°.2E±0°.2, h35km, n7, σ0:74/6, mb3.5/3, Laos

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PAYA	**Payao**	**1.22**	**262**	P	P	**Pn**	**11 51 07.6**	**+0.3**
CMAI	**Chiengmai2**	**2.02**	**282**	P	P	**Pn**	**11 51 18.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**2.34**	**243**	Pn	P	**Pn**	**11 51 22.3**	**-0.4**
	2.4nm,0.3s,baz=66,slow=13,SNR=20							
CMAR				Lg		Lg	11 51 59.0	
	13nm,0.3s,baz=68,slow=31,SNR=6.3							
	4.7nm,0.3s							
MKAR	**Makanchi Array**	**31.28**	**335**	P	P	**P**	**11 57 04.0**	**+0.6**
	0.3nm,0.8s,baz=147,slow=9.1,SNR=2.9							
	0.3nm,0.8s							
ZALV	**Zalesovo Beam**	**36.58**	**344**	P	P	**P**	**11 57 48.3**	**-0.9**
	0.3nm,0.3s,baz=157,slow=7.8,SNR=3.6							
	0.3nm,0.3s							
KLR	**Kul'dur**	**38.46**	**32**	LR	LR	LR	12 17 32.1	
	comp=Z,6.9nm,19.3s,baz=150,slow=42							
ASAR	**Alice Springs**	**53.51**	**142**	P	P	**P**	**12 00 04.4**	**+0.3**
	0.5nm,0.9s,baz=315,slow=10,SNR=2.5							
	0.5nm,0.9s							

*JMA **07** 11:57:38.9±0.1, 24°.2N±0°.5×122°.2E±0°.2, h55km±1km,*
MD4.1/18, MV4.2/18, TAIWAN REGION
*IDC **07** 11:57:40.0±2.6, 24°.34N×122°.32E, h64km±25km, mb3.5/13,*
mbtmp3.8/17, ML3.8/4, MS3.1/1, Error ellipse:
s-maj=17.2km s-min=13.7km az=56.0
*ASIES **07** 11:57:39.5, 24°.30N×122°.13E, h50km, Mw4.0, Fault plane*
solution: NP1:φ±241.00000°, δ56.00000°, λ.149.00000°.
NP2:φ±350.00000°, δ65.00000°, λ.39.00000°.
*NEIC **07** 11:57:39.0±0.7, 24°.22N±0°.05×122°.17E±0°.03, h54km±7km,*
mb4.0/7, Error ellipse: s-maj=7.4km s-min=3.9km
az=162.0
*TAP **07** 11:57:39.2, 24°.30N×122°.09E, h58km, ML4.8, B*

ISC 07 11:57:38.8±0.6, 24°.30N±0°.02×122°.15E±0°.02, h55km±4km, n227, σ1°45/366, mb3.9/18, 33C-54D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.14**	**33**	⇑*i*P		**Pn**	**11 57 47.9**	**+0.6**
EOS2				*i* S		**Sn**	**11 57 54.6**	**+1.3**
EOS3	**EOS3**	**0.15**	**95**	⇑*i*P		**Pn**	**11 57 47.9**	**+0.7**
EOS3				*i* S		**Sn**	**11 57 54.2**	**+0.8**
EOS4	**EOS4**	**0.24**	**139**	⇑*i*P		**Pn**	**11 57 47.7**	**+0.2**
EOS4				S		**Sn**	**11 57 53.8**	**+0.1**
EWUT	**Wuta**	**0.37**	**293**	⇓P		**Pn**	**11 57 49.3**	**+0.3**
EWUT				S		**Sn**	**11 57 56.2**	**-0.1**
EHP	**Heping Village**	**0.37**	**272**	*e*P		**Pn**	**11 57 49.4**	**+0.3**
EHP				S		**Sn**	**11 57 57.0**	**+0.6**
EAHA	**Aohua**	**0.37**	**274**	⇓P		**Pn**	**11 57 49.4**	**+0.4**
EAHA				*e*S		**Sn**	**11 57 57.4**	**+0.9**
TWC	**Suao**	**0.41**	**318**	⇑*i*P		**Pn**	**11 57 49.8**	**+0.4**
TWC				S		**Sn**	**11 57 56.9**	**-0.2**
ETL	**Fush Village**	**0.50**	**254**	*i* P		**Pn**	**11 57 50.5**	**+0.1**
ETL				S		**Sn**	**11 57 58.9**	**+0.1**
NDS	**Dongshan**	**0.52**	**310**	⇓*i*P		**Pn**	**11 57 50.6**	**+0.1**
NDS				*i* S		**Sn**	**11 57 58.8**	**-0.3**
NACB	**Ninganchiao**	**0.52**	**256**			**Pn**	**11 57 50.6**	**0.0**
NACB				Sn		**Sn**	**11 57 59.1**	**0.0**
NACB	**Ninganchiao**	**0.52**	**256**	S		**Sn**	**11 57 59.5**	**+0.3**
NACB	**Ninganchiao**	**0.52**	**256**	P		**Pn**	**11 57 50.7**	**0.0**
NACB	**Ninganchiao**	**0.52**	**256**	S		**Sn**	**11 57 59.8**	**+0.6**
NACB	**Ninganchiao**	**0.52**	**256**	⇓P		**Pn**	**11 57 50.6**	**0.0**
NACB				S		**Sn**	**11 57 59.9**	**-0.3**
TWD	**Chiawan**	**0.55**	**247**	⇓*i*P		**Pn**	**11 57 51.0**	**0.0**
TWD				*i* S		**Sn**	**11 57 59.9**	**+0.1**
EGS		**0.58**	**340**	⇑P		**Pn**	**11 57 51.9**	**+0.6**
EGS				S		**Sn**	**11 58 01.3**	**+1.0**
ILA	**Ilan**	**0.59**	**322**	P		**Pn**	**11 57 51.2**	**-0.2**
ILA				S		**Sn**	**11 58 01.5**	**+0.9**
HWA	**Hwalien**	**0.59**	**237**	⇓*i*P		**Pn**	**11 57 51.9**	**+0.4**
HWA				S		**Sn**	**11 58 01.5**	**+0.9**
TWE	**Neicheng**	**0.61**	**314**	⇓*i*P		**Pn**	**11 57 52.6**	**+1.0**
TWE				S		**Sn**	**11 58 01.4**	**+0.4**
LATG	**Datong**	**0.61**	**293**	⇓*i*P		**Pn**	**11 57 52.4**	**+0.6**
LATG				S		**Sn**	**11 58 02.0**	**+0.7**
ETLH	**Xiulin Townshi**	**0.61**	**261**	⇓*i*P		**Pn**	**11 57 52.0**	**+0.2**
ETLH				S		**Sn**	**11 58 01.5**	**+0.2**
NTC	**Toucheng**	**0.62**	**332**	P		**Pn**	**11 57 53.0**	**+1.1**
NTC				S		**Sn**	**11 58 02.6**	**+1.3**
ENTT	**Nioudou**	**0.63**	**303**	⇓*i*P		**Pn**	**11 57 52.9**	**+0.9**
ENTT				*e*S		**Sn**	**11 58 02.4**	**+0.9**
TEYL	**Yanliau Villag**	**0.66**	**230**	⇑P		**Pn**	**11 57 52.5**	**+0.1**
TEYL				S		**Sn**	**11 58 02.0**	**-0.1**
ETM	**Tongmen**	**0.69**	**241**	⇓P		**Pn**	**11 57 52.7**	**+0.1**
ETM				S		**Sn**	**11 58 02.6**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.69**	**312**	⇓*i*P		**Pn**	**11 57 53.8**	**+1.1**
FUSB				S		**Sn**	**11 58 03.7**	**+0.9**
NNSB	**Datong**	**0.71**	**280**	⇓P		**Pn**	**11 57 53.6**	**+0.6**
NNSB				S		**Sn**	**11 58 03.7**	**+0.3**
TWB1	**Santiao Chiao**	**0.72**	**348**	⇑*i*P		**Pn**	**11 57 53.3**	**+0.3**
TWB1				S		**Sn**	**11 58 03.3**	**-0.1**
NNS	**Nan Shan**	**0.72**	**281**	⇓P		**Pn**	**11 57 53.7**	**+0.5**
NNS				S		**Sn**	**11 58 03.9**	**+0.2**
LXIB	**Xiulin Townshi**	**0.73**	**248**	⇓*i*P		**Pn**	**11 57 53.3**	**0.0**
LXIB				S		**Sn**	**11 58 03.4**	**-0.4**
TIPB	**Shuangxi**	**0.73**	**336**	⇑P		**Pn**	**11 57 53.8**	**+0.6**
TIPB				S		**Sn**	**11 58 04.3**	**+0.6**
SHUL	**Shoufeng**	**0.74**	**226**	⇑*i*P		**Pn**	**11 57 53.6**	**+0.4**
SHUL				S		**Sn**	**11 58 04.3**	**+0.5**
JYNG	**Yonagunijimaku**	**0.74**	**78**	P		**Pn**	**11 57 53.8**	**+0.5**
JYNG				A		A	11 57 53.8	
	comp=N,19nm,1.6s,comp=E,21nm,1.3s							
JYNG				S		**Sn**	**11 58 04.2**	**+0.3**
NWLT	**Wulai**	**0.76**	**309**	⇓*i*P		**Pn**	**11 57 54.7**	**+1.1**
NWLT				S		**Sn**	**11 58 05.1**	**+0.8**
YHNB	**Yeheng**	**0.79**	**298**			**Pn**	**11 57 55.1**	**+1.0**
YHNB	**Yeheng**	**0.79**	**298**	P		**Pn**	**11 57 54.7**	**+0.6**
YHNB	**Yeheng**	**0.79**	**298**	S		**Sn**	**11 58 06.0**	**+0.8**
YHNB	**Yeheng**	**0.79**	**298**	P		**Pn**	**11 57 55.1**	**+1.0**
YHNB	**Yeheng**	**0.79**	**298**	S		**Sn**	**11 58 06.6**	**+1.4**
YHNB	**Yeheng**	**0.79**	**298**	⇓P		**Pn**	**11 57 55.1**	**+1.0**
YHNB				*e*S		**Sn**	**11 58 05.9**	**+0.6**
YOJ	**Yonaguni jima**	**0.80**	**78**	P		**Pn**	**11 57 54.5**	**+0.4**
YOJ				Sn		**Sn**	**11 58 05.3**	**0.0**
YOJ	**Yonaguni jima**	**0.80**	**78**	P		**Pn**	**11 57 54.7**	**+0.6**
YOJ	**Yonaguni jima**	**0.80**	**78**	S		**Sn**	**11 58 06.1**	**+0.8**
YOJ	**Yonaguni jima**	**0.80**	**78**	P		**Pn**	**11 57 54.9**	**+0.8**
YOJ	**Yonaguni jima**	**0.80**	**78**	S		**Sn**	**11 58 05.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.80**	**78**	P		**Pn**	**11 57 54.5**	**+0.4**
YOJ				A		A	11 57 54.5	
	comp=N,13nm,1.5s,comp=E,15nm,1.1s							
YOJ				S		**Sn**	**11 58 05.8**	**+0.6**
YOJ	**Yonaguni jima**	**0.80**	**78**	⇓P		**Pn**	**11 57 54.5**	**+0.4**
YOJ				S		**Sn**	**11 58 05.2**	**-0.1**
TEGC	**Jichi Village**	**0.81**	**223**	P		**Pn**	**11 57 54.5**	**+0.3**
TEGC				S		**Sn**	**11 58 05.8**	**+0.3**
NSK	**Sanguang**	**0.81**	**298**	⇓P		**Pn**	**11 57 55.2**	**+0.9**
NSK				*e*S		**Sn**	**11 58 06.6**	**+1.0**
ESL	**Shilin**	**0.81**	**234**	⇑*i*P		**Pn**	**11 57 54.1**	**-0.1**
ESL				*e*S		**Sn**	**11 58 05.5**	**0.0**
WHF	**Hehuan Shan**	**0.82**	**259**	⇓P		**Pn**	**11 57 55.2**	**+0.4**
WHF				*e*S		**Sn**	**11 58 06.2**	**-0.2**
FUSS	**Fushou**	**0.83**	**267**	*e*P		**Pn**	**11 57 55.4**	**+0.8**
FUSS				*e*S		**Sn**	**11 58 07.2**	**+1.0**
SXI1	**Grass Mountain**	**0.83**	**343**	⇑*i*P		**Pn**	**11 57 55.0**	**+0.5**
SXI1				S		**Sn**	**11 58 05.8**	**-0.2**
NWF	**Wu-fen Shan**	**0.84**	**337**	⇑P		**Pn**	**11 57 55.4**	**+0.8**
NWF				S		**Sn**	**11 58 06.5**	**+0.3**
WFSB	**Wu-fen Shan**	**0.84**	**337**	⇑*i*P		**Pn**	**11 57 55.4**	**+0.9**
WFSB				*e*S		**Sn**	**11 58 06.7**	**+0.6**
TWA	**Mucha**	**0.85**	**323**	⇓P		**Pn**	**11 57 56.0**	**+1.3**
TWA				*e*S		**Sn**	**11 58 07.5**	**+1.1**
NHDH	**Xindian Distri**	**0.87**	**319**	⇓P		**Pn**	**11 57 56.5**	**+1.6**
NHDH				*e*S		**Sn**	**11 58 08.7**	**+1.8**
TWT	**Tachien**	**0.89**	**267**	⇓P		**Pn**	**11 57 56.6**	**+1.2**
TWT				*e*S		**Sn**	**11 58 08.7**	**+1.2**
TATO	**Taipei**	**0.90**	**318**			**Pn**	**11 57 56.6**	**+1.3**
TATO	**Taipei**	**0.90**	**318**	P		**Pn**	**11 57 56.8**	**+1.4**
TATO	**Taipei**	**0.90**	**318**	S		**Sn**	**11 58 08.8**	**+1.2**
NHY	**Taipei**	**0.91**	**325**	*e*P		**Pn**	**11 57 56.7**	**+1.3**
NHY				S		**Sn**	**11 58 09.0**	**+1.4**
TDCB	**Techi**	**0.91**	**267**	⇓P		**Pn**	**11 57 56.6**	**+1.1**
TDCB				*e*S		**Sn**	**11 58 07.7**	**-0.2**
WARBT	**Fenglin Townsh**	**0.91**	**230**	⇑P		**Pn**	**11 57 55.3**	**-0.2**
WARBT				*e*S		**Sn**	**11 58 07.1**	**-0.6**
EGFH	**Guangfu**	**0.91**	**226**	*e*P		**Pn**	**11 57 55.8**	**+0.3**
EGFH				*e*S		**Sn**	**11 58 07.5**	**-0.2**
TNOU	**National Taiwa**	**0.91**	**338**	⇑P		**Pn**	**11 57 55.9**	**+0.4**
TNOU				S		**Sn**	**11 58 07.8**	**0.0**
TAP	**Taipei**	**0.94**	**322**	⇓P		**Pn**	**11 57 57.0**	**+1.2**
TAP				*e*S		**Sn**	**11 58 09.7**	**+1.3**
OWD	**Renai**	**0.95**	**249**	⇓P		**Pn**	**11 57 56.6**	**+0.4**
OWD				*e*S		**Sn**	**11 58 08.6**	**-0.4**
WUSB	**Renai**	**0.99**	**252**	⇓P		**Pn**	**11 57 57.4**	**+0.8**
WUSB				*e*S		**Sn**	**11 58 10.4**	**+0.5**
YM01	**YM01**	**0.99**	**328**	P		**Pn**	**11 57 57.3**	**+0.7**
YM01				*e*S		**Sn**	**11 58 10.3**	**+0.6**
NFF	**Wufeng Townshi**	**0.99**	**290**	*e*P		**Pn**	**11 57 58.1**	**+1.4**
NFF				*e*S		**Sn**	**11 58 12.0**	**+2.2**
KSHI	**Guanxi Townshi**	**1.00**	**298**	⇓P		**Pn**	**11 57 58.5**	**+1.8**
KSHI				*e*S		**Sn**	**11 58 12.6**	**+2.6**
ZUZH	**Zhuzihu**	**1.02**	**328**	⇓P		**Pn**	**11 57 57.7**	**+0.7**
ZUZH				*e*S		**Sn**	**11 58 10.6**	**+0.2**
YM08	**YM08**	**1.02**	**330**	⇑P		**Pn**	**11 57 57.3**	**+0.3**
YM08				*e*S		**Sn**	**11 58 09.7**	**-0.7**
TWS1	**Kuangyinshan**	**1.04**	**320**	⇓P		**Pn**	**11 57 58.6**	**+1.4**
TWS1				S		**Sn**	**11 58 12.4**	**+1.7**
HGSD	**Ruisui**	**1.04**	**220**	⇑P		**Pn**	**11 57 57.2**	**-0.1**
HGSD				*e*S		**Sn**	**11 58 11.4**	**+0.5**
ANP	**Anpu**	**1.05**	**327**	P		**Pn**	**11 57 57.9**	**+0.5**
ANP				*e*S		**Sn**	**11 58 11.5**	**+0.3**
NTST	**Danshui**	**1.07**	**324**	⇓P		**Pn**	**11 57 58.8**	**+1.2**
NTST				*e*S		**Sn**	**11 58 12.8**	**+1.3**
VWDT	**VWDT**	**1.07**	**240**	⇓P		**Pn**	**11 57 58.5**	**+0.9**
VWDT				S		**Sn**	**11 58 12.0**	**+0.5**
LIOB	**Emei**	**1.09**	**289**	⇓P		**Pn**	**11 57 59.6**	**+1.7**
LIOB				*e*S		**Sn**	**11 58 14.2**	**+2.6**
TWY	**Chenhua**	**1.09**	**333**	*e*P		**Pn**	**11 57 58.9**	**+1.0**
TWY				*e*S		**Sn**	**11 58 12.8**	**+0.8**
EHY	**Hungye**	**1.09**	**224**	⇑*i*P		**Pn**	**11 57 57.6**	**-0.3**
EHY				*e*S		**Sn**	**11 58 08.5**	**-3.6**
NSTT	**Nanjuang**	**1.10**	**288**	⇓P		**Pn**	**11 57 59.6**	**+1.6**
NSTT				*e*S		**Sn**	**11 58 13.9**	**+1.7**
WHP	**Taichung City**	**1.10**	**269**	⇓P		**Pn**	**11 57 59.8**	**+1.8**
WHP				*e*S		**Sn**	**11 58 13.6**	**+1.3**
NCU	**National Centr**	**1.10**	**308**	⇓P		**Pn**	**11 57 57.3**	**-0.7**
NCU				*e*S		**Sn**	**11 58 12.5**	**+0.3**
NCUH	**Zhongli**	**1.10**	**307**	*e*P		**Pn**	**11 57 59.2**	**+1.2**
NCUH				*e*S		**Sn**	**11 58 13.3**	**+1.1**
WCS	**Beigang Elemen**	**1.16**	**258**	*e*P		**Pn**	**11 58 00.1**	**+1.3**
WCS				*e*S		**Sn**	**11 58 15.1**	**+1.5**
SBCB	**Hsinchu**	**1.17**	**295**	⇑P		**Pn**	**11 58 00.2**	**+1.3**
ECBN	**Changbin**	**1.17**	**213**	⇑P		**Pn**	**11 57 58.9**	**0.0**
ECBN				S		**Sn**	**11 58 13.1**	**-0.8**
HSN	**Hsinchu**	**1.18**	**295**	⇑*i*P		**Pn**	**11 58 00.0**	**+0.9**
YULB	**Yu-li**	**1.19**	**221**			**Pn**	**11 57 58.9**	**-0.3**
YULB	**Yu-li**	**1.19**	**221**	P		**Pn**	**11 57 59.0**	**-0.3**
YULB	**Yu-li**	**1.19**	**221**	P		**Pn**	**11 57 59.2**	**-0.1**
YULB	**Yu-li**	**1.19**	**221**	⇑*i*P		**Pn**	**11 57 58.9**	**-0.3**
YULB				*e*S		**Sn**	**11 58 10.6**	**-3.9**
SSLB	**Suanglung**	**1.21**	**245**			**Pn**	**11 58 00.3**	**+0.8**
SSLB	**Suanglung**	**1.21**	**245**	P		**Pn**	**11 58 00.3**	**+0.8**
SSLB	**Suanglung**	**1.21**	**245**	P		**Pn**	**11 58 01.3**	**+1.9**
SSLB	**Suanglung**	**1.21**	**245**	⇓P		**Pn**	**11 58 00.2**	**+0.8**
SSLB				*e*S		**Sn**	**11 58 14.7**	**-0.1**
SMLT	**Sun Moon Lake**	**1.21**	**250**	⇓P		**Pn**	**11 58 00.8**	**+1.1**
SMLT				*e*S		**Sn**	**11 58 16.0**	**+0.8**
TWF1	**Yuli**	**1.22**	**220**	⇑*i*P		**Pn**	**11 57 59.5**	**-0.2**
TYC	**Yuchr**	**1.24**	**252**	⇓P		**Pn**	**11 58 01.1**	**+1.2**
TYC				*e*S		**Sn**	**11 58 16.3**	**+0.6**
TWQ1	**Liyutan**	**1.25**	**272**	⇓P		**Pn**	**11 58 01.9**	**+1.8**
TWQ1				*e*S		**Sn**	**11 58 17.8**	**+2.8**
NMLH	**Miaoli**	**1.26**	**281**	*e*P		**Pn**	**11 58 02.0**	**+1.9**
NMLH				*e*S		**Sn**	**11 58 18.2**	**+2.1**
NSY	**Sanyi**	**1.27**	**275**	P		**Pn**	**11 58 02.1**	**+1.8**
NSY				*e*S		**Sn**	**11 58 18.9**	**+2.5**
CHKH	**Chenggong**	**1.30**	**212**	*e*P		**Pn**	**11 58 00.3**	**-0.4**
CHKH				*e*S		**Sn**	**11 58 15.8**	**-1.3**
PCYT	**Pengchaiyu**	**1.32**	**357**	⇓P		**Pn**	**11 58 01.6**	**+0.6**
PCYT				*e*S		**Sn**	**11 58 18.1**	**+0.4**
WHYT	**Xinyi Township**	**1.33**	**243**	*e*P		**Pn**	**11 58 02.8**	**+1.7**
WHYT				*e*S		**Sn**	**11

MASBT	**Mashibuluo**	**2.18**	**220**	*eP*		**Pn**	**11 58 13.8**	**+1.1**
MASBT				eS		**Sn**	**11 58 41.2**	**+2.6**
SGLT	**Jiouru**	**2.19**	**224**	*eP*		**Pn**	**11 58 16.8**	**+4.0**
SGLT				eS		**Sn**	**11 58 42.5**	**+3.9**
TSCK	**Chigu Township**	**2.21**	**239**	*eP*		**Pn**	**11 58 14.8**	**+1.7**
TSCK				eS		**Sn**	**11 58 41.4**	**+2.1**
TAW	**Tawu**	**2.25**	**211**	*eS*		**Sn**	**11 58 38.8**	**-1.4**
EAST	**Anshuo**	**2.25**	**212**	*eP*		**Pn**	**11 58 13.3**	**-0.3**
LAY	**Lan-yu**	**2.32**	**194**	*eP*		**Pn**	**11 58 13.6**	**-1.0**
LYUB	**Lan-yu**	**2.35**	**193**	*eP*		**Pn**	**11 58 13.3**	**-1.6**
JTJ	**Tarama**	**2.35**	**81**	P		**Pn**	**11 58 15.8**	**+0.8**
JTJ				eS		**Sn**	**11 58 43.4**	**+0.7**
SCZT	**Fangliau**	**2.38**	**216**	*eP*		**Pn**	**11 58 16.5**	**+1.1**
SCZT				eS		**Sn**	**11 58 45.2**	**+1.8**
PNG	**Penghu**	**2.48**	**253**	*eP*		**Pn**	**11 58 16.9**	**+0.1**
PNG				eS		**Sn**	**11 58 45.6**	**-0.3**
PHUB	**P'eng-hu**	**2.48**	**252**	*eP*		**Pn**	**11 58 17.2**	**+0.4**
PHUB				eS		**Sn**	**11 58 45.0**	**-1.0**
WDGT	**Dungji**	**2.50**	**246**	*eP*		**Pn**	**11 58 17.5**	**+0.4**
WDGT				eS		**Sn**	**11 58 46.7**	**+0.3**
VWUC	**VWUC**	**2.55**	**286⇓**	*eP*		**Pn**	**11 58 17.9**	**+0.2**
VWUC				eS		**Sn**	**11 58 45.1**	**-2.4**
SMST	**Manzhou Townsh**	**2.57**	**208**	*eP*		**Pn**	**11 58 18.2**	**+0.2**
SMST				eS		**Sn**	**11 58 47.1**	**-1.0**
HEN	**Hengchun**	**2.63**	**210**	*eP*		**Pn**	**11 58 20.0**	**+1.2**
TSEB	**Hengchuen, Pin**	**2.65**	**206**	*eS*		**Sn**	**11 58 50.5**	**+0.4**
TWKBT	**Hengchun**	**2.65**	**208⇑**	*eP*		**Pn**	**11 58 19.4**	**+0.3**
TWKBT				eS		**Sn**	**11 58 50.4**	**+0.3**
TWK1	**Hengchun**	**2.65**	**208**	*eP*		**Pn**	**11 58 19.6**	**+0.5**
MATB	**Ma-tsu**	**2.72**	**313⇓**	*eP*		**Pn**	**11 58 20.0**	**+0.1**
MATB				eS		**Sn**	**11 58 50.4**	**-1.2**
VCHM	**Qimei**	**2.72**	**247**	*eP*		**Pn**	**11 58 20.8**	**+0.8**
VCHM				eS		**Sn**	**11 58 50.9**	**-0.8**
JIRB	**Irabujima**	**2.80**	**79**	*eP*		**Pn**	**11 58 22.1**	**+1.0**
JIRB				S		**Sn**	**11 58 54.3**	**+0.5**
JIKM	**Ikemajima**	**2.89**	**77**	P		**Pn**	**11 58 23.6**	**+1.3**
JIKM				eS		**Sn**	**11 58 56.6**	**+0.8**
JMJ	**Miyako jima 2**	**2.91**	**79**	P		**Pn**	**11 58 25.1**	**+2.5**
JMJ2	**Miyako jima3**	**2.93**	**81**	*eP*		**Pn**	**11 58 24.4**	**+1.5**
JMJ2				eS		**Sn**	**11 58 57.9**	**+1.0**
JOGS	**Gusukube**	**3.00**	**81**	P		**Pn**	**11 58 25.5**	**+1.6**
JOGS				eS		**Sn**	**11 58 59.8**	**+1.1**
LYJJ	**Jianjiangzhen**	**3.11**	**317⇓**	*eP*		**Pn**	**11 58 25.5**	**+0.2**
LYJJ				eS		**Sn**	**11 59 00.1**	**-1.2**
XPSS	**Dashiqiu**	**3.16**	**326⇓**	*eP*		**Pn**	**11 58 26.5**	**+0.4**
XPSS				eS		**Sn**	**11 59 01.7**	**-0.8**
MHZQ	**Yeshan**	**3.34**	**303⇓**	*eP*		**Pn**	**11 58 28.3**	**-0.3**
MHZQ				eS		**Sn**	**11 59 05.3**	**-1.8**
KNM	**Kinmen**	**3.39**	**273**	*eP*		**Pn**	**11 58 31.1**	**+1.9**
KNM				eS		**Sn**	**11 59 07.2**	**-1.0**
KNMB	**Chin-men Tao**	**3.43**	**273**			**Pn**	**11 58 29.7**	**-0.1**
KNMB	**Chin-men Tao**	**3.43**	**273**	⇓P		**Pn**	**11 58 29.7**	**-0.1**
KNMB				eS		**Sn**	**11 59 06.2**	**-3.1**
AXDP	**Jialang**	**3.85**	**280⇓**	*eP*		**Pn**	**11 58 35.8**	**+0.3**
AXDP				eS		**Sn**	**11 59 16.7**	**-2.8**
ZPLA	**Ao Xicun**	**4.04**	**266**	*eP*		**Pn**	**11 58 38.3**	**+0.3**
ZPLA				eS		**Sn**	**11 59 21.8**	**-2.3**
DSXP	**Dongshan**	**4.36**	**263**	⇓P		**Pn**	**11 58 42.6**	**+0.1**
DSXP				eS		**Sn**	**11 59 29.2**	**-2.8**
SXFK	**Yanhouchang**	**4.58**	**298**	*eP*		**Pn**	**11 58 45.1**	**-0.4**
SXFK				eS		**Sn**	**11 59 34.2**	**-3.3**
JOW	**Kunigami**	**6.08**	**64**	P		**Pn**	**11 59 05.7**	**-0.5**
	comp=E,15nm,0.3s,baz=177,slow=11,SNR=44							
JOW				S		**Sn**	**12 00 11.1**	**-3.3**
	comp=E,7.5nm,0.2s,baz=320,slow=12,SNR=1.0							
	comp=E,27nm,0.3s							
JOW	**Kunigami**	**6.08**	**64**			**Pn**	**11 59 06.0**	**-0.1**
JOW	**Kunigami**	**6.08**	**64**	P		**Pn**	**11 59 05.8**	**-0.3**
CNSH	**ChangSha**	**9.13**	**297**	P		**Pn**	**11 59 48.5**	**+0.6**
CNSH				S		**Sn**	**12 01 26.6**	**-2.6**
CNSH				smax	smax			
	comp=N,58nm,1.1s							
CNSH				smax	smax			
	comp=E,54nm,1.3s							
JNU	**Nakatsue**	**11.65**	**39**	P		**Pn**	**12 00 21.2**	**-1.2**
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=1.7							
	comp=E,3.5nm,0.7s							
KSRS	**Korea Array**	**14.01**	**19**	P		**Pn**	**12 00 55.0**	**+0.5**
	comp=E,0.4nm,0.3s,baz=194,slow=11,SNR=11							
	comp=E,0.6nm,0.4s							
LZDM	**Lanzhou Array**	**19.70**	**310**	P		**Pn**	**12 02 07.0**	**+1.2**
	baz=139,slow=12							
	comp=E,0.7nm,0.3s							
XLT	**XiLinHaoTe**	**20.17**	**347**	*eP*		Pn	12 02 13.3	+2.2
XLT				pP		sP	12 02 26.6	-1.3
XLT				pmax	pmax			
	comp=Z,3.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**22.36**	**259**	P		**P**	**12 02 34.1**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=64,slow=8.7,SNR=5.0							
	comp=Z,0.5nm,0.5s							
GUMO	**Guam**	**23.95**	**112**	LR		LR	12 11 08.3	
	comp=Z,42nm,20.4s,baz=193,slow=34							
SONM	**Songino Array**	**26.61**	**336**	P		**P**	**12 03 13.1**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=150,slow=10,SNR=12							
	comp=Z,1.3nm,0.4s							
SONM	**Songino Array**	**26.61**	**336**	P		**P**	**12 03 12.9**	**+0.8**
SONM				IAmb		IAmb	12 03 13.4	
	comp=Z,1.7nm,0.8s							
MKAR	**Makanchi Array**	**38.87**	**315**	P		**P**	**12 04 59.5**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=100,slow=9.4,SNR=18							
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**38.87**	**315**	P		**P**	**12 04 58.8**	**+0.1**
ZALV	**Zalesovo Beam**	**40.63**	**327**	P		**P**	**12 05 12.6**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=116,slow=10,SNR=3.8							
	comp=Z,1.1nm,0.4s							
H11N1	**WAKE ISLAND Hy**	**41.60**	**87**	T		T	12 51 06.8	
	baz=283							
H11N2	**WAKE ISLAND Hy**	**41.60**	**87**	T		T	12 51 01.9	
	baz=283							
H11N3	**WAKE ISLAND Hy**	**41.62**	**87**	T		T	12 51 05.0	
	baz=283							
H11S3	**WAKE ISLAND Hy**	**41.74**	**89**	T		T	12 51 09.5	
	baz=284							
H11S1	**WAKE ISLAND Hy**	**41.74**	**89**	T		T	12 51 06.7	
	baz=284							
H11S2	**WAKE ISLAND Hy**	**41.75**	**89**	T		T	12 51 06.7	
	baz=284							
KURK	**Kurchatov**	**42.57**	**320**	P		**P**	**12 05 29.4**	**+0.3**
KURK				IAmb		IAmb	12 05 29.5	
	comp=Z,1.8nm,0.9s							
KURBB	**Kurchatov Array**	**42.59**	**320**	P		**P**	**12 05 29.8**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=108,slow=10,SNR=4.4							
	comp=Z,0.4nm,0.6s							
COEN	**Coen**	**43.22**	**149**	P		**P**	**12 05 33.6**	**-1.2**
COEN				IAmb		IAmb	12 05 42.0	
	comp=Z,4.1nm,1.0s							
WB0	**Warramunga Arr**	**45.40**	**164**	P		**P**	**12 05 51.2**	**-0.9**
WB0				IAmb		IAmb	12 05 59.0	
	comp=Z,3.0nm,1.1s							
WRA	**Warramunga Arr**	**45.55**	**164**	P		**P**	**12 05 53.6**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=346,slow=8.6,SNR=15							
	comp=Z,2.2nm,0.8s							
WRA	**Warramunga Arr**	**45.55**	**164**	P		**P**	**12 05 51.6**	**-1.8**
WR8	**Warramunga Arr**	**45.60**	**164**	P		**P**	**12 05 53.8**	**+0.1**
BVAR	**Borovoye Array**	**48.14**	**320**	P		**P**	**12 06 13.4**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=101,slow=7.5,SNR=4.1							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**49.03**	**166**	P		**P**	**12 06 20.7**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=340,slow=7.4,SNR=9.0							
	comp=Z,0.8nm,0.8s							
ASAR	**Alice Springs**	**49.03**	**166**	P		**P**	**12 06 19.4**	**-0.9**
STKA	**Stephens Creek**	**58.88**	**161**	P		**P**	**12 07 31.7**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=310,slow=10,SNR=3.2							
	comp=Z,1.7nm,0.7s							
ILAR	**Eielson Array**	**68.71**	**27**	P		**P**	**12 08 37.1**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=293,slow=8.7,SNR=13							
	comp=Z,0.3nm,0.7s							
SPITS	**Spitsbergen Ar**	**69.56**	**348**	P		**P**	**12 08 40.7**	**-0.7**
	comp=Z,25nm,1.1s,baz=351,slow=10,SNR=3.6							
FINES	**FINESS Array B**	**71.79**	**330**	P		**P**	**12 08 55.6**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=51,slow=6.4,SNR=1.7							
	comp=Z,1.5nm,0.8s							
FINES	**FINESS Array B**	**71.79**	**330**	P		**P**	**12 08 55.5**	**+0.3**
BARN	**Barnard Glacie**	**71.96**	**31**	P		**P**	**12 08 56.8**	**+0.3**
BARN				IAmb		IAmb	12 09 15.6	
	comp=Z,4.0nm,1.2s							
YKA	**Yellowknife Ar**	**82.52**	**23**	P		**P**	**12 09 54.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=316,slow=5.6,SNR=9.9							
	comp=Z,0.4nm,0.7s							
NVAR	**Mina Array Bea**	**95.75**	**43**	P		**P**	**12 10 57.3**	**-2.1**
	comp=Z,0.3nm,0.6s,baz=315,slow=3.9,SNR=2.4							
	comp=Z,0.3nm,0.6s							

IDC 07 12:07:02.1±999.0, 51°.03N×43°.26E, h0km, Error ellipse: s-maj=1589.0km s-min=224.8km az=84.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**9.40**	**88**	I	I	13 06 50.0	
	0.4nm,0.7s,baz=278,slow=300,SNR=4.1						
I46RU	**ZALESOVO INFRA**	**25.21**	**67**	I	I	14 40 40.0	
	baz=278,slow=301,SNR=0.6						
I34MN	**SONGINO INFRAS**	**40.10**	**69**	I	I	16 09 40.0	
	baz=301,slow=328,SNR=0.5						

*IDC **07** 12:56:24.8±2.8, 36°.69N×71°.35E, h89km±24km, mb3.4/11, mbtmp3.8/16, MS3.7/1, Error ellipse: s-maj=17.9km s-min=16.1km az=153.0*

*NNC **07** 12:56:30.5±3.1, 37°.16N×71°.01E, h172km±40km, mb3.2, mpv3.9, Error ellipse: s-maj=29.7km s-min=19.7km az=40.0*

ISC 07 12:56:27.5±1.2, 36°.99N±0°.10×70°.97E±0°.09, h88km, n29, σ1§56/31, mb3.6/12, 6C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.90**	**27**	P	**Pn**	**12 57 53.6**	**+0.9**
	SNR=14						
EKS2	**Erkin-Say**	**6.06**	**20**	P	**Pn**	**12 57 56.1**	**+1.5**
	SNR=26						
KK31	**Karatay Array**	**6.11**	**357**	⇑P	**Pn**	**12 57 56.2**	**+1.0**
	17nm,0.5s,baz=183,slow=15,SNR=94						
KK31				⇑S	**Sn**	**12 59 05.2**	**+1.5**
	4.0nm,0.3s,baz=177,slow=22,SNR=3.8						
AAK	**Ala-Archa**	**6.26**	**25**	P	**Pn**	**12 57 58.1**	**+0.8**
	15nm,0.3s,baz=189,slow=5.7,SNR=43						
AAK				S	**Sn**	**12 59 08.3**	**+0.9**
	5.8nm,0.3s,baz=139,slow=20,SNR=8.5						
AAK	**Ala-Archa**	**6.26**	**25**	P	**Pn**	**12 57 58.5**	**+1.2**
	SNR=31						
AAK	**Ala-Archa**	**6.26**	**25**	⇓P	**Pn**	**12 57 58.1**	**+0.8**
	1.4nm,0.3s						
AAK				⇓S	**Sn**	**12 59 08.5**	**+1.0**
	5.5nm,0.5s						
CHMS	**Chumysh**	**6.66**	**25**	P	**Pn**	**12 58 03.8**	**+1.0**
	SNR=9.2						
USP	**Ospenovka**	**6.83**	**22**	P	**Pn**	**12 58 06.2**	**+1.2**
	SNR=5.8						
TKM2	**Tokmak 2**	**6.91**	**30**	P	**Pn**	**12 58 08.3**	**+2.1**
	SNR=3.5						
MKAR	**Makanchi Array**	**12.91**	**37**	P	**Pn**	**12 59 25.9**	**-1.6**
	2.3nm,0.7s,baz=223,slow=14,SNR=20						
AB31	**Akbulak array**	**14.64**	**330**	⇑P	**Pn**	**12 59 48.4**	**-1.6**
	2.3nm,0.4s,baz=136,slow=12,SNR=146						
AB31				⇑S	**Sn**	**13 02 28.5**	**-2.6**
	1.3nm,0.7s,baz=51,slow=38,SNR=5.2						
KURBB	**Kurchatov Arra**	**14.67**	**19**	P	**Pn**	**12 59 51.0**	**+0.8**
	2.3nm,0.8s,baz=205,slow=10,SNR=22						
BVAR	**Borovoye Array**	**16.04**	**359**	P	**Pn**	**13 00 06.9**	**-0.7**
	1.7nm,0.6s,baz=163,slow=13,SNR=12						
AKTO	**Aktyubinsk**	**16.34**	**329**	P	**Pn**	**13 00 11.3**	**-0.1**
	5.6nm,0.4s,baz=132,slow=6.1,SNR=15						
AKTO				S	**Sn**	**13 03 14.1**	**+1.9**
	0.7nm,0.3s,baz=41,slow=15,SNR=1.2						
AKTO	**Aktyubinsk**	**16.34**	**329**	⇑P	**Pn**	**13 00 10.4**	**-1.1**
	3.7nm,0.5s						
AKTO				⇑S	**Sn**	**13 03 07.4**	**-4.8**
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**19.48**	**25**	P	**P**	**13 00 45.8**	**-1.3**
	2.2nm,0.3s,baz=215,slow=10,SNR=14						
ZALV				S	**S**	**13 04 23.6**	**+1.1**
	0.3nm,0.3s,baz=221,slow=18,SNR=3.6						
LZDM	**Lanzhou Array**	**26.27**	**82**	P	**P**	**13 01 54.3**	**-0.6**
	0.7nm,0.4s,baz=0.0,slow=12,SNR=2.1						
SONM	**Songino Array**	**28.08**	**56**	P	P	13 02 07.3	-3.5
	0.5nm,0.5s,baz=265,slow=8.4,SNR=5.7						
	0.5nm,0.5s						
BRTR	**Keskin Array B**	**29.26**	**287**	P	**P**	**13 02 22.6**	**+1.2**
	0.8nm,0.5s,baz=99,slow=10,SNR=2.3						
	0.8nm,0.5s						
AKASG	**Malin Array Be**	**32.62**	**308**	P	**P**	**13 02 51.3**	**+0.8**
	0.3nm,0.3s,baz=74,slow=1.9,SNR=2.0						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**37.06**	**326**	P	**P**	**13 03 29.4**	**+0.8**
	2.6nm,1.1s,baz=127,slow=11,SNR=1.2						
	2.6nm,1.1s						
ARCES	**ARCESS Array B**	**40.68**	**337**	P	**P**	**13 03 59.6**	**+0.8**
	4.2nm,1.1s,baz=101,slow=6.3,SNR=4.7						
	4.2nm,1.1s						
HFS	**Hagfors**	**42.66**	**322**	P	**P**	**13 04 15.8**	**+0.7**
	1.2nm,0.4s,baz=99,slow=7.7,SNR=5.9						
	1.2nm,0.4s						
NOA	**NORSAR Array B**	**43.97**	**323**	P	**P**	**13 04 25.7**	**+0.1**
	0.3nm,0.4s,baz=99,slow=7.4,SNR=2.0						
	0.3nm,0.4s						
KSRS	**Korea Array**	**44.75**	**71**	P	P	13 04 28.2	-3.8
	0.4nm,0.4s,baz=266,slow=6.9,SNR=1.1						
	0.4nm,0.4s						
SEY	**Seymchan**	**54.02**	**34**	LR	LR	13 31 48.1	
	comp=Z,64nm,18.3s,baz=147,slow=39						
YKA	**Yellowknife Ar**	**80.75**	**3**	P	**P**	**13 08 29.3**	**-1.4**
	0.1nm,0.5s,baz=350,slow=6.3,SNR=4.1						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**82.27**	**122**	P	P	13 08 34.1	-5.3
	0.3nm,0.5s,baz=315,slow=4.9,SNR=2.7						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**84.56**	**125**	P	P	13 08 46.0	-5.1
	0.4nm,0.6s,baz=314,slow=5.2,SNR=9.6						
	0.4nm,0.6s						

*NEIC **07** 13:02:59.3±1.7, 5°.45N±0°.05×126°.36E±0°.10, h10km±1km, mb4.6/39, Error ellipse: s-maj=16.7km s-min=7.4km az=80.0*

*DJA **07** 13:03:03.5±0.7, 5°.N±2°×12°.6E±°, h12km±5km, M4.4/19, mB4.9/7, mb4.6/12, MLv4.5/19, Mw(mB)4.2/7*

*IDC **07** 13:03:04.7±1.2, 5°.44N×126°.46E, h54km±9km, mb3.9/20, mbtmp4.1/21, MS3.3/18, Error ellipse: s-maj=28.9km s-min=8.2km az=63.0*

ISC 07 13:03:04.2±0.8, 5°.39N±0°.04×126°.35E±0°.07, h51km±6km, n121, σ1§41/117, mb4.4/48, MS3.2/14, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.83**	**335**	P	**Pn**	**13 03 33.5**	**+0.2**
	457nm,0.5s,baz=124,slow=3.6,SNR=7.9						
DAV				S	**Sn**	**13 03 57.1**	**+1.7**
	576nm,0.5s,baz=62,slow=17,SNR=8.6						
DAV				LR	LR	13 04 23.7	
	comp=Z,657nm,21.3s,baz=170,slow=43						
DAV	**Davao City (W)**	**1.83**	**335**		**Pn**	**13 03 30.6**	**-2.7**
DAV	**Davao City (W)**	**1.83**	**335**	P	**Pn**	**13 03 34.5**	**+1.2**
DAV				S	**Sn**	**13 04 00.2**	**+4.8**
SGSI	**Sangihe**	**1.88**	**206**	S	**Sn**	**13 03 59.0**	**+2.4**
MNI	**Manado**	**4.20**	**201**	P	**Pn**	**13 04 06.9**	**+1.1**
TNTI	**Ternate**	**4.70**	**167**		**Pn**	**13 04 10.7**	**-1.9**
TNTI	**Ternate**	**4.70**	**167**	P	**Pn**	**13 04 14.1**	**+1.4**
MRSI	**Marisa**	**6.57**	**222**	P	**Pn**	**13 04 40.8**	**+2.5**
TOLI2	**Tolitoli**	**7.00**	**233**		**Pn**	**13 04 44.0**	**-0.2**
SANI	**Sanana**	**7.40**	**183**	P	**Pn**	**13 04 49.9**	**+0.2**
	0.1nm687nm26nm,0.9s						
MYLDM	**Lahad Datu**	**7.82**	**269**	Pn	**Pn**	**13 04 53.1**	**-2.3**
MYLDM	**Lahad Datu**	**7.82**	**269**	P	**Pn**	**13 04 58.2**	**+2.8**
APSI	**Ampana**	**7.82**	**217**	P	**Pn**	**13 04 58.2**	**+2.7**
	757nm70nm,1.1s						
SWI	**Sorong**	**7.92**	**142**	P	**Pn**	**13 04 57.3**	**+0.5**
	0.1nm18nm,0.7s						
SIJI	**Sorong**	**7.92**	**142**	P	**Pn**	**13 04 56.3**	**-0.6**
	4.3nm,0.5s,baz=323,slow=18,SNR=4.9						
SIJI				S	**Sn**	**13 06 25.6**	**+0.3**
	2.1nm,0.4s,baz=328,slow=18,SNR=1.0						
SIJI	**Sorong**	**7.92**	**142**	P	**Pn**	**13 04 57.6**	**+0.7**
MPSI	**Mapaga**	**8.17**	**232**	P	**Pn**	**13 05 01.8**	**+1.6**
	906nm11nm,0.7s						
NLAI	**Namlea**	**8.61**	**175**	P	**Pn**	**13 05 07.3**	**+1.1**
KKM	**Kota Kinabalu**	**10.10**	**274**	Pn	**Pn**	**13 05 25.1**	**-1.8**
KAPI	**Kappang**	**12.26**	**213**	LR	LR	13 10 56.4	
	comp=Z,139nm,20.3s,baz=66,slow=38						
SBUM	**Sibu**	**14.39**	**259**		**Pn**	**13 06 24.4**	**-0.8**
BATI	**Baumata**	**15.72**	**190**	LR	LR	13 12 52.6	
	comp=Z,67nm,21.4s,baz=314,slow=37						
JAY	**Jayapura**	**16.35**	**118**	LR	LR	13 13 09.7	
	comp=Z,153nm,18.8s,baz=1.5,slow=37						
TPUB	**Ta-pu**	**18.64**	**343**	P	**P**	**13 07 17.1**	**-0.7**
TPUB				IAmb	IAmb	13 07 23.6	
	comp=Z,50nm,1.2s						
MTN	**Manton Dam**	**18.73**	**165**	P	**P**	**13 07 17.4**	**-1.5**

GUMO	**Guam**	**19.99**	**65**	LR		LR	13 13 47.6		
	comp=Z,117nm,20.9s,baz=244,slow=32								
KNRA	**Kununurra**	**21.07**	**174**			**P**	**13 07 45.4**	**+1.1**	
KNRA				IAmb		IAmb	13 08 04.9		
	comp=Z,16nm,0.9s								
LEM	**Lembang**	**22.29**	**237**	LR		LR	13 17 25.0		
	comp=Z,80nm,20.7s,baz=17,slow=38								
PMG	**Port Moresby**	**25.42**	**125**	LR		LR	13 20 36.9		
	comp=Z,128nm,18.1s,baz=326,slow=42								
PMG	**Port Moresby**	**25.42**	**125**	P		**P**	**13 08 29.2**	**+1.8**	
PMG				IAmb		IAmb	13 08 40.5		
	comp=Z,20nm,1.2s								
COEN	**Coen**	**25.46**	**139**	P		**P**	**13 08 25.7**	**-2.0**	
WB0	**Warramunga Arr**	**26.22**	**163**			**P**	**13 08 32.8**	**-1.8**	
WB0				IAmb		IAmb	13 08 39.8		
	comp=Z,14nm,1.1s								
WRA	**Warramunga Arr**	**26.37**	**163**	P		**P**	**13 08 37.5**	**+1.6**	
	comp=Z,3.3nm,0.8s,baz=343,slow=10,SNR=22								
WRA				PcP		**PcP**	**13 12 01.2**	**+0.4**	
	comp=Z,0.5nm,0.6s,baz=332,slow=2.3,SNR=1.0								
WRA				ScP		**ScP**	**13 15 36.1**	**-0.5**	
	comp=Z,0.3nm,0.8s,baz=346,slow=3.2,SNR=1.7								
	comp=Z,3.3nm,0.8s								
WRA	**Warramunga Arr**	**26.37**	**163**	P		**P**	**13 08 34.7**	**-1.2**	
WR8	**Warramunga Arr**	**26.43**	**163**			**P**	**13 08 34.9**	**-1.6**	
WR8				IAmb		IAmb	13 09 04.2		
	comp=Z,18nm,1.4s								
MBWA	**Marble Bar**	**27.17**	**194**	P		**P**	**13 08 43.0**	**-0.1**	
NJ2	**Nanjing**	**27.43**	**346**	*eP*		**P**	**13 08 47.8**	**+2.5**	
NJ2				pmax		pmax			
	comp=Z,8.0nm,0.7s								
CM31	**Chiang Mai Arr**	**29.73**	**298**	P		**P**	**13 09 03.3**	**-2.7**	
CMAR	**Chiang Mai Arr**	**29.73**	**298**	P		**P**	**13 09 05.0**	**-0.9**	
	comp=Z,0.3nm,0.4s,baz=122,slow=7.4,SNR=6.6								
CMAR				PcP		**PcP**	**13 12 10.0**	**+1.0**	
	comp=Z,0.5nm,0.3s,baz=114,slow=1.8,SNR=2.0								
CMAR				ScP		**ScP**	**13 15 47.9**	**+0.8**	
	comp=Z,0.5nm,0.4s,baz=134,slow=1.6,SNR=7.6								
CMAR				LR		LR	13 21 26.9		
	comp=Z,35nm,18.1s,baz=115,slow=37								
	comp=Z,0.3nm,0.4s								
CMAR	**Chiang Mai Arr**	**29.73**	**298**	P		**P**	**13 09 03.4**	**-2.5**	
AS31	**Alice Springs**	**29.81**	**166**	P		**P**	**13 09 05.5**	**-1.1**	
ASAR	**Alice Springs**	**29.81**	**166**	P		**P**	**13 09 06.4**	**-0.1**	
	comp=Z,0.7nm,0.7s,baz=344,slow=7.0,SNR=15								
ASAR				PcP		**PcP**	**13 12 09.7**	**+0.5**	
	comp=Z,1.0nm,0.6s,baz=347,slow=2.4,SNR=10								
ASAR				ScP		**ScP**	**13 15 48.4**	**+1.2**	
	comp=Z,0.3nm,0.9s,baz=341,slow=2.8,SNR=4.2								
ASAR				LR		LR	13 22 41.4		
	comp=Z,48nm,19.1s,baz=36,slow=39								
	comp=Z,0.7nm,0.7s								
ASAR	**Alice Springs**	**29.81**	**166**	P		**P**	**13 09 05.8**	**-0.7**	
JHJ	**Hachijo jima 2**	**30.30**	**23**	LR		LR	13 22 10.6		
	comp=Z,24nm,18.8s,baz=110,slow=38								
PZH	**PanZhiHua**	**31.50**	**314**	P		**P**	**13 09 24.3**	**+2.7**	
TIA	**Tai'an**	**31.82**	**346**	P		P	13 09 30.4	+6.3	
TIA				pmax		pmax			
	comp=Z,4.0nm,0.7s								
KSRS	**Korea Array**	**31.95**	**2**	P		**P**	**13 09 23.4**	**-1.8**	
	comp=Z,0.3nm,0.4s,baz=182,slow=8.8,SNR=4.9								
KSRS				LR		LR	13 22 59.5		
	comp=Z,22nm,20.1s,baz=205,slow=38								
	comp=Z,0.3nm,0.4s								
CTA	**Charters Tower**	**32.00**	**143**	LR		LR	13 22 27.0		
	comp=Z,54nm,21.9s,baz=7

	comp=Z,2.5nm,0.6s							
MKAR	**Makanchi Array**	**55.98**	**325**		**P**	**P**	13 12 37.6	**+0.1**
MKAR					**PcP**	**P**	13 13 36.0	**+0.6**
MAKZ	**Makanchi**	**56.17**	**325**		**P**	**P**	13 12 38.8	**-0.1**
MAKZ				IAmb	IAmb	IAmb	13 12 50.2	
	comp=Z,3.6nm,0.9s							
KSH2	**Kashi**	**56.76**	**314**	P	**P**	**P**	13 12 44.5	**+1.2**
KSH2				pP	sP		13 13 01.1	-1.2
KSH2				pmax	pmax			
	comp=Z,4.0nm,1.1s							
KDJ	**Kajisay**	**56.86**	**318**	P	P	**P**	13 12 42.2	**-1.9**
KDJ				IAmb	IAmb		13 12 45.4	
	comp=Z,2.6nm,0.6s							
ZAA0	**Zalesovo Array**	**58.94**	**333**	P	**P**	**P**	13 12 57.6	**-0.6**
ZAA0				IAmb	IAmb		13 13 10.3	
	comp=Z,3.1nm,1.0s							
ZALV	**Zalesovo Beam**	**58.94**	**333**	P	**P**		13 12 57.0	**-1.2**
	comp=Z,0.8nm,0.6s,baz=120,slow=8.8,SNR=4.9							
	comp=Z,0.8nm,0.5s							
ZALV	**Zalesovo Beam**	**58.94**	**333**	P	**P**		13 12 57.5	**-0.7**
KURBB	**Kurchatov Arra**	**60.14**	**327**	P	**P**		13 13 06.0	**-0.5**
	comp=Z,3.1nm,0.6s,baz=124,slow=6.6,SNR=56							
	comp=Z,3.1nm,0.6s							
KURK	**Kurchatov**	**60.15**	**327**			**P**	13 13 06.3	**-0.2**
BTK	**Batken**	**60.51**	**313**	P		**P**	13 13 08.6	**-0.8**
BTK				IAmb		IAmb	13 13 25.0	
	comp=Z,7.2nm,1.1s							
GAR	**Garm**	**60.53**	**312**	P		**P**	13 13 09.1	**-0.4**
KK31	**Karatay Array**	**61.77**	**317**	P		**P**	13 13 17.4	**-0.3**
KK31				IAmb		IAmb	13 13 18.9	
	comp=Z,3.6nm,1.0s							
KKAR	**Karatay Array**	**61.77**	**317**			**P**	13 13 17.6	**-0.1**
RAO	**Raoul Island**	**63.61**	**126**	LR		LR	13 41 56.8	
	comp=Z,123nm,18.1s,baz=114,slow=37							
BVAR	**Borovoye Array**	**65.73**	**327**	P		**P**	13 13 43.0	**-0.6**
	comp=Z,1.6nm,0.7s,baz=130,slow=8.7,SNR=8.0							
	comp=Z,1.6nm,0.7s							
BORK	**Borovoye**	**65.78**	**327**	P		**P**	13 13 43.6	**-0.3**
BORK				IAmb		IAmb	13 13 53.4	
	comp=Z,3.8nm,0.7s							
TIXI	**Tiksi**	**66.20**	**1**	P		**P**	13 13 47.1	**+0.9**
NRIK	**Noril'sk**	**68.73**	**346**	P		**P**	13 14 02.4	**0.0**
	comp=Z,3.1nm,0.6s,baz=130,slow=6.3,SNR=9.8							
	comp=Z,3.1nm,0.6s							
NRIK	**Noril'sk**	**68.73**	**346**	P		**P**	13 14 02.6	**+0.3**
NRIK				IAmb		IAmb	13 14 07.9	
	comp=Z,4.7nm,0.8s							
AB31	**Akbulak array**	**70.63**	**320**	P		**P**	13 14 14.1	**-0.3**
ABKAR	**Akbulak array**	**70.63**	**320**	P		**P**	13 14 14.0	**-0.4**
AKTO	**Aktyubinsk**	**72.13**	**321**	LR		LR	13 49 57.7	
	comp=Z,42nm,18.4s,baz=228,slow=39							
CASY	**Casey**	**72.41**	**187**	P		**P**	13 14 25.5	**+0.8**
ANM	**Nome**	**75.92**	**24**	P		**P**	13 14 46.1	**+0.8**
ANM				IAmb		IAmb	13 14 51.6	
	comp=Z,7.3nm,1.4s							
KBZ	**Khabaz**	**81.57**	**313**	P		**P**	13 15 18.0	**+1.4**
	comp=Z,2.5nm,0.9s,baz=31,slow=5.9,SNR=2.7							
	comp=Z,2.5nm,0.9s							
G24K	**Hadweenzic Riv**	**83.57**	**24**	P		**P**	13 15 26.4	**-0.3**
G24K				IAmb		IAmb	13 15 43.7	
	comp=Z,7.3nm,1.2s							
ILAR	**Eielson Array**	**83.78**	**25**	P		**P**	13 15 27.1	**-0.7**
	comp=Z,2.2nm,1.2s,baz=250,slow=4.8,SNR=6.8							
	comp=Z,2.2nm,1.2s							
ILAR	**Eielson Array**	**83.78**	**25**	P		**P**	13 15 26.7	**-1.1**
BMAR	**Burnt Mountain**	**84.70**	**23**	P		**P**	13 15 33.9	**+1.4**
BR104	**Keskin Array S**	**88.67**	**310**	P		**P**	13 15 51.6	**-0.9**
BR104				pP		**pwP**	13 16 08.5	**-1.6**
ARCES	**ARCESS Array B**	**88.77**	**340**	P		**P**	13 15 51.7	**-0.5**
	comp=Z,2.9nm,0.7s,baz=84,slow=3.8,SNR=5.1							
	comp=Z,2.9nm,0.7s							
ARCES	**ARCESS Array B**	**88.77**	**340**	P		**P**	13 15 52.6	**+0.4**
FINES	**FINESS Array B**	**90.20**	**332**	P		**P**	13 15 58.7	**-0.3**
	comp=Z,3.8nm,0.9s,baz=72,slow=6.2,SNR=8.5							
	comp=Z,3.8nm,0.9s							
FINES	**FINESS Array B**	**90.20**	**332**	P		**P**	13 15 58.8	**-0.1**
NOA	**NORSAR Array B**	**97.14**	**334**	P		**P**	13 16 30.2	**-0.7**
	comp=Z,0.5nm,0.7s,baz=48,slow=1.9,SNR=2.6							
NOA				LR		LR	14 03 15.0	
	comp=Z,37nm,18.4s,baz=300,slow=37							
	comp=Z,0.5nm,0.7s							
YKA	**Yellowknife Ar**	**98.15**	**24**	P		Pdif	13 16 35.9	+0.5
	comp=Z,0.2nm,0.8s,baz=303,slow=5.1,SNR=2.2							
	comp=Z,0.2nm,0.8s							
TXAR	**Lajitas Array**	**120.87**	**51**	PKP		**PKPdf**	13 21 50.7	**-1.0**
	comp=Z,0.2nm,0.8s,baz=264,slow=3.1,SNR=1.8							
TORD	**Torodi Ar. Bea**	**122.03**	**289**	PKP		**PKiKP**	13 21 54.9	**+0.6**
	comp=Z,0.5nm,0.6s,baz=38,slow=1.9,SNR=3.8							

IDC 07 13:08:31.4±1.9, 5.36N×126.00E, h0km, mb3.5/5, mbtmp3.5/5, MS3.4/1, Error ellipse: s-maj=138.2km s-min=20.4km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.31**	**181**	P	P	13 13 41.9	+0.6
	1.7nm,0.9s,baz=17,slow=11,SNR=1.3						
	1.7nm,0.9s						
WRA	**Warramunga Arr**	**26.45**	**162**	P	P	13 14 11.3	+1.0
	0.5nm,0.9s,baz=340,slow=10,SNR=5.4						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**29.86**	**165**	P	P	13 14 39.1	-1.7
	0.3nm,0.9s,baz=340,slow=8.2,SNR=1.3						
	0.3nm,0.9s						
NWAO	**Narrogin (SRO)**	**38.98**	**192**	LR	LR	13 33 28.9	
	comp=Z,45nm,18.4s,baz=77,slow=38						
MKAR	**Makanchi Array**	**55.81**	**325**	P	P	13 18 10.8	+0.2
	0.4nm,0.4s,baz=114,slow=6.4,SNR=9.3						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**59.99**	**327**	P	P	13 18 39.5	-0.3
	0.5nm,0.6s,baz=123,slow=7.0,SNR=7.2						
	0.5nm,0.6s						

*IDC **07** 13:21:50.9±10.0, 31.82S×179.60W, h206km±104km, mb3.0/2, mbtmp3.6/3, Error ellipse: s-maj=99.6km s-min=41.6km az=2.0*
*WEL **07** 13:21:57.1±1.2, 32.2S±18.1×17.9W±2.2, h308km±42km, M4.3/9, mB4.7/6, ML4.1/10, MLv4.5/9, Mw(mB)3.9/6, Error ellipse: s-maj=31.0km s-min=21.7km az=111.3*
*NOU **07** 13:22:47.7, 36.46S×179.28E, h240km, MLv4.0/9, Off E. Coast of N. Island, N.Z.*
ISC 07 13:21:56.0±1.9, 32.4S±0.1×179.0W±0.2, h300km, n42, σ1s65/53, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.59**	**202**	P	**Pn**	13 23 24.3	**+3.9**
MXZ	**Matakaoa Point**	**5.59**	**202**	P	**Pn**	13 23 19.1	**-1.3**
MXZ				S	**S**	13 24 28.5	**+0.2**
WMGZ	**Waiomatatini S**	**5.80**	**200**	P	**Pn**	13 23 23.6	**+0.8**
WMGZ				S	**S**	13 24 33.8	**+1.1**
PKGZ	**Pakihiroa**	**5.94**	**203**	P	**Pn**	13 23 24.9	**+0.3**
PKGZ				S	**S**	13 24 37.0	**+1.1**
HAZ	**Te Kaha**	**5.95**	**205**	P	**Pn**	13 23 24.6	**0.0**
HAZ				S	**S**	13 24 36.5	**+0.5**
PUZ	**Puketiti**	**6.08**	**201**	P	**Pn**	13 23 25.7	**-0.5**
PUZ				S	**S**	13 24 40.1	**+1.3**
RUGZ	**Raukumara Rang**	**6.17**	**205**	P	**Pn**	13 23 27.7	**+0.3**
RUGZ				S	**S**	13 24 39.8	**-1.3**
CNGZ	**Carnagh Statio**	**6.47**	**200**	P	**Pn**	13 23 31.2	**+0.3**
WCZ	**Waipu Caves**	**6.52**	**235**	P	**Pn**	13 23 30.9	**-0.6**
TKGZ	**Te Karaka**	**6.54**	**202**	P	**Pn**	13 23 30.8	**-0.9**
TKGZ				S	**S**	13 24 49.4	**+0.5**
MWZ	**Matawai**	**6.55**	**204**	P	**Pn**	13 23 31.0	**-0.9**
MWZ				S	**S**	13 24 48.9	**-0.4**
URZ	**Urewera**	**6.64**	**207**	P	**Pn**	13 23 30.9	**-2.0**
	2.6nm,0.4s,baz=6.4,slow=15,SNR=33						
URZ				S	**S**	13 24 49.9	**-1.2**
	10nm,0.3s,baz=54,slow=19,SNR=14						
URZ	**Urewera**	**6.64**	**207**	P	**Pn**	13 23 33.4	**+0.5**
URZ	**Urewera**	**6.64**	**207**	P	**Pn**	13 23 32.3	**-0.6**
URZ				S	**S**	13 24 49.6	**-1.5**
RIGZ	**Rimuhau**	**6.81**	**202**	P	**Pn**	13 23 34.4	**-0.6**
MUGZ	**Murupara**	**6.96**	**208**	P	**Pn**	13 23 39.6	**+2.8**
MUGZ				S	**S**	13 24 57.5	**-0.8**
RTZ	**Ruatahuna**	**7.00**	**206**	P	**Pn**	13 23 37.6	**+0.2**
SNGZ	**Shannon Statio**	**7.02**	**204**	P	**Pn**	13 23 38.2	**+0.6**
SNGZ				S	**S**	13 24 59.6	**0.0**
KNZ	**Kokohu**	**7.13**	**201**	P	**Pn**	13 23 40.6	**+1.8**
KNZ				S	**S**	13 25 01.3	**-0.6**
RAHZ	**Arahi**	**7.23**	**205**	P	**Pn**	13 23 40.3	**+0.2**
TLZ	**Tolley Road**	**7.39**	**215**	P	**Pn**	13 23 46.3	**+4.3**
BKZ	**Black Stump Fm**	**7.66**	**207**	P	**Pn**	13 23 44.4	**-1.0**
BKZ	**Black Stump Fm**	**7.66**	**207**	P	**Pn**	13 23 42.4	**-3.1**
HIZ	**Hauiti**	**7.87**	**218**	P	Pn	13 23 53.2	+5.3
HIZ	**Hauiti**	**7.87**	**218**	P	Pn	13 23 53.3	+5.4
NGZ	**Ngauruhoe**	**8.04**	**211**	P	**Pn**	13 23 52.3	**+2.1**
PWZ	**Pawanui**	**8.30**	**202**	P	**Pn**	13 23 55.6	**+2.5**
PXZ	**Pawanui**	**8.30**	**202**	P	**Pn**	13 23 54.3	**+1.1**
VRZ	**Vera Road**	**8.39**	**215**	P	**Pn**	13 23 57.6	**+3.4**
TSZ	**Takapari Road**	**8.64**	**206**	P	**Pn**	13 23 57.3	**-0.1**
WAZ	**Wanganui**	**8.79**	**212**	P	**Pn**	13 24 01.3	**+2.1**
BFZ	**Birch Farm**	**9.09**	**203**	P	**Pn**	13 24 01.7	**-1.2**
BFZ	**Birch Farm**	**9.09**	**203**	P	**Pn**	13 24 03.3	**+0.4**
MRZ	**Mangatainoka R**	**9.31**	**206**	P	**Pn**	13 24 03.2	**-2.4**
NNZ	**Nelson**	**10.69**	**212**	P	**Pn**	13 24 22.3	**-0.1**
QRZ	**Quartz Range**	**10.79**	**216**	P	**P**	13 24 25.3	**-1.1**
KHZ	**Kahutara**	**11.60**	**208**	P	**Pn**	13 24 34.3	**+0.7**
ODZ	**Otahua Downs**	**14.96**	**209**	P	**Pn**	13 25 16.3	**+2.5**
JCZ	**Jackson Bay**	**15.06**	**216**	P	**Pn**	13 25 18.9	**+3.8**
ASAR	**Alice Springs**	**42.16**	**270**	P	**P**	13 29 19.8	**-0.2**
	0.2nm,0.3s,baz=106,slow=7.5,SNR=12						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.33**	**275**	P	**P**	13 29 28.3	**-1.0**
	0.3nm,0.3s,baz=112,slow=8.0,SNR=13						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**146.69**	**338**	PKPbc	**PKPab**	13 41 04.7	**+0.9**
	0.9nm,0.5s,baz=46,slow=4.6,SNR=8.7						

*IDC **07** 13:40:00.0±4.7, 32.20N×141.62E, h75km±38km, mb3.2/7, mbtmp3.4/8, ML2.1/1, Error ellipse: s-maj=40.9km s-min=27.7km az=67.0*
*JMA **07** 13:40:00.9±0.3, 32.3N±0.6×14.1E±, h21km, MV3.5/27, E OFF HACHIJOJIMA ISLAND*
ISC 07 13:39:59.2±1.0, 32.05N±0.07×141.16E±0.09, h57km, n17, σ1s74/23, mb3.5/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.25**	**289**	P	**Pn**	13 40 21.2	**+0.7**
JHCJ	**Hachijojimakas**	**1.54**	**312**	P	**Pn**	13 40 24.6	**+0.4**
JHCJ				eS	**Sn**	13 40 41.0	**-2.2**
JHJ2	**Mitsune**	**1.55**	**313**	P	**Pn**	13 40 24.6	**+0.2**
JHJ2				S	**Sn**	13 40 41.6	**-1.9**
JMKN	**Mikurajimanish**	**2.26**	**325**	eP	**Pn**	13 40 34.8	**+0.7**
JMYK	**Miyake Tsubota**	**2.42**	**326**	eP	**Pn**	13 40 37.5	**+1.3**
JMYK				eS	**Sn**	13 41 04.3	**-0.4**
BSO1	**Boso 1**	**2.60**	**357**	eP	**Pn**	13 40 40.3	**+2.1**
BSO1				S	**Sn**	13 41 08.8	**+0.5**
BSO3	**Boso 3**	**2.79**	**349**	S	**Sn**	13 41 14.0	**+0.5**
JHO	**Hitachi**	**4.57**	**354**	P	**Pn**	13 41 06.9	**+1.1**
JHO				eS	**Sn**	13 41 54.3	**-3.3**
CBIJ	**Chichi jima**	**5.02**	**170**	eP	**Pn**	13 41 14.0	**+2.1**
MJAR	**Matsushiro Arr**	**5.10**	**332**	P	**Pn**	13 41 15.4	**+2.4**
	0.1nm,0.3s,baz=152,slow=12,SNR=6.4						
MJAR				S	**Sn**	13 42 12.5	**+1.9**
	1.0nm,0.5s,baz=72,slow=21,SNR=1.8						
	0.8nm,0.6s						
SONM	**Songino Array**	**30.66**	**311**	P	**P**	13 46 09.7	**+1.5**
	0.3nm,0.6s,baz=115,slow=8.7,SNR=2.5						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**45.24**	**316**	P	**P**	13 48 09.7	**-0.9**
	0.3nm,0.4s,baz=99,slow=9.2,SNR=1.7						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**46.74**	**306**	P	**P**	13 48 23.1	**+0.5**
	0.6nm,0.4s,baz=87,slow=9.5,SNR=6.5						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**49.02**	**311**	P	**P**	13 48 40.5	**+0.4**
	0.5nm,0.6s,baz=90,slow=7.6,SNR=11						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**52.11**	**188**	P	**P**	13 49 03.8	**+0.1**
	0.3nm,0.9s,baz=10,slow=7.5,SNR=1.6						
	0.3nm,0.9s						
ILAR	**Eielson Array**	**53.85**	**30**	P	**P**	13 49 12.4	**-3.6**
	0.6nm,1.1s,baz=258,slow=5.7,SNR=2.7						
	0.6nm,1.1s						
BVAR	**Borovoye Array**	**53.86**	**315**	P	**P**	13 49 17.8	**+1.6**
	0.2nm,0.3s,baz=99,slow=7.4,SNR=2.2						
	0.2nm,0.3s						

*IDC **07** 13:57:21.2±1.2, 35.42N×27.31E, h0km, mb3.5/6, mbtmp3.4/8, ML3.3/2, MS3.4/1, Error ellipse: s-maj=33.8km s-min=18.7km az=156.0*
*GII **07** 13:57:21.4±0.0, 35.312N±0.002×27.503E±0.001, h0km, Mws3.5, confirmed*
*ATH **07** 13:57:21.7, 35.40N×27.47E, h7km±1km, ML3.4/6, Manual Solution by S.Koutrakis First location: 2020/02/07 13:58:50, This location: 2020/02/07 14:49:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **07** 13:57:22.8, 35.4N±4.2×27.7E±, h1km±5km, M3.1/6, MLh3.1/6*
ISC 07 13:57:21.6±1.3, 35.40N±0.04×27.47E±0.04, h7km±9km, n40, σ1s18/71, mb3.2/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.29**	**300**	P	**Pg**	13 57 27.7	**+0.3**
KARP				S	**Sg**	13 57 31.5	**+0.3**
KARP	**Karpathos**	**0.29**	**300**	P	**Pg**	13 57 27.6	**+0.3**
KARP				S	**Sg**	13 57 31.7	**+0.4**
ARG	**Arkhangelos**	**0.97**	**33**	P	**Pn**	13 57 40.5	**-1.3**
ARG				S	**Sn**	13 57 54.1	**-1.8**
ARG	**Arkhangelos**	**0.97**	**33**	P	**Pn**	13 57 40.5	**-1.3**
ARG				S	**Sn**	13 57 54.0	**-1.8**
ZKR	**Zakros**	**1.06**	**255**	P	**Pn**	13 57 42.5	**-0.4**
ZKR	**Zakros**	**1.06**	**255**	P	**Pn**	13 57 42.2	**-0.8**
ZKR				S	**Sg**	13 57 56.4	**+0.6**
NPS	**Neapolis**	**1.52**	**265**	P	**Pg**	13 57 50.6	**-0.3**
NPS				S	**Sg**	13 58 10.8	**+0.2**
NPS	**Neapolis**	**1.52**	**265**	P	**Pg**	13 57 50.5	**-0.3**
NPS				S	**Sn**	13 58 08.5	**-1.0**
YER	**Yerkesik**	**1.85**	**21**	P	**Pb**	13 57 55.3	**-0.5**
YER				S	**Sg**	13 58 19.3	**-1.8**
THERA	**Ancient Thera,**	**1.88**	**301**	P	**Pn**	13 57 54.3	**0.0**
THERA				S	**Sb**	13 58 18.8	**-1.3**
THERA	**Ancient Thera,**	**1.88**	**301**	P	**Pn**	13 57 54.3	**0.0**
THERA				S	**Sb**	13 58 18.7	**-1.4**
IDI	**Anoyia**	**2.11**	**268**	P	**Pn**	13 57 58.1	**+0.6**
IDI				S	**Sb**	13 58 26.9	**+0.2**
IDI	**Anoyia**	**2.11**	**268**	P	**Pn**	13 57 58.0	**+0.5**
IDI				S	**Sn**	13 58 24.3	**+0.4**
CSS	**Mathiatis**	**4.82**	**94**	P	**Pn**	13 58 34.4	**-0.3**
CSS				S	**Sn**	13 59 30.0	**-0.7**
BRTR	**Keskin Array B**	**6.53**	**47**	Pn	**Pn**	13 59 00.4	**+2.2**
	0.1nm,0.3s,baz=230,slow=15,SNR=1.7						
BRTR				Sn	**Sn**	14 00 17.1	**+4.0**
	0.1nm,0.3s,baz=225,slow=18,SNR=2.1						
	0.8nm,0.6s						
HNTI	**Hanita**	**6.79**	**108**	P	**Pn**	13 59 01.3	**-0.4**
HNTI				S	**Sn**	14 00 18.3	**-0.9**
MMAI	**Mount Meron Ar**	**6.99**	**108**	Pn	**Pn**	13 59 05.2	**+0.7**
	2.0nm,0.3s,baz=294,slow=11,SNR=11						
MMAI				Sn	**Sn**	14 00 23.0	**-1.3**
	4.2nm,0.3s,baz=307,slow=32,SNR=8.8						
	0.8nm,0.2s						
GEM	**Giv'at Ha'Em**	**7.12**	**106**	P	**Pn**	13 59 06.2	**-0.1**
GEM				S	**Sn**	14 00 26.8	**-0.7**
NATI	**Neve Ativ**	**7.17**	**105**	P	**Pn**	13 59 07.1	**+0.3**
NATI				S	**Sn**	14 00 27.7	**-0.8**
AMAZ	**Amatzia**	**7.32**	**120**	P	**Pn**	13 59 08.0	**-1.0**
AMAZ				S	**Sn**	14 00 31.1	**-1.3**
KZIT	**Kziot**	**7.34**	**126**	P	**Pn**	13 59 08.3	**-0.9**
KZIT				S	**Sn**	14 00 31.5	**-1.3**
HMDT	**Nahal Hemdat**	**7.40**	**113**	P	**Pn**	13 59 09.2	**-1.0**
HMDT				S	**Sn**	14 00 34.1	**-0.3**
YTIR	**Yattir**	**7.56**	**120**	P	**Pn**	13 59 11.5	**-0.8**
YTIR				S	**Sn**	14 00 37.0	**-1.3**
DSI	**Dead Sea**	**7.63**	**118**	P	**Pn**	13 59 12.7	**-0.6**
DSI				S	**Sn**	14 00 39.4	**-0.7**
MSBI	**Mazada**	**7.76**	**119**	P	**Pn**	13 59 13.8	**-1.1**
MSBI				S	**Sn**	14 00 42.0	**-1.0**
RMNI	**Mount Ramon**	**7.78**	**126**	P	**Pn**	13 59 15.0	**-0.3**
RMNI				S	**Sn**	14 00 42.3	**-1.4**
GHAJ	**Ghor Haditha**	**7.91**	**119**	P	**Pn**	13 59 15.9	**-1.2**
GHAJ				S	**Sn**	14 00 45.8	**-1.1**
IDAN	**Idan**	**7.97**	**123**	P	**Pn**	13 59 17.6	**-0.3**
IDAN				S	**Sn**	14 00 46.7	**-1.8**
ZFRI	**Zfri**	**8.08**	**125**	P	**Pn**	13 59 18.2	**-1.2**
ZFRI				S	**Sn**	14 00 49.9	**-1.1**
PRNI	**Paran**	**8.09**	**126**	P	**Pn**	13 59 18.5	**-1.1**
PRNI				S	**Sn**	14 00 49.9	**-1.5**
HRFI	**Mount Harif**	**8.32**	**128**	P	**Pn**	13 59 22.0	**-0.8**
HRFI				S	**Sn**	14 00 55.7	**-1.3**
MBRI	**Mt Berech**	**8.41**	**130**	P	**Pn**	13 59 23.5	**-0.5**
MBRI				S	**Sn**	14 00 57.8	**-1.5**
EIL	**Elat**	**8.52**	**130**	P	**Pn**	13 59 24.6	**-0.8**
EIL				S	**Sn**	14 01 00.7	**-1.1**
ESDC	**Sonseca Array**	**25.21**	**289**	P	**P**	14 02 46.6	**-1.5**
	0.3nm,0.4s,baz=88,slow=9.6,SNR=4.3						
	0.3nm,0.4s						
HFS	**Hagfors**	**26.31**	**344**	P	**P**	14 02 57.7	**0.0**
	2.1nm,0.8s,baz=150,slow=12,SNR=2.4						
	2.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**32.12**	**233**	P	**P**	14 03 50.0	**+0.3**
	1.1nm,0.8s,baz=38,slow=10,SNR=6.8						
	1.1nm,0.8s						
BVAR	**Borovoye Array**	**34.82**	**46**	P	**P**	14 04 14.7	**+1.8**
	0.2nm,0.6s,baz=302,slow=3.2,SNR=2.0						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**39.50**	**51**	P	**P**	14 04 55.1	**+2.4**
	0.1nm,0.3s,baz=276,slow=9.8,SNR=2.2						
	0.1nm,0.3s						
BORG	**Borgarnes**	**41.25**	**331**	LR	LR	14 23 29.9	
	comp=Z,49nm,19.4s,baz=171,slow=38						
MKAR	**Makanchi Array**	**42.06**	**57**	P	**P**	14 05 15.6	**+1.6**
	0.2nm,0.6s,baz=271,slow=8.7,SNR=5.0						
	0.2nm,0.6s						

*AEIC **07** 14:17:23.8±2.1, 53.20N±0.05×166.78W±0.07, h45km±9km, Error ellipse: s-maj=9.0km s-min=4.2km az=147.0*
NEIC 07 14:17:24.3±1.6, 53.144N±0.008×166.74W±0.05, h35km±2km, mb3.7/6, ML3.4/10, ML3.1(AEIC), Error ellipse: s-maj=4.8km s-min=3.1km az=256.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.66**	**353**		**Pn**	14 17 36.5	**-0.6**
MGOD					**Sn**	14 17 46.2	**-0.1**
MREP	**Makushin Rep't**	**0.67**	**360**		**Pn**	14 17 36.6	**-0.7**
MAPS	**Pakushin South**	**0.68**	**350**		**Pn**	14 17 37.0	**-0.4**
MAPS					**Sn**	14 17 46.8	**+0.1**
UNV	**Unalaska Valle**	**0.72**	**11**		**Pn**	14 17 36.5	**-1.4**
UNV					**Sn**	14 17 46.1	**-1.6**
OKFG	**Magazine Ridge**	**0.75**	**291**		**Pn**	14 17 38.0	**-0.4**
OKFG					**Sn**	14 17 48.7	**+0.1**
OKER	**Okmok East Rim**	**0.85**	**292**		**Pn**	14 17 39.8	**0.0**
OKER					**Sn**	14 17 51.3	**+0.3**
ZRO	**Akutan Zero**	**1.05**	**25**		**Pn**	14 17 41.7	**-0.8**
ZRO					**Sn**	14 17 55.5	**-0.5**
AKRB	**Akutan Reef Bi**	**1.06**	**22**		**Pn**	14 17 42.3	**-0.4**
AKRB					**Sn**	14 17 56.7	**+0.4**
AKBBA	**Akutan Broad B**	**1.07**	**26**		**Pn**	14 17 42.0	**-0.8**
LVA	**Lava Point**	**1.10**	**22**		**Pn**	14 17 42.7	**-0.5**
LVA					**Sn**	14 17 57.6	**+0.4**
LVA	**Lava Point**	**1.10**	**22**	IAML		14 18 01.2	
	comp=N,2μm,0.6s						
LVA				IAML		14 18 02.8	
	comp=E,1μm,0.6s						
AHB	**Akutan Harbor**	**1.12**	**29**		**Pn**	14 17 42.4	**-1.1**
AHB					**Sn**	14 17 58.1	**+0.6**
AKUT	**Akutan**	**1.15**	**30**		**Pn**	14 17 43.0	**-0.8**
AKUT	**Akutan**	**1.15**	**30**	IAML		14 17 58.9	
	comp=E,656nm,0.2s						
AKUT				IAML		14 18 01.6	
	comp=N,673nm,0.4s						
NIKH	**Nikolski High**	**1.29**	**263**		**Pn**	14 17 45.2	**-0.6**
NIKH					**Sn**	14 18 01.1	**-0.7**
NIKH				IAML		14 18 05.1	
	comp=N,579nm,0.6s						
NIKH				IAML		14 18 08.8	
	comp=E,378nm,0.5s						
SSBA	**Shishaldin**	**2.25**	**42**		**Pn**	14 17 59.0	**+0.1**
FALS	**False Pass**	**2.60**	**47**		**Pn**	14 18 04.8	**+1.0**
DT1	**Dutton Round H**	**3.28**	**51**		**Pn**	14 18 13.9	**+0.9**
DTNA	**Dutton South F**	**3.32**	**51**		**Pn**	14 18 14.3	**+0.7**
DOL	**Dolgoi Island**	**3.50**	**53**		**Pn**	14 18 16.9	**+0.8**
SDPT	**

PB01				IAML		14 48 53.1	
	comp=N,2μm,0.2s						
PB16	**IPOC Station P**	**1.46**	**350**	*eP*	**Pn**	**14 48 36.5**	**+0.8**
PB16				*eS*	**Sn**	**14 48 57.0**	**+1.5**
PB16				IAML		14 49 00.2	
	comp=E,317nm,0.5s						
PB02	**IPOC Station P**	**1.64**	**201**	*eP*	**Pn**	**14 48 38.0**	**+0.6**
PB02				*eS*	**Sn**	**14 48 59.5**	**+0.7**
PB02				IAML		14 49 06.1	
	comp=N,518nm,0.1s						
PB09	**IPOC Station P**	**2.00**	**180**	*eP*	**Pn**	**14 48 43.5**	**+1.5**
PB07	**IPOC Station P**	**2.02**	**197**	*eP*	**Pn**	**14 48 43.2**	**+1.0**
PB07				IAML		14 49 17.6	
	comp=N,222nm,0.5s						
PB03	**IPOC Station P**	**2.30**	**192**	*eP*	**Pn**	**14 48 46.9**	**+1.0**
PB03				IAML		14 49 23.5	
	comp=E,116nm,0.3s						
LPAZ	**La Paz**	**3.64**	**17**	P	**Pn**	**14 49 06.2**	**+2.1**
	comp=E,11nm,0.5s,baz=202,slow=5.6,SNR=30						
LPAZ				S	**Sn**	**14 49 48.5**	**+2.1**
	comp=E,2.2nm,0.6s,baz=193,slow=14,SNR=1.1						
SIV	**San Ignacio**	**8.65**	**65**	P	**Pn**	**14 50 08.3**	**-3.3**
	comp=E,0.6nm,0.4s,baz=257,slow=14,SNR=2.3						
TORD	**Torodi Ar. Bea**	**77.09**	**71**	P	**P**	**14 59 50.2**	**-1.7**
	comp=E,0.2nm,0.3s,baz=252,slow=6.8,SNR=1.9						
	comp=E,0.2nm,0.3s						
H11S2	**WAKE ISLAND Hyl**	**27.33**	**279**	T	T	17 26 45.8	
	baz=101						
H11S1	**WAKE ISLAND Hyl**	**27.33**	**279**	T	T	17 26 51.1	
	baz=101						
H11S3	**WAKE ISLAND Hyl**	**27.34**	**279**	T	T	17 26 43.2	
	baz=101						
ASAR	**Alice Springs**	**131.27**	**209**	PKP	**PKPdf**	**15 07 09.9**	**-0.3**
	comp=E,0.4nm,0.9s,baz=132,slow=1.6,SNR=1.5						

IDC 07 14:52:53.5±999.0, 50.93N×41.97E, h0km, Error ellipse: s-maj=1658.0km s-min=230.5km az=82.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**10.22**	**87**	I	I	15 56 50.0	
	0.3nm,0.7s,baz=278,slow=299,SNR=4.2						
I46RU	**ZALESOVO INFRA**	**26.00**	**66**	I	I	17 31 50.0	
	baz=280,slow=310,SNR=1.0						
I34MN	**SONGINO INFRAS**	**40.89**	**68**	I	I	19 00 30.0	
	baz=301,slow=328,SNR=0.4						

*IDC **07** 14:53:30.1±0.7,2°.62S×138°.44E, h0km, mb3.9/11, mbtmp3.9/17, ML3.6/5, MS3.6/18, Error ellipse: s-maj=19.8km s-min=15.8km az=53.0*
*NEIC **07** 14:53:34.8±2.2,2°.7S±0°.1×138°.4E±0°.1, h35km±2km, mb4.3/19, Error ellipse: s-maj=19.9km s-min=15.5km az=213.0*
*DJA **07** 14:53:34.6±1.0,2°.S±5°×13°.8E±°, h15km±8km, M4.3/12, mb4.4/4, MLv4.3/12*
ISC 07 14:53:33.7±0.5, 2.72S±0°.06×138°.48E±0°.05, h32km, n74, σ1§39/66, mb4.3/19, MS3.6/15, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.69**	**86**	P	**Pb**	**14 54 04.9**	**+0.7**
JAY	**Jayapura**	**2.23**	**85**	Pn	**Pb**	**14 54 10.1**	**-3.4**
	9.7nm,0.3s,baz=250,slow=7.8,SNR=16						
JAY				Sn	**Sb**	**14 54 39.2**	**-1.5**
	9.6nm,0.3s,baz=347,slow=22,SNR=4.7						
	76nm,0.6s						
JAY	**Jayapura**	**2.23**	**85**	P	**Pb**	**14 54 10.6**	**-2.8**
SRPI	**Serui, Papua**	**2.39**	**291**	P	**Pn**	**14 54 10.6**	**-0.1**
SRPI				S	**Sn**	**14 54 39.3**	**+0.3**
BAKI	**Biak**	**2.82**	**303**	P	**Pn**	**14 54 16.5**	**-0.1**
BAKI				S	**Sn**	**14 54 48.2**	**-1.3**
RKPI	**Ransiki, Papua**	**4.47**	**286**	P	**Pn**	**14 54 39.4**	**+0.2**
RKPI				S	**Sn**	**14 55 30.2**	**0.0**
MWPI	**Manokwari, Pap**	**4.78**	**292**	P	**Pn**	**14 54 43.0**	**-0.6**
FAKI	**Fak Fak**	**6.23**	**268**	Pn	**Pn**	**14 55 03.5**	**0.0**
FAKI	**Fak Fak**	**6.23**	**268**	P	**Pn**	**14 55 02.7**	**-0.8**
	0.1nm17nm,0.8s						
SIJI	**Sorong**	**7.44**	**284**	Pn	**Pn**	**14 55 20.4**	**+0.2**
	1.5nm,0.3s,baz=90,slow=10,SNR=8.8						
SIJI				Sn	**Sn**	**14 56 42.4**	**-1.2**
	baz=38,slow=20						
	4.6nm,0.3s						
SIJI	**Sorong**	**7.44**	**284**	P	**Pn**	**14 55 20.5**	**+0.3**
	0.1nm7.9nm,0.7s						
SWI	**Sorong**	**7.45**	**284**	P	**Pn**	**14 55 21.9**	**+1.7**
	0.1nm22nm,0.6s						
PMG	**Port Moresby**	**10.88**	**128**	Pn	**Pn**	**14 56 08.0**	**+0.6**
	3.3nm,0.6s,baz=244,slow=22,SNR=1.3						
PMG	**Port Moresby**	**10.88**	**128**	Pn	**Pn**	**14 56 10.1**	**+2.8**
COEN	**Coen**	**12.09**	**158**		**Pn**	**14 56 24.9**	**+1.1**
MTN	**Manton Dam**	**12.41**	**215**	Pn	**Pn**	**14 56 29.5**	**+1.3**
SOEI	**Soe**	**15.76**	**243**		**Pn**	**14 57 12.6**	**-0.9**
SOEI				IAmb	IAmb	14 57 36.6	
	comp=Z,47nm,1.1s						
LUWI	**Luwuk**	**15.79**	**276**	Pn	**Pn**	**14 57 10.2**	**-3.7**
KNRA	**Kununurra**	**16.04**	**216**	Pn	**Pn**	**14 57 17.7**	**+0.6**
KNRA				IAmb	IAmb	14 57 44.4	
	comp=Z,20nm,1.1s						
DAV	**Davao City (W)**	**16.14**	**307**	LR	LR	15 03 45.9	
	comp=Z,118nm,18.3s,baz=158,slow=38						
BATI	**Baumata**	**16.48**	**243**	Pn	**P**	**14 57 26.7**	**+1.5**
	comp=Z,4.7nm,0.3s,baz=97,slow=3.1,SNR=4.6						
WB0	**Warramunga Arr**	**17.41**	**193**	P	**P**	**14 57 35.1**	**-0.2**
WR8	**Warramunga Arr**	**17.56**	**192**	P	**P**	**14 57 36.8**	**-0.3**
WRAB	**Tennant Creek**	**17.57**	**193**	P	**P**	**14 57 37.8**	**+0.6**
WRAB				IAmb	IAmb	14 58 09.4	
	comp=Z,17nm,1.1s						
WRA	**Warramunga Arr**	**17.59**	**193**	P	**Pn**	**14 57 36.3**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=14,slow=12,SNR=16						
WRA				S	**Sn**	**15 00 48.8**	**-2.7**
	comp=Z,0.5nm,0.7s,baz=13,slow=22,SNR=1.3						
	comp=Z,2.1nm,0.7s						
WRA	**Warramunga Arr**	**17.59**	**193**	P	**Pn**	**14 57 34.0**	**-2.5**
TOLI2	**Tolitoli**	**18.10**	**282**	P	**Pn**	**14 57 40.3**	**-2.6**
TOLI2				IAmb	IAmb	14 57 59.8	
	comp=Z,10.0nm,0.9s						
CTA	**Charters Tower**	**18.85**	**157**	P	**Pn**	**14 57 53.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=293,slow=15,SNR=1.9						
CTA				LR	LR	15 06 21.5	
	comp=Z,396nm,18.3s,baz=336,slow=41						
	comp=Z,1.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.80**	**219**	P	**Pn**	**14 58 03.6**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=34,slow=11,SNR=0.8						
FITZ				LR	LR	15 06 37.9	
	comp=Z,208nm,18.2s,baz=41,slow=40						
	comp=Z,2.0nm,0.7s						
AS31	**Alice Springs**	**21.29**	**192**	P	**P**	**14 58 19.3**	**+1.5**
ASAR	**Alice Springs**	**21.29**	**192**	P	**P**	**14 58 19.2**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=20,slow=10,SNR=24						
ASAR				S	**S**	**15 02 12.0**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=15,slow=18,SNR=3.0						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**21.29**	**192**	P	**P**	**14 58 18.3**	**+0.6**
BBOO	**Buckleboo**	**30.02**	**184**	P	**P**	**14 59 40.3**	**+0.6**
LEM	**Lembang**	**31.02**	**261**	LR	LR	15 14 11.3	
	comp=Z,58nm,18.3s,baz=236,slow=40						
NWAO	**Narrogin (SRO)**	**36.05**	**211**	LR	LR	15 16 31.9	
	comp=Z,416nm,18.3s,baz=318,slow=38						
JNU	**Nakatsue**	**36.37**	**349**	LR	LR	15 13 50.6	
	comp=Z,75nm,19.5s,baz=160,slow=34						
CM31	**Chiang Mai Arr**	**44.25**	**300**	P	**P**	**15 01 38.9**	**-1.7**
CM31				IAmb	IAmb	15 01 47.9	
	comp=Z,7.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**44.25**	**300**	P	**P**	**15 01 41.4**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=122,slow=6.3,SNR=6.1						
	comp=Z,0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**44.25**	**300**	P	**P**	**15 01 39.1**	**-1.4**
ASAJ	**Asahikawa**	**46.77**	**4**	LR	LR	15 19 12.6	
	comp=Z,64nm,22.0s,baz=130,slow=33						
LZH	**Lanzhou**	**50.35**	**323**	*eP*	**P**	**15 02 30.5**	**+2.5**
LZH				pP	pP	15 02 34.8	-3.0
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
LZDM	**Lanzhou Array**	**50.36**	**323**	P	**P**	**15 02 29.1**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=187,slow=9.0,SNR=5.9						
	comp=Z,0.6nm,0.5s						
HILR	**Hailar Array B**	**54.53**	**345**	P	**P**	**15 02 58.4**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=166,slow=7.1,SNR=2.0						
	comp=Z,0.6nm,0.4s						
GTA2	**Gaotai**	**55.03**	**324**	P	**P**	**15 03 04.4**	**+1.9**
GTA2				pP	pP	15 03 09.0	-3.3
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**57.63**	**335**	P	**P**	**15 03 21.3**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=129,slow=12,SNR=2.0						
SONM				LR	LR	15 27 47.9	
	comp=Z,57nm,20.7s,baz=216,slow=36						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**57.63**	**335**	P	**P**	**15 03 20.6**	**-0.4**
SONM				IAmb	IAmb	15 03 51.8	
	comp=Z,3.0nm,1.4s						
PETK	**Petropavlovsk-**	**57.93**	**14**	P	**P**	**15 03 23.9**	**+1.1**
	comp=Z,14nm,1.2s,baz=230,slow=9.0,SNR=2.9						
	comp=Z,14nm,1.2s						
PETK	**Petropavlovsk-**	**57.93**	**14**	P	**P**	**15 03 25.2**	**+2.5**
PALK	**Pallekele**	**58.50**	**280**	LR	LR	15 30 56.8	
	comp=Z,22nm,18.3s,baz=114,slow=38						
RAR	**Rarotonga**	**62.73**	**112**	LR	LR	15 30 17.4	
	comp=Z,43nm,18.1s,baz=188,slow=35						
MA2	**Magadan**	**62.86**	**7**	LR	LR	15 34 19.6	
	comp=Z,19nm,18.0s,baz=142,slow=39						
YAK	**Yakutsk**	**64.93**	**355**	LR	LR	15 29 40.0	
	comp=Z,53nm,21.8s,baz=354,slow=34						
YAK	**Yakutsk**	**64.93**	**355**	P	**P**	**15 04 10.1**	**+0.2**
MK31	**Makanchi Array**	**69.66**	**322**	P	**P**	**15 04 40.7**	**+0.5**
MK31				IAmb	IAmb	15 04 48.2	
	comp=Z,3.8nm,1.1s						
MKAR	**Makanchi Array**	**69.66**	**322**	P	**P**	**15 04 41.5**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=118,slow=8.0,SNR=33						
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**69.66**	**322**	P	**P**	**15 04 41.7**	**+1.4**
MAKZ	**Makanchi**	**69.86**	**322**	P	**P**	**15 04 42.4**	**+1.0**
ZALV	**Zalesovo Beam**	**71.83**	**330**	P	**P**	**15 04 53.5**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=90,slow=4.4,SNR=3.6						
	comp=Z,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**71.83**	**330**	P	**P**	**15 04 53.1**	**-0.1**
PPT	**Papeete**	**71.97**	**107**	LR	LR	15 33 57.8	
	comp=Z,34nm,21.0s,baz=238,slow=34						
KURK	**Kurchatov**	**73.60**	**325**	P	**P**	**15 05 03.8**	**0.0**
KURK				IAmb	IAmb	15 05 11.3	
	comp=Z,4.8nm,1.3s						
KURBB	**Kurchatov Arra**	**73.61**	**325**	P	**P**	**15 05 04.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=117,slow=4.8,SNR=5.7						
	comp=Z,0.9nm,0.8s						
TIXI	**Tiksi**	**74.50**	**357**	LR	LR	15 37 44.2	
	comp=Z,42nm,18.8s,baz=192,slow=36						
BVAR	**Borovoye Array**	**79.19**	**325**	P	**P**	**15 05 36.4**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=112,slow=7.0,SNR=6.1						
	comp=Z,1.0nm,0.5s						
BORK	**Borovoye**	**79.24**	**325**	P	**P**	**15 05 35.5**	**-0.2**
BORK				IAmb	IAmb	15 05 43.5	
	comp=Z,2.3nm,0.8s						
NRIK	**Noril'sk**	**79.67**	**344**	LR	LR	15 43 08.5	
	comp=Z,23nm,19.1s,baz=151,slow=37						
KDAK	**Kodiak Island**	**81.23**	**30**	LR	LR	15 37 56.8	
	comp=Z,74nm,20.1s,baz=236,slow=33						
AB31	**Akbulak array**	**84.58**	**320**	P	**P**	**15 06 02.2**	**-1.7**
AB31				IAmb	IAmb	15 06 11.7	
	comp=Z,2.7nm,1.1s						
ABKAR	**Akbulak array**	**84.58**	**320**	P	**P**	**15 06 02.1**	**-1.9**
IL31		**85.94**	**24**	P	**P**	**15 06 10.2**	**-0.2**
IL31				IAmb	IAmb	15 06 17.8	
	comp=Z,2.5nm,1.1s						
ILAR	**Eielson Array**	**85.94**	**24**	P	**P**	**15 06 10.6**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=266,slow=4.5,SNR=13						
	comp=Z,0.5nm,0.6s						
DLBC	**Dease Lake**	**93.08**	**32**	LR	LR	15 42 16.3	
	comp=Z,33nm,20.5s,baz=276,slow=32						
SPITS	**Spitsbergen Ar**	**98.95**	**350**	LR	LR	15 54 00.7	
	comp=Z,22nm,20.2s,baz=62,slow=37						
LPAZ	**La Paz**	**147.62**	**127**	PKPbc	**PKPab**	**15 13 18.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=218,slow=6.5,SNR=4.1						

IDC 07 15:01:52.3±671.0, 52.85N×34.65E, h0km, Error ellipse: s-maj=284.0km s-min=83.6km az=25.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.16**	**20**	I	I	15 29 10.0	
	baz=202,slow=344,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**14.71**	**90**	I	I	16 34 15.4	
	baz=286,slow=304,SNR=3.0						
I46RU	**ZALESOVO INFRA**	**29.43**	**67**	I	I	17 58 20.0	
	baz=291,slow=317,SNR=1.5						

*IDC **07** 15:13:55.8±1.0, 35°.46N×27°.40E, h0km, mb3.7/7, mbtmp3.6/12, ML3.3/4, Error ellipse: s-maj=23.4km s-min=14.8km az=175.0*
*ISK **07** 15:13:56.7, 35°.49N×27°.43E, h5km, ML3.4/13*
*ATH **07** 15:13:56.8, 35°.41N×27°.47E, h7km±1km, ML3.4/6, Manual Solution by S.Koutrakis First location: 2020/02/07 15:15:27, This location: 2020/02/07 15:46:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **07** 15:13:57.8, 35°.N±4°.×2°.7E±°, h5km±5km, M3.2/6, MLh3.2/6*
*AFAD **07** 15:13:59.0, 35°.60N×27°.43E, h26km±15km, ML3.1*
ISC 07 15:13:56.9±1.1, 35.43N±0°.04×27.48E±0°.03, h8km±8km, n61, σ1§05/88, mb3.5/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.28**	**295**	Pg	**Pg**	**15 14 02.4**	**-0.1**
KARP				Sg	**Sg**	**15 14 06.5**	**+0.2**
KARP	**Karpathos**	**0.28**	**295**	P	**Pg**	**15 14 02.5**	**0.0**
KARP				S	**Sg**	**15 14 06.2**	**-0.2**
KARP	**Karpathos**	**0.28**	**295**	P	**Pg**	**15 14 02.5**	**0.0**
KARP				S	**Sg**	**15 14 06.5**	**+0.2**
ARG	**Arkhangelos**	**0.95**	**34**	Pg	**Pb**	**15 14 15.5**	**0.0**
ARG				Sg	**Sb**	**15 14 28.9**	**+0.7**
ARG	**Arkhangelos**	**0.95**	**34**	P	**Pb**	**15 14 15.2**	**-0.3**
ARG				S	**Sb**	**15 14 28.7**	**+0.5**
ARG	**Arkhangelos**	**0.95**	**34**	P	**Pb**	**15 14 15.5**	**0.0**
ARG				S	**Sb**	**15 14 28.8**	**+0.7**
ZKR	**Zakros**	**1.08**	**253**	Pg	**Pg**	**15 14 17.5**	**0.0**
ZKR				Sg	**Sn**	**15 14 34.2**	**+0.9**
ZKR	**Zakros**	**1.08**	**253**	P	**Pg**	**15 14 17.2**	**-0.4**
ZKR	**Zakros**	**1.08**	**253**	P	**Pg**	**15 14 17.4**	**-0.2**
ZKR				S	**Sg**	**15 14 31.3**	**-0.2**
YAZI	**Mula-Dat§a-**	**1.25**	**359**	P	**Pb**	**15 14 20.6**	**-0.1**
YAZI				S	**Sg**	**15 14 36.0**	**-1.1**
DAT	**Datca**	**1.30**	**4**	Pn	**Pb**	**15 14 21.5**	**-0.1**
TURN	**Turunc**	**1.48**	**25**	Pn	**Pg**	**15 14 25.1**	**-0.2**
TURN	**Turunc**	**1.48**	**25**	P	**Pn**	**15 14 24.1**	**+0.4**
TURN				S	**Sb**	**15 14 42.6**	**-0.9**
TURN				IAML		15 14 53.0	
	comp=N,368nm,0.6s						
NPS	**Neapolis**	**1.53**	**264**	P	**Pn**	**15 14 25.3**	**+0.8**
NPS				S	**Sn**	**15 14 45.1**	**+0.6**
NPS	**Neapolis**	**1.53**	**264**	P	**Pb**	**15 14 25.5**	**0.0**
NPS				S	**Sn**	**15 14 44.0**	**-0.6**
BDRM	**Kayabasi**	**1.63**	**359**	P	**Pn**	**15 14 26.1**	**+0.2**
BDRM				S	**Sn**	**15 14 45.9**	**-1.2**
BODT	**Bodrum**	**1.64**	**355**	Pn	**Pb**	**15 14 26.9**	**-0.4**
DALY	**Dalyan (Mula)**	**1.68**	**34**	Pn	**Pb**	**15 14 28.2**	**+0.2**
IZZE	**Mula-Seydike**	**1.74**	**54**	P	**Pb**	**15 14 28.5**	**-0.5**
YER	**Yerkesik**	**1.82**	**21**	Pn	**Pb**	**15 14 30.1**	**-0.4**
YER	**Yerkesik**	**1.82**	**21**	P	**Pn**	**15 14 29.4**	**+0.9**
YER				S	**Sn**	**15 14 52.7**	**+0.9**
SABU	**Mula-Dalaman**	**1.84**	**41**	P	**Pb**	**15 14 30.5**	**-0.3**
SABU				S	**Sg**	**15 14 56.1**	**0.0**
SABU				IAML		15 15 05.0	
	comp=N,217nm,0.4s						
SABU				IAML		15 15 12.0	
	comp=E,155nm,0.5s						
THERA	**Ancient Thera,**	**1.88**	**301**	P	**Pn**	**15 14 28.9**	**-0.2**
THERA				S	**Sn**	**15 14 53.0**	**-0.1**
THERA	**Ancient Thera,**	**1.88**	**301**	P	**Pn**	**15 14 29.3**	**+0.1**
THERA				S	**Sn**	**15 14 53.6**	**+0.6**
MLSB	**Milas**	**1.88**	**7**	Pn	**Pb**	**15 14 30.7**	**-0.7**
AKAS	**Kas**	**1.91**	**64**	Pn	**Pb**	**15 14 31.7**	**-0.2**
AKAS	**Kas**	**1.91**	**64**	P	**Pb**	**15 14 31.6**	**-0.4**
CAME	**Cameli-Denizli**	**2.11**	**44**	Pn	**Pn**	**15 14 34.0**	**+1.4**
IDI	**Anoyia**	**2.12**	**267**	Pn	**Pn**	**15 14 32.8**	**+0.2**
	22nm,0.3s,baz=2.2,slow=4.3,SNR=39						
IDI				Sn	**Sn**	**15 14 59.1**	**0.0**
	20nm,0.3s,baz=171,slow=19,SNR=7.7						
IDI	**Anoyia**	**2.12**	**267**	Pn	**Pn**	**15 14 33.7**	**+1.1**
IDI	**Anoyia**	**2.12**	**267**	P	**Pn**	**15 14 32.6**	**0.0**
IDI				S	**Sn**	**15 15 00.0**	**+0.9**
IDI	**Anoyia**	**2.12**	**267**	P	**Pn**	**15 14 33.5**	**+0.9**
IDI				S	**Sn**	**15 14 59.6**	**+0.5**
KNIK	**Mula-Seydike**	**2.21**	**50**	P	**Pb**	**15 14 36.0**	**-1.1**
DNZT	**Denizli-Tavas-**	**2.23**	**34**	P	**Pb**	**15 14 36.5**	**-0.9**
DNZT				P	**Pn**	**15 14 36.8**	**+2.7**
AYDN	**Tasoluk**	**2.25**	**8**	P	**Pn**	**15 14 34.9**	**+0.5**
AYDN				S	**Sn**	**15 15 01.3**	**-1.1**
AYDN				IAML		15 15 16.0	
	comp=N,125nm,0.8s						
CAEL	**Denizli, Camel**	**2.25**	**41**	P	**Pb**	**15 14 38.5**	**+0.6**
GCAM	**G?zelcaml?**	**2.28**	**355**	Pn	**Pn**	**15 14 36.1**	**+1.4**
GCAM	**G?zelcaml?**	**2.28**	**355**	P	**Pn**	**15 14 35.2**	**+0.5**
SMG	**Samos**	**2.33**	**347**	P	**Pn**	**15 14 36.0**	**+0.6**
TAVA	**DENIZLI_Tavas**	**2.34**	**29**	P	**Pb**	**15 14 39.6**	**+0.3**
TAVA				S	**Sb**	**15 15 07.9**	**-0.5**
ESEN	**Aydn-Nazilli**	**2.47**	**16**	P	**Pn**	**15 14 38.7**	**+1.4**
ESEN				S	**Sn**	**15 15 08.2**	**+0.6**
ESEN				IAML		15 15 15.0	
	comp=E,132nm,0.5s						
GOLH	**Golhisar**	**2.47**	**42**	P	**Pb**	**15 14 40.1**	**-1.4**
DNIZ	**Denizli-Tavas-**	**2.53**	**29**	P	**Pn**	**15 14 40.4**	**+2.1**
DGB	**zmir**	**2.66**	**350**	P	**Pn**	**15 14 40.7**	**+0.7**
VAM	**Vamos**	**2.68**	**270**	P	**Pn**	**15 14 40.9**	**+0.7**
IZMR	**zmir-demi**	**2.73**	**8**	P	**Pn**	**15 14 41.2**	**+0.3**
SULTU	**Buldan**	**2.82**	**21**	P	**Pn**	**15 14 44.5**	**+2.3**
INCE	**Denizli-Bozkur**	**2.83**	**36**	P	**Pn**	**15 14 44.0**	**+1.5**
KIRA	**zmir-Kiraz**	**2.86**	**15**	P	**Pn**	**15 14 44.0**	**+1.1**
MANT	**Manisa**	**3.18**	**15**	P	**Pn**	**15 14 49.8**	**+2.5**
BRTR	**Keskin Array B**	**6.51**	**47**	Pn	**Pn**	**15 15 33.4**	**+0.4**
	0.2nm,0.3s,baz=231,slow=17,SNR=2.0						
	2.3nm,1.1s						
MMAI	**Mount Meron Ar**	**6.99**	**108**	Pn	**Pn**	**15 15 39.7**	**+0.1**
	1.8nm,0.3s,baz=305,slow=13,SNR=8.8						
MMAI				Sn	**Sn**	**15 16 58.6**	**-0.7**
	5.5nm,0.3s,baz=310,slow=33,SNR=7.9						
	0.6nm,0.2s						
ASF	**Jabal al Asfar**	**8.48**	**110**	Pn	**Pn**	**15 16 02.6**	**+2.6**
	0.3nm,0.3s,baz=28,slow=20,SNR=1.0						
ASF				Sn	**Sn**	**15 17 38.0**	**+2.0**
	0.3nm,0.3s,baz=254,slow=18,SNR=1.6						
	1.2nm,0.4s						
EIL	**Elat**	**8.53**	**130**	Pn	**Pn**	**15 16 01.1**	**+0.5**
	0.3nm,0.3s,baz=321,slow=3.3,SNR=9.3						
EIL				Sn	**Sn**	**15 17 32.5**	**-4.5**
	1.1nm,0.3s,baz=353,slow=16,SNR=6.7						
	4.0nm,0.7s						
ESDC	**Sonseca Array**	**25.21**	**289**	P	**P**	**15 19 22.3**	**-0.7**
	0.4nm,0.4s,baz=82,slow=9.7,SNR=4.2						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**26.05**	**358**	P	**P**	**15 19 28.9**	**-1.4**
	5.3nm,1.1s,baz=190,slow=9.5,SNR=2.3						
	5.3nm,1.1s						
HFS	**Hagfors**	**26.29**	**344**	P	**P**	**15 19 32.8**	**+0.4**
	1.3nm,0.6s,baz=146,slow=11,SNR=4.4						
	1.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**32.14**	**233**	P	**P**	**15 20 24.1**	**-0.8**
	1.0nm,0.7s,baz=33,slow=6.1,SNR=6.6						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**39.48**	**51**	P	**P**	**15 21 28.7**	**+1.2**
	0.3nm,0.5s,baz=277,slow=8.7,SNR=0.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**42.04**	**57**	P	**P**	**15 21 50.1**	**+1.4**
	0.1nm,0.5s,baz=285,slow=5.5,SNR=4.9						
	0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**43.45**	**46**	P	**P**	**15 22 00.8**	**+0.8**
	0.5nm,0.5s,baz=271,slow=9.8,SNR=3.6						
	0.5nm,0.5s						

*IDC **07** 15:22:40.2±1.5, 3°.01S×137°.37E, h0km, mb3.4/2, mbtmp3.5/6, ML3.5/4, Error ellipse: s-maj=28.4km s-min=25.9km az=161.0*
*DJA **07** 15:22:45.2±0.2, 3°.S±2°×13°.7E±°, h10km, M3.8/10, mB4.7/1, mb4.2/3, MLv3.6/10, Mw(mB)3.9/1*
ISC 07 15:22:46.1±0.9, 3.07S±0°.07×137.29E±0°.05, h54km, n13, σ1§41/20, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.58**	**319**	P	**Pn**	**15 23 10.8**	**-1.0**
SRPI				S	**Sn**	**15 23 30.0**	**-1.2**
BAKI	**Biak**	**2.21**	**328**	P	**Pn**	**15 23 20.5**	**+0.2**
BAKI				S	**Sn**	**15 23 46.0**	**-0.5**
GENI	**Genyem**	**2.92**	**81**	P	**Pn**	**15 23 31.0**	**+1.0**
GENI				S	**Sn**	**15 24 06.3**	**+2.4**
JAY	**Jayapura**	**3.46**	**81**	Pn	**Pn**	**15 23 35.2**	**-2.3**
	0.8nm,0.3s,baz=308,slow=17,SNR=1.6						
JAY				Sn	**Sn**	**15

35nm,0.9s,baz=105,slow=20,SNR=1.7
BATI S **Sn** **15 33 30.5 +1.5**
38nm,0.5s,baz=331,slow=17,SNR=7.1
RKPI Ransiki, Papua 7.10 43 P **Pn** **15 32 18.5 -3.4**
79nm,0.6s
FITZ Fitzroy Crossi 11.85 197 P **Pn** **15 33 25.9 +1.6**
1.6nm,0.3s,baz=21,slow=10,SNR=14
FITZ S **Sn** **15 35 31.8 -3.8**
3.9nm,0.2s,baz=72,slow=19,SNR=8.0
WRA Warramunga Arr 14.01 160 P **Pn** **15 33 52.2 +0.4**
2.5nm,0.3s,baz=326,slow=14,SNR=22
WRA S **Sn** **15 36 25.9 -1.6**
1.1nm,0.5s,baz=332,slow=22,SNR=5.8
ASAR Alice Springs 17.40 166 P **Pn** **15 34 34.3 +0.9**
5.5nm,0.4s,baz=343,slow=10,SNR=202
ASAR S **S** **15 37 45.1 +0.2**
0.4nm,0.4s,baz=346,slow=18,SNR=4.7
CTA Charters Tower 21.13 131 P **P** **15 35 13.1 +0.7**
2.2nm,0.8s,baz=312,slow=14,SNR=3.1
2.2nm,0.8s
STKA Stephens Creek 27.52 157 P **P** **15 36 11.1 -0.5**
1.1nm,0.5s,baz=318,slow=14,SNR=3.6
1.1nm,0.5s

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*IDC **07** 15:37:23.9±2.6,2˚.42S×127˚.82E, h0km, mb3.3/2, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=214.8km s-min=28.9km az=67.0*
*DJA **07** 15:37:36.7±0.2,4˚S±4˚×12˚.8E±˚, h25km±3km, M3.2/12, MLv3.2/12*
ISC 07 15:37:33.5±0.8,**3˚.20S**±0˚.05×**128˚.39E**±0˚.04,**h10**km,**n10,** σ1°**36**/15,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.53**	**202**	P		**Pb**	**Pb**	**15 37 44.1**	**-0.8**
AAI				S		**Sg**	**Sg**	**15 37 48.6**	**-2.2**
MSAI	**Masohi**	**0.56**	**106**	P		**Pn**	**Pn**	**15 37 47.7**	**+0.2**
MSAI				S		**Sn**	**Sn**	**15 37 59.6**	**+2.8**
NLAI	**Namlea**	**1.29**	**268**	P		**Pg**	**Pg**	**15 37 58.9**	**+0.6**
NLAI				S		**Sg**	**Sg**	**15 38 15.9**	**+0.8**
BNDI	**Bandanaira**	**2.00**	**131**	P		**Pn**	**Pn**	**15 38 06.6**	**-0.8**
SANI	**Sanana**	**2.66**	**295**	P		**Pb**	**Pb**	**15 39 20.3**	**-0.9**
SANI				S		**Sb**	**Sb**	**15 38 53.4**	**-0.5**
SWI	**Sorong**	**3.69**	**51**	P		**Pb**	**Pb**	**15 38 37.6**	**-1.2**
SWI				S		**Sb**	**Sb**	**15 39 22.9**	**-0.6**
SIJI	**Sorong**	**3.69**	**51**	P		**Pb**	**Pb**	**15 38 37.6**	**-1.2**
SIJI				S		**Sb**	**Sb**	**15 39 22.9**	**-0.7**
WRA	**Warramunga Arr**	**17.63**	**161**	P		**P**	**P**	**15 41 41.2**	**+0.8**
	baz=339,slow=10,SNR=1.9								
	0.3nm,0.8s								
ASAR	**Alice Springs**	**21.04**	**166**	P		**P**	**P**	**15 42 19.2**	**+1.4**
	1.0nm,0.7s,baz=341,slow=10,SNR=8.2								
	1.0nm,0.7s								
MKAR	**Makanchi Array**	**64.19**	**327**	P		P		15 47 54.6	-14
	0.3nm,0.6s,baz=138,slow=5.0,SNR=2.9								
	0.3nm,0.6s								

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*KOLA **07** 15:38:11.2, 67˚.69N×34˚.12E, h0km, ML2.1, Error ellipse: s-maj=3.0km s-min=1.8km az=130.0, Khibiny Massif*
*IDC **07** 15:38:12.5±2.1, 67˚.67N×33˚.77E, h0km, mbtmp3.8/4, ML2.3/4, Error ellipse: s-maj=23.2km s-min=10.7km az=78.0*
ISC 07 15:38:07.0±1.0,**67˚.63N**±0˚.05×**34˚.19E**±0˚.05,**h0**km,**n12,** σ1°**74**/20,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.31**	**260**	P		**Pb**	**Pb**	**15 38 16.0**	**+0.7**
APA				S		**Sb**	**Sb**	**15 38 20.4**	**-0.5**
LVZ	**Lovozero**	**0.32**	**32**	P		**Pb**	**Pb**	**15 38 16.1**	**+0.4**
LVZ				S		**Sb**	**Sb**	**15 38 20.6**	**-0.8**
APA0	**Apatity Array**	**0.46**	**268**	P		**Pb**	**Pb**	**15 38 18.7**	**+0.8**
APA0				S		**Sb**	**Sb**	**15 38 24.8**	**-0.5**
KVDA	**Kovda**	**1.07**	**209**	P		**Pn**	**Pn**	**15 38 30.6**	**+1.4**
KVDA				S		**Sn**	**Sn**	**15 38 46.1**	**+1.4**
VADS	**Vadso**	**3.06**	**327**	P		**Pn**	**Pn**	**15 38 59.4**	**+3.0**
VADS				S		**Sn**	**Sn**	**15 39 34.6**	**+0.9**
ARCES	**ARCESS Array B**	**3.72**	**305**	Pn		**Pn**	**Pn**	**15 39 08.6**	**+3.0**
	0.3nm,0.3s,baz=121,slow=15,SNR=22								
ARCES				Pg		**Pg**	**Pg**	**15 39 16.9**	**-1.2**
	0.4nm,0.3s,baz=117,slow=18,SNR=7.4								
ARCES				Sn		**Sn**	**Sn**	**15 39 50.7**	**+0.7**
	0.5nm,0.3s,baz=121,slow=26,SNR=3.8								
ARCES				Lg		Lg	Lg	15 40 02.9	
	1.3nm,0.3s,baz=115,slow=28,SNR=12								
	0.8nm,0.2s								
ARCES	**ARCESS Array B**	**3.72**	**305**	P		**Pn**	**Pn**	**15 39 08.4**	**+2.8**
ARCES				S		**Sn**	**Sn**	**15 39 51.0**	**+0.9**
FINES	**FINESS Array B**	**7.12**	**213**	Pn		**Pn**	**Pn**	**15 39 55.7**	**+3.5**
	0.1nm,0.3s,baz=26,slow=12,SNR=2.1								
FINES				Sn		**Sn**	**Sn**	**15 41 13.2**	**-0.5**
	0.1nm,0.3s,baz=23,slow=25,SNR=1.7								
	3.2nm,1.0s								
FAUS	**Fauske**	**7.25**	**277**	S		**Sn**	**Sn**	**15 41 16.4**	**-0.5**
I43RU	**DUBNA INFRASONI**	**1.03**	**171**	I		I	I	16 40 40.0	
	baz=355,slow=324,SNR=4.5								
HFS	**Hagfors**	**11.69**	**240**	Pn		**Pn**	**Pn**	**15 40 53.1**	**-1.6**
	baz=46,slow=13,SNR=1.9								
	3.2nm,1.0s								
SPITS	**Spitsbergen Ar**	**11.73**	**342**	Pn		**Pn**	**Pn**	**15 40 55.1**	**-0.2**
	baz=146,slow=16								
	18nm,1.0s								

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*IDC **07** 15:39:36.9±1.8, 44˚.63N×81˚.52E, h0km, mb3.6/1, mbtmp3.2/6, ML2.8/5, MS2.9/1, Error ellipse: s-maj=25.4km s-min=9.7km az=124.0*
*NNC **07** 15:39:39.3±0.6, 44˚.60N×81˚.35E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=5.9km s-min=3.5km az=123.0*
*SOME **07** 15:39:39.8, 44˚.55N×81˚.35E, h20km*
ISC 07 15:39:39.1±1.3,**44˚.57N**±0˚.03×**81˚.37E**±0˚.04,**h9**km±10km, **n53,** σ2°**01**/78,**12C-4D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.15**	**259**	P		**Pg**	**Pg**	**15 40 01.5**	**+0.3**
	19nm,0.1s								
DJR				S		**Sb**	**Sb**	**15 40 17.7**	**+1.3**
	56nm,0.2s								
DJR	**Jarkent**	**1.15**	**259**	*e*P		**Pg**	**Pg**	**15 40 01.5**	**+0.3**
	19nm,0.1s								
DJR				*e*S		**Sb**	**Sb**	**15 40 17.7**	**+1.3**
	56nm,0.2s								
KTMS	**Ketmen**	**1.34**	**213**	P		**Pg**	**Pg**	**15 40 04.3**	**-0.5**
	30nm,0.1s								
KTMS				S		**Sg**	**Sg**	**15 40 22.3**	**+0.1**
	206nm,0.1s								
KTMS	**Ketmen**	**1.34**	**213**	*e*P		**Pg**	**Pg**	**15 40 04.3**	**-0.5**
	30nm,0.1s								
KTMS				*e*S		**Sg**	**Sg**	**15 40 22.3**	**+0.1**
	206nm,0.1s								
KNOS	**Konyrlen**	**1.58**	**263**	P		**Pn**	**Pn**	**15 40 09.0**	**+1.5**
	38nm,0.2s								
KNOS				S		**Sb**	**Sb**	**15 40 30.7**	**+2.0**
	128nm,0.3s								
KAPS	**Kapalarasan**	**1.59**	**297**	P		**Pn**	**Pn**	**15 40 08.7**	**+1.1**
	33nm,0.1s								
KAPS				S		**Sg**	**Sg**	**15 40 30.4**	**0.0**
	496nm,0.2s								
PDGK	**Podgornoye**	**1.84**	**228**	⇑Pn		**Pn**	**Pn**	**15 40 12.4**	**+1.5**
	46nm,0.5s								
PDGK				⇓Sn		**Sb**	**Sb**	**15 40 37.8**	**+1.7**
	324nm,0.5s								
SHLS	**Shalkode**	**1.97**	**225**	P		**Pn**	**Pn**	**15 40 11.8**	**-1.1**
	218nm,0.1s								
SHLS				S		**Sn**	**Sn**	**15 40 34.6**	**-3.1**
	381nm,0.2s								
SHLS	**Shalkode**	**1.97**	**225**	*e*P		**Pn**	**Pn**	**15 40 11.8**	**-1.1**
	218nm,0.1s								
SHLS				*e*S		**Sn**	**Sn**	**15 40 34.6**	**-3.1**
	381nm,0.2s								
TDK	**Taldyqorghan**	**2.15**	**283**	Pg		**Pb**	**Pb**	**15 40 18.5**	**+0.2**
	59nm,0.3s								
TDK				Lg		Lg	Lg	15 40 46.6	
	457nm,0.2s								
TDK	**Taldyqorghan**	**2.15**	**283**	*e*P		**Pb**	**Pb**	**15 40 18.5**	**+0.2**
	59nm,0.3s								
TDK				*e*S		**Sb**	**Sb**	**15 40 46.6**	**+1.5**
	457nm,0.2s								
UZB	**Uzynbulak**	**2.21**	**231**	Pg		**Pn**	**Pn**	**15 40 18.8**	**+2.6**
	23nm,0.3s								
UZB				Lg		Lg	Lg	15 40 47.3	
	138nm,0.5s								
UZB	**Uzynbulak**	**2.21**	**231**	*e*P		**Pn**	**Pn**	**15 40 18.8**	**+2.6**
	23nm,0.3s								
UZB				*e*S		**Sb**	**Sb**	**15 40 47.3**	**+0.3**
	138nm,0.5s								
KPKS	**Kokpek**	**2.23**	**241**	Pg		**Pb**	**Pb**	**15 40 20.3**	**+0.7**
	0.4nm,0.2s								
KPKS				Lg		Lg	Lg	15 40 49.6	
	290nm,0.3s								
KPKS	**Kokpek**	**2.23**	**241**	*e*P		**Pb**	**Pb**	**15 40 20.3**	**+0.7**
	0.4nm,0.2s								
KPKS				*e*S		**Sb**	**Sb**	**15 40 49.6**	**+2.3**
	290nm,0.3s								
MAKZ	**Makanchi**	**2.28**	**11**	⇑Pn		**Pn**	**Pn**	**15 40 17.7**	**+0.7**
	9.2nm,0.3s								
MAKZ				⇑Lg		Lg	Lg	15 40 49.6	
	37nm,0.3s								
MK31	**Makanchi Array**	**2.32**	**16**	⇑Pn		**Pn**	**Pn**	**15 40 18.0**	**+0.6**
	4.7nm,0.2s,baz=195,slow=15,SNR=1054								
MK31				⇓Lg		Lg	Lg	15 40 49.6	
	26nm,0.5s,baz=202,slow=28,SNR=11								
MKAR	**Makanchi Array**	**2.32**	**16**	Pn		**Pn**	**Pn**	**15 40 17.9**	**+0.4**
	11nm,0.3s,baz=199,slow=15,SNR=230								
MKAR				Sn		**Sn**	**Sn**	**15 40 45.2**	**-0.9**
	28nm,0.3s,baz=195,slow=22,SNR=17								
MKAR				Lg		Lg	Lg	15 40 47.2	
	28nm,0.3s,baz=196,slow=26,SNR=4.7								
	15nm,0.3s								
ARXS	**Arharly**	**2.56**	**263**	Pg		**Pb**	**Pb**	**15 40 26.4**	**+1.1**
	9.1nm,0.2s								
ARXS				Lg		Lg	Lg	15 40 59.9	
	115nm,0.3s								
ARXS	**Arharly**	**2.56**	**263**	*e*P		**Pb**	**Pb**	**15 40 26.4**	**+1.1**
	9.1nm,0.2s								
ARXS				*e*S		**Sg**	**Sg**	**15 40 59.9**	**-1.5**
	115nm,0.3s								
SATY	**Saty**	**2.62**	**236**	Pg		**Pn**	**Pn**	**15 40 24.7**	**+3.0**
	14nm,0.1s								
SATY				Lg		Lg	Lg	15 40 57.1	
	751nm,0.3s								
KOTS	**Kotyrbulak**	**3.35**	**248**	Pg		**Pb**	**Pb**	**15 40 40.3**	**+1.5**
	6.6nm,0.2s								
KOTS				Lg		Lg	Lg	15 41 23.9	
	144nm,0.4s								
KOTS	**Kotyrbulak**	**3.35**	**248**	*e*P		**Pb**	**Pb**	**15 40 40.3**	**+1.5**
	6.6nm,0.2s								
KOTS				*e*S		**Sb**	**Sb**	**15 41 23.9**	**+4.2**
	144nm,0.4s								
MDOK	**Medeo**	**3.42**	**247**	Pg		**Pb**	**Pb**	**15 40 39.9**	**-0.1**
	38nm,0.4s								
MDOK				Lg		Lg	Lg	15 41 23.1	
	36nm,0.2s								
KNDC	**Almaty**	**3.46**	**248**	⇑Pg		**Pg**	**Pg**	**15 40 44.0**	**-1.3**
	22nm,0.5s								
KNDC				⇓Lg		Lg	Lg	15 41 29.5	
	89nm,0.5s								
KTBS	**Karatobe**	**3.48**	**257**	Pg		**Pb**	**Pb**	**15 40 41.9**	**+1.1**
	2.7nm,0.2s								
KTBS				Lg		Lg	Lg	15 41 26.3	
	0.4nm,0.5s								
KTBS	**Karatobe**	**3.48**	**257**	*e*P		**Pb**	**Pb**	**15 40 41.9**	**+1.1**
	2.7nm,0.2s								
KTBS				*e*S		**Sb**	**Sb**	**15 41 26.3**	**+3.0**
	0.4nm,0.5s								
TNSS	**Tian-Shan**	**3.55**	**246**	Pg		**Pb**	**Pb**	**15 40 44.4**	**+2.2**
	4.4nm,0.4s								
TNSS				Lg		Lg	Lg	15 41 30.2	
	7.7nm,0.4s								
TNSS	**Tian-Shan**	**3.55**	**246**	*e*P		**Pb**	**Pb**	**15 40 44.4**	**+2.2**
	4.4nm,0.4s								
TNSS				*e*S		**Sg**	**Sg**	**15 41 30.2**	**-2.8**
	7.7nm,0.4s								
KUU	**Kurty**	**3.68**	**261**	Pg		**Pb**	**Pb**	**15 40 45.1**	**+0.9**
	4.2nm,0.0s								
KUU				Lg		Lg	Lg	15 41 31.9	
	45nm,0.3s								
KUU	**Kurty**	**3.68**	**261**	*e*P		**Pb**	**Pb**	**15 40 45.1**	**+0.9**
	4.2nm,0.0s								
KUU				*e*S		**Sb**	**Sb**	**15 41 31.9**	**+3.0**
	45nm,0.3s								
IZV	**Izvestkoviy**	**3.77**	**248**	Pg		**Pb**	**Pb**	**15 40 48.6**	**+2.7**
	4.0nm,0.2s								
IZV				Lg		Lg	Lg	15 41 38.1	
	18nm,0.2s								
IZV	**Izvestkoviy**	**3.77**	**248**	*e*P		**Pb**	**Pb**	**15 40 48.6**	**+2.7**
	4.0nm,0.2s								
IZV				*e*S		**Sg**	**Sg**	**15 41 38.1**	**-1.9**
	18nm,0.2s								
ZSN	**Zaisan**	**3.77**	**39**	Pg		**Pb**	**Pb**	**15 40 46.7**	**+0.8**
	8.7nm,0.4s								
ZSN				Lg		Lg	Lg	15 41 34.6	
	38nm,0.5s								
ZSN	**Zaisan**	**3.77**	**39**	*e*P		**Pb**	**Pb**	**15 40 47.2**	**+1.3**
	8.7nm,0.4s								
ZSN				*e*S		**Sb**	**Sb**	**15 41 35.6**	**+3.9**
	38nm,0.5s								
MTBS	**Maitube**	**3.85**	**250**	Pg		**Pb**	**Pb**	**15 40 48.3**	**+1.0**
	2.9nm,0.1s								
MTBS				Lg		Lg	Lg	15 41 37.3	
	31nm,0.2s								
MTBS	**Maitube**	**3.85**	**250**	*e*P		**Pb**	**Pb**	**15 40 48.3**	**+1.0**
	2.9nm,0.1s								
MTBS				*e*S		**Sb**	**Sb**	**15 41 37.3**	**+3.3**
	31nm,0.2s								
KRBS	**Karabastau**	**4.19**	**260**	Pg		**Pb**	**Pb**	**15 40 53.1**	**+0.1**
	2.8nm,0.2s								
KRBS				Lg		Lg	Lg	15 41 45.7	
	17nm,0.2s								
KRBS	**Karabastau**	**4.19**	**260**	*e*P		**Pb**	**Pb**	**15 40 54.1**	**+1.2**
	1.9nm,0.2s								
KRBS				*e*S		**Sb**	**Sb**	**15 41 47.5**	**+3.8**
	17nm,0.2s								
KST	**Kastek**	**4.20**	**251**	Pg		**Pb**	**Pb**	**15 40 56.3**	**+3.1**
	3.9nm,0.2s								
KST				Lg		Lg	Lg	15 41 51.0	
	20nm,0.4s								
KST	**Kastek**	**4.20**	**251**	*e*P		**Pb**	**Pb**	**15 40 56.3**	**+3.1**
	3.9nm,0.2s								
KST				*e*S		**Sg**	**Sg**	**15 41 51.0**	**-2.9**
	20nm,0.4s								
DGS	**Degeres**	**4.25**	**254**	Pg		**Pb**	**Pb**	**15 40 57.7**	**+3.5**
	3.2nm,0.2s								
DGS				Lg		Lg	Lg	15 41 53.7	
	40nm,0.6s								
DGS	**Degeres**	**4.25**	**254**	*e*P		**Pb**	**Pb**	**15 40 57.7**	**+3.5**
	3.2nm,0.2s								
DGS				*e*S		**Sg**	**Sg**	**15 41 53.7**	**-2.0**
	40nm,0.6s								
AAK	**Ala-Archa**	**5.35**	**251**	Pn		**Pn**	**Pn**	**15 41 03.7**	**+4.4**
	0.3nm,0.3s,baz=96,slow=7.3,SNR=5.5								
AAK				Pg		**Pb**	**Pb**	**15 41 15.1**	**+2.2**
	0.7nm,0.3s,baz=103,slow=7.0,SNR=7.9								
AAK				Lg		Lg	Lg	15 42 23.9	
	0.9nm,0.3s,baz=0.0,slow=20,SNR=8.5								
	0.5nm,0.3s								
AAK	**Ala-Archa**	**5.35**	**251**	⇑Pg		**Pg**	**Pg**	**15 41 20.0**	**-1.5**
	1.4nm,0.6s								
AAK				⇑Lg		Lg	Lg	15 42 27.0	
	2.7nm,0.5s								
KURBB	**Kurchatov Arra**	**6.35**	**343**	Pn		**Pn**	**Pn**	**15 41 12.5**	**-0.3**
	0.3nm,0.3s,baz=161,slow=12,SNR=11								
KURBB				Sn		**Sn**	**Sn**	**15 42 24.4**	**-1.0**
	0.3nm,0.3s,baz=173,slow=16,SNR=5.3								
KURBB				Lg		Lg	Lg	15 42 51.3	
	0.4nm,0.3s,baz=155,slow=32,SNR=6.9								
	0.5nm,0.3s								
KURBB	**Kurchatov Arra**	**6.35**	**343**	⇓Pn		**Pn**	**Pn**	**15 41 12.5**	**-0.3**
	3.1nm,0.5s								
KURBB				⇑Lg		Lg	Lg	15 42 57.6	
	24nm,0.6s								
KURK	**Kurchatov**	**6.42**	**344**	⇑Pn		**Pn**	**Pn**	**15 41 12.1**	**-1.7**
	0.9nm,0.5s								
KURK				⇑Lg		Lg	Lg	15 42 58.7	
	16nm,1.2s								
KK31	**Karatay Array**	**7.98**	**263**	⇑Pg		**Pg**	**Pg**	**15 42 11.1**	**-0.8**
	0.3nm,0.3s								
KK31				⇑Lg		Lg	Lg	15 43 50.9	
	1.2nm,0.4s								
ZALV	**Zalesovo Beam**	**9.65**	**12**	Pn		**Pn**	**Pn**	**15 41 55.6**	**-2.5**
	0.3nm,0.3s,baz=198,slow=11,SNR=5.1								
ZALV				Lg		Lg	Lg	15 44 40.4	
	0.1nm,0.3s,baz=195,slow=28,SNR=3.2								
	0.3nm,0.3s								
BVAR	**Borovoye Array**	**11.12**	**323**	Pn		**Pn**	**Pn**	**15 42 17.8**	**-0.4**
	baz=133,slow=14,SNR=1.3								
BVAR				Lg		Lg	Lg	15 45 23.9	
	baz=117,slow=25,SNR=2.2								
	0.3nm,0.5s								
SONM	**Songino Array**	**17.61**	**70**	LR		LR	LR	15 51 36.8	
	comp=Z,39nm,18.0s,baz=124,slow=41								
TORD	**Torodi Ar. Bea**	**73.57**	**272**	P		**P**		**15 51 11.4**	**-1.4**
	0.3nm,0.5s,baz=39,slow=5.7,SNR=2.6								
	0.3nm,0.5s								

IDC 07 15:43:46.7±2.4,**6˚.83S**×**129˚.16E**,**h0**km,**mb3.3**/1, **mbtmp3.1**/3,**ML2.8**/2,**Error ellipse: s-maj=150.0km s-min=34.0km az=67.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.97**	**159**	Pn		Pn	Pn	15 47 08.1	+2.0
	baz=342,slow=14,SNR=1.3								
WRA				Sn		Sn	Sn	15 49 37.0	-5.1
	baz=333,slow=24,SNR=1.4								
	0.2nm,0.8s								
ASAR	**Alice Springs**	**17.35**	**165**	P		Pn	Pn	15 47 49.0	-1.5
	baz=346,slow=11,SNR=4.8								
	0.4nm,0.9s								
MKAR	**Makanchi Array**	**67.63**	**327**	P		P	P	15 54 45.5	0.0
	0.2nm,0.7s,baz=116,slow=5.3,SNR=2.3								
	0.2nm,0.7s								

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*IDC **07** 15:52:08.6±2.6, 23˚.52N×93˚.97E, h53km±30km, mb3.3/8, mbtmp3.5/10, ML3.7/3, Error ellipse: s-maj=19.8km s-min=15.9km az=60.0*
ISC 07 15:52:09.8±0.8,**23˚.5N**±0˚.1×**93˚.91E**±0˚.08,**h73**km,**n11,** σ0°**89**/12,**mb3.5**/8,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.23**	**249**	P		**Pn**	**Pn**	**15 52 43.5**	**-1.2**
	76nm,0.3s,baz=72,slow=20,SNR=1.9								
BRDH				S		**Sn**	**Sn**	**15 53 11.7**	**+0.4**
	132nm,0.3s,baz=49,slow=19,SNR=4.3								
CMAR	**Chiang Mai Arr**	**6.86**	**136**	P		**Pn**	**Pn**	**15 53 47.1**	**-0.7**
	0.1nm,0.3s,baz=321,slow=14,SNR=4.2								
	0.4nm,0.4s								
LZDM	**Lanzhou Array**	**15.05**	**32**	P		**Pn**	**Pn**	**15 55 37.9**	**-0.8**
	baz=194,slow=18								
	0.4nm,0.3s								
AAK	**Ala-Archa**	**24.99**	**325**	P		**P**	**P**	**15 57 28.1**	**+1.2**
	0.3nm,0.4s,baz=184,slow=13,SNR=1.6								
	0.3nm,0.4s								
MKAR	**Makanchi Array**	**25.07**	**341**	P		**P**	**P**	**15 57 28.0**	**+0.6**
	0.1nm,0.4s,baz=168,slow=9.5,SNR=5.1								
	0.1nm,0.4s								
SONM	**Songino Array**	**26.27**	**19**	P		**P**	**P**	**15 57 38.8**	**+0.4**
	1.1nm,0.6s,baz=199,slow=11,SNR=4.4								
	1.1nm,0.6s								
KURBB	**Kurchatov Arra**	**29.62**	**340**	P		**P**	**P**	**15 58 08.8**	**+0.7**
	0.3nm,0.2s,baz=128,slow=11,SNR=0.8								
	0.3nm,0.2s								
ZALV	**Zalesovo Beam**	**31.19**	**350**	P		**P**	**P**	**15 58 21.8**	**0.0**
	0.2nm,0.3s,baz=158,slow=12,SNR=1.7								
	0.2nm,0.3s								
HILR	**Hailar Array B**	**32.99**	**31**	P		**P**	**P**	**15 58 37.0**	**-0.7**
	0.4nm,0.3s,baz=218,slow=9.0,SNR=2.2								
	0.4nm,0.3s								
WRA	**Warramunga Arr**	**58.45**	**134**	P		**P**	**P**	**16 01 59.0**	**+0.5**
	0.3nm,0.7s,baz=321,slow=7.4,SNR=6.3								
	0.3nm,0.7s								
ASAR	**Alice Springs**	**60.87**	**138**	P		**P**	**P**	**16 02 16.0**	**+1.0**
	0.3nm,0.5s,baz=318,slow=6.5,SNR=14								
	0.3nm,0.5s								

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*IDC **07** 15:56:03.9±0.7, 17˚.81N×40˚.07E, h0km, mb4.1/28, mbtmp4.1/30, ML3.2/3, MS3.6/46, Error ellipse: s-maj=16.8km s-min=14.9km az=179.0*
*SGS **07** 15:56:03.7, 17˚.78N×40˚.38E, h18km, MI3.1*
*NEIC **07** 15:56:04.8±2.4, 17˚.87N±0˚.08×40˚.17E±0˚.08, h10km±1km, mb4.2/15, Error ellipse: s-maj=14.6km s-min=11.3km az=217.0*
ISC 07 15:56:07.6±0.5,**17˚.89N**±0˚.05×**40˚.22E**±0˚.05,**h28**km,**n133,** σ2°**09**/114,**mb4.2**/30,**MS3.7**/42,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRK01	**Al Birk**	**1.33**	**73**	S		**Sn**	**Sn**	**15 56 42.3**	**-4.8**
BRK01				P		Pn	Pn	15 56 26.5	-3.8
AMGES	**AMGES**	**1.38**	**65**	P		Pn	Pn	15 56 27.2	-3.8
AMGES				S		**Sn**	**Sn**	**15 56 43.9**	**-4.4**
BRK02	**Al Birk**	**1.53**	**87**	S		**Sn**	**Sn**	**15 56 47.9**	**-4.1**
BRK02				P		Pn	Pn	15 56 29.4	-3.6
BRK03	**Al Birk**	**1.62**	**79**	P		Pn	Pn	15 56 31.2	-3.1
BRK03				S		**Sn**	**Sn**	**15 56 50.7**	**-3.6**
BRK04	**Al Birk**	**1.68**	**64**	S		**Sn**	**Sn**	**15 56 51.3**	**-4.6**
BRK04				P		Pn	Pn	15 56 32.0	-3.2
FRSS2	**Sair Farasan I**	**1.82**	**124**	S		Sn	Sn	15 56 52.4	-6.8
FRSS2				P		Pn	Pn	15 56 32.3	-4.8
DRBS	**Ad Darb**	**1.98**	**91**	S		**Sn**	**Sn**	**15 56 59.5**	**-3.7**
DRBS				P		Pn	Pn	15 56 35.1	-4.2
FRSS	**Farasan al Kab**	**2.14**	**122**	S		**Sn**	**Sn**	**15 57 01.7**	**-5.4**
FRSS				P		Pn	Pn	15 56 36.9	-4.5
ASIR3	**ASIR3**	**2.19**	**68**	P		**Pn**	**Pn**	**15 56 40.6**	**-1.9**
ASIR3				S		**Sn**	**Sn**	**15 57 06.2**	**-2.7**
NAMS	**An Nimas**	**2.27**	**55**	S		**S

SOHO SOHO 16.44 65 P P 16 00 00.8 +1.8
SOHO S S 16 03 27.4 +18
UOSS Minazif 16.45 62 Pn Pn 15 59 53.5 -3.0
UOSS IAmb IAmb 16 00 16.3
comp=Z,11nm,0.9s
UOSS Minazif 16.45 62 P P 16 00 01.0 +1.9
MASF Masafi 16.57 61 P P 16 00 02.1 +1.6
BSY Bisya 16.64 70 P P 16 00 01.8 +0.6
SNR=5.3
MDH Madha 16.66 61 P Pn 16 00 01.1 +1.8
SHME Shamm 16.84 58 P P 16 00 04.5 +1.1
BANOM Banah 16.92 59 P P 16 00 05.5 +1.2
HOQ Hoqain 16.95 68 P P 16 00 06.6 +1.9
SNR=14
MHTO MHTO 17.02 77 P P 16 00 07.0 +1.6
SNR=11
JMDO Jabal Madar 17.37 72 P P 16 00 11.0 +1.6
SNR=15
SMDO Samad 17.47 70 P P 16 00 12.7 +2.1
SNR=8.7
BIDO Bidbid 17.66 68 P P 16 00 14.1 +1.7
WBK Wadi Bani Khal 18.20 72 P Pn 16 00 21.2 +2.8
SNR=10
JLN Jalan Bani Buh 18.52 74 P Pn 16 00 23.9 +1.6
MBAR Mbarara 20.61 208 P P 16 00 45.4 +0.5
comp=Z,3.7nm,0.2s,baz=61,slow=10,SNR=4.0
MBAR LR LR 16 07 30.4
comp=Z,151nm,21.9s,baz=30,slow=34
comp=Z,3.7nm,0.2s
MBAR Mbarara 20.61 208 P P 16 00 43.8 -1.2
NGCH Negor - Chabah 20.80 65 P P 16 00 47.2 +0.3
ARPR Arapgir-MALATY 21.20 356 P P 16 00 48.2 -2.9
ARPR IAmb IAmb 16 00 59.6
comp=Z,35nm,1.4s
BRTR Keskin Array B 22.50 347 P P 16 01 07.2 +2.0
comp=Z,3.0nm,0.9s,baz=174,slow=8.8,SNR=8.5
BRTR LR LR 16 09 20.6
comp=Z,111nm,18.4s,baz=151,slow=35
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 22.50 347 P P 16 01 02.6 -2.5
GNI Garni 22.53 9 LR LR 16 10 42.8
comp=Z,95nm,20.1s,baz=202,slow=39
KBZ Khabaz 25.86 4 LR LR 16 12 45.8
comp=Z,164nm,18.4s,baz=204,slow=39
MLR Muntele Rosu 29.99 340 P P 16 02 16.4 +2.4
comp=Z,3.9nm,0.8s,baz=208,slow=10.0,SNR=4.8
comp=Z,3.9nm,0.8s
MLR Muntele Rosu 29.99 340 P P 16 02 10.4 -3.5
MLR IAmb IAmb 16 02 18.6
comp=Z,3.9nm,0.7s
BURAR Bucovina Array 32.10 341 P P 16 02 31.0 -1.5
BURAR IAmb IAmb 16 02 38.9
comp=Z,1.8nm,0.8s
KEST Kesra 32.60 309 LR LR 16 15 52.7
comp=Z,73nm,21.9s,baz=309,slow=36
TAM Tamanrasset 32.85 284 P P 16 02 37.5 -2.0
AKASG Malin Array Be 33.90 347 P P 16 02 48.2 +0.2
comp=Z,0.1nm,0.3s,baz=170,slow=7.2,SNR=4.3
AKASG LR LR 16 16 00.2
comp=Z,36nm,20.7s,baz=62,slow=35
comp=Z,0.1nm,0.3s
BTK Batken 34.43 44 P P 16 02 52.3 -0.6
BTK IAmb IAmb 16 03 07.1
comp=Z,4.7nm,1.3s
LSZ Lusaka 35.02 201 LR LR 16 17 20.1
comp=Z,415nm,19.1s,baz=21,slow=37
AB31 Akbulak array 35.12 23 P P 16 02 59.1 +0.5
AB31 IAmb IAmb 16 03 06.2
comp=Z,2.4nm,0.7s
ABKAR Akbulak array 35.12 23 P P 16 02 59.2 +0.6
AKTO Aktyubinsk 35.46 20 LR LR 16 19 35.9
comp=Z,98nm,20.0s,baz=140,slow=40
TORD Torodi Ar. Bea 37.38 268 P P 16 03 17.2 -1.1
comp=Z,2.7nm,0.9s,baz=92,slow=6.2,SNR=12
comp=Z,2.7nm,0.9s
TORD Torodi Ar. Bea 37.38 268 P P 16 03 16.1 -2.3
GERES GERESS Array B 37.62 331 P P 16 03 20.5 +0.4
comp=Z,1.1nm,0.8s,baz=131,slow=6.1,SNR=6.1
GERES LR LR 16 19 42.6
comp=Z,43nm,19.4s,baz=94,slow=38
comp=Z,1.1nm,0.8s
AAK Ala-Archa 38.12 42 LR LR 16 21 51.1
comp=Z,139nm,18.4s,baz=230,slow=40
DAVOX Davos/Dischmat 38.14 326 LR LR 16 22 50.0
comp=Z,31nm,18.7s,baz=68,slow=42
BOOM Boomskoye usch 38.99 43 P P 16 03 28.6 -3.1
PALK Pallekele 40.80 100 LR LR 16 17 44.1
comp=Z,56nm,20.7s,baz=286,slow=32
ARTI Arti 40.81 15 LR LR 16 23 37.2
comp=Z,63nm,20.7s,baz=196,slow=40
ARTI Arti 40.81 15 P P 16 03 46.8 +0.3
KIRV Kirov 41.20 7 LR LR 16 22 20.0
comp=Z,59nm,18.6s,baz=203,slow=38
BORK Borovoye 42.20 27 P P 16 03 58.5 +0.5
BVAR Borovoye Array 42.22 27 P P 16 04 00.7 +2.6
comp=Z,0.5nm,0.6s,baz=212,slow=5.3,SNR=4.7
BVAR LR LR 16 23 38.5
comp=Z,121nm,19.4s,baz=216,slow=39
comp=Z,0.5nm,0.6s
MDT Midelt 42.83 299 LR LR 16 22 37.4
comp=Z,56nm,19.0s,baz=48,slow=37
TSUM Tsumeb 43.05 212 LR LR 16 21 11.0
comp=Z,33nm,18.6s,baz=26,slow=35
ESDC Sonseca Array 43.85 309 P P 16 04 11.9 +0.3
comp=Z,2.0nm,1.0s,baz=104,slow=7.0,SNR=8.0
comp=Z,2.0nm,1.0s
FINES FINESS Array B 44.65 350 P P 16 04 18.6 +1.0
comp=Z,2.9nm,0.7s,baz=150,slow=8.1,SNR=4.4
comp=Z,2.9nm,0.7s
KURBB Kurchatov Arra 44.66 34 P P 16 04 20.4 +2.5
comp=Z,1.9nm,0.8s,baz=238,slow=8.1,SNR=12
KURBB PcP PcP 16 06 00.3 +0.2
comp=Z,0.3nm,0.4s,baz=239,slow=3.9,SNR=1.7
KURBB LR LR 16 25 26.7
comp=Z,134nm,20.4s,baz=180,slow=39
comp=Z,1.9nm,0.8s
KURK Kurchatov 44.76 34 P P 16 04 20.6 +2.0
KURK IAmb IAmb 16 04 22.9
comp=Z,2.4nm,0.8s
MAKZ Makanchi 44.78 40 P P 16 04 20.2 +1.3
MAKZ IAmb IAmb 16 04 22.9
comp=Z,2.8nm,0.8s
LBTB Lobatse 44.96 199 LR LR 16 22 44.2
comp=Z,141nm,18.8s,baz=20,slow=36
MKAR Makanchi Array 44.97 41 P P 16 04 21.8 +1.5
comp=Z,1.0nm,0.7s,baz=231,slow=7.7,SNR=13
MKAR PcP PcP 16 06 01.8 +0.4
comp=Z,0.1nm,0.4s,baz=276,slow=2.8,SNR=4.6
MKAR LR LR 16 25 39.5
comp=Z,204nm,18.9s,baz=294,slow=39
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 44.97 41 P P 16 04 19.5 -0.9
DBIC Dimbokro 45.32 262 P P 16 04 22.2 -1.3
comp=Z,3.0nm,0.7s,baz=32,slow=4.4,SNR=3.6
DBIC LR LR 16 22 57.7
comp=Z,145nm,18.4s,baz=95,slow=36
comp=Z,3.0nm,0.7s
DBIC Dimbokro 45.32 262 P P 16 04 21.7 -1.8
HFS Hagfors 46.31 342 P P 16 04 31.7 +0.9
comp=Z,2.3nm,0.8s,baz=163,slow=7.5,SNR=2.4
HFS LR LR 16 24 24.1
comp=Z,99nm,18.0s,baz=86,slow=37
comp=Z,2.3nm,0.8s
NB2 NORSAR Subarra 47.78 341 P P 16 04 42.2 -0.1
comp=Z,19nm,1.7s,baz=142,slow=7.9
NOA NORSAR Array B 47.78 341 P P 16 04 42.1 -0.1
comp=Z,1.5nm,0.9s,baz=133,slow=8.6,SNR=4.3
NOA LR LR 16 24 53.6
comp=Z,19nm,19.0s,baz=290,slow=36
comp=Z,1.5nm,0.9s
BRDH Bariadhala 48.28 75 LR LR 16 25 36.7
comp=Z,77nm,21.8s,baz=243,slow=37
BOSA Boshof 48.44 198 LR LR 16 24 17.4
comp=Z,46nm,20.0s,baz=26,slow=35
ZALV Zalesovo Beam 49.68 33 P P 16 04 58.0 +1.0
comp=Z,4.1nm,0.7s,baz=247,slow=8.2,SNR=22
ZALV LR LR 16 28 09.8
comp=Z,78nm,18.2s,baz=252,slow=39
comp=Z,4.1nm,0.7s
EKA Eskdalemuir Ar 49.76 329 P P 16 04 56.4 -1.1
comp=Z,2.0nm,0.8s,baz=125,slow=9.3,SNR=2.3
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 52.43 354 P P 16 05 17.0 -0.3
comp=Z,2.6nm,0.8s,baz=157,slow=4.9,SNR=2.1
comp=Z,2.6nm,0.8s
SUR Sutherland 53.33 201 LR LR 16 28 10.7
comp=Z,274nm,18.2s,baz=359,slow=36
CMAR Chiang Mai Arr 55.57 80 P P 16 05 42.0 +0.9

comp=Z,0.3nm,0.4s,baz=289,slow=8.7,SNR=7.7
CMAR LR LR 16 31 52.8
comp=Z,16nm,19.1s,baz=280,slow=39
comp=Z,0.3nm,0.4s
LZDM Lanzhou Array 58.43 58 P P 16 06 03.5 +2.0
comp=Z,0.3nm,0.3s,baz=261,slow=2.8,SNR=1.2
comp=Z,0.3nm,0.3s
NRIK Noril'sk 59.04 18 P P 16 06 06.0 +1.3
comp=Z,3.2nm,0.8s,baz=228,slow=4.8,SNR=7.0
NRIK LR LR 16 35 16.1
comp=Z,87nm,18.9s,baz=227,slow=40
comp=Z,3.2nm,0.8s
SONM Songino Array 61.00 45 P P 16 06 20.6 +1.8
comp=Z,2.1nm,0.8s,baz=260,slow=8.5,SNR=13
SONM LR LR 16 36 25.7
comp=Z,127nm,18.8s,baz=294,slow=40
comp=Z,2.1nm,0.8s
SONM Songino Array 61.00 45 P P 16 06 20.4 +1.6
SONM IAmb IAmb 16 06 22.7
comp=Z,1.9nm,0.8s
SPITS Spitsbergen Ar 61.43 355 P P 16 06 22.1 +1.1
comp=Z,13nm,0.8s,baz=179,slow=6.7,SNR=4.1
SPITS LR LR 16 33 43.1
comp=Z,26nm,20.2s,baz=136,slow=37
comp=Z,13nm,0.8s
HILR Hailar Array B 69.86 43 P P 16 07 17.4 +1.5
comp=Z,2.6nm,0.8s,baz=262,slow=4.4,SNR=9.5
HILR LR LR 16 40 54.9
comp=Z,210nm,18.3s,baz=70,slow=38
comp=Z,2.6nm,0.8s
TIXI Tiksi 72.74 19 LR LR 16 45 08.4
comp=Z,51nm,18.1s,baz=354,slow=40
YAK Yakutsk 74.13 29 LR LR 16 42 30.0
comp=Z,41nm,18.5s,baz=298,slow=38
KSRS Korea Array 77.57 55 P P 16 08 02.9 +1.5
comp=Z,1.1nm,0.8s,baz=272,slow=6.0,SNR=2.9
KSRS LR LR 16 46 39.9
comp=Z,43nm,18.7s,baz=290,slow=39
comp=Z,1.1nm,0.8s
KLR Kul'dur 77.65 42 LR LR 16 47 11.2
comp=Z,14nm,18.9s,baz=268,slow=39
JNU Nakatsue 80.37 58 LR LR 16 51 45.9
comp=Z,32nm,18.6s,baz=300,slow=41
FRB Frobisher Bay 82.12 335 LR LR 16 50 29.3
comp=Z,24nm,18.5s,baz=89,slow=40
SCHQ Schefferville 84.99 326 P P 16 08 40.5 +0.1
comp=Z,2.1nm,0.7s,baz=57,slow=9.7,SNR=2.4
comp=Z,2.1nm,0.7s
ASAJ Asahikawa 86.29 45 LR LR 16 50 01.8
comp=Z,64nm,18.0s,baz=295,slow=38
MAW Mawson 86.86 172 LR LR 16 43 44.4
comp=Z,38nm,18.9s,baz=352,slow=33
MDP Montagnes des 91.17 276 LR LR 16 49 05.8
comp=Z,27nm,19.4s,baz=22,slow=35
PETK Petropavlovsk- 91.22 32 LR LR 16 54 12.0
comp=Z,78nm,18.4s,baz=281,slow=38
ILAR Eielson Array 97.42 3 P P 16 09 38.6 +0.2
comp=Z,0.3nm,0.9s,baz=29,slow=2.1,SNR=2.2
comp=Z,0.3nm,0.9s
YKA Yellowknife Ar 97.46 349 P Pdif 16 09 39.5 +0.9
comp=Z,0.2nm,0.8s,baz=17,slow=4.7,SNR=4.8
comp=Z,0.2nm,0.8s
WRA Warramunga Arr 99.66 108 P Pdif 16 09 50.4 +1.1
comp=Z,0.3nm,0.7s,baz=298,slow=2.2,SNR=1.6
comp=Z,0.3nm,0.7s
ASAR Alice Springs 100.25 112 P Pdif 16 09 53.2 +1.3
comp=Z,0.2nm,0.8s,baz=304,slow=5.4,SNR=1.3
TXAR Lajitas Array 121.53 323 PKP PKiKP 16 14 59.6 +0.1
comp=Z,0.2nm,0.8s,baz=33,slow=4.1,SNR=2.2

*SJA **07** 16:00:41.1±0.7, 22.˚83S×68.˚72W, h120km±4km, ML4.0, MW4.0*
*NEIC **07** 16:00:42.4±1.4, 22.˚87S±0.˚06×68.˚77W±0.˚06, h124km±6km, mb4.4/4, ML3.9(GUC), Error ellipse: s-maj=8.8km s-min=7.9km az=146.0*
*GUC **07** 16:00:44.2±0.7, 22.˚77S×68.˚81W, h111km±4km, ML3.9*
*IDC **07** 16:00:44.0±3.6, 22.˚76S×68.˚22W, h94km±37km, mb3.8/2, mbtmp3.9/5, Error ellipse: s-maj=53.1km s-min=29.4km az=127.0*

ISC 07 16:00:41.6±0.7, **22.˚80S**±0.˚04×**68.˚70W**±0.˚05, **h119**km±6km, **n57**, σ1°**69**/69, **5C-4D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.51**	**107**			**Pn**	**16 01 01.5**	**+1.7**
AF01	**San Pedro de A**	**0.51**	**107**	⇓	*iP*	**Pn**	**16 01 01.5**	**+1.7**
AF01					*eS*	**Sn**	**16 01 15.0**	**+1.5**
AF01	**San Pedro de A**	**0.51**	**107**		*eP*	**Pn**	**16 01 00.8**	**+1.0**
AF01					*eS*	**Sn**	**16 01 14.0**	**+0.5**
AF01					IAML		16 01 20.3	
comp=Z,7μm,0.1s								
PB06	**IPOC Station P**	**0.81**	**277**			**Pn**	**16 01 02.6**	**+0.7**
PB06	**IPOC Station P**	**0.81**	**277**	⇑	*iP*	**Pn**	**16 01 02.6**	**+0.7**
PB06					*eS*	**Sn**	**16 01 16.7**	**-0.6**
PB06					IAML		16 01 19.2	
comp=E,3μm,0.1s								
PB06	**IPOC Station P**	**0.81**	**277**	*eP*		**Pn**	**16 01 02.1**	**+0.1**
PB06					*eS*	**Sn**	**16 01 17.7**	**+0.5**
PB06					IAML		16 01 19.8	
comp=Z,2μm,0.3s								
PB09	**IPOC Station P**	**1.12**	**333**			**Pn**	**16 01 06.4**	**+1.4**
PB09	**IPOC Station P**	**1.12**	**333**	⇓	*iP*	**Pn**	**16 01 06.5**	**+1.6**
PB09					*eS*	**Sn**	**16 01 23.2**	**+0.6**
PB09					IAML		16 01 24.5	
comp=N,4μm,0.6s								
PB03	**IPOC Station P**	**1.23**	**307**			**Pn**	**16 01 06.9**	**+0.8**
PB03	**IPOC Station P**	**1.23**	**307**	⇑	*iP*	**Pn**	**16 01 06.8**	**+0.8**
PB03					*eS*	**Sn**	**16 01 24.0**	**-0.6**
PB03					IAML		16 01 25.0	
comp=N,2μm,0.3s								
PB03	**IPOC Station P**	**1.23**	**307**	*eP*		**Pn**	**16 01 06.8**	**+0.8**
PB03					*eS*	**Sn**	**16 01 25.2**	**+0.6**
PB03					IAML		16 01 32.1	
comp=Z,1μm,0.3s								
PB05	**IPOC Station P**	**1.39**	**268**			**Pn**	**16 01 08.4**	**+0.7**
PB05	**IPOC Station P**	**1.39**	**268**	⇑	*iP*	**Pn**	**16 01 08.5**	**+0.7**
PB05					*eS*	**Sn**	**16 01 26.9**	**-0.7**
PB05	**IPOC Station P**	**1.39**	**268**	*eP*		**Pn**	**16 01 07.8**	**0.0**
PB05					*eS*	**Sn**	**16 01 28.4**	**+0.7**
PB07	**IPOC Station P**	**1.53**	**314**			**Pn**	**16 01 10.6**	**+1.0**
PB07	**IPOC Station P**	**1.53**	**314**	⇑	*iP*	**Pn**	**16 01 10.5**	**+1.0**
PB07					*eS*	**Sn**	**16 01 30.1**	**-0.6**
PB07					IAML		16 01 31.7	
comp=N,2μm,0.4s								
PB07	**IPOC Station P**	**1.53**	**314**	*eP*		**Pn**	**16 01 10.3**	**+0.8**
PB07					*eS*	**Sn**	**16 01 31.6**	**+0.9**
PB07					IAML		16 01 32.6	
comp=Z,1μm,0.4s								
PB02	**IPOC Station P**	**1.84**	**323**			**Pn**	**16 01 14.3**	**+1.1**
PB02	**IPOC Station P**	**1.84**	**323**	*eP*		**Pn**	**16 01 14.3**	**+1.1**
PB02					*eS*	**Sn**	**16 01 36.9**	**-0.4**
PB02					IAML		16 01 44.2	
comp=E,2μm,0.3s								
PB01	**IPOC Station P**	**1.90**	**337**			**Pn**	**16 01 15.0**	**+1.2**
PB01	**IPOC Station P**	**1.90**	**337**	⇑	*iP*	**Pn**	**16 01 15.0**	**+1.2**
PB01					*eS*	**Sn**	**16 01 38.9**	**+0.5**
PB01					IAML		16 01 42.6	
comp=E,1μm,0.4s								
PB14	**IPOC Station P**	**2.40**	**220**			**Pn**	**16 01 21.3**	**+0.9**
PB14	**IPOC Station P**	**2.40**	**220**	*eP*		**Pn**	**16 01 21.2**	**+0.9**
PB14	**IPOC Station P**	**2.40**	**220**	*eP*		**Pn**	**16 01 20.7**	**+0.4**
PB14					*eS*	**Sn**	**16 01 50.2**	**+0.2**
SALTA			**2.59**	**124**	*eP*	Pn	16 01 12.4	-11
TA01	**Diego Aracena**	**2.62**	**328**			**Pn**	**16 01 22.9**	**+0.1**
PB08	**IPOC Station P**	**2.68**	**351**			**Pn**	**16 01 25.7**	**+1.6**
HMBC	**Humberstone**	**2.74**	**336**			**Pn**	**16 01 24.7**	**0.0**
HMBC	**Humberstone**	**2.74**	**336**	⇓	*eP*	**Pn**	**16 01 24.6**	**0.0**
GO01	**Chusmiza**	**3.15**	**352**			**Pn**	**16 01 31.6**	**+1.3**
GO01	**Chusmiza**	**3.15**	**352**	*eP*		**Pn**	**16 01 31.9**	**+1.5**
PB11	**IPOC Station P**	**3.15**	**343**			**Pn**	**16 01 30.3**	**+0.2**
PB11	**IPOC Station P**	**3.15**	**343**	*eP*		**Pn**	**16 01 30.3**	**+0.2**
SLA	**San Lorenzo**	**3.50**	**124**	*eP*		Pn	16 01 40.1	+5.5
AC01	**Pan de Azucar**	**3.75**	**207**			**Pn**	**16 01 38.1**	**+0.2**
AC01	**Pan de Azucar**	**3.75**	**207**	⇓	*eP*	**Pn**	**16 01 37.9**	**0.0**
AC01	**Pan de Azucar**	**3.75**	**207**	*eP*		**Pn**	**16 01 38.0**	**+0.2**
AC01					*eS*	**Sn**	**16 02 19.8**	**-1.6**
AC02	**Maricunga**	**4.04**	**185**			**Pn**	**16 01 44.4**	**+2.3**
AC02	**Maricunga**	**4.04**	**185**	*eP*		Pn	16 01 31.8	-10
PB16	**IPOC Station P**	**4.51**	**350**			**Pn**	**16 01 50.3**	**+1.8**
GO03	**Copiapo**	**4.97**	**196**	Pn		**Pn**	**16 01 53.8**	**-0.4**
GO03	**Copiapo**	**4.97**	**196**	*eP*		**Pn**	**16 01 54.1**	**-0.1**
TINO	**Tinogasta**	**5.34**	**169**	*eP*		**Pn**	**16 02 01.8**	**+2.5**
AC05	**El Transito**	**6.17**	**193**	Pn		**Pn**	**16 02 09.6**	**-0.9**

LCO Las Campanas 6.44 196 Pn Pn 16 02 12.5 -1.7
LPAZ La Paz 6.50 5 P Pn 16 02 17.7 +2.2
comp=E,0.9nm,0.3s,baz=195,slow=12,SNR=7.7
LPAZ S Sn 16 03 15.4 -13
comp=E,8.4nm,0.7s,baz=161,slow=1.8,SNR=6.6
CO01 Juntas del Tor 7.26 190 Pn Pn 16 02 21.3 -3.9
SIV San Ignacio 9.88 48 P Pn 16 02 58.3 -2.3
comp=E,2.8nm,0.5s,baz=241,slow=14,SNR=14
SIV S Sn 16 04 41.1 -8.7
comp=E,2.5nm,0.4s,baz=140,slow=22,SNR=12
PLCA Paso Flores 17.95 185 P Pn 16 04 46.6 +3.0
comp=E,1.0nm,0.6s,baz=11,slow=10,SNR=3.7
VAO Valinhos 20.03 95 P P 16 05 04.7 -0.6
BDFB Brasilia 20.78 74 P Pn 16 05 15.0 -2.1
comp=E,4.4nm,0.5s,baz=255,slow=10,SNR=7.7
comp=E,4.4nm,0.5s
BDFB Brasilia 20.78 74 P P 16 05 13.5 0.0
BOAV Boa Vista 26.28 19 P P 16 06 07.7 +1.5
BOAV IAmb IAmb 16 06 24.6
comp=Z,14nm,1.5s
MG03 Isla Dawson 31.03 182 P P 16 06 47.2 -0.7
MG03 IAmb IAmb 16 06 51.9
comp=Z,7.8nm,0.8s
TORD Torodi Ar. Bea 77.61 70 P P 16 12 27.8 +2.5
comp=Z,1.2nm,0.7s,baz=250,slow=6.8,SNR=7.1
comp=Z,1.2nm,0.7s
HHC Hu-ho-hao-te 162.00 359 *eP* PKPdf 16 20 31.4 +2.2
PZH PanZhiHua 170.56 65 PKP PKPdf 16 20 35.2 -1.1

*JMA **07** 16:01:25.0±0.1, 24.˚1N±0.˚4×121.˚6E±0.˚8, h22km, MV3.2/12, TAIWAN REGION*
*TAP **07** 16:01:25.7, 24.˚22N×121.˚62E, h20km, ML4.0, B*

ISC 07 16:01:25.9±0.8, **24.˚21N**±0.˚01×**121.˚63E**±0.˚02, **h18**km±2km, **n146**, σ0°**64**/238, **10C-10D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.05**	**223**			**Pg**	**16 01 29.2**	**-0.1**
NACB	**Ninganchiao**	**0.05**	**223**	⇑	*iP*	**Pg**	**16 01 29.4**	**+0.1**
NACB					*i S*	**Sg**	**16 01 32.0**	**+0.4**
ETL	**Fush Village**	**0.05**	**191**	⇑	*iP*	**Pg**	**16 01 29.6**	**+0.2**
ETL					S	**Sg**	**16 01 32.0**	**+0.3**
TWD	**Chiawan**	**0.14**	**195**	⇑	*iP*	**Pg**	**16 01 30.2**	**+0.2**
TWD					S	**Sg**	**16 01 33.3**	**+0.4**
EHP	**Heping Village**	**0.14**	**45**	⇑	*iP*	**Pg**	**16 01 30.3**	**+0.2**
EHP					S	**Sg**	**16 01 33.7**	**+0.8**
ETLH	**Xiulin Townshi**	**0.14**	**268**	⇑	*iP*	**Pg**	**16 01 30.3**	**+0.1**
ETLH					*i S*	**Sg**	**16 01 33.4**	**+0.3**
EAHA	**Aohua**	**0.15**	**40**	⇑	*iP*	**Pg**	**16 01 30.4**	**+0.2**
EAHA					S	**Sg**	**16 01 33.5**	**+0.3**
HWA	**Hwalien**	**0.24**	**186**	⇑	*iP*	**Pg**	**16 01 32.0**	**+0.5**
HWA					*eS*	**Sg**	**16 01 36.2**	**+1.0**
EWUT	**Wuta**	**0.27**	**30**	⇓	*eP*	**Pb**	**16 01 32.1**	**0.0**
EWUT					*eS*	**Sb**	**16 01 36.0**	**-0.2**
ETM	**Tongmen**	**0.28**	**208**	⇓	*iP*	**Pb**	**16 01 32.0**	**-0.3**
ETM					S	**Sb**	**16 01 36.4**	**-0.1**
LXIB	**Xiulin Townshi**	**0.28**	**227**	⇑	*iP*	**Pb**	**16 01 32.0**	**-0.4**
LXIB					S	**Sg**	**16 01 37.0**	**+0.4**
NNSB	**Datong**	**0.31**	**313**	⇓	*iP*	**Pg**	**16 01 32.8**	**0.0**
NNSB					S	**Sg**	**16 01 37.4**	**-0.2**
NNS	**Nan Shan**	**0.33**	**314**	⇓	*iP*	**Pg**	**16 01 33.0**	**-0.1**
NNS					*i S*	**Sg**	**16 01 37.9**	**-0.1**
LATG	**Datong**	**0.34**	**343**	⇓	*iP*	**Pg**	**16 01 33.1**	**-0.2**
LATG					S	**Sg**	**16 01 37.9**	**-0.3**
WHF	**Hehuan Shan**	**0.34**	**259**	⇑	*iP*	**Pg**	**16 01 33.4**	**-0.1**
WHF					S	**Sg**	**16 01 38.3**	**-0.3**
TEYL	**Yanliau Villag**	**0.34**	**186**		P	**Pg**	**16 01 33.2**	**0.0**
FUSS	**Fushou**	**0.36**	**276**	⇓	*iP*	**Pg**	**16 01 33.8**	**+0.2**
FUSS					S	**Sg**	**16 01 38.9**	**0.0**
TWT	**Tachien**	**0.42**	**276**		P	**Pg**	**16 01 35.0**	**+0.3**
TWT					S	**Sg**	**16 01 40.7**	**+0.1**
NDS	**Dongshan**	**0.43**	**10**		P	**Sg**	**16 01 34.8**	**0.0**
NDS					*eS*	**Sg**	**16 01 40.0**	**-0.7**
SHUL	**Shoufeng**	**0.43**	**189**		P	**Pb**	**16 01 35.1**	**+0.2**
SHUL					*eS*	**Sb**	**16 01 42.3**	**+1.2**
ENTT	**Nioudou**	**0.43**	**352**	⇓	*iP*	**Pg**	**16 01 34.7**	**-0.1**
ENTT					S	**Sg**	**16 01 40.8**	**0.0**
TDCB	**Techi**	**0.44**	**275**	⇓	*iP*	**Pg**	**16 01 35.0**	**+0.1**
TDCB					S	**Sg**	**16 01 40.6**	**-0.4**
ESL	**Shilin**	**0.44**	**205**		P	**Pg**	**16 01 34.4**	**-0.5**
ESL					*eS*	**Sg**	**16 01 40.7**	**-0.2**
TWC	**Suao**	**0.44**	**26**	*eP*		**Pg**	**16 01 35.0**	**+0.1**
TWC					*eS*	**Sg**	**16 01 41.1**	**+0.1**
OWD	**Renai**	**0.49**	**239**	*eP*		**Pg**	**16 01 35.6**	**-0.3**
OWD					*eS*	**Sg**	**16 01 42.1**	**-0.6**
TWE	**Neicheng**	**0.51**	**3**	P		**Pb**	**16 01 36.1**	**-0.2**
TWE					S	**Sg**	**16 01 42.6**	**-0.5**
TEGC	**Jichi Village**	**0.51**	**190**	*eP*		**Pg**	**16 01 36.4**	**+0.2**
YHNB	**Yeheng**	**0.51**	**333**		P	**Pb**	**16 01 36.1**	**-0.3**
YHNB	**Yeheng**	**0.51**	**333**		S	**Sg**	**16 01 43.0**	**-0.3**
YHNB	**Yeheng**	**0.51**	**333**	⇓	*iP*	**Pb**	**16 01 36.1**	**-0.3**
YHNB					S	**Sg**	**16 01 42.7**	**-0.6**
WUSB	**Renai**	**0.52**	**245**	⇑	*iP*	**Pb**	**16 01 36.4**	**-0.2**
WUSB					S	**Sg**	**16 01 43.1**	**-0.5**
NSK	**Sanguang**	**0.53**	**331**	⇓	*iP*	**Pb**	**16 01 36.2**	**-0.4**
NSK					S	**Sb**	**16 01 43.2**	**-0.7**
WARBT	**Fenglin Townsh**	**0.54**	**205**		P	**Pb**	**16 01 35.6**	**-1.3**
WARBT					*eS*	**Sb**	**16 01 43.1**	**-1.1**
FUSB	**Fushanzhiwuyua**	**0.55**	**356**		P	**Pb**	**16 01 36.7**	**-0.2**
FUSB					S	**Sb**	**16 01 44.0**	**-0.4**
ILA	**Ilan**	**0.56**	**11**	*eP*		**Pb**	**16 01 35.8**	**-1.3**
ILA					*eS*	**Sb**	**16 01 44.0**	**-0.7**
EGFH	**Guangfu**	**0.57**	**199**	*eP*		**Pb**	**16 01 37.0**	**-0.3**
EGFH					*eS*	**Sb**	**16 01 45.1**	**0.0**
NWLT	**Wulai**	**0.57**	**348**	*eP*		**Pb**	**16 01 37.1**	**-0.3**
NWLT					*eS*	**Sb**	**16 01 44.3**	**-0.9**
EOS2	**EOS2**	**0.58**	**69**	*eP*		**Pn**	**16 01 39.0**	**-0.2**
EOS3	**EOS3**	**0.63**	**83**	*eP*		**Pn**	**16 01 39.9**	**+0.2**
NFF	**Wufeng Townshi**	**0.63**	**312**	*eP*		**Pb**	**16 01 37.9**	**-0.4**
NFF					*eS*	**Sb**	**16 01 46.3**	**-0.5**
EOS4	**EOS4**	**0.63**	**98**	*eP*		**Pn**	**16 01 39.7**	**+0.1**
WHP	**Taichung City**	**0.63**	**276**	*eP*		**Pb**	**16 01 38.2**	**-0.1**
WHP					S	**Sb**	**16 01 46.6**	**-0.3**
VWDT	**VWDT**	**0.64**	**225**	*eP*		**Pb**	**16 01 38.3**	**-0.2**
VWDT					*eS*	**Sb**	**16 01 47.0**	**0.0**
WCS	**Beigang Elemen**	**0.68**	**257**	*eP*		**Pb**	**16 01 39.2**	**0.0**
WCS					*eS*	**Sb**	**16 01 47.9**	**-0.2**
EGS		**0.69**	**23**	*eP*		**Pb**	**16 01 39.5**	**+0.2**
KSHI	**Guanxi Townshi**	**0.70**	**323**		P	**Pb**	**16 01 40.0**	**+0.4**
LIOB	**Emei**	**0.71**	**308**		P	**Pb**	**16 01 39.9**	**+0.2**
NSTT	**Nanjuang**	**0.71**	**306**	*eP*		**Pb**	**16 01 39.8**	**0.0**
NSTT					*eS*	**Sb**	**16 01 48.7**	**-0.4**
HGSD	**Ruisui**	**0.74**	**195**	*eP*		**Pb**	**16 01 40.1**	**-0.2**
HGSD					*eS*	**Sn**	**16 01 52.5**	**+0.3**
SMLT	**Sun Moon Lake**	**0.75**	**244**	*eP*	

YULB	**Yu-li**	**0.87**	**201**	P		**Pb**	**16 01 41.9**	**-0.6**
YULB	**Yu-li**	**0.87**	**201**	S		**Sg**	**16 01 55.0**	**+0.5**
YULB	**Yu-li**	**0.87**	**201**	*eP*		**Pb**	**16 01 40.6**	**-2.0**
YULB				*eS*		**Sg**	**16 01 54.5**	**0.0**
TCU	**Taichung**	**0.88**	**266**	P		**Pn**	**16 01 44.2**	**+0.9**
TCU				*eS*		**Sn**	**16 01 57.3**	**+1.7**
WHYT	**Xinyi Township**	**0.88**	**234**	*eP*		**Pb**	**16 01 43.0**	**+0.3**
WHYT				*eS*		**Sn**	**16 01 55.6**	**-0.1**
SXI1	**Grass Mountain**	**0.91**	**14**	P		**Pb**	**16 01 43.1**	**0.0**
SXI1				S		**Sg**	**16 01 55.8**	**+0.2**
TWS1	**Kuangyinshan**	**0.91**	**347**	*eP*		**Pb**	**16 01 43.4**	**+0.3**
TWS1				*eS*		**Sn**	**16 01 57.1**	**+0.7**
ECBN	**Changbin**	**0.91**	**191**	P		**Pb**	**16 01 42.2**	**-0.9**
TWF1	**Yuli**	**0.91**	**200**	*eP*		**Pb**	**16 01 41.3**	**-1.9**
TWF1				*eS*		**Sn**	**16 01 56.6**	**+0.1**
WNT	**Mingjian**	**0.93**	**249**	*eP*		**Pg**	**16 01 44.6**	**+0.6**
WNT				*eS*		**Sn**	**16 01 58.2**	**+1.3**
YM01	**YM01**	**0.93**	**356**	*eP*		**Pb**	**16 01 43.1**	**-0.4**
YM01				*eS*		**Sb**	**16 01 56.4**	**+0.8**
TNOU	**National Taiwa**	**0.94**	**8**	*eP*		**Pb**	**16 01 43.9**	**+0.2**
ZUZH	**Zhuzihu**	**0.95**	**355**	*eP*		**Pb**	**16 01 43.7**	**-0.2**
ZUZH				*eS*		**Sb**	**16 01 56.5**	**+0.5**
NTST	**Danshui**	**0.96**	**350**	*eP*		**Pb**	**16 01 44.6**	**+0.6**
NTST				*eS*		**Sn**	**16 01 58.1**	**+0.4**
YM08	**YM08**	**0.97**	**358**	*eP*		**Pb**	**16 01 43.7**	**-0.6**
YM08				*eS*		**Sb**	**16 01 57.0**	**+0.2**
ANP	**Anpu**	**0.97**	**354**	*eP*		**Pb**	**16 01 44.3**	**0.0**
WCHH	**Zhanghua**	**0.99**	**263**	*eP*		**Pg**	**16 01 45.8**	**+0.6**
WCH1	**Changhua City**	**1.00**	**262**	*eP*		**Pg**	**16 01 45.6**	**+0.2**
WCH1				*eS*		**Sg**	**16 02 00.1**	**+1.4**
ALS	**Alishan**	**1.03**	**228**	P		**Pb**	**16 01 45.5**	**+0.1**
CHKH	**Chenggong**	**1.04**	**192**	*eP*		**Pb**	**16 01 43.8**	**-1.5**
FULB	**Fuli**	**1.06**	**197**	*eP*		**Pb**	**16 01 44.1**	**-1.6**
TWY	**Chenhua**	**1.06**	**358**	*eP*		**Pb**	**16 01 45.9**	**+0.2**
TWY				*eS*		**Sn**	**16 02 00.6**	**+0.5**
CHN5	**Tsauling**	**1.07**	**235**	*eP*		**Pg**	**16 01 46.7**	**0.0**
CHN5				*eS*		**Sg**	**16 02 02.3**	**+1.6**
WGK	**Gukeng**	**1.11**	**242**	P		**Pg**	**16 01 47.5**	**0.0**
WDL	**Douliou City**	**1.12**	**244**	*eP*		**Pg**	**16 01 47.8**	**+0.2**
WDL				*eS*		**Sg**	**16 02 04.1**	**+1.8**
WDLH	**Douliu**	**1.13**	**243**	*eP*		**Pg**	**16 01 47.8**	**-0.1**
WDLH				*eS*		**Sg**	**16 02 03.7**	**+1.1**
ELDTW	**Lidau**	**1.17**	**209**	*eP*		**Pn**	**16 01 45.8**	**-1.6**
WRL	**Guolierlin Hig**	**1.19**	**255**	P		**Pb**	**16 01 48.1**	**+0.2**
WRL				S		**Sg**	**16 02 04.7**	**+0.1**
WCKO	**Fanlu**	**1.22**	**231**	*eP*		**Pn**	**16 01 47.8**	**-0.3**
WCKO				*eS*		**Sg**	**16 02 05.6**	**+0.1**
JYNG	**Yonagunijimaku**	**1.22**	**78**	*eP*		**Pn**	**16 01 48.1**	**0.0**
JYNG				*eS*		**Sn**	**16 02 04.6**	**+0.6**
CHN2	**Minshiung**	**1.26**	**238**	*eP*		**Pg**	**16 01 50.1**	**-0.2**
CHN2				*eS*		**Sg**	**16 02 08.2**	**+1.4**
YOJ	**Yonaguni jima**	**1.28**	**79**	P		**Pn**	**16 01 49.1**	**+0.2**
YOJ	**Yonaguni jima**	**1.28**	**79**	*eP*		**Pn**	**16 01 48.9**	**-0.1**
YOJ	**Yonaguni jima**	**1.28**	**79**	*eP*		**Pn**	**16 01 48.8**	**-0.1**
YOJ				*eS*		**Sb**	**16 02 06.5**	**+1.0**
WTCT	**Ta-ch'eng**	**1.28**	**255**	*eP*		**Pn**	**16 01 49.5**	**+0.6**
WTCT				*eS*		**Sb**	**16 02 06.9**	**+1.2**
TPUB	**Ta-pu**	**1.29**	**226**	P		**Pb**	**16 01 50.2**	**+0.5**
TPUB	**Ta-pu**	**1.29**	**226**	S		**Sg**	**16 02 08.5**	**+0.6**
TPUB	**Ta-pu**	**1.29**	**226**	P		**Pb**	**16 01 49.9**	**+0.2**
TPUB				*eS*		**Sg**	**16 02 08.8**	**+0.9**
STYH	**Taoyuan**	**1.30**	**217**	*eP*		**Pn**	**16 01 48.9**	**-0.3**
CHY	**Chiayi**	**1.32**	**238**	*eP*		**Pb**	**16 01 50.3**	**+0.2**
CHY				*eS*		**Sg**	**16 02 09.2**	**+0.6**
WTP	**Ta-pu**	**1.34**	**224**	*eP*		**Pb**	**16 01 50.8**	**+0.2**
WTP				*eS*		**Sg**	**16 02 09.5**	**+0.1**
TWK	**Hsinying**	**1.41**	**228**	P		**Pb**	**16 01 51.9**	**+0.1**
TWK				*eS*		**Sg**	**16 02 11.0**	**-0.6**
WSF	**Szhu**	**1.41**	**246**	*eP*		**Pn**	**16 01 51.5**	**+0.8**
WSF				*eS*		**Sg**	**16 02 11.3**	**-0.3**
SNST	**Tainan City**	**1.44**	**227**	*eP*		**Pg**	**16 01 53.2**	**-0.4**
SNST				*eS*		**Sg**	**16 02 12.8**	**+0.4**
WSL	**Shuilin Townsh**	**1.46**	**242**	*eP*		**Pb**	**16 01 52.5**	**0.0**
WSL				*eS*		**Sg**	**16 02 13.3**	**+0.1**
TWG	**Pinlang**	**1.48**	**201**	*eP*		**Pn**	**16 01 50.8**	**-0.8**
TWGBT	**Beinan**	**1.48**	**200**	P		**Pn**	**16 01 52.2**	**+0.6**
TWGBT	**Beinan**	**1.48**	**200**	*eP*		**Pn**	**16 01 50.3**	**-1.3**
SGST	**Jiashian**	**1.48**	**221**	*eP*		**Pn**	**16 01 52.1**	**+0.5**
SGST				*eS*		**Sg**	**16 02 13.1**	**-0.7**
CHN8	**Yiju**	**1.56**	**237**	*eP*		**Pb**	**16 01 54.6**	**+0.4**
CHN8				*eS*		**Sg**	**16 02 16.0**	**-0.4**
SCLT	**Jiali**	**1.68**	**232**	*eS*		**Sb**	**16 02 17.9**	**+1.0**
ECL	**Taimali**	**1.73**	**201**	*eP*		**Pn**	**16 01 53.9**	**-1.1**
SSD	**Sandimen**	**1.73**	**212**	*eP*		**Pn**	**16 01 54.7**	**-0.3**
TSCK	**Chigu Township**	**1.77**	**234**	*eP*		**Pn**	**16 01 56.6**	**+1.0**
TSCK				*eS*		**Sb**	**16 02 19.6**	**-0.2**
MASBT	**Mashibuluo**	**1.84**	**210**	*eP*		**Pn**	**16 01 57.5**	**+1.0**
MASBT				*eS*		**Sb**	**16 02 20.8**	**-0.9**
IRIF	**Iriomote-Funau**	**1.92**	**86**	*eP*		**Pn**	**16 01 57.6**	**0.0**
IRIF				*eS*		**Sn**	**16 02 21.8**	**+0.5**
HATJ	**Hateruma jima**	**1.99**	**94**	*eS*		**Sn**	**16 02 23.2**	**+0.1**
PNG	**Penghu**	**2.01**	**252**	*eP*		**Pn**	**16 01 58.8**	**-0.1**
PNG				*eS*		**Sn**	**16 02 23.5**	**0.0**
PHUB	**P'eng-hu**	**2.01**	**250**	*eP*		**Pn**	**16 01 58.7**	**-0.2**
PHUB				*eS*		**Sn**	**16 02 23.7**	**+0.1**
SCZT	**Fangliau**	**2.06**	**207**	*eP*		**Pn**	**16 02 00.4**	**+0.9**
VWUC	**VWUC**	**2.13**	**292**	*eP*		**Pn**	**16 02 00.0**	**-0.6**
VWUC				*eS*		**Sn**	**16 02 25.4**	**-1.2**
JKRS	**Kuro-shima**	**2.17**	**89**	*eP*		**Pn**	**16 02 01.8**	**+0.7**
VCHM	**Qimei**	**2.25**	**244**	*eP*		**Pn**	**16 02 02.0**	**-0.2**
VCHM				*eS*		**Sn**	**16 02 30.9**	**+1.3**
JJ	**Ishigaki jima**	**2.29**	**86**	*eP*		**Pn**	**16 02 02.7**	**-0.1**
MATB	**Ma-tsu**	**2.46**	**322**	*eP*		**Pn**	**16 02 04.1**	**-1.1**
JISG	**Ishigakijimahi**	**2.47**	**81**	*eP*		**Pn**	**16 02 04.6**	**-0.6**
LYJJ	**Jianjiangzhen**	**2.88**	**324**	*eP*		**Pn**	**16 02 10.0**	**-0.8**
LYJJ				*eS*		**Sn**	**16 02 43.9**	**-1.1**
KNM	**Kinmen**	**2.93**	**275**	*eP*		**Pn**	**16 02 12.7**	**+1.2**
KNMB	**Chin-men Tao**	**2.97**	**275**	P		**Pn**	**16 02 11.1**	**-1.0**
XPSS	**Dashiqiu**	**3.00**	**335**	P		**Pn**	**16 02 11.4**	**-1.2**
MHZQ	**Yeshan**	**3.02**	**309**	P		**Pn**	**16 02 12.1**	**-0.7**
MHZQ				*eS*		**Sn**	**16 02 46.9**	**-1.5**
AXDP	**Jialang**	**3.41**	**282**	P		**Pn**	**16 02 17.4**	**-0.7**
ZPLA	**Ao Xicun**	**3.56**	**266**	*eP*		**Pn**	**16 02 19.8**	**-0.4**
DSXP	**Dongshan**	**3.88**	**263**	*eP*		**Pn**	**16 02 24.6**	**-0.1**
SXFK	**Yanhouchang**	**4.22**	**302**	*eP*		**Pn**	**16 02 28.8**	**-0.5**

IDC 07 16:01:29.0±8.8, 12°.42S×167°.17E, h0km, mb3.7/4, mbtmp3.7/4, MS3.2/1, Error ellipse: s-maj=238.2km s-min=51.0km az=122.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.46**	**226**	LR	LR	16 19 31.8	
	comp=Z,37nm,18.0s,baz=23,slow=36						
WRA	**Warramunga Arr**	**32.36**	**252**	P	P	16 08 00.2	-0.3
	0.4nm,0.6s,baz=83,slow=8.5,SNR=5.5						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**33.46**	**246**	P	P	16 08 10.1	-0.1
	0.5nm,0.6s,baz=70,slow=9.6,SNR=14						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.93**	**293**	P	P	16 13 07.3	+0.6
	0.3nm,0.3s,baz=135,slow=5.2,SNR=4.9						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**95.47**	**317**	P	P	16 14 55.0	-0.8
	0.2nm,0.6s,baz=105,slow=5.9,SNR=2.4						
	0.2nm,0.6s						

*IDC **07** 16:16:51.4±1.1,6°.69N×72°.95W, h154km±13km, mbtmp3.4/2, Error ellipse: s-maj=122.6km s-min=8.3km az=132.0*
*FUNV **07** 16:16:52.7, 6°.77N×73°.23W, h153km, MW3.5, Presumed earthquake*
*RSNC **07** 16:16:53.0±0.0, 7°.N±1°×7°.3W±°, h149km±2km, M3.2, ML2.9*

ISC 07 16:16:51.5±1.1, 6°.85N±0°.03×73°.14W±0°.03, h155km±6km, n37, σ1°26/67, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**189**	P	**Pn**	**16 17 13.3**	**+0.4**
BARC				S	**Sn**	**16 17 28.3**	**-0.9**
BRJC	**Barrancabermej**	**0.61**	**282**	P	**Pn**	**16 17 14.9**	**+0.9**
BRJC				S	**Sn**	**16 17 31.7**	**+0.5**
PAMC	**Pamplona, Colo**	**0.66**	**42**	P	**Pn**	**16 17 16.1**	**+1.2**
PAMC				S	**Sn**	**16 17 33.1**	**+0.4**
RUSC	**La Rusia**	**0.95**	**176**	P	**Pn**	**16 17 17.3**	**+0.3**
RUSC				S	**Sn**	**16 17 35.7**	**-0.8**
RUSC	**La Rusia**	**0.95**	**176**	*eP*	**Pn**	**16 17 16.5**	**-0.5**
RUSC				*eS*	**Sn**	**16 17 33.9**	**-2.5**
CAPV	**Capacho**	**1.30**	**39**	*eP*	**Pn**	**16 17 20.9**	**+1.1**
CAPV				*eS*	**Sn**	**16 17 42.2**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.34**	**257**	P	**Pn**	**16 17 19.6**	**-0.3**
PTBC				S	**Sn**	**16 17 40.9**	**-0.7**
OCAC	**Ocana**	**1.39**	**353**	P	**Pn**	**16 17 21.4**	**+0.8**
OCAC				S	**Sn**	**16 17 42.5**	**-0.4**
SPBC	**San Pablo de B**	**1.51**	**218**	P	**Pn**	**16 17 22.0**	**+0.3**
SPBC				S	**Sn**	**16 17 44.1**	**-0.7**
NORC	**Norcasia**	**2.14**	**233**	P	**Pn**	**16 17 28.8**	**+0.1**
NORC				S	**Sn**	**16 17 56.8**	**-0.5**
CHIC	**Chingaza**	**2.28**	**195**	P	**Pn**	**16 17 31.5**	**+0.8**
CHIC				S	**Sn**	**16 18 00.7**	**-0.2**
ROSC	**El Rosal**	**2.31**	**210**	P	**Pn**	**16 17 32.4**	**+1.3**
ROSC	41nm,0.3s,baz=270,slow=20,SNR=33			S	**Sn**	**16 18 00.4**	**-1.2**
	67nm,0.5s,baz=38,slow=15,SNR=4.7						
ROSC	**El Rosal**	**2.31**	**210**	P	**Pn**	**16 17 33.2**	**+2.1**
ROSC				S	**Sn**	**16 18 02.3**	**+0.7**
HELC	**Santa Helena**	**2.46**	**255**	P	**Pn**	**16 17 35.5**	**+2.7**
HELC				S	**Sn**	**16 18 06.9**	**+2.4**
HELC	**Santa Helena**	**2.46**	**255**	*eP*	**Pn**	**16 17 31.9**	**-0.9**
HELC				*eS*	**Sn**	**16 18 00.4**	**-4.1**
CVER	**Cruz Verde, Cu**	**2.49**	**202**	P	**Pn**	**16 17 34.9**	**+1.6**
CVER				S	**Sn**	**16 18 05.7**	**+0.2**
UREC	**San Jos de Ur**	**2.54**	**291**	P	**Pn**	**16 17 33.9**	**+0.6**
UREC				S	**Sn**	**16 18 05.3**	**-0.3**
SOCV	**Socops**	**2.68**	**58**	*eP*	**Pn**	**16 17 36.7**	**+1.6**
SOCV				*eS*	**Sn**	**16 18 08.8**	**0.0**
VILC	**Villavicencio,**	**2.77**	**191**	P	**Pn**	**16 17 37.1**	**+0.7**
VILC				S	**Sn**	**16 18 11.6**	**+0.4**
PTGC	**Puerto Gaitan,**	**2.82**	**159**	P	**Pn**	**16 17 36.6**	**-0.3**
PTGC				S	**Sn**	**16 18 10.2**	**-1.8**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P	**Pn**	**16 17 41.8**	**+2.3**
DBBC	**Dabeiba**	**3.05**	**273**	P	**Pn**	**16 17 41.7**	**+1.9**
DBBC				S	**Sn**	**16 18 16.3**	**-0.9**
ARGC	**Ariguani, Magd**	**3.18**	**340**	P	**Pn**	**16 17 43.5**	**+2.1**
ARGC				S	**Sn**	**16 18 20.9**	**+0.7**
SDV	**Santo Domingo**	**3.21**	**51**	P	**Pn**	**16 17 43.2**	**+1.3**
	4.3nm,0.3s,baz=234,slow=14,SNR=13						
SDV				S	**Sn**	**16 18 19.7**	**-1.2**
	17nm,0.4s,baz=252,slow=20,SNR=20						
SDV	**Santo Domingo**	**3.21**	**51**	P	**Pn**	**16 17 42.9**	**+1.0**
SDV				S	**Sn**	**16 18 19.8**	**-1.2**
SDV	**Santo Domingo**	**3.21**	**51**	*eP*	**Pn**	**16 17 42.9**	**+1.0**
APAC	**Apartado, Choc**	**3.57**	**287**	P	**Pn**	**16 17 46.9**	**+0.6**
APAC				S	**Sn**	**16 18 27.6**	**-1.2**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**16 17 46.7**	**+0.3**
PRAC				S	**Sn**	**16 18 28.6**	**-0.4**
ORTC	**Ortega, Tolima**	**3.59**	**216**	P	**Pn**	**16 17 47.6**	**+0.9**
ORTC				S	**Sn**	**16 18 30.4**	**+0.8**
SJCC	**San Jacinto, C**	**3.64**	**326**	P	**Pn**	**16 17 46.8**	**-0.5**
SJCC				S	**Sn**	**16 18 28.3**	**-2.3**
SJCC	**San Jacinto, C**	**3.64**	**326**	*eP*	**Pn**	**16 17 47.5**	**+0.2**
URMC	**La Uribe, Meta**	**3.79**	**199**	P	**Pn**	**16 17 50.3**	**+1.1**
URMC				S	**Sn**	**16 18 34.1**	**0.0**
YOTC	**Yotoco, Valle**	**4.27**	**228**	P	**Pn**	**16 17 56.0**	**+0.4**
SMRC	**Santa Marta, M**	**4.42**	**346**	P	**Pn**	**16 17 58.3**	**+0.9**
SMRC				S	**Sn**	**16 18 47.0**	**-1.8**
URIC	**Uribia, Colomb**	**4.95**	**13**	P	**Pn**	**16 18 03.9**	**-0.5**
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPbc**	**16 36 21.9**	**-0.5**
	0.5nm,0.7s,baz=121,slow=3.7,SNR=9.4						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**16 36 25.1**	**-0.3**
	0.2nm,0.5s,baz=109,slow=2.7,SNR=9.8						

*RSPR **07** 16:38:18.6, 19°.11N×67°.67W, h32km±31km, MD3.5/7*
*NEIC **07** 16:38:19.5±1.4, 18°.90N±0°.04×67°.58W±0°.04, h35km±2km, ML3.4/33, Md3.5/7(RSPR), Error ellipse: s-maj=9.1km s-min=3.1km az=45.0*

ISC 07 16:38:18.8±1.2, 18°.94N±0°.07×67°.63W±0°.03, h27km, n36, σ1°14/52, 3C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.57**	**166**		**Pb**	**16 38 29.0**	**-1.3**
IDE					**Sb**	**16 38 38.0**	**-0.1**
IDE	**Isla Desecheo**	**0.57**	**166**	*eP*	**Pb**	**16 38 29.0**	**-1.3**
IDE				*eS*	**Sb**	**16 38 38.0**	**-0.1**
AGPR	**Aguadilla, PR**	**0.68**	**134**		**Pb**	**16 38 30.7**	**-1.4**
AGPR				IAML		16 38 41.7	
	2μm,0.3s						
AGPR				IAML		16 38 41.9	
	3μm,0.4s						
AGPR	**Aguadilla, PR**	**0.68**	**134**	*eP*	**Pb**	**16 38 31.1**	**-1.0**
AGPR				*eS*	**Sb**	**16 38 41.0**	**0.0**
PRSN	**Puerto Rico Se**	**0.85**	**148**		**Sb**	**16 38 41.0**	**+1.0**
PRSN	**Puerto Rico Se**	**0.85**	**148**		**Pn**	**16 38 32.0**	**-3.0**
PRSN	**Puerto Rico Se**	**0.85**	**148**	*eP*	**Pb**	**16 38 36.0**	**+1.0**
PRSN				*eS*	**Sb**	**16 38 47.0**	**+1.0**
LSP	**Las Mesas**	**0.92**	**146**		**Pn**	**16 38 35.1**	**-0.9**
LSP					**Sb**	**16 38 48.8**	**+0.8**
LSP	**Las Mesas**	**0.92**	**146**	*iP*	**Pn**	**16 38 35.1**	**-0.9**
LSP				*eS*	**Sb**	**16 38 48.8**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.05**	**152**		**Pn**	**16 38 37.0**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.05**	**152**		**Sb**	**16 38 53.4**	**+1.7**
CRPR	**Cabo Rojo, PR**	**1.05**	**152**	IAML		16 38 58.6	
	1μm,0.5s						
CRPR				IAML		16 38 59.5	
	772nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.05**	**152**	*iP*	**Pb**	**16 38 39.0**	**+0.6**
CRPR				*eS*	**Sb**	**16 38 53.4**	**+1.7**
HIDR	**Higuey Centro**	**1.09**	**252**	*iP*	**Pn**	**16 38 36.6**	**-1.7**
HIDR				*eS*	**Sn**	**16 38 50.5**	**-2.0**
UPTR	**Utuado, UPR, P**	**1.10**	**128**		**Pn**	**16 38 36.9**	**-1.6**
MLPR	**Magueyes Islan**	**1.11**	**150**		**Pn**	**16 38 37.7**	**-0.9**
MLPR				IAML		16 38 57.5	
	1μm,0.4s						
MLPR				IAML		16 38 58.8	
	753nm,0.3s						
EMPR	**Esperanza - Ma**	**1.14**	**114**		**Pn**	**16 38 38.4**	**-0.5**
EMPR					**Sb**	**16 38 55.2**	**+1.0**
EMPR	**Esperanza - Ma**	**1.14**	**114**	*iP*	**Pn**	**16 38 38.4**	**-0.5**
EMPR				*eS*	**Sb**	**16 38 55.2**	**+1.0**
GBPR	**Guanica, Bosqu**	**1.19**	**144**		**Sn**	**16 38 39.8**	**+0.1**
GBPR					**Sn**	**16 38 56.3**	**+1.3**
GBPR	**Guanica, Bosqu**	**1.19**	**144**	*iP*	**Sn**	**16 38 39.8**	**+0.1**
GBPR				*eS*	**Sn**	**16 38 56.3**	**+1.3**
CELP	**Cerrillos**	**1.31**	**131**		**Pn**	**16 38 40.8**	**-0.6**
CELP				IAML		16 39 03.6	
	657nm,0.3s						
CELP				IAML		16 39 06.3	
	514nm,0.3s						
OBIP	**Obispado Ponce**	**1.32**	**133**		**Pn**	**16 38 40.9**	**-0.6**
OBIP					**Sn**	**16 38 58.8**	**+0.7**
OBIP	**Obispado Ponce**	**1.32**	**133**	*iP*	**Pn**	**16 38 40.9**	**-0.6**
OBIP				*eS*	**Sn**	**16 38 58.8**	**+0.7**
ECPR	**Experimental S**	**1.35**	**117**		**Pn**	**16 38 40.9**	**-1.0**
ECPR	**Experimental S**	**1.35**	**117**	*iP*	**Pn**	**16 38 40.9**	**-1.0**
ECPR				*eS*	**Sn**	**16 38 59.4**	**+0.5**
GCPR	**Guaynabo City**	**1.59**	**113**		**Pn**	**16 38 43.6**	**-1.6**
GCPR	**Guaynabo City**	**1.59**	**113**		**Sn**	**16 39 06.1**	**+1.3**
GCPR	**Guaynabo City**	**1.59**	**113**	IAML		16 39 11.8	
	comp=E,129nm,0.6s						
GCPR				IAML		16 39 14.5	
	comp=N,122nm,0.4s						
GCPR	**Guaynabo City**	**1.59**	**113**	*eP*	**Pb**	**16 38 46.8**	**-0.7**
GCPR				*eS*	**Sn**	**16 39 06.1**	**+1.3**
SJG	**San Juan**	**1.62**	**120**	*eP*	**Pb**	**16 38 47.3**	**-0.8**
SJG				*eS*	**Sn**	**16 39 07.3**	**+1.6**
DR12	**Loma Pena Alta**	**1.67**	**265**		**Pn**	**16 38 47.1**	**+0.8**
PDPR	**Patillas Dam,**	**1.78**	**121**		**Pn**	**16 38 47.8**	**+0.1**
HUMP	**Col San Antoni**	**1.86**	**115**		**Sb**	**16 38 48.8**	**-0.2**
HUMP	**Col San Antoni**	**1.86**	**115**	Pn	**Pn**	**16 38 48.8**	**-0.2**
HUMP	**Col San Antoni**	**1.86**	**115**	*eP*	**Pb**	**16 38 51.1**	**-1.1**
HUMP				*eS*	**Sb**	**16 39 14.3**	**-0.7**
SDDR	**Presa de Saban**	**3.47**	**271**		**Pn**	**16 39 12.8**	**+1.8**
SDDR				IAML		16 40 09.7	
	comp=N,99nm,0.7s						
SDDR				IAML		16 40 13.5	
	comp=N,107nm,0.8s						

*IGIL **07** 16:38:40.5, 36°.67N×9°.68W, h21km, ML1.6*
*INMG **07** 16:38:40.7±1.0, 36°.68N×9°.68W, h21km±3km, ML1.8, Error ellipse: s-maj=4.6km s-min=4.5km az=43.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
*MDD **07** 16:38:40.2±1.4, 36°.75N×9°.74W, h23km±30km, mb_Lg2.5/5, Error ellipse: s-maj=33.3km s-min=8.9km az=39.0*
*CNRM **07** 16:38:41.5, 36°.41N×8°.90W, h10km*

ISC 07 16:38:40.3±3.2, 36°.7N±0°.1×9°.6W±0°.1, h33km±4km, n29, σ0°75/47, 2C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.77**	**57**	*eP*	**Pb**	**16 38 55.5**	**+0.1**
PFVI				*eS*	**Sb**	**16 39 07.0**	**+1.3**
PFVI				*i* IAML		16 39 07.7	
PFVI				*i* IAML		16 39 07.7	
PFVI				*i* IAML		16 39 08.2	
PFVI	**Vila Bisbo**	**0.77**	**57**	P	**Pb**	**16 38 54.9**	**-0.4**
PFVI				S	**Sb**	**16 39 05.6**	**0.0**
MORF	**Marmelete**	**0.98**	**53**	*eP*	**Pb**	**16 38 58.4**	**-0.5**
MORF				*eS*	**Sb**	**16 39 11.2**	**-0.5**
MORF				IAML		16 39 12.6	
	comp=N,15nm,0.2s						
MORF	**Marmelete**	**0.98**	**53**	*eP*	**Pb**	**16 38 58.4**	**-0.5**
MORF				*eS*	**Sb**	**16 39 12.1**	**+0.5**
MORF				*i* IAML		16 39 12.8	
MORF				*i* IAML		16 39 13.2	
MORF				*i* IAML		16 39 15.0	
PTEO	**Sao Teotonio**	**1.11**	**41**	*eP*	**Pn**	**16 39 00.2**	**+0.7**
PTEO				*eS*	**Sb**	**16 39 15.2**	**+0.2**
PTEO				*i* IAML		16 39 15.9	
PTEO				*i* IAML		16 39 15.9	
PTEO				*i* IAML		16 39 18.6	
PBDV	**Barranco-do-Ve**	**1.47**	**68**	*iP*	**Pn**	**16 39 05.1**	**+0.6**
PBDV				*eS*	**Sn**	**16 39 23.1**	**+0.5**
PBDV				*i* IAML		16 39 26.2	
PBDV				*i* IAML		16 39 26.9	
PBDV				*i* IAML		16 39 29.5	
PCVE	**Castro Verde**	**1.57**	**54**	*eP*	**Pn**	**16 39 06.9**	**+1.1**
PCVE				*eS*	**Sn**	**16 39 26.3**	**+1.2**
PCVE				*i* IAML		16 39 28.0	
PCVE				*i* IAML		16 39 28.3	
PCVE				*i* IAML		16 39 28.4	
MESJ	**Messejana**	**1.59**	**45**	*eP*	**Pn**	**16 39 06.7**	**+0.6**
MESJ				*eS*	**Sn**	**16 39 26.0**	**+0.3**
MESJ				IAML		16 39 27.3	
	comp=N,4.8nm,0.2s						
MESJ	**Messejana**	**1.59**	**45**	*eP*	**Pn**	**16 39 06.8**	**+0.6**
MESJ				*eS*	**Sn**	**16 39 26.5**	**+0.9**
MESJ				*i* IAML		16 39 27.7	
MESJ				*i* IAML		16 39 28.6	
MESJ				*i* IAML		16 39 28.8	
PVAQ	**Vaqueiros**	**1.69**	**65**	*eP*	**Pn**	**16 39 08.0**	**+0.6**
PVAQ				*eS*	**Sn**	**16 39 28.2**	**+0.3**
PVAQ				*i* IAML		16 39 29.7	
PVAQ				*i* IAML		16 39 30.7	
PVAQ				*i* IAML		16 39 31.7	
PVAQ	**Vaqueiros**	**1.69**	**65**	P	**Pn**	**16 39 07.0**	**-0.4**
PVAQ				S	**Sn**	**16 39 26.5**	**-1.4**
PBEJ	**Beja**	**1.93**	**47**	*eS*	**Sn**	**16 39 34.5**	**+0.7**
PBEJ				*i* IAML		16 39 35.1	
PBEJ				*i* IAML		16 39 35.4	
PBEJ				*i* IAML		16 39 35.9	
MOE	**Montemor**	**2.08**	**29**	*eP*	**Pn**	**16 39 13.4**	**+0.6**
MOE				*eS*	**Sn**	**16 39 38.0**	**+0.5**
MOE				*i* IAML		16 39 39.2	
MOE				*i* IAML		16 39 39.5	
MOE		

0.5nm,1.0s,baz=108,slow=1.9,SNR=2.2
ASAR LR LR 16 58 39.9
comp=Z,92nm,18.2s,baz=96,slow=35
2.8nm,0.7s
GUMO Guam 36.96 320 LR LR 17 02 49.4
comp=Z,96nm,18.2s,baz=106,slow=38
FITZ Fitzroy Crossi 40.91 260 P **P 16 47 04.8 +0.6**
6.3nm,0.8s,baz=104,slow=5.9,SNR=9.2
FITZ LR LR 17 03 33.7
comp=Z,97nm,18.1s,baz=78,slow=36
6.3nm,0.8s
KAPI Kappang 48.80 277 LR LR 17 07 11.2
comp=Z,21nm,19.1s,baz=78,slow=34
MJAR Matsushiro Arr 58.94 332 P **P 16 49 20.4 -0.5**
2.2nm,0.9s,baz=179,slow=5.9,SNR=5.0
2.2nm,0.9s
VNDA Vanda 62.26 182 P **P 16 49 43.5 +0.5**
2.7nm,0.8s,baz=31,slow=2.8,SNR=5.1
2.7nm,0.8s
USRK Ussuriysk Ar. 67.91 333 P **P 16 50 20.9 +0.8**
1.7nm,0.7s,baz=134,slow=5.5,SNR=4.8
1.7nm,0.7s
QSPA South Pole Qui 74.67 180 P **P 16 51 01.0 +0.1**
12nm,0.8s,baz=16,slow=1.1,SNR=12
12nm,0.8s
CMAR Chiang Mai Arr 76.14 294 P **P 16 51 10.3 +0.4**
0.5nm,0.6s,baz=129,slow=4.3,SNR=5.9
0.5nm,0.6s
LZDM Lanzhou Array 79.55 312 P **P 16 51 29.8 +0.8**
0.2nm,0.3s,baz=147,slow=2.9,SNR=3.9
0.2nm,0.3s
SONM Songino Array 83.61 323 P **P 16 51 50.9 +0.9**
2.0nm,0.9s,baz=149,slow=8.4,SNR=10
2.0nm,0.9s
ILAR Eielson Array 86.81 18 P **P 16 52 04.5 -0.9**
0.6nm,0.8s,baz=236,slow=5.3,SNR=5.9
0.6nm,0.8s
NVAR Mina Array Bea 86.91 49 P **P 16 52 08.2 +1.3**
1.3nm,0.7s,baz=228,slow=9.3,SNR=8.4
1.3nm,0.7s
YKA Yellowknife Ar 97.64 27 P **P 16 52 55.1 -0.5**
0.3nm,0.8s,baz=263,slow=4.7,SNR=6.0
0.3nm,0.8s
MKAR Makanchi Array 98.36 316 P Pdif 16 53 00.1 +0.7
1.2nm,0.7s,baz=100,slow=5.3,SNR=13
1.2nm,0.7s
ZALV Zalesovo Beam 98.50 324 P **P 16 52 58.3 -1.5**
0.6nm,0.6s,baz=93,slow=10,SNR=3.6
0.6nm,0.6s

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*DJA **07** 16:55:08.3±0.3,5˚S×12˚9E±˚, h225km±4km, M4.3/23, mB4.9/3, mb4.4/7, MLv4.3/23, Mw(mB)4.2/3*
ISC 07 16:55:09.7±1.1,5˚27S±0˙06×129˚38E±0˙06, h200km, n19, σ2§52/24, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.91**	**35**	P	**Pn**	**16 55 40.4**	**+1.5**
BNDI	**Bandanaira**	**0.91**	**35**	P	**Sn**	**16 56 09.5**	**+8.0**
BNDI	**Bandanaira**	**0.91**	**35**	P	**Pn**	**16 55 39.9**	**+1.0**
BNDI				S	**Sn**	**16 56 05.4**	**+3.9**
MSAI	**Masohi**	**1.96**	**347**	P	**Pn**	**16 55 46.9**	**-0.9**
AAI	**Ambon**	**1.96**	**323**	P	**Pn**	**16 55 47.5**	**-0.4**
NLAI	**Namlea**	**3.04**	**311**	P	**Pn**	**16 56 01.8**	**+2.0**
NLAI				S	**Sn**	**16 56 40.1**	**+1.1**
SAUI	**Saumlaki**	**3.31**	**145**	P	**Pn**	**16 56 02.7**	**-0.3**
SAUI				S	**Sn**	**16 56 47.7**	**+2.9**
FAKI	**Fak Fak**	**3.69**	**51**	P	**Pn**	**16 56 06.6**	**-1.1**
FAKI	**Fak Fak**	**3.69**	**51**	P	**Pn**	**16 56 06.1**	**-1.6**
FAKI				S	**Sn**	**16 56 52.3**	**-0.9**
KMPI	**Kaimana, Papua**	**4.60**	**70**	P	**Pn**	**16 56 18.4**	**-0.6**
SANI	**Sanana**	**4.65**	**313**	P	**Pn**	**16 56 17.4**	**-2.3**
SANI	**Sanana**	**4.65**	**313**	P	**Pn**	**16 56 17.3**	**-2.4**
SIJI	**Sorong**	**4.76**	**23**	P	**Pn**	**16 56 19.0**	**-2.1**
SWI	**Sorong**	**4.76**	**23**	P	**Pn**	**16 56 19.2**	**-1.9**
RKPI	**Ransiki, Papua**	**6.07**	**52**	P	**Pn**	**16 56 36.3**	**-1.7**
MWPI	**Manokwari, Pap**	**6.34**	**47**	P	**Pn**	**16 56 39.9**	**-1.5**
	0.4nm73nm,0.8s						
MWPI				S	**Sn**	**16 57 52.9**	**-1.2**
	0.4nm73nm,0.8s						
SOEI	**Soe**	**6.75**	**228**	P	**Pn**	**16 56 46.3**	**-0.5**
SOEI	**Soe**	**6.75**	**228**	S	**Sn**	**16 58 04.2**	**+0.3**
DRS	**Darwin Rock St**	**7.28**	**168**	P	**Pn**	**16 56 51.6**	**-1.9**

IDC 07 17:11:10.1±23.0, 16˚75S×179˚51W, h630km±222km, mb2.5/3, mbtmp3.5/3, Error ellipse: s-maj=300.3km s-min=51.2km az=131.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.82**	**258**	P	P	17 18 22.8	0.0
	0.2nm,0.6s,baz=92,slow=7.8,SNR=7.5						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**44.10**	**253**	P	P	17 18 25.1	+0.1
	0.6nm,0.6s,baz=88,slow=8.5,SNR=16						
ASAR				PcP	PcP	17 19 55.3	-0.5
	0.3nm,0.7s,baz=96,slow=4.0,SNR=2.5						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**85.01**	**13**	P	P	17 22 40.3	+0.1
	0.2nm,0.5s,baz=230,slow=4.6,SNR=4.2						
	0.2nm,0.5s						

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*KEA **07** 17:13:12.9, 31˚79N×128˚85E, h3km, ML4.2/4*
*IDC **07** 17:13:32.1±0.8, 31˚85N×128˚90E, h0km, mb3.7/16, mbtmp3.6/19, ML2.9/3, MS3.4/3, Error ellipse: s-maj=16.0km s-min=13.0km az=140.0*
*NIED **07** 17:13:34.3, 31˚84N×128˚91E, h29km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=1.25; Mθθ=0.83; Mφφ=0.42; Mrθ=-0.48; Mθφ=0.71; Mφr=-0.60; Fault plane solution: M₀1.52000×10¹⁵ NP1: φs=242.00000°, δ=31.00000°, λ=-76.00000°. NP2: φs=45.00000°, δ=60.00000°, λ=-98.00000°.*
*JMA **07** 17:13:34.3±0.1, 31˚8N±0˙5×128˚9E±0˙6, h29km±1km, MD4.0/38, MV4.1/38, SW OFF KYUSHU*
JMA Felt I J1 at SW OFF KYUSHU .
ISC 07 17:13:33.9±0.6, 31˚92N±0˙05×129˚00E±0˙05, h11km, n34, σ2§67/33, mb3.6/17, MS3.3/3, 3D, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.66**	**112**	*e*P	**Pb**	**17 13 47.2**	**-0.1**
JSJ				A	A	17 13 47.2	
	comp=N,15nm,1.9s,comp=E,7.0nm,0.2s						
JFU	**Fukue jima 2**	**0.76**	**344**	*i* P	**Pb**	**17 13 49.7**	**+0.6**
JFU				A	A	17 13 49.7	
	comp=N,25nm,0.6s,comp=E,15nm,1.1s						
JFU				eS	**Sb**	**17 14 00.7**	**+1.1**
NGSJ	**Nagasakinomoza**	**0.98**	**44**	⇓*i* P	**Pb**	**17 13 53.7**	**+0.9**
JHD	**Hondo**	**1.10**	**60**	⇓P	**Pn**	**17 13 55.8**	**+0.5**
JHD				A	A	17 13 55.8	
	comp=N,5.0nm,1.2s,comp=E,3.0nm,2.0s						
JHD				⇓*e*S	**Sb**	**17 14 11.0**	**+1.6**
JSU	**Suzuyama**	**1.31**	**108**	*i* P	**Pn**	**17 13 57.9**	**-0.2**
JSU				A	A	17 13 57.9	
	comp=N,9.0nm,0.8s,comp=E,6.0nm,3.5s						
JZO	**Okuchi**	**1.38**	**81**	*e*P	**Pn**	**17 13 59.4**	**+0.3**
JZO				A	A	17 13 59.4	
	comp=N,3.0nm,1.5s,comp=E,3.0nm,2.8s						
JIU3	**Izumi3**	**1.66**	**67**	*e*P	**Pn**	**17 14 04.0**	**+1.1**
JTZ	**Takazaki**	**1.78**	**90**	*e*P	**Pn**	**17 14 05.0**	**+0.4**
JNU	**Nakatsue**	**1.99**	**53**	Pn	**Pb**	**17 14 09.9**	**-0.1**
	comp=E,6.3nm,0.3s,baz=247,slow=9.3,SNR=27						
JNU				Lg	Lg	17 14 39.1	
	comp=E,44nm,0.3s,baz=186,slow=17,SNR=6.1						
	comp=E,34nm,0.4s						
KSRS	**Korea Array**	**5.59**	**351**	Pn	**Pn**	**17 14 58.4**	**+1.4**
	comp=E,1.9nm,0.3s,baz=170,slow=14,SNR=28						
KSRS				Sn	**Sn**	**17 16 01.7**	**+0.6**
	comp=E,3.1nm,0.3s,baz=347,slow=9.0,SNR=5.8						
KSRS				Lg	Lg	17 16 31.2	
	comp=E,4.6nm,0.3s,baz=172,slow=32,SNR=5.7						
	comp=E,7.2nm,0.5s						
HJU	**Haeju**	**6.67**	**337**	Sg	**Sb**	**17 16 57.8**	**+8.3**
HJU				AML	AML		
	comp=N,225nm,0.7s						
HJU				AML	AML		
	comp=E,203nm,0.7s						
HJU				AML	AML		
	comp=Z,181nm,0.7s						
PYS	**Pyongsong**	**7.75**	**342**	Sg	Sg	17 17 33.9	-8.6
PYS				AML	AML		
	comp=N,156nm,0.6s						
PYS				AML	AML		
	comp=E,416nm,0.9s						
PYS				AML	AML		
	comp=Z,165nm,0.6s						
HHU	**Hamhung**	**8.08**	**352**	Sg	**Sg**	**17 17 45.4**	**-7.5**
HHU				AML	AML		
	comp=N,80nm,1.0s						
HHU				AML	AML		
	comp=E,82nm,0.2s						
HHU				AML	AML		
	comp=Z,57nm,1.0s						
MJAR	**Matsushiro Arr**	**8.91**	**56**	Pn	**Pn**	**17 15 44.9**	**+2.4**
	baz=243,slow=13,SNR=2.2						
	comp=Z,0.8nm,0.9s						
SUJ	**Sinuiju**	**8.94**	**337**	Sg	**Sg**	**17 18 12.6**	**-8.0**
SUJ				AML	AML		
	comp=N,497nm,1.3s						
SUJ				AML	AML		
	comp=E,198nm,0.7s						
SUJ				AML	AML		
	comp=Z,47nm,2.2s						
LZH	**Lanzhou**	**21.24**	**288**	*e*P	P	17 18 27.6	+7.5
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LZDM	**Lanzhou Array**	**21.36**	**288**	P	**P**	**17 18 22.0**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=125,slow=7.8,SNR=5.1						
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	**23.40**	**319**	P	**P**	**17 18 42.8**	**0.0**
	comp=Z,2.6nm,0.9s,baz=138,slow=11,SNR=12						
SONM				LR	LR	17 27 47.0	
	comp=Z,67nm,19.3s,baz=64,slow=36						
	comp=Z,2.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.21**	**251**	P	**P**	**17 19 44.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=49,slow=6.2,SNR=4.5						
	comp=Z,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**38.29**	**318**	P	**P**	**17 20 54.5**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=116,slow=6.6,SNR=1.5						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**38.47**	**306**	P	**P**	**17 20 55.6**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=96,slow=11,SNR=6.4						
	comp=Z,0.2nm,0.6s						
TIXI	**Tiksi**	**39.78**	**360**	LR	LR	17 38 17.2	
	comp=Z,37nm,18.2s,baz=198,slow=37						
KURBB	**Kurchatov Arra**	**41.37**	**312**	P	**P**	**17 21 19.3**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=98,slow=8.4,SNR=1.7						
	comp=Z,0.2nm,0.4s						
BVAR	**Borovoye Array**	**46.62**	**315**	P	**P**	**17 22 02.0**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=98,slow=11,SNR=4.0						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**51.82**	**174**	P	**P**	**17 22 41.3**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=350,slow=8.4,SNR=4.9						
	comp=Z,0.5nm,0.8s						
ARTI	**Arti**	**53.54**	**319**	LR	LR	17 46 08.4	
	comp=Z,51nm,19.9s,baz=3.5,slow=36						
ASAR	**Alice Springs**	**55.47**	**175**	P	**P**	**17 23 07.9**	**-0.9**
	comp=Z,0.6nm,1.0s,baz=356,slow=6.8,SNR=6.1						
	comp=Z,0.6nm,1.0s						
ILAR	**Eielson Array**	**59.15**	**30**	P	**P**	**17 23 35.3**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=280,slow=7.9,SNR=6.0						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**68.28**	**330**	P	**P**	**17 24 33.9**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=71,slow=4.7,SNR=17						
	comp=Z,1.8nm,0.5s						
AKASG	**Malin Array Be**	**71.68**	**319**	P	**P**	**17 24 55.0**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=66,slow=2.3,SNR=4.6						
	comp=Z,1.3nm,0.6s						
YKA	**Yellowknife Ar**	**73.11**	**26**	P	**P**	**17 25 05.6**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=300,slow=6.7,SNR=4.9						
	comp=Z,0.2nm,0.7s						
BRTR	**Keskin Array B**	**74.11**	**307**	P	**P**	**17 25 10.8**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=94,slow=5.8,SNR=4.0						
	comp=Z,2.3nm,0.8s						
NOA	**NORSAR Array B**	**74.53**	**333**	P	**P**	**17 25 11.3**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=50,slow=6.4,SNR=3.4						
	comp=Z,1.0nm,0.9s						
NVAR	**Mina Array Bea**	**86.10**	**47**	P	**P**	**17 26 14.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=333,slow=7.3,SNR=2.4						
	comp=Z,0.3nm,0.6s						

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*IDC **07** 17:23:39.8±1.0, 31˚04S×71˚57W, h0km, mb4.2/3, mbtmp4.1/5, ML3.8/2, MS3.3/3, Error ellipse: s-maj=83.5km s-min=22.1km az=153.0*
*GUC **07** 17:23:42.8±0.8, 30˚46S×72˚02W, h31km±3km, ML4.2*
*SJA **07** 17:23:42.3±0.7, 30˚48S×72˚16W, h28km±8km, ML4.4, MW4.2*
ISC 07 17:23:40.5±1.2, 30˚43S±0˙03×72˚01W±0˙05, h6km±6km, n44, σ1§24/58, 6C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO04	**Tololo Observa**	**1.07**	**77**	⇓*e*P	**Pb**	**17 24 02.2**	**+0.6**
GO04				*e*S	**Sb**	**17 24 16.7**	**+0.6**
GO04				IAML		17 24 19.6	
	comp=E,16μm,0.5s						
CO02	**Combarbal**	**1.16**	**132**	⇓*e*P	**Pb**	**17 24 03.5**	**+0.4**
CO02				*e*S	**Sb**	**17 24 18.6**	**+0.1**
CO02				IAML		17 24 19.6	
	comp=N,15μm,0.3s						
CO03	**El Pedregal**	**1.21**	**110**	⇓*e*P	**Pg**	**17 24 03.9**	**+0.2**
CO03				*e*S	**Sb**	**17 24 20.2**	**+0.4**
CO03				IAML		17 24 21.9	
	comp=N,8μm,0.4s						
CO01	**Juntas del Tor**	**1.72**	**75**	⇓*e*P	**Pb**	**17 24 12.7**	**0.0**
CO01				*e*S	**Sb**	**17 24 34.7**	**+0.1**
CO01				IAML		17 24 40.0	
	comp=N,2μm,0.3s						
LCO	**Las Campanas**	**1.81**	**39**	⇑*e*P	**Pn**	**17 24 13.4**	**+0.9**
LCO				*e*S	**Sb**	**17 24 38.1**	**+0.7**
LCO				IAML		17 24 41.5	
	comp=N,8μm,0.5s						
CO04	**Los Peladeros**	**1.84**	**151**	⇑*e*P	**Pn**	**17 24 13.8**	**+0.8**
CO04				*e*S	**Sn**	**17 24 37.0**	**+0.4**
CO04				IAML		17 24 47.3	
	comp=N,3μm,0.4s						
AC05	**El Transito**	**2.19**	**44**	⇑*e*P	**Pn**	**17 24 19.3**	**+1.7**
AC05				*e*S	**Sb**	**17 24 47.6**	**-0.5**
AC05				IAML		17 24 52.8	
	comp=N,1μm,0.7s						
AROD	**Rodeo**	**2.21**	**84**	*e*P	**Pb**	**17 24 22.0**	**+0.9**
AROD				*e*S	**Sg**	**17 24 50.3**	**-1.2**
VA06	**Catapilco**	**2.21**	**164**	*e*P	**Pn**	**17 24 18.3**	**+0.5**
VA06				IAML		17 25 00.2	
	comp=E,3μm,0.4s						
AC04	**Llanos de Chal**	**2.36**	**20**	⇑*e*P	**Pn**	**17 24 20.1**	**+0.3**
ACDV	**Cuesta del Vie**	**2.51**	**85**	*e*P	**Pb**	**17 24 27.3**	**+1.2**
ACDV				*e*S	**Sb**	**17 24 55.3**	**-2.1**
ACCO	**Cerro Coronel**	**2.54**	**94**	*e*P	**Pb**	**17 24 27.0**	**+0.2**
ACCO				*e*S	**Sg**	**17 25 01.7**	**-0.6**
VA03	**San Esteban**	**2.64**	**152**	*e*P	**Pn**	**17 24 25.4**	**+1.6**
VA03				*e*S	**Sn**	**17 24 57.0**	**+0.8**
VA03				IAML		17 25 05.9	
	comp=E,2μm,0.7s						
VA03	**San Esteban**	**2.64**	**152**	*e*P	**Pn**	**17 24 25.6**	**+1.8**
VA03				*e*S	**Sn**	**17 24 58.3**	**+2.1**
VA03				IAML		17 25 08.5	
	comp=Z,1μm,0.5s						
ROCH	**El Roble**	**2.67**	**162**	*e*P	**Pn**	**17 24 25.0**	**+0.7**
ROCH				*e*S	**Sn**	**17 24 57.6**	**+0.3**
RTLS	**Leoncito**	**2.70**	**121**	*e*P	**Pb**	**17 24 28.7**	**-0.7**
RTLS				*e*S	**Sb**	**17 25 01.8**	**-1.1**
RTLS				IAML		17 25 14.9	
	comp=Z,2μm,0.5s						
AUSP	**Uspallata**	**2.87**	**129**	*e*P	**Pb**	**17 24 31.0**	**-1.3**
AUSP				*e*S	**Sb**	**17 25 06.3**	**-1.5**
MT02	**Curacav**	**2.92**	**166**	*e*P	**Pn**	**17 24 28.9**	**+1.3**
MT02				IAML		17 25 17.2	
	comp=E,463nm,0.3s						
PEL	**Peldehue**	**2.93**	**158**	⇑*e*P	**Pn**	**17 24 28.9**	**+1.1**
PEL				*e*S	**Sn**	**17 25 04.6**	**+1.3**
PEL				IAML		17 25 15.5	
	comp=N,917nm,0.5s						
MT10	**Hacienda Santa**	**3.10**	**157**	⇑*e*P	**Pn**	**17 24 31.3**	**+1.2**
MT10				*e*S	**Sn**	**17 25 08.6**	**+1.0**
GO03	**Copiapo**	**3.22**	**29**	*e*P	**Pn**	**17 24 32.8**	**+1.0**
GO03				*e*S	**Sb**	**17 25 15.3**	**-2.5**
MT09	**Talagante**	**3.45**	**166**	*e*P	**Pn**	**17 24 36.3**	**+1.3**
BO04	**La Punta**	**3.74**	**162**	*e*P	**Pn**	**17 24 40.1**	**+1.2**
H03N1	**Juan Fernandez**	**6.59**	**241**	Pn	**Pn**	**17 25 17.2**	**-0.5**
	baz=113,slow=18						
H03N1				T	T	17 32 18.6	
	baz=70,slow=72						
H03N2	**Juan Fernandez**	**6.61**	**241**	Pn	**Pn**	**17 25 17.5**	**-0.5**
	baz=113,slow=18						
H03N2				T	T	17 32 18.8	
	baz=70,slow=72						
H03N3	**Juan Fernandez**	**6.61**	**241**	Pn	**Pn**	**17 25 17.5**	**-0.5**
	baz=113,slow=18						
H03N3				T	T	17 32 18.5	
	baz=70,slow=72						
H03S3	**Juan Fernandez**	**6.76**	**238**	Pn	**Pn**	**17 25 20.8**	**+0.7**
	baz=356,slow=74						
H03S1	**Juan Fernandez**	**6.77**	**238**	Pn	**Pn**	**17 25 19.2**	**-1.0**
H03S2	**Juan Fernandez**	**6.78**	**238**	Pn	**Pn**	**17 25 19.2**	**-1.1**
CPUP	**Villa Florida**	**13.55**	**76**	Pn	**Pn**	**17 26 49.0**	**-4.3**
	comp=N,0.1nm,0.3s,baz=218,slow=17,SNR=1.1						
CPUP				Sn	Sn	17 29 14.5	-10
	baz=337,slow=20,SNR=1.3						
CPUP				LR	LR	17 32 03.7	
	comp=N,62nm,20.2s,baz=256,slow=38						
	comp=N,0.6nm,0.4s						
LPAZ	**La Paz**	**14.52**	**15**	Pn	**Pn**	**17 27 09.0**	**+1.8**
	comp=N,0.1nm,0.3s,baz=193,slow=18,SNR=4.6						
SIV	**San Ignacio**	**17.52**	**37**	P	**P**	**17 27 47.2**	**+0.5**
	baz=212,slow=12,SNR=24						
	comp=N,5.5nm,0.8s						
BDFB	**Brasilia**	**26.45**	**62**	P	**P**	**17 29 17.6**	**-1.0**
	comp=N,3.6nm,0.6s,baz=197,slow=6.3,SNR=4.2						
	comp=N,3.6nm,0.6s						
SNAA	**Sanae**	**54.88**	**159**	LR	LR	17 54 32.9	
	comp=N,52nm,19.4s,baz=5.0,slow=34						
DBIC	**Dimbokro**	**74.04**	**72**	P	**P**	**17 35 16.3**	**-1.4**
	comp=N,1.1nm,0.3s,baz=218,slow=12,SNR=3.7						
	comp=N,1.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**82.98**	**70**	P	**P**	**17 36 07.5**	**+0.5**
	comp=N,0.9nm,0.7s,baz=239,slow=7.0,SNR=4.8						
	comp=N,0.9nm,0.7s						
MDT	**Midelt**	**89.56**	**51**	LR	LR	18 16 32.0	
	comp=N,12nm,19.5s,baz=48,slow=35						
H11S2	**WAKE ISLAND Hy**	**125.77**	**272**	T	T	20 01 26.7	
	baz=115,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**125.78**	**272**	T	T	20 01 29.4	
	baz=115,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**125.79**	**272**	T	T	20 01 26.9	
	baz=115,slow=75,SNR=9.8						
BVAR	**Borovoye Array**	**144.58**	**39**	PKP	PKPbc	17 43 17.2	+0.9
	comp=N,0.6nm,0.6s,baz=308,slow=3.5,SNR=4.2						
KURBB	**Kurchatov Arra**	**150.17**	**39**	PKPbc	**PKPbc**	**17 43 32.6**	**+0.7**
	comp=N,0.9nm,0.5s,baz=300,slow=3.1,SNR=13						
ZALV	**Zalesovo Beam**	**151.14**	**29**	PKPbc	**PKPbc**	**17 43 35.2**	**+1.0**
	comp=N,5.8nm,0.7s,baz=321,slow=2.6,SNR=29						
ZALV				PKPab	**sPKPab**	**17 43 44.2**	**+1.1**
	comp=N,4.1nm,0.6s,baz=308,slow=3.2,SNR=9.4						
MKAR	**Makanchi Array**	**154.28**	**43**	PKPbc	**PKiKP**	**17 43 42.4**	**+0.9**
	comp=N,0.5nm,0.8s,baz=305,slow=3.0,SNR=4.9						
MKAR				PKPab	**PKPab**	**17 43 56.5**	**+1.1**
	comp=N,0.6nm,0.9s,baz=304,slow=3.3,SNR=3.6						

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*IDC **07** 17:44:10.7±0.9, 36˚38N×1˚55E, h0km, mb3.6/10, mbtmp3.6/15, ML3.3/5, MS2.8/1, Error ellipse: s-maj=22.1km s-min=15.2km az=149.0*
*CRAAG **07** 17:44:10.2, 36˚40N×1˚67E, MI3.5, Algrie 10km SE Breira*
*INMG **07** 17:44:10.0±1.6, 36˚53N×1˚89E, h16km, ML2.5, Error ellipse: s-maj=21.7km s-min=10.1km az=60.0, #DIST_RANGE: REGIONAL #IPMA_REGION: N Argelia (ALG)*
*MDD **07** 17:44:11.7±0.6, 36˚24N×1˚74E, h27km±12km, Mb4.3/42, M_mb3.6/42, Error ellipse: s-maj=11.3km s-min=2.7km az=148.0*
*IGIL **07** 17:44:11.6, 36˚64N×2˚12E, h60km*
*CNRM **07** 17:44:14.2, 36˚47N×1˚36E, h33km, ML3.3*
ISC 07 17:44:11.4±1.1, 36˚42N±0˙03×1˚61E±0˙03, h11km±7km, n102, σ1§98/136, mb3.6/8, 18C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EBNH	**Beni Haoua**	**0.10**	**337**	P	**Pg**	**17 44 14.4**	**+0.1**
EBNR	**Beni Rached**	**0.15**	**206**	P	**Pb**	**17 44 14.9**	**-1.3**
ECHA	**Ech Chlef**	**0.34**	**216**	P	**Pg**	**17 44 17.6**	**-0.6**
EARB	**Arib**	**0.34**	**111**	P	**Pg**	**17 44 16.8**	**-1.5**
EHRZ	**Djelida**	**0.46**	**119**	P	**Pg**	**17 44 19.1**	**-1.4**
ABKD	**Sidi Amar**	**0.57**	**79**	P	**Pb**	**17 44 21.5**	**-2.0**
EANR	**'Ain N'Sour**	**0.63**	**221**	P	**Pb**	**17 44 23.5**	**-0.9**
EDDR	**Deurdeur**	**0.64**	**131**	P	**Pb**	**17 44 22.7**	**-2.0**
EKMS	**Oued Kramis**	**0.79**	**262**	P	**Pn**	**17 44 27.8**	**-0.7**
OKGL	**Djebel Kef Gue**	**0.87**	**244**	P	**Pn**	**17 44 31.0**	**+1.4**
EBGR	**Bougara**	**0.90**	**163**	P	**Pb**	**17 44 28.6**	**-0.5**
ADOR	**Douera**	**1.08**	**77**	P	**Pn**	**17 44 32.0**	**-0.7**
OJGS	**Djebel Guires**	**1.15**	**218**	P	**Pn**	**17 44 32.0**	**-1.6**
ESMB	**Sidi M'hamed B**	**1.19**	**225**	P	**Pn**	**17 44 33.0**	**-1.0**
ABA	**Alger-Bouzarea**	**1.21**	**71**	P	**Pb**	**17 44 34.1**	**-0.2**
AFDJ	**Sidi Ladjel**	**1.29**	**142**	P	**Pb**	**17 44 35.9**	**+0.2**
OJBR	**Djebel Berber**	**1.32**	**231**	P	**Pn**	**17 44 35.0**	**-0.9**
ABRIN	**Birine**	**1.46**	**123**	P	**Pn**	**17 44 37.4**	**-0.4**
OFRG	**Douar Fergoug**	**1.56**	**235**	P	**Pn**	**17 44 37.7**	**-1.4**
EADEB	**Ain Deheb**	**1.56**	**181**	P	**Pb**	**17 44 41.1**	**+0.7**
EZEK	**Zmalet El Emir**	**1.65**	**160**	P	**Pn**	**17 44 41.1**	**+0.6**
ODJA	**Bouhanifia**	**1.80**	**233**	P	**Pn**	**17 44 42.9**	**+0.5**
AKET	**Djebel Ketaf**	**1.88**	**101**	P	**Pb**	**17 44 44.7**	**-1.1**
USTO	**Oran**	**1.88**	**249**	P	**Pn**	**17 44 40.0**	**-3.5**
ATKB	**Taksebt**	**2.04**	**82**	P	**Pb**	**17 44 48.5**	**+0.1**
ADCK	**Dar Chioukh**	**2.12**	**135**	P	**Pb**	**17 44 51.5**	**+1.5**
ABSD	**Ouled Sidi Bra**	**2.32**	**114**	P	**Pn**	**17 44 49.6**	**0.0**
CART	**Cartagena**	**2.39**	**300**	Pn	**Pn**	**17 44 48.6**	**-1.9**
CART				Sn	**Sn**	**17 45 14.5**	**-5.2**
CART	**Cartagena**	**2.39**	**300**	P	**Pn**	**17 44 47.5**	**-3.0**
CART				S	**Sn**	**17 45 15.5**	**-4.3**
CTCHA	**Tamokra**	**2.45**	**89**	P	**Pn**	**17 44 51.5**	**+0.1**
EIBI	**Ibiza**	**2.61

278nm,SNR=3.5
ELGU Sn **Sn** **17 46 01.9 -3.5**
EMOS Mosqueruela 4.26 338 Pn **Pn** **17 45 17.0 +0.6**
EMOS Sn **Sn** **17 46 02.6 -3.6**
E0901 Celadas (Terue 4.58 333 Pn **Pn** **17 45 21.9 +1.1**
E0901 Sn **Sn** **17 46 12.7 -1.4**
ERTA Horta de San J 4.63 348 Pn **Pn** **17 45 21.6 +0.2**
ERTA ⇑*i*VmbVC 17 45 28.0
170nm,SNR=2.5
ERTA Sn **Sn** **17 46 12.4 -2.8**
EGOR Sierra Gorda, 4.64 280 Pn **Pn** **17 45 22.5 +0.9**
EGOR Sierra Gorda, 4.64 280 Pn **Pn** **17 45 23.5 +1.9**
EGOR ⇑*i*VmbVC 17 45 28.6
136nm,SNR=3.1
EGOR Sn **Sn** **17 46 14.0 -1.5**
AKLM AKL 4.86 248 P **Pn** **17 45 23.6 -0.9**
AKLM S **Sn** **17 46 17.3 -3.4**
PSIM Granatula de C 4.88 301 Pn **Pn** **17 45 24.2 -0.6**
PSIM Sn **Sn** **17 46 19.5 -1.9**
FIGM Figuig 4.90 210 P **Pn** **17 45 24.5 -0.6**
CRHA Rehia 4.93 96 P **Pn** **17 45 25.5 0.0**
EPOB Poblet 4.94 355 Pn **Pn** **17 45 25.0 -0.6**
EPOB ⇑*i*VmbVC 17 45 32.8
152nm,SNR=2.5
EPOB Sn **Sn** **17 46 19.6 -3.1**
EADA Adamuz 5.23 291 Pn **Pn** **17 45 28.6 -0.9**
EADA Adamuz 5.23 291 Pn **Pn** **17 45 29.2 -0.4**
EADA Sn **Sn** **17 46 27.9 -2.0**
ETOR Torete 5.24 328 Pn **Pn** **17 45 31.3 +1.5**
ETOR ⇑*i*VmbVC 17 45 40.7
121nm,SNR=1.8
ETOR Sn **Sn** **17 46 30.7 +0.4**
ESDC Sonseca Array 5.46 308 Pn **Pn** **17 45 31.8 -1.0**
0.5nm,0.3s,baz=124,slow=13,SNR=30
ESDC Sn **Sn** **17 46 35.6 -0.1**
0.3nm,0.3s,baz=123,slow=24,SNR=5.2
ESDC LR LR 17 47 50.8
comp=Z,80nm,18.6s,baz=115,slow=40
2.7nm,0.5s
EMIR Miracle 5.48 359 Pn **Pn** **17 45 33.3 +0.2**
PAB San Pablo 5.64 305 Pn **Pn** **17 45 35.1 -0.2**
PAB ⇑*i*VmbVC 17 45 37.9
108nm,SNR=2.5
PAB Sn **Sn** **17 46 37.2 -2.9**
ECAB El Cabril 5.84 288 Pn **Pn** **17 45 36.8 -1.2**
ECAB El Cabril 5.84 288 Pn **Pn** **17 45 36.9 -1.2**
ECAB ⇑*i*VmbVC 17 45 42.0
117nm,SNR=2.6
ECAB Sn **Sn** **17 46 39.4 -5.6**
GUD Guadarrama 6.18 315 Pn **Pn** **17 45 44.0 +1.3**
GUD ⇑*i*VmbVC 17 45 51.0
97nm,SNR=2.6
MDT Midelt 6.26 237 Pn **Pn** **17 45 44.1 +0.3**
0.7nm,0.3s,baz=50,slow=18,SNR=24
MDT Sn **Sn** **17 46 58.5 +3.0**
0.3nm,0.3s,baz=271,slow=24,SNR=1.7
MDT Lg Lg 17 47 28.1
0.2nm,0.3s,baz=260,slow=21,SNR=1.7
1.8nm,0.4s
MDT Midelt 6.26 237 P **Pn** **17 45 43.4 -0.5**
KEST Kesra 6.30 94 Pn **Pn** **17 45 45.8 +1.4**
1.4nm,0.3s,baz=217,slow=6.1,SNR=14
KEST Sn **Sn** **17 46 56.6 +0.2**
baz=159,slow=23
KEST Lg Lg 17 47 38.6
baz=33,slow=12
10nm,0.6s
MD31 MD31 6.33 238 P **Pn** **17 45 43.9 -0.9**
PBAR Barrancos 7.11 287 *e*P **Pn** **17 45 54.6 -0.8**
PBAR *e*S **Sn** **17 47 11.1 -5.0**
PBAR *i* IAML 17 47 15.5
PBAR *i* IAML 17 47 16.4
PBAR *i* IAML 17 47 16.4
PVAQ Vaqueiros 7.54 280 *e*P **Pn** **17 46 00.1 -1.1**
PVAQ *e*S **Sn** **17 47 22.5 -4.1**
PVAQ *i* IAML 17 47 23.8
PVAQ *i* IAML 17 47 26.8
PVAQ *i* IAML 17 47 27.0
PBDV Barranco-do-Ve 7.70 279 *e*P **Pn** **17 46 03.8 +0.4**
PMRV Marv??o 7.72 296 *e*S **Sn** **17 47 27.3 -3.9**
ELAN Lanestosa 7.83 332 Pn **Pn** **17 46 06.7 +1.5**
MESJ Messejana 7.98 283 *e*P **Pn** **17 46 05.9 -1.4**
MESJ Messejana 7.98 283 *e*P **Pn** **17 46 06.1 -1.1**
PMTG Montargil 8.23 292 *e*S **Sn** **17 47 36.1 -7.5**
PMTG *i* IAML 17 47 40.2
PMTG *i* IAML 17 47 40.5
PMTG *i* IAML 17 47 42.1
ECAL Calabor 8.50 313 Pn **Pn** **17 46 15.1 +0.6**
ECAL ⇑*i*VmbVC 17 46 20.5
170nm,SNR=1.6
EARI Arriondas 8.64 325 Pn **Pn** **17 46 17.5 +1.2**
EARI ⇑*i*VmbVC 17 46 18.1
184nm,SNR=1.6
ZGR Zagora 8.72 226 P **Pn** **17 46 17.5 -0.2**
PCP Piancastagn 9.67 31 Pn **Pn** **17 46 30.2 -0.3**
GERES GERESS Array B 15.25 32 Pn **Pn** **17 47 47.4 +0.8**
baz=233,slow=16,SNR=2.8
0.2nm,0.4s
EKA Eskdalemuir Ar 19.19 352 P **Pn** **17 48 37.8 +1.9**
baz=155,slow=11
3.1nm,0.9s
MLR Muntele Rosu 20.43 56 P Pn 17 48 51.5 +0.7
5.1nm,0.8s,baz=207,slow=2.3,SNR=3.0
5.1nm,0.8s
TORD Torodi Ar. Bea 23.18 180 P **P** **17 49 17.6 -0.5**
0.6nm,0.8s,baz=343,slow=9.3,SNR=3.1
0.6nm,0.8s
AKASG Malin Array Be 24.40 46 P **P** **17 49 29.3 -0.3**
0.3nm,0.4s,baz=244,slow=10,SNR=1.6
0.3nm,0.4s
NOA NORSAR Array B 25.38 11 P **P** **17 49 40.5 +2.1**
0.7nm,0.8s,baz=202,slow=7.8,SNR=1.6
0.7nm,0.8s
FINES FINESS Array B 29.40 24 P **P** **17 50 15.4 +1.0**
3.6nm,0.9s,baz=218,slow=8.8,SNR=3.4
3.6nm,0.9s
BVAR Borovoye Array 49.65 48 P **P** **17 53 03.9 +1.1**
0.6nm,0.8s,baz=274,slow=5.8,SNR=4.2
0.6nm,0.8s
KURBB Kurchatov Arra 55.11 49 P **P** **17 53 45.0 +1.7**
1.1nm,0.6s,baz=290,slow=8.0,SNR=7.0
1.1nm,0.6s
MKAR Makanchi Array 58.72 52 P **P** **17 54 10.8 +1.8**
0.5nm,0.6s,baz=285,slow=5.6,SNR=9.0
0.5nm,0.6s
YKA Yellowknife Ar 69.01 334 P **P** **17 55 18.1 +1.5**
0.1nm,0.3s,baz=39,slow=6.0,SNR=2.6
0.1nm,0.3s
PDAR Pinedale Array 79.31 316 P **P** **17 56 18.5 +1.2**
0.5nm,0.9s,baz=57,slow=8.0,SNR=3.5
0.5nm,0.9s

*KRNET **07** 17:48:25.2±0.1,41°.07N×72°.59E,h13km, mb2.7*
*SOME **07** 17:48:27.6,41°.23N×72°.57E,h10km*
*ISU **07** 17:48:31,41°.11N×72°.51E,h14km*
*NNC **07** 17:48:32.7±4.8,41°.46N×72°.49E,h0km, mb2.7, mpv2.4, Error ellipse: s-maj=45.0km s-min=17.4km az=171.0*
ISC 07 17:48:25.4±1.0,**41°.12N**±0°.02×**72°.61E**±0°.03,**h13**km±10km, **n21**,σ1**°23**/37,**19C-3D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
TSTA	**Tashata**	**0.55**	**190**	P		**Pg**	**17 48 36.3 +0.1**
TSTA				S		**Sg**	**17 48 44.5 +1.0**
OHH	**Osh**	**0.61**	**167**	⇑*i*P		**Pg**	**17 48 35.9 -1.4**
OHH				⇑*i*S		**Sg**	**17 48 43.6 -1.8**
ARK	**Arkit**	**0.83**	**325**	⇑*i*P		**Pb**	**17 48 41.8 0.0**
ARK				⇑*i*S		**Sn**	**17 48 53.6 -1.5**
SALK	**Salom-Alik**	**0.95**	**104**	⇑*i*P		**Pg**	**17 48 43.3 -0.4**
SALK				⇑*i*S		**Sg**	**17 48 56.5 +0.4**
FRG	**Fergana**	**0.97**	**220**	S		**Sg**	**17 48 58.0 +1.2**
TRKS	**Terek-Say**	**1.18**	**291**	⇑*i*P		**Pb**	**17 48 46.9 -0.8**
TRKS				⇑*i*S		**Sb**	**17 49 02.5 -0.4**
SFK	**Sufi-Kurgan**	**1.30**	**148**	⇑*i*P		**Pn**	**17 48 49.2 -0.2**
SFK				⇑*e*S		**Sb**	**17 49 06.3 -0.1**
MNAS	**Manas**	**1.37**	**357**	⇑*i*P		**Pg**	**17 48 51.7 -0.1**
MNAS				⇑*i*S		**Sg**	**17 49 11.2 +1.6**
ARLS	**Aral**	**1.49**	**59**	⇑*i*P		**Pg**	**17 48 53.8 -0.2**
ARLS				⇑*i*S		**Sg**	**17 49 14.3 +1.0**
MRKS	**Merke**	**1.69**	**16**	P		**Pg**	**17 48 58.1 +0.3**
	5.7nm,0.4s						
MRKS				S		**Sg**	**17 49 21.1 +1.3**
	9.4nm,0.3s						
DRK	**Karamyk**	**1.75**	**201**	⇑*i*P		**Pn**	**17 48 56.8 +1.2**
DRK				⇑*e*S		**Sn**	**17 49 19.5 +1.6**
UCH	**Uchtor**	**1.81**	**52**	⇑*i*P		**Pg**	**17 48 59.6 -0.5**
UCH				⇑*i*S		**Sg**	**17 49 24.5 +0.9**
AAK	**Ala-Archa**	**2.07**	**42**	⇓Pn		**Pg**	**17 49 05.2 +0.1**
	0.7nm,0.7s						
AAK				⇓Sn		**Sg**	**17 49 32.8 +0.7**
	1.6nm,0.5s						
IUG	**Iuzhnay**	**2.19**	**299**	Pg		**Pg**	**17 49 07.0 -0.4**
	3.3nm,0.3s						
IUG				Lg		Lg	17 49 36.0
	14nm,0.3s						
IUG	**Iuzhnay**	**2.19**	**299**	*e*P		**Pg**	**17 49 07.0 -0.4**
	3.3nm,0.3s						
IUG				*e*S		**Sg**	**17 49 36.0 +0.2**
	14nm,0.3s						
KK31	**Karatay Array**	**2.52**	**323**	⇓Pg		**Pg**	**17 49 12.2 -1.6**
	0.3nm,0.3s,baz=132,slow=17						
KK31				⇑Lg		Lg	17 49 41.1
	1.9nm,0.5s,baz=125,slow=28						
BRLS	**Borolday**	**2.81**	**314**	Pg		**Pb**	**17 49 16.7 +1.3**
	0.5nm,0.2s						
BRLS				Lg		Lg	17 49 52.8
	2.3nm,0.2s						
BRLS	**Borolday**	**2.81**	**314**	*e*P		**Pb**	**17 49 16.7 +1.3**
	0.5nm,0.2s						
BRLS				*e*S		**Sg**	**17 49 52.8 -2.9**
	2.3nm,0.2s						
KST	**Kastek**	**3.15**	**51**	Pg		**Pg**	**17 49 23.8 -2.0**
KST				Lg		Lg	17 50 04.7
KST	**Kastek**	**3.15**	**51**	*e*P		**Pg**	**17 49 23.8 -2.0**
	0.5nm,0.1s						
KST				*e*S		**Sg**	**17 50 04.7 -2.0**
	4.8nm,0.4s						

*IDC **07** 17:48:35.9±1.9,5°.75S×146°.54E,h43km±17km, mb3.8/12, mbtmp4.1/17,ML4.3/3,MS3.3/13,Error ellipse: s-maj=20.5km s-min=10.7km az=90.0*
*NEIC **07** 17:48:38.0±1.6,5°.83S±0°.06×146°.42E±0°.07,h59km±6km, mb4.9/52,Error ellipse: s-maj=10.4km s-min=8.3km az=84.0*
*DJA **07** 17:48:43.7±0.8,6°S±5°×14°6E±°,h101km±9km, M4.7/12, mb4.6/12,mB5.0/6,MLv5.1/4,Mw(mB)4.3/6*
ISC 07 17:48:37.0±0.4,**5°.84S**±0°.04×**146°.42E**±0°.05,**h52**km,**n141,** σ1**°55**/140,**mb4.7**/36,**MS3.2**/8,**1C,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
PMG	**Port Moresby**	**3.61**	**168**	P		**Pn**	**17 49 31.1 +0.7**
	122nm,0.4s,baz=17,slow=14,SNR=263						
PMG				S		**Sn**	**17 50 12.2 +0.3**
	218nm,0.7s,baz=311,slow=19,SNR=6.4						
PMG				LR		LR	17 51 19.8
	comp=Z,846nm,18.2s,baz=350,slow=44						
PMG	**Port Moresby**	**3.61**	**168**	P		**Pn**	**17 49 31.3 +0.8**
PMG	**Port Moresby**	**3.61**	**168**	S		**Sn**	**17 50 12.8 +0.9**
PMG	**Port Moresby**	**3.61**	**168**	P		**Pn**	**17 49 31.1 +0.7**
PMG	**Port Moresby**	**3.61**	**168**	S		**Sn**	**17 50 12.9 +1.0**
PMG	**Port Moresby**	**3.61**	**168**	P		**Pn**	**17 49 31.2 +0.7**
PMG	**Port Moresby**	**3.61**	**168**	P		**Pn**	**17 49 30.7 +0.2**
MANU	**Manus Island**	**3.89**	**14**			**Pn**	**17 49 34.4 +0.1**
RABL	**Rabaul**	**5.95**	**74**			**Pn**	**17 50 01.9 -0.7**
JAY	**Jayapura**	**6.59**	**300**	P		**Pn**	**17 50 11.1 -0.3**
	16nm,0.8s,baz=65,slow=5.1,SNR=2.2						
JAY				LR		LR	17 53 08.8
	comp=Z,309nm,20.7s,baz=182,slow=41						
GENI	**Genyem**	**7.02**	**297**	P		Pn	17 50 25.8 +8.5
	0.5nm50nm,0.9s						
COEN	**Coen**	**8.67**	**201**			**Pn**	**17 50 41.4 +1.5**
COEN	**Coen**	**8.67**	**201**	P		**Pn**	**17 50 41.6 +1.7**
COEN	**Coen**	**8.67**	**201**	P		**Pn**	**17 50 41.4 +1.5**
MTSU	**Mount Surprise**	**12.39**	**189**	P		**Pn**	**17 51 31.8 +1.1**
HNR	**Honiara**	**13.87**	**106**	Pn		**Pn**	**17 51 49.5 -1.5**
CTA	**Charters Tower**	**14.16**	**181**	P		**Pn**	**17 51 56.9 +2.1**
	1.4nm,0.3s,baz=354,slow=14,SNR=26						
CTA				S		**Sn**	**17 54 28.6 -2.0**
	1.5nm,0.5s,baz=352,slow=7.4,SNR=2.1						
CTA				LR		LR	17 57 18.4
	comp=Z,214nm,20.0s,baz=34,slow=37						
	5.1nm,0.4s						
CTA	**Charters Tower**	**14.16**	**181**	P		**Pn**	**17 51 57.4 +2.6**
CTA	**Charters Tower**	**14.16**	**181**	P		**Pn**	**17 51 57.0 +2.1**
CTAO	**Charters Tower**	**14.16**	**181**			**Pn**	**17 51 57.0 +2.1**
CTAO	**Charters Tower**	**14.16**	**181**	P		**Pn**	**17 51 57.4 +2.6**
CTAO	**Charters Tower**	**14.16**	**181**	P		**Pn**	**17 51 57.0 +2.1**
FAKI	**Fak Fak**	**14.43**	**281**			**P**	**17 52 03.8 -0.1**
FAKI	**Fak Fak**	**14.43**	**281**	P		**P**	**17 52 03.8 -0.1**
NGOA	**Tingoa Renbel**	**14.62**	**114**	P		**P**	**17 52 04.9 -1.2**
SIJI	**Sorong**	**15.91**	**288**	P		**Pn**	**17 52 18.9 +1.3**
	1.7nm,0.3s,baz=68,slow=9.6,SNR=12						
SIJI				LR		LR	17 59 26.6
	comp=Z,119nm,21.9s,baz=164,slow=41						
	38nm,0.8s						
SIJI	**Sorong**	**15.91**	**288**	P		**P**	**17 52 20.0 -0.5**
	369nm48nm,1.0s						
SWI	**Sorong**	**15.92**	**288**	P		**P**	**17 52 21.9 +1.4**
QIS	**Mount Isa**	**16.05**	**204**	P		**P**	**17 52 23.2 +1.2**
QIS	**Mount Isa**	**16.05**	**204**	P		**P**	**17 52 21.4 -0.6**
MTN	**Manton Dam**	**16.60**	**244**			**Pn**	**17 52 25.9 -0.4**
WRAB	**Tennant Creek**	**18.27**	**219**	P		**P**	**17 52 45.8 -0.7**
WRAB	**Tennant Creek**	**18.27**	**219**	P		**Pn**	**17 52 47.4 +0.5**
WRA	**Warramunga Arr**	**18.29**	**219**	P		**Pn**	**17 52 47.8 +0.7**
	0.7nm,0.3s,baz=33,slow=11,SNR=24						
WRA				S		**Sn**	**17 56 04.1 -6.5**
	0.8nm,1.1s,baz=38,slow=21,SNR=11						
WRA				PcP		**PcP**	**17 57 17.9 +0.7**
	2.8nm,0.6s,baz=26,slow=1.7,SNR=14						
	3.4nm,0.6s						
WRA	**Warramunga Arr**	**18.29**	**219**	P		**P**	**17 52 43.6 -3.1**
WRA						**PcP**	**17 57 17.0 -0.2**
AAI	**Ambon**	**18.29**	**276**	P		**Pn**	**17 52 48.3 +1.2**
GUMO	**Guam**	**19.37**	**355**	LR		LR	17 59 46.0
	comp=Z,78nm,18.4s,baz=166,slow=35						
KNRA	**Kununurra**	**19.89**	**239**	P		**P**	**17 53 04.0 -0.3**
EIDS	**Eidsvold**	**19.92**	**168**	P		**P**	**17 53 04.0 -0.6**
SANI	**Sanana**	**20.73**	**280**	P		Pn	17 53 18.7 +2.5
SANI	**Sanana**	**20.73**	**280**	P		**P**	**17 53 10.5 -2.9**
AS31	**Alice Springs**	**21.43**	**213**	P		**P**	**17 53 22.0 +1.1**
ASAR	**Alice Springs**	**21.43**	**213**	P		**P**	**17 53 22.3 +1.4**
	2.0nm,0.8s,baz=51,slow=8.8,SNR=33						
ASAR				S		**S**	**17 57 19.4 +3.4**
	2.5nm,0.8s,baz=32,slow=22,SNR=7.6						
ASAR				PcP		**PcP**	**17 57 23.6 +0.8**
	0.6nm,0.4s,baz=44,slow=1.6,SNR=4.2						
ASAR				LR		LR	18 02 45.6
	comp=Z,147nm,18.6s,baz=44,slow=39						
	2.0nm,0.8s						
ASAR	**Alice Springs**	**21.43**	**213**	P		**P**	**17 53 21.2 +0.4**
ASAR						**S**	**17 57 12.9 -3.0**
SOEI	**Soe**	**22.29**	**259**	P		**P**	**17 53 30.6 +0.4**
SOEI						IAmb	IAmb 17 53 43.0
	comp=Z,34nm,1.2s						
SOEI	**Soe**	**22.29**	**259**	P		**P**	**17 53 33.8 +3.5**
INKA	**Innaminka**	**22.43**	**193**	P		**P**	**17 53 31.6 0.0**
MNI	**Manado**	**22.73**	**288**	P		**P**	**17 53 37.0 +2.1**
SGSI	**Sangihe**	**22.91**	**294**	P		P	17 53 46.3 +10
BATI	**Baumata**	**22.94**	**258**	LR		LR	18 05 07.0
	comp=Z,115nm,19.7s,baz=82,slow=43						
FITZ	**Fitzroy Crossi**	**23.66**	**237**	LR		LR	18 03 10.8
	comp=Z,85nm,18.4s,baz=53,slow=37						
LUWI	**Luwuk**	**24.08**	**281**	P		**P**	**17 53 48.8 +1.0**
LUWI						IAmb	IAmb 17 54 16.4
	comp=Z,71nm,0.9s						
MMRI	**Maumere**	**24.15**	**262**	P		**P**	**17 53 48.7 +0.2**
ARMA	**Armidale**	**24.93**	**169**	P		**P**	**17 53 55.9 +0.4**
ARMA						IAmb	IAmb 17 54 02.1
	comp=Z,46nm,1.6s						
DZM	**Mont Dzumac**	**25.20**	**132**	P		**P**	**17 53 58.0 0.0**
DZM						IAmb	IAmb 17 54 09.9
	comp=Z,35nm,1.4s						
DZM	**Mont Dzumac**	**25.20**	**132**	P		**P**	**17 53 58.4 +0.4**
STKA	**Stephens Creek**	**26.29**	**189**	P		**P**	**17 54 09.5 +1.8**
	comp=Z,2.1nm,0.5s,baz=4.6,slow=9.9,SNR=4.0						
STKA				PP		**PnPn**	**17 54 48.8 -0.4**
	comp=Z,3.4nm,0.7s,baz=4.3,slow=15,SNR=3.1						
STKA				LR		LR	18 06 05.7
	comp=Z,87nm,18.1s,baz=24,slow=40						
	comp=Z,2.1nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
STKA	**Stephens Creek**	**26.29**	**189**	P		**P**	**17 54 07.7 0.0**
STKA				IAmb		IAmb	17 54 43.6
	comp=Z,38nm,1.2s						
TOLI2	**Tolitoli**	**26.52**	**284**	P		**P**	**17 54 09.3 -0.7**
TOLI2	**Tolitoli**	**26.52**	**284**	P		**P**	**17 54 11.8 +1.8**
HTT	**Hallett**	**28.32**	**193**	P		**P**	**17 54 27.5 +1.5**
BBOO	**Buckleboo**	**28.52**	**198**	P		**P**	**17 54 27.6 0.0**
BBOO				IAmb		IAmb	17 55 32.1
	comp=Z,68nm,2.0s						
MBWA	**Marble Bar**	**30.01**	**237**	P		**P**	**17 54 40.7 -0.3**
PSA00	**Pilbara Seismi**	**30.10**	**236**	P		**P**	**17 54 40.9 -0.9**
PSA00				IAmb		IAmb	17 55 10.4
	comp=Z,81nm,1.9s						
PSA00	**Pilbara Seismi**	**30.10**	**236**	P		**P**	**17 54 40.8 -1.0**
PSA00				IAmb		IAmb	17 55 46.9
	comp=Z,194nm,1.8s						
MGBR	**Mount Gambier**	**32.18**	**189**	P		**P**	**17 55 00.2 +0.3**
JCJ	**Chichijima**	**33.00**	**353**	LR		LR	18 05 58.3
	comp=Z,36nm,20.4s,baz=130,slow=32						
MEEK	**Meekatharra**	**33.62**	**229**	P		**P**	**17 55 14.5 +1.8**
LKBA	**Tubou, Lakemba**	**36.08**	**113**	P		**P**	**17 55 37.6 +3.6**
MORW	**Morawa**	**36.85**	**228**	P		**P**	**17 55 39.5 -1.0**
MORW	**Morawa**	**36.85**	**228**	P		**P**	**17 55 42.8 +2.4**
KLBR	**Kellerberrin**	**37.09**	**223**	P		**P**	**17 55 44.5 +2.0**
BLDU	**Ballidu**	**37.23**	**225**	P		**P**	**17 55 45.5 +1.8**
NACB	**Ninganchiao**	**38.42**	**322**	P		**P**	**17 55 53.0 -0.7**
BBJI	**Bungbulang**	**38.53**	**265**	P		**P**	**17 55 53.4 -1.6**
BBJI				IAmb		IAmb	17 56 39.1
	comp=Z,23nm,1.4s						
SSLB	**Suanglung**	**38.53**	**321**	P		**P**	**17 55 53.4 -1.4**
KNMB	**Chin-men Tao**	**40.66**	**319**	P		**P**	**17 56 11.1 -1.3**
JMN	**Monobe**	**41.11**	**344**	P		**P**	**17 56 14.4 -1.6**
JMN				IAmb		IAmb	17 56 26.6
	comp=Z,62nm,1.6s						
JNU	**Nakatsue**	**41.47**	**340**	LR		LR	18 12 40.9
	comp=Z,24nm,19.3s,baz=132,slow=35						
MRNZ	**Matariki Terra**	**42.49**	**150**	P		**P**	**17 56 26.4 -0.7**
URZ	**Urewera**	**42.62**	**144**	P		**P**	**17 56 29.2 +1.0**
RTZ	**Ruatahuna**	**42.78**	**144**	P		**P**	**17 56 28.4 -1.3**
RTZ				IAmb		IAmb	17 56 37.1
	comp=Z,36nm,1.3s						
THZ	**Tophouse**	**42.84**	**151**	P		**P**	**17 56 29.4 -0.7**
THZ				IAmb		IAmb	17 57 10.9
	comp=Z,20nm,1.1s						
BKZ	**Black Stump Fm**	**42.87**	**145**	P		**P**	**17 56 30.6 +0.2**
BKZ				IAmb		IAmb	17 57 03.3
	comp=Z,55nm,1.8s						
TUWZ	**Tuamarina**	**43.10**	**149**	P		**P**	**17 56 32.6 +0.5**
TCW	**Tory Channel**	**43.11**	**149**	P		**P**	**17 56 32.4 +0.2**
MYKOM	**Kota Tinggi**	**43.18**	**279**	P		**P**	**17 56 33.7 +0.5**
MYKOM				IAmb		IAmb	17 56 49.9
	comp=Z,44nm,1.4s						
LTZ	**Lake Taylor**	**43.31**	**152**	P		**P**	**17 56 33.5 -0.4**
KHZ	**Kahutara**	**43.64**	**151**	P		**P**	**17 56 35.4 -1.0**
MLZ	**Mavora Lakes**	**43.66**	**158**	P		**P**	**17 56 36.8 +0.2**
MSWZ	**Moikau Station**	**43.76**	**148**	P		**P**	**17 56 37.3 -0.2**
BFZ	**Birch Farm**	**43.77**	**147**	P		**P**	**17 56 37.4 -0.2**
BFZ	**Birch Farm**	**43.77**	**147**	P		**P**	**17 56 39.4 +1.8**
AMCZ	**Amberley**	**43.80**	**152**	P		**P**	**17 56 37.1 -0.5**
GVZ	**Greta Valley S**	**43.81**	**152**	P		**P**	**17 56 37.6 -0.2**
KSRS	**Korea Array**	**46.40**	**340**	P		**P**	**17 56 57.8 -0.5**
	comp=Z,1.0nm,0.5s,baz=157,slow=9.6,SNR=4.9						
KSRS				LR		LR	18 14 10.1
	comp=Z,30nm,20.7s,baz=95,slow=33						
	comp=Z,1.0nm,0.5s						
KULM	**Kulim**	**47.02**	**283**	P		**P**	**17 57 02.5 -1.2**
KULM				IAmb		IAmb	17 57 05.5
	comp=Z,11nm,0.7s						
KULM	**Kulim**	**47.02**	**283**	P		**P**	**17 57 07.7 +4.1**
CM31	**Chiang Mai Arr**	**52.67**	**298**	P		**P**	**17 57 46.7 +0.2**
CM31				IAmb		IAmb	17 58 04.8
	comp=Z,4.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**52.67**	**298**	P		**P**	**17 57 47.2 +0.7**
	comp=Z,1.4nm,0.6s,baz=122,slow=6.1,SNR=20						
	comp=Z,1.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**52.67**	**298**	P		**P**	**17 57 46.6 +0.1**
CN2	**Changchun**	**52.92**	**341**	P		**P**	**17 57 52.2 +4.3**
BNX	**BinXian**	**54.09**	**344**	⇑P		**P**	**17 57 58.7 +2.3**
BNX				pmax		pmax	
	comp=Z,5.0nm,1.5s						
KLR	**Kul'dur**	**56.32**	**348**	LR		LR	18 21 21.7
	comp=Z,7.6nm,18.8s,baz=78,slow=35						
PETK	**Petropavlovsk-**	**59.50**	**8**	P		**P**	**17 58 35.4 +0.7**
	comp=Z,3.1nm,0.8s,baz=185,slow=7.1,SNR=2.2						
	comp=Z,3.1nm,0.8s						
PETK	**Petropavlovsk-**	**59.50**	**8**	P		**P**	**17 58 34.5 -0.2**
GTA2	**Gaotai**	**62.33**	**321**	*e*P		**P**	**17 58 56.1 +1.7**
GTA2				sP		pP	17 59 09.8 +0.6
GTA2				pmax		pmax	
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**63.99**	**331**	P		**P**	**17 59 06.2 +1.0**
	comp=Z,0.9nm,0.8s,baz=133,slow=4.3,SNR=5.8						
	comp=Z,0.9nm,0.8s						
SONM	**Songino Array**	**63.99**	**331**	P		**P**	**17 59 05.4 +0.2**
VNDA	**Vanda**	**72.10**	**177**	P		**P**	**17 59 53.6 -1.8**
MKAR	**Makanchi Array**	**77.01**	**321**	P		**P**	**18 00 24.5 0.0**
	comp=Z,0.6nm,0.7s,baz=101,slow=7.4,SNR=8.4						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**77.01**	**321**	P		**P**	**18 00 23.8 -0.6**
O15K	**Ungalikthiuk R**	**77.52**	**25**	P		**P**	**18 00 25.8 -1.2**
L14K	**Kuka Creek**	**77.65**	**23**	P		**P**	**18 00 27.8 +0.2**
L14K				IAmb		IAmb	18 01 54.4
	comp=Z,19nm,1.6s						
O16K	**Kokwok River B**	**78.48**	**25**	P		**P**	**18 00 32.4 +0.2**
O16K				IAmb		IAmb	18 03 27.5
	comp=Z,42nm,2.0s						
ZAA0	**Zalesovo Array**	**78.57**	**328**	P		**P**	**18 00 31.3 -1.6**
ZAA0				IAmb		IAmb	18 01 00.2
	comp=Z,13nm,2.0s						
ZALV	**Zalesovo Beam**	**78.57**	**328**	P		**P**	**18 00 31.4 -1.5**
	comp=Z,0.9nm,0.6s,baz=118,slow=5.4,SNR=5.3						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**78.57**	**328**	P		**P**	**18 00 30.6 -2.3**
J16K	**Anvik River**	**79.60**	**22**	P		**P**	**18 00 39.2 +0.9**
J16K				IAmb		IAmb	18 02 10.9
	comp=Z,28nm,1.9s						
BOOM	**Boomskoye usch**	**79.76**	**315**	P		**P**	**18 00 39.7 -0.2**
KURK	**Kurchatov**	**80.74**	**323**	P		**P**	**18 00 42.9 -1.8**

σ1$52/59, **19C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.76**	**316**	⇑*i*P	**Pn**	**18 03 56.8**	**-1.7**
JNKS				⇑*i*S	**Sn**	**18 04 18.4**	**-3.2**
NRN	**Naryn**	**1.90**	**331**	⇑*i*P	**Pn**	**18 03 59.0**	**-1.3**
NRN				⇑*i*S	**Sn**	**18 04 22.3**	**-2.7**
TARG	**Taragay, Kyrgy**	**1.99**	**12**	⇓*i*P	**Pn**	**18 04 01.1**	**-0.6**
TARG				⇓*i*S	**Sn**	**18 04 26.0**	**-1.3**
KDJ	**Kajisay**	**2.34**	**359**	⇑*i*P	**Pn**	**18 04 06.2**	**-0.1**
KDJ				⇑*i*S	**Sn**	**18 04 34.9**	**-0.8**
ULHL	**Ulahol**	**2.57**	**343**	⇑*i*P	**Pn**	**18 04 09.3**	**-0.2**
ULHL				⇑*i*S	**Sn**	**18 04 40.2**	**-1.2**
SALK	**Salom-Alik**	**2.83**	**294**	⇑*i*P	**Pn**	**18 04 13.9**	**+0.8**
SALK				⇑*i*S	**Sn**	**18 04 48.2**	**+0.3**
BOOM	**Boomskoye usch**	**2.87**	**340**	⇑*i*P	**Pn**	**18 04 13.5**	**-0.1**
BOOM				⇑*i*S	**Sn**	**18 04 47.3**	**-1.6**
ARLS	**Aral**	**3.03**	**314**	⇑*e*P	**Pn**	**18 04 16.4**	**+0.6**
ARLS				⇑*e*S	**Sn**	**18 04 51.1**	**-1.7**
TNSS	**Tian-Shan** 1.6nm,0.2s	**3.25**	**356**	Pg	**Pb**	**18 04 25.9**	**+0.6**
TNSS				Lg	Lg	18 05 07.6	
	3.5nm,0.5s						
TNSS	**Tian-Shan** 1.6nm,0.2s	**3.25**	**356**	*e*P	**Pb**	**18 04 25.6**	**+0.2**
TNSS				*e*S	**Sb**	**18 05 07.4**	**+1.8**
	3.5nm,0.5s						
IZV	**Izvestkoviy** 8.4nm,0.5s	**3.28**	**352**	Pg	**Pb**	**18 04 25.4**	**-0.3**
IZV				Lg	Lg	18 05 07.2	
	18nm,0.5s						
IZV	**Izvestkoviy** 8.4nm,0.5s	**3.28**	**352**	*e*P	**Pb**	**18 04 24.9**	**-0.8**
IZV				*e*S	**Sb**	**18 05 06.2**	**+0.2**
	18nm,0.5s						
MDOK	**Medeo** 8.7nm,0.4s	**3.38**	**358**	Pg	**Pb**	**18 04 27.4**	**+0.1**
MDOK				Lg	Lg	18 05 10.2	
	14nm,0.5s						
SATY	**Saty** 12nm,0.7s	**3.38**	**15**	Pg	**Pb**	**18 04 27.0**	**-0.4**
SATY				Lg	Lg	18 05 10.7	
	23nm,0.5s						
KST	**Kastek** 4.5nm,0.6s	**3.39**	**344**	Pg	**Pb**	**18 04 28.3**	**+0.8**
KST				Lg	Lg	18 05 11.8	
	11nm,0.3s						
KST	**Kastek** 4.5nm,0.6s	**3.39**	**344**	*e*P	**Pb**	**18 04 28.3**	**+0.8**
KST				*e*S	**Sb**	**18 05 11.8**	**+2.6**
	11nm,0.3s						
MTBS	**Maitube** 3.6nm,0.5s	**3.39**	**350**	Pg	**Pb**	**18 04 27.6**	**+0.1**
MTBS				Lg	Lg	18 05 10.6	
	12nm,0.3s						
MTBS	**Maitube** 3.6nm,0.5s	**3.39**	**350**	*e*P	**Pb**	**18 04 27.6**	**+0.1**
MTBS				*e*S	**Sb**	**18 05 10.9**	**+1.6**
	12nm,0.3s						
KOTS	**Kotyrbulak** 8.0nm,0.4s	**3.44**	**358**	Pg	**Pb**	**18 04 28.9**	**+0.4**
KOTS				Lg	Lg	18 05 12.8	
	39nm,0.5s						
KOTS	**Kotyrbulak** 8.0nm,0.4s	**3.44**	**358**	*e*P	**Pb**	**18 04 28.7**	**+0.2**
KOTS				*e*S	**Sb**	**18 05 12.8**	**+2.0**
	39nm,0.5s						
AAK	**Ala-Archa** 7.4nm,0.8s	**3.52**	**325**	⇑Pg	**Pb**	**18 04 29.1**	**-0.7**
AAK				⇑Lg	Lg	18 05 14.2	
	6.4nm,0.9s						
UZB	**Uzynbulak** 2.4nm,0.2s	**3.61**	**21**	Pg	**Pb**	**18 04 30.4**	**-0.9**
UZB				Lg	Lg	18 05 15.2	
	11nm,0.5s						
UZB	**Uzynbulak** 2.4nm,0.2s	**3.61**	**21**	*e*P	**Pb**	**18 04 30.4**	**-0.9**
UZB				*e*S	**Sb**	**18 05 15.2**	**-0.4**
	11nm,0.5s						
DGS	**Degeres** 7.9nm,0.6s	**3.62**	**343**	Pg	**Pb**	**18 04 30.9**	**-0.6**
DGS				Lg	Lg	18 05 17.0	
	7.3nm,0.5s						
DGS	**Degeres** 7.9nm,0.6s	**3.62**	**343**	*e*P	**Pb**	**18 04 30.9**	**-0.6**
DGS				*e*S	**Sb**	**18 05 16.3**	**+0.4**
	7.3nm,0.5s						
SHLS	**Shalkode** 4.1nm,0.4s	**3.76**	**26**	Pg	**Pg**	**18 04 37.7**	**-0.9**
SHLS				Lg	Lg	18 05 27.9	
	14nm,0.6s						
SHLS	**Shalkode** 4.1nm,0.4s	**3.76**	**26**	*e*P	**Pg**	**18 04 37.2**	**-1.4**
SHLS				*e*S	**Sg**	**18 05 27.5**	**+0.2**
	14nm,0.6s						
KURS	**Kuram** 8.3nm,0.6s	**3.76**	**10**	Pg	**Pb**	**18 04 33.2**	**-0.6**
KURS				Lg	Lg	18 05 20.3	
	7.9nm,0.7s						
KPKS	**Kokpek** 0.5nm,0.3s	**3.83**	**16**	Pg	**Pb**	**18 04 35.1**	**+0.1**
KPKS				Lg	Lg	18 05 23.7	
	7.8nm,0.5s						
KPKS	**Kokpek** 0.5nm,0.3s	**3.83**	**16**	*e*P	**Pb**	**18 04 35.1**	**+0.1**
KPKS				*e*S	**Sb**	**18 05 23.7**	**+1.8**
	7.8nm,0.5s						
PDGK	**Podgornoye** 2.5nm,0.4s	**3.92**	**25**	⇑Pg	**Pb**	**18 04 35.3**	**-1.2**
PDGK				⇑Lg	Lg	18 05 27.2	
	18nm,1.0s						
KRBS	**Karabastau** 3.3nm,0.5s	**4.08**	**344**	Pg	**Pb**	**18 04 39.8**	**+0.7**
KRBS				Lg	Lg	18 05 31.7	
	8.0nm,0.4s						
KRBS	**Karabastau** 3.3nm,0.5s	**4.08**	**344**	*e*P	**Pb**	**18 04 39.8**	**+0.7**
KRBS				*e*S	**Sb**	**18 05 31.7**	**+2.8**
	8.0nm,0.4s						
ARXS	**Arharly** 4.7nm,0.6s	**4.44**	**5**	Pg	**Pb**	**18 04 46.3**	**+0.9**
ARXS				Lg	Lg	18 05 43.4	
	11nm,0.5s						
ARXS	**Arharly** 4.7nm,0.6s	**4.44**	**5**	*e*P	**Pb**	**18 04 46.5**	**+1.0**
ARXS				*e*S	**Sb**	**18 05 43.3**	**+3.9**
	11nm,0.5s						
KNOS	**Konyrlen** 2.5nm,0.3s	**4.79**	**17**	Pg	**Pb**	**18 04 54.8**	**+3.4**
KNOS				Lg	Lg	18 05 57.4	
	5.0nm,0.5s						
DJR	**Jarkent** 1.1nm,0.3s	**4.92**	**22**	Pg	**Pb**	**18 04 54.9**	**+1.3**
DJR				Lg	Lg	18 05 57.9	
	3.4nm,0.5s						
DJR	**Jarkent** 1.1nm,0.3s	**4.92**	**22**	*e*P	**Pb**	**18 04 54.9**	**+1.3**
DJR				*e*S	**Sb**	**18 05 57.9**	**+4.6**
	3.4nm,0.5s						
KK31	**Karatay Array** 1.7nm,0.8s,baz=127,slow=15	**6.04**	**305**	⇑Pg	**Pb**	**18 05 14.3**	**+1.6**
KK31				⇓Lg	Lg	18 06 34.6	
	1.0nm,0.6s,baz=125,slow=27						

IDC 07 18:27:34.8±2.1, 7.81S×127.27E, h0km, mb3.2/1, mbtmp3.3/3, ML3.5/2, Error ellipse: s-maj=212.4km s-min=32.1km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=325,slow=13,SNR=20	**13.87**	**151**	Pn	Pn	18 30 52.0	-0.8
WRA				Sn	Sn	18 33 15.2	-12
	0.7nm,0.3s,baz=338,slow=22,SNR=14 0.5nm,0.5s						
ASAR	**Alice Springs** 0.2nm,0.3s,baz=336,slow=12,SNR=14	**17.00**	**159**	P	Pn	18 31 34.9	+0.7
ASAR				S	Sn	18 34 35.5	-8.5
	0.4nm,0.4s,baz=315,slow=19,SNR=7.3 0.5nm,0.6s						
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=125,slow=6.9,SNR=5.1 0.1nm,0.3s	**67.45**	**328**	P	P	18 38 32.4	0.0

*IDC **07** 18:30:13.2±0.8, 51.77N×171.23W, h0km, mb3.9/23,*

mbtmp3.9/25, ML3.5/2, MS3.2/12, Error ellipse: s-maj=22.7km s-min=13.4km az=178.0
*NEIC **07** 18:30:15.1±2.6, 51.60N±0.06×171.20W±0.05, h17km±3km, mb4.1/82, ML4.1/20, ML3.7(AEIC), Error ellipse: s-maj=9.1km s-min=4.0km az=162.0*
*AEIC **07** 18:30:16.0±2.6, 51.63N±0.06×171.22W±0.05, h20km±4km, Error ellipse: s-maj=8.5km s-min=4.4km az=171.0*
ISC 07 18:30:14.3±2.3, 51.62N±0.08×171.22W±0.03, h13km±13km, n178, σ1$21/161, mb4.0/45, MS3.3/10, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**1.45**	**34**		**Sb**	**18 30 59.6**	**0.0**
CLES					**Sg**	**18 31 00.5**	**-0.6**
CLES	**Cleveland East**	**1.45**	**34**		**Pn**	**18 30 40.5**	**+0.2**
CLES				IAML		18 31 04.1	
	comp=E,3μm,0.3s						
CLES				IAML		18 31 06.1	
	comp=N,4μm,0.6s						
CLCO	**Concord Point,**	**1.49**	**38**		**Pn**	**18 30 41.4**	**+0.7**
CLCO					**Pb**	**18 30 42.1**	**+0.3**
CLCO					**Sg**	**18 31 03.5**	**+1.3**
KOSE	**Korovin Southe**	**1.89**	**294**		**Pn**	**18 30 47.4**	**+1.1**
KOSE					**Sb**	**18 31 11.9**	**-0.3**
KOSE					**Sn**	**18 31 12.1**	**+2.0**
KOFP	**Korovin Flat P**	**1.90**	**291**		**Pn**	**18 30 47.4**	**+1.0**
KOFP					**Sb**	**18 31 11.5**	**-0.8**
ATKA	**Atka Island**	**1.93**	**289**		**Pn**	**18 30 47.4**	**+0.6**
ATKA				Sn	**Sn**	**18 31 10.8**	**-0.1**
KONE	**Korovin Northe**	**1.95**	**294**		**Sn**	**18 31 11.2**	**-0.2**
KOKV	**Korovin Volcan**	**1.96**	**293**		**Pn**	**18 30 48.9**	**+1.5**
KOKV					**Sn**	**18 31 13.1**	**+1.3**
KOKL	**Mount Kliuchef**	**1.97**	**292**		**Pn**	**18 30 48.2**	**+0.8**
KOKL					**Pb**	**18 30 49.4**	**-0.7**
KOKL					**Sb**	**18 31 14.6**	**+0.1**
NIKH	**Nikolski High**	**1.99**	**46**		**Pn**	**18 30 48.4**	**+0.8**
NIKH				IAML		18 31 29.9	
	comp=N,1μm,0.7s						
NIKH	**Nikolski High**	**1.99**	**46**		**Sn**	**18 31 11.9**	**-0.4**
KONW	**Korovin Northw**	**2.00**	**294**		**Pn**	**18 30 49.2**	**+1.4**
KOWE	**Korovin West**	**2.02**	**293**		**Pb**	**18 30 50.2**	**-0.6**
KOWE					**Sb**	**18 31 15.9**	**+0.1**
OKTU	**Okmok Mt. Tuli**	**2.63**	**47**		**Pn**	**18 30 58.0**	**+1.6**
GSIG	**Igitkin Island**	**2.94**	**279**		**Pn**	**18 31 02.1**	**+1.4**
GSIG					**Sn**	**18 31 36.1**	**+0.2**
GSIG					**Sb**	**18 31 38.5**	**-3.9**
GSMY	**Great Sitkin M**	**3.03**	**280**		**Pn**	**18 31 04.0**	**+2.0**
GSMY					**Sn**	**18 31 39.8**	**+1.8**
GSTR	**Great Sitkin T**	**3.04**	**281**		**Pn**	**18 31 01.2**	**-0.8**
GSTR	**Great Sitkin T**	**3.04**	**281**		**Sb**	**18 31 41.9**	**-3.2**
GSTD	**Great Sitkin T**	**3.08**	**280**		**Sn**	**18 31 41.3**	**+1.8**
ETKA	**Kagalaska Isla**	**3.23**	**276**		**Pn**	**18 31 05.9**	**+1.2**
ETKA					Pb	18 31 06.3	-5.2
ADAG	**Mount Adagdak**	**3.36**	**278**		**Pn**	**18 31 08.8**	**+2.3**
ADK	**Adak**	**3.40**	**277**		**Pn**	**18 31 08.4**	**+1.3**
ADK				IAML		18 32 07.4	
	comp=N,532nm,1.2s						
ADK				IAML		18 32 08.8	
	comp=N,487nm,0.8s						
ADK	**Adak**	**3.40**	**277**		**Sn**	**18 31 47.4**	**+0.1**
MNAT	**Makushin Natee**	**3.57**	**49**		**Pn**	**18 31 10.7**	**+1.4**
UNV	**Unalaska Valle**	**3.63**	**50**		**Pn**	**18 31 10.3**	**+0.2**
KIWB	**Kanaga Island**	**3.69**	**276**		**Pn**	**18 31 12.7**	**+1.6**
KIWB				IAML		18 32 15.2	
	comp=N,371nm,1.1s						
KIKV	**Kanaga Island**	**3.71**	**276**		**Pn**	**18 31 13.5**	**+2.3**
KIMD	**Kanaga Island**	**3.74**	**274**		**Pn**	**18 31 14.0**	**+2.3**
ZRO	**Akutan Zero**	**4.03**	**50**		**Pn**	**18 31 17.6**	**+1.9**
LVA	**Lava Point**	**4.04**	**49**		**Pn**	**18 31 16.0**	**+0.2**
LVA				IAML		18 32 22.3	
	comp=E,252nm,1.2s						
LVA				IAML		18 32 30.2	
	comp=N,383nm,0.9s						
AKUT	**Akutan**	**4.15**	**51**	Pn	**Pn**	**18 31 18.6**	**+1.3**
AKUT				IAML		18 32 38.3	
	comp=E,137nm,2.3s						
AKUT				IAML		18 33 23.4	
	comp=N,151nm,3.1s						
GAKI	**Gareloi-Kavalg**	**4.73**	**272**		**Pn**	**18 31 27.7**	**+2.4**
P08K	**Saint George I**	**5.09**	**11**		**Pn**	**18 31 29.4**	**-0.8**
ISNN	**Isanotski Nort**	**5.51**	**51**		**Pn**	**18 31 38.5**	**+2.6**
SPIA	**Saint Paul Isl**	**5.60**	**5**	Pn	**Pn**	**18 31 38.4**	**+1.3**
FALS	**False Pass**	**5.70**	**52**	Pn	**Pn**	**18 31 37.7**	**-0.9**
AMKA	**Amchitka**	**5.92**	**271**	Pn	**Pn**	**18 31 41.6**	**0.0**
DOL	**Dolgoi Island**	**6.62**	**54**		**Pn**	**18 31 53.1**	**+1.9**
SDPT	**Sand Point**	**7.42**	**56**	Pn	**Pn**	**18 32 03.1**	**+1.0**
CNBA	**Chernabura Isl**	**7.68**	**61**	Pn	**Pn**	**18 32 05.5**	**-0.2**
O14K	**Tigyukauivet M**	**9.50**	**33**	Pn	**Pn**	**18 32 31.9**	**+1.2**
CHIR	**Chirikof Islan**	**10.15**	**59**	Pn	**Pn**	**18 32 39.4**	**-0.2**
M14K	**Bethel**	**10.49**	**26**		**Pn**	**18 32 44.6**	**+0.4**
P16K	**Nushagak River**	**10.56**	**40**		**Pn**	**18 32 46.8**	**+1.6**
N15K	**Kwethluk River**	**10.59**	**32**		**Pn**	**18 32 47.2**	**+1.6**
O16K	**Kokwok River B**	**10.89**	**38**		**Pn**	**18 32 51.6**	**+2.0**
N17K	**Nushagak Hills**	**11.85**	**36**		**Pn**	**18 33 04.7**	**+1.8**
J14K	**Nanvaranak Lak**	**11.89**	**17**		**Pn**	**18 33 05.0**	**+1.6**
K15K	**Wolf Creek Mou**	**11.92**	**22**		**Pn**	**18 33 04.5**	**+0.7**
L16K	**Owhat River**	**11.98**	**28**		**Pn**	**18 33 05.7**	**+1.2**
GAMB	**Gambell**	**12.19**	**359**	Pn	**Pn**	**18 33 06.9**	**-0.5**
O18K	**Koktuh Hills**	**12.20**	**41**		**Pn**	**18 33 07.5**	**0.0**
KDAK	**Kodiak Island**	**12.40**	**53**	Pn	**Pn**	**18 33 08.4**	**-1.9**
	comp=N,0.5nm,0.3s,baz=192,slow=1.0,SNR=16						
K17K	**Iditarod**	**13.11**	**27**		**Pn**	**18 33 20.5**	**+0.5**
TNA	**Tin City**	**14.08**	**6**		**Pn**	**18 33 33.4**	**+0.2**
J18K	**Innoko River**	**14.15**	**27**		**Pn**	**18 33 35.1**	**+1.0**
F15K	**North Star Dit**	**14.52**	**11**		**Pn**	**18 33 40.5**	**+1.3**
H17K	**Granite Mounta**	**14.58**	**19**		**P**	**18 33 43.7**	**-2.8**
H18K	**Honhosa River**	**15.10**	**21**		**P**	**18 33 51.2**	**-1.2**
F17K	**Baldwin Pennin**	**15.69**	**15**	P	**P**	**18 33 58.0**	**-0.8**
F17K				IAmb	IAmb	18 34 11.2	
	comp=Z,15nm,1.4s						
KNK	**Knik Glacier**	**15.85**	**43**		**Pn**	**18 33 55.5**	**-1.3**
KNK				IAmb	IAmb	18 34 30.0	
	comp=Z,7.3nm,0.8s						
BPAW	**Bear Paw Mtn.**	**16.39**	**33**		**P**	**18 34 05.6**	**-1.1**
RND	**Reindeer**	**16.73**	**37**	P	**P**	**18 34 09.4**	**-1.0**
I21K	**Tanana**	**16.81**	**29**	P	**P**	**18 34 10.3**	**-1.0**
H21K	**Melozitna Rive**	**16.92**	**27**	P	**P**	**18 34 12.3**	**-0.1**
KLU	**Klutina**	**16.98**	**45**		**Pn**	**18 34 09.8**	**-1.5**
KLU				IAmb	IAmb	18 34 17.4	
	comp=Z,12nm,1.2s						
RDOG	**Red Dog Mine**	**16.98**	**11**		**P**	**18 34 13.4**	**+0.3**
RDOG				IAmb	IAmb	18 34 17.8	
	comp=Z,7.5nm,0.6s						
I23K	**Minto, Yukon-K**	**17.61**	**31**	P	**Pn**	**18 34 19.4**	**+0.3**
I23K				IAmb	IAmb	18 34 42.5	
	comp=Z,19nm,1.3s						
WRH	**Wood River Hil**	**17.62**	**34**		**Pn**	**18 34 18.6**	**-0.6**
WRH				IAmb	IAmb	18 34 31.8	
	comp=Z,13nm,1.4s						
C18K	**Utukok River**	**17.75**	**12**	IAmb	IAmb	18 34 38.9	
	comp=Z,13nm,1.4s						
ILAR	**Eielson Array**	**18.22**	**34**	P	**Pn**	**18 34 25.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=234,slow=10,SNR=14						
ILAR				LR	LR	18 42 13.7	
	comp=Z,128nm,19.3s,baz=237,slow=40 comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**18.22**	**34**	P	**Pn**	**18 34 25.3**	**-1.3**
RIDG	**Independent Ri**	**18.43**	**39**	P	**P**	**18 34 28.4**	**-0.8**
RIDG				IAmb	IAmb	18 34 51.4	
	comp=Z,13nm,1.2s						
H24K	**Noodor Dome**	**18.52**	**31**		**P**	**18 34 29.7**	**-0.5**
GRNC	**Granite Creek**	**18.61**	**49**	IAmb	IAmb	18 35 05.2	
	comp=Z,8.2nm,0.8s						
J25K	**Salcha River,**	**18.67**	**36**	P	**P**	**18 34 30.8**	**-1.1**
BARN	**Barnard Glacie**	**18.75**	**48**	P	**P**	**18 34 32.7**	**-0.2**
BARN				IAmb	IAmb	18 34 51.4	
	comp=Z,11nm,0.6s						
CTGM	**Chitina Glacie**	**18.88**	**49**	P	**P**	**18 34 33.8**	**-0.5**
CTGM				IAmb	IAmb	18 34 50.0	
	comp=Z,8.5nm,0.8s						
PETK	**Petropavlovsk-**	**18.96**	**287**	P	**Pn**	**18 34 36.8**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=85,slow=16,SNR=11						
PETK				LR	LR	18 40 49.8	
	comp=Z,63nm,21.2s,baz=83,slow=34 comp=Z,2.6nm,0.7s						
PETK	**Petropavlovsk-**	**18.96**	**287**	P	**Pn**	**18 34 36.0**	**+0.2**
LOGN	**Logan Glacier**	**18.99**	**49**	IAmb	IAmb	18 34 51.2	
	comp=Z,14nm,0.9s						
M27K	**Edge Creek, AK**	**19.07**	**44**	P	**P**	**18 34 36.4**	**0.0**
M27K				IAmb	IAmb	18 35 01.4	
	comp=Z,18nm,1.4s						
G24K	**Hadweenzic Riv** comp=Z,16nm,1.1s	**19.20**	**29**	IAmb	IAmb	18 34 54.6	
J26L	**Joseph Creek**	**19.29**	**37**	P	**P**	**18 34 36.9**	**-1.7**
O28M	**Mount Upton** comp=Z,12nm,1.1s	**19.37**	**50**	IAmb	IAmb	18 35 05.7	
BILL	**Bilibino**	**19.76**	**335**		**P**	**18 34 42.8**	**-0.8**
BILL				IAmb	IAmb	18 35 13.1	
	comp=Z,8.7nm,1.1s						
F25K	**Christian Rive** comp=Z,5.8nm,1.1s	**20.33**	**28**	IAmb	IAmb	18 35 12.2	
I27K	**Kandik River** comp=Z,6.7nm,0.9s	**20.55**	**36**	IAmb	IAmb	18 35 01.6	
HYT	**Haines Junctio**	**20.66**	**50**		Pn	18 34 55.1	-0.9
F26K	**Sheenjek River** comp=Z,7.1nm,1.4s	**20.84**	**29**	IAmb	IAmb	18 35 12.1	
H27K	**Steamboat Moun** comp=Z,13nm,1.5s	**20.89**	**34**	IAmb	IAmb	18 35 37.7	
I28M	**Miner Creek** comp=Z,8.6nm,1.1s	**21.10**	**37**	IAmb	IAmb	18 35 18.3	
D25K	**Kavik River** comp=Z,5.9nm,0.7s	**21.28**	**24**	IAmb	IAmb	18 35 03.9	
O30N	**Mendenhall** comp=Z,6.1nm,0.8s	**21.33**	**51**	IAmb	IAmb	18 35 29.6	
K29M	**Barlow Dome** comp=Z,4.6nm,0.7s	**21.45**	**42**	IAmb	IAmb	18 35 25.3	
N31M	**Braeburn, Yuko**	**21.61**	**49**		**P**	**18 35 03.7**	**0.0**
N31M				IAmb	IAmb	18 35 40.0	
	comp=Z,9.0nm,0.7s						
I29M	**Ogilvie Camp,**	**21.68**	**38**	P	**P**	**18 35 04.6**	**+0.1**
I29M				IAmb	IAmb	18 35 27.4	
	comp=Z,5.2nm,0.9s						
SEY	**Seymchan** comp=Z,0.8nm,0.4s,baz=100,slow=12,SNR=8.2 comp=Z,0.8nm,0.4s	**22.36**	**314**	P	**P**	**18 35 12.3**	**+0.7**
P32M	**Atlin**	**22.37**	**54**	P	**P**	**18 35 11.0**	**-1.0**
P32M				IAmb	IAmb	18 35 46.2	
	comp=Z,8.8nm,1.1s						
I30M	**Mount Dempster**	**22.38**	**39**		**P**	**18 35 10.3**	**-1.8**
G29M	**Pine Creek**	**22.45**	**34**	P	**P**	**18 35 11.8**	**-0.9**
G29M				IAmb	IAmb	18 35 28.9	
	comp=Z,7.7nm,0.9s						
MA2	**Magadan** comp=Z,2.4nm,0.7s,baz=112,slow=8.0,SNR=1.8	**22.62**	**305**	P	**P**	**18 35 14.6**	**0.0**
MA2				LR	LR	18 43 26.1	
	comp=Z,63nm,19.6s,baz=98,slow=35 comp=Z,2.4nm,0.7s						
MA2	**Magadan**	**22.62**	**305**	P	**P**	**18 35 14.1**	**-0.5**
MA2				IAmb	IAmb	18 35 25.3	
	comp=Z,5.7nm,0.9s						
D27M	**Malcolm River** comp=Z,3.3nm,0.7s	**22.71**	**28**	IAmb	IAmb	18 35 18.3	
P33M	**Teslin, Yukon** comp=Z,6.3nm,0.9s	**22.87**	**53**	IAmb	IAmb	18 35 25.6	
Q32M	**Nakina River** comp=Z,10.0nm,1.0s	**23.08**	**56**	IAmb	IAmb	18 35 37.9	
E29M	**Blow River**	**23.19**	**31**		**P**	**18 35 19.0**	**-1.3**
E29M				IAmb	IAmb	18 35 47.6	
	comp=Z,6.7nm,1.4s						
INK	**Inuvik** comp=Z,1.8nm,0.5s,baz=252,slow=8.8,SNR=7.9 comp=Z,1.8nm,0.5s	**24.60**	**33**	P	**P**	**18 35 33.9**	**+0.1**
INK	**Inuvik**	**24.60**	**33**	P	**P**	**18 35 32.9**	**-0.9**
INK				IAmb	IAmb	18 35 55.0	
	comp=Z,5.7nm,1.1s						
A36M	**Sachs Harbour**	**28.61**	**28**		**P**	**18 36 08.7**	**-1.1**
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.6s,baz=277,slow=8.5,SNR=4.2	**31.59**	**48**	P	**P**	**18 36 36.8**	**+0.5**
YKA				LR	LR	18 51 32.9	
	comp=Z,87nm,18.4s,baz=312,slow=41 comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**31.59**	**48**	P	**P**	**18 36 35.7**	**-0.6**
TIXI	**Tiksi** comp=Z,30nm,18.6s,baz=216,slow=40	**32.79**	**330**	LR	LR	18 52 15.8	
YAK	**Yakutsk** comp=Z,58nm,19.2s,baz=106,slow=38	**32.81**	**312**	LR	LR	18 50 39.7	
NEW	**Newport**	**34.31**	**74**	P	**P**	**18 37 00.4**	**+0.1**
EDM	**Edmonton**	**34.50**	**64**	P	**P**	**18 37 00.1**	**-1.7**
I07A	**Izee**	**34.88**	**82**	P	**P**	**18 37 03.4**	**-1.8**
I07A				IAmb	IAmb	18 37 13.1	
	comp=Z,5.0nm,1.3s						
KLR	**Kul'dur** comp=Z,4.8nm,18.1s,baz=58,slow=36	**35.62**	**289**	LR	LR	18 51 26.3	
H11N2	**WAKE ISLAND Hy** baz=21,slow=76,SNR=3.8	**36.16**	**217**	T	T	19 15 59.1	
H11N3	**WAKE ISLAND Hy** baz=21,slow=76,SNR=4.1	**36.17**	**216**	T	T	19 15 56.7	
H11N1	**WAKE ISLAND Hy** baz=21,slow=76,SNR=3.2	**36.18**	**217**	T	T	19 15 57.1	
H11S1	**WAKE ISLAND Hy** baz=25,slow=76	**37.35**	**216**	T	T	19 17 22.2	
H11S2	**WAKE ISLAND Hy** baz=25,slow=76	**37.37**	**216**	T	T	19 17 40.8	
H11S3	**WAKE ISLAND Hy** baz=25,slow=76	**37.37**	**216**	T	T	19 17 26.7	
RES	**Resolute Bay** comp=Z,42nm,18.2s,baz=10.0,slow=41	**37.54**	**25**	LR	LR	18 55 36.8	
RES	**Resolute Bay**	**37.54**	**25**	P	**P**	**18 37 28.1**	**+0.6**
RES				IAmb	IAmb	18 37 52.6	
	comp=Z,4.1nm,1.4s						
PNTR	**Pine Nut**	**37.61**	**89**	P	**P**	**18 37 28.9**	**+0.1**
LYMT	**Lyon Mountain**	**37.81**	**73**	P	**P**	**18 37 28.8**	**-1.6**
MJAR	**Matsushiro Arr** comp=Z,1.5nm,0.8s,baz=36,slow=7.8,SNR=2.7 comp=Z,1.5nm,0.8s	**38.52**	**267**	P	**P**	**18 37 38.5**	**+2.3**
MJAR	**Matsushiro Arr**	**38.52**	**267**	P	**P**	**18 37 36.0**	**-0.2**
MJAR				IAmb	IAmb	18 37 53.8	
	comp=Z,6.1nm,1.5s						
MCMT	**McKenzie Canyo**	**38.56**	**76**	P	**P**	**18 37 35.6**	**-1.1**
LHV	**Little Huntoon**	**38.80**	**89**	P	**P**	**18 37 38.5**	**0.0**
LHV				IAmb	IAmb	18 37 59.6	
	comp=Z,6.9nm,1.4s						
NVAR	**Mina Array Bea** comp=Z,1.5nm,0.9s,baz=292,slow=7.8,SNR=5.1 comp=Z,1.5nm,0.9s	**38.81**	**89**	P	**P**	**18 37 40.2**	**+1.2**
YHH	**Holmes Hill**	**39.79**	**75**	P	**P**	**18 37 45.3**	**-1.8**
FLWY	**Flagg Ranch**	**40.26**	**76**	P	**P**	**18 37 50.3**	**-0.6**
DUG	**Dugway, Tooele**	**41.17**	**82**	P	**P**	**18 37 57.4**	**-0.9**
DU

KURK	**Kurchatov**	**62.16**	**318**	P	**P**	**18 40 34.0**	**-0.8**
KURBB	**Kurchatov Arra**	**62.27**	**318**	P	**P**	**18 40 36.1**	**+0.5**
	comp=Z,2.3nm,0.2s,baz=44,slow=7.1,SNR=8.9						
	comp=Z,2.3nm,0.2s						
MKAR	**Makanchi Array**	**63.48**	**313**	P	**P**	**18 40 43.2**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=46,slow=6.4,SNR=30						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**63.48**	**313**	P	**P**	**18 40 42.6**	**-1.1**
BVAR	**Borovoye Array**	**63.63**	**324**	P	**P**	**18 40 44.6**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=44,slow=5.8,SNR=11						
	comp=Z,1.6nm,0.5s						
FINES	**FINESS Array B**	**66.44**	**351**	P	**P**	**18 41 01.7**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=9.5,slow=7.4,SNR=4.0						
	comp=Z,1.5nm,0.9s						
NOA	**NORSAR Array B**	**67.67**	**359**	P	**P**	**18 41 09.4**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=356,slow=6.4,SNR=3.3						
	comp=Z,0.4nm,0.6s						
HFS	**Hagfors**	**68.53**	**357**	P	**P**	**18 41 15.2**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=29,slow=3.4,SNR=9.6						
	comp=Z,2.3nm,0.7s						
LSA	**Lhasa**	**71.73**	**295**	P	**P**	**18 41 34.6**	**-2.1**
LSA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSH2	**Kashi**	**72.51**	**311**	P	**P**	**18 41 41.6**	**+0.8**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**72.95**	**7**	P	**P**	**18 41 42.8**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=15,slow=5.9,SNR=3.0						
	comp=Z,2.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.66**	**282**	P	**P**	**18 42 00.7**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=26,slow=6.2,SNR=9.7						
	comp=Z,0.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**75.66**	**282**	P	**P**	**18 41 58.9**	**-0.3**
GERES	**GERESS Array B**	**79.82**	**357**	P	**P**	**18 42 22.8**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=17,slow=5.6,SNR=3.6						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**85.64**	**230**	P	**P**	**18 42 52.3**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=25,slow=4.9,SNR=1.7						
	comp=Z,0.3nm,0.7s						
ESDC	**Sonseca Array**	**88.40**	**10**	P	**P**	**18 43 06.0**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=347,slow=5.7,SNR=4.2						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**89.04**	**229**	P	**P**	**18 43 09.4**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=24,slow=5.0,SNR=23						
	comp=Z,0.5nm,0.5s						
H03N2	**Juan Fernandez**	**116.72**	**111**	T	T	20 57 11.7	
	baz=316						
H03N1	**Juan Fernandez**	**116.74**	**111**	T	T	20 57 22.6	
	baz=316						
H03N3	**Juan Fernandez**	**116.74**	**111**	T	T	20 56 57.3	
	baz=316						

*IDC **07** 18:30:27.8±2.6,47°.54N×92°.55W,h0km,mb2.8/1, mbtmp3.0/4,ML2.4/2,MS3.3/1,Error ellipse: s-maj=36.1km s-min=14.4km az=79.0*

*NEIC **07** 18:30:28.8±0.8,47°.48N±0°.03×92°.73W±0°.06,h0km±2km, ML3.3/20,Error ellipse: s-maj=7.7km s-min=4.4km az=241.0*

ISC 07 18:30:27.2±0.8,**47°.49N**±0°.04×**92°.72W**±0°.05,**h0**km,**n33,** σ0**97**/33,**Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.94**	**61**		**Pg**	**18 30 44.3**	**-1.0**
EYMN				IAML		18 30 58.2	
	862nm,0.8s						
E38A	**The Farm, Brul**	**1.19**	**138**		**Pg**	**18 30 50.3**	**+0.3**
E38A				IAML		18 31 10.8	
	638nm,0.6s						
E38A				IAML		18 31 14.1	
	729nm,0.5s						
AGMN	**Agassiz Nation**	**2.26**	**292**		**Pn**	**18 31 06.9**	**+1.0**
AGMN				IAML		18 31 41.2	
	183nm,0.5s						
SPMN	**Marine on St.**	**2.27**	**182**		**Pn**	**18 31 06.6**	**+0.6**
EPLO	**Experimental L**	**2.29**	**343**		**Pn**	**18 31 07.8**	**+1.6**
TBO	**Thunder Bay**	**2.50**	**61**		**Pn**	**18 31 10.7**	**+1.5**
TBO				IAML		18 31 56.2	
	comp=E,153nm,1.2s						
G40A	**Rib Lake**	**2.83**	**141**		**Pn**	**18 31 15.3**	**+1.7**
G40A				IAML		18 31 55.1	
	comp=E,99nm,0.6s						
G40A				IAML		18 31 55.1	
	comp=E,108nm,0.6s						
F33A	**5 Mile Ranch,**	**2.96**	**237**		**Pn**	**18 31 17.2**	**+1.7**
F33A				IAML		18 32 08.0	
	comp=E,130nm,0.5s						
ULM	**Lac du Bonnet**	**3.46**	**324**	Pn	**Pn**	**18 31 22.7**	**+0.4**
	comp=E,1.0nm,0.3s,baz=143,slow=15,SNR=11						
ULM				Pg	**Pb**	**18 31 30.4**	**+1.1**
	comp=E,0.9nm,0.3s,baz=139,slow=17,SNR=4.7						
ULM				Sn	**Sn**	**18 32 02.1**	**-1.9**
	comp=E,1.5nm,0.3s,baz=27,slow=18,SNR=3.1						
ULM				Lg	Lg	18 32 15.6	
	comp=E,8.8nm,0.3s,baz=53,slow=20,SNR=5.0						
	comp=E,1.1nm,0.5s						
ULM	**Lac du Bonnet**	**3.46**	**324**		**Pn**	**18 31 22.6**	**+0.3**
ULM				IAML		18 32 18.7	
	comp=N,60nm,0.5s						
ULM				IAML		18 32 18.9	
	comp=E,70nm,0.7s						
I10CA	**LAC DU BONNET**	**3.48**	**322**	I	I	18 52 10.0	
	baz=137,slow=346,SNR=0.7						
I37A	**Lemond, Waseca**	**3.51**	**188**		**Pn**	**18 31 24.9**	**+1.9**
F42A	**Maple Grove Fa**	**3.60**	**117**		**Pn**	**18 31 25.5**	**+1.2**
I40A	**Norwalk**	**3.89**	**157**		**Pn**	**18 31 28.6**	**+0.3**
I42A	**Draeger Farm,**	**4.48**	**142**		**Pn**	**18 31 36.9**	**+0.6**
H43A	**Windswept, Lux**	**4.58**	**129**	Pn	**Pn**	**18 31 38.3**	**+0.6**
ECSD	**EROS Data Cent**	**4.64**	**217**		**Pn**	**18 31 38.9**	**+0.3**
MDND	**Maddock**	**4.67**	**277**	Pn	**Pn**	**18 31 38.8**	**-0.1**
JFWS	**Jewell Farm**	**4.90**	**158**		**Pn**	**18 31 42.1**	**+0.1**
SUSD	**Miller**	**5.31**	**237**	Pn	**Pn**	**18 31 48.2**	**+0.4**
E28A	**Huff**	**5.53**	**263**		**Pn**	**18 31 50.3**	**-0.4**
L40A	**Anamosa**	**5.53**	**168**		**Pn**	**18 31 49.3**	**-1.5**
SCIA	**State Center**	**5.59**	**184**	Pn	**Pn**	**18 31 52.0**	**+0.4**
K43A	**Burlington**	**5.70**	**145**	Pn	**Pn**	**18 31 53.3**	**+0.1**
E46A	**Sault Ste Mari**	**5.87**	**98**	Pn	**Pn**	**18 31 56.2**	**+0.7**
L42A	**Oliver, Polo**	**5.90**	**157**		**Pn**	**18 31 55.7**	**-0.2**
L34A	**Svendsen Farm,**	**6.11**	**207**	Pn	**Pn**	**18 31 58.7**	**0.0**
M44A	**Midewin, Midew**	**6.96**	**150**	Pn	**Pn**	**18 32 10.3**	**0.0**
PDAR	**Pinedale Array**	**12.79**	**255**	Pn	**Pn**	**18 33 30.1**	**-0.3**
	comp=E,0.4nm,0.5s,baz=75,slow=12,SNR=5.8						
YKA	**Yellowknife Ar**	**19.43**	**329**	P	**P**	**18 34 53.9**	**-0.9**
	comp=E,0.1nm,0.3s,baz=134,slow=12,SNR=7.0						
	comp=E,0.6nm,0.8s						
TXAR	**Lajitas Array**	**20.02**	**209**	P	**Pn**	**18 35 03.1**	**-0.2**
	comp=E,0.4nm,0.8s,baz=22,slow=13,SNR=3.5						
	comp=E,0.4nm,0.8s						
TXAR	**Lajitas Array**	**20.02**	**209**	P	**P**	**18 35 01.9**	**+0.3**
BBB	**Bella Bella**	**23.15**	**295**	LR	LR	18 45 39.9	
	comp=E,80nm,21.2s,baz=302,slow=39						

*MOS **07** 18:52:50.3±1.0,59°.25S×59°.92W,h10km,mb5.6/15, MS4.8/7,Error ellipse: s-maj=22.4km s-min=8.4km az=93.3*

*NEIC **07** 18:52:50.7±1.8,59°.39S±0°.05×60°.2W±0°.2,h10km±1km, mb5.6/93,Ms_20 5.0/119,Mwb5.4/19,Mww5.5/18, Mww5.6(GUC),Error ellipse: s-maj=13.6km s-min=8.7km az=251.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.12; Mθθ1.44; Mϕϕ-1.56; Mrθ0.44; Mθϕ0.62; Mϕr0.83; Fault plane solution: M₀1.88000×10¹⁷ NP1:ϕs33.02000°,δ89.46000°,λ150.09000°. NP2: ϕs123.33000°,δ60.09000°,λ0.63000°. Principal axes: T 1.7942, Plg21.0000°, Azm344.0000°; N 0.1574, Plg60.0000°, Azm212.0000°; P -1.9516, Plg20.0000°, Azm82.0000°;*

*IDC **07** 18:52:50.4±0.4,59°.26S×59°.84W,h0km,mb5.1/18, mbtmp5.1/21,ML5.2/3,MS4.7/36 Error ellipse: s-maj=18.3km s-min=10.3km az=76.0*

*NEIC **07** 18:52:50.6,59°.31S×60°.22W,h16km,Moment Tensor Solution. Duration:3s0 Moment tensor: Scale 10¹⁷Nm; Mrr-0.51; Mθθ1.54; Mϕϕ-1.02; Mrθ0.05; Mθϕ0.69; Mϕr1.35; Fault plane solution: M₀2.03000×10¹⁷ NP1: ϕs113.16000°,δ54.22000°,λ-20.54000°. NP2: ϕs215.52000°,δ73.47000°,λ-142.42000°. Principal axes: T 1.7924, Plg12.0000°, Azm341.0000°; N 0.4132, Plg49.0000°, Azm236.0000°; P -2.2056, Plg38.0000°, Azm80.0000°;*

*NEIC **07** 18:52:50.6,59°.41S×60°.22W,h16km*

*NEIC **07** 18:52:50.6,59°.41S×60°.22W,h10km*

*PTWC **07** 18:52:51,59°.40S×60°.30W,h10km,Mwp5.6/6*

*GUC **07** 18:52:51.5±2.4,59°.32S×60°.28W,h16km±88km,MS5.4*

*BJI **07** 18:52:52.0,59°.40S×60°.10W,h14km,mB5.3/5,Ms5.4/18, Ms7 5.1/20*

*GCMT **07** 18:52:53.7±0.1,59°.43S×59°.99W,h14km,MW5.5/142, Moment Tensor Solution. s130,c213; s142,c267; Duration: 1s3 Moment tensor: Scale 10¹⁷Nm; Mrr-0.14±.02; Mθθ1.82±.03; Mϕϕ-1.68±.03; Mrθ0.02±.04; Mθϕ0.98±.02; Mϕr0.47±.05; Best double couple: M₀2.06300×10¹⁷ NP1:ϕs120.00000°,δ78.00000°, λ-7.00000°. NP2:ϕs211.00000°,δ83.00000°, λ-168.00000°. Principal axes: T 2.0830, Plg4.0000°, Azm345.0000°; N -0.0360, Plg76.0000°, Azm240.0000°; P -2.0430, Plg13.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 18:52:51.1±0.2,**59°.32S**±0°.04×**60°.17W**±0°.05,**h10**km,**n461,** σ1**34**/431,**mb5.6**/83,**MS5.0**/100,**13C-2D,Drake Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUBA	**Jubany**	**3.02**	**166**	P	**Pn**	**18 53 35.7**	**-3.2**
ESPZ	**Base Esperanza**	**4.37**	**161**		**Pn**	**18 53 56.2**	**-1.2**
PMSA	**Palmer Station**	**5.77**	**197**	Pn	**Pn**	**18 54 16.7**	**+0.1**
	124nm,0.3s,baz=27,slow=9.3,SNR=91						
PMSA				Sn	**Sn**	**18 55 19.0**	**-3.7**
	57nm,0.3s,baz=260,slow=21,SNR=10						
PMSA				LR	LR	18 56 22.6	
	comp=Z,5μm,20.5s,baz=142,slow=36						
	408nm,0.5s						
PMSA	**Palmer Station**	**5.77**	**197**		**Pn**	**18 54 16.0**	**-0.6**
PMSA	**Palmer Station**	**5.77**	**197**	*eP*	**Pn**	**18 54 16.2**	**-0.4**
PMSA	**Palmer Station**	**5.77**	**197**	P	**Pn**	**18 54 16.7**	**+0.1**
PMSA	**Palmer Station**	**5.77**	**197**	*eP*	**Pn**	**18 54 16.6**	**0.0**
MG01	**Puerto William**	**5.99**	**314**		**Pn**	**18 54 19.4**	**-0.2**
MG01	**Puerto William**	**5.99**	**314**	*eP*	**Pn**	**18 54 18.9**	**-0.7**
MG01				*eS*	**Sn**	**18 55 27.2**	**-0.9**
USHA	**Ushuaia**	**6.36**	**311**	Pn	**Pn**	**18 54 26.3**	**+1.5**
	6.4nm,0.3s,baz=87,slow=1.6,SNR=14						
USHA				Sn	**Sn**	**18 55 38.2**	**+0.8**
	22nm,0.3s,baz=211,slow=22,SNR=9.9						
USHA				LR	LR	18 56 23.3	
	comp=Z,5μm,19.4s,baz=138,slow=33						
	21nm,0.4s						
USHA	**Ushuaia**	**6.36**	**311**	*eP*	**Pn**	**18 54 23.7**	**-1.1**
USHA				*eS*	**Sn**	**18 55 37.0**	**-0.4**
EFI	**East Falkland**	**7.75**	**10**		**Pn**	**18 54 44.6**	**+0.7**
EFI	**East Falkland**	**7.75**	**10**	*ceP*	**Pn**	**18 54 44.8**	**+0.9**
EFI				pmax	pmax		
	comp=Z,575nm,0.6s						
EFI	**East Falkland**	**7.75**	**10**	P	**Pn**	**18 54 44.3**	**+0.4**
MG03	**Isla Dawson**	**7.89**	**310**		**Pn**	**18 54 45.3**	**-0.4**
MG03	**Isla Dawson**	**7.89**	**310**	*eP*	**Pn**	**18 54 45.4**	**-0.3**
MG03				*eS*	**Sn**	**18 56 12.7**	**-2.3**
GO10	**Punta Arenas**	**8.64**	**311**		**Pn**	**18 54 55.3**	**-0.9**
GO10	**Punta Arenas**	**8.64**	**311**	*eP*	**Pn**	**18 54 54.9**	**-1.2**
GO10				IVMs_BB	IVMs_BB	18 59 07.7	
	comp=Z,20μm,6.2s						
GO10	**Punta Arenas**	**8.64**	**311**	P	**Pn**	**18 54 55.6**	**-0.5**
MG04	**Isla Riesco**	**9.07**	**311**		**Pn**	**18 55 01.1**	**-0.9**
MG04	**Isla Riesco**	**9.07**	**311**	*eP*	**Pn**	**18 55 01.2**	**-0.7**
MG04				IVMs_BB	IVMs_BB	18 58 31.0	
	comp=Z,19μm,7.4s						
MG05	**Puerto Natales**	**10.36**	**312**		**Pn**	**18 55 18.0**	**-1.5**
MG05	**Puerto Natales**	**10.36**	**312**	*eP*	**Pn**	**18 55 18.8**	**-0.7**
MG05				IVMs_BB	IVMs_BB	18 59 33.5	
	comp=N,12μm,11.1s						
MG05	**Puerto Natales**	**10.36**	**312**	P	**Pn**	**18 55 19.5**	**0.0**
GO09	**Cerro Castillo**	**10.62**	**314**		**Pn**	**18 55 22.0**	**-1.1**
GO09	**Cerro Castillo**	**10.62**	**314**	*eP*	**Pn**	**18 55 22.2**	**-0.9**
GO09				IVMs_BB	IVMs_BB	19 00 21.4	
	comp=Z,9μm,9.5s						
GO09	**Cerro Castillo**	**10.62**	**314**	P	**Pn**	**18 55 22.4**	**-0.8**
GO08	**Villa O'Higgin**	**13.07**	**321**		**Pn**	**18 55 55.7**	**-0.9**
GO08	**Villa O'Higgin**	**13.07**	**321**	*eP*	**Pn**	**18 55 56.2**	**-0.4**
GO08	**Villa O'Higgin**	**13.07**	**321**	P	**Pn**	**18 55 56.8**	**+0.2**
HOPE	**Hope Point**	**13.88**	**79**		**Pn**	**18 56 06.4**	**-1.2**
HOPE	**Hope Point**	**13.88**	**79**	P	**Pn**	**18 56 06.4**	**-1.2**
HOPE	**Hope Point**	**13.88**	**79**	P	**Pn**	**18 56 09.8**	**+2.2**
AY03	**Cochrane**	**14.15**	**323**		**Pn**	**18 56 13.4**	**+2.0**
COYC	**Coyhaique**	**15.53**	**327**		**Pn**	**18 56 31.2**	**+1.3**
COYC				IAmb	IAmb	18 56 35.4	
	comp=Z,484nm,1.5s						
COYC	**Coyhaique**	**15.53**	**327**	*eP*	**Pn**	**18 56 32.2**	**+2.4**
CYQE	**Coyhaique**	**15.55**	**327**	*eP*	**P**	**18 56 35.5**	**+1.0**
CYQE				IVMs_BB	IVMs_BB	19 04 10.6	
	comp=Z,8μm,8.4s						
CHAC	**Puerto Chacabu**	**15.85**	**326**	*eP*	**P**	**18 56 37.3**	**-0.6**
CHAC				IVMs_BB	IVMs_BB	19 03 55.8	
	comp=Z,10μm,10.7s						
CUEV	**Cuervo**	**16.18**	**325**	*eP*	**P**	**18 56 41.8**	**+0.1**
USPA	**Uspallante**	**16.38**	**326**	*eP*	**P**	**18 56 44.1**	**+0.3**
AY01	**Puyuhuapi**	**16.74**	**328**		**P**	**18 56 48.0**	**+0.3**
AY01	**Puyuhuapi**	**16.74**	**328**	*eP*	**P**	**18 56 48.5**	**+0.7**
LJUN	**La Junta**	**17.09**	**328**	*eP*	**P**	**18 56 51.9**	**+0.3**
LJUN				IVMs_BB	IVMs_BB	19 05 18.0	
	comp=Z,10μm,10.5s						
LL02	**Futaleuf**	**17.68**	**331**		**P**	**18 56 58.7**	**+0.5**
LL02	**Futaleuf**	**17.68**	**331**	*eP*	**P**	**18 56 59.0**	**+0.9**
GO07	**Milladeo Hill,**	**18.23**	**327**		Pn	18 56 57.3	-6.7
GO07	**Milladeo Hill,**	**18.23**	**327**	*eP*	**Pn**	**18 57 04.6**	**+0.6**
GO07				IVMs_BB	IVMs_BB	19 05 25.2	
	comp=Z,7μm,11.3s						
LL07	**Hotel Espejo d**	**18.44**	**328**	P	**P**	**18 57 00.4**	**-6.1**
LL07	**Hotel Espejo d**	**18.44**	**328**	*eP*	**Pn**	**18 57 08.3**	**+1.8**
LL07				IVMs_BB	IVMs_BB	19 05 33.4	
	comp=Z,5μm,12.4s						
PLCA	**Paso Flores**	**19.72**	**336**	P	**Pn**	**18 57 22.7**	**+0.6**
	comp=Z,3.6nm,0.3s,baz=161,slow=10,SNR=176						
PLCA				LR	LR	19 05 54.1	
	comp=Z,3μm,18.2s,baz=174,slow=40						
	comp=Z,255nm,1.2s						
PLCA	**Paso Flores**	**19.72**	**336**		**P**	**18 57 21.6**	**+1.0**
PLCA				IAmb	IAmb	18 57 33.5	
	comp=Z,341nm,1.1s						
PLCA	**Paso Flores**	**19.72**	**336**	P	**Pn**	**18 57 22.9**	**+0.8**
LL05	**Los Muermos**	**19.77**	**329**	P	**P**	**18 57 19.7**	**-1.4**
LL05				IAmb	IAmb	18 57 33.6	
	comp=Z,356nm,1.0s						
BELA	**Belgrano 2**	**20.46**	**165**	P	**P**	**18 57 28.3**	**0.0**
BELA				IAmb	IAmb	18 57 40.4	
	comp=Z,218nm,1.0s						
LR05	**Currie**	**20.52**	**333**		**P**	**18 57 30.1**	**+0.9**
LR05				IAmb	IAmb	18 57 37.1	
	comp=Z,396nm,1.1s						
GO06	**Curarrehue**	**21.02**	**335**		**P**	**18 57 35.1**	**+0.4**
GO06				IAmb	IAmb	18 57 42.1	
	comp=Z,393nm,1.2s						
GO06	**Curarrehue**	**21.02**	**335**	*eP*	**P**	**18 57 35.2**	**+0.4**
LR04	**Corral**	**21.19**	**331**		**P**	**18 57 36.3**	**-0.2**
LR04				IAmb	IAmb	18 57 39.6	
	comp=Z,431nm,1.1s						
VNA3	**Neumayer Olymp**	**23.39**	**141**	⇑P	**P**	**18 58 00.3**	**+0.9**
	comp=Z,248nm,1.0s						
VNA3				⇑S	**S**	**19 02 14.2**	**+2.1**
BI02	**San Fabin de**	**23.79**	**337**		**P**	**18 58 03.0**	**-0.8**
BI02				IAmb	IAmb	18 58 05.7	
	comp=Z,127nm,1.1s						
BI02				IAMs_20	IAMs_20	19 08 23.1	
	comp=Z,4μm,18.0s						
VNA1	**Neumayer--Stat**	**23.81**	**139**	⇑P	**P**	**18 58 06.1**	**+2.5**
	comp=Z,411nm,1.0s						
VNA2	**Neumayer--Watz**	**24.11**	**140**	⇑P	**P**	**18 58 09.3**	**+2.9**
	comp=Z,59nm,0.7s,baz=275,slow=9.0						
BI05	**Punta Hualpn**	**24.12**	**334**		**P**	**18 58 06.3**	**-0.5**
BI05				IAMs_20	IAMs_20	19 07 43.5	
	comp=Z,4μm,18.0s						
ML02	**Panimavida**	**24.69**	**338**	P	**P**	**18 58 11.6**	**-0.4**
BO02	**Sierra Bellavi**	**25.52**	**339**		**P**	**18 58 19.4**	**-0.2**
BO02				IAmb	IAmb	18 58 22.3	
	comp=Z,246nm,1.3s						
GO05	**Hualane**	**25.52**	**337**		**P**	**18 58 19.0**	**-0.6**
GO05				IAmb	IAmb	18 58 33.5	
	comp=Z,194nm,1.1s						
SNAA	**Sanae**	**25.58**	**142**	⇑P	**P**	**18 58 21.1**	**+1.2**
	comp=Z,4μm,1.0s						
SNAA				⇑S	**S**	**19 02 46.7**	**-0.6**
SNAA	**Sanae**	**25.58**	**142**	P	**P**	**18 58 21.5**	**+1.6**
	comp=Z,232nm,1.0s,baz=267,slow=6.9,SNR=41						
SNAA				LR	LR	19 07 18.5	
	comp=Z,2μm,18.4s,baz=272,slow=34						
SNAA	**Sanae**	**25.58**	**142**		**P**	**18 58 20.6**	**+0.7**
BO01	**Tunca**	**25.96**	**339**		**P**	**18 58 22.1**	**-1.4**
BO01				IAmb	IAmb	18 58 28.5	
	comp=Z,138nm,1.1s						
MT13	**San Alfonso**	**26.45**	**341**	IAMs_20	IAMs_20	19 08 41.6	
	comp=Z,3μm,18.0s						
MT01	**Popeta**	**26.50**	**339**	IAmb	IAmb	18 58 32.9	
	comp=Z,97nm,0.9s						
MT01				IAMs_20	IAMs_20	19 10 36.9	
	comp=Z,4μm,18.0s						
MT09	**Talagante**	**26.54**	**340**	IAMs_20	IAMs_20	19 09 39.0	
	comp=Z,3μm,19.0s						
MT08	**Bocatoma Ro**	**26.70**	**341**	P	**P**	**18 58 30.7**	**+0.2**
MT08				IAMs_20	IAMs_20	19 08 51.7	
	comp=Z,3μm,20.0s						
MT03	**Universidad Ad**	**26.73**	**341**	IAMs_20	IAMs_20	19 08 44.1	
	comp=Z,4μm,19.0s						
MT16	**CCHEN**	**26.80**	**341**	IAMs_20	IAMs_20	19 08 45.8	
	comp=Z,4μm,22.0s						
MT02	**Curacav**	**27.07**	**340**	IAMs_20	IAMs_20	19 09 54.0	
	comp=Z,4μm,21.0s						
PEL	**Peldehue**	**27.11**	**340**	IAMs_20	IAMs_20	19 08 31.9	
	comp=Z,3μm,21.0s						
VA03	**San Esteban**	**27.45**	**341**	IAMs_20	IAMs_20	19 10 19.1	
	comp=Z,4μm,19.0s						
VA06	**Catapilco**	**27.78**	**340**	IAMs_20	IAMs_20	19 10 14.8	
	comp=Z,3μm,20.0s						
PLTB	**Pedras Altas**	**27.91**	**12**	P	**P**	**18 58 41.2**	**+0.1**
PLTB				IAmb	IAmb	18 58 43.2	
	comp=Z,123nm,1.4s						
PLTB	**Pedras Altas**	**27.91**	**12**	*eP*	**P**	**18 58 42.1**	**+1.0**
CO04	**Los Peladeros**	**28.23**	**340**	IAMs_20	IAMs_20	19 09 06.4	
	comp=Z,3μm,20.0s						
PSAL	**Palomas, Salto**	**28.29**	**5**	*eP*	**P**	**18 58 45.3**	**+0.8**
ZON	**Zonda**	**28.36**	**345**		**P**	**18 58 45.0**	**-0.1**
ZON	**Zonda**	**28.36**	**345**	P	**P**	**18 58 45.1**	**-0.1**
ZON				pmax	pmax		
	comp=Z,296nm,1.4s						
CPSB	**Cacapava Do Su**	**29.27**	**12**	*eP*	**P**	**18 58 54.1**	**+0.9**
CO03	**El Pedregal**	**29.36**	**341**		**P**	**18 58 54.2**	**+0.1**
CO01	**Juntas del Tor**	**30.11**	**343**	IAMs_20	IAMs_20	19 11 59.2	
	comp=Z,3μm,18.0s						
NVL	**N'lazarevskaya**	**30.40**	**141**	*eP*	**P**	**18 59 05.4**	**+2.6**
NVL				*e*		19 00 03.5	
NVL				*e*PPP	PPP	19 00 11.9	
NVL				*e*		19 02 04.9	
NVL				*eS*	**S**	**19 04 06.3**	**+3.3**
NVL				*e*SS	**ScP**	**19 05 42.5**	**-1.6**
NVL				*e*SSS	SSS	19 05 57.3	
NVL				*i*		19 09 36.6	
NVL				pmax	pmax		
	comp=Z,123nm,1.1s						
NVL				MLR	MLR		
	comp=Z,1μm,19.0s						
QSPA	**South Pole Qui**	**30.91**	**180**	P	**P**	**18 59 09.0**	**+1.3**
	comp=Z,99nm,0.9s,baz=158,slow=3.7,SNR=85						
QSPA				LR	LR	19 11 43.3	
	comp=Z,3μm,19.7s,baz=156,slow=37						
	comp=Z,99nm,0.9s						
QSPA	**South Pole Qui**	**30.91**	**180**	P	**P**	**18 59 08.2**	**+0.5**
QSPA	**South Pole Qui**	**30.91**	**180**	IAMs_20	IAMs_20	19 11 22.3	
	comp=Z,3μm,20.0s						
LCO	**Las Campanas**	**31.15**	**342**		**P**	**18 59 09.8**	**-0.4**
LCO				IAmb	IAmb	18 59 12.0	
	comp=Z,82nm,0.8s						
LCO	**Las Campanas**	**31.15**	**342**	*eP*	**P**	**18 59 09.9**	**-0.2**
AC04	**Llanos de Chal**	**32.00**	**342**		**P**	**18 59 18.4**	**+1.0**
AC04				IAMs_20	IAMs_20	19 11 50.3	
	comp=Z,2μm,19.0s						
GO03	**Copiapo**	**32.47**	**343**	IAMs_20	IAMs_20	19 14 09.8	
	comp=Z,3μm,18.0s						
ITAB	**Concordia**	**32.55**	**13**		**P**	**18 59 22.7**	**+0.6**
ITAB				IAmb	IAmb	18 59 34.3	
	comp=Z,68nm,1.2s						
ITAB	**Concordia**	**32.55**	**13**	*eP*	**P**	**18 59 24.0**	**+1.9**
CPUP	**Villa Florida**	**33.03**	**5**	P	**P**	**18 59 26.8**	**+0.4**
	comp=Z,40nm,1.1s,baz=178,slow=8.9,SNR=51						
CPUP				LR	LR	19 12 36.8	
	comp=Z,2μm,20.3s,baz=179,slow=36						
	comp=Z,40nm,1.1s						
CPUP	**Villa Florida**	**33.03**	**5**		**P**	**18 59 26.3**	**-0.1**
CPUP				IAmb	IAmb	18 59 27.9	
	comp=Z,66nm,1.1s						
ELIB	**Princess Elisa**	**33.51**	**146**	*dP*	**P**	**18 59 30.1**	**-0.2**
	comp=Z,52nm,1.1s						
AC01	**Pan de Azucar**	**33.94**	**343**	IAMs_20	IAMs_20	19 13 13.0	
	comp=Z,3μm,21.0s						
PTGB	**Pitanga**	**35.05**	**13**	*eP*	**P**	**18 59 45.4**	**+1.4**
PB14	**IPOC Station P**	**35.41**	**344**		**P**	**18 59 47.4**	**+0.1**
PB14				IAmb	IAmb	18 59 49.1	
	comp=Z,128nm,1.1s		

SIV **San Ignacio** 43.27 359 LR LR 19 20 10.8
comp=Z,3µm,19.1s,baz=194,slow=38
LPAZ **La Paz** 43.36 349 P **P** **19 00 55.5 +1.4**
comp=Z,22nm,1.0s,baz=151,slow=6.0,SNR=44
LPAZ PP **PP** **19 02 36.5 +1.7**
comp=Z,33nm,1.2s,baz=154,slow=8.8,SNR=6.0
LPAZ LR LR 19 20 50.1
comp=Z,2µm,18.5s,baz=151,slow=39
comp=Z,22nm,1.0s
LPAZ **La Paz** 43.36 349 **P** **19 00 55.1 +1.0**
SALV **Santo Antonio** 43.48 6 *e*P **P** **19 00 55.0 +0.7**
PTLB **Pontes e Lacer** 43.81 1 **P** **19 00 56.3 -0.7**
PTLB **PP** **19 02 37.0 -1.8**
PTLB **Pontes e Lacer** 43.81 1 *e*P **P** **19 00 57.5 +0.6**
ARAG **Araguaiana, MT** 43.98 12 *e*P **P** **19 00 59.2 +0.9**
BDFB **Brasilia** 44.52 17 P **P** **19 01 03.4 +0.6**
comp=Z,21nm,0.7s,baz=181,slow=4.5,SNR=30
BDFB LR LR 19 20 25.0
comp=Z,1µm,19.5s,baz=180,slow=37
comp=Z,21nm,0.7s
BDFB **Brasilia** 44.52 17 **P** **19 01 02.9 +0.1**
GUA01 **Guaratinga, BA** 45.21 28 *e*P **P** **19 01 08.9 +0.7**
JANB **Januaria** 45.72 22 *e*P **P** **19 01 12.8 +0.6**
VILB **Vilhena** 46.28 360 **P** **19 01 16.9 +0.2**
VILB IAmb IAmb 19 01 18.6
comp=Z,82nm,0.8s
VILB **Vilhena** 46.28 360 *e*P **P** **19 01 17.4 +0.8**
CMC01 **Camacan, BA** 46.46 28 *e*P **P** **19 01 19.0 +1.0**
MAW **Mawson** 46.70 154 P **P** **19 01 21.0 +1.7**
comp=Z,93nm,1.0s,baz=213,slow=7.8,SNR=7.6
MAW LR LR 19 19 56.9
comp=Z,3µm,20.9s,baz=218,slow=35
comp=Z,93nm,1.0s
NBIT **Itapeh - BA** 46.89 28 *e*P **P** **19 01 22.4 +1.0**
PDRB **Porto dos Gac** 47.68 5 *e*P **P** **19 01 27.6 0.0**
SNDB **Serra Nova Dou** 47.72 12 *e*P **P** **19 01 29.0 +1.1**
SDBA **SAO DESIDERIO** 48.20 20 *e*P **P** **19 01 31.9 +0.3**
CLDB **Colider** 48.46 6 *e*P **P** **19 01 33.7 +0.1**
NNA **Nana** 48.87 338 LR LR 19 19 09.6
comp=Z,861nm,21.3s,baz=146,slow=32
NNA **Nana** 48.87 338 **P** **19 01 35.4 -1.4**
NNA IAmb IAmb 19 01 39.8
comp=Z,34nm,0.8s
NNA **Nana** 48.87 338 *ce*P **P** **19 01 37.2 +0.4**
NNA pmax pmax
comp=Z,47nm,1.0s
NNA **Nana** 48.87 338 P **P** **19 01 36.6 -0.2**
comp=Z,51nm,1.4s
SMTB **Santa Maria do** 51.25 16 *e*P **P** **19 01 55.5 +0.6**
NPGB **Novo Progresso** 52.28 6 *e*P **P** **19 02 03.1 +0.5**
CZSB **Cruzeiro do Su** 52.35 344 P **P** **19 02 03.2 +0.2**
CZSB **Cruzeiro do Su** 52.35 344 *e*P **P** **19 02 04.5 +1.4**
CZSB **Cruzeiro do Su** 52.35 344 P **P** **19 02 01.6 -1.5**
comp=Z,3µmcomp=Z,247nm,1.2s
PRPB **Parauapebas** 53.61 13 *e*P **P** **19 02 13.0 +0.6**
ATAH **Atahualpa** 53.89 337 P **P** **19 02 17.7 +2.8**
comp=Z,39nm,0.8s,baz=158,slow=4.9,SNR=28
comp=Z,39nm,0.8s
CASY **Casey** 54.52 175 P **P** **19 02 17.0 -1.4**
CASY IAmb IAmb 19 02 44.5
comp=Z,108nm,1.4s
ITTB **Itaituba** 54.92 5 *e*P **P** **19 02 22.5 +0.6**
TEFE **Tefe** 55.77 355 *e*P **P** **19 02 28.6 +0.7**
MACA **Manacapuru-AM** 56.01 359 P **P** **19 02 28.7 -1.0**
MACA IAmb IAmb 19 02 31.0
comp=Z,55nm,1.0s
MACA **Manacapuru-AM** 56.01 359 *e*P **P** **19 02 30.2 +0.5**
NBPV **Pedro Velho** 56.11 30 *e*P **P** **19 02 31.4 +1.0**
NBPA **Parau_RN** 56.30 28 *e*P **P** **19 02 32.3 +0.6**
RCBR **Riachuelo** 56.52 29 LR LR 19 23 41.2
comp=Z,158nm,21.7s,baz=204,slow=33
NBPS **Pedro II - PI** 56.66 23 *e*P **P** **19 02 34.5 0.0**
MCRA **Macar, Loja** 56.90 336 P **P** **19 02 35.2 -0.9**
comp=Z,41nm,1.3s
SUR **Sutherland** 58.29 101 LR LR 19 22 55.6
comp=Z,1µm,18.7s,baz=210,slow=31
SUR **Sutherland** 58.29 101 P **P** **19 02 46.4 +0.4**
SUR IAmb IAmb 19 03 59.6
comp=Z,64nm,1.4s
SHEL **Horse Pasture** 58.56 66 P **P** **19 02 49.0 +1.1**
SHEL **Horse Pasture** 58.56 66 P **P** **19 02 49.0 +1.1**
SHEL pmax pmax
comp=Z,132nm,1.2s
COHC **Cochancay** 58.61 338 P **P** **19 02 46.8 -1.3**
comp=Z,0.7nm,1.0s
SGC2 **Sao Gabriel da** 59.24 352 P **P** **19 02 50.1 -2.3**
comp=Z,62nm,1.0s
PPLP **Puerto Lpez** 59.81 336 P **P** **19 02 53.5 -3.0**
SLOR **San Lorenzo -** 60.16 339 P **P** **19 02 59.8 +0.4**
PTLC **Puerto Leguiza** 60.42 343 P **P** **19 02 58.3 -2.3**
comp=Z,2µmcomp=Z,132nm,1.1s
CASC **Dorado de Casc** 60.80 340 P **P** **19 03 04.5 +1.2**
comp=Z,44nm,1.3s
H10S3 **ASCENSION HYDR** 60.81 54 T T 20 09 18.5
baz=15,slow=74,SNR=227
H10S2 **ASCENSION HYDR** 60.81 54 T T 20 09 15.5
baz=205,slow=74,SNR=272
OTAV **Otavalo** 61.09 339 **P** **19 03 06.6 +0.9**
OTAV **Otavalo** 61.09 339 P **P** **19 03 06.6 +0.9**
OTAV pmax pmax
comp=Z,86nm,1.1s
OTAV MLR MLR
comp=Z,700nm,21.0s
OTAV **Otavalo** 61.09 339 *e*P **P** **19 03 07.8 +2.1**
OTAV **Otavalo** 61.09 339 P **P** **19 03 04.5 -1.2**
comp=Z,835nmcomp=Z,80nm,1.4s
TULM **Tulcn-Chalpat** 61.44 340 P **P** **19 03 10.4 +2.3**
comp=Z,83nm,1.3s
BOAV **Boa Vista** 61.53 360 **P** **19 03 08.2 +0.1**
BOAV **Boa Vista** 61.53 360 *e*P **P** **19 03 08.3 +0.1**
BOAV **Boa Vista** 61.53 360 P P 19 03 03.6 -4.5
comp=Z,33nm,1.1s
H10N3 **ASCENSION HYDR** 61.88 53 T T 20 10 37.6
baz=204,slow=74,SNR=280
H10N1 **ASCENSION HYDR** 61.88 54 T T 20 10 31.7
baz=204,slow=74,SNR=491
H10N2 **ASCENSION HYDR** 61.90 53 T T 20 10 39.0
baz=204,slow=74,SNR=315
POPC **Popayan, Colom** 63.04 341 P **P** **19 03 20.0 +1.5**
comp=Z,18nm,1.6s
URMC **La Uribe, Meta** 63.38 344 P **P** **19 03 18.5 -2.1**
comp=Z,593nmcomp=Z,35nm,1.2s
BOSA **Boshof** 63.58 102 P **P** **19 03 21.2 -0.7**
comp=Z,14nm,0.9s,baz=214,slow=7.6,SNR=11
BOSA LR LR 19 26 08.4
comp=Z,645nm,18.4s,baz=218,slow=32
comp=Z,14nm,0.9s
BOSA **Boshof** 63.58 102 **P** **19 03 20.7 -1.2**
BOSA IAmb IAmb 19 03 26.1
comp=Z,34nm,1.1s
BOSA **Boshof** 63.58 102 P **P** **19 03 20.7 -1.2**
BOSA pmax pmax
comp=Z,34nm,1.2s
JAMC **Jamundi, Valle** 63.70 342 P **P** **19 03 24.1 +1.3**
comp=Z,35nm,1.1s
GR1C **Gorgona, Isla** 63.74 340 P **P** **19 03 22.8 0.0**
PRAC **Prado** 63.91 344 P **P** **19 03 26.0 +2.0**
comp=Z,984nmcomp=Z,60nm,1.4s
YOTC **Yotoco, Valle** 64.40 342 P **P** **19 03 28.4 +1.1**
comp=Z,568nmcomp=Z,48nm,1.0s
WIN **Windhoek** 64.41 91 P **P** **19 03 26.9 -0.6**
WIN IAmb IAmb 19 03 29.0
comp=Z,47nm,1.0s
WIN IAMs_20 IAMs_20 19 28 03.3
comp=Z,824nm,18.0s
WIN **Windhoek** 64.41 91 P **P** **19 03 26.9 -0.6**
WIN pmax pmax
comp=Z,47nm,1.0s
WIN MLR MLR
comp=Z,800nm,18.0s
MDP **Montagnes des** 64.50 8 P **P** **19 03 26.6 -1.2**
comp=Z,36nm,0.8s,baz=191,slow=7.0,SNR=6.7
MDP LR LR 19 32 41.2
comp=Z,993nm,18.8s,baz=172,slow=37
comp=Z,36nm,0.8s
CHIC **Chingaza** 64.66 345 P **P** **19 03 26.6 -2.7**
comp=Z,31nm,1.2s
ROSC **El Rosal** 64.94 344 P **P** **19 03 32.3 +1.1**
comp=Z,23nm,0.7s,baz=166,slow=4.9,SNR=13
ROSC LR LR 19 34 56.5
comp=Z,1µm,18.8s,baz=201,slow=39
comp=Z,23nm,0.7s
ROSC **El Rosal** 64.94 344 P **P** **19 03 31.6 +0.5**
ROSC IAmb IAmb 19 03 34.0
comp=Z,44nm,0.9s
ROSC **El Rosal** 64.94 344 P **P** **19 03 31.7 +0.5**
ROSC pmax pmax
comp=Z,44nm,1.0s
LKGWB **Lokgwabe** 65.23 96 **P** **19 03 33.6 +0.9**
KOOLE **Kule** 65.64 94 **P** **19 03 34.4 -1.0**
KOOLE IAmb IAmb 19 03 36.1
comp=Z,53nm,0.8s
KOOLE **Kule** 65.64 94 *i* P **P** **19 03 35.4 -0.1**
MAKGR **Makgori** 65.65 100 *i* P **P** **19 03 34.9 -0.6**
NORC **Norcasia** 65.73 344 P **P** **19 03 34.8 -1.1**
comp=Z,27nm,1.2s
RUSC **La Rusia** 65.82 346 P **P** **19 03 35.3 -1.6**
comp=Z,627nmcomp=Z,46nm,1.0s
SKOMA **Sekoma** 66.28 98 *i* P **P** **19 03 39.3 -0.2**
HELC **Santa Helena** 66.44 343 P **P** **19 03 39.1 -1.7**
comp=Z,34nm,0.8s
PTBC **PUERTO BERRIO,** 66.63 345 P P 19 03 36.3 -5.3
LBTB **Lobatse** 66.71 100 LR LR 19 26 13.9
comp=Z,800nm,22.0s,baz=207,slow=30
LBTB **Lobatse** 66.71 100 **P** **19 03 41.2 -1.0**
LBTB IAmb IAmb 19 03 42.8
comp=Z,35nm,0.9s
LBTB **Lobatse** 66.71 100 P **P** **19 03 41.2 -1.0**
LBTB pmax pmax
comp=Z,35nm,0.9s
KGCAE **Kacgae** 66.78 96 IAmb IAmb 19 03 43.5
comp=Z,59nm,0.9s
KGCAE **Kacgae** 66.78 96 *i* P **P** **19 03 42.6 -0.1**
DBBC **Dabeiba** 67.36 343 P **P** **19 03 47.9 +1.6**
TSUM **Tsumeb** 67.45 90 LR LR 19 26 46.7
comp=Z,345nm,21.9s,baz=202,slow=30
GRTLG **Ghanzi** 67.51 94 P **P** **19 03 46.3 -1.1**
GRTLG IAmb IAmb 19 03 48.2
comp=Z,45nm,0.8s
GRTLG **Ghanzi** 67.51 94 *i* P **P** **19 03 47.2 -0.2**
PTAC **Punta Ardita,** 67.74 341 P **P** **19 03 50.7 +2.1**
comp=Z,108nm,1.4s
UREC **San Jos de Ur** 67.98 344 P **P** **19 03 50.3 +0.2**
comp=Z,30nm,1.2s
LPHEP **Lephephe** 68.21 99 *i* P **P** **19 03 51.6 -0.2**
APAC **Apartado, Choc** 68.28 342 P **P** **19 03 54.7 +2.7**
comp=Z,78nm,1.0s
SDV **Santo Domingo** 68.50 349 P **P** **19 03 53.5 -0.1**
comp=Z,9.5nm,0.8s,baz=188,slow=5.8,SNR=13
SDV LR LR 19 36 49.4
comp=Z,873nm,18.5s,baz=172,slow=38
comp=Z,9.5nm,0.8s
SDV **Santo Domingo** 68.50 349 **P** **19 03 52.8 -0.7**
SDV IAMs_20 IAMs_20 19 36 38.9
comp=Z,868nm,19.0s
SDV **Santo Domingo** 68.50 349 *e*P **P** **19 03 53.9 +0.3**
SDV **Santo Domingo** 68.50 349 P **P** **19 03 54.1 +0.5**
comp=Z,211nm,0.9s
KHWEE **KHWEE** 69.18 98 P **P** **19 03 56.8 -1.0**
KHWEE IAmb IAmb 19 04 02.2
comp=Z,40nm,0.8s
KHWEE **KHWEE** 69.18 98 *i* P **P** **19 03 57.8 0.0**
LTZ **Lake Taylor** 69.46 219 **P** **19 04 00.3 +1.1**
BSWZ **Blackbirch Sta** 69.89 220 **P** **19 04 02.9 +1.1**
XAUDM **Khaudum** 69.93 93 P **P** **19 04 02.2 -0.3**
XAUDM IAmb IAmb 19 04 09.6
comp=Z,121nm,1.6s
SJCC **San Jacinto, C** 70.04 344 P **P** **19 04 04.3 +1.4**
BCIP **Isla Barro Col** 70.07 339 P **P** **19 04 00.8 -2.3**
THZ **Tophouse** 70.17 219 P **P** **19 04 03.4 -0.2**
THZ IAmb IAmb 19 04 17.4
comp=Z,40nm,1.2s
BROLN **Tlhalogang** 70.85 99 *i* P **P** **19 04 07.3 -0.8**
URZ **Urewera** 71.87 224 LR LR 19 28 22.4
comp=Z,466nm,19.7s,baz=151,slow=30
MXZ **Matakaoa Point** 72.05 225 IAMs_20 IAMs_20 19 27 52.4
comp=Z,897nm,21.0s
JTS **Las Juntas de** 72.19 334 P **P** **19 04 16.7 +0.8**
comp=Z,32nm,1.1s,baz=129,slow=2.2,SNR=19
comp=Z,32nm,1.1s
JTS **Las Juntas de** 72.19 334 **P** **19 04 16.8 +0.8**
JTS IAmb IAmb 19 04 18.8
comp=Z,58nm,1.2s
JTS **Las Juntas de** 72.19 334 *i* P **P** **19 04 16.9 +0.9**
JTS pmax pmax
comp=Z,48nm,1.2s
JTS **Las Juntas de** 72.19 334 P **P** **19 04 14.7 -1.3**
KSANE **Kasane** 72.51 95 **P** **19 04 17.5 -0.6**
KSANE **Kasane** 72.51 95 *i* P **P** **19 04 18.3 +0.2**
PPT **Papeete** 74.77 261 LR LR 19 30 35.7
comp=Z,268nm,21.3s,baz=176,slow=30
SIUN **Universidad Ur** 75.47 335 IAmb IAmb 19 04 36.7
comp=Z,44nm,0.9s
LSZ **Lusaka** 76.17 97 LR LR 19 33 09.8
comp=Z,396nm,20.0s,baz=212,slow=32
LSZ **Lusaka** 76.17 97 **P** **19 04 39.4 -0.1**
LSZ **Lusaka** 76.17 97 IAMs_20 IAMs_20 19 31 42.8
comp=Z,707nm,21.0s
LSZ **Lusaka** 76.17 97 P **P** **19 04 39.4 -0.1**
LSZ pmax pmax
comp=Z,33nm,1.0s
LSZ MLR MLR
comp=Z,700nm,21.0s
RAR **Rarotonga** 76.76 251 LR LR 19 32 36.6
comp=Z,213nm,18.1s,baz=174,slow=31
SMRT **St. Maarten** 77.12 357 IAMs_20 IAMs_20 19 39 44.7
comp=Z,716nm,19.0s
MLPR **Magueyes Islan** 77.21 353 P **P** **19 04 44.0 -0.9**
MLPR IAmb IAmb 19 04 45.7
comp=Z,60nm,0.9s
CELP **Cerrillos** 77.29 354 P **P** **19 04 43.2 -2.1**
CELP IAmb IAmb 19 04 45.8
comp=Z,40nm,0.9s
SJG **San Juan** 77.31 354 IAMs_20 IAMs_20 19 40 48.4
comp=Z,838nm,20.0s
RAO **Raoul Island** 77.95 232 P **P** **19 04 51.3 +2.2**
comp=Z,177nm,0.3s,baz=274,slow=20,SNR=1.8
RAO **Raoul Island** 77.95 232 P **P** **19 04 48.8 -0.4**
APG **El Apazote** 78.05 330 P **P** **19 04 50.5 +0.6**
comp=Z,1.8nm,0.9s,baz=148,slow=10,SNR=14
APG LR LR 19 32 49.3
comp=Z,48nm,21.1s,baz=118,slow=31
comp=Z,1.8nm,0.9s
SDDR **Presa de Saban** 78.55 349 P **P** **19 04 52.2 -0.2**
SDDR IAMs_20 IAMs_20 19 42 09.2
comp=Z,738nm,20.0s
DBIC **Dimbokro** 79.00 56 P **P** **19 04 55.4 +0.4**
comp=Z,8.6nm,0.9s,baz=222,slow=5.7,SNR=10
DBIC PP **PP** **19 07 53.2 -0.9**
comp=Z,5.7nm,1.1s,baz=186,slow=5.8,SNR=3.7
DBIC LR LR 19 32 37.6
comp=Z,315nm,20.4s,baz=221,slow=30
comp=Z,8.6nm,0.9s
DBIC **Dimbokro** 79.00 56 **P** **19 04 54.5 -0.5**
DBIC IAmb IAmb 19 04 57.1
comp=Z,90nm,1.9s
DBIC **PP** **19 07 51.4 -2.7**
DBIC **Dimbokro** 79.00 56 P **P** **19 04 54.5 -0.5**
DBIC 19 07 51.4
DBIC pmax pmax
comp=Z,90nm,1.9s
VOI **Vohitsoka** 79.66 115 **P** **19 04 58.4 -0.4**
CMIG **Matias Romero** 81.23 327 LR LR 19 33 34.5
comp=Z,478nm,21.9s,baz=164,slow=30
ABPO **Ambohimpanom** 82.36 114 P **P** **19 05 13.7 +0.4**
ABPO **Ambohimpanom** 82.36 114 P **P** **19 05 13.7 +0.4**
ABPO pmax pmax
comp=Z,10.0nm,0.9s
TEIG **Tepich** 82.55 334 P **P** **19 05 13.7 0.0**
OPO **Ambohidratompo** 82.72 114 LR LR 19 37 25.5
comp=Z,141nm,18.7s,baz=2.5,slow=32
EDA **Edea** 83.33 71 **P** **19 05 17.6 -0.5**
STKA **Stephens Creek** 87.36 198 P **P** **19 05 39.9 +1.8**
comp=Z,4.9nm,0.9s,baz=190,slow=12,SNR=5.1
comp=Z,4.9nm,0.9s
STKA **Stephens Creek** 87.36 198 **P** **19 05 37.7 -0.4**
STKA IAmb IAmb 19 05 50.3
comp=Z,30nm,0.8s
STKA **Stephens Creek** 87.36 198 P **P** **19 05 37.7 -0.4**
STKA pmax pmax
comp=Z,30nm,0.8s
TORD **Torodi Ar. Bea** 87.62 59 P **P** **19 05 40.0 +0.6**
comp=Z,3.5nm,0.9s,baz=214,slow=6.8,SNR=16
TORD LR LR 19 40 13.4
comp=Z,211nm,18.8s,baz=210,slow=32
comp=Z,3.5nm,0.9s
NWAO **Narrogin (SRO)** 88.07 178 LR LR 19 43 13.7
comp=Z,1µm,20.1s,baz=196,slow=34
NWAO **Narrogin (SRO)** 88.07 178 **P** **19 05 41.3 -0.2**
NWAO IAmb IAmb 19 05 46.9
comp=Z,52nm,1.1s
NWAO **Narrogin (SRO)** 88.07 178 P **P** **19 05 41.3 -0.2**
NWAO pmax pmax
comp=Z,52nm,1.1s
MBAR **Mbarara** 89.95 91 LR LR 19 41 24.1
comp=Z,426nm,19.7s,baz=199,slow=32
MBAR **Mbarara** 89.95 91 P **P** **19 05 49.4 -1.3**
MBAR **Mbarara** 89.95 91 IAMs_20 IAMs_20 19 41 22.4
comp=Z,604nm,19.0s
MBAR **Mbarara** 89.95 91 *i* P **P** **19 05 51.4 +0.7**
MBAR pmax pmax
comp=Z,5.0nm,1.1s
KIBK **Kibwezi** 92.20 98 IAMs_20 IAMs_20 19 40 06.9
comp=Z,518nm,22.0s
LPIG **La Paz** 92.77 315 LR LR 19 40 55.7
comp=Z,281nm,18.4s,baz=184,slow=31
KMBO **Kilima Mbogo** 92.84 97 LR LR 19 42 25.9
comp=Z,490nm,20.8s,baz=282,slow=32
TXAR **Lajitas Array** 95.37 323 P **P** **19 06 15.4 +0.2**
comp=Z,1.8nm,1.0s,baz=147,slow=7.0,SNR=11
TXAR PKKP **PKKPdf** **19 23 08.0 +1.0**
comp=Z,0.7nm,0.8s,baz=253,slow=3.8,SNR=3.6
TXAR LR LR 19 42 38.8
comp=Z,347nm,19.0s,baz=152,slow=31
comp=Z,1.8nm,1.0s
BRDY **Brady** 95.83 327 **P** **19 06 16.3 -0.8**
ASAR **Alice Springs** 96.51 193 P **P** **19 06 21.1 +0.3**
comp=Z,1.5nm,0.9s,baz=172,slow=4.7,SNR=9.5
ASAR PP **PP** **19 10 16.8 +3.0**
comp=Z,1.8nm,1.1s,baz=165,slow=6.4,SNR=4.0
ASAR LR LR 19 51 03.9
comp=Z,153nm,18.0s,baz=162,slow=36
comp=Z,1.5nm,0.9s
TKL **Tuckaleechee C** 96.64 341 LR LR 19 54 31.5
comp=Z,467nm,19.4s,baz=146,slow=38
CTA **Charters Tower** 97.96 205 LR LR 19 46 10.9
comp=Z,212nm,18.6s,baz=188,slow=33
OK052 **Battle Ridge R** 99.71 331 IAMs_20 IAMs_20 19 59 49.1
comp=Z,482nm,22.0s
WRA **Warramunga Arr** 100.13 194 P **Pdif** **19 06 37.0 0.0**
comp=Z,2.7nm,0.9s,baz=176,slow=4.2,SNR=9.7
WRA PP **PP** **19 10 43.5 +1.9**
comp=Z,0.7nm,0.9s,baz=181,slow=4.8,SNR=2.4
WRA **Warramunga Arr** 100.13 194 **Pdif** **19 06 36.5 -0.5**
WRAB **Tennant Creek** 100.14 194 *i* P **Pdif** **19 06 36.3 -0.7**
WRAB pmax pmax
comp=Z,4.0nm,1.0s
ANMO **Albuquerque** 101.44 323 IAMs_20 IAMs_20 19 46 12.9
comp=Z,411nm,20.0s
ANMO **Albuquerque** 101.44 323 IAMs_20 IAMs_20 19 46 12.8
comp=Z,412nm,20.0s
ANMO **Albuquerque** 101.44 323 IAMs_20 IAMs_20 19 46 12.8
comp=Z,411nm,20.0s
IRM **Iron Mountain** 103.64 316 IAMs_20 IAMs_20 19 47 41.6
comp=Z,523nm,19.0s
PMG **Port Moresby** 108.06 208 PP **PP** **19 11 44.4 +3.6**
comp=Z,3.0nm,0.3s,baz=231,slow=17,SNR=5.1
CART **Cartagena** 108.22 46 IAMs_20 IAMs_20 19 59 01.9
comp=Z,348nm,21.0s
PDAR **Pinedale Array** 109.57 324 PP **PP** **19 11 52.5 -0.3**
comp=Z,0.2nm,0.5s,baz=140,slow=7.2,SNR=3.9
MMRI **Maumere** 112.24 183 IAMs_20 IAMs_20 19 55 45.6
comp=Z,351nm,22.0s
VSL **Villasalto** 113.91 52 IAMs_20 IAMs_20 19 55 15.1
comp=Z,441nm,19.0s
BMO **Blue Mountains** 113.92 319 IAMs_20 IAMs_20 19 53 46.1
comp=Z,316nm,21.0s
PMBI **Palembang** 116.81 163 IAMs_20 IAMs_20 19 57 24.4
comp=Z,402nm,20.0s
RAYN **Ar Rayn** 117.90 91 IAMs_20 IAMs_20 19 59 27.9
comp=Z,314nm,20.0s
BKNI **Bangkinang** 119.36 158 IAMs_20 IAMs_20 19 57 54.0
comp=Z,410nm,20.0s
PALK **Pallekele** 120.17 134 IAMs_20 IAMs_20 20 03 52.5
comp=Z,365nm,19.0s
RPSI **Rantau Prapat** 121.24 155 IAMs_20 IAMs_20 20 01 53.9
comp=Z,393nm,19.0s
TOLI2 **Tolitoli** 121.95 181 IAMs_20 IAMs_20 20 04 11.8
comp=Z,342nm,20.0s
GERES **GERESS Array B** 123.40 49 PKP **PKiKP** **19 11 48.7 +1.1**
comp=Z,0.7nm,0.8s,baz=204,slow=2.2,SNR=2.7
IPM **Ipoh** 123.41 157 IAMs_20 IAMs_20 19 58 19.3
comp=Z,301nm,20.0s
KULM **Kulim** 124.12 157 IAMs_20 IAMs_20 19 57 07.2
comp=Z,409nm,22.0s
UOSS **Minazif** 124.53 99 IAMs_20 IAMs_20 20 00 15.0
comp=Z,397nm,22.0s
BRTR **Keskin Array B** 124.94 70 PKP **PKiKP** **19 11 51.0 +0.1**
comp=Z,2.9nm,0.8s,baz=195,slow=2.0,SNR=5.4
ARPR **Arapgir-MALATY** 126.74 74 IAMs_20 IAMs_20 19 54 37.1
comp=Z,251nm,21.0s
KMPD **K-Podol'skiy** 128.44 58 PKP **PKiKP** **19 11 57.7 +0.3**
YKA **Yellowknife Ar** 128.45 331 PKP **PKiKP** **19 11 57.1 +0.1**
comp=Z,1.0nm,0.7s,baz=152,slow=1.6,SNR=14
YKA SKKPbc SKKPbc 19 25 09.7 +0.2
comp=Z,0.1nm,0.4s,baz=333,slow=4.6,SNR=3.6
YKA **Yellowknife Ar** 128.45 331 **PKPdf** **19 11 55.9 -0.5**
YKA **Yellowknife Ar** 128.45 331 PKIKP **PKPdf** **19 11 55.9 -0.5**
HYB **Hyderabad** 128.56 126 *e*PKiKP **PKiKP** **19 11 58.5 -0.2**
HYB *e*SKSac **SKSac** **19 19 05.8 0.0**
ILON **Igloolik, Nuna** 129.34 350 **PKPdf** **19 11 57.6 -0.2**
S34M **Telegraph Cree** 129.54 319 **PKPdf** **19 11 57.5 -1.1**
LUBAR **Lubar, Ukraine** 130.02 58 PKP **PKPdf** **19 11 59.6 -0.2**
RNPP1 **Kostyukhnivka** 130.24 55 PKP **PKiKP** **19 12 00.9 -0.1**
GNI **Garni** 130.73 78 *i* PKIKP **PKPdf** **19 12 01.6 -0.1**
SOC **Sochi** 130.83 71 *i* PKIKP **PKiKP** **19 12 02.2 -0.2**
SOC *e* 19 14 18.4
SOC *e*SS SS 19 31 42.9 -5.2
AK13 **Malin Array Si** 131.10 58 PKP **PKiKP** **19 12 02.2 -0.5**
AK12 **Malin Array Si** 131.16 58 PKP **PKiKP** **19 12 03.0 +0.2**
AKASG **Malin Array Be** 131.23 58 PKP **PKiKP** **19 12 02.6 -0.4**
comp=Z,1.9nm,0.8s,baz=256,slow=1.6,SNR=5.5
AKASG **Malin Array Be** 131.23 58 **PKPdf** **19 12 00.6 -1.5**
AKASG **Malin Array Be** 131.23 58 PKIKP **PKPdf** **19 12 00.6 -1.5**
AKBB **Malin Array Si** 131.23 58 *i* PKIKP **PKiKP** **19 12 03.0 0.0**
AKBB **Malin Array Si** 131.23 58 PKP **PKiKP** **19 12 03.6 +0.6**
SUMG **Summit** 132.46 9 *i* P **PKiKP** **19 12 11.0 +5.6**
KBZ **Khabaz** 132.49 73 PKP **PKiKP** **19 12 05.1 -0.6**
comp=Z,4.4nm,1.1s,baz=116,slow=3.1,SNR=2.9
KIV **Kislovodsk** 132.55 73 *i* PKIKP **PKiKP** **19 12 05.5 -0.5**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV pmax pmax
comp=Z,180nm,23.0s
MNK **Minsk** 133.41 53 *i* PKP **PKPdf** **19 12 06.0 0.0**
MNK comp=E,10.0nm,0.8s
MNK *i* PKP **PKPdf** **19 12 06.0 0.0**
MNK comp=N,17nm,1.2s
MNK *i* PKP **PKPdf** **19 12 06.0 0.0**
MNK comp=Z,6.0nm,0.6s,baz=224
MNK *i* PP **PP** **19 14 33.8 -1.0**
MNK *i* PPP PPP 19 17 26.6
MNK *i* SKS **SKSac** **19 19 17.2 0.0**
MNK *i* SS **SS** **19 32 19.9 +0.6**
MNK *i* SSS SSS 19 37 16.2
MNK *i* LQ LQ 20 03 27.5
MNK **Minsk** 133.41 53 *i* PKIKP **PKPdf** **19 12 06.0 0.0**
MNK *i* 19 14 33.8
MNK *i* PPP PPP 19 17 26.5
MNK *i* 19 19 17.2
MNK *i* SS SS 19 32 19.8 +0.5
MNK *i* SSS SSS 19 37 16.1
MNK pmax pmax
comp=Z,6.0nm,0.6s
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK pmax pmax
comp=N,17nm,1.2s
MNK MLR MLR
comp=Z,235nm,17.0s
MNK MLR MLR
comp=N,137nm,17.0s
MNK MLR MLR
comp=E,202nm,15.0s
MAK **Makhachkala** 134.21 77 *e*P **Pdif** **19 09 06.1 -1.6**
MAK *i* 19 12 06.6
MAK *e* 19 14 37.3
MAK *e*PPP PPP 19 17 37.0
MAK *e* 19 19 22.1
MAK *e*PS **PS** **19 25 04.8 +5.8**
MAK *e*SS SS 19 32 29.4 +0.2
MAK *e*SSS SSS 19 37 20.5
MAK pmax pmax
comp=Z,95nm,1.0s
MAK MLR MLR
comp=Z,428nm,15.0s
CMAR **Chiang Mai Arr** 136.46 151 PKP **PKiKP** **19 12 13.5 -1.1**
comp=Z,2.2nm,1.0s,baz=220,slow=2.8,SNR=6.8

CMAR	Chiang Mai Arr	136.46	151			PKPdf	19 12 10.9	-2.0	
NEEM	North Greenlan	136.63	3	*i*	P	PKPdf	19 12 12.1	+0.3	
CHTO	Chiang Mai	136.80	150		IAMs_20	IAMs_20	20 11 32.8		
	comp=Z,308nm,20.0s								
BCAR	Beaver Creek A	136.91	319			PKPdf	19 12 11.9	-0.5	
F31M	Tsiigehtchic	137.40	327		PKPdf	PKPdf	19 12 12.7	-0.3	
OBN	Obninsk	137.50	58	⇑*i*	PKIKP	PKiKP	19 12 15.9	+0.4	
OBN				*e*			19 15 00.9		
OBN				*e*	SSS	SSS	19 38 11.5		
OBN					pmax	pmax			
	comp=Z,5.0nm,1.1s								
QIZ	Qiongzhong	139.11	165		PKP	PKPdf	19 12 16.4	-1.4	
QIZ					SS	SS	19 33 26.8	+0.4	
QIZ					LR	LR			
	comp=Z,290nm,15.2s								
QIZ					LR	LR			
	comp=Z,200nm,13.2s								
QIZ					LR	LR			
	comp=Z,460nm,26.0s								
ILAR	Eielson Array	139.74	319		PKhKP	PKPpre	19 12 09.7		
	comp=Z,0.6nm,0.7s,baz=174,slow=2.0,SNR=4.6								
ILAR					PKP	PKiKP	19 12 19.4	-0.4	
	comp=Z,2.4nm,1.0s,baz=190,slow=2.0,SNR=10								
ILAR	Eielson Array	139.74	319			PKPdf	19 12 15.8	-1.7	
WRH	Wood River Hil	139.97	318			PKPdf	19 12 16.7	-1.2	
CCB	Clear Creek Bu	139.97	318			PKPdf	19 12 17.4	-0.5	
BELG	Belogornoye	140.76	67	*i*	PKIKP	PKiKP	19 12 21.7	-0.6	
BELG					pmax	pmax			
	comp=Z,3.0nm,1.0s								
ARCES	ARCESS Array B	142.19	35		PKP	PKPdf	19 12 21.8	0.0	
	comp=Z,4.8nm,0.8s,baz=224,slow=2.5,SNR=3.7								
TNCH	TengChong	142.62	147		PKP	PKPdf	19 12 23.3	-0.9	
APA	Apatity	143.62	40	⇓*i*	PKHKP	PKPpre	19 12 19.6		
APA				*e*	SS	SS	19 34 20.1	+0.7	
APA					pmax	pmax			
	comp=Z,10.0nm,1.3s								
APA					MLR	MLR			
	comp=Z,1μm,5.6s								
KMI2	Kunming	143.81	153		PKP	PKiKP	19 12 28.7	-1.1	
KMI2					LR	LR			
	comp=Z,310nm,18.5s								
KMI2					LR	LR			
	comp=Z,150nm,16.9s								
KMI2					LR	LR			
	comp=Z,290nm,22.3s								
TPUB	Ta-pu	144.01	181			PKPbc	19 12 24.2	-0.1	
LVZ	Lovozero	144.19	40	*i*	PKIKP	PKPdf	19 12 24.9	-0.5	
I17K	Unalakleet	144.22	312			PKPbc	19 12 24.5	+0.7	
LSA	Lhasa	144.55	134		PKP	PKPab	19 12 22.7	-3.6	
SPITS	Spitsbergen Ar	144.63	20		PKP	PKPdf	19 12 26.0	+0.1	
	comp=Z,24nm,0.8s,baz=215,slow=7.1,SNR=8.9								
ABKAR	Akbulak array	144.80	79			PKPab	19 12 25.0	-1.0	
PZH	PanZhiHua	144.87	151		PKP	PKPbc	19 12 27.0	-0.1	
PZH					PP	PP	19 15 54.7	+9.4	
PZH					AMB	AMB			
	comp=Z,100nm,5.4s								
PZH					LR	LR			
	comp=Z,200nm,18.4s								
PZH					LR	LR			
	comp=Z,170nm,16.9s								
PZH					LR	LR			
	comp=Z,230nm,22.2s								
CHM	Chimkent	145.00	96	*e*	PKIKP	PKPab	19 12 26.2	-0.8	
CHM	Chimkent	145.00	96	*e*	PKP	PKPab	19 12 26.3	-0.8	
IUG	Iuzhnay	145.10	97	*e*	PKIKP	PKPbc	19 12 26.3	-1.1	
IUG				*e*			19 15 45.3		
IUG	Iuzhnay	145.10	97	*e*	PKP	PKPbc	19 12 26.4	-1.1	
IUG				*e*	PP	PP	19 15 45.3	-1.9	
KIRV	Kirov	145.22	60	*c*	*i* PKIKP	PKPdf	19 12 27.3	0.0	
GULI	GuiLin	145.35	165		PKPbc	PKPdf	19 12 30.1	+1.4	
KSH2	Kashi	145.62	106		PKPbc	PKPab	19 12 29.5	-0.1	
KSH2					LR	LR			
	comp=Z,250nm,16.5s								
KSH2					LR	LR			
	comp=Z,220nm,15.5s								
KSH2					LR	LR			
	comp=Z,140nm,15.8s								
BRLS	Boroldoy	145.64	96	*e*	PKP2	PKPdf	19 12 26.8	-1.9	
BRLS	Boroldoy	145.64	96	*e*	PKP	PKPdf	19 12 26.9	-1.8	
GYA	Guiyang	145.90	159		PKPbc	PKPab	19 12 30.8	-0.1	
GYA					LR	LR			
	comp=Z,440nm,23.3s								
KKAR	Karatay Array	146.03	96			PKPdf	19 12 28.2	-1.2	
KKAR	Karatay Array	146.03	96		PKIKP	PKPdf	19 12 28.2	-1.2	
DZA	Taraz	146.30	97	*e*	PKIKP	PKPdf	19 12 28.4	-1.4	
DZA	Taraz	146.30	97	*e*	PKP	PKPdf	19 12 28.5	-1.4	
EKS2	Erkin-Say	147.37	100		P	PKPbc	19 12 32.9	-1.3	
	SNR=15								
UCH	Uchtor	147.43	101		P	PKPbc	19 12 35.5	+0.7	
	SNR=14								
AAK	Ala-Archa	147.72	101		P	PKPbc	19 12 35.8	+0.5	
	SNR=10								
AAK	Ala-Archa	147.72	101		PKPdf	PKPdf	19 12 30.3	-2.1	
AAK						PKPbc	19 12 34.8	-0.4	
AAK	Ala-Archa	147.72	101	*c*	*i* PKP2	PKPbc	19 12 35.7	+0.5	
AAK					pmax	pmax			
	comp=Z,24nm,1.3s								
KBK	Karagaybulak	147.96	101		P	PKPbc	19 12 35.6	-0.2	
	SNR=11								
CHMS	Chumysh	148.11	101		P	PKPbc	19 12 35.9	-0.2	
	SNR=13								
USP	Ospenovka	148.18	100		P	PKPbc	19 12 36.4	+0.2	
	SNR=8.9								
ARTI	Arti	148.19	68		PKPdf	PKPdf	19 12 30.5	-2.0	
ARTI						sPKPdf	19 12 35.3	-0.3	
ARTI	Arti	148.19	68	*i*	PKP2	PKPbc	19 12 34.6	-1.2	
ARTI							19 16 02.7		
ARTI					SS	SS	19 35 12.1	+0.1	
MDOK	Medeo	149.38	103	*e*	PKIKP	PKPpre	19 12 33.5		
MDOK	Medeo	149.38	103	*e*	PKP	PKPdf	19 12 33.5	-1.5	
CD2	Chengdu	149.58	152		PKPbc	PKPbc	19 12 40.2	0.0	
CD2					sPKP	sPKPbc	19 12 43.0	-0.3	
CD2					pPKP	pPKPab	19 12 46.3	-1.2	
CD2					SKS	SKSdf	19 19 42.5	-1.0	
CD2					LR	LR			
	comp=Z,460nm,23.9s								
CD2					LR	LR			
	comp=Z,380nm,25.9s								
CD2					LR	LR			
	comp=Z,460nm,26.3s								
SATY	Saty	149.98	104	*e*	PKIKP	PKPdf	19 12 34.3	-1.7	
SATY				*e*			19 16 13.9		
SATY	Saty	149.98	104	*e*	PKP	PKPdf	19 12 34.3	-1.7	
SATY				*e*	PP	PP	19 16 14.0	-1.8	
UZB	Uzynbulak	150.35	105	*e*	PKIKP	PKPdf	19 12 34.9	-1.7	
UZB				*e*			19 16 16.3		
UZB	Uzynbulak	150.35	105	*e*	PKP	PKPdf	19 12 35.0	-1.7	
UZB				*e*	PP	PP	19 16 16.4	-1.6	
SHLS	Shalkode	150.58	105	*e*	PKIKP	PKPdf	19 12 35.7	-1.2	
SHLS	Shalkode	150.58	105	*e*	PKP	PKPdf	19 12 35.7	-1.2	
WHN	Wuhan	150.99	170		PKPbc	PKPab	19 12 47.3	-3.6	
TDK	Taldyqorghan	151.38	101	*e*	PKIKP	PKPdf	19 12 36.5	-1.4	
TDK	Taldyqorghan	151.38	101	*e*	PKP	PKPdf	19 12 36.5	-1.4	
GOMU	GeErMu	151.72	134		PKPbc	PKPdf	19 12 39.3	+0.1	
BORK	Borovoye	152.30	81		PKPdf	PKPdf	19 12 37.6	-1.4	
BORK						PKPbc	19 12 45.6	-0.2	
BORK	Borovoye	152.30	81		PKIKP	PKPdf	19 12 37.6	-1.4	
BORK							19 12 45.7		
BVAR	Borovoye Array	152.33	81		PKP	PKPdf	19 12 39.6	+0.5	
	comp=Z,1.4nm,0.9s,baz=255,slow=2.8,SNR=4.0								
BVAR					PKPbc	PKiKP	19 12 45.9	-0.2	
	comp=Z,9.5nm,0.8s,baz=226,slow=3.9,SNR=5.0								
NJ2	Nanjing	152.72	178	*e*	PKPbc	PKPdf	19 12 40.5	+0.2	
JMN	Monobe	152.75	206		PKPdf	PKPdf	19 12 37.5	-2.9	
JMN					PKPbc	PKPbc	19 12 46.3	-1.2	
XAN	Xi'an	153.70	159	⇑	PKPbc	PKiKP	19 12 49.5	-0.2	
MJAR	Matsushiro Arr	154.27	216		PKPbc	PKiKP	19 12 52.5	+1.8	
	comp=Z,1.2nm,0.8s,baz=180,slow=2.0,SNR=2.2								
MJAR					PKPab	pPKPab	19 13 05.7	-1.0	
	comp=Z,2.9nm,0.8s,baz=193,slow=5.9,SNR=5.3								
LZDM	Lanzhou Array	154.36	149		PKP	PKPdf	19 12 44.4	+1.4	
	comp=Z,0.7nm,0.4s,baz=225,slow=6.1,SNR=5.1								
LZDM					PKPbc	PKiKP	19 12 52.2	+0.8	
	comp=Z,2.9nm,0.7s,baz=222,slow=7.8,SNR=6.4								
LZDM					PKPab	PKPab	19 13 05.7	+0.3	
	comp=Z,8.7nm,0.8s,baz=189,slow=8.8,SNR=7.9								
MAKZ	Makanchi	154.43	102		PKPdf	PKPdf	19 12 40.0	-2.3	
MAKZ						sPKPdf	19 12 47.1	+1.6	
MAKZ	Makanchi	154.43	102		PKIKP	PKPdf	19 12 40.1	-2.3	
MAKZ							19 12 47.1		
LZH	Lanzhou	154.52	149		PKPbc	PKiKP	19 12 51.3	-0.2	
LZH					sPKP	sPKPab	19 13 09.8	+0.8	
MKAR	Makanchi Array	154.58	103		PKP	PKPdf	19 12 42.1	-0.5	
	comp=Z,0.4nm,0.8s,baz=345,slow=7.5,SNR=2.7								
MKAR					PKPbc	PKiKP	19 12 51.2	+0.2	
	comp=Z,1.9nm,0.8s,baz=294,slow=1.2,SNR=11								
MKAR					PKPab	PKPab	19 13 06.2	+0.4	
	comp=Z,3.9nm,0.9s,baz=208,slow=2.1,SNR=7.3								
MKAR	Makanchi Array	154.58	103			PKPdf	19 12 40.5	-2.1	
WMQ	Urumqi	155.05	114	*e*	PKPbc	PKPdf	19 12 43.9	+0.5	
WMQ					PKPab	PKPab	19 13 08.0	+0.1	
WMQ					LR	LR			
	comp=Z,170nm,24.1s								
KURBB	Kurchatov Arra	155.12	92		PKP	PKPdf	19 12 43.8	+0.7	
	comp=Z,2.6nm,1.1s,baz=246,slow=1.9,SNR=7.1								
KURBB					PKPbc	pPKPbc	19 12 51.9	-2.4	
	comp=Z,1.9nm,0.9s,baz=244,slow=2.1,SNR=6.5								
KURBB					PKPab	PKPab	19 13 07.4	-0.6	
	comp=Z,1.8nm,0.8s,baz=241,slow=2.9,SNR=6.1								
KURK	Kurchatov	155.22	92			PKPdf	19 12 41.5	-1.7	
KURK	Kurchatov	155.22	92		PKIKP	PKPdf	19 12 43.8	+0.6	
KURK							19 12 51.9		
KURK							19 13 07.4		
GTA2	Gaotai	156.42	138		PKP	PKPdf	19 12 50.1	+4.7	
KSRS	Korea Array	157.50	197		PKPab	PKPab	19 13 19.8	+1.4	
	comp=Z,2.4nm,1.0s,baz=178,slow=4.9,SNR=4.4								
BILL	Bilibino	158.18	313		PKPdf	PKPdf	19 12 45.2	-1.3	
BILL						PKPab	19 13 20.4	-0.3	
DL2	Dalian	159.53	184	*e*	PKP	PKPdf	19 12 53.0	+4.0	
DL2					PKPab	PKPab	19 13 27.0	-0.2	
DL2					PP	PP	19 17 17.3	+8.9	
DL2					AMB	AMB			
	comp=Z,330nm,4.9s								
DL2					LR	LR			
	comp=Z,180nm,16.2s								
DL2					LR	LR			
	comp=Z,220nm,18.4s								
DL2					LR	LR			
	comp=Z,350nm,15.8s								
ZALV	Zalesovo Beam	160.18	90		PKP	PKPdf	19 12 49.7	+0.4	
	comp=Z,0.3nm,0.5s,baz=180,slow=0.7,SNR=1.7								
ZALV					PKPab	PKPab	19 13 28.2	-1.5	
	comp=Z,1.7nm,0.8s,baz=239,slow=4.7,SNR=4.9								
ZALV					PP	PP	19 17 13.0	+0.4	
	comp=Z,1.0nm,0.9s,baz=289,slow=4.5,SNR=4.4								
BTO2	Baotou	160.38	157	*e*	PKP	PKPab	19 13 34.8	+3.8	
BTO2					PP	PP	19 18 02.0	+49	
BJI2	Beijing	160.54	172		PKP	PKPdf	19 12 51.0	+0.8	
BJI2					PP	PP	19 17 15.7	+1.8	
BJI2					SKS	SKSdf	19 19 55.8	+0.8	
BJI2					AMB	AMB			
	comp=Z,120nm,7.6s								
BJI2					LR	LR			
	comp=Z,130nm,20.9s								
BJI2					LR	LR			
	comp=Z,86nm,22.5s								
BJI2					LR	LR			
	comp=Z,180nm,19.4s								
HHC	Hu-ho-hao-te	160.79	161	*e*	PKP	PKPdf	19 12 46.4	-4.2	
HHC					LR	LR			
	comp=Z,160nm,19.9s								
HHC					LR	LR			
	comp=Z,160nm,14.2s								
HHC					LR	LR			
	comp=Z,290nm,23.7s								
YSS	Yuzhno-Sakhali	161.62	238	*e*	PKP2	PKPab	19 13 38.0	+1.9	
YSS				*e*			19 17 22.2		
YSS				*e*	SS	SS	19 37 39.1	+1.9	
SEY	Seymchan	163.97	297		PKPab	PKPab	19 13 46.9	+0.8	
	comp=Z,6.4nm,1.1s,baz=131,slow=3.1,SNR=7.1								
CN2	Changchun	164.08	195		PKP	PKPdf	19 12 54.6	+1.0	
CN2					SKKS		19 24 23.0		
XLT	XiLinHaoTe	164.39	170	*e*	PKP	PKPdf	19 12 54.0	0.0	
XLT					PKPab	PKPab	19 13 45.9	-2.6	
XLT					PP	PP	19 17 33.7	-0.8	
XLT					SS	SS	19 38 04.8	-0.5	
XLT					AMB	AMB			
	comp=Z,110nm,5.7s								
XLT					LR	LR			
	comp=Z,23nm,18.7s								
XLT					LR	LR			
	comp=Z,220nm,21.7s								
XLT					LR	LR			
	comp=Z,330nm,20.4s								
SONM	Songino Array	166.04	140		PKPab	PKPab	19 13 55.5	-0.3	
	comp=Z,7.3nm,0.8s,baz=201,slow=4.4,SNR=18								
SONM	Songino Array	166.04	140		PKPdf	PKPdf	19 12 52.2	-3.1	
SONM						PKPab	19 13 54.1	-1.7	
SONM	Songino Array	166.04	140		PKIKP	PKPdf	19 12 52.2	-3.1	
SONM							19 13 54.1		
ULN	Ulaanbaatar	166.28	141		PKPdf	PKPdf	19 12 53.5	-2.0	
ULN						PKPab	19 13 55.9	-0.9	
ULN	Ulaanbaatar	166.28	141		PKIKP	PKPdf	19 12 53.5	-2.0	
ULN							19 13 55.9		
TIXI	Tiksi	167.09	347		PKPab	PKPab	19 14 00.0	+0.5	
	comp=Z,6.8nm,0.8s,baz=49,slow=5.6,SNR=23								
TIXI	Tiksi	167.09	347		PKPdf	PKPdf	19 12 54.8	-0.4	
TIXI						PKPab	19 13 58.9	-0.7	
TIXI	Tiksi	167.09	347		PKIKP	PKPdf	19 12 54.8	-0.4	
HILR	Hailar Array B	170.22	180		PKPab	PKPab	19 14 15.2	+1.2	
	comp=Z,14nm,1.1s,baz=177,slow=7.4,SNR=8.5								

IDC ***07*** *19:35:07.9±0.8, 35.27N×27.93E, h0km, mb3.8/16, mbtmp3.7/23, ML3.3/7, Error ellipse: s-maj=16.5km s-min=14.1km az=8.0*

AFAD ***07*** *19:35:08.0, 34.96N×27.87E, h92km±55km, ML3.3*
GII ***07*** *19:35:08.8±0.0, 35.198N±0.001×28.032E±0.001, h0km, Mws3.6, confirmed*

NEIC ***07*** *19:35:09.1±2.2, 35.20N±0.05×28.01E±0.05, h6km±2km, mb4.3/14, Error ellipse: s-maj=7.3km s-min=5.1km az=196.0*

ISK ***07*** *19:35:09.0, 35.13N×27.95E, h20km, ML3.4/14*

ATH ***07*** *19:35:11.2, 35.28N×28.08E, h14km±4km, ML3.5/13, Manual Solution by I.Dede First location: 2020/02/07 19:36:35, This location: 2020/10/26 16:57:51 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 07 19:35:08.7±1.4, 35.19N±0.03×28.01E±0.02, h10km±9km, n145, σ1§17/176, mb3.9/18, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.78	297		Pg	19 35 23.5	-0.3
KARP					Sb	19 35 34.8	-0.3
KARP	Karpathos	0.78	297	Pg	Pb	19 35 24.6	+0.2
KARP				Sg	Sn	19 35 35.9	-1.8
KARP	Karpathos	0.78	297	P	Pn	19 35 26.7	+0.8
KARP				S	Sn	19 35 37.1	-0.5
ARG	Arkhangelos	1.03	5		Pg	19 35 28.6	+0.1
ARG	Arkhangelos	1.03	5	Pn	Pn	19 35 29.7	+0.5
ARG				Sn	Sn	19 35 44.6	+0.9
ARG	Arkhangelos	1.03	5	P	Pn	19 35 29.3	0.0
ZKR	Zakros	1.47	267	Pn	Pn	19 35 34.8	-0.6
ZKR	Zakros	1.47	267	P	Pg	19 35 38.0	+1.0
YAZI	Mula-Dat§a-	1.55	343	P	Pb	19 35 37.8	+0.2
YAZI				IAML		19 36 07.0	
	comp=N,239nm,0.5s						
YAZI				IAML		19 36 07.0	
	comp=E,234nm,0.9s						
SIT2	Siteia	1.56	271	P	Pg	19 35 39.2	+0.6
DAT	Datca	1.57	347	Pn	Pn	19 35 37.1	+0.2
DAT				Sn	Sb	19 35 58.2	+0.2
IZZE	Mula-Seydike	1.59	38	P	Pn	19 35 36.7	-0.3
TURN	Turunc	1.59	7	Pn	Pb	19 35 38.5	+0.3
TURN	Turunc	1.59	7	P	Pg	19 35 39.4	+0.2
TURN				IAML		19 36 05.0	
	comp=E,286nm,0.6s						
TURN				IAML		19 36 11.0	
	comp=N,216nm,0.9s						
AKAS	Kas	1.66	51		Pb	19 35 39.2	-0.3
AKAS	Kas	1.66	51	Pn	Pb	19 35 39.4	-0.1
AKAS	Kas	1.66	51	P	Pb	19 35 39.4	-0.1
AKAS				IAML		19 36 26.0	
	comp=E,229nm,1.0s						
AKAS				IAML		19 36 34.0	
	comp=N,450nm,0.8s						
FETY	Fethiye	1.68	31	P	Pn	19 35 28.5	-10
DALY	Dalyan (Mula)	1.70	18	Pn	Pb	19 35 39.6	-0.6
SABU	Mula-Dalaman	1.80	25	P	Pn	19 35 39.4	-0.5
BDRM	Kayabasi	1.92	346	P	Pb	19 35 42.7	-1.3
BDRM				S	Sb	19 36 08.8	+0.8
BDRM				IAML		19 36 24.0	
	comp=E,166nm,0.9s						
BODT	Bodrum	1.95	343	Pn	Pn	19 35 42.7	+0.7
BODT	Bodrum	1.95	343	P	Pn	19 35 42.1	+0.2
BODT				IAML		19 36 22.0	
	comp=N,173nm,0.7s						
YER	Yerkesik	1.95	6	Pn	Pb	19 35 42.9	-1.5
YER	Yerkesik	1.95	6	P	Pb	19 35 44.3	-0.1
YER				S	Sg	19 36 14.3	+2.8
NPS	Neapolis	1.96	273	P	Pb	19 35 44.8	+0.2
CAME	Cameli-Denizli	2.04	31	Pn	Pn	19 35 44.3	+1.0
MULA	Mugla, Merkez-	2.08	7	P	Pg	19 35 47.6	-0.9
KNIK	Mula-Seydike	2.08	37	P	Pb	19 35 45.4	-1.3
MLSB	Milas	2.11	355	Pn	Pn	19 35 44.8	+0.7
MLSB	Milas	2.11	355	P	Pg	19 35 48.1	-1.0
ELL	Elmali	2.19	44		Pb	19 35 47.8	-0.7
ELL	Elmali	2.19	44	P	Pb	19 35 48.1	-0.4
CAEL	Denizli, Camel	2.20	28	P	Pn	19 35 46.0	+0.5
CAEL				IAML		19 36 36.0	
	comp=E,292nm,0.9s						
CAEL				IAML		19 36 57.0	
	comp=N,296nm,0.8s						
THERA	Ancient Thera,	2.37	300	P	Pb	19 35 50.0	-1.6
TAVA	DENIZLI_Tavas	2.38	18	P	Pb	19 35 50.8	-1.0
TAVA				IAML		19 36 55.0	
	comp=E,106nm,0.9s						
GOLH	Golhisar	2.40	31	P	Pn	19 35 49.2	+1.1
GOLH				S	Sb	19 36 20.2	-1.4
GOLH				IAML		19 36 23.0	
	comp=E,162nm,0.7s						
GOLH				IAML		19 36 27.0	
	comp=N,120nm,0.6s						
SNT5	Nea Kammeni, S	2.44	300	P	Pn	19 35 50.3	+1.6
AYDN	Tasoluk	2.47	358	P	Pb	19 35 50.8	-2.4
AYDN				IAML		19 36 37.0	
	comp=E,110nm,0.6s						
AYDN				IAML		19 36 42.0	
	comp=N,116nm,0.6s						
IDI	Anoyia	2.56	273	Pn	Pb	19 35 53.3	-1.5
	8.8nm,0.3s,baz=117,slow=13,SNR=44						
IDI					Sn	19 36 21.2	-0.4
	6.7nm,0.3s,baz=106,slow=21,SNR=5.6						
IDI	Anoyia	2.56	273		Pn	19 35 52.0	+1.7
IDI	Anoyia	2.56	273	Pn	Pn	19 35 49.6	-0.7
IDI	Anoyia	2.56	273	P	Pb	19 35 53.2	-1.5
DNIZ	Denizli-Tavas-	2.57	19	P	Pn	19 35 51.9	+1.4
DNIZ				IAML		19 36 46.0	
	comp=N,136nm,0.8s						
DNIZ				IAML		19 36 49.0	
	comp=E,204nm,0.4s						
GCAM	G?zelcaml?	2.58	346	Pn	Pn	19 35 51.9	+1.3
GCAM	G?zelcaml?	2.58	346	P	Pn	19 35 50.8	+0.3
GCAM				IAML		19 36 52.0	
	comp=E,91nm,1.6s						
GCAM				IAML		19 36 55.0	
	comp=N,101nm,1.0s						
ESEN	Aydn-Nazilli	2.62	6	P	Pn	19 35 52.5	+1.4
ESEN				S	Sb	19 36 27.3	-0.6
ESEN				IAML		19 36 44.0	
	comp=E,113nm,0.7s						
SMG	Samos	2.68	340	P	Pn	19 35 53.1	+1.0
APE	Apeiranthos	2.75	314	Pn	Pn	19 35 52.5	-0.4
APE	Apeiranthos	2.75	314	P	Pn	19 35 52.8	-0.1
INCE	Denizli-Bozkur	2.81	26	P	Pb	19 35 56.8	-2.3
INCE				IAML		19 36 52.0	
	comp=N,79nm,0.6s						
INCE				IAML		19 37 10.0	
	comp=E,76nm,0.8s						
SULTU	Buldan	2.92	12	P	Pn	19 35 55.8	+0.4
SULTU				IAML		19 37 04.0	
	comp=N,83nm,0.9s						
SULTU				IAML		19 37 06.0	
	comp=E,104nm,1.4s						
DGB	zmir	3.00	343	P	Pn	19 35 56.3	0.0
VAM	Vamos	3.12	275	P	Pb	19 36 02.6	-1.8
IMMV	Iera Moni Meta	3.31	276	P	Pn	19 36 03.5	+2.9
MANT	Manisa	3.32	7	Pn	Pn	19 36 01.6	+0.6
MANT	Manisa	3.32	7	P	Pn	19 36 02.3	+1.3
KULA	Kula-Manisa	3.36	9	P	Pn	19 36 01.7	+0.4
CHOS	Chios island	3.55	334	P	Pn	19 36 05.3	+1.2
KARY	Karystos	4.04	316	P	Pb	19 36 15.1	-4.9
KTHA	Kythira Island	4.16	286	P	Pn	19 36 14.3	+2.0
VLY	Voula,Athens	4.31	309	Pn_2		19 36 14.3	
VLY				P	Pn	19 36 17.6	+3.2
ASGA	Asgata	4.32	94	P	Pn	19 36 15.6	+1.1
DION	Dionisos Attik	4.36	312	P	Pn	19 36 15.9	+0.8
CSS	Mathiatis	4.37	91	Pn	Pn	19 36 14.9	-0.3
CSS	Mathiatis	4.37	91	P	Pn	19 36 14.4	-0.9
CSS				S	Sn	19 37 05.7	-0.6
CSS	Mathiatis	4.37	91	P	Pn	19 36 16.3	+1.1
VLI	Veliai	4.39	292	P	Pn	19 36 16.8	+1.4
MET2	Kameni Chora,	4.48	304	P	Pn	19 36 20.4	+3.6
MVOU	Mavrovouni	4.61	91	P	Pn	19 36 19.5	+1.0
STFN	Stefani	4.66	311	P	Pn	19 36 21.3	+2.0
VIL2	Platees	4.86	310	P	Pn	19 36 23.3	+1.4
ITM	Ithomi	5.30	294	Pn	Pn	19 36 30.0	+1.9
ALN	Alexandroupoli	5.90	345	Pn	Pn	19 36 37.9	+1.7
RDO	Rodhopi	6.25	343	Pn	Pn	19 36 41.6	+0.5
HNTI	Hanita	6.30	107	P	Pn	19 36 41.6	-0.1
HNTI				S	S

RAFF	**Raffo Rosso**	**11.21**	**284**	Pn		**Pn**	**19 37 47.8**	**-1.3**
BURAR	**Bucovina Array**	**12.59**	**351**	Pn		**Pn**	**19 38 07.7**	**-0.2**
BUR08	**Bucovina Ar. S**	**12.62**	**351**	Pn		**Pn**	**19 38 09.1**	**+0.8**
NRCA	**Norcia**	**13.86**	**308**	Pn		**Pn**	**19 38 25.3**	**0.0**
KBZ	**Khabaz**	**14.30**	**49**	Pn		**P**	**19 38 36.0**	**-2.4**
	0.1nm,0.3s,baz=220,slow=4.6,SNR=4.6							
	2.4nm,1.1s							
AKASG	**Malin Array Be**	**15.53**	**3**	Pn		**Pn**	**19 38 47.5**	**-0.1**
	0.3nm,0.3s,baz=196,slow=11,SNR=1.4							
	0.4nm,0.5s							
GERES	**GERESS Array B**	**17.25**	**327**	P		**Pn**	**19 39 09.6**	**-0.2**
	baz=163,slow=9.8,SNR=3.4							
	0.9nm,0.8s							
SENIN	**Lac Senin/Sane**	**19.19**	**312**	P		**P**	**19 39 31.5**	**-1.3**
CORI	**Orista**	**21.35**	**296**	P		**P**	**19 39 54.9**	**-1.1**
CORI				IAmb		IAmb	19 40 09.2	
	comp=Z,12nm,1.1s							
ESBB	**Sonseca Array**	**25.70**	**290**	P		**P**	**19 40 38.0**	**-1.2**
ESBB				IAmb		IAmb	19 41 02.5	
	comp=Z,8.6nm,1.4s							
ESDC	**Sonseca Array**	**25.70**	**290**	P		**P**	**19 40 39.2**	**0.0**
	comp=Z,1.0nm,0.5s,baz=81,slow=9.3,SNR=13							
	comp=Z,1.0nm,0.5s							
ESDC	**Sonseca Array**	**25.70**	**290**	P		**P**	**19 40 38.5**	**-0.7**
FINES	**FINESS Array B**	**26.30**	**358**	P		**P**	**19 40 43.1**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=163,slow=14,SNR=7.7							
	comp=Z,1.3nm,0.5s							
FIA1	**FINESS Array S**	**26.30**	**358**	P		**P**	**19 40 42.8**	**-1.4**
HFS	**Hagfors**	**26.63**	**344**	P		**P**	**19 40 45.7**	**-1.6**
	comp=Z,3.4nm,0.9s,baz=152,slow=9.8,SNR=5.0							
	comp=Z,3.4nm,0.9s							
AB31	**Akbulak array**	**27.27**	**49**	P		**P**	**19 40 53.2**	**0.0**
AB31				IAmb		IAmb	19 41 18.3	
	comp=Z,5.2nm,1.4s							
ABKAR	**Akbulak array**	**27.27**	**49**	P		**P**	**19 40 53.3**	**+0.1**
NAO01	**NORSAR Array S**	**27.93**	**342**	P		**P**	**19 40 58.7**	**-0.2**
NB201	**NORSAR Array S**	**28.00**	**343**	P		**P**	**19 40 58.9**	**-0.7**
NOA	**NORSAR Array B**	**28.02**	**343**	P		**P**	**19 40 59.2**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=152,slow=8.9,SNR=1.8							
	comp=Z,0.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**32.35**	**234**	P		**P**	**19 41 39.1**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=29,slow=7.2,SNR=8.5							
	comp=Z,0.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**32.35**	**234**	IAmb		IAmb	19 41 39.2	
	comp=Z,12nm,0.8s							
KKAR	**Karatay Array**	**33.60**	**63**	P		**P**	**19 41 47.9**	**-1.3**
ARCES	**ARCESS Array B**	**34.42**	**358**	P		**P**	**19 41 54.8**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=176,slow=8.5,SNR=1.3							
	comp=Z,1.8nm,0.8s							
KURBB	**Kurchatov Array**	**39.29**	**51**	P		**P**	**19 42 38.7**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=275,slow=8.9,SNR=4.1							
	comp=Z,0.5nm,0.7s							
MK31	**Makanchi Array**	**41.80**	**57**	P		**P**	**19 42 58.8**	**+0.3**
MKAR	**Makanchi Array**	**41.80**	**57**	P		**P**	**19 42 59.6**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=269,slow=7.6,SNR=7.3							
	comp=Z,0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**43.30**	**46**	P		**P**	**19 43 11.6**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=272,slow=8.2,SNR=1.5							
	comp=Z,0.2nm,0.3s							
SONM	**Songino Array**	**57.65**	**51**	P		**P**	**19 45 00.5**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=282,slow=7.2,SNR=5.7							
	comp=Z,0.6nm,0.5s							
SONM	**Songino Array**	**57.65**	**51**	P		**P**	**19 44 59.5**	**+0.2**
SONM				IAmb		IAmb	19 45 11.4	
	comp=Z,2.2nm,1.3s							
LZDM	**Lanzhou Array**	**60.02**	**65**	P		**P**	**19 45 17.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=317,slow=9.9,SNR=1.1							
	comp=Z,0.2nm,0.3s							
BOSA	**Boshof**	**63.52**	**183**	P		**P**	**19 45 40.8**	**+1.5**
	comp=Z,7.1nm,1.2s,baz=117,slow=12,SNR=2.3							
	comp=Z,7.1nm,1.2s							
BOSA	**Boshof**	**63.52**	**183**	IAmb		IAmb	19 46 20.7	
	comp=Z,9.6nm,1.3s							
CMAR	**Chiang Mai Arr**	**64.25**	**85**	P		**P**	**19 45 45.8**	**+1.4**
	comp=Z,0.2nm,0.8s,baz=265,slow=6.9,SNR=4.1							
	comp=Z,0.2nm,0.8s							
CMAR	**Chiang Mai Arr**	**64.25**	**85**	P		**P**	**19 45 44.6**	**+0.3**
SCHQ	**Schefferville**	**64.66**	**320**	P		**P**	**19 45 47.1**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=352,slow=4.8,SNR=3.7							
	comp=Z,3.1nm,0.8s							
ILAR	**Eielson Array**	**80.28**	**358**	P		**P**	**19 47 20.5**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=24,slow=7.0,SNR=2.1							
	comp=Z,0.2nm,0.5s							
ULM	**Lac du Bonnet**	**81.56**	**327**	P		**P**	**19 47 27.1**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=72,slow=3.2,SNR=2.3							
	comp=Z,1.1nm,0.4s							
ULM	**Lac du Bonnet**	**81.56**	**327**	IAmb		IAmb	19 47 49.1	
	comp=Z,6.2nm,1.4s							

*ISK **07** 19:57:04.9,38°.41N×39°.22E,h6km,ML3.8/11*
*AFAD **07** 19:57:05.6,38°.43N×39°.20E,h8km±2km,MW3.8*
*IDC **07** 19:57:07.5±0.9,38°.42N×39°.04E,h0km,mb3.7/4,*
mbtmp3.6/10,ML3.1/6,MS3.8/3,Error ellipse:
s-maj=15.8km s-min=10.2km az=166.0
ISC 07 19:57:06.9±0.6,38°.42N±0°.02×39°.22E±0°.02,h10km,n74,
σ1ş48/92,mb3.7/4,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.08**	**121**	Pg	**Pg**	**19 57 07.3**	**-2.1**
SVRC				Sg	**Sg**	**19 57 08.3**	**-2.9**
ELZG	**Elazig**	**0.20**	**293**	P	**Pg**	**19 57 10.0**	**-1.3**
ELZ	**Elazig**	**0.27**	**357**	P	**Pg**	**19 57 11.2**	**-1.2**
ELZ				S	**Sg**	**19 57 15.5**	**-0.7**
ELZ				IAML		19 57 16.0	
	comp=E,3μm,0.3s						
ELZ				IAML		19 57 16.0	
	comp=N,2μm,0.4s						
MDNT	**Maden**	**0.36**	**94**	P	**Pg**	**19 57 12.6**	**-1.5**
KOVA	**Elazig, Kovanc**	**0.55**	**58**	P	**Pg**	**19 57 16.3**	**-1.2**
MAYA	**Malatya/Merkez**	**0.63**	**262**	P	**Pg**	**19 57 17.7**	**-1.5**
MAYA				S	**Sg**	**19 57 26.8**	**-0.8**
MAYA				IAML		19 57 31.0	
	comp=N,3μm,0.6s						
NARI	**Adyaman-Kaht**	**0.65**	**214**	P	**Pg**	**19 57 18.4**	**-1.0**
MCKZ	**Bingol**	**0.73**	**345**	P	**Pg**	**19 57 19.0**	**-2.0**
MCKZ				S	**Sg**	**19 57 29.5**	**-1.0**
MCKZ				IAML		19 57 31.0	
	comp=E,3μm,0.6s						
MCKZ				IAML		19 57 31.0	
	comp=N,2μm,0.6s						
TNCL	**Tunceli-Merkez**	**0.74**	**20**	P	**Pg**	**19 57 19.5**	**-1.7**
KAHTU	**Kahta**	**0.78**	**219**	P	**Pg**	**19 57 21.0**	**-0.9**
DYBB	**Diyarbakir**	**0.86**	**122**	Pg	**Pg**	**19 57 21.9**	**-1.6**
DYBB				Sg	**Sg**	**19 57 34.0**	**-0.6**
DIYA	**Diyarbakir**	**0.86**	**125**	P	**Pb**	**19 57 23.2**	**-0.8**
HANM	**anlurfa/Hi**	**0.88**	**198**	P	**Pb**	**19 57 23.4**	**-0.9**
HANM				S	**Sn**	**19 57 37.3**	**-1.0**
HANM				IAML		19 57 39.0	
	comp=N,2μm,0.3s						
MAYK		**0.95**	**70**	P	**Pg**	**19 57 24.0**	**-1.1**
ARPR	**Arapgir-MALATY**	**0.97**	**314**	Pg	**Pg**	**19 57 23.8**	**-1.7**
ARPR				Sg	**Sb**	**19 57 38.4**	**-0.4**
AZEY	**Adyaman-Merk**	**0.98**	**232**	P	**Pb**	**19 57 24.8**	**-1.2**
AZEY				S	**Sn**	**19 57 40.3**	**-0.4**
AZEY				IAML		19 57 48.0	
	comp=N,988nm,0.8s						
URFA	**Urfa**	**1.02**	**198**	Pg	**Pg**	**19 57 23.3**	**-3.3**
URFA				Sg	**Sb**	**19 57 39.4**	**-0.9**
AKCD	**Akcadag**	**1.03**	**264**	P	**Pg**	**19 57 24.5**	**-2.2**
AKCD				IAML		19 57 42.0	
	comp=N,2μm,0.5s						
HEKM	**Malatya_Hekimh**	**1.09**	**295**	P	**Pg**	**19 57 25.9**	**-2.0**
HEKM				S	**Sn**	**19 57 42.8**	**-1.0**
HEKM				IAML		19 57 47.0	
	comp=E,2μm,0.5s						
ILIC	**ilic-Erzincan**	**1.15**	**334**	Pn	**Pb**	**19 57 27.5**	**-1.5**
ILIC				Sn	**Sn**	**19 57 44.1**	**-1.0**
ATAB	**Bozova**	**1.20**	**218**	P	**Pg**	**19 57 29.7**	**-0.2**
ERZN	**Erzincan**	**1.23**	**18**	Pn	**Pn**	**19 57 28.8**	**-1.5**
ERZN				Sn	**Sn**	**19 57 47.3**	**+0.2**
SANL	**SANLIURFA_Merk**	**1.26**	**189**	P	**Pg**	**19 57 30.3**	**-0.7**
BNGB	**Bingl**	**1.27**	**63**	Pn	**Pn**	**19 57 29.9**	**-1.0**
MDIV		**1.29**	**315**	P	**Pn**	**19 57 29.3**	**-1.8**
MDIV				S	**Sb**	**19 57 46.3**	**-1.6**
MDIV				IAML		19 57 50.0	
	comp=E,2μm,0.9s						
MIMR	**Divri**	**1.29**	**315**	P	Pg	19 57 37.1	+5.5
EUZM	**Uzumlu**	**1.34**	**16**	P	**Pn**	**19 57 30.4**	**-1.4**
AKCA	**Adyaman/G¶l**	**1.36**	**243**	P	**Pg**	**19 57 31.9**	**-1.1**
YEDI	**Yedisu-Bingol**	**1.45**	**45**	Pn	**Pn**	**19 57 32.4**	**-0.9**
SLHN	**Bingol, Solhan**	**1.51**	**69**	P	**Pg**	**19 57 34.7**	**-1.2**
SLHN				S	**Sg**	**19 57 58.6**	**+3.1**
SLHN				IAML		19 58 01.0	
	comp=N,910nm,0.5s						
SLHN				IAML		19 58 02.0	
	comp=E,1μm,1.0s						
SVAN	**Silvan-Diyarba**	**1.58**	**99**	Pn	**Pn**	**19 57 34.0**	**-1.0**
SVAN	**Silvan-Diyarba**	**1.58**	**99**	P	**Pn**	**19 57 33.6**	**-1.4**
SVAN				S	**Sn**	**19 57 54.8**	**-0.7**
SVAN				IAML		19 57 58.0	
	comp=N,523nm,0.5s						
SURC	**SANLIURFA_SURC**	**1.61**	**198**	P	**Pb**	**19 57 35.3**	**-1.4**
SURC				S	**Sg**	**19 57 58.9**	**+0.2**
SURC				IAML		19 58 03.0	
	comp=E,718nm,0.8s						
SURC				IAML		19 58 05.0	
	comp=N,731nm,0.9s						
MARD	**Mardin**	**1.65**	**131**	P	**Pb**	**19 57 36.1**	**-1.4**
MARD				S	**Sb**	**19 57 57.7**	**-0.7**
MARD				IAML		19 58 02.0	
	comp=N,2μm,0.7s						
KARO	**Karliova-Bingo**	**1.68**	**57**	Pn	**Pn**	**19 57 36.1**	**-0.5**
GZT	**Gaziantep**	**1.69**	**232**	P	**Pb**	**19 57 36.3**	**-1.8**
MBOZ		**1.69**	**345**	P	**Pb**	**19 57 37.4**	**-0.9**
BTMN	**Batman**	**1.70**	**107**	P	**Pn**	**19 57 36.1**	**-0.6**
BTMN				S	**Sg**	**19 58 00.1**	**-1.4**
BTMN				IAML		19 58 05.0	
	comp=N,1μm,0.5s						
ECAT	**Cat-ERZURUM**	**1.81**	**48**	P	**Pb**	**19 57 39.6**	**-0.6**
MUSM	**Mu-Merkez**	**1.82**	**80**	P	**Pb**	**19 57 38.8**	**-1.6**
MUSM				S	**Sb**	**19 58 02.9**	**-0.4**
MUSM				IAML		19 58 07.0	
	comp=N,275nm,0.5s						
MUSM				IAML		19 58 07.0	
	comp=E,182nm,0.5s						
NZIP	**Nizip/Gaziante**	**1.84**	**222**	P	**Pn**	**19 57 38.4**	**-0.2**
NZIP				S	**Sb**	**19 58 03.6**	**-0.2**
NZIP				IAML		19 58 06.0	
	comp=E,534nm,0.5s						
KOPT	**Kop Dagi**	**1.88**	**31**	P	**Pb**	**19 57 40.5**	**-1.0**
VRTB	**Varto-Mus**	**1.90**	**66**	Pn	**Pn**	**19 57 38.9**	**-0.6**
VRTB	**Varto-Mus**	**1.90**	**66**	P	**Pg**	**19 57 41.6**	**-1.7**
KHMN	**Narli-Kahraman**	**1.93**	**239**	Pn	**Pn**	**19 57 39.0**	**-0.8**
KHMN	**Narli-Kahraman**	**1.93**	**239**	P	**Pn**	**19 57 39.6**	**-0.2**
ALUC	**Giresun/Alucra**	**1.96**	**350**	P	**Pb**	**19 57 42.1**	**-0.6**
SUSE	**Susehri**	**1.96**	**336**	P	**Pg**	**19 57 42.6**	**-1.8**
SUSE				S	**Sg**	**19 58 11.1**	**+1.3**
SUSE				IAML		19 58 21.0	
	comp=N,364nm,1.4s						
MIDY	**Mardin/Midyat-**	**2.00**	**120**	P	**Pb**	**19 57 41.1**	**-2.2**
BAYB	**BAYBURT**	**2.01**	**23**	P	**Pb**	**19 57 42.9**	**-0.7**
GAZ	**Gaziantep**	**2.02**	**233**	Pn	**Pn**	**19 57 40.4**	**-0.7**
KMRS	**Kahramanmaras**	**2.05**	**244**	Pn	**Pn**	**19 57 40.9**	**-0.6**
BAYT	**Aydıntepe-Bayb**	**2.10**	**20**	Pn	**Pn**	**19 57 41.8**	**-0.5**
CUAYA	**Sivas-Altinyay**	**2.11**	**294**	P	**Pb**	**19 57 43.6**	**-1.7**
CUAYA				S	**Sg**	**19 58 13.4**	**-1.3**
CUAYA				IAML		19 58 18.0	
	comp=E,302nm,0.7s						
SRTM	**Siirt_Merkez**	**2.17**	**100**	P	**Pn**	**19 57 43.5**	**+0.3**
SCER	**sogukcermik**	**2.17**	**312**	P	**Pb**	**19 57 45.4**	**-1.1**
GURO	**Guroymak-BITLI**	**2.21**	**86**	Pn	**Pn**	**19 57 43.2**	**-0.6**
BLIS	**Bitlis-Merkez**	**2.27**	**89**	P	**Pn**	**19 57 45.2**	**+0.6**
KRIK	**Erzurum-spir**	**2.33**	**34**	P	**Pb**	**19 57 47.3**	**-1.8**
AKDA	**Akdag**	**2.37**	**44**	P	**Pb**	**19 57 48.0**	**-1.7**
SAIM	**ADANA**	**2.51**	**261**	P	**Pb**	**19 57 50.1**	**-2.1**
BRTR	**Keskin Array B**	**4.54**	**288**	Pn	**Pn**	**19 58 17.6**	**+1.8**
	0.9nm,0.3s,baz=117,slow=15,SNR=13						
BRTR				Sn	**Sn**	**19 59 09.8**	**+1.2**
	baz=98,slow=20						
BRTR				Lg	Lg	19 59 27.9	
	baz=104,slow=33						
BRTR				LR	LR	20 00 21.0	
	comp=Z,263nm,20.7s,baz=177,slow=44						
	5.0nm,0.7s						
GNI	**Garni**	**4.62**	**66**	Pn	**Pb**	**19 58 24.3**	**-3.8**
	0.5nm,0.3s,baz=50,slow=7.2,SNR=6.3						
	2.9nm,0.4s						
KVAR	**Kislovodsk Arr**	**6.12**	**24**	Pn	Pn	19 58 43.1	+5.6
	baz=297,slow=2.3						
	2.2nm,0.8s						
MMAI	**Mount Meron Ar**	**6.22**	**211**	Pn	**Pn**	**19 58 40.4**	**+1.6**
	1.3nm,0.3s,baz=18,slow=15,SNR=6.6						
MMAI				Lg	Lg	20 00 24.2	
	0.3nm,0.3s,baz=39,slow=26,SNR=1.0						
	2.0nm,0.5s						
ASF	**Jabal al Asfar**	**6.51**	**198**	Pn	**Pn**	**19 58 43.1**	**+0.3**
	0.4nm,0.3s,baz=345,slow=9.6,SNR=6.8						
ASF				Lg	Lg	20 00 32.6	
	0.9nm,0.3s,baz=18,slow=23,SNR=1.9						
	6.1nm,0.9s						
EIL	**Elat**	**9.42**	**203**	Lg	Lg	20 02 08.6	
	0.1nm,0.3s,baz=260,slow=16,SNR=1.3						
AKTO	**Aktyubinsk**	**17.95**	**42**	P	**P**	**20 01 21.2**	**+4.1**
	0.1nm,0.3s,baz=228,slow=15,SNR=3.5						
	1.0nm,0.6s						
FINES	**FINESS Array B**	**24.46**	**345**	P	**P**	**20 02 26.6**	**+1.0**
	1.9nm,0.9s,baz=159,slow=8.3,SNR=3.3						
	1.9nm,0.9s						
KURBB	**Kurchatov Arra**	**30.21**	**53**	P	**P**	**20 03 19.3**	**+1.9**
	0.7nm,0.7s,baz=266,slow=9.0,SNR=7.6						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**32.44**	**61**	P	**P**	**20 03 38.6**	**+1.4**
	0.3nm,0.7s,baz=264,slow=7.7,SNR=4.8						
	0.3nm,0.7s						
HILR	**Hailar Array B**	**56.37**	**50**	LR	LR	20 31 54.4	
	comp=Z,255nm,21.5s,baz=55,slow=37						
SEY	**Seymchan**	**65.86**	**27**	P	**P**	**20 07 54.4**	**+2.1**
	2.2nm,1.0s,baz=292,slow=22,SNR=3.4						
	2.2nm,1.0s						
JCJ	**Chichijima**	**82.92**	**61**	LR	LR	20 49 57.6	
	comp=Z,100nm,19.5s,baz=136,slow=38						

IDC 07 20:14:15.0±7.0,30°.47S×177°.94W,h76km±47km,mb3.1/2,
mbtmp3.4/2,Error ellipse: s-maj=92.5km s-min=47.7km
az=138.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.21**	**1**	P	Pn	20 14 36.2	-0.3
	244nm,0.3s,baz=76,slow=23,SNR=2.6						
RAO				S	Sn	20 14 52.6	0.0
	289nm,0.3s,baz=89,slow=23,SNR=2.8						
ASAR	**Alice Springs**	**43.16**	**267**	P	P	20 22 08.0	-0.4
	0.2nm,0.5s,baz=101,slow=7.0,SNR=2.3						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**44.15**	**272**	P	P	20 22 16.4	0.0
	0.3nm,0.3s,baz=111,slow=8.1,SNR=11						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**145.23**	**340**	PKPbc	PKPbc	20 33 42.1	-0.8
	0.8nm,0.7s,baz=35,slow=3.2,SNR=0.9						

*JSN **07** 20:17:27.4±1.3,19°.25N×81°.12W,h50km±999km,MD4.2,*
MW4.2,Presumed earthquake
*SSNC **07** 20:17:29.0±1.6,18°.93N×81°.04W,h24km±23km,MD3.6,*
ML3.1,Presumed earthquake
ISC 07 20:17:25.2±2.7,19°.02N±0°.09×80°.9W±0°.1,h10km,n15,
σ3ş19/20,Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.01**	**50**	*eP*	**Pn**	**20 17 47.7**	**+2.2**
LCCY				IAML		20 18 01.9	
	comp=E,146nm,0.2s						
LCCY				IAML		20 18 02.1	
	comp=N,140nm,0.3s						
CBCY	**The Bluff, Cay**	**1.30**	**57**	*eP*	**Pg**	**20 17 51.0**	**+0.9**
CBCY				*eS*	**Sn**	**20 18 07.9**	**+1.1**
CBCY				IAML		20 18 11.3	
	comp=E,236nm,0.3s						
CBCY				IAML		20 18 13.4	
	comp=N,308nm,0.4s						
MGV	**Manicaragua**	**3.19**	**16**	*eP*	**Pn**	**20 18 16.8**	**+1.4**
MGV				*eS*	**Sn**	**20 18 54.6**	**+1.0**
MGV				*eSg*	**Sb**	**20 18 57.3**	**-3.7**
MGV				IAML		20 18 57.6	
	comp=E,27nm,0.1s						
MGV				IAML		20 18 58.1	
	comp=N,14nm,0.1s						
MTDJ	**Mount Denham**	**3.29**	**103**	*eP*	**Pn**	**20 18 18.9**	**+2.0**
MTDJ				*eS*	**Sn**	**20 18 54.8**	**-1.5**
MTDJ				*eSg*	**Sb**	**20 18 58.5**	**-5.6**
MTDJ				IAML		20 19 00.2	
	comp=N,114nm,0.3s						
MTDJ				IAML		20 19 00.8	
	comp=N,133nm,0.2s						
CCCC	**Ccc**	**3.66**	**53**	*eP*	**Pb**	**20 18 28.0**	**-2.0**
CAIB	**Caibarien**	**3.70**	**21**	*eP*	**Pn**	**20 18 24.8**	**+2.3**
LMGC	**Las Mercedes**	**3.82**	**74**	*eP*	**Pn**	**20 18 27.6**	**+3.5**
STH	**Stony Hill**	**4.00**	**103**	*i* P	**Pn**	**20 18 28.8**	**+2.2**
CAMR	**Camarioca**	**4.04**	**354**	*eP*	**Pn**	**20 18 28.4**	**+1.3**
HOJ	**Hope**	**4.07**	**104**	*i* P	**Pn**	**20 18 30.2**	**+2.6**
CHIV	**Chivirico**	**4.34**	**77**	*eP*	**Pn**	**20 18 34.9**	**+3.6**
YAR	**Yar**	**4.49**	**72**	*eP*	**Pn**	**20 18 37.9**	**+4.5**
RCC	**Rio Carpintero**	**5.01**	**78**	*eP*	**Pn**	**20 18 44.0**	**+3.5**
PINC	**Pinares de May**	**5.03**	**72**	*eP*	**Pn**	**20 18 45.1**	**+4.3**
GTBY	**Guantanamo Bay**	**5.54**	**80**	*eP*	**Pn**	**20 18 51.4**	**+3.6**

*SSNC **07** 20:24:31.1±1.1,18°.78N×81°.08W,h23km±20km,MD3.6,*
ML3.3,Presumed earthquake
*JSN **07** 20:24:32.0±1.9,19°.25N×80°.85W,h0km±999km,MD4.6,*
MW4.9,Presumed earthquake
ISC 07 20:24:30.6±2.2,19°.09N±0°.09×80°.9W±0°.1,h10km,n8,
σ2ş04/12,1C-1D,Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.99**	**54**	*eP*	**Pn**	**20 24 52.3**	**+1.8**
CBCY	**The Bluff, Cay**	**1.28**	**60**	*eP*	**Pg**	**20 24 56.1**	**+0.8**
CBCY				*eS*	**Sn**	**20 25 13.6**	**+1.7**
CBCY				IAML		20 25 17.4	
	comp=N,260nm,0.4s						
CBCY				IAML		20 25 17.6	
	comp=E,160nm,0.5s						
MGV	**Manicaragua**	**3.13**	**16**	*eP*	**Pn**	**20 25 21.5**	**+1.4**
MGV				*eS*	**Sn**	**20 26 00.3**	**+2.8**
MGV				*eSg*	**Sb**	**20 26 02.5**	**-2.2**
MGV				IAML		20 26 02.7	
	comp=E,87nm,0.3s						
MGV				IAML		20 26 05.3	
	comp=N,61nm,0.4s						
MTDJ	**Mount Denham**	**3.34**	**104**	*eP*	**Pn**	**20 25 23.6**	**+0.7**
MTDJ				IAML		20 26 04.9	
	comp=N,132nm,0.5s						
MTDJ				IAML		20 26 05.1	
	comp=N,76nm,0.3s						
MTDJ	**Mount Denham**	**3.34**	**104**	*iP*	**Pn**	**20 25 24.0**	**+1.1**
MTDJ				*i* S	**Sn**	**20 26 02.9**	**+0.2**
CCCC	**Cccc**	**3.64**	**54**	*eP*	**Pb**	**20 25 31.7**	**-3.4**
CCCC				IAML		20 26 27.9	
	comp=N,12nm,0.7s						
CCCC				IAML		20 26 28.3	
	comp=E,13nm,0.6s						
STH	**Stony Hill**	**4.04**	**104**	*iP*	**Pn**	**20 25 34.2**	**+1.6**
SOR	**Soroa**	**4.16**	**333**	*eP*	**Pn**	**20 25 34.9**	**+0.7**
SOR				IAML		20 26 24.8	
	comp=N,12nm,0.4s						
SOR				IAML		20 26 25.5	
	comp=E,18nm,0.3s						

*NEIC **07** 20:31:13.5±2.0,5°.43S±0°.06×146°.47E±0°.07,h76km±7km,*
mb4.4/30,Error ellipse: s-maj=10.7km s-min=7.8km
az=61.0
*IDC **07** 20:31:14.2±2.4,5°.32S×146°.58E,h75km±22km,mb3.6/16,*
mbtmp4.0/20,MS3.6/11,Error ellipse: s-maj=26.4km
s-min=11.3km az=64.0
*DJA **07** 20:31:22.2±1.0,6°.S±8°×14°.6E±1°.1,h97km±6km,M5.1/15,*
mB6.0/3,mb4.5/15,MLv5.3/5,Mw(mB)5.6/3
ISC 07 20:31:15.7±0.5,5°.50S±0°.05×146°.44E±0°.07,h100km,n79,
σ1ş44/72,mb4.1/23,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.55**	**15**	Pn	Pn	20 32 03.9	-5.0
PMG	**Port Moresby**	**3.95**	**170**	P	**Pn**	**20 32 14.1**	**-0.1**
	114nm,0.7s,baz=72,slow=3.8,SNR=37						
PMG				S	**Sn**	**20 33 01.9**	**+2.3**
	359nm,0.7s,baz=304,slow=20,SNR=6.8						
PMG				LR	LR	20 33 37.9	
	comp=Z,368nm,19.7s,baz=45,slow=35						
PMG	**Port Moresby**	**3.95**	**170**		**Pn**	**20 32 13.5**	**-0.8**
PMG	**Port Moresby**	**3.95**	**170**	P	**Pn**	**20 32 14.5**	**+0.2**
PMG	**Port Moresby**	**3.95**	**170**	P	**Pn**	**20 32 14.1**	**-0.1**
RABL	**Rabaul**	**5.85**	**77**		**Pn**	**20 32 36.9**	**-3.2**
JAY	**Jayapura**	**6.44**	**297**	P	**Pn**	**20 32 47.0**	**-1.1**
	6.1nm,0.4s,baz=128,slow=9.2,SNR=5.2						
JAY				S	**Sn**	**20 34 01.3**	**+1.0**
	26nm,0.9s,baz=346,slow=22,SNR=1.7						
JAY				LR	LR	20 35 30.7	
	comp=Z,846nm,18.1s,baz=134,slow=40						
GENI	**Genyem**	**6.89**	**295**	P	Pn	20 33 00.6	+6.4
	0.6nm90nm,1.1s						
COEN	**Coen**	**9.00**	**201**		**Pn**	**20 33 21.4**	**-1.6**
COEN	**Coen**	**9.00**	**201**	P	**Pn**	**20 33 22.1**	**-

USRK	**Ussuriysk Ar.**	**51.16**	**347**	P		**P**		**20 40 07.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**52.52**	**298**	P		**P**		**20 40 20.9**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=112,slow=7.1,SNR=8.2								
	comp=Z,0.3nm,0.6s								
CMAR	**Chiang Mai Arr**	**52.52**	**298**	P		**P**		**20 40 18.9**	**-0.3**
PEA0B	**Petropavlovsk-**	**59.16**	**8**	P		**P**		**20 41 05.5**	**-0.4**
PETK	**Petropavlovsk-**	**59.16**	**8**	P		**P**		**20 41 06.0**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=207,slow=6.7,SNR=4.4								
	comp=Z,3.5nm,0.7s								
PETK	**Petropavlovsk-**	**59.16**	**8**	P		**P**		**20 41 05.8**	**-0.1**
HILR	**Hailar Array B**	**59.54**	**340**	P		**P**		**20 41 09.4**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=141,slow=9.3,SNR=7.1								
	comp=Z,1.0nm,0.6s								
SONM	**Songino Array**	**63.70**	**331**	P		**P**		**20 41 37.7**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=143,slow=6.0,SNR=4.8								
SONM				LR		LR		21 10 35.3	
	comp=Z,44nm,19.1s,baz=156,slow=37								
	comp=Z,0.3nm,0.6s								
YAK	**Yakutsk**	**68.56**	**352**	LR		LR		21 12 33.7	
	comp=Z,300nm,18.1s,baz=283,slow=36								
VNDA	**Vanda**	**72.44**	**177**	P		**P**		**20 42 34.2**	**+3.4**
	comp=Z,4.2nm,0.7s,baz=316,slow=8.9,SNR=7.2								
	comp=Z,4.2nm,0.7s								
VNDA	**Vanda**	**72.44**	**177**	IAmb		IAmb		20 42 35.0	
	comp=Z,5.8nm,0.8s								
MKAR	**Makanchi Array**	**76.76**	**321**	P		**P**		**20 42 57.7**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=96,slow=6.1,SNR=3.8								
	comp=Z,0.4nm,0.9s								
MKAR	**Makanchi Array**	**76.76**	**321**	P		**P**		**20 42 57.0**	**+0.6**
ZALV	**Zalesovo Beam**	**78.29**	**328**	P		**P**		**20 43 04.5**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=90,slow=5.9,SNR=5.1								
	comp=Z,0.2nm,0.4s								
KURK	**Kurchatov**	**80.48**	**323**	P		**P**		**20 43 17.6**	**+1.0**
H17K	**Granite Mounta**	**80.49**	**20**	P		**P**		**20 43 16.8**	**+0.4**
H17K				IAmb		IAmb		20 43 45.0	
	comp=Z,2.7nm,1.0s								
KURBB	**Kurchatov Arra**	**80.50**	**323**	P		**P**		**20 43 18.0**	**+1.3**
	comp=Z,0.2nm,0.2s,baz=111,slow=4.2,SNR=4.3								
	comp=Z,0.2nm,0.2s								
G18K	**Tagagawik**	**81.47**	**20**	P		**P**		**20 43 23.0**	**+1.4**
G18K				IAmb		IAmb		20 43 34.8	
	comp=Z,5.6nm,1.1s								
G19K	**Purcell Mounta**	**82.14**	**20**	P		**P**		**20 43 25.8**	**+0.7**
G19K				IAmb		IAmb		20 43 40.2	
	comp=Z,6.2nm,1.1s								
F19K	**Shaleruckit Mo**	**82.30**	**19**	P		**P**		**20 43 25.5**	**-0.3**
NRIK	**Noril'sk**	**84.63**	**342**	P		**P**		**20 43 38.9**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=126,slow=4.1,SNR=6.5								
	comp=Z,1.0nm,0.4s								
IL31		**85.24**	**23**	P		**P**		**20 43 39.7**	**-1.2**
IL31				IAmb		IAmb		20 43 53.3	
	comp=Z,6.6nm,1.3s								
ILAR	**Eielson Array**	**85.24**	**23**	P		**P**		**20 43 40.8**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=254,slow=5.1,SNR=8.9								
	comp=Z,0.8nm,0.8s								
ILAR	**Eielson Array**	**85.24**	**23**	P		**P**		**20 43 40.0**	**-0.9**
J25K	**Salcha River,**	**85.78**	**24**	P		**P**		**20 43 42.3**	**-1.5**
J25K				IAmb		IAmb		20 44 08.2	
	comp=Z,4.5nm,1.0s								
BVAR	**Borovoye Array**	**86.04**	**324**	P		**P**		**20 43 45.3**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=105,slow=9.3,SNR=4.1								
	comp=Z,0.3nm,0.6s								
BMAR	**Burnt Mountain**	**87.13**	**21**	P		**P**		**20 43 50.4**	**+0.2**
G31M	**Satah River**	**90.83**	**23**	P		**P**		**20 44 07.2**	**-0.3**
YKA	**Yellowknife Ar**	**98.99**	**28**	P		**Pdif**		**20 44 44.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=277,slow=5.7,SNR=1.7								
	comp=Z,0.1nm,0.3s								
TORD	**Torodi Ar. Bea**	**144.43**	**285**	PKP		**PKPdf**		**20 50 42.8**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=106,slow=1.5,SNR=1.4								

*KRNET **07** 20:51:09.1±0.1,42°.14N×76°.98E,h18km,mb3.5*
*SOME **07** 20:51:09.4,42°.17N×77°.00E,h10km*
*NNC **07** 20:51:10.9±0.5,42°.22N×76°.96E,h0km,mb3.5,mpv3.6,*
Error ellipse: s-maj=3.4km s-min=2.3km az=1.0
*KNET **07** 20:51:11.1±0.3,42°.17N×76°.85E,h14km±1km,ml2.7,Error ellipse: s-maj=3.1km s-min=1.8km az=0.0*

ISC 07 20:51:09.4±0.8, 42°.17N±0°.02×77°.04E±0°.02, h13km±6km, n79, σ1§04/136, 53C-27D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.11**	**111**	⇓*eP*	**Pg**	**20 51 12.8**	**0.0**
KDJ				⇓*eS*	**Sg**	**20 51 15.4**	**+0.3**
ULHL	**Ulahol**	**0.60**	**278**	⇑P	**Pg**	**20 51 20.2**	**-0.9**
	230nm,0.1s						
ULHL				⇑S	**Sg**	**20 51 27.8**	**-1.3**
	223nm,0.1s						
ULHL	**Ulahol**	**0.60**	**278**	⇓*eP*	**Pg**	**20 51 19.9**	**-1.3**
ULHL				⇓*eS*	**Sg**	**20 51 27.8**	**-1.3**
TARG	**Taragay, Kyrgy**	**0.72**	**127**	⇓*eP*	**Pb**	**20 51 23.3**	**-0.7**
TARG				⇑*eS*	**Sb**	**20 51 33.6**	**-0.3**
TNSS	**Tian-Shan**	**0.87**	**355**	P	**Pb**	**20 51 26.4**	**-0.2**
	24nm,0.2s						
TNSS				S	**Sb**	**20 51 38.5**	**+0.2**
	89nm,0.2s						
TNSS	**Tian-Shan**	**0.87**	**355**	*eP*	**Pb**	**20 51 26.4**	**-0.2**
	24nm,0.2s						
TNSS				*eS*	**Sb**	**20 51 38.5**	**+0.2**
	89nm,0.2s						
BOOM	**Boomskoye usch**	**0.88**	**292**	⇑*eP*	**Pg**	**20 51 25.2**	**-1.2**
BOOM				⇑*eS*	**Sg**	**20 51 36.8**	**-1.1**
IZV	**Izvestkoviy**	**0.92**	**340**	P	**Pg**	**20 51 26.5**	**-0.8**
	38nm,0.1s						
IZV				S	**Sg**	**20 51 38.4**	**-0.9**
	323nm,0.2s						
IZV	**Izvestkoviy**	**0.92**	**340**	*eP*	**Pg**	**20 51 26.4**	**-0.8**
	38nm,0.1s						
IZV				*eS*	**Sg**	**20 51 38.7**	**-0.6**
	323nm,0.2s						
MDOK	**Medeo**	**0.99**	**0**	Pg	**Pb**	**20 51 28.6**	**0.0**
	40nm,0.2s						
MDOK				Lg	Lg	20 51 42.5	
	95nm,0.3s						
KNDC	**Almaty**	**1.05**	**357**	⇓P	**Pn**	**20 51 30.1**	**+0.3**
	24nm,0.3s						
KNDC				⇑S	**Sn**	**20 51 44.4**	**+0.1**
	648nm,0.6s						
PRZ	**Przheval'sk**	**1.05**	**72**	⇓*eP*	**Pn**	**20 51 29.8**	**-0.2**
PRZ				⇓*eS*	**Sn**	**20 51 44.9**	**+0.2**
MTBS	**Maitube**	**1.06**	**335**	P	**Pb**	**20 51 29.2**	**-0.4**
	32nm,0.2s						
MTBS				S	**Sb**	**20 51 43.4**	**-0.1**
	229nm,0.4s						
MTBS	**Maitube**	**1.06**	**335**	*eP*	**Pb**	**20 51 29.2**	**-0.4**
	32nm,0.2s						
MTBS				*eS*	**Sb**	**20 51 43.4**	**-0.1**
	229nm,0.4s						
KOTS	**Kotyrbulak**	**1.06**	**3**	P	**Pn**	**20 51 30.0**	**-0.1**
	46nm,0.2s						
KOTS				S	**Sn**	**20 51 44.7**	**-0.2**
	175nm,0.2s						
KOTS	**Kotyrbulak**	**1.06**	**3**	*eP*	**Pn**	**20 51 30.0**	**-0.1**
	46nm,0.2s						
KOTS				*eS*	**Sn**	**20 51 44.7**	**-0.2**
	175nm,0.2s						
NRN	**Naryn**	**1.07**	**227**	⇑*eP*	**Pg**	**20 51 28.6**	**-1.5**
NRN				⇑*eS*	**Sg**	**20 51 42.7**	**-1.4**
KST	**Kastek**	**1.18**	**318**	P	**Pn**	**20 51 31.4**	**-0.3**
	21nm,0.2s						
KST				S	**Sb**	**20 51 46.9**	**0.0**
	149nm,0.3s						
KST	**Kastek**	**1.18**	**318**	*eP*	**Pn**	**20 51 31.4**	**-0.3**
	21nm,0.2s						
KST				*eS*	**Sb**	**20 51 46.9**	**0.0**
	149nm,0.3s						
TKM2	**Tokmak 2**	**1.30**	**306**	⇑P	**Pb**	**20 51 33.6**	**-0.3**
	51nm,0.1s,SNR=32						
TKM2				⇑S	**Sb**	**20 51 50.8**	**+0.2**
	238nm,0.1s						
TKM2	**Tokmak 2**	**1.30**	**306**	⇓*eP*	**Pn**	**20 51 32.8**	**-0.7**
TKM2				⇓*eS*	**Sb**	**20 51 50.1**	**-0.5**
SATY	**Saty**	**1.34**	**48**	P	**Pg**	**20 51 35.7**	**+0.5**
	19nm,0.2s						
SATY				S	**Sg**	**20 51 54.4**	**+1.6**
	418nm,0.2s						
DGS	**Degeres**	**1.42**	**319**	P	**Pb**	**20 51 35.7**	**-0.2**
	12nm,0.1s						
DGS				S	**Sb**	**20 51 54.3**	**+0.4**
	128nm,0.2s						
DGS	**Degeres**	**1.42**	**319**	*eP*	**Pb**	**20 51 35.8**	**0.0**
	12nm,0.1s						
DGS				*eS*	**Sb**	**20 51 54.5**	**+0.6**
	128nm,0.2s						
JNKS	**Jany-Kuch**	**1.54**	**224**	⇓*eP*	**Pn**	**20 51 36.1**	**-0.6**
JNKS				⇓*eS*	**Sn**	**20 51 55.9**	**-0.8**
KTBS	**Karatobe**	**1.56**	**350**	P	**Pg**	**20 51 38.8**	**-0.6**
	48nm,0.2s						
KTBS				S	**Sg**	**20 51 59.5**	**-0.2**
	0.2nm,0.2s						
KTBS	**Karatobe**	**1.56**	**350**	*eP*	**Pg**	**20 51 38.8**	**-0.6**
	48nm,0.2s						
KTBS				*eS*	**Sg**	**20 51 59.5**	**-0.2**
	0.2nm,0.2s						
KBK	**Karagaybulak**	**1.62**	**288**	⇑P	**Pb**	**20 51 39.1**	**-0.2**
	37nm,0.1s,SNR=62						
KBK				⇓S	**Sb**	**20 52 00.4**	**+0.6**
	78nm,0.2s						
KBK	**Karagaybulak**	**1.62**	**288**	⇑*eP*	**Pn**	**20 51 38.2**	**+0.4**
KBK				⇑*eS*	**Sn**	**20 51 59.4**	**+0.7**
UZB	**Uzynbulak**	**1.76**	**56**	*eP*	**Pg**	**20 51 43.0**	**-0.2**
	22nm,0.2s						
UZB				*eS*	**Sg**	**20 52 06.6**	**+0.7**
	207nm,0.3s						
KPKS	**Kokpek**	**1.77**	**42**	P	**Pg**	**20 51 43.3**	**-0.1**
	0.6nm,0.2s						
KPKS				S	**Sg**	**20 52 06.7**	**+0.3**
	383nm,0.4s						
KPKS	**Kokpek**	**1.77**	**42**	*eP*	**Pg**	**20 51 43.0**	**-0.4**
	0.6nm,0.2s						
KPKS				*eS*	**Sg**	**20 52 07.3**	**+0.9**
	383nm,0.4s						
KUU	**Kurty**	**1.80**	**344**	P	**Pb**	**20 51 42.8**	**+0.7**
	14nm,0.1s						
KUU				S	**Sg**	**20 52 06.5**	**-0.7**
	126nm,0.2s						
KUU	**Kurty**	**1.80**	**344**	*eP*	**Pb**	**20 51 42.8**	**+0.7**
	14nm,0.1s						
KUU				*eS*	**Sg**	**20 52 06.5**	**-0.7**
	126nm,0.2s						
KRBS	**Karabastau**	**1.83**	**327**	P	**Pb**	**20 51 43.3**	**+0.6**
	17nm,0.1s						
KRBS				S	**Sg**	**20 52 07.7**	**-0.4**
	104nm,0.4s						
KRBS	**Karabastau**	**1.83**	**327**	*eP*	**Pb**	**20 51 43.3**	**+0.6**
KRBS				*eS*	**Sg**	**20 52 07.7**	**-0.4**
KRBS	**Karabastau**	**1.83**	**327**	*eP*	**Pb**	**20 51 43.3**	**+0.6**
	17nm,0.1s						
KRBS				*eS*	**Sg**	**20 52 07.7**	**-0.4**
	104nm,0.4s						
UCH	**Uchtor**	**1.88**	**273**	⇑P	**Pb**	**20 51 43.2**	**-0.6**
	20nm,0.2s,SNR=33						
UCH				⇓S	**Sb**	**20 52 07.7**	**+0.4**
	15nm,0.2s						
UCH	**Uchtor**	**1.88**	**273**	⇑*eP*	**Pb**	**20 51 42.6**	**-1.2**
UCH				⇑*eS*	**Sb**	**20 52 07.0**	**-0.3**
CHMS	**Chumysh**	**1.88**	**297**	⇑P	**Pb**	**20 51 43.2**	**-0.4**
	16nm,0.1s,SNR=25						
CHMS				⇑S	**Sb**	**20 52 07.9**	**+0.9**
	54nm,0.2s						
CHMS	**Chumysh**	**1.88**	**297**	⇑*eP*	**Pb**	**20 51 42.5**	**-1.1**
CHMS				⇑*eS*	**Sb**	**20 52 07.0**	**-0.1**
FRU1	**Bishkek**	**1.89**	**291**	⇑*eP*	**Pb**	**20 51 43.0**	**-0.8**
FRU1				⇑*eS*	**Sb**	**20 52 07.7**	**+0.3**
AAK	**Ala-Archa**	**1.94**	**285**	⇑P	**Pb**	**20 51 44.2**	**-0.5**
	22nm,0.2s,SNR=48						
AAK				⇓S	**Sb**	**20 52 10.0**	**+1.1**
	52nm,0.2s						
AAK	**Ala-Archa**	**1.94**	**285**	⇑Pn	**Pb**	**20 51 44.1**	**-0.7**
	3.1nm,0.4s						
AAK				⇓Sn	**Sb**	**20 52 09.9**	**+1.1**
	8.1nm,0.4s						
AAK	**Ala-Archa**	**1.94**	**285**	⇑*eP*	**Pb**	**20 51 43.4**	**-1.3**
AAK				⇑*eS*	**Sb**	**20 52 08.5**	**-0.4**
SHLS	**Shalkode**	**2.04**	**60**	Pg	Pg	20 51 53.1	+4.6
	21nm,0.2s						
SHLS				Lg	Lg	20 52 24.9	
	240nm,0.3s						
SHLS	**Shalkode**	**2.04**	**60**	*eP*	Pg	20 51 53.1	+4.6
	21nm,0.2s						
SHLS				*eS*	Sg	20 52 24.9	+10
	240nm,0.3s						
ARLS	**Aral**	**2.05**	**262**	⇑*eP*	**Pn**	**20 51 44.6**	**+0.9**
ARLS				⇑*eS*	**Sn**	**20 52 10.6**	**+1.5**
ARXS	**Arharly**	**2.12**	**15**	Pg	**Pg**	**20 51 49.0**	**-1.0**
	31nm,0.2s						
ARXS				Lg	Lg	20 52 17.0	
	79nm,0.2s						
ARXS	**Arharly**	**2.12**	**15**	*eP*	**Pg**	**20 51 49.0**	**-1.0**
	31nm,0.2s						
ARXS				*eS*	**Sg**	**20 52 17.0**	**-0.6**
	79nm,0.2s						
PDGK	**Podgornoye**	**2.14**	**56**	⇑Pn	**Pg**	**20 51 49.1**	**-1.4**
	21nm,0.6s						
PDGK				⇑Sn	**Sg**	**20 52 18.2**	**-0.1**
	169nm,0.8s						
USP	**Ospenovka**	**2.17**	**301**	⇑P	**Pb**	**20 51 48.2**	**-0.3**
	52nm,0.2s,SNR=97						
USP				⇓S	**Sb**	**20 52 16.8**	**+1.5**
	72nm,0.2s						
USP	**Ospenovka**	**2.17**	**301**	⇓*eP*	**Pn**	**20 51 46.6**	**+1.4**
USP				⇓*eS*	**Sb**	**20 52 14.0**	**-1.3**
SGDS	**Sogindy**	**2.19**	**307**	Pg	**Pb**	**20 51 49.0**	**+0.2**
	33nm,0.1s						
SGDS				Lg	Lg	20 52 17.3	
	100nm,0.3s						
EKS2	**Erkin-Say**	**2.47**	**283**	⇑*eP*	**Pn**	**20 51 50.7**	**+1.3**
EKS2				⇑*eS*	**Sn**	**20 52 21.0**	**+1.6**
KNOS	**Konyrlen**	**2.69**	**35**	Pg	**Pg**	**20 51 59.0**	**-1.9**
	9.6nm,0.2s						
KNOS				Lg	Lg	20 52 35.1	
	131nm,0.4s						
SALK	**Salom-Alik**	**2.74**	**243**	⇑*eP*	**Pn**	**20 51 54.3**	**+1.2**
SALK				⇑*eS*	**Sn**	**20 52 27.2**	**+1.0**
KTMS	**Ketmen**	**2.75**	**61**	Pg	**Pg**	**20 52 00.1**	**-2.0**
	3.8nm,0.1s						
KTMS				Lg	Lg	20 52 36.1	
	110nm,0.4s						
KTMS	**Ketmen**	**2.75**	**61**	*eP*	**Pg**	**20 52 00.1**	**-2.0**
	3.8nm,0.1s						
KTMS				*eS*	**Sg**	**20 52 36.1**	**-1.6**
	110nm,0.4s						
MRKS	**Merke**	**2.88**	**283**	Pg	**Pb**	**20 52 01.4**	**+0.7**
	11nm,0.2s						
MRKS				Lg	Lg	20 52 39.4	
	155nm,0.3s						
MRKS	**Merke**	**2.88**	**283**	*eP*	**Pb**	**20 52 01.4**	**+0.7**
	11nm,0.2s						
MRKS				*eS*	**Sb**	**20 52 38.9**	**+3.0**
	155nm,0.3s						
DJR	**Jarkent**	**2.95**	**42**	Pg	**Pg**	**20 52 03.9**	**-2.1**
	9.8nm,0.2s						
DJR				Lg	Lg	20 52 42.6	
	129nm,0.4s						
DJR	**Jarkent**	**2.95**	**42**	*eP*	**Pg**	**20 52 03.9**	**-2.1**
	9.8nm,0.2s						
DJR				*eS*	**Sg**	**20 52 42.6**	**-1.5**
	129nm,0.4s						
TDK	**Taldyqorghan**	**3.00**	**19**	Pg	**Pg**	**20 52 04.5**	**-2.3**
	12nm,0.1s						
TDK				Lg	Lg	20 52 43.8	
	74nm,0.3s						
TDK	**Taldyqorghan**	**3.00**	**19**	*eP*	**Pg**	**20 52 04.5**	**-2.3**
	12nm,0.1s						
TDK				*eS*	**Sg**	**20 52 43.8**	**-2.0**
	74nm,0.3s						
ARSB	**Arslanbob**	**3.15**	**256**	⇑P	**Pn**	**20 52 00.0**	**+1.2**
ARSB				⇑*eS*	**Sn**	**20 52 37.1**	**+0.7**
MNAS	**Manas**	**3.38**	**277**	⇓*eP*	**Pn**	**20 52 03.2**	**+1.3**
MNAS				⇓*eS*	**Sn**	**20 52 42.7**	**+0.8**
SFK	**Sufi-Kurgan**	**3.43**	**232**	⇓*eP*	**Pn**	**20 52 03.9**	**+1.1**
SFK				⇑*eS*	**Sn**	**20 52 43.9**	**+0.5**
KAPS	**Kapalarasan**	**3.54**	**28**	Pg	**Pb**	**20 52 13.7**	**+1.9**
	8.2nm,0.3s						
KAPS				Lg	Lg	20 53 00.2	
	89nm,0.2s						
OHH	**Osh**	**3.60**	**244**	⇑*eP*	**Pn**	**20 52 06.2**	**+1.3**
OHH				⇑*eS*	**Sn**	**20 52 47.8**	**+0.5**
ARK	**Arkit**	**3.80**	**266**	⇑*eP*	**Pn**	**20 52 09.0**	**+1.3**
ARK				⇑*eS*	**Sn**	**20 52 52.8**	**+0.4**
TRKS	**Terek-Say**	**4.45**	**264**	⇑*eP*	**Pn**	**20 52 17.9**	**+1.2**
TRKS				⇑*eS*	**Sn**	**20 53 08.2**	**-0.3**
DRK	**Karamyk**	**4.80**	**238**	⇑*eP*	**Pn**	**20 52 22.8**	**+1.2**
DRK				⇑*eS*	**Sn**	**20 53 16.7**	**-0.5**
KK31	**Karatay Array**	**4.91**	**283**	⇑Pg	**Pb**	**20 52 38.9**	**+3.8**
	5.4nm,0.6s						
KK31				⇓Lg	Lg	20 53 47.3	
	2.4nm,0.3s						
BTK	**Batken**	**5.15**	**248**	⇓*eP*	**Pn**	**20 52 27.6**	**+1.4**
BTK				⇓*eS*	**Sn**	**20 53 24.9**	**-0.7**
MAKZ	**Makanchi**	**5.83**	**36**	⇓Pn	Pb	20 52 42.9	-7.9
	0.3nm,0.4s						
MAKZ				⇑Lg	Lg	20 54 13.5	
	8.5nm,1.1s						
MK31	**Makanchi Array**	**5.96**	**37**	⇓Pn	Pn	20 52 41.7	+4.5
	0.1nm,0.3s,baz=214,slow=15,SNR=9.3						
MK31				⇑Lg	Lg	20 54 18.1	
	1.0nm,0.3s,baz=216,slow=28,SNR=6.3						
KURBB	**Kurchatov Arra**	**8.52**	**6**	⇑Pg	Pg	20 53 46.2	-6.1
	1.3nm,0.7s						
KURBB				⇓Lg	Lg	20 55 42.8	
	9.4nm,0.7s						
KURK	**Kurchatov**	**8.62**	**7**	⇑Pg	Pg	20 53 48.6	-5.6
	0.3nm,0.7s						
KURK				⇓Lg	Lg	20 55 41.5	
	3.6nm,0.8s						

*PGC **07** 21:12:26.1±0.1,50°.11N×114°.55W,h0km,ML2.9/3,29km east of Elkford, Bc Alberta, Canada Mining explosion.*
*IDC **07** 21:12:43.7±1.1,50°.30N×114°.73W,h0km,mb2.8/2, mbtmp3.1/5,ML3.7/3,Error ellipse: s-maj=35.2km s-min=10.9km az=82.0*

ISC 07 21:12:26.0±1.1, 50°.05N±0°.05×114°.60W±0°.06, h0km, n15, σ0§63/13, Alberta

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSPGA	**Hill Springs,**	**0.92**	**138**	P	**Pg**	**21 12 43.2**	**-0.4**
HSPGA				S	**Sg**	**21 12 55.6**	**0.0**
MKRVA	**Milk River, Al**	**2.05**	**115**	Pn	**Pn**	**21 13 02.4**	**+0.7**
MKRVA				Sn	**Sn**	**21 13 27.6**	**-0.4**
BSMT	**Bassoo Peak**	**2.20**	**183**	Pn	**Pn**	**21 13 03.8**	**-0.2**
YBMT	**Yellow Bay**	**2.22**	**170**	Pn	**Pn**	**21 13 04.5**	**+0.3**
JTMT	**Jette**	**2.31**	**175**	Pn	**Pn**	**21 13 04.5**	**-0.9**
I56US	**NEWPORT INFRAS**	**2.44**	**224**	I	I	21 26 10.0	
	0.3nm,0.9s,baz=41,slow=325,SNR=6.9						
EDM	**Edmonton**	**3.27**	**13**	Pn	**Pn**	**21 13 17.9**	**-0.6**
PNT	**Penticton**	**3.34**	**259**	Sn	**Sn**	**21 13 59.1**	**-0.7**
LYMT	**Lyon Mountain**	**3.44**	**153**	Pn	**Pn**	**21 13 21.3**	**+0.3**
B08A	**Colville Reser**	**3.53**	**243**	Pn	**Pn**	**21 13 22.8**	**+0.7**
PDAR	**Pinedale Array**	**8.07**	**153**	Pn	**Pb**	**21 14 47.0**	**+0.3**
	0.1nm,0.3s,baz=345,slow=15,SNR=5.1						
	0.3nm,0.5s						
NVAR	**Mina Array Bea**	**11.91**	**194**	Pn	Pn	21 15 37.9	+21
	0.2nm,0.3s,baz=27,slow=14,SNR=1.8						
	0.4nm,0.3s						
YKA	**Yellowknife Ar**	**12.48**	**360**	Pn	Pn	21 15 35.3	+11
	0.6nm,0.3s,baz=185,slow=12,SNR=20						
YKA				Sn	**Sn**	**21 17 45.0**	**+0.8**
	0.2nm,0.3s,baz=182,slow=21,SNR=6.0						
YKA				Lg	Lg	21 19 03.6	
	0.1nm,0.3s,baz=175,slow=28,SNR=4.6						
	0.7nm,0.5s						
TXAR	**Lajitas Array**	**22.29**	**154**	P	P	21 17 46.1	+21
	0.2nm,0.7s,baz=355,slow=13,SNR=2.3						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**22.44**	**323**	P	P	21 17 41.0	+15
	0.3nm,0.7s,baz=126,slow=12,SNR=4.7						
	0.3nm,0.7s						

IDC 07 21:30:58.0±1.7, 2°.66S×138°.41E, h0km, mb3.2/2, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=32.1km s-min=18.7km az=169.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.29**	**87**	Pn	Pn	21 31 37.7	+0.6
	3.9nm,0.3s,baz=253,slow=10,SNR=8.1						
JAY				Lg	Lg	21 32 10.6	
	1.8nm,0.3s,baz=159,slow=23,SNR=2.2						
	7.9nm,0.3s						
WRA	**Warramunga Arr**	**17.64**	**193**	P	Pn	21 35 05.5	+0.2
	0.1nm,0.3s,baz=17,slow=13,SNR=5.0						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**21.34**	**191**	P	P	21 35 46.6	-0.3
	0.5nm,0.6s,baz=18,slow=12,SNR=10						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**69.57**	**323**	P	P	21 42 08.9	-0.1
	0.2nm,0.7s,baz=119,slow=4.8,SNR=2.1						
	0.2nm,0.7s						

*IDC **07** 21:37:10.2±0.8,55°.25S×158°.66E,h0km,mb4.5/7, mbtmp4.5/7,MS3.8/23,Error ellipse: s-maj=37.2km s-min=22.6km az=55.0*
*NEIC **07** 21:37:11.9±1.0,55°.2S±0°.1×158°.9E±0°.2,h10km±1km, mb4.8/17,Error ellipse: s-maj=20.9km s-min=16.7km az=239.0*

ISC 07 21:37:12.0±0.7, 55°.1S±0°.1×158°.8E±0°.1, h10km, n75, σ1§12/46, mb4.6/13, MS3.7/24, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYZ	**Puysegur Point**	**10.24**	**32**	Pn	**Pn**	**21 39 39.0**	**+0.1**
WHZ	**Wether Hill Ro**	**10.89**	**36**		**Pn**	**21 39 46.6**	**-1.2**
DCZ	**Deep Cove**	**11.01**	**32**	Pn	**Pn**	**21 39 49.3**	**-0.2**
MLZ	**Mavora Lakes**	**11.41**	**35**		**Pn**	**21 39 54.5**	**-0.5**
WKZ	**Wanaka**	**12.19**	**37**	Pn	**Pn**	**21 40 06.2**	**+0.6**
ODZ	**Otahua Downs**	**12.59**	**42**	Pn	**Pn**	**21 40 10.5**	**-0.6**
LBZ	**Lake Benmore**	**

COEN Coen 42.83 337 P 21 45 10.1 +0.1
COEN IAmb IAmb 21 45 11.4
comp=Z,15nm,1.1s
FITZ Fitzroy Crossi 44.75 312 LR LR 22 02 02.2
comp=Z,149nm,20.6s,baz=148,slow=33
HNR Honiara 45.56 2 LR LR 21 59 59.2
comp=Z,7.6nm,19.3s,baz=333,slow=30
KNRA Kununurra 45.66 318 P 21 45 33.2 +0.5
PMG Port Moresby 46.51 344 LR LR 22 05 45.1
comp=Z,82nm,18.3s,baz=196,slow=37
BELA Belgrano 2 47.02 176 P **P 21 45 42.2 -0.6**
BELA IAmb IAmb 21 46 26.1
comp=Z,22nm,1.6s
MTN Manton Dam 47.38 322 P **P 21 45 46.1 -0.2**
BATI Baumata 52.66 315 LR LR 22 07 59.4
comp=Z,110nm,18.2s,baz=124,slow=35
PPT Papeete 54.13 67 LR LR 22 04 56.8
comp=Z,68nm,20.5s,baz=190,slow=31
PMSA Palmer Station 56.02 159 LR LR 22 05 52.0
comp=Z,69nm,20.1s,baz=233,slow=31
SIJI Sorong 58.55 327 LR LR 22 12 33.4
comp=Z,109nm,18.4s,baz=148,slow=36
KAPI Kappang 58.96 313 LR LR 22 12 43.9
comp=Z,67nm,18.4s,baz=144,slow=36
H04S2 CROZET ISLANDS 61.29 228 T T 22 54 51.7
baz=140,slow=75,SNR=28
H04S1 CROZET ISLANDS 61.29 228 T T 22 54 54.2
baz=140,slow=75,SNR=36
H04S3 CROZET ISLANDS 61.31 228 T T 22 54 53.2
baz=140,slow=75,SNR=34
LEM Lembang 62.98 300 LR LR 22 11 32.3
comp=Z,82nm,21.2s,baz=172,slow=33
TOLI2 Tolitoli 64.10 317 P **P 21 47 46.0 -0.3**
DAV Davao City (W) 67.85 324 LR LR 22 17 59.0
comp=Z,116nm,18.0s,baz=159,slow=36
PLCA Paso Flores 75.67 143 P **P 21 48 56.8 -0.5**
comp=Z,1.9nm,0.9s,baz=189,slow=9.4,SNR=4.3
PLCA LR LR 22 14 19.3
comp=Z,69nm,19.6s,baz=205,slow=30
comp=Z,1.9nm,0.9s
H03S2 Juan Fernandez 78.56 134 T T 23 16 32.1
baz=208,slow=74,SNR=1449
H03S1 Juan Fernandez 78.57 134 T T 23 16 33.5
baz=208,slow=74,SNR=1297
H03S3 Juan Fernandez 78.58 134 T T 23 16 31.5
baz=208,slow=74,SNR=1556
H03N3 Juan Fernandez 78.89 134 T T 23 18 12.9
baz=212,slow=72,SNR=28
H03N2 Juan Fernandez 78.91 134 T T 23 18 16.2
baz=212,slow=72,SNR=39
H03N1 Juan Fernandez 78.91 134 T T 23 18 08.1
baz=212,slow=72,SNR=19
H08S2 Diego Garcia H 81.68 269 T T 23 19 15.6
baz=144,slow=76,SNR=98
H08S1 Diego Carcia H 81.69 269 T T 23 19 16.5
baz=144,slow=76,SNR=54
H08S3 Diego Garcia H 81.70 269 T T 23 19 21.7
baz=144,slow=76,SNR=136
SUR Sutherland 85.71 215 LR LR 22 23 58.7
comp=Z,21nm,20.6s,baz=177,slow=33
BOSA Boshof 87.61 220 LR LR 22 24 03.1
comp=Z,28nm,19.6s,baz=202,slow=32
CMAR Chiang Mai Arr 89.07 305 P **P 21 50 07.2 0.0**
comp=Z,2.0nm,0.9s,baz=173,slow=4.2,SNR=16
CMAR LR LR 22 27 08.8
comp=Z,37nm,21.9s,baz=150,slow=34
comp=Z,2.0nm,0.9s
PALK Pallekele 89.17 284 LR LR 22 24 14.7
comp=Z,34nm,19.1s,baz=156,slow=32
JNU Nakatsue 91.09 337 LR LR 22 31 06.3
comp=Z,48nm,18.1s,baz=138,slow=36
MJAR Matsushiro Arr 92.98 344 LR LR 22 32 36.1
comp=Z,27nm,18.1s,baz=152,slow=36
BRDH Bariadhala 96.19 301 LR LR 22 37 25.7
comp=Z,31nm,18.2s,baz=200,slow=38
MKAR Makanchi Array 120.17 309 PKP **PKPdf 21 56 01.6 -0.6**
comp=Z,0.5nm,0.8s,baz=238,slow=2.3,SNR=5.1
KURBB Kurchatov Arra 124.69 310 PKP **PKPdf 21 56 10.0 -0.6**
comp=Z,1.4nm,0.2s,baz=134,slow=0.8,SNR=6.6
ILAR Eielson Array 126.56 26 PKP **PKPdf 21 56 13.7 -0.2**
comp=Z,1.7nm,1.0s,baz=267,slow=3.3,SNR=10
TORD Torodi Ar. Bea 134.49 212 PKP **PKPdf 21 56 28.2 -2.2**
comp=Z,1.0nm,0.9s,baz=220,slow=2.5,SNR=4.3
YKA Yellowknife Ar 135.14 41 PKP **PKPdf 21 56 29.9 -0.2**
comp=Z,0.6nm,0.8s,baz=256,slow=2.4,SNR=8.5
OBN Obninsk 147.78 294 PKPbc **PKPbc 21 56 56.0 +0.3**
comp=Z,7.8nm,0.4s,baz=0.3,slow=22,SNR=4.2
MLR Muntele Rosu 148.95 272 PKPbc **PKPdf 21 56 58.8 +3.5**
comp=Z,3.2nm,0.7s,baz=205,slow=6.7,SNR=3.0
AKASG Malin Array Be 149.83 283 PKPbc **PKPdf 21 57 00.1 +3.7**
comp=Z,2.8nm,0.7s,baz=90,slow=2.2,SNR=6.3
FINES FINESS Array 154.84 304 PKPbc **PKPbc 21 57 12.1 0.0**
comp=Z,1.9nm,0.7s,baz=151,slow=3.2,SNR=4.3
FINES PKPab **PKPab 21 57 26.8 -0.7**
comp=Z,3.6nm,0.9s,baz=116,slow=3.2,SNR=3.5

*VIE **07** 21:54:50.9±0.5, 50.13°N × 18.41°E, h0km, mb2.5/3, ml2.5/6, Error ellipse: s-maj=3.4km s-min=2.9km az=2.0 34 km NNE of Ostrava Suspected Mining induced.*
*IPEC **07** 21:54:51.5±0.1, 50.08°N × 18.46°E, h1km, ML2.5/6, Error ellipse: s-maj=1.6km s-min=1.0km az=166.0*
*PRU **07** 21:54:53.9, 50.07°N × 18.27°E, h0km*
ISC 07 21:54:51.5±1.1, 50.08°N±0.03° × 18.42°E±0.04, h0km, n32, σ0.85/58, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**273**		*e*PG	**Pg**	**21 54 55.8**	**+1.5**
RAC					*e*SG	**Sg**	**21 54 58.9**	**+2.7**
OKC	**Ostrava-Krasne**	**0.30**	**216**		*e*PG	**Pg**	**21 54 58.1**	**+0.9**
OKC					*e*SG	**Sg**	**21 55 02.0**	**+1.0**
	comp=Z,147nm,0.4s							
STEB	**Steborice**	**0.44**	**251**		*e*PG	**Pg**	**21 55 00.9**	**+0.9**
STEB					*e*SG	**Sg**	**21 55 06.9**	**+1.2**
MORC	**Moravsky Berou**	**0.64**	**242**		*e*Pg	**Pg**	**21 55 04.1**	**+0.3**
	baz=63							
MORC					*e*Sg	**Sg**	**21 55 12.2**	**+0.2**
	101nm,0.4s,baz=63							
MORC	**Moravsky Berou**	**0.64**	**242**		*e*PG	**Pg**	**21 55 04.2**	**+0.4**
MORC					*e*SG	**Sg**	**21 55 12.3**	**+0.2**
ANAC	**Anensky vrch**	**0.67**	**270**		*e*Pg	**Pg**	**21 55 04.8**	**+0.4**
	baz=90							
ANAC					*e*Sg	**Sg**	**21 55 13.5**	**+0.5**
	93nm,0.3s,baz=90							
MAUC	**Maruska**	**0.81**	**209**		*e*SG	**Pg**	**21 55 08.0**	**+1.0**
LOSC	**Losov**	**0.82**	**237**		*e*Pg	**Pg**	**21 55 07.6**	**+0.4**
	baz=57							
LOSC					*e*Sg	**Sg**	**21 55 17.6**	**-0.1**
	58nm,0.3s,baz=57							
JAVC	**Velka Javorina**	**1.31**	**202**		*e*Pg	**Pg**	**21 55 16.5**	**-0.1**
	baz=23							
JAVC	**Velka Javorina**	**1.31**	**202**		*e*PG	**Pg**	**21 55 16.6**	**-0.1**
DPC	**Dobruska-Polom**	**1.38**	**282**		*e*PG	**Pg**	**21 55 17.3**	**-0.6**
DPC					*e*SG	**Sg**	**21 55 35.2**	**-0.5**
	comp=Z,54nm,0.5s							
NIE	**Niedzica**	**1.39**	**118**		*e*Pg	**Pn**	**21 55 17.8**	**-0.3**
NIE					*e*Sg	**Sn**	**21 55 36.9**	**-0.2**
VRAC	**Vranov**	**1.41**	**238**		*e*Pg	**Pn**	**21 55 17.9**	**-0.6**
	baz=57							
VRAC					*e*Sg	**Sg**	**21 55 36.4**	**-0.5**
	39nm,0.4s,baz=57							
OSTC	**Ostas**	**1.49**	**290**		*e*PG	**Pn**	**21 55 18.9**	**-0.7**
OSTC					*e*SG	**Sb**	**21 55 39.7**	**+0.1**
	comp=Z,20nm,0.9s							
KSP	**Ksiaz**	**1.56**	**300**		*e*Pg	**Pn**	**21 55 19.6**	**-0.9**
KSP					*e*Sg	**Sn**	**21 55 41.3**	**-0.2**
CHVC	**Chvalec**	**1.60**	**290**		*e*PG	**Pn**	**21 55 20.6**	**-0.5**
UPC	**Upice**	**1.60**	**287**		*e*PG	**Pn**	**21 55 21.1**	**0.0**
UPC					*e*SG	**Sn**	**21 55 42.4**	**-0.1**
KRUC	**Moravsky**	**1.67**	**233**		*e*Pn	**Pn**	**21 55 21.9**	**0.0**
	baz=52							
KRUC					*e*Sg	**Sn**	**21 55 44.1**	**+0.1**
	37nm,0.4s,baz=52							
KRUC	**Moravsky**	**1.67**	**233**		*e*PN	**Pn**	**21 55 22.0**	**0.0**
KRUC					*e*SG	**Sn**	**21 55 44.2**	**+0.2**
TREC	**Trest**	**2.06**	**249**		*e*PG	**Pb**	**21 55 28.6**	**-1.2**
TREC					*e*SG	**Sb**	**21 55 56.2**	**+0.3**
	comp=Z,25nm,0.2s							
PRU	**Pruhonice**	**2.50**	**269**		*e*PG	**Pb**	**21 55 36.2**	**-1.1**
PRU					*e*SG	**Sb**	**21 56 08.5**	**-0.1**
	comp=Z,12nm,0.5s							
PVCC	**Panska Ves**	**2.51**	**282**		*e*PG	**Pb**	**21 55 38.4**	**+1.0**
PVCC					*e*SG	**Sb**	**21 56 10.5**	**+1.6**
	comp=Z,20nm,0.3s							
CONA	**Conrad Observa**	**2.73**	**219**		*e*Pn	**Pn**	**21 55 36.6**	**-0.1**
	0.1nm,0.1s							
CONA					*e*Sn	**Sn**	**21 56 09.4**	**-1.1**
	0.7nm,0.2s							
RONA	**Rosalia, Austr**	**2.76**	**211**		*e*Pn	**Pn**	**21 55 37.2**	**+0.2**
	0.2nm,0.2s							
RONA					*e*Sn	**Sn**	**21 56 10.8**	**-0.4**
	0.4nm,0.1s							
ZVC	**Zvikov**	**2.81**	**258**		*e*PG	**Pb**	**21 55 42.5**	**-0.1**
CKRC	**Cesky Krumlov**	**2.96**	**246**		*e*PG	**Pb**	**21 55 46.0**	**+0.8**
CKRC					*e*SG	**Sb**	**21 56 22.2**	**+0.3**
	comp=Z,11nm,0.4s							
BRG	**Berggiesshubel**	**2.97**	**287**		Pg	**Pb**	**21 55 46.3**	**+1.1**
BRG					Sg	**Sg**	**21 56 25.6**	**-1.2**
BRG					Amp		21 56 30.0	
	comp=Z,7.6nm,0.5s							
KHC	**Kasperske Hory**	**3.29**	**255**		*e*PN	**Pn**	**21 55 43.0**	**-1.3**
KHC					*e*PG	**Pg**	**21 55 53.0**	**-1.5**
KHC					*e*SG	**Sg**	**21 56 35.0**	**-2.1**
MOA	**Molln**	**3.53**	**232**		*e*Pg	**Pg**	**21 55 58.7**	**-0.4**
	comp=Z,0.1nm,0.1s							
MOA					*i* Sn	**Sn**	**21 56 30.3**	**+0.2**
	comp=Z,0.2nm,0.1s							
CLL	**Collm**	**3.66**	**292**		*i* (Pn)	**Pg**	**21 56 02.1**	**+0.5**
CLL					*i* Sg	**Sg**	**21 56 48.3**	**-0.7**
BIOA	**Bad Ischl, Aus**	**3.96**	**235**		*i* Sn	**Sn**	**21 56 41.0**	**+0.5**
	comp=Z,6.7nm,0.4s							
KBA	**Koelnbreinsper**	**4.51**	**230**		*i* Sn	**Sn**	**21 56 54.2**	**-0.2**
	comp=Z,0.5nm,0.3s							

*IDC **07** 22:26:37.5±1.9, 1.88°N × 126.64°E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=190.9km s-min=22.6km az=66.0*
*DJA **07** 22:26:42.5±0.7, 2.7°N±3.3° × 12.7°E±.5, h27km±7km, M3.3/10, MLv3.3/10*
ISC 07 22:26:44.4±1.4, 2.0°N±0.1° × 127.0°E±0.1, h63km, n7, σ1.9±27/9, mb3.4/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**162**		P	**Pn**	**22 27 04.8**	**-1.3**
TNTI					S	**Sn**	**22 27 21.8**	**-0.5**
MNI	**Manado**	**2.19**	**256**		P	**Pn**	**22 27 16.9**	**-1.6**
SANI	**Sanana**	**4.12**	**194**		P	**Pn**	**22 27 44.3**	**-0.6**
SANI					S	**Sn**	**22 28 33.7**	**+1.8**
WRA	**Warramunga Arr**	**22.96**	**162**		P	**P**	**22 31 44.0**	**+0.3**
	0.6nm,0.5s,baz=340,slow=11,SNR=9.4							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**26.37**	**166**		P	**P**	**22 32 15.0**	**0.0**
	0.2nm,0.7s,baz=338,slow=8.3,SNR=1.3							
	0.2nm,0.7s							
MKAR	**Makanchi Array**	**59.12**	**326**		P	**P**	**22 36 39.4**	**+0.9**
	0.2nm,0.4s,baz=120,slow=7.9,SNR=6.0							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**63.33**	**328**		P	**P**	**22 37 07.6**	**+0.8**
	0.2nm,0.4s,baz=130,slow=6.1,SNR=4.5							
	0.2nm,0.4s							

IDC 07 22:34:56.5±1.5, 2.66°S × 138.40°E, h0km, mb3.5/2, mbtmp3.4/4, ML3.3/2, MS3.1/2, Error ellipse: s-maj=29.8km s-min=18.2km az=173.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.30**	**87**		Pn	**Pn**	**22 35 36.5**	**+0.8**
	3.2nm,0.3s,baz=211,slow=10,SNR=8.0							
JAY					Lg	Lg	22 36 09.0	
	4.7nm,0.3s,baz=89,slow=19,SNR=3.7							
	10.0nm,0.3s							
DAV	**Davao City (W)**	**16.04**	**307**		LR	LR	22 43 30.2	
	comp=Z,34nm,20.5s,baz=122,slow=32							
WRA	**Warramunga Arr**	**17.63**	**193**		P	Pn	22 39 03.0	-0.7
	0.2nm,0.3s,baz=14,slow=12,SNR=7.7							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**21.34**	**191**		P	P	22 39 45.7	+0.3
	0.9nm,0.7s,baz=21,slow=11,SNR=8.1							
	0.9nm,0.7s							
NWAO	**Narrogin (SRO)**	**36.06**	**211**		LR	LR	22 58 43.4	
	comp=Z,68nm,18.9s,baz=292,slow=40							
MKAR	**Makanchi Array**	**69.56**	**323**		P	P	22 46 07.3	-0.1
	0.8nm,0.9s,baz=118,slow=7.7,SNR=6.1							
	0.8nm,0.9s							

*RSNC **07** 22:45:35.4±1.0, 2.7°N±5.5° × 8.75W±.7°, h0km, M4.5, mB5.2, mb4.4, ML3.1, Mw(mB)4.5*
*IDC **07** 22:45:37.7±1.0, 1.87°N × 84.96W, h0km, mb3.8/7, mbtmp4.0/10, ML2.9/2, MS3.4/20, Error ellipse: s-maj=35.9km s-min=19.0km az=57.0*
*NEIC **07** 22:45:39.5±2.1, 2.0°N±0.1° × 84.7°W±0.2, h10km±1km, mb4.3/1, Error ellipse: s-maj=32.7km s-min=13.9km az=240.0*
ISC 07 22:45:42.2±0.7, 2.00°N±0.07° × 84.60°W±0.10, h35km, n55, σ1.9±99/37, mb3.7/7, MS3.3/16, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PPLP	**Puerto Lpez**	**5.20**	**133**		P	**Pn**	**22 46 54.4**	**-3.2**
	1μm77nm,0.7s							
PPLP					S	**Sn**	**22 47 51.2**	**-5.2**
	1μm77nm,0.7s							
PAC1	**Pacto, Paraso**	**6.06**	**106**		P	**Pn**	**22 47 08.4**	**-1.1**
OTAV	**Otavalo**	**6.39**	**106**		Pn	**Pn**	**22 47 14.2**	**-0.2**
OTAV	**Otavalo**	**6.39**	**106**		P	**Pn**	**22 47 13.0**	**-1.4**
	26nm,1.1s							
GR1C	**Gorgona, Isla**	**6.51**	**81**		P	**Pn**	**22 47 15.3**	**-0.2**
SLOR	**San Lorenzo -**	**6.68**	**114**		Pn	**Pn**	**22 47 19.7**	**+1.4**
BONI	**La Bonita**	**7.24**	**102**		P	**Pn**	**22 47 26.8**	**+1.0**
	635nm27nm,0.9s							
GCUF	**Volcan Galeras**	**7.29**	**96**		P	**Pn**	**22 47 26.3**	**-0.5**
	25nm,0.8s							
BBAC	**Balboa, Cauca**	**7.35**	**90**		P	**Pn**	**22 47 27.7**	**+0.4**
	25nm,0.9s							
CASC	**Dorado de Casc**	**7.49**	**104**		P	**Pn**	**22 47 31.5**	**+2.3**
	20nm,1.0s							
MCRA	**Macar, Loja**	**7.85**	**144**		P	**Pn**	**22 47 31.9**	**-2.1**
	5.5nm,1.2s							
POPC	**Popayan, Colom**	**7.94**	**86**		P	**Pn**	**22 47 34.8**	**-0.6**
	15nm,1.2s							
JUD3	**Juan Diaz 3**	**8.16**	**353**			**Pn**	**22 47 37.6**	**-0.8**
JTS	**Las Juntas de**	**8.24**	**358**		Pn	**Pn**	**22 47 39.9**	**+0.5**
	23nm,0.4s,baz=279,slow=23,SNR=21							
JTS					Sn	**Sn**	**22 49 04.7**	**-6.7**
	baz=158,slow=24							
JTS					LR	LR	22 50 18.3	
	comp=Z,386nm,21.0s,baz=191,slow=34							
JTS	**Las Juntas de**	**8.24**	**358**			**Pn**	**22 47 39.6**	**+0.2**
JTS	**Las Juntas de**	**8.24**	**358**		P	**Pn**	**22 47 37.7**	**-1.7**
YOTC	**Yotoco, Valle**	**8.48**	**76**		P	**Pn**	**22 47 43.0**	**+0.3**
	9.2nm,1.1s							
FLOC	**Florencia**	**8.96**	**93**		P	**Pn**	**22 47 49.2**	**0.0**
ORTC	**Ortega, Tolima**	**9.53**	**78**		P	**Pn**	**22 47 59.2**	**+2.1**
PRAC	**Prado**	**9.85**	**80**		P	**Pn**	**22 48 01.4**	**-0.1**
BOAB	**BOACO BROADBAN**	**10.43**	**354**		Pn	**Pn**	**22 48 09.7**	**+0.3**
ROSC	**El Rosal**	**10.64**	**74**		Pn	Pn	22 48 18.4	+5.8
	4.2nm,0.3s,baz=120,slow=11,SNR=3.7							
	9.9nm,0.4s							
MACC	**Macarena, Meta**	**10.75**	**89**		P	**Pn**	**22 48 15.7**	**+1.9**
HERN	**Volcan Telica**	**10.77**	**348**		Pn	**Pn**	**22 48 14.2**	**+0.1**
ATAH	**Atahualpa**	**10.99**	**146**		LR	LR	22 52 10.1	
	comp=Z,123nm,19.0s,baz=315,slow=35							
APG	**El Apazote**	**14.16**	**336**		Pn	**P**	**22 49 05.8**	**-1.9**
	0.1nm,0.3s,baz=93,slow=12,SNR=4.4							
APG					LR	LR	22 53 16.0	
	comp=Z,8.0nm,21.3s,baz=128,slow=32							
SDV	**Santo Domingo**	**15.49**	**63**		Pn	**P**	**22 49 23.3**	**+0.8**
	0.1nm,0.3s,baz=278,slow=7.0,SNR=3.8							
SDV					LR	LR	22 54 35.1	
	comp=Z,52nm,19.8s,baz=220,slow=34							
	1.9nm,0.4s							
CMIG	**Matias Romero**	**18.09**	**327**		LR	LR	22 55 11.0	
	comp=Z,71nm,19.1s,baz=151,slow=32							
LPAZ	**La Paz**	**24.39**	**139**		P	**P**	**22 50 59.5**	**+1.3**
	3.1nm,0.6s,baz=318,slow=5.5,SNR=12							
LPAZ					LR	LR	23 00 05.2	
	comp=Z,69nm,20.8s,baz=296,slow=35							
	3.1nm,0.6s							
LPAZ	**La Paz**	**24.39**	**139**		P	**P**	**22 50 59.0**	**+0.8**
LPAZ					IAmb	IAmb	22 51 02.2	
	comp=Z,11nm,1.4s							
MDP	**Montagnes des**	**32.04**	**84**		LR	LR	23 04 54.7	
	comp=Z,52nm,20.8s,baz=322,slow=36							
TXAR	**Lajitas Array**	**32.68**	**328**		P	**P**	**22 52 13.0**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=138,slow=7.5,SNR=2.8							
	comp=Z,0.2nm,0.6s							
TKL	**Tuckaleechee C**	**33.50**	**1**		LR	LR	23 04 60.0	
	comp=Z,64nm,20.5s,baz=162,slow=34							
H03N2	**Juan Fernandez**	**35.65**	**172**		T	T	23 30 18.0	
	baz=351,slow=76,SNR=64							
H03N1	**Juan Fernandez**	**35.66**	**172**		T	T	23 30 14.9	
	baz=351,slow=76,SNR=68							
H03N3	**Juan Fernandez**	**35.67**	**172**		T	T	23 30 14.1	
	baz=351,slow=76,SNR=78							
RPN	**Rapa Nui**	**37.51**	**218**		LR	LR	23 04 11.5	
	comp=Z,53nm,19.3s,baz=40,slow=30							
CPUP	**Villa Florida**	**38.57**	**139**		LR	LR	23 11 52.6	
	comp=Z,33nm,19.6s,baz=292,slow=41							
BDFB	**Brasilia**	**40.20**	**117**		LR	LR	23 10 10.8	
	comp=Z,38nm,20.4s,baz=82,slow=36							
SADO	**Sadowa**	**42.86**	**6**		LR	LR	23 10 21.6	
	comp=Z,93nm,19.4s,baz=117,slow=34							
PFO	**Pinyon Flats O**	**43.32**	**320**		LR	LR	23 08 56.1	
	comp=Z,33nm,18.0s,baz=198,slow=32							
PLCA	**Paso Flores**	**44.42**	**165**		P	**P**	**22 53 50.4**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=301,slow=8.0,SNR=3.7							
	comp=Z,1.2nm,0.8s							
PDAR	**Pinedale Array**	**46.31**	**335**		LR	LR	23 13 51.9	
	comp=Z,38nm,18.2s,baz=95,slow=37							
NVAR	**Mina Array Bea**	**47.59**	**324**		P	**P**	**22 54 16.4**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=120,slow=4.3,SNR=2.4							
	comp=Z,0.2nm,0.3s							
NEW	**Newport**	**53.92**	**334**		LR	LR	23 18 38.4	
	comp=Z,26nm,18.3s,baz=302,slow=37							
FRB	**Frobisher Bay**	**62.73**	**8**		LR	LR	23 22 55.0	
	comp=Z,79nm,18.5s,baz=276,slow=36							
YKA	**Yellowknife Ar**	**64.37**	**345**		P	**P**	**22 56 14.2**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=140,slow=6.1,SNR=5.9							
	comp=Z,0.4nm,0.9s							
SFJD	**Kangerlussuaq**	**69.05**	**14**		LR	LR	23 27 12.1	
	comp=Z,33nm,19.1s,baz=298,slow=36							
ILAR	**Eielson Array**	**76.67**	**337**		P	**P**	**22 57 28.9**	**-0.4**
	comp=Z,0.9nm,1.1s,baz=118,slow=7.4,SNR=4.3							
	comp=Z,0.9nm,1.1s							
DBIC	**Dimbokro**	**79.59**	**84**		P	**P**	**22 57 49.9**	**+3.4**
	comp=Z,3.3nm,0.8s,baz=256,slow=5.6,SNR=4.0							
DBIC					LR	LR	23 31 43.8	
	comp=Z,16nm,18.7s,baz=357,slow=35							
	comp=Z,3.3nm,0.8s							
ESDC	**Sonseca Array**	**81.52**	**50**		LR	LR	23 30 41.9	
	comp=Z,7.9nm,19.0s,baz=302,slow=33							
SPITS	**Spitsbergen Ar**	**90.30**	**12**		LR	LR	23 40 10.1	
	comp=Z,49nm,18.4s,baz=230,slow=36							
VRAC	**Vranov**	**95.78**	**40**		LR	LR	23 34 44.9	
	comp=Z,27nm,21.2s,baz=337,slow=31							
MKAR	**Makanchi Array**	**130.06**	**12**		PKP	**PKiKP**	**23 04 50.4**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=342,slow=0.4,SNR=4.0							
WRA	**Warramunga Arr**	**137.99**	**242**		PKP	**PKPdf**	**23 05 04.2**	**0.0**
	comp=Z,0.6nm,1.1s,baz=120,slow=2.0,SNR=1.8							

RSPR 07 22:52:06.8, 17.91°N × 66.68°W, h6km, 4C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.15**	**26**	⇓	*i* P	Pg	22 52 10.3	+0.4
OBIP					*e*S	Sg	22 52 12.7	+0.8
GBPR	**Guanica, Bosqu**	**0.20**	**289**	⇑	*i* P	Pg	22 52 11.3	+0.5
GBPR					*e*S	Sg	22 52 14.5	+0.9
CRPR	**Cabo Rojo, PR**	**0.42**	**283**	⇑	*e*P	Pg	22 52 15.3	+0.3
CRPR					*e*S	Sg	22 52 21.6	+1.0
LSP	**Las Mesas**	**0.47**	**304**	⇑	*e*P	Pg	22 52 16.1	+0.2
LSP					*e*S	Sg	22 52 23.4	+1.3
ECPR	**Experimental S**	**0.51**	**36**	⇓	*i* P	Pg	22 52 16.5	-0.1
ECPR					*e*S	Sg	22 52 23.7	+0.5
EMPR	**Esperanza - Ma**	**0.58**	**14**	⇑	*e*P	Pg	22 52 18.4	+0.3
EMPR					*e*S	Sg	22 52 26.7	+1.1
AGPR	**Aguadilla, PR**	**0.69**	**323**	⇓	*e*P	Pg	22 52 19.6	-0.6
AGPR					*e*S	Sg	22 52 29.2	0.0
HUMP	**Col San Antoni**	**0.82**	**73**	⇑	*e*P	Pg	22 52 21.9	-0.6
IDE	**Isla Desecheo**	**0.90**	**302**	⇑	*i* P	Pg	22 52 23.9	-0.1
IDE					*e*S	Sg	22 52 33.2	-2.4

SDD 07 22:52:57.3±2.4, 18.89°N × 67.70°W, h29km±52km, MD3.4, ML2.3, MW2.9, 7C-1D, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.70**	**127**	⇑	*e*Pg	Pb	22 53 08.8	-2.2
AGPR				⇓	*e*Sg	Sb	22 53 19.7	-0.6
AGPR					IAML		22 53 20.9	
	comp=N,131nm,1.1s							
PCDR	**Punta Cana, DR**	**0.75**	**240**		*e*Pg	Pb	22 53 10.6	-1.3
PCDR				⇑	*e*Sg	Sb	22 53 20.4	-1.3
PCDR					IAML		22 53 49.0	
	comp=N,170nm,1.6s							
CRPR	**Cabo Rojo, PR**	**1.04**	**148**	⇑	*e*Pg	Pn	22 53 14.8	-1.1
CRPR					IAML		22 53 36.0	
	comp=N,84nm,0.5s							
MIDR	**Miches**	**1.28**	**274**	⇑	*e*Pg	Pn	22 53 18.7	-0.6
MIDR				⇑	*e*Sg	Sb	22 53 36.6	-0.3
MIDR					IAML		22 53 59.3	
	comp=N,38nm,2.2s							
HATOM	**Hato Mayor del**	**1.60**	**266**	⇑	*e*Pg	Pb	22 53 25.0	-1.2
HATOM				⇑	*e*Sg	Sn	22 53 42.3	-1.1
HATOM					IAML		22 54 20.0	
	comp=N,28nm,3.3s							

*NIED **07** 22:54:54.4, 45.05°N × 149.29°E, h30km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr2.59; Mθθ-0.79; Mφφ-1.80; Mrθ0.56; Mrφ-3.87; Mθφ5.07; Fault plane solution: M0 6.76000 × 10^14 NP1: φs258.00000°, δ33.00000°, λ154.00000°. NP2: φs10.00000°, δ76

GLVR smax smax
comp=E,361nm,0.6s
GLVR smax smax
comp=N,577nm,0.4s
GLVR Golovnino 2.92 252 *e*P **Pn** **22 55 40.8 -1.8**
GLVR AMB AMB 22 55 41.8
comp=N,170nm,0.6s
GLVR *i* S **Sn** **22 56 15.5 -0.9**
GLVR A A 22 56 23.5
comp=N,580nm,0.5s
GLVR A A 22 56 23.5
comp=N,360nm,0.5s
NMR Nemuro--Hokkai 2.93 244 *e*PN **Pn** **22 55 39.6 -3.2**
NMR *i* S **Sn** **22 56 16.1 -0.7**
NMR Nemuro--Hokkai 2.93 244 *e*P **Pn** **22 55 39.9 -2.9**
NMR *i* S **Sn** **22 56 14.6 -2.2**
RUSJ Misakicho 3.00 260 *e*PN **Pn** **22 55 42.4 -1.4**
RUSJ *i* S **Sn** **22 56 21.1 +2.6**
AKK Akkeshi 3.67 244 *e*P **Pn** **22 55 49.5 -3.4**
JKA Kamikawa-asahi 4.87 266 **Pn** **22 56 07.8 -1.6**
ASAJ Asahikawa 4.88 266 P **Pn** **22 56 11.3 +1.9**
comp=N,7.1nm,0.5s,baz=78,slow=9.3,SNR=4.4
ASAJ S **Sn** **22 57 09.2 +4.7**
comp=N,6.9nm,0.5s,baz=78,slow=25,SNR=1.4
YSS Yuzhno-Sakhali 5.13 298 *e*PN **Pn** **22 56 13.5 +0.5**
YSS *e*S **Sn** **22 57 12.1 +1.2**
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS smax smax
comp=N,10.0nm,0.6s
YSS smax smax
comp=E,20nm,0.7s
YSS Yuzhno-Sakhali 5.13 298 *e*P **Pn** **22 56 12.5 -0.5**
YSS *e*S **Sn** **22 57 10.5 -0.4**
TYV Tymovskoe 7.64 326 *e*P **Pn** **22 56 45.3 -2.0**
PEA0B Petropavlovsk- 10.05 30 *i*PN **Pn** **22 57 22.1 +1.9**
PETK Petropavlovsk- 10.05 30 P **Pn** **22 57 20.2 0.0**
comp=E,3.2nm,0.9s,baz=213,slow=12,SNR=9.9
NKL Nikolayevsk 10.20 329 *e*P **Pn** **22 57 22.0 -0.2**
PET Petropavlovsk 10.34 33 *i*PN Pn 22 57 26.5 +2.4
PET pmax pmax
comp=Z,18nm,0.9s
KLR Kul'dur 12.85 297 LR LR 23 02 47.3
comp=Z,9.2nm,20.9s,baz=108,slow=36
ZEA Zeya 16.98 310 *e*P **P** **22 58 55.6 +2.5**
KSRS Korea Array 17.67 253 P **P** **22 59 02.9 +2.1**
comp=Z,0.9nm,0.5s,baz=62,slow=11,SNR=2.2
KSRS LR LR 23 05 54.6
comp=Z,35nm,19.2s,baz=55,slow=37
HILR Hailar Array B 20.65 294 P Pn 22 59 33.6 -2.5
comp=Z,0.6nm,0.3s,baz=96,slow=13,SNR=3.0
comp=Z,0.6nm,0.3s
YAK Yakutsk 20.81 333 *i*P Pn 22 59 35.4 -2.4
YAK pmax pmax
comp=Z,16nm,0.9s
YAK Yakutsk 20.81 333 *e*P Pn 22 59 35.4 -2.4
TIXI Tiksi 28.78 347 *i*P **P** **23 00 50.8 +0.4**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
TIXI Tiksi 28.78 347 *e*P **P** **23 00 50.9 +0.5**
H11N2 WAKE ISLAND Hy 28.85 144 T T 23 31 38.9
baz=334,slow=75,SNR=63
H11N1 WAKE ISLAND Hy 28.87 144 T T 23 31 35.1
baz=334,slow=75,SNR=57
H11N3 WAKE ISLAND Hy 28.87 144 T T 23 31 35.3
baz=334,slow=75,SNR=69
SONM Songino Array 29.58 292 P **P** **23 00 57.7 -0.2**
comp=Z,0.4nm,0.6s,baz=86,slow=7.9,SNR=4.3
comp=Z,0.4nm,0.6s
SONM Songino Array 29.58 292 *e*P **P** **23 00 58.8 +0.8**
H11S1 WAKE ISLAND Hy 29.87 145 T T 23 33 00.9
baz=335,slow=76,SNR=78
H11S3 WAKE ISLAND Hy 29.87 145 T T 23 32 54.1
baz=335,slow=76,SNR=55
H11S2 WAKE ISLAND Hy 29.89 145 T T 23 32 54.7
baz=335,slow=76,SNR=64
LZDM Lanzhou Array 35.49 272 P **P** **23 01 50.3 +0.4**
comp=Z,1.1nm,0.5s,baz=129,slow=2.1,SNR=5.9
comp=Z,1.1nm,0.5s
GTA2 Gaotai 36.71 280 P **P** **23 02 01.0 +1.0**
GTA2 sP pP 23 02 09.4 -5.6
GTA2 pmax pmax
comp=Z,6.0nm,0.8s
ILAR Eielson Array 39.79 37 P **P** **23 02 25.5 +0.1**
comp=Z,0.3nm,0.6s,baz=273,slow=8.8,SNR=6.9
comp=Z,0.3nm,0.6s
ILAR Eielson Array 39.79 37 *e*P **P** **23 02 25.9 +0.5**
D25K Kavik River 40.08 30 P **P** **23 02 28.5 +0.7**
D25K IAmb IAmb 23 02 31.4
comp=Z,1.8nm,0.6s
F25K Christian Rive 40.28 33 P **P** **23 02 30.1 +0.5**
F25K IAmb IAmb 23 02 32.4
comp=Z,4.4nm,1.4s
MK31 Makanchi Array 45.55 298 *i*P **P** **23 03 11.0 -1.4**
MKAR Makanchi Array 45.55 298 P **P** **23 03 12.8 +0.4**
comp=Z,1.4nm,0.6s,baz=75,slow=7.7,SNR=19
comp=Z,1.4nm,0.6s
MAKZ Makanchi 45.74 298 **P** **23 03 14.2 +0.3**
MAKZ IAmb IAmb 23 03 14.8
comp=Z,2.1nm,0.8s
MAKZ Makanchi 45.74 298 P **P** **23 03 14.2 +0.3**
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 46.32 304 P **P** **23 03 17.8 -0.5**
KURK Kurchatov 46.32 304 P **P** **23 03 17.8 -0.5**
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURBB Kurchatov Arra 46.40 304 P **P** **23 03 18.0 -0.9**
comp=Z,0.6nm,0.3s,baz=74,slow=8.1,SNR=8.0
comp=Z,0.6nm,0.3s
A36M Sachs Harbour 46.85 25 P **P** **23 03 20.6 -1.6**
CMAR Chiang Mai Arr 49.30 255 LR LR 23 24 29.0
comp=Z,14nm,18.6s,baz=330,slow=36
WUS Wushi 50.00 292 **P** **23 03 47.8 +0.8**
WUS IAmb IAmb 23 03 48.6
comp=Z,6.0nm,0.7s
YKA Yellowknife Ar 54.13 35 P **P** **23 04 17.5 +0.3**
comp=Z,0.3nm,0.8s,baz=304,slow=7.5,SNR=4.1
comp=Z,0.3nm,0.8s
FINES FINESS Array B 64.74 334 P **P** **23 05 29.4 -0.8**
comp=Z,0.6nm,0.5s,baz=33,slow=5.2,SNR=7.5
comp=Z,0.6nm,0.5s
FINES FINESS Array B 64.74 334 *e*P **P** **23 05 30.0 -0.3**
FINES pmax pmax
comp=Z,1.0nm,0.7s
OBN Obninsk 65.48 324⇑ *e*P **P** **23 05 34.6 -0.5**
OBN *e* 23 06 07.4
OBN *e* 23 08 01.6
OBN *e*S **S** **23 14 08.0 -7.0**
OBN *i* SSS SSS 23 21 22.9
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN Obninsk 65.48 324 *e*P **P** **23 05 34.6 -0.5**
WRA Warramunga Arr 65.77 196 P **P** **23 05 36.6 -0.7**
comp=Z,0.5nm,0.8s,baz=11,slow=6.8,SNR=2.0
comp=Z,0.5nm,0.9s
NB2 NORSAR Subarra 69.28 340 P **P** **23 05 58.4 -0.7**
comp=Z,3.0nm,0.8s,baz=31,slow=6.5
NOA NORSAR Array B 69.28 340 P **P** **23 05 58.7 -0.4**
comp=Z,0.4nm,0.5s,baz=32,slow=6.6,SNR=7.2
comp=Z,0.4nm,0.5s
HFS Hagfors 69.42 338 P **P** **23 05 59.3 -0.6**
comp=Z,1.0nm,0.5s,baz=64,slow=6.8,SNR=7.6
comp=Z,1.0nm,0.5s
ASAR Alice Springs 69.48 195 P **P** **23 06 01.2 +0.5**
comp=Z,0.2nm,0.5s,baz=7.4,slow=5.1,SNR=4.0
comp=Z,0.2nm,0.5s
KIV Kislovodsk 70.30 313 *e*P **P** **23 06 04.8 -1.0**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV Kislovodsk 70.30 313 *e*P **P** **23 06 04.8 -1.0**
KBZ Khabaz 70.35 312 P **P** **23 06 07.2 +1.3**
comp=Z,2.6nm,0.7s,baz=79,slow=4.3,SNR=6.4
comp=Z,2.6nm,0.7s
AKASG Malin Array Be 71.74 325 P **P** **23 06 14.4 +0.2**
comp=Z,1.2nm,0.6s,baz=37,slow=5.6,SNR=4.2
comp=Z,1.2nm,0.6s
CLL Collm 77.19 334 *i*P **P** **23 06 46.4 +0.6**
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL Collm 77.19 334 *i*P **P** **23 06 46.4 +0.6**
comp=Z,4.0nm,0.6s
GERES GERESS Array B 79.09 332 P **P** **23 06 57.1 +0.6**
comp=Z,0.6nm,0.6s,baz=43,slow=9.9,SNR=4.1
comp=Z,0.6nm,0.6s
TXAR Lajitas Array 80.81 58 P **P** **23 07 06.7 +0.6**
comp=Z,0.4nm,0.7s,baz=288,slow=2.4,SNR=4.5
comp=Z,0.4nm,0.7s
H03N2 Juan Fernandez 141.38 90 T T 01 52 15.6
baz=305,slow=77,SNR=4.0
H03N3 Juan Fernandez 141.39 90 T T 01 52 12.2
baz=305,slow=77,SNR=4.4
H03N1 Juan Fernandez 141.40 90 T T 01 52 07.3
baz=305,slow=77,SNR=3.7

BER ***07*** *22:58:24.5±2.7, 75°.78N×5°.70E, h10km, Mw3.6, Confirmed Earthquake*
IDC ***07*** *22:58:26.9±1.9, 75°.96N×6°.34E, h0km, mb3.4/3, mbtmp3.5/6, ML2.9/3, MS3.2/2, Error ellipse: s-maj=32.5km s-min=17.8km az=76.0*
DNK ***07*** *22:58:28.2±0.7, 76°.04N×5°.17E, h19km±11km, ML1.3, Presumed earthquake*
KOLA ***07*** *22:58:30.1, 74°.41N×4°.76E, h0km, ML1.7*
ISC 07 22:58:28.6±1.2, 76°.51N±0°.08×6°.80E±0°.06, h10km, n24, σ2s06/18, mb3.2/3, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**2.07**	**72**	*e*P		**Pb**	**22 59 05.2**	**-0.9**
HSPB				*e*S		**Sb**	**22 59 33.0**	**+1.1**
BRBA	**Barentsburg A**	**2.26**	**43**	*e*P		**Pg**	**22 59 12.3**	**+0.4**
BRBB	**Barentsburg B**	**2.28**	**42**	*e*P		**Pg**	**22 59 11.0**	**-1.2**
KBS	**Kingsbay**	**2.67**	**22**	*e*P		**Pg**	**22 59 17.7**	**-1.8**
KBS	**Kingsbay**	**2.67**	**22**	*e*P		**Pg**	**22 59 17.8**	**-1.8**
SPA0	**Spitsbergen Ar**	**2.69**	**47**	*e*P		**Pb**	**22 59 16.6**	**-0.1**
SPITS	**Spitsbergen Ar**	**2.69**	**47**	Pn		**Pb**	**22 59 16.6**	**-0.1**
	baz=233,slow=12							
SPITS				Sn		**Sg**	**22 59 53.4**	**-1.5**
	baz=184,slow=21							
	5.2nm,0.4s							
HOPEN	**Hopen**	**4.26**	**81**	*e*P		**Pn**	**22 59 34.1**	**+0.8**
HOPEN				*e*S		**Sn**	**23 00 23.4**	**+0.4**
HOPEN				IAML			23 00 29.7	
	comp=Z,5.6nm,0.2s							
NOR	**Nord**	**6.71**	**330**	*e*P		**Pn**	**23 00 07.0**	**0.0**
NOR	**Nord**	**6.71**	**330**	*i*P		**Pn**	**23 00 07.0**	**0.0**
NOR				*i*S		**Sn**	**23 01 21.0**	**-2.2**
NOR				IAML			23 01 25.6	
	comp=Z,0.8nm,0.2s							
DBG	**Daneborg**	**7.12**	**265**	*e*P		Pn	23 00 02.9	-10
DBG				*e*S		Sn	23 01 12.3	-21
DBG	**Daneborg**	**7.12**	**265**	*i*P		Pn	23 00 04.6	-8.0
DBG				*i*S		Sn	23 01 15.7	-18
DBG				IAML			23 01 17.2	
	comp=Z,1.4nm,0.2s							
ARCES	**ARCESS Array B**	**8.83**	**133**	Pn		Pn	23 00 30.0	-6.0
	comp=Z,0.2nm,0.3s,baz=328,slow=12,SNR=7.4							
ARCES				Sn		Sn	23 01 57.1	-18
	comp=Z,0.2nm,0.3s,baz=329,slow=17,SNR=1.8							
	comp=Z,1.1nm,0.4s							
ARCES	**ARCESS Array B**	**8.83**	**133**	S		Sn	23 01 56.4	-19
VADS	**Vadso**	**9.04**	**123**	P		Pn	23 00 33.9	-4.9
VADS				S		Sn	23 02 04.1	-16
SCO	**Scoresbysund**	**10.04**	**248**	*i*P		Pn	23 00 41.0	-12
SCO				*i*S		Sn	23 02 18.8	-26
SCO				IAML			23 02 25.6	
	comp=Z,0.6nm,0.3s							
APA0	**Apatity Array**	**11.88**	**125**	S		Sn	23 03 07.2	-23
KVDA	**Kovda**	**12.66**	**127**	S		Sn	23 03 22.3	-27
FINES	**FINESS Array B**	**16.47**	**146**	Pn		**Pn**	**23 02 14.3**	**-5.0**
	comp=Z,0.1nm,0.3s,baz=354,slow=13,SNR=3.4							
	comp=Z,3.1nm,1.0s							
BVAR	**Borovoye Array**	**33.10**	**98**	LR		LR	23 21 31.2	
	comp=Z,29nm,18.6s,baz=182,slow=42							
SCHQ	**Schefferville**	**33.79**	**273**	LR		LR	23 19 47.7	
	comp=Z,38nm,18.4s,baz=268,slow=38							
ZALV	**Zalesovo Beam**	**35.62**	**83**	P		**P**	**23 05 27.6**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=337,slow=7.0,SNR=1.9							
	comp=Z,0.3nm,0.4s							
ILAR	**Eielson Array**	**38.00**	**342**	P		**P**	**23 05 49.7**	**+3.7**
	comp=Z,0.4nm,0.8s,baz=23,slow=7.5,SNR=6.0							
	comp=Z,0.4nm,0.8s							
MKAR	**Makanchi Array**	**41.70**	**90**	P		**P**	**23 06 18.5**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=349,slow=6.9,SNR=3.5							
	comp=Z,0.2nm,0.5s							

CATAC ***07*** *23:07:54.1±0.4, 13°.N±2°.×8°.9W±°, h27km±2km, M4.4/34, MLv4.4/34, Error ellipse: s-maj=5.3km s-min=2.2km az=27.6, confirmed*
SNET ***07*** *23:07:54.6±1.2, 13°.04N×89°.18W, h38km, ML4.3, Presumed earthquake*
IDC ***07*** *23:07:55.0±3.2, 13°.83N×88°.40W, h35km±45km, mb3.2/3, mbtmp3.6/6, ML3.5/3, MS2.9/4, Error ellipse: s-maj=105.2km s-min=17.5km az=36.0*
NEIC ***07*** *23:07:55.8±1.5, 13°.10N±0°.07×89°.12W±0°.08, h45km±2km, mb4.2/31, Error ellipse: s-maj=12.6km s-min=7.4km az=52.0*
GCG ***07*** *23:07:56.8±1.0, 13°.18N×89°.26W, h48km±8km, MD4.3, ML4.4, MW3.5, Presumed earthquake*
ISC 07 23:07:54.8±0.9, 13°.07N±0°.05×89°.16W±0°.03, h46km±8km, n118, σ1s33/140, mb4.2/16, MS2.9/3, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.44**	**339**	P		**Pn**	**23 08 05.2**	**+0.1**
LALI	**Alcalda de L**	**0.44**	**339**	*e*P		**Pn**	**23 08 05.4**	**+0.2**
LALI	**Alcalda de L**	**0.44**	**339**	*i*P		**Pn**	**23 08 05.4**	**+0.2**
LALI				*i*S		**Sn**	**23 08 12.8**	**+0.3**
PANCS	**Alcalda de**	**0.54**	**357**	P		**Pn**	**23 08 06.4**	**+0.1**
PANCS				S		**Sn**	**23 08 15.1**	**+0.5**
TECO	**Alcaldia de Te**	**0.59**	**38**	P		**Pn**	**23 08 07.1**	**+0.1**
TECO				S		**Sn**	**23 08 16.8**	**+1.1**
COEG	**Centro de Oper**	**0.61**	**26**	P		**Pn**	**23 08 07.5**	**+0.2**
COEG				S		**Sn**	**23 08 17.4**	**+1.2**
UTEC	**Universidad Te**	**0.63**	**356**	P		**Pn**	**23 08 07.8**	**+0.3**
UTEC				S		**Sn**	**23 08 17.8**	**+1.1**
SEMO	**Seminario San**	**0.63**	**354**	P		**Pn**	**23 08 07.9**	**+0.3**
SEMO				S		**Sn**	**23 08 17.7**	**+1.0**
IGN	**Direccin Gen**	**0.64**	**359**	P		**Pn**	**23 08 08.0**	**+0.3**
IGN	**Direccin Gen**	**0.64**	**359**	*e*P		**Pn**	**23 08 08.0**	**+0.3**
IGN				*e*S		**Sn**	**23 08 18.6**	**+1.7**
UDBS	**Universidad Do**	**0.64**	**360**	P		**Pn**	**23 08 08.1**	**+0.4**
UDBS				S		**Sn**	**23 08 18.1**	**+1.2**
JAYA	**Jayaque - finc**	**0.65**	**334**	P		**Pn**	**23 08 07.9**	**0.0**
JAYA				S		**Sn**	**23 08 17.7**	**+0.5**
JAYA	**Jayaque - finc**	**0.65**	**334**	*i*P		**Pn**	**23 08 07.9**	**0.0**
JAYA				*e*S		**Sn**	**23 08 17.0**	**-0.2**
UEES	**Universidad Ev**	**0.65**	**353**	P		**Pn**	**23 08 08.1**	**+0.3**
UEES				S		**Sn**	**23 08 18.5**	**+1.4**
PMON	**Piamonte**	**0.66**	**346**	P		**Pn**	**23 08 08.3**	**+0.4**
PMON				S		**Sn**	**23 08 18.6**	**+1.3**
BOQS	**Boqueron**	**0.67**	**350**⇓	*i*P		**Pn**	**23 08 08.7**	**+0.4**
PAVA	**Las Pavas**	**0.67**	**18**	P		**Pn**	**23 08 08.5**	**+0.4**
PAVA				S		**Sn**	**23 08 18.9**	**+1.2**
SCLA	**Alcaldia de Sa**	**0.75**	**33**	P		**Pn**	**23 08 09.8**	**+0.7**
SCLA				S		**Sn**	**23 08 20.7**	**+1.2**
CEDA	**San Andres**	**0.76**	**342**	P		**Pn**	**23 08 09.5**	**+0.2**
CEDA				S		**Sn**	**23 08 21.1**	**+1.3**
CEDA	**San Andres**	**0.76**	**342**	*e*P		**Pn**	**23 08 09.4**	**+0.1**
PQSS	**Presa 15 de Se**	**0.80**	**46**	P		Pn	23 08 03.0	-6.7
PQSS				S		**Sn**	**23 08 14.9**	**-5.6**
CEVE	**Cerro Verde**	**0.88**	**329**	P		**Pn**	**23 08 11.3**	**+0.3**
CEVE				S		**Sn**	**23 08 24.0**	**+1.1**
CEVE	**Cerro Verde**	**0.88**	**329**	*e*P		**Pn**	**23 08 11.2**	**+0.1**
CEVE				*e*S		**Sn**	**23 08 23.8**	**+0.9**
PACA	**Pacayal**	**0.90**	**64**	P		**Pn**	**23 08 12.0**	**+0.8**
PACA				S		**Sn**	**23 08 25.6**	**+2.4**
RANC	**El Ranchito**	**0.92**	**67**	P		**Pn**	**23 08 12.4**	**+1.0**
RANC				S		**Sn**	**23 08 25.9**	**+2.3**
BLLM	**Bellamira**	**0.96**	**68**	*i*P		**Pn**	**23 08 12.7**	**+0.7**
UNIC	**Universidad Ca**	**0.98**	**337**	P		**Pn**	**23 08 12.8**	**+0.5**
UNIC				S		**Sn**	**23 08 26.7**	**+1.6**
NUBE	**Las Nubes**	**1.02**	**324**	P		**Pn**	**23 08 13.1**	**+0.2**
NUBE	**Las Nubes**	**1.02**	**324**	*i*P		**Pn**	**23 08 12.9**	**-0.1**
NUBE				*i*S		**Sn**	**23 08 26.3**	**0.0**
CNRM	**Centro Naciona**	**1.04**	**67**	P		**Pn**	**23 08 13.4**	**+0.5**
CNRM				S		**Sn**	**23 08 28.8**	**+2.4**
LLGN	**La Laguna**	**1.10**	**11**	P		**Pn**	**23 08 14.4**	**+0.5**
LOAL	**Lomas de Alarc**	**1.10**	**327**	P		**Pn**	**23 08 14.4**	**+0.5**
LOAL				S		**Sn**	**23 08 29.8**	**+1.7**
FAME	**Alcaldia de Sa**	**1.13**	**313**	P		**Pn**	**23 08 14.0**	**-0.3**
LCND	**La Caada**	**1.25**	**79**	P		**Pn**	**23 08 16.6**	**+0.7**
MTO3	**Montecristo**	**1.33**	**351**	Pn		**Pn**	**23 08 17.6**	**+0.3**
MTO3				Sn		**Sn**	**23 08 34.1**	**+0.2**
MTO3	**Montecristo**	**1.33**	**351**	P		**Pn**	**23 08 17.6**	**+0.3**
MTO3	**Montecristo**	**1.33**	**351**	*i*P		**Pn**	**23 08 17.6**	**+0.3**
ESQI	**Esquipulas**	**1.49**	**353**	Pn		**Pn**	**23 08 20.0**	**+0.8**
ESQI				Sn		**Sn**	**23 08 38.5**	**+0.9**
ESQI	**Esquipulas**	**1.49**	**353**	P		**Pn**	**23 08 20.0**	**+0.8**
ESQI	**Esquipulas**	**1.49**	**353**	*i*P		**Pn**	**23 08 20.1**	**+0.8**
ESQI				*e*S		**Sn**	**23 08 39.2**	**+1.7**
ZAFR2	**Estanzuela, Za**	**1.51**	**353**	*i*P		Pn	23 08 26.0	+6.6
CSGN	**Cosiguina Volc**	**1.56**	**93**	P		**Pn**	**23 08 20.7**	**+0.6**
CSGN				S		**Sn**	**23 08 41.1**	**+1.8**
PCG5	**San Vicente Pa**	**1.64**	**314**	*i*P		Pn	23 08 25.7	+4.3
FG16	**Alotenango, Sa**	**1.78**	**312**	*i*P		Pn	23 08 28.6	+5.4
FG16				IAML			23 09 01.1	
	comp=N,7μm,0.2s							
TGUH	**Tegucigalpa,Un**	**2.08**	**62**	P		**Pn**	**23 08 27.3**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.08**	**62**	P		**Pn**	**23 08 28.0**	**+0.7**
TGUH				S		**Sn**	**23 08 54.1**	**+2.1**
CRIN	**San Cristobal**	**2.08**	**100**	Pn		**Pn**	**23 08 28.1**	**+0.8**
CRIN	**San Cristobal**	**2.08**	**100**	P		**Pn**	**23 08 28.2**	**+0.9**
CRIN				S		**Sn**	**23 08 54.4**	**+2.2**
ESSG	**Sabana Grande**	**2.09**	**309**	*i*P		**Pn**	**23 08 28.0**	**+0.6**
ESSG				*i*S		**Sn**	**23 08 50.9**	**-1.3**
QUEN	**Al S del Volca**	**2.30**	**102**	P		**Pn**	**23 08 28.6**	**-1.6**
APG	**El Apazote**	**2.30**	**327**	Pn		**Pn**	**23 08 31.1**	**+0.6**
	comp=N,0.5nm,0.3s,baz=130,slow=12,SNR=22							
APG				Pg			23 08 38.4	
	comp=N,0.8nm,0.3s,baz=132,slow=10,SNR=12							
APG				Lg		Lg	23 09 09.5	
	comp=N,1.4nm,0.3s,baz=85,slow=16,SNR=6.0							
APG	**El Apazote**	**2.30**	**327**	*i*P		**Pn**	**23 08 31.1**	**+0.6**
HERN	**Volcan Telica**	**2.31**	**101**	Pn		**Pn**	**23 08 30.5**	**0.0**
HERN	**Volcan Telica**	**2.31**	**101**	P		**Pn**	**23 08 30.6**	**+0.1**
HERN				S		**Sn**	**23 08 59.1**	**+1.3**
POLN	**Al Sur del Vol**	**2.32**	**100**	P		**Pn**	**23 08 30.7**	**+0.1**
CNGA	**Al SSO del Vol**	**2.46**	**103**	P		**Pn**	**23 08 33.2**	**+0.7**
CNGN	**Cerro Negro**	**2.46**	**103**	Pn		**Pn**	**23 08 33.2**	**+0.7**
CNGN	**Cerro Negro**	**2.46**	**103**	P		**Pn**	**23 08 33.3**	**+0.8**
STG8	**El Palmar, Qui**	**2.54**	**303**	*i*P		Pn	23 08 40.3	+6.6
MOMN	**Momotombo**	**2.63**	**104**	P		**Pn**	**23 08 35.9**	**+1.0**
COPN	**Copaltepe**	**2.65**	**109**	P		**Pn**	**23 08 35.5**	**+0.4**
LIMN	**Finca el Limon**	**2.72**	**90**	P		**Pn**	**23 08 36.2**	**+0.1**
RTAL	**Retalhuleu**	**2.86**	**301**	Pn		**Pn**	**23 08 39.0**	**+1.1**
RCPN	**Sur Rio San Ju**	**3.01**	**81**	P		**Pn**	**23 08 40.4**	**+0.3**
MATN	**Matagalpa**	**3.15**	**92**	P		**Pn**	**23 08 41.1**	**-0.9**
BOAB	**BOACO BROADBAN**	**3.46**	**100**	Pn		**Pn**	**23 08 45.7**	**-0.5**
BOAB	**BOACO BROADBAN**	**3.46**	**100**	P		**Pn**	**23 08 45.9**	**-0.3**
PETF	**Flores**	**3.88**	**350**	Pn		**Pn**	**23 08 53.3**	**+1.3**
SIUN	**Universidad Ur**	**4.31**	**81**	Pn		**Pn**	**23 08 58.5**	**+0.6**
JUD3	**Juan Diaz 3**	**4.57**	**129**			**Pn**	**23 09 02.7**	**+1.2**
JTS	**Las Juntas de**	**4.96**	**123**	Pn		**Pn**	**23 09 06.8**	**0.0**
	comp=N,7.0nm,0.3s,baz=310,slow=18,SNR=14							
JTS				Lg		Lg	23 10 20.9	
	comp=N,1.5nm,0.3s,baz=98,slow=21,SNR=8.0							
JTS				LR		LR	23 11 03.7	
	comp=N,54nm,21.0s,baz=286,slow=39							
	comp=N,2.7nm,0.3s							
JTS	**Las Juntas de**	**4.96**	**123**	Pn		**Pn**	**23 09 08.3**	**+1.5**
CMIG	**Matias Romero**	**6.83**	**307**	Pn		**Pn**	**23 09 33.9**	**+1.5**
	comp=N,0.9nm,0.3s,baz=114,slow=10,SNR=7.1							
CMIG				Sn		**Sn**	**23 10 55.5**	**+6.6**
	comp=N,1.7nm,0.3s,baz=54,slow=16,SNR=4.4							
	comp=N,2.8nm,0.4s							
TEIG	**Tepich**	**7.16**	**7**	Pn		**Pn**	**23 09 38.5**	**+1.4**
PIRO	**Carate, Puerto**	**7.36**	**128**	Pn		**Pn**	**23 09 40.1**	**+0.3**
SOR	**Soroa**	**11.29**	**30**	Pn		**Pn**	**23 10 34.6**	**+1.0**
MTDJ	**Mount Denham**	**12.31**	**64**	Pn		**Pn**	**23 10 46.8**	**-0.8**
HNVL	**Huntsville, TX**	**18.54**	**343**			**P**	**23 12 06.8**	**-0.8**
HNVL				IAmb		IAmb	23 12 12.2	
	comp=Z,24nm,0.8s							
SDV	**Santo Domingo**	**18.65**	**101**	P		**P**	**23 12 04.2**	**-5.0**
	comp=Z,0.4nm,0.3s,baz=292,slow=7.5,SNR=3.8							
	comp=Z,1.1nm,0.3s							
SDV	**Santo Domingo**	**18.65**	**101**	P		**P**	**23 12 08.8**	**-0.4**
BRDY	**Brady**	**20.27**	**335**			**P**	**23 12 26.1**	**-0.5**
BRDY				IAmb		IAmb	23 12 27.1	
	comp=Z,4.8nm,0.6s							
GOGA	**Godfrey**	**20.90**	**13**	P		**P**	**23 12 33.6**	**+0.3**
GOGA				IAmb		IAmb	23 12 35.5	
	comp=Z,17nm,1.1s							
OZNA	**Ozona**	**20.92**	**330**	P		**P**	**23 12 34.3**	**+0.7**
TXAR	**Lajitas Array**	**21.05**	**322**	P		**P**	**23 12 35.6**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=145,slow=9.7,SNR=7.9							
	comp=Z,0.6nm,0.6s							
TX31	**Lajitas Ar. Si**	**21.06**	**322**	P		**P**	**23 12 35.8**	**+0.6**
MIAR	**Mount Ida**	**21.75**	**350**	P		**P**	**23 12 43.7**	**+1.3**
MIAR				IAmb		IAmb	23 12 47.7	
	comp=Z,18nm,1.4s							
APMT	**Aspermont**	**22.51**	**335**	P		**P**	**23 12 49.2**	**-1.4**
X34A	**Smith Ranch, M**	**22.83**	**341**	P		**P**	**23 12 54.5**	**+0.4**
X34A				IAmb		IAmb	23 13 27.7	
	comp=Z,12nm,1.2s							
TKL	**Tuckaleechee C**	**23.01**	**11**	LR		LR	23 20 28.6	
	comp=Z,30nm,19.8s,baz=186,slow=34							
W35A	**Tecumseh**	**23.07**	**344**	P		**P**	**23 12 55.0**	**-1.4**
W35A				IAmb		IAmb	23 13 22.2	
	comp=Z,13nm,1.4s							
DKNS	**Dickens**	**23.14**	**334**	P		**P**	**23 12 56.5**	**-0.6**
WMOK	**Wichita Mounta**	**23.27**	**340**	P		**P**	**23 12 58.2**	**-0.3**
T42A	**Van Buren**	**23.92**	**356**	P		**P**	**23 13 04.5**	**0.0**
T42A				IAmb		IAmb	23 13 47.0	
	comp=Z,7.6nm,1.5s							
MGMO	**Mountain Grove**	**24.14**	**354**	P		**P**	**23 13 06.4**	**-0.2**
MGMO				IAmb		IAmb	23 13 33.3	
	comp=Z,15nm,1.4s							
O20A	**White River Ci**	**31.76**	**332**	P		**P**	**23 14 14.9**	**0.0**
O20A				IAmb		IAmb	23 14 22.0	
	comp=Z,5.3nm,1.4s							
PFO	**Pinyon Flats O**	**32.18**	**314**	LR		LR	23 29 46.4	
	comp=Z,41nm,19.3s,baz=212,slow=41							
SHOC	**Shoshone, Teco**	**33.35**	**318**	P		**P**	**23 14 28.9**	**+0.3**
PSUT	**Pine Spring**	**33.52**	**324**	P		**P**	**

RNPP5	**Staryi Chortor**	**1.70**	**95**	Pn	**Pg**	**23**	**24**	**58.8 -0.7**
RNPP5				Sn	**Sg**	**23**	**25**	**22.5 +0.9**
KWP	**Kalwaria Pacla**	**1.82**	**190**	Pn	**Pn**	**23**	**24**	**58.4 +0.8**
OJC	**Ojcow**	**2.46**	**242**	*e*Pg	**Pn**	**23**	**25**	**05.9 -0.6**
OJC				*e*Sg	**Sn**	**23**	**25**	**37.2 +0.8**
NIE	**Niedzica**	**2.73**	**224**	*e*Pg	**Pn**	**23**	**25**	**09.8 -0.4**
NIE				*e*Sg	**Sb**	**23**	**25**	**46.3 -2.3**
NIE	**Niedzica**	**2.73**	**224**	Pn	**Pn**	**23**	**25**	**09.9 -0.2**
NIE				Sn	**Sn**	**23**	**25**	**44.3 +1.4**
MI28	**Mi28,Pidlybu**	**2.86**	**98**	Pn	**Pb**	**23**	**25**	**16.4 -1.2**
LANS	**Liptovska Anna**	**3.30**	**228**	*e*SG	**Sb**	**23**	**26**	**05.8 +0.8**
STEB	**Steborice**	**3.75**	**249**	*e*SG	**Sb**	**23**	**26**	**17.9 -0.2**
MORC	**Moravsky Berou**	**3.96**	**248**	*e*PN	**Pn**	**23**	**25**	**25.9 -1.1**
MORC				*e*SN	**Sn**	**23**	**26**	**12.9 -0.3**
DPC	**Dobruska-Polom**	**4.48**	**259**	*e*SG	**Sb**	**23**	**26**	**40.2 +1.2**
OSTC	**Ostas**	**4.49**	**262**	*e*SG	**Sb**	**23**	**26**	**41.7 +2.4**
VRAC	**Vranov**	**4.72**	**246**	*e*SN	**Sn**	**23**	**26**	**32.2 +0.2**

IDC 07 23:26:46.6±1.8, 21°48S×173°71W, *h*0km, mb3.5/2, mbtmp3.8/3, ML3.3/1, MS3.3/2, Error ellipse: s-maj=115.3km s-min=35.0km az=171.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**12.99**	**91**	Pn	Pn	23 29 51.7	-0.9
	1.8nm,0.3s,baz=266,slow=7.4,SNR=6.9						
RAR				Sn	Sn	23 32 02.6	-15
	1.0nm,0.3s,baz=356,slow=21,SNR=1.6						
	6.0nm,0.4s						
CTA	**Charters Tower**	**37.39**	**265**	LR	LR	23 48 07.0	
	comp=Z,47nm,18.1s,baz=52,slow=34						
ASAR	**Alice Springs**	**48.20**	**257**	P	P	23 35 29.1	-0.2
	0.4nm,0.5s,baz=100,slow=7.7,SNR=5.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**48.43**	**262**	P	P	23 35 30.8	-0.4
	0.2nm,0.3s,baz=97,slow=7.7,SNR=7.9						
	0.2nm,0.3s						
ASAJ	**Asahikawa**	**76.56**	**329**	LR	LR	00 13 46.9	
	comp=Z,17nm,18.6s,baz=157,slow=37						
AKASG	**Malin Array Be**	**145.74**	**334**	PKPbc	PKPdf	23 46 27.1	+0.1
	0.6nm,0.4s,baz=46,slow=4.0,SNR=4.7						

IDC 07 23:40:30.4±2.8, 54°76S×159°77E, *h*0km, mb4.2/3, mbtmp4.2/3, MS3.4/1, Error ellipse: s-maj=243.7km s-min=53.6km az=53.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**26.27**	**323**	LR	LR	23 54 41.8	
	comp=Z,70nm,18.1s,baz=31,slow=32						
ASAR	**Alice Springs**	**36.54**	**318**	P	P	23 47 37.9	+0.3
	3.3nm,0.7s,baz=154,slow=8.5,SNR=34						
ASAR				PcP	PcP	23 50 00.9	-0.3
	0.5nm,0.6s,baz=151,slow=4.5,SNR=5.5						
	3.3nm,0.7s						
WRA	**Warramunga Arr**	**39.76**	**321**	P	P	23 48 04.0	-0.8
	2.6nm,1.1s,baz=158,slow=8.2,SNR=9.9						
WRA				PcP	PcP	23 50 11.6	+0.4
	0.2nm,0.5s,baz=162,slow=3.0,SNR=2.1						
	2.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**44.93**	**311**	P	P	23 48 47.2	+0.3
	4.5nm,1.1s,baz=140,slow=7.9,SNR=2.1						
	4.5nm,1.1s						
H03S2	**Juan Fernandez**	**78.40**	**133**	T	T	01 19 41.5	
	baz=208,slow=74,SNR=206						
H03S1	**Juan Fernandez**	**78.41**	**133**	T	T	01 19 53.3	
	baz=208,slow=74,SNR=219						
H03S3	**Juan Fernandez**	**78.42**	**133**	T	T	01 19 44.4	
	baz=208,slow=74,SNR=225						
H03N3	**Juan Fernandez**	**78.73**	**133**	T	T	01 20 08.6	
	baz=204,slow=79						
H03N2	**Juan Fernandez**	**78.74**	**133**	T	T	01 20 07.2	
	baz=204,slow=79						
H03N1	**Juan Fernandez**	**78.75**	**133**	T	T	01 20 09.6	
	baz=204,slow=79						
H08S2	**Diego Garcia H**	**82.24**	**268**	T	T	01 22 40.1	
	baz=144,slow=76,SNR=28						
H08S1	**Diego Garcia H**	**82.25**	**268**	T	T	01 22 38.7	
	baz=144,slow=76,SNR=27						
H08S3	**Diego Garcia H**	**82.26**	**268**	T	T	01 22 37.9	
	baz=144,slow=76,SNR=52						
AKASG	**Malin Array Be**	**150.29**	**283**	PKPbc	PKPbc	00 00 21.5	-0.9
	0.9nm,0.6s,baz=92,slow=2.3,SNR=2.3						

*SOME **07** 23:54:45.1, 42°.50N×83°.63E, h10km*
*NNC **07** 23:54:52.4±2.5, 42°.07N×83°.11E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=22.0km s-min=11.8km az=164.0*
ISC 07 23:54:55.0±2.3, 42°.0N±0°.1×82°.86E±0°.07, h10km, n22, σ1§40/31, 8C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.36**	**309**	Pg	**Pn**	**23**	**55**	**35.3 +1.5**
	30nm,0.4s						
KTMS				Lg	Lg	23 56 12.2	
	89nm,0.4s						
KTMS	**Ketmen**	**2.36**	**309**	*e*P	**Pn**	**23**	**55**	**35.3 +1.5**
	30nm,0.4s						
KTMS				*e*S	**Sg**	**23**	**56**	**11.1 +0.4**
	89nm,0.4s						
SHLS	**Shalkode**	**2.77**	**296**	Pg	**Pn**	**23**	**55**	**38.7 -0.9**
	50nm,0.2s						
SHLS				Lg	Lg	23 56 17.5	
	267nm,0.4s						
SHLS	**Shalkode**	**2.77**	**296**	*e*P	**Pn**	**23**	**55**	**38.7 -0.9**
	50nm,0.2s						
SHLS				*e*S	**Sb**	**23**	**56**	**16.8 -1.9**
	267nm,0.4s						
PDGK	**Podgornoye**	**2.83**	**299**	⇓Pn	**Pn**	**23**	**55**	**42.3 +2.0**
	7.9nm,0.4s						
PDGK				⇑Lg	Lg	23 56 27.2	
	71nm,0.5s						
UZB	**Uzynbulak**	**3.06**	**293**	Pg	**Pb**	**23**	**55**	**48.7 -1.0**
	7.1nm,0.2s						
UZB				Lg	Lg	23 56 34.1	
	48nm,0.4s						
UZB	**Uzynbulak**	**3.06**	**293**	*e*P	**Pb**	**23**	**55**	**48.7 -1.0**
	7.1nm,0.2s						
UZB				*e*S	**Sg**	**23**	**56**	**34.1 +0.7**
	48nm,0.4s						
DJR	**Jarkent**	**3.25**	**317**	Pg	**Pn**	**23**	**55**	**47.2 +1.1**
	6.5nm,0.4s						
DJR				Lg	Lg	23 56 31.8	
	9.6nm,0.4s						
DJR	**Jarkent**	**3.25**	**317**	*e*P	**Pn**	**23**	**55**	**47.2 +1.1**
	6.5nm,0.4s						
DJR				*e*S	**Sb**	**23**	**56**	**31.8 -0.6**
	9.6nm,0.4s						
KPKS	**Kokpek**	**3.42**	**297**	Pg	**Pb**	**23**	**55**	**55.7 +0.1**
	0.7nm,0.3s						
KPKS				Lg	Lg	23 56 46.3	
	29nm,0.3s						
KPKS	**Kokpek**	**3.42**	**297**	*e*P	**Pb**	**23**	**55**	**55.7 +0.1**
	0.7nm,0.3s						
KPKS				*e*S	**Sg**	**23**	**56**	**46.2 +1.6**
	29nm,0.3s						
SATY	**Saty**	**3.46**	**289**	Pg	**Pb**	**23**	**55**	**56.8 +0.3**
	10.0nm,0.3s						
SATY				Lg	Lg	23 56 48.2	
	71nm,0.3s						
KNOS	**Konyrlen**	**3.59**	**313**	Pg	**Pb**	**23**	**55**	**55.6 -3.0**
	2.9nm,0.2s						
KNOS				Lg	Lg	23 56 46.8	
	17nm,0.3s						
KURS	**Kuram**	**3.77**	**295**	Pg	**Pb**	**23**	**56**	**02.3 +0.6**
	23nm,0.8s						
KURS				Lg	Lg	23 56 57.4	
	19nm,0.5s						
KAPS	**Kapalarasan**	**4.16**	**324**	Pg	**Pn**	**23**	**56**	**01.4 +2.7**
	4.4nm,0.1s						
KAPS				Lg	Lg	23 56 55.7	
	29nm,0.2s						
ARXS	**Arharly**	**4.31**	**303**	Pg	**Pb**	**23**	**56**	**10.2 -0.6**
	2.2nm,0.3s						
ARXS				Lg	Lg	23 57 11.2	
	22nm,0.4s						
ARXS	**Arharly**	**4.31**	**303**	*e*P	**Pb**	**23**	**56**	**10.2 -0.6**
	2.2nm,0.3s						
ARXS				*e*S	**Sg**	**23**	**57**	**11.2 -2.0**
	22nm,0.4s						
MK31	**Makanchi Array**	**4.82**	**355**	⇑Pn	**Pn**	**23**	**56**	**06.3 -1.3**
	0.2nm,0.3s,baz=161,slow=12,SNR=73						
MK31				⇑Pg	**Pb**	**23**	**56**	**19.5 -0.1**
	4.2nm,0.4s,baz=166,slow=16,SNR=24						
MK31				⇑Lg	Lg	23 57 21.2	
	19nm,0.6s,baz=168,slow=29,SNR=7.2						
MAKZ	**Makanchi**	**4.86**	**353**	⇑Pn	**Pn**	**23**	**56**	**06.5 -1.7**
	0.6nm,0.3s						
MAKZ				⇑Pg	**Pb**	**23**	**56**	**22.6 +2.4**
	6.2nm,0.8s						
MAKZ				⇓Lg	Lg	23 57 21.1	
	16nm,0.7s						
ZSN	**Zaisan**	**5.64**	**14**	Pg	**Pn**	**23**	**56**	**18.3 -0.7**
	2.5nm,0.2s						
ZSN				Lg	Lg	23 57 24.9	
	9.1nm,0.5s						
ZSN	**Zaisan**	**5.64**	**14**	*e*P	**Pn**	**23**	**56**	**18.3 -0.7**
	2.5nm,0.2s						
ZSN				*e*S	**Sn**	**23**	**57**	**24.9 +1.1**
	9.1nm,0.5s						
AAK	**Ala-Archa**	**6.24**	**279**	⇑Pg	**Pg**	**23**	**56**	**54.6 +0.2**
	2.3nm,0.8s						
AAK				⇑Lg	Lg	23 58 15.2	
	5.1nm,0.9s						

*IDC **08** 00:02:06.6±1.8, 0°.49S×67°.15E, h0km, mb3.8/8, mbtmp3.9/9, ML4.1/1, MS3.6/31, Error ellipse: s-maj=50.5km s-min=26.1km az=67.0*
*NEIC **08** 00:02:10.1±1.5, 0°.5S±0°.1×67°.35E±0°.08, h10km±1km, mb4.3/1, Error ellipse: s-maj=24.8km s-min=7.3km az=153.0*
ISC 08 00:02:10.2±0.9, 0°.6S±0°.2×67°.4E±0°.1, h19km, n43, σ1§18/15, mb4.0/8, MS3.5/30, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAAM	**Kaadhehdhoo**	**5.70**	**79**	Pn	**Pn**	**00**	**03**	**33.2 -0.7**
HMDM	**Hanimaadhoo**	**9.30**	**38**	Pn	**Pn**	**00**	**04**	**24.5 +1.1**
MSEY	**Mahe Island**	**12.58**	**251**	Pn	**Pn**	**00**	**05**	**08.3 0.0**
PALK	**Pallekele**	**15.39**	**59**	Pn	**Pn**	**00**	**05**	**47.1 +0.5**
	0.7nm,0.3s,baz=245,slow=15,SNR=4.3						
PALK				LR	LR	00 10 31.3	
	comp=Z,336nm,19.7s,baz=250,slow=32						
	5.3nm,0.7s						
PALK	**Pallekele**	**15.39**	**59**	Pn	**Pn**	**00**	**05**	**47.1 +0.5**
PALK				IAmb	IAmb	00 05 57.4	
	comp=Z,26nm,1.4s						
FURI	**Furi**	**30.10**	**289**	LR	LR	00 18 28.9	
	comp=Z,54nm,21.2s,baz=84,slow=33						
KMBO	**Kilima Mbogo**	**30.14**	**269**	LR	LR	00 19 16.4	
	comp=Z,87nm,19.6s,baz=102,slow=34						
BRDH	**Bariadhala**	**33.04**	**44**	LR	LR	00 24 50.8	
	comp=Z,187nm,18.1s,baz=200,slow=41						
CMAR	**Chiang Mai Arr**	**36.32**	**57**	P	**P**	**00**	**09**	**14.1 +1.0**
	comp=Z,0.4nm,0.3s,baz=250,slow=11,SNR=7.1						
CMAR				LR	LR	00 23 15.3	
	comp=Z,62nm,19.4s,baz=240,slow=35						
	comp=Z,0.4nm,0.3s						
MBAR	**Mbarara**	**36.65**	**270**	LR	LR	00 21 37.3	
	comp=Z,72nm,20.6s,baz=90,slow=32						
LSA	**Lhasa**	**37.68**	**35**	P	**P**	**00**	**09**	**23.8 -1.2**
LEM	**Lembang**	**40.60**	**100**	LR	LR	00 22 55.6	
	comp=Z,59nm,20.8s,baz=203,slow=31						
LSZ	**Lusaka**	**41.37**	**247**	LR	LR	00 24 46.6	
	comp=Z,150nm,18.9s,baz=114,slow=33						
EIL	**Elat**	**43.14**	**317**	LR	LR	00 25 06.3	
	comp=Z,42nm,19.3s,baz=82,slow=32						
AAK	**Ala-Archa**	**43.48**	**8**	LR	LR	00 28 06.6	
	comp=Z,65nm,18.9s,baz=222,slow=36						
ASF	**Jabal al Asfar**	**43.48**	**321**	LR	LR	00 26 16.5	
	comp=Z,51nm,21.7s,baz=199,slow=34						
LBTB	**Lobatse**	**47.12**	**236**	LR	LR	00 28 32.5	
	comp=Z,77nm,18.7s,baz=78,slow=34						
H04N2	**CROZET ISLANDS**	**47.44**	**195**	T	T	01 01 38.4	
	baz=19,slow=75,SNR=2.8						
H04N1	**CROZET ISLANDS**	**47.44**	**195**	T	T	01 01 38.4	
	baz=19,slow=75,SNR=3.9						
H04N3	**CROZET ISLANDS**	**47.45**	**195**	T	T	01 01 37.3	
	baz=19,slow=75,SNR=4.0						
MKAR	**Makanchi Array**	**48.94**	**14**	P	**P**	**00**	**10**	**53.9 -1.3**
	comp=Z,0.2nm,0.6s,baz=189,slow=6.8,SNR=3.7						
MKAR				LR	LR	00 31 04.9	
	comp=Z,47nm,18.0s,baz=201,slow=36						
	comp=Z,0.2nm,0.6s						
BOSA	**Boshof**	**48.96**	**231**	LR	LR	00 28 41.5	
	comp=Z,97nm,19.3s,baz=25,slow=33						
KURBB	**Kurchatov Arra**	**51.87**	**9**	P	**P**	**00**	**11**	**15.0 -2.2**
	comp=Z,2.2nm,1.1s,baz=204,slow=7.7,SNR=7.0						
KURBB				LR	LR	00 32 36.6	
	comp=Z,100nm,19.3s,baz=174,slow=35						
	comp=Z,2.2nm,1.1s						
KAPI	**Kappang**	**52.47**	**96**	LR	LR	00 31 34.9	
	comp=Z,20nm,19.8s,baz=309,slow=34						
BVAR	**Borovoye Array**	**53.45**	**2**	LR	LR	00 34 43.8	
	comp=Z,69nm,18.6s,baz=205,slow=37						
SUR	**Sutherland**	**54.07**	**229**	LR	LR	00 31 00.8	
	comp=Z,142nm,20.8s,baz=54,slow=32						
ZALV	**Zalesovo Beam**	**56.21**	**12**	P	**P**	**00**	**11**	**47.4 -1.5**
	comp=Z,1.2nm,0.7s,baz=216,slow=7.3,SNR=6.8						
ZALV				LR	LR	00 35 06.2	
	comp=Z,33nm,21.1s,baz=0.0,slow=35						
	comp=Z,1.2nm,0.7s						
ARTI	**Arti**	**57.23**	**354**	LR	LR	00 36 42.4	
	comp=Z,34nm,18.1s,baz=200,slow=36						
SONM	**Songino Array**	**58.91**	**30**	P	**P**	**00**	**12**	**09.4 +1.1**
	comp=Z,2.3nm,1.0s,baz=219,slow=7.0,SNR=11						
SONM				LR	LR	00 37 38.8	
	comp=Z,196nm,20.0s,baz=215,slow=36						
	comp=Z,2.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**66.50**	**285**	LR	LR	00 40 43.9	
	comp=Z,52nm,19.2s,baz=80,slow=35						
HILR	**Hailar Array B**	**67.03**	**34**	P	**P**	**00**	**13**	**02.8 +0.7**
	comp=Z,0.6nm,0.6s,baz=234,slow=7.0,SNR=5.0						
	comp=Z,0.6nm,0.6s						
KSRS	**Korea Array**	**67.32**	**49**	LR	LR	00 44 46.2	
	comp=Z,32nm,19.1s,baz=240,slow=38						
WRA	**Warramunga Arr**	**68.19**	**111**	P	**P**	**00**	**13**	**10.7 +0.7**
	comp=Z,1.1nm,0.8s,baz=286,slow=5.9,SNR=6.7						
	comp=Z,1.1nm,0.8s						
JNU	**Nakatsue**	**68.33**	**54**	LR	LR	00 44 05.5	
	comp=Z,47nm,19.1s,baz=296,slow=37						
ASAR	**Alice Springs**	**68.33**	**115**	P	**P**	**00**	**13**	**11.7 +0.9**
	comp=Z,0.5nm,0.6s,baz=291,slow=6.2,SNR=8.5						
	comp=Z,0.5nm,0.6s						
DAVOX	**Davos/Dischmat**	**68.77**	**322**	LR	LR	00 43 57.9	
	comp=Z,17nm,19.2s,baz=42,slow=37						
NRIK	**Nord'ik**	**71.09**	**7**	LR	LR	00 44 38.5	
	comp=Z,52nm,20.5s,baz=204,slow=36						
DBIC	**Dimbokro**	**72.43**	**277**	LR	LR	00 44 41.1	
	comp=Z,28nm,18.2s,baz=130,slow=35						
KLR	**Kul'dur**	**73.96**	**38**	LR	LR	00 48 32.0	
	comp=Z,9.3nm,18.3s,baz=228,slow=38						
MJAR	**Matsushiro Arr**	**75.00**	**52**	LR	LR	00 47 45.5	
	comp=Z,23nm,18.4s,baz=186,slow=36						
ARCES	**ARCESS Array B**	**75.36**	**346**	LR	LR	00 47 21.0	
	comp=Z,14nm,21.8s,baz=88,slow=36						
TIXI	**Tiksi**	**81.83**	**16**	LR	LR	00 51 04.7	
	comp=Z,61nm,18.6s,baz=200,slow=36						
TXAR	**Lajitas Array**	**150.14**	**344**	PKPbc	**PKPbc**	**00**	**22**	**00.6 -0.1**
	comp=Z,0.9nm,0.9s,baz=34,slow=3.6,SNR=5.3						

*IDC **08** 00:05:29.4±1.5, 0°.58S×67°.14E, h0km, mb3.8/9, mbtmp3.9/10, ML4.0/1, Error ellipse: s-maj=42.0km s-min=24.0km az=57.0*
*NEIC **08** 00:05:33.1±1.5, 0°.5S±0°.1×67°.4E±0°.1, h10km±2km, mb4.2/2, Error ellipse: s-maj=23.3km s-min=20.4km az=300.0*
ISC 08 00:05:32.8±1.4, 0°.6S±0°.2×67°.3E±0°.1, h19km, n15, σ1§06/15, mb4.1/10, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAAM	**Kaadhehdhoo**	**5.79**	**79**	Pn	**Pn**	**00**	**06**	**55.9 -1.8**
HMDM	**Hanimaadhoo**	**9.38**	**39**		**Pn**	**00**	**07**	**47.5 +0.5**
PALK	**Pallekele**	**15.48**	**59**	Pn	**Pn**	**00**	**09**	**10.0 -0.3**
	0.5nm,0.3s,baz=206,slow=14,SNR=2.2						
	4.8nm,0.6s						
PALK	**Pallekele**	**15.48**	**59**		**Pn**	**00**	**09**	**10.4 +0.1**
PALK				IAmb	IAmb	00 09 23.6	
	comp=Z,13nm,1.1s						
CMAR	**Chiang Mai Arr**	**36.40**	**57**	P	**P**	**00**	**12**	**37.6 +1.2**
	comp=Z,0.3nm,0.3s,baz=242,slow=11,SNR=6.3						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**48.99**	**14**	P	**P**	**00**	**14**	**18.3 +0.1**
	comp=Z,0.3nm,0.7s,baz=196,slow=8.3,SNR=4.1						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**50.56**	**326**	P	**P**	**00**	**14**	**29.2 -1.2**
	comp=Z,1.3nm,0.9s,baz=120,slow=9.2,SNR=3.0						
	comp=Z,1.3nm,0.9s						
KURBB	**Kurchatov Arra**	**51.92**	**9**	P	**P**	**00**	**14**	**39.4 -0.8**
	comp=Z,0.8nm,0.8s,baz=205,slow=7.7,SNR=5.5						
	comp=Z,0.8nm,0.8s						
KURK	**Kurchatov**	**52.02**	**9**	P	**P**	**00**	**14**	**41.5 +0.5**
KURK				IAmb	IAmb	00 14 42.4	
	comp=Z,3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**56.27**	**12**	P	**P**	**00**	**15**	**09.9 -2.0**
	comp=Z,1.5nm,0.8s,baz=210,slow=8.6,SNR=6.7						
	comp=Z,1.5nm,0.8s						
SONM	**Songino Array**	**58.98**	**30**	P	**P**	**00**	**15**	**31.9 +0.6**
	comp=Z,1.6nm,0.8s,baz=224,slow=6.1,SNR=11						
	0.5nm,0.3s,baz=338,slow=12,SNR=16						
HILR	**Hailar Array B**	**67.10**	**34**	P	**P**	**00**	**16**	**26.2 +1.1**
	comp=Z,1.6nm,0.8s,baz=223,slow=6.1,SNR=5.5						
	comp=Z,1.6nm,0.8s						
WRA	**Warramunga Arr**	**68.25**	**111**	P	**P**	**00**	**16**	**33.6 +0.7**
	comp=Z,1.6nm,0.8s,baz=283,slow=6.2,SNR=8.9						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**68.39**	**115**	P	**P**	**00**	**16**	**34.2 +0.4**
	comp=Z,1.0nm,0.7s,baz=286,slow=6.1,SNR=8.8						
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**150.15**	**344**	PKPbc	**PKPbc**	**00**	**25**	**23.5 +0.1**
	comp=Z,0.7nm,0.9s,baz=54,slow=2.3,SNR=5.3						

IDC 08 00:44:20.4±17.0, 5°.65S×128°.55E, h236km±193km, mb2.8/1, mbtmp3.7/4, Error ellipse: s-maj=143.3km s-min=51.2km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.69**	**193**	P	Pn	00 47 12.8	-0.2
	1.6nm,0.8s,baz=13,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	**15.28**	**159**	P	P	00 47 43.2	-1.0
	0.5nm,0.3s,baz=338,slow=12,SNR=16						
WRA				S	S	00 50 23.4	-10
	0.2nm,0.7s,baz=332,slow=20,SNR=1.6						
ASAR	**Alice Springs**	**18.64**	**164**	P	P	00 48 21.3	+0.4
	1.5nm,0.3s,baz=345,slow=12,SNR=28						
MKAR	**Makanchi Array**	**66.32**	**327**	P	P	00 54 43.7	0.0
	0.2nm,0.5s,baz=128,slow=7.5,SNR=4.6						
	0.2nm,0.5s						

*IDC **08** 00:44:45.7±2.9, 30°.71S×177°.56W, h0km, mb4.0/3, mbtmp4.0/4, ML3.1/1, Error ellipse: s-maj=64.6km s-min=28.3km az=112.0*
ISC 08 00:44:49.9±2.8, 30°.7S±0°.1×177°.6W±0°.4, h33km, n6, σ1§63/8, mb4.0/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.45**	**349**	Pn	**Pn**	**00**	**45**	**14.3 +0.5**
	96nm,0.3s,baz=116,slow=19,SNR=2.5						
RAO				Sn	**Sn**	**00**	**45**	**29.3 -2.4**
	217nm,0.3s,baz=33,slow=18,SNR=7.8						
URZ	**Urewera**	**8.73**	**209**	Pn	**Pn**	**00**	**46**	**53.1 -0.7**
	0.2nm,0.3s,baz=107,slow=15,SNR=2.0						
URZ				Sn	**Sn**	**00**	**48**	**29.4 -1.7**
	2.1nm,0.3s,baz=234,slow=22,SNR=11						
	4.2nm,0.7s						
STKA	**Stephens Creek**	**34.75**	**257**	P	**P**	**00**	**51**	**39.1 +2.0**
	4.9nm,0.7s,baz=103,slow=11,SNR=7.2						
	4.9nm,0.7s						
ASAR	**Alice Springs**	**43.43**	**267**	P	**P**	**00**	**52**	**50.0 +0.1**
	0.3nm,0.5s,baz=102,slow=7.2,SNR=7.3						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.45**	**272**	P	**P**	**00**	**52**	**58.6 +0.5**
	0.8nm,0.3s,baz=110,slow=8.2,SNR=18						
	0.8nm,0.3s						
FINES	**FINESS Array B**	**145.52**	**340**	PKPbc	**PKPab**	**01**	**04**	**24.4 0.0**
	3.0nm,0.5s,baz=55,slow=4.1,SNR=43						

*IDC **08** 01:01:43.3±0.5, 29°.93N×79°.89E, h0km, mb4.4/29, mbtmp4.4/32, ML4.5/3, MS3.6/29, Error ellipse: s-maj=14.8km s-min=11.6km az=29.0*
*NEIC **08** 01:01:46.8±1.3, 30°.03N±0°.09×79°.98E±0°.08, h19km±4km, mb4.7/76, Error ellipse: s-maj=14.1km s-min=9.7km az=198.0*
*NDI **08** 01:01:49.0±1.8, 30°.03N×79°.86E, h12km±6km, ML4.5, MW4.5*
*BJI **08** 01:01:51.2, 30°.41N×80°.25E, h40km, mB4.8/10, mb4.5/48, ML4.2/1, Ms4.1/20, Ms7 3.9/18*
*NNC **08** 01:01:52.4±1.9, 30°.82N×79°.48E, h0km, mb4.6, Error ellipse: s-maj=30.8km s-min=19.2km az=104.0*
ISC 08 01:01:48.4±0.5, 30°.10N±0°.03×79°.94E±0°.03, h30km±3km, h31km: pP-P, n254, σ1§76/236, mb4.6/98, MS3.6/29, 10C-16D, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**0.56**	**156**	*e*P	**Pb**	**01**	**01**	**59.4 -0.6**
PTH				IAML		01 02 02.6	
	comp=E,23μm,0.3s						
PTH				IAML		01 02 02.8	
	comp=N,22μm,0.2s						
PTH				*e*S	**Sb**	**01**	**02**	**07.7 0.0**
JOSI	**Joshimath**	**0.57**	**324**	*e*P	**Pb**	**01**	**01**	**60.0 -0.2**
JOSI				IAML		01 02 07.2	
	comp=N,14μm,0.4s						
JOSI				IAML		01 02 07.7	
	comp=E,17μm,0.3s						
JOSI				*e*S	**Sn**	**01**	**02**	**08.8 -0.4**
TKRD	**Thakurdwara**	**1.34**	**225**	*e*P	**Pn**	**01**	**02**	**11.9 +0.8**
TKRD				*e*S	**Sb**	**01**	**02**	**29.0 -0.7**
TKRD				IAML		01 02 31.6	
	comp=N,12μm,0.5s						
TKRD				IAML		01 02 31.6	
	comp=E,14μm,0.1s						
DDI	**Dehra Dun**	**1.

TLWR eS Sn 01 03 31.7 +0.7
TLWR IAML 01 03 49.6
comp=N,1μm,0.1s
TLWR IAML 01 03 52.4
comp=E,1μm,0.5s
TSSA Tissa 4.24 311 eP Pn **01 02 52.4 +1.2**
TSSA eS Sn **01 03 40.5 +0.7**
TSSA IAML 01 03 49.6
comp=N,1μm,0.4s
TSSA IAML 01 04 08.6
comp=E,1μm,0.4s
ALCI Alchi Leh 4.73 331 eP Pn **01 03 00.1 +2.1**
ALCI eS Sn **01 03 52.3 +0.2**
ALCI IAML 01 04 01.7
comp=E,1μm,0.2s
ALCI IAML 01 04 01.8
comp=N,1μm,0.4s
JMU Jammu 5.12 303 eP Pn **01 03 06.3 +3.1**
JMU eS Sn **01 04 01.4 0.0**
JMU IAML 01 04 15.2
comp=E,500nm,0.7s
JMU IAML 01 04 15.8
comp=N,562nm,0.6s
NIL Nilore 6.70 304 Pn **01 03 25.2 +0.3**
UDPR Udaipur 7.80 227 eP Pn **01 03 40.5 +0.4**
UDPR eS Sn **01 05 01.0 -6.4**
UDPR IAML 01 05 07.6
comp=N,178nm,0.9s
UDPR IAML 01 05 54.3
comp=E,284nm,1.0s
KSH2 Kashi 9.72 339 P Pn **01 04 06.6 +0.2**
KSH2 S Sn **01 05 51.8 -2.8**
KSH2 smax smax
comp=E,130nm,0.6s
KSH2 smax smax
comp=E,130nm,0.6s
LSA Lhasa 9.73 90 P Pn **01 04 04.9 -2.0**
LSA pmax pmax
comp=E,23nm,0.7s
LSA LR LR
comp=E,170nm,5.2s
LSA LR LR
comp=E,160nm,5.5s
KBL Kabul 10.23 298 Pn Pn **01 04 12.7 -0.7**
WUS Wushi 11.10 357 Pn **01 04 25.0 -0.1**
SHL Shillong 11.49 110 Pn **01 04 27.4 -3.2**
DRK Karamyk 11.50 327 Pn **01 04 30.6 -0.3**
TARG Taragay, Kyrgy 11.74 352 Pn **01 04 34.8 +0.6**
NRN Naryn 11.76 345 Pn Pn **01 04 33.9 -0.5**
KDJ Kajisay 12.21 350 Pn **01 04 40.7 +0.2**
PRZ Przheval'sk 12.43 355 Pn **01 04 44.4 +1.0**
BTK Batken 12.43 326 Pn **01 04 41.2 -2.1**
ARSB Arslanbob 12.54 335 Pn **01 04 42.2 -2.8**
HYB Hyderabad 12.69 186 eP Pn **01 04 46.1 -0.8**
BOOM Boomskoye usch 12.78 346 Pn **01 04 48.3 0.0**
BRDH Bariadhala 12.82 122 Pn Pn **01 04 46.0 -2.7**
comp=E,6.7nm,0.3s,baz=212,slow=4.9,SNR=3.5
comp=E,41nm,0.3s
UCH Uchtor 12.87 342 P Pn **01 04 49.4 -0.4**
SNR=12
KBK Karagaybulak 13.16 344 P Pn **01 04 56.2 +2.8**
SNR=30
PDGK Podgornoye 13.21 359 ⇓P Pn **01 04 53.3 -0.8**
PDGK comp=E,16nm,0.7s ⇓S Sn **01 07 13.5 -6.5**
comp=E,22nm,0.8s
AAK Ala-Archa 13.26 342 Pn Pn **01 04 53.9 -0.9**
comp=E,2.8nm,0.3s,baz=174,slow=7.0,SNR=40
AAK LR LR 01 10 49.6
comp=E,429nm,18.7s,baz=168,slow=41
comp=E,7.1nm,0.3s
AAK Ala-Archa 13.26 342 P Pn **01 04 56.2 +1.5**
SNR=8.0
AAK Ala-Archa 13.26 342 Pn **01 04 54.5 -0.3**
AAK Ala-Archa 13.26 342 ⇓P Pn **01 04 53.1 -1.6**
AAK comp=E,7.2nm,0.7s ⇑S Sn 01 07 10.0 -11
comp=E,15nm,1.1s
TKM2 Tokmak 2 13.27 346 P Pn **01 04 56.3 +1.4**
SNR=6.6
FRU1 Bishkek 13.39 343 Pn **01 04 56.2 -0.2**
EKS2 Erkin-Say 13.48 340 P Pn **01 04 59.6 +1.8**
SNR=9.8
CHMS Chumysh 13.53 344 P Pn **01 04 59.5 +1.2**
SNR=12
USP Ospenovka 13.85 343 P Pn **01 05 03.7 +1.1**
SNR=9.8
GOMU GeErMu 13.86 60 P Pn **01 05 04.1 +0.9**
GOMU S Sn **01 07 37.0 +0.8**
GOMU pmax pmax
comp=E,5.0nm,0.9s
GOMU LR LR
comp=E,160nm,8.7s
GOMU LR LR
comp=E,210nm,5.8s
KK31 Karatay Array 15.02 332 P Pn **01 05 14.8 -3.7**
comp=E,6.8nm,0.3s,baz=140,slow=12,SNR=108
KK31 ⇑S Sn **01 07 53.5 -10**
comp=E,14nm,0.7s,baz=168,slow=24,SNR=6.7
WMQ Urumqi 15.02 22 eP P **01 05 26.2 +2.5**
WMQ pmax pmax
comp=Z,24nm,0.7s
WMQ LR LR
comp=N,530nm,16.9s
WMQ LR LR
comp=E,470nm,12.9s
WMQ LR LR
comp=Z,300nm,15.3s
MAKZ Makanchi 16.76 5 Pn **01 05 39.1 -1.9**
MK31 Makanchi Array 16.77 6 P Pn **01 05 39.5 -1.6**
comp=Z,20nm,0.9s,baz=188,slow=13,SNR=81
MK31 ⇓S Sn **01 08 39.6 -6.8**
comp=Z,10nm,1.1s,baz=184,slow=24,SNR=5.0
MKAR Makanchi Array 16.77 6 Pn Pn **01 05 39.8 -1.3**
comp=Z,0.8nm,0.3s,baz=173,slow=11,SNR=29
MKAR LR LR 01 13 00.1
comp=Z,197nm,18.1s,baz=195,slow=40
comp=Z,1.9nm,0.4s
TNCH TengChong 17.22 103 P P **01 05 50.6 +2.2**
TNCH pmax pmax
comp=Z,11nm,1.1s
GTA2 Gaotai 18.75 55 eP P **01 06 04.3 -0.7**
GTA2 sP sP 01 06 20.4 +1.8
GTA2 pmax pmax
comp=Z,5.0nm,1.2s
GTA2 LR LR
comp=Z,220nm,14.3s
GTA2 LR LR
comp=Z,190nm,12.7s
GTA2 LR LR
comp=Z,250nm,16.7s
PZH PanZhiHua 19.52 95 P Pn **01 06 14.8 -0.2**
CD2 Chengdu 20.53 82 P P **01 06 25.2 +0.7**
CD2 pP pP 01 06 33.2 -0.2
CD2 sP sP 01 06 40.5 +2.9
CD2 pmax pmax
comp=Z,20nm,0.6s
KURBB Kurchatov Arra 20.53 357 P P **01 06 23.8 -0.5**
comp=Z,5.3nm,0.7s,baz=185,slow=10,SNR=26
comp=Z,5.3nm,0.7s
KURBB Kurchatov Arra 20.53 357 ⇓P P **01 06 24.6 +0.4**
comp=Z,18nm,1.1s
CHTO Chiang Mai 20.59 119 P **01 06 24.4 -0.7**
CHTO Chiang Mai 20.59 119 P P **01 06 24.9 -0.2**
comp=Z,9.6nm,0.8s
KURK Kurchatov 20.62 358 P **01 06 24.8 -0.4**
KURK Kurchatov 20.62 358 ⇑P P **01 06 24.6 -0.6**
comp=Z,4.9nm,0.8s
LZDM Lanzhou Array 20.73 67 P P **01 06 28.1 +1.2**
comp=Z,37nm,0.5s,baz=240,slow=8.4,SNR=170
comp=Z,37nm,0.5s
KMI2 Kunming 20.79 98 P P **01 06 27.8 +0.3**
KMI2 pmax pmax
comp=Z,28nm,0.8s
CMAR Chiang Mai Arr 20.80 120 P P **01 06 26.5 -0.9**
comp=Z,6.9nm,0.7s,baz=313,slow=12,SNR=34
CMAR LR LR 01 16 38.8
comp=Z,43nm,20.2s,baz=305,slow=43
comp=Z,6.9nm,0.7s
LZH Lanzhou 20.87 67 eP Pn 01 06 29.9 -1.0
LZH pP pP 01 06 36.5 -1.2
LZH sP sP 01 06 42.1 0.0
LZH pmax pmax
comp=Z,49nm,1.6s
LZH LR LR
comp=Z,400nm,11.0s
LZH LR LR
comp=Z,300nm,9.6s
LZH LR LR
comp=Z,180nm,9.3s
PALK Pallekele 22.71 178 LR LR 01 15 52.1
comp=Z,225nm,20.4s,baz=356,slow=38
GYA Guiyang 23.79 92 P P **01 06 59.0 +0.2**
GYA pP pP 01 07 08.3 -0.1
GYA pmax pmax
comp=Z,11nm,1.5s
GYA pmax pmax
comp=Z,260nm,4.4s
BVA0 Borovoye Array 23.96 346 ⇑P P **01 06 60.0 0.0**
comp=Z,10nm,0.9s
BVAR Borovoye Array 23.96 346 P P **01 07 00.8 +0.9**
comp=Z,2.8nm,0.2s,baz=151,slow=11,SNR=25
BVAR LR LR 01 17 10.3
comp=Z,364nm,18.9s,baz=163,slow=38
comp=Z,2.8nm,0.2s
BORK Borovoye 23.99 346 P **01 07 00.1 -0.2**
ZALV Zalesovo Beam 24.10 7 P P **01 07 01.9 +0.7**
comp=Z,9.4nm,0.8s,baz=197,slow=9.1,SNR=39
comp=Z,9.4nm,0.8s
AB31 Akbulak array 24.43 327 P P **01 07 05.6 +1.3**
comp=Z,8.3nm,0.5s,baz=127,slow=9.4,SNR=262
XAN Xi'an 24.83 73 ⇓P P **01 07 08.1 -0.1**
XAN pmax pmax
comp=Z,34nm,0.9s
ENH Enshi 25.51 82 P P **01 07 15.4 +1.1**
ENH IAmb IAmb 01 07 28.2
comp=Z,13nm,0.7s
AKTO Aktyubinsk 26.14 327 LR LR 01 18 30.6
comp=Z,286nm,19.3s,baz=139,slow=38
AKTO Aktyubinsk 26.14 327 ⇓P P **01 07 20.0 +0.1**
comp=Z,16nm,0.8s
BTO2 Baotou 26.49 58 eP P **01 07 27.4 +4.1**
BTO2 pP **pP** **01 07 32.2 -1.0**
BTO2 sP **sP** **01 07 34.7 -2.7**
BTO2 PP **PnPn** **01 08 10.4 +6.6**
BTO2 pmax pmax
comp=Z,56nm,0.8s
BTO2 pmax pmax
comp=Z,340nm,5.0s
SONM Songino Array 26.94 41 P P **01 07 29.4 +2.1**
comp=Z,2.8nm,0.6s,baz=232,slow=9.6,SNR=31
SONM LR LR 01 19 19.6
comp=Z,122nm,20.7s,baz=236,slow=39
comp=Z,2.8nm,0.6s
ULN Ulaanbaatar 27.34 42 P P **01 07 33.0 +2.2**
comp=Z,29nm,2.6s
HHC Hu-ho-hao-te 27.76 59 eP P **01 07 35.1 +0.5**
HHC pmax pmax
comp=Z,7.0nm,0.7s
LYN LuoYang 27.77 72 P P **01 07 35.6 +0.9**
LYN pmax pmax
comp=Z,9.0nm,0.7s
HNS HongShan 29.69 66 ⇓P P **01 07 53.6 +1.9**
HNS pmax pmax
comp=Z,8.0nm,1.1s
GNI Garni 30.32 299 LR LR 01 23 19.0
comp=Z,39nm,18.9s,baz=254,slow=43
ARTI Arti 30.36 336 LR LR 01 21 45.3
comp=Z,143nm,19.2s,baz=148,slow=39
ARTI Arti 30.36 336 P P **01 07 58.1 +0.8**
RAYN Ar Rayn 31.35 266 P P **01 08 07.0 +0.5**
KBZ Khabaz 32.32 305 P P **01 08 14.7 -0.1**
comp=Z,3.5nm,0.8s,baz=114,slow=8.5,SNR=7.1
comp=Z,3.5nm,0.8s
KIV Kislovodsk 32.51 306 P P **01 08 16.8 +0.2**
comp=Z,7.5nm,0.8s
KIV pP **sP** **01 08 32.6 +1.7**
comp=Z,7.5nm,0.8s
GSI Gunungsitoli 33.17 146 P P **01 08 26.2 +3.7**
comp=Z,70nm,1.1s
MARD Mardin 33.19 293 P P **01 08 24.1 +1.5**
MARD IAmb IAmb 01 08 24.4
comp=Z,8.4nm,0.8s
NJ2 Nanjing 33.27 77 eP P **01 08 22.0 -1.2**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
KIRV Kirov 35.31 333 LR LR 01 23 59.5
comp=Z,249nm,18.0s,baz=122,slow=38
HILR Hailar Array B 35.69 46 P P **01 08 45.4 +1.3**
comp=Z,3.3nm,0.6s,baz=248,slow=7.8,SNR=5.2
comp=Z,3.3nm,0.6s
BRTR Keskin Array B 38.80 297 P P **01 09 10.1 -0.6**
comp=Z,1.4nm,0.8s,baz=113,slow=12,SNR=4.1
comp=Z,1.4nm,0.8s
BR105 Keskin Array S 38.82 297 P P **01 09 10.8 0.0**
comp=Z,4.1nm,1.3s
BR106 Keskin Array S 38.82 297 P P **01 09 11.0 +0.2**
comp=Z,3.6nm,1.4s
EIL Elat 38.82 281 LR LR 01 29 18.7
comp=Z,27nm,19.2s,baz=102,slow=43
NRIK Noril'sk 39.53 4 P P **01 09 16.7 +0.6**
comp=Z,5.7nm,0.9s,baz=173,slow=6.2,SNR=12
NRIK LR LR 01 27 54.2
comp=Z,82nm,21.4s,baz=182,slow=40
comp=Z,5.7nm,0.9s
NRIK Noril'sk 39.53 4 IAmb IAmb 01 09 18.3
comp=Z,12nm,1.1s
OBN Obninsk 39.62 322 P P **01 09 17.0 -0.1**
OBN Obninsk 39.62 322 P P **01 09 17.6 +0.5**
comp=Z,28nm,0.5s
BNX BinXian 39.96 53 ⇑P P **01 09 19.5 -0.6**
BNX pmax pmax
comp=Z,7.0nm,1.7s
KSRS Korea Array 40.20 66 P P **01 09 22.2 +0.1**
comp=Z,0.9nm,0.5s,baz=274,slow=8.6,SNR=2.1
KSRS LR LR 01 28 18.2
comp=Z,31nm,20.0s,baz=300,slow=40
comp=Z,0.9nm,0.5s
BAL3X Bal3x, Balta 42.17 310 P P **01 09 38.4 +0.2**
AK09 Malin Array Si 42.73 313 P P **01 09 43.1 +0.4**
AK10 Malin Array Si 42.75 313 P P **01 09 43.2 +0.3**
AK07 Malin Array Si 42.77 313 P P **01 09 43.0 -0.1**
AK06 Malin Array Si 42.78 313 P P **01 09 43.5 +0.4**
AKASG Malin Array Be 42.78 314 P P **01 09 42.8 -0.4**
comp=Z,2.8nm,0.6s,baz=81,slow=6.7,SNR=23
AKASG LR LR 01 32 09.0
comp=Z,64nm,18.4s,baz=153,slow=43
comp=Z,2.8nm,0.6s
AKBB Malin Array Si 42.78 314 P P **01 09 42.9 -0.3**
AK01 Malin Array Si 42.79 314 P P **01 09 43.4 +0.2**
KIEV Kiev 42.79 314 P P **01 09 43.1 -0.1**
KIEV IAmb IAmb 01 09 44.9
comp=Z,14nm,0.8s
KIEV Kiev 42.79 314 ⇓P P **01 09 43.5 +0.3**
KIEV Kiev 42.79 314 P P **01 09 43.0 -0.2**
comp=Z,86nm,0.7s
AK18 Malin Array Si 42.88 314 P P **01 09 43.9 -0.1**
AK20 Malin Array Si 42.92 314 P P **01 09 44.3 0.0**
KLR Kul'dur 43.28 49 LR LR 01 29 13.8
comp=Z,24nm,18.8s,baz=274,slow=38
LUBAR Lubar, Ukraine 43.60 312 P P **01 09 49.6 -0.2**
MI28 Mi28,Pidlybu 43.79 314 P P **01 09 50.5 -0.8**
FURI Furi 43.92 250 LR LR 01 27 55.4
comp=Z,22nm,19.5s,baz=96,slow=36
VRI Vrincioaia 43.98 306 ⇑P P **01 09 53.4 +0.4**
PLOR Plostina 44.04 306 ⇓P P **01 09 54.8 +1.4**
MNK Minsk 44.27 319 *i* P P **01 09 55.8 +0.7**
comp=E,10.0nm,0.8s
MNK *i* P P **01 09 55.8 +0.7**
comp=N,10.0nm,0.8s
MNK *i* P P **01 09 55.8 +0.7**
comp=Z,27nm,0.8s,baz=102
MNK *i* pP **sP** **01 10 09.2 -0.3**
MNK *i* sP pP 01 10 13.4 +8.0
MNK *i* PP **PcP** **01 11 45.4 +6.3**
MNK *i* PPP PPP 01 12 17.2
MNK *i* S **S** **01 16 26.9 0.0**
MNK *i* sS **sS** **01 16 49.9 +6.7**
MNK *i* SS **SnSn** **01 20 09.1 +1.3**
MNK *i* SSS SSS 01 20 41.2
MNK *i* LQ LQ 01 25 24.9
MNK *i* LR LR 01 27 37.8
MNK *i* LRM MLR 01 29 52.1
comp=Z,75nm,11.3s
MNK *i* LRM MLR 01 29 52.9
comp=N,37nm,9.7s
MNK *i* LRM MLR 01 30 20.7
comp=E,56nm,10.5s
KMPD K-Podol'skiy 44.32 310 P P **01 09 55.6 +0.1**
COVR Voineasa-Covas 44.35 306 ⇓P P **01 09 57.2 +1.2**
TURR Turia 44.49 307 ⇓P P **01 09 57.8 +0.8**
MLR Muntele Rosu 44.52 306 P P **01 09 59.1 +1.7**
MLR Muntele Rosu 44.52 306 ⇓P P **01 09 59.2 +1.7**
DOPR Dopca 44.92 306 ⇓P P **01 10 01.6 +1.1**
RNPP5 Staryi Chortor 44.94 314 P P **01 10 00.5 0.0**
RNPP9 Sopachiv 44.96 314 P P **01 10 00.8 +0.1**
RNPP8 Varash 44.98 314 P P **01 10 01.0 +0.2**
NACGM Naroch 44.98 319 eP P **01 10 01.6 +0.9**
comp=Z,34nm,0.9s,baz=101
BURAR Bucovina Array 45.09 309 ⇑P P **01 10 02.7 +0.8**
VOIR 45.15 306 ⇑P P **01 10 02.9 +0.5**
LEM Lembang 45.31 140 LR LR 01 29 33.1
comp=Z,50nm,20.8s,baz=326,slow=37
ARR Arges 45.45 306 ⇑P P **01 10 05.1 +0.3**
PABE Paberze 46.67 320 P P **01 10 15.5 +1.4**
KWP Kalwaria Pacla 46.84 311 P P **01 10 16.3 +0.7**
comp=Z,37nm,1.1s
FINES FINESS Array B 46.91 328 P P **01 10 16.5 +0.6**
comp=Z,12nm,0.6s,baz=112,slow=9.4,SNR=57
FINES LR LR 01 31 20.6
comp=Z,253nm,18.1s,baz=73,slow=38
comp=Z,12nm,0.6s
UZHM Uzhgorod 47.08 310 P P **01 10 17.1 -0.3**
BZS Buzias 47.56 306 ⇓P P **01 10 22.6 +1.3**
BOVS Bovan 47.60 303 ⇑P P **01 10 22.2 +0.6**
NIE Niedzica 48.41 311 P P **01 10 28.6 +0.9**
comp=Z,4.7nm,1.5s
VADS Vadso 48.92 339 eP P **01 10 32.5 +1.2**
TIXI Tiksi 49.19 18 LR LR 01 33 20.8
comp=Z,182nm,19.6s,baz=194,slow=38
TIXI Tiksi 49.19 18 P P **01 10 33.6 +0.3**
TIXI IAmb IAmb 01 10 34.7
comp=Z,7.3nm,0.7s
MORH Mrgy, Hungar 49.61 307 ⇓P P **01 10 40.5 +3.6**
MORH Mrgy, Hungar 49.61 307 P P **01 10 37.2 +0.3**
SRO Srobarova 49.75 309 eP P **01 10 38.5 +0.5**
ARA0 ARCESS Array S 49.89 338 eP P **01 10 39.8 +1.1**
ARCES ARCESS Array B 49.89 338 P P **01 10 39.8 +1.1**
comp=Z,12nm,0.6s,baz=105,slow=7.8,SNR=19
comp=Z,12nm,0.6s
MAUC Maruska 50.02 311 eP P **01 10 41.6 +1.5**
STEB Steborice 50.04 312 eP P **01 10 40.7 +0.5**
MORC Moravsky Berou 50.20 312 P P **01 10 42.0 +0.6**
MODS Modra-Piesok 50.42 310 eP P 01 10 48.5 +5.4
KTK1 Kautokeino 50.45 337 eP P **01 10 43.9 +0.9**
VRAC Vranov 50.83 311 LR LR 01 36 18.6
comp=Z,84nm,19.1s,baz=322,slow=41
HAMF Hammerfest 50.88 339 eP P **01 10 48.1 +1.9**
DPC Dobruska-Polom 50.97 312 eP P **01 10 47.8 +0.6**
DPC epP **pP** **01 10 52.0 -5.7**
OSTC Ostas 51.03 313 eP P **01 10 48.8 +1.1**
RONA Rosalia, Austr 51.12 309 eP P **01 10 49.2 +0.8**
comp=Z,2.5nm,0.8s
CHVC Chvalec 51.13 313 eP P **01 10 48.3 -0.1**
CHVC ex x 01 10 52.7
UPC Upice 51.16 313 eP P **01 10 50.0 +1.4**
CONA Conrad Observa 51.39 309 *i* P P **01 10 51.0 +0.5**
comp=Z,3.2nm,0.7s,SNR=6.1
ARSA Arzberg 51.67 308 eP P **01 10 53.4 +0.9**
comp=Z,1.4nm,0.5s
KAPI Kappang 51.69 126 LR LR 01 39 01.8
comp=Z,36nm,19.1s,baz=2.5,slow=43
SOKA Soboth 52.06 308 eP P **01 10 56.2 +0.6**
comp=Z,1.7nm,0.6s,SNR=5.0
TRO Tromso 52.09 337 eP P **01 10 56.0 +0.7**
CKRC Cesky Krumlov 52.36 311 eP P **01 10 58.4 +0.8**
ZVC Zvikov 52.39 311 eP P **01 10 58.7 +0.9**
OBKA Obir 52.41 308 eP P **01 10 58.4 +0.3**
comp=Z,1.1nm,0.3s
MOA Molln 52.47 309 eP P **01 10 58.4 -0.1**
comp=Z,4.9nm,0.8s,SNR=6.1
HFS Hagfors 52.65 325 P P **01 10 59.8 +0.2**
comp=Z,12nm,0.7s,baz=109,slow=9.9,SNR=50
HFS LR LR 01 34 48.5
comp=Z,165nm,19.2s,baz=58,slow=38
comp=Z,12nm,0.7s
GERES GERESS Array B 52.76 311 P P **01 11 00.3 -0.4**
comp=Z,1.0nm,0.7s,baz=86,slow=6.8,SNR=9.4
comp=Z,1.0nm,0.7s
FAUS Fauske 52.87 334 eP P **01 11 03.1 +2.1**
MOR8 Moi Rana 52.99 332 eP P **01 10 59.9 -2.1**
CLL Collm 53.03 314 *i* P P **01 10 59.1 -3.4**
comp=Z,4.0nm,1.0s
SABO M.te Sabotino 53.12 307 P P **01 11 02.9 -0.4**
KBA Koelnbreinsper 53.17 308 eP P **01 11 03.9 +0.1**
comp=Z,0.8nm,0.4s
RAUS Rausandaksla 53.20 333 eP P **01 11 04.7 +1.2**
VAGH Vaagaholmen 53.55 333 eP P **01 11 06.8 +0.8**
KONS Konsvik 53.57 333 eP P **01 11 07.6 +1.4**
LESA Schwarzleotal 53.58 309 eP P **01 11 06.6 -0.1**
comp=Z,3.7nm,0.9s
STOK Stokkvaagen 53.59 333 eP P **01 11 07.0 +0.7**
STAL STALIGIAL 53.70 307 P P **01 11 07.1 -0.5**
NSS Namsos 53.82 330 eP P **01 11 08.3 +0.3**
FDMO Fiordimonte 53.91 303 P P **01 11 09.5 +0.3**
FDMO IAmb IAmb 01 11 10.0
comp=Z,5.7nm,0.8s
NB2 NORSAR Subarra 53.92 326 P P **01 11 08.4 -0.6**
comp=Z,11nm,1.0s,baz=95,slow=6.9
NB2 NORSAR Subarra 53.92 326 P P **01 11 08.4 -0.6**
NB2 AMP 01 11 08.4
comp=Z,11nm,1.0s
NOA NORSAR Array B 53.92 326 P P **01 11 08.4 -0.6**
comp=Z,2.8nm,0.7s,baz=94,slow=7.0,SNR=9.5
NOA LR LR 01 35 29.9
comp=Z,113nm,19.9s,baz=80,slow=38
comp=Z,2.8nm,0.7s
NRCA Norcia 53.93 303 IAmb IAmb 01 11 10.4
comp=Z,6.7nm,0.8s
WTTA Wattenberg 54.30 309 eP P **01 11 11.9 -0.3**
comp=Z,0.9nm,0.3s
WATA Walderalm 54.34 309 eP P **01 11 11.8 -0.6**
comp=Z,1.7nm,0.5s
SQTA Sankt Quirin 54.60 309 eP P **01 11 13.4 -0.8**
comp=Z,2.1nm,0.4s,SNR=5.5
MOTA Moosalm 54.65 309 eP P **01 11 14.1 -0.5**
comp=Z,1.0nm,0.4s,SNR=6.4
RETA Reutte 54.86 309 eP P **01 11 15.9 -0.2**
comp=Z,2.4nm,0.7s
FETA Feichten 54.95 309 eP P **01 11 16.1 -0.8**
comp=Z,2.4nm,0.7s,SNR=6.1
SPA0 Spitsbergen Ar 55.41 347 eP P **01 11 21.0 +1.6**
SPITS Spitsbergen Ar 55.41 347 P P **01 11 19.8 +0.3**
comp=Z,10nm,0.7s,baz=135,slow=9.5,SNR=11
SPITS LR LR 01 38 22.5
comp=Z,119nm,20.1s,baz=128,slow=40
comp=Z,10nm,0.7s
DAVA Damuels 55.48 309 *i* P P **01 11 20.6 0.0**
comp=Z,6.7nm,0.5s,SNR=9.2
SENIN Lac Senin/Sane 57.39 308 IAmb IAmb 01 11 35.7
comp=Z,6.5nm,0.7s
KEST Kesra 58.38 296 P P **01 11 40.9 -0.4**
comp=Z,4.4nm,0.9s,baz=347,slow=7.0,SNR=5.2
comp=Z,4.4nm,0.9s
KEST Kesra 58.38 296 IAmb IAmb 01 11 49.1
comp=Z,12nm,1.2s
PETK Petropavlovsk- 59.41 43 P P **01 11 47.3 -0.8**
comp=Z,4.1nm,0.8s,baz=251,slow=4.4,SNR=2.6
comp=Z,4.1nm,0.8s
EKA Eskdalemuir Ar 62.04 320 P P **01 12 05.5 -0.3**
comp=Z,4.6nm,0.8s,baz=90,slow=7.1,SNR=6.2
EKA LR LR 01 41 54.4
comp=Z,170nm,18.5s,baz=192,slow=39
comp=Z,4.6nm,0.8s
TAM Tamanrasset 65.99 283 P P **01 12 31.7 -0.8**
ESDC Sonseca Array 67.16 304 P P **01 12 39.4 -0.3**
comp=Z,2.4nm,0.9s,baz=61,slow=7.2,SNR=18
comp=Z,2.4nm,0.9s
LSZ Lusaka 67.22 235 LR LR 01 39 37.1
comp=Z,19nm,20.1s,baz=162,slow=34
BORG Borgarnes 67.79 333 LR LR 01 42 51.2
comp=Z,76nm,18.1s,baz=105,slow=36
WRA Warramunga Arr 72.21 127 P P **01 13 09.6 -1.3**
comp=Z,1.1nm,0.4s,baz=321,slow=6.0,SNR=31
comp=Z,1.1nm,0.4s
E18K Tukpahlearik C 72.80 21 IAmb IAmb 01 13 15.7
comp=Z,6.7nm,0.8s
D20K Etivluk River 73.14 19 IAmb IAmb 01 13 17.9
comp=Z,7.1nm,1.0s
F17K Baldwin Pennin 73.20 22 IAmb IAmb 01 13 18.4
comp=Z,8.0nm,0.8s
TORD Torodi Ar. Bea 73.46 276 P P **01 13 17.6 -0.8**
comp=Z,2.8nm,0.7s,baz=67,slow=2.3,SNR=18
comp=Z,2.8nm,0.7s
E19K Redstone River 73.79 20 IAmb IAmb 01 13 21.1
comp=Z,6.1nm,0.9s
D22K Ayikyak River 74.08 17 IAmb IAmb 01 13 22.9
comp=Z,7.3nm,0.8s

ASAR	**Alice Springs**	**74.43**	**130**	P		**P**	**01 13 22.4**	**-1.6**
	comp=Z,1.4nm,0.5s,baz=313,slow=5.8,SNR=28							
	comp=Z,1.4nm,0.5s							
D23K	**Nanushuk River**	**74.53**	**17**	IAmb		IAmb	01 13 25.6	
	comp=Z,10nm,1.1s							
D25K	**Kavik River**	**75.30**	**15**	IAmb		IAmb	01 13 30.0	
	comp=Z,6.9nm,1.0s							
J16K	**Anvik River**	**75.38**	**24**	IAmb		IAmb	01 13 32.0	
	comp=Z,7.6nm,1.0s							
C27K	**Jago River**	**75.66**	**14**	IAmb		IAmb	01 13 32.1	
	comp=Z,6.4nm,0.8s							
E24K	**Your Creek**	**75.73**	**17**	IAmb		IAmb	01 13 33.0	
	comp=Z,8.7nm,1.1s							
COLD	**Coldfoot**	**75.92**	**18**	IAmb		IAmb	01 13 34.0	
	comp=Z,7.0nm,1.0s							
H21K	**Melozitna Rive**	**76.31**	**20**	IAmb		IAmb	01 13 36.0	
	comp=Z,8.2nm,0.8s							
E25K	**Arctic Village**	**76.41**	**16**	IAmb		IAmb	01 13 36.0	
	comp=Z,5.0nm,0.8s							
H22K	**Ishtalitna Cre**	**76.56**	**19**	IAmb		IAmb	01 13 37.4	
	comp=Z,9.6nm,1.2s							
A36M	**Sachs Harbour**	**76.69**	**8**	IAmb		IAmb	01 13 37.1	
	comp=Z,6.9nm,0.8s							
L18K	**Granite Mounta**	**77.44**	**24**	IAmb		IAmb	01 13 42.6	
	comp=Z,8.2nm,1.0s							
K20K	**Telida**	**77.54**	**22**	IAmb		IAmb	01 13 43.3	
	comp=Z,6.6nm,0.9s							
E29M	**Blow River**	**77.88**	**13**	IAmb		IAmb	01 13 44.5	
	comp=Z,7.8nm,0.9s							
BOSA	**Boshof**	**78.30**	**227**	P		**P**	**01 13 45.7**	**-0.2**
	comp=Z,3.8nm,0.8s,baz=35,slow=2.8,SNR=7.9							
BOSA				LR		LR	01 46 40.3	
	comp=Z,25nm,18.3s,baz=29,slow=34							
	comp=Z,3.8nm,0.8s							
BOSA	**Boshof**	**78.30**	**227**	IAmb		IAmb	01 13 47.3	
	comp=Z,7.3nm,0.9s							
ILAR	**Eielson Array**	**78.66**	**19**	P		**P**	**01 13 47.4**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=308,slow=4.9,SNR=31							
	comp=Z,3.0nm,0.8s							
N19K	**Bonanza Creek**	**79.18**	**24**	IAmb		IAmb	01 13 54.5	
	comp=Z,5.4nm,0.8s							
SKT	**Skwentna**	**79.35**	**22**	P		**P**	**01 13 51.2**	**+0.1**
O18K	**Koktuh Hills**	**79.58**	**25**	P		**P**	**01 13 53.8**	**+1.3**
G31M	**Satah River**	**79.86**	**13**	IAmb		IAmb	01 13 54.5	
	comp=Z,10nm,1.1s							
RIDG	**Independent Ri**	**80.02**	**19**	IAmb		IAmb	01 13 55.8	
	comp=Z,6.7nm,0.8s							
SCRK	**Sand Creek**	**80.07**	**18**	P		**P**	**01 13 54.8**	**-0.4**
SCRK				IAmb		IAmb	01 13 56.4	
	comp=Z,10nm,1.2s							
H31M	**Peel River**	**80.82**	**14**	IAmb		IAmb	01 13 59.7	
	comp=Z,6.1nm,0.7s							
I30M	**Mount Dempster**	**80.90**	**15**	IAmb		IAmb	01 14 00.5	
	comp=Z,10nm,1.0s							
DAWY	**Dawson**	**81.18**	**16**	IAmb		IAmb	01 14 02.0	
	comp=Z,6.0nm,1.0s							
J30M	**Hart River**	**81.46**	**15**	IAmb		IAmb	01 14 03.8	
	comp=Z,6.5nm,0.8s							
K29M	**Barlow Dome**	**81.82**	**16**	IAmb		IAmb	01 14 05.8	
	comp=Z,5.6nm,0.8s							
DBIC	**Dimbokro**	**82.21**	**273**	P		**P**	**01 14 07.0**	**-0.2**
	comp=Z,7.4nm,0.8s,baz=70,slow=6.6,SNR=9.6							
	comp=Z,7.4nm,0.8s							
DBIC	**Dimbokro**	**82.21**	**273**	IAmb		IAmb	01 14 11.0	
	comp=Z,8.4nm,0.8s							
L29M	**L29M**	**82.29**	**16**	IAmb		IAmb	01 14 08.5	
	comp=Z,11nm,1.2s							
M29M	**Somme Creek**	**82.77**	**17**	IAmb		IAmb	01 14 11.4	
	comp=Z,5.3nm,0.8s							
SUR	**Sutherland**	**83.67**	**227**	LR		LR	01 47 29.4	
	comp=Z,38nm,21.9s,baz=39,slow=33							
YKA	**Yellowknife Ar**	**87.00**	**7**	P		**P**	**01 14 29.5**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=341,slow=5.6,SNR=8.3							
	comp=Z,0.5nm,0.7s							
TXAR	**Lajitas Array**	**120.80**	**4**	PKP		**PKPdf**	**01 20 38.2**	**0.0**
	comp=Z,0.1nm,0.4s,baz=202,slow=0.3,SNR=4.5							
LPAZ	**La Paz**	**147.72**	**288**	PKPbc		**PKPbc**	**01 21 31.5**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=68,slow=6.5,SNR=6.2							
PLCA	**Paso Flores**	**153.83**	**238**	PKPbc		**PKiKP**	**01 21 45.6**	**+0.7**
	comp=Z,1.6nm,1.0s,baz=328,slow=9.2,SNR=3.2							

IDC 08 01:02:10.8±3.3, 30°.26S×177°.89W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=72.9km s-min=23.0km az=113.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.01**	**359**	Pn	Pn	01 02 32.3	+0.1
	98nm,0.3s,baz=87,slow=22,SNR=2.2						
RAO				Sn	Sn	01 02 47.9	+0.8
	370nm,0.3s,baz=139,slow=20,SNR=7.6						
URZ	**Urewera**	**8.98**	**206**	Sn	Sn	01 05 56.0	-7.7
	0.6nm,0.3s,baz=144,slow=23,SNR=1.4						
ASAR	**Alice Springs**	**43.21**	**267**	P	P	01 10 13.9	0.0
	0.4nm,0.5s,baz=103,slow=7.3,SNR=7.7						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.18**	**272**	P	P	01 10 21.5	-0.3
	0.8nm,0.4s,baz=111,slow=8.2,SNR=17						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**145.05**	**340**	PKPbc	PKPbc	01 21 47.9	-0.9
	0.7nm,0.4s,baz=38,slow=2.3,SNR=8.8						

*ISK **08** 01:08:21.9, 39°.14N×27°.90E, h5km, ML1.6/4*
AFAD 08 01:08:23.3, 39°.09N×27°.86E, h7km±3km**, ML1.4, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.22**	**190**	P	Pg	01 08 27.9	+0.3
AKS	**Akhisar**	**0.22**	**190**	Pg	Pg	01 08 27.9	+0.3
AKS				Sg	Sg	01 08 32.3	+1.8
SOMA	**Soma-Manisa**	**0.26**	**284**	Pg	Pg	01 08 28.1	-0.4
SOMA				Sg	Sg	01 08 32.5	+0.5
GORD	**Gordes-Manisa**	**0.30**	**127**	Pg	Pg	01 08 28.8	-0.5
STEP	**BALIKESIR_Sava**	**0.31**	**338**	P	Pg	01 08 30.1	+0.8
KTTT	**Salihli**	**0.44**	**156**	P	Pb	01 08 32.9	-0.5
KTTT				S	Sb	01 08 39.0	-1.2
CAMT	**Merkez**	**0.55**	**232**	P	Pb	01 08 34.7	-0.6
CAMT				S	Sb	01 08 43.0	-0.4
CAMT				IAML		01 08 50.0	
	comp=N,18nm,0.3s						
ZEDA	**zmir-Bergama**	**0.62**	**259**	P	Pg	01 08 35.5	+0.2
ZEDA				S	Sg	01 08 42.5	-0.9
ZEDA				IAML		01 08 44.0	
	comp=N,26nm,0.7s						
BKES	**Balkesir-Mer**	**0.64**	**5**	P	Pg	01 08 35.3	-0.3
DEMI	**Demirci**	**0.67**	**94**	P	Pg	01 08 36.4	+0.3
DEMI				S	Sg	01 08 44.0	-0.8
DEMI				IAML		01 08 48.0	
	comp=N,20nm,0.1s						
BUHA	**Balikesir, Bur**	**0.73**	**304**	P	Pg	01 08 37.1	-0.3
IZMD	**zmir-Dikili-**	**0.74**	**262**	P	Pb	01 08 38.2	-0.3
IZMD				S	Sg	01 08 46.2	-0.8
IZMD				IAML		01 08 49.0	
	comp=N,30nm,2.3s						
DKL	**Dikili**	**0.75**	**269**	Pg	Pg	01 08 37.9	+0.3
MANT	**Manisa**	**0.81**	**138**	P	Pg	01 08 38.6	-0.3
MANT				S	Sg	01 08 48.8	-0.5
AYVA	**Ayvalik**	**0.94**	**284**	P	Pg	01 08 41.4	+0.2
BLCB	**Balcova**	**0.95**	**223**	Pg	Pg	01 08 41.8	+0.2
IZMR	**zmir-demi**	**0.96**	**176**	P	Pg	01 08 41.6	0.0
IZMR				S	Sg	01 08 53.2	-0.8
IZMR				IAML		01 08 56.0	
	comp=N,8.1nm,1.0s						
USAK	**Uak-Merkez**	**0.98**	**112**	P	Pg	01 08 41.6	-0.4
KIRA	**zmir-Kiraz**	**0.99**	**155**	P	Pg	01 08 42.3	0.0
KIRA				S	Sb	01 08 56.7	+0.6

*NOU **08** 01:25:23.9, 21°.66S×179°.16W, h594km, mb5.0/64, Fiji Islands Region*
*IDC **08** 01:25:23.5±0.5, 21°.66S×179°.22W, h585km±5km, mb3.9/22, mbtmp4.9/24, Error ellipse: s-maj=12.1km s-min=9.7km az=101.0*
*BGR **08** 01:25:23.7, 22°.23S×179°.80W, h599km*
*NEIC **08** 01:25:24.3±2.5, 21°.65S±0°.10×179°.2W±0°.1, h585km±5km, mb4.6/204, Error ellipse: s-maj=15.3km s-min=13.8km az=120.0*
ISC 08 01:25:23.5±0.4, 21°.83S±0°.05×179°.22W±0°.05, h591km±3km, h592km: pP-P, n497, σ1§62/460, mb4.6/181, 28C-24D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.82**	**327**		**P**	**01 26 54.9**	**+0.3**
MSVF	**Nonsavu**	**4.82**	**327**	P	**P**	**01 26 55.1**	**+0.5**
TAVE	**Taveuni**	**5.14**	**353**	P	**P**	**01 26 56.9**	**-0.2**
DGTI	**Dogotuki**	**5.59**	**350**	P	**P**	**01 27 00.3**	**-0.5**
	409nm,0.8s						
RAO	**Raoul Island**	**7.48**	**171**	P	**P**	**01 27 17.6**	**+0.1**
	412nm,0.4s,baz=106,slow=16,SNR=4.4						
RAO				S	**S**	**01 28 49.6**	**-1.2**
	335nm,0.3s,baz=106,slow=22,SNR=9.7						
RAO	**Raoul Island**	**7.48**	**171**	P	**P**	**01 27 18.4**	**+1.0**
GLKZ	**Green Lake**	**7.49**	**171**	P	**P**	**01 27 17.7**	**+0.2**
GLKZ				S	**S**	**01 28 50.8**	**-0.3**
NIUE	**Niue**	**9.13**	**74**	P	**P**	**01 27 32.4**	**-1.1**
NIUE	**Niue**	**9.13**	**74**	P	**P**	**01 27 31.4**	**-2.1**
NIUE				S	**S**	**01 29 24.2**	**+4.1**
AFI	**Afiamalu**	**10.59**	**43**	P	**P**	**01 27 44.1**	**-4.0**
AFI	**Afiamalu**	**10.59**	**43**	S	S	01 29 37.5	-9.4
MARNC	**Mare, Loyalty**	**11.87**	**269**		**P**	**01 28 00.8**	**0.0**
MARNC	**Mare, Loyalty**	**11.87**	**269**	P	**P**	**01 28 00.9**	**0.0**
	1μm,1.0s						
PINNC	**Pines Island,**	**12.38**	**264**	P	**P**	**01 28 06.6**	**+0.5**
PINNC	**Pines Island,**	**12.38**	**264**	P	**P**	**01 28 06.5**	**+0.5**
	45μm,0.7s						
OUENC	**Ouen Island, N**	**12.94**	**265**	P	**P**	**01 28 12.5**	**+0.8**
	96nm,1.1s						
ONTNC	**Ouen Toro**	**13.30**	**265**	P	**P**	**01 28 14.7**	**-0.8**
DZM	**Mont Dzumac**	**13.31**	**266**	*e*P	**P**	**01 28 15.3**	**-0.4**
	138nm,0.7s						
DZM				*e*S	**S**	**01 30 29.6**	**-7.5**
	284nm,25.9s						
DZM	**Mont Dzumac**	**13.31**	**266**	P	**P**	**01 28 15.3**	**-0.4**
	89nm,0.5s,baz=77,slow=20,SNR=42						
DZM	**Mont Dzumac**	**13.31**	**266**		**P**	**01 28 15.6**	**-0.1**
DZM	**Mont Dzumac**	**13.31**	**266**	P	**P**	**01 28 15.4**	**-0.3**
	126nm,0.7s						
OUZ	**Omahuta**	**14.75**	**204**	P	**P**	**01 28 32.3**	**+2.9**
WCZ	**Waipu Caves**	**15.14**	**200**	P	**P**	**01 28 36.2**	**+3.2**
KOUNC	**Koumac, New Ca**	**15.44**	**272**	P	**P**	**01 28 38.0**	**+1.9**
	128nm,1.1s						
KUZ	**Kuaotunu**	**15.50**	**195**	P	**P**	**01 28 39.2**	**+2.9**
	83nm,0.7s						
KUZ	**Kuaotunu**	**15.50**	**195**	P	**P**	**01 28 38.6**	**+2.2**
ABAZ	**Army Bay**	**15.60**	**198**	P	**P**	**01 28 39.5**	**+2.2**
MXZ	**Matakaoa Point**	**15.82**	**187**	P	**P**	**01 28 39.2**	**-0.2**
MXZ				S	**S**	**01 31 13.5**	**-5.6**
WIZ	**White Island**	**15.95**	**190**	P	**P**	**01 28 43.1**	**+2.6**
HAZ	**Te Kaha**	**16.08**	**189**	P	**P**	**01 28 40.9**	**-0.8**
HAZ				S	**S**	**01 31 17.4**	**-5.9**
PUZ	**Puketiti**	**16.33**	**187**	P	**P**	**01 28 44.3**	**+0.3**
PUZ				S	**S**	**01 31 27.1**	**-0.4**
TOZ	**Tahuroa Road**	**16.49**	**195**		**P**	**01 28 48.3**	**+2.8**
TOZ	**Tahuroa Road**	**16.49**	**195**	P	**P**	**01 28 48.0**	**+2.6**
URZ	**Urewera**	**16.68**	**190**	P	**P**	**01 28 44.8**	**-2.3**
	49nm,0.3s,baz=275,slow=2.5,SNR=40						
URZ				S	**S**	**01 31 26.7**	**-6.3**
	12nm,0.5s,baz=88,slow=20,SNR=9.5						
URZ	**Urewera**	**16.68**	**190**	P	**P**	**01 28 45.7**	**-1.5**
URZ				S	**S**	**01 31 27.3**	**-5.7**
MWZ	**Matawai**	**16.68**	**189**	P	**P**	**01 28 46.1**	**-1.2**
MWZ				S	**S**	**01 31 29.1**	**-4.2**
TLZ	**Tolley Road**	**17.05**	**194**	P	**P**	**01 28 53.3**	**+2.6**
WATZ	**Wairara**	**17.37**	**193**	P	**P**	**01 28 54.6**	**+1.0**
HIZ	**Hauiti**	**17.39**	**196**	P	**P**	**01 28 56.6**	**+2.9**
RATZ	**Rangitukua**	**17.52**	**193**	P	**P**	**01 28 55.5**	**+0.6**
NMHZ	**Naumai**	**17.54**	**190**	P	**P**	**01 28 55.2**	**+0.1**
NMHZ				S	**S**	**01 31 40.4**	**-6.9**
RITZ	**Rihia Road**	**17.60**	**193**	P	**P**	**01 28 56.4**	**+0.7**
BKZ	**Black Stump Fm**	**17.66**	**191**	P	**P**	**01 28 56.9**	**+0.6**
	38nm,1.1s						
BKZ	**Black Stump Fm**	**17.66**	**191**	P	**P**	**01 28 55.0**	**-1.3**
BKZ				S	**S**	**01 31 42.6**	**-6.6**
TMVZ	**Te Maari**	**17.77**	**193**	P	**P**	**01 28 57.9**	**+0.6**
TWVZ	**Taurewa**	**17.78**	**194**	P	**P**	**01 28 57.8**	**+0.4**
ETVZ	**East Tongariro**	**17.79**	**193**	P	**P**	**01 28 57.3**	**-0.2**
ETVZ				S	**S**	**01 31 47.4**	**-3.9**
WTVZ	**West Tongariro**	**17.79**	**193**	P	**P**	**01 28 58.7**	**+1.2**
NNVZ	**North Ngauruho**	**17.80**	**193**	P	**P**	**01 28 58.2**	**+0.5**
OTVZ	**Oturere**	**17.82**	**193**	P	**P**	**01 28 58.5**	**+0.7**
NGZ	**Ngauruhoe**	**17.85**	**193**	P	**P**	**01 28 58.7**	**+0.7**
SNVZ	**South Ngauruho**	**17.85**	**193**	P	**P**	**01 28 58.5**	**+0.5**
MCHZ	**McNeill Hill**	**17.90**	**190**	P	**P**	**01 28 58.1**	**-0.3**
MCHZ				S	**S**	**01 31 48.9**	**-4.0**
TUVZ	**Tukino**	**17.93**	**193**	P	**P**	**01 28 59.8**	**+1.1**
KWHZ	**Kaweka Forest**	**17.93**	**191**	P	**P**	**01 28 58.0**	**-0.7**
KWHZ				S	**S**	**01 31 48.9**	**-4.6**
FWVZ	**Far West T-bar**	**17.93**	**193**	P	**P**	**01 28 56.6**	**-2.3**
MAVZ	**Matarangi**	**17.95**	**193**	P	**P**	**01 28 59.8**	**+0.7**
WHVZ	**Whangaehu Hut**	**17.95**	**193**	P	**P**	**01 28 59.8**	**+0.7**
TRVZ	**Turoa**	**17.98**	**193**	P	**P**	**01 28 59.1**	**-0.2**
VRZ	**Vera Road**	**17.99**	**195**	P	**P**	**01 29 01.6**	**+2.4**
WNVZ	**Wahianoa**	**18.00**	**193**	P	**P**	**01 28 59.0**	**-0.4**
WNVZ				S	**S**	**01 31 50.3**	**-4.5**
MOVZ	**Moawhango**	**18.04**	**193**	P	**P**	**01 28 59.2**	**-0.5**
MOVZ				S	**S**	**01 31 51.1**	**-4.2**
CKHZ	**Cape Kidnapper**	**18.05**	**189**	P	**P**	**01 28 60.0**	**+0.3**
CKHZ				S	**S**	**01 31 50.9**	**-4.5**
KRHZ	**Kereru**	**18.15**	**191**	P	**P**	**01 29 00.5**	**-0.2**
KRHZ				S	**S**	**01 31 52.1**	**-5.0**
KAHZ	**Kahuranaki**	**18.21**	**190**	P	**P**	**01 29 01.6**	**+0.3**
KAHZ				S	**S**	**01 31 53.9**	**-4.2**
KHEZ	**Kahui Hut**	**18.34**	**197**	P	**P**	**01 29 06.9**	**+4.4**
PNHZ	**Pukenui**	**18.44**	**191**	P	**P**	**01 29 02.9**	**-0.5**
PXZ	**Pawanui**	**18.45**	**190**	P	**P**	**01 29 03.5**	**+0.2**
PXZ				S	**S**	**01 31 58.0**	**-3.7**
WPHZ	**Waipukurau**	**18.55**	**191**	P	**P**	**01 29 06.2**	**+2.0**
TSZ	**Takapari Road**	**18.63**	**192**	P	**P**	**01 29 05.6**	**+0.6**
DVHZ	**Dannevirke**	**18.82**	**191**	P	**P**	**01 29 07.0**	**+0.2**
BFZ	**Birch Farm**	**19.18**	**191**	P	**P**	**01 29 09.2**	**-0.8**
MRZ	**Mangatainoka R**	**19.28**	**192**	P	**P**	**01 29 09.4**	**-1.5**
OGWZ	**Otaki Gorge**	**19.52**	**193**	P	**P**	**01 29 12.7**	**-0.3**
HOWZ	**Holdsworth Sta**	**19.52**	**192**	P	**P**	**01 29 13.3**	**+0.2**
KIW	**Kapiti Island**	**19.61**	**193**	P	**P**	**01 29 13.5**	**-0.4**
TMWZ	**Te Maipa**	**19.66**	**191**	P	**P**	**01 29 14.0**	**-0.3**
MTW	**Mount Morrison**	**19.78**	**192**	P	**P**	**01 29 15.2**	**-0.2**
DUWZ	**D'Urville Isla**	**19.79**	**196**	P	**P**	**01 29 15.2**	**-0.3**
CAW	**Cannon Point**	**19.82**	**193**	P	**P**	**01 29 15.3**	**-0.4**
TRWZ	**Traveller**	**19.98**	**191**	P	**P**	**01 29 17.1**	**-0.1**
PAWZ	**Paruwai Farm**	**20.01**	**192**	P	**P**	**01 29 17.2**	**-0.3**
MSWZ	**Moikau Station**	**20.08**	**192**	P	**P**	**01 29 17.9**	**-0.2**
TCW	**Tory Channel**	**20.09**	**194**	P	**P**	**01 29 18.3**	**+0.2**
QRZ	**Quartz Range**	**20.19**	**198**	P	**P**	**01 29 20.5**	**+1.4**
	61nm,0.6s						
QRZ	**Quartz Range**	**20.19**	**198**	P	**P**	**01 29 20.5**	**+1.4**
TKNZ	**Takaka Hill**	**20.26**	**197**	P	**P**	**01 29 19.9**	**+0.1**
NNZ	**Nelson**	**20.32**	**196**	P	**P**	**01 29 20.1**	**-0.1**
MRNZ	**Matariki Terra**	**20.65**	**197**	P	**P**	**01 29 23.4**	**+0.1**
THZ	**Tophouse**	**20.95**	**197**	P	**P**	**01 29 26.0**	**0.0**
RPZ	**Rata Peaks**	**23.27**	**198**	P	**P**	**01 29 48.0**	**+1.4**
	51nm,1.3s						
JCZ	**Jackson Bay**	**24.31**	**201**	P	**P**	**01 29 56.4**	**+0.5**
	80nm,0.8s						
ODZ	**Otahua Downs**	**24.61**	**197**	P	**P**	**01 29 59.6**	**+1.2**
	40nm,1.9s						
AUWSH	**Wavell State H**	**25.80**	**252**	P	**P**	**01 30 11.1**	**+2.0**
	58nm,0.9s						
TW1H	**Toowoomba 1 Ha**	**26.75**	**252**	P	**P**	**01 30 19.8**	**+2.2**
	109nm,0.8s						
EIDS	**Eidsvold**	**27.42**	**257**	P	**P**	**01 30 24.3**	**+0.9**
EIDS	**Eidsvold**	**27.42**	**257**	P	**P**	**01 30 24.3**	**+0.9**
	52nm,0.9s						
ARMA	**Armidale**	**27.48**	**246**	P	**P**	**01 30 25.9**	**+2.0**
ARMA	**Armidale**	**27.48**	**246**	P	**P**	**01 30 26.0**	**+2.0**
	65nm,0.9s						
TBI	**Tubuai**	**27.49**	**99**	*es*S	sS	01 37 19.3	+0.4
	490nm,28.0s						
AUNRC	**North Rockhamp**	**27.95**	**261**	P	**P**	**01 30 28.8**	**+0.8**
	30nm,0.9s						
PPT2	**Papeete2**	**28.20**	**87**	*e*S	**S**	**01 34 27.3**	**-8.5**
	11nm,20.5s						
PPT2				*es*S	sS	01 37 28.9	-2.0
	88nm,24.0s						
AUPHS	**Peel High Scho**	**28.24**	**245**	P	**P**	**01 30 32.5**	**+2.0**
	60nm,0.9s						
SYDH	**Sydney Hard Ro**	**29.01**	**239**	P	**P**	**01 30 39.0**	**+2.0**
	84nm,0.8s						
AUDCS	**Dubbo College**	**30.36**	**243**	P	**P**	**01 30 50.8**	**+2.1**
	44nm,1.0s						
AULRC	**Lightning Ridg**	**30.45**	**249**	P	**P**	**01 30 51.0**	**+1.4**
	118nm,1.1s						
CNB	**Canberra Magne**	**30.55**	**237**	P	**P**	**01 30 52.5**	**+2.1**
	69nm,1.7s						
AUMHS	**Melrose High S**	**30.77**	**237**	P	**P**	**01 30 53.9**	**+1.6**
	97nm,1.2s						
AUMTS	**Mt Stromlo**	**30.83**	**237**	P	**P**	**01 30 54.8**	**+2.0**
	84nm,1.4s						
CAN	**Canberra**	**30.83**	**237**	P	**P**	**01 30 54.6**	**+1.8**
CAN	**Canberra**	**30.83**	**237**	P	**P**	**01 30 54.8**	**+2.0**
	109nm,1.7s						
CTA	**Charters Tower**	**32.26**	**267**	PcP	**PcP**	**01 33 34.5**	**-0.6**
	2.3nm,0.4s,baz=98,slow=4.3,SNR=2.1						
CTA	**Charters Tower**	**32.26**	**267**	P	**P**	**01 31 05.6**	**+0.6**
CTAO	**Charters Tower**	**32.26**	**267**	P	**P**	**01 31 05.8**	**+0.7**
CTAO	**Charters Tower**	**32.26**	**267**	P	**P**	**01 31 05.6**	**+0.6**
	32nm,1.3s						
CMSA	**Cobar Meteorol**	**32.69**	**245**	P	**P**	**01 31 10.0**	**+1.4**
	82nm,1.1s						
QLP	**Quilpie**	**33.60**	**255**	P	**P**	**01 31 16.9**	**+0.7**
	106nm,0.8s						
TOO	**Toolangi**	**34.20**	**235**	P	**P**	**01 31 22.6**	**+1.4**
TOO				IAmb	IAmb	01 31 23.4	
	comp=Z,12nm,1.0s						
MTSU	**Mount Surprise**	**34.42**	**270**	P	**P**	**01 31 23.7**	**+0.5**
	comp=Z,71nm,0.7s						
AUKSC	**Keysborough Se**	**34.57**	**234**	P	**P**	**01 31 25.5**	**+1.3**
	comp=Z,121nm,0.6s						
PMG	**Port Moresby**	**34.57**	**286**		**P**	**01 31 24.7**	**+0.2**
PMG	**Port Moresby**	**34.57**	**286**	P	**P**	**01 31 24.6**	**+0.2**
	comp=Z,105nm,0.8s						
PMG	**Port Moresby**	**34.57**	**286**	P	**P**	**01 31 24.5**	**0.0**
	comp=Z,105nm,0.8s						
PMG	**Port Moresby**	**34.57**	**286**	P	**P**	**01 31 24.0**	**-0.5**
	comp=Z,1μmcomp=Z,105nm,0.8s						
TAU	**Tasmania Unive**	**34.89**	**225**	P	**P**	**01 31 27.8**	**+1.1**
BRAT	**Ballarat**	**35.38**	**235**	P	**P**	**01 31 33.2**	**+2.3**
	comp=Z,22nm,0.9s						
STKA	**Stephens Creek**	**36.20**	**246**	P	**P**	**01 31 39.0**	**+1.2**
	comp=Z,20nm,0.5s,baz=93,slow=10,SNR=36						
STKA				S	**S**	**01 36 34.9**	**-2.0**
	comp=Z,4.9nm,0.8s,baz=96,slow=9.2,SNR=3.6						
	comp=Z,20nm,0.5s						
STKA	**Stephens Creek**	**36.20**	**246**	P	**P**	**01 31 39.3**	**+1.6**
	comp=Z,9.7nm,1.1s						
COEN	**Coen**	**36.56**	**276**	P	**P**	**01 31 41.7**	**+0.7**
COEN	**Coen**	**36.56**	**276**	P	**P**	**01 31 41.6**	**+0.7**
	comp=Z,80nm,0.8s						
INKA	**Innaminka**	**36.71**	**253**	P	**P**	**01 31 43.8**	**+1.8**
INKA				IAmb	IAmb	01 31 44.8	
	comp=Z,13nm,0.9s						
QIS	**Mount Isa**	**38.34**	**264**	P	**P**	**01 31 55.2**	**-0.1**
	comp=Z,15nm,0.5s						
AUMBR	**Murray Bridge**	**38.54**	**241**	P	**P**	**01 31 58.0**	**+1.3**
	comp=Z,75nm,1.0s						
HTT	**Hallett**	**38.61**	**243**	P	**P**	**01 31 58.5**	**+1.1**
	comp=Z,45nm,1.0s						
AUJCS	**Jamestown Cent**	**38.85**	**244**	P	**P**	**01 32 00.7**	**+1.4**
	comp=Z,30nm,0.9s						
BBOO	**Buckleboo**	**40.95**	**245**	P	**P**	**01 32 16.7**	**+0.7**
BBOO	**Buckleboo**	**40.95**	**245**	P	**P**	**01 32 16.5**	**+0.5**
	comp=Z,56nm,1.2s						
ASAR	**Alice Springs**	**43.12**	**258**	P	**P**	**01 32 33.7**	**+0.5**
	comp=Z,44nm,0.6s,baz=97,slow=7.8,SNR=612						
ASAR				PcP	**PcP**	**01 34 08.7**	**-0.6**
	comp=Z,5.7nm,0.7s,baz=112,slow=3.6,SNR=8.1						
ASAR				ScP	**ScP**	**01 37 06.8**	**+1.9**
	comp=Z,3.4nm,0.7s,baz=109,slow=4.6,SNR=6.1						
ASAR				S	**S**	**01 38 15.8**	**-2.0**
	comp=Z,10nm,0.8s,baz=95,slow=15,SNR=33						
	comp=Z,44nm,0.6s						
AUALC	**St Philip's Co**	**43.14**	**258**	P	**P**	**01 32 33.8**	**+0.5**
	comp=Z,49nm,1.0s						
WB1	**Warramunga Ar.**	**43.30**	**264**	P	**P**	**01 32 34.3**	**-0.3**
WRAB	**Tennant Creek**	**43.30**	**264**	P	**P**	**01 32 34.3**	**-0.3**
WRAB	**Tennant Creek**	**43.30**	**264**	P	**P**	**01 32 34.0**	**-0.6**
	comp=Z,35nm,0.8s						
WRA	**Warramunga Arr**	**43.31**	**264**	P	**P**	**01 32 34.2**

BELA Belgrano 2 78.39 173 P **P** **01 36 24.2 +0.9**
USRK Ussuriysk Ar. 79.44 327 P **P** **01 36 30.3 +1.1**
comp=Z,6.2nm,1.0s,baz=132,slow=2.8,SNR=5.6
comp=Z,6.2nm,1.0s
NJ2 Nanjing 79.86 310 *e*P **P** **01 36 32.7 +1.0**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
MAW Mawson 79.93 200 P **P** **01 36 32.1 +0.6**
comp=Z,18nm,0.7s,baz=114,slow=3.3,SNR=2.5
comp=Z,18nm,0.7s
O02D Mt. Diablo Mer 81.02 40 P **P** **01 36 39.1 +1.4**
O02D IAmb IAmb 01 36 40.5
comp=Z,16nm,1.0s
KHBM Hayfork Bally 81.06 40 IAmb IAmb 01 36 40.3
comp=Z,13nm,0.9s
AFDM Forest Hills D 81.38 42 **P** **01 36 40.0 +0.6**
N02D Trinity Center 81.56 40 IAmb IAmb 01 36 43.1
comp=Z,15nm,1.1s
O03E Paynes Creek 81.69 41 IAmb IAmb 01 36 43.6
comp=Z,27nm,1.2s
M02C Callahan 81.74 39 P **P** **01 36 43.2 +1.9**
M02C IAmb IAmb 01 36 44.0
comp=Z,22nm,1.1s
CCCA Chr Cany lake 81.74 47 IAmb IAmb 01 36 43.4
comp=Z,14nm,1.2s
CLC China Lake 81.75 46 IAmb IAmb 01 36 43.2
comp=Z,14nm,1.1s
YBH Yreka Blue Hor 82.03 39 **P** **01 36 44.5 +1.7**
YBH IAmb IAmb 01 36 45.1
comp=Z,12nm,1.1s
GLA Glamis 82.15 50 IAmb IAmb 01 36 46.0
comp=Z,15nm,1.1s
MPK Martis Peak 82.18 42 IAmb IAmb 01 36 45.7
comp=Z,25nm,1.2s
IPM Ipoh 82.18 278 P **P** **01 36 44.9 +0.8**
comp=Z,35nm,1.0s
IPM Ipoh 82.18 278 P **P** **01 36 44.0 -0.1**
comp=Z,35nm,1.1s
HATC Hat Creek Radi 82.21 40 IAmb IAmb 01 36 45.9
comp=Z,20nm,0.9s
PNTR Pine Nut 82.33 43 IAmb IAmb 01 36 46.4
comp=Z,23nm,0.9s
WHN Wuhan 82.33 307 P **P** **01 36 46.2 +1.8**
LHV Little Huntoon 82.53 44 IAmb IAmb 01 36 47.4
comp=Z,13nm,1.0s
L04D Klamath Falls 82.57 39 IAmb IAmb 01 36 47.1
comp=Z,14nm,0.8s
CN2 Changchun 82.67 323 *e*P **P** **01 36 45.8 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
NVAR Mina Array Bea 82.77 44 P **P** **01 36 47.4 +0.6**
comp=Z,5.9nm,0.9s,baz=225,slow=8.7,SNR=23
NVAR pP **pP** **01 38 50.4 -1.2**
comp=Z,0.6nm,0.7s,baz=205,slow=6.6,SNR=2.4
comp=Z,5.9nm,0.9s
BNX BinXian 82.86 325 ⇑P **P** **01 36 46.8 +0.1**
BNX pmax pmax
comp=Z,9.0nm,1.0s
MG04 Isla Riesco 82.92 144 **P** **01 36 49.8 +2.8**
MG04 IAmb IAmb 01 36 50.4
comp=Z,21nm,0.8s
MG05 Puerto Natales 82.94 143 **P** **01 36 48.9 +1.8**
MG05 IAmb IAmb 01 36 49.7
comp=Z,15nm,0.9s
MG03 Isla Dawson 83.06 146 IAmb IAmb 01 36 49.9
comp=Z,10nm,0.8s
GO10 Punta Arenas 83.07 145 P **P** **01 36 50.7 +2.9**
K05A Summer Lake 83.71 39 IAmb IAmb 01 36 53.5
comp=Z,19nm,1.0s
O18K Koktuh Hills 83.73 12 P **P** **01 36 50.3 -0.5**
O18K IAmb IAmb 01 36 51.1
comp=Z,16nm,0.9s
J05D Fort Rock, OR 83.85 39 IAmb IAmb 01 36 54.1
comp=Z,20nm,0.9s
WIFE Three Sisters- 83.99 38 IAmb IAmb 01 36 54.6
comp=Z,13nm,0.9s
PINE Pine Mountain 84.33 38 IAmb IAmb 01 36 56.6
comp=Z,24nm,1.2s
GO08 Villa O'Higgin 84.34 140 IAmb IAmb 01 36 57.3
comp=Z,11nm,0.9s
TUC Tucson 84.69 52 P **P** **01 36 58.3 +2.1**
M17K Holitna River 84.78 10 IAmb IAmb 01 36 57.5
comp=Z,13nm,1.1s
AY03 Cochrane 84.86 139 IAmb IAmb 01 36 59.8
comp=Z,8.6nm,0.8s
ELIB Princess Elisa 85.19 187 *d*P **P** **01 36 58.5 +0.4**
comp=Z,36nm,0.8s
J08A Circle Bar Ran 85.51 40 IAmb IAmb 01 37 01.8
comp=Z,12nm,1.2s
HNS HongShan 85.62 313 ⇑P **P** **01 37 01.6 +1.2**
HNS pmax pmax
comp=Z,8.0nm,1.0s
U15A North Rim 85.69 48 IAmb IAmb 01 37 03.3
comp=Z,11nm,0.8s
LYN LuoYang 85.72 310 P **P** **01 37 02.0 +1.0**
LYN pmax pmax
comp=Z,12nm,0.8s
HEH HeiHe 85.85 329 *e*P **P** **01 37 01.6 +0.4**
HEH pmax pmax
comp=Z,13nm,1.0s
ENH Enshi 85.86 305 **P** **01 37 02.8 +1.0**
ENH IAmb IAmb 01 37 03.2
comp=Z,15nm,1.0s
ENH Enshi 85.86 305 P **P** **01 37 02.9 +1.1**
comp=Z,17nm,1.2s
AY01 Puyuhuapi 86.10 136 IAmb IAmb 01 37 05.4
comp=Z,10nm,0.9s
SUA Susitna One 86.11 13 IAmb IAmb 01 37 02.4
comp=Z,11nm,1.0s
PKCU Pink Cliffs 86.20 47 IAmb IAmb 01 37 06.3
comp=Z,20nm,1.2s
GYA Guiyang 86.33 300 P **P** **01 37 05.3 +1.1**
GYA pmax pmax
comp=Z,10.0nm,1.2s
G08A Pilot Rock 86.36 38 IAmb IAmb 01 37 05.7
comp=Z,20nm,1.3s
MXC Moxie City 86.38 36 IAmb IAmb 01 37 05.7
comp=Z,13nm,1.1s
E07A Sunnyside 86.61 36 IAmb IAmb 01 37 06.9
comp=Z,17nm,1.0s
SNAA Sanae 86.71 179 ⇓P **P** **01 37 05.1 -0.1**
comp=Z,114nm,0.5s
SNAA Sanae 86.71 179 P **P** **01 37 05.3 +0.2**
comp=Z,4.6nm,0.6s,baz=193,slow=12,SNR=6.2
comp=Z,4.6nm,0.6s
SNAA Sanae 86.71 179 IAmb IAmb 01 37 07.7
comp=Z,9.1nm,1.0s
J18K Innoko River 86.83 10 IAmb IAmb 01 37 06.3
comp=Z,6.9nm,0.8s
VNA3 Neumayer Olymp 86.89 177 ⇓P **P** **01 37 06.1 +0.2**
comp=Z,7.2nm,0.4s
E08A Dider Farm, El 87.01 37 IAmb IAmb 01 37 08.6
comp=Z,10nm,0.9s
MFID Camas Ranch 87.13 41 IAmb IAmb 01 37 09.4
comp=Z,9.8nm,1.0s
K20K Telida 87.18 11 IAmb IAmb 01 37 07.7
comp=Z,8.4nm,1.0s
EPH Ephrata 87.23 36 IAmb IAmb 01 37 09.4
comp=Z,13nm,1.1s
VNA2 Neumayer--Watz 87.32 177 ⇑P **P** **01 37 08.4 +0.5**
comp=Z,7.0nm,0.5s,baz=184,slow=5.2
D08A Wollman Farm, 87.42 36 IAmb IAmb 01 37 10.6
comp=Z,15nm,0.9s
VNA1 Neumayer--Stat 87.55 177 ⇑P **P** **01 37 09.6 +0.6**
comp=Z,2.6nm,0.4s
N25K Chitina, Valde 87.67 16 IAmb IAmb 01 37 10.4
comp=Z,12nm,1.1s
Q16A Castle Valley 87.72 46 IAmb IAmb 01 37 13.1
comp=Z,7.7nm,1.2s
J20K Nowinta River 87.92 11 IAmb IAmb 01 37 11.3
comp=Z,8.0nm,1.1s
KTH Kantishna Hill 87.95 12 IAmb IAmb 01 37 10.8
comp=Z,10.0nm,0.9s
PLID Pearl Lake 87.96 39 IAmb IAmb 01 37 13.0
comp=Z,14nm,1.4s
B08A Colville Reser 87.97 35 IAmb IAmb 01 37 12.3
comp=Z,12nm,0.8s
BARN Barnard Glacie 87.98 17 IAmb IAmb 01 37 12.4
comp=Z,12nm,0.9s
CTGM Chitina Glacie 87.99 17 IAmb IAmb 01 37 12.3
comp=Z,7.4nm,0.8s
LLLB Lillooet 88.02 32 IAmb IAmb 01 37 13.0
comp=Z,11nm,1.0s
XAN Xi'an 88.04 308 ⇓P **P** **01 37 12.6 +0.6**
XAN S **S** **01 47 11.3 +4.3**
XAN pmax pmax
comp=Z,13nm,0.8s
XAN pmax pmax
comp=Z,230nm,4.7s
HLID Hailey 88.07 41 IAmb IAmb 01 37 14.0
comp=Z,8.8nm,1.0s
HVU Hansel Valley 88.15 43 IAmb IAmb 01 37 14.8
comp=Z,12nm,1.1s
O28M Mount Upton 88.16 18 IAmb IAmb 01 37 13.2
comp=Z,9.3nm,0.9s
SRU San Rafael Swe 88.26 46 IAmb IAmb 01 37 14.6
comp=Z,14nm,1.2s
Y22A Socorro 88.28 52 IAmb IAmb 01 37 15.7
comp=Z,7.4nm,1.0s
P17A Butcher Ranch, 88.29 46 IAmb IAmb 01 37 15.8
comp=Z,14nm,1.3s
VHRN Van Horn 88.34 56 IAmb IAmb 01 37 15.8
comp=Z,11nm,1.0s
MNTX Cornudas Mount 88.44 55 IAmb IAmb 01 37 15.9
comp=Z,9.2nm,0.9s
MCK McKinley 88.52 13 IAmb IAmb 01 37 15.5
comp=Z,16nm,1.3s
P18A Preston Nutter 88.70 46 IAmb IAmb 01 37 17.0
comp=Z,6.2nm,1.1s
TXAR Lajitas Array 88.72 58 P **P** **01 37 16.5 +1.2**
comp=Z,5.5nm,0.9s,baz=217,slow=5.6,SNR=54
TXAR pP **pP** **01 39 22.7 +0.5**
comp=Z,0.2nm,0.8s,baz=193,slow=5.1,SNR=1.9
TXAR PKKPbc **PKKPbc** **01 54 52.3 0.0**
comp=Z,0.5nm,0.6s,baz=96,slow=2.8,SNR=7.6
comp=Z,5.5nm,0.9s
M26K Nabesna, AK 88.74 16 IAmb IAmb 01 37 16.1
comp=Z,8.7nm,1.1s
BSUT Blindstream Ca 88.81 45 IAmb IAmb 01 37 17.7
comp=Z,10nm,1.0s
HWUT Hardware Ranch 88.83 44 IAmb IAmb 01 37 16.8
comp=Z,4.8nm,0.8s
S34M Telegraph Cree 88.93 23 IAmb IAmb 01 37 41.2
comp=Z,11nm,1.5s
KMI2 Kunming 88.95 298 P **P** **01 37 18.5 +1.9**
KMI2 pmax pmax
comp=Z,8.0nm,0.9s
PV23 Carpenter Ridg 88.96 48 IAmb IAmb 01 37 17.8
comp=Z,12nm,1.1s
F17K Baldwin Pennin 89.04 7 IAmb IAmb 01 37 16.5
comp=Z,10nm,1.1s
GO06 Curarrehue 89.09 133 IAmb IAmb 01 37 19.6
comp=Z,9.0nm,0.9s
PV01 Paradox Valley 89.11 48 IAmb IAmb 01 37 18.7
comp=Z,5.2nm,1.1s
ANMO Albuquerque 89.12 52 P **P** **01 37 18.1 +0.9**
ANMO IAmb IAmb 01 37 18.6
comp=Z,7.2nm,1.1s
PLCA Paso Flores 89.18 134 P **P** **01 37 19.1 +1.8**
comp=Z,8.3nm,0.9s,baz=240,slow=4.3,SNR=17
comp=Z,8.3nm,0.9s
ALPN Alpine 89.20 57 IAmb IAmb 01 37 19.4
comp=Z,6.5nm,0.8s
I21K Tanana 89.22 11 IAmb IAmb 01 37 17.5
comp=Z,11nm,1.1s
HILR Hailar Array B 89.29 325 P **P** **01 37 17.6 +0.2**
comp=Z,2.9nm,0.7s,baz=116,slow=9.8,SNR=2.6
comp=Z,2.9nm,0.7s
G19K Purcell Mounta 89.30 9 IAmb IAmb 01 37 17.8
comp=Z,4.0nm,0.9s
TPB01 Permian Basin 89.33 56 IAmb IAmb 01 37 19.8
comp=Z,6.7nm,0.7s
HHC Hu-ho-hao-te 89.48 315 *e*P **P** **01 37 19.5 +0.9**
HHC pmax pmax
comp=Z,6.0nm,1.1s
CMAR Chiang Mai Arr 89.50 290 P **P** **01 37 20.4 +1.4**
comp=Z,9.3nm,0.9s,baz=132,slow=3.2,SNR=42
CMAR pP **pP** **01 39 25.9 0.0**
comp=Z,0.7nm,0.3s,baz=126,slow=3.1,SNR=1.2
comp=Z,9.3nm,0.9s
H21K Melozitna Rive 89.52 11 IAmb IAmb 01 37 19.9
comp=Z,11nm,1.3s
CCB Clear Creek Bu 89.56 13 IAmb IAmb 01 37 18.0
comp=Z,11nm,1.1s
RDMU Red Mountain 89.62 46 IAmb IAmb 01 37 20.7
comp=Z,8.3nm,1.0s
CHTO Chiang Mai 89.64 290 P **P** **01 37 21.8 +2.1**
CHTO Chiang Mai 89.64 290 P **P** **01 37 21.2 +1.5**
comp=Z,9.6nm,0.9s
CHTO Chiang Mai 89.64 290 P **P** **01 37 19.6 -0.1**
TPB05 Hovey Rd 89.68 56 IAmb IAmb 01 37 21.8
comp=Z,8.7nm,0.9s
AHID Auburn Hatcher 89.72 43 IAmb IAmb 01 37 22.0
comp=Z,8.1nm,0.9s
COLA College 89.75 13 P **P** **01 37 18.4 -0.6**
COLA College 89.75 13 P **P** **01 37 17.1 -1.9**
comp=Z,5.4nm,1.0s
F19K Shaleruckik Mo 89.85 8 IAmb IAmb 01 37 20.1
comp=Z,4.4nm,0.9s
ILAR Eielson Array 89.86 13 P **P** **01 37 18.6 -1.0**
comp=Z,1.9nm,0.9s,baz=218,slow=5.2,SNR=20
ILAR pP **pP** **01 39 25.6 -1.7**
comp=Z,2.2nm,1.1s,baz=232,slow=4.8,SNR=5.6
ILAR PKKPbc **PKKPdf** **01 54 47.8 +1.2**
comp=Z,0.2nm,0.4s,baz=327,slow=3.5,SNR=4.5
comp=Z,1.9nm,0.9s
E18K Tukpahlearik C 90.06 7 IAmb IAmb 01 37 21.3
comp=Z,6.5nm,0.9s
DLMT Dillon 90.13 40 IAmb IAmb 01 37 23.1
comp=Z,9.6nm,1.2s
G21K Allakaket 90.19 10 IAmb IAmb 01 37 21.8
comp=Z,5.7nm,0.9s
SAND Sanderson 90.20 58 IAmb IAmb 01 37 23.6
comp=Z,4.6nm,1.0s
PZH PanZhiHua 90.33 298 P **P** **01 37 25.1 +2.2**
J26L Joseph Creek 90.37 15 IAmb IAmb 01 37 23.3
comp=Z,11nm,1.1s
C16K Lisburne Hill 90.42 5 IAmb IAmb 01 37 23.4
comp=Z,13nm,1.4s
E19K Redstone River 90.51 8 IAmb IAmb 01 37 23.4
comp=Z,7.0nm,0.9s
L29M L29M 90.62 17 IAmb IAmb 01 37 24.6
comp=Z,6.0nm,0.9s
BW06 Boulder Array 90.70 44 IAmb IAmb 01 37 25.3
comp=Z,4.6nm,1.0s
PDAR Pinedale Array 90.70 44 P **P** **01 37 24.6 +0.2**
comp=Z,2.9nm,0.8s,baz=207,slow=3.3,SNR=25
PDAR PKKPbc **PKKPbc** **01 54 47.5 -0.6**
comp=Z,0.5nm,0.8s,baz=68,slow=5.1,SNR=4.0
comp=Z,2.9nm,0.8s
YHL Hebgen Lake 90.72 41 IAmb IAmb 01 37 26.6
comp=Z,4.8nm,0.9s
BOZ Bozeman (W) 90.83 40 IAmb IAmb 01 37 26.3
comp=Z,4.1nm,0.9s
YNE Yellowstone No 91.53 42 IAmb IAmb 01 37 33.5
comp=Z,3.7nm,0.9s
C19K Lookout Ridge 91.79 7 IAmb IAmb 01 37 29.4
comp=Z,8.2nm,1.0s
LZDM Lanzhou Array 92.73 308 P **P** **01 37 35.3 +1.4**
comp=Z,1.0nm,0.5s,baz=64,slow=6.9,SNR=5.0
comp=Z,1.0nm,0.5s
SONM Songino Array 96.01 319 P **P** **01 37 48.5 +0.2**
comp=Z,0.3nm,0.5s,baz=132,slow=4.1,SNR=2.7
SONM pP **pP** **01 39 56.2 +0.3**
comp=Z,0.1nm,0.5s,baz=119,slow=5.2,SNR=1.3
SONM PKKPbc **PKKPbc** **01 54 32.9 -1.5**
comp=Z,0.6nm,0.6s,baz=285,slow=5.7,SNR=4.7
comp=Z,0.3nm,0.5s
YKA Yellowknife Ar 98.19 25 P Pdif 01 37 57.0 -0.5
comp=Z,0.2nm,0.6s,baz=258,slow=5.1,SNR=4.4
YKA PKKPbc **PKKPbc** **01 54 25.2 -3.5**
comp=Z,0.2nm,0.4s,baz=34,slow=2.6,SNR=6.6
comp=Z,0.2nm,0.6s
ZALV Zalesovo Beam 110.81 321 PKiKP **PKiKP** **01 42 48.1 -1.6**
comp=Z,1.4nm,0.6s,baz=156,slow=1.8,SNR=6.9
MKAR Makanchi Array 111.28 313 PKiKP **PKiKP** **01 42 49.7 -1.2**
comp=Z,0.7nm,0.4s,baz=196,slow=0.9,SNR=18
MKAR PKKPbc **PKKPbc** **01 53 49.0 -0.2**
comp=Z,1.1nm,0.6s,baz=278,slow=3.4,SNR=11
KURK Kurchatov 114.20 317 PKPdf 01 42 54.9 -1.3
KURBB Kurchatov Arra 114.25 317 PKP PKPdf 01 42 54.9 -1.4
comp=Z,1.3nm,0.6s,baz=99,slow=2.2,SNR=10
KURBB PKKPbc **PKKPab** **01 53 45.6 -0.3**
comp=Z,1.0nm,0.3s,baz=270,slow=5.6,SNR=4.9
AAK Ala-Archa 116.22 308 PKP **PKPdf** **01 42 59.9 -0.7**
comp=Z,0.5nm,0.5s,baz=186,slow=7.2,SNR=4.5
AAK PKKPbc **PKKPbc** **01 53 32.2 -0.5**
comp=Z,1.9nm,0.7s,baz=228,slow=4.2,SNR=8.4
BVAR Borovoye Array 119.36 319 PKP **PKPdf** **01 43 05.3 -0.9**
comp=Z,3.2nm,0.3s,baz=118,slow=2.3,SNR=31
BVAR PKKPbc **PKKPbc** **01 53 21.4 -0.3**
comp=Z,0.7nm,0.7s,baz=249,slow=7.8,SNR=3.6
BORK Borovoye 119.40 320 **PKPdf** **01 43 05.4 -0.8**
SPITS Spitsbergen Ar 123.12 356 PKP **PKPdf** **01 43 12.0 -0.8**
comp=Z,13nm,0.7s,baz=45,slow=6.0,SNR=10
BOSA Boshof 124.57 206 PKP **PKiKP** **01 43 17.6 0.0**
comp=Z,4.0nm,0.8s,baz=184,slow=1.2,SNR=5.8
ARTI Arti 125.74 325 PKP **PKPdf** **01 43 17.9 -0.4**
comp=Z,6.1nm,0.6s,baz=67,slow=1.4,SNR=16
AKTO Aktyubinsk 127.29 317 PKP **PKPdf** **01 43 21.4 -0.1**
comp=Z,1.8nm,0.7s,baz=358,slow=0.9,SNR=11
KIRV Kirov 129.54 329 SKPbc SKPab 01 45 51.9 -1.0
ARCES ARCESS Array B 130.01 349 PKP **PKPdf** **01 43 25.4 -0.6**
comp=Z,5.3nm,0.6s,baz=5.7,slow=1.2,SNR=14
ARCES SKPbc **SKPbc** **01 45 53.2 -1.2**
comp=Z,6.8nm,0.8s,baz=20,slow=3.9,SNR=7.0
KOOLE Kule 131.60 204 **PKiKP** **01 43 32.5 +0.7**
BELG Belogornoye 132.97 322 PKP **PKPdf** **01 43 32.0 0.0**
comp=Z,19nm,0.9s,baz=255,slow=1.0,SNR=5.1
BELG SKPbc **SKPbc** **01 46 05.1 -0.1**
comp=Z,24nm,0.9s,baz=3.8,slow=1.2,SNR=7.1
FINES FINESS Array B 136.71 343 PKHKP PKPpre 01 43 26.0
comp=Z,1.3nm,0.7s,baz=60,slow=6.3,SNR=7.1
FINES PKP **PKPdf** **01 43 39.3 +0.5**
comp=Z,3.7nm,0.7s,baz=57,slow=1.8,SNR=15
FINES SKPbc **SKPbc** **01 46 16.5 -0.1**
comp=Z,4.6nm,0.8s,baz=54,slow=4.9,SNR=8.4
RAYN Ar Rayn 138.83 281 **PKiKP** **01 43 46.0 -0.3**
KBZ Khabaz 138.97 312 SKPbc **SKPbc** **01 46 23.9 +0.3**
comp=Z,1.6nm,0.8s,baz=90,slow=6.1,SNR=1.7
NB2 NORSAR Subarra140.15 352 PKP **PKPdf** **01 43 37.7 -7.5**
comp=Z,10nm,0.7s,baz=13,slow=4.1
NB2 pPKP **SKPbc** **01 46 26.4 +0.2**
comp=Z,1.4nm,0.7s,baz=14,slow=2.8
NOA NORSAR Array B140.15 352 PKP **PKPdf** **01 43 44.8 -0.4**
comp=Z,2.0nm,0.7s,baz=13,slow=4.0,SNR=5.6
NOA SKPbc **SKPbc** **01 46 26.7 +0.5**
comp=Z,3.2nm,0.8s,baz=15,slow=4.3,SNR=8.8
HFS Hagfors 140.66 350 PKhKP PKPpre 01 43 39.3
comp=Z,2.6nm,0.4s,baz=64,slow=4.6,SNR=35
HFS SKPbc **SKPbc** **01 46 27.2 -0.2**
comp=Z,6.7nm,0.8s,baz=40,slow=2.5,SNR=6.5
TJOU Tjoern 142.99 350 *i* P **PKPdf** **01 43 46.6 -3.6**
HOMB Homborsund 143.17 353 *i* P PKPab 01 43 47.6 -1.0
BORU Boraas 143.19 349 *i* P PKPab 01 43 46.6 -2.1
SNART Snartemo 143.24 354 *i* P PKPab 01 43 47.6 -1.3
MBAR Mbarara 143.24 237 **PKPdf** **01 43 52.1 -0.2**
ONAU Onsala 143.56 350 *i* P PKPab 01 43 47.8 -2.3
AK03 Malin Array Si 143.59 329 PKP PKPab 01 43 49.2 -1.3
AKASG Malin Array Be 143.60 329 PKP PKPab 01 43 49.4 -1.1
comp=Z,3.0nm,0.3s,baz=43,slow=4.5,SNR=56
AKASG SKPbc **SKiKP** **01 46 35.4 -0.4**
comp=Z,1.1nm,0.5s,baz=57,slow=1.5,SNR=4.5
AKBB Malin Array Si 143.60 329 PKP PKPab 01 43 49.3 -1.2
AK23 Malin Array Si 143.61 329 PKP PKPab 01 43 49.2 -1.3
AK01 Malin Array Si 143.61 329 PKP PKPab 01 43 49.4 -1.2
KIEV Kiev 143.61 329 PKPab 01 43 49.5 -1.1
KIEV Kiev 143.61 329 PKP PKPab 01 43 49.4 -1.2
AK04 Malin Array Si 143.61 329 PKP PKPab 01 43 49.4 -1.2
AK09 Malin Array Si 143.63 329 PKP PKPbc 01 43 49.4 -1.2
AK08 Malin Array Si 143.63 329 PKP PKPbc 01 43 49.4 -1.2
AK22 Malin Array Si 143.63 329 PKP PKPbc 01 43 49.2 -1.4
AK02 Malin Array Si 143.64 329 PKP PKPbc 01 43 49.4 -1.3
AK11 Malin Array Si 143.64 329 PKP PKPbc 01 43 49.1 -1.6
ARPR Arapgir-MALATY 143.65 307 **PKPdf** **01 43 52.4 +0.1**
AK18 Malin Array Si 143.66 329 PKP PKPbc 01 43 49.4 -1.3
AK05 Malin Array Si 143.66 329 PKP PKPbc 01 43 49.5 -1.2
DEL Delary 144.08 348 *i* P PKPbc 01 43 50.3 -1.5
MI28 MI28,Pidlybu 144.17 331 PKP PKPbc 01 43 50.5 -1.8
RNPP9 Sopachiv 144.60 333 PKP **PKPdf** **01 43 52.7 -0.5**
BJUU Bjuv 144.62 348 *i* P **PKPdf** **01 43 52.0 -1.1**
RNPP8 Varash 144.68 333 PKP **PKPdf** **01 43 52.6 -0.8**
RNPP5 Staryi Chortor 144.74 332 PKP **PKPdf** **01 43 52.8 -0.7**
LUBAR Lubar, Ukraine 144.82 329 PKP **PKPdf** **01 43 52.9 -0.8**
LUNU Lund 144.95 348 *i* P **PKPdf** **01 43 52.5 -1.2**
BSD Bornholm Skovb 145.11 346 *i* P **PKPdf** **01 43 54.0 0.0**
BNN Bunyan 145.57 308 **PKPbc** **01 43 57.3 +0.2**
SSRD Sdr. Stenderup 145.75 351 *i* P **PKPab** **01 43 57.8 -0.9**
ASF Jabal al Asfar 146.36 296 PKPbc **PKPbc** **01 43 59.8 +0.4**
comp=Z,6.8nm,0.8s,baz=87,slow=9.1,SNR=4.6
EKA Eskdalemuir Ar 146.42 4 PKPbc **PKPbc** **01 43 58.1 -0.6**
comp=Z,11nm,0.9s,baz=343,slow=2.9,SNR=9.1
BRTR Keskin Array B 146.86 310 PKPbc **PKPbc** **01 44 00.1 -0.5**
comp=Z,2.7nm,0.8s,baz=133,slow=4.5,SNR=21
BSEG Bad Segeberg 147.14 350 *e*PKPbc **PKPbc** **01 44 00.8 +0.2**
baz=19,slow=2.3
MMAI Mount Meron Ar 147.45 297 PKPbc **PKPbc** **01 44 02.9 +0.6**
comp=Z,4.8nm,0.5s,baz=73,slow=7.1,SNR=15
BURAR Bucovina Array 147.63 328 ⇓P **PKPbc** **01 44 02.5 +0.2**
CFR Carcaliu 147.68 323 ⇓P **PKPbc** **01 44 02.0 -0.3**
TPGR Topolog 147.71 322 ⇓P **PKPbc** **01 44 02.6 +0.1**
RUE Ruedersdorf 147.81 345 *e*PKPbc **PKPbc** **01 44 02.6 +0.2**
baz=19,slow=2.3
GORT1 Trebel 147.86 348 *e*PKPbc **PKPbc** **01 44 02.9 +0.4**
baz=19,slow=2.3
ONER Baraj Valea Uz 147.90 326 ⇓P **PKPbc** **01 44 03.5 +0.6**
VRI Vrincioaia 148.03 325 ⇓P **PKPbc** **01 44 02.9 -0.4**
TURR Turia 148.28 326 ⇓P **PKPbc** **01 44 04.2 +0.3**
COVR Voineasa-Covas 148.32 325 ⇑P **PKPdf** **01 44 00.1 +0.3**
EIL Elat 148.34 291 PKPbc **PKPbc** **01 44 04.7 +0.1**
comp=Z,12nm,0.8s,baz=337,slow=5.9,SNR=5.7
RETH Rethem/Aller, 148.45 350 *e*PKPbc **PKPbc** **01 44 04.2 +0.3**
baz=19,slow=2.3
FLTG Flechtingen 148.50 348 *e*PKPbc **PKPbc** **01 44 04.0 -0.1**
baz=19,slow=2.3
MLR Muntele Rosu 148.69 325 PKPbc **PKPbc** **01 44 04.9 -0.2**
comp=Z,20nm,1.1s,baz=110,slow=6.6,SNR=3.8
MLR Muntele Rosu 148.69 325 ⇓P **PKPbc** **01 44 04.4 -0.7**
ASSE Asse, Remlinge 148.80 348 *e*PKPbc **PKPbc** **01 44 05.0 +0.2**
baz=19,slow=2.3
OSTC Ostas 148.88 341⇑ *e*PKP **PKiKP** **01 44 05.7 -0.4**
CHVC Chvalec 148.90 341⇑ *e*PKP **PKPbc** **01 44 05.7 +0.5**
STEB Steborice 148.91 339⇑ *e*PKP **PKPbc** **01 44 05.3 0.0**
LANS Liptovska Anna 148.96 336 *e*PKP **PKiKP** **01 44 06.7 +0.3**
LANS *e* 01 44 12.3
UPC Upice 148.98 341⇑ *e*PKP **PKPbc** **01 44 05.7 +0.3**
DPC Dobruska-Polom 149.02 341⇑ *e*PKP **PKPbc** **01 44 05.9 +0.3**
MESP Meseseni 149.04 330 ⇑P **PKiKP** **01 44 06.8 +0.2**
CJR Cluj-Napoca 149.05 329 ⇑P **PKPbc** **01 44 04.4 -1.4**
CLL Collm 149.07 345 *i* pPKPbc pPKPbc 01 46 23.1 +2.4
comp=Z,9.0nm,1.0s
CLL Collm 149.07 345 *e*PKPbc **PKPbc** **01 44 05.7 0.0**
baz=19,slow=2.3
CLL *ep*PKPbc **pPKPbc** **01 46 23.1 +2.4**
CLL Collm 149.07 345 *i* PKPbc **PKPbc** **01 44 05.6 0.0**
comp=Z,42nm,1.1s
CLL Collm 149.07 345 *i* PKPab **PKPab** **01 44 12.0 -0.3**
comp=Z,6.0nm,0.8s
IBBN Ibbenburen 149.10 352 *e*PKPbc **PKPbc** **01 44 05.6 0.0**
baz=19,slow=2.3
MORC Moravsky Berou 149.12 339 ⇓P **PKPbc** **01 44 06.1 +0.2**
MORC Moravsky Berou 149.12 339 *e*PKP **PKPbc** **01 44 06.0 +0.2**
CLZ Clausthal 149.13 348 *e*PKPbc **PKPbc** **01 44 06.2 +0.4**
baz=19,slow=2.3
VOIR 149.20 326 ⇑P **PKPbc** **01 44 06.0 -0.3**
BRG Berggiesshubel 149.24 344 *e*PKPbc **PKPbc** **01 44 06.2 +0.2**
baz=19,slow=2.3
BRG Berggiesshubel 149.24 344 Amp 01 44 07.3
comp=Z,21nm,0.9s
BRG Berggiesshubel 149.24 344 ⇓ *i* PKP **PKPbc** **01 44 06.2 +0.2**
MARR Marisel-Cluj 149.31 329 ⇑P **PKPbc** **01 44 05.9 -0.5**
MAUC Maruska 149.38 338⇑ *e*PKP **PKiKP** **01 44 07.2 0.0**
PVCC Panska Ves 149.38 343⇑ *e*PKP **PKiKP** **01 44 06.8 -0.3**
DRGR 149.41 330 ⇑P **PKPbc** **01 44 06.6 -0.1**
NEUB Neuenburg 149.45 346 *e*PKPbc **PKPbc** **01 44 06.4 0.0**
baz=19,slow=2.3
ARR Arges 149.46 326 ⇓P **PKiKP** **01 44 07.9 +0.3**
GTTG Gottingen 149.49 349 *e*PKPbc **PKPbc** **01 44 06.8 +0.2**
baz=19,slow=2.3
HSKC Hora Svate Kat 149.61 344⇑ *e*PKP **PKPbc** **01 44 07.1 +0.1**
PSZ Piszkesteto 149.78 334 ⇑P **PKPbc** **01 44 07.2 -0.3**
PRA Prague 149.83 342⇑ *e*PKP **PKiKP** **01 44 08.2 +0.1**
VRAC Vranov 149.84 339 PKPbc **PKPbc** **01 44 07.4 -0.1**
comp=Z,8.0nm,0.9s,baz=2.2,slow=1.5,SNR=12
VRAC Vranov 149.84 339 ⇓P **PKPbc** **01 44 07.8 +0.3**
VRAC Vranov 149.84 339 *e* **PKPab** **01 44 16.1 +0.4**
VRAC Vranov 149.84 339 *e*PKP **PKPbc** **01 44 07.6 +0.1**
LOT Lotru 149.85 327 ⇓P **PKiKP** **01 44 08.8 +0.4**
JAVC Velka Javorina 149.86 338 *e*PKP **PKiKP** **01 44 08.8 +0.5**
JAVC *e* 01 44 17.4
PRU Pruhonice 149.88 342⇑ *e*PKP **PKPbc** **01 44 07.5 0.0**
PRU *e*PKPAB **PKPab** **01 44 13.4 -1.4**
MOX Moxa 150.01 346 *e*PKPbc **PKPbc** **01 44 08.0 +0.1**
baz=19,slow=2.3
TANN Tannenbergstha 150.03 345 *e*PKPbc **PKPbc** **01 44 08.1 +0.1**
baz=19,slow=2.3
PLN Plauen 150.04 345 *e*PKPbc **PKPbc** **01 44 08.2 +0.2**
baz=19,slow=2.3

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KASTN	**Kahler Asten**	150.09	350	*e*PKPbc	**PKPbc**	01 44 08.0	-0.1
	baz=19,slow=2.3						
KRUC	**Moravsky**	150.12	339	*e*		01 46 29.5	
KRUC	**Moravsky**	150.12	339	*e*PKP	**PKPbc**	01 44 08.1	-0.1
KRUC	**Moravsky**	150.12	339	*e*	**PKPab**	01 44 17.1	+0.3
UBBA	**Unterbreizbach**	150.18	348	*e*PKPbc	**PKPbc**	01 44 08.1	0.0
	baz=19,slow=2.3						
NKC	**Novy Kostel**	150.20	345↑	*e*PKP	**PKPbc**	01 44 08.3	0.0
TREC	**Trest**	150.21	340↑	*e*PKP	**PKPbc**	01 44 08.3	-0.1
SIRR	**Siria**	150.29	330	↓P	**PKPbc**	01 44 08.7	+0.1
GZR	**Gura Zlata**	150.39	328	↑P	**PKPbc**	01 44 08.8	-0.2
MODS	**Modra-Piesok**	150.41	337	*e*	**PKPab**	01 44 18.7	+0.6
MODS	**Modra-Piesok**	150.41	337	*e*PKP	**PKiKP**	01 44 09.8	+0.4
ZVC	**Zvikov**	150.47	342↑	*e*PKP	**PKiKP**	01 44 09.2	-0.2
SRO	**Srobarova**	150.50	336	*e*PKP	**PKiKP**	01 44 09.5	0.0
MANZ	**Manzenberg**	150.51	345	*e*PKPbc	**PKPbc**	01 44 09.2	+0.1
	baz=19,slow=2.3						
ROTZ	**Rotzenmuhle**	150.69	345	*e*PKPbc	**PKPbc**	01 44 09.6	+0.1
	baz=19,slow=2.3						
BZS	**Buzias**	150.79	329	↓P	**PKPbc**	01 44 07.8	-2.0
KHC	**Kasperske Hory**	150.92	343↑	*e*PKP	**PKPbc**	01 44 09.5	-0.6
UCC	**Uccle**	150.95	355	*d*PKP	**PKPbc**	01 44 09.8	-0.2
MEM	**Membach**	150.99	353	*d*PKP	**PKPbc**	01 44 09.8	-0.3
CKRC	**Cesky Krumlov**	150.99	341↑	*e*PKP	**PKPbc**	01 44 10.3	+0.1
GRF	**Grafenberg Arr**	151.00	346	*e*PKPbc	**PKPbc**	01 44 10.0	-0.1
	baz=19,slow=2.3						
GRF				*e*PKPab	**PKPab**	01 44 20.4	-0.1
	baz=19,slow=4.3						
TNS	**Taunus Mts**	151.03	350	*e*PKPbc	**PKPbc**	01 44 10.4	+0.1
	baz=19,slow=2.3						
WET	**Wettzell**	151.10	343	*e*PKPbc	**PKPbc**	01 44 10.4	0.0
	baz=19,slow=2.3						
WET				*e*PKPab	**PKPab**	01 44 21.2	+0.3
	baz=19,slow=4.3						
GEC2	**GERESS Array S**	151.14	342	*e*PKPbc	**PKPbc**	01 44 10.5	-0.2
	baz=19,slow=2.3						
GERES	**GERESS Array B**	151.14	342	PKPbc	**PKPbc**	01 44 10.3	-0.3
	comp=Z,5.3nm,0.8s,baz=36,slow=2.5,SNR=33						
GERES				pPKPbc	**pPKPbc**	01 46 25.9	-0.1
	comp=Z,0.8nm,0.8s,baz=353,slow=4.2,SNR=2.6						
BANR	**Banloc**	151.19	329	↓P	**PKiKP**	01 44 12.7	+1.7
CONA	**Conrad Observa**	151.28	339	PKP	**PKPbc**	01 44 11.0	0.0
	comp=Z,7.7nm,0.8s,SNR=15						
CONA				*ep*PKiKP	**pPKiKP**	01 46 28.5	+1.2
	comp=Z,3.5nm,0.9s						
CONA	**Conrad Observa**	151.28	339	P	**PKPbc**	01 44 11.0	0.0
	comp=Z,7.7nm,0.8s,SNR=15						
RONA	**Rosalia, Austr**	151.33	338	*e*PKP	**PKPbc**	01 44 11.0	0.0
	comp=Z,25nm,0.9s						
RONA				*e*PKP	**PKPab**	01 44 23.0	+1.1
	comp=Z,10nm,1.0s						
RONA				*ep*PKP	**pPKPab**	01 46 31.6	+0.2
	comp=Z,4.8nm,1.0s						
MDVR	**Moldovita**	151.35	328	↑P	**PKPbc**	01 44 10.5	-0.7
BMRD	**Maredsous**	151.41	355	*d*PKP	**PKPbc**	01 44 11.1	+0.1
MORH	**Mrgy, Hungar**	151.66	333	↓P	**PKPbc**	01 44 11.3	-0.4
MOA	**Molln**	151.87	341	*i* PKP	**PKPbc**	01 44 11.6	-0.5
	comp=Z,0.7nm,0.4s,SNR=4.8						
MOA				*e*PKP	**PKPab**	01 44 25.0	+0.7
	comp=Z,6.6nm,1.1s						
WLF	**Walferdange**	151.90	353	*d*PKP	**PKiKP**	01 44 12.8	+0.5
WLF	**Walferdange**	151.90	353	*e*PKPbc	**PKiKP**	01 44 12.6	+0.3
	baz=19,slow=2.3						
ARSA	**Arzberg**	151.98	338	*ep*PKP	pPKPab	01 46 35.6	+1.6
	comp=Z,4.5nm,1.2s						
BIOA	**Bad Ischl, Aus**	152.20	341	*e*PKP	**PKPbc**	01 44 12.2	-0.7
	comp=Z,0.1nm,0.2s						
BIOA				*e*PKP	**PKPab**	01 44 26.4	+0.8
	comp=Z,4.2nm,0.6s						
STU	**Stuttgart**	152.29	348	*e*PKPbc	**PKPbc**	01 44 13.0	0.0
	baz=19,slow=2.3						
RJOB	**Jochberg**	152.40	342	*e*PKPbc	**PKPbc**	01 44 12.9	-0.6
	baz=19,slow=2.3						
FUR	**Furstenfeldbru**	152.41	345	*e*PKPab	**PKPab**	01 44 26.8	+0.3
	baz=19,slow=4.3						
SOKA	**Soboth**	152.65	338	*e*PKP	**PKPbc**	01 44 13.2	-0.8
	comp=Z,0.7nm,0.4s						
SOKA				*e*PKP	**PKPab**	01 44 27.9	+0.3
	comp=Z,5.5nm,1.2s						
SOKA				*ep*PKP	**pPKPbc**	01 46 33.3	+3.6
	comp=Z,6.1nm,1.7s						
LESA	**Schwarzleotal**	152.72	342	*e*PKP	**PKPdf**	01 44 05.4	-1.0
	comp=Z,3.5nm,0.9s						
LESA				*e*PKP	**PKPbc**	01 44 13.6	-0.6
	comp=Z,2.0nm,0.5s						
LESA				*e*PKP	**PKPab**	01 44 29.2	+1.3
	comp=Z,10nm,1.3s						
LESA				*ep*PKP	**pPKPab**	01 46 36.2	-1.0
	comp=Z,5.5nm,1.3s						
KBA	**Koelnbreinsper**	152.84	341	*i* PKP	**PKPbc**	01 44 13.4	-1.1
	comp=Z,4.6nm,0.8s,SNR=4.6						
KBA				*ep*PKiKP	**pPKPbc**	01 46 30.1	-0.1
	comp=Z,0.1nm,0.2s						
KBA	**Koelnbreinsper**	152.84	341	*e*P	**PKPbc**	01 44 13.4	-1.1
	comp=Z,4.6nm,0.8s,SNR=4.6						
BFO	**Black Forest**	152.88	349	*e*PKPbc	**PKPbc**	01 44 14.1	-0.3
	baz=19,slow=2.3						
OBKA	**Obir**	152.96	339	*e*PKP	**PKPbc**	01 44 13.5	-1.2
	comp=Z,2.7nm,0.7s						
WATA	**Walderalm**	153.10	344	*e*PKP	**PKPbc**	01 44 13.9	-1.2
	comp=Z,2.7nm,0.5s						
WATA				*e*PKP	**PKPab**	01 44 30.0	+0.4
	comp=Z,7.1nm,0.9s						
UBR	**Ueberruh**	153.14	346	*e*PKPbc	**PKPbc**	01 44 14.8	-0.2
	baz=19,slow=2.3						
WTTA	**Wattenberg**	153.15	344	PKP	**PKPbc**	01 44 14.7	-0.5
	comp=Z,0.4nm,0.2s,SNR=5.3						
WTTA				*ep*PKP	**pPKPab**	01 46 35.9	-3.2
	comp=Z,8.7nm,1.0s						
WTTA	**Wattenberg**	153.15	344	P	**PKPbc**	01 44 14.7	-0.5
	comp=Z,0.4nm,0.2s,SNR=5.3						
RETA	**Reutte**	153.17	345	*e*PKP	**PKPbc**	01 44 14.2	-0.9
	comp=Z,6.0nm,1.2s						
RETA				*e*PKP	**PKPab**	01 44 29.6	-0.2
	comp=Z,4.2nm,1.0s						
RETA				*ep*PKP	**pPKPab**	01 46 36.2	-2.8
	comp=Z,2.7nm,1.1s						
RETA	**Reutte**	153.17	345	*e*PKPab	**PKPab**	01 44 29.8	0.0
	baz=19,slow=4.3						
MOTA	**Moosalm**	153.22	344	*e*PKP	**PKPbc**	01 44 14.3	-1.0
	comp=Z,6.6nm,1.0s						
MOTA				*ep*PKP	**pPKPab**	01 46 37.9	-1.5
	comp=Z,6.7nm,1.1s						
SQTA	**Sankt Quirin**	153.31	344	*e*PKP	**PKPdf**	01 44 06.9	-0.5
	comp=Z,4.7nm,1.1s						
SQTA				*e*PKP	**PKPbc**	01 44 14.4	-1.0
	comp=Z,5.1nm,1.0s						
SQTA				*ep*PKP	**pPKPab**	01 46 37.4	-2.2
	comp=Z,6.8nm,1.2s						
ABTA	**Abfaltersbach**	153.38	342	*i* PKP	**PKPdf**	01 44 06.5	-0.9
	comp=Z,5.9nm,0.9s,SNR=4.4						
ABTA				*e*PKP	**PKPbc**	01 44 14.4	-1.2
	comp=Z,4.3nm,0.6s						
ABTA				*ep*PKP	**pPKPab**	01 46 36.6	-3.3
	comp=Z,7.0nm,1.0s						
DAVA	**Damuels**	153.56	346	*ep*PKP	pPKPab	01 46 37.2	-3.7
	comp=Z,0.4nm,0.2s						
FETA	**Feichten**	153.61	345	*i* PKP	**PKPdf**	01 44 07.2	-0.6
	comp=Z,13nm,1.2s,SNR=5.6						
FETA				*e*PKP	**PKPbc**	01 44 15.6	-0.5
	comp=Z,2.3nm,0.7s						
FETA				*ep*PKP	**pPKPab**	01 46 38.8	-2.2
	comp=Z,8.3nm,1.3s						
DAVOX	**Davos/Dischmat**	154.04	346	PKPbc	**PKPbc**	01 44 16.8	-0.3
	comp=Z,5.0nm,0.7s,baz=184,slow=7.2,SNR=6.7						
DAVOX				PKPab	**PKPab**	01 44 32.9	-0.8
	comp=Z,1.2nm,0.5s,baz=316,slow=16,SNR=3.9						
DAVOX				pPKPbc	**pPKPbc**	01 46 33.5	+0.5
	comp=Z,1.3nm,0.7s,baz=36,slow=1.9,SNR=1.9						
EDA	**Edea**	159.88	208		**PKPab**	01 44 59.5	-0.1
ESDC	**Sonseca Array**	161.76	12	PKPab	**PKPab**	01 45 05.8	-1.5
	comp=Z,2.4nm,1.1s,baz=322,slow=5.6,SNR=7.3						
DBIC	**Dimbokro**	163.97	159	PKP	**PKPdf**	01 44 19.9	-0.6
	comp=Z,6.2nm,0.7s,baz=243,slow=3.6,SNR=8.8						
DBIC				PKPab	**PKPab**	01 45 18.1	+0.5
	comp=Z,6.6nm,0.6s,baz=206,slow=5.3,SNR=14						
TORD	**Torodi Ar. Bea**	171.32	186	PKP	**PKPdf**	01 44 24.4	-1.2
	comp=Z,4.2nm,0.9s,baz=247,slow=3.1,SNR=24						
TORD				PKPab	**PKPab**	01 45 50.4	+0.5
	comp=Z,5.4nm,0.8s,baz=193,slow=6.2,SNR=26						
TORD				PP	**PP**	01 49 40.1	-0.2
	comp=Z,1.4nm,0.8s,baz=179,slow=7.1,SNR=7.4						

*KRNET **08** 01:28:21.9±0.1, 42°.26N×76°.29E, h18km, mb2.7*
*NNC **08** 01:28:22.2±0.5, 42°.30N×76°.31E, h0km, mb2.7, mpv2.8,*

Error ellipse: s-maj=2.9km s-min=2.2km az=2.0
*SOME **08** 01:28:22.0, 42°.25N×76°.30E, h15km*
ISC 08 01:28:22.0±0.8, **42°.27N**±0°.02×**76°.31E**±0°.02, **h16**km±5km, **n34**, σ0**°55**/64, **5C-17D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	0.06	248	↓*i*P	**Pg**	01 28 25.2	-0.1
ULHL				↓*i*S	**Sg**	01 28 27.5	0.0
BOOM	**Boomskoye usch**	0.35	309	↑*i*P	**Pg**	01 28 29.1	-0.3
BOOM				↑*i*S	**Sg**	01 28 34.2	-0.3
KDJ	**Kajisay**	0.66	102	↓*i*P	**Pg**	01 28 34.9	-0.1
KDJ				↓*i*S	**Sg**	01 28 44.0	+0.3
IZV	**Izvestkoviy**	0.80	16	P	**Pg**	01 28 37.1	-0.5
	2.6nm,0.1s						
IZV				S	**Sg**	01 28 48.1	-0.1
	9.5nm,0.2s						
IZV	**Izvestkoviy**	0.80	16	*e*P	**Pg**	01 28 37.1	-0.5
	2.6nm,0.1s						
IZV				*e*S	**Sg**	01 28 48.1	-0.1
	9.5nm,0.2s						
KST	**Kastek**	0.82	342	P	**Pg**	01 28 37.6	-0.4
	3.6nm,0.1s						
KST				S	**Sg**	01 28 48.8	0.0
	14nm,0.3s						
KST	**Kastek**	0.82	342	*e*P	**Pg**	01 28 37.6	-0.4
	3.6nm,0.1s						
KST				*e*S	**Sg**	01 28 48.8	0.0
	14nm,0.3s						
TKM2	**Tokmak 2**	0.84	321	↓*i*P	**Pg**	01 28 37.6	-0.8
TKM2				↓*i*S	**Sg**	01 28 49.1	-0.4
NRN	**Naryn**	0.86	196	↓*i*P	**Pg**	01 28 38.1	-0.7
NRN				↓*i*S	**Sb**	01 28 50.2	0.0
MTBS	**Maitube**	0.87	6	P	**Pb**	01 28 38.4	-0.3
	4.5nm,0.1s						
MTBS				S	**Sb**	01 28 50.1	-0.1
	8.0nm,0.2s						
MTBS	**Maitube**	0.87	6	*e*P	**Pb**	01 28 38.4	-0.3
	4.5nm,0.1s						
MTBS				*e*S	**Sb**	01 28 50.0	-0.1
	8.0nm,0.2s						
TNSS	**Tian-Shan**	0.90	31	P	**Pg**	01 28 39.3	-0.3
	2.9nm,0.2s						
TNSS				S	**Sg**	01 28 51.4	-0.1
	1.9nm,0.3s						
TNSS	**Tian-Shan**	0.90	31	*e*P	**Pg**	01 28 39.3	-0.3
	2.9nm,0.2s						
TNSS				*e*S	**Sg**	01 28 51.4	-0.1
	1.9nm,0.3s						
MDOK	**Medeo**	1.05	31	Pg	**Pb**	01 28 41.7	-0.1
	4.7nm,0.2s						
MDOK				Lg	Lg	01 28 55.7	
	5.1nm,0.2s						
DGS	**Degeres**	1.05	338	P	**Pb**	01 28 41.8	-0.1
	2.6nm,0.2s						
DGS				S	**Sb**	01 28 55.8	+0.3
	15nm,0.2s						
DGS	**Degeres**	1.05	338	*e*P	**Pb**	01 28 41.8	-0.1
	2.6nm,0.2s						
DGS				*e*S	**Sb**	01 28 55.8	+0.3
	15nm,0.2s						
KNDC	**Almaty**	1.06	27	↓P	**Pb**	01 28 41.8	-0.2
	16nm,0.3s						
KNDC				↓S	**Sg**	01 28 56.6	0.0
	9.9nm,0.5s						
KOTS	**Kotyrbulak**	1.13	31	P	**Pb**	01 28 43.5	+0.3
	2.6nm,0.2s						
KOTS				S	**Sn**	01 28 59.2	+0.6
	14nm,0.3s						
KOTS	**Kotyrbulak**	1.13	31	*e*P	**Pb**	01 28 43.5	+0.3
KOTS				*e*S	**Sn**	01 28 59.2	+0.6
KOTS	**Kotyrbulak**	1.13	31	*e*P	**Pb**	01 28 43.5	+0.3
	2.6nm,0.2s						
KOTS				*e*S	**Sn**	01 28 59.2	+0.6
	14nm,0.3s						
TARG	**Taragay, Kyrgy**	1.23	115	↓*i*P	**Pn**	01 28 44.9	0.0
TARG				↓*i*S	**Sn**	01 29 01.6	+0.1
JNKS	**Jany-Kuch**	1.32	203	↓*i*P	**Pn**	01 28 45.7	-0.2
JNKS				↓*i*S	**Sn**	01 29 03.2	-0.1
UCH	**Uchtor**	1.34	269	↑*i*P	**Pn**	01 28 46.2	-0.2
UCH				↑*i*S	**Sn**	01 29 04.0	0.0
KTBS	**Karatobe**	1.47	10	P	**Pb**	01 28 49.4	+0.5
	2.6nm,0.1s						
KTBS				S	**Sg**	01 29 08.9	-0.5
	0.3nm,0.1s						
KTBS	**Karatobe**	1.47	10	*e*P	**Pb**	01 28 49.4	+0.5
	2.6nm,0.1s						
KTBS				*e*S	**Sg**	01 29 08.9	-0.5
	0.3nm,0.1s						
KRBS	**Karabastau**	1.50	342	P	**Pb**	01 28 49.7	+0.2
	1.6nm,0.1s						
KRBS				S	**Sb**	01 29 09.3	+0.9
	0.8nm,0.2s						
KRBS	**Karabastau**	1.50	342	*e*P	**Pb**	01 28 49.7	+0.2
	1.6nm,0.1s						
KRBS				*e*S	**Sb**	01 29 09.3	+0.9
	0.8nm,0.2s						
USP	**Ospenovka**	1.67	307	↓*i*P	**Pb**	01 28 51.8	-0.5
USP				↓*i*S	**Sb**	01 29 13.8	+0.7
SATY	**Saty**	1.73	62	P	**Pb**	01 28 54.2	+0.7
	1.3nm,0.1s						
SATY				S	**Sg**	01 29 17.0	-0.8
	9.8nm,0.1s						
KPKS	**Kokpek**	2.12	55	Pg	**Pb**	01 29 00.7	+0.8
	0.2nm,0.1s						
KPKS				Lg	Lg	01 29 28.5	
	2.9nm,0.3s						
KPKS	**Kokpek**	2.12	55	*e*P	**Pb**	01 29 00.7	+0.8
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	01 29 28.5	-1.5
	2.9nm,0.3s						
MRKS	**Merke**	2.33	283	Pg	**Pb**	01 29 05.1	+1.4
	0.7nm,0.2s						
MRKS				Lg	Lg	01 29 35.8	
	3.7nm,0.2s						
MRKS	**Merke**	2.33	283	*e*P	**Pb**	01 29 05.1	+1.4
	0.7nm,0.2s						
MRKS				*e*S	**Sg**	01 29 35.8	-1.1
	3.7nm,0.2s						
PDGK	**Podgornoye**	2.57	65	↑Pg	**Pb**	01 29 07.2	-0.5
	2.6nm,1.1s						
PDGK				↓Lg	Lg	01 29 45.7	
	2.3nm,0.8s						

IDC 08 01:41:51.1±1.4, **2°.63S**×**138°.36E**, **h0**km, **mb3.3**/3, **mbtmp3.3**/5, **ML3.4**/2, **Error ellipse: s-maj=30.0km s-min=26.6km az=146.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	2.34	87	Pn	Pn	01 42 31.8	+0.8
	3.6nm,0.3s,baz=85,slow=23,SNR=8.5						
JAY				Sn	Sn	01 43 01.7	+1.3
	3.7nm,0.3s,baz=184,slow=22,SNR=2.5						
	14nm,0.4s						
WRA	**Warramunga Arr**	17.65	193	P	Pn	01 45 58.1	-0.6
	0.2nm,0.3s,baz=11,slow=12,SNR=7.6						
	0.5nm,0.7s						
ASAR	**Alice Springs**	21.35	191	P	P	01 46 40.4	+0.2
	0.7nm,0.7s,baz=21,slow=12,SNR=6.6						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	69.52	323	P	P	01 53 02.6	+0.9
	0.3nm,0.5s,baz=114,slow=8.0,SNR=4.0						
	0.3nm,0.5s						
ILAR	**Eielson Array**	85.90	24	P	P	01 54 31.3	-1.5
	0.2nm,0.6s,baz=271,slow=5.8,SNR=1.5						
	0.2nm,0.6s						

*ISK **08** 01:45:14.9, 39°.09N×27°.82E, h11km, ML4.0/37*
*THE **08** 01:45:15.0, 39°.39N×14°.2E±1°.4, h1km±32km, M3.4/14, MLh3.4/14*
*AFAD **08** 01:45:15.4, 39°.08N×27°.83E, h11km±2km, MW3.7*
*ATH **08** 01:45:17.6, 39°.07N×27°.77E, h26km±4km, ML3.7/8, Manual Solution by A.Agalos First location: 2020/02/08 01:46:50, This location: 2020/02/08 02:57:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*
*CFUSG **08** 01:45:19.4, 39°.10N×27°.80E, h10km, Mb3.0/5, MD3.3/3, MSH3.2/7*
ISC 08 01:45:15.6±0.8, **39°.09N**±0°.02×**27°.83E**±0°.01, **h14**km±6km, **n181**, σ0**°86**/224, **23C-5D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	0.21	183	P	**Pg**	01 45 20.3	-0.1
AKHS				S	**Sg**	01 45 23.9	+0.3
AKHS				IAML		01 45 25.0	
	comp=E,8μm,0.3s						
AKS	**Akhisar**	0.21	183	Pg	**Pg**	01 45 19.8	-0.6
AKS				Sg	**Sg**	01 45 23.4	-0.2
SOMA	**Soma-Manisa**	0.24	286	Pg	**Pg**	01 45 20.3	-0.5
SOMA				Sg	**Sg**	01 45 24.3	0.0
STEP	**BALIKESIR_Sava**	0.30	343	P	**Pn**	01 45 25.7	+0.2
GORD	**Gordes-Manisa**	0.33	124	Pg	**Pg**	01 45 22.0	-0.2
GOMA	**Golmarmara-Man**	0.39	170	Pg	**Pg**	01 45 23.2	-0.3
GOMA				Sg	**Sg**	01 45 29.3	+0.5
KTTT	**Salihli**	0.45	153	P	**Pg**	01 45 24.6	0.0
KTTT				S	**Sg**	01 45 30.9	+0.1
KTTT				IAML		01 45 32.0	
	comp=N,3μm,0.7s						
CAMT	**Merkez**	0.53	230	P	**Pb**	01 45 26.3	-0.4
BALB	**Balikesir**	0.55	4	Pg	**Pg**	01 45 26.0	-0.4
ZEDA	**zmir-Bergama**	0.60	258	P	**Pb**	01 45 27.8	0.0
BKES	**Balkesir-Mer**	0.65	7	P	**Pb**	01 45 28.8	+0.2
BKES				S	**Sg**	01 45 36.2	-0.6
BKES				IAML		01 45 42.0	
	comp=E,3μm,0.2s						
BALY	**Balya**	0.67	346	P	**Pb**	01 45 29.4	+0.3
DEMI	**Demirci**	0.69	94	P	**Pg**	01 45 29.1	0.0
DEMI				S	**Sg**	01 45 38.0	-0.3
IZMD	**zmir-Dikili-**	0.71	262	P	**Pb**	01 45 29.9	+0.1
IZMD				P	**Pb**	01 45 29.9	+0.1
IZMD				S	**Sb**	01 45 38.9	-0.5
IZMD				S	**Sg**	01 45 39.2	+0.4
IZMD				IAML		01 45 40.0	
	comp=N,2μm,0.7s						
IZMD				IAML		01 45 40.0	
	comp=N,2μm,0.8s						
BUHA	**Balikesir, Bur**	0.71	305	P	**Pb**	01 45 29.7	-0.1
DURS	**Dursunbey**	0.71	44	P	**Pg**	01 45 29.4	-0.2
DKL	**Dikili**	0.72	269	Pg	**Pg**	01 45 29.3	-0.3
YALO	**Edremit-Balk**	0.78	312	Pg	**Pg**	01 45 30.2	-0.4
BLKS	**Balkesir-Sus**	0.79	8	P	**Pb**	01 45 30.5	-0.5
BLKS				P	**Pb**	01 45 31.0	-0.1
DST	**Dursunbey**	0.80	50	Pg	**Pg**	01 45 31.0	-0.1
MANT	**Manisa**	0.83	136	P	**Pg**	01 45 31.3	-0.4
MANT				S	**Sg**	01 45 42.8	+0.1
MANT				IAML		01 45 46.0	
	comp=N,2μm,0.3s						
KULA	**Kula-Manisa**	0.87	131	Pg	**Pg**	01 45 31.9	-0.6
BAGT	**Foa**	0.88	241	P	**Pb**	01 45 32.7	+0.1
BAGT				S	**Sb**	01 45 44.6	+0.4
BAGT				IAML		01 45 45.0	
	comp=N,5μm,0.7s						
BAGT				IAML		01 45 48.0	
	comp=E,6μm,0.8s						
SUSR	**Susurluk-Balik**	0.89	13	Pg	**Pg**	01 45 32.1	-0.8
SMAA	**Simav-Kutahya**	0.90	89	Pg	**Pg**	01 45 32.9	-0.1
SIMA	**Simav-Kutahya**	0.90	90	Pg	**Pg**	01 45 32.9	-0.1
AYVA	**Ayvalik**	0.91	284	P	**Pb**	01 45 33.0	-0.2
AYVA				S	**Sb**	01 45 46.0	+0.9
AYVA				IAML		01 45 48.0	
	comp=E,4μm,0.6s						
DUVT	**Torbali**	0.92	199	P	**Pb**	01 45 33.5	+0.2
CMHT	**Manyas**	0.93	7	P	**Pg**	01 45 33.3	-0.3
CMHT				S	**Sb**	01 45 45.9	+0.4
CMHT				IAML		01 45 47.0	
	comp=N,3μm,0.4s						
CMHT				IAML		01 45 48.0	
	comp=E,8μm,0.3s						
BLCB	**Balcova**	0.94	221	Pg	**Pg**	01 45 33.0	-0.7
FOCM	**Foa**	0.94	246	Pg	**Pg**	01 45 33.2	-0.5
YENI	**Yenice-Canakka**	0.96	332	Pg	**Pg**	01 45 33.7	-0.4
GONE	**Gonen-Balikesi**	0.96	353	Pg	**Pg**	01 45 33.5	-0.7
IZMR	**zmir-demi**	0.96	174	P	**Pb**	01 45 34.1	+0.1
IZMR				P	**Pb**	01 45 34.1	+0.1
IZMR				S	**Sg**	01 45 44.9	-1.8
IZMR				IAML		01 45 48.0	
	comp=E,1μm,0.8s						
IZMR				IAML		01 45 49.0	
	comp=N,640nm,0.8s						
IZMR				IAML		01 45 49.0	
	comp=N,635nm,0.8s						
KIRA	**zmir-Kiraz**	1.00	153	P	**Pb**	01 45 34.9	+0.2
KIRA				S	**Sg**	01 45 47.6	-0.4
KIRA				IAML		01 45 50.0	
	comp=N,1μm,0.7s						
USAK	**Uak-Merkez**	1.00	112	P	**Pg**	01 45 34.1	-0.9
ATIT	**Gnen**	1.01	348	P	**Pb**	01 45 35.1	+0.3
ATIT				S	**Sn**	01 45 49.0	-0.3
ATIT				IAML		01 45 50.0	
	comp=N,1μm,0.5s						
ATIT				IAML		01 45 50.0	
	comp=E,6μm,0.4s						
SHAP	**Saphane-Kutahy**	1.09	93	Pn	**Pg**	01 45 36.5	-0.1
CANM	**Can-anakkale**	1.10	327	Pn	**Pg**	01 45 36.4	-0.4
KRBN	**Karaburun**	1.11	244	Pn	**Pb**	01 45 36.6	0.0
NAZL	**Nazilli-

	comp=N,1μm,0.5s						
CESE	**eme**	**1.42**	**238**	Pn	**Pn**	**01 45 41.1**	**+0.2**
AYDN	**Tasoluk**	**1.43**	**178**	P	**Pn**	**01 45 41.0**	**-0.1**
COMU	**Canakkale**	**1.45**	**314**	Pn	**Pn**	**01 45 41.5**	**+0.1**
ULDT	**Uludag**	**1.46**	**44**	P	**Pb**	**01 45 42.6**	**0.0**
ULDT				S	**Sn**	**01 46 00.6**	**0.0**
ULDT				IAML		01 46 03.0	
	comp=N,576nm,0.2s						
GCAM	**G?zelcaml?**	**1.47**	**199**	Pn	**Pn**	**01 45 41.8**	**+0.2**
GCAM	**G?zelcaml?**	**1.47**	**199**	P	**Pn**	**01 45 41.0**	**-0.6**
CNKL	**anakkale-Mer**	**1.48**	**312**	P	**Pb**	**01 45 42.4**	**-0.4**
CNKL				P	**Pn**	**01 45 42.6**	**+0.8**
CNKL				S	**Sn**	**01 46 01.2**	**+0.3**
CNKL				IAML		01 46 04.0	
	comp=N,691nm,0.3s						
PASA	**Karahalli, USA**	**1.50**	**119**	P	**Pg**	**01 45 43.9**	**-0.5**
MADA	**Marmara adas**	**1.51**	**352**	P	**Pg**	**01 45 44.0**	**-0.7**
MDNY	**Mudanya-Bursa**	**1.51**	**32**	Pn	**Pn**	**01 45 42.7**	**+0.5**
MRMT	**Marmara Adasi**	**1.52**	**353**	Pn	**Pn**	**01 45 42.8**	**+0.4**
LPK	**Lapseki**	**1.52**	**328**	Pn	**Pn**	**01 45 42.6**	**+0.2**
KHL	**Karahalli**	**1.53**	**120**	Pn	**Pn**	**01 45 43.1**	**+0.5**
SIGR	**SIGRI**	**1.54**	**275**	Pn	**Pn**	**01 45 42.9**	**+0.3**
SIGR	**SIGRI**	**1.54**	**275**	S	**Sg**	**01 46 06.0**	**+0.8**
SIGR	**SIGRI**	**1.54**	**275**	P	**Pn**	**01 45 42.1**	**-0.5**
SIGR				S	**Sn**	**01 46 01.8**	**-0.5**
CHOS	**Chios island**	**1.56**	**244**	Pn	**Pn**	**01 45 43.1**	**+0.2**
CHOS	**Chios island**	**1.56**	**244**	S	**Sg**	**01 46 06.7**	**+1.0**
CHOS	**Chios island**	**1.56**	**244**	P	**Pn**	**01 45 43.4**	**+0.5**
BOZC	**Bozcaada**	**1.56**	**299**	Pn	**Pn**	**01 45 43.2**	**+0.2**
BOZC	**Bozcaada**	**1.56**	**299**	P	**Pn**	**01 45 43.2**	**+0.2**
BOZC				P	**Pb**	**01 45 43.5**	**-0.8**
KRL1	**Karlovasi Samo**	**1.57**	**215**	P	**Pn**	**01 45 43.3**	**+0.3**
IGD	**Bursa**	**1.58**	**42**	P	**Pb**	**01 45 44.0**	**-0.5**
SMG	**Samos**	**1.59**	**210**	P	**Pn**	**01 45 43.5**	**+0.3**
ECEA	**Canakkale, Ece**	**1.59**	**307**	P	**Pb**	**01 45 44.5**	**-0.3**
DOMA	**Ktahya-Doman**	**1.60**	**64**	P	**Pb**	**01 45 45.2**	**+0.1**
BNAZ	**Uak-Banaz**	**1.65**	**104**	P	**Pg**	**01 45 46.9**	**-0.5**
ANDZ	**Kutahya, Merke**	**1.66**	**75**	P	**Pg**	**01 45 46.8**	**-0.7**
SART	**Tekirdag**	**1.67**	**343**	P	**Pb**	**01 45 45.6**	**-0.6**
DDIM	**Aydin, Didim**	**1.70**	**196**	P	**Pb**	**01 45 46.9**	**+0.3**
KUTH	**Kutahya**	**1.73**	**79**	P	**Pg**	**01 45 48.4**	**-0.4**
DNIZ	**Denizli-Tavas-**	**1.75**	**147**	P	**Pn**	**01 45 45.7**	**+0.1**
MLSB	**Milas**	**1.79**	**181**	Pn	**Pn**	**01 45 46.6**	**+0.5**
GOKT	**Kean, EDRN**	**1.82**	**300**	P	**Pn**	**01 45 47.4**	**+0.9**
GOAD	**anakkale-G¶**	**1.83**	**306**	P	**Pn**	**01 45 46.7**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.83**	**152**	P	**Pn**	**01 45 46.9**	**+0.1**
GADA	**Gvkgeada**	**1.85**	**307**	P	**Pn**	**01 45 47.4**	**+0.6**
MULA	**Mugla, Merkez-**	**1.87**	**168**	P	**Pn**	**01 45 47.0**	**-0.2**
INCE	**Denizli-Bozkur**	**1.95**	**135**	P	**Pn**	**01 45 49.1**	**+0.8**
YER	**Yerkesik**	**1.99**	**169**	Pn	**Pn**	**01 45 48.9**	**+0.1**
YER	**Yerkesik**	**1.99**	**169**	P	**Pn**	**01 45 49.1**	**+0.3**
KZIL	**AFYON_Kizioren**	**1.99**	**114**	P	**Pn**	**01 45 50.2**	**+1.3**
CAVK	**Edirne/Enez-Ca**	**2.04**	**322**	⇑P	**Pn**	**01 45 50.5**	**+0.9**
CAVK				⇓S	**Sb**	**01 46 16.6**	**-1.1**
BODT	**Bodrum**	**2.07**	**192**	P	**Pn**	**01 45 50.6**	**+0.7**
ENEZ	**Enez**	**2.09**	**322**	P	**Pn**	**01 45 51.1**	**+1.0**
LIA	**Limnos Island**	**2.20**	**292**	P	**Pn**	**01 45 52.5**	**+0.8**
LIA	**Limnos Island**	**2.20**	**292**	P	**Pn**	**01 45 52.4**	**+0.8**
SMTH	**Samothraki Isl**	**2.24**	**309**	P	**Pn**	**01 45 52.9**	**+0.6**
ALN	**Alexandroupoli**	**2.26**	**323**	P	**Pn**	**01 45 53.1**	**+0.6**
ALN	**Alexandroupoli**	**2.26**	**323**	P	**Pn**	**01 45 52.9**	**+0.4**
ALEX	**Alexandroupoli**	**2.30**	**321**	P	**Pn**	**01 45 53.7**	**+0.7**
SFL1	**Soufli**	**2.40**	**331**	P	**Pn**	**01 45 55.3**	**+0.9**
ISP	**Isparta**	**2.47**	**120**	P	**Pn**	**01 45 56.4**	**+0.9**
RDO	**Rodhopi**	**2.70**	**320**	P	**Pn**	**01 45 59.7**	**+1.1**
RDO	**Rodhopi**	**2.70**	**320**	P	**Pn**	**01 45 59.7**	**+1.1**
THAS	**Thassos island**	**2.83**	**303**	P	**Pn**	**01 46 01.2**	**+0.8**
THAS	**Thassos island**	**2.83**	**303**	P	**Pn**	**01 45 60.0**	**-0.4**
ARG	**Arkhangelos**	**2.88**	**175**	P	**Pn**	**01 46 01.5**	**+0.5**
ARG	**Arkhangelos**	**2.88**	**175**	P	**Pn**	**01 46 01.8**	**+0.7**
SAHE	**Sakarya_HENDEK**	**2.92**	**52**	⇑P	**Pn**	**01 46 03.5**	**+1.9**
SAHE				⇑S	**Sb**	**01 46 42.6**	**-0.2**
KDZ	**Kurdzhali**	**3.17**	**324**	*e*P	**Pn**	**01 46 04.0**	**-1.0**
KAVA	**Kavala**	**3.18**	**308**	P	**Pn**	**01 46 06.0**	**+0.9**
KAVA	**Kavala**	**3.18**	**308**	P	**Pn**	**01 46 05.6**	**+0.5**
OUR	**Ouranopolis**	**3.21**	**294**	P	**Pn**	**01 46 06.0**	**+0.4**
DION	**Dionisos Attik**	**3.22**	**253**	P	**Pn**	**01 46 06.0**	**+0.3**
DIM	**Dimitrovgrad**	**3.41**	**331**	P	**Pn**	**01 46 09.3**	**+1.0**
RZN	**Rozhen**	**3.51**	**319**	P	**Pn**	**01 46 11.4**	**+1.5**
RZN	**Rozhen**	**3.51**	**319**	P	**Pn**	**01 46 11.2**	**+1.3**
JMB	**Yambol**	**3.54**	**344**	*e*P	**Pn**	**01 46 11.6**	**+1.6**
VILL	**Villia**	**3.66**	**257**	P	**Pn**	**01 46 12.8**	**+1.0**
NVR	**Nevrokopi**	**3.78**	**308**	P	**Pn**	**01 46 14.7**	**+1.2**
PLD	**Plovdiv**	**3.85**	**323**	P	**Pn**	**01 46 15.5**	**+1.2**
HORT	**Hortiatis**	**3.94**	**294**	P	**Pn**	**01 46 16.7**	**+1.0**
MMB	**Musomishta**	**3.97**	**309**	P	**Pn**	**01 46 17.2**	**+1.2**
MMB	**Musomishta**	**3.97**	**309**	P	**Pn**	**01 46 16.9**	**+0.9**
ELND	**Elena**	**4.11**	**340**	⇑P	**Pn**	**01 46 18.8**	**+0.9**
SZH	**Strazhitsa**	**4.40**	**342**	P	**Pn**	**01 46 23.4**	**+1.5**
SZH	**Strazhitsa**	**4.40**	**342**	*e*P	**Pn**	**01 46 23.4**	**+1.5**
PVL	**Pavlikeni**	**4.50**	**334**	P	**Pn**	**01 46 24.5**	**+1.2**
KKB	**Krupnik**	**4.51**	**309**	P	**Pn**	**01 46 25.3**	**+1.8**
PSN	**Preselentsi**	**4.55**	**3**	*e*P	**Pn**	**01 46 24.4**	**+0.5**
PLNA	**Plana**	**4.75**	**317**	P	**Pn**	**01 46 28.8**	**+1.9**
PLVB	**Pleven**	**4.92**	**332**	⇓P	**Pn**	**01 46 30.4**	**+1.3**
VTS	**Vitosha**	**4.95**	**317**	P	**Pn**	**01 46 31.2**	**+1.5**
ICOR	**Ion Corvin**	**5.02**	**360**	⇓P	**Pn**	**01 46 32.2**	**+1.9**
BLSH	**Balsha**	**5.10**	**319**	*e*P	**Pn**	**01 46 33.6**	**+2.0**
CFR	**Carcaliu**	**6.09**	**2**	⇑P	**Pn**	**01 46 46.6**	**+1.5**
BOVS	**Bovan**	**6.46**	**317**	⇑P	**Pn**	**01 46 51.7**	**+1.4**
MLR	**Muntele Rosu**	**6.54**	**348**	⇑P	**Pn**	**01 46 52.4**	**+0.9**
VOIR		**6.67**	**343**	⇑P	**Pn**	**01 46 54.6**	**+1.4**
ODBI	**Odobesti**	**6.69**	**355**	⇑P	**Pn**	**01 46 55.0**	**+1.6**
PLOR	**Plostina**	**6.81**	**353**	⇑P	**Pn**	**01 46 56.8**	**+1.8**
VRI	**Vrincioaia**	**6.82**	**354**	⇑P	**Pn**	**01 46 57.4**	**+2.2**
COVR	**Voineasa-Covas**	**6.86**	**350**	⇑P	**Pn**	**01 46 57.0**	**+1.4**
SEV	**Sevastopol'**	**6.98**	**37**	*e*P	**Pn**	**01 46 57.8**	**+0.5**
SEV				pmax	pmax	01 47 08.9	
	comp=Z,3.0nm,0.4s						
SEV				*e*S	**Sn**	**01 48 13.3**	**-3.1**
SEV				smax	smax	01 48 15.5	
	comp=N,4.0nm,0.3s						
SEV				smax	smax	01 48 15.5	
	comp=E,8.0nm,0.5s						
HERR	**Herculane**	**7.05**	**327**	⇑P	**Pn**	**01 46 58.4**	**+0.1**
TURR	**Turia**	**7.09**	**350**	⇑P	**Pn**	**01 47 00.3**	**+1.5**
YAL	**Yalta**	**7.17**	**39**	*e*P	**Pn**	**01 47 02.0**	**+2.1**
YAL				*e*S	**Sn**	**01 48 20.2**	**-0.9**
YAL				smax	smax	01 48 23.9	
	comp=N,8.0nm,0.3s						
YAL				smax	smax	01 48 23.9	
	comp=E,15nm,0.5s						
TARU	**Tarkhankut**	**7.18**	**28**	*e*S	**Sn**	**01 48 19.6**	**-1.8**
TARU				smax	smax	01 48 20.2	
	comp=N,26nm,0.7s						
TARU				smax	smax	01 48 20.2	
	comp=E,9.0nm,0.5s						
MDVR	**Moldovita**	**7.29**	**323**	⇑P	**Pn**	**01 47 02.2**	**+0.6**
ONER	**Baraj Valea Uz**	**7.32**	**352**	⇑P	**Pn**	**01 47 03.8**	**+1.9**
GZR	**Gura Zlata**	**7.33**	**331**	⇑P	**Pn**	**01 47 02.6**	**+0.5**
ALU	**Alushta**	**7.43**	**39**	*e*S	**Sn**	**01 48 26.9**	**-0.6**
ALU				smax	smax	01 48 28.8	
	comp=N,6.0nm,0.4s						
ALU				smax	smax	01 48 28.8	
	comp=E,8.0nm,0.4s						
DNZ2	**Donuzlav2**	**7.44**	**31**	*e*P	**Pn**	**01 47 05.3**	**+1.7**
DNZ2				pmax	pmax	01 47 17.2	
	comp=Z,7.0nm,0.4s						
DNZ2				*e*S	**Sn**	**01 48 25.8**	**-1.9**
DNZ2				smax	smax	01 48 31.6	
	comp=N,11nm,0.4s						
DNZ2				smax	smax	01 48 31.6	
	comp=E,14nm,0.6s						
TESR	**Tescani**	**7.47**	**354**	⇑P	**Pn**	**01 47 05.0**	**+1.0**
SIM	**Simferopol'**	**7.49**	**37**	*e*P	**Pn**	**01 47 05.5**	**+1.1**
SIM				pmax	pmax	01 47 13.9	
	comp=Z,17nm,0.3s						
SIM				*e*S	**Sn**	**01 48 28.1**	**-1.0**
SIM				smax	smax	01 48 30.5	
	comp=N,12nm,0.5s						
SIM				smax	smax	01 48 30.5	
	comp=E,5.0nm,0.3s						
SUDU	**Sudak**	**7.88**	**40**	*e*P	**Pn**	**01 47 10.5**	**+0.9**
SUDU				pmax	pmax	01 47 19.8	
	comp=Z,5.0nm,0.6s						
SUDU				*e*S	**Sn**	**01 48 36.0**	**-2.5**
SUDU				smax	smax	01 48 39.8	
	comp=N,14nm,0.4s						
SUDU				smax	smax	01 48 39.8	
	comp=E,8.0nm,0.3s						
BZS	**Buzias**	**7.98**	**327**	⇓P	**Pn**	**01 47 11.1**	**+0.1**
MARR	**Marisel-Cluj**	**8.33**	**337**	⇑P	**Pn**	**01 47 16.5**	**+0.6**
SIRR	**Siria**	**8.49**	**330**	⇓P	**Pn**	**01 47 19.5**	**+1.5**
DRGR		**8.56**	**336**	⇑P	**Pn**	**01 47 20.4**	**+1.3**
BURAR	**Bucovina Array**	**8.73**	**348**	⇑P	**Pn**	**01 47 24.1**	**+2.7**
SORM	**Soroca**	**9.05**	**2**	⇑P	**Pn**	**01 47 27.2**	**+1.5**
MORH	**Mrgy, Hungar**	**9.81**	**319**	⇑P	**Pn**	**01 47 36.5**	**+0.3**

IDC 08 01:51:15.6±3.3, 2°.19S×134°.36E, h0km, mb3.2/2, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=151.8km s-min=31.2km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.65**	**180**	P	Pn	01 55 23.1	+0.1
	0.1nm,0.3s,baz=359,slow=12,SNR=1.8 0.3nm,0.6s						
ASAR	**Alice Springs**	**21.36**	**181**	P	P	01 56 04.6	-0.1
	0.8nm,0.8s,baz=1.3,slow=12,SNR=7.5 0.8nm,0.8s						
MKAR	**Makanchi Array**	**66.76**	**324**	P	P	02 02 08.9	0.0
	0.1nm,0.4s,baz=118,slow=7.9,SNR=2.7 0.1nm,0.4s						

*UPP **08** 01:53:51.8±0.1, 67°.18N×20°.71E, h0km, ML2.5, Confirmed Induced event*
*HEL **08** 01:53:51.6±0.2, 67°.15N×20°.53E, h0km, ML1.4, Suspected explosion*
ISC 08 01:53:52.0±0.8, 67°.19N±0°.02×20°.71E±0°.02, h0km, n27, σ0°.74/47, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.09**	**219**	P	**Pg**	**01 53 53.6**	**0.0**
DUNU				S	**Sg**	**01 53 54.6**	**-0.1**
MASU	**Masugnsbyn**	**0.57**	**61**	P	**Pg**	**01 54 02.8**	**0.0**
MASU				S	**Sg**	**01 54 11.0**	**+0.8**
RATU	**Laukkuluspa**	**0.77**	**327**	P	**Pg**	**01 54 06.1**	**-0.6**
RATU				S	**Sg**	**01 54 17.0**	**+0.4**
KUA	**Kurravaara**	**0.78**	**350**	P	**Pg**	**01 54 06.6**	**-0.3**
KUA				S	**Sg**	**01 54 17.4**	**+0.3**
ERTU	**Ertsjaerv**	**0.86**	**137**	P	**Pg**	**01 54 07.4**	**-1.1**
ERTU				S	**Sg**	**01 54 19.8**	**+0.1**
ERTU	**Ertsjaerv**	**0.86**	**137**	PG	**Pg**	**01 54 07.3**	**-1.1**
ERTU				SB	**Sg**	**01 54 20.0**	**+0.3**
SALU	**Saltoluokta**	**0.88**	**284**	P	**Pg**	**01 54 08.4**	**-0.3**
SALU				S	**Sg**	**01 54 20.2**	**+0.2**
NIKU	**Nikkaluokta**	**0.94**	**317**	P	**Pg**	**01 54 09.2**	**-0.7**
NIKU				S	**Sb**	**01 54 23.0**	**-1.0**
LANU	**Lannavaara**	**0.99**	**29**	PG	**Pg**	**01 54 10.5**	**-0.5**
LANU				SB	**Sb**	**01 54 25.4**	**-0.3**
HARU	**Harads**	**1.04**	**174**	P	**Pg**	**01 54 10.4**	**-1.4**
HARU				S	**Sg**	**01 54 25.2**	**0.0**
KOVU	**Salmi**	**1.06**	**349**	P	**Pg**	**01 54 12.0**	**-0.2**
KLF	**Kolari**	**1.27**	**86**	PG	**Pg**	**01 54 15.0**	**-1.2**
KLF				smax	smax	01 54 32.0	
	comp=Z,1.3nm,0.2s						
KLF				SG	**Sg**	**01 54 32.4**	**-0.2**
HEF	**Hetta**	**1.66**	**41**	PG	**Pn**	**01 54 22.2**	**-0.1**
HEF				smax	smax	01 54 43.4	
	comp=Z,2.4nm,0.2s						
HEF				SG	**Sg**	**01 54 45.3**	**+0.1**
KALU	**Kalix**	**1.71**	**140**	P	**Pn**	**01 54 22.7**	**-0.2**
KALU				S	**Sn**	**01 54 45.6**	**+0.3**
SJUU	**Sjulsmark**	**1.73**	**168**	P	**Pn**	**01 54 22.5**	**-0.6**
TOF	**Tornio**	**1.82**	**126**	PG	**Pn**	**01 54 24.6**	**+0.1**
TOF				smax	smax	01 54 47.1	
	comp=Z,1.9nm,0.2s						
TOF				SG	**Sb**	**01 54 50.1**	**+0.7**
KIF	**Kilpisjarvi**	**1.82**	**1**	PG	**Pb**	**01 54 25.7**	**-0.5**
KIF				smax	smax	01 54 48.4	
	comp=Z,3.1nm,0.2s						
KIF				SG	**Sb**	**01 54 49.8**	**+0.3**
KTK1	**Kautokeino**	**2.06**	**26**	PG	**Pb**	**01 54 29.3**	**-0.9**
KTK1				SG	**Sb**	**01 54 56.9**	**+0.5**
RNF	**Rovaniemi**	**2.17**	**103**	PB	**Pn**	**01 54 30.2**	**+0.9**
RNF				SG	**Sb**	**01 54 59.9**	**+0.4**
TRO	**Tromso**	**2.54**	**346**	SG	**Sb**	**01 55 10.8**	**+0.7**
BURU	**Burvik**	**2.63**	**174**	PB	**Pn**	**01 54 36.4**	**+0.8**
BURU				SG	**Sb**	**01 55 13.3**	**+0.6**
RANF	**Ranua**	**2.70**	**113**	SB	**Sb**	**01 55 14.3**	**-0.3**
ARA0	**ARCESS Array S**	**2.95**	**35**	PG	**Pb**	**01 54 46.3**	**+1.0**
ARA0				SB	**Sb**	**01 55 21.6**	**-0.4**
OUL	**Oulu**	**2.98**	**133**	SG	**Sb**	**01 55 24.6**	**+1.8**
RAJF	**Raja-Jooseppi**	**3.16**	**62**	SB	**Sb**	**01 55 28.5**	**+0.7**
KEV	**Kevo**	**3.47**	**39**	PG	**Pg**	**01 54 56.5**	**-1.8**
KEV				SN	**Sn**	**01 55 29.3**	**+0.5**
KU6	**Riekki**	**3.84**	**103**	SN	**Sn**	**01 55 39.1**	**+1.0**

*NOU **08** 01:58:00.2, 45°.17S×167°.53E, h93km, MLv3.9/11, South Island, New Zealand*
*WEL **08** 01:58:00.6±0.7, 45°.3S×167°.7E±°, h63km±6km, M3.6/8, ML3.4/8, MLv3.6/8, Error ellipse: s-maj=6.3km s-min=3.6km az=121.3*
ISC 08 01:57:58.2±1.6, 45°.18S±0°.04×167°.26E±0°.07, h92km±9km, n31, σ0°.89/48, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.30**	**195**	P	**Pn**	**01 58 11.8**	**0.0**
DCZ				S	**Sn**	**01 58 20.5**	**-1.5**
TAFS	**Te Anau Fire S**	**0.40**	**127**	P	**Pn**	**01 58 12.9**	**+0.5**
TAFS				S	**Sn**	**01 58 22.0**	**-1.0**
MLZ	**Mavora Lakes**	**0.63**	**108**	P	**Pn**	**01 58 14.7**	**+0.5**
MLZ				S	**Sn**	**01 58 25.7**	**-0.6**
MSZ	**Milford Sound**	**0.69**	**43**	P	**Pn**	**01 58 15.9**	**+1.2**
MSZ				S	**Sn**	**01 58 27.3**	**+0.2**
MOSS	**Mossburn Schoo**	**0.84**	**126**	P	**Pn**	**01 58 17.1**	**+0.3**
MOSS				S	**Sn**	**01 58 30.2**	**+0.3**
WHZ	**Wether Hill Ro**	**0.86**	**146**	P	**Pn**	**01 58 17.0**	**+0.5**
WHZ				S	**Sn**	**01 58 29.7**	**-0.4**
GLNY	**Glenorchy**	**0.87**	**69**	P	**Pn**	**01 58 17.4**	**+0.8**
GLNY				S	**Sn**	**01 58 29.6**	**-0.7**
RRKS	**Rarakau**	**0.98**	**171**	P	**Pn**	**01 58 18.8**	**+1.1**
RRKS				S	**Sn**	**01 58 32.9**	**+0.4**
QTPS	**Queenstown Pol**	**1.00**	**82**	P	**Pn**	**01 58 18.9**	**+0.9**
QTPS				S	**Sn**	**01 58 32.3**	**-0.6**
PYZ	**Puysegur Point**	**1.07**	**202**	P	**Pn**	**01 58 19.3**	**+0.5**
PYZ				S	**Sn**	**01 58 34.0**	**-0.3**
ORPS	**Orepuki**	**1.16**	**163**	P	**Pn**	**01 58 20.8**	**+0.9**
ORPS				S	**Sn**	**01 58 35.6**	**-0.6**
WKZ	**Wanaka**	**1.29**	**75**	P	**Pn**	**01 58 22.9**	**+1.4**
WKZ				S	**Sn**	**01 58 38.9**	**-0.1**
WNPS	**Wanaka Nationa**	**1.42**	**71**	P	**Pn**	**01 58 24.8**	**+1.8**
WNPS				S	**Sn**	**01 58 42.6**	**+0.8**
EAZ	**Earnscleugh**	**1.45**	**93**	P	**Pn**	**01 58 24.6**	**+1.3**
EAZ				S	**Sn**	**01 58 41.8**	**-0.6**
JCZ	**Jackson Bay**	**1.55**	**45**	P	**Pn**	**01 58 25.3**	**+0.6**
JCZ	**Jackson Bay**	**1.55**	**45**	S	**Sn**	**01 58 44.4**	**-0.5**
JCZ	**Jackson Bay**	**1.55**	**45**	P	**Pn**	**01 58 25.6**	**+0.9**
MECS	**Makarora Emerg**	**1.69**	**57**	P	**Pn**	**01 58 26.9**	**+0.4**
APZ	**The Paps**	**1.73**	**163**	P	**Pn**	**01 58 27.5**	**+0.6**
APZ				S	**Sn**	**01 58 48.5**	**-0.3**
HDWS	**Haast DOC Work**	**1.82**	**45**	P	**Pn**	**01 58 28.0**	**0.0**
TUZ	**Tuapeka**	**1.83**	**116**	P	**Pn**	**01 58 29.2**	**+0.9**
TUZ				S	**Sn**	**01 58 49.8**	**-1.3**
SYZ	**Scrubby Hill**	**1.89**	**137**	P	**Pn**	**01 58 29.6**	**+0.7**
SYZ	**Scrubby Hill**	**1.89**	**137**	S	**Sn**	**01 58 52.0**	**-0.3**
SYZ	**Scrubby Hill**	**1.89**	**137**	P	**Pn**	**01 58 29.7**	**+0.7**
SYZ				S	**Sn**	**01 58 51.3**	**-1.0**
ODZ	**Otahua Downs**	**2.40**	**88**	P	**Pn**	**01 58 35.8**	**+0.1**
ODZ	**Otahua Downs**	**2.40**	**88**	S	**Sn**	**01 59 02.2**	**-2.2**
RPZ	**Rata Peaks**	**3.08**	**63**	P	**Pn**	**01 58 44.1**	**-0.8**
RPZ	**Rata Peaks**	**3.08**	**63**	S	**Sn**	**01 59 19.6**	**-1.3**
QRZ	**Quartz Range**	**5.82**	**43**	P	**Pn**	**01 59 21.3**	**-0.6**
KHEZ	**Kahui Hut**	**7.72**	**43**	P	**Pn**	**01 59 48.4**	**+0.5**
OUZ	**Omahuta**	**11.06**	**28**	P	**Pn**	**02 00 34.0**	**+0.7**

KRSC 08 02:08:18.1±0.5, 55°.82N×162°.24E, h48km±13km, Ml3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.50**	**40**	*i* P	Pn	02 08 30.4	+1.1
KBTR				*e*S	Sn	02 08 39.0	+1.8
KBG	**Krutoberegovo**	**0.51**	**31**	*i* P	Pn	02 08 30.2	+0.9
KBG				*e*S	Sn	02 08 38.7	+1.5
ZLN	**Zelenaya**	**0.83**	**284**	*e*P	Pn	02 08 34.6	+1.0
SMKR	**Semkarok**	**0.87**	**331**	*i* P	Pn	02 08 35.0	+0.9
SMKR				*e*S	Sn	02 08 47.2	+1.3
CIRR	**Tsirk**	**0.89**	**290**	*e*S	Sn	02 08 46.7	+0.4
BZP	**Bezymyannyi-Pe**	**0.96**	**276**	*e*P	Pn	02 08 36.0	+0.5
BZWR	**Bezymyannyi-We**	**0.99**	**279**	*e*P	Pn	02 08 36.7	+0.8
KLY	**Klyuchi**	**1.02**	**299**	*e*P	Pn	02 08 35.1	-0.8
KLY				*e*S	Sn	02 08 47.1	-2.0
KIRR	**Kirishev**	**1.08**	**278**	*e*P	Pn	02 08 38.3	+1.3
KIRR				*e*S	Sn	02 08 52.3	+1.5
KMNR	**Kamenistaya**	**1.13**	**267**	*e*P	Pn	02 08 39.5	+1.8
KMNR				*e*S	Sn	02 08 54.2	+2.1
KPT	**Kopyto**	**1.15**	**278**	*e*S	Sn	02 08 53.9	+1.5
TUMD	**Tumrok D**	**1.22**	**240**	*e*P	Pn	02 08 40.5	+1.7
KOZ	**Kozyrevsk**	**1.35**	**281**	*e*P	Pn	02 08 42.6	+2.0
KOZ				*e*S	Sn	02 09 00.1	+2.8
SRDR	**Sredinnyy**	**1.50**	**290**	*e*P	Pn	02 08 44.7	+2.1
SRDR				*e*S	Sn	02 09 03.3	+2.3
ESO	**Esso**	**2.00**	**274**	*e*P	Pn	02 08 50.8	+1.4
BKI	**Bering**	**2.21**	**105**	*e*S	Sn	02 09 21.3	+2.9
KII	**Karymskiy**	**2.41**	**223**	*i* P	Pn	02 08 59.0	+3.9
SPN	**Mys Shipunski**	**3.02**	**206**	*e*S	Sn	02 09 41.5	+3.2
SDLR	**Sedlovina**	**3.21**	**219**	*e*P	Pn	02 09 10.5	+4.3
GNL	**Ganaly**	**3.28**	**231**	*e*P	Pn	02 09 11.1	+4.1
DALK	**Dalny**	**3.46**	**217**	*e*S	Sn	02 09 51.4	+2.3
GRL	**Gorelyy**	**4.09**	**218**	*e*S	Sn	02 10 08.8	+4.0

*NEIC **08** 02:48:16.5±1.4, 17°.85N±0°.03×66°.824W±0°.009, h10km±1km, ML3.2/33, ML2.9(RSPR), Error ellipse: s-maj=4.4km s-min=2.9km az=8.0*
*RSPR **08** 02:48:17.2, 17°.91N×66°.85W, h15km*
*SDD **08** 02:48:19.2±2.7, 18°.01N×66°.78W, h0km±11km, MD2.9, ML3.0, MW3.0, Presumed earthquake*
ISC 08 02:48:17.2±0.9, 17°.93N±0°.05×66°.82W±0°.02, h18km±4km, n41, σ0°.96/66, 19C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**311**		**Pg**	**02 48 20.3**	**-0.3**
GBPR					**Sg**	**02 48 22.7**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.07**	**311**	⇑*e*P	**Pg**	**02 48 20.3**	**-0.3**
GBPR				*e*S	**Sg**	**02 48 22.7**	**-0.2**
MLPR	**Magueyes Islan**	**0.21**	**281**		**Pg**	**02 48 21.8**	**-0.5**
MLPR				Sg	**Sg**	**02 48 25.3**	**-0.5**
MLPR				IAML		02 48 25.6	
	4μm,0.6s						
MLPR				IAML		02 48 25.6	
	5μm,0.5s						
OBIP	**Obispado Ponce**	**0.23**	**61**		**Pg**	**02 48 22.6**	**-0.1**
OBIP				Sg	**Sg**	**02 48 27.0**	**+0.6**
OBIP	**Obispado Ponce**	**0.23**	**61**	⇓*e*P	**Pg**	**02 48 22.6**	**-0.1**
OBIP				*e*S	**Sg**	**02 48 27.0**	**+0.6**
CELP	**Cerrillos**	**0.27**	**58**		**Pg**	**02 48 23.3**	**0.0**
CELP				Sg	**Sg**	**02 48 27.8**	**+0.3**
CELP				IAML		02 48 28.1	
	3μm,0.4s						
CELP				IAML		02 48 28.5	
	3μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.28**	**286**		**Pg**	**02 48 22.9**	**-0.6**
CRPR	

CRPR				IAML			02 49 06.0	
	7µm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.26**	**304**	⇑*e*Pg		**Pn**	**02 49 02.4**	**+1.7**
CRPR				⇑*e*Sg		**Sn**	**02 49 05.0**	**-0.7**
CRPR				IAML			02 49 05.5	
	comp=N,5µm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.26**	**304**	⇑*e*P		**Pn**	**02 49 01.2**	**+0.5**
CRPR				*e*S		**Sn**	**02 49 05.2**	**-0.7**
OBIP	**Obispado Ponce**	**0.32**	**56**			**Pb**	**02 49 00.9**	**+0.4**
OBIP				Sg		**Sb**	**02 49 05.0**	**-0.7**
OBIP	**Obispado Ponce**	**0.32**	**56**	⇑*e*P		**Pb**	**02 49 01.0**	**+0.5**
OBIP				*e*S		**Sb**	**02 49 05.2**	**-0.5**
CELP	**Cerrillos**	**0.36**	**54**	Pg		**Pb**	**02 49 01.5**	**+0.4**
CELP				Sg		**Sb**	**02 49 06.0**	**-0.6**
CELP				IAML			02 49 06.5	
	comp=N,5µm,0.2s							
LSP	**Las Mesas**	**0.36**	**329**			**Pn**	**02 49 02.4**	**+0.1**
LSP						**Sn**	**02 49 08.0**	**-0.5**
LSP	**Las Mesas**	**0.36**	**329**	⇓*e*P		**Pn**	**02 49 02.4**	**+0.1**
LSP				*e*S		**Sn**	**02 49 08.0**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.42**	**22**			**Pb**	**02 49 02.2**	**+0.2**
UUPR				Sg		**Sb**	**02 49 07.1**	**-1.1**
PRSN	**Puerto Rico Se**	**0.43**	**325**			**Pn**	**02 49 03.4**	**+0.3**
PRSN				IAML			02 49 11.1	
	comp=N,5µm,0.3s							
PRSN	**Puerto Rico Se**	**0.43**	**325**			**Sn**	**02 49 09.7**	**-0.3**
PRSN	**Puerto Rico Se**	**0.43**	**325**	⇑*e*Pg		**Pn**	**02 49 03.4**	**+0.3**
PRSN				⇑*e*Sg		**Sb**	**02 49 08.6**	**+0.2**
PRSN				IAML			02 49 10.4	
	comp=N,6µm,0.3s							
PRSN	**Puerto Rico Se**	**0.43**	**325**	⇑*e*P		**Pn**	**02 49 03.4**	**+0.3**
PRSN				*e*S		**Sn**	**02 49 09.7**	**-0.3**
AGPR	**Aguadilla, PR**	**0.64**	**340**			**Pn**	**02 49 06.5**	**+0.5**
AGPR				IAML			02 49 19.0	
	comp=N,984nm,0.6s							
AGPR	**Aguadilla, PR**	**0.64**	**340**	⇑*e*Pg		**Pn**	**02 49 06.3**	**+0.2**
AGPR				⇑*e*Sg		**Sb**	**02 49 13.2**	**-1.0**
AGPR				IAML			02 49 15.3	
	comp=N,1µm,0.2s							
AGPR	**Aguadilla, PR**	**0.64**	**340**	⇑*e*P		**Pn**	**02 49 06.5**	**+0.5**
AGPR				*e*S		**Sn**	**02 49 15.0**	**-0.2**
ECPR	**Experimental S**	**0.67**	**48**	Pg		**Pb**	**02 49 06.2**	**0.0**
ECPR				IAML			02 49 16.3	
	comp=N,2µm,0.2s							
ECPR				IAML			02 49 17.6	
	comp=N,3µm,0.2s							
ECPR	**Experimental S**	**0.67**	**48**	⇑*e*P		**Pn**	**02 49 06.4**	**-0.1**
ECPR				*e*S		**Sb**	**02 49 14.7**	**-0.5**
EMPR	**Esperanza - Ma**	**0.70**	**29**			**Pn**	**02 49 07.3**	**+0.4**
EMPR						**Sb**	**02 49 16.1**	**+0.2**
EMPR	**Esperanza - Ma**	**0.70**	**29**	⇑*e*P		**Pn**	**02 49 07.3**	**+0.4**
EMPR				*e*S		**Sb**	**02 49 16.1**	**+0.2**
SJG	**San Juan**	**0.74**	**70**	Pg		**Pb**	**02 49 07.9**	**+0.6**
SJG				IAML			02 49 17.5	
	comp=N,916nm,0.3s							
SJG				IAML			02 49 17.8	
	comp=N,951nm,0.4s							
SJG	**San Juan**	**0.74**	**70**	⇑*e*P		**Pb**	**02 49 08.1**	**+0.8**
SJG				*e*S		**Sb**	**02 49 17.3**	**+0.2**
IDE	**Isla Desecheo**	**0.76**	**313**			**Pb**	**02 49 09.4**	**+1.7**
IDE						**Sn**	**02 49 19.6**	**+1.3**
IDE	**Isla Desecheo**	**0.76**	**313**	⇑*e*P		**Pb**	**02 49 09.4**	**+1.7**
IDE				*e*S		**Sn**	**02 49 19.6**	**+1.3**
PDPR	**Patillas Dam,**	**0.84**	**79**	Pg		**Pb**	**02 49 09.9**	**+1.0**
GCPR	**Guaynabo City**	**0.88**	**60**			**Pb**	**02 49 10.2**	**+0.6**
GCPR						**Sn**	**02 49 20.9**	**-0.4**
GCPR	**Guaynabo City**	**0.88**	**60**	⇑*e*P		**Pb**	**02 49 10.2**	**+0.6**
GCPR				*e*S		**Sn**	**02 49 20.9**	**-0.4**
HUMP	**Col San Antoni**	**1.02**	**74**	Pg		**Pb**	**02 49 12.8**	**+0.8**
HUMP				IAML			02 49 29.0	
	comp=N,1µm,0.3s							
HUMP				IAML			02 49 29.0	
	comp=N,1µm,0.4s							
HUMP	**Col San Antoni**	**1.02**	**74**			**Sb**	**02 49 25.4**	**+0.3**
HUMP	**Col San Antoni**	**1.02**	**74**	⇑*e*P		**Pb**	**02 49 13.3**	**+1.2**
HUMP				*e*S		**Sb**	**02 49 25.4**	**+0.3**
CUPR	**Culebra, Puert**	**1.59**	**74**	Pn		**Pb**	**02 49 22.4**	**+0.8**
MIDR	**Miches**	**2.34**	**299**	⇑*e*Pg		**Pn**	**02 49 10.6**	**+1.2**
MIDR				⇑*e*Sg		**Sn**	**02 49 52.2**	**-4.9**
MIDR				IAML			02 50 11.4	
	comp=N,68nm,1.4s							
HATOM	**Hato Mayor del**	**2.54**	**292**	⇑*e*Pg		**Pn**	**02 49 31.2**	**-1.1**
HATOM				⇑*e*Sg		**Sn**	**02 49 58.3**	**-4.0**
HATOM				IAML			02 50 18.4	
	comp=N,52nm,0.6s							

NEIC ***08*** *02:53:22.8±1.6,26°.02S±0°.08×177°.5W±0°.1,h192km±5km, mb4.6/21,Error ellipse: s-maj=17.9km s-min=11.3km az=97.0*

IDC ***08*** *02:53:23.2±0.8,25°.99S×177°.51W,h201km±6km,mb4.0/14, mbtmp4.5/16,Error ellipse: s-maj=16.2km s-min=13.6km az=117.0*

ISC 08 02:53:18.3±0.4,25°.87S±0°.05×177°.34W±0°.08,h161km, n100,σ1°59/107,mb4.5/24,3C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.41**	**189**	S	**Sn**	**02 54 53.1**	**+0.6**
	230nm,0.4s,baz=291,slow=23,SNR=1.8						
RAO	**Raoul Island**	**3.41**	**189**	Pn	**Pn**	**02 54 12.0**	**+0.8**
RAO				Sn	**Sn**	**02 54 55.8**	**+3.3**
GLKZ	**Green Lake**	**3.42**	**189**	P	Pn	02 54 15.6	+4.2
GLKZ				S	**Sn**	**02 54 56.9**	**+4.2**
MSVF	**Nonsavu**	**9.16**	**331**	Pn	**Pn**	**02 55 28.8**	**+1.6**
NIUE	**Niue**	**9.62**	**47**		**Pn**	**02 55 34.7**	**+1.5**
NIUE	**Niue**	**9.62**	**47**	P	**Pn**	**02 55 34.4**	**+1.3**
NIUE				S	**Sn**	**02 57 18.1**	**-1.9**
OUZ	**Omahuta**	**12.16**	**218**	P	**P**	**02 56 10.5**	**-1.6**
WCZ	**Waipu Caves**	**12.31**	**213**	P	**P**	**02 56 12.0**	**-1.8**
WIZ	**White Island**	**12.52**	**200**	P	**Pn**	**02 56 11.7**	**+0.9**
HAZ	**Te Kaha**	**12.56**	**198**	P	**Pn**	**02 56 10.6**	**-0.8**
PUZ	**Puketiti**	**12.73**	**196**	P	**P**	**02 56 16.5**	**-1.9**
RUGZ	**Raukumara Rang**	**12.78**	**198**	P	**P**	**02 56 16.4**	**-2.8**
TWGZ	**Tauwhareparae**	**12.90**	**197**	P	**P**	**02 56 20.7**	**+0.3**
CNGZ	**Carnagh Statio**	**13.13**	**196**	P	**P**	**02 56 21.5**	**-1.4**
MWZ	**Matawai**	**13.17**	**198**	P	**P**	**02 56 21.9**	**-1.5**
URZ	**Urewera**	**13.22**	**199**	P	**P**	**02 56 21.1**	**-2.8**
	25nm,0.4s,baz=28,slow=2.5,SNR=14						
URZ				S	Sn	02 58 33.3	-13
	17nm,0.6s,baz=117,slow=23,SNR=10						
URZ	**Urewera**	**13.22**	**199**	P	**P**	**02 56 22.6**	**-1.3**
SNGZ	**Shannon Statio**	**13.64**	**198**	P	**P**	**02 56 27.2**	**-1.4**
TLZ	**Tolley Road**	**13.81**	**204**	P	**Pn**	**02 56 27.3**	**0.0**
MTHZ	**Maungataniwha**	**13.85**	**199**	P	**P**	**02 56 29.8**	**-1.1**
NMHZ	**Naumai**	**14.08**	**199**	P	**P**	**02 56 32.4**	**-1.1**
HIZ	**Hauiti**	**14.23**	**206**	P	**P**	**02 56 37.3**	**+2.2**
BKZ	**Black Stump Fm**	**14.24**	**200**		**Pn**	**02 56 32.3**	**-0.5**
BKZ	**Black Stump Fm**	**14.24**	**200**	P	**P**	**02 56 33.2**	**-2.1**
MCHZ	**McNeill Hill**	**14.44**	**199**	P	**P**	**02 56 36.0**	**-1.4**
ETVZ	**East Tongariro**	**14.47**	**202**	P	**P**	**02 56 35.6**	**-2.3**
KAHZ	**Kahuranaki**	**14.71**	**198**	P	**P**	**02 56 39.3**	**-1.2**
KRHZ	**Kereru**	**14.72**	**199**	P	**Pn**	**02 56 37.4**	**-1.2**
PKVZ	**Pokaka**	**14.73**	**203**	P	**Pn**	**02 56 37.1**	**-1.8**
VRZ	**Vera Road**	**14.80**	**205**	P	**P**	**02 56 41.5**	**+0.1**
PXZ	**Pawanui**	**14.94**	**198**	P	**P**	**02 56 41.1**	**-1.8**
DZM	**Mont Dzumac**	**15.30**	**281**	P	**P**	**02 56 48.5**	**+1.2**
	6.6nm,0.7s,baz=36,slow=19,SNR=6.9						
BFZ	**Birch Farm**	**15.71**	**198**	P	**Pn**	**02 56 49.9**	**-1.0**
MRZ	**Mangatainoka R**	**15.89**	**200**	P	**Pn**	**02 56 50.4**	**-2.8**
NNZ	**Nelson**	**17.14**	**204**	P	**P**	**02 57 03.4**	**-3.8**
THZ	**Tophouse**	**17.79**	**205**	P	**P**	**02 57 12.2**	**-2.2**
KHZ	**Kahutara**	**18.13**	**202**	P	**P**	**02 57 14.0**	**-4.1**
GVZ	**Greta Valley S**	**18.80**	**202**	P	**P**	**02 57 22.7**	**-2.6**
WHZ	**Wether Hill Ro**	**23.20**	**207**	P	**P**	**02 58 10.1**	**-0.7**
ARMA	**Armidale**	**27.69**	**253**	P	**P**	**02 58 53.0**	**+1.5**
ARMA				IAmb	IAmb	02 58 54.9	
	comp=Z,9.7nm,0.9s						
EIDS	**Eidsvold**	**28.45**	**264**	P	**P**	**02 58 58.8**	**+0.5**
EIDS				IAmb	IAmb	02 59 00.8	
	comp=Z,7.9nm,0.8s						
TOO	**Toolangi**	**33.50**	**240**	P	**P**	**02 59 41.0**	**-1.5**
CTAO	**Charters Tower**	**33.94**	**272**	P	**P**	**02 59 47.0**	**+0.6**
STKA	**Stephens Creek**	**36.30**	**251**	P	**P**	**03 00 06.1**	**-0.4**
	comp=Z,3.6nm,0.4s,baz=96,slow=14,SNR=18						
STKA				PcP	**PcP**	**03 02 27.8**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=72,slow=6.6,SNR=4.4						
	comp=Z,3.6nm,0.4s						
STKA	**Stephens Creek**	**36.30**	**251**	P	**P**	**03 00 07.7**	**+1.2**
INKA	**Innaminka**	**37.34**	**258**	P	**P**	**03 00 15.5**	**+0.3**
COEN	**Coen**	**38.83**	**280**	P	**P**	**03 00 28.2**	**+0.3**
BBOO	**Buckleboo**	**40.95**	**249**	P	**P**	**03 00 44.0**	**-1.2**
AS31	**Alice Springs**	**44.13**	**262**	P	**P**	**03 01 10.4**	**-0.7**
ASAR	**Alice Springs**	**44.13**	**262**	P	**P**	**03 01 10.0**	**-1.1**
	comp=Z,10nm,0.8s,baz=88,slow=6.5,SNR=93						
ASAR				PcP	**PcP**	**03 02 52.3**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=96,slow=3.6,SNR=3.0						
	comp=Z,10nm,0.8s						
WR8	**Warramunga Arr**	**44.56**	**267**	P	**P**	**03 01 13.1**	**-1.4**
WR8				IAmb	IAmb	03 01 15.5	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**44.71**	**267**	P	**P**	**03 01 15.3**	**-0.4**
	comp=Z,21nm,0.5s,baz=104,slow=8.0,SNR=176						
WRA				PcP	**PcP**	**03 02 54.5**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=110,slow=3.5,SNR=4.6						
	comp=Z,21nm,0.5s						
FORT	**Forrest**	**47.93**	**251**	P	**P**	**03 01 39.0**	**-1.6**
FORT				IAmb	IAmb	03 01 41.7	
	comp=Z,15nm,0.6s						
KNRA	**Kununurra**	**51.11**	**270**	P	**P**	**03 02 03.9**	**-0.9**
KNRA				IAmb	IAmb	03 02 07.0	
	comp=Z,17nm,0.7s						
VNDA	**Vanda**	**52.65**	**186**	P	**P**	**03 02 16.1**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=352,slow=6.0,SNR=5.6						
	comp=Z,2.1nm,0.6s						
VNDA	**Vanda**	**52.65**	**186**	P	**P**	**03 02 16.2**	**+0.9**
VNDA				IAmb	IAmb	03 02 26.3	
	comp=Z,14nm,1.2s						
PSA00	**Pilbara Seismi**	**57.20**	**260**	P	**P**	**03 02 47.8**	**-1.1**
PSA00				IAmb	IAmb	03 03 08.3	
	comp=Z,23nm,1.4s						
MBWA	**Marble Bar**	**57.43**	**261**	P	**P**	**03 02 48.7**	**-1.8**
MORW	**Morawa**	**58.49**	**250**	P	**P**	**03 02 56.5**	**-1.3**
MORW				IAmb	IAmb	03 03 40.5	
	comp=Z,12nm,1.2s						
CASY	**Casey**	**59.42**	**207**	P	**P**	**03 03 03.6**	**0.0**
QSPA	**South Pole Qui**	**64.23**	**180**	P	**P**	**03 03 35.0**	**-0.8**
	comp=Z,6.1nm,0.7s,baz=29,slow=2.0,SNR=7.4						
	comp=Z,6.1nm,0.7s						
QSPA	**South Pole Qui**	**64.23**	**180**	P	**P**	**03 03 36.5**	**+0.7**
QSPA				IAmb	IAmb	03 03 38.4	
	comp=Z,19nm,1.2s						
BELA	**Belgrano 2**	**74.18**	**172**	P	**P**	**03 04 37.1**	**+0.3**
BELA				IAmb	IAmb	03 04 39.5	
	comp=Z,13nm,1.2s						
MAW	**Mawson**	**76.75**	**200**	P	**P**	**03 04 51.4**	**0.0**
	comp=Z,13nm,0.7s,baz=155,slow=1.2,SNR=1.9						
	comp=Z,13nm,0.7s						
KSRS	**Korea Array**	**81.31**	**319**	P	**P**	**03 05 17.8**	**+1.2**
	comp=Z,8.6nm,0.5s,baz=125,slow=6.4,SNR=2.0						
	comp=Z,0.8nm,0.5s						
PETK	**Petropavlovsk-**	**81.59**	**345**	P	**P**	**03 05 18.8**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=114,slow=7.8,SNR=6.1						
	comp=Z,2.4nm,0.6s						
SNAA	**Sanae**	**82.65**	**178**	⇑P	**P**	**03 05 23.7**	**+0.3**
	comp=Z,178nm,0.7s						
SNAA	**Sanae**	**82.65**	**178**	P	**P**	**03 05 23.4**	**+0.1**
	comp=Z,6.9nm,0.7s,baz=208,slow=0.4,SNR=6.4						
	comp=Z,6.9nm,0.7s						
SNAA	**Sanae**	**82.65**	**178**	P	**P**	**03 05 23.2**	**-0.1**
SNAA				IAmb	IAmb	03 05 24.7	
	comp=Z,11nm,0.9s						
VNA3	**Neumayer Olymp**	**82.77**	**176**	⇑P	**P**	**03 05 24.1**	**+0.2**
	comp=Z,13nm,0.7s						
VNA2	**Neumayer--Watz**	**83.22**	**177**	⇑P	**P**	**03 05 26.7**	**+0.6**
	comp=Z,16nm,0.8s,baz=168,slow=3.4						
USRK	**Ussuriysk Ar.**	**83.73**	**326**	P	**P**	**03 05 30.1**	**+1.1**
	comp=Z,7.1nm,0.9s,baz=126,slow=9.7,SNR=6.4						
	comp=Z,7.1nm,0.9s						
NVAR	**Mina Array Bea**	**84.52**	**43**	P	**P**	**03 05 35.3**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=226,slow=9.4,SNR=5.8						
NVAR				pP	**sP**	**03 06 23.3**	**-6.8**
	comp=Z,0.7nm,0.9s,baz=211,slow=8.8,SNR=3.1						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**92.44**	**43**	P	**P**	**03 06 12.4**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=234,slow=2.1,SNR=4.3						
PDAR				pP	pP	03 07 00.1	+8.8
	comp=Z,0.4nm,0.8s,baz=213,slow=4.7,SNR=2.0						
	comp=Z,0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.47**	**289**	P	**P**	**03 06 11.5**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=149,slow=2.8,SNR=9.5						
	comp=Z,1.5nm,0.7s						
ILAR	**Eielson Array**	**93.39**	**13**	P	**P**	**03 06 15.1**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=227,slow=5.8,SNR=5.1						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**115.26**	**312**	PKP	**PKPdf**	**03 11 39.2**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=182,slow=0.9,SNR=13						
KURK	**Kurchatov**	**118.29**	**316**		**PKPdf**	**03 11 45.5**	**-0.6**
KURBB	**Kurchatov Arra**	**118.34**	**315**	PKP	**PKPdf**	**03 11 45.1**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=109,slow=2.0,SNR=5.8						
BVAR	**Borovoye Array**	**123.51**	**318**	PKP	**PKPdf**	**03 11 55.9**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=97,slow=1.8,SNR=11						
ARCES	**ARCESS Array B**	**134.28**	**349**	PKP	**PKPdf**	**03 12 16.2**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=11,slow=1.2,SNR=12						
FINES	**FINESS Array B**	**141.06**	**342**	PKhKP	PKPpre	03 12 22.6	
	comp=Z,1.7nm,0.8s,baz=55,slow=4.0,SNR=11						
NB2	**NORSAR Subarra**	**144.36**	**353**	PKP	**PKPab**	**03 12 33.6**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=11,slow=3.3						
NOA	**NORSAR Array B**	**144.36**	**353**	PKP	**PKPab**	**03 12 33.5**	**+0.2**
	comp=Z,6.8nm,0.8s,baz=13,slow=2.4,SNR=20						
NC602	**NORSAR Array S**	**144.62**	**352**	PKPbc	**PKPab**	**03 12 34.4**	**+0.2**
HFS	**Hagfors**	**144.91**	**350**	PKPbc	**PKPbc**	**03 12 35.1**	**-0.1**
	comp=Z,3nm,0.7s,baz=67,slow=3.9,SNR=26						
KONO	**Kongsberg**	**145.89**	**354**	PKPdf	**PKPdf**	**03 12 37.6**	**+0.3**
AK03	**Malin Array Si**	**147.91**	**328**	PKP	**PKPbc**	**03 12 43.8**	**-0.4**
AKASG	**Malin Array Be**	**147.92**	**328**	PKPbc	**PKPbc**	**03 12 43.4**	**-0.8**
	comp=Z,2.9nm,0.5s,baz=46,slow=4.0,SNR=15						
AKASG				pPKPbc	**sPKPdf**	**03 13 36.7**	**-2.6**
	comp=Z,1.3nm,0.6s,baz=48,slow=3.3,SNR=2.6						
AKBB	**Malin Array Si**	**147.92**	**328**	PKP	**PKPbc**	**03 12 43.5**	**-0.7**
AK01	**Malin Array Si**	**147.94**	**328**	PKP	**PKPbc**	**03 12 43.8**	**-0.4**
KIEV	**Kiev**	**147.94**	**328**	PKP	**PKPbc**	**03 12 43.5**	**-0.7**
MI28	**Mi28,Pidlybu**	**148.50**	**329**	PKP	**PKPbc**	**03 12 44.7**	**-1.0**
RNPP9	**Sopachiv**	**148.96**	**331**	PKP	**PKPbc**	**03 12 46.4**	**-0.4**
RNPP1	**Kostyukhnivka**	**149.06**	**331**	PKP	**PKPdf**	**03 12 45.2**	**+2.4**
LUBAR	**Lubar, Ukraine**	**149.15**	**328**	PKP	**PKPbc**	**03 12 47.2**	**-0.2**
KMPD	**K-Podol'skiy**	**150.69**	**327**	PKP	**PKPdf**	**03 12 48.2**	**+2.8**
BRTR	**Keskin Array B**	**150.69**	**306**	PKPbc	**PKPbc**	**03 12 51.4**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=141,slow=4.5,SNR=8.5						
MMAI	**Mount Meron Ar**	**150.70**	**292**	PKPbc	**PKiKP**	**03 12 52.6**	**+0.2**
	comp=Z,4.5nm,0.4s,baz=63,slow=7.6,SNR=16						
TORD	**Torodi Ar. Bea**	**167.31**	**176**	PKP	**PKPdf**	**03 13 05.2**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=249,slow=3.0,SNR=4.7						
TORD				PKPab	**PKPab**	**03 14 11.6**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=181,slow=5.0,SNR=9.9						

RSPR ***08*** *03:08:09.3,17°.92N×66°.89W,h12km,MD2.8/6*

NEIC ***08*** *03:08:09.8±1.2,17°.94N±0°.03×66°.861W±0°.008, h10km±1km,ML2.5/33,Md2.8/6(RSPR),Error ellipse: s-maj=5.3km s-min=2.3km az=0.0*

SDD ***08*** *03:08:10.0±2.1,17°.93N×66°.91W,h20km±13km,MD3.1, ML2.6,MW3.6,Presumed earthquake*

ISC 08 03:08:09.2±0.9,17°.94N±0°.05×66°.86W±0°.02,h15km±5km, n39,σ0°56/63,18C-3D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.04**	**335**		**Pg**	**03 08 11.9**	**-0.1**
GBPR					**Sg**	**03 08 13.8**	**0.0**
GBPR	**Guanica, Bosqu**	**0.04**	**335**	⇑*e*P	**Pg**	**03 08 11.9**	**-0.1**
GBPR				*e*S	**Sg**	**03 08 13.8**	**0.0**
MLPR	**Magueyes Islan**	**0.18**	**280**		**Pg**	**03 08 13.3**	**-0.2**
MLPR				Sg	**Sg**	**03 08 16.3**	**0.0**
MLPR				IAML		03 08 16.4	
	1µm,0.3s						
MLPR				IAML		03 08 16.4	
	1µm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.25**	**286**		**Pg**	**03 08 14.3**	**-0.3**
CRPR					**Sg**	**03 08 18.0**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.25**	**286**	IAML		03 08 18.3	
	971nm,0.2s						
CRPR				IAML		03 08 18.6	
	1000nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.25**	**286**	⇑*e*Pg	**Pg**	**03 08 14.3**	**-0.3**
CRPR				⇑*e*Sg	**Sg**	**03 08 17.7**	**-0.6**
CRPR				IAML		03 08 18.1	
	comp=N,1µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.25**	**286**	⇑*e*P	**Pg**	**03 08 14.3**	**-0.3**
CRPR				*e*S	**Sg**	**03 08 18.0**	**-0.3**
OBIP	**Obispado Ponce**	**0.26**	**67**		**Pg**	**03 08 15.1**	**+0.2**
OBIP					**Sb**	**03 08 20.0**	**-0.1**
OBIP	**Obispado Ponce**	**0.26**	**67**	IAML		03 08 20.4	
	comp=N,120nm,0.3s						
OBIP	**Obispado Ponce**	**0.26**	**67**	⇓*e*P	**Pg**	**03 08 15.1**	**+0.2**
OBIP				*e*S	**Sb**	**03 08 20.0**	**-0.1**
CELP	**Cerrillos**	**0.30**	**63**		**Pg**	**03 08 15.8**	**+0.2**
CELP				Sg	**Sb**	**03 08 20.9**	**-0.2**
CELP				IAML		03 08 21.3	
	comp=N,694nm,0.2s						
CELP				IAML		03 08 21.3	
	comp=N,441nm,0.3s						
LSP	**Las Mesas**	**0.32**	**318**		**Pg**	**03 08 15.8**	**-0.1**
LSP					**Sb**	**03 08 21.2**	**-0.6**
LSP	**Las Mesas**	**0.32**	**318**	⇓*e*P	**Pg**	**03 08 15.8**	**-0.1**
LSP				*e*S	**Sb**	**03 08 21.2**	**-0.6**
UUPR	**Utuado, UPR, P**	**0.34**	**23**		**Pg**	**03 08 16.3**	**0.0**
UUPR				Sg	**Sg**	**03 08 21.2**	**+0.1**
PRSN	**Puerto Rico Se**	**0.39**	**316**		**Pg**	**03 08 16.9**	**-0.2**
PRSN					**Sg**	**03 08 22.7**	**+0.2**
PRSN	**Puerto Rico Se**	**0.39**	**316**	IAML		03 08 25.5	
	comp=N,1µm,0.3s						
PRSN				IAML		03 08 26.0	
	comp=N,1µm,0.2s						
PRSN	**Puerto Rico Se**	**0.39**	**316**	⇑*e*Pg	**Pg**	**03 08 16.9**	**-0.2**
PRSN				⇑*e*Sg	**Sg**	**03 08 21.0**	**-1.5**
PRSN				IAML		03 08 24.9	
	comp=N,783nm,0.2s						
PRSN	**Puerto Rico Se**	**0.39**	**316**	⇓*e*P	**Pg**	**03 08 16.9**	**-0.2**
PRSN				*e*S	**Sg**	**03 08 22.7**	**+0.2**
AGPR	**Aguadilla, PR**	**0.58**	**336**		**Pg**	**03 08 20.2**	**-0.4**
AGPR	**Aguadilla, PR**	**0.58**	**336**	⇑*e*Pg	**Pg**	**03 08 20.2**	**-0.4**
AGPR				⇑*e*Sg	**Sg**	**03 08 28.1**	**-0.2**
AGPR				IAML		03 08 28.9	
	comp=N,191nm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**336**	⇑*e*P	**Pg**	**03 08 20.4**	**-0.3**
AGPR				*e*S	**Sg**	**03 08 28.3**	**-0.1**
ECPR	**Experimental S**	**0.61**	**51**		**Pg**	**03 08 20.8**	**-0.4**
ECPR				IAML		03 08 30.6	
	comp=N,261nm,0.3s						
ECPR				IAML		03 08 31.5	
	comp=N,370nm,0.2s						
ECPR	**Experimental S**	**0.61**	**51**	⇑*e*P	**Pg**	**03 08 20.8**	**-0.4**
ECPR				*e*S	**Sb**	**03 08 29.9**	**-0.1**
EMPR	**Esperanza - Ma**	**0.62**	**30**		**Pg**	**03 08 21.5**	**+0.1**
EMPR					**Sb**	**03 08 30.4**	**0.0**
EMPR	**Esperanza - Ma**	**0.62**	**30**	⇑*e*P	**Pg**	**03 08 21.5**	**+0.1**
EMPR				*e*S	**Sb**	**03 08 30.4**	**0.0**
SJG	**San Juan**	**0.70**	**76**		**Pg**	**03 08 22.4**	**-0.5**
SJG				IAML		03 08 33.1	
	comp=N,203nm,0.6s						
SJG				IAML		03 08 33.7	
	comp=N,173nm,0.3s						
SJG	**San Juan**	**0.70**	**76**	*e*S	**Sg**	**03 08 32.3**	**+0.2**
IDE	**Isla Desecheo**	**0.73**	**308**		**Pg**	**03 08 22.7**	**-0.8**
IDE					**Sg**	**03 08 33.0**	**-0.2**
IDE	**Isla Desecheo**	**0.73**	**308**	⇑*e*P	**Pg**	**03 08 22.7**	**-0.8**
IDE				*e*S	**Sg**	**03 08 33.0**	**-0.2**
PDPR	**Patillas Dam,**	**0.80**	**84**		**Pg**	**03 08 24.6**	**-0.3**
GCPR	**Guaynabo City**	**0.83**	**63**		**Pg**	**03 08 24.4**	**-0.9**
GCPR					**Sg**	**03 08 35

OBKA				*e*Sn		**Sn**	**03 12 50.8**	**+0.2**
	comp=Z,10nm,0.2s							
FRGS	**Fruska Gora**	**2.18**	**87**	*e*Pg		**Pb**	**03 12 27.4**	**-0.7**
FRGS				*e*Sg		**Sb**	**03 12 57.2**	**+1.7**
BBLS	**Lazi&#263i**	**2.26**	**121**	*e*Pg		**Pn**	**03 12 27.3**	**+1.0**
BBLS				*e*Sg		**Sg**	**03 13 00.8**	**0.0**
LSTV	**Lastovo**	**2.31**	**177**	*e*Pn		**Pn**	**03 12 27.6**	**+0.7**
STON	**Ston**	**2.31**	**162**	*i* Pn		**Pn**	**03 12 27.1**	**+0.3**
STON				Sn		**Sn**	**03 12 56.7**	**+1.1**
STON	**Ston**	**2.31**	**162**	*e*Pg		**Pn**	**03 12 28.0**	**+1.2**
STON				*e*Sg		**Sn**	**03 12 56.5**	**+0.8**
ARSA	**Arzberg**	**2.33**	**339**	*e*Pn		**Pn**	**03 12 26.7**	**-0.5**
	comp=Z,5.7nm,0.4s,SNR=7.4							
ARSA				*e*Sn		**Sn**	**03 12 55.5**	**-0.8**
	comp=Z,0.9nm,0.2s							
DIVS	**Divibare**	**2.53**	**112**	*e*Pg		**Pb**	**03 12 34.9**	**+0.9**
DIVS				*e*Sg		**Sb**	**03 13 06.6**	**+1.1**
DBRK	**Dubrovnik**	**2.61**	**156**	*e*Pn		**Pn**	**03 12 32.0**	**+1.0**
DBRK				Sn		**Sn**	**03 13 04.5**	**+1.3**
RONA	**Rosalia, Austr**	**2.64**	**354**	*e*Pn		**Pn**	**03 12 31.5**	**0.0**
	comp=Z,1.5nm,0.1s,SNR=23							
RONA				*e*Sn		**Sn**	**03 13 04.1**	**0.0**
	comp=Z,7.0nm,0.3s							
MYKA	**Terra Mystica**	**2.66**	**307**	*e*Pn		**Pn**	**03 12 32.2**	**+0.4**
	comp=Z,7.7nm,0.3s							
MYKA				*e*Sn		**Sn**	**03 13 05.6**	**+1.1**
	comp=Z,3.1nm,0.3s							
AVAS	**Avala Beograd**	**2.72**	**97**	*e*Pn		**Pb**	**03 12 36.3**	**-0.9**
AVAS				*e*Sn		**Sb**	**03 13 08.5**	**-2.3**
TRUS	**Trudelj**	**2.76**	**107**	*e*Pn		**Pn**	**03 12 34.7**	**+1.7**
IVAS	**Ivanjica**	**2.88**	**120**	*e*Sn		**Sn**	**03 13 10.3**	**+0.5**
CONA	**Conrad Observa**	**2.92**	**348**	*e*Pn		**Pn**	**03 12 34.9**	**-0.4**
	comp=Z,1.4nm,0.2s,SNR=17							
CONA				Sn		**Sn**	**03 13 10.3**	**-0.6**
	comp=Z,1.6nm,0.2s							
SRO	**Srobarova**	**2.95**	**21**	*e*PN		**Pn**	**03 12 37.7**	**+2.0**
SRO				*e*PG		Pg	03 12 51.9	+7.3
GRUS	**Gruza**	**3.09**	**111**	*e*Pn		**Pn**	**03 12 37.1**	**-0.5**
KBA	**Koelnbreinsper**	**3.09**	**312**	*i* Pn		**Pn**	**03 12 38.0**	**+0.2**
	comp=Z,7.6nm,0.4s							
ZST	**Bratislava**	**3.13**	**5**	*e*SN		**Sn**	**03 13 15.6**	**-0.4**
PDG	**Podgorica**	**3.21**	**144**	⇓P		**Pn**	**03 12 38.3**	**-1.0**
PDG				⇑S		**Sn**	**03 13 18.7**	**+0.7**
VRSS	**Vrsac**	**3.25**	**88**	*e*Sn		**Sb**	**03 13 23.1**	**-3.2**
MOA	**Molln**	**3.26**	**329**	*i* Pn		**Pn**	**03 12 40.7**	**+0.7**
	comp=Z,3.0nm,0.2s,SNR=24							
MOA				*e*Sn		**Sn**	**03 13 18.8**	**-0.3**
	comp=Z,1.8nm,0.3s							
BIOA	**Bad Ischl, Aus**	**3.38**	**322**	*e*Pn		**Pn**	**03 12 41.1**	**-0.5**
	comp=Z,1.7nm,0.2s							
BIOA				*i* Sn		**Sn**	**03 13 22.4**	**+0.2**
	comp=Z,6.4nm,0.5s							
ABTA	**Abfaltersbach**	**3.39**	**301**	*i* Pn		**Pn**	**03 12 42.2**	**+0.4**
	comp=Z,11nm,0.6s							
ABTA				*e*Sg		**Sg**	**03 13 37.9**	**+1.1**
	comp=Z,19nm,0.9s							
BZS	**Buzias**	**3.49**	**79**	⇑P		**Pn**	**03 12 46.3**	**+3.3**
BZS				⇑S		**Sb**	**03 13 35.8**	**+2.8**
MDVR	**Moldovita**	**3.55**	**93**	⇑P		**Pn**	**03 12 46.5**	**+2.5**
MDVR				⇓S		**Sb**	**03 13 36.6**	**+1.7**
SIRR	**Siria**	**3.66**	**69**	⇑P		**Pn**	**03 12 48.9**	**+3.5**
SIRR				⇑S		**Sb**	**03 13 39.3**	**+1.4**
LESA	**Schwarzleotal**	**3.67**	**311**	*i* Pn		**Pn**	**03 12 46.3**	**+0.7**
	comp=Z,2.8nm,0.3s							
LESA				*i* Sn		**Sn**	**03 13 29.3**	**0.0**
	comp=Z,0.3nm,0.1s							
BOVS	**Bovan**	**3.85**	**110**	⇑P		**Pn**	**03 12 47.4**	**-0.6**
BOVS	**Bovan**	**3.85**	**110**	*e*Pn		**Pn**	**03 12 47.2**	**-0.8**
KRUC	**Moravsky**	**4.00**	**357**	*e*PN		**Pn**	**03 12 49.5**	**-0.6**
KRUC				*e*SN		**Sn**	**03 13 31.7**	**-5.6**
CKRC	**Cesky Krumlov**	**4.10**	**337**	*e*PN		**Pn**	**03 12 52.2**	**+0.7**
CKRC				*e*SN		**Sn**	**03 13 36.6**	**-3.2**
WTTA	**Wattenberg**	**4.16**	**304**	*e*Pn		**Pn**	**03 12 53.7**	**+1.2**
	comp=Z,0.3nm,0.1s							
WATA	**Walderalm**	**4.23**	**304**	*i* Pn		**Pn**	**03 12 54.4**	**+0.9**
	comp=Z,1.8nm,0.2s							
WATA				*i* Sn		**Sn**	**03 13 41.7**	**-1.7**
	comp=Z,2.9nm,0.6s							
VRAC	**Vranov**	**4.24**	**359**	⇑P		**Pn**	**03 12 49.4**	**-4.0**
VRAC				⇑S		**Sn**	**03 13 39.5**	**-3.8**
VRAC	**Vranov**	**4.24**	**359**	*e*PN		**Pn**	**03 12 49.5**	**-0.6**
VRAC				*e*SN		**Sn**	**03 13 41.1**	**-2.2**
GZR	**Gura Zlata**	**4.28**	**84**	⇑P		**Pn**	**03 12 56.4**	**+2.4**
BARS	**Barje**	**4.31**	**120**	*e*Pn		**Pn**	**03 12 53.9**	**-0.5**
MAUC	**Maruska**	**4.36**	**9**	*e*PN		**Pn**	**03 12 55.5**	**+0.4**
SQTA	**Sankt Quirin**	**4.40**	**301**	*i* Pn		**Pn**	**03 12 55.7**	**0.0**
	comp=Z,0.2nm,0.2s							
SQTA				*i* Sn		**Sn**	**03 13 47.6**	**+0.2**
	comp=Z,7.9nm,0.8s							
LANS	**Liptovska Anna**	**4.49**	**24**	*e*PN		**Pn**	**03 12 59.1**	**+2.3**
LANS				*e*PG		**Pg**	**03 13 14.3**	**+0.3**
LANS				*e*SG		**Sg**	**03 14 14.7**	**+2.6**
MOTA	**Moosalm**	**4.52**	**302**	*e*Pn		**Pn**	**03 12 58.0**	**+0.6**
	comp=Z,1.4nm,0.3s							
KHC	**Kasperske Hory**	**4.59**	**333**	*e*PN		**Pn**	**03 12 58.5**	**+0.2**
KHC				*e*SN		**Sn**	**03 13 50.0**	**-2.1**
FETA	**Feichten**	**4.61**	**297**	*e*Pn		**Pn**	**03 12 58.6**	**-0.1**
	comp=Z,0.9nm,0.4s							
FETA				*i* Sn		**Sn**	**03 13 53.7**	**+1.0**
	comp=Z,1.0nm,0.4s							
ZVC	**Zvikov**	**4.70**	**339**	*e*PN		**Pn**	**03 13 00.4**	**+0.7**
ZVC				*e*SN		**Sn**	**03 13 50.7**	**-3.9**
MORC	**Moravsky Berou**	**4.74**	**6**	⇑P		**Pn**	**03 12 58.0**	**-2.3**
MORC				⇑S		**Sn**	**03 13 54.3**	**-1.4**
MORC	**Moravsky Berou**	**4.74**	**6**	*e*PN		**Pn**	**03 12 59.8**	**-0.5**
MORC				*e*SN		**Sn**	**03 13 53.0**	**-2.6**
RETA	**Reutte**	**4.79**	**302**	*e*Pn		**Pn**	**03 13 01.1**	**+0.1**
	comp=Z,0.3nm,0.1s							
RETA				*e*Sn		**Sn**	**03 13 57.4**	**+0.5**
	comp=Z,2.2nm,0.7s							
STEB	**Steborice**	**4.91**	**8**	*e*PN		**Pn**	**03 13 02.7**	**0.0**
STEB				*e*SN		**Sn**	**03 13 58.2**	**-1.7**
DAVA	**Damuels**	**5.25**	**297**	*i* Pn		**Pn**	**03 13 08.2**	**+0.9**
	comp=Z,0.2nm,0.2s							
DPC	**Dobruska-Polom**	**5.29**	**357**	*e*PN		**Pn**	**03 13 08.9**	**+1.1**
STHS	**Stebnicka Huta**	**5.32**	**34**	*e*PN		**Pn**	**03 13 04.5**	**-3.8**
STHS				*e*PG		**Pg**	**03 13 28.6**	**-1.4**
STHS				*e*SN		Sn	03 13 58.0	-12
STHS				*e*SG		**Sg**	**03 14 41.3**	**+2.4**

KRSC 08 03:12:39.5±0.6, 52°.36N×158°.66E, h84km±4km, MI3.5,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.11**	**310**	*e*P	Pn	03 12 52.4	+1.0
RUS				*e*S	Sn	03 13 01.6	+1.4
MTVR	**Mutnovka**	**0.31**	**293**	*e*P	Pn	03 12 53.4	+0.9
MTVR				*e*S	Sn	03 13 03.7	+1.7
GRL	**Gorelyy**	**0.41**	**299**	*e*P	Pn	03 12 54.2	+1.2
ASAK	**Asacha**	**0.46**	**273**	*e*P	Pn	03 12 54.4	+1.1
KRMR	**Karymshinskiy**	**0.57**	**326**	*e*P	Pn	03 12 54.9	+0.7
KRMR				*e*S	Sn	03 13 06.5	+1.5
KDTR	**Khodutka, Kamc**	**0.66**	**213**	*e*P	Pn	03 12 55.8	+0.8
KDTR				*e*S	Sn	03 13 07.4	+0.9
PET	**Petropavlovsk**	**0.67**	**360**	*i* P	Pn	03 12 56.0	+1.0
PET				*e*S	Sn	03 13 08.0	+1.4
DALK	**Dalny**	**0.68**	**5**	*e*P	Pn	03 12 56.3	+1.1
DALK				*e*S	Sn	03 13 08.2	+1.4
INSR	**Institute**	**0.71**	**358**	*e*P	Pn	03 12 56.6	+1.1
INSR				*e*S	Sn	03 13 08.7	+1.3
UGLR	**Uglovaya**	**0.86**	**7**	*e*P	Pn	03 12 58.7	+1.5
AVH	**Avacha**	**0.91**	**3**	*e*P	Pn	03 12 59.5	+1.8
SMAR	**Somma**	**0.91**	**6**	*e*P	Pn	03 12 59.2	+1.3
NLC	**Nalytchevo**	**0.91**	**27**	*e*P	Pn	03 12 58.2	+0.5
NLC				*e*S	Sn	03 13 11.2	-0.1
SDLR	**Sedlovina**	**0.93**	**8**	*e*P	Pn	03 12 59.2	+1.1
KRER	**Koryakskii**	**0.95**	**3**	*e*P	Pn	03 12 59.6	+1.3
KRX	**Arik**	**1.00**	**360**	*e*P	Pn	03 13 00.2	+1.3
APC	**Apacha**	**1.07**	**302**	*e*P	Pn	03 13 00.7	+1.1
SPN	**Mys Shipunski**	**1.11**	**48**	*e*P	Pn	03 13 01.4	+1.3
SPN				*e*S	Sn	03 13 18.0	+2.5
GNL	**Ganaly**	**1.41**	**342**	*e*P	Pn	03 13 04.4	+0.6
PAU	**Pauzhetka**	**1.45**	**233**	*e*P	Pn	03 13 05.0	+0.8

*NIED **08** 03:13:56.4, 39°.14N×142°.90E, h25km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.04; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-3.92; $M_{r\theta}$3.15; $M_{\theta\phi}$-1.27; $M_{r\phi}$6.48; Fault plane solution: $M_0$8.09000×10^{14} NP1: ϕ_s175.00000°, δ15.00000°, λ60.00000°. NP2:ϕ_s26.00000°, δ77.00000°, λ98.00000°.*

*JMA **08** 03:13:56.4±0.1, 39°.1N×0°.3×142°.9E±0°.6, h25km±1km, MV4.1/40, FAR E OFF SANRIKU*

*NEIC **08** 03:13:59.3±1.5, 39°.22N±0°.04×142°.8E±0°.2, h35km±2km, mb4.3/8, Error ellipse: s-maj=21.9km s-min=3.0km az=106.0*

*IDC **08** 03:13:59.1±3.1, 39°.19N×142°.82E, h39km±27km, mb3.7/10, mbtmp4.0/14, ML3.8/4, MS3.1/8, Error ellipse: s-maj=28.3km s-min=16.5km az=86.0*

ISC 08 03:13:56.5±0.9, 39°.14N±0°.04×142°.88E±0°.10, h21km±5km, n54, σ1s41/57, mb4.1/14, MS3.2/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.93**	**298**	*i* P	**Pb**	**03 14 13.5**	**-0.4**
MIYJ				*e*S	**Sb**	**03 14 25.8**	**0.0**
OFUJ	**Ofunato**	**0.94**	**267**	*i* P	**Pn**	**03 14 13.9**	**-0.5**
OFUJ				*e*S	**Sb**	**03 14 26.2**	**+0.1**
JTH	**Tanohata**	**1.12**	**316**	P	**Pn**	**03 14 16.5**	**-0.4**
JTH				*e*S	**Sn**	**03 14 31.3**	**-0.3**
JKMT	**Kesennumamotoy**	**1.14**	**254**	*i* P	**Pn**	**03 14 16.9**	**-0.4**
JKMT				*e*S	**Sn**	**03 14 31.2**	**-1.1**
JOM	**Ohasama**	**1.27**	**285**	*i* P	**Pn**	**03 14 19.1**	**+0.1**
JOM				*e*S	**Sn**	**03 14 35.5**	**0.0**
JMK	**Ichinoseki**	**1.30**	**262**	*e*P	**Pn**	**03 14 19.5**	**0.0**
JMK				*e*S	**Sn**	**03 14 36.2**	**-0.1**
JIO	**Ouri**	**1.38**	**241**	*i* P	**Pn**	**03 14 20.2**	**-0.2**
JIO				*e*S	**Sn**	**03 14 37.3**	**-0.8**
JANG	**Nango**	**1.62**	**320**	P	**Pn**	**03 14 23.7**	**-0.1**
JANG				*e*S	**Sn**	**03 14 43.8**	**-0.1**
JRG	**Rokugo**	**1.76**	**279**	*e*P	**Pn**	**03 14 27.0**	**+1.2**
JRG				*e*S	**Sn**	**03 14 49.0**	**+1.5**
JOU	**Okura**	**1.90**	**247**	*e*P	**Pn**	**03 14 28.6**	**+1.0**
JOU				*e*S	**Sn**	**03 14 52.5**	**+1.6**
JYK	**Kaneyama**	**1.97**	**264**	*e*P	**Pn**	**03 14 29.8**	**+1.1**
JYK				*e*S	**Sn**	**03 14 54.4**	**+1.6**
JAH	**Hinai**	**2.02**	**302**	*e*P	**Pn**	**03 14 30.2**	**+0.8**
JAH				*e*S	**Sn**	**03 14 55.4**	**+1.5**
JMM	**Marumori**	**2.07**	**233**	*e*P	**Pn**	**03 14 30.4**	**+0.3**
JYT	**Yasato**	**3.61**	**217**	Pn	**Pn**	**03 14 50.5**	**-0.7**
JEW	**Eniwo**	**3.85**	**344**	Pn	**Pn**	**03 14 53.9**	**-0.6**
MJAR	**Matsushiro Arr**	**4.52**	**236**	Pn	**Pn**	**03 15 06.5**	**+2.8**
MJAR	1.0nm,0.3s,baz=36,slow=13,SNR=92			LR	LR	03 17 08.6	
	comp=Z,205nm,18.6s,baz=162,slow=42 10nm,0.4s						
MAJO	**Matsushiro**	**4.52**	**236**		**Pn**	**03 15 06.7**	**+3.0**
MJB9	**Matsu-Tunnel**	**4.52**	**236**	Pn	**Pn**	**03 15 07.7**	**+4.0**
JKA	**Kamikawa-asahi**	**4.97**	**358**		**Pn**	**03 15 12.3**	**+2.4**
ASAJ	**Asahikawa**	**4.97**	**358**	Pn	**Pn**	**03 15 10.4**	**+0.5**
ASAJ	2.2nm,0.3s,baz=199,slow=16,SNR=9.1			Sn	**Sn**	**03 16 05.7**	**-1.1**
	1.6nm,0.3s,baz=156,slow=14,SNR=4.4 4.9nm,0.3s						
JGF	**Kuroka**	**5.64**	**233**		**Pn**	**03 15 22.1**	**+3.0**
INU	**Inuyama**	**6.02**	**233**	Pn	**Pn**	**03 15 26.1**	**+1.9**
JHJ2	**Mitsune**	**6.51**	**203**	Pn	**Pn**	**03 15 31.7**	**+0.7**
JHJ	**Hachijo jima 2**	**6.51**	**204**	Pn	**Pn**	**03 15 31.6**	**+0.5**
	7.2nm,0.3s,baz=55,slow=21,SNR=1.4						
JHJ				Sn	**Sn**	**03 16 39.7**	**-5.0**
	6.2nm,0.3s,baz=76,slow=8.9,SNR=1.7 71nm,0.5s						
JNU	**Nakatsue**	**11.41**	**242**	LR	LR	03 21 26.8	
	comp=Z,139nm,19.1s,baz=36,slow=39						
KSRS	**Korea Array**	**11.87**	**267**	LR	LR	03 21 03.8	
	comp=Z,76nm,18.3s,baz=65,slow=36						
KLR	**Kul'dur**	**12.85**	**325**	LR	LR	03 21 52.9	
	comp=Z,20nm,19.4s,baz=142,slow=37						
HILR	**Hailar Array B**	**19.47**	**310**	P	**P**	**03 18 19.7**	**-2.1**
	baz=119,slow=12 3.6nm,0.5s						
SONM	**Songino Array**	**27.64**	**300**	P	**P**	**03 19 42.4**	**-0.3**
	0.7nm,0.6s,baz=90,slow=8.3,SNR=4.7						
SONM				LR	LR	03 29 50.4	
	comp=Z,62nm,18.6s,baz=248,slow=34 0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.34**	**126**	T	T	03 50 27.3	
	baz=318,slow=75,SNR=80						
H11N1	**WAKE ISLAND Hy**	**28.35**	**126**	T	T	03 50 25.2	
	baz=318,slow=75,SNR=70						
H11N3	**WAKE ISLAND Hy**	**28.36**	**126**	T	T	03 50 26.9	
	baz=318,slow=75,SNR=74						
H11S1	**WAKE ISLAND Hy**	**29.14**	**128**	T	T	03 51 24.6	
	baz=318,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.14**	**128**	T	T	03 51 28.8	
	baz=318,slow=76,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	**29.16**	**128**	T	T	03 51 24.6	
	baz=318,slow=76,SNR=4.9						
ZAA0	**Zalesovo Array**	**41.38**	**311**	P	**P**	**03 21 39.8**	**-1.1**
ZALV	**Zalesovo Beam**	**41.38**	**311**	P	**P**	**03 21 40.9**	**0.0**
	1.2nm,0.5s,baz=86,slow=8.0,SNR=5.6						
ZALV				LR	LR	03 39 26.7	
	comp=Z,36nm,21.1s,baz=32,slow=37 1.2nm,0.5s						
G18K	**Tagagawik**	**42.25**	**31**	P	**P**	**03 21 48.6**	**+0.7**
MKAR	**Makanchi Array**	**44.01**	**301**	P	**P**	**03 22 02.3**	**-0.1**
	1.9nm,0.8s,baz=81,slow=9.7,SNR=18 1.9nm,0.8s						
KURK	**Kurchatov**	**45.57**	**307**	P	**P**	**03 22 14.1**	**-0.6**
KURBB	**Kurchatov Arra**	**45.65**	**307**	P	**P**	**03 22 15.2**	**-0.1**
	5.3nm,0.6s,baz=81,slow=8.4,SNR=27 5.3nm,0.6s						
E23K	**Chandalar**	**46.02**	**29**	P	**P**	**03 22 18.9**	**+0.7**
E23K				IAmb	IAmb	03 22 26.0	
	comp=Z,3.1nm,1.1s						
ILAR	**Eielson Array**	**47.10**	**33**	P	**P**	**03 22 27.1**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=269,slow=5.9,SNR=4.3 comp=Z,0.3nm,0.7s						
BVAR	**Borovoye Array**	**50.03**	**311**	P	**P**	**03 22 48.9**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=62,slow=7.5,SNR=7.4 comp=Z,1.1nm,0.6s						
AAK	**Ala-Archa**	**50.53**	**297**	LR	LR	03 43 40.1	
	comp=Z,18nm,20.2s,baz=147,slow=35						
INK	**Inuvik**	**51.98**	**28**	P	**P**	**03 23 04.8**	**+1.2**
INK				IAmb	IAmb	03 23 26.4	
	comp=Z,5.6nm,1.4s						
ARTI	**Arti**	**55.67**	**318**	LR	LR	03 48 29.0	
	comp=Z,45nm,18.0s,baz=21,slow=37						
ARTI	**Arti**	**55.67**	**318**	P	**P**	**03 23 30.8**	**0.0**
AB31	**Akbulak array**	**57.48**	**310**	P	**P**	**03 23 43.7**	**-0.1**
AB31				IAmb	IAmb	03 23 44.8	
	comp=Z,5.4nm,1.4s						
WR8	**Warramunga Arr**	**59.31**	**189**	P	**P**	**03 23 55.8**	**-1.0**
WR8				IAmb	IAmb	03 24 33.3	
	comp=Z,4.5nm,1.2s						
WRA	**Warramunga Arr**	**59.32**	**189**	P	**P**	**03 23 56.4**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=5.9,slow=6.7,SNR=7.5 comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**63.04**	**189**	P	**P**	**03 24 22.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=21,slow=5.9,SNR=1.7 comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**67.49**	**332**	P	**P**	**03 24 50.0**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=51,slow=6.4,SNR=1.3 comp=Z,1.6nm,0.9s						
HFS	**Hagfors**	**72.64**	**336**	P	**P**	**03 25 21.8**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=54,slow=7.3,SNR=4.5 comp=Z,2.6nm,0.9s						

*BEO **08** 03:16:44.6±0.4, 44°.92N×16°.72E, h0km, ML2.2/5*

*VIE **08** 03:16:44.1±0.5, 45°.10N×16°.76E, h8km±1km, mb2.5/11, ml2.4/16, Error ellipse: s-maj=3.5km s-min=3.1km az=11.0 98 km SE of Zagreb*

*PRU **08** 03:16:49.0, 45°.56N×17°.11E, h1km*

ISC 08 03:16:43.7±1.1, 45°.08N±0°.02×16°.75E±0°.02, h4km±10km, n56, σ1s48/100, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.45**	**137**	*e*Pg	**Pg**	**03 16 51.3**	**-1.1**
BLY				*e*Sg	**Sg**	**03 16 57.2**	**-1.1**
MOSL	**Moslavina**	**0.53**	**0**	*e*Pg	**Pb**	**03 16 54.4**	**-1.2**
MOSL				Sg	**Sb**	**03 17 02.8**	**-0.8**
PLIT	**Plitvice**	**0.83**	**256**	*i* Pg	**Pg**	**03 16 59.1**	**-0.4**
PLIT				Sg	**Sg**	**03 17 09.3**	**-0.9**
UDBI	**Udbina**	**0.90**	**232**	*i* Pg	**Pg**	**03 17 00.3**	**-0.6**
UDBI				Sg	**Sg**	**03 17 11.4**	**-1.1**
ZAG	**Zagreb**	**0.92**	**324**	*e*Pg	**Pb**	**03 17 02.1**	**-0.1**
ZAG				Sg	**Sn**	**03 17 16.8**	**-0.2**
PTJ	**Puntijarka**	**0.99**	**326**	*e*Pg	**Pb**	**03 17 03.4**	**-0.1**
PTJ				Sg	**Sn**	**03 17 17.4**	**-1.6**
OZLJ	**Ozalj**	**1.05**	**301**	*e*Pg	**Pg**	**03 17 03.7**	**-0.1**
OZLJ				Sg	**Sb**	**03 17 18.3**	**-0.2**
KALN	**Kalnik**	**1.07**	**349**	*i* Pg	**Pn**	**03 17 04.7**	**-0.8**
KALN				Sg	**Sn**	**03 17 20.7**	**-0.1**
KIJV	**Kijevo**	**1.11**	**193**	*i* Pg	**Pg**	**03 17 03.5**	**-1.3**
KIJV				Sg	**Sg**	**03 17 17.8**	**-1.3**
GCIS	**Gornji Cirnik**	**1.11**	**315**	*i* Pg	**Pb**	**03 17 05.4**	**-0.1**
GCIS				IAML		03 17 25.5	
	comp=Z,29nm,0.2s						
BOJS	**Bojanci**	**1.14**	**292**	*i* Pg	**Pg**	**03 17 05.0**	**-0.5**
BOJS				*e*Sg	**Sn**	**03 17 21.5**	**-1.0**
BOJS				IAML		03 17 26.7	
	comp=Z,32nm,0.1s						
LOBO	**Lobor**	**1.17**	**336**	*i* Pg	**Pn**	**03 17 06.3**	**-0.6**
LOBO				Sg	**Sn**	**03 17 24.0**	**+0.6**
MORI	**Morici**	**1.43**	**212**	*i* Pg	**Pn**	**03 17 09.8**	**-0.5**
MORI				Sg	**Sn**	**03 17 28.2**	**-1.4**
NVLJ	**Novalja**	**1.44**	**249**	*e*Pg	**Pn**	**03 17 09.8**	**-0.6**
NVLJ				Sg	**Sg**	**03 17 31.5**	**+1.8**
RABC	**Rab**	**1.44**	**257**	*e*Pg	**Pn**	**03 17 10.0**	**-0.5**
RABC				Sg	**Sg**	**03 17 31.0**	**+1.2**
VIRC	**Vir**	**1.45**	**237**	*i* Pg	**Pn**	**03 17 10.1**	**-0.5**
VIRC				Sg	**Sn**	**03 17 29.5**	**-0.5**
RICI	**Ricice**	**1.61**	**170**	*e*Pg	**Pn**	**03 17 13.3**	**+0.4**
RICI				Sg	**Sb**	**03 17 35.9**	**+1.2**
RIY	**Rijeka**	**1.62**	**279**	*e*Pg	**Pn**	**03 17 12.9**	**-0.1**
RIY				*e*Sg	**Sg**	**03 17 36.3**	**+0.6**
DUGI	**Dugi Otok**	**1.63**	**229**	*e*Pn	**Pn**	**03 17 13.3**	**+0.1**
DUGI				Sn	**Sn**	**03 17 35.2**	**+0.6**
ZIRJ	**Zirje**	**1.64**	**209**	*i* Pg	**Pn**	**03 17 13.9**	**+0.8**
ZIRJ				Sg	**Sn**	**03 17 34.8**	**+0.1**
HVAR	**Hvar**	**1.92**	**187**	*e*Pn	**Pn**	**03 17 17.9**	**+0.8**
HVAR				Sn	**Sb**	**03 17 43.7**	**+0.2**
SKDS	**Skadanscina**	**1.99**	**284**	*i* Pn	**Pn**	**03 17 18.7**	**+0.6**
SKDS				*e*Sn	**Sb**	**03 17 45.8**	**+0.3**
SKDS				IAML		03 17 53.1	
	comp=Z,12nm,0.2s						
SOKA	**Soboth**	**2.00**	**324**	*e*Pn	**Pn**	**03 17 17.7**	**-0.6**
	comp=Z,0.6nm,0.2s						
SOKA				*e*Sn	**Sn**	**03 17 43.0**	**-0.8**
	comp=Z,4.9nm,0.3s						
OBKA	**Obir**	**2.10**	**314**	*e*Pn	**Pn**	**03 17 19.6**	**-0.1**
	comp=Z,3.4nm,0.2s						
OBKA				*e*Sn	**Sn**	**03 17 45.9**	**-0.4**
	comp=Z,23nm,0.5s						
FRGS	**Fruska Gora**	**2.17**	**87**	*e*Pg	**Pb**	**03 17 22.6**	**-0.9**
FRGS				*e*Sg	**Sg**	**03 17 52.8**	**-0.4**
BBLS	**Lazi&#263i**	**2.26**	**122**	*e*Pn	**Pb**	**03 17 24.8**	**-0.2**
STON	**Ston**	**2.31**	**162**	*i* Pn	**Pn**	**03 17 24.3**	**+1.8**
STON				Sn	**Sn**	**03 17 52.9**	**+1.4**
STON	**Ston**	**2.31**	**162**	*e*Pg	**Pn**	**03 17 23.7**	**+1.2**
STON				*e*Sg	**Sn**	**03 17 51.6**	**+0.2**
LSTV	**Lastovo**	**2.32**	**177**	*e*Pn	**Pn**	**03 17 23.5**	**+0.9**
LSTV				Sn	**Sn**	**03 17 53.3**	**+1.8**
ARSA	**Arzberg**	**2.33**	**339**	*e*Pn	**Pn**	**03 17 22.5**	**-0.3**
	comp=Z,1.4nm,0.3s						
ARSA				*e*Sn	**Sn**	**03 17 51.7**	**-0.2**
	comp=Z,5.8nm,0.3s						
DIVS	**Divibare**	**2.52**	**112**	*e*Pg	**Pb**	**03 17 30.6**	**+1.2**
DIVS				*e*Sg	**Sb**	**03 18 01.2**	**+0.4**
DBRK	**Dubrovnik**	**2.62**	**157**	*e*Pn	**Pn**	**03 17 27.7**	**+0.9**
DBRK				Sn	**Sn**	**03 18 00.7**	**+1.8**
RONA	**Rosalia, Aust

*AFAD **08** 03:46:41.1, 39°66N×26°14E, h10km±1km, ML3.1*
ISC 08 03:46:41.2±0.8, 39°65N±0°01×26°11E±0°02, h15km±5km, n107, σ0660/138, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.15**	**172**	P	**Pg**	**03 46 44.8**	**-0.2**
KOCA				IAML		03 46 47.0	
	comp=N,5μm,0.3s						
KOCA				S	**Sg**	**03 46 47.4**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.19**	**175**	Pg	**Pg**	**03 46 45.2**	**-0.5**
GPNR				Sg	**Sg**	**03 46 49.4**	**+0.7**
BOZC	**Bozcaada**	**0.20**	**347**	Pg	**Pg**	**03 46 45.7**	**-0.1**
BOZC				Sg	**Sg**	**03 46 48.9**	**-0.1**
BOZC	**Bozcaada**	**0.20**	**347**	P	**Pg**	**03 46 45.6**	**-0.3**
BOZC				P	**Pg**	**03 46 45.7**	**-0.1**
BOZC				S	**Sg**	**03 46 48.6**	**-0.4**
BOZC				S		03 46 48.8	
BOZC				IAML		03 46 49.0	
	comp=N,5μm,0.3s						
BOZC				IAML		03 46 49.0	
	comp=N,3μm,0.2s						
BOZC				IAML		03 46 49.0	
	comp=E,7μm,0.3s						
BOZC				IAML		03 46 49.0	
	comp=E,8μm,0.3s						
EZNE	**Ezine-Canakkal**	**0.22**	**61**	Pg	**Pb**	**03 46 46.2**	**-0.7**
EZN	**Ezine**	**0.24**	**43**	Pg	**Pg**	**03 46 46.4**	**-0.1**
EZN				Sg	**Sg**	**03 46 49.9**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.35**	**74**	P	**Pg**	**03 46 48.3**	**0.0**
BAYC				S	**Sg**	**03 46 52.5**	**-0.7**
BAYC				IAML		03 46 53.0	
	comp=N,3μm,0.3s						
BAYC				IAML		03 46 53.0	
	comp=E,2μm,0.2s						
PRK	**Paraskevi**	**0.42**	**163**	P	**Pg**	**03 46 49.5**	**-0.1**
PRK				S	**Sg**	**03 46 55.7**	**+0.4**
PRK	**Paraskevi**	**0.42**	**163**	P	**Pg**	**03 46 49.3**	**-0.3**
PRK				S	**Sg**	**03 46 54.3**	**-1.0**
CNKL	**anakkale-Mer**	**0.47**	**27**	P	**Pg**	**03 46 49.9**	**-0.6**
CNKL				P	**Pb**	**03 46 50.2**	**-0.9**
CNKL				S	**Sb**	**03 46 57.1**	**-0.7**
SIGR	**SIGRI**	**0.48**	**205**	Pg	**Pg**	**03 46 50.3**	**-0.3**
SIGR	**SIGRI**	**0.48**	**205**	P	**Pg**	**03 46 50.4**	**-0.3**
SIGR				S	**Sg**	**03 46 57.3**	**+0.2**
SIGR	**SIGRI**	**0.48**	**205**	P	**Pg**	**03 46 50.2**	**-0.5**
SIGR				S	**Sg**	**03 46 57.0**	**-0.1**
COMU	**Canakkale**	**0.53**	**31**	Pg	**Pg**	**03 46 51.3**	**-0.4**
GOAD	**anakkale-G¶**	**0.54**	**343**	P	**Pg**	**03 46 51.8**	**0.0**
GOAD				S	**Sg**	**03 46 58.9**	**-0.1**
GOAD				IAML		03 46 59.0	
	comp=N,2μm,0.3s						
AYVA	**Ayvalik**	**0.56**	**127**	P	**Pg**	**03 46 52.0**	**-0.2**
GADA	**Gvkgeada**	**0.57**	**343**	Pg	**Pg**	**03 46 51.5**	**-0.9**
GADA	**Gvkgeada**	**0.57**	**343**	P	**Pg**	**03 46 52.2**	**-0.2**
YAYO	**Edremit-Balk**	**0.74**	**92**	Pg	**Pb**	**03 46 55.6**	**-0.2**
BUHA	**Balikesir, Bur**	**0.76**	**101**	P	**Pb**	**03 46 55.8**	**-0.2**
BUHA				S	**Sg**	**03 47 05.7**	**-0.2**
BUHA				IAML		03 47 06.0	
	comp=E,609nm,0.5s						
BUHA				IAML		03 47 08.0	
	comp=N,644nm,0.5s						
LIA	**Limnos Island**	**0.76**	**290**	P	**Pg**	**03 46 55.7**	**-0.2**
LIA				S	**Sb**	**03 47 07.0**	**+0.8**
LIA	**Limnos Island**	**0.76**	**290**	P	**Pg**	**03 46 55.5**	**-0.5**
LIA				S	**Sg**	**03 47 06.2**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.80**	**20**	Pg	**Pg**	**03 46 56.4**	**-0.3**
CANM	**Can-anakkale**	**0.81**	**63**	Pg	**Pb**	**03 46 56.8**	**-0.1**
LAPS	**Lapseki, ANA**	**0.82**	**42**	P	**Pg**	**03 46 56.8**	**-0.4**
LAPS				S	**Sb**	**03 47 07.8**	**-0.3**
LAPS				IAML		03 47 08.0	
	comp=N,482nm,0.3s						
DKL	**Dikili**	**0.84**	**133**	Pg	**Pb**	**03 46 57.5**	**+0.1**
LMN1	**MIRINA LIMNOU**	**0.84**	**286**	P	**Pg**	**03 46 57.6**	**0.0**
LPK	**Lapseki**	**0.88**	**34**	Pg	**Pg**	**03 46 57.7**	**-0.5**
IZMD	**zmir-Dikili-**	**0.92**	**136**	P	**Pb**	**03 46 59.1**	**+0.3**
IZMD				P	**Pn**	**03 46 59.3**	**-0.3**
IZMD				S	**Sb**	**03 47 11.6**	**+0.8**
YENI	**Yenice-Canakka**	**0.92**	**71**	Pg	**Pb**	**03 46 58.9**	**+0.2**
SMTH	**Samothraki Isl**	**0.94**	**332**	P	**Pb**	**03 46 59.4**	**+0.3**
SMTH	**Samothraki Isl**	**0.94**	**332**	P	**Pg**	**03 46 58.7**	**-0.6**
SMTH				S	**Sg**	**03 47 11.3**	**-0.3**
KARB	**zmir-Karabur**	**1.01**	**167**	P	**Pg**	**03 47 00.3**	**-0.4**
KARB				S	**Sg**	**03 47 13.4**	**-0.5**
KARB				IAML		03 47 15.0	
	comp=E,1μm,0.4s						
KARB				IAML		03 47 16.0	
	comp=N,730nm,0.3s						
ZEDA	**zmir-Bergama**	**1.01**	**132**	P	**Pg**	**03 47 00.2**	**-0.5**
BIGA	**Biga-Canakkale**	**1.02**	**51**	Pg	**Pb**	**03 47 00.6**	**+0.1**
CAVK	**Edirne/Enez-Ca**	**1.04**	**2**	P	**Pg**	**03 47 00.6**	**-0.7**
FOCM	**Foa**	**1.05**	**153**	Pg	**Pg**	**03 47 01.2**	**-0.2**
ERIK	**Erikli-Kesan**	**1.07**	**17**	Pg	**Pg**	**03 47 00.8**	**-1.0**
GOKT	**Kean, EDRN**	**1.09**	**21**	P	**Pb**	**03 47 01.0**	**-0.7**
GOKT				S	**Sb**	**03 47 16.2**	**+0.6**
GOKT				IAML		03 47 18.0	
	comp=N,562nm,0.3s						
ENEZ	**Enez**	**1.09**	**2**	Pn	**Pb**	**03 47 01.7**	**0.0**
ENEZ	**Enez**	**1.09**	**2**	P	**Pg**	**03 47 01.9**	**-0.3**
ENEZ				S	**Sn**	**03 47 17.3**	**+0.7**
KRBN	**Karaburun**	**1.11**	**162**	Pn	**Pb**	**03 47 02.3**	**+0.3**
BAGT	**Foa**	**1.15**	**150**	P	**Pb**	**03 47 02.8**	**+0.1**
BAGT				S	**Sb**	**03 47 17.3**	**0.0**
BAGT				IAML		03 47 20.0	
	comp=N,456nm,0.6s						
BALY	**Balya**	**1.17**	**85**	P	**Pn**	**03 47 03.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.18**	**50**	Pn	**Pb**	**03 47 03.1**	**-0.1**
ATIT	**Gnen**	**1.20**	**68**	P	**Pb**	**03 47 03.6**	**0.0**
ATIT				S	**Sg**	**03 47 19.2**	**-0.6**
ATIT				IAML		03 47 21.0	
	comp=E,1μm,0.6s						
ATIT				IAML		03 47 22.0	
	comp=N,868nm,0.3s						
SOMA	**Soma-Manisa**	**1.21**	**114**	Pn	**Pg**	**03 47 04.1**	**-0.3**
ALN	**Alexandroupoli**	**1.25**	**358**	Pn	**Pn**	**03 47 04.3**	**+0.2**
ALN	**Alexandroupoli**	**1.25**	**358**	S	**Sn**	**03 47 21.5**	**+0.9**
ALN	**Alexandroupoli**	**1.25**	**358**	P	**Pn**	**03 47 03.9**	**-0.2**
ALN				S	**Sb**	**03 47 20.8**	**+0.5**
KESN	**Edirne-Kesan**	**1.25**	**20**	P	**Pn**	**03 47 04.0**	**-0.5**
CHOS	**Chios island**	**1.26**	**182**	Pn	**Pn**	**03 47 04.6**	**+0.3**
CHOS	**Chios island**	**1.26**	**182**	P	**Pn**	**03 47 03.5**	**-0.8**
CHOS	**Chios island**	**1.26**	**182**	P	**Pn**	**03 47 04.0**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.27**	**102**	P	**Pb**	**03 47 04.9**	**+0.1**
GONE	**Gonen-Balikesi**	**1.27**	**71**	Pn	**Pg**	**03 47 05.2**	**-0.5**
CAMT	**Merkez**	**1.29**	**134**	P	**Pn**	**03 47 04.9**	**+0.2**
CAMT				S	**Sb**	**03 47 21.5**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.32**	**38**	Pn	**Pn**	**03 47 05.3**	**+0.2**
SART	**Tekirdag**	**1.32**	**38**	P	**Pn**	**03 47 04.0**	**-1.1**
BALB	**Balikesir**	**1.36**	**90**	Pn	**Pn**	**03 47 06.1**	**+0.5**
BKES	**Balkesir-Mer**	**1.40**	**86**	P	**Pn**	**03 47 06.7**	**+0.5**
THAS	**Thassos island**	**1.44**	**312**	P	**Pn**	**03 47 07.6**	**+1.0**
ZEYE	**Izmir, Urla-Ze**	**1.44**	**168**	P	**Pn**	**03 47 06.3**	**-0.4**
GAZK	**Gazikoy-TEKIRD**	**1.44**	**40**	Pn	**Pn**	**03 47 07.1**	**+0.4**
BLKS	**Balkesir-Sus**	**1.45**	**80**	P	**Pn**	**03 47 07.3**	**+0.4**
BLKS				P	**Pb**	**03 47 07.5**	**-0.3**
MADA	**Marmara adas**	**1.45**	**49**	P	**Pn**	**03 47 07.4**	**+0.6**
BLCB	**Balcova**	**1.45**	**150**	Pn	**Pb**	**03 47 07.8**	**-0.1**
CMHT	**Manyas**	**1.48**	**75**	P	**Pn**	**03 47 07.1**	**-0.1**
CMHT				S	**Sb**	**03 47 27.1**	**+0.3**
CMHT				IAML		03 47 31.0	
	comp=N,468nm,0.3s						
MRMT	**Marmara Adasi**	**1.48**	**50**	Pn	**Pn**	**03 47 07.9**	**+0.5**
EDC	**Edincik**	**1.52**	**62**	Pn	**Pb**	**03 47 08.6**	**-0.3**
AKHS	**Akhisar**	**1.53**	**120**	P	**Pn**	**03 47 07.9**	**0.0**
AKS	**Akhisar**	**1.53**	**120**	Pn	**Pn**	**03 47 08.7**	**+0.8**
UKOP	**Uzunkopru-Edir**	**1.53**	**15**	Pn	**Pn**	**03 47 08.8**	**+0.9**
SFL1	**Soufli**	**1.55**	**5**	P	**Pn**	**03 47 08.4**	**+0.2**
SUSR	**Susurluk-Balik**	**1.55**	**78**	Pn	**Pn**	**03 47 09.0**	**+0.8**
RDO	**Rodhopi**	**1.56**	**344**	Pn	**Pn**	**03 47 08.9**	**+0.6**
RDO	**Rodhopi**	**1.56**	**344**	S	**Sb**	**03 47 29.6**	**+0.3**
RDO	**Rodhopi**	**1.56**	**344**	P	**Pn**	**03 47 09.0**	**+0.7**
BAND	**Balkesir-Ban**	**1.68**	**65**	P	**Pn**	**03 47 10.0**	**0.0**
DGB	**zmir**	**1.70**	**159**	P	**Pn**	**03 47 10.1**	**-0.1**
GORD	**Gordes-Manisa**	**1.76**	**114**	Pn	**Pn**	**03 47 11.8**	**+0.6**
DUVT	**Torbali**	**1.77**	**143**	P	**Pb**	**03 47 12.9**	**-0.3**
OUR	**Ouranopolis**	**1.77**	**293**	P	**Pn**	**03 47 10.8**	**-0.5**
OUR	**Ouranopolis**	**1.77**	**293**	P	**Pn**	**03 47 11.4**	**+0.2**
KTTT	**Salihli**	**1.81**	**121**	P	**Pn**	**03 47 11.8**	**0.0**
KAVA	**Kavala**	**1.82**	**318**	P	**Pn**	**03 47 11.5**	**-0.4**
MURA	**Muratl, TEK**	**1.83**	**34**	P	**Pb**	**03 47 13.8**	**-0.6**
MURA				S	**Sb**	**03 47 36.8**	**-0.2**
SMG	**Samos**	**2.02**	**163**	P	**Pn**	**03 47 15.2**	**+0.6**
KDZ	**Kurdzhali**	**2.07**	**344**	*eP*	**Pn**	**03 47 16.1**	**+0.8**
ORLT	**Orhaneli**	**2.18**	**79**	P	**Pg**	**03 47 21.8**	**-1.1**
KIRK	**Kırklareli**	**2.26**	**19**	P	**Pn**	**03 47 19.9**	**+1.9**
RZN	**Rozhen**	**2.30**	**333**	*eP*	**Pb**	**03 47 21.3**	**-1.1**
VIZE	**Kirklareli, Vi**	**2.33**	**34**	P	**Pn**	**03 47 19.6**	**+0.6**
NVR	**Nevrokopi**	**2.42**	**315**	P	**Pn**	**03 47 20.0**	**-0.2**
DIM	**Dimitrovgrad**	**2.43**	**351**	*eP*	**Pb**	**03 47 20.5**	**+1.0**
HORT	**Hortiatis**	**2.50**	**293**	P	**Pn**	**03 47 21.4**	**+0.1**
VLY	**Voula,Athens**	**2.55**	**226**	P	**Pn**	**03 47 21.5**	**-0.5**
MMB	**Musomishta**	**2.62**	**317**	*eP*	**Pn**	**03 47 23.1**	**+0.2**
PLD	**Plovdiv**	**2.70**	**338**	*eP*	**Pg**	**03 47 31.2**	**-1.8**
JMB	**Yambol**	**2.86**	**6**	*eP*	**Pb**	**03 47 33.3**	**+1.5**
KNT	**Kendrikon**	**2.88**	**303**	P	**Pn**	**03 47 26.8**	**+0.3**
MAKR	**Makrakomi, Fth**	**3.15**	**260**	P	**Pn**	**03 47 30.1**	**-0.1**
KKB	**Krupnik**	**3.15**	**315**	*eP*	**Pb**	**03 47 35.2**	**-1.7**
GUR	**Goura**	**3.41**	**241**	P	**Pn**	**03 47 33.5**	**-0.3**
ANX	**Ano Chora**	**3.43**	**253**	P	**Pn**	**03 47 34.5**	**+0.4**
PVL	**Pavlikeni**	**3.54**	**349**	*eP*	**Pn**	**03 47 37.9**	**+2.3**
SZH	**Strazhitsa**	**3.62**	**358**	*eP*	**Pn**	**03 47 37.9**	**+1.3**

*IDC **08** 04:08:14.6±1.1, 36°67N×5°53E, h0km, mb3.5/5, mbtmp3.5/7, ML3.5/2, MS2.9/1, Error ellipse: s-maj=27.7km s-min=22.2km az=18.0*
*CRAAG **08** 04:08:16.3, 36°72N×5°66E, Ml3.5, Algrie 08km SE El-Aouana*
*MDD **08** 04:08:17.6±0.5, 36°79N×5°70E, h2km±4km, Mb4.2/60, M_mb3.5/44, Error ellipse: s-maj=4.1km s-min=2.2km az=164.0*
*CNRM **08** 04:08:23.1, 36°77N×4°93E, h0km*
ISC 08 04:08:17.2±0.6, 36°78N±0°04×5°68E±0°03, h18km, n88, σ1973/115, mb3.5/4, 24C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.28**	**146**	P	**Pg**	**04 08 22.6**	**-0.9**
CBOS	**Bilal Ibnou Ra**	**0.51**	**89**	P	**Pg**	**04 08 27.3**	**-0.1**
CBHR	**Beni Haroun da**	**0.52**	**114**	P	**Pg**	**04 08 27.1**	**-0.6**
SET	**Setif**	**0.62**	**201**	P	**Pb**	**04 08 28.0**	**-1.5**
COAT	**Oued Athmania**	**0.73**	**138**	P	**Pb**	**04 08 30.4**	**-1.0**
CAZD	**Ain Tagrout**	**0.74**	**215**	P	**Pb**	**04 08 30.4**	**-1.1**
CASM	**Ain Smara**	**0.83**	**128**	P	**Pb**	**04 08 32.3**	**-0.9**
CTCHA	**Tamokra**	**0.90**	**247**	P	**Pb**	**04 08 33.3**	**-0.9**
CKFL	**Kef-Lekhel**	**0.92**	**114**	P	**Pb**	**04 08 34.4**	**-0.3**
CTEI	**Djebel Teioual**	**0.93**	**141**	P	**Pb**	**04 08 34.5**	**-0.3**
CAEH	**'Ain El Ouahch**	**0.94**	**90**	P	**Pb**	**04 08 35.2**	**+0.3**
CJSR	**Ain Djasser**	**0.94**	**167**	P	**Pb**	**04 08 35.7**	**+0.7**
CSGS	**Sigus**	**1.05**	**128**	P	**Pb**	**04 08 37.3**	**+0.4**
CBST	**Bordj Sabath**	**1.20**	**108**	P	**Pn**	**04 08 39.7**	**+0.5**
ATKB	**Taksebt**	**1.26**	**265**	P	**Pn**	**04 08 39.7**	**-0.1**
CTGD	**Timgad**	**1.43**	**151**	P	**Pn**	**04 08 42.4**	**+0.1**
CKTS	**El Kantara**	**1.55**	**180**	P	**Pn**	**04 08 46.2**	**+2.2**
AKET	**Djebel Ketaf**	**1.62**	**244**	P	**Pn**	**04 08 47.6**	**+2.6**
ABMS	**Boumerdes**	**1.77**	**270**	P	**Pn**	**04 08 45.5**	**-1.3**
ABSD	**Ouled Sidi Bra**	**1.80**	**222**	P	**Pn**	**04 08 48.1**	**+0.7**
CRHA	**Rehia**	**1.88**	**122**	P	**Pn**	**04 08 49.1**	**+0.6**
CBBAR	**Babar**	**2.04**	**143**	P	**Pn**	**04 08 54.0**	**+0.2**
CBOGS	**Bogous**	**2.20**	**91**	P	**Pn**	**04 08 53.8**	**+1.0**
AFRS	**Ain Fares**	**2.28**	**206**	P	**Pn**	**04 08 54.5**	**+0.5**
ABRIN	**Birine**	**2.37**	**242**	P	**Pn**	**04 08 57.6**	**+2.4**
ABKD	**Sidi Amar**	**2.72**	**266**	P	**Pb**	**04 09 06.9**	**+1.6**
CNGR	**Negrine**	**2.74**	**147**	P	**Pn**	**04 09 02.1**	**+1.8**
AFDJ	**Sidi Ladjel**	**2.87**	**242**	P	**Pn**	**04 09 03.6**	**+1.6**
EDDR	**Deurdeur**	**2.90**	**255**	P	**Pb**	**04 09 09.6**	**+1.2**
KEST	**Kesra**	**3.14**	**108**	Pn	**Pn**	**04 09 07.2**	**+1.3**
	9.7nm,0.3s,baz=292,slow=4.4,SNR=114						
KEST				Sn	**Sn**	**04 09 45.7**	**+2.8**
	9.5nm,0.3s,baz=17,slow=17,SNR=7.0						
	88nm,0.7s						
EBGR	**Bougara**	**3.26**	**249**	P	**Pn**	**04 09 10.3**	**+2.8**
MAHO	**Mahon**	**3.30**	**341**	Pn	**Pn**	**04 09 09.2**	**+1.3**
MAHO				Sn	**Sn**	**04 09 43.6**	**-3.1**
EZEK	**Zmalet El Emir**	**3.34**	**236**	P	**Pn**	**04 09 11.9**	**+3.3**
ETOS	**Mallorca**	**3.74**	**324**	Pn	**Pn**	**04 09 15.0**	**+1.1**
ETOS				Sn	**Sn**	**04 09 53.3**	**-4.2**
ETOS	**Mallorca**	**3.74**	**324**	P	**Pn**	**04 09 14.5**	**+0.5**
ETOS				⇑*i*Vmb_VC		04 09 15.6	
	629nm,SNR=4.9						
ETOS				S	**Sn**	**04 09 56.6**	**-0.9**
VSL	**Villasalto**	**3.98**	**46**	P	**Pn**	**04 09 18.2**	**+0.9**
VSL				S	**Sn**	**04 10 01.6**	**-1.9**
EIBI	**Ibiza**	**4.10**	**304**	Pn	**Pn**	**04 09 20.0**	**+1.2**
EIBI				Sn	**Sn**	**04 10 05.3**	**-1.0**
EIBI	**Ibiza**	**4.10**	**304**	P	**Pn**	**04 09 19.5**	**+0.6**
EIBI				⇑*i*Vmb_VC		04 09 22.4	
	452nm,SNR=2.6						
EIBI				S	**Sn**	**04 10 04.9**	**-1.4**
ECOL	**Islas Columbre**	**5.01**	**310**	P	**Pn**	**04 09 31.6**	**+0.2**
ECOL				S	**Sn**	**04 10 27.1**	**-1.7**
EBEN2	**Beniarda presa**	**5.02**	**294**	P	**Pn**	**04 09 32.5**	**+0.9**
EBEN2				⇑*i*Vmb_VC		04 09 34.9	
	233nm,SNR=1.6						
EBEN2				S	**Sn**	**04 10 27.0**	**-2.2**
AFON	**Font Roja**	**5.28**	**293**	P	**Pn**	**04 09 36.3**	**+1.1**
AFON				⇑*i*Vmb_VC		04 09 39.7	
	104nm,SNR=1.2						
CART	**Cartagena**	**5.39**	**281**	Pn	**Pn**	**04 09 36.8**	**+0.1**
CART				Sn	**Sn**	**04 10 34.0**	**-4.3**
CART	**Cartagena**	**5.39**	**281**	P	**Pn**	**04 09 36.7**	**0.0**
EMUR	**La Murta**	**5.62**	**283**	Pn	**Pn**	**04 09 40.7**	**+0.9**
EMUR	**La Murta**	**5.62**	**283**	P	**Pn**	**04 09 41.0**	**+1.2**
EMUR				⇑*i*Vmb_VC		04 09 42.4	
	61nm,SNR=1.3						
EMUR				S	**Sn**	**04 10 43.6**	**-0.3**
EPOB	**Poblet**	**5.80**	**323**	P	**Pn**	**04 09 42.6**	**+0.2**
EPOB				⇑*i*Vmb_VC		04 09 46.4	
	161nm,SNR=2.6						
EPOB				S	**Sn**	**04 10 45.4**	**-3.0**
LINA	**Linosa Island**	**5.87**	**97**	P	**Pn**	**04 09 43.7**	**+0.5**
LINA				S	**Sn**	**04 10 48.0**	**-2.1**
ERTA	**Horta de San J**	**5.90**	**317**	P	**Pn**	**04 09 44.5**	**+0.9**
ERTA				⇑*i*Vmb_VC		04 09 47.1	
	99nm,SNR=1.1						
ERTA				S	**Sn**	**04 10 47.8**	**-2.9**
EVIV	**Cofrentes, Val**	**5.91**	**297**	P	**Pn**	**04 09 44.9**	**+1.1**
EVIV				⇑*i*Vmb_VC		04 09 47.5	
	161nm,SNR=2.1						
EVIV				S	**Sn**	**04 10 49.3**	**-1.9**
ECHE	**Chera**	**5.94**	**300**	Pn	**Pn**	**04 09 45.9**	**+1.6**
ECHE	**Chera**	**5.94**	**300**	P	**Pn**	**04 09 45.6**	**+1.3**
ECHE				⇑*i*Vmb_VC		04 09 47.9	
	110nm,SNR=1.5						
TLOR	**Lorca, Murcia**	**5.95**	**281**	Pn	**Pn**	**04 09 44.9**	**+0.6**
TLOR	**Lorca, Murcia**	**5.95**	**281**	P	**Pn**	**04 09 44.9**	**+0.6**
TLOR				S	**Sn**	**04 10 51.6**	**-0.3**
EMOS	**Mosqueruela**	**6.00**	**308**	P	**Pn**	**04 09 46.6**	**+1.4**
EMOS				⇑*i*Vmb_VC		04 09 49.3	
	116nm,SNR=1.4						
EMOS				S	**Sn**	**04 10 50.3**	**-3.2**
ETOB	**Tobarra**	**6.02**	**290**	Pn	**Pn**	**04 09 48.6**	**+3.2**
ETOB				Sn	**Sn**	**04 10 52.8**	**-1.1**
ETOB	**Tobarra**	**6.02**	**290**	P	**Pn**	**04 09 48.1**	**+2.6**
ETOB				⇑*i*Vmb_VC		04 09 51.5	
	91nm,SNR=1.2						
ETOB				S	**Sn**	**04 10 53.1**	**-0.9**
EMIR	**Miracle**	**6.05**	**329**	P	**Pn**	**04 09 47.1**	**+1.3**
EMIR				⇑*i*Vmb_VC		04 09 48.3	
	317nm,SNR=2.1						
EMIR				S	**Sn**	**04 10 53.1**	**-1.6**
EJON	**La Jonquera**	**6.05**	**340**	Pn	**Pn**	**04 09 46.2**	**+0.4**
EJON				Sn	**Sn**	**04 10 51.9**	**-2.8**
EJON	**La Jonquera**	**6.05**	**340**	P	**Pn**	**04 09 46.1**	**+0.3**
EJON				⇑*i*Vmb_VC		04 09 48.0	
	176nm,SNR=2.0						
EJON				S	**Sn**	**04 10 52.1**	**-2.5**
CLTB	**Caltabellotta**	**6.07**	**80**	P	**Pn**	**04 09 46.3**	**+0.3**
CLTB				S	**Sn**	**04 10 53.7**	**-1.4**
E0901	**Celadas (Terue**	**6.48**	**307**	P	**Pn**	**04 09 53.0**	**+1.2**
E0901				⇑*i*Vmb_VC		04 09 56.8	
	107nm,SNR=1.3						
ESAC	**San Caprasio**	**6.86**	**318**	P	**Pn**	**04 09 58.5**	**+1.6**
ESAC				⇑*i*Vmb_VC		04 09 59.4	
	429nm,SNR=2.7						
ESAC				S	**Sn**	**04 11 11.7**	**-2.8**
EQES	**Quesada**	**7.05**	**281**	P	**Pn**	**04 10 01.2**	**+1.7**
EQES				⇑*i*Vmb_VC		04 10 04.2	
	149nm,SNR=2.2						
EQES				S	**Sn**	**04 11 19.7**	**+0.4**
JBK	**JBK**	**7.15**	**252**	P	**Pn**	**04 10 02.2**	**+1.1**
ETOR	**Torete**	**7.26**	**306**	P	**Pn**	**04 10 04.4**	**+1.9**
ETOR				⇑*i*Vmb_VC		04 10 08.2	
	79nm,SNR=1.1						
FIGM	**Figuig**	**7.37**	**233**	P	**Pn**	**04 10 05.3**	**+1.2**
ELGU	**Los Guajares,**	**7.46**	**273**	P	**Pn**	**04 10 04.9**	**-0.3**
ELGU				⇑*i*Vmb_VC		04 10 06.4	
	57nm,SNR=1.1						
PSIM	**Granatula de C**	**7.74**	**288**	P	**Pn**	**04 10 10.1**	**+1.1**
EGOR	**Sierra Gorda,**	**7.85**	**275**	P	**Pn**	**04 10 11.9**	**+1.4**
EGOR				⇑*i*Vmb_VC		04 10 15.8	
	62nm,SNR=1.3						
PCP	**Piancastagn**	**8.05**	**15**	P	**Pn**	**04 10 14.4**	**+1.2**
PCP				S	**Sn**	**04 11 38.8**	**-5.0**
AKLM	**AKL**	**8.09**	**257**	P	**Pn**	**04 10 13.8**	**0.0**
ESDC	**Sonseca Array**	**8.12**	**294**	Pn	**Pn**	**04 10 14.1**	**-0.1**
	0.2nm,0.3s,baz=103,slow=14,SNR=10						
	0.6nm,0.7s						
EADA	**Adamuz**	**8.27**	**283**	P	**Pn**	**04 10 16.9**	**+0.6**
EADA				⇑*i*Vmb_VC		04 10 18.7	
	40nm,SNR=0.7						
BNI	**Bardonecchia**	**8.30**	**5**	P	**Pn**	**04 10 16.9**	**+0.2**
BNI				S	**Sn**	**04 11 46.0**	**-4.0**
PAB	**San Pablo**	**8.37**	**292**	P	**Pn**	**04 10 18.7**	**+1.1**
PAB				⇑*i*Vmb_VC		04 10 21.9	
	50nm,SNR=1.1						
GUD	**Guadarrama**	**8.60**	**300**	P	**Pn**	**04 10 22.0**	**+1.2**
GUD				⇑*i*Vmb_VC		04 10 25.4	
	45nm,SNR=1.0						
ECAB	**El Cabril**	**8.92**	**282**	P	**Pn**	**04 10 25.8**	**+0.6**
ECAB				⇑*i*Vmb_VC		04 10 28.8	
	60nm,SNR=1.0						
CIBOR	**Castaar de Ib**	**9.19**	**291**	P	**Pn**	**04 10 30.5**	**+1.6**
MDT	**Midelt**	**9.34**	**248**	LR	LR	04 14 27.1	
	comp=Z,68nm,18.8s,baz=46,slow=41						
MDT	**Midelt**	**9.34**	**248**	P	**Pn**	**04 10 32.0**	**+1.0**
MD31	**MD31**	**9.43**	**249**	P	**Pn**	**04 10 33.1**	**+0.9**
ELAN	**Lanestosa**	**9.50**	**315**	P	**Pn**	**04 10 34.9**	**+1.8**
ELAN				⇑*i*Vmb_VC		04 10 37.8	
	77nm,SNR=0.9						
ELAN				S	**Sn**	**04 12 14.9**	**-4.5**
SENIN	**Lac Senin/Sane**	**9.65**	**7**	P	**Pn**	**04 10 36.7**	**+1.5**
AKASG	**Malin Array Be**	**21.85**	**43**	P	**P**	**04 13 11.6**	**+3.0**
	0.9nm,0.5s,baz=242,slow=11,SNR=2.0						
	0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**23.80**	**190**	P	**P**	**04 13 27.9**	**-1.1**
	1.0nm,0.7s,baz=356,slow=7.4,SNR=6.7						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**55.88**	**54**	P	**P**	**04 17 54.8**	**+1.1**
	0.5nm,0.6s,baz=282,slow=6.0,SNR=7.0						
	0.5nm,0.6s						
YKA	**Yellowknife Ar**	**70.12**	**335**	P	**P**	**04 19 28.0**	**0.0**
	0.1nm,0.4s,baz=39,slow=5.8,SNR=4.5						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**81.30**	**318**	P	**P**	**04 20 33.2**	**+0.6**
	0.4nm,0.6s,baz=49,slow=6.7,SNR=4.1						
	0.4nm,0.6s						

*JMA **08** 04:16:48.7±0

SMLT	**Sun Moon Lake**	**1.12 317**	*eP*	**Pn**	**04 17 09.6 +0.1**
SMLT			*eS*	**Sn**	**04 17 24.5 -0.1**
CHN1	**Nanshi**	**1.12 276**	*eP*	**Pg**	**04 17 10.9 +1.1**
CHN1			*eS*	**Sn**	**04 17 25.0 +0.5**
SNST	**Tainan City**	**1.15 278**	*eP*	**Pg**	**04 17 11.9 +1.4**
SNST			*S*	**Sg**	**04 17 27.9 +2.3**
WHF	**Hehuan Shan**	**1.16 338**	*eP*	**Pn**	**04 17 10.5 +0.3**
WHF			*S*	**Sb**	**04 17 23.9 -1.2**
ETLH	**Xiulin Townshi**	**1.16 348**	*eP*	**Pb**	**04 17 09.2 -0.8**
ETLH			*eS*	**Sb**	**04 17 22.8 -2.1**
TYC	**Yuchr**	**1.16 316**	*P*	**Pn**	**04 17 10.1 +0.2**
TYC			*eS*	**Sg**	**04 17 25.5 -0.4**
TWK	**Hsinying**	**1.17 280**	*P*	**Pg**	**04 17 10.6 -0.2**
TWK			*eS*	**Sg**	**04 17 25.9 -0.1**
EOS4	**EOS4**	**1.18 27**	*i P*	**Pn**	**04 17 10.2 +0.5**
EOS4			*S*	**Sb**	**04 17 24.6 -0.3**
SLIU	**Shizi**	**1.21 226**	*eS*	**Sn**	**04 17 27.3 +0.6**
SCZT	**Fangliau**	**1.24 236**	*eP*	**Pg**	**04 17 12.5 +0.4**
WCS	**Beigang Elemen**	**1.25 323**	*P*	**Pg**	**04 17 12.2 -0.1**
WCS			*eS*	**Sn**	**04 17 27.4 -0.2**
WGK	**Gukeng**	**1.25 300**	*eP*	**Pg**	**04 17 12.0 -0.2**
WGK			*eS*	**Sg**	**04 17 28.4 -0.1**
EAHA	**Aohua**	**1.26 360**	*eP*	**Pn**	**04 17 11.4 +0.2**
FUSS	**Fushou**	**1.26 339**	*eP*	**Pn**	**04 17 11.7 +0.2**
FUSS			*eS*	**Sb**	**04 17 26.5 -1.4**
WNT	**Mingjian**	**1.26 310**	*P*	**Pg**	**04 17 12.8 +0.3**
WNT			*S*	**Sg**	**04 17 29.1 0.0**
WDLH	**Douliu**	**1.27 300**	*eP*	**Pg**	**04 17 13.1 +0.5**
WDLH			*eS*	**Sg**	**04 17 30.1 +0.9**
WDL	**Douliou City**	**1.28 301**	*eP*	**Pg**	**04 17 12.7 -0.1**
WDL			*eS*	**Sg**	**04 17 29.7 +0.1**
SHHT	**Tainan City**	**1.28 268**	*eS*	**Sg**	**04 17 30.2 +0.6**
CHY	**Chiayi**	**1.28 290**	*P*	**Pg**	**04 17 13.1 +0.1**
CHY			*S*	**Sg**	**04 17 30.1 +0.4**
TWT	**Tachien**	**1.29 336**	*P*	**Pb**	**04 17 12.4 +0.1**
TWT			*S*	**Sb**	**04 17 27.9 -0.8**
TDCB	**Techi**	**1.30 336**	*P*	**Pb**	**04 17 12.3 0.0**
TDCB			*S*	**Sb**	**04 17 27.2 -1.7**
EOS3	**EOS3**	**1.32 23**	*eP*	**Pn**	**04 17 12.6 +0.6**
EOS3			*eS*	**Sn**	**04 17 29.8 +0.5**
SMST	**Manzhou Townsh**	**1.33 219**	*eP*	**Pn**	**04 17 11.9 -0.3**
SMST			*eS*	**Sn**	**04 17 28.0 -1.7**
TAI1	**Yung-k'ang**	**1.39 269**	*P*	**Pb**	**04 17 14.1 +0.2**
NNSB	**Datong**	**1.40 346**	*P*	**Pn**	**04 17 13.3 +0.1**
NNSB			*eS*	**Sn**	**04 17 30.0 -1.4**
HEN	**Hengchun**	**1.40 221**	*eP*	**Pg**	**04 17 15.2 0.0**
HEN			*eS*	**Sn**	**04 17 30.9 -0.5**
NNS	**Nan Shan**	**1.41 346**	*eP*	**Pb**	**04 17 14.8 +0.5**
NNS			*eS*	**Sn**	**04 17 30.9 -0.8**
WHP	**Taichung City**	**1.41 329**	*eP*	**Pb**	**04 17 14.6 +0.4**
WHP			*eS*	**Sg**	**04 17 32.8 -0.9**
TWKBT	**Hengchun**	**1.41 218**	*eP*	**Pb**	**04 17 15.3 +1.1**
TWKBT			*eS*	**Sn**	**04 17 30.4 -1.2**
TWK1	**Hengchun**	**1.41 218**	*eP*	**Pn**	**04 17 13.6 +0.3**
TWK1			*eS*	**Sg**	**04 17 33.4 -0.4**
EOS2	**EOS2**	**1.42 18**	*eP*	**Pb**	**04 17 14.3 0.0**
EOS2			*eS*	**Sn**	**04 17 30.2 -1.4**
SCLT	**Jiali**	**1.43 275**	*eS*	**Sg**	**04 17 34.3 0.0**
CHN8	**Yiju**	**1.43 282**	*eP*	**Pg**	**04 17 15.5 -0.3**
CHN8			*eS*	**Sg**	**04 17 34.2 -0.3**
TCU	**Taichung**	**1.45 318**	*eS*	**Sg**	**04 17 34.3 -0.8**
WSL	**Shuilin Townsh**	**1.46 288**	*P*	**Pg**	**04 17 15.8 -0.5**
WSL			*S*	**Sg**	**04 17 34.8 -0.6**
LATG	**Datong**	**1.48 352**	*P*	**Pn**	**04 17 14.5 +0.2**
LATG			*eS*	**Sn**	**04 17 31.3 -2.1**
WCHH	**Zhanghua**	**1.48 313**	*eS*	**Sg**	**04 17 34.7 -1.3**
WCH1	**Changhua City**	**1.48 313**	*eS*	**Sg**	**04 17 35.3 -0.8**
WRL	**Guolierlin Hig**	**1.50 304**	*S*	**Sg**	**04 17 35.3 -1.3**
WSF	**Szhu**	**1.51 293**	*eP*	**Pb**	**04 17 16.5 +0.7**
WSF			*S*	**Sg**	**04 17 35.4 -1.4**
TSCK	**Chigu Township**	**1.52 273**	*eS*	**Sg**	**04 17 37.1 -0.3**
TWC	**Suao**	**1.54 4**	*P*	**Pn**	**04 17 16.0 +0.9**
TWC			*S*	**Sn**	**04 17 34.5 -0.3**
TWQ1	**Liyutan**	**1.55 325**	*eP*	**Pg**	**04 17 17.5 -0.6**
TWQ1			*eS*	**Sg**	**04 17 37.6 -0.7**
NDS	**Dongshan**	**1.56 359**	*eP*	**Pb**	**04 17 17.1 +0.4**
NDS			*eS*	**Sb**	**04 17 36.0 -0.3**
ENTT	**Nioudou**	**1.57 354**	*eP*	**Pn**	**04 17 16.2 +0.6**
ENTT			*eS*	**Sn**	**04 17 35.8 +0.1**
NSY	**Sanyi**	**1.62 326**	*eP*	**Pb**	**04 17 18.5 +0.8**
NSY			*eS*	**Sg**	**04 17 39.4 -0.9**
YHNB	**Yeheng**	**1.63 348**	*P*	**Pn**	**04 17 17.1 +0.7**
YHNB	**Yeheng**	**1.63 348**	*P*	**Pb**	**04 17 17.5 -0.5**
YHNB	**Yeheng**	**1.63 348**	*P*	**Pn**	**04 17 17.2 +0.8**
YHNB			*S*	**Sn**	**04 17 32.6 -0.8**
NSK	**Sanguang**	**1.64 348**	*P*	**Pn**	**04 17 17.3 +0.8**
NSK			*S*	**Sn**	**04 17 36.6 -0.8**
TWE	**Neicheng**	**1.65 358**	*eP*	**Pb**	**04 17 17.8 -0.4**
TWE			*S*	**Sb**	**04 17 39.7 +0.9**
NFF	**Wufeng Townshi**	**1.66 340**	*eP*	**Pb**	**04 17 19.2 +0.7**
NFF			*eS*	**Sb**	**04 17 38.4 -0.8**
FUSB	**Fushanzhiwuyua**	**1.69 355**	*P*	**Pn**	**04 17 18.1 +0.9**
FUSB			*eS*	**Sn**	**04 17 38.5 -0.2**
ILA	**Ilan**	**1.69 0**	*eP*	**Pb**	**04 17 19.0 0.0**
NSTT	**Nanjuang**	**1.70 337**	*eP*	**Pb**	**04 17 19.4 +0.2**
NSTT			*S*	**Sb**	**04 17 40.3 0.0**
NMLH	**Miaoli**	**1.70 330**	*eP*	**Pb**	**04 17 19.4 +0.2**
NMLH			*eS*	**Sb**	**04 17 40.7 +0.3**
LIOB	**Emei**	**1.71 337**	*eP*	**Pb**	**04 17 19.6 +0.3**
LIOB			*eS*	**Sg**	**04 17 41.8 -1.4**
NWLT	**Wulai**	**1.72 353**	*eP*	**Pn**	**04 17 18.4 +0.8**
NWLT			*eS*	**Sn**	**04 17 37.6 -1.6**
JYNG	**Yonagunijimaku**	**1.77 38**	*eS*	**Sn**	**04 17 41.0 +0.6**
KSHI	**Guanxi Townshi**	**1.78 343**	*eP*	**Pb**	**04 17 20.6 +0.1**
KSHI			*eS*	**Sb**	**04 17 42.9 +0.2**
YOJ	**Yonaguni jima**	**1.81 40**	*eS*	**Sn**	**04 17 41.7 +0.2**
YOJ	**Yonaguni jima**	**1.81 40**	*eP*	**Pb**	**04 17 20.9 -0.1**
YOJ			*eS*	**Sn**	**04 17 42.2 +0.7**
SBCB	**Hsinchu**	**1.85 338**	*eS*	**Sb**	**04 17 43.6 -1.1**
TIPB	**Shuangxi**	**1.90 2**	*eP*	**Pb**	**04 17 21.7 -0.8**
TIPB			*eS*	**Sn**	**04 17 44.8 +1.1**
TWB1	**Santiao Chiao**	**1.95 7**	*eP*	**Pn**	**04 17 22.1 +1.4**
TWB1			*eS*	**Sn**	**04 17 45.5 +0.6**
NCUH	**Zhongli**	**1.96 345**	*eS*	**Sb**	**04 17 46.9 -0.9**
NCU	**National Centr**	**1.96 345**	*eS*	**Sb**	**04 17 46.9 -1.0**
NWF	**Wu-fen Shan**	**2.00 1**	*eP*	**Pb**	**04 17 24.0 -0.2**
NWF			*eS*	**Sb**	**04 17 47.8 -1.2**
WFSB	**Wu-fen Shan**	**2.00 1**	*eS*	**Sn**	**04 17 47.4 +1.3**
SXI1	**Grass Mountain**	**2.02 3**	*P*	**Pn**	**04 17 23.5 +1.7**
SXI1			*S*	**Sn**	**04 17 45.0 +1.2**
PHUB	**P'eng-hu**	**2.04 283**	*eP*	**Pn**	**04 17 23.1 +1.1**
PHUB			*eS*	**Sn**	**04 17 46.7 -0.5**
YM01	**YM01**	**2.08 356**	*eS*	**Sn**	**04 17 49.2 +1.1**
ZUZH	**Zhuzihu**	**2.10 355**	*eS*	**Sn**	**04 17 48.9 +0.3**
YM08	**YM08**	**2.12 356**	*eP*	**Pn**	**04 17 24.7 +1.7**
YM08			*eS*	**Sn**	**04 17 50.5 +1.4**
ANP	**Anpu**	**2.12 355**	*eS*	**Sn**	**04 17 50.1 +0.8**
VCHM	**Qimei**	**2.13 274**	*P*	**Pb**	**04 17 25.1 -1.4**
VCHM			*eS*	**Sn**	**04 17 50.1 +0.7**
HATJ	**Hateruma jima**	**2.14 62**	*eS*	**Sn**	**04 17 50.1 +0.6**
TWY	**Chenhua**	**2.20 357**	*eP*	**Pn**	**04 17 25.4 +1.2**
TWY			*eS*	**Sn**	**04 17 52.7 +1.5**
IRIF	**Iriomote-Funau**	**2.22 55**	*eS*	**Sn**	**04 17 52.2 +0.7**
JKRS	**Kuro-shima**	**2.38 60**	*eS*	**Sn**	**04 17 56.2 +0.5**
JIJ	**Ishigaki jima**	**2.55 59**	*eS*	**Sn**	**04 17 59.8 0.0**
JISG	**Ishigakijimahi**	**2.80 57**	*eS*	**Sn**	**04 18 05.6 -0.3**
VWUC	**VWUC**	**2.84 313**	*eP*	**Pn**	**04 17 34.1 +1.1**
KNMB	**Chin-men Tao**	**3.37 295**	*eP*	**Pn**	**04 17 42.5 +2.2**
MATB	**Ma-tsu**	**3.48 332**	*eP*	**Pn**	**04 17 43.9 +2.2**
MATB			*eS*	**Sn**	**04 18 21.2 -1.4**
MHZQ	**Yeshan**	**3.90 321**	*eP*	**Pn**	**04 17 48.9 +1.3**
AXDP	**Jialang**	**3.90 299**	*eP*	**Pn**	**04 17 48.3 +0.7**
XPSS	**Dashiqiu**	**4.10 340**	*eP*	**Pn**	**04 17 51.7 +1.5**

*NEIC **08** 05:11:10.0±1.2, 40.°53S±0.°08×173.°32E±0.°09, h172km±8km, mb4.2/6, Error ellipse: s-maj=12.6km s-min=8.7km az=149.0*

*NOU **08** 05:11:09.2, 40.°56S×173.°36E, h167km, MLv4.2/22, Cook Strait, New Zealand*

*IDC **08** 05:11:11.4±6.3, 40.°25S×173.°59E, h193km±43km, mb3.2/2, mbtmp3.8/3, Error ellipse: s-maj=138.3km s-min=37.2km az=169.0*

*WEL **08** 05:11:12.0±0.9, 41.°3S×17.°3E, h149km±6km, M4.0/53, MLv4.0/53, Error ellipse: s-maj=7.6km s-min=4.2km az=101.4*

ISC 08 05:11:09.5±0.8, 40.°55S±0.°04×173.°34E±0.°04, h177km±5km, n133, σ0.°96/147, mb4.0/6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TSFS	**Takaka Scotts**	**0.50**	**232**	*P*		**Pn**	**05 11 33.8**	**0.0**
DUWZ	**D'Urville Isla**	**0.51**	**120**	*P*		**Pn**	**05 11 34.5**	**+0.5**
DUWZ				*S*		**Sn**	**05 11 51.7**	**-1.1**
KHLK	**Kaihoka Lakes**	**0.55**	**269**	*P*		**Pn**	**05 11 34.1**	**0.0**
TKNZ	**Takaka Hill**	**0.57**	**210**			**Pn**	**05 11 34.1**	**-0.1**
TKNZ	**Takaka Hill**	**0.57**	**210**	*P*		**Pn**	**05 11 34.4**	**+0.2**
TKNZ				*S*		**Sn**	**05 11 51.6**	**-1.8**
MOTS	**Motueka DOC wo**	**0.63**	**203**	*P*		**Pn**	**05 11 34.6**	**+0.2**
NNZ	**Nelson**	**0.67**	**177**			**Pn**	**05 11 34.8**	**+0.1**
NNZ	**Nelson**	**0.67**	**177**	*P*		**Pn**	**05 11 35.1**	**+0.4**
NNZ				*S*		**Sn**	**05 11 52.9**	**-1.4**
QRZ	**Quartz Range**	**0.68**	**245**			**Pn**	**05 11 34.7**	**0.0**
QRZ	**Quartz Range**	**0.68**	**245**	*P*		**Pn**	**05 11 34.6**	**-0.1**
QRZ	**Quartz Range**	**0.68**	**245**	*S*		**Sn**	**05 11 52.4**	**-1.8**
QRZ	**Quartz Range**	**0.68**	**245**	*P*		**Pn**	**05 11 34.9**	**+0.1**
QRZ				*S*		**Sn**	**05 11 52.2**	**-2.0**
NCBS	**Nelson Council**	**0.73**	**183**	*P*		**Pn**	**05 11 35.5**	**+0.5**
MRNZ	**Matariki Terra**	**0.96**	**207**			**Pn**	**05 11 36.7**	**+0.1**
MRNZ	**Matariki Terra**	**0.96**	**207**	*P*		**Pn**	**05 11 36.8**	**+0.2**
MRNZ				*S*		**Sn**	**05 11 55.6**	**-2.0**
TCW	**Tory Channel**	**0.97**	**133**			**Pn**	**05 11 37.4**	**+0.8**
TCW	**Tory Channel**	**0.97**	**133**	*P*		**Pn**	**05 11 37.7**	**+1.1**
TCW				*S*		**Sn**	**05 11 56.3**	**-1.4**
TUWZ	**Tuamarina**	**0.99**	**153**			**Pn**	**05 11 37.9**	**+1.1**
TUWZ	**Tuamarina**	**0.99**	**153**	*P*		**Pn**	**05 11 38.2**	**+1.4**
TUWZ				*S*		**Sn**	**05 11 56.9**	**-1.1**
NMEZ	**Namu Road**	**1.20**	**20**	*P*		**Pn**	**05 11 38.8**	**+0.3**
NMEZ				*S*		**Sn**	**05 11 59.8**	**-1.1**
KIW	**Kapiti Island**	**1.23**	**105**	*P*		**Pn**	**05 11 39.4**	**+0.7**
BSWZ	**Blackbirch Sta**	**1.24**	**161**			**Pn**	**05 11 39.4**	**+0.7**
BSWZ	**Blackbirch Sta**	**1.24**	**161**	*P*		**Pn**	**05 11 39.8**	**+1.0**
BSWZ				*S*		**Sn**	**05 12 00.5**	**-1.0**
THZ	**Tophouse**	**1.26**	**195**			**Pn**	**05 11 39.2**	**+0.1**
THZ	**Tophouse**	**1.26**	**195**	*P*		**Pn**	**05 11 39.5**	**+0.5**
THZ				*S*		**Sn**	**05 12 00.4**	**-1.6**
SNZO	**South Karori**	**1.29**	**127**			**Pn**	**05 11 39.8**	**+0.6**
SNZO	**South Karori**	**1.29**	**127**	*P*		**Pn**	**05 11 39.7**	**+0.6**
SNZO	**South Karori**	**1.29**	**127**	*S*		**Sn**	**05 12 00.4**	**-1.7**
WEL	**Wellington**	**1.31**	**125**	*P*		**Pn**	**05 11 40.2**	**+0.8**
NBEZ	**Newall Road No**	**1.34**	**18**	*P*		**Pn**	**05 11 40.0**	**+0.3**
NBEZ				*S*		**Sn**	**05 12 02.3**	**-0.6**
KHEZ	**Kahui Hut**	**1.35**	**23**	*P*		**Pn**	**05 11 40.0**	**+0.1**
KHEZ	**Kahui Hut**	**1.35**	**23**	*S*		**Sn**	**05 12 02.7**	**-0.7**
KHEZ	**Kahui Hut**	**1.35**	**23**	*P*		**Pn**	**05 11 40.2**	**+0.2**
KHEZ				*S*		**Sn**	**05 12 02.5**	**-0.9**
LREZ	**Lake Rotokare**	**1.36**	**37**	*P*		**Pn**	**05 11 40.3**	**+0.5**
LREZ				*S*		**Sn**	**05 12 03.2**	**0.0**
PREZ	**Palmer Road**	**1.36**	**28**	*P*		**Pn**	**05 11 40.3**	**+0.3**
OGWZ	**Otaki Gorge**	**1.42**	**102**	*P*		**Pn**	**05 11 41.2**	**+0.8**
CAW	**Cannon Point**	**1.43**	**114**	*P*		**Pn**	**05 11 41.2**	**+0.7**
PKE	**Pukeiti**	**1.44**	**20**	*P*		**Pn**	**05 11 40.9**	**+0.2**
BHW	**Baring Head**	**1.45**	**127**			**Pn**	**05 11 41.0**	**+0.4**
BHW	**Baring Head**	**1.45**	**127**	*P*		**Pn**	**05 11 41.2**	**+0.6**
WAZ	**Wanganui**	**1.49**	**59**	*P*		**Pn**	**05 11 42.0**	**+0.9**
DREZ	**Durham Road**	**1.51**	**26**	*P*		**Pn**	**05 11 41.5**	**+0.2**
OHWZ	**Ohakea**	**1.55**	**78**	*P*		**Pn**	**05 11 42.9**	**+1.3**
MHEZ	**Mangahewa**	**1.65**	**28**	*P*		**Pn**	**05 11 43.2**	**+0.6**
DSZ	**Denniston Nort**	**1.67**	**224**			**Pn**	**05 11 42.8**	**-0.1**
DSZ	**Denniston Nort**	**1.67**	**224**	*P*		**Pn**	**05 11 42.9**	**+0.1**
MSWZ	**Moikau Station**	**1.69**	**122**			**Pn**	**05 11 43.5**	**+0.5**
MSWZ	**Moikau Station**	**1.69**	**122**	*P*		**Pn**	**05 11 43.7**	**+0.7**
HOWZ	**Holdsworth Sta**	**1.69**	**103**	*P*		**Pn**	**05 11 43.7**	**+0.6**
MRZ	**Mangatainoka R**	**1.71**	**95**			**Pn**	**05 11 43.5**	**+0.3**
MRZ	**Mangatainoka R**	**1.71**	**95**	*P*		**Pn**	**05 11 43.8**	**+0.6**
MTW	**Mount Morrison**	**1.75**	**111**	*P*		**Pn**	**05 11 44.4**	**+0.7**
PAWZ	**Paruwai Farm**	**1.79**	**119**	*P*		**Pn**	**05 11 44.7**	**+0.6**
VRZ	**Vera Road**	**1.79**	**38**	*P*		**Pn**	**05 11 43.8**	**-0.3**
POWZ	**Post Office Ro**	**1.86**	**86**	*P*		**Pn**	**05 11 45.4**	**+0.6**
KHZ	**Kahutara**	**1.88**	**175**			**Pn**	**05 11 45.5**	**+0.6**
KHZ	**Kahutara**	**1.88**	**175**	*P*		**Pn**	**05 11 45.5**	**+0.6**
KHZ	**Kahutara**	**1.88**	**175**	*S*		**Sn**	**05 12 10.6**	**-1.9**
KHZ	**Kahutara**	**1.88**	**175**	*P*		**Pn**	**05 11 45.7**	**+0.8**
TIWZ	**Tintock**	**1.95**	**98**	*P*		**Pn**	**05 11 46.5**	**+0.7**
TRWZ	**Traveller**	**1.97**	**116**	*P*		**Pn**	**05 11 46.8**	**+0.8**
PKVZ	**Pokaka**	**1.99**	**52**	*P*		**Pn**	**05 11 46.3**	**0.0**
PRWZ	**Pori Road**	**2.01**	**91**	*P*		**Pn**	**05 11 47.3**	**+0.9**
MTVZ	**Mangateitei**	**2.01**	**55**	*P*		**Pn**	**05 11 46.6**	**+0.1**
TMWZ	**Te Maipa**	**2.02**	**107**	*P*		**Pn**	**05 11 47.3**	**+0.8**
TSZ	**Takapari Road**	**2.06**	**77**	*P*		**Pn**	**05 11 47.4**	**+0.3**
TRVZ	**Turoa**	**2.11**	**54**	*P*		**Pn**	**05 11 47.5**	**-0.3**
WNVZ	**Wahianoa**	**2.12**	**56**	*P*		**Pn**	**05 11 47.7**	**-0.2**
MAVZ	**Matarangi**	**2.13**	**54**	*P*		**Pn**	**05 11 47.8**	**-0.3**
FWVZ	**Far West T-bar**	**2.14**	**54**	*P*		**Pn**	**05 11 47.7**	**-0.4**
WHVZ	**Whangaehu Hut**	**2.14**	**55**	*P*		**Pn**	**05 11 47.9**	**-0.3**
COVZ	**Chateau Observ**	**2.16**	**52**	*P*		**Pn**	**05 11 47.9**	**-0.4**
DVHZ	**Dannevirke**	**2.17**	**84**	*P*		**Pn**	**05 11 48.5**	**+0.3**
MOVZ	**Moawhango**	**2.18**	**59**	*P*		**Pn**	**05 11 47.9**	**-0.5**
TWVZ	**Taurewa**	**2.19**	**48**	*P*		**Pn**	**05 11 48.1**	**-0.4**
TUVZ	**Tukino**	**2.19**	**55**	*P*		**Pn**	**05 11 48.5**	**-0.1**
CPWZ	**Castlepoint**	**2.21**	**100**	*P*		**Pn**	**05 11 49.8**	**+1.3**
NGZ	**Ngauruhoe**	**2.21**	**53**	*P*		**Pn**	**05 11 48.5**	**-0.4**
BFZ	**Birch Farm**	**2.22**	**94**			**Pn**	**05 11 49.5**	**+0.8**
BFZ	**Birch Farm**	**2.22**	**94**	*P*		**Pn**	**05 11 49.3**	**+0.6**
BFZ	**Birch Farm**	**2.22**	**94**	*P*		**Sn**	**05 12 17.1**	**-2.1**
BFZ	**Birch Farm**	**2.22**	**94**	*P*		**Pn**	**05 11 49.3**	**+0.6**
SNVZ	**South Ngauruho**	**2.23**	**53**	*P*		**Pn**	**05 11 48.9**	**-0.2**
WTVZ	**West Tongariro**	**2.25**	**51**	*P*		**Pn**	**05 11 48.9**	**-0.4**
NNVZ	**North Ngauruho**	**2.25**	**52**	*P*		**Pn**	**05 11 48.9**	**-0.4**
OTVZ	**Oturere**	**2.26**	**53**	*P*		**Pn**	**05 11 49.2**	**-0.2**
PNHZ	**Pukenui**	**2.28**	**75**	*P*		**Pn**	**05 11 49.6**	**+0.1**
KRVZ	**Karewarewa**	**2.29**	**61**	*P*		**Pn**	**05 11 49.4**	**-0.3**
NTVZ	**North Tongarir**	**2.31**	**52**	*P*		**Pn**	**05 11 49.7**	**-0.2**
TMVZ	**Te Maari**	**2.31**	**53**	*P*		**Pn**	**05 11 49.9**	**-0.1**
HIZ	**Hauiti**	**2.34**	**31**			**Pn**	**05 11 49.4**	**-0.8**
HIZ	**Hauiti**	**2.34**	**31**	*P*		**Pn**	**05 11 49.7**	**-0.5**
HIZ	**Hauiti**	**2.34**	**31**	*S*		**Sn**	**05 12 20.3**	**-1.5**
HIZ	**Hauiti**	**2.34**	**31**	*P*		**Pn**	**05 11 49.8**	**-0.5**
LTZ	**Lake Taylor**	**2.37**	**199**			**Pn**	**05 11 50.4**	**-0.1**
ANWZ	**Angora Road**	**2.39**	**89**	*P*		**Pn**	**05 11 51.4**	**+0.7**
KATZ	**Kakaramea**	**2.40**	**50**	*P*		**Pn**	**05 11 50.9**	**-0.1**
WPHZ	**Waipukurau**	**2.42**	**80**	*P*		**Pn**	**05 11 51.5**	**+0.5**
GVZ	**Greta Valley S**	**2.43**	**185**			**Pn**	**05 11 51.2**	**0.0**
GVZ	**Greta Valley S**	**2.43**	**185**	*P*		**Pn**	**05 11 51.5**	**+0.4**
RITZ	**Rihia Road**	**2.50**	**52**	*P*		**Pn**	**05 11 51.9**	**-0.1**
INZ	**Inchbonnie**	**2.60**	**212**			**Pn**	**05 11 52.8**	**-0.3**
INZ	**Inchbonnie**	**2.60**	**212**	*P*		**Pn**	**05 11 52.9**	**-0.2**
WATZ	**Wairara**	**2.60**	**46**	*P*		**Pn**	**05 11 53.2**	**-0.1**
KWHZ	**Kaweka Forest**	**2.62**	**66**	*P*		**Pn**	**05 11 53.9**	**+0.4**
AMCZ	**Amberley**	**2.65**	**191**			**Pn**	**05 11 54.0**	**-0.1**
BKZ	**Black Stump Fm**	**2.79**	**61**			**Pn**	**05 11 54.6**	**-0.9**
BKZ	**Black Stump Fm**	**2.79**	**61**	*P*		**Pn**	**05 11 54.7**	**-0.9**
BKZ	**Black Stump Fm**	**2.79**	**61**	*P*		**Sn**	**05 12 28.9**	**-2.4**
OXZ	**Oxford**	**2.94**	**199**			**Pn**	**05 11 56.4**	**-0.8**
MQZ	**McQueen's Vall**	**3.20**	**189**			**Pn**	**05 11 59.4**	**-0.9**
TOZ	**Tahuroa Road**	**3.27**	**32**			**Pn**	**05 12 00.3**	**-1.1**
RTZ	**Ruatahuna**	**3.41**	**57**			**Pn**	**05 12 01.5**	**-1.7**
RPZ	**Rata Peaks**	**3.59**	**207**			**Pn**	**05 12 04.5**	**-0.8**
RPZ	**Rata Peaks**	**3.59**	**207**	*P*		**Pn**	**05 12 04.6**	**-0.7**
URZ	**Urewera**	**3.71**	**53**	*P*		**Pn**	**05 12 05.0**	**-1.8**
	38nm,0.3s,baz=240,slow=7.8,SNR=118							
URZ				*S*		**Sn**	**05 12 47.7**	**-3.8**
	79nm,0.3s,baz=104,slow=21,SNR=24							
URZ	**Urewera**	**3.71**	**53**	*P*		**Pn**	**05 12 04.8**	**-2.0**
KUZ	**Kuautunu**	**4.23**	**27**	*P*		**Pn**	**05 12 12.9**	**-0.5**
JCZ	**Jackson Bay**	**4.88**	**222**	*P*		**Pn**	**05 12 20.2**	**-1.7**
MXZ	**Matakaoa Point**	**4.88**	**54**	*P*		**Pn**	**05 12 20.2**	**-1.6**
ODZ	**Otahua Downs**	**4.91**	**203**			**Pn**	**05 12 21.2**	**-1.0**
ODZ	**Otahua Downs**	**4.91**	**203**	*P*		**Pn**	**05 12 21.4**	**-0.8**
OUZ	**Omahuta**	**5.32**	**2**	*P*		**Pn**	**05 12 28.4**	**+0.8**
SYZ	**Scrubby Hill**	**6.72**	**206**	*P*		**Pn**	**05 12 44.4**	**-1.4**
TOO	**Toolangi**	**21.79**	**269**	*P*		**P**	**05 15 49.5**	**+2.0**
TOO					IAmb	IAmb	05 16 25.5	
	comp=Z,6.3nm,1.2s							
AS31	**Alice Springs**	**37.05**	**285**	*P*		**P**	**05 18 04.2**	**+1.6**
ASAR	**Alice Springs**	**37.05**	**285**	*P*		**P**	**05 18 03.5**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=127,slow=7.3,SNR=5.4							
	comp=Z,0.6nm,0.9s							
WRA	**Warramunga Arr**	**39.04**	**290**	*P*		**P**	**05 18 20.4**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=126,slow=8.3,SNR=22							
	comp=Z,0.7nm,0.3s							
WB0	**Warramunga Arr**	**39.12**	**290**	*P*		**P**	**05 18 20.0**	**+0.2**
WB0					IAmb	IAmb	05 18 44.9	
	comp=Z,5.0nm,1.2s							
KNRA	**Kununurra**	**45.83**	**290**	*P*		**P**	**05 19 16.9**	**+2.9**
KNRA					IAmb	IAmb	05 19 44.8	
	comp=Z,12nm,1.2s							
MTN	**Manton Dam**	**46.09**	**295**	*P*		**P**	**05 19 15.8**	**-0.2**
MTN					IAmb	IAmb	05 19 25.2	
	comp=Z,22nm,1.4s							
FAKI	**Fak Fak**	**52.67**	**304**	*P*		**P**	**05 20 05.5**	**-0.4**
ARCES	**ARCESS Array B**	**146.41**	**340**	PKPbc		**PKPdf**	**05 30 26.9**	**+0.1**
	comp=Z,6.2nm,0.9s,baz=42,slow=4.1,SNR=1.5							

IDC 08 05:13:03.0±2.8, 10.°49N×124.°41E, h0km, mb3.5/3, mbtmp3.5/3, MS3.2/4, Error ellipse: s-maj=247.2km s-min=26.2km az=64.0, Leyte

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**23.30**	**14**	LR		LR	05 27 15.4	
	comp=Z,34nm,19.2s,baz=166,slow=37							
CMAR	**Chiang Mai Arr**	**25.87**	**291**	LR		LR	05 29 19.6	
	comp=Z,22nm,18.5s,baz=75,slow=38							
KSRS	**Korea Array**	**27.04**	**6**	LR		LR	05 28 34.4	
	comp=Z,20nm,20.2s,baz=225,slow=34							
WRA	**Warramunga Arr**	**31.78**	**162**	*P*		*P*	05 19 28.5	-0.8
	0.3nm,0.6s,baz=342,slow=8.7,SNR=1.8							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**35.19**	**165**	*P*		*P*	05 19 59.5	+0.5
	0.7nm,0.7s,baz=342,slow=8.4,SNR=6.7							
	0.7nm

	comp=Z,25nm,0.8s							
SLM	**Saint Louis**	**6.40**	**99**	IAmb_Lg			05 41 02.6	
	comp=Z,22nm,0.8s							
FVM	**French Village**	**6.44**	**105**			**Pn**	**05 39 12.1**	**-0.1**
FVM				IAmb_Lg			05 41 00.5	
	comp=Z,15nm,0.7s							
MIAR	**Mount Ida**	**6.53**	**143**			**Pn**	**05 39 12.7**	**-0.7**
MIAR				IAmb_Lg			05 41 17.7	
	comp=Z,19nm,0.7s							
DKNS	**Dickens**	**6.54**	**199**	IAmb_Lg			05 41 14.1	
	comp=Z,25nm,1.0s							
APMT	**Aspermont**	**6.70**	**193**			**Pn**	**05 39 15.4**	**-0.3**
SPMN	**Marine on St.**	**6.72**	**36**			**Pn**	**05 39 15.7**	**-0.2**
SPMN				IAmb_Lg			05 41 15.5	
	comp=Z,22nm,0.8s							
JFWS	**Jewell Farm**	**6.78**	**61**	IAmb_Lg			05 41 13.0	
	comp=Z,18nm,0.8s							
LCAR	**Lake Charles**	**6.82**	**122**	IAmb_Lg			05 41 13.5	
	comp=Z,20nm,0.7s							
E28A	**Huff**	**6.91**	**346**	IAmb_Lg			05 41 26.2	
	comp=Z,24nm,0.9s							
PBMO	**Poplar Bluff**	**6.93**	**114**	IAmb_Lg			05 41 32.8	
	comp=Z,18nm,0.7s							
X40A	**Basin Creek Fa**	**6.94**	**139**			**Pn**	**05 39 18.4**	**-0.5**
HDIL	**Hopedale**	**6.94**	**82**			**Pn**	**05 39 19.0**	**0.0**
PLPT	**Palo Pinto**	**7.05**	**180**			**Pn**	**05 39 19.2**	**-1.3**
SN07	**Snyder 07**	**7.08**	**198**	IAmb_Lg			05 41 38.9	
	comp=Z,14nm,0.8s							
Z38A	**Mt. Pleasant**	**7.13**	**157**	IAmb_Lg			05 41 37.6	
	comp=Z,25nm,0.7s							
POST	**Post**	**7.26**	**202**			**Pn**	**05 39 22.0**	**-1.6**
S44A	**Carbondale**	**7.41**	**104**	IAmb_Lg			05 41 48.7	
	comp=Z,17nm,0.7s							
Z41A	**Richland Creek**	**7.96**	**144**	IAmb_Lg			05 42 01.3	
	comp=Z,15nm,0.7s							
128A	**Castleberry Fa**	**7.99**	**206**	IAmb_Lg			05 42 07.5	
	comp=Z,4.6nm,0.9s							
ANMO	**Albuquerque**	**8.13**	**235**	Pg		**Pb**	**05 40 02.4**	**+4.1**
	comp=Z,0.3nm,0.3s,baz=43,slow=15,SNR=9.3							
ANMO				Lg		Lg	05 41 49.4	
	comp=Z,0.6nm,0.3s,baz=324,slow=7.7,SNR=7.1							
BRDY	**Brady**	**8.59**	**184**			**Pn**	**05 39 40.4**	**-1.4**
NATX	**Nacogdoches**	**8.63**	**159**	IAmb_Lg			05 42 24.3	
	comp=Z,15nm,0.9s							
PDAR	**Pinedale Array**	**8.93**	**292**	Pn		**Pn**	**05 39 45.0**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=109,slow=13,SNR=5.3							
PDAR				Lg		Lg	05 42 04.9	
	comp=Z,0.5nm,0.3s,baz=108,slow=31,SNR=4.1							
	comp=Z,0.3nm,0.5s							
435B	**Jarrell**	**9.10**	**176**	IAmb_Lg			05 42 31.7	
	comp=Z,16nm,1.1s							
TPB06	**Permian Basin**	**9.12**	**207**	IAmb_Lg			05 42 32.4	
	comp=Z,12nm,0.7s							
TPB05	**Hovey Rd**	**9.82**	**206**	IAmb_Lg			05 43 05.4	
	comp=Z,7.5nm,1.0s							
EPLO	**Experimental L**	**10.32**	**17**			**Pn**	**05 40 03.7**	**-1.6**
ULM	**Lac du Bonnet**	**10.51**	**9**	Pn		**Pn**	**05 40 05.4**	**-2.5**
	comp=Z,0.7nm,0.3s,baz=186,slow=10,SNR=14							
ULM				Sn		Sn	05 41 57.1	-8.6
	comp=Z,0.7nm,0.3s,baz=275,slow=22,SNR=3.2							
ULM				Lg		Lg	05 43 01.1	
	comp=Z,0.7nm,0.3s,baz=245,slow=13,SNR=5.2							
	comp=Z,1.7nm,0.3s							
TXAR	**Lajitas Array**	**11.40**	**204**	Pn		**Pn**	**05 40 18.5**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=32,slow=10,SNR=7.3							
TXAR				Lg		Lg	05 43 27.8	
	comp=Z,0.1nm,0.3s,baz=21,slow=28,SNR=1.9							
	comp=Z,0.4nm,0.5s							
TKL	**Tuckaleechee C**	**12.26**	**106**	Lg		Lg	05 44 01.0	
	comp=Z,0.4nm,0.3s,baz=23,slow=21,SNR=4.1							

*ISK **08** 05:39:30.7,39˚.00N×27˚.85E,h9km,ML4.2/47*
*ATH **08** 05:39:30.5,38˚.95N×27˚.87E,h7km±2km,ML3.9/12, Manual Solution by F.Xalaris First location: 2020/02/08 05:40:58, This location: 2020/02/08 07:17:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*IDC **08** 05:39:31.0±1.0,38˚.89N×28˚.02E,h0km,mb3.5/4, mbtmp3.7/9,ML3.7/4,MS3.1/3,Error ellipse: s-maj=16.9km s-min=13.2km az=147.0*
*AFAD **08** 05:39:31.3,39˚.03N×27˚.87E,h7km±2km,MW4.0*
*THE **08** 05:39:32.6,39˚N±4˚×2˚8E±˚,h11km,M3.6/15,MLh3.6/15*

ISC 08 05:39:31.8±0.8,38˚.99N±0˚.02×27˚.87E±0˚.02,h14km±5km, n163,σ1§24/205,mb3.5/3,20C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKHS	**Akhisar**	**0.12**	**201**	P		**Pg**	**05 39 35.1**	**-0.1**
AKHS				IAML			05 39 38.0	
	comp=E,6μm,0.4s							
AKHS				S		**Sg**	**05 39 38.1**	**+0.5**
SOMA	**Soma-Manisa**	**0.31**	**302**	Pg		**Pg**	**05 39 37.4**	**-0.8**
SOMA				Sg		**Sg**	**05 39 42.2**	**-0.3**
KTTT	**Salihli**	**0.35**	**150**	P		**Pb**	**05 39 39.2**	**-0.7**
KTTT				S		**Sb**	**05 39 44.2**	**-1.0**
KTTT				IAML			05 39 45.0	
	comp=N,2μm,0.5s							
CAMT	**Merkez**	**0.50**	**241**	P		**Pb**	**05 39 42.1**	**-0.2**
CAMT				IAML			05 39 50.0	
	comp=N,1μm,0.2s							
CAMT				S		**Sb**	**05 39 50.1**	**+0.6**
CAMT				IAML			05 39 52.0	
	comp=E,2μm,0.4s							
ZEDA	**zmir-Bergama**	**0.62**	**268**	P		**Pb**	**05 39 43.9**	**-0.5**
ZEDA				IAML			05 39 52.0	
	comp=E,4μm,0.3s							
ZEDA				S		**Sb**	**05 39 52.5**	**-0.4**
BALB	**Balikesir**	**0.65**	**1**	Pg		**Pg**	**05 39 43.5**	**-0.9**
BALB				Sg		**Sb**	**05 39 53.7**	**0.0**
DEMI	**Demirci**	**0.66**	**86**	P		**Pb**	**05 39 44.6**	**-0.6**
IZMD	**zmir-Dikili-**	**0.73**	**270**	P		**Pb**	**05 39 45.9**	**-0.5**
IZMD				P		**Pb**	**05 39 45.9**	**-0.5**
IZMD				S		**Sb**	**05 39 55.7**	**-0.6**
IZMD				S		**Sb**	**05 39 55.7**	**-0.6**
IZMD				IAML			05 39 56.0	
	comp=N,2μm,0.7s							
IZMD				IAML			05 39 56.0	
	comp=N,2μm,0.7s							
IZMD				IAML			05 39 56.0	
	comp=E,2μm,0.7s							
IZMD				IAML			05 39 56.0	
	comp=E,2μm,0.7s							
MANT	**Manisa**	**0.74**	**133**	P		**Pb**	**05 39 46.2**	**-0.4**
MANT				S		**Sb**	**05 39 56.1**	**-0.4**
MANT				IAML			05 39 59.0	
	comp=N,1μm,0.4s							
BKES	**Balkesir-Mer**	**0.74**	**4**	P		**Pg**	**05 39 44.9**	**-1.3**
DURS	**Dursunbey**	**0.77**	**38**	P		**Pg**	**05 39 45.7**	**-1.0**
DURS				S		**Sg**	**05 39 55.7**	**-1.2**
DURS				IAML			05 39 59.0	
	comp=E,4μm,0.4s							
BALY	**Balya**	**0.77**	**346**	P		**Pg**	**05 39 46.1**	**-0.7**
BALY				S		**Sg**	**05 39 55.6**	**-1.3**
BALY				IAML			05 39 57.0	
	comp=E,4μm,0.4s							
BUHA	**Balikesir, Bur**	**0.80**	**310**	P		**Pg**	**05 39 46.5**	**-0.8**
BUHA				S		**Sg**	**05 39 56.6**	**-1.2**
BUHA				IAML			05 40 00.0	
	comp=N,3μm,0.4s							
DUVT	**Torbali**	**0.84**	**203**	P		**Pb**	**05 39 48.1**	**-0.1**
IZMR	**zmir-demi**	**0.86**	**176**	P		**Pb**	**05 39 48.6**	**+0.1**
IZMR				P		**Pb**	**05 39 48.6**	**+0.1**
IZMR				S		**Sb**	**05 39 59.2**	**-0.6**
IZMR				S		**Sg**	**05 39 59.6**	**-0.1**
IZMR				IAML			05 40 02.0	
	comp=N,6μm,0.4s							
IZMR				IAML			05 40 02.0	
	comp=N,6μm,0.4s							
BAGT	**Foa**	**0.86**	**247**	P		**Pb**	**05 39 48.6**	**+0.1**
BAGT				S		**Sb**	**05 40 00.8**	**+0.8**
BAGT				IAML			05 40 02.0	
	comp=N,1μm,0.8s							
BAGT				IAML			05 40 03.0	
	comp=E,1μm,0.7s							
SIMA	**Simav-Kutahya**	**0.87**	**84**	Pg		**Pg**	**05 39 47.9**	**-0.8**
YAYO	**Edremit-Balk**	**0.87**	**315**	Pg		**Pg**	**05 39 47.6**	**-1.1**
BLKS	**Balkesir-Sus**	**0.88**	**5**	P		**Pg**	**05 39 47.5**	**-1.4**
BLKS				P		**Pb**	**05 39 47.6**	**-1.3**
BLKS				S		**Sg**	**05 39 59.0**	**-1.5**
BLKS				IAML			05 40 03.0	
	comp=E,732nm,0.9s							
BLKS				IAML			05 40 03.0	
	comp=E,833nm,0.7s							
KIRA	**zmir-Kiraz**	**0.90**	**152**	P		**Pb**	**05 39 49.3**	**+0.1**
KIRA				S		**Sb**	**05 40 01.4**	**+0.3**
KIRA				IAML			05 40 03.0	
	comp=N,7μm,0.5s							
USAK	**Uak-Merkez**	**0.94**	**107**	P		**Pb**	**05 39 49.7**	**-0.2**
AYVA	**Ayvalik**	**0.97**	**289**	P		**Pb**	**05 39 50.2**	**-0.1**
AYVA				S		**Sb**	**05 40 03.2**	**+0.2**
AYVA				IAML			05 40 06.0	
	comp=N,8μm,0.8s							
SUSR	**Susurluk-Balik**	**0.98**	**10**	Pg		**Pg**	**05 39 49.3**	**-1.5**
CMHT	**Manyas**	**1.02**	**4**	P		**Pg**	**05 39 50.3**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**179**	Pg		**Pg**	**05 39 50.7**	**-1.3**
YENI	**Yenice-Canakka**	**1.06**	**333**	Pg		**Pg**	**05 39 50.9**	**-1.4**
NAZL	**Nazilli-Aydin**	**1.08**	**162**	Pn		**Pn**	**05 39 52.3**	**-0.2**
SULTU	**Buldan**	**1.17**	**143**	P		**Pn**	**05 39 54.1**	**+0.2**
GMLD	**Gumuldur**	**1.18**	**220**	Pn		**Pb**	**05 39 53.7**	**-0.3**
KARB	**zmir-Karabur**	**1.19**	**254**	P		**Pn**	**05 39 53.9**	**-0.1**
EMET	**Ktahya-Emet**	**1.19**	**71**	P		**Pn**	**05 39 54.3**	**+0.2**
EMET				S		**Sb**	**05 40 09.8**	**+0.3**
EMET				IAML			05 40 11.0	
	comp=E,3μm,0.4s							
EMET				IAML			05 40 12.0	
	comp=N,4μm,0.4s							
CANM	**Can-anakkale**	**1.20**	**328**	Pn		**Pg**	**05 39 53.7**	**-1.2**
KUSD	**Kusadasi-Aydin**	**1.22**	**202**	Pn		**Pg**	**05 39 54.1**	**-1.2**
ESEN	**Aydn-Nazilli**	**1.25**	**162**	P		**Pn**	**05 39 54.6**	**-0.3**
GDZ	**Gediz**	**1.26**	**85**	P		**Pn**	**05 39 55.0**	**-0.1**
GDZ				S		**Sn**	**05 40 12.4**	**+0.5**
GDZ				IAML			05 40 15.0	
	comp=N,1μm,0.6s							
BAYC	**CANAKKALE_Bayr**	**1.27**	**306**	P		**Pn**	**05 39 55.1**	**0.0**
BAYC				S		**Sb**	**05 40 11.2**	**-0.4**
BAYC				IAML			05 40 14.0	
	comp=N,4μm,0.5s							
PRK	**Paraskevi**	**1.27**	**282**	P		**Pn**	**05 39 54.8**	**-0.2**
PRK				S		**Sb**	**05 40 11.7**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**1.31**	**235**	P		**Pn**	**05 39 55.0**	**-0.6**
ORLT	**Orhaneli**	**1.32**	**37**	Pn		**Pn**	**05 39 55.8**	**0.0**
TVSB	**Tavsanli**	**1.32**	**69**	Pn		**Pn**	**05 39 55.9**	**0.0**
EZNE	**Ezine-Canakkal**	**1.39**	**304**	Pn		**Pn**	**05 39 56.3**	**-0.5**
CESE	**eme**	**1.40**	**242**	Pn		**Pn**	**05 39 56.6**	**-0.2**
BIGA	**Biga-Canakkale**	**1.40**	**337**	Pn		**Pn**	**05 39 56.6**	**-0.3**
PASA	**Karahalli, USA**	**1.42**	**116**	P		**Pn**	**05 39 57.6**	**+0.3**
GPNR	**Gulpinar-Canak**	**1.43**	**289**	Pn		**Pn**	**05 39 57.0**	**-0.2**
KOCA	**Canakkale, Ayv**	**1.44**	**291**	P		**Pn**	**05 39 57.3**	**-0.1**
EAG2	**Marmaro, Chios**	**1.45**	**252**	P		**Pn**	**05 39 57.6**	**0.0**
EAG2				S		**Sn**	**05 40 16.1**	**-0.2**
EZN	**Ezine**	**1.46**	**305**	Pn		**Pn**	**05 39 57.4**	**-0.3**
KRBG	**Karabiga-Canak**	**1.47**	**343**	Pn		**Pn**	**05 39 57.3**	**-0.5**
KRL1	**Karlovasi Samo**	**1.51**	**218**	P		**Pn**	**05 39 57.3**	**-1.1**
KRL1				S		**Sn**	**05 40 17.2**	**-0.5**
SMG	**Samos**	**1.52**	**213**	P		**Pb**	**05 39 59.6**	**-0.1**
SMG	**Samos**	**1.52**	**213**	P		**Pn**	**05 39 57.5**	**-1.0**
SMG				S		**Sn**	**05 40 17.4**	**-0.7**
CHOS	**Chios island**	**1.54**	**247**	P		**Pn**	**05 39 58.6**	**-0.4**
CHOS				S		**Sn**	**05 40 18.9**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.58**	**29**	Pn		**Pn**	**05 39 59.1**	**-0.3**
SIGR	**SIGRI**	**1.58**	**279**	P		**Pn**	**05 39 58.9**	**-0.5**
SIGR				S		**Sn**	**05 40 19.7**	**+0.1**
LPK	**Lapseki**	**1.62**	**328**	Pn		**Pn**	**05 39 59.4**	**-0.5**
MRMT	**Marmara Adasi**	**1.62**	**353**	Pn		**Pn**	**05 40 00.1**	**+0.1**
ARMT	**Armutlu**	**1.75**	**26**	Pn		**Pn**	**05 40 01.9**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.77**	**323**	Pn		**Pn**	**05 40 01.7**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.77**	**343**	Pn		**Pn**	**05 40 01.8**	**-0.3**
YER	**Yerkesik**	**1.89**	**170**	P		**Pn**	**05 40 03.7**	**+0.1**
APMY	**Acipayam-Deniz**	**1.89**	**143**	Pn		**Pn**	**05 40 04.1**	**+0.3**
GADA	**Gvkgeada**	**1.94**	**309**	P		**Pn**	**05 40 04.8**	**+0.6**
ERIK	**Erikli-Kesan**	**1.97**	**328**	Pn		**Pn**	**05 40 04.5**	**-0.3**
BODT	**Bodrum**	**1.98**	**193**	P		**Pn**	**05 40 05.5**	**+0.7**
BASM	**Basmaki-Afyon**	**2.02**	**121**	Pn		**Pn**	**05 40 06.0**	**+0.5**
ADVT	**Abdulvahap**	**2.04**	**44**	Pn		**Pn**	**05 40 05.5**	**-0.1**
YLVH	**Yalova**	**2.06**	**34**	Pn		**Pn**	**05 40 06.3**	**+0.4**
SINB	**Sinanoba-Istan**	**2.07**	**14**	Pn		**Pn**	**05 40 06.7**	**+0.6**
YKBL	**Yakuplu-Istanb**	**2.09**	**17**	Pn		**Pn**	**05 40 06.7**	**+0.4**
TUZL	**Tuzla-Istanbul**	**2.11**	**30**	Pn		**Pn**	**05 40 07.3**	**+0.7**
CRLT	**Corlu**	**2.13**	**357**	Pn		**Pn**	**05 40 07.2**	**+0.2**
CAVK	**Edirne/Enez-Ca**	**2.14**	**323**	⇑P		**Pn**	**05 40 07.7**	**+0.6**
CAVK				⇑S		**Sb**	**05 40 36.5**	**-0.3**
ENEZ	**Enez**	**2.19**	**323**	Pn		**Pn**	**05 40 08.0**	**+0.3**
ENEZ	**Enez**	**2.19**	**323**	P		**Pn**	**05 40 08.4**	**+0.7**
KAVV	**Kandilli-Istan**	**2.26**	**23**	Pn		**Pn**	**05 40 08.4**	**+0.5**
LIA	**Limnos Island**	**2.27**	**294**	P		**Pn**	**05 40 09.0**	**+0.2**
LIA	**Limnos Island**	**2.27**	**294**	P		**Pn**	**05 40 08.7**	**-0.1**
LIA				S		**Sn**	**05 40 37.5**	**+1.0**
HRT	**Hereke**	**2.29**	**37**	Pn		**Pn**	**05 40 09.6**	**+0.4**
BGKT	**Bogazkoy**	**2.29**	**17**	Pn		**Pn**	**05 40 09.7**	**+0.6**
CTKS	**Kestanelik-??a**	**2.29**	**12**	Pn		**Pn**	**05 40 09.9**	**+0.7**
SMTH	**Samothraki Isl**	**2.33**	**310**	P		**Pn**	**05 40 10.0**	**+0.3**
SMTH	**Samothraki Isl**	**2.33**	**310**	P		**Pn**	**05 40 09.7**	**0.0**
SMTH				S		**Sn**	**05 40 39.4**	**+1.3**
UKOP	**Uzunkopru-Edir**	**2.33**	**336**	Pn		**Pn**	**05 40 09.8**	**+0.1**
CAME	**Cameli-Denizli**	**2.34**	**151**	Pn		**Pn**	**05 40 10.8**	**+0.8**
ALN	**Alexandroupoli**	**2.36**	**324**	P		**Pn**	**05 40 10.0**	**-0.1**
ALN				S		**Sn**	**05 40 40.0**	**+1.1**
ISP	**Isparta**	**2.39**	**118**	P		**Pn**	**05 40 10.3**	**-0.3**
ISP				S		**Sn**	**05 40 39.0**	**-0.7**
KLYT	**Kilyos**	**2.43**	**21**	Pn		**Pn**	**05 40 11.7**	**+0.7**
SDAG	**Sultandagi-AFY**	**2.45**	**102**	Pn		**Pn**	**05 40 11.9**	**+0.5**
GULT	**Gulveren**	**2.50**	**54**	Pn		**Pn**	**05 40 12.2**	**+0.2**
FETI	**Fethiye-Mugla**	**2.50**	**157**	Pn		**Pn**	**05 40 13.1**	**+1.1**
CTYL	**Yalikoy Yolu**	**2.50**	**7**	Pn		**Pn**	**05 40 12.9**	**+0.9**
SFL1	**Soufli**	**2.50**	**332**	P		**Pn**	**05 40 12.1**	**+0.1**
SFL1				S		**Sn**	**05 40 43.1**	**+0.8**
CIFT	**Cifteler, Eski**	**2.51**	**81**	Pn		**Pn**	**05 40 13.2**	**+1.0**
SILT	**Sile**	**2.55**	**32**	⇑P		**Pb**	**05 40 15.1**	**-2.2**
SILT				⇑S		**Sb**	**05 40 49.5**	**+1.0**
SILT	**Sile**	**2.55**	**32**	Pn		**Pn**	**05 40 13.6**	**+0.9**
SAUV	**Serdivan-Sakar**	**2.57**	**47**	Pn		**Pn**	**05 40 13.6**	**+0.6**
PHSR	**Pinarhisar**	**2.65**	**354**	Pn		**Pn**	**05 40 14.5**	**+0.5**
APE	**Apeiranthos**	**2.67**	**225**	⇑P		**Pn**	**05 40 13.5**	**-0.9**
APE				⇓S		**Sn**	**05 40 46.0**	**-0.5**
APE	**Apeiranthos**	**2.67**	**225**	P		**Pn**	**05 40 13.5**	**-0.9**
ARG	**Arkhangelos**	**2.78**	**176**	P		**Pn**	**05 40 16.0**	**+0.1**
ARG	**Arkhangelos**	**2.78**	**176**	P		**Pn**	**05 40 15.6**	**-0.3**
RDO	**Rodhopi**	**2.80**	**321**	P		**Pn**	**05 40 16.5**	**+0.4**
RDO	**Rodhopi**	**2.80**	**321**	P		**Pn**	**05 40 16.2**	**+0.1**
KARY	**Karystos**	**2.86**	**251**	P		**Pn**	**05 40 16.4**	**-0.5**
KYMI	**Kymi, Euboea I**	**2.97**	**264**	P		**Pn**	**05 40 19.2**	**+0.8**
KYMI	**Kymi, Euboea I**	**2.97**	**264**	P		**Pn**	**05 40 17.9**	**-0.5**
ANTB	**Antalya**	**3.04**	**133**	Pn		**Pn**	**05 40 20.3**	**+0.9**
KIZT	**Kizilcal**	**3.13**	**91**	Pn		**Pn**	**05 40 20.1**	**-0.7**
DION	**Dionisos Attik**	**3.22**	**255**	P		**Pn**	**05 40 22.2**	**+0.2**
KDZ	**Kurdzhali**	**3.27**	**325**	eP		**Pn**	**05 40 20.8**	**-1.8**
OUR	**Ouranopolis**	**3.29**	**295**	P		**Pn**	**05 40 23.2**	**+0.4**
OUR	**Ouranopolis**	**3.29**	**295**	P		**Pn**	**05 40 22.6**	**-0.2**
KARP	**Karpathos**	**3.49**	**190**	P		**Pn**	**05 40 24.9**	**-0.7**
DIM	**Dimitrovgrad**	**3.51**	**331**	P		**Pn**	**05 40 26.2**	**+0.3**
RZN	**Rozhen**	**3.60**	**319**	P		**Pn**	**05 40 28.0**	**+0.6**
JMB	**Yambol**	**3.64**	**344**	P		**Pn**	**05 40 29.4**	**+1.7**
PLG	**Polygyros**	**3.68**	**293**	P		**Pn**	**05 40 28.9**	**+0.6**
PLG	**Polygyros**	**3.68**	**293**	P		**Pn**	**05 40 28.1**	**-0.2**
SRS	**Serrai**	**3.91**	**304**	P		**Pn**	**05 40 31.4**	**0.0**
PLD	**Plovdiv**	**3.95**	**324**	P		**Pn**	**05 40 30.4**	**+0.5**
PLD	**Plovdiv**	**3.95**	**324**	P		**Pn**	**05 40 32.4**	**+0.5**
HORT	**Hortiatis**	**4.01**	**295**	P		**Pn**	**05 40 33.5**	**+0.7**
MMB	**Musomishta**	**4.05**	**310**	P		**Pn**	**05 40 34.0**	**+0.6**
MMB	**Musomishta**	**4.05**	**310**	P		**Pn**	**05 40 34.0**	**+0.6**
NPS	**Neapolis**	**4.14**	**207**	P		**Pn**	**05 40 34.5**	**0.0**
PRD	**Provadia**	**4.18**	**355**	eP		**Pn**	**05 40 36.6**	**+1.6**
ELND	**Elena**	**4.21**	**340**	⇑P		**Pn**	**05 40 36.0**	**+0.5**
IDI	**Anoyia**	**4.40**	**214**	Pn		**Pn**	**05 40 38.0**	**-0.1**
	5.4nm,0.5s,baz=273,slow=5.8,SNR=8.6							
IDI				Lg		Lg	05 41 51.7	
	2.7nm,0.3s,baz=316,slow=14,SNR=3.9							
IDI	**Anoyia**	**4.40**	**214**	P		**Pn**	**05 40 38.1**	**-0.1**
BRTR	**Keskin Array B**	**4.53**	**79**	Pn		**Pn**	**05 40 41.2**	**+1.2**
	1.9nm,0.3s,baz=257,slow=14,SNR=39							
BRTR				Pg		**Pb**	**05 40 54.0**	**+2.8**
	1.3nm,0.3s,baz=258,slow=17,SNR=5.1							
BRTR				Lg		Lg	05 41 51.2	
	1.3nm,0.3s,baz=267,slow=23,SNR=12							
BRTR				LR		LR	05 42 50.4	
	comp=Z,268nm,18.1s,baz=269,slow=45 4.5nm,0.3s							
PVL	**Pavlikeni**	**4.60**	**335**	*e*P		**Pn**	**05 40 41.5**	**+0.6**
KKB	**Krupnik**	**4.60**	**310**	*e*P		**Pn**	**05 40 41.9**	**+1.0**
PSN	**Preselentsi**	**4.64**	**2**	*e*P		**Pn**	**05 40 41.4**	**-0.1**
KIRS	**Kirsehir-Merke**	**4.71**	**86**	⇑P		**Pn**	**05 40 43.9**	**+1.4**
KIRS				⇑S		**Sn**	**05 41 43.0**	**+6.0**
PLNA	**Plana**	**4.85**	**317**	P		**Pn**	**05 40 45.6**	**+1.2**
ITM	**Ithomi**	**5.03**	**251**	P		**Pn**	**05 40 46.9**	**+0.1**
PLVB	**Pleven**	**5.03**	**332**	⇑P		**Pn**	**05 40 48.3**	**+1.6**
PLVB				⇑S		**Sn**	**05 41 46.9**	**+2.3**
VTS	**Vitosha**	**5.05**	**317**	*e*P		**Pn**	**05 40 47.8**	**+0.6**
BLSH	**Balsha**	**5.19**	**319**	*e*P		**Pn**	**05 40 50.7**	**+1.6**
BLKB	**Belogradchik**	**6.05**	**321**	⇑S		**Sn**	**05 42 12.1**	**+2.1**
CFR	**Carcaliu**	**6.18**	**2**	⇑P		**Pn**	**05 41 04.8**	**+2.2**
BOVS	**Bovan**	**6.56**	**317**	⇑P		**Pn**	**05 41 08.7**	**+0.9**
MLR	**Muntele Rosu**	**6.65**	**348**	Pn		**Pn**	**05 41 12.5**	**+3.3**
	0.9nm,0.3s,baz=127,slow=11,SNR=7.6 11nm,0.8s							
MLR	**Muntele Rosu**	**6.65**	**348**	⇑P		**Pn**	**05 41 11.4**	**+2.3**
VOIR		**6.77**	**343**	⇓P		**Pn**	**05 41 12.7**	**+2.0**
PLOR	**Plostina**	**6.91**	**353**	⇑P		**Pn**	**05 41 15.1**	**+2.4**
VRI	**Vrincioaia**	**6.92**	**353**	⇑P		**Pn**	**05 41 14.8**	**+2.1**
SEV	**Sevastopol'**	**7.04**	**36**	*e*P		**Pn**	**05 41 15.0**	**+0.7**
SEV				pmax		pmax	05 41 20.1	
	comp=Z,8.0nm,0.6s							
SEV				*e*S		**Sn**	**05 42 31.2**	**-2.9**
SEV				smax		smax	05 42 35.9	
	comp=N,4.0nm,0.5s							
SEV				smax		smax	05 42 35.9	
	comp=E,3.0nm,0.4s							
HERR	**Herculane**	**7.15**	**327**	⇓P		**Pn**	**05 41 15.6**	**-0.3**
MDVR	**Moldovita**	**7.38**	**324**	⇑P		**Pn**	**05 41 18.9**	**-0.2**
SUDU	**Sudak**	**7.93**	**40**	*e*S		**Sn**	**05 42 52.7**	**-3.4**
SUDU				smax		smax	05 42 55.1	
	comp=N,16nm,0.5s,comp=E,11nm,0.5s							
BZS	**Buzias**	**8.08**	**327**	⇑P		**Pn**	**05 41 28.5**	**-0.1**
MMAI	**Mount Meron Ar**	**8.53**	**132**	Pn		**Pn**	**05 41 34.8**	**-0.2**
	comp=E,1.6nm,0.3s,baz=316,slow=14,SNR=5.7							
MMAI				Sn		**Sn**	**05 43 06.2**	**-4.9**
	comp=E,3.5nm,0.3s,baz=306,slow=29,SNR=7.0 comp=E,4.9nm,0.7s							
DRGR		**8.66**	**336**	⇑P		**Pn**	**05 41 37.7**	**+1.0**
MORH	**Mrgy, Hungar**	**9.91**	**320**	⇑P		**Pn**	**05 41 53.7**	**0.0**
EIL	**Elat**	**10.98**	**146**	Pn		**Pn**	**05 42 08.3**	**-0.2**
	comp=E,0.4nm,0.3s,baz=47,slow=21,SNR=1.4							
EIL				Sn		**Sn**	**05 44 03.4**	**-7.8**
	comp=E,0.8nm,0.3s,baz=5.6,slow=11,SNR=4.2 comp=E,2.1nm,0.5s							
FINES	**FINESS Array B**	**22.50**	**358**	P		**P**	**05 44 34.4**	**+3.8**
	comp=E,1.7nm,0.8s,baz=176,slow=10,SNR=5.6 comp=E,1.7nm,0.8s							
AKTO	**Aktyubinsk**	**24.11**	**52**	LR		LR	05 55 28

GAMI	**Galela, Maluku**	**1.39**	**87**	P		**Pn**	**05 51 46.0**	**+1.5**
MNI	**Manado**	**1.59**	**259**	P		**Pn**	**05 51 48.6**	**+1.4**
SGSI	**Sangihe**	**2.10**	**336**	P		**Pn**	**05 51 55.4**	**+1.2**
SANI	**Sanana**	**3.81**	**186**	P		**Pn**	**05 52 19.0**	**+1.4**
MRSI	**Marisa**	**4.63**	**254**	P		**Pn**	**05 52 29.7**	**+0.7**
WRA	**Warramunga Arr**	**22.93**	**161**	P		**P**	**05 56 21.2**	**-0.6**
	1.0nm,0.4s,baz=340,slow=11,SNR=18							
	1.0nm,0.4s							
ASAR	**Alice Springs**	**26.31**	**164**	P		**P**	**05 56 52.7**	**-0.2**
	0.4nm,0.5s,baz=341,slow=8.1,SNR=6.2							
	0.4nm,0.5s							
HNR	**Honiara**	**35.22**	**109**	LR		LR	06 12 19.3	
	comp=Z,6.3nm,18.1s,baz=14,slow=36							
MKAR	**Makanchi Array**	**58.98**	**326**	P		**P**	**06 01 15.2**	**-1.2**
	0.4nm,0.6s,baz=116,slow=8.7,SNR=5.7							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**63.22**	**328**	P		**P**	**06 01 43.8**	**-1.1**
	0.7nm,0.3s,baz=126,slow=5.8,SNR=4.6							
	0.7nm,0.3s							

IDC 08 05:56:43.4±1.8,3°.78N×122°.56E,h602km±23km,mb2.9/5, mbtmp4.0/5,Error ellipse: s-maj=123.5km s-min=13.1km az=65.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.27**	**154**	P		P	06 01 32.3	-0.5
	1.7nm,0.3s,baz=336,slow=9.5,SNR=47							
WRA				S		S	06 05 19.9	-4.6
	0.3nm,0.6s,baz=334,slow=15,SNR=4.9							
WRA				ScP		ScP	06 07 21.8	-0.4
	0.5nm,1.0s,baz=348,slow=3.1,SNR=4.6							
	1.7nm,0.3s							
ASAR	**Alice Springs**	**29.44**	**158**	P		P	06 02 00.6	+0.1
	1.2nm,0.5s,baz=336,slow=7.1,SNR=18							
ASAR				S		S	06 06 11.1	-2.7
	0.8nm,0.6s,baz=327,slow=12,SNR=9.4							
ASAR				ScP		ScP	06 07 31.9	-0.2
	0.5nm,0.6s,baz=338,slow=2.9,SNR=5.8							
	1.2nm,0.5s							
STKA	**Stephens Creek**	**39.82**	**154**	P		P	06 03 26.9	+0.6
	0.8nm,0.3s,baz=333,slow=10,SNR=2.1							
	0.8nm,0.3s							
SONM	**Songino Array**	**46.04**	**345**	P		P	06 04 15.0	+0.4
	0.4nm,0.5s,baz=163,slow=8.4,SNR=4.8							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**55.20**	**327**	P		P	06 05 20.8	0.0
	0.9nm,0.5s,baz=128,slow=7.5,SNR=14							
MKAR				PcP		PcP	06 06 11.0	-1.5
	0.3nm,0.6s,baz=132,slow=4.2,SNR=3.8							
	0.9nm,0.5s							

*VAO **08** 06:17:48.7±0.6,20°.77S×68°.86W,h41km±4km,mb5.4, Presumed earthquake*

*SJA **08** 06:17:56.5±0.6,20°.81S×68°.87W,h130km±4km,ML5.2, MW5.0*

*NEIC **08** 06:17:57.8,20°.73S×68°.70W,h90km,Moment Tensor Solution. Duration: 1s9 Moment tensor: Scale 10^16^Nm; Mrr~0.01; Mθθ~8.52; Mϕϕ8.53; Mrθ~1.27; Mϕθ~1.09; Mϕr~1.98; Fault plane solution: M0 8.91000×10^16^ NP1: ϕs131.06000°,δ74.90000°,λ177.98000°. NP2: ϕs221.59000°,δ88.05000°,λ15.11000°. Principal axes: T 9.0036, Plg12.0000°, Azm87.0000°; N -0.1855, Plg75.0000°, Azm229.0000°; P -8.8181, Plg9.0000°, Azm355.0000°;*

*NEIC **08** 06:17:57.8,20°.83S×68°.70W,h90km*

*NEIC **08** 06:17:57.8,20°.81S×68°.67W,h108km*

*NEIC **08** 06:17:58.0±1.7,20°.83S±0°.04×68°.71W±0°.06,h108km±4km, mb5.5/47,Mwr5.2/39,Mww5.2/16,Mwr5.3(GUC),Error ellipse: s-maj=8.0km s-min=4.9km az=100.0,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr2.00; Mθθ~7.49; Mϕϕ5.49; Mrθ~1.67; Mϕθ 1.26; Mϕr~3.11; Fault plane solution: M0 7.70000×10^16^ NP1: ϕs136.56000°,δ62.06000°,λ163.06000°. NP2: ϕs234.67000°,δ75.09000°,λ29.00000°. Principal axes: T 7.5633, Plg31.0000°, Azm99.0000°; N 0.2573, Plg58.0000°, Azm260.0000°; P -7.8207, Plg9.0000°, Azm3.0000°;*

*GFZ **08** 06:17:57.1,20°.89S×68°.59W,h96km,MW5.2,Moment Tensor Solution. s39 Moment tensor: Mrr0.65; Mθθ-6.84; Mϕϕ6.19; Mrθ-1.70; Mϕθ0.77; Mϕr-3.41; Fault plane solution: NP1:ϕs135.00000°,δ63.00000°, λ170.00000°. NP2:ϕs230.00000°,δ81.00000°,λ28.00000°.*

*GUC **08** 06:17:58.3±0.6,20°.84S×68°.70W,h110km±3km,ML5.2*

*IDC **08** 06:17:59.0±0.4,20°.77S×68°.47W,h116km±2km,mb4.6/21, mbtmp5.0/26,MS3.9/10,Error ellipse: s-maj=13.8km s-min=9.0km az=62.0*

*MOS **08** 06:17:58.8±1.6,20°.80S×68°.55W,h126km,mb5.1/10, Error ellipse: s-maj=14.7km s-min=7.6km az=115.0*

*GCMT **08** 06:18:01.8±0.2,20°.91S±0°.02×68°.64W±0°.02,h131km±2km, MW5.2/109,Moment Tensor Solution. s51,c68; s109,c167; Duration: 1s0 Moment tensor: Scale 10^17^ Nm; Mrr0.01±.02; Mθθ-0.71±.02; Mϕϕ0.70±.02; Mrθ-0.21±.01; Mϕϕ0.31±.02; Mϕr-0.34±.02; Best double couple: M0 0.86100×10^17^ NP1:ϕs145.00000°,δ66.00000°, λ171.00000°. NP2:ϕs238.00000°,δ82.00000°,λ24.00000°. Principal axes: T 0.9220, Plg23.0000°, Azm104.0000°; N -0.1210, Plg65.0000°, Azm256.0000°; P -0.8010, Plg11.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 06:17:57.6±0.3,20°.82S±0°.02×68°.67W±0°.04,h112km±2km, h112km:pP-P,n399,σ1°.58/466,mb5.3/86,16C-13D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB01	**IPOC Station P**	**0.80**	**253**			**Pn**	**06 18 16.9**	**-0.1**
PB01				Sn		**Sn**	**06 18 30.8**	**-1.0**
PB01	**IPOC Station P**	**0.80**	**253**	↑	*iP*	**Pn**	**06 18 16.6**	**-0.5**
PB01				*i*	S	**Sn**	**06 18 31.0**	**-0.8**
PB01					IAML		06 18 33.2	
	comp=E,173μm,0.2s							
PB01	**IPOC Station P**	**0.80**	**253**	*eP*		**Pn**	**06 18 15.9**	**-1.2**
PB01				*eS*		Sn	06 18 16.4	-15
PB01					IAML		06 18 32.7	
	comp=Z,100μm,0.2s							
PB08	**IPOC Station P**	**0.81**	**326**			**Pn**	**06 18 17.3**	**-0.3**
PB08				Sn		**Sn**	**06 18 32.5**	**0.0**
PB08	**IPOC Station P**	**0.81**	**326**	↑	*iP*	**Pn**	**06 18 18.0**	**+0.4**
PB08				*i*	S	**Sn**	**06 18 32.8**	**+0.3**
PB08					IAML		06 18 34.7	
	comp=E,74μm,0.3s							
PB08	**IPOC Station P**	**0.81**	**326**	*eP*		**Pn**	**06 18 17.3**	**-0.3**
PB08					IAML		06 18 36.1	
	comp=Z,42μm,0.5s							
PX03	**IPOC Station P**	**0.99**	**294**	*iP*		**Pn**	**06 18 17.9**	**-1.0**
PX03				*i*	S	**Sn**	**06 18 34.6**	**-0.5**
PB09	**IPOC Station P**	**1.11**	**209**			**Pn**	**06 18 20.8**	**+0.5**
PB09				Sn		**Sn**	**06 18 37.6**	**+0.2**
PB09	**IPOC Station P**	**1.11**	**209**	↓	*iP*	**Pn**	**06 18 20.6**	**+0.3**
PB09				*i*	S	**Sn**	**06 18 37.2**	**-0.2**
PB09	**IPOC Station P**	**1.11**	**209**	*eP*		**Pn**	**06 18 20.6**	**+0.3**
PB09				*eS*		**Sn**	**06 18 38.4**	**+0.9**
PB09					IAML		06 18 39.8	
	comp=Z,20μm,0.9s							
GO01	**Chusmiza**	**1.24**	**337**			**Pn**	**06 18 22.3**	**+0.2**
GO01				Sn		**Sn**	**06 18 41.0**	**+0.4**
GO01	**Chusmiza**	**1.24**	**337**	↓	*iP*	**Pn**	**06 18 22.5**	**+0.4**
GO01				*i*	S	**Sn**	**06 18 40.9**	**+0.4**
GO01					IAML		06 18 42.6	
	comp=E,79μm,0.4s							
GO01	**Chusmiza**	**1.24**	**337**	*eP*		**Pn**	**06 18 22.5**	**+0.4**
GO01				*eS*		**Sn**	**06 18 41.8**	**+1.2**
GO01					IAML		06 18 43.9	
	comp=Z,37μm,0.5s							
PB02	**IPOC Station P**	**1.25**	**246**			**Pn**	**06 18 21.9**	**+0.1**
PB02				Sn		**Sn**	**06 18 38.5**	**-1.5**
PB02	**IPOC Station P**	**1.25**	**246**	↑	*iP*	**Pn**	**06 18 21.4**	**-0.4**
PB02				*i*	S	**Sn**	**06 18 39.2**	**-0.8**
PB02					IAML		06 18 41.0	
	comp=N,69μm,0.3s							
PB02	**IPOC Station P**	**1.25**	**246**	*eP*		**Pn**	**06 18 21.1**	**-0.6**
PB02				*eS*		**Sn**	**06 18 39.1**	**-0.9**
PB02					IAML		06 18 43.1	
	comp=Z,68μm,0.4s							
PB11	**IPOC Station P**	**1.40**	**318**			**Pn**	**06 18 22.9**	**-0.6**
PB11				Sn		**Sn**	**06 18 42.2**	**-0.9**
PB11	**IPOC Station P**	**1.40**	**318**	↑	*iP*	**Pn**	**06 18 23.5**	**0.0**
PB11				*i*	S	**Sn**	**06 18 42.8**	**-0.4**
PB11					IAML		06 18 44.1	
	comp=N,70μm,0.5s							
PB11	**IPOC Station P**	**1.40**	**318**	*eP*		**Pn**	**06 18 22.8**	**-0.8**
PB11				*eS*		**Sn**	**06 18 44.1**	**+0.9**
PB11					IAML		06 18 45.8	
	comp=Z,29μm,0.2s							
TA01	**Diego Aracena**	**1.44**	**280**			**Pn**	**06 18 23.0**	**-0.7**
TA01				Sn		**Sn**	**06 18 42.4**	**-1.2**
TA01	**Diego Aracena**	**1.44**	**280**	↑	*iP*	**Pn**	**06 18 23.1**	**-0.7**
TA01				*i*	S	**Sn**	**06 18 42.4**	**-1.2**
TA01	**Diego Aracena**	**1.44**	**280**	*eP*		**Pn**	**06 18 23.0**	**-0.7**
TA01				*eS*		**Sn**	**06 18 45.2**	**+1.6**
PB07	**IPOC Station P**	**1.45**	**231**			**Pn**	**06 18 23.4**	**-0.7**
PB07				Sn		**Sn**	**06 18 42.9**	**-1.3**
PB07	**IPOC Station P**	**1.45**	**231**	↑	*iP*	**Pn**	**06 18 23.8**	**-0.3**
PB07				*i*	S	**Sn**	**06 18 43.9**	**-0.4**
PB07					IAML		06 18 46.0	
	comp=E,32μm,0.4s							
PB07	**IPOC Station P**	**1.45**	**231**	*eP*		**Pn**	**06 18 23.6**	**-0.6**
PB07					IAML		06 18 47.6	
	comp=Z,24μm,0.2s							
TA02	**Huaiquique**	**1.47**	**291**	↑	*iP*	**Pn**	**06 18 23.8**	**-0.4**
TA02				*i*	S	**Sn**	**06 18 44.0**	**-0.4**
TA02	**Huaiquique**	**1.47**	**291**	*eP*		**Pn**	**06 18 23.3**	**-0.9**
TA02				*eS*		**Sn**	**06 18 45.7**	**+1.3**
TA02					IAML		06 18 46.4	
	comp=Z,28μm,0.1s							
PB03	**IPOC Station P**	**1.59**	**219**			**Pn**	**06 18 25.2**	**-0.5**
PB03	**IPOC Station P**	**1.59**	**219**	↓	*iP*	**Pn**	**06 18 25.5**	**-0.3**
PB03				*i*	S	**Sn**	**06 18 46.3**	**-0.9**
PB03	**IPOC Station P**	**1.59**	**219**	*eP*		**Pn**	**06 18 25.3**	**-0.5**
PB03					IAML		06 18 49.5	
	comp=Z,10μm,0.2s							
PB06	**IPOC Station P**	**2.06**	**204**			**Pn**	**06 18 31.2**	**-0.4**
PB06	**IPOC Station P**	**2.06**	**204**	↓	*iP*	**Pn**	**06 18 31.4**	**-0.2**
PB06				*i*	S	**Sn**	**06 18 56.8**	**-0.7**
PB06					IAML		06 19 05.7	
	comp=E,17μm,0.3s							
PB06	**IPOC Station P**	**2.06**	**204**	*eP*		**Pn**	**06 18 30.9**	**-0.7**
PB06				*eS*		**Sn**	**06 18 58.0**	**+0.5**
PB06					IAML		06 19 00.6	
	comp=Z,8μm,0.6s							
AF01	**San Pedro de A**	**2.17**	**168**			**Pn**	**06 18 34.5**	**+1.3**
AF01	**San Pedro de A**	**2.17**	**168**	↓	*iP*	**Pn**	**06 18 35.1**	**+1.9**
AF01				*i*	S	**Sn**	**06 19 01.7**	**+1.3**
AF01	**San Pedro de A**	**2.17**	**168**	*eP*		**Pn**	**06 18 34.5**	**+1.3**
AF01				*eS*		Sn	06 19 19.1	+19
AF01					IAML		06 19 22.8	
	comp=Z,6μm,0.9s							
PX02	**IPOC Station P**	**2.34**	**322**	*eP*		**Pn**	**06 18 33.5**	**-1.7**
PX02				*i*	S	**Sn**	**06 19 02.8**	**-1.1**
PX02					IAML		06 19 07.5	
	comp=N,9μm,0.7s							
PB05	**IPOC Station P**	**2.48**	**215**			**Pn**	**06 18 36.5**	**-0.4**
PB05	**IPOC Station P**	**2.48**	**215**	↓	*iP*	**Pn**	**06 18 35.8**	**-1.1**
PB05				*i*	S	**Sn**	**06 19 02.4**	**-4.6**
PB05					IAML		06 19 15.3	
	comp=E,9μm,0.3s							
PB05	**IPOC Station P**	**2.48**	**215**	*eP*		**Pn**	**06 18 36.0**	**-0.9**
PB05				*eS*		**Sn**	**06 19 05.8**	**-1.3**
PB05					IAML		06 19 17.1	
	comp=Z,7μm,0.3s							
PB16	**IPOC Station P**	**2.59**	**342**			**Pn**	**06 18 39.5**	**+0.7**
PB16	**IPOC Station P**	**2.59**	**342**	↓	*iP*	**Pn**	**06 18 40.0**	**+1.2**
PB16				*i*	S	**Sn**	**06 19 12.1**	**+1.6**
PB16					IAML		06 19 19.7	
	comp=N,5μm,0.4s							
PB16	**IPOC Station P**	**2.59**	**342**	*eP*		**Pn**	**06 18 39.4**	**+0.6**
PB16					IAML		06 19 24.2	
	comp=E,6μm,0.6s							
PB12	**IPOC Station P**	**2.69**	**324**			**Pn**	**06 18 38.4**	**-1.3**
PB12	**IPOC Station P**	**2.69**	**324**	↑	*iP*	**Pn**	**06 18 38.7**	**-1.0**
PB12				*i*	S	**Sn**	**06 19 09.4**	**-2.6**
PB12					IAML		06 19 18.0	
	comp=N,22μm,0.7s							
PB12	**IPOC Station P**	**2.69**	**324**	*eP*		**Pn**	**06 18 38.7**	**-1.0**
PB12				*eS*		**Sn**	**06 19 12.3**	**+0.2**
PB12					IAML		06 19 18.1	
	comp=Z,8μm,0.8s							
AP01	**Chacalluta**	**2.90**	**327**			**Pn**	**06 18 41.6**	**-0.7**
AP01	**Chacalluta**	**2.90**	**327**	*iP*		**Pn**	**06 18 41.6**	**-0.7**
AP01				*i*	S	**Sn**	**06 19 15.6**	**-1.2**
AP01	**Chacalluta**	**2.90**	**327**	*eP*		**Pn**	**06 18 41.4**	**-0.9**
AP01				*eS*		**Sn**	**06 19 19.9**	**+3.1**
AP01					IAML		06 19 28.4	
	comp=Z,28μm,1.1s							
YJA	**Yavi**	**3.23**	**115**	↑	*eP*	**Pn**	**06 18 49.5**	**+2.3**
YJA	**Yavi**	**3.23**	**115**		*eP*	**Pn**	**06 18 50.7**	**+3.5**
PB18	**Visviri**	**3.30**	**346**			**Pn**	**06 18 49.8**	**+1.6**
PB18	**Visviri**	**3.30**	**346**	↓	*iP*	**Pn**	**06 18 50.3**	**+2.1**
SALTA		**4.02**	**148**	↓	*eP*	**Pn**	**06 18 59.8**	**+2.1**
SALTA		**4.02**	**148**		*eP*	**Pn**	**06 18 59.7**	**+2.0**
PB14	**IPOC Station P**	**4.12**	**203**			**Pn**	**06 18 58.9**	**+0.1**
PB14	**IPOC Station P**	**4.12**	**203**	*i*	P	**Pn**	**06 18 57.0**	**-1.8**
PB14	**IPOC Station P**	**4.12**	**203**	*eP*		**Pn**	**06 18 56.9**	**-1.8**
PB14				*eS*		Sn	06 19 58.8	+13
PB14					IAML		06 20 01.1	
	comp=Z,2μm,0.7s							
LPAZ	**La Paz**	**4.53**	**7**	P		**Pn**	**06 19 06.6**	**+1.9**
	comp=Z,679nm,0.4s,baz=199,slow=5.4,SNR=2481							
LPAZ	**La Paz**	**4.53**	**7**			**Pn**	**06 19 07.1**	**+2.4**
LPAZ	**La Paz**	**4.53**	**7**	P		**Pn**	**06 19 07.1**	**+2.4**
SLA	**San Lorenzo**	**4.86**	**144**	↓	*eP*	**Pn**	**06 19 10.8**	**+2.0**
SLA	**San Lorenzo**	**4.86**	**144**	*eP*		**Pn**	**06 19 10.9**	**+2.2**
AC01	**Pan de Azucar**	**5.59**	**198**			**Pn**	**06 19 16.2**	**-2.3**
AC02	**Maricunga**	**6.01**	**184**			**Pn**	**06 19 23.6**	**-0.8**
GO03	**Copiapo**	**6.90**	**192**			**Pn**	**06 19 32.8**	**-3.4**
AC04	**Llanos de Chal**	**7.67**	**196**			Pn	06 19 41.3	-5.3
LCO	**Las Campanas**	**8.36**	**192**			**Pn**	**06 19 51.9**	**-4.3**
LCO	**Las Campanas**	**8.36**	**192**	P		**Pn**	**06 19 51.9**	**-4.3**
SIV	**San Ignacio**	**8.66**	**58**	P		**Pn**	**06 19 57.6**	**-2.5**
	comp=Z,114nm,0.6s,baz=237,slow=9.9,SNR=467							
SIV				S		Sn	06 21 25.5	-11
	comp=Z,34nm,0.9s,baz=302,slow=20,SNR=6.1							
SIV				LR		LR	06 24 06.9	
	comp=Z,721nm,18.1s,baz=260,slow=43							
GO04	**Tololo Observa**	**9.51**	**191**			**Pn**	**06 20 07.7**	**-4.1**
MURT	**Porto Murtinho**	**10.35**	**97**	*eP*		Pn	06 20 16.5	-6.4
PTLB	**Pontes e Lacer**	**10.52**	**61**	*eP*		Pn	06 20 19.0	-6.2
BDQN	**Bodoquena, MS**	**11.17**	**90**	*eP*		Pn	06 20 28.9	-5.1
CPUP	**Villa Florida**	**11.76**	**120**	P		**Pn**	**06 20 39.6**	**-2.1**
	comp=Z,18nm,0.5s,baz=299,slow=13,SNR=62							
CPUP				LR		LR	06 25 28.8	
	comp=Z,406nm,21.7s,baz=289,slow=39							
CPUP	**Villa Florida**	**11.76**	**120**	Pn		**Pn**	**06 20 39.4**	**-2.4**
CPUP	**Villa Florida**	**11.76**	**120**	P		**Pn**	**06 20 39.4**	**-2.4**
NNA	**Nana**	**11.77**	**317**	P		**Pn**	**06 20 40.0**	**-2.0**
	comp=Z,7.3nm,0.4s,baz=158,slow=10.0,SNR=5.4							
NNA				S		**Sn**	**06 22 45.9**	**-5.7**
	comp=Z,18nm,0.4s,baz=228,slow=21,SNR=2.4							
NNA	**Nana**	**11.77**	**317**	*i*	P	**Pn**	**06 20 41.6**	**-0.4**
NNA					pmax	pmax		
	comp=Z,146nm,0.9s							
NNA	**Nana**	**11.77**	**317**	P		**Pn**	**06 20 40.6**	**-1.4**
	comp=Z,146nm,0.9s							
AQDB	**Aquidauana**	**12.15**	**91**	*eP*		Pn	06 20 42.1	-4.9
MT08	**Bocatoma Ro**	**12.63**	**185**			**Pn**	**06 20 51.4**	**-2.1**
AMBA	**Amambai (Brazi**	**12.87**	**102**	*eP*		**Pn**	**06 20 52.1**	**-4.4**
PP1B	**Ponte de Pedra**	**13.41**	**79**	*eP*		Pn	06 20 58.3	-5.3
PSAL	**Palomas, Salto**	**14.26**	**138**	*eP*		**Pn**	**06 21 09.7**	**-4.5**
TRCB	**Terra Rica**	**15.03**	**100**			**Pn**	**06 21 22.9**	**-1.3**
TRCB	**Terra Rica**	**15.03**	**100**	*eP*		**Pn**	**06 21 21.7**	**-2.4**
C2SB	**Chapadao do Su**	**15.04**	**85**	*eP*		**Pn**	**06 21 21.7**	**-2.6**
ML02	**Panimavida**	**15.09**	**189**			**Pn**	**06 21 23.0**	**-1.7**
H03N1	**Juan Fernandez**	**15.52**	**214**	T		T	06 36 22.6	
	baz=36,slow=72,SNR=21							
H03N2	**Juan Fernandez**	**15.53**	**214**	T		T	06 36 21.7	
	baz=36,slow=72,SNR=31							
H03N3	**Juan Fernandez**	**15.54**	**214**	T		T	06 36 20.7	
	baz=36,slow=72,SNR=32							
PTGB	**Pitanga**	**15.80**	**107**	*eP*		**Pn**	**06 21 31.0**	**-2.9**
CLDB	**Colider**	**15.84**	**53**	*eP*		**Pn**	**06 21 30.7**	**-3.7**
BI02	**San Fabin de**	**15.95**	**188**			**Pn**	**06 21 34.6**	**-1.1**
PCMB	**Pacaembu**	**16.25**	**96**	*eP*		**Pn**	**06 21 32.9**	**-6.6**
BI05	**Punta Hualpn**	**16.36**	**193**	P		**Pn**	**06 21 39.7**	**-0.8**
ITAB	**Concordia**	**16.40**	**116**			**Pn**	**06 21 40.0**	**-1.1**
ITAB	**Concordia**	**16.40**	**116**	*eP*		**Pn**	**06 21 38.5**	**-2.7**
LDASE	**Londrina, Braz**	**16.47**	**102**	*eP*		**Pn**	**06 21 40.2**	**-1.9**
ATAH	**Atahualpa**	**16.54**	**324**	P		**P**	**06 21 44.7**	**+0.6**
	comp=Z,26nm,0.7s,baz=170,slow=11,SNR=12							
ATAH				S		**Sn**	**06 24 45.4**	**-2.0**
	comp=Z,6.4nm,0.8s,baz=131,slow=12,SNR=1.8							
CPSB	**Cacapava Do Su**	**16.71**	**128**	*eP*		**Pn**	**06 21 42.0**	**-3.0**
ARAG	**Araguaiana, MT**	**16.80**	**75**	*eP*		**Pn**	**06 21 43.9**	**-2.2**
ITRB	**Iturama**	**17.22**	**90**	*eP*		**P**	**06 21 49.1**	**-2.0**
PLTB	**Pedras Altas**	**17.34**	**132**			**P**	**06 21 49.9**	**-2.5**
PLTB	**Pedras Altas**	**17.34**	**132**	*eP*		**P**	**06 21 49.9**	**-2.5**
TEFE	**Tefe**	**17.65**	**13**	*eP*		**P**	**06 21 52.1**	**-3.7**
FRTB	**Fartura**	**17.89**	**102**	*eP*		**P**	**06 21 57.3**	**-1.1**
CNLB	**Canela**	**18.21**	**121**	*eP*		**P**	**06 22 00.6**	**-1.3**
NPGB	**Novo Progresso**	**18.80**	**45**	*eP*		**P**	**06 22 06.4**	**-2.1**
BB19B	**Bebedouro**	**18.82**	**94**	*eP*		**P**	**06 22 07.4**	**-1.3**
SNDB	**Serra Nova Dou**	**18.83**	**65**	*eP*		**P**	**06 22 06.7**	**-2.1**
GO06	**Curarrehue**	**18.86**	**187**			**P**	**06 22 09.3**	**+0.2**
MACA	**Manacapuru-AM**	**19.20**	**25**			**P**	**06 22 10.9**	**-1.8**
MACA	**Manacapuru-AM**	**19.20**	**25**	*eP*		**P**	**06 22 10.1**	**-2.7**
IPMB	**Ipameri, GO**	**19.50**	**85**	*eP*		**P**	**06 22 14.9**	**-1.3**
LR05	**Curie**	**19.56**	**188**			**P**	**06 22 16.7**	**+0.2**
MCRA	**Macar, Loja**	**19.69**	**325**	P		**Pn**	**06 22 19.7**	**-1.0**
	comp=Z,3μmcomp=Z,404nm,1.1s							
RCLB	**Rio Claro- Sao**	**19.72**	**98**	*eP*		**P**	**06 22 16.7**	**-1.7**
SPB	**Sao Paulo**	**19.86**	**102**	*eP*		**P**	**06 22 18.0**	**-1.9**
PLCA	**Paso Flores**	**19.92**	**184**	P		**P**	**06 22 20.9**	**+0.5**
	comp=Z,29nm,0.7s,baz=3.0,slow=13,SNR=72							
PLCA				S		**S**	**06 25 54.6**	**-3.9**
	comp=Z,2.1nm,1.0s,baz=32,slow=17,SNR=1.3							
PLCA	**Paso Flores**	**19.92**	**184**	P		**P**	**06 22 21.0**	**+0.5**
PET01	**Itanhaem-SP**	**20.06**	**104**	*eP*		**P**	**06 22 20.6**	**-1.4**
VAO	**Valinhos**	**20.25**	**100**	*eP*		**P**	**06 22 22.5**	**-1.7**
BDFB	**Brasilia**	**20.28**	**79**	P		**P**	**06 22 23.5**	**-1.1**
	comp=Z,14nm,0.3s,baz=256,slow=11,SNR=60							
BDFB				S		**S**	**06 25 57.5**	**-8.6**
	comp=Z,5.1nm,0.7s,baz=130,slow=26,SNR=1.2							
BDFB				LR		LR	06 31 39.4	
	comp=Z,585nm,18.2s,baz=260,slow=41							
	comp=Z,14nm,0.3s							
SGC2	**Sao Gabriel da**	**20.61**	**5**	P		**P**	**06 22 26.3**	**-1.7**
	comp=Z,3μmcomp=Z,327nm,1.1s							
ITTB	**Itaituba**	**20.63**	**39**	*eP*		**P**	**06 22 25.9**	**-2.4**
LL05	**Los Muermos**	**20.93**	**190**	P		**P**	**06 22 30.3**	**-0.8**
COHC	**Cochancay**	**20.96**	**329**	P		Pn	06 22 34.4	-1.0
COHC	**Cochancay**	**20.96**	**329**	P		Pn	06 22 34.8	-0.6
	comp=Z,35nmcomp=Z,2.3nm,0.7s							
PMNB	**Patos De Minas**	**21.06**	**88**	*eP*		**P**	**06 22 30.9**	**-2.1**
PARB	**Paraibuna**	**21.50**	**101**	*eP*		**P**	**06 22 35.7**	**-2.0**
PTLC	**Puerto Leguiza**	**21.70**	**343**	P		**P**	**06 22 33.1**	**-6.6**
	comp=Z,1μmcomp=Z,76nm,0.8s							
BSCB	**Bom Sucesso**	**22.32**	**95**	*eP*		**P**	**06 22 44.6**	**-1.7**
CASC	**Dorado de Casc**	**22.48**	**337**	P		**P**	**06 22 49.4**	**+1.4**
	comp=Z,7μmcomp=Z,554nm,1.0s							
PPLP	**Puerto Lpez**	**22.50**	**327**	P		**P**	**06 22 49.6**	**+1.5**
	comp=Z,3μmcomp=Z,289nm,0.6s							
GO07	**Milladeo Hill,**	**22.62**	**190**	P		**P**	**06 22 49.1**	**+0.2**
BONI	**La Bonita**	**22.85**	**337**	P		**P**	**06 22 53.5**	**+1.8**
	comp=Z,3μmcomp=Z,248nm,0.8s							
OTAV	**Otavalo**	**23.01**	**334**			**P**	**06 22 55.5**	**+2.0**
OTAV	**Otavalo**	**23.01**	**334**	P		**P**	**06 22 55.5**	**+2.0**
OTAV	**Otavalo**	**23.01**	**334**	*eP*		**P**	**06 22 49.0**	**-4.5**
OTAV	**Otavalo**	**23.01**	**334**	P		**P**	**06 22 55.5**	**+2.0**
	comp=Z,3μmcomp=Z,187nm,1.5s							
CUSE	**Cuicocha Este**	**23.05**	**334**	P		**P**	**06 22 55.7**	**+1.8**
	comp=Z,2μmcomp=Z,106nm,0.8s							
PAC1	**Pacto, Paraso**	**23.17**	**333**	P		**P**	**06 22 56.3**	**+1.6**

comp=Z,1µmcomp=Z,98nm,0.7s
GUA01 Guaratinga, BA 27.64 86 *e*P P **P** 06 23 33.9 **-1.0**
PTBC PUERTO BERRIO, 27.77 348 P P **P** 06 23 33.9 **-2.2**
comp=Z,1µmcomp=Z,188nm,0.9s
BRJC Barrancabermej 28.06 349 P P **P** 06 23 36.1 **-2.5**
comp=Z,1µmcomp=Z,70nm,0.9s
CMC01 Camacan, BA 28.21 84 *e*P P **P** 06 23 39.2 **-0.8**
PAMC Pamplona, Colo 28.26 352 P P **P** 06 23 40.7 **-0.2**
comp=Z,864mmcomp=Z,93nm,0.7s
NBIT Itapeh - BA 28.41 83 *e*P P **P** 06 23 40.9 **-0.8**
DBBC Dabeiba 28.64 344 P P **P** 06 23 44.5 **+0.7**
UREC San Jos de Ur 29.18 346 P P **P** 06 23 47.6 **-1.0**
comp=Z,21nm,0.6s
PTAC Punta Ardita, 29.20 341 P P **P** 06 23 49.8 **+1.0**
comp=Z,2µmcomp=Z,119nm,0.9s
PTAC Punta Ardita, 29.20 341 P P **P** 06 23 50.9 **+2.1**
comp=Z,2µmcomp=Z,119nm,0.9s
OCAC Ocana 29.23 351 P P **P** 06 23 46.3 **-2.9**
comp=Z,1µmcomp=Z,126nm,0.8s
APAC Apartado, Choc 29.58 344 P P **P** 06 23 52.6 **+0.5**
comp=Z,86nm,0.9s
APAC Apartado, Choc 29.58 344 P P **P** 06 23 53.8 **+1.7**
comp=Z,86nm,0.9s
SDV Santo Domingo 29.58 356 LR LR 06 35 46.8
comp=Z,252nm,21.2s,baz=170,slow=36
SDV Santo Domingo 29.58 356 **P** 06 23 51.2 **-1.1**
SDV Santo Domingo 29.58 356 *e*P **P** 06 23 50.0 **-2.3**
SDV Santo Domingo 29.58 356 P P **P** 06 23 51.0 **-1.3**
comp=Z,616nmcomp=Z,54nm,0.8s
SDV Santo Domingo 29.58 356 P P **P** 06 23 51.5 **-0.8**
comp=Z,617nmcomp=Z,54nm,0.8s
MDP Montagnes des 30.18 33 LR LR 06 36 16.6
comp=Z,297nm,20.4s,baz=193,slow=36
MG05 Puerto Natales 30.95 185 P P **P** 06 24 04.2 **+0.5**
ARGC Ariguani, Magd 30.97 349 P P **P** 06 24 03.0 **-1.4**
comp=Z,3µmcomp=Z,293nm,0.8s
ARGC Ariguani, Magd 30.97 349 P P **P** 06 24 04.0 **-0.4**
comp=Z,3µmcomp=Z,294nm,0.8s
NBPS Pedro II - PI 31.09 62 *e*P P **P** 06 24 04.3 **-1.2**
SJCC San Jacinto, C 31.18 348 P P **P** 06 24 04.5 **-1.8**
comp=Z,1µmcomp=Z,107nm,0.5s
SJCC San Jacinto, C 31.18 348 P P **P** 06 24 05.7 **-0.6**
comp=Z,1µmcomp=Z,107nm,0.5s
BCIP Isla Barro Col 31.75 339 P P **P** 06 24 13.0 **+1.8**
EFI East Falkland 31.89 167 *ce*P P **P** 06 24 13.4 **+1.3**
EFI pmax pmax
comp=Z,66nm,1.7s
MG04 Isla Riesco 32.06 183 P P **P** 06 24 14.7 **+1.2**
MG04 IAmb IAmb 06 24 56.3
comp=Z,215nm,1.9s
MG03 Isla Dawson 33.00 182 P P **P** 06 24 22.4 **+0.7**
MG03 IAmb IAmb 06 24 23.7
comp=Z,36nm,0.9s
USHA Ushuaia 33.96 180 P P **P** 06 24 30.9 **+0.9**
comp=Z,32nm,0.6s,baz=333,slow=6.8,SNR=6.7
comp=Z,32nm,0.6s
NBPA Parau_RN 34.07 68 *e*P P **P** 06 24 31.6 **+0.1**
MG01 Puerto William 34.07 179 P P **P** 06 24 30.7 **-0.2**
HDC Heredia 34.18 332 *e*P P **P** 06 24 29.2 **-3.3**
JTS Las Juntas de 34.81 331 LR LR 06 40 02.3
comp=Z,125nm,21.0s,baz=162,slow=38
JTS Las Juntas de 34.81 331 *i* P P **P** 06 24 38.0 **+0.2**
JTS pmax pmax
comp=Z,26nm,1.0s
RCBR Riachuelo 35.09 70 LR LR 06 40 43.0
comp=Z,160nm,19.2s,baz=241,slow=39
RCBR Riachuelo 35.09 70 P P **P** 06 24 39.9 **-0.4**
RCBR IAmb IAmb 06 24 42.1
comp=Z,36nm,1.1s
RCBR Riachuelo 35.09 70 P P **P** 06 24 39.9 **-0.4**
RCBR pmax pmax
comp=Z,36nm,1.1s
RCBR Riachuelo 35.09 70 *e*P P **P** 06 24 40.1 **-0.2**
NBPV Pedro Velho 35.35 71 *e*P P **P** 06 24 40.3 **-2.2**
MPOM Morne Pois Mar 35.87 13 P P **P** 06 24 45.0 **-1.8**
BIM Bigot 35.90 13 P P **P** 06 24 46.0 **-1.1**
SIUN Universidad Ur 37.79 334 P P **P** 06 25 04.0 **+0.9**
SIUN IAmb IAmb 06 25 06.0
comp=Z,17nm,1.0s
CRIN San Cristobal 37.89 330 P P **P** 06 25 03.4 **-0.7**
MLPR Magueyes Islan 38.58 2 **P** 06 25 08.2 **-1.5**
MLPR IAmb IAmb 06 25 09.3
comp=Z,138nm,0.9s
CRPR Cabo Rojo, PR 38.61 2 P P **P** 06 25 08.5 **-1.5**
SJG San Juan 38.77 4 P P **P** 06 25 09.5 **-1.7**
SJG San Juan 38.77 4 P P **P** 06 25 09.0 **-2.3**
SJG PcP **PnPn** 06 26 44.3 **-1.5**
UUPR Utuado, UPR, P 38.88 3 P P **P** 06 25 10.4 **-1.8**
GCPR Guaynabo City 38.97 4 **P** 06 25 10.6 **-2.3**
GCPR IAmb IAmb 06 25 12.8
comp=Z,62nm,1.1s
TGUH Tegucigalpa,Un 39.18 331 **P** 06 25 15.8 **+0.9**
TGUH IAmb IAmb 06 25 17.3
comp=Z,42nm,0.9s
DR12 Loma Pena Alta 39.37 359 **P** 06 25 14.2 **-2.1**
MTO3 Montecristo 40.47 328 P P **P** 06 25 26.5 **+0.8**
HOPE Hope Point 41.37 152 P P **P** 06 25 33.8 **+1.4**
HOPE Hope Point 41.37 152 P P **P** 06 25 33.8 **+1.4**
HOPE pmax pmax
comp=Z,321nm,1.3s
HOPE Hope Point 41.37 152 P P **P** 06 25 34.3 **+1.9**
HOPE PcP **PcP** 06 27 29.3 **+0.8**
PETF Flores 42.88 329 P P **P** 06 25 45.1 **+0.1**
ESPZ Base Esperanza 43.29 172 P P **P** 06 25 48.2 **+0.4**
ESPZ IAmb IAmb 06 25 49.9
comp=Z,35nm,0.9s
CCIG Comitan 43.47 326 P P **P** 06 25 50.3 **+0.3**
TEIG Tepich 45.08 334 **P** 06 26 02.6 **0.0**
TEIG IAmb IAmb 06 26 03.9
comp=Z,263nm,1.8s
SOR Soroa 45.54 341 P P **P** 06 26 06.8 **+0.6**
SOR IAmb IAmb 06 26 07.9
comp=Z,50nm,1.0s
SOR Soroa 45.54 341 P P **P** 06 26 06.8 **+0.6**
SOR pmax pmax
comp=Z,50nm,1.0s
TLIG Tlapa 48.11 320 P P **P** 06 26 28.2 **+1.8**
TLIG IAmb IAmb 06 26 29.7
comp=Z,35nm,0.7s
060A Indiantown 48.90 346 P P **P** 06 26 32.8 **+0.7**
656A Williston 51.65 345 P P **P** 06 26 53.3 **+0.4**
TIGA Tifton 53.89 344 P P **P** 06 27 09.4 **0.0**
TIGA IAmb IAmb 06 27 10.2
comp=Z,42nm,0.8s
NHSC New Hope 54.74 348 P P **P** 06 27 16.1 **+0.7**
HKT Hockley 56.85 332 *i* P P **P** 06 27 31.1 **+0.6**
HKT pmax pmax
comp=Z,22nm,1.0s
WVT Waverly 59.47 342 P P **P** 06 27 47.8 **-0.9**
WVT pP **pP** 06 28 16.3 **-1.0**
S54A Dingess, Beckl 59.51 348 P P **P** 06 27 49.3 **+0.3**
X40A Basin Creek Fa 59.61 337 P P **P** 06 27 50.1 **+0.4**
TXAR Lajitas Array 60.20 325 P P **P** 06 27 54.6 **+0.6**
comp=Z,3.3nm,0.8s,baz=148,slow=7.8,SNR=34
comp=Z,3.3nm,0.8s
VNA3 Neumayer Olymp 60.65 161 ⇑P P **P** 06 27 57.5 **+1.1**
comp=Z,25nm,0.8s
WCI Wyandotte Cave 61.02 344 P P **P** 06 27 58.5 **-0.8**
WCI pP **pP** 06 28 27.3 **-0.7**
VNA2 Neumayer--Watz 61.22 161 ⇑P P **P** 06 28 01.4 **+1.2**
comp=Z,30nm,0.8s,baz=280,slow=8.5
SSPA Standing Stone 61.73 352 P P **P** 06 28 04.2 **+0.1**
SSPA IAmb IAmb 06 28 05.5
comp=Z,77nm,1.3s
CCM Cathedral Cave 62.29 340 P P **P** 06 28 07.6 **-0.2**
SNAA Sanae 62.85 161 ⇑P P **P** 06 28 12.2 **+1.0**
comp=Z,677nm,0.8s
SNAA Sanae 62.85 161 P P **P** 06 28 12.1 **+1.0**
comp=Z,26nm,0.8s,baz=290,slow=6.2,SNR=22
comp=Z,26nm,0.8s
SNAA Sanae 62.85 161 *ce*P P **P** 06 28 12.7 **+1.5**
SNAA pmax pmax
comp=Z,26nm,0.6s
SADO Sadowa 65.97 352 LR LR 06 57 44.2
comp=Z,100nm,21.4s,baz=190,slow=36
ANMO Albuquerque 66.05 327 P P **P** 06 28 33.5 **+0.8**
comp=Z,6.1nm,0.9s,baz=144,slow=8.3,SNR=27
comp=Z,6.1nm,0.9s
ANMO Albuquerque 66.05 327 *i* P P **P** 06 28 33.0 **+0.3**
ANMO pmax pmax
comp=Z,7.0nm,0.9s
JFWS Jewell Farm 66.46 343 P P **P** 06 28 34.5 **-0.4**
JFWS IAmb IAmb 06 28 35.7
comp=Z,53nm,0.7s
JFWS Jewell Farm 66.46 343 P P **P** 06 28 34.5 **-0.4**
JFWS pmax pmax
comp=Z,53nm,0.7s
NVL N'lazarevskaya 67.39 159 *e*P P **P** 06 28 40.3 **-0.1**
NVL *e* 06 29 07.8
NVL *e* 06 31 08.5
NVL *e*PPP PPP 06 32 45.1
NVL *e*SS SS 06 41 57.1 +8.7
NVL pmax pmax
comp=Z,38nm,0.8s
NVL MLR MLR
comp=Z,342nm,17.0s
DBIC Dimbokro 68.33 74 P P **P** 06 28 46.5 **-0.7**
comp=Z,18nm,0.4s,baz=260,slow=6.6,SNR=50
DBIC LR LR 06 59 12.4
comp=Z,87nm,18.2s,baz=346,slow=36
comp=Z,18nm,0.4s
DBIC Dimbokro 68.33 74 P P **P** 06 28 46.6 **-0.7**
QSPA South Pole Qui 69.37 180 P P **P** 06 28 53.9 **+0.9**
comp=Z,23nm,0.8s,baz=150,slow=3.0,SNR=18
comp=Z,23nm,0.8s
QSPA South Pole Qui 69.37 180 P P **P** 06 28 53.3 **+0.2**
QSPA IAmb IAmb 06 29 37.8
comp=Z,67nm,1.4s
QSPA South Pole Qui 69.37 180 P P **P** 06 28 54.5 **+1.4**
QSPA PcP **PcP** 06 29 15.8 **0.0**
QSPA pP **pP** 06 29 24.2 **+1.9**
QSPA sP **sP** 06 29 36.8 **+1.8**
PFO Pinyon Flats O 70.74 319 P P **P** 06 29 04.2 **+2.3**
comp=Z,6.6nm,0.8s,baz=110,slow=4.1,SNR=14
comp=Z,6.6nm,0.8s
PFO Pinyon Flats O 70.74 319 *i* P P **P** 06 29 02.3 **+0.4**
PFO pmax pmax
comp=Z,13nm,1.0s
ELIB Princess Elisa 71.01 161 *d*P P **P** 06 29 04.0 **+1.1**
ELIB *dx* x 06 29 17.7
RDMU Red Mountain 71.95 328 P P **P** 06 29 10.2 **+1.0**
RSSD Black Hills 72.28 334 P P **P** 06 29 12.2 **+1.2**
RSSD PcP **PcP** 06 29 29.7 **+1.3**
CLC China Lake 72.92 320 P P **P** 06 29 16.2 **+1.4**
CLC China Lake 72.92 320 P P **P** 06 29 16.2 **+1.4**
CLC pmax pmax
comp=Z,45nm,1.8s
PDAR Pinedale Array 73.63 330 P P **P** 06 29 19.9 **+0.9**
comp=Z,3.5nm,0.7s,baz=135,slow=7.3,SNR=23
comp=Z,3.5nm,0.7s
ULM Lac du Bonnet 74.74 342 P P **P** 06 29 25.0 **+0.1**
comp=Z,20nm,0.6s,baz=150,slow=6.9,SNR=43
comp=Z,20nm,0.6s
ULM Lac du Bonnet 74.74 342 *i* P P **P** 06 29 25.9 **+1.0**
ELK Elko 74.99 325 P P **P** 06 29 28.6 **+1.7**
comp=Z,2.9nm,0.8s,baz=154,slow=4.0,SNR=12
ELK pP **pP** 06 29 57.1 **+0.5**
comp=Z,6.0nm,1.0s,baz=132,slow=2.3,SNR=6.6
comp=Z,2.9nm,0.8s
NVAR Mina Array Bea 75.10 322 P P **P** 06 29 29.6 **+2.0**
comp=Z,3.8nm,0.9s,baz=161,slow=6.9,SNR=22
NVAR pP **pP** 06 29 58.6 **+1.3**
comp=Z,7.4nm,0.9s,baz=153,slow=6.8,SNR=12
comp=Z,3.8nm,0.9s
SCHQ Schefferville 75.36 1 P P **P** 06 29 28.9 **+0.4**
comp=Z,13nm,0.7s,baz=192,slow=4.4,SNR=20
SCHQ pP **pP** 06 29 58.1 **0.0**
comp=Z,18nm,1.1s,baz=171,slow=6.7,SNR=4.2
comp=Z,13nm,0.7s
TORD Torodi Ar. Bea 76.92 70 P P **P** 06 29 37.3 **-0.8**
comp=Z,35nm,0.6s,baz=244,slow=7.5,SNR=197
TORD pP **pP** 06 30 07.1 **-0.8**
comp=Z,10nm,0.6s,baz=244,slow=7.6,SNR=3.7
TORD S **S** 06 39 12.8 **-4.7**
comp=Z,3.2nm,0.9s,baz=243,slow=12,SNR=12
TORD PKKP **PKKPdf** 06 48 34.1 **+0.5**
comp=Z,0.3nm,0.6s,baz=130,slow=2.3,SNR=3.5
TORD PKKPbc **PKKPbc** 06 48 48.8 **+3.0**
comp=Z,0.2nm,0.5s,baz=28,slow=3.4,SNR=1.5
comp=Z,35nm,0.6s
YBH Yreka Blue Hor 79.81 322 P P **P** 06 29 54.1 **+0.4**
comp=Z,0.4nm,0.8s,baz=104,slow=1.2,SNR=15
FFC Flin Flon 80.46 341 P P **P** 06 29 57.2 **+0.6**
FFC PcP **PcP** 06 30 02.4 **-0.9**
FFC pP **pP** 06 30 27.7 **+1.0**
FFC sP **sP** 06 30 39.1 **-0.1**
PTEO Sao Teotonio 80.91 44 *e*P P **P** 06 29 59.0 **-0.4**
KOOLE Kule 81.12 111 P P **P** 06 30 01.4 **+0.2**
KOOLE IAmb IAmb 06 30 03.2
comp=Z,79nm,0.9s
KOOLE Kule 81.12 111 *i* P P **P** 06 30 01.8 **+0.5**
NEW Newport 81.27 330 P P **P** 06 30 02.4 **+1.2**
comp=Z,1.7nm,0.6s,baz=302,slow=5.4,SNR=3.6
comp=Z,1.7nm,0.6s
MESJ Mesejana 81.41 44 *e*P P **P** 06 30 03.4 **+1.3**
PCVE Castro Verde 81.41 44 *e*P P **P** 06 30 03.1 **+1.0**
PVAQ Vaqueiros 81.49 45 *e*P P **P** 06 30 04.1 **+1.6**
MOE Montemor 81.71 44 *e*P P **P** 06 30 04.8 **+1.1**
PBEJ Beja 81.74 44 *e*P P **P** 06 30 05.3 **+1.4**
EVO Evora 81.93 44 *e*P P **P** 06 30 06.0 **+1.2**
PARRA Arraiolos 82.08 43 *e*P P **P** 06 30 06.5 **+0.9**
PMTG Montargil 82.10 43 *e*P P **P** 06 30 06.5 **+0.8**
PBAR Barrancos 82.36 44 *e*P P **P** 06 30 07.9 **+0.8**
PSARD Sardoal 82.44 43 *e*P P **P** 06 30 08.2 **+0.7**
GRTLG Ghanzi 82.55 110 P P **P** 06 30 08.2 **-0.5**
GRTLG IAmb IAmb 06 30 10.5
comp=Z,59nm,0.9s
GRTLG Ghanzi 82.55 110 *i* P P **P** 06 30 09.0 **+0.3**
KGCAE Kacgae 82.92 112 P P **P** 06 30 11.1 **+0.5**
KGCAE IAmb IAmb 06 30 12.5
comp=Z,64nm,1.1s
KGCAE Kacgae 82.92 112 *i* P P **P** 06 30 10.7 **+0.1**
PCBR Castelo Branco 83.01 43 *e*P P **P** 06 30 11.8 **+1.4**
BOSA Boshof 83.57 118 P P **P** 06 30 14.3 **+0.5**
comp=Z,38nm,0.8s,baz=256,slow=4.1,SNR=49
comp=Z,38nm,0.8s
BOSA Boshof 83.57 118 P P **P** 06 30 14.3 **+0.5**
SKOMA Sekoma 83.85 114 *i* P P **P** 06 30 15.5 **+0.2**
CCD Concordia, Ant 84.00 183 P P **P** 06 30 17.0 **+1.5**
CCD pP **pP** 06 30 47.0 **+1.3**
CCD sP **sP** 06 30 59.8 **+1.6**
MVO Moncorvo 84.04 42 *e*P P **P** 06 30 15.6 **-0.2**
MAKGR Makgori 84.15 115 *i* P P **P** 06 30 17.1 **+0.3**
TAM Tamanrasset 84.31 63 P P **P** 06 30 17.6 **0.0**
TAM IAmb IAmb 06 33 14.2
comp=Z,31nm,0.3s
TAM Tamanrasset 84.31 63 P P **P** 06 30 17.7 **0.0**
TAM pmax pmax
comp=Z,31nm,0.3s
PBRG Braganca 84.58 42 *e*P P **P** 06 30 18.7 **+0.3**
MAW Mawson 84.92 163 P P **P** 06 30 20.8 **+1.2**
comp=Z,22nm,0.9s,baz=222,slow=6.5,SNR=2.6
comp=Z,22nm,0.9s
LBTB Lobatse 85.10 115 P P **P** 06 30 22.5 **+0.9**
ESDC Sonseca Array 85.19 44 P P **P** 06 30 22.1 **+0.5**
comp=Z,2.9nm,0.9s,baz=244,slow=5.1,SNR=17
comp=Z,2.9nm,0.9s
LPHEP Lephephe 85.91 113 P P **P** 06 30 25.9 **+0.2**
LPHEP IAmb IAmb 06 30 27.6
comp=Z,30nm,0.9s
LPHEP Lephephe 85.91 113 *i* P P **P** 06 30 26.2 **+0.6**
KHWEE KHWEE 86.05 112 P P **P** 06 30 27.0 **+0.6**
KHWEE IAmb IAmb 06 30 28.5
comp=Z,128nm,1.0s
KHWEE KHWEE 86.05 112 *i* P P **P** 06 30 27.1 **+0.8**
KSANE Kasane 87.26 108 P P **P** 06 30 32.2 **-0.1**
KSANE IAmb IAmb 06 30 34.8
comp=Z,55nm,1.0s
KSANE Kasane 87.26 108 *i* P P **P** 06 30 33.4 **+1.1**
BROLN Tlhalogang 87.99 112 *i* P P **P** 06 30 36.1 **+0.3**
YKA Yellowknife Ar 90.62 341 P P **P** 06 30 47.6 **+0.7**
comp=Z,3.0nm,0.7s,baz=135,slow=3.9,SNR=64
YKA pP **pP** 06 31 17.8 **+0.4**
comp=Z,10nm,1.0s,baz=142,slow=4.0,SNR=10
YKA PP **PP** 06 34 24.6 **+0.8**
comp=Z,0.3nm,0.6s,baz=140,slow=6.4,SNR=2.8
comp=Z,3.0nm,0.7s
LSZ Lusaka 90.88 107 P P **P** 06 30 50.3 **+0.9**
LSZ Lusaka 90.88 107 P P **P** 06 30 50.3 **+0.9**
LSZ pmax pmax
comp=Z,10.0nm,1.1s
DLBC Dease Lake 93.70 332 P P **P** 06 31 01.9 **+0.6**
comp=Z,1.4nm,0.5s,baz=86,slow=3.1,SNR=3.1
DLBC pP **pP** 06 31 32.4 **+0.6**
comp=Z,3.5nm,0.7s,baz=348,slow=3.5,SNR=3.4
DLBC PP **PP** 06 34 49.5 **+1.4**
comp=Z,3.4nm,1.1s,baz=148,slow=9.5,SNR=3.3
comp=Z,1.4nm,0.5s
ILAR Eielson Array 103.73 334 PP **PP** 06 36 05.8 **+1.5**
comp=Z,1.8nm,1.1s,baz=104,slow=7.2,SNR=5.7
LVZ Lovozero 114.12 24 *i* PKIKP **PKiKP** 06 36 24.6 **+1.6**
OBN Obninsk 115.50 38 ⇓ *e*PKIKP **PKiKP** 06 36 25.9 **0.0**
OBN *e* 06 37 29.6
OBN *i* SS SS 06 53 18.3 **-1.5**
OBN pmax pmax
comp=Z,48nm,2.3s
KIV Kislovodsk 119.37 51 *e*PKIKP **PKPdf** 06 36 33.3 **-0.6**
KIV pmax pmax
comp=Z,11nm,1.0s
KBZ Khabaz 119.52 51 PKP **PKiKP** 06 36 35.5 **+1.4**
comp=Z,4.8nm,0.9s,baz=182,slow=3.2,SNR=3.7
BILL Bilibino 121.97 339 *i* PKIKP **PKPdf** 06 36 36.1 **-2.0**
BILL pmax pmax
comp=Z,2.0nm,1.4s
BELG Belogornoye 122.22 40 *i* PKIKP **PKiKP** 06 36 39.8 **+0.7**
ARTI Arti 127.38 34 *i* PKIKP **PKiKP** 06 36 50.4 **+1.1**
ARTI 06 43 52.2
ARTI SS SS 06 55 44.7 **-6.4**
H11S2 WAKE ISLAND Hyl 128.01 278 T T 08 57 01.0
baz=102,slow=74,SNR=158
H11S1 WAKE ISLAND Hyl 128.02 278 T T 08 56 56.6
baz=102,slow=74,SNR=121
H11S3 WAKE ISLAND Hyl 128.03 278 T T 08 56 54.7
baz=102,slow=74,SNR=106
H11N3 WAKE ISLAND Hyl 128.07 279 T T 08 57 00.3
baz=102,slow=74,SNR=126
H11N2 WAKE ISLAND Hyl 128.09 279 T T 08 57 01.4
baz=102,slow=74,SNR=117
H11N1 WAKE ISLAND Hyl 128.09 279 T T 08 57 04.5
baz=102,slow=74,SNR=71
NRIK Noril'sk 129.36 11 *i* PKIKP **PKiKP** 06 36 53.3 **+0.4**
SEY Seymchan 129.56 337 PKP **PKiKP** 06 36 54.9 **+1.4**
comp=Z,2.0nm,0.7s,baz=53,slow=23,SNR=4.4
SEY pPKP **pPKPdf** 06 37 24.8 **+0.3**
comp=Z,4.0nm,0.8s,baz=23,slow=23,SNR=6.0
SEY PP **PP** 06 39 04.0 **0.0**
comp=Z,3.9nm,0.9s,baz=80,slow=12,SNR=5.4
ASAR Alice Springs 130.62 208 PKP **PKPdf** 06 36 56.3 **+0.2**
comp=Z,1.7nm,1.0s,baz=181,slow=2.5,SNR=8.7
ASAR pPKP **pPKPdf** 06 37 27.6 **-0.5**
comp=Z,1.6nm,1.0s,baz=168,slow=2.5,SNR=4.1
ASAR SKPbc **SKPab** 06 40 10.3 **+0.5**
comp=Z,1.4nm,0.8s,baz=156,slow=4.4,SNR=6.1
WRA Warramunga Arr 133.65 211 PKP **PKPdf** 06 37 01.6 **-0.3**
comp=Z,0.5nm,0.5s,baz=156,slow=1.9,SNR=4.8
WRA pPKP **pPKPdf** 06 37 33.0 **-0.9**
comp=Z,0.8nm,0.6s,baz=158,slow=1.6,SNR=3.8
WRA SKPbc **SKPbc** 06 40 20.6 **+0.1**
comp=Z,2.2nm,0.9s,baz=146,slow=3.5,SNR=8.1
BORK Borovoye 135.06 34 *i* PKIKP **PKPdf** 06 37 04.0 **+0.6**
BVAR Borovoye Array 135.11 34 PKP **PKiKP** 06 37 05.3 **+0.2**
comp=Z,1.5nm,0.8s,baz=304,slow=3.4,SNR=5.7
BVAR pPKP **pPKPdf** 06 37 35.7 **+0.4**
comp=Z,0.8nm,0.5s,baz=261,slow=2.9,SNR=3.3
KURK Kurchatov 140.64 33 PKIKP **PKPdf** 06 37 14.7 **+1.0**
KURK 06 37 45.2
KURBB Kurchatov Arra 140.65 33 PKP **PKPdf** 06 37 14.7 **+0.9**
comp=Z,0.6nm,0.3s,baz=318,slow=3.0,SNR=5.1
KURBB pPKP **pPKPdf** 06 37 45.2 **-0.4**
comp=Z,1.6nm,0.4s,baz=314,slow=3.3,SNR=3.1
KURBB SKPbc **SKPbc** 06 40 39.7 **-0.4**
comp=Z,0.7nm,0.3s,baz=315,slow=3.1,SNR=3.9
ZALV Zalesovo Beam 141.24 25 PKP **PKPdf** 06 37 12.9 **-1.8**
comp=Z,3.4nm,0.7s,baz=307,slow=3.1,SNR=15
ZALV pPKP **pPKPdf** 06 37 44.9 **-1.7**
comp=Z,4.8nm,0.8s,baz=292,slow=2.9,SNR=2.6
ZALV SKPbc **SKPbc** 06 40 41.5 **0.0**
comp=Z,5.4nm,1.0s,baz=306,slow=3.5,SNR=9.2
KSH2 Kashi 144.33 51 PKP **PKPdf** 06 37 21.0 **+0.1**
ZEA Zeya 144.95 344 *e*PKIKP **PKPdf** 06 37 22.2 **+0.9**
ZEA *e* 06 37 53.2
ZEA pmax pmax
comp=Z,10.0nm,0.8s
MK31 Makanchi Array 144.95 36 *i* PKIKP **PKPab** 06 37 21.2 **+0.1**
MKAR Makanchi Array 144.95 36 PKP **PKPdf** 06 37 21.9 **+0.4**
comp=Z,6.6nm,0.7s,baz=337,slow=2.7,SNR=70
MKAR pPKP **pPKPdf** 06 37 52.0 **-1.4**
comp=Z,7.8nm,0.8s,baz=337,slow=2.8,SNR=3.9
MKAR SKPbc **SKPbc** 06 40 51.2 **+0.5**
comp=Z,2.3nm,0.8s,baz=325,slow=2.3,SNR=6.0
DGZ Jazzator, Alta 145.49 28 *i* PKP2 **PKPab** 06 37 23.8 **+0.6**
KLR Kul'dur 147.30 335 *c i* PKP2 **PKPab** 06 37 29.3 **-0.7**
KLR pmax pmax
comp=Z,2.0nm,2.5s
HEH HeiHe 147.99 340 *e*PKPbc **PKPbc** 06 37 30.0 **+0.3**
MOY Mondy 148.17 12 *e*PKP2 **PKiKP** 06 37 32.2 **+0.2**
MOY pmax pmax
comp=Z,38nm,2.3s
TLY Talaya 148.62 9 *c i* PKP2 **PKPab** 06 37 36.2 **+1.0**
TLY pmax pmax
comp=Z,5.0nm,0.7s
HYB Hyderabad 148.88 91 *e*PKPbc **PKPbc** 06 37 32.6 **-0.5**
HYB *e*SKSdf **SKSdf** 06 44 26.4 **-0.9**
WMQ Urumqi 149.78 35 *e*PKPbc **PKPdf** 06 37 30.5 **+0.8**
WMQ pPKP pPKPdf 06 37 57.3 **-4.3**
HILR Hailar Array B 150.55 349 PKPbc **PKiKP** 06 37 37.5 **+0.6**
comp=Z,6.8nm,0.6s,baz=5.9,slow=1.8,SNR=13
HILR pPKPbc **pPKPbc** 06 38 08.1 **+0.2**
comp=Z,7.7nm,0.5s,baz=354,slow=2.4,SNR=7.9
HILR PP **PP** 06 41 12.2 **-0.1**
comp=Z,0.9nm,0.4s,baz=26,slow=3.8,SNR=3.6
USRK Ussuriysk Ar. 151.05 328 PKPbc **PKiKP** 06 37 38.8 **+0.8**
comp=Z,4.8nm,0.7s,baz=24,slow=2.3,SNR=5.4
USRK pPKPbc **pPKPbc** 06 38 10.6 **+1.3**
comp=Z,20nm,1.0s,baz=22,slow=2.1,SNR=7.5
MJAR Matsushiro Arr 151.82 310 PKPbc **PKiKP** 06 37 40.2 **+0.4**
comp=Z,1.4nm,0.5s,baz=74,slow=2.1,SNR=5.2
MJAR pPKPbc **pPKPbc** 06 38 11.5 **+0.2**
comp=Z,6.8nm,0.8s,baz=87,slow=1.2,SNR=8.6
BNX BinXian 151.85 336 PKPbc **PKPdf** 06 37 32.9 **+0.2**
LEM Lembang 152.29 172 PKPbc **PKiKP** 06 37 43.4 **+1.7**
comp=Z,21nm,0.4s,baz=130,slow=13,SNR=4.1
SONM Songino Array 152.75 7 PKP **PKPdf** 06 37 36.3 **+2.1**
comp=Z,1.4nm,0.9s,baz=325,slow=2.4,SNR=6.4
SONM PKPbc **PKiKP** 06 37 43.0 **+1.4**
comp=Z,1.3nm,0.5s,baz=301,slow=1.0,SNR=7.7
SONM PKPab **PKPab** 06 37 53.9 **+1.3**
comp=Z,2.1nm,0.7s,baz=336,slow=3.5,SNR=6.7
SONM pPKPbc **pPKPbc** 06 38 14.2 **+1.1**
comp=Z,4.6nm,0.5s,baz=339,slow=1.7,SNR=8.0
KSRS Korea Array 158.04 323 PKPab **PKPab** 06 38 16.5 **+1.2**
comp=Z,0.7nm,0.4s,baz=66,slow=4.3,SNR=4.1
KSRS pPKPab **pPKPab** 06 38 46.4 **+0.3**
comp=Z,4.8nm,1.0s,baz=79,slow=2.7,SNR=3.8
GTA2 Gaotai 158.91 26 *e*PKP **PKPdf** 06 37 44.1 **+1.5**
GTA2 LR LR
comp=Z,280nm,17.9s
GTA2 LR LR
comp=Z,290nm,16.7s
GTA2 LR LR
comp=Z,190nm,22.7s
HHC Hu-ho-hao-te 160.03 359 *e*PKP **PKPdf** 06 37 44.3 **+0.5**
NJ2 Nanjing 166.94 331 *e*PKP **PKPdf** 06 37 50.9 **+0.5**
CMAR Chiang Mai Arr 168.09 99 PKP **PKPdf** 06 37 52.5 **+0.9**
comp=Z,0.5nm,0.3s,baz=262,slow=1.2,SNR=6.8
CMAR pPKP **pPKPdf** 06 38 25.4 **+1.7**
comp=Z,0.8nm,0.3s,baz=215,slow=1.0,SNR=2.4
CMAR PKPab **PKPab** 06 39 00.6 **+0.5**
comp=Z,1.8nm,0.6s,baz=256,slow=6.1,SNR=8.4
CMAR PP **PP** 06 42 50.0 **+0.5**
comp=Z,1.0nm,0.3s,baz=234,slow=4.6,SNR=9.4
PZH PanZhiHua 169.55 55 PKP **PKPdf** 06 37 51.5 **-1.0**

*NEIC **08** 06:32:43.0±2.2, 23°.29S±0°.08×66°.8W±0°.1, h208km±10km, mb4.5/10, ML4.1(GUC), Error ellipse: s-maj=17.8km s-min=10.9km az=84.0*
*GUC **08** 06:32:43.8±0.7, 23°.22S×66°.87W, h210km±9km, ML4.2*
*IDC **08** 06:32:43.6±2.1, 23°.21S×66°.66W, h205km±20km, mb3.2/6, mbtmp3.7/11, Error ellipse: s-maj=21.3km s-min=17.9km az=46.0*
*SJA **08** 06:32:43.2±1.8, 23°.29S×66°.79W, h185km, ML3.9, MW3.7*
ISC 08 06:32:43.1±0.6, 23°.25S±0°.04×66°.84W±0°.04, h210km±6km, n94, σ1$47/122, mb3.4/7, 12C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SALTA		**1.07**	**155**	⇓ *i* P		**Pn**	**06 33 15.5**	**+0.6**
SALTA		**1.07**	**155**	*e*P		Pn	06 33 10.4	-4.5
SALTA				*e*P			06 33 15.5	
SALTA				*e*P			06 33 15.7	
AF01	**San Pedro de A**	**1.27**	**283**			**Pn**	**06 33 17.4**	**+1.3**
AF01	**San Pedro de A**	**1.27**	**283**	⇑*e*P		**Pn**	**06 33 17.7**	**+1.5**
AF01	**San Pedro de A**	**1.27**	**283**	*e*P		**Pn**	**06 33 17.0**	**+0.9**
AF01				*e*S		S	06 33 50.7	+9.2
YJA	**Yavi**	**1.63**	**49**	*e*P		**Pn**	**06 33 20.1**	**+0.8**

YJA	Yavi	1.63	49	eP	Pn	06 33 20.4	+1.1
YJA				eS	S	06 33 42.5	-4.5
SLA	San Lorenzo	1.90	140⇓	eP	Pn	06 33 22.7	+1.2
SLA				eS	S	06 33 51.9	+0.7
SLA	San Lorenzo	1.90	140	eP	Pn	06 33 17.2	-4.3
SLA				eS	S	06 33 53.5	+2.3
PB06	IPOC Station P	2.58	282		Pn	06 33 28.7	+0.1
PB06	IPOC Station P	2.58	282⇑	iP	Pn	06 33 29.3	+0.7
PB06				i S	S	06 34 03.2	-0.5
PB06				IAML		06 34 05.8	
	comp=E,534nm,0.4s						
PB06	IPOC Station P	2.58	282	eP	Pn	06 33 28.9	+0.2
PB06				eS	S	06 34 04.3	+0.6
PB06				IAML		06 34 07.9	
	comp=Z,311nm,0.2s						
PB09	IPOC Station P	2.66	303		Pn	06 33 30.4	+0.9
PB09	IPOC Station P	2.66	303⇑	iP	Pn	06 33 30.5	+0.9
PB09	IPOC Station P	2.66	303	eP	Pn	06 33 30.1	+0.6
PB09				eS	S	06 34 07.8	+2.5
FSA	Cafayete	2.95	165	eP	Pn	06 33 33.5	+0.7
PB03	IPOC Station P	2.95	293		Pn	06 33 32.8	0.0
PB03	IPOC Station P	2.95	293⇑	iP	Pn	06 33 33.2	+0.4
PB03				IAML		06 34 13.1	
	comp=N,287nm,0.3s						
PB03	IPOC Station P	2.95	293	eP	Pn	06 33 32.6	-0.2
PB03				eS	S	06 34 11.1	-0.2
PB03				IAML		06 34 12.6	
	comp=Z,308nm,0.3s						
PB05	IPOC Station P	3.13	277		Pn	06 33 34.8	0.0
PB05	IPOC Station P	3.13	277⇑	iP	Pn	06 33 35.2	+0.4
PB05				i S	S	06 34 13.7	-1.1
PB05				IAML		06 34 14.5	
	comp=N,284nm,0.3s						
PB05	IPOC Station P	3.13	277	eP	Pn	06 33 34.5	-0.3
PB05				eS	S	06 34 14.0	-0.9
PB05				IAML		06 34 18.7	
	comp=Z,151nm,0.3s						
PB07	IPOC Station P	3.20	298		Pn	06 33 35.9	+0.1
PB07	IPOC Station P	3.20	298⇑	iP	Pn	06 33 36.1	+0.3
PB07				i S	S	06 34 15.2	-1.4
PB07				IAML		06 34 17.2	
	comp=N,302nm,0.2s						
PB07	IPOC Station P	3.20	298	eP	Pn	06 33 35.6	-0.2
PB07				eS	S	06 34 16.2	-0.4
PB07				IAML		06 34 18.1	
	comp=Z,166nm,0.3s						
PB01	IPOC Station P	3.30	311		Pn	06 33 37.0	+0.2
PB01	IPOC Station P	3.30	311⇑	iP	Pn	06 33 37.1	+0.2
PB01				i S	S	06 34 18.0	-0.5
PB01	IPOC Station P	3.30	311	eP	Pn	06 33 36.8	-0.1
PB01				eS	S	06 34 18.6	+0.1
PB01				IAML		06 34 20.2	
	comp=Z,305nm,0.2s						
PB02	IPOC Station P	3.43	304		Pn	06 33 38.2	-0.2
PB02	IPOC Station P	3.43	304⇑	iP	Pn	06 33 38.4	0.0
PB02	IPOC Station P	3.43	304	eP	Pn	06 33 38.2	-0.2
PB02				eS	S	06 34 20.6	-0.6
PB02				IAML		06 34 24.8	
	comp=Z,240nm,0.2s						
PB14	IPOC Station P	3.54	247		Pn	06 33 39.5	-0.4
PB14	IPOC Station P	3.54	247⇑	iP	Pn	06 33 40.1	+0.2
PB14				i S	S	06 34 22.0	-2.0
PB14	IPOC Station P	3.54	247	eP	Pn	06 33 40.1	+0.2
PB14				eS	S	06 34 23.1	-0.9
PB14				IAML		06 34 25.0	
	comp=Z,364nm,0.2s						
PB08	IPOC Station P	3.77	325		Pn	06 33 43.6	+0.8
PB08	IPOC Station P	3.77	325⇑	iP	Pn	06 33 43.9	+1.0
PB08				i S	S	06 34 29.6	+0.2
PB08	IPOC Station P	3.77	325	eP	Pn	06 33 43.5	+0.6
PB08				eS	S	06 34 30.1	+0.8
PB08				IAML		06 34 31.5	
	comp=Z,108nm,0.4s						
PX03	IPOC Station P	3.84	317	i P	Pn	06 33 42.6	-0.8
TA01	Diego Aracena	4.10	310		Pn	06 33 45.6	-0.9
TA01	Diego Aracena	4.10	310	i P	Pn	06 33 45.5	-0.9
TA01				i S	S	06 34 32.6	-3.3
TA01	Diego Aracena	4.10	310	eP	Pn	06 33 45.9	-0.6
TA01				eS	S	06 34 34.5	-1.3
TA01				IAML		06 34 37.6	
	comp=Z,75nm,0.3s						
AC02	Maricunga	4.13	210		Pn	06 33 47.6	+0.4
AC02	Maricunga	4.13	210	eP	Pn	06 33 47.2	0.0
AC02				eP		06 33 48.1	
AC02				eS	S	06 34 35.0	-2.3
GO01	Chusmiza	4.19	328		Pn	06 33 48.4	+0.3
GO01	Chusmiza	4.19	328⇑	iP	Pn	06 33 48.5	+0.5
GO01				i S	S	06 34 38.6	-0.2
GO01	Chusmiza	4.19	328	eP	Pn	06 33 48.1	0.0
GO01				eS	S	06 34 39.8	+1.0
GO01				IAML		06 34 40.6	
	comp=Z,89nm,0.8s						
TA02	Huaiquique	4.26	313	eP	Pn	06 33 47.4	-1.1
TA02	Huaiquique	4.26	313	eP	Pn	06 33 48.7	+0.2
TA02				IAML		06 34 46.6	
	comp=Z,147nm,0.1s						
PB11	IPOC Station P	4.36	322		Pn	06 33 49.0	-0.8
PB11	IPOC Station P	4.36	322⇑	iP	Pn	06 33 49.0	-0.8
PB11				i S	S	06 34 38.8	-3.2
PB11	IPOC Station P	4.36	322	eP	Pn	06 33 49.1	-0.7
PB11				eS	S	06 34 39.7	-2.2
PB11				IAML		06 34 41.3	
	comp=Z,115nm,0.2s						
AC01	Pan de Azucar	4.47	229	Pn	Pn	06 33 50.1	-0.9
AC01	Pan de Azucar	4.47	229	i P	Pn	06 33 50.3	-0.8
AC01				i S	S	06 34 40.7	-3.7
AC01	Pan de Azucar	4.47	229	eP	Pn	06 33 50.2	-0.9
AC01				eS	S	06 34 41.0	-3.4
AC01				IAML		06 34 44.0	
	comp=Z,101nm,0.2s						
TINO	Tinogasta	4.83	188	eP	Pn	06 33 57.1	+1.4
GO03	Copiapo	5.30	215	Pn	Pn	06 34 00.1	-1.4
GO03	Copiapo	5.30	215	eP	Pn	06 34 00.6	-0.9
GO03				eS	S	06 35 00.6	-2.8
GO03				IAML		06 35 04.4	
	comp=Z,77nm,0.3s						
PB16	IPOC Station P	5.50	332		Pn	06 34 04.5	-0.1
PB12	IPOC Station P	5.65	324		Pn	06 34 03.6	-2.5
PB18	Visviri	6.16	336	Pn	Pn	06 34 14.7	+1.6
AC04	Llanos de Chal	6.24	217	Pn	Pn	06 34 11.2	-2.2
AC05	El Transito	6.36	208		Pn	06 34 13.9	-1.3
LCO	Las Campanas	6.70	210	Pn	Pn	06 34 17.7	-2.0
LPAZ	La Paz	7.04	350	P	Pn	06 34 25.1	+0.6
	comp=Z,3.2nm,0.4s,baz=158,slow=6.5,SNR=25						
LPAZ				S	S	06 35 39.4	-5.6
	comp=Z,1.0nm,0.5s,baz=138,slow=3.9,SNR=0.9						
LPAZ	La Paz	7.04	350	Pn	Pn	06 34 24.8	+0.3
CO01	Juntas del Tor	7.30	203	Pn	Pn	06 34 28.9	+1.5
CO03	El Pedregal	8.30	204	Pn	Pn	06 34 38.8	-1.4
CO02	Combarbal	8.74	204	Pn	Pn	06 34 44.7	-1.3
SIV	San Ignacio	9.04	38	P	Pn	06 34 47.7	-2.1
	comp=Z,1.2nm,0.5s,baz=228,slow=9.1,SNR=11						
SIV				S	S	06 36 15.7	-16
	comp=Z,0.5nm,0.7s,baz=147,slow=19,SNR=1.0						
CPUP	Villa Florida	9.16	111	P	Pn	06 34 49.8	-1.5
	comp=Z,1.8nm,0.8s,baz=290,slow=12,SNR=6.9						
MT02	Curacav	10.66	200	Pn	Pn	06 35 08.5	-2.1
TRCB	Terra Rica	13.09	91	P	P	06 35 45.0	+0.8
ITAB	Concordia	13.88	110		P	06 35 53.2	+0.2
PLTB	Pedras Altas	14.47	129		Pn	06 35 58.8	+0.4
PLCA	Paso Flores	17.71	189	P	P	06 36 36.7	+1.7
	comp=Z,1.0nm,0.9s,baz=32,slow=10,SNR=6.0						
PLCA	Paso Flores	17.71	189	P	P	06 36 36.0	+1.0
VAO	Valinhos	18.28	93	P	P	06 36 40.7	-0.7
VAO				IAmb	IAmb	06 36 41.6	
	comp=Z,15nm,0.7s						
BDFB	Brasilia	19.28	70	P	P	06 36 52.1	-0.3
	comp=Z,3.5nm,0.5s,baz=244,slow=9.5,SNR=8.3						
BDFB	Brasilia	19.28	70	P	P	06 36 52.1	-0.3
BDFB				IAmb	IAmb	06 36 53.4	
	comp=Z,7.0nm,1.0s						
MACA	Manacapuru-AM	20.84	18	P	P	06 37 07.1	-1.8
MACA				IAmb	IAmb	06 37 08.2	
	comp=Z,10nm,0.5s						
BOAV	Boa Vista	26.23	14	P	P	06 37 58.8	-0.1
BOAV				IAmb	IAmb	06 38 20.8	
	comp=Z,17nm,1.5s						
MTO3	Montecristo	43.43	327	P	P	06 40 27.0	+1.3
TEIG	Tepich	48.01	332	P	P	06 41 01.7	+0.6
LRAL	Lakeview Retre	59.19	340	P	P	06 42 21.5	-0.5
LRAL				IAmb	IAmb	06 42 26.9	
	comp=Z,8.7nm,1.2s						

TXAR	Lajitas Array	63.16	324	P	P	06 42 50.3	+1.4
	comp=Z,0.2nm,0.4s,baz=149,slow=7.4,SNR=5.8						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	76.16	69	P	P	06 44 07.6	-0.9
	comp=Z,0.6nm,0.6s,baz=251,slow=7.0,SNR=5.0						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	76.59	329	P	P	06 44 12.2	+1.6
	comp=Z,0.2nm,0.4s,baz=93,slow=5.9,SNR=4.1						
	comp=Z,0.2nm,0.4s						
SCHQ	Schefferville	77.77	0	P	P	06 44 16.9	+0.4
	comp=Z,2.7nm,0.8s,baz=225,slow=2.9,SNR=1.4						
	comp=Z,2.7nm,0.8s						
NVAR	Mina Array Bea	78.05	321	P	P	06 44 20.0	+1.2
	comp=Z,0.2nm,0.5s,baz=150,slow=3.5,SNR=0.6						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	93.48	340	P	P	06 45 35.3	+1.0
	comp=Z,0.2nm,0.6s,baz=131,slow=3.3,SNR=5.5						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	145.85	39	PKPbc	PKPbc	06 51 58.3	+0.7
	comp=Z,1.4nm,0.6s,baz=314,slow=3.4,SNR=4.9						
HHC	Hu-ho-hao-te	162.40	4	eP	PKPdf	06 52 17.2	-2.6
PZH	PanZhiHua	169.14	70	PKP	PKPdf	06 52 24.4	-1.3
NJ2	Nanjing	169.89	331	eP	PKPdf	06 52 26.5	+0.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						

MOS ***08*** *06:36:41.8±0.8,2˚.96S×129˚.91E,h14km,mb5.5/54, MS5.0/14,Error ellipse: s-maj=8.4km s-min=4.6km az=117.4*

IDC ***08*** *06:36:41.3±0.4,3˚.00S×129˚.88E,h0km,mb5.1/35, mbtmp5.1/41,ML4.9/4,MS4.9/56,Error ellipse: s-maj=15.4km s-min=9.7km az=82.0*

BJI ***08*** *06:36:42.0,3˚.00S×129˚.90E,h10km,mB5.4/64,mb5.0/76, Ms5.2/83,Ms7 5.0/79*

NEIC ***08*** *06:36:44.2,2˚.82S×129˚.94E,h20km,Moment Tensor Solution. Duration: 2s9 Moment tensor: Scale 10¹⁷Nm; Mrr1.46; Mθθ-0.85; Mφφ-0.62; Mrθ-1.69; Mθφ1.77; Mφr0.25; Fault plane solution: M₀2.77000×10¹⁷ NP1: φs165.92000°,δ37.16000°,λ144.57000°. NP2: φs285.48000°,δ69.50000°,λ58.30000°. Principal axes: T 2.4980, Plg54.0000°, Azm156.0000°; N 0.4745, Plg29.0000°, Azm298.0000°; P -2.9725, Plg18.0000°, Azm39.0000°;*

GFZ ***08*** *06:36:44.0,2˚.92S×129˚.94E,h11km,MW5.4,Moment Tensor Solution. s106 Moment tensor: Mrr1.14; Mθθ-0.96; Mφφ-0.18; Mrθ-0.23; Mθφ1.13; Mφr0.10; Fault plane solution: NP1:φs132.00000°,δ40.00000°, λ99.00000°. NP2:φs300.00000°,δ50.00000°,λ83.00000°. Principal axes: T 1.1700, Plg82.0000°, Azm165.0000°; N 0.6200, Plg6.0000°, Azm305.0000°; P -1.7900, Plg5.0000°, Azm35.0000°;*

NEIC ***08*** *06:36:44.1±1.4,2˚.88S±0˚.05×129˚.94E±0˚.06,h10km±1km, mb5.4/114,Ms_20 5.3/201,Mww5.6/25 Error ellipse: s-maj=9.8km s-min=8.9km az=263.0*

NEIC ***08*** *06:36:44.2,2˚.92S×129˚.94E,h20km*

DJA ***08*** *06:36:47.5±0.1,3˚S±1˚×13˚0E±˚,h51km±2km,M5.5/159, mb5.7/159,mB6.0/128,MLv5.8/40,Mw(mB)5.6/128, MwMwp5.3/85,Mwp5.5/85*

GCMT ***08*** *06:36:47.1±0.1,2˚.83S±0˚.01×129˚.97E±0˚.01,h18km, MW5.6/142,Moment Tensor Solution. s115,c198; s142,c237; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr1.62±.04; Mθθ-1.50±.03; Mφφ-0.12±.03; Mrθ-1.33±.08; Mθφ1.58±.02; Mφr1.25±.08; Best double couple: M₀2.78000×10¹⁷ NP1:φs107.00000°,δ26.00000°, λ66.00000°. NP2:φs313.00000°,δ66.00000°,λ101.00000°. Principal axes: T 2.3500, Plg67.0000°, Azm244.0000°; N 0.8510, Plg10.0000°, Azm129.0000°; P -3.2090, Plg21.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 06:36:46.2±0.5,2˚.99S±0˚.03×129˚.90E±0˚.03,h31km±3km, h31km:pP-P,n1024,σ1♦93/1014,mb5.3/229,MS5.2/185, 32C-12D,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.03	250	P	Pb	06 37 05.7	+0.1
BNDI	Bandanaira	1.52	180	P	Pb	06 37 13.4	-0.4
BNDI	Bandanaira	1.52	180	P	Pb	06 37 14.5	+0.7
KRAI	Kairung Ratu	1.54	258	P	Pb	06 37 12.9	-1.2
AAI	Ambon	1.84	248	P	Pn	06 37 17.3	+1.6
FAKI	Fak Fak	2.34	88		Pn	06 37 22.9	+0.2
FAKI	Fak Fak	2.34	88	P	Pn	06 37 23.7	+1.0
FAKI	Fak Fak	2.34	88	P	Pn	06 37 23.1	+0.4
SIJI	Sorong	2.51	33	Pn	Pn	06 37 23.8	-1.2
	327nm,0.3s,baz=240,slow=22,SNR=111						
SIJI				Sn	Sn	06 37 53.1	-1.4
	469nm,0.3s,baz=56,slow=21,SNR=15						
	958nm,0.2s						
SIJI	Sorong	2.51	33	P	Pn	06 37 23.4	-1.6
SIJI				S	Sn	06 37 53.8	-0.7
SWI	Sorong	2.51	33	P	Pn	06 37 24.0	-1.0
NLAI	Namlea	2.81	265	P	Pn	06 37 30.3	+1.3
KMPI	Kaimana, Papua	3.85	100	P	Pn	06 37 44.7	+1.3
SANI	Sanana	4.02	283	P	Pn	06 37 44.9	-0.8
SANI	Sanana	4.02	283	P	Pn	06 37 44.6	-1.1
TNTI	Ternate	4.52	326		Pn	06 37 51.7	-0.8
TNTI	Ternate	4.52	326	P	Pn	06 37 53.7	+1.2
TNTI	Ternate	4.52	326	P	Pn	06 37 51.2	-1.3
RKPI	Ransiki, Papua	4.52	71	P	Pn	06 37 52.4	-0.2
MWPI	Manokwari, Pap	4.62	64	P	Pn	06 37 55.0	+1.1
SAUI	Saumlaki	5.15	164	Pn	Pn	06 38 04.1	+2.8
SAUI	Saumlaki	5.15	164	P	Pn	06 38 02.8	+1.6
SAUI	Saumlaki	5.15	164	P	Pn	06 38 06.7	+5.5
GAMI	Galela, Maluku	5.24	336	P	Pn	06 38 01.4	-1.1
	3.3nm9μm1μm,1.2s						
SRPI	Serui, Papua	6.43	80	P	Pn	06 38 18.9	+0.1
	4.0nm14μm8μm799nm,0.7s						
BAKI	Biak	6.45	74	P	Pn	06 38 20.3	+1.1
MNI	Manado	6.71	311	P	Pn	06 38 22.8	+0.1
	4.7nm10μm919nm,0.9s						
LUWI	Luwuk	7.38	285		Pn	06 38 30.9	-1.0
LUWI	Luwuk	7.38	285	P	Pn	06 38 32.1	+0.2
	1μm,0.9s						
LUWI	Luwuk	7.38	285	P	Pn	06 38 31.2	-0.7
	11μm11μm1μm,0.9s						
BBSI	Bau Bau	7.72	251	P	Pn	06 38 38.1	+1.5
	3.0nm3μm986nm,1.1s						
SGSI	Sangihe	7.94	327	P	Pn	06 38 40.3	+0.7
	3.0nm6μm9μm958nm,1.2s						
KKSI	Kolaka, Sulawe	8.32	262	P	Pn	06 38 46.9	+2.1
APSI	Ampana	8.50	284	P	Pn	06 38 47.6	+0.3
MRSI	Marisa	8.67	293	P	Pn	06 38 47.9	-1.7
	5μm7μm632nm,0.6s						
SOEI	Soe	8.74	220		Pn	06 38 54.5	+3.8
SOEI	Soe	8.74	220	P	Pn	06 38 53.2	+2.4
SOEI	Soe	8.74	220	P	Pn	06 38 54.0	+3.2
	19μm1μm,1.4s						
SMPI	Sarmi	8.86	84	P	Pn	06 38 53.5	+1.3
	15μm4μm412nm,1.2s						
DRS	Darwin Rock St	9.43	174	P	Pn	06 39 01.6	+1.6
	201nm,0.6s						
DRS	Darwin Rock St	9.43	174	S	Sn	06 40 47.2	+2.1
	201nm,0.6s						
MMRI	Maumere	9.46	233		Pn	06 39 02.9	+2.4
MMRI	Maumere	9.46	233	P	Pn	06 39 02.4	+1.9
MMRI	Maumere	9.46	233	P	Pn	06 39 02.7	+2.2
	15μm1μm,1.5s						
BATI	Baumata	9.47	221	Pn	Pn	06 39 05.1	+4.5
	11nm,0.3s,baz=77,slow=5.9,SNR=8.2						
BATI				LR	LR	06 42 46.6	
	comp=Z,28μm,20.3s,baz=57,slow=39						
BATI	Baumata	9.47	221	P	Pn	06 39 03.2	+2.5
	16μm7μm602nm,1.3s						
MTN	Manton Dam	9.86	173	P	Pn	06 39 06.1	+0.1
	comp=Z,226nm,0.5s,comp=Z,0.0nm						
MTN	Manton Dam	9.86	173		Pn	06 39 06.4	+0.4
BSSI	Bau Bau, Buton	9.89	251	P	Pn	06 39 08.4	+2.1
	comp=Z,14μmcomp=Z,7μmcomp=Z,820nm,0.9s						
KDU	Kakadu	9.96	165	P	Pn	06 39 05.8	-1.6
	comp=Z,66nm,0.5s,comp=Z,0.0nm						
EDFI	Ende, Flores	9.97	235	P	Pn	06 39 10.9	+3.4
	comp=Z,10μmcomp=Z,540nm,1.5s						
TOLI2	Tolitoli	9.99	294		Pn	06 39 06.4	-1.2
TOLI2	Tolitoli	9.99	294	P	Pn	06 39 07.3	-0.4
	comp=Z,290nm,0.9s						
TOLI2	Tolitoli	9.99	294	S	Sn	06 41 01.2	+2.4
	comp=Z,290nm,0.9s						

TTSI	Tana Toraja	10.07	269	P	Pn	06 39 10.3	+1.5
	comp=Z,9μmcomp=Z,4μmcomp=Z,270nm,0.9s						
SPSI	Sidrap Palu	10.16	264	P	Pn	06 39 11.6	+1.6
	comp=Z,10μmcomp=Z,7μmcomp=Z,325nm,1.4s						
GENI	Genyem	10.26	88	P	Pn	06 39 13.3	+1.8
	comp=Z,640nm,0.8s						
GENI	Genyem	10.26	88	P	Pn	06 39 12.5	+1.0
	comp=Z,11μmcomp=Z,7μmcomp=Z,639nm,0.8s						
PCI	Palu	10.27	281	P	Pn	06 39 12.3	+0.7
	comp=Z,386nm,0.5s						
KAPI	Kappang	10.32	258	Pn	Pn	06 39 15.1	+2.9
	comp=Z,3.3nm,0.3s,baz=79,slow=6.3,SNR=36						
KAPI				Sn	Sn	06 41 09.1	+2.1
	baz=66,slow=18						
KAPI				LR	LR	06 44 14.0	
	comp=Z,17μm,20.4s,baz=76,slow=44						
KAPI	Kappang	10.32	258		Pn	06 39 14.1	+1.8
KAPI	Kappang	10.32	258	P	Pn	06 39 13.9	+1.6
KAPI	Kappang	10.32	258	c iP	Pn	06 39 14.6	+2.3
KAPI				pmax	pmax		
	comp=Z,281nm,1.1s						
KAPI	Kappang	10.32	258	P	Pn	06 39 15.2	+2.9
KAPI				P	Pn	06 39 15.2	+2.9
KAPI				S	Sn	06 41 14.7	+7.7
KAPI				S	Sn	06 41 14.7	+7.7
KAPI	Kappang	10.32	258	P	Pn	06 39 14.2	+1.9
	comp=Z,6μmcomp=Z,3μmcomp=Z,300nm,1.5s						
MPSI	Mapaga	10.53	288	P	Pn	06 39 15.1	-0.1
	comp=Z,6μmcomp=Z,206nm,0.7s						
MKS	Makassar	10.64	258	P	Pn	06 39 19.3	+2.7
	comp=Z,5μmcomp=Z,329nm,0.8s						
JAY	Jayapura	10.80	88	Pn	Pn	06 39 17.1	-1.8
	comp=Z,3.5nm,0.3s,baz=198,slow=6.5,SNR=8.7						
	comp=Z,40nm,0.7s						
JAY	Jayapura	10.80	88	P	Pn	06 39 17.6	-1.3
	comp=Z,186nm,0.9s						
DAV	Davao City (W)	10.89	337	Pn	Pn	06 39 18.5	-1.5
	comp=Z,233nm,0.3s,baz=270,slow=2.5,SNR=6.7						
DAV	Davao City (W)	10.89	337	P	Pn	06 39 21.8	+1.8
DAV				S	Sn	06 41 26.6	+5.8
DAV	Davao City (W)	10.89	337	P	Pn	06 39 20.1	+0.1
PMSI	Majene	10.98	267	P	Pn	06 39 23.7	+2.4
	comp=Z,7μmcomp=Z,4μmcomp=Z,404nm,1.4s						
MMSI	Mamuju	10.98	271	P	Pn	06 39 22.7	+1.4
WSI	Waingapu	11.62	235	P	Pn	06 39 32.8	+2.8
BASI	Baing, Sumba	11.71	232	P	Pn	06 39 36.2	+4.9
MMPI	Merauke	11.76	118	P	Pn	06 39 32.6	+0.6
WBSI	Waikabubak, Su	12.36	237	P	Pn	06 39 42.0	+1.8
	comp=Z,12μmcomp=Z,9μmcomp=Z,656nm,1.2s						
KNRA	Kununurra	12.65	185	P	Pn	06 39 42.0	-2.2
	comp=Z,315nm,0.9s,comp=Z,0.0nm						
KNRA	Kununurra	12.65	185		Pn	06 39 42.4	-1.8
DBNI	Kabupaten Domp	12.76	244	P	Pn	06 39 48.2	+2.5
BKB	Balikpapan	13.11	277		Pn	06 39 52.3	+1.8
BKB	Balikpapan	13.11	277	P	Pn	06 39 53.5	+3.1
	comp=Z,450nm,0.9s						
BKB	Balikpapan	13.11	277	P	Pn	06 39 52.4	+2.0
	comp=Z,7μmcomp=Z,10μmcomp=Z,441nm,0.9s						
PLAI	Plampang	13.38	244	P	Pn	06 39 56.9	+2.8
	comp=Z,513nm,1.0s						
PLAI	Plampang	13.38	244	S	Sn	06 42 25.1	+3.3
	comp=Z,513nm,1.0s						
PLAI	Plampang	13.38	244	P	Pn	06 39 55.2	+1.1
	comp=Z,12μmcomp=Z,12μmcomp=Z,513nm,1.0s						
MYLDM	Lahad Datu	13.99	305		Pn	06 40 02.8	+0.4
MYLDM	Lahad Datu	13.99	305	P	Pn	06 40 04.2	+1.8
	comp=Z,359nm,1.5s						
MYLDM	Lahad Datu	13.99	305	P	Pn	06 40 04.7	+2.3
	comp=Z,3μmcomp=Z,4μmcomp=Z,359nm,1.5s						
TWSI	Taliwang, Sumb	14.15	246	P	Pn	06 40 06.5	+1.9
	comp=Z,11μmcomp=Z,9μmcomp=Z,253nm,1.1s						
KLNI	Mataram	14.76	248	P	Pn	06 40 14.8	+1.9
	comp=Z,9μmcomp=Z,6μmcomp=Z,217nm,1.2s						
BBKI	Banjar Baru	15.04	268	P	Pn	06 40 18.5	+1.7
	comp=Z,7μmcomp=Z,16μmcomp=Z,443nm,1.4s						
MTKI	Muara Teweh, K	15.13	277	P	Pn	06 40 19.3	+1.3
	comp=Z,11μmcomp=Z,315nm,1.2s						
KHKI	Kahang-Kahang	15.19	249	P	Pn	06 40 20.4	+1.8
	comp=Z,10μmcomp=Z,7μmcomp=Z,284nm,1.1s						
SRBI	Singaraja	15.47	250	P	Pn	06 40 23.5	+1.2
	comp=Z,8μmcomp=Z,6μmcomp=Z,315nm,1.6s						
FITZ	Fitzroy Crossi	15.58	195	Pn	Pn	06 40 21.6	-2.2
	comp=Z,2.3nm,0.3s,baz=38,slow=11,SNR=34						
FITZ				Sn	Sn	06 43 15.8	+0.3
	comp=Z,1.2nm,0.3s,baz=294,slow=20,SNR=1.6						
FITZ				LR	LR	06 47 54.1	
	comp=Z,7μm,18.7s,baz=26,slow=43						
	comp=Z,34nm,0.8s						
DNP	Denpasar	15.66	248	P	Pn	06 40 25.9	+1.1
	comp=Z,326nm,0.4s						
IGBI	Denpasar	15.77	248	P	Pn	06 40 27.9	+1.7
	comp=Z,9μmcomp=Z,6μmcomp=Z,305nm,0.9s						
RTBI	Rangdo, Negare	15.84	249	P	Pn	06 40 28.9	+1.7
	comp=Z,11μmcomp=Z,9μmcomp=Z,445nm,1.4s						
ABJI	Asem Bagus	16.31	252	P	P	06 40 34.6	-1.2
	comp=

comp=Z,365nm,1.1s
UGM Wanagama 19.89 255 P **Pn** **06 41 16.7 -0.5**
comp=Z,5µmcomp=Z,6µmcomp=Z,362nm,1.1s
MBWA Marble Bar 20.59 208 P Pn 06 41 25.5 +0.3
comp=Z,263nm,1.2s,comp=Z,0.0nm
MBWA Marble Bar 20.59 208 P Pn 06 41 24.8 -0.5
comp=Z,152nm,1.2s
MBWA Marble Bar 20.59 208 P **P** **06 41 23.7 +0.8**
MBWA P **P** **06 41 23.7 +0.8**
MBWA S Sn 06 45 17.5 +0.7
MBWA S Sn 06 45 17.5 +0.7
MTSU Mount Surprise 20.64 138 P Pn 06 41 24.9 -0.9
comp=Z,218nm,0.9s
MTSU Mount Surprise 20.64 138 P Pn 06 41 24.7 -1.2
comp=Z,218nm,0.9s
PSAC2 Pilbara Seismi 20.86 207 P **P** **06 41 25.3 -0.5**
comp=Z,179nm,0.9s
PSAA2 Pilbara Seismi 20.89 207 P **P** **06 41 27.3 +1.2**
comp=Z,191nm,0.9s
PSA00 Pilbara Seismi 20.90 207 P **P** **06 41 24.1 -2.1**
PSA00 Pilbara Seismi 20.90 207 P Pn 06 41 27.5 -1.3
comp=Z,218nm,1.0s
PSAB3 Pilbara Seismi 20.91 207 P **P** **06 41 26.1 -0.2**
comp=Z,239nm,0.9s
ASAR Alice Springs 20.91 170 P **P** **06 41 26.3 -0.1**
comp=Z,344nm,0.8s,baz=349,slow=10,SNR=1335
ASAR S **S** **06 45 13.3 -4.8**
comp=Z,22nm,0.8s,baz=353,slow=24,SNR=5.0
ASAR ScP **ScP** **06 49 11.3 +2.7**
comp=Z,3.0nm,0.9s,baz=309,slow=2.8,SNR=2.9
comp=Z,344nm,0.8s
AUALC St Philip's Co 20.93 170 P **P** **06 41 26.6 0.0**
comp=Z,972nm,1.1s
CTJI Waduk Cacaban 21.02 258 P **P** **06 41 26.1 -1.4**
comp=Z,5µmcomp=Z,233nm,1.1s
SCJI Gunung Srandil 21.16 256 P **P** **06 41 29.0 0.0**
KPJI Karang Pucung 21.32 258 P **P** **06 41 29.5 -1.3**
CMJI Cimerak 21.88 257 P **P** **06 41 34.4 -2.3**
WRKA Warakurna 21.97 184 P **P** **06 41 37.0 -0.8**
comp=Z,308nm,1.0s,comp=Z,0.0nm
GUMO Guam 22.18 42 P **P** **06 41 38.8 -1.2**
comp=Z,49nm,0.5s,baz=235,slow=12,SNR=1.7
GUMO LR LR 06 51 38.1
comp=Z,2µm,18.3s,baz=229,slow=40
comp=Z,49nm,0.5s
TPI Tanjungpandan 22.22 270 P **P** **06 41 41.0 +0.5**
comp=Z,3µmcomp=Z,3µmcomp=Z,200nm,1.1s
LEM Lembang 22.52 259 P **P** **06 41 42.2 -1.7**
comp=Z,70nm,0.7s,baz=84,slow=14,SNR=7.8
LEM LR LR 06 52 11.3
comp=Z,11µm,19.2s,baz=92,slow=41
LEM ScS ScS 06 53 01.3 +2.7
comp=Z,21nm,0.4s,baz=310,slow=23,SNR=1.5
comp=Z,70nm,0.7s
BBJI Bungbulang 22.59 258 P **P** **06 41 40.5 -4.1**
CTA Charters Tower 23.31 138 P **P** **06 41 52.3 +0.5**
comp=Z,6.8nm,1.4s
CTAO Charters Tower 23.31 138 P **P** **06 41 51.6 -0.2**
CTAO Charters Tower 23.31 138 P **P** **06 41 52.3 +0.5**
comp=Z,84nm,1.0s
CTAO Charters Tower 23.31 138 P **P** **06 41 51.6 -0.2**
CTAO pmax pmax
comp=Z,204nm,1.0s
DBJI Dramaga 23.34 260 P **P** **06 41 49.9 -2.2**
PPBI Pangkal Pinang 23.75 271 P **P** **06 41 56.8 +0.6**
GIRL Giralia 24.75 217 P **P** **06 42 06.3 +1.2**
comp=Z,89nm,1.7s
KLI Kotabumi 25.05 265 P **P** **06 42 07.6 -0.5**
comp=Z,4µmcomp=Z,193nm,1.0s
PMBI Palembang 25.10 269 P **P** **06 42 10.4 +1.9**
PMBI IAMs_20 IAMs_20 06 53 40.8
comp=Z,9µm,19.0s
PMBI Palembang 25.10 269 P **P** **06 42 10.9 +2.5**
PMBI Palembang 25.10 269 P **P** **06 42 10.2 +1.8**
XMI Christmas Isla 25.14 252 P **P** **06 42 07.1 -1.8**
comp=Z,176nm,1.1s
DSRI Dabo 25.43 275 P **P** **06 42 12.1 +0.6**
KASI Kota Agung 25.46 263 P **P** **06 42 08.6 -3.1**
comp=Z,129nm,1.0s
TPRI Tanjung Pinang 25.66 278 P **P** **06 42 14.7 +1.1**
comp=Z,3µmcomp=Z,217nm,1.2s
MDSI Maura Dua 25.71 266 P **P** **06 42 13.5 -0.5**
comp=Z,2µmcomp=Z,173nm,1.2s
MEEK Meekatharra 25.88 204 P P 06 42 08.2 -7.3
MEEK Meekatharra 25.88 204 P **P** **06 42 15.4 -0.1**
comp=Z,35nm,0.7s
JMBI JAMBI 26.27 272 P **P** **06 42 21.0 +1.9**
MYKOM Kota Tinggi 26.47 280 P **P** **06 42 21.8 +0.9**
MYKOM Kota Tinggi 26.47 280 P **P** **06 42 22.8 +1.9**
comp=Z,130nm,0.9s
MYKOM Kota Tinggi 26.47 280 P **P** **06 42 22.0 +1.1**
comp=Z,3µmcomp=Z,2µmcomp=Z,130nm,0.9s
BTDF Bukit Timah Da 26.48 279 P **P** **06 42 22.7 +1.7**
comp=Z,158nm,0.9s
BTDF Bukit Timah Da 26.48 279 P **P** **06 42 22.5 +1.5**
comp=Z,1µmcomp=Z,158nm,0.9s
INKA Innaminka 26.70 158 P **P** **06 42 23.0 +0.2**
MNAI Manna 26.92 266 IAMs_20 IAMs_20 06 54 37.5
comp=Z,6µm,20.0s
QLP Quilpie 27.19 151 P **P** **06 42 27.2 0.0**
comp=Z,117nm,0.7s
QLP Quilpie 27.19 151 P **P** **06 42 27.4 +0.2**
comp=Z,117nm,0.7s
KSI Kapahiang 27.27 268 P **P** **06 42 27.9 -0.3**
comp=Z,158nm,0.6s
MASI Maura Aman, Be 27.62 269 P **P** **06 42 31.1 -0.2**
FORT Forrest 27.69 183 P **P** **06 42 30.6 -1.0**
comp=Z,41nm,0.7s,comp=Z,0.0nm
FORT Forrest 27.69 183 P **P** **06 42 30.8 -0.9**
FORT IAmb IAmb 06 43 12.1
comp=Z,45nm,0.8s
KRJI Kerinci 28.43 271 P **P** **06 42 38.7 +0.1**
AUNRC North Rockhamp 28.43 137 P **P** **06 42 39.3 +1.0**
comp=Z,71nm,1.2s
BKNI Bangkinang 29.04 276 P **P** **06 42 44.6 +0.7**
MORW Morawa 29.09 206 P **P** **06 42 43.8 -0.4**
comp=Z,20nm,2.0s,comp=Z,0.0nm
MORW Morawa 29.09 206 P **P** **06 42 43.6 -0.6**
MORW IAmb IAmb 06 43 35.1
comp=Z,139nm,1.8s
KMBL Kambalda 29.22 194 P **P** **06 42 44.4 -1.0**
comp=Z,33nm,0.5s,comp=Z,0.0nm
QIZ Qiongzhong 29.47 319 P **P** **06 42 48.4 +0.8**
QIZ S **S** **06 47 40.0 -0.2**
QIZ pmax pmax
comp=Z,250nm,4.3s
QIZ LR LR
comp=Z,2µm,15.7s
QIZ LR LR
comp=Z,2µm,19.0s
QIZ LR LR
comp=Z,2µm,22.6s
PDSI Padang 29.49 273 P **P** **06 42 47.9 -0.1**
comp=Z,187nm,0.8s
RMQ Roma 29.54 144 P **P** **06 42 45.8 -2.4**
comp=Z,94nm,1.5s
PPI Padang Panjang 29.60 274 P **P** **06 42 48.2 -0.7**
JOW Kunigami 29.69 357 LR LR 06 53 18.6
comp=Z,4µm,20.9s,baz=142,slow=34
IPM Ipoh 29.79 284 P **P** **06 42 51.7 +1.1**
comp=Z,133nm,1.3s
IPM Ipoh 29.79 284 P **P** **06 42 50.7 +0.1**
comp=Z,1µmcomp=Z,132nm,1.3s
EIDS Eidsvold 30.17 139 **P** **06 42 54.0 +0.2**
EIDS Eidsvold 30.17 139 P **P** **06 42 54.4 +0.6**
comp=Z,32nm,1.4s
BLDU Ballidu 30.18 203 P **P** **06 42 51.8 -2.0**
comp=Z,27nm,1.5s
BBOO Buckleboo 30.22 170 P **P** **06 42 53.8 -0.3**
comp=Z,97nm,0.8s
BBOO Buckleboo 30.22 170 P **P** **06 42 53.5 -0.6**
BBOO IAmb IAmb 06 43 01.2
comp=Z,64nm,0.8s
BBOO Buckleboo 30.22 170 P **P** **06 42 53.6 -0.6**
comp=Z,98nm,0.8s
KULM Kulim 30.36 286 P **P** **06 42 55.8 +0.2**
KULM Kulim 30.36 286 P **P** **06 42 56.6 +1.0**
comp=Z,73nm,1.0s
KULM Kulim 30.36 286 P **P** **06 42 55.7 +0.1**
comp=Z,849nmcomp=Z,73nm,1.0s
HNR Honiara 30.53 103 LR LR 06 57 28.1
comp=Z,139nm,18.6s,baz=358,slow=41
MNSI Mandailing Nat 30.54 277 P **P** **06 42 57.3 +0.1**
comp=Z,142nm,0.7s
KLBR Kellerberrin 30.66 201 P **P** **06 42 57.4 -0.6**
comp=Z,88nm,0.8s
KLBR Kellerberrin 30.66 201 P **P** **06 42 57.5 -0.6**
comp=Z,88nm,0.8s
STKA Stephens Creek 30.77 160 P **P** **06 42 59.1 +0.2**
comp=Z,236nm,1.4s
STKA Stephens Creek 30.77 160 P **P** **06 42 58.8 -0.2**
comp=Z,29nm,0.6s,baz=341,slow=8.3,SNR=48
STKA LR LR 06 57 14.7
comp=Z,2µm,20.6s,baz=327,slow=40
comp=Z,29nm,0.6s
STKA Stephens Creek 30.77 160 P **P** **06 42 58.9 0.0**
comp=Z,12nm,1.4s
STKA Stephens Creek 30.77 160 *c i*P **P** **06 42 59.0 0.0**
SISI Saibi 30.83 272 P **P** **06 43 00.6 +0.8**
AUJCS Jamestown Cent 31.14 166 P **P** **06 43 02.7 +0.4**
comp=Z,43nm,1.2s
AULRC Lightning Ridg 31.40 149 P **P** **06 43 04.7 +0.1**
comp=Z,175nm,1.1s
HTT Hallett 31.44 165 P **P** **06 43 05.1 +0.2**
comp=Z,17nm,1.6s
HTT Hallett 31.44 165 P **P** **06 43 05.6 +0.7**
comp=Z,41nm,1.6s
RPSI Rantau Prapat 31.48 280 P **P** **06 43 05.5 0.0**
PSI Prapat 31.50 280 P **P** **06 43 05.6 -0.2**
comp=Z,79nm,1.2s
PSI Prapat 31.50 280 P **P** **06 43 05.5 -0.2**
PSI pmax pmax
comp=Z,88nm,1.1s
PSI MLR MLR
comp=Z,4µm,20.0s
PSI Prapat 31.50 280 P **P** **06 43 05.5 -0.2**
comp=Z,984nmcomp=Z,73nm,1.2s
MUN Mundaring 31.58 203 P **P** **06 43 04.7 -1.4**
comp=Z,46nm,2.0s
CMSA Cobar Meteorol 32.06 154 P **P** **06 43 10.5 +0.2**
comp=Z,74nm,1.0s
CMSA Cobar Meteorol 32.06 154 P **P** **06 43 10.1 -0.2**
comp=Z,74nm,1.0s
NWAO Narrogin (SRO) 32.06 200 P **P** **06 43 09.7 -0.6**
comp=Z,49nm,2.1s
NWAO Narrogin (SRO) 32.06 200 LR LR 06 57 50.3
comp=Z,3µm,18.6s,baz=26,slow=40
NWAO Narrogin (SRO) 32.06 200 P **P** **06 43 09.4 -0.9**
NWAO IAmb IAmb 06 44 16.8
comp=Z,64nm,1.1s
NWAO Narrogin (SRO) 32.06 200 P **P** **06 43 09.4 -0.9**
NWAO pmax pmax
comp=Z,64nm,1.2s
JCJ Chichijima 32.18 21 LR LR 06 54 12.2
comp=Z,4µm,20.8s,baz=124,slow=33
TW1H Toowoomba 1 Ha 32.26 141 P **P** **06 43 13.3 +1.0**
comp=Z,54nm,0.9s
GSI Gunungsitoli 32.60 277 P **P** **06 43 14.4 -1.0**
GSI IAMs_20 IAMs_20 06 58 34.6
comp=Z,5µm,19.0s
GSI Gunungsitoli 32.60 277 P **P** **06 43 14.7 -0.6**
comp=Z,122nm,1.1s
GSI Gunungsitoli 32.60 277 P **P** **06 43 13.6 -1.7**
comp=Z,131nm,1.3s
KCSI Kotacane, Aceh 32.76 281 P **P** **06 43 15.1 -1.7**
AUMAR Marden Senior 32.76 167 P **P** **06 43 17.7 +1.2**
comp=Z,120nm,1.0s
GHSS Government Hou 32.78 167 P **P** **06 43 17.9 +1.3**
AUMBR Murray Bridge 33.15 166 P **P** **06 43 20.1 +0.3**
comp=Z,97nm,0.9s
RKGY Rocky Gully 33.68 199 P **P** **06 43 25.1 +0.6**
comp=Z,98nm,1.1s
GULI GuiLin 33.91 327 P **P** **06 43 28.8 +2.2**
GULI S **S** **06 48 50.8 +1.5**
GULI pmax pmax
comp=Z,9.0nm,1.2s
GULI pmax pmax
comp=Z,310nm,4.0s
GULI LR LR
comp=Z,2µm,22.0s
GULI LR LR
comp=Z,2µm,23.5s
GULI LR LR
comp=Z,2µm,19.4s
LHMI Lhok Sumawe 33.92 284 P **P** **06 43 28.5 +1.7**
comp=Z,216nm,1.3s
LHMI Lhok Sumawe 33.92 284 P **P** **06 43 26.4 -0.4**
comp=Z,3µmcomp=Z,179nm,1.2s
AUDCS Dubbo College 33.99 151 P **P** **06 43 27.6 +0.3**
comp=Z,217nm,1.1s
ARMA Armidale 34.16 145 P **P** **06 43 30.0 +1.1**
comp=Z,80nm,1.0s
ARMA Armidale 34.16 145 P **P** **06 43 28.8 0.0**
ARMA IAmb IAmb 06 43 37.8
comp=Z,58nm,0.8s
ARMA Armidale 34.16 145 P **P** **06 43 29.9 +1.1**
comp=Z,80nm,1.0s
MLSI Meulaboh, Aceh 34.24 282 P **P** **06 43 28.5 -1.2**
AUPHS Peel High Scho 34.26 147 P **P** **06 43 30.8 +1.1**
comp=Z,81nm,1.4s
SSE Sheshan 34.90 347 P **P** **06 43 35.7 +0.6**
SSE S **S** **06 49 09.2 +4.7**
SSE pmax pmax
comp=Z,9.0nm,1.1s
SSE pmax pmax
comp=Z,120nm,3.5s
SSE LR LR
comp=Z,600nm,18.7s
SSE LR LR
comp=Z,540nm,19.1s
CNSH ChangSha 35.03 333 P P 06 43 42.2 +5.9
CNSH S **S** **06 49 12.8 +6.2**
CNSH pmax pmax
comp=Z,380nm,5.1s
CNSH LR LR
comp=Z,2µm,20.4s
CNSH LR LR
comp=Z,2µm,17.1s
CNSH LR LR
comp=Z,1µm,25.1s
ARPS Mount Arapiles 35.37 163 P **P** **06 43 40.0 +1.0**
comp=Z,63nm,1.4s
YNG Young 35.60 153 P **P** **06 43 42.4 +1.3**
comp=Z,113nm,1.1s
MGBR Mount Gambier 35.93 166 P **P** **06 43 44.1 +0.2**
JNU Nakatsue 35.93 1 P **P** **06 43 43.1 -0.8**
comp=Z,7.2nm,0.7s,baz=224,slow=0.6,SNR=6.4
JNU LR LR 06 58 43.1
comp=Z,4µm,19.1s,baz=178,slow=37
comp=Z,7.2nm,0.7s
MGCD Mangrove Creek 36.02 149 P **P** **06 43 43.6 -1.1**
comp=Z,53nm,0.9s
NJ2 Nanjing 36.40 344 ⇓P P 06 43 54.7 +6.8
NJ2 S **S** **06 49 30.2 +2.8**
NJ2 SS SS 06 52 22.6 +15
NJ2 pmax pmax
comp=Z,15nm,1.3s
NJ2 LR LR
comp=N,950nm,18.9s
NJ2 LR LR
comp=E,1µm,19.9s
NJ2 LR LR
comp=Z,1µm,23.5s
WHN Wuhan 36.50 337 P **P** **06 43 52.0 +3.2**
WHN S **S** **06 49 33.0 +3.9**
WHN LR LR
comp=Z,3µm,12.5s
WHN LR LR
comp=Z,2µm,12.1s
WHN LR LR
comp=Z,4µm,18.9s
JMN Monobe 36.72 6 P **P** **06 43 51.9 +1.2**
comp=Z,77nm,1.4s
AUMTS Mt Stromlo 36.72 153 P **P** **06 43 51.9 +1.1**
comp=Z,99nm,1.1s
CAN Canberra 36.72 153 P **P** **06 43 51.8 +1.0**
comp=Z,79nm,1.1s
CAN Canberra 36.72 153 P **P** **06 43 51.0 +0.2**
CAN IAmb IAmb 06 43 59.6
comp=Z,88nm,1.1s
CAN Canberra 36.72 153 P **P** **06 43 51.7 +1.0**
comp=Z,122nm,1.1s
CAN Canberra 36.72 153 P **P** **06 43 51.0 +0.2**
CAN pmax pmax
comp=Z,88nm,1.1s
BRAT Ballarat 36.73 161 P **P** **06 43 51.7 +1.1**
comp=Z,38nm,1.0s
AUDAR Daramalan Coll 36.73 153 P **P** **06 43 51.8 +1.0**
comp=Z,59nm,1.9s
AUMHS Melrose High S 36.80 153 P **P** **06 43 52.4 +1.0**
comp=Z,94nm,2.0s
GYA Guiyang 36.90 324 ⇓P **P** **06 43 53.3 +0.8**
GYA S **S** **06 49 34.8 -0.9**
GYA pmax pmax
comp=Z,20nm,1.4s
GYA pmax pmax
comp=Z,420nm,6.4s
GYA LR LR
comp=Z,1µm,18.6s
GYA LR LR
comp=Z,620nm,13.6s
GYA LR LR
comp=Z,1µm,15.9s
JHJ Hachijo jima 2 37.11 14 LR LR 06 57 02.0
comp=Z,4µm,20.1s,baz=170,slow=33
CMAR Chiang Mai Arr 37.20 306 P **P** **06 43 56.2 +1.2**
comp=Z,43nm,1.0s,baz=134,slow=7.2,SNR=109
CMAR PcP **PcP** **06 46 16.0 +1.3**
comp=Z,1.8nm,0.3s,baz=140,slow=2.7,SNR=4.3
CMAR ScP **ScP** **06 50 02.2 +2.5**
comp=Z,0.7nm,0.3s,baz=123,slow=4.6,SNR=5.1
CMAR ScS **ScS** **06 54 11.7 +3.9**
comp=Z,1.0nm,0.3s,baz=90,slow=13,SNR=1.5
comp=Z,43nm,1.0s
CMBY CAMPBELL BAY 37.26 286 *e*P **P** **06 43 53.7 -1.8**
CMBY IAmb IAmb 06 44 09.4
comp=Z,48nm,0.7s
TOO Toolangi 37.27 159 P **P** **06 43 57.2 +1.8**
comp=Z,23nm,1.3s
TOO Toolangi 37.27 159 P **P** **06 43 56.1 +0.7**
TOO Toolangi 37.27 159 P **P** **06 43 56.1 +0.7**
TOO pmax pmax
comp=Z,20nm,1.0s
CHTO Chiang Mai 37.38 307 P **P** **06 43 57.1 +0.6**
CHTO IAmb IAmb 06 43 59.6
comp=Z,103nm,1.0s
CHTO Chiang Mai 37.38 307 P **P** **06 43 57.4 +0.9**
comp=Z,66nm,1.1s
CHTO Chiang Mai 37.38 307 P **P** **06 43 57.1 +0.6**
CHTO pmax pmax
comp=Z,103nm,1.0s
CHTO MLR MLR
comp=Z,1µm,22.0s
CHTO Chiang Mai 37.38 307 P **P** **06 43 57.4 +0.9**
CHTO P **P** **06 43 57.4 +0.9**
CHTO Chiang Mai 37.38 307 P **P** **06 43 56.9 +0.3**
ENH Enshi 38.40 331 P **P** **06 44 05.5 +0.5**
comp=Z,25nm,1.1s
KMI2 Kunming 38.43 318 ⇑P **P** **06 44 06.9 +1.4**
KMI2 S **S** **06 49 55.8 -3.2**
KMI2 pmax pmax
comp=Z,45nm,1.2s
KMI2 pmax pmax
comp=Z,540nm,4.1s
KMI2 LR LR
comp=Z,610nm,19.6s
KMI2 LR LR
comp=Z,1µm,17.7s
KMI2 LR LR
comp=Z,1µm,19.4s
INU Inuyama 38.72 9 IAMs_20 IAMs_20 06 57 45.0
comp=Z,4µm,21.0s
JGF Kuroka 39.02 10 P **P** **06 44 09.9 -0.2**
JGF Kuroka 39.02 10 P **P** **06 44 11.6 +1.5**
comp=Z,46nm,2.1s
PBA Port Blair 39.71 292 *e*P **P** **06 44 15.8 -0.3**
PBA IAmb IAmb 06 44 40.4
comp=Z,52nm,0.9s
PBA *e*S **S** **06 50 15.9 -2.2**
PZH PanZhiHua 40.01 319 ⇓P **P** **06 44 19.1 +0.5**
PZH sP **pP** **06 44 27.5 -0.3**
PZH S **S** **06 50 25.4 +2.8**
PZH ScS **ScS** **06 54 26.1 +2.2**
PZH pmax pmax
comp=Z,30nm,1.0s
PZH pmax pmax
comp=Z,400nm,5.1s
PZH LR LR
comp=Z,1µm,18.8s
PZH LR LR
comp=Z,810nm,21.6s
PZH LR LR
comp=Z,1µm,21.0s
MAJO Matsushiro 40.09 10 P **P** **06 44 18.1 -0.9**
MAJO Matsushiro 40.09 10 P **P** **06 44 17.2 -1.8**
comp=Z,35nm,0.9s
MAJO Matsushiro 40.09 10 ⇑*e*P **P** **06 44 17.8 -1.2**
MAJO pmax pmax
comp=Z,67nm,2.7s
MJAR Matsushiro Arr 40.09 10 P **P** **06 44 17.0 -2.0**
comp=Z,9.1nm,0.8s,baz=183,slow=9.2,SNR=16
MJAR PcP **PcP** **06 46 24.8 +1.4**
comp=Z,3.3nm,0.9s,baz=185,slow=4.5,SNR=2.2
MJAR LR LR 07 00 38.8
comp=Z,2µm,18.9s,baz=204,slow=36
comp=Z,9.1nm,0.8s
DZM Mont Dzumac 40.22 121 *e*P **P** **06 44 18.5 -1.9**
comp=Z,106nm,1.1s
DZM *e*S **S** **06 50 28.5 +2.7**
comp=Z,494nm,31.2s
DZM *e*SS **SS** **06 53 26.3 +1.7**
comp=Z,924nm,27.4s
DZM *e*LR LR 06 55 15.1
comp=Z,3µm,27.4s
DZM Mont Dzumac 40.22 121 P **P** **06 44 20.8 +0.4**
DZM Mont Dzumac 40.22 121 P **P** **06 44 21.1 +0.7**
comp=Z,40nm,1.0s
KSRS Korea Array 40.28 358 P **P** **06 44 19.7 -0.8**
comp=Z,2.8nm,0.7s,baz=175,slow=8.7,SNR=8.0
KSRS PcP **PcP** **06 46 24.8 +0.9**
comp=Z,4.2nm,0.9s,baz=184,slow=3.7,SNR=4.2
KSRS LR LR 06 59 50.3
comp=Z,3µm,21.8s,baz=180,slow=34
comp=Z,2.8nm,0.7s
INCN Inchon 40.38 356 IAMs_20 IAMs_20 07 01 07.1
comp=Z,3µm,20.0s
LYN LuoYang 40.79 338 P **P** **06 44 25.1 +0.3**
LYN S **S** **06 50 31.8 -1.9**
LYN pmax pmax
comp=Z,23nm,1.1s
LYN pmax pmax
comp=Z,520nm,5.5s
LYN LR LR
comp=Z,2µm,19.9s
LYN LR LR
comp=Z,3µm,22.0s
LYN LR LR
comp=Z,2µm,19.2s
TIA Tai'an 40.79 344 P **P** **06 44 21.0 -3.8**
TIA S **S** **06 50 25.2 -8.5**
TIA SS **SS** **06 53 26.5 -9.0**
TIA pmax pmax
comp=Z,12nm,1.1s
TIA LR LR
comp=N,890nm,21.1s
TIA LR LR
comp=E,1µm,16.7s
TIA LR LR
comp=Z,2µm,24.0s
TNCH TengChong 41.27 314 P **P** **06 44 29.6 +0.5**
TNCH PP **PnPn** **06 46 08.4 -1.0**
TNCH S **S** **06 50 43.4 +1.9**
TNCH ScS **ScS** **06 54 34.8 +3.1**
TNCH pmax pmax
comp=Z,44nm,1.4s
TNCH pmax pmax
comp=Z,540nm,2.8s
TNCH LR LR
comp=Z,1µm,16.6s
TNCH LR LR
comp=Z,830nm,12.7s
TNCH LR LR
comp=Z,2µm,30.1s
XAN Xi'an 41.81 334 ⇓P **P** **06 44 32.9 -0.3**
XAN S **S** **06 50 52.7 +3.7**
XAN pmax pmax
comp=Z,33nm,1.2s
XAN pmax pmax
comp=Z,310nm,3.9s
XAN LR LR
comp=Z,1µm,24.1s
XAN LR LR
comp=Z,2µm,22.7s
XAN LR LR
comp=Z,2µm,17.9s
CD2 Chengdu 41.92 325 P **P** **06 44 33.5 -0.8**
CD2 pP pP 06 44 38.3 -5.2
CD2 sP sP 06 44 40.4 -6.7
CD2 PP **PP** **06 46 12.9 +1.2**
CD2 S **S** **06 50 46.4 -4.4**
CD2 pmax pmax

	comp=Z,30nm,0.9s								
CD2					pmax	pmax			
	comp=Z,370nm,4.3s								
CD2					LR	LR			
	comp=Z,1μm,14.9s								
CD2					LR	LR			
	comp=Z,2μm,17.1s								
CD2					LR	LR			
	comp=Z,1μm,14.7s								
MOO	**Moorlands**	**42.21**	**161**		P	**P**	**06**	**44**	**37.2** **+0.8**
	comp=Z,62nm,2.3s								
DL2	**Dalian**	**42.38**	**350**		P	**P**	**06**	**44**	**38.2** **+0.4**
DL2					S	**S**	**06**	**50**	**59.0** **+1.8**
DL2					pmax	pmax			
	comp=Z,38nm,1.3s								
DL2					pmax	pmax			
	comp=Z,450nm,6.5s								
DL2					LR	LR			
	comp=Z,1μm,22.4s								
DL2					LR	LR			
	comp=Z,3μm,21.6s								
DL2					LR	LR			
	comp=Z,2μm,22.0s								
HNS	**HongShan**	**42.59**	**342**	⇓	P	**P**	**06**	**44**	**39.4** **-0.1**
HNS					S	**S**	**06**	**50**	**59.2** **-1.1**
HNS					pmax	pmax			
	comp=Z,12nm,0.9s								
HNS					LR	LR			
	comp=Z,1μm,21.6s								
HNS					LR	LR			
	comp=Z,2μm,20.4s								
HNS					LR	LR			
	comp=Z,1μm,24.3s								
TAU	**Tasmania Unive**	**42.67**	**161**		IAMs_20	IAMs_20	07	02	43.6
	comp=Z,4μm,21.0s								
SAIH	**SAIHA**	**44.05**	**307**	*e*	P	**P**	**06**	**44**	**48.5** **-3.1**
SAIH					IAmb	IAmb	06	44	54.7
	comp=Z,68nm,0.8s								
SAIH				⇓	*e*S	**S**	**06**	**51**	**20.2** **-2.2**
IMP	**Imphal**	**44.53**	**310**	*e*	P	**P**	**06**	**44**	**52.7** **-2.7**
IMP					IAmb	IAmb	06	44	57.2
	comp=Z,59nm,1.1s								
IMP					*e*S	**S**	**06**	**51**	**27.4** **-1.9**
BJI2	**Beijing**	**44.62**	**345**		P	**P**	**06**	**44**	**54.8** **-1.0**
BJI2					S	**S**	**06**	**51**	**27.1** **-2.8**
BJI2					SS	**SS**	**06**	**54**	**40.5** **-10**
BJI2					pmax	pmax			
	comp=Z,13nm,1.3s								
BJI2					LR	LR			
	comp=Z,390nm,19.6s								
BJI2					LR	LR			
	comp=Z,570nm,21.3s								
BJI2					LR	LR			
	comp=Z,530nm,19.8s								
BJT	**Baijiatuau**	**44.62**	**345**		P	**P**	**06**	**44**	**55.0** **-0.8**
BJT	**Baijiatuau**	**44.62**	**345**		P	**P**	**06**	**44**	**56.0** **+0.2**
	comp=Z,35nm,1.1s								
BJT	**Baijiatuau**	**44.62**	**345**		P	**P**	**06**	**44**	**55.0** **-0.8**
BJT					pmax	pmax			
	comp=Z,27nm,0.9s								
BJT					MLR	MLR			
	comp=Z,1μm,22.0s								
KOHI	**KOHIMA**	**44.90**	**312**	*e*	P	**P**	**06**	**44**	**54.7** **-3.7**
KOHI					IAmb	IAmb	06	45	04.8
	comp=Z,70nm,0.8s								
MOKO	**MOKOCHONG**	**44.94**	**313**	*e*	P	**P**	**06**	**44**	**54.6** **-4.1**
MOKO					IAmb	IAmb	06	45	06.6
	comp=Z,34nm,0.7s								
MOKO					*e*S	**S**	**06**	**51**	**33.5** **-1.8**
SNY	**Shenyang**	**44.98**	**353**	⇑	P	**P**	**06**	**44**	**57.0** **-1.6**
SNY					S	**S**	**06**	**51**	**36.0** **+1.0**
SNY					pmax	pmax			
	comp=Z,17nm,1.1s								
SNY					pmax	pmax			
	comp=Z,260nm,5.7s								
SNY					LR	LR			
	comp=Z,1μm,21.7s								
SNY					LR	LR			
	comp=Z,730nm,18.4s								
SNY					LR	LR			
	comp=Z,3μm,22.0s								
BRDH	**Bariadhala**	**45.22**	**306**		LR	LR	07	06	50.0
	comp=Z,1μm,20.7s,baz=134,slow=40								
JORH	**JORHAT**	**45.38**	**313**	*e*	P	**P**	**06**	**44**	**57.4** **-4.6**
BELO	**BELONIA**	**45.66**	**307**	*e*	P	**P**	**06**	**45**	**00.8** **-3.5**
LZDM	**Lanzhou Array**	**45.84**	**330**		P	**P**	**06**	**45**	**05.9** **-0.1**
	comp=Z,5.4nm,0.5s,baz=163,slow=11,SNR=30								
LZDM					PcP	**PcP**	**06**	**46**	**44.3** **+1.3**
	comp=Z,5.3nm,0.7s,baz=194,slow=3.7,SNR=0.8								
LZDM					ScP	**ScP**	**06**	**50**	**38.1** **+4.0**
	comp=Z,0.5nm,0.3s,baz=155,slow=4.8,SNR=4.0								
LZDM					LR	LR	07	05	42.8
	comp=Z,1μm,21.9s,baz=150,slow=38								
	comp=Z,5.4nm,0.5s								
LZH	**Lanzhou**	**45.87**	**330**		P	**P**	**06**	**45**	**06.4** **+0.4**
LZH					S	**S**	**06**	**51**	**49.4** **+0.9**
LZH					pmax	pmax			
	comp=Z,40nm,1.5s								
LZH					pmax	pmax			
	comp=Z,160nm,5.2s								
LZH					LR	LR			
	comp=Z,1μm,15.8s								
LZH					LR	LR			
	comp=Z,1μm,14.8s								
LZH					LR	LR			
	comp=Z,1μm,13.7s								
ITAN	**ITANAGAR**	**45.99**	**313**	*e*	P	**P**	**06**	**45**	**02.8** **-4.1**
ITAN					IAmb	IAmb	06	45	11.1
	comp=Z,16nm,0.7s								
ITAN					*e*S	**S**	**06**	**51**	**48.8** **-1.4**
AGT	**Agartala**	**46.13**	**308**	*e*	P	**P**	**06**	**45**	**03.9** **-4.2**
AGT					IAmb	IAmb	06	50	32.7
	comp=Z,45nm,0.4s								
SHL	**Shillong**	**46.50**	**310**		P	**P**	**06**	**45**	**10.1** **-1.1**
SHL	**Shillong**	**46.50**	**310**	*e*	P	**P**	**06**	**45**	**07.4** **-3.8**
SHL					IAmb	IAmb	06	45	13.4
	comp=Z,58nm,1.1s								
SHL					*e*S	**S**	**06**	**51**	**56.7** **-1.2**
SHL	**Shillong**	**46.50**	**310**		P	**P**	**06**	**45**	**10.1** **-1.1**
SHL					pmax	pmax			
	comp=Z,49nm,0.8s								
SHL	**Shillong**	**46.50**	**310**		P	**P**	**06**	**45**	**12.0** **+0.8**
	SNR=14								
HHC	**Hu-ho-hao-te**	**46.74**	**341**	⇑	*i*P	**P**	**06**	**45**	**13.9** **+1.2**
HHC					sP	pP	06	45	21.6 -0.4
HHC					S	**S**	**06**	**52**	**01.2** **+0.5**
HHC					SS	**SS**	**06**	**55**	**22.9** **-4.6**
HHC					pmax	pmax			
	comp=Z,29nm,1.3s								
HHC					pmax	pmax			
	comp=Z,370nm,6.5s								
HHC					LR	LR			
	comp=Z,990nm,23.7s								
HHC					LR	LR			
	comp=Z,1μm,21.8s								
HHC					LR	LR			
	comp=Z,1μm,23.7s								
CN2	**Changchun**	**46.75**	**356**	*e*	P	**P**	**06**	**45**	**12.3** **-0.3**
CN2				*e*	pP	pP	06	45	16.4 -5.5
CN2					PP	**PP**	**06**	**47**	**03.4** **+0.4**
CN2				*e*	S	**S**	**06**	**51**	**58.2** **-2.3**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.7s								
CN2					pmax	pmax			
	comp=Z,300nm,6.0s								
CN2					LR	LR			
	comp=Z,2μm,18.0s								
CN2					LR	LR			
	comp=Z,1μm,18.0s								
CN2					LR	LR			
	comp=Z,2μm,20.1s								
GUWA	**GUWAHATI**	**46.98**	**311**	*e*	P	**P**	**06**	**45**	**12.1** **-2.6**
GUWA					IAmb	IAmb	06	45	17.0
	comp=Z,21nm,1.1s								
GUWA					*e*S	**S**	**06**	**52**	**03.1** **-1.2**
USRK	**Ussuriysk Ar.**	**47.02**	**2**		P	**P**	**06**	**45**	**14.7** **0.0**
	comp=Z,15nm,0.8s,baz=186,slow=7.5,SNR=6.8								
	comp=Z,15nm,0.8s								
BTO2	**Baotou**	**47.22**	**339**	*e*	P	**P**	**06**	**45**	**18.3** **+1.8**
BTO2					S	**S**	**06**	**52**	**01.2** **-6.4**
BTO2					pmax	pmax			
	comp=Z,19nm,1.2s								
BTO2					pmax	pmax			
	comp=Z,680nm,7.0s								
BTO2					LR	LR			
	comp=Z,2μm,21.3s								
BTO2					LR	LR			
	comp=Z,4μm,23.3s								
BTO2					LR	LR			
	comp=Z,2μm,19.9s								
MDJ	**Mudanjiang**	**47.40**	**360**		P	**P**	**06**	**45**	**16.7** **-0.9**
MDJ					IAmb	IAmb	06	45	25.9
	comp=Z,45nm,1.2s								
MDJ	**Mudanjiang**	**47.40**	**360**		P	**P**	**06**	**45**	**18.5** **+0.9**
	comp=Z,40nm,1.2s								
MDJ	**Mudanjiang**	**47.40**	**360**		P	**P**	**06**	**45**	**18.3** **+0.7**
MDJ					S	**S**	**06**	**52**	**09.2** **-0.5**
MDJ					pmax	pmax			
	comp=Z,15nm,0.8s								
MDJ					pmax	pmax			
	comp=Z,390nm,4.2s								
MDJ					LR	LR			
	comp=Z,2μm,20.1s								
MDJ					LR	LR			
	comp=Z,930nm,20.8s								
MDJ					LR	LR			
	comp=Z,3μm,22.8s								
TAWA	**Tawang**	**47.61**	**312**	*e*	P	P	06	45	15.0 -5.0
TAWA					IAmb	IAmb	06	45	26.7
	comp=Z,35nm,0.8s								
TEY	**Ternei**	**48.19**	**6**	*e*	P	**P**	**06**	**45**	**22.0** **-1.7**
ASAJ	**Asahikawa**	**48.26**	**12**		P	**P**	**06**	**45**	**24.9** **+0.6**
	comp=Z,13nm,0.7s,baz=241,slow=25,SNR=6.1								
ASAJ					LR	LR	07	06	20.8
	comp=Z,2μm,19.7s,baz=207,slow=37								
	comp=Z,13nm,0.7s								
ASAJ	**Asahikawa**	**48.26**	**12**		P	**P**	**06**	**45**	**24.8** **+0.5**
ASAJ					pmax	pmax			
	comp=Z,36nm,0.9s								
JKA	**Kamikawa-asahi**	**48.26**	**12**		P	**P**	**06**	**45**	**24.8** **+0.5**
JKA					IAmb	IAmb	06	45	41.9
	comp=Z,36nm,0.9s								
XLT	**XiLinHaoTe**	**48.30**	**347**	*e*	P	**P**	**06**	**45**	**25.5** **+0.7**
XLT					pP	pP	06	45	30.5 -3.6
XLT					PcP	**PcP**	**06**	**46**	**56.9** **+5.6**
XLT					PP	**PP**	**06**	**47**	**20.2** **+2.7**
XLT					S	**S**	**06**	**52**	**21.5** **-1.3**
XLT					pmax	pmax			
	comp=Z,22nm,1.0s								
XLT					pmax	pmax			
	comp=Z,380nm,7.5s								
XLT					LR	LR			
	comp=Z,1μm,16.9s								
XLT					LR	LR			
	comp=Z,1μm,22.6s								
BNX	**BinXian**	**48.57**	**358**	⇑	P	**P**	**06**	**45**	**27.3** **+0.7**
BNX					S	**S**	**06**	**52**	**26.6** **+0.3**
BNX					pmax	pmax			
	comp=Z,13nm,1.2s								
BNX					pmax	pmax			
	comp=Z,340nm,6.1s								
BNX					LR	LR			
	comp=Z,1μm,17.9s								
BNX					LR	LR			
	comp=Z,1μm,19.3s								
BNX					LR	LR			
	comp=Z,4μm,21.8s								
LSA	**Lhasa**	**49.30**	**314**		P	**P**	**06**	**45**	**32.8** **-0.3**
LSA					IAmb	IAmb	06	45	54.2
	comp=Z,33nm,0.9s								
LSA	**Lhasa**	**49.30**	**314**		P	**P**	**06**	**45**	**30.0** **-3.2**
LSA					pmax	pmax			
	comp=Z,23nm,1.3s								
LSA					LR	LR			
	comp=Z,730nm,19.9s								
LSA					LR	LR			
	comp=Z,430nm,20.4s								
LSA	**Lhasa**	**49.30**	**314**		P	**P**	**06**	**45**	**33.3** **+0.2**
LSA	**Lhasa**	**49.30**	**314**		P	**P**	**06**	**45**	**32.8** **-0.3**
LSA					pmax	pmax			
	comp=Z,33nm,0.9s								
LSA					MLR	MLR			
	comp=Z,500nm,20.0s								
LSA	**Lhasa**	**49.30**	**314**		P	**P**	**06**	**45**	**34.5** **+1.4**
MSVF	**Nonsavu**	**49.40**	**111**	⇑	*e*P	**P**	**06**	**45**	**33.3** **-0.3**
MSVF					pmax	pmax			
	comp=Z,29nm,1.2s								
PALK	**Pallekele**	**50.15**	**282**		LR	LR	07	08	37.3
	comp=Z,2μm,20.5s,baz=106,slow=38								
PALK	**Pallekele**	**50.15**	**282**		P	**P**	**06**	**45**	**38.8** **-0.6**
PALK					IAmb	IAmb	06	45	44.5
	comp=Z,98nm,1.7s								
PALK	**Pallekele**	**50.15**	**282**		P	**P**	**06**	**45**	**37.3** **-2.0**
PALK	**Pallekele**	**50.15**	**282**	*c*	*i*P	**P**	**06**	**45**	**38.9** **-0.4**
PALK					pmax	pmax			
	comp=Z,20nm,0.8s								
PALK	**Pallekele**	**50.15**	**282**		P	**P**	**06**	**45**	**38.9** **-0.4**
VIS	**Vishakhapatnam**	**50.31**	**296**	*e*	P	**P**	**06**	**45**	**36.6** **-3.8**
VIS					IAmb	IAmb	06	45	43.4
	comp=Z,40nm,0.9s								
GTA2	**Gaotai**	**50.54**	**330**	⇑	P	**P**	**06**	**45**	**42.0** **0.0**
GTA2					ScP	**ScP**	**06**	**50**	**55.6** **+1.9**
GTA2					S	**S**	**06**	**52**	**52.4** **-2.0**
GTA2					ScS	**ScS**	**06**	**55**	**31.8** **+0.8**
GTA2					pmax	pmax			
	comp=Z,39nm,1.0s								
GTA2					pmax	pmax			
	comp=Z,370nm,4.8s								
GTA2					LR	LR			
	comp=Z,1μm,22.3s								
GTA2					LR	LR			
	comp=Z,810nm,22.3s								
GTA2					LR	LR			
	comp=Z,2μm,23.9s								
RAGD	**RAYAGADA**	**50.72**	**298**	*e*	P	**P**	**06**	**45**	**39.8** **-3.7**
RAGD					IAmb	IAmb	06	45	47.5
	comp=Z,70nm,1.0s								
RAGD					*e*S	**S**	**06**	**52**	**56.8** **-0.4**
DGTI	**Dogotuki**	**50.73**	**109**		P	**P**	**06**	**45**	**43.8** **+0.2**
GOMU	**GeErMu**	**50.91**	**323**		P	**P**	**06**	**45**	**46.0** **+0.9**
GOMU					PcP	**PcP**	**06**	**47**	**01.8** **+0.4**
GOMU					S	**S**	**06**	**53**	**01.8** **+1.7**
GOMU					pmax	pmax			
	comp=Z,12nm,1.3s								
YSS	**Yuzhno-Sakhali**	**51.01**	**11**		P	**P**	**06**	**45**	**45.1** **-0.1**
YSS	**Yuzhno-Sakhali**	**51.01**	**11**		P	**P**	**06**	**45**	**45.4** **+0.2**
	comp=Z,33nm,0.8s								
YSS	**Yuzhno-Sakhali**	**51.01**	**11**	*e*	P	**P**	**06**	**45**	**44.6** **-0.6**
YSS				*e*	*P	**pP**	**06**	**45**	**54.3** **-0.2**
YSS				*e*			06	47	40.6
YSS				*e*	S	**S**	**06**	**52**	**57.7** **-2.6**
YSS				*e*	PS	pS	06	53	19.8 +9.0
YSS					pmax	pmax			
	comp=Z,20nm,0.8s								
YSS					pmax	pmax			
	comp=Z,200nm,4.9s								
YSS					smax	smax			
	comp=E,500nm,5.9s								
JHSG	**JHARSUGUGA**	**51.37**	**301**	*e*	P	**P**	**06**	**45**	**44.8** **-3.6**
JHSG					IAmb	IAmb	06	45	52.1
	comp=Z,68nm,1.1s								
MDRS	**Chennai**	**51.80**	**289**	*e*	P	**P**	**06**	**45**	**48.8** **-2.9**
MDRS					IAmb	IAmb	06	45	53.5
	comp=Z,63nm,1.2s								
KLR	**Kul'dur**	**52.04**	**2**		LR	LR	07	09	52.2
	comp=Z,273nm,18.3s,baz=191,slow=38								
KLR	**Kul'dur**	**52.04**	**2**	*c*	*e*P	**P**	**06**	**45**	**53.2** **+0.4**
KLR					pmax	pmax			
	comp=Z,7.0nm,1.3s								
VJD	**Vijayawada**	**52.37**	**293**	*e*	P	**P**	**06**	**45**	**52.1** **-3.7**
VJD					IAmb	IAmb	06	46	14.3
	comp=Z,35nm,1.6s								
VJD					*e*S	**S**	**06**	**53**	**18.5** **-1.4**
HILR	**Hailar Array B**	**53.07**	**352**		P	**P**	**06**	**46**	**00.5** **-0.1**
	comp=Z,5.2nm,0.7s,baz=159,slow=9.4,SNR=6.0								
HILR					PcP	**PcP**	**06**	**47**	**08.3** **-0.4**
	comp=Z,2.6nm,0.5s,baz=152,slow=4.5,SNR=1.4								
	comp=Z,5.2nm,0.7s								
HEH	**HeiHe**	**53.08**	**358**	*e*	P	**P**	**06**	**45**	**59.9** **-0.6**
HEH					S	**S**	**06**	**53**	**28.8** **+0.2**
HEH					pmax	pmax			
	comp=Z,32nm,1.4s								
HEH					pmax	pmax			
	comp=Z,440nm,5.6s								
HEH					LR	LR			
	comp=Z,2μm,22.5s								
HEH					LR	LR			
	comp=Z,2μm,23.3s								
HEH					LR	LR			
	comp=Z,2μm,24.9s								
JCZ	**Jackson Bay**	**53.40**	**146**		P	**P**	**06**	**46**	**06.3** **+3.1**
QRZ	**Quartz Range**	**53.75**	**140**		IAMs_20	IAMs_20	07	12	29.2
	comp=Z,3μm,19.0s								
QRZ	**Quartz Range**	**53.75**	**140**		P	**P**	**06**	**46**	**07.8** **+2.1**
DSZ	**Denniston Nort**	**53.80**	**142**		P	**P**	**06**	**46**	**08.7** **+2.6**
TRD	**Trivandrum**	**54.01**	**283**	*e*	P	**P**	**06**	**46**	**03.4** **-4.6**
TRD					IAmb	IAmb	06	46	23.0
	comp=Z,59nm,10.7s								
TRD					*e*S	**S**	**06**	**53**	**42.9** **+0.4**
INZ	**Inchbonnie**	**54.14**	**143**		P	**P**	**06**	**46**	**09.6** **+1.1**
TOZ	**Tahuroa Road**	**54.16**	**136**		P	**P**	**06**	**46**	**10.7** **+2.0**
TOZ					IAmb	IAmb	06	46	20.0
	comp=Z,33nm,1.0s								
TOZ					IAMs_20	IAMs_20	07	10	21.0
	comp=Z,3μm,21.0s								
TOZ	**Tahuroa Road**	**54.16**	**136**		P	**P**	**06**	**46**	**10.9** **+2.2**
LBZ	**Lake Benmore**	**54.38**	**145**		P	**P**	**06**	**46**	**11.7** **+1.4**
LBZ					IAmb	IAmb	06	46	15.9
	comp=Z,52nm,1.0s								
LBZ	**Lake Benmore**	**54.38**	**145**		P	**P**	**06**	**46**	**11.6** **+1.3**
ULN	**Ulaanbaatar**	**54.45**	**341**		P	**P**	**06**	**46**	**11.1** **+0.2**
ULN					IAmb	IAmb	06	46	15.8
	comp=Z,49nm,0.9s								
ULN	**Ulaanbaatar**	**54.45**	**341**	*ce*	P	**P**	**06**	**46**	**11.2** **+0.3**
ULN					pmax	pmax			
	comp=Z,57nm,1.0s								
ULN	**Ulaanbaatar**	**54.45**	**341**		P	**P**	**06**	**46**	**11.8** **+0.9**
ULN					P	**P**	**06**	**46**	**11.8** **+0.9**
THZ	**Tophouse**	**54.49**	**141**		P	**P**	**06**	**46**	**13.4** **+2.2**
NNZ	**Nelson**	**54.50**	**140**		IAMs_20	IAMs_20	07	12	14.2
	comp=Z,3μm,20.0s								
NNZ	**Nelson**	**54.50**	**140**		P	**P**	**06**	**46**	**12.1** **+0.9**
HYB	**Hyderabad**	**54.54**	**294**	*e*	P	**P**	**06**	**46**	**12.3** **+0.4**
SONM	**Songino Array**	**54.64**	**341**		P	**P**	**06**	**46**	**12.8** **+0.6**
	comp=Z,26nm,1.0s,baz=153,slow=7.7,SNR=59								
SONM					LR	LR	07	10	42.3
	comp=Z,676nm,18.7s,baz=159,slow=37								
	comp=Z,26nm,1.0s								
LTZ	**Lake Taylor**	**54.67**	**143**		IAMs_20	IAMs_20	07	12	05.8
	comp=Z,3μm,21.0s								
TYV	**Tymovskoe**	**54.75**	**10**	*e*	P	**P**	**06**	**46**	**13.9** **+1.2**
TYV					*e*S	**S**	**06**	**53**	**53.1** **+1.9**
TYV					pmax	pmax			
	comp=Z,28nm,1.0s								
TYV					pmax	pmax			
	comp=Z,300nm,4.2s								
TYV					smax	smax			
	comp=N,300nm,4.1s								
TYV					smax	smax			
	comp=E,200nm,4.1s								
NGZ	**Ngauruhoe**	**54.92**	**137**		P	**P**	**06**	**46**	**16.5** **+2.1**
TUWZ	**Tuamarina**	**54.97**	**140**		P	**P**	**06**	**46**	**14.8** **+0.3**
KHZ	**Kahutara**	**55.25**	**142**		P	**P**	**06**	**46**	**17.3** **+0.8**
MQZ	**McQueen's Vall**	**55.42**	**143**		P	**P**	**06**	**46**	**18.3** **+0.5**
BKZ	**Black Stump Fm**	**55.52**	**137**		IAMs_20	IAMs_20	07	14	10.1
	comp=Z,2μm,19.0s								
BKZ	**Black Stump Fm**	**55.52**	**137**		P	**P**	**06**	**46**	**19.7** **+1.1**
	comp=Z,87nm,0.7s								
BKZ	**Black Stump Fm**	**55.52**	**137**		P	**P**	**06**	**46**	**19.8** **+1.1**
URZ	**Urewera**	**55.53**	**136**		P	**P**	**06**	**46**	**19.7** **+1.1**
BHW	**Baring Head**	**55.55**	**140**		IAMs_20	IAMs_20	07	14	05.1
	comp=Z,3μm,18.0s								
RTZ	**Ruatahuna**	**55.60**	**136**		IAMs_20	IAMs_20	07	11	41.2
	comp=Z,3μm,18.0s								
RTZ	**Ruatahuna**	**55.60**	**136**		P	**P**	**06**	**46**	**20.2** **+1.0**
MRZ	**Mangatainoka R**	**55.63**	**139**		P	**P**	**06**	**46**	**19.3** **0.0**
HAZ	**Te Kaha**	**55.77**	**135**		P	**P**	**06**	**46**	**22.7** **+2.3**
MWZ	**Matawai**	**55.85**	**135**		P	**P**	**06**	**46**	**22.1** **+1.1**
RAO	**Raoul Island**	**55.92**	**124**		LR	LR	07	08	17.0
	comp=Z,1μm,21.8s,baz=309,slow=34								
MXZ	**Matakaoa Point**	**56.06**	**134**		IAMs_20	IAMs_20	07	13	37.4
	comp=Z,3μm,20.0s								
MXZ	**Matakaoa Point**	**56.06**	**134**		P	**P**	**06**	**46**	**24.0** **+1.5**
BFZ	**Birch Farm**	**56.09**	**138**		P	**P**	**06**	**46**	**22.3** **-0.4**
PUZ	**Puketiti**	**56.25**	**135**		P	**P**	**06**	**46**	**24.9** **+1.1**
KNZ	**Kokohu**	**56.27**	**136**		P	**P**	**06**	**46**	**24.6** **+0.7**
CIT	**Chita**	**56.54**	**348**	*e*	P	**P**	**06**	**46**	**25.0** **-0.6**
CIT				*e*			06	46	32.8
CIT				*e*			06	47	20.6
CIT					pmax	pmax			
	comp=Z,174nm,2.3s								
ZEA	**Zeya**	**56.57**	**358**	*e*	P	**P**	**06**	**46**	**26.5** **+0.8**
ZEA					pmax	pmax			
	comp=Z,10.0nm,1.3s								
ZAK	**Zakamensk**	**57.88**	**340**	*e*	P	**P**	**06**	**46**	**35.2** **0.0**
ZAK					pmax	pmax			
	comp=Z,30nm,1.1s								
GUNA	**GUNA**	**57.94**	**302**	*e*	P	P	06	46	30.7 -5.3
GUNA					IAmb	IAmb	06	46	37.6
	comp=Z,37nm,1.6s								
GUNA					*e*S	**S**	**06**	**54**	**31.5** **-3.0**
GOA	**Goa**	**58.43**	**290**	*e*	P	**P**	**06**	**46**	**31.3** **-8.3**
TLY	**Talaya**	**58.87**	**341**		P	**P**	**06**	**46**	**42.4** **+0.5**
TLY					IAmb	IAmb	06	46	46.5
	comp=Z,48nm,1.5s								
TLY	**Talaya**	**58.87**	**341**	*ce*	P	**P**	**06**	**46**	**42.6** **+0.6**
TLY					pmax	pmax			
	comp=Z,22nm,1.1s								
TLY	**Talaya**	**58.87**	**341**		P	**P**	**06**	**46**	**43.3** **+1.3**
TLY					P	**P**	**06**	**46**	**43.3** **+1.3**
IRK	**Irkutsk**	**59.15**	**342**	*e*	P	**P**	**06**	**46**	**44.1** **+0.2**
IRK				*e*			06	56	25.7
IRK					pmax	pmax			
	comp=Z,101nm,1.8s								
POO	**Poona**	**59.15**	**294**	*e*	P	**P**	**06**	**46**	**41.4** **-3.3**
POO					IAmb	IAmb	06	48	59.4
	comp=Z,59nm,17.8s								
DDI	**Dehra Dun**	**59.51**	**308**	*e*	P	**P**	**06**	**46**	**42.3** **-4.6**
DDI					IAmb	IAmb	06	47	09.9
	comp=Z,11nm,0.2s								
DDI					*e*S	**S**	**06**	**54**	**54.6** **-0.2**
MOY	**Mondy**	**59.74**	**340**	*e*	P	**P**	**06**	**46**	**49.1** **+0.9**
MOY					pmax	pmax			
	comp=Z,98nm,2.6s								
WMQ	**Urumqi**	**60.02**	**326**	*e*	P	**P**	**06**	**46**	**51.0** **+0.8**
WMQ					pP	pP	06	46	56.3 -3.4
WMQ					S	**S**	**06**	**55**	**02.1** **+1.1**
WMQ					pmax	pmax			
	comp=Z,30nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,260nm,4.3s								
WMQ					LR	LR			
	comp=Z,1μm,16.5s								
WMQ					LR	LR			
	comp=Z,1μm

MA2 Magadan 64.51 12 P **P** **06 47 19.6 -0.2**
comp=Z,24nm,1.1s,baz=185,slow=8.3,SNR=10
MA2 LR LR 07 14 53.5
comp=Z,682nm,19.5s,baz=200,slow=36
comp=Z,24nm,1.1s
MA2 Magadan 64.51 12 P **P** **06 47 20.5 +0.7**
MA2 IAmb IAmb 06 47 30.7
comp=Z,39nm,1.0s
MA2 Magadan 64.51 12 P **P** **06 47 20.9 +1.1**
comp=Z,48nm,1.5s
MA2 Magadan 64.51 12 *de*P **P** **06 47 21.0 +1.1**
MA2 pmax pmax
comp=Z,61nm,1.3s
MA2 Magadan 64.51 12 P **P** **06 47 20.4 +0.5**
comp=Z,47nm,1.5s
SHLS Shalkode 64.53 321 *e*P **P** **06 47 18.7 -1.7**
SHLS pmax pmax
comp=Z,29nm,1.3s
SHLS Shalkode 64.53 321 *e*P **P** **06 47 18.8 -1.7**
comp=Z,29nm,1.3s
NIL Nilore 64.57 310 P **P** **06 47 19.9 -0.9**
NIL IAmb IAmb 06 47 50.1
comp=Z,32nm,1.0s
NIL Nilore 64.57 310 P **P** **06 47 19.9 -0.9**
NIL pmax pmax
comp=Z,32nm,1.0s
UZB Uzynbulak 64.80 321 *i* P **P** **06 47 22.2 0.0**
YAK Yakutsk 64.84 360 P **P** **06 47 21.8 -0.2**
comp=Z,85nm,0.8s,baz=121,slow=0.3,SNR=18
YAK S **S** **06 56 01.6 +0.9**
comp=Z,6.7nm,0.3s,baz=315,slow=23,SNR=9.1
YAK LR LR 07 14 46.4
comp=Z,1μm,21.4s,baz=176,slow=35
comp=Z,85nm,0.8s
YAK Yakutsk 64.84 360 P **P** **06 47 22.2 +0.3**
YAK Yakutsk 64.84 360 IAMs_20 IAMs_20 07 14 27.6
comp=Z,1μm,20.0s
YAK Yakutsk 64.84 360 *e*P **P** **06 47 22.4 +0.5**
YAK *e**PP **pP** **06 47 31.7 +0.2**
YAK *e* 06 47 54.4
YAK *e* 06 49 42.8
YAK *e*PPP PPP 06 51 15.8
YAK *e*S **S** **06 56 02.0 +1.3**
YAK *e**SS **sS** **06 56 18.3 +1.9**
YAK *e* 06 57 13.4
YAK *e*SS **SS** **07 00 14.9 +2.2**
YAK pmax pmax
comp=Z,42nm,0.6s
YAK pmax pmax
comp=N,14nm,1.5s
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK pmax pmax
comp=Z,210nm,5.8s
YAK pmax pmax
comp=N,183nm,6.9s
YAK pmax pmax
comp=E,275nm,6.8s
YAK smax smax
comp=N,485nm,4.2s
YAK smax smax
comp=E,299nm,5.9s
YAK MLR MLR
comp=Z,1μm,25.0s
YAK MLR MLR
comp=N,875nm,31.0s
YAK MLR MLR
comp=E,235nm,18.0s
PRZ Przheval'sk 64.85 320 **P** **06 47 23.4 +0.7**
PRZ Przheval'sk 64.85 320 P **P** **06 47 23.4 +0.7**
PRZ pmax pmax
comp=Z,54nm,1.1s
MK31 Makanchi Array 64.86 326 *c* *i*P **P** **06 47 22.5 +0.1**
MK31 pmax pmax
comp=Z,37nm,1.0s
MKAR Makanchi Array 64.86 326 P **P** **06 47 22.6 +0.2**
comp=Z,15nm,0.6s,baz=122,slow=8.1,SNR=85
MKAR S **S** **06 56 01.9 +0.3**
comp=Z,0.5nm,0.8s,baz=117,slow=15,SNR=3.9
MKAR ScS **SKSac** **06 57 14.3 -0.6**
comp=Z,0.2nm,0.6s,baz=250,slow=32,SNR=0.9
MKAR PKP2bc **P'P'bc** **07 16 14.5 +1.8**
comp=Z,0.8nm,0.9s,baz=270,slow=2.4,SNR=4.0
MKAR LR LR 07 18 06.2
comp=Z,442nm,20.8s,baz=142,slow=38
comp=Z,15nm,0.6s
TARG Taragay, Kyrgy 64.86 319 P **P** **06 47 22.6 -0.4**
TARG IAmb IAmb 06 47 34.7
comp=Z,21nm,0.9s
TARG Taragay, Kyrgy 64.86 319 P **P** **06 47 22.6 -0.4**
TARG pmax pmax
comp=Z,21nm,0.9s
MAKZ Makanchi 65.04 326 P **P** **06 47 23.5 -0.1**
MAKZ Makanchi 65.04 326 P **P** **06 47 23.5 -0.1**
MAKZ pmax pmax
comp=Z,65nm,1.3s
MAKZ MLR MLR
comp=Z,700nm,20.0s
SATY Saty 65.14 321 *i* P **P** **06 47 24.4 0.0**
SATY *e*S **S** **06 56 08.2 +2.7**
KSH2 Kashi 65.15 316 P **P** **06 47 24.9 +0.2**
KSH2 sP pP 06 47 31.4 -2.9
KSH2 S **S** **06 56 07.2 +1.4**
KSH2 pmax pmax
comp=Z,11nm,0.8s
KSH2 pmax pmax
comp=Z,330nm,4.1s
KSH2 LR LR
comp=Z,790nm,20.6s
KSH2 LR LR
comp=Z,490nm,19.9s
KSH2 LR LR
comp=Z,590nm,23.4s
KPKS Kokpek 65.17 321 *e*P **P** **06 47 24.6 0.0**
KPKS Kokpek 65.17 321 *e*P **P** **06 47 24.6 0.0**
KDJ Kajisay 65.46 319 **P** **06 47 26.1 -0.5**
KDJ IAmb IAmb 06 47 37.3
comp=Z,19nm,0.8s
KDJ Kajisay 65.46 319 P **P** **06 47 26.1 -0.5**
KDJ pmax pmax
comp=Z,19nm,0.8s
NRN Naryn 65.91 318 **P** **06 47 29.3 -0.4**
NRN Naryn 65.91 318 P **P** **06 47 29.3 -0.4**
NRN pmax pmax
comp=Z,15nm,0.8s
MDOK Medeo 66.05 320 *i* P **P** **06 47 30.4 0.0**
MDOK *e*S **S** **06 56 19.2 +2.5**
TNSS Tian-Shan 66.06 320 *e*P **P** **06 47 30.4 -0.3**
TNSS Tian-Shan 66.06 320 *e*P **P** **06 47 30.4 -0.3**
TDK Taldyqorghan 66.14 323 *e*P **P** **06 47 30.8 +0.1**
TDK Taldyqorghan 66.14 323 *e*P **P** **06 47 30.9 +0.1**
BOOM Boomskoye usch 66.44 319 **P** **06 47 32.7 -0.3**
BOOM IAmb IAmb 06 47 47.4
comp=Z,44nm,1.2s
BOOM Boomskoye usch 66.44 319 P **P** **06 47 32.7 -0.3**
BOOM pmax pmax
comp=Z,44nm,1.2s
SHEM Shemya Is, Ala 66.78 27 LR LR 07 13 07.0
comp=Z,984nm,19.9s,baz=254,slow=33
TKM2 Tokmak 2 66.87 320 P **P** **06 47 36.0 +0.3**
SNR=13
UCH Uchtor 67.26 318 P **P** **06 47 39.3 +0.8**
SNR=28
MANEM Manem 67.26 313 P **P** **06 47 38.6 +0.3**
CHMS Chumysh 67.45 319 P **P** **06 47 39.1 0.0**
SNR=6.1
AAK Ala-Archa 67.46 319 LR LR 07 20 19.4
comp=Z,320nm,20.2s,baz=108,slow=39
AAK Ala-Archa 67.46 319 P **P** **06 47 39.9 +0.5**
SNR=14
AAK Ala-Archa 67.46 319 P **P** **06 47 39.4 0.0**
AAK IAmb IAmb 06 47 59.7
comp=Z,30nm,1.2s
AAK Ala-Archa 67.46 319 *i* P **P** **06 47 39.9 +0.5**
SNR=6.8
AAK Ala-Archa 67.46 319⇈ *e*P **P** **06 47 39.4 0.0**
AAK pmax pmax
comp=Z,193nm,1.3s
AAK Ala-Archa 67.46 319 P **P** **06 47 40.6 +1.2**
AAK P **P** **06 47 40.6 +1.2**
USP Ospenovka 67.74 319 P **P** **06 47 41.3 +0.3**
SNR=35
ARSB Arslanbob 67.89 317 P **P** **06 47 41.7 -0.4**
ARSB Arslanbob 67.89 317 P **P** **06 47 41.7 -0.4**
ARSB pmax pmax
comp=Z,41nm,1.0s

SEY Seymchan 67.91 11 P **P** **06 47 42.9 +1.3**
comp=Z,47nm,1.0s,baz=219,slow=5.0,SNR=45
SEY LR LR 07 16 52.2
comp=Z,694nm,19.6s,baz=200,slow=36
comp=Z,47nm,1.0s
SEY Seymchan 67.91 11⇈ *e*P **P** **06 47 42.7 +1.1**
SEY pmax pmax
comp=Z,85nm,1.3s
SEY MLR MLR
comp=Z,876nm,19.0s
EKS2 Erkin-Say 67.94 319 P **P** **06 47 42.7 +0.3**
SNR=21
DRK Karamyk 67.94 315 P **P** **06 47 42.6 0.0**
DRK Karamyk 67.94 315 P **P** **06 47 42.6 0.0**
DRK pmax pmax
comp=Z,49nm,0.2s
ZALV Zalesovo Beam 67.98 333 P **P** **06 47 41.7 -0.5**
comp=Z,41nm,1.0s,baz=119,slow=4.5,SNR=70
ZALV S **S** **06 56 37.9 -1.2**
comp=Z,0.5nm,0.3s,baz=122,slow=19,SNR=0.6
ZALV PKPPKP **P'P'df** **07 16 03.4 +1.8**
comp=Z,0.4nm,0.3s,baz=316,slow=6.0,SNR=1.8
ZALV LR LR 07 20 18.3
comp=Z,629nm,20.0s,baz=140,slow=38
comp=Z,41nm,1.0s
SEM Semipalatinsk 68.05 328 *e*P **P** **06 47 43.0 0.0**
SEM Semipalatinsk 68.05 328 *e*P **P** **06 47 43.0 0.0**
KBL Kabul 68.15 309 P **P** **06 47 43.3 -0.7**
KBL P **P** **06 47 43.3 -0.7**
GAR Garm 68.81 314 P **P** **06 47 47.4 -0.5**
KURBB Kurchatov Arra 69.08 328 P **P** **06 47 49.1 0.0**
comp=Z,37nm,0.5s,baz=132,slow=5.8,SNR=53
KURBB S **S** **06 56 52.4 +0.2**
comp=Z,0.5nm,0.3s,baz=3.1,slow=21,SNR=1.3
KURBB PKPPKP **P'P'df** **07 15 59.9 -0.2**
comp=Z,0.4nm,0.2s,baz=286,slow=2.9,SNR=4.8
comp=Z,37nm,0.5s
KURBB Kurchatov Arra 69.08 328 P **P** **06 47 48.6 -0.5**
KURK Kurchatov 69.08 328 P **P** **06 47 49.2 +0.1**
KURK Kurchatov 69.08 328 *ce*P **P** **06 47 49.3 +0.1**
KURK pmax pmax
comp=Z,114nm,1.0s
KURK Kurchatov 69.08 328 P **P** **06 47 49.0 -0.1**
KURK P **P** **06 47 49.0 -0.1**
CHGR Chuyangaron 69.52 313 P **P** **06 47 51.8 -0.5**
CHGR Chuyangaron 69.52 313⇈ *i*P **P** **06 47 51.6 -0.7**
CHGR pmax pmax
comp=Z,42nm,1.0s
DZA Taraz 69.66 318 *e*P **P** **06 47 53.1 +0.1**
DZA Taraz 69.66 318 *e*P **P** **06 47 53.1 +0.1**
SHAA Shahritus 69.89 312 P **P** **06 47 54.2 -0.3**
SHAA IAmb IAmb 06 49 04.8
comp=Z,22nm,0.9s
IUG Iuzhnay 70.24 317 *e*P **P** **06 47 56.7 +0.1**
IUG pmax pmax
comp=Z,17nm,0.9s
IUG Iuzhnay 70.24 317 *e*P **P** **06 47 56.7 +0.1**
comp=Z,17nm,0.9s
KK31 Karatay Array 70.30 318 *i* P **P** **06 47 56.9 0.0**
RAR Rarotonga 70.59 111 LR LR 07 18 38.1
comp=Z,273nm,21.1s,baz=266,slow=36
CHM Chimkent 70.60 317 *e*P **P** **06 47 58.8 +0.1**
CHM pmax pmax
comp=Z,18nm,1.1s
CHM Chimkent 70.60 317 *e*P **P** **06 47 58.8 +0.1**
comp=Z,18nm,1.1s
BRLS Borolday 70.72 318 *e*P **P** **06 47 59.5 +0.1**
BRLS pmax pmax
comp=Z,8.0nm,0.6s
BRLS Borolday 70.72 318 *e*P **P** **06 47 59.5 +0.1**
comp=Z,8.5nm,0.6s
BRZS Berezniki 71.98 325 *e*P **P** **06 48 07.1 +0.3**
BRZS Berezniki 71.98 325 *e*P **P** **06 48 07.2 +0.3**
NGCH Negor - Chabah 72.23 298 P **P** **06 48 09.2 +0.4**
JLN Jalan Bani Buh 73.16 294 P **P** **06 48 14.4 0.0**
SNR=8.7
WBK Wadi Bani Khal 73.64 294 P **P** **06 48 17.3 0.0**
SNR=8.0
MSEY Mahe Island 74.25 266 IAMs_20 IAMs_20 07 17 43.2
comp=Z,2μm,20.0s
MHTO MHTO 74.28 293 P **P** **06 48 20.8 -0.2**
SNR=9.6
JMDO Jabal Madar 74.39 294 P **P** **06 48 22.0 +0.3**
SNR=12
TIXI Tiksi 74.51 360 P **P** **06 48 20.7 -0.6**
comp=Z,11nm,0.5s,baz=193,slow=3.6,SNR=19
TIXI LR LR 07 20 42.5
comp=Z,2μm,20.7s,baz=194,slow=35
comp=Z,11nm,0.5s
TIXI Tiksi 74.51 360 P **P** **06 48 21.6 +0.3**
TIXI Tiksi 74.51 360 IAMs_20 IAMs_20 07 20 37.2
comp=Z,1μm,21.0s
TIXI Tiksi 74.51 360⇊ *e*P **P** **06 48 20.9 -0.4**
TIXI pmax pmax
comp=Z,29nm,1.3s
SMDO Samad 74.56 295 P **P** **06 48 22.7 -0.1**
SNR=7.9
BIDO Bidbid 74.57 295 P **P** **06 48 23.1 +0.4**
SNR=9.2
BVA0 Borovoye Array 74.65 327 P **P** **06 48 22.9 +0.3**
BVAR Borovoye Array 74.65 327 P **P** **06 48 22.7 +0.1**
comp=Z,36nm,0.8s,baz=120,slow=8.8,SNR=58
BVAR S **S** **06 57 56.2 -0.2**
comp=Z,2.1nm,1.1s,baz=141,slow=9.6,SNR=7.9
BVAR LR LR 07 24 02.5
comp=Z,316nm,20.6s,baz=112,slow=38
comp=Z,36nm,0.8s
BORK Borovoye 74.70 327 *c* *i*P **P** **06 48 22.9 +0.1**
BORK pmax pmax
comp=Z,60nm,1.0s
BILL Bilibino 75.26 13 IAMs_20 IAMs_20 07 21 20.1
comp=Z,1μm,21.0s
BILL Bilibino 75.26 13 *ce*P **P** **06 48 25.5 -0.3**
BILL pmax pmax
comp=Z,4.0nm,1.4s
BILL MLR MLR
comp=Z,1μm,20.0s
BSY Bisya 75.27 294 P **P** **06 48 27.1 +0.2**
SNR=9.0
HOQ Hoqain 75.31 295 P **P** **06 48 27.6 +0.5**
SNR=12
NIKH Nikolski High 75.57 33 P P 06 48 19.8 -8.0
baz=245
SHAO Shalim 76.02 289 P **P** **06 48 31.7 +0.6**
SOHO SOHO 76.11 296 *i* P **P** **06 48 31.5 -0.1**
SNR=7.7
SOHO SOHO 76.11 296 P **P** **06 48 32.0 +0.5**
VNDA Vanda 76.41 173 P **P** **06 48 32.0 -0.2**
comp=Z,7.1nm,0.6s,baz=318,slow=7.0,SNR=19
comp=Z,7.1nm,0.6s
UOSS Minazif 76.54 296 P **P** **06 48 33.8 -0.2**
UOSS IAmb IAmb 06 48 54.7
comp=Z,30nm,1.1s
UOSS Minazif 76.54 296 *i* P **P** **06 48 33.7 -0.3**
SNR=5.3
HATD Hatta, Dubai 76.59 296 *i* P **P** **06 48 34.1 -0.2**
SNR=10
HATD Hatta, Dubai 76.59 296 P **P** **06 48 35.6 +1.4**
SNR=12
DMTO DMTO 76.62 289 P **P** **06 48 34.9 +0.3**
BANOM Banah 76.62 297 *i* P **P** **06 48 34.9 +0.4**
SNR=6.6
BANOM Banah 76.62 297 P **P** **06 48 37.0 +2.5**
ASHO Ashiyiah 76.63 296 *i* P **P** **06 48 34.8 +0.3**
SNR=11
ASHO Ashiyiah 76.63 296 P **P** **06 48 36.0 +1.4**
SNR=8.7
MSFE Esma-Masafi 76.65 297 *i* P **P** **06 48 34.9 +0.3**
SNR=7.7
MASF Masafi 76.65 297 P **P** **06 48 36.0 +1.3**
SNR=11
SPIA Saint Paul Isl 76.72 29 P P 06 48 27.0 -7.3
baz=242
SHME Shamm 76.79 297 P **P** **06 48 35.6 +0.3**
ALNE Al Ain 76.80 295 *i* P **P** **06 48 35.8 +0.3**
SNR=8.7
ALNE Al Ain 76.80 295 P **P** **06 48 36.5 +1.0**
SNR=17
NAZ Nazwa, Dubai 77.03 296 P **P** **06 48 36.9 +0.2**
FAQ Al Faqa, Dubai 77.06 296 *i* P **P** **06 48 36.9 0.0**
SNR=7.8
FAQ Al Faqa, Dubai 77.06 296 P **P** **06 48 38.8 +1.9**
SNR=9.1
UNV Unalaska Valle 77.21 33 P P 06 48 29.6 -7.5
baz=246
ASUD Al Ashush, Dub 77.27 296 *i* P **P** **06 48 38.6 +0.5**
SNR=8.6

ASUD Al Ashush, Dub 77.27 296 P **P** **06 48 39.6 +1.5**
SNR=7.7
DOK Doka 77.51 290 P **P** **06 48 39.1 -0.4**
SNR=5.3
AJN Ajban 77.57 296 *i* P **P** **06 48 39.8 +0.1**
SNR=6.7
NRIK Noril'sk 77.67 346 P **P** **06 48 40.0 +0.6**
comp=Z,15nm,0.8s,baz=134,slow=6.6,SNR=18
NRIK LR LR 07 24 17.7
comp=Z,1μm,22.0s,baz=141,slow=37
comp=Z,15nm,0.8s
NRIK Noril'sk 77.67 346 *c* *i*P **P** **06 48 39.6 +0.2**
NRIK pmax pmax
comp=Z,18nm,0.9s
NRIK MLR MLR
comp=Z,2μm,20.0s
ABTO Aybut 78.14 288 P **P** **06 48 43.1 0.0**
SNR=6.5
MAW Mawson 78.62 201 P **P** **06 48 45.0 +0.3**
comp=Z,13nm,0.8s,baz=52,slow=3.0,SNR=1.8
MAW LR LR 07 20 53.3
comp=Z,1μm,20.4s,baz=63,slow=34
comp=Z,13nm,0.8s
MZR Muzera 78.70 294 *i* P **P** **06 48 46.3 +0.2**
SNR=8.1
FALS False Pass 79.26 33 P P 06 48 42.5 -5.9
baz=249
GAMB Gambell 79.28 23 P **P** **06 48 49.3 +1.0**
GAMB IAmb IAmb 06 48 54.1
comp=Z,43nm,1.4s
GAMB Gambell 79.28 23 P **P** **06 48 43.6 -4.7**
baz=240
AB31 Akbulak array 79.33 321 *i* P **P** **06 48 49.0 0.0**
M11K Mekoryuk 80.02 27 P P 06 48 47.0 -5.5
baz=246
PPT Papeete 80.07 107 P **P** **06 48 53.8 +0.2**
comp=Z,40nm,0.9s,baz=59,slow=7.0,SNR=2.5
PPT LR LR 07 25 31.2
comp=Z,218nm,18.2s,baz=264,slow=37
comp=Z,40nm,0.9s
PPT2 Papeete2 80.07 107 *e*P **P** **06 48 50.9 -2.8**
comp=Z,148nm,26.0s
PPT2 *e*PP **PP** **06 51 54.8 -1.3**
comp=Z,88nm,25.5s
PPT2 *e*S **S** **06 58 57.0 +0.3**
comp=Z,347nm,28.8s
PPT2 *e*SS **SS** **07 04 08.8 +1.3**
comp=Z,316nm,28.0s
PPT2 *e*LQ LQ 07 10 31.1
comp=Z,2μm,34.8s
PPT2 *e*LR LR 07 13 49.9
comp=Z,663nm,26.0s
PPT2 *e*LR LR 07 13 52.0
comp=Z,983nm,25.5s
TBI Tubuai 80.23 113 *e*P **P** **06 48 52.6 -1.8**
comp=Z,550nm,25.5s
TBI *e*PP **PP** **06 51 54.8 -2.4**
comp=Z,802nm,41.5s
TBI *e*S **S** **06 58 57.8 -0.2**
comp=Z,975nm,31.2s
TBI *e*LR LR 07 13 47.4
comp=Z,2μm,27.0s
TBI *e*LR LR 07 13 55.2
comp=Z,7μm,29.5s
AKTO Aktyubinsk 80.87 322 LR LR 07 28 49.9
comp=Z,493nm,20.8s,baz=75,slow=39
AKTO Aktyubinsk 80.87 322 P **P** **06 48 56.7 -0.6**
TRNA Turayna 80.99 295 P **P** **06 48 59.3 +0.9**
SNR=5.5
SDPT Sand Point 81.02 33 P P 06 48 52.9 -5.0
baz=251
SVE Sverdlovsk 81.31 329 *e*P **P** **06 49 00.3 +0.8**
K13K Kusilvak Mount 81.34 26 P **P** **06 48 59.6 +0.1**
K13K IAmb IAmb 06 49 04.7
comp=Z,63nm,1.7s
K13K Kusilvak Mount 81.34 26 P **P** **06 48 55.2 -4.3**
baz=247
M13K Dall Lake 81.34 27 P **P** **06 48 55.3 -4.1**
baz=248
CHNA Chernabura Isl 81.34 33 P **P** **06 48 54.8 -4.8**
baz=252
SMRA Abu-Samra 81.35 295 P **P** **06 49 01.1 +0.8**
SNR=5.7
TNA Tin City 81.56 22 P **P** **06 49 01.2 +0.7**
TNA Tin City 81.56 22 P **P** **06 48 57.0 -3.5**
baz=243
O14K Tigyukauivet M 81.91 29 P **P** **06 48 58.3 -4.2**
baz=250
N14K Kuskokwak Cree 81.94 28 P **P** **06 48 58.5 -4.1**
baz=250
L14K Kuka Creek 81.98 27 P **P** **06 49 04.1 +1.3**
L14K IAmb IAmb 06 49 24.2
comp=Z,31nm,1.1s
L14K IAMs_20 IAMs_20 07 18 16.2
comp=Z,1μm,21.0s
L14K Kuka Creek 81.98 27 P **P** **06 48 58.8 -4.0**
baz=249
M14K Bethel 82.10 27 P **P** **06 49 04.4 +0.9**
M14K IAmb IAmb 06 49 07.6
comp=Z,75nm,1.4s
M14K Bethel 82.10 27 P **P** **06 48 59.8 -3.7**
baz=249
ANM Nome 82.10 23 P **P** **06 49 04.5 +1.0**
ANM Nome 82.10 23 P **P** **06 49 04.5 +1.0**
ANM pmax pmax
comp=Z,37nm,1.6s
ANM Nome 82.10 23 P **P** **06 49 00.5 -3.0**
baz=246
ABPO Ambohimpanom 82.11 251 P **P** **06 49 05.2 +0.5**
ABPO IAmb IAmb 06 49 10.8
comp=Z,48nm,1.3s
ABPO Ambohimpanom 82.11 251 P **P** **06 49 05.2 +0.5**
ABPO pmax pmax
comp=Z,48nm,1.3s
F14K Arctic Creek 82.12 22 P **P** **06 49 00.6 -3.0**
baz=245
J14K Nanvaranak Lak 82.13 25 P **P** **06 49 00.3 -3.3**
baz=248
ARTI Arti 82.36 328 P **P** **06 49 04.8 -0.1**
ARTI Arti 82.36 328 *ce*P **P** **06 49 04.5 -0.5**
ARTI pmax pmax
comp=Z,53nm,1.0s
VOI Vohitsoka 82.50 248 P **P** **06 49 06.6 -0.1**
VOI Vohitsoka 82.50 248 P **P** **06 49 07.5 +0.8**
SNR=5.5
O15K Ungalikthiuk R 82.58 29 IAMs_20 IAMs_20 07 19 37.1
comp=Z,1μm,20.0s
O15K Ungalikthiuk R 82.58 29 P **P** **06 49 02.7 -3.4**
baz=251
L15K Ungalak Mounta 82.64 27 P **P** **06 49 03.6 -2.7**
baz=250
M15K Kasigluk River 82.67 28 P **P** **06 49 03.0 -3.5**
baz=250
N15K Kwethluk River 82.77 28 P **P** **06 49 03.4 -3.7**
baz=251
G15K Niukluk 82.80 23 P **P** **06 49 04.5 -2.6**
baz=247,SNR=11
K15K Wolf Creek Mou 82.83 26 **P** **06 49 08.2 +0.8**
K15K IAmb IAmb 06 49 35.1
comp=Z,51nm,1.4s
K15K IAMs_20 IAMs_20 07 25 30.7
comp=Z,1μm,20.0s
K15K Wolf Creek Mou 82.83 26 P **P** **06 49 03.8 -3.6**
baz=250
F15K North Star Dit 82.85 22 P **P** **06 49 08.2 +0.9**
F15K North Star Dit 82.85 22 P **P** **06 49 05.0 -2.4**
baz=246,SNR=21
R16K Pilot Point 83.23 31 P **P** **06 49 05.8 -3.6**
baz=254
H16K Elim 83.38 24 P **P** **06 49 07.3 -2.8**
baz=249,SNR=14
P16K Nushagak River 83.44 30 P **P** **06 49 07.2 -3.3**
baz=253
N16K Nishlik Lake 83.49 28 P **P** **06 49 07.5 -3.4**
baz=252
O16K Kokwok River B 83.55 29 P **P** **06 49 07.8 -3.2**
baz=253
L16K Owhat River 83.56 27 P **P** **06 49 11.8 +0.7**
L16K Owhat River 83.56 27 P **P** **06 49 08.3 -2.7**
baz=251
M16K Timber Creek 83.57 28 P **P** **06 49 12.3 +1.1**
M16K IAmb IAmb 06 49 17.7
comp=Z,26nm,1.1s
M16K IAMs_20 IAMs_20 07 22 57.2
comp=Z,1μm,21.0s
M16K Timber Creek 83.57 28 P **P** **06 49 07.9 -3.3**
baz=252

J16K Anvik River 83.58 25 P P 06 49 08.7 -2.4
baz=250
G16K Koyuk River 83.61 23 P P 06 49 09.3 -2.0
baz=248,SNR=21
C16K Lisburne Hills 83.66 20 P P 06 49 12.6 +1.1
C16K IAmb IAmb 06 49 27.5
comp=Z,28nm,0.8s
C16K Lisburne Hills 83.66 20 P P 06 49 09.7 -1.8
baz=245
I17K Unalakleet 83.74 25 P P 06 49 09.6 -2.4
baz=250,SNR=7.1
R17L Mt. Peulik Vol 83.87 31 P P 06 49 09.6 -3.3
baz=255
Q16K King Salmon 84.00 30 P P 06 49 10.1 -3.3
baz=254
O17K Koliganek Bris 84.09 29 P P 06 49 11.2 -2.6
baz=254
D17K Noatak River 84.21 21 P P 06 49 12.1 -2.1
baz=248,SNR=28
L17K Donlin 84.22 27 P P 06 49 12.4 -2.0
baz=252,SNR=6.1
P17K Kvichak River 84.25 30 P P 06 49 11.9 -2.7
baz=254
N17K Nushagak Hills 84.26 28 IAMs_20 IAMs_20 07 19 52.1
comp=Z,1µm,22.0s
N17K Nushagak Hills 84.26 28 P P 06 49 11.7 -3.0
baz=254
Q17K Contact Creek 84.28 31 P P 06 49 12.4 -2.6
baz=255
G17K Kiwalik Mounta 84.31 23 P P 06 49 12.6 -2.2
baz=250
K17K Iditarod 84.39 26 IAMs_20 IAMs_20 07 22 33.8
comp=Z,967nm,20.0s
K17K Iditarod 84.39 26 P P 06 49 13.3 -2.0
baz=252,SNR=14
M17K Holitna River 84.39 27 P P 06 49 12.2 -3.1
baz=253
RDOG Red Dog Mine 84.41 20 P P 06 49 13.8 -1.5
baz=248
F17K Baldwin Pennin 84.41 22 P P 06 49 13.3 -2.0
baz=249
H17K Granite Mounta 84.42 24 P P 06 49 13.6 -1.8
baz=251,SNR=22
SII Sitkinak Islan 84.76 33 P P 06 49 14.5 -2.8
baz=257
P18K Big Mountain, 84.90 30 IAMs_20 IAMs_20 07 23 51.8
comp=Z,1µm,20.0s
P18K Big Mountain, 84.90 30 P P 06 49 16.0 -2.0
baz=255
N18K Kilae Creek 84.92 28 P P 06 49 15.8 -2.2
baz=255
L18K Granite Mounta 84.96 27 P P 06 49 19.1 +0.9
L18K IAmb IAmb 06 49 24.9
comp=Z,33nm,1.1s
L18K IAMs_20 IAMs_20 07 22 53.9
comp=Z,1µm,21.0s
L18K Granite Mounta 84.96 27 P P 06 49 16.4 -1.8
baz=254
E18K Tukpahlearik C 84.99 21 P P 06 49 17.7 -0.6
baz=250,SNR=6.5
O18K Koktuh Hills 85.03 29 P P 06 49 16.4 -2.2
baz=255
F18K Selawik 85.07 22 P P 06 49 17.1 -1.5
baz=251
H18K Honhosa River 85.11 24 P P 06 49 20.1 +1.2
H18K IAmb IAmb 06 49 46.8
comp=Z,28nm,1.3s
H18K Honhosa River 85.11 24 P P 06 49 16.5 -2.4
baz=252
M18K Stony River 85.16 28 P P 06 49 17.1 -2.1
baz=255,SNR=9.1
C18K Utukok River 85.22 20 P P 06 49 17.7 -1.7
baz=249
G18K Tagagawik 85.22 23 P P 06 49 20.2 +0.8
G18K IAmb IAmb 06 49 23.9
comp=Z,35nm,1.8s
G18K Tagagawik 85.22 23 P P 06 49 17.7 -1.7
baz=252
J18K Innoko River 85.30 26 IAMs_20 IAMs_20 07 23 12.7
comp=Z,1µm,21.0s
J18K Innoko River 85.30 26 P P 06 49 17.6 -2.3
baz=254
OHAK Old Harbor 85.39 32 P P 06 49 18.1 -2.3
baz=257
O19K Port Alsworth 85.55 29 P P 06 49 18.1 -3.0
baz=256
Q19K Cape Douglas, 85.58 30 P P 06 49 19.6 -1.9
baz=257
GCSA Galena City Sc 85.59 24 P P 06 49 19.5 -1.7
baz=254
N19K Bonanza Creek 85.62 28 P P 06 49 19.0 -2.6
baz=256,SNR=15
F19K Shaleruckik Mo 85.85 22 P P 06 49 21.3 -1.2
baz=253
KDAK Kodiak Island 85.88 32 LR LR 07 23 23.7
comp=Z,475nm,20.8s,baz=237,slow=33
KDAK Kodiak Island 85.88 32 IAMs_20 IAMs_20 07 21 24.7
comp=Z,1µm,22.0s
KDAK Kodiak Island 85.88 32 P P 06 49 20.2 -2.6
baz=258
G19K Purcell Mounta 85.91 23 P P 06 49 23.4 +0.5
G19K Purcell Mounta 85.91 23 P P 06 49 21.5 -1.4
baz=253
J19K Poorman 85.91 25 P P 06 49 20.9 -2.0
baz=255
M19K Big River Lodg 85.93 27 P P 06 49 23.6 +0.6
M19K IAmb IAmb 06 49 28.2
comp=Z,58nm,1.4s
M19K IAMs_20 IAMs_20 07 26 52.0
comp=Z,1µm,20.0s
M19K Big River Lodg 85.93 27 P P 06 49 21.0 -2.1
baz=256
P19K Oil Pt 85.95 30 P P 06 49 21.0 -2.2
baz=257
RAYN Ar Rayn 86.05 294 P P 06 49 24.9 +0.3
RAYN Ar Rayn 86.05 294 *i* P P 06 49 25.1 +0.6
SNR=59
RAYN Ar Rayn 86.05 294 P P 06 49 24.9 +0.3
RAYN pmax pmax
comp=Z,58nm,0.9s
RAYN MLR MLR
comp=Z,2µm,22.0s
RAYN Ar Rayn 86.05 294 P P 06 49 25.7 +1.1
Q20K Shuyak Island 86.15 31 P P 06 49 21.5 -2.7
baz=258
SYI Shuyak Island 86.15 31 IAMs_20 IAMs_20 07 26 55.8
comp=Z,1µm,20.0s
E19K Redstone River 86.24 22 P P 06 49 24.1 -0.4
baz=253
RED Redoubt Volcan 86.35 29 P P 06 49 25.3 +0.1
RED IAmb IAmb 06 49 35.0
comp=Z,18nm,0.9s
K20K Telida 86.42 26 IAMs_20 IAMs_20 07 20 30.7
comp=Z,1µm,22.0s
K20K Telida 86.42 26 P P 06 49 24.7 -0.8
baz=256
MAK Makhachkala 86.46 313 *e*P P 06 49 21.8 -4.2
MAK *e* 06 52 45.4
MAK *e*PPP PPP 06 54 41.0
MAK *e* 06 59 44.6
MAK *e*SS SS 07 05 40.5 -0.4
MAK *e*SSS SSS 07 09 13.1
MAK pmax pmax
comp=Z,337nm,1.3s
M20K Styx River 86.50 28 P P 06 49 27.0 +1.0
M20K IAmb IAmb 06 49 52.3
comp=Z,30nm,1.1s
M20K IAMs_20 IAMs_20 07 22 21.9
comp=Z,1µm,20.0s
M20K Styx River 86.50 28 P P 06 49 25.2 -0.7
baz=257
J20K Nowinta River 86.58 25 P P 06 49 25.1 -1.1
baz=256
I20K Naaghedeneel 86.60 25 P P 06 49 25.4 -0.9
baz=256
H20K Anotleneega Mo 86.61 24 P P 06 49 25.9 -0.4
baz=255
F20K Avaraart Lake 86.69 22 P P 06 49 25.6 -1.0
baz=254
HOM Homer 86.74 30 P P 06 49 25.3 -1.8
baz=258
SPCR Spurr Chakacha 86.78 28 P P 06 49 26.2 -1.2
baz=258
D20K Etivluk River 86.82 21 P P 06 49 27.3 -0.1
baz=254
SPU Mount Spurr 86.85 28 P P 06 49 27.8 +0.1
SPU IAmb IAmb 06 49 38.0
comp=Z,49nm,1.9s
QSPA South Pole Qui 86.96 180 P P 06 49 26.7 -1.5
comp=Z,16nm,0.9s,baz=315,slow=2.0,SNR=9.6
comp=Z,16nm,0.9s
QSPA South Pole Qui 86.96 180 P P 06 49 28.0 -0.2
QSPA IAmb IAmb 06 49 35.9
comp=Z,38nm,1.2s
BRLK Bradley Lake 87.14 30 P P 06 49 29.3 +0.2
BRLK IAmb IAmb 06 49 37.5
comp=Z,36nm,1.1s
PPLA Purkeypile 87.15 27 IAMs_20 IAMs_20 07 22 56.0
comp=Z,938nm,20.0s
PPLA Purkeypile 87.15 27 P P 06 49 28.1 -1.1
baz=258
CAPN Captain Cook N 87.20 29 P P 06 49 28.6 -0.6
baz=259
BRSE Bradley Lake S 87.21 30 P P 06 49 27.8 -1.6
baz=259
SKT Skwentna 87.26 28 P P 06 49 29.0 -0.6
baz=258
CHUM Lake Minchumin 87.30 26 P P 06 49 28.9 -0.8
baz=258
SYO Syowa Base 87.34 201⇓ *e*P P 06 49 24.6 -5.2
SYO Syowa Base 87.34 201⇑ *e*P P 06 49 30.0 +0.2
G21K Allakaket 87.40 23 P P 06 49 30.3 +0.1
baz=256
H21K Melozitna Rive 87.49 24 P P 06 49 29.9 -0.7
baz=257
SUA Susitna One 87.53 28 P P 06 49 30.8 -0.2
SUA IAmb IAmb 06 49 37.4
comp=Z,36nm,1.2s
SUA IAMs_20 IAMs_20 07 22 31.1
comp=Z,1µm,22.0s
SUA Susitna One 87.53 28 P P 06 49 30.2 -0.9
baz=259
A21K Barrow 87.57 18 P P 06 49 31.4 +0.6
baz=253
KIRV Kirov 87.58 329 LR LR 07 32 41.6
comp=Z,333nm,19.8s,baz=99,slow=38
KIRV Kirov 87.58 329 *de*P P 06 49 32.5 +1.4
F21K Alatna River 87.58 22 P P 06 49 30.3 -0.8
baz=256
BELG Belogornoye 87.64 323 *de*P P 06 49 31.1 -0.4
BELG pmax pmax
comp=Z,19nm,0.9s
BELG MLR MLR
comp=Z,69nm,21.0s
I21K Tanana 87.72 24 P P 06 49 32.7 +1.0
I21K IAmb IAmb 06 50 10.4
comp=Z,29nm,1.6s
I21K Tanana 87.72 24 P P 06 49 31.6 -0.1
baz=258
M22K Willow 87.88 28 P P 06 49 32.5 0.0
M22K IAMs_20 IAMs_20 07 23 28.3
comp=Z,1µm,22.0s
M22K Willow 87.88 28 P P 06 49 32.4 -0.1
baz=260
SEW Seward 87.91 30 IAMs_20 IAMs_20 07 27 06.1
comp=Z,1µm,20.0s
SEW Seward 87.91 30 P P 06 49 32.1 -0.5
baz=260
BPAW Bear Paw Mtn. 87.92 26 P P 06 49 32.6 -0.1
BPAW IAmb IAmb 06 49 39.5
comp=Z,32nm,1.7s
BPAW Bear Paw Mtn. 87.92 26 P P 06 49 32.1 -0.6
baz=259
CUT Chulitna 87.92 27 IAMs_20 IAMs_20 07 22 21.6
comp=Z,951nm,21.0s
CUT Chulitna 87.92 27 P P 06 49 32.0 -0.7
baz=260
RC01 Rabbit Creek A 87.94 29 P P 06 49 33.2 +0.4
RC01 IAmb IAmb 06 49 47.0
comp=Z,18nm,0.9s
RC01 Rabbit Creek A 87.94 29 P P 06 49 32.3 -0.5
baz=260
TRF Thorofare Moun 88.10 26 P P 06 49 33.1 -0.7
baz=260
H22K Ishtalitna Cre 88.11 24 IAMs_20 IAMs_20 07 27 29.3
comp=Z,837nm,20.0s
H22K Ishtalitna Cre 88.11 24 P P 06 49 34.0 +0.4
baz=258
GNI Garni 88.21 310 LR LR 07 34 44.0
comp=Z,300nm,22.0s,baz=103,slow=40
GNI Garni 88.21 310 P P 06 49 36.0 +1.3
GNI Garni 88.21 310 *ce*P P 06 49 36.1 +1.3
GNI pmax pmax
comp=Z,16nm,1.1s
G22K Bettles 88.27 23 P P 06 49 34.9 +0.6
baz=258
PMR Palmer 88.31 28 P P 06 49 34.7 +0.2
PMR IAmb IAmb 06 49 47.9
comp=Z,19nm,1.2s
PMR Palmer 88.31 28 P P 06 49 34.7 +0.2
PMR pmax pmax
comp=Z,19nm,1.2s
PMR Palmer 88.31 28 P P 06 49 34.0 -0.6
baz=261
GHO Glory Hole Cre 88.44 28 IAMs_20 IAMs_20 07 22 28.1
comp=Z,1µm,22.0s
KNK Knik Glacier 88.60 28 P P 06 49 36.7 +0.7
KNK IAmb IAmb 06 49 50.4
comp=Z,27nm,1.0s
KNK IAMs_20 IAMs_20 07 23 45.5
comp=Z,1µm,22.0s
KNK Knik Glacier 88.60 28 P P 06 49 36.2 +0.2
baz=261
MCK McKinley 88.75 26 P P 06 49 37.2 +0.5
baz=261
WAT1 Susitna Watana 88.78 27 P P 06 49 37.3 +0.5
baz=261
I23K Minto, Yukon-K 88.80 25 IAMs_20 IAMs_20 07 28 36.6
comp=Z,893nm,22.0s
I23K Minto, Yukon-K 88.80 25 P P 06 49 37.4 +0.6
baz=260
G23K Bananza Creek 88.80 23 P P 06 49 37.4 +0.6
baz=260
COLD Coldfoot 88.83 23 P P 06 49 37.0 +0.1
baz=260
NEA2 Nenana 88.83 25 P P 06 49 37.1 +0.1
baz=261
H23K Yukon River 88.84 24 P P 06 49 37.4 +0.4
baz=260
P23K Montague Islan 88.91 30 P P 06 49 37.5 +0.1
baz=262
M23K Glacier View 89.00 28 P P 06 49 37.6 -0.3
baz=262
WAT6 Susitna Watana 89.11 27 P P 06 49 38.7 +0.1
baz=262
E23K Chandalar 89.20 22 P P 06 49 39.4 +0.7
baz=260
SCM Sheep Creek Mo 89.20 28 P P 06 49 39.1 +0.2
baz=262
DHY Denali Highway 89.34 27 P P 06 49 40.3 +0.7
DHY Denali Highway 89.34 27 P P 06 49 39.7 +0.1
baz=262
Q23K Middleton Isla 89.37 31 P P 06 49 39.1 -0.4
baz=263
CCB Clear Creek Bu 89.38 25 P P 06 49 38.4 -1.1
COLA College 89.39 25 IAMs_20 IAMs_20 07 20 13.1
comp=Z,758nm,19.0s
COLA College 89.39 25⇑ *e*P P 06 49 41.8 +2.3
COLA pmax pmax
comp=Z,4.0nm,0.9s
TAOE Nuku Hiva Isla 89.50 99 *e*S S 07 00 26.0 -4.6
comp=Z,191nm,29.6s
TAOE *e*SS SS 07 06 30.4 +3.7
comp=Z,273nm,27.0s
TAOE *e*LR LR 07 18 14.4
comp=Z,988nm,22.6s
H24K Noodor Dome 89.52 24 P P 06 49 40.8 +0.6
baz=262
POKR Poker Flat Res 89.60 25 P P 06 49 41.3 +0.7
baz=262
HDA Harding Lake 89.71 26 P P 06 49 41.5 +0.3
baz=263
M24K Tolsona, Glenn 89.77 28 P P 06 49 41.7 +0.2
baz=263
ILAR Eielson Array 89.78 25 P P 06 49 40.4 -1.1
comp=Z,1.9nm,0.6s,baz=240,slow=4.7,SNR=25
comp=Z,1.9nm,0.6s
EYAK Cordova Ski Ar 89.80 29 IAMs_20 IAMs_20 07 28 13.9
comp=Z,1µm,20.0s
EYAK Cordova Ski Ar 89.80 29 P P 06 49 41.9 +0.3
baz=264
G24K Hadweenzic Riv 89.80 23 P P 06 49 42.1 +0.5
baz=262
KLU Klutina 89.82 29 P P 06 49 42.3 +0.5
baz=264
KBZ Khabaz 89.88 314 P P 06 49 41.1 -1.2
comp=Z,4.3nm,0.9s,baz=86,slow=6.1,SNR=6.8
KBZ LR LR 07 36 23.6
comp=Z,178nm,19.6s,baz=86,slow=40
comp=Z,4.3nm,0.9s
KBZ Khabaz 89.88 314⇑ *e*P P 06 49 42.4 +0.1
KBZ pmax pmax
comp=Z,13nm,1.0s
KIV Kislovodsk 90.05 314 *e*P P 06 49 43.1 -0.2
KIV *e* 06 53 18.7
KIV *e* 07 00 13.5
KIV *e*SS SS 07 06 35.4 +2.0
KIV *e*SSS SSS 07 10 13.0
KIV pmax pmax
comp=Z,12nm,1.1s
KIV pmax pmax
comp=Z,242nm,20.0s
K24K Donnelly Dome 90.15 26 P P 06 49 43.7 +0.5
baz=264
PAX Paxson 90.19 27 P P 06 49 43.6 +0.1
baz=264
HARP HAARP 90.28 28 P P 06 49 44.0 +0.1
baz=264
KAIM Kayak Island 90.39 30 P P 06 49 44.3 0.0
baz=265
BMRM Bremner River 90.40 29 IAMs_20 IAMs_20 07 26 36.8
comp=Z,1µm,20.0s
BMRM Bremner River 90.40 29 P P 06 49 44.2 -0.3
baz=265
J25K Salcha River, 90.41 25 P P 06 49 44.9 +0.4
baz=264
PRP Porcupine Dome 90.45 25 P P 06 49 44.7 0.0
baz=264
N25K Chitina, Valde 90.46 28 IAMs_20 IAMs_20 07 25 01.7
comp=Z,1µm,20.0s
N25K Chitina, Valde 90.46 28 P P 06 49 45.1 +0.3
baz=265
RIDG Independent Ri 90.55 26 P P 06 49 45.5 +0.4
baz=264
D25K Kavik River 90.56 21 P P 06 49 44.8 -0.3
D25K Kavik River 90.56 21 P P 06 49 46.0 +0.9
baz=263
F25K Christian Rive 90.62 22 P P 06 49 46.2 +0.8
baz=264
E25K Arctic Village 90.71 22 P P 06 49 46.9 +1.2
baz=264
GLB Gilahina Butte 90.83 29 IAMs_20 IAMs_20 07 24 51.3
comp=Z,1µm,22.0s
DOT Dot Lake 90.89 26 P P 06 49 47.1 +0.4
SCRK Sand Creek 90.95 26 P P 06 49 48.1 +1.0
baz=265
VRDI Verde Repeater 90.98 29 IAMs_20 IAMs_20 07 26 56.1
comp=Z,1µm,21.0s
CRQE Cirque 91.12 29 P P 06 49 48.4 +0.4
baz=266
L26K Log Cabin Wild 91.17 27 P P 06 49 48.6 +0.6
baz=266
VRH Novokhopyorsk 91.17 321 *e*P P 06 49 47.9 -0.2
VRH pmax pmax
comp=Z,4.0nm,0.8s
J26L Joseph Creek 91.18 26 P P 06 49 49.0 +0.9
baz=266
MCARA McCarthy VSAT 91.20 29 IAMs_20 IAMs_20 07 24 42.1
comp=Z,1µm,21.0s
MCARA McCarthy VSAT 91.20 29 P P 06 49 48.9 +0.8
baz=266
F26K Sheenjek River 91.20 22 P P 06 49 49.3 +1.2
baz=265
WAX Waxell Ridge 91.22 30 IAMs_20 IAMs_20 07 27 58.7
comp=Z,1µm,19.0s
G26K Porcupine Rive 91.28 23 P P 06 49 49.6 +1.2
baz=265
M26K Nabesna, AK 91.28 28 IAMs_20 IAMs_20 07 28 48.3
comp=Z,876nm,21.0s
M26K Nabesna, AK 91.28 28 P P 06 49 49.2 +0.7
baz=266
C27K Jago River 91.52 20 P P 06 49 50.7 +1.3
baz=266
MESA MESA 91.65 30 P P 06 49 51.1 +0.6
baz=267
FURI Furi 91.66 279 LR LR 07 32 31.1
comp=Z,785nm,18.5s,baz=106,slow=37
FURI Furi 91.66 279 IAMs_20 IAMs_20 07 32 57.4
comp=Z,1µm,20.0s
KIBK Kibwezi 91.73 268 IAMs_20 IAMs_20 07 26 24.6
comp=Z,1µm,22.0s
KIBK Kibwezi 91.73 268 P P 06 49 53.3 +1.5
SNR=6.0
GRNC Granite Creek 91.78 29 IAMs_20 IAMs_20 07 25 24.2
comp=Z,893nm,21.0s
M27K Edge Creek, AK 91.80 28 P P 06 49 51.8 +0.7
baz=267
BARN Barnard Glacie 91.84 29 IAMs_20 IAMs_20 07 30 27.8
comp=Z,824nm,21.0s
L27K Beaver Creek, 91.86 27 P P 06 49 51.6 +0.5
L27K Beaver Creek, 91.86 27 P P 06 49 52.1 +0.9
baz=267
CTG Chitna Glacier 91.99 29 P P 06 49 52.4 +0.5
baz=268
TABL Table Mountain 92.06 30 IAMs_20 IAMs_20 07 25 59.8
comp=Z,1µm,21.0s
I27K Kandik River 92.07 25 P P 06 49 52.8 +0.6
I27K IAmb IAmb 06 50 31.7
comp=Z,40nm,1.6s
I27K Kandik River 92.07 25 P P 06 49 53.5 +1.4
baz=267
G27K Doyon Strip 92.11 23 P P 06 49 53.7 +1.4
baz=267
H27K Steamboat Moun 92.14 24 P P 06 49 53.7 +1.3
baz=268
BVCY Beaver Creek 92.28 28 P P 06 49 54.2 +1.1
baz=268
YUK3 Moose Creek 92.44 28 P P 06 49 55.1 +0.9
baz=268
D27M Malcolm River 92.47 21 P P 06 49 54.2 +0.3
D27M Malcolm River 92.47 21 P P 06 49 55.3 +1.4
baz=268
PCA Pinnacle 92.49 30 IAMs_20 IAMs_20 07 25 21.3
comp=Z,1µm,22.0s
PINM Pinnacle 92.49 30 P P 06 49 54.6 +0.4
baz=268
O28M Mount Upton 92.54 29 IAMs_20 IAMs_20 07 25 29.6
comp=Z,843nm,20.0s
O28M Mount Upton 92.54 29 P P 06 49 54.7 0.0
baz=268
KMBO Kilima Mbogo 92.59 269 P P 06 49 54.7 -1.2
comp=Z,8.2nm,0.8s,baz=75,slow=4.7,SNR=7.1
comp=Z,8.2nm,0.8s
YUK8 Steele Glacier 92.76 29 P P 06 49 56.2 +0.5
baz=269
I28M Miner Creek 92.77 25 P P 06 49 55.8 +0.4
I28M IAmb IAmb 06 50 36.6
comp=Z,29nm,1.3s
I28M Miner Creek 92.77 25 P P 06 49 56.0 +0.6
baz=269
VSR Storozhevoye 92.77 321 *e*P P 06 49 52.6 -3.0
VSR pmax pmax
comp=Z,5.0nm,1.0s
F28M Old Crow 92.83 23 P P 06 49 56.0 +0.5
baz=269
LPSR Galich'ya Gora 92.95 322 *e*P P 06 49 54.3 -2.1
LPSR pmax pmax
comp=Z,8.0nm,1.1s
E28M Babbage River 92.97 22 P P 06 49 57.5 +1.3
baz=269
D28M Stokes Point 93.26 21 P P 06 49 59.3 +1.9
baz=270
YUK4 Talbot Arm 93.30 29 P P 06 49 59.0 +0.9
baz=270
O29M Mount Kennedy 93.33 30 IAMs_20 IAMs_20 07 28 51.5
comp=Z,957nm,20.0s
O29M Mount Kennedy 93.33 30 P P 06 49 58.6 +0.5
baz=270
M29M Somme Creek 93.39 28 P P 06 49 59.1 +0.8
M29M IAMs_20 IAMs_20 07 31 49.8
comp=Z,1µm,20.0s
M29M Somme Creek 93.39 28 P P 06 49 59.5 +1.1
baz=270
YUK6 Outpost Mounta 93.44 29 P P 06 49 58.7 -0.1
baz=270
I29M Ogilvie Camp, 93.45 25 P P 06 49 58.6 +0.1
I29M IAmb IAmb 06 50 23.6
comp=Z,15nm,1.1s
I29M Ogilvie Camp, 93.45 25 P P 06 49 59.3 +0.9
baz=270
J29N Klondike Camp 93.49 26 P P 06 49 60.0 +1.2
baz=270
L29M L29M 93.54 27 P P 06 49 59.3 +0.3

L29M IAmb IAmb 06 50 21.2
comp=Z,21nm,1.1s
L29M L29M 93.54 27 P **P** **06 49 60.0 +1.0**
baz=270
G29M Pine Creek 93.55 23 P **P** **06 49 60.0 +1.1**
baz=271
E29M Blow River 93.58 22 P **P** **06 50 00.8 +1.9**
baz=271
MOS Moscow 93.74 326 *e*P **P** **06 49 57.8 -2.1**
K29M Barlow Dome 93.81 26 P **P** **06 50 00.5 +0.2**
K29M IAmb IAmb 06 50 22.3
comp=Z,20nm,1.2s
K29M Barlow Dome 93.81 26 P **P** **06 50 01.1 +0.8**
baz=271
ANN Anapa 93.84 315 *e*P **P** **06 49 56.1 -4.6**
ANN pmax pmax
comp=Z,56nm,1.0s
HYT Haines Junctio 93.86 29 P **P** **06 50 01.6 +1.0**
baz=271
ASF Jabal al Asfar 94.12 302 LR LR 07 39 40.3
comp=Z,461nm,18.5s,baz=109,slow=40
P30M Million Dollar 94.14 30 P **P** **06 50 02.4 +0.6**
baz=271
M30M Minto, Yukon 94.16 28 **P** **06 50 02.3 +0.4**
M30M IAMs_20 IAMs_20 07 30 14.5
comp=Z,1μm,21.0s
M30M Minto, Yukon 94.16 28 P **P** **06 50 02.6 +0.8**
baz=272
I30M Mount Dempster 94.26 25 P **P** **06 50 03.4 +1.1**
baz=272
J30M Hart River 94.31 26 P **P** **06 50 02.9 +0.4**
J30M IAmb IAmb 06 50 07.8
comp=Z,28nm,1.4s
J30M Hart River 94.31 26 P **P** **06 50 03.6 +1.0**
baz=272
OBN Obninsk 94.35 325 LR LR 07 36 00.9
comp=Z,340nm,20.2s,baz=32,slow=38
OBN Obninsk 94.35 325‖ *e*P **P** **06 50 02.4 -0.3**
OBN e 06 53 52.6
OBN *e*PS **PS** **07 02 29.6 -1.8**
OBN *e*SS SS 07 07 38.7 +4.4
OBN pmax pmax
comp=Z,11nm,1.0s
OBN MLR MLR
comp=Z,750nm,22.0s
F30M Barrier River 94.40 23 P **P** **06 50 02.5 -0.2**
F30M IAmb IAmb 06 50 18.2
comp=Z,28nm,1.3s
F30M Barrier River 94.40 23 P **P** **06 50 03.4 +0.6**
baz=273
MAYO Mayo, Yukon 94.54 27 P **P** **06 50 04.4 +0.9**
baz=272
O30N Mendenhall 94.56 29 P **P** **06 50 04.1 +0.4**
baz=272
S31K Pelican 94.58 32 P **P** **06 50 04.0 +0.3**
baz=272
N31M Braeburn, Yuko 94.68 29 IAMs_20 IAMs_20 07 28 53.1
comp=Z,930nm,19.0s
N31M Braeburn, Yuko 94.68 29 P **P** **06 50 05.1 +0.9**
baz=272
SKAG Skagway 94.99 31 P **P** **06 50 06.0 +0.4**
baz=273
G31M Satah River 95.03 23 P **P** **06 50 05.0 -0.6**
G31M IAmb IAmb 06 50 13.3
comp=Z,15nm,1.0s
G31M Satah River 95.03 23 P **P** **06 50 06.0 +0.4**
baz=274
H31M Peel River 95.08 24 P **P** **06 50 06.8 +0.8**
baz=274
SIT Sitka 95.10 33 P **P** **06 50 06.4 +0.3**
baz=272
WHY Whitehorse 95.16 30 P **P** **06 50 06.7 +0.2**
baz=273
F31M Tsiigehtchic 95.19 23 **P** **06 50 05.9 -0.4**
F31M IAmb IAmb 06 50 26.7
comp=Z,27nm,1.4s
F31M Tsiigehtchic 95.19 23 P **P** **06 50 06.6 +0.2**
baz=275
INK Inuvik 95.20 22 LR LR 07 30 12.6
comp=Z,201nm,21.7s,baz=286,slow=34
INK Inuvik 95.20 22 P **P** **06 50 06.4 0.0**
baz=275
M31M Drury Creek, Y 95.30 28 P **P** **06 50 06.8 -0.2**
baz=274
MMAI Mount Meron Ar 95.39 303 LR LR 07 39 44.9
comp=Z,369nm,18.9s,baz=95,slow=40
R32K Eaglecrest 95.47 32 P **P** **06 50 07.2 -0.7**
baz=273
S32K Killisnoo 95.48 33 P **P** **06 50 07.5 -0.3**
baz=273
EIL Elat 95.77 299 LR LR 07 36 11.2
comp=Z,303nm,21.6s,baz=122,slow=37
P32M Atlin 95.80 31 P **P** **06 50 10.0 +0.5**
baz=274
N32M Quiet Lake 96.00 29 P **P** **06 50 10.6 +0.3**
baz=275
NVL N'lazarevskaya 96.13 197 *e*P P 06 50 05.4 -5.2
NVL *e*S **SKSac** **07 00 41.5 -3.1**
NVL *e*PS **PS** **07 02 44.1 -6.3**
NVL *e*SS **SS** **07 07 55.1 -3.4**
NVL *e*SSS SSS 07 11 38.7
NVL pmax pmax
comp=Z,132nm,1.1s
NVL MLR MLR
comp=Z,1μm,18.0s
U33K Whale Pass 96.37 34 P **P** **06 50 12.5 +0.5**
baz=274
CRAG Craig 96.41 35 P **P** **06 50 12.6 +0.4**
baz=274
Q32M Nakina River 96.59 31 P **P** **06 50 13.3 +0.1**
baz=275
BRTR Keskin Array B 96.72 309 P **P** **06 50 12.9 -1.3**
comp=Z,4.8nm,1.1s,baz=90,slow=4.8,SNR=6.0
BRTR LR LR 07 42 16.8
comp=Z,205nm,19.3s,baz=94,slow=41
comp=Z,4.8nm,1.1s
WRAK Wrangell Islan 96.77 34 P **P** **06 50 14.3 +0.5**
baz=275
R33M Jennings River 97.22 31 IAMs_20 IAMs_20 07 34 32.2
comp=Z,802nm,20.0s
R33M Jennings River 97.22 31 P **P** **06 50 15.9 0.0**
baz=276
V35K Ketchikan 97.28 35 P **P** **06 50 15.9 -0.2**
baz=275
S34M Telegraph Cree 97.29 32 P **P** **06 50 15.9 -0.2**
baz=276
A36M Sachs Harbour 97.41 18 P Pdif 06 50 17.2 +0.8
baz=283
SPITS Spitsbergen Ar 97.64 349 P **P** **06 50 16.9 -0.5**
comp=Z,12nm,1.0s,baz=75,slow=1.6,SNR=4.8
SPITS LR LR 07 39 25.2
comp=Z,332nm,21.9s,baz=54,slow=38
comp=Z,12nm,1.0s
ARCES ARCESS Array B 97.81 340 P **P** **06 50 16.8 -1.5**
comp=Z,7.6nm,0.9s,baz=76,slow=6.0,SNR=9.7
ARCES LR LR 07 40 01.9
comp=Z,727nm,19.2s,baz=86,slow=39
comp=Z,7.6nm,0.9s
DLBC Dease Lake 97.81 32 LR LR 07 30 28.8
comp=Z,320nm,21.6s,baz=272,slow=33
T35M Bob Quinn 97.87 33 P Pdif 06 50 18.8 0.0
baz=277
U35K Hyder 98.12 34 P Pdif 06 50 19.9 0.0
baz=277
C36M Paulatuk 98.41 20 P Pdif 06 50 21.0 +0.2
baz=284
AKASG Malin Array Be 99.07 321 P **Pdif** **06 50 22.3 -1.9**
comp=Z,0.3nm,0.4s,baz=67,slow=5.5,SNR=1.6
AKASG LR LR 07 40 24.9
comp=Z,340nm,21.3s,baz=72,slow=39
comp=Z,0.3nm,0.4s
MBAR Mbarara 99.12 269 LR LR 07 32 00.8
comp=Z,399nm,21.4s,baz=94,slow=34
FINES FINESS Array B 99.22 332 P **Pdif** **06 50 22.8 -1.8**
comp=Z,1.8nm,0.6s,baz=70,slow=6.3,SNR=10
FINES PKiKP **PKiKP** **06 54 55.5 +1.0**
comp=Z,1.5nm,0.7s,baz=150,slow=3.1,SNR=1.8
FINES LR LR 07 40 41.7
comp=Z,720nm,18.8s,baz=77,slow=39
comp=Z,1.8nm,0.6s
MNK Minsk 99.40 325 *i* P **Pdif** **06 50 24.3 -1.3**
comp=E,19nm,0.9s
MNK *i* P **Pdif** **06 50 24.3 -1.3**
comp=N,22nm,0.8s
MNK *i* P **Pdif** **06 50 24.3 -1.3**
comp=Z,13nm,0.8s,baz=82
MNK *i* PP **PP** **06 54 27.8 -1.2**
MNK *i* PPP PPP 06 56 34.2
MNK *i* SKS 07 00 24.9
MNK *i* S **SKSac** **07 01 02.8 +1.0**
MNK *i* SP **SP** **07 03 24.6 +2.5**
MNK *i* PS PS 07 03 46.8 +20
MNK *i* SS SS 07 09 24.4 +39
MNK *i* SSS SSS 07 13 27.0
MNK *i* LQ LQ 07 29 32.4
MNK *i* LR LR 07 35 49.0
MNK *i* LRM MLR 07 36 28.9
comp=N,510nm,17.3s
MNK *i* LRM MLR 07 36 47.7
comp=Z,337nm,16.7s
MNK Minsk 99.40 325 *i* P **Pdif** **06 50 24.3 -1.3**
MNK *i* 06 54 27.8
MNK *i* PPP PPP 06 56 34.2
MNK *i* S **SKSac** **07 01 02.8 +1.0**
MNK *i* SP **SP** **07 03 24.6 +2.5**
MNK pmax pmax
comp=N,22nm,0.8s
MNK pmax pmax
comp=E,19nm,0.9s
MNK pmax pmax
comp=Z,13nm,0.8s
MNK MLR MLR
comp=N,510nm,17.0s
MNK MLR MLR
comp=Z,337nm,17.0s
MNK MLR MLR
comp=E,351nm,15.0s
SNAA Sanae 99.51 194 LR LR 07 36 12.4
comp=E,1μm,19.3s,baz=107,slow=36
BBB Bella Bella 99.70 38 LR LR 07 28 53.1
comp=E,466nm,21.7s,baz=282,slow=31
WRGLY Wrigley 100.12 26 P **Pdif** **06 50 28.7 +0.1**
baz=284
LSZ Lusaka 100.49 254 IAMs_20 IAMs_20 07 34 58.2
comp=Z,1μm,21.0s
LSZ Lusaka 100.49 254 P **Pdif** **06 50 32.6 +1.0**
BOSA Boshof 101.38 240 P **Pdif** **06 50 35.0 -0.3**
comp=Z,11nm,1.1s,baz=106,slow=4.7,SNR=6.5
BOSA Boshof 101.38 240 P **Pdif** **06 50 35.0 -0.3**
YKA Yellowknife Ar 104.21 26 Pdiff **Pdif** **06 50 46.8 -0.1**
comp=Z,0.5nm,0.9s,baz=302,slow=5.4,SNR=4.8
YKA PKiKP **PKiKP** **06 55 03.7 +0.1**
comp=Z,0.5nm,0.6s,baz=308,slow=2.2,SNR=9.2
YKA PKKPbc **PKKPbc** **07 06 34.9 -2.3**
comp=Z,0.5nm,0.8s,baz=94,slow=1.9,SNR=6.8
STHS Stebnicka Huta 104.35 320 *e*P **Pdif** **06 50 48.9 +1.1**
STHS Stebnicka Huta 104.35 320 *e*PDIFF **Pdif** **06 50 48.9 +1.1**
M02C Callahan 104.89 48 IAMs_20 IAMs_20 07 32 20.9
comp=Z,1μm,20.0s
O02D Mt. Diablo Mer 105.13 49 IAMs_20 IAMs_20 07 39 37.5
comp=Z,1μm,20.0s
HFS Hagfors 105.40 332 Pdiff **Pdif** **06 50 51.1 -1.2**
comp=Z,5.4nm,1.0s,baz=115,slow=10,SNR=4.2
PSZ Piszkesteto 105.56 319 IAMs_20 IAMs_20 07 43 50.2
comp=Z,736nm,22.0s
NB2 NORSAR Subarra 106.18 334 P **Pdif** **06 50 54.7 -1.0**
comp=Z,14nm,1.2s,baz=66,slow=4.4
NB2 NORSAR Subarra 106.18 334 P **Pdif** **06 50 54.7 -1.0**
NB2 AMP 06 50 54.7
comp=Z,14nm,1.2s
NOA NORSAR Array B 106.18 334 Pdiff **Pdif** **06 50 54.2 -1.5**
comp=Z,3.6nm,1.0s,baz=66,slow=4.5,SNR=3.9
NOA PP **PP** **06 55 20.0 +0.5**
comp=Z,2.8nm,1.1s,baz=66,slow=7.7,SNR=3.3
WELL Weller Preserv 106.99 51 IAMs_20 IAMs_20 07 36 44.1
comp=Z,714nm,18.0s
CMB Columbia Colle 107.33 51 IAMs_20 IAMs_20 07 36 51.9
comp=Z,1μm,19.0s
WVOR Wild Horse Val 107.78 46 IAMs_20 IAMs_20 07 34 33.3
comp=Z,1μm,20.0s
RUE Ruedersdorf 108.06 325 *e*SP **PS** **07 05 00.4 +2.9**
baz=66,slow=10
BRG Berggiesshubel 108.49 323 *e*SP **PS** **07 05 05.9 +4.0**
baz=66,slow=10
VES Vestal, Richgr 108.73 53 IAMs_20 IAMs_20 07 33 00.5
comp=Z,852nm,20.0s
NVAR Mina Array Bea 108.86 50 Pdiff **Pdif** **06 51 14.0 +5.5**
comp=Z,0.4nm,0.8s,baz=283,slow=5.3,SNR=3.6
NVAR PKiKP **PKiKP** **06 55 13.4 +0.2**
comp=Z,0.7nm,0.9s,baz=224,slow=2.5,SNR=3.9
NVAR PKKPbc **PKKPbc** **07 06 21.5 -0.9**
comp=Z,0.2nm,0.6s,baz=61,slow=4.2,SNR=2.0
CLL Collm 108.90 324 *e*SP **PS** **07 05 09.7 +3.6**
baz=66,slow=10
PLID Pearl Lake 108.99 43 IAMs_20 IAMs_20 07 37 05.0
comp=Z,868nm,20.0s
TIN Tinemaha, Big 109.19 52 IAMs_20 IAMs_20 07 35 34.3
comp=Z,774nm,19.0s
GEC2 GERESS Array S 109.28 321 *e*SP **PS** **07 05 16.7 +6.3**
baz=66,slow=10
GERES GERESS Array B 109.28 321 PKiKP **PKiKP** **06 55 13.3 -0.2**
comp=Z,0.3nm,0.4s,baz=63,slow=0.3,SNR=1.9
GORT1 Trebel 109.28 326 *e*SP **PS** **07 05 13.7 +3.8**
baz=66,slow=10
CWC Cottonwood Cre 109.42 52 IAMs_20 IAMs_20 07 39 41.7
comp=Z,938nm,19.0s
BSEG Bad Segeberg 109.47 327 *e*SP **PS** **07 05 15.0 +3.2**
baz=66,slow=10
TANN Tannenbergstha 109.53 323 *e*SP **PS** **07 05 16.6 +3.8**
baz=66,slow=10
FLTG Flechtingen 109.57 325 *e*SP **PS** **07 05 16.7 +3.9**
baz=66,slow=10
NEUB Neuenburg 109.66 324 *e*SP **PS** **07 05 18.5 +4.6**
baz=66,slow=10
PLN Plauen 109.69 323 *e*SP **PS** **07 05 17.7 +3.5**
baz=66,slow=10
WET Wettzell 109.70 322 *e*SP **PS** **07 05 21.0 +6.5**
baz=66,slow=10
MANZ Manzenberg 109.89 323 *e*SP **PS** **07 05 22.8 +6.5**
baz=66,slow=10
ROTZ Rotzenmuhle 109.90 322 *e*SP **PS** **07 05 21.9 +5.5**
baz=66,slow=10
LRMC Laurel Mtn Rad 109.92 53 IAMs_20 IAMs_20 07 40 30.0
comp=Z,980nm,21.0s
MOX Moxa 109.95 323 *e*SP **PS** **07 05 21.6 +4.7**
baz=66,slow=10
MOX *e*L L 07 52 07.0
comp=Z,506nm,19.2s
ASSE Asse, Remlinge 109.96 325 *e*SP **PS** **07 05 19.6 +2.9**
baz=66,slow=10
RJOB Jochberg 110.21 320 *e*SP **PS** **07 05 25.1 +5.6**
baz=66,slow=10
CLZ Clausthal 110.25 325 *e*SP **PS** **07 05 23.6 +4.0**
baz=66,slow=10
RETH Rethem/Aller, 110.47 326 *e*SP **PS** **07 05 25.7 +4.2**
baz=66,slow=10
GRF Grafenberg Arr 110.53 323 *e*SP **PS** **07 05 27.2 +4.9**
baz=66,slow=10
GRF *e*L L 07 46 22.0
comp=Z,572nm,21.7s
GTTG Gottingen 110.59 325 *e*SP **PS** **07 05 28.7 +6.0**
baz=66,slow=10
ELK Elko 110.65 47 IAMs_20 IAMs_20 07 35 02.5
comp=Z,740nm,21.0s
HLG Helgoland 110.68 328 *e*SP **PS** **07 05 28.0 +4.7**
baz=66,slow=10
TPNV Topopah Spring 110.76 52 IAMs_20 IAMs_20 07 35 30.0
comp=Z,744nm,20.0s
UBBA Unterbreizbach 110.85 324 *e*SP **PS** **07 05 28.6 +3.7**
baz=66,slow=10
FUR Furstenfeldbru 111.03 321 *e*SP **PS** **07 05 34.0 +7.1**
baz=66,slow=10
BAR Barrett 111.27 56 IAMs_20 IAMs_20 07 38 44.9
comp=Z,880nm,19.0s
IBBN Ibbenburen 111.54 326 *e*SP **PS** **07 05 35.9 +4.5**
baz=66,slow=10
KASTN Kahler Asten 111.62 325 *e*SP **PS** **07 05 37.6 +5.3**
baz=66,slow=10
UBR Ueberruh 111.93 321 *e*SP **PS** **07 05 41.8 +6.4**
baz=66,slow=10
TNS Taunus Mts 111.99 324 *e*SP **PS** **07 05 42.4 +6.6**
baz=66,slow=10
BC3 Big Chuckawall 112.08 55 IAMs_20 IAMs_20 07 33 53.4
comp=Z,780nm,21.0s
STU Stuttgart 112.10 322 *e*SP **PS** **07 05 43.7 +6.9**
baz=66,slow=10
BUG Bochum--Univer 112.18 325 *e*SP **PS** **07 05 42.2 +4.9**
baz=66,slow=10
DUG Dugway, Tooele 112.58 48 IAMs_20 IAMs_20 07 39 15.5
comp=Z,663nm,19.0s
BFO Black Forest 112.80 322 *e*SP **PS** **07 05 50.4 +7.2**
baz=66,slow=10
AHID Auburn Hatcher 113.05 44 IAMs_20 IAMs_20 07 37 47.6
comp=Z,733nm,20.0s
HWUT Hardware Ranch 113.08 46 IAMs_20 IAMs_20 07 39 20.5
comp=Z,802nm,20.0s
LOHW Long Hollow 113.13 43 IAMs_20 IAMs_20 07 38 27.4
comp=Z,852nm,20.0s
WLF Walferdange 113.57 324 *e*SP **PS** **07 05 58.1 +7.9**
baz=66,slow=10
BW06 Boulder Array 114.13 44 IAMs_20 IAMs_20 07 38 06.0
comp=Z,951nm,20.0s
PDAR Pinedale Array 114.13 44 PKP **PKiKP** **06 55 23.1 0.0**
comp=Z,0.7nm,0.7s,baz=115,slow=0.6,SNR=8.3
PDAR PKKPbc **PKKPbc** **07 06 04.5 -0.6**
comp=Z,1.0nm,0.9s,baz=86,slow=4.9,SNR=4.1
BNI Bardonecchia 115.11 319 IAMs_20 IAMs_20 07 53 47.0
comp=Z,892nm,20.0s
TUC Tucson 116.21 55 IAMs_20 IAMs_20 07 42 39.6
comp=Z,799nm,20.0s
K22A Casper 116.26 43 IAMs_20 IAMs_20 07 45 13.0
comp=Z,550nm,20.0s
ANMO Albuquerque 118.95 51 IAMs_20 IAMs_20 07 41 45.1
comp=Z,904nm,20.0s
ANMO Albuquerque 118.95 51 IAMs_20 IAMs_20 07 41 45.1
comp=Z,903nm,20.0s
ULM Lac du Bonnet 119.14 32 PKP **PKPdf** **06 55 30.5 -1.7**
comp=Z,1.5nm,0.7s,baz=309,slow=6.5,SNR=3.4
ULM PKKPbc **PKKPbc** **07 05 46.0 -1.4**
comp=Z,1.8nm,0.6s,baz=87,slow=4.6,SNR=4.5
EDA Edea 119.86 273 IAMs_20 IAMs_20 07 45 33.7
comp=Z,747nm,20.0s
OGNE Ogallala 120.02 44 IAMs_20 IAMs_20 07 45 21.8
comp=Z,711nm,20.0s
MNTX Cornudas Mount 120.79 55 IAMs_20 IAMs_20 07 44 27.9
comp=Z,731nm,21.0s
TXAR Lajitas Array 122.90 57 PKP **PKiKP** **06 55 41.2 +0.8**
comp=Z,1.7nm,0.8s,baz=207,slow=1.3,SNR=15
TXAR PKKPbc **PKKPab** **07 05 32.5 0.0**
comp=Z,0.9nm,0.6s,baz=129,slow=5.4,SNR=9.4
ESDC Sonseca Array 124.55 318 PKP **PKiKP** **06 55 43.4 +0.1**
comp=Z,0.9nm,0.9s,baz=351,slow=4.8,SNR=5.3
ESDC PP **PP** **06 57 30.5 +1.3**
comp=Z,1.3nm,1.0s,baz=68,slow=7.7,SNR=4.7
ABTX Abilene, Hawle 125.07 52 IAMs_20 IAMs_20 07 45 24.9
comp=Z,759nm,20.0s
SCHQ Schefferville 126.56 12 PKP **PKPdf** **06 55 46.4 0.0**
comp=Z,4.9nm,0.9s,baz=352,slow=2.1,SNR=4.6
TORD Torodi Ar. Bea 127.84 284 PKP **PKPdf** **06 55 49.4 -0.5**
comp=Z,6.7nm,1.0s,baz=195,slow=1.1,SNR=23
AY01 Puyuhuapi 128.66 159 IAMs_20 IAMs_20 07 53 01.6
comp=Z,618nm,19.0s
HKT Hockley 129.10 53 IAMs_20 IAMs_20 07 57 58.5
comp=Z,739nm,19.0s
UNM Universidad Na 129.40 67 IAMs_20 IAMs_20 07 43 49.9
comp=Z,768nm,20.0s
T47A Sharon Grove 132.04 40 IAMs_20 IAMs_20 07 57 11.5
comp=Z,749nm,20.0s
PLCA Paso Flores 132.64 159 PKP **PKPdf** **06 55 58.8 +0.4**
comp=Z,1.7nm,0.7s,baz=204,slow=3.3,SNR=6.7
DBIC Dimbokro 134.78 276 PKhKP PKPpre 06 55 55.1
comp=Z,3.1nm,0.7s,baz=180,slow=1.1,SNR=5.6
BI02 San Fabin de 135.89 155 IAMs_20 IAMs_20 07 49 09.0
comp=Z,490nm,20.0s
GO04 Tololo Observa 141.54 151 IAMs_20 IAMs_20 08 04 16.8
comp=Z,555nm,20.0s
ACDV Cuesta del Vie 142.34 152 *e*P **PKPdf** **06 56 12.7 -4.0**
ACDV IAML 06 56 53.5
comp=Z,20nm,0.2s
GO03 Copiapo 143.93 149 *e*P PKPbc 06 56 17.5 +0.3
GO03 IAML 06 57 15.2
comp=Z,20nm,0.9s
ACLC CERRO LA CRUZ 143.95 155 *e*P PKPbc 06 56 18.2 +0.9
ACLC IAML 06 56 34.6
comp=Z,12nm,2.5s
VCA Vinchina 143.98 152 *e*P **PKPdf** **06 56 18.7 -0.9**
VCA *e*P PKPbc 06 56 19.2 +1.8
VCA ⇓*e*P PKPab 06 56 19.9 +3.0
VCA IAML 06 56 44.6
comp=Z,34nm,1.8s
AANI Anillaco 144.48 154 *e*P PKPbc 06 56 19.7 +0.7
TINO Tinogasta 144.84 153 *e*P **PKPdf** **06 56 20.6 -0.5**
AC02 Maricunga 145.11 149 *e*P **PKPdf** **06 56 23.2 +1.1**
AC02 IAML 06 56 58.5
comp=Z,27nm,1.6s
PLTB Pedras Altas 145.28 175 *e*P **PKPdf** **06 56 22.5 +0.9**
HDC Heredia 145.52 77 *e*P **PKPab** **06 56 23.2 +0.3**
SLA San Lorenzo 148.65 152 *e*P **PKPbc** **06 56 32.0 +0.7**
CPUP Villa Florida 150.02 167 PKPbc **PKiKP** **06 56 35.0 -0.4**
comp=Z,9.6nm,0.7s,baz=185,slow=2.3,SNR=35
CPUP Villa Florida 150.02 167 PKiKP **PKiKP** **06 56 35.0 -0.4**
LPAZ La Paz 153.83 138 PKP **PKPdf** **06 56 37.1 +0.8**
comp=Z,2.6nm,0.8s,baz=213,slow=2.8,SNR=6.3
LPAZ PKPbc **pPKPdf** **06 56 45.5 -1.1**
comp=Z,4.6nm,0.6s,baz=251,slow=4.5,SNR=13
ROSC El Rosal 155.77 85 PKP **PKPdf** **06 56 39.0 +0.2**
comp=Z,3.5nm,0.4s,baz=220,slow=8.8,SNR=1.3
ROSC El Rosal 155.77 85 PKiKP **PKPdf** **06 56 39.0 +0.2**
SJG San Juan 158.25 45 IAMs_20 IAMs_20 08 10 49.4
comp=Z,406nm,21.0s
SDV Santo Domingo 158.76 73 IAMs_20 IAMs_20 08 18 43.6
comp=Z,497nm,20.0s
BDFB Brasilia 161.37 186 PKP **PKPdf** **06 56 45.9 +0.9**
comp=Z,2.5nm,0.9s,baz=107,slow=9.2,SNR=3.5

SSNC ***08*** *06:48:16.4±1.2, 19°.41N×78°.08W, h20km±11km, MD3.3, ML2.8, Presumed earthquake*
JSN ***08*** *06:48:18.5±1.0, 19°.37N×77°.84W, h6km±16km, MD4.4, MW3.4, Presumed earthquake*
ISC 08 06:48:12.0±1.1, 19.47N±0.04×77.95W±0.05, h10km, n13,
σ1§97/17, 1C-2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.07**	**56**	*e*P		**Pn**		**06 48 35.6**	**+2.5**
LMGC				*e*S		**Sn**		**06 48 49.5**	**+1.4**
LMGC				IAML				06 48 51.2	
	comp=E,113nm,0.1s								
LMGC				IAML				06 48 51.4	
	comp=N,123nm,0.1s								
MTDJ	**Mount Denham**	**1.29**	**162**	*e*P		**Pg**		**06 48 36.9**	**0.0**
MTDJ				*e*S		**Sn**		**06 48 51.5**	**-2.2**
MTDJ				*e*Sg		**Sn**		**06 48 54.7**	**+1.0**
MTDJ				IAML				06 48 56.5	
	comp=N,275nm,0.3s								
MTDJ				IAML				06 48 56.6	
	comp=N,446nm,0.4s								
MTDJ	**Mount Denham**	**1.29**	**162**	⇓*i*P		**Pg**		**06 48 39.2**	**+2.3**
MTDJ				⇓*i*S		**Sn**		**06 48 54.8**	**+1.0**
CHIV	**Chivirico**	**1.54**	**70**	*e*P		**Pg**		**06 48 42.2**	**+0.7**
CBCY	**The Bluff, Cay**	**1.72**	**279**	*e*P		**Pb**		**06 48 41.5**	**-2.3**
CBCY				IAML				06 49 04.1	
	comp=E,71nm,0.3s								
CBCY				IAML				06 49 04.5	
	comp=N,66nm,0.2s								
CCCC	**Cccc**	**1.74**	**6**	*e*P		**Pg**		**06 48 46.0**	**+0.7**
STH	**Stony Hill**	**1.75**	**142**	i*e*P		**Pg**		**06 48 45.9**	**+0.2**
MARVS	**Santiago de Cu**	**2.01**	**74**	*e*P		**Pg**		**06 48 48.9**	**-1.6**
RCC	**Rio Carpintero**	**2.19**	**76**	*e*P		**Pb**		**06 48 51.6**	**-0.1**
PINC	**Pinares de May**	**2.27**	**63**	*e*P		**Pb**		**06 48 53.2**	**0.0**
HLGC	**Holguin**	**2.27**	**51**	*e*P		**Pn**		**06 48 50.5**	**+0.8**
QMBU	**Quimbuelo**	**3.05**	**76**	*e*P		**Pb**		**06 49 03.1**	**-3.3**
MASC	**Masc**	**3.58**	**78**	*e*P		**Pb**		**06 49 11.6**	**-3.7**

IDC ***08*** *06:51:38.1±0.5, 2°.96S×129°.88E, h0km, mb4.6/19, mbtmp4.6/24, ML4.6/4, MS4.2/4, Error ellipse: s-maj=21.2km s-min=11.6km az=69.0*
BJI ***08*** *06:51:39.0, 3°.00S×129°.90E, h10km, mB5.2/5, mb4.6/45, Ms4.8/4, Ms7 4.6/5*
NEIC ***08*** *06:51:40.4±1.3, 3°.00S±0°.07×129°.92E±0°.06, h10km±1km, mb4.9/32, Error ellipse: s-maj=11.8km s-min=9.9km az=38.0*
DJA ***08*** *06:51:44.2±0.1, 3°S±1°×13°0E±°, h45km±3km, M5.5/57, mB6.1/13, mb4.9/57, MLv5.0/34, Mw(mB)5.8/13*
ISC 08 06:51:42.1±0.3, 3.00S±0.04×129.94E±0.05, h25km, n139,
σ1§51/137, mb4.7/45, MS4.5/3, 1C-1D, Seram

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.07**	**251**	P		**Pn**		**06 52 01.9**	**+0.4**
BNDI	**Bandanaira**	**1.52**	**181**	P		**Pb**		**06 52 11.1**	**+1.6**
KRAI	**Karang Ratu**	**1.58**	**258**	P		**Pn**		**06 52 09.7**	**+1.2**
AAI	**Ambon**	**1.88**	**248**	P		**Pn**		**06 52 14.2**	**+1.6**
FAKI	**Fak Fak**	**2.30**	**88**	P		**Pn**		**06 52 19.1**	**+0.7**
FAKI	**Fak Fak**	**2.30**	**88**	P		**Pn**		**06 52 19.5**	**+1.0**
SIJI	**Sorong**	**2.49**	**32**	Pn		**Pn**		**06 52 20.3**	**-0.8**
	164nm,0.3s,baz=182,slow=22,SNR=87								

SIJI Sn **Sn** **06 52 49.8 -0.9**
300nm,0.3s,baz=52,slow=23,SNR=16
SIJI LR LR 06 53 10.5
comp=Z,2µm,19.4s,baz=183,slow=37
530nm,0.4s
SIJI Sorong 2.49 32 P **Pn** **06 52 20.3 -0.8**
SIJI S **Sn** **06 52 49.8 -0.9**
SWI Sorong 2.49 32 P **Pn** **06 52 21.1 0.0**
SWI S **Sn** **06 52 50.1 -0.6**
NLAI Namlea 2.85 265 P **Pn** **06 52 27.6 +1.6**
KMPI Kaimana, Papua 3.81 100 P **Pn** **06 52 40.9 +1.7**
SANI Sanana 4.06 283 P **Pn** **06 52 40.4 -2.3**
RKPI Ransiki, Papua 4.48 71 P **Pn** **06 52 49.3 +0.9**
RKPI S **Sn** **06 53 42.2 +2.4**
TNTI Ternate 4.54 325 Pn **Pn** **06 52 48.5 -0.8**
TNTI Ternate 4.54 325 P **Pn** **06 52 47.1 -2.2**
MWPI Manokwari, Pap 4.58 63 P **Pn** **06 52 51.3 +1.5**
SAUI Saumlaki 5.13 165 Pn **Pn** **06 52 56.7 -0.7**
GAMI Galela, Maluku 5.26 336 P **Pn** **06 52 58.6 -0.6**
0.6nm121nm,0.8s
SRPI Serui, Papua 6.39 80 P **Pn** **06 53 14.9 +0.2**
BAKI Biak 6.42 74 P **Pn** **06 53 16.5 +1.5**
LUWI Luwuk 7.42 285 Pn **Pn** **06 53 29.9 +1.0**
APSI Ampana 8.54 284 P **Pn** **06 53 44.2 -0.1**
211nm,0.8s
MRSI Marisa 8.71 293 P **Pn** **06 53 46.5 -0.1**
80nm,0.9s
SOEI Soe 8.77 220 Pn **06 53 54.8 +7.3**
SOEI Soe 8.77 220 P **Pn** **06 53 50.6 +3.1**
171nm,1.4s
SMPI Sarmi 8.81 84 P **Pn** **06 53 50.5 +2.5**
201nm,1.1s
MMRI Maumere 9.49 234 Pn **Pn** **06 53 58.4 +1.1**
BATI Baumata 9.50 221 Pn **Pn** **06 54 00.6 +3.2**
7.9nm,0.3s,baz=39,slow=21,SNR=6.4
BATI Baumata 9.50 221 P **Pn** **06 54 01.3 +3.9**
MTN Manton Dam 9.86 173 **Pn** **06 54 02.8 +0.5**
BSSI Bau Bau, Buton 9.93 251 P **Pn** **06 54 05.2 +1.9**
112nm,1.1s
EDFI Ende, Flores 10.00 235 P **Pn** **06 54 07.5 +3.1**
93nm,1.6s
TOLI2 Tolitoli 10.03 294 **Pn** **06 54 03.6 -1.0**
TTSI Tana Toraja 10.11 269 P **Pn** **06 54 06.9 +1.1**
33nm,0.8s
SPSI Sidrap Palu 10.20 264 P **Pn** **06 54 08.8 +1.8**
53nm,0.8s
GENI Genyem 10.22 88 P **Pn** **06 54 08.3 +1.0**
KAPI Kappang 10.36 259 Pn **Pn** **06 54 12.1 +2.9**
5.7nm,0.3s,baz=73,slow=14,SNR=6.3
KAPI LR LR 06 59 00.8
comp=Z,3µm,18.5s,baz=88,slow=43
KAPI Kappang 10.36 259 **Pn** **06 54 11.9 +2.7**
KAPI Kappang 10.36 259 P **Pn** **06 54 11.3 +2.1**
MPSI Mapaga 10.57 288 P **Pn** **06 54 15.6 +3.5**
JAY Jayapura 10.76 88 Pn **Pn** **06 54 13.6 -1.1**
2.7nm,0.3s,baz=265,slow=7.8,SNR=7.8
49nm,0.8s
JAY Jayapura 10.76 88 P **Pn** **06 54 13.1 -1.6**
70nm,0.7s
MMSI Mamuju 11.02 271 P **Pn** **06 54 18.3 0.0**
MMPI Merauke 11.72 118 P Pn 06 54 50.6 +23
BASI Baing, Sumba 11.74 232 P Pn 06 54 33.7 +5.5
180nm,1.0s
WBSI Waikabubak, Su 12.39 237 P **Pn** **06 54 39.9 +2.9**
103nm,1.0s
KNRA Kununurra 12.65 185 **Pn** **06 54 38.9 -1.7**
DBNI Kabupaten Domp 12.80 244 P **Pn** **06 54 46.1 +3.5**
PLAI Plampang 13.41 244 P **Pn** **06 54 53.6 +2.6**
104nm,1.5s
MYLDM Lahad Datu 14.02 305 **Pn** **06 54 58.0 -1.3**
MYLDM Lahad Datu 14.02 305 P **P** **06 55 09.0 +2.1**
TWSI Taliwang, Sumb 14.19 246 P **P** **06 55 10.7 +1.9**
BBKI Banjar Baru 15.09 268 P **Pn** **06 55 13.9 +0.2**
8µm66nm,1.1s
KHKI Kahang-Kahang 15.22 249 P **Pn** **06 55 16.5 +0.9**
49nm,1.4s
FITZ Fitzroy Crossi 15.59 195 Pn **Pn** **06 55 18.6 -1.8**
2.0nm,0.3s,baz=37,slow=11,SNR=23
FITZ LR LR 07 01 40.6
comp=Z,2µm,18.8s,baz=50,slow=39
4.7nm,0.5s
KKM Kota Kinabalu 16.39 303 P **Pn** **06 55 30.2 -0.5**
JAGI Jajag, Banyuwa 16.62 250 **Pn** **06 55 33.8 +0.2**
BLJI Banyuglugur 16.94 253 P **Pn** **06 55 38.1 +0.5**
6µm69nm,1.1s
COEN Coen 17.01 131 **Pn** **06 55 36.9 -1.6**
GMJI Gumukmas 17.23 252 P **Pn** **06 55 41.7 +0.5**
38nm,1.0s
WRAB Tennant Creek 17.38 166 **Pn** **06 55 41.8 -1.2**
WRA Warramunga Arr 17.38 166 P **Pn** **06 55 41.0 -2.1**
2.4nm,0.3s,baz=348,slow=12,SNR=27
WRA S Sn 06 58 46.5 -9.4
4.8nm,0.7s,baz=353,slow=23,SNR=4.5
7.7nm,0.3s
PMG Port Moresby 18.25 111 P **Pn** **06 55 54.8 +0.9**
19nm,0.9s,baz=301,slow=5.3,SNR=9.1
PMG Port Moresby 18.25 111 **P** **06 55 52.7 -1.2**
PMG IAmb IAmb 06 56 02.8
comp=Z,182nm,1.4s
PMG Port Moresby 18.25 111 P **Pn** **06 55 57.0 +3.2**
comp=Z,81nm,1.3s
SBUM Sibu 18.52 287 P **P** **06 55 56.4 -0.5**
SBUM Sibu 18.52 287 P **Pn** **06 55 57.7 +0.5**
SJI Sawahan 18.69 255 P **P** **06 55 59.3 +0.5**
comp=Z,79nm,2.0s
SNJI Sawahan-Nganju 18.71 255 P **P** **06 55 59.3 +0.2**
comp=Z,67nm,1.8s
NGJI Ngawi 18.91 256 P **Pn** **06 56 02.6 +0.8**
comp=Z,63nm,1.8s
UGM Wanagama 19.93 255 P **Pn** **06 56 14.3 +0.2**
comp=Z,62nm,1.6s
MBWA Marble Bar 20.61 208 P **P** **06 56 17.9 -1.7**
AS31 Alice Springs 20.90 170 P **P** **06 56 22.1 -0.7**
AS31 IAmb IAmb 06 56 24.7
comp=Z,38nm,0.8s
ASAR Alice Springs 20.90 170 P **P** **06 56 22.6 -0.2**
comp=Z,86nm,0.7s,baz=348,slow=11,SNR=218
ASAR S **S** **07 00 09.8 -5.1**
comp=Z,9.8nm,0.8s,baz=352,slow=24,SNR=7.3
comp=Z,86nm,0.7s
GUMO Guam 22.16 42 LR LR 07 05 32.5
comp=Z,305nm,19.8s,baz=225,slow=38
BBJI Bungbulang 22.63 258 **P** **06 56 38.0 -3.5**
BBJI IAmb IAmb 06 56 46.7
comp=Z,21nm,0.7s
BBJI Bungbulang 22.63 258 P **P** **06 56 40.7 -0.8**
comp=Z,32nm,0.8s
CTA Charters Tower 23.28 138 P **P** **06 56 49.2 +1.2**
comp=Z,8.3nm,0.9s,baz=306,slow=9.4,SNR=13
comp=Z,8.3nm,0.9s
CTAO Charters Tower 23.28 138 **P** **06 56 48.4 +0.3**
CTAO IAmb IAmb 06 57 03.5
comp=Z,43nm,1.0s
MDSI Maura Dua 25.75 266 P **P** **06 57 11.5 +0.5**
comp=Z,24nm,1.1s
FORT Forrest 27.69 183 P **P** **06 57 27.9 -0.4**
NACB Ninganchiao 28.20 344 P **P** **06 57 34.3 +1.3**
MORW Morawa 29.11 206 P **P** **06 57 40.4 -0.5**
MORW IAmb IAmb 06 58 42.1
comp=Z,49nm,1.7s
PDSI Padang 29.54 273 P **P** **06 57 42.3 -2.7**
comp=Z,34nm,0.6s
PPI Padang Panjang 29.64 274 P **P** **06 57 44.5 -1.4**
comp=Z,26nm,1.1s
BBOO Buckleboo 30.21 170 P **P** **06 57 49.9 -0.8**
BBOO IAmb IAmb 06 57 51.6
comp=Z,15nm,0.9s
KULM Kulim 30.40 286 P **P** **06 57 52.6 0.0**
KULM IAmb IAmb 06 58 01.9
comp=Z,28nm,1.2s
MNSI Mandailing Nat 30.59 277 P P 06 58 05.1 +11
STKA Stephens Creek 30.75 160 P **P** **06 57 55.7 +0.2**
comp=Z,4.2nm,0.3s,baz=336,slow=8.0,SNR=10
comp=Z,4.2nm,0.3s
RPSI Rantau Prapat 31.52 280 P **P** **06 58 01.5 -0.9**
ARMA Armidale 34.13 145 P **P** **06 58 25.0 -0.2**
NJ2 Nanjing 36.41 344 *eP* **P** **06 58 46.2 +1.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 37.23 306 P **P** **06 58 51.5 -0.5**
comp=Z,9.9nm,1.1s,baz=132,slow=7.0,SNR=31
comp=Z,9.9nm,1.1s
TOO Toolangi 37.25 159 P **P** **06 58 51.9 +0.1**
CHTO Chiang Mai 37.42 307 P **P** **06 58 53.4 -0.1**
CHTO IAmb IAmb 06 59 01.3
comp=Z,19nm,1.1s

KMI2 Kunming 38.46 318 P P 06 59 09.3 +6.9
KMI2 pmax pmax
comp=Z,15nm,0.9s
PZH PanZhiHua 40.04 319 P **P** **06 59 17.7 +2.2**
MJAR Matsushiro Arr 40.08 10 P **P** **06 59 14.0 -1.6**
comp=Z,5.6nm,0.8s,baz=190,slow=9.3,SNR=14
comp=Z,5.6nm,0.8s
KSRS Korea Array 40.29 358 P **P** **06 59 17.2 -0.1**
comp=Z,1.2nm,0.6s,baz=176,slow=11,SNR=4.3
comp=Z,1.2nm,0.6s
XAN Xi'an 41.83 333 ⇑P P 06 59 35.9 +5.8
XAN pmax pmax
comp=Z,9.0nm,1.0s
BJI2 Beijing 44.63 345 P **P** **06 59 52.0 -0.6**
BJI2 pmax pmax
comp=Z,3.0nm,0.7s
LZDM Lanzhou Array 45.87 330 P **P** **07 00 03.3 +0.5**
comp=Z,2.4nm,0.7s,baz=186,slow=10,SNR=6.3
comp=Z,2.4nm,0.7s
LZH Lanzhou 45.89 330 P **P** **07 00 05.0 +2.1**
LZH pP pP 07 00 09.4 -1.1
LZH pmax pmax
comp=Z,14nm,1.5s
SHL Shillong 46.53 310 P **P** **07 00 08.4 +0.3**
SHL IAmb IAmb 07 00 15.1
comp=Z,13nm,1.0s
HHC Hu-ho-hao-te 46.76 341 *eP* **P** **07 00 11.0 +1.5**
HHC pP pP 07 00 15.9 -1.2
HHC pmax pmax
comp=Z,8.0nm,0.7s
ASAJ Asahikawa 48.26 12 P **P** **07 00 21.6 +0.7**
comp=Z,4.4nm,0.7s,baz=216,slow=19,SNR=1.9
comp=Z,4.4nm,0.7s
XLT XiLinHaoTe 48.32 347 *eP* **P** **07 00 21.1 -0.4**
XLT pmax pmax
comp=Z,6.0nm,1.0s
XLT pmax pmax
comp=Z,240nm,7.0s
XLT LR LR
comp=Z,520nm,19.0s
XLT LR LR
comp=Z,420nm,17.5s
BNX BinXian 48.58 358 ⇓P **P** **07 00 23.1 -0.3**
BNX pmax pmax
comp=Z,7.0nm,0.9s
GTA2 Gaotai 50.57 330 *eP* **P** **07 00 38.7 -0.2**
GTA2 pP pP 07 00 44.7 -1.8
GTA2 pmax pmax
comp=Z,6.0nm,0.9s
HEH HeiHe 53.09 358 *eP* **P** **07 00 56.8 -0.5**
HEH pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 54.47 341 P **P** **07 01 07.6 -0.1**
ULN IAmb IAmb 07 01 15.4
comp=Z,13nm,1.1s
SONM Songino Array 54.66 341 P **P** **07 01 09.3 +0.2**
comp=Z,4.3nm,1.0s,baz=151,slow=8.2,SNR=14
comp=Z,4.3nm,1.0s
WMQ Urumqi 60.05 326 *eP* **P** **07 01 49.3 +2.2**
WMQ pP pP 07 01 55.2 +0.3
WMQ pmax pmax
comp=Z,17nm,1.1s
WMQ LR LR
comp=Z,440nm,22.7s
PETK Petropavlovsk- 60.57 19 P **P** **07 01 49.7 -0.6**
comp=Z,4.0nm,0.8s,baz=229,slow=4.6,SNR=2.6
comp=Z,4.0nm,0.8s
YAK Yakutsk 64.85 360 P **P** **07 02 17.9 -0.8**
comp=Z,1.6nm,0.4s,baz=155,slow=1.8,SNR=2.5
comp=Z,1.6nm,0.4s
YAK Yakutsk 64.85 360 P **P** **07 02 18.4 -0.3**
MKAR Makanchi Array 64.88 326 P **P** **07 02 19.0 -0.3**
comp=Z,4.3nm,0.7s,baz=122,slow=7.9,SNR=25
comp=Z,4.3nm,0.7s
MAKZ Makanchi 65.07 326 **P** **07 02 20.0 -0.5**
KSH2 Kashi 65.19 316 P **P** **07 02 23.3 +1.7**
KSH2 sP sP 07 02 33.5 +1.0
KSH2 pmax pmax
comp=Z,4.0nm,1.2s
NRN Naryn 65.94 318 P **P** **07 02 26.2 -0.4**
NRN IAmb IAmb 07 02 39.6
comp=Z,12nm,1.6s
AAK Ala-Archa 67.49 319 P **P** **07 02 36.7 +0.4**
SEY Seymchan 67.91 11 P **P** **07 02 38.4 +0.1**
comp=Z,11nm,0.8s,baz=213,slow=5.2,SNR=18
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 68.00 333 P **P** **07 02 38.6 -0.4**
comp=Z,6.9nm,0.9s,baz=104,slow=6.3,SNR=19
comp=Z,6.9nm,0.9s
GAR Garm 68.84 314 **P** **07 02 45.9 +1.1**
GAR IAmb IAmb 07 03 01.6
comp=Z,12nm,1.1s
KURBB Kurchatov Arra 69.10 328 P **P** **07 02 45.5 -0.4**
comp=Z,16nm,1.0s,baz=125,slow=5.7,SNR=29
comp=Z,16nm,1.0s
KURK Kurchatov 69.10 328 **P** **07 02 45.8 -0.2**
TIXI Tiksi 74.51 360 **P** **07 03 18.1 0.0**
TIXI IAmb IAmb 07 03 32.7
comp=Z,14nm,1.5s
BVAR Borovoye Array 74.67 327 P **P** **07 03 17.5 -1.9**
comp=Z,7.3nm,0.9s,baz=125,slow=7.4,SNR=23
comp=Z,7.3nm,0.9s
BORK Borovoye 74.72 327 **P** **07 03 19.3 -0.4**
BORK IAmb IAmb 07 03 22.5
comp=Z,8.1nm,0.9s
VNDA Vanda 76.40 173 P **P** **07 03 27.9 -1.0**
comp=Z,3.7nm,0.8s,baz=326,slow=8.4,SNR=1.7
comp=Z,3.7nm,0.8s
NRIK Noril'sk 77.69 346 P **P** **07 03 36.1 -0.1**
comp=Z,5.0nm,0.9s,baz=125,slow=7.7,SNR=7.6
comp=Z,5.0nm,0.9s
ARTI Arti 82.38 328 **P** **07 04 02.5 +0.6**
ARTI IAmb IAmb 07 04 15.9
comp=Z,7.0nm,0.8s
RAYN Ar Rayn 86.09 294 **P** **07 04 20.7 -0.8**
SLKM Skilak Lake 87.59 29 P **P** **07 04 28.2 +0.2**
ILAR Eielson Array 89.77 25 P **P** **07 04 36.4 -1.8**
comp=Z,0.4nm,0.6s,baz=261,slow=5.2,SNR=10.0
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 122.86 57 PKP **PKiKP** **07 10 37.5 +0.3**
comp=Z,0.3nm,0.6s,baz=326,slow=2.6,SNR=4.4
TORD Torodi Ar. Bea 127.88 284 PKP **PKPdf** **07 10 46.4 -0.3**
comp=Z,1.4nm,0.8s,baz=229,slow=1.7,SNR=5.1
CPUP Villa Florida 150.01 167 PKPbc **PKiKP** **07 11 33.1 +0.9**
comp=Z,2.6nm,0.7s,baz=163,slow=2.0,SNR=9.9
LPAZ La Paz 153.80 138 PKPbc **PKiKP** **07 11 42.3 +1.3**
comp=Z,1.4nm,0.8s,baz=225,slow=4.6,SNR=4.1

*IDC **08** 06:56:40.1±0.9,2.°94S×129.°98E,h0km,mb4.0/9, mbtmp4.1/11,ML4.4/2,Error ellipse: s-maj=29.2km s-min=17.7km az=76.0*
*NEIC **08** 06:56:42.2±1.2,3.°00S±0.°05×129.°95E±0.°08,h10km±1km, mb4.5/13,Error ellipse: s-maj=14.7km s-min=6.3km az=238.0*
*DJA **08** 06:56:45.1±0.6,3.°S±2.°×13.°0E±.°,h23km±6km,M4.5/25, mb4.7/7,MLv4.5/25*
ISC 08 06:56:44.0±0.5,**2.°95S**±0.°06×**129.°95E**±0.°05,**h25km**,**n47,**
σ1ş**20**/49,**mb4.1**/12,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.09**	**249**	P	**Pb**	**06 57 05.9**	**+1.7**
BNDI	**Bandanaira**	**1.57**	**182**	P	**Pb**	**06 57 13.8**	**+1.4**
KRAI	**Karang Ratu**	**1.59**	**256**	P	**Pb**	**06 57 12.6**	**-0.2**
AAI	**Ambon**	**1.90**	**247**	P	**Pb**	**06 57 17.1**	**-0.9**
FAKI	**Fak Fak**	**2.30**	**89**	Pn	**Pn**	**06 57 20.0**	**-0.4**
FAKI	**Fak Fak**	**2.30**	**89**	P	**Pn**	**06 57 21.1**	**+0.7**
FAKI				S	**Sb**	**06 57 50.3**	**-2.6**
SIJI	**Sorong**	**2.45**	**33**	Pn	**Pn**	**06 57 22.6**	**+0.2**
	56nm,0.3s,baz=250,slow=23,SNR=12						
SIJI				Sn	**Sn**	**06 57 52.5**	**+0.9**
	67nm,0.3s,baz=221,slow=23,SNR=14						
	124nm,0.2s						
SIJI	**Sorong**	**2.45**	**33**	P	**Pn**	**06 57 23.0**	**+0.6**
SWI	**Sorong**	**2.45**	**32**	P	**Pn**	**06 57 23.2**	**+0.8**
NLAI	**Namlea**	**2.86**	**264**	P	**Pn**	**06 57 30.4**	**+2.4**
KMPI	**Kaimana, Papua**	**3.82**	**101**	P	**Pn**	**06 57 42.6**	**+1.3**
SANI	**Sanana**	**4.05**	**283**	P	**Pn**	**06 57 43.2**	**-1.3**
RKPI	**Ransiki, Papua**	**4.46**	**71**	P	**Pn**	**06 57 51.0**	**+0.9**
BAKI	**Biak**	**6.40**	**74**	P	**Pn**	**06 58 18.4**	**+1.6**
LUWI	**Luwuk**	**7.42**	**285**	Pn	**Pn**	**06 58 30.2**	**-0.5**
LUWI	**Luwuk**	**7.42**	**285**	P	**Pn**	**06 58 30.2**	**-0.5**
	68nm,0.8s						
APSI	**Ampana**	**8.54**	**284**	P	**Pn**	**06 58 46.5**	**+0.4**
	50nm,0.9s						
MTN	**Manton Dam**	**9.90**	**173**	Pn	**Pn**	**06 59 05.0**	**+0.1**
TOLI2	**Tolitoli**	**10.01**	**294**	Pn	**Pn**	**06 59 06.3**	**-0.1**
KNRA	**Kununurra**	**12.71**	**185**	Pn	**Pn**	**06 59 40.9**	**-2.3**
COEN	**Coen**	**17.04**	**131**	Pn	**Pn**	**07 00 39.7**	**-1.1**
COEN				IAmb	IAmb	07 00 52.7	
	comp=Z,24nm,0.8s						
WB0	**Warramunga Arr**	**17.27**	**166**		**Pn**	**07 00 43.1**	**-0.6**
WB0				IAmb	IAmb	07 00 45.4	
	comp=Z,33nm,1.0s						
WRA	**Warramunga Arr**	**17.43**	**166**	P	**Pn**	**07 00 43.0**	**-2.6**
	comp=Z,1.8nm,0.3s,baz=355,slow=12,SNR=6.8						
	comp=Z,9.7nm,0.9s						
PMG	**Port Moresby**	**18.27**	**111**	P	**Pn**	**07 00 55.0**	**-1.0**
PMG				IAmb	IAmb	07 00 56.9	
	comp=Z,36nm,1.3s						
SBUM	**Sibu**	**18.51**	**287**	P	**P**	**07 00 57.9**	**-0.8**
AS31	**Alice Springs**	**20.95**	**170**	P	**P**	**07 01 25.4**	**+0.1**
AS31				IAmb	IAmb	07 01 27.3	
	comp=Z,26nm,1.0s						
ASAR	**Alice Springs**	**20.95**	**170**	P	**P**	**07 01 24.7**	**-0.6**
	comp=Z,7.2nm,0.8s,baz=348,slow=10,SNR=25						
CTA	**Charters Tower**	**23.32**	**138**	P	**P**	**07 01 51.0**	**+0.6**
	comp=Z,4.2nm,0.7s,baz=332,slow=12,SNR=3.2						
	comp=Z,4.2nm,0.7s						
BBOO	**Buckleboo**	**30.26**	**170**	P	**P**	**07 02 52.5**	**-0.5**
BBOO				IAmb	IAmb	07 02 53.0	
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**37.21**	**306**	P	**P**	**07 03 54.9**	**+1.3**
	comp=Z,0.8nm,0.2s,baz=130,slow=5.8,SNR=4.8						
	comp=Z,0.8nm,0.2s						
MJAR	**Matsushiro Arr**	**40.03**	**10**	P	**P**	**07 04 15.5**	**-1.6**
	comp=Z,1.3nm,0.8s,baz=194,slow=9.3,SNR=2.7						
	comp=Z,1.3nm,0.8s						
ULN	**Ulaanbaatar**	**54.42**	**341**	P	**P**	**07 06 09.6**	**+0.3**
SONM	**Songino Array**	**54.61**	**341**	P	**P**	**07 06 10.5**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=162,slow=9.3,SNR=5.3						
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**64.84**	**326**	P	**P**	**07 07 21.1**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=109,slow=8.2,SNR=7.9						
	comp=Z,1.7nm,0.9s						
ZAA0	**Zalesovo Array**	**67.95**	**333**	P	**P**	**07 07 40.2**	**-0.5**
ZAA0				IAmb	IAmb	07 07 43.7	
	comp=Z,5.6nm,1.4s						
ZALV	**Zalesovo Beam**	**67.95**	**333**	P	**P**	**07 07 41.4**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=120,slow=5.2,SNR=3.7						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**67.95**	**333**	P	**P**	**07 07 40.8**	**+0.1**
KBL	**Kabul**	**68.16**	**309**	P	**P**	**07 07 43.0**	**+0.3**
KURBB	**Kurchatov Arra**	**69.06**	**328**	P	**P**	**07 07 47.9**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=126,slow=5.4,SNR=6.2						
	comp=Z,0.9nm,0.4s						
BVAR	**Borovoye Array**	**74.63**	**327**	P	**P**	**07 08 20.5**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=109,slow=8.0,SNR=3.8						
	comp=Z,1.2nm,0.8s						
NRIK	**Noril'sk**	**77.64**	**346**	P	**P**	**07 08 36.5**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=117,slow=6.3,SNR=4.0						
	comp=Z,1.2nm,0.6s						
AB31	**Akbulak array**	**79.33**	**321**	P	**P**	**07 08 47.8**	**+0.2**
ABKAR	**Akbulak array**	**79.33**	**321**	P	**P**	**07 08 47.8**	**+0.2**
H17K	**Granite Mounta**	**84.36**	**24**	P	**P**	**07 09 15.9**	**+2.1**
L18K	**Granite Mounta**	**84.90**	**27**	P	**P**	**07 09 18.3**	**+1.7**
L18K				IAmb	IAmb	07 09 20.3	
	comp=Z,3.9nm,1.0s						
M19K	**Big River Lodg**	**85.86**	**27**	P	**P**	**07 09 23.9**	**+2.5**
TORD	**Torodi Ar. Bea**	**127.87**	**284**	PKP	**PKiKP**	**07 15 49.6**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=152,slow=0.9,SNR=1.9						

*IDC **08** 07:10:44.4±1.6,3.°10S×130.°54E,h0km,mb3.3/2, mbtmp3.3/4,ML3.0/2,MS3.8/1,Error ellipse: s-maj=63.0km s-min=22.5km az=91.0*
*DJA **08** 07:10:46.5±0.5,3.°S±4.°×13.°0E±.°,h10km±6km,M3.1/11, MLv3.1/11*
ISC 08 07:10:47.5±0.9,**3.°04S**±0.°08×**130.°12E**±0.°07,**h25km**,**n11,**
σ1ş**79**/12,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.23**	**256**	P	**Pn**	**07 11 07.5**	**-1.6**
MSAI				S	**Sn**	**07 11 23.8**	**-1.1**
BNDI	**Bandanaira**	**1.49**	**188**	P	**Pb**	**07 11 16.7**	**+2.3**
KRAI	**Karang Ratu**	**1.75**	**261**	P	**Pn**	**07 11 15.2**	**-1.0**
FAKI	**Fak Fak**	**2.13**	**87**	P	**Pb**	**07 11 26.0**	**+0.6**
SIJI	**Sorong**	**2.44**	**28**	Pn	**Pn**	**07 11 24.1**	**-1.6**
	3.9nm,0.3s,baz=248,slow=23,SNR=2.5						
SIJI				Sn	**Sn**	**07 11 53.6**	**-1.2**
	4.0nm,0.3s,baz=208,slow=23,SNR=2.0						
	11nm,0.4s						
SIJI	**Sorong**	**2.44**	**28**	P	**Pn**	**07 11 25.6**	**-0.2**
SWI	**Sorong**	**2.44**	**28**	P	**Pn**	**07 11 25.9**	**+0.1**
WRA	**Warramunga Arr**	**17.30**	**167**	P	**Pn**	**07 14 44.8**	**-2.6**
	0.1nm,0.3s,baz=347,slow=11,SNR=1.6						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**20.83**	**170**	P	**P**	**07 15 26.8**	**-0.6**
	1.4nm,0.7s,baz=348,slow=11,SNR=12						
	1.4nm,0.7s						
JNU	**Nakatsue**	**35.97**	**1**	LR	LR	07 30 43.0	
	comp=Z,160nm,21.9s,baz=240,slow=33						
MKAR	**Makanchi Array**	**65.02**	**326**	P	**P**	**07 21 28.3**	**+2.7**
	0.1nm,0.4s,baz=106,slow=5.1,SNR=1.8						
	0.1nm,0.4s						

*IDC **08** 07:20:36.6±1.2,3.°00S×129.°89E,h0km,mb3.7/5, mbtmp3.7/7,ML3.8/2,MS3.7/1,Error ellipse: s-maj=48.0km s-min=22.7km az=80.0*
*DJA **08** 07:20:40.7±0.2,3.°S±3.°×13.°0E±.°,h10km,M4.0/18,mb4.3/3, MLv3.8/18*
ISC 08 07:20:40.3±0.8,**3.°00S**±0.°06×**129.°97E**±0.°06,**h25km**,**n19,**
σ2ş**13**/20,**mb3.6**/4,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.10**	**251**	P	**Pb**	**07 21 01.4**	**+0.8**
BNDI	**Bandanaira**	**1.52**	**182**	P	**Pb**	**07 21 09.9**	**+2.1**
KRAI	**Karang Ratu**	**1.60**	**258**	P	**Pb**	**07 21 10.5**	**+1.2**
AAI	**Ambon**	**1.90**	**249**	P	**Pb**	**07 21 16.5**	**+2.2**
FAKI	**Fak Fak**	**2.28**	**88**	P	**Pn**	**07 21 17.0**	**+0.7**
SIJI	**Sorong**	**2.48**	**32**	Pn	**Pn**	**07 21 19.2**	**+0.2**
	12nm,0.3s,baz=145,slow=18,SNR=10.0						
SIJI				Sn	**Sn**	**07 21 48.2**	**-0.4**
	12nm,0.3s,baz=228,slow=23,SNR=12						
	31nm,0.2s						
SIJI	**Sorong**	**2.48**	**32**	P	**Pn**	**07 21 19.0**	**-0.1**
SWI	**Sorong**	**2.48**	**31**	P	**Pn**	**07 21 19.1**	**0.0**
NLAI	**Namlea**	**2.88**	**265**	P	**Pn**	**07 21 27.1**	**+2.5**
SANI	**Sanana**	**4.09**	**283**	P	**Pn**	**07 21 40.4**	**-0.8**
RKPI	**Ransiki, Papua**	**4.46**	**71**	P	**Pn**	**07 21 48.1**	**+1.8**
BAKI	**Biak**	**6.39**	**74**	P	**Pn**	**07 22 14.8**	**+1.9**
WRA	**Warramunga Arr**	**17.38**	**166**	P	**Pn**	**07 24 39.2**	**-2.1**
	0.4nm,0.3s,baz=349,slow=12,SNR=9.9						
WRA				S	Sn	07 27 45.8	-8.3
	0.4nm,0.7s,baz=346,slow=21,SNR=2.0						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**20.90**	**170**	P	**P**	**07 25 21.6**	**+0.5**
	15nm,0.9s,baz=348,slow=10,SNR=55						
ASAR				S	**S**	**07 29 06.2**	**-6.8**
	0.7nm,0.8s,baz=352,slow=26,SNR=4.5						
	15nm,0.9s						
LEM	**Lembang**	**22.59**	**259**	LR	LR	07 34 46.6	
	comp=Z,183nm,18.8s,baz=330,slow=38						
SONM	**Songino Array**	**54.67**	**341**	P	**P**	**07 30 07.0**	**-0.3**
	0.2nm,0.3s,baz=148,slow=8.5,SNR=2.9						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**64.90**	**326**	P	**P**	**07 31 17.3**	**-0.3**
	0.3nm,0.9s,baz=123,slow=6.0,SNR=2.0						
	0.3nm,0.9s						
KURBB	**Kurchatov Arra**	**69.11**	**328**	P	**P**	**07 31 44.4**	**+0.1**
	0.4nm,0.4s,baz=126,slow=5.6,SNR=5.4						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**74.69**	**327**	P	**P**	**07 32 18.4**	**+0.7**
	0.3nm,0.5s,baz=111,slow=7.9,SNR=1.8						
	0.3nm,0.5s						

*AEIC **08** 07:23:05.0±1.8,61.°96N±0.°01×138.°78W±0.°03,h0km±5km, Error ellipse: s-maj=2.4km s-min=1.8km az=52.0*
*ANF **08** 07:23:04.8±0.1,61.°95N×138.°80W,h0km,ML4.1/62,Error ellipse: s-maj=1.1km s-min=0.9km az=66.0*
*IDC **08** 07:23:06.4±0.8,62.°15N×138.°83W,h0km,mb3.8/10, mbtmp3.8/15,ML3.5/5,Error ellipse: s-maj=15.8km s-min=10.0km az=21.0*
*NEIC **08** 07:23:06.3±1.9,61.°97N±0.°02×138.°76W±0.°04,h10km±1km, mb4.0/11,ML3.6(AEIC),Error ellipse: s-maj=3.0km*

s-min=2.9km az=173.0
*PGC **08** 07:23:06.3-0.0,61°.96N×138°.77W,h1km,ML3.9/34,*
mb4.0(NEIC),68km northeast of Burwash Landing, Yt
Southern Yukon Territory, Canada
ISC 08 07:23:06.0±0.4,61°.96N±0'.01×138°.80W±0'.01,h10km,
n346,σ1§89/455,mb4.0/16,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
					ISC		
M29M	**Somme Creek**	**0.51**	**18**		**Pg**	**07 23 14.9**	**-1.0**
M29M	**Somme Creek**	**0.51**	**18**		**Sg**	**07 23 22.1**	**-0.5**
M29M	**Somme Creek**	**0.51**	**18**	P	**Pg**	**07 23 14.9**	**-1.0**
	baz=197,SNR=1000						
M29M				S	**Sg**	**07 23 21.9**	**-0.7**
	baz=197						
M29M	**Somme Creek**	**0.51**	**18**	P	**Pg**	**07 23 14.7**	**-1.2**
M29M				S	**Sg**	**07 23 22.2**	**-0.5**
BRWY	**Burwash Landin**	**0.60**	**191**	P	**Pg**	**07 23 16.6**	**-1.1**
BRWY				S	**Sg**	**07 23 24.9**	**-0.7**
YUK4	**Talbot Arm**	**0.62**	**173**	P	**Pg**	**07 23 15.5**	**-2.6**
	baz=348,SNR=1000						
YUK4				S	**Sg**	**07 23 23.0**	**-3.3**
	baz=348						
YUK4	**Talbot Arm**	**0.62**	**173**	P	**Pg**	**07 23 15.4**	**-2.6**
YUK4				S	**Sg**	**07 23 22.8**	**-3.5**
YUK3	**Moose Creek**	**0.81**	**257**		**Pg**	**07 23 20.1**	**-1.4**
YUK3					**Sb**	**07 23 32.5**	**-0.7**
YUK3	**Moose Creek**	**0.81**	**257**	P	**Pg**	**07 23 20.1**	**-1.4**
	baz=76,SNR=1000						
YUK3				S	**Sg**	**07 23 30.8**	**-1.3**
	baz=76						
YUK3	**Moose Creek**	**0.81**	**257**	P	**Pg**	**07 23 20.1**	**-1.4**
YUK8	**Steele Glacier**	**0.82**	**214**		**Pg**	**07 23 20.7**	**-1.1**
YUK8					**Sb**	**07 23 33.5**	**-0.2**
YUK8	**Steele Glacier**	**0.82**	**214**	P	**Pg**	**07 23 20.7**	**-1.1**
	baz=34,SNR=1000						
YUK8				S	**Sg**	**07 23 31.8**	**-0.7**
	baz=34						
YUK8	**Steele Glacier**	**0.82**	**214**	P	**Pg**	**07 23 20.7**	**-1.1**
YUK8				S	**Sb**	**07 23 32.3**	**-1.3**
YUK5	**Granite Creek**	**0.95**	**151**		**Pg**	**07 23 22.8**	**-1.5**
YUK5					**Sg**	**07 23 35.2**	**-1.3**
YUK5	**Granite Creek**	**0.95**	**151**	P	**Pg**	**07 23 22.7**	**-1.5**
YUK5				S	**Sg**	**07 23 36.0**	**-0.5**
YUK2	**White River**	**0.98**	**261**		**Pg**	**07 23 23.2**	**-1.7**
YUK2					**Sn**	**07 23 38.7**	**-1.2**
YUK2	**White River**	**0.98**	**261**	S	**Sg**	**07 23 36.9**	**-0.7**
YUK6	**Outpost Mounta**	**1.04**	**168**		**Pg**	**07 23 24.7**	**-1.4**
YUK6					**Sg**	**07 23 39.0**	**-0.7**
YUK6	**Outpost Mounta**	**1.04**	**168**	P	**Pg**	**07 23 24.8**	**-1.2**
	baz=349,SNR=1000						
YUK6				S	**Sg**	**07 23 38.9**	**-0.7**
	baz=349						
YUK6	**Outpost Mounta**	**1.04**	**168**	P	**Pg**	**07 23 24.9**	**-1.2**
YUK6				S	**Sb**	**07 23 39.6**	**-0.5**
BVCY	**Beaver Creek**	**1.07**	**296**		**Pg**	**07 23 25.1**	**-1.3**
BVCY					**Sn**	**07 23 41.4**	**-0.5**
BVCY					**Sb**	**07 23 41.6**	**+1.0**
BVCY	**Beaver Creek**	**1.07**	**296**	P	**Pg**	**07 23 24.7**	**-1.8**
	baz=114,SNR=793						
BVCY				S	**Sg**	**07 23 39.6**	**-0.7**
	baz=114						
BVCY	**Beaver Creek**	**1.07**	**296**	P	**Pg**	**07 23 25.2**	**-1.2**
M30M	**Minto, Yukon**	**1.12**	**56**		**Pb**	**07 23 26.3**	**-1.2**
M30M	**Minto, Yukon**	**1.12**	**56**		**Sg**	**07 23 41.0**	**-1.2**
M30M	**Minto, Yukon**	**1.12**	**56**	P	**Pb**	**07 23 26.0**	**-1.5**
	baz=237,SNR=1000						
M30M				S	**Sg**	**07 23 40.8**	**-1.3**
	baz=237						
M30M	**Minto, Yukon**	**1.12**	**56**	P	**Pb**	**07 23 26.1**	**-1.5**
M30M				S	**Sg**	**07 23 40.9**	**-1.3**
L29M	**L29M**	**1.19**	**15**		**Pb**	**07 23 27.4**	**-1.3**
L29M					**Sg**	**07 23 43.5**	**-0.8**
L29M	**L29M**	**1.19**	**15**	P	**Pb**	**07 23 27.4**	**-1.3**
	baz=195						
L29M				S	**Sb**	**07 23 43.3**	**-0.9**
	baz=195						
L29M	**L29M**	**1.19**	**15**	P	**Pb**	**07 23 27.2**	**-1.5**
L29M				S	**Sn**	**07 23 44.7**	**-0.3**
HYT	**Haines Junctio**	**1.30**	**151**		**Pn**	**07 23 29.1**	**-1.1**
HYT	**Haines Junctio**	**1.30**	**151**	P	**Pn**	**07 23 29.2**	**-1.1**
	baz=332,SNR=1000						
HYT				S	**Sb**	**07 23 45.8**	**-1.5**
	baz=332						
HYT	**Haines Junctio**	**1.30**	**151**	P	**Pn**	**07 23 29.1**	**-1.1**
HYT				S	**Sb**	**07 23 45.9**	**-1.5**
O28M	**Mount Upton**	**1.37**	**210**		**Pn**	**07 23 30.5**	**-0.8**
O28M	**Mount Upton**	**1.37**	**210**	P	**Pn**	**07 23 30.4**	**-1.0**
	baz=29						
O28M				S	**Sg**	**07 23 49.9**	**-0.1**
	baz=29						
O28M	**Mount Upton**	**1.37**	**210**	P	**Pn**	**07 23 30.7**	**-0.7**
O28M				S	**Sg**	**07 23 50.1**	**+0.1**
YUK7	**Dusty Glacier**	**1.47**	**167**		**Pb**	**07 23 32.4**	**-1.1**
YUK7					**Sg**	**07 23 52.1**	**-1.2**
YUK7	**Dusty Glacier**	**1.47**	**167**	P	**Pb**	**07 23 32.1**	**-0.6**
YUK7				S	**Sb**	**07 23 51.9**	**-0.4**
M27K	**Edge Creek, AK**	**1.50**	**287**		**Pb**	**07 23 32.9**	**-1.0**
M27K	**Edge Creek, AK**	**1.50**	**287**		**Sb**	**07 23 52.8**	**-0.2**
M27K	**Edge Creek, AK**	**1.50**	**287**	P	**Pn**	**07 23 32.3**	**-0.7**
	baz=104,SNR=1000						
M27K				S	**Sb**	**07 23 52.5**	**-0.5**
	baz=104						
N31M	**Braeburn, Yuko**	**1.52**	**107**		**Pb**	**07 23 33.2**	**-1.0**
N31M	**Braeburn, Yuko**	**1.52**	**107**		**Sg**	**07 23 53.5**	**-1.2**
N31M	**Braeburn, Yuko**	**1.52**	**107**	P	**Pb**	**07 23 33.0**	**-1.2**
	baz=290,SNR=1000						
N31M				S	**Sg**	**07 23 53.6**	**-1.1**
	baz=290						
N31M	**Braeburn, Yuko**	**1.52**	**107**	P	**Pb**	**07 23 33.0**	**-1.2**
N31M				S	**Sg**	**07 23 54.1**	**-0.6**
LOGN	**Logan Glacier**	**1.56**	**224**		**Pb**	**07 23 34.2**	**-0.7**
LOGN	**Logan Glacier**	**1.56**	**224**	Pn	**Pb**	**07 23 33.8**	**-1.2**
LOGN				Sn	**Sg**	**07 23 56.4**	**+0.4**
CTGM	**Chitina Glacie**	**1.57**	**232**		**Pb**	**07 23 34.0**	**-1.2**
CTGM	**Chitina Glacie**	**1.57**	**232**	Pn	**Pb**	**07 23 34.1**	**-1.2**
CTGM				Sn	**Sg**	**07 23 56.9**	**+0.4**
CTG	**Chitna Glacier**	**1.58**	**232**	P	**Pn**	**07 23 33.8**	**-0.3**
	baz=50,SNR=736						
CTG				S	**Sb**	**07 23 54.8**	**-0.4**
	baz=50						
BARN	**Barnard Glacie**	**1.64**	**238**		**Pg**	**07 23 36.2**	**-1.2**
O29M	**Mount Kennedy**	**1.67**	**176**		**Pb**	**07 23 35.7**	**-1.1**
O29M	**Mount Kennedy**	**1.67**	**176**	Pb	**Pb**	**07 23 36.1**	**-0.7**
	baz=357						
O29M				S	**Sb**	**07 23 57.8**	**-0.2**
	baz=357						
O29M	**Mount Kennedy**	**1.67**	**176**	Pn	**Pb**	**07 23 35.6**	**-1.2**
O29M				Sn	**Sg**	**07 23 58.7**	**-0.9**
O30N	**Mendenhall**	**1.77**	**131**		**Pb**	**07 23 36.8**	**-1.7**
O30N	**Mendenhall**	**1.77**	**131**	P	**Pn**	**07 23 36.4**	**-0.3**
	baz=314,SNR=1000						
O30N				S	**Sb**	**07 24 00.6**	**-0.2**
	baz=314						
O30N	**Mendenhall**	**1.77**	**131**	Pn	**Pn**	**07 23 36.3**	**-0.3**
O30N				Sn	**Sb**	**07 24 00.5**	**-0.3**
BCAR	**Beaver Creek A**	**1.77**	**310**		**Pn**	**07 23 36.6**	**-0.1**
BC01	**Beaver Creek A**	**1.79**	**310**		**Pn**	**07 23 36.3**	**-0.6**
L27K	**Beaver Creek,**	**1.79**	**310**	P	**Pn**	**07 23 36.4**	**-0.5**
	baz=127						
L27K				S	**Sb**	**07 24 00.4**	**-0.8**
	baz=127						
L27K	**Beaver Creek,**	**1.79**	**310**	Pn	**Pn**	**07 23 36.5**	**-0.4**
L27K				Sn	**Sg**	**07 24 01.8**	**-1.5**
GRNC	**Granite Creek**	**1.88**	**230**		**Pb**	**07 23 39.1**	**-1.5**
GRNC	**Granite Creek**	**1.88**	**230**	Pn	**Pb**	**07 23 39.0**	**-1.5**
GRNC				Sn	**Sb**	**07 24 04.0**	**-0.1**
TABL	**Table Mountain**	**1.90**	**218**		**Pb**	**07 23 39.4**	**-1.4**
TABL	**Table Mountain**	**1.90**	**218**	Pn	**Pb**	**07 23 39.6**	**-1.2**
TABL				Sn	**Sb**	**07 24 04.7**	**0.0**
PTPK	**Patty Peak**	**1.92**	**248**		**Pb**	**07 23 39.3**	**-1.8**
PTPK	**Patty Peak**	**1.92**	**248**	Pn	**Pb**	**07 23 39.8**	**-1.3**
BALM	**Baldy**	**1.94**	**243**		**Pb**	**07 23 39.9**	**-1.5**
BALM	**Baldy**	**1.94**	**243**	Pn	**Pb**	**07 23 40.4**	**-1.0**
BALM				Sn	**Sb**	**07 24 05.7**	**+0.1**
K29M	**Barlow Dome**	**1.98**	**17**	P	**Pn**	**07 23 39.7**	**+0.1**
	baz=198						
K29M				Sb	**Sg**	**07 24 08.4**	**-1.1**
	baz=198						
K29M	**Barlow Dome**	**1.98**	**17**	Pn	**Pn**	**07 23 39.9**	**+0.2**
K29M				Sn	**Sb**	**07 24 06.2**	**-0.6**
KIAG	**Kiagna River**	**2.00**	**240**		**Pn**	**07 23 40.2**	**+0.2**
KIAG	**Kiagna River**	**2.00**	**240**	Pn	**Pb**	**07 23 40.7**	**-1.8**
KIAG				Sn	**Sb**	**07 24 07.0**	**-0.5**
PCA	**Pinnacle**	**2.00**	**201**		**Pb**	**07 23 41.2**	**-1.3**
PCA	**Pinnacle**	**2.00**	**201**	Pn	**Pb**	**07 23 40.9**	**-1.6**
PCA				Sn	**Sb**	**07 24 06.7**	**-0.7**
PINM	**Pinnacle**	**2.00**	**201**	Pb	**Pb**	**07 23 41.5**	**-1.0**
	baz=20,SNR=227						
PINM				Sg	**Sg**	**07 24 10.8**	**+0.6**
	baz=20						
M26K	**Nabesna, AK**	**2.02**	**284**		**Pn**	**07 23 39.7**	**-0.4**
M26K	**Nabesna, AK**	**2.02**	**284**	P	**Pn**	**07 23 39.9**	**-0.2**
	baz=101						
M26K				Sb	**Sg**	**07 24 09.0**	**-1.7**
	baz=101						
P30M	**Million Dollar**	**2.05**	**153**	P	**Pn**	**07 23 40.5**	**-0.1**
	baz=335						
P30M				Sb	**Sg**	**07 24 10.3**	**-1.5**
	baz=335						
P30M	**Million Dollar**	**2.05**	**153**	Pn	**Pb**	**07 23 41.2**	**-2.2**
P30M				Sn	**Sb**	**07 24 07.1**	**-1.8**
BCPM	**Bancas Point**	**2.06**	**192**		**Pb**	**07 23 41.5**	**-1.8**
RKAV	**Rock Avalanche**	**2.08**	**218**		**Pb**	**07 23 41.7**	**-2.1**
RKAV	**Rock Avalanche**	**2.08**	**218**	Pn	**Pb**	**07 23 42.0**	**-1.8**
RKAV				Sn	**Sb**	**07 24 08.3**	**-1.3**
M31M	**Drury Creek, Y**	**2.09**	**81**		**Pn**	**07 23 40.3**	**-0.8**
M31M	**Drury Creek, Y**	**2.09**	**81**	P	**Pn**	**07 23 41.0**	**-0.1**
	baz=265,SNR=248						
M31M				Sb	**Sg**	**07 24 11.5**	**-1.5**
	baz=265						
M31M	**Drury Creek, Y**	**2.09**	**81**	Pn	**Pn**	**07 23 41.0**	**-0.1**
M31M				Sn	**Sn**	**07 24 07.7**	**+0.6**
MCARA	**McCarthy VSAT**	**2.10**	**256**		**Pb**	**07 23 41.9**	**-2.2**
MCARA	**McCarthy VSAT**	**2.10**	**256**	P	**Pn**	**07 23 41.2**	**+0.1**
	baz=72,SNR=510						
MCARA				Sb	**Sg**	**07 24 11.7**	**-1.5**
	baz=72						
MCARA	**McCarthy VSAT**	**2.10**	**256**	Pn	**Pb**	**07 23 42.3**	**-1.8**
MAYO	**Mayo, Yukon**	**2.12**	**38**		**Pn**	**07 23 41.6**	**+0.2**
MAYO	**Mayo, Yukon**	**2.12**	**38**	P	**Pn**	**07 23 41.6**	**+0.2**
	baz=220,SNR=31						
MAYO				S	**Sb**	**07 24 08.9**	**-1.8**
	baz=220						
MAYO	**Mayo, Yukon**	**2.12**	**38**	Pn	**Pn**	**07 23 41.3**	**-0.1**
MAYO				Sn	**Sb**	**07 24 08.6**	**-2.1**
BAGL	**Bagley Icefiel**	**2.17**	**229**		**Pb**	**07 23 43.0**	**-2.2**
ISLE	**Juniper Island**	**2.19**	**233**		**Pb**	**07 23 44.0**	**-1.6**
TGL	**Tana Glacier**	**2.29**	**240**		**Pb**	**07 23 45.5**	**-1.9**
WHY	**Whitehorse**	**2.30**	**123**		**Pn**	**07 23 44.4**	**+0.4**
WHY	**Whitehorse**	**2.30**	**123**	P	**Pn**	**07 23 43.4**	**-0.6**
	baz=306,SNR=471						
WHY				Sb	**Sg**	**07 24 17.4**	**-2.4**
	baz=306						
WHY	**Whitehorse**	**2.30**	**123**	Pn	**Pn**	**07 23 44.3**	**+0.3**
WHY				Sg	**Sg**	**07 24 17.9**	**-1.8**
VRDI	**Verde Repeater**	**2.34**	**254**		**Pn**	**07 23 45.6**	**+0.9**
MESA	**MESA**	**2.35**	**222**		**Pn**	**07 23 45.9**	**+1.0**
MESA	**MESA**	**2.35**	**222**	Pb	**Pb**	**07 23 46.8**	**-1.7**
	baz=39,SNR=61						
MESA				Sb	**Sb**	**07 24 18.8**	**+1.1**
	baz=39						
MESA	**MESA**	**2.35**	**222**	Pn	**Pb**	**07 23 46.2**	**-2.4**
L26K	**Log Cabin Wild**	**2.37**	**299**		**Pn**	**07 23 44.8**	**-0.1**
L26K	**Log Cabin Wild**	**2.37**	**299**	P	**Pn**	**07 23 44.3**	**-0.6**
	baz=115,SNR=58						
L26K				Sb	**Sg**	**07 24 19.5**	**-2.3**
	baz=115						
CRQE	**Cirque**	**2.40**	**241**	Pb	**Pb**	**07 23 47.8**	**-1.4**
	baz=58						
CRQE				Sb	**Sb**	**07 24 19.6**	**+0.7**
	baz=58						
CRQM	**Cirque**	**2.41**	**242**		**Pb**	**07 23 47.4**	**-2.2**
GLB	**Gilahina Butte**	**2.44**	**260**		**Pn**	**07 23 46.7**	**+0.8**
WAX	**Waxell Ridge**	**2.48**	**234**		**Pb**	**07 23 48.1**	**-2.5**
MENT	**Mentasta**	**2.49**	**295**		**Pn**	**07 23 46.5**	**0.0**
J29N	**Klondike Camp**	**2.51**	**6**		**Pn**	**07 23 47.2**	**+0.3**
J29N	**Klondike Camp**	**2.51**	**6**	P	**Pn**	**07 23 47.4**	**+0.4**
	baz=186,SNR=25						
J29N				Sb	**Sb**	**07 24 23.6**	**+1.4**
	baz=186						
FARO	**Faro, Yukon**	**2.58**	**82**	Pn	**Pn**	**07 23 47.9**	**+0.2**
WACK	**Wrangell Chich**	**2.61**	**273**		**Pn**	**07 23 48.5**	**+0.1**
KHIT	**Khitrov Hills**	**2.64**	**237**		**Pb**	**07 23 51.5**	**-1.8**
N25K	**Chitina, Valde**	**2.78**	**265**		**Pn**	**07 23 51.4**	**+0.8**
N25K	**Chitina, Valde**	**2.78**	**265**	P	**Pn**	**07 23 51.1**	**+0.6**
	baz=80						
N25K				Sb	**Sb**	**07 24 30.3**	**+0.6**
	baz=80						
N25K	**Chitina, Valde**	**2.78**	**265**	Pn	**Pn**	**07 23 51.9**	**+1.4**
J30M	**Hart River**	**2.85**	**22**	P	**Pn**	**07 23 52.3**	**+0.7**
	baz=204						
J30M				Sb	**Sg**	**07 24 34.2**	**-3.2**
	baz=204						
J30M	**Hart River**	**2.85**	**22**	Pn	**Pn**	**07 23 52.3**	**+0.7**
N32M	**Quiet Lake**	**2.86**	**104**	P	**Pn**	**07 23 51.7**	**0.0**
	baz=289						
N32M				Sb	**Sg**	**07 24 34.8**	**-2.8**
	baz=289						
N32M	**Quiet Lake**	**2.86**	**104**	Pn	**Pn**	**07 23 51.6**	**0.0**
N32M				Sg	**Sg**	**07 24 34.5**	**-3.1**
DOT	**Dot Lake**	**2.95**	**307**		**Pn**	**07 23 52.0**	**-0.8**
DOT	**Dot Lake**	**2.95**	**307**	Pn	**Pn**	**07 23 53.3**	**+0.5**
DOT				Sg	**Sg**	**07 24 39.1**	**-1.5**
BMRM	**Bremner River**	**2.96**	**253**		**Pn**	**07 23 54.2**	**+1.2**
BMRM	**Bremner River**	**2.96**	**253**	P	**Pn**	**07 23 53.6**	**+0.6**
	baz=68						
BMRM				S	**Sn**	**07 24 29.1**	**+0.5**
	baz=68						
HARP	**HAARP**	**3.01**	**281**	P	**Pn**	**07 23 53.7**	**0.0**
	baz=96						
HARP				Sb	**Sg**	**07 24 39.2**	**-3.4**
	baz=96						
SKAG	**Skagway**	**3.04**	**144**		**Pn**	**07 23 54.0**	**0.0**
SKAG	**Skagway**	**3.04**	**144**	Pb	**Pb**	**07 24 00.5**	**+0.5**
	baz=328						
SKAG				Sb	**Sg**	**07 24 40.5**	**-2.8**
	baz=328						
SUCK	**Suckling Hills**	**3.08**	**234**		**Pn**	**07 23 56.4**	**+1.8**
SCRK	**Sand Creek**	**3.11**	**313**		**Pn**	**07 23 55.1**	**-0.1**
SCRK	**Sand Creek**	**3.11**	**313**	P	**Pn**	**07 23 55.1**	**-0.1**
	baz=128,SNR=220						
SCRK				Sb	**Sg**	**07 24 42.6**	**-3.2**
	baz=128						
GOAT	**Goat Mountain**	**3.18**	**247**		**Pn**	**07 23 56.6**	**+0.6**
RAGM	**Ragged Mountai**	**3.25**	**244**		**Pn**	**07 23 57.3**	**+0.2**
PAX	**Paxson**	**3.26**	**291**		**Pn**	**07 23 57.4**	**+0.3**
PAX	**Paxson**	**3.26**	**291**	P	**Pn**	**07 23 57.5**	**+0.3**
	baz=105						
PAX				Sb	**Sb**	**07 24 45.8**	**+2.2**
	baz=105						
PAX	**Paxson**	**3.26**	**291**	Pn	**Pn**	**07 23 57.8**	**+0.6**
RIDG	**Independent Ri**	**3.30**	**305**		**Pn**	**07 23 57.3**	**-0.3**
RIDG	**Independent Ri**	**3.30**	**305**	P	**Pn**	**07 23 57.3**	**-0.3**
	baz=120						
RIDG				Sb	**Sb**	**07 24 47.2**	**+2.6**
	baz=120						
J26L	**Joseph Creek**	**3.34**	**322**		**Pn**	**07 23 58.5**	**+0.2**
J26L	**Joseph Creek**	**3.34**	**322**	P	**Pn**	**07 23 58.2**	**0.0**
	baz=138						
J26L				Sb	**Sb**	**07 24 48.5**	**+2.6**
	baz=138						
P33M	**Teslin, Yukon**	**3.40**	**118**		**Pn**	**07 23 59.4**	**+0.3**
P33M	**Teslin, Yukon**	**3.40**	**118**	P	**Pn**	**07 23 58.9**	**-0.2**
	baz=304,SNR=108						
P33M				Sb	**Sb**	**07 24 49.8**	**+2.2**
	baz=304						
P33M	**Teslin, Yukon**	**3.40**	**118**	Pn	**Pn**	**07 23 59.2**	**+0.2**
P33M				Sg	**Sb**	**07 24 50.0**	**+2.5**
I29M	**Ogilvie Camp,**	**3.42**	**3**		**Pn**	**07 23 59.5**	**+0.2**
I29M	**Ogilvie Camp,**	**3.42**	**3**	P	**Pn**	**07 24 00.2**	**+0.9**
	baz=184,SNR=40						
I29M				S	**Sn**	**07 24 42.0**	**+2.1**
	baz=184						
I29M	**Ogilvie Camp,**	**3.42**	**3**	Pn	**Pn**	**07 24 00.1**	**+0.9**
KLU	**Klutina**	**3.42**	**265**		**Pn**	**07 24 01.1**	**+1.7**
KLU	**Klutina**	**3.42**	**265**	P	**Pn**	**07 24 00.8**	**+1.4**
	baz=79						
KLU				S	**Sn**	**07 24 42.2**	**+2.2**
	baz=79						
DIV	**Divide**	**3.44**	**259**		**Pn**	**07 24 00.6**	**+1.0**
I30M	**Mount Dempster**	**3.45**	**17**	P	**Pn**	**07 24 00.9**	**+1.1**
	baz=199						
I30M				Sb	**Sb**	**07 24 51.0**	**+1.9**
	baz=199						
I30M	**Mount Dempster**	**3.45**	**17**	Pn	**Pn**	**07 24 00.4**	**+0.6**
P32M	**Atlin**	**3.45**	**131**		**Pn**	**07 23 59.6**	**-0.1**
P32M	**Atlin**	**3.45**	**131**	P	**Pn**	**07 23 59.9**	**+0.2**
	baz=316,SNR=31						
P32M				Sb	**Sb**	**07 24 51.9**	**+2.9**
	baz=316						
P32M	**Atlin**	**3.45**	**131**	Sg	**Sg**	**07 24 52.6**	**-4.0**
M24K	**Tolsona, Glenn**	**3.48**	**276**		**Pn**	**07 24 02.1**	**+1.9**
M24K	**Tolsona, Glenn**	**3.48**	**276**	P	**Pn**	**07 24 01.0**	**+0.9**
	baz=89						
I28M	**Miner Creek**	**3.54**	**352**	P	**Pn**	**07 24 01.3**	**+0.3**
	baz=171						
I28M	**Miner Creek**	**3.54**	**352**	Pn	**Pn**	**07 24 01.7**	**+0.7**
EYAK	**Cordova Ski Ar**	**3.64**	**250**	Pn	**Pn**	**07 24 04.3**	**+2.0**
EYAK	**Cordova Ski Ar**	**3.64**	**250**	Pb	**Pb**	**07 24 09.4**	**-0.9**
	baz=64						
K24K	**Donnelly Dome**	**3.69**	**303**		**Pn**	**07 24 02.8**	**-0.3**
K24K	**Donnelly Dome**	**3.69**	**303**	P	**Pn**	**07 24 03.1**	**+0.1**
	baz=117						
K24K				Sb	**Sg**	**07 25 00.1**	**-4.3**
	baz=117						
I27K	**Kandik River**	**3.86**	**342**		**Pn**	**07 24 05.0**	**-0.4**
I27K	**Kandik River**	**3.86**	**342**	P	**Pn**	**07 24 05.8**	**+0.3**
	baz=160						
I27K				Sb	**Sb**	**07 25 04.5**	**+3.6**
	baz=160						
BESE	**Bessie Mountai**	**3.92**	**148**	Pn	**Pn**	**07 24 06.7**	**+0.4**
J25K	**Salcha River,**	**3.98**	**315**	P	**Pn**	**07 24 07.0**	**0.0**
	baz=129						
J25K				Sb	**Sg**	**07 25 08.8**	**-4.9**
	baz=129						
SCM	**Sheep Creek Mo**	**4.04**	**272**		**Pn**	**07 24 09.3**	**+1.5**
SCM	**Sheep Creek Mo**	**4.04**	**272**	P	**Pn**	**07 24 08.2**	**+0.3**
	baz=84						
DHY	**Denali Highway**	**4.13**	**289**		**Pn**	**07 24 09.4**	**+0.3**
DHY	**Denali Highway**	**4.13**	**289**	P	**Pn**	**07 24 09.5**	**+0.3**
	baz=102						
S31K	**Pelican**	**4.22**	**161**		**Pn**	**07 24 10.7**	**+0.5**
S31K	**Pelican**	**4.22**	**161**	P	**Pn**	**07 24 10.7**	**+0.5**
	baz=343,SNR=29						
WAT6	**Susitna Watana**	**4.22**	**282**		**Pn**	**07 24 11.4**	**+0.9**
WAT6	**Susitna Watana**	**4.22**	**282**	P	**Pn**	**07 24 12.7**	**+2.2**
	baz=94						
M23K	**Glacier View**	**4.23**	**272**		**Pn**	**07 24 11.5**	**+1.1**
M23K	**Glacier View**	**4.23**	**272**	P	**Pn**	**07 24 12.0**	**+1.6**
	baz=84						
R32K	**Eaglecrest**	**4.27**	**148**	Pb	**Pb**	**07 24 21.5**	**+0.4**
	baz=332						
H31M	**Peel River**	**4.33**	**25**	P	**Pn**	**07 24 12.6**	**+0.8**
	baz=209						
H31M				Sb	**Sb**	**07 25 18.6**	**+4.2**
	baz=209						
H31M	**Peel River**	**4.33**	**25**	Pn	**Pn**	**07 24 12.3**	**+0.5**
H31M				Sg	**Sg**	**07 25 19.2**	**-5.6**
Q32M	**Nakina River**	**4.42**	**130**	P	**Pn**	**07 24 13.8**	**+0.6**
	baz=316						
Q32M				Sb	**Sb**	**07 25 20.1**	**+3.0**
	baz=316						
Q32M	**Nakina River**	**4.42**	**130**	Pn	**Pn**	**07 24 13.4**	**+0.2**
Q32M				Sg	**Sb**	**07 25 21.0**	**+4.0**
HDA	**Harding Lake**	**4.43**	**307**		**Pn**	**07 24 12.1**	**-1.1**
HDA	**Harding Lake**	**4.43**	**307**	P	**Pn**	**07 24 12.6**	**-0.5**
	baz=120						
HDA				Sb	**Sg**	**07 25 22.8**	**-5.3**
	baz=120						
H27K	**Steamboat Moun**	**4.45**	**346**	P	**Pn**	**07 24 14.6**	**+1.1**
	baz=163						
H27K				Sb	**Sg**	**07 25 22.8**	**-5.9**
	baz=163						
H27K	**Steamboat Moun**	**4.45**	**346**	Pn	**Pn**	**07 24 14.0**	**+0.5**
ILAR	**Eielson Array**	**4.60**	**311**	Pn	**Pn**	**07 24 14.6**	**-0.9**
	1.3nm,0.3s,baz=131,slow=12,SNR=154						
ILAR				Pg	**Pb**	**07 24 29.6**	**+2.9**
	3.1nm,0.3s,baz=116,slow=17,SNR=26						
ILAR				Lg	Lg	07 25 27.9	
	16nm,0.3s,baz=114,slow=26,SNR=9.7						
	4.3nm,0.5s						
ILAR	**Eielson Array**	**4.60**	**311**		**Pn**	**07 24 14.2**	**-1.3**
WAT1	**Susitna Watana**	**4.62**	**285**		**Pn**	**07 24 15.5**	**-0.3**
WAT1	**Susitna Watana**	**4.62**	**285**	P	**Pn**	**07 24 17.1**	**+1.3**
	baz=96						
KNK	**Knik Glacier**	**4.63**	**267**		**Pn**	**07 24 17.5**	**+1.6**
KNK	**Knik Glacier**	**4.63**	**267**	P	**Pn**	**07 24 17.9**	**+2.0**
	baz=79						
R33M	**Jennings River**	**4.63**	**120**	P	**Pn**	**07 24 15.7**	**-0.3**
	baz=307						
R33M				Sb	**Sb**	**07 25 27.9**	**+4.8**
	baz=307						
R33M	**Jennings River**	**4.63**	**120**	Pn	**Pn**	**07 24 16.0**	**-0.1**
R33M				Sg	**Sg**	**07 25 28.2**	**-6.4**
PRP	**Porcupine Dome**	**4.65**	**323**		**Pn**	**07 24 16.8**	**+0.5**

F28M				Sb	**Sb**	**07 26 00.2**	**+6.7**	
	baz=175							
F28M	**Old Crow**	**5.69**	**356**	Pn	**Pn**	**07 24 30.7**	**+0.2**	
I23K	**Minto, Yukon-K**	**5.70**	**309**		**Pn**	**07 24 29.4**	**-1.1**	
I23K	**Minto, Yukon-K**	**5.70**	**309**	P	**Pn**	**07 24 29.9**	**-0.6**	
	baz=119							
I23K				Sb	**Sg**	**07 26 01.5**	**-7.1**	
	baz=119							
SUA	**Susitna One**	**5.70**	**270**		**Pn**	**07 24 32.3**	**+1.6**	
SUA	**Susitna One**	**5.70**	**270**	P	**Pn**	**07 24 32.3**	**+1.6**	
	baz=80							
SLKM	**Skilak Lake**	**5.71**	**260**		**Pn**	**07 24 32.1**	**+1.4**	
KTH	**Kantishna Hill**	**5.79**	**291**		**Pn**	**07 24 34.6**	**+2.7**	
F30M	**Barrier River**	**5.82**	**11**	P	**Pn**	**07 24 32.8**	**+0.6**	
	baz=194							
F30M	**Barrier River**	**5.82**	**11**	Pn	**Pn**	**07 24 32.2**	**0.0**	
F31M	**Tsiigehtchic**	**5.91**	**19**		**Pn**	**07 24 32.6**	**-0.8**	
F31M	**Tsiigehtchic**	**5.91**	**19**	P	**Pn**	**07 24 33.5**	**+0.1**	
	baz=204,SNR=55							
F31M	**Tsiigehtchic**	**5.91**	**19**	Pn	**Pn**	**07 24 33.1**	**-0.3**	
SKT	**Skwentna**	**6.00**	**276**		**Pn**	**07 24 36.2**	**+1.5**	
SKT	**Skwentna**	**6.00**	**276**	P	**Pn**	**07 24 36.7**	**+1.9**	
	baz=85							
BMAR	**Burnt Mountain**	**6.02**	**338**		**Pn**	**07 24 35.0**	**0.0**	
G24K	**Hadweenzic Riv**	**6.06**	**325**	P	**Pn**	**07 24 36.5**	**+0.9**	
	baz=138							
H23K	**Yukon River**	**6.12**	**314**	P	**Pn**	**07 24 36.0**	**-0.4**	
	baz=124							
F26K	**Sheenjek River**	**6.19**	**341**	P	**Pn**	**07 24 38.1**	**+0.8**	
	baz=156							
F26K	**Sheenjek River**	**6.19**	**341**	Pn	**Pn**	**07 24 38.3**	**+1.0**	
PPLA	**Purkeypile**	**6.29**	**284**		**Pn**	**07 24 40.0**	**+1.2**	
PPLA	**Purkeypile**	**6.29**	**284**	P	**Pn**	**07 24 40.3**	**+1.5**	
	baz=93							
F25K	**Christian Rive**	**6.36**	**336**	P	**Pn**	**07 24 40.2**	**+0.5**	
	baz=149							
F25K	**Christian Rive**	**6.36**	**336**	Pn	**Pn**	**07 24 40.4**	**+0.7**	
E29M	**Blow River**	**6.47**	**3**	P	**Pn**	**07 24 41.6**	**+0.5**	
	baz=184							
E29M	**Blow River**	**6.47**	**3**	Pn	**Pn**	**07 24 41.2**	**+0.1**	
T35M	**Bob Quinn**	**6.62**	**135**		**Pn**	**07 24 43.9**	**+0.6**	
T35M	**Bob Quinn**	**6.62**	**135**	P	**Pn**	**07 24 44.3**	**+1.0**	
	baz=323							
T35M	**Bob Quinn**	**6.62**	**135**	Pn	**Pn**	**07 24 44.3**	**+1.0**	
E28M	**Babbage River**	**6.68**	**358**	P	**Pn**	**07 24 43.8**	**-0.2**	
	baz=177							
E28M	**Babbage River**	**6.68**	**358**	Pn	**Pn**	**07 24 44.0**	**0.0**	
RDT	**Redoubt**	**6.71**	**264**		**Pn**	**07 24 44.3**	**-0.1**	
I21K	**Tanana**	**6.71**	**305**		**Pn**	**07 24 44.5**	**+0.1**	
I21K	**Tanana**	**6.71**	**305**	P	**Pn**	**07 24 44.0**	**-0.4**	
	baz=113							
INK	**Inuvik**	**6.75**	**17**	Pn	**Pn**	**07 24 43.5**	**-1.4**	
	1.2nm,0.3s,baz=196,slow=16,SNR=29							
INK				Sn	**Sn**	**07 25 59.2**	**-2.4**	
	0.8nm,0.3s,baz=262,slow=29,SNR=4.1							
INK				Lg	Lg	07 26 25.8		
	0.7nm,0.3s,baz=258,slow=23,SNR=3.4							
	3.6nm,0.5s							
INK	**Inuvik**	**6.75**	**17**		**Pn**	**07 24 43.8**	**-1.0**	
INK	**Inuvik**	**6.75**	**17**	P	**Pn**	**07 24 44.1**	**-0.8**	
	baz=202,SNR=20							
INK	**Inuvik**	**6.75**	**17**	Pn	**Pn**	**07 24 44.2**	**-0.6**	
M20K	**Styx River**	**6.77**	**276**	P	**Pn**	**07 24 44.7**	**-0.6**	
	baz=83							
H22K	**Ishtalitna Cre**	**6.80**	**311**	P	**Pn**	**07 24 45.8**	**+0.2**	
	baz=120							
G23K	**Bananza Creek**	**6.81**	**319**	P	**Pn**	**07 24 45.9**	**+0.1**	
	baz=129							
E25K	**Arctic Village**	**6.81**	**338**		**Pn**	**07 24 46.4**	**+0.5**	
E25K	**Arctic Village**	**6.81**	**338**	P	**Pn**	**07 24 46.2**	**+0.4**	
	baz=152,SNR=26							
E25K	**Arctic Village**	**6.81**	**338**	Pn	**Pn**	**07 24 46.5**	**+0.7**	
RDSO	**Redoubt South**	**6.90**	**264**		**Pn**	**07 24 47.4**	**+0.1**	
K20K	**Telida**	**7.17**	**288**		**Pn**	**07 24 52.2**	**+1.4**	
WRGLY	**Wrigley**	**7.19**	**73**		**Pn**	**07 24 51.5**	**+0.5**	
COLD	**Coldfoot**	**7.20**	**322**		**Pn**	**07 24 51.1**	**0.0**	
COLD	**Coldfoot**	**7.20**	**322**	P	**Pn**	**07 24 50.9**	**-0.2**	
	baz=132							
COLD	**Coldfoot**	**7.20**	**322**	Pn	**Pn**	**07 24 52.0**	**+0.9**	
H21K	**Melozitna Rive**	**7.21**	**307**		**Pn**	**07 24 51.1**	**-0.2**	
H21K	**Melozitna Rive**	**7.21**	**307**	P	**Pn**	**07 24 50.9**	**-0.4**	
	baz=114							
M19K	**Big River Lodg**	**7.36**	**276**	P	**Pn**	**07 24 52.9**	**-0.4**	
	baz=83							
D27M	**Malcolm River**	**7.37**	**354**	P	**Pn**	**07 24 53.7**	**+0.3**	
	baz=172							
D27M	**Malcolm River**	**7.37**	**354**	Pn	**Pn**	**07 24 54.0**	**+0.5**	
KOTAN	**Kotaneelee Air**	**7.39**	**98**	P	**Pn**	**07 24 53.7**	**-0.1**	
	baz=291							
KOTAN	**Kotaneelee Air**	**7.39**	**98**	Pn	**Pn**	**07 24 54.0**	**+0.2**	
D28M	**Stokes Point**	**7.40**	**0**	P	**Pn**	**07 24 55.0**	**+1.2**	
	baz=180							
D28M	**Stokes Point**	**7.40**	**0**	Pn	**Pn**	**07 24 54.7**	**+0.9**	
E23K	**Chandalar**	**7.63**	**328**	P	**Pn**	**07 24 58.8**	**+1.6**	
	baz=138							
G21K	**Allakaket**	**7.86**	**312**	P	**Pn**	**07 25 00.4**	**+0.2**	
	baz=119							
J19K	**Poorman**	**7.92**	**292**	Pn	**Pn**	**07 25 02.2**	**+1.1**	
Q19K	**Cape Douglas,**	**7.94**	**254**	P	**Pn**	**07 25 02.5**	**+1.1**	
	baz=61							
C27K	**Jago River**	**7.95**	**347**	P	**Pn**	**07 25 02.8**	**+1.4**	
	baz=163							
C27K	**Jago River**	**7.95**	**347**	Pn	**Pn**	**07 25 03.1**	**+1.6**	
H20K	**Anotleneega Mo**	**7.96**	**303**	P	**Pn**	**07 25 02.3**	**+0.8**	
	baz=109							
D25K	**Kavik River**	**8.02**	**340**	P	**Pn**	**07 25 04.1**	**+1.8**	
	baz=153							
D25K	**Kavik River**	**8.02**	**340**	Pn	**Pn**	**07 25 04.0**	**+1.6**	
KDAK	**Kodiak Island**	**8.10**	**245**	Pn	**Pn**	**07 25 03.5**	**+0.1**	
	0.4nm,0.3s,baz=18,slow=3.7,SNR=8.4							
KDAK				Sn	**Sn**	**07 26 30.6**	**-4.2**	
	0.1nm,0.3s,baz=92,slow=22,SNR=2.3							
	6.1nm,0.9s							
M18K	**Stony River**	**8.10**	**274**	P	**Pn**	**07 25 04.2**	**+0.8**	
	baz=79							
F21K	**Alatna River**	**8.21**	**316**	P	**Pn**	**07 25 05.6**	**+0.5**	
	baz=123							
FNSB	**Fort Nelson**	**8.56**	**105**	Pn	**Pn**	**07 25 10.2**	**+0.4**	
M17K	**Holitna River**	**8.87**	**275**	P	**Pn**	**07 25 14.3**	**+0.2**	
	baz=78							
F20K	**Avaraart Lake**	**8.88**	**312**	P	**Pn**	**07 25 14.3**	**+0.1**	
	baz=117							
G19K	**Purcell Mounta**	**9.03**	**306**	P	**Pn**	**07 25 15.8**	**-0.4**	
	baz=109							
C36M	**Paulatuk**	**9.56**	**33**		**Pn**	**07 25 22.0**	**-1.4**	
C36M	**Paulatuk**	**9.56**	**33**	P	**Pn**	**07 25 22.0**	**-1.4**	
	baz=226,SNR=15							
C36M	**Paulatuk**	**9.56**	**33**	Pn	**Pn**	**07 25 21.8**	**-1.5**	
E19K	**Redstone River**	**9.59**	**313**		**Pn**	**07 25 23.4**	**-0.5**	
E18K	**Tukpahlearik C**	**10.77**	**310**	P	**Pn**	**07 25 40.5**	**+0.5**	
	baz=110							
E17K	**Hotham Inlet**	**11.12**	**307**	P	**Pn**	**07 25 44.4**	**-0.3**	
	baz=107							
YKAW3	**Yellowknife Wh**	**11.27**	**76**		**Pn**	**07 25 45.7**	**-1.1**	
YKAW3	**Yellowknife Wh**	**11.27**	**76**	Pn	**Pn**	**07 25 45.7**	**-1.1**	
YKA	**Yellowknife Ar**	**11.28**	**77**	Pn	**Pn**	**07 25 45.9**	**-1.1**	
	0.5nm,0.3s,baz=278,slow=13,SNR=43							
YKA				Sn	**Sn**	**07 27 46.2**	**-6.7**	
	baz=86,slow=26							
YKA				Lg	Lg	07 28 54.5		
	baz=156,slow=25,SNR=4.8							
	1.8nm,0.6s							
A36M	**Sachs Harbour**	**11.34**	**22**		**Pn**	**07 25 46.6**	**-1.1**	
A36M	**Sachs Harbour**	**11.34**	**22**	P	**Pn**	**07 25 46.5**	**-1.1**	
	baz=214,SNR=7.5							
A36M	**Sachs Harbour**	**11.34**	**22**	Pn	**Pn**	**07 25 46.8**	**-0.9**	
YKAW1	**Yellowknife Wh**	**11.34**	**77**	Pn	**Pn**	**07 25 46.6**	**-1.2**	
KUKN	**Kugluktuk,NWT**	**11.60**	**49**	Pn	**Pn**	**07 25 49.9**	**-1.4**	
EDM	**Edmonton**	**16.11**	**111**	Pn	**Pn**	**07 26 51.9**	**-0.4**	
RES	**Resolute Bay**	**19.93**	**33**	P	**Pn**	**07 27 37.9**	**-1.2**	
	0.1nm,0.3s,baz=254,slow=12,SNR=8.1							
RES				S	**S**	**07 31 10.8**	**-10**	
	1.1nm,0.8s,baz=74,slow=18,SNR=2.2							
	2.9nm,0.9s							
FFC	**Flin Flon**	**20.40**	**94**	P	Pn	07 27 43.1	-1.7	
FFC				IAmb	IAmb	07 27 49.6		
	comp=Z,7.3nm,1.1s							
LYMT	**Lyon Mountain**	**21.29**	**123**	P	**P**	**07 27 54.4**	**+1.8**	
EGMT	**Eagleton**	**21.48**	**117**	P	**P**	**07 27 55.8**	**+1.3**	
EGMT				IAmb	IAmb	07 27 59.8		
	comp=Z,6.4nm,1.1s							
FCC	**Fort Churchill**	**22.00**	**78**	P	**P**	**07 28 01.3**	**+1.4**	
ILON	**Igloolik, Nuna**	**23.74**	**48**	P	**P**	**07 28 18.3**	**+0.5**	
ILON				IAmb	IAmb	07 28 31.1		
	comp=Z,3.6nm,0.9s							
POIN	**Pond Inlet**	**24.52**	**39**	P	**P**	**07 28 26.4**	**+1.4**	
POIN				IAmb	IAmb	07 28 36.1		
	comp=Z,6.9nm,1.3s							
PNTR	**Pine Nut**	**25.75**	**144**	P	**P**	**07 28 38.9**	**+2.2**	
PNTR				IAmb	IAmb	07 29 05.2		
	comp=Z,4.2nm,1.0s							
PDAR	**Pinedale Array**	**25.86**	**124**	P	**P**	**07 28 40.2**	**+2.5**	
	comp=Z,0.6nm,0.8s,baz=337,slow=7.1,SNR=5.0							
	comp=Z,0.6nm,0.8s							
NVAR	**Mina Array Bea**	**26.73**	**142**	P	**P**	**07 28 49.0**	**+3.4**	
	comp=Z,1.8nm,0.8s,baz=326,slow=8.3,SNR=17							
	comp=Z,1.8nm,0.8s							
MIAR	**Mount Ida**	**39.45**	**113**	P	**P**	**07 30 36.9**	**+0.9**	
TXAR	**Lajitas Array**	**39.92**	**128**	P	**P**	**07 30 43.4**	**+3.3**	
	comp=Z,1.0nm,1.0s,baz=345,slow=7.8,SNR=5.8							
	comp=Z,1.0nm,1.0s							
WVT	**Waverly**	**40.69**	**105**	P	**P**	**07 30 47.5**	**+1.2**	
WVT				IAmb	IAmb	07 31 07.7		
	comp=Z,9.0nm,1.5s							
TKL	**Tuckaleechee C**	**42.94**	**102**	P	**P**	**07 31 05.5**	**+0.8**	
NRIK	**Noril'sk**	**44.91**	**339**	P	**P**	**07 31 21.3**	**+1.2**	
	comp=Z,1.0nm,0.5s,baz=63,slow=8.1,SNR=2.2							
	comp=Z,1.0nm,0.5s							
ARCES	**ARCESS Array B**	**48.32**	**7**	P	**P**	**07 31 48.7**	**+1.9**	
	comp=Z,5.6nm,0.9s,baz=4.8,slow=6.6,SNR=2.2							
	comp=Z,5.6nm,0.9s							
BVAR	**Borovoye Array**	**63.05**	**341**	P	**P**	**07 33 34.0**	**+1.2**	
	comp=Z,0.5nm,0.6s,baz=34,slow=10,SNR=2.8							
	comp=Z,0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**63.89**	**335**	P	**P**	**07 33 39.3**	**+1.0**	
	comp=Z,0.5nm,0.6s,baz=27,slow=5.7,SNR=4.4							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**66.69**	**331**	P	**P**	**07 33 57.3**	**+0.7**	
	comp=Z,0.3nm,0.8s,baz=44,slow=4.4,SNR=4.8							
	comp=Z,0.3nm,0.8s							
AKASG	**Malin Array Be**	**67.28**	**8**	P	**P**	**07 34 00.6**	**+0.4**	
	comp=Z,0.6nm,0.5s,baz=359,slow=6.3,SNR=4.3							
	comp=Z,0.6nm,0.5s							
WMQ	**Urumqi**	**68.12**	**326**	*e*P	**P**	**07 34 05.4**	**-0.3**	
WMQ				pmax	pmax			
	comp=Z,13nm,0.9s							
ESDC	**Sonseca Array**	**72.35**	**35**	P	**P**	**07 34 33.0**	**+1.4**	
	comp=Z,1.1nm,0.9s,baz=333,slow=5.8,SNR=5.7							
	comp=Z,1.1nm,0.9s							
BOSA	**Boshof**	**145.02**	**25**	PKP	**PKPdf**	**07 42 43.0**	**0.0**	
	comp=Z,2.5nm,0.9s,baz=345,slow=7.5,SNR=3.6							

IDC 08 07:45:21.1±2.2, 4°87S×152°25E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=84.4km s-min=25.2km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.99**	**228**	P	P	P	07 50 28.0	+0.2
	0.5nm,0.4s,baz=51,slow=9.8,SNR=8.9							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**25.73**	**222**	P	P	P	07 50 54.4	+0.8
	0.2nm,0.4s,baz=59,slow=8.9,SNR=6.4							
	0.2nm,0.4s							
FITZ	**Fitzroy Crossi**	**29.14**	**241**	P	P	P	07 51 23.4	-0.8
	1.8nm,0.7s,baz=56,slow=7.3,SNR=1.8							
	1.8nm,0.7s							
SONM	**Songino Array**	**66.10**	**328**	P	P	P	07 56 11.2	+1.0
	0.4nm,0.7s,baz=156,slow=5.2,SNR=2.8							
	0.4nm,0.7s							
MKAR	**Makanchi Array**	**80.02**	**319**	P	P	P	07 57 32.4	-0.3
	0.4nm,0.8s,baz=117,slow=5.0,SNR=2.8							
	0.8nm,0.8s							
ILAR	**Eielson Array**	**82.43**	**22**	P	P	P	07 57 45.4	+0.3
	0.3nm,0.9s,baz=234,slow=7.7,SNR=1.7							
	0.3nm,0.9s							
TORD	**Torodi Ar. Bea**	**149.81**	**288**	PKPbc	PKPbc	PKPbc	08 05 12.7	-1.7
	0.8nm,0.8s,baz=40,slow=0.2,SNR=5.0							

*NNC **08** 08:12:06.0±2.0, 41°.30N×79°.14E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=14.4km s-min=12.2km az=141.0*
*SOME **08** 08:12:05.3, 41°.32N×79°.02E, h10km*
ISC 08 08:12:06.1±3.2, 41°.3N±0°.1×78°.9E±0°.1, h10km, n7, σ0§67/12, 2C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SATY	**Saty**	**1.77**	**347**	P		**Pb**	**08 12 39.0**	**+0.2**
	1.6nm,0.1s							
SATY				S		**Sg**	**08 13 03.1**	**-0.1**
	7.9nm,0.2s							
UZB	**Uzynbulak**	**1.82**	**2**	P		**Pg**	**08 12 40.1**	**-0.9**
	3.4nm,0.2s							
UZB				S		**Sg**	**08 13 05.0**	**+0.4**
	5.2nm,0.3s							
UZB	**Uzynbulak**	**1.82**	**2**	*e*P		**Pg**	**08 12 40.1**	**-0.9**
	3.4nm,0.2s							
UZB				*e*S		**Sg**	**08 13 05.0**	**+0.4**
	5.2nm,0.3s							
SHLS	**Shalkode**	**1.87**	**12**	Pg		**Pg**	**08 12 41.3**	**-0.6**
	3.5nm,0.2s							
SHLS				Lg		Lg	08 13 07.2	
	36nm,0.6s							
SHLS	**Shalkode**	**1.87**	**12**	*e*P		**Pg**	**08 12 41.3**	**-0.6**
	3.5nm,0.2s							
SHLS				*e*S		**Sg**	**08 13 07.2**	**+1.0**
	36nm,0.6s							
PDGK	**Podgornoye**	**2.04**	**11**	⇓Pn		**Pn**	**08 12 41.2**	**+0.5**
	2.4nm,0.6s							
PDGK				⇑Sn		**Sb**	**08 13 08.7**	**-0.2**
	8.2nm,0.5s							
KNDC	**Almaty**	**2.39**	**323**	⇓Pg		**Pg**	**08 12 51.5**	**-0.3**
	17nm,0.3s							
KNDC				⇑Lg		Lg	08 13 25.2	
	16nm,0.3s							

*SSNC **08** 08:12:30.4±1.3, 19°.47N×78°.05W, h31km±24km, MD3.1, ML2.5, Presumed earthquake*
*JSN **08** 08:12:31.5±1.1, 19°.40N×77°.89W, h15km±404km, MD4.0, Presumed earthquake*
ISC 08 08:12:26.3±1.1, 19°.44N±0°.05×78°.03W±0°.05, h10km, n12, σ1§00/13, 2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.15**	**57**	*e*P		**Pg**	**08 12 48.8**	**+0.4**
LMGC				*e*S		**Sb**	**08 13 02.2**	**-1.1**
LMGC				IAML			08 13 04.3	
	comp=E,84nm,0.1s							
LMGC				IAML			08 13 05.2	
	comp=N,142nm,0.1s							
MTDJ	**Mount Denham**	**1.29**	**159**	*e*P		**Pg**	**08 12 52.2**	**+1.1**
MTDJ	**Mount Denham**	**1.29**	**159**	⇓*i*P		**Pg**	**08 12 52.4**	**+1.2**
CHIV	**Chivirico**	**1.62**	**70**	*e*P		**Pb**	**08 12 55.2**	**-1.0**
CBCY	**The Bluff, Cay**	**1.65**	**281**	*e*P		**Pn**	**08 12 54.7**	**-0.6**
CCCC	**Cccc**	**1.77**	**8**	*e*P		**Pb**	**08 12 59.0**	**+0.1**
STH	**Stony Hill**	**1.78**	**139**	⇓*i*P		**Pg**	**08 12 59.1**	**-1.4**
MARVS	**Santiago de Cu**	**2.09**	**74**	*e*P		**Pn**	**08 13 02.2**	**+0.9**
RCC	**Rio Carpintero**	**2.27**	**75**	*e*P		**Pn**	**08 13 04.6**	**+0.7**
QMBU	**Quimbuelo**	**3.12**	**75**	*e*P		**Pn**	**08 13 16.2**	**+0.5**
MGV	**Manicaragua**	**3.22**	**326**	*e*P		**Pn**	**08 13 17.7**	**+0.7**
MASC	**Masc**	**3.65**	**78**	*e*P		**Pn**	**08 13 23.7**	**+0.8**

*SSNC **08** 08:20:33.1±1.3, 19°.49N×78°.13W, h26km±60km, MD3.1, ML2.4, Presumed earthquake*
*JSN **08** 08:20:35.3±0.8, 19°.37N×77°.83W, h7km±7km, MD3.9, Presumed earthquake*
ISC 08 08:20:28.9±1.1, 19°.48N±0°.05×78°.13W±0°.05, h10km, n13, σ1§48/16, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.21**	**61**	*e*P		**Pb**	**08 20 52.0**	**+0.1**
LMGC				*e*S		**Sb**	**08 21 06.1**	**-1.5**
LMGC				IAML			08 21 07.6	
	comp=E,157nm,0.1s							
LMGC				IAML			08 21 07.6	
	comp=N,160nm,0.1s							
MTDJ	**Mount Denham**	**1.36**	**156**	*e*P		**Pn**	**08 20 55.2**	**+1.1**
MTDJ				IAML			08 21 13.2	
	comp=N,256nm,0.5s							
MTDJ				IAML			08 21 13.6	
	comp=N,153nm,0.4s							
MTDJ	**Mount Denham**	**1.36**	**156**	*i* P		**Pn**	**08 20 55.9**	**+1.8**
MTDJ				*i* S		**Sb**	**08 21 11.2**	**-0.9**
CBCY	**The Bluff, Cay**	**1.56**	**280**	*e*P		**Pn**	**08 20 57.3**	**+0.7**
CBCY				*e*S		**Sn**	**08 21 14.6**	**-2.3**
CBCY				IAML			08 21 16.9	
	comp=E,19nm,0.2s							
CBCY				IAML			08 21 19.0	
	comp=N,30nm,0.4s							
CHIV	**Chivirico**	**1.69**	**73**	*e*P		**Pn**	**08 20 58.7**	**+0.2**
CHIV				IAML			08 21 19.2	
	comp=N,57nm,0.2s							
CHIV				IAML			08 21 19.6	
	comp=E,40nm,0.2s							
CCCC	**Cccc**	**1.75**	**11**	*e*P		**Pn**	**08 21 01.8**	**+2.5**
CCCC				IAML			08 21 29.1	
	comp=E,27nm,0.4s							
CCCC				IAML			08 21 29.8	
	comp=N,17nm,0.5s							
LCCY	**Blossom Villag**	**1.85**	**276**	*e*P		**Pn**	**08 21 02.0**	**+1.3**
LCCY				IAML			08 21 24.1	
	comp=E,32nm,0.3s							
LCCY				IAML			08 21 24.4	
	comp=N,20nm,0.2s							
STH	**Stony Hill**	**1.87**	**138**	⇑*i*P		**Pn**	**08 21 02.5**	**+1.5**
MARVS	**Santiago de Cu**	**2.16**	**76**	*e*P		**Pn**	**08 21 05.3**	**+0.3**
MARVS				IAML			08 21 06.8	
	comp=E,6.6nm,0.1s							
MARVS				IAML			08 21 07.3	
	comp=N,2.9nm,0.1s							
RCC	**Rio Carpintero**	**2.35**	**77**	*e*P		**Pn**	**08 21 08.0**	**+0.4**
RCC				IAML			08 21 57.0	
	comp=E,5.8nm,0.7s							
RCC				IAML			08 21 58.3	
	comp=N,9.6nm,0.7s							
PINC	**Pinares de May**	**2.42**	**65**	*e*P		**Pn**	**08 21 10.1**	**+1.6**
PINC				IAML			08 21 40.6	
	comp=N,14nm,0.1s							
PINC				IAML			08 21 40.6	
	comp=E,12nm,0.1s							
QMBU	**Quimbuelo**	**3.21**	**76**	*e*P		**Pn**	**08 21 19.8**	**+0.5**
QMBU				IAML			08 21 58.2	
	comp=N,16nm,0.2s							
QMBU				IAML			08 21 58.4	
	comp=E,8.9nm,0.2s							
MASC	**Masc**	**3.74**	**79**	*e*P		**Pn**	**08 21 27.9**	**+1.3**
MASC				IAML			08 22 16.4	
	comp=E,16nm,0.6s							
MASC				IAML			08 22 16.8	
	comp=N,17nm,0.7s							

*NEIC **08** 08:22:42.8±0.7, 17°.81N±0°.03×66°.85W±0°.01, h10km±1km, ML3.3/33, Md3.4/5(RSPR), Error ellipse: s-maj=4.8km s-min=2.6km az=16.0*
*RSPR **08** 08:22:43.1, 17°.84N×66°.85W, h3km, MD3.4/5*
*SDD **08** 08:22:44.6±2.2, 17°.84N×66°.89W, h20km±18km, MD3.6, ML3.1, MW3.7, Presumed earthquake*
ISC 08 08:22:43.1±1.2, 17°.86N±0°.07×66°.85W±0°.02, h15km±6km, n39, σ0§70/58, 18C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.12**	**346**			**Pg**	**08 22 46.4**	**-0.1**
GBPR						**Sg**	**08 22 48.5**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.12**	**346**	⇓*e*P		**Pg**	**08 22 46.4**	**-0.1**
GBPR				*e*S		**Sg**	**08 22 48.5**	**-0.2**
MLPR	**Magueyes Islan**	**0.21**	**300**			**Pg**	**08 22 47.9**	**0.0**
MLPR				IAML			08 22 52.5	
	3µm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.29**	**300**			**Pg**	**08 22 49.2**	**+0.1**
CRPR				IAML			08 22 54.8	
	4µm,0.6s							
CRPR	**Cabo Rojo, PR**	**0.29**	**300**			**Sb**	**08 22 54.4**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**300**	⇑*e*Pg		**Pg**	**08 22 49.3**	**+0.2**
CRPR				⇑*e*Sg		**Sb**	**08 22 54.3**	**-0.3**
CRPR				IAML			08 22 54.6	
	comp=N,3µm,0.9s							
CRPR	**Cabo Rojo, PR**	**0.29**	**300**	⇑*e*P		**Pg**	**08 22 49.2**	**+0.1**
CRPR				*e*S		**Sb**	**08 22 54.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.29**	**52**			**Sb**	**08 22 54.7**	**-0.1**
OBIP	**Obispado Ponce**	**0.29**	**52**			**Pg**	**08 22 49.5**	**+0.3**
OBIP				IAML			08 22 56.5	
	comp=N,667nm,0.6s							
OBIP	**Obispado Ponce**	**0.29**	**52**	⇓*e*P		**Pb**	**08 22 49.7**	**-0.3**
OBIP				*e*S		**Sb**	**08 22 54.7**	**-0.1**
CELP	**Cerrillos**	**0.33**	**51**			**Pb**	**08 22 50.3**	**-0.5**
LSP	**Las Mesas**	**0.38**	**324**			**Pb**	**08 22 51.2**	**-0.4**
LSP						**Sb**	**08 22 58.3**	**+0.9**
LSP	**Las Mesas**	**0.38**	**324**	⇓*e*P		**Pb**	**08 22 51.2**	**-0.4**
LSP				*e*S		**Sb**	**08 22 58.3**	**+0.9**
UUPR	**Utuado, UPR, P**	**0.41**	**18**			**Pb**	**08 22 51.6**	**-0.5**
PRSN	**Puerto Rico Se**	**0.45**	**322**			**Pb**	**08 22 52.3**	**-0.4**
PRSN						**Sb**	**08 23 00.0**	**+0.7**
PRSN	**Puerto Rico Se**	**0.45**	**322**	IA

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAPH	**Port-au-Prince**	**0.28**	**83**	*e*P	**Pg**	**08 32 18.2**	**0.0**
PAPH				*e*S	**Sg**	**08 32 22.4**	**+0.1**
PAPH				IAML		08 32 22.9	
	comp=N,9μm,0.1s						
PAPH				IAML		08 32 23.4	
	comp=E,9μm,0.1s						
PAPH	**Port-au-Prince**	**0.28**	**83**	*i* P	**Pg**	**08 32 18.4**	**+0.2**
PAPH				*e*S	**Sg**	**08 32 22.5**	**+0.1**
PAPH				IAML		08 32 22.7	
	comp=Z,5μm,0.5s						
LODU1	**El Espartillar**	**1.07**	**97**	*i* P	**Pg**	**08 32 31.4**	**-1.4**
LODU1				*e*S	**Sg**	**08 32 46.3**	**-0.6**
LODU1				IAML		08 32 53.4	
	comp=Z,322nm,0.7s						
LONE3	**El Aguacate, B**	**1.08**	**84**	*i* P	**Pg**	**08 32 31.3**	**-1.7**
LONE3				*e*S	**Sg**	**08 32 45.7**	**-1.5**
LONE3				IAML		08 32 46.3	
	comp=Z,107nm,0.3s						
LOBH	**Bahia de las A**	**1.10**	**125**	*i* P	**Pg**	**08 32 32.6**	**-0.9**
LOBH				*e*S	**Sg**	**08 32 47.9**	**+0.1**
LOBH				IAML		08 32 51.0	
	comp=Z,99nm,2.2s						
SDDR	**Presa de Saban**	**1.32**	**68**	*i* P	**Pg**	**08 32 36.7**	**-1.0**
LOVI	**El Cajuil, Ovi**	**1.35**	**120**	*i* P	**Pn**	**08 32 36.7**	**+0.5**
LOVI				*e*S	**Sb**	**08 32 55.2**	**+1.3**
LOPP1	**Punta Rusia, P**	**1.89**	**44**	*e*	**Pn**	**08 32 45.5**	**+1.9**
LOPP1				*i* P	**Pn**	**08 32 45.5**	**+1.9**
LOPP1				IAML		08 33 11.6	
	comp=Z,68nm,0.7s						
MASC	**Masc**	**2.28**	**317**	*e*P	**Pn**	**08 32 49.5**	**+0.4**
MASC				*e*S	**Sn**	**08 33 15.3**	**-1.5**
MASC				IAML		08 33 17.4	
	comp=E,16nm,0.4s						
MASC				IAML		08 33 18.3	
	comp=N,8.6nm,0.3s						
QMBU	**Quimbuelo**	**2.70**	**309**	*e*P	**Pn**	**08 32 55.0**	**+0.1**
NMDO	**Nuevo Mundo**	**3.06**	**313**	*e*P	**Pn**	**08 33 00.5**	**+0.8**
MOAC	**Moa**	**3.11**	**314**	*e*P	**Pn**	**08 33 00.3**	**-0.1**
RCC	**Rio Carpintero**	**3.30**	**297**	*e*P	**Pn**	**08 33 03.9**	**+0.9**
MARVS	**Santiago de Cu**	**3.47**	**296**	*e*P	**Pn**	**08 33 06.6**	**+1.2**
PINC	**Pinares de May**	**3.62**	**304**	*e*P	**Pn**	**08 33 08.5**	**+1.1**
HLGC	**Holguin**	**4.05**	**307**	*e*P	**Pn**	**08 33 15.9**	**+2.5**

RSNC 08 08:37:16.9±0.0, 7°N±3°×7°3W±°, h141km±3km, M1.6, ML1.3, MLv1.3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.20**	**205**	P	Pn	08 37 35.8	-0.6
BARC				S	Sn	08 37 51.0	-0.2
PAMC	**Pamplona, Colo**	**0.69**	**35**	P	Pn	08 37 38.4	-0.6
PAMC				S	Sn	08 37 55.8	+0.1
RUSC	**La Rusia**	**0.87**	**179**	P	Pn	08 37 40.1	-0.2
RUSC				S	Sn	08 37 58.2	+0.1
OCAC	**Ocana**	**1.48**	**352**	P	Pn	08 37 46.0	+0.3
OCAC				S	Sn	08 38 07.4	-0.3

RSNC 08 08:37:22.8±0.0, 3°N±1°×7°5W±°, h32km±2km, ML1.3, MLv1.9, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.45**	**53**	P	Pb	08 37 32.7	0.0
URMC				S	Sb	08 37 39.3	-0.2
PRAC	**Prado**	**0.75**	**349**	P	Pn	08 37 37.3	0.0
PRAC				S	Sb	08 37 47.2	-0.4
ORTC	**Ortega, Tolima**	**1.06**	**332**	P	Pb	08 37 42.7	0.0
ORTC				S	Sb	08 37 57.0	+0.7
GARC	**Garzon, Huila**	**1.08**	**224**	P	Pb	08 37 43.2	0.0
GARC				S	Sb	08 37 57.1	0.0
FLOC	**Florencia**	**1.65**	**214**	P	Pb	08 37 52.5	-0.2
FLOC				S	Sb	08 38 13.9	+0.7
CVER	**Cruz Verde, Cu**	**1.68**	**23**	P	Pb	08 37 54.7	+1.3
YOTC	**Yotoco, Valle**	**1.89**	**302**	P	Pb	08 37 56.1	-0.7
YOTC				S	Sb	08 38 20.1	0.0
CHIC	**Chingaza**	**1.93**	**31**	P	Pb	08 37 59.4	+1.8
CHIC				S	Sb	08 38 26.0	+4.5
CHIC	**Chingaza**	**1.93**	**31**	P	Pb	08 37 59.4	+1.8

*IDC **08** 08:50:47.9±1.5, 3°.08S×130°.62E, h0km, mb3.8/2, mbtmp3.6/4, ML3.3/2, MS3.0/1, Error ellipse: s-maj=57.9km s-min=21.5km az=90.0*
*DJA **08** 08:50:48.5±0.7, 3°S±3°×13°0E±°, h19km±8km, M3.8/12, mb4.5/2, MLv3.4/12*
ISC 08 08:50:48.6±1.1, 2°90S±0°.08×129°93E±0°.07, h25km, n13, σ0$82/12, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.09**	**246**	P	**Pn**	**08 51 08.9**	**+0.6**
KRAI	**Karang Ratu**	**1.59**	**255**	P	**Pn**	**08 51 15.0**	**-0.2**
BNDI	**Bandanaira**	**1.61**	**181**	P	**Pb**	**08 51 17.8**	**+0.1**
AAI	**Ambon**	**1.90**	**246**	P	**Pn**	**08 51 20.8**	**+1.3**
FAKI	**Fak Fak**	**2.31**	**91**	P	**Pn**	**08 51 25.9**	**+0.8**
SIJI	**Sorong**	**2.42**	**33**	Pn	**Pn**	**08 51 27.0**	**+0.4**
	7.2nm,0.3s,baz=44,slow=23,SNR=9.7						
SIJI				Sn	**Sn**	**08 51 56.1**	**+0.7**
	9.0nm,0.3s,baz=217,slow=23,SNR=7.2 10nm,0.3s						
SIJI	**Sorong**	**2.42**	**33**	P	**Pn**	**08 51 25.8**	**-0.8**
SWI	**Sorong**	**2.42**	**33**	P	**Pn**	**08 51 27.3**	**+0.7**
NLAI	**Namlea**	**2.85**	**263**	P	**Pn**	**08 51 32.6**	**+0.1**
WRA	**Warramunga Arr**	**17.48**	**166**	P	**Pn**	**08 54 49.9**	**-0.9**
	0.1nm,0.3s,baz=348,slow=11,SNR=4.7 0.2nm,0.3s						
ASAR	**Alice Springs**	**21.00**	**170**	P	**P**	**08 55 29.5**	**-0.9**
	6.5nm,0.8s,baz=349,slow=11,SNR=17 6.5nm,0.8s						
LEM	**Lembang**	**22.57**	**259**	LR	LR	09 07 39.7	
	comp=Z,36nm,18.7s,baz=3.5,slow=44						
MKAR	**Makanchi Array**	**64.80**	**326**	P	P	09 01 32.1	+6.8
	0.4nm,0.5s,baz=142,slow=7.3,SNR=5.4 0.4nm,0.5s						

*SDD **08** 08:53:59.9±2.1, 17°.90N×66°.70W, h19km±25km, MD3.5, ML3.4, MW3.5, Presumed earthquake*
*TRN **08** 08:54:00.7, 17°.86N×66°.71W, h15km, MD0.0, Near South of Puerto Rico.*
*NEIC **08** 08:54:01.8±1.9, 17°.86N±0°.04×66°.810W±0°.009, h10km±1km, ML3.9/35, Md3.4/6(RSPR), Error ellipse: s-maj=6.4km s-min=2.9km az=5.0*
*RSPR **08** 08:54:02.6, 17°.93N×66°.83W, h16km, MD3.4/6*
ISC 08 08:54:01.7±0.9, 17°91N±0°.05×66°81W±0°.02, h18km±2km, n54, σ1$05/83, 10C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**315**		**Pg**	**08 54 05.7**	**+0.3**
GBPR					**Sg**	**08 54 07.9**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.09**	**315**	⇓*i*P	**Pg**	**08 54 05.7**	**+0.3**
GBPR				*e*S	**Sg**	**08 54 07.9**	**+0.1**
MLPR	**Magueyes Islan**	**0.23**	**285**		**Pb**	**08 54 06.9**	**-0.2**
MLPR				Sg	**Sb**	**08 54 10.4**	**-0.4**
MLPR				IAML		08 54 11.0	
	18μm,0.2s						
MLPR				IAML		08 54 11.2	
	17μm,0.3s						
OBIP	**Obispado Ponce**	**0.24**	**55**		**Pb**	**08 54 07.7**	**+0.4**
OBIP				Sg	**Sb**	**08 54 11.5**	**+0.6**
OBIP	**Obispado Ponce**	**0.24**	**55**	⇑*i*P	**Pg**	**08 54 07.9**	**+0.7**
OBIP				*e*S	**Sg**	**08 54 11.8**	**+0.8**
CELP	**Cerrillos**	**0.28**	**53**		**Pg**	**08 54 08.3**	**+0.5**
CELP				Sg	**Sb**	**08 54 12.8**	**+0.4**
CELP				IAML		08 54 13.3	
	21μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.30**	**289**		**Pg**	**08 54 08.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.30**	**289**	Sg	**Sg**	**08 54 12.0**	**-0.8**
CRPR				IAML		08 54 12.5	
	15μm,0.5s						
CRPR				IAML		08 54 12.7	
	16μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.30**	**289**	⇓*e*Pg	**Pg**	**08 54 08.4**	**0.0**
CRPR				⇑*e*Sg	**Sg**	**08 54 12.2**	**-0.6**
CRPR				IAML		08 54 12.6	
	comp=N,16μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.30**	**289**	⇓*i*P	**Pg**	**08 54 08.3**	**0.0**
CRPR				*e*S	**Sg**	**08 54 12.3**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.35**	**14**		**Pg**	**08 54 08.9**	**-0.4**
UUPR				Sg	**Sg**	**08 54 13.6**	**-0.7**
LSP	**Las Mesas**	**0.37**	**315**		**Pg**	**08 54 09.5**	**-0.1**
LSP					**Sg**	**08 54 15.1**	**+0.1**
LSP	**Las Mesas**	**0.37**	**315**	⇑*i*P	**Pg**	**08 54 09.5**	**-0.1**
LSP				*e*S	**Sg**	**08 54 15.1**	**+0.1**
PRSN	**Puerto Rico Se**	**0.44**	**314**		**Pg**	**08 54 10.2**	**-0.6**
PRSN				IAML		08 54 17.1	
	comp=N,11μm,0.3s						
PRSN				IAML		08 54 18.6	
	comp=N,13μm,0.3s						
PRSN	**Puerto Rico Se**	**0.44**	**314**		**Sg**	**08 54 17.0**	**+0.1**
PRSN	**Puerto Rico Se**	**0.44**	**314**	⇑*e*Pg	**Pg**	**08 54 10.4**	**-0.4**
PRSN				⇑*e*Sg	**Sg**	**08 54 16.1**	**-0.8**
PRSN				IAML		08 54 18.6	
	comp=N,7μm,0.2s						
PRSN	**Puerto Rico Se**	**0.44**	**314**	⇓*i*P	**Pg**	**08 54 10.5**	**-0.4**
PRSN				*e*S	**Sg**	**08 54 17.0**	**+0.1**
ECPR	**Experimental S**	**0.59**	**46**		**Pb**	**08 54 13.2**	**-0.2**
ECPR				IAML		08 54 22.8	
	comp=N,4μm,0.2s						
ECPR	**Experimental S**	**0.59**	**46**	⇑*i*P	**Pb**	**08 54 13.4**	**-0.1**
ECPR				*e*S	**Sb**	**08 54 21.7**	**+0.3**
AGPR	**Aguadilla, PR**	**0.63**	**333**		**Pb**	**08 54 13.3**	**-0.8**
AGPR	**Aguadilla, PR**	**0.63**	**333**	⇑*e*Pg	**Pb**	**08 54 13.4**	**-0.6**
AGPR				⇑*e*Sg	**Sb**	**08 54 21.0**	**-1.5**
AGPR				IAML		08 54 22.0	
	comp=N,2μm,0.2s						
AGPR	**Aguadilla, PR**	**0.63**	**333**	⇑*i*P	**Pb**	**08 54 13.5**	**-0.6**
AGPR				*e*S	**Sb**	**08 54 21.7**	**-0.8**
SJG	**San Juan**	**0.66**	**72**		**Pb**	**08 54 14.2**	**-0.5**
SJG				IAML		08 54 25.2	
	comp=N,7μm,0.3s						
SJG				IAML		08 54 25.6	
	comp=N,3μm,0.3s						
SJG	**San Juan**	**0.66**	**72**		**Sb**	**08 54 22.0**	**-1.5**
SJG	**San Juan**	**0.66**	**72**	⇑*i*P	**Pb**	**08 54 14.8**	**+0.1**
SJG				*e*S	**Sg**	**08 54 24.2**	**+0.6**
PDPR	**Patillas Dam,**	**0.76**	**82**		**Pb**	**08 54 16.5**	**+0.2**
IDE	**Isla Desecheo**	**0.79**	**307**		**Pb**	**08 54 16.4**	**-0.5**
IDE					**Sb**	**08 54 26.8**	**-0.6**
IDE	**Isla Desecheo**	**0.79**	**307**	⇑*i*P	**Pb**	**08 54 16.4**	**-0.5**
IDE				*e*S	**Sb**	**08 54 26.8**	**-0.6**
GCPR	**Guaynabo City**	**0.80**	**60**		**Pb**	**08 54 16.7**	**-0.4**
GCPR	**Guaynabo City**	**0.80**	**60**		**Sb**	**08 54 26.2**	**-1.3**
GCPR	**Guaynabo City**	**0.80**	**60**	⇑*e*P	**Pb**	**08 54 17.0**	**-0.1**
GCPR				*e*S	**Sb**	**08 54 26.2**	**-1.3**
HUMP	**Col San Antoni**	**0.94**	**76**		**Pb**	**08 54 19.4**	**-0.1**
HUMP				IAML		08 54 32.8	
	comp=N,2μm,0.6s						
HUMP				IAML		08 54 36.9	
	comp=N,2μm,0.2s						
HUMP	**Col San Antoni**	**0.94**	**76**		**Sg**	**08 54 32.6**	**+0.1**
HUMP	**Col San Antoni**	**0.94**	**76**	⇑*i*P	**Pb**	**08 54 19.6**	**+0.1**
HUMP				*e*S	**Sg**	**08 54 32.6**	**+0.1**
CUPR	**Culebra, Puert**	**1.51**	**74**		**Pb**	**08 54 29.3**	**+0.2**
HIDR	**Higuey Centro**	**1.94**	**291**	⇑*e*Pg	**Pn**	**08 54 34.6**	**+0.9**
HIDR				⇑*e*Sg	**Sb**	**08 55 01.7**	**+1.4**
HIDR				IAML		08 55 03.4	
	comp=N,238nm,0.2s						
MIDR	**Miches**	**2.38**	**297**	⇓*e*Pg	**Pn**	**08 54 41.1**	**+1.3**
MIDR				⇑*e*Sg	**Sb**	**08 55 13.5**	**+0.4**
MIDR				IAML		08 55 22.1	
	comp=N,88nm,0.4s						
DR12	**Loma Pena Alta**	**2.59**	**290**	Pn	**Pn**	**08 54 44.8**	**+2.0**
HATOM	**Hato Mayor del**	**2.59**	**290**	⇓*e*Pg	**Pn**	**08 54 45.5**	**+2.7**
HATOM				⇑*e*Sg	**Sb**	**08 55 21.1**	**+1.8**
HATOM				IAML		08 55 28.4	
	comp=N,96nm,0.6s						
BANI	**BANI**	**3.41**	**279**	Pn	**Pn**	**08 54 56.5**	**+2.4**
SABA	**Saba**	**3.41**	**94**	Pn	**Pn**	**08 54 55.2**	**+1.2**
SMRT	**St. Maarten**	**3.56**	**87**	Pn	**Pn**	**08 54 57.1**	**+1.1**
SKI	**Saint Kitts**	**3.92**	**98**	*e*P	**Pn**	**08 55 01.4**	**+0.3**
SKI				*e*S	**Sn**	**08 55 45.7**	**-1.0**
SC01	**Santiago de lo**	**4.01**	**293**	Pn	**Pn**	**08 55 06.9**	**+4.6**
SDDR	**Presa de Saban**	**4.38**	**285**	Pn	Pn	08 55 12.8	+5.3
MBFL	**Flemmings, Mon**	**4.54**	**104**	*e*P	**Pn**	**08 55 10.3**	**+0.7**
MBFL				*e*S	**Sn**	**08 56 02.1**	**+0.2**
MBWH	**Windy Hill**	**4.56**	**104**	*e*P	**Pn**	**08 55 09.7**	**-0.2**
MBWH				*e*S	**Sn**	**08 56 01.1**	**-1.3**
DHSZ	**Broadband at M**	**5.09**	**108**	*e*P	**Pn**	**08 55 17.4**	**+0.3**
DHSZ				*e*S	**Sn**	**08 56 14.1**	**-1.4**
GDHS	**Morne Mazeau,**	**5.09**	**108**	Pn	**Pn**	**08 55 17.1**	**-0.1**
ATGZ	**Broadband at L**	**5.19**	**110**	*e*P	**Pn**	**08 55 19.1**	**+0.6**
TBG	**Guadaloupe-3**	**5.35**	**112**	*e*P	**Pn**	**08 55 21.4**	**+0.7**
DSLB	**Salisbury**	**5.72**	**115**	*e*P	**Pn**	**08 55 26.2**	**+0.4**
DSLB				*e*S	**Sn**	**08 56 28.0**	**-3.0**
DWS	**Wesley**	**5.76**	**113**	*e*P	**Pn**	**08 55 26.1**	**-0.2**
BIM	**Bigot**	**6.46**	**121**	*e*P	**Pn**	**08 55 36.6**	**+0.6**
BIM				*e*S	**Sn**	**08 56 47.0**	**-2.3**

DJA 08 08:56:05.5±0.7, 3°S±3°×13°0E±°, h19km±7km, M3.9/17, mb4.4/3, MLv3.6/17, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.07**	**240**	P	Pb	08 56 24.2	-1.3
KRAI	**Karang Ratu**	**1.55**	**251**	P	Pb	08 56 33.2	-0.4
BNDI	**Bandanaira**	**1.70**	**179**	P	Pn	08 56 34.6	+0.4
AAI	**Ambon**	**1.88**	**242**	P	Pn	08 56 35.1	-1.5
SIJI	**Sorong**	**2.39**	**36**	P	Pn	08 56 43.9	+0.3
SWI	**Sorong**	**2.39**	**36**	P	Pn	08 56 44.1	+0.5
FAKI	**Fak Fak**	**2.39**	**93**	P	Pn	08 56 42.7	-1.0
NLAI	**Namlea**	**2.79**	**261**	P	Pn	08 56 51.1	+1.9
SANI	**Sanana**	**3.94**	**281**	P	Pn	08 57 03.5	-1.5

IDC 08 08:56:21.4±2.0, 6°.85S×129°.27E, h0km, mb3.4/2, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=98.1km s-min=26.5km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.73**	**197**	Pn	Pn	08 59 11.0	+0.9
	0.1nm,0.3s,baz=15,slow=13,SNR=6.5						
FITZ				Sn	Sn	09 01 09.5	-12
	0.7nm,0.3s,baz=120,slow=23,SNR=8.6 1.7nm,0.7s						
WRA	**Warramunga Arr**	**13.91**	**160**	Pn	Pn	08 59 38.7	-1.3
	0.3nm,0.3s,baz=331,slow=14,SNR=9.8						
WRA				Sn	Sn	09 02 00.6	-15
	0.8nm,0.3s,baz=332,slow=22,SNR=11 0.7nm,0.6s						
ASAR	**Alice Springs**	**17.30**	**166**	P	Pn	09 00 24.9	+0.3
	0.4nm,0.3s,baz=339,slow=9.6,SNR=17						
ASAR				S	Sn	09 03 24.8	-13
	0.3nm,0.4s,baz=320,slow=16,SNR=4.8 0.8nm,0.5s						
MKAR	**Makanchi Array**	**67.71**	**327**	P	P	09 07 21.1	+0.4
	0.1nm,0.4s,baz=113,slow=6.7,SNR=4.1 0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**72.01**	**329**	P	P	09 07 46.5	-0.5
	0.2nm,0.4s,baz=133,slow=6.8,SNR=1.9 0.2nm,0.4s						

*IDC **08** 08:56:43.7±0.8, 17°.75N×66°.86W, h0km, mb3.8/10, mbtmp4.0/13, ML3.4/3, MS3.4/8, Error ellipse: s-maj=24.4km s-min=16.9km az=9.0*
*OSPL **08** 08:56:44.9±0.8, 17°.65N×66°.88W, h4km±999km, ML3.8, Presumed earthquake*
*NEIC **08** 08:56:44.8, 17°.70N×66°.85W, h10km*
*RSPR **08** 08:56:45.7, 17°.77N×66°.88W, h3km±1km, MD4.0/4*
*NEIC **08** 08:56:45.4±1.7, 17°.76N±0°.03×66°.84W±0°.02, h14km, mb4.3/14, ML4.3/45, Mwr4.2/35, Md4.0/4(RSPR), Error ellipse: s-maj=4.2km s-min=2.4km az=186.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=0.25; Mθθ=0.67; Mφφ=-0.41; Mrθ=0.35; Mθφ=2.45; Mrφ=-0.70; Fault plane solution: M0=2.64000×10^15 NP1:ϑs7.58000°, δ79.91000°, λ-164.73000°. NP2:ϑs274.84000°, δ74.97000°, λ-10.45000°. Principal axes: T 2.6481, Plg3.0000°, Azm141.0000°; N -0.0158, Plg72.0000°, Azm40.0000°; P -2.6323, Plg18.0000°, Azm232.0000°;*
*PTWC **08** 08:56:46, 17°.80N×66°.80W, Ml4.4/13*
*SDD **08** 08:56:47.0±2.0, 17°.74N×66°.95W, h20km±21km, MD4.0, ML4.0, MW4.3, Presumed earthquake*
*TRN **08** 08:56:50.9, 17°.13N×66°.51W, h35km, MD0.0, South of Puerto Rico.*
ISC 08 08:56:43.2±1.3, 17°60N±0°.05×66°86W±0°.02, h3km±8km, n107, σ1$37/136, mb4.0/14, MS3.2/6, 14C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.37**	**358**	⇓*e*P	**Pg**	**08 56 50.5**	**+0.1**
MLPR	**Magueyes Islan**	**0.41**	**335**		**Pg**	**08 56 51.3**	**+0.3**
MLPR				Sg	**Sg**	**08 56 55.8**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.47**	**330**		**Pg**	**08 56 52.2**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.47**	**330**	Sg	**Sg**	**08 56 57.5**	**-0.8**
CRPR				IAML		08 56 58.7	
	27μm,0.4s						
CRPR				IAML		08 56 59.1	
	20μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.47**	**330**	⇑*e*Pg	**Pg**	**08 56 52.5**	**+0.3**
CRPR				⇑*e*Sg	**Sg**	**08 56 57.6**	**-0.7**
CRPR				IAML		08 56 58.5	
	comp=N,21μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.47**	**330**	⇑*e*P	**Pg**	**08 56 52.5**	**+0.3**
CRPR				*e*S	**Sg**	**08 56 58.2**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.47**	**330**	*i* P	**Pg**	**08 56 52.4**	**+0.3**
CRPR				*e*S	**Sg**	**08 56 57.9**	**-0.3**
CRPR				IAML		08 56 58.6	
	comp=Z,22μm,0.8s						
OBIP	**Obispado Ponce**	**0.50**	**29**		**Pg**	**08 56 52.9**	**0.0**
OBIP					**Sg**	**08 56 58.6**	**-0.8**
OBIP	**Obispado Ponce**	**0.50**	**29**	P	**Pg**	**08 56 52.9**	**0.0**
OBIP	**Obispado Ponce**	**0.50**	**29**	⇓*e*P	**Pg**	**08 56 53.0**	**+0.2**
OBIP				*e*S	**Sg**	**08 56 59.0**	**+0.5**
OBIP	**Obispado Ponce**	**0.50**	**29**	*i* P	**Pg**	**08 56 53.0**	**+0.1**
OBIP				*e*S	**Sg**	**08 56 59.3**	**-0.2**
OBIP				IAML		08 57 02.7	
	comp=Z,5μm,0.3s						
CELP	**Cerrillos**	**0.55**	**30**		**Pg**	**08 56 53.6**	**-0.1**
CELP				Sg	**Sg**	**08 56 59.9**	**-0.8**
CELP				IAML		08 57 01.5	
	comp=Z,17μm,0.5s						
CELP				IAML		08 57 01.8	
	comp=Z,20μm,0.3s						
LSP	**Las Mesas**	**0.61**	**340**		**Pg**	**08 56 55.0**	**+0.1**
LSP	**Las Mesas**	**0.61**	**340**	⇓*e*P	**Pg**	**08 56 55.0**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.66**	**12**		**Pg**	**08 56 55.3**	**+0.6**
PRSN	**Puerto Rico Se**	**0.67**	**336**		**Pg**	**08 56 55.6**	**-0.4**
PRSN				IAML		08 57 07.1	
	comp=Z,30μm,0.3s						
PRSN	**Puerto Rico Se**	**0.67**	**336**		**Sg**	**08 57 04.4**	**-0.4**
PRSN	**Puerto Rico Se**	**0.67**	**336**	P	**Pg**	**08 56 55.8**	**-0.2**
PRSN	**Puerto Rico Se**	**0.67**	**336**	⇓*e*Pg	**Pg**	**08 56 55.9**	**-0.2**
PRSN				⇑*e*Sg	**Sg**	**08 57 03.6**	**-1.1**
PRSN				IAML		08 57 08.6	
	comp=N,28μm,0.3s						
PRSN	**Puerto Rico Se**	**0.67**	**336**	⇑*e*P	**Pg**	**08 56 55.6**	**-0.4**
PRSN				*e*S	**Sg**	**08 57 04.4**	**-0.4**
SJG	**San Juan**	**0.85**	**53**		**Pg**	**08 56 59.8**	**+0.3**
SJG	**San Juan**	**0.85**	**53**	⇓*e*P	**Pg**	**08 56 59.8**	**+0.3**
SJG				*e*S	**Sb**	**08 57 11.7**	**-0.6**
SJG	**San Juan**	**0.85**	**53**	*i* P	**Pg**	**08 56 59.8**	**+0.3**
SJG				*e*S	**Sb**	**08 57 11.5**	**-0.8**
SJG				IAML		08 57 11.9	
	comp=Z,4μm,0.7s						
ECPR	**Experimental S**	**0.86**	**34**		**Pg**	**08 56 58.9**	**-0.7**
ECPR				IAML		08 57 12.4	
	comp=Z,12μm,0.2s						
ECPR				IAML		08 57 12.7	
	comp=Z,15μm,0.6s						
ECPR	**Experimental S**	**0.86**	**34**	⇑*e*P	**Pg**	**08 56 59.5**	**-0.2**
ECPR				*e*S	**Sg**	**08 57 09.5**	**-1.4**
AGPR	**Aguadilla, PR**	**0.90**	**345**		**Pg**	**08 56 59.3**	**-1.0**
AGPR				IAML		08 57 14.5	
	comp=Z,13μm,0.6s						
AGPR				IAML		08 57 20.0	
	comp=Z,12μm,0.9s						
AGPR	**Aguadilla, PR**	**0.90**	**345**	P	**Pg**	**08 56 59.4**	**-1.0**
AGPR	**Aguadilla, PR**	**0.90**	**345**	⇑*e*Pg	**Pg**	**08 56 59.7**	**-0.6**
AGPR				⇑*e*Sg	**Sg**	**08 57 09.8**	**-2.2**
AGPR				IAML		08 57 19.8	
	comp=N,11μm,0.9s						
AGPR	**Aguadilla, PR**	**0.90**	**345**	⇑*e*P	**Pg**	**08 56 59.3**	**-1.0**
AGPR				*e*S	**Sg**	**08 57 10.3**	**-1.7**
PDPR	**Patillas Dam,**	**0.90**	**62**		**Pb**	**08 57 01.1**	**-0.3**
GCPR	**Guaynabo City**	**1.02**	**46**		**Pg**	**08 57 02.2**	**-0.7**
GCPR	**Guaynabo City**	**1.02**	**46**		**Sg**	**08 57 15.8**	**-0.3**
GCPR	**Guaynabo City**	**1.02**	**46**	P	**Pg**	**08 57 02.5**	**-0.3**
GCPR	**Guaynabo City**	**1.02**	**46**	⇓*e*P	**Pg**	**08 57 02.9**	**+0.1**
GCPR				*e*S	**Sg**	**08 57 15.8**	**-0.3**
HUMP	**Col San Antoni**	**1.11**	**61**		**Pg**	**08 57 04.1**	**-0.3**
HUMP				IAML		08 57 21.4	
	comp=N,5μm,0.6s						
HUMP				IAML		08 57 21.7	
	comp=N,6μm,0.2s						
HUMP	**Col San Antoni**	**1.11**	**61**		**Sb**	**08 57 19.3**	**-0.4**
HUMP	**Col San Antoni**	**1.11**	**61**	P	**Pg**	**08 57 04.4**	**0.0**
HUMP	**Col San Antoni**	**1.11**	**61**	⇑*e*P	**Pb**	**08 57 04.7**	**-0.2**
HUMP				*e*S	**Sb**	**08 57 19.3**	**-0.4**
CUPR	**Culebra, Puert**	**1.66**	**65**		**Pb**	**08 57 14.0**	**-0.4**
HIDR	**Higuey Centro**	**2.02**	**300**	⇑*e*Pg	**Pn**	**08 57 19.0**	**+0.8**
HIDR				⇑*e*Sg	**Sn**	**08 57 41.1**	**-2.8**
HIDR				IAML		08 57 51.8

NMDO	**Nuevo Mundo**	**8.22**	**292**	Pn	**Pn**	**08 58 44.6**	**+1.2**
SDV	**Santo Domingo**	**9.41**	**203**	Pn	**Pn**	**08 59 02.8**	**+2.9**
	comp=N,3.7nm,0.3s,baz=64,slow=9.2,SNR=18						
SDV				Sn	**Sn**	**09 00 40.9**	**-5.4**
	comp=N,0.9nm,0.3s,baz=62,slow=14,SNR=1.4						
SDV				LR	LR	09 02 45.3	
	comp=N,166nm,19.4s,baz=66,slow=38						
	comp=N,6.7nm,0.3s						
SDV	**Santo Domingo**	**9.41**	**203**	Pn	**Pn**	**08 59 02.3**	**+2.5**
MTDJ	**Mount Denham**	**10.18**	**275**	Pn	**Pn**	**08 59 08.9**	**-1.4**
ROSC	**El Rosal**	**14.63**	**211**	Pn	**Pn**	**09 00 14.2**	**+2.7**
	comp=N,2.5nm,0.3s,baz=11,slow=16,SNR=3.1						
ROSC				LR	LR	09 06 19.5	
	comp=N,175nm,19.3s,baz=256,slow=39						
	comp=N,7.1nm,0.4s						
ROSC	**El Rosal**	**14.63**	**211**	Pn	**Pn**	**09 00 09.5**	**-2.1**
JTS	**Las Juntas de**	**18.99**	**250**	P	**Pn**	**09 01 07.1**	**+0.4**
	comp=N,0.1nm,0.3s,baz=59,slow=8.9,SNR=4.9						
	comp=N,11nm,1.0s						
JTS	**Las Juntas de**	**18.99**	**250**	P	**Pn**	**09 01 08.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**19.95**	**263**	P	**P**	**09 01 16.6**	**-0.1**
TGUH				IAmb	IAmb	09 01 51.9	
	comp=Z,24nm,1.4s						
OTAV	**Otavalo**	**20.68**	**215**	P	Pn	09 01 27.1	-0.1
OTAV				IAmb	IAmb	09 01 33.6	
	comp=Z,14nm,1.2s						
BIRD	**Birdtown, Kers**	**20.87**	**327**	P	**P**	**09 01 25.6**	**-0.8**
BIRD				IAmb	IAmb	09 02 05.5	
	comp=Z,44nm,1.4s						
352A	**Blakely**	**21.43**	**314**	P	**P**	**09 01 32.4**	**0.0**
TKL	**Tuckaleechee C**	**23.43**	**323**	LR	LR	09 10 20.6	
	comp=Z,97nm,21.0s,baz=143,slow=35						
ATAH	**Atahualpa**	**27.09**	**206**	LR	LR	09 15 57.5	
	comp=Z,69nm,18.7s,baz=24,slow=42						
SIV	**San Ignacio**	**33.86**	**170**	LR	LR	09 18 11.6	
	comp=Z,48nm,18.3s,baz=290,slow=38						
TXAR	**Lajitas Array**	**35.58**	**296**	P	**P**	**09 03 43.0**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=112,slow=8.9,SNR=16						
TXAR				PcP	**PcP**	**09 06 12.1**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=96,slow=3.2,SNR=2.1						
TXAR				ScP	**ScP**	**09 09 59.2**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=74,slow=4.2,SNR=4.3						
	comp=Z,0.9nm,0.6s						
TX31	**Lajitas Ar. Si**	**35.58**	**296**	P	**P**	**09 03 42.2**	**0.0**
TX31				IAmb	IAmb	09 03 52.6	
	comp=Z,1.8nm,0.7s						
ALPN	**Alpine**	**35.76**	**298**	P	**P**	**09 03 43.9**	**+0.1**
ALPN				IAmb	IAmb	09 03 50.3	
	comp=Z,2.1nm,0.8s						
ECSD	**EROS Data Cent**	**36.17**	**322**	P	**P**	**09 03 45.5**	**-1.4**
ECSD				IAmb	IAmb	09 03 49.8	
	comp=Z,4.9nm,1.1s						
PECS	**Pecos**	**36.18**	**299**	P	**P**	**09 03 47.0**	**-0.3**
VHRN	**Van Horn**	**36.99**	**298**	P	**P**	**09 03 54.7**	**+0.5**
GO01	**Chusmiza**	**37.11**	**184**	P	**P**	**09 03 56.5**	**+0.9**
GO01				IAmb	IAmb	09 04 08.3	
	comp=Z,10nm,1.3s						
PB11	**IPOC Station P**	**37.23**	**184**	P	**P**	**09 03 56.5**	**+0.3**
BDFB	**Brasilia**	**37.90**	**150**	LR	LR	09 19 53.1	
	comp=Z,49nm,20.5s,baz=105,slow=36						
EPLO	**Experimental L**	**38.63**	**332**	P	**P**	**09 04 07.0**	**-0.6**
EPLO				IAmb	IAmb	09 04 18.7	
	comp=Z,21nm,1.5s						
ANMO	**Albuquerque**	**39.18**	**304**	LR	LR	09 22 09.4	
	comp=Z,36nm,19.4s,baz=92,slow=39						
ULM	**Lac du Bonnet**	**40.01**	**331**	P	**P**	**09 04 19.3**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=119,slow=7.2,SNR=4.3						
	comp=Z,1.8nm,0.7s						
PDAR	**Pinedale Array**	**43.98**	**314**	P	**P**	**09 04 52.6**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=136,slow=8.1,SNR=4.3						
PDAR				PcP	**PcP**	**09 06 38.0**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=59,slow=2.9,SNR=2.2						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**49.23**	**306**	P	**P**	**09 05 34.2**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=96,slow=9.2,SNR=4.2						
NVAR				PcP	**PcP**	**09 06 56.7**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=62,slow=5.0,SNR=1.3						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**55.67**	**335**	P	**P**	**09 06 20.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=110,slow=7.0,SNR=17						
	comp=Z,0.6nm,0.6s						
ESDC	**Sonseca Array**	**58.24**	**54**	P	**P**	**09 06 40.5**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=265,slow=6.9,SNR=12						
	comp=Z,0.8nm,0.5s						
DBIC	**Dimbokro**	**61.36**	**92**	P	**P**	**09 07 02.4**	**+1.5**
	comp=Z,7.3nm,1.1s,baz=274,slow=7.0,SNR=3.9						
	comp=Z,7.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**65.95**	**83**	P	**P**	**09 07 31.8**	**+0.6**
	comp=Z,1.0nm,1.1s,baz=290,slow=4.4,SNR=3.6						
	comp=Z,1.0nm,1.1s						
ILAR	**Eielson Array**	**69.98**	**333**	P	**P**	**09 07 55.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=92,slow=4.4,SNR=12						
	comp=Z,0.7nm,0.8s						
VRAC	**Vranov**	**72.64**	**43**	LR	LR	09 39 11.6	
	comp=Z,24nm,18.3s,baz=338,slow=35						
FINES	**FINESS Array B**	**76.11**	**30**	P	**P**	**09 08 31.4**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=325,slow=5.3,SNR=3.9						
	comp=Z,1.9nm,0.9s						

*IDC **08** 09:07:44.0±1.4, 3.67S×142.76E, h0km, mb3.5/5, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=32.4km s-min=22.5km az=97.0*

ISC 08 09:07:47.2±1.4, 3.7S±0.1×142.8E±0.2, h22km, n10, σ0s83/7, mb3.7/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JAY	**Jayapura**	**2.45**	**299**	Pg		**Pn**	**09 08 25.3**	**-0.6**
	5.2nm,0.3s,baz=142,slow=19,SNR=16							
JAY				Lg		Lg	09 08 51.7	
	9.1nm,0.3s,baz=275,slow=22,SNR=5.4							
WRA	**Warramunga Arr**	**18.12**	**207**	P		**Pn**	**09 11 58.0**	**+0.3**
	0.3nm,0.3s,baz=29,slow=12,SNR=14							
	1.9nm,0.7s							
ASAR	**Alice Springs**	**21.62**	**203**	P		**P**	**09 12 35.4**	**-0.7**
	0.4nm,0.9s,baz=30,slow=9.4,SNR=7.8							
	0.4nm,0.9s							
FITZ	**Fitzroy Crossi**	**22.08**	**228**	P		**P**	**09 12 41.4**	**+0.4**
	1.7nm,0.7s,baz=62,slow=10,SNR=1.4							
	1.7nm,0.7s							
H11S3	**WAKE ISLAND Hy**	**32.24**	**46**	T		T	09 48 01.9	
	baz=229,slow=75,SNR=6.5							
H11S2	**WAKE ISLAND Hy**	**32.25**	**46**	T		T	09 48 02.8	
	baz=229,slow=75,SNR=5.7							
H11S1	**WAKE ISLAND Hy**	**32.26**	**46**	T		T	09 48 03.6	
	baz=229,slow=75,SNR=6.0							
SONM	**Songino Array**	**60.45**	**333**	P		**P**	**09 17 56.3**	**+0.9**
	0.3nm,0.5s,baz=122,slow=7.0,SNR=3.9							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**73.13**	**321**	P		**P**	**09 19 16.5**	**+0.4**
	0.9nm,0.9s,baz=108,slow=7.8,SNR=7.1							
	0.9nm,0.9s							
ILAR	**Eielson Array**	**85.06**	**24**	P		**P**	**09 20 20.2**	**-0.7**
	0.5nm,0.6s,baz=255,slow=4.9,SNR=10							
	0.5nm,0.6s							

*IDC **08** 09:11:45.1±1.9, 4.08N×126.58E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=118.1km s-min=25.5km az=68.0*

*DJA **08** 09:11:50.2±1.1, 4°N±10'×12°7'E±', h39km±5km, M4.2/12, mb4.3/5, MLv4.2/12*

ISC 08 09:11:50.2±1.5, 4.2N±0.1×126.8E±0.1, h36km, n10, σ1s68/11, mb3.5/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**1.39**	**251**	P		**Pn**	**09 12 14.0**	**+1.0**
SGSI				S		**Sn**	**09 12 32.1**	**+2.0**
MNI	**Manado**	**3.35**	**217**	P		**Pn**	**09 12 39.6**	**-0.4**
MRSI	**Marisa**	**6.10**	**233**	P		**Pn**	**09 13 14.3**	**-3.6**
SANI	**Sanana**	**6.21**	**188**	P		**Pn**	**09 13 18.5**	**-0.9**
	0.1nm9.0nm,0.6s							
NLAI	**Namlea**	**7.34**	**178**	P		**Pn**	**09 13 35.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P		**P**	**09 16 41.8**	**-1.1**
	1.7nm,0.6s,baz=14,slow=8.3,SNR=2.3							
	1.7nm,0.6s							
WRA	**Warramunga Arr**	**25.05**	**163**	P		**P**	**09 17 10.2**	**-1.1**
	0.3nm,0.3s,baz=342,slow=9.5,SNR=5.6							
	0.3nm,0.3s							
ASAR	**Alice Springs**	**28.49**	**166**	P		**P**	**09 17 43.0**	**+0.7**
	0.2nm,0.4s,baz=339,slow=9.9,SNR=4.2							
	0.2nm,0.4s							
STKA	**Stephens Creek**	**38.48**	**160**	P		**P**	**09 19 09.8**	**+0.9**
	1.7nm,0.7s,baz=339,slow=8.6,SNR=2.9							
	1.7nm,0.7s							
MKAR	**Makanchi Array**	**57.28**	**325**	P		**P**	**09 21 33.8**	**-0.5**
	0.2nm,0.4s,baz=117,slow=6.8,SNR=4.5							
	0.2nm,0.4s							

*NOU **08** 09:13:53.1, 45.55S×166.72E, h101km, MLv4.4/6, Off W. Coast of S. Island, N.Z.*

*WEL **08** 09:13:53.9±0.8, 45°S±4'×16°7E±', h12km, M4.0/18, ML3.8/9, MLv4.0/18, Error ellipse: s-maj=6.7km s-min=5.4km az=102.5*

ISC 08 09:13:54.9±1.4, 45.35S±0.04×166.92E±0.07, h25km±8km, n48, σ1s15/54, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DCZ	**Deep Cove**	**0.20**	**125**	P		**Pb**	**09 14 00.5**	**0.0**
DCZ				S		**Sb**	**09 14 04.1**	**-0.3**
TAFS	**Te Anau Fire S**	**0.56**	**97**	P		**Pb**	**09 14 06.3**	**+0.2**
TAFS				S		**Sn**	**09 14 14.9**	**-0.9**
PYZ	**Puysegur Point**	**0.83**	**192**	P		**Pb**	**09 14 11.1**	**+0.4**
PYZ	**Puysegur Point**	**0.83**	**192**	P		**Pb**	**09 14 08.7**	**-2.0**
MLZ	**Mavora Lakes**	**0.84**	**91**	P		**Pb**	**09 14 10.7**	**-0.1**
MLZ				S		**Sn**	**09 14 21.7**	**-1.0**
RRKS	**Rarakau**	**0.88**	**154**	P		**Pb**	**09 14 11.2**	**-0.3**
WHZ	**Wether Hill Ro**	**0.90**	**127**	P		**Pb**	**09 14 11.4**	**-0.4**
WHZ				S		**Sn**	**09 14 23.5**	**-0.6**
MOSS	**Mossburn Schoo**	**0.98**	**109**	P		**Pn**	**09 14 13.0**	**0.0**
MOSS				S		**Sn**	**09 14 26.7**	**+0.7**
MSZ	**Milford Sound**	**0.98**	**47**	P		**Pb**	**09 14 11.5**	**-1.7**
MSZ				S		**Sn**	**09 14 28.2**	**+2.2**
GLNY	**Glenorchy**	**1.16**	**66**	P		**Pn**	**09 14 15.2**	**-0.2**
QTPS	**Queenstown Pol**	**1.27**	**76**	P		**Pb**	**09 14 17.4**	**-0.7**
WKZ	**Wanaka**	**1.57**	**71**	P		**Pb**	**09 14 22.1**	**-1.2**
APZ	**The Paps**	**1.66**	**154**	P		**Pb**	**09 14 23.8**	**-0.9**
EAZ	**Earnscleugh**	**1.69**	**87**	P		**Pb**	**09 14 24.0**	**-1.2**
JCZ	**Jackson Bay**	**1.84**	**47**	P		**Pb**	**09 14 27.2**	**-0.7**
JCZ	**Jackson Bay**	**1.84**	**47**	P		**Pn**	**09 14 25.9**	**+0.9**
SYZ	**Scrubby Hill**	**1.95**	**128**	P		**Pn**	**09 14 27.0**	**+0.7**
TUZ	**Tuapeka**	**1.99**	**109**	P		**Pn**	**09 14 27.8**	**+0.9**
LBZ	**Lake Benmore**	**2.51**	**69**	P		**Pn**	**09 14 34.4**	**+0.3**
HHSZ	**Highcliff Hill**	**2.63**	**103**	P		**Pn**	**09 14 36.8**	**+1.1**
ODZ	**Otahua Downs**	**2.65**	**85**	P		**Pn**	**09 14 36.2**	**+0.2**
ODZ	**Otahua Downs**	**2.65**	**85**	P		**Pn**	**09 14 36.1**	**+0.2**
FOZ	**Fox Glacier**	**2.76**	**50**	P		**Pn**	**09 14 37.9**	**+0.5**
TMZ	**Timaru**	**3.06**	**73**	P		**Pn**	**09 14 41.3**	**-0.3**
ARCZ	**Arundel**	**3.34**	**67**	P		**Pn**	**09 14 44.8**	**-0.7**
RPZ	**Rata Peaks**	**3.38**	**62**	P		**Pn**	**09 14 45.9**	**-0.1**
RPZ	**Rata Peaks**	**3.38**	**62**	P		**Pn**	**09 14 45.7**	**-0.2**
WVZ	**Waitaha Valley**	**3.56**	**52**	P		**Pn**	**09 14 49.1**	**+0.6**
WACZ	**Wakanui South**	**3.78**	**70**	P		**Pn**	**09 14 51.0**	**-0.5**
MHCZ	**Mount Hutt**	**3.79**	**63**	P		**Pn**	**09 14 52.0**	**+0.3**
RACZ	**Rakaia**	**4.07**	**68**	P		**Pn**	**09 14 56.9**	**+1.5**
INZ	**Inchbonnie**	**4.18**	**53**	P		**Pn**	**09 14 57.3**	**+0.3**
OXZ	**Oxford**	**4.19**	**63**	P		**Pn**	**09 14 56.1**	**-1.1**
MQZ	**McQueen's Vall**	**4.42**	**70**	P		**Pn**	**09 14 59.1**	**-1.1**
LTZ	**Lake Taylor**	**4.63**	**58**	P		**Pn**	**09 15 02.3**	**-1.0**
AMCZ	**Amberley**	**4.65**	**64**	P		**Pn**	**09 15 02.9**	**-0.5**
OKCZ	**Okains Bay**	**4.68**	**72**	P		**Pn**	**09 15 05.3**	**+1.5**
GVZ	**Greta Valley S**	**5.00**	**64**	P		**Pn**	**09 15 07.4**	**-0.9**
DSZ	**Denniston Nort**	**5.06**	**46**	P		**Pn**	**09 15 08.9**	**-0.2**
KHZ	**Kahutara**	**5.61**	**61**	P		**Pn**	**09 15 18.4**	**+1.8**
THZ	**Tophouse**	**5.63**	**53**	P		**Pn**	**09 15 17.8**	**+0.8**
MRNZ	**Matariki Terra**	**5.80**	**49**	P		**Pn**	**09 15 20.2**	**+0.9**
QRZ	**Quartz Range**	**6.11**	**44**	P		**Pn**	**09 15 23.5**	**+0.1**
QRZ	**Quartz Range**	**6.11**	**44**	P		**Pn**	**09 15 23.4**	**-0.1**
TKNZ	**Takaka Hill**	**6.17**	**48**	P		**Pn**	**09 15 24.7**	**+0.4**
NNZ	**Nelson**	**6.27**	**51**	P		**Pn**	**09 15 27.4**	**+1.8**
TUWZ	**Tuamarina**	**6.44**	**55**	P		**Pn**	**09 15 31.6**	**+3.6**
TCW	**Tory Channel**	**6.78**	**55**	P		**Pn**	**09 15 36.0**	**+3.4**

*CATAC **08** 09:25:48.9±0.9, 15°N±5°×90W±', h1km±3km, M2.4/11, MLv2.4/11, Error ellipse: s-maj=12.3km s-min=5.3km az=150.3, confirmed*

*GCG **08** 09:25:48.6±1.5, 14.78N×89.67W, h18km±56km, MD3.5, Presumed earthquake*

ISC 08 09:25:46.5±1.8, 14.85N±0.07×89.65W±0.04, h2km±12km, n18, σ0s68/29, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ZAFR2	**Estanzuela, Za**	**0.39**	**133**	*i* P		**Pg**	**09 25 54.1**	**0.0**
ZAFR2				*i* S		**Sg**	**09 25 57.7**	**-1.4**
ESQI	**Esquipulas**	**0.41**	**134**	P		**Pb**	**09 25 57.0**	**+0.4**
ESQI				S		**Sb**	**09 26 02.9**	**-0.5**
MTO3	**Montecristo**	**0.53**	**148**	P		**Pb**	**09 25 58.3**	**-0.3**
MTO3				S		**Sb**	**09 26 04.8**	**-1.9**
MTO3	**Montecristo**	**0.53**	**148**	*i* P		**Pb**	**09 25 58.3**	**-0.3**
APG	**El Apazote**	**0.81**	**281**	*i* P		**Pb**	**09 26 03.3**	**-0.1**
SLOZ	**Alcaldia de Sa**	**0.83**	**189**	P		**Pg**	**09 26 03.1**	**+0.7**
SLOZ				S		**Sg**	**09 26 13.1**	**-0.1**
LOAL	**Lomas de Alarc**	**0.86**	**189**	P		**Pg**	**09 26 03.6**	**+0.7**
LOAL				S		**Sg**	**09 26 13.7**	**-0.4**
UNIC	**Universidad Ca**	**0.87**	**174**	P		**Pb**	**09 26 04.3**	**-0.1**
UNIC				S		**Sg**	**09 26 14.4**	**0.0**
NUBE	**Las Nubes**	**0.95**	**188**	P		**Pg**	**09 26 05.3**	**+0.5**
NUBE				S		**Sg**	**09 26 16.9**	**-0.2**
NUBE	**Las Nubes**	**0.95**	**188**	*i* P		**Pg**	**09 26 05.0**	**+0.3**
FAME	**Alcaldia de Sa**	**1.06**	**200**	P		**Pg**	**09 26 07.0**	**+0.1**
PMON	**Piamonte**	**1.18**	**164**	P		**Pn**	**09 26 10.1**	**0.0**
PMON				S		**Sb**	**09 26 25.0**	**-0.3**
UEES	**Universidad Ev**	**1.19**	**161**	P		**Pn**	**09 26 10.0**	**-0.3**
UEES				S		**Sb**	**09 26 25.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.20**	**171**	P		**Pb**	**09 26 09.9**	**-0.2**
JAYA				S		**Sg**	**09 26 25.3**	**+0.1**
JAYA	**Jayaque - finc**	**1.20**	**171**	*i* P		**Pg**	**09 26 09.7**	**+0.1**
PAVA	**Las Pavas**	**1.32**	**149**	P		**Pb**	**09 26 13.1**	**+1.0**
COEG	**Centro de Oper**	**1.43**	**149**	P		**Pg**	**09 26 14.9**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.45**	**142**	P		**Pg**	**09 26 15.1**	**+0.9**
SCLA				S		**Sn**	**09 26 34.2**	**+0.8**

*NEIC **08** 09:38:40.4±1.8, 19.32N±0.04×78.94W±0.06, h10km±2km, mb4.0/4, Error ellipse: s-maj=9.3km s-min=7.1km az=260.0*

*SSNC **08** 09:38:40.9±1.1, 19.32N×79.05W, h10km±8km, MD3.4, ML3.8, Presumed earthquake*

*JSN **08** 09:38:43.8±1.3, 19.31N×78.65W, h0km±35km, MD4.2, MW4.4, Presumed earthquake*

ISC 08 09:38:39.4±0.7, 19.32N±0.06×79.01W±0.05, h10km, n44, σ1s47/46, 1C-1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CBCY	**The Bluff, Cay**	**0.82**	**301**	*e*P		**Pg**	**09 38 54.6**	**-0.6**
CBCY				*e*S		**Sg**	**09 39 04.1**	**-1.8**
CBCY				IAML			09 39 07.2	
	comp=N,1μm,0.4s							
CBCY				IAML			09 39 07.4	
	comp=E,584nm,0.3s							
LCCY	**Blossom Villag**	**1.07**	**289**	*e*P		**Pg**	**09 38 58.8**	**-1.1**
LCCY				*e*S		**Sg**	**09 39 11.0**	**-2.8**
LCCY				IAML			09 39 12.2	
	comp=E,2μm,0.3s							
LCCY				IAML			09 39 12.6	
	comp=N,3μm,0.4s							
MTDJ	**Mount Denham**	**1.77**	**128**			**Pn**	**09 39 10.1**	**-0.1**
MTDJ				Sn		**Sn**	**09 39 29.9**	**-3.0**
MTDJ	**Mount Denham**	**1.77**	**128**	*e*P		**Pn**	**09 39 09.9**	**-0.3**
MTDJ				IAML			09 39 31.6	
	comp=N,795nm,0.5s							
MTDJ				IAML			09 39 31.7	
	comp=N,1μm,0.3s							
LMGC	**Las Mercedes**	**2.03**	**68**	*e*P		**Pn**	**09 39 13.5**	**-0.1**
CCCC	**Coco**	**2.21**	**32**	*e*P		**Pn**	**09 39 18.8**	**+2.7**
STH	**Stony Hill**	**2.43**	**120**	*i*P		**Pn**	**09 39 19.1**	**-0.1**
HOJ	**Hope**	**2.51**	**121**	*i*P		**Pn**	**09 39 20.9**	**+0.6**
CHIV	**Chivirico**	**2.53**	**75**			**Pn**	**09 39 20.0**	**-0.5**
CHIV	**Chivirico**	**2.53**	**75**	*e*P		**Pn**	**09 39 19.8**	**-0.8**
CHIV				IAML			09 39 51.1	
	comp=N,511nm,0.3s							
CHIV				IAML			09 39 51.4	
	comp=E,727nm,0.3s							
MGV	**Manicaragua**	**2.92**	**342**	*e*P		**Pn**	**09 39 25.1**	**-0.8**
MGV				*e*S		**Sn**	**09 39 57.5**	**-3.5**
MGV				IAML			09 39 59.4	
	comp=E,267nm,0.2s							
MGV				IAML			09 39 59.8	
	comp=N,173nm,0.3s							
MARVS	**Santiago de Cu**	**3.01**	**77**	*e*P		**Pn**	**09 39 26.3**	**-0.8**
MARVS				IAML			09 40 03.0	
	comp=N,551nm,0.2s							
MARVS				IAML			09 40 03.7	
	comp=E,370nm,0.4s							
RCC	**Rio Carpintero**	**3.19**	**77**	*e*P		**Pn**	**09 39 29.0**	**-0.7**
RCC				IAML			09 40 07.2	
	comp=E,106nm,0.3s							
RCC				IAML			09 40 08.3	
	comp=N,104nm,0.2s							
PINC	**Pinares de May**	**3.24**	**69**	*e*P		**Pn**	**09 39 30.9**	**+0.5**
PINC				IAML			09 40 10.4	
	comp=E,331nm,0.4s							
PINC				IAML			09 40 10.5	
	comp=N,349nm,0.3s							
GTBY	**Guantanamo Bay**	**3.73**	**80**	*e*P		**Pn**	**09 39 36.4**	**-0.6**
GTBY	**Guantanamo Bay**	**3.73**	**80**	*i* P		**Pn**	**09 39 37.4**	**+0.4**
NMDO	**Nuevo Mundo**	**3.98**	**71**			**Pn**	**09 39 40.7**	**+0.1**
NMDO	**Nuevo Mundo**	**3.98**	**71**	*e*P		**Pn**	**09 39 40.6**	**+0.1**
MOAC	**Moa**	**4.04**	**70**	*e*P		**Pn**	**09 39 41.5**	**+0.3**
QMBU	**Quimbuelo**	**4.05**	**77**	*e*P		**Pn**	**09 39 41.1**	**-0.4**
CAMR	**Camarioca**	**4.32**	**330**	Pn		**Pn**	**09 39 49.0**	**+3.8**
MASC	**Masc**	**4.58**	**79**	*e*P		**Pn**	**09 39 48.9**	**+0.2**
SOR	**Soroa**	**5.08**	**313**			**Pn**	**09 39 56.2**	**+0.6**
SOR	**Soroa**	**5.08**	**313**	*e*P		**Pn**	**09 39 55.0**	**-0.7**
BILN	**Bilwi Airport**	**6.71**	**219**	Pn		**Pn**	**09 40 19.2**	**+1.2**
061Z	**Ochoppi**	**6.75**	**345**	Pn		**Pn**	**09 40 19.5**	**+1.0**
SDDR	**Presa de Saban**	**7.31**	**91**			**Pn**	**09 40 26.9**	**+0.6**
SIUN	**Universidad Ur**	**7.85**	**226**	Pn		**Pn**	**09 40 35.0**	**+1.3**
BANI	**BANI**	**8.24**	**95**	Pn		**Pn**	**09 40 40.8**	**+1.6**
TEIG	**Tepich**	**8.77**	**277**			**Pn**	**09 40 46.6**	**+0.3**
DR12	**Loma Pena Alta**	**9.12**	**92**	Pn		**Pn**	**09 40 53.3**	**+2.1**
BOAB	**BOACO BROADBAN**	**9.36**	**224**			**Pn**	**09 40 57.3**	**+2.9**
656A	**Willston**	**10.51**	**343**	Pn		**Pn**	**09 41 09.9**	**-0.2**
JTS	**Las Juntas de**	**10.65**	**213**	Pn		**Pn**	**09 41 13.8**	**+1.5**
JUD3	**Juan Diaz 3**	**11.07**	**216**	Pn		**Pn**	**09 41 19.7**	**+1.7**
553A	**Crawfordville**	**11.89**	**337**	Pn		**Pn**	**09 41 28.1**	**-0.8**
PDPR	**Patillas Dam,**	**12.38**	**94**	Pn		**Pn**	**09 41 35.2**	**-0.5**
TIGA	**Tifton**	**12.75**	**342**	Pn		**Pn**	**09 41 41.7**	**+0.9**
SDV	**Santo Domingo**	**13.17**	**141**			**Pn**	**09 41 46.3**	**-0.5**
GOGA	**Godfrey**	**14.59**	**345**	Pn		**Pn**	**09 42 06.1**	**+0.2**
TLIG	**Tlapa**	**18.64**	**268**	P		**Pn**	**09 42 59.8**	**+2.0**
Q56A	**Snyder Ridge,**	**19.65**	**360**	P		**P**	**09 43 08.3**	**-0.1**
Q56A				IAmb	IAmb		09 43 25.3	
	comp=Z,7.8nm,1.1s							
FCAR	**Ozark Folk Cen**	**20.15**	**328**	P		Pn	09 43 16.1	+0.5
FW13	**Cleburne**	**21.01**	**312**				09 43 30.2	
FW13				IAmb	IAmb		09 43 31.2	
	comp=Z,7.8nm,0.8s							

*NEIC **08** 09:41:32.1±0.9, 17.96S±0.08×174.43W±0.05, h77km±8km, mb4.7/18, Error ellipse: s-maj=13.1km s-min=4.7km az=153.0*

*IDC **08** 09:41:40.5±2.8, 18.12S×174.59W, h154km±26km, mb4.0/14, mbtmp4.4/14, Error ellipse: s-maj=29.8km s-min=12.0km az=139.0*

ISC 08 09:41:37.8±0.8, 18.1S±0.2×174.6W±0.2, h132km, n48, σ0s76/44, mb4.4/24, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
NIUE	**Niue**	**4.50**	**103**			Pn	09 42 36.9	-7.3
NIUE				Sn		Sn	09 43 21.6	-14
AFI	**Afiamalu**	**4.97**	**33**			Pn	09 42 41.0	-10
AFI				Sn		Sn	09 43 30.1	-17
URZ	**Urewera**	**21.35**	**198**	P		**P**	**09 46 14.5**	**+0.1**
	11nm,0.5s,baz=43,slow=2.2,SNR=16							
	11nm,0.5s							
CAN	**Canberra**	**36.53**	**235**	P		**P**	**09 48 29.9**	**-0.8**
CAN				IAmb		IAmb	09 48 31.3	
	comp=Z,18nm,1.1s							
CTAO	**Charters T

ILAR	Eielson Array	85.31	12	P		P	09 53 58.7	-0.7
CMAR	Chiang Mai Arr	92.42	289	P		P	09 54 33.7	-0.4
	comp=Z,0.6nm,0.3s,baz=87,slow=7.0,SNR=1.9							
	comp=Z,0.6nm,0.3s							
YKA	Yellowknife Ar	93.02	24	P		P	09 54 34.7	-1.1
	comp=Z,0.3nm,0.8s,baz=243,slow=4.8,SNR=3.4							
	comp=Z,0.3nm,0.8s							
MKAR	Makanchi Array	111.92	314	PKiKP		PKiKP	09 59 57.7	+0.5
	comp=Z,0.2nm,0.7s,baz=72,slow=1.8,SNR=1.8							
BRTR	Keskin Array B	147.48	317	PKPbc		PKPbc	10 01 07.3	+0.6
	comp=Z,1.3nm,0.7s,baz=128,slow=5.9,SNR=3.6							
GERES	GERESS Array B	148.62	349	PKPbc		PKiKP	10 01 09.9	-0.9
	comp=Z,0.3nm,0.5s,baz=264,slow=1.0,SNR=2.8							

IDC ***08*** *09:42:01.5±6.1, 29.°94N×139.°44E, h385km±33km, mb3.1/7, mbtmp3.9/9, Error ellipse: s-maj=94.2km s-min=50.1km az=3.0*

JMA ***08*** *09:42:03.4±0.3, 30.°N±2.°×14.°0E±.°, h355km, MV3.4/38, NEAR TORISHIMA IS*

ISC 08 09:42:00.8±0.9, 29.°89N±0.°09×139.°8E±0.°1, h388km, n24, σ1§04/26, mb3.4/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.22	1	eP			Pn	09 43 04.7	-0.1
JHJ	Hachijo jima 2	3.23	1	P			Pn	09 43 05.3	+0.4
	142nm,0.9s,baz=135,slow=8.6,SNR=1.5								
JHJ				S			S	09 43 56.5	-0.3
	79nm,0.5s,baz=246,slow=24,SNR=1.3								
CBIJ	Chichi jima	3.51	142	eS			S	09 44 01.5	-0.1
JCJ	Chichijima	3.51	142	P			Pn	09 42 55.2	-12
	152nm,1.0s,baz=90,slow=21,SNR=2.1								
JCJ				S			S	09 43 47.2	-14
	92nm,0.3s,baz=117,slow=23,SNR=7.5								
JHH2	Haha-jima-NKT2	3.88	146	S			S	09 44 07.2	-0.8
JMYK	Miyake Tsubota	4.17	358	eP			Pn	09 43 14.2	+0.6
BSO1	Boso 1	4.87	12	P			Pn	09 43 21.6	+1.5
BSO1				eS			S	09 44 23.6	-1.1
BSO3	Boso 3	4.95	7	P			Pn	09 43 21.9	+0.6
BSO4	Boso 4	5.12	5	P			Pn	09 43 24.6	+1.4
JIE	Ise	5.18	331	P			Pn	09 43 24.8	+0.8
JHMK	Hamakita	5.20	342	P			Pn	09 43 24.7	+0.6
HMMJ	Hamamatsu 2	5.24	341	eP			Pn	09 43 25.0	+0.3
JKN2	Miekihoku	5.25	327	P			Pn	09 43 25.2	+0.5
JOD2	Odawara 2	5.39	354	P			Pn	09 43 26.4	+0.1
JNY	Yasuok	5.68	344	P			Pn	09 43 30.5	+1.0
JAO	Obara	5.76	339	P			Pn	09 43 31.2	+0.9
MJAR	Matsushiro Arr	6.76	349	P			Pn	09 43 40.7	-0.7
	2.9nm,0.4s,baz=170,slow=11,SNR=19								
SONM	Songino Array	31.23	314	P			P	09 47 45.3	-0.8
	0.4nm,0.4s,baz=118,slow=8.3,SNR=4.5								
	0.4nm,0.4s								
MKAR	Makanchi Array	47.06	308	P			P	09 49 54.1	-1.1
	0.3nm,0.6s,baz=96,slow=9.0,SNR=4.9								
MKAR				PcP			pwP	09 51 19.9	+3.1
	0.1nm,0.5s,baz=90,slow=2.9,SNR=1.6								
	0.3nm,0.6s								
KURBB	Kurchatov Arra	49.57	313	P			P	09 50 12.6	-1.3
	0.6nm,0.3s,baz=91,slow=8.4,SNR=7.8								
	0.6nm,0.3s								
BVAR	Borovoye Array	54.55	316	P			P	09 50 49.7	-0.5
	0.8nm,0.4s,baz=99,slow=6.4,SNR=8.2								
	0.8nm,0.4s								
FINES	FINESS Array B	74.50	333	P			P	09 52 58.0	+0.5
	1.9nm,1.0s,baz=62,slow=5.5,SNR=6.2								
	1.9nm,1.0s								
HFS	Hagfors	80.02	336	P			P	09 53 27.7	-0.2
	2.3nm,0.9s,baz=104,slow=9.3,SNR=5.4								
	2.3nm,0.9s								
NOA	NORSAR Array B	80.23	337	P			P	09 53 29.1	0.0
	0.2nm,0.3s,baz=25,slow=3.8,SNR=1.4								
	0.2nm,0.3s								

IDC ***08*** *09:56:58.9±0.8, 4.°18S×77.°38W, h0km, mb3.9/8, mbtmp3.8/11, ML3.5/2, MS3.3/6, Error ellipse: s-maj=28.9km s-min=17.8km az=87.0*

NEIC ***08*** *09:57:01.4±1.7, 4.°48S±0.°09×77.°5W±0.°1, h10km±1km, mb4.4/18, Error ellipse: s-maj=23.7km s-min=10.2km az=240.0*

ISC 08 09:57:03.8±0.5, 4.°45S±0.°06×77.°38W±0.°09, h35km, n42, σ1§36/36, mb4.5/12, Northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.85	201	Pn			Pn	09 57 49.5	+2.2
	7.5nm,0.3s,baz=22,slow=9.9,SNR=43								
ATAH				Sn			Sn	09 58 29.6	+9.0
	7.7nm,0.3s,baz=39,slow=23,SNR=5.2								
ATAH				LR			LR	09 58 55.0	
	comp=Z,202nm,21.2s,baz=27,slow=37								
	61nm,0.5s								
OTAV	Otavalo	4.78	347	Pn			Pn	09 58 14.3	+0.5
CZSB	Cruzeiro do Su	5.67	125	Pn			Pn	09 58 26.0	+0.3
NNA	Nana	7.51	176	Pn			Pn	09 58 49.8	-1.1
	1.4nm,0.3s,baz=353,slow=8.9,SNR=4.4								
NNA				Sn			Sn	10 00 11.4	-3.5
	3.4nm,0.3s,baz=138,slow=21,SNR=5.3								
NNA	Nana	7.51	176					09 58 50.0	-1.0
ROSC	El Rosal	9.72	18	Pn			Pn	09 59 18.8	-2.8
	2.9nm,0.3s,baz=198,slow=19,SNR=0.9								
ROSC				Lg			Lg	10 02 01.0	
	3.9nm,0.3s,baz=138,slow=22,SNR=2.3								
SDV	Santo Domingo	14.86	27	Pn			Pn	10 00 32.1	+0.4
LPAZ	La Paz	14.86	143	LR			LR	10 07 25.7	
	comp=Z,80nm,20.8s,baz=301,slow=42								
PB18	Visviri	15.18	150				Pn	10 00 36.5	+0.4
PB18				IAmb			IAmb	10 00 47.3	
	comp=Z,23nm,1.1s								
PB16	IPOC Station P	15.80	151				Pn	10 00 45.5	+1.1
JTS	Las Juntas de	16.48	333	LR			LR	10 06 10.3	
	comp=Z,101nm,20.5s,baz=115,slow=34								
MACA	Manacapuru-AM	16.70	86				Pn	10 00 56.7	+1.4
MACA				IAmb			IAmb	10 00 58.3	
	comp=Z,14nm,0.8s								
GO01	Chusmiza	17.10	153	P			P	10 01 02.3	+0.1
BOAV	Boa Vista	18.16	68	P			P	10 01 13.5	0.0
PB07	IPOC Station P	18.65	158	P			P	10 01 18.8	-0.2
PB07				IAmb			IAmb	10 01 34.0	
	comp=Z,24nm,1.3s								
PB06	IPOC Station P	19.66	158	P			Pn	10 01 30.7	-0.8
PB06				IAmb			IAmb	10 01 39.3	
	comp=Z,24nm,1.4s								
SIV	San Ignacio	19.70	127	P			Pn	10 01 32.6	+0.6
	baz=304,slow=4.5,SNR=4.6								
SIV				LR			LR	10 09 38.4	
	comp=Z,119nm,19.4s,baz=302,slow=38								
	comp=Z,0.5nm,0.6s								
PTLB	Pontes e Lacer	21.00	123	P			P	10 01 45.8	+1.3
BDFB	Brasilia	30.93	113	LR			LR	10 17 03.9	
	comp=Z,96nm,19.1s,baz=133,slow=39								
TKL	Tuckaleechee C	40.35	352	LR			LR	10 22 05.4	
	comp=Z,34nm,18.5s,baz=164,slow=38								
TXAR	Lajitas Array	42.02	325	P			P	10 04 50.6	-1.6
	comp=Z,0.3nm,0.8s,baz=159,slow=9.3,SNR=2.4								
	comp=Z,0.3nm,0.8s								
S57A	Dark Hollow, R	42.02	358	P			P	10 04 53.4	+1.4
PLPT	Palo Pinto	42.05	333	P			P	10 04 53.0	+0.8
PLPT				IAmb			IAmb	10 04 56.0	
	comp=Z,9.8nm,1.0s								
SMWD	Samnorwood	44.84	333	P			P	10 05 15.9	+1.1
PV18	Skein Mesa, Pa	51.57	328	P			P	10 06 07.1	+0.2
PV18				IAmb			IAmb	10 06 10.4	
	comp=Z,5.8nm,0.9s								
AGMN	Agassiz Nation	54.97	345	IAmb			IAmb	10 06 34.5	
	comp=Z,6.5nm,0.9s								
PDAR	Pinedale Array	55.30	332	P			P	10 06 32.3	-2.0
	comp=Z,0.6nm,0.8s,baz=139,slow=3.8,SNR=5.2								
	comp=Z,0.6nm,0.8s								
ULM	Lac du Bonnet	56.78	346	P			P	10 06 41.5	-2.9
	comp=Z,4.5nm,0.9s,baz=147,slow=8.6,SNR=6.4								
	comp=Z,4.5nm,0.9s								
ULM	Lac du Bonnet	56.78	346	P			P	10 06 44.4	+0.1
YHL	Hebgen Lake	57.65	332	IAmb			IAmb	10 06 54.3	
	comp=Z,9.8nm,1.4s								
MFID	Camas Ranch	58.92	328	IAmb			IAmb	10 07 03.6	
	comp=Z,7.0nm,1.3s								
YKA	Yellowknife Ar	72.52	343	P			P	10 08 27.2	+0.3
	comp=Z,0.6nm,0.8s,baz=141,slow=4.9,SNR=9.6								
	comp=Z,0.6nm,0.8s								
YKA	Yellowknife Ar	72.52	343	P			P	10 08 27.5	+0.6
YKAW3	Yellowknife Wh	72.58	343	P			P	10 08 27.8	+0.6
ESDC	Sonseca Array	80.17	49	P			P	10 09 09.8	-1.1
	comp=Z,0.5nm,0.8s,baz=254,slow=5.0,SNR=2.2								
	comp=Z,0.5nm,0.8s								
TORD	Torodi Ar. Bea	80.40	76	P			P	10 09 12.5	0.0
	comp=Z,3.1nm,1.2s,baz=259,slow=5.9,SNR=5.2								
	comp=Z,3.1nm,1.2s								
INK	Inuvik	82.25	342	P			P	10 09 22.1	+0.9
ILAR	Eielson Array	85.42	336	P			P	10 09 37.0	-0.5
	comp=Z,0.7nm,1.0s,baz=135,slow=3.9,SNR=4.8								
	comp=Z,0.7nm,1.0s								
QSPA	South Pole Qui	85.63	180	P			P	10 09 40.8	+2.1
	comp=Z,4.6nm,1.0s,baz=178,slow=2.2,SNR=2.2								
	comp=Z,4.6nm,1.0s								
SONM	Songino Array	136.66	356	PKP			PKPdf	10 16 22.9	+0.1
	comp=Z,0.3nm,0.7s,baz=339,slow=3.6,SNR=1.8								
ASAR	Alice Springs	138.63	226	PKP			PKPdf	10 16 27.7	+0.6
	comp=Z,0.6nm,0.8s,baz=124,slow=1.6,SNR=4.6								
GTA2	Gaotai	145.03	4	eP			PKPab	10 16 37.7	+0.3
GTA2				pP			PKiKP	10 16 42.5	+0.6
GTA2				pmax			pmax		
	comp=Z,3.0nm,1.0s								

IDC ***08*** *10:09:37.2±1.2, 17.°84N×66.°90W, h0km, mb3.5/8, mbtmp3.6/9, ML3.0/1, MS3.0/4, Error ellipse: s-maj=34.4km s-min=20.6km az=14.0*

NEIC ***08*** *10:09:37.3, 17.°64N×66.°88W, h10km*

NEIC ***08*** *10:09:37.2±0.9, 17.°64N±0.°03×66.°88W±0.°01, h10km±2km, mb4.1/3, ML4.3/47, Mwr4.0/31, Md3.9/6(RSPR), Mwr4.0/16(SLM), Error ellipse: s-maj=4.8km s-min=2.9km az=358.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.38; Mθθ0.21; Mϕϕ-0.59; Mrθ-0.19; Mθϕ1.31; Mϕr-0.42; Fault plane solution: M0 1.48000×10¹⁵ NP1:ϕs185.93000°, δ78.76000°, λ158.36000°. NP2: ϕs280.35000°, δ68.80000°, λ12.07000°. Principal axes: T 1.3497, Plg23.0000°, Azm142.0000°; N 0.2313, Plg66.0000°, Azm340.0000°; P -1.5810, Plg7.0000°, Azm234.0000°;*

TRN ***08*** *10:09:37.3, 17.°66N×66.°70W, h7km, MD0.0, Near South of Puerto Rico,*

OSPL ***08*** *10:09:38.7±0.6, 17.°68N×66.°89W, h3km±999km, ML3.9, Presumed earthquake*

SDD ***08*** *10:09:39.2±2.0, 17.°74N×66.°82W, h21km±26km, MD4.0, ML3.8, MW4.2, Presumed earthquake*

NEIC ***08*** *10:09:39, 17.°79N×66.°87W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.03; Mθθ0.39; Mϕϕ-0.35; Mrθ0.05; Mθϕ0.97; Mϕr-0.20; Fault plane solution: M0 1.06000×10¹⁵ NP1:ϕs11.00000°, δ85.00000°, λ-170.00000°. NP2:ϕs280.00000°, δ80.00000°, λ-5.00000°. Principal axes: T 1.0593, Plg4.0000°, Azm145.0000°; N -0.0002, Plg79.0000°, Azm37.0000°; P -1.0591, Plg11.0000°, Azm236.0000°;*

PTWC ***08*** *10:09:39, 17.°80N×66.°80W, MI4.2/13*

RSPR ***08*** *10:09:39.6, 17.°79N×66.°87W, h5km±1km, MD3.9/6*

ISC 08 10:09:36.8±1.3, 17.°62N±0.°05×66.°88W±0.°02, h9km±8km, n96, σ1§30/126, mb3.7/8, 11C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.36	359				Pg	10 09 44.0	+0.1
GBPR	Guanica, Bosqu	0.36	359	⇓	iP		Pg	10 09 44.0	+0.1
MLPR	Magueyes Islan	0.39	336				Pg	10 09 44.8	+0.3
CRPR	Cabo Rojo, PR	0.45	330				Pg	10 09 45.9	+0.3
CRPR	Cabo Rojo, PR	0.45	330	Sg			Sg	10 09 51.1	-0.5
CRPR				IAML				10 09 53.5	
	11μm,0.3s								
CRPR				IAML				10 09 54.8	
	15μm,0.2s								
CRPR	Cabo Rojo, PR	0.45	330	P			Pg	10 09 45.8	+0.2
CRPR	Cabo Rojo, PR	0.45	330	⇑	ePg		Pg	10 09 46.0	+0.3
CRPR				⇑	eSg		Sg	10 09 51.0	-0.5
CRPR				IAML				10 09 54.8	
	comp=N,16μm,0.2s								
CRPR	Cabo Rojo, PR	0.45	330	⇑	iP		Pg	10 09 46.0	+0.3
CRPR					eS		Sg	10 09 51.4	-0.2
CRPR	Cabo Rojo, PR	0.45	330		iP		Pg	10 09 45.9	+0.3
CRPR					eS		Sg	10 09 51.0	-0.6
CRPR				IAML				10 09 52.3	
	comp=Z,12μm,0.5s								
OBIP	Obispado Ponce	0.50	31				Pg	10 09 46.6	+0.1
OBIP					Sg		Sg	10 09 53.2	+0.2
OBIP	Obispado Ponce	0.50	31	P			Pg	10 09 46.6	+0.1
OBIP	Obispado Ponce	0.50	31	⇓	iP		Pg	10 09 46.7	+0.1
OBIP					eS		Sg	10 09 52.8	-0.3
OBIP	Obispado Ponce	0.50	31		iP		Pg	10 09 46.6	+0.1
OBIP					eS		Sg	10 09 52.7	-0.4
OBIP				IAML				10 09 55.6	
	comp=Z,6μm,0.8s								
CELP	Cerrillos	0.54	32				Pg	10 09 47.3	0.0
CELP				IAML				10 09 54.8	
	comp=Z,15μm,0.6s								
CELP				IAML				10 09 56.0	
	comp=Z,16μm,0.3s								
LSP	Las Mesas	0.59	340				Pg	10 09 48.5	+0.1
LSP	Las Mesas	0.59	340	⇑	iP		Pg	10 09 48.5	+0.1
PRSN	Puerto Rico Se	0.65	337				Pg	10 09 49.2	-0.3
PRSN				IAML				10 10 01.8	
	comp=Z,24μm,0.4s								
PRSN				IAML				10 10 02.5	
	comp=Z,30μm,0.3s								
PRSN	Puerto Rico Se	0.65	337				Sg	10 09 57.8	-0.2
PRSN	Puerto Rico Se	0.65	337	P			Pg	10 09 49.1	-0.3
PRSN	Puerto Rico Se	0.65	337	⇑	ePg		Pg	10 09 49.2	-0.3
PRSN				⇑	eSg		Sb	10 09 59.1	-0.5
PRSN				IAML				10 10 02.5	
	comp=N,17μm,0.2s								
PRSN	Puerto Rico Se	0.65	337	⇑	iP		Pg	10 09 49.2	-0.3
PRSN					eS		Sg	10 09 57.8	-0.2
UUPR	Utuado, UPR, P	0.65	13				Pg	10 09 49.0	-0.5
UUPR					Sg		Sg	10 09 56.9	-1.1
SJG	San Juan	0.85	54				Pb	10 09 53.3	-0.4
SJG				IAML				10 10 06.7	
	comp=N,8μm,0.3s								
SJG				IAML				10 10 07.3	
	comp=N,11μm,0.3s								
SJG	San Juan	0.85	54	Sg			Sb	10 10 04.6	-0.7
SJG	San Juan	0.85	54	⇓	iP		Pb	10 09 53.4	-0.4
SJG					eS		Sb	10 10 04.8	-0.5
SJG	San Juan	0.85	54		iP		Pb	10 09 53.4	-0.4
SJG					eS		Sb	10 10 04.8	-0.5
SJG				IAML				10 10 06.4	
	comp=Z,6μm,0.3s								
ECPR	Experimental S	0.85	35				Pg	10 09 52.7	-0.6
ECPR				IAML				10 10 04.7	
	comp=Z,16μm,0.3s								
ECPR				IAML				10 10 06.2	
	comp=Z,17μm,0.2s								
ECPR	Experimental S	0.85	35	⇓	iP		Pg	10 09 52.7	-0.6
ECPR					eS		Sg	10 10 03.3	-1.1
AGPR	Aguadilla, PR	0.88	345				Pg	10 09 52.9	-0.8
AGPR				IAML				10 10 09.1	
	comp=Z,6μm,0.5s								
AGPR				IAML				10 10 13.1	
	comp=Z,9μm,0.6s								
AGPR	Aguadilla, PR	0.88	345	P			Pg	10 09 52.9	-0.8
AGPR	Aguadilla, PR	0.88	345	⇑	ePg		Pg	10 09 52.9	-0.8
AGPR				⇑	eSg		Sg	10 10 03.4	-1.8
AGPR				IAML				10 10 15.9	
	comp=N,5μm,0.8s								
AGPR	Aguadilla, PR	0.88	345	⇑	iP		Pg	10 09 53.0	-0.7
AGPR					eS		Sg	10 10 03.6	-1.5
PDPR	Patillas Dam,	0.91	64				Pb	10 09 54.8	+0.1
PDPR				IAML				10 10 09.2	
	comp=N,8μm,0.7s								
IDE	Isla Desecheo	0.95	323				Pg	10 09 54.8	-0.4
IDE							Sg	10 10 06.5	-1.1
IDE	Isla Desecheo	0.95	323	⇑	iP		Pg	10 09 54.8	-0.4
IDE					eS		Sg	10 10 06.5	-1.1
GCPR	Guaynabo City	1.02	47				Pg	10 09 55.9	-0.6
GCPR							Sg	10 10 09.4	-0.4
GCPR	Guaynabo City	1.02	47	P			Pg	10 09 55.9	-0.6
GCPR	Guaynabo City	1.02	47	⇓	iP		Pg	10 09 56.3	-0.2
GCPR					eS		Sg	10 10 08.9	-0.9
HUMP	Col San Antoni	1.11	62				Pg	10 09 58.0	-0.2
HUMP	Col San Antoni	1.11	62				Sn	10 10 13.3	-0.6
HUMP	Col San Antoni	1.11	62	⇑	iP		Pg	10 09 58.4	-0.2
HUMP					eS		Sn	10 10 13.3	-0.6
CUPR	Culebra, Puert	1.67	65				Pb	10 10 07.5	-0.2
HIDR	Higuey Centro	2.00	299	⇑	ePg		Pb	10 10 13.5	0.0
HIDR				⇑	eSg		Sb	10 10 37.7	-0.8
HIDR				IAML				10 10 44.9	
	comp=N,575nm,0.2s								
MIDR	Miches	2.47	304	P			Pb	10 10 20.8	-0.7
MIDR	Miches	2.47	304	⇑	ePg		Pb	10 10 20.8	-0.7
MIDR				⇑	eSg		Sn	10 10 49.4	+1.8
MIDR				IAML				10 11 02.2	
	comp=N,323nm,0.5s								
DR12	Loma Pena Alta	2.65	296				Pn	10 10 21.8	+1.9
HATOM	Hato Mayor del	2.65	296	⇓	ePg		Pn	10 10 21.6	+1.8
HATOM				⇑	eSg		Sb	10 10 56.2	-1.0
HATOM				IAML				10 11 10.5	
	comp=N,240nm,0.8s								
SDD	Santo Domingo	3.01	287	Pn			Pn	10 10 27.4	+2.7
SDD				IAML				10 11 21.4	
	comp=N,620nm,1.0s								
SDD				IAML				10 11 28.4	
	comp=E,668nm,1.1s								
DR08	Loma La Naviza	3.27	295	P			Pn	10 10 30.7	+2.3
BANI	BANI	3.40	284	Pn			Pn	10 10 31.2	+0.9
SABA	Saba	3.46	89	Pn			Pn	10 10 32.6	+1.6
SABA				IAML				10 11 23.3	
	comp=N,625nm,0.6s								
SMRT	St. Maarten	3.65	83				Pn	10 10 34.3	+0.8
SMRT				IAML				10 11 16.7	
	comp=N,496nm,0.2s								
SMRT				IAML				10 11 27.4	
	comp=E,659nm,0.5s								
SMRT	St. Maarten	3.65	83	P			Pn	10 10 33.8	+0.3
SEUS	St. Eustatius	3.72	91	Pn			Pn	10 10 36.0	+1.6
SEUS				IAML				10 11 25.2	
	comp=E,419nm,0.9s								
SEUS				IAML				10 12 12.2	
	comp=N,429nm,0.7s								
SBLM	St Barthlm	3.85	85	P			Pn	10 10 36.7	+0.5
SKI	Saint Kitts	3.96	93	eP			Pn	10 10 39.7	+1.9
SKI				eS			Sn	10 11 23.6	-0.8
SC01	Santiago de lo	4.08	297	Pn			Pn	10 10 40.6	+1.2
SC01				IAML				10 11 55.9	
	comp=E,614nm,1.4s								
SC01				IAML				10 12 05.4	
	comp=N,474nm,0.8s								
SDDR	Presa de Saban	4.41	289	P			Pn	10 10 48.0	+4.0
MBFL	Flemmings, Mon	4.54	100	eP			Pn	10 10 47.2	+1.4
MBFL				eS			Sn	10 11 38.1	-0.7
MBWH	Windy Hill	4.56	100	eP			Pn	10 10 47.5	+1.3
MBWH				eS			Sn	10 11 38.6	-0.7
ANWB	Willy Bob	4.85	89	eP			Pn	10 10 51.4	+1.3
ANWB				eS			Sn	10 11 45.1	-1.3
DHSZ	Broadband at M	5.07	105	eP			Pn	10 10 54.0	+1.0
DHSZ				eS			Sn	10 11 50.8	-1.0
ATGZ	Broadband at L	5.16	106	eP			Pn	10 10 55.8	+1.5
MMLZ	Guadeloupe Bro	5.22	107	eP			Pn	10 10 56.9	+1.7
MMLZ				eS			Sn	10 11 54.4	-1.3
CBE	Ff, Capester	5.27	106	Pn			Pn	10 10 57.4	+1.5
ABD	La Joyeuse, An	5.28	102	Pn			Pn	10 10 57.2	+1.3
TBG	Guadaloupe-3	5.31	109	eP			Pn	10 10 57.7	+1.4
TDBA	Terre de Bas,	5.32	109	Pn			Pn	10 10 57.8	+1.3
MAGL	Barre de l'ile	5.61	106	Pn			Pn	10 11 02.0	+1.6
DSLB	Salisbury	5.66	112	eP			Pn	10 11 02.6	+1.4
DSLB				eS			Sn	10 12 05.6	-0.9
DSDZ	La Diserade, G	5.71	102	eP			Pn	10 11 03.3	+1.4
DSDZ				eS			Sn	10 12 06.1	-1.4
GDSD	La Dsirade Is	5.71	102	Pn			Pn	10 11 03.2	+1.3
H05N1	Guadeloupe/Mar	5.72	102	Pn			Pn	10 11 02.7	+0.7
H05N1				Sn			Sn	10 12 04.0	-3.8
BIM	Bigot	6.37	118	Pn			Pn	10 11 13.0	+1.9
MPOM	Morne Pois Mar	6.59	118	Pn			Pn	10 11 16.8	+2.8
SLBI	Saint Lucia, B	6.71	121	eP			Pn	10 11 16.7	+1.1
SLBI				eS			Sn	10 12 31.8	-0.4
SDV	Santo Domingo	9.42	203	Pn			Pn	10 11 57.5	+4.5
	comp=N,1.3nm,0.3s,baz=8.1,slow=7.1,SNR=8.9								
SDV				Sn			Sn	10 13 33.9	-5.3
	comp=N,0.7nm,0.3s,baz=321,slow=16,SNR=1.2								
SDV				LR			LR	10 15 39.3	
	comp=N,42nm,21.6s,baz=60,slow=38								
	comp=N,3.3nm,0.3s								
SDV	Santo Domingo	9.42	203	Pn			Pn	10 11 52.2	-0.7
BBSR	BB Station	14.82	7	Pn			Pn	10 13 06.1	-0.6
BOAV	Boa Vista	16.36	157	Pn			Pn	10 13 24.4	-2.5
BOAV				IAmb			IAmb	10 13 49.0	
	comp=Z,5.8nm,1.1s								
JTS	Las Juntas de	18.98	250	LR			LR	10 21 40.3	
	comp=Z,16nm,18.3s,baz=88,slow=38								
X58A	Rowland	20.21	329	P			P	10 14 11.0	-1.1
X58A				IAmb			IAmb	10 14 22.3	
	comp=Z,10nm,0.8s								
ATAH	Atahualpa	27.10	206	LR			LR	10 28 38.5	
	comp=Z,47nm,18.0s,baz=20,slow=42								
TXAR	Lajitas Array	35.56	296	P			P	10 16 35.8	+1.

UUPR	**Utuado, UPR, P**	**0.52**	**11**		**Pb**	**10 17 26.4**	**-0.2**
PRSN	**Puerto Rico Se**	**0.56**	**327**		**Pg**	**10 17 27.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.56**	**327**		**Sg**	**10 17 34.1**	**-0.5**
PRSN	**Puerto Rico Se**	**0.56**	**327**	⇑*e*Pg	**Pg**	**10 17 27.0**	**-0.1**
PRSN				⇑*e*Sg	**Sb**	**10 17 35.1**	**-0.1**
PRSN				IAML		10 17 37.0	
	comp=N,4μm,0.3s						
PRSN	**Puerto Rico Se**	**0.56**	**327**	⇑*i*P	**Pg**	**10 17 27.0**	**-0.1**
PRSN				*e*S	**Sg**	**10 17 34.1**	**-0.5**
ECPR	**Experimental S**	**0.72**	**37**		**Pb**	**10 17 29.9**	**-0.2**
ECPR				IAML		10 17 43.1	
	comp=N,2μm,0.2s						
ECPR				IAML		10 17 45.5	
	comp=N,2μm,0.2s						
ECPR	**Experimental S**	**0.72**	**37**	⇓*i*P	**Pb**	**10 17 30.0**	**-0.1**
ECPR				*e*S	**Sg**	**10 17 40.3**	**+0.8**
SJG	**San Juan**	**0.74**	**60**		**Pg**	**10 17 30.5**	**+0.2**
SJG				IAML		10 17 44.5	
	comp=N,725nm,0.5s						
SJG				IAML		10 17 44.9	
	comp=N,1μm,0.4s						
SJG	**San Juan**	**0.74**	**60**	Sg	**Sn**	**10 17 42.0**	**-0.6**
SJG	**San Juan**	**0.74**	**60**	⇑*i*P	**Pn**	**10 17 31.1**	**-0.5**
SJG				*e*S	**Sn**	**10 17 42.2**	**-0.4**
AGPR	**Aguadilla, PR**	**0.77**	**339**		**Pb**	**10 17 30.6**	**-0.3**
AGPR				IAML		10 17 43.0	
	comp=N,1μm,0.6s						
AGPR				IAML		10 17 49.3	
	comp=N,900nm,0.4s						
AGPR	**Aguadilla, PR**	**0.77**	**339**	⇑*e*Pg	**Pb**	**10 17 30.6**	**-0.3**
AGPR				⇑*e*Sg	**Sb**	**10 17 40.6**	**-0.6**
AGPR				IAML		10 17 42.7	
	comp=N,931nm,0.3s						
AGPR	**Aguadilla, PR**	**0.77**	**339**	⇑*i*P	**Pb**	**10 17 30.6**	**-0.3**
AGPR				*e*S	**Sg**	**10 17 41.2**	**0.0**
PDPR	**Patillas Dam,**	**0.81**	**70**		**Pn**	**10 17 32.2**	**-0.5**
IDE	**Isla Desecheo**	**0.89**	**316**		**Pb**	**10 17 32.4**	**-0.6**
IDE					**Sb**	**10 17 44.7**	**0.0**
IDE	**Isla Desecheo**	**0.89**	**316**	⇑*i*P	**Pb**	**10 17 32.4**	**-0.6**
IDE				*e*S	**Sb**	**10 17 44.7**	**0.0**
GCPR	**Guaynabo City**	**0.90**	**51**		**Pg**	**10 17 33.5**	**+0.1**
GCPR					**Sn**	**10 17 46.2**	**-0.4**
GCPR	**Guaynabo City**	**0.90**	**51**	⇑*i*P	**Pn**	**10 17 33.8**	**-0.1**
GCPR				*e*S	**Sn**	**10 17 46.4**	**-0.3**
HUMP	**Col San Antoni**	**1.01**	**67**		**Pg**	**10 17 35.4**	**0.0**
HUMP				IAML		10 17 53.6	
	comp=N,698nm,0.2s						
HUMP	**Col San Antoni**	**1.01**	**67**		**Sn**	**10 17 49.8**	**+0.6**
HUMP	**Col San Antoni**	**1.01**	**67**	⇑*i*P	**Pg**	**10 17 35.6**	**+0.2**
HUMP				*e*S	**Sn**	**10 17 49.8**	**+0.6**
CUPR	**Culebra, Puert**	**1.57**	**69**		**Pg**	**10 17 45.4**	**-0.7**
HIDR	**Higuey Centro**	**1.99**	**295**	⇑*e*Pg	**Pn**	**10 17 50.2**	**+1.3**
HIDR				⇑*e*Sg	**Sb**	**10 18 16.7**	**+0.4**
HIDR				IAML		10 18 25.8	
	comp=N,77nm,0.2s						
MIDR	**Miches**	**2.45**	**301**	⇑*e*Pg	**Pb**	**10 17 58.5**	**-1.1**
MIDR				⇑*e*Sg	**Sb**	**10 18 29.7**	**+0.2**
MIDR				IAML		10 18 37.1	
	comp=N,60nm,2.7s						
DR12	**Loma Pena Alta**	**2.64**	**294**	Pn	**Pn**	**10 17 59.2**	**+1.2**
HATOM	**Hato Mayor del**	**2.64**	**294**	⇓*e*Pg	**Pn**	**10 17 58.6**	**+0.7**
HATOM				IAML		10 18 47.5	
	comp=N,36nm,2.7s						

IDC 08 10:23:43.5±3.4, 33°09'S×178°61'W, h0km, mb3.4/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=78.6km s-min=47.8km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.22**	**213**	Pn	Pn	10 25 16.1	-0.5
URZ	1.5nm,0.3s,baz=218,slow=0.6,SNR=22			Sn	Sn	10 26 25.5	-2.9
	1.4nm,0.3s,baz=50,slow=21,SNR=5.5 3.3nm,0.2s						
ASAR	**Alice Springs**	**42.52**	**270**	P	P	10 31 41.0	+0.1
	0.4nm,0.7s,baz=106,slow=7.5,SNR=6.9 0.4nm,0.7s						
WRA	**Warramunga Arr**	**43.75**	**275**	P	P	10 31 50.7	-0.2
	0.3nm,0.6s,baz=115,slow=8.1,SNR=2.2 0.3nm,0.6s						
FINES	**FINESS Array B**	**147.46**	**338**	PKPbc	PKPbc	10 43 28.0	-0.7
	2.2nm,1.0s,baz=48,slow=2.1,SNR=1.8						

*NEIC **08** 10:29:51.4±0.6, 17°.66N±0°.03×66°.85W±0°.01, h10km±2km, ML3.5/33, ML3.3(RSPR), Error ellipse: s-maj=4.7km s-min=3.0km az=19.0*
*SDD **08** 10:29:52.6±2.3, 17°.66N×66°.92W, h15km±60km, MD3.6, ML3.2, MW3.4, Presumed earthquake*
*RSPR **08** 10:29:53.1, 17°.77N×66°.86W, h5km±1km*
ISC 08 10:29:52.8±1.3, 17°.76N±0°.07×66°.84W±0°.02, h18km±4km, n37, σ0≡48/58, 9C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.21**	**351**		**Pg**	**10 29 57.8**	**-0.1**
GBPR					**Sb**	**10 30 01.6**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.21**	**351**	⇓*i*P	**Pg**	**10 29 57.8**	**-0.1**
GBPR				*e*S	**Sb**	**10 30 01.6**	**+0.2**
MLPR	**Magueyes Islan**	**0.28**	**317**		**Pg**	**10 29 58.8**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.35**	**314**		**Pg**	**10 29 59.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.35**	**314**	Sg	**Sg**	**10 30 05.2**	**0.0**
CRPR				IAML		10 30 05.9	
	4μm,0.3s						
CRPR				IAML		10 30 06.5	
	3μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.35**	**314**	⇑*e*Pg	**Pg**	**10 29 60.0**	**-0.2**
CRPR				⇑*e*Sg	**Sg**	**10 30 05.5**	**+0.3**
CRPR				IAML		10 30 05.6	
	comp=N,3μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.35**	**314**	*e*S	**Sg**	**10 30 05.5**	**+0.2**
CRPR				⇑*i*P	**Pg**	**10 30 00.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.36**	**39**		**Pg**	**10 30 00.0**	**-0.3**
OBIP					**Sb**	**10 30 06.2**	**+0.2**
OBIP	**Obispado Ponce**	**0.36**	**39**	⇓*i*P	**Pg**	**10 30 00.2**	**-0.2**
OBIP				*e*S	**Sb**	**10 30 06.5**	**+0.5**
CELP	**Cerrillos**	**0.40**	**39**		**Pg**	**10 30 00.9**	**-0.2**
CELP				IAML		10 30 08.3	
	comp=N,3μm,0.2s						
LSP	**Las Mesas**	**0.47**	**331**		**Pg**	**10 30 02.3**	**0.0**
LSP					**Sb**	**10 30 09.8**	**+0.5**
LSP	**Las Mesas**	**0.47**	**331**	⇑*i*P	**Pg**	**10 30 02.3**	**0.0**
LSP				*e*S	**Sb**	**10 30 09.8**	**+0.5**
UUPR	**Utuado, UPR, P**	**0.50**	**14**		**Pg**	**10 30 02.7**	**-0.2**
PRSN	**Puerto Rico Se**	**0.54**	**328**		**Pg**	**10 30 03.2**	**-0.3**
PRSN	**Puerto Rico Se**	**0.54**	**328**		**Sb**	**10 30 11.5**	**+0.4**
PRSN	**Puerto Rico Se**	**0.54**	**328**	⇑*e*Pg	**Pg**	**10 30 03.2**	**-0.3**
PRSN				⇑*e*Sg	**Sb**	**10 30 11.4**	**+0.4**
PRSN				IAML		10 30 13.2	
	comp=N,4μm,0.3s						
PRSN	**Puerto Rico Se**	**0.54**	**328**	⇑*i*P	**Pg**	**10 30 03.2**	**-0.3**
PRSN				*e*S	**Sb**	**10 30 11.5**	**+0.5**
ECPR	**Experimental S**	**0.72**	**40**		**Pg**	**10 30 06.2**	**-0.7**
ECPR				IAML		10 30 18.7	
	comp=N,3μm,0.2s						
ECPR				IAML		10 30 19.5	
	comp=N,3μm,0.2s						
ECPR	**Experimental S**	**0.72**	**40**	⇓*i*P	**Pg**	**10 30 06.2**	**-0.7**
ECPR				*e*S	**Sb**	**10 30 17.0**	**+0.7**
AGPR	**Aguadilla, PR**	**0.75**	**340**		**Pg**	**10 30 06.9**	**-0.5**
AGPR				IAML		10 30 19.0	
	comp=N,2μm,0.6s						
AGPR				IAML		10 30 25.6	
	comp=N,2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.75**	**340**	⇑*e*Pg	**Pg**	**10 30 06.9**	**-0.5**
AGPR				⇑*e*Sg	**Sb**	**10 30 17.6**	**+0.5**
AGPR				IAML		10 30 19.1	
	comp=N,2μm,0.8s						
AGPR	**Aguadilla, PR**	**0.75**	**340**	⇑*i*P	**Pg**	**10 30 06.9**	**-0.5**
AGPR				*e*S	**Sb**	**10 30 17.5**	**+0.3**
SJG	**San Juan**	**0.75**	**62**		**Pg**	**10 30 06.9**	**-0.5**
SJG				IAML		10 30 20.9	
	comp=N,1μm,0.5s						
SJG				IAML		10 30 21.9	
	comp=N,2μm,0.3s						
SJG	**San Juan**	**0.75**	**62**	⇓*e*P	**Pg**	**10 30 06.9**	**-0.6**
SJG				*e*S	**Sn**	**10 30 18.4**	**-0.9**
PDPR	**Patillas Dam,**	**0.82**	**72**		**Pb**	**10 30 08.3**	**-0.3**
IDE	**Isla Desecheo**	**0.86**	**316**		**Pb**	**10 30 08.7**	**-0.6**
IDE					**Sb**	**10 30 20.4**	**-0.1**
IDE	**Isla Desecheo**	**0.86**	**316**	⇑*i*P	**Pb**	**10 30 08.7**	**-0.6**
IDE				*e*S	**Sb**	**10 30 20.4**	**-0.1**
GCPR	**Guaynabo City**	**0.91**	**53**		**Pb**	**10 30 09.9**	**0.0**
GCPR					**Sg**	**10 30 21.9**	**-0.5**
GCPR	**Guaynabo City**	**0.91**	**53**	⇑*i*P	**Pb**	**10 30 10.0**	**+0.1**
GCPR				*e*S	**Sn**	**10 30 22.9**	**-0.4**
HUMP	**Col San Antoni**	**1.02**	**68**		**Pb**	**10 30 11.7**	**-0.2**
HUMP				IAML		10 30 28.1	
	comp=N,802nm,0.2s						
HUMP				IAML		10 30 28.0	
	comp=N,910nm,0.2s						
HUMP	**Col San Antoni**	**1.02**	**68**		**Sn**	**10 30 26.6**	**+0.6**
HUMP	**Col San Antoni**	**1.02**	**68**	⇑*i*P	**Pb**	**10 30 11.8**	**-0.1**
HUMP				*e*S	**Sn**	**10 30 26.6**	**+0.6**
CUPR	**Culebra, Puert**	**1.58**	**70**		**Pn**	**10 30 20.1**	**+0.2**
HIDR	**Higuey Centro**	**1.96**	**295**	⇑*e*Pg	**Pb**	**10 30 27.0**	**-1.0**
HIDR				⇓*e*Sg	**Sn**	**10 30 49.5**	**+0.2**
HIDR				IAML		10 31 00.9	
	comp=N,157nm,0.3s						
MIDR	**Miches**	**2.42**	**300**	⇑*e*Pg	**Pb**	**10 30 34.8**	**-1.0**
MIDR				⇑*e*Sg	**Sb**	**10 31 05.7**	**+0.4**
MIDR				IAML		10 31 18.1	
	comp=N,72nm,0.7s						
DR12	**Loma Pena Alta**	**2.62**	**293**	Pn	**Pn**	**10 30 34.5**	**+0.3**
HATOM	**Hato Mayor del**	**2.62**	**293**	⇓*e*Pg	**Pn**	**10 30 35.6**	**+1.4**
HATOM				IAML		10 31 24.8	
	comp=N,63nm,0.6s						

*AFAD **08** 10:34:16.9, 37°.64N×26°.89E, h9km±1km, ML3.1*
*ISK **08** 10:34:16.9, 37°.65N×26°.83E, h11km, ML3.3/30*
*THE **08** 10:34:17.8, 38°N±162°×2°.7E±9°.2, h2km±69km, MLh3.1/3*
*ATH **08** 10:34:17.3, 37°.71N×26°.93E, h8km±1km, ML3.3/7, Manual Solution by F.Xalaris First location: 2020/02/08 10:35:39, This location: 2020/02/08 10:46:27 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 08 10:34:17.5±0.8, 37°.70N±0°.02×26°.90E±0°.02, h9km±5km, n72, σ0≡85/91, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.05**	**281**	P	**Pg**	**10 34 19.5**	**+0.2**
SMG				S	**Sg**	**10 34 21.0**	**+0.2**
SMG	**Samos**	**0.05**	**281**	P	**Pg**	**10 34 19.5**	**+0.2**
SMG				S	**Sg**	**10 34 20.9**	**+0.2**
KRL1	**Karlovasi Samo**	**0.18**	**302**	P	**Pg**	**10 34 21.2**	**0.0**
KRL1				S	**Sg**	**10 34 23.9**	**+0.1**
GCAM	**G?zelcaml?**	**0.27**	**90**	Pg	**Pb**	**10 34 24.3**	**-0.2**
GCAM				Sg	**Sb**	**10 34 29.3**	**+0.2**
KUSD	**Kusadasi-Aydin**	**0.35**	**62**	Pg	**Pb**	**10 34 25.6**	**-0.3**
GMLD	**Gumuldur**	**0.38**	**2**	Pg	**Pb**	**10 34 25.9**	**-0.5**
GMLD				Sg	**Sb**	**10 34 32.4**	**+0.1**
YKAV	**Yalikavak-Bodr**	**0.65**	**152**	Pg	**Pb**	**10 34 31.2**	**+0.2**
DUVT	**Torbali**	**0.68**	**40**	P	**Pb**	**10 34 31.3**	**-0.2**
DUVT				S	**Sb**	**10 34 40.7**	**-0.3**
DUVT				IAML		10 34 45.0	
	comp=E,1μm,0.3s						
BLCB	**Balcova**	**0.69**	**9**	Pg	**Pb**	**10 34 31.8**	**0.0**
KLNA	**Kalymnos**	**0.74**	**175**	Pg	**Pb**	**10 34 32.0**	**+0.2**
KLNA				S	**Sg**	**10 34 40.7**	**-0.8**
CESE	**eme**	**0.79**	**323**	Pg	**Pb**	**10 34 33.1**	**-0.3**
BODA	**Bodrum-Mula**	**0.79**	**147**	Pg	**Pb**	**10 34 33.0**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.82**	**72**	Pg	**Pn**	**10 34 34.3**	**-1.1**
KRBN	**Karaburun**	**0.93**	**343**	Pg	**Pb**	**10 34 35.7**	**-0.1**
IZMR	**zmir-demi**	**0.94**	**62**	P	**Pn**	**10 34 36.5**	**-0.4**
IZMR				S	**Sn**	**10 34 49.3**	**-1.1**
IZMR				IAML		10 34 51.0	
	comp=N,442nm,0.5s						
IZMR				IAML		10 34 54.0	
	comp=E,443nm,0.5s						
BAGT	**Foa**	**0.95**	**358**	P	**Pn**	**10 34 36.6**	**-0.5**
BAGT				S	**Sn**	**10 34 50.3**	**-0.6**
BAGT				IAML		10 34 51.0	
	comp=N,536nm,0.5s						
BAGT				IAML		10 34 52.0	
	comp=E,2μm,0.5s						
CHOS	**Chios island**	**0.96**	**316**	Pg	**Pg**	**10 34 35.3**	**-0.6**
CHOS	**Chios island**	**0.96**	**316**	P	**Pg**	**10 34 35.6**	**-0.3**
CHOS	**Chios island**	**0.96**	**316**	P	**Pg**	**10 34 35.1**	**-0.8**
CHOS				S	**Sg**	**10 34 48.0**	**-0.3**
FOCM	**Foa**	**1.02**	**353**	Pg	**Pn**	**10 34 38.0**	**0.0**
EAG2	**Marmaro, Chios**	**1.05**	**324**	P	**Pn**	**10 34 38.0**	**-0.4**
EAG2				S	**Sb**	**10 34 51.5**	**-0.2**
ODEM	**Odemis-Izmir**	**1.09**	**58**	Pn	**Pn**	**10 34 39.0**	**-0.1**
CAMT	**Merkez**	**1.10**	**17**	P	**Pn**	**10 34 38.7**	**-0.3**
CAMT				S	**Sn**	**10 34 56.0**	**+1.6**
CAMT				IAML		10 34 59.0	
	comp=N,1μm,0.6s						
CAMT				IAML		10 35 00.0	
	comp=E,1μm,0.4s						
DAT	**Datca**	**1.11**	**151**	Pn	**Pg**	**10 34 38.2**	**-0.6**
NAZL	**Nazilli-Aydin**	**1.14**	**76**	Pn	**Pg**	**10 34 39.9**	**+0.3**
YER	**Yerkesik**	**1.24**	**117**	Pn	**Pg**	**10 34 41.2**	**-0.1**
YER	**Yerkesik**	**1.24**	**117**	P	**Pg**	**10 34 41.4**	**+0.2**
ZEDA	**zmir-Bergama**	**1.27**	**6**	P	**Pn**	**10 34 41.1**	**-0.4**
ZEDA				S	**Sn**	**10 35 00.6**	**+1.9**
ZEDA				IAML		10 35 02.0	
	comp=E,641nm,0.7s						
ZEDA				IAML		10 35 03.0	
	comp=N,556nm,0.7s						
IZMD	**zmir-Dikili-**	**1.28**	**1**	P	**Pn**	**10 34 41.0**	**-0.7**
IZMD				S	**Sn**	**10 35 01.4**	**+2.3**
IZMD				IAML		10 35 03.0	
	comp=N,286nm,0.5s						
IZMD				IAML		10 35 06.0	
	comp=E,371nm,0.6s						
GOMA	**Golmarmara-Man**	**1.29**	**38**	Pn	**Pg**	**10 34 42.6**	**+0.4**
KTTT	**Salihli**	**1.36**	**43**	P	**Pn**	**10 34 42.4**	**-0.4**
KTTT				IAML		10 35 11.0	
	comp=N,153nm,0.6s						
DKL	**Dikili**	**1.37**	**0**	Pn	**Pg**	**10 34 43.7**	**-0.1**
AKHS	**Akhisar**	**1.38**	**31**	P	**Pn**	**10 34 42.4**	**-0.6**
AKHS				S	**Sg**	**10 35 04.4**	**+2.5**
AKHS				IAML		10 35 13.0	
	comp=E,399nm,0.6s						
AKS	**Akhisar**	**1.38**	**31**	Pn	**Pg**	**10 34 43.9**	**-0.1**
TNSA	**Tinos**	**1.39**	**264**	P	**Pn**	**10 34 43.2**	**+0.2**
TURN	**Turunc**	**1.42**	**130**	Pn	**Pn**	**10 34 43.0**	**-0.4**
MANT	**Manisa**	**1.53**	**58**	P	**Pn**	**10 34 45.1**	**-0.1**
MANT				S	**Sg**	**10 35 05.8**	**-0.9**
MANT				IAML		10 35 14.0	
	comp=N,120nm,0.4s						
MANT				IAML		10 35 17.0	
	comp=E,116nm,0.4s						
SOMA	**Soma-Manisa**	**1.54**	**19**	Pn	**Pg**	**10 34 46.1**	**-0.9**
GORD	**Gordes-Manisa**	**1.57**	**39**	Pn	**Pb**	**10 34 46.4**	**-0.4**
KULA	**Kula-Manisa**	**1.61**	**59**	Pn	**Pn**	**10 34 46.3**	**+0.1**
PRK	**Paraskevi**	**1.62**	**343**	P	**Pn**	**10 34 46.4**	**+0.2**
PRK				S	**Sb**	**10 35 07.4**	**-0.7**
DALY	**Dalyan (Mula)**	**1.66**	**122**	Pn	**Pn**	**10 34 46.8**	**+0.1**
THR2	**Thira island,**	**1.71**	**224**	P	**Pb**	**10 34 48.5**	**-0.6**
SIGR	**SIGRI**	**1.72**	**332**	Pn	**Pn**	**10 34 48.1**	**+0.5**
SIGR	**SIGRI**	**1.72**	**332**	P	**Pn**	**10 34 47.3**	**-0.2**
THR8	**Santorini-Mono**	**1.72**	**222**	P	**Pn**	**10 34 48.5**	**+0.9**
THERA	**Ancient Thera,**	**1.75**	**221**	P	**Pn**	**10 34 48.0**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.77**	**223**	P	**Pb**	**10 34 49.4**	**-0.6**
SAP3	**Santorini-Thir**	**1.77**	**225**	P	**Pb**	**10 34 49.6**	**-0.6**
SAP3	**Santorini-Thir**	**1.77**	**225**	P	**Pn**	**10 34 49.3**	**+1.0**
ARG	**Arkhangelos**	**1.78**	**146**	Pn	**Pn**	**10 34 48.1**	**-0.3**
ARG	**Arkhangelos**	**1.78**	**146**	P	**Pn**	**10 34 48.1**	**-0.3**
STEP	**BALIKESIR_Sava**	**1.79**	**21**	P	**Pg**	**10 34 51.9**	**0.0**
STEP				S	**Sg**	**10 35 16.7**	**+1.6**
THR6	**Thira Island,**	**1.80**	**222**	P	**Pn**	**10 34 49.7**	**+1.0**
THR9	**Santorini-Faro**	**1.82**	**223**	P	**Pn**	**10 34 49.8**	**+0.8**
THR9	**Santorini-Faro**	**1.82**	**223**	P	**Pn**	**10 34 49.7**	**+0.8**
GPNR	**Gulpinar-Canak**	**1.85**	**341**	Pn	**Pb**	**10 34 50.2**	**-1.3**
YAYO	**Edremit-Balk**	**1.91**	**4**	Pn	**Pb**	**10 34 51.5**	**-1.1**
APMY	**Acipayam-Deniz**	**1.92**	**96**	Pn	**Pb**	**10 34 51.3**	**-1.5**
DEMI	**Demirci**	**1.96**	**46**	P	**Pg**	**10 34 55.4**	**+0.3**
DEMI				S	**Sg**	**10 35 22.8**	**+2.3**
KARY	**Karystos**	**1.98**	**280**	P	**Pn**	**10 34 51.2**	**0.0**
CAME	**Cameli-Denizli**	**2.06**	**111**	Pn	**Pn**	**10 34 53.1**	**+0.7**
BALB	**Balikesir**	**2.08**	**21**	Pn	**Pb**	**10 34 54.2**	**-1.3**
SIMA	**Simav-Kutahya**	**2.14**	**49**	Pn	**Pb**	**10 34 54.9**	**-1.6**
KARP	**Karpathos**	**2.16**	**174**	P	**Pn**	**10 34 52.9**	**-0.7**
EZN	**Ezine**	**2.17**	**348**	Pn	**Pn**	**10 34 55.0**	**+1.2**
YENI	**Yenice-Canakka**	**2.25**	**7**	Pn	**Pb**	**10 34 56.3**	**-2.0**
DST	**Dursunbey**	**2.33**	**35**	Pn	**Pb**	**10 34 57.7**	**-2.0**
BASM	**Basmaki-Afyon**	**2.51**	**84**	Pn	**Pn**	**10 34 59.2**	**+0.7**
IDI	**Anoyia**	**2.90**	**215**	P	**Pn**	**10 35 04.0**	**+0.1**
SMTH	**Samothraki Isl**	**2.96**	**339**	P	**Pn**	**10 35 04.8**	**0.0**
ALN	**Alexandroupoli**	**3.26**	**349**	P	**Pn**	**10 35 08.7**	**-0.1**

IDC 08 10:37:32.7±12.0, 62°.06S×92°.53E, h0km, Error ellipse: s-maj=34.8km s-min=9.8km az=159.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04S1	**CROZET ISLANDS**	**27.52**	**285**	H	H	11 12 28.4	
	baz=138,slow=76,SNR=15						
H04S2	**CROZET ISLANDS**	**27.52**	**285**	H	H	11 12 26.4	
	baz=138,slow=76,SNR=15						
H04S3	**CROZET ISLANDS**	**27.53**	**285**	H	H	11 12 25.8	
	baz=138,slow=76,SNR=14						
H01W2	**Cape Leeuwin H**	**30.41**	**37**	H	H	11 15 42.9	
	baz=200,slow=76,SNR=26						
H01W1	**Cape Leeuwin H**	**30.43**	**37**	H	H	11 15 44.9	
	baz=200,slow=76,SNR=32						
H01W3	**Cape Leeuwin H**	**30.43**	**37**	H	H	11 15 44.0	
	baz=200,slow=76,SNR=31						
H08S2	**Diego Garcia H**	**56.27**	**336**	H	H	11 47 57.9	
	baz=168,slow=76,SNR=24						
H08S1	**Diego Carcia H**	**56.28**	**336**	H	H	11 47 58.7	
	baz=168,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**56.29**	**336**	H	H	11 47 59.3	
	baz=168,slow=76,SNR=42						

*IDC **08** 10:46:24.0±1.0, 3°.00S×129°.94E, h0km, mb3.9/8, mbtmp4.0/11, ML4.2/3, MS3.1/5, Error ellipse: s-maj=39.2km s-min=17.3km az=75.0*
*NEIC **08** 10:46:25.3±1.3, 3°.06S±0°.08×129°.81E±0°.03, h10km±1km, mb4.1/10, Error ellipse: s-maj=13.7km s-min=4.5km az=6.0*
*DJA **08** 10:46:28.9±0.5, 3°S±2°×13°0E±°, h13km±5km, M4.3/25, mB5.0/1, mb4.7/7, MLv4.2/25, Mw(mB)4.3/1*
ISC 08 10:46:27.2±0.6, 2°.99S±0°.05×129°.88E±0°.05, h25km, n49, σ1≡80/49, mb4.0/9, MS2.8/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.02**	**250**	P	**Pn**	**10 46 49.1**	**+3.2**
BNDI	**Bandanaira**	**1.52**	**179**	P	**Pb**	**10 46 57.8**	**+3.1**
KRAI	**Karang Ratu**	**1.52**	**258**	P	**Pb**	**10 46 57.6**	**+2.9**
AAI	**Ambon**	**1.82**	**248**	P	**Pb**	**10 47 01.7**	**+1.8**
FAKI	**Fak Fak**	**2.36**	**88**		**Pn**	**10 47 06.3**	**+1.9**
FAKI	**Fak Fak**	**2.36**	**88**	P	**Pn**	**10 47 06.5**	**+2.1**
SIJI	**Sorong**	**2.52**	**33**	Pn	**Pn**	**10 47 06.2**	**-0.4**
	32nm,0.3s,baz=209,slow=13,SNR=48						
SIJI				Sn	**Sn**	**10 47 35.4**	**-1.1**
	28nm,0.3s,baz=74,slow=23,SNR=12 71nm,0.3s						
SIJI	**Sorong**	**2.52**	**33**	P	**Pn**	**10 47 07.0**	**+0.4**
SWI	**Sorong**	**2.52**	**33**	P	**Pn**	**10 47 07.2**	**+0.6**
NLAI	**Namlea**	**2.79**	**265**	P	**Pb**	**10 47 14.6**	**-1.8**
KMPI	**Kaimana, Papua**	**3.87**	**100**	P	**Pn**	**10 47 27.8**	**+2.6**
SANI	**Sanana**	**4.00**	**283**	P	**Pn**	**10 47 28.3**	**+1.3**
TNTI	**Ternate**	**4.51**	**326**	Pn	**Pn**	**10 47 33.6**	**-0.3**
RKN	**Ransiki, Papua**	**4.54**	**71**	P	**Pn**	**10 47 36.3**	**+2.0**
MWPI	**Manokwari, Pap**	**4.63**	**64**	P	**Pn**	**10 47 39.4**	**+3.8**
SAUI	**Saumlaki**	**5.16**	**164**	Pn	**Pn**	**10 47 41.8**	**-1.0**
BAKI	**Biak**	**6.47**	**74**	P	**Pn**	**10 48 03.3**	**+2.4**
LUWI	**Luwuk**	**7.37**	**285**	Pn	**Pn**	**10 48 13.6**	**+0.4**
APSI	**Ampana**	**8.49**	**284**	P	**Pn**	**10 48 30.8**	**+2.2**
	753nm46nm,0.7s						
MRSI	**Marisa**	**8.65**	**293**	P	**Pn**	**10 48 31.2**	**+0.3**
BATI	**Baumata**	**9.46**	**220**	LR	LR	10 52 31.9	
	comp=Z,190nm,20.9s,baz=63,slow=39						
MTN	**Manton Dam**	**9.87**	**173**	Pn	**Pn**	**10 48 46.3**	**-1.2**
TOLI2	**Tolitoli**	**9.97**	**294**	Pn	**Pn**	**10 48 47.8**	**-1.2**
KAPI	**Kappang**	**10.30**	**258**	LR	LR	10 53 34.3	
	comp=Z,76nm,20.4s,baz=74,slow=42						
KNRA	**Kununurra**	**12.65**	**185**	Pn	**Pn**	**10 49 24.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**15.58**	**195**	Pn	**Pn**	**10 50 04.4**	**-0.9**
	1.0nm,0.3s,baz=18,slow=11,SNR=17 3.9nm,0.8s						
COEN	**Coen**	**17.06**	**130**	P	**Pn**	**10 50 24.7**	**+0.5**
COEN				IAmb

PAMC S **Sn** 10 49 40.2 +3.5

*AFAD **08** 10:54:11.7, 35°.06N×27°.92E, h12km±2km, ML3.0*
*IDC **08** 10:54:13.2±1.0, 35°.30N×28°.07E, h0km, mb3.8/6, mbtmp3.7/11, ML3.3/4, MS3.2/3, Error ellipse: s-maj=22.6km s-min=15.2km az=173.0*
*ISK **08** 10:54:14.2, 35°.16N×27°.92E, h9km, ML3.3/19*
*ATH **08** 10:54:16.1, 35°.23N×28°.05E, h7km±3km, ML3.5/6, Manual Solution by F.Xalaris First location: 2020/02/08 10:55:59, This location: 2020/02/08 11:16:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 08 10:54:14.7±1.3, 35°.13N±0°.04×27°.94E±0°.03, h17km±9km, n59, σ1§43/72, mb3.7/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KARP	**Karpathos**	**0.76**	**304**	Pg		**Pg**	**10 54 28.2**	**-1.5**
KARP				Sg		**Sb**	**10 54 39.7**	**0.0**
KARP	**Karpathos**	**0.76**	**304**	P		**Pg**	**10 54 28.8**	**-0.9**
KARP				S		**Sn**	**10 54 41.8**	**-0.1**
ARG	**Arkhangelos**	**1.10**	**8**	Pg		**Pb**	**10 54 35.2**	**-0.1**
ARG				Sg		**Sg**	**10 54 50.5**	**+0.1**
ARG	**Arkhangelos**	**1.10**	**8**	P		**Pb**	**10 54 35.2**	**-0.1**
ARG				S		**Sb**	**10 54 48.0**	**-1.3**
ZKR	**Zakros**	**1.41**	**270**	Pn		**Pb**	**10 54 40.7**	**+0.1**
ZKR	**Zakros**	**1.41**	**270**	P		**Pg**	**10 54 42.9**	**+1.0**
ZKR				S		**Sg**	**10 55 03.2**	**+2.8**
YAZI	**Mula-Dat§a-**	**1.60**	**346**	P		**Pn**	**10 54 42.6**	**+0.3**
YAZI				S		**Sg**	**10 55 05.9**	**-0.5**
YAZI				IAML			10 55 11.0	
	comp=E,212nm,0.9s							
YAZI				IAML			10 55 16.0	
	comp=N,220nm,1.1s							
DAT	**Datca**	**1.63**	**350**	Pn		**Pn**	**10 54 43.2**	**+0.5**
TURN	**Turunc**	**1.66**	**8**	Pn		**Pn**	**10 54 43.8**	**+0.7**
TURN	**Turunc**	**1.66**	**8**	P		**Pb**	**10 54 44.6**	**-0.3**
TURN				S		**Sg**	**10 55 10.3**	**+1.9**
TURN				IAML			10 55 20.0	
	comp=E,214nm,0.8s							
TURN				IAML			10 55 23.0	
	comp=N,148nm,0.6s							
AKAS	**Kas**	**1.75**	**50**	Pn		**Pn**	**10 54 45.6**	**+1.2**
DALY	**Dalyan (Mula)**	**1.78**	**19**	Pn		**Pn**	**10 54 45.5**	**+0.7**
SABU	**Mula-Dalaman**	**1.89**	**26**	P		**Pn**	**10 54 48.1**	**+1.8**
SABU				S		Sg	10 55 25.2	+10
SABU				IAML			10 55 39.0	
	comp=E,105nm,0.9s							
SABU				IAML			10 55 46.0	
	comp=N,183nm,0.8s							
NPS	**Neapolis**	**1.91**	**275**	P		**Pg**	**10 54 50.5**	**-0.9**
NPS				S		**Sg**	**10 55 15.6**	**-0.7**
BDRM	**Kayabasi**	**1.98**	**348**	P		**Pb**	**10 54 50.5**	**+0.2**
BDRM				S		**Sb**	**10 55 14.8**	**+0.1**
BODT	**Bodrum**	**2.00**	**345**	Pn		**Pn**	**10 54 48.4**	**+0.7**
YER	**Yerkesik**	**2.02**	**8**	Pn		**Pn**	**10 54 48.8**	**+0.7**
CAME	**Cameli-Denizli**	**2.12**	**31**	Pn		**Pn**	**10 54 50.6**	**+1.0**
MLSB	**Milas**	**2.17**	**357**	Pn		**Pn**	**10 54 49.4**	**-0.7**
ELL	**Elmali**	**2.27**	**44**	Pn		**Pn**	**10 54 52.9**	**+1.3**
DNZT	**Denizli-Tavas-**	**2.32**	**22**	P		**Pn**	**10 54 52.8**	**+0.5**
DNZT				IAML			10 55 39.0	
	comp=E,56nm,1.1s							
DNZT				IAML			10 55 47.0	
	comp=N,50nm,0.7s							
THERA	**Ancient Thera,**	**2.36**	**302**	P		**Pn**	**10 54 52.0**	**-0.7**
THR6	**Thira Island,**	**2.41**	**301**	P		**Pn**	**10 54 54.2**	**+0.9**
SNT5	**Nea Kammeni, S**	**2.43**	**302**	P		**Pn**	**10 54 53.8**	**+0.1**
SNT5	**Nea Kammeni, S**	**2.43**	**302**	P		**Pb**	**10 54 56.5**	**-1.5**
IDI	**Anoyia**	**2.50**	**275**	Pn		**Pb**	**10 54 58.0**	**-1.3**
	16nm,0.4s,baz=67,slow=16,SNR=19							
IDI				Sn		**Sb**	**10 55 30.5**	**+0.6**
	9.4nm,0.3s,baz=295,slow=17,SNR=4.2							
IDI	**Anoyia**	**2.50**	**275**	Pn		**Pn**	**10 54 56.6**	**+1.9**
IDI	**Anoyia**	**2.50**	**275**	P		**Pb**	**10 54 58.8**	**-0.5**
IDI				S		**Sb**	**10 55 30.9**	**+1.1**
AYDN	**Tasoluk**	**2.53**	**359**	P		**Pn**	**10 54 56.0**	**+0.9**
AYDN				S		**Sb**	**10 55 30.3**	**-0.3**
AYDN				IAML			10 55 44.0	
	comp=E,127nm,0.9s							
AYDN				IAML			10 55 50.0	
	comp=N,116nm,1.0s							
APMY	**Acipayam-Deniz**	**2.59**	**25**	Pn		**Pn**	**10 54 56.9**	**+1.0**
ESEN	**Aydn-Nazilli**	**2.69**	**7**	P		**Pn**	**10 54 58.5**	**+1.3**
ESEN				S		**Sb**	**10 55 33.7**	**-1.4**
ESEN				IAML			10 55 55.0	
	comp=N,50nm,1.0s							
ESEN				IAML			10 56 01.0	
	comp=E,51nm,0.7s							
KORT	**Korkueli**	**2.70**	**46**	Pn		**Pn**	**10 54 59.2**	**+1.6**
SMG	**Samos**	**2.73**	**341**	P		**Pn**	**10 54 59.2**	**+1.5**
SMG	**Samos**	**2.73**	**341**	P		**Pn**	**10 54 59.6**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**2.81**	**359**	Pn		**Pn**	**10 55 00.1**	**+1.0**
NAZL	**Nazilli-Aydin**	**2.85**	**6**	Pn		**Pn**	**10 55 00.6**	**+1.2**
VAM	**Vamos**	**3.07**	**276**	P		**Pb**	**10 55 06.3**	**-2.6**
ODEM	**Odemis-Izmir**	**3.15**	**2**	Pn		**Pn**	**10 55 04.8**	**+1.2**
GVD	**Gavdhos**	**3.18**	**266**	P		**Pb**	**10 55 08.0**	**-2.7**
GVD				S		**Sb**	**10 55 46.9**	**-2.2**
IMMV	**Iera Moni Meta**	**3.26**	**277**	P		**Pb**	**10 55 08.8**	**-3.3**
KULA	**Kula-Manisa**	**3.43**	**9**	Pn		**Pn**	**10 55 08.9**	**+1.4**
AKMS	**Akamas**	**3.61**	**90**	P		**Pn**	**10 55 11.2**	**+1.4**
NATA	**Nata**	**3.82**	**94**	P		**Pn**	**10 55 14.3**	**+1.5**
VLI	**Veliai**	**4.36**	**293**	P		**Pn**	**10 55 20.2**	**0.0**
CSS	**Mathiatis**	**4.42**	**91**	P		**Pn**	**10 55 22.6**	**+1.5**
BRTR	**Keskin Array B**	**6.45**	**43**	Pn		**Pn**	**10 55 47.8**	**-1.2**
	0.1nm,0.3s,baz=238,slow=16,SNR=2.1							
BRTR				Sn		**Sn**	**10 56 58.3**	**-4.0**
	0.1nm,0.3s,baz=170,slow=28,SNR=1.3 1.1nm,1.0s							
MMAI	**Mount Meron Ar**	**6.54**	**107**	Pn		**Pn**	**10 55 49.9**	**-0.3**
	3.6nm,0.3s,baz=308,slow=14,SNR=10							
MMAI				Sn		**Sn**	**10 57 04.9**	**+0.4**
	3.6nm,0.3s,baz=276,slow=23,SNR=4.8 1.5nm,0.3s							
EIL	**Elat**	**8.04**	**131**	Pn		**Pn**	**10 56 11.7**	**+0.8**
	1.8nm,0.3s,baz=354,slow=4.9,SNR=14							
EIL				Sn		**Sn**	**10 57 38.1**	**-3.3**
	1.9nm,0.3s,baz=0.5,slow=17,SNR=7.3 28nm,1.1s							
MLR	**Muntele Rosu**	**10.46**	**352**	Pn		Pn	10 56 50.1	+6.0
	0.2nm,0.3s,baz=168,slow=13,SNR=4.1							
GERES	**GERESS Array B**	**17.28**	**327**	P		**Pn**	**10 58 15.7**	**+0.6**
	baz=129,slow=16,SNR=5.5 0.4nm,0.6s							
DAVOX	**Davos/Dischmat**	**17.89**	**316**	LR		LR	11 05 59.1	
	comp=Z,58nm,18.1s,baz=76,slow=40							
ESDC	**Sonseca Array**	**25.67**	**290**	P		**P**	**10 59 45.9**	**+2.2**
	1.0nm,0.7s,baz=90,slow=8.9,SNR=9.4 1.0nm,0.7s							
FINES	**FINESS Array B**	**26.36**	**358**	P		**P**	**10 59 48.3**	**-1.4**
	2.7nm,1.0s,baz=177,slow=5.6,SNR=4.6 2.7nm,1.0s							
HFS	**Hagfors**	**26.68**	**344**	P		**P**	**10 59 51.1**	**-1.5**
	2.5nm,0.9s,baz=138,slow=11,SNR=1.6 2.5nm,0.9s							
NOA	**NORSAR Array B**	**28.06**	**343**	LR		LR	11 13 20.0	
	comp=Z,33nm,19.1s,baz=350,slow=41							
TORD	**Torodi Ar. Bea**	**32.26**	**234**	P		**P**	**11 00 43.9**	**+1.4**
	1.4nm,0.8s,baz=37,slow=6.3,SNR=8.5 1.4nm,0.8s							
JMIC	**Jan Mayen**	**40.78**	**343**	LR		LR	11 18 05.6	
	comp=Z,46nm,19.5s,baz=292,slow=35							
MKAR	**Makanchi Array**	**41.89**	**57**	P		**P**	**11 02 05.1**	**+1.0**
	0.2nm,0.4s,baz=284,slow=2.4,SNR=4.4 0.2nm,0.4s							
SONM	**Songino Array**	**57.74**	**51**	P		**P**	**11 04 05.6**	**+0.9**
	0.4nm,0.5s,baz=297,slow=6.5,SNR=4.0 0.4nm,0.5s							

SSNC 08 11:05:48.3±2.0, 19°.32N×79°.22W, h7km±20km, MD2.5, ML2.2, 1C, Presumed earthquake, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CBCY	**The Bluff, Cay**	**0.66**	**309**	*eP*		Pg	11 06 00.8	-0.2
CBCY				*eS*		Sg	11 06 08.7	-0.9
CBCY	**The Bluff, Cay**	**0.66**	**309**	*i P*		Pg	11 06 00.9	-0.2
CBCY				IAML			11 06 01.0	
	comp=Z,510nm,1.0s							
LCCY	**Blossom Villag**	**0.89**	**293**	*eP*		Pg	11 06 03.9	-1.5
LCCY				*eS*		Sg	11 06 14.0	-2.9
LCCY	**Blossom Villag**	**0.89**	**293**	*i P*		Pg	11 06 04.1	-1.3
LCCY				IAML			11 06 13.1	
	comp=Z,350nm,1.0s							
MTDJ	**Mount Denham**	**1.93**	**124**	*eP*		Pn	11 06 19.4	-2.3
MTDJ				*eS*		Sn	11 06 41.0	-5.2
MTDJ	**Mount Denham**	**1.93**	**124**	*i P*		Pn	11 06 19.3	-2.3
MTDJ				IAML			11 06 36.2	
	comp=Z,110nm,1.0s							
LMGC	**Las Mercedes**	**2.21**	**70**	*eP*		Pn	11 06 24.4	-1.0
LMGC				*eS*		Sn	11 06 49.3	-3.8
LMGC				*eSg*		Sb	11 06 51.6	-4.7
LMGC				IAML			11 06 52.8	
	comp=E,14nm,0.2s							
LMGC				IAML			11 06 52.8	
	comp=N,11nm,0.1s							
LMGC	**Las Mercedes**	**2.21**	**70**	*i* P		Pn	11 06 24.4	-1.0
LMGC				IAML			11 06 26.6	
	comp=Z,40nm,1.0s							
CCCC	**Cccc**	**2.32**	**36**	*eP*		Pb	11 06 29.3	-1.1
CCCC	**Cccc**	**2.32**	**36**	*i*↑P		Pb	11 06 30.9	+0.5
MGV	**Manicaragua**	**2.87**	**346**	*i* P		Pn	11 06 33.3	-1.2
MARVS	**Santiago de Cu**	**3.20**	**77**	*eP*		Pn	11 06 38.5	-0.5
RCC	**Rio Carpintero**	**3.39**	**78**	*eP*		Pn	11 06 34.7	-6.9
RCC	**Rio Carpintero**	**3.39**	**78**	*i* P		Pn	11 06 40.1	-1.5
GTBY	**Guantanamo Bay**	**3.92**	**80**	*i* P		Pn	11 06 49.1	+0.2
QMBU	**Quimbuelo**	**4.24**	**77**	*eP*		Pn	11 06 49.9	-3.5
MASC	**Masc**	**4.77**	**79**	*eP*		Pn	11 07 01.2	+0.6

*RSPR **08** 11:14:05.7, 17°.97N×66°.84W, h15km, MD3.5/7*
*NEIC **08** 11:14:06.1±1.5, 18°.07N±0°.03×66°.81W±0°.01, h10km±1km, ML3.0/33, Md3.5/7(RSPR), Error ellipse: s-maj=4.5km s-min=2.7km az=15.0*

ISC 08 11:14:05.4±0.9, 17°.99N±0°.05×66°.82W±0°.02, h17km±6km, n31, σ0§40/47, 6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GBPR	**Guanica, Bosqu**	**0.06**	**253**			**Pg**	**11 14 08.4**	**-0.1**
GBPR						**Sg**	**11 14 10.6**	**0.0**
GBPR	**Guanica, Bosqu**	**0.06**	**253**	*i*↑P		**Pg**	**11 14 08.4**	**-0.1**
GBPR				*eS*		**Sg**	**11 14 10.6**	**0.0**
OBIP	**Obispado Ponce**	**0.21**	**76**			**Pg**	**11 14 10.3**	**-0.1**
OBIP	**Obispado Ponce**	**0.21**	**76**	*i*↓*eP*		**Pb**	**11 14 10.8**	**0.0**
OBIP				*eS*		**Sb**	**11 14 14.4**	**-0.1**
MLPR	**Magueyes Islan**	**0.21**	**264**			**Pg**	**11 14 10.0**	**-0.3**
MLPR				Sg		**Sg**	**11 14 13.8**	**0.0**
MLPR				IAML			11 14 14.4	
	2μm,1.0s							
MLPR				IAML			11 14 14.9	
	2μm,0.5s							
CELP	**Cerrillos**	**0.24**	**70**			**Pb**	**11 14 11.2**	**-0.2**
CELP				IAML			11 14 17.3	
	2μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.28**	**273**			**Pg**	**11 14 11.1**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.28**	**273**	Sg		**Sg**	**11 14 15.2**	**-0.3**
CRPR				IAML			11 14 15.4	
	2μm,0.8s							
CRPR				IAML			11 14 18.7	
	1μm,0.7s							
CRPR	**Cabo Rojo, PR**	**0.28**	**273**	*i*↓*P*		**Pg**	**11 14 11.2**	**-0.2**
CRPR				*eS*		**Sg**	**11 14 15.2**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.28**	**20**			**Pg**	**11 14 11.4**	**0.0**
LSP	**Las Mesas**	**0.31**	**306**			**Pg**	**11 14 12.0**	**-0.1**
LSP						**Sg**	**11 14 17.1**	**+0.5**
LSP	**Las Mesas**	**0.31**	**306**	*i*↓*P*		**Pg**	**11 14 12.0**	**-0.1**
LSP				*eS*		**Sg**	**11 14 17.1**	**+0.5**
PRSN	**Puerto Rico Se**	**0.38**	**306**			**Pg**	**11 14 12.9**	**-0.4**
PRSN	**Puerto Rico Se**	**0.38**	**306**			**Sg**	**11 14 18.4**	**-0.2**
PRSN	**Puerto Rico Se**	**0.38**	**306**	*i*↑*P*		**Pg**	**11 14 13.0**	**-0.2**
PRSN				*eS*		**Sg**	**11 14 18.4**	**-0.2**
ECPR	**Experimental S**	**0.54**	**53**			**Pg**	**11 14 16.0**	**-0.2**
ECPR	**Experimental S**	**0.54**	**53**	*i*↓*P*		**Pg**	**11 14 16.0**	**-0.2**
ECPR				*eS*		**Sb**	**11 14 24.2**	**+0.2**
AGPR	**Aguadilla, PR**	**0.55**	**330**			**Pg**	**11 14 15.8**	**-0.5**
AGPR				IAML			11 14 26.8	
	1μm,0.5s							
AGPR				IAML			11 14 27.4	
	1μm,0.4s							
AGPR	**Aguadilla, PR**	**0.55**	**330**	*i*↑*P*		**Pg**	**11 14 16.0**	**-0.3**
AGPR				*eS*		**Sg**	**11 14 23.5**	**-0.1**
SJG	**San Juan**	**0.65**	**79**			**Pg**	**11 14 17.8**	**-0.4**
SJG				IAML			11 14 27.6	
	634nm,0.7s							
SJG	**San Juan**	**0.65**	**79**	*i*↓*P*		**Pg**	**11 14 17.6**	**-0.5**
SJG				*eS*		**Sb**	**11 14 26.9**	**-0.2**
IDE	**Isla Desecheo**	**0.73**	**302**			**Pb**	**11 14 19.1**	**-0.7**
IDE						**Sg**	**11 14 29.5**	**0.0**
IDE	**Isla Desecheo**	**0.73**	**302**	*i*↑*P*		**Pb**	**11 14 19.1**	**-0.7**
IDE				*eS*		**Sg**	**11 14 29.5**	**0.0**
PDPR	**Patillas Dam,**	**0.76**	**88**			**Pb**	**11 14 19.5**	**-0.7**
PDPR				IAML			11 14 31.1	
	574nm,0.6s							
GCPR	**Guaynabo City**	**0.77**	**66**			**Pb**	**11 14 20.0**	**-0.4**
GCPR						**Sb**	**11 14 29.8**	**-0.8**
GCPR				IAML			11 14 35.5	
	comp=E,419nm,0.2s							
GCPR	**Guaynabo City**	**0.77**	**66**	*i*↓*P*		**Pb**	**11 14 19.8**	**-0.5**
GCPR				*eS*		**Sb**	**11 14 30.2**	**-0.3**
HUMP	**Col San Antoni**	**0.94**	**81**			**Sb**	**11 14 35.4**	**+0.1**
HUMP	**Col San Antoni**	**0.94**	**81**			**Pb**	**11 14 22.6**	**-0.6**
HUMP				IAML			11 14 41.9	
	comp=E,531nm,0.2s							
HUMP				IAML			11 14 44.1	
	comp=E,622nm,0.2s							
HUMP	**Col San Antoni**	**0.94**	**81**	*i*↑*P*		**Pb**	**11 14 22.9**	**-0.3**
HUMP				*eS*		**Sb**	**11 14 35.4**	**+0.1**
CUPR	**Culebra, Puert**	**1.50**	**78**			**Pb**	**11 14 32.4**	**-0.3**
DR12	**Loma Pena Alta**	**2.56**	**288**			**Pn**	**11 14 47.5**	**+1.3**

KRSC 08 11:18:48.3±1.1, 55°.51N×160°.36E, h186km±9km, Ml3.5, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KMNR	**Kamenistaya**	**0.26**	**344**	*eP*		Pn	11 19 15.2	+2.0
KLY	**Klyuchi**	**0.82**	**11**	*eP*		Pn	11 19 16.2	+0.9
KLY				*eS*		Sn	11 19 38.0	+1.7
SRDR	**Sredinnyy**	**0.89**	**336**	*eP*		Pn	11 19 16.4	+0.6
SRDR				*eS*		Sn	11 19 36.9	-0.4
ESO	**Esso**	**1.03**	**295**	*eP*		Pn	11 19 17.7	+0.9
ESO				*eS*		Sn	11 19 39.5	+0.6
BDR	**Baidarnaya**	**1.16**	**24**	*eS*		Sn	11 19 41.7	+0.8
SMKR	**Semkarok**	**1.24**	**30**	*eP*		Pn	11 19 19.5	+1.0
SMKR				*eS*		Sn	11 19 44.1	+2.1
KBG	**Krutoberegovo**	**1.52**	**60**	*eP*		Pn	11 19 21.8	+1.0
KBG				*eS*		Sn	11 19 46.9	+0.8
KBTR	**Krutoberegovo**	**1.55**	**62**	*eP*		Pn	11 19 22.1	+1.0
KBTR				*eS*		Sn	11 19 47.5	+0.7
SDLR	**Sedlovina**	**2.40**	**202**	*eP*		Pn	11 19 32.3	+2.0
SPN	**Mys Shipunski**	**2.42**	**185**	*eS*		Sn	11 20 00.4	+0.3
BKI	**Bering**	**3.22**	**93**	*eP*		Pn	11 19 41.9	+2.2
BKI				*eS*		Sn	11 20 20.7	+0.7

*IDC **08** 11:20:33.6±0.8, 16°.93N×59°.22W, h0km, mb4.0/12, mbtmp4.0/12, MS3.1/2, Error ellipse: s-maj=22.6km s-min=16.7km az=157.0*
*NEIC **08** 11:20:35.4±1.6, 17°.09N±0°.09×59°.30W±0°.03, h10km±1km, mb4.6/11, Error ellipse: s-maj=15.5km s-min=4.0km az=193.0*
*TRN **08** 11:20:36.5, 16°.98N×59°.25W, h29km, MD4.2, Far East of Antigua.*

ISC 08 11:20:34.4±4.6, 17°.00N±0°.04×59°.26W±0°.06, h8km±29km, n72, σ1§34/93, mb4.3/16, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H05N1	**Guadeloupe/Mar**	**1.86**	**249**	Pn		**Pn**	**11 21 07.0**	**+0.4**
H05N1				Sn		**Sn**	**11 21 26.8**	**-3.5**
DSDZ	**La Diserade, G**	**1.87**	**249**	*eP*		**Pn**	**11 21 07.3**	**+0.6**
GDSD	**La Dsirade Is**	**1.87**	**249**			**Pn**	**11 21 07.3**	**+0.5**
ABD	**La Joyeuse, An**	**2.20**	**257**	Pn		**Pn**	**11 21 13.1**	**+1.8**
MAGL	**Barre de l'ile**	**2.21**	**242**	Pn		**Pn**	**11 21 12.3**	**+0.9**
DWS	**Wesley**	**2.44**	**234**	*eP*		**Pn**	**11 21 15.7**	**+1.1**
DWS				*eS*		**Sn**	**11 21 44.0**	**-0.6**
CBE	**Ff, Capester**	**2.44**	**248**			**Pn**	**11 21 16.7**	**+2.0**
MMLZ	**Guadeloupe Bro**	**2.50**	**248**	*eP*		**Pn**	**11 21 17.1**	**+1.6**
MMLZ				*eS*		**Sn**	**11 21 47.1**	**+0.9**
ANWB	**Willy Bob**	**2.50**	**286**			**Sn**	**11 21 44.9**	**-1.4**
ANWB	**Willy Bob**	**2.50**	**286**	*eP*		**Pn**	**11 21 17.2**	**+1.7**
ANWB				*eS*		**Sn**	**11 21 46.4**	**+0.1**
DHSZ	**Broadband at M**	**2.51**	**254**	*eP*		**Pn**	**11 21 17.9**	**+2.3**
DHSZ				*eS*		**Sn**	**11 21 46.9**	**+0.4**
GDHS	**Morne Mazeau,**	**2.51**	**254**			**Pn**	**11 21 17.6**	**+1.9**
DLPL	**La Plaine**	**2.53**	**229**	*eP*		**Pn**	**11 21 17.2**	**+1.3**
DLPL				*eS*		**Sn**	**11 21 46.8**	**-0.2**
ATGZ	**Broadband at L**	**2.54**	**250**	*eP*		**Pn**	**11 21 17.6**	**+1.7**
ATGZ				*eS*		**Sn**	**11 21 47.7**	**+0.7**
TDBA	**Terre de Bas,**	**2.56**	**244**			**Pn**	**11 21 16.7**	**+0.5**
TBG	**Guadaloupe-3**	**2.56**	**244**	*eP*		**Pn**	**11 21 18.7**	**+2.4**
TBG				*eS*		**Sn**	**11 21 48.5**	**+0.7**
DSLB	**Salisbury**	**2.60**	**234**	*eP*		**Pn**	**11 21 18.2**	**+1.4**
DSLB				*eS*		**Sn**	**11 21 47.9**	**-0.7**
MBWH	**Windy Hill**	**2.82**	**265**	*eP*		**Pn**	**11 21 21.7**	**+1.7**
MBWH				*eS*		**Sn**	**11 21 54.4**	**+0.2**
SVN	**Savane Anatole**	**2.83**	**221**			**Pn**	**11 21 21.5**	**+1.4**
SVN	**Savane Anatole**	**2.83**	**221**	*eP*		**Pn**	**11 21 21.3**	**+1.3**
SVN				*eS*		**Sn**	**11 21 54.3**	**-0.1**
MBFL	**Flemmings, Mon**	**2.84**	**265**	*eP*		**Pn**	**11 21 21.8**	**+1.7**
MBFL				*eS*		**Sn**	**11 21 55.2**	**+0.6**
CXM	**Morne La Croix**	**2.85**	**220**			**Pn**	**11 21 22.2**	**+1.8**
MPOM	**Morne Pois Mar**	**2.98**	**211**	Pn		**Pn**	**11 21 21.0**	**-1.0**
H05S1	**Guadeloupe/Mar**	**2.98**	**211**	Pn		**Pn**	**11 21 22.2**	**+0.1**
H05S1				Sn		**Sn**	**11 21 52.7**	**-5.4**
BIM	**Bigot**	**3.03**	**216**			**Pn**	**11 21 24.4**	**+1.6**
BIM	**Bigot**	**3.03**	**216**	*eP*		**Pn**	**11 21 24.9**	**+2.1**
BIM				*eS*		**Sn**	**11 21 59.4**	**+0.1**
SKI	**Saint Kitts**	**3.35**	**276**	*eP*		**Pn**	**11 21 28.8**	**+1.6**
SKI				*eS*		**Sn**	**11 22 08.1**	**+1.0**
SLBI	**Saint Lucia, B**	**3.40**	**209**	*eP*		**Pn**	**11 21 28.7**	**+0.9**
SLBI				*eS*		**Sn**	**11 22 07.9**	**-0.4**
SLAC	**Saint Lucia, A**	**3.47**	**207**	*eP*		**Pn**	**11 21 30.1**	**+1.2**
SLAC				*eS*		**Sn**	**11 22 09.7**	**-0.5**
SEUS	**St. Eustatius**	**3.59**	**278**	Pn		**Pn**	**11 21 29.4**	**-1.1**
MCLT	**Moule a Chique**	**3.66**	**207**	*eP*		**Pn**	**11 21 32.9**	**+1.6**
MCLT				*eS*		**Sn**	**11 22 15.0**	**+0.2**
SABA	**Saba**	**3.86**	**280**	Pn		**Pn**	**11 21 32.9**	**-1.2**
SVB	**Belmont**	**4.18**	**208**	*eP*		**Pn**	**11 21 40.3**	**+1.7**
SVB				*eS*		**Sn**	**11 22 27.3**	**-0.4**
GRGR	**Grenville**	**5.37**	**206**	*eP*		**Pn**	**11 21 56.8**	**+1.8**
GRGR				*eS*		**Sn**	**11 22 55.5**	**-1.5**
CUPR	**Culebra, Puert**	**5.89**	**284**			**Pn**	**11 22 00.9**	**-1.2**
GCPR	**Guaynabo City**	**6.64**	**282**			**Pn**	**11 22 11.4**	**-1.0**
CELP	**Cerrillos**	**7.07**	**280**	Pn		**Pn**	**11 22 17.9**	**-0.3**
OBIP	**Obispado Ponce**	**7.09**	**279**	Pn		**Pn**	**11 22 18.6**	**+0.1**
UUPR	**Utuado, UPR, P**	**7.22**	**281**			**Pn**	**11 22 20.0**	**-0.4**
DR12	**Loma Pena Alta**	**9.80**	**282**	Pn		**Pn**	**11 22 55.2**	**-0.7**
SDV	**Santo Domingo**	**13.71**	**235**	LR		LR	11 29 27.3	
	comp=Z,74nm,19.3s,baz=37,slow=39							
BOAV	**Boa Vista**	**14.57**	**185**	Pn		**Pn**	**11 24 00.3**	**-0.8**
ROSC	**El Rosal**	**19.08**	**232**	LR		LR	11 33 10.4	
	comp=Z,64nm,18.4s,baz=170,slow=40							
T59A	**Double "B" Far**	**25.63**	**324**	P		**P**	**11 26 03.5**	**-1.1**
T59A				IAmb		IAmb	11 26 36.6	
	comp=Z,27nm,1.4s							
HRV	**Adam Dziewonsk**	**27.51**	**340**	P		**P**	**11 26 20.6**	**-0.9**
HNDO	**Hondo**	**38.64**	**296**			**P**	**11 27 57.0**	**-1.7**
HNDO				IAmb		IAmb	11 28 01.3	
	comp=Z,5.8nm,0.8s							
TXAR	**Lajitas Array**	**42.40**	**295**	P		**P**	**11 28 31.4**	**+1.5**
	comp=Z,1.2nm,1.0s,baz=130,slow=6.9,SNR=7.2							
TXAR				PcP		**PcP**	**11 30 24.9**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=90,slow=4.3,SNR=3.7 comp=Z,1.2nm,1.0s							
TXAR	**Lajitas Array**	**42.40**	**295**	P		**P**	**11 28 28.9**	**-1.0**
VHRN	**Van Horn**	**43.71**	**297**			**P**	**11 28 38.7**	**-1.8**
VHRN				IAmb		IAmb	11 28 44.6	
	comp=Z,6.5nm,0.9s							
MNTX	**Cornudas Mount**	**44.17**	**298**			**P**	**11 28 42.7**	**-1.4**
**PDAR

NEIC ***08*** *11:25:31.9±1.2,2.89S±0.10×129.93E±0.03,h10km±1km, mb4.2/12,Error ellipse: s-maj=16.2km s-min=5.8km az=177.0*
DJA ***08*** *11:25:33.4±0.5,3°S±2°×13°0E±°,h13km±5km,M4.3/24, mB5.1/1,mb4.6/6,MLv4.1/24,Mw(mB)4.4/1*

ISC 08 11:25:33.3±0.5,2.94S±0.05×129.92E±0.06,h25km,n53, σ1§76/47,mb4.0/11,MS3.2/8,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSAI	**Masohi**	**1.07**	**248**	P		**Pb**	**11 25 54.6**	**+1.6**
KRAI	**Karang Ratu**	**1.57**	**256**	P		**Pb**	**11 26 02.5**	**+0.9**
BNDI	**Bandanaira**	**1.57**	**180**	P		**Pb**	**11 26 03.9**	**+2.3**
AAI	**Ambon**	**1.87**	**247**	P		**Pb**	**11 26 07.5**	**+0.7**
FAKI	**Fak Fak**	**2.33**	**89**			**Pn**	**11 26 10.4**	**+0.4**
FAKI	**Fak Fak**	**2.33**	**89**	P		**Pn**	**11 26 11.0**	**+1.0**
SIJI	**Sorong**	**2.46**	**33**	Pn		**Pn**	**11 26 11.4**	**-0.5**
	17nm,0.3s,baz=92,slow=23,SNR=74							
SIJI				Sn		**Sn**	**11 26 39.6**	**-1.5**
	21nm,0.3s,baz=208,slow=19,SNR=12							
SIJI				LR		LR	11 27 35.9	
	comp=Z,512nm,18.6s,baz=188,slow=53 35nm,0.3s							
SIJI	**Sorong**	**2.46**	**33**	P		**Pn**	**11 26 11.3**	**-0.6**
SWI	**Sorong**	**2.46**	**33**	P		**Pn**	**11 26 11.5**	**-0.4**
NLAI	**Namlea**	**2.83**	**264**	P		**Pn**	**11 26 18.7**	**+1.8**
KMPI	**Kaimana, Papua**	**3.85**	**101**	P		**Pn**	**11 26 32.2**	**+1.3**
SANI	**Sanana**	**4.03**	**283**	P		**Pn**	**11 26 32.2**	**-1.1**
RKPI	**Ransiki, Papua**	**4.49**	**72**	P		**Pn**	**11 26 40.1**	**+0.4**
MWPI	**Manokwari, Pap**	**4.58**	**64**	P		**Pn**	**11 26 43.3**	**+2.3**
BAKI	**Biak**	**6.42**	**74**	P		**Pn**	**11 27 07.1**	**+0.7**
	45nm,0.8s							
APSI	**Ampana**	**8.51**	**284**	P		**Pn**	**11 27 35.2**	**+0.2**
BATI	**Baumata**	**9.52**	**220**	LR		LR	11 31 11.6	
	comp=Z,118nm,20.0s,baz=96,slow=36							
MTN	**Manton Dam**	**9.91**	**173**	Pn		**Pn**	**11 27 54.9**	**+0.7**
TOLI2	**Tolitoli**	**9.98**	**294**	Pn		**Pn**	**11 27 55.9**	**+0.7**
DAV	**Davao City (W)**	**10.85**	**336**	LR		LR	11 33 06.5	
	comp=Z,200nm,19.0s,baz=100,slow=42							
KNRA	**Kununurra**	**12.71**	**185**	Pn		**Pn**	**11 28 32.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**15.63**	**195**	Pn		**Pn**	**11 29 11.8**	**-0.2**
	0.1nm,0.3s,baz=352,slow=7.1,SNR=2.1 2.3nm,0.7s							
WRA	**Warramunga Arr**	**17.44**	**166**	P		**Pn**	**11 29 33.5**	**-1.4**
	0.5nm,0.3s,baz=350,slow=11,SNR=18							
WRA				S		**Sn**	**11 32 40.3**	**-8.2**
	0.3nm,0.6s,baz=351,slow=21,SNR=1.6 0.8nm,0.6s							
WRA	**Warramunga Arr**	**17.44**	**166**	P		**Pn**	**11 29 34.1**	**-0.9**
WR8	**Warramunga Arr**	**17.49**	**166**	P		**Pn**	**11 29 33.4**	**-2.3**
PSA00	**Pilbara Seismi**	**20.95**	**207**	P		**P**	**11 30 13.9**	**-0.6**
PSA00	**Pilbara Seismi**	**20.95**	**207**	P		**P**	**11 30 13.9**	**-0.6**
PSA00				IAmb		IAmb	11 30 45.0	
	comp=Z,29nm,1.5s							
AS31	**Alice Springs**	**20.96**	**170**	P		**P**	**11 30 15.2**	**+0.5**
ASAR	**Alice Springs**	**20.96**	**170**	P		**P**	**11 30 15.1**	**+0.5**
	comp=Z,13nm,0.8s,baz=347,slow=10,SNR=65							
ASAR				S		**S**	**11 34 03.0**	**-4.2**
	comp=Z,0.5nm,0.6s,baz=345,slow=14,SNR=5.0							
ASAR				LR		LR	11 38 50.9	
	comp=Z,116nm,18.7s,baz=344,slow=38 comp=Z,13nm,0.8s							
GUMO	**Guam**	**22.13**	**42**	LR		LR	11 38 44.9	
	comp=Z,55nm,18.0s,baz=170,slow=36							
LEM	**Lembang**	**22.55**	**259**	LR		LR	11 41 55.3	
	comp=Z,65nm,19.5s,baz=136,slow=44							
STKA	**Stephens Creek**	**30.81**	**160**	P		**P**	**11 31 49.4**	**+2.2**
	comp=Z,0.8nm,0.4s,baz=315,slow=11,SNR=1.8 comp=Z,0.8nm,0.4s							
JNU	**Nakatsue**	**35.88**	**1**	LR		LR	11 47 16.5	
	comp=Z,50nm,18.4s,baz=150,slow=36							
CM31	**Chiang Mai Arr**	**37.18**	**306**	P		**P**	**11 32 41.5**	**-1.2**
CM31				IAmb		IAmb	11 32 45.2	
	comp=Z,2.8nm,0.7s							
CMAR	**Chiang Mai Arr**	**37.18**	**306**	P		**P**	**11 32 44.4**	**+1.7**
	comp=Z,0.6nm,0.4s,baz=135,slow=7.1,SNR=7.6 comp=Z,0.6nm,0.4s							
CMAR	**Chiang Mai Arr**	**37.18**	**306**	P		**P**	**11 32 41.5**	**-1.2**
CHTO	**Chiang Mai**	**37.37**	**307**	P		**P**	**11 32 43.1**	**-1.2**
CHTO				IAmb		IAmb	11 32 46.5	
	comp=Z,3.8nm,1.0s							
LHI	**Lord Howe Isla**	**39.52**	**139**	P		**P**	**11 33 02.4**	**+0.2**
KSRS	**Korea Array**	**40.23**	**358**	LR		LR	11 50 00.6	
	comp=Z,24nm,20.1s,baz=190,slow=37							
ASAJ	**Asahikawa**	**48.21**	**12**	LR		LR	11 51 56.9	
	comp=Z,28nm,21.6s,baz=172,slow=33							
SONM	**Songino Array**	**54.60**	**341**	P		**P**	**11 34 59.5**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=145,slow=5.4,SNR=3.8 comp=Z,0.4nm,0.8s							
YAK	**Yakutsk**	**64.80**	**360**	LR		LR	12 04 06.8	
	comp=Z,31nm,20.8s,baz=91,slow=36							
MK31	**Makanchi Array**	**64.82**	**326**	P		**P**	**11 36 10.7**	**+0.6**
MK31				IAmb		IAmb	11 36 37.8	
	comp=Z,2.7nm,1.4s							
MKAR	**Makanchi Array**	**64.82**	**326**	P		**P**	**11 36 10.6**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=120,slow=7.8,SNR=9.5 comp=Z,0.6nm,0.5s							
MKAR	**Makanchi Array**	**64.82**	**326**	P		**P**	**11 36 10.4**	**+0.3**
BTK	**Batken**	**68.84**	**315**	P		**P**	**11 36 35.4**	**-0.5**
KURBB	**Kurchatov Arra**	**69.04**	**328**	P		**P**	**11 36 37.3**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=129,slow=5.9,SNR=6.8 comp=Z,1.4nm,0.4s							
KURK	**Kurchatov**	**69.05**	**328**	P		**P**	**11 36 37.0**	**+0.2**
KURK				IAmb		IAmb	11 36 45.4	
	comp=Z,3.1nm,0.9s							
BVAR	**Borovoye Array**	**74.62**	**327**	P		**P**	**11 37 11.4**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=120,slow=8.5,SNR=3.0 comp=Z,0.5nm,0.5s							
AB31	**Akbulak array**	**79.31**	**321**	P		**P**	**11 37 36.6**	**-0.1**
AB31				IAmb		IAmb	11 37 48.9	
	comp=Z,1.7nm,1.1s							
ABKAR	**Akbulak array**	**79.31**	**321**	P		**P**	**11 37 36.9**	**+0.1**
BMAR	**Burnt Mountain**	**90.96**	**23**	P		**P**	**11 38 35.8**	**+0.9**
AKASG	**Malin Array Be**	**99.04**	**321**	LR		LR	12 30 09.3	
	comp=Z,32nm,18.3s,baz=308,slow=39							

IDC ***08*** *11:36:07.1±7.9,19.98S×177.46W,h485km±90km, mb3.3/4, mbtmp4.1/5,Error ellipse: s-maj=40.6km s-min=36.3km az=24.0*

ISC 08 11:36:08.1±1.5,20.0S±0.2×177.5W±0.3,h500km,n6, σ0§25/7,mb3.8/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	**Urewera**	**18.78**	**193**	P		**P**	**11 39 55.4**	**0.0**
	5.3nm,0.8s,baz=279,slow=3.1,SNR=7.1							
ASAR	**Alice Springs**	**45.12**	**256**	P		**P**	**11 43 39.9**	**+0.3**
	2.9nm,0.5s,baz=89,slow=8.1,SNR=61							
ASAR				PcP		**PcP**	**11 45 09.6**	**-0.1**
	0.7nm,0.8s,baz=109,slow=3.9,SNR=4.8 2.9nm,0.5s							
WRA	**Warramunga Arr**	**45.17**	**261**	P		**P**	**11 43 39.9**	**-0.1**
	2.4nm,0.3s,baz=98,slow=7.1,SNR=145 2.4nm,0.3s							
MJAR	**Matsushiro Arr**	**70.12**	**323**	P		**P**	**11 46 29.6**	**-0.1**
	1.5nm,0.8s,baz=153,slow=5.7,SNR=5.0 1.5nm,0.8s							
ILAR	**Eielson Array**	**87.73**	**13**	P		**P**	**11 48 03.0**	**+0.2**
	0.2nm,0.7s,baz=224,slow=3.8,SNR=3.5 0.2nm,0.7s							
GERES	**GERESS Array B**	**149.87**	**345**	PKPbc		**PKiKP**	**11 55 01.9**	**-0.2**
	0.2nm,0.3s,baz=352,slow=3.0,SNR=3.6							

ISK ***08*** *11:37:20.3,38.34N×39.03E,h5km,ML2.6/9*
AFAD ***08*** *11:37:22.1,38.37N×39.04E,h7km±1km,ML2.4*

ISC 08 11:37:21.7±0.9,38.35N±0.03×39.08E±0.03,h14km±7km, n15,σ0§65/23,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ELZG	**Elazig**	**0.17**	**333**	P		**Pg**	**11 37 25.7**	**-0.1**
ELZG				S		**Sg**	**11 37 28.6**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.18**	**81**	Pg		**Pg**	**11 37 25.5**	**-0.5**
ELZ	**Elazig**	**0.35**	**16**	P		**Pg**	**11 37 29.0**	**+0.1**
ELZ				IAML			11 37 34.0	
	comp=N,825nm,0.3s							
ELZ				S		**Sg**	**11 37 34.3**	**+0.5**
ELZ				IAML			11 37 35.0	
	comp=E,804nm,0.5s							
MDNT	**Maden**	**0.48**	**85**	P		**Pb**	**11 37 31.8**	**-0.2**
MDNT				S		**Sb**	**11 37 39.3**	**+0.5**
MDNT				IAML			11 37 40.0	
	comp=N,322nm,0.4s							
MDNT				IAML			11 37 40.0	
	comp=E,218nm,0.6s							
MAYA	**Malatya/Merkez**	**0.52**	**267**	P		**Pg**	**11 37 32.0**	**+0.2**
MAYA				S		**Sg**	**11 37 39.1**	**+0.3**
MAYA				IAML			11 37 40.0	
	comp=E,511nm,0.2s							
MAYA				IAML			11 37 41.0	
	comp=N,508nm,0.3s							
NARI	**Adyaman-Kaht**	**0.53**	**208**	P		**Pb**	**11 37 32.8**	**+0.1**
NARI				S		**Sn**	**11 37 42.2**	**-1.5**
NARI				IAML			11 37 43.0	
	comp=E,160nm,0.9s							
NARI				IAML			11 37 44.0	
	comp=N,111nm,0.6s							
MCKZ	**Bingol**	**0.77**	**354**	P		**Pg**	**11 37 36.2**	**-0.5**
MCKZ				IAML			11 37 47.0	
	comp=E,201nm,0.4s							
MCKZ				S		**Sb**	**11 37 47.7**	**+0.3**
MCKZ				IAML			11 37 50.0	
	comp=N,91nm,0.4s							
DYBB	**Diyarbakir**	**0.93**	**115**	Pg		**Pg**	**11 37 39.9**	**+0.4**
URFA	**Urfa**	**0.93**	**193**	Pg		**Pb**	**11 37 38.7**	**-0.9**
URFA				Sg		**Sn**	**11 37 52.7**	**-0.9**
ARPR	**Arapgir-MALATY**	**0.94**	**322**	Pg		**Pb**	**11 37 39.4**	**-0.5**
ARPR				Sg		**Sb**	**11 37 53.4**	**+1.0**
ILIC	**ilic-Erzincan**	**1.17**	**340**	Pn		**Pn**	**11 37 43.6**	**-0.2**
ERZN	**Erzincan**	**1.33**	**22**	Pn		**Pg**	**11 37 47.4**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.68**	**96**	Pn		**Pb**	**11 37 52.5**	**+0.1**
GAZ	**Gaziantep**	**1.89**	**232**	Pn		**Pn**	**11 37 54.4**	**+0.8**
KMRS	**Kahramanmaras**	**1.92**	**245**	Pn		**Pn**	**11 37 54.8**	**+0.8**

IDC ***08*** *11:46:26.2±1.5,2.99S×129.85E,h0km,mb3.6/3, mbtmp3.7/5,ML3.7/2,Error ellipse: s-maj=53.4km s-min=23.3km az=85.0*
DJA ***08*** *11:46:31.4±0.7,3°S±3°×13°0E±°,h24km±8km,M3.9/22, mb4.3/4,MLv3.8/22*

ISC 08 11:46:30.0±0.8,2.90S±0.06×129.87E±0.06,h25km,n19, σ1§32/20,mb3.7/3,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSAI	**Masohi**	**1.04**	**245**	P		**Pb**	**11 46 50.4**	**+0.9**
KRAI	**Karang Ratu**	**1.53**	**254**	P		**Pb**	**11 46 59.1**	**+1.3**
BNDI	**Bandanaira**	**1.62**	**179**	P		**Pb**	**11 47 00.5**	**+1.3**
AAI	**Ambon**	**1.85**	**245**	P		**Pb**	**11 47 02.4**	**-0.8**
FAKI	**Fak Fak**	**2.37**	**91**	P		**Pn**	**11 47 08.1**	**+0.7**
SIJI	**Sorong**	**2.45**	**35**	Pn		**Pn**	**11 47 08.6**	**+0.1**
	11nm,0.3s,baz=218,slow=18,SNR=8.4							
SIJI				Sn		**Sn**	**11 47 37.1**	**-0.5**
	16nm,0.3s,baz=77,slow=23,SNR=8.6 33nm,0.2s							
SIJI	**Sorong**	**2.45**	**35**	P		**Pn**	**11 47 08.4**	**-0.1**
SWI	**Sorong**	**2.45**	**35**	P		**Pn**	**11 47 09.1**	**+0.6**
NLAI	**Namlea**	**2.79**	**263**	P		**Pn**	**11 47 15.5**	**+2.4**
KMPI	**Kaimana, Papua**	**3.90**	**101**	P		**Pn**	**11 47 29.4**	**+1.0**
SANI	**Sanana**	**3.97**	**282**	P		**Pn**	**11 47 29.4**	**0.0**
RKPI	**Ransiki, Papua**	**4.52**	**72**	P		**Pn**	**11 47 37.4**	**+0.5**
MWPI	**Manokwari, Pap**	**4.60**	**65**	P		**Pn**	**11 47 40.0**	**+1.9**
BAKI	**Biak**	**6.46**	**75**	P		**Pn**	**11 48 04.8**	**+1.2**
	53nm,1.1s							
APSI	**Ampana**	**8.45**	**283**	P		**Pn**	**11 48 31.4**	**+0.4**
WRA	**Warramunga Arr**	**17.50**	**166**	P		**Pn**	**11 50 29.3**	**-3.2**
	0.3nm,0.3s,baz=343,slow=9.1,SNR=21 0.3nm,0.3s							
ASAR	**Alice Springs**	**21.01**	**170**	P		**P**	**11 51 11.4**	**-0.6**
	3.8nm,0.7s,baz=350,slow=10,SNR=20 3.8nm,0.7s							
STKA	**Stephens Creek**	**30.87**	**160**	P		**P**	**11 52 43.7**	**-0.8**
	0.4nm,0.3s,baz=321,slow=13,SNR=1.3 0.4nm,0.3s							
MKAR	**Makanchi Array**	**64.76**	**326**	P		**P**	**11 57 07.1**	**+0.6**
	0.2nm,0.6s,baz=134,slow=6.2,SNR=1.9 0.2nm,0.6s							

MOS ***08*** *11:51:49.9±0.7,53.06N×168.91E,h29km,mb3.8/1,Error ellipse: s-maj=18.7km s-min=8.4km az=16.1*
IDC ***08*** *11:51:53.8±2.0,53.37N×168.92E,h36km±8km,mb3.1/6, mbtmp3.3/7,ML3.2/1,Error ellipse: s-maj=68.1km s-min=19.4km az=172.0*
KRSC ***08*** *11:51:53.9±1.9,53.19N×168.07E,h26km±29km,Ml4.2*

ISC 08 11:51:52.6±0.9,53.08N±0.09×168.74E±0.06,h35km,n47, σ1§74/57,mb3.2/6,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BKI	**Bering**	**2.68**	**324**	eS		**Sn**	**11 53 01.0**	**-3.3**
KBTR	**Krutoberegovo**	**4.65**	**315**	PN		**Pn**	**11 53 01.0**	**+0.8**
KBTR	**Krutoberegovo**	**4.65**	**315**	eP		**Pn**	**11 53 01.1**	**+0.8**
KBTR				eS		**Sn**	**11 53 52.1**	**-0.8**
SMKR	**Semkarok**	**5.47**	**313**	PN		**Pn**	**11 53 14.3**	**+2.7**
SMKR	**Semkarok**	**5.47**	**313**	eP		**Pn**	**11 53 14.4**	**+2.7**
SMKR				eS		**Sn**	**11 54 13.3**	**-0.1**
KII	**Karymskiy**	**5.62**	**284**	PN		**Pn**	**11 53 12.8**	**-0.8**
KII	**Karymskiy**	**5.62**	**284**	eP		**Pn**	**11 53 12.9**	**-0.8**
NLC	**Nalytchevo**	**5.66**	**275**	eS		**Sn**	**11 54 16.7**	**-1.0**
SDLR	**Sedlovina**	**5.93**	**276**	PN		**Pn**	**11 53 19.0**	**+1.1**
SDLR	**Sedlovina**	**5.93**	**276**	eP		**Pn**	**11 53 19.1**	**+1.1**
UGLR	**Uglovaya**	**5.97**	**275**	PN		**Pn**	**11 53 20.4**	**+2.0**
UGLR	**Uglovaya**	**5.97**	**275**	eP		**Pn**	**11 53 20.4**	**+2.0**
SMAR	**Somma**	**5.98**	**276**	PN		**Pn**	**11 53 19.9**	**+1.2**
SMAR	**Somma**	**5.98**	**276**	eP		**Pn**	**11 53 19.9**	**+1.2**
AVH	**Avacha**	**6.02**	**276**	PN		**Pn**	**11 53 20.0**	**+0.9**
AVH	**Avacha**	**6.02**	**276**	eP		**Pn**	**11 53 20.1**	**+0.9**
DALK	**Dalny**	**6.02**	**274**	PN		**Pn**	**11 53 20.2**	**+1.2**
DALK	**Dalny**	**6.02**	**274**	eP		**Pn**	**11 53 20.2**	**+1.2**
DALK				eS		**Sn**	**11 54 23.9**	**-2.8**
KRX	**Arik**	**6.07**	**277**	PN		**Pn**	**11 53 21.2**	**+1.4**
KRX	**Arik**	**6.07**	**277**	eP		**Pn**	**11 53 21.3**	**+1.4**
KOK	**Koryaka**	**6.08**	**276**	PN		**Pn**	**11 53 21.4**	**+1.5**
KOK	**Koryaka**	**6.08**	**276**	eP		**Pn**	**11 53 21.4**	**+1.5**
PET	**Petropavlovsk**	**6.08**	**274**	ePN		**Pn**	**11 53 22.7**	**+2.8**
PET	**Petropavlovsk**	**6.08**	**274**	eP		**Pn**	**11 53 20.9**	**+1.0**
KRMR	**Karymshinskiy**	**6.42**	**272**	PN		**Pn**	**11 53 25.5**	**+1.1**
KRMR	**Karymshinskiy**	**6.42**	**272**	eP		**Pn**	**11 53 25.6**	**+1.1**
KRMR				eS		**Sn**	**11 54 32.7**	**-3.8**
MTVR	**Mutnovka**	**6.43**	**269**	PN		**Pn**	**11 53 25.9**	**+1.1**
MTVR	**Mutnovka**	**6.43**	**269**	eP		**Pn**	**11 53 25.9**	**+1.1**
MTVR				eS		**Sn**	**11 54 34.0**	**-3.1**
GRL	**Gorelyy**	**6.49**	**270**	PN		**Pn**	**11 53 28.0**	**+2.4**
GRL	**Gorelyy**	**6.49**	**270**	eP		**Pn**	**11 53 28.1**	**+2.4**
GNL	**Ganaly**	**6.49**	**280**	PN		**Pn**	**11 53 27.9**	**+2.3**
GNL	**Ganaly**	**6.49**	**280**	eP		**Pn**	**11 53 27.9**	**+2.3**
ESO	**Esso**	**6.50**	**300**	PN		**Pn**	**11 53 26.8**	**+1.1**
ESO	**Esso**	**6.50**	**300**	eP		**Pn**	**11 53 26.8**	**+1.1**
ASAK	**Asacha**	**6.62**	**268**	PN		**Pn**	**11 53 29.7**	**+2.3**
ASAK	**Asacha**	**6.62**	**268**	eP		**Pn**	**11 53 29.7**	**+2.3**
PEA0B	**Petropavlovsk-**	**6.65**	**275**	PN		**Pn**	**11 53 28.7**	**+1.0**
PETK	**Petropavlovsk-**	**6.65**	**275**	Pn		**Pn**	**11 53 29.7**	**+2.0**
	2.4nm,0.3s,baz=92,slow=18,SNR=48							
PETK				Sn		**Sn**	**11 54 40.5**	**-1.7**
	0.6nm,0.3s,baz=88,slow=17,SNR=1.6 5.5nm,0.4s							
ILAR	**Eielson Array**	**25.13**	**45**	P		**P**	**11 57 11.7**	**-2.1**
	0.4nm,0.7s,baz=265,slow=7.9,SNR=12							
ILAR				pP		**pP**	**11 57 22.7**	**+0.5**
	0.5nm,0.6s,baz=248,slow=7.2,SNR=4.6 0.4nm,0.7s							
SONM	**Songino Array**	**38.92**	**288**	P		**P**	**11 59 17.0**	**+2.2**
	0.3nm,0.7s,baz=57,slow=10,SNR=3.0 0.3nm,0.7s							
SONM	**Songino Array**	**38.92**	**288**	P		**P**	**11 59 17.0**	**+2.2**
YKA	**Yellowknife Ar**	**39.56**	**45**	P		**P**	**11 59 19.0**	**-0.7**
	0.1nm,0.5s,baz=298,slow=8.9,SNR=3.9							
YKA				pP		**pP**	**11 59 29.0**	**+0.5**
	0.2nm,0.5s,baz=296,slow=8.4,SNR=5.0 0.1nm,0.5s							
YKA	**Yellowknife Ar**	**39.56**	**45**	P		**P**	**11 59 19.0**	**-0.7**
YKA				*PP		**pP**	**11 59 29.0**	**+0.5**
KURK	**Kurchatov**	**52.06**	**306**	P		**P**	**12 00 59.6**	**+1.2**
KURBB	**Kurchatov Arra**	**52.16**	**306**	P		**P**	**12 00 59.6**	**+0.4**
	0.9nm,0.7s,baz=54,slow=7.7,SNR=7.0 0.9nm,0.7s							
MKAR	**Makanchi Array**	**52.76**	**301**	P		**P**	**12 01 03.2**	**-0.5**
	0.1nm,0.5s,baz=46,slow=8.3,SNR=2.5 0.1nm,0.5s							
TXAR	**Lajitas Array**	**65.74**	**73**	P		**P**	**12 02 33.6**	**-0.2**
	0.2nm,0.6s,baz=332,slow=6.6,SNR=2.5							
TXAR				pP		**sP**	**12 02 44.5**	**-1.5**
	0.3nm,0.5s,baz=305,slow=5.2,SNR=5.4 0.2nm,0.6s							

ATH ***08*** *12:02:45.9,36.78N×21.45E,h6km±1km,ML3.4/18, Manual Solution by F.Xalaris First location: 2020/02/08 12:03:52, This location: 2020/11/04 08:21:25 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
THE ***08*** *12:02:47.9,37°N±7°×2°E±°,h2km±7km,M3.3/7,MLh3.3/7*
IDC ***08*** *12:02:50.5±11.0,37.73N×22.20E,h0km,mb3.6/6, mbtmp3.6/6,Error ellipse: s-maj=224.2km s-min=35.4km az=31.0*

ISC 08 12:02:45.7±1.6,36.79N±0.07×21.46E±0.04,h14km±7km, n44,σ1§10/52,mb3.6/6,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PYL1	**Pylos**	**0.23**	**56**	P		**Pg**	**12 02 50.6**	**-0.1**
PYL1				S		**Sg**	**12 02 53.7**	**-0.4**
PYL	**PYLOS**	**0.25**	**64**	P		**Pg**	**12 02 51.1**	**0.0**
PYL				S		**Sg**	**12 02 54.5**	**-0.3**
ITM	**Ithomi**	**0.54**	**44**	P		**Pg**	**12 02 56.3**	**-0.1**
ITM				S		**Sg**	**12 03 03.5**	**-0.2**
ZARO	**Zacharo**	**0.72**	**12**	P		**Pg**	**12 02 59.6**	**0.0**
ZARO				S		**Sg**	**12 03 09.4**	**+0.4**
AMT	**Artemida-Makis**	**0.77**	**15**	P		**Pg**	**12 03 00.3**	**-0.4**
AMT				S		**Sg**	**12 03 11.0**	**+0.2**
VLX	**Vlachokerasia**	**0.94**	**51**	P		**Pg**	**12 03 03.7**	**-0.2**
VLX				S		**Sb**	**12 03 15.8**	**-0.4**
LTHK	**Lithakia**	**1.05**	**332**	P		**Pg**	**12 03 06.2**	**+0.3**
LTHK				S		**Sg**	**12 03 20.2**	**+0.7**
CLEM	**Kyllini,Ilia,G**	**1.13**	**347**	P		**Pg**	**12 03 07.4**	**-0.1**
KYPS	**Kipseli, Zakin**	**1.15**	**334**	P		**Pg**	**12 03 08.0**	**+0.2**
KYPS				S		**Sg**	**12 03 23.2**	**+0.5**
DRO	**Drossia**	**1.18**	**10**	P		**Pg**	**12 03 08.7**	**+0.3**
DRO	**Drossia**	**1.18**	**10**	P		**Pg**	**12 03 07.1**	**-1.4**
VLI	**Veliai**	**1.19**	**93**	P		**Pg**	**12 03 08.7**	**+0.1**
VLI				S		**Sn**	**12 03 25.2**	**+1.3**
ORTH	**Orthonies,Zaky**	**1.22**	**331**	P		**Pg**	**12 03 08.7**	**-0.6**
ORTH				S		**Sg**	**12 03 25.4**	**+0.3**
RLS	**Riolos of Patr**	**1.27**	**0**	P		**Pg**	**12 03 10.9**	**+0.8**
RLS	**Riolos of Patr**	**1.27**	**0**	P		**Pg**	**12 03 08.9**	**-1.2**
MNVA	**Monemvasia**	**1.27**	**94**	P		**Pg**	**12 03 10.1**	**-0.1**
RTZL	**Ratzakli, Kefa**	**1.40**	**337**	P		**Pn**	**12 03 11.6**	**+0.9**
AXS	**Araxos**	**1.41**	**357**	P		**Pn**	**12 03 11.9**	**+1.0**
TEME	**Temeni, Aigial**	**1.54**	**20**	P		**Pn**	**12 03 13.8**	**+1.2**
VLS	**Valsamata**	**1.55**	**334**	P		**Pn**	**12 03 13.8**	**+1.0**
AGEO	**AgiosGiorgios,**	**1.55**	**18**	P		**Pn**	**12 03 14.2**	**+1.3**
ZIRI	**Ziria, Aigiali**	**1.57**	**14**	P		**Pn**	**12 03 14.7**	**+1.6**
AGRP	**Agrapidokambos**	**1.62**	**7**	P		**Pn**	**12 03 15.5**	**+1.7**
MALA	**Malamata, Dori**	**1.64**	**12**	P		**Pn**	**12 03 15.6**	**+1.6**
TRIZ	**Trizonia**	**1.65**	**17**	P		**Pn**	**12 03 15.7**	**+1.5**
EFP	**Efpalio**	**1.68**	**12**	P		**Pn**	**12 03 15.6**	**+1.1**
KALE	**Kalithea**	**1.69**	**19**	P		**Pn**	**12 03 16.8**	**+2.0**
KALE	**Kalithea**	**1.69**	**19**	P		**Pn**	**12 03 16.6**	**+1.8**
SERG	**Sergoula**	**1.69**	**16**	P		**Pn**	**12 03 16.0**	**+1.2**
MET2	**Kameni Chora,**	**1.71**	**61**	P		**Pn**	**12 03 16.8**	**+1.8**
LTK	**Loutraki**	**1.72**	**44**	P		**Pn**	**12 03 16.6**	**+1.4**
LTK	**Loutraki**	**1.72**	**44**	P		**Pn**	**12 03 16.8**	**+1.5**
MET5	**Makryloggos,Me**	**1.73**	**61**	P		**Pn**	**12 03 16.4**	**+1.0**
FSK	**Fiskardo**	**1.81**	**337**	P		**Pn**	**12 03 17.8**	**+1.3**
VIL2	**Platees**	**2.02**	**45**	P		**Pn**	**12 03 20.0**	**+0.6**
VLY	**Voula,Athens**	**2.15**	**60**	P		**Pn**	**12 03 22.4**	**+1.4**
LKR	**Lokris**	**2.23**	**33**	P		**Pn**	**12 03 23.5**	**+1.4**
ATAL	**Atalanti**	**2.27**	**33**	P		**Pn**	**12 03 24.4**	**+1.6**
HFS	**Hagfors**	**23.89**	**350**	P		**P**	**12 07 57.1**	**-1.5**
	2.0nm,0.7s,baz=150,slow=12,SNR=4.4 2.0nm,0.7s							
FINES	**FINESS Array B**	**24.85**	**5**	P	

WRA	**Warramunga Arr**	**20.66**	**220**	P		P		12 37 58.9	-1.5
	0.3nm,1.0s,baz=45,slow=10,SNR=6.2								
	0.3nm,1.0s								
ASAR	**Alice Springs**	**23.73**	**215**	P		P		12 38 34.1	+1.3
	0.5nm,0.9s,baz=56,slow=9.8,SNR=4.6								
	0.5nm,0.9s								
MKAR	**Makanchi Array**	**77.15**	**320**	P		P		12 45 14.4	-0.1
	0.1nm,0.5s,baz=100,slow=5.2,SNR=1.9								
	0.1nm,0.5s								

IDC 08 12:44:53.3±6.7, 7°32S×126°26E, h344km±70km, mb3.4/1, mbtmp4.0/4, Error ellipse: s-maj=104.9km s-min=90.6km az=103.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.85**	**222**	P		Pn	12 46 01.8	+1.4
	30nm,0.4s,baz=263,slow=0.8,SNR=11							
BATI				S		S	12 46 54.1	-0.5
	26nm,0.4s,baz=233,slow=20,SNR=7.2							
WRA	**Warramunga Arr**	**14.79**	**149**	P		P		12 48 05.8	-0.2
	0.3nm,0.3s,baz=329,slow=10,SNR=27								
ASAR	**Alice Springs**	**17.83**	**157**	P		P		12 48 40.4	+1.5
	2.1nm,0.3s,baz=336,slow=11,SNR=43								
STKA	**Stephens Creek**	**28.31**	**152**	P		P		12 50 14.9	-1.5
	1.7nm,0.5s,baz=326,slow=7.3,SNR=4.0								
	1.7nm,0.5s								

*NDI **08** 12:46:55.2±1.9, 26°34N×90°85E, h6km, ML4.9, MW4.9*
*MOS **08** 12:46:58.7±1.0, 26°24N×90°81E, h9km, mb5.0/46, Error ellipse: s-maj=8.3km s-min=3.8km az=114.4*
*NEIC **08** 12:47:01.9±1.6, 26°34N±0°07×90°8E±0°1, h10km±1km, mb5.0/99, Error ellipse: s-maj=19.3km s-min=7.1km az=240.0*
*BJI **08** 12:47:01.7, 26°42N×90°79E, h26km, mB4.7/20, mb4.6/68, ML4.6/7, Ms4.2/45, Ms7 4.0/43*
*DMN **08** 12:47:03.1±0.7, 25°85N×90°82E, h10km, Ml5.4/9, Error ellipse: s-maj=75.5km s-min=13.8km az=20.0*
*IDC **08** 12:47:03.1±0.5, 26°28N×90°84E, h27km±2km, mb4.4/29, mbtmp4.5/31, ML4.3/2, MS3.7/16, Error ellipse: s-maj=14.4km s-min=11.9km az=179.0*
*BKK **08** 12:47:04.3±1.6, 27°N±10°×9°1E±1°2, h41km±16km, M4.5/18, mB4.8/14, mb4.7/15, Mjma4.1/18, ML5.6/6, MLv5.3/5, Mw(mB)4.0/14*
*BGR **08** 12:47:15.6, 26°95N×88°77E, h32km±2km, mb4.9*
ISC 08 12:47:02.9±0.3, 26°21N±0°03×90°86E±0°02, h28km±2km, h28km:pP-P, n401, σ1§88/422, mb4.9/163, MS3.8/21, 20C-13D, Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUWA	**GUWAHATI**	**0.75**	**91**	*eP*	Pb	12 47 10.6	-6.8
GUWA				*eS*	**Sb**	**12 47 21.2**	**-6.1**
GUWA				IAML		12 47 30.0	
	comp=E,254μm,0.3s						
GUWA				IAML		12 47 30.1	
	comp=N,223μm,0.4s						
DHUB	**DHUBRI**	**0.80**	**256**	*eP*	Pb	12 47 11.2	-6.9
DHUB				*eS*	**Sb**	**12 47 22.6**	**-6.0**
DHUB				IAML		12 47 33.1	
	comp=E,30μm,0.2s						
DHUB				IAML		12 47 33.2	
	comp=N,24μm,0.2s						
SHL	**Shillong**	**1.13**	**125**		**Pb**	**12 47 25.5**	**+1.7**
SHL	**Shillong**	**1.13**	**125**	*eP*	**Pn**	**12 47 19.7**	**-3.2**
SHL				*eS*	**Sn**	**12 47 37.6**	**0.0**
SHL				IAML		12 47 43.0	
	comp=N,127μm,0.3s						
SHL				IAML		12 47 43.8	
	comp=E,112μm,0.2s						
SHL	**Shillong**	**1.13**	**125**	P	**Pb**	**12 47 25.5**	**+1.7**
TAWA	**Tawang**	**1.65**	**33**	*eP*	Pn	12 47 23.8	-6.5
TAWA				*eS*	**Sn**	**12 47 44.4**	**-6.3**
TAWA				IAML		12 47 56.4	
	comp=N,37μm,0.3s						
TAWA				IAML		12 47 57.5	
	comp=E,37μm,0.3s						
TEZP	**TEZPUR**	**1.79**	**77**	*eP*	Pn	12 47 27.0	-4.9
TEZP				*eS*	**Sn**	**12 47 49.9**	**-3.8**
TEZP				IAML		12 48 00.2	
	comp=E,17μm,0.2s						
TEZP				IAML		12 48 00.6	
	comp=N,21μm,0.2s						
SILR	**SILCHAR**	**2.26**	**129**	*eP*	**Pn**	**12 47 34.2**	**-4.2**
SILR				*eS*	**Sn**	**12 48 03.3**	**-2.1**
SILR				IAML		12 48 28.6	
	comp=N,119μm,0.1s						
SILR				IAML		12 48 29.2	
	comp=E,116μm,0.7s						
GTK	**Tadong**	**2.30**	**299**	*eP*	Pn	12 47 32.7	-6.4
GTK				*eS*	**Sn**	**12 48 00.6**	**-5.9**
GTK				IAML		12 48 13.3	
	comp=N,6μm,0.2s						
AGT	**Agartala**	**2.34**	**171**	*eP*	**Pn**	**12 47 36.8**	**-2.7**
AGT				*eS*	**Sn**	**12 48 05.3**	**-2.0**
AGT				IAML		12 48 27.0	
	comp=E,9μm,0.6s						
AGT				IAML		12 48 27.1	
	comp=N,7μm,0.9s						
ITAN	**ITANAGAR**	**2.73**	**69**	*eP*	Pn	12 47 39.6	-5.2
ITAN				*eS*	**Sn**	**12 48 11.1**	**-5.8**
ITAN				IAML		12 48 36.4	
	comp=E,14μm,0.6s						
ITAN				IAML		12 48 38.8	
	comp=N,11μm,0.6s						
KOHI	**KOHIMA**	**2.97**	**99**	*eP*	**Pn**	**12 47 43.9**	**-4.4**
KOHI				*eS*	**Sn**	**12 48 18.3**	**-4.7**
KOHI				IAML		12 48 41.9	
	comp=N,7μm,0.8s						
KOHI				IAML		12 48 45.7	
	comp=E,9μm,0.5s						
ZIRO	**ZIRO**	**2.98**	**63**	*eP*	Pn	12 47 42.4	-6.0
ZIRO				*eS*	**Sn**	**12 48 17.3**	**-6.0**
ZIRO				IAML		12 48 47.6	
	comp=N,52μm,0.7s						
ZIRO				IAML		12 48 47.7	
	comp=E,49μm,0.6s						
JORH	**JORHAT**	**3.09**	**79**	*eP*	Pn	12 47 44.1	-5.7
JORH				*eS*	**Sn**	**12 48 20.1**	**-5.7**
JORH				IAML		12 48 45.8	
	comp=E,12μm,0.5s						
JORH				IAML		12 48 48.2	
	comp=N,10μm,0.4s						
IMP	**Imphal**	**3.11**	**116**	*eP*	**Pn**	**12 47 45.8**	**-4.4**
IMP				*eS*	**Sn**	**12 48 22.7**	**-3.8**
IMP				IAML		12 48 49.3	
	comp=E,1μm,0.3s						
IMP				IAML		12 48 49.7	
	comp=N,2μm,0.7s						
MOKO	**MOKOCHONG**	**3.29**	**87**	*eP*	Pn	12 47 47.6	-5.0
MOKO				*eS*	**Sn**	**12 48 25.7**	**-5.2**
MOKO				IAML		12 48 36.3	
	comp=N,4μm,0.2s						
MOKO				IAML		12 48 36.8	
	comp=E,4μm,0.1s						
LSA	**Lhasa**	**3.48**	**4**		**Pn**	**12 47 57.9**	**+2.2**
LSA	**Lhasa**	**3.48**	**4**	Pn	**Pn**	**12 47 54.1**	**-1.6**
LSA				Sn	**Sn**	**12 48 34.4**	**-1.9**
LSA				smax	smax		
	comp=E,2μm,0.8s						
LSA				smax	smax		
	comp=E,3μm,0.9s						
LSA	**Lhasa**	**3.48**	**4**	P	**Pn**	**12 47 57.9**	**+2.2**
BRDH	**Bariadhala**	**3.59**	**168**	Pn	**Pb**	**12 48 02.2**	**-3.4**
	comp=E,200nm,0.3s,baz=13,slow=3.3,SNR=13						
BRDH				Sn	**Sn**	**12 48 42.0**	**+3.8**
	comp=E,353nm,0.3s,baz=255,slow=20,SNR=10						
MORE	**Moreh**	**3.69**	**121**		**Pn**	**12 48 02.5**	**+4.4**
RAMN	**Ramite**	**3.88**	**282**	Pn	**Pn**	**12 48 03.5**	**+2.6**
	baz=287,slow=0.0						
RAMN				Sn	**Sn**	**12 48 44.7**	**-1.0**
	comp=E,3μm,0.3s,baz=287,slow=0.0						
SAIH	**SAIHA**	**4.18**	**152**	*eP*	**Pn**	**12 48 01.3**	**-3.7**
SAIH				*eS*	**Sn**	**12 48 48.8**	**-4.2**
SAIH				IAML		12 49 03.0	
	comp=E,850nm,0.5s						
SAIH				IAML		12 49 06.2	
	comp=N,562nm,0.6s						
GUN	**Gumba**	**4.75**	**292**	Pn	**Pn**	**12 48 15.1**	**+2.1**
	baz=296,slow=0.0						
GUN				Sn	**Sn**	**12 49 07.6**	**+0.3**
	comp=N,1μm,0.3s,baz=296,slow=0.0						
PKI	**Pulchoki**	**5.05**	**287**	Pn	**Pn**	**12 48 18.4**	**+1.3**
	baz=291,slow=0.0						
PKI				Sn	**Sn**	**12 49 14.7**	**0.0**
	comp=N,365nm,0.3s,baz=291,slow=0.0						
PKIN	**Phulchoki**	**5.06**	**287**	Pn	**Pn**	**12 48 18.5**	**+1.3**
	baz=291,slow=0.0						
PKIN				Sn	**Sn**	**12 49 14.8**	**-0.1**
	comp=N,660nm,0.3s,baz=291,slow=0.0						
BOK	**Bokaro**	**5.11**	**243**	*eP*	Pn	12 48 12.1	-5.5
BOK				*eS*	**Sn**	**12 49 12.2**	**-3.5**
BOK				IAML		12 49 46.5	
	comp=N,2μm,0.7s						
BOK				IAML		12 49 55.9	
	comp=E,970nm,0.2s						
KKN	**Kakani**	**5.22**	**289**	Pn	**Pn**	**12 48 20.7**	**+1.4**
	baz=293,slow=0.0						
KKN				Sn	**Sn**	**12 49 19.2**	**+0.6**
	comp=E,675nm,0.2s,baz=293,slow=0.0						
GAYA	**Gaya**	**5.27**	**256**	*eP*	**Pn**	**12 48 15.3**	**-4.5**
GAYA				*eS*	**Sn**	**12 49 11.7**	**-8.0**
DMN	**Daman**	**5.32**	**286**	Pn	**Pn**	**12 48 21.8**	**+1.1**
	baz=290,slow=0.0						
DMN				Sn	**Sn**	**12 49 22.3**	**+1.1**
	comp=E,871nm,0.5s,baz=290,slow=0.0						
GKN	**Gorkha**	**5.82**	**289**	Pn	**Pn**	**12 48 29.1**	**+1.6**
	baz=292,slow=0.0						
GKN				Sn	**Sn**	**12 49 31.7**	**-1.8**
	comp=E,1μm,0.3s,baz=292,slow=0.0						
KOLN	**Koldanda**	**6.66**	**285**	Pn	**Pn**	**12 48 40.1**	**+1.1**
	baz=288,slow=0.0						
KOLN				Sn	**Sn**	**12 49 50.7**	**-3.4**
	comp=E,495nm,0.3s,baz=288,slow=0.0						
DANN	**Dangsing**	**6.66**	**290**	Pn	**Pn**	**12 48 39.5**	**+0.3**
	baz=293,slow=0.0						
DANN				Sn	**Sn**	**12 49 50.3**	**-4.1**
	comp=E,393nm,0.4s,baz=293,slow=0.0						
TNCH	**TengChong**	**7.02**	**98**	Pn	**Pn**	**12 48 45.6**	**+1.6**
TNCH				Sn	**Sn**	**12 50 04.2**	**+1.2**
TNCH				smax	smax		
	comp=E,170nm,1.5s						
TNCH				smax	smax		
	comp=E,170nm,1.3s						
TNCH				LR	LR		
	comp=E,680nm,5.8s						
TNCH				LR	LR		
	comp=E,750nm,5.8s						
PYUN	**Piuthan**	**7.25**	**287**	Pn	**Pn**	**12 48 47.1**	**-0.2**
	baz=290,slow=0.0						
BWNR	**Bhubaneshwar**	**7.52**	**219**	*eP*	Pn	12 48 45.8	-4.9
BWNR				*eS*	**Sn**	**12 50 12.0**	**-3.2**
BWNR				IAML		12 51 07.0	
	comp=N,3μm,0.7s						
BWNR				IAML		12 51 09.2	
	comp=E,4μm,0.3s						
RAGD	**RAYAGADA**	**9.73**	**226**	*eP*	Pn	12 49 16.1	-4.9
RAGD				*eS*	Sn	12 51 00.3	-9.1
PZH	**PanZhiHua**	**9.77**	**86**	P	**Pn**	**12 49 25.7**	**+4.0**
PZH				S	**Sn**	**12 51 16.2**	**+5.7**
PZH				pmax	pmax		
	comp=E,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=E,110nm,5.2s						
PZH				LR	LR		
	comp=E,430nm,15.1s						
PZH				LR	LR		
	comp=E,510nm,14.6s						
PZH				LR	LR		
	comp=E,580nm,14.2s						
MHMT	**Maesarieng**	**10.34**	**139**	P	**Pn**	**12 49 32.3**	**+2.9**
	comp=E,0.1nmcomp=E,800nmcomp=E,70nm,0.8s						
CHTO	**Chiang Mai**	**10.49**	**133**		**Pn**	**12 49 33.3**	**+1.9**
CHTO	**Chiang Mai**	**10.49**	**133**	P	**Pn**	**12 49 33.3**	**+1.9**
CHTO	**Chiang Mai**	**10.49**	**133**	P	**Pn**	**12 49 32.7**	**+1.2**
	comp=E,0.2nmcomp=E,19nm,1.0s						
GOMU	**GeErMu**	**10.52**	**18**	P	**Pn**	**12 49 30.9**	**-1.2**
GOMU				S	**Sn**	**12 51 30.8**	**+1.7**
GOMU				pmax	pmax		
	comp=E,30nm,1.0s						
GOMU				LR	LR		
	comp=E,870nm,9.9s						
GOMU				LR	LR		
	comp=E,270nm,6.9s						
CM15	**Chiang Mai Arr**	**10.74**	**134**	P	**Pn**	**12 49 37.8**	**+2.9**
	comp=E,0.1nmcomp=E,274nmcomp=E,31nm,0.7s						
CM31	**Chiang Mai Arr**	**10.75**	**134**		**Pn**	**12 49 38.3**	**+3.4**
CMAR	**Chiang Mai Arr**	**10.75**	**134**	Pn	**Pn**	**12 49 35.8**	**+0.8**
	comp=E,0.6nm,0.3s,baz=310,slow=13,SNR=27						
CMAR				LR	LR	12 55 25.4	
	comp=E,119nm,18.6s,baz=320,slow=46						
	comp=E,4.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**10.75**	**134**		**Pn**	**12 49 36.9**	**+1.9**
CMAR	**Chiang Mai Arr**	**10.75**	**134**	P	**Pn**	**12 49 36.9**	**+1.9**
CM13	**Chiang Mai Arr**	**10.75**	**135**	P	**Pn**	**12 49 36.1**	**+1.1**
	comp=E,0.1nmcomp=E,226nmcomp=E,27nm,0.8s						
CM02	**Chiang Mai Arr**	**10.77**	**134**	P	**Pn**	**12 49 37.7**	**+2.5**
	comp=E,0.1nmcomp=E,198nmcomp=E,29nm,0.8s						
KMI2	**Kunming**	**10.78**	**93**	P	**Pn**	**12 49 38.3**	**+2.7**
KMI2				pmax	pmax		
	comp=E,13nm,1.0s						
KMI2				LR	LR		
	comp=E,410nm,13.4s						
KMI2				LR	LR		
	comp=E,210nm,7.4s						
KMI2				LR	LR		
	comp=E,310nm,14.7s						
CM01	**Chiang Mai Arr**	**10.78**	**134**	P	**Pn**	**12 49 37.6**	**+2.1**
	comp=E,0.1nmcomp=E,214nmcomp=E,23nm,1.0s						
CM09	**Chiang Mai Arr**	**10.79**	**134**	P	**Pn**	**12 49 37.2**	**+1.7**
	comp=E,0.1nmcomp=E,175nmcomp=E,25nm,0.9s						
CM05	**Chiang Mai Arr**	**10.79**	**134**	P	**Pn**	**12 49 36.6**	**+1.0**
	comp=E,0.0nmcomp=E,151nmcomp=E,20nm,0.7s						
CM04	**Chiang Mai Arr**	**10.81**	**134**	P	**Pn**	**12 49 38.8**	**+2.9**
	comp=E,164nmcomp=E,18nm,0.7s						
JOSI	**Joshimath**	**10.85**	**296**	*eP*	Pn	12 49 29.7	-6.9
JOSI				*eS*	Sn	12 51 22.7	-14
JOSI				IAML		12 51 44.3	
	comp=E,169nm,0.9s						
JOSI				IAML		12 51 52.2	
	comp=N,193nm,0.8s						
NGP	**Nagpur**	**11.92**	**248**	*eP*	Pn	12 49 45.1	-6.0
NGP				*eS*	Sn	12 51 50.8	-12
CD2	**Chengdu**	**12.27**	**65**	P	**Pn**	**12 49 57.5**	**+1.7**
CD2				S	**Sn**	**12 52 13.6**	**+2.0**
CD2				pmax	pmax		
	comp=N,20nm,0.9s						
CD2				LR	LR		
	comp=N,670nm,9.7s						
CD2				LR	LR		
	comp=N,590nm,8.9s						
CD2				LR	LR		
	comp=N,550nm,9.5s						
GUNA	**GUNA**	**12.32**	**266**	*eP*	Pn	12 49 49.5	-7.0
GUNA				*eS*	Sn	12 52 00.3	-13
GUNA				IAML		12 53 39.4	
	comp=E,297nm,0.9s						
GUNA				IAML		12 53 46.3	
	comp=N,357nm,0.3s						
SMLA	**Simla**	**12.98**	**295**	*eP*	Pn	12 49 57.9	-7.5
SMLA				*eS*	Sn	12 52 11.4	-17
SMLA				IAML		12 52 36.1	
	comp=E,141nm,1.0s						
SMLA				IAML		12 52 39.7	
	comp=N,98nm,1.8s						
DHRM	**DHARAMSHALA**	**14.06**	**299**	*eP*	Pn	12 50 14.4	-5.9
DHRM				*eS*	**Sn**	**12 52 50.8**	**-4.8**
DHRM				IAML		12 52 55.4	
	comp=E,105nm,1.1s						
DHRM				IAML		12 53 00.3	
	comp=N,101nm,0.2s						
GYA	**Guiyang**	**14.18**	**86**	⇑P	**Pn**	**12 50 23.3**	**+1.3**
GYA				sP	P	12 50 30.8	+1.6
GYA				pmax	pmax		
	comp=N,24nm,1.0s						
GYA				LR	LR		
	comp=N,460nm,17.0s						
ALCI	**Alchi Leh**	**14.25**	**307**	*eP*	Pn	12 50 16.3	-6.8
ALCI				*eS*	**Sn**	**12 52 55.8**	**-4.7**
ALCI				IAML		12 52 55.8	
	comp=E,460nm,0.7s						
ALCI				IAML		12 53 08.8	
	comp=N,44nm,0.2s						
HYB	**Hyderabad**	**14.38**	**235**	*eP*	**P**	**12 50 32.7**	**+1.3**
LZDM	**Lanzhou Array**	**14.66**	**45**	Pn	**Pn**	**12 50 27.3**	**-1.4**
	baz=232,slow=12						
	comp=N,2.1nm,0.4s						
LZH	**Lanzhou**	**14.84**	**45**	P	**P**	**12 50 34.6**	**-1.9**
LZH				pP	Pn	12 50 39.5	+8.6
LZH				pmax	pmax		
	comp=N,7.0nm,1.5s						
LZH				LR	LR		
	comp=N,540nm,13.0s						
LZH				LR	LR		
	comp=N,460nm,12.7s						
LZH				LR	LR		
	comp=N,850nm,15.8s						
GTA2	**Gaotai**	**15.19**	**27**	*eP*	**Pn**	**12 50 33.9**	**-1.7**
GTA2				sP	P	12 50 40.5	+0.1
GTA2				LR	LR		
	comp=N,420nm,15.5s						
GTA2				LR	LR		
	comp=N,380nm,15.9s						
GTA2				LR	LR		
	comp=N,490nm,18.7s						
PANO	**Nakornpanom**	**15.63**	**122**	P	**Pn**	**12 50 42.9**	**+1.5**
	comp=N,0.1nmcomp=N,544nmcomp=N,20nm,1.0s						
ENH	**Enshi**	**16.91**	**72**		**Pn**	**12 50 55.3**	**-2.3**
XAN	**Xi'an**	**17.45**	**59**	⇑P	**Pn**	**12 51 01.6**	**-2.7**
XAN				S	**Sn**	**12 54 14.5**	**-3.4**
XAN				pmax	pmax		
	comp=N,8.0nm,1.0s						
XAN				pmax	pmax		
	comp=N,190nm,4.9s						
XAN				LR	LR		
	comp=N,230nm,8.3s						
XAN				LR	LR		
	comp=N,280nm,7.2s						
XAN				LR	LR		
	comp=N,220nm,15.8s						
WMQ	**Urumqi**	**17.76**	**352**	*eP*	**Pn**	**12 51 03.0**	**-5.1**
WMQ				pmax	pmax		
	comp=N,41nm,0.7s						
WMQ				pmax	pmax		
	comp=N,120nm,3.7s						
WMQ				LR	LR		
	comp=N,210nm,20.5s						
WUS	**Wushi**	**17.78**	**330**	Pn	**Pn**	**12 51 05.9**	**-2.6**
KSH2	**Kashi**	**18.19**	**319**	P	**Pn**	**12 51 11.0**	**-2.5**
KSH2				pP	P	12 51 14.7	+1.1
KSH2				sP	pP	12 51 21.6	+0.5
KSH2				pmax	pmax		
	comp=N,32nm,0.7s						
TARG	**Taragay, Kyrgy**	**18.85**	**328**		**P**	**12 51 20.4**	**-0.8**
TARG	**Taragay, Kyrgy**	**18.85**	**328**	P	**P**	**12 51 20.4**	**-0.8**
TARG				pmax	pmax		
	comp=Z,25nm,0.9s						
PRZ	**Przheval'sk**	**19.18**	**331**	P	**Pn**	**12 51 25.3**	**-0.2**
PRZ				IAmb	IAmb	12 51 26.8	
	comp=Z,46nm,0.6s						
PRZ	**Przheval'sk**	**19.18**	**331**	P	**Pn**	**12 51 25.3**	**-0.2**
PRZ				pmax	pmax		
	comp=Z,46nm,0.6s						
SHLS	**Shalkode**	**19.30**	**334**	*eP*	**P**	**12 51 23.6**	**-2.1**
SHLS	**Shalkode**	**19.30**	**334**	*eP*	**P**	**12 51 23.6**	**-2.1**
KDJ	**Kajisay**	**19.46**	**328**		**Pn**	**12 51 29.3**	**+0.5**
KDJ	**Kajisay**	**19.46**	**328**	P	**Pn**	**12 51 29.3**	**+0.5**
KDJ				pmax	pmax		
	comp=Z,21nm,0.7s						
UZB	**Uzynbulak**	**19.46**	**333**	*eP*	**P**	**12 51 27.8**	**+0.3**
UZB	**Uzynbulak**	**19.46**	**333**	*eP*	**P**	**12 51 27.8**	**+0.3**
NRN	**Naryn**	**19.52**	**325**	P	**P**	**12 51 28.3**	**-0.1**
NRN	**Naryn**	**19.52**	**325**	P	**P**	**12 51 28.3**	**-0.1**
NRN				pmax	pmax		
	comp=Z,29nm,1.4s						
SATY	**Saty**	**19.64**	**332**	*eP*	**P**	**12 51 29.9**	**+0.4**
SATY				*eS*	**Sn**	**12 55 10.7**	**-0.1**
SATY	**Saty**	**19.64**	**332**	*eP*	**P**	**12 51 30.0**	**+0.4**
SATY				*eS*	**Sn**	**12 55 10.8**	**-0.1**
KPKS	**Kokpek**	**19.86**	**333**	*eP*	**P**	**12 51 31.9**	**+0.1**
KPKS				*eS*	**Sn**	**12 55 15.4**	**-0.7**
KPKS	**Kokpek**	**19.86**	**333**	*eP*	**P**	**12 51 31.9**	**+0.1**
KPKS				*eS*	**Sn**	**12 55 15.4**	**-0.7**
ULHL	**Ulahol**	**20.00**	**327**	P	**Pn**	**12 51 35.8**	**+0.5**
	SNR=15						
TNSS	**Tian-Shan**	**20.27**	**329**	*eP*	**P**	**12 51 36.5**	**-0.1**
TNSS	**Tian-Shan**	**20.27**	**329**	*eP*	**P**	**12 51 36.5**	**-0.1**
MDOK	**Medeo**	**20.32**	**330**	*eP*	**P**	**12 51 37.0**	**+0.1**
MDOK				*eS*	**S**	**12 55 25.1**	**+1.7**
MDOK	**Medeo**	**20.32**	**330**	*eP*	**P**	**12 51 37.1**	**+0.1**
MDOK				*eS*	**S**	**12 55 25.2**	**+1.7**
BOOM	**Boomskoye usch**	**20.33**	**327**		**P**	**12 51 37.2**	**+0.2**
BOOM	**Boomskoye usch**	**20.33**	**327**	P	**P**	**12 51 37.2**	**+0.2**
BOOM				pmax	pmax		
	comp=Z,22nm,0.7s						
LYN	**LuoYang**	**20.39**	**61**	P	**P**	**12 51 38.3**	**+0.8**
LYN				pmax	pmax		
	comp=Z,32nm,1.2s						
LYN				pmax	pmax		
	comp=Z,440nm,4.8s						
KBL	**Kabul**	**20.54**	**299**		**P**	**12 51 40.4**	**+1.0**
KBL				IAmb	IAmb	12 51 42.1	
	comp=Z,68nm,0.8s						
KBL	**Kabul**	**20.54**	**299**	P	**P**	**12 51 40.4**	**+1.0**
KBL				pmax	pmax		
	comp=Z,68nm,0.9s						
DRK	**Karamyk**	**20.71**	**314**	P	**P**	**12 51 41.5**	**+0.2**
DRK				IAmb	IAmb	12 51 46.6	
	comp=Z,64nm,0.6s						
DRK	**Karamyk**	**20.71**	**314**	P	**P**	**12 51 41.5**	**+0.2**
DRK				pmax	pmax		
	comp=Z,64nm,0.6s						
TKM2	**Tokmak 2**	**20.82**	**327**	P	Pn	12 51 44.0	-0.9
	SNR=18						
UCH	**Uchtor**	**20.87**	**324**	P	**P**	**12 51 44.3**	**+1.2**
	SNR=31						
KBK	**Karagaybulak**	**20.95**	**326**	P	Pn	12 51 45.3	-1.1
	SNR=13						
ARSB	**Arslanbob**	**21.10**	**320**	P	**P**	**12 51 45.8**	**+0.4**
ARSB	**Arslanbob**	**21.10**	**320**	P	**P**	**12 51 45.8**	**+0.4**
ARSB				pmax	pmax		
	comp=Z,20nm,0.8s						
WHN	**Wuhan**	**21.11**	**73**	⇓P	**P**	**12 51 46.8**	**+1.5**
WHN				sP	**sP**	**12 51 56.6**	**+0.2**
WHN				pmax	pmax		
	comp=Z,200nm,0.8s						
AAK	**Ala-Archa**	**21.17**	**325**	P	**P**	**12 51 47.4**	**+1.3**
	comp=Z,9.6nm,0.7s,baz=145,slow=8.2,SNR=30						
AAK				LR	LR	13 00 51.5	
	comp=Z,169nm,19.0s,baz=133,slow=39						
	comp=Z,9.6nm,0.7s						
AAK	**Ala-Archa**	**21.17**	**325**	P	**P**	**12 51 47.5**	**+1.4**
	SNR=20						
AAK	**Ala-Archa**	**21.17**	**325**		**P**	**12 51 47.4**	**+1.3**
AAK	**Ala-Archa**	**21.17**	**325**	*ce*P	**P**	**12 51 47.3**	**+1.3**
AAK				pmax	pmax		
	comp=Z,35nm,1.3s						
PALK	**Pallekele**	**21.17**	**209**	LR	LR	12 59 50.4	
	comp=Z,190nm,21.8s,baz=32,slow=36						
PALK	**Pallekele**	**21.17**	**209**	‖*e*P	**P**	**12 51 49.3**	**+3.1**
PALK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KUU	**Kurty**	**21.21**	**330**	*eP*	**P**	**12 51 46.6**	**+0.3**
KUU	**Kurty**	**21.21**	**330**	*eP*	**P**	**12 51 46.7**	**+0.3**
FRU1	**Bishkek**	**21.22**	**325**	P	**P**	**12 51 47.0**	**+0.5**
FRU1	**Bishkek**	**21.22**	**325**	P	**P**	**12 51 47.0**	**+0.5**
FRU1				pmax	pmax		
	comp=Z,30nm,0.9s						
TDK	**Taldyqorghan**	**21.26**	**335**	*eP*	**P**	**12 51 47.1**	**+0.3**
TDK				pmax	pmax		
	comp=Z,18nm,0.7s						
TDK	**Taldyqorghan**	**

EKS2 Erkin-Say 21.56 324 P P 12 51 50.1 -0.1
SNR=19
MK31 Makanchi Array 21.64 344 *c iP* **P 12 51 50.5 -0.4**
MKAR Makanchi Array 21.64 344 P P 12 51 50.6 -0.3
comp=Z,89nm,0.6s,baz=155,slow=12,SNR=277
comp=Z,89nm,0.6s
MKAR Makanchi Array 21.64 344 P 12 51 50.4 -0.5
MKAR Makanchi Array 21.64 344 P **P 12 51 50.4 -0.5**
BTK Batken 21.66 315 - P 12 51 52.2 +0.9
BTK Batken 21.66 315 P P 12 51 52.2 +0.9
BTK pmax pmax
comp=Z,95nm,0.7s
SGDS Sogindy 21.69 327 *eP* **P 12 51 51.8 +0.3**
ZSN Zaisan 21.72 349 *eP* **P 12 51 52.2 +0.5**
ZSN pmax pmax
comp=Z,18nm,1.0s
ZSN Zaisan 21.72 349 *eP* **P 12 51 52.3 +0.5**
comp=Z,18nm,1.0s
MAKZ Makanchi 21.73 343 P 12 51 51.3 -0.6
MAKZ Makanchi 21.73 343 P P 12 51 51.3 -0.6
MAKZ pmax pmax
comp=Z,58nm,0.6s
HHC Hu-ho-hao-te 22.53 44⇓ *iP* **P 12 52 01.2 +0.6**
HHC pP pP 12 52 04.3 -3.9
HHC sP sP 12 52 10.7 -1.1
HHC S **S 12 55 57.9 -8.3**
HHC pmax pmax
comp=Z,16nm,1.2s
HHC pmax pmax
comp=Z,130nm,4.4s
HHC LR LR
comp=Z,370nm,10.5s
HHC LR LR
comp=Z,280nm,11.5s
HHC LR LR
comp=Z,340nm,12.0s
DZA Taraz 23.05 321 *eP* **P 12 52 06.2 +0.2**
DZA Taraz 23.05 321 *eP* **P 12 52 06.2 +0.2**
HNS HongShan 23.07 55⇑ **P P 12 52 07.6 +1.4**
HNS pmax pmax
comp=Z,41nm,1.1s
IUG luzhnay 23.35 318 *eP* **P 12 52 09.2 +0.1**
IUG *eS* **S 12 56 22.6 +2.4**
IUG pmax pmax
comp=Z,53nm,1.3s
IUG luzhnay 23.35 318 *eP* **P 12 52 09.2 +0.1**
comp=Z,53nm,1.3s
IUG *eS* **S 12 56 22.6 +2.4**
DGZ Jazzator, Alta 23.60 354 *ceP* **P 12 52 12.0 +0.5**
DGZ pmax pmax
comp=Z,31nm,0.8s
KK31 Karatay Array 23.65 321 P 12 52 11.0 -0.9
KK31 Karatay Array 23.65 321 P P 12 52 11.0 -0.9
KK31 pmax pmax
comp=Z,11nm,0.9s
KKAR Karatay Array 23.65 321 P 12 52 11.5 -0.4
KKAR Karatay Array 23.65 321 P P 12 52 11.5 -0.4
CHM Chimkent 23.71 318 *eP* **P 12 52 13.0 +0.6**
CHM pmax pmax
comp=Z,17nm,0.7s
CHM Chimkent 23.71 318 *eP* **P 12 52 13.0 +0.6**
comp=Z,17nm,0.7s
BRLS Boroldaу 23.99 320 *eP* **P 12 52 14.4 -0.7**
BRLS Boroldaу 23.99 320 *eP* **P 12 52 14.4 -0.7**
TIA Tai'an 24.51 60 P P 12 52 20.6 +0.7
TIA pmax pmax
comp=Z,31nm,0.9s
TIA LR LR
comp=Z,210nm,22.6s
TIA LR LR
comp=Z,330nm,24.3s
TIA LR LR
comp=Z,400nm,24.4s
PSI Prapat 24.53 160 P P 12 52 22.3 +1.9
PSI pmax pmax
comp=Z,7.0nm,0.7s
RPSI Rantau Prapat 24.63 160 P P 12 52 22.3 +1.2
SONM Songino Array 24.80 25 P P 12 52 23.8 +1.2
comp=Z,31nm,0.8s,baz=206,slow=9.7,SNR=207
SONM LR LR 13 02 50.0
comp=Z,183nm,18.4s,baz=238,slow=38
comp=Z,31nm,0.8s
SONM Songino Array 24.80 25 P 12 52 23.6 +1.0
SONM IAmb IAmb 12 52 24.8
comp=Z,32nm,0.8s
SONM Songino Array 24.80 25 P P 12 52 23.6 +1.0
SONM pmax pmax
comp=Z,32nm,0.8s
KNGR Kungurtug, Tuv 24.89 10 *deP* **P 12 52 25.2 +1.9**
KNGR pmax pmax
comp=Z,38nm,0.8s
ULN Ulaanbaatar 25.09 26 P P 12 52 26.1 +0.9
ULN IAmb IAmb 12 52 27.1
comp=Z,33nm,0.8s
ULN Ulaanbaatar 25.09 26 *c iP* **P 12 52 26.1 +0.9**
ULN pmax pmax
comp=Z,34nm,0.9s
NJ2 Nanjing 25.10 70 *eP* **P 12 52 26.1 +0.8**
NJ2 pmax pmax
comp=Z,9.0nm,0.7s
BJI2 Beijing 25.18 51 P P 12 52 27.1 +1.2
BJI2 pmax pmax
comp=Z,5.0nm,0.9s
ZAK Zakamensk 25.96 18 *eP* **P 12 52 33.4 +0.4**
ZAK pmax pmax
comp=Z,28nm,1.0s
KURBB Kurchatov Arra 26.14 342 P P 12 52 34.8 +0.2
comp=Z,51nm,0.8s,baz=159,slow=9.1,SNR=363
comp=Z,51nm,0.8s
KURK Kurchatov 26.20 342 P 12 52 35.4 +0.3
KURK Kurchatov 26.20 342 *c iP* **P 12 52 35.2 +0.1**
KURK pmax pmax
comp=Z,50nm,0.9s
MOY Mondy 26.56 14 *eP* **P 12 52 39.9 +1.4**
MOY pmax pmax
comp=Z,15nm,1.6s
XLT XiLinHaoTe 27.00 43 *eP* **P 12 52 43.7 +1.2**
XLT pP sP 12 52 55.2 +1.1
XLT pmax pmax
comp=Z,9.0nm,1.0s
XLT pmax pmax
comp=Z,90nm,6.9s
XLT LR LR
comp=Z,280nm,7.7s
XLT LR LR
comp=Z,300nm,14.1s
TLY Talaya 27.23 18 *deP* **P 12 52 46.6 +2.3**
TLY pmax pmax
comp=Z,9.0nm,1.7s
BRZS Berezniki 27.57 334 *eP* **P 12 52 48.0 +0.6**
BRZS Berezniki 27.57 334 *eP* **P 12 52 48.0 +0.6**
IRK Irkutsk 27.90 18 *eP* **P 12 52 51.6 +1.2**
IRK pmax pmax
comp=Z,49nm,2.4s
ZALV Zalesovo Beam 28.07 352 P P 12 52 51.3 -0.5
comp=Z,3.1nm,0.4s,baz=181,slow=8.2,SNR=13
ZALV LR LR 13 06 00.3
comp=Z,115nm,21.5s,baz=38,slow=41
comp=Z,3.1nm,0.4s
ZALV Zalesovo Beam 28.07 352 P 12 52 51.7 -0.1
BVAR Borovoye Array 30.85 336 P P 12 53 16.6 +0.1
comp=Z,9.8nm,0.4s,baz=132,slow=9.6,SNR=75
BVAR LR LR 13 07 05.3
comp=Z,170nm,18.4s,baz=146,slow=39
comp=Z,9.8nm,0.4s
BORK Borovoye 30.90 336 P 12 53 17.3 +0.4
BORK IAmb IAmb 12 53 18.6
comp=Z,10.0nm,0.6s
BORK Borovoye 30.90 336 *ceP* **P 12 53 17.0 +0.1**
BORK pmax pmax
comp=Z,11nm,0.7s
HILR Hailar Array B 32.27 36 P P 12 53 27.5 -1.6
comp=Z,1.0nm,0.3s,baz=207,slow=13,SNR=4.4
comp=Z,1.0nm,0.3s
CN2 Changchun 33.02 49 *eP* **P 12 53 36.7 +1.0**
CN2 *epP* sP 12 53 49.4 +2.1
CN2 pmax pmax
comp=Z,10.0nm,1.0s
ABKAR Akbulak array 33.19 322 P P 12 53 37.7 +0.6
KSRS Korea Array 33.23 61 P P 12 53 36.7 -0.9
comp=Z,1.5nm,0.7s,baz=252,slow=8.4,SNR=4.5
comp=Z,1.5nm,0.7s
AKTO Aktyubinsk 34.87 323 LR LR 13 09 32.4
comp=Z,240nm,18.2s,baz=184,slow=39
BNX BinXian 35.02 47⇓ **P P 12 53 54.2 +1.2**
HEH HeiHe 36.86 40 *eP* **P 12 54 09.2 +0.5**
HEH pmax pmax
comp=Z,18nm,1.0s
VLA Vladivostok 37.31 52⇑ *iP* **P 12 54 12.8 +0.2**
VLA pmax pmax
comp=Z,23nm,0.9s
SVE Sverdlovsk 37.47 333 *eP* **P 12 54 14.6 +0.9**
ARTI Arti 38.13 331 LR LR 13 11 33.0
comp=Z,104nm,19.2s,baz=128,slow=39
ARTI Arti 38.13 331 P P 12 54 19.6 +0.3
ARTI IAmb IAmb 12 54 20.4
comp=Z,23nm,0.9s
ARTI Arti 38.13 331 *c iP* **P 12 54 19.5 +0.1**
ARTI 12 55 42.4
ARTI S **S 13 00 11.1 +0.5**
ARTI SS **SnSn 13 02 44.1 -11**
ARTI pmax pmax
comp=Z,11nm,0.7s
ZEA Zeya 38.47 35 *eP* **P 12 54 23.6 +1.4**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,0.8s
KLR Kulʹdur 39.02 43⇓ *eP* **P 12 54 27.6 +0.6**
KLR pmax pmax
comp=Z,4.0nm,2.5s
GNI Garni 40.58 302⇑ *eP* **P 12 54 40.8 +0.5**
GNI pmax pmax
comp=Z,12nm,1.1s
MJB9 Matsu-Tunnel 41.36 64 IAmb IAmb 12 55 00.5
comp=Z,22nm,0.7s
MAJO Matsushiro 41.36 64 P P 12 54 47.0 +0.5
MAJO IAmb IAmb 12 54 59.6
comp=Z,23nm,0.7s
MAJO Matsushiro 41.36 64 *deP* **P 12 54 47.0 +0.5**
MAJO pmax pmax
comp=Z,15nm,0.8s
MJAR Matsushiro Arr 41.36 64 P **P 12 54 47.1 +0.5**
comp=Z,8.4nm,0.8s,baz=276,slow=10,SNR=19
MJAR pP **pP 12 54 55.4 +0.5**
comp=Z,16nm,0.7s,baz=276,slow=9.5,SNR=16
comp=Z,8.4nm,0.8s
MJAR Matsushiro Arr 41.36 64 P P 12 54 47.4 +0.8
BELG Belogornoye 41.56 321 *d iP* **P 12 54 48.3 +0.4**
BELG pmax pmax
comp=Z,5.0nm,1.1s
KBZ Khabaz 42.38 307 P P 12 54 55.0 +0.3
comp=Z,4.0nm,0.9s,baz=130,slow=7.9,SNR=3.4
comp=Z,4.0nm,0.9s
KBZ Khabaz 42.38 307 *eP* **P 12 54 52.9 -1.8**
KBZ pmax pmax
comp=Z,9.0nm,1.2s
SHA1 Shidzhatmaz 42.55 307⇑ *eP* **P 12 54 56.9 +0.5**
KIV Kislovodsk 42.56 307 *eP* **P 12 54 56.8 +0.4**
KIV pmax pmax
comp=Z,16nm,1.1s
KIV pmax pmax
comp=Z,55nm,16.0s
KIV Kislovodsk 42.56 307 pP **P 12 54 59.8 +3.4**
comp=Z,18nm,1.4s
NRIK Norilʹsk 43.20 358 P P 12 55 00.7 -0.3
comp=Z,2.1nm,0.3s,baz=172,slow=6.8,SNR=6.7
comp=Z,2.1nm,0.3s
NRIK Norilʹsk 43.20 358 P P 12 55 01.2 +0.2
NRIK Norilʹsk 43.20 358 P P 12 55 01.2 +0.2
NRIK pmax pmax
comp=Z,7.0nm,1.0s
KIRV Kirov 43.37 330 LR LR 13 14 47.3
comp=Z,110nm,18.2s,baz=126,slow=38
KIRV Kirov 43.37 330⇓ *eP* **P 12 55 03.2 +0.7**
YAK Yakutsk 44.16 25 *eP* **P 12 55 09.0 +0.2**
YAK *e**PP **pP 12 55 12.9 -4.3**
YAK *e* 12 56 51.8
YAK *e*PPP PPP 12 57 28.7
YAK *e*S **S 13 01 39.4 -0.6**
YAK *e**SS **sS 13 01 58.9 +5.1**
YAK *e*SS **SS 13 04 53.4 -4.6**
YAK pmax pmax
comp=Z,16nm,1.2s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,118nm,4.9s
YAK pmax pmax
comp=N,155nm,8.6s
YAK pmax pmax
comp=E,177nm,9.1s
YAK smax smax
comp=E,169nm,6.6s
YAK smax smax
comp=N,65nm,4.0s
VRH Novokhopyorsk 44.66 317 *eP* **P 12 55 11.2 -1.8**
VRH pmax pmax
comp=Z,10.0nm,1.0s
YSS Yuzhno-Sakhali 45.59 49 P **P 12 55 21.0 +0.5**
YSS IAmb IAmb 12 55 34.5
comp=Z,18nm,0.8s
YSS Yuzhno-Sakhali 45.59 49 *eP* **P 12 55 20.9 +0.5**
YSS *e* 12 56 57.7
YSS *e* 12 57 10.7
YSS *e*S **S 13 02 01.9 +0.8**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,300nm,19.0s
YSS MLR MLR
comp=N,300nm,15.0s
YSS MLR MLR
comp=E,300nm,16.0s
VORD Divnogorie 46.10 317 *eP* **P 12 55 22.7 -1.7**
VORD pmax pmax
comp=Z,10.0nm,1.0s
TYV Tymovskoe 46.22 44 *eP* P 12 55 36.3 +11
TYV pmax pmax
comp=Z,5.0nm,1.3s
TYV pmax pmax
comp=Z,100nm,4.6s
VSR Storozhevoye 46.23 317 *eP* **P 12 55 23.1 -2.3**
VSR pmax pmax
comp=Z,7.0nm,1.0s
VORR Voronezh 46.30 318 *eP* **P 12 55 24.3 -1.7**
VORR pmax pmax
comp=Z,20nm,0.9s
LPSR Galichʹya Gora 46.69 319 *eP* **P 12 55 27.0 -2.0**
LPSR pmax pmax
comp=Z,20nm,0.9s
ASF Jabal al Asfar 47.08 291 LR LR 13 18 39.4
comp=Z,83nm,19.8s,baz=57,slow=40
MOS Moscow 48.21 323 *eP* **P 12 55 40.0 -0.8**
OBN Obninsk 48.64 322⇓ *eP* **P 12 55 44.8 +0.7**
OBN *e* 12 57 37.8
OBN pmax pmax
comp=Z,14nm,1.0s
BRTR Keskin Array B 49.10 301 P P 12 55 48.1 0.0
comp=Z,0.7nm,0.6s,baz=90,slow=6.2,SNR=3.9
BRTR pP **pP 12 55 57.5 +0.9**
comp=Z,2.3nm,0.6s,baz=97,slow=8.7,SNR=7.1
comp=Z,0.7nm,0.6s
EIL Elat 49.11 288 LR LR 13 18 19.1
comp=Z,70nm,20.2s,baz=1.0,slow=38
TIXI Tiksi 50.14 15 P **P 12 55 54.9 -0.4**
comp=Z,8.4nm,0.4s,baz=245,slow=6.6,SNR=9.8
TIXI pP **pP 12 56 03.7 -0.2**
comp=Z,10nm,0.5s,baz=220,slow=4.3,SNR=7.3
comp=Z,8.4nm,0.4s
TIXI Tiksi 50.14 15 P **P 12 55 55.2 -0.1**
TIXI IAmb IAmb 12 56 07.1
comp=Z,17nm,0.7s
TIXI Tiksi 50.14 15⇓ *eP* **P 12 55 55.2 -0.1**
TIXI pmax pmax
comp=Z,25nm,1.3s
NE56 Odesa 51.08 310 P P 12 56 03.6 +0.8
AK09 Malin Array Si 52.33 315 P P 12 56 11.4 -0.7
AK10 Malin Array Si 52.35 315 P P 12 56 11.5 -0.7
AKASG Malin Array Be 52.38 315 P P 12 56 11.6 -0.8
comp=Z,0.7nm,0.3s,baz=83,slow=6.6,SNR=13
AKASG pP **pP 12 56 19.9 -1.0**
comp=Z,5.6nm,0.6s,baz=82,slow=6.7,SNR=12
AKASG LR LR 13 20 58.9
comp=Z,124nm,18.8s,baz=62,slow=39
comp=Z,0.7nm,0.3s
AKBB Malin Array Si 52.38 315 P P 12 56 11.5 -0.9
AKBB Malin Array Si 52.38 315⇑ *eP* **P 12 56 11.4 -1.0**
AK03 Malin Array Si 52.38 315 P P 12 56 11.6 -0.8
AK07 Malin Array Si 52.38 315 P P 12 56 11.6 -0.8
AK06 Malin Array Si 52.39 315 P P 12 56 11.6 -0.9
KIEV Kiev 52.39 315 P P 12 56 11.5 -1.0
KIEV Kiev 52.39 315 P P 12 56 11.5 -1.0
KIEV pmax pmax
comp=Z,9.0nm,0.9s
MA2 Magadan 52.60 34 *deP* **P 12 56 14.2 +0.3**
MA2 pmax pmax
comp=Z,23nm,1.7s
LUBAR Lubar, Ukraine 53.28 314 P P 12 56 18.1 -1.0
MNK Minsk 53.49 320 *i P* **P 12 56 20.4 -0.2**
comp=E,9.0nm,0.8s
MNK *i P* **P 12 56 20.4 -0.2**
comp=N,20nm,0.9s
MNK *i P* **P 12 56 20.4 -0.2**
comp=Z,17nm,0.8s,baz=95
MNK *i* PcP **PcP 12 57 27.2 -0.1**
MNK *i* PP **PP 12 58 21.0 -0.1**
MNK *i* PPP PPP 12 59 27.1
MNK *i* S **S 13 03 53.8 +2.4**
MNK *i* SS **SKiKP 13 07 35.5 +1.1**
MNK *i* LQ LQ 13 16 18.8
MNK *i* LR LR 13 19 31.6
MNK *i* LRM MLR 13 22 19.6
comp=Z,74nm,10.5s
MNK *i* LRM MLR 13 22 24.0
comp=E,81nm,12.9s
MNK *i* LRM MLR 13 22 42.9
comp=N,60nm,10.8s
MNK Minsk 53.49 320 *i P* **P 12 56 20.4 -0.2**
MNK *i* 12 57 27.1
MNK *i* 12 58 20.9
MNK *i* PPP PPP 12 59 27.1
MNK *i* S **S 13 03 53.8 +2.4**
MNK *i* SS **SKiKP 13 07 35.4 +1.1**
MNK pmax pmax
comp=N,20nm,0.9s
MNK pmax pmax
comp=E,9.0nm,0.8s
MNK pmax pmax
comp=Z,17nm,0.8s
MNK MLR MLR
comp=Z,74nm,10.0s
MNK MLR MLR
comp=E,81nm,13.0s
MNK MLR MLR
comp=N,60nm,11.0s
SEY Seymchan 54.09 30⇑ *eP* **P 12 56 25.0 +0.2**
SEY pmax pmax
comp=Z,7.0nm,0.8s
RNPP5 Staryi Chortor 54.51 316 P P 12 56 27.6 -0.5
RNPP9 Sopachiv 54.51 316 P P 12 56 27.7 -0.4
MLR Muntele Rosu 54.54 309 LR LR 13 23 30.5
comp=Z,98nm,19.3s,baz=72,slow=40
MLR Muntele Rosu 54.54 309 P P 12 56 29.2 +0.7
MLR IAmb IAmb 12 56 39.8
comp=Z,22nm,1.0s
MLR Muntele Rosu 54.54 309 P P 12 56 29.2 +0.7
MLR pmax pmax
comp=Z,22nm,1.0s
BURAR Bucovina Array 54.96 311 P P 12 56 31.7 +0.2
BUR08 Bucovina Ar. S 54.97 311 P P 12 56 32.1 +0.5
BUR08 IAmb IAmb 12 56 36.9
comp=Z,32nm,1.9s
FIA1 FINESS Array S 55.30 328 P P 12 56 33.7 +0.1
FINES FINESS Array B 55.31 328 P P 12 56 33.6 -0.1
comp=Z,6.4nm,0.6s,baz=101,slow=8.6,SNR=36
FINES pP **pP 12 56 42.1 -0.1**
comp=Z,5.7nm,0.7s,baz=112,slow=7.5,SNR=6.1
comp=Z,6.4nm,0.6s
FINES FINESS Array B 55.31 328 P P 12 56 33.7 +0.1
SUW Suwalki 56.22 319 *eP* **P 12 56 38.4 -1.9**
BRIU Brid 56.40 312 P P 12 56 41.9 +0.2
KWP Kalwaria Pacla 56.55 314 *eP* **P 12 56 43.4 +0.6**
KWP Kalwaria Pacla 56.55 314 P P 12 56 43.0 +0.2
comp=Z,34nm,1.0s
ARCES ARCESS Array B 57.11 338 P P 12 56 45.6 -0.9
comp=Z,8.7nm,0.7s,baz=105,slow=7.4,SNR=12
comp=Z,8.7nm,0.7s
BEL Belsk 57.69 316 *eP* P 12 56 60.0 +9.2
NIE Niedzica 58.13 314 *eP* **P 12 56 54.4 +0.4**
BILL Bilibino 60.52 25 P P 12 57 10.8 +0.7
BILL IAmb IAmb 12 57 21.0
comp=Z,13nm,1.0s
BILL Bilibino 60.52 25 *ceP* **P 12 57 10.8 +0.7**
BILL pmax pmax
comp=Z,11nm,1.3s
VRAC Vranov 60.55 314 LR LR 13 26 04.2
comp=Z,65nm,19.1s,baz=38,slow=39
KSP Ksiaz 60.57 315 *eP* P 12 57 02.0 -8.8
KSP Ksiaz 60.57 315 P P 12 57 10.7 -0.1
comp=Z,9.1nm,2.1s
DPC Dobruska-Polom 60.61 315 P P 12 57 11.6 +0.5
comp=Z,7.4nm,2.0s
RONA Rosalia, Austr 60.96 312 *i P* **P 12 57 13.1 -0.4**
comp=Z,3.4nm,0.7s
CONA Conrad Observa 61.21 312 *i P* **P 12 57 15.3 0.0**
comp=Z,7.6nm,1.1s
HFS Hagfors 61.30 326 P P 12 57 15.1 -0.5
comp=Z,14nm,0.7s,baz=110,slow=5.9,SNR=54
HFS pP **pP 12 57 23.7 -0.5**
comp=Z,5.7nm,0.5s,baz=85,slow=6.7,SNR=5.6
comp=Z,14nm,0.7s
SPITS Spitsbergen Ar 61.35 347 P P 12 57 15.7 0.0
comp=Z,6.9nm,0.7s,baz=108,slow=11,SNR=21
comp=Z,6.9nm,0.7s
ARSA Arzberg 61.54 311 *i P* **P 12 57 17.2 -0.2**
comp=Z,6.6nm,1.2s
RUE Ruedersdorf 61.94 318 *eP* **P 12 57 19.8 -0.1**
comp=Z,19nm,1.1s,baz=81,slow=6.7
SOKA Soboth 61.96 311 *i P* **P 12 57 20.3 -0.1**
comp=Z,4.0nm,0.8s
BRG Berggiesshubel 62.05 316 *eP* **P 12 57 20.9 +0.2**
comp=Z,13nm,1.3s,baz=81,slow=6.7
BRG *epP* **pP 12 57 29.2 -0.2**
baz=81,slow=6.9
BRG Berggiesshubel 62.05 316 *eP* **P 12 57 21.1 +0.3**
BRG Amp 12 57 22.6
comp=Z,5.2nm,0.9s
BRG pP **pP 12 57 29.4 0.0**
BRG Amp 12 57 30.5
comp=Z,4.6nm,0.8s
MOA Molln 62.29 312 *i P* **P 12 57 22.1 -0.4**
comp=Z,4.2nm,1.0s
OBKA Obir 62.32 311 *eP* **P 12 57 22.9 +0.2**
comp=Z,7.0nm,1.1s
NC602 NORSAR Array S 62.33 327 P P 12 57 22.7 +0.3
WRA Warramunga Arr 62.34 133 P P 12 57 23.0 -0.1
WRA Warramunga Arr 62.34 133 P P 12 57 23.0 -0.1
WRA pmax pmax
comp=Z,3.0nm,1.0s
WRA Warramunga Arr 62.34 133 PcP **P 12 57 23.5 +0.4**
comp=Z,21nm,0.6s,baz=25,slow=1.7,SNR=9.5
NB201 NORSAR Array S 62.42 327 P P 12 57 23.1 -0.1
NB2 NORSAR Subarra 62.46 327 P P 12 57 22.8 -0.6
comp=Z,3.4nm,0.7s,baz=84,slow=6.5
NOA NORSAR Array B 62.46 327 P P 12 57 22.4 -1.0
comp=Z,6.5nm,0.8s,baz=85,slow=6.6,SNR=14
NOA pP **pP 12 57 31.4 -0.8**
comp=Z,2.9nm,0.7s,baz=86,slow=6.7,SNR=6.9
comp=Z,6.5nm,0.8s
GEC2 GERESS Array S 62.50 313 P 12 57 24.3 +0.3
GEC2 IAmb IAmb 12 57 33.8
comp=Z,6.2nm,0.7s
GEC2 GERESS Array S 62.50 313 *eP* **P 12 57 23.8 -0.2**
comp=Z,7.1nm,1.0s,baz=81,slow=6.7
GERES GERESS Array B 62.50 313 P P 12 57 24.0 0.0
comp=Z,2.6nm,0.8s,baz=76,slow=5.6,SNR=18
GERES pP **pP 12 57 32.5 -0.2**
comp=Z,5.1nm,0.7s,baz=76,slow=5.6,SNR=18
GERES LR LR 13 27 14.3
comp=Z,86nm,21.7s,baz=53,slow=39
comp=Z,2.6nm,0.8s
CLL Collm 62.57 316 *i P* **P 12 57 23.7 -0.6**
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 62.57 316 P **P 12 57 23.9 -0.4**
CLL Collm 62.57 316 *i P* **P 12 57 23.7 -0.6**
comp=Z,6.0nm,1.1s
CLL Collm 62.57 316 *eP* **P 12 57 23.9 -0.4**
comp=Z,10nm,1.1s,baz=81,slow=6.7
CLL *epP* **pP 12 57 33.2 +0.3**
baz=81,slow=6.9
WET Wettzell 62.99 314 *eP* **P 12 57 27.0 -0.1**
comp=Z,6.0nm,1.1s,baz=81,slow=6.7

KBA	**Koelnbreinsper**	**63.03 312**	*e*P		**P**		**12 57 26.2**	**-1.5**	
	comp=Z,4.7nm,1.1s								
TANN	**Tannenbergstha**	**63.05 315**	*e*P		**P**		**12 57 27.3**	**-0.2**	
	comp=Z,17nm,1.5s,baz=81,slow=6.7								
PLN	**Plauen**	**63.23 315**	*e*P		**P**		**12 57 28.5**	**-0.1**	
	comp=Z,1.8nm,1.1s,baz=81,slow=6.7								
RJOB	**Jochberg**	**63.28 312**	*e*P		**P**		**12 57 28.2**	**-1.0**	
	comp=Z,8.3nm,1.4s,baz=81,slow=6.7								
ROTZ	**Rotzenmuhle**	**63.32 315**	*e*P		**P**		**12 57 29.9**	**+0.7**	
	comp=Z,3.7nm,1.3s,baz=81,slow=6.7								
ROTZ			*e*pP		**pP**		**12 57 38.6**	**+0.7**	
	baz=81,slow=6.9								
MANZ	**Manzenberg**	**63.34 315**	*e*P		**P**		**12 57 29.3**	**-0.2**	
	comp=Z,1.4nm,1.1s,baz=81,slow=6.7								
MANZ			*e*pP		**pP**		**12 57 38.6**	**+0.5**	
	baz=81,slow=6.9								
GORT1	**Trebel**	**63.36 318**	*e*P		**P**		**12 57 29.9**	**+0.6**	
	comp=Z,40nm,1.4s,baz=81,slow=6.7								
LESA	**Schwarzleotal**	**63.42 312**	*e*P		**P**		**12 57 29.3**	**-0.8**	
	comp=Z,2.8nm,0.6s								
FLTG	**Flechtingen**	**63.50 318**	*e*P		**P**		**12 57 30.5**	**+0.1**	
	comp=Z,13nm,1.1s,baz=81,slow=6.7								
MOX	**Moxa**	**63.54 316**	*e*P		**P**		**12 57 30.5**	**-0.3**	
	comp=Z,8.7nm,1.2s,baz=81,slow=6.7								
STAL	**STALIGIAL**	**63.62 311**	IAmb		IAmb		12 57 40.6		
	comp=Z,10nm,0.8s								
ABTA	**Abfaltersbach**	**63.66 311**	*i* P		**P**		**12 57 30.2**	**-1.5**	
	comp=Z,4.9nm,1.1s								
ABTA			*i* PcP		**PcP**		**12 58 08.6**	**+0.8**	
	comp=Z,1.7nm,0.5s								
MBAR	**Mbarara**	**63.71 255**	*ce*P		**P**		**12 57 34.1**	**+1.5**	
MBAR			pmax		pmax				
	comp=Z,6.0nm,1.7s								
BSEG	**Bad Segeberg**	**63.80 319**	*e*P		**P**		**12 57 32.9**	**+0.6**	
	comp=Z,8.5nm,0.8s,baz=81,slow=6.7								
BSEG			*e*pP		**pP**		**12 57 42.0**	**+1.0**	
	baz=81,slow=6.9								
CAMP	**Campotosto**	**63.88 307**	IAmb		IAmb		12 57 42.4		
	comp=Z,8.2nm,0.6s								
GRF	**Grafenberg Arr**	**63.96 315**	*e*P		**P**		**12 57 34.0**	**+0.5**	
	comp=Z,26nm,1.3s,baz=81,slow=6.7								
CLZ	**Clausthal**	**64.11 317**	*e*P		**P**		**12 57 34.7**	**+0.2**	
	comp=Z,15nm,0.9s,baz=81,slow=6.7								
CLZ			*e*pP		**pP**		**12 57 43.7**	**+0.5**	
	baz=81,slow=6.9								
WTTA	**Wattenberg**	**64.14 312**	*e*P		**P**		**12 57 33.4**	**-1.5**	
	comp=Z,3.6nm,0.7s								
WATA	**Walderalm**	**64.17 312**	*e*P		**P**		**12 57 33.8**	**-1.3**	
	comp=Z,3.7nm,0.6s								
GTTG	**Gottingen**	**64.41 317**	*e*P		**P**		**12 57 37.2**	**+0.8**	
	comp=Z,20nm,1.3s,baz=81,slow=6.7								
SQTA	**Sankt Quirin**	**64.44 312**	*i* P		**P**		**12 57 35.7**	**-1.1**	
	comp=Z,3.8nm,0.8s								
MOTA	**Moosalm**	**64.48 312**	*e*P		**P**		**12 57 36.1**	**-1.1**	
	comp=Z,9.1nm,1.1s								
UBBA	**Unterbreizbach**	**64.52 316**	*e*P		**P**		**12 57 37.9**	**+0.9**	
	comp=Z,70nm,2.4s,baz=81,slow=6.7								
RETH	**Rethem/Aller,**	**64.56 318**	*e*P		**P**		**12 57 37.7**	**+0.4**	
	comp=Z,134nm,2.5s,baz=81,slow=6.7								
RETA	**Reutte**	**64.68 312**	*e*P		**P**		**12 57 37.5**	**-0.8**	
	comp=Z,4.9nm,1.0s								
FETA	**Feichten**	**64.80 312**	*e*P		**P**		**12 57 38.1**	**-1.2**	
	comp=Z,6.6nm,1.6s								
UBR	**Ueberruh**	**65.08 313**	*e*P		**P**		**12 57 40.2**	**-0.7**	
	comp=Z,2.7nm,0.7s,baz=81,slow=6.7								
DAVA	**Damuels**	**65.31 312**	*i* P		**P**		**12 57 41.8**	**-0.7**	
	comp=Z,7.0nm,1.1s								
DAVOX	**Davos/Dischmat**	**65.42 312**	LR		LR		13 30 41.0		
	comp=Z,102nm,21.2s,baz=77,slow=40								
KASTN	**Kahler Asten**	**65.43 317**	*e*P		**P**		**12 57 43.4**	**+0.3**	
	comp=Z,52nm,1.9s,baz=81,slow=6.7								
STU	**Stuttgart**	**65.44 314**	*e*P		**P**		**12 57 43.7**	**+0.5**	
	comp=Z,32nm,1.1s,baz=81,slow=6.7								
STU			*e*pP		**pP**		**12 57 52.4**	**+0.5**	
	baz=81,slow=6.9								
TNS	**Taunus Mts**	**65.61 316**	*e*P		**P**		**12 57 44.6**	**+0.3**	
	comp=Z,14nm,1.0s,baz=81,slow=6.7								
TUE	**Stuetta**	**65.85 311**	P		**P**		**12 57 45.9**	**-0.2**	
TUE			IAmb		IAmb		12 57 56.1		
	comp=Z,6.6nm,0.8s								
BUG	**Bochum--Univer**	**66.08 317**	*e*P		**P**		**12 57 47.5**	**+0.3**	
	comp=Z,20nm,1.2s,baz=81,slow=6.7								
NOR	**Nord**	**66.75 351**	*i* P		**P**		**12 57 50.0**	**-1.1**	
NOR			IAmb		IAmb		12 57 51.0		
	comp=Z,7.1nm,0.5s								
MEM	**Membach**	**67.05 316**	*d*P		**P**		**12 57 53.8**	**+0.3**	
	comp=Z,8.8nm,1.1s								
WLF	**Walferdange**	**67.18 315**	*e*P		**P**		**12 57 55.1**	**+0.8**	
	comp=Z,30nm,1.1s,baz=81,slow=6.7								
KEST	**Kesra**	**68.70 300**	P		**P**		**12 58 04.4**	**+0.2**	
	comp=Z,12nm,1.0s,baz=60,slow=2.8,SNR=9.7								
KEST			pP		**pP**		**12 58 13.2**	**+0.2**	
	comp=Z,11nm,0.7s,baz=308,slow=1.1,SNR=8.9								
	comp=Z,12nm,1.0s								
KEST	**Kesra**	**68.70 300**	IAmb		IAmb		12 58 14.4		
	comp=Z,11nm,0.8s								
TNA	**Tin City**	**70.93 26**	IAmb		IAmb		12 58 28.9		
	comp=Z,23nm,1.5s								
EKA	**Eskdalemuir Ar**	**71.06 323**	P		**P**		**12 58 17.8**	**-0.5**	
	comp=Z,6.0nm,0.8s,baz=76,slow=6.6,SNR=5.9								
EKA			pP		**pP**		**12 58 26.3**	**-0.8**	
	comp=Z,8.1nm,0.6s,baz=73,slow=6.3,SNR=8.8								
	comp=Z,6.0nm,0.8s								
ANM	**Nome**	**72.31 26**	P		**P**		**12 58 26.9**	**+1.3**	
ANM			IAmb		IAmb		13 00 40.4		
	comp=Z,10nm,0.9s								
ANM	**Nome**	**72.31 26**	P		**P**		**12 58 26.9**	**+1.3**	
ANM			pmax		pmax				
	comp=Z,10.0nm,0.9s								
NEEM	**North Greenlan**	**74.10 352**	*i* P		**P**		**12 58 35.4**	**-1.0**	
NEEM			IAmb		IAmb		12 58 37.0		
	comp=Z,31nm,0.7s								
F19K	**Shaleruckik Mo**	**74.10 23**	IAmb		IAmb		12 58 46.8		
	comp=Z,16nm,1.2s								
STKA	**Stephens Creek**	**75.36 137**	P		**P**		**12 58 45.5**	**+1.7**	
	comp=Z,7.2nm,1.0s,baz=346,slow=4.2,SNR=1.3								
	comp=Z,7.2nm,1.0s								
STKA	**Stephens Creek**	**75.36 137**	P		**P**		**12 58 45.6**	**+1.7**	
SUMG	**Summit**	**75.67 346**			**P**		**12 58 45.7**	**+0.1**	
SUMG			IAmb		IAmb		12 58 50.2		
	comp=Z,20nm,1.3s								
SUMG	**Summit**	**75.67 346**	P		**P**		**12 58 45.7**	**+0.1**	
SUMG			pmax		pmax				
	comp=Z,20nm,1.3s								
SUMG	**Summit**	**75.67 346**	*i* P		**P**		**12 58 45.0**	**-0.6**	
SUMG			IAmb		IAmb		12 58 46.2		
	comp=Z,12nm,0.7s								
J18K	**Innoko River**	**76.20 25**	IAmb		IAmb		12 58 59.9		
	comp=Z,23nm,1.3s								
J19K	**Poorman**	**76.33 25**	IAmb		IAmb		12 58 51.2		
	comp=Z,12nm,1.0s								
COLD	**Coldfoot**	**76.38 21**			pP		12 58 55.1	-3.1	
TULEG	**Thule**	**76.72 355**			**P**		**12 58 50.3**	**-0.7**	
TULEG			IAmb		IAmb		12 59 00.8		
	comp=Z,16nm,0.9s								
TULEG	**Thule**	**76.72 355**	*i* P		**P**		**12 58 49.5**	**-1.5**	
TULEG			IAmb		IAmb		12 58 51.5		
	comp=Z,11nm,0.7s								
ESDC	**Sonseca Array**	**77.23 308**	P		**P**		**12 58 54.3**	**-0.3**	
	comp=Z,2.5nm,1.1s,baz=49,slow=5.1,SNR=9.5								
ESDC			pP		**pP**		**12 59 03.2**	**-0.3**	
	comp=Z,2.2nm,0.7s,baz=52,slow=5.5,SNR=10								
	comp=Z,2.5nm,1.1s								
ESDC	**Sonseca Array**	**77.23 308**			**P**		**12 58 53.5**	**-1.1**	
E25K	**Arctic Village**	**77.23 19**	IAmb		IAmb		12 59 55.8		
	comp=Z,34nm,2.0s								
KULLO	**Kullorsuaq**	**77.33 352**	*i* P		**P**		**12 58 53.9**	**-0.6**	
KULLO			IAmb		IAmb		12 58 54.9		
	comp=Z,12nm,0.7s								
BMAR	**Burnt Mountain**	**77.97 19**	P		**P**		**12 58 59.6**	**+1.4**	
H24K	**Noodor Dome**	**77.97 21**			**P**		**12 58 59.4**	**+1.1**	
PBRG	**Braganca**	**78.29 311**	*e*pP		pP		12 59 09.5	+0.1	
POKR	**Poker Plat Res**	**78.56 22**	IAmb		IAmb		12 59 12.6		
	comp=Z,18nm,0.9s								
COLA	**College**	**78.58 22**	*e*P		**P**		**12 59 01.6**	**+0.1**	
COLA			pmax		pmax				
	comp=Z,15nm,1.5s								
MVO	**Moncorvo**	**78.75 310**	*e*pP		pP		12 59 12.2	+0.2	
UPNV	**Upernavik**	**78.75 350**	*i* P		**P**		**12 59 01.8**	**-0.6**	
UPNV			IAmb		IAmb		12 59 02.7		
	comp=Z,10nm,0.7s								
PRP	**Porcupine Dome**	**78.93 21**	IAmb		IAmb		12 59 14.9		
	comp=Z,10nm,0.8s								
ILAR	**Eielson Array**	**78.96 22**	P		**P**		**12 59 03.0**	**-0.8**	
	comp=Z,2.1nm,0.8s,baz=306,slow=5.0,SNR=21								
ILAR			pP		**pP**		**12 59 12.4**	**-0.2**	
	comp=Z,2.7nm,1.0s,baz=267,slow=9.6,SNR=4.1								
	comp=Z,2.1nm,0.8s								

ILAR	**Eielson Array**	**78.96 22**			**P**		**12 59 02.8**	**-0.9**	
SKT	**Skwentna**	**79.01 25**	IAmb		IAmb		12 59 46.5		
	comp=Z,18nm,1.1s								
F28M	**Old Crow**	**79.17 18**	IAmb		IAmb		12 59 16.9		
	comp=Z,17nm,1.2s								
PVRL	**Vila Real**	**79.18 311**	*e*pP		pP		12 59 12.7	-1.6	
RES	**Resolute Bay**	**79.28 2**	IAmb		IAmb		12 59 10.1		
	comp=Z,23nm,1.9s								
MTE	**Manteigas**	**79.43 310**	*e*pP		pP		12 59 16.0	+0.3	
PVIS	**Viseu**	**79.54 310**	*e*pP		pP		12 59 16.4	+0.1	
SUA	**Susitna One**	**79.62 25**	IAmb		IAmb		12 59 17.9		
	comp=Z,14nm,0.9s								
PCBR	**Castelo Branco**	**79.63 309**	*e*pP		pP		12 59 16.8	+0.1	
PMRV	**Marv??o**	**79.74 309**	*e*pP		pP		12 59 17.6	+0.2	
PBAR	**Barrancos**	**80.03 308**	*e*pP		pP		12 59 18.8	-0.1	
I27K	**Kandik River**	**80.08 20**	IAmb		IAmb		12 59 21.8		
	comp=Z,31nm,1.3s								
PSARD	**Sardoal**	**80.21 309**	*e*pP		pP		12 59 20.1	+0.2	
INK	**Inuvik**	**80.26 15**	IAmb		IAmb		12 59 21.2		
	comp=Z,18nm,1.1s								
SCRK	**Sand Creek**	**80.44 21**	IAmb		IAmb		12 59 22.5		
	comp=Z,22nm,1.3s								
PARRA	**Arraiolos**	**80.46 308**	*e*pP		pP		12 59 20.7	-0.5	
EVO	**Evora**	**80.57 308**	*e*pP		pP		12 59 20.0	-1.8	
MD01	**Midelt array s**	**80.60 302**	P		**P**		**12 59 13.6**	**+0.2**	
PVAQ	**Vaqueiros**	**80.85 307**	*e*pP		pP		12 59 22.3	-1.0	
F31M	**Tsiigehtchic**	**80.88 16**	IAmb		IAmb		12 59 24.5		
	comp=Z,15nm,1.1s								
POIN	**Pond Inlet**	**81.05 357**			**P**		**12 59 15.1**	**+0.3**	
POIN			IAmb		IAmb		12 59 25.7		
	comp=Z,15nm,1.1s								
PBDV	**Barranco-do-Ve**	**81.07 307**	*e*pP		pP		12 59 23.5	-1.1	
KLU	**Klutina**	**81.41 24**	IAmb		IAmb		12 59 28.9		
	comp=Z,17nm,0.9s								
N25K	**Chitina, Valde**	**81.81 23**	IAmb		IAmb		12 59 30.1		
	comp=Z,14nm,0.9s								
I30M	**Mount Dempster**	**81.88 18**	IAmb		IAmb		12 59 29.8		
	comp=Z,24nm,1.3s								
J29N	**Klondike Camp**	**81.91 19**	IAmb		IAmb		12 59 30.2		
	comp=Z,10nm,0.9s								
SFJD	**Kangerlussuaq**	**82.66 346**	*i* P		**P**		**12 59 22.4**	**-1.0**	
SFJD			IAmb		IAmb		12 59 23.4		
	comp=Z,10nm,0.9s								
BOSA	**Boshof**	**83.28 234**	P		**P**		**12 59 27.6**	**+0.3**	
	comp=Z,1.6nm,0.7s,baz=72,slow=3.2,SNR=1.7								
BOSA			pP		**pP**		**12 59 36.6**	**+0.3**	
	comp=Z,3.0nm,0.8s,baz=74,slow=6.7,SNR=2.5								
	comp=Z,1.6nm,0.7s								
BOSA	**Boshof**	**83.28 234**	P		**P**		**12 59 28.2**	**+0.9**	
TORD	**Torodi Ar. Bea**	**83.56 281**	P		**P**		**12 59 29.2**	**+0.2**	
	comp=Z,1.5nm,0.6s,baz=92,slow=2.0,SNR=12								
TORD			pP		**pP**		**12 59 38.1**	**+0.1**	
	comp=Z,1.9nm,0.6s,baz=88,slow=2.3,SNR=10.0								
	comp=Z,1.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**83.56 281**	P		**P**		**12 59 29.3**	**+0.2**	
YKAW3	**Yellowknife Wh**	**89.22 11**	IAmb		IAmb		13 00 05.7		
	comp=Z,10nm,1.1s								
YKA	**Yellowknife Ar**	**89.28 12**	P		**P**		**12 59 55.9**	**-0.2**	
	comp=Z,0.6nm,0.6s,baz=331,slow=5.6,SNR=12								
YKA			pP		**pP**		**13 00 05.0**	**-0.2**	
	comp=Z,3.2nm,0.9s,baz=332,slow=4.8,SNR=21								
	comp=Z,0.6nm,0.6s								
YKAW1	**Yellowknife Wh**	**89.32 11**	IAmb		IAmb		13 00 06.2		
	comp=Z,11nm,1.0s								
DBIC	**Dimbokro**	**92.19 278**	P		**P**		**13 00 11.1**	**+0.5**	
	comp=Z,3.5nm,0.5s,baz=115,slow=6.0,SNR=6.9								
DBIC			pP		**pP**		**13 00 19.9**	**+0.3**	
	comp=Z,3.9nm,0.6s,baz=71,slow=5.6,SNR=4.3								
	comp=Z,3.5nm,0.5s								
BLOK	**Blackwell**	**116.90 7**			**PKiKP**		**13 05 47.5**	**+2.2**	
TXAR	**Lajitas Array**	**123.04 15**	PKP		**PKPdf**		**13 05 57.4**	**+0.1**	
	comp=Z,0.3nm,0.6s,baz=14,slow=0.5,SNR=6.1								
TXAR			pPKP		**pPKPdf**		**13 06 06.5**	**-0.1**	
	comp=Z,1.0nm,0.9s,baz=256,slow=1.0,SNR=6.8								
ROSC	**El Rosal**	**145.95 333**	PKPbc		**PKPab**		**13 06 42.1**	**+0.5**	
	comp=Z,11nm,0.5s,baz=9.5,slow=6.1,SNR=6.4								
ROSC			pPKPbc		pPKPab		13 06 51.0	+0.2	
	comp=Z,35nm,0.8s,baz=150,slow=2.6,SNR=4.8								
ITAB	**Concordia**	**147.00 260**	PKPbc		**PKPbc**		**13 06 43.8**	**+0.4**	
AQDB	**Aquidauana**	**148.82 273**			**PKPdf**		**13 06 44.9**	**+0.3**	
PTLB	**Pontes e Lacer**	**150.05 285**			**PKPbc**		**13 06 51.9**	**+0.4**	
CPUP	**Villa Florida**	**151.51 263**	PKPbc		**PKPbc**		**13 06 54.4**	**-0.3**	
	comp=Z,3.5nm,0.6s,baz=45,slow=1.6,SNR=9.9								
CPUP			pPKPbc		**PKPab**		**13 07 03.0**	**-0.2**	
	comp=Z,6.6nm,0.6s,baz=75,slow=2.5,SNR=12								
OTAV	**Otavalo**	**151.75 337**			**PKiKP**		**13 06 57.3**	**+0.6**	
OTAV	**Otavalo**	**151.75 337**	PKIKP		**PKiKP**		**13 06 57.3**	**+0.6**	
SIV	**San Ignacio**	**151.96 286**	PKPbc		**PKPbc**		**13 06 55.8**	**-0.3**	
	comp=Z,3.5nm,0.7s,baz=94,slow=3.8,SNR=15								
SIV			pPKPbc		**PKPab**		**13 07 05.4**	**0.0**	
	comp=Z,4.4nm,0.7s,baz=110,slow=4.5,SNR=6.4								

*GFZ **08** 12:48:37.2,5˚.86S×147˚.54E,h54km,MW5.1,Moment Tensor Solution. s36 Moment tensor: Mrr5.52; Mθθ-5.82; Mφφ0.29; Mrθ-0.28; Mθφ0.82; Mφr-0.96; Fault plane solution: NP1:φs108.00000°,δ45.00000°, λ105.00000°. NP2:φs267.00000°,δ47.00000°,λ75.00000°. Principal axes: T 5.7100, Plg79.0000°, Azm102.0000°; N 0.2200, Plg11.0000°, Azm277.0000°; P -5.9200, Plg1.0000°, Azm7.0000°;*

*BJI **08** 12:48:37.9,6˚.25S×147˚.92E,h54km,mB5.3/19,mb4.9/69, Ms4.6/6,Ms7 4.3/9*

*IDC **08** 12:48:43.2±1.7,5˚.98S×147˚.54E,h64km±15km,mb4.6/26, mbtmp4.9/31,MS4.0/44,Error ellipse: s-maj=13.4km s-min=7.9km az=89.0*

*DJA **08** 12:48:43.9±0.6,6˚S±4˚×14˚8E±˚,h100km±4km,M5.3/67, mb5.5/67,mB5.7/52,MLv6.0/4,Mw(mB)5.2/52, MwMwp4.8/5,Mwp5.1/5*

*NEIC **08** 12:48:43.7,6˚.12S×147˚.46E,h50km, Moment Tensor Solution. Duration: 1ᵗ9 Moment tensor: Scale 10¹⁶Nm; Mrr6.24; Mθθ-6.57; Mφφ0.33; Mrθ-0.28; Mθφ 1.57; Mφr0.00; Fault plane solution: M₀6.61000×10¹⁶ NP1: φs102.83000°,δ43.80000°,λ90.82000°. NP2: φs281.69000°,δ46.20000°,λ89.21000°. Principal axes: T 6.2469, Plg89.0000°, Azm167.0000°; N 0.6742, Plg1.0000°, Azm282.0000°; P -6.9211, Plg1.0000°, Azm12.0000°;*

*NEIC **08** 12:48:43.7,6˚.02S×147˚.46E,h50km*

*NEIC **08** 12:48:43.5±1.4,6˚.01S±0˚.06×147˚.44E±0˚.08,h53km±4km, mb5.1/150,Mww5.1/13,Error ellipse: s-maj=10.8km s-min=8.7km az=96.0*

*GCMT **08** 12:48:44.5±0.2,6˚.11S±0˚.01×147˚.54E±0˚.01,h58km, MW5.1/97,Moment Tensor Solution. s86,c115; s97,c153; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.58±.14; Mθθ-6.31±.10; Mφφ0.73±.12; Mrθ-0.07±.10; Mθφ 1.33±.10; Mφr-1.00±.09; Best double couple: M₀6.17000×10¹⁶ NP1:φs269.00000°,δ46.00000°, λ74.00000°. NP2:φs112.00000°,δ47.00000°,λ106.00000°. Principal axes: T 5.7860, Plg78.0000°, Azm98.0000°; N 0.7680, Plg12.0000°, Azm281.0000°; P -6.5540, Plg1.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 12:48:42.7±0.4,**6˚.03S**±0˚.03×**147˚.52E**±0˚.05,**h59**km±3km, **h58**km:**pP-P,n614,**σ1ˢ**28**/558,**mb5.1**/166,**MS4.0**/44,**2C-2D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
BULU	**Kimbe**	**2.83**	**80**	P		Pn	12 49 34.1		+8.6
PMG	**Port Moresby**	**3.37**	**186**	P		**Pn**	**12 49 33.9**		**+1.0**
	3μm,0.8s,baz=23,slow=6.5,SNR=553								
PMG				S		**Sn**	**12 50 13.8**		**+2.2**
	4μm,0.8s,baz=82,slow=21,SNR=12								
PMG				LR		LR	12 51 17.1		
	comp=Z,7μm,19.5s,baz=35,slow=45								
PMG	**Port Moresby**	**3.37**	**186**			**Pn**	**12 49 33.7**		**+0.8**
PMG	**Port Moresby**	**3.37**	**186**	S		**Sn**	**12 50 13.9**		**+2.2**
PMG	**Port Moresby**	**3.37**	**186**	P		**Pn**	**12 49 34.0**		**+1.1**
PMG	**Port Moresby**	**3.37**	**186**	S		**Sn**	**12 50 14.0**		**+2.3**
PMG	**Port Moresby**	**3.37**	**186**	P		**Pn**	**12 49 32.9**		**0.0**
MANU	**Manus Island**	**3.37**	**358**			**Pn**	**12 49 42.1**		**+1.1**
RABL	**Rabaul**	**4.98**	**69**			**Pn**	**12 49 56.2**		**+1.3**
MMPI	**Merauke**	**7.48**	**251**	P		**Pn**	**12 50 31.1**		**+1.9**
	4.1nm592nm,0.6s								
JAY	**Jayapura**	**7.64**	**297**	P		**Pn**	**12 50 34.9**		**+3.5**
	124nm,0.4s,baz=113,slow=9.4,SNR=24								
JAY				S		**Sn**	**12 52 03.2**		**+6.6**
	53nm,0.6s,baz=342,slow=20,SNR=1.6								

JAY				LR		LR	12 53 56.4		
	comp=Z,2μm,18.7s,baz=122,slow=41								
JAY	**Jayapura**	**7.64**	**297**	P		**Pn**	**12 50 34.6**		**+3.2**
	0.7nm178nm,0.6s								
GENI	**Genyem**	**8.09**	**295**	P		**Pn**	**12 50 41.5**		**+4.0**
	411nm,0.6s								
GENI	**Genyem**	**8.09**	**295**	P		**Pn**	**12 50 40.7**		**+3.2**
	4μm412nm,0.6s								
COEN	**Coen**	**8.96**	**208**	P		**Pn**	**12 50 49.3**		**-0.2**
	comp=Z,135nm,0.9s,comp=Z,0.0nm								
COEN	**Coen**	**8.96**	**208**			**Pn**	**12 50 49.8**		**+0.3**
COEN	**Coen**	**8.96**	**208**	P		**Pn**	**12 50 50.9**		**+1.4**
	comp=Z,135nm,0.9s								
COEN	**Coen**	**8.96**	**208**	S		**Sn**	**12 52 29.1**		**+0.1**
	comp=Z,135nm,0.9s								
SRPI	**Serui, Papua**	**11.98**	**290**	P		**Pn**	**12 51 32.5**		**+1.6**
	comp=Z,3μmcomp=Z,353nm,0.6s								
BAKI	**Biak**	**12.36**	**292**	P		**Pn**	**12 51 40.0**		**+4.0**
	comp=Z,148nm,0.5s								
MTSU	**Mount Surprise**	**12.43**	**194**	P		**Pn**	**12 51 37.9**		**+1.0**
	comp=Z,68nm,1.1s								
MTSU	**Mount Surprise**	**12.43**	**194**	P		**Pn**	**12 51 37.9**		**+1.0**
	comp=Z,68nm,1.1s								
KMPI	**Kaimana, Papua**	**13.96**	**279**	P		**Pn**	**12 51 58.9**		**+1.1**
	comp=Z,2μmcomp=Z,109nm,0.6s								
CTA	**Charters Tower**	**14.03**	**185**	P		**Pn**	**12 52 00.8**		**+2.2**
	comp=Z,20nm,1.5s,comp=Z,0.0nm								
CTA	**Charters Tower**	**14.03**	**185**	P		**Pn**	**12 52 00.6**		**+2.1**
	comp=Z,22nm,0.7s,baz=360,slow=14,SNR=58								
CTA				LR		LR	12 57 18.7		
	comp=Z,763nm,21.4s,baz=355,slow=37								
CTA	**Charters Tower**	**14.03**	**185**	P		**Pn**	**12 52 00.8**		**+2.2**
	comp=Z,1.5nm,1.5s								
CTAO	**Charters Tower**	**14.03**	**185**			**Pn**	**12 52 00.4**		**+1.8**
CTAO	**Charters Tower**	**14.03**	**185**	P		**Pn**	**12 52 00.8**		**+2.2**
	comp=Z,18nm,1.5s								
RKPI	**Ransiki, Papua**	**14.04**	**288**	P		**Pn**	**12 52 00.0**		**+1.1**
	comp=Z,5μmcomp=Z,165nm,0.6s								
MWPI	**Manokwari, Pap**	**14.37**	**290**	P		**Pn**	**12 52 05.1**		**+1.9**
	comp=Z,166nm,0.8s								
FAKI	**Fak Fak**	**15.53**	**281**			**Pn**	**12 52 17.8**		**-0.4**
FAKI	**Fak Fak**	**15.53**	**281**	P		**P**	**12 52 20.4**		**-1.1**
	comp=Z,111nm,0.9s								
FAKI	**Fak Fak**	**15.53**	**281**	P		**Pn**	**12 52 17.4**		**-0.8**
	comp=Z,110nm,0.9s								
SAUI	**Saumlaki**	**16.21**	**262**	Pn		**Pn**	**12 52 26.6**		**-0.3**
SAUI	**Saumlaki**	**16.21**	**262**	P		**Pn**	**12 52 27.6**		**+0.8**
	comp=Z,12μmcomp=Z,361nm,1.3s								
KDU	**Kakadu**	**16.24**	**245**	P		**Pn**	**12 52 27.5**		**+0.3**
	comp=Z,79nm,0.9s								
QIS	**Mount Isa**	**16.35**	**207**	P		**Pn**	**12 52 28.4**		**-0.1**
	comp=Z,146nm,1.1s								
QIS	**Mount Isa**	**16.35**	**207**	P		**Pn**	**12 52 28.5**		**-0.1**
	comp=Z,146nm,1.1s								
SIJI	**Sorong**	**17.01**	**287**	P		**Pn**	**12 52 36.9**		**+0.1**
	comp=Z,25nm,0.4s,baz=83,slow=8.1,SNR=19								
SIJI				LR		LR	13 00 05.0		
	comp=Z,587nm,21.1s,baz=76,slow=40					

comp=Z,60nm,0.9s
ARMA Armidale 24.57 171 P **P** **12 53 58.8 +1.5**
comp=Z,81nm,0.8s
YATNC Mamie plateau, 24.59 132 P **P** **12 54 00.5 +3.0**
comp=Z,55nm,1.1s
LUWI Luwuk 25.18 280 **P** **12 54 02.6 -0.4**
LUWI Luwuk 25.18 280 P **P** **12 54 03.8 +0.8**
comp=Z,293nm,1.0s
LUWI Luwuk 25.18 280 P **P** **12 54 02.4 -0.6**
comp=Z,3µmcomp=Z,291nm,1.1s
MMRI Maumere 25.20 263 P **P** **12 54 03.1 -0.1**
comp=Z,259nm,0.6s
MMRI Maumere 25.20 263 P **P** **12 54 00.9 -2.3**
comp=Z,3µmcomp=Z,258nm,0.6s
CMSA Cobar Meteorol 25.43 184 P **P** **12 54 06.9 +1.9**
comp=Z,49nm,0.9s
CMSA Cobar Meteorol 25.43 184 P **P** **12 54 06.7 +1.7**
comp=Z,49nm,0.9s
DAV Davao City (W) 25.47 300 LR LR 13 05 21.2
comp=Z,112nm,18.0s,baz=112,slow=39
EDFI Ende, Flores 25.75 262 P **P** **12 54 05.6 -2.7**
comp=Z,2µmcomp=Z,142nm,0.5s
KKSI Kolaka, Sulawe 25.83 273 P **P** **12 54 08.5 -0.3**
comp=Z,1µmcomp=Z,118nm,0.7s
STKA Stephens Creek 26.30 191 P **P** **12 54 13.5 +0.6**
comp=Z,176nm,1.1s
STKA Stephens Creek 26.30 191 P **P** **12 54 13.7 +0.8**
comp=Z,21nm,0.4s,baz=10,slow=8.0,SNR=61
comp=Z,21nm,0.4s
STKA Stephens Creek 26.30 191 **P** **12 54 13.7 +0.8**
STKA Stephens Creek 26.30 191 P **P** **12 54 13.5 +0.6**
comp=Z,8.7nm,1.1s
WRKA Warakurna 26.39 222 P **P** **12 54 13.7 -0.2**
comp=Z,36nm,0.7s
BASI Baing, Sumba 26.98 259 P **P** **12 54 16.4 -2.9**
WSI Waingapu 27.20 261 P **P** **12 54 19.6 -1.6**
MGCD Mangrove Creek 27.25 173 P **P** **12 54 25.4 +4.0**
KAPI Kappang 27.65 271 P **P** **12 54 25.1 -0.1**
comp=Z,23nm,0.5s,baz=105,slow=3.3,SNR=14
KAPI LR LR 13 07 44.0
comp=Z,230nm,20.7s,baz=82,slow=41
comp=Z,23nm,0.5s
KAPI Kappang 27.65 271 **P** **12 54 25.5 +0.2**
KAPI IAmb IAmb 12 54 43.4
comp=Z,56nm,1.1s
KAPI Kappang 27.65 271 P **P** **12 54 26.0 +0.7**
comp=Z,30nm,1.2s
KAPI Kappang 27.65 271 P **P** **12 54 24.7 -0.6**
SPSI Sidrap Palu 27.72 273 P **P** **12 54 24.5 -1.3**
comp=Z,1µmcomp=Z,41nm,0.5s
TTSI Tana Toraja 27.77 275 P **P** **12 54 25.5 -0.8**
comp=Z,3µmcomp=Z,76nm,1.1s
WBSI Waikabubak, Su 28.09 261 P **P** **12 54 27.0 -2.2**
comp=Z,2µmcomp=Z,165nm,1.5s
YNG Young 28.14 178 P **P** **12 54 32.5 +3.1**
AUJCS Jamestown Cent 28.27 196 P **P** **12 54 31.9 +1.3**
comp=Z,152nm,0.8s
HTT Hallett 28.41 195 P **P** **12 54 33.8 +2.0**
comp=Z,17nm,1.0s
HTT Hallett 28.41 195 P **P** **12 54 33.1 +1.3**
comp=Z,41nm,0.9s
BBOO Buckleboo 28.70 200 P **P** **12 54 36.0 +1.7**
comp=Z,67nm,0.8s
BBOO Buckleboo 28.70 200 IAmb IAmb 12 54 49.1
comp=Z,60nm,0.9s
BBOO Buckleboo 28.70 200 P **P** **12 54 35.9 +1.5**
comp=Z,67nm,0.8s
CAN Canberra 29.18 178 P **P** **12 54 40.2 +1.6**
comp=Z,77nm,2.6s
PLAI Plampang 29.62 263 P **P** **12 54 40.7 -2.0**
comp=Z,70nm,0.7s
AUMAR Marden Senior 29.86 195 P **P** **12 54 45.9 +1.3**
comp=Z,45nm,1.1s
AUMBR Murray Bridge 29.94 194 P **P** **12 54 46.4 +1.1**
comp=Z,47nm,0.9s
FORT Forrest 30.66 214 P **P** **12 54 52.5 +0.8**
comp=Z,47nm,1.0s
FORT Forrest 30.66 214 IAmb IAmb 12 55 08.1
comp=Z,33nm,0.7s
MBWA Marble Bar 30.83 238 P **P** **12 54 54.1 +0.8**
comp=Z,112nm,0.8s
MBWA Marble Bar 30.83 238 P **P** **12 54 53.8 +0.4**
MBWA Marble Bar 30.83 238 P **P** **12 54 53.7 +0.4**
comp=Z,64nm,0.8s
H11S3 WAKE ISLAND Hy 30.85 37 T T 13 27 30.0
baz=220,slow=74,SNR=43
H11S2 WAKE ISLAND Hy 30.85 37 T T 13 27 31.1
baz=220,slow=74,SNR=26
PSAC2 Pilbara Seismi 30.86 237 P **P** **12 54 55.0 +1.4**
comp=Z,132nm,0.6s
H11S1 WAKE ISLAND Hy 30.86 37 T T 13 27 32.8
baz=220,slow=74,SNR=23
PSA00 Pilbara Seismi 30.91 237 P **P** **12 54 55.3 +1.2**
comp=Z,141nm,1.2s
PSA00 Pilbara Seismi 30.91 237 P **P** **12 54 54.4 +0.3**
PSA00 IAmb IAmb 12 54 55.4
comp=Z,46nm,0.8s
PSA00 Pilbara Seismi 30.91 237 IAmb IAmb 12 54 55.4
comp=Z,94nm,0.7s
PSA00 Pilbara Seismi 30.91 237 P **P** **12 54 54.4 +0.3**
comp=Z,140nm,1.2s
PSAB3 Pilbara Seismi 30.91 237 P **P** **12 54 54.8 +0.7**
comp=Z,99nm,0.7s
ARPS Mount Arapiles 31.03 189 P **P** **12 54 55.9 +1.0**
comp=Z,23nm,1.3s
TOO Toolangi 31.45 183 P **P** **12 55 00.4 +1.7**
BRAT Ballarat 31.54 185 P **P** **12 55 00.8 +1.4**
comp=Z,23nm,0.9s
H11N1 WAKE ISLAND Hy 31.91 36 T T 13 29 09.4
baz=218,slow=76,SNR=11
H11N3 WAKE ISLAND Hy 31.92 36 T T 13 29 10.4
baz=218,slow=76,SNR=15
H11N2 WAKE ISLAND Hy 31.93 36 T T 13 29 14.9
baz=218,slow=76,SNR=24
MSVF Nonsavu 32.00 114 P **P** **12 55 06.4 +2.6**
comp=Z,47nm,2.1s
MGBR Mount Gambier 32.17 190 P **P** **12 55 06.8 +1.8**
TGY Tagaytay City 33.10 307 LR LR 13 08 10.6
comp=Z,128nm,21.2s,baz=95,slow=35
DGTI Dogotuki 33.16 111 P **P** **12 55 14.2 +0.3**
comp=Z,48nm,1.7s
JAGI Jajag, Banyuwa 33.18 264 **P** **12 55 11.8 -2.3**
JAGI Jajag, Banyuwa 33.18 264 P **P** **12 55 12.2 -1.9**
comp=Z,111nm,1.1s
JCJ Chichijima 33.34 351 LR LR 13 06 46.6
comp=Z,251nm,21.0s,baz=156,slow=32
JCJ Chichijima 33.34 351 P **P** **12 55 15.4 +0.2**
MEEK Meekatharra 34.33 230 P **P** **12 55 25.2 +1.3**
comp=Z,160nm,0.8s
MEEK Meekatharra 34.33 230 P **P** **12 55 24.2 +0.2**
comp=Z,160nm,0.8s
KMBL Kambalda 34.81 220 P **P** **12 55 28.2 +0.2**
comp=Z,41nm,1.1s
SBUM Sibu 36.24 282 **P** **12 55 40.6 +0.1**
SBUM Sibu 36.24 282 P **P** **12 55 40.5 0.0**
comp=Z,15nm,1.1s
MORW Morawa 37.53 229 P **P** **12 55 53.2 +1.8**
MORW Morawa 37.53 229 P **P** **12 55 52.0 +0.7**
comp=Z,63nm,1.2s
KLBR Kellerberrin 37.70 224 P **P** **12 55 53.6 +0.8**
comp=Z,280nm,0.6s
KLBR Kellerberrin 37.70 224 P **P** **12 55 52.7 0.0**
comp=Z,280nm,0.6s
BLDU Ballidu 37.88 226 P **P** **12 55 54.3 +0.1**
comp=Z,61nm,1.1s
BLDU Ballidu 37.88 226 P **P** **12 55 54.5 +0.3**
comp=Z,61nm,1.1s
NWAO Narrogin (SRO) 38.85 223 P **P** **12 56 02.4 0.0**
comp=Z,33nm,0.5s,baz=63,slow=7.8,SNR=28
NWAO LR LR 13 13 29.6
comp=Z,762nm,18.7s,baz=64,slow=38
comp=Z,33nm,0.5s
YULB Yu-li 38.88 320 P **P** **12 56 02.6 -0.1**
YULB IAmb IAmb 12 56 06.5
comp=Z,27nm,0.7s
MUN Mundaring 39.00 225 P **P** **12 56 04.6 +1.0**
comp=Z,92nm,1.2s
MUN Mundaring 39.00 225 P **P** **12 56 04.4 +0.8**
comp=Z,92nm,1.2s
NACB Ninganchiao 39.25 321 P **P** **12 56 06.0 +0.3**
BBJI Bungbulang 39.61 266 P **P** **12 56 08.3 -0.7**
comp=Z,107nm,0.7s
LEM Lembang 39.65 267 LR LR 13 15 23.7
comp=Z,126nm,21.9s,baz=144,slow=40
AUALB St Joseph's Co 39.70 219 P **P** **12 56 10.4 +1.0**
comp=Z,101nm,1.4s
YHNB Yeheng 39.74 321 P **P** **12 56 10.2 +0.2**
RAO Raoul Island 39.97 129 LR LR 13 09 32.1
comp=Z,348nm,21.5s,baz=296,slow=31
RKGY Rocky Gully 40.04 221 P **P** **12 56 13.7 +1.4**
comp=Z,189nm,1.0s
AFI Afiamalu 40.80 104 P **P** **12 56 20.1 +1.3**
AFI IAmb IAmb 12 56 57.0
comp=Z,59nm,1.1s
KNMB Chin-men Tao 41.52 318 P **P** **12 56 24.2 -0.3**
JMN Monobe 41.60 343 P **P** **12 56 24.9 -0.2**
XMI Christmas Isla 41.60 261 P **P** **12 56 26.3 +0.9**
comp=Z,187nm,0.5s
QZH2 Quanzhou 41.72 319 *e*P **P** **12 56 28.0 +1.9**
URZ Urewera 41.83 144 P **P** **12 56 26.3 -0.5**
comp=Z,6.7nm,0.8s,baz=225,slow=4.3,SNR=1.2
URZ LR LR 13 12 27.5
comp=Z,578nm,20.1s,baz=320,slow=34
comp=Z,6.7nm,0.8s
THZ Tophouse 42.14 151 P **P** **12 56 30.9 +1.5**
THZ IAmb IAmb 12 56 59.7
comp=Z,58nm,1.0s
JCZ Jackson Bay 42.24 157 P **P** **12 56 31.6 +1.4**
comp=Z,188nm,1.0s
TUWZ Tuamarina 42.39 150 P **P** **12 56 33.1 +1.6**
JGF Kuroka 42.50 348 IAmb IAmb 12 56 34.2
comp=Z,38nm,0.8s
JGF Kuroka 42.50 348 P **P** **12 56 32.7 +0.3**
comp=Z,56nm,0.8s
KHZ Kahutara 42.95 152 P **P** **12 56 36.4 +0.5**
comp=Z,38nm,2.8s
MJAR Matsushiro Arr 43.24 349 P **P** **12 56 37.8 -0.5**
comp=Z,16nm,0.8s,baz=171,slow=9.1,SNR=20
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 43.24 349 P **P** **12 56 38.5 +0.2**
MAJO Matsushiro 43.24 349 P **P** **12 56 38.8 +0.4**
MAJO IAmb IAmb 12 56 39.6
comp=Z,33nm,0.8s
MAJO Matsushiro 43.24 349 P **P** **12 56 38.8 +0.4**
comp=Z,48nm,0.7s
MAJO Matsushiro 43.24 349 P **P** **12 56 38.5 +0.1**
MAJO x x 12 56 53.1
MJB9 Matsu-Tunnel 43.24 349 IAmb IAmb 12 56 40.5
comp=Z,31nm,0.8s
NJ2 Nanjing 46.69 326 *e*P **P** **12 57 08.2 +2.4**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
KSRS Korea Array 46.97 339 P **P** **12 57 08.4 +0.6**
comp=Z,8.4nm,0.9s,baz=158,slow=9.7,SNR=17
KSRS PcP **PcP** **12 58 39.8 +0.3**
comp=Z,2.5nm,0.5s,baz=190,slow=2.4,SNR=8.3
KSRS LR LR 13 13 53.0
comp=Z,183nm,21.8s,baz=145,slow=32
comp=Z,8.4nm,0.9s
IPM Ipoh 47.58 282 P **P** **12 57 13.3 +0.2**
IPM IAmb IAmb 12 57 43.1
comp=Z,20nm,0.8s
WHN Wuhan 48.28 321 P **P** **12 57 19.1 +0.9**
WHN sP **sP** **12 57 37.3 -2.4**
WHN pmax pmax
comp=Z,50nm,1.0s
RPSI Rantau Prapat 49.29 279 **P** **12 57 25.9 -0.3**
RPSI IAmb IAmb 12 57 51.7
comp=Z,19nm,1.1s
JKA Kamikawa-asahi 50.11 355 IAmb IAmb 12 58 03.8
comp=Z,22nm,1.0s
GSI Gunungsitoli 50.39 277 P **P** **12 57 34.1 -0.5**
GSI Gunungsitoli 50.39 277 P **P** **12 57 34.1 -0.5**
comp=Z,60nm,0.7s
DL2 Dalian 50.74 334 P **P** **12 57 36.7 -0.1**
DL2 S **S** **13 04 49.3 +1.2**
DL2 pmax pmax
comp=Z,34nm,1.8s
DL2 pmax pmax
comp=Z,290nm,4.6s
DL2 LR LR
comp=Z,440nm,16.1s
DL2 LR LR
comp=Z,360nm,20.8s
DL2 LR LR
comp=Z,510nm,24.0s
ENH Enshi 51.29 317 IAmb IAmb 12 57 43.5
comp=Z,18nm,1.0s
ENH Enshi 51.29 317 P **P** **12 57 41.9 +0.8**
comp=Z,19nm,1.6s
ENH Enshi 51.29 317 P **P** **12 57 41.1 -0.1**
ENH sP **sP** **12 58 01.2 -1.5**
USRK Ussuriysk Ar. 51.93 346 P **P** **12 57 46.3 +0.8**
comp=Z,8.3nm,0.5s,baz=164,slow=8.3,SNR=11
comp=Z,8.3nm,0.5s
LYN LuoYang 52.19 323 P **P** **12 57 47.5 -0.2**
LYN pmax pmax
comp=Z,23nm,0.9s
LYN pmax pmax
comp=Z,210nm,10.4s
YSS Yuzhno-Sakhali 52.92 356 **P** **12 57 53.0 +0.2**
YSS IAmb IAmb 12 57 55.0
comp=Z,22nm,0.9s
MDJ Mudanjiang 52.94 344 P **P** **12 57 53.7 +0.7**
MDJ pmax pmax
comp=Z,12nm,1.1s
HNS HongShan 52.95 327 ⇑P **P** **12 57 52.4 -0.8**
HNS pmax pmax
comp=Z,36nm,0.8s
HNS LR LR
comp=Z,250nm,14.3s
HNS LR LR
comp=Z,270nm,18.2s
RAR Rarotonga 53.15 112 LR LR 13 18 04.5
comp=Z,57nm,21.7s,baz=272,slow=33
KMI2 Kunming 53.43 307 P **P** **12 57 57.6 +0.3**
KMI2 pP pP 12 58 15.8 +3.1
KMI2 pmax pmax
comp=Z,7.0nm,0.9s
KMI2 LR LR
comp=Z,200nm,29.3s
CN2 Changchun 53.46 340 *e*P **P** **12 58 00.1 +3.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CM31 Chiang Mai Arr 53.72 298 P **P** **12 57 59.1 -0.1**
CM31 IAmb IAmb 12 58 47.6
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 53.72 298 P **P** **12 57 58.9 -0.4**
comp=Z,3.7nm,0.5s,baz=112,slow=7.2,SNR=22
CMAR LR LR 13 19 00.6
comp=Z,23nm,20.7s,baz=125,slow=34
CMAR PKP2bc **P'P'bc** **13 28 34.6 +0.3**
comp=Z,1.0nm,0.9s,baz=296,slow=3.0,SNR=6.1
comp=Z,3.7nm,0.5s
CMAR Chiang Mai Arr 53.72 298 P **P** **12 57 59.4 +0.2**
XAN Xi'an 54.03 320 ⇓P **P** **12 58 01.0 -0.3**
XAN pmax pmax
comp=Z,24nm,1.0s
XAN pmax pmax
comp=Z,130nm,4.0s
XAN Xi'an 54.03 320 P **P** **12 58 00.6 -0.8**
XAN pP **pP** **12 58 14.4 -2.0**
BJI2 Beijing 54.17 330 P **P** **12 58 02.2 +0.1**
BJI2 pmax pmax
comp=Z,7.0nm,1.3s
BJT Baijiatuan 54.17 330 IAmb IAmb 12 58 02.9
comp=Z,56nm,1.9s
BJT Baijiatuan 54.17 330 P **P** **12 58 01.4 -0.7**
comp=Z,14nm,1.5s
PZH PanZhiHua 54.88 308 P **P** **12 58 10.3 +2.6**
CD2 Chengdu 55.67 314 P **P** **12 58 12.6 -0.6**
CD2 pP pP 12 58 28.7 0.0
CD2 sP sP 12 58 35.4 0.0
CD2 pmax pmax
comp=Z,20nm,0.7s
KLR Kul'dur 56.73 348 LR LR 13 20 11.3
comp=Z,28nm,21.7s,baz=198,slow=33
HHC Hu-ho-hao-te 57.13 328 ⇓P **P** **12 58 23.9 +0.4**
HHC pmax pmax
comp=Z,13nm,1.5s
HHC pmax pmax
comp=Z,110nm,6.6s
XLT XiLinHaoTe 57.23 333 *e*P **P** **12 58 23.9 -0.2**
XLT sP sP 12 58 49.5 +3.6
XLT pmax pmax
comp=Z,6.0nm,1.1s
XLT pmax pmax
comp=Z,75nm,3.6s
BTO2 Baotou 57.96 327 *e*P **P** **12 58 29.5 +0.1**
BTO2 pP **sP** **12 58 49.1 -2.0**
BTO2 pmax pmax
comp=Z,14nm,0.6s
BTO2 pmax pmax
comp=Z,280nm,8.3s
LZH Lanzhou 58.57 319 P **P** **12 58 34.1 +0.3**
LZH pP pP 12 58 50.8 +1.4
LZH pmax pmax
comp=Z,11nm,1.6s
LZDM Lanzhou Array 58.59 319 P **P** **12 58 35.8 +1.7**
comp=Z,2.9nm,0.6s,baz=149,slow=6.9,SNR=12
LZDM LR LR 13 24 30.7
comp=Z,69nm,18.8s,baz=5.0,slow=37
comp=Z,2.9nm,0.6s
HEH HeiHe 58.70 345 *e*P **P** **12 58 33.8 -0.4**
HEH pmax pmax
comp=Z,15nm,0.9s
PETK Petropavlovsk- 59.55 7 P **P** **12 58 41.1 +1.1**
comp=Z,22nm,0.8s,baz=160,slow=5.7,SNR=24
comp=Z,22nm,0.8s
HIA Hailar 60.16 339 IAmb IAmb 12 58 45.6
comp=Z,24nm,1.0s
HIA Hailar 60.16 339 P **P** **12 58 45.1 +0.8**
comp=Z,30nm,1.8s
HILR Hailar Array B 60.41 340 P **P** **12 58 45.9 -0.1**
comp=Z,12nm,0.6s,baz=147,slow=7.6,SNR=16
HILR LR LR 13 23 51.6
comp=Z,132nm,19.9s,baz=80,slow=35
comp=Z,12nm,0.6s
DRV Dumont d'Urvil 60.76 183 P **P** **12 58 48.7 +0.7**
DRV pP **pP** **12 59 02.9 -1.5**
BRDH Bariadhala 61.62 300 LR LR 13 24 48.4
comp=Z,46nm,21.9s,baz=188,slow=35
PPT Papeete 62.39 107 LR LR 13 23 04.6
comp=Z,48nm,21.1s,baz=254,slow=33
SHEM Shemya Is, Ala 62.74 18 LR LR 13 20 40.0
comp=Z,89nm,21.3s,baz=328,slow=31
GTA2 Gaotai 63.17 320 P **P** **12 59 04.8 -0.1**
GTA2 pP pP 12 59 22.5 +1.8
GTA2 pmax pmax
comp=Z,5.0nm,1.4s
ULN Ulaanbaatar 64.39 331 P **P** **12 59 12.8 +0.1**
ULN IAmb IAmb 12 59 15.7
comp=Z,12nm,0.7s
ULN Ulaanbaatar 64.39 331 P **P** **12 59 12.9 +0.1**
ULN x x 12 59 28.2
ULN x x 12 59 29.7
SONM Songino Array 64.68 331 P **P** **12 59 14.9 +0.2**
comp=Z,8.0nm,0.8s,baz=146,slow=6.7,SNR=26
SONM LR LR 13 26 33.9
comp=Z,239nm,21.2s,baz=154,slow=35
SONM PKP2bc **P'P'bc** **13 28 06.5 +0.8**
comp=Z,3.5nm,1.0s,baz=284,slow=1.8,SNR=14
comp=Z,8.0nm,0.8s
SONM Songino Array 64.68 331 **P** **12 59 15.0 +0.4**
GOMU GeErMu 64.78 315 P **P** **12 59 16.9 +1.0**
GOMU pmax pmax
comp=Z,4.0nm,0.8s
CASY Casey 65.36 196 P **P** **12 59 19.5 +0.9**
MA2 Magadan 65.45 2 P **P** **12 59 19.7 +0.5**
MA2 Magadan 65.45 2 P **P** **12 59 19.9 +0.7**
comp=Z,47nm,0.8s
MA2 Magadan 65.45 2 P **P** **12 59 19.5 +0.3**
comp=Z,46nm,0.8s
MA2 Magadan 65.45 2 P **P** **12 59 19.6 +0.3**
MA2 PcP **PcP** **12 59 51.5 +0.8**
PALK Pallekele 67.96 280 LR LR 13 33 21.3
comp=Z,62nm,18.4s,baz=108,slow=39
TLY Talaya 68.61 332 **P** **12 59 40.3 +0.7**
YAK Yakutsk 69.25 351 **P** **12 59 43.2 0.0**
YAK Yakutsk 69.25 351 P **P** **12 59 42.9 -0.2**
YAK ScP 12 59 59.0
CCD Concordia, Ant 70.40 186 P **P** **12 59 51.0 +0.4**
CCD pP **pP** **13 00 05.5 -1.9**
CCD PcP **PcP** **13 00 10.9 -0.9**
UNV Unalaska Valle 71.01 27 P **P** **12 59 54.1 0.0**
baz=229
VNDA Vanda 71.85 177 P **P** **12 59 59.8 +0.9**
comp=Z,12nm,0.5s,baz=332,slow=7.3,SNR=44
VNDA LR LR 13 27 10.0
comp=Z,102nm,21.4s,baz=346,slow=32
comp=Z,12nm,0.5s
VNDA Vanda 71.85 177 P **P** **13 00 00.0 +1.1**
VNDA IAmb IAmb 13 00 15.3
comp=Z,21nm,0.8s
HYB Hyderabad 71.95 290 *e*P **P** **13 00 00.8 +0.2**
SBA Scott Base 72.49 176 P **P** **13 00 04.7 +2.1**
FALS False Pass 73.05 27 P **P** **13 00 06.9 +0.6**
baz=232
WMQ Urumqi 73.15 319 ⇑P **P** **13 00 07.9 +0.6**
WMQ pmax pmax
comp=Z,45nm,2.1s
WMQ pmax pmax
comp=Z,260nm,3.6s
WMQ LR LR
comp=Z,75nm,18.5s
BILL Bilibino 75.08 7 P **P** **13 00 18.6 +0.7**
GAMB Gambell 76.05 17 P **P** **13 00 24.9 +1.4**
baz=222
ZSN Zaisan 76.50 322 *e*P **P** **13 00 26.4 -0.1**
M13K Dall Lake 76.57 23 P **P** **13 00 28.1 +1.6**
baz=231
O14K Tigyukauivet M 76.67 24 P **P** **13 00 28.7 +1.6**
baz=233
N14K Kuskokwak Cree 76.91 24 P **P** **13 00 29.6 +1.1**
baz=232
O15K Ungalikthiuk R 77.22 25 P **P** **13 00 31.4 +1.1**
baz=234
R16K Pilot Point 77.28 27 P **P** **13 00 32.1 +1.5**
baz=237
M14K Bethel 77.32 23 P **P** **13 00 32.1 +1.4**
baz=232
L14K Kuka Creek 77.41 22 IAmb IAmb 13 00 33.8
comp=Z,19nm,0.7s
L14K Kuka Creek 77.41 22 P **P** **13 00 32.4 +1.2**
baz=231
N15K Kwethluk River 77.70 24 P **P** **13 00 34.2 +1.3**
baz=234
M15K Kasigluk River 77.78 23 P **P** **13 00 34.7 +1.4**
baz=233
MKAR Makanchi Array 77.85 320 P **P** **13 00 33.1 -1.0**
comp=Z,3.5nm,0.5s,baz=98,slow=6.9,SNR=54
MKAR PKKPbc **PKKPbc** **13 19 35.8 -1.7**
comp=Z,0.5nm,0.7s,baz=300,slow=2.0,SNR=5.7
MKAR PKPPKP P'P'df 13 27 27.3 -11
comp=Z,0.6nm,1.0s,baz=264,slow=1.4,SNR=3.6
MKAR LR LR 13 34 58.9
comp=Z,39nm,20.3s,baz=93,slow=36
comp=Z,3.5nm,0.5s
R17L Mt. Peulik Vol 77.87 27 P **P** **13 00 35.0 +1.1**
baz=238
P16K Nushagak River 77.92 25 P **P** **13 00 35.6 +1.5**
baz=236
WUS Wushi 77.94 314 P **P** **13 00 34.4 -0.5**
J14K Nanvaranak Lak 77.99 21 P **P** **13 00 35.8 +1.4**
baz=230
MAKZ Makanchi 78.05 320 **P** **13 00 34.1 -1.2**
MAKZ Makanchi 78.05 320 P **P** **13 00 34.0 -1.2**
MAKZ PcP **PcP** **13 00 43.9 -0.8**
MAKZ x x 13 00 50.9
L15K Ungalak Mounta 78.07 22 P **P** **13 00 36.2 +1.3**
baz=232
O16K Kokwok River B 78.19 25 P **P** **13 00 35.8 +0.2**
baz=236
N16K Nishlik Lake 78.41 24 P **P** **13 00 38.4 +1.5**
baz=235
SHLS Shalkode 78.42 316 *e*P **P** **13 00 35.5 -1.9**
comp=Z,12nm,1.4s
Q17K Contact Creek 78.42 27 P **P** **13 00 37.3 +0.2**
baz=238
K15K Wolf Creek Mou 78.43 22 P **P** **13 00 38.7 +1.7**
baz=232
TNA Tin City 78.47 17 **P** **13 00 38.1 +1.1**
TNA Tin City 78.47 17 P **P** **13 00 37.9 +0.9**
baz=225
TIXI Tiksi 78.50 354 P **P** **13 00 35.8 -1.2**
comp=Z,7.5nm,0.5s,baz=204,slow=4.4,SNR=19
comp=Z,7.5nm,0.5s
TIXI Tiksi 78.50 354 **P** **13 00 36.2 -0.9**
TIXI IAmb IAmb 13 00 39.4
comp=Z,9.4nm,0.6s
ANM Nome 78.57 19 P **P** **13 00 38.8 +1.1**
baz=228
M16K Timber Creek 78.66 24 P **P** **13 00 39.7 +1.5**
baz=235
O17K Koliganek Bris 78.71 25 P **P** **13 00 39.9 +1.5**
baz=237
UZB Uzynbulak 78.72 316 *e*P **P** **13 00 38.6 -0.5**
L16K Owhat River 78.86 23 P **P** **13 00 40.3 +1.1**
L16K IAmb IAmb 13 00 41.6
comp=Z,26nm,1.3s
L16K Owhat River 78.86 23 P **P** **13 00 40.1 +0.8**

baz=234
F14K Arctic Creek 78.89 18 P P 13 00 39.7 +0.3
baz=227
PRZ Przheval'sk 78.93 315 P
PRZ IAmb IAmb 13 00 43.9
comp=Z,18nm,1.1s
KPKS Kokpek 79.05 316 eP P 13 00 40.6 -0.3
SATY Saty 79.11 316 eP P 13 00 40.8 -0.5
G15K Niukluk 79.29 19 P P 13 00 42.5 +0.9
baz=229
ZAA0 Zalesovo Array 79.31 328 IAmb IAmb 13 00 42.4
comp=Z,9.7nm,0.5s
ZALV Zalesovo Beam 79.31 328 P P 13 00 40.2 -1.7
comp=Z,9.9nm,0.4s,baz=117,slow=6.1,SNR=21
ZALV LR LR 13 34 17.2
comp=Z,94nm,21.7s,baz=62,slow=34
comp=Z,9.9nm,0.4s
ZALV Zalesovo Beam 79.31 328 P 13 00 39.7 -2.2
J16K Anvik River 79.38 21 IAmb IAmb 13 00 44.7
comp=Z,93nm,1.9s
J16K Anvik River 79.38 21 P P 13 00 43.6 +1.5
baz=233
M17K Holitna River 79.48 24 P P 13 00 44.0 +1.3
baz=236
L17K Donlin 79.56 23 P P 13 00 44.6 +1.5
baz=235
F15K North Star Dit 79.56 18 P P 13 00 44.5 +1.5
baz=229
H16K Elim 79.65 20 P P 13 00 44.5 +1.0
baz=231
KDJ Kajisay 79.68 315 P 13 00 45.0 +0.6
KDAK Kodiak Island 79.69 28 LR LR 13 27 25.1
comp=Z,208nm,21.9s,baz=235,slow=29
I17K Unalakleet 79.71 21 IAmb IAmb 13 00 47.1
comp=Z,27nm,1.4s
I17K Unalakleet 79.71 21 P P 13 00 45.6 +1.8
baz=233
N18K Kilae Creek 79.71 25 P P 13 00 45.3 +1.3
baz=238
TDK Taldyqorghan 79.75 318 eP P 13 00 44.3 -0.3
comp=Z,7.9nm,0.8s
Q19K Cape Douglas, 79.77 27 P P 13 00 45.1 +0.8
baz=240
K17K Iditarod 79.89 22 IAmb IAmb 13 00 47.8
comp=Z,38nm,1.4s
K17K Iditarod 79.89 22 P P 13 00 46.6 +1.7
baz=235
KSH2 Kashi 79.98 311 P P 13 00 45.6 -0.5
KSH2 pP pP 13 01 03.0 +0.8
KSH2 pmax pmax
comp=Z,3.0nm,0.7s
J17K VABM Dome 80.00 22 P P 13 00 47.1 +1.7
baz=234
G16K Koyuk River 80.09 19 P P 13 00 47.1 +1.2
baz=231
MDOK Medeo 80.09 316 eP P 13 00 46.2 -0.4
TNSS Tian-Shan 80.12 315 eP P 13 00 46.2 -0.9
M18K Stony River 80.17 24 P P 13 00 47.8 +1.4
baz=238
P19K Oil Pt 80.31 26 P P 13 00 47.9 +0.6
baz=240
NIL Nilore 80.36 305 P P 13 00 48.7 +0.6
NIL IAmb IAmb 13 01 15.3
comp=Z,25nm,0.8s
N19K Bonanza Creek 80.37 25 P P 13 00 48.7 +1.1
baz=239
SEM Semipalatinsk 80.46 323 eP P 13 00 48.2 -0.3
H17K Granite Mounta 80.62 20 P P 13 00 49.9 +1.1
baz=233
G17K Kiwalik Mounta 80.71 19 P P 13 00 50.8 +1.6
baz=232
KUU Kurty 80.80 316 eP P 13 00 49.8 -0.4
J18K Innoko River 80.91 22 P P 13 00 52.0 +1.6
baz=236
L19K White Mountain 80.93 24 P P 13 00 51.9 +1.3
baz=238
C16K Lisburne Hills 81.08 16 P P 13 00 52.5 +1.4
baz=228
F17K Baldwin Pennin 81.10 18 P P 13 00 52.5 +1.3
baz=232
H18K Honhosa River 81.28 20 P P 13 00 53.2 +0.9
baz=235
E17K Hotham Inlet 81.32 18 P P 13 00 53.4 +1.0
baz=231
D17K Noatak River 81.34 17 P P 13 00 53.9 +1.4
baz=230
M20K Styx River 81.47 24 P P 13 00 54.9 +1.4
baz=240
KURK Kurchatov 81.54 323 P 13 00 53.6 -0.4
KURK Kurchatov 81.54 323 P P 13 00 53.5 -0.4
GCSA Galena City Sc 81.56 21 P P 13 00 54.9 +1.2
baz=236
KURBB Kurchatov Arra 81.56 323 P P 13 00 53.2 -0.9
comp=Z,2.8nm,0.8s,baz=94,slow=5.9,SNR=18
KURBB PKKPbc PKKPbc 13 19 27.8 -1.5
comp=Z,0.8nm,0.5s,baz=301,slow=2.9,SNR=15
KURBB LR LR 13 34 46.7
comp=Z,52nm,21.3s,baz=177,slow=34
comp=Z,2.8nm,0.8s
J19K Poorman 81.61 22 P P 13 00 55.0 +0.9
baz=237
G18K Tagagawik 81.61 20 P P 13 00 55.2 +1.1
baz=234
RDOG Red Dog Mine 81.62 17 IAmb IAmb 13 00 56.7
comp=Z,12nm,0.8s
RDOG Red Dog Mine 81.62 17 P P 13 00 55.1 +1.0
baz=230
AAK Ala-Archa 81.73 315 P P 13 00 54.8 -0.6
comp=Z,4.7nm,0.7s,baz=122,slow=5.7,SNR=11
AAK PKKPbc PKKPbc 13 19 28.0 -0.7
comp=Z,1.5nm,0.5s,baz=224,slow=6.1,SNR=7.1
AAK LR LR 13 37 10.4
comp=Z,39nm,21.9s,baz=90,slow=36
comp=Z,4.7nm,0.7s
AAK Ala-Archa 81.73 315 P 13 00 55.7 +0.4
K20K Telida 81.86 23 P P 13 00 56.3 +0.9
baz=239
E18K Tukpahlearik C 81.91 18 P P 13 00 56.5 +1.0
baz=232
SEW Seward 82.21 27 P P 13 00 58.3 +1.0
baz=244
J20K Nowinta River 82.25 22 P P 13 00 58.6 +1.2
baz=239
SUA Susitna One 82.27 25 P P 13 00 57.6 -0.1
baz=242
G19K Purcell Mounta 82.28 20 P P 13 00 58.4 +0.9
baz=236
MAW Mawson 82.42 203 P P 13 00 57.1 -1.2
comp=Z,5.6nm,1.2s
MAW Mawson 82.42 203 P P 13 00 58.1 -0.1
comp=Z,6.7nm,0.7s,baz=98,slow=6.9,SNR=7.5
MAW LR LR 13 35 44.8
comp=Z,260nm,21.2s,baz=70,slow=34
comp=Z,6.7nm,0.7s
F19K Shaleruckik Mo 82.45 19 P P 13 00 58.9 +0.6
baz=235
ARSB Arslanbob 82.47 313 IAmb IAmb 13 01 50.9
comp=Z,17nm,1.2s
C18K Utukok River 82.49 17 P P 13 00 59.1 +0.4
baz=232
H20K Anotteneega Mo 82.68 21 P P 13 01 00.7 +1.0
baz=238
CHUM Lake Minchumin 82.80 23 P P 13 01 01.1 +0.8
baz=240
CUT Chulitna 82.91 25 P P 13 01 01.3 +0.5
baz=242
E19K Redstone River 82.98 19 IAmb IAmb 13 01 08.4
comp=Z,11nm,0.7s
E19K Redstone River 82.98 19 P P 13 01 01.7 +0.6
baz=236
KNK Knik Glacier 83.22 26 P P 13 01 04.0 +1.5
baz=244
F20K Avaraakt Lake 83.24 19 P P 13 01 03.8 +1.4
baz=237
TRF Thorofare Moun 83.38 24 P P 13 01 04.3 +0.8
baz=242
H21K Melozitna Rive 83.51 21 P P 13 01 04.3 +0.4
baz=240
I21K Tanana 83.57 22 P P 13 01 05.4 +1.3
baz=241
G21K Allakaket 83.70 20 P P 13 01 05.9 +1.0
baz=239
M23K Glacier View 83.70 26 P P 13 01 06.0 +1.0
baz=245
WAT1 Susitna Watana 83.81 25 P P 13 01 05.7 +0.2
baz=244
D20K Etivluk River 83.88 18 IAmb IAmb 13 01 32.2
comp=Z,12nm,0.5s

SCM Sheep Creek Mo 83.89 26 P P 13 01 07.0 +1.0
baz=245
QSPA South Pole Qui 83.94 180 P P 13 01 06.4 +0.1
comp=Z,66nm,0.5s,baz=317,slow=1.0,SNR=67
QSPA LR LR 13 36 52.5
comp=Z,184nm,21.2s,baz=357,slow=34
QSPA South Pole Qui 83.94 180 P 13 01 06.2 -0.1
QSPA South Pole Qui 83.94 180 P P 13 01 06.6 +0.3
QSPA pP pP 13 01 21.4 -1.9
RND Reindeer 83.94 24 IAmb IAmb 13 01 06.7
comp=Z,12nm,0.6s
WAT6 Susitna Watana 84.04 25 P P 13 01 07.5 +0.6
baz=245
DZA Taraz 84.05 314 eP P 13 01 06.6 -0.6
comp=Z,5.8nm,0.7s
MCK McKinley 84.05 24 IAmb IAmb 13 01 35.2
comp=Z,15nm,1.1s
MCK McKinley 84.05 24 P P 13 01 06.3 -0.4
baz=244
F21K Alatna River 84.07 20 P P 13 01 07.4 +0.7
baz=239
H22K Ishtalitna Cre 84.14 21 P P 13 01 07.8 +0.6
baz=241
KLU Klutina 84.36 26 P P 13 01 09.3 +0.8
baz=246
NEA2 Nenana 84.39 23 P P 13 01 08.1 -0.3
baz=243
DHY Denali Highway 84.40 25 P P 13 01 09.1 +0.5
baz=245
M24K Tolsona, Glenn 84.50 26 P P 13 01 10.1 +1.0
baz=246
I23K Minto, Yukon-K 84.53 22 IAmb IAmb 13 01 11.4
comp=Z,48nm,2.0s
I23K Minto, Yukon-K 84.53 22 P P 13 01 09.2 +0.1
baz=243
G22K Bettles 84.59 20 P P 13 01 09.7 +0.3
baz=241
KKAR Karatay Array 84.68 314 P 13 01 09.5 -0.9
WRH Wood River Hil 84.71 23 IAmb IAmb 13 01 29.5
comp=Z,20nm,1.4s
BMRM Bremner River 84.75 27 P P 13 01 11.1 +0.7
baz=248
H23K Yukon River 84.77 22 IAmb IAmb 13 01 12.2
comp=Z,7.8nm,0.6s
H23K Yukon River 84.77 22 P P 13 01 11.1 +0.8
baz=243
IUG luzhnay 84.81 313 eP P 13 01 10.5 -0.7
comp=Z,8.2nm,0.9s
COLA College 84.98 23 P P 13 01 11.1 -0.2
COLA College 84.98 23 P P 13 01 10.9 -0.4
baz=244
N25K Chitina, Valde 84.99 26 P P 13 01 11.9 +0.2
baz=248
G23K Bananza Creek 85.01 21 IAmb IAmb 13 01 13.6
comp=Z,8.4nm,0.7s
G23K Bananza Creek 85.01 21 P P 13 01 12.2 +0.6
baz=242
HARP HAARP 85.06 26 P P 13 01 12.4 +0.5
baz=247
HDA Harding Lake 85.13 23 P P 13 01 11.6 -0.5
baz=245
PAX Paxson 85.15 25 P P 13 01 12.3 -0.1
baz=247
CHM Chimkent 85.16 313 eP P 13 01 12.6 -0.2
comp=Z,6.7nm,0.5s
COLD Coldfoot 85.19 20 P P 13 01 13.0 +0.7
baz=242
ILAR Eielson Array 85.31 23 P P 13 01 10.8 -2.2
comp=Z,8.2nm,0.6s,baz=252,slow=4.6,SNR=79
ILAR PKKP PKKPdf 13 19 10.8 -2.6
comp=Z,0.2nm,0.6s,baz=315,slow=3.0,SNR=4.5
comp=Z,8.2nm,0.6s
ILAR Eielson Array 85.31 23 P 13 01 11.3 -1.7
A21K Barrow 85.36 16 P P 13 01 13.3 +0.2
baz=236,SNR=5.7
CRQE Cirque 85.36 27 P P 13 01 14.3 +0.8
baz=249
H24K Noodor Dome 85.39 22 IAmb IAmb 13 01 16.1
comp=Z,19nm,1.5s
H24K Noodor Dome 85.39 22 P P 13 01 13.7 +0.2
baz=244
NRIK Noril'sk 85.46 342 P P 13 01 12.6 -1.1
comp=Z,16nm,0.8s,baz=117,slow=4.9,SNR=8.2
NRIK LR LR 13 38 10.9
comp=Z,60nm,21.8s,baz=128,slow=35
comp=Z,16nm,0.8s
NRIK Noril'sk 85.46 342 IAmb IAmb 13 01 15.7
comp=Z,17nm,0.8s
MCARA McCarthy VSAT 85.61 27 P P 13 01 15.1 +0.5
baz=249
RIDG Independent Ri 85.71 24 P P 13 01 15.9 +0.8
baz=247
E23K Chandalar 85.77 20 IAmb IAmb 13 02 19.4
comp=Z,39nm,2.0s
E23K Chandalar 85.77 20 P P 13 01 16.3 +0.9
baz=243
J25K Salcha River, 85.84 23 IAmb IAmb 13 01 16.9
comp=Z,17nm,0.8s
J25K Salcha River, 85.84 23 P P 13 01 15.7 -0.1
baz=247
MENT Mentasta 85.88 25 IAmb IAmb 13 01 48.4
comp=Z,23nm,1.6s
G24K Hadweenzic Riv 85.91 21 IAmb IAmb 13 01 37.0
comp=Z,20nm,1.4s
G24K Hadweenzic Riv 85.91 21 P P 13 01 16.4 +0.5
baz=245
L26K Log Cabin Wild 86.07 25 P P 13 01 17.6 +0.8
baz=249
BARN Barnard Glacie 86.12 27 IAmb IAmb 13 01 22.9
comp=Z,12nm,0.7s
PRP Poupine Dome 86.14 23 P P 13 01 16.7 -0.6
baz=247
SCRK Sand Creek 86.15 24 P P 13 01 17.6 +0.2
baz=248
E24K Your Creek 86.16 20 P P 13 01 17.5 +0.3
baz=244
CTG Chitna Glacier 86.23 28 P P 13 01 18.9 +1.0
baz=251
CTGM Chitina Glacie 86.24 28 IAmb IAmb 13 01 20.0
comp=Z,11nm,0.8s
PINM Pinnacle 86.46 29 P P 13 01 19.8 +0.9
baz=252
M27K Edge Creek, AK 86.46 26 IAmb IAmb 13 01 21.2
comp=Z,15nm,0.7s
M27K Edge Creek, AK 86.46 26 P P 13 01 19.7 +0.8
baz=250
J26L Joseph Creek 86.52 24 P P 13 01 19.8 +0.7
baz=248
FYU Fort Yukon 86.67 22 IAmb IAmb 13 01 22.5
comp=Z,75nm,1.7s
O28M Mount Upton 86.70 28 IAmb IAmb 13 01 22.5
comp=Z,12nm,0.8s
O28M Mount Upton 86.70 28 P P 13 01 21.2 +0.8
baz=252
L27K Beaver Creek, 86.73 25 P P 13 01 20.6 +0.5
baz=250
YUK3 Moose Creek 86.90 27 P P 13 01 22.0 +0.8
baz=251
BVCY Beaver Creek 86.93 26 P P 13 01 21.6 +0.5
baz=251,SNR=6.0
F25K Christian Rive 86.93 21 P P 13 01 21.5 +0.5
baz=246
K27K Chicken 86.96 25 IAmb IAmb 13 01 23.7
comp=Z,14nm,1.1s
YUK8 Steele Glacier 87.06 28 P P 13 01 23.0 +0.9
baz=252
BVAR Borovoye Array 87.10 324 P P 13 01 20.2 -1.9
comp=Z,4.3nm,0.5s,baz=114,slow=5.0,SNR=29
BVAR PKKPbc PKKPdf 13 19 12.3 +2.3
comp=Z,0.7nm,0.5s,baz=274,slow=4.3,SNR=5.5
BVAR LR LR 13 37 21.7
comp=Z,30nm,20.6s,baz=85,slow=34
comp=Z,4.3nm,0.5s
BORK Borovoye 87.14 324 P 13 01 20.0 -2.3
BORK Borovoye 87.14 324 P P 13 01 20.0 -2.3
E25K Arctic Village 87.17 20 P P 13 01 23.2 +1.1
baz=246
O29M Mount Kennedy 87.32 29 IAmb IAmb 13 01 25.5
comp=Z,12nm,0.8s
O29M Mount Kennedy 87.32 29 P P 13 01 24.5 +1.4
baz=253,SNR=6.5
G26K Porcupine Rive 87.35 22 IAmb IAmb 13 01 25.5
comp=Z,14nm,1.0s
G26K Porcupine Rive 87.35 22 P P 13 01 24.1 +1.1
baz=248
D25K Kavik River 87.39 19 IAmb IAmb 13 01 25.1
comp=Z,25nm,1.6s
D25K Kavik River 87.39 19 P P 13 01 24.0 +0.8
baz=246
F26K Sheenjek River 87.50 21 IAmb IAmb 13 01 27.0
comp=Z,22nm,1.8s
F26K Sheenjek River 87.50 21 P P 13 01 24.7 +1.0
baz=248
YUK4 Talbot Arm 87.59 28 P P 13 01 25.7 +1.2
baz=253,SNR=9.2
YUK6 Outpost Mounta 87.61 28 P P 13 01 25.4 +0.7
baz=253
I27K Kandik River 87.68 23 IAmb IAmb 13 01 26.8
comp=Z,10nm,0.9s
I27K Kandik River 87.68 23 P P 13 01 25.3 +0.6
baz=250,SNR=6.8
H27K Steamboat Moun 87.93 23 IAmb IAmb 13 01 28.2
comp=Z,12nm,0.8s
H27K Steamboat Moun 87.93 23 P P 13 01 26.7 +0.9
baz=250,SNR=8.4
HYT Haines Junctio 87.98 28 IAmb IAmb 13 01 28.6
comp=Z,11nm,0.7s
HYT Haines Junctio 87.98 28 P P 13 01 27.2 +0.9
baz=254,SNR=7.1
M29M Somme Creek 88.00 27 IAmb IAmb 13 01 28.5
comp=Z,8.8nm,0.8s
M29M Somme Creek 88.00 27 P P 13 01 26.8 +0.4
baz=253,SNR=8.2
P30M Million Dollar 88.05 29 P P 13 01 27.9 +1.4
baz=254
G27K Doyon Strip 88.08 22 P P 13 01 27.4 +0.9
baz=250
I28M Miner Creek 88.29 24 IAmb IAmb 13 01 55.7
comp=Z,46nm,1.9s
I28M Miner Creek 88.29 24 P P 13 01 28.9 +1.3
baz=252
L29M L29M 88.34 26 IAmb IAmb 13 01 30.1
comp=Z,12nm,0.8s
L29M L29M 88.34 26 P P 13 01 29.3 +1.4
baz=253
C27K Jago River 88.38 19 IAmb IAmb 13 01 30.3
comp=Z,15nm,0.8s
C27K Jago River 88.38 19 P P 13 01 28.9 +1.1
baz=248
S32K Killisnoo 88.58 32 P P 13 01 30.6 +1.6
baz=257
O30N Mendenhall 88.63 29 P P 13 01 30.2 +0.9
baz=255
SKAG Skagway 88.67 30 P P 13 01 31.1 +1.7
baz=256
M30M Minto, Yukon 88.78 27 P P 13 01 31.0 +1.0
baz=255
K29M Barlow Dome 88.81 25 IAmb IAmb 13 01 32.3
comp=Z,9.7nm,0.8s
K29M Barlow Dome 88.81 25 P P 13 01 30.6 +0.5
baz=254
I29M Ogilvie Camp, 88.92 24 IAmb IAmb 13 01 32.0
comp=Z,8.0nm,0.9s
CRAG Craig 88.93 34 P P 13 01 32.2 +1.5
baz=258
N31M Braeburn, Yuko 88.96 28 P P 13 01 31.7 +0.9
baz=256
F28M Old Crow 89.00 21 IAmb IAmb 13 01 32.9
comp=Z,5.6nm,0.8s
F28M Old Crow 89.00 21 P P 13 01 31.1 +0.3
baz=252,SNR=6.5
D27M Malcolm River 89.15 20 IAmb IAmb 13 02 15.6
comp=Z,19nm,1.8s
D27M Malcolm River 89.15 20 P P 13 01 31.9 +0.4
baz=251
WHY Whitehorse 89.18 29 P P 13 01 32.6 +0.7
baz=256
E28M Babbage River 89.43 21 IAmb IAmb 13 01 34.9
comp=Z,21nm,1.6s
E28M Babbage River 89.43 21 P P 13 01 33.1 +0.3
baz=252
MAYO Mayo, Yukon 89.44 26 P P 13 01 34.5 +1.5
baz=255
G29M Pine Creek 89.48 22 IAmb IAmb 13 01 34.8
comp=Z,9.8nm,0.8s
G29M Pine Creek 89.48 22 P P 13 01 34.0 +0.9
baz=253
P32M Atlin 89.50 30 P P 13 01 34.1 +0.8
baz=257
J30M Hart River 89.51 25 IAmb IAmb 13 01 35.4
comp=Z,9.1nm,0.8s
J30M Hart River 89.51 25 P P 13 01 33.9 +0.5
baz=255,SNR=11
I30M Mount Dempster 89.66 24 P P 13 01 34.4 +0.3
baz=255
M31M Drury Creek, Y 89.77 27 P P 13 01 35.2 +0.6
baz=257
EPYK Eagle Plains 89.83 23 P P 13 01 34.9 +0.1
baz=255
D28M Stokes Point 89.93 20 P P 13 01 35.5 +0.4
baz=253
E29M Blow River 89.95 21 P P 13 01 36.0 +0.8
baz=254
P33M Teslin, Yukon 90.08 29 P P 13 01 37.3 +1.2
baz=258
Q32M Nakina River 90.10 31 P P 13 01 37.4 +1.0
baz=259
N32M Quiet Lake 90.15 28 P P 13 01 37.0 +0.6
baz=258
S34M Telegraph Cree 90.48 32 P P 13 01 39.5 +1.6
baz=260
F30M Barrier River 90.50 22 P P 13 01 38.3 +0.5
baz=256
H31M Peel River 90.62 24 P P 13 01 38.8 +0.4
baz=257
T35M Bob Quinn 90.79 33 P P 13 01 40.7 +1.3
baz=260
R33M Jennings River 90.84 30 P P 13 01 40.9 +1.1
baz=260
G31M Satah River 90.91 23 P P 13 01 39.8 +0.1
baz=257
DLBC Dease Lake 91.15 31 LR LR 13 35 33.1
comp=Z,131nm,19.4s,baz=192,slow=31
DLBC Dease Lake 91.15 31 P P 13 01 42.1 +1.0
baz=260
F31M Tsiigehtchic 91.23 22 IAmb IAmb 13 02 20.1
comp=Z,10.0nm,1.2s
F31M Tsiigehtchic 91.23 22 P P 13 01 41.3 +0.2
baz=257
BBB Bella Bella 91.27 38 LR LR 13 34 48.0
comp=Z,167nm,20.4s,baz=266,slow=30
INK Inuvik 91.50 21 IAmb IAmb 13 02 15.5
comp=Z,7.2nm,1.1s
INK Inuvik 91.50 21 P P 13 01 42.9 +0.5
baz=258
WTLY Watson Lake, Y 92.04 30 P P 13 01 46.2 +1.0
baz=262
AB31 Akbulak array 92.94 319 IAmb IAmb 13 01 50.1
comp=Z,7.9nm,1.4s
ABKAR Akbulak array 92.94 319 P 13 01 47.3 -2.2
TOAD Toad River Com 93.69 31 P P 13 01 52.9 +0.1
baz=265
AKTO Aktyubinsk 94.28 320 LR LR 13 43 50.3
comp=Z,54nm,21.4s,baz=50,slow=35
A36M Sachs Harbour 94.84 18 P P 13 01 58.1 +0.4
baz=266
WRGLY Wrigley 94.90 27 P P 13 01 58.3 +0.1
baz=266
C36M Paulatuk 95.04 21 P P 13 01 58.7 0.0
baz=266
NVAR Mina Array Bea 96.98 52 P P 13 02 07.3 -1.3
comp=Z,0.4nm,0.7s,baz=260,slow=4.9,SNR=4.6
comp=Z,0.4nm,0.7s
ABPO Ambohimpanom 97.72 250 P P 13 02 12.1 -0.2
ABPO IAmb IAmb 13 02 13.4
comp=Z,5.3nm,0.7s
PFO Pinyon Flats O 98.31 57 LR LR 13 39 09.7
comp=Z,140nm,20.2s,baz=260,slow=31
RPN Rapa Nui 98.88 119 LR LR 13 40 41.9
comp=Z,48nm,19.8s,baz=252,slow=32
YKA Yellowknife Ar 98.96 28 P P 13 02 16.0 -0.6
comp=Z,0.9nm,0.8s,baz=277,slow=5.6,SNR=10
YKA PKKPbc PKKPbc 13 18 41.5 -4.1
comp=Z,0.5nm,0.5s,baz=82,slow=2.6,SNR=14
YKA LR LR 13 40 51.6
comp=Z,81nm,21.1s,baz=283,slow=32
comp=Z,0.9nm,0.8s
KIRV Kirov 99.34 328 LR LR 13 47 40.7
comp=Z,146nm,21.4s,baz=83,slow=36
PDAR Pinedale Array 103.56 48 Pdiff Pdif 13 02 36.8 -1.1
comp=Z,0.4nm,0.6s,baz=237,slow=1.9,SNR=5.0
PDAR PKiKP PP 13 06 54.6 +0.1
comp=Z,0.3nm,0.5s,baz=243,slow=4.7,SNR=4.8
PDAR PKKPbc PKKPbc 13 18 29.6 -2.2
comp=Z,0.6nm,0.5s,baz=70,slow=2.5,SNR=14
ARCES ARCESS Array B 106.45 342 PKiKP PKiKP 13 06 59.3 -1.2
comp=Z,4.4nm,0.9s,baz=60,slow=2.2,SNR=3.7

ARCES				PKKPbc	**PKKPbc**	**13 18 20.0**		**-3.7**
	comp=Z,1.9nm,0.8s,baz=234,slow=3.1,SNR=4.8							
TXAR	**Lajitas Array**	**109.33**	**61**	PKKPbc	PKKPbc	13 18 11.7		-1.8
	comp=Z,0.3nm,0.6s,baz=110,slow=5.3,SNR=4.8							
TXAR				PKKP	**PKKPab**	**13 18 25.9**		**+0.9**
	comp=Z,1.0nm,0.7s,baz=96,slow=5.9,SNR=9.7							
FINES	**FINESS Array B**	**109.93**	**334**	Pdiff	**Pdif**	**13 03 02.7**		**-2.7**
	comp=Z,1.4nm,0.8s,baz=62,slow=8.9,SNR=6.9							
FINES				PKiKP	**PKiKP**	**13 07 05.3**		**-1.8**
	comp=Z,2.3nm,0.6s,baz=22,slow=2.1,SNR=8.0							
ULM	**Lac du Bonnet**	**111.47**	**38**	PKiKP	**PKiKP**	**13 07 08.3**		**-2.1**
	comp=Z,1.5nm,0.4s,baz=68,slow=1.1,SNR=5.7							
BRTR	**Keskin Array B**	**112.14**	**310**	PKiKP	**PKiKP**	**13 07 11.5**		**-0.7**
	comp=Z,0.8nm,0.7s,baz=112,slow=2.6,SNR=2.4							
BRTR				PKKP	**PKKPbc**	**13 18 04.5**		**-0.1**
	comp=Z,0.6nm,0.8s,baz=221,slow=5.7,SNR=4.1							
AKASG	**Malin Array Be**	**112.35**	**323**	PKKPbc	PKKPbc	13 18 01.9		-2.2
	comp=Z,1.2nm,0.5s,baz=264,slow=4.1,SNR=6.7							
BOSA	**Boshof**	**114.64**	**235**	PKP	**PKiKP**	**13 07 17.5**		**+0.1**
	comp=Z,4.1nm,0.5s,baz=93,slow=1.7,SNR=18							
LBTB	**Lobatse**	**115.67**	**239**	PKP	**PKPdf**	**13 07 18.8**		**-0.6**
	comp=Z,3.6nm,0.7s,baz=152,slow=4.0,SNR=4.6							
U38A	**Gravette**	**116.07**	**52**		**PKPdf**	**13 07 19.1**		**-0.6**
LSZ	**Lusaka**	**116.28**	**250**	PKP	**PKPdf**	**13 07 20.3**		**-0.5**
	comp=Z,2.7nm,0.5s,baz=64,slow=3.9,SNR=3.9							
SUR	**Sutherland**	**116.57**	**229**	PKP	**PKiKP**	**13 07 22.1**		**+1.1**
	comp=Z,9.8nm,0.8s,baz=140,slow=5.6,SNR=3.8							
S39A	**Bolivar**	**116.61**	**51**		**PKPdf**	**13 07 19.6**		**-1.0**
CCM	**Cathedral Cave**	**118.11**	**50**		**PKPdf**	**13 07 22.4**		**-1.1**
KSANE	**Kasane**	**118.38**	**246**		**PKiKP**	**13 07 25.4**		**+0.6**
KGCAE	**Kacgae**	**119.34**	**240**		**PKiKP**	**13 07 26.9**		**+0.4**
LKGWB	**Lokgwabe**	**119.71**	**238**		**PKPdf**	**13 07 26.8**		**-0.4**
E46A	**Sault Ste Mari**	**120.07**	**39**		**PKPdf**	**13 07 26.1**		**-1.0**
GRTLG	**Ghanzi**	**120.73**	**241**		**PKPdf**	**13 07 28.9**		**-0.4**
CLL	**Collm**	**121.26**	**328**		**PKPdf**	**13 07 28.1**		**-1.1**
CLL	**Collm**	**121.26**	**328**	*i* PKPdf	**PKPdf**	**13 07 27.8**		**-1.4**
	comp=Z,4.0nm,0.8s							
CLL				AMS	AMS	14 03 00.0		
	comp=Z,100nm,19.0s							
CONA	**Conrad Observa**	**121.45**	**324**	*i* PKP	**PKPdf**	**13 07 28.4**		**-1.4**
	comp=Z,3.0nm,0.6s							
WCI	**Wyandotte Cave**	**121.79**	**48**		**PKPdf**	**13 07 29.7**		**-0.9**
PLCA	**Paso Flores**	**121.81**	**147**	PKP	**PKiKP**	**13 07 31.1**		**+0.2**
	comp=Z,8.0nm,0.6s,baz=232,slow=1.8,SNR=56							
PLCA	**Paso Flores**	**121.81**	**147**		**PKiKP**	**13 07 31.3**		**+0.4**
PLCA	**Paso Flores**	**121.81**	**147**	PKP2	**PKiKP**	**13 07 31.3**		**+0.4**
ARSA	**Arzberg**	**121.99**	**323**	*i* PKP	**PKPdf**	**13 07 28.9**		**-1.9**
	comp=Z,1.4nm,0.8s							
GO06	**Curarrehue**	**122.08**	**145**		**PKiKP**	**13 07 32.4**		**+0.9**
GEC2	**GERESS Array S**	**122.22**	**326**		**PKPdf**	**13 07 30.2**		**-1.1**
GERES	**GERESS Array B**	**122.22**	**326**	PKP	**PKPdf**	**13 07 29.9**		**-1.4**
	comp=Z,2.0nm,0.5s,baz=63,slow=1.9,SNR=22							
MOA	**Molln**	**122.42**	**324**	*i* PKP	**PKPdf**	**13 07 29.9**		**-1.6**
	comp=Z,9.2nm,2.1s							
SOKA	**Soboth**	**122.56**	**323**	*i* PKP	**PKPdf**	**13 07 30.3**		**-1.6**
	comp=Z,3.6nm,0.9s							
BIOA	**Bad Ischl, Aus**	**122.87**	**325**	*i* PKP	**PKPdf**	**13 07 30.5**		**-1.9**
	comp=Z,1.4nm,0.5s							
OBKA	**Obir**	**122.93**	**323**	*i* PKP	**PKPdf**	**13 07 30.9**		**-1.8**
	comp=Z,1.9nm,0.8s							
T50A	**Nancy**	**123.28**	**49**		**PKPdf**	**13 07 32.8**		**-0.7**
VLDQ	**Val d'Or**	**123.30**	**35**		**PKPdf**	**13 07 31.4**		**-1.8**
KBA	**Koelnbreinsper**	**123.36**	**324**	*i* PKP	**PKPdf**	**13 07 31.4**		**-2.2**
	comp=Z,5.4nm,1.2s							
MYKA	**Terra Mystica**	**123.41**	**323**	*i* PKP	**PKPdf**	**13 07 32.0**		**-1.5**
	comp=Z,2.1nm,0.6s							
LESA	**Schwarzleotal**	**123.56**	**325**	*i* PKP	**PKPdf**	**13 07 32.0**		**-1.8**
	comp=Z,3.9nm,0.5s							
ABTA	**Abfaltersbach**	**124.02**	**324**	*i* PKP	**PKPdf**	**13 07 32.8**		**-1.9**
	comp=Z,3.7nm,0.6s							
SCHQ	**Schefferville**	**124.07**	**23**	PKP	**PKPdf**	**13 07 33.8**		**-0.7**
	comp=Z,2.8nm,0.6s,baz=284,slow=2.8,SNR=7.1							
SCHQ				PKKPbc	**PKKPab**	**13 17 19.3**		**-0.4**
	comp=Z,6.2nm,1.0s,baz=121,slow=5.9,SNR=5.2							
STAL	**STALIGIAL**	**124.16**	**323**		**PKPdf**	**13 07 33.5**		**-1.4**
WATA	**Walderalm**	**124.24**	**325**	*e*PKP	**PKPdf**	**13 07 33.6**		**-1.7**
	comp=Z,3.7nm,0.4s							
WTTA	**Wattenberg**	**124.24**	**325**	*i* PKP	**PKPdf**	**13 07 33.8**		**-1.4**
	comp=Z,5.0nm,0.5s							
MOTA	**Moosalm**	**124.50**	**325**	*i* PKP	**PKPdf**	**13 07 34.1**		**-1.6**
	comp=Z,7.1nm,0.7s							
SQTA	**Sankt Quirin**	**124.51**	**325**	*i* PKP	**PKPdf**	**13 07 34.2**		**-1.5**
	comp=Z,3.5nm,0.7s							
RETA	**Reutte**	**124.61**	**326**	*i* PKP	**PKPdf**	**13 07 35.1**		**-0.8**
	comp=Z,1.5nm,0.5s							
FETA	**Feichten**	**124.89**	**325**	*i* PKP	**PKPdf**	**13 07 35.3**		**-1.2**
	comp=Z,3.4nm,0.7s							
DAVA	**Damuels**	**125.22**	**326**	*i* PKP	**PKPdf**	**13 07 36.3**		**-0.8**
	comp=Z,6.3nm,0.6s							
V53A	**Saluda**	**125.28**	**50**		**PKPdf**	**13 07 37.4**		**0.0**
EKA	**Eskdalemuir Ar**	**125.53**	**340**	PKP	**PKPdf**	**13 07 36.2**		**-1.1**
	comp=Z,4.2nm,0.6s,baz=23,slow=3.3,SNR=9.7							
NRCA	**Norcia**	**125.63**	**320**		**PKPdf**	**13 07 36.9**		**-1.0**
TUE	**Stuetta**	**125.99**	**325**		**PKPdf**	**13 07 37.8**		**-0.9**
LCO	**Las Campanas**	**129.35**	**136**		**PKiKP**	**13 07 46.4**		**-0.1**
LCO	**Las Campanas**	**129.35**	**136**	PKP2	**PKiKP**	**13 07 46.4**		**-0.1**
KEST	**Kesra**	**131.58**	**314**	PKP	**PKPdf**	**13 07 49.7**		**+0.2**
	comp=Z,1.3nm,0.3s,baz=131,slow=9.3,SNR=1.7							
ATAH	**Atahualpa**	**132.36**	**105**	PKP	**PKiKP**	**13 07 53.6**		**+0.5**
	comp=Z,12nm,0.6s,baz=180,slow=4.0,SNR=9.7							
ESDC	**Sonseca Array**	**137.80**	**327**	PKP	**PKPdf**	**13 08 01.6**		**+0.6**
	comp=Z,0.8nm,0.8s,baz=13,slow=3.3,SNR=6.4							
LPAZ	**La Paz**	**138.34**	**123**	PKhKP	PKPpre	13 07 52.3		
	comp=Z,5.9nm,0.6s,baz=334,slow=1.4,SNR=12							
LPAZ				PKP	**PKiKP**	**13 08 04.5**		**-0.8**
	comp=Z,18nm,0.8s,baz=232,slow=1.6,SNR=16							
CPUP	**Villa Florida**	**139.81**	**144**	PKhKP	PKPpre	13 07 54.6		
	comp=Z,1.8nm,0.6s,baz=212,slow=4.9,SNR=3.3							
CPUP				PKP	**PKPdf**	**13 08 06.1**		**+1.1**
	comp=Z,7.1nm,0.6s,baz=324,slow=2.1,SNR=8.9							
CPUP	**Villa Florida**	**139.81**	**144**		**PKPdf**	**13 08 02.5**		**-2.4**
ITAB	**Concordia**	**141.85**	**151**		**PKiKP**	**13 08 10.2**		**-1.4**
SDV	**Santo Domingo**	**142.08**	**83**	PKhKP	PKPpre	13 08 03.7		
	comp=Z,8.2nm,0.7s,baz=287,slow=11,SNR=10							
SDV	**Santo Domingo**	**142.08**	**83**		PKPpre	13 08 04.9		
CRPR	**Cabo Rojo, PR**	**144.18**	**68**		**PKPab**	**13 08 09.8**		**-0.9**
SIV	**San Ignacio**	**144.23**	**128**	PKP	PKPbc	13 08 11.6		+0.2
	comp=Z,38nm,0.5s,baz=231,slow=5.3,SNR=99							
UUPR	**Utuado, UPR, P**	**144.47**	**67**		PKPbc	13 08 12.7		+0.6
OBIP	**Obispado Ponce**	**144.63**	**67**		PKPbc	13 08 12.8		+0.2
AQDB	**Aquidauana**	**145.15**	**140**		**PKPbc**	**13 08 13.8**		**-0.4**
HUMP	**Col San Antoni**	**145.30**	**67**		**PKPbc**	**13 08 14.7**		**0.0**
TORD	**Torodi Ar. Bea**	**145.60**	**284**	PKPbc	**PKPdf**	**13 08 14.7**		**-0.8**
	comp=Z,12nm,0.6s,baz=110,slow=1.3,SNR=65							
PTLB	**Pontes e Lacer**	**146.05**	**129**		**PKPbc**	**13 08 17.0**		**-0.1**
VILB	**Vilhena**	**146.62**	**124**		**PKPbc**	**13 08 18.2**		**-0.7**
VAO	**Valinhos**	**147.85**	**154**		**PKPbc**	**13 08 21.1**		**-1.1**
BOAV	**Boa Vista**	**151.81**	**96**		**PKPdf**	**13 08 25.3**		**-0.3**
BOAV					**PKPbc**	**13 08 32.2**		**+0.2**
DBIC	**Dimbokro**	**152.54**	**273**	PKPbc	**PKPbc**	**13 08 32.8**		**-0.8**
	comp=Z,8.9nm,0.5s,baz=121,slow=2.4,SNR=19							
DBIC	**Dimbokro**	**152.54**	**273**		**PKPbc**	**13 08 33.0**		**-0.7**
BDFB	**Brasilia**	**153.54**	**145**	PKP	**PKPdf**	**13 08 29.1**		**+0.9**
	comp=Z,20nm,0.6s,baz=202,slow=1.8,SNR=30							
BDFB				PKPbc	**PKiKP**	**13 08 36.4**		**+0.4**
	comp=Z,42nm,0.5s,baz=227,slow=1.9,SNR=47							
BDFB	**Brasilia**	**153.54**	**145**		**PKPdf**	**13 08 28.6**		**+0.4**

*WEL **08** 12:49:25.0±0.7,32.5°×5.5°×17.8W±1.5,h12km,M4.7/12, mB5.2/9, ML4.7/15, MLv4.9/12, Mw(mB)4.6/9, Error ellipse: s-maj=21.0km s-min=3.1km az=107.2*

*NOU **08** 12:49:30.7,32.45S×177.70W,h209km,mb4.2/7, South of Kermadec Islands*

*IDC **08** 12:49:35.8±6.7,32.42S×178.44W,h107km±61km, mb4.2/4, mbtmp4.5/5, Error ellipse: s-maj=54.1km s-min=29.8km az=5.0*

ISC 08 12:49:21.8±1.0,32.04S±0.06×177.5W±0.1,h18km,n76, σ2.934/92,mb4.7/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GLKZ	**Green Lake**	**2.79**	**353**	P		**Pb**	**12 50 09.7**	**-1.5**
GLKZ				S		**Sn**	**12 50 38.7**	**-0.1**
RIZ	**Raoul Island**	**2.81**	**353**	P		**Pn**	**12 50 07.3**	**+1.5**
RIZ				S		**Sn**	**12 50 35.8**	**-3.6**
MXZ	**Matakaoa Point**	**6.49**	**211**	P		**Pn**	**12 50 58.8**	**+2.4**
MXZ	**Matakaoa Point**	**6.49**	**211**	P		**Pn**	**12 50 58.3**	**+1.9**
MXZ				S		**Sn**	**12 52 11.7**	**+1.8**
WMGZ	**Waiomatatini S**	**6.66**	**209**	P		**Pn**	**12 51 01.7**	**+3.0**
WMGZ				S		**Sn**	**12 52 16.2**	**+2.0**
PKGZ	**Pakihiroa**	**6.84**	**211**	P		**Pn**	**12 51 03.4**	**+2.1**
PKGZ				S		**Sn**	**12 52 17.7**	**-0.9**
HAZ	**Te Kaha**	**6.88**	**213**	P		**Pn**	**12 51 04.3**	**+2.5**
HAZ				S		**Sn**	**12 52 21.0**	**+1.3**
PUZ	**Puketiti**	**6.94**	**209**	P		**Pn**	**12 51 04.4**	**+1.8**
PUZ				S		**Sn**	**12 52 22.2**	**+1.1**
RUGZ	**Raukumara Rang**	**7.10**	**212**	P		**Pn**	**12 51 06.5**	**+1.6**
TWGZ	**Tauwhareparae**	**7.14**	**210**	P		**Pn**	**12 51 07.9**	**+2.4**
TWGZ				S		**Sn**	**12 52 27.4**	**+1.2**
KUZ	**Kuaotunu**	**7.29**	**228**	P		**Pn**	**12 51 10.2**	**+2.8**
CNGZ	**Carnagh Statio**	**7.31**	**207**	P		**Pn**	**12 51 09.9**	**+2.1**
TKGZ	**Te Karaka**	**7.42**	**209**	P		**Pn**	**12 51 13.2**	**+4.0**
TKGZ				S		**Sn**	**12 52 31.4**	**-1.5**
MWZ	**Matawai**	**7.47**	**212**	P		**Pn**	**12 51 10.3**	**+0.4**
MWZ				S		**Sn**	**12 52 31.6**	**-2.6**
OPRZ	**Ohinepanea**	**7.56**	**218**	P		**Pn**	**12 51 15.0**	**+3.9**
URZ	**Urewera**	**7.60**	**214**	P		**Pn**	**12 51 12.0**	**+0.3**
	8.0nm,0.3s,baz=284,slow=2.0,SNR=29							
URZ				S		**Sn**	**12 52 32.7**	**-4.6**
	18nm,0.4s,baz=172,slow=23,SNR=9.5							
URZ	**Urewera**	**7.60**	**214**	P		**Pn**	**12 51 12.5**	**+0.9**
URZ	**Urewera**	**7.60**	**214**	P		**Pn**	**12 51 12.3**	**+0.7**
URZ				S		**Sn**	**12 52 34.8**	**-2.5**
MARZ	**Manawahe**	**7.60**	**217**	P		**Pn**	**12 51 15.9**	**+4.2**
TGRZ	**Tauranga**	**7.63**	**220**	P		Pn	12 51 17.1	+5.0
RAGZ	**Rawiri**	**7.65**	**211**	P		**Pn**	**12 51 14.7**	**+2.2**
RAGZ				S		**Sn**	**12 52 37.7**	**-1.0**
RIGZ	**Rimuhau**	**7.68**	**209**	P		**Pn**	**12 51 14.9**	**+2.1**
WCZ	**Waipu Caves**	**7.79**	**238**	P		**Pn**	**12 51 17.9**	**+3.6**
PRGZ	**Paritu Road**	**7.82**	**207**	P		**Pn**	**12 51 16.9**	**+2.2**
KARZ	**Kaharoa**	**7.86**	**219**	P		**Pn**	**12 51 19.5**	**+4.3**
SNGZ	**Shannon Statio**	**7.92**	**211**	P		**Pn**	**12 51 20.6**	**+4.5**
SNGZ				S		**Sn**	**12 52 42.4**	**-2.9**
MUGZ	**Murupara**	**7.94**	**214**	P		**Pn**	**12 51 15.5**	**-0.8**
MUGZ				S		**Sn**	**12 52 42.3**	**-3.3**
MHGZ	**Mahia Peninsul**	**8.01**	**206**	P		**Pn**	**12 51 18.6**	**+1.3**
OUZ	**Omahuta**	**8.06**	**244**	P		**Pn**	**12 51 20.6**	**+2.7**
OUZ	**Omahuta**	**8.06**	**244**	P		**Pn**	**12 51 20.2**	**+2.3**
TOZ	**Tahuroa Road**	**8.06**	**223**	P		Pn	12 51 23.9	+5.8
PRRZ	**Plateau Road**	**8.14**	**216**	P		**Pn**	**12 51 21.1**	**+2.0**
RAHZ	**Arahi**	**8.15**	**211**	P		**Pn**	**12 51 22.5**	**+3.3**
MTHZ	**Maungataniwha**	**8.20**	**213**	P		**Pn**	**12 51 21.4**	**+1.4**
MTHZ				S		**Sn**	**12 52 51.9**	**-0.3**
MRHZ	**Matea Rd**	**8.39**	**214**	P		**Pn**	**12 51 24.7**	**+2.2**
NMHZ	**Naumai**	**8.42**	**212**	P		**Pn**	**12 51 24.7**	**+1.7**
NMHZ				S		**Sn**	**12 52 54.5**	**-3.0**
ARHZ	**Aropaoanui**	**8.47**	**210**	P		**Pn**	**12 51 26.5**	**+2.9**
BKZ	**Black Stump Fm**	**8.62**	**213**	P		**Pn**	**12 51 26.3**	**+0.7**
BKZ	**Black Stump Fm**	**8.62**	**213**	P		**Pn**	**12 51 25.9**	**+0.3**
BKZ				S		**Sn**	**12 52 58.3**	**-4.1**
WATZ	**Wairara**	**8.63**	**218**	P		**Pn**	**12 51 29.0**	**+3.1**
MCHZ	**McNeill Hill**	**8.75**	**211**	P		**Pn**	**12 51 30.1**	**+2.6**
RITZ	**Rihia Road**	**8.77**	**216**	P		**Pn**	**12 51 30.5**	**+2.7**
KATZ	**Kakaramea**	**8.85**	**217**	P		**Pn**	**12 51 33.2**	**+4.3**
KWHZ	**Kaweka Forest**	**8.86**	**212**	P		**Pn**	**12 51 30.5**	**+1.6**
KWHZ				S		**Sn**	**12 53 04.1**	**-4.2**
TMVZ	**Te Maari**	**8.96**	**216**	P		**Pn**	**12 51 32.0**	**+1.6**
NTVZ	**North Tongarir**	**8.96**	**216**	P		**Pn**	**12 51 32.6**	**+2.2**
KAHZ	**Kahuranaki**	**8.97**	**209**	P		**Pn**	**12 51 32.2**	**+1.7**
HIZ	**Hauiti**	**8.97**	**222**	P		**Pn**	**12 51 34.9**	**+4.4**
OTVZ	**Oturere**	**9.01**	**216**	P		**Pn**	**12 51 32.6**	**+1.5**
NNVZ	**North Ngauruho**	**9.01**	**216**	P		**Pn**	**12 51 33.5**	**+2.3**
WTVZ	**West Tongariro**	**9.01**	**217**	P		**Pn**	**12 51 33.3**	**+2.1**
SNVZ	**South Ngauruho**	**9.04**	**216**	P		**Pn**	**12 51 33.7**	**+2.1**
TWVZ	**Taurewa**	**9.06**	**217**	P		**Pn**	**12 51 33.9**	**+2.2**
KRHZ	**Kereru**	**9.06**	**211**	P		**Pn**	**12 51 32.0**	**+0.3**
MAVZ	**Mataitangi**	**9.14**	**216**	P		**Pn**	**12 51 33.9**	**+0.8**
WNVZ	**Waitahanui**	**9.17**	**216**	P		**Pn**	**12 51 35.4**	**+2.0**
PXZ	**Pawanui**	**9.18**	**208**	P		**Pn**	**12 51 34.5**	**+1.3**
PNHZ	**Pukenui**	**9.36**	**211**	P		**Pn**	**12 51 35.4**	**-0.4**
WPHZ	**Waipukurau**	**9.38**	**210**	P		**Pn**	**12 51 37.7**	**+1.7**
PRHZ	**Porangahau**	**9.47**	**208**	P		**Pn**	**12 51 38.0**	**+0.7**
TSZ	**Takapari Road**	**9.58**	**212**	P		**Pn**	**12 51 38.1**	**-0.7**
DVHZ	**Dannevirke**	**9.69**	**210**	P		**Pn**	**12 51 40.2**	**-0.1**
BFZ	**Birch Farm**	**9.98**	**208**	P		**Pn**	**12 51 44.8**	**+0.6**
BFZ	**Birch Farm**	**9.98**	**208**	P		**Pn**	**12 51 44.3**	**+0.1**
KHZ	**Kahutara**	**12.56**	**212**	P		**Pn**	**12 52 16.5**	**-3.0**
CTA	**Charters Tower**	**34.50**	**281**	P		**P**	**12 56 08.7**	**-0.3**
	10nm,0.7s,baz=90,slow=13,SNR=5.0 10nm,0.7s							
ASAR	**Alice Springs**	**43.46**	**268**	P		**P**	**12 57 22.2**	**-1.9**
	4.1nm,0.5s,baz=112,slow=8.0,SNR=5.0 4.1nm,0.5s							
WRA	**Warramunga Arr**	**44.59**	**274**	P		**P**	**12 57 31.0**	**-2.2**
	6.6nm,0.4s,baz=114,slow=8.0,SNR=6.6 6.6nm,0.4s							
NVAR	**Mina Array Bea**	**89.17**	**42**	P		P	13 02 24.6	+8.1
	0.9nm,0.7s,baz=258,slow=4.4,SNR=6.9 0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**122.51**	**313**	PKP		**PKiKP**	**13 08 17.1**	**+1.3**
	0.3nm,0.5s,baz=116,slow=1.9,SNR=5.9							
BVAR	**Borovoye Array**	**127.86**	**315**	PKP		**PKiKP**	**13 08 27.6**	**+1.2**
	0.6nm,0.3s,baz=122,slow=1.8,SNR=7.8							
FINES	**FINESS Array B**	**146.83**	**339**	PKPbc		**PKPab**	**13 09 04.0**	**+0.5**
	2.7nm,0.4s,baz=47,slow=3.9,SNR=25							
NB2	**NORSAR Subarra**	**150.43**	**351**	PKP		**PKiKP**	**13 09 14.4**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=18,slow=4.1							
NOA	**NORSAR Array B**	**150.43**	**351**	PKPbc		**PKiKP**	**13 09 14.2**	**+2.0**
	comp=Z,1.0nm,0.9s,baz=59,slow=1.2,SNR=4.9							
HFS	**Hagfors**	**150.93**	**348**	PKPbc		**PKiKP**	**13 09 15.3**	**+2.0**
	comp=Z,1.0nm,0.4s,baz=142,slow=5.3,SNR=11							
BRTR	**Keskin Array B**	**153.72**	**296**	PKPbc		**PKiKP**	**13 09 20.6**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=149,slow=3.1,SNR=5.1							

*DJA **08** 13:23:10.7±0.2,0.°S±2.°×12.°5E±.°,h10km,M4.4/27,mB5.0/6, mb4.8/12, MLv4.2/27, Mw(mB)4.3/6*

*IDC **08** 13:23:15.0±2.9,0.42S×125.07E,h58km±29km,mb3.3/4, mbtmp3.7/6, ML4.0/3, MS2.9/1, Error ellipse: s-maj=23.0km s-min=20.4km az=41.0*

ISC 08 13:23:13.5±1.0,0.30S±0.07×125.30E±0.07,h57km,n18, σ1.994/19,mb3.5/4,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MNI	**Manado**	**1.79**	**345**	P		**Pn**	**13 23 41.1**	**-1.1**
SANI	**Sanana**	**1.87**	**158**	P		**Pn**	**13 23 41.3**	**-1.9**
LUWI	**Luwuk**	**2.63**	**254**	P		**Pn**	**13 23 54.6**	**+1.0**
NLAI	**Namlea**	**3.43**	**148**	P		**Pn**	**13 24 03.3**	**-1.2**
MRSI	**Marisa**	**3.44**	**283**	P		**Pn**	**13 24 01.4**	**-3.3**
APSI	**Ampana**	**3.70**	**261**	P		**Pn**	**13 24 08.5**	**+0.3**
KRAI	**Karang Ratu**	**4.31**	**134**	P		**Pn**	**13 24 17.9**	**+1.3**
MPSI	**Mapaga**	**5.43**	**277**	P		**Pn**	**13 24 33.2**	**+1.2**
PCI	**Palu**	**5.49**	**264**	P		**Pn**	**13 24 35.8**	**+3.0**
	0.4nm126nm,0.8s							
SIJI	**Sorong**	**6.00**	**95**	P		Pn	13 24 45.5	+5.7
	1.4nm,0.3s,baz=132,slow=23,SNR=9.6 3.4nm,0.3s							
TTSI	**Tana Toraja**	**6.11**	**243**	P		**Pn**	**13 24 41.5**	**+0.1**
	0.2nm33nm,0.5s							
SPSI	**Sidrap Palu**	**6.61**	**237**	P		**Pn**	**13 24 48.6**	**+0.4**
	0.2nm735nm53nm,0.5s							
KAPI	**Kappang**	**7.25**	**230**	P		**Pn**	**13 24 54.8**	**-2.2**
	1.4nm,0.3s,baz=274,slow=4.5,SNR=5.1							
KAPI				S		**Sn**	**13 26 14.1**	**-3.8**
	3.6nm,0.4s,baz=99,slow=19,SNR=1.5							
KAPI				LR		LR	13 28 32.8	
	comp=Z,90nm,19.7s,baz=24,slow=45 4.3nm,0.5s							
BATI	**Baumata**	**9.97**	**189**	P		**Pn**	**13 25 33.9**	**-0.4**
	7.2nm,0.3s,baz=352,slow=9.3,SNR=4.4							
WRA	**Warramunga Arr**	**21.43**	**156**	P		**P**	**13 27 56.5**	**-0.6**
	0.5nm,0.6s,baz=338,slow=11,SNR=6.7 0.5nm,0.6s							
ASAR	**Alice Springs**	**24.68**	**161**	P		**P**	**13 28 30.6**	**+1.2**
	0.3nm,0.4s,baz=340,slow=8.7,SNR=5.6							
ASAR				PcP		**PcP**	**13 32 07.7**	**+2.1**
	0.2nm,0.4s,baz=346,slow=2.1,SNR=5.4 0.3nm,0.4s							
MKAR	**Makanchi Array**	**60.09**	**327**	P		**P**	**13 33 14.8**	**-0.1**
	1.1nm,0.5s,baz=122,slow=8.5,SNR=19 1.1nm,0.5s							
KURBB	**Kurchatov Arra**	**64.39**	**329**	P		**P**	**13 33 45.7**	**+2.1**
	0.6nm,0.5s,baz=134,slow=6.7,SNR=20 0.6nm,0.5s							

IDC 08 13:27:16.7±1.8,3.92N×123.41E,h0km,mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=304.0km s-min=20.6km az=63.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**26.03**	**156**	P		P	13 32 52.0	+0.2
	0.7nm,0.4s,baz=335,slow=9.5,SNR=19 0.7nm,0.4s							
ASAR	**Alice Springs**	**29.26**	**160**	P		P	13 33 20.5	-0.2
	0.3nm,0.4s,baz=334,slow=7.3,SNR=7.1 0.3nm,0.4s							
MKAR	**Makanchi Array**	**55.55**	**327**	P		P	13 36 54.9	+1.0
	0.3nm,0.3s,baz=126,slow=8.3,SNR=8.4 0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**59.83**	**329**	P		P	13 37 22.9	-1.0
	0.5nm,0.6s,baz=136,slow=6.2,SNR=8.5 0.5nm,0.6s							

*SSNC **08** 13:27:21.9±0.7,18.°94N×81.°03W,h12km±23km, MD3.2, ML2.9, Presumed earthquake*

*JSN **08** 13:27:22.0±1.3,19.°35N×80.°84W,h15km±999km, MD4.3, MW4.2, Presumed earthquake*

ISC 08 13:27:22.5±2.4,19.0N±0.1×81.0W±0.1,h35km,n7,σ0.924/8, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LCCY	**Blossom Villag**	**1.09**	**51**	*e*P		**Pn**	**13 27 41.3**	**+0.1**
LCCY				*e*S		**Sn**	**13 27 54.9**	**-0.2**
LCCY				IAML			13 28 01.9	
	comp=N,174nm,0.5s							
LCCY				IAML			13 28 05.8	
	comp=E,325nm,0.8s							
CBCY	**The Bluff, Cay**	**1.37**	**56**	*e*P		**Pn**	**13 27 45.0**	**-0.1**
CBCY				*e*S		**Sn**	**13 28 02.5**	**+0.4**
CBCY				IAML			13 28 06.1	
	comp=N,160nm,0.3s							
CBCY				IAML			13 28 06.4	
	comp=E,202nm,0.4s							
MGV	**Manicaragua**	**3.25**	**16**	*e*P		**Pn**	**13 28 10.8**	**-0.2**
MTDJ	**Mount Denham**	**3.35**	**102**	*e*P		**Pn**	**13 28 12.5**	**+0.1**
CCCC	**Cccc**	**3.74**	**53**	*e*P	

PB11	**IPOC Station P**	**2.14**	**311**	*e*P		**Pn**	**13 46 56.2**	**-0.7**
PB11				*i* S		**Sn**	**13 47 24.8**	**-1.2**
PB11	**IPOC Station P**	**2.14**	**311**	*e*P		**Pn**	**13 46 56.1**	**-0.7**
PB11				*e*S		**Sn**	**13 47 25.4**	**-0.6**
PB11				IAML			13 47 27.0	
	comp=Z,403nm,0.4s							
PB11	**IPOC Station P**	**2.14**	**311**	Pg		**Pn**	**13 46 56.2**	**-0.7**
PB11				Sg		**Sn**	**13 47 25.1**	**-0.9**
PB06	**IPOC Station P**	**2.14**	**225**	*e*P		**Pn**	**13 46 56.9**	**+0.1**
PB06				*e*S		**Sn**	**13 47 26.8**	**+0.8**
PB06	**IPOC Station P**	**2.14**	**225**	Pg		**Pn**	**13 46 57.0**	**+0.1**
MOCB	**Mochara**	**2.15**	**92**	Pg		**Pn**	**13 46 56.2**	**-1.1**
MOCB				Sg		**Sn**	**13 47 24.2**	**-2.5**
MOCB				IAML			13 47 25.9	
	comp=Z,308nm,1.1s							
TA01	**Diego Aracena**	**2.18**	**286**	*e*P		**Pn**	**13 46 56.3**	**-0.8**
TA01				*i* S		**Sn**	**13 47 24.8**	**-1.7**
TA01				IAML			13 47 26.4	
	comp=E,559nm,0.3s							
TA01	**Diego Aracena**	**2.18**	**286**	*e*P		**Pn**	**13 46 56.4**	**-0.8**
TA01				*e*S		**Sn**	**13 47 25.7**	**-0.8**
TA01				IAML			13 47 28.0	
	comp=Z,249nm,0.5s							
YJA	**Yavi**	**2.47**	**114**	*e*P		**Pn**	**13 47 00.7**	**-0.3**
YJA				*e*S		Sn	13 47 21.7	-12
YJA	**Yavi**	**2.47**	**114**	Pg		**Pn**	**13 47 00.4**	**-0.6**
SOEO	**Opoqueri**	**2.61**	**1**	Pg		**Pn**	**13 47 02.8**	**+0.1**
PB05	**IPOC Station P**	**2.67**	**231**	*e*P		**Pn**	**13 47 02.4**	**-0.7**
PB05				*e*S		**Sn**	**13 47 36.1**	**-1.1**
PB16	**IPOC Station P**	**3.19**	**332**	*e*P		**Pn**	**13 47 10.0**	**-0.1**
PB16				*i* S		**Sn**	**13 47 48.9**	**-0.7**
PB16				IAML			13 47 51.3	
	comp=E,111nm,0.4s							
PB16	**IPOC Station P**	**3.19**	**332**	*e*P		**Pn**	**13 47 10.2**	**+0.2**
PB16				*e*S		**Sn**	**13 47 49.7**	**+0.2**
PB16	**IPOC Station P**	**3.19**	**332**	Pg		**Pn**	**13 47 10.4**	**+0.4**
SALTA		**3.37**	**154**	*e*P		**Pn**	**13 47 12.8**	**+0.7**
PB12	**IPOC Station P**	**3.40**	**318**	*e*P		**Pn**	**13 47 10.2**	**-2.0**
PB12				*e*S		**Sn**	**13 47 51.0**	**-2.4**
AOEA	**Aiquile**	**3.93**	**41**	Pg		**Pn**	**13 47 18.3**	**-0.9**
PB14	**IPOC Station P**	**4.11**	**213**	*e*P		**Pn**	**13 47 20.6**	**-0.8**
PB14				*e*S		**Sn**	**13 48 07.4**	**-2.6**
SLA	**San Lorenzo**	**4.18**	**148**	*e*P		**Pn**	**13 47 22.2**	**0.0**
SLA				*e*S		**Sn**	**13 48 13.4**	**+2.0**
BBOJ	**La Paz, Jacaqu**	**4.19**	**357**	Pg		**Pn**	**13 47 23.7**	**+0.9**
SOEJ	**Jacaque**	**4.19**	**357**	Pg		**Pn**	**13 47 23.8**	**+1.0**
BBOE	**La Paz, Chanca**	**4.35**	**360**	Pg		**Pn**	**13 47 25.7**	**+0.9**
BBOD	**La Paz, Gloria**	**4.56**	**352**	Pg		**Pn**	**13 47 28.1**	**+0.5**
LPAZ	**La Paz**	**4.87**	**358**	P		**Pn**	**13 47 31.6**	**-0.2**
	comp=E,37nm,0.4s,baz=204,slow=6.0,SNR=81							
LPAZ	**La Paz**	**4.87**	**358**	*e*P		**Pn**	**13 47 32.3**	**+0.5**
LPAZ	**La Paz**	**4.87**	**358**	Pg		**Pn**	**13 47 31.9**	**+0.2**
BBOB	**La Paz, Bander**	**5.02**	**358**	Pg		**Pn**	**13 47 33.6**	**+0.1**
FSA	**Cafayete**	**5.23**	**160**	*e*P		**Pn**	**13 47 36.8**	**+0.8**
SIV	**San Ignacio**	**8.31**	**53**	P		Pn	13 48 11.9	-4.8
	comp=E,8.2nm,0.4s,baz=238,slow=12,SNR=47							
SIV				S		Sn	13 49 36.4	-13
	comp=E,6.3nm,0.9s,baz=322,slow=21,SNR=4.6							
CPUP	**Villa Florida**	**10.99**	**120**	P		**Pn**	**13 48 49.6**	**-2.3**
	comp=E,1.4nm,0.5s,baz=296,slow=15,SNR=5.6							
PLCA	**Paso Flores**	**19.61**	**186**	P		**P**	**13 50 35.2**	**+0.3**
	comp=E,1.6nm,0.9s,baz=5.2,slow=11,SNR=4.3							
PDAR	**Pinedale Array**	**74.29**	**329**	P		**P**	**13 57 39.5**	**+0.8**
	comp=E,0.2nm,0.5s,baz=125,slow=9.0,SNR=5.8							
	comp=E,0.2nm,0.5s							
YKA	**Yellowknife Ar**	**91.19**	**340**	P		**P**	**13 59 05.3**	**+0.3**
	comp=E,0.7nm,0.8s,baz=135,slow=3.7,SNR=12							
	comp=E,0.7nm,0.8s							
MKAR	**Makanchi Array**	**144.85**	**36**	PKP		**PKPab**	**14 05 36.3**	**+0.2**
	comp=E,1.1nm,0.7s,baz=312,slow=3.1,SNR=14							

*IDC **08** 14:05:52.1±1.3,26.°40S×27.°60E, h0km, mb4.0/3, mbtmp4.1/7, ML4.2/4, Error ellipse: s-maj=27.5km s-min=19.0km az=116.0*

ISC 08 14:05:52.4±1.0, 26.°45S±0.°06×27.°5E±0.°1, h5km, n19, σ1§65/21, mb3.9/3, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.24**	**309**	Pn	**Pn**	**14 06 31.9**	**+1.7**
LBTB				Pg	**Pb**	**14 06 33.2**	**-0.2**
	87nm,0.3s,baz=127,slow=15,SNR=834						
	176nm,0.3s,baz=125,slow=17,SNR=249						
LBTB	**Lobatse**	**2.24**	**309**	P	**Pn**	**14 06 32.0**	**+1.7**
BOSA	**Boshof**	**2.94**	**222**	Pn	**Pn**	**14 06 40.7**	**+0.8**
	14nm,0.3s,baz=44,slow=12,SNR=435						
BOSA				Pg	**Pb**	**14 06 47.6**	**+2.3**
	13nm,0.3s,baz=45,slow=16,SNR=26						
BOSA				Lg	Lg	14 07 23.3	
	28nm,0.3s,baz=319,slow=20,SNR=10						
	40nm,0.3s						
BOSA	**Boshof**	**2.94**	**222**	P	**Pn**	**14 06 40.8**	**+1.0**
LPHEP	**Lephephe**	**3.42**	**334**	P	**Pn**	**14 06 47.9**	**+1.5**
MREMI	**Moremi**	**3.87**	**359**	P	**Pn**	**14 06 52.9**	**+0.3**
KHWEE	**KHWEE**	**4.86**	**337**	P	**Pn**	**14 07 07.5**	**+1.1**
BROLN	**Tlhalogang**	**5.33**	**358**	P	**Pn**	**14 07 13.2**	**+0.4**
SOOWA	**Sowa**	**5.98**	**348**	P	**Pn**	**14 07 22.6**	**+0.9**
KGCAE	**Kacgae**	**6.00**	**305**	P	**Pn**	**14 07 24.0**	**+1.9**
LKGWB	**Lokgwabe**	**6.15**	**291**	P	Pn	14 07 18.1	-5.9
GRTLG	**Ghanzi**	**7.67**	**310**	P	**Pn**	**14 07 44.9**	**0.0**
SUR	**Sutherland**	**8.30**	**223**	Pn	**Pn**	**14 07 54.0**	**+0.4**
	3.1nm,0.3s,baz=59,slow=12,SNR=40						
SUR				Sn	**Sn**	**14 09 23.3**	**-4.6**
	3.8nm,0.3s,baz=324,slow=23,SNR=7.0						
SUR				Lg	Lg	14 10 14.1	
	4.2nm,0.3s,baz=314,slow=12,SNR=6.1						
	13nm,0.5s						
KSANE	**Kasane**	**8.88**	**345**	P	**Pn**	**14 08 01.8**	**+0.3**
LSZ	**Lusaka**	**11.14**	**3**	Pn	**Pn**	**14 08 30.2**	**-2.3**
	1.1nm,0.3s,baz=190,slow=13,SNR=8.2						
LSZ				Sn	Sn	14 10 28.6	-8.9
	0.8nm,0.3s,baz=263,slow=6.5,SNR=3.9						
LSZ				Lg	Lg	14 11 41.1	
	0.9nm,0.3s,baz=305,slow=3.1,SNR=4.2						
	2.8nm,0.3s						
ESDC	**Sonseca Array**	**72.04**	**335**	P	**P**	**14 17 17.7**	**+0.4**
	0.6nm,0.6s,baz=154,slow=5.8,SNR=6.5						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**87.59**	**359**	P	**P**	**14 18 41.4**	**+0.4**
	3.2nm,1.0s,baz=174,slow=4.2,SNR=4.4						
	3.2nm,1.0s						
MKAR	**Makanchi Array**	**88.09**	**34**	P	**P**	**14 18 43.7**	**-0.2**
	0.4nm,0.7s,baz=235,slow=3.2,SNR=4.5						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**148.94**	**301**	PKPbc	**PKiKP**	**14 25 43.7**	**+0.5**
	0.2nm,0.5s,baz=56,slow=1.0,SNR=2.6						

*KRNET **08** 14:11:50.6±0.1, 41.°03N×72.°04E, h15km, mb2.6*
*ISU **08** 14:11:50, 41.°05N×72.°07E, h12km*
*SOME **08** 14:11:52.2, 41.°10N×72.°05E, h10km*
*NNC **08** 14:11:53.4±2.1, 41.°13N×72.°07E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=18.8km s-min=7.5km az=179.0*

ISC 08 14:11:50.8±1.2, 41.°04N±0.°03×72.°13E±0.°02, h3km±11km, n25, σ1§15/42, 9C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSNS	**Kasansay**	**0.47**	**284**	P	**Pg**	**14 12 00.3**	**+0.4**
KSNS				S	**Sg**	**14 12 06.8**	**+0.7**
TSTA	**Tashata**	**0.54**	**150**	P	**Pg**	**14 12 01.5**	**+0.4**
TSTA				S	**Sb**	**14 12 10.5**	**-0.5**
ARK	**Arkit**	**0.76**	**351**	⇓*i*P	**Pg**	**14 12 05.3**	**-0.2**
ARK				⇓*i*S	**Sg**	**14 12 16.2**	**+0.8**
SALK	**Salom-Alik**	**1.29**	**97**	⇓*i*P	**Pn**	**14 12 16.2**	**+0.3**
SALK				⇓*i*S	**Sn**	**14 12 34.6**	**+0.8**
SFK	**Sufi-Kurgan**	**1.47**	**134**	⇓*i*P	**Pb**	**14 12 18.6**	**-0.3**
SFK				⇓*i*S	**Sn**	**14 12 39.1**	**+0.9**
MNAS	**Manas**	**1.47**	**11**	⇓*i*P	**Pn**	**14 12 18.6**	**+0.3**
MNAS				⇓*i*S	**Sn**	**14 12 39.0**	**+0.9**
DRK	**Karamyk**	**1.58**	**189**	⇑*i*P	**Pn**	**14 12 19.6**	**-0.4**
DRK				⇑*i*S	**Sn**	**14 12 40.7**	**-0.4**
CHRV	**Charvak**	**1.75**	**291**	S	**Sg**	**14 12 48.1**	**+1.2**
ARLS	**Aral**	**1.84**	**63**	⇑*i*P	**Pg**	**14 12 25.8**	**-0.3**
ARLS				⇑*i*S	**Sg**	**14 12 51.5**	**+1.6**
MRKS	**Merke**	**1.89**	**25**	Pg	**Pg**	**14 12 27.8**	**+0.9**
	4.2nm,0.3s						
MRKS				Lg	Lg	14 12 53.4	
	26nm,0.4s						
MRKS	**Merke**	**1.89**	**25**	*e*P	**Pg**	**14 12 27.9**	**+0.9**
	4.2nm,0.3s						
MRKS				*e*S	**Sg**	**14 12 53.4**	**+2.0**
	26nm,0.4s						
IUG	**Iuzhnay**	**1.92**	**306**	*e*P	**Pb**	**14 12 27.1**	**+0.5**
	16nm,0.3s						
IUG				*e*S	**Sg**	**14 12 52.0**	**-0.5**
	73nm,0.7s						
EKS2	**Erkin-Say**	**2.03**	**37**	⇑*i*P	**Pb**	**14 12 28.4**	**0.0**
EKS2				⇑*i*S	**Sg**	**14 12 55.8**	**-0.3**
UCH	**Uchtor**	**2.14**	**56**	⇓*i*P	**Pb**	**14 12 30.2**	**-0.3**
UCH				⇓*i*S	**Sg**	**14 12 59.1**	**-0.6**
AAK	**Ala-Archa**	**2.38**	**47**	⇑Pg	**Pb**	**14 12 35.1**	**+0.8**
	4.0nm,1.0s						
AAK				⇑Lg	Lg	14 13 08.6	
	3.8nm,0.5s						
KK31	**Karatay Array**	**2.38**	**330**	⇑Pn	**Pb**	**14 12 33.1**	**-1.3**
	1.3nm,0.3s,baz=133,slow=13,SNR=36						
KK31				Lg	Lg	14 13 04.0	
	4.9nm,0.4s,baz=143,slow=25,SNR=8.1						
BRLS	**Borolday**	**2.62**	**320**	Pg	**Pb**	**14 12 37.5**	**-0.9**
	3.3nm,0.4s						
BRLS				Lg	Lg	14 13 09.9	
	9.0nm,0.4s						
BRLS	**Borolday**	**2.62**	**320**	*e*P	**Pb**	**14 12 37.5**	**-0.9**
	3.3nm,0.4s						
BRLS				*e*S	**Sb**	**14 13 09.9**	**-1.1**
	9.0nm,0.4s						
KST	**Kastek**	**3.48**	**54**	Pg	**Pg**	**14 12 57.1**	**-0.5**
	0.5nm,0.1s						
KST				Lg	Lg	14 13 43.3	
	4.7nm,0.5s						
KST	**Kastek**	**3.48**	**54**	*e*P	**Pg**	**14 12 57.1**	**-0.5**
	0.5nm,0.1s						
KST				*e*S	**Sg**	**14 13 43.3**	**+0.6**
	4.7nm,0.5s						
DGS	**Degeres**	**3.49**	**50**	Pg	**Pg**	**14 12 56.3**	**-1.4**
	1.7nm,0.6s						
DGS				Lg	Lg	14 13 41.5	
	5.0nm,0.6s						
DGS	**Degeres**	**3.49**	**50**	*e*P	**Pg**	**14 12 56.2**	**-1.4**
	1.7nm,0.6s						
DGS				*e*S	**Sg**	**14 13 41.5**	**-1.3**
	5.0nm,0.6s						
KRBS	**Karabastau**	**3.73**	**44**	Pg	**Pg**	**14 13 01.2**	**-1.1**
	0.3nm,0.2s						
KRBS				Lg	Lg	14 13 50.0	
	3.9nm,0.4s						
KRBS	**Karabastau**	**3.73**	**44**	*e*P	**Pg**	**14 13 01.2**	**-1.1**
	0.3nm,0.2s						
KRBS				*e*S	**Sg**	**14 13 50.0**	**-0.6**
	3.9nm,0.4s						
BTLS	**Baital**	**4.24**	**19**	*e*P	**Pb**	**14 13 09.0**	**+3.1**
	1.6nm,0.4s						
BTLS				*e*S	**Sg**	**14 14 03.4**	**-3.4**
	1.8nm,0.5s						

*IDC **08** 14:16:28.7±2.5, 16.°14N×120.°17E, h109km±24km, mb3.4/12, mbtmp3.8/13, Error ellipse: s-maj=46.2km s-min=15.5km az=60.0*

ISC 08 14:16:18.9±0.8, 16.°42N±0.°09×120.°5E±0.°3, h19km, n13, σ1§17/16, mb4.0/11, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**2.34**	**170**	P	**Pg**	**14 17 04.5**	**+0.6**
	349nm,0.4s,baz=164,slow=9.7,SNR=7.6						
TGY				S	**Sg**	**14 17 35.7**	**+1.4**
	1μm,0.6s,baz=325,slow=15,SNR=7.3						
CMAR	**Chiang Mai Arr**	**20.69**	**279**	P	**P**	**14 20 57.5**	**-0.6**
	0.6nm,0.6s,baz=98,slow=8.0,SNR=7.8						
	0.6nm,0.6s						
LZDM	**Lanzhou Array**	**24.56**	**326**	P	**P**	**14 21 38.2**	**+0.2**
	0.3nm,0.3s,baz=179,slow=6.7,SNR=4.6						
	0.3nm,0.3s						
SONM	**Songino Array**	**33.42**	**343**	P	**P**	**14 22 58.4**	**+1.9**
	0.3nm,0.7s,baz=161,slow=6.6,SNR=2.4						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**38.60**	**159**	P	**P**	**14 23 38.3**	**-2.7**
	0.2nm,0.5s,baz=338,slow=8.4,SNR=1.7						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**41.93**	**161**	P	**P**	**14 24 07.6**	**-1.0**
	0.3nm,0.5s,baz=337,slow=7.1,SNR=7.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**43.77**	**322**	P	**P**	**14 24 22.3**	**-1.0**
	0.4nm,0.3s,baz=119,slow=9.9,SNR=8.8						
MKAR				PcP	**PcP**	**14 26 09.4**	**-0.4**
	0.8nm,0.8s,baz=94,slow=4.9,SNR=7.2						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**47.86**	**325**	P	**P**	**14 24 56.0**	**+0.5**
	2.1nm,0.7s,baz=121,slow=8.5,SNR=18						
KURBB				PcP	**PcP**	**14 26 23.5**	**-0.5**
	0.3nm,0.3s,baz=118,slow=4.6,SNR=2.7						
	2.1nm,0.7s						
BVAR	**Borovoye Array**	**53.45**	**325**	P	**P**	**14 25 38.0**	**+0.3**
	1.6nm,0.7s,baz=117,slow=8.5,SNR=5.8						
	1.6nm,0.7s						
ARCES	**ARCESS Array B**	**76.50**	**339**	P	**P**	**14 28 07.5**	**+0.2**
	4.2nm,0.9s,baz=96,slow=5.3,SNR=3.7						
	4.2nm,0.9s						
SPITS	**Spitsbergen Ar**	**76.91**	**348**	P	**P**	**14 28 10.2**	**+0.7**
	4.0nm,0.7s,baz=138,slow=9.3,SNR=4.2						
	4.0nm,0.7s						
FINES	**FINESS Array B**	**77.84**	**331**	P	**P**	**14 28 14.0**	**-1.0**
	0.6nm,0.4s,baz=57,slow=7.0,SNR=11						
	0.6nm,0.4s						
NOA	**NORSAR Array B**	**84.78**	**333**	P	**P**	**14 28 51.6**	**-0.3**
	0.6nm,0.6s,baz=76,slow=7.7,SNR=1.4						
	0.6nm,0.6s						

IDC 08 14:16:44.5±1.4, 2.°85S×140.°73E, h0km, mb3.6/3, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=25.0km s-min=7.8km az=95.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.33**	**356**	Pg	Pg	14 16 51.3	+0.4
	762nm,0.3s,baz=171,slow=9.4,SNR=3767						
JAY				Lg	Lg	14 16 55.2	
	2μm,0.3s,baz=80,slow=12,SNR=58						
JAY				LR	LR	14 17 00.3	
	comp=Z,348nm,20.9s,baz=52,slow=48						
WRA	**Warramunga Arr**	**18.10**	**200**	P	Pn	14 20 57.7	+0.1
	0.5nm,0.3s,baz=22,slow=12,SNR=20						
	2.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.18**	**223**	P	P	14 21 30.6	-1.1
	2.6nm,0.8s,baz=52,slow=12,SNR=1.8						
	2.6nm,0.8s						
ASAR	**Alice Springs**	**21.72**	**197**	P	P	14 21 38.0	+0.4
	1.5nm,0.6s,baz=29,slow=9.7,SNR=17						
	1.5nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**33.21**	**49**	T	T	14 58 08.5	
	baz=232,slow=75,SNR=38						
H11S2	**WAKE ISLAND Hy**	**33.23**	**49**	T	T	14 58 06.3	
	baz=232,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**33.23**	**49**	T	T	14 58 10.5	
	baz=232,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**34.11**	**48**	T	T	14 59 22.1	
	baz=228						
H11N2	**WAKE ISLAND Hy**	**34.12**	**48**	T	T	14 59 22.3	
	baz=228						
H11N3	**WAKE ISLAND Hy**	**34.12**	**48**	T	T	14 59 24.9	
	baz=228						
CMAR	**Chiang Mai Arr**	**46.26**	**299**	P	P	14 25 11.1	-1.0
	0.4nm,0.3s,baz=102,slow=9.2,SNR=4.3						
	0.4nm,0.3s						

IDC 08 14:20:46.9±6.4, 7.°85S×128.°66E, h194km±64km, mb3.0/1, mbtmp3.5/4, Error ellipse: s-maj=83.2km s-min=23.2km az=54.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.46**	**244**	P	Pn	14 22 06.5	-0.6
	58nm,0.4s,baz=240,slow=2.1,SNR=24						
BATI				S	Sn	14 23 05.9	-4.6
	8.0nm,0.3s,baz=0.0,slow=3.0,SNR=1.9						
FITZ	**Fitzroy Crossi**	**10.60**	**196**	P	Pn	14 23 15.3	+1.4
	1.6nm,0.6s,baz=13,slow=13,SNR=7.1						
FITZ				S	Sn	14 25 07.2	-5.0
	1.3nm,0.3s,baz=270,slow=20,SNR=1.6						
WRA	**Warramunga Arr**	**13.22**	**156**	P	Pn	14 23 47.8	+0.5
	0.6nm,1.0s,baz=336,slow=15,SNR=11						
WRA				S	Sn	14 26 10.0	-4.8
	1.3nm,0.4s,baz=329,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.51**	**163**	P	P	14 24 25.2	-1.6
	1.0nm,0.8s,baz=339,slow=9.2,SNR=4.9						
ASAR				S	S	14 27 29.5	-0.1
	0.3nm,0.4s,baz=345,slow=25,SNR=6.0						

MKAR	**Makanchi Array**	**68.22**	**328**	P		P		14 31 26.6	+0.1
	0.2nm,0.5s,baz=126,slow=8.0,SNR=7.1								
	0.2nm,0.5s								

*SOME **08** 14:25:11.5, 43.°27N×80.°42E, h10km*
*NNC **08** 14:25:12.4±1.1, 43.°30N×80.°32E, h0km, mb3.6, mpv2.8, Error ellipse: s-maj=7.3km s-min=4.6km az=140.0*

ISC 08 14:25:10.9±3.1, 43.°25N±0.°08×80.°4E±0.°1, h1km±15km, n14, σ0§42/22, 4C, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**0.69**	**277**	⇑P	**Pg**	**14 25 24.0**	**-0.1**
	0.6nm,0.3s						
PDGK				⇑S	**Sg**	**14 25 32.9**	**-0.2**
	14nm,0.5s						
SHLS	**Shalkode**	**0.71**	**263**	P	Pg	14 25 19.8	-4.8
	28nm,0.1s						
SHLS				S	Sg	14 25 25.9	-8.0
	85nm,0.2s						
SHLS	**Shalkode**	**0.71**	**263**	*e*P	Pg	14 25 19.8	-4.8
	28nm,0.1s						
SHLS				*e*S	Sg	14 25 25.9	-8.0
	85nm,0.2s						
UZB	**Uzynbulak**	**1.04**	**265**	P	**Pg**	**14 25 30.7**	**0.0**
	4.8nm,0.1s						
UZB				S	**Sg**	**14 25 44.4**	**+0.2**
	8.5nm,0.2s						
UZB	**Uzynbulak**	**1.04**	**265**	*e*P	**Pg**	**14 25 30.7**	**0.0**
	4.8nm,0.1s						
UZB				*e*S	**Sg**	**14 25 44.4**	**+0.2**
	8.5nm,0.2s						
DJR	**Jarkent**	**1.18**	**337**	P	**Pg**	**14 25 33.3**	**-0.1**
	2.2nm,0.1s						
DJR				S	**Sg**	**14 25 49.2**	**+0.5**
	2.5nm,0.1s						
DJR	**Jarkent**	**1.18**	**337**	*e*P	**Pg**	**14 25 33.3**	**-0.1**
	2.2nm,0.1s						
DJR				*e*S	**Sg**	**14 25 49.2**	**+0.5**
	2.5nm,0.1s						
KPKS	**Kokpek**	**1.29**	**280**	P	**Pg**	**14 25 35.2**	**-0.4**
	0.2nm,0.1s						
KPKS				S	**Sg**	**14 25 52.3**	**0.0**
	7.7nm,0.3s						
KPKS	**Kokpek**	**1.29**	**280**	*e*P	**Pg**	**14 25 35.2**	**-0.4**
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	**14 25 52.4**	**0.0**
	7.7nm,0.3s						
KNOS	**Konyrlen**	**1.43**	**321**	P	Pn	14 25 37.9	-0.3
	2.6nm,0.2s						
KNOS				S	**Sb**	**14 25 56.8**	**-0.5**
	3.0nm,0.2s						
SATY	**Saty**	**1.50**	**263**	P	**Pn**	**14 25 39.0**	**0.0**
	1.8nm,0.1s						
SATY				S	**Sb**	**14 25 59.0**	**-0.1**
	23nm,0.6s						
KOTS	**Kotyrbulak**	**2.43**	**271**	Pg	**Pb**	**14 25 55.6**	**+0.1**
	1.4nm,0.2s						
KOTS				Lg	Lg	14 26 27.2	
	7.5nm,0.5s						
KOTS	**Kotyrbulak**	**2.43**	**271**	*e*P	**Pb**	**14 25 55.6**	**+0.1**
	1.4nm,0.2s						
KOTS				*e*S	**Sb**	**14 26 27.2**	**+1.3**
	7.5nm,0.5s						
KNDC	**Almaty**	**2.53**	**270**	⇑Pg	**Pb**	**14 25 56.9**	**-0.3**
	8.8nm,0.3s						
KNDC				⇑Lg	Lg	14 26 25.0	
	7.7nm,0.6s						

*PTWC **08** 14:32:55, 59.°20S×24.°10W, Mwp6.2/19, SOUTH SANDWICH ISLANDS REGION*
*NEIC **08** 14:32:57.3, 60.°01S×25.°12W, h18km, Moment Tensor Solution. Duration: 52 Moment tensor: Scale 10^18 Nm; Mrr0.75; Mθθ-0.04; Mφφ-0.71; Mrθ0.14; Mθφ-0.32; Mφr1.05; Fault plane solution: Mo1.33000×10^18 NP1: φs215.16000°, δ19.82000°, λ113.74000°. NP2: φs10.10000°, δ71.91000°, λ81.74000°. Principal axes: T 1.3000, Plg62.0000°, Azm268.0000°; N 0.0566, Plg8.0000°, Azm13.0000°; P -1.3566, Plg26.0000°, Azm107.0000°;*
*NEIC **08** 14:32:57.3, 60.°01S×25.°52W, h18km*
*IDC **08** 14:32:57.1±0.4, 59.°65S×25.°73W, h0km, mb4.9/13, mbtmp4.8/13, MS5.7/38, Error ellipse: s-maj=20.5km s-min=14.1km az=51.0*
*IPGP **08** 14:32:57.0, 60.°02S×25.°48W, h17km, Mw6.1, Fault plane solution: NP1:φs226.00000°, δ30.00000°, λ125.00000°. NP2:φs7.00000°, δ65.00000°, λ71.00000°.*
*NEIC **08** 14:32:58.6±1.9, 59.°9S±0.°1×25.°6W±0.°2, h16km±1km, mb5.6/84, Ms_20 5.9/552, Mwb5.8/127, Mww6.0/46, Error ellipse: s-maj=21.6km s-min=10.9km az=214.0*
*ISC-PP **08** 14:32:58, 59.°92S×25.°55W, h7km±2km, Mwppsm6.3, Moment Tensor Solution. s27 Moment tensor: Scale 10^18 Nm; Mrr0.69±.25; Mθθ-0.41±.26; Mφφ-0.24±.17; Mrθ-0.10±.20; Mθφ-0.09±.21; Mφr0.36±.31; Fault plane solution: Mo3.39000×10^18 NP1:φs139.20000°, δ44.90000°, λ105.90000°. NP2:φs297.30000°, δ47.20000°, λ74.80000°.*
*MOS **08** 14:33:00.6±1.5, 59.°70S×25.°92W, h28km, mb5.4/12, MS5.7/11 Error ellipse: s-maj=21.9km s-min=11.7km az=105.7*
*GFZ **08** 14:33:01.8, 59.°79S×25.°79W, h24km, MW6.0, Moment Tensor Solution. s36 Moment tensor: Mrr1.02; Mθθ-0.11; Mφφ

PMSA LR LR 14 43 44.4
comp=Z,27µm,19.0s,baz=83,slow=35
PMSA Palmer Station 17.97 239 P P 14 37 18.4 +10
PMSA Palmer Station 17.97 239 ⇑P P 14 37 17.0 +8.5
PMSA Palmer Station 17.97 239 *e*P P 14 37 18.4 +10
BELA Belgrano 2 18.15 186 Pn **Pn** **14 37 06.7 -3.4**
NVL N'lazarevskaya 18.73 141 *e*P **Pn** **14 37 20.1 +2.9**
NVL *e*S **S** **14 40 54.0 +4.0**
NVL pmax pmax
comp=Z,191nm,1.6s
NVL MLR MLR
comp=Z,13µm,16.0s
EFI East Falkland 19.58 281 **Pn** **14 37 29.6 +2.0**
EFI IAmb IAmb 14 37 42.1
comp=Z,584nm,1.3s
EFI East Falkland 19.58 281 ⇓*e*P **P** **14 37 28.6 +2.3**
EFI pmax pmax
comp=Z,597nm,1.4s
EFI MLR MLR
comp=Z,32µm,14.0s
EFI East Falkland 19.58 281 P **Pn** **14 37 31.3 +3.7**
EFI East Falkland 19.58 281 ⇑P **Pn** **14 37 30.8 +3.2**
MG01 Puerto William 22.56 265 P **P** **14 38 01.4 +3.0**
ELIB Princess Elisa 22.58 142 *d*P **P** **14 37 57.5 -1.2**
ELIB *d*S **S** **14 42 06.1 -0.2**
USHA Ushuaia 23.02 264 LR LR 14 45 30.9
comp=Z,41µm,18.4s,baz=112,slow=32
MG03 Isla Dawson 24.54 265 **P** **14 38 20.5 +2.6**
MG03 IAmb IAmb 14 38 40.7
comp=Z,149nm,1.1s
MG03 IAMs_20 IAMs_20 14 46 27.0
comp=Z,37µm,19.0s
GO10 Punta Arenas 25.22 266 P **P** **14 38 27.0 +2.9**
GO10 IAmb IAmb 14 38 55.8
comp=Z,196nm,0.9s
GO10 Punta Arenas 25.22 266 P **P** **14 38 27.9 +3.8**
GO10 Punta Arenas 25.22 266 ⇓P **P** **14 38 28.0 +3.8**
MG04 Isla Riesco 25.64 266 **P** **14 38 30.2 +2.3**
MG04 IAmb IAmb 14 38 47.7
comp=Z,106nm,0.7s
MG05 Puerto Natales 26.80 267 **P** **14 38 38.0 -0.3**
MG05 IAmb IAmb 14 38 54.2
comp=Z,108nm,0.7s
MG05 Puerto Natales 26.80 267 P **P** **14 38 39.7 +1.4**
GO09 Cerro Castillo 26.96 268 P **P** **14 38 40.7 +0.9**
GO09 IAmb IAmb 14 38 55.1
comp=Z,90nm,0.8s
SYO Syowa Base 28.24 136 ⇓*i*P **P** **14 38 50.0 -1.1**
SYO Syowa Base 28.24 136 ⇓*i*P **P** **14 38 54.0 +2.9**
GO08 Villa O'Higgin 28.84 273 P **P** **14 38 56.9 +0.3**
GO08 IAmb IAmb 14 39 29.9
comp=Z,108nm,1.2s
GO08 Villa O'Higgin 28.84 273 P **P** **14 38 59.1 +2.5**
AY03 Cochrane 29.66 274 IAMs_20 IAMs_20 14 50 28.1
comp=Z,31µm,18.0s
QSPA South Pole Qui 30.21 180 P **P** **14 39 12.0 +3.2**
comp=Z,24nm,0.9s,baz=174,slow=2.6,SNR=18
QSPA LR LR 14 51 25.4
comp=Z,11µm,18.4s,baz=188,slow=36
comp=Z,24nm,0.9s
QSPA South Pole Qui 30.21 180 P **P** **14 39 09.7 +0.8**
QSPA IAmb IAmb 14 40 14.7
comp=Z,145nm,1.1s
QSPA South Pole Qui 30.21 180 P **P** **14 39 11.0 +2.1**
QSPA South Pole Qui 30.21 180 ⇓P **P** **14 39 11.8 +2.9**
COYC Coyhaique 30.57 277 P **P** **14 39 12.1 +0.1**
COYC IAmb IAmb 14 40 04.4
comp=Z,100nm,1.3s
COYC Coyhaique 30.57 277 IAMs_20 IAMs_20 14 51 09.1
comp=Z,21µm,18.0s
AY01 Puyuhuapi 31.68 278 **P** **14 39 23.0 +1.3**
AY01 IAmb IAmb 14 39 36.7
comp=Z,74nm,0.9s
AY01 IAMs_20 IAMs_20 14 51 37.9
comp=Z,25µm,19.0s
LL02 Futaleuf 32.18 281 P **P** **14 39 27.0 +0.8**
LL02 IAmb IAmb 14 39 30.6
comp=Z,144nm,1.5s
LL02 Futaleuf 32.18 281 ⇓P **P** **14 39 27.5 +1.3**
GO07 Milladeo Hill, 33.13 279 IAMs_20 IAMs_20 14 52 32.4
comp=Z,28µm,20.0s
PLCA Paso Flores 33.40 285 P **P** **14 39 37.6 +0.6**
comp=Z,14nm,0.7s,baz=146,slow=7.8,SNR=32
PLCA ScP **ScP** **14 46 01.9 -0.8**
comp=Z,5.5nm,0.9s,baz=145,slow=0.3,SNR=5.1
PLCA LR LR 14 53 27.2
comp=Z,15µm,18.2s,baz=157,slow=37
comp=Z,14nm,0.7s
PLCA Paso Flores 33.40 285 P **P** **14 39 37.6 +0.6**
PLCA IAmb IAmb 14 39 59.7
comp=Z,64nm,1.1s
PLCA Paso Flores 33.40 285 P **P** **14 39 36.0 -0.9**
PLCA Paso Flores 33.40 285 ⇑P **P** **14 39 37.5 +0.6**
PLCA Paso Flores 33.40 285 *e*P **P** **14 39 38.2 +1.3**
PLTB Pedras Altas 33.63 315 P **P** **14 39 39.5 +0.6**
PLTB IAmb IAmb 14 40 24.1
comp=Z,88nm,1.0s
PLTB Pedras Altas 33.63 315 *e*P **P** **14 39 40.5 +1.6**
LR05 Currie 34.49 284 P **P** **14 39 47.5 +1.1**
LR05 IAmb IAmb 14 40 11.7
comp=Z,96nm,0.9s
GO06 Curarrehue 34.73 285 P **P** **14 39 50.0 +1.4**
GO06 IAMs_20 IAMs_20 14 54 15.6
comp=Z,15µm,18.0s
GO06 Curarrehue 34.73 285 P **P** **14 39 49.3 +0.7**
GO06 Curarrehue 34.73 285 ⇑P **P** **14 39 49.4 +0.7**
CPSB Cacapava Do Su 34.80 316 *e*P **P** **14 39 50.6 +1.5**
CNLB Canela 34.94 320 *e*P **P** **14 39 51.6 +1.2**
LR04 Corral 35.45 283 P **P** **14 39 55.4 +0.7**
LR04 IAMs_20 IAMs_20 14 54 39.7
comp=Z,15µm,18.0s
LR04 Corral 35.45 283 P **P** **14 39 56.5 +1.9**
PSAL Palomas, Salto 35.72 310 *e*P **P** **14 39 59.4 +2.4**
MAW Mawson 36.68 140 P **P** **14 40 06.0 +1.2**
comp=Z,8.0nm,1.0s
MAW Mawson 36.68 140 P **P** **14 40 05.6 +0.8**
comp=Z,8.7nm,0.8s,baz=251,slow=6.9,SNR=4.3
MAW LR LR 14 53 34.2
comp=Z,13µm,19.3s,baz=250,slow=34
comp=Z,8.7nm,0.8s
MAW Mawson 36.68 140 ⇑P **P** **14 40 09.4 +4.6**
BI02 San Fabin de 36.95 289 P **P** **14 40 05.7 -1.8**
BI02 San Fabin de 36.95 289 P **P** **14 40 08.0 +0.4**
ITAB Concordia 37.28 320 *e*P **P** **14 40 12.8 +2.5**
BI05 Punta Hualpn 37.80 287 P **P** **14 40 16.6 +2.0**
BO02 Sierra Bellavi 38.24 291 P **P** **14 40 19.2 +0.7**
BO02 Sierra Bellavi 38.24 291 ⇑P **P** **14 40 20.5 +2.0**
GO05 Hualane 38.60 290 P **P** **14 40 22.5 +1.0**
GO05 IAmb IAmb 14 40 38.8
comp=Z,138nm,0.9s
GO05 Hualane 38.60 290 ⇑P **P** **14 40 22.1 +0.6**
BO01 Tunca 38.71 291 IAmb IAmb 14 40 53.9
comp=Z,147nm,1.0s
BO04 La Punta 38.82 292 IAmb IAmb 14 40 44.2
comp=Z,170nm,0.9s
MT08 Bocatoma Ro 38.99 293 IAmb IAmb 14 40 47.2
comp=Z,120nm,0.9s
PARB Paraibuna 39.12 331 *e*P **P** **14 40 27.0 +1.1**
MT09 Talagante 39.17 292 IAMs_20 IAMs_20 14 57 35.9
comp=Z,13µm,19.0s
MT01 Popeta 39.22 291 IAmb IAmb 14 40 50.1
comp=Z,92nm,0.7s
SPB Sao Paulo 39.33 328 *e*P **P** **14 40 29.1 +1.5**
PEL Peldehue 39.55 293 P **P** **14 40 30.0 +0.5**
PEL Peldehue 39.55 293 P **P** **14 40 30.0 +0.5**
PEL pmax pmax
comp=Z,277nm,0.9s
PEL MLR MLR
comp=Z,5µm,18.0s
PEL Peldehue 39.55 293 ⇓P **P** **14 40 30.9 +1.4**
DUB01 Friburgo-RJ 39.60 336 *e*P **P** **14 40 31.1 +1.1**
PTGB Pitanga 39.61 321 *e*P **P** **14 40 31.2 +1.1**
MT02 Curacav 39.67 292 P **P** **14 40 31.4 +0.9**
MT02 IAmb IAmb 14 40 51.7
comp=Z,164nm,1.0s
MT02 IAMs_20 IAMs_20 14 57 50.1
comp=Z,14µm,19.0s
CAM01 Campos-RJ 39.71 337 *e*P **P** **14 40 32.7 +1.9**
VAO Valinhos 39.78 329 *e*P **P** **14 40 31.9 +0.4**
VA03 San Esteban 39.81 293 P **P** **14 40 33.1 +1.4**
VA03 IAMs_20 IAMs_20 14 59 36.7
comp=Z,12µm,18.0s
CPUP Villa Florida 39.90 314 P **P** **14 40 31.7 -0.7**
comp=Z,9.3nm,0.8s,baz=157,slow=10,SNR=14
CPUP S S 14 46 23.3 -14
comp=Z,6.6nm,1.1s,baz=200,slow=17,SNR=4.2
CPUP LR LR 14 58 08.8
comp=Z,8µm,18.8s,baz=157,slow=38
comp=Z,9.3nm,0.8s
CPUP Villa Florida 39.90 314 **P** **14 40 31.9 -0.5**
CPUP Villa Florida 39.90 314 ⇑P **P** **14 40 31.7 -0.7**
CPUP Villa Florida 39.90 314 *e*P **P** **14 40 31.6 -0.7**
VA06 Catapilco 40.32 292 P **P** **14 40 39.1 +3.3**
VA06 IAmb IAmb 14 41 04.6
comp=Z,118nm,0.9s
LDASE Londrina, Braz 40.56 323 *e*P **P** **14 40 39.3 +1.4**
CO04 Los Peladeros 40.60 293 IAmb IAmb 14 41 02.3
comp=Z,145nm,0.9s
ALF01 Guarapari-ES 40.71 339 *e*P **P** **14 40 40.4 +1.3**
BSCB Bom Sucesso 41.17 333 *e*P **P** **14 40 44.1 +1.1**
CO02 Combarbal 41.32 294 P **P** **14 40 43.0 -1.2**
CO02 IAmb IAmb 14 41 05.7
comp=Z,190nm,1.2s
SUR Sutherland 41.35 69 LR LR 14 54 04.1
comp=Z,6µm,18.1s,baz=211,slow=31
CO03 El Pedregal 41.49 294 P **P** **14 40 44.0 -1.5**
CO03 IAMs_20 IAMs_20 14 58 00.1
comp=Z,17µm,19.0s
RIB01 Linhares ES 41.93 340 *e*P **P** **14 40 50.4 +1.2**
CO01 Juntas del Tor 41.95 296 P **P** **14 40 51.3 +1.8**
CO01 IAmb IAmb 14 41 08.0
comp=Z,194nm,1.1s
CO01 IAMs_20 IAMs_20 15 00 06.2
comp=Z,13µm,18.0s
BB19B Bebedouro 42.03 328 *e*P **P** **14 40 51.3 +1.2**
GO04 Tololo Observa 42.10 295 P **P** **14 40 52.3 +1.5**
AMBA Amanbai (Brazi 42.22 319 *e*P **P** **14 40 51.9 +0.4**
PCMB Pacaembu 42.29 324 *e*P **P** **14 40 52.1 +0.1**
BSFB Barra de Sao F 42.48 339 *e*P **P** **14 40 53.2 -0.4**
CO05 La Serena 42.52 295 P **P** **14 40 53.0 -0.9**
CO05 IAMs_20 IAMs_20 14 59 46.4
comp=Z,16µm,18.0s
VNDA Vanda 42.61 183 P **P** **14 40 58.1 +4.0**
comp=Z,7.6nm,0.8s,baz=173,slow=5.2,SNR=6.5
VNDA LR LR 14 57 40.5
comp=Z,5µm,19.2s,baz=170,slow=34
comp=Z,7.6nm,0.8s
SJMB Sao Joao De Ma 42.66 339 *e*P **P** **14 40 54.9 -0.3**
AC05 El Transito 43.00 296 P **P** **14 40 59.0 +1.1**
AC05 IAMs_20 IAMs_20 14 58 05.1
comp=Z,14µm,21.0s
VA04 Juan Fernndez 43.03 284 IAMs_20 IAMs_20 14 58 50.3
comp=Z,13µm,18.0s
LCO Las Campanas 43.04 296 P **P** **14 40 56.9 -1.6**
LCO IAmb IAmb 14 41 19.1
comp=Z,125nm,1.2s
LCO Las Campanas 43.04 296 IAMs_20 IAMs_20 15 01 16.3
comp=Z,17µm,18.0s
LCO Las Campanas 43.04 296 *e*P **P** **14 40 56.9 -1.6**
LCO Las Campanas 43.04 296 ⇓P **P** **14 40 59.1 +0.6**
DIAM Diamantina, MG 43.55 336 *e*P **P** **14 41 03.3 +0.9**
ITRB Iturama 43.83 326 *e*P **P** **14 41 05.3 +0.7**
AC04 Llanos de Chal 43.90 296 P **P** **14 41 05.0 -0.1**
AC04 IAMs_20 IAMs_20 14 58 34.0
comp=Z,13µm,19.0s
PMNB Patos De Minas 43.93 332 *e*P **P** **14 41 05.1 -0.3**
GO03 Copiapo 44.05 297 P **P** **14 41 07.0 +0.6**
GO03 IAMs_20 IAMs_20 14 59 16.9
comp=Z,17µm,19.0s
GO03 Copiapo 44.05 297 ⇑P **P** **14 41 07.9 +1.5**
AC02 Maricunga 44.22 299 P **P** **14 41 08.9 +0.7**
MURT Porto Murtinho 44.28 316 *e*P **P** **14 41 08.0 -0.2**
GUA01 Guaratinga, BA 44.50 341 *e*P **P** **14 41 08.8 -1.1**
AQDB Aquidauana 44.73 319 *e*P **P** **14 41 10.0 -1.8**
IPMB Ipameri, GO 44.90 330 *e*P **P** **14 41 12.7 -0.4**
BDQN Bodoquena, MS 45.11 318 *e*P **P** **14 41 14.5 -0.3**
C2SB Chapadao do Su 45.43 323 *e*P **P** **14 41 17.4 0.0**
AC01 Pan de Azucar 45.46 298 IAMs_20 IAMs_20 15 00 01.2
comp=Z,14µm,20.0s
H04S2 CROZET ISLANDS 45.56 110 T T 15 30 16.6
baz=224,slow=75,SNR=78
H04S3 CROZET ISLANDS 45.57 110 T T 15 30 21.8
baz=224,slow=75,SNR=15
H04S1 CROZET ISLANDS 45.58 110 T T 15 30 19.6
baz=224,slow=75,SNR=47
CMC01 Camacan, BA 45.66 342 *e*P **P** **14 41 18.0 -1.1**
BOSA Boshof 46.59 71 P P 14 41 22.6 -4.0
comp=Z,4.1nm,0.8s,baz=209,slow=6.1,SNR=9.0
BOSA LR LR 14 56 40.1
comp=Z,6µm,20.5s,baz=213,slow=31
comp=Z,4.1nm,0.8s
BOSA Boshof 46.59 71 ⇓P **P** **14 41 25.3 -1.3**
BOSA Boshof 46.59 71 P P 14 41 22.4 -4.2
BOSA S **S** **14 48 11.2 -4.4**
PB14 IPOC Station P 46.70 299 P **P** **14 41 26.7 -1.0**
PB14 IPOC Station P 46.70 299 P P 14 41 24.0 -3.7
PB14 IAmb IAmb 14 41 31.6
comp=Z,47nm,0.9s
PB14 IAMs_20 IAMs_20 15 03 08.9
comp=Z,11nm,18.0s
JANB Januaria 46.82 336 *e*P **P** **14 41 26.8 -1.6**
BDFB Brasilia 47.10 331 P **P** **14 41 29.8 -0.8**
comp=Z,6.8nm,0.8s,baz=140,slow=5.8,SNR=8.3
BDFB LR LR 15 00 39.0
comp=Z,11nm,18.2s,baz=158,slow=35
comp=Z,6.8nm,0.8s
BDFB Brasilia 47.10 331 P **P** **14 41 30.1 -0.5**
PP1B Ponte de Pedra 47.16 321 *e*P **P** **14 41 30.3 -0.6**
PB06 IPOC Station P 48.02 301 P **P** **14 41 38.0 +0.2**
PB06 IAmb IAmb 14 41 57.7
comp=Z,63nm,0.8s
ARAG Araguaiana, MT 48.04 326 *e*P **P** **14 41 37.5 -0.2**
WIN Windhoek 48.10 58 IAMs_20 IAMs_20 14 57 03.7
comp=Z,15µm,20.0s
WIN Windhoek 48.10 58 P P 14 41 31.7 -6.8
WIN S **S** **14 48 39.7 +2.4**
PB05 IPOC Station P 48.16 301 P **P** **14 41 39.1 +0.3**
PB05 IAmb IAmb 14 42 16.3
comp=Z,95nm,1.0s
PB05 IAMs_20 IAMs_20 15 04 18.7
comp=Z,13µm,18.0s
LKGWB Lokgwabe 48.56 64 P P 14 41 34.0 -7.9
LKGWB S **S** **14 48 43.8 +0.2**
PB03 IPOC Station P 48.68 302 P **P** **14 41 43.4 +0.5**
PB09 IPOC Station P 48.69 302 P **P** **14 41 43.7 +0.7**
SALV Santo Antonio 49.01 321 *e*P **P** **14 41 45.8 +0.5**
PB07 IPOC Station P 49.02 302 P **P** **14 41 45.6 +0.1**
KOOLE Kule 49.07 62 P P 14 41 35.5 -10
KOOLE S **S** **14 48 45.9 -5.1**
PB02 IPOC Station P 49.38 302 P **P** **14 41 48.4 +0.2**
SKOMA Sekoma 49.45 67 P P 14 41 37.9 -11
SKOMA S **S** **14 48 54.0 -2.1**
PB01 IPOC Station P 49.46 303 P **P** **14 41 49.4 +0.6**
PB01 IAmb IAmb 14 42 26.2
comp=Z,129nm,1.2s
SDBA SAO DESIDERIO 49.52 336 *e*P **P** **14 41 47.7 -1.5**
LBTB Lobatse 49.80 69 LR LR 14 59 13.2
comp=Z,7µm,18.4s,baz=207,slow=32
LBTB Lobatse 49.80 69 P P 14 41 47.8 -3.6
LBTB Lobatse 49.80 69 P P 14 41 47.8 -3.5
LBTB pmax pmax
comp=Z,47nm,1.2s
LBTB Lobatse 49.80 69 ⇓P **P** **14 41 49.9 -1.4**
LBTB Lobatse 49.80 69 P P 14 41 39.4 -12
LBTB S **S** **14 48 54.0 -7.0**
CASY Casey 49.98 159 IAMs_20 IAMs_20 15 02 32.8
comp=Z,12µm,18.0s
KGCAE Kacgae 50.09 64 P P 14 41 49.4 -4.3
KGCAE Kacgae 50.09 64 P P 14 41 45.6 -8.1
KGCAE S **S** **14 49 02.1 -3.1**
PB08 IPOC Station P 50.12 303 P **P** **14 41 55.4 +1.2**
PB08 IPOC Station P 50.12 303 IAmb IAmb 14 42 22.4
comp=Z,63nm,1.1s
TA01 Diego Aracena 50.17 302 P **P** **14 41 53.1 -1.0**
TA01 IAmb IAmb 14 42 21.1
comp=Z,64nm,1.1s
GO01 Chusmiza 50.56 304 P **P** **14 41 57.4 -0.2**
GO01 IAmb IAmb 14 42 25.6
comp=Z,167nm,1.5s
PTLB Pontes e Lacer 50.56 317 P **P** **14 41 55.4 -1.7**
PTLB IAmb IAmb 14 42 27.9
comp=Z,64nm,1.0s
PTLB Pontes e Lacer 50.56 317 *e*P **P** **14 41 56.7 -0.3**
PB11 IPOC Station P 50.67 303 P **P** **14 41 56.9 -1.1**
PB11 IAmb IAmb 14 42 36.2
comp=Z,163nm,1.3s
SIV San Ignacio 50.74 315 LR LR 15 05 28.0
comp=Z,7µm,18.4s,baz=166,slow=38
GRTLG Ghanzi 50.95 62 P **P** **14 41 57.3 -2.9**
GRTLG Ghanzi 50.95 62 P P 14 41 54.0 -6.1
GRTLG S **S** **14 49 16.4 -0.8**
SNDB Serra Nova Dou 51.45 328 *e*P **P** **14 42 05.0 +1.2**
H10S2 ASCENSION HYDR 51.70 15 T T 15 37 53.6
baz=187,slow=74,SNR=36
H10S3 ASCENSION HYDR 51.70 15 T T 15 37 53.7
baz=33,slow=74,SNR=28
KHWEE KHWEE 52.36 67 P P 14 42 00.2 -10
KHWEE S S 14 49 26.6 -10
MREMI Moremi 52.75 69 P P 14 42 10.0 -3.6
MREMI IAmb IAmb 14 42 34.4
comp=Z,66nm,0.9s
MREMI Moremi 52.75 69 P P 14 42 05.6 -7.9
MREMI S **S** **14 49 38.8 -3.1**
H10N1 ASCENSION HYDR 52.81 15 T T 15 39 17.5
baz=180,slow=72,SNR=7.2
H10N3 ASCENSION HYDR 52.82 15 T T 15 39 16.2
baz=180,slow=72,SNR=15
H10N2 ASCENSION HYDR 52.83 15 T T 15 39 17.6
baz=180,slow=72,SNR=18
LPAZ La Paz 53.15 307 P **P** **14 42 16.9 -0.2**
comp=Z,8.3nm,0.4s,baz=78,slow=3.4,SNR=21
LPAZ LR LR 15 05 13.0
comp=Z,6µm,20.5s,baz=152,slow=36
comp=Z,8.3nm,0.4s
LPAZ La Paz 53.15 307 P **P** **14 42 16.0 -1.2**
LPAZ IAmb IAmb 14 42 38.7
comp=Z,106nm,1.3s
LPAZ La Paz 53.15 307 *e*P **P** **14 42 15.0 -2.1**
LPAZ La Paz 53.15 307 ⇑P **P** **14 42 16.6 -0.6**
LPAZ La Paz 53.15 307 *e*P **P** **14 42 17.2 +0.1**
VILB Vilhena 53.25 317 P **P** **14 42 14.7 -2.4**
VILB Vilhena 53.25 317 *e*P **P** **14 42 17.2 0.0**
PDRB Porto dos Gac 53.37 322 *e*P **P** **14 42 15.6 -2.4**
XAUDM Khaudum 53.49 61 P P 14 42 12.6 -6.4
XAUDM S **S** **14 49 55.1 +3.2**
SMTB Santa Maria do 53.54 333 *e*P **P** **14 42 19.2 -0.1**
CLDB Colider 53.78 323 *e*P **P** **14 42 19.6 -1.5**
SOOWA Sowa 53.91 67 P P 14 42 14.1 -8.0
SOOWA S **S** **14 49 53.1 -4.6**
NBPV Pedro Velho 53.93 349 *e*P **P** **14 42 21.1 -1.1**
BROLN Tlhalogang 53.97 68 P P 14 42 17.2 -5.3
BROLN S **S** **14 49 53.1 -5.3**
RCBR Riachuelo 54.58 348 LR LR 15 00 50.2
comp=Z,2µm,20.6s,baz=175,slow=31
NBPA Parau_RN 54.79 347 *e*P **P** **14 42 27.7 -0.6**
KSANE Kasane 55.84 64 P P **P** **14 42 35.0 -1.1**
KSANE S **S** **14 50 23.6 +0.1**
PRPB Parauapebas 56.65 332 *e*P **P** **14 42 40.0 -1.7**
NBPS Pedro II - PI 56.72 342 *e*P **P** **14 42 43.3 +1.0**
NPGB Novo Progresso 57.28 325 *e*P **P** **14 42 44.7 -1.5**
LSZ Lusaka 59.42 66 LR LR 15 04 24.0
comp=Z,12µm,21.7s,baz=206,slow=32
LSZ Lusaka 59.42 66 P P 14 42 56.5 -4.8
LSZ Lusaka 59.42 66 P P 14 42 56.5 -4.8
LSZ pmax pmax
comp=Z,29nm,0.8s
LSZ Lusaka 59.42 66 ⇑P **P** **14 43 03.4 +2.1**
LSZ Lusaka 59.42 66 P **P** **14 43 02.0 +0.6**
LSZ S **S** **14 51 06.4 -4.3**
ITTB Itaituba 59.94 325 *e*P **P** **14 43 03.0 -1.7**
FOMA Nahampoana Res 60.32 89 IAMs_20 IAMs_20 15 06 14.0
comp=Z,8µm,18.0s
FOMA Nahampoana Res 60.32 89 P P 14 43 12.0 +4.7
FOMA S **S** **14 51 26.8 +4.9**
NNA Nana 60.67 300 LR LR 15 10 42.0
comp=Z,3µm,19.2s,baz=136,slow=37
NNA Nana 60.67 300 P **P** **14 43 09.7 0.0**
NNA Nana 60.67 300*c i*P **P** **14 43 10.6 +0.8**
NNA pmax pmax
comp=Z,260nm,2.0s
NNA MLR MLR
comp=Z,8µm,18.0s
SKRH Sakahara 60.98 86 P **P** **14 43 14.3 +2.4**
SKRH S **S** **14 51 39.0 +8.4**
MACA Manacapuru-AM 62.58 320 *e*P **P** **14 43 22.3 -0.3**
CZSB Cruzeiro do Su 62.75 306 *e*P **P** **14 43 22.7 -1.1**
VOI Vohitsoka 62.79 87 P P 14 43 16.6 -7.5
VOI S **S** **14 51 53.2 -0.2**
RPN Rapa Nui 63.54 261 LR LR 15 05 07.4
comp=Z,4µm,19.6s,baz=132,slow=30
TEFE Tefe 63.57 316 *e*P **P** **14 43 28.0 -1.2**
ABPO Ambohimpanom 65.43 86 IAMs_20 IAMs_20 15 07 50.5
comp=Z,8µm,19.0s
ABPO Ambohimpanom 65.43 86 P **P** **14 43 44.4 +2.8**
ABPO S **S** **14 52 34.0 +7.6**
ATAH Atahualpa 65.67 301 LR LR 15 10 43.2
comp=Z,5µm,21.3s,baz=147,slow=34
OPO Ambohidratompo 65.79 85 LR LR 15 07 04.6
comp=Z,5µm,19.4s,baz=349,slow=31
BOAV Boa Vista 67.77 322 P **P** **14 43 53.5 -2.8**
BOAV IAmb IAmb 14 44 08.4
comp=Z,43nm,1.3s
BOAV Boa Vista 67.77 322 *e*P **P** **14 43 53.8 -2.5**
MDP Montagnes des 68.20 331 LR LR 15 12 00.4
comp=Z,5µm,20.7s,baz=164,slow=34
DBIC Dimbokro 68.61 23 P **P** **14 43 59.0 -2.4**
comp=Z,7.1nm,0.6s,baz=214,slow=6.5,SNR=10
DBIC LR LR 15 06 38.0
comp=Z,5µm,21.0s,baz=206,slow=30
comp=Z,7.1nm,0.6s
DBIC Dimbokro 68.61 23 P P 14 43 57.7 -3.7
DBIC Dimbokro 68.61 23 ⇑P **P** **14 43 59.5 -1.9**
EDA Edea 69.70 39 P **P** **14 44 04.9 -3.4**
EDA IAmb IAmb 14 44 21.1
comp=Z,42nm,1.2s
EDA IAMs_20 IAMs_20 15 12 28.5
comp=Z,6µm,18.0s
PTLC Puerto Leguiza 70.77 307 P **P** **14 44 12.2 -2.7**
comp=Z,6µmcomp=Z,2µmcomp=Z,135nm,1.1s
MACC Macarena, Meta 72.20 309 P **P** **14 44 23.4 -0.1**
comp=Z,1µmcomp=Z,45nm,1.7s
OTAV Otavalo 72.32 304 P **P** **14 44 23.6 -1.2**
OTAV IAmb IAmb 14 44 41.0
comp=Z,116nm,1.4s
OTAV Otavalo 72.32 304 *e*P **P** **14 44 23.6 -1.2**
OTAV Otavalo 72.32 304 ⇑P **P** **14 44 24.5 -0.3**
OTAV Otavalo 72.32 304 *e*P **P** **14 44 24.4 -0.3**
OTAV Otavalo 72.32 304 P **P** **14 44 25.3 +0.5**
comp=Z,1µmcomp=Z,54nm,1.2s
GARC Garzon, Huila 72.88 308 P **P** **14 44 26.8 -1.1**
comp=Z,5µmcomp=Z,1µmcomp=Z,64nm,1.1s
MBAR Mbarara 73.56 61 LR LR 15 13 27.3
comp=Z,10µm,19.2s,baz=202,slow=33
MBAR Mbarara 73.56 61 P P 14 44 28.1 -3.7
MBAR Mbarara 73.56 61⇑*e*P **P** **14 44 28.5 -3.3**
MBAR pmax pmax
comp=Z,64nm,2.3s
MBAR Mbarara 73.56 61 P P 14 44 37.1 +5.3
MBAR S **SKiKP** **14 54 05.7 +3.4**
PYZ Puysegur Point 73.64 189 IAMs_20 IAMs_20 15 17 27.8
comp=Z,5µm,18.0s
POPC Popayan, Colom 73.68 307 P **P** **14 44 32.1 -0.5**
comp=Z,1µmcomp=Z,48nm,2.1s
CTZ Chatham Island 73.79 202 IAMs_20 IAMs_20 15 14 24.4
comp=Z,5µm,20.0s
PRAC Prado 74.04 309 P **P** **14 44 33.0 -1.4**
comp=Z,2µmcomp=Z,87nm,1.6s
DCZ Deep Cove 74.30 190 IAMs_20 IAMs_20 15 21 11.3
comp=Z,5µm,18.0s
MLZ Mavora Lakes 74.31 190 IAMs_20 IAMs_20 15 16 20.7
comp=Z,5µm,19.0s
ORTC Ortega, Tolima 74.36 308 P **P** **14 44 35.5 -0.8**
comp=Z,1µmcomp=Z,152nm,1.0s
ODZ Otahua Downs 74.38 192 IAMs_20 IAMs_20 15 18 05.8
comp=Z,4µm,18.0s
MBO M'Bour 74.53 9 IAMs_20 IAMs_20 15 10 46.3
comp=Z,6µm,20.0s
SACV Santiago Islan 74.77 3 IAMs_20 IAMs_20 15 13 10.2
comp=Z,5µm,19.0s
ROSC El Rosal 74.85 310 P **P** **14 44 38.1 -1.4**
comp=Z,20nm,0.9s,baz=148,slow=5.5,SNR=8.9
ROSC LR LR 15 18 12.7
comp=Z,6µm,21.0s,baz=187,slow=36
comp=Z,20nm,0.9s
ROSC El Rosal 74.85 310 P **P** **14 44 38.0 -1.5**
ROSC IAmb IAmb 14 44 41.9
comp=Z,81nm,1.4s
KIBK Kibwezi 75.33 68 P **P** **14 44 43.9 +1.8**
KIBK Kibwezi 75.33 68 IAMs_20 IAMs_20 15 14 03.4
comp=Z,7µm,20.0s
MQZ McQueen's Vall 75.47 194 IAMs_20 IAMs_20 15 20 08.9
comp=Z,5µm,18.0s
KMBO Kilima Mbogo 76.03 67 P **P** **14 44 50.4 +4.1**
comp=Z,1.2nm,0.3s,baz=203,slow=6.8,SNR=18

KMBO LR LR 15 14 36.8
comp=Z,9µm,19.8s,baz=196,slow=33
GVZ Greta Valley S 76.15 194 IAMs_20 IAMs_20 15 15 44.0
comp=Z,5µm,20.0s
LTZ Lake Taylor 76.43 194 IAMs_20 IAMs_20 15 16 16.3
comp=Z,5µm,18.0s
KHZ Kahutara 76.63 195 IAMs_20 IAMs_20 15 15 56.8
comp=Z,6µm,18.0s
PAYG Puerto Ayora 76.74 292 IAMs_20 IAMs_20 15 15 53.1
comp=Z,6µm,20.0s
SDV Santo Domingo 77.21 315 LR LR 15 20 37.3
comp=Z,11µm,19.5s,baz=151,slow=37
SDV Santo Domingo 77.21 315 P **P** **14 44 51.0 -1.7**
SDV Santo Domingo 77.21 315 *eP* **P** **14 44 51.7 -1.0**
SDV Santo Domingo 77.21 315 P **P** **14 44 52.2 -0.5**
comp=Z,1µmcomp=Z,37nm,1.9s
THZ Tophouse 77.36 195 IAMs_20 IAMs_20 15 16 21.9
comp=Z,6µm,19.0s
DSZ Denniston Nort 77.51 194 IAMs_20 IAMs_20 15 16 59.8
comp=Z,5µm,20.0s
SNZO South Karori 77.56 196 IAMs_20 IAMs_20 15 14 51.6
comp=Z,5µm,21.0s
NNZ Nelson 77.83 195 IAMs_20 IAMs_20 15 17 39.5
comp=Z,5µm,18.0s
BFZ Birch Farm 77.96 197 IAMs_20 IAMs_20 15 14 26.3
comp=Z,5µm,21.0s
UREC San Jos de Ur 77.98 310 P **P** **14 44 55.5 -1.3**
MRZ Mangatainoka R 78.08 197 IAMs_20 IAMs_20 15 14 52.3
comp=Z,6µm,21.0s
RTZ Ruatahuna 79.87 198 IAMs_20 IAMs_20 15 22 55.9
comp=Z,6µm,18.0s
URZ Urewera 80.20 198 LR LR 15 18 05.2
comp=Z,2µm,20.0s,baz=160,slow=34
MXZ Matakaoa Point 80.68 200 IAMs_20 IAMs_20 15 20 14.6
comp=Z,4µm,18.0s
TOO Toolangi 82.51 173 P **P** **14 45 25.0 +3.9**
comp=Z,13nm,1.6s
NWAO Narrogin (SRO) 82.60 150 LR LR 15 18 45.7
comp=Z,3µm,19.3s,baz=192,slow=33
ARPS Mount Arapiles 83.05 170 P **P** **14 45 25.7 +1.8**
comp=Z,21nm,2.6s
OUZ Omahuta 83.70 196 IAMs_20 IAMs_20 15 18 04.1
comp=Z,5µm,21.0s
JTS Las Juntas de 84.11 302 P **P** **14 45 28.6 -0.8**
JTS Las Juntas de 84.11 302 *ceP* **P** **14 45 29.9 +0.4**
JTS pmax pmax
comp=Z,61nm,1.4s
SJG San Juan 84.33 322 IAMs_20 IAMs_20 15 22 39.8
comp=Z,4µm,19.0s
TBI Tubuai 84.97 230 *eP* **P** **14 45 32.4 -1.5**
comp=Z,3µm,25.0s
TBI *ePP* **PP** **14 48 52.3 +2.4**
comp=Z,1µm,24.8s
TBI *eS* **S** **14 56 03.9 +0.9**
comp=Z,7µm,25.2s
TBI *eSS* **SS** **15 01 31.0 -3.6**
comp=Z,1µm,22.0s
TBI *eLQ* LQ 15 08 49.7
comp=Z,35µm,31.5s
TBI *eLR* LR 15 12 27.8
comp=Z,16µm,21.2s
TBI *eLR* LR 15 12 30.9
comp=Z,5µm,21.8s
FURI Furi 85.53 64 LR LR 15 20 42.9
comp=Z,4µm,18.6s,baz=203,slow=34
HTT Hallett 86.07 168 P **P** **14 45 41.9 +2.6**
comp=Z,18nm,2.3s
HTT Hallett 86.07 168 †P **P** **14 45 40.0 +0.7**
BOAB BOACO BROADBAND 86.34 303 P **P** **14 45 39.4 -1.2**
BOAB IAMs_20 IAMs_20 15 22 51.0
comp=Z,6µm,19.0s
TAM Tamanrasset 86.50 29 IAMs_20 IAMs_20 15 21 35.0
comp=Z,4µm,18.0s
FORT Forrest 87.07 158 P **P** **14 45 45.9 +1.8**
comp=Z,26nm,1.6s
STKA Stephens Creek 87.88 170 P **P** **14 45 49.6 +1.6**
comp=Z,161nm,2.3s
STKA Stephens Creek 87.88 170 P **P** **14 45 50.0 +1.9**
comp=Z,11nm,1.0s,baz=180,slow=6.9,SNR=11
STKA LR LR 15 23 47.0
comp=Z,7µm,18.3s,baz=186,slow=35
comp=Z,11nm,1.0s
STKA Stephens Creek 87.88 170 P **P** **14 45 46.0 -2.1**
STKA Stephens Creek 87.88 170 *ceP* **P** **14 45 47.6 -0.4**
DGAR Diego Garcia 87.93 101 IAMs_20 IAMs_20 15 17 55.5
comp=Z,6µm,19.0s
CMSA Cobar Meteorol 88.53 173 P **P** **14 45 53.8 +2.7**
comp=Z,71nm,2.3s,comp=Z,0.0nm
MEEK Meekatharra 88.94 149 P **P** **14 45 54.3 +1.1**
comp=Z,43nm,2.0s,comp=Z,0.0nm
GTBY Guantanamo Bay 89.00 315 IAMs_20 IAMs_20 15 30 37.4
comp=Z,5µm,19.0s
MTO3 Montecristo 89.67 300 P **P** **14 45 54.6 -2.2**
ATD Arta Tunnel 89.75 66 LR LR 15 24 20.0
comp=Z,310nm,18.2s,baz=201,slow=34
ATD Arta Tunnel 89.75 66 P **P** **14 45 54.4 -2.6**
TVO Taravao 89.92 233 eLR LR 15 14 42.0
comp=Z,1µm,24.0s
TIAR Tiarei 90.16 233 eLR LR 15 14 58.9
comp=Z,4µm,22.9s
PPT2 Papeete2 90.22 233 *eP* P 14 45 53.9 -5.4
PPT2 *ePP* **PP** **14 49 29.6 -2.7**
comp=Z,488nm,24.8s
PPT2 *eS* **S** **14 56 49.2 -4.3**
comp=Z,2µm,28.2s
PPT2 *eSS* **SS** **15 02 53.5 +1.9**
comp=Z,1µm,28.8s
PPT2 *eLQ* LQ 15 10 53.2
comp=Z,3µm,25.0s
PPT2 *eLR* LR 15 14 47.0
comp=Z,3µm,22.8s
PPT2 *eLR* LR 15 14 52.6
comp=Z,3µm,22.0s
PPT Papeete 90.24 233 LR LR 15 19 31.4
comp=Z,3µm,18.2s,baz=152,slow=31
RAR Rarotonga 90.68 223 LR LR 15 22 19.7
comp=Z,2µm,18.1s,baz=187,slow=32
APG El Apazote 90.69 299 LR LR 15 22 57.8
comp=Z,97nm,22.0s,baz=62,slow=33
PMOR Pomariorio Ree 91.87 235 eLR LR 15 15 42.1
comp=Z,3µm,22.3s
INKA Innaminka 91.89 168 P P 14 46 03.2 -3.6
INKA IAmb IAmb 14 46 15.5
comp=Z,31nm,1.4s
TIO Tiouine 91.95 16 P **P** **14 46 07.6 +0.7**
PMAR Madeira 92.73 8 *eP* P 14 46 05.5 -5.0
PMAR *ePP* **PP** **14 49 50.9 -2.1**
PMOZ Porto Moniz, M 92.81 8 *eP* P 14 46 04.8 -6.0
PMOZ *eS* S 14 57 29.8 +14
TAOE Nuku Hiva Isla 93.97 245 *eP* **P** **14 46 15.6 -1.1**
comp=Z,424nm,24.5s
TAOE *ePP* **PP** **14 49 59.0 -3.2**
comp=Z,544nm,25.8s
TAOE *eS* **S** **14 57 32.9 +5.5**
comp=Z,2µm,26.9s
TAOE *eSS* **SS** **15 03 49.2 +3.2**
comp=Z,844nm,26.6s
TAOE *eLR* LR 15 16 41.9
comp=Z,5µm,23.5s
MDT Midelt 94.20 18 LR LR 15 24 26.4
comp=Z,7µm,18.7s,baz=210,slow=33
MBWA Marble Bar 94.46 148 IAMs_20 IAMs_20 15 25 07.4
comp=Z,3µm,20.0s
CMIG Matias Romero 94.48 297 LR LR 15 24 21.8
comp=Z,2µm,20.3s,baz=134,slow=33
IFR Ifrane 94.81 18 P **P** **14 46 21.2 +1.2**
ASAR Alice Springs 95.03 162 P **P** **14 46 21.2 -0.2**
comp=Z,9.0nm,1.1s,baz=183,slow=3.9,SNR=33
ASAR PKKPbc **PKKPbc** **15 03 14.8 +1.5**
comp=Z,1.9nm,0.7s,baz=19,slow=2.3,SNR=16
ASAR LR LR 15 25 47.9
comp=Z,7µm,21.4s,baz=188,slow=33
comp=Z,9.0nm,1.1s
ASAR Alice Springs 95.03 162 P **P** **14 46 20.3 -1.1**
ASAR Alice Springs 95.03 162 P **P** **14 46 20.3 -1.1**
061Z Ochoppi 96.55 312 IAMs_20 IAMs_20 15 33 47.4
comp=Z,4µm,18.0s
060A Indiantown 97.41 313 IAMs_20 IAMs_20 15 27 29.1
comp=Z,3µm,21.0s
DZM Mont Dzumac 97.55 192 *eP* P 14 46 26.4 -6.5
DZM *ePP* **PP** **14 50 24.4 -4.9**
comp=Z,248nm,23.9s
DZM *eS* S 14 57 50.4 -7.8
comp=Z,282nm,23.9s
DZM *eSS* **SS** **15 04 41.3 +5.7**
comp=Z,596nm,22.9s
DZM *eLR* LR 15 18 09.5
comp=Z,2µm,29.4s
DZM Mont Dzumac 97.55 192 LR LR 15 27 31.1
comp=Z,2µm,22.4s
PFVI Vila Bisbo 97.86 14 P P 14 46 28.6 -5.0
PFVI Vila Bisbo 97.86 14 *eP* P 14 46 30.1 -3.5
PFVI *ePP* **PP** **14 50 33.4 +0.8**
MORF Marmelete 98.06 14 *eP* **P** **14 46 34.1 -0.4**
MORF IAMs_20 IAMs_20 15 27 55.3
comp=Z,4µm,19.2s
MORF Marmelete 98.06 14 *eP* P 14 46 29.1 -5.5
MORF Marmelete 98.06 14 *eP* **P** **14 46 34.1 -0.4**
PBDV Barranco-do-Ve 98.08 15 *eP* **P** **14 46 35.0 +0.3**
PBDV *ePP* **PP** **14 50 31.3 -3.0**
PVAQ Vaqueiros 98.27 15 *eP* P 14 46 30.5 -4.9
PVAQ *ePP* **PP** **14 50 31.1 -4.6**
PVAQ *eS* **S** **14 58 06.9 +3.9**
PVAQ *i* IAMs_20 IAMs_20 15 27 47.1
comp=Z,4µm,18.0s
PTEO Sao Teotonio 98.28 14 P Pdif 14 46 42.6 +7.1
PCVE Castro Verde 98.45 14 *eP* P 14 46 30.3 -5.9
MESJ Messejana 98.64 14 *eP* **P** **14 46 37.8 +0.8**
MESJ IAMs_20 IAMs_20 15 28 08.0
comp=Z,6µm,18.7s
MESJ Messejana 98.64 14 *eP* **P** **14 46 37.8 +0.8**
WRA Warramunga Arr 98.75 161 P **P** **14 46 38.8 +0.5**
comp=Z,2.8nm,1.2s,baz=191,slow=3.1,SNR=7.9
WRA PKKP **PKKPbc** **15 03 04.5 +1.2**
comp=Z,1.3nm,0.6s,baz=1.0,slow=3.0,SNR=19
comp=Z,2.8nm,1.2s
WRA Warramunga Arr 98.75 161 P **P** **14 46 35.8 -2.5**
WRA Warramunga Arr 98.75 161 P **P** **14 46 35.8 -2.5**
WRA pmax pmax
comp=Z,3.0nm,1.8s
WR8 Warramunga Arr 98.76 162 P **P** **14 46 38.0 -0.3**
WR8 IAmb IAmb 14 46 46.2
comp=Z,21nm,1.4s
DWPF Disney Wildern 98.78 313 IAMs_20 IAMs_20 15 30 03.4
comp=Z,3µm,20.0s
FITZ Fitzroy Crossi 98.86 153 LR LR 15 28 44.8
comp=Z,3µm,19.6s,baz=196,slow=34
PBAR Barrancos 99.12 15 *eP* **Pdif** **14 46 39.7 +0.5**
PBAR *ePP* **PP** **14 50 39.1 -3.1**
MOE Montemor 99.29 14 *eP* **Pdif** **14 46 35.6 -4.3**
LIS Lisbon 99.39 13 *eP* **Pdif** **14 46 41.0 +0.6**
LIS IAMs_20 IAMs_20 15 26 11.5
comp=E,6µm,10.7s
LIS Lisbon 99.39 13 *eP* **Pdif** **14 46 41.0 +0.6**
PMAFR Mafra 99.61 13 *eP* **Pdif** **14 46 41.3 -0.1**
PARRA Arraiolos 99.62 14 *eP* **Pdif** **14 46 36.6 -4.8**
PARRA *ePP* **PP** **14 50 43.9 -2.1**
PESTR Estremoz 99.73 15 *eP* **Pdif** **14 46 38.7 -3.2**
KEST Kesra 99.81 29 LR LR 15 27 05.2
comp=E,3µm,19.1s,baz=204,slow=33
PMTG Montargil 99.85 14 *eP* **Pdif** **14 46 37.5 -4.9**
PMTG *ePP* PP 14 50 38.0 -10
CTA Charters Tower 99.94 173 P **Pdif** **14 46 46.9 +3.4**
comp=E,1.2nm,0.8s,baz=169,slow=8.7,SNR=3.7
MSVF Nonsavu 100.05 203† *eP* **Pdif** **14 46 40.5 -3.7**
MSVF pmax pmax
comp=Z,136nm,4.6s
PSBE So Bento 100.22 14 *eP* **Pdif** **14 46 45.9 +1.8**
PSBE *ePP* PP 14 50 37.5 -13
PMRV Marv??o 100.31 15 *eP* **Pdif** **14 46 39.8 -4.7**
PMRV *i* IAMs_20 IAMs_20 15 29 15.2
comp=Z,5µm,18.0s
656A Willston 100.32 312 IAMs_20 IAMs_20 15 29 01.3
comp=Z,4µm,21.0s
PSARD Sardoal 100.38 14 *eP* **Pdif** **14 46 41.9 -2.9**
PSARD *ePP* PP 14 50 40.4 -11
PCAS Casmilo, Conde 100.79 14 *eP* **Pdif** **14 46 49.4 +2.9**
ESDC Sonseca Array 101.02 17 P **Pdif** **14 46 48.3 +0.6**
comp=Z,1.1nm,0.9s,baz=186,slow=5.3,SNR=7.1
WDD Wied Dalam 101.23 33 IAMs_20 IAMs_20 15 35 19.8
comp=Z,3µm,18.0s
MTE Manteigas 101.24 14 IAMs_20 IAMs_20 15 27 45.6
comp=Z,4µm,20.0s
MTE Manteigas 101.24 14 *eP* **Pdif** **14 46 52.2 +3.5**
MTE *ePP* **PP** **14 50 55.7 -2.7**
MTE *i* IAMs_20 IAMs_20 15 28 00.2
comp=Z,3µm,20.0s
456A Hilliard 101.36 313 IAMs_20 IAMs_20 15 35 33.6
comp=Z,4µm,18.0s
553A Crawfordville 101.77 311 IAMs_20 IAMs_20 15 37 09.8
comp=Z,3µm,20.0s
MVO Moncorvo 102.06 15 *eP* **Pdif** **14 46 52.7 +0.4**
MVO *ePP* **PP** **14 51 07.2 +2.6**
MVO *i* IAMs_20 IAMs_20 15 30 18.2
comp=Z,4µm,18.0s
257A Skidaway Islan 102.12 315 IAMs_20 IAMs_20 15 29 25.9
comp=Z,3µm,22.0s
POLO Lamas de Olo 102.17 14 *eP* **Pdif** **14 46 54.4 +1.6**
POLO *ePP* **PP** **14 51 07.9 +2.5**
TIGA Tifton 102.57 312 IAMs_20 IAMs_20 15 32 20.0
comp=Z,4µm,22.0s
PGAV Gavieira, Arco 102.70 14 *eP* **Pdif** **14 47 00.9 +5.8**
PGAV *ePP* **PP** **14 51 09.4 +0.1**
PBRG Braganca 102.73 15 *eP* **Pdif** **14 46 55.8 +0.6**
PBRG *ePP* **PP** **14 51 10.9 +1.4**
NHSC New Hope 102.85 316 IAMs_20 IAMs_20 15 39 14.1
comp=Z,3µm,18.0s
Y60A Bolivia 102.99 318 IAMs_20 IAMs_20 15 30 38.6
comp=Z,3µm,21.0s
352A Blakely 103.11 311 IAMs_20 IAMs_20 15 29 21.3
comp=Z,3µm,20.0s
VSL Villasalto 103.40 28 IAMs_20 IAMs_20 15 29 17.8
comp=Z,4µm,20.0s
BRAL Brewton 103.64 310 IAMs_20 IAMs_20 15 37 37.7
comp=Z,3µm,22.0s
X58A Rowland 103.88 317 IAMs_20 IAMs_20 15 31 20.0
comp=Z,3µm,20.0s
TRD Trivandrum 103.89 97 *eP* **Pdif** **14 46 59.7 -1.3**
250A Grady 104.06 311 IAMs_20 IAMs_20 15 30 06.0
comp=Z,3µm,22.0s
152A Waverly Hall 104.10 312 IAMs_20 IAMs_20 15 39 05.7
comp=Z,3µm,18.0s
GOGA Godfrey 104.30 313 IAMs_20 IAMs_20 15 31 55.9
comp=Z,3µm,21.0s
W57A Gilead 104.64 317 IAMs_20 IAMs_20 15 31 44.5
comp=Z,3µm,22.0s
PALK Pakekele 104.68 101 IAMs_20 IAMs_20 15 26 08.4
comp=Z,3µm,20.0s
KARP Karpathos 104.84 43 IAMs_20 IAMs_20 15 40 27.4
comp=Z,3µm,18.0s
Y52A Lilburn 104.92 313 IAMs_20 IAMs_20 15 41 33.4
comp=Z,3µm,18.0s
TIP Timpagrande 104.98 33 IAMs_20 IAMs_20 15 30 44.2
comp=Z,3µm,20.0s
LRAL Lakeview Retre 105.28 311 IAMs_20 IAMs_20 15 30 43.4
comp=Z,3µm,21.0s
V55A Taylorsville 105.69 316 IAMs_20 IAMs_20 15 31 51.4
comp=Z,3µm,22.0s
146A Union 105.73 309 IAMs_20 IAMs_20 15 39 05.2
comp=Z,3µm,20.0s
Y49A Blount Mountai 105.79 311 IAMs_20 IAMs_20 15 32 23.6
comp=Z,4µm,22.0s
X51A Calhoun 105.84 313 IAMs_20 IAMs_20 15 42 10.8
comp=Z,3µm,18.0s
W52A Murphy 105.98 314 IAMs_20 IAMs_20 15 37 25.2
comp=Z,3µm,19.0s
CSS Mathiatis 106.51 48 IAMs_20 IAMs_20 15 41 28.0
comp=Z,4µm,18.0s
X48A Hartselle 106.56 311 IAMs_20 IAMs_20 15 32 48.0
comp=Z,3µm,22.0s
W50A Signal Mountai 106.58 313 IAMs_20 IAMs_20 15 42 26.2
comp=Z,3µm,18.0s
Y45A Yeager Farm, C 107.00 309 IAMs_20 IAMs_20 15 40 23.9
comp=Z,3µm,20.0s
P61A Hammonton 107.08 323 IAMs_20 IAMs_20 15 35 01.2
comp=Z,3µm,21.0s
TZTN Tazewell 107.14 315 IAMs_20 IAMs_20 15 33 05.8
comp=Z,3µm,22.0s
GSI Gunungsitoli 107.37 119 IAMs_20 IAMs_20 15 32 45.9
comp=Z,3µm,18.0s
UOSS Minazif 107.60 71 IAMs_20 IAMs_20 15 38 50.1
comp=Z,3µm,18.0s
V48A Smith Brothers 107.62 312 IAMs_20 IAMs_20 15 34 16.9
comp=Z,3µm,22.0s
N62A Caumsett State 107.84 324 IAMs_20 IAMs_20 15 38 12.1
comp=Z,3µm,18.0s
P57A Homestead Farm 107.91 320 IAMs_20 IAMs_20 15 33 52.6
comp=Z,3µm,19.0s
U49A Red Boiling Sp 107.92 313 IAMs_20 IAMs_20 15 34 03.7
comp=Z,3µm,21.0s
BKNI Bangkinang 107.97 123 IAMs_20 IAMs_20 15 31 56.1
comp=Z,2µm,18.0s
T50A Nancy 108.03 314 IAMs_20 IAMs_20 15 32 39.5
comp=Z,3µm,21.0s
GOA Goa 108.28 91 *eP* **Pdif** **14 47 18.1 -2.4**
WVT Waverly 108.34 311 IAMs_20 IAMs_20 15 35 53.1
comp=Z,3µm,21.0s
PDG Podgorica 108.69 34 IAMs_20 IAMs_20 15 35 18.5
comp=Z,3µm,20.0s
T47A Sharon Grove 108.83 312 IAMs_20 IAMs_20 15 38 03.9
comp=Z,3µm,20.0s
R50A Paris 108.97 315 IAMs_20 IAMs_20 15 34 10.2
comp=Z,3µm,22.0s
P53A Whipple 109.03 318 IAMs_20 IAMs_20 15 35 18.5
comp=Z,3µm,22.0s
TXAR Lajitas Array 109.06 296 PKiKP **PKiKP** **14 51 28.4 +0.5**
comp=Z,1.5nm,0.9s,baz=161,slow=4.3,SNR=9.2
RPSI Rantau Prapat 109.20 120 IAMs_20 IAMs_20 15 34 59.6
comp=Z,4µm,18.0s
R49A Shelbyville 109.28 314 IAMs_20 IAMs_20 15 34 33.5
comp=Z,3µm,21.0s
MDRS Chennai 109.43 98 *eP* **Pdif** **14 47 22.8 -2.8**
T45A Paducah 109.43 311 IAMs_20 IAMs_20 15 36 36.0
comp=Z,3µm,22.0s
WCI Wyandotte Cave 109.63 314 IAMs_20 IAMs_20 15 33 29.9
comp=Z,3µm,22.0s
J61A Chester 109.80 326 IAMs_20 IAMs_20 15 36 17.8
comp=Z,3µm,18.0s
SAUI Saumlaki 109.88 156 IAMs_20 IAMs_20 15 41 33.9
comp=Z,3µm,19.0s
TUE Stuetta 110.04 25 IAMs_20 IAMs_20 15 36 52.1
comp=Z,3µm,18.0s
ACSO Alum Creek Sta 110.24 317 IAMs_20 IAMs_20 15 34 52.6
comp=Z,3µm,22.0s
FUORN Ofenpass-Fuorn 110.38 26 IAMs_20 IAMs_20 15 37 34.0
comp=Z,3µm,19.0s
T42A Van Buren 110.38 309 IAMs_20 IAMs_20 15 34 57.3
comp=Z,3µm,20.0s
LHMI Lhok Sumawe 110.58 117 IAMs_20 IAMs_20 15 26 23.1
comp=Z,3µm,22.0s
PMG Port Moresby 110.59 173 IAMs_20 IAMs_20 15 37 11.9
comp=Z,3µm,19.0s
HNR Honiara 110.59 186 IAMs_20 IAMs_20 15 38 15.8
comp=Z,3µm,18.0s
FETA Feichten 110.86 26 pPKiKP **PKiKP** **14 51 34.0 +3.1**
comp=Z,7.7nm,2.0s
DAVA Damuels 110.92 25 PKiKP **PKiKP** **14 51 32.4 +1.4**
comp=Z,6.8nm,1.4s
ABTA Abfaltersbach 111.00 27 PKiKP **PKiKP** **14 51 29.0 -2.0**
comp=Z,10nm,1.8s
O48B Farmland 111.02 315 IAMs_20 IAMs_20 15 43 28.4
comp=Z,2µm,20.0s
SQTA Sankt Quirin 111.15 26 PKiKP **PKiKP** **14 51 28.3 -3.0**
comp=Z,5.1nm,1.4s
U38A Gravette 111.17 307 IAMs_20 IAMs_20 15 38 20.5
comp=Z,3µm,20.0s
P46A Rosedale 111.19 314 IAMs_20 IAMs_20 15 34 00.2
comp=Z,3µm,22.0s
Q44A Meyer Farm, Va 111.22 312 IAMs_20 IAMs_20 15 39 47.4
comp=Z,2µm,20.0s
ECH Echery 111.25 23 IAMs_20 IAMs_20 15 32 52.4
comp=Z,3µm,20.0s
MOTA Moosalm 111.25 26 PKiKP **PKiKP** **14 51 30.5 -1.1**
comp=Z,4.6nm,1.1s
N49A Columbus Grove 111.27 316 IAMs_20 IAMs_20 15 34 59.9
comp=Z,3µm,22.0s
M50A Fremont 111.30 317 IAMs_20 IAMs_20 15 42 58.7
comp=Z,2µm,19.0s
RETA Reutte 111.31 26 PKiKP **PKiKP** **14 51 33.2 +1.6**
comp=Z,4.1nm,1.1s
CCM Cathedral Cave 111.33 310 IAMs_20 IAMs_20 15 42 59.5
comp=Z,3µm,19.0s
UBR Ueberruh 111.35 25 *e*Sdiff **Sdif** **14 59 59.8 +7.9**
baz=195,slow=8.6
SOKA Soboth 111.54 29 PKiKP **PKiKP** **14 51 32.5 +0.5**
comp=Z,5.3nm,1.7s
BFO Black Forest 111.59 24 *e*Sdiff **Sdif** **15 00 03.3 +9.5**
baz=195,slow=8.6
BFO *e*SP **SP** **15 01 52.1 +7.2**
baz=200,slow=8.1
LESA Schwarzleotal 111.68 27 PKiKP **PKiKP** **14 51 29.1 -3.2**
comp=Z,5.2nm,1.4s
IPM Ipoh 111.70 121 IAMs_20 IAMs_20 15 31 21.9
comp=Z,3µm,19.0s
N47A Urbana 111.76 315 IAMs_20 IAMs_20 15 43 32.0
comp=Z,3µm,19.0s
SFIN Lafayette 111.82 314 IAMs_20 IAMs_20 15 36 29.8
comp=Z,3µm,21.0s
S39A Bolivar 111.83 308 IAMs_20 IAMs_20 15 43 03.0
comp=Z,3µm,19.0s
R40A Maddies Statio 111.93 309 IAMs_20 IAMs_20 15 36 11.5
comp=Z,2µm,20.0s
RJOB Jochberg 112.00 27 *e*Sdiff **Sdif** **15 00 04.1 +6.8**
baz=195,slow=8.6
RJOB *e*SP **SP** **15 01 58.6 +10**
baz=200,slow=8.1
ARPR Arapgir-MALATY 112.03 49 IAMs_20 IAMs_20 15 38 48.0
comp=Z,2µm,19.0s
P43A Skaggs, Pawnee 112.06 312 IAMs_20 IAMs_20 15 40 13.5
comp=Z,3µm,20.0s
FUR Furstenfeldbru 112.06 26 *e*Sdiff **Sdif** **15 00 05.1 +7.4**
baz=195,slow=8.6
FUR *e*SP **SP** **15 01 57.0 +7.8**
baz=200,slow=8.1
STU Stuttgart 112.19 24 *e*Sdiff **Sdif** **15 00 09.0 +10**
baz=195,slow=8.6
STU *e*SP **SP** **15 01 55.6 +5.2**
baz=200,slow=8.1
HYB Hyderabad 112.28 94 *e*PKiKP **PKiKP** **14 51 33.0 -1.3**
AAM Ann Arbor 112.31 317 IAMs_20 IAMs_20 15 36 17.4
comp=Z,3µm,21.0s
WLF Walferdange 112.44 22 *e*Sdiff **Sdif** **15 00 11.0 +10**
baz=195,slow=8.6
WLF *e*SP **SP** **15 01 57.0 +4.4**
baz=200,slow=8.1
MOA Molln 112.45 28 PKiKP **PKiKP** **14 51 34.9 +1.2**
comp=Z,5.4nm,1.4s
MSTX Muleshoe 112.59 299 IAMs_20 IAMs_20 15 35 48.0
comp=Z,2µm,18.0s
P40A Paris 112.92 310 IAMs_20 IAMs_20 15 38 46.6
comp=Z,3µm,22.0s
OK038 West end E0370 112.99 303 IAMs_20 IAMs_20 15 41 35.2
comp=Z,2µm,18.0s
M44A Midewin, Midew 113.04 314 IAMs_20 IAMs_20 15 44 51.3
comp=Z,2µm,19.0s
GEC2 GERESS Array S 113.25 27 *e*Sdiff **Sdif** **15 00 15.5 +7.7**
baz=195,slow=8.6
GEC2 *e*SP **SP** **15 02 05.9 +5.7**
baz=200,slow=8.1
GERES GERESS Array B 113.25 27 PKiKP **PKiKP** **14 51 36.2 +0.9**
comp=Z,0.3nm,0.3s,baz=70,slow=1.6,SNR=3.9
WET Wettzell 113.34 27 *e*Sdiff **Sdif** **15 00 16.3 +7.9**
baz=195,slow=8.6
WET *e*SP **SP** **15 02 05.3 +4.4**
baz=200,slow=8.1
CKRC Cesky Krumlov 113.37 28 *e*PKKP **PKKPbc** **15 02 16.0 -3.4**
CKRC *e*SS SS 15 08 09.9 -3.4
CKRC AMS AMS 15 39 10.0
comp=Z,3µm,18.4s
TNS Taunus Mts 113.42 23 *e*Sdiff **Sdif** **15 00 20.3 +11**
baz=195,slow=8.6
TNS *e*SP **SP** **15 02 04.6 +3.0**
baz=200,slow=8.1
MLR Muntele Rosu 113.45 37 IAMs_20 IAMs_20 15 40 56.8
comp=Z,3µm,19.0s
I49A Point Hope 113.49 319 IAMs_20 IAMs_20 15 33 37.4
comp=Z,3µm,22.0s
N41A Harden Midland 113.49 311 IAMs_20 IAMs_20 15 41 09.4
comp=Z,3µm,19.0s
GRFO Grafenberg 113.49 25 IAMs_20 IAMs_20 15 36 03.7
comp=Z,2µm,20.0s
GRA1 Grafenberg Arr 113.49 25 IAMs_20 IAMs_20 15 36 04.4
comp=Z,2µm,20.0s
GRF Grafenberg Arr 113.49 25 *e*Sdiff **Sdif** **15 00 18.2 +8.6**
baz=195,slow=8.6
GRF *e*SP **SP** **15 02 04.7 +2.5**
baz=200,slow=8.1
GRF *e*L L 15 36 14.3
comp=Z,2µm,18.7s
P38A Dawn 113.58 309 IAMs_20 IAMs_20 15 47 05.0
comp=Z,3µm,18.0s
MODS Modra-Piesok 113.67 30 *eP* **Pdif** **14 47 46.2 +2.5**
MODS Modra-Piesok 113.67 30 *e*PDIFF **Pdif** **14 47 46.2 +2.5**
ROTZ Rotzenmuhle 113.78 26 *e*Sdiff **Sdif** **15 00 20.8 +8.9**
baz=195,slow=8.6
ROTZ *e*SP **SP** **15 02 07.6 +2.8**
baz=200,slow=8.1
ZVC Zvikov 113.92 28 AMS AMS 15 37 50.0
comp=Z,2µm,17.9s

MANZ	**Manzenberg**	**113.96**	**26**	*e*Sdiff	**Sdif**	**15 00 23.5**	**+10**		
	baz=195,slow=8.6								
MANZ				*e*SP	**SP**	**15 02 08.9**	**+2.4**		
	baz=200,slow=8.1								
TREC	**Trest**	**114.09**	**28**	*e*PKKP	PKKPbc	15 02 25.8	+8.9		
TREC				AMS	AMS	15 41 10.0			
	comp=Z,2µm,17.0s								
KRUC	**Moravsky**	**114.09**	**29**	*e*PP	**PP**	**14 52 30.5**	**-1.8**		
L42A	**Oliver, Polo**	**114.17**	**313**	IAMs_20	IAMs_20	15 37 50.3			
	comp=Z,3µm,21.0s								
JAVC	**Velka Javorina**	**114.22**	**30**	*e*PP	**PP**	**14 52 31.0**	**-2.3**		
NKC	**Novy Kostel**	**114.27**	**26**	*e*PKKP	**PKKPbc**	**15 02 17.8**	**+1.5**		
NKC				AMS	AMS	15 37 10.0			
	comp=Z,3µm,21.2s								
K43A	**Burlington**	**114.30**	**314**	IAMs_20	IAMs_20	15 45 32.5			
	comp=Z,2µm,18.0s								
PBA	**Port Blair**	**114.30**	**110**	*e*P	PKPdf	14 51 36.6	-1.6		
UBBA	**Unterbreizbach**	**114.30**	**24**	*e*Sdiff	**Sdif**	**15 00 28.3**	**+12**		
	baz=195,slow=8.6								
UBBA				*e*SP	**SP**	**15 02 11.8**	**+2.4**		
	baz=200,slow=8.1								
KASTN	**Kahler Asten**	**114.34**	**23**	*e*Sdiff	**Sdif**	**15 00 29.3**	**+13**		
	baz=195,slow=8.6								
KASTN				*e*SP	**SP**	**15 02 13.0**	**+3.0**		
	baz=200,slow=8.1								
BUG	**Bochum--Univer**	**114.35**	**22**	*e*Sdiff	**Sdif**	**15 00 29.6**	**+13**		
	baz=195,slow=8.6								
BUG				*e*SP	**SP**	**15 02 12.8**	**+2.8**		
	baz=200,slow=8.1								
KSU1	**Kansas State U**	**114.35**	**306**	IAMs_20	IAMs_20	15 45 17.9			
	comp=Z,2µm,19.0s								
VRAC	**Vranov**	**114.37**	**29**	*e*PP	**PP**	**14 52 31.8**	**-2.4**		
PLN	**Plauen**	**114.44**	**26**	*e*Sdiff	**Sdif**	**15 00 26.2**	**+8.8**		
	baz=195,slow=8.6								
PLN				*e*SP	**SP**	**15 02 12.2**	**+1.3**		
	baz=200,slow=8.1								
TANN	**Tannenbergstha**	**114.44**	**26**	*e*Sdiff	**Sdif**	**15 00 27.5**	**+10**		
	baz=195,slow=8.6								
TANN				*e*SP	**SP**	**15 02 12.8**	**+1.8**		
	baz=200,slow=8.1								
N38A	**Joes South For**	**114.47**	**310**	IAMs_20	IAMs_20	15 44 44.6			
	comp=Z,3µm,18.0s								
MOX	**Moxa**	**114.47**	**25**	*e*Sdiff	**Sdif**	**15 00 28.3**	**+11**		
	baz=195,slow=8.6								
MOX				*e*SP	**SP**	**15 02 12.9**	**+1.7**		
	baz=200,slow=8.1								
MOX				*e*L	L	15 35 21.1			
	comp=Z,2µm,20.1s								
PRU	**Pruhonice**	**114.51**	**28**	AMS	AMS	15 40 40.0			
	comp=Z,2µm,16.6s								
R32A	**Long Quarter,**	**114.63**	**304**	IAMs_20	IAMs_20	15 40 37.5			
	comp=Z,2µm,20.0s								
MAUC	**Maruska**	**114.73**	**30**	*e*PKKP		15 02 32.9			
L40A	**Anamosa**	**114.80**	**312**	IAMs_20	IAMs_20	15 37 59.1			
	comp=Z,3µm,21.0s								
TUC	**Tucson**	**114.84**	**292**	IAMs_20	IAMs_20	15 35 20.7			
	comp=Z,3µm,18.0s								
HSKC	**Hora Svate Kat**	**114.84**	**27**	AMS	AMS	15 39 00.0			
	comp=Z,2µm,17.0s								
VIS	**Vishakhapatnam**	**114.93**	**98**	*e*P	PKPdf	14 51 39.4	+0.1		
GTTG	**Gottingen**	**114.98**	**24**	*e*Sdiff	**Sdif**	**15 00 35.0**	**+13**		
	baz=195,slow=8.6								
GTTG				*e*SP	**SP**	**15 02 20.6**	**+4.9**		
	baz=200,slow=8.1								
MORC	**Moravsky Berou**	**115.04**	**30**	*e*PP	**PP**	**14 52 37.8**	**-1.2**		
NEUB	**Neuenburg**	**115.04**	**25**	*e*Sdiff	**Sdif**	**15 00 33.5**	**+11**		
	baz=195,slow=8.6								
NEUB				*e*SP	**SP**	**15 02 17.5**	**+1.2**		
	baz=200,slow=8.1								
ANMO	**Albuquerque**	**115.05**	**297**	PKP	**PKiKP**	**14 51 41.0**	**+1.7**		
	comp=Z,1.5nm,0.9s,baz=147,slow=5.4,SNR=4.2								
ANMO	**Albuquerque**	**115.05**	**297**	IAMs_20	IAMs_20	15 36 32.0			
	comp=Z,4µm,18.0s								
BRG	**Berggiesshubel**	**115.20**	**27**	*e*Sdiff	**Sdif**	**15 00 33.7**	**+10**		
	baz=195,slow=8.6								
BRG				*e*SP	**SP**	**15 02 19.6**	**+1.8**		
	baz=200,slow=8.1								
BRG	**Berggiesshubel**	**115.20**	**27**	SP	SP	15 02 30.0	+12		
BRG	**Berggiesshubel**	**115.20**	**27**	SS	SS	15 08 36.0	-1.3		
OKC	**Ostrava-Krasne**	**115.25**	**30**	*e*SS	SS	15 08 28.0	-10		
OKC				AMS	AMS	15 39 40.0			
	comp=Z,2µm,18.3s								
IBBN	**Ibbenburen**	**115.27**	**22**	*e*SP	SP	15 02 20.8	+2.5		
	baz=200,slow=8.1								
DPC	**Dobruska-Polom**	**115.27**	**29**	*e*PKKP	PKKPdf	15 02 29.0	-8.7		
DPC				AMS	AMS	15 40 00.0			
	comp=Z,2µm,17.1s								
CLZ	**Clausthal**	**115.34**	**24**	*e*Sdiff	**Sdif**	**15 00 36.6**	**+12**		
	baz=195,slow=8.6								
CLZ				*e*SP	SP	15 02 20.8	+1.7		
	baz=200,slow=8.1								
UPC	**Upice**	**115.34**	**28**	*e*PKKP	**PKKPdf**	**15 02 31.7**	**-5.8**		
UPC				AMS	AMS	15 39 50.0			
	comp=Z,2µm,18.4s								
CBKS	**Cedar Bluff**	**115.39**	**304**	IAMs_20	IAMs_20	15 40 50.6			
	comp=Z,3µm,20.0s								
CLL	**Collm**	**115.40**	**26**	IAMs_20	IAMs_20	15 37 57.9			
	comp=Z,2µm,19.0s								
CLL	**Collm**	**115.40**	**26**	*e*Sdiff	**Sdif**	**15 00 35.6**	**+10**		
	baz=195,slow=8.6								
CLL				*e*SP	SP	15 02 20.8	+1.2		
	baz=200,slow=8.1								
CHVC	**Chvalec**	**115.43**	**28**	AMS	AMS	15 40 00.0			
	comp=Z,2µm,17.9s								
OSTC	**Ostas**	**115.44**	**28**	*e*PKKP	**PKKPdf**	**15 02 35.6**	**-1.7**		
OSTC				AMS	AMS	15 39 50.0			
	comp=Z,3µm,19.0s								
GNI	**Garni**	**115.44**	**53**	IAMs_20	IAMs_20	15 38 49.1			
	comp=Z,3µm,18.0s								
N35A	**Tabor**	**115.47**	**308**	IAMs_20	IAMs_20	15 48 17.2			
	comp=Z,3µm,20.0s								
I42A	**Draeger Farm,**	**115.54**	**315**	IAMs_20	IAMs_20	15 44 53.3			
	comp=Z,3µm,18.0s								
SIM	**Simferopol'**	**115.61**	**43**	P	**Pdif**	**14 47 59.4**	**+7.0**		
SIM				*e*PS	**PKKPab**	**15 02 16.0**	**+0.9**		
SIM				pmax	pmax				
	comp=Z,81nm,14.4s								
ASSE	**Asse, Remlinge**	**115.68**	**24**	*e*Sdiff	**Sdif**	**15 00 39.5**	**+12**		
	baz=195,slow=8.6								
ASSE				*e*SP	**SP**	**15 02 23.3**	**+1.3**		
	baz=200,slow=8.1								
T25A	**Trinidad**	**115.98**	**300**	IAMs_20	IAMs_20	15 39 14.6			
	comp=Z,3µm,18.0s								
FLTG	**Flechtingen**	**115.98**	**25**	*e*Sdiff	**Sdif**	**15 00 41.3**	**+11**		
	baz=195,slow=8.6								
FLTG				*e*SP	**SP**	**15 02 25.6**	**+0.8**		
	baz=200,slow=8.1								
RETH	**Rethem/Aller,**	**115.99**	**23**	*e*SP	SP	15 02 26.6	+1.8		
	baz=200,slow=8.1								
I40A	**Norwalk**	**116.16**	**313**	IAMs_20	IAMs_20	15 36 15.8			
	comp=Z,2µm,21.0s								
RAGD	**RAYAGADA**	**116.28**	**97**	*e*P	**PKPdf**	**14 51 42.2**	**+0.3**		
SOC	**Sochi**	**116.43**	**48**	*i* PKIKP	PKPdf	14 51 34.5	-6.9		
SOC				*e*		14 52 45.9			
SOC				*e*SS	SS	15 08 54.8	+1.2		
SOC				*e*SSS	SSS	15 13 12.1			
GORT1	**Trebel**	**116.62**	**24**	*e*SP	SP	15 02 31.9	+1.4		
	baz=200,slow=8.1								
RUE	**Ruedersdorf**	**116.67**	**26**	*e*Sdiff	**Sdif**	**15 00 44.4**	**+8.6**		
	baz=195,slow=8.6								
RUE				*e*SP	**SP**	**15 02 32.7**	**+1.7**		
	baz=200,slow=8.1								
L34A	**Svendsen Farm,**	**116.70**	**308**	IAMs_20	IAMs_20	15 48 04.7			
	comp=Z,2µm,19.0s								
F42A	**Maple Grove Fa**	**116.89**	**316**	IAMs_20	IAMs_20	15 45 55.2			
	comp=Z,2µm,18.0s								
BGNE	**Belgrade**	**116.93**	**307**	IAMs_20	IAMs_20	15 46 44.1			
	comp=Z,3µm,20.0s								
HLG	**Helgoland**	**117.08**	**22**	*e*Sdiff	**Sdif**	**15 00 48.9**	**+10**		
	baz=195,slow=8.6								
HLG				*e*SP	**SP**	**15 02 36.6**	**+1.9**		
	baz=200,slow=8.1								
G40A	**Rib Lake**	**117.19**	**314**	IAMs_20	IAMs_20	15 47 18.0			
	comp=Z,2µm,20.0s								
I37A	**Lemond, Waseca**	**117.29**	**312**	IAMs_20	IAMs_20	15 43 44.4			
	comp=Z,3µm,20.0s								
BSEG	**Bad Segeberg**	**117.31**	**23**	*e*Sdiff	**Sdif**	**15 00 51.5**	**+10**		
	baz=195,slow=8.6								
BSEG				*e*SP	**SP**	**15 02 38.5**	**+1.7**		
	baz=200,slow=8.1								
GLA	**Glamis**	**117.35**	**289**	IAMs_20	IAMs_20	15 34 39.4			
	comp=Z,3µm,20.0s								
WUAZ	**Wupatki**	**117.77**	**293**	IAMs_20	IAMs_20	15 38 51.2			
	comp=Z,3µm,18.0s								
AJM	**Ajmer**	**117.86**	**85**	*e*P	**PKPdf**	**14 51 44.3**	**-0.5**		
KIV	**Kislovodsk**	**117.87**	**50**	IAMs_20	IAMs_20	15 42 03.6			
	comp=Z,2µm,18.0s								
KIV	**Kislovodsk**	**117.87**	**50**	*i* PKIKP	**PKPdf**	**14 51 42.3**	**-2.0**		
KIV				*e*		14 52 55.2			
KIV				*e*		14 58 33.8			
KIV				*e*PS	**PS**	**15 02 39.8**	**-3.4**		
KIV				*e*SS	SS	15 09 07.4	-5.1		
KIV				pmax	pmax				
	comp=Z,5.0nm,1.0s								
KIV				pmax	pmax				
	comp=Z,2µm,22.0s								
OGNE	**Ogallala**	**118.14**	**304**	IAMs_20	IAMs_20	15 40 56.3			
	comp=Z,2µm,21.0s								
BC3	**Big Chuckawall**	**118.15**	**289**	IAMs_20	IAMs_20	15 35 02.4			
	comp=Z,3µm,20.0s								
ECSD	**EROS Data Cent**	**118.28**	**309**	IAMs_20	IAMs_20	15 42 05.6			
	comp=Z,3µm,20.0s								
CPE	**Camp Elliot**	**118.31**	**287**	IAMs_20	IAMs_20	15 37 02.8			
	comp=Z,2µm,18.0s								
BWNR	**Bhubaneshwar**	**118.31**	**99**	*e*P	**PKPdf**	**14 51 45.9**	**+0.2**		
RGN	**Rugen**	**118.50**	**25**	IAMs_20	IAMs_20	15 41 03.0			
	comp=Z,3µm,18.0s								
RGN	**Rugen**	**118.50**	**25**	*e*Sdiff	**Sdif**	**15 01 02.3**	**+11**		
	baz=195,slow=8.6								
RGN				*e*SP	SP	15 02 48.9	+1.3		
	baz=200,slow=8.1								
K30B	**Basset**	**118.59**	**306**	IAMs_20	IAMs_20	15 42 28.9			
	comp=Z,3µm,20.0s								
PFO	**Pinyon Flats O**	**118.59**	**288**	PKP	**PKPdf**	**14 51 47.4**	**+1.3**		
	comp=Z,2.1nm,0.8s,baz=117,slow=2.3,SNR=4.3								
PFO	**Pinyon Flats O**	**118.59**	**288**	⇑*i* PKIKP	**PKPdf**	**14 51 46.9**	**+0.8**		
PFO				MLR	MLR				
	comp=Z,3µm,16.0s								
NEE2	**Needles Airpor**	**118.66**	**290**	IAMs_20	IAMs_20	15 36 32.1			
	comp=Z,2µm,18.0s								
ISCO	**Idaho Springs**	**118.71**	**300**	IAMs_20	IAMs_20	15 40 09.9			
	comp=Z,2µm,19.0s								
DANC	**Danby, Needles**	**118.92**	**290**	IAMs_20	IAMs_20	15 35 39.8			
	comp=Z,3µm,20.0s								
MAK	**Makhachkala**	**118.93**	**54**	*e*P	**Pdif**	**14 47 58.4**	**-8.7**		
MAK				*i*		14 51 43.7			
MAK				*e*		14 53 03.9			
MAK				*e*		14 58 30.9			
MAK				*e*PS	PKKPdf	15 02 52.7	+23		
MAK				*e*SS	SS	15 09 21.9	-4.1		
MAK				*e*SSS	SSS	15 13 42.3			
MAK				pmax	pmax				
	comp=Z,377nm,1.1s								
SCHQ	**Schefferville**	**119.01**	**334**	PKP	**PKPdf**	**14 51 45.8**	**-0.3**		
	comp=Z,6.7nm,0.7s,baz=209,slow=4.5,SNR=8.5								
AKASG	**Malin Array Be**	**119.09**	**37**	PKP	**PKPdf**	**14 51 45.3**	**-0.9**		
	comp=Z,1.1nm,0.5s,baz=246,slow=1.5,SNR=5.3								
AKBB	**Malin Array Si**	**119.09**	**37**	⇓*i* PKIKP	**PKPdf**	**14 51 47.3**	**+1.1**		
BFSC	**Mount Baldy Ra**	**119.67**	**288**	IAMs_20	IAMs_20	15 36 28.0			
	comp=Z,2µm,18.0s								
SUSD	**Miller**	**119.80**	**308**	IAMs_20	IAMs_20	15 41 52.8			
	comp=Z,3µm,20.0s								
MWC	**Mount Wilson**	**119.85**	**287**	IAMs_20	IAMs_20	15 37 48.7			
	comp=Z,3µm,19.0s								
F33A	**5 Mile Ranch,**	**119.93**	**311**	IAMs_20	IAMs_20	15 44 29.0			
	comp=Z,2µm,18.0s								
EYMN	**Ely**	**119.95**	**315**	IAMs_20	IAMs_20	15 48 33.8			
	comp=Z,3µm,18.0s								
SHOC	**Shoshone, Teco**	**120.37**	**290**	IAMs_20	IAMs_20	15 36 24.2			
	comp=Z,3µm,20.0s								
OSI	**Osito Audit: C**	**120.49**	**287**	IAMs_20	IAMs_20	15 37 40.6			
	comp=Z,3µm,18.0s								
LRMC	**Laurel Mtn Rad**	**120.69**	**288**	IAMs_20	IAMs_20	15 37 39.9			
	comp=Z,3µm,18.0s								
JMIU	**JAMIA UNIVERSI**	**120.95**	**86**	*e*P	**PKPdf**	**14 51 48.4**	**-2.2**		
FURC	**Furnace Creek,**	**121.10**	**290**	IAMs_20	IAMs_20	15 41 11.7			
	comp=Z,3µm,18.0s								
K22A	**Casper**	**121.44**	**302**	IAMs_20	IAMs_20	15 43 07.0			
	comp=Z,3µm,19.0s								
MERT	**Meerut**	**121.51**	**86**	*e*P	**PKPdf**	**14 51 52.4**	**+0.8**		
RSSD	**Black Hills**	**121.59**	**304**		**PKPdf**	**14 51 50.0**	**-1.6**		
RSSD	**Black Hills**	**121.59**	**304**	IAMs_20	IAMs_20	15 43 56.7			
	comp=Z,2µm,20.0s								
RSSD	**Black Hills**	**121.59**	**304**	PKIKP	**PKPdf**	**14 51 50.0**	**-1.6**		
RSSD				MLR	MLR				
	comp=Z,2µm,20.0s								
VES	**Vestal, Richgr**	**121.66**	**288**	IAMs_20	IAMs_20	15 38 56.4			
	comp=Z,2µm,19.0s								
CWC	**Cottonwood Cre**	**121.66**	**289**	IAMs_20	IAMs_20	15 40 28.5			
	comp=Z,2µm,18.0s								
AGMN	**Agassiz Nation**	**121.83**	**313**	IAMs_20	IAMs_20	15 45 53.8			
	comp=Z,3µm,18.0s								
MNK	**Minsk**	**122.05**	**34**	*i* PKP	**PKPdf**	**14 51 51.7**	**-0.1**		
	comp=E,10.0nm,0.8s								
MNK				*i* PKP	**PKPdf**	**14 51 51.7**	**-0.1**		
	comp=N,12nm,1.0s								
MNK				*i* PKP	**PKPdf**	**14 51 51.7**	**-0.1**		
	comp=Z,12nm,0.9s,baz=208								
MNK				*i* PP	**PP**	**14 53 24.2**	**-3.2**		
MNK				*i* SKP	**SKPdf**	**14 55 27.1**	**-0.1**		
MNK				*i* PKS	**PKSdf**	**14 55 28.4**	**+0.3**		
MNK				*i* PPP	PPP	14 55 59.0			
MNK				*i* SKS	**SKSdf**	**14 59 03.7**	**+0.3**		
MNK				*i* PS	**PS**	**15 03 29.9**	**+10**		
MNK				*i* SS	**SS**	**15 10 01.7**	**-4.1**		
MNK				*i* SSS	SSS	15 13 45.5			
MNK				*i* LQ	LQ	15 36 42.9			
MNK				*i* LRM	MLR	15 44 32.8			
	comp=E,2µm,17.4s								
MNK	**Minsk**	**122.05**	**34**	*i* PKIKP	**PKPdf**	**14 51 51.7**	**-0.1**		
MNK				*i*		14 53 24.1			
MNK				*i* PPP	PPP	14 55 58.9			
MNK				*i*		14 59 03.7			
MNK				*i* SS	SS	15 10 01.7	-4.1		
MNK				pmax	pmax				
	comp=Z,12nm,0.9s								
MNK				pmax	pmax				
	comp=N,12nm,1.0s								
MNK				pmax	pmax				
	comp=E,10.0nm,0.8s								
MNK				MLR	MLR				
	comp=E,2µm,17.0s								
MNK				MLR	MLR				
	comp=N,1µm,17.0s								
MNK				MLR	MLR				
	comp=Z,2µm,16.0s								
DUG	**Dugway, Tooele**	**122.23**	**295**	IAMs_20	IAMs_20	15 42 19.3			
	comp=Z,3µm,18.0s								
E28A	**Huff**	**122.25**	**308**	IAMs_20	IAMs_20	15 43 18.6			
	comp=Z,3µm,22.0s								
PKD	**Bear Valley Ra**	**122.44**	**287**	IAMs_20	IAMs_20	15 35 33.2			
	comp=Z,3µm,20.0s								
VSR	**Storozhevoye**	**122.73**	**43**	*e*PKIKP	**PKPdf**	**14 51 50.4**	**-2.8**		
VSR				pmax	pmax				
	comp=Z,4.0nm,0.8s								
DDI	**Dehra Dun**	**122.77**	**85**	*e*P	**PKPdf**	**14 51 53.8**	**-0.4**		
BHK	**Bhakra**	**122.80**	**83**	*e*P	**PKPdf**	**14 51 53.8**	**-0.3**		
HWUT	**Hardware Ranch**	**122.81**	**297**	IAMs_20	IAMs_20	15 40 33.4			
	comp=Z,2µm,22.0s								
HULI	**Fort Hunter Li**	**122.83**	**286**	IAMs_20	IAMs_20	15 35 07.7			
	comp=Z,3µm,21.0s								
PDAR	**Pinedale Array**	**122.85**	**299**	PKP	**PKPdf**	**14 51 53.0**	**-1.2**		
	comp=Z,2.2nm,0.6s,baz=142,slow=6.5,SNR=17								
PDAR	**Pinedale Array**	**122.85**	**299**		**PKPdf**	**14 51 54.5**	**+0.3**		
MDND	**Maddock**	**122.87**	**310**	IAMs_20	IAMs_20	15 47 18.8			
	comp=Z,3µm,19.0s								
SMLA	**Simla**	**122.98**	**84**	*e*P	**PKPdf**	**14 51 53.4**	**-1.0**		
CMAR	**Chiang Mai Arr**	**123.12**	**112**	PKP	**PKPdf**	**14 51 53.9**	**-1.2**		
	comp=Z,3.5nm,0.8s,baz=228,slow=3.7,SNR=29								
CMAR				PKKPab	**PKKPab**	**15 01 47.9**	**+1.8**		
	comp=Z,0.4nm,0.4s,baz=22,slow=3.2,SNR=5.8								
CMAR	**Chiang Mai Arr**	**123.12**	**112**		**PKPdf**	**14 51 54.9**	**-0.2**		
NVAR	**Mina Array Bea**	**123.36**	**290**	PKP	**PKPdf**	**14 51 56.2**	**+1.0**		
	comp=Z,6.3nm,0.8s,baz=141,slow=3.5,SNR=21								
NVAR	**Mina Array Bea**	**123.36**	**290**		**PKPdf**	**14 51 55.9**	**+0.7**		
ULM	**Lac du Bonnet**	**123.45**	**314**	PKP	**PKPdf**	**14 51 53.4**	**-1.2**		
	comp=Z,11nm,0.6s,baz=141,slow=2.6,SNR=16								
ULM	**Lac du Bonnet**	**123.45**	**314**	⇓*i* PKIKP	**PKPdf**	**14 51 54.6**	**-0.1**		
AHID	**Auburn Hatcher**	**123.53**	**298**	IAMs_20	IAMs_20	15 42 18.4			
	comp=Z,3µm,19.0s								
VRH	**Novokhopyorsk**	**123.60**	**44**	*e*PKIKP	**PKPdf**	**14 51 53.6**	**-1.3**		
VRH				pmax	pmax				
	comp=Z,10.0nm,0.8s								
FORD	**Fort Ord Natur**	**123.63**	**286**	IAMs_20	IAMs_20	15 37 05.7			
	comp=Z,3µm,19.0s								
JOSI	**Joshimath**	**123.71**	**86**	*e*P	**PKPdf**	**14 51 54.5**	**-1.7**		
SAIH	**SAIHA**	**123.73**	**104**	*e*P	**PKPdf**	**14 51 56.1**	**-0.2**		
HFS	**Hagfors**	**123.77**	**23**	PKP	**PKPdf**	**14 51 52.9**	**-2.0**		
	comp=Z,6.3nm,0.9s,baz=143,slow=3.7,SNR=11								
ELK	**Elko**	**123.78**	**294**	PKP	**PKPdf**	**14 51 56.2**	**+0.3**		
	comp=Z,6.6nm,0.9s,baz=221,slow=1.5,SNR=22								
LPSR	**Galich'ya Gora**	**123.81**	**42**	*e*PKIKP	**PKPdf**	**14 51 54.5**	**-0.8**		
LPSR				pmax	pmax				
	comp=Z,9.0nm,0.8s								
KLP	**Kalpa**	**123.84**	**85**	*e*P	**PKPdf**	**14 51 55.5**	**-1.0**		
CMB	**Columbia Colle**	**124.03**	**288**	IAMs_20	IAMs_20	15 38 18.4			
	comp=Z,2µm,19.0s								
MHC	**Mount Hamilton**	**124.08**	**287**	IAMs_20	IAMs_20	15 35 48.8			
	comp=Z,2µm,21.0s								
NB2	**NORSAR Subarra**	**124.15**	**21**	PKPdf	**PKPdf**	**14 51 56.5**	**+0.8**		
	comp=Z,26nm,1.7s,baz=202,slow=1.9								
NB2	**NORSAR Subarra**	**124.15**	**21**	PKPdf	**PKPdf**	**14 51 56.5**	**+0.8**		
NB2				AMP		14 51 56.5			
	comp=Z,26nm,1.7s								
NOA	**NORSAR Array B**	**124.15**	**21**	PKP	**PKPdf**	**14 51 55.9**	**+0.1**		
	comp=Z,3.7nm,0.8s,baz=182,slow=1.6,SNR=8.9								
MOOW	**Moose Ponds**	**124.16**	**299**	IAMs_20	IAMs_20	15 44 22.0			
	comp=Z,3µm,19.0s								
SRNI	**Srinagar**	**124.16**	**80**	*e*P	**PKPdf**	**14 51 55.4**	**-1.4**		
FARB	**Farallon Islan**	**125.02**	**286**	IAMs_20	IAMs_20	15 42 35.6			
	comp=Z,2µm,18.0s								
OBN	**Obninsk**	**125.15**	**39**	IAMs_20	IAMs_20	15 46 29.3			
	comp=Z,2µm,20.0s								
OBN	**Obninsk**	**125.15**	**39**	⇑*i* PKIKP	**PKPdf**	**14 51 58.3**	**+0.6**		
OBN				*e*		14 53 44.9			
OBN				*e*		14 59 05.6			
OBN				*e*PS	**PS**	**15 03 49.2**	**+1.6**		
OBN				*e*SSS	SSS	15 15 23.1			
OBN				pmax	pmax				
	comp=Z,14nm,0.6s								
OBN				MLR	MLR				
	comp=Z,2µm,17.0s								
DGMT	**Dagmar**	**125.18**	**307**	IAMs_20	IAMs_20	15 45 18.2			
	comp=Z,3µm,20.0s								
VSU	**Vasula**	**125.21**	**31**	⇓*i* PKIKP	**PKPdf**	**14 51 56.4**	**-1.3**		
VSU				MLR	MLR				
	comp=Z,2µm,17.0s								
DHUB	**DHUBRI**	**125.21**	**99**	*e*P	**PKPdf**	**14 51 58.5**	**-0.3**		
CVS	**Carmenet Viney**	**125.27**	**287**	IAMs_20	IAMs_20	15 40 31.2			
	comp=Z,3µm,18.0s								
MCCM	**Marconi Confer**	**125.32**	**286**	IAMs_20	IAMs_20	15 37 54.4			
	comp=Z,3µm,21.0s								
GTK	**Tadong**	**125.60**	**97**	*e*P	**PKPdf**	**14 52 00.6**	**+0.9**		
SUTB	**Sutter Butte**	**125.65**	**288**	IAMs_20	IAMs_20	15 38 22.9			
	comp=Z,3µm,19.0s								
SHL	**Shillong**	**125.77**	**101**	*e*P	**PKPdf**	**14 51 59.5**	**-0.7**		
MORE	**Moreh**	**125.84**	**104**	IAMs_20	IAMs_20	15 43 01.5			
	comp=Z,3µm,18.0s								
MOS	**Moscow**	**126.01**	**39**	*i* PKIKP	**PKPdf**	**14 51 57.6**	**-1.8**		
MOS				*e*		14 53 55.3			
MOS				*e*PS	**PS**	**15 04 00.7**	**+5.6**		
MOS				MLR	MLR				
	comp=Z,2µm,18.0s								
MFID	**Camas Ranch**	**126.16**	**296**	IAMs_20	IAMs_20	15 45 05.0			
	comp=Z,3µm,20.0s								
IMP	**Imphal**	**126.17**	**103**	*e*P	**PKPdf**	**14 52 00.8**	**0.0**		
GUWA	**GUWAHATI**	**126.20**	**100**	*e*P	**PKPdf**	**14 51 58.1**	**-2.7**		
DLMT	**Dillon**	**126.24**	**299**	IAMs_20	IAMs_20	15 48 03.9			
	comp=Z,3µm,18.0s								
BELG	**Belogornoye**	**126.70**	**47**	PKP	**PKPdf**	**14 51 59.6**	**-1.1**		
	comp=Z,12nm,0.8s,baz=142,slow=4.3,SN

comp=Z,280nm,5.7s
PZH LR LR
comp=Z,1μm,17.3s
PZH LR LR
comp=Z,980nm,22.6s
WUS Wushi 131.92 78 IAMs_20 IAMs_20 15 54 33.1
comp=Z,2μm,18.0s
KIRV Kirov 132.17 43 ⇓*i*PKIKP **PKPdf 14 52 11.0 0.0**
TNSS Tian-Shan 132.20 75 *e*PKIKP **PKPdf 14 52 10.0 -2.1**
TNSS *e* 14 54 30.9
TNSS Tian-Shan 132.20 75 *e*PKP **PKPdf 14 52 10.1 -2.1**
TNSS *e*PP **PP 14 54 30.9 -4.2**
TNSS *e*PKSbc **PKSbc 14 55 37.0 -3.1**
MDOK Medeo 132.34 75 *e*PKIKP **PKPdf 14 52 10.5 -1.6**
MDOK Medeo 132.34 75 *e*PKP **PKPdf 14 52 10.5 -1.6**
MDOK *e*PKSbc **PKSbc 14 55 37.4 -2.6**
MDOK LR LR 15 51 06.6
comp=Z,320nm,16.0s
SUMG Summit 132.60 355 *i* P **PKiKP 14 52 14.0 +0.9**
SUMG IAmb IAmb 14 52 27.2
comp=Z,10nm,1.6s
ADZR Andozero 132.86 33 *e*PKIKP **PKPdf 14 52 11.6 -0.5**
ADZR pmax pmax
comp=Z,10.0nm,0.6s
ADZR MLR MLR
comp=Z,4μm,19.0s
SATY Saty 132.92 76 *e*PKIKP **PKPdf 14 52 11.8 -1.3**
SATY Saty 132.92 76 *e*PKP **PKPdf 14 52 11.8 -1.3**
SATY *e*PKSbc **PKSbc 14 55 39.2 -2.8**
HKPS Hong Kong Po S 133.15 126 IAMs_20 IAMs_20 15 46 48.4
comp=Z,3μm,19.0s
UZB Uzynbulak 133.29 76 *e*PKIKP **PKPdf 14 52 12.2 -1.6**
UZB Uzynbulak 133.29 76 *e*PKP **PKPdf 14 52 12.3 -1.6**
UZB *e*PKSbc **PKSbc 14 55 40.5 -2.8**
KPKS Kokpek 133.36 75 *e*PKIKP **PKPdf 14 52 12.5 -1.4**
KPKS Kokpek 133.36 75 *e*PKP **PKPdf 14 52 12.5 -1.4**
SHLS Shalkode 133.51 76 *e*PKIKP **PKPdf 14 52 13.4 -0.8**
SHLS Shalkode 133.51 76 *e*PKP **PKPdf 14 52 13.5 -0.8**
SHLS *e*PKSbc PKSdf 14 55 41.8 -8.8
GYA Guiyang 133.58 115 PKP **PKPdf 14 52 14.4 -0.5**
GYA PP **PP 14 54 44.8 +1.4**
GYA PKS **PKSdf 14 55 48.6 -2.9**
GYA SS SS 15 12 35.6 +6.3
GYA AMB AMB
comp=Z,410nm,11.3s
GYA LR LR
comp=Z,730nm,16.7s
GYA LR LR
comp=Z,1μm,17.3s
ARTI Arti 133.81 50 **PKPdf 14 52 14.5 +0.3**
ARTI IAMs_20 IAMs_20 15 52 31.0
comp=Z,2μm,20.0s
ARTI Arti 133.81 50 *i* PKIKP **PKPdf 14 52 13.3 -0.9**
ARCES ARCESS Array B 134.43 23 PKhKP PKPpre 14 52 09.3
comp=Z,5.1nm,1.1s,baz=193,slow=3.6,SNR=3.9
ARCES PKP **PKPdf 14 52 15.4 +0.4**
comp=Z,3.6nm,0.5s,baz=196,slow=1.4,SNR=12
ARCES SKPab **SKPbc 14 55 46.2 +1.4**
comp=Z,3.1nm,0.7s,baz=216,slow=2.9,SNR=5.1
BLKN Baker Lake 134.66 325 **PKPdf 14 52 17.4 +1.9**
GOMU GeErMu 135.86 95 PKP **PKPdf 14 52 19.3 +0.1**
GOMU LR LR
comp=Z,1μm,18.8s
GOMU LR LR
comp=Z,960nm,18.4s
KULLO Kullorsuaq 135.91 349 *i* P **PKPdf 14 52 17.7 +0.1**
KULLO IAmb IAmb 14 52 49.9
comp=Z,14nm,0.8s
CD2 Chengdu 135.98 109 PKP **PKPdf 14 52 21.3 +2.1**
CD2 sPKP sPKPdf 14 52 23.8 +2.8
CD2 PP **PP 14 55 05.1 +6.5**
CD2 SKS **SKSdf 14 59 26.5 -3.8**
CD2 SKKS **SKKSac 15 01 53.2 -0.4**
CD2 AMB AMB
comp=Z,390nm,7.7s
CD2 LR LR
comp=Z,2μm,16.9s
BORK Borovoye 136.36 60 IAMs_20 IAMs_20 15 55 26.7
comp=Z,2μm,18.0s
BORK Borovoye 136.36 60 ⇑*i*PKIKP **PKPdf 14 52 19.7 +0.6**
BORK pmax pmax
comp=Z,8.0nm,1.3s
BVAR Borovoye Array 136.38 60 PKhKP PKPpre 14 52 08.0
comp=Z,0.6nm,0.8s,baz=222,slow=3.7,SNR=3.9
BVAR PKP **PKPdf 14 52 20.2 +1.1**
comp=Z,2.9nm,0.7s,baz=267,slow=2.5,SNR=7.8
BVAR SKP **SKPdf 14 55 52.4 -1.8**
comp=Z,1.4nm,0.7s,baz=48,slow=2.1,SNR=4.3
KNMB Chin-men Tao 136.80 129 IAMs_20 IAMs_20 15 47 28.3
comp=Z,2μm,20.0s
MAKZ Makanchi 137.39 75 IAMs_20 IAMs_20 15 54 25.3
comp=Z,2μm,20.0s
MK31 Makanchi Array 137.53 75 ⇑*i*PKIKP **PKPdf 14 52 21.3 -0.2**
MKAR Makanchi Array 137.53 75 PKhKP PKPpre 14 52 13.5
comp=Z,1.1nm,0.8s,baz=222,slow=1.6,SNR=12
MKAR PKP **PKPdf 14 52 19.7 -1.8**
comp=Z,2.5nm,0.9s,baz=249,slow=3.4,SNR=12
MKAR SKPbc **SKPbc 14 55 51.8 -3.3**
comp=Z,1.2nm,1.0s,baz=225,slow=0.6,SNR=2.4
CNSH ChangSha 137.85 121 PKP **PKPdf 14 52 24.4 +1.8**
CNSH AMB AMB
comp=Z,430nm,6.8s
CNSH LR LR
comp=Z,810nm,16.3s
CNSH LR LR
comp=Z,1μm,16.9s
WMQ Urumqi 138.06 82 PKP **PKPdf 14 52 20.9 -1.7**
WMQ PP **PP 14 55 12.9 +1.1**
WMQ PKS **PKSdf 14 55 56.1 -2.6**
WMQ AMB AMB
comp=Z,510nm,5.9s
WMQ LR LR
comp=Z,1μm,18.1s
WMQ LR LR
comp=Z,1μm,24.9s
KURBB Kurchatov Arra 138.41 68 PKhKP PKPpre 14 52 14.0
comp=Z,0.8nm,0.8s,baz=235,slow=4.0,SNR=5.6
KURBB PKP **PKPdf 14 52 20.2 -2.7**
comp=Z,1.5nm,0.7s,baz=234,slow=3.7,SNR=7.2
KURBB SKPbc **SKPbc 14 55 55.7 -1.7**
comp=Z,2.1nm,1.1s,baz=232,slow=3.8,SNR=6.4
KURK Kurchatov 138.51 68 IAMs_20 IAMs_20 15 53 20.2
comp=Z,2μm,21.0s
KURK Kurchatov 138.51 68 PKIKP **PKPdf 14 52 20.2 -2.9**
TULEG Thule 138.96 346 *i* P PKPdf 14 52 16.4 -6.7
TULEG IAmb IAmb 14 52 38.0
comp=Z,14nm,0.9s
ZSN Zaisan 139.25 76 *e*PKIKP **PKPdf 14 52 23.3 -1.3**
ZSN Zaisan 139.25 76 *e*PKP **PKPdf 14 52 23.4 -1.3**
ZSN *e*PKSbc **PKSdf 14 55 58.7 -1.8**
YKAW1 Yellowknife Wh 139.37 315 **PKPdf 14 52 24.1 -0.2**
YKA Yellowknife Ar 139.42 314 PKhKP PKPpre 14 52 19.9
comp=Z,1.2nm,0.6s,baz=115,slow=2.3,SNR=11
YKA PKP **PKPdf 14 52 24.2 -0.2**
comp=Z,16nm,0.8s,baz=128,slow=1.5,SNR=80
YKA SKPbc **SKPbc 14 55 59.6 -0.2**
comp=Z,2.8nm,0.6s,baz=129,slow=2.7,SNR=18
LZDM Lanzhou Array 140.06 104 PKhKP PKPpre 14 52 23.5
comp=Z,0.3nm,0.3s,baz=217,slow=6.9,SNR=1.9
LZH Lanzhou 140.24 104 PKP **PKPdf 14 52 26.7 -0.3**
LZH AMB AMB
comp=Z,300nm,5.2s
LZH LR LR
comp=Z,810nm,16.5s
LZH LR LR
comp=Z,1μm,15.8s
SPITS Spitsbergen Ar 140.35 13 PKhKP PKPpre 14 52 19.3
comp=Z,2.4nm,0.5s,baz=163,slow=5.6,SNR=8.8
WHN Wuhan 140.51 120 PKP **PKPdf 14 52 26.3 -1.1**
WHN PP **PP 14 55 28.8 +2.3**
WHN PKS **PKSdf 14 56 03.2 -0.2**
WHN SKS **SKSdf 14 59 33.5 -4.2**
WHN LR LR
comp=Z,5μm,18.8s
GTA2 Gaotai 140.88 97 *e*PKP **PKPdf 14 52 27.3 -0.7**
GTA2 PKS **PKSbc 14 56 05.7 -0.2**
GTA2 SKKS 15 02 18.9
GTA2 AMB AMB
comp=Z,740nm,11.6s
GTA2 LR LR
comp=Z,1μm,21.1s
GTA2 LR LR
comp=Z,1μm,21.1s
GTA2 LR LR
comp=Z,2μm,23.9s

XAN Xi'an 141.00 111 PKP **PKPdf 14 52 27.7 -0.6**
XAN SKKS 15 02 21.2
XAN AMB AMB
comp=Z,1μm,9.8s
XAN LR LR
comp=Z,950nm,17.9s
XAN LR LR
comp=Z,890nm,19.2s
XAN LR LR
comp=Z,1μm,21.3s
DGZ Jazzator, Alta 142.03 75*c* *i*PKIKP **PKPdf 14 52 30.1 +0.4**
T35M Bob Quinn 142.23 300 IAMs_20 IAMs_20 15 54 39.9
comp=Z,3μm,20.0s
LYN LuoYang 143.07 115 PKP PKPab 14 52 29.3 +2.1
LYN PP **PP 14 55 46.2 +4.0**
LYN SS SS 15 14 22.9 +1.7
LYN AMB AMB
comp=Z,1μm,8.3s
LYN LR LR
comp=Z,4μm,19.2s
ZALV Zalesovo Beam 143.51 68 PKhKP PKPpre 14 52 27.4
comp=Z,2.1nm,0.6s,baz=216,slow=4.8,SNR=7.1
ZALV Zalesovo Beam 143.51 68 PKPab 14 52 28.1 -0.3
ZALV Zalesovo Beam 143.51 68 PKIKP PKPab 14 52 28.1 -0.3
NJ2 Nanjing 143.72 125 ⇓PKP PKPab 14 52 31.0 +1.1
NJ2 PP **PP 14 55 51.7 +5.7**
NJ2 SKKS 15 02 38.9
NJ2 SS **SS 15 14 34.8 +6.3**
NJ2 AMB AMB
comp=Z,1μm,8.0s
NJ2 LR LR
comp=Z,990nm,16.6s
NJ2 LR LR
comp=Z,2μm,16.9s
SSE Sheshan 143.82 128 PKP PKPab 14 52 31.1 +0.8
SSE AMB AMB
comp=Z,200nm,4.2s
SSE LR LR
comp=Z,530nm,16.8s
SSE LR LR
comp=Z,410nm,17.4s
P33M Teslin, Yukon 145.19 303 IAMs_20 IAMs_20 15 57 10.8
comp=Z,2μm,19.0s
S31K Pelican 145.43 298 IAMs_20 IAMs_20 15 57 49.6
comp=Z,2μm,18.0s
TIY Taiyuan 145.64 112 *e*PKPbc **PKPdf 14 52 36.4 0.0**
TIY *e*PP **PP 14 55 58.8 +1.1**
TIY SS SS 15 14 47.2 -3.8
TIY AMB AMB
comp=Z,930nm,10.3s
TIY LR LR
comp=Z,500nm,17.9s
TIY LR LR
comp=Z,1μm,19.2s
C36M Paulatuk 146.41 321 **PKPdf 14 52 36.7 +0.2**
HNS HongShan 146.44 115 ⇑PKPbc **PKPdf 14 52 37.7 +0.1**
HNS PP **PP 14 56 05.3 +3.0**
HNS SKKS 15 02 49.4
HNS SS **SS 15 15 02.0 +2.3**
HNS AMB AMB
comp=Z,2μm,8.2s
HNS LR LR
comp=Z,780nm,17.3s
HNS LR LR
comp=Z,2μm,17.3s
TIA Tai'an 146.54 119 PKPbc **PKPdf 14 52 39.8 +1.9**
TIA SKKS 15 02 50.5
TIA SS **SS 15 15 01.8 +0.9**
TIA LR LR
comp=Z,1μm,22.6s
TIA LR LR
comp=Z,530nm,16.7s
BTO2 Baotou 146.82 106 *e*PKPbc **PKPdf 14 52 38.6 +0.3**
BTO2 PP **PP 14 56 08.3 +3.5**
BTO2 SS SS 15 15 03.4 -1.2
BTO2 LR LR
comp=Z,2μm,17.3s
M31M Drury Creek, Y 146.87 305 IAMs_20 IAMs_20 15 55 05.9
comp=Z,2μm,20.0s
HYT Haines Junctio 147.50 302 **PKPdf 14 52 37.8 -1.0**
O29M Mount Kennedy 147.70 301 IAMs_20 IAMs_20 16 08 48.5
comp=Z,2μm,19.0s
HHC Hu-ho-hao-te 147.72 107 ⇓*i*PKPbc **PKPdf 14 52 40.4 +0.6**
HHC PP **PP 14 56 15.4 +5.4**
HHC LR LR
comp=Z,960nm,17.1s
HHC LR LR
comp=Z,1μm,19.9s
A36M Sachs Harbour 147.83 325 **PKPdf 14 52 41.3 +2.5**
M30M Minto, Yukon 148.03 305 IAMs_20 IAMs_20 15 57 40.7
comp=Z,2μm,18.0s
MAYO Mayo, Yukon 148.13 307 **PKiKP 14 52 45.3 +0.7**
H31M Peel River 148.48 311 IAMs_20 IAMs_20 15 58 47.7
comp=Z,2μm,20.0s
L29M L29M 148.82 305 IAMs_20 IAMs_20 15 55 48.8
comp=Z,2μm,19.0s
TABL Table Mountain 148.88 300 IAMs_20 IAMs_20 15 59 42.4
comp=Z,2μm,20.0s
K29M Barlow Dome 148.89 307 IAMs_20 IAMs_20 15 59 24.3
comp=Z,2μm,18.0s
F31M Tsiigehtchic 148.90 315 IAMs_20 IAMs_20 16 00 10.4
comp=Z,2μm,19.0s
CTGM Chitina Glacie 149.21 300 IAMs_20 IAMs_20 15 59 10.3
comp=Z,2μm,19.0s
BJT Baijiatuan 149.23 114 **PKPbc 14 52 45.9 -0.5**
BJT Baijiatuan 149.23 114 PKP2 **PKPbc 14 52 45.9 -0.5**
BJI2 Beijing 149.23 114 PKPbc **PKPdf 14 52 42.9 +0.8**
BJI2 SS SS 15 15 31.0 -0.2
BJI2 LR LR
comp=Z,280nm,18.1s
BJI2 LR LR
comp=Z,430nm,19.0s
BJI2 LR LR
comp=Z,480nm,19.2s
BARN Barnard Glacie 149.39 300 IAMs_20 IAMs_20 15 58 09.1
comp=Z,2μm,20.0s
ISLE Juniper Island 149.48 299 IAMs_20 IAMs_20 16 00 01.3
comp=Z,2μm,19.0s
TGL Tana Glacier 149.76 299 IAMs_20 IAMs_20 16 03 27.0
comp=Z,2μm,20.0s
CRQM Cirque 149.90 299 IAMs_20 IAMs_20 16 05 20.0
comp=Z,2μm,20.0s
MOY Mondy 149.95 82 *e*PKHKP PKPpre 14 52 42.8
MOY pmax pmax
comp=Z,310nm,2.8s
M27K Edge Creek, AK 150.06 303 IAMs_20 IAMs_20 16 03 07.6
comp=Z,2μm,19.0s
SONM Songino Array 150.22 93 PKP **PKPdf 14 52 44.9 +1.3**
comp=Z,14nm,0.9s,baz=255,slow=1.7,SNR=44
SONM PKPbc **PKPbc 14 52 48.9 +0.1**
comp=Z,14nm,0.9s,baz=220,slow=2.6,SNR=60
SONM Songino Array 150.22 93 **PKPbc 14 52 48.1 -0.6**
VRDI Verde Repeater 150.25 300 IAMs_20 IAMs_20 16 11 42.7
comp=Z,2μm,18.0s
ZAK Zakamensk 150.30 86 *e*PKIKP **PKPdf 14 52 43.4 -0.2**
ZAK pmax pmax
comp=Z,12nm,2.4s
GLB Gilahina Butte 150.49 300 IAMs_20 IAMs_20 16 00 12.3
comp=Z,2μm,20.0s
ULN Ulaanbaatar 150.57 93 IAMs_20 IAMs_20 16 11 55.5
comp=Z,2μm,18.0s
ULN Ulaanbaatar 150.57 93*c* *i*PKIKP **PKPbc 14 52 49.9 +0.3**
ULN pmax pmax
comp=Z,88nm,2.5s
BMRM Bremner River 150.64 299 IAMs_20 IAMs_20 16 00 48.1
comp=Z,2μm,20.0s
E29M Blow River 150.70 315 IAMs_20 IAMs_20 16 02 53.9
comp=Z,2μm,19.0s
DL2 Dalian 150.75 122 PKPbc **PKPdf 14 52 44.4 -0.2**
DL2 PKPab **PKPab 14 52 58.7 +1.5**
DL2 SS SS 15 15 47.2 -0.7
DL2 AMB AMB
comp=Z,660nm,6.9s
DL2 LR LR
comp=Z,810nm,17.3s
DL2 LR LR
comp=Z,2μm,17.5s
K27K Chicken 150.81 306 IAMs_20 IAMs_20 15 57 19.3
comp=Z,2μm,20.0s
N25K Chitina, Valde 150.91 300 IAMs_20 IAMs_20 16 00 24.2
comp=Z,2μm,20.0s
L26K Log Cabin Wild 150.95 303 IAMs_20 IAMs_20 16 10 27.0
comp=Z,2μm,19.0s
F28M Old Crow 151.18 313 IAMs_20 IAMs_20 16 00 19.5
comp=Z,2μm,19.0s
I27K Kandik River 151.19 309 **PKPdf 14 52 44.4 -0.1**

DIV Divide 151.22 299 IAMs_20 IAMs_20 16 02 11.6
comp=Z,2μm,20.0s
TLY Talaya 151.28 84*c* *i*PKIKP **PKPbc 14 52 51.7 +0.7**
TLY pmax pmax
comp=Z,87nm,2.5s
INCN Inchon 151.56 130 IAMs_20 IAMs_20 15 57 20.0
comp=Z,1μm,20.0s
SCRK Sand Creek 151.57 305 IAMs_20 IAMs_20 16 00 34.3
comp=Z,2μm,21.0s
NRIK Noril'sk 151.67 43 PKP **PKPdf 14 52 45.3 +0.3**
comp=Z,1.0nm,0.4s,baz=182,slow=2.3,SNR=4.3
NRIK PKPbc **PKPbc 14 52 51.7 +0.4**
comp=Z,9.6nm,0.8s,baz=45,slow=1.4,SNR=17
NRIK PKKPab 15 00 00.2
comp=Z,2.1nm,0.3s,baz=181,slow=1.3,SNR=5.8
NRIK Noril'sk 151.67 43*c* *i*PKIKP **PKPbc 14 52 51.0 -0.3**
IRK Irkutsk 151.92 84 *e*PKIKP **PKPdf 14 52 44.3 -1.6**
IRK pmax pmax
comp=Z,208nm,2.1s
KSAR Wonju Array Be 152.00 132 **PKPbc 14 52 51.9 -1.1**
KSAR Wonju Array Be 152.00 132 PKIKP **PKPbc 14 52 51.9 -1.1**
KSRS Korea Array 152.02 132 PKPbc **PKPbc 14 52 54.3 +1.2**
comp=Z,6.6nm,0.9s,baz=179,slow=1.6,SNR=10
XLT XiLinHaoTe 152.20 108 *e*PKPbc **PKPdf 14 52 47.8 +1.0**
XLT PKPab **sPKPab 14 53 07.8 +2.7**
XLT SKKS 15 03 24.4
XLT SS **SS 15 16 04.0 -0.5**
XLT LR LR
comp=Z,110nm,15.7s
XLT LR LR
comp=Z,760nm,15.2s
XLT LR LR
comp=Z,690nm,15.5s
SEW Seward 152.43 295 IAMs_20 IAMs_20 15 59 40.0
comp=Z,2μm,19.0s
G26K Porcupine Rive 152.44 311 IAMs_20 IAMs_20 16 03 33.3
comp=Z,2μm,18.0s
PRP Porcupine Dome 152.71 308 **PKPbc 14 52 53.7 -0.3**
O22K Cooper Landing 152.71 296 IAMs_20 IAMs_20 16 09 50.3
comp=Z,2μm,19.0s
HDA Harding Lake 152.94 305 IAMs_20 IAMs_20 16 00 26.4
comp=Z,2μm,21.0s
BRLK Bradley Lake 152.94 294 IAMs_20 IAMs_20 15 55 35.7
comp=Z,2μm,20.0s
ILAR Eielson Array 153.03 306 PKPbc **PKPbc 14 52 54.4 -0.2**
comp=Z,0.7nm,1.0s,baz=131,slow=0.4,SNR=4.7
C27K Jago River 153.04 317 IAMs_20 IAMs_20 16 00 53.3
comp=Z,2μm,20.0s
F25K Christian River 153.31 312 IAMs_20 IAMs_20 16 01 43.1
comp=Z,2μm,20.0s
E25K Arctic Village 153.40 313 IAMs_20 IAMs_20 16 00 30.3
comp=Z,2μm,20.0s
NEA2 Nenana 153.87 305 IAMs_20 IAMs_20 15 58 34.0
comp=Z,2μm,21.0s
D25K Kavik River 153.91 316 IAMs_20 IAMs_20 15 56 57.5
comp=Z,2μm,22.0s
SNY Shenyang 154.00 121 ⇑PKPbc **PKPdf 14 52 46.5 -2.8**
SNY PP **PP 14 56 49.0 +3.2**
SNY SS SS 15 16 24.4 +0.7
SNY AMB AMB
comp=Z,530nm,12.0s
SNY LR LR
comp=Z,900nm,20.0s
SNY LR LR
comp=Z,720nm,15.5s
SNY LR LR
comp=Z,1μm,19.2s
MJAR Matsushiro Arr 154.44 150 PKPbc **PKPbc 14 52 59.2 +0.7**
comp=Z,3.9nm,1.1s,baz=195,slow=2.1,SNR=4.1
G23K Bananza Creek 154.78 309 IAMs_20 IAMs_20 16 06 41.7
comp=Z,2μm,18.0s
COLD Coldfoot 154.95 310 IAMs_20 IAMs_20 16 03 24.9
comp=Z,2μm,19.0s
I21K Tanana 155.23 305 IAMs_20 IAMs_20 16 12 47.8
comp=Z,2μm,20.0s
CN2 Changchun 156.40 121 PKP **PKPdf 14 52 48.7 -3.8**
CN2 AMB AMB
comp=Z,800nm,10.6s
CN2 LR LR
comp=Z,800nm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
CN2 LR LR
comp=Z,1μm,18.6s
CIT Chita 156.45 92 *e*PKIKP **PKPdf 14 52 54.2 +1.8**
CIT pmax pmax
comp=Z,108nm,2.9s
G19K Purcell Mounta 157.48 307 IAMs_20 IAMs_20 16 02 46.6
comp=Z,2μm,20.0s
HIA Hailar 157.80 104 IAMs_20 IAMs_20 16 15 59.7
comp=Z,2μm,20.0s
HILR Hailar Array B 158.00 103 PKPab **PKPab 14 53 27.4 -0.5**
comp=Z,8.3nm,0.8s,baz=204,slow=3.2,SNR=6.8
H17K Granite Mounta 158.48 303 IAMs_20 IAMs_20 16 03 50.1
comp=Z,2μm,20.0s
MDJ Mudanjiang 158.80 126 IAMs_20 IAMs_20 16 02 28.7
comp=Z,2μm,19.0s
MDJ Mudanjiang 158.80 126 PKP **PKPdf 14 52 50.6 -4.9**
MDJ pPKP sPKPdf 14 52 59.1 +1.9
MDJ PP **PP 14 57 10.5 -1.9**
MDJ SS SS 15 17 16.7 +1.4
MDJ AMB AMB
comp=Z,460nm,7.8s
MDJ LR LR
comp=Z,1μm,18.6s
MDJ LR LR
comp=Z,3μm,19.1s
G16K Koyuk River 159.56 304 IAMs_20 IAMs_20 16 11 17.2
comp=Z,2μm,20.0s
TEY Ternei 161.79 138 *e*PKIKP PKPdf 14 52 47.6 -11
HEH HeiHe 162.14 111 PKP **PKPdf 14 52 58.4 -0.5**
HEH AMB AMB
comp=Z,810nm,10.8s
HEH LR LR
comp=Z,4μm,17.2s
ZEA Zeya 164.25 102 *i* PKIKP **PKPdf 14 53 01.3 +0.5**
ZEA pmax pmax
comp=Z,700nm,9.3s
YSS Yuzhno-Sakhali 165.37 149*c* *i*PKIKP **PKPdf 14 53 02.6 +0.6**
YSS *e*SS SS 15 18 20.4 -2.8
YSS pmax pmax
comp=Z,10μm,1.4s
YSS pmax pmax
comp=Z,1μm,6.5s
GRNR Gornyy 166.49 126 *e*PKIKP **PKPdf 14 53 03.7 +0.9**
YAK Yakutsk 168.15 70 *e*PKIKP **PKPdf 14 53 00.8 -2.8**
YAK *e* 14 57 56.8
YAK pmax pmax
comp=Z,9.0nm,2.5s
YAK pmax pmax
comp=N,2.0nm,1.8s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=Z,301nm,3.3s
YAK pmax pmax
comp=N,156nm,10.3s
YAK pmax pmax
comp=E,196nm,5.3s
SKR Severo-Kuril's 170.54 189 *i* PKIKP PKPdf 14 52 55.4 -10
SKR pmax pmax
comp=Z,1μm,5.3s
PET Petropavlovsk 172.49 203 *i* PKIKP **PKPdf 14 53 08.7 +2.4**
PET *e* 14 58 29.6
PET *e*SS SS 15 19 39.6 +5.5
SEY Seymchan 177.00 13 PKP **PKPdf 14 53 04.9 -2.5**
comp=Z,3.1nm,0.9s,baz=333,slow=2.3,SNR=8.3

JMA ***08*** *14:37:56.2±0.3,28.°N±2.°×14.°3E±.°, h32km, MV4.3/22, NEAR CHICHIJIMA ISLAND*
IDC ***08*** *14:38:05.9±4.4,29.°11N×143.°43E, h74km±39km, mb3.4/7, mbtmp3.8/10, ML3.3/3, Error ellipse: s-maj=29.6km s-min=23.5km az=90.0*

ISC 08 14:37:54.0±1.1,28°25N±0.°07×143°3E±0.°1, h15km, n17, σ1s 60/18, mb3.8/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**		**1.51**	**221**	*e*P	**Pn**	**14 38 20.3**	**-0.2**
CBIJ					*e*S	**Sn**	**14 38 37.6**	**-2.3**
JHH2	**Haha-jima-NKT2**		**1.89**	**212**	*e*S	**Sn**	**14 38 48.4**	**-0.9**
JOD2	**Odawara 2**		**7.85**	**334**	*e*P	**Pn**	**14 39 47.5**	**-0.3**
JOD2					*e*S	**Sn**	**14 41 13.0**	**-3.4**
JYT	**Yasato**		**8.38**	**343**	*e*P	**Pn**	**14 39 55.6**	**+0.8**
JRY	**Ryogami san**		**8.59**	**335**	*e*P	**Pn**	**14 39 57.9**	**+0.1**

JHO	**Hitachi**	**8.65**	**345**	*e*P		**Pn**	**14 39 57.0**	**-1.7**
MJAR	**Matsushiro Arr**	**9.32**	**334**	P		**Pn**	**14 40 07.1**	**-0.7**
	0.4nm,0.3s,baz=275,slow=17,SNR=34							
	2.2nm,0.4s							
KSRS	**Korea Array**	**15.83**	**309**	P		**Pn**	**14 41 37.9**	**+1.6**
	0.1nm,0.3s,baz=113,slow=12,SNR=5.3							
	1.1nm,0.7s							
ASAJ	**Asahikawa**	**15.85**	**358**	P		**Pn**	**14 41 34.4**	**-2.1**
	0.2nm,0.3s,baz=215,slow=12,SNR=5.5							
	1.3nm,0.3s							
SONM	**Songino Array**	**34.58**	**315**	P		**P**	**14 44 44.3**	**+1.9**
	0.9nm,0.7s,baz=117,slow=8.2,SNR=6.3							
	0.9nm,0.7s							
SEY	**Seymchan**	**35.20**	**7**	P		**P**	**14 44 48.7**	**+1.5**
	0.8nm,0.5s,baz=72,slow=24,SNR=6.0							
WRA	**Warramunga Arr**	**48.68**	**191**	P		P	14 46 49.3	+12
	1.3nm,0.8s,baz=10,slow=7.8,SNR=11							
	1.3nm,0.8s							
MKAR	**Makanchi Array**	**50.51**	**309**	P		**P**	**14 46 52.8**	**+1.2**
	0.9nm,0.8s,baz=91,slow=9.1,SNR=11							
	0.9nm,0.8s							
KURBB	**Kurchatov Arra**	**52.94**	**314**	P		**P**	**14 47 10.3**	**+0.7**
	0.9nm,0.6s,baz=91,slow=7.8,SNR=8.9							
	0.9nm,0.6s							
ILAR	**Eielson Array**	**56.23**	**29**	P		**P**	**14 47 31.9**	**-1.4**
	0.6nm,0.9s,baz=272,slow=8.2,SNR=4.1							
	0.6nm,0.9s							
BVAR	**Borovoye Array**	**57.87**	**317**	P		**P**	**14 47 45.7**	**+0.6**
	0.5nm,0.5s,baz=71,slow=6.6,SNR=4.5							
	0.5nm,0.5s							
YKA	**Yellowknife Ar**	**70.67**	**29**	P		**P**	**14 49 08.4**	**-0.3**
	0.6nm,0.9s,baz=299,slow=6.4,SNR=5.7							
	0.6nm,0.9s							

*IDC **08** 15:16:34.9±0.9,2.°99S×129.°90E,h0km,mb3.9/8, mbtmp3.9/11,ML3.8/3,Error ellipse: s-maj=38.6km s-min=17.5km az=75.0*
*DJA **08** 15:16:39.0±0.5,3.°3S±3.°3×13.°0E±.°,h14km±5km,M4.1/19, mB4.8/1,mb4.2/1,MLv4.0/19,Mw(mB)4.1/1*
ISC 08 15:16:38.6±0.7,2.°92S±0.°06×129.°93E±0.°04,h25km,n22, σ1§34/25,mb4.0/8,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.08**	**247**	P	**Pb**	**15 16 58.6**	**-0.1**
MSAI				S	**Sb**	**15 17 14.6**	**+2.1**
KRAI	**Karang Ratu**	**1.58**	**255**	P	**Pb**	**15 17 07.0**	**-0.2**
KRAI				S	**Sb**	**15 17 26.9**	**+0.1**
BNDI	**Bandanaira**	**1.59**	**181**	P	**Pb**	**15 17 07.5**	**+0.1**
AAI	**Ambon**	**1.89**	**246**	P	**Pb**	**15 17 11.2**	**-1.3**
FAKI	**Fak Fak**	**2.32**	**90**	P	**Pn**	**15 17 17.0**	**+1.8**
SIJI	**Sorong**	**2.44**	**33**	Pn	**Pn**	**15 17 17.6**	**+0.8**
	15nm,0.3s,baz=49,slow=20,SNR=69						
SIJI				Sn	**Sn**	**15 17 44.7**	**-1.2**
	12nm,0.3s,baz=236,slow=20,SNR=5.0						
	34nm,0.3s						
SIJI	**Sorong**	**2.44**	**33**	P	**Pn**	**15 17 17.6**	**+0.8**
SWI	**Sorong**	**2.44**	**33**	P	**Pn**	**15 17 17.7**	**+0.9**
NLAI	**Namlea**	**2.84**	**264**	P	**Pn**	**15 17 25.2**	**+2.8**
SANI	**Sanana**	**4.03**	**282**	P	**Pn**	**15 17 37.7**	**-1.1**
RKPI	**Ransiki, Papua**	**4.47**	**72**	P	**Pn**	**15 17 46.4**	**+1.6**
FITZ	**Fitzroy Crossi**	**15.66**	**195**	Pn	**Pn**	**15 20 17.1**	**-0.6**
	0.2nm,0.3s,baz=61,slow=10,SNR=2.8						
	4.2nm,0.8s						
WRA	**Warramunga Arr**	**17.46**	**166**	P	**Pn**	**15 20 37.5**	**-3.1**
	0.5nm,0.3s,baz=350,slow=11,SNR=18						
WRA				S	Sn	15 23 38.9	-15
	0.4nm,0.7s,baz=351,slow=20,SNR=1.9						
	3.4nm,0.9s						
ASAR	**Alice Springs**	**20.98**	**170**	P	**P**	**15 21 20.4**	**+0.2**
	24nm,0.8s,baz=348,slow=10,SNR=153						
ASAR				S	**S**	**15 25 11.2**	**-1.7**
	2.6nm,1.1s,baz=352,slow=23,SNR=7.1						
	24nm,0.8s						
STKA	**Stephens Creek**	**30.83**	**160**	P	**P**	**15 22 51.9**	**-0.8**
	3.5nm,0.9s,baz=338,slow=11,SNR=2.9						
	3.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.18**	**306**	P	**P**	**15 23 48.6**	**+0.6**
	0.3nm,0.4s,baz=122,slow=9.4,SNR=5.9						
	0.3nm,0.4s						
GTA2	**Gaotai**	**50.50**	**330**	*e*P	P	15 25 40.2	+5.3
GTA2				sP	sP	15 25 57.0	+11
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**54.58**	**341**	P	**P**	**15 26 05.0**	**0.0**
	comp=Z,0.3nm,0.5s,baz=142,slow=5.1,SNR=2.4						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**64.81**	**326**	P	**P**	**15 27 15.6**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=113,slow=6.2,SNR=8.9						
	comp=Z,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**67.92**	**333**	P	**P**	**15 27 35.9**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=132,slow=8.0,SNR=1.1						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**69.03**	**328**	P	**P**	**15 27 42.4**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=129,slow=5.6,SNR=10						
	comp=Z,1.2nm,0.8s						
BVAR	**Borovoye Array**	**74.60**	**327**	P	**P**	**15 28 16.3**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=116,slow=3.4,SNR=4.2						
	comp=Z,1.3nm,0.9s						

*IDC **08** 15:17:44.4±1.5,59.°91S×25.°74W,h0km,mb3.8/1, mbtmp4.4/2,ML4.4/1,Error ellipse: s-maj=96.6km s-min=38.5km az=27.0*
ISC 08 15:17:46.9±1.4,60.°0S±0.°3×25.°8W±0.°3,h16km,n11, σ0§33/8,1C-4D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.88**	**153**	⇓P	**Pn**	**15 20 48.9**	**-0.1**
	comp=Z,8.2nm,0.3s						
VNA3	**Neumayer Olymp**	**13.03**	**156**	⇓P	**Pn**	**15 20 51.1**	**0.0**
	comp=Z,4.8nm,0.2s						
VNA3				⇓S	Sn	15 23 02.7	-13
	comp=E,3.9nm,0.3s						
VNA2	**Neumayer--Watz**	**13.28**	**153**	⇓P	**Pn**	**15 20 54.3**	**-0.1**
	comp=Z,4.0nm,0.2s,baz=317,slow=12						
VNA2				⇑S	Sn	15 23 07.9	-14
	comp=E,1.3nm,0.2s,baz=299,slow=13						
SNAA	**Sanae**	**14.86**	**151**	Pn	**Pn**	**15 21 16.4**	**+0.3**
	comp=E,1.8nm,0.3s,baz=312,slow=12,SNR=3.8						
	comp=E,11nm,0.3s						
PLCA	**Paso Flores**	**33.57**	**285**	P	**P**	**15 24 25.8**	**-0.1**
	comp=E,0.9nm,0.6s,baz=141,slow=6.5,SNR=6.4						
	comp=E,0.9nm,0.6s						
H04S2	**CROZET ISLANDS**	**45.39**	**110**	T	T	16 14 57.6	
	baz=224,slow=75,SNR=4.4						
H04S3	**CROZET ISLANDS**	**45.40**	**110**	T	T	16 14 57.0	
	baz=224,slow=75,SNR=4.1						
H04S1	**CROZET ISLANDS**	**45.41**	**110**	T	T	16 15 00.9	
	baz=224,slow=75,SNR=3.1						
YKA	**Yellowknife Ar**	**139.54**	**314**	PKP	**PKPdf**	**15 37 12.1**	**+0.2**
	comp=E,0.8nm,0.7s,baz=122,slow=1.5,SNR=14						
SONM	**Songino Array**	**150.04**	**92**	PKPbc	**PKPbc**	**15 37 35.2**	**-0.5**
	comp=E,0.6nm,0.6s,baz=236,slow=1.0,SNR=4.2						
ILAR	**Eielson Array**	**153.16**	**306**	PKPbc	**PKPbc**	**15 37 42.5**	**+0.4**
	comp=E,0.4nm,0.4s,baz=142,slow=2.7,SNR=7.2						

IDC 08 15:24:18.7±13.0,6.°62S×129.°03E,h184km±149km, mb2.9/1,mbtmp3.5/4,ML3.2/3,MS3.7/1,Error ellipse: s-maj=104.7km s-min=54.4km az=38.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.88**	**196**	P	Pn	15 27 03.4	+0.9
	0.1nm,0.3s,baz=35,slow=12,SNR=2.3						
FITZ				S	Sn	15 29 09.4	-5.2
	2.8nm,0.9s,baz=240,slow=16,SNR=2.1						
	3.4nm,1.0s						
WRA	**Warramunga Arr**	**14.21**	**159**	P	Pn	15 27 31.6	-0.3
	0.1nm,0.3s,baz=336,slow=13,SNR=5.2						
WRA				S	Sn	15 29 55.1	-15
	0.2nm,0.4s,baz=332,slow=24,SNR=4.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**17.58**	**165**	P	P	15 28 10.8	-0.4
	0.1nm,0.3s,baz=350,slow=11,SNR=3.8						
	0.5nm,0.5s						
KSRS	**Korea Array**	**43.86**	**359**	LR	LR	15 53 49.9	
	comp=Z,91nm,18.3s,baz=240,slow=40						
MKAR	**Makanchi Array**	**67.39**	**327**	P	P	15 34 54.2	0.0
	0.1nm,0.4s,baz=112,slow=6.4,SNR=6.5						
	0.1nm,0.4s						

*CATAC **08** 15:24:27.8±0.2,12.°N±2.°×8.°8W±.°,h28km,M3.5/23, MLv3.5/23,Error ellipse: s-maj=5.0km s-min=1.8km az=27.4,confirmed*
*SNET **08** 15:24:30.1±1.4,12.°62N×87.°96W,h37km,ML3.4, Presumed earthquake*
ISC 08 15:24:27.6±1.4,12.°46N±0.°06×87.°97W±0.°03,h30km±12km, n48,σ0§62/74,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.65**	**38**	P	**Pn**	**15 24 41.3**	**+0.4**
CSGN				S	**Sn**	**15 24 51.0**	**+0.7**
CNCH	**Conchagua**	**0.82**	**10**	P	**Pb**	**15 24 43.5**	**0.0**
CNCH	**Conchagua**	**0.82**	**10**	*e*P	**Pb**	**15 24 43.4**	**0.0**
CNCH				*e*S	**Sn**	**15 24 55.0**	**+0.5**
LCND	**La Caada**	**0.84**	**5**	P	**Pb**	**15 24 43.7**	**0.0**
LCND				S	**Sb**	**15 24 55.3**	**+0.5**
LCND	**La Caada**	**0.84**	**5**	*e*P	**Pb**	**15 24 43.5**	**-0.2**
LCND				*e*P	**Pb**	**15 24 43.7**	**0.0**
LCND				*e*S	**Sb**	**15 24 54.5**	**-0.2**
LCND				*e*S	**Sn**	**15 24 54.8**	**-0.1**
CRIN	**San Cristobal**	**0.93**	**75**	P	**Pb**	**15 24 45.9**	**+0.7**
CRIN				S	**Sb**	**15 24 58.8**	**+1.5**
VSM	**San Miguel**	**1.00**	**343**	*e*P	**Pn**	**15 24 46.3**	**+0.4**
LCY	**Lacayo**	**1.00**	**342**	*e*P	**Pn**	**15 24 45.9**	**+0.1**
BLLM	**Bellamira**	**1.01**	**345**	*e*P	**Pn**	**15 24 45.9**	**+0.1**
RANC	**El Ranchito**	**1.01**	**342**	P	**Pn**	**15 24 46.2**	**+0.3**
RANC	**El Ranchito**	**1.01**	**342**	*e*P	**Pn**	**15 24 46.1**	**+0.1**
RANC				*e*S	**Sb**	**15 24 59.4**	**-0.2**
RANC				*e*S	**Sb**	**15 24 59.5**	**-0.2**
CNRM	**Centro Naciona**	**1.02**	**349**	S	**Sb**	**15 24 59.2**	**-0.6**
PACA	**Pacayal**	**1.06**	**341**	P	**Pn**	**15 24 46.7**	**+0.2**
PACA	**Pacayal**	**1.06**	**341**	*e*P	**Pn**	**15 24 46.9**	**+0.4**
PACA				*e*S	**Sb**	**15 25 00.3**	**-0.6**
TECA	**Tecapa**	**1.15**	**333**	*e*P	**Pn**	**15 24 48.0**	**+0.1**
POLN	**Al Sur del Vol**	**1.15**	**81**	P	**Pn**	**15 24 47.8**	**+0.1**
POLN				S	**Sn**	**15 25 02.6**	**+0.1**
CNGA	**Al SSO del Vol**	**1.24**	**88**	P	**Pn**	**15 24 49.5**	**+0.5**
CNGA				S	**Sn**	**15 25 05.1**	**+0.4**
CNGN	**Cerro Negro**	**1.25**	**88**	P	**Pn**	**15 24 49.5**	**+0.4**
CNGN				S	**Sn**	**15 25 05.0**	**+0.2**
TECO	**Alcaldia de Te**	**1.33**	**324**	P	**Pn**	**15 24 50.4**	**+0.2**
TECO				S	**Sn**	**15 25 06.9**	**+0.1**
COPN	**Copaltepe**	**1.38**	**102**	P	**Pn**	**15 24 50.6**	**-0.2**
MOMN	**Momotombo**	**1.40**	**92**	P	**Pn**	**15 24 51.5**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.43**	**329**	P	**Pn**	**15 24 52.2**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.43**	**329**	*e*P	**Pn**	**15 24 52.4**	**+0.8**
SCLA				*e*S	**Sb**	**15 25 10.2**	**-1.5**
COEG	**Centro de Oper**	**1.45**	**323**	S	**Sn**	**15 25 09.9**	**-0.1**
PAVA	**Las Pavas**	**1.56**	**323**	S	**Sb**	**15 25 13.7**	**-1.5**
SAPS	**Ciudad Sandino**	**1.56**	**101**	P	**Pn**	**15 24 53.5**	**+0.2**
SAPS				S	**Sn**	**15 25 13.3**	**+0.7**
APQ2	**Apoyeque**	**1.63**	**99**	S	**Sn**	**15 25 14.7**	**+0.4**
PANCS	**Alcalda de**	**1.64**	**314**	P	**Pn**	**15 24 54.2**	**-0.3**
LIMN	**Finca el Limon**	**1.68**	**69**	P	**Pn**	**15 24 54.7**	**-0.3**
LIMN				S	**Sn**	**15 25 14.7**	**-0.9**
TISN	**Laguna Tiscapa**	**1.70**	**101**	P	**Pn**	**15 24 54.0**	**-1.2**
UNAN	**Cigeo UNAN**	**1.70**	**102**	S	**Sn**	**15 25 16.2**	**+0.1**
MGAN	**Managua**	**1.72**	**100**	S	**Sn**	**15 25 16.5**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.73**	**23**	P	**Pn**	**15 24 55.8**	**+0.1**
AERN	**Aeropuerto Man**	**1.79**	**100**	P	**Pn**	**15 24 55.6**	**-0.9**
AERN				S	**Sn**	**15 25 18.8**	**+0.5**
PMON	**Piamonte**	**1.80**	**314**	P	**Pn**	**15 24 57.9**	**+1.1**
PMON				S	**Sn**	**15 25 19.4**	**+0.7**
PMON	**Piamonte**	**1.80**	**314**	*e*P	**Sn**	**15 24 56.9**	**+0.2**
PMON				*e*S	**Sn**	**15 25 19.0**	**+0.3**
MAS3	**Al N del Volca**	**1.81**	**104**	S	**Sn**	**15 25 18.1**	**-0.6**
JAYA	**Jayaque - finc**	**1.86**	**310**	P	**Pn**	**15 24 58.2**	**+0.6**
JAYA				S	**Sn**	**15 25 20.2**	**-0.1**
JAYA	**Jayaque - finc**	**1.86**	**310**	*e*P	**Pn**	**15 24 58.0**	**+0.3**
JAYA				*e*S	**Sn**	**15 25 19.8**	**-0.4**
RCON	**San Juan de Ri**	**2.04**	**60**	P	**Pn**	**15 25 00.3**	**+0.2**
RCON				S	**Sn**	**15 25 24.4**	**-0.2**
MATN	**Matagalpa**	**2.05**	**77**	P	**Pn**	**15 24 59.2**	**-0.9**
MATN				S	**Sn**	**15 25 23.0**	**-1.9**
RCVN	**Varillal2**	**2.06**	**57**	S	**Sn**	**15 25 24.5**	**-0.6**
RCPN	**Sur Rio San Ju**	**2.11**	**60**	P	**Pn**	**15 25 01.5**	**+0.4**
BOAB	**BOACO BROADBAN**	**2.25**	**90**	P	**Pn**	**15 25 03.0**	**+0.1**
BOAB				S	**Sn**	**15 25 28.8**	**-0.9**
NUBE	**Las Nubes**	**2.27**	**309**	P	**Pn**	**15 25 04.3**	**+1.1**
NUBE	**Las Nubes**	**2.27**	**309**	*e*P	**Pn**	**15 25 03.3**	**+0.1**
NUBE				*e*S	**Sn**	**15 25 30.3**	**0.0**
MTO3	**Montecristo**	**2.35**	**325**	P	**Pn**	**15 25 05.0**	**+0.6**
FAME	**Alcaldia de Sa**	**2.42**	**305**	S	**Sn**	**15 25 34.1**	**+0.4**

*BJI **08** 15:34:54.0,43.°40N×126.°90W,h10km,mB5.2/3,mb4.6/23, Ms5.3/2,Ms7.5.1/2*
*IDC **08** 15:34:55.5±0.7,43.°44N×126.°81W,h0km,mb4.2/18, mbtmp4.2/24,ML4.0/6,MS4.7/9,Error ellipse: s-maj=18.6km s-min=8.3km az=40.0*
*NEIC **08** 15:34:55.8±2.1,43.°27N±0.°07×126.°9W±0.°1,h10km±1km, mb4.6/103,ML3.9/97,Error ellipse: s-maj=14.1km s-min=10.2km az=242.0*
ISC 08 15:34:56.5±0.6,43.°29N±0.°07×126.°96W±0.°07,h14km, n399,σ1§08/347,mb4.6/71,MS5.0/7,1C-1D,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J01E	**Myrtle Point**	**2.22**	**92**		**Pn**	**15 35 30.9**	**-2.0**
J01E				IAML		15 36 05.6	
	comp=N,968nm,0.7s						
J01E				IAML		15 36 07.3	
	comp=E,1µm,1.0s						
KBO	**Bosley Butte**	**2.28**	**117**		**Pn**	**15 35 32.3**	**-1.6**
I02E	**Swisshome, OR**	**2.40**	**69**		**Pn**	**15 35 33.8**	**-1.6**
I02E				IAML		15 36 06.5	
	comp=E,618nm,0.6s						
I02E				IAML		15 36 06.8	
	comp=N,455nm,0.8s						
K02D	**Willamette Mer**	**2.49**	**103**		**Pn**	**15 35 35.0**	**-1.7**
K02D				IAML		15 36 08.7	
	comp=N,358nm,0.5s						
K02D				IAML		15 36 08.8	
	comp=E,398nm,0.6s						
I03D	**Drain, OR**	**2.66**	**80**		**Pn**	**15 35 37.1**	**-1.9**
I03D				IAML		15 36 10.8	
	comp=E,318nm,0.5s						
I03D				IAML		15 36 15.0	
	comp=N,660nm,0.6s						
KSXB	**Camp Six Broad**	**2.71**	**122**		**Pn**	**15 35 38.1**	**-1.6**
L02F	**Cave Junction**	**2.76**	**114**		**Pn**	**15 35 39.3**	**-1.1**
KRMB	**Red Mountain**	**2.87**	**127**		**Pn**	**15 35 40.3**	**-1.6**
COR	**Corvallis**	**2.94**	**63**		**Pn**	**15 35 41.6**	**-1.2**
COR				IAML		15 36 21.9	
	comp=N,487nm,0.7s						
COR				IAML		15 36 24.9	
	comp=N,600nm,1.2s						
BUCK	**Buck Mountain**	**3.02**	**71**		**Pn**	**15 35 43.3**	**-0.7**
BUCK				IAML		15 36 23.1	
	comp=N,440nm,1.0s						
BUCK				IAML		15 36 23.9	
	comp=E,474nm,1.1s						
BBOR	**Butler Butte**	**3.16**	**96**		**Pn**	**15 35 45.4**	**-0.6**
BBOR				IAML		15 36 31.4	
	comp=E,313nm,0.9s						
BBOR				IAML		15 36 31.8	
	comp=N,331nm,0.7s						
G03D	**McMinnville, O**	**3.28**	**53**		**Pn**	**15 35 46.2**	**-1.3**
G03D				IAML		15 36 28.7	
	comp=E,524nm,0.4s						
H04D	**Lebanon**	**3.29**	**67**		**Pn**	**15 35 47.2**	**-0.5**
H04D				IAML		15 36 33.5	
	comp=N,421nm,0.8s						
I04A	**Tendick Farm,**	**3.35**	**80**		**Pn**	**15 35 47.9**	**-0.6**
I04A				IAML		15 36 31.7	
	comp=N,306nm,0.5s						
I04A				IAML		15 36 32.2	
	comp=E,477nm,0.2s						
YBH	**Yreka Blue Hor**	**3.51**	**115**	Pn	**Pn**	**15 35 50.9**	**+0.2**
	comp=E,1.0nm,0.3s,baz=327,slow=11,SNR=191						
YBH				Sn	**Sn**	**15 36 32.9**	**+0.8**
	comp=E,0.6nm,0.3s,baz=179,slow=21,SNR=8.3						
YBH	**Yreka Blue Hor**	**3.51**	**115**		**Pn**	**15 35 50.7**	**0.0**
J04A	**Umpqua Nationa**	**3.54**	**89**		**Pn**	**15 35 51.6**	**+0.3**
M02C	**Callahan**	**3.59**	**120**		**Pn**	**15 35 51.5**	**-0.3**
L04D	**Klamath Falls**	**3.59**	**106**		**Pn**	**15 35 51.9**	**0.0**
L04D				IAML		15 36 39.6	
	comp=E,260nm,1.9s						
L04D				IAML		15 36 42.5	
	comp=N,194nm,1.0s						

H04A	**Detroit Lake**	**3.72**	**66**			**Pn**	**15 35 53.1**	**-0.4**
WIFE	**Three Sisters-**	**3.81**	**77**	IAML			15 36 20.5	
	comp=N,186nm,1.1s							
WIFE				IAML			15 36 21.7	
	comp=E,261nm,0.6s							
RADR	**Rader Ridge**	**3.86**	**35**	IAML			15 36 47.5	
	comp=E,325nm,1.1s							
KMRM	**Mail Ridge**	**3.91**	**140**			**Pn**	**15 35 57.5**	**+1.3**
N02D	**Trinity Center**	**3.92**	**125**			**Pn**	**15 35 56.4**	**0.0**
F04D	**Rainier, OR**	**3.97**	**44**			**Pn**	**15 35 56.7**	**-0.2**
M03C	**McCloud**	**4.12**	**118**	IAML			15 36 58.3	
	comp=N,155nm,2.2s							
M03C				IAML			15 37 05.1	
	comp=E,125nm,1.7s							
J05D	**Fort Rock, OR**	**4.18**	**88**	IAML			15 37 26.1	
	comp=E,117nm,2.5s							
J05D				IAML			15 37 26.6	
	comp=N,127nm,2.9s							
I05D	**Terrebonne, OR**	**4.20**	**74**	IAML			15 36 45.4	
	comp=E,188nm,1.5s							
I05D				IAML			15 36 55.1	
	comp=N,176nm,0.7s							
KCPM	**Cahto Peak**	**4.40**	**144**	IAML			15 38 28.3	
	comp=E,81nm,4.2s							
PINE	**Pine Mountain**	**4.41**	**81**	IAML			15 36 41.4	
	comp=E,112nm,1.6s							
PINE				IAML			15 36 43.0	
	comp=N,111nm,1.6s							
WISH	**Wishkah**	**4.44**	**29**			**Pn**	**15 36 02.9**	**-0.6**
K05A	**Summer Lake**	**4.49**	**95**	IAML			15 37 41.3	
	comp=N,96nm,1.9s							
K05A				IAML			15 37 43.4	
	comp=E,77nm,1.7s							
NLWA	**Neilton Lookou**	**4.65**	**27**	IAML			15 37 05.1	
	comp=E,156nm,0.5s							
DCMP	**DeCamp, Califo**	**4.69**	**143**	Pn		**Pn**	**15 36 07.3**	**+0.4**
G06A	**Carlson Farm,**	**4.94**	**65**	IAML			15 36 49.1	
	comp=N,70nm,1.1s							
G06A				IAML			15 37 29.9	
	comp=E,56nm,2.1s							
LON	**Longmire**	**5.03**	**45**	IAML			15 37 13.6	
	comp=N,136nm,1.1s							
LON				IAML			15 37 16.3	
	comp=E,113nm,1.6s							
GNW	**Green Mountain**	**5.17**	**33**			**Pn**	**15 36 12.4**	**-1.1**
GNW				IAML			15 37 13.4	
	comp=N,77nm,1.0s							
GNW				IAML			15 37 16.6	
	comp=E,96nm,0.8s							
B04A	**Port Angeles**	**5.35**	**26**			**Pn**	**15 36 15.5**	**-0.5**
CLRS	**Cowichan Lake**	**5.87**	**19**			**Pn**	**15 36 22.0**	**-1.1**
MCCM	**Marconi Confer**	**6.00**	**148**	Pn		**Pn**	**15 36 25.9**	**+1.0**
HOLB	**Holberg**	**7.40**	**354**	Pn		**Pn**	**15 36 46.9**	**+2.9**
PLID	**Pearl Lake**	**8.08**	**73**			**Pn**	**15 36 52.6**	**-1.1**
NVAR	**Mina Array Bea**	**8.16**	**124**	Pn		**Pn**	**15 36 57.7**	**+3.0**
	comp=E,0.9nm,0.3s,baz=297,slow=14,SNR=19							
	comp=E,3.5nm,0.7s							
NEW	**Newport**	**8.49**	**51**	Pn		**Pn**	**15 36 58.6**	**-0.4**
	comp=E,4.8nm,0.3s,baz=232,slow=12,SNR=63							
NEW				LR	LR		15 40 25.8	
	comp=E,3µm,19.1s,baz=121,slow=40							
	comp=E,17nm,0.5s							
NEW	**Newport**	**8.49**	**51**			**Pn**	**15 36 58.2**	**-0.8**
BBB	**Bella Bella**	**8.94**	**355**	Pn		**Pn**	**15 37 06.5**	**+1.4**
	comp=E,1.1nm,0.3s,baz=212,slow=8.5,SNR=6.6							
BBB	**Bella Bella**	**8.94**	**355**	Pn		**Pn**	**15 37 05.2**	**+0.1**
ELK	**Elko**	**9.09**	**102**	Pn		**Pn**	**15 37 10.0**	**+2.5**
	comp=E,0.7nm,0.3s,baz=298,slow=14,SNR=14							
	comp=E,4.5nm,0.6s							
MSO	**Missoula**	**9.87**	**64**			**Pn**	**15 37 17.6**	**-0.5**
JTMT	**Jette**	**9.95**	**59**			**Pn**	**15 37 19.0**	**-0.2**
DLMT	**Dillon**	**10.50**	**74**			**Pn**	**15 37 25.0**	**-1.7**
LRM	**Limekiln Ridge**	**10.66**	**71**			**Pn**	**15 37 28.3**	**-0.8**
DUG	**Dugway, Tooele**	**11.02**	**101**	Pn		**Pn**	**15 37 34.6**	**+0.8**
BOZ	**Bozeman (W)**	**11.21**	**73**			**Pn**	**15 37 36.3**	**-0.1**
YHL	**Hebgen Lake**	**11.46**	**77**			**Pn**	**15 37 39.6**	**-0.4**
HWUT	**Hardware Ranch**	**11.50**	**93**			**Pn**	**15 37 39.5**	**-1.0**
CCUT	**Cedar City**	**11.84**	**114**	Pn		**Pn**	**15 37 43.7**	**-1.4**
V35K	**Ketchikan**	**12.42**	**348**	P		**Pn**	**15 37 54.1**	**+1.4**
	baz=164							
PFO	**Pinyon Flats O**	**12.68**	**136**	Pn		**Pn**	**15 38 00.7**	**+4.1**
	comp=E,0.2nm,0.3s,baz=343,slow=16,SNR=5.1							
	comp=E,2.4nm,0.7s							
PDAR	**Pinedale Array**	**12.75**	**86**	Pn		**Pn**	**15 37 59.4**	**+1.8**
	comp=E,0.1nm,0.3s,baz=277,slow=13,SNR=39							
PDAR				LR	LR		15 42 42.0	
	comp=E,4µm,19.4s,baz=136,slow=37							
	comp=E,6.7nm,0.9s							
PDAR	**Pinedale Array**	**12.75**	**86**	Pn		**Pn**	**15 37 58.3**	**+0.8**
U35K

N31M **Braeburn, Yuko** 18.97 347 P Pn 15 39 18.3 +0.4
baz=160,SNR=7.6
MESA **MESA** 19.21 337 P P 15 39 19.8 -0.3
baz=145
O28M **Mount Upton** 19.24 340 P P 15 39 20.4 -0.1
baz=149
YUK4 **Talbot Arm** 19.39 343 P Pn 15 39 23.1 -0.1
baz=154
M31M **Drury Creek, Y** 19.45 350 P Pn 15 39 24.5 +0.9
baz=163,SNR=8.1
BGLC **Bering Glacier** 19.56 335 P P 15 39 23.9 +0.3
baz=142
YUK8 **Steele Glacier** 19.59 341 P P 15 39 24.8 +0.6
baz=151,SNR=5.1
GRNC **Granite Creek** 19.61 338 IAmb IAmb 15 39 28.9
comp=Z,32nm,1.2s
CTG **Chitna Glacier** 19.70 339 P P 15 39 25.8 +0.5
baz=147
KAIM **Kayak Island** 19.77 333 P P 15 39 25.8 -0.1
baz=140
BARN **Barnard Glacie** 19.86 339 P P 15 39 26.3 -0.9
BARN IAmb IAmb 15 39 51.1
comp=Z,30nm,1.3s
FFC **Flin Flon** 19.87 46 P 15 39 25.7 -1.4
FFC IAmb IAmb 15 39 31.2
comp=Z,64nm,1.2s
CRQE **Cirque** 20.01 337 P P 15 39 29.1 +0.4
baz=144
Q23K **Middleton Isla** 20.07 330 P P 15 39 29.1 0.0
baz=135
WRGLY **Wrigley** 20.08 5 P Pn 15 39 31.8 +0.7
baz=187,SNR=15
M30M **Minto, Yukon** 20.16 347 P P 15 39 24.9 -5.4
M30M **Minto, Yukon** 20.16 347 P P 15 39 30.7 +0.4
baz=159,SNR=7.4
YUK3 **Moose Creek** 20.18 341 P P 15 39 30.6 0.0
baz=150
M29M **Somme Creek** 20.34 345 P Pn 15 39 33.4 -0.9
baz=155
MCARA **McCarthy VSAT** 20.50 338 P P 15 39 32.1 -1.8
MCARA IAmb IAmb 15 39 48.4
comp=Z,25nm,1.2s
MCARA **McCarthy VSAT** 20.50 338 P P 15 39 34.4 +0.5
baz=145
YKA **Yellowknife Ar** 20.56 16 P P 15 39 35.0 +0.5
comp=Z,5.1nm,0.8s,baz=211,slow=10,SNR=32
comp=Z,5.1nm,0.8s
YKA **Yellowknife Ar** 20.56 16 P 15 39 34.9 +0.4
YKAW3 **Yellowknife Wh** 20.62 16 P P 15 39 34.6 -0.6
YKAW3 IAmb IAmb 15 39 42.8
comp=Z,17nm,0.9s
BMRM **Bremner River** 20.63 335 P P 15 39 35.7 +0.3
baz=141
EYAK **Cordova Ski Ar** 20.68 333 P P 15 39 35.6 -0.1
baz=138
BVCY **Beaver Creek** 20.83 342 P P 15 39 38.1 +0.7
baz=150
P23K **Montague Islan** 20.85 330 P P 15 39 37.3 -0.4
baz=134
L29M **L29M** 20.89 346 P P 15 39 38.9 +0.7
baz=157
M27K **Edge Creek, AK** 21.02 340 P P 15 39 40.0 +0.3
baz=148
N25K **Chitina, Valde** 21.13 336 P 15 39 40.3 -0.5
N25K **Chitina, Valde** 21.13 336 P P 15 39 40.6 -0.2
baz=142
M26K **Nabesna, AK** 21.34 339 P P 15 39 43.2 +0.2
baz=146
KLU **Klutina** 21.44 335 P P 15 39 45.0 +0.9
KLU IAmb IAmb 15 39 46.6
comp=Z,21nm,1.0s
KLU **Klutina** 21.44 335 P P 15 39 43.8 -0.3
baz=140
K29M **Barlow Dome** 21.47 347 P P 15 39 45.2 +0.7
baz=158
BCAR **Beaver Creek A** 21.61 342 P P 15 39 45.9 0.0
L27K **Beaver Creek,** 21.61 342 P P 15 39 46.2 +0.3
baz=149
KDAK **Kodiak Island** 21.62 321 P P 15 39 44.4 -1.5
baz=121
OHAK **Old Harbor** 21.67 319 P P 15 39 44.8 -1.7
baz=119
SEW **Seward** 21.68 329 P P 15 39 46.0 -0.5
baz=131
SII **Sitkinak Islan** 21.80 317 P P 15 39 46.6 -1.3
baz=116
HARP **HAARP** 21.92 337 P P 15 39 49.4 +0.2
baz=142
BRSE **Bradley Lake S** 21.95 327 P P 15 39 48.7 -0.8
baz=128
L26K **Log Cabin Wild** 21.95 340 P P 15 39 50.4 +0.9
baz=146
ECSD **EROS Data Cent** 21.96 78 P 15 39 50.4 +0.6
ECSD IAmb IAmb 15 39 53.9
comp=Z,32nm,1.1s
MENT **Mentasta** 21.97 339 P P 15 39 51.9 +2.1
Q20K **Shuyak Island** 21.98 323 P P 15 39 48.9 -0.8
baz=123
J30M **Hart River** 21.98 349 IAmb IAmb 15 39 54.6
comp=Z,33nm,1.0s
J30M **Hart River** 21.98 349 P P 15 39 51.4 +1.5
baz=161
M24K **Tolsona, Glenn** 21.99 336 P P 15 39 50.1 +0.1
baz=140
SCM **Sheep Creek Mo** 22.14 334 P P 15 39 51.8 +0.2
baz=138,SNR=6.8
J29N **Klondike Camp** 22.15 347 P P 15 39 53.4 +1.7
baz=158
AGMN **Agassiz Nation** 22.17 66 P P 15 39 53.0 +1.1
KNK **Knik Glacier** 22.21 332 P P 15 39 51.6 -0.7
KNK IAmb IAmb 15 39 57.2
comp=Z,28nm,1.0s
KNK **Knik Glacier** 22.21 332 P P 15 39 52.2 -0.2
baz=135
CHIR **Chirikof Islan** 22.24 314 P P 15 39 51.2 -1.3
baz=112
M23K **Glacier View** 22.24 334 P P 15 39 53.0 +0.4
baz=137,SNR=9.1
HOM **Homer** 22.26 326 P P 15 39 52.8 +0.1
baz=126
ULM **Lac du Bonnet** 22.29 61 P P 15 39 53.6 +0.4
comp=Z,22nm,0.6s,baz=268,slow=9.4,SNR=50
comp=Z,22nm,0.6s
ULM **Lac du Bonnet** 22.29 61 P P 15 39 53.1 -0.1
PAX **Paxson** 22.47 338 P P 15 39 55.4 +0.3
baz=143
PMR **Palmer** 22.57 332 P P 15 39 56.1 0.0
baz=134
I30M **Mount Dempster** 22.61 350 P P 15 39 58.0 +1.4
baz=162
GHO **Glory Hole Cre** 22.62 332 IAmb IAmb 15 40 06.5
comp=Z,25nm,1.0s
Q19K **Cape Douglas,** 22.70 323 P P 15 39 56.6 -0.9
baz=122
CAPN **Captain Cook N** 22.75 329 P P 15 39 57.2 -0.8
baz=129
WAT6 **Susitna Watana** 22.83 335 P P 15 39 59.2 +0.2
baz=138,SNR=5.1
SCRK **Sand Creek** 22.91 341 P P 15 39 59.8 0.0
baz=147
P19K **Oil Pt** 22.92 325 P P 15 39 59.6 -0.2
baz=124
RIDG **Independent Ri** 22.92 339 P P 15 40 00.1 +0.2
baz=145
H31M **Peel River** 22.93 352 P P 15 40 01.6 +1.6
baz=166
M22K **Willow** 23.02 331 P P 15 40 00.5 -0.3
baz=133
SUA **Susitna One** 23.05 330 P P 15 39 59.4 -1.9
SUA IAmb IAmb 15 40 04.0
comp=Z,28nm,1.0s
SUA **Susitna One** 23.05 330 P P 15 40 00.8 -0.5
baz=131,SNR=5.0
DHY **Denali Highway** 23.09 336 P P 15 40 01.5 -0.3
baz=139,SNR=7.9
K24K **Donnelly Dome** 23.22 339 P P 15 40 03.0 +0.2
baz=143
J26L **Joseph Creek** 23.25 342 P P 15 40 04.3 +1.1
J26L **Joseph Creek** 23.25 342 P P 15 40 03.7 +0.5
baz=148,SNR=7.4
WAT1 **Susitna Watana** 23.27 335 P P 15 40 03.4 +0.1
baz=137
TXAR **Lajitas Array** 23.27 119 P P 15 40 06.3 +2.5
comp=Z,2.4nm,0.7s,baz=297,slow=8.3,SNR=12
comp=Z,2.4nm,0.7s
R17L **Mt. Peulik Vol** 23.34 318 P P 15 40 02.5 -1.6
baz=115
SPU **Mount Spurr** 23.35 329 IAmb IAmb 15 40 09.2
comp=Z,14nm,1.1s
I28M **Miner Creek** 23.36 346 P P 15 40 05.3 +0.9
baz=156
Q17K **Contact Creek** 23.39 320 P P 15 40 03.2 -1.6
baz=117
SPCR **Spurr Chakacha** 23.42 329 P P 15 40 04.3 -0.7
baz=128
EPLO **Experimental L** 23.62 63 P 15 40 06.0 -1.0
EPLO IAmb IAmb 15 40 19.4
comp=Z,38nm,1.2s
P18K **Big Mountain,** 23.64 323 P P 15 40 06.1 -1.0
baz=120
SKT **Skwentna** 23.67 331 P P 15 40 07.0 -0.4
baz=131
O19K **Port Alsworth** 23.67 325 P P 15 40 06.9 -0.5
baz=123
EPYK **Eagle Plains** 23.75 350 P P 15 40 09.1 +1.0
baz=162,SNR=12
J25K **Salcha River,** 23.77 340 P P 15 40 08.4 0.0
baz=145,SNR=8.4
I27K **Kandik River** 23.80 345 IAmb IAmb 15 40 12.2
comp=Z,30nm,1.3s
I27K **Kandik River** 23.80 345 P P 15 40 09.7 +1.1
baz=153,SNR=8.8
O18K **Koktuh Hills** 23.87 324 P P 15 40 08.6 -0.7
baz=121
R16K **Pilot Point** 23.91 317 P P 15 40 08.2 -1.4
baz=113
HDA **Harding Lake** 24.01 339 IAmb IAmb 15 40 23.3
comp=Z,18nm,1.3s
HDA **Harding Lake** 24.01 339 P P 15 40 11.0 +0.4
baz=142
G31M **Satah River** 24.02 353 P 15 40 10.0 -0.6
G31M IAmb IAmb 15 40 20.4
comp=Z,16nm,1.1s
G31M **Satah River** 24.02 353 P P 15 40 11.0 +0.4
baz=127
MCK **McKinley** 24.05 336 P P 15 40 11.6 +0.6
baz=138,SNR=6.8
CHNA **Chernabura Isl** 24.07 310 P P 15 40 10.3 -0.9
baz=105
P17K **Kvichak River** 24.08 322 P P 15 40 10.8 -0.4
baz=118
N19K **Bonanza Creek** 24.09 326 P P 15 40 11.4 0.0
baz=124
FNO **Franklin** 24.16 99 P P 15 40 11.7 -0.5
X34A **Smith Ranch, M** 24.16 101 IAmb IAmb 15 40 23.1
comp=Z,22nm,0.8s
M20K **Styx River** 24.19 329 P P 15 40 11.4 -1.0
baz=128
I37A **Lemond, Waseca** 24.20 77 P P 15 40 11.2 -1.4
TRF **Thorofare Moun** 24.26 334 IAmb IAmb 15 40 17.7
comp=Z,38nm,1.4s
TRF **Thorofare Moun** 24.26 334 P P 15 40 12.8 -0.3
baz=135
ILAR **Eielson Array** 24.29 339 P P 15 40 13.8 +0.7
comp=Z,7.6nm,0.8s,baz=151,slow=8.8,SNR=82
ILAR PcP PcP 15 43 53.1 +0.6
comp=Z,1.0nm,1.0s,baz=166,slow=1.5,SNR=4.3
comp=Z,7.6nm,0.8s
ILAR **Eielson Array** 24.29 339 P P 15 40 13.1 0.0
H27K **Steamboat Moun** 24.35 346 P P 15 40 14.5 +0.7
baz=154
WRH **Wood River Hil** 24.37 338 P P 15 40 13.7 -0.2
WRH IAmb IAmb 15 40 19.3
comp=Z,12nm,0.9s
G29M **Pine Creek** 24.43 349 P P 15 40 15.3 +0.9
baz=160
CCB **Clear Creek Bu** 24.43 338 P 15 40 13.3 -1.1
CCB IAmb IAmb 15 40 16.6
comp=Z,12nm,1.0s
F31M **Tsiigehtchic** 24.48 354 IAmb IAmb 15 40 24.3
comp=Z,26nm,1.3s
F31M **Tsiigehtchic** 24.48 354 P P 15 40 16.6 +1.8
baz=68
PPLA **Purkeypile** 24.51 332 P P 15 40 15.2 -0.1
baz=131,SNR=5.8
KTH **Kantishna Hill** 24.54 334 IAmb IAmb 15 40 21.7
comp=Z,10nm,0.9s
PRP **Porcupine Dome** 24.56 341 P 15 40 15.9 +0.2
PRP IAmb IAmb 15 40 18.5
comp=Z,16nm,1.2s
PRP **Porcupine Dome** 24.56 341 P P 15 40 16.7 +0.9
baz=146,SNR=6.1
N18K **Kilae Creek** 24.59 325 P P 15 40 15.0 -1.0
baz=122
COLA **College** 24.62 339 P P 15 40 16.9 +0.8
baz=141
M19K **Big River Lodg** 24.68 329 P P 15 40 16.6 -0.2
baz=126
SDPT **Sand Point** 24.70 311 P P 15 40 16.0 -0.8
baz=105
POKR **Poker Plat Res** 24.70 339 IAmb IAmb 15 40 22.3
comp=Z,29nm,1.4s
POKR **Poker Plat Res** 24.70 339 P P 15 40 17.4 +0.5
baz=142
P16K **Nushagak River** 24.72 320 P P 15 40 16.6 -0.4
baz=116
NEA2 **Nenana** 24.74 337 IAmb IAmb 15 40 19.1
comp=Z,20nm,0.8s
NEA2 **Nenana** 24.74 337 P P 15 40 17.8 +0.5
baz=139,SNR=5.0
SCIA **Ste Genevieve** 24.79 82 IAmb IAmb 15 40 25.8
comp=Z,19nm,0.8s
F30M **Barrier River** 24.84 352 P P 15 40 19.7 +1.6
baz=164
G27K **Doyon Strip** 24.89 346 P P 15 40 19.5 +0.9
baz=154
BPAW **Bear Paw Mtn.** 24.94 335 IAmb IAmb 15 40 20.3
comp=Z,16nm,0.7s
BPAW **Bear Paw Mtn.** 24.94 335 P P 15 40 19.4 +0.4
baz=135,SNR=11
M18K **Stony River** 25.00 327 P P 15 40 19.6 0.0
baz=124
O16K **Kokwok River B** 25.02 322 P P 15 40 19.6 -0.1
baz=117
L19K **White Mountain** 25.02 329 P P 15 40 19.4 -0.4
baz=126
N17K **Nushagak Hills** 25.06 324 P P 15 40 19.9 -0.3
baz=120
N38A **Joes South For** 25.08 84 IAmb IAmb 15 40 27.3
comp=Z,21nm,0.9s
DRIO **Del Rio** 25.20 115 IAmb IAmb 15 40 26.1
comp=Z,15nm,0.9s
CHUM **Lake Minchumin** 25.21 334 P P 15 40 21.4 -0.1
baz=133,SNR=7.5
P38A **Dawn** 25.22 87 IAmb IAmb 15 40 28.3
comp=Z,22nm,1.0s
I23K **Minto, Yukon-K** 25.24 338 P P 15 40 20.6 -1.1
I23K IAmb IAmb 15 40 26.3
comp=Z,24nm,1.0s
I23K **Minto, Yukon-K** 25.24 338 P P 15 40 22.4 +0.7
baz=139,SNR=12
INK **Inuvik** 25.32 354 IAmb IAmb 15 40 25.1
comp=Z,13nm,1.1s
INK **Inuvik** 25.32 354 P P 15 40 24.5 +2.2
baz=169
F28M **Old Crow** 25.35 348 P P 15 40 24.2 +1.5
baz=158
FYU **Fort Yukon** 25.38 343 P 15 40 21.3 -1.6
H24K **Noodor Dome** 25.39 340 P 15 40 23.3 +0.2
H24K **Noodor Dome** 25.39 340 P P 15 40 23.8 +0.6
baz=142,SNR=15
G26K **Porcupine Rive** 25.41 345 P P 15 40 24.0 +0.8
baz=150
K20K **Telida** 25.46 331 IAmb IAmb 15 40 26.2
comp=Z,22nm,1.0s
K20K **Telida** 25.46 331 P P 15 40 24.5 +0.7
baz=129,SNR=9.5
FCC **Fort Churchill** 25.48 41 IAmb IAmb 15 40 36.2
comp=Z,21nm,1.0s
M17K **Holitna River** 25.61 326 P P 15 40 25.3 +0.1
baz=121
O15K **Ungalikthiuk R** 25.64 320 P P 15 40 24.7 -0.7
baz=114
N16K **Nishlik Lake** 25.72 323 P P 15 40 26.1 -0.1
baz=118
L18K **Granite Mounta** 25.75 328 P P 15 40 26.1 -0.3
baz=124
H23K **Yukon River** 25.81 339 P P 15 40 27.6 +0.7
baz=140
E29M **Blow River** 25.82 351 IAmb IAmb 15 40 33.3
comp=Z,29nm,1.2s
E29M **Blow River** 25.82 351 P P 15 40 28.8 +1.9
baz=161
BMAR **Burnt Mountain** 25.98 345 P P 15 40 28.9 +0.4
G24K **Hadweenzic Riv** 25.99 341 P P 15 40 29.4 +0.9
baz=144
J20K **Nowinta River** 26.01 333 P 15 40 29.2 +0.5
J20K IAmb IAmb 15 40 30.3
comp=Z,15nm,0.8s
J20K **Nowinta River** 26.01 333 P P 15 40 29.0 +0.3
baz=130,SNR=12
I21K **Tanana** 26.02 336 P P 15 40 29.5 +0.7
baz=135,SNR=21
M16K **Timber Creek** 26.06 324 P P 15 40 28.5 -0.8
baz=118
F26K **Sheenjek River** 26.13 345 P P 15 40 30.9 +1.1
baz=151
C36M **Paulatuk** 26.17 2 P 15 40 30.4 +0.4
C36M IAmb IAmb 15 40 36.7
comp=Z,17nm,1.3s
C36M **Paulatuk** 26.17 2 P P 15 40 32.9 +2.9
baz=185
N15K **Kwethluk River** 26.18 322 P P 15 40 29.7 -0.6
baz=115
E28M **Babbage River** 26.22 350 P P 15 40 32.2 +1.6
baz=159
F25K **Christian Rive** 26.34 344 P P 15 40 32.6 +0.9
baz=148
P40A **Paris** 26.34 86 P 15 40 31.1 -0.8
P40A IAmb IAmb 15 40 36.7
comp=Z,18nm,1.0s
L17K **Donlin** 26.34 327 P P 15 40 31.1 -0.6
baz=121
O14K **Tigyukauivet M** 26.35 319 P P 15 40 31.3 -0.6
baz=112
J19K **Poorman** 26.40 332 P P 15 40 31.2 -1.1
J19K IAmb IAmb 15 40 36.2
comp=Z,18nm,0.8s
J19K **Poorman** 26.40 332 P P 15 40 32.6 +0.4
baz=128,SNR=10.0
J18K **Innoko River** 26.47 330 P P 15 40 32.9 0.0
baz=126
I20K **Naaghedeneel** 26.53 334 P P 15 40 34.2 +0.8
baz=131
H21K **Melozitna Rive** 26.60 336 P P 15 40 33.8 -0.2
baz=135
L16K **Owhat River** 26.61 325 P P 15 40 34.5 +0.3
baz=119
G23K **Bananza Creek** 26.62 340 P 15 40 34.8 +0.6
G23K IAmb IAmb 15 40 36.6
comp=Z,16nm,0.9s
G23K **Bananza Creek** 26.62 340 P P 15 40 34.0 -0.2
baz=140
K17K **Iditarod** 26.65 328 P 15 40 34.8 +0.3
K17K **Iditarod** 26.65 328 P P 15 40 33.6 -0.9
baz=122
M15K **Kasigluk River** 26.67 323 P P 15 40 35.1 +0.4
baz=115
E25K **Arctic Village** 26.77 345 P P 15 40 36.6 +0.9
E25K **Arctic Village** 26.77 345 P P 15 40 36.5 +0.9
baz=149
D28M **Stokes Point** 26.81 351 P P 15 40 37.3 +1.5
baz=161
N14K **Kuskokwak Cree** 26.81 320 P P 15 40 34.6 -1.3
baz=113
D27M **Malcolm River** 27.01 349 P P 15 40 39.1 +1.3
baz=157
COLD **Coldfoot** 27.06 340 P 15 40 38.8 +0.6
COLD **Coldfoot** 27.06 340 P P 15 40 39.3 +1.1
baz=141
H20K **Anotleneega Mo** 27.12 335 P P 15 40 39.2 +0.5
baz=131
G22K **Bettles** 27.16 339 P P 15 40 39.6 +0.6
baz=138
M14K **Bethel** 27.26 322 P P 15 40 40.2 +0.2
baz=114
GCSA **Galena City Sc** 27.29 332 P P 15 40 40.6 +0.4
baz=127,SNR=6.6
J17K **VABM Dome** 27.31 329 P P 15 40 40.7 +0.2
baz=122
E24K **Your Creek** 27.34 343 P P 15 40 41.5 +0.8
baz=144
G21K **Allakaket** 27.41 337 P P 15 40 41.7 +0.4
baz=135
L15K **Ungalak Mounta** 27.45 324 P P 15 40 41.3 -0.4
baz=116
E23K **Chandalar** 27.58 342 P P 15 40 43.6 +0.7
baz=142
K15K **Wolf Creek Mou** 27.74 325 P P 15 40 43.8 -0.5
baz=117
M13K **Dall Lake** 27.76 321 P P 15 40 43.0 -1.4
baz=112
C27K **Jago River** 27.77 347 P P 15 40 45.9 +1.4
baz=153
L14K **Kuka Creek** 27.82 323 P P 15 40 44.6 -0.4
baz=114
J16K **Anvik River** 27.84 328 P P 15 40 44.9 -0.3
baz=120
UNV **Unalaska Valle** 27.87 306 P P 15 40 44.7 -0.8
baz=96
F21K **Alatna River** 27.91 338 P P 15 40 46.3 +0.5
baz=136
D25K **Kavik River** 27.96 345 P P 15 40 47.1 +0.8
baz=149
H18K **Honhosa River** 28.04 332 P P 15 40 47.3 +0.3
baz=126
I17K **Unalakleet** 28.19 329 IAmb IAmb 15 40 51.0
comp=Z,18nm,1.3s
I17K **Unalakleet** 28.19 329 P P 15 40 48.0 -0.2
baz=121
G19K **Purcell Mounta** 28.23 334 P P 15 40 49.2 +0.6
baz=129
F20K **Avaraart Lake** 28.41 337 P P 15 40 50.9 +0.7
baz=132
H17K **Granite Mounta** 28.46 331 P P 15 40 50.0 -0.7
baz=124
G18K **Tagagawik** 28.58 333 P P 15 40 52.2 +0.4
baz=127
J14K **Nanvaranak Lak** 28.79 325 P P 15 40 53.5 -0.1
baz=115
A36M **Sachs Harbour** 28.79 1 IAmb IAmb 15 40 56.6
comp=Z,13nm,1.2s
A36M **Sachs Harbour** 28.79 1 P P 15 40 55.9 +2.4
baz=182
K13K **Kusilvak Mount** 28.92 323 P P 15 40 54.3 -0.5
baz=113
M11K **Mekoryuk** 29.09 320 P P 15 40 55.7 -0.5
baz=108
E19K **Redstone River** 29.12 336 P P 15 40 56.8 +0.2
baz=131
H16K **Elim** 29.15 329 P P 15 40 56.6 -0.2
baz=120
G16K **Koyuk River** 29.58 331 P P 15 41 00.7 +0.1
baz=121
F17K **Baldwin Pennin** 29.76 333 P P 15 41 02.5 +0.3
baz=124
D20K **Etivluk River** 29.80 339 IAmb IAmb 15 41 05.6
comp=Z,9.4nm,0.9s
D20K **Etivluk River** 29.80 339 P P 15 41 03.1 +0.5
baz=133
G15K **Niukluk** 30.00 329 P P 15 41 04.3 0.0
baz=118
E18K **Tukpahlearik C** 30.12 335 P P 15 41 05.6 +0.2
baz=126
ANM **Nome** 30.31 328 P P 15 41 06.4 -0.7
baz=116
E17K **Hotham Inlet** 30.31 334 P P 15 41 07.3 +0.2
baz=124
F15K **North Star Dit** 30.56 330 P P 15 41 09.3 -0.1
baz=119
C18K **Utukok River** 31.04 336 P P 15 41 13.9 +0.4
baz=127
D17K **Noatak River** 31.06 334 P P 15 41 13.9 +0.2
baz=123
F14K **Arctic Creek** 31.07 329 P P 15 41 13.6 -0.2
baz=116
RDOG **Red Dog Mine** 31.20 335 P P 15 41 15.5 +0.6
baz=124
A21K **Barrow** 31.65 342 P P 15 41 19.5 +0.7
baz=136,SNR=5.3
TNA **Tin City** 31.71 329 P P 15 41 19.1 -0.4
baz=114
C16K **Lisburne Hills** 32.09 334 P P 15 41 23.1 +0.4
baz=121,SNR=15
GAMB **Gambell** 32.59 325 P P 15 41 26.8 -0.3
baz=107
TKL **Tuckaleechee C** 33.89 88 LR LR 15 55 55.3
comp=Z,809nm,18.8s,baz=260,slow=37
RES **Resolute Bay** 34.60 14 IAmb IAmb 15 41 53.2
comp=Z,9.3nm,1.1s
ILON **Igloolik, Nuna** 34.77 26 P 15 41 47.3 +1.3
M65A **Busby, Falmout** 40.93 72 P P 15 42 47.8 +9.4
baz=292
NEEM **North Greenlan** 45.12 17 *i* P P 15 43 12.4 +0.2

SIUN	**Universidad Ur**	**46.62**	**116**	P	**P**	**15 43 22.0**	**-2.4**
SIUN				IAmb	IAmb	15 43 44.0	
	comp=Z,31nm,0.7s						
SUMG	**Summit**	**48.91**	**24**	*i* P	**P**	**15 43 42.0**	**0.0**
PETK	**Petropavlovsk-**	**48.97**	**309**	P	**P**	**15 43 42.0**	**-0.1**
	comp=Z,5.9nm,1.0s,baz=68,slow=8.7,SNR=4.0						
	comp=Z,5.9nm,1.0s						
JTS	**Las Juntas de**	**49.06**	**119**	LR	LR	16 09 08.9	
	comp=Z,152nm,18.1s,baz=13,slow=42						
SPITS	**Spitsbergen Ar**	**56.79**	**8**	P	**P**	**15 44 39.3**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=337,slow=3.3,SNR=1.4						
	comp=Z,3.9nm,0.9s						
YAK	**Yakutsk**	**58.47**	**327**	LR	LR	16 10 25.0	
	comp=Z,2μm,21.0s,baz=326,slow=36						
H11N3	**WAKE ISLAND Hy**	**59.50**	**269**	T	T	16 49 31.0	
	baz=50,slow=75,SNR=204						
H11N2	**WAKE ISLAND Hy**	**59.50**	**269**	T	T	16 49 25.8	
	baz=50,slow=75,SNR=165						
H11N1	**WAKE ISLAND Hy**	**59.52**	**269**	T	T	16 49 25.8	
	baz=50,slow=75,SNR=207						
SDV	**Santo Domingo**	**59.68**	**108**	LR	LR	16 12 40.4	
	comp=Z,195nm,19.9s,baz=348,slow=38						
H11S1	**WAKE ISLAND Hy**	**60.42**	**268**	T	T	16 50 29.8	
	baz=50,slow=75,SNR=1149						
H11S2	**WAKE ISLAND Hy**	**60.42**	**268**	T	T	16 50 30.2	
	baz=50,slow=75,SNR=1041						
H11S3	**WAKE ISLAND Hy**	**60.44**	**268**	T	T	16 50 31.0	
	baz=50,slow=75,SNR=1106						
NRIK	**Noril'sk**	**64.84**	**347**	P	**P**	**15 45 35.0**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=51,slow=4.5,SNR=3.5						
	comp=Z,1.9nm,0.6s						
NRIK	**Noril'sk**	**64.84**	**347**	P	**P**	**15 45 33.4**	**-1.0**
NRIK				IAmb	IAmb	15 45 41.5	
	comp=Z,6.1nm,1.1s						
BNX	**BinXian**	**69.52**	**314**	⇑P	**P**	**15 46 03.5**	**-1.0**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NOA	**NORSAR Array B**	**70.61**	**20**	P	**P**	**15 46 10.3**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=308,slow=4.9,SNR=4.2						
	comp=Z,0.9nm,0.6s						
HFS	**Hagfors**	**72.01**	**19**	P	**P**	**15 46 21.1**	**+1.7**
	comp=Z,4.0nm,0.9s,baz=36,slow=7.7,SNR=5.2						
	comp=Z,4.0nm,0.9s						
FINES	**FINESS Array B**	**73.36**	**13**	P	**P**	**15 46 28.0**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=313,slow=0.8,SNR=6.5						
	comp=Z,3.1nm,0.9s						
SONM	**Songino Array**	**77.80**	**326**	P	**P**	**15 46 53.7**	**+0.4**
	comp=Z,2.0nm,1.0s,baz=24,slow=2.1,SNR=8.6						
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**77.80**	**326**	P	**P**	**15 46 51.0**	**-2.3**
SONM				IAmb	IAmb	15 46 56.4	
	comp=Z,4.6nm,1.2s						
ZALV	**Zalesovo Beam**	**79.39**	**342**	P	**P**	**15 47 02.4**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=27,slow=6.6,SNR=2.5						
ZALV				LR	LR	16 24 33.5	
	comp=Z,1μm,21.4s,baz=32,slow=38						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**79.39**	**342**	P	**P**	**15 47 01.7**	**-0.1**
LPAZ	**La Paz**	**80.07**	**123**	P	**P**	**15 47 06.2**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=351,slow=7.8,SNR=4.2						
	comp=Z,2.3nm,0.9s						
HHC	**Hu-ho-hao-te**	**81.03**	**319**	*e*P	**P**	**15 47 10.6**	**-0.4**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GERES	**GERESS Array B**	**81.96**	**25**	P	**P**	**15 47 15.5**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=326,slow=6.4,SNR=3.8						
	comp=Z,0.6nm,0.8s						
DAVA	**Damuels**	**82.08**	**28**	*e*pP	**P**	**15 47 16.6**	**+0.1**
	comp=Z,6.0nm,1.0s						
HNS	**HongShan**	**82.11**	**315**	⇓P	**P**	**15 47 18.7**	**+2.1**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	**Borovoye Array**	**82.91**	**350**	P	**P**	**15 47 21.1**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=15,slow=6.2,SNR=8.0						
	comp=Z,2.0nm,0.8s						
ABTA	**Abfaltersbach**	**83.43**	**27**	*e*P	**P**	**15 47 23.2**	**-0.3**
	comp=Z,4.9nm,1.1s						
CONA	**Conrad Observa**	**83.44**	**24**	*e*P	**P**	**15 47 23.2**	**-0.2**
	comp=Z,4.2nm,1.0s						
MODS	**Modra-Piesok**	**83.45**	**23**	*e*P	**P**	**15 47 25.8**	**+2.4**
STHS	**Stebnicka Huta**	**83.56**	**20**	*e*P	**P**	**15 47 24.2**	**+0.2**
KURK	**Kurchatov**	**83.76**	**344**	P	**P**	**15 47 24.1**	**-0.8**
KURK				IAmb	IAmb	15 47 32.1	
	comp=Z,4.7nm,1.0s						
KURBB	**Kurchatov Arra**	**83.87**	**344**	P	**P**	**15 47 25.4**	**0.0**
	comp=Z,1.4nm,0.2s,baz=18,slow=4.6,SNR=5.9						
KURBB				LR	LR	16 30 27.9	
	comp=Z,850nm,19.2s,baz=3.0,slow=40						
	comp=Z,1.4nm,0.2s						
NJ2	**Nanjing**	**83.87**	**309**	*e*P	**P**	**15 47 24.7**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARSA	**Arzberg**	**83.94**	**25**	*e*P	**P**	**15 47 25.2**	**-0.8**
	comp=Z,5.9nm,1.2s						
AKASG	**Malin Array Be**	**84.12**	**15**	P	**P**	**15 47 28.1**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=346,slow=4.7,SNR=4.0						
	comp=Z,0.4nm,0.3s						
OBKA	**Obir**	**84.30**	**26**	*e*pP	**P**	**15 47 28.1**	**+0.2**
	comp=Z,7.6nm,1.2s						
SOKA	**Soboth**	**84.30**	**25**	*i* pP	**P**	**15 47 28.1**	**+0.2**
	comp=Z,6.6nm,1.5s						
MKAR	**Makanchi Array**	**86.64**	**340**	P	**P**	**15 47 40.3**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=3.8,slow=3.6,SNR=4.8						
	comp=Z,0.4nm,0.9s						
GTA2	**Gaotai**	**87.40**	**326**	*e*P	**P**	**15 47 44.3**	**+0.8**
GTA2				pP	pwP	15 47 50.9	-0.1
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.1s						
XAN	**Xi'an**	**87.67**	**317**	P	**P**	**15 47 45.4**	**+0.6**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WMQ	**Urumqi**	**87.90**	**336**	*e*P	**P**	**15 47 45.3**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH	**Lanzhou**	**88.46**	**321**	*e*P	**P**	**15 47 46.8**	**-1.8**
LZH				pP	pP	15 47 52.7	+0.4
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
AAK	**Ala-Archa**	**92.31**	**344**	LR	LR	16 33 11.0	
	comp=Z,582nm,20.3s,baz=18,slow=38						

*NOU **08** 15:39:55.6, 33.°97S×179.°79W, h295km, mb4.1/7, South of Kermadec Islands*
*WEL **08** 15:40:26.5±1.3, 36.°3S±14.°×17.°9E±1.°3, h166km±17km, M3.5/12, ML3.5/12, MLv3.5/12, Error ellipse: s-maj=18.6km s-min=16.0km az=36.1*

ISC 08 15:40:23.8±4.1, **35.°7S**±0.°2×**178.°7E**±0.°2, **h192**km±18km, **n33**, σ1°**40**/**41**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.86**	**188**	P		**Pn**	**Pn**	**15 41 01.0**	**+0.8**
MXZ	**Matakaoa Point**	**1.86**	**188**	P		Pn	**Sn**	**15 41 00.8**	**+0.6**
MXZ				S			**Sn**	**15 41 27.6**	**-1.1**
WMGZ	**Waiomatatini S**	**2.10**	**185**	P		**Pn**	**Pn**	**15 41 04.1**	**+1.3**
WMGZ				S			**Sn**	**15 41 32.3**	**-0.9**
HAZ	**Te Kaha**	**2.15**	**199**	P		**Pn**	**Pn**	**15 41 04.1**	**+0.9**
HAZ				S			**Sn**	**15 41 33.1**	**-1.0**
PKGZ	**Pakihiroa**	**2.19**	**192**	P		**Pn**	**Pn**	**15 41 05.0**	**+1.3**
PKGZ				S			**Sn**	**15 41 34.6**	**-0.4**
PUZ	**Puketiti**	**2.37**	**187**	P		**Pn**	**Pn**	**15 41 06.6**	**+0.9**
PUZ				S			**Sn**	**15 41 36.8**	**-1.7**
RUGZ	**Raukumara Rang**	**2.37**	**199**	P		**Pn**	**Pn**	**15 41 06.5**	**+0.6**
TWGZ	**Tauwhareparae**	**2.51**	**192**	P		**Pn**	**Pn**	**15 41 08.9**	**+1.6**
TWGZ				S			**Sn**	**15 41 42.0**	**+0.6**
KUZ	**Kuaotunu**	**2.58**	**246**	P		**Pn**	**Pn**	**15 41 07.5**	**-0.5**
KUZ	**Kuaotunu**	**2.58**	**246**	P		**Pn**	**Pn**	**15 41 05.7**	**-2.4**
MWZ	**Matawai**	**2.76**	**199**	P		**Pn**	**Pn**	**15 41 11.3**	**+1.1**
MWZ				S			**Sn**	**15 41 45.5**	**-1.0**
CNGZ	**Carnagh Statio**	**2.78**	**187**	P		**Pn**	**Pn**	**15 41 11.7**	**+1.3**
TKGZ	**Te Karaka**	**2.79**	**193**	P		**Pn**	**Pn**	**15 41 11.5**	**+1.0**
TKGZ				S			**Sn**	**15 41 46.5**	**-0.6**
URZ	**Urewera**	**2.82**	**205**	P		**Pn**	**Pn**	**15 41 11.7**	**+0.9**
URZ	**Urewera**	**2.82**	**205**	P		**Pn**	**Pn**	**15 41 11.4**	**+0.6**
RIGZ	**Rimuhau**	**3.06**	**193**	P		**Pn**	**Pn**	**15 41 14.6**	**+0.8**
MUGZ	**Murupara**	**3.14**	**208**	P		**Pn**	**Pn**	**15 41 15.0**	**+0.4**
RTZ	**Ruatahuna**	**3.18**	**204**	P		**Pn**	**Pn**	**15 41 15.8**	**+0.6**
TOZ	**Tahuroa Road**	**3.23**	**231**	P		**Pn**	**Pn**	**15 41 19.9**	**+4.2**
SNGZ	**Shannon Statio**	**3.23**	**198**	P		**Pn**	**Pn**	**15 41 16.7**	**+1.0**
KNZ	**Kokohu**	**3.39**	**193**	P		**Pn**	**Pn**	**15 41 18.0**	**+0.4**
RAHZ	**Arahi**	**3.43**	**201**	P		**Pn**	**Pn**	**15 41 19.1**	**+0.9**
MHGZ	**Mahia Peninsul**	**3.48**	**190**	P		**Pn**	**Pn**	**15 41 19.9**	**+1.1**
NMHZ	**Naumai**	**3.68**	**203**	P		**Pn**	**Pn**	**15 41 22.1**	**+0.8**
ARHZ	**Aropaoanui**	**3.77**	**200**	P		**Pn**	**Pn**	**15 41 22.9**	**+0.5**
BKZ	**Black Stump Fm**	**3.84**	**206**	P		**Pn**	**Pn**	**15 41 23.6**	**+0.2**
BKZ	**Black Stump Fm**	**3.84**	**206**	P		**Pn**	**Pn**	**15 41 23.7**	**+0.4**
HIZ	**Hauiti**	**4.12**	**226**	P		**Pn**	**Pn**	**15 41 29.0**	**+2.3**
HIZ	**Hauiti**	**4.12**	**226**	P		**Pn**	**Pn**	**15 41 30.2**	**+3.5**
OTVZ	**Oturere**	**4.18**	**214**	P		**Pn**	**Pn**	**15 41 28.6**	**+0.9**
NGZ	**Ngauruhoe**	**4.22**	**214**	P		**Pn**	**Pn**	**15 41 29.2**	**+1.0**
BFZ	**Birch Farm**	**5.30**	**200**	P		**Pn**	**Pn**	**15 41 41.7**	**-0.2**
KHZ	**Kahutara**	**7.78**	**209**	P		**Pn**	**Pn**	**15 42 12.5**	**-1.5**

*NEIC **08** 15:41:51.8±0.8, 17.°66N±0.°03×66.°85W±0.°02, h10km±1km, ML3.8/33, Md3.5/7(RSPR), Error ellipse: s-maj=4.6km s-min=2.5km az=188.0*
*OSPL **08** 15:41:52.5±0.8, 17.°64N×66.°88W, h4km±999km, ML3.4, Presumed earthquake*
*SDD **08** 15:41:52.9±0.7, 17.°68N×66.°93W, h29km±9km, MD3.4, ML3.9, MW4.0, Presumed earthquake*
*RSPR **08** 15:41:53.7, 17.°77N×66.°87W, h4km±1km, MD3.5/7*

ISC 08 15:41:53.4±1.4, **17.°77N**±0.°07×**66.°86W**±0.°02, **h18**km±6km, **n41**, σ0°**42**/**66**, **6C-5D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.20**	**354**				**Pg**	**15 41 58.3**	**-0.1**
GBPR							**Sb**	**15 42 02.1**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.20**	**354**	⇓*i*P			**Pg**	**15 41 58.3**	**-0.1**
GBPR				*e*S			**Sb**	**15 42 02.1**	**+0.1**
MLPR	**Magueyes Islan**	**0.27**	**317**				**Pg**	**15 41 59.3**	**-0.1**
MLPR				Sg			**Sb**	**15 42 03.9**	**0.0**
MLPR				IAML				15 42 04.0	
	8μm,0.6s								
MLPR				IAML				15 42 04.3	
	8μm,0.6s								
CRPR	**Cabo Rojo, PR**	**0.34**	**314**	Pg			**Pg**	**15 42 00.5**	**-0.1**
CRPR				Sg			**Sb**	**15 42 06.1**	**+0.1**
CRPR				IAML				15 42 07.0	
	11μm,0.3s								
CRPR	**Cabo Rojo, PR**	**0.34**	**314**	⇑*e*Pg			**Pg**	**15 42 00.5**	**-0.1**
CRPR				⇓*e*Sg			**Sb**	**15 42 05.9**	**-0.1**
CRPR				IAML				15 42 06.3	
	comp=N,13μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.34**	**314**	⇑*i*P			**Pg**	**15 42 00.5**	**-0.1**
CRPR				*e*S			**Sb**	**15 42 05.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.34**	**314**	*i* P			**Pg**	**15 42 00.5**	**-0.1**
CRPR				*e*S			**Sg**	**15 42 05.9**	**+0.5**
CRPR				IAML				15 42 06.8	
	comp=Z,7μm,0.7s								
OBIP	**Obispado Ponce**	**0.36**	**41**				**Pg**	**15 42 00.6**	**-0.4**
OBIP	**Obispado Ponce**	**0.36**	**41**				**Sb**	**15 42 07.7**	**+1.0**
OBIP	**Obispado Ponce**	**0.36**	**41**	⇓*i*P			**Pg**	**15 42 00.7**	**-0.3**
OBIP				*e*S			**Sb**	**15 42 07.7**	**+1.0**
OBIP	**Obispado Ponce**	**0.36**	**41**	*i* P			**Pg**	**15 42 00.6**	**-0.3**
OBIP				*e*S			**Sb**	**15 42 07.4**	**+0.8**
OBIP				IAML				15 42 09.8	
	comp=Z,1μm,0.6s								
CELP	**Cerrillos**	**0.40**	**41**				**Pg**	**15 42 01.3**	**-0.3**
CELP				IAML				15 42 10.2	
	comp=Z,4μm,0.3s								
LSP	**Las Mesas**	**0.46**	**331**				**Pg**	**15 42 02.9**	**+0.1**
LSP							**Sb**	**15 42 10.0**	**+0.4**
LSP	**Las Mesas**	**0.46**	**331**	⇑*i*P			**Pg**	**15 42 02.9**	**+0.1**
LSP				*e*S			**Sb**	**15 42 10.0**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.49**	**15**				**Pg**	**15 42 03.0**	**-0.4**
PRSN	**Puerto Rico Se**	**0.52**	**328**				**Pg**	**15 42 03.7**	**-0.2**
PRSN	**Puerto Rico Se**	**0.52**	**328**				**Sg**	**15 42 10.8**	**-0.1**
PRSN	**Puerto Rico Se**	**0.52**	**328**	⇑*e*Pg			**Pg**	**15 42 03.7**	**-0.2**
PRSN				⇓*e*Sg			**Sg**	**15 42 10.9**	**-0.1**
PRSN				IAML				15 42 13.7	
	comp=N,8μm,0.4s								
PRSN	**Puerto Rico Se**	**0.52**	**328**	⇑*i*P			**Pg**	**15 42 03.7**	**-0.2**
PRSN				*e*S			**Sg**	**15 42 10.8**	**-0.1**
ECPR	**Experimental S**	**0.72**	**41**				**Pb**	**15 42 06.7**	**-0.8**
ECPR				IAML				15 42 19.5	
	comp=N,3μm,0.2s								
ECPR				IAML				15 42 21.2	
	comp=N,4μm,0.3s								
ECPR	**Experimental S**	**0.72**	**41**	⇑*i*P			**Pb**	**15 42 06.9**	**-0.6**
ECPR				*e*S			**Sg**	**15 42 17.6**	**+0.6**
AGPR	**Aguadilla, PR**	**0.73**	**341**				**Pb**	**15 42 07.3**	**-0.3**
AGPR				IAML				15 42 19.7	
	comp=N,4μm,0.6s								
AGPR				IAML				15 42 22.4	
	comp=N,3μm,0.4s								
AGPR	**Aguadilla, PR**	**0.73**	**341**	⇑*e*Pg			**Pb**	**15 42 07.4**	**-0.3**
AGPR				⇑*e*Sg			**Sb**	**15 42 17.4**	**0.0**
AGPR				IAML				15 42 20.2	
	comp=N,3μm,0.3s								
AGPR	**Aguadilla, PR**	**0.73**	**341**	⇑*i*P			**Pb**	**15 42 07.4**	**-0.3**
AGPR				*e*S			**Sg**	**15 42 17.6**	**+0.1**
SJG	**San Juan**	**0.75**	**63**				**Pb**	**15 42 07.2**	**-0.8**
SJG				IAML				15 42 21.6	
	comp=N,2μm,0.6s								
SJG				IAML				15 42 21.9	
	comp=N,3μm,0.5s								
SJG	**San Juan**	**0.75**	**63**				**Pb**	**15 42 07.6**	**-0.4**
SJG	**San Juan**	**0.75**	**63**	⇑*e*Pg			**Pb**	**15 42 07.6**	**-0.4**
SJG				⇑*e*Sg			**Sn**	**15 42 19.4**	**-0.7**
SJG	**San Juan**	**0.75**	**63**	⇓*i*P			**Pg**	**15 42 08.1**	**0.0**
SJG				*e*S			**Sn**	**15 42 19.4**	**-0.7**
SJG	**San Juan**	**0.75**	**63**	*i* P			**Pb**	**15 42 07.6**	**-0.4**
SJG				*e*S			**Sn**	**15 42 19.2**	**-0.9**
SJG				IAML				15 42 19.6	
	comp=Z,1μm,0.4s								
EMPR	**Esperanza - Ma**	**0.77**	**24**				**Pg**	**15 42 08.4**	**0.0**
EMPR							**Sn**	**15 42 20.3**	**-0.2**
EMPR	**Esperanza - Ma**	**0.77**	**24**	⇑*i*P			**Pg**	**15 42 08.4**	**0.0**
EMPR				*e*S			**Sn**	**15 42 20.3**	**-0.2**
PDPR	**Patillas Dam,**	**0.83**	**73**				**Pb**	**15 42 08.9**	**-0.4**
IDE	**Isla Desecheo**	**0.85**	**316**				**Pb**	**15 42 09.2**	**-0.4**
IDE							**Sg**	**15 42 21.4**	**+0.2**
IDE	**Isla Desecheo**	**0.85**	**316**	⇑*i*P			**Pb**	**15 42 09.2**	**-0.4**
IDE				*e*S			**Sg**	**15 42 21.4**	**+0.2**
GCPR	**Guaynabo City**	**0.91**	**54**				**Pb**	**15 42 09.9**	**-0.7**
GCPR	**Guaynabo City**	**0.91**	**54**				**Sg**	**15 42 23.2**	**+0.1**
GCPR	**Guaynabo City**	**0.91**	**54**	⇑*i*P			**Pb**	**15 42 09.6**	**0.0**
GCPR				*e*S			**Sg**	**15 42 23.2**	**+0.1**
HUMP	**Col San Antoni**	**1.02**	**69**				**Pb**	**15 42 12.1**	**-0.6**
HUMP				IAML				15 42 29.3	
	comp=Z,1μm,0.9s								
HUMP	**Col San Antoni**	**1.02**	**69**				**Sn**	**15 42 27.2**	**+0.3**
HUMP	**Col San Antoni**	**1.02**	**69**	⇑*i*P			**Pb**	**15 42 12.4**	**-0.3**
HUMP				*e*S			**Sn**	**15 42 27.2**	**+0.3**
DR12	**Loma Pena Alta**	**2.60**	**293**				**Pn**	**15 42 35.4**	**+0.7**

MEX 08 15:50:06.6±0.4, **16.°59N×94.°65W**, **h5**km, **MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.55**	**336**	*e*P			Pg	15 50 15.9	-1.3
CMIG				*e*S			Sg	15 50 23.3	-1.0
CARR	**Arriaga**	**0.79**	**116**	*i* S			Sg	15 50 32.4	+0.5
UXUV	**UXUV**	**0.87**	**34**	*e*P			Pg	15 50 22.7	-0.6
UXUV				*e*S			Sg	15 50 34.7	+0.1
NEUV	**Arroyo Zacate**	**1.57**	**316**	*e*P			Pn	15 50 33.6	-1.5
NEUV				*e*S			Sn	15 50 54.4	-1.4
HUIG	**Huatulco**	**1.62**	**240**	*e*P			Pn	15 50 34.7	-1.2
HUIG				*e*S			Sn	15 50 54.8	-2.4
PCIG		**1.63**	**122**	*e*S			Sn	15 50 55.2	-2.2
YOIG	**Yosondua**	**2.79**	**276**	*e*S			Sn	15 51 26.1	-0.2
TXIG	**Tlaxiaco**	**3.06**	**283**	*e*P			Pn	15 50 56.3	+0.4
TXIG				*e*S			Sn	15 51 30.3	-2.7

*IDC **08** 16:00:34.0±1.4, 2.°92S×129.°93E, h0km, mb3.4/3, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=38.2km s-min=22.1km az=92.0*
*DJA **08** 16:00:38.3±0.7, 3.°3S±4.°×13.°0E±.°, h17km±7km, M3.7/12, MLv3.7/12*

ISC 08 16:00:36.4±1.0, **2.°87S**±0.°08×**130.°2E**±0.°1, **h25**km, **n12**, σ0°**98**/**13**, **Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.39**	**250**	P			**Pn**	**16 00 59.9**	**-0.3**
BNDI	**Bandanaira**	**1.68**	**191**	P			**Pb**	**16 01 06.5**	**-0.1**
KRAI	**Karang Ratu**	**1.89**	**256**	P			**Pn**	**16 01 06.8**	**-0.3**
AAI	**Ambon**	**2.19**	**248**	P			**Pn**	**16 01 11.0**	**-0.3**
SIJI	**Sorong**	**2.24**	**27**	Pn			**Pb**	**16 01 14.8**	**-1.4**
	5.3nm,0.3s,baz=155,slow=16,SNR=26								
SIJI							**Sn**	**16 01 45.2**	**+1.8**
	2.9nm,0.3s,baz=218,slow=24,SNR=7.0								
	13nm,0.2s								
SIJI	**Sorong**	**2.24**	**27**	P			**Pb**	**16 01 15.7**	**-0.5**
SWI	**Sorong**	**2.24**	**27**	P			**Pb**	**16 01 15.5**	**-0.7**
SWI				S			**Sb**	**16 01 43.9**	**+0.4**
NLAI	**Namlea**	**3.15**	**263**	P			**Pn**	**16 01 23.7**	**-0.8**
WRA	**Warramunga Arr**	**17.44**	**167**	P			**P**	**16 04 38.4**	**-0.8**
	0.1nm,0.3s,baz=347,slow=12,SNR=6.2								
	0.1nm,0.3s								
ASAR	**Alice Springs**	**20.98**	**171**	P			Pn	16 05 19.1	-1.5
	1.7nm,0.6s,baz=349,slow=11,SNR=36								
	1.7nm,0.6s								
MKAR	**Makanchi Array**	**64.94**	**326**	P			**P**	**16 11 15.0**	**+1.0**
	0.3nm,0.9s,baz=109,slow=7.4,SNR=1.6								
	0.3nm,0.9s								
KURBB	**Kurchatov Arra**	**69.15**	**328**	P			**P**	**16 11 41.6**	**+0.9**
	0.1nm,0.3s,baz=115,slow=6.4,SNR=2.1								
	0.1nm,0.3s								

*IDC **08** 16:01:59.1±0.8, 3.°03S×129.°97E, h0km, mb4.0/9, mbtmp4.0/12, ML4.0/3, Error ellipse: s-maj=28.1km s-min=15.3km az=76.0*
*DJA **08** 16:02:03.3±0.5, 3.°5S±2.°×13.°0E±.°, h13km±4km, M4.2/23, mb4.6/3, MLv4.1/23*

ISC 08 16:02:02.9±0.6, **3.°02S**±0.°05×**129.°94E**±0.°04, **h25**km, **n26**, σ2°**83**/**32**, **mb3.8/9**, **Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.06**	**252**	P			**Pn**	**16 02 22.1**	**-0.2**
MSAI				S			**Sn**	**16 02 39.1**	**+2.8**
BNDI	**Bandanaira**	**1.50**	**181**	P			**Pb**	**16 02 31.6**	**+1.5**
BNDI				S			**Sb**	**16 02 54.9**	**+6.2**
KRAI	**Karang Ratu**	**1.57**	**259**	P			**Pb**	**16 02 31.4**	**0.0**
AAI	**Ambon**	**1.87**	**249**	P			**Pb**	**16 02 35.6**	**-0.8**
FAKI	**Fak Fak**	**2.31**	**88**	P			**Pn**	**16 02 40.8**	**+1.4**
SIJI	**Sorong**	**2.51**	**32**	Pn			**Pn**	**16 02 42.7**	**+0.5**
	21nm,0.3s,baz=207,slow=15,SNR=19								
SIJI				Sn			**Sn**	**16 03 11.6**	**-0.4**
	35nm,0.3s,baz=75,slow=22,SNR=11								
	46nm,0.2s								
SIJI	**Sorong**	**2.51**	**32**	P			**Pn**	**16 02 41.6**	**-0.6**
SIJI				S			**Sn**	**16 03 11.7**	**-0.3**
SWI	**Sorong**	**2.51**	**32**	P			**Pn**	**16 02 42.2**	**0.0**
NLAI	**Namlea**	**2.85**	**265**	P			**Pn**	**16 02 48.1**	**+1.3**
SANI	**Sanana**	**4.06**	**284**	P			**Pn**	**16 03 02.7**	**-0.9**
RKPI	**Ransiki, Papua**	**4.49**	**71**	P			**Pn**	**16 03 10.8**	**+1.4**
MWPI	**Manokwari, Pap**	**4.59**	**63**	P			**Pn**	**16 03 12.6**	**+1.8**
BAKI	**Biak**	**6.42**	**74**	P			**Pn**	**16 03 38.5**	**+2.5**
KAPI	**Kappang**	**10.36**	**259**	Pn			**Pn**	**16 04 32.5**	**+2.5**
	0.5nm,0.3s,baz=85,slow=11,SNR=1.4								
FITZ	**Fitzroy Crossi**	**15.57**	**195**	Pn			**Pn**	**16 05 38.0**	**-2.9**
	0.7nm,0.3s,baz=17,slow=10,SNR=12								
	1.7nm,0.9s								
WRA	**Warramunga Arr**	**17.36**	**166**	P			**Pn**	**16 06 01.7**	**-2.1**
	0.5nm,0.3s,baz=350,slow=11,SNR=14								
WRA				S			**Sn**	**16 09 08.0**	**-8.4**
	0.7nm,0.8s,baz=332,slow=22,SNR=2.3								
	1.3nm,0.3s								
ASAR	**Alice Springs**	**20.89**	**170**	P			**P**	**16 06 44.2**	**+0.7**
	19nm,0.6s,baz=350,slow=11,SNR=97								
ASAR				S			**S**	**16 10 27.0**	**-8.3**
	1.8nm,1.0s,baz=347,

comp=Z,17nm,0.9s
CO05 La Serena 42.97 294 P P 16 14 04.5 -0.2
AC05 El Transito 43.45 295 P P 16 14 09.4 +0.6
AC05 IAmb IAmb 16 14 15.4
comp=Z,22nm,0.9s
AC02 Maricunga 44.65 298 P 16 14 20.1 +1.2
AC02 IAmb IAmb 16 14 44.7
comp=Z,10nm,0.9s
H04S2 CROZET ISLANDS 45.09 109 T T 17 03 14.8
baz=220,slow=74
H04S3 CROZET ISLANDS 45.10 109 T T 17 03 27.3
baz=220,slow=74
H04S1 CROZET ISLANDS 45.11 109 T T 17 03 21.7
baz=220,slow=74
BOSA Boshof 46.15 70 P P 16 14 30.8 +0.4
comp=Z,3.4nm,0.8s,baz=172,slow=7.6,SNR=4.3
comp=Z,3.4nm,0.8s
BOSA Boshof 46.15 70 P P 16 14 29.0 -1.4
BOSA IAmb IAmb 16 14 43.0
comp=Z,13nm,1.2s
BDFB Brasilia 47.37 330 LR LR 16 33 54.7
comp=Z,354nm,18.5s,baz=181,slow=36
PB03 IPOC Station P 49.11 301 P P 16 14 50.7 -2.7
PB09 IPOC Station P 49.11 301 P P 16 14 52.1 -1.4
LBTB Lobatse 49.37 68 P P 16 14 52.3 -3.0
LBTB IAmb IAmb 16 15 01.6
comp=Z,10nm,1.2s
PB07 IPOC Station P 49.45 301 P P 16 14 56.1 0.0
PB02 IPOC Station P 49.81 301 P P 16 14 58.1 -0.6
PB01 IPOC Station P 49.88 302 P P 16 15 00.2 +1.0
PB08 IPOC Station P 50.54 302 P 16 15 04.5 0.0
PB08 IAmb IAmb 16 15 09.3
comp=Z,17nm,1.1s
GO01 Chusmiza 50.98 303 P P 16 15 07.4 -0.6
GO01 IAmb IAmb 16 15 10.3
comp=Z,10nm,0.7s
PB11 IPOC Station P 51.09 302 P 16 15 09.1 +0.6
H10S2 ASCENSION HYDR 51.62 13 T T 17 10 59.3
baz=34,slow=74,SNR=3.5
H10S3 ASCENSION HYDR 51.62 13 T T 17 10 49.7
baz=186,slow=74,SNR=3.9
H10N1 ASCENSION HYDR 52.74 13 T T 17 12 22.9
baz=186
H10N3 ASCENSION HYDR 52.74 13 T T 17 12 18.6
baz=186
H10N2 ASCENSION HYDR 52.75 13 T T 17 12 20.1
baz=186
LPAZ La Paz 53.56 306 P P 16 15 28.0 +0.6
comp=Z,2.9nm,0.7s,baz=161,slow=5.4,SNR=7.4
LPAZ LR LR 16 42 24.6
comp=Z,138nm,18.2s,baz=92,slow=41
comp=Z,2.9nm,0.7s
LPAZ La Paz 53.56 306 P 16 15 28.2 +0.8
VILB Vilhena 53.61 316 P P 16 15 26.3 -0.7
VILB IAmb IAmb 16 15 52.5
comp=Z,12nm,1.1s
DBIC Dimbokro 68.46 22 P P 16 17 09.0 +1.2
comp=Z,1.5nm,0.6s,baz=218,slow=6.2,SNR=1.7
comp=Z,1.5nm,0.6s
ASAR Alice Springs 94.84 161 P P 16 19 30.6 +2.8
comp=Z,1.0nm,0.7s,baz=186,slow=3.9,SNR=17
comp=Z,1.0nm,0.7s
CMIG Matias Romero 94.93 296 LR LR 16 57 30.5
comp=Z,154nm,21.2s,baz=352,slow=33
CMAR Chiang Mai Arr 122.66 111 PKP PKiKP 16 25 04.5 +2.9
comp=Z,0.9nm,0.8s,baz=222,slow=4.0,SNR=11
PDAR Pinedale Array 123.29 299 PKP PKiKP 16 25 03.5 +1.1
comp=Z,0.4nm,0.5s,baz=143,slow=5.4,SNR=5.8
ULM Lac du Bonnet 123.82 313 PKP PKiKP 16 25 03.5 +0.6
comp=Z,2.6nm,0.6s,baz=109,slow=3.3,SNR=5.0
NVAR Mina Array Bea 123.82 289 PKP PKiKP 16 25 06.4 +2.8
comp=Z,0.7nm,0.6s,baz=156,slow=3.1,SNR=5.9
FINES FINESS Array B 127.45 28 PKP PKiKP 16 25 10.6 +0.9
comp=Z,3.0nm,1.0s,baz=183,slow=8.4,SNR=4.1
PZH PanZhiHua 130.87 109 PKP PKPdf 16 25 15.8 -1.2
BVAR Borovoye Array 135.98 60 PKP PKiKP 16 25 27.6 +0.4
comp=Z,0.6nm,0.8s,baz=150,slow=3.2,SNR=3.7
MKAR Makanchi Array 137.08 74 PKP PKiKP 16 25 30.1 +0.5
comp=Z,0.5nm,0.8s,baz=243,slow=3.5,SNR=5.3
KURBB Kurchatov Arra 137.98 68 PKP PKiKP 16 25 32.1 +0.8
comp=Z,0.4nm,0.3s,baz=232,slow=4.5,SNR=2.5
YKA Yellowknife Ar 139.79 314 PKP PKiKP 16 25 34.7 0.0
comp=Z,2.3nm,0.8s,baz=127,slow=1.4,SNR=30
XAN Xi'an 140.54 110 PKP PKiKP 16 25 45.8 +8.6
NJ2 Nanjing 143.30 124 *eP* **PKPdf 16 25 38.9 -0.6**
NJ2 pmax pmax
comp=Z,1.0nm,0.5s
HHC Hu-ho-hao-te 147.25 106 *eP* **PKPdf 16 25 41.5 -4.7**
SONM Songino Array 149.74 92 PKPbc PKiKP 16 25 57.5 +1.7
comp=Z,3.8nm,0.9s,baz=224,slow=2.5,SNR=13
SONM Songino Array 149.74 92 PKiKP 16 25 56.9 +1.1
NRIK Noril'sk 151.38 43 PKPbc PKiKP 16 25 58.8 +0.5
comp=Z,2.0nm,0.8s,baz=83,slow=2.8,SNR=6.4
ILAR Eielson Array 153.44 305 PKPbc PKiKP 16 26 04.5 +1.7
comp=Z,6.9nm,1.0s,baz=166,slow=0.6,SNR=38

IDC 08 16:06:58.1±1.4, 13°09N×120°43E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=33.3km s-min=12.2km az=107.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.12**	**26**	Pg	Pg	16 07 19.9	+0.3
TGY	141nm,0.3s,baz=347,slow=20,SNR=9.9			Lg	Lg	16 07 34.6	
CMAR	**Chiang Mai Arr**	**21.35**	**287**	P	P	16 11 47.2	0.0
	0.2nm,0.3s,baz=96,slow=12,SNR=4.0						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**35.56**	**157**	P	P	16 13 56.8	-0.6
	0.5nm,0.6s,baz=332,slow=9.9,SNR=6.0						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**38.84**	**160**	P	P	16 14 25.4	+0.3
	0.5nm,0.6s,baz=339,slow=7.0,SNR=12						
	0.5nm,0.6s						

*IDC **08** 16:16:55.3±0.5, 59°.79S×25°.69W, h0km, mb4.4/12, mbtmp4.4/12, MS4.0/7, Error ellipse: s-maj=21.8km s-min=17.7km az=49.0*
*NEIC **08** 16:16:56.9±2.0, 59°.8S±0°.1×25°.7W±0°.2, h10km±1km, mb4.9/38, Error ellipse: s-maj=24.1km s-min=16.2km az=207.0*
ISC 08 16:16:58.7±0.4, 59°.83S±0°.08×25°.67W±0°.09, h26km, n83, σ1°15/72, mb4.8/27, MS4.1/5, 4C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.00**	**154**	⇑P	**Pn**	**16 19 59.5**	**-1.9**
	comp=Z,28nm,0.3s						
VNA3	**Neumayer Olymp**	**13.16**	**157**	⇑P	**Pn**	**16 20 00.9**	**-2.8**
	comp=Z,18nm,0.2s						
VNA3				⇓S	Sn	16 22 10.9	-18
	comp=N,3.6nm,0.2s						
VNA2	**Neumayer--Watz**	**13.40**	**154**	⇓P	**Pn**	**16 20 04.5**	**-2.4**
	comp=Z,11nm,0.2s,baz=312,slow=13						
VNA2				⇓S	Sn	16 22 22.7	-12
	comp=E,3.4nm,0.2s,baz=319,slow=18						
SNAA	**Sanae**	**14.98**	**152**	⇑P	**Pn**	**16 20 27.0**	**-1.4**
	comp=Z,536nm,0.3s						
SNAA	**Sanae**	**14.98**	**152**	Pn	**Pn**	**16 20 25.8**	**-2.6**
	comp=Z,9.7nm,0.3s,baz=323,slow=20,SNR=12						
SNAA				Sn	Sn	16 22 58.1	-15
	comp=Z,1.9nm,0.3s,baz=238,slow=14,SNR=1.6						
SNAA				LR	LR	16 25 44.3	
	comp=Z,303nm,19.7s,baz=11,slow=35						
SNAA	**Sanae**	**14.98**	**152**		**Pn**	**16 20 26.8**	**-1.5**
SNAA				IAmb	IAmb	16 20 32.0	
	comp=Z,37nm,0.6s						
ESPZ	**Base Esperanza**	**15.23**	**243**	P	**P**	**16 20 36.0**	**-0.3**
ESPZ				IAmb	IAmb	16 20 42.8	
	comp=Z,51nm,1.0s						
PMSA	**Palmer Station**	**18.29**	**238**	LR	LR	16 27 28.7	
	comp=Z,578nm,18.1s,baz=91,slow=35						
BELA	**Belgrano 2**	**18.37**	**186**	P	**P**	**16 21 10.7**	**-0.3**
MG01	**Puerto William**	**22.84**	**264**	P	**P**	**16 22 01.9**	**+2.4**
GO10	**Punta Arenas**	**25.49**	**265**	P	**P**	**16 22 25.2**	**+0.7**
GO10				IAmb	IAmb	16 22 50.7	
	comp=Z,27nm,0.8s						
MG04	**Isla Riesco**	**25.92**	**265**	P	**P**	**16 22 30.0**	**+1.7**
MG04				IAmb	IAmb	16 22 43.8	
	comp=Z,25nm,1.0s						
MG05	**Puerto Natales**	**27.07**	**267**		**P**	**16 22 37.7**	**-0.9**
MG05				IAmb	IAmb	16 22 49.6	
	comp=Z,17nm,0.8s						
GO08	**Villa O'Higgin**	**29.09**	**272**		**P**	**16 22 57.7**	**+1.0**
AY03	**Cochrane**	**29.91**	**274**	P	**P**	**16 23 03.4**	**-0.6**
AY03				IAmb	IAmb	16 23 15.5	
	comp=Z,12nm,0.8s						
QSPA	**South Pole Qui**	**30.41**	**180**	P	**P**	**16 23 09.9**	**+1.4**
	comp=Z,13nm,1.0s,baz=205,slow=5.9,SNR=7.7						
	comp=Z,13nm,1.0s						
QSPA	**South Pole Qui**	**30.41**	**180**	P	**P**	**16 23 10.1**	**+1.6**
AY01	**Puyuhuapi**	**31.91**	**278**		**P**	**16 23 20.8**	**-0.8**
AY01				IAmb	IAmb	16 23 22.5	
	comp=Z,9.8nm,0.8s						
PLCA	**Paso Flores**	**33.60**	**284**	P	**P**	**16 23 36.6**	**0.0**
	comp=Z,3.2nm,0.7s,baz=141,slow=8.4,SNR=22						
PLCA				LR	LR	16 36 36.9	
	comp=Z,252nm,18.4s,baz=129,slow=35						
	comp=Z,3.2nm,0.7s						
PLCA	**Paso Flores**	**33.60**	**284**		**P**	**16 23 34.4**	**-2.2**
PLCA				IAmb	IAmb	16 23 51.1	
	comp=Z,6.5nm,1.0s						
MAW	**Mawson**	**36.66**	**140**	LR	LR	16 38 46.5	
	comp=Z,285nm,18.1s,baz=268,slow=36						
BO02	**Sierra Bellavi**	**38.41**	**290**		**P**	**16 24 18.6**	**+0.8**
BO02				IAmb	IAmb	16 24 45.1	
	comp=Z,16nm,0.9s						
GO05	**Hualane**	**38.78**	**289**	P	**P**	**16 24 20.6**	**-0.2**
GO05				IAmb	IAmb	16 24 28.6	
	comp=Z,14nm,0.8s						
BO01	**Tunca**	**38.88**	**290**		**P**	**16 24 20.5**	**-1.1**
BO01				IAmb	IAmb	16 24 23.0	
	comp=Z,21nm,1.0s						
BO04	**La Punta**	**38.99**	**291**	P	**P**	**16 24 21.0**	**-1.6**
MT08	**Bocatoma Ro**	**39.16**	**292**	P	**P**	**16 24 24.5**	**+0.2**
MT09	**Talagante**	**39.34**	**291**	P	**P**	**16 24 24.6**	**-1.1**
MT01	**Popeta**	**39.39**	**291**	P	**P**	**16 24 25.6**	**-0.4**
MT01				IAmb	IAmb	16 24 26.6	
	comp=Z,18nm,0.9s						
MT16	**CCHEN**	**39.41**	**292**	P	**P**	**16 24 25.6**	**-0.6**
PEL	**Peldehue**	**39.72**	**292**		**P**	**16 24 29.2**	**+0.5**
PEL				IAmb	IAmb	16 24 31.1	
	comp=Z,35nm,0.9s						
CPUP	**Villa Florida**	**39.95**	**313**	P	**P**	**16 24 30.5**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=132,slow=7.1,SNR=5.0						
CPUP				LR	LR	16 42 23.8	
	comp=Z,159nm,18.5s,baz=87,slow=38						
	comp=Z,1.6nm,0.6s						
CPUP	**Villa Florida**	**39.95**	**313**	P	**P**	**16 24 28.2**	**-2.4**
VA03	**San Esteban**	**39.97**	**292**	P	**P**	**16 24 31.6**	**+0.7**
VA03				IAmb	IAmb	16 24 42.8	
	comp=Z,23nm,0.9s						
SUR	**Sutherland**	**41.04**	**69**	LR	LR	16 36 53.4	
	comp=Z,258nm,20.6s,baz=236,slow=29						
CO01	**Juntas del Tor**	**42.10**	**295**	P	**P**	**16 24 48.7**	**+0.1**
CO01				IAmb	IAmb	16 24 52.9	
	comp=Z,18nm,0.8s						
VNDA	**Vanda**	**42.82**	**182**	P	**P**	**16 24 54.9**	**+1.3**
	comp=Z,3.5nm,0.9s,baz=172,slow=15,SNR=2.2						
	comp=Z,3.5nm,0.9s						
AC05	**El Transito**	**43.15**	**296**		**P**	**16 24 56.8**	**-0.2**
LCO	**Las Campanas**	**43.19**	**295**	P	**P**	**16 24 57.9**	**+0.4**
H04S2	**CROZET ISLANDS**	**45.38**	**110**	T	T	17 14 49.3	
	baz=224,slow=73,SNR=7.6						
H04S3	**CROZET ISLANDS**	**45.39**	**110**	T	T	17 14 26.3	
	baz=224,slow=73,SNR=8.4						
H04S1	**CROZET ISLANDS**	**45.40**	**110**	T	T	17 14 51.4	
	baz=224,slow=73,SNR=8.2						
BOSA	**Boshof**	**46.28**	**71**	P	**P**	**16 25 21.5**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=232,slow=9.3,SNR=4.9						
BOSA				LR	LR	16 40 16.8	
	comp=Z,236nm,19.2s,baz=242,slow=30						
	comp=Z,2.2nm,0.8s						
BDFB	**Brasilia**	**47.05**	**330**	P	**P**	**16 25 27.5**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=112,slow=5.7,SNR=3.7						
	comp=Z,2.0nm,0.6s						
PB05	**IPOC Station P**	**48.29**	**300**		**P**	**16 25 36.1**	**-1.6**
PB03	**IPOC Station P**	**48.80**	**301**	P	**P**	**16 25 41.6**	**0.0**
PB09	**IPOC Station P**	**48.80**	**302**	IAmb	IAmb	16 25 54.6	
	comp=Z,8.9nm,0.6s						
PB01	**IPOC Station P**	**49.57**	**302**	IAmb	IAmb	16 25 48.7	
	comp=Z,11nm,0.8s						
GO01	**Chusmiza**	**50.66**	**303**	P	**P**	**16 25 56.1**	**-0.1**
GO01				IAmb	IAmb	16 25 58.6	
	comp=Z,10nm,0.8s						
H10S2	**ASCENSION HYDR**	**51.44**	**14**	T	T	17 21 41.5	
	baz=187,slow=74,SNR=4.8						
H10S3	**ASCENSION HYDR**	**51.45**	**14**	T	T	17 21 44.3	
	baz=33,slow=74,SNR=4.7						
LPAZ	**La Paz**	**53.24**	**306**	P	**P**	**16 26 16.5**	**+0.9**
	comp=Z,3.8nm,0.4s,baz=133,slow=2.8,SNR=13						
	comp=Z,3.8nm,0.4s						
LPAZ	**La Paz**	**53.24**	**306**		**P**	**16 26 15.0**	**-0.6**
LSZ	**Lusaka**	**59.10**	**65**	P	**P**	**16 26 58.7**	**+1.8**
	comp=Z,1.2nm,0.4s,baz=195,slow=7.2,SNR=5.4						
	comp=Z,1.2nm,0.4s						
LSZ	**Lusaka**	**59.10**	**65**	P	**P**	**16 26 56.8**	**0.0**
LSZ				IAmb	IAmb	16 27 11.1	
	comp=Z,7.2nm,1.0s						
DBIC	**Dimbokro**	**68.32**	**22**	P	**P**	**16 27 58.4**	**+1.0**
	comp=Z,5.6nm,0.9s,baz=202,slow=6.2,SNR=6.0						
	comp=Z,5.6nm,0.9s						
DBIC	**Dimbokro**	**68.32**	**22**	P	**P**	**16 27 57.8**	**+0.5**
DBIC				IAmb	IAmb	16 27 59.1	
	comp=Z,8.5nm,0.9s						
OTAV	**Otavalo**	**72.43**	**303**	P	**P**	**16 28 22.0**	**-1.1**
OTAV				IAmb	IAmb	16 28 27.0	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	**88.03**	**169**	P	**P**	**16 29 47.4**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=170,slow=3.5,SNR=4.6						
	comp=Z,4.2nm,0.9s						
ASAR	**Alice Springs**	**95.13**	**161**	P	**P**	**16 30 20.1**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=184,slow=4.2,SNR=18						
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	**98.85**	**161**	P	Pdif	16 30 36.9	+0.6
	comp=Z,0.6nm,1.0s,baz=191,slow=4.5,SNR=2.6						
	comp=Z,0.6nm,1.0s						
SCHQ	**Scheffer ville**	**118.95**	**334**	PKP	**PKiKP**	**16 35 43.6**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=97,slow=5.2,SNR=4.2						
CMAR	**Chiang Mai Arr**	**122.95**	**111**	PKP	**PKPdf**	**16 35 51.4**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=232,slow=1.4,SNR=9.1						
PDAR	**Pinedale Array**	**122.98**	**299**	PKP	**PKiKP**	**16 35 52.3**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=141,slow=4.8,SNR=7.3						
ULM	**Lac du Bonnet**	**123.50**	**314**	PKP	**PKiKP**	**16 35 52.4**	**-0.1**
	comp=Z,4.5nm,0.6s,baz=135,slow=1.4,SNR=8.3						
NVAR	**Mina Array Bea**	**123.54**	**290**	PKP	**PKiKP**	**16 35 54.8**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=134,slow=2.8,SNR=9.6						
FINES	**FINESS Array B**	**127.35**	**28**	PKP	**PKiKP**	**16 36 00.2**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=163,slow=2.0,SNR=13						
AKTO	**Aktyubinsk**	**128.90**	**55**	PKP	**PKiKP**	**16 36 03.4**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=224,slow=3.8,SNR=7.5						
AAK	**Ala-Archa**	**130.41**	**73**	PKP	**PKPdf**	**16 36 06.4**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=210,slow=8.1,SNR=5.1						
PZH	**PanZhiHua**	**131.15**	**109**	PKP	**PKiKP**	**16 36 08.7**	**-0.1**
ARCES	**ARCESS Array B**	**134.15**	**22**	PKP	**PKPdf**	**16 36 11.9**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=172,slow=1.8,SNR=5.3						
YKA	**Yellowknife Ar**	**139.47**	**314**	PKP	**PKiKP**	**16 36 23.3**	**-1.0**
	comp=Z,7.4nm,0.9s,baz=124,slow=1.5,SNR=8.7						
YKA	**Yellowknife Ar**	**139.47**	**314**		**PKPdf**	**16 36 22.9**	**+0.9**
LZH	**Lanzhou**	**140.03**	**103**	*e*PKP	**PKiKP**	**16 36 26.3**	**-0.3**
GTA2	**Gaotai**	**140.64**	**96**	*e*PKP	**PKiKP**	**16 36 28.5**	**+0.8**
XAN	**Xi'an**	**140.83**	**111**	PKP	**PKPdf**	**16 36 26.6**	**+1.1**
HNS	**HongShan**	**146.28**	**114**	⇑PKPbc	**PKPab**	**16 36 37.1**	**+0.2**
HHC	**Hu-ho-hao-te**	**147.52**	**106**	*eP*	**PKPdf**	**16 36 34.2**	**-2.8**
SONM	**Songino Array**	**149.97**	**92**	PKPbc	**PKiKP**	**16 36 46.6**	**0.0**
	comp=Z,5.8nm,0.9s,baz=218,slow=2.8,SNR=24						
SONM	**Songino Array**	**149.97**	**92**		**PKiKP**	**16 36 46.5**	**-0.1**
NRIK	**Noril'sk**	**151.35**	**43**	PKPbc	**PKiKP**	**16 36 48.6**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=278,slow=0.9,SNR=7.1						
XLT	**XiLinHaoTe**	**152.01**	**107**	*eP*	**PKPbc**	**16 36 50.7**	**+0.1**
XLT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,190nm,8.7s						
ILAR	**Eielson Array**	**153.12**	**306**	PKPbc	**PKiKP**	**16 36 53.1**	**+0.7**
	comp=Z,6.7nm,0.9s,baz=152,slow=1.9,SNR=41						
ILAR	**Eielson Array**	**153.12**	**306**		**PKiKP**	**16 36 52.9**	**+0.5**

*ASRS **08** 16:32:58.3±0.2, 51°.N±1°×9°.0E±°, h10km, MLh3.5/20, Error ellipse: s-maj=3.1km s-min=1.9km az=124.2, confirmed*
*NNC **08** 16:33:04.2±3.2, 51°.24N×89°.98E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=26.0km s-min=13.0km az=92.0*
ISC 08 16:33:00.2±0.8, 51°.35N±0°.02×90°.39E±0°.03, h10km, n26, σ1°53/52, 7C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEL	**Teeli**	**0.35**	**200**	⇓Pg	**Pg**	**16 33 05.6**	**-1.6**
TEL				Sg	**Sg**	**16 33 10.0**	**-1.8**
DJO	**Djoy, Khakassi**	**1.53**	**19**	⇓Pg	**Pg**	**16 33 28.3**	**-1.2**
DJO				Sg	**Sg**	**16 33 49.7**	**+0.4**
CERR	**Cheremushki**	**1.64**	**22**	Pg	**Pb**	**16 33 30.2**	**-0.3**
CERR				Sg	**Sg**	**16 33 53.7**	**+0.8**
ULGR	**Ulagan, Altay**	**1.70**	**246**	Pg	**Pg**	**16 33 32.0**	**-0.7**
ULGR				Sg	**Sg**	**16 33 54.6**	**-0.1**
YALR	**Yailyu, Altay**	**1.78**	**285**	Pg	**Pg**	**16 33 34.2**	**-0.2**
YALR				Sg	**Sg**	**16 33 57.6**	**0.0**
CUR	**Chagan-Uzun**	**1.80**	**227**	Pg	**Pg**	**16 33 33.7**	**-1.0**
CUR				Sg	**Sg**	**16 33 57.0**	**-1.0**
VEH	**Verkhnyaya Baz**	**1.91**	**359**	Pg	**Pg**	**16 33 36.0**	**-0.8**
VEH				Sg	**Sg**	**16 34 01.2**	**-0.4**
ARTR	**Artybash**	**1.99**	**284**	Pg	**Pg**	**16 33 38.0**	**-0.4**
ARTR				Sg	**Sg**	**16 34 04.7**	**+0.5**
AKAR	**Aktash**	**2.03**	**241**	Pg	**Pg**	**16 33 38.1**	**-1.1**
AKAR				Sg	**Sg**	**16 34 04.4**	**-1.2**
CHBI	**Chibit, Altay**	**2.10**	**242**	Pg	**Pg**	**16 33 38.9**	**-1.6**
CHBI				Sg	**Sg**	**16 34 07.2**	**-0.5**
ARDR	**Aradan**	**2.25**	**56**	Pg	**Pb**	**16 33 40.2**	**-0.8**
ARDR				Sg	**Sb**	**16 34 09.6**	**+0.6**
LUZB	**Luzhba, Kemero**	**2.49**	**339**	Pg	**Pg**	**16 33 46.2**	**-1.7**
LUZB				Sg	**Sg**	**16 34 17.8**	**-2.4**
DGZ	**Jazzator, Alta**	**2.50**	**230**	Pg	**Pb**	**16 33 44.9**	**-0.5**
DGZ				Sg	**Sg**	**16 34 19.1**	**-1.6**
KZLR	**Kyzyl**	**2.56**	**80**	Pg	**Pb**	**16 33 45.6**	**-0.8**
KZLR				Sg	**Sb**	**16 34 16.7**	**-1.2**
KIYZ	**Kiyzas, Kuzbas**	**2.74**	**325**	Pg	**Pg**	**16 33 50.7**	**-1.9**
KIYZ				Sg	**Sg**	**16 34 27.1**	**-1.0**
KALT2	**Kaltan 2**	**2.79**	**319**	Pg	**Pg**	**16 33 52.7**	**-0.8**
KALT2				Sg	**Sg**	**16 34 29.6**	**0.0**
MALIN	**Malinovka, Kuz**	**2.82**	**319**	Pg	**Pg**	**16 33 52.4**	**-1.8**
MALIN				Sg	**Sg**	**16 34 29.3**	**-1.4**
KALT3	**Kaltan 3**	**2.82**	**321**	Pg	**Pg**	**16 33 52.9**	**-1.3**
KALT3				Sg	**Sg**	**16 34 28.8**	**-2.0**
TUNR	**Tungur**	**2.84**	**247**	Pg	**Pg**	**16 33 53.1**	**-1.5**
TUNR				Sg	**Sg**	**16 34 30.2**	**-1.1**
ELT	**Eltsovka**	**3.19**	**309**	Pn	**Pn**	**16 33 52.9**	**+2.6**
ELT				Pg	**Pg**	**16 33 59.3**	**-2.0**
ELT				Sg	**Sg**	**16 34 40.3**	**-2.2**
UKR	**Ust'-Kan**	**3.56**	**266**	Pg	**Pg**	**16 34 06.2**	**-2.2**
UKR				Sg	**Sg**	**16 34 53.4**	**-1.1**
MINR	**Mina**	**4.24**	**31**	Pg	**Pn**	**16 34 07.8**	**+3.0**
MINR				Sg	**Sg**	**16 35 12.6**	**-3.5**
ZAA0	**Zalesovo Array**	**4.28**	**310**	⇓Pg	**Pg**	**16 34 20.1**	**-1.9**
	3.1nm,0.7s						
ZAA0				⇑Lg	Lg	16 35 15.3	
	10nm,0.5s						
MK31	**Makanchi Array**	**7.00**	**233**	⇓Pn	**Pn**	**16 34 45.3**	**+2.5**
	0.9nm,0.5s,baz=58,slow=13,SNR=27						
MK31				⇓Sn	**Sn**	**16 36 01.2**	**-1.2**
	1.0nm,0.5s						
MK31				⇑Lg	Lg	16 36 38.5	
	1.9nm,0.6s,baz=51,slow=32,SNR=4.7						
MAKZ	**Makanchi**	**7.15**	**234**	⇑Pn	**Pn**	**16 34 47.3**	**+2.5**
	1.0nm,0.8s						
MAKZ				⇑Sn	**Sn**	**16 36 07.0**	**+1.0**
	1.0nm,0.6s						
MAKZ				⇑Lg	Lg	16 36 43.4	
	8.4nm,1.4s						
KURBB	**Kurchatov Arra**	**7.52**	**269**	⇑Pn	**Pn**	**16 34 49.5**	**-0.4**
	1.6nm,0.5s						
KURBB				⇑Sn	**Sn**	**16 36 16.6**	**+1.5**
	2.4nm,0.6s						
KURBB				⇓Lg	Lg	16 36 57.3	
	10nm,0.8s						

*PRU **08** 16:52:55.0, 44°.22N×16°.28E, h10km*
*VIE **08** 16:52:55.9±0.8, 44°.28N×16°.05E, h8km, mb2.4/8, ml2.3/11, Error ellipse: s-maj=7.3km s-min=5.3km az=22.0 91 km NNW of Split*
*BEO **08** 16:52:56.2±0.5, 44°.29N×16°.05E, h11km±3km, ML2.5/9*
ISC 08 16:52:54.6±1.1, 44°.21N±0°.02×16°.04E±0°.02, h6km±9km, n45, σ0°96/83, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIJV	**Kijevo**	**0.33**	**128**	*i* Pg	**Pg**	**16 53 01.1**	**0.0**
KIJV				Sg	**Sg**	**16 53 06.3**	**+0.8**
UDBI	**Udbina**	**0.37**	**328**	*e*Pg	**Pg**	**16 53 01.8**	**-0.1**
UDBI				Sg	**Sg**	**16 53 07.3**	**+0.7**
MORI	**Morici**	**0.42**	**215**	*i* Pg	**Pg**	**16 53 02.2**	**+0.5**
MORI				Sg	**Sg**	**16 53 08.9**	**+0.7**
VIRC	**Vir**	**0.71**	**277**	*i* Pg	**Pg**	**16 53 07.4**	**-0.9**
VIRC				Sg	**Sg**	**16 53 18.6**	**+1.0**
PLIT	**Plitvice**	**0.73**	**336**	*i* Pg	**Pg**	**16 53 08.6**	**-0.1**
PLIT				Sg	**Sg**	**16 53 18.5**	**+0.3**
DUGI	**Dugi Otok**	**0.74**	**253**	*i* Pg	**Pg**	**16 53 07.8**	**-1.1**
DUGI				Sg	**Sg**	**16 53 19.3**	**+0.8**
NVLJ	**Novalja**	**0.91**	**293**	*i* Pg	**Pg**	**16 53 10.7**	**-1.3**
NVLJ				Sg	**Sg**	**16 53 24.4**	**+0.5**
BLY	**Banja Luka**	**0.98**	**56**	*e*Pg	**Pg**	**16 53 12.9**	**-0.5**
BLY				*e*Sg	**Sg**	**16 53 27.0**	**+0.9**
RABC	**Rab**	**1.05**	**301**	*e*Pg	**Pg**	**16 53 13.9**	**-0.8**
RABC				Sg	**Sg**	**16 53 29.0**

comp=Z,0.5nm,0.2s
CONA *i* Sn **Sn** **16 54 35.7 -1.1**
comp=Z,1.8nm,0.3s
SELS **Selova** **3.81 103** *e*Pn **Pn** **16 53 54.6 +0.7**
SELS *e*Sn **Sn** **16 54 39.2 +0.2**
MOA **Molln** **3.84 342** *i* Pn **Pn** **16 53 55.2 +0.9**
comp=Z,1.6nm,0.3s
MOA *i* Sn **Sn** **16 54 39.2 -0.6**
comp=Z,2.0nm,0.4s
MOA **Molln** **3.84 342** *e*Pn **Pn** **16 53 54.0 -0.3**
LESA **Schwarzleotal** **3.98 325** *i* Pn **Pn** **16 53 57.1 +0.9**
comp=Z,0.8nm,0.3s
LESA *i* Sn **Sn** **16 54 44.9 +1.6**
comp=Z,2.1nm,0.4s
WTTA **Wattenberg** **4.34 316** *e*Pn **Pn** **16 54 01.7 +0.4**
comp=Z,0.5nm,0.1s
WTTA *i* Sn **Sn** **16 54 54.0 +1.8**
comp=Z,2.4nm,0.4s
WATA **Walderalm** **4.42 317** *i* Pn **Pn** **16 54 01.7 -0.6**
comp=Z,0.8nm,0.2s
WATA *i* Sn **Sn** **16 54 54.6 +0.5**
comp=Z,0.7nm,0.2s
FETA **Feichten** **4.67 309** *e*Sn **Sn** **16 55 02.5 +2.2**
comp=Z,0.6nm,0.5s
FETA *e*Sg **Sg** **16 55 26.9 +2.5**
comp=Z,0.8nm,0.4s
ZVC **Zvikov** **5.38 347** *e*SN **Sn** **16 55 15.4 -2.2**

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*DNK **08** 17:08:50.1±1.5,80.21N×0.45E, h0km±28km, ML2.7, Presumed earthquake*
*IDC **08** 17:08:51.8±0.9,80.00N×0.63W, h0km, mb3.7/13, mbtmp3.8/16, ML3.3/2, MS3.6/7, Error ellipse: s-maj=22.1km s-min=14.7km az=43.0*
*NEIC **08** 17:08:51.1±2.4,80.0N±0.1×0.6W±0.3, h10km±1km, mb4.3/32, Error ellipse: s-maj=19.0km s-min=9.4km az=12.0*
*BER **08** 17:08:52.9±3.6,80.26N×0.48E, h10km, Mw4.6, ML3.9(NAO), Confirmed Earthquake*
*KOLA **08** 17:08:55.3,80.29N×2.23E, h0km, ML3.4, Error ellipse: s-maj=52.4km s-min=7.0km az=40.0, Greenland sea,Knipovich ridge, north*
*FCIAR **08** 17:08:55.0,80.14N×3.77E, h10km, station OMEGA has station magnitude of 4.00 station ZFI2 has station magnitude of 4.00*

ISC 08 17:08:50.7±0.4,**79.89N**±0.05×**0.56W**±0.04,**h10km**,**n149,**
*σ*2**s75**/169,**mb4.1**/24,**MS3.7**/5,**2C-1D**,**Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.50**	**106**	Pn		**Pn**	**17 09 31.0**	**-0.5**
KBS				Sn		**Sn**	**17 09 57.2**	**-4.6**
KBS	**Kingsbay**	**2.50**	**106**	⇑*i*P		**Pn**	**17 09 30.9**	**-0.5**
KBS				*e*S		**Sn**	**17 09 57.3**	**-4.6**
KBS				IAML			17 10 00.8	
	comp=Z,213nm,0.5s							
KBS	**Kingsbay**	**2.50**	**106**	S		**Sn**	**17 09 55.3**	**-6.6**
KBS	**Kingsbay**	**2.50**	**106**	P		**Pn**	**17 09 30.9**	**-0.5**
KBS				S		**Sn**	**17 09 56.9**	**-4.9**
KBS	**Kingsbay**	**2.50**	**106**	S		**Sn**	**17 09 57.2**	**-4.6**
KBS	**Kingsbay**	**2.50**	**106**	*i* P		**Pn**	**17 09 30.8**	**-0.5**
KBS				*i* S		**Sn**	**17 09 56.5**	**-5.3**
KBS	**Kingsbay**	**2.50**	**106**	P		**Pn**	**17 09 30.5**	**-0.8**
NOR	**Nord**	**3.11**	**311**	Pn		**Pn**	**17 09 39.4**	**-0.3**
NOR				Sn		**Sn**	**17 10 13.2**	**-0.7**
NOR	**Nord**	**3.11**	**311**	*e*P		**Pn**	**17 09 39.4**	**-0.3**
NOR	**Nord**	**3.11**	**311**	*i* P		**Pn**	**17 09 39.0**	**-0.8**
NOR				*i* S		**Sn**	**17 10 12.8**	**-4.1**
NOR				IAML			17 10 19.4	
	comp=Z,22nm,0.3s							
BRBB	**Barentsburg B**	**3.35**	**115**	Pn		**Pn**	**17 09 44.2**	**+1.2**
BRBB				Sn		**Sn**	**17 10 22.3**	**-0.4**
BRBB	**Barentsburg B**	**3.35**	**115**	*e*P		**Pn**	**17 09 44.0**	**+1.0**
BRBB				*e*S		**Sn**	**17 10 21.1**	**-1.6**
BRBB	**Barentsburg B**	**3.35**	**115**	S		**Sn**	**17 10 21.2**	**-1.5**
BRBB	**Barentsburg B**	**3.35**	**115**	P		**Pn**	**17 09 44.5**	**+1.5**
BRBB				S		**Sn**	**17 10 21.5**	**-1.2**
BRBB	**Barentsburg B**	**3.35**	**115**	S		**Sn**	**17 10 21.2**	**-1.5**
BRBB	**Barentsburg B**	**3.35**	**115**	P		**Pn**	**17 09 46.1**	**-4.0**
BRBA	**Barentsburg A**	**3.37**	**115**	Pn		**Pn**	**17 09 45.0**	**+1.7**
BRBA				Sn		**Sn**	**17 10 22.3**	**-1.0**
BRBA	**Barentsburg A**	**3.37**	**115**	*e*P		**Pn**	**17 09 45.2**	**+1.9**
BRBA				*e*S		**Sn**	**17 10 22.7**	**-0.6**
BRBA				IAML			17 10 25.5	
	comp=Z,106nm,0.2s							
SPA0	**Spitsbergen Ar**	**3.65**	**109**	Pn		**Pn**	**17 09 47.7**	**+0.5**
	baz=321,slow=7.4							
SPA0				Sn		**Sn**	**17 10 26.4**	**-3.9**
	baz=314,slow=14							
SPA0	**Spitsbergen Ar**	**3.65**	**109**	Pn		**Pn**	**17 09 47.7**	**+0.5**
SPA0				Sn		**Sn**	**17 10 26.4**	**-3.9**
SPA0	**Spitsbergen Ar**	**3.65**	**109**	⇓*i*P		**Pn**	**17 09 47.7**	**+0.5**
SPA0				*e*S		**Sn**	**17 10 26.1**	**-4.1**
SPITS	**Spitsbergen Ar**	**3.65**	**109**	Pn		**Pn**	**17 09 47.5**	**+0.3**
	comp=Z,156nm,0.4s,baz=342,slow=7.3,SNR=2538							
SPITS				Sn		**Sn**	**17 10 26.5**	**-3.7**
	baz=350,slow=8.5							
SPITS	**Spitsbergen Ar**	**3.65**	**109**	S		**Sn**	**17 10 22.1**	**-8.1**
SPITS	**Spitsbergen Ar**	**3.65**	**109**	P		**Pn**	**17 09 47.5**	**+0.3**
SPITS				S		**Sn**	**17 10 26.7**	**-3.5**
SPITS	**Spitsbergen Ar**	**3.65**	**109**	S		**Sn**	**17 10 28.5**	**-1.7**
SPITS	**Spitsbergen Ar**	**3.65**	**109**	P		**Pn**	**17 09 43.9**	**-3.3**
SPITS	**Spitsbergen Ar**	**3.65**	**109**	P		**Pn**	**17 09 47.2**	**0.0**
SPB2	**Spitsbergen Ar**	**3.66**	**109**			**Pn**	**17 09 47.5**	**+0.2**
SPB2				Sn		**Sn**	**17 10 26.8**	**-3.5**
HSPB	**Hornsund (broa**	**4.33**	**124**	Pn		**Pn**	**17 09 58.5**	**+2.0**
HSPB				Sn		**Sn**	**17 10 46.0**	**-0.8**
HSPB	**Hornsund (broa**	**4.33**	**124**	*e*P		**Pn**	**17 09 57.9**	**+1.5**
HSPB				*e*S		**Sn**	**17 10 45.0**	**-1.8**
HSPB				IAML			17 10 51.5	
	comp=Z,176nm,0.5s							
HSPB	**Hornsund (broa**	**4.33**	**124**	⇑*i*P		**Pn**	**17 09 58.4**	**+2.0**
HSPB				*e*S		**Sn**	**17 10 45.6**	**-1.2**
HSPB	**Hornsund (broa**	**4.33**	**124**	S		**Sn**	**17 10 45.5**	**-1.3**
HSPB	**Hornsund (broa**	**4.33**	**124**	S		**Sn**	**17 10 45.5**	**-1.3**
HSPB	**Hornsund (broa**	**4.33**	**124**	P		**Pn**	**17 09 57.6**	**+1.2**
HSPB	**Hornsund (broa**	**4.33**	**124**	P		**Pn**	**17 09 59.3**	**+2.9**
HOPEN	**Hopen**	**6.18**	**110**	Pn		**Pn**	**17 10 21.3**	**-0.6**
HOPEN				Sn		**Sn**	**17 11 26.5**	**-6.0**
HOPEN	**Hopen**	**6.18**	**110**	*e*P		**Pn**	**17 10 21.7**	**-0.2**
HOPEN				*e*S		**Sn**	**17 11 26.6**	**-6.0**
HOPEN				IAML			17 11 30.8	
	comp=Z,51nm,0.1s							
BJO1	**Bjornoya**	**6.88**	**131**	Pn		**Pn**	**17 10 35.1**	**+3.6**
BJO1	**Bjornoya**	**6.88**	**131**	*e*P		**Pn**	**17 10 35.2**	**+3.7**
BEAR	**Bear Island, N**	**6.89**	**131**	Pn		**Pn**	**17 10 35.1**	**+3.5**
	baz=336,slow=18							
BEAR				Sn		**Sn**	**17 11 47.5**	**-2.4**
	baz=336,slow=37							
DBG	**Daneborg**	**7.07**	**228**	Pn		**Pn**	**17 10 37.0**	**+3.0**
DBG				Sn		**Sn**	**17 11 52.0**	**-2.2**
DBG	**Daneborg**	**7.07**	**228**	*e*P		**Pn**	**17 10 37.0**	**+3.0**
DBG				*e*S		**Sn**	**17 11 50.4**	**-3.9**
DBG	**Daneborg**	**7.07**	**228**	*i* P		**Pn**	**17 10 37.1**	**+3.0**
DBG				*i* S		**Sn**	**17 11 49.2**	**-5.0**
DBG				IAML			17 11 56.3	
	comp=Z,116nm,0.4s							
ZFI2	**Zemlya Franca-**	**7.95**	**60**	*e*P		**Pn**	**17 10 42.7**	**-3.4**
ZFI2				*e*S		Sn	17 12 03.8	-12
	comp=Z,38nm,1.0s							
OMEGA	**Omega**	**7.97**	**60**	*e*P		**Pn**	**17 10 42.7**	**-3.7**
OMEGA				*e*S		Sn	17 12 03.8	-13
	comp=Z,38nm,0.9s							
JNW	**Jan Mayen West**	**9.11**	**196**	*e*P		Pn	17 11 06.8	+4.9
JNW				*e*S		**Sn**	**17 12 42.7**	**-1.6**
JNW				IAML			17 12 50.9	
	comp=Z,80nm,0.4s							
JMIC	**Jan Mayen**	**9.15**	**197**	Pn		**Pn**	**17 11 01.9**	**-0.7**
	comp=Z,74nm,0.3s,baz=132,slow=1.9,SNR=15							
JMIC				Sn		**Sn**	**17 12 46.6**	**+1.2**
	comp=Z,42nm,0.3s,baz=156,slow=16,SNR=13							
JMIC	**Jan Mayen**	**9.15**	**197**	*e*P		Pn	17 11 07.2	+4.6
JMI	**Jan Mayen**	**9.22**	**197**	*e*P		Pn	17 11 08.1	+4.6
NEEM	**North Greenlan**	**9.93**	**282**	*i* P		**Pn**	**17 11 13.0**	**-0.6**
NEEM	**North Greenlan**	**9.93**	**282**	*i* P		**Pn**	**17 11 13.4**	**-0.2**
NEEM				*i* S		Sn	17 12 55.5	-9.5
NEEM				IAML			17 13 03.3	
	comp=Z,22nm,0.4s							
SCO	**Scoresbysund**	**10.79**	**221**	Pn		**Pn**	**17 11 25.2**	**+0.3**
SCO	**Scoresbysund**	**10.79**	**221**	*i* P		**Pn**	**17 11 28.2**	**+3.3**
SCO	**Scoresbysund**	**10.79**	**221**	*i* P		**Pn**	**17 11 28.2**	**+3.3**
SCO				*i* S		**Sn**	**17 13 23.0**	**-2.5**
SCO				IAML			17 13 42.4	
	comp=Z,4.2nm,0.4s							
HAMF	**Hammerfest**	**10.99**	**134**	P		**Pn**	**17 11 28.7**	**+1.0**
SUMG	**Summit**	**11.32**	**251**			**Pn**	**17 11 33.5**	**+1.0**
SUMG	**Summit**	**11.32**	**251**	*i* P		**Pn**	**17 11 32.2**	**-0.3**
SUMG	**Summit**	**11.32**	**251**	*i* P		**Pn**	**17 11 32.2**	**-0.3**
SUMG				*i* S		**Sn**	**17 13 32.1**	**-7.0**
SUMG				IAML			17 13 37.6	
	comp=Z,11nm,0.4s							
JETT	**Jettan, Norway**	**11.62**	**141**	*e*P		**Pn**	**17 11 40.2**	**+3.8**
KIF	**Kilpisjarvi**	**12.19**	**142**	Pn		**Pn**	**17 11 48.3**	**+4.2**
KIF	**Kilpisjarvi**	**12.19**	**142**	*e*P		**Pn**	**17 11 48.2**	**+4.2**
VADS	**Vadso**	**12.24**	**126**	P		**Pn**	**17 11 45.9**	**+1.2**
VADS	**Vadso**	**12.24**	**126**	*e*P		**Pn**	**17 11 46.9**	**+2.2**
KEV	**Kevo**	**12.25**	**131**	*e*P		**Pn**	**17 11 47.5**	**+2.6**
ARA0	**ARCESS Array S**	**12.25**	**133**	Pn		**Pn**	**17 11 47.7**	**+2.8**
	baz=333,slow=10							
ARA0				Sn		**Sn**	**17 13 56.6**	**-4.8**
	baz=349,slow=18							
ARA0	**ARCESS Array S**	**12.25**	**133**	Pn		**Pn**	**17 11 47.7**	**+2.8**
ARA0				Sn		**Sn**	**17 13 56.6**	**-4.8**
ARCES	**ARCESS Array B**	**12.25**	**133**	Pn		**Pn**	**17 11 47.6**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=347,slow=11,SNR=16							
ARCES				Sn		**Sn**	**17 13 56.6**	**-4.8**
	comp=Z,0.2nm,0.3s,baz=350,slow=25,SNR=1.5							
	comp=Z,4.2nm,0.7s							
ARCES	**ARCESS Array B**	**12.25**	**133**			**Pn**	**17 11 45.3**	**+0.3**
LOF	**Lofoten**	**12.37**	**155**	*e*P		Pn	17 11 52.1	+5.6
KTK1	**Kautokeino**	**12.47**	**138**	*e*P		**Pn**	**17 11 52.1**	**+4.3**
STEI	**Steigen**	**12.70**	**152**	*e*P		Pn	17 11 57.2	+6.2
KULLO	**Kullorsuaq**	**13.00**	**277**	*i* P		**Pn**	**17 11 53.5**	**-1.6**
KULLO	**Kullorsuaq**	**13.00**	**277**	*i* P		**Pn**	**17 11 52.3**	**-2.8**
KULLO				*i* S		Sn	17 14 06.2	-13
HEF	**Hetta**	**13.09**	**138**	*e*P		Pn	17 12 00.8	+4.4
FAUS	**Fauske**	**13.24**	**153**	*e*P		**P**	**17 12 05.5**	**-2.8**
SALU	**Saltoluokta**	**13.53**	**147**	*e*P		**P**	**17 12 10.1**	**-1.5**
TULEG	**Thule**	**13.54**	**292**			Pn	17 11 57.6	-4.9
TULEG	**Thule**	**13.54**	**292**	*i* P		**Pn**	**17 11 58.5**	**-4.0**
VAGH	**Vaagaholmen**	**13.73**	**156**	*e*P		**P**	**17 12 11.5**	**-2.3**
RAUS	**Rausandaksla**	**14.07**	**155**	*e*P		**P**	**17 12 16.7**	**-1.0**
STOK	**Stokkvaagen**	**14.10**	**157**	*e*P		**P**	**17 12 17.0**	**-1.0**
UPNV	**Upernavik**	**14.22**	**271**	*i* P		**Pn**	**17 12 08.8**	**-3.0**
UPNV	**Upernavik**	**14.22**	**271**	*i* P		**Pn**	**17 12 08.8**	**-3.0**
LEIR	**Leirfjorden**	**14.33**	**157**	*e*P		**P**	**17 12 20.3**	**-0.1**
MOR8	**Moi Rana**	**14.37**	**155**	*e*P		**P**	**17 12 19.6**	**-1.3**
NUUG	**Nuugaatsiaq**	**14.73**	**265**	*i* P		**Pn**	**17 12 16.8**	**-1.9**
NUUG	**Nuugaatsiaq**	**14.73**	**265**	*i* P		**Pn**	**17 12 14.4**	**-4.3**
SAATT	**Saattut**	**15.07**	**262**	*i* P		**Pn**	**17 12 19.1**	**-4.1**
SAQQ	**Saqqaq**	**15.81**	**260**	*i* P		**Pn**	**17 12 28.0**	**-5.0**
NSS	**Namsos**	**15.82**	**160**	*e*P		**P**	**17 12 41.2**	**+4.2**
ILULI	**Ilulissat**	**16.36**	**258**	Pn		**Pn**	**17 12 36.0**	**-4.0**
ILULI				IAML		IAmb	17 12 51.1	
	comp=Z,34nm,1.1s							
ILULI	**Ilulissat**	**16.36**	**258**	*i* P		**Pn**	**17 12 36.9**	**-3.2**
GDH	**Godhavn**	**16.75**	**261**	*i* P		**Pn**	**17 12 41.1**	**-3.8**
ANGG	**Ammassalik, Gr**	**17.45**	**237**	Pn		**Pn**	**17 12 53.0**	**-0.8**
POIN	**Pond Inlet**	**18.07**	**290**	P		**Pn**	**17 12 57.9**	**-3.4**
SFJD	**Kangerlussuaq**	**18.26**	**254**	P		**Pn**	**17 13 01.9**	**-1.8**
	comp=Z,12nm,0.4s,baz=18,slow=13,SNR=18							
SFJD				S		Sn	17 16 14.1	-13
	comp=Z,5.2nm,0.5s,baz=226,slow=23,SNR=2.0							
SFJD				LR		LR	17 20 46.4	
	comp=Z,191nm,18.5s,baz=44,slow=39							
SFJD	**Kangerlussuaq**	**18.26**	**254**			**Pn**	**17 13 00.8**	**-2.9**
SFJD				IAmb		IAmb	17 13 29.4	
	comp=Z,15nm,0.8s							
NC204	**NORSAR Array S**	**19.00**	**163**	P		**P**	**17 13 11.1**	**-1.0**
NC204				IAmb		IAmb	17 13 53.3	
	comp=Z,26nm,1.3s							
RES	**Resolute Bay**	**19.04**	**306**	P		**P**	**17 13 10.2**	**-2.1**
	comp=Z,1.7nm,0.6s,baz=30,slow=11,SNR=7.1							
RES				S		Sn	17 16 27.5	-18
	comp=Z,3.1nm,0.7s,baz=285,slow=19,SNR=5.1							
RES	**Resolute Bay**	**19.04**	**306**	P		**P**	**17 13 08.2**	**-4.1**
NC405	**NORSAR Array S**	**19.21**	**162**	P		**P**	**17 13 13.1**	**-1.3**
NC405				IAmb		IAmb	17 13 46.9	
	comp=Z,33nm,1.5s							
NOA	**NORSAR Array B**	**19.26**	**162**	P		**Pn**	**17 13 20.1**	**+4.2**
	baz=345,slow=12,SNR=6.2							
NOA				LR		LR	17 19 02.6	
	comp=Z,54nm,21.7s,baz=110,slow=32							
	comp=Z,1.2nm,1.0s							
FIA1	**FINESS Array S**	**20.10**	**141**	P		Pn	17 13 27.5	+1.7
FINES	**FINESS Array B**	**20.10**	**141**	P		Pn	17 13 28.8	+2.9
	comp=Z,7.7nm,0.9s,baz=353,slow=9.7,SNR=21							
	comp=Z,7.7nm,0.9s							
FINES	**FINESS Array B**	**20.10**	**141**	P		Pn	17 13 27.4	+1.5
HFS	**Hagfors**	**20.31**	**159**	P		Pn	17 13 31.1	+2.7
	comp=Z,7.0nm,1.0s,baz=335,slow=8.7,SNR=7.3							
	comp=Z,7.0nm,1.0s							
ILON	**Igloolik, Nuna**	**21.58**	**288**	P		**P**	**17 13 42.2**	**+2.2**
ILON				IAmb		IAmb	17 13 44.3	
	comp=Z,9.9nm,1.1s							
NRIK	**Noril'sk**	**22.74**	**67**	P		**P**	**17 13 56.0**	**+3.6**
	comp=Z,11nm,0.8s,baz=8.2,slow=3.4,SNR=10							
NRIK				LR		LR	17 23 10.4	
	comp=Z,154nm,18.4s,baz=350,slow=38							
	comp=Z,11nm,0.8s							
NRIK	**Noril'sk**	**22.74**	**67**			**P**	**17 13 55.1**	**+2.7**
BLKN	**Baker Lake**	**28.53**	**295**	P		**P**	**17 14 45.9**	**+0.1**
BLKN				IAmb		IAmb	17 14 52.8	
	comp=Z,5.1nm,1.3s							
D27M	**Malcolm River**	**29.42**	**332**	P		**P**	**17 14 53.0**	**-0.8**
KUQ	**Kuujjuaa**	**29.60**	**265**	P		**P**	**17 14 55.4**	**0.0**
F28M	**Old Crow**	**30.92**	**331**	P		**P**	**17 15 05.8**	**-1.2**
G31M	**Satah River**	**31.09**	**327**	P		**P**	**17 15 08.1**	**-0.3**
G31M				IAmb		IAmb	17 15 19.9	
	comp=Z,4.3nm,1.0s							
E24K	**Your Creek**	**31.14**	**337**	P		**P**	**17 15 08.4**	**-0.5**
C18K	**Utukok River**	**31.26**	**346**	P		**P**	**17 15 09.8**	**-0.3**
C18K				IAmb		IAmb	17 15 13.6	
	comp=Z,7.7nm,1.3s							
VRAC	**Vranov**	**31.27**	**158**	LR		LR	17 26 13.0	
	comp=Z,97nm,18.7s,baz=315,slow=33							
G29M	**Pine Creek**	**31.45**	**329**	P		**P**	**17 15 11.5**	**-0.1**
BMAR	**Burnt Mountain**	**31.49**	**334**	P		**P**	**17 15 11.4**	**-0.6**
GERES	**GERESS Array B**	**31.56**	**162**	P		**P**	**17 15 15.3**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=347,slow=6.5,SNR=4.1							
	comp=Z,0.7nm,0.7s							
C16K	**Lisburne Hills**	**31.79**	**349**			**P**	**17 15 13.2**	**-1.4**
C16K				IAmb		IAmb	17 15 26.9	
	comp=Z,9.1nm,1.4s							
FYU	**Fort Yukon**	**32.39**	**334**	P		**P**	**17 15 19.7**	**-0.2**
G24K	**Hadweenzic Riv**	**32.42**	**336**	P		**P**	**17 15 19.6**	**-0.6**
G24K				IAmb		IAmb	17 15 36.4	
	comp=Z,4.0nm,1.2s							
YKA	**Yellowknife Ar**	**33.04**	**309**	P		**P**	**17 15 27.0**	**+1.4**
	comp=Z,0.1nm,0.6s,baz=38,slow=11,SNR=5.2							
	comp=Z,0.1nm,0.6s							
H24K	**Noodor Dome**	**33.30**	**336**	P		**P**	**17 15 26.4**	**-1.6**
F17K	**Baldwin Pennin**	**33.47**	**346**	P		**P**	**17 15 28.9**	**-0.3**
F17K				IAmb		IAmb	17 15 32.5	
	comp=Z,4.5nm,0.8s							
G18K	**Tagagawik**	**33.90**	**344**	P		**P**	**17 15 32.0**	**-1.0**
ILAR	**Eielson Array**	**34.29**	**335**	P		**P**	**17 15 39.1**	**+2.6**
	comp=Z,0.6nm,0.8s,baz=1.1,slow=9.1,SNR=7.7							
	comp=Z,0.6nm,0.8s							
ILAR	**Eielson Array**	**34.29**	**335**	P		**P**	**17 15 36.5**	**+0.1**
G16K	**Koyuk River**	**34.56**	**347**	P		**P**	**17 15 38.9**	**+0.2**
G16K				IAmb		IAmb	17 15 55.7	
	comp=Z,5.5nm,1.2s							
H18K	**Honhosa River**	**34.62**	**344**	P		**P**	**17 15 40.1**	**+0.8**
H18K				IAmb		IAmb	17 15 51.5	
	comp=Z,6.7nm,1.4s							
YAK	**Yakutsk**	**35.49**	**38**	P		**P**	**17 15 46.8**	**0.0**
YAK				IAmb		IAmb	17 15 57.2	
	comp=Z,5.3nm,0.8s							
BCAR	**Beaver Creek A**	**35.56**	**331**	P		**P**	**17 15 48.5**	**+1.0**
ZALV	**Zalesovo Beam**	**36.65**	**81**	P		**P**	**17 15 59.3**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=348,slow=13,SNR=3.7							
	comp=Z,0.4nm,0.3s							
ZALV	**Zalesovo Beam**	**36.65**	**81**	P		**P**	**17 15 57.6**	**+0.8**
HYT	**Haines Junctio**	**37.37**	**327**	P		**P**	**17 16 01.7**	**-1.3**
KURK	**Kurchatov**	**38.66**	**88**	P		**P**	**17 16 13.8**	**-0.1**
KURK				IAmb		IAmb	17 16 17.7	
	comp=Z,4.1nm,0.9s							
KURBB	**Kurchatov Arra**	**38.73**	**88**	P		**P**	**17 16 17.5**	**+3.0**
	comp=Z,1.0nm,0.3s,baz=340,slow=7.6,SNR=13							
KURBB				LR		LR	17 37 25.8	
	comp=Z,96nm,18.2s,baz=168,slow=44							
	comp=Z,1.0nm,0.3s							
KBZ	**Khabaz**	**39.56**	**128**	P		**P**	**17 16 23.8**	**+2.5**
	comp=Z,4.1nm,1.0s,baz=45,slow=4.3,SNR=3.2							
	comp=Z,4.1nm,1.0s							
MAKZ	**Makanchi**	**43.02**	**87**			**P**	**17 16 51.7**	**+1.8**
MAKZ				IAmb		IAmb	17 16 53.8	
	comp=Z,5.3nm,1.2s							
MK31	**Makanchi Array**	**43.09**	**86**	P		**P**	**17 16 53.0**	**+2.5**
MKAR	**Makanchi Array**	**43.09**	**86**	P		**P**	**17 16 53.3**	**+2.8**
	comp=Z,1.6nm,0.6s,baz=345,slow=7.4,SNR=25							
	comp=Z,1.6nm,0.6s							
MKAR	**Makanchi Array**	**43.09**	**86**	P		**P**	**17 16 52.1**	**+1.7**
SONM	**Songino Array**	**46.16**	**63**	P		**P**	**17 17 16.4**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=332,slow=8.1,SNR=2.7							
SONM				LR		LR	17 38 37.1	
	comp=Z,125nm,18.3s,baz=358,slow=39							
	comp=Z,0.3nm,0.5s							
KDJ	**Kajisay**	**46.71**	**93**	P		**P**	**17 17 21.9**	**+2.4**
KDJ				IAmb		IAmb	17 17 24.1	
	comp=Z,2.2nm,0.7s							
VHRN	**Van Horn**	**62.39**	**290**	P		**P**	**17 19 15.6**	**+2.2**
TXAR	**Lajitas Array**	**63.59**	**288**	P		**P**	**17 19 23.5**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=32,slow=6.0,SNR=2.4							
	comp=Z,0.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**73.62**	**77**	P		**P**	**17 20 24.9**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=348,slow=6.9,SNR=4.1							
	comp=Z,0.3nm,0.7s							
CMIG	**Matias Romero**	**74.05**	**277**	LR		LR	17 56 58.7	
	comp=Z,58nm,19.0s,baz=358,slow=39							

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*SJA **08** 17:09:31.4±1.7,36.32S×73.89W, h16km±23km, ML3.3, MW3.6*
*GUC **08** 17:09:32.8±0.7,36.19S×73.68W, h15km±4km, ML3.8*

ISC 08 17:09:30.7±2.1,**36.21S**±0.06×**73.83W**±0.09,**h13km**±12km,
n17,*σ*1**s33**/26,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.74**	**136**	*e*P		**Pg**	**17 09 45.0**	**-0.1**
BI05				*i* S		**Sg**	**17 09 54.3**	**-0.6**
BI05				IAML			17 09 56.1	
	comp=N,11μm,0.3s							
BI05	**Punta Hualpn**	**0.74**	**136**	*e*P		**Pg**	**17 09 45.6**	**+0.5**
BI05				*e*S		**Sb**	**17 09 55.2**	**-0.2**
BI05				IAML			17 09 56.0	
	comp=Z,4μm,0.4s							
GO05	**Hualane**	**1.96**	**53**	*e*P		**Pn**	**17 10 03.3**	**-0.3**
GO05				*i* S		**Sn**	**17 10 26.6**	**-1.5**
GO05				IAML			17 10 31.1	
	comp=N,638nm,0.2s							
ML02	**Panimavida**	**2.01**	**78**	*e*P		**Pn**	**17 10 04.0**	**-0.2**
ML02				*i* S		**Sn**	**17 10 28.0**	**-1.1**
BI02	**San Fabin de**	**2.11**	**103**	*e*P		**Pn**	**17 10 05.8**	**0.0**
BI02				*i* S		**Sn**	**17 10 30.8**	**-1.1**
BI02				IAML			17 10 36.0	
	comp=E,2μm,0.4s							
BI02	**San Fabin de**	**2.11**	**103**	*e*P		**Pb**	**17 10 08.8**	**0.0**
BI02				IAML			17 11 02.4	
	comp=Z,74nm,1.2s							
BI04	**Isla Mocha**	**2.19**	**181**	*e*P		**Pb**	**17 10 09.3**	**-0.9**
BI04				*i* S		**Sb**	**17 10 36.9**	**-0.4**
CANA	**Caviahue**	**2.77**	**128**	*e*P		**Pb**	**17 10 19.0**	**-1.2**
CANA				IAML			17 11 26.0	
	comp=Z,52nm,1.0s							
BO02	**Sierra Bellavi**	**2.86**	**61**	*e*P		**Pn**	**17 10 16.6**	**+0.6**
BO02				*i* S		**Sn**	**17 10 50.6**	**+0.2**
BO01	**Tunca**	**2.89**	**52**	*e*P		**Pn**	**17 10 17.1**	**+0.8**
BO01				*i* S		**Sn**	**17 10 51.0**	**+0.1**
BO01

NACB				S		Sn	17 32 23.8	-1.1
NNSB	**Datong**	**1.44**	**244**	*i*	P		Pn	17 32 02.9	+0.8
NNSB					S		Sn	17 32 25.4	-0.2
NNS	**Nan Shan**	**1.44**	**245**	*i*	P		Pn	17 32 03.1	+0.9
NNS					S		Sn	17 32 25.0	-0.6
JISG	**Ishigakijimahi**	**1.45**	**109**	*i*	P		Pn	17 32 02.4	+0.3
JISG					eS		Sn	17 32 24.7	-0.8
NCU	**National Centr**	**1.47**	**266**		P		Pn	17 32 03.0	+0.8
NCU					S		Sn	17 32 25.7	-0.1
NCUH	**Zhongli**	**1.47**	**266**		P		Pn	17 32 02.7	+0.4
NCUH					eS		Sn	17 32 25.7	-0.1
TWD	**Chiawan**	**1.48**	**228**		P		Pn	17 32 02.8	+0.5
TWD					S		Sn	17 32 25.1	-0.9
ETLH	**Xiulin Townshi**	**1.48**	**235**		P		Pn	17 32 02.6	+0.2
ETLH					S		Sn	17 32 25.0	-1.2
KSHI	**Guanxi Townshi**	**1.50**	**259**		P		Pn	17 32 03.7	+1.1
KSHI					S		Sn	17 32 27.1	+0.6
HWA	**Hwalien**	**1.54**	**225**		P		Pn	17 32 03.7	+0.8
HWA					eS		Sn	17 32 26.4	-0.7
NFF	**Wufeng Townshi**	**1.59**	**254**	*i*	P		Pn	17 32 03.8	+0.3
NFF					S		Sn	17 32 27.3	-0.8
ETM	**Tongmen**	**1.62**	**228**	*i*	P		Pn	17 32 03.8	0.0
ETM					S		Sn	17 32 27.1	-1.5
TEYL	**Yanliau Villag**	**1.62**	**223**		P		Pn	17 32 03.9	+0.1
TEYL					S		Sn	17 32 27.9	-0.7
FUSS	**Fushou**	**1.64**	**240**		P		Pn	17 32 05.2	+1.0
FUSS					eS		Sn	17 32 28.6	-0.7
LXIB	**Xiulin Townshi**	**1.64**	**231**	*i*	P		Pn	17 32 04.0	-0.1
LXIB					S		Sn	17 32 27.9	-1.3
SBCB	**Hsinchu**	**1.67**	**261**		P		Pn	17 32 05.4	+1.1
SBCB					S		Sn	17 32 29.8	+0.3
WHF	**Hehuan Shan**	**1.67**	**237**		P		Pn	17 32 05.6	+0.8
WHF					eS		Sn	17 32 29.9	-0.4
LIOB	**Emei**	**1.68**	**256**	*eP*			Pn	17 32 05.0	+0.6
LIOB					S		Sn	17 32 29.4	-0.2
HSN	**Hsinchu**	**1.69**	**261**		P		Pn	17 32 04.7	+0.3
HSN					eS		Sn	17 32 29.5	-0.2
NSTT	**Nanjuang**	**1.69**	**255**		P		Pn	17 32 05.0	+0.5
NSTT					*i* S		Sn	17 32 29.3	-0.6
TDCB	**Techi**	**1.70**	**242**	*i*	P		Pn	17 32 06.1	+1.3
TDCB					S		Sn	17 32 29.7	-0.6
SHUL	**Shoufeng**	**1.70**	**222**		P		Pn	17 32 05.6	+0.9
SHUL					S		Sn	17 32 29.9	-0.3
ESL	**Shilin**	**1.77**	**225**		P		Pn	17 32 05.2	-0.1
ESL					S		Sn	17 32 29.6	-1.7
TEGC	**Jichi Village**	**1.78**	**221**	*eP*			Pn	17 32 06.4	+1.0
TEGC					eS		Sn	17 32 30.8	-0.7
JTJ	**Tarama**	**1.78**	**103**	*eP*			Pn	17 32 06.0	+0.6
JTJ					eS		Sn	17 32 31.3	-0.2
OWD	**Renai**	**1.85**	**234**	*i*	P		Pn	17 32 07.1	+0.8
OWD					S		Sn	17 32 32.6	-0.6
WHP	**Taichung City**	**1.86**	**245**	*i*	P		Pn	17 32 07.6	+1.2
WHP					S		Sn	17 32 33.1	-0.2
WARBT	**Fenglin Townsh**	**1.86**	**224**	*i*	P		Pn	17 32 06.0	-0.4
WARBT					S		Sn	17 32 31.2	-2.0
WUSB	**Renai**	**1.87**	**235**	*i*	P		Pn	17 32 07.8	+1.2
WUSB					S		Sn	17 32 33.3	-0.2
EGFH	**Guangfu**	**1.88**	**222**	*eP*			Pn	17 32 06.6	+0.1
EGFH					eS		Sn	17 32 32.1	-1.3
NMLH	**Miaoli**	**1.90**	**254**		P		Pn	17 32 07.5	+0.7
NMLH					eS		Sn	17 32 33.7	-0.2
TWQ1	**Liyutan**	**1.98**	**249**	*i*	P		Pn	17 32 08.3	+0.6
TWQ1					S		Sn	17 32 34.8	-0.7
WCS	**Beigang Elemen**	**1.99**	**240**		P		Pn	17 32 09.2	+1.5
WCS					S		Sn	17 32 35.7	0.0
VWDT	**VWDT**	**2.00**	**229**		P		Pn	17 32 09.0	+1.2
VWDT					eS		Sn	17 32 35.6	-0.2
HGSD	**Ruisui**	**2.01**	**219**		P		Pn	17 32 08.5	+0.6
HGSD					eS		Sn	17 32 35.8	-0.3
EHY	**Hungye**	**2.06**	**221**	*eP*			Pn	17 32 08.7	+0.2
EHY					eS		Sn	17 32 35.0	-2.1
SMLT	**Sun Moon Lake**	**2.10**	**236**		P		Pn	17 32 10.6	+1.5
SMLT					eS		Sn	17 32 39.4	+1.4
SSLB	**Suanglung**	**2.11**	**233**		P		Pn	17 32 10.7	+1.6
SSLB	**Suanglung**	**2.11**	**233**		S		Sn	17 32 38.5	+0.3
SSLB	**Suanglung**	**2.11**	**233**		P		Pn	17 32 10.7	+1.6
SSLB					eS		Sn	17 32 38.9	+0.7
TYC	**Yuchr**	**2.12**	**237**	*eP*			Pn	17 32 10.5	+1.4
TYC					eS		Sn	17 32 39.3	+1.1
ECBN	**Changbin**	**2.14**	**216**	*eS*			Sn	17 32 38.2	-0.5
TCU	**Taichung**	**2.14**	**245**	*i*	P		Pn	17 32 10.5	+1.1
TCU					eS		Sn	17 32 38.6	-0.1
YULB	**Yu-li**	**2.16**	**220**		P		Pn	17 32 10.0	+0.3
YULB	**Yu-li**	**2.16**	**220**	*i*	P		Pn	17 32 10.0	+0.3
YULB					eS		Sn	17 32 37.5	-1.6
JIRB	**Irabujima**	**2.17**	**96**	*eP*			Pn	17 32 10.4	-0.7
TWF1	**Yuli**	**2.19**	**219**	*eP*			Pn	17 32 10.4	+0.3
TWF1					eS		Sn	17 32 38.7	-1.2
WHYT	**Xinyi Township**	**2.24**	**233**	*i*	P		Pn	17 32 12.1	+1.4
WHYT					eS		Sn	17 32 42.4	+1.5
WNT	**Mingjian**	**2.27**	**239**		P		Pn	17 32 12.1	+1.3
WNT					eS		Sn	17 32 40.7	-0.5
CHKH	**Chenggong**	**2.27**	**215**	*eS*			Sn	17 32 40.5	-0.8
WCHH	**Zhanghua**	**2.27**	**245**	*i*	P		Pn	17 32 11.8	+1.0
WCH1	**Changhua City**	**2.28**	**245**	*i*	P		Pn	17 32 11.8	+0.8
WCH1					S		Sn	17 32 41.4	-0.2
FULB	**Fuli**	**2.32**	**217**	*eP*			Pn	17 32 12.4	+0.8
FULB					eS		Sn	17 32 42.0	-0.4
CHKT	**Chengkung**	**2.36**	**214**	*eS*			Sn	17 32 40.4	-2.8
ALS	**Alishan**	**2.39**	**230**		P		Pn	17 32 14.2	+1.5
ALS					eS		Sn	17 32 45.6	+1.2
CHN5	**Tsauling**	**2.43**	**233**		P		Pn	17 32 14.4	+1.5
CHN5					S		Sn	17 32 45.6	+0.8
ECS	**Chishang**	**2.44**	**217**	*eP*			Pn	17 32 13.2	+0.3
ECS					eS		Sn	17 32 44.6	-0.4
WDLH	**Douliu**	**2.48**	**237**	*i*	P		Pn	17 32 14.4	+1.1
ELDTW	**Lidau**	**2.48**	**221**		P		Pn	17 32 14.1	+0.6
ELDTW					eS		Sn	17 32 45.8	-0.3
WRL	**Guolierlin Hig**	**2.50**	**243**		P		Pn	17 32 14.0	+0.5
WRL					eS		Sn	17 32 45.2	-0.9
WCKO	**Fanlu**	**2.58**	**231**		P		Pn	17 32 13.8	-0.8
WCKO					eS		Sn	17 32 47.8	-0.1
WTCT	**Ta-ch'eng**	**2.59**	**243**		P		Pn	17 32 15.1	+0.4
WTCT					eS		Sn	17 32 46.9	-1.3
STYH	**Taoyuan**	**2.65**	**225**		P		Pn	17 32 16.9	+1.6
STYH					eS		Sn	17 32 48.5	-0.8
TPUB	**Ta-pu**	**2.65**	**229**		P		Pn	17 32 16.7	+1.2
TPUB	**Ta-pu**	**2.65**	**229**		P		Pn	17 32 16.6	+1.2
CHY	**Chiayi**	**2.67**	**235**	*eP*			Pn	17 32 16.6	+0.8
CHY					eS		Sn	17 32 50.2	+0.3
WTP	**Ta-pu**	**2.70**	**228**		P		Pn	17 32 17.2	+1.1
TWGBT	**Beinan**	**2.74**	**215**		P		Pn	17 32 16.4	-0.1
TWGBT	**Beinan**	**2.74**	**215**	*eP*			Pn	17 32 17.3	+0.8
TWGBT					eS		Sn	17 32 50.7	-0.7
TWG	**Pinlang**	**2.74**	**216**		P		Pn	17 32 17.7	+1.1
TWG					eS		Sn	17 32 49.8	-1.7
WSF	**Szhu**	**2.75**	**239**		P		Pn	17 32 17.0	+0.4
WSF					eS		Sn	17 32 50.9	-0.6
TWK	**Hsinying**	**2.77**	**230**		P		Pn	17 32 18.0	+1.0
MATB	**Ma-tsu**	**2.79**	**293**	*eP*			Pn	17 32 18.3	+1.2
SNST	**Tainan City**	**2.80**	**229**		P		Pn	17 32 18.3	+1.1
CHN1	**Nanshi**	**2.80**	**228**		P		Pn	17 32 18.4	+1.1
WSL	**Shuilin Townsh**	**2.81**	**237**		P		Pn	17 32 17.9	+0.6
WSL					S		Sn	17 32 52.6	-0.3
SGST	**Jiashian**	**2.83**	**226**	*i*	P		Pn	17 32 18.4	+0.8
XPSS	**Dashiqiu**	**2.99**	**309**	*eP*			Pn	17 32 20.7	+1.2
SCLT	**Jiali**	**3.04**	**232**		P		Pn	17 32 21.2	+1.0
SSLD	**Sandimen**	**3.05**	**221**		P		Pn	17 32 22.1	+1.8
LYJJ	**Jianjiangzhen**	**3.11**	**299**	*eS*			Sn	17 32 58.9	-0.7
TSCK	**Chigu Township**	**3.13**	**233**	*eP*			Pn	17 32 22.3	+1.0
MASBT	**Mashibuluo**	**3.15**	**220**		P		Pn	17 32 23.3	+1.7
MASBT					eS		Sn	17 32 59.2	-1.3
EAST	**Anshuo**	**3.22**	**214**	*eP*			Pn	17 32 25.0	+2.5
LYUB	**Lan-yu**	**3.25**	**200**		P		Pn	17 32 24.4	+1.6
LYUB					eS		Sn	17 33 01.3	-1.4
PHUB	**P'eng-hu**	**3.33**	**243**	*eP*			Pn	17 32 23.7	-0.1
PHUB					eS		Sn	17 33 02.5	-1.9
SCZT	**Fangliau**	**3.35**	**217**		P		Pn	17 32 25.6	+1.6
WSSB	**Gushan**	**3.35**	**224**	*eS*			Sn	17 33 03.8	-1.2
WDGT	**Dungji**	**3.39**	**239**	*eS*			Sn	17 33 04.6	-1.1
MHZQ	**Yeshan**	**3.56**	**288**	*eP*			Pn	17 32 26.4	-0.2
KNMB	**Chin-men Tao**	**4.06**	**262**	*eP*			Pn	17 32 32.5	-0.5
AXDP	**Jialang**	**4.39**	**269**		P		Pn	17 32 37.8	+0.5
AXDP					eS		Sn	17 33 27.3	-1.4
DSXP	**Dongshan**	**5.08**	**256**		P		Pn	17 32 47.1	+0.7
DSXP					eS		Sn	17 33 42.5	-2.5

*IDC **08** 17:42:10.1±3.5, 8°.57S×111°.57E, h0km, mb3.2/3,*

mbtmp3.2/3, Error ellipse: s-maj=197.0km s-min=30.9km az=49.0

*DJA **08** 17:42:16.6±0.8, 9°S×4°×11°E±°, h25km±7km, M3.3/15, MLv3.3/15*

ISC 08 17:42:18.3±1.3, **8°.7S**±0°.1×**111°.48E**±0°.06, **h84**km, **n11**, σ1§**93**/15, **mb3.0**/3, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.61**	**331**	P	**Pn**	**17 42 31.0**	**-2.5**
PCJI				S	**Sn**	**17 42 40.3**	**-4.4**
SNJI	**Sawahan-Nganju**	**0.99**	**16**	P	**Pn**	**17 42 37.9**	**+0.2**
SNJI				S	**Sn**	**17 42 52.3**	**+0.2**
SJI	**Sawahan**	**1.03**	**16**	P	**Pn**	**17 42 37.7**	**-0.4**
SJI				S	**Sn**	**17 42 51.2**	**-1.7**
UGM	**Wanagama**	**1.25**	**311**	P	**Pn**	**17 42 40.1**	**-0.6**
UGM				S	**Sn**	**17 42 56.4**	**-1.1**
NGJI	**Ngawi**	**1.36**	**359**	P	**Pn**	**17 42 43.2**	**+1.2**
GMJI	**Gumukmas**	**2.00**	**77**	P	**Pn**	**17 42 48.9**	**-1.4**
BLJI	**Banyuglugur**	**2.32**	**65**	P	**Pn**	**17 42 52.7**	**-1.8**
KPJI	**Karang Pucung**	**2.88**	**299**	P	**Pn**	**17 43 01.9**	**-0.2**
WRA	**Warramunga Arr**	**24.76**	**119**	P	**P**	**17 47 34.1**	**+1.8**
	0.5nm,0.9s,baz=296,slow=9.7,SNR=2.6 0.5nm,0.9s						
ASAR	**Alice Springs**	**26.10**	**127**	P	**P**	**17 47 45.8**	**+1.3**
	0.4nm,0.9s,baz=306,slow=8.8,SNR=5.4 0.4nm,0.9s						
MKAR	**Makanchi Array**	**61.09**	**337**	P	**P**	**17 52 25.2**	**+1.6**
	0.1nm,0.5s,baz=154,slow=8.1,SNR=1.5 0.1nm,0.5s						

*IDC **08** 17:47:09.8±18.0, 17°.86N×81°.51W, h0km, mb3.3/3, mbtmp3.3/3, MS1.7/1, Error ellipse: s-maj=383.6km s-min=78.7km az=171.0*

*SSNC **08** 17:47:16.0±1.4, 18°.21N×81°.46W, h5km±25km, MW2.8, Presumed earthquake*

ISC 08 17:47:14.6±1.4, **18°.3N**±0°.1×**81°.43W**±0°.07, **h14**km, **n14**, σ1§**86**/15, **mb3.4**/3, **North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.88**	**43**	*eP*	**Pb**	**17 47 47.9**	**-0.7**
LCCY				*eS*	**Sb**	**17 48 12.3**	**+0.4**
CBCY	**The Bluff, Cay**	**2.14**	**47**	*eP*	**Pn**	**17 47 51.0**	**+1.0**
CBCY				*eS*	**Sn**	**17 48 17.2**	**+0.9**
MTDJ	**Mount Denham**	**3.70**	**90**	*eP*	**Pn**	**17 48 13.2**	**+1.8**
MGV	**Manicaragua**	**4.04**	**19**	*eP*	**Pn**	**17 48 17.8**	**+1.7**
CCCC	**Cccc**	**4.51**	**49**	*eP*	**Pb**	**17 48 30.0**	**-3.5**
LMGC	**Las Mercedes**	**4.54**	**66**	*eP*	**Pn**	**17 48 25.4**	**+2.5**
SOR	**Soroa**	**4.72**	**342**	*eP*	**Pn**	**17 48 27.6**	**+2.1**
RCC	**Rio Carpintero**	**5.68**	**72**	*eP*	**Pn**	**17 48 40.4**	**+1.8**
GTBY	**Guantanamo Bay**	**6.19**	**74**	*eP*	**Pn**	**17 48 47.1**	**+1.5**
QMBU	**Quimbuelo**	**6.54**	**72**	*eP*	**Pn**	**17 48 52.0**	**+1.6**
APG	**El Apazote**	**9.25**	**251**	LR	LR	17 53 37.7	
	comp=Z,4.5nm,18.0s,baz=144,slow=43						
TXAR	**Lajitas Array**	**23.09**	**303**	P	**P**	**17 52 18.9**	**-1.3**
	1.0nm,0.8s,baz=118,slow=10.0,SNR=10 1.0nm,0.8s						
YKA	**Yellowknife Ar**	**49.80**	**341**	P	**P**	**17 56 06.4**	**-0.3**
	0.2nm,0.7s,baz=137,slow=7.3,SNR=4.5 0.2nm,0.7s						
ILAR	**Eielson Array**	**63.20**	**334**	P	**P**	**17 57 42.3**	**+0.2**
	0.3nm,0.7s,baz=97,slow=4.2,SNR=4.2 0.3nm,0.7s						

*IDC **08** 17:47:28.9±1.1, 2°.94S×129°.98E, h0km, mb3.8/8, mbtmp3.8/11, ML3.6/3, Error ellipse: s-maj=31.2km s-min=19.2km az=89.0*

*DJA **08** 17:47:33.6±0.6, 3°S×3°×13°0E±°, h18km±5km, M4.0/19, mb4.3/2, MLv3.8/19*

ISC 08 17:47:32.5±0.6, **2°.97S**±0°.05×**129°.96E**±0°.05, **h25**km, **n22**, σ2§**03**/28, **mb3.7**/7, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.10**	**250**	P	**Pb**	**17 47 54.9**	**+2.1**
BNDI	**Bandanaira**	**1.55**	**182**	P	**Pb**	**17 48 02.3**	**+1.8**
KRAI	**Karang Ratu**	**1.60**	**257**	P	**Pb**	**17 48 02.1**	**+0.7**
KRAI				S	**Sb**	**17 48 21.9**	**+0.6**
AAI	**Ambon**	**1.90**	**248**	P	**Pn**	**17 48 05.9**	**+2.5**
FAKI	**Fak Fak**	**2.29**	**89**	P	**Pn**	**17 48 11.0**	**+2.3**
SIJI	**Sorong**	**2.46**	**32**	Pn	**Pn**	**17 48 11.4**	**+0.3**
	7.2nm,0.3s,baz=275,slow=12,SNR=57						
SIJI				Sn	**Sn**	**17 48 40.8**	**+0.5**
	9.4nm,0.3s,baz=233,slow=10,SNR=5.8 18nm,0.2s						
SIJI	**Sorong**	**2.46**	**32**	P	**Pn**	**17 48 10.9**	**-0.2**
SIJI				S	**Sn**	**17 48 39.5**	**-0.8**
SWI	**Sorong**	**2.46**	**32**	P	**Pn**	**17 48 11.3**	**+0.2**
SWI				S	**Sn**	**17 48 40.3**	**0.0**
NLAI	**Namlea**	**2.87**	**264**	P	**Pn**	**17 48 17.6**	**+0.9**
SANI	**Sanana**	**4.07**	**283**	P	**Pn**	**17 48 32.2**	**-1.0**
RKPI	**Ransiki, Papua**	**4.46**	**71**	P	**Pn**	**17 48 40.6**	**+2.1**
BAKI	**Biak**	**6.39**	**74**	P	**Pn**	**17 49 07.3**	**+2.1**
FITZ	**Fitzroy Crossi**	**15.62**	**195**	Pn	**Pn**	**17 51 11.5**	**+0.3**
	0.2nm,0.3s,baz=24,slow=15,SNR=5.4						
FITZ				Sn	**Sn**	**17 53 56.3**	**-7.4**
	0.1nm,0.3s,baz=272,slow=18,SNR=1.3 2.9nm,0.7s						
WRA	**Warramunga Arr**	**17.41**	**166**	P	**Pn**	**17 51 32.5**	**-1.4**
	0.3nm,0.3s,baz=349,slow=12,SNR=16						
WRA				S	Sn	17 54 30.4	-17
	0.3nm,0.5s,baz=338,slow=24,SNR=1.3 1.4nm,0.8s						
ASAR	**Alice Springs**	**20.93**	**170**	P	**P**	**17 52 13.9**	**+0.4**
	13nm,0.8s,baz=348,slow=9.6,SNR=90						
ASAR				S	**S**	**17 56 02.9**	**-2.9**
	1.1nm,1.0s,baz=348,slow=15,SNR=4.5 13nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.23**	**306**	P	**P**	**17 54 43.2**	**+0.8**
	0.3nm,0.4s,baz=127,slow=8.9,SNR=5.5 0.3nm,0.4s						
LZDM	**Lanzhou Array**	**45.85**	**330**	P	**P**	**17 55 51.3**	**-1.9**
	0.3nm,0.4s,baz=118,slow=8.5,SNR=2.2 0.3nm,0.4s						
SONM	**Songino Array**	**54.64**	**341**	P	**P**	**17 56 59.2**	**-0.1**
	0.3nm,0.3s,baz=155,slow=4.8,SNR=2.4 0.3nm,0.3s						
PETK	**Petropavlovsk-**	**60.53**	**19**	P	**P**	**17 57 40.0**	**-0.6**
	4.2nm,0.9s,baz=246,slow=9.0,SNR=1.9 4.2nm,0.9s						
MKAR	**Makanchi Array**	**64.87**	**326**	P	**P**	**17 58 10.3**	**+0.7**
	0.2nm,0.3s,baz=114,slow=8.4,SNR=8.6 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**69.08**	**328**	P	**P**	**17 58 36.7**	**+0.4**
	0.7nm,0.4s,baz=124,slow=5.8,SNR=6.1 0.7nm,0.4s						
BVAR	**Borovoye Array**	**74.66**	**327**	P	**P**	**17 59 10.5**	**+0.7**
	0.3nm,0.4s,baz=118,slow=12,SNR=2.4 0.3nm,0.4s						

*JMA **08** 17:59:31.8±0.2, 24°.5N±0°.4×121°.8E±0°.6, h76km±1km, MV2.7/14, TAIWAN REGION*

*TAP **08** 17:59:32.7, 24°.52N×121°.83E, h69km, ML3.5, B*

ISC 08 17:59:33.4±1.2, **24°.53N**±0°.02×**121°.86E**±0°.02, **h68**km±5km, **n114**, σ0§**73**/215, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESAO	**Su ao**	**0.04**	**346**	P	**Pn**	**17 59 43.4**	**0.0**
TWC	**Suao**	**0.08**	**355**	P	**Pn**	**17 59 43.5**	**0.0**
TWC				*i* S	**Sn**	**17 59 51.2**	**+0.5**
EWUT	**Wuta**	**0.11**	**220**	*i* P	**Pn**	**17 59 43.3**	**-0.2**
EWUT				*i* S	**Sn**	**17 59 51.5**	**+0.7**
ENA	**Nanau**	**0.15**	**225**	*i* P	**Pn**	**17 59 43.6**	**0.0**
ENA				S	**Sn**	**17 59 52.1**	**+1.1**
NDS	**Dongshan**	**0.16**	**309**	*i* P	**Pn**	**17 59 43.9**	**+0.2**
NDS				S	**Sn**	**17 59 51.5**	**+0.3**
EAHA	**Aohua**	**0.23**	**208**	*eP*	**Pn**	**17 59 43.7**	**-0.3**
EAHA				*eS*	**Sn**	**17 59 53.2**	**+1.5**
ILA	**Ilan**	**0.25**	**337**	*eP*	**Pn**	**17 59 43.2**	**-0.9**
ILA				*eS*	**Sn**	**17 59 52.3**	**+0.4**
TWE	**Neicheng**	**0.26**	**318**	*i* P	**Pn**	**17 59 44.4**	**+0.2**
TWE				*i* S	**Sn**	**17 59 52.6**	**+0.6**
ENTT	**Nioudou**	**0.28**	**292**	*i* P	**Pn**	**17 59 44.3**	**0.0**
ENTT				S	**Sn**	**17 59 52.8**	**+0.4**
LATG	**Datong**	**0.30**	**271**	*i* P	**Pn**	**17 59 44.3**	**-0.2**
LATG				S	**Sn**	**17 59 52.9**	**+0.2**
EGS		**0.32**	**12**	*eP*	**Pn**	**17 59 43.9**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.33**	**313**	*i* P	**Pn**	**17 59 44.7**	**0.0**
FUSB				S	**Sn**	**17 59 53.2**	**+0.2**
EOS2	**EOS2**	**0.36**	**108**	*eP*	**Pn**	**17 59 45.4**	**+0.7**
EOS2				*eS*	**Sn**	**17 59 55.1**	**+2.1**
NWLT	**Wulai**	**0.40**	**307**	*i* P	**Pn**	**17 59 44.9**	**-0.4**
NWLT				*i* S	**Sn**	**17 59 53.3**	**-0.6**
ETL	**Fush Village**	**0.43**	**210**	*i* P	**Pn**	**17 59 44.8**	**-0.7**
ETL				*eS*	**Sn**	**17 59 53.7**	**-0.6**
NACB	**Ninganchiao**	**0.43**	**214**	*i* P	**Pn**	**17 59 44.6**	**-0.8**
NACB				*i* S	**Sn**	**17 59 53.5**	**-0.8**
TIPB	**Shuangxi**	**0.44**	**356**	*i* P	**Pn**	**17 59 45.6**	**0.0**
TIPB				*i* S	**Sn**	**17 59 54.7**	**+0.2**
NNSB	**Datong**	**0.44**	**257**	*i* P	**Pn**	**17 59 45.5**	**-0.2**
NNSB				S	**Sn**	**17 59 54.4**	**-0.3**
NNSH	**Datong**	**0.44**	**257**	P	**Pn**	**17 59 45.5**	**-0.2**
NNSH				S	**Sn**	**17 59 54.5**	**-0.2**
NNS	**Nan Shan**	**0.45**	**258**	*i* P	**Pn**	**17 59 45.6**	**-0.2**
NNS				*i* S	**Sn**	**17 59 54.5**	**-0.3**
YHNB	**Yeheng**	**0.46**	**288**	*i* P	**Pn**	**17 59 45.4**	**-0.4**
YHNB				*i* S	**Sn**	**17 59 54.4**	**-0.5**
ETLH	**Xiulin Townshi**	**0.47**	**227**	*i* P	**Pn**	**17 59 45.3**	**-0.6**
ETLH				*i* S	**Sn**	**17 59 54.4**	**-0.7**
NSK	**Sanguang**	**0.48**	**288**	*i* P	**Pn**	**17 59 45.4**	**-0.6**
NSK				*i* S	**Sn**	**17 59 54.5**	**-0.6**
EOS3	**EOS3**	**0.49**	**120**	*eP*	**Pn**	**17 59 46.3**	**+0.5**
EOS3				*eS*	**Sn**	**17 59 56.4**	**+1.5**
TWB1	**Santiao Chiao**	**0.49**	**14**	P	**Pn**	**17 59 45.8**	**-0.2**
TWB1				S	**Sn**	**17 59 55.1**	**-0.1**
TWD	**Chiawan**	**0.51**	**208**	*i* P	**Pn**	**17 59 45.3**	**-0.9**
TWD				*i* S	**Sn**	**17 59 54.6**	**-0.9**
TWA	**Mucha**	**0.51**	**331**	*i* P	**Pn**	**17 59 46.0**	**-0.2**
TWA				*i* S	**Sn**	**17 59 55.5**	**-0.2**
NHDH	**Xindian Distri**	**0.53**	**325**	*i* P	**Pn**	**17 59 46.0**	**-0.3**
NHDH				*i* S	**Sn**	**17 59 55.6**	**-0.2**
NWF	**Wu-fen Shan**	**0.54**	**353**	P	**Pn**	**17 59 46.8**	**+0.2**
NWF				S	**Sn**	**17 59 56.5**	**+0.2**
WFSB	**Wu-fen Shan**	**0.54**	**353**	P	**Pn**	**17 59 46.6**	**0.0**
WFSB				S	**Sn**	**17 59 56.6**	**+0.5**
TATO	**Taipei**	**0.55**	**323**	*eP*	**Pn**	**17 59 46.2**	**-0.5**
TATO				*eS*	**Sn**	**17 59 56.2**	**-0.1**
SXI1	**Grass Mountain**	**0.56**	**2**	*eP*	**Pn**	**17 59 46.6**	**-0.2**
SXI1				*eS*	**Sn**	**17 59 57.2**	**+0.6**
NHY	**Taipei**	**0.57**	**333**	P	**Pn**	**17 59 46.8**	**0.0**
NHY				S	**Sn**	**17 59 56.9**	**+0.3**
EOS4	**EOS4**	**0.59**	**134**	*eP*	**Pn**	**17 59 46.4**	**-0.2**
EOS4				*eS*	**Sn**	**17 59 56.6**	**+0.3**
TAP	**Taipei**	**0.60**	**328**	P	**Pn**	**17 59 46.7**	**-0.4**
TAP				S	**Sn**	**17 59 57.1**	**-0.1**
BACT	**New Taipei Cit**	**0.60**	**321**	*eP*	**Pn**	**17 59 46.6**	**-0.5**
BACT				*eS*	**Sn**	**17 59 57.0**	**-0.2**
HWA	**Hwalien**	**0.60**	**203**	*eP*	**Pn**	**17 59 46.7**	**-0.4**
TNOU	**National Taiwa**	**0.62**	**353**	*eP*	**Pn**	**17 59 47.1**	**-0.2**
TNOU				*eS*	**Sn**	**17 59 57.6**	**0.0**
FUSS	**Fushou**	**0.63**	**243**	*i* P	**Pn**	**17 59 47.5**	**-0.1**
FUSS				S	**Sn**	**17 59 57.7**	**-0.4**
LXIB	**Xiulin Townshi**	**0.65**	**219**	*i* P	**Pn**	**17 59 46.8**	**-1.1**
LXIB				*eS*	**Sn**	**17 59 58.2**	**-0.1**
ETM	**Tongmen**	**0.65**	**211**	*eP*	**Pn**	**17 59 46.5**	**-1.2**
WHF	**Hehuan Shan**	**0.66**	**235**	*eP*	**Pn**	**17 59 47.8**	**-0.4**
WHF				*eS*	**Sn**	**17 59 58.9**	**-0.3**
KSHI	**Guanxi Townshi**	**0.67**	**292**	P	**Pn**	**17 59 47.7**	**-0.2**

ALS	**Alishan**	**1.40**	**224**	*eP*		**Pn**	**17 59 58.0**	**+0.7**
ALS				*eS*		**Sn**	**18 00 16.9**	**+1.7**
CHKH	**Chenggong**	**1.40**	**198**	*eS*		**Sn**	**18 00 14.1**	**-0.6**
CHN5	**Tsauling**	**1.42**	**229**	*eP*		**Pn**	**17 59 58.2**	**+0.8**
CHN5				*eS*		**Sn**	**18 00 16.9**	**+1.5**
FULB	**Fuli**	**1.42**	**201**	*eP*		**Pn**	**17 59 57.2**	**-0.2**
FULB				*eS*		**Sn**	**18 00 15.2**	**-0.1**
WGK	**Gukeng**	**1.45**	**235**	*eP*		**Pn**	**17 59 58.7**	**+1.0**
WGK				*eS*		**Sn**	**18 00 17.2**	**+1.2**
WDL	**Douliou City**	**1.45**	**236**	*eS*		**Sn**	**18 00 16.6**	**+0.6**
WDLH	**Douliu**	**1.47**	**235**	*eP*		**Pn**	**17 59 58.8**	**+0.8**
WDLH				*eS*		**Sn**	**18 00 17.4**	**+1.0**
WRL	**Guolierlin Hig**	**1.49**	**245**	*eP*		**Pn**	**17 59 57.6**	**-0.6**
WRL				*eS*		**Sn**	**18 00 16.1**	**-0.7**
EHD	**Haiduan**	**1.50**	**204**	*eP*		**Pn**	**17 59 59.0**	**+0.6**
EHD				*eS*		**Sn**	**18 00 17.0**	**-0.2**
ELDTW	**Lidau**	**1.54**	**210**	*eP*		**Pn**	**17 59 58.6**	**-0.4**
ELDTW				*eS*		**Sn**	**18 00 17.7**	**-0.6**
ECS	**Chishang**	**1.54**	**202**	*eP*		**Pn**	**17 59 59.1**	**+0.1**
ECS				*eS*		**Sn**	**18 00 18.6**	**+0.4**
WCKO	**Fanlu**	**1.58**	**227**	*eP*		**Pn**	**17 59 60.0**	**+0.6**
WCKO				*eS*		**Sn**	**18 00 20.6**	**+1.5**
CHN4	**Tsaushan**	**1.65**	**225**	*eP*		**Pn**	**18 00 01.0**	**+0.7**
CHN4				*eS*		**Sn**	**18 00 22.8**	**+2.1**
IRIF	**Iriomote-Funau**	**1.72**	**96**	*eP*		**Pn**	**18 00 00.6**	**-0.7**
IRIF				*eS*		**Sn**	**18 00 21.5**	**-0.9**
HATJ	**Hateruma jima**	**1.84**	**104**	*eS*		**Sn**	**18 00 25.5**	**+0.3**
JKRS	**Kuro-shima**	**1.98**	**98**	*eP*		**Pn**	**18 00 04.8**	**-0.1**
JKRS				*eS*		**Sn**	**18 00 28.6**	**-0.1**
JIJ	**Ishigaki jima**	**2.09**	**94**	*eP*		**Pn**	**18 00 05.8**	**-0.4**
JISG	**Ishigakijimahi**	**2.24**	**88**	*eP*		**Pn**	**18 00 07.7**	**-0.5**
JISG				*eS*		**Sn**	**18 00 34.7**	**-0.1**
JTJ	**Tarama**	**2.59**	**87**	*eP*		**Pn**	**18 00 13.4**	**+0.3**
JTJ				*eS*		**Sn**	**18 00 43.5**	**0.0**

TAP 08 17:59:55.7, 23°22N × 120°77E, h12km, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYH	**Taoyuan**	**0.05**	**169**	*i* P	Pg	17 59 58.4	+0.4
STYH				*i* S	Sg	18 00 00.1	+0.4
STYT	**Tauyuan**	**0.06**	**187**	*i* P	Pg	17 59 58.6	+0.4
STYT				*i* S	Sg	18 00 00.4	+0.5
WTP	**Ta-pu**	**0.14**	**279**	*i* P	Pg	17 59 59.6	+0.4
WTP				S	Sg	18 00 02.5	+0.8
TPUB	**Ta-pu**	**0.15**	**302**	*i* P	Pg	17 59 59.6	+0.4
TPUB				*i* S	Sg	18 00 02.5	+0.8
SGST	**Jiashian**	**0.22**	**230**	*i* P	Pg	18 00 00.3	-0.1
SGST				S	Sg	18 00 04.3	+0.7
CHN1	**Nanshi**	**0.22**	**260**	*i* P	Pb	18 00 01.4	-0.4
CHN1				*i* S	Sg	18 00 05.5	+1.8
ELDTW	**Lidau**	**0.23**	**98**	*eP*	Pb	18 00 01.4	-0.6
ELDTW				*eS*	Sg	18 00 05.6	+1.5
TWK	**Hsinying**	**0.26**	**280**	P	Pb	18 00 02.0	-0.3
TWK				*eS*	Sb	18 00 06.3	-0.6
ALS	**Alishan**	**0.29**	**7**	*eP*	Pg	18 00 02.4	+0.6
ALS				*eS*	Sb	18 00 07.1	-0.8

KRNET ***08*** *18:16:07.9±0.1, 40°.40N × 77°.58E, h19km, mb4.4*
IDC ***08*** *18:16:08.0±0.9, 40°.32N × 77°.59E, h0km, mb3.6/13, mbtmp3.7/19, ML3.3/6, MS3.4/4, Error ellipse: s-maj=15.6km s-min=12.8km az=44.0*
SOME ***08*** *18:16:09.1, 40°.43N × 77°.57E, h10km, MS3.3*
NEIC ***08*** *18:16:10.2±2.5, 40°.41N±0°.06 × 77°.68E±0°.05, h11km±5km, mb4.4/17, Error ellipse: s-maj=8.3km s-min=5.2km az=178.0*
MOS ***08*** *18:16:11.3±1.3, 40°.39N × 77°.68E, h35km, mb4.7/5, Error ellipse: s-maj=7.9km s-min=5.1km az=97.5*
NNC ***08*** *18:16:12.0±0.7, 40°.55N × 77°.58E, h0km, mb4.6, mpv4.3, Error ellipse: s-maj=4.7km s-min=3.5km az=163.0*

ISC 08 18:16:09.2±0.4, 40°.34N±0°.03 × 77°.65E±0°.03, h10km, n184, σ1§81/229, mb4.0/25, MS3.5/3, 45C-26D,
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.39**	**5**		**Pn**	**18 16 33.3**	**-1.8**
TARG					**Sb**	**18 16 52.6**	**-1.0**
TARG	**Taragay, Kyrgy**	**1.39**	**5**	P	**Pn**	**18 16 33.3**	**-1.8**
TARG						18 16 52.6	
WUS	**Wushi**	**1.47**	**54**		**Pn**	**18 16 35.1**	**-0.8**
WUS				Sn	**Sn**	**18 16 53.5**	**-1.8**
NRN	**Naryn**	**1.66**	**312**		**Pn**	**18 16 37.7**	**-1.0**
NRN				Sn	**Sn**	**18 16 59.7**	**-0.5**
NRN	**Naryn**	**1.66**	**312**	PN	**Pn**	**18 16 37.7**	**-1.0**
NRN						18 16 59.7	
NRN	**Naryn**	**1.66**	**312**	⇓*i*P	**Pn**	**18 16 37.8**	**-1.0**
NRN				⇓*e*S	**Sn**	**18 16 59.8**	**-0.5**
JNKS	**Jany-Kuch**	**1.69**	**296**	⇓*i*P	**Pn**	**18 16 38.1**	**-1.0**
JNKS				⇓*e*S	**Sn**	**18 17 00.0**	**-1.0**
KDJ	**Kajisay**	**1.82**	**349**		**Pb**	**18 16 41.0**	**-1.8**
KDJ				Sn	**Sn**	**18 17 01.9**	**-2.2**
KDJ	**Kajisay**	**1.82**	**349**	PN	**Pb**	**18 16 41.0**	**-1.8**
KDJ						18 17 01.9	
KDJ	**Kajisay**	**1.82**	**349**	⇓*e*P	**Pn**	**18 16 40.6**	**-0.2**
KDJ				⇓*e*S	**Sb**	**18 17 04.6**	**-1.2**
KSH2	**Kashi**	**2.00**	**234**	Pn	**Pb**	**18 16 45.2**	**-0.6**
KSH2				Sn	**Sg**	**18 17 14.0**	**+0.5**
KSH2	comp=N,1μm,0.9s			smax	smax		
KSH2	comp=E,2μm,0.8s			smax	smax		
ULHL	**Ulahol**	**2.18**	**331**	P	**Pb**	**18 16 47.5**	**-1.4**
	SNR=212						
ULHL	**Ulahol**	**2.18**	**331**	⇓*e*P	**Pb**	**18 16 46.5**	**-2.4**
ULHL				⇓*e*S	**Sb**	**18 17 14.5**	**-1.5**
PRZ	**Przheval'sk**	**2.21**	**15**		**Pb**	**18 16 48.5**	**-1.0**
PRZ	**Przheval'sk**	**2.21**	**15**	PN	**Pb**	**18 16 48.5**	**-1.0**
PRZ	**Przheval'sk**	**2.21**	**15**	⇑*e*P	**Pb**	**18 16 47.6**	**-1.9**
PRZ				⇑*e*S	**Sb**	**18 17 16.7**	**-0.4**
BOOM	**Boomskoye usch**	**2.50**	**330**		**Pb**	**18 16 52.6**	**-1.8**
BOOM	**Boomskoye usch**	**2.50**	**330**	PN	**Pb**	**18 16 52.6**	**-1.8**
BOOM	**Boomskoye usch**	**2.50**	**330**	⇑*i*P	**Pn**	**18 16 50.9**	**+0.7**
BOOM				⇑*e*S	**Sn**	**18 17 22.2**	**+1.4**
TNSS	**Tian-Shan**	**2.75**	**349**	Pg	**Pb**	**18 16 59.1**	**+0.4**
TNSS	comp=E,144nm,0.4s			Lg	Lg	18 17 34.6	
	comp=E,503nm,1.1s						
TNSS	**Tian-Shan**	**2.75**	**349**	*eP*	**Pb**	**18 16 59.1**	**+0.4**
TNSS	comp=E,144nm,0.4s			*eS*	**Sg**	**18 17 34.6**	**-2.9**
SATY	**Saty**	**2.78**	**12**	Pg	**Pb**	**18 16 58.9**	**-0.1**
SATY	comp=E,214nm,1.0s			Lg	Lg	18 17 34.5	
	comp=E,1μm,1.0s						
MDOK	**Medeo**	**2.86**	**351**	Pg	**Pb**	**18 17 00.8**	**+0.4**
MDOK	comp=E,628nm,0.6s			Lg	Lg	18 17 37.2	
	comp=E,4μm,0.7s						
KOTS	**Kotyrbulak**	**2.92**	**352**	Pg	**Pb**	**18 17 02.2**	**+0.7**
KOTS	comp=E,264nm,0.6s			Lg	Lg	18 17 39.9	
	comp=E,2μm,0.7s						
KOTS	**Kotyrbulak**	**2.92**	**352**	*eP*	**Pb**	**18 17 02.2**	**+0.7**
KOTS	comp=E,264nm,0.6s			*eS*	**Sg**	**18 17 39.9**	**-3.1**
	comp=E,2μm,0.7s						
KNDC	**Almaty**	**2.92**	**350**	⇑Pg	**Pb**	**18 17 01.6**	**+0.1**
KNDC	comp=E,367nm,0.6s			⇓Lg	Lg	18 17 39.6	
	comp=E,3μm,0.5s						
MTBS	**Maitube**	**2.93**	**342**	Pg	**Pb**	**18 17 01.7**	**+0.1**
MTBS	comp=E,237nm,0.4s			Lg	Lg	18 17 38.9	
	comp=E,557nm,0.6s						
MTBS	**Maitube**	**2.93**	**342**	*eP*	**Pb**	**18 17 01.7**	**+0.1**
MTBS	comp=E,237nm,0.4s			*eS*	**Sb**	**18 17 38.9**	**+1.3**
	comp=E,557nm,0.6s						
ARLS	**Aral**	**2.94**	**302**	⇑*e*P	**Pn**	**18 16 56.9**	**+0.8**
ARLS				⇑*e*S	**Sn**	**18 17 32.6**	**+1.1**
SALK	**Salom-Alik**	**2.96**	**282**	⇑*e*P	**Pn**	**18 16 57.4**	**+0.9**
SALK				⇑*e*S	**Sn**	**18 17 33.8**	**+1.6**
KST	**Kastek**	**2.98**	**336**	Pg	**Pb**	**18 17 02.3**	**-0.2**
KST	comp=E,70nm,0.8s			Lg	Lg	18 17 39.8	
	comp=E,756nm,0.8s						
KST	**Kastek**	**2.98**	**336**	*eP*	**Pb**	**18 17 02.3**	**-0.2**
KST	comp=E,756nm,0.8s			*eS*	**Sb**	**18 17 39.8**	**+0.8**
UZB	**Uzynbulak**	**2.99**	**20**	Pg	**Pb**	**18 17 03.1**	**+0.5**
UZB	comp=E,102nm,0.7s			Lg	Lg	18 17 41.5	
	comp=E,866nm,0.8s						
UZB	**Uzynbulak**	**2.99**	**20**	*eP*	**Pb**	**18 17 03.1**	**+0.5**
UZB	comp=E,102nm,0.7s			*eS*	**Sg**	**18 17 41.5**	**-3.7**
	comp=E,866nm,0.8s						
TKM2	**Tokmak 2**	**3.00**	**330**	P	**Pb**	**18 17 02.8**	**-0.1**
	SNR=56						
TKM2	**Tokmak 2**	**3.00**	**330**	⇑*i*P	**Pn**	**18 16 57.7**	**+0.6**
TKM2				⇑*e*S	**Sn**	**18 17 34.3**	**+1.1**
UCH	**Uchtor**	**3.02**	**310**	P	**Pb**	**18 17 00.0**	**-3.4**
	SNR=96						
UCH	**Uchtor**	**3.02**	**310**	⇑*e*P	**Pn**	**18 16 58.3**	**+0.8**
UCH				⇑*i*S	**Sn**	**18 17 35.0**	**+1.0**
KBK	**Karagaybulak**	**3.08**	**320**	P	**Pb**	**18 17 01.3**	**-2.9**
	SNR=122						
KBK	**Karagaybulak**	**3.08**	**320**	⇓*i*P	**Pn**	**18 16 58.7**	**+0.6**
KBK				⇓*i*S	**Sn**	**18 17 36.0**	**+1.0**
SHLS	**Shalkode**	**3.13**	**25**	Pg	**Pg**	**18 17 08.9**	**-0.2**
SHLS	comp=E,328nm,0.5s			Lg	Lg	18 17 51.5	
	comp=E,554nm,0.7s						
SHLS	**Shalkode**	**3.13**	**25**	*eP*	**Pg**	**18 17 08.9**	**-0.2**
SHLS	comp=E,328nm,0.5s			*eS*	**Sg**	**18 17 51.5**	**+1.9**
	comp=E,554nm,0.7s						
KURS	**Kuram**	**3.17**	**7**	Pg	**Pb**	**18 17 05.8**	**+0.1**
	comp=E,106nm,0.5s						
KURS				Lg	Lg	18 17 46.2	
	comp=E,197nm,0.7s						
SFK	**Sufi-Kurgan**	**3.19**	**265**	⇑*e*P	**Pn**	**18 17 00.9**	**+1.2**
SFK				⇑*e*S	**Sn**	**18 17 39.7**	**+1.8**
KPKS	**Kokpek**	**3.22**	**14**	Pg	**Pb**	**18 17 06.9**	**+0.4**
	comp=E,0.3nm,0.3s						
KPKS				Lg	Lg	18 17 47.7	
	comp=E,772nm,0.4s						
KPKS	**Kokpek**	**3.22**	**14**	*eP*	**Pb**	**18 17 06.9**	**+0.4**
	comp=E,0.3nm,0.3s						
KPKS				*eS*	**Sb**	**18 17 47.7**	**+1.9**
	comp=E,772nm,0.4s						
DGS	**Degeres**	**3.22**	**335**	Pg	**Pb**	**18 17 06.5**	**-0.1**
	comp=E,179nm,0.7s						
DGS				Lg	Lg	18 17 47.2	
	comp=E,618nm,0.5s						
DGS	**Degeres**	**3.22**	**335**	*eP*	**Pb**	**18 17 06.5**	**-0.1**
	comp=E,179nm,0.7s						
DGS				*eS*	**Sb**	**18 17 47.2**	**+1.3**
	comp=E,618nm,0.5s						
PDGK	**Podgornoye**	**3.29**	**24**	⇑Pn	**Pn**	**18 17 03.3**	**+2.4**
	comp=E,93nm,0.5s						
PDGK				⇑Lg	Lg	18 17 51.3	
	comp=E,1μm,0.7s						
AAK	**Ala-Archa**	**3.30**	**315**	Pn	**Pb**	**18 17 04.1**	**-3.8**
	comp=E,7.0nm,0.3s,baz=138,slow=7.9,SNR=74						
AAK				Lg	Lg	18 17 51.1	
	comp=E,20nm,0.3s,baz=276,slow=16,SNR=24						
AAK				LR	LR	18 17 56.8	
	comp=E,33nm,21.1s,baz=181,slow=33						
	comp=E,50nm,0.5s						
AAK	**Ala-Archa**	**3.30**	**315**	P	**Pb**	**18 17 04.1**	**-3.8**
	SNR=82						
AAK	**Ala-Archa**	**3.30**	**315**		**Pb**	**18 17 03.8**	**-4.2**
AAK	**Ala-Archa**	**3.30**	**315**	⇓Pn	**Pb**	**18 17 03.7**	**-4.2**
	comp=E,162nm,0.8s						
AAK				⇑Lg	Lg	18 17 50.6	
	comp=E,557nm,1.0s						
AAK	**Ala-Archa**	**3.30**	**315**	*c i*PN	**Pb**	**18 17 03.7**	**-4.2**
AAK	**Ala-Archa**	**3.30**	**315**	⇓*e*P	**Pn**	**18 17 01.9**	**+0.8**
AAK				⇓*i*S	**Sn**	**18 17 41.2**	**+0.8**
FRU1	**Bishkek**	**3.35**	**318**		**Pn**	**18 17 02.0**	**+0.3**
FRU1	**Bishkek**	**3.35**	**318**	PN	**Pn**	**18 17 02.0**	**+0.3**
FRU1	**Bishkek**	**3.35**	**318**	⇑*e*P	**Pn**	**18 17 02.9**	**+1.2**
FRU1				⇑*e*S	**Sn**	**18 17 43.0**	**+1.5**
CHMS	**Chumysh**	**3.43**	**322**	P	**Pb**	**18 17 05.7**	**-4.4**
	SNR=37						
CHMS	**Chumysh**	**3.43**	**322**	⇑*e*P	**Pn**	**18 17 03.4**	**+0.6**
CHMS				⇑*e*S	**Sn**	**18 17 44.2**	**+0.7**
KTBS	**Karatobe**	**3.44**	**348**	Pg	**Pb**	**18 17 11.1**	**+0.8**
KTBS				Lg	Lg	18 17 54.8	
KTBS	**Karatobe**	**3.44**	**348**	*eP*	**Pb**	**18 17 11.1**	**+0.8**
KTBS				*eS*	**Sb**	**18 17 54.8**	**+2.5**
KRBS	**Karabastau**	**3.66**	**337**	Pg	**Pb**	**18 17 14.2**	**+0.1**
	comp=E,64nm,0.5s						
KRBS				Lg	Lg	18 18 00.4	
	comp=E,69nm,0.8s						
KRBS	**Karabastau**	**3.66**	**337**	*eP*	**Pb**	**18 17 14.2**	**+0.1**
	comp=E,64nm,0.5s						
KRBS				*eS*	**Sb**	**18 18 00.4**	**+1.9**
	comp=E,69nm,0.8s						
ARSB	**Arslanbob**	**3.67**	**287**		**Pn**	**18 17 08.2**	**+2.0**
ARSB	**Arslanbob**	**3.67**	**287**	PN	**Pn**	**18 17 08.2**	**+2.0**
ARSB	**Arslanbob**	**3.67**	**287**	⇑*i*P	**Pn**	**18 17 07.1**	**+0.9**
ARSB				⇑*i*S	**Sn**	**18 17 50.4**	**+0.7**
KUU	**Kurty**	**3.68**	**345**	Pg	**Pb**	**18 17 14.2**	**-0.2**
	comp=E,15nm,0.2s						
KUU				Lg	Lg	18 18 00.3	
	comp=E,351nm,0.5s						
KUU	**Kurty**	**3.68**	**345**	*eP*	**Pb**	**18 17 14.2**	**-0.2**
	comp=E,15nm,0.2s						
KUU				*eS*	**Sb**	**18 18 00.3**	**+1.3**
	comp=E,351nm,0.5s						
OHH	**Osh**	**3.71**	**274**	⇑*e*P	**Pn**	**18 17 08.0**	**+1.3**
OHH				⇑*e*S	**Sn**	**18 17 51.7**	**+1.1**
EKS2	**Erkin-Say**	**3.72**	**310**	P	Pb	18 17 10.2	-4.9
	SNR=45						
EKS2	**Erkin-Say**	**3.72**	**310**	⇑*e*P	**Pn**	**18 17 07.7**	**+0.9**
EKS2				⇑*i*S	**Sn**	**18 17 51.4**	**+0.7**
USP	**Ospenovka**	**3.75**	**322**	P	**Pn**	**18 17 10.3**	**+3.1**
	SNR=12						
USP	**Ospenovka**	**3.75**	**322**	⇑*e*P	**Pn**	**18 17 08.0**	**+0.8**
USP				⇑*i*S	**Sn**	**18 17 51.9**	**+0.4**
SGDS	**Sogindy**	**3.84**	**325**	Pg	**Pb**	**18 17 17.4**	**+0.3**
	comp=E,195nm,0.7s						
SGDS				Lg	Lg	18 18 05.8	
	comp=E,210nm,0.7s						
ARXS	**Arharly**	**3.87**	**2**	Pg	**Pb**	**18 17 18.4**	**+0.8**
	comp=E,41nm,0.7s						
ARXS				Lg	Lg	18 18 07.9	
	comp=E,754nm,0.6s						
ARXS	**Arharly**	**3.87**	**2**	*eP*	**Pb**	**18 17 18.4**	**+0.8**
	comp=E,41nm,0.7s						
ARXS				*eS*	**Sb**	**18 18 07.9**	**+3.3**
	comp=E,754nm,0.6s						
MRKS	**Merke**	**4.10**	**307**	Pg	**Pb**	**18 17 22.6**	**+1.1**
	comp=E,56nm,0.5s						
MRKS				Lg	Lg	18 18 14.9	
	comp=E,217nm,0.8s						
MRKS	**Merke**	**4.10**	**307**	*eP*	**Pb**	**18 17 22.6**	**+1.1**
	comp=E,56nm,0.5s						
MRKS				*eS*	**Sb**	**18 18 14.9**	**+3.9**
	comp=E,217nm,0.8s						
KNOS	**Konyrlen**	**4.17**	**15**	Pg	**Pb**	**18 17 23.8**	**+1.0**
	comp=E,93nm,0.8s						
KNOS				Lg	Lg	18 18 17.0	
	comp=E,210nm,0.6s						
DJR	**Jarkent**	**4.29**	**21**	Pg	**Pb**	**18 17 26.8**	**+1.9**
	comp=E,41nm,0.6s						
DJR				Lg	Lg	18 18 22.1	
	comp=E,102nm,0.4s						
DJR	**Jarkent**	**4.29**	**21**	*eP*	**Pb**	**18 17 26.8**	**+1.9**
	comp=E,41nm,0.6s						
DJR				*eS*	**Sg**	**18 18 22.1**	**-5.0**
	comp=E,102nm,0.4s						
MNAS	**Manas**	**4.42**	**301**	⇓*e*P	**Pn**	**18 17 17.6**	**+1.1**
MNAS				⇓*e*S	**Sn**	**18 18 08.4**	**+0.3**
ARK	**Arkit**	**4.54**	**291**	⇓*e*P	**Pn**	**18 17 19.1**	**+1.0**
ARK				⇓*e*S	**Sn**	**18 18 11.4**	**+0.5**
DRK	**Karamyk**	**4.58**	**261**		**Pn**	**18 17 21.1**	**+2.3**
DRK	**Karamyk**	**4.58**	**261**	PN	**Pn**	**18 17 21.1**	**+2.3**
BTK	**Batken**	**5.24**	**269**	Pn	**Pn**	**18 17 28.9**	**+1.2**
BTK	**Batken**	**5.24**	**269**	PN	**Pn**	**18 17 28.9**	**+1.2**
BTLS	**Baital**	**5.39**	**332**	*eP*	**Pb**	**18 17 43.5**	**0.0**
	comp=E,65nm,0.7s						
BTLS				*eS*	**Sb**	**18 18 51.2**	**+2.9**
	comp=E,82nm,1.0s						
KK31	**Karatay Array**	**6.01**	**300**		**Pn**	**18 17 39.3**	**+1.1**
KK31	**Karatay Array**	**6.01**	**300**	Pn	**Pn**	**18 17 40.1**	**+1.9**
	comp=E,1.3nm,0.5s,baz=114,slow=12,SNR=21						
KK31				⇓Pg	**Pg**	**18 18 00.2**	**-4.1**
	comp=E,8.3nm,0.5s,baz=122,slow=16,SNR=15						
KK31				⇑Lg	Lg	18 19 18.7	
	comp=E,27nm,0.6s,baz=111,slow=26,SNR=5.3						
KK31	**Karatay Array**	**6.01**	**300**	PN	**Pn**	**18 17 39.3**	**+1.1**
KKAR	**Karatay Array**	**6.01**	**300**		**Pn**	**18 17 39.6**	**+1.4**
KKAR	**Karatay Array**	**6.01**	**300**	PN	**Pn**	**18 17 39.6**	**+1.4**
ALCI	**Alchi Leh**	**6.13**	**184**	*eP*	**Pn**	**18 17 42.5**	**+2.3**
ALCI				*eS*	**Sn**	**18 18 49.5**	**-1.0**
ALCI	comp=N,435nm,1.2s			IAML		18 19 29.3	
ALCI	comp=E,548nm,0.6s			IAML		18 19 34.1	
SRNI	**Srinagar**	**6.67**	**201**	*eP*	**Pn**	**18 17 49.7**	**+2.2**
SRNI	comp=N,17nm,1.4s			IAML		18 17 52.6	
SRNI	comp=E,433nm,0.6s			IAML		18 17 55.5	
SRNI	comp=N,561nm,0.3s			*eS*	**Sn**	**18 19 01.2**	**-2.4**
MAKZ	**Makanchi**	**7.19**	**24**		**Pn**	**18 17 53.1**	**-1.3**
MAKZ	**Makanchi**	**7.19**	**24**	⇓Pn	**Pn**	**18 17 55.8**	**+1.4**
MAKZ	comp=N,17nm,1.4s			⇑Lg	Lg	18 19 56.4	
MAKZ	**Makanchi**	**7.19**	**24**	PN	**Pn**	**18 17 53.1**	**-1.3**
MK31	**Makanchi Array**	**7.28**	**26**	Pn	**Pn**	**18 17 56.8**	**+1.1**
MK31	**Makanchi Array**	**7.28**	**26**	Pn	**Pn**	**18 17 56.6**	**+1.0**
MK31	comp=N,1.6nm,0.4s,baz=202,slow=13,SNR=63			⇑Sn	**Sn**	**18 19 19.5**	**+1.2**
MK31	comp=N,16nm,0.8s			⇑Lg	Lg	18 19 57.1	
MK31	comp=N,25nm,0.8s,baz=203,slow=29,SNR=3.6 **Makanchi Array**	**7.28**	**26**	*ce*P	**Pn**	**18 17 56.7**	**+1.1**
MKAR	**Makanchi Array**	**7.28**	**26**	Pn	**Pn**	**18 17 57.2**	**+1.6**
MKAR	comp=N,1.2nm,0.3s,baz=200,slow=15,SNR=60			Sn	**Sn**	**18 19 18.4**	**+0.1**
MKAR	comp=N,1.1nm,0.3s,baz=196,slow=20,SNR=5.3			Lg	Lg	18 20 00.5	
	comp=N,2.0nm,0.3s,baz=212,slow=27,SNR=5.0						
	comp=N,2.0nm,0.5s						
MKAR	**Makanchi Array**	**7.28**	**26**		**Pn**	**18 17 55.0**	**-0.6**
NIL	**Nilore**	**7.54**	**209**		**Pn**	**18 18 02.1**	**+2.8**
NIL	**Nilore**	**7.54**	**209**	P	**Pn**	**18 18 02.1**	**+2.8**
TSSA	**Tissa**	**7.58**	**190**	*eP*	**Pn**	**18 18 02.7**	**+2.7**
TSSA				*eS*	**Sn**	**18 19 24.7**	**-1.4**
TSSA	comp=N,152nm,0.6s			IAML		18 19 34.6	
TSSA	comp=E,170nm,0.6s			IAML		18 19 37.5	
JMU	**Jammu**	**7.88**	**198**	*eP*	**Pn**	**18 18 06.7**	**+2.9**
JMU				*eS*	**Sn**	**18 19 30.6**	**-2.4**
JMU	comp=E,262nm,0.4s			IAML		18 19 52.0	
JMU	comp=N,360nm,1.2s			IAML		18 19 52.1	
DHRM	**DHARAMSHALA**	**8.15**	**188**	*eP*	**Pn**	**18 18 10.4**	**+2.6**
DHRM				*eS*	**Sn**	**18 19 37.5**	**-2.5**
DHRM	comp=E,118nm,0.5s			IAML		18 19 50.9	
DHRM	comp=N,130nm,0.7s			IAML		18 19 51.2	
WMQ	**Urumqi**	**8.24**	**62**	P	Pn	18 18 13.0	+4.1
WMQ	comp=N,30nm,1.3s			smax	smax		
WMQ	comp=E,24nm,1.3s			smax	smax		
KBL	**Kabul**	**8.96**	**232**	Pn	**Pn**	**18 18 19.5**	**+0.6**
KBL	**Kabul**	**8.96**	**232**	P	**Pn**	**18 18 19.5**	**+0.6**
SMLA	**Simla**	**9.20**	**183**	*eP*	**Pn**	**18 18 24.2**	**+2.3**
SMLA				*eS*	**Sn**	**18 19 59.6**	**-5.9**
SMLA	comp=E,115nm,0.8s			IAML		18 20 09.7	
SMLA	comp=N,117nm,1.1s			IAML		18 20 13.1	
JOSI	**Joshimath**	**9.89**	**170**	*eP*	**Pn**	**18 18 33.6**	**+2.0**
JOSI				*eS*	**Sn**	**18 20 18.3**	**-4.4**
JOSI	comp=E,86nm,1.1s			IAML		18 20 29.1	
JOSI	comp=N,99nm,0.4s			IAML		18 20 35.6	
KURBB	**Kurchatov Arra**	**10.30**	**3**	Pn	**Pn**	**18 18 37.3**	**+0.3**
KURBB	comp=N,0.1nm,0.3s,baz=194,slow=12,SNR=12			Lg	Lg	18 21 32.2	
	comp=N,0.2nm,0.3s,baz=198,slow=29,SNR=9.5						
	comp=N,1.3nm,0.7s						
KURBB	**Kurchatov Arra**	**10.30**	**3**	⇑Pn	**Pn**	**18 18 37.4**	**+0.5**
KURBB	comp=N,3.7nm,0.6s			⇓Lg	Lg	18 21 31.0	
	comp=N,119nm,1.1s						
KURK	**Kurchatov**	**10.40**	**3**		**Pn**	**18 18 37.6**	**-0.7**
KURK	**Kurchatov**	**10.40**	**3**	⇓Pn	**Pn**	**18 18 38.1**	**-0.2**
KURK	comp=N,1.3nm,0.8s			⇓Lg	Lg	18 21 33.4	
	comp=N,40nm,1.2s						
KURK	**Kurchatov**	**10.40**	**3**	⇓*e*P	**Pn**	**18 18 37.7**	**-0.6**
KURK	comp=Z,3.0nm,0.6s			pmax	pmax		
DGZ	**Jazzator, Alta**	**11.63**	**33**	⇑*e*P	**Pn**	**18 18 55.2**	**-0.2**
DGZ	comp=Z,2.0nm,0.5s			pmax	pmax		
BVAR	**Borovoye Array**	**13.62**	**341**	Pn	**Pn**	**18 19 21.2**	**-1.1**
BVAR	baz=157,slow=12,SNR=3.2 comp=Z,0.1nm,0.3s,baz=149,slow=29,SNR=8.1			Lg	Lg	18 23 14.8	
	comp=Z,1.2nm,0.7s						
BORK	**Borovoye**	**13.66**	**341**	Pn	**Pn**	**18 19 21.6**	**-1.2**
BORK	**Borovoye

PZH	**PanZhiHua**	**24.29**	**117**	P		**P**		**18 21 29.3 +2.3**
XAN	**Xi'an**	**25.61**	**94**	⇓P		**P**		**18 21 36.1 -2.7**
XAN				pmax		pmax		
	comp=Z,4.0nm,2.8s							
HHC	**Hu-ho-hao-te**	**25.67**	**78**	*eP*		**P**		**18 21 42.1 +2.8**
HHC				pmax		pmax		
	comp=Z,3.0nm,0.6s							
KIV	**Kislovodsk**	**26.05**	**290**	*eP*		**P**		**18 21 42.8 +0.1**
KIV				pmax		pmax		
	comp=Z,5.0nm,1.1s							
VSLR	**Vesyoloye**	**28.01**	**289**	⇑*eP*		**P**		**18 22 01.3 +1.0**
VSLR				pmax		pmax		
	comp=Z,24nm,1.0s							
SOC	**Sochi**	**28.23**	**289**	*eP*		**P**		**18 22 04.5 +2.3**
SOC				*e*				18 22 51.4
SOC				*eS*		**S**		**18 26 50.4 +2.5**
SOC				*e*SS		**SnSn**		**18 28 05.9 +1.9**
SOC				pmax		pmax		
	comp=Z,26nm,1.0s							
SOC				MLR		MLR		
	comp=Z,105nm,16.0s							
CMAR	**Chiang Mai Arr**	**28.49**	**134**	P		**P**		**18 22 05.4 +0.7**
	comp=Z,0.4nm,0.3s,baz=332,slow=9.9,SNR=4.3							
	comp=Z,0.4nm,0.3s							
HNS	**HongShan**	**28.87**	**84**	⇑P		P		18 22 12.0 +4.1
HNS				pmax		pmax		
	comp=Z,5.0nm,1.7s							
NRIK	**Noril'sk**	**29.54**	**7**	⇑*eP*		**P**		**18 22 14.1 +0.6**
NRIK				pmax		pmax		
	comp=Z,5.0nm,1.6s							
HIA	**Hailar**	**30.83**	**59**	⇑*eP*		**P**		**18 22 22.9 -2.3**
HIA				pmax		pmax		
	comp=Z,10.0nm,1.9s							
PALK	**Pallekele**	**33.04**	**174**	LR		LR		18 37 05.0
	comp=Z,88nm,18.0s,baz=350,slow=38							
NJ2	**Nanjing**	**34.02**	**91**	*eP*		**P**		**18 22 54.2 +0.9**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
HEH	**HeiHe**	**35.77**	**57**	*eP*		P		18 23 12.9 +4.7
HEH				pmax		pmax		
	comp=Z,5.0nm,0.9s							
FIA1	**FINESS Array S**	**37.46**	**322**	P		**P**		**18 23 22.1 -0.3**
FINES	**FINESS Array B**	**37.46**	**322**	P		**P**		**18 23 22.4 -0.1**
	comp=Z,2.0nm,0.8s,baz=108,slow=6.2,SNR=7.1							
	comp=Z,2.0nm,0.8s							
FINES	**FINESS Array B**	**37.46**	**322**	P		**P**		**18 23 21.8 -0.7**
FINES	**FINESS Array B**	**37.46**	**322**	*eP*		**P**		**18 23 23.2 +0.7**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ARCES	**ARCESS Array B**	**39.77**	**334**	P		**P**		**18 23 42.6 +0.8**
	comp=Z,3.4nm,0.8s,baz=95,slow=8.6,SNR=3.8							
	comp=Z,3.4nm,0.8s							
ARCES	**ARCESS Array B**	**39.77**	**334**	P		**P**		**18 23 42.6 +0.8**
ARCES				IAmb		IAmb		18 24 26.6
	comp=Z,10nm,1.2s							
ARCES	**ARCESS Array B**	**39.77**	**334**	*eP*		**P**		**18 23 43.1 +1.3**
ARCES				pmax		pmax		
	comp=Z,4.0nm,0.8s							
HFS	**Hagfors**	**43.43**	**319**	P		**P**		**18 24 12.4 +0.6**
	comp=Z,0.7nm,0.6s,baz=148,slow=14,SNR=1.1							
	comp=Z,0.7nm,0.6s							
NC405	**NORSAR Array S**	**44.35**	**321**	P		**P**		**18 24 19.7 +0.4**
NC405				IAmb		IAmb		18 24 21.0
	comp=Z,22nm,1.4s							
NAO01	**NORSAR Array S**	**44.77**	**320**	P		**P**		**18 24 23.0 +0.3**
CLL	**Collm**	**44.98**	**307**	*eP*		**P**		**18 24 27.0 +2.6**
CLL	**Collm**	**44.98**	**307**	*eP*		**P**		**18 24 27.0 +2.6**
GERES	**GERESS Array B**	**45.10**	**303**	P		**P**		**18 24 25.3 -0.3**
	comp=Z,0.3nm,0.4s,baz=94,slow=10.0,SNR=2.6							
	comp=Z,0.3nm,0.4s							
JGF	**Kuroka**	**46.54**	**76**	P		**P**		**18 24 38.7 +1.7**
ESDC	**Sonseca Array**	**60.26**	**298**	P		**P**		**18 26 17.0 -0.8**
	comp=Z,0.5nm,0.8s,baz=67,slow=5.9,SNR=3.0							
	comp=Z,0.5nm,0.8s							
K15K	**Wolf Creek Mou**	**67.23**	**26**	P		**P**		**18 27 03.3 0.0**
F25K	**Christian Rive**	**67.53**	**17**	P		**P**		**18 27 06.3 +1.1**
F25K				IAmb		IAmb		18 27 10.6
	comp=Z,2.6nm,1.1s							
BMAR	**Burnt Mountain**	**67.89**	**16**	P		**P**		**18 27 08.6 +1.1**
E29M	**Blow River**	**68.38**	**13**	P		**P**		**18 27 10.3 -0.1**
ILAR	**Eielson Array**	**69.57**	**19**	P		**P**		**18 27 17.1 -0.8**
	comp=Z,0.3nm,0.6s,baz=320,slow=5.3,SNR=4.8							
	comp=Z,0.3nm,0.6s							
SKT	**Skwentna**	**70.59**	**22**	P		**P**		**18 27 23.0 -1.2**
SKT				IAmb		IAmb		18 27 26.3
	comp=Z,7.0nm,1.3s							
SCM	**Sheep Creek Mo**	**71.88**	**21**	P		**P**		**18 27 31.6 -0.6**
SCM	**Sheep Creek Mo**	**71.88**	**21**	P		**P**		**18 27 31.6 -0.6**
SCM				pmax		pmax		
	comp=Z,36nm,1.5s							
LSZ	**Lusaka**	**71.90**	**230**	LR		LR		18 59 04.3
	comp=Z,60nm,18.6s,baz=226,slow=36							
YKA	**Yellowknife Ar**	**77.05**	**6**	P		**P**		**18 28 01.4 -0.5**
	comp=Z,0.6nm,0.8s,baz=345,slow=6.1,SNR=6.7							
	comp=Z,0.6nm,0.8s							
ASAR	**Alice Springs**	**82.42**	**130**	P		**P**		**18 28 32.5 +0.8**
	comp=Z,0.3nm,0.8s,baz=311,slow=5.3,SNR=4.6							
	comp=Z,0.3nm,0.8s							

*IDC **08** 18:25:59.3±0.5, 60°.59S×25°.54W, h0km, mb4.5/10, mbtmp4.4/10, MS3.7/23, Error ellipse: s-maj=24.5km s-min=17.6km az=55.0*

*NEIC **08** 18:26:00.2±1.3, 60°.64S±0°.10×25°.4W±0°.2, h10km±1km, mb5.0/63, Error ellipse: s-maj=19.7km s-min=15.2km az=233.0*

*GCMT **08** 18:26:06.2±0.3, 60°.88S±0°.03×25°.13W±0°.07, h18km±1km, MW4.9/96, Moment Tensor Solution. s21,c22; s96,c121; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.29±.23; Mθθ1.88±.15; Mϕϕ1.42±.14; Mrθ0.14±.38; Mθϕ0.91±.08; Mϕr1.11±.42; Best double couple: Mo3.11800×10¹⁶ NP1:ϕs60.00000°, δ38.00000°, λ-74.00000°. NP2: ϕs220.00000°, δ54.00000°, λ-102.00000°. Principal axes: T 2.6960, Plg8.0000°, Azm319.0000°; N 0.8530, Plg10.0000°, Azm228.0000°; P -3.5390, Plg77.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 18:26:01.6±0.4, 60°.67S±0°.08×25°.43W±0°.09, h19km, n127, σ1.9 23/101, mb4.9/33, MS3.8/22, 1C-5D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**8.73**	**312**	Pn		Pn	18 28 12.7	+6.0
VNA1	**Neumayer--Stat**	**12.20**	**152**	⇓P		**Pn**	**18 28 51.2**	**-2.9**
	comp=Z,308nm,0.4s							
VNA3	**Neumayer Olymp**	**12.35**	**156**	⇓P		**Pn**	**18 28 52.5**	**-3.5**
VNA3	comp=Z,118nm,0.2s			⇑S		Sn	18 30 58.9	-14
	comp=E,48nm,0.4s							
VNA2	**Neumayer--Watz**	**12.60**	**152**	⇓P		**Pn**	**18 28 56.3**	**-3.3**
	comp=Z,43nm,0.2s,baz=315,slow=11							
VNA2				⇓S		Sn	18 31 07.1	-12
	comp=N,30nm,0.4s,baz=312,slow=18							
SNAA	**Sanae**	**14.19**	**150**	⇓P		**Pn**	**18 29 18.4**	**-2.8**
	comp=Z,μm,0.5s							
SNAA	**Sanae**	**14.19**	**150**	Pn		**Pn**	**18 29 18.0**	**-3.2**
	comp=Z,19nm,0.3s,baz=299,slow=13,SNR=23							
SNAA				Sn		Sn	18 31 42.3	-16
	comp=Z,5.0nm,0.3s,baz=333,slow=21,SNR=8.4							
SNAA				LR		LR	18 33 36.1	
	comp=Z,421nm,20.6s,baz=240,slow=32							
SNAA	**Sanae**	**14.19**	**150**			**Pn**	**18 29 17.7**	**-3.5**
ESPZ	**Base Esperanza**	**14.97**	**246**	Pn		**Pn**	**18 29 33.3**	**+1.5**
BELA	**Belgrano 2**	**17.55**	**186**	P		**P**	**18 30 05.6**	**-0.1**
PMSA	**Palmer Station**	**17.96**	**240**	LR		LR	18 35 22.0	
	comp=Z,97nm,20.0s,baz=7.0,slow=31							
EFI	**East Falkland**	**20.07**	**282**	P		**P**	**18 30 32.5**	**-1.0**
MG03	**Isla Dawson**	**24.86**	**266**	P		**P**	**18 31 22.5**	**0.0**
QSPA	**South Pole Qui**	**29.57**	**180**	P		**P**	**18 32 06.3**	**+1.4**
	comp=Z,5.7nm,0.6s,baz=203,slow=2.4,SNR=7.1							
QSPA				LR		LR	18 43 00.7	
	comp=Z,198nm,21.8s,baz=192,slow=34							
	comp=Z,5.7nm,0.6s							
QSPA	**South Pole Qui**	**29.57**	**180**			**P**	**18 32 06.3**	**+1.4**
QSPA				IAmb		IAmb	18 33 02.7	
	comp=Z,11nm,0.6s							
LL07	**Hotel Espejo d**	**33.72**	**280**	P		**P**	**18 32 41.1**	**-0.2**
PLCA	**Paso Flores**	**33.92**	**285**	P		**P**	**18 32 43.1**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=151,slow=9.3,SNR=9.4							
PLCA				LR		LR	18 45 30.1	
	comp=Z,133nm,19.1s,baz=137,slow=35							
	comp=Z,1.4nm,0.6s							

PLCA	**Paso Flores**	**33.92**	**285**	P		**P**		**18 32 42.7 -0.5**
PLCA				IAmb		IAmb		18 32 45.0
	comp=Z,14nm,1.7s							
PLTB	**Pedras Altas**	**34.34**	**315**	P		**P**		**18 32 45.7 -1.1**
LR05	**Currie**	**35.01**	**284**	P		**P**		**18 32 52.9 +0.5**
LR05				IAmb		IAmb		18 33 21.6
	comp=Z,40nm,1.6s							
MAW	**Mawson**	**35.95**	**139**	LR		LR		18 45 24.1
	comp=Z,251nm,21.7s,baz=259,slow=32							
BI02	**San Fabin de**	**37.51**	**289**	P		**P**		**18 33 13.1 -0.9**
BI05	**Punta Hualpn**	**38.34**	**287**	P		**P**		**18 33 20.1 -0.8**
BO02	**Sierra Bellavi**	**38.81**	**291**	P		**P**		**18 33 24.2 -0.8**
GO05	**Hualane**	**39.16**	**289**	P		**P**		**18 33 26.8 -1.1**
GO05				IAmb		IAmb		18 33 30.9
	comp=Z,30nm,1.2s							
BO01	**Tunca**	**39.28**	**291**			**P**		**18 33 27.2 -1.7**
BO04	**La Punta**	**39.40**	**292**	P		**P**		**18 33 28.6 -1.2**
BO04				IAmb		IAmb		18 33 37.8
	comp=Z,25nm,1.1s							
MT08	**Bocatoma Ro**	**39.59**	**293**	P		**P**		**18 33 32.1 +0.4**
MT09	**Talagante**	**39.75**	**292**	P		**P**		**18 33 32.4 -0.5**
MT09				IAmb		IAmb		18 33 35.3
	comp=Z,34nm,0.8s							
MT03	**Universidad Ad**	**39.77**	**292**	P		**P**		**18 33 32.0 -1.0**
MT03				IAmb		IAmb		18 33 38.5
	comp=Z,34nm,0.8s							
MT01	**Popeta**	**39.80**	**291**	P		**P**		**18 33 32.8 -0.4**
MT16	**CCHEN**	**39.83**	**292**	P		**P**		**18 33 33.4 -0.1**
VA05	**Santo Domingo**	**40.14**	**291**	P		**P**		**18 33 37.1 +1.2**
PEL	**Peldehue**	**40.14**	**292**	P		**P**		**18 33 36.0 0.0**
MT02	**Curacav**	**40.25**	**292**	P		**P**		**18 33 36.7 -0.2**
MT02				IAmb		IAmb		18 33 41.8
	comp=Z,42nm,1.4s							
VA03	**San Esteban**	**40.40**	**293**	P		**P**		**18 33 37.6 -0.6**
VA03				IAmb		IAmb		18 33 43.5
	comp=Z,30nm,0.9s							
CPUP	**Villa Florida**	**40.61**	**313**	P		**P**		**18 33 39.3 -0.6**
	comp=Z,2.1nm,0.6s,baz=149,slow=9.7,SNR=5.6							
CPUP				LR		LR		18 49 05.3
	comp=Z,114nm,21.8s,baz=160,slow=34							
	comp=Z,2.1nm,0.6s							
CPUP	**Villa Florida**	**40.61**	**313**	P		**P**		**18 33 39.3 -0.6**
VA06	**Catapilco**	**40.91**	**292**	P		**P**		**18 33 42.6 +0.3**
CO04	**Los Peladeros**	**41.20**	**293**	P		**P**		**18 33 45.3 +0.2**
CO04				IAmb		IAmb		18 33 50.9
	comp=Z,16nm,0.7s							
SUR	**Sutherland**	**41.23**	**68**	LR		LR		18 46 39.0
	comp=Z,135nm,18.5s,baz=204,slow=30							
CO02	**Combarbal**	**41.92**	**294**			**P**		**18 33 49.6 -1.2**
CO02				IAmb		IAmb		18 33 55.5
	comp=Z,44nm,1.3s							
VNDA	**Vanda**	**41.99**	**182**	P		**P**		**18 33 53.1 +2.4**
	comp=Z,5.7nm,0.9s,baz=181,slow=8.2,SNR=5.2							
VNDA				LR		LR		18 50 37.8
	comp=Z,35nm,18.4s,baz=162,slow=35							
	comp=Z,5.7nm,0.9s							
VNDA	**Vanda**	**41.99**	**182**	P		**P**		**18 33 50.4 -0.3**
VNDA				IAmb		IAmb		18 34 42.8
	comp=Z,89nm,2.0s							
CO03	**El Pedregal**	**42.09**	**294**	P		**P**		**18 33 51.3 -0.8**
CO03				IAmb		IAmb		18 35 14.4
	comp=Z,45nm,1.8s							
CO01	**Juntas del Tor**	**42.56**	**296**	P		**P**		**18 33 56.2 0.0**
AC05	**El Transito**	**43.62**	**296**			**P**		**18 34 03.9 -0.7**
LCO	**Las Campanas**	**43.66**	**296**	P		**P**		**18 34 04.5 -0.6**
LCO				IAmb		IAmb		18 34 42.8
	comp=Z,26nm,1.4s							
AC02	**Maricunga**	**44.85**	**299**	P		**P**		**18 34 15.1 +0.2**
AC02				IAmb		IAmb		18 35 02.9
	comp=Z,10nm,0.6s							
H04S2	**CROZET ISLANDS**	**45.00**	**109**	T		T		19 22 57.1
	baz=224,slow=74,SNR=16							
H04S3	**CROZET ISLANDS**	**45.01**	**109**	T		T		19 23 00.8
	baz=224,slow=74,SNR=9.4							
H04S1	**CROZET ISLANDS**	**45.01**	**109**	T		T		19 22 59.8
	baz=224,slow=74,SNR=12							
AC01	**Pan de Azucar**	**46.09**	**298**	P		**P**		**18 34 23.1 -1.0**
BOSA	**Boshof**	**46.45**	**70**	P		**P**		**18 34 27.5 +0.3**
	comp=Z,5.3nm,1.0s,baz=248,slow=6.6,SNR=4.2							
BOSA				LR		LR		18 49 53.8
	comp=Z,102nm,19.7s,baz=195,slow=31							
	comp=Z,5.3nm,1.0s							
BOSA	**Boshof**	**46.45**	**70**	P		**P**		**18 34 26.0 -1.1**
PB14	**IPOC Station P**	**47.34**	**299**	P		**P**		**18 34 33.1 -1.2**
BDFB	**Brasilia**	**47.84**	**330**	P		**P**		**18 34 37.5 -0.5**
	comp=Z,2.1nm,0.5s,baz=161,slow=9.3,SNR=4.7							
BDFB				LR		LR		18 51 32.4
	comp=Z,124nm,21.8s,baz=165,slow=32							
	comp=Z,2.1nm,0.5s							
BDFB	**Brasilia**	**47.84**	**330**	IAmb		IAmb		18 35 09.1
	comp=Z,26nm,1.9s							
PB05	**IPOC Station P**	**48.81**	**300**	P		**P**		**18 34 44.4 -1.1**
PB05				IAmb		IAmb		18 35 52.5
	comp=Z,37nm,1.7s							
PB03	**IPOC Station P**	**49.33**	**301**	P		**P**		**18 34 49.0 -0.5**
PB03				IAmb		IAmb		18 34 57.6
	comp=Z,21nm,1.3s							
PB09	**IPOC Station P**	**49.34**	**302**	P		**P**		**18 34 49.0 -0.7**
PB07	**IPOC Station P**	**49.67**	**301**	P		**P**		**18 34 51.6 -0.5**
PB07				IAmb		IAmb		18 34 57.0
	comp=Z,19nm,1.2s							
LBTB	**Lobatse**	**49.69**	**68**	LR		LR		18 52 40.0
	comp=Z,43nm,18.9s,baz=204,slow=32							
LBTB	**Lobatse**	**49.69**	**68**	P		**P**		**18 34 52.2 0.0**
LBTB				IAmb		IAmb		18 35 35.4
	comp=Z,32nm,1.7s							
PB02	**IPOC Station P**	**50.04**	**302**	P		**P**		**18 34 54.7 -0.1**
PB02				IAmb		IAmb		18 35 12.0
	comp=Z,25nm,1.3s							
PB01	**IPOC Station P**	**50.11**	**302**	P		**P**		**18 34 55.1 -0.3**
PB01				IAmb		IAmb		18 35 01.0
	comp=Z,13nm,0.8s							
PB08	**IPOC Station P**	**50.78**	**303**	P		**P**		**18 35 00.2 -0.6**
HMBC	**Humberstone**	**50.96**	**302**	P		**P**		**18 35 00.3 -1.6**
HMBC				IAmb		IAmb		18 35 16.5
	comp=Z,32nm,1.5s							
GO01	**Chusmiza**	**51.22**	**303**	P		**P**		**18 35 02.9 -1.3**
GO01				IAmb		IAmb		18 35 15.0
	comp=Z,23nm,1.6s							
PB11	**IPOC Station P**	**51.33**	**303**	P		**P**		**18 35 03.4 -1.2**
PB11				IAmb		IAmb		18 35 11.8
	comp=Z,20nm,1.2s							
SIV	**San Ignacio**	**51.45**	**314**	LR		LR		18 55 33.5
	comp=Z,49nm,21.2s,baz=109,slow=34							
H10S2	**ASCENSION HYDR**	**52.23**	**14**	T		T		19 31 48.7
	baz=186,slow=74,SNR=17							
H10S3	**ASCENSION HYDR**	**52.23**	**14**	T		T		19 31 49.0
	baz=34,slow=74,SNR=17							
PB16	**IPOC Station P**	**52.54**	**304**	P		**P**		**18 35 13.4 -0.8**
PB16				IAmb		IAmb		18 35 23.2
	comp=Z,24nm,1.9s							
H10N1	**ASCENSION HYDR**	**53.34**	**14**	T		T		19 33 13.0
	baz=180,slow=71,SNR=6.3							
H10N3	**ASCENSION HYDR**	**53.35**	**14**	T		T		19 33 13.3
	baz=180,slow=71,SNR=15							
H10N2	**ASCENSION HYDR**	**53.36**	**14**	T		T		19 33 14.2
	baz=180,slow=71,SNR=17							
LPAZ	**La Paz**	**53.83**	**306**	P		**P**		**18 35 24.0 +0.2**
	comp=Z,5.8nm,0.5s,baz=102,slow=6.3,SNR=15							
LPAZ				LR		LR		19 00 00.6
	comp=Z,47nm,19.2s,baz=150,slow=38							
	comp=Z,5.8nm,0.5s							
LPAZ	**La Paz**	**53.83**	**306**			**P**		**18 35 23.8 0.0**
LPAZ				IAmb		IAmb		18 35 28.9
	comp=Z,6.7nm,0.5s							
LPAZ	**La Paz**	**53.83**	**306**	PKHKP		PKPpre		18 35 24.0
VILB	**Vilhena**	**53.97**	**317**	P		**P**		**18 35 24.0 0.0**
VILB				IAmb		IAmb		18 35 27.6
	comp=Z,15nm,1.1s							
NNA	**Nana**	**61.30**	**299**	LR		LR		19 00 01.0
	comp=Z,50nm,21.9s,baz=172,slow=33							
ATAH	**Atahualpa**	**66.31**	**300**	LR		LR		19 05 01.5
	comp=Z,48nm,21.7s,baz=147,slow=35							
BOAV	**Boa Vista**	**68.50**	**322**	P		**P**		**18 37 01.4 -1.1**
MDP	**Montagnes des**	**68.94**	**331**	LR		LR		19 04 58.9
	comp=Z,64nm,20.4s,baz=163,slow=34							
DBIC	**Dimbokro**	**69.06**	**22**	P		**P**		**18 37 07.4 +1.6**
	comp=Z,4.6nm,0.5s,baz=219,slow=8.3,SNR=7.6							
DBIC				LR		LR		19 00 51.3
	comp=Z,45nm,18.8s,baz=236,slow=30							
	comp=Z,4.6nm,0.5s							
DBIC	**Dimbokro**	**69.06**	**22**	P		**P**		**18 37 06.2 +0.4**
DBIC				IAmb		IAmb		18 37 11.5
	comp=Z,7.5nm,1.0s							
MBAR	**Mbarara**	**73.55**	**60**	LR		LR		19 06 21.2
	comp=Z,54nm,19.9s,baz=188,slow=33							

ROSC	**El Rosal**	**75.54**	**309**	LR		LR		19 11 41.2
	comp=Z,52nm,21.9s,baz=155,slow=36							
LTZ	**Lake Taylor**	**75.90**	**193**	P		**P**		**18 37 47.6 +1.2**
MRNZ	**Matariki Terra**	**77.20**	**194**	P		**P**		**18 37 54.4 +0.6**
MRZ	**Mangatainoka R**	**77.57**	**196**	P		**P**		**18 37 56.3 +0.5**
SDV	**Santo Domingo**	**77.92**	**314**	LR		LR		19 12 36.8
	comp=Z,151nm,21.1s,baz=108,slow=36							
BKZ	**Black Stump Fm**	**78.91**	**197**	P		**P**		**18 38 03.1 -0.2**
SMRT	**St. Maarten**	**84.09**	**324**	P		**P**		**18 38 31.1 +0.4**
CAN	**Canberra**	**84.25**	**175**	P		**P**		**18 38 31.9 +0.2**
FURI	**Furi**	**85.49**	**63**	LR		LR		19 15 05.2
	comp=Z,54nm,18.4s,baz=134,slow=34							
RAO	**Raoul Island**	**87.62**	**204**	LR		LR		19 13 59.9
	comp=Z,233nm,18.3s,baz=58,slow=33							
RAR	**Rarotonga**	**90.46**	**222**	LR		LR		19 11 28.9
	comp=Z,950nm,21.7s,baz=279,slow=30							
INKA	**Innaminka**	**91.19**	**168**	P		**P**		**18 39 05.2 +0.1**
ASAR	**Alice Springs**	**94.30**	**161**	P		**P**		**18 39 19.8 +0.1**
	comp=Z,1.7nm,0.6s,baz=181,slow=4.2,SNR=30							
	comp=Z,1.7nm,0.6s							
AS31	**Alice Springs**	**94.30**	**161**	P		**P**		**18 39 19.4 -0.2**
MDT	**Midelt**	**94.70**	**17**	LR		LR		19 16 06.8
	comp=Z,45nm,20.1s,baz=224,slow=32							
WRA	**Warramunga Arr**	**98.02**	**161**	P		**P**		**18 39 36.4 -0.1**
	comp=Z,0.8nm,1.0s,baz=189,slow=4.4,SNR=3.8							
	comp=Z,0.8nm,1.0s							
WR8	**Warramunga Arr**	**98.04**	**161**	P		**P**		**18 39 36.3 -0.3**
WB0	**Warramunga Arr**	**98.20**	**161**	P		**P**		**18 39 37.2 -0.1**
CMAR	**Chiang Mai Arr**	**122.53**	**112**	PKP		**PKiKP**		**18 44 56.5 +0.9**
	comp=Z,2.0nm,0.9s,baz=225,slow=3.8,SNR=8.3							
CMAR	**Chiang Mai Arr**	**122.53**	**112**			**PKPdf**		**18 44 54.8 -0.6**
PDAR	**Pinedale Array**	**123.48**	**299**	PKP		**PKiKP**		**18 44 57.5 +0.4**
	comp=Z,0.4nm,0.5s,baz=128,slow=4.9,SNR=6.0							
NOA	**NORSAR Array B**	**124.61**	**21**	PKP		**PKPdf**		**18 44 57.9 -0.2**
	comp=Z,0.9nm,0.8s,baz=209,slow=4.6,SNR=1.9							
FINES	**FINESS Array B**	**128.03**	**29**	PKP		**PKiKP**		**18 45 05.2 +0.1**
	comp=Z,2.9nm,0.6s,baz=186,slow=1.7,SNR=16							
AB31	**Akbulak array**	**129.16**	**57**			**PKPdf**		**18 45 06.3 -0.8**
ARCES	**ARCESS Array B**	**134.88**	**23**	PKP		**PKPdf**		**18 45 16.0 -1.3**
	comp=Z,3.4nm,0.9s,baz=209,slow=1.7,SNR=2.0							
BVAR	**Borovoye Array**	**136.37**	**61**	PKP		**PKPdf**		**18 45 20.9 +0.4**
	comp=Z,0.9nm,0.5s,baz=256,slow=1.2,SNR=6.7							
MKAR	**Makanchi Array**	**137.34**	**75**	PKhKP		PKPpre		18 45 14.9
	comp=Z,0.3nm,0.7s,baz=175,slow=1.1,SNR=2.8							
MKAR				PKP		**PKiKP**		**18 45 25.0 +0.5**
	comp=Z,1.3nm,1.0s,baz=193,slow=1.6,SNR=6.9							
KURBB	**Kurchatov Array**	**138.30**	**68**	PKhKP		PKPpre		18 45 17.9
	comp=Z,0.2nm,0.3s,baz=235,slow=3.9,SNR=1.4							
KURBB				PKP		**PKiKP**		**18 45 25.1 -1.2**
	comp=Z,0.9nm,0.8s,baz=236,slow=2.7,SNR=2.2							
YKA	**Yellowknife Ar**	**140.13**	**314**	PKhKP		PKPpre		18 45 21.3
	comp=Z,0.2nm,0.7s,baz=128,slow=1.2,SNR=3.8							
YKA				PKP		**PKPdf**		**18 45 27.6 +0.5**
	comp=Z,0.6nm,0.6s,baz=126,slow=1.4,SNR=8.9							
SPITS	**Spitsbergen Ar**	**140.89**	**13**	PKhKP		PKPpre		18 45 23.3
	comp=Z,8.0nm,1.0s,baz=170,slow=5.6,SNR=5.5							
ZALV	**Zalesovo Beam**	**143.40**	**68**	PKhKP		PKPpre		18 45 29.6
	comp=Z,0.5nm,0.4s,baz=252,slow=2.9,SNR=2.0							
ZALV				PKP		**PKiKP**		**18 45 36.2 -0.4**
	comp=Z,0.7nm,0.4s,baz=270,slow=1.4,SNR=3.7							
BTO2	**Baotou**	**146.29**	**106**	*e*PKPbc		**PKPab**		**18 45 41.6 +0.7**
BTO2				PP		**PP**		**18 49 08.5 +5.3**
BTO2				pmax		pmax		
	comp=Z,23nm,0.7s							
BTO2				pmax		pmax		
	comp=Z,430nm,5.4s							
H31M	**Peel River**	**149.18**	**310**			**PKiKP**		**18 45 47.7 -0.5**
K29M	**Barlow Dome**	**149.57**	**306**			**PKiKP**		**18 45 48.7 -0.5**
SONM	**Songino Array**	**149.82**	**93**	PKPbc		**PKiKP**		**18 45 49.9 -0.3**
	comp=Z,3.5nm,0.7s,baz=219,slow=3.6,SNR=22							
SONM	**Songino Array**	**149.82**	**93**			**PKPbc**		**18 45 49.2

PETK	**Petropavlovsk-**	**72.88**	**344**	LR	LR	19 42 56.8		
	comp=Z,146nm,19.3s,baz=150,slow=34							
LEM	**Lembang**	**74.31**	**267**	LR	LR	19 45 43.6		
	comp=Z,102nm,20.3s,baz=24,slow=35							
KSRS	**Korea Array**	**74.81**	**317**	LR	LR	19 41 55.6		
	comp=Z,26nm,21.0s,baz=120,slow=32							
PFO	**Pinyon Flats O**	**76.17**	**48**	LR	LR	19 41 30.1		
	comp=Z,274nm,18.7s,baz=224,slow=30							
LPIG	**La Paz**	**76.47**	**60**	LR	LR	19 42 23.8		
	comp=Z,114nm,18.1s,baz=222,slow=31							
YBH	**Yreka Blue Hor**	**76.58**	**39**	LR	LR	19 40 39.2		
	comp=Z,25nm,19.9s,baz=258,slow=30							
KDAK	**Kodiak Island**	**76.82**	**13**	LR	LR	19 42 54.3		
	comp=Z,306nm,18.7s,baz=199,slow=32							
NVAR	**Mina Array Bea**	**77.45**	**43**	P	**P**	**19 14 44.5**	**+2.3**	
	0.4nm,0.6s,baz=253,slow=4.7,SNR=2.0							
NVAR				LR	LR	19 43 47.3		
	comp=Z,161nm,18.9s,baz=206,slow=32							
	0.4nm,0.6s							
KLR	**Kul'dur**	**79.83**	**329**	LR	LR	19 45 41.6		
	comp=Z,24nm,19.8s,baz=134,slow=33							
MA2	**Magadan**	**80.41**	**344**	LR	LR	19 41 55.6		
	comp=Z,139nm,21.6s,baz=168,slow=30							
SEY	**Seymchan**	**82.91**	**346**	LR	LR	19 45 05.4		
	comp=Z,186nm,21.4s,baz=146,slow=31							
NEW	**Newport**	**83.59**	**35**	LR	LR	19 46 14.7		
	comp=Z,242nm,18.4s,baz=220,slow=31							
ANMO	**Albuquerque**	**84.11**	**51**	LR	LR	19 46 28.5		
	comp=Z,276nm,18.1s,baz=251,slow=31							
ILAR	**Eielson Array**	**84.33**	**12**	P	**P**	**19 15 16.4**	**-1.6**	
	0.6nm,0.8s,baz=206,slow=4.6,SNR=8.7							
	0.6nm,0.8s							
PDAR	**Pinedale Array**	**85.38**	**43**	LR	LR	19 48 29.4		
	comp=Z,86nm,19.3s,baz=248,slow=32							
CMIG	**Matias Romero**	**87.37**	**71**	LR	LR	19 45 50.0		
	comp=Z,122nm,20.7s,baz=186,slow=29							
YAK	**Yakutsk**	**89.00**	**338**	LR	LR	19 56 13.6		
	comp=Z,49nm,18.7s,baz=112,slow=37							
CMAR	**Chiang Mai Arr**	**89.93**	**289**	LR	LR	19 52 27.3		
	comp=Z,54nm,21.2s,baz=115,slow=34							
INK	**Inuvik**	**90.27**	**15**	LR	LR	19 49 45.5		
	comp=Z,203nm,19.7s,baz=250,slow=32							
YKA	**Yellowknife Ar**	**92.55**	**24**	LR	LR	19 50 11.2		
	comp=Z,282nm,21.5s,baz=240,slow=31							
SONM	**Songino Array**	**93.62**	**319**	LR	LR	19 53 31.6		
	comp=Z,68nm,20.1s,baz=80,slow=33							
JTS	**Las Juntas de**	**94.63**	**81**	LR	LR	19 50 23.1		
	comp=Z,74nm,20.3s,baz=176,slow=30							
TIXI	**Tiksi**	**95.34**	**345**	LR	LR	19 56 32.6		
	comp=Z,131nm,19.0s,baz=185,slow=34							
NNA	**Nana**	**95.93**	**104**	LR	LR	19 49 32.6		
	comp=Z,79nm,21.7s,baz=252,slow=29							
ATAH	**Atahualpa**	**95.95**	**99**	LR	LR	19 48 56.0		
	comp=Z,176nm,21.6s,baz=251,slow=28							
ULM	**Lac du Bonnet**	**96.96**	**40**	LR	LR	19 54 17.3		
	comp=Z,291nm,18.8s,baz=198,slow=32							
BRDH	**Bariadhala**	**97.66**	**291**	LR	LR	19 56 50.1		
	comp=Z,109nm,21.8s,baz=256,slow=34							
BRTR	**Keskin Array B**	**144.96**	**317**	PKP	**PKPdf**	**19 22 24.1**	**+0.1**	
	0.9nm,0.9s,baz=100,slow=1.8,SNR=3.8							
GERES	**GERESS Array B**	**146.76**	**347**	PKPbc	**PKPbc**	**19 22 27.6**	**-0.8**	
	0.6nm,0.8s,baz=35,slow=3.6,SNR=4.1							

IDC 08 19:18:19.2±1.6,2°.64S×138°.40E,h0km,mb3.2/2, mbtmp3.3/4,ML3.3/2,Error ellipse: s-maj=30.8km s-min=18.5km az=173.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.31**	**87**	Pn		Pn	19 18 59.9	+1.3
	4.3nm,0.3s,baz=243,slow=12,SNR=14							
JAY				Lg		Lg	19 19 31.9	
	3.3nm,0.3s,baz=139,slow=20,SNR=1.7							
	10nm,0.4s							
WRA	**Warramunga Arr**	**17.65**	**193**	P		Pn	19 22 26.7	0.0
	0.1nm,0.3s,baz=17,slow=12,SNR=7.2							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**21.35**	**191**	P		P	19 23 07.7	-0.5
	0.5nm,0.7s,baz=25,slow=9.6,SNR=5.6							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**69.54**	**323**	P		P	19 29 29.9	-0.1
	0.3nm,0.6s,baz=116,slow=7.3,SNR=4.7							
	0.3nm,0.6s							

*IDC **08** 19:23:43.2±0.8,2°.98S×130°.00E,h0km,mb3.8/8, mbtmp3.9/11,ML4.0/3,Error ellipse: s-maj=29.9km s-min=15.3km az=74.0*
*NEIC **08** 19:23:45.5±1.3,2°.93S±0°.06×129°.99E±0°.02,h10km±1km, mb4.2/14,Error ellipse: s-maj=9.4km s-min=4.2km az=175.0*
*DJA **08** 19:23:47.3±0.5,3°S±2°×13°0E±°,h17km±5km,M4.3/22, mB5.1/1,mb4.6/5,MLv4.2/22,Mw(mB)4.5/1*
ISC 08 19:23:47.1±0.5,2°.94S±0°.05×129°.98E±0°.05,h25km,n52, σ1s14/54,mb4.0/10,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.13**	**249**	P		**Pb**	**19 24 08.0**	**0.0**
MSAI				S		**Sb**	**19 24 23.4**	**+1.1**
BNDI	**Bandanaira**	**1.58**	**183**	P		**Pb**	**19 24 16.2**	**+0.5**
KRAI	**Karang Ratu**	**1.63**	**256**	P		**Pb**	19 24 15.6	-1.0
AAI	**Ambon**	**1.94**	**247**	P		**Pn**	**19 24 19.8**	**+1.3**
FAKI	**Fak Fak**	**2.26**	**90**			**Pn**	**19 24 24.2**	**+1.2**
FAKI				Sn		**Sn**	**19 24 50.6**	**+0.5**
FAKI	**Fak Fak**	**2.26**	**90**	P		**Pn**	**19 24 23.9**	**+0.9**
SIJI	**Sorong**	**2.42**	**32**	Pn		**Pn**	**19 24 24.9**	**-0.3**
	20nm,0.3s,baz=234,slow=21,SNR=82							
SIJI				Sn		**Sn**	**19 24 54.3**	**+0.3**
	22nm,0.3s,baz=206,slow=22,SNR=9.6							
	42nm,0.3s							
SIJI	**Sorong**	**2.42**	**32**	P		**Pn**	**19 24 25.2**	**0.0**
SWI	**Sorong**	**2.42**	**32**	P		**Pn**	**19 24 25.0**	**-0.2**
NLAI	**Namlea**	**2.90**	**264**	P		**Pn**	**19 24 32.7**	**+1.0**
SANI	**Sanana**	**4.09**	**282**	P		**Pn**	**19 24 45.5**	**-2.6**
RKPI	**Ransiki, Papua**	**4.42**	**71**	P		**Pn**	**19 24 53.8**	**+1.1**
MWPI	**Manokwari, Pap**	**4.52**	**64**	P		**Pn**	**19 24 56.3**	**+2.3**
TNTI	**Ternate**	**4.52**	**325**	Pn		**Pn**	**19 24 53.5**	**-0.5**
SAUI	**Saumlaki**	**5.18**	**165**	Pn		**Pn**	**19 25 04.2**	**+1.0**
BAKI	**Biak**	**6.36**	**74**	P		**Pn**	**19 25 20.8**	**+1.4**
LUWI	**Luwuk**	**7.45**	**284**	Pn		**Pn**	**19 25 33.9**	**-0.4**
LUWI	**Luwuk**	**7.45**	**284**	P		**Pn**	**19 25 33.7**	**-0.6**
	1µm41nm,0.9s							
SOEI	**Soe**	**8.84**	**220**	Pn		**Pn**	**19 25 53.7**	**+0.2**
BATI	**Baumata**	**9.57**	**221**	Pn		**Pn**	**19 26 06.8**	**+3.4**
	1.2nm,0.3s,baz=63,slow=6.8,SNR=5.4							
MTN	**Manton Dam**	**9.91**	**173**	Pn		**Pn**	**19 26 07.6**	**-0.5**
KAPI	**Kappang**	**10.41**	**258**	Pn		**Pn**	**19 26 17.8**	**+2.8**
	0.8nm,0.3s,baz=85,slow=12,SNR=1.8							
KAPI	**Kappang**	**10.41**	**258**			**Pn**	**19 26 15.1**	**+0.1**
KNRA	**Kununurra**	**12.72**	**185**	Pn		**Pn**	**19 26 45.1**	**-1.4**
FITZ	**Fitzroy Crossi**	**15.66**	**195**	Pn		**Pn**	**19 27 25.3**	**-1.0**
	0.6nm,0.3s,baz=25,slow=7.5,SNR=16							
	5.0nm,0.6s							
COEN	**Coen**	**17.02**	**131**	Pn		**Pn**	**19 27 42.2**	**-1.5**
COEN				IAmb		IAmb	19 27 58.2	
	comp=Z,16nm,1.3s							
WB0	**Warramunga Arr**	**17.27**	**166**	P		**Pn**	**19 27 47.0**	**+0.1**
WRA	**Warramunga Arr**	**17.43**	**166**	P		**Pn**	**19 27 46.5**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=346,slow=11,SNR=17							
	comp=Z,1.7nm,0.6s							
WRA	**Warramunga Arr**	**17.43**	**166**	P		**Pn**	**19 27 47.1**	**-1.7**
AS31	**Alice Springs**	**20.95**	**170**	P		**P**	**19 28 28.0**	**-0.5**
AS31				IAmb		IAmb	19 28 29.4	
	comp=Z,4.6nm,0.6s							
ASAR	**Alice Springs**	**20.95**	**170**	P		**P**	**19 28 28.1**	**-0.4**
	comp=Z,12nm,0.6s,baz=348,slow=11,SNR=144							
	comp=Z,12nm,0.6s							
ASAR	**Alice Springs**	**20.95**	**170**	P		**P**	**19 28 27.7**	**-0.7**
PSA00	**Pilbara Seismi**	**20.99**	**207**	P		Pn	19 28 30.4	-1.1
PSA00				IAmb		IAmb	19 28 38.8	
	comp=Z,14nm,1.4s							
CTA	**Charters Tower**	**23.30**	**138**	P		**P**	**19 28 53.0**	**-0.3**
	comp=Z,21nm,0.8s,baz=294,slow=12,SNR=1.8							
	comp=Z,21nm,0.8s							
CTAO	**Charters Tower**	**23.30**	**138**	P		**P**	**19 28 54.4**	**+1.1**
CTAO				IAmb		IAmb	19 29 07.5	
	comp=Z,10nm,1.1s							
INKA	**Innaminka**	**26.72**	**158**	P		**P**	**19 29 24.4**	**-0.3**
BBOO	**Buckleboo**	**30.26**	**170**	P		**P**	**19 29 55.5**	**-0.7**
STKA	**Stephens Creek**	**30.79**	**160**	P		**P**	**19 29 59.5**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=337,slow=9.2,SNR=5.8							
	comp=Z,2.1nm,0.8s							
STKA	**Stephens Creek**	**30.79**	**160**	P		**P**	**19 29 59.7**	**-1.2**
CM31	**Chiang Mai Arr**	**37.23**	**306**	P		**P**	**19 30 57.3**	**+0.3**
CM31				IAmb		IAmb	19 30 59.7	
	comp=Z,4.6nm,1.1s							
CMAR	**Chiang Mai Arr**	**37.23**	**306**	P		**P**	**19 30 56.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=139,slow=7.4,SNR=7.1							
	comp=Z,0.5nm,0.6s							
SONM	**Songino Array**	**54.62**	**341**	P		**P**	**19 33 14.3**	**+0.5**
	comp=Z,0.8nm,1.0s,baz=150,slow=6.9,SNR=4.5							
	comp=Z,0.8nm,1.0s							
SONM	**Songino Array**	**54.62**	**341**	P		**P**	**19 33 14.0**	**+0.3**
SONM				IAmb		IAmb	19 33 18.3	
	comp=Z,2.1nm,1.2s							
MKAR	**Makanchi Array**	**64.86**	**326**	P		**P**	**19 34 24.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=114,slow=8.2,SNR=8.9							
	comp=Z,0.3nm,0.5s							
MKAR	**Makanchi Array**	**64.86**	**326**	P		**P**	**19 34 23.8**	**-0.4**
ZALV	**Zalesovo Beam**	**67.96**	**333**	P		**P**	**19 34 44.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=134,slow=6.2,SNR=3.7							
	comp=Z,0.3nm,0.3s							
ZALV	**Zalesovo Beam**	**67.96**	**333**	P		**P**	**19 34 43.9**	**+0.1**
KURBB	**Kurchatov Arra**	**69.07**	**328**	P		**P**	**19 34 51.1**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=129,slow=5.8,SNR=10							
	comp=Z,0.7nm,0.3s							
KURK	**Kurchatov**	**69.08**	**328**	P		**P**	**19 34 51.4**	**+0.5**
KURK				IAmb		IAmb	19 34 59.0	
	comp=Z,6.1nm,1.4s							
AB31	**Akbulak array**	**79.34**	**321**	P		**P**	**19 35 51.3**	**+0.5**
AB31				IAmb		IAmb	19 36 22.3	
	comp=Z,4.0nm,1.5s							
ABKAR	**Akbulak array**	**79.34**	**321**	P		**P**	**19 35 50.5**	**-0.4**
L16K	**Owhat River**	**83.47**	**27**	P		**P**	**19 36 13.2**	**+0.8**

*IDC **08** 19:25:53.9±0.7,2°.99S×129°.98E,h0km,mb4.1/11, mbtmp4.1/14,ML4.2/3,MS3.6/7,Error ellipse: s-maj=25.7km s-min=13.9km az=65.0*
*NEIC **08** 19:25:56.0±1.6,2°.93S±0°.06×129°.88E±0°.05,h10km±1km, mb4.4/24,Error ellipse: s-maj=10.2km s-min=8.7km az=212.0*
*DJA **08** 19:25:59.0±0.5,3°S±2°×13°0E±°,h19km±5km,M4.4/24, mb4.7/4,MLv4.3/24*
ISC 08 19:25:54.3±1.3,2°.88S±0°.04×130°.05E±0°.03,h6km±9km, n75,σ1s29/72,mb4.3/20,MS3.8/5,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.21**	**248**	P		**Pn**	**19 26 17.5**	**-0.3**
MSAI				S		**Sn**	**19 26 33.4**	**-1.2**
BNDI	**Bandanaira**	**1.64**	**185**	P		**Pg**	**19 26 27.4**	**+1.7**
BNDI				S		**Sg**	**19 26 49.8**	**+2.8**
KRAI	**Karang Ratu**	**1.71**	**255**	P		**Pg**	**19 26 26.1**	**-1.0**
AAI	**Ambon**	**2.02**	**247**	P		**Pb**	**19 26 30.5**	**-0.9**
FAKI	**Fak Fak**	**2.19**	**91**			**Pg**	**19 26 36.0**	**-0.4**
FAKI				Sn		**Sg**	**19 27 04.6**	**-0.2**
FAKI	**Fak Fak**	**2.19**	**91**	P		**Pg**	**19 26 36.0**	**-0.4**
SIJI	**Sorong**	**2.34**	**31**	Pn		**Pb**	**19 26 37.2**	**+0.3**
	36nm,0.3s,baz=151,slow=10,SNR=26							
SIJI				Sn		**Sb**	**19 27 07.0**	**+1.0**
	52nm,0.3s,baz=197,slow=19,SNR=12							
	74nm,0.3s							
SIJI	**Sorong**	**2.34**	**31**	P		**Pb**	**19 26 36.7**	**-0.2**
SIJI				S		**Sb**	**19 27 06.6**	**+0.6**
SWI	**Sorong**	**2.34**	**31**	P		**Pb**	**19 26 36.8**	**-0.1**
SWI				S		**Sb**	**19 27 07.4**	**+1.4**
NLAI	**Namlea**	**2.97**	**263**	P		**Pn**	**19 26 43.7**	**+1.7**
KMPI	**Kaimana, Papua**	**3.73**	**102**	P		**Pb**	**19 26 59.3**	**-1.3**
SANI	**Sanana**	**4.14**	**281**	P		**Pn**	**19 26 57.5**	**-0.6**
RKPI	**Ransiki, Papua**	**4.34**	**72**	P		Pn	19 27 06.1	+5.2
MWPI	**Manokwari, Pap**	**4.43**	**64**	P		**Pb**	**19 27 08.6**	**-4.0**
TNTI	**Ternate**	**4.51**	**323**	Pn		**Pn**	**19 27 04.0**	**+0.7**
TNTI	**Ternate**	**4.51**	**323**	P		**Pn**	**19 27 04.4**	**+1.2**
BAKI	**Biak**	**6.28**	**75**	P		Pn	19 27 33.2	+5.7
LUWI	**Luwuk**	**7.50**	**284**	Pn		**Pn**	**19 27 43.1**	**-1.2**
SOEI	**Soe**	**8.93**	**220**	Pn		**Pn**	**19 28 05.0**	**+1.0**
BATI	**Baumata**	**9.65**	**221**	Pn		Pn	19 28 18.5	+4.5
	3.1nm,0.3s,baz=78,slow=4.4,SNR=6.2							
KAPI	**Kappang**	**10.49**	**258**	Pn		**Pn**	**19 28 28.9**	**+3.6**
	2.6nm,0.3s,baz=78,slow=13,SNR=4.3							
KAPI	**Kappang**	**10.49**	**258**			**Pn**	**19 28 25.7**	**+0.3**
KNRA	**Kununurra**	**12.78**	**186**			**Pn**	**19 28 57.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**15.73**	**196**	Pn		**Pn**	**19 29 36.0**	**-0.7**
	0.8nm,0.3s,baz=37,slow=9.8,SNR=10							
	3.7nm,0.7s							
JAGI	**Jajag, Banyuwa**	**16.76**	**250**	Pn		**Pn**	**19 29 48.6**	**-1.3**
JAGI				IAmb		IAmb	19 30 01.8	
	comp=Z,32nm,1.1s							
COEN	**Coen**	**17.00**	**131**			**P**	**19 29 54.4**	**-0.5**
WB0	**Warramunga Arr**	**17.31**	**166**			**Pn**	**19 29 55.5**	**-1.3**
WRA	**Warramunga Arr**	**17.47**	**166**	P		**Pn**	**19 29 57.3**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=337,slow=13,SNR=11							
	comp=Z,6.7nm,1.0s							
WRA	**Warramunga Arr**	**17.47**	**166**			**Pn**	**19 29 58.0**	**-0.8**
PMG	**Port Moresby**	**18.20**	**112**	LR		LR	19 37 39.0	
	comp=Z,126nm,21.3s,baz=318,slow=39							
SBUM	**Sibu**	**18.59**	**286**			**Pn**	**19 30 12.3**	**-0.4**
TGY	**Tagaytay City**	**19.14**	**332**	LR		LR	19 39 27.5	
	comp=Z,246nm,20.1s,baz=206,slow=42							
MBWA	**Marble Bar**	**20.76**	**208**	P		**P**	**19 30 34.1**	**-1.9**
AS31	**Alice Springs**	**21.00**	**170**	P		**P**	**19 30 38.8**	**+0.2**
AS31				IAmb		IAmb	19 30 40.4	
	comp=Z,14nm,0.8s							
ASAR	**Alice Springs**	**21.00**	**170**	P		**P**	**19 30 39.0**	**+0.3**
	comp=Z,36nm,0.8s,baz=348,slow=11,SNR=42							
	comp=Z,36nm,0.8s							
ASAR	**Alice Springs**	**21.00**	**170**			**P**	**19 30 38.6**	**-0.1**
PSA00	**Pilbara Seismi**	**21.07**	**207**	P		**P**	**19 30 38.3**	**-1.1**
BBJI	**Bungbulang**	**22.76**	**258**	P		**P**	**19 30 54.3**	**-3.4**
BBJI				IAmb		IAmb	19 31 24.5	
	comp=Z,14nm,1.1s							
CTA	**Charters Tower**	**23.29**	**138**	P		**P**	**19 31 03.6**	**+0.5**
	comp=Z,8.9nm,0.9s,baz=319,slow=10,SNR=7.7							
	comp=Z,8.9nm,0.9s							
CTAO	**Charters Tower**	**23.29**	**138**	P		**P**	**19 31 04.2**	**+1.1**
CTAO				IAmb		IAmb	19 31 13.6	
	comp=Z,14nm,1.1s							
INKA	**Innaminka**	**26.75**	**159**	P		**P**	**19 31 35.1**	**+0.2**
BBOO	**Buckleboo**	**30.30**	**170**	P		**P**	**19 32 06.0**	**-0.6**
BBOO				IAmb		IAmb	19 32 07.7	
	comp=Z,11nm,0.9s							
HNR	**Honiara**	**30.41**	**104**	P		**P**	**19 32 07.6**	**-0.1**
	comp=Z,7.4nm,0.8s,baz=222,slow=3.3,SNR=1.7							
	comp=Z,7.4nm,0.8s							
HNR	**Honiara**	**30.41**	**104**	P		**P**	**19 32 08.3**	**+0.6**
STKA	**Stephens Creek**	**30.82**	**161**	P		**P**	**19 32 10.7**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=343,slow=8.2,SNR=5.9							
	comp=Z,2.9nm,0.8s							
STKA	**Stephens Creek**	**30.82**	**161**	P		**P**	**19 32 10.6**	**-0.5**
GSI	**Gunungsitoli**	**32.73**	**277**	P		**P**	**19 32 26.8**	**-1.4**
CM31	**Chiang Mai Arr**	**37.25**	**306**	P		**P**	**19 33 06.9**	**-0.2**
CM31				IAmb		IAmb	19 33 15.5	
	comp=Z,8.6nm,1.4s							
CMAR	**Chiang Mai Arr**	**37.25**	**306**	P		**P**	**19 33 08.0**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=136,slow=8.0,SNR=12							
	comp=Z,1.5nm,0.9s							
CMAR	**Chiang Mai Arr**	**37.25**	**306**	P		**P**	**19 33 06.8**	**-0.3**
CHTO	**Chiang Mai**	**37.44**	**306**			**P**	**19 33 08.2**	**-0.5**
CHTO				IAmb		IAmb	19 33 11.0	
	comp=Z,4.6nm,0.8s							
PZH	**PanZhiHua**	**40.02**	**319**	P		**P**	**19 33 33.2**	**+2.7**
LZDM	**Lanzhou Array**	**45.82**	**330**	P		**P**	**19 34 18.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=133,slow=6.1,SNR=1.5							
	comp=Z,0.2nm,0.3s							
HHC	**Hu-ho-hao-te**	**46.68**	**341**	*e*P		**P**	**19 34 27.0**	**+3.0**
HHC				pmax		pmax		
	comp=Z,3.0nm,0.7s							
SONM	**Songino Array**	**54.59**	**341**	P		**P**	**19 35 24.6**	**+1.0**
	comp=Z,0.9nm,1.0s,baz=157,slow=7.7,SNR=3.8							
	comp=Z,0.9nm,1.0s							
SONM	**Songino Array**	**54.59**	**341**	P		**P**	**19 35 23.9**	**+0.2**
TUWZ	**Tuamarina**	**54.96**	**140**	P		**P**	**19 35 28.3**	**+1.9**
PETK	**Petropavlovsk-**	**60.42**	**19**	LR		LR	20 03 29.0	
	comp=Z,39nm,19.4s,baz=97,slow=37							
YAK	**Yakutsk**	**64.73**	**360**	P		**P**	**19 36 34.6**	**+1.5**
MKAR	**Makanchi Array**	**64.85**	**326**	P		**P**	**19 36 35.1**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=125,slow=7.5,SNR=11							
	comp=Z,0.6nm,0.5s							
MKAR	**Makanchi Array**	**64.85**	**326**	P		**P**	**19 36 34.0**	**-0.2**
MAKZ	**Makanchi**	**65.03**	**326**	P		**P**	**19 36 35.5**	**0.0**
MAKZ				IAmb		IAmb	19 36 37.2	
	comp=Z,3.2nm,1.1s							
AAK	**Ala-Archa**	**67.47**	**319**	LR		LR	20 10 05.0	
	comp=Z,49nm,19.2s,baz=84,slow=39							
ZALV	**Zalesovo Beam**	**67.94**	**333**	P		**P**	**19 36 54.2**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=121,slow=5.7,SNR=5.4							
	comp=Z,1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**67.94**	**333**	P		**P**	**19 36 53.8**	**-0.2**
KURBB	**Kurchatov Arra**	**69.06**	**328**	P		**P**	**19 37 01.9**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=128,slow=5.8,SNR=16							
KURBB				LR		LR	20 06 53.8	
	comp=Z,54nm,21.6s,baz=164,slow=36							
	comp=Z,2.0nm,0.5s							
KURK	**Kurchatov**	**69.06**	**328**			**P**	**19 37 00.9**	**-0.1**
KURK				IAmb		IAmb	19 37 02.7	
	comp=Z,4.5nm,0.9s							
KKAR	**Karatay Array**	**70.31**	**318**	P		**P**	**19 37 09.2**	**+0.2**
BVAR	**Borovoye Array**	**74.64**	**327**	P		**P**	**19 37 35.5**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=117,slow=5.2,SNR=6.4							
	comp=Z,1.7nm,0.8s							
BORK	**Borovoye**	**74.68**	**327**	P		**P**	**19 37 35.5**	**+0.8**
BORK				IAmb		IAmb	19 38 00.2	
	comp=Z,2.2nm,0.7s							
AB31	**Akbulak array**	**79.34**	**321**	P		**P**	**19 38 01.0**	**0.0**
AB31				IAmb		IAmb	19 38 08.6	
	comp=Z,6.5nm,1.5s							
ABKAR	**Akbulak array**	**79.34**	**321**	P		**P**	**19 38 00.8**	**-0.2**
RAYN	**Ar Rayn**	**86.14**	**294**	P		**P**	**19 38 36.8**	**-0.2**
RAYN				IAmb		IAmb	19 38 44.7	
	comp=Z,3.0nm,0.8s							
FURI	**Furi**	**91.80**	**279**	LR		LR	20 19 14.0	
	comp=Z,55nm,22.0s,baz=135,slow=35							
MMAI	**Mount Meron Ar**	**95.45**	**303**	LR		LR	20 30 24.2	
	comp=Z,32nm,19.3s,baz=50,slow=40							

*IDC **08** 19:34:20.1±0.8,35°.07N×116°.82W,h0km,mb3.5/2, mbtmp3.5/6,ML3.8/4,MS4.2/2,Error ellipse: s-maj=15.2km s-min=6.7km az=79.0*
*NEIC **08** 19:34:20.0±1.4,35°.09N±0°.01×116°.969W±0°.008, h15km±4km,ML4.2/138,Mwr3.9/69,Mwr3.9/4(PAS),Error ellipse: s-maj=1.7km s-min=0.7km az=204.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.43; $M_{\theta\theta}$-1.71; $M_{\phi\phi}$1.28; $M_{r\theta}$-0.57; $M_{r\phi}$6.78; $M_{\theta\phi}$3.72; Fault plane solution: $M_0$7.91000×10^{14} NP1: ϕ_s353.16000°,δ88.81000°,λ151.46000°. NP2: ϕ_s83.80000°,δ61.47000°,λ1.35000°. Principal axes: T 7.6894, Plg21.0000°, Azm305.0000°; N 0.4238, Plg61.0000°, Azm171.0000°; P -8.1132, Plg19.0000°, Azm42.0000°;*
*PAS **08** 19:34:20.7±2.7,35°.10N±0°.01×116°.97W±0°.01,h2km±5km Error ellipse: s-maj=1.6km s-min=1.5km az=193.0*
*NEIC **08** 19:34:20,35°.09N×116°.97W,h15km*
ISC 08 19:34:20.7±1.0,35°.09N±0°.02×116°.97W±0°.02,h7km±9km, n78,σ0s99/82,Central California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GSC	**Goldstone, Bar**	**0.25**	**32**			**Pg**	**19 34 25.9**	**+0.3**
GSC				IAML			19 34 30.7	
	comp=E,41µm,0.5s							
GSC				IAML			19 34 32.5	
	comp=N,35µm,0.6s							
ALV	**Alvord Mountai**	**0.28**	**95**			**Pg**	**19 34 26.6**	**+0.4**
ALV						**Sg**	**19 34 30.8**	**+0.9**
HYS	**Haystack Butte**	**0.54**	**246**			**Pg**	**19 34 31.1**	**-0.1**
HYS						**Sg**	**19 34 38.3**	**0.0**
CCCA	**Chr Cany lake**	**0.54**	**323**			**Pg**	**19 34 31.3**	**+0.1**
CCCA				Sg		**Sg**	**19 34 38.5**	**+0.2**
CCCA				IAML			19 34 39.4	
	comp=N,13µm,0.7s							
CCCA				IAML			19 34 43.6	
	comp=E,9µm,0.6s							
HEC	**Hector,Ludlow**	**0.58**	**116**			**Pg**	**19 34 31.9**	**0.0**
H

TPNV	**Topopah Spring**	**1.95**	**17**		**Pn**		**19 34 53.5**	**-0.8**
TPNV				IAML			19 35 26.8	
	comp=N,2µm,0.6s							
TPNV				IAML			19 35 30.6	
	comp=N,1µm,0.9s							
NEE2	**Needles Airpor**	**1.96**	**99**		**Pn**		**19 34 52.4**	**-1.9**
NEE2				IAML			19 35 28.4	
	comp=E,3µm,0.4s							
SALN	**Salton City**	**1.98**	**155**		**Pn**		**19 34 54.4**	**-0.2**
SHPR	**Sheep Range**	**2.04**	**46**		**Pn**		**19 34 54.8**	**-0.8**
DPP	**Dos Picos Cty**	**2.08**	**179**		**Pn**		**19 34 55.2**	**-0.9**
DPP				IAML			19 35 26.1	
	comp=E,2µm,0.2s							
CPE	**Camp Elliot**	**2.20**	**183**		**Pn**		**19 34 56.9**	**-0.7**
TIN	**Tinemaha, Big**	**2.21**	**333**		**Pn**		**19 34 57.3**	**-0.6**
TIN				IAML			19 35 39.0	
	comp=E,2µm,0.9s							
TIN				IAML			19 35 39.9	
	comp=N,1µm,1.1s							
BAR	**Barrett**	**2.42**	**174**		**Pn**		**19 34 59.9**	**-0.7**
BAR				IAML			19 35 36.2	
	comp=E,1µm,0.3s							
BAR				IAML			19 35 37.6	
	comp=N,1µm,0.3s							
DSP	**Deep Springs**	**2.42**	**341**		**Pn**		**19 34 59.8**	**-0.8**
BLYC	**Blythe**	**2.42**	**123**		**Pn**		**19 34 58.6**	**-2.1**
BLYC				IAML			19 35 40.2	
	comp=N,988nm,0.5s							
W13A	**Hualapai Mount**	**2.53**	**89**		**Pn**		**19 35 00.8**	**-1.6**
W13A				IAML			19 35 45.0	
	comp=N,692nm,0.6s							
TJX	**Tijuana**	**2.57**	**182**		**Pn**		**19 35 02.2**	**-0.6**
YUH	**Yuha Desert**	**2.58**	**160**		**Pn**		**19 35 01.5**	**-1.4**
GLA	**Glamis**	**2.70**	**138**		**Pn**		**19 35 02.4**	**-2.2**
GLA				IAML			19 35 48.1	
	comp=E,1µm,0.6s							
GLA				IAML			19 35 57.4	
	comp=N,859nm,0.6s							
S11A	**Rachel**	**2.73**	**21**		**Pn**		**19 35 03.8**	**-1.4**
S11A				IAML			19 35 53.2	
	comp=N,1µm,1.0s							
S11A				IAML			19 36 04.1	
	comp=E,1µm,0.9s							
CBX	**Cerro Bola**	**2.78**	**175**		**Pn**		**19 35 05.2**	**-0.5**
PRN	**Pahroc Range**	**2.79**	**33**		**Pn**		**19 35 05.3**	**-0.5**
PRN				IAML			19 35 28.8	
	comp=N,628nm,0.6s							
PRN				IAML			19 36 03.5	
	comp=E,779nm,0.7s							
PKD	**Bear Valley Ra**	**3.04**	**287**		**Pn**		**19 35 08.4**	**-0.9**
MDPB	**Devils Postpil**	**3.06**	**327**		**Pn**		**19 35 09.6**	**-0.1**
PMPB	**Monarch Peak**	**3.32**	**291**		**Pn**		**19 35 12.1**	**-1.0**
PMPB				IAML			19 36 10.2	
	comp=N,510nm,0.8s							
PMPB				IAML			19 36 20.2	
	comp=E,590nm,0.8s							
NV11	**Mina Array Sit**	**3.47**	**344**		**Pn**		**19 35 15.2**	**-0.1**
NVAR	**Mina Array Bea**	**3.50**	**343**	Pn	**Pn**		**19 35 16.1**	**+0.3**
	comp=E,4.5nm,0.3s,baz=164,slow=13,SNR=46							
NVAR				Lg	Lg		19 36 14.2	
	comp=E,5.4nm,0.3s,baz=122,slow=16,SNR=2.5 comp=E,9.4nm,0.5s							
NVAR	**Mina Array Bea**	**3.50**	**343**		**Pn**		**19 35 15.9**	**+0.1**
BBGB	**Big Mountain B**	**3.63**	**295**		**Pn**		**19 35 17.1**	**-0.2**
BBGB				IAML			19 36 19.1	
	comp=E,674nm,0.7s							
BBGB				IAML			19 36 21.6	
	comp=N,670nm,1.1s							
CCUT	**Cedar City**	**3.81**	**49**		**Pn**		**19 35 20.5**	**+0.5**
KNB	**Kanab**	**3.87**	**59**		**Pn**		**19 35 21.0**	**+0.1**
SAO	**San Andreas Ge**	**4.00**	**296**		**Pn**		**19 35 21.9**	**-0.5**
WUAZ	**Wupatki**	**4.59**	**83**		**Pn**		**19 35 30.4**	**-0.4**
WUAZ				IAML			19 36 49.9	
	comp=N,246nm,0.7s							
WUAZ				IAML			19 36 58.9	
	comp=N,206nm,0.5s							
ELK	**Elko**	**5.81**	**13**	Pn	**Pn**		**19 35 48.5**	**+1.0**
	comp=N,0.8nm,0.3s,baz=196,slow=8.6,SNR=14							
ELK				Sn	**Sn**		**19 36 53.0**	**-1.5**
	comp=N,0.9nm,0.3s,baz=217,slow=20,SNR=0.9							
ELK				Lg	Lg		19 37 21.8	
	comp=N,3.2nm,0.3s,baz=79,slow=10,SNR=6.5 comp=N,4.8nm,0.6s							
ELK	**Elko**	**5.81**	**13**		**Pn**		**19 35 47.6**	**+0.1**
TUC	**Tucson**	**5.85**	**117**		**Pn**		**19 35 46.4**	**-1.5**
YBH	**Yreka Blue Hor**	**8.02**	**328**	Lg	Lg		19 38 35.9	
	baz=164,slow=10,SNR=2.0							
ANMO	**Albuquerque**	**8.62**	**88**	Pg	Pg		19 36 55.6	-10
	comp=N,0.2nm,0.3s,baz=249,slow=7.0,SNR=2.4							
ANMO				Lg	Lg		19 38 46.9	
	comp=N,0.3nm,0.3s,baz=198,slow=20,SNR=3.8							
PDAR	**Pinedale Array**	**9.59**	**35**	Pn	**Pn**		**19 36 41.7**	**+2.3**
	comp=N,0.1nm,0.3s,baz=229,slow=12,SNR=5.6							
PDAR				Lg	Lg		19 39 22.4	
	comp=N,0.1nm,0.3s,baz=221,slow=31,SNR=3.1 comp=N,0.8nm,0.7s							
TXAR	**Lajitas Array**	**12.63**	**113**	Pn	**Pn**		**19 37 22.3**	**+1.3**
	comp=N,0.6nm,0.3s,baz=292,slow=12,SNR=22							
TXAR				Lg	Lg		19 40 53.2	
	comp=N,0.1nm,0.3s,baz=314,slow=22,SNR=5.1 comp=N,0.7nm,0.4s							
ULM	**Lac du Bonnet**	**21.57**	**39**	P	**P**		**19 39 11.0**	**+0.3**
	comp=N,2.4nm,0.9s,baz=234,slow=10,SNR=5.9 comp=N,2.4nm,0.9s							
ILAR	**Eielson Array**	**34.75**	**338**	P	**P**		**19 41 13.4**	**+2.2**
	comp=N,0.7nm,0.9s,baz=154,slow=8.3,SNR=6.8 comp=N,0.7nm,0.9s							
SFJD	**Kangerlussuaq**	**49.04**	**28**	LR	LR		20 05 06.6	
	comp=N,337nm,19.3s,baz=312,slow=38							
BORG	**Borgarnes**	**61.16**	**29**	LR	LR		20 10 16.6	
	comp=N,133nm,18.1s,baz=330,slow=35							

*IDC **08** 19:39:23.4±0.8,3˚.06S×130˚.05E, h0km, mb3.9/9, mbtmp3.9/12, ML3.8/3, MS3.5/2, Error ellipse: s-maj=31.0km s-min=10.9km az=79.0*

*NEIC **08** 19:39:25.7±1.3,2˚.97S±0.˚07×129˚.90E±0˚.03, h10km±2km, mb4.0/7, Error ellipse: s-maj=13.0km s-min=3.8km az=162.0*

*DJA **08** 19:39:28.2±0.5,3˚S±2˚×13˚0E±˚, h17km±5km, M4.0/19, mb4.1/2, MLv3.9/19*

ISC 08 19:39:27.7±0.6, 2˚.95S±0˚.04×129˚.88E±0˚.05, h25km, n39, σ1°45/43, mb3.9/10, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.03**	**248**	P		**Pn**	**19 39 46.3**	**-0.2**
KRAI	**Karang Ratu**	**1.53**	**256**	P		**Pb**	**19 39 55.4**	**+0.1**
BNDI	**Bandanaira**	**1.56**	**179**	P		**Pb**	**19 39 57.1**	**+1.2**
BNDI				S		**Sb**	**19 40 19.4**	**+4.2**
AAI	**Ambon**	**1.83**	**246**	P		**Pb**	**19 39 59.3**	**-1.2**
FAKI	**Fak Fak**	**2.37**	**89**			**Pn**	**19 40 05.8**	**+0.8**
FAKI	**Fak Fak**	**2.37**	**89**	P		**Pn**	**19 40 06.2**	**+1.3**
SIJI	**Sorong**	**2.49**	**34**	Pn		**Pn**	**19 40 06.3**	**-0.3**
	16nm,0.3s,baz=244,slow=24,SNR=49							
SIJI				Sn		**Sn**	**19 40 36.3**	**+0.1**
	11nm,0.3s,baz=218,slow=19,SNR=4.6 56nm,0.3s							
SIJI	**Sorong**	**2.49**	**34**	P		**Pn**	**19 40 06.9**	**+0.3**
SIJI				S		**Sn**	**19 40 35.9**	**-0.4**
SWI	**Sorong**	**2.49**	**34**	P		**Pn**	**19 40 06.9**	**+0.3**
SWI				S		**Sn**	**19 40 36.4**	**+0.1**
NLAI	**Namlea**	**2.79**	**264**	P		**Pn**	**19 40 13.0**	**+2.2**
SANI	**Sanana**	**3.99**	**283**	P		**Pn**	**19 40 27.0**	**-0.3**
RKPI	**Ransiki, Papua**	**4.53**	**72**	P		**Pn**	**19 40 35.9**	**+1.2**
MWPI	**Manokwari, Pap**	**4.62**	**64**	P		**Pn**	**19 40 36.7**	**+0.8**
BAKI	**Biak**	**6.46**	**74**	P		**Pn**	**19 41 02.4**	**+1.1**
LUWI	**Luwuk**	**7.35**	**285**	Pn		**Pn**	**19 41 14.0**	**+0.5**
BATI	**Baumata**	**9.49**	**220**	Pn		Pn	19 41 52.7	+10
	1.8nm,0.3s,baz=84,slow=1.2,SNR=5.1							
BATI				LR		LR	19 45 00.3	
	comp=Z,156nm,19.6s,baz=72,slow=35							
MTN	**Manton Dam**	**9.91**	**173**	Pn		**Pn**	**19 41 48.1**	**-0.5**
KNRA	**Kununurra**	**12.69**	**185**	Pn		**Pn**	**19 42 24.7**	**-2.0**
FITZ	**Fitzroy Crossi**	**15.62**	**195**	Pn		**Pn**	**19 43 04.7**	**-1.5**
	0.5nm,0.3s,baz=29,slow=10,SNR=11 2.5nm,1.0s							
COEN	**Coen**	**17.09**	**131**	Pn		**Pn**	**19 43 23.8**	**-1.2**
COEN				IAmb		IAmb	19 43 26.2	
	comp=Z,8.3nm,1.2s							
WB0	**Warramunga Arr**	**17.29**	**166**	Pn		**Pn**	**19 43 24.5**	**-3.0**
WB0				IAmb		IAmb	19 43 45.7	
	comp=Z,9.5nm,1.2s							
WRA	**Warramunga Arr**	**17.44**	**166**	P		**Pn**	**19 43 26.6**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=347,slow=13,SNR=16							
WRA				S		**Sn**	**19 46 42.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=339,slow=20,SNR=1.9 comp=Z,1.3nm,0.5s							
WRA	**Warramunga Arr**	**17.44**	**166**			**Pn**	**19 43 26.5**	**-2.9**
AS31	**Alice Springs**	**20.96**	**170**			**P**	**19 44 08.9**	**-0.1**
AS31				IAmb		IAmb	19 44 10.4	
	comp=Z,8.1nm,1.0s							
ASAR	**Alice Springs**	**20.96**	**170**	P		**P**	**19 44 08.3**	**-0.7**
	comp=Z,15nm,0.7s,baz=348,slow=11,SNR=123							
ASAR				S		**S**	**19 47 59.2**	**-2.3**
	comp=Z,1.4nm,0.9s,baz=355,slow=22,SNR=4.4 comp=Z,15nm,0.7s							
STKA	**Stephens Creek**	**30.81**	**160**	P		**P**	**19 45 40.6**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=332,slow=8.9,SNR=1.9 comp=Z,1.3nm,0.6s							
STKA	**Stephens Creek**	**30.81**	**160**	P		**P**	**19 45 40.1**	**-1.5**
JCJ	**Chichijima**	**32.15**	**21**	LR		LR	19 56 37.4	
	comp=Z,156nm,20.4s,baz=172,slow=32							
CMAR	**Chiang Mai Arr**	**37.16**	**306**	P		**P**	**19 46 38.1**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=132,slow=8.0,SNR=5.1 comp=Z,0.5nm,0.3s							
LZDM	**Lanzhou Array**	**45.80**	**330**	P		**P**	**19 47 50.2**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=121,slow=10,SNR=2.1 comp=Z,0.2nm,0.3s							
SONM	**Songino Array**	**54.60**	**341**	P		**P**	**19 48 54.8**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=142,slow=7.3,SNR=2.2 comp=Z,0.3nm,0.6s							
PETK	**Petropavlovsk-**	**60.55**	**19**	P		**P**	**19 49 34.8**	**-1.0**
	comp=Z,5.7nm,1.1s,baz=202,slow=11,SNR=1.6 comp=Z,5.7nm,1.1s							
MKAR	**Makanchi Array**	**64.81**	**326**	P		**P**	**19 50 04.7**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=119,slow=7.1,SNR=6.0 comp=Z,0.2nm,0.5s							
MKAR	**Makanchi Array**	**64.81**	**326**	P		**P**	**19 50 04.2**	**-0.2**
ZAA0	**Zalesovo Array**	**67.93**	**333**	P		**P**	**19 50 24.5**	**+0.3**
ZAA0				IAmb		IAmb	19 50 39.0	
	comp=Z,1.8nm,0.9s							
ZALV	**Zalesovo Beam**	**67.93**	**333**	P		**P**	**19 50 25.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=142,slow=7.2,SNR=1.4 comp=Z,0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**67.93**	**333**	P		**P**	**19 50 24.4**	**+0.2**
KURBB	**Kurchatov Arra**	**69.03**	**328**	P		**P**	**19 50 31.5**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=128,slow=6.1,SNR=12 comp=Z,0.9nm,0.5s							
KURK	**Kurchatov**	**69.03**	**328**	P		**P**	**19 50 31.2**	**+0.1**
KURK				IAmb		IAmb	19 50 32.9	
	comp=Z,2.4nm,1.1s							

*IDC **08** 20:02:20.0±1.8, 0˚.02S×125˚.89E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=218.9km s-min=21.7km az=65.0*

*DJA **08** 20:02:24.3±0.3,0˚.N±4˚×12˚6E±˚, h10km, M3.2/9, MLv3.2/9*

ISC 08 20:02:26.3±1.1, 0˚.03S±0˚.08×125˚.9E±0˚.1, h44km, n7, σ1°09/7, mb3.5/4, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.68**	**62**	P		**Pn**	**20 02 53.9**	**+0.6**
MNI	**Morotai**	**1.79**	**324**	P		**Pn**	**20 02 55.3**	**+0.4**
SANI	**Sanana**	**2.01**	**177**	P		**Pn**	**20 02 58.7**	**+0.9**
WRA	**Warramunga Arr**	**21.46**	**158**	P		**P**	**20 07 09.3**	**-1.8**
	1.5nm,0.7s,baz=336,slow=11,SNR=9.0 1.5nm,0.7s							
ASAR	**Alice Springs**	**24.76**	**162**	P		**P**	**20 07 44.1**	**+0.1**
	0.7nm,0.6s,baz=343,slow=8.0,SNR=15 0.7nm,0.6s							
MKAR	**Makanchi Array**	**60.18**	**327**	P		**P**	**20 12 29.4**	**-0.3**
	0.4nm,0.5s,baz=122,slow=7.7,SNR=8.4 0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**64.46**	**329**	P		**P**	**20 12 58.5**	**+0.3**
	0.3nm,0.5s,baz=131,slow=6.2,SNR=4.4 0.3nm,0.5s							

*IDC **08** 20:03:03.5±0.9, 46˚.89N×155˚.83E, h0km, mb3.6/8, mbtmp3.6/10, ML2.9/2, Error ellipse: s-maj=25.7km s-min=20.3km az=143.0*

ISC 08 20:03:06.4±0.9, 46˚.9N±0˚.1×155˚.8E±0˚.1, h18km, n10, σ0°85/11, mb3.7/8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.30**	**10**	Pn		**Pn**	**20 04 37.3**	**-1.1**
	0.3nm,0.3s,baz=192,slow=12,SNR=6.9							
PETK				Sn		**Sn**	**20 05 50.3**	**+0.5**
	0.4nm,0.3s,baz=21,slow=30,SNR=5.4 3.4nm,0.8s							
ASAJ	**Asahikawa**	**9.69**	**258**	Pn		**Pn**	**20 05 24.5**	**-0.2**
	0.3nm,0.3s,baz=98,slow=15,SNR=4.8 1.8nm,0.5s							
MKAR	**Makanchi Array**	**48.49**	**298**	P		**P**	**20 11 48.5**	**+0.7**
	0.3nm,0.8s,baz=57,slow=5.3,SNR=2.9 0.3nm,0.8s							
KURBB	**Kurchatov Arra**	**48.88**	**304**	P		**P**	**20 11 50.5**	**-0.2**
	0.7nm,0.6s,baz=67,slow=8.6,SNR=4.7 0.7nm,0.6s							
BVAR	**Borovoye Array**	**52.16**	**310**	P		**P**	**20 12 15.0**	**-0.4**
	0.4nm,0.5s,baz=50,slow=9.5,SNR=3.0 0.4nm,0.5s							
CMAR	**Chiang Mai Arr**	**54.21**	**258**	P		**P**	**20 12 32.0**	**+1.0**
	0.3nm,0.4s,baz=40,slow=7.4,SNR=4.0 0.3nm,0.4s							
NVAR	**Mina Array Bea**	**60.71**	**64**	P		**P**	**20 13 17.3**	**+0.5**
	0.4nm,0.6s,baz=336,slow=6.6,SNR=2.1 0.4nm,0.6s							
WRA	**Warramunga Arr**	**69.32**	**202**	P		**P**	**20 14 11.2**	**-1.4**
	0.7nm,0.8s,baz=16,slow=5.7,SNR=3.8 0.7nm,0.8s							
ASAR	**Alice Springs**	**73.00**	**201**	P		**P**	**20 14 34.5**	**-0.3**
	0.4nm,0.7s,baz=13,slow=4.9,SNR=4.8 0.4nm,0.7s							
TXAR	**Lajitas Array**	**75.78**	**62**	P		**P**	**20 14 51.7**	**+0.4**
	1.0nm,0.5s,baz=306,slow=5.1,SNR=18 1.0nm,0.5s							

*NEIC **08** 20:03:36.9, 67˚.44N×146˚.81W, h7km*

*AEIC **08** 20:03:37.1±1.6, 67˚.41N±0˚.02×146˚.73W±0˚.05, h8km±5km, Error ellipse: s-maj=2.7km s-min=2.6km az=220.0*

*NEIC **08** 20:03:37.3±1.3, 67˚.41N±0˚.02×146˚.79W±0˚.05, h8km±5km, mb3.5/2, ML3.9/158, Mwr3.8/22, ML3.8(AEIC), Error ellipse: s-maj=2.9km s-min=2.7km az=96.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr0.18; Mθθ-4.31; Mφφ4.13; Mrθ3.74; Mrφ-1.34; Mθφ4.61; Fault plane solution: M₀7.40000×10¹⁴ NP1:φ₀306.55000°, δ36.67000°, λ178.64000°. NP2:φ₀37.64000°, δ89.19000°, λ53.34000°. Principal axes: T 7.2526, Plg35.0000°, Azm277.0000°; N 0.2916, Plg37.0000°, Azm38.0000°; P -7.5442, Plg34.0000°, Azm158.0000°;*

*IDC **08** 20:03:39.5±1.1, 67˚.42N×146˚.96W, h0km, mb3.5/4, mbtmp3.6/6, ML3.8/2, MS3.9/1 Error ellipse: s-maj=31.0km s-min=18.5km az=73.0*

ISC 08 20:03:37.4±0.6, 67˚.41N±0˚.03×146˚.76W±0˚.02, h10km, n152, σ0°95/162, mb3.5/5, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
F25K	**Christian Rive**	**0.47**	**66**			**Pg**	**20 03 46.2**	**-0.2**
G24K	**Hadweenzic Riv**	**0.76**	**202**			**Pg**	**20 03 51.7**	**-0.4**
G24K						**Sg**	**20 04 01.4**	**-0.7**
G24K				IAML			20 04 06.4	
	comp=E,5µm,0.8s							
G24K				IAML			20 04 06.5	
	comp=N,6µm,0.6s							
BMAR	**Burnt Mountain**	**0.84**	**88**			**Pg**	**20 03 53.3**	**-0.2**
E25K	**Arctic Village**	**0.85**	**32**			**Pg**	**20 03 52.9**	**-0.8**
E25K						**Sg**	**20 04 04.0**	**-0.7**
E24K	**Your Creek**	**0.94**	**316**			**Pb**	**20 03 54.8**	**-1.0**
E24K						**Sb**	**20 04 07.7**	**-0.6**
E24K				IAML			20 04 11.5	
	comp=N,3µm,0.6s							
FYU	**Fort Yukon**	**1.04**	**144**			**Pn**	**20 03 57.4**	**-0.5**
FYU						**Sn**	**20 04 11.7**	**-0.7**
FYU				IAML			20 04 13.6	
	comp=E,3µm,1.0s							
F26K	**Sheenjek River**	**1.04**	**73**			**Pg**	**20 03 56.7**	**-0.6**
F26K						**Sn**	**20 04 11.9**	**-0.8**
G26K	**Porcupine Rive**	**1.25**	**110**			**Pg**	**20 04 01.0**	**-0.3**
G26K						**Sg**	**20 04 17.1**	**-0.3**
G26K				IAML			20 04 21.2	
	comp=E,3µm,1.1s							
G26K				IAML			20 04 21.9	
	comp=N,2µm,0.9s							
E23K	**Chandalar**	**1.27**	**302**			**Pg**	**20 04 00.8**	**-0.9**
E23K						**Sb**	**20 04 16.5**	**-1.4**
E23K				IAML			20 04 20.3	
	comp=N,2µm,1.1s							
E23K				IAML			20 04 24.2	
	comp=E,2µm,0.7s							
COLD	**Coldfoot**	**1.35**	**264**			**Pb**	**20 04 02.1**	**-0.6**
COLD						**Sg**	**20 04 19.7**	**-1.0**
COLD				IAML			20 04 25.0	
	comp=N,2µm,0.5s							
G23K	**Bananza Creek**	**1.46**	**243**			**Pn**	**20 04 03.2**	**-0.5**
G23K						**Sb**	**20 04 23.0**	**-0.2**
G23K				IAML			20 04 27.4	
	comp=E,2µm,0.7s							
H24K	**Noodor Dome**	**1.64**	**196**			**Pn**	**20 04 05.9**	**-0.4**
H24K						**Sb**	**20 04 28.0**	**-0.4**
H24K				IAML			20 04 29.8	
	comp=E,1µm,0.8s							
H24K				IAML			20 04 29.8	
	comp=N,2µm,0.7s							
G22K	**Bettles**	**1.92**	**257**			**Pn**	**20 04 09.8**	**-0.2**
D25K	**Kavik River**	**1.93**	**4**			**Pb**	**20 04 11.2**	**-1.4**
D25K				IAML			20 04 39.5	
	comp=E,981nm,0.8s							
H23K	**Yukon River**	**1.94**	**216**			**Pn**	**20 04 10.3**	**-0.1**
H23K						**Sn**	**20 04 34.4**	**-0.4**
H23K				IAML			20 04 40.8	
	comp=E,1µm,0.3s							
H23K				IAML			20 04 41.0	
	comp=N,1µm,0.4s							
PRP	**Porcupine Dome**	**1.96**	**165**			**Pn**	**20 04 11.0**	**+0.2**
PRP						**Sn**	**20 04 35.4**	**0.0**
PRP				IAML			20 04 38.4	
	comp=E,880nm,0.4s							
PRP				IAML			20 04 39.3	
	comp=N,887nm,0.3s							
G27K	**Doyon Strip**	**2.08**	**104**			**Pn**	**20 04 12.3**	**0.0**
POKR	**Poker Plat Res**	**2.32**	**187**			**Pn**	**20 04 15.5**	**0.0**
POKR				IAML			20 04 50.5	
	comp=E,640nm,0.5s							
POKR				IAML			20 04 59.2	
	comp=N,623nm,0.9s							
H27K	**Steamboat Moun**	**2.38**	**117**			**Pn**	**20 04 17.6**	**+1.2**
H27K				IAML			20 04 58.0	
	comp=N,607nm,0.8s							
H27K				IAML			20 04 59.7	
	comp=E,581nm,0.8s							
H22K	**Ishtalitna Cre**	**2.39**	**233**			**Pn**	**20 04 16.3**	**-0.2**
H22K				IAML			20 04 54.6	
	comp=E,601nm,1.3s							
H22K				IAML			20 04 58.5	
	comp=N,761nm,1.2s							
I23K	**Minto, Yukon-K**	**2.50**	**206**			**Pn**	**20 04 18.1**	**+0.1**
I23K				IAML			20 04 57.6	
	comp=N,541nm,0.6s							
I23K				IAML			20 05 00.9	
	comp=E,459nm,0.6s							
MDM	**Murphy Dome**	**2.53**	**194**			**Pn**	**20 04 18.3**	**-0.1**
COLA	**College**	**2.58**	**190**			**Pn**	**20 04 19.2**	**0.0**
F21K	**Alatna River**	**2.62**	**269**			**Pn**	**20 04 19.9**	**+0.3**
F21K				IAML			20 05 02.0	
	comp=N,628nm,0.5s							
F21K				IAML			20 05 06.8	
	comp=E,532nm,0.6s							
ILAR	**Eielson Array**	**2.65**	**181**	Pn		**Pb**	**20 04 22.1**	**-2.7**
	comp=E,5.7nm,0.3s,baz=359,slow=15,SNR=128 comp=E,192nm,0.6s							
ILAR	**Eielson Array**	**2.65**	**181**			**Pn**	**20 04 20.0**	**-0.1**
F28M	**Old Crow**	**2.66**	**82**			**Pn**	**20 04 19.4**	**-0.7**
F28M				IAML			20 05 10.6	
	comp=N,439nm,0.9s							
I27K	**Kandik River**	**2.74**	**129**			**Pn**	**20 04 21.9**	**+0.4**
I27K				IAML			20 05 13.8	
	comp=N,654nm,1.1s							
G21K	**Allakaket**	**2.80**	**254**			**Pn**	**20 04 21.2**	**-1.0**
CCB	**Clear Creek Bu**	**2.81**	**189**			**Pn**	**20 04 22.0**	**-0.2**
CCB				IAML			20 05 08.2	
	comp=N,374nm,0.3s							
CCB				IAML			20 05 11.6	
	comp=E,401nm,0.3s							
D27M	**Malcolm River**	**2.83**	**47**			**Pn**	**20 04 23.0**	**+0.3**
J25K	**Salcha River,**	**2.86**	**168**			**Pn**	**20 04 23.4**	**+0.4**
E28M	**Babbage River**	**2.97**	**63**			**Pn**	**20 04 23.8**	**-0.7**
NEA2	**Nenana**	**2.98**	**200**			**Pn**	**20 04 24.1**	**-0.5**
H21K	**Melozitna River**	**2.99**	**237**			**Pn**	**20 04 24.4**	**-0.4**
H21K				IAML			20 05 15.1	
	comp=N,529nm,0.9s							
WRH	**Wood River Hil**	**3.00**	**191**			**Pn**	**20 04 24.8**	**-0.1**
WRH				IAML			20 05 13.9	
	comp=N,276nm,0.2s							
WRH				IAML			20 05 14.5	
	comp=E,364nm,0.4s							
HDA	**Harding Lake**	**3.01**	**182**			**Pn**	**20 04 25.4**	**+0.3**
HDA				IAML			20 05 15.3	
	comp=E,385nm,0.8s							
HDA				IAML			20 05 18.2	
	comp=N,345nm,0.8s							
I21K	**Tanana**	**3.08**	**226**			**Pn**	**20 04 26.0**	**+0.1**
IM02	**Indian Mountai**	**3.13**	**246**			**Pn**	**20 04 25.9**	**-0.9**
J26L	**Joseph Creek**	**3.20**	**154**			**Pn**	**20 04 27.8**	**+0.1**
J26L				IAML			20 05 17.3	
	comp=E,240nm,0.7s							
I28M	**Miner Creek**	**3.37**	**123**			**Pn**	**20 04 30.2**	**+0.1**
I28M				IAML			20 05 33.4	
	comp=E,234nm,0.9s							
I28M				IAML			20 05 34.4	
	comp=N,202nm,1.2s							
G29M	**Pine Creek**	**3.44**	**94**			**Pn**	**20 04 31.0**	**0.0**
G29M				IAML			20 05 45.1	
	comp=N,369nm,0.8s							
E29M	**Blow River**	**3.49**	**70**			**Pn**	**20 04 31.1**	**-0.5**
F20K	**Avaraart Lake**	**3.51**	**268**			**Pn**	**20 04 32.0**	**+0.2**
F20K				IAML			20 05 36.2	
	comp=E,240nm,0.8s							
**

	comp=N,132nm,1.2s							
KTH	**Kantishna Hill**	**4.24**	**206**			**Pn**	**20 04 41.9**	**-0.1**
KTH				IAML			20 05 54.4	
	comp=N,188nm,1.0s							
KTH				IAML			20 06 05.0	
	comp=E,160nm,1.2s							
G19K	**Purcell Mounta**	**4.28**	**258**			**Pn**	**20 04 42.3**	**-0.2**
F19K	**Shaleruckik Mo**	**4.34**	**267**			**Pn**	**20 04 42.8**	**-0.5**
F19K				IAML			20 06 17.4	
	comp=E,124nm,1.0s							
DHY	**Denali Highway**	**4.36**	**184**			**Pn**	**20 04 44.6**	**+0.9**
J20K	**Nowinta River**	**4.45**	**227**			**Pn**	**20 04 44.6**	**-0.1**
J20K				IAML			20 06 00.6	
	comp=N,179nm,0.5s							
PAX	**Paxson**	**4.49**	**172**			**Pn**	**20 04 46.1**	**+0.7**
J29N	**Klondike Camp**	**4.58**	**126**			**Pn**	**20 04 48.0**	**+1.3**
L26K	**Log Cabin Wild**	**4.63**	**160**			**Pn**	**20 04 47.8**	**+0.5**
MENT	**Mentasta**	**4.67**	**163**			**Pn**	**20 04 48.4**	**+0.6**
WAT7	**Susitna Watana**	**4.68**	**192**			**Pn**	**20 04 49.0**	**+1.0**
I30M	**Mount Dempster**	**4.72**	**113**			**Pn**	**20 04 49.0**	**+0.3**
I30M				IAML			20 06 13.1	
	comp=N,72nm,0.8s							
L27K	**Beaver Creek,**	**4.83**	**152**			**Pn**	**20 04 50.4**	**+0.3**
L27K				IAML			20 06 13.8	
	comp=E,107nm,0.8s							
L27K				IAML			20 06 18.4	
	comp=N,92nm,0.8s							
BCAR	**Beaver Creek A**	**4.83**	**152**			**Pn**	**20 04 50.5**	**+0.4**
WAT6	**Susitna Watana**	**4.87**	**185**			**Pn**	**20 04 51.5**	**+0.8**
G31M	**Satah River**	**4.89**	**90**			**Pn**	**20 04 50.0**	**-0.8**
G31M				IAML			20 06 23.0	
	comp=E,126nm,1.1s							
G31M				IAML			20 06 31.6	
	comp=N,92nm,1.3s							
G18K	**Tagagawik**	**4.97**	**258**			**Pn**	**20 04 51.8**	**-0.2**
G18K				IAML			20 06 25.0	
	comp=E,104nm,0.6s							
G18K				IAML			20 06 27.7	
	comp=N,78nm,1.3s							
J19K	**Poorman**	**5.01**	**231**			**Pn**	**20 04 52.1**	**-0.4**
J19K				IAML			20 06 22.3	
	comp=N,119nm,0.8s							
J19K				IAML			20 06 23.0	
	comp=E,121nm,1.2s							
F31M	**Tsiigehtchic**	**5.02**	**84**			**Pn**	**20 04 52.5**	**0.0**
F31M				IAML			20 06 21.2	
	comp=N,68nm,0.9s							
F31M				IAML			20 06 38.1	
	comp=E,70nm,1.4s							
PPLA	**Purkeypile**	**5.08**	**209**			**Pn**	**20 04 53.8**	**+0.3**
HARP	**HAARP**	**5.08**	**172**			**Pn**	**20 04 53.6**	**+0.2**
INK	**Inuvik**	**5.09**	**74**			**Pn**	**20 04 54.3**	**+0.8**
K20K	**Telida**	**5.09**	**220**			**Pn**	**20 04 53.1**	**-0.5**
J30M	**Hart River**	**5.12**	**119**			**Pn**	**20 04 55.7**	**+1.6**
J30M				IAML			20 06 25.3	
	comp=E,63nm,1.1s							
J30M				IAML			20 06 33.7	
	comp=N,64nm,1.8s							
F18K	**Selawik**	**5.12**	**267**			**Pn**	**20 04 53.6**	**-0.3**
H31M	**Peel River**	**5.20**	**102**			**Pn**	**20 04 54.2**	**-1.0**
H18K	**Honhosa River**	**5.20**	**250**			**Pn**	**20 04 55.0**	**-0.2**
H18K				IAML			20 06 24.0	
	comp=E,101nm,1.1s							
K29M	**Barlow Dome**	**5.24**	**129**			**Pn**	**20 04 56.1**	**+0.5**
CUT	**Chulitna**	**5.24**	**198**			**Pn**	**20 04 55.1**	**-0.5**
M26K	**Nabesna, AK**	**5.28**	**161**			**Pn**	**20 04 57.1**	**+1.0**
M26K				IAML			20 06 32.6	
	comp=E,67nm,0.8s							
M26K				IAML			20 06 40.7	
	comp=N,70nm,1.2s							
M24K	**Tolsona, Glenn**	**5.33**	**177**			**Pn**	**20 04 58.3**	**+1.4**
E18K	**Tukpahlearik C**	**5.34**	**277**			**Pn**	**20 04 58.0**	**+1.0**
E18K				IAML			20 06 35.6	
	comp=E,85nm,0.9s							
M27K	**Edge Creek, AK**	**5.48**	**155**			**Pn**	**20 04 60.0**	**+0.9**
C18K	**Utukok River**	**5.56**	**290**			**Pn**	**20 05 00.7**	**+0.6**
SCM	**Sheep Creek Mo**	**5.60**	**183**			**Pn**	**20 05 02.6**	**+1.9**
BVCY	**Beaver Creek**	**5.60**	**151**			**Pn**	**20 05 00.8**	**+0.1**
L29M	**L29M**	**5.63**	**136**			**Pn**	**20 05 01.0**	**-0.1**
M23K	**Glacier View**	**5.65**	**185**			**Pn**	**20 05 02.5**	**+1.1**
J18K	**Innoko River**	**5.73**	**231**			**Pn**	**20 05 01.7**	**-0.7**
GHO	**Glory Hole Cre**	**5.74**	**190**			**Pn**	**20 05 03.4**	**+0.9**
F17K	**Baldwin Pennin**	**5.78**	**267**			**Pn**	**20 05 03.1**	**0.0**
SKT	**Skwentna**	**5.82**	**203**			**Pn**	**20 05 04.2**	**+0.6**
E17K	**Hotham Inlet**	**5.86**	**274**			**Pn**	**20 05 04.4**	**+0.3**
M22K	**Willow**	**5.86**	**196**			**Pn**	**20 05 05.8**	**+1.7**
H17K	**Granite Mounta**	**5.88**	**251**			**Pn**	**20 05 04.5**	**+0.1**
N25K	**Chitina, Valde**	**5.90**	**170**	Pn		**Pn**	**20 05 04.4**	**-0.4**
PMR	**Palmer**	**5.93**	**191**			**Pn**	**20 05 06.1**	**+1.0**
KLU	**Klutina**	**5.95**	**176**			**Pn**	**20 05 07.0**	**+1.6**
KNK	**Knik Glacier**	**6.06**	**188**			**Pn**	**20 05 09.4**	**+2.4**
M29M	**Somme Creek**	**6.10**	**141**			**Pn**	**20 05 08.1**	**+0.5**
GLB	**Gilahina Butte**	**6.12**	**167**			**Pn**	**20 05 08.7**	**+0.9**
RDOG	**Red Dog Mine**	**6.17**	**283**			**Pn**	**20 05 08.5**	**+0.1**
M20K	**Styx River**	**6.18**	**209**			**Pn**	**20 05 09.1**	**+0.4**
YUK2	**White River**	**6.19**	**153**			**Pn**	**20 05 09.6**	**+0.9**
SUA	**Susitna One**	**6.21**	**198**			**Pn**	**20 05 11.1**	**+2.0**
MCARA	**McCarthy VSAT**	**6.26**	**163**	Pn		**Pn**	**20 05 10.9**	**+1.3**
YUK3	**Moose Creek**	**6.27**	**151**			**Pn**	**20 05 10.4**	**+0.5**
DIV	**Divide**	**6.32**	**176**			**Pn**	**20 05 11.3**	**+0.8**
VRDI	**Verde Repeater**	**6.37**	**165**			**Pn**	**20 05 12.7**	**+1.4**
M19K	**Big River Lodg**	**6.42**	**214**			**Pn**	**20 05 12.3**	**+0.5**
M30M	**Minto, Yukon**	**6.42**	**134**	Pn		**Pn**	**20 05 11.3**	**-0.6**
BMRM	**Bremner River**	**6.53**	**171**			**Pn**	**20 05 15.5**	**+2.1**
G16K	**Koyuk River**	**6.58**	**259**			**Pn**	**20 05 13.5**	**-0.4**
SPU	**Mount Spurr**	**6.66**	**203**	Pn		**Pn**	**20 05 16.1**	**+1.0**
L18K	**Granite Mounta**	**6.71**	**224**			**Pn**	**20 05 15.6**	**-0.2**
BARN	**Barnard Glacie**	**6.75**	**158**			**Pn**	**20 05 17.0**	**+0.5**
I17K	**Unalakleet**	**6.75**	**245**			**Pn**	**20 05 16.4**	**0.0**
K17K	**Iditarod**	**6.78**	**231**			**Pn**	**20 05 15.8**	**-0.9**
KIAG	**Kiagna River**	**6.79**	**162**			**Pn**	**20 05 17.7**	**+0.7**
CRQM	**Cirque**	**6.86**	**165**			**Pn**	**20 05 18.4**	**+0.3**
CTGM	**Chitina Glacie**	**6.88**	**157**			**Pn**	**20 05 19.4**	**+1.1**
TGL	**Tana Glacier**	**6.89**	**164**	Pn		**Pn**	**20 05 19.6**	**+1.2**
HIN	**Hinchinbrook I**	**7.04**	**179**	Pn		**Pn**	**20 05 21.0**	**+0.7**
GRNC	**Granite Creek**	**7.05**	**160**			**Pn**	**20 05 22.0**	**+1.3**
LOGN	**Logan Glacier**	**7.07**	**156**			**Pn**	**20 05 22.3**	**+1.4**
C16K	**Lisburne Hills**	**7.08**	**286**			**Pn**	**20 05 21.0**	**+0.2**
J16K	**Anvik River**	**7.11**	**241**			**Pn**	**20 05 20.8**	**-0.5**
M18K	**Stony River**	**7.11**	**218**			**Pn**	**20 05 20.9**	**-0.3**
L17K	**Donlin**	**7.22**	**228**			**Pn**	**20 05 23.2**	**+0.3**
YUK6	**Outpost Mounta**	**7.45**	**147**			**Pn**	**20 05 27.1**	**+1.0**
C36M	**Paulatuk**	**8.58**	**67**			**Pn**	**20 05 39.8**	**-1.5**
A36M	**Sachs Harbour**	**8.73**	**49**			**Pn**	**20 05 43.6**	**+0.2**
YKAW3	**Yellowknife Wh**	**14.31**	**94**			**Pn**	**20 06 58.3**	**-1.4**
YKA	**Yellowknife Ar**	**14.35**	**95**	Pn		**Pn**	**20 06 57.6**	**-2.7**
	comp=E,0.8nm,0.3s,baz=308,slow=13,SNR=20							
	comp=E,1.2nm,0.5s							
RES	**Resolute Bay**	**17.71**	**43**	Pn		**Pn**	**20 07 43.3**	**-0.3**
RES				IAmb	IAmb		20 08 24.4	
	comp=Z,1.8nm,1.1s							
ILON	**Igloolik, Nuna**	**23.00**	**55**	P		**P**	**20 08 41.7**	**0.0**
ILON				IAmb	IAmb		20 08 53.6	
	comp=Z,5.1nm,1.1s							
FCC	**Fort Churchill**	**24.59**	**85**	P		**P**	**20 08 56.3**	**-0.8**
SCHQ	**Schefferville**	**37.68**	**69**	LR	LR		20 26 40.4	
	comp=Z,175nm,19.8s,baz=321,slow=37							
TXAR	**Lajitas Array**	**45.90**	**124**	P		P	20 12 04.9	+5.1
	comp=Z,0.2nm,0.6s,baz=347,slow=5.9,SNR=2.7							
	comp=Z,0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**57.46**	**328**	P		**P**	**20 13 29.8**	**+4.0**
	comp=Z,0.1nm,0.3s,baz=31,slow=7.0,SNR=1.8							
	comp=Z,0.1nm,0.3s							
MKAR	**Makanchi Array**	**60.25**	**323**	P		**P**	**20 13 47.1**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=37,slow=7.4,SNR=2.5							
	comp=Z,0.3nm,0.8s							
AKASG	**Malin Array Be**	**62.18**	**3**	P		**P**	**20 14 02.3**	**+4.1**
	comp=Z,1.7nm,0.6s,baz=360,slow=6.8,SNR=7.4							
	comp=Z,1.7nm,0.6s							

*SJA **08** 20:38:43.8±0.6,23.°94S×66.°78W,h234km±6km,ML3.6, MW3.6*

*GUC **08** 20:38:46.4±0.6,23.°88S×66.°82W,h209km±5km,ML3.9*

ISC 08 20:38:48.4±1.3,**23.°90S**±0.°04×**66.°93W**±0.°05,**h181**km,**n36,** σ1§**59**/49,**2C-2D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.63**	**121**	⇓*iP*	**Pn**	**20 39 15.2**	**+0.8**
SALTA				*eS*	**Sn**	**20 39 37.3**	**+2.8**
SALTA		**0.63**	**121**	*eP*	**Pn**	**20 39 15.4**	**+0.9**
AF01	**San Pedro de A**	**1.49**	**309**	*eP*	**Pn**	**20 39 23.2**	**+2.6**
SLA	**San Lorenzo**	**1.53**	**123**	⇓*iP*	**Pn**	**20 39 20.5**	**-0.3**
SLA	**San Lorenzo**	**1.53**	**123**	*eP*	**Pn**	**20 39 20.6**	**-0.3**
AZAP	**Zapla**	**1.73**	**101**	*eP*	**Pn**	**20 39 21.8**	**-1.1**
FSA	**Cafayete**	**2.36**	**159**	*eP*	**Pn**	**20 39 28.5**	**-1.3**
PB06	**IPOC Station P**	**2.71**	**296**	⇑*iP*	**Pn**	**20 39 34.5**	**+0.7**
PB06				*eS*	**Sn**	**20 40 10.2**	**+1.2**
PB06				IAML		20 40 11.6	
	comp=N,280nm,0.2s						
PB06	**IPOC Station P**	**2.71**	**296**	*eP*	**Pn**	**20 39 34.4**	**+0.7**
PB06				*eS*	**Sn**	**20 40 11.5**	**+2.5**
PB06				IAML		20 40 14.1	
	comp=Z,174nm,0.1s						
PB09	**IPOC Station P**	**2.99**	**314**	*eP*	**Pn**	**20 39 38.0**	**+0.8**
PB09				*eS*	**Sn**	**20 40 16.9**	**+1.8**
PB09				IAML		20 40 20.9	
	comp=N,62nm,0.3s						
PB09	**IPOC Station P**	**2.99**	**314**	*eP*	**Pn**	**20 39 37.4**	**+0.3**
PB09				IAML		20 40 19.4	
	comp=Z,80nm,0.2s						
PB05	**IPOC Station P**	**3.19**	**288**	*eP*	**Pn**	**20 39 39.5**	**0.0**
PB05				IAML		20 40 21.5	
	comp=E,99nm,0.3s						
PB05	**IPOC Station P**	**3.19**	**288**	*eP*	**Pn**	**20 39 39.6**	**+0.2**
PB05				*eS*	**Sn**	**20 40 21.4**	**+2.2**
PB05				IAML		20 40 25.1	
	comp=Z,61nm,0.2s						
PB03	**IPOC Station P**	**3.19**	**305**	⇑*iP*	**Pn**	**20 39 39.8**	**+0.2**
PB03				IAML		20 40 22.0	
	comp=N,132nm,0.2s						
PB03	**IPOC Station P**	**3.19**	**305**	*eP*	**Pn**	**20 39 39.7**	**+0.2**
PB03				IAML		20 40 24.2	
	comp=Z,139nm,0.1s						
PB14	**IPOC Station P**	**3.25**	**256**	*eP*	**Pn**	**20 39 40.4**	**-0.1**
PB14	**IPOC Station P**	**3.25**	**256**	*eP*	**Pn**	**20 39 40.4**	**-0.1**
PB14				*eS*	**Sn**	**20 40 21.6**	**+0.5**
PB14				IAML		20 40 22.9	
	comp=Z,136nm,0.2s						
PB07	**IPOC Station P**	**3.48**	**308**	*eP*	**Pn**	**20 39 43.1**	**-0.1**
PB07	**IPOC Station P**	**3.48**	**308**	*eP*	**Pn**	**20 39 42.9**	**-0.3**
PB07				*eS*	**Sn**	**20 40 26.8**	**+0.8**
PB07				IAML		20 40 26.8	
	comp=Z,81nm,0.3s						
AC02	**Maricunga**	**3.54**	**214**	*eP*	**Pn**	**20 39 42.6**	**-1.5**
AC02	**Maricunga**	**3.54**	**214**	*eP*	**Pn**	**20 39 43.2**	**-1.0**
AC02				*eS*	**Sn**	**20 40 33.0**	**+5.3**
PB01	**IPOC Station P**	**3.70**	**320**	*eP*	**Pn**	**20 39 45.4**	**-0.5**
PB01	**IPOC Station P**	**3.70**	**320**	*eP*	**Pn**	**20 39 45.4**	**-0.5**
PB01				IAML		20 40 34.2	
	comp=Z,66nm,0.2s						
PB02	**IPOC Station P**	**3.76**	**313**	*eP*	**Pn**	**20 39 46.2**	**-0.4**
PB02	**IPOC Station P**	**3.76**	**313**	*eP*	**Pn**	**20 39 45.9**	**-0.7**
PB02				IAML		20 40 37.3	
	comp=Z,99nm,0.1s						
AC01	**Pan de Azucar**	**4.01**	**235**	*eP*	**Pn**	**20 39 47.9**	**-1.8**
AC01	**Pan de Azucar**	**4.01**	**235**	*eP*	**Pn**	**20 39 48.0**	**-1.6**
AC01				*eS*	Sn	20 40 21.1	-17
AC01				IAML		20 40 38.0	
	comp=Z,43nm,0.2s						
TINO	**Tinogasta**	**4.19**	**188**	*eP*	**Pn**	**20 39 51.4**	**-0.6**
PB08	**IPOC Station P**	**4.27**	**331**	*eP*	**Pn**	**20 39 53.4**	**0.0**
PB08	**IPOC Station P**	**4.27**	**331**	*eP*	**Pn**	**20 39 52.8**	**-0.7**
PB08				*eS*	**Sn**	**20 40 44.5**	**+0.2**
PB08				IAML		20 40 46.4	
	comp=Z,25nm,0.2s						
HMBC	**Humberstone**	**4.53**	**322**	*eP*	**Pn**	**20 39 54.1**	**-2.3**
HMBC	**Humberstone**	**4.53**	**322**	*eP*	**Pn**	**20 39 54.7**	**-1.7**
HMBC				*eS*	**Sn**	**20 40 48.0**	**-1.9**
HMBC				IAML		20 40 50.1	
	comp=Z,75nm,0.3s						
GO01	**Chusmiza**	**4.71**	**333**	*eP*	**Pn**	**20 39 58.3**	**-0.8**
GO01				*eS*	**Sn**	**20 40 54.8**	**+0.3**
GO01				IAML		20 40 57.9	
	comp=Z,21nm,0.2s						
GO03	**Copiapo**	**4.74**	**218**	*eP*	**Pn**	**20 39 56.4**	**-2.5**
GO03	**Copiapo**	**4.74**	**218**	*eP*	**Pn**	**20 39 56.8**	**-2.2**
GO03				*eS*	**Sn**	**20 40 52.5**	**-1.9**
GO03				IAML		20 40 55.0	
	comp=Z,22nm,0.5s						
PB11	**IPOC Station P**	**4.84**	**328**	*eP*	**Pn**	**20 39 57.8**	**-2.6**
PB11				*eS*	**Sn**	**20 40 54.6**	**-2.4**
PB11				IAML		20 40 58.3	
	comp=Z,53nm,0.2s						

*LDG **08** 20:40:55.6±0.1,42.°98N×2.°14W,h10km,Ml2.6/8, Error ellipse: s-maj=2.8km s-min=1.9km az=167.0*

*MDD **08** 20:40:55.1±0.2,42.°98N×2.°15W,h8km±1km,mb_Lg2.3/47, Error ellipse: s-maj=1.8km s-min=1.2km az=173.0*

ISC 08 20:40:53.6±1.2,**42.°96N**±0.°02×**2.°17W**±0.°02,**h10**km±10km, **n27,**σ1§**56**/63,**Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EARA	**Aranguren**	**0.47**	**114**	Pg	**Pb**	**20 41 04.3**	**+0.2**
EARA				Sg	**Sb**	**20 41 10.9**	**-0.2**
EARA				*i* lVmb_Lg		20 41 14.0	
EORO	**Oroz-Betelu**	**0.64**	**96**	Pg	**Pb**	**20 41 06.6**	**-0.3**
EORO				Sg	**Sb**	**20 41 15.5**	**-0.4**
EORO				*i* lVmb_Lg		20 41 18.8	
SJPF	**Ste Jean**	**0.71**	**78**	*ePg*	**Pb**	**20 41 07.8**	**-0.3**
SJPF				*eSg*	**Sg**	**20 41 17.3**	**+0.7**
	32nm,0.2s						
ELAN	**Lanestosa**	**0.96**	**287**	Pg	**Pn**	**20 41 12.7**	**-0.6**
ELAN				Sg	**Sn**	**20 41 26.5**	**-0.7**
ELAN				*i* lVmb_Lg		20 41 30.5	
ETSF	**Etsaut**	**1.18**	**93**	*ePg*	**Pg**	**20 41 16.8**	**+0.4**
ETSF				*eSg*	**Sn**	**20 41 33.0**	**+0.4**
	38nm,0.3s						
ESAC	**San Caprasio**	**1.77**	**134**	Pg	**Pg**	**20 41 27.5**	**-0.1**
ESAC				Sg	**Sg**	**20 41 51.1**	**+0.6**
ESAC				*i* lVmb_Lg		20 41 55.2	
EPF	**Esparros**	**1.84**	**87**	*ePn*	**Pb**	**20 41 27.9**	**+0.4**
EPF				*ePg*	**Pg**	**20 41 30.3**	**+1.3**
EPF				*eSn*	**Sn**	**20 41 49.3**	**+0.5**
EPF				*eSg*	**Sg**	**20 41 52.7**	**-0.1**
	13nm,0.3s						
ETOR	**Torete**	**2.15**	**178**	Pg	**Pg**	**20 41 33.5**	**-1.3**
ETOR				Sn	**Sn**	**20 41 56.2**	**-0.1**
ETOR				*i* lVmb_Lg		20 42 04.0	
VIER	**Vielha - Casau**	**2.19**	**96**	Pg	**Pb**	**20 41 34.0**	**+0.6**
VIER				Sg	**Sg**	**20 42 03.9**	**0.0**
EARI	**Arriondas**	**2.25**	**280**	Pn	**Pn**	**20 41 31.3**	**+0.3**
EARI				Sn	**Sn**	**20 41 59.3**	**+0.4**
EARI				Sg	**Sg**	**20 42 06.7**	**+0.8**
EARI				*i* lVmb_Lg		20 42 06.9	
E0901	**Celadas (Terue**	**2.60**	**162**	Sg	**Sg**	**20 42 19.0**	**+1.8**
E0901				*i* lVmb_Lg		20 42 23.7	
ERTA	**Horta de San J**	**2.74**	**136**	Pn	**Pn**	**20 41 38.1**	**+0.4**
ERTA				Sn	**Sn**	**20 42 10.6**	**-0.4**
ERTA				Sg	**Sg**	**20 42 20.2**	**-1.4**
ERTA				*i* lVmb_Lg		20 42 26.0	
GUD	**Guadarrama**	**2.75**	**213**	Pn	**Pn**	**20 41 38.3**	**+0.3**
GUD				Sn	**Sn**	**20 42 10.5**	**-0.9**
GUD				Sg	**Sb**	**20 42 18.6**	**+1.6**
GUD				*i* lVmb_Lg		20 42 25.6	
LFF	**La Frestale**	**2.88**	**46**	*ePn*	**Pn**	**20 41 40.6**	**+1.0**
LFF				*ePg*	**Pg**	**20 41 48.0**	**-0.9**
LFF				*eSn*	**Sn**	**20 42 12.3**	**-2.1**
LFF				*eSg*	**Sg**	**20 42 23.7**	**-2.5**
	3.2nm,0.3s						
EMOS	**Mosqueruela**	**2.89**	**153**	Pn	**Pn**	**20 41 40.3**	**+0.3**
EMOS				Sg	**Sg**	**20 42 26.2**	**-0.4**
EMOS				*i* lVmb_Lg		20 42 28.9	
EPOB	**Poblet**	**2.90**	**123**	Pn	**Pn**	**20 41 40.3**	**+0.3**
EPOB				Sn	**Sn**	**20 42 13.9**	**-1.1**
EPOB				Sg	**Sg**	**20 42 24.6**	**-2.3**
EPOB				*i* lVmb_Lg		20 42 36.0	
MTLF	**Montolieu**	**3.23**	**82**	*ePn*	**Pn**	**20 41 46.0**	**+1.5**
MTLF				*ePg*	**Pg**	**20 41 55.5**	**0.0**
MTLF				*eSn*	**Sn**	**20 42 21.7**	**-1.3**
MTLF				*eSg*	**Sg**	**20 42 35.3**	**-2.1**
	1.6nm,0.3s						
ECAL	**Calabor**	**3.53**	**255**	Pn	**Pn**	**20 41 49.4**	**+0.7**
ECAL				Sn	**Sn**	**20 42 29.0**	**-1.5**
ECAL				*i* lVmb_Lg		20 42 48.7	
RJF	**Les Rejaudoux**	**3.54**	**47**	*ePn*	**Pn**	**20 41 49.0**	**+0.3**
RJF				*ePg*	**Pg**	**20 42 00.1**	**-1.3**
RJF				*eSn*	**Sn**	**20 42 28.0**	**-2.5**
RJF				*eSg*	**Sg**	**20 42 44.8**	**-2.4**
	2.8nm,0.3s						
CAF	**Calviac**	**3.63**	**56**	*ePn*	**Pn**	**20 41 50.1**	**+0.1**
CAF				*ePg*	**Pg**	**20 42 03.2**	**0.0**
CAF				*eSn*	**Sn**	**20 42 30.9**	**-2.0**
	0.8nm,0.2s						
PAB	**San Pablo**	**3.79**	**206**	Sn	**Sn**	**20 42 35.4**	**-1.5**
PAB				*i* lVmb_Lg		20 43 06.7	
MFF	**Saint Martin d**	**3.91**	**21**	*eSg*	**Sg**	**20 42 57.1**	**-2.1**
	12nm,0.9s						
MFF				*eSg*	**Sb**	**20 42 57.5**	**+7.4**
	12nm,0.5s						
MVO	**Moncorvo**	**4.04**	**245**	*ePn*	**Pn**	**20 41 56.3**	**+0.6**
EPLA	**Plasencia**	**4.12**	**227**	Pn	**Pn**	**20 41 57.4**	**+0.6**
EPLA				Sn	**Sn**	**20 42 43.0**	**-2.1**
EPLA				*i* lVmb_Lg		20 43 03.5	
CIBOR	**Castaar de Ib**	**4.13**	**217**	Pn	**Pn**	**20 41 57.5**	**+0.6**
CIBOR				Sn	**Sn**	**20 42 43.4**	**-1.9**
EAGO	**Agolada(Pontev**	**4.35**	**270**	Pn	**Pn**	**20 42 00.4**	**+0.5**
PMRV	**Marv??o**	**5.29**	**230**	*ePn*	**Pn**	**20 42 13.3**	**+0.5**
PMRV				*eSn*	**Sn**	**20 43 11.1**	**-2.7**

*NOU **08** 20:50:45.2,32.°63S×176.°29W,h81km,mb5.2/28,South of Kermadec Islands*

*BJI **08** 20:50:49.8,31.°71S×178.°23W,h11km,mb4.9/14,Ms5.0/2, Ms7 4.7/2*

*WEL **08** 20:50:50.8±0.8,32.°5±7.°×17.°8W±1.°6,h96km±29km, M5.3/11,mB5.5/6,ML5.4/12,MLv5.6/11,Mw(mB)4.9/6, Error ellipse: s-maj=22.0km s-min=3.7km az=112.5*

*MOS **08** 20:50:55.6±1.0,31.°91S×178.°76W,h46km,mb5.2/15, Error ellipse: s-maj=11.7km s-min=9.6km az=79.8*

*IDC **08** 20:50:57.1±1.3,31.°86S×178.°85W,h49km±11km,mb4.5/14, mbtmp4.8/15,ML5.3/2,MS3.6/3,Error ellipse: s-maj=13.9km s-min=9.4km az=109.0*

*GCMT **08** 20:50:58.2±0.4,31.°84S±0.°03×178.°55W±0.°03,h54km±2km, MW4.9/47,Moment Tensor Solution. s40,c47; s47,c60; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr2.61±.17; Mθθ0.04±.14; Mϕϕ-2.64±.11; Mrθ0.28±.10; Mθϕ-0.32±.11; Mϕr0.92±.11; Best double couple: Mo2.81200×10^16^ NP1:φs183.00000°,δ35.00000°,λ84.00000°. NP2: φs10.00000°,δ55.00000°,λ94.00000°. Principal axes: T 2.7840, Plg80.0000°, Azm297.0000°; N 0.0640, Plg4.0000°, Azm188.0000°; P -2.8400, Plg10.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 20:50:58.1±2.0,31.°96S±0.°08×178.°7W±0.°1,h50km±5km, mb5.2/54,Mww4.8/10 Error ellipse: s-maj=14.4km s-min=11.0km az=96.0*

ISC 08 20:50:55.2±0.3,**32.°01S**±0.°04×**178.°53W**±0.°06,**h38**km±2km, **n364,**σ1§**64**/386,**mb5.1**/68,**19C-10D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.79**	**11**	P	**Pn**	**20 51 37.9**	**+0.6**
GLKZ				S	**Sn**	**20 52 09.7**	**0.0**
RAO	**Raoul Island**	**2.80**	**11**	P	**Pn**	**20 51 38.5**	**+1.0**
	402nm,0.3s,baz=240,slow=20,SNR=15						
RAO				S	**Sn**	**20 52 10.2**	**+0.2**
	3μm,0.3s,baz=128,slow=19,SNR=7.3						
	1μm,0.3s						
RAO	**Raoul Island**	**2.80**	**11**		**Pn**	**20 51 38.0**	**+0.6**
RAO				Sn	**Sn**	**20 52 09.7**	**-0.2**
RAO	**Raoul Island**	**2.80**	**11**	P	**Pn**	**20 51 38.9**	**+1.4**
RAO	**Raoul Island**	**2.80**	**11**	P	**Pn**	**20 51 38.0**	**+0.6**
RAO						20 52 09.7	
RAO	**Raoul Island**	**2.80**	**11**	P	**Pn**	**20 51 38.4**	**+1.0**
RAO				S	**Sn**	**20 52 10.2**	**+0.2**
RIZ	**Raoul Island**	**2.81**	**11**	P	**Pn**	**20 51 33.8**	**-3.8**
MXZ	**Matakaoa Point**	**6.12**	**204**		**Pn**	**20 52 21.6**	**-1.4**
MXZ	**Matakaoa Point**	**6.12**	**204**	P	**Pn**	**20 52 22.1**	**-0.9**
MXZ				S	**Sn**	**20 53 34.3**	**+2.6**
HAZ	**Te Kaha**	**6.48**	**207**	P	**Pn**	**20 52 27.4**	**-0.6**
WIZ	**White Island**	**6.53**	**211**	P	**Pn**	**20 52 30.2**	**+1.5**
GRZ	**Great Barrier**	**6.53**	**228**	P	**Pn**	**20 52 32.9**	**+4.2**
PUZ	**Puketiti**	**6.59**	**203**	P	**Pn**	**20 52 27.9**	**-1.7**
KUZ	**Kuaotunu**	**6.70**	**224**	P	**Pn

comp=Z,95nm,1.6s
CAN Canberra 27.16 254 P P 20 56 36.5 +1.5
CAN pmax pmax
comp=Z,95nm,1.6s
EIDS Eidsvold 27.41 276 P P 20 56 38.4 +1.2
comp=Z,26nm,1.0s
EIDS Eidsvold 27.41 276 P 20 56 37.8 +0.6
EIDS IAmb IAmb 20 57 09.9
comp=Z,83nm,1.9s
AUNRC North Rockhamp 28.64 280 P P 20 56 52.4 +4.1
TAU Tasmania Unive 29.02 238 P P 20 56 51.7 +0.3
TAU IAmb IAmb 20 57 44.8
comp=Z,92nm,1.5s
TAU Tasmania Unive 29.02 238 P P 20 56 51.7 +0.3
TAU pmax pmax
comp=Z,92nm,1.5s
TOO Toolangi 29.94 249 P P 20 56 59.7 0.0
TOO Toolangi 29.94 249 P P 20 56 59.7 0.0
TOO pmax pmax
comp=Z,34nm,1.9s
CMSA Cobar Meteorol 30.33 261 P P 20 57 05.5 +2.3
comp=Z,40nm,1.1s
CMSA Cobar Meteorol 30.33 261 P P 20 57 05.7 +2.5
QLP Quilpie 32.81 270 P P 20 57 26.7 +1.7
comp=Z,55nm,0.6s
QLP Quilpie 32.81 270 P P 20 57 27.7 +2.7
ARPS Mount Arapiles 32.88 251 P P 20 57 27.1 +1.6
comp=Z,16nm,1.0s
AUAYR Ayr State High 32.93 284 P P 20 57 29.9 +3.8
CTA Charters Tower 33.64 282 P P 20 57 35.4 +3.0
CTAO Charters Tower 33.64 282 P 20 57 33.1 +0.7
CTAO IAmb IAmb 20 57 36.3
comp=Z,36nm,0.8s
CTAO Charters Tower 33.64 282 P P 20 57 34.9 +2.5
CTAO Charters Tower 33.64 282 P P 20 57 33.1 +0.7
CTAO pmax pmax
comp=Z,36nm,0.8s
CTAO Charters Tower 33.64 282 P P 20 57 33.6 +1.3
STKA Stephens Creek 33.70 259 P P 20 57 34.5 +1.8
comp=Z,67nm,0.7s
STKA Stephens Creek 33.70 259 P P 20 57 34.4 +1.6
comp=Z,10nm,0.7s,baz=101,slow=10,SNR=20
STKA LR LR 21 09 58.1
comp=Z,253nm,19.1s,baz=64,slow=34
STKA Stephens Creek 33.70 259 P 20 57 33.4 +0.7
STKA IAmb IAmb 20 57 35.7
comp=Z,44nm,0.7s
STKA Stephens Creek 33.70 259 P P 20 57 33.7 +0.9
STKA Stephens Creek 33.70 259 ⇓eP P 20 57 34.1 +1.3
HTT Hallett 35.64 256 P P 20 57 50.6 +1.1
comp=Z,8.6nm,0.8s
HTT Hallett 35.64 256 P P 20 57 49.7 +0.1
MTSU Mount Surprise 36.19 283 P P 20 57 55.8 +1.6
comp=Z,39nm,0.7s
MTSU Mount Surprise 36.19 283 P P 20 57 55.9 +1.6
BBOO Buckleboo 38.12 256 P P 20 58 10.6 0.0
comp=Z,35nm,0.7s
BBOO Buckleboo 38.12 256 P 20 58 09.8 -0.8
BBOO IAmb IAmb 20 58 11.4
comp=Z,23nm,0.7s
BBOO Buckleboo 38.12 256 P P 20 58 10.5 0.0
PMG Port Moresby 38.91 298 P P 20 58 17.6 +0.3
PMG IAmb IAmb 20 58 18.9
comp=Z,22nm,0.8s
PMG Port Moresby 38.91 298 deP P 20 58 14.9 -2.5
PMG pmax pmax
comp=Z,19nm,0.7s
RABL Rabaul 39.00 309 P P 20 58 18.2 +0.1
QIS Mount Isa 39.01 277 P P 20 58 19.2 +1.0
comp=Z,21nm,0.9s
QIS Mount Isa 39.01 277 P P 20 58 19.2 +1.0
COEN Coen 39.31 288 P P 20 58 22.4 +1.8
comp=Z,74nm,0.8s
COEN Coen 39.31 288 P 20 58 21.5 +0.8
COEN IAmb IAmb 20 58 23.1
comp=Z,51nm,0.8s
COEN Coen 39.31 288 P P 20 58 22.5 +1.8
AS31 Alice Springs 42.59 269 P 20 58 47.6 -0.1
ASAR Alice Springs 42.59 269 P P 20 58 47.6 -0.1
comp=Z,44nm,0.7s,baz=103,slow=7.5,SNR=349
ASAR PcP PcP 21 00 38.9 -0.7
comp=Z,1.8nm,0.8s,baz=110,slow=5.1,SNR=1.2
ASAR S S 21 05 04.4 -3.7
comp=Z,2.6nm,1.0s,baz=109,slow=15,SNR=9.6
ASAR PKiKP PKiKP 21 07 42.6 -1.6
comp=Z,0.4nm,0.6s,baz=141,slow=1.4,SNR=5.6
comp=Z,44nm,0.7s
AUALC St Philip's Co 42.60 269 P P 20 58 48.1 +0.3
WRAB Tennant Creek 43.72 274 P P 20 58 56.8 -0.1
WRAB Tennant Creek 43.72 274 c iP P 20 58 56.5 -0.4
WRAB pmax pmax
comp=Z,23nm,0.7s
WRAB Tennant Creek 43.72 274 P P 20 58 56.6 -0.3
WRA Warramunga Arr 43.73 274 P P 20 58 56.6 -0.4
comp=Z,51nm,0.6s,baz=115,slow=7.6,SNR=663
WRA PcP PcP 21 00 42.6 -0.8
comp=Z,3.3nm,1.0s,baz=129,slow=2.9,SNR=1.4
WRA S S 21 05 20.0 -4.8
comp=Z,1.3nm,1.0s,baz=113,slow=14,SNR=4.2
WRA PKiKP PKiKP 21 07 44.0 -1.3
comp=Z,0.4nm,0.5s,baz=149,slow=0.6,SNR=7.8
comp=Z,51nm,0.6s
WRA Warramunga Arr 43.73 274 P P 20 58 55.3 -1.6
WB0 Warramunga Arr 43.76 274 P P 20 58 56.6 -0.6
FORT Forrest 45.21 257 P P 20 59 08.2 -0.4
comp=Z,45nm,0.7s
FORT Forrest 45.21 257 P 20 59 07.8 -0.8
FORT IAmb IAmb 20 59 08.5
comp=Z,27nm,0.7s
SBA Scott Base 46.40 184 P P 20 59 19.7 +2.3
SBA Scott Base 46.40 184 P P 20 59 19.7 +2.3
SBA pmax pmax
comp=Z,99nm,1.5s
VNDA Vanda 46.45 186 P P 20 59 20.4 +2.6
comp=Z,3.1nm,0.7s,baz=356,slow=8.8,SNR=11
comp=Z,3.1nm,0.7s
VNDA Vanda 46.45 186 P P 20 59 19.6 +1.8
VNDA IAmb IAmb 21 00 26.1
comp=Z,50nm,1.9s
WRKA Warakurna 46.85 264 P P 20 59 20.8 -0.8
comp=Z,14nm,1.2s
MTN Manton Dam 49.80 281 P 20 59 43.7 -0.8
DRS Darwin Rock St 50.21 281 P P 20 59 47.6 0.0
KNRA Kununurra 50.39 276 P P 20 59 48.5 -0.4
KNRA IAmb IAmb 20 59 52.6
comp=Z,20nm,0.8s
CCD Concordia, Ant 51.28 196 P P 20 59 56.3 +1.0
CCD PcP PcP 21 01 10.0 +0.1
KLBR Kellerberrin 53.41 252 P P 21 00 08.6 -2.7
CASY Casey 53.51 208 P 21 00 10.8 -0.6
CASY Casey 53.51 208 P P 21 00 11.0 -0.4
CASY PcP PcP 21 01 17.2 -0.6
FAKI Fak Fak 54.49 292 P P 21 00 17.5 -1.8
FAKI IAmb IAmb 21 00 20.4
comp=Z,50nm,1.1s
MORW Morawa 55.65 255 P P 21 00 25.8 -1.8
MORW IAmb IAmb 21 02 29.0
comp=Z,72nm,1.7s
PUH Pauahi 55.77 27 P P 21 00 29.7 +1.2
KNHH Kane Nui o Ham 55.79 27 P P 21 00 30.0 +1.4
HMH Humu'ula Sheep 55.87 26 P P 21 00 31.0 +1.6
SOEI Soe 57.15 280 P P 21 00 39.0 +0.5
SOEI Soe 57.15 280 P P 21 00 37.6 -0.9
SOEI Soe 57.15 280 P P 21 00 38.6 +0.1
comp=Z,52nm,0.9s
BATI Baumata 57.42 279 P P 21 00 40.0 -0.3
comp=Z,38nm,1.0s
QSPA South Pole Qui 58.10 180 P P 21 00 46.9 +2.3
comp=Z,13nm,0.5s,baz=40,slow=1.2,SNR=15
comp=Z,13nm,0.5s
QSPA South Pole Qui 58.10 180 P P 21 00 46.4 +1.9
QSPA South Pole Qui 58.10 180 P P 21 00 47.0 +2.5
MMRI Maumere 59.44 279 P P 21 00 53.9 -0.5
MMRI IAmb IAmb 21 00 55.1
comp=Z,41nm,1.1s
SANI Sanana 60.01 288 P P 21 00 57.8 -0.5
SANI Sanana 60.01 288 P P 21 00 56.2 -2.1
LUWI Luwuk 63.20 287 P P 21 01 19.4 -0.4
LUWI IAmb IAmb 21 02 24.3
comp=Z,20nm,0.9s
PCI Palu 65.68 285 P P 21 01 35.4 -0.6
comp=Z,27nm,1.1s
MPSI Mapaga 66.34 286 P P 21 01 38.2 -2.0
comp=Z,9.8nm,0.8s
MAW Mawson 70.64 201 P P 21 02 08.1 +1.8
comp=Z,9.0nm,0.5s,baz=133,slow=7.3,SNR=2.3
comp=Z,9.0nm,0.5s
SBUM Sibu 73.84 283 P P 21 02 25.8 -0.5
MG03 Isla Dawson 74.41 144 P P 21 02 30.3 +1.4
ELIB Princess Elisa 75.20 187 dP P 21 02 34.3 +0.8
comp=Z,16nm,0.7s
SNAA Sanae 76.56 179 ⇓pP P 21 02 46.5 +5.3
comp=Z,158nm,0.4s
SNAA Sanae 76.56 179 P P 21 02 42.1 +1.0
comp=Z,26nm,0.9s,baz=171,slow=8.7,SNR=4.2
comp=Z,26nm,0.9s
SNAA Sanae 76.56 179 P 21 02 43.0 +1.8
SNAA IAmb IAmb 21 02 47.0
comp=Z,20nm,0.7s
SNAA Sanae 76.56 179 ceP P 21 02 41.3 +0.2
SNAA pmax pmax
comp=Z,8.0nm,1.1s
VNA3 Neumayer Olymp 76.73 176 ⇑P P 21 02 42.8 +0.8
comp=Z,7.8nm,0.5s
VNA3 ⇓pP **pP 21 02 48.0 -4.8**
comp=Z,72nm,0.7s
MDSI Maura Dua 76.86 273 P P 21 02 41.3 -2.3
comp=Z,850nmcomp=Z,25nm,0.7s
VNA2 Neumayer--Watz 77.16 177 ⇓P P 21 02 45.8 +1.3
comp=Z,17nm,0.6s,baz=170,slow=4.8
VNA2 ⇓pP **PcP 21 02 50.5 -4.6**
baz=166,slow=5.2
VNA1 Neumayer--Stat 77.39 177 ⇑P P 21 02 46.9 +1.3
comp=Z,2.3nm,0.4s
VNA1 ⇑pP **PcP 21 02 52.2 -3.9**
comp=Z,50nm,0.9s
COYC Coyhaique 78.08 136 P P 21 02 52.8 +2.8
JGF Kuroka 78.97 325 P P 21 02 54.3 -0.6
JGF IAmb IAmb 21 04 55.2
comp=Z,69nm,1.6s
MJAR Matsushiro Arr 79.31 326 P P 21 02 55.4 -1.3
comp=Z,3.1nm,1.0s,baz=137,slow=5.4,SNR=3.7
comp=Z,3.1nm,1.0s
MAJO Matsushiro 79.31 326 ⇓eP P 21 02 55.0 -1.7
MAJO pmax pmax
comp=Z,82nm,3.6s
LL02 Futaleuf 79.55 135 P P 21 02 59.7 +1.5
H03S2 Juan Fernandez 79.96 124 T T 22 31 36.1
baz=236,slow=74,SNR=117
H03S1 Juan Fernandez 79.97 124 T T 22 31 40.0
baz=236,slow=74,SNR=104
H03S3 Juan Fernandez 79.98 124 T T 22 31 38.8
baz=236,slow=74,SNR=107
H03N3 Juan Fernandez 80.16 123 T T 22 31 48.3
baz=240,slow=72,SNR=295
H03N2 Juan Fernandez 80.16 123 T T 22 31 47.9
baz=240,slow=72,SNR=220
H03N1 Juan Fernandez 80.18 123 T T 22 31 54.0
baz=240,slow=72,SNR=590
PLCA Paso Flores 81.75 133 P P 21 03 12.1 +2.1
comp=Z,4.8nm,0.8s,baz=232,slow=4.9,SNR=21
comp=Z,4.8nm,0.8s
PLCA Paso Flores 81.75 133 P P 21 03 12.4 +2.3
PLCA Paso Flores 81.75 133 P P 21 03 12.8 +2.7
PLCA PcP PcP 21 03 16.7 +1.0
BI02 San Fabin de 83.63 129 P P 21 03 21.6 +1.7
JKA Kamikawa-asahi 83.66 333 P P 21 03 19.6 +0.2
JKA IAmb IAmb 21 05 31.3
comp=Z,100nm,2.0s
ASAJ Asahikawa 83.66 333 P P 21 03 19.6 +0.1
ASAJ pmax pmax
comp=Z,100nm,2.0s
IPM Ipoh 84.28 279 P P 21 03 21.6 -1.8
IPM IAmb IAmb 21 04 28.6
comp=Z,32nm,1.7s
BO02 Sierra Bellavi 85.04 128 P 21 03 29.2 +2.1
KSRS Korea Array 85.28 320 P P 21 03 28.4 +0.6
comp=Z,2.7nm,0.7s,baz=141,slow=6.6,SNR=9.0
comp=Z,2.7nm,0.7s
KSAR Wonju Array Be 85.29 320 P P 21 03 28.9 +1.0
KSAR Wonju Array Be 85.29 320 P P 21 03 28.9 +1.0
GSI Gunungsitoli 85.50 274 P P 21 03 28.5 -1.1
YSS Yuzhno-Sakhali 86.00 335 ⇑eP P 21 03 31.3 +0.2
YSS pmax pmax
comp=Z,6.0nm,0.9s
NJ2 Nanjing 86.95 311 eP P 21 03 38.8 +2.6
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
CO02 Combarbal 86.98 125 P P 21 03 38.1 +1.3
CO02 IAmb IAmb 21 04 07.7
comp=Z,32nm,1.3s
PEA0B Petropavlovsk- 87.26 346 P P 21 03 38.7 +1.5
PEA0B Petropavlovsk- 87.26 346 P P 21 03 38.7 +1.5
PEA0B pmax pmax
comp=Z,78nm,1.4s
PETK Petropavlovsk- 87.26 346 P P 21 03 36.9 -0.3
comp=Z,5.8nm,0.6s,baz=112,slow=6.7,SNR=8.8
comp=Z,5.8nm,0.6s
PETK Petropavlovsk- 87.26 346 P P 21 03 37.7 +0.5
PETK Petropavlovsk- 87.26 346 P P 21 03 37.7 +0.5
BORC Borrego Spring 87.43 48 P P 21 03 40.5 +2.0
BORC IAmb IAmb 21 03 42.3
comp=Z,20nm,1.6s
PFO Pinyon Flats O 87.63 48 ⇑eP P 21 03 40.5 +0.9
PFO pmax pmax
comp=Z,10.0nm,1.4s
ISA Isabella, Lake 87.76 45 P 21 03 42.1 +2.0
ISA IAmb IAmb 21 03 43.8
comp=Z,12nm,1.1s
ISA Isabella, Lake 87.76 45 P P 21 03 42.1 +2.0
ISA pmax pmax
comp=Z,13nm,1.2s
CMB Columbia Colle 88.26 42 P P 21 03 44.0 +1.6
CMB Columbia Colle 88.26 42 P P 21 03 44.0 +1.6
CMB pmax pmax
comp=Z,6.0nm,1.0s
BC3 Big Chuckawall 88.29 48 P 21 03 45.2 +2.4
BC3 IAmb IAmb 21 03 47.0
comp=Z,15nm,1.3s
214A Organ Pipe Nat 88.91 51 P P 21 03 48.1 +2.4
QSM Queen of Sheba 88.93 46 P P 21 03 47.3 +1.7
QSM IAmb IAmb 21 03 49.0
comp=Z,9.4nm,1.2s
YBH Yreka Blue Hor 89.58 38 P P 21 03 50.4 +1.8
comp=Z,0.1nm,0.7s,baz=252,slow=3.2,SNR=4.3
NVAR Mina Array Bea 89.73 43 P P 21 03 51.8 +2.3
comp=Z,5.3nm,1.0s,baz=219,slow=8.2,SNR=16
comp=Z,5.3nm,1.0s
NVAR Mina Array Bea 89.73 43 P P 21 03 50.6 +1.1
TUC Tucson 90.47 52 P 21 03 55.5 +2.5
TUC IAmb IAmb 21 03 57.2
comp=Z,26nm,1.8s
TUC Tucson 90.47 52 P P 21 03 55.5 +2.5
TUC pmax pmax
comp=Z,26nm,1.8s
BNX BinXian 91.57 325 ⇑P P 21 03 51.0 -6.6
BNX pmax pmax
comp=Z,3.0nm,0.9s
PINE Pine Mountain 91.95 38 P P 21 04 01.7 +2.0
GYA Guiyang 91.96 300 P P 21 04 01.6 +1.5
LYN LuoYang 92.67 310 P P 21 04 04.5 +1.5
LYN pmax pmax
comp=Z,16nm,0.8s
HNS HongShan 92.98 313 ⇑P P 21 04 04.9 +0.5
HNS pmax pmax
comp=Z,5.0nm,1.1s
ELK Elko 93.03 43 P P 21 04 06.4 +1.5
comp=Z,1.5nm,0.7s,baz=238,slow=4.8,SNR=6.2
comp=Z,1.5nm,0.7s
CMAR Chiang Mai Arr 93.50 289 PP PP 21 07 51.6 -0.7
comp=Z,1.5nm,0.9s,baz=138,slow=6.9,SNR=12
CMAR PKKPbc **PKKPbc 21 21 13.3 +0.8**
comp=Z,0.6nm,0.4s,baz=282,slow=3.6,SNR=4.2
TXAR Lajitas Array 93.64 58 P P 21 04 08.3 +0.6
comp=Z,0.4nm,0.8s,baz=261,slow=3.2,SNR=1.9
comp=Z,0.4nm,0.8s
XAN Xi'an 94.72 307 ⇑P P 21 04 14.3 +1.8
XAN pmax pmax
comp=Z,3.0nm,1.0s
HLID Hailey 95.32 41 P P 21 04 16.9 +1.7
HLID IAmb IAmb 21 07 38.3
comp=Z,16nm,2.0s
PZH PanZhiHua 95.64 298 P P 21 04 18.4 +1.4
SUA Susitna One 95.84 13 P P 21 04 17.8 +0.7
HHC Hu-ho-hao-te 97.02 314 eP Pdif 21 04 24.3 +1.3
HHC pmax pmax
comp=Z,3.0nm,0.6s
SEY Seymchan 97.44 347 ⇑eP P 21 04 22.8 -1.3
SEY pmax pmax
comp=Z,3.0nm,1.4s
ILAR Eielson Array 99.59 13 P Pdif 21 04 33.8 0.0
comp=Z,0.8nm,0.9s,baz=217,slow=7.4,SNR=4.4
ILAR PKiKP **PKiKP 21 09 02.9 +0.4**
comp=Z,0.5nm,0.6s,baz=272,slow=2.3,SNR=5.4
comp=Z,0.8nm,0.9s
YKA Yellowknife Ar 107.09 26 PKiKP PKiKP 21 09 15.5 -0.6
comp=Z,0.2nm,0.5s,baz=278,slow=2.2,SNR=9.2
YKA PKKPbc **PKKPbc 21 20 32.8 -2.2**
comp=Z,0.5nm,0.6s,baz=30,slow=3.3,SNR=6.9
WMQ Urumqi 113.86 308 PKP PKiKP 21 09 33.6 +3.9
BOSA Boshof 115.60 203 PKP PKPdf 21 09 34.2 +0.5
comp=Z,2.1nm,0.7s,baz=93,slow=1.2,SNR=4.2
BOSA Boshof 115.60 203 PKiKP 21 09 33.6 -0.1
SADO Sadowa 117.97 53 PKP PKiKP 21 09 38.6 +1.1
comp=Z,4.0nm,0.9s,baz=242,slow=3.4,SNR=3.9
MK31 Makanchi Array 118.45 310 dPKiKP PKPdf 21 09 36.9 -1.5
MKAR Makanchi Array 118.45 310 PKP PKPdf 21 09 37.0 -1.3
comp=Z,1.4nm,0.6s,baz=180,slow=0.6,SNR=23
MKAR PKKPbc **PKKPab 21 19 57.4 +0.6**
comp=Z,0.3nm,0.6s,baz=290,slow=3.5,SNR=4.1
MKAR Makanchi Array 118.45 310 PKPdf 21 09 36.8 -1.6
MKAR Makanchi Array 118.45 310 PKiKP PKPdf 21 09 36.8 -1.6
MAKZ Makanchi 118.66 309 PKPdf 21 09 36.9 -1.9
MAKZ Makanchi 118.66 309 PKiKP PKPdf 21 09 36.9 -1.9
WUS Wushi 118.83 303 PKPdf 21 09 38.2 -1.2
ZALV Zalesovo Beam 118.92 318 PKP PKPdf 21 09 37.5 -1.5
comp=Z,1.8nm,0.5s,baz=86,slow=2.4,SNR=6.9
ZALV Zalesovo Beam 118.92 318 PKPdf 21 09 37.1 -1.8
ZALV Zalesovo Beam 118.92 318 PKiKP PKPdf 21 09 37.1 -1.8
PRZ Przheval'sk 119.81 304 PKPdf PKPdf 21 09 40.3 -1.0
PRZ Przheval'sk 119.81 304 PKiKP PKPdf 21 09 40.3 -1.0
KSH2 Kashi 120.84 299 PKP PKPdf 21 09 43.0 -0.4
NRIK Noril'sk 120.91 336 PKP PKPdf 21 09 41.4 -0.9
comp=Z,3.0nm,0.7s,baz=73,slow=5.0,SNR=7.1
NRIK Noril'sk 120.91 336 PKPdf 21 09 41.8 -0.6
BOOM Boomskoye usch 121.55 303 PKPdf 21 09 43.9 -0.8
BOOM Boomskoye usch 121.55 303 PKiKP PKPdf 21 09 43.9 -0.8
KURK Kurchatov 121.82 313 PKPdf 21 09 43.0 -1.6
KURK Kurchatov 121.82 313 c iPKiKP PKPdf 21 09 43.1 -1.6
KURK pmax pmax
comp=Z,4.0nm,0.7s
KURBB Kurchatov Arra 121.86 313 PKP PKPdf 21 09 43.3 -1.4
comp=Z,4.3nm,0.5s,baz=115,slow=1.9,SNR=61
KGCAE Kacgae 121.95 203 PKPdf 21 09 46.1 0.0
AAK Ala-Archa 122.62 303 PKPdf 21 09 45.7 -1.0
AAK Ala-Archa 122.62 303 ⇓iPKiKP PKPdf 21 09 45.8 -0.9
AAK pmax pmax
comp=Z,3.0nm,1.3s
GRTLG Ghanzi 123.66 202 PKPdf 21 09 49.4 0.0
KBL Kabul 124.42 292 PKPdf 21 09 49.7 -0.8
KBL Kabul 124.42 292 PKiKP PKPdf 21 09 49.7 -0.8
KSANE Kasane 125.51 208 PKPdf 21 09 52.7 -0.2
KK31 Karatay Array 125.57 303 PKPdf 21 09 51.1 -1.0
KK31 Karatay Array 125.57 303 PKiKP PKPdf 21 09 51.2 -1.0
KKAR Karatay Array 125.57 303 PKPdf 21 09 51.2 -0.9
KKAR Karatay Array 125.57 303 PKiKP PKPdf 21 09 51.2 -0.9
LSZ Lusaka 126.46 213 PKPdf 21 09 53.3 -1.6
LSZ Lusaka 126.46 213 PKiKP PKPdf 21 09 53.3 -1.6
BVAR Borovoye Array 127.23 315 PKP PKPdf 21 09 54.1 -0.8
comp=Z,4.7nm,0.5s,baz=135,slow=2.0,SNR=21
BORK Borovoye 127.27 315 c iPKiKP PKPdf 21 09 54.7 -0.3
SPA0 Spitsbergen Ar 133.27 356 eP PKPdf 21 10 06.5 +0.7
SPITS Spitsbergen Ar 133.27 356 PKP PKPdf 21 10 06.0 +0.2
comp=Z,5.9nm,0.6s,baz=90,slow=4.2,SNR=22
SPITS Spitsbergen Ar 133.27 356 PKiKP PKPdf 21 10 06.0 +0.2
SPB2 Spitsbergen Ar 133.28 356 PKPdf 21 10 06.0 +0.2
ARTI Arti 134.13 320 PKPdf 21 10 07.8 -0.1
ARTI Arti 134.13 320 i PKiKP PKPdf 21 10 07.5 -0.4
ARTI 21 12 37.4
ARTI SS SS 21 30 17.4 -8.3
KIRV Kirov 138.37 324 ⇑iPKiKP PKiKP 21 10 17.4 -0.4
ARCES ARCESS Array B 140.06 347 PKP PKiKP 21 10 20.1 -0.9
comp=Z,4.5nm,0.6s,baz=53,slow=1.3,SNR=12
KLMR Klimovskoe 141.95 331 ePKiKP PKPdf 21 10 20.9 -1.2
KLMR pmax pmax
comp=Z,14nm,1.3s
RAUS Rausandaksla 144.72 351 eP PKPab 21 10 25.4 -0.3
KONS Konsvik 144.78 352 eP PKPab 21 10 25.8 -0.1
VRH Novokhopyorsk 144.88 315 ePKiKP PKPab 21 10 25.8 -1.0
VRH pmax pmax
comp=Z,7.0nm,0.8s
MOR8 Moi Rana 144.92 351 eP PKPab 21 10 25.4 -1.1
STOK Stokkvaagen 144.95 352 eP PKPab 21 10 26.3 -0.2
LEIR Leirfjorden 145.15 352 eP PKPbc 21 10 27.0 -0.2
MOS Moscow 145.38 324 ePKP2 PKPbc 21 10 26.5 -1.8
MOS pmax pmax
comp=Z,36nm,1.2s
KBZ Khabaz 145.60 302 PKPbc PKPbc 21 10 29.4 +0.1
comp=Z,16nm,1.0s,baz=157,slow=3.2,SNR=12
KBZ Khabaz 145.60 302 ⇑ePKiKP PKPdf 21 10 28.2 -0.9
KIV Kislovodsk 145.73 302 i PKiKP PKPab 21 10 30.5 +0.2
KIV pmax pmax
comp=Z,13nm,1.1s
KIV pmax pmax
comp=Z,115nm,25.0s
SHA1 Shidzhatmaz 145.77 302 cePKiKP PKPab 21 10 30.6 -0.1
LPSR Galich'ya Gora 146.03 318 ePKiKP PKPdf 21 10 27.9 -1.6
LPSR pmax pmax
comp=Z,30nm,1.0s
OBN Obninsk 146.21 324 ⇑ePKP2 PKPdf 21 10 29.5 -0.2
OBN e 21 13 52.3
OBN e 21 17 37.1
OBN pmax pmax
comp=Z,18nm,0.5s
VORR Voronezh 146.21 317 ePKiKP PKPdf 21 10 28.8 -1.1
VORR pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 146.40 316 ePKiKP PKPdf 21 10 28.4 -1.8
VSR pmax pmax
comp=Z,20nm,1.0s
VORD Divnogorie 146.41 316 ePKiKP PKPdf 21 10 28.8 -1.4
VORD pmax pmax
comp=Z,10.0nm,1.0s
FINES FINESS Array B 146.49 339 PKPbc PKPdf 21 10 30.6 +0.6
comp=Z,38nm,0.6s,baz=46,slow=4.0,SNR=263
FINES FINESS Array B 146.49 339 PKPdf 21 10 30.5 +0.5
NSS Namsos 146.81 352 eP PKPbc 21 10 31.8 -0.5
VSU Vasula 148.49 335 cePKiKP PKPdf 21 10 35.3 +1.9
VSU pmax pmax
comp=Z,89nm,2.5s
MOL Molde 149.18 355 eP PKPbc 21 10 38.7 +0.1
DOMB Dombas 149.56 353 eP PKPbc 21 10 39.5 -0.2
NB2 NORSAR Subarra 150.26 350 PKP PKPbc 21 10 41.3 -0.2
comp=Z,8.4nm,0.5s,baz=16,slow=2.6
NB2 NORSAR Subarra 150.26 350 PKP PKPbc 21 10 41.3 -0.2
NB2 AMP 21 10 41.3
comp=Z,8.4nm,0.5s
NOA NORSAR Array B 150.26 350 PKPbc PKPbc 21 10 41.0 -0.5
comp=Z,12nm,0.6s,baz=15,slow=4.1,SNR=48
FOO Floro 150.31 357 eP PKPbc 21 10 41.6 +0.1
NC602 NORSAR Array S 150.51 350 eP PKPbc 21 10 41.5 -0.5
HFS Hagfors 150.72 347 PKPbc PKPbc 21 10 41.8 -0.7
comp=Z,18nm,0.5s,baz=72,slow=4.8,SNR=94
MNK Minsk 150.72 328 i PKiKP PKPbc 21 10 42.3 -0.4
comp=E,8.0nm,0.9s
MNK *i* PKiKP **PKPbc 21 10 42.3 -0.4**
comp=N,5.0nm,0.9s
MNK *i* PKiKP **PKPbc 21 10 42.3 -0.4**
comp=Z,35nm,0.9s,baz=50
MNK *i* SKP **SKPdf 21 14 10.6 +3.0**
MNK *i* PKS PP 21 14 17.1 -2.6
MNK *i* PP PP 21 14 29.2 +10
MNK *i* SKS SKSdf 21 17 14.6 -27
MNK *i* PPP PPP 21 17 50.1
MNK *i* SS **SS 21 33 44.3 +7.2**
MNK *i* SSS SSS 21 39 28.9
MNK Minsk 150.72 328 i PKiKP PKPbc 21 10 42.2 -0.4
MNK *i* 21 14 17.0
MNK *i* PPP PPP 21 17 50.1
MNK pmax pmax
comp=N,5.0nm,0.9s
MNK pmax pmax
comp=Z,35nm,0.9s
MNK pmax pmax
comp=E,8.0nm,0.9s
EDA Edea 150.75 198 PKPbc 21 10 43.3 -0.8
SKAR Skarslia 150.97 353 eP PKiKP 21 10 43.7 -0.1
ASK Askoy 151.41 356 eP PKiKP 21 10 44.5 0.0
MMAI Mount Meron Ar 151.43 281 PKPbc PKiKP 21 10 45.5 -0.1
comp=E,7.1nm,0.5s,baz=57,slow=6.1,SNR=25
BER Bergen 151.50 356 eP PKiKP 21 10 44.9 +0.1
KONO Kongsberg 151.83 351 eP PKPbc 21 10 45.2 +0.1
ODD1 Odda 151.88 354 eP PKiKP 21 10 45.6 0.0
AKASG Malin Array Be 152.28 320 PKPbc PKPbc 21 10 45.5 -0.9
comp=E,5.2nm,0.6s,baz=46,slow=2.9,SNR=25

AKBB Malin Array Si 152.28 320 PKPbc 21 10 45.7 -0.7
AKBB Malin Array Si 152.28 320*c* *i*PKIKP **PKPbc 21 10 45.7 -0.7**
BLS5 Blasjo 152.38 354 *e*P **PKiKP 21 10 47.1 +0.5**
KMY Karmoy 152.68 356 *e*P **PKiKP 21 10 47.6 +0.4**
BRTR Keskin Array B 152.92 296 PKPbc **PKPbc 21 10 47.2 -1.2**
comp=E,4.2nm,0.6s,baz=144,slow=3.9,SNR=23
TJOU Tjoern 153.07 348 *i* P **PKPbc 21 10 47.4 -0.4**
SUW Suwalki 153.08 331 PKPbc 21 10 47.2 -0.8
SUW Suwalki 153.08 331 PKIKP **PKPbc 21 10 47.2 -0.8**
BORU Boraas 153.23 346 *i* P **PKPbc 21 10 47.7 -0.6**
HOMB Homborsund 153.31 352 *e*P **PKPbc 21 10 47.3 -1.1**
HOMB Homborsund 153.31 352 *i* P **PKPbc 21 10 48.5 +0.1**
CSS Mathiatis 153.32 285 PKPbc **PKPbc 21 10 48.2 -1.1**
SNART Snartemo 153.38 353 *e*P **PKiKP 21 10 49.3 +0.6**
SNART Snartemo 153.38 353 *i* P **PKiKP 21 10 49.1 +0.4**
ONAU Onsala 153.62 347 *i* P **PKPbc 21 10 48.4 -0.7**
DEL Delary 154.06 344 *i* P **PKPbc 21 10 49.8 -0.3**
DBIC Dimbokro 154.11 165 PKP **PKPdf 21 10 44.1 +0.7**
comp=E,4.0nm,0.9s,baz=233,slow=0.2,SNR=3.8
DBIC PKPbc **PKiKP 21 10 52.0 +0.5**
comp=E,5.9nm,0.6s,baz=217,slow=2.0,SNR=9.7
DBIC Dimbokro 154.11 165 PKPdf **PKPdf 21 10 43.1 -0.3**
DBIC **PKiKP 21 10 51.8 +0.2**
DBIC Dimbokro 154.11 165 PKIKP **PKPdf 21 10 43.1 -0.3**
DBIC 21 10 51.8
BJUU Bjuv 154.62 345 *i* P **PKPbc 21 10 50.7 -0.5**
BSD Bornholm Skovb 155.02 342 *i* P PKPbc 21 10 51.8
CLL Collm 158.93 340 *i* PKP2 **PKPab 21 11 22.4 -2.4**
CLL pmax pmax
comp=Z,3.0nm,0.8s
CLL MLR MLR
comp=Z,300nm,18.8s
CLL Collm 158.93 340 *i* PKPab **PKPab 21 11 22.4 -2.4**
comp=Z,3.0nm,0.8s
CLL L L 22 21 00.0
comp=Z,300nm,18.8s
RONA Rosalia, Austr 160.69 328 *i* PKP **PKPdf 21 10 49.4 -1.2**
comp=Z,2.0nm,0.7s
RONA *e*PKP **PKPab 21 11 33.0 +0.3**
comp=Z,4.0nm,1.3s
CONA Conrad Observa 160.70 330 *e*PKP **PKPab 21 11 32.5 -0.2**
comp=Z,3.6nm,0.8s
GERES GERESS Array B 160.82 335 PKP **PKPdf 21 10 50.2 -0.7**
comp=Z,0.2nm,0.4s,baz=45,slow=4.0,SNR=3.6
GERES PKPab **PKPab 21 11 32.7 -0.6**
comp=Z,0.7nm,0.6s,baz=26,slow=6.4,SNR=5.2
ARSA Arzberg 161.37 329 *e*PKP **PKPab 21 11 35.3 -0.3**
comp=Z,2.8nm,1.0s
MOA Molln 161.43 332 *e*PKP **PKPdf 21 10 50.9 -0.5**
comp=Z,1.2nm,1.0s
MOA *e*PKP **PKPab 21 11 35.5 -0.3**
comp=Z,4.7nm,1.6s
BIOA Bad Ischl, Aus 161.80 333 *e*PKP **PKPdf 21 10 51.0 -0.9**
comp=Z,3.6nm,1.1s
BIOA *e*PKP **PKPab 21 11 36.8 -0.7**
comp=Z,1.7nm,0.9s
SOKA Soboth 162.02 328 *i* PKP **PKPdf 21 10 51.6 -0.6**
comp=Z,2.9nm,1.4s
SOKA *e*PKP **PKPab 21 11 38.1 -0.5**
comp=Z,4.6nm,1.9s
LESA Schwarzleotal 162.39 334 *e*PKP **PKPdf 21 10 52.1 -0.5**
comp=Z,3.9nm,0.9s
LESA *e*PKP **PKPab 21 11 39.9 -0.2**
comp=Z,3.5nm,1.0s
WATA Walderalm 162.85 336 *e*PKP **PKPab 21 11 42.0 -0.2**
comp=Z,3.0nm,1.1s
WTTA Wattenberg 162.90 336 *e*PKP **PKPdf 21 10 53.1 -0.1**
comp=Z,4.0nm,1.0s
WTTA *e*PKP **PKPab 21 11 42.5 0.0**
comp=Z,2.2nm,0.6s
RETA Reutte 162.99 338 *i* PKP **PKPab 21 11 43.0 +0.2**
comp=Z,4.4nm,1.5s
MOTA Moosalm 163.01 337 *i* PKP **PKPdf 21 10 53.8 +0.5**
comp=Z,6.9nm,1.2s
MOTA *i* PKP **PKPab 21 11 42.8 -0.1**
comp=Z,5.3nm,1.1s
ABTA Abfaltersbach 163.01 333 *e*PKP **PKPdf 21 10 52.4 -0.8**
comp=Z,2.8nm,1.0s
ABTA *e*PKP **PKPab 21 11 41.7 -1.2**
comp=Z,3.2nm,1.3s
SQTA Sankt Quirin 163.08 337 *i* PKP **PKPdf 21 10 53.0 -0.2**
comp=Z,6.6nm,1.5s
SQTA *i* PKP **PKPab 21 11 43.2 -0.1**
comp=Z,4.8nm,1.1s
FETA Feichten 163.41 337 *i* PKP **PKPdf 21 10 53.7 0.0**
comp=Z,3.8nm,1.0s
FETA *i* PKP **PKPab 21 11 44.2 -0.5**
comp=Z,6.5nm,1.3s
DAVA Damuels 163.44 340 *i* PKP **PKPdf 21 10 53.5 -0.2**
comp=Z,8.9nm,1.3s
DAVA *e*PKP **PKPab 21 11 44.9 +0.1**
comp=Z,7.8nm,1.4s
DAVOX Davos/Dischmat 163.90 339 PKP **PKPdf 21 10 53.4 -0.7**
comp=Z,1.2nm,0.7s,baz=316,slow=5.2,SNR=4.2
FUORN Ofenpass-Fuorn 163.92 338 PKPdf **PKPdf 21 10 54.4 +0.1**
ESDC Sonseca Array 171.18 28 PKP **PKPdf 21 11 00.6 +1.2**
comp=Z,2.2nm,1.1s,baz=337,slow=2.6,SNR=7.0
ESDC PKPab **PKPab 21 12 19.4 +0.3**
comp=Z,1.0nm,0.8s,baz=313,slow=4.7,SNR=6.5
ESDC Sonseca Array 171.18 28 PKPdf 21 10 59.6 +0.3
MD01 Midelt array s 174.67 79 PKPdf **PKPdf 21 11 01.4 +0.2**
MDT Midelt 174.80 80 PKP **PKPdf 21 11 02.7 +1.6**
comp=Z,2.5nm,0.8s,baz=282,slow=5.1,SNR=4.0

*NOU **08** 21:05:14.9, 16˙39S×176˚36W, h0km, MLv4.5/4, Fiji Islands Region*
*IDC **08** 21:05:19.0±0.8, 17˙39S×176˚67W, h0km, mb4.1/14, mbtmp4.1/14, MS4.2/50, Error ellipse: s-maj=37.4km s-min=18.9km az=146.0*
*NEIC **08** 21:05:22.6±1.5, 17˙1S±0˙1×176˚9W±0˙1, h10km±1km, mb4.8/20, Error ellipse: s-maj=25.6km s-min=18.7km az=156.0*
*GCMT **08** 21:05:25.6±0.2, 17˙34S±0˙01×176˚66W±0˙01, h17km±1km, MW5.1/119, Moment Tensor Solution. s46,c60; s119,c165; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.06±.12; Mθθ-4.15±.12; Mϕϕ4.21±.11; Mrθ0.93±.27; Mθϕ2.10±.09; Mϕr1.32±.26; Best double couple: Mo4.93600×10¹⁶ NP1:ϕs327.00000°, δ73.00000°, λ174.00000°. NP2:ϕs59.00000°, δ84.00000°, λ17.00000°. Principal axes: T 5.1430, Plg16.0000°, Azm284.0000°; N -0.4100, Plg72.0000°, Azm78.0000°; P -4.7290, Plg8.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 21˙05˙26.4±0.5, 16˙98S±0˙09×177˚09W±0˙08, h35km, n121, σ1s55/75, mb4.6/24, MS4.3/47, 2C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.07 233**		P	**Pn**	**21 06 03.2**	**+4.5**
LKBA	**Tubou, Lakemba**	**2.07 233**		P	**Sn**	**21 06 20.6**	**-2.6**
TAVE	**Taveuni**	**2.71 275**		P	**Pn**	**21 06 08.5**	**+0.9**
TAVE	**Taveuni**	**2.71 275**		P	**Pn**	**21 06 08.4**	**+0.8**
DGTI	**Dogotuki**	**3.12 282**		P	**Pn**	**21 06 14.2**	**+1.0**
DGTI	**Dogotuki**	**3.12 282**		P	**Pn**	**21 06 13.9**	**+0.7**
MSVF	**Nonsavu**	**4.71 260**			**Pn**	**21 06 35.8**	**+0.8**
MSVF	**Nonsavu**	**4.71 260**		P	**Pn**	**21 06 38.5**	**+3.4**
MSVF	**Nonsavu**	**4.71 260**		P	**Pn**	**21 06 38.4**	**+3.3**
RAO	**Raoul Island**	**12.24 183**		LR	LR	21 12 04.2	
comp=Z,4μm,20.5s,baz=54,slow=34							
DZM	**Mont Dzumac**	**16.33 249**		LR	LR	21 14 24.6	
comp=Z,2μm,20.4s,baz=50,slow=33							
RAR	**Rarotonga**	**16.89 107**		LR	LR	21 14 01.6	
comp=Z,1μm,20.2s,baz=278,slow=32							
TOZ	**Tahuroa Road**	**21.68 196**			**P**	**21 10 11.8**	**-2.3**
TOZ				IAmb	IAmb	21 10 16.6	
comp=Z,52nm,1.4s							
URZ	**Urewera**	**21.80 192**		LR	LR	21 17 14.4	
comp=Z,2μm,20.4s,baz=39,slow=33							
HNR	**Honiara**	**23.57 286**		LR	LR	21 18 33.1	
comp=Z,73nm,19.1s,baz=199,slow=33							
PPT2	**Papeete2**	**26.27 95**		*e*S	**S**	**21 15 33.7**	**+4.4**
comp=Z,902nm,26.8s							
PPT2				*e*LR	LR	21 17 17.5	
comp=Z,2μm,24.5s							
PPT2				*e*LR	LR	21 17 25.5	
comp=Z,2μm,26.8s							
PPT	**Papeete**	**26.27 95**		LR	LR	21 18 21.4	
comp=Z,666nm,19.7s,baz=243,slow=30							
TBI	**Tubuai**	**26.67 108**		*e*LR	LR	21 17 32.1	
comp=Z,7μm,24.5s							
TBI				*e*LR	LR	21 17 34.5	
comp=Z,3μm,28.2s							
EIDS	**Eidsvold**	**30.77 249**		P	**P**	**21 11 39.5**	**+0.7**
CTA	**Charters Tower**	**34.85 259**		LR	LR	21 25 21.9	
comp=Z,807nm,18.3s,baz=74,slow=34							
CTAO	**Charters Tower**	**34.85 259**		P	**P**	**21 12 14.1**	**-0.5**
PMG	**Port Moresby**	**35.57 278**		LR	LR	21 26 03.4	
comp=Z,486nm,18.2s,baz=116,slow=34							
TAOE	**Nuku Hiva Isla**	**36.84 82**		*e*LR	LR	21 22 06.2	
comp=Z,819nm,28.5s							
STKA	**Stephens Creek**	**40.18 241**		P	**P**	**21 12 58.1**	**-1.4**
comp=Z,3.4nm,0.9s,baz=136,slow=8.7,SNR=4.0							
STKA				LR	LR	21 28 26.1	
comp=Z,250nm,18.5s,baz=66,slow=34							
comp=Z,3.4nm,0.9s							
STKA	**Stephens Creek**	**40.18 241**		P	**P**	**21 12 58.8**	**-0.7**
JAY	**Jayapura**	**43.88 284**		LR	LR	21 30 44.6	
comp=Z,396nm,21.2s,baz=178,slow=34							
WB0	**Warramunga Arr**	**46.01 259**		P	**P**	**21 13 46.5**	**-0.4**
WB0				IAmb	IAmb	21 13 56.5	
comp=Z,11nm,1.1s							
WRA	**Warramunga Arr**	**46.05 258**		P	**P**	**21 13 46.8**	**-0.4**
comp=Z,1.6nm,0.9s,baz=94,slow=6.7,SNR=8.8							
comp=Z,1.6nm,0.9s							
WRA	**Warramunga Arr**	**46.05 258**		P	**P**	**21 13 45.8**	**-1.4**
AS31	**Alice Springs**	**46.26 253**			**P**	**21 13 48.2**	**-0.6**
ASAR	**Alice Springs**	**46.26 253**		P	**P**	**21 13 48.0**	**-0.9**
comp=Z,9.8nm,0.8s,baz=85,slow=8.4,SNR=22							
comp=Z,9.8nm,0.8s							
ASAR	**Alice Springs**	**46.26 253**			**P**	**21 13 48.2**	**-0.7**
SIJI	**Sorong**	**53.27 282**		LR	LR	21 36 47.3	
comp=Z,303nm,20.5s,baz=165,slow=35							
FITZ	**Fitzroy Crossi**	**54.43 260**		LR	LR	21 37 29.9	
comp=Z,522nm,18.4s,baz=104,slow=35							
SOEI	**Soe**	**57.34 269**		P	**P**	**21 15 12.0**	**+0.2**
BATI	**Baumata**	**57.81 268**		LR	LR	21 38 00.6	
comp=Z,327nm,21.9s,baz=142,slow=34							
VNDA	**Vanda**	**61.47 185**		LR	LR	21 40 15.9	
comp=Z,142nm,18.2s,baz=4.5,slow=34							
DAV	**Davao City (W)**	**61.50 288**		LR	LR	21 41 17.0	
comp=Z,71nm,18.6s,baz=112,slow=35							
KAPI	**Kappang**	**62.90 273**		LR	LR	21 42 20.1	
comp=Z,149nm,20.5s,baz=99,slow=35							
RPN	**Rapa Nui**	**62.96 112**		LR	LR	21 36 01.9	
comp=Z,381nm,19.6s,baz=258,slow=30							
TGY	**Tagaytay City**	**68.53 293**		LR	LR	21 42 05.4	
comp=Z,286nm,21.7s,baz=113,slow=32							
SHEM	**Shnya Is, Ala**	**69.84 354**		LR	LR	21 41 49.8	
comp=Z,328nm,21.7s,baz=75,slow=31							
ASAJ	**Asahikawa**	**71.08 330**		LR	LR	21 43 56.7	
comp=Z,86nm,20.1s,baz=154,slow=32							
QSPA	**South Pole Qui**	**73.07 180**		P	**P**	**21 16 48.9**	**-4.0**
comp=Z,2.3nm,0.4s,baz=359,slow=2.8,SNR=4.8							
QSPA				LR	LR	21 42 59.9	
comp=Z,92nm,21.8s,baz=38,slow=31							
comp=Z,2.3nm,0.4s							
QSPA	**South Pole Qui**	**73.07 180**		P	**P**	**21 16 51.3**	**-1.6**
PETK	**Petropavlovsk-**	**73.12 344**		LR	LR	21 45 14.7	
comp=Z,129nm,21.6s,baz=142,slow=32							
LEM	**Lembang**	**74.01 268**		LR	LR	21 49 41.0	
comp=Z,149nm,20.2s,baz=178,slow=36							
KSRS	**Korea Array**	**74.86 318**		LR	LR	21 47 01.5	
comp=Z,24nm,20.2s,baz=130,slow=33							
KSAR	**Wonju Array Be**	**74.88 317**		P	**P**	**21 17 05.8**	**+2.1**
CMB	**Columbia Colle**	**76.30 43**		P	**P**	**21 17 11.6**	**-0.3**
CMB				IAmb	IAmb	21 17 26.4	
comp=Z,9.6nm,1.3s							
PFO	**Pinyon Flats O**	**76.60 48**		LR	LR	21 42 22.5	
comp=Z,327nm,21.8s,baz=247,slow=29							
LPIG	**La Paz**	**76.88 60**		LR	LR	21 43 59.1	
comp=Z,91nm,19.0s,baz=216,slow=30							
YBH	**Yreka Blue Hor**	**77.01 39**		LR	LR	21 42 18.6	
comp=Z,27nm,20.8s,baz=262,slow=29							
KDAK	**Kodiak Island**	**77.21 13**		LR	LR	21 44 19.1	
comp=Z,331nm,19.9s,baz=210,slow=30							
QSM	**Queen of Sheba**	**77.53 46**		P	**P**	**21 17 18.0**	**-0.8**
QSM				IAmb	IAmb	21 17 27.1	
comp=Z,14nm,1.6s							
NVAR	**Mina Array Bea**	**77.89 43**		P	**P**	**21 17 17.6**	**-3.5**
comp=Z,1.1nm,0.8s,baz=234,slow=11,SNR=3.9							
NVAR				LR	LR	21 44 36.7	
comp=Z,167nm,19.3s,baz=229,slow=30							
comp=Z,1.1nm,0.8s							
NVAR	**Mina Array Bea**	**77.89 43**		P	**P**	**21 17 19.5**	**-1.6**
NV11	**Mina Array Sit**	**77.98 43**		P	**P**	**21 17 20.9**	**-0.6**
NV11				IAmb	IAmb	21 17 39.2	
comp=Z,12nm,1.5s							
MA2	**Magadan**	**80.65 344**		LR	LR	21 50 17.9	
comp=Z,84nm,19.2s,baz=119,slow=33							
BBB	**Bella Bella**	**80.91 28**		LR	LR	21 45 05.5	
comp=Z,210nm,19.7s,baz=204,slow=29							
J16K	**Anvik River**	**81.03 7**		P	**P**	**21 17 38.5**	**+1.1**
J16K				IAmb	IAmb	21 18 01.7	
comp=Z,17nm,1.4s							
ELK	**Elko**	**81.12 43**		P	**P**	**21 17 37.6**	**-1.0**
comp=Z,0.6nm,0.6s,baz=256,slow=9.8,SNR=3.5							
comp=Z,0.6nm,0.6s							
SEY	**Seymchan**	**83.17 346**		LR	LR	21 53 52.5	
comp=Z,80nm,18.9s,baz=150,slow=35							
BJT	**Baijiatuau**	**84.02 315**		P	**P**	**21 17 54.3**	**+0.9**
BJT				IAmb	IAmb	21 18 00.2	
comp=Z,16nm,1.7s							
NEW	**Newport**	**84.02 36**		LR	LR	21 49 19.4	
comp=Z,183nm,18.6s,baz=244,slow=31							
PMSA	**Palmer Station**	**84.16 157**		LR	LR	21 54 01.0	
comp=Z,90nm,18.2s,baz=232,slow=35							
CCB	**Clear Creek Bu**	**84.41 12**			**P**	**21 17 54.5**	**-0.2**
CCB				IAmb	IAmb	21 18 19.1	
comp=Z,10nm,1.2s							
TXAR	**Lajitas Array**	**84.43 57**		P	**P**	**21 17 54.6**	**-1.3**
comp=Z,0.7nm,1.0s,baz=239,slow=5.0,SNR=1.6							
comp=Z,0.7nm,1.0s							
DLBC	**Dease Lake**	**84.49 23**		LR	LR	21 47 30.9	
comp=Z,400nm,20.7s,baz=259,slow=30							
ANMO	**Albuquerque**	**84.53 51**		LR	LR	21 48 44.4	
comp=Z,193nm,18.4s,baz=247,slow=31							
ILAR	**Eielson Array**	**84.71 13**		P	**P**	**21 17 55.5**	**-0.9**
comp=Z,4.6nm,1.1s,baz=228,slow=5.4,SNR=11							
comp=Z,4.6nm,1.1s							
ILAR	**Eielson Array**	**84.71 13**		P	**P**	**21 17 55.9**	**-0.4**
ENH	**Enshi**	**84.81 304**		P	**P**	**21 17 58.2**	**+0.6**
MAW	**Mawson**	**85.15 199**		LR	LR	21 53 18.4	
comp=Z,286nm,19.5s,baz=100,slow=34							
E19K	**Redstone River**	**85.46 8**		P	**P**	**21 18 00.6**	**+0.5**
E19K				IAmb	IAmb	21 18 03.6	
comp=Z,9.3nm,1.2s							
BILL	**Bilibino**	**85.65 354**		P	**P**	**21 18 00.1**	**-0.8**
BILL				IAmb	IAmb	21 18 02.8	
comp=Z,7.8nm,1.1s							
PDAR	**Pinedale Array**	**85.81 43**		P	**P**	**21 18 00.7**	**-2.0**
comp=Z,1.0nm,0.8s,baz=256,slow=4.1,SNR=5.6							
PDAR				LR	LR	21 49 18.1	
comp=Z,71nm,20.2s,baz=256,slow=31							
comp=Z,1.0nm,0.8s							
PDAR	**Pinedale Array**	**85.81 43**		P	**P**	**21 17 59.8**	**-2.9**
HILR	**Hailar Array B**	**86.50 324**		P	**P**	**21 18 07.0**	**+1.4**
comp=Z,0.3nm,0.3s,baz=103,slow=6.5,SNR=3.8							
comp=Z,0.3nm,0.3s							
CMIG	**Matias Romero**	**87.74 71**		LR	LR	21 47 52.5	
comp=Z,145nm,21.4s,baz=187,slow=29							
CMAR	**Chiang Mai Arr**	**89.77 289**		P	**P**	**21 18 23.1**	**+1.2**
comp=Z,0.7nm,0.3s,baz=98,slow=5.4,SNR=7.3							
CMAR				LR	LR	21 54 53.7	
comp=Z,49nm,21.7s,baz=105,slow=33							
comp=Z,0.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**89.77 289**		P	**P**	**21 18 22.5**	**+0.6**
INK	**Inuvik**	**90.67 15**		LR	LR	21 51 38.8	
comp=Z,160nm,21.2s,baz=300,slow=31							
PLCA	**Paso Flores**	**91.05 133**		LR	LR	21 49 17.0	
comp=Z,90nm,21.1s,baz=243,slow=29							
LZDM	**Lanzhou Array**	**91.40 307**		P	**P**	**21 18 31.2**	**+1.7**
comp=Z,0.2nm,0.3s,baz=104,slow=5.2,SNR=1.4							
comp=Z,0.2nm,0.3s							
SNAA	**Sanae**	**91.48 178**		LR	LR	21 57 10.0	
comp=Z,113nm,19.4s,baz=184,slow=34							
YKA	**Yellowknife Ar**	**92.97 24**		P	**P**	**21 18 34.8**	**-0.9**
comp=Z,0.2nm,0.5s,baz=250,slow=4.7,SNR=5.1							
YKA				LR	LR	21 52 48.1	
comp=Z,236nm,21.2s,baz=278,slow=31							
comp=Z,0.2nm,0.5s							
SONM	**Songino Array**	**93.68 319**		P	**P**	**21 18 40.1**	**+0.6**
comp=Z,0.8nm,1.1s,baz=117,slow=2.5,SNR=5.6							
comp=Z,0.8nm,1.1s							
SONM	**Songino Array**	**93.68 319**		P	**P**	**21 18 39.8**	**+0.3**
JTS	**Las Juntas de**	**94.97 81**		LR	LR	21 52 38.3	
comp=Z,93nm,18.7s,baz=219,slow=30							
TIXI	**Tiksi**	**95.59 345**		LR	LR	21 56 03.3	
comp=Z,178nm,21.4s,baz=188,slow=32							
NNA	**Nana**	**96.12 104**		LR	LR	21 52 07.1	
comp=Z,96nm,21.0s,baz=237,slow=29							
ATAH	**Atahualpa**	**96.18 99**		LR	LR	21 51 30.1	
comp=Z,200nm,21.7s,baz=252,slow=29							
ULM	**Lac du Bonnet**	**97.39 40**		LR	LR	21 57 04.4	
comp=Z,273nm,19.5s,baz=214,slow=32							
BRDH	**Bariadhala**	**97.52 291**		LR	LR	22 01 38.2	
comp=Z,82nm,18.7s,baz=178,slow=34							
CFR	**Carcaliu**	**144.84 328**		⇑P	**PKiKP**	**21 25 07.2**	**+3.6**
TPGR	**Topolog**	**144.92 328**		⇓P	**PKPdf**	**21 25 00.3**	**+0.3**
BR131	**Keskin Array S**	**145.00 317**	PKPbc		**PKPbc**	**21 24 58.7**	**-1.2**
BRTR	**Keskin Array B**	**145.00 317**	PKPbc		**PKPbc**	**21 24 59.8**	**-0.1**
comp=Z,3.1nm,1.0s,baz=85,slow=1.4,SNR=6.4							
BRTR	**Keskin Array B**	**145.00 317**			**PKPbc**	**21 24 58.6**	**-1.2**
VRI	**Vrincioaia**	**145.02 331**		⇓P	**PKiKP**	**21 25 04.8**	**+0.8**
OZUR		**145.29 332**		⇑P	**PKPdf**	**21 25 01.7**	**+1.1**
LODK	**Lodwar**	**145.42 251**			**PKPdf**	**21 25 01.8**	**-0.1**
GERES	**GERESS Array B**	**147.02 347**	PKPbc		**PKPdf**	**21 25 04.0**	**+0.4**
comp=Z,0.3nm,0.5s,baz=44,slow=3.1,SNR=4.5							
CONA	**Conrad Observa**	**147.35 344**	*i* PKP		**PKPab**	**21 25 07.9**	**-0.5**
comp=Z,6.0nm,1.1s							
RONA	**Rosalia, Austr**	**147.45 343**	*e*PKP		**PKPab**	**21 25 08.1**	**-0.6**
comp=Z,3.1nm,0.8s							
MOA	**Molln**	**147.83 346**	*i* PKP		**PKPbc**	**21 25 08.6**	**+0.8**
comp=Z,8.8nm,1.7s							
ARSA	**Arzberg**	**148.07 344**	*i* PKP		**PKPbc**	**21 25 07.7**	**-0.7**
comp=Z,3.7nm,1.2s							
BIOA	**Bad Ischl, Aus**	**148.13 346**	*e*PKP		**PKPbc**	**21 25 09.2**	**+0.6**
comp=Z,6.2nm,1.2s							
LESA	**Schwarzleotal**	**148.59 347**	*i* PKP		**PKiKP**	**21 25 10.8**	**-0.6**
comp=Z,6.1nm,1.5s							
SOKA	**Soboth**	**148.73 344**	*i* PKP		**PKPbc**	**21 25 10.7**	**+0.5**
comp=Z,4.2nm,1.5s							
WATA	**Walderalm**	**148.90 349**	*e*PKP		**PKPbc**	**21 25 10.6**	**-0.2**
comp=Z,3.9nm,1.2s							
RETA	**Reutte**	**148.90 350**	*e*PKP		**PKPbc**	**21 25 10.4**	**-0.2**
comp=Z,4.2nm,1.1s							
WTTA	**Wattenberg**	**148.95 348**	*i* PKP		**PKPbc**	**21 25 11.0**	**+0.1**
comp=Z,3.1nm,1.3s							
SQTA	**Sankt Quirin**	**149.08 349**	*e*PKP		**PKPbc**	**21 25 11.3**	**+0.2**
comp=Z,5.8nm,1.2s							
MYKA	**Terra Mystica**	**149.12 346**	*i* PKP		**PKiKP**	**21 25 12.4**	**-0.1**
comp=Z,13nm,1.8s							
DAVA	**Damuels**	**149.24 351**	*e*PKP		**PKPbc**	**21 25 12.0**	**+0.4**
comp=Z,12nm,1.3s							
ABTA	**Abfaltersbach**	**149.27 347**	*e*PKP		**PKPbc**	**21 25 11.7**	**+0.1**
comp=Z,7.5nm,1.1s							
FETA	**Feichten**	**149.35 349**	*i* PKP		**PKiKP**	**21 25 12.7**	**-0.4**
comp=Z,10nm,1.2s							
FUORN	**Ofenpass-Fuorn**	**149.82 350**	PKPbc		**PKPbc**	**21 25 13.2**	**0.0**
TUE	**Stuetta**	**150.11 351**	PKPbc		**PKiKP**	**21 25 14.3**	**-0.4**

*NEIC **08** 21:08:52.0±0.9, 43˙77N±0˙06×105˙29W±0˙08, h0km±1km, ML3.4/58, Error ellipse: s-maj=13.5km s-min=2.7km az=46.0*
*IDC **08** 21:08:53.8±1.6, 43˙81N×105˙59W, h0km, mb3.7/1, mbtmp3.3/6, ML2.7/4, Error ellipse: s-maj=43.9km s-min=8.7km az=148.0*

ISC 08 21:08:53.3±0.9, 43.77N±0˙06×105˙26W±0˙07, h0km, n47, σ0s67/46, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.95 68**			**Pb**	**21 09 12.3**	**-0.6**
K22A	**Casper**	**1.45 220**		Pg	**Pn**	**21 09 18.8**	**-2.2**
LAO	**LASA Array**	**3.00 347**			**Pn**	**21 09 41.6**	**-0.5**
LAO				IAML		21 10 30.6	
156nm,0.9s							
LAO				IAML		21 10 34.3	
149nm,1.1s							
RLMT	**Red Lodge**	**3.17 297**		Pn	**Pn**	**21 09 45.2**	**+0.6**
RLMT				IAML		21 10 38.8	
75nm,0.3s							
RLMT				IAML		21 10 41.6	
77nm,0.6s							
PD31	**Pinedale Array**	**3.29 254**			**Pn**	**21 09 46.5**	**+0.1**
PDAR	**Pinedale Array**	**3.29 254**		Pn	**Pn**	**21 09 46.0**	**-0.3**
4.5nm,0.3s,baz=72,slow=16,SNR=24							
PDAR				Lg	Lg	21 10 30.1	
16nm,0.3s,baz=71,slow=31,SNR=8.6							
PDAR	**Pinedale Array**	**3.29 254**			**Pn**	**21 09 46.4**	**+0.1**
BW06	**Boulder Array**	**3.29 254**			**Pn**	**21 09 46.6**	**+0.2**
BW06				IAML		21 10 37.3	
73nm,0.4s							
BW06				IAML		21 10 40.1	
76nm,0.7s							
HAYD	**Hayden**	**3.57 205**			**Pn**	**21 09 50.4**	**+0.2**
HAYD				IAML		21 10 57.5	
comp=E,69nm,0.9s							
HAYD				IAML		21 11 26.0	
comp=N,66nm,2.0s							
YNE	**Yellowstone No**	**3.62 292**		Pn	**Pn**	**21 09 50.4**	**-0.4**
YNE				IAML		21 10 50.8	
comp=N,70nm,0.4s							
YNE				IAML		21 10 56.8	
comp=E,56nm,0.4s							
YMP	**Mirror Lake Pl**	**3.65 287**			**Pn**	**21 09 51.1**	**-0.2**
YMP				IAML		21 11 21.7	
comp=N,82nm,1.5s							
OGNE	**Ogallala**	**3.70 139**			**Pn**	**21 09 52.9**	**+1.0**
LOHW	**Long Hollow**	**3.88 269**			**Pn**	**21 09 54.4**	**0.0**
H17A	**Grant Village**	**3.88 281**			**Pn**	**21 09 54.0**	**-0.4**
H17A				IAML		21 10 58.3	
comp=E,39nm,1.7s							
H17A				IAML		21 11 06.7	
comp=N,37nm,1.4s							
**FLW

baz=56,slow=14,SNR=2.5
comp=N,0.4nm,0.6s
YKA Yellowknife Ar 19.54 347 P **P** **21 13 22.2 +0.1**
comp=N,0.1nm,0.3s,baz=160,slow=11,SNR=5.8
comp=N,0.3nm,0.6s
MKAR Makanchi Array 89.57 355 P **P** **21 21 52.3 -0.3**
comp=N,0.4nm,0.7s,baz=358,slow=3.8,SNR=4.6
comp=N,0.4nm,0.7s

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*ATH **08** 21:11:01.4, 36°.79N×21°.48E, h16km±1km, ML3.1/10, Manual Solution by F.Xalaris First location: 2020/02/08 21:12:12, This location: 2020/11/04 08:16:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **08** 21:11:04.5, 37°.N±13°×2°.2E±°, h6km±28km, M2.9/14, MLh2.9/14*
*IDC **08** 21:11:07.1±1.5, 36°.71N×21°.45E, h81km±35km, mb3.3/5, mbtmp3.5/8, Error ellipse: s-maj=52.2km s-min=11.4km az=17.0*
ISC 08 21:11:03.0±0.9, 36°.95N±0°.04×21°.56E±0°.03, h17km±5km, n42, σ1°.916/49, mb3.6/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL1	**Pylos**	**0.12**	**108**	P	**Pg**	**21 11 06.4**	**-0.2**
PYL1				S	**Sg**	**21 11 09.6**	**+0.5**
PYL	**PYLOS**	**0.16**	**111**	P	**Pg**	**21 11 06.8**	**-0.5**
PYL				S	**Sg**	**21 11 10.3**	**+0.3**
ITM	**Ithomi**	**0.37**	**52**	P	**Pb**	**21 11 12.2**	**+1.0**
ITM	**Ithomi**	**0.37**	**52**	P	**Pb**	**21 11 11.9**	**+0.7**
ITM				S	**Sn**	**21 11 19.5**	**-1.2**
AMT	**Artemida-Makis**	**0.59**	**12**	S	**Sn**	**21 11 27.4**	**+1.4**
AMT	**Artemida-Makis**	**0.59**	**12**	P	**Pn**	**21 11 16.1**	**-0.6**
AMT				S	**Sn**	**21 11 26.7**	**+0.6**
VLX	**Vlachokerasia**	**0.78**	**57**	P	**Pb**	**21 11 18.9**	**+0.7**
VLX				S	**Sn**	**21 11 31.5**	**+0.8**
LTHK	**Lithakia**	**0.95**	**323**	P	**Pg**	**21 11 21.2**	**-0.3**
CLEM	**Kyllini,Ilia,G**	**1.00**	**340**	P	**Pn**	**21 11 22.6**	**+0.4**
KYPS	**Kipseli, Zakin**	**1.04**	**326**	P	**Pn**	**21 11 22.8**	**-0.1**
RLS	**Riolos of Patr**	**1.11**	**356**	P	**Pg**	**21 11 24.4**	**0.0**
ORTH	**Orthonies,Zaky**	**1.13**	**323**	P	**Pn**	**21 11 24.0**	**-0.2**
VLI	**Veliai**	**1.13**	**101**	P	**Pb**	**21 11 24.6**	**+0.4**
VLI	**Veliai**	**1.13**	**101**	P	**Pn**	**21 11 23.8**	**-0.3**
YRMI	**Loutra Irminis**	**1.16**	**352**	P	**Pg**	**21 11 25.0**	**-0.4**
KLV	**Kalavryta, Ach**	**1.19**	**23**	P	**Pg**	**21 11 25.9**	**-0.1**
AXS	**Araxos**	**1.25**	**353**	P	**Pb**	**21 11 26.1**	**-0.1**
RTZL	**Ratzakli, Kefa**	**1.28**	**331**	P	**Pn**	**21 11 26.3**	**+0.1**
KTHA	**Kythira Island**	**1.40**	**119**	P	**Pn**	**21 11 26.0**	**-1.8**
EFP	**Efpalio**	**1.50**	**11**	P	**Pg**	**21 11 32.6**	**+0.7**
KALE	**Kalithea**	**1.51**	**18**	P	**Pg**	**21 11 32.8**	**+0.7**
SERG	**Sergoula**	**1.51**	**15**	P	**Pg**	**21 11 32.6**	**+0.5**
LTK	**Loutraki**	**1.55**	**46**	P	**Pg**	**21 11 32.5**	**-0.3**
LTK				S	**Sg**	**21 11 54.2**	**+1.2**
EVGI	**Lefkada island**	**1.81**	**337**	P	**Pg**	**21 11 36.9**	**-1.0**
DRAG	**Dragano-Lefkad**	**1.90**	**336**	P	**Pg**	**21 11 38.4**	**-1.1**
LKD2	**Lefkada island**	**1.97**	**339**	P	**Pb**	**21 11 39.3**	**+0.9**
AMPL	**Ampelaki**	**1.99**	**352**	P	**Pb**	**21 11 39.7**	**+1.0**
VLY	**Voula,Athens**	**2.00**	**63**	P	**Pn**	**21 11 37.7**	**+1.6**
ATAL	**Atalanti**	**2.09**	**33**	P	**Pb**	**21 11 40.0**	**-0.5**
TETR	**Tetrakomo, Epi**	**2.40**	**355**	P	**Pb**	**21 11 45.1**	**-0.7**
PRMD	**Pramanda**	**2.60**	**352**	P	**Pb**	**21 11 47.9**	**-1.4**
THL	**Klokotos Trika**	**2.63**	**8**	P	**Pb**	**21 11 47.9**	**-1.8**
NEO	**Neokhori**	**2.69**	**29**	P	**Pn**	**21 11 48.3**	**+2.7**
KPRO	**Kipourio**	**3.00**	**357**	P	**Pb**	**21 11 53.7**	**-2.4**
IDI	**Anoyia**	**3.17**	**121**	P	**Pn**	**21 11 52.8**	**+0.6**
	6.2nm,0.5s,baz=312,slow=7.5,SNR=7.8						
IDI				S	**Sn**	**21 12 31.2**	**+1.6**
	13nm,0.5s,baz=300,slow=20,SNR=5.9						
VAE	**Valguarnera**	**5.73**	**277**	P	**Pn**	**21 12 30.6**	**+3.3**
	1.9nm,0.4s,baz=94,slow=15,SNR=2.6						
VAE				S	**Sn**	**21 13 34.3**	**+1.6**
	5.1nm,0.5s,baz=124,slow=15,SNR=2.1						
BRTR	**Keskin Array B**	**9.89**	**70**	P	Pn	21 13 30.0	+5.5
	0.7nm,0.9s,baz=263,slow=15,SNR=1.6						
HFS	**Hagfors**	**23.74**	**350**	P	**P**	**21 16 13.0**	**-1.2**
	1.1nm,0.5s,baz=152,slow=9.6,SNR=5.5						
	1.1nm,0.5s						
FINES	**FINESS Array B**	**24.68**	**5**	P	**P**	**21 16 22.8**	**+0.1**
	2.2nm,0.9s,baz=178,slow=10.0,SNR=1.3						
	2.2nm,0.9s						
NOA	**NORSAR Array B**	**24.98**	**348**	P	**P**	**21 16 24.7**	**-0.9**
	1.3nm,0.9s,baz=156,slow=8.9,SNR=3.7						
	1.3nm,0.9s						
KURBB	**Kurchatov Arra**	**42.31**	**53**	P	**P**	**21 18 54.5**	**-1.2**
	0.2nm,0.4s,baz=276,slow=8.8,SNR=5.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**45.25**	**58**	P	**P**	**21 19 18.1**	**-1.4**
	0.1nm,0.4s,baz=268,slow=8.5,SNR=5.7						
	0.1nm,0.4s						

ISK 08 21:14:39.9, 39°.00N×27°.85E, h14km, ML1.5/5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.13**	**192**	Pg	Pg	21 14 43.6	+0.2
AKS				Sg	Sb	21 14 46.3	-0.5
GORD	**Gordes-Manisa**	**0.27**	**110**	Pg	Pg	21 14 45.9	+0.2
GORD				Sg	Sb	21 14 50.5	-0.6
SOMA	**Soma-Manisa**	**0.29**	**302**	Pg	Pg	21 14 46.3	+0.3
GOMA	**Golmarmara-Man**	**0.30**	**170**	Pg	Pg	21 14 46.5	+0.4
ODEM	**Odemis-Izmir**	**0.75**	**166**	Pg	Pb	21 14 54.8	+0.1

AFAD 08 21:14:40.7, 39°.06N×29°.44E, h9km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.04**	**44**	P	Pg	21 14 42.8	+0.1
GDZ				IAML		21 14 44.0	
	comp=E,243nm,0.2s						
GDZ				S	Sg	21 14 44.1	-0.1
EMET	**Ktahya-Emet**	**0.33**	**344**	P	Pg	21 14 47.4	0.0
EMET				S	Sg	21 14 50.4	-1.4
USAK	**Uak-Merkez**	**0.48**	**224**	P	Pg	21 14 50.5	+0.6
USAK				S	Sb	21 14 57.8	-0.7
BNAZ	**Uak-Banaz**	**0.51**	**138**	P	Pb	21 14 51.4	-0.5
BNAZ				S	Sb	21 14 58.5	-0.9
BNAZ				IAML		21 14 59.0	
	comp=N,22nm,0.1s						
BNAZ				IAML		21 14 59.0	
	comp=E,24nm,0.2s						
DEMI	**Demirci**	**0.56**	**269**	P	Pg	21 14 52.2	+0.6
ANDZ	**Kutahya, Merke**	**0.57**	**38**	P	Pg	21 14 51.9	+0.1

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*ISK **08** 21:45:12.4, 38°.46N×25°.73E, h7km, ML2.5/16*
*THE **08** 21:45:12.8, 38°.N±2°×2°.6E±°, h10km±4km, M2.5/6, MLh2.5/6*
*ATH **08** 21:45:12.3, 38°.39N×25°.72E, h8km±2km, ML2.4/7, Manual Solution by F.Xalaris First location: 2020/02/08 21:46:26, This location: 2020/02/09 05:36:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*AFAD **08** 21:45:14.6, 38°.40N×25°.89E, h7km±2km, ML2.2*
ISC 08 21:45:12.4±1.1, 38°.43N±0°.02×25°.71E±0°.02, h7km±10km, n46, σ0°.945/67, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.28**	**99**	Pg	**Pg**	**21 45 17.8**	**0.0**
CHOS				Sg	**Sg**	**21 45 22.4**	**+0.9**
CHOS	**Chios island**	**0.28**	**99**	P	**Pg**	**21 45 18.0**	**-0.2**
CHOS	**Chios island**	**0.28**	**99**	P	**Pg**	**21 45 17.9**	**+0.1**
CHOS				S	**Sg**	**21 45 21.5**	**0.0**
EAG2	**Marmaro, Chios**	**0.33**	**70**	P	**Pg**	**21 45 19.1**	**+0.2**
EAG2				S	**Sg**	**21 45 23.5**	**+0.2**
CESE	**eme**	**0.47**	**102**	Pg	**Pg**	**21 45 22.1**	**+0.5**
KARB	**zmir-Karabur**	**0.60**	**67**	P	**Pg**	**21 45 23.8**	**-0.1**
KARB				S	**Sg**	**21 45 31.1**	**-0.6**
KARB				IAML		21 45 32.0	
	comp=N,257nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**0.65**	**107**	P	**Pg**	**21 45 24.5**	**-0.4**
ZEYE				IAML		21 45 39.0	
	comp=E,114nm,0.5s						
ZEYE				IAML		21 45 41.0	
	comp=N,98nm,0.3s						
KRBN	**Karaburun**	**0.68**	**76**	Pg	**Pg**	**21 45 25.8**	**+0.3**
KRBN				Sg	**Sg**	**21 45 34.4**	**0.0**
SIGR	**SIGRI**	**0.79**	**8**	Pg	**Pg**	**21 45 27.4**	**-0.2**
SIGR				Sg	**Sg**	**21 45 38.4**	**+0.6**
SIGR	**SIGRI**	**0.79**	**8**	P	**Pg**	**21 45 27.6**	**+0.1**
SIGR				S	**Sb**	**21 45 39.3**	**0.0**
SIGR	**SIGRI**	**0.79**	**8**	P	**Pg**	**21 45 27.3**	**-0.2**
SIGR				S	**Sb**	**21 45 39.3**	**0.0**
FOCM	**Foa**	**0.85**	**70**	Pg	**Pg**	**21 45 28.8**	**+0.1**
BAGT	**Foa**	**0.92**	**76**	P	**Pg**	**21 45 30.4**	**+0.3**
BAGT				S	**Sg**	**21 45 41.5**	**-0.6**
BAGT				IAML		21 45 42.0	
	comp=N,139nm,1.4s						
BAGT				IAML		21 45 45.0	
	comp=E,129nm,0.8s						
PRK	**Paraskevi**	**0.93**	**28**	P	**Pg**	**21 45 29.8**	**-0.3**
PRK	**Paraskevi**	**0.93**	**28**	P	**Pg**	**21 45 29.7**	**-0.5**
PRK				S	**Sb**	**21 45 43.6**	**+0.4**
SKY	**Skiros Island**	**1.01**	**297**	P	**Pg**	**21 45 32.4**	**+0.5**
SKY	**Skiros Island**	**1.01**	**297**	P	**Pg**	**21 45 32.6**	**+0.8**
SKY				S	**Sb**	**21 45 46.7**	**+1.0**
GMLD	**Gumuldur**	**1.01**	**110**	Pg	**Pg**	**21 45 31.8**	**0.0**
GMLD				Sg	**Sb**	**21 45 45.8**	**+0.1**
BLCB	**Balcova**	**1.05**	**92**	Pg	**Pb**	**21 45 32.8**	**0.0**
BLCB	**Balcova**	**1.05**	**92**	P	**Pg**	**21 45 32.3**	**-0.2**
BLCB				S	**Sb**	**21 45 46.9**	**+0.2**
GPNR	**Gulpinar-Canak**	**1.08**	**18**	Pg	**Pg**	**21 45 32.8**	**-0.2**
KARY	**Karystos**	**1.08**	**249**	P	**Pg**	**21 45 32.9**	**-0.2**
KARY	**Karystos**	**1.08**	**249**	P	**Pg**	**21 45 32.7**	**-0.4**
KARY				S	**Sg**	**21 45 46.6**	**-0.5**
IZMD	**zmir-Dikili-**	**1.10**	**60**	P	**Pg**	**21 45 33.7**	**+0.1**
IZMD				S	**Sg**	**21 45 47.4**	**-0.5**
IZMD				IAML		21 45 49.0	
	comp=N,64nm,0.8s						
DKL	**Dikili**	**1.13**	**55**	Pn	**Pg**	**21 45 33.8**	**-0.3**
DKL				Sn	**Sb**	**21 45 49.6**	**+0.4**
SMG	**Samos**	**1.15**	**129**	P	**Pg**	**21 45 33.8**	**-0.5**
SMG				S	**Sb**	**21 45 49.7**	**+0.2**
SMG	**Samos**	**1.15**	**129**	P	**Pg**	**21 45 33.8**	**-0.5**
SMG				S	**Sg**	**21 45 48.9**	**-0.3**
ZEDA	**zmir-Bergama**	**1.20**	**63**	P	**Pb**	**21 45 34.4**	**-1.0**
ZEDA				S	**Sg**	**21 45 50.5**	**-0.3**
ZEDA				IAML		21 45 52.0	
	comp=N,62nm,0.8s						
ZEDA				IAML		21 45 53.0	
	comp=E,57nm,0.7s						
KYMI	**Kymi, Euboea I**	**1.28**	**280**	P	**Pn**	**21 45 36.1**	**-0.6**
KYMI	**Kymi, Euboea I**	**1.28**	**280**	P	**Pg**	**21 45 37.7**	**+0.8**
CAMT	**Merkez**	**1.29**	**75**	P	**Pb**	**21 45 37.1**	**0.0**
CAMT				S	**Sn**	**21 45 54.9**	**+0.4**
GCAM	**G?zelcaml?**	**1.41**	**121**	Pn	**Pb**	**21 45 39.1**	**+0.2**
EZNE	**Ezine-Canakkal**	**1.42**	**21**	Pn	**Pn**	**21 45 38.7**	**+0.1**
BOZC	**Bozcaada**	**1.43**	**11**	Pn	**Pn**	**21 45 38.9**	**+0.1**
DION	**Dionisos Attik**	**1.44**	**256**	P	**Pn**	**21 45 38.7**	**-0.2**
EZN	**Ezine**	**1.47**	**19**	Pn	**Pn**	**21 45 39.4**	**+0.1**
LIA	**Limnos Island**	**1.52**	**345**	P	**Pn**	**21 45 39.3**	**-0.7**
LIA	**Limnos Island**	**1.52**	**345**	P	**Pn**	**21 45 39.6**	**-0.4**
SOMA	**Soma-Manisa**	**1.60**	**62**	Pn	**Pn**	**21 45 41.4**	**+0.3**
COMU	**Canakkale**	**1.77**	**19**	Pn	**Pn**	**21 45 43.7**	**+0.3**
YKAV	**Yalikavak-Bodr**	**1.80**	**136**	Pn	**Pn**	**21 45 44.8**	**-0.9**
BODT	**Bodrum**	**1.86**	**137**	Pn	**Pn**	**21 45 45.7**	**+1.0**
ODEM	**Odemis-Izmir**	**1.87**	**94**	Pn	**Pn**	**21 45 45.4**	**+0.6**
KTTT	**Salihli**	**1.89**	**81**	P	**Pb**	**21 45 47.2**	**0.0**
KTTT				S	**Sb**	**21 46 10.3**	**-0.7**
KTTT				IAML		21 46 14.0	
	comp=N,25nm,0.6s						
GORD	**Gordes-Manisa**	**1.99**	**75**	Pn	**Pn**	**21 45 47.1**	**+0.6**
SMTH	**Samothraki Isl**	**2.04**	**356**	P	**Pn**	**21 45 47.1**	**-0.1**

DJA 08 21:46:45.3±1.0, 10°.5±5°×11°.3E±°, h18km±11km, M3.6/18, mb3.8/1, MLv3.5/18, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.39**	**24**	P	Pn	21 47 08.8	-1.0
JAGI	**Jajag, Banyuwa**	**1.65**	**50**	P	Pn	21 47 11.9	-1.5
JAGI				S	Sn	21 47 33.9	-0.3
BLJI	**Banyuglugur**	**1.93**	**22**	P	Pn	21 47 17.9	+0.7
BLJI				S	Sn	21 47 41.6	+0.6
SNJI	**Sawahan-Nganju**	**2.08**	**328**	P	Pn	21 47 19.6	+0.2
SJI	**Sawahan**	**2.11**	**329**	P	Pn	21 47 20.7	+0.8
PCJI	**Pacitan**	**2.15**	**309**	P	Pn	21 47 19.5	-0.8
PCJI				S	Sn	21 47 47.7	+1.1
ABJI	**Asem Bagus**	**2.20**	**38**	P	Pn	21 47 22.4	+1.5
RTBI	**Rangdo, Negare**	**2.31**	**62**	P	Pn	21 47 22.5	0.0
IGBI	**Denpasar**	**2.35**	**72**	P	Pn	21 47 24.1	+1.0
KMMI	**Kalianget**	**2.71**	**23**	P	Pn	21 47 28.2	+0.3
UGM	**Wanagama**	**2.84**	**305**	P	Pn	21 47 29.2	-0.6
KHKI	**Kahang-Kahang**	**2.94**	**67**	P	Pn	21 47 32.7	+1.5
PLAI	**Plampang**	**4.89**	**82**	P	Pn	21 47 58.1	+0.1
DBNI	**Kabupaten Domp**	**5.47**	**79**	P	Pn	21 48 05.9	0.0

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*GCMT **08** 21:53:52.0±0.3, 17°.38S±0°.02×176°.65W±0°.02, h20km±1km, MW4.9/92, Moment Tensor Solution. s24,c29; s92,c118; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.11±.14; Mθθ-2.76±.14; Mϕϕ2.64±.12; Mrθ0.86±.24; Mϕθ1.32±.11; Mϕr0.42±.20; Best double couple: Mw3.15200×10¹⁶ NP1:ϕs328.00000°, δ73.00000°, λ-179.00000°. NP2: ϕs238.00000°, δ89.00000°, λ-17.00000°. Principal axes: T 3.0710, Plg12.0000°, Azm284.0000°; N 0.1550, Plg72.0000°, Azm56.0000°; P -3.2330, Plg13.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
IDC 08 21:53:48.7±8.7, 16°.36S×177°.49W, h0km, mb4.0/3, mbtmp4.0/3, MS4.2/9 Error ellipse: s-maj=391.3km s-min=35.9km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**12.84**	**182**	LR	LR	22 00 29.9	
	comp=Z,2μm,19.9s,baz=100,slow=31						
DZM	**Mont Dzumac**	**16.20**	**247**	eS	S	22 01 24.5	+33
	4μm,31.8s						
DZM				eLR	LR	22 01 58.9	
	720nm,24.0s						
DZM	**Mont Dzumac**	**16.20**	**247**	LR	LR	22 02 40.1	
	comp=Z,627nm,19.0s,baz=91,slow=33						
RAR	**Rarotonga**	**17.45**	**109**	LR	LR	22 02 05.3	
	comp=Z,958nm,21.8s,baz=285,slow=28						
URZ	**Urewera**	**22.33**	**191**	LR	LR	22 05 40.2	
	comp=Z,1μm,20.4s,baz=41,slow=32						
HNR	**Honiara**	**23.03**	**285**	LR	LR	22 06 59.3	
	comp=Z,30nm,19.4s,baz=196,slow=34						
PPT2	**Papeete2**	**26.72**	**97**	eS	S	22 03 54.6	-12
	442nm,27.5s						
PPT2				eLR	LR	22 05 44.1	
	813nm,24.2s						
PPT2				eLR	LR	22 05 51.4	
	707nm,26.8s						
PPT	**Papeete**	**26.72**	**97**	LR	LR	22 06 47.0	
	comp=Z,276nm,19.7s,baz=210,slow=29						
TBI	**Tubuai**	**27.23**	**109**	eLR	LR	22 05 58.3	
	3μm,24.8s						
TBI				eLR	LR	22 06 03.1	
	796nm,26.0s						
PMG	**Port Moresby**	**35.11**	**277**	LR	LR	22 13 36.6	
	comp=Z,210nm,18.4s,baz=102,slow=34						
WRA	**Warramunga Arr**	**45.79**	**258**	P	P	22 02 12.3	-0.2
	0.5nm,0.7s,baz=92,slow=7.7,SNR=4.7						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**46.07**	**253**	P	P	22 02 14.7	-0.1
	4.4nm,0.8s,baz=85,slow=8.5,SNR=19						
ASAR				LR	LR	22 20 43.0	
	comp=Z,120nm,18.4s,baz=92,slow=35						
	4.4nm,0.8s						
SIJI	**Sorong**	**52.76**	**282**	LR	LR	22 25 03.5	
	comp=Z,211nm,20.8s,baz=133,slow=36						
FITZ	**Fitzroy Crossi**	**54.16**	**259**	LR	LR	22 25 00.2	
	comp=Z,265nm,19.4s,baz=102,slow=35						
ILAR	**Eielson Array**	**84.19**	**13**	P	P	22 06 21.5	0.0
	0.9nm,0.6s,baz=211,slow=5.2,SNR=7.1						
	0.9nm,0.6s						

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*SJA **08** 21:54:36.6±0.6, 20°.29S×69°.12W, h98km±3km, ML3.9, MW3.8*
*GUC **08** 21:54:39.5±0.8, 20°.31S×69°.15W, h86km±3km, ML3.7*
ISC 08 21:54:39.0±1.5, 20°.30S±0°.03×69°.20W±0°.07, h89km±8km, n30, σ0°.972/52, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.16**	**17**	eP	**Pn**	**21 54 52.1**	**-0.2**
PB08				*i* S	**Sn**	**21 55 02.2**	**+0.2**
PB08				IAML		21 55 03.5	
	comp=N,3μm,0.2s						
PB08	**IPOC Station P**	**0.16**	**17**	eP	**Pn**	**21 54 51.8**	**-0.5**
PB08				eS	**Sn**	**21 55 02.5**	**+0.5**
PB08				IAML		21 55 03.1	
	comp=Z,1μm,0.2s						
PX03	**IPOC Station P**	**0.41**	**255**	eP	**Pn**	**21 54 52.2**	**-0.9**
PX03				*i* S	**Sn**	**21 55 03.8**	**+0.1**
GO01	**Chusmiza**	**0.63**	**1**	eP	**Pn**	**21 54 54.9**	**-0.4**
GO01				*i* S	**Sn**	**21 55 07.8**	**+0.5**
GO01				IAML		21 55 10.0	
	comp=N,6μm,0.1s						
GO01	**Chusmiza**	**0.63**	**1**	eP	**Pn**	**21 54 54.4**	**-0.9**
GO01				IAML		21 55 09.5	
	comp=Z,1μm,0.2s						
HMBC	**Humberstone**	**0.64**	**272**	eP	**Pn**	**21 54 54.5**	**-0.5**
HMBC				*i* S	**Sn**	**21 55 07.4**	**+0.4**
HMBC				IAML		21 55 10.1	
	comp=N,2μm,0.6s						
HMBC	**Humberstone**	**0.64**	**272**	eP	**Pn**	**21 54 53.9**	**-1.1**
HMBC				IAML		21 55 14.9	
	comp=Z,2μm,0.4s						
PB11	**IPOC Station P**	**0.68**	**321**	eP	**Pn**	**21 54 55.3**	**-0.2**
PB11				*i* S	**Sn**	**21 55 08.5**	**+0.8**
PB11	**IPOC Station P**	**0.68**	**321**	eP	**Pn**	**21 54 55.1**	**-0.4**
PB11				eS	**Sn**	**21 55 08.7**	**+1.0**
PB11				IAML		21 55 10.6	
	comp=Z,2μm,0.2s						
PB01	**IPOC Station P**	**0.79**	**200**	eP	**Pn**	**21 54 56.1**	**-0.3**
PB01				*i* S	**Sn**	**21 55 09.5**	**+0.1**
PB01				IAML		21 55 10.6	
	comp=N,5μm,0.3s						
PB01	**IPOC Station P**	**0.79**	**200**	eP	**Pn**	**21 54 56.0**	**-0.5**
PB01				eS	**Sn**	**21 55 10.2**	**+0.8**
PB01				IAML		21 55 12.2	
	comp=Z,3μm,0.2s						
TA02	**Huaiquique**	**0.87**	**272**	eP	**Pn**	**21 54 57.1**	**-0.1**
TA02				*i* S	**Sn**	**21 55 11.1**	**+0.3**
TA02	**Huaiquique**	**0.87**	**272**	eP	**Pn**	**21 54 57.1**	**-0.1**
TA02				IAML		21 55 15.3	
	comp=Z,3μm,0.1s						
PB02	**IPOC Station P**	**1.21**	**212**	eP	**Pn**	**21 55 01.1**	**-0.1**
PB02				*i* S	**Sn**	**21 55 17.9**	**0.0**
PB02				IAML		21 55 24.8	
	comp=N,4μm,0.2s						
PB02	**IPOC Station P**	**1.21**	**212**	eP	**Pn**	**21 55 00.6**	**-0.6**
PB02				eS	**Sn**	**21 55 19.1**	**+1.2**
PB02				IAML		21 55 24.3	
	comp=Z,4μm,0.4s						
PB09	**IPOC Station P**	**1.49**	**181**	eP	**Pn**	**21 55 04.8**	**0.0**
PB09				*i* S	**Sn**	**21 55 25.0**	**+0.7**
PB09				IAML		21 55 28.1	
	comp=E,1μm,0.4s						
PB09	**IPOC Station P**	**1.49**	**181**	eP	**Pn**	**21 55 04.2**	**-0.6**
PB09				IAML		21 55 27.3	
	comp=Z,2μm,0.6s						
PB07	**IPOC Station P**	**1.56**	**204**	eP	**Pn**	**21 55 05.4**	**-0.3**
PB07				*i* S	**Sn**	**21 55 25.7**	**0.0**
PB07				IAML		21 55 33.6	
	comp=E,2μm,0.3s						
PB07	**IPOC Station P**	**1.56**	**204**	eP	**Pn**	**21 55 04.9**	**-0.8**
PB07				IAML		21 55 31.8	
	comp=Z,1μm,0.4s						
PB03	**IPOC Station P**	**1.82**	**196**	eP	**Pn**	**21 55 08.5**	**-0.4**
PB03				*i* S	**Sn**	**21 55 32.1**	**+0.4**
PB03				IAML		21 55 36.1	
	comp=E,895nm,0.3s						
PB03	**IPOC Station P**	**1.82**	**196**	eP	**Pn**	**21 55 08.5**	**-0.4**
PB03				eS	**Sn**	**21 55 34.1**	**+2.5**
PB03				IAML		21 55 36.8	
	comp=Z,851nm,0.3s						
PB12	**IPOC Station P**	**1.98**	**327**	eP	**Pn**	**21 55 10.6**	**-0.5**
PB12				*i* S	**Sn**	**21 55 35.9**	**+0.4**
PB12	**IPOC Station P**	**1.98**	**327**	eP	**Pn**	**21 55 10.7**	**-0.4**
PB12				eS	**Sn**	**21 55 36.5**	**+1.0**
PB12				IAML		21 55 43.1	
	comp=Z,1μm,0.3s						
AP01	**Chacalluta**	**2.20**	**331**	eP	**Pn**	**21 55 14.3**	**+0.5**
AP01				eS	**Sn**	**21 55 39.4**	**-0.9**
AP01				IAML		21 55 49.3	
	comp=Z,2μm,0.2s						
PB06	**IPOC Station P**	**2.42**	**188**	eP	**Pn**	**21 55 15.9**	**-1.0**
PB06				*i* S	**Sn**	**21 55 46.8**	**+0.9**
PB06				IAML		21 55 53.7	
	comp=N,758nm,0.2s						
PB06	**IPOC Station P**	**2.42**	**188**	eP	**Pn**	**21 55 16.7**	**-0.2**
PB06				eS	**Sn**	**21 55 45.4**	**-0.5**
PB06				IAML		21 55 51.9	
	comp=Z,563nm,0.3s						
PB05	**IPOC Station P**	**2.71**	**200**	eP	**Pn**	**21 55 19.8**	**-0.9**
PB05				*i* S	**Sn**	**21 55 53.1**	**+0.4**
PB05				IAML		21 56 07.4	
	comp=E,433nm,0.5s						
PB05	**IPOC Station P**	**2.71**	**200**	eP	**Pn**	**21 55 19.6**	**-1.1**
PB05				IAML		21 56 01.2	
	comp=Z,236nm,0.9s						
AF01	**San Pedro de A**	**2.81**	**160**	eP	Pn	21 55 08.9	-13
AF01				eS	**Sn**	**21 55 56.2**	**+0.8**
AF01				IAML		21 56 26.3	
	comp=Z,350nm,0.6s						
PB14	**IPOC Station P**	**4.45**	**194**	eP	**Pn**	**21 55 43.9**	**-0.6**
PB14				IAML		21 56 55.9	
	comp=Z,110nm,0.3s						

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*IDC **08** 21:58:35.8±0.6,

JOD2 eS Sn 21 59 21.3 -1.1
JHJ Hachijo jima 2 1.57 124 Pn Pn 21 59 05.6 +0.1
comp=E,66nm,0.3s,baz=279,slow=19,SNR=7.1
JHJ Sn Sn 21 59 25.4 -0.3
comp=E,269nm,0.3s,baz=234,slow=22,SNR=5.9
JHJ2 Mitsune 1.60 124 Pn 21 59 05.7 -0.1
INU Inuyama 1.67 323 Pn 21 59 05.9 -0.9
INU Sn Sn 21 59 24.9 -3.3
JGF Kuroka 1.74 336 Pn 21 59 07.5 -0.4
JGF Sn 21 59 27.9 -2.1
MJAR Matsushiro Arr 2.52 359 Pn Pn 21 59 18.9 +0.3
comp=E,2.6nm,0.3s,baz=181,slow=14,SNR=113
MJAR Sn Sn 21 59 50.4 +1.1
comp=E,4.4nm,0.3s,baz=195,slow=26,SNR=6.2
MJAR LR LR 22 00 32.9
comp=E,594nm,20.2s,baz=210,slow=45
comp=E,26nm,0.4s
MJAR Matsushiro Arr 2.52 359 Pn 21 59 18.8 +0.2
MAJO Matsushiro 2.52 359 Pn 21 59 19.2 +0.6
MAJO Sn Sn 21 59 49.3 0.0
MJB9 Matsu-Tunnel 2.53 359 Pn 21 59 18.9 +0.3
MJB9 Sn Sn 21 59 49.1 -0.3
JMN Monobe 3.64 267 Pn Pn 21 59 33.2 -0.7
JNU Nakatsue 6.21 264 Pn Pn 22 00 09.9 +0.6
comp=E,2.2nm,0.3s,baz=38,slow=5.1,SNR=16
comp=E,4.7nm,0.3s
KSRS Korea Array 9.06 295 Pn Pn 22 00 49.5 +1.2
comp=E,0.2nm,0.3s,baz=108,slow=14,SNR=2.1
KSRS LR LR 22 04 39.3
comp=E,22nm,21.3s,baz=95,slow=40
comp=E,0.7nm,0.5s
ASAJ Asahikawa 10.64 17 Pn Pn 22 01 10.1 +0.1
comp=E,0.2nm,0.3s,baz=203,slow=13,SNR=6.7
ASAJ LR LR 22 05 36.6
comp=E,126nm,19.5s,baz=167,slow=39
comp=E,10nm,1.0s
JKA Kamikawa-asahi 10.64 17 Pn Pn 22 01 08.6 -1.4
KLR Kul'dur 15.95 344 LR LR 22 08 15.6
comp=E,32nm,20.0s,baz=155,slow=36
PETK Petropavlovsk- 23.59 30 P P 22 03 48.5 +0.3
comp=E,4.2nm,0.9s,baz=212,slow=7.0,SNR=5.1
comp=E,4.2nm,0.9s
PETK Petropavlovsk- 23.59 30 P P 22 03 48.3 0.0
SONM Songino Array 27.52 310 P P 22 04 24.9 +0.7
comp=E,1.6nm,1.0s,baz=128,slow=9.5,SNR=8.7
SONM PcP PcP 22 07 42.9 +0.7
comp=E,0.6nm,0.6s,baz=104,slow=2.8,SNR=4.6
comp=E,1.6nm,1.0s
SONM Songino Array 27.52 310 P P 22 04 24.7 +0.5
LZDM Lanzhou Array 28.28 284 P P 22 04 31.6 +0.2
comp=E,0.2nm,0.3s,baz=120,slow=8.8,SNR=5.9
comp=E,0.2nm,0.3s
YAK Yakutsk 28.56 352 LR LR 22 15 59.8
comp=E,105nm,18.1s,baz=108,slow=36
H11N2 WAKE ISLAND Hy 29.14 112 T T 22 35 33.5
baz=302
H11N1 WAKE ISLAND Hy 29.14 112 T T 22 35 35.6
baz=302
H11N3 WAKE ISLAND Hy 29.15 112 T T 22 35 21.3
baz=302
H11S3 WAKE ISLAND Hy 29.70 114 T T 22 36 58.1
baz=306
H11S1 WAKE ISLAND Hy 29.70 114 T T 22 37 02.2
baz=306
H11S2 WAKE ISLAND Hy 29.71 114 T T 22 36 56.0
baz=306
ZALV Zalesovo Beam 42.12 315 P P 22 06 30.1 +0.5
comp=E,0.3nm,0.4s,baz=97,slow=12,SNR=1.6
ZALV PcP PcP 22 08 24.0 0.0
comp=E,1.8nm,0.7s,baz=96,slow=3.0,SNR=9.0
comp=E,0.3nm,0.4s
MKAR Makanchi Array 43.60 304 P P 22 06 42.9 +1.0
comp=E,0.6nm,0.8s,baz=89,slow=11,SNR=5.9
MKAR PcP PcP 22 08 29.1 -0.1
comp=E,0.9nm,0.8s,baz=71,slow=4.8,SNR=5.0
comp=E,0.6nm,0.8s
MKAR Makanchi Array 43.60 304 P P 22 06 40.9 -0.9
NRIK Noril'sk 44.98 337 P P 22 06 52.9 +0.4
comp=E,1.0nm,0.5s,baz=109,slow=10,SNR=3.6
NRIK LR LR 22 26 57.3
comp=E,109nm,18.7s,baz=110,slow=38
comp=E,1.0nm,0.5s
NRIK Noril'sk 44.98 337 P P 22 06 52.6 +0.1
NRIK IAmb IAmb 22 07 03.1
comp=Z,8.6nm,1.2s
IPM Ipoh 45.35 238 P P 22 06 55.3 -0.8
IPM IAmb IAmb 22 06 59.7
comp=Z,14nm,1.3s
KURK Kurchatov 45.82 310 P P 22 06 58.9 -0.5
KURBB Kurchatov Arra 45.88 310 P P 22 07 00.5 +0.6
comp=Z,0.3nm,0.3s,baz=88,slow=8.7,SNR=4.5
comp=Z,0.3nm,0.3s
F15K North Star Dit 46.09 29 P P 22 07 02.0 +0.6
F15K IAmb IAmb 22 07 05.3
comp=Z,5.3nm,1.2s
BATI Baumata 46.10 200 LR LR 22 26 25.9
comp=Z,142nm,19.6s,baz=150,slow=36
K17K Iditarod 48.30 34 P P 22 07 19.6 +1.0
K17K IAmb IAmb 22 07 43.4
comp=Z,6.9nm,1.1s
C19K Lookout Ridge 48.79 25 P P 22 07 23.8 +1.4
C19K IAmb IAmb 22 07 25.3
comp=Z,4.1nm,0.9s
BVAR Borovoye Array 50.73 314 LR LR 22 29 59.0
comp=Z,71nm,20.4s,baz=29,slow=37
KK31 Karatay Array 52.43 301 P P 22 07 49.8 -0.4
KKAR Karatay Array 52.43 301 P P 22 07 49.9 -0.3
ILAR Eielson Array 53.42 31 P P 22 07 57.5 +0.3
comp=Z,0.8nm,0.9s,baz=285,slow=6.5,SNR=6.0
comp=Z,0.8nm,0.9s
ILAR Eielson Array 53.42 31 P P 22 07 56.7 -0.4
WB0 Warramunga Arr 53.61 184 P P 22 07 57.5 -1.4
WB0 IAmb IAmb 22 08 01.0
comp=Z,10nm,1.2s
WRA Warramunga Arr 53.78 185 P P 22 07 59.1 -1.2
comp=Z,0.6nm,0.5s,baz=0.2,slow=7.5,SNR=13
comp=Z,0.6nm,0.5s
WRA Warramunga Arr 53.78 185 P P 22 07 58.7 -1.5
BCAR Beaver Creek A 55.84 33 P P 22 08 15.7 +1.0
ARTI Arti 57.03 319 P P 22 08 23.4 +0.1
EPYK Eagle Plains 57.42 28 P P 22 08 26.8 +0.8
EPYK IAmb IAmb 22 08 28.6
comp=Z,10nm,0.9s
ASAR Alice Springs 57.51 185 P P 22 08 26.3 -0.7
comp=Z,0.6nm,0.8s,baz=15,slow=11,SNR=7.1
comp=Z,0.6nm,0.8s
AB31 Akbulak array 57.92 311 P P 22 08 29.4 -0.3
AB31 IAmb IAmb 22 08 39.5
comp=Z,4.5nm,0.8s
ABKAR Akbulak array 57.92 311 P P 22 08 29.4 -0.3
INK Inuvik 58.24 26 P P 22 08 32.2 +0.6
INK IAmb IAmb 22 08 33.8
comp=Z,10nm,1.5s
A36M Sachs Harbour 60.01 21 P P 22 08 44.8 +1.0
DLBC Dease Lake 62.59 36 LR LR 22 35 46.2
comp=Z,216nm,21.7s,baz=198,slow=36
STKA Stephens Creek 65.62 177 P P 22 09 21.6 0.0
RES Resolute Bay 66.15 13 P P 22 09 24.7 +0.2
RES IAmb IAmb 22 09 25.8
comp=Z,8.2nm,1.0s
YKA Yellowknife Ar 67.70 29 P P 22 09 34.4 -0.2
comp=Z,1.0nm,0.8s,baz=298,slow=7.0,SNR=13
comp=Z,1.0nm,0.8s
FIA1 FINESS Array S 70.26 332 P P 22 09 49.7 -0.8
FINES FINESS Array B 70.26 332 P P 22 09 50.6 +0.2
comp=Z,1.1nm,0.6s,baz=52,slow=6.8,SNR=6.6
comp=Z,1.1nm,0.6s
FINES FINESS Array B 70.26 332 P P 22 09 50.0 -0.5
SUMG Summit 73.67 359 P P 22 10 11.8 +0.5
SUMG IAmb IAmb 22 10 13.5
comp=Z,5.6nm,0.8s
K05A Summer Lake 74.87 49 P P 22 10 19.1 +0.5
AKASG Malin Array Be 75.07 322 P P 22 10 19.4 +0.1
comp=Z,1.6nm,0.6s,baz=51,slow=6.0,SNR=8.5
comp=Z,1.6nm,0.6s
HFS Hagfors 75.74 335 P P 22 10 23.1 +0.1
comp=Z,2.3nm,0.7s,baz=46,slow=6.2,SNR=5.3
comp=Z,2.3nm,0.7s
NOA NORSAR Array B 75.94 336 P P 22 10 23.8 -0.4
comp=Z,0.9nm,0.7s,baz=56,slow=6.1,SNR=2.3
comp=Z,0.9nm,0.7s
NVAR Mina Array Bea 78.88 51 P P 22 10 41.5 +0.1
comp=Z,0.8nm,0.6s,baz=337,slow=6.5,SNR=2.2
comp=Z,0.8nm,0.6s
BURAR Bucovina Array 79.03 321 P P 22 10 41.8 0.0
TPNV Topopah Spring 81.07 51 P P 22 10 52.9 -0.2
PDAR Pinedale Array 81.63 44 P P 22 10 56.4 +0.3
comp=Z,0.6nm,0.7s,baz=299,slow=6.7,SNR=5.3
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 81.63 44 P P 22 10 55.9 -0.2
GERES GERESS Array B 83.86 327 P P 22 11 07.5 +0.2
comp=Z,0.6nm,0.7s,baz=25,slow=3.9,SNR=4.3
comp=Z,0.6nm,0.7s
ARSA Arzberg 84.16 325 *i* pP P 22 11 03.0 -5.8
comp=Z,2.7nm,1.0s
SOKA Soboth 84.80 325 *i* pP P 22 11 06.3 -5.8
comp=Z,4.0nm,0.9s
WATA Walderalm 85.94 327 *e*PcP P 22 11 11.7 -6.2
comp=Z,3.5nm,1.5s
WTTA Wattenberg 85.96 327 *i* PcP P 22 11 11.1 -6.9
comp=Z,4.6nm,1.2s
MOTA Moosalm 86.14 327 *i* pP P 22 11 13.7 -5.3
comp=Z,2.8nm,1.2s
FETA Feichten 86.56 327 *e*P P 22 11 10.3 -11
comp=Z,6.4nm,1.4s
TXAR Lajitas Array 94.03 51 P P 22 11 57.1 +0.9
comp=Z,1.0nm,0.8s,baz=278,slow=3.2,SNR=9.7
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 94.03 51 P P 22 11 56.2 -0.1
LPAZ La Paz 150.45 60 PKPbc **PKPbc** 22 18 30.1 -0.4
comp=Z,1.3nm,0.8s,baz=340,slow=3.4,SNR=5.3

*IDC **08** 22:21:43.8±1.0, 17°.20S×176°.95W, h0km, mb4.0/12, mbtmp4.0/12, MS4.4/51, Error ellipse: s-maj=38.7km s-min=21.4km az=143.0*
*GCMT **08** 22:21:52.0±0.1, 17°.29S±0°.01×176°.66W±0°.01, h15km, MW5.2/137, Moment Tensor Solution. s67,c103; s137,c213; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.02±.01; Mθθ-0.61±.01; Mφφ0.63±.01; Mrθ0.14±.03; Mθφ0.44±.01; Mφr0.17±.03; Best double couple: M=0.78800×10^17 NP1:φs332.00000°, δ76.00000°, λ175.00000°. NP2:φs63.00000°, δ85.00000°, λ14.00000°. Principal axes: T 0.8170, Plg14.0000°, Azm288.0000°; N -0.0590, Plg75.0000°, Azm83.0000°; P -0.7590, Plg6.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 08 22:21:49.1±0.8, 17°.3S±0°.2×177°.0W±0°.2, h35km, n71, σ0.6 f79/24, mb4.0/12, MS4.4/49, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**11.97**	**184**	LR		LR	LR	22 28 30.9	
	comp=Z,6μm,20.4s,baz=12,slow=34								
DZM	**Mont Dzumac**	**16.33**	**250**	*e*S		S		22 29 17.1	+29
	9μm,27.0s								
DZM				*e*LR		LR	LR	22 30 00.8	
	2μm,23.4s								
RAR	**Rarotonga**	**16.71**	**106**	LR		LR	LR	22 30 28.8	
	comp=Z,2μm,20.9s,baz=279,slow=31								
URZ	**Urumqi**	**21.55**	**193**	P		P		**22 26 35.3**	**-0.1**
	16nm,1.1s,baz=0.9,slow=7.4,SNR=3.0								
	16nm,1.1s								
HNR	**Honiara**	**23.75**	**286**	LR		LR	LR	22 34 56.9	
	comp=Z,114nm,19.0s,baz=198,slow=33								
PPT	**Papeete**	**26.14**	**95**	LR		LR	LR	22 34 47.7	
	comp=Z,883nm,19.4s,baz=238,slow=30								
TBI	**Tubuai**	**26.48**	**108**	*e*LR		LR	LR	22 33 58.3	
	18μm,28.8s								
TBI				*e*LR		LR	LR	22 34 01.7	
	4μm,28.2s								
CTA	**Charters Tower**	**34.91**	**260**	LR		LR	LR	22 41 46.6	
	comp=Z,2μm,18.1s,baz=74,slow=34								
PMG	**Port Moresby**	**35.71**	**278**	LR		LR	LR	22 42 36.0	
	comp=Z,914nm,18.1s,baz=84,slow=35								
TAOE	**Nuku Hiva Isla**	**36.78**	**82**	*e*LR		LR	LR	22 38 32.5	
	1μm,25.5s								
STKA	**Stephens Creek**	**40.14**	**241**	LR		LR	LR	22 44 51.7	
	comp=Z,475nm,18.4s,baz=68,slow=34								
JAY	**Jayapura**	**44.05**	**285**	LR		LR	LR	22 47 19.5	
	comp=Z,520nm,21.4s,baz=152,slow=35								
WRA	**Warramunga Arr**	**46.10**	**259**	P		P		**22 30 10.5**	**+0.3**
	0.3nm,0.4s,baz=93,slow=7.0,SNR=9.1								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**46.28**	**254**	P		P		**22 30 12.0**	**+0.3**
	5.6nm,0.7s,baz=89,slow=8.4,SNR=22								
ASAR				LR		LR	LR	22 49 08.2	
	comp=Z,638nm,18.2s,baz=94,slow=36								
	5.6nm,0.7s								
GUMO	**Guam**	**48.57**	**307**	LR		LR	LR	22 48 49.3	
	comp=Z,212nm,20.9s,baz=120,slow=34								
SIJI	**Sorong**	**53.43**	**282**	LR		LR	LR	22 53 00.8	
	comp=Z,636nm,20.5s,baz=116,slow=35								
FITZ	**Fitzroy Crossi**	**54.49**	**260**	LR		LR	LR	22 52 58.6	
	comp=Z,994nm,19.5s,baz=103,slow=34								
BATI	**Baumata**	**57.91**	**269**	LR		LR	LR	22 54 24.9	
	comp=Z,473nm,21.7s,baz=137,slow=34								
NWAO	**Narrogin (SRO)**	**60.72**	**242**	LR		LR	LR	22 57 03.0	
	comp=Z,372nm,18.7s,baz=72,slow=35								
DAV	**Davao City (W)**	**61.69**	**288**	LR		LR	LR	22 56 52.1	
	comp=Z,78nm,18.6s,baz=121,slow=34								
RPN	**Rapa Nui**	**62.76**	**112**	LR		LR	LR	22 52 28.5	
	comp=Z,598nm,19.0s,baz=249,slow=29								
KAPI	**Kappang**	**63.02**	**273**	LR		LR	LR	22 57 44.4	
	comp=Z,216nm,20.8s,baz=100,slow=34								
MJAR	**Matsushiro Arr**	**68.22**	**322**	P		P		**22 32 45.8**	**-0.5**
	0.5nm,0.3s,baz=129,slow=3.1,SNR=1.6								
MJAR				LR		LR	LR	22 57 27.0	
	comp=Z,104nm,21.0s,baz=135,slow=31								
	0.5nm,0.3s								
TGY	**Tagaytay City**	**68.74**	**293**	LR		LR	LR	22 59 09.8	
	comp=Z,326nm,20.3s,baz=136,slow=33								
JOW	**Kunigami**	**68.88**	**309**	LR		LR	LR	22 58 46.2	
	comp=Z,72nm,18.6s,baz=46,slow=32								
SHEM	**Shemya Is, Ala**	**70.12**	**354**	LR		LR	LR	22 59 19.7	
	comp=Z,336nm,19.0s,baz=123,slow=32								
PETK	**Petropavlovsk-**	**73.42**	**344**	LR		LR	LR	23 02 07.2	
	comp=Z,206nm,19.5s,baz=149,slow=33								
LEM	**Lembang**	**74.11**	**268**	LR		LR	LR	23 05 54.9	
	comp=Z,156nm,20.3s,baz=130,slow=36								
KSRS	**Korea Array**	**75.14**	**318**	LR		LR	LR	23 02 33.1	
	comp=Z,47nm,21.0s,baz=125,slow=33								
PFO	**Pinyon Flats O**	**76.70**	**49**	LR		LR	LR	22 59 09.9	
	comp=Z,565nm,21.3s,baz=238,slow=29								
LPIG	**La Paz**	**76.93**	**59**	LR		LR	LR	23 01 26.2	
	comp=Z,147nm,18.3s,baz=232,slow=31								
YBH	**Yreka Blue Hor**	**77.16**	**39**	LR		LR	LR	22 59 51.4	
	comp=Z,36nm,20.4s,baz=248,slow=30								
KDAK	**Kodiak Island**	**77.46**	**13**	LR		LR	LR	22 59 35.3	
	comp=Z,591nm,21.3s,baz=203,slow=29								
NVAR	**Mina Array Bea**	**78.01**	**43**	P		P		**22 33 44.1**	**-0.3**
	0.3nm,0.3s,baz=241,slow=7.3,SNR=1.8								
NVAR				LR		LR	LR	23 01 21.1	
	comp=Z,262nm,20.0s,baz=230,slow=30								
	0.3nm,0.3s								
KLR	**Kul'dur**	**80.26**	**329**	LR		LR	LR	23 04 53.2	
	comp=Z,40nm,20.9s,baz=136,slow=32								
MA2	**Magadan**	**80.94**	**344**	LR		LR	LR	23 04 01.5	
	comp=Z,136nm,21.3s,baz=120,slow=31								
BBB	**Bella Bella**	**81.10**	**28**	LR		LR	LR	23 01 40.4	
	comp=Z,319nm,20.5s,baz=217,slow=30								
SEY	**Seymchan**	**83.46**	**346**	LR		LR	LR	23 07 36.4	
	comp=Z,197nm,19.0s,baz=139,slow=33								
PMSA	**Palmer Station**	**83.86**	**157**	LR		LR	LR	23 10 38.6	
	comp=Z,134nm,18.3s,baz=264,slow=35								
NEW	**Newport**	**84.19**	**36**	LR		LR	LR	23 05 43.9	
	comp=Z,356nm,18.7s,baz=241,slow=31								
TXAR	**Lajitas Array**	**84.49**	**57**	P		P		**22 34 18.9**	**+0.1**
	0.9nm,1.0s,baz=237,slow=5.8,SNR=4.7								
TXAR				LR		LR	LR	23 05 58.9	
	comp=Z,156nm,18.1s,baz=244,slow=31								
	0.9nm,1.0s								
ANMO	**Albuquerque**	**84.62**	**51**	LR		LR	LR	23 05 19.3	
	comp=Z,407nm,18.5s,baz=244,slow=31								
DLBC	**Dease Lake**	**84.70**	**23**	LR		LR	LR	23 03 55.1	
	comp=Z,711nm,21.4s,baz=268,slow=30								
ILAR	**Eielson Array**	**84.96**	**12**	P		P		**22 34 20.6**	**+0.4**
	3.0nm,1.0s,baz=225,slow=4.3,SNR=9.8								
	3.0nm,1.0s								
PDAR	**Pinedale Array**	**85.94**	**43**	P		P		**22 34 26.0**	**0.0**
	0.7nm,0.9s,baz=244,slow=4.6,SNR=3.1								
PDAR				LR		LR	LR	23 07 31.5	
	comp=Z,109nm,20.0s,baz=246,slow=32								
	0.7nm,0.9s								
HILR	**Hailar Array B**	**86.79**	**324**	P		P		**22 34 29.9**	**+0.1**
	0.5nm,0.5s,baz=132,slow=8.8,SNR=4.1								
	0.5nm,0.5s								
CMIG	**Matias Romero**	**87.73**	**71**	LR		LR	LR	23 04 39.8	
	comp=Z,202nm,20.3s,baz=228,slow=29								
YAK	**Yakutsk**	**89.49**	**338**	LR		LR	LR	23 10 39.6	
	comp=Z,40nm,20.9s,baz=113,slow=33								
CMAR	**Chiang Mai Arr**	**89.96**	**289**	P		P		**22 34 45.4**	**-0.1**
	0.3nm,0.3s,baz=105,slow=8.8,SNR=6.0								
	0.3nm,0.3s								
PLCA	**Paso Flores**	**90.78**	**133**	LR		LR	LR	23 10 20.1	
	comp=Z,141nm,18.2s,baz=244,slow=32								
INK	**Inuvik**	**90.91**	**15**	LR		LR	LR	23 07 52.0	
	comp=Z,291nm,22.0s,baz=238,slow=30								
LZDM	**Lanzhou Array**	**91.65**	**307**	LR		LR	LR	23 13 37.6	
	comp=Z,97nm,20.7s,baz=315,slow=34								
YKA	**Yellowknife Ar**	**93.18**	**24**	P		P		**22 34 59.4**	**0.0**
	0.1nm,0.3s,baz=246,slow=5.3,SNR=2.6								
YKA				LR		LR	LR	23 09 11.7	
	comp=Z,396nm,21.6s,baz=258,slow=31								
	0.1nm,0.3s								
SONM	**Songino Array**	**93.96**	**319**	P		P		**22 35 03.4**	**-0.1**
	0.1nm,0.3s,baz=119,slow=1.8,SNR=1.8								
SONM				LR		LR	LR	23 12 54.6	
	comp=Z,103nm,20.7s,baz=114,slow=33								
	0.1nm,0.3s								
JTS	**Las Juntas de**	**94.91**	**81**	LR		LR	LR	23 09 13.4	
	comp=Z,133nm,20.6s,baz=91,slow=30								
TIXI	**Tiksi**	**95.88**	**345**	LR		LR	LR	23 15 02.6	
	comp=Z,247nm,19.4s,baz=186,slow=33								
NNA	**Nana**	**95.95**	**104**	LR		LR	LR	23 08 52.5	
	comp=Z,110nm,19.1s,baz=248,slow=30								
ATAH	**Atahualpa**	**96.03**	**99**	LR		LR	LR	23 08 37.8	
	comp=Z,282nm,21.4s,baz=254,slow=29								
ULM	**Lac du Bonnet**	**97.54**	**40**	LR		LR	LR	23 13 28.4	
	comp=Z,455nm,18.3s,baz=238,slow=32								
OSTC	**Ostas**	**145.14**	**345**	*e*P		**PKiKP**		**22 41 25.0**	**-1.8**
UPC	**Upice**	**145.23**	**345**	*e*P		**PKiKP**		**22 41 25.8**	**-1.1**
BRTR	**Keskin Array B**	**145.28**	**316**	PKPbc		**PKPbc**		**22 41 23.0**	**-0.4**
	2.1nm,0.9s,baz=46,slow=5.3,SNR=4.3								
DPC	**Dobruska-Polom**	**145.30**	**345**	*e*P		**PKiKP**		**22 41 26.0**	**-1.1**
DPC				*ex*		x		22 41 32.3	
STEB	**Steborice**	**145.30**	**343**	*e*P		**PKiKP**		**22 41 25.5**	**-1.6**
PRU	**Pruhonice**	**146.06**	**347**	*e*P		**PKiKP**		**22 41 27.6**	**-1.0**
GERES	**GERESS Array B**	**147.32**	**347**	PKPbc		**PKPdf**		**22 41 27.7**	**+1.0**
	1.0nm,1.2s,baz=48,slow=2.0,SNR=5.2								
CONA	**Conrad Observa**	**147.65**	**344**	*e*PKP		**PKPab**		**22 41 33.5**	**+1.2**
	3.2nm,1.1s								
MOA	**Molln**	**148.13**	**346**	*e*PKP		**PKPab**		**22 41 34.1**	**+0.1**
	4.6nm,1.1s								
SQTA	**Sankt Quirin**	**149.37**	**349**	*e*PKP		**PKiKP**		**22 41 36.1**	**+0.3**
	8.1nm,1.3s								
ABTA	**Abfaltersbach**	**149.56**	**347**	*e*PKP		**PKiKP**		**22 41 35.9**	**-0.2**
	5.6nm,1.0s								
FETA	**Feichten**	**149.65**	**350**	*e*PKP		**PKiKP**		**22 41 36.9**	**+0.6**
	5.2nm,1.3s								

*FUNV **08** 22:22:11.8, 7°.21N×72°.59W, h11km, MW2.6, Presumed earthquake*
*RSNC **08** 22:22:13.8±0.0, 7°.7N±0.9°×7°.3W±°, h12km±7km, M1.8, ML1.5*
ISC 08 22:22:09.8±1.2, 7°.12N±0°.04×72°.34W±0°.05, h28km±13km, n8, σ1.9 f52/15, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.41**	**302**	P		P		**22 22 18.5**	**-0.7**
PAMC				S		S		**Sb 22 22 24.7**	**-0.9**
CAPV	**Capacho**	**0.74**	**2**	*e*P		**Pn**		**22 22 24.9**	**+0.3**
CAPV				*e*S		**Sn**		**22 22 35.0**	**-0.1**
RUSC	**La Rusia**	**1.42**	**211**	P		**Pb**		**22 22 36.4**	**+0.3**
RUSC				S		**Sb**		**22 22 56.6**	**+2.6**
RUSC	**La Rusia**	**1.42**	**211**	*e*P		**Pb**		**22 22 36.7**	**+0.7**
RUSC				*e*S		**Sb**		**22 22 55.3**	**+1.3**
OCAC	**Ocana**	**1.47**	**319**	P		**Pb**		**22 22 38.1**	**+1.4**
OCAC				S		**Sb**		**22 22 57.3**	**+2.2**
PTBC	**PUERTO BERRIO,**	**2.18**	**255**	P		**Pb**		**22 22 47.2**	**-1.4**
PTBC				S		**Sn**		**22 23 08.2**	**-2.1**
SDV	**Santo Domingo**	**2.44**	**44**	*e*P		**Pb**		**22 22 52.7**	**-0.5**
SDV				*e*S		**Sb**		**22 23 22.6**	**-0.3**
CHIC	**Chingaza**	**2.83**	**209**	P		**Pb**		**22 22 58.7**	**-1.3**

WEL 08 22:29:49.8±1.3, 32°S±5°×17°8W±2°2, h12km, mB5.0/9, ML4.8/15, MLv4.8/11, Mw(mB)4.4/9, Error ellipse: s-maj=28.7km s-min=5.6km az=98.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.96**	**354**	P		P	Pn	22 30 39.0	+2.3
GLKZ				S		S	Sn	22 31 11.2	-0.9
MXZ	**Matakaoa Point**	**6.33**	**211**	P		P	Pn	22 31 23.1	+0.2
MXZ				S		S	Sn	22 32 32.6	-2.5
WMGZ	**Waiomatatini S**	**6.50**	**210**	P		P	Pn	22 31 26.3	+1.1
WMGZ				S		S	Sn	22 32 39.1	-0.2
PKGZ	**Pakihiroa**	**6.68**	**211**	P		P	Pn	22 31 28.3	+0.5
HAZ	**Te Kaha**	**6.72**	**213**	P		P	Pn	22 31 28.5	+0.2
HAZ				S		S	Sn	22 32 44.7	-0.2
PUZ	**Puketiti**	**6.78**	**209**	P		P	Pn	22 31 29.0	-0.1
PUZ				S		S	Sn	22 32 44.6	-1.6
RUGZ	**Raukumara Rang**	**6.94**	**213**	P		P	Pn	22 31 30.6	-0.9
TWGZ	**Tauwhareparae**	**6.98**	**210**	P		P	Pn	22 31 31.4	-0.6
CNGZ	**Carnagh Station**	**7.15**	**208**	P		P	Pn	22 31 34.4	+0.2
TKGZ	**Te Karaka**	**7.26**	**210**	P		P	Pn	22 31 38.5	+2.8
TKGZ				S		S	Sn	22 32 55.2	-2.8
MWZ	**Matawai**	**7.31**	**212**	P		P	Pn	22 31 36.9	+0.4
MWZ				S		S	Sn	22 32 55.3	-4.1
OPRZ	**Ohinepanea**	**7.41**	**219**	P		P	Pn	22 31 39.9	+2.1
URZ	**Urewera**	**7.45**	**214**	P		P	Pn	22 31 36.2	-2.0
URZ				S		S	Sn	22 32 56.4	-6.3
MARZ	**Manawahe**	**7.45**	**218**	P		P	Pn	22 31 40.3	+2.0
RAGZ	**Rawiri**	**7.50**	**212**	P		P	Pn	22 31 38.1	-0.9
RIGZ	**Rimuhau**	**7.52**	**209**	P		P	Pn	22 31 39.3	0.0
PRGZ	**Paritu Road**	**7.66**	**208**	P		P	Pn	22 31 40.9	-0.3
WCZ	**Waipu Caves**	**7.68**	**239**	P		P	Pn	22 31 42.6	+1.1
TARZ	**Mount Tarawera**	**7.73**	**217**	P		P	Pn	22 31 41.2	-1.1
TARZ				S		S	Sn	22 33 09.3	-0.4
SNGZ	**Shannon Statio**	**7.76**	**211**	P		P	Pn	22 31 42.8	+0.1
MUGZ	**Murupara**	**7.78**	**215**	P		P	Pn	22 31 42.3	-0.5
RTZ	**Ruatahuna**	**7.79**	**213**	P		P	Pn	22 31 41.7	-1.3
OUZ	**Omahuta**	**7.96**	**245**	P		P	Pn	22 31 45.9	+0.5
RAHZ	**Arahi**	**7.99**	**212**	P		P	Pn	22 31 47.6	+1.9
MTHZ	**Maungataniwha**	**8.05**	**213**	P		P	Pn	22 31 46.7	+0.2
NMHZ	**Naumai**	**8.26**	**212**	P		P	Pn	22 31 48.8	-0.7
ARHZ	**Aropaoanui**	**8.31**	**211**	P		P	Pn	22 31 49.3	-0.8
BKZ	**Black Stump Fm**	**8.46**	**213**	P		P	Pn	22 31 52.5	+0.3
MCHZ	**McNeill Hill**	**8.59**	**211**	P		P	Pn	22 31 52.8	-1.2
KWHZ	**Kaweka Forest**	**8.70**

0.3nm,0.4s
KURBB **Kurchatov Arra** 50.26 326 P P 22 38 48.1 -0.8
0.5nm,0.2s,baz=124,slow=7.4,SNR=4.5
0.5nm,0.2s
BVAR **Borovoye Array** 55.85 326 P P 22 39 29.1 -1.0
0.5nm,0.6s,baz=120,slow=8.5,SNR=4.0
0.5nm,0.6s

IDC 08 22:40:03.5±10.0, 18°10S×175°88W, h0km, mb3.8/3, mbtmp3.8/3, MS3.7/2, Error ellipse: s-maj=474.0km s-min=39.1km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	17.07	254	LR	LR	22 49 24.4	
	comp=Z,563nm,18.7s,baz=6.5,slow=33						
PPT	**Papeete**	25.04	93	LR	LR	22 52 59.1	
	comp=Z,97nm,21.3s,baz=210,slow=31						
WRA	**Warramunga Arr**	46.97	259	P	P	22 48 35.4	-1.2
	0.6nm,0.8s,baz=99,slow=7.6,SNR=2.9						
	0.6nm,0.8s						
ASAR	**Alice Springs**	47.06	254	P	P	22 48 37.8	+0.5
	3.1nm,0.8s,baz=90,slow=7.7,SNR=17						
	3.1nm,0.8s						
ILAR	**Eielson Array**	85.55	12	P	P	22 52 43.0	0.0
	0.8nm,1.0s,baz=236,slow=6.4,SNR=5.0						
	0.8nm,1.0s						

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*IDC **08** 22:47:01.9±0.9, 36°12N×141°85E, h0km, mb3.6/12, mbtmp3.7/15, ML3.5/3, MS4.3/6, Error ellipse: s-maj=22.3km s-min=16.7km az=149.0*
*NEIC **08** 22:47:05.6±1.5, 36°29N±0°08×141°8E±0°1, h19km±5km, mb4.1/12, Error ellipse: s-maj=12.8km s-min=10.7km az=122.0*
*JMA **08** 22:47:06.4±0.4, 36°4N±0°6×14°2E±°, h50km, MV3.7/38, FAR E OFF IBARAKI PREF*

ISC 08 22:47:05.3±0.6, 36°25N±0°05×141°80E±0°06, h23km, n65, σ1s31/57, mb3.7/18, MS4.5/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	0.98	276	*i* P	Pb	22 47 22.1	-1.5
JHO	**Hitachi**	1.05	290	P	Pn	22 47 22.4	-2.3
JIHU	**Itakohorinouch**	1.07	255	P	Pn	22 47 24.2	-0.6
ONAJ	**Iwakimizuishiy**	1.17	317	P	Pn	22 47 23.6	-2.7
JFK	**Kawauchi**	1.34	327	P	Pn	22 47 27.9	-0.7
BSO1	**Boso 1**	1.73	203	P	Pb	22 47 35.6	-0.4
JOTO	**OTAMA OYAMA**	1.76	319	*e*P	Pn	22 47 33.2	-1.2
BSO3	**Boso 3**	1.78	216	P	Pb	22 47 36.2	-0.9
JMM	**Marumori**	1.80	334	*e*P	Pn	22 47 33.2	-1.7
JAG	**Ashikaga**	1.90	276	*i* P	Pn	22 47 34.9	-1.4
JFY	**Yanaizu**	2.04	305	P	Pn	22 47 37.5	-0.7
JKT	**Katashina**	2.12	285	*i* P	Pn	22 47 38.8	-0.6
JRY	**Ryogami san**	2.35	265	*i* P	Pn	22 47 41.5	-1.1
JOD2	**Odawara 2**	2.41	247	P	Pn	22 47 44.8	+1.4
MJAR	**Matsushiro Arr**	2.91	277	Pn	Pn	22 47 50.2	0.0
	2.6nm,0.3s,baz=109,slow=9.2,SNR=80						
MJAR				Sn	Sn	22 48 25.7	+1.2
	1.7nm,0.3s,baz=116,slow=14,SNR=4.7						
	17nm,0.5s						
MAJO	**Matsushiro**	2.91	277		Pn	22 47 50.6	+0.4
MAJO				Sn	Sb	22 48 28.5	-3.2
MJB9	**Matsu-Tunnel**	2.91	277		Pn	22 47 50.4	+0.1
JHJ2	**Mitsune**	3.53	208	Pn	Pn	22 47 59.6	+0.9
JHJ	**Hachijo jima 2**	3.54	209	Pn	Pn	22 47 56.3	-2.5
	9.9nm,0.3s,baz=58,slow=18,SNR=1.3						
JHJ				Sn	Sn	22 48 37.2	-2.7
	20nm,0.3s,baz=170,slow=11,SNR=1.4						
JHJ				LR	LR	22 48 47.1	
	comp=Z,134nm,21.4s,baz=102,slow=31						
	133nm,0.6s						
JGF	**Kuroka**	3.66	261		Pn	22 48 02.4	+1.8
INU	**Inuyama**	3.99	258		Pn	22 48 06.7	+1.7
JMN	**Monobe**	6.97	251	Pn	Pn	22 48 47.6	+1.6
ASAJ	**Asahikawa**	7.88	4	Pn	Pn	22 48 59.2	+0.7
	1.1nm,0.3s,baz=243,slow=14,SNR=9.1						
ASAJ				Sn	Sn	22 50 25.1	-1.8
	0.2nm,0.3s,baz=159,slow=21,SNR=1.5						
	3.8nm,0.4s						
JKA	**Kamikawa-asahi**	7.88	4		Pn	22 48 56.2	-2.3
H11N2	**WAKE ISLAND Hy**	27.49	120	T	T	23 21 38.9	
	baz=313,slow=75,SNR=31						
H11N1	**WAKE ISLAND Hy**	27.49	120	T	T	23 21 39.9	
	baz=313,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	27.50	120	T	T	23 21 37.4	
	baz=313,slow=75,SNR=22						
ENH	**Enshi**	27.59	267	P	P	22 52 49.9	-0.9
ENH				IAmb	IAmb	22 52 51.6	
	comp=Z,4.5nm,0.7s						
H11S1	**WAKE ISLAND Hy**	28.18	122	T	T	23 22 28.1	
	baz=314,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	28.18	122	T	T	23 22 32.5	
	baz=314,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	28.19	122	T	T	23 22 35.1	
	baz=314,slow=75,SNR=17						
SONM	**Songino Array**	28.48	305	P	P	22 52 59.6	+0.8
	comp=Z,1.1nm,0.8s,baz=102,slow=8.6,SNR=7.4						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	28.48	305	P	P	22 52 58.6	-0.2
LZDM	**Lanzhou Array**	30.66	281	P	P	22 53 19.2	+0.8
	comp=Z,0.2nm,0.3s,baz=94,slow=4.8,SNR=1.3						
	comp=Z,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	41.60	256	P	P	22 54 52.6	+0.9
	comp=Z,0.9nm,0.3s,baz=47,slow=6.9,SNR=5.2						
	comp=Z,0.9nm,0.3s						
ZALV	**Zalesovo Beam**	42.67	313	P	P	22 55 00.8	+0.8
	comp=Z,0.5nm,0.4s,baz=103,slow=6.5,SNR=3.8						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	42.67	313	P	P	22 54 59.9	-0.1
MKAR	**Makanchi Array**	44.80	303	P	P	22 55 18.1	+0.8
	comp=Z,0.5nm,0.8s,baz=98,slow=6.5,SNR=4.0						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	44.80	303	P	P	22 55 17.4	+0.1
MAKZ	**Makanchi**	45.01	303	P	P	22 55 19.1	+0.1
MAKZ				IAmb	IAmb	22 55 29.7	
	comp=Z,5.2nm,1.4s						
KURBB	**Kurchatov Arra**	46.73	309	P	P	22 55 32.6	+0.2
	comp=Z,0.8nm,0.6s,baz=84,slow=8.2,SNR=5.3						
	comp=Z,0.8nm,0.6s						
WUS	**Wushi**	48.15	296	P	P	22 55 45.2	+1.5
WUS				IAmb	IAmb	22 55 55.7	
	comp=Z,2.9nm,0.9s						
ILAR	**Eielson Array**	49.99	32	P	P	22 55 57.0	-0.4
	comp=Z,0.6nm,0.8s,baz=268,slow=7.4,SNR=5.5						
	comp=Z,0.6nm,0.8s						
D25K	**Kavik River**	50.22	26	P	P	22 55 60.0	+0.9
D25K				IAmb	IAmb	22 56 01.8	
	comp=Z,1.3nm,0.9s						
BVAR	**Borovoye Array**	51.33	313	P	P	22 56 08.9	+1.3
	comp=Z,0.2nm,0.5s,baz=71,slow=6.2,SNR=3.8						
	comp=Z,0.2nm,0.5s						
E29M	**Blow River**	53.33	27	P	P	22 56 23.1	+0.9
G29M	**Pine Creek**	53.46	29	P	P	22 56 24.5	+1.2
INK	**Inuvik**	54.94	27	P	P	22 56 34.6	+0.7
INK				IAmb	IAmb	22 56 40.8	
	comp=Z,3.2nm,1.4s						
H31M	**Peel River**	55.11	30	P	P	22 56 36.0	+0.7
WB0	**Warramunga Arr**	56.15	188	P	P	22 56 44.0	+0.8
WRA	**Warramunga Arr**	56.33	188	P	P	22 56 43.2	-1.2
	comp=Z,0.2nm,0.3s,baz=6.6,slow=7.4,SNR=1.9						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	56.33	188	P	P	22 56 42.9	-1.5
AB31	**Akbulak array**	58.68	311	P	P	22 57 00.6	-0.2
AB31				IAmb	IAmb	22 57 09.7	
	comp=Z,1.0nm,0.8s						
ABKAR	**Akbulak array**	58.68	311	P	P	22 57 00.9	+0.1
SPITS	**Spitsbergen Ar**	61.35	349	LR	LR	23 25 12.9	
	comp=Z,308nm,21.8s,baz=345,slow=37						
YKA	**Yellowknife Ar**	64.33	30	P	P	22 57 39.8	+1.1
	comp=Z,0.4nm,0.7s,baz=305,slow=7.4,SNR=7.3						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	64.84	340	LR	LR	23 30 26.0	
	comp=Z,343nm,18.8s,baz=10.0,slow=40						
JMIC	**Jan Mayen**	70.97	350	LR	LR	23 31 34.7	
	comp=Z,243nm,18.1s,baz=344,slow=38						
HFS	**Hagfors**	74.93	336	LR	LR	23 33 04.4	
	comp=Z,167nm,21.8s,baz=12,slow=37						
NOA	**NORSAR Array B**	75.03	338	LR	LR	23 37 09.8	
	comp=Z,41nm,18.0s,baz=0.0,slow=40						
PDAR	**Pinedale Array**	78.00	46	P	P	22 59 03.5	+1.3
	comp=Z,0.2nm,0.5s,baz=337,slow=3.6,SNR=3.9						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	78.00	46	P	P	22 59 02.5	+0.4
BORG	**Borgarnes**	78.46	353	LR	LR	23 33 41.1	
	comp=Z,270nm,19.7s,baz=315,slow=36						
TXAR	**Lajitas Array**	90.36	53	P	P	23 00 05.9	+0.9
	comp=Z,0.3nm,0.7s,baz=279,slow=3.9,SNR=3.7						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	90.36	53	P	P	23 00 04.8	-0.2

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*IDC **08** 22:54:27.4±2.0, 15°45S×178°31W, h0km, mb3.9/6, mbtmp3.9/6, MS4.2/16, Error ellipse: s-maj=134.6km s-min=23.8km az=152.0*
*GCMT **08** 22:54:30.0±0.2, 17°31S±0°01×176°69W±0°01, h18km±1km, MW5.2/132, Moment Tensor Solution. s57,c79; s132,c200; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr0.31±.16; Mθθ-5.35±.16; Mϕϕ5.04±.15; Mrθ0.55±.34; Mθϕ4.08±.15; Mϕr1.39±.33; Best double couple: M0 6.77800×10^16 NP1:ϕs333.00000°, δ80.00000°, λ171.00000°. NP2:ϕs65.00000°, δ81.00000°, λ10.00000°. Principal axes: T 6.7940, Plg13.0000°, Azm289.0000°; N -0.0310, Plg77.0000°, Azm107.0000°; P -6.7610, Plg1.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 08 22:54:29.1±1.2, 17°1S±0°4×177°4W±0°2, h35km, n24, σ2s82/7, mb3.9/6, MS4.3/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	16.04	249	*e*LR	LR	23 02 36.8	
	1μm,23.1s						
HNR	**Honiara**	23.31	286	LR	LR	23 07 32.8	
	comp=Z,80nm,18.9s,baz=200,slow=36						
PPT2	**Papeete2**	26.55	95	*e*S	S	23 04 33.7	-2.7
	1μm,26.0s						
PPT2				*e*LR	LR	23 06 20.6	
	2μm,26.2s						
PPT2				*e*LR	LR	23 06 28.5	
	1μm,25.5s						
TBI	**Tubuai**	26.92	108	*e*LR	LR	23 06 35.6	
	6μm,23.0s						
TBI				*e*LR	LR	23 06 39.1	
	2μm,25.2s						
CTA	**Charters Tower**	34.56	259	LR	LR	23 14 14.0	
	comp=Z,1μm,18.2s,baz=76,slow=35						
WRA	**Warramunga Arr**	45.75	259	P	P	23 02 47.0	-0.5
	1.2nm,1.1s,baz=96,slow=7.8,SNR=5.9						
	1.2nm,1.1s						
ASAR	**Alice Springs**	45.97	253	P	P	23 02 49.2	0.0
	5.8nm,0.9s,baz=85,slow=8.5,SNR=17						
	5.8nm,0.9s						
GUMO	**Guam**	48.12	307	LR	LR	23 20 47.3	
	comp=Z,170nm,18.1s,baz=118,slow=34						
DAV	**Davao City (W)**	61.25	288	LR	LR	23 28 42.8	
	comp=Z,63nm,19.7s,baz=110,slow=34						
RPN	**Rapa Nui**	63.20	112	LR	LR	23 25 14.7	
	comp=Z,434nm,19.7s,baz=261,slow=29						
PFO	**Pinyon Flats O**	76.86	49	LR	LR	23 35 23.0	
	comp=Z,391nm,18.1s,baz=236,slow=32						
YBH	**Yreka Blue Hor**	77.24	39	LR	LR	23 32 05.6	
	comp=Z,24nm,20.8s,baz=252,slow=30						
NVAR	**Mina Array Bea**	78.13	44	P	P	23 06 25.8	+0.8
	0.5nm,0.5s,baz=236,slow=5.1,SNR=1.8						
	0.5nm,0.5s						
BBB	**Bella Bella**	81.10	28	LR	LR	23 34 58.1	
	comp=Z,236nm,19.0s,baz=214,slow=30						
ELK	**Elko**	81.36	43	LR	LR	23 41 07.4	
	comp=Z,135nm,18.3s,baz=277,slow=35						
NEW	**Newport**	84.24	36	LR	LR	23 38 20.6	
	comp=Z,291nm,18.6s,baz=240,slow=32						
DLBC	**Dease Lake**	84.66	23	LR	LR	23 37 11.9	
	comp=Z,478nm,19.9s,baz=264,slow=31						
TXAR	**Lajitas Array**	84.71	57	P	P	23 07 02.9	+2.9
	0.7nm,1.0s,baz=289,slow=5.0,SNR=4.3						
	0.7nm,1.0s						
ILAR	**Eielson Array**	84.83	13	P	P	23 06 56.3	-3.4
	0.8nm,0.7s,baz=224,slow=4.9,SNR=5.1						
	0.8nm,0.7s						
PDAR	**Pinedale Array**	86.06	43	P	P	23 07 08.6	+2.0
	0.7nm,0.9s,baz=224,slow=3.9,SNR=3.6						
PDAR				LR	LR	23 40 24.8	
	comp=Z,101nm,19.0s,baz=238,slow=32						
	0.7nm,0.9s						
CMAR	**Chiang Mai Arr**	89.52	289	LR	LR	23 44 03.8	
	comp=Z,64nm,21.3s,baz=120,slow=34						
PLCA	**Paso Flores**	91.21	133	LR	LR	23 42 28.9	
	comp=Z,105nm,18.4s,baz=241,slow=31						
ATAH	**Atahualpa**	96.45	99	LR	LR	23 40 32.0	
	comp=Z,212nm,21.1s,baz=253,slow=28						
BRDH	**Bariadhala**	97.28	291	LR	LR	23 48 27.5	
	comp=Z,120nm,21.2s,baz=182,slow=34						

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*IDC **08** 23:00:23.6±2.0, 16°54S×177°47W, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=121.2km s-min=23.0km az=151.0*

ISC 08 23:00:29.1±1.9, 16°6S±0°7×177°5W±0°4, h35km, n9, σ0s40/9, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	45.76	258	P	P	23 08 47.4	-0.2
	0.9nm,0.7s,baz=97,slow=6.0,SNR=9.0						
	0.9nm,0.7s						
ASAR	**Alice Springs**	46.01	253	P	P	23 08 49.4	-0.2
	6.1nm,0.7s,baz=88,slow=8.3,SNR=82						
	6.1nm,0.7s						
NVAR	**Mina Array Bea**	77.86	44	P	P	23 12 23.4	-0.2
	0.2nm,0.3s,baz=234,slow=7.2,SNR=1.4						
	0.2nm,0.3s						
ILAR	**Eielson Array**	84.40	13	P	P	23 12 57.5	0.0
	4.3nm,1.2s,baz=215,slow=4.8,SNR=13						
	4.3nm,1.2s						
TXAR	**Lajitas Array**	84.54	57	P	P	23 12 59.3	+0.2
	0.1nm,0.5s,baz=199,slow=3.4,SNR=3.6						
	0.1nm,0.5s						
PDAR	**Pinedale Array**	85.78	43	P	P	23 13 05.0	-0.3
	1.3nm,1.2s,baz=245,slow=4.7,SNR=3.4						
	1.3nm,1.2s						
YKA	**Yellowknife Ar**	92.76	24	P	P	23 13 37.1	-0.3
	0.1nm,0.5s,baz=208,slow=5.0,SNR=2.4						
	0.1nm,0.5s						
BRTR	**Keskin Array B**	144.46	317	PKP	PKPab	23 20 01.1	+0.6
	1.1nm,0.9s,baz=72,slow=4.7,SNR=2.3						
GERES	**GERESS Array B**	146.55	347	PKPbc	PKPdf	23 20 06.1	+0.6
	0.1nm,0.3s,baz=316,slow=2.7,SNR=3.5						

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*IDC **08** 23:06:29.6±2.2, 16°46S×177°57W, h0km, mb3.7/5, mbtmp3.7/5, MS4.3/34, Error ellipse: s-maj=130.8km s-min=26.1km az=151.0*
*GCMT **08** 23:06:33.0±0.2, 17°28S±0°01×176°68W±0°01, h18km±1km, MW5.1/118, Moment Tensor Solution. s41,c45; s118,c168; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.14±.18; Mθθ-3.73±.17; Mϕϕ3.87±.15; Mrθ0.72±.38; Mθϕ3.75±.14; Mϕr1.51±.37; Best double couple: M0 5.57100×10^16 NP1:ϕs336.00000°, δ78.00000°, λ170.00000°. NP2:ϕs68.00000°, δ80.00000°, λ12.00000°. Principal axes: T 5.8720, Plg16.0000°, Azm292.0000°; N -0.6020, Plg74.0000°, Azm108.0000°; P -5.2700, Plg1.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 08 23:06:34.3±1.8, 16°5S±0°6×177°6W±0°4, h35km, n51, σ0s62/14, mb3.7/5, MS4.3/32, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	16.05	247	*e*LR	LR	23 14 40.8	
	1μm,24.2s						
DZM	**Mont Dzumac**	16.05	247	LR	LR	23 15 20.3	
	comp=Z,1μm,19.0s,baz=92,slow=33						
RAR	**Rarotonga**	17.52	108	LR	LR	23 14 59.4	
	comp=Z,2μm,21.1s,baz=288,slow=29						
HNR	**Honiara**	22.95	285	LR	LR	23 19 38.5	
	comp=Z,70nm,18.8s,baz=204,slow=34						
PPT	**Papeete**	26.81	96	LR	LR	23 19 29.4	
	comp=Z,500nm,19.7s,baz=219,slow=29						
PPT2	**Papeete2**	26.81	96	*e*LR	LR	23 18 03.3	
	2μm,27.2s						
PPT2				*e*LR	LR	23 18 11.0	
	2μm,30.2s						
TBI	**Tubuai**	27.30	109	*e*LR	LR	23 18 12.0	
	2μm,32.0s						
TBI				*e*LR	LR	23 18 16.7	
	11μm,28.5s						
CTA	**Charters Tower**	34.46	258	LR	LR	23 26 28.4	
	comp=Z,793nm,18.1s,baz=72,slow=35						
PMG	**Port Moresby**	35.01	277	LR	LR	23 27 07.6	
	comp=Z,552nm,18.1s,baz=119,slow=35						
TAOE	**Nuku Hiva Isla**	37.27	83	*e*LR	LR	23 22 47.1	
	743nm,29.0s						
WRA	**Warramunga Arr**	45.66	258	P	P	23 14 51.5	-0.5
	0.4nm,0.8s,baz=95,slow=7.1,SNR=5.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	45.93	253	P	P	23 14 55.0	+0.9
	3.8nm,0.7s,baz=89,slow=8.4,SNR=18						
	3.8nm,0.7s						
FITZ	**Fitzroy Crossi**	54.03	259	LR	LR	23 37 39.9	
	comp=Z,624nm,19.2s,baz=102,slow=35						
BATI	**Baumata**	57.33	268	LR	LR	23 38 43.7	
	comp=Z,366nm,21.6s,baz=132,slow=34						
NWAO	**Narrogin (SRO)**	60.56	241	LR	LR	23 42 03.3	
	comp=Z,209nm,18.9s,baz=74,slow=35						
DAV	**Davao City (W)**	60.87	288	LR	LR	23 40 14.4	
	comp=Z,103nm,21.8s,baz=118,slow=33						
VNDA	**Vanda**	61.93	185	LR	LR	23 40 23.7	
	comp=Z,65nm,18.4s,baz=355,slow=33						
KAPI	**Kappang**	62.37	273	LR	LR	23 43 05.8	
	comp=Z,114nm,20.2s,baz=110,slow=35						
RPN	**Rapa Nui**	63.61	112	LR	LR	23 37 10.4	
	comp=Z,322nm,21.1s,baz=262,slow=29						
SHEM	**Shemya Is, Ala**	69.29	355	LR	LR	23 45 07.9	
	comp=Z,305nm,19.5s,baz=135,slow=34						
PETK	**Petropavlovsk-**	72.50	345	LR	LR	23 47 07.6	
	comp=Z,131nm,18.6s,baz=145,slow=34						
QSPA	**South Pole Qui**	73.57	180	LR	LR	23 48 26.4	
	comp=Z,89nm,18.6s,baz=34,slow=34						
PFO	**Pinyon Flats O**	76.64	49	LR	LR	23 47 18.9	
	comp=Z,289nm,18.2s,baz=229,slow=32						
KDAK	**Kodiak Island**	76.84	13	LR	LR	23 44 38.5	
	comp=Z,412nm,21.4s,baz=206,slow=30						
YBH	**Yreka Blue Hor**	76.94	39	LR	LR	23 44 09.6	
	comp=Z,25nm,19.9s,baz=260,slow=29						
NVAR	**Mina Array Bea**	77.86	44	LR	LR	23 47 09.2	
	comp=Z,149nm,19.2s,baz=244,slow=31						
MA2	**Magadan**	80.03	344	LR	LR	23 55 07.9	
	comp=Z,79nm,18.1s,baz=128,slow=36						
BBB	**Bella Bella**	80.70	28	LR	LR	23 46 53.0	
	comp=Z,245nm,18.9s,baz=210,slow=30						
NEW	**Newport**	83.91	36	LR	LR	23 49 56.3	
	comp=Z,227nm,18.8s,baz=240,slow=31						
DLBC	**Dease Lake**	84.22	23	LR	LR	23 48 47.0	
	comp=Z,434nm,21.7s,baz=256,slow=30						
ILAR	**Eielson Array**	84.33	13	P	P	23 19 02.6	+0.3
	0.8nm,0.9s,baz=222,slow=5.4,SNR=7.6						
	0.8nm,0.9s						
TXAR	**Lajitas Array**	84.58	57	P	P	23 19 04.6	0.0
	0.1nm,0.5s,baz=273,slow=5.9,SNR=2.0						
	0.1nm,0.5s						
ANMO	**Albuquerque**	84.61	51	LR	LR	23 50 19.7	
	comp=Z,268nm,18.5s,baz=246,slow=31						
PDAR	**Pinedale Array**	85.79	43	P	P	23 19 10.7	+0.3
	0.4nm,0.8s,baz=200,slow=4.2,SNR=2.8						
PDAR				LR	LR	23 50 02.7	
	comp=Z,71nm,18.8s,baz=238,slow=30						
	0.4nm,0.8s						
CMIG	**Matias Romero**	88.06	72	LR	LR	23 51 57.5	
	comp=Z,120nm,18.5s,baz=246,slow=31						
PLCA	**Paso Flores**	91.75	133	LR	LR	23 54 42.8	
	comp=Z,74nm,18.5s,baz=242,slow=32						
SNAA	**Sanae**	92.00	178	LR	LR	23 58 28.5	
	comp=Z,112nm,19.4s,baz=183,slow=34						
YKA	**Yellowknife Ar**	92.72	24	LR	LR	23 53 53.4	
	comp=Z,295nm,19.7s,baz=272,slow=31						
TIXI	**Tiksi**	94.97	345	LR	LR	23 57 07.2	
	comp=Z,190nm,21.8s,baz=188,slow=32						
NNA	**Nana**	96.73	105	LR	LR	23 53 33.3	
	comp=Z,72nm,21.8s,baz=258,slow=29						
ATAH	**Atahualpa**	96.75	99	LR	LR	23 52 37.5	
	comp=Z,194nm,20.9s,baz=253,slow=29						
ULM	**Lac du Bonnet**	97.33	40	LR	LR	23 57 49.2	
	comp=Z,311nm,18.5s,baz=219,slow=32						
BRTR	**Keskin Array B**	144.30	317	PKP	PKiKP	23 26 09.9	-0.9
	1.6nm,0.9s,baz=47,slow=3.0,SNR=4.2						
GERES	**GERESS Array B**	146.42	346	PKPbc	PKPab	23 26 13.3	+0.7
	0.5nm,0.8s,baz=8.9,slow=4.3,SNR=3.9						
CONA	**Conrad Observa**	146.73	343	*e*PKP	PKiKP	23 26 15.0	-0.5
	7.6nm,1.5s						
RONA	**Rosalia, Austr**	146.82	343	*i* PKP	PKiKP	23 26 15.4	-0.2
	4.6nm,1.1s						
MOA	**Molln**	147.22	345	*e*PKP	PKPab	23 26 15.6	-0.1
	4.4nm,1.2s						
WATA	**Walderalm**	148.31	348	*i* PKP	PKPbc	23 26 17.2	+0.1
	4.0nm,1.0s						
RETA	**Reutte**	148.31	349	*i* PKP	PKiKP	23 26 18.0	-0.7
	7.1nm,1.6s						
SQTA	**Sankt Quirin**	148.49	348	*e*PKP	PKiKP	23 26 18.5	-0.6
	3.6nm,1.3s						
ABTA	**Abfaltersbach**	148.67	347	*e*PKP	PKiKP	23 26 18.7	-0.7
	4.8nm,1.2s						

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*PDG **08** 23:10:20.8±0.2, 43°04N×18°20E, h12km±1km, MD3.4/8, ML3.4/12, Error ellipse: s-maj=0.7km s-min=0.4km az=90.0*
*KRSZO **08** 23:10:21.2±2.4, 42°93N×18°22E, h10km, ML3.7/22, Error ellipse: s-maj=24.5km s-min=20.9km az=164.0*
*BEO **08** 23:10:21.5±0.3, 43°04N×18°13E, h8km±2km, ML3.0/8*
*PRU **08** 23:10:24.2, 43°08N×18°26E, h10km*

ISC 08 23:10:21.3±1.1, 43°03N±0°02×18°20E±0°01, h3km±9km, n115, σ1s30/180, 17C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRY	**Bratogost**	0.28	118	⇑*i*Pg	Pg	23 10 26.7	0.0
BRY				*i* Sg	Sg	23 10 31.4	+1.0
DBRK	**Dubrovnik**	0.36	187	*e*Pg	Pg	23 10 28.7	+0.3
DBRK				Sg	Sg	23 10 34.4	+1.3
STON	**Ston**	0.40	247	*e*Pg	Pg	23 10 28.8	-0.2
STON				Sg	Sg	23 10 34.9	+0.6

BLY	**Banja Luka**	**1.87**	**337**	Pn	**Pn**	**23 10 54.7**	**+0.4**
BLY				Sn	**Sg**	**23 11 21.4**	**+0.1**
BLY						00 00 00.0	
BLY	**Banja Luka**	**1.87**	**337**	*e*Pg	**Pb**	**23 10 56.0**	**-0.1**
BLY				*e*Sg	**Sg**	**23 11 21.0**	**-0.3**
ZIRJ	**Zirje**	**1.97**	**289**	*i* Pn	**Pn**	**23 10 56.0**	**+0.4**
ZIRJ				Sn	**Sb**	**23 11 22.4**	**-0.4**
TRUS	**Trudelj**	**1.99**	**53**	*e*Pn	**Pn**	**23 10 55.3**	**-0.7**
MORI	**Morici**	**2.00**	**295**	*i* Pn	**Pb**	**23 10 57.4**	**-0.9**
MORI				Sn	**Sb**	**23 11 24.0**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.02**	**74**	*e*Pn	**Pn**	**23 10 56.8**	**+0.4**
GRUS	**Gruza**	**2.02**	**64**	*e*Pn	**Pn**	**23 10 55.9**	**-0.4**
SELS	**Selova**	**2.14**	**84**	*e*Pn	**Pn**	**23 10 58.3**	**+0.2**
UDBI	**Udbina**	**2.31**	**311**	*e*Pn	**Pb**	**23 11 02.6**	**-1.2**
UDBI				Sn	**Sb**	**23 11 33.4**	**+0.6**
AVAS	**Avala Beograd**	**2.36**	**44**	*e*Pn	**Pn**	**23 11 00.0**	**-1.0**
BEO	**Beograd**	**2.42**	**42**	Pg	**Pg**	**23 11 07.6**	**-0.1**
BEO				AMB	AMB	00 00 00.0	
FRGS	**Fruska Gora**	**2.42**	**28**	Pn	**Pn**	**23 11 00.1**	**-1.8**
FRGS				Sn	**Sn**	**23 11 32.1**	**+0.1**
DUGI	**Dugi Otok**	**2.48**	**294**	*i* Pn	**Pn**	**23 11 03.9**	**+1.2**
DUGI				Sn	**Sn**	**23 11 33.8**	**+0.3**
SKO	**Skopje**	**2.62**	**113**	*i* Pn	**Pb**	**23 11 07.5**	**-1.4**
PLIT	**Plitvice**	**2.62**	**316**	*e*Pn	**Pn**	**23 11 06.3**	**+1.7**
PLIT				Sn	**Sb**	**23 11 40.0**	**-1.7**
BOVS	**Bovan**	**2.63**	**76**	⇑P	**Pn**	**23 11 05.0**	**+0.3**
BOVS	**Bovan**	**2.63**	**76**	*e*Pn	**Pn**	**23 11 05.5**	**+0.8**
MATE	**Matera**	**2.63**	**206**	⇑P	**Pn**	**23 11 02.9**	**-1.8**
MATE	**Matera**	**2.63**	**206**	Pn	**Pn**	**23 11 02.1**	**-2.6**
BARS	**Barje**	**2.66**	**93**	*e*Pn	**Pn**	**23 11 05.9**	**+0.7**
BARS				*e*Sn	**Sn**	**23 11 39.3**	**+1.3**
OHR	**Ohrid**	**2.72**	**134**	*i* Pn	**Pb**	**23 11 08.8**	**-2.0**
MOSL	**Moslavina**	**2.78**	**339**	*e*Pn	**Pn**	**23 11 06.8**	**0.0**
NVLJ	**Novalja**	**2.86**	**304**	*e*Pn	**Pn**	**23 11 08.3**	**+0.5**
NVLJ				Sn	**Sn**	**23 11 43.6**	**+0.8**
RABC	**Rab**	**3.01**	**306**	*e*Pn	**Pn**	**23 11 11.5**	**+1.5**
ZAGS	**Zajecar**	**3.04**	**74**	*e*Pn	**Pn**	**23 11 10.8**	**+0.5**
VRSS	**Vrsac**	**3.07**	**46**	*e*Pn	**Pn**	**23 11 10.0**	**-0.8**
VRSS				*e*Sn	**Sn**	**23 11 46.7**	**-1.3**
MDVR	**Moldovita**	**3.08**	**54**	⇑P	**Pn**	**23 11 10.2**	**-0.8**
MORH	**Mrgy, Hungar**	**3.20**	**5**	⇑P	**Pn**	**23 11 11.1**	**-1.4**
MORH	**Mrgy, Hungar**	**3.20**	**5**	Pn	**Pn**	**23 11 10.8**	**-1.7**
ZAG	**Zagreb**	**3.21**	**331**	Pn	**Pn**	**23 11 14.1**	**+1.4**
OZLJ	**Ozalj**	**3.24**	**324**	*i* Pn	**Pn**	**23 11 14.2**	**+1.1**
ZAPS	**Zavoj**	**3.25**	**84**	*e*Pn	**Pn**	**23 11 14.2**	**+0.9**
TRAN	**Tran**	**3.27**	**92**	*e*P	**Pn**	**23 11 14.3**	**+0.7**
PTJ	**Puntijarka**	**3.29**	**332**	Pn	**Pn**	**23 11 14.7**	**+0.8**
GCIS	**Gornji Cirnik**	**3.38**	**328**	*i* Pn	**Pn**	**23 11 15.7**	**+0.6**
GCIS				*e*Sn	**Sn**	**23 11 55.1**	**-0.6**
CRES	**Cresnjevec Ost**	**3.42**	**326**	Pn	**Pn**	**23 11 16.3**	**+0.7**
CRES				Sn	**Sn**	**23 11 57.2**	**+0.7**
RIY	**Rijeka**	**3.52**	**312**	*e*Pn	**Pn**	**23 11 16.7**	**-0.3**
HERR	**Herculane**	**3.56**	**57**	⇑P	**Pn**	**23 11 17.4**	**-0.1**
BZS	**Buzias**	**3.56**	**42**	⇑P	**Pn**	**23 11 16.9**	**-0.6**
BZS	**Buzias**	**3.56**	**42**	Pn	**Pn**	**23 11 17.6**	**+0.1**
BZS				Sn	**Sn**	**23 11 57.7**	**-2.4**
BEHE	**Becsehely**	**3.58**	**344**	Pn	**Pn**	**23 11 17.8**	**-0.1**
AQU	**L'Aquila**	**3.60**	**261**	Pg	**Pg**	**23 11 30.8**	**+0.4**
VAY	**Valandovo**	**3.67**	**116**	*i* Pn	**Pn**	**23 11 20.2**	**+1.3**
VISS	**Visnje**	**3.67**	**320**	*e*Pn	**Pn**	**23 11 19.9**	**+0.9**
KOGS	**Kog**	**3.69**	**339**	Pn	**Pn**	**23 11 18.6**	**-0.6**
VTS	**Vitosha**	**3.73**	**95**	P	**Pn**	**23 11 21.4**	**+1.5**
VTS				*e*S	**Sn**	**23 12 05.3**	**+0.9**
BLSH	**Balsha**	**3.73**	**91**	*e*P	**Pn**	**23 11 20.5**	**+0.6**
KKB	**Krupnik**	**3.83**	**106**	P	**Pn**	**23 11 23.4**	**+2.1**
KKB				S	**Sn**	**23 12 09.0**	**+2.1**
TIH	**Tihany**	**3.87**	**357**	Pn	**Pn**	**23 11 21.3**	**-0.5**
PLNA	**Plana**	**3.89**	**96**	P	**Pn**	**23 11 24.2**	**+2.1**
SKDS	**Skadanscina**	**3.92**	**311**	*e*Pn	**Pn**	**23 11 22.3**	**-0.1**
TIP	**Timpagrande**	**4.00**	**196**	⇑P	**Pn**	**23 11 22.3**	**-1.4**
GZR	**Gura Zlata**	**4.05**	**53**	⇑P	**Pn**	**23 11 23.6**	**-0.7**
GZR	**Gura Zlata**	**4.05**	**53**	Pn	**Pn**	**23 11 23.7**	**-0.6**
SIRR	**Siria**	**4.07**	**36**	⇑P	**Pn**	**23 11 23.2**	**-1.3**
SIRR	**Siria**	**4.07**	**36**	Pn	**Pn**	**23 11 23.4**	**-1.1**
SIRR				Sn	**Sn**	**23 12 09.7**	**-3.0**
MPLH	**Magyarpolny**	**4.17**	**354**	Pn	**Pn**	**23 11 25.2**	**-0.6**
MPLH				Sn	**Sn**	**23 12 15.7**	**+0.7**
SOKA	**Soboth** 7.8nm,0.3s,SNR=8.4	**4.29**	**329**	*i* Pn	**Pn**	**23 11 27.4**	**-0.1**
SOKA	8.1nm,0.4s			*i* Sn	**Sn**	**23 12 17.2**	**-0.9**
CSKK	**Cskako**	**4.33**	**1**	Pn	**Pn**	**23 11 28.3**	**+0.2**
CSKK				Sn	**Sn**	**23 12 19.7**	**+0.6**
OBKA	**Obir** 2.6nm,0.3s,SNR=11	**4.34**	**324**	*i* Pn	**Pn**	**23 11 29.8**	**+1.4**
OBKA	27nm,0.6s			*e*Sn	**Sn**	**23 12 21.0**	**+1.4**
OBKA	**Obir**	**4.34**	**324**	Pn	**Pn**	**23 11 29.6**	**+1.2**
MMB	**Musomishta**	**4.37**	**108**	*e*P	**Pn**	**23 11 30.7**	**+2.0**
DEV	**Deva**	**4.41**	**48**	Pg	**Pg**	**23 11 48.5**	**+2.7**
EGYH	**Egyhazaskeszo**	**4.43**	**352**	Sn	**Sn**	**23 12 23.3**	**+1.8**
BUD	**Budapest**	**4.49**	**7**	Pn	Pn	23 11 35.1	+4.8
ARSA	**Arzberg** 9.4nm,0.4s,SNR=19	**4.62**	**337**	*i* Pn	**Pn**	**23 11 32.2**	**0.0**
ARSA	6.3nm,0.4s			*i* Sn	**Sn**	**23 12 26.2**	**-0.2**
ARSA	**Arzberg**	**4.62**	**337**	Pn	**Pn**	**23 11 32.7**	**+0.6**
ARSA				Sn	**Sn**	**23 12 26.0**	**-0.3**
SOP	**Sopron**	**4.79**	**347**	Pn	**Pn**	**23 11 34.3**	**-0.1**
MYKA	**Terra Mystica** 1.6nm,0.3s	**4.84**	**320**	*e*Pn	**Pn**	**23 11 36.6**	**+1.4**
MYKA	3.7nm,0.4s			*i* Sn	**Sn**	**23 12 33.0**	**+1.2**
RONA	**Rosalia, Austr** 3.8nm,0.4s	**4.86**	**345**	*i* Pn	**Pn**	**23 11 35.2**	**-0.1**
PSZ	**Piszkesteto**	**5.03**	**13**	⇑P	**Pn**	**23 11 34.9**	**-2.9**
CONA	**Conrad Observa** 1.2nm,0.3s,SNR=4.7	**5.17**	**342**	*i* Pn	**Pn**	**23 11 40.7**	**+1.1**
CONA	3.9nm,0.3s			*i* Sn	**Sn**	**23 12 38.0**	**-1.8**
ZST	**Bratislava**	**5.22**	**352**	*e*PN	**Pn**	**23 11 39.5**	**-0.8**
ZST				*e*SN	Sn	23 12 28.5	-13
KBA	**Koelnbreinsper** 1.7nm,0.3s,SNR=12	**5.31**	**321**	*i* Pn	**Pn**	**23 11 42.8**	**+1.1**
KBA	1.1nm,0.2s			*i* Sn	**Sn**	**23 12 44.2**	**+0.6**
MODS	**Modra-Piesok**	**5.38**	**353**	*e*PG	**Pg**	**23 12 02.4**	**-2.0**
MODS				*e*SN	**Sn**	**23 12 51.4**	**+6.4**
ABTA	**Abfaltersbach** 3.3nm,0.2s,SNR=9.2	**5.49**	**315**	*e*Pn	**Pn**	**23 11 45.0**	**+0.9**
ABTA	4.3nm,0.3s			*e*Sn	**Sn**	**23 12 47.2**	**-0.6**
MOA	**Molln** 4.2nm,0.3s,SNR=14	**5.56**	**331**	*i* Pn	**Pn**	**23 11 46.2**	**+1.3**
MOA	7.8nm,0.4s			*i* Sn	**Sn**	**23 12 48.4**	**-0.9**
BIOA	**Bad Ischl, Aus** 2.0nm,0.2s,SNR=12	**5.66**	**327**	*i* Pn	**Pn**	**23 11 47.8**	**+1.4**
BIOA	7.2nm,0.4s			*i* Sn	**Sn**	**23 12 52.0**	**+0.1**
LESA	**Schwarzleotal** 2.4nm,0.2s,SNR=12	**5.87**	**320**	*i* Pn	**Pn**	**23 11 50.3**	**+1.0**
LESA	3.7nm,0.4s			*e*Sn	**Sn**	**23 12 59.9**	**+2.6**
KRUC	**Moravsky**	**6.16**	**349**	*e*PN	**Pn**	**23 11 53.3**	**+0.1**
KRUC				*e*SN	**Sn**	**23 13 04.2**	**0.0**
LANS	**Liptovska Anna**	**6.18**	**8**	*e*PG	**Pb**	**23 12 11.6**	**+2.0**
LANS				*e*SG	**Sg**	**23 13 38.0**	**-1.8**
WTTA	**Wattenberg** 3.0nm,0.2s,SNR=15	**6.28**	**315**	*i* Pn	**Pn**	**23 11 57.2**	**+2.1**
WTTA	9.4nm,0.6s			*e*Sn	**Sn**	**23 13 06.9**	**-0.5**
WATA	**Walderalm** 4.5nm,0.2s,SNR=5.6	**6.36**	**315**	*i* Pn	**Pn**	**23 11 57.7**	**+1.6**
WATA	4.3nm,0.3s			*e*Sn	**Sn**	**23 13 09.7**	**+0.4**
CKRC	**Cesky Krumlov**	**6.39**	**336**	*e*PN	**Pn**	**23 11 58.2**	**+1.8**
CKRC				*e*SN	**Sn**	**23 13 07.4**	**-2.5**
SQTA	**Sankt Quirin** 2.1nm,0.1s	**6.48**	**313**	*i* Pn	**Pn**	**23 11 59.0**	**+1.3**
SQTA	4.3nm,0.3s			*i* Sn	**Sn**	**23 13 14.3**	**+2.0**
MOTA	**Moosalm** 2.0nm,0.2s,SNR=11	**6.61**	**313**	*i* Pn	**Pn**	**23 12 00.8**	**+1.2**
MOTA	7.3nm,0.6s			*e*Sn	**Sn**	**23 13 17.3**	**+1.7**
FETA	**Feichten** 0.9nm,0.2s	**6.63**	**310**	*i* Pn	**Pn**	**23 12 02.0**	**+2.2**
FETA	3.0nm,0.6s			*i* Sn	**Sn**	**23 13 17.2**	**+1.2**
RETA	**Reutte** 0.8nm,0.2s	**6.88**	**313**	*i* Pn	**Pn**	**23 12 05.2**	**+1.9**
RETA				*e*Sn	**Sn**	**23 13 23.3**	**+1.2**
	4.7nm,0.6s						
ZVC	**Zvikov**	**6.98**	**338**	*e*SN	**Sn**	**23 13 21.1**	**-3.4**

*SOF **08** 23:11:58.2, 45˚.64N±0˚.01×26˚.57E±0˚.01, h80km±2km, MD3.1/4*

BUC 08 23:11:57.7±0.2, 45˚.70N×26˚.63E, h86km±1km, ml3.3/46, 52C-42D, Error ellipse: s-maj=1.1km s-min=1.0km az=32.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.15**	**4**	⇑P	Pn	23 12 10.3	+0.1
PLOR				⇓S	Sn	23 12 20.0	+0.5
BISRR	**Bisoca**	**0.16**	**160**	⇑P	Pn	23 12 10.6	+0.3
BISRR				⇑S	Sn	23 12 19.9	+0.4
VRI	**Vrincioaia**	**0.18**	**21**	⇑P	Pn	23 12 10.6	+0.3
VRI				⇑S	Sn	23 12 19.6	+0.1
VRI	**Vrincioaia**	**0.18**	**21**	Pg	Pn	23 12 10.4	+0.1
ODBI	**Odobesti**	**0.30**	**77**	⇑P	Pn	23 12 11.4	+0.7
ODBI				⇓S	Sn	23 12 21.3	+0.9
COVR	**Voineasa-Covas**	**0.34**	**296**	⇑P	Pn	23 12 11.1	+0.1
COVR				⇑S	Sn	23 12 21.0	+0.2
NEHR	**Nehoiu**	**0.36**	**221**	⇑P	Pn	23 12 11.7	+0.5
NEHR				⇑S	Sn	23 12 22.0	+1.0
COSR	**Cosmesti PH**	**0.50**	**71**	⇓P	Pn	23 12 11.6	-0.5
COSR				⇓S	Sn	23 12 24.0	+1.3
MLR	**Muntele Rosu**	**0.53**	**247**	⇑P	Pn	23 12 13.0	+0.6
MLR				⇓S	Sn	23 12 23.9	+0.5
MLR	**Muntele Rosu**	**0.53**	**247**	Pg	Pn	23 12 13.0	+0.5
TURR	**Turia**	**0.56**	**310**	⇑P	Pn	23 12 12.9	+0.3
TURR				⇓S	Sn	23 12 23.5	-0.2
ISR	**Istrita**	**0.58**	**186**	⇑P	Pn	23 12 13.1	+0.2
ISR				⇓S	Sn	23 12 24.3	+0.2
GHRR		**0.65**	**56**	⇑P	Pn	23 12 14.1	+0.7
GHRR				⇓S	Sn	23 12 25.8	+0.7
ONER	**Baraj Valea Uz**	**0.66**	**345**	⇑P	Pn	23 12 13.8	+0.2
ONER				⇓S	Sn	23 12 25.4	+0.1
OZUR		**0.71**	**304**	⇑P	Pn	23 12 13.8	-0.3
TUDR		**0.73**	**98**	⇓P	Pn	23 12 14.2	0.0
TUDR				⇓S	Sn	23 12 26.7	+0.2
BOSR	**Bodos**	**0.78**	**299**	⇑P	Pn	23 12 14.6	-0.1
BOSR				⇓S	Sn	23 12 27.0	-0.4
IZVR	**Izvoarele**	**0.81**	**101**	⇓P	Pn	23 12 14.8	-0.2
IZVR				⇓S	Sn	23 12 27.4	-0.6
TESR	**Tescani**	**0.81**	**1**	⇑P	Pn	23 12 15.0	-0.1
SCHLR	**Schela**	**0.87**	**105**	⇓P	Pn	23 12 15.6	-0.1
SCHLR				⇓S	Sn	23 12 28.4	-0.7
VARL	**Varlezi**	**0.87**	**76**	⇑P	Pn	23 12 16.5	+0.7
VARL				⇓S	Sn	23 12 29.7	+0.5
NEGRR	**Negrea**	**0.89**	**100**	⇓P	Pn	23 12 16.1	+0.2
NEGRR				⇓S	Sn	23 12 29.4	0.0
BIR	**Birlad**	**0.90**	**50**	⇑P	Pn	23 12 16.5	+0.5
BIR				⇓S	Sn	23 12 30.2	+0.5
DOPR	**Dopca**	**0.91**	**288**	⇑P	Pn	23 12 16.2	+0.1
DOPR				⇓S	Sn	23 12 30.3	+0.3
SCTR	**Scanteiesti**	**0.95**	**91**	⇑P	Pn	23 12 17.3	+0.7
SCTR				⇓S	Sn	23 12 31.2	+0.4
TATR	**Tatarca**	**1.00**	**95**	⇑P	Pn	23 12 17.8	+0.7
TATR				⇓S	Sn	23 12 33.0	+1.3
VLDR	**Vladesti**	**1.02**	**81**	⇑P	Pn	23 12 18.0	+0.5
VLDR				⇓S	Sn	23 12 32.5	+0.3
SULR		**1.05**	**195**	⇑P	Pn	23 12 18.0	+0.2
SULR				⇓S	Sn	23 12 33.7	+0.9
GIUM	**Giurgiulesti**	**1.13**	**100**	⇑P	Pn	23 12 19.0	+0.4
GIUM				⇓S	Sn	23 12 34.9	+0.6
VOIR		**1.14**	**257**	⇑P	Pn	23 12 19.1	+0.1
VOIR				⇓S	Sn	23 12 35.6	+0.7
CFR	**Carcaliu**	**1.18**	**116**	⇓P	Pn	23 12 19.2	-0.1
CFR				⇓S	Sn	23 12 35.3	-0.1
AMRR	**Amara**	**1.20**	**155**	⇑P	Pn	23 12 20.1	+0.6
AMRR				⇑S	Sn	23 12 36.7	+0.9
LEHL	**Lehliu**	**1.23**	**174**	⇓P	Pn	23 12 20.6	+0.7
LEHL				⇓S	Sn	23 12 37.8	+1.2
VASR	**Vaslui**	**1.24**	**40**	⇑P	Pn	23 12 20.0	0.0
VASR				⇑S	Sn	23 12 36.7	-0.1
GIRR	**Girov**	**1.26**	**356**	⇓P	Pn	23 12 20.5	+0.2
GIRR				⇓S	Sn	23 12 36.9	-0.4
BUCI	**Bucharest**	**1.42**	**198**	⇓S	Sn	23 12 41.0	+0.3
ARR	**Arges**	**1.44**	**257**	⇑P	Pn	23 12 20.3	+0.6
ARR				⇓S	Sn	23 12 41.4	-0.1
TPGR	**Topolog**	**1.52**	**123**	⇑P	Pn	23 12 23.5	0.0
TPGR				⇓S	Sn	23 12 43.0	-0.1
CICN	**Ciocanesti**	**1.53**	**169**	⇓P	Pn	23 12 23.9	+0.3
CICN				⇑S	Sn	23 12 43.4	+0.3
TLBR	**Topalu**	**1.53**	**139**	⇓P	Pn	23 12 23.8	+0.2
TLBR				⇓S	Sn	23 12 43.3	+0.1
SGRR	**Singureni**	**1.55**	**198**	⇑P	Pn	23 12 24.0	+0.1
SGRR				⇑S	Sn	23 12 43.6	-0.1
TLCR		**1.62**	**108**	⇓P	Pn	23 12 24.8	+0.1
TLCR				⇓S	Sn	23 12 44.8	-0.5
HUMR	**Humele**	**1.66**	**226**	⇑S	Sn	23 12 46.1	-0.1
PRAR	**RASCA**	**1.69**	**351**	⇑P	Pn	23 12 25.9	+0.2
PRAR				⇓S	Sn	23 12 46.6	-0.4
TIRR	**Tirgusor**	**1.77**	**134**	⇓P	Pn	23 12 26.9	+0.2
TIRR				⇓S	Sn	23 12 48.4	-0.4
ICOR	**Ion Corvin**	**1.79**	**152**	⇓P	Pn	23 12 27.6	+0.6
ICOR				⇓S	Sn	23 12 48.9	-0.3
JURR	**Jurilovca**	**1.84**	**120**	⇓P	Pn	23 12 27.7	+0.1
MFTR	**Murfatlar**	**1.98**	**139**	⇓P	Pn	23 12 29.7	+0.2
BURAR	**Bucovina Array**	**2.15**	**334**	⇑P	Pn	23 12 32.7	+0.8
BURAR				⇑S	Sn	23 12 59.4	+1.4
EFOR	**EFORIE**	**2.15**	**138**	⇑S	Sn	23 12 58.0	+0.2
PSN	**Preselentsi**	**2.32**	**152**	P	Pn	23 12 34.7	+0.6
LOZB	**Loznitsa**	**2.33**	**181**	⇑P	Pn	23 12 33.9	-0.3
MANR	**Mangalia**	**2.34**	**143**	⇑S	Sn	23 13 02.3	+0.1
SZH	**Strazhitsa**	**2.48**	**191**	P	Pn	23 12 36.0	-0.2
PRD	**Provadia**	**2.60**	**167**	*i* P	Pn	23 12 38.3	+0.6
ROIA	**ROIAK**	**2.66**	**168**	*e*P	Pn	23 12 39.1	+0.5
AVR	**AVREN**	**2.68**	**164**	*e*P	Pn	23 12 38.9	0.0
SORM	**Soroca**	**2.71**	**25**	⇓P	Pn	23 12 38.5	-0.7
PLVB	**Pleven**	**2.72**	**213**	⇓P	Pn	23 12 39.3	-0.1
PVL	**Pavlikeni**	**2.78**	**203**	P	Pn	23 12 40.0	-0.2
ELND	**Elena**	**2.82**	**191**	⇓P	Pn	23 12 40.8	0.0

IDC 08 23:15:05.8±9.3, 17˚.14S×176˚.74W, h0km, mb3.9/3, mbtmp3.9/3, 1C, Error ellipse: s-maj=416.6km s-min=35.8km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 580nm,26.9s	**16.58**	**250**	*e*LR	LR	23 24 11.8	
PPT2	**Papeete2** 638nm,23.8s	**25.93**	**95**	*e*LR	LR	23 27 06.2	
PPT2	525nm,26.8s			*e*LR	LR	23 27 13.4	
TBI	**Tubuai** 1μm,28.2s	**26.30**	**108**	*e*LR	LR	23 27 03.8	
TBI	2μm,24.5s			*e*LR	LR	23 27 20.4	
TAOE	**Nuku Hiva Isla** 243nm,27.4s	**36.54**	**82**	*e*LR	LR	23 31 50.9	
WRA	**Warramunga Arr** 0.8nm,0.8s,baz=94,slow=6.6,SNR=5.3 0.8nm,0.8s	**46.34**	**259**	P	P	23 23 33.8	-0.2
ASAR	**Alice Springs** 4.5nm,0.8s,baz=86,slow=8.3,SNR=22 4.5nm,0.8s	**46.53**	**253**	P	P	23 23 35.4	-0.1
ILAR	**Eielson Array** 0.5nm,0.6s,baz=215,slow=5.6,SNR=8.0 0.5nm,0.6s	**84.80**	**12**	P	P	23 27 41.7	+0.1
SNAA	**Sanae** comp=Z,38nm,0.2s	**91.31**	**178**	⇑P	P	23 28 07.3	-5.8

GCMT 08 23:18:47.0±0.3, 17˚.11S±0˚.02×176˚.82W±0˚.02, h42km±1km, MW5.3/94, Moment Tensor Solution. s34,c37; s94,c123; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr 0.08±.04; Mθθ 0.81±.04; Mϕϕ 0.72±.03; Mrθ -0.03±.03; Mrϕ 0.91±.03; Mθϕ 0.11±.02; Best double couple: M0 1.19800×10^17 NP1: ϕ 70.00000°, δ 84.00000°, λ 1.00000°. NP2: ϕ 340.00000°, δ 89.00000°, λ 174.00000°. Principal axes: T 1.1590, Plg 5.0000°, Azm 295.0000°; N 0.0770, Plg 84.0000°, Azm 149.0000°; P -1.2360, Plg 3.0000°, Azm 25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 899nm,24.6s	**16.52**	**250**	*e*LR	LR	23 27 02.3	
TBI	**Tubuai** 5μm,25.5s	**26.39**	**108**	*e*LR	LR	23 30 55.1	
TBI	2μm,27.2s			*e*LR	LR	23 30 56.8	
TAOE	**Nuku Hiva Isla** 473nm,30.7s	**36.61**	**82**	*e*LR	LR	23 35 25.7	

*NEIC **08** 23:19:15.3±0.8, 37˚.06N±0˚.01×97˚.98W±0˚.02, h5km±1km, mb_Lg3.5/131, ML3.9/44 Error ellipse: s-maj=3.0km s-min=2.9km az=59.0*
*IDC **08** 23:19:15.2±0.8, 37˚.06N×98˚.06W, h0km, mb3.1/1, mbtmp3.6/6, ML4.4/3, Error ellipse: s-maj=11.4km s-min=9.6km az=168.0*

ISC 08 23:19:15.6±1.0, 37˚.06N±0˚.03×97˚.97W±0˚.03, h9km±8km, n114, σ0 81/74, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN08	**Anthony NE Sta**	**0.16**	**359**		**Pg**	**23 19 19.0**	**-0.1**
KAN01	**Argonia South**	**0.19**	**62**		**Pg**	**23 19 19.7**	**+0.2**
KAN01	comp=E,18μm,0.4s			IAML		23 19 22.9	
KAN01	comp=N,20μm,0.2s			IAML		23 19 23.0	
GC02	**Grant County #**	**0.23**	**158**		**Pg**	**23 19 20.5**	**+0.3**
GC02				Sg	**Sg**	**23 19 24.0**	**+0.6**
CROK	**Carrier**	**0.56**	**181**		**Pg**	**23 19 26.3**	**-0.1**
CROK				Sg	**Sg**	**23 19 34.1**	**+0.4**
CROK	comp=E,9μm,0.3s			IAML		23 19 38.6	
CROK	comp=N,6μm,0.3s			IAML		23 19 43.3	
BLOK	**Blackwell**	**0.68**	**116**		**Pg**	**23 19 28.6**	**0.0**
BLOK	comp=N,10μm,0.2s			IAML		23 19 38.7	
BLOK	comp=E,6μm,0.2s			IAML		23 19 42.8	
OK038	**West end E0370**	**0.85**	**227**		**Pg**	**23 19 31.6**	**-0.4**
OK038				Sg	**Sg**	**23 19 43.2**	**+0.1**
OK038	comp=E,8μm,0.3s			IAML		23 20 01.9	
NOKA	**Waynoka**	**0.88**	**241**		**Pg**	**23 19 32.0**	**-0.5**
NOKA				Sg	**Sg**	**23 19 43.8**	**-0.3**
NOKA	comp=N,5μm,0.3s			IAML		23 19 50.8	
NOKA	comp=E,4μm,0.2s			IAML		23 20 00.4	
OK048	**Pawnee Station**	**1.05**	**128**		**Pb**	**23 19 35.3**	**-0.5**
OK048	comp=E,3μm,0.4s			IAML		23 19 49.7	
OK048	comp=E,3μm,0.2s			IAML		23 19 54.9	
OK051	**E0350 and S346**	**1.07**	**121**		**Pb**	**23 19 35.7**	**-0.5**
T35A	**Sooner Cattle**	**1.18**	**97**		**Pb**	**23 19 37.6**	**-0.5**
OK029	**Liberty Lake**	**1.33**	**162**		**Pn**	**23 19 40.2**	**-0.1**
OK029	comp=E,3μm,0.5s			IAML		23 19 59.0	
OK029	comp=E,2μm,0.2s			IAML		23 20 01.5	
QUOK	**Quay**	**1.35**	**131**		**Pn**	**23 19 40.5**	**-0.1**
OK052	**Battle Ridge R**	**1.42**	**138**		**Pb**	**23 19 41.7**	**-0.6**
R32A	**Long Quarter,**	**1.48**	**337**		**Pn**	**23 19 42.5**	**+0.1**
ADOK	**Arcadia Dam**	**1.49**	**161**		**Pb**	**23 19 43.0**	**-0.4**
ELIS	**Ellis County**	**1.54**	**230**		**Pb**	**23 19 43.5**	**-0.6**
DEOK	**Depew**	**1.70**	**135**		**Pn**	**23 19 45.9**	**+0.5**
OKCSW	**OKLAHOMA CITY**	**1.71**	**165**		**Pn**	**23 19 45.7**	**+0.2**
FNO	**Franklin**	**1.86**	**166**		**Pn**	**23 19 47.9**	**+0.3**
TUL3	**Leonard**	**2.10**	**123**		**Pn**	**23 19 51.3**	**+0.5**
TUL3	comp=Z,358nm,0.8s			IAmb_Lg		23 20 27.0	
W35A	**Tecumseh**	**2.10**	**155**		**Pn**	**23 19 51.5**	**+0.6**
CBKS	**Cedar Bluff**	**2.24**	**322**		**Pn**	**23 19 53.3**	**+0.4**
KSU1	**Kansas State U**	**2.30**	**27**		**Pn**	**23 19 54.4**	**+0.8**
KSU1	**Kansas State U** comp=Z,339nm,0.8s	**2.30**	**27**	IAmb_Lg		23 20 28.4	
WMOK	**Wichita Mounta**	**2.41**	**196**		**Pn**	**23 19 55.3**	**+0.1**
X34A	**Smith Ranch, M**	**2.46**	**177**		**Pn**	**23 19 56.9**	**+1.1**
RLO	**Rose Lookout**	**2.53**	**110**		**Pn**	**23 19 57.5**	**+0.6**
RLO	comp=Z,181nm,0.9s			IAmb_Lg		23 20 38.0	
SMWD	**Samnorwood**	**2.69**	**224**		**Pn**	**23 19 59.

Z41A	**Richland Creek**	**5.69**	**130**	IAmb_Lg			23 22 23.0	
	comp=Z,112nm,1.1s							
SGCY	**Sterling City**	**5.76**	**208**	IAmb_Lg			23 22 31.9	
	comp=Z,97nm,0.8s							
BRDY	**Brady**	**5.83**	**189**	IAmb_Lg			23 22 27.2	
	comp=Z,58nm,0.8s							
CCAR	**Cane Creek**	**5.95**	**120**	IAmb_Lg			23 22 34.0	
	comp=Z,88nm,0.9s							
NATX	**Nacogdoches**	**5.96**	**152**	IAmb_Lg			23 22 39.3	
	comp=Z,84nm,1.0s							
Q24A	**Divide**	**5.98**	**291**	IAmb_Lg			23 22 29.4	
	comp=Z,57nm,0.7s							
229A	**Bryant Ranch,**	**5.99**	**213**	IAmb_Lg			23 22 38.9	
	comp=Z,37nm,1.0s							
PBMO	**Poplar Bluff**	**6.05**	**90**	IAmb_Lg			23 22 26.0	
	comp=Z,61nm,0.7s							
FVM	**French Village**	**6.07**	**79**	IAmb_Lg			23 22 25.9	
	comp=Z,120nm,1.1s							
SCIA	**State Center**	**6.07**	**36**	IAmb_Lg			23 22 32.7	
	comp=Z,105nm,0.7s							
HBAR	**Harrisburg**	**6.09**	**102**	IAmb_Lg			23 22 29.8	
	comp=Z,116nm,0.8s							
435B	**Jarrell**	**6.27**	**177**	IAmb_Lg			23 22 51.3	
	comp=Z,70nm,0.9s							
CGM3	**Cape Girardeau**	**6.64**	**85**	IAmb_Lg			23 22 57.9	
	comp=Z,51nm,0.8s							
OZNA	**Ozona**	**6.66**	**204**	IAmb_Lg			23 22 59.0	
	comp=Z,75nm,0.9s							
143A	**Socs Landing,**	**6.93**	**127**	IAmb_Lg			23 23 04.4	
	comp=Z,53nm,0.8s							
TPB06	**Permian Basin**	**6.93**	**220**	IAmb_Lg			23 23 06.2	
	comp=Z,40nm,0.7s							
S44A	**Carbondale**	**6.97**	**82**	IAmb_Lg			23 23 06.8	
	comp=Z,99nm,0.7s							
ANMO	**Albuquerque**	**7.20**	**255**	Pn		**Pn**	**23 21 02.3 +1.2**	
	comp=Z,0.5nm,0.5s,baz=84,slow=9.2,SNR=1.8							
ANMO				Pg		Pb	23 21 25.7 +4.9	
	comp=Z,1.0nm,0.3s,baz=70,slow=16,SNR=8.3							
ANMO				Sn		**Sn**	**23 22 23.9 +0.8**	
	comp=Z,0.9nm,0.3s,baz=67,slow=16,SNR=2.0							
ANMO				Lg		Lg	23 22 58.3	
	comp=Z,8.0nm,0.3s,baz=197,slow=17,SNR=12							
ANMO	**Albuquerque**	**7.20**	**255**	IAmb_Lg			23 23 02.9	
	comp=Z,20nm,0.9s							
OXF	**Oxford**	**7.41**	**108**	IAmb_Lg			23 23 22.6	
	comp=Z,51nm,0.8s							
SUSD	**Miller**	**7.41**	**355**	IAmb_Lg			23 23 18.7	
	comp=Z,52nm,0.7s							
PECS	**Pecos**	**7.49**	**222**	IAmb_Lg			23 23 31.0	
	comp=Z,58nm,0.9s							
TPB05	**Hovey Rd**	**7.57**	**218**	IAmb_Lg			23 23 26.1	
	comp=Z,47nm,0.9s							
Y45A	**Yeager Farm, C**	**7.58**	**112**	IAmb_Lg			23 23 35.2	
	comp=Z,40nm,0.8s							
HNDO	**Hondo**	**7.59**	**189**	IAmb_Lg			23 23 21.6	
	comp=Z,39nm,0.7s							
HDIL	**Hopedale**	**7.62**	**60**			**Pn**	**23 21 07.2 +0.5**	
I37A	**Lemond, Waseca**	**7.76**	**25**	IAmb_Lg			23 23 28.0	
	comp=Z,52nm,0.7s							
TPB01	**Permian Basin**	**7.78**	**220**	IAmb_Lg			23 23 42.9	
	comp=Z,38nm,0.7s							
SAND	**Sanderson**	**7.89**	**207**	IAmb_Lg			23 23 35.4	
	comp=Z,39nm,0.8s							
DRIO	**Del Rio**	**7.94**	**197**	IAmb_Lg			23 23 29.6	
	comp=Z,34nm,0.8s							
Y22A	**Socorro**	**7.97**	**250**	IAmb_Lg			23 23 41.2	
	comp=Z,46nm,0.9s							
HAYD	**Hayden**	**8.03**	**298**	IAmb_Lg			23 23 39.8	
	comp=Z,33nm,0.8s							
MNTX	**Cornudas Mount**	**8.13**	**231**	IAmb_Lg			23 23 43.1	
	comp=Z,76nm,0.8s							
EF02	**Christine**	**8.28**	**183**	IAmb_Lg			23 23 56.0	
	comp=Z,39nm,0.8s							
RSSD	**Black Hills**	**8.42**	**329**	IAmb_Lg			23 23 48.1	
	comp=Z,58nm,1.1s							
146A	**Union**	**8.55**	**118**	IAmb_Lg			23 24 03.2	
	comp=Z,48nm,1.1s							
VHRN	**Van Horn**	**8.55**	**225**	IAmb_Lg			23 24 08.9	
	comp=Z,37nm,0.8s							
K22A	**Casper**	**8.62**	**313**	IAmb_Lg			23 24 09.4	
	comp=Z,73nm,0.9s							
I40A	**Norwalk**	**8.82**	**37**	IAmb_Lg			23 24 01.4	
	comp=Z,41nm,0.7s							
Z47A	**Carrollton**	**8.98**	**113**	IAmb_Lg			23 24 04.1	
	comp=Z,34nm,1.1s							
TXAR	**Lajitas Array**	**9.06**	**213**	Pn		**Pn**	**23 21 25.1 -1.5**	
	comp=Z,0.7nm,0.3s,baz=37,slow=10,SNR=26							
TXAR				Pg			23 21 51.9	
	comp=Z,0.7nm,0.3s,baz=35,slow=12,SNR=6.6							
TXAR				Lg		Lg	23 23 55.1	
	comp=Z,1.9nm,0.3s,baz=37,slow=17,SNR=6.0							
	comp=Z,1.0nm,0.3s							
121A	**Cookes Peak, D**	**9.25**	**244**	IAmb_Lg			23 24 21.8	
	comp=Z,38nm,1.1s							
I42A	**Draeger Farm,**	**9.70**	**43**	IAmb_Lg			23 24 33.2	
	comp=Z,39nm,0.9s							
BW06	**Boulder Array**	**10.56**	**306**			**Pn**	**23 21 47.8 +0.5**	
PDAR	**Pinedale Array**	**10.56**	**306**	Pn		**Pn**	**23 21 48.4 +1.1**	
	comp=Z,0.5nm,0.3s,baz=115,slow=10,SNR=15							
PDAR				Pg			23 22 29.7	
	comp=Z,0.5nm,0.3s,baz=112,slow=14,SNR=3.5							
PDAR				Lg		Lg	23 24 41.4	
	comp=Z,1.3nm,0.3s,baz=104,slow=41,SNR=3.8							
	comp=Z,0.7nm,0.4s							
PDAR	**Pinedale Array**	**10.56**	**306**	Pn		**Pn**	**23 21 47.1 -0.2**	
TKL	**Tuckaleechee C**	**11.53**	**93**	Pn		**Pn**	**23 22 00.2 -0.2**	
	comp=Z,1.4nm,0.3s,baz=254,slow=7.2,SNR=8.1							
TKL				Sn		**Sn**	**23 24 07.8 -1.4**	
	comp=Z,0.4nm,0.3s,baz=299,slow=19,SNR=1.6							
TKL				Lg		Lg	23 25 16.2	
	comp=Z,1.2nm,0.3s,baz=330,slow=20,SNR=6.7							
	comp=Z,5.8nm,0.5s							
ULM	**Lac du Bonnet**	**13.27**	**6**	Pn		**Pn**	**23 22 20.6 -3.3**	
	comp=Z,1.0nm,0.3s,baz=185,slow=12,SNR=2.6							
ULM				Sn		Sn	23 24 40.7 -11	
	comp=Z,0.5nm,0.3s,baz=159,slow=15,SNR=2.9							
ULM				Lg		Lg	23 26 00.2	
	comp=Z,0.4nm,0.3s,baz=276,slow=18,SNR=3.5							
ILAR	**Eielson Array**	**39.87**	**330**	P		**P**	**23 26 51.8 +2.6**	
	comp=Z,0.2nm,0.8s,baz=113,slow=8.5,SNR=1.7							
	comp=Z,0.2nm,0.8s							

*FUNV **08** 23:25:20.5, 10.61N×62.50W, h20km, MW3.3, Presumed earthquake*
*TRN **08** 23:25:23.2, 10.75N×62.26W, h104km, MD3.4, North of the Paria peninsula.*

ISC 08 23:25:21.0±2.2, 10.70N±0.07×62.57W±0.06, h24km±20km, **n8,** σ1§12/13**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TRN	**Trinidad (W)**	**1.15**	**92**	*eP*		**Pn**	**23 25 39.5**	**-2.1**
TRN				*eS*		**Sn**	**23 25 55.7**	**-0.9**
TRN	**Trinidad (W)**	**1.15**	**92**	*eP*		**Pb**	**23 25 42.1**	**-0.1**
TRN				*eS*		**Sn**	**23 25 56.3**	**-0.3**
TPP	**Pointe-a-Pierr**	**1.17**	**109**	*eP*		**Pn**	**23 25 43.9**	**+2.1**
TPP				*eS*		**Sn**	**23 25 57.6**	**+0.6**
GRFF	**Grenada Fort F**	**1.57**	**31**	*eP*		**Pn**	**23 25 47.6**	**+0.2**
GRFF				*eS*		**Sn**	**23 26 06.9**	**-0.2**
GRGR	**Grenville**	**1.69**	**32**	*eP*		**Pn**	**23 25 49.5**	**+0.5**
GRGR				*eS*		**Sn**	**23 26 09.9**	**0.0**
GRGR	**Grenville**	**1.69**	**32**	*eP*		**Pn**	**23 25 49.9**	**+0.9**
GRGR				*eS*		**Sn**	**23 26 09.9**	**0.0**
PCRV	**Puerto La Cruz**	**2.09**	**256**	*eS*		**Sn**	**23 26 19.3**	**-0.7**
CACV	**CAICARA DEL OR**	**5.00**	**232**	*eP*		Pn	23 26 27.8	-6.8
CACV				*eS*		Sn	23 27 17.6	-14

*CATAC **08** 23:30:02.5, 14.7N±0.6×87.4W±0.6, h1km, M4.2/43, MLv4.2/43, confirmed*
*SNET **08** 23:30:02.9±4.2, 14.56N×87.19W, h32km, ML4.0, Presumed earthquake*

ISC 08 23:30:00.7±1.4, 14.68N±0.04×87.33W±0.03, h6km±11km, **n59,** σ1§**00**/113**, Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**0.62**	**175**	P		**Pb**	**23 30 13.8**	**-0.2**
TGUH				S		**Sb**	**23 30 22.8**	**-0.2**
OCON	**Estacion meteo**	**1.33**	**142**	P		**Pg**	**23 30 27.0**	**+0.8**
OCON				S		**Sg**	**23 30 46.2**	**+2.8**
CNRM	**Centro Naciona**	**1.45**	**214**	P		**Pn**	**23 30 27.2**	**-0.3**
CNRM				S		**Sn**	**23 30 46.3**	**-0.4**
LCND	**La Caada**	**1.47**	**202**	P		**Pb**	**23 30 28.0**	**-0.4**
LCND				S		**Sb**	**23 30 47.4**	**+0.1**
LCND	**La Caada**	**1.47**	**202**	*eP*		**Pn**	**23 30 27.6**	**-0.1**
LCND				*eP*		**Pb**	**23 30 28.0**	**-0.4**
LCND				*eS*		**Sn**	**23 30 47.0**	**-0.2**
CNCH	**Conchagua**	**1.48**	**199**	P		**Pn**	**23 30 28.0**	**+0.1**
CNCH				S		**Sb**	**23 30 47.7**	**0.0**
CNCH	**Conchagua**	**1.48**	**199**	*eP*		**Pn**	**23 30 28.0**	**+0.1**
CNCH				*eS*		**Sb**	**23 30 48.0**	**+0.3**
BLLM	**Bellamira**	**1.51**	**216**	*eP*		**Pn**	**23 30 27.9**	**-0.5**
PACA	**Pacayal**	**1.54**	**219**	P		**Pn**	**23 30 28.4**	**-0.4**
PACA				S		**Sn**	**23 30 49.3**	**+0.1**
RCVN	**Varillal2**	**1.55**	**135**	P		**Pg**	**23 30 30.8**	**+0.4**
RCVN				S		**Sg**	**23 30 52.9**	**+2.4**
RANC	**El Ranchito**	**1.55**	**217**	P		**Pn**	**23 30 28.7**	**-0.3**
RANC				S		**Sn**	**23 30 49.5**	**+0.1**
LCY	**Lacayo**	**1.56**	**217**	*eP*		**Pn**	**23 30 29.0**	**-0.1**
IZABA	**Izabal, Puerto**	**1.60**	**311**	P		**Pn**	**23 30 29.1**	**-0.4**
IZABA				S		**Sn**	**23 30 49.1**	**-1.4**
RCON	**San Juan de Ri**	**1.64**	**136**	P		**Pg**	**23 30 32.5**	**+0.3**
RCON				S		**Sg**	**23 30 55.9**	**+2.3**
LLGN	**La Laguna**	**1.65**	**252**	P		**Pn**	**23 30 29.6**	**-0.6**
LLGN	**La Laguna**	**1.65**	**252**	*eP*		**Pn**	**23 30 29.6**	**-0.6**
LLGN				*eS*		**Sn**	**23 30 50.2**	**-1.6**
RCPN	**Sur Rio San Ju**	**1.66**	**134**	P		**Pg**	**23 30 32.5**	**0.0**
RCPN				S		**Sg**	**23 30 56.1**	**+2.1**
SCLA	**Alcaldia de Sa**	**1.67**	**235**	P		**Pn**	**23 30 30.2**	**-0.3**
SCLA				S		**Sn**	**23 30 52.2**	**-0.1**
CSGN	**Cosiguina Volc**	**1.71**	**188**	P		**Pb**	**23 30 32.2**	**-0.4**
CSGN				S		**Sg**	**23 30 55.4**	**-0.2**
TECO	**Alcaldia de Te**	**1.81**	**231**	P		**Pn**	**23 30 32.6**	**+0.2**
TECO				S		**Sn**	**23 30 56.6**	**+0.9**
PAVA	**Las Pavas**	**1.83**	**239**	P		**Pn**	**23 30 32.8**	**0.0**
PAVA				S		**Sn**	**23 30 57.1**	**+0.7**
COEG	**Centro de Oper**	**1.84**	**235**	P		**Pn**	**23 30 32.8**	**0.0**
COEG				S		**Sn**	**23 30 57.2**	**+0.8**
LIMN	**Finca el Limon**	**1.86**	**150**	P		**Pg**	**23 30 35.7**	**-0.6**
LIMN				S		**Sg**	**23 31 01.7**	**+1.2**
ESQI	**Esquipulas**	**1.95**	**267**	P		**Pn**	**23 30 34.7**	**+0.3**
ESQI				S		**Sn**	**23 30 59.4**	**+0.1**
ESQI	**Esquipulas**	**1.95**	**267**	*eP*		**Pn**	**23 30 34.7**	**+0.3**
ESQI				*eS*		**Sn**	**23 31 00.2**	**+0.9**
CRIN	**San Cristobal**	**1.98**	**172**	P		**Pb**	**23 30 37.4**	**+0.2**
CRIN				S		**Sg**	**23 31 03.5**	**-1.1**
MTO3	**Montecristo**	**1.99**	**262**	P		**Pn**	**23 30 35.5**	**+0.4**
MTO3	**Montecristo**	**1.99**	**262**	*eP*		**Pn**	**23 30 35.4**	**+0.4**
MTO3				*eS*		**Sn**	**23 31 00.8**	**+0.4**
IGN	**Direccin Gen**	**2.03**	**242**	P		**Pn**	**23 30 36.8**	**+1.4**
IGN				S		**Sn**	**23 31 01.6**	**+0.5**
UTEC	**Universidad Te**	**2.06**	**242**	P		**Pn**	**23 30 37.0**	**+1.1**
UTEC				S		**Sn**	**23 31 02.2**	**+0.3**
POLN	**Al Sur del Vol**	**2.08**	**166**	P		**Pb**	**23 30 37.9**	**-1.0**
POLN				S		**Sg**	**23 31 06.9**	**-0.7**
SEMO	**Seminario San**	**2.08**	**242**	P		**Pn**	**23 30 37.0**	**+0.9**
SEMO				S		**Sn**	**23 31 03.5**	**+1.1**
UEES	**Universidad Ev**	**2.09**	**243**	P		**Pn**	**23 30 37.4**	**+1.1**
UEES				S		**Sn**	**23 31 03.6**	**+1.0**
HERN	**Volcan Telica**	**2.11**	**167**	P		**Pb**	**23 30 39.2**	**-0.2**
HERN				S		**Sg**	**23 31 07.6**	**-1.1**
HOYN	**Al Sur del Vol**	**2.12**	**167**	P		**Pb**	**23 30 39.3**	**-0.3**
HOYN				S		**Sg**	**23 31 08.2**	**-0.7**
QUEN	**Al S del Volca**	**2.12**	**167**	P		**Pb**	**23 30 39.1**	**-0.5**
QUEN				S		**Sg**	**23 31 07.6**	**-1.4**
PMON	**Piamonte**	**2.15**	**244**	P		**Pn**	**23 30 38.2**	**+1.0**
PMON				S		**Sn**	**23 31 05.2**	**+0.9**
CEDA	**San Andres**	**2.19**	**247**	P		**Pn**	**23 30 38.4**	**+0.8**
CEDA				S		**Sn**	**23 31 06.3**	**+1.3**
MATN	**Matagalpa**	**2.21**	**142**	P		**Pb**	**23 30 40.5**	**-0.5**
MATN				S		**Sg**	**23 31 09.3**	**-0.8**
CNGN	**Cerro Negro**	**2.25**	**164**	P		**Pb**	**23 30 41.9**	**+0.1**
CNGN				S		**Sb**	**23 31 10.4**	**+0.5**
ALEN	**Leon**	**2.25**	**169**	P		**Pb**	**23 30 41.0**	**-0.8**
ALEN				S		**Sg**	**23 31 10.9**	**-2.2**
CNGA	**Al SSO del Vol**	**2.25**	**164**	P		**Pb**	**23 30 42.0**	**+0.1**
CNGA				S		**Sb**	**23 31 10.6**	**+0.5**
UNIC	**Universidad Ca**	**2.26**	**252**	P		**Pn**	**23 30 39.7**	**+1.1**
UNIC				S		**Sn**	**23 31 08.0**	**+1.1**
LALI	**Alcalda de L**	**2.27**	**239**	P		**Pn**	**23 30 39.8**	**+1.1**
LALI				S		**Sn**	**23 31 08.4**	**+1.5**
JAYA	**Jayaque - finc**	**2.29**	**244**	P		**Pn**	**23 30 40.2**	**+1.0**
JAYA				S		**Sn**	**23 31 08.9**	**+1.1**
JAYA	**Jayaque - finc**	**2.29**	**244**	*eP*		**Pn**	**23 30 40.3**	**+1.1**
JAYA				*eS*		**Sb**	**23 31 10.5**	**-0.8**
CEVE	**Cerro Verde**	**2.38**	**249**	P		**Pn**	**23 30 41.2**	**+0.8**
CEVE				S		**Sn**	**23 31 11.3**	**+1.2**
SLOZ	**Alcaldia de Sa**	**2.47**	**255**	P		**Pn**	**23 30 42.3**	**+0.9**
LOAL	**Lomas de Alarc**	**2.47**	**254**	P		**Pn**	**23 30 42.6**	**+1.0**
LOAL				S		**Sn**	**23 31 13.0**	**+0.9**
NUBE	**Las Nubes**	**2.50**	**252**	P		**Pn**	**23 30 43.3**	**+1.3**
NUBE				S		**Sn**	**23 31 14.3**	**+1.4**
NUBE	**Las Nubes**	**2.50**	**252**	*eP*		**Pn**	**23 30 40.8**	**-1.3**
NUBE				*eS*		**Sb**	**23 31 16.2**	**-1.0**
SAPS	**Ciudad Sandino**	**2.65**	**160**	P		**Pb**	**23 30 47.1**	**-1.5**
SAPS				S		**Sb**	**23 31 20.9**	**-0.5**
APQ2	**Apoyeque**	**2.65**	**158**	P		**Pb**	**23 30 47.1**	**-1.5**
APQ2				S		**Sb**	**23 31 21.4**	**0.0**
SIUN	**Universidad Ur**	**2.66**	**111**	P		**Pb**	**23 30 47.4**	**-1.3**
SIUN				S		**Sb**	**23 31 21.2**	**-0.4**
MGAN	**Managua**	**2.73**	**157**	P		**Pb**	**23 30 47.7**	**-2.2**
MGAN				S		**Sb**	**23 31 23.2**	**-0.4**
FAME	**Alcaldia de Sa**	**2.73**	**253**	P		**Pn**	**23 30 47.0**	**+1.8**
FAME				S		**Sn**	**23 31 19.8**	**+1.3**
BOAB	**BOACO BROADBAN**	**2.74**	**144**	P		**Pb**	**23 30 47.9**	**-2.2**
BOAB				S		**Sb**	**23 31 24.2**	**+0.2**
UNAN	**Cigeo UNAN**	**2.75**	**158**	P		**Pb**	**23 30 48.3**	**-2.0**
UNAN				S		**Sb**	**23 31 23.2**	**-1.1**
PETF	**Flores**	**3.31**	**313**	P		**Pn**	**23 30 53.4**	**+0.4**

*ISK **08** 23:30:51.9, 38.32N×38.96E, h5km, ML3.2/8*
*AFAD **08** 23:30:51.8, 38.29N×38.93E, h7km±2km, ML3.0*

ISC 08 23:30:51.6±1.3, 38.27N±0.04×38.91E±0.04, h6km±13km, **n19,** σ0§**53**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELZG	**Elazig**	**0.24**	**14**	P		**Pg**	**23 30 56.4**	**0.0**
ELZG				IAML			23 31 00.0	
	comp=E,3µm,0.3s							
ELZG				S		**Sg**	**23 31 00.3**	**+0.7**
ELZG				IAML			23 31 01.0	
	comp=N,4µm,0.3s							
SVRC	**Sivrice-ELAZID**	**0.33**	**70**	Pg		**Pg**	**23 30 57.7**	**-0.4**
SVRC				Sg		**Sg**	**23 31 02.4**	**-0.1**
MAYA	**Malatya/Merkez**	**0.39**	**279**	P		**Pb**	**23 31 00.4**	**-0.5**
MAYA				IAML			23 31 06.0	
	comp=N,1µm,0.5s							
MAYA				S		**Sb**	**23 31 06.3**	**-0.9**
NARI	**Adyaman-Kaht**	**0.40**	**197**	P		**Pb**	**23 30 00.9**	**-0.2**
ELZ	**Elazig**	**0.48**	**29**	P		**Pg**	**23 31 00.7**	**-0.2**
ELZ				S		**Sg**	**23 31 07.6**	**+0.4**
KAHTU	**Kahta**	**0.52**	**207**	P		**Pb**	**23 31 02.9**	**-0.2**
KAHTU				S		**Sb**	**23 31 10.7**	**-0.2**
KOVA	**Elazig, Kovanc**	**0.83**	**58**	P		**Pg**	**23 31 06.9**	**-0.7**
MCKZ	**Bingol**	**0.85**	**3**	P		**Pg**	**23 31 07.2**	**-0.8**
MCKZ				S		**Sg**	**23 31 19.4**	**+0.3**
ARPR	**Arapgir-MALATY**	**0.94**	**332**	Pg		**Pg**	**23 31 09.8**	**+0.1**
TNCL	**Tunceli-Merkez**	**0.98**	**30**	P		**Pg**	**23 31 09.4**	**-1.0**
DYBB	**Diyarbakir**	**1.02**	**108**	Pg		**Pb**	**23 31 11.7**	**0.0**
ILIC	**ilic-Erzincan**	**1.21**	**347**	Pn		**Pg**	**23 31 14.7**	**-0.2**
ILIC				Sn		**Sb**	**23 31 31.3**	**+0.3**
ERZN	**Erzincan**	**1.46**	**25**	Pn		**Pn**	**23 31 18.5**	**-0.1**
YEDI	**Yedisu-Bingol**	**1.73**	**47**	Pn		**Pn**	**23 31 22.6**	**+0.3**
GAZ	**Gaziantep**	**1.73**	**231**	Pn		**Pb**	**23 31 24.3**	**+0.4**
KMRS	**Kahramanmaras**	**1.76**	**245**	Pn		**Pb**	**23 31 24.6**	**+0.2**
SVAN	**Silvan-Diyarba**	**1.81**	**93**	Pn		**Pn**	**23 31 23.9**	**+0.6**
VRTB	**Varto-Mus**	**2.18**	**65**	Pn		**Pn**	**23 31 28.9**	**+0.4**
GURO	**Guroymak-BITLI**	**2.47**	**82**	Pn		**Pn**	**23 31 33.3**	**+0.8**

IDC 08 23:32:20.7±8.1, 18.31S×175.97W, h0km**, mb3.9**/3**, mbtmp3.9**/3**, MS3.8**/12**, Error ellipse: s-maj=360.9km s-min=36.5km az=142.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAR	**Rarotonga**	**15.52**	**103**	LR		LR	23 40 55.0	
	comp=Z,253nm,19.0s,baz=273,slow=33							
DZM	**Mont Dzumac**	**16.93**	**254**	LR		LR	23 41 28.4	
	comp=Z,449nm,20.0s,baz=90,slow=32							
HNR	**Honiara**	**24.97**	**287**	LR		LR	23 45 38.1	
	comp=Z,10nm,19.0s,baz=170,slow=32							
PPT	**Papeete**	**25.11**	**92**	LR		LR	23 45 35.9	
	comp=Z,106nm,18.9s,baz=254,slow=32							
CTA	**Charters Tower**	**35.67**	**261**	LR		LR	23 52 26.9	
	comp=Z,145nm,18.2s,baz=80,slow=34							
PMG	**Port Moresby**	**36.81**	**279**	LR		LR	23 51 23.3	
	comp=Z,126nm,19.7s,baz=26,slow=31							
STKA	**Stephens Creek**	**40.48**	**242**	LR		LR	23 55 29.1	
	comp=Z,79nm,18.5s,baz=25,slow=34							
WRA	**Warramunga Arr**	**46.84**	**260**	P		P	23 40 52.2	-0.6
	0.4nm,0.6s,baz=96,slow=7.3,SNR=2.4							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**46.92**	**254**	P		P	23 40 53.6	+0.2
	2.8nm,0.6s,baz=90,slow=8.2,SNR=20							
ASAR				LR		LR	23 59 39.6	
	comp=Z,132nm,18.4s,baz=86,slow=35							
	2.8nm,0.6s							
FITZ	**Fitzroy Crossi**	**55.25**	**260**	LR		LR	00 04 55.2	
	comp=Z,137nm,18.4s,baz=83,slow=35							
RPN	**Rapa Nui**	**61.48**	**111**	LR		LR	00 02 33.7	
	comp=Z,45nm,21.4s,baz=267,slow=30							
ASAJ	**Asahikawa**	**72.76**	**330**	LR		LR	00 10 34.6	
	comp=Z,103nm,20.7s,baz=166,slow=32							
KLR	**Kul'dur**	**81.65**	**328**	LR		LR	00 13 44.3	
	comp=Z,14nm,20.6s,baz=124,slow=30							
ILAR	**Eielson Array**	**85.78**	**12**	P		P	23 45 01.4	0.0
	1.0nm,0.9s,baz=221,slow=5.2,SNR=9.3							
	1.0nm,0.9s							
JTS	**Las Juntas de**	**94.13**	**81**	LR		LR	00 18 50.6	
	comp=Z,104nm,21.5s,baz=16,slow=30							

*KRNET **08** 23:33:48.6±0.1, 41.36N×71.68E, h18km, mb2.3*
*NNC **08** 23:33:50.8±1.6, 41.47N×71.63E, h0km, mb2.9, mpv2.9, Error ellipse: s-maj=12.9km s-min=5.3km az=4.0*
*SOME **08** 23:33:50.1, 41.48N×71.63E, h10km*
*ISU **08** 23:33:52, 41.40N×71.72E, h15km*

ISC 08 23:33:48.8±1.1, 41.41N±0.02×71.67E±0.02, h6km±10km**, n24,** σ1§**01**/46**, 15C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSNS	**Kasansay**	**0.27**	**204**	P		**Pg**	**23 33 55.1**	**+1.0**
KSNS				S		**Sb**	**23 33 59.8**	**-1.3**
ARK	**Arkit**	**0.45**	**30**	⇑*iP*		**Pb**	**23 33 58.4**	**-0.8**
ARK				⇑*iS*		**Sb**	**23 34 04.8**	**-1.5**
ARSB	**Arslanbob**	**0.99**	**94**	⇑*iP*		**Pg**	**23 34 07.2**	**-0.7**
ARSB				⇑*iS*		**Sg**	**23 34 20.6**	**-0.2**
TSTA	**Tashata**	**1.03**	**143**	P		**Pg**	**23 34 09.1**	**+0.5**
TSTA				S		**Sg**	**23 34 23.1**	**+1.1**
FRG	**Fergana**	**1.04**	**175**	S		**Sn**	**23 34 26.6**	**+1.8**
OHH	**Osh**	**1.22**	**136**	⇑*iP*		**Pg**	**23 34 10.4**	**-1.9**
OHH				⇑*iS*		**Sg**	**23 34 26.7**	**-1.4**
MNAS	**Manas**	**1.25**	**30**	⇑*iP*		**Pg**	**23 34 12.6**	**-0.1**
MNAS				⇑*iS*		**Sn**	**23 34 29.9**	**-0.3**
CHRV	**Charvak**	**1.31**	**281**	P		**Pg**	**23 34 13.0**	**-0.9**
CHRV				S		**Sn**	**23 34 31.7**	**+0.1**
IUG	**luzhnay**	**1.43**	**302**	P		**Pg**	**23 34 16.3**	**+0.1**
	28nm,0.2s							
IUG				S		**Sn**	**23 34 35.3**	**+0.7**
	149nm,0.2s							
IUG	**luzhnay**	**1.43**	**302**	*eP*		**Pg**	**23 34 16.0**	**-0.2**
	28nm,0.2s							
IUG				*eS*		**Sn**	**23 34 35.1**	**+0.4**
	149nm,0.2s							
BTK	**Batken**	**1.50**	**206**	⇓*iP*		**Pn**	**23 34 15.6**	**-0.7**
BTK				⇓*iS*		**Sn**	**23 34 35.1**	**-1.1**
TVKS	**Tavaksay**	**1.52**	**277**	P		**Pg**	**23 34 17.3**	**-0.2**
TVKS				S		**Sg**	**23 34 38.3**	**+0.6**
SALK	**Salom-Alik**	**1.71**	**107**

PPT2					*e*LR	LR	00 37 06.7			
	201nm,28.0s									
PPT	**Papeete**	**25.27**	**92**	LR	LR	00 38 03.0				
	comp=Z,82nm,20.2s,baz=224,slow=31									
TBI	**Tubuai**	**25.41**	**106**	*e*LR	LR	00 37 11.0				
	1µm,42.8s									
CTA	**Charters Tower**	**35.52**	**261**	LR	LR	00 43 57.1				
	comp=Z,82nm,20.9s,baz=60,slow=32									
WRA	**Warramunga Arr**	**46.69**	**260**	P	P	00 33 29.7	-0.5			
	0.6nm,0.7s,baz=97,slow=7.9,SNR=5.8									
	0.6nm,0.7s									
ASAR	**Alice Springs**	**46.76**	**254**	P	P	00 33 30.4	-0.3			
	2.9nm,0.7s,baz=90,slow=8.1,SNR=25									
ASAR				LR	LR	00 51 32.7				
	comp=Z,54nm,20.5s,baz=102,slow=34									
	2.9nm,0.7s									
VNDA	**Vanda**	**60.23**	**185**	LR	LR	00 56 08.2				
	comp=Z,37nm,20.8s,baz=277,slow=31									
ASAJ	**Asahikawa**	**72.69**	**330**	LR	LR	01 01 25.8				
	comp=Z,73nm,20.0s,baz=172,slow=30									
KLR	**Kul'dur**	**81.58**	**328**	LR	LR	01 07 19.3				
	comp=Z,16nm,20.6s,baz=130,slow=31									
MA2	**Magadan**	**82.18**	**344**	LR	LR	01 08 37.3				
	comp=Z,30nm,21.1s,baz=208,slow=32									
SEY	**Seymchan**	**84.67**	**346**	LR	LR	01 09 55.5				
	comp=Z,40nm,19.8s,baz=108,slow=32									
ILAR	**Eielson Array**	**85.81**	**12**	P	P	00 37 39.5	-0.7			
	0.4nm,0.5s,baz=215,slow=5.8,SNR=12									
	0.4nm,0.5s									
CMIG	**Matias Romero**	**87.31**	**71**	LR	LR	01 09 50.3				
	comp=Z,47nm,18.3s,baz=270,slow=31									
TIXI	**Tiksi**	**97.11**	**345**	LR	LR	01 15 38.5				
	comp=Z,40nm,20.6s,baz=187,slow=31									
BRTR	**Keskin Array B**	**146.59**	**316**	PKPbc	PKPab	00 44 44.5	+0.2			
	0.4nm,0.6s,baz=57,slow=5.3,SNR=1.7									

*IDC **09** 00:30:23.2±3.3,9°.52S×119°.83E,h72km±29km,mb3.5/3, mbtmp3.8/8,Error ellipse: s-maj=39.5km s-min=11.7km az=59.0*
*DJA **09** 00:30:25.7±0.2,9°S±4°×12°.0E±°,h39km±6km,M3.8/17, MLv3.8/17*
ISC 09 00:30:22.8±0.8,**9°.54S**±0°.05×**119°.94E**±0°.04,**h61**km,**n25,** σ3°.**17**/30,**mb3.9/3,Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**0.38**	**111**	P	**Pn**	**00 30 36.8**	**+3.2**
WSI				S	Sn	00 30 45.4	+3.9
WBSI	**Waikabubak, Su**	**0.55**	**259**	P	**Pn**	**00 30 37.4**	**+2.0**
WBSI				S	Sn	00 30 46.8	+2.2
BASI	**Baing, Sumba**	**0.93**	**137**	P	Pn	00 30 43.6	+3.7
EDFI	**Ende, Flores**	**1.90**	**66**	P	**Pn**	**00 30 55.0**	**+2.0**
EDFI				S	Sn	00 31 16.3	+0.4
DBNI	**Kabupaten Domp**	**1.91**	**302**	P	**Pn**	**00 30 55.6**	**+2.6**
DBNI				S	Sn	00 31 17.9	+1.9
PLAI	**Plampang**	**2.25**	**288**	P	**Pn**	**00 30 59.8**	**+2.1**
MMRI	**Maumere**	**2.44**	**69**	P	**Pn**	**00 31 03.2**	**+2.9**
TWSI	**Taliwang, Sumb**	**3.12**	**284**	P	**Pn**	**00 31 12.6**	**+3.0**
BSSI	**Bau Bau, Buton**	**3.41**	**9**	P	**Pn**	**00 31 15.7**	**+2.1**
BATI	**Baumata**	**3.73**	**101**	P	**Pn**	**00 31 20.9**	**+3.0**
	32nm,0.3s,baz=169,slow=0.6,SNR=12						
BATI				S	Sn	00 32 04.3	+3.6
	16nm,0.3s,baz=32,slow=18,SNR=2.1						
BATI	**Baumata**	**3.73**	**101**	P	**Pn**	**00 31 21.8**	**+3.9**
SOEI	**Soe**	**4.27**	**93**	P	**Pn**	**00 31 28.1**	**+2.6**
MKS	**Makassar**	**4.31**	**354**	P	**Pn**	**00 31 28.8**	**+2.9**
KAPI	**Kappang**	**4.50**	**358**	P	**Pn**	**00 31 29.2**	**+0.8**
	26nm,0.4s,baz=169,slow=12,SNR=7.5						
KAPI				S	Sn	00 32 19.8	+0.4
	19nm,0.3s,baz=33,slow=22,SNR=9.9						
KAPI	**Kappang**	**4.50**	**358**	P	**Pn**	**00 31 31.0**	**+2.6**
IGBI	**Denpasar**	**4.79**	**278**	P	**Pn**	**00 31 35.3**	**+2.9**
FITZ	**Fitzroy Crossi**	**10.15**	**148**	P	**Pn**	**00 32 46.5**	**+0.6**
	1.9nm,0.7s,baz=301,slow=5.7,SNR=9.4						
FITZ				S	Sn	00 34 33.6	-4.6
	5.0nm,0.4s,baz=190,slow=19,SNR=11						
WRA	**Warramunga Arr**	**17.33**	**128**	P	**Pn**	**00 34 20.7**	**-0.1**
	0.4nm,0.4s,baz=302,slow=14,SNR=6.9						
WRA				S	Sn	00 37 23.6	-9.4
	0.4nm,0.6s,baz=292,slow=20,SNR=2.6						
ASAR	**Alice Springs**	**19.38**	**138**	P	**Pn**	**00 34 45.0**	**-0.4**
	0.9nm,0.8s,baz=312,slow=11,SNR=11						
SONM	**Songino Array**	**58.37**	**349**	P	**P**	**00 40 11.4**	**-0.5**
	0.9nm,0.5s,baz=168,slow=8.7,SNR=8.5						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**65.35**	**333**	P	**P**	**00 40 57.5**	**-1.3**
	0.3nm,0.5s,baz=156,slow=7.5,SNR=6.8						
	0.3nm,0.5s						
H04N2	**CROZET ISLANDS**	**68.06**	**224**	T	T	01 55 28.0	
	baz=80,slow=75,SNR=5.6						
H04N1	**CROZET ISLANDS**	**68.08**	**224**	T	T	01 55 26.4	
	baz=80,slow=75,SNR=5.2						
H04N3	**CROZET ISLANDS**	**68.08**	**224**	T	T	01 55 25.8	
	baz=80,slow=75,SNR=5.4						
ZALV	**Zalesovo Beam**	**69.87**	**339**	P	**P**	**00 41 25.4**	**-1.5**
	0.5nm,0.3s,baz=134,slow=5.6,SNR=6.3						
	0.5nm,0.3s						

*IDC **09** 00:45:34.0±1.2,2°.23S×134°.17E,h0km,mb4.0/7, mbtmp4.1/10,ML4.3/3,MS3.0/6,Error ellipse: s-maj=35.9km s-min=20.0km az=74.0*
*DJA **09** 00:45:35.9±0.3,2°.5S×13°.4E±°,h10km,M4.1/7,MLv4.1/7*
*NEIC **09** 00:45:37.8±1.6,2°.26S±0°.08×134°.16E±0°.09,h27km±5km, mb4.2/8,Error ellipse: s-maj=14.2km s-min=11.1km az=122.0*
ISC 09 00:45:37.6±0.6,**2°.30S**±0°.05×**134°.13E**±0°.06,**h27**km,**n45,** σ1°.**18**/42,**mb4.3**/14,**MS2.8**/4,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RKPI	**Ransiki, Papua**	**0.78**	**3**	P	**Pb**	**00 45 50.3**	**-2.3**
MWPI	**Manokwari, Pap**	**1.36**	**356**	P	**Pb**	**00 46 01.4**	**-1.0**
KMPI	**Kaimana, Papua**	**1.42**	**198**	P	**Pn**	**00 46 03.0**	**+1.3**
FAKI	**Fak Fak**	**1.98**	**252**		**Pn**	**00 46 09.9**	**+0.5**
FAKI				Sn	Sn	00 46 34.8	+1.4
FAKI	**Fak Fak**	**1.98**	**252**	P	**Pn**	**00 46 10.1**	**+0.7**
BAKI	**Biak**	**2.26**	**61**	P	**Pn**	**00 46 14.3**	**+1.1**
SIJI	**Sorong**	**3.20**	**296**	Pn	**Pn**	**00 46 26.0**	**-0.2**
	22nm,0.3s,baz=191,slow=23,SNR=64						
SIJI				Sn	Sn	00 47 03.7	+0.3
	3.0nm,0.3s,baz=91,slow=17,SNR=4.9						
	50nm,0.3s						
SIJI	**Sorong**	**3.20**	**296**	P	**Pn**	**00 46 26.5**	**+0.4**
SWI	**Sorong**	**3.21**	**296**	P	**Pn**	**00 46 26.7**	**+0.5**
JAY	**Jayapura**	**6.57**	**92**	LR	LR	00 50 28.5	
	comp=Z,295nm,20.3s,baz=258,slow=45						
MTN	**Manton Dam**	**10.89**	**196**		**Pn**	**00 48 11.8**	**-0.1**
LUWI	**Luwuk**	**11.43**	**276**	Pn	**Pn**	**00 48 17.0**	**-2.2**
KNRA	**Kununurra**	**14.31**	**201**	Pn	**Pn**	**00 48 56.1**	**-2.5**
KAPI	**Kappang**	**14.60**	**259**	LR	LR	00 54 35.6	
	comp=Z,90nm,21.6s,baz=78,slow=37						
COEN	**Coen**	**14.63**	**146**	Pn	**Pn**	**00 49 01.2**	**-1.8**
WB0	**Warramunga Arr**	**17.36**	**179**	Pn	**Pn**	**00 49 37.5**	**-0.7**
WRA	**Warramunga Arr**	**17.54**	**179**	P	**P**	**00 49 41.5**	**+0.2**
	1.3nm,0.3s,baz=359,slow=12,SNR=56						
	3.8nm,0.5s						
WRA	**Warramunga Arr**	**17.54**	**179**		**Pn**	**00 49 40.4**	**0.0**
FITZ	**Fitzroy Crossi**	**17.78**	**207**	P	**Pn**	**00 49 42.4**	**-0.9**
	0.8nm,0.3s,baz=41,slow=13,SNR=12						
	2.6nm,0.4s						
AS31	**Alice Springs**	**21.24**	**181**		**P**	**00 50 23.1**	**+1.3**
AS31				IAmb	IAmb	00 50 25.3	
	comp=Z,7.8nm,1.1s						
ASAR	**Alice Springs**	**21.25**	**181**	P	**P**	**00 50 23.1**	**+1.3**
	comp=Z,13nm,0.8s,baz=4.3,slow=11,SNR=73						
ASAR				LR	LR	01 00 06.1	
	comp=Z,21nm,21.1s,baz=308,slow=41						
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**21.25**	**181**		**P**	**00 50 22.6**	**+0.9**
CTA	**Charters Tower**	**21.28**	**147**	LR	LR	00 59 21.8	
	comp=Z,84nm,18.3s,baz=18,slow=39						
PSA00	**Pilbara Seismi**	**23.68**	**215**	P	**P**	**00 50 46.2**	**-1.0**
PSA00				IAmb	IAmb	00 50 54.6	
	comp=Z,13nm,1.3s						
HNR	**Honiara**	**26.62**	**107**	LR	LR	01 01 03.3	
	comp=Z,4.8nm,18.4s,baz=58,slow=35						
STKA	**Stephens Creek**	**30.25**	**167**	LR	LR	01 04 48.9	
	comp=Z,72nm,18.7s,baz=215,slow=38						
CMAR	**Chiang Mai Arr**	**40.31**	**302**	P	**P**	**00 53 13.1**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=113,slow=6.4,SNR=6.6						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.31**	**302**	P	**P**	**00 53 11.8**	**-1.2**
PZH	**PanZhiHua**	**42.40**	**315**	P	**P**	**00 53 32.5**	**+2.2**

HHC	**Hu-ho-hao-te**	**47.62**	**337**	*e*P		**P**	**00 54 13.9**	**+2.4**		
HHC				pmax	pmax					
	comp=Z,6.0nm,0.5s									
HHC				pmax	pmax					
	comp=Z,160nm,5.4s									
SONM	**Songino Array**	**55.50**	**338**	P		**P**	**00 55 10.8**	**+0.5**		
	comp=Z,0.5nm,0.7s,baz=168,slow=8.1,SNR=2.8									
	comp=Z,0.5nm,0.7s									
WMQ	**Urumqi**	**61.90**	**324**	*e*P		**P**	**00 55 57.1**	**+2.2**		
WMQ				pP	sP		00 56 07.2	+0.5		
WMQ				pmax	pmax					
	comp=Z,11nm,0.7s									
MKAR	**Makanchi Array**	**66.72**	**324**	P		**P**	**00 56 27.2**	**+0.8**		
	comp=Z,1.3nm,0.4s,baz=108,slow=8.5,SNR=29									
	comp=Z,1.3nm,0.4s									
MKAR	**Makanchi Array**	**66.72**	**324**	P		**P**	**00 56 26.8**	**+0.4**		
MAKZ	**Makanchi**	**66.91**	**324**	P		**P**	**00 56 27.5**	**-0.1**		
KSH2	**Kashi**	**67.66**	**314**	P		**P**	**00 56 33.6**	**+0.9**		
KSH2				pmax	pmax					
	comp=Z,2.0nm,0.8s									
KDJ	**Kajisay**	**67.75**	**318**	P		**P**	**00 56 33.5**	**+0.3**		
KURK	**Kurchatov**	**70.80**	**326**	P		**P**	**00 56 51.3**	**-0.3**		
KURK				IAmb	IAmb		00 56 53.7			
	comp=Z,2.3nm,0.7s									
KURBB	**Kurchatov Arra**	**70.80**	**326**	P		**P**	**00 56 52.1**	**+0.5**		
	comp=Z,2.0nm,0.8s,baz=122,slow=5.6,SNR=21									
	comp=Z,2.0nm,0.8s									
KK31	**Karatay Array**	**72.66**	**317**	P		**P**	**00 57 02.9**	**-0.2**		
KK31				IAmb	IAmb		00 57 09.5			
	comp=Z,2.0nm,1.1s									
KKAR	**Karatay Array**	**72.66**	**317**	P		**P**	**00 57 03.6**	**+0.5**		
BVAR	**Borovoye Array**	**76.39**	**326**	P		**P**	**00 57 25.2**	**+0.6**		
	comp=Z,1.1nm,0.8s,baz=103,slow=6.4,SNR=6.6									
	comp=Z,1.1nm,0.8s									
ABKAR	**Akbulak array**	**81.47**	**320**	P		**P**	**00 57 52.1**	**-0.3**		
ILAR	**Eielson Array**	**87.37**	**25**	P		**P**	**00 58 21.2**	**-0.8**		
	comp=Z,0.3nm,0.8s,baz=225,slow=5.0,SNR=1.9									
	comp=Z,0.3nm,0.8s									
BMAR	**Burnt Mountain**	**88.76**	**22**	P		**P**	**00 58 28.8**	**+0.2**		

*NEIC **09** 00:56:08.8±0.9,17°.80N±0°.01×66°.83W±0°.01,h10km±2km, ML3.6/31,Md2.5/7(RSPR),Error ellipse: s-maj=3.2km s-min=2.5km az=15.0*
*OSPL **09** 00:56:09.3±0.4,17°.77N×66°.87W,h2km±999km,ML3.1, Presumed earthquake*
*RSPR **09** 00:56:10.4,17°.90N×66°.86W,h8km±1km,MD2.5/7*
*SDD **09** 00:56:10.7±0.8,17°.94N×66°.85W,h18km±14km,MD3.4, ML3.3,MW3.5,Presumed earthquake*
ISC 09 00:56:09.4±1.1,**17°.87N**±0°.05×**66°.85W**±0°.02,**h16**km±6km, **n40,** σ0°.**46**/69,**5C-8D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.11**	**345**		**Pg**	**00 56 12.9**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.11**	**345**	⇓*i*P	**Pg**	**00 56 12.9**	**-0.1**
MLPR	**Magueyes Islan**	**0.21**	**298**		**Pg**	**00 56 14.2**	**-0.1**
MLPR				Sg	**Sg**	**00 56 17.6**	**-0.1**
MLPR				IAML		00 56 17.9	
	19µm,0.6s						
MLPR				IAML		00 56 17.9	
	15µm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.28**	**299**		**Pg**	**00 56 15.4**	**-0.1**
CRPR				Sg	**Sg**	**00 56 19.6**	**-0.1**
CRPR				IAML		00 56 19.9	
	12µm,0.5s						
CRPR				IAML		00 56 20.0	
	11µm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.28**	**299**	⇑*e*Pg	**Pg**	**00 56 15.4**	**-0.1**
CRPR				⇑*e*Sg	**Sg**	**00 56 19.6**	**-0.1**
CRPR				IAML		00 56 19.8	
	comp=N,8µm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.28**	**299**	*e*S	**Sg**	**00 56 19.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.28**	**299**	*i* P	**Pg**	**00 56 15.3**	**-0.2**
CRPR				*e*S	**Sg**	**00 56 19.6**	**-0.1**
CRPR				IAML		00 56 20.0	
	comp=Z,6µm,0.2s						
OBIP	**Obispado Ponce**	**0.29**	**53**		**Pg**	**00 56 15.8**	**+0.1**
OBIP				Sg	**Sb**	**00 56 20.9**	**0.0**
OBIP	**Obispado Ponce**	**0.29**	**53**	⇓*i*P	**Pg**	**00 56 15.8**	**+0.1**
OBIP				*e*S	**Sb**	**00 56 21.0**	**+0.1**
OBIP	**Obispado Ponce**	**0.29**	**53**	*i* P	**Pg**	**00 56 15.8**	**+0.1**
OBIP				*e*S	**Sb**	**00 56 20.9**	**0.0**
OBIP				IAML		00 56 22.1	
	comp=Z,2µm,0.4s						
CELP	**Cerrillos**	**0.33**	**51**		**Pg**	**00 56 16.6**	**+0.2**
CELP				Sg	**Sb**	**00 56 22.4**	**+0.3**
CELP				IAML		00 56 22.7	
	comp=Z,12µm,0.5s						
CELP				IAML		00 56 23.4	
	comp=Z,4µm,0.2s						
LSP	**Las Mesas**	**0.38**	**324**		**Pg**	**00 56 17.2**	**0.0**
LSP					**Sb**	**00 56 23.8**	**+0.3**
LSP	**Las Mesas**	**0.38**	**324**	⇓*i*P	**Pg**	**00 56 17.2**	**0.0**
LSP				*e*S	**Sb**	**00 56 23.8**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.40**	**18**		**Pg**	**00 56 17.6**	**0.0**
UUPR				Sg	**Sg**	**00 56 23.4**	**+0.2**
PRSN	**Puerto Rico Se**	**0.45**	**321**		**Pg**	**00 56 18.2**	**-0.2**
PRSN				IAML		00 56 27.4	
	comp=Z,7µm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**321**		**Sb**	**00 56 25.2**	**-0.2**
PRSN	**Puerto Rico Se**	**0.45**	**321**	⇑*e*Pg	**Pg**	**00 56 18.3**	**-0.2**
PRSN				⇓*e*Sg	**Sb**	**00 56 25.5**	**+0.1**
PRSN				IAML		00 56 29.4	
	comp=N,8µm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**321**	⇑*i*P	**Pg**	**00 56 18.2**	**-0.2**
PRSN				*e*S	**Sb**	**00 56 25.2**	**-0.2**
ECPR	**Experimental S**	**0.64**	**46**		**Pg**	**00 56 21.8**	**-0.4**
ECPR				Sg	**Sg**	**00 56 30.7**	**0.0**
ECPR				IAML		00 56 33.2	
	comp=N,7µm,0.2s						
ECPR	**Experimental S**	**0.64**	**46**	⇑*i*P	**Pg**	**00 56 21.9**	**-0.2**
ECPR				*e*S	**Sb**	**00 56 30.9**	**-0.2**
AGPR	**Aguadilla, PR**	**0.65**	**337**		**Pg**	**00 56 21.7**	**-0.4**
AGPR				Sg	**Sg**	**00 56 30.8**	**0.0**
AGPR				IAML		00 56 34.6	
	comp=N,1µm,0.5s						
AGPR	**Aguadilla, PR**	**0.65**	**337**	⇑*e*Pg	**Pg**	**00 56 21.8**	**-0.4**
AGPR				⇓*e*Sg	**Sg**	**00 56 28.8**	**-1.9**
AGPR				IAML		00 56 31.8	
	comp=N,1µm,0.3s						
AGPR	**Aguadilla, PR**	**0.65**	**337**	⇑*i*P	**Pg**	**00 56 21.7**	**-0.4**
AGPR				*e*S	**Sg**	**00 56 30.8**	**0.0**
EMPR	**Esperanza - Ma**	**0.68**	**27**		**Pb**	**00 56 23.1**	**+0.2**
EMPR					**Sb**	**00 56 32.4**	**+0.3**
EMPR	**Esperanza - Ma**	**0.68**	**27**	⇑*i*P	**Pb**	**00 56 23.1**	**+0.2**
EMPR				*e*S	**Sb**	**00 56 32.4**	**+0.3**
SJG	**San Juan**	**0.71**	**70**	Pg	**Pg**	**00 56 22.9**	**-0.4**
SJG				Sg	**Sg**	**00 56 32.0**	**-0.7**
SJG	**San Juan**	**0.71**	**70**	⇓*e*Pg	**Pg**	**00 56 22.9**	**-0.4**
SJG				⇑*e*Sg	**Sg**	**00 56 32.4**	**-0.4**
SJG	**San Juan**	**0.71**	**70**	⇓*i*P	**Pg**	**00 56 22.9**	**-0.4**
SJG				*e*S	**Sb**	**00 56 33.1**	**+0.1**
SJG	**San Juan**	**0.71**	**70**	*i* P	**Pg**	**00 56 23.0**	**-0.4**
SJG				*e*S	**Sb**	**00 56 33.3**	**+0.3**
SJG				IAML		00 56 35.6	
	comp=Z,504nm,0.2s						
IDE	**Isla Desecheo**	**0.79**	**311**		**Pb**	**00 56 24.0**	**-0.7**
IDE					**Sb**	**00 56 34.7**	**-0.5**
IDE	**Isla Desecheo**	**0.79**	**311**	⇑*i*P	**Pb**	**00 56 24.0**	**-0.7**
IDE				*e*S	**Sb**	**00 56 34.7**	**-0.5**
PDPR	**Patillas Dam,**	**0.80**	**79**		**Pb**	**00 56 24.5**	**-0.5**
PDPR				IAML		00 56 39.6	
	comp=Z,1µm,0.6s						
GCPR	**Guaynabo City**	**0.85**	**59**		**Pb**	**00 56 25.2**	**-0.7**
GCPR				Sg	**Sb**	**00 56 36.6**	**-0.4**
GCPR	**Guaynabo City**	**0.85**	**59**	⇓*e*P	**Pb**	**00 56 25.4**	**-0.5**
GCPR				*e*S	**Sb**	**00 56 36.7**	**-0.4**
HUMP	**Col San Antoni**	**0.99**	**74**		**Pb**	**00 56 27.5**	**-0.7**
HUMP				IAML		00 56 44.7	
	comp=Z,943nm,0.7s						
HUMP				IAML		00 56 47.3	
	comp=Z,751nm,0.2s						
HUMP	**Col San Antoni**	**0.99**	**74**		**Sg**	**00 56 41.8**	**+0.2**
HUMP	**Col San Antoni**	**0.99**	**74**	⇑*i*P	**Pb**	**00 56 27.7**	**-0.5**
HUMP				*e*S	**Sg**	**00 56 41.8**	**+0.2**
CUPR	**Culebra, Puert**	**1.55**	**73**		**Pn**	**00 56 36.8**	**+0.3**
DR12	**Loma Pena Alta**	**2.57**	**291**		**Pn**	**00 56 51.9**	**+1.3**
SDDR	**Presa de Saban**	**4.36**	**285**	Pn	**Pn**	**00 57 16.3**	**+1.2**

*MOS **09** 00:57:27.2±1.0,48°.64N×155°.98E,h26km,mb3.8/1,Error ellipse: s-maj=42.2km s-min=7.9km az=76.2*
*SKHL **09** 00:57:28.5±0.8,48°.80N×155°.70E,h50km±9km,mb4.2/2*
*KRSC **09** 00:57:32.9±1.1,49°.19N×156°.06E,h31km±13km,Ml4.1*
*IDC **09** 00:57:34.3±11.0,49°.11N×155°.27E,h80km±138km, mb3.1/5,mbtmp3.4/7,ML3.0/2,Error ellipse: s-maj=310.7km s-min=19.7km az=131.0*
ISC 09 00:57:30.1±0.8,**48°.9N**±0°.1×**155°.7E**±0°.1,**h35**km,**n32,** σ2°.**31**/39,**mb3.5/5,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.84**	**9**	*e*P	**Pn**	**00 57 56.6**	**-2.5**
SKR				AMB	AMB	00 58 02.5	
	150nm,0.5s						
SKR				*e*S	**Sn**	**00 58 17.9**	**-3.3**
SKR				A	A	00 58 19.0	
	270nm,0.3s						
SKR				A	A	00 58 19.0	
	230nm,0.3s						
PAU	**Pauzhetka**	**2.70**	**15**	*e*P	**Pn**	**00 58 09.3**	**-1.7**
PAU				AMB	AMB	00 58 10.1	
	20nm,0.2s						
PAU				*e*S	**Sn**	**00 58 40.3**	**-2.2**
PAU	**Pauzhetka**	**2.70**	**15**	*e*S	**Sn**	**00 58 39.2**	**-3.3**
KDTR	**Khodutka, Kamc**	**3.33**	**27**	*e*S	**Sn**	**00 58 54.6**	**-3.2**
ASAK	**Asacha**	**3.80**	**21**	PN	**Pn**	**00 58 27.5**	**+1.4**
ASAK	**Asacha**	**3.80**	**21**	*e*P	**Pn**	**00 58 27.5**	**+1.4**
MTVR	**Mutnovka**	**3.96**	**23**	PN	**Pn**	**00 58 29.9**	**+1.5**
MTVR	**Mutnovka**	**3.96**	**23**	*e*P	**Pn**	**00 58 29.9**	**+1.5**
MTVR				*e*S	**Sn**	**00 59 11.5**	**-2.1**
GRL	**Gorelyy**	**3.99**	**22**	PN	**Pn**	**00 58 31.0**	**+2.1**
GRL	**Gorelyy**	**3.99**	**22**	*e*P	**Pn**	**00 58 30.9**	**+2.0**
GRL				*e*S	**Sn**	**00 59 14.0**	**-0.5**
PEA0B	**Petropavlovsk-**	**4.44**	**16**	PN	**Pn**	**00 58 36.8**	**+2.0**
PETK	**Petropavlovsk-**	**4.44**	**16**	P	**Pn**	**00 58 36.6**	**+1.8**
	0.8nm,0.3s,baz=175,slow=12,SNR=20						
PETK				S	**Sn**	**00 59 30.9**	**+5.7**
	1.4nm,0.4s,baz=116,slow=17,SNR=1.1						
	5.0nm,0.8s						
PET	**Petropavlovsk**	**4.57**	**23**	*e*P	**Pn**	**00 58 36.6**	**0.0**
PET				*e*S	**Sn**	**00 59 27.0**	**-1.5**
PET				A	A	00 59 39.4	
	50nm,0.5s						
PET				A	A	00 59 39.4	
	30nm,0.5s						
PET	**Petropavlovsk**	**4.57**	**23**	*e*S	**Sn**	**00 59 26.9**	**-1.5**
DALK	**Dalny**	**4.60**	**24**	PN	**Pn**	**00 58 39.5**	**+2.4**
DALK	**Dalny**	**4.60**	**24**	*e*P	**Pn**	**00 58 39.5**	**+2.4**
KOK	**Koryaka**	**4.81**	**22**	PN	**Pn**	**00 58 43.5**	**+3.5**
KOK	**Koryaka**	**4.81**	**22**	*e*P	**Pn**	**00 58 43.5**	**+3.5**
KOK	**Koryaka**	**4.81**	**22**	*e*P	**Pn**	**00 58 42.8**	**+2.8**
AVH	**Avacha**	**4.81**	**23**	PN	**Pn**	**00 58 42.7**	**+2.7**
AVH	**Avacha**	**4.81**	**23**	*e*P	**Pn**	**00 58 42.7**	**+2.7**
GNL	**Ganaly**	**5.04**	**16**	PN	**Pn**	**00 58 43.8**	**+0.6**
KUR	**Kuril'sk**	**6.45**	**239**	*e*P	**Pn**	**00 59 02.0**	**-0.4**
NMR	**Nemuro--Hokkai**	**8.82**	**235**	*e*P	**Pn**	**00 59 35.0**	**+0.1**
NMR				*e*S	**Sn**	**01 01 10.8**	**-2.2**
AKK	**Akkeshi**	**9.54**	**236**	*e*P	**Pn**	**00 59 44.3**	**-0.5**
JKA	**Kamikawa-asahi**	**10.18**	**247**	*e*P	**Pn**	**00 59 56.4**	**+2.8**
ASAJ	**Asahikawa**	**10.18**	**247**	P	**Pn**	**00 59 56.4**	**+2.7**
	0.4nm,0.3s,baz=82,slow=15,SNR=4.3						
	3.0nm,0.6s						
ILAR	**Eielson Array**	**33.82**	**40**	P	**P**	**01 04 07.6**	**-0.9**
	0.2nm,0.8s,baz=272,slow=10,SNR=2.2						
	0.2nm,0.8s						
PDAR	**Pinedale Array**	**62.12**	**56**	P	**P**	**01 07 47.7**	**+0.1**
	0.3nm,0.7s,baz=328,slow=7.7,SNR=2.4						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**71.09**	**201**	P	**P**	**01 08 43.7**	**-0.9**
	0.2nm,0.4s,baz=7.8,slow=6.2,SNR=2.0						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**74.78**	**201**	P	**P**	**01 09 06.7**	**+0.3**
	0.2n

comp=Z,8.6nm,0.3s
H03N1 Juan Fernandez 10.16 218 T T 01 21 25.3
baz=46,slow=74,SNR=61
H03N2 Juan Fernandez 10.17 218 T T 01 21 20.1
baz=46,SNR=59
H03N3 Juan Fernandez 10.18 218 T T 01 21 21.6
baz=46,slow=74,SNR=22
SIV San Ignacio 13.62 48 Pn **Pn 01 11 18.0 -1.0**
baz=238,slow=10.0,SNR=7.5
comp=Z,1.2nm,0.4s
PLCA Paso Flores 15.15 177 Pn **P 01 11 48.0 +3.0**
comp=Z,0.3nm,0.3s,baz=352,slow=12,SNR=5.3
comp=Z,3.0nm,0.7s
BDFB Brasilia 24.05 70 P **P 01 13 23.5 +2.1**
comp=Z,2.2nm,0.8s,baz=229,slow=11,SNR=2.3
comp=Z,2.2nm,0.8s
TXAR Lajitas Array 62.72 328 P P 01 18 34.9 +3.7
comp=Z,0.2nm,0.6s,baz=154,slow=5.3,SNR=2.6
comp=Z,0.2nm,0.6s
MKAR Makanchi Array 150.29 38 PKPbc **PKPab 01 28 00.2 -3.2**
comp=Z,0.5nm,0.8s,baz=307,slow=3.5,SNR=3.9

*VIE **09** 01:15:24.8±0.4, 44°.24N×16°.14E, h10km, mb2.3/10, ml2.2/14, Error ellipse: s-maj=4.0km s-min=3.5km az=56.0*
84 km NNW of Split
*PDG **09** 01:15:24.4±0.3, 44°.25N×16°.05E, h12km±2km, ML2.8/10, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0*
*BEO **09** 01:15:24.7±0.4, 44°.13N×15°.97E, h0km, ML2.2/3*
ISC 09 01:15:23.6±1.1, **44°.21N**±0°.02×**16°.06E**±0°.02, **h3**km±9km,
n48, σ1§**14**/**87**, **1C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KIJV	**Kijevo**	**0.32**	**129**	*i*	Pg	**Pg**	**01 15 30.5**	**+0.7**
KIJV					Sg	**Sg**	**01 15 36.0**	**+2.0**
UDBI	**Udbina**	**0.38**	**327**	*e*	Pg	**Pg**	**01 15 31.5**	**+0.4**
UDBI					Sg	**Sg**	**01 15 37.0**	**+0.9**
MORI	**Morici**	**0.42**	**217**	*i*	Pg	**Pg**	**01 15 31.6**	**-0.2**
MORI					Sg	**Sg**	**01 15 38.3**	**+1.1**
ZIRJ	**Zirje**	**0.63**	**209**	*i*	Pg	**Pg**	**01 15 35.2**	**-0.5**
ZIRJ					Sg	**Sg**	**01 15 45.2**	**+1.4**
VIRC	**Vir**	**0.73**	**277**	*e*	Pg	**Pg**	**01 15 36.3**	**-1.2**
VIRC					Sg	**Sg**	**01 15 47.5**	**+0.6**
PLIT	**Plitvice**	**0.74**	**335**	*e*	Pg	**Pg**	**01 15 37.5**	**-0.4**
PLIT					Sg	**Sg**	**01 15 47.9**	**+0.4**
DUGI	**Dugi Otok**	**0.75**	**254**	*e*	Pg	**Pg**	**01 15 37.5**	**-0.6**
DUGI					Sg	**Sg**	**01 15 48.7**	**+0.9**
NVLJ	**Novalja**	**0.92**	**293**	*e*	Pg	**Pg**	**01 15 40.4**	**-0.9**
NVLJ					Sg	**Sg**	**01 15 54.4**	**+1.1**
BLY	**Banja Luka**	**0.97**	**56**	*e*	Pg	**Pb**	**01 15 42.6**	**-0.5**
BLY					eSg	**Sn**	**01 15 58.2**	**-0.2**
RICI	**Ricice**	**1.05**	**132**	*i*	Pg	**Pg**	**01 15 43.8**	**0.0**
RICI					Sg	**Sn**	**01 16 00.4**	**-0.1**
RABC	**Rab**	**1.06**	**301**	*e*	Pg	**Pb**	**01 15 43.5**	**-1.2**
RABC					Sg	**Sg**	**01 15 58.6**	**+0.9**
HVAR	**Hvar**	**1.07**	**164**	*e*	Pg	**Pg**	**01 15 43.3**	**-0.8**
HVAR					Sg	**Sg**	**01 15 59.1**	**+1.3**
OZLJ	**Ozalj**	**1.47**	**344**	*i*	Pg	**Pn**	**01 15 50.9**	**-0.1**
OZLJ					Sg	**Sn**	**01 16 10.4**	**-0.3**
MOSL	**Moslavina**	**1.49**	**19**	*e*	Pn	**Pn**	**01 15 50.8**	**-0.6**
MOSL					Sg	**Sg**	**01 16 11.3**	**-0.2**
LSTV	**Lastovo**	**1.56**	**157**	*i*	Pn	**Pn**	**01 15 52.4**	**+0.2**
LSTV					Sn	**Sn**	**01 16 13.1**	**+0.2**
RIY	**Rijeka**	**1.58**	**315**	*i*	Pg	**Pn**	**01 15 53.1**	**+0.6**
RIY					Sg	**Sn**	**01 16 14.3**	**+0.8**
RIY	**Rijeka**	**1.58**	**315**	*e*	Pg	**Pn**	**01 15 53.0**	**+0.4**
RIY					eSg	**Sb**	**01 16 15.5**	**+1.6**
STON	**Ston**	**1.79**	**138**	*e*	Pn	**Pn**	**01 15 56.2**	**+0.8**
STON					Sn	**Sg**	**01 16 20.8**	**-0.3**
STON	**Ston**	**1.79**	**138**	*e*	Pg	**Pn**	**01 15 56.3**	**+0.9**
STON					eSg	**Sg**	**01 16 20.9**	**-0.3**
KALN	**Kalnik**	**1.94**	**8**	*e*	Pn	**Pn**	**01 15 57.7**	**+0.2**
KALN					Sn	**Sb**	**01 16 24.3**	**-0.1**
LOBO	**Lobor**	**1.95**	**0**	*e*	Pn	**Pn**	**01 15 57.0**	**-0.6**
LOBO					Sn	**Sb**	**01 16 24.7**	**+0.3**
BRY	**Bratogost**	**2.23**	**125**	⇓*i*	Pn	**Pn**	**01 16 02.9**	**+1.4**
BRY				*i*	Sn	**Sb**	**01 16 32.9**	**+0.4**
UPM	**Unac-Piva**	**2.29**	**115**	⇓*i*	Pn	**Pn**	**01 16 03.5**	**+1.0**
UPM				*i*	Sn	**Sb**	**01 16 33.9**	**-0.7**
BBLS	**Lazi&#263i**	**2.44**	**97**	*e*	Pn	**Pb**	**01 16 06.5**	**-1.6**
HCY	**Herceg Novi**	**2.50**	**134**	*e*	Pn	**Pn**	**01 16 03.9**	**-1.3**
HCY				*i*	Sn	**Sb**	**01 16 39.5**	**-0.8**
OBKA	**Obir**	**2.54**	**336**	*e*	Pn	**Pn**	**01 16 05.7**	**-0.1**
	3.0nm,0.4s,SNR=8.8							
OBKA					Sn	**Sn**	**01 16 38.9**	**+1.7**
	2.4nm,0.3s							
NKME	**Niksic**	**2.55**	**123**	⇑*i*	Pn	**Pn**	**01 16 07.6**	**+1.7**
NKME					eSn	**Sb**	**01 16 40.3**	**-1.5**
CEME	**Cevo**	**2.66**	**128**	*e*	Pn	**Pn**	**01 16 08.7**	**+1.2**
CEME					eSn	**Sb**	**01 16 43.5**	**-1.6**
BUM	**Brajici-Budva**	**2.81**	**132**	*e*	Pn	**Pn**	**01 16 10.5**	**+1.0**
BUM				*i*	Sn	**Sb**	**01 16 46.8**	**-2.6**
FRGS	**Fruska Gora**	**2.84**	**69**	*e*	Pn	**Pb**	**01 16 14.2**	**-0.8**
FRGS					eSn	**Sb**	**01 16 50.1**	**0.0**
KOME	**Kolasin**	**2.86**	**117**	*e*	Pn	**Pb**	**01 16 12.8**	**-2.5**
KOME					eSn	**Sb**	**01 16 47.5**	**-3.1**
PDG	**Podgorica**	**2.93**	**126**	*e*	Pn	**Pn**	**01 16 12.0**	**+0.9**
PDG					eSn	**Sn**	**01 16 48.8**	**+2.1**
MYKA	**Terra Mystica**	**2.96**	**326**		Pn	**Pn**	**01 16 12.2**	**+0.6**
	0.4nm,0.2s							
IVA	**Berane**	**3.09**	**114**	*e*	Pn	**Pn**	**01 16 14.8**	**+1.4**
IVA				*i*	Sn	**Sn**	**01 16 53.0**	**+2.2**
PVY	**Plav**	**3.27**	**118**	⇓*i*	Pn	**Pn**	**01 16 17.8**	**+2.0**
PVY				*i*	Sn	**Sn**	**01 16 57.5**	**+2.3**
KBA	**Koelnbreinsper**	**3.44**	**327**	*e*	Pn	**Pn**	**01 16 19.0**	**+0.6**
	0.5nm,0.4s							
RONA	**Rosalia, Austr**	**3.50**	**3**	*e*	Pn	**Pn**	**01 16 18.5**	**-0.4**
	0.4nm,0.2s							
GOCS	**Kraljevo Serbi**	**3.54**	**99**	*e*	Pn	**Pn**	**01 16 20.5**	**+1.0**
ABTA	**Abfaltersbach**	**3.56**	**317**	*e*	Pn	**Pn**	**01 16 20.8**	**+0.9**
	0.2nm,0.2s							
ABTA					eSn	**Sn**	**01 17 03.2**	**+0.8**
	2.4nm,0.6s							
CONA	**Conrad Observa**	**3.73**	**358**	*i*	Pn	**Pn**	**01 16 22.6**	**+0.5**
	0.5nm,0.2s							
CONA					eSn	**Sn**	**01 17 08.0**	**+1.5**
	1.3nm,0.5s							
SELS	**Selova**	**3.80**	**103**	*e*	Pn	**Pn**	**01 16 24.8**	**+1.8**
MOA	**Molln**	**3.85**	**342**	*e*	Pn	**Pn**	**01 16 23.9**	**+0.1**
	0.9nm,0.3s,SNR=5.7							
MOA					eSn	**Sn**	**01 17 08.7**	**-0.8**
	0.7nm,0.3s							
LESA	**Schwarzleotal**	**3.99**	**325**	*e*	Pn	**Pn**	**01 16 25.5**	**-0.2**
	0.5nm,0.4s							
LESA					eSn	**Sn**	**01 17 13.0**	**0.0**
	1.3nm,0.4s							
WTTA	**Wattenberg**	**4.35**	**316**	*e*	Pn	**Pn**	**01 16 31.0**	**+0.3**
	0.3nm,0.2s							
WTTA					eSn	**Sn**	**01 17 22.3**	**+0.3**
	2.3nm,0.8s							
WATA	**Walderalm**	**4.43**	**317**	*e*	Pn	**Pn**	**01 16 32.1**	**+0.3**
	0.9nm,0.3s							
WATA					eSn	**Sn**	**01 17 23.9**	**0.0**
	1.2nm,0.4s							
SQTA	**Sankt Quirin**	**4.54**	**313**	*i*	Pn	**Pn**	**01 16 34.5**	**+1.2**
	0.3nm,0.2s							
MOTA	**Moosalm**	**4.67**	**314**	*e*	Sn	**Sn**	**01 17 31.9**	**+1.9**
	2.2nm,0.7s							
RETA	**Reutte**	**4.95**	**313**	*e*	Sn	**Sn**	**01 17 38.0**	**+1.4**
	0.8nm,0.4s							

*IDC **09** 01:24:54.2±1.9, 6°.60S×130°.29E, h89km±18km, mb4.0/13, mbtmp4.5/20, MS2.3/1, Error ellipse: s-maj=21.3km*
s-min=12.9km az=65.0
*NEIC **09** 01:24:56.9±2.3, 6°.49S±0°.07×130°.4E±0°.1, h103km±7km, mb4.5/25, Error ellipse: s-maj=15.1km s-min=9.3km*
az=70.0
*DJA **09** 01:24:56.9±0.4, 7°.5S±3°×13°.1E±°, h155km±11km, M4.9/14, mB5.4/7, mb4.8/8, MLv5.0/14, Mw(mB)4.8/7*
ISC 09 01:24:59.3±0.4, **6°.79S**±0°.05×**130°.43E**±0°.05, **h150**km, **n100**,
σ2§**27**/89, **mb4.3**/27, **2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.47**	**144**			**Pn**	**01 25 27.6**	**-1.0**
SAUI					Sn	**Sn**	**01 25 46.8**	**-4.2**
SAUI	**Saumlaki**	**1.47**	**144**	P		**Pn**	**01 25 27.8**	**-0.8**
SAUI	**Saumlaki**	**1.47**	**144**	P		**Sn**	**01 25 48.6**	**-2.4**
SAUI	**Saumlaki**	**1.47**	**144**	P		**Pn**	**01 25 27.5**	**-1.0**
BNDI	**Bandanaira**	**2.31**	**347**	P		Pn	01 25 33.1	-5.0
BNDI	**Bandanaira**	**2.31**	**347**	P		Pn	01 25 32.9	-5.2
MSAI	**Masohi**	**3.73**	**336**	P		**Pn**	**01 25 52.2**	**-3.9**
AAI	**Ambon**	**3.80**	**324**	P		**Pn**	**01 25 53.2**	**-3.8**
KRAI	**Karang Ratu**	**4.00**	**329**	P		**Pn**	**01 25 56.2**	**-3.3**
FAKI	**Fak Fak**	**4.25**	**25**			Pn	01 25 56.4	-6.4
FAKI	**Fak Fak**	**4.25**	**25**	P		Pn	01 25 56.8	-6.1
FAKI	**Fak Fak**	**4.25**	**25**	P		Pn	01 25 56.7	-6.1
NLAI	**Namlea**	**4.84**	**317**	P		**Pn**	**01 26 13.2**	**+2.6**
DRS	**Darwin Rock St**	**5.63**	**175**	P		**Pn**	**01 26 20.6**	**-0.5**
SIJI	**Sorong**	**5.94**	**8**	P		Pn	01 26 18.6	-6.7
	50nm,0.3s,baz=237,slow=23,SNR=84							
SIJI					S	Sn	01 27 18.5	-14
	119nm,0.2s,baz=0.8,slow=23,SNR=16							
SIJI	**Sorong**	**5.94**	**8**	P		Pn	01 26 18.6	-6.6
	1.9nm83nm,0.4s							
SWI	**Sorong**	**5.94**	**8**	P		Pn	01 26 18.7	-6.6
	1.5nm5µm129nm,0.7s							
MTN	**Manton Dam**	**6.06**	**173**			**Pn**	**01 26 26.6**	**-0.3**
RKPI	**Ransiki, Papua**	**6.44**	**36**	P		**Pn**	**01 26 27.9**	**-4.0**
	4µm150nm,0.7s							
SANI	**Sanana**	**6.46**	**317**	P		**Pn**	**01 26 31.1**	**-1.1**
SANI	**Sanana**	**6.46**	**317**	S		**Sn**	**01 27 40.5**	**-4.4**
SANI	**Sanana**	**6.46**	**317**	P		**Pn**	**01 26 34.0**	**+1.8**
SOEI	**Soe**	**6.77**	**244**			**Pn**	**01 26 34.6**	**-1.8**
SOEI	**Soe**	**6.77**	**244**	P		**Pn**	**01 26 35.8**	**-0.7**
SOEI	**Soe**	**6.77**	**244**	P		**Pn**	**01 26 36.3**	**-0.2**
BATI	**Baumata**	**7.50**	**243**	P		**Pn**	**01 26 41.9**	**-4.3**
	55nm,0.4s,baz=74,slow=5.3,SNR=15							
BATI					S	**Sn**	**01 28 05.0**	**-5.1**
	155nm,0.4s,baz=104,slow=23,SNR=8.0							
KNRA	**Kununurra**	**8.99**	**190**			**Pn**	**01 27 04.5**	**-1.4**
JAY	**Jayapura**	**11.09**	**68**	P		**Pn**	**01 27 30.9**	**-2.8**
	9.2nm,0.5s,baz=242,slow=12,SNR=5.3							
FITZ	**Fitzroy Crossi**	**12.18**	**202**	P		**Pn**	**01 27 45.5**	**-2.4**
	27nm,0.3s,baz=34,slow=11,SNR=130							
FITZ					S	Sn	01 29 52.5	-10
	58nm,0.5s,baz=75,slow=20,SNR=14							
WRA	**Warramunga Arr**	**13.62**	**164**	P		**Pn**	**01 28 04.5**	**-1.9**
	27nm,0.6s,baz=347,slow=13,SNR=89							
WRA					S	Sn	01 30 28.4	-8.9
	22nm,0.5s,baz=346,slow=22,SNR=12							
WRA	**Warramunga Arr**	**13.62**	**164**			**Pn**	**01 28 02.8**	**-3.7**
WR8	**Warramunga Arr**	**13.68**	**164**			**Pn**	**01 28 04.2**	**-3.0**
COEN	**Coen**	**14.42**	**121**			**Pn**	**01 28 17.3**	**+0.8**
COEN	**Coen**	**14.42**	**121**	P		**P**	**01 28 17.9**	**-1.2**
QIS	**Mount Isa**	**16.33**	**148**	P		**P**	**01 28 41.3**	**+1.0**
PMG	**Port Moresby**	**16.77**	**100**	P		**P**	**01 28 44.4**	**-0.7**
	7.4nm,0.6s,baz=28,slow=3.8,SNR=4.2							
PMG	**Port Moresby**	**16.77**	**100**	IAmb		IAmb	01 28 51.7	
	comp=Z,20nm,0.8s							
MYLDM	**Lahad Datu**	**16.82**	**315**	P		**Pn**	**01 28 45.6**	**-0.6**
AS31	**Alice Springs**	**17.11**	**169**			**Pn**	**01 28 50.1**	**+0.5**
ASAR	**Alice Springs**	**17.11**	**169**	P		**Pn**	**01 28 49.7**	**+0.1**
	comp=Z,44nm,0.8s,baz=337,slow=8.7,SNR=157							
ASAR					S	**S**	**01 31 51.0**	**-8.8**
	comp=Z,6.8nm,0.6s,baz=330,slow=17,SNR=6.3							
ASAR	**Alice Springs**	**17.11**	**169**	P		**Pn**	**01 28 50.2**	**+0.6**
AUALC	**St Philip's Co**	**17.13**	**169**	P		**Pn**	**01 28 52.0**	**+2.1**
MTSU	**Mount Surprise**	**17.62**	**131**	P		**Pn**	**01 28 57.2**	**+1.4**
KKM	**Kota Kinabalu**	**19.07**	**312**	P		**P**	**01 29 09.9**	**-0.6**
KKM	**Kota Kinabalu**	**19.07**	**312**	P		**P**	**01 29 10.4**	**-0.1**
CTA	**Charters Tower**	**20.26**	**132**	P		**P**	**01 29 24.9**	**+1.6**
	comp=Z,15nm,0.8s,baz=309,slow=11,SNR=18							
	comp=Z,15nm,0.8s							
CTA	**Charters Tower**	**20.26**	**132**	P		Pn	01 29 27.0	+0.2
CTAO	**Charters Tower**	**20.26**	**132**			Pn	01 29 27.4	+0.5
CTAO					IAmb	IAmb	01 29 31.1	
	comp=Z,24nm,1.0s							
CTAO	**Charters Tower**	**20.26**	**132**	P		Pn	01 29 27.1	+0.3
SBUM	**Sibu**	**20.36**	**296**	P		**P**	**01 29 25.0**	**+0.8**
SBUM					IAmb	IAmb	01 29 26.1	
	comp=Z,12nm,0.7s							
SBUM	**Sibu**	**20.36**	**296**	P		**P**	**01 29 25.2**	**+0.9**
BBJI	**Bungbulang**	**22.61**	**267**	P		**P**	**01 29 45.9**	**-1.9**
BBJI	**Bungbulang**	**22.61**	**267**	P		**P**	**01 29 48.8**	**+1.1**
INKA	**Innaminka**	**23.02**	**156**	P		**P**	**01 29 54.3**	**+3.0**
INKA					IAmb	IAmb	01 29 56.2	
	comp=Z,18nm,0.7s							
QLP	**Quilpie**	**23.67**	**148**	P		**P**	**01 30 00.5**	**+3.2**
FORT	**Forrest**	**23.97**	**185**	P		**P**	**01 30 02.0**	**+2.1**
FORT					IAmb	IAmb	01 30 04.7	
	comp=Z,18nm,0.8s							
BBOO	**Buckleboo**	**26.42**	**169**	P		**P**	**01 30 24.8**	**+2.7**
BBOO					IAmb	IAmb	01 30 28.2	
	comp=Z,10nm,0.6s							
STKA	**Stephens Creek**	**27.05**	**159**	P		**P**	**01 30 30.8**	**+3.0**
	comp=Z,5.6nm,0.5s,baz=328,slow=9.2,SNR=14							
	comp=Z,5.6nm,0.5s							
STKA	**Stephens Creek**	**27.05**	**159**	P		**P**	**01 30 30.7**	**+3.0**
STKA	**Stephens Creek**	**27.05**	**159**	P		**P**	**01 30 30.8**	**+3.0**
CMSA	**Cobar Meteorol**	**28.46**	**152**	P		**P**	**01 30 43.9**	**+3.6**
HNR	**Honiara**	**29.34**	**97**	LR		LR	01 43 53.4	
	comp=Z,2nm,18.2s,baz=42,slow=39							
CAN	**Canberra**	**33.14**	**152**	P		**P**	**01 31 25.6**	**+4.2**
CMAR	**Chiang Mai Arr**	**39.92**	**309**	P		**P**	**01 32 17.5**	**-1.5**
	comp=Z,2.7nm,0.4s,baz=135,slow=7.0,SNR=20							
	comp=Z,2.7nm,0.4s							
CHTO	**Chiang Mai**	**40.13**	**310**	P		**P**	**01 32 21.1**	**+0.3**
CHTO					IAmb	IAmb	01 32 22.1	
	comp=Z,4.9nm,0.7s							
CHTO	**Chiang Mai**	**40.13**	**310**	P		**P**	**01 32 21.4**	**+0.6**
NJ2	**Nanjing**	**40.17**	**345**	*e*	P	**P**	**01 32 23.2**	**+2.4**
NJ2					pmax	pmax		
	comp=Z,10.0nm,1.0s							
KMI2	**Kunming**	**41.63**	**321**	P		**P**	**01 32 34.0**	**+0.8**
KMI2					pmax	pmax		
	comp=Z,6.0nm,1.0s							
PZH	**PanZhiHua**	**43.23**	**321**	P		**P**	**01 32 48.4**	**+2.4**
XAN	**Xi'an**	**45.43**	**335**	⇓P		**P**	**01 33 01.7**	**-1.5**
XAN					pmax	pmax		
	comp=Z,4.0nm,0.6s							
LZDM	**Lanzhou Array**	**49.38**	**331**	P		**P**	**01 33 33.5**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=164,slow=12,SNR=3.6							
	comp=Z,0.8nm,0.4s							
LZH	**Lanzhou**	**49.42**	**331**	*e*	P	**P**	**01 33 34.4**	**+0.2**
LZH					sP	pP	01 33 41.1	-26
LZH					pmax	pmax		
	comp=Z,6.0nm,1.6s							
HHC	**Hu-ho-hao-te**	**50.48**	**341**	*e*	P	**P**	**01 33 44.9**	**+2.9**
HHC					pmax	pmax		
	comp=Z,5.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,120nm,5.7s							
LSA	**Lhasa**	**52.34**	**316**	P		**P**	**01 33 57.7**	**+1.1**
LSA					IAmb	IAmb	01 33 58.5	
	comp=Z,5.5nm,1.0s							
BNX	**BinXian**	**52.36**	**357**	⇓P		**P**	**01 33 54.8**	**-1.0**
BNX					pmax	pmax		
	comp=Z,7.0nm,1.2s							
ULN	**Ulaanbaatar**	**58.20**	**342**	P		**P**	**01 34 37.6**	**-0.1**
ULN					IAmb	IAmb	01 34 39.2	
	comp=Z,4.3nm,0.7s							
SONM	**Songino Array**	**58.38**	**341**	P		**P**	**01 34 39.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=166,slow=7.9,SNR=9.8							
	comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**58.38**	**341**	P		**P**	**01 34 39.1**	**+0.1**
WMQ	**Urumqi**	**63.45**	**327**	*e*	P	**P**	**01 35 15.8**	**+2.5**
WMQ					LR	LR		
	comp=E,510nm,23.9s							
WMQ					LR	LR		
	comp=Z,92nm,24.3s							
MKAR	**Makanchi Array**	**68.28**	**327**	P		**P**	**01 35 44.7**	**+0.6**
	comp=Z,5.1nm,0.7s,baz=115,slow=8.1,SNR=56							
	comp=Z,5.1nm,0.7s							
MKAR	**Makanchi Array**	**68.28**	**327**			**P**	**01 35 44.8**	**+0.7**
BOOM	**Boomskoye usch**	**69.66**	**320**	P		**P**	**01 35 54.0**	**+1.1**
AAK	**Ala-Archa**	**70.65**	**320**	P		**P**	**01 35 59.9**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=134,slow=6.5,SNR=8.1							
	comp=Z,1.7nm,0.8s							
AAK	**Ala-Archa**	**70.65**	**320**			**P**	**01 36 00.5**	**+1.6**
DRK	**Karamyk**	**70.99**	**316**	IAmb		IAmb	01 36 02.9	
	comp=Z,4.0nm,0.6s							
ARSB	**Arslanbob**	**71.02**	**318**	P		**P**	**01 36 02.2**	**+1.0**
ARSB					IAmb	IAmb	01 36 03.0	
	comp=Z,7.4nm,0.9s							
ZALV	**Zalesovo Beam**	**71.58**	**334**	P		**P**	**01 36 03.7**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=111,slow=5.2,SNR=9.8							
	comp=Z,2.5nm,0.8s							
ZALV	**Zalesovo Beam**	**71.58**	**334**			**P**	**01 36 04.0**	**0.0**
KURBB	**Kurchatov Arra**	**72.55**	**328**	P		**P**	**01 36 10.3**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=130,slow=4.9,SNR=26							
	comp=Z,2.0nm,0.6s							
KURK	**Kurchatov**	**72.56**	**328**			**P**	**01 36 10.1**	**+0.2**
KKAR	**Karatay Array**	**73.46**	**319**	P		**P**	**01 36 16.1**	**+0.7**
BVAR	**Borovoye Array**	**78.11**	**328**	P		**P**	**01 36 41.6**	**0.0**
	comp=Z,1.4nm,0.7s,baz=141,slow=7.3,SNR=4.6							
	comp=Z,1.4nm,0.7s							
NRIK	**Noril'sk**	**81.46**	**346**	P		**P**	**01 37 00.2**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=144,slow=5.9,SNR=9.8							
	comp=Z,3.1nm,0.7s							
AKTO	**Aktyubinsk**	**84.17**	**322**	P		**P**	**01 37 13.7**	**0.0**
	comp=Z,1.1nm,0.5s,baz=62,slow=1.2,SNR=5.1							
	comp=Z,1.1nm,0.5s							
ARTI	**Arti**	**85.83**	**328**	P		**P**	**01 37 21.7**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=145,slow=0.9,SNR=7.0							
	comp=Z,2.7nm,0.7s							
ARTI	**Arti**	**85.83**	**328**	P		**P**	**01 37 21.9**	**+0.1**
ARTI					IAmb	IAmb	01 37 22.4	
	comp=Z,4.1nm,0.6s							
RAYN	**Ar Rayn**	**88.05**	**294**	P		**P**	**01 37 34.0**	**+0.7**
RAYN					IAmb	IAmb	01 37 35.5	
	comp=Z,2.8nm,0.7s							
KARS	**Kars**	**92.36**	**310**	P		**P**	**01 37 54.9**	**+1.7**
CPUP	**Villa Florida**	**146.23**	**167**	PKPbc		**PKiKP**	**01 44 26.6**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=165,slow=2.6,SNR=3.3							
LPAZ	**La Paz**	**150.62**	**141**	PKPbc		**PKiKP**	**01 44 38.5**	**+2.5**
	comp=Z,0.8nm,0.4s,baz=72,slow=3.2,SNR=2.4							

*IDC **09** 01:25:19.9±1.0, 6°.53N×72°.74W, h173km±9km, mb3.0/4, mbtmp3.5/6, Error ellipse: s-maj=38.6km s-min=7.6km*
az=132.0
*FUNV **09** 01:25:21.3, 6°.82N×73°.10W, h168km, MW3.9, Presumed earthquake*
*RSNC **09** 01:25:22.1±0.0, 7°.1N±1°×7°.3W±°, h149km±2km, M3.5, mB4.9, mb3.8, ML3.1, Mw(mB)4.1*
*UPA **09** 01:25:23.0±1.5, 7°.09N×73°.30W, h0km±16km, MD4.3, Presumed earthquake*
ISC 09 01:25:21.0±0.8, **6°.85N**±0°.03×**73°.12W**±0°.03, **h154**km±5km,
n57, σ1§**62**/**99**, **mb3.3**/4, **1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**193**	P		**Pn**	**01 25 42.3**	**+0.1**
BARC				S		**Sn**	**01 25 57.8**	**-0.6**
BRJC	**Barrancabermej**	**0.63**	**281**	P		**Pn**	**01 25 44.0**	**+0.5**
BRJC				S		**Sn**	**01 26 01.0**	**+0.4**
PAMC	**Pamplona, Colo**	**0.64**	**41**	P		**Pn**	**01 25 45.1**	**+1.0**
PAMC				S		**Sn**	**01 26 02.2**	**+0.5**
RUSC	**La Rusia**	**0.95**	**178**	P		**Pn**	**01 25 46.2**	**-0.2**
RUSC				S		**Sn**	**01 26 05.2**	**-0.4**
RUSC	**La Rusia**	**0.95**	**178**	*e*	P	**Pn**	**01 25 46.2**	**-0.2**
RUSC				*e*	S	**Sn**	**01 26 05.3**	**-0.4**
CAPV	**Capacho**	**1.29**	**38**	*e*	P	**Pn**	**01 25 50.1**	**+1.1**
CAPV				*e*	S	**Sn**	**01 26 11.7**	**+1.3**
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	P		**Pn**	**01 25 48.7**	**-0.8**
PTBC				S		**Sn**	**01 26 09.9**	**-1.3**
OCAC	**Ocana**	**1.39**	**352**	P		**Pn**	**01 25 50.3**	**+0.3**
OCAC				S		**Sn**	**01 26 12.3**	**+0.1**
SPBC	**San Pablo de B**	**1.52**	**218**	P		**Pn**	**01 25 51.2**	**0.0**
SPBC				S		**Sn**	**01 26 13.3**	**-1.0**
NORC	**Norcasia**	**2.16**	**234**	P		**Pn**	**01 25 58.5**	**+0.2**
NORC				S		**Sn**	**01 26 25.3**	**-1.7**
CHIC	**Chingaza**	**2.29**	**195**	P		**Pn**	**01 26 00.3**	**+0.1**
CHIC				S		**Sn**	**01 26 29.7**	**-0.7**
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**01 26 02.2**	**+1.5**
	50nm,0.3s,baz=118,slow=23,SNR=94							
ROSC				S		**Sn**	**01 26 31.7**	**+0.5**
	356nm,0.4s,baz=128,slow=17,SNR=24							
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**01 26 02.1**

JMA ***09*** *01:42:25.4±0.1, 30°.4N±0°.4×131°.1E±0°.7, h32km, MV2.9/26, NEAR TANEGASHIMA ISLAND*

ISC 09 01:42:24.6±2.0**, 30°.34N**±0°.08×**131°.1E**±0°.1**, h31**km±7km**, n13, σ1s.13**/19**, mb3.7**/4**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.21**	**285**	*i* P	**Pn**	**01 42 31.4**	**-0.2**
JMTN				*e*S	**Sb**	**01 42 36.0**	**+0.5**
JTN	**Tanegashima 3**	**0.34**	**336**	P	**Pb**	**01 42 32.5**	**-0.2**
JTN				*e*S	**Sb**	**01 42 37.7**	**-0.5**
JYAK	**Yakushimahirau**	**0.56**	**259**	*i* P	**Pb**	**01 42 36.1**	**+0.2**
JYAK				*e*S	**Sb**	**01 42 43.9**	**+0.2**
JKC	**Kuchinoerabu**	**0.82**	**279**	*e*P	**Pn**	**01 42 40.2**	**+0.2**
JKC				*e*S	**Sb**	**01 42 50.7**	**-0.5**
JTSR	**Tashiro 2**	**0.84**	**347**	P	**Pn**	**01 42 40.0**	**-0.3**
JTSR				*e*S	**Sb**	**01 42 51.1**	**-0.7**
JNN	**Nakanoshima**	**1.21**	**246**	*e*P	**Pn**	**01 42 46.0**	**+0.7**
JSU	**Suzuyama**	**1.30**	**333**	P	**Pn**	**01 42 46.8**	**+0.2**
JSU				*e*S	**Sn**	**01 43 03.6**	**+0.6**
JNU	**Nakatsue**	**2.78**	**355**	Pn	**Pn**	**01 43 07.6**	**+0.7**
	0.7nm,0.3s,baz=173,slow=17,SNR=2.3						
JNU				Sn	**Sn**	**01 43 43.2**	**+3.7**
	0.9nm,0.3s,baz=43,slow=13,SNR=2.3						
	7.7nm,0.7s						
ASAJ	**Asahikawa**	**16.48**	**30**	LR	LR	01 52 46.3	
	comp=Z,54nm,20.1s,baz=246,slow=38						
SONM	**Songino Array**	**25.79**	**320**	P	**P**	**01 47 51.6**	**-1.2**
	0.3nm,0.4s,baz=142,slow=11,SNR=4.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**40.88**	**308**	P	**P**	**01 50 04.0**	**+0.3**
	0.2nm,0.7s,baz=92,slow=10,SNR=2.6						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**49.03**	**316**	P	**P**	**01 51 07.6**	**-0.7**
	1.3nm,0.5s,baz=102,slow=9.6,SNR=16						
	1.3nm,0.5s						
FINES	**FINESS Array B**	**70.56**	**331**	P	**P**	**01 53 35.5**	**-0.7**
	0.8nm,0.4s,baz=79,slow=6.4,SNR=14						
	0.8nm,0.4s						

IDC ***09*** *01:56:00.6±1.2, 2°.98S×129°.95E, h0km, mb3.5/5, mbtmp3.5/7, ML3.3/2, MS3.6/1, Error ellipse: s-maj=38.0km s-min=21.8km az=90.0*

ISC 09 01:56:04.1±1.2**, 3°.0S**±0°.1×**130°.0E**±0°.2**, h25**km**, n8, σ0s.98**/8**, mb3.6**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.48**	**30**	Pn	**Pn**	**01 56 43.2**	**+0.2**
	3.8nm,0.3s,baz=157,slow=20,SNR=21						
SIJI				Sn	**Sn**	**01 57 12.3**	**-0.2**
	4.8nm,0.3s,baz=198,slow=23,SNR=8.6						
	8.0nm,0.3s						
WRA	**Warramunga Arr**	**17.34**	**166**	P	**P**	**02 00 05.7**	**-0.1**
	0.1nm,0.3s,baz=347,slow=12,SNR=5.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**20.86**	**170**	P	**P**	**02 00 44.5**	**+0.1**
	2.6nm,0.8s,baz=347,slow=11,SNR=16						
	2.6nm,0.8s						
DZM	**Mont Dzumac**	**40.11**	**121**	LR	LR	02 19 54.3	
	comp=Z,69nm,18.6s,baz=70,slow=36						
MKAR	**Makanchi Array**	**64.94**	**326**	P	**P**	**02 06 43.4**	**+1.7**
	0.1nm,0.4s,baz=130,slow=6.2,SNR=1.9						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**68.05**	**333**	P	**P**	**02 07 00.3**	**-1.1**
	0.3nm,0.4s,baz=132,slow=8.0,SNR=1.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**69.16**	**328**	P	**P**	**02 07 07.7**	**-0.7**
	0.5nm,0.7s,baz=130,slow=6.0,SNR=4.8						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**74.73**	**327**	P	**P**	**02 07 42.1**	**+0.3**
	0.3nm,0.7s,baz=117,slow=5.5,SNR=2.4						
	0.3nm,0.7s						

AFAD ***09*** *02:01:09.9, 40°.79N×31°.56E, h7km±1km, ML2.6*
ISK ***09*** *02:01:09.7, 40°.78N×31°.56E, h4km, ML2.8/20*
CFUSG ***09*** *02:01:11.0, 40°.80N×31°.60E, h5km, Mb2.6/3, MD2.9/2, MSH2.4/3*

ISC 09 02:01:10.6±1.0**, 40°.77N**±0°.02×**31°.57E**±0°.02**, h3**km±9km**, n45, σ0s.82**/68**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLU	**Bolu-Merkez-Mu**	**0.08**	**86**	P	**Pg**	**02 01 12.4**	**+0.2**
BOLU				S	**Sg**	**02 01 13.7**	**+0.3**
BOLU				IAML		02 01 16.0	
	comp=E,9μm,0.4s						
RUZG	**Kolk¶y-BOLU**	**0.18**	**106**	Pg	**Pg**	**02 01 14.2**	**+0.1**
RUZG				Sg	**Sg**	**02 01 17.1**	**+0.7**
BCAM	**Yenicaga**	**0.38**	**83**	P	**Pg**	**02 01 17.6**	**-0.3**
BCAM				S	**Sg**	**02 01 22.7**	**-0.2**
BCAM				IAML		02 01 23.0	
	comp=N,819nm,0.2s						
BCAM				IAML		02 01 23.0	
	comp=E,589nm,0.5s						
YUVA	**Yuva-Kibriscik**	**0.39**	**167**	Pg	**Pg**	**02 01 18.5**	**+0.4**
YUVA				Sg	**Sb**	**02 01 24.9**	**-1.8**
KIBS	**BOLU**	**0.41**	**149**	P	**Pg**	**02 01 19.0**	**+0.5**
MDUB	**Mudurnu**	**0.41**	**223**	Pg	**Pg**	**02 01 18.8**	**+0.2**
BTAS	**Taskesti**	**0.48**	**245**	P	**Pg**	**02 01 19.7**	**-0.1**
BTAS				S	**Sg**	**02 01 26.9**	**+0.9**
BTAS				IAML		02 01 29.0	
	comp=E,392nm,0.2s						
BTAS				IAML		02 01 34.0	
	comp=N,388nm,0.8s						
UVEZ	**Uvezbeli-DUZCE**	**0.52**	**285**	Pg	**Pg**	**02 01 20.4**	**-0.2**
UVEZ				Sg	**Sg**	**02 01 27.9**	**+0.5**
SAHE	**Sakarya_HENDEK**	**0.55**	**278**	P	**Pg**	**02 01 20.9**	**-0.3**
SAHE				S	**Sg**	**02 01 28.5**	**+0.2**
SUSU	**Bolu-G¶ynk-**	**0.70**	**232**	P	**Pg**	**02 01 24.1**	**0.0**
CMDR	**Camlidere-ANKA**	**0.74**	**112**	P	**Pg**	**02 01 24.6**	**-0.2**
CMDR				S	**Sg**	**02 01 35.3**	**+0.9**
CMDR				IAML		02 01 37.0	
	comp=N,225nm,0.3s						
DERS	**Karabk-Eskip**	**0.75**	**84**	P	**Pg**	**02 01 25.1**	**+0.2**
DERS				S	**Sg**	**02 01 32.4**	**-2.2**
DERS				IAML		02 01 39.0	
	comp=E,205nm,0.8s						
GULT	**Gulveren**	**0.87**	**247**	Pg	**Pg**	**02 01 27.1**	**-0.2**
KZCM	**Kizilcahamam**	**0.90**	**112**	P	**Pg**	**02 01 27.5**	**-0.4**
KZCM				IAML		02 01 43.0	
	comp=N,352nm,0.2s						
KZCM				IAML		02 01 47.0	
	comp=E,457nm,0.3s						
KBUK	**KARABUK-Merkez**	**0.92**	**60**	P	**Pg**	**02 01 27.7**	**-0.6**
KBUK				S	**Sg**	**02 01 39.4**	**-0.8**
KBUK				IAML		02 01 42.0	
	comp=N,143nm,0.3s						
KBUK				IAML		02 01 42.0	
	comp=E,167nm,0.3s						
SAUV	**Serdivan-Sakar**	**0.94**	**268**	Pg	**Pg**	**02 01 27.9**	**-0.8**
SAFT	**Safranbolu**	**0.96**	**61**	Pg	**Pg**	**02 01 28.8**	**-0.3**
BTIN	**Bartın**	**1.00**	**31**	P	**Pg**	**02 01 28.9**	**-1.0**
BTIN				S	**Sg**	**02 01 42.9**	**+0.1**
BTIN				IAML		02 01 47.0	
	comp=N,158nm,0.3s						
BTIN				IAML		02 01 47.0	
	comp=E,151nm,0.3s						
YALI	**Yalozu-CANKI**	**1.07**	**90**	Pn	**Pb**	**02 01 31.5**	**-0.3**
POLA	**Polatl-ANKAR**	**1.17**	**157**	Pn	**Pg**	**02 01 32.5**	**-0.4**
LOD	**Lodumlu**	**1.27**	**134**	Pn	**Pg**	**02 01 34.5**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.33**	**182**	Pn	**Pg**	**02 01 35.8**	**-0.2**
KURC	**Kurucasile-Bar**	**1.39**	**39**	Pn	**Pg**	**02 01 37.1**	**-0.1**
PELI	**Kastamonı-Ara**	**1.42**	**68**	P	**Pn**	**02 01 37.0**	**-0.3**
PELI				S	**Sg**	**02 01 55.4**	**-0.8**
PELI				IAML		02 02 00.0	
	comp=E,68nm,0.4s						
OSMT	**Osmaniye**	**1.43**	**264**	Pn	**Pn**	**02 01 37.2**	**-0.3**
ADVT	**Abdulvahap**	**1.44**	**257**	Pn	**Pn**	**02 01 36.9**	**-0.6**
ELDT	**Eldivan**	**1.44**	**101**	P	**Pn**	**02 01 37.4**	**-0.3**
ELDT				S	**Sn**	**02 01 57.1**	**-0.1**
ELDT				IAML		02 02 01.0	
	comp=N,123nm,0.4s						
ELDT				IAML		02 02 04.0	
	comp=E,94nm,0.9s						
HRT	**Hereke**	**1.45**	**273**	Pn	**Pn**	**02 01 37.3**	**-0.3**
CIFT	**Cifteler, Eski**	**1.46**	**196**	Pn	**Pn**	**02 01 37.9**	**0.0**
SILT	**Sile**	**1.51**	**285**	Pn	**Pn**	**02 01 38.4**	**0.0**
CANT	**Cankiri**	**1.57**	**95**	Pn	**Pb**	**02 01 39.8**	**-0.4**
KRGN	**Kargin**	**1.58**	**107**	P	**Pb**	**02 01 40.5**	**+0.1**
KRGN				S	**Sg**	**02 02 02.2**	**+0.7**
GOKD	**Ankara-Kalecik**	**1.61**	**115**	P	**Pb**	**02 01 40.8**	**-0.2**
GOKD				S	**Sg**	**02 02 04.7**	**+2.3**
BBAL	**Bala**	**1.71**	**135**	P	**Pg**	**02 01 42.9**	**-0.4**
BBAL				S	**Sg**	**02 02 07.0**	**+1.5**
YENC	**ankr-Yen**	**1.73**	**92**	P	**Pn**	**02 01 42.1**	**+0.5**
YENC				S	**Sg**	**02 02 07.4**	**+1.3**
YENC				IAML		02 02 18.0	
	comp=N,50nm,0.6s						
AFSR	**Afar-Bala (An**	**1.75**	**139**	Pn	**Pg**	**02 01 44.3**	**+0.1**
SEYI	**Kastamonu-Seyd**	**1.85**	**62**	P	**Pb**	**02 01 44.2**	**-0.8**
SEYI				S	**Sb**	**02 02 08.4**	**-0.3**
SEYI				IAML		02 02 13.0	
	comp=E,52nm,0.4s						
BR131	**Keskin Array S**	**1.90**	**123**	Pn	**Pn**	**02 01 43.8**	**-0.2**
KESK	**Krkkale-Ke**	**1.91**	**126**	P	**Pg**	**02 01 46.6**	**-0.6**
KESK				S	**Sg**	**02 02 12.1**	**0.0**
DELI	**KIRIKKALE**	**1.96**	**113**	P	**Pn**	**02 01 45.1**	**+0.4**
DELI				S	**Sn**	**02 02 09.4**	**-0.4**
SUNG	**orum-Sungurl**	**2.12**	**105**	P	**Pb**	**02 01 48.6**	**-1.1**
SUNG				S	**Sb**	**02 02 15.6**	**-0.8**
SUNG				IAML		02 02 30.0	
	comp=N,39nm,2.5s						
SEV	**Sevastopol'**	**4.07**	**22**	*e*P	**Pn**	**02 02 15.0**	**+1.3**
SEV				pmax	pmax	02 02 27.2	
	comp=Z,10.0nm,1.0s						
SEV				*e*S	**Sn**	**02 03 03.3**	**+1.4**
SEV				smax	smax	02 03 03.6	
	comp=N,2.0nm,0.5s						
SEV				smax	smax	02 03 03.6	
	comp=E,2.0nm,0.3s						
SEV	**Sevastopol'**	**4.07**	**22**	smax	smax	02 03 22.3	
	comp=E,1.0nm,0.3s						
YAL	**Yalta**	**4.17**	**26**	*e*P	**Pn**	**02 02 16.4**	**+1.4**
YAL				pmax	pmax	02 02 17.3	
	comp=Z,4.0nm,0.3s						
YAL				*e*S	**Sn**	**02 03 05.3**	**+1.0**
YAL				smax	smax	02 03 07.3	
	comp=N,2.0nm,0.2s						
YAL				smax	smax	02 03 07.3	
	comp=E,9.0nm,0.6s						
DNZ2	**Donuzlav2**	**4.75**	**14**	*e*P	**Pn**	**02 02 25.0**	**+2.0**
DNZ2				pmax	pmax	02 02 25.2	
	comp=Z,4.0nm,0.3s						
DNZ2				*e*S	**Sn**	**02 03 20.3**	**+1.7**
DNZ2				smax	smax	02 03 22.3	
	comp=N,7.0nm,0.6s						
DNZ2				smax	smax	02 03 22.3	
	comp=E,2.0nm,0.3s						

PDG ***09*** *02:01:25.4±0.3, 44°.21N×16°.00E, h11km±1km, ML3.1/10, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*
BEO ***09*** *02:01:26.2±0.4, 44°.19N×16°.03E, h0km, ML2.8/7*
PRU ***09*** *02:01:27.2, 44°.32N×16°.28E, h10km*

ISC 09 02:01:24.8±1.4**, 44°.24N**±0°.03×**16°.03E**±0°.03**, h2**km±11km**, n54, σ1s.15**/90**, 10C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.97**	**58**	⇑P	**Pg**	**02 01 44.0**	**+0.7**
BLY				⇓S	**Sb**	**02 01 58.4**	**+0.8**
BLY	**Banja Luka**	**0.97**	**58**	*e*Pg	**Pg**	**02 01 44.0**	**+0.7**
BLY				*e*Sg	**Sn**	**02 01 59.3**	**-0.5**
RIY	**Rijeka**	**1.55**	**315**	*e*Pg	**Pb**	**02 01 54.6**	**+0.4**
RIY				*e*Sg	**Sg**	**02 02 16.2**	**+1.6**
STON	**Ston**	**1.82**	**138**	*e*Pg	**Pn**	**02 01 57.4**	**+0.2**
STON				*e*Sg	**Sg**	**02 02 22.8**	**-0.6**
BRY	**Bratogost**	**2.26**	**125**	⇓*i*Pn	**Pn**	**02 02 04.0**	**+0.7**
BRY				*i* Sn	**Sb**	**02 02 33.8**	**-1.0**
UPM	**Unac-Piva**	**2.32**	**115**	⇑*i*Pn	**Pn**	**02 02 04.9**	**+0.7**
UPM				*i* Sn	**Sb**	**02 02 35.3**	**-1.5**
BBLS	**Lazi&#263i**	**2.46**	**97**	*e*Pn	**Pn**	**02 02 07.0**	**+1.0**
OBKA	**Obir**	**2.50**	**336**	Pn	**Pn**	**02 02 07.3**	**+0.7**
	5.1nm,0.3s,SNR=25						
OBKA				Sn	**Sn**	**02 02 37.4**	**-0.3**
	10nm,0.3s						
HCY	**Herceg Novi**	**2.53**	**134**	⇓*i*Pn	**Pn**	**02 02 07.8**	**+0.8**
HCY				*i* Sn	**Sb**	**02 02 40.5**	**-2.1**
SOKA	**Soboth**	**2.54**	**344**	Pn	**Pn**	**02 02 07.4**	**+0.3**
	1.2nm,0.2s						
SOKA				Sn	**Sn**	**02 02 38.2**	**-0.5**
	3.5nm,0.3s						
NKME	**Niksic**	**2.58**	**124**	⇓*i*Pn	**Pn**	**02 02 08.3**	**+0.6**
NKME				*e*Sn	**Sb**	**02 02 41.8**	**-2.3**
CEME	**Cevo**	**2.70**	**128**	⇓*i*Pn	**Pn**	**02 02 09.7**	**+0.4**
CEME				*e*Sn	**Sb**	**02 02 44.3**	**-3.1**
MORH	**Mrgy, Hungar**	**2.71**	**42**	⇑P	**Pn**	**02 02 09.7**	**+0.4**
FRGS	**Fruska Gora**	**2.85**	**70**	*e*Pn	**Pn**	**02 02 13.1**	**+1.8**
FRGS				*e*Sn	**Sb**	**02 02 49.4**	**-2.2**
BUM	**Brajici-Budva**	**2.85**	**132**	⇑*i*Pn	**Pn**	**02 02 11.9**	**+0.6**
BUM				*i* Sn	**Sn**	**02 02 47.1**	**+0.9**
KOME	**Kolasin**	**2.89**	**117**	⇑*i*Pn	**Pn**	**02 02 13.0**	**+1.1**
KOME				*e*Sn	**Sn**	**02 02 49.5**	**+2.3**
MYKA	**Terra Mystica**	**2.93**	**326**	Pn	**Pn**	**02 02 13.9**	**+1.5**
	1.2nm,0.4s						
PDG	**Podgorica**	**2.96**	**126**	⇑P	**Pn**	**02 02 13.5**	**+0.6**
PDG	**Podgorica**	**2.96**	**126**	⇓*i*Pn	**Pn**	**02 02 13.7**	**+0.9**
PDG				*i* Sn	**Sn**	**02 02 50.7**	**+1.7**
PDG	**Podgorica**	**2.96**	**126**	*e*Pn	**Pn**	**02 02 14.2**	**+1.4**
PDG				*e*Sn	**Sn**	**02 02 50.5**	**+1.5**
SJES	**Sjenica**	**3.02**	**107**	*e*Pn	**Pn**	**02 02 15.1**	**+1.4**
ARSA	**Arzberg**	**3.04**	**353**	*e*Pn	**Pn**	**02 02 13.8**	**-0.1**
	2.9nm,0.4s,SNR=7.7						
ARSA				*e*Sn	**Sn**	**02 02 49.9**	**-0.9**
	1.1nm,0.3s						
IVA	**Berane**	**3.12**	**115**	*e*Pn	**Pn**	**02 02 15.7**	**+0.6**
IVA				*i* Sn	**Sn**	**02 02 54.7**	**+1.7**
ULC	**Ulcinj**	**3.27**	**133**	⇑*i*Pn	**Pn**	**02 02 17.5**	**+0.4**
ULC				*i* Sn	**Sn**	**02 02 57.4**	**+0.8**
KBA	**Koelnbreinsper**	**3.41**	**327**	*e*Pn	**Pn**	**02 02 18.9**	**-0.2**
	0.4nm,0.3s						
KBA				*e*Sn	**Sn**	**02 03 02.2**	**+1.9**
	2.1nm,0.4s						
RONA	**Rosalia, Austr**	**3.47**	**3**	*i* Pn	**Pn**	**02 02 19.9**	**+0.1**
	1.7nm,0.4s,SNR=5.4						
ABTA	**Abfaltersbach**	**3.53**	**317**	*e*Pn	**Pn**	**02 02 21.3**	**+0.7**
	0.4nm,0.2s						
ABTA				*e*Sn	**Sn**	**02 03 04.7**	**+1.6**
	4.9nm,0.5s						
GOCS	**Kraljevo Serbi**	**3.56**	**99**	*e*Pn	**Pn**	**02 02 22.0**	**+0.8**
GOCS				*e*Sn	**Sn**	**02 03 03.1**	**-0.8**
CONA	**Conrad Observa**	**3.69**	**358**	*i* Pn	**Pn**	**02 02 23.3**	**+0.3**
	1.6nm,0.4s,SNR=8.8						
CONA				*e*Sn	**Sn**	**02 03 06.4**	**-0.8**
	1.8nm,0.4s						
MOA	**Molln**	**3.82**	**342**	*i* Pn	**Pn**	**02 02 25.6**	**+1.0**
	4.4nm,0.4s,SNR=14						
MOA				*e*Sn	**Sn**	**02 03 09.7**	**-0.4**
	2.3nm,0.4s						
SELS	**Selova**	**3.82**	**104**	*e*Pn	**Pn**	**02 02 26.4**	**+1.7**
SELS				*e*Sn	**Sn**	**02 03 09.2**	**-1.1**
BIOA	**Bad Ischl, Aus**	**3.84**	**335**	*e*Pn	**Pn**	**02 02 25.7**	**+0.8**
	3.2nm,0.4s,SNR=6.3						
BIOA				*e*Sn	**Sn**	**02 03 12.2**	**+1.6**
	2.9nm,0.4s						
LESA	**Schwarzleotal**	**3.96**	**325**	*e*Pn	**Pn**	**02 02 28.1**	**+1.5**
	2.9nm,0.5s,SNR=6.3						
LESA				*e*Sn	**Sn**	**02 03 14.2**	**+0.5**
	2.7nm,0.3s						
ZST	**Bratislava**	**4.03**	**10**	*e*PN	**Pn**	**02 02 27.4**	**-0.1**
MDVR	**Moldovita**	**4.10**	**80**	⇑P	**Pn**	**02 02 29.6**	**+1.1**
BOVS	**Bovan**	**4.14**	**96**	⇓P	**Pn**	**02 02 29.8**	**+0.8**
BOVS	**Bovan**	**4.14**	**96**	*e*Pn	**Pn**	**02 02 29.6**	**+0.6**
BOVS				*e*Sn	**Sn**	**02 03 16.4**	**-1.6**
MODS	**Modra-Piesok**	**4.23**	**11**	*e*PN	**Pn**	**02 02 29.7**	**-0.5**
MODS				*e*SN	**Sn**	**02 03 19.9**	**-0.3**
WTTA	**Wattenberg**	**4.32**	**316**	*e*Pn	**Pn**	**02 02 32.6**	**+1.0**
	1.3nm,0.3s						
WTTA				*e*Sn	**Sn**	**02 03 23.8**	**+1.2**
	12nm,0.7s						
WATA	**Walderalm**	**4.40**	**316**	*e*Pn	**Pn**	**02 02 32.4**	**-0.2**
	1.6nm,0.4s						
ZAGS	**Zajecar**	**4.49**	**93**	*e*Pn	**Pn**	**02 02 35.8**	**+2.0**
SQTA	**Sankt Quirin**	**4.51**	**313**	*e*Pn	**Pn**	**02 02 33.4**	**-0.8**
	0.7nm,0.4s						
SQTA				*e*Sn	**Sn**	**02 03 28.7**	**+1.5**
	5.6nm,0.5s						
HERR	**Herculane**	**4.61**	**80**	⇓P	**Pn**	**02 02 35.8**	**+0.4**
MOTA	**Moosalm**	**4.64**	**314**	*e*Pn	**Pn**	**02 02 36.3**	**+0.2**
	0.6nm,0.3s						
MOTA				*e*Sn	**Sn**	**02 03 31.7**	**+1.1**
	4.9nm,0.7s						
FETA	**Feichten**	**4.65**	**309**	Pg	**Pg**	**02 02 51.8**	**-2.0**
	1.1nm,0.4s						
CKRC	**Cesky Krumlov**	**4.74**	**346**	*e*PN	**Pn**	**02 02 36.6**	**-0.6**
CKRC				*e*SN	**Sn**	**02 03 31.0**	**-1.7**
KRUC	**Moravsky**	**4.83**	**3**	*e*PN	**Pn**	**02 02 38.6**	**+0.1**
KRUC				*e*SN	**Sn**	**02 03 35.9**	**+0.8**
ZAPS	**Zavoj**	**4.88**	**99**	*e*Pn	**Pn**	**02 02 40.1**	**+0.9**
RETA	**Reutte**	**4.91**	**313**	*e*Pn	**Pn**	**02 02 38.4**	**-1.3**
	0.4nm,0.3s						
RETA				*e*Sn	**Sn**	**02 03 38.3**	**+1.1**
	3.3nm,0.7s						
GZR	**Gura Zlata**	**4.94**	**74**	⇓P	**Pn**	**02 02 40.6**	**+0.6**
TIP	**Timpagrande**	**5.08**	**174**	⇑P	**Pn**	**02 02 42.4**	**+0.3**
VRAC	**Vranov**	**5.09**	**4**	⇑P	**Pn**	**02 02 42.3**	**+0.2**
VRAC	**Vranov**	**5.09**	**4**	*e*PN	**Pn**	**02 02 41.3**	**-0.8**
VRAC				*e*SN	**Sn**	**02 03 42.3**	**+0.9**
ZVC	**Zvikov**	**5.36**	**347**	*e*PN	**Pn**	**02 02 46.2**	**+0.5**

SFS ***09*** *02:01:45.8, 36°.58N×9°.84W, h17km, ML2.8/6, ML2.2/10, MLv1.8/10*
MDD ***09*** *02:01:45.4±1.1, 36°.60N×9°.85W, h14km±5km, mb_Lg2.6/7, Error ellipse: s-maj=8.0km s-min=7.2km az=22.0*
IGIL ***09*** *02:01:46.1, 36°.55N×9°.79W, h10km, ML1.4*
INMG ***09*** *02:01:46.5±1.2, 36°.57N×9°.79W, h12km±5km, ML1.6, Error ellipse: s-maj=4.9km s-min=3.7km az=47.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
CNRM ***09*** *02:01:47.4, 36°.32N×9°.38W, h21km*

ISC 09 02:01:42.5±1.9**, 36°.42N**±0°.04×**9°.92W**±0°.08**, h31**km±14km**, n48, σ1s.52**/90**, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.13**	**51**	Pg	**Pb**	**02 02 03.8**	**+0.2**
PFVI				Sg	**Sn**	**02 02 16.5**	**-0.2**
PFVI	**Vila Bisbo**	**1.13**	**51**	*e*P	**Pb**	**02 02 03.8**	**+0.2**
PFVI				*e*S	**Sn**	**02 02 16.7**	**0.0**
PFVI				*i* IAML		02 02 17.1	
PFVI				*i* IAML		02 02 17.7	
PFVI				*i* IAML		02 02 19.2	
PFVI	**Vila Bisbo**	**1.13**	**51**	P	**Pb**	**02 02 03.9**	**+0.4**
PFVI				S	**Sn**	**02 02 17.8**	**+1.1**
MORF	**Marmelete**	**1.35**	**49**	*e*P	**Pb**	**02 02 06.9**	**-0.3**
MORF				*e*S	**Sn**	**02 02 21.9**	**-0.2**
MORF				IAML		02 02 25.7	
	comp=N,9.4nm,0.2s						
MORF	**Marmelete**	**1.35**	**49**	*e*P	**Pb**	**02 02 07.0**	**-0.2**
MORF				*e*S	**Sb**	**02 02 22.4**	**-1.7**
MORF				*i* IAML		02 02 24.9	
MORF				*i* IAML		02 02 25.8	
MORF				*i* IAML		02 02 27.0	
PTEO	**Sao Teotonio**	**1.48**	**40**	*e*S	**Sn**	**02 02 25.3**	**+0.1**
PTEO				*i* IAML		02 02 25.9	
PTEO				*i* IAML		02 02 32.2	
PTEO				*i* IAML		02 02 35.0	
PBDV	**Barranco-do-Ve**	**1.80**	**62**	Pn	**Pn**	**02 02 13.3**	**+1.9**
PBDV				Sn	**Sn**	**02 02 33.1**	**-0.1**
PBDV	**Barranco-do-Ve**	**1.80**	**62**	*e*P	**Pn**	**02 02 13.3**	**+1.9**
PBDV				*e*S	**Sn**	**02 02 33.6**	**+0.4**
PBDV				*i* IAML		02 02 35.2	
PBDV				*i* IAML		02 02 38.0	
PBDV				*i* IAML		02 02 40.0	
PCVE	**Castro Verde**	**1.93**	**51**	Pn	**Pn**	**02 02 14.9**	**+1.6**
PCVE				Sn	**Sn**	**02 02 36.7**	**+0.2**
PCVE	**Castro Verde**	**1.93**	**51**	*e*P	**Pn**	**02 02 15.2**	**+1.9**
PCVE				*e*S	**Sn**	**02 02 36.7**	**+0.2**
PCVE				*i* IAML		02 02 37.5	
PCVE				*i* IAML		02 02 38.1	
PCVE				*i* IAML		02 02 38.5	
MESJ	**Messejana**	**1.96**	**43**	*e*P	**Pn**	**02 02 15.3**	**+1.6**
MESJ				*e*S	**Sn**	**02 02 36.7**	**-0.6**
MESJ				IAML		02 02 39.3	
	comp=E,1.6nm,0.1s						
MESJ	**Messejana**	**1.96**	**43**	*e*P	**Pn**	**02 02 15.5**	**+1.8**
MESJ				*e*S	**Sn**	**02 02 37.3**	**-0.1**
MESJ				*i* IAML		02 02 38.2	
MESJ				*i* IAML		02 02 40.1	
MESJ				*i* IAML		02 02 40.5	
PVAQ	**Vaqueiros**	**2.02**	**60**	*e*P	**Pn**	**02 02 16.3**	**+1.8**
PVAQ				*e*S	**Sn**	**02 02 39.0**	**+0.3**
PVAQ				*i* IAML		02 02 40.3	
PVAQ				*i* IAML		02 02 41.2	
PVAQ				*i* IAML		02 02 46.7	
PVAQ	**Vaqueiros**	**2.02**	**60**	P	**Pn**	**02 02 16.3**	**+1.8**
PVAQ				S	**Sn**	**02 02 38.1**	**-0.6**
PBEJ	**Beja**	**2.29**	**45**	*e*S	**Sn**	**02 02 45.0**	**-0.5**
PBEJ				*i* IAML		02 02 46.0	
PBEJ				*i* IAML		02 02 47.1	
PBEJ				*i* IAML		02 02 48.2	
MOE	**Montemor**	**2.44**	**30**	*e*P	**Pn**	**02 02 22.4**	**+2.1**
MOE				*e*S	**Sn**	**02 02 48.6**	**-0.5**
MOE				*i* IAML		02 02 49.4	
MOE				*i* IAML		02 02 50.5	
MOE				*i* IAML		02 02 51.0	
PMAFR	**Mafra**	**2.58**	**11**	Pn	**Pn**	**02 02 23.4**	**+1.1**
PMAFR	**Mafra**	**2.58**	**11**	*e*P	**Pn**	**02 02 24.1**	**+1.8**
PMAFR				*e*S	**Sn**	**02 02 52.2**	**-0.4**
PMAFR				*i* IAML		02 02 54.0	
PMAFR				*i* IAML		02 02 54.3	
PMAFR				*i* IAML		02 02 54.4	
EVO	**Evora**	**2.60**	**35**	Pn	**Pn**	**02 02 23.6**	**+1.2**
EVO				Sn	**Sn**	**02 02 51.8**	**-1.2**
EVO	**Evora**	**2.60**	**35**	*e*P	**Pn**	**02 02 23.8**	**+1.3**
EVO				*e*S	**Sn**	**02 02 51.9**	**-1.0**
EVO				*i* IAML		02 02 52.6	
EVO				*i* IAML		02 02 53.1	
EVO				*i* IAML		02 02 53.9	
PARRA	**Arraiolos**	**2.82**	**31**	*e*P	**Pn**	**02 02 26.7**	**+1.2**
PARRA				*e*S	**Sn**	**02 02 58.1**	**-0.3**
PARRA				*i* IAML		02 02 59.2	
PARRA				*i* IAML		02 02 59.6	
PARRA				*i* IAML		02 02 59.7	
PBAR	**Barrancos**	**2.89**	**52**	Pn	**Pn**	**02 02 28.0**	**+1.6**
PBAR				Sn	**Sn**	**02 02 59.7**	**-0.5**
PBAR	**Barrancos**	**2.89**	**52**	*e*P	**Pn**	**02 02 28.0**	**+1.6**
PBAR				*e*S	**Sn**	**02 02 59.7**	**-0.5**
PBAR				*i* IAML		02 03 01.1	
PBAR				*i* IAML		02 03 01.3	
PBAR				*i* IAML		02 03 05.8	
PMTG	**Montargil**	**2.97**	**26**	*e*P	**Pn**	**02 02 28.9**	**+1.4**
PMTG				*e*S	**Sn**	**02 03 00.8**	**-1.3**
PMTG				*i* IAML		02 03 01.7	
PMTG				*i* IAML		02 03 02.3	
PMTG				*i* IAML		02 03 02.6	
PESTR	**Estremoz**	**3.06**	**36**	Sn	**Sn**	**02 03 03.0**	**-1.4**
PESTR	**Estremoz**	**3.06**	**36**	*e*P	**Pn**	**02 02 31.1**	**+2.2**
PESTR				*e*S	**Sn**	**02 03 03.9**	**-0.6**
PESTR				*i* IAML		02 03 04.7	
PESTR				*i* IAML		02 03 05.2	
PESTR				*i* IAML		02 03 09.2	
PSBE	**So Bento**	**3.21**	**16**	*e*P	**Pn**	**02 02 32.6**	**+1.7**
PSBE				*e*S	**Sn**	**02 03 07.6**	**-0.6**
PSBE				*i* IAML		02 03 10.4	
PSBE				*i* IAML		02 03 11.3	
PSBE				*i* IAML		02 03 11.4	
EBAD	**Badajoz**	**3.28**	**44**	Pn	**Pn**	**02 02 32.7**	**+0.8**
EBAD				Sn	**Sn**	**02 03 07.9**	**-1.9**
EBAD	**Badajoz**	**3.28**	**44**	Pn	**Pn**	**02 02 32.6**	**+0.8**
EBAD				Sn	**Sn**	**02 03 07.6**	**-2.2**
EBAD				*i* IVmb_Lg		02 03 15.6	
ESPR	**Espera**	**3.30**	**81**	Pn	**Pn**	**02 02 34.3**	**+2.2**
ESPR				Sn	**Sn**	**02 03 10.5**	**+0.3**
ESPR				*i* IVmb_Lg		02 03 13.2	
PSARD	**Sardoal**	**3.46**	**23**	*e*P	**Pn**	**02 02 35.9**	**+1.5**
PSARD				*e*S	**Sn**	**02 03 12.3**	**-2.1**
PSARD				*i* IAML		02 03 15.9	
PSARD				*i* IAML		02 03 16.9	
PSARD				*i* IAML		02 03 19.4	
PMRV	**Marv??o**	**3.61**	**33**	*e*P	**Pn**	**02 02 37.6**	**+1.2**
PMRV				*e*S	**Sn**	**02 03 16.1**	**-1.8**
PMRV				*i* IAML		02 03 17.9	
PMRV				*i* IAML		02 03 18.3	
PMRV				*i* IAML		02 03 19.2	
PCAS	**Casmilo, Conde**	**3.80**	**17**	*e*P	**Pn**	**02 02 40.3**	**+1.4**
PCAS				*e*S	**Sn**	**02 03 21.0**	**-1.5**
PCAS				*i* IAML		02 03 23.3	
PCAS				*i* IAML		02 03 26.0	
PCAS				*i* IAML		02 03 26.6	
PCBR	**Castelo Branco**	**3.92**	**29**	*e*P	**Pn**	**02 02 42.2**	**+1.6**
PCBR				*e*S	**Sn**	**02 03 23.9**	**-1.6**
PCBR				*i* IAML		02 03 25.5	
PCBR				*i* IAML		02 03 26.8	

ECAB	**El Cabril**	**3.95**	**64**	Pn		**Pn**	**02 02 42.8**	**+1.7**
ECAB				Sn		**Sn**	**02 03 24.8**	**-1.6**
ECAB	**El Cabril**	**3.95**	**64**	Pn		**Pn**	**02 02 42.8**	**+1.7**
ECAB				Sn		**Sn**	**02 03 24.6**	**-1.9**
ECAB				*i* IVmb_Lg			02 03 29.3	
MTE	**Manteigas**	**4.39**	**24**	*e*P		**Pn**	**02 02 48.4**	**+1.2**
MTE				*e*S		**Sn**	**02 03 36.6**	**-0.7**
PVIS	**Viseu**	**4.57**	**20**	*e*S		**Sn**	**02 03 39.5**	**-2.3**
EADA	**Adamuz**	**4.60**	**66**	Pn		**Pn**	**02 02 51.6**	**+1.5**
EADA				*i* IVmb_Lg			02 03 40.4	
EADA				Sn		**Sn**	**02 03 41.4**	**-1.0**
EPLA	**Plasencia**	**4.73**	**39**	Pn		**Pn**	**02 02 52.9**	**+1.1**
EPLA				*i* IVmb_Lg			02 03 30.9	
EPLA				Sn		**Sn**	**02 04 01.4**	**-2.0**
MD31	**MD31**	**5.54**	**128**	P		**Pn**	**02 03 04.0**	**+1.0**
MD31				S		**Sn**	**02 04 02.4**	**-3.2**
EQES	**Quesada**	**5.65**	**74**	Pn		**Pn**	**02 03 06.3**	**+1.9**
EQES				*i* IVmb_Lg			02 03 59.7	
EQES				Sn		**Sn**	**02 04 06.4**	**-1.9**
MDT	**Midelt**	**5.67**	**128**	P		**Pn**	**02 03 06.3**	**+1.5**
MDT				S		**Sn**	**02 04 05.4**	**-3.4**
OUZM	**OUZ**	**6.10**	**153**	P		**Pn**	**02 03 12.6**	**+1.9**
OUZM				S		**Sn**	**02 04 21.2**	**+1.8**

NEIC ***09*** *02:19:10.7±2.4, 40.21°S±0.06°×92.20°W±0.2, h10km±2km, mb4.4/15, Error ellipse: s-maj=25.3km s-min=9.2km az=259.0*

IDC ***09*** *02:19:14.4±4.7, 39.05°S×91.90°W, h0km, mb4.0/6, mbtmp4.0/6, MS3.8/23, Error ellipse: s-maj=113.5km s-min=35.4km az=12.0*

ISC 09 02:19:10.9±1.5, 40.1°S±0.2°×92.0°W±0.2°, h10km, n51, σ1°§24/26, mb4.3/11, MS3.8/22, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.15**	**63**	T	T	02 34 33.7	
	baz=233,slow=73,SNR=267						
H03S1	**Juan Fernandez**	**12.16**	**63**	T	T	02 34 40.2	
	baz=233,slow=73,SNR=212						
H03S3	**Juan Fernandez**	**12.17**	**63**	T	T	02 34 39.2	
	baz=233,slow=73,SNR=254						
VA04	**Juan Fernndez**	**12.33**	**63**	Pn	**Pn**	**02 22 06.0**	**-0.5**
H03N3	**Juan Fernandez**	**12.38**	**62**	T	T	02 34 46.0	
	baz=235,slow=71,SNR=2424						
H03N2	**Juan Fernandez**	**12.38**	**62**	T	T	02 34 44.8	
	baz=235,slow=71,SNR=2231						
H03N1	**Juan Fernandez**	**12.39**	**62**	T	T	02 34 50.1	
	baz=235,slow=71,SNR=2957						
GO07	**Milladeo Hill,**	**14.02**	**108**	Pn	**Pn**	**02 22 27.5**	**-2.0**
LL01	**San Ignacio de**	**14.89**	**105**	Pn	**Pn**	**02 22 42.2**	**+0.8**
LR05	**Currie**	**15.26**	**97**	Pn	**Pn**	**02 22 47.3**	**+0.8**
LL02	**Futaleuf**	**15.35**	**108**		**Pn**	**02 22 48.0**	**+0.5**
PLCA	**Paso Flores**	**16.32**	**99**	LR	LR	02 26 52.7	
	comp=Z,90nm,19.4s,baz=242,slow=28						
BI02	**San Fabin de**	**16.58**	**85**		**Pn**	**02 23 01.5**	**-2.1**
MG05	**Puerto Natales**	**17.76**	**137**		**P**	**02 23 18.6**	**-0.2**
MG05				IAmb	IAmb	02 23 23.7	
	comp=Z,44nm,1.5s						
CO04	**Los Peladeros**	**18.75**	**71**	P	**P**	**02 23 29.5**	**-0.8**
CO04				IAmb	IAmb	02 23 50.9	
	comp=Z,38nm,1.5s						
LCO	**Las Campanas**	**20.66**	**64**	P	**P**	**02 23 51.3**	**+0.2**
LCO				IAmb	IAmb	02 24 02.0	
	comp=Z,23nm,1.2s						
AC05	**El Transito**	**21.07**	**64**		**P**	**02 23 54.3**	**-1.1**
AC05				IAmb	IAmb	02 24 07.2	
	comp=Z,37nm,1.5s						
AC02	**Maricunga**	**23.11**	**62**	P	**P**	**02 24 17.8**	**+0.2**
AC02				IAmb	IAmb	02 24 26.9	
	comp=Z,18nm,1.4s						
NNA	**Nana**	**31.03**	**30**	LR	LR	02 35 05.0	
	comp=Z,122nm,19.1s,baz=204,slow=32						
LPAZ	**La Paz**	**31.50**	**48**	P	**P**	**02 25 32.5**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=216,slow=8.9,SNR=5.3						
LPAZ				LR	LR	02 35 20.5	
	comp=Z,183nm,22.0s,baz=228,slow=31						
	comp=Z,1.8nm,0.7s						
LPAZ	**La Paz**	**31.50**	**48**		**P**	**02 25 34.4**	**+0.6**
LPAZ				IAmb	IAmb	02 25 46.9	
	comp=Z,4.6nm,1.1s						
CPUP	**Villa Florida**	**31.85**	**75**	P	**P**	**02 25 38.7**	**+2.6**
	comp=Z,0.8nm,0.5s,baz=221,slow=11,SNR=3.5						
CPUP				LR	LR	02 36 34.2	
	comp=Z,194nm,21.7s,baz=244,slow=33						
	comp=Z,0.8nm,0.5s						
ATAH	**Atahualpa**	**35.01**	**24**	LR	LR	02 36 54.3	
	comp=Z,128nm,20.7s,baz=228,slow=31						
SIV	**San Ignacio**	**36.03**	**57**	P	**P**	**02 26 11.6**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=232,slow=12,SNR=6.3						
SIV				LR	LR	02 39 33.9	
	comp=Z,179nm,20.8s,baz=290,slow=34						
	comp=Z,1.1nm,0.8s						
CZSB	**Cruzeiro do Su**	**36.55**	**33**	P	**P**	**02 26 18.2**	**+1.3**
CZSB				IAmb	IAmb	02 26 29.3	
	comp=Z,9.6nm,1.3s						
VILB	**Vilhena**	**38.86**	**55**	P	**P**	**02 26 36.3**	**-0.2**
OTAV	**Otavalo**	**42.00**	**20**		**P**	**02 27 03.4**	**+0.4**
OTAV				IAmb	IAmb	02 27 16.5	
	comp=Z,6.1nm,1.0s						
BDFB	**Brasilia**	**45.26**	**70**	LR	LR	02 45 45.9	
	comp=Z,286nm,18.4s,baz=192,slow=36						
ROSC	**El Rosal**	**47.58**	**24**	P	**P**	**02 27 45.0**	**-2.4**
	comp=Z,3.1nm,0.3s,baz=138,slow=9.5,SNR=6.9						
ROSC				LR	LR	02 46 36.0	
	comp=Z,125nm,18.2s,baz=179,slow=35						
	comp=Z,3.1nm,0.3s						
ROSC	**El Rosal**	**47.58**	**24**	P	**P**	**02 27 48.2**	**+0.9**
JTS	**Las Juntas de**	**50.56**	**9**	LR	LR	02 44 12.6	
	comp=Z,124nm,21.4s,baz=37,slow=30						
SNAA	**Sanae**	**52.24**	**156**	LR	LR	02 45 57.5	
	comp=Z,95nm,20.1s,baz=332,slow=30						
SDV	**Santo Domingo**	**52.59**	**27**	LR	LR	02 48 53.3	
	comp=Z,115nm,19.5s,baz=216,slow=34						
SDV	**Santo Domingo**	**52.59**	**27**	P	**P**	**02 28 23.5**	**-1.6**
PPT	**Papeete**	**54.24**	**277**	LR	LR	02 46 53.2	
	comp=Z,86nm,18.8s,baz=182,slow=31						
CMIG	**Matias Romero**	**56.96**	**357**	LR	LR	02 47 19.0	
	comp=Z,69nm,20.4s,baz=231,slow=30						
MDP	**Montagnes des**	**57.70**	**48**	LR	LR	02 51 58.3	
	comp=Z,68nm,18.6s,baz=312,slow=34						
RAR	**Rarotonga**	**59.93**	**267**	LR	LR	02 48 33.2	
	comp=Z,69nm,18.2s,baz=168,slow=29						
RCBR	**Riachuelo**	**60.61**	**71**	LR	LR	02 54 18.2	
	comp=Z,41nm,19.7s,baz=250,slow=35						
URZ	**Urewera**	**67.30**	**239**	LR	LR	02 51 57.1	
	comp=Z,133nm,21.1s,baz=97,slow=29						
TXAR	**Lajitas Array**	**69.93**	**349**	P	**P**	**02 30 20.7**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=158,slow=7.7,SNR=5.4						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**69.93**	**349**	P	**P**	**02 30 22.6**	**+0.3**
TX31	**Lajitas Ar. Sí**	**69.94**	**349**	P	**P**	**02 30 22.7**	**+0.4**
TX31				IAmb	IAmb	02 30 25.1	
	comp=Z,4.1nm,1.4s						
MAW	**Mawson**	**70.94**	**170**	LR	LR	02 59 46.2	
	comp=Z,146nm,18.9s,baz=85,slow=34						
PDAR	**Pinedale Array**	**84.01**	**347**	P	**P**	**02 31 41.6**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=159,slow=5.6,SNR=7.9						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**84.01**	**347**	P	**P**	**02 31 41.3**	**-0.2**
SUR	**Sutherland**	**84.80**	**128**	LR	LR	03 05 47.0	
	comp=Z,23nm,21.9s,baz=198,slow=33						
SADO	**Sadowa**	**85.27**	**9**	LR	LR	03 05 51.4	
	comp=Z,93nm,18.1s,baz=332,slow=33						
BOSA	**Boshof**	**90.16**	**129**	LR	LR	03 10 42.4	
	comp=Z,22nm,19.0s,baz=194,slow=34						
DBIC	**Dimbokro**	**92.04**	**83**	LR	LR	03 11 06.8	
	comp=Z,44nm,18.5s,baz=168,slow=34						
CTA	**Charters Tower**	**99.24**	**234**	LR	LR	03 15 05.9	
	comp=Z,33nm,18.6s,baz=143,slow=34						

VAO ***09*** *02:26:46.9±2.1, 16.87°S×69.71W, h178km, mb4.0, Presumed earthquake*

NEIC ***09*** *02:26:48.5±2.5, 16.91°S±0.08°×69.5W±0.1, h185km±6km, mb4.1/11, ML4.1(GUC), Error ellipse: s-maj=16.9km s-min=10.0km az=119.0*

GUC ***09*** *02:26:48.2±0.8, 16.98°S×69.75W, h190km±4km, ML4.1*

IDC ***09*** *02:26:48.2±1.3, 16.81°S×69.50W, h174km±11km, mb3.2/5, mbtmp3.9/7, Error ellipse: s-maj=26.6km s-min=18.7km az=36.0*

ISC 09 02:26:47.3±0.6, 16.87°S±0.05°×69.56W±0.05°, h179km±6km, n61, σ1°§45/69, mb3.8/8, 1C-3D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.72**	**174**		**Pn**	**02 27 15.0**	**+1.3**
PB18				Sn	**Sn**	**02 27 36.0**	**+1.8**
PB18	**Visviri**	**0.72**	**174**	*i* P	**Pn**	**02 27 15.0**	**+1.3**
PB18				*e*S	**Sn**	**02 27 35.9**	**+1.7**
PB16	**IPOC Station P**	**1.46**	**178**		**Pn**	**02 27 20.8**	**+1.4**
PB16				Sn	**Sn**	**02 27 45.5**	**+1.1**
PB16	**IPOC Station P**	**1.46**	**178**	*e*P	**Pn**	**02 27 20.6**	**+1.1**
PB16				*e*S	**Sn**	**02 27 45.6**	**+1.2**
LPAZ	**La Paz**	**1.48**	**67**	P	**Pn**	**02 27 20.6**	**+0.8**
	396nm,0.5s,baz=273,slow=5.8,SNR=897						
LPAZ				S	**Sn**	**02 27 43.6**	**-1.1**
	133nm,0.9s,baz=170,slow=22,SNR=7.1						
LPAZ	**La Paz**	**1.48**	**67**		**Pn**	**02 27 20.8**	**+1.1**
LPAZ	**La Paz**	**1.48**	**67**	*e*P	**Pn**	**02 27 20.5**	**+0.8**
AP01	**Chacalluta**	**1.67**	**207**	*e*S	**Sn**	**02 27 44.6**	**-2.3**
AP01				IAML		02 27 46.7	
	comp=N,2μm,0.5s						
PB12	**IPOC Station P**	**1.89**	**203**		**Pn**	**02 27 22.5**	**-0.7**
PB12	**IPOC Station P**	**1.89**	**203**	*e*P	**Pn**	**02 27 22.2**	**-0.9**
PB12				*e*S	**Sn**	**02 27 48.4**	**-2.7**
GO01	**Chusmiza**	**2.81**	**173**		**Pn**	**02 27 35.0**	**+0.9**
GO01	**Chusmiza**	**2.81**	**173**	*e*P	**Pn**	**02 27 34.5**	**+0.4**
GO01				IAML		02 28 18.1	
	comp=E,291nm,0.1s						
PB11	**IPOC Station P**	**2.88**	**182**		**Pn**	**02 27 34.5**	**-0.1**
PB11	**IPOC Station P**	**2.88**	**182**	*e*P	**Pn**	**02 27 34.2**	**-0.4**
PB11				IAML		02 28 11.9	
	comp=E,201nm,0.3s						
PB08	**IPOC Station P**	**3.28**	**173**		**Pn**	**02 27 40.4**	**+0.8**
PB08	**IPOC Station P**	**3.28**	**173**	*e*P	**Pn**	**02 27 39.8**	**+0.2**
PB01	**IPOC Station P**	**4.15**	**179**		**Pn**	**02 27 50.0**	**-0.4**
PB02	**IPOC Station P**	**4.44**	**184**		**Pn**	**02 27 53.5**	**-0.6**
PB09	**IPOC Station P**	**4.91**	**177**		**Pn**	**02 28 00.4**	**+0.1**
PB03	**IPOC Station P**	**5.16**	**182**		**Pn**	**02 28 02.7**	**-0.7**
PB06	**IPOC Station P**	**5.81**	**180**		**Pn**	**02 28 10.8**	**-1.1**
PB05	**IPOC Station P**	**5.99**	**186**		**Pn**	**02 28 12.3**	**-1.8**
SIV	**San Ignacio**	**8.19**	**85**	P	**Pn**	**02 28 41.5**	**-1.7**
	comp=E,5.8nm,0.3s,baz=266,slow=8.2,SNR=56						
SIV				S	**Sn**	**02 30 11.2**	**-3.7**
	comp=E,5.1nm,0.8s,baz=162,slow=22,SNR=5.2						
NNA	**Nana**	**8.56**	**304**	P	**Pn**	**02 28 47.4**	**-0.7**
	comp=E,31nm,0.3s,baz=137,slow=12,SNR=20						
NNA				S	**Sn**	**02 30 19.1**	**-4.9**
	comp=E,9.9nm,0.3s,baz=272,slow=11,SNR=4.0						
NNA	**Nana**	**8.56**	**304**		**Pn**	**02 28 47.1**	**-1.0**
VILB	**Vilhena**	**9.84**	**68**	*e*P	**Pn**	**02 29 06.9**	**+2.0**
AC02	**Maricunga**	**9.93**	**178**		**Pn**	**02 29 05.2**	**-1.1**
MURT	**Porto Murtinho**	**12.24**	**115**	*e*P	**Pn**	**02 29 36.7**	**+0.8**
SALV	**Santo Antonio**	**13.34**	**88**	*e*P	**P**	**02 29 52.1**	**-1.1**
AQDB	**Aquidauana**	**13.61**	**107**	*e*P	**Pn**	**02 29 54.0**	**+0.8**
MT01	**Popeta**	**16.99**	**185**	P	**Pn**	**02 30 34.1**	**-0.4**
MT01				IAmb	IAmb	02 31 09.7	
	comp=Z,26nm,1.5s						
PTGB	**Pitanga**	**18.11**	**118**	*e*P	**Pn**	**02 30 46.8**	**-1.0**
SNDB	**Serra Nova Dou**	**18.34**	**77**	*e*P	**P**	**02 30 49.2**	**+0.9**
ITTB	**Itaituba**	**18.39**	**49**	*e*P	**P**	**02 30 49.1**	**+0.2**
ITRB	**Iturama**	**18.45**	**102**	*e*P	**Pn**	**02 30 50.7**	**-1.1**
LDASE	**Londrina, Braz**	**18.48**	**114**	*e*P	**Pn**	**02 30 52.0**	**-0.2**
ITAB	**Concordia**	**19.14**	**126**	P	**P**	**02 30 57.2**	**+0.2**
ITAB				IAmb	IAmb	02 30 58.9	
	comp=Z,15nm,1.1s						
ITAB	**Concordia**	**19.14**	**126**	*e*P	**Pn**	**02 30 58.6**	**-1.2**
IPMB	**Ipameri, GO**	**20.40**	**96**	*e*P	**Pn**	**02 31 10.5**	**-0.1**
BDFB	**Brasilia**	**20.72**	**90**	P	**P**	**02 31 13.5**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=284,slow=11,SNR=3.2						
	comp=Z,3.5nm,0.8s						
BDFB	**Brasilia**	**20.72**	**90**	P	**P**	**02 31 13.2**	**-0.8**
BDFB				IAmb	IAmb	02 31 14.9	
	comp=Z,4.7nm,1.0s						
PLTB	**Pedras Altas**	**20.73**	**139**	P	**P**	**02 31 10.9**	**-3.0**
TRQA	**Tornquist**	**22.14**	**164**	P	**P**	**02 31 29.3**	**+0.8**
TRQA				IAmb	IAmb	02 32 04.7	
	comp=Z,10.0nm,1.3s						
SMTB	**Santa Maria do**	**22.83**	**72**	*e*P	**P**	**02 31 35.8**	**+0.7**
PLCA	**Paso Flores**	**23.80**	**182**	P	**P**	**02 31 45.6**	**+2.0**
	comp=Z,2.1nm,0.9s,baz=7.0,slow=12,SNR=5.4						
	comp=Z,2.1nm,0.9s						
PLCA	**Paso Flores**	**23.80**	**182**	P	**P**	**02 31 45.8**	**+2.1**
JANB	**Januaria**	**24.33**	**89**	*e*P	**P**	**02 31 50.2**	**+1.4**
P61A	**Hammonton**	**56.46**	**355**	P	**P**	**02 36 09.5**	**-0.8**
TXAR	**Lajitas Array**	**56.52**	**324**	P	**P**	**02 36 12.1**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=154,slow=9.0,SNR=4.1						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**56.52**	**324**	P	**P**	**02 36 10.8**	**-0.4**
TUL3	**Leonard**	**58.07**	**335**	P	**P**	**02 36 22.1**	**+0.3**
TUL3				IAmb	IAmb	02 36 52.9	
	comp=Z,3.1nm,0.6s						
VHRN	**Van Horn**	**58.36**	**324**	P	**P**	**02 36 24.6**	**+0.5**
BW06	**Boulder Array**	**69.82**	**330**	P	**P**	**02 37 40.3**	**+1.7**
BW06				IAmb	IAmb	02 37 54.4	
	comp=Z,3.4nm,1.4s						
PDAR	**Pinedale Array**	**69.82**	**330**	P	**P**	**02 37 40.0**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=117,slow=8.5,SNR=11						
	comp=Z,0.3nm,0.4s						
PDAR	**Pinedale Array**	**69.82**	**330**	P	**P**	**02 37 39.9**	**+1.4**
YNE	**Yellowstone No**	**71.72**	**331**	P	**P**	**02 37 51.9**	**+1.9**
YNE				IAmb	IAmb	02 37 53.0	
	comp=Z,3.0nm,1.0s						
YHH	**Holmes Hill**	**71.95**	**330**	P	**P**	**02 37 53.9**	**+2.4**
YKA	**Yellowknife Ar**	**86.64**	**341**	P	**P**	**02 39 11.5**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=139,slow=4.7,SNR=0.9						
	comp=Z,0.5nm,0.6s						
HILR	**Hailar Array B**	**146.53**	**349**	PKPbc	**PKPab**	**02 46 09.1**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=34,slow=2.6,SNR=3.0						
SONM	**Songino Array**	**148.94**	**5**	PKPbc	**PKiKP**	**02 46 15.3**	**0.0**
	comp=Z,1.0nm,0.6s,baz=14,slow=1.3,SNR=7.2						
SONM	**Songino Array**	**148.94**	**5**		**PKiKP**	**02 46 15.8**	**+0.5**

TRN 09 02:30:22.8, 16.84N×60.18W, h70km, MD3.5, Far North-east of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSDZ	**La Diserade, G**	**1.00**	**238**	*e*P	Pn	02 30 42.9	+1.6
DSDZ				*e*S	Sn	02 30 57.3	+2.3
DHSZ	**Broadband at M**	**1.62**	**250**	*e*P	Pn	02 30 51.3	+1.9
DHSZ				*e*S	Sn	02 31 11.8	+2.4
MMLZ	**Guadeloupe Bro**	**1.63**	**241**	*e*P	Pn	02 30 50.5	+0.9
MMLZ				*e*S	Sn	02 31 12.2	+2.4
ATGZ	**Broadband at L**	**1.66**	**244**	*e*P	Pn	02 30 51.3	+1.4
ATGZ				*e*S	Sn	02 31 12.0	+1.7
DWS	**Wesley**	**1.67**	**221**	*e*P	Pn	02 30 50.5	+0.5
TBG	**Guadaloupe-3**	**1.72**	**235**	*e*P	Pn	02 30 53.0	+2.4
ANWB	**Willy Bob**	**1.74**	**298**	*e*P	Pn	02 30 52.5	+1.6
ANWB				*e*S	Sn	02 31 13.5	+1.1
DSLB	**Salisbury**	**1.83**	**221**	*e*P	Pn	02 30 53.7	+1.4
DSLB				*e*S	Sn	02 31 16.5	+1.8
MBWH	**Windy Hill**	**1.93**	**267**	*e*P	Pn	02 30 55.1	+1.6
MBFL	**Flemmings, Mon**	**1.95**	**268**	*e*P	Pn	02 30 56.3	+2.5
BIM	**Bigot**	**2.46**	**200**	*e*P	Pn	02 31 02.9	+2.1
BIM				*e*S	Sn	02 31 30.6	+0.7
SKI	**Saint Kitts**	**2.50**	**282**	*e*P	Pn	02 31 02.6	+1.4
SKI				*e*S	Sn	02 31 32.0	+1.4

IDC 09 02:38:07.6±1.6, 2.99°S×129.98°E, h0km, mb3.3/2, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=49.2km s-min=22.6km az=96.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.47**	**31**	Pn	Pn	02 38 50.1	+0.9
	5.8nm,0.3s,baz=232,slow=17,SNR=10						
SIJI				Sn	Sn	02 39 19.5	-0.6
	5.3nm,0.3s,baz=201,slow=23,SNR=6.2						
	11nm,0.2s						
WRA	**Warramunga Arr**	**17.38**	**166**	P	Pn	02 42 09.9	-1.8
	0.2nm,0.3s,baz=349,slow=12,SNR=8.7						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**20.90**	**170**	P	P	02 42 52.5	+0.7
	1.5nm,0.5s,baz=347,slow=11,SNR=34						
	1.5nm,0.5s						
MKAR	**Makanchi Array**	**64.90**	**326**	P	P	02 48 48.8	-0.1
	0.1nm,0.3s,baz=130,slow=6.7,SNR=1.2						
	0.1nm,0.3s						

IDC ***09*** *02:41:10.8±0.7, 6.70°N×72.90W, h158km±8km, mb3.3/5, mbtmp3.9/8, Error ellipse: s-maj=26.5km s-min=7.5km az=131.0*

RSNC ***09*** *02:41:11.9±0.0, 7°N±1°×7°3W±°, h152km±2km, M4.1, mB4.9, mb4.5, ML3.7, Mw(mB)4.2*

FUNV ***09*** *02:41:11.3, 6.79°N×73.16W, h169km, MW4.4, Presumed earthquake*

NEIC ***09*** *02:41:12.3±1.6, 6.77°N±0.09°×72.99W±0.02, h159km±9km, mb4.2/15, Error ellipse: s-maj=12.8km s-min=2.6km az=183.0*

CATAC ***09*** *02:41:14.4±1.1, 7°N±2°×7°4W±°, h6km±8km, M4.4/7, mb4.6/1, mB5.0/1, MLv4.3/7, Mw(mB)4.3/1, Error ellipse: s-maj=11.0km s-min=4.0km az=92.9, confirmed*

ISC 09 02:41:11.7±0.6, 6.86N±0.03°×73.12W±0.04, h153km±5km, n106, σ1°§61/140, mb4.0/14, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**193**	P	**Pn**	**02 41 32.8**	**0.0**
BARC				S	**Sn**	**02 41 46.9**	**-2.0**
BRJC	**Barrancabermej**	**0.63**	**280**	P	**Pn**	**02 41 34.4**	**+0.3**
BRJC				S	**Sn**	**02 41 51.6**	**+0.5**
PAMC	**Pamplona, Colo**	**0.63**	**41**	P	**Pn**	**02 41 35.6**	**+0.9**
PAMC				S	**Sn**	**02 41 52.9**	**+0.7**
RUSC	**La Rusia**	**0.96**	**178**	P	**Pn**	**02 41 36.7**	**-0.4**
RUSC				S	**Sn**	**02 41 55.6**	**-0.7**
RUSC	**La Rusia**	**0.96**	**178**	P	**Pn**	**02 41 36.6**	**-0.4**
RUSC				S	**Sn**	**02 41 55.0**	**-1.4**
RUSC	**La Rusia**	**0.96**	**178**	*e*P	**Pn**	**02 41 36.8**	**-0.3**
RUSC				*e*S	**Sn**	**02 41 55.4**	**-1.0**
CAPV	**Capacho**	**1.28**	**39**	*e*P	**Pn**	**02 41 40.8**	**+1.3**
CAPV				*e*S	**Sn**	**02 42 01.0**	**+0.2**
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	P	**Pn**	**02 41 39.1**	**-1.0**
PTBC				S	**Sn**	**02 42 00.2**	**-1.7**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**02 41 40.8**	**+0.3**
OCAC				S	**Sn**	**02 42 02.5**	**-0.1**
SPBC	**San Pablo de B**	**1.53**	**218**	P	**Pn**	**02 41 41.4**	**-0.5**
SPBC				S	**Sn**	**02 42 03.1**	**-2.0**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**02 41 50.5**	**-0.5**
CHIC				S	**Sn**	**02 42 20.0**	**-1.2**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**02 41 52.5**	**+1.1**
	672nm,0.3s,baz=300,slow=23,SNR=869						
ROSC				S	**Sn**	**02 42 21.4**	**-0.5**
	529nm,0.5s,baz=126,slow=19,SNR=10						
ROSC	**El Rosal**	**2.34**	**211**		**Pn**	**02 41 52.4**	**+1.0**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**02 41 52.2**	**+0.8**
ROSC				S	**Sn**	**02 42 21.5**	**-0.5**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**02 41 54.0**	**+0.4**
CVER				S	**Sn**	**02 42 26.1**	**+0.2**
UREC	**San Jos de Ur**	**2.55**	**290**	P	**Pn**	**02 41 52.4**	**-1.2**
UREC				S	**Sn**	**02 42 23.9**	**-2.1**
SOCV	**Socops**	**2.65**	**58**	*e*P	**Pn**	**02 41 55.7**	**+0.9**
VILC	**Villavicencio,**	**2.79**	**192**	P	**Pn**	**02 41 56.6**	**-0.7**
VILC				S	**Sn**	**02 42 30.1**	**-1.4**
NIZA	**Niza - Manizal**	**2.95**	**233**	P	**Pn**	**02 42 00.0**	**+1.2**
NIZA				S	**Sn**	**02 42 36.8**	**+1.6**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P	**Pn**	**02 42 00.2**	**+0.3**
CBOC				S	**Sn**	**02 42 35.4**	**-1.7**
DBBC	**Dabeiba**	**3.07**	**273**	P	**Pn**	**02 42 00.1**	**-0.1**
DBBC				S	**Sn**	**02 42 35.6**	**-2.1**
ARGC	**Ariguani, Magd**	**3.18**	**340**	P	**Pn**	**02 42 02.8**	**+1.3**
ARGC				S	**Sn**	**02 42 41.1**	**+1.0**
SDV	**Santo Domingo**	**3.18**	**51**	P	**Pn**	**02 42 01.7**	**+0.1**
	75nm,0.3s,baz=204,slow=3.5,SNR=139						
SDV				S	**Sn**	**02 42 38.4**	**-2.0**
	349nm,0.4s,baz=55,slow=22,SNR=44						
SDV	**Santo Domingo**	**3.18**	**51**		**Pn**	**02 42 02.4**	**+0.8**
SDV	**Santo Domingo**	**3.18**	**51**	P	**Pn**	**02 42 02.4**	**+0.8**
SDV				S	**Sn**	**02 42 38.9**	**-1.4**
SDV	**Santo Domingo**	**3.18**	**51**	*e*P	**Pn**	**02 42 02.5**	**+0.8**
SDV				*e*S	**Sn**	**02 42 39.7**	**-0.6**
MCQV	**Machiques**	**3.22**	**10**	*e*P	**Pn**	**02 42 02.5**	**+0.5**
APAC	**Apartado, Choc**	**3.58**	**287**	P	**Pn**	**02 42 06.6**	**0.0**
APAC				S	**Sn**	**02 42 46.0**	**-3.3**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**02 42 05.5**	**-1.2**
PRAC				S	**Sn**	**02 42 48.5**	**-1.0**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**02 42 05.5**	**-1.2**
PRAC				S	**Sn**

	comp=Z,32nm,1.0s								
MOAC	**Moa**			**13.83**	**353**	*i* P	**P**	**02 44 26.7**	**+1.9**
MOAC						IAML		02 44 42.9	
	comp=Z,21nm,1.0s								
HLGC	**Holguin**			**14.23**	**349**	*i* P	**P**	**02 44 32.9**	**+3.6**
HLGC						IAML		02 44 57.4	
	comp=Z,69nm,1.0s								
CCCC	**Cccc**			**14.95**	**343**	*i* P	**P**	**02 44 41.2**	**+4.1**
CCCC						IAML		02 45 09.1	
	comp=Z,27nm,1.0s								
WVT	**Waverly**			**32.10**	**337**	P	**P**	**02 47 24.9**	**+0.6**
WVT						IAmb	IAmb	02 48 08.1	
	comp=Z,8.1nm,1.4s								
BRDY	**Brady**			**34.30**	**318**	P	**P**	**02 47 43.5**	**-0.1**
BRDY						IAmb	IAmb	02 47 43.9	
	comp=Z,1.9nm,0.7s								
KSPA	**Keystone Colle**			**34.63**	**357**	P	**P**	**02 47 48.3**	**+2.0**
TXAR	**Lajitas Array**			**36.44**	**312**	P	**P**	**02 48 02.5**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=127,slow=9.2,SNR=12								
	comp=Z,0.8nm,0.6s								
TXAR	**Lajitas Array**			**36.44**	**312**	P	**P**	**02 48 02.1**	**+0.1**
TX31	**Lajitas Ar. Si**			**36.44**	**312**	P	**P**	**02 48 02.5**	**+0.5**
MNTX	**Cornudas Mount**			**38.95**	**314**	P	**P**	**02 48 23.5**	**+0.5**
MNTX						IAmb	IAmb	02 48 25.1	
	comp=Z,1.9nm,0.7s								
D62A	**Allapoint, All**			**40.23**	**4**	P	**P**	**02 48 34.5**	**+1.3**
D62A						IAmb	IAmb	02 49 03.0	
	comp=Z,19nm,1.5s								
BATG	**Bathurst New B**			**40.72**	**7**	P	**P**	**02 48 38.2**	**+0.9**
LDAQ	**Lac Daran**			**40.99**	**2**	P	**P**	**02 48 40.1**	**+0.5**
Y14A	**Wickenburg**			**45.62**	**312**	P	**P**	**02 49 18.1**	**+1.1**
PDAR	**Pinedale Array**			**48.05**	**324**	P	**P**	**02 49 36.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=123,slow=9.0,SNR=6.1								
	comp=Z,0.4nm,0.6s								
SCHQ	**Schefferville**			**48.10**	**5**	P	**P**	**02 49 35.6**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=207,slow=9.3,SNR=4.7								
	comp=Z,2.8nm,0.7s								
BGU	**Big Grassy Mou**			**49.11**	**320**	P	**P**	**02 49 44.5**	**+0.5**
DGMT	**Dagmar**			**49.12**	**333**	P	**P**	**02 49 44.9**	**+1.2**
DGMT						IAmb	IAmb	02 49 45.6	
	comp=Z,5.5nm,0.7s								
LRMC	**Laurel Mtn Rad**			**49.76**	**311**	IAmb	IAmb	02 49 53.7	
	comp=Z,8.9nm,0.8s								
DSP	**Deep Springs**			**50.76**	**313**	P	**P**	**02 49 56.5**	**+0.2**
DSP						IAmb	IAmb	02 49 57.9	
	comp=Z,4.9nm,1.2s								
FFC	**Flin Flon**			**53.05**	**339**	P	**P**	**02 50 12.6**	**-0.2**
YKA	**Yellowknife Ar**			**63.23**	**340**	P	**P**	**02 51 23.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=134,slow=5.9,SNR=16								
	comp=Z,0.6nm,0.6s								
YKA	**Yellowknife Ar**			**63.23**	**340**	P	**P**	**02 51 23.2**	**-0.3**
YKAW3	**Yellowknife Wh**			**63.27**	**340**	P	**P**	**02 51 24.2**	**+0.5**
YKAW3						IAmb	IAmb	02 51 25.7	
	comp=Z,1.9nm,1.0s								
F31M	**Tsiigehtchic**			**72.70**	**339**	P	**P**	**02 52 22.9**	**+0.4**
F31M						IAmb	IAmb	02 52 28.2	
	comp=Z,3.5nm,1.3s								
ILAR	**Eielson Array**			**76.93**	**335**	P	**P**	**02 52 47.7**	**+0.8**
	comp=Z,0.5nm,1.0s,baz=108,slow=7.9,SNR=4.5								
	comp=Z,0.5nm,1.0s								
ASAR	**Alice Springs**			**149.13**	**234**	PKPbc	**PKPbc**	**03 00 41.4**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=117,slow=3.5,SNR=19								
WRA	**Warramunga Arr**			**150.36**	**241**	PKPbc	**PKPbc**	**03 00 44.0**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=109,slow=2.7,SNR=28								
WRA	**Warramunga Arr**			**150.36**	**241**		**PKPbc**	**03 00 44.4**	**-1.5**
WB0	**Warramunga Arr**			**150.38**	**242**	PKPbc	**PKPbc**	**03 00 44.6**	**-1.4**

*DJA **09** 02:45:46.6±0.3, 9°S±4°×11°9E±°, h87km±8km, M4.6/22, mB5.2/4, mb4.5/10, MLv4.6/22, Mw(mB)4.6/4*
*IDC **09** 02:45:52.3±2.0, 8°.86S×119°.66E, h157km±18km, mb3.3/7, mbtmp3.8/9, Error ellipse: s-maj=32.0km s-min=9.9km az=55.0*
ISC 09 02:45:44.7±0.8, 9°37S±0°.06×119°12E±0°.06, h100km, n41, σ2s34/38, mb3.6/7, 1D, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.38**	**135**	P	**Pn**	**02 46 01.6**	**+1.8**
DBNI	**Kabupaten Domp**	**1.17**	**317**	P	**Pn**	**02 46 08.0**	**+0.9**
WSI	**Waingapu**	**1.20**	**104**	P	**Pn**	**02 46 09.5**	**+2.1**
PLAI	**Plampang**	**1.43**	**292**	P	**Pn**	**02 46 11.3**	**+1.2**
PLAI	**Plampang**	**1.43**	**292**	P	**Pn**	**02 46 11.1**	**+1.0**
BASI	**Baing, Sumba**	**1.67**	**121**	P	**Pn**	**02 46 15.9**	**+2.8**
EDFI	**Ende, Flores**	**2.62**	**77**	P	**Pn**	**02 46 27.2**	**+1.8**
MMRI	**Maumere**	**3.17**	**77**	P	**Pn**	**02 46 35.3**	**+2.6**
MMRI	**Maumere**	**3.17**	**77**	P	**Pn**	**02 46 34.8**	**+2.1**
BSSI	**Bau Bau, Buton**	**3.48**	**23**	P	**Pn**	**02 46 37.6**	**+0.7**
DNP	**Denpasar**	**3.92**	**280**	P	**Pn**	**02 46 44.2**	**+1.4**
MKS	**Makassar**	**4.14**	**5**	P	**Pn**	**02 46 47.0**	**+1.2**
RTBI	**Rangdo, Negare**	**4.22**	**282**	P	**Pn**	**02 46 47.8**	**+0.9**
KAPI	**Kapang**	**4.37**	**8**	P	**Pn**	**02 46 50.1**	**+1.2**
	16nm,0.3s,baz=167,slow=4.0,SNR=26						
KAPI				S	**Sn**	**02 47 36.1**	**-2.7**
	128nm,0.4s,baz=70,slow=23,SNR=34						
KAPI	**Kappang**	**4.37**	**8**	P	**Pn**	**02 46 50.3**	**+1.4**
BATI	**Baumata**	**4.56**	**101**	P	**Pn**	**02 46 54.2**	**+2.7**
	125nm,0.3s,baz=292,slow=1.3,SNR=17						
BATI				S	**Sn**	**02 47 44.7**	**+1.3**
	90nm,0.3s,baz=49,slow=23,SNR=10						
BATI	**Baumata**	**4.56**	**101**	P	**Pn**	**02 46 54.6**	**+3.1**
JAGI	**Jajag, Banyuwa**	**4.99**	**280**	P	**Pn**	**02 46 56.8**	**-0.4**
JAGI	**Jajag, Banyuwa**	**4.99**	**280**	P	**Pn**	**02 46 56.4**	**-0.8**
SOEI	**Soe**	**5.09**	**95**	P	**Pn**	**02 47 01.8**	**+3.0**
	0.6nm2µm62nm,0.8s						
TTSI	**Tana Toraja**	**6.32**	**6**	P	**Pn**	**02 47 18.2**	**+2.8**
	0.1nm23nm,0.5s						
SNJI	**Sawahan-Nganju**	**7.44**	**282**	P	**Pn**	**02 47 32.9**	**+2.1**
SJI	**Sawahan**	**7.45**	**282**	P	**Pn**	**02 47 32.9**	**+2.1**
	3µm32nm,0.7s						
PCJI	**Pacitan**	**7.93**	**278**	P	**Pn**	**02 47 38.4**	**+1.1**
	0.3nm36nm,0.9s						
UGM	**Wanagama**	**8.62**	**279**	P	**Pn**	**02 47 45.7**	**+0.8**
UGM	**Wanagama**	**8.62**	**279**	P	**Pn**	**02 47 47.2**	**+0.5**
FITZ	**Fitzroy Crossi**	**10.74**	**145**	S	**Sn**	**02 50 10.6**	**-3.3**
	13nm,0.5s,baz=182,slow=20,SNR=12						
BBJI	**Bungbulang**	**11.50**	**279**	P	**Pn**	**02 48 26.9**	**+1.0**
LEM	**Lembang**	**11.66**	**282**	P	Pn	02 48 40.3	+12
	37nm,0.3s,baz=148,slow=16,SNR=3.7						
WRA	**Warramunga Arr**	**18.08**	**127**	P	**Pn**	**02 49 50.9**	**+1.4**
	1.2nm,0.5s,baz=303,slow=14,SNR=15						
WRA				S	**S**	**02 53 02.1**	**-8.7**
	2.9nm,0.9s,baz=303,slow=25,SNR=6.9						
ASAR	**Alice Springs**	**20.05**	**137**	P	Pn	02 50 13.6	+0.9
	2.2nm,0.5s,baz=314,slow=10,SNR=44						
	2.2nm,0.5s						
H08S2	**Diego Garcia H**	**46.12**	**268**	T	T	03 43 33.8	
	baz=96,slow=76,SNR=5.9						
H08S3	**Diego Garcia H**	**46.13**	**268**	T	T	03 43 34.5	
	baz=96,slow=76,SNR=7.8						
H08S1	**Diego Garcia H**	**46.13**	**268**	T	T	03 43 30.5	
	baz=96,slow=76,SNR=3.7						
LZDM	**Lanzhou Array**	**47.37**	**343**	P	**P**	**02 54 09.3**	**+0.1**
	0.3nm,0.3s,baz=135,slow=14,SNR=1.5						
	0.3nm,0.3s						
BNX	**BinXian**	**55.36**	**7**	⇓P	P	02 55 14.1	+5.9
BNX				pmax	pmax		
	comp=Z,7.0nm,1.9s						
SONM	**Songino Array**	**58.06**	**350**	P	**P**	**02 55 25.9**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=171,slow=7.5,SNR=7.2						
	comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	**64.83**	**333**	P	**P**	**02 56 12.1**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=156,slow=6.5,SNR=8.7						
	comp=Z,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**69.35**	**334**	P	**P**	**02 56 41.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=134,slow=5.4,SNR=4.6						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**69.42**	**339**	P	**P**	**02 56 41.5**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=165,slow=6.0,SNR=2.1						
	comp=Z,0.3nm,0.3s						
BVAR	**Borovoye Array**	**74.67**	**332**	P	**P**	**02 57 15.2**	**+2.0**
	comp=Z,0.3nm,0.4s,baz=141,slow=7.1,SNR=2.6						
	comp=Z,0.3nm,0.4s						

*AFAD **09** 02:50:28.2, 37°.89N×27°.26E, h7km±21km, ML1.1*
ISK 09 02:50:13.0, 37°.28N×26°.44E, h13km, ML2.0/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.73**	**107**	Pg	Pb	02 50 28.1	+0.6
BODT				Sg	Sb	02 50 38.1	+0.7
APE	**Apeiranthos**	**0.76**	**254**	Pg	Pb	02 50 28.3	+0.2
APE				Sg	Sb	02 50 39.2	+0.9
GCAM	**G?zelcaml?**	**0.76**	**56**	Pg	Pb	02 50 28.1	+0.1
GCAM				Sg	Sb	02 50 39.0	+0.8
GCAM	**G?zelcaml?**	**0.76**	**56**	P	Pb	02 50 28.5	+0.5
GCAM				S	Sb	02 50 38.0	-0.2
GCAM				IAML		02 50 43.0	
	comp=E,55nm,0.2s						
GCAM				IAML		02 50 44.0	
	comp=N,82nm,0.7s						
DGB	**zmir**	**0.85**	**24**	P	Pn	02 50 32.1	+1.5
DGB				S	Sn	02 50 42.0	-0.9
DGB				IAML		02 50 46.0	
	comp=E,47nm,0.2s						
DGB				IAML		02 50 50.0	
	comp=N,29nm,1.1s						
DAT	**Datca**	**1.06**	**121**	Pg	Pn	02 50 34.1	+0.4
DAT				Sg	Sn	02 50 48.7	+0.4
DUVT	**Torbali**	**1.23**	**40**	P	Pg	02 50 37.6	+0.9
DUVT				IAML		02 50 57.0	
	comp=E,14nm,0.3s						
IZMR	**zmir-demi**	**1.47**	**54**	P	Pn	02 50 39.1	-0.1
IZMR				S	Sn	02 50 56.6	-1.7
IZMR				IAML		02 51 03.0	
	comp=E,11nm,1.5s						
IZMR				IAML		02 51 25.0	
	comp=N,11nm,1.9s						
YER	**Yerkesik**	**1.48**	**95**	Pn	Pb	02 50 40.3	0.0
YER				Sn	Sb	02 50 59.7	+0.7
TURN	**Turunc**	**1.53**	**109**	Pn	Pb	02 50 40.7	-0.4
ARG	**Arkhangelos**	**1.72**	**128**	Pn	Pn	02 50 43.4	+0.8

IDC 09 03:15:56.4±2.4, 6°.38S×129°.20E, h0km, mb3.1/1, mbtmp3.3/4, ML3.2/3, MS3.4/1, Error ellipse: s-maj=95.6km s-min=30.3km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.16**	**196**	Pn	Pn	03 18 50.9	-0.2
	0.1nm,0.3s,baz=13,slow=9.8,SNR=2.1						
FITZ				Sn	Sn	03 20 54.5	-13
	0.1nm,0.3s,baz=107,slow=16,SNR=2.0						
	4.6nm,1.1s						
WRA	**Warramunga Arr**	**14.38**	**160**	Pn	Pn	03 19 22.4	+1.0
	0.2nm,0.3s,baz=339,slow=12,SNR=7.8						
WRA				Sn	Sn	03 21 46.2	-16
	0.2nm,0.3s,baz=338,slow=21,SNR=5.9						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.78**	**166**	P	Pn	03 20 04.8	-0.7
	baz=341,slow=11,SNR=4.1						
	0.3nm,0.7s						
JOW	**Kunigami**	**33.02**	**358**	LR	LR	03 34 01.9	
	comp=Z,66nm,19.7s,baz=272,slow=33						
MKAR	**Makanchi Array**	**67.27**	**327**	P	P	03 26 53.1	+0.1
	0.1nm,0.4s,baz=119,slow=9.1,SNR=1.3						
	0.1nm,0.4s						

*IDC **09** 03:22:43.4±1.2, 49°.73N×18°.57E, h0km, mbtmp3.2/5, ML2.1/4, Error ellipse: s-maj=21.9km s-min=9.1km az=151.0*
*VIE **09** 03:22:43.1±0.3, 49°.89N×18°.56E, h0km, mb2.6/8, ml2.9/9, Error ellipse: s-maj=3.5km s-min=2.0km az=157.0 23 km ENE of Ostrava Suspected Mining induced.*
*KRSZO **09** 03:22:43.5±0.8, 49°.83N×18°.57E, h2km, ML2.9/12, Error ellipse: s-maj=6.1km s-min=3.6km az=4.0*
*IPEC **09** 03:22:43.7±0.3, 49°.83N×18°.55E, h1km, ML2.7/6, Error ellipse: s-maj=1.8km s-min=1.4km az=73.0*
*PRU **09** 03:22:44.1, 49°.81N×18°.49E, h0km, Mining Induced Event Csm, E=3.7e+06*
*BGR **09** 03:22:46.8±1.4, 49°.80N×18°.32E, h1km, ML3.1/12, Error ellipse: s-maj=24.5km s-min=13.3km az=43.0*
ISC 09 03:22:42.0±0.7, 49°.88N±0°.03×18°.53E±0°.02, h0km, n83, σ0s88/118, 6C-7D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.25**	**260**	*e*PG	**Pb**	**03 22 49.1**	**-0.4**
OKC				*e*SG	**Sb**	**03 22 53.0**	**-1.4**
	comp=Z,182nm,0.5s						
RAC	**Raciborz**	**0.29**	**313**	*e*PG	**Pb**	**03 22 50.9**	**+0.7**
RAC				*e*SG	**Sb**	**03 22 56.7**	**+1.0**
STEB	**Steborice**	**0.49**	**276**	*e*PG	**Pb**	**03 22 53.3**	**-0.3**
STEB				*e*SG	**Sb**	**03 23 00.4**	**-0.9**
	comp=Z,159nm,0.4s						
MORC	**Moravsky Berou**	**0.65**	**261**	⇓P	**Pb**	**03 22 56.3**	**0.0**
MORC				⇑S	**Sb**	**03 23 05.4**	**-0.5**
MORC	**Moravsky Berou**	**0.65**	**261**	*e*Pg	**Pb**	**03 22 56.2**	**0.0**
	baz=85						
MORC				*e*Sg	**Sg**	**03 23 04.3**	**+1.5**
	116nm,0.4s,baz=85						
MORC	**Moravsky Berou**	**0.65**	**261**	*e*PG	**Pb**	**03 22 56.3**	**0.0**
MORC				*e*SG	**Sg**	**03 23 04.4**	**+1.6**
ANAC	**Anensky vrch**	**0.77**	**285**	*e*Pg	**Pb**	**03 22 58.8**	**+0.5**
	baz=108						
ANAC				*e*Sg	**Sb**	**03 23 08.6**	**-0.7**
	155nm,0.4s,baz=108						
LOSC	**Losov**	**0.80**	**251**	*e*Pg	**Pb**	**03 22 58.7**	**0.0**
	baz=74						
LOSC				*e*Sg	**Sg**	**03 23 08.5**	**+0.9**
	139nm,0.3s,baz=74						
OJC	**Ojcow**	**0.88**	**67**	*e*Pg	**Pb**	**03 22 59.9**	**-0.4**
OJC				*e*Sg	**Sb**	**03 23 12.5**	**-0.2**
LANS	**Liptovska Anna**	**0.95**	**140**	*e*PG	**Pb**	**03 23 01.0**	**-0.5**
LANS				*e*SG	**Sb**	**03 23 14.3**	**-0.4**
LANS				*e*LG	Lg	03 23 17.5	
JAVC	**Velka Javorina**	**1.17**	**209**	Pn	**Pn**	**03 23 05.8**	**+0.1**
JAVC				Lg	Lg	03 23 20.6	
JAVC	**Velka Javorina**	**1.17**	**209**	*e*Pg	**Pn**	**03 23 05.4**	**-0.3**
	baz=30						
JAVC	**Velka Javorina**	**1.17**	**209**	*e*PG	**Pn**	**03 23 05.5**	**-0.3**
NIE	**Niedzica**	**1.24**	**111**	*e*Pg	**Pn**	**03 23 06.3**	**-0.4**
NIE				*e*Sg	**Sn**	**03 23 24.2**	**+0.1**
NIE	**Niedzica**	**1.24**	**111**	Pg	**Pn**	**03 23 06.5**	**-0.1**
NIE				Sn	**Sn**	**03 23 24.0**	**-0.1**
VRAC	**Vranov**	**1.39**	**246**	Pg	**Pb**	**03 23 08.8**	**0.0**
	11nm,0.3s,baz=67,slow=15,SNR=95						
VRAC				Lg	Lg	03 23 27.1	
	29nm,0.3s,baz=171,slow=22,SNR=15						
VRAC	**Vranov**	**1.39**	**246**	⇓P	**Pn**	**03 23 08.3**	**-0.3**
VRAC				⇑S	**Sb**	**03 23 27.2**	**+0.1**
VRAC	**Vranov**	**1.39**	**246**	Pn	**Pg**	**03 23 08.6**	**0.0**
VRAC	**Vranov**	**1.39**	**246**	*e*Pg	**Pb**	**03 23 09.3**	**+0.5**
	baz=67						
VRAC				*e*Sg	**Sg**	**03 23 26.7**	**+0.2**
	82nm,0.3s,baz=67						
DPC	**Dobruska-Polom**	**1.50**	**289**	*e*PG	**Pg**	**03 23 11.0**	**+0.3**
DPC				*e*SG	**Sn**	**03 23 30.9**	**+0.5**
	comp=Z,56nm,0.2s						
KRUC	**Moravsky**	**1.62**	**240**	Pn	**Pb**	**03 23 12.4**	**-0.3**
KRUC	**Moravsky**	**1.62**	**240**	*e*Pg	**Pb**	**03 23 12.5**	**-0.3**
	baz=61						
KRUC				*e*Sg	**Sn**	**03 23 33.5**	**+0.2**
	59nm,0.2s,baz=61						
KRUC	**Moravsky**	**1.62**	**240**	*e*PG	**Pb**	**03 23 12.6**	**-0.1**
KRUC				*e*SG	**Sn**	**03 23 33.6**	**+0.2**
OSTC	**Ostas**	**1.63**	**295**	*e*PG	**Pg**	**03 23 13.9**	**+0.6**
OSTC				*e*SG	**Sg**	**03 23 36.3**	**+1.9**
	comp=Z,98nm,0.9s						
MODS	**Modra-Piesok**	**1.72**	**209**	*e*PG	**Pn**	**03 23 13.6**	**+0.3**
MODS				*e*SN	**Sn**	**03 23 36.3**	**+0.4**
MODS				*e*LG	Lg	03 23 37.1	
KSP	**Ksiaz**	**1.73**	**305**	*e*Pg	**Pb**	**03 23 14.5**	**-0.1**
KSP				*e*Sg	**Sg**	**03 23 37.7**	**+0.3**
KSP	**Ksiaz**	**1.73**	**305**	Pn	**Pb**	**03 23 14.4**	**-0.1**
KSP				Lg	Lg	03 23 37.6	
UPC	**Upice**	**1.73**	**292**	*e*SG	**Sg**	**03 23 38.7**	**+1.0**
	comp=Z,66nm,0.8s						
CHVC	**Chvalec**	**1.74**	**295**	*e*PG	**Pb**	**03 23 14.9**	**+0.1**
KECS	**Kecovo**	**1.90**	**137**	Pn	**Pn**	**03 23 15.6**	**-0.1**
KECS				Sn	**Sn**	**03 23 39.6**	**-0.8**
KECS	**Kecovo**	**1.90**	**137**	*e*PN	**Pn**	**03 23 15.5**	**-0.2**
KECS				*e*SN	**Sn**	**03 23 40.6**	**+0.3**
KECS				*e*LG	Lg	03 23 40.9	
ZST	**Bratislava**	**1.93**	**210**	Pn	**Pn**	**03 23 16.0**	**-0.2**
ZST	**Bratislava**	**1.93**	**210**	*e*PN	**Pn**	**03 23 16.6**	**+0.5**
ZST				*e*SN	**Sn**	**03 23 41.2**	**+0.1**
ZST				*e*LG	Lg	03 23 42.3	
TREC	**Trest**	**2.07**	**255**	*e*SG	**Sb**	**03 23 47.5**	**+0.9**
TREC	**Trest**	**2.07**	**255**	Pn	**Pn**	**03 23 18.5**	**+0.5**
SRO	**Srobarova**	**2.08**	**184**	*e*PN	**Pn**	**03 23 18.4**	**+0.3**
SRO				*e*SN	**Sn**	**03 23 44.6**	**-0.1**
SRO				*e*LG	Lg	03 23 45.0	
PSZ	**Piszkesteto**	**2.16**	**155**	⇑P	**Pn**	**03 23 19.4**	**0.0**
PSZ	**Piszkesteto**	**2.16**	**155**	Pn	**Pn**	**03 23 20.1**	**+0.7**
ABAH	**Abaujker**	**2.39**	**131**	Pn	**Pn**	**03 23 22.4**	**+0.1**
CSKK	**Cskako**	**2.53**	**184**	Pn	**Pn**	**03 23 25.1**	**+0.7**
PRU	**Pruhonice**	**2.58**	**274**	*e*PN	**Pn**	**03 23 24.9**	**-0.1**
PRU				*e*SG	**Sb**	**03 24 03.1**	**+1.7**
	comp=Z,23nm,0.9s						
PVCC	**Panska Ves**	**2.62**	**286**	*e*PG	**Pg**	**03 23 31.6**	**-0.7**
CONA	**Conrad Observa**	**2.63**	**223**	*e*Pn	**Pn**	**03 23 25.6**	**-0.2**
	2.3nm,0.3s,SNR=11						
CONA				Sn	**Sn**	**03 23 58.3**	**-0.2**
	2.8nm,0.2s						
RONA	**Rosalia, Austr**	**2.64**	**215**	*e*Pn	**Pn**	**03 23 26.3**	**+0.4**
	2.2nm,0.2s,SNR=18						
RONA				*e*Sn	**Sn**	**03 23 58.1**	**-0.5**
	13nm,0.5s						
PRA	**Prague**	**2.65**	**276**	*e*SG	**Sg**	**03 24 06.9**	**-0.3**
KWP	**Kalwaria Pacla**	**2.72**	**94**	Pg	**Pg**	**03 23 38.1**	**+4.0**
MPLH	**Magyarpolny**	**2.79**	**194**	Pn	**Pn**	**03 23 28.1**	**+0.2**
CKRC	**Cesky Krumlov**	**2.96**	**251**	*e*PN	**Pn**	**03 23 30.7**	**+0.4**
CKRC				*e*PG	**Pb**	**03 23 36.7**	**+1.1**
CKRC				*e*SG	**Sg**	**03 24 15.2**	**-1.8**
	comp=Z,24nm,0.7s						
BRG	**Berggiesshubel**	**3.10**	**290**	*e*Sg	**Sg**	**03 24 22.0**	**+0.5**
BRG	**Berggiesshubel**	**3.10**	**290**	Pg	**Pg**	**03 23 40.6**	**-0.8**
BRG				Sg	**Sg**	**03 24 22.1**	**+0.5**
BRG				Amp		03 24 26.5	
	comp=Z,14nm,0.5s						
ARSA	**Arzberg**	**3.31**	**218**	*e*Pn	**Pn**	**03 23 35.3**	**+0.2**
	comp=Z,1.4nm,0.3s						
ARSA				*e*Sn	**Sn**	**03 24 15.5**	**+0.5**
	comp=Z,2.2nm,0.4s						
GEC2	**GERESS Array S**	**3.32**	**254**	*e*Pn	**Pn**	**03 23 37.1**	**+1.7**
GERES	**GERESS Array B**	**3.32**	**254**	Pn	**Pn**	**03 23 35.7**	**+0.3**
	baz=75,slow=14,SNR=7.0						
GERES				Pg	**Pg**	**03 23 44.5**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=71,slow=18,SNR=29						
GERES				Lg	Lg	03 24 29.6	
	comp=Z,0.5nm,0.3s,baz=68,slow=26,SNR=9.0						
	comp=Z,0.3nm,0.3s						
HSKC	**Hora Svate Kat**	**3.35**	**284**	*e*SG	**Sg**	**03 24 30.0**	**+0.3**
FBE	**Freiberg**	**3.47**	**289**	*e*SG	**Sg**	**03 24 32.2**	**-1.3**
MOA	**Moiln**	**3.47**	**236**	*i* Pn	**Pn**	**03 23 37.2**	**-0.1**
	comp=Z,0.6nm,0.1s,SNR=6.1						
MORH	**Mrgy, Hungar**	**3.67**	**179**	⇑P	**Pn**	**03 23 39.5**	**-0.5**
WET	**Wettzell**	**3.76**	**261**	*e*Pn	**Pn**	**03 23 42.4**	**+1.2**
WET				*e*Sg	**Sg**	**03 24 39.7**	**-3.0**
CLL	**Collm**	**3.80**	**294**	*e*Sg	**Sg**	**03 24 43.8**	**-0.2**
CLL	**Collm**	**3.80**	**294**	*i* (Pn)	**Pg**	**03 23 55.8**	**+1.0**
CLL				*i* Sg	**Sg**	**03 24 44.7**	**+0.7**
	comp=Z,10.0nm,0.5s						
NKC	**Novy Kostel**	**3.94**	**277**	*e*SG	**Sg**	**03 24 48.2**	**-0.2**
	comp=Z,14nm,0.5s						
NKC	**Novy Kostel**	**3.94**	**277**	*e*Sg	**Sg**	**03 24 49.2**	**+0.8**
ABG1	**Leinawald**	**3.96**	**288**	*e*Sg	**Sg**	**03 24 48.7**	**-0.5**
WERN	**Wernitzgruen**	**3.98**	**278**	*e*Sg	**Sg**	**03 24 51.3**	**+1.3**
SCHF	**Schoenfels**	**4.01**	**284**	*e*Sg	**Sg**	**03 24 51.7**	**+1.0**
PLN	**Plauen**	**4.14**	**281**	*e*Sg	**Sg**	**03 24 52.7**	**-2.3**
DRGR		**4.17**	**136**	⇓P	**Pn**	**03 23 47.1**	**+0.2**
SIRR	**Siria**	**4.18**	**149**	⇑P	**Pn**	**03 23 47.0**	**-0.1**
SIRR	**Siria**	**4.18**	**149**	Pn	**Pn**	**03 23 47.0**	**-0.1**
MARR	**Marisel-Cluj**	**4.44**	**135**	⇑P	**Pn**	**03 23 50.8**	**+0.2**
KBA	**Koelnbreinsper**	**4.45**	**233**	*e*Pn	**Pn**	**03 23 51.2**	**+0.4**
	comp=Z,0.6nm,0.3s						
KBA				*e*Sn	**Sn**	**03 24 42.9**	**-0.5**
	comp=Z,0.9nm,0.4s						
TAUT	**Tautenburg**	**4.50**	**287**	*e*Sg	**Sg**	**03 25 07.0**	**+0.6**
LESA	**Schwarzleotal**	**4.59**	**240**	Pg	**Pg**	**03 24 11.3**	**+1.3**
	comp=Z,1.9nm,0.3s						
CJR	**Cluj-Napoca**	**4.64**	**131**	⇓P	**Pn**	**03 23 53.6**	**+0.2**
BZS	**Buzias**	**4.75**	**153**	⇓P	**

PRSN	**Puerto Rico Se**	**0.58**	**309**	⇑*eP*	**Pb**	**03 25 21.4**	**+0.5**
PRSN				*eS*	**Sb**	**03 25 29.8**	**+0.9**
EMPR	**Esperanza - Ma**	**0.64**	**12**		**Pb**	**03 25 22.7**	**+0.7**
EMPR					**Sb**	**03 25 31.1**	**+0.5**
EMPR	**Esperanza - Ma**	**0.64**	**12**	⇓*eP*	**Pb**	**03 25 22.7**	**+0.7**
EMPR				*eS*	**Sb**	**03 25 31.1**	**+0.5**
PDPR	**Patillas Dam,**	**0.64**	**74**		**Pn**	**03 25 23.4**	**-0.1**
GCPR	**Guaynabo City**	**0.72**	**51**		**Pn**	**03 25 24.2**	**-0.5**
GCPR	**Guaynabo City**	**0.72**	**51**		**Sg**	**03 25 33.5**	**+0.3**
GCPR	**Guaynabo City**	**0.72**	**51**	⇑*eP*	**Pn**	**03 25 24.2**	**-0.5**
GCPR				*eS*	**Sg**	**03 25 33.5**	**+0.3**
AGPR	**Aguadilla, PR**	**0.74**	**326**		**Pg**	**03 25 24.1**	**+0.2**
AGPR				IAML		03 25 37.7	
	comp=N,1μm,0.4s						
AGPR				IAML		03 25 41.0	
	comp=N,1μm,0.6s						
AGPR	**Aguadilla, PR**	**0.74**	**326**	⇓*eP*	**Pg**	**03 25 24.3**	**+0.4**
AGPR				⇓*eS*	**Sn**	**03 25 35.2**	**-0.7**
AGPR				IAML		03 25 40.9	
	comp=N,1μm,0.5s						
AGPR	**Aguadilla, PR**	**0.74**	**326**	⇑*eP*	**Pg**	**03 25 24.1**	**+0.2**
AGPR				*eS*	**Sb**	**03 25 33.8**	**+0.2**
HUMP	**Col San Antoni**	**0.84**	**69**		**Pn**	**03 25 26.4**	**+0.2**
HUMP				IAML		03 25 39.2	
	comp=N,1μm,0.3s						
HUMP				IAML		03 25 41.5	
	comp=N,880nm,0.2s						
HUMP	**Col San Antoni**	**0.84**	**69**		**Sn**	**03 25 37.4**	**-0.7**
HUMP	**Col San Antoni**	**0.84**	**69**	⇓*iP*	**Pn**	**03 25 26.4**	**+0.2**
HUMP				*eS*	**Sn**	**03 25 37.4**	**-0.7**
IDE	**Isla Desecheo**	**0.93**	**305**		**Pn**	**03 25 27.7**	**+0.1**
IDE					**Sg**	**03 25 39.7**	**0.0**
IDE	**Isla Desecheo**	**0.93**	**305**	⇑*iP*	**Pn**	**03 25 27.7**	**+0.1**
IDE				*eS*	**Sg**	**03 25 39.7**	**0.0**
CUPR	**Culebra, Puert**	**1.40**	**71**		**Pg**	**03 25 36.2**	**-0.1**
HIDR	**Higuey Centro**	**2.08**	**291**	*ePg*	**Pb**	**03 25 46.5**	**0.0**
HIDR				⇓*eSg*	**Sb**	**03 26 13.3**	**+1.3**
HIDR				IAML		03 26 24.2	
	comp=N,126nm,0.2s						
MIDR	**Miches**	**2.52**	**297**	*ePg*	**Pb**	**03 25 55.1**	**+1.1**
MIDR				IAML		03 26 33.8	
	comp=N,50nm,2.2s						
DR12	**Loma Pena Alta**	**2.74**	**290**		**Pb**	**03 25 56.2**	**-1.5**
HATOM	**Hato Mayor del**	**2.74**	**290**	⇓*ePg*	**Pb**	**03 25 56.4**	**-1.4**
HATOM				⇓*eSg*	**Sg**	**03 26 35.0**	**-2.3**
HATOM				IAML		03 26 39.2	
	comp=N,45nm,0.5s						

*NEIC **09** 03:44:19.2±2.3, 18°.0S±0°.1×178°.3W±0°.1, h574km±11km, mb4.3/21, Error ellipse: s-maj=20.1km s-min=15.9km az=120.0*
*IDC **09** 03:44:19.5±4.7, 17°.90S×178°.34W, h580km±55km, mb3.3/11, mbtmp4.3/12, Error ellipse: s-maj=36.6km s-min=21.3km az=143.0*
ISC 09 03:44:19.3±0.8, 18°.1S±0°.2×178°.2W±0°.1, h590km, n60, σ0$89/62, mb4.1/21, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.56**	**275**	P	**P**	**03 45 41.6**	**+0.3**
AFI	**Afiamalu**	**7.46**	**57**	P	**P**	**03 46 10.5**	**-2.9**
DZM	**Mont Dzumac**	**14.94**	**252**	P	**P**	**03 47 27.0**	**-0.4**
	7.1nm,0.7s,baz=116,slow=18,SNR=1.9						
DZM	**Mont Dzumac**	**14.94**	**252**	P	**P**	**03 47 24.7**	**-2.7**
EIDS	**Eidsvold**	**29.37**	**250**	P	**P**	**03 49 36.2**	**0.0**
EIDS				IAmb	IAmb	03 49 39.6	
	comp=Z,6.4nm,1.0s						
CTA	**Charters Tower**	**33.59**	**261**	P	**P**	**03 50 12.5**	**+0.3**
	comp=Z,3.7nm,0.6s,baz=93,slow=10,SNR=12						
	comp=Z,3.7nm,0.6s						
CTAO	**Charters Tower**	**33.59**	**261**	P	**P**	**03 50 12.5**	**+0.3**
CTAO				IAmb	IAmb	03 50 12.8	
	comp=Z,4.8nm,0.8s						
CAN	**Canberra**	**33.73**	**233**	P	**P**	**03 50 14.1**	**+0.8**
TOO	**Toolangi**	**37.19**	**231**	P	**P**	**03 50 42.7**	**+0.9**
TOO				IAmb	IAmb	03 50 43.6	
	comp=Z,17nm,1.4s						
COEN	**Coen**	**37.28**	**271**	P	**P**	**03 50 43.6**	**+0.8**
COEN				IAmb	IAmb	03 50 54.1	
	comp=Z,18nm,1.5s						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**03 50 55.1**	**+1.0**
	comp=Z,3.6nm,0.5s,baz=74,slow=11,SNR=9.2						
	comp=Z,3.6nm,0.5s						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**03 50 55.0**	**+1.0**
INKA	**Innaminka**	**38.84**	**248**	P	**P**	**03 50 56.4**	**+1.1**
INKA				IAmb	IAmb	03 50 57.3	
	comp=Z,3.6nm,0.8s						
BBOO	**Buckleboo**	**43.47**	**241**	P	**P**	**03 51 32.1**	**+0.4**
BBOO				IAmb	IAmb	03 51 32.3	
	comp=Z,13nm,1.1s						
WR8	**Warramunga Arr**	**44.62**	**260**	P	**P**	**03 51 40.1**	**-0.7**
WR8				IAmb	IAmb	03 51 46.9	
	comp=Z,7.7nm,1.3s						
WRA	**Warramunga Arr**	**44.77**	**260**	P	**P**	**03 51 41.3**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=96,slow=7.5,SNR=31						
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**44.77**	**260**	P	**P**	**03 51 41.0**	**-0.9**
AS31	**Alice Springs**	**44.91**	**254**	P	**P**	**03 51 43.2**	**+0.2**
ASAR	**Alice Springs**	**44.91**	**254**	P	**P**	**03 51 43.2**	**+0.2**
	comp=Z,10nm,0.7s,baz=87,slow=9.0,SNR=115						
ASAR				PcP	**PcP**	**03 53 11.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=99,slow=3.7,SNR=5.1						
ASAR				S	**S**	**03 57 38.2**	**-0.9**
	comp=Z,0.8nm,1.0s,baz=88,slow=14,SNR=4.3						
	comp=Z,10nm,0.7s						
ASAR	**Alice Springs**	**44.91**	**254**	P	**P**	**03 51 42.8**	**-0.2**
MJAR	**Matsushiro Arr**	**68.15**	**323**	P	**P**	**03 54 21.7**	**0.0**
	comp=Z,1.6nm,0.5s,baz=157,slow=5.5,SNR=7.2						
	comp=Z,1.6nm,0.5s						
MJAR	**Matsushiro Arr**	**68.15**	**323**	P	**P**	**03 54 21.9**	**+0.2**
PETK	**Petropavlovsk-**	**73.90**	**345**	P	**P**	**03 54 55.0**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=97,slow=9.7,SNR=8.5						
	comp=Z,3.7nm,0.7s						
PETK	**Petropavlovsk-**	**73.90**	**345**	P	**P**	**03 54 54.8**	**-0.1**
YBH	**Yreka Blue Hor**	**78.55**	**39**	P	**P**	**03 55 22.6**	**+1.8**
YBH				IAmb	IAmb	03 55 32.9	
	comp=Z,8.6nm,1.3s						
N14K	**Kuskokwak Cree**	**78.89**	**8**	P	**P**	**03 55 23.0**	**+1.0**
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**	**03 55 26.5**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=231,slow=7.1,SNR=6.7						
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**	**03 55 27.3**	**+1.6**
ILSW	**Iliamna Southw**	**80.42**	**12**	P	**P**	**03 55 29.6**	**-0.6**
ILSW				IAmb	IAmb	03 55 30.7	
	comp=Z,16nm,1.0s						
M17K	**Holitna River**	**80.95**	**10**	P	**P**	**03 55 34.1**	**+1.3**
M17K				IAmb	IAmb	03 55 35.1	
	comp=Z,11nm,0.9s						
I07A	**Izee**	**81.84**	**38**	P	**P**	**03 55 39.0**	**+1.1**
J17K	**VABM Dome**	**82.59**	**9**	P	**P**	**03 55 42.1**	**+1.1**
SCM	**Sheep Creek Mo**	**83.36**	**14**	P	**P**	**03 55 45.5**	**+0.5**
GLB	**Gilahina Butte**	**83.89**	**16**	P	**P**	**03 55 48.0**	**+0.4**
TXAR	**Lajitas Array**	**85.94**	**58**	P	**P**	**03 55 59.9**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=247,slow=5.1,SNR=9.1						
	comp=Z,0.7nm,0.6s						
ILAR	**Eielson Array**	**86.02**	**13**	P	**P**	**03 55 57.2**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=220,slow=4.9,SNR=68						
	comp=Z,1.0nm,0.4s						
ILAR	**Eielson Array**	**86.02**	**13**	P	**P**	**03 55 57.5**	**-0.3**
PDAR	**Pinedale Array**	**87.36**	**43**	P	**P**	**03 56 05.6**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=220,slow=2.6,SNR=8.8						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**87.36**	**43**	P	**P**	**03 56 05.8**	**+0.8**
F31M	**Tsiigehtchic**	**91.31**	**16**	P	**P**	**03 56 22.8**	**+0.5**
F31M				IAmb	IAmb	03 56 23.2	
	comp=Z,3.8nm,0.7s						
YKA	**Yellowknife Ar**	**94.42**	**25**	P	**P**	**03 56 36.0**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=247,slow=4.4,SNR=5.9						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**94.42**	**25**	P	**P**	**03 56 36.6**	**-0.1**
BRTR	**Keskin Array B**	**145.03**	**315**	PKP	**PKPbc**	**04 02 51.5**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=128,slow=3.7,SNR=8.5						
BRTR	**Keskin Array B**	**145.03**	**315**		**PKPab**	**04 02 51.9**	**-0.8**
CLL	**Collm**	**145.68**	**347**		**PKPbc**	**04 02 53.2**	**+0.3**
CLL	**Collm**	**145.68**	**347**	⇓*iP*	**PKPbc**	**04 02 53.3**	**+0.4**
	comp=Z,9.0nm,0.8s						
BRG	**Berggiesshubel**	**145.88**	**346**	*ePKP*	**PKPab**	**04 02 54.5**	**-0.9**
BRG				Amp		04 02 56.6	
	comp=Z,5.7nm,1.0s						
GERES	**GERESS Array B**	**147.83**	**345**	PKPbc	**PKiKP**	**04 02 59.2**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=20,slow=4.3,SNR=11						
CONA	**Conrad Observa**	**148.09**	**342**	*i* PKP	**PKiKP**	**04 03 00.3**	**-0.5**
	comp=Z,5.4nm,1.1s						
RONA	**Rosalia, Austr**	**148.16**	**341**	*i* PKP	**PKiKP**	**04 03 00.5**	**-0.4**
	comp=Z,4.1nm,1.0s						
BIOA	**Bad Ischl, Aus**	**148.92**	**344**	*e*PKP	**PKPab**	**04 03 09.1**	**+1.2**
	comp=Z,1.7nm,0.5s						
LESA	**Schwarzleotal**	**149.40**	**345**	*e*PKP	**PKiKP**	**04 03 03.1**	**-0.4**
	comp=Z,2.9nm,0.9s						
KBA	**Koelnbreinsper**	**149.56**	**344**	*e*PKP	**PKiKP**	**04 03 03.6**	**-0.4**
	comp=Z,2.0nm,0.6s						
WATA	**Walderalm**	**149.74**	**347**	*i* PKP	**PKiKP**	**04 03 03.7**	**-0.6**
	comp=Z,2.3nm,0.6s						
WTTA	**Wattenberg**	**149.79**	**347**	*i* PKP	**PKiKP**	**04 03 04.1**	**-0.4**
	comp=Z,4.7nm,0.6s						
MOTA	**Moosalm**	**149.83**	**347**	*i* PKP	**PKiKP**	**04 03 04.0**	**-0.4**
	comp=Z,4.2nm,1.0s						
MYKA	**Terra Mystica**	**149.90**	**344**	*i* PKP	**PKPbc**	**04 03 03.7**	**-0.2**
	comp=Z,2.3nm,0.5s						
SQTA	**Sankt Quirin**	**149.93**	**347**	*i* PKP	**PKiKP**	**04 03 04.4**	**-0.2**
	comp=Z,2.9nm,0.6s						
ABTA	**Abfaltersbach**	**150.08**	**345**	*i* PKP	**PKiKP**	**04 03 04.3**	**-0.6**
	comp=Z,3.9nm,0.7s						
FETA	**Feichten**	**150.22**	**348**	*i* PKP	**PKiKP**	**04 03 05.3**	**0.0**
	comp=Z,2.0nm,0.8s						

*DJA **09** 04:07:37.1±0.2, 3°.5S±3°.3×13°.0E±°, h10km, M3.9/12, mb3.8/1, MLv3.9/12*
*IDC **09** 04:07:41.4±3.2, 2°.96S×130°.45E, h75km±37km, mb3.5/3, mbtmp3.9/6, ML3.8/3, MS3.1/1, Error ellipse: s-maj=52.7km s-min=13.3km az=81.0*
ISC 09 04:07:36.5±0.8, 2°.91S±0°.06×129°.99E±0°.05, h25km, n17, σ1$70/18, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.15**	**248**	P	**Pn**	**04 07 57.2**	**+0.3**
BNDI	**Bandanaira**	**1.60**	**183**	P	**Pb**	**04 08 07.9**	**+2.5**
KRAI	**Karang Ratu**	**1.65**	**256**	P	**Pb**	**04 08 06.1**	**0.0**
AAI	**Ambon**	**1.95**	**247**	P	**Pb**	**04 08 10.4**	**-1.0**
FAKI	**Fak Fak**	**2.25**	**90**	P	**Pb**	**04 08 14.7**	**-1.8**
SIJI	**Sorong**	**2.40**	**32**	P	**Pn**	**04 08 14.8**	**+0.6**
	30nm,0.3s,baz=57,slow=22,SNR=87						
SIJI				S	**Sn**	**04 08 43.7**	**+0.9**
	36nm,0.3s,baz=29,slow=23,SNR=9.1						
	80nm,0.2s						
SIJI	**Sorong**	**2.40**	**32**	P	**Pn**	**04 08 15.2**	**+1.0**
SWI	**Sorong**	**2.40**	**32**	P	**Pn**	**04 08 15.2**	**+1.0**
NLAI	**Namlea**	**2.91**	**264**	P	**Pn**	**04 08 23.0**	**+1.8**
SANI	**Sanana**	**4.09**	**282**	P	**Pn**	**04 08 37.2**	**-0.3**
RKPI	**Ransiki, Papua**	**4.41**	**72**	P	**Pn**	**04 08 43.8**	**+1.9**
KAPI	**Kappang**	**10.43**	**258**	LR	LR	04 14 51.4	
	comp=Z,97nm,19.7s,baz=78,slow=40						
FITZ	**Fitzroy Crossi**	**15.68**	**195**	P	**P**	**04 11 18.9**	**-0.8**
	0.3nm,0.3s,baz=28,slow=15,SNR=2.5						
	1.9nm,0.6s						
WRA	**Warramunga Arr**	**17.45**	**166**	P	**Pn**	**04 11 36.8**	**-1.6**
	0.4nm,0.3s,baz=348,slow=11,SNR=6.0						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**20.98**	**170**	P	**P**	**04 12 18.2**	**+0.2**
	3.5nm,0.5s,baz=348,slow=9.5,SNR=21						
ASAR				S	**S**	**04 16 06.6**	**-4.1**
	1.0nm,1.0s,baz=350,slow=21,SNR=4.8						
	3.5nm,0.5s						
MKAR	**Makanchi Array**	**64.84**	**326**	P	**P**	**04 18 14.4**	**+1.0**
	0.2nm,0.4s,baz=126,slow=7.6,SNR=6.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**69.06**	**328**	P	**P**	**04 18 41.1**	**+1.0**
	0.7nm,0.3s,baz=137,slow=5.1,SNR=4.4						
	0.7nm,0.3s						

*IDC **09** 04:13:10.0±1.3, 3°.05S×145°.78E, h0km, mb3.9/6, mbtmp4.0/8, ML2.7/2, MS3.3/9, Error ellipse: s-maj=43.2km s-min=21.1km az=92.0*
ISC 09 04:13:15.1±1.1, 3°.2S±0°.1×145°.7E±0°.2, h35km, n14, σ0$52/8, mb4.0/5, MS3.1/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**5.07**	**277**	LR	LR	04 16 20.3	
	comp=Z,593nm,18.6s,baz=192,slow=37						
PMG	**Port Moresby**	**6.36**	**167**	Pn	**Pn**	**04 14 46.7**	**+0.3**
	1.2nm,0.3s,baz=14,slow=4.7,SNR=6.2						
	29nm,0.8s						
SIJI	**Sorong**	**14.64**	**279**	LR	LR	04 21 30.3	
	comp=Z,236nm,21.1s,baz=174,slow=34						
GUMO	**Guam**	**16.66**	**357**	LR	LR	04 22 16.6	
	comp=Z,35nm,18.6s,baz=131,slow=33						
CTA	**Charters Tower**	**16.83**	**178**	Pn	**P**	**04 17 09.9**	**-0.1**
	0.2nm,0.3s,baz=20,slow=3.1,SNR=4.0						
CTA				LR	LR	04 23 19.2	
	comp=Z,78nm,18.1s,baz=40,slow=36						
	4.2nm,0.9s						
WRA	**Warramunga Arr**	**20.05**	**213**	P	**Pn**	**04 17 46.9**	**-0.5**
	4.8nm,1.1s,baz=36,slow=11,SNR=14						
	4.8nm,1.1s						
ASAR	**Alice Springs**	**23.37**	**208**	P	**P**	**04 18 20.9**	**+0.1**
	4.3nm,0.8s,baz=38,slow=8.8,SNR=33						
ASAR				LR	LR	04 27 34.4	
	comp=Z,71nm,19.7s,baz=26,slow=37						
	4.3nm,0.8s						
STKA	**Stephens Creek**	**28.83**	**187**	LR	LR	04 30 44.9	
	comp=Z,82nm,19.2s,baz=22,slow=36						
ASAJ	**Asahikawa**	**47.15**	**357**	LR	LR	04 43 13.9	
	comp=Z,18nm,18.1s,baz=63,slow=38						
CMAR	**Chiang Mai Arr**	**50.83**	**297**	P	**P**	**04 22 12.9**	**+0.3**
	1.5nm,0.3s,baz=115,slow=4.9,SNR=5.6						
CMAR				LR	LR	04 41 24.5	
	comp=Z,11nm,21.9s,baz=100,slow=33						
	1.5nm,0.3s						
MKAR	**Makanchi Array**	**74.52**	**320**	P	**P**	**04 24 51.0**	**+0.7**
	0.2nm,0.6s,baz=98,slow=7.4,SNR=3.7						
	0.2nm,0.6s						
TIXI	**Tiksi**	**75.48**	**355**	LR	LR	05 02 51.5	
	comp=Z,29nm,18.1s,baz=194,slow=40						
ILAR	**Eielson Array**	**83.39**	**23**	P	**P**	**04 25 38.3**	**-0.2**
	0.4nm,0.7s,baz=256,slow=5.1,SNR=6.5						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**83.75**	**324**	P	**P**	**04 25 39.9**	**-0.7**
	0.9nm,0.8s,baz=87,slow=8.8,SNR=4.0						
	0.9nm,0.8s						

*IDC **09** 04:15:38.5±2.5, 6°.78S×130°.91E, h55km±26km, mb3.7/7, mbtmp4.2/12, ML4.5/6, MS3.7/1, Error ellipse: s-maj=23.7km s-min=20.4km az=68.0*
*NEIC **09** 04:15:39.8±2.0, 6°.70S±0°.06×130°.93E±0°.08, h57km±11km, mb4.4/12, Error ellipse: s-maj=12.1km s-min=8.7km az=94.0*
*DJA **09** 04:15:40.7±0.3, 7°.5S±3°.3×13°.1E±°, h82km±17km, M4.8/19, mB5.2/6, mb4.8/11, MLv4.9/19, Mw(mB)4.6/6*
ISC 09 04:15:38.6±0.6, 6°.70S±0°.04×130°.93E±0°.06, h50km, n61, σ1$91/61, mb4.2/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.32**	**164**	Pn	**Pn**	**04 15 59.9**	**-0.9**
SAUI				Sn	**Sn**	**04 16 20.8**	**+3.6**
SAUI	**Saumlaki**	**1.32**	**164**	P	**Pn**	**04 16 03.9**	**+3.2**
BNDI	**Bandanaira**	**2.39**	**335**	P	**Pn**	**04 16 19.8**	**+4.5**
BNDI	**Bandanaira**	**2.39**	**335**	S	**Sn**	**04 16 47.4**	**+3.9**
BNDI	**Bandanaira**	**2.39**	**335**	P	**Pn**	**04 16 17.6**	**+2.3**
FAKI	**Fak Fak**	**3.98**	**19**		**Pn**	**04 16 38.2**	**+1.1**
FAKI	**Fak Fak**	**3.98**	**19**	P	**Pn**	**04 16 38.4**	**+1.3**
FAKI	**Fak Fak**	**3.98**	**19**	P	**Pn**	**04 16 38.3**	**+1.1**
KMPI	**Kaimana, Papua**	**4.09**	**43**	P	**Pn**	**04 16 40.7**	**+2.0**
NLAI	**Namlea**	**5.14**	**312**	P	**Pn**	**04 16 54.7**	**+1.7**
	0.4nm2μm117nm,0.9s						
DRS	**Darwin Rock St**	**5.69**	**180**	P	**Pn**	**04 17 03.0**	**+2.4**
SIJI	**Sorong**	**5.80**	**3**	P	**Pn**	**04 17 02.6**	**+0.4**
	18nm,0.3s,baz=231,slow=22,SNR=30						
SIJI				S	**Sn**	**04 18 02.6**	**-4.9**
	125nm,0.2s,baz=300,slow=24,SNR=17						
	43nm,0.3s						
SIJI	**Sorong**	**5.80**	**3**	P	**Pn**	**04 17 02.3**	**+0.1**
	1.3nm10μm32nm,0.5s						
SWI	**Sorong**	**5.81**	**3**	P	**Pn**	**04 17 02.5**	**+0.3**
RKPI	**Ransiki, Papua**	**6.09**	**32**	P	**Pn**	**04 17 08.2**	**+2.1**
MTN	**Manton Dam**	**6.11**	**178**		**Pn**	**04 17 08.2**	**+1.9**
MWPI	**Manokwari, Pap**	**6.52**	**29**	P	**Pn**	**04 17 14.8**	**+2.8**
SANI	**Sanana**	**6.76**	**313**	P	**Pn**	**04 17 20.5**	**+5.3**
SOEI	**Soe**	**7.26**	**245**		**Pn**	**04 17 23.6**	**+1.4**
SOEI	**Soe**	**7.26**	**245**	P	**Pn**	**04 17 24.7**	**+2.5**
SOEI	**Soe**	**7.26**	**245**	P	**Pn**	**04 17 24.4**	**+2.2**
	0.4nm30nm,0.6s						

BAKI	**Biak**	**7.53**	**44**	P	**Pn**	**04 17 29.1**	**+3.3**
	0.5nm124nm,0.5s							
BATI	**Baumata**			P	**Pn**	**04 17 32.6**	**+0.5**
	15nm,0.3s,baz=88,slow=5.1,SNR=6.2							
BATI				S	**Sn**	**04 19 00.3**	**-0.9**
	60nm,0.4s,baz=267,slow=21,SNR=6.9							
	34nm,0.3s							
BATI	**Baumata**	**7.99**	**244**	P	**Pn**	**04 17 34.2**	**+2.1**
KNRA	**Kununurra**	**9.17**	**193**		**Pn**	**04 17 48.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**12.45**	**204**	P	**Pn**	**04 18 31.4**	**-1.6**
	5.6nm,0.3s,baz=30,slow=9.8,SNR=90							
FITZ				S	Sn	04 20 42.0	-8.3	
	26nm,0.6s,baz=86,slow=21,SNR=7.4							
PLAI	**Plampang**	**13.20**	**260**	P	**Pn**	**04 18 47.0**	**+3.5**	
WRA	**Warramunga Arr**	**13.57**	**166**	P	**Pn**	**04 18 45.5**	**-3.0**	
	1.4nm,0.3s,baz=348,slow=14,SNR=26							
WRA				S	Sn	04 21 07.5	-10	
	15nm,0.4s,baz=336,slow=22,SNR=15							
	2.5nm,0.5s							
WRA	**Warramunga Arr**	**13.57**	**166**		Pn	04 18 44.1	-4.4	
WR8	**Warramunga Arr**	**13.62**	**166**	Pn	**Pn**	**04 18 46.2**	**-3.0**	
COEN	**Coen**	**14.03**	**122**		**Pn**	**04 18 52.9**	**-1.8**	
COEN	**Coen**	**14.03**	**122**	P	**Pn**	**04 18 53.0**	**-1.8**	
QIS	**Mount Isa**	**16.14**	**149**	P	**Pn**	**04 19 21.3**	**-0.9**	
AS31	**Alice Springs**	**17.11**	**171**	P	**Pn**	**04 19 33.4**	**-0.9**	
ASAR	**Alice Springs**	**17.11**	**171**	P	**Pn**	**04 19 32.4**	**-1.9**	
	2.2nm,0.3s,baz=345,slow=9.6,SNR=55							
ASAR				S	Sn	04 22 31.6	-12	
	4.7nm,0.6s,baz=358,slow=29,SNR=8.0							
	7.8nm,0.6s							
ASAR	**Alice Springs**	**17.11**	**171**	P	**Pn**	**04 19 32.9**	**-1.4**	
MYLDM	**Lahad Datu**	**17.12**	**313**		**Pn**	**04 19 35.6**	**+1.0**	
MYLDM				IAmb	IAmb	04 19 42.7		
	comp=Z,19nm,1.2s							
MTSU	**Mount Surprise**	**17.30**	**132**	P	**Pn**	**04 19 36.3**	**-0.5**	
MBWA	**Marble Bar**	**18.00**	**216**	P	**P**	**04 19 43.9**	**-1.4**	
MBWA				IAmb	IAmb	04 20 03.5		
	comp=Z,59nm,1.5s							
MBWA	**Marble Bar**	**18.00**	**216**	P	**P**	**04 19 43.6**	**-1.7**	
PSA00	**Pilbara Seismi**	**18.26**	**215**	P	**P**	**04 19 47.2**	**-0.9**	
PSA00	**Pilbara Seismi**	**18.26**	**215**	P	**P**	**04 19 47.0**	**-1.1**	
PSA00				IAmb	IAmb	04 20 02.1		
	comp=Z,20nm,1.4s							
PSA00	**Pilbara Seismi**	**18.26**	**215**	P	**P**	**04 19 48.2**	**+0.1**	
CTA	**Charters Tower**	**19.95**	**133**	P	**P**	**04 20 07.3**	**+0.6**	
	comp=Z,0.2nm,0.3s,baz=300,slow=11,SNR=4.7							
	comp=Z,5.1nm,0.9s							
MEEK	**Meekatharra**	**23.04**	**209**	P	**P**	**04 20 39.9**	**+0.3**	
FORT	**Forrest**	**24.10**	**186**	P	**P**	**04 20 50.1**	**+0.5**	
FORT				IAmb	IAmb	04 21 27.1		
	comp=Z,23nm,1.5s							
BBOO	**Buckleboo**	**26.41**	**170**	P	**P**	**04 21 10.9**	**+0.3**	
BBOO				IAmb	IAmb	04 21 29.1		
	comp=Z,25nm,1.5s							
CMAR	**Chiang Mai Arr**	**40.26**	**309**	P	**P**	**04 23 10.8**	**-0.2**	
	comp=Z,1.5nm,0.7s,baz=138,slow=7.0,SNR=7.8							
	comp=Z,1.5nm,0.7s							
LZDM	**Lanzhou Array**	**49.55**	**331**	P	**P**	**04 24 25.1**	**+0.1**	
	comp=Z,1.4nm,0.5s,baz=163,slow=10,SNR=6.3							
	comp=Z,1.4nm,0.5s							
HILR	**Hailar Array B**	**56.87**	**351**	LR	LR	04 50 35.2		
	comp=Z,74nm,20.7s,baz=85,slow=37							
SONM	**Songino Array**	**58.46**	**341**	P	**P**	**04 25 30.1**	**+0.5**	
	comp=Z,0.4nm,0.5s,baz=171,slow=5.1,SNR=3.7							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**68.49**	**326**	P	**P**	**04 26 35.8**	**+0.1**	
	comp=Z,5.9nm,0.6s,baz=125,slow=7.7,SNR=64							
	comp=Z,5.9nm,0.6s							
KSH2	**Kashi**	**68.53**	**317**	P	**P**	**04 26 37.1**	**+0.9**	
KSH2				pmax	pmax			
	comp=Z,2.0nm,0.7s							
**MAK

BLQ	**Beylaqan**	**2.41**	**64**	P		**Pb**	**04 38 45.3**	**-1.6**
BLQ				S		**Sg**	**04 39 19.9**	**-0.6**
QZX	**Qazax, Azerbai**	**2.42**	**11**	P		**Pn**	**04 38 44.2**	**+0.9**
QZX				S		**Sb**	**04 39 17.9**	**+0.6**
BRDA	**Brd**	**2.45**	**49**	P		**Pn**	**04 38 44.6**	**+0.8**
BRDA				S		**Sg**	**04 39 20.7**	**-1.1**
MUSM	**Mu-Merkez**	**2.54**	**272**	P		**Pb**	**04 38 48.5**	**-0.7**
KOPR	**Koprukoy-ERZUR**	**2.60**	**301**	Pn		**Pb**	**04 38 48.1**	**-2.2**
SENK	**Senkaya-Erzuru**	**2.64**	**316**	Pn		**Pn**	**04 38 48.1**	**+1.6**
YRD	**Yardimli**	**2.73**	**84**	P		**Pn**	**04 38 48.9**	**+1.1**
YRD				S		**Sb**	**04 39 28.0**	**+1.5**
LRK	**Lerik**	**2.81**	**90**	P		**Pb**	**04 38 51.3**	**-2.5**
LRK				S		**Sb**	**04 39 29.7**	**+1.2**
SVAN	**Silvan-Diyarba**	**2.84**	**260**	Pn		**Pb**	**04 38 51.5**	**-2.8**
GLBA	**Clilabad**	**2.89**	**78**	P		**Pn**	**04 38 52.2**	**+2.5**
GLBA				S		**Sb**	**04 39 31.8**	**+1.1**
ASTR	**Astara**	**3.16**	**91**	P		**Pn**	**04 38 55.9**	**+2.4**
ASTR				S		**Sb**	**04 39 37.8**	**-0.7**
QBL	**Gabala**	**3.28**	**45**	P		**Pn**	**04 38 57.7**	**+2.6**
QBL				S		**Sb**	**04 39 40.9**	**-1.1**
ZKTA	**Zakatala**	**3.28**	**25**	P		**Pn**	**04 38 57.7**	**+2.5**
ZKTA				S		**Sb**	**04 39 40.8**	**-1.3**

*AZER **09** 04:39:32.5, 38.65N×44.68E, h3km, ml3.8*
*NSSP **09** 04:39:33.2, 38.68N×44.83E, h7km, Ms3.5*
*AFAD **09** 04:39:33.1, 38.68N×44.77E, h5km±3km, MWW3.9*
*ISK **09** 04:39:35.0, 38.63N×44.70E, h5km, ML3.3/11*
*TEH **09** 04:39:35.3, 38.74N×44.82E, h13km±33km, ML3.5, Presumed earthquake*

ISC 09 04:39:34.7±1.1, 38.69N±0.02×44.80E±0.02, h6km±10km, n74, σ1.968/127, 2D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.64**	**268**	P	**Pg**	**04 39 44.9**	**-2.1**
OZAP				S	**Sg**	**04 39 54.6**	**-0.7**
OZAP				IAML		04 39 55.0	
	comp=E,2μm,0.9s						
OZAP				IAML		04 40 06.0	
	comp=N,936nm,0.7s						
MAKU	**Maku**	**0.68**	**352**	Pg	**Pg**	**04 39 47.4**	**-0.4**
IMRD	**Marand**	**0.70**	**87**	Pg	**Pg**	**04 39 48.7**	**+0.4**
NAX	**Nakhchivan**	**0.73**	**48**	P	**Pb**	**04 39 49.7**	**-0.2**
NAX				S	**Sn**	**04 40 01.6**	**-1.7**
SBZ	**Shahbuz**	**0.92**	**39**	P	**Pb**	**04 39 52.7**	**-0.5**
SBZ				S	**Sn**	**04 40 09.0**	**+1.0**
ORD	**Ordubad**	**0.96**	**75**	P	**Pb**	**04 39 53.5**	**-0.4**
ORD				S	**Sn**	**04 40 08.5**	**-0.5**
HYR	**Heyderabad**	**1.03**	**2**	P	**Pn**	**04 39 54.6**	**-1.3**
HYR				S	**Sn**	**04 40 12.6**	**+1.8**
TVAN	**Van**	**1.11**	**262**	P	**Pb**	**04 39 54.7**	**-1.7**
TVAN				S	**Sb**	**04 40 11.3**	**+0.1**
TVAN				IAML		04 40 26.0	
	comp=N,491nm,1.1s						
TVAN				IAML		04 40 28.0	
	comp=E,695nm,1.2s						
VAYK	**Vayk**	**1.12**	**25**	*i* P	**Pn**	**04 39 56.0**	**-1.1**
VAYK				*i* S	**Sn**	**04 40 12.2**	**-0.7**
ERCV	**ERCIS-VAN**	**1.19**	**287**	Pn	**Pn**	**04 39 57.7**	**-0.5**
IGDI	**IGDIR**	**1.31**	**335**	P	**Pn**	**04 39 58.3**	**-1.4**
IGDI				IAML		04 40 22.0	
	comp=E,273nm,0.7s						
IGDI				IAML		04 40 24.0	
	comp=N,183nm,0.9s						
IGDI	**IGDIR**	**1.31**	**335**	P	**Pg**	**04 40 00.5**	**+0.7**
IGDI				S	**Sg**	**04 40 19.9**	**+3.1**
IAZR	**Azarshahr**	**1.37**	**137**	Pg	**Pg**	**04 40 01.9**	**+0.9**
HAKT	**HAKKARI**	**1.42**	**218**	P	**Pn**	**04 40 00.8**	**-0.6**
HAKT				S	**Sn**	**04 40 19.4**	**-1.1**
HAKT				IAML		04 40 26.0	
	comp=N,277nm,0.5s						
HAKT				IAML		04 40 30.0	
	comp=E,338nm,0.7s						
HAKT	**HAKKARI**	**1.42**	**218**	P	**Pn**	**04 40 01.8**	**+0.4**
HAKT				S	**Sg**	**04 40 22.0**	**+1.6**
GRS	**Goris**	**1.44**	**55**	⇓*i* P	**Pg**	**04 40 03.0**	**+0.6**
GRS				⇓*i* S	**Sg**	**04 40 23.0**	**+1.9**
EGVZ	**Egvard**	**1.46**	**68**	*e*P	**Pn**	**04 40 01.3**	**-0.5**
EGVZ				*e*S	**Sg**	**04 40 22.1**	**+0.5**
GNI	**Garni**	**1.46**	**358**	Pn	**Pg**	**04 40 04.3**	**+1.5**
GNI				Sn	**Sg**	**04 40 25.9**	**+4.1**
AKDM	**Akdamar-Van**	**1.47**	**257**	Pn	**Pn**	**04 40 02.2**	**+0.1**
AKDM				Sn	**Sb**	**04 40 22.4**	**+0.6**
METS	**Metsamor**	**1.57**	**339**	*e*P	**Pb**	**04 40 03.7**	**-0.5**
METS				*e*S	**Sg**	**04 40 26.1**	**+1.0**
VNNZ	**Vanand**	**1.61**	**332**	*e*P	**Pb**	**04 40 04.6**	**-0.3**
VNNZ				*e*S	**Sg**	**04 40 27.8**	**+1.4**
AYRK	**Ayrk**	**1.62**	**28**	*e*P	**Pb**	**04 40 04.0**	**-1.3**
AYRK				*e*S	**Sg**	**04 40 27.0**	**+0.2**
KAPZ	**Kaputan**	**1.64**	**357**	*e*P	**Pb**	**04 40 04.8**	**-0.7**
KAPZ				*e*S	**Sg**	**04 40 28.3**	**+0.9**
AGRB	**Hanur-Agry**	**1.67**	**303**	Pn	**Pn**	**04 40 04.8**	**+0.1**
AGRB				Sn	**Sg**	**04 40 28.8**	**+0.5**
KOTA	**Agri, Merkez-K**	**1.67**	**312**	P	**Pn**	**04 40 03.6**	**-1.1**
KOTA				IAML		04 40 36.0	
	comp=N,114nm,0.9s						
KOTA				IAML		04 40 37.0	
	comp=E,94nm,1.9s						
ARUZ	**Aruch**	**1.69**	**341**	*e*P	**Pg**	**04 40 06.3**	**-0.9**
ARUZ				*e*S	**Sg**	**04 40 30.6**	**+1.6**
CUKT	**Cukurca**	**1.72**	**214**	Pn	**Pn**	**04 40 05.8**	**+0.4**
CUKT				Sn	**Sn**	**04 40 28.8**	**+1.0**
CUKT	**Cukurca**	**1.72**	**214**	P	**Pn**	**04 40 06.1**	**+0.7**
CUKT				IAML		04 40 31.0	
	comp=E,591nm,0.7s						
CUKT				IAML		04 40 49.0	
	comp=N,498nm,0.8s						
DORK	**Agr/Tutak/Do**	**1.72**	**295**	P	**Pn**	**04 40 05.0**	**-0.5**
DORK				S	**Sg**	**04 40 30.0**	**-0.2**
DORK				IAML		04 40 33.0	
	comp=N,283nm,0.9s						
DORK				IAML		04 40 33.0	
	comp=E,232nm,0.8s						
AMBZ	**Amberd**	**1.75**	**346**	*e*P	**Pg**	**04 40 07.7**	**-0.7**
AMBZ				*e*S	**Sg**	**04 40 33.1**	**+2.1**
IHRS	**Heris**	**1.79**	**101**	Pg	**Pb**	**04 40 07.4**	**-0.8**
MLAZ	**Malazgirt-MUS**	**1.82**	**285**	Pn	**Pb**	**04 40 07.9**	**-0.6**
PERV	**Siirt/Pervari-**	**1.93**	**248**	P	**Pb**	**04 40 10.1**	**-0.3**
PERV				S	**Sb**	**04 40 36.5**	**+1.8**
PERV				IAML		04 40 38.0	
	comp=E,522nm,0.6s						
PERV				IAML		04 40 39.0	
	comp=N,617nm,1.0s						
MAHB	**Mahabad**	**2.04**	**159**	Pn	**Pb**	**04 40 11.9**	**-0.5**
QRD	**Qoradiz**	**2.11**	**68**	P	**Pb**	**04 40 13.2**	**-0.2**
QRD				S	**Sg**	**04 40 33.9**	**+1.5**
GDB	**GEDABAY**	**2.16**	**20**	P	**Pb**	**04 40 14.2**	**-0.2**
GDB				S	**Sg**	**04 40 43.9**	**-0.3**
GURO	**Guroymak-BITLI**	**2.17**	**267**	Pn	**Pn**	**04 40 12.5**	**+0.8**
LSVT	**Lusahovit**	**2.25**	**7**	*e*P	**Pb**	**04 40 15.8**	**0.0**
LSVT				*e*S	**Sg**	**04 40 47.6**	**+0.6**
AGDM	**Agdam**	**2.28**	**51**	P	**Pb**	**04 40 16.3**	**-0.1**
AGDM				S	**Sg**	**04 40 48.7**	**+0.6**
GANJ	**Ganja**	**2.28**	**30**	P	**Pb**	**04 40 16.0**	**-0.4**
GANJ				S	**Sg**	**04 40 47.7**	**-0.3**
KARS	**Kars**	**2.35**	**326**	Pn	**Pb**	**04 40 15.8**	**-1.9**
SRTM	**Siirt_Merkez**	**2.37**	**254**	P	**Pn**	**04 40 15.3**	**+1.0**
SRTM				S	**Sb**	**04 40 46.5**	**-0.9**
SRTM				IAML		04 40 50.0	
	comp=N,316nm,1.1s						
SRTM				IAML		04 40 54.0	
	comp=E,288nm,0.7s						
BLQ	**Beylaqan**	**2.38**	**63**	P	**Pb**	**04 40 18.0**	**0.0**
BLQ				S	**Sg**	**04 40 51.0**	**-0.1**
IHSH	**Hashtrud**	**2.38**	**125**	Pn	**Pn**	**04 40 16.3**	**+1.6**
SRTK	**Saratovka**	**2.41**	**351**	*e*P	**Pb**	**04 40 17.8**	**-0.8**
SRTK				*e*S	**Sg**	**04 40 50.5**	**-1.5**
QZX	**Qazax, Azerbai**	**2.41**	**10**	P	**Pb**	**04 40 17.9**	**-0.7**
QZX				S	**Sg**	**04 40 50.6**	**-1.5**
GRMI	**Germi**	**2.42**	**86**	Pn	**Pb**	**04 40 17.0**	**-1.8**
BRDA	**Brd**	**2.42**	**49**	P	**Pb**	**04 40 18.7**	**0.0**
BRDA				S	**Sg**	**04 40 51.3**	**-1.2**
KOPR	**Koprukoy-ERZUR**	**2.63**	**301**	Pn	**Pn**	**04 40 19.7**	**+1.7**
SENK	**Senkaya-Erzuru**	**2.66**	**315**	Pn	**Pb**	**04 40 21.2**	**-1.8**
YRD	**Yardimli**	**2.70**	**84**	P	**Pb**	**04 40 21.7**	**-1.9**
YRD				S	**Sg**	**04 40 59.6**	**-1.7**
MNGR	**Mingechevir, A**	**2.73**	**39**	P	**Pb**	**04 40 21.1**	**-2.9**
MNGR				S	**Sb**	**04 40 57.2**	**-0.5**
BGD	**Bogdanovka**	**2.74**	**341**	P	**Pg**	**04 40 26.3**	**-0.9**
BGD				S	**Sg**	**04 41 04.6**	**+1.9**
ZRD	**Zardab**	**2.74**	**54**	P	**Pb**	**04 40 22.6**	**-1.5**
ZRD				S	**Sb**	**04 40 58.9**	**+0.9**
LRK	**Lerik**	**2.77**	**90**	P	**Pb**	**04 40 22.2**	**-2.5**
LRK				S	**Sg**	**04 41 01.8**	**-1.9**
DGRG	**David-gareji**	**2.80**	**9**	P	**Pg**	**04 40 28.9**	**+0.6**
DGRG				S	**Sg**	**04 41 07.0**	**+2.4**
VSHL	**Vashlovani**	**2.82**	**25**	P	**Pg**	**04 40 28.1**	**-0.7**
VSHL				S	**Sg**	**04 41 09.2**	**+3.8**
GLBA	**Clilabad**	**2.85**	**78**	P	**Pb**	**04 40 24.6**	**-1.4**
GLBA				S	**Sb**	**04 41 02.9**	**+1.7**
SVAN	**Silvan-Diyarba**	**2.88**	**260**	Pn	**Pn**	**04 40 22.4**	**+1.1**
AKH	**Akhalkalaki**	**2.90**	**340**	P	**Pg**	**04 40 31.8**	**+1.4**
AKH				S	**Sg**	**04 41 11.8**	**+3.8**
SAAT	**Saatly**	**3.04**	**66**	P	**Pb**	**04 40 26.3**	**-3.1**
SAAT				S	**Sb**	**04 41 08.1**	**+1.3**
LKRN	**Lenkeran, Azer**	**3.11**	**88**	P	**Pb**	**04 40 27.1**	**-3.4**
LKRN				S	**Sb**	**04 41 09.5**	**+0.8**
SEKA	**Sheki**	**3.12**	**35**	P	**Pb**	**04 40 28.8**	**-1.9**
SEKA				S	**Sb**	**04 41 08.5**	**-0.5**
ASTR	**Astara**	**3.13**	**91**	P	**Pn**	**04 40 27.2**	**+2.6**
ASTR				S	**Sb**	**04 41 09.2**	**+0.1**
QBL	**Gabala**	**3.25**	**45**	P	**Pb**	**04 40 30.3**	**-2.6**
QBL				S	**Sb**	**04 41 12.8**	**+0.1**
ZKTA	**Zakatala**	**3.26**	**25**	P	**Pb**	**04 40 30.9**	**-2.2**
ZKTA				S	**Sb**	**04 41 12.2**	**-0.9**
LGD	**Lagodekhi**	**3.33**	**19**	P	**Pg**	**04 40 36.9**	**-1.8**
LGD				S	**Sg**	**04 41 23.5**	**+1.7**
IML	**Ismayilli**	**3.35**	**50**	P	**Pb**	**04 40 30.6**	**-4.0**
IML				S	**Sb**	**04 41 15.5**	**-0.2**
XNQ	**Khinaliq**	**3.57**	**45**	P	**Pb**	**04 40 34.3**	**-4.2**
XNQ				S	**Sb**	**04 41 21.3**	**-0.9**
GBS	**Qobustan**	**3.69**	**59**	P	**Pn**	**04 40 35.4**	**+2.9**
GBS				S	**Sb**	**04 41 21.7**	**-3.8**
ATGJ	**Altiaghaj**	**3.86**	**54**	P	Pb	04 40 38.2	-5.0
QSAR	**Qusar**	**3.88**	**42**	P	**Pn**	**04 40 37.6**	**+2.7**
QUBA	**Quba, Azerbaij**	**3.89**	**46**	P	**Pn**	**04 40 38.4**	**+3.2**
SIZA	**Siyzn**	**3.95**	**52**	P	**Pn**	**04 40 39.3**	**+3.2**
SIZA				S	**Sb**	**04 41 28.5**	**-4.5**

IDC 09 04:48:13.1±3.7, 30.32S×177.92W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=81.0km s-min=23.4km az=114.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.07**	**0**	Pn	Pn	04 48 36.7	+1.4
	52nm,0.3s,baz=284,slow=22,SNR=1.6						
RAO				Sn	Sn	04 48 49.9	-0.9
	171nm,0.3s,baz=200,slow=23,SNR=8.9						
ASAR	**Alice Springs**	**43.18**	**267**	P	P	04 56 15.7	-0.3
	0.2nm,0.3s,baz=107,slow=7.9,SNR=4.9						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.16**	**272**	P	P	04 56 23.9	0.0
	0.3nm,0.3s,baz=110,slow=8.1,SNR=11						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**145.10**	**340**	PKPbc	PKPbc	05 07 49.6	-1.6
	4.8nm,1.0s,baz=45,slow=5.3,SNR=4.0						

*OSPL **09** 04:53:37.5±0.8, 17.67N×66.88W, h3km±999km, ML2.8, Presumed earthquake*
*RSPR **09** 04:53:38.1, 17.76N×66.88W, h4km*
*SDD **09** 04:53:39.4±1.4, 17.77N×66.88W, h19km±16km, MD2.6, ML3.1, MW3.4, Presumed earthquake*

NEIC 09 04:53:36.6±1.0, 17.67N±0.03×66.88W±0.01, h10km±2km, ML3.3/31, ML3.3(RSPR), 10C-8D, Error ellipse: s-maj=5.1km s-min=3.0km az=349.0, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.30**	**0**		Pg	04 53 42.8	+0.1
GBPR					Sg	04 53 46.5	-0.1
GBPR	**Guanica, Bosqu**	**0.30**	**0**	⇓*i* P	Pg	04 53 42.8	+0.1
GBPR				*e*S	Sg	04 53 46.5	-0.1
MLPR	**Magueyes Islan**	**0.33**	**332**		Pg	04 53 43.8	+0.5
MLPR				Sg	Sg	04 53 48.0	+0.3
MLPR				IAML		04 53 48.3	
	2μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.40**	**326**		Pg	04 53 44.9	+0.5
CRPR				Sg	Sg	04 53 50.2	+0.5
CRPR				IAML		04 53 51.0	
	2μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.40**	**326**	⇑*e*Pg	Pg	04 53 45.0	+0.6
CRPR				⇓*e*Sg	Sg	04 53 50.3	+0.6
CRPR				IAML		04 53 50.6	
	comp=N,6μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.40**	**326**	⇑*i* P	Pg	04 53 44.9	+0.5
CRPR				*e*S	Sg	04 53 50.1	+0.4
CRPR	**Cabo Rojo, PR**	**0.40**	**326**	*i* P	Pg	04 53 44.9	+0.5
CRPR				*e*S	Sg	04 53 50.2	+0.5
CRPR				IAML		04 53 50.9	
	comp=Z,3μm,0.3s						
OBIP	**Obispado Ponce**	**0.45**	**35**		Pg	04 53 45.1	-0.3
OBIP				Sg	Sg	04 53 51.7	+0.3
OBIP	**Obispado Ponce**	**0.45**	**35**	⇓*i* P	Pg	04 53 45.2	-0.2
OBIP				*e*S	Sg	04 53 51.7	+0.4
OBIP	**Obispado Ponce**	**0.45**	**35**	*i* P	Pg	04 53 45.2	-0.2
OBIP				*e*S	Sg	04 53 51.8	+0.4
OBIP				IAML		04 53 52.8	
	comp=Z,537nm,0.2s						
CELP	**Cerrillos**	**0.49**	**36**		Pg	04 53 45.9	-0.2
CELP				Sg	Sg	04 53 53.0	+0.4
CELP				IAML		04 53 53.9	
	comp=Z,3μm,0.3s						
LSP	**Las Mesas**	**0.54**	**339**		Pg	04 53 47.2	+0.1
LSP					Sg	04 53 54.8	+0.6
LSP	**Las Mesas**	**0.54**	**339**	⇓*i* P	Pg	04 53 47.2	+0.1
LSP				*e*S	Sg	04 53 54.8	+0.6
UUPR	**Utuado, UPR, P**	**0.59**	**15**		Pg	04 53 47.7	-0.5
UUPR				Sg	Sg	04 53 55.4	-0.6
PRSN	**Puerto Rico Se**	**0.60**	**335**		Pg	04 53 48.1	0.0
PRSN	**Puerto Rico Se**	**0.60**	**335**		Sg	04 53 56.2	+0.2
PRSN	**Puerto Rico Se**	**0.60**	**335**	*e*Pg	Pg	04 53 48.3	+0.1
PRSN				⇑*e*Sg	Sb	04 53 56.9	-0.7
PRSN	**Puerto Rico Se**	**0.60**	**335**	⇑*i* P	Pg	04 53 48.2	0.0
PRSN				*e*S	Sg	04 53 56.2	+0.2
ECPR	**Experimental S**	**0.81**	**37**		Pg	04 53 51.3	-0.9
ECPR				IAML		04 54 04.6	
	comp=Z,1μm,0.2s						
ECPR				IAML		04 54 04.8	
	comp=Z,2μm,0.2s						
ECPR	**Experimental S**	**0.81**	**37**	⇑*e*P	Pg	04 53 51.7	-0.5
ECPR				*e*S	Sg	04 54 02.3	-0.5
AGPR	**Aguadilla, PR**	**0.82**	**344**		Pg	04 53 51.8	-0.6
AGPR				IAML		04 54 04.0	
	comp=Z,1μm,0.5s						
AGPR				IAML		04 54 04.1	
	comp=Z,1μm,0.4s						
AGPR	**Aguadilla, PR**	**0.82**	**344**	⇓*e*Pg	Pg	04 53 52.1	-0.4
AGPR				⇓*e*Sg	Sg	04 54 01.9	-1.2
AGPR				IAML		04 54 04.0	
	comp=N,1μm,0.3s						
AGPR	**Aguadilla, PR**	**0.82**	**344**	⇑*i* P	Pg	04 53 51.9	-0.6
AGPR				*e*S	Sg	04 54 02.5	-0.6
SJG	**San Juan**	**0.82**	**58**		Pg	04 53 52.1	-0.3
SJG	**San Juan**	**0.82**	**58**	IAML		04 54 04.4	
	comp=N,758nm,0.5s						
SJG				IAML		04 54 06.5	
	comp=N,762nm,0.6s						
SJG	**San Juan**	**0.82**	**58**	⇑*e*Pg	Pg	04 53 52.2	-0.2
SJG				⇑*e*Sg	Sb	04 54 04.0	0.0
SJG	**San Juan**	**0.82**	**58**	⇑*e*P	Pg	04 53 52.6	+0.2
SJG				*e*S	Sb	04 54 03.7	-0.4
SJG	**San Juan**	**0.82**	**58**	*i* P	Pg	04 53 52.5	+0.1
SJG				*e*S	Sb	04 53 52.6	-0.4
SJG				IAML		04 54 04.3	
	comp=Z,378nm,0.3s						
EMPR	**Esperanza - Ma**	**0.86**	**23**		Pg	04 53 53.0	-0.3
EMPR					Sg	04 54 04.2	-0.3
EMPR	**Esperanza - Ma**	**0.86**	**23**	⇑*e*P	Pg	04 53 53.0	-0.3
EMPR				*e*S	Sg	04 54 04.2	-0.3
PDPR	**Patillas Dam,**	**0.89**	**67**		Pb	04 53 53.9	-0.1
IDE	**Isla Desecheo**	**0.91**	**321**		Pg	04 53 53.6	-0.4
IDE					Sg	04 54 05.4	-0.5
IDE	**Isla Desecheo**	**0.91**	**321**	⇑*e*P	Pg	04 53 53.6	-0.4
IDE				*e*S	Sg	04 54 05.4	-0.5
GCPR	**Guaynabo City**	**0.99**	**50**		Pg	04 53 54.9	-0.7
GCPR	**Guaynabo City**	**0.99**	**50**		Sg	04 54 07.6	-0.8
GCPR	**Guaynabo City**	**0.99**	**50**	⇓*e*P	Pg	04 53 55.0	-0.5
GCPR				*e*S	Sg	04 54 07.6	-0.8
HUMP	**Col San Antoni**	**1.08**	**64**		Pb	04 53 57.0	-0.5
HUMP				IAML		04 54 32.8	
	comp=Z,645nm,0.4s						
HUMP				IAML		04 54 33.9	
	comp=Z,608nm,0.2s						
HUMP	**Col San Antoni**	**1.08**	**64**		Sg	04 54 11.1	-0.5
HUMP	**Col San Antoni**	**1.08**	**64**	⇑*e*P	Pb	04 53 56.9	-0.5
HUMP				*e*S	Sg	04 54 11.1	-0.5
CUPR	**Culebra, Puert**	**1.65**	**67**		Pb	04 54 07.0	0.0
HIDR	**Higuey Centro**	**1.97**	**298**	*e*Pg	Pb	04 54 12.9	+0.4
HIDR				⇑*e*Sg	Sb	04 54 36.9	-0.4
HIDR				IAML		04 54 46.2	
	comp=N,109nm,0.7s						
HATOM	**Hato Mayor del**	**2.62**	**295**	⇓*e*Pg	Pb	04 54 24.2	+0.5
HATOM				IAML		04 55 25.7	
	comp=N,32nm,0.9s						

*NEIC **09** 04:53:55.8±0.7, 17.66N±0.04×66.87W±0.01, h10km±2km, ML3.3/21, Md3.4/3(RSPR), Error ellipse: s-maj=6.0km s-min=3.0km az=349.0*
*OSPL **09** 04:53:56.8±0.8, 17.67N×66.89W, h3km±999km, ML3.1, Presumed earthquake*
*SDD **09** 04:53:56.9±0.8, 17.66N×66.89W, h12km±24km, MD2.8, ML3.4, MW3.6, Presumed earthquake*
*RSPR **09** 04:53:57.4, 17.76N×66.88W, h3km, MD3.4/3*

ISC 09 04:53:56.5±2.3, 17.7N±0.1×66.86W±0.03, h12km±11km, n31, σ0.941/54, 9C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.28**	**355**		**Pg**	**04 54 02.2**	**-0.1**
GBPR					**Sg**	**04 54 06.1**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.28**	**355**	⇓*e*P	**Pg**	**04 54 02.2**	**-0.1**
GBPR				*e*S	**Sg**	**04 54 06.1**	**-0.1**
MLPR	**Magueyes Islan**	**0.33**	**327**		**Pg**	**04 54 03.1**	**-0.1**
MLPR				Sg	**Sg**	**04 54 07.6**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.39**	**322**	Pg	**Pg**	**04 54 04.2**	**-0.2**
CRPR				Sg	**Sg**	**04 54 09.8**	**+0.1**
CRPR				IAML		04 54 10.0	
	5μm,0.2s						
CRPR				IAML		04 54 10.1	
	2μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.39**	**322**	*e*Pg	**Pg**	**04 54 04.2**	**-0.2**
CRPR				IAML	**Sg**	**04 54 09.9**	**+0.2**
	comp=N,4μm,0.2s						
CRPR				⇓*e*Sg	**Sg**	**04 54 09.9**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.39**	**322**	⇑*e*P	**Pg**	**04 54 04.4**	**0.0**
CRPR				*e*S	**Sg**	**04 54 09.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.39**	**322**	*i* P	**Pg**	**04 54 04.2**	**-0.2**
CRPR				*e*S	**Sg**	**04 54 09.2**	**-0.5**
CRPR				IAML		04 54 10.2	
	comp=Z,2μm,0.4s						
OBIP	**Obispado Ponce**	**0.42**	**34**	Pg	**Pg**	**04 54 04.5**	**-0.4**
OBIP				Sg	**Sg**	**04 54 11.2**	**+0.6**
OBIP	**Obispado Ponce**	**0.42**	**34**	⇑*e*P	**Pg**	**04 54 05.2**	**+0.3**
OBIP				*e*S	**Sg**	**04 54 11.3**	**+0.8**
OBIP	**Obispado Ponce**	**0.42**	**34**	*i* P	**Pg**	**04 54 04.4**	**-0.4**
OBIP				*e*S	**Sg**	**04 54 11.0**	**+0.5**
OBIP				IAML		04 54 11.5	
	comp=Z,720nm,0.8s						
CELP	**Cerrillos**	**0.46**	**35**	Pg	**Pg**	**04 54 05.2**	**-0.4**
CELP				Sg	**Sg**	**04 54 12.3**	**+0.5**
CELP				IAML		04 54 13.9	
	comp=Z,2μm,0.2s						
LSP	**Las Mesas**	**0.53**	**335**		**Pg**	**04 54 06.9**	**0.0**
LSP					**Sg**	**04 54 14.3**	**+0.4**
LSP	**Las Mesas**	**0.53**	**335**	⇑*e*P	**Pg**	**04 54 06.9**	**0.0**
LSP				*e*S	**Sg**	**04 54 14.3**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.57**	**13**		**Sg**	**04 54 14.8**	**-0.5**
PRSN	**Puerto Rico Se**	**0.59**	**332**	Pg	**Pg**	**04 54 07.5**	**-0.5**
PRSN	**Puerto Rico Se**	**0.59**	**332**		**Sg**	**04 54 16.1**	**+0.3**
PRSN	**Puerto Rico Se**	**0.59**	**332**	*e*Pg	**Pg**	**04 54 08.0**	**0.0**
PRSN				⇑*e*Sg	**Sb**	**04 54 17.6**	**+0.6**
PRSN				IAML		04 54 20.4	
	comp=N,3μm,0.3s						
PRSN	**Puerto Rico Se**	**0.59**	**332**	⇑*e*P	**Pg**	**04 54 08.0**	**0.0**
PRSN				*e*S	**Sg**	**04 54 16.1**	**+0.3**
ECPR	**Experimental S**	**0.78**	**37**	⇑*e*P	**Pg**	**04 54 11.3**	**-0.3**
ECPR				*e*S	**Sb**	**04 54 22.9**	**+0.3**
SJG	**San Juan**	**0.79**	**58**	*e*Pg	**Pg**	**04 54 11.7**	**-0.2**
SJG				*e*Sg	**Sb**	**04 54 23.6**	**+0.7**
SJG	**San Juan**	**0.79**	**58**	*e*S	**Sb**	**04 54 23.5**	**+0.6**
SJG	**San Juan**	**0.79**	**58**	*i* P	**Pg**	**04 54 11.7**	**-0.2**

1.1nm,0.3s,baz=125,slow=4.0,SNR=5.6
CMAR LR LR 05 42 60.0
comp=Z,14nm,18.7s,baz=120,slow=37
1.1nm,0.3s
SONM Songino Array 57.69 335 P **P 05 25 51.7 +0.7**
0.1nm,0.3s,baz=116,slow=6.8,SNR=4.5
SONM LR LR 05 48 46.3
comp=Z,22nm,21.5s,baz=160,slow=34
0.1nm,0.3s
PETK Petropavlovsk- 57.97 14 P **P 05 25 52.1 -0.6**
8.1nm,1.1s,baz=217,slow=12,SNR=2.2
8.1nm,1.1s
MKAR Makanchi Array 69.72 322 P **P 05 27 10.2 -0.1**
2.2nm,0.8s,baz=116,slow=7.4,SNR=13
2.2nm,0.8s
ZALV Zalesovo Beam 71.89 330 P **P 05 27 24.2 +1.0**
0.8nm,0.6s,baz=140,slow=9.2,SNR=2.8
0.8nm,0.6s
BVAR Borovoye Array 79.25 325 P **P 05 28 05.4 0.0**
0.4nm,0.4s,baz=102,slow=12,SNR=4.0
0.4nm,0.4s
ILAR Eielson Array 85.97 24 P **P 05 28 39.5 -0.7**
0.6nm,0.7s,baz=262,slow=5.9,SNR=5.2
0.6nm,0.7s

*UPA **09** 05:16:34.2±2.3,9.°89N×83.°98W, h5km±12km, MD3.8, ML3.2, Presumed earthquake*
*CATAC **09** 05:16:34.7±0.2,10.°N±2.°×8.°4W±.°, h27km±2km, M3.0/10, MLv3.0/10, Error ellipse: s-maj=4.4km s-min=4.3km az=79.2, confirmed*
*UCR **09** 05:16:35.4±1.0,9.°57N×84.°18W, h34km±1km, MW3.6, Presumed earthquake*

ISC 09 05:16:36.1±0.9, 9.°57N±0.°02×84.°19W±0.°02, h30km±4km, **n93**, σ0°89/127, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PICV	**PH. Pirrs**	**0.06**	**354**	*eP*		**Pb**	**05 16 41.2**	**-0.1**
PICV				*eS*		**Sb**	**05 16 46.0**	**+1.1**
SVQ2	**Quepos**	**0.14**	**171**	*eP*		**Pb**	**05 16 41.2**	**-0.5**
SVQ2				*eS*		**Sb**	**05 16 45.8**	**+0.3**
QUEP	**Quepos**	**0.14**	**170**	P		**Pb**	**05 16 41.2**	**-0.5**
QUEP	**Quepos**	**0.14**	**170**	*eP*		**Pb**	**05 16 40.8**	**-0.9**
QUEP				*eS*		**Sb**	**05 16 45.8**	**+0.3**
RAZU	**San Marcos de**	**0.19**	**61**	*eP*		**Pb**	**05 16 42.0**	**-0.4**
RAZU				*eS*		**Sb**	**05 16 47.3**	**+0.6**
PITB	**Pirrs, San**	**0.19**	**60**	*eP*		**Pb**	**05 16 42.1**	**-0.2**
PITB				*eS*		**Sb**	**05 16 47.3**	**+0.6**
ACOS	**Acosta**	**0.23**	**6**	*eP*		**Pb**	**05 16 42.3**	**-0.5**
ACOS				*eS*		**Sb**	**05 16 47.8**	**+0.4**
PIEC	**Cerro El Cedra**	**0.23**	**77**	*eP*		**Pb**	**05 16 42.5**	**-0.4**
PIEC				*eS*		**Sb**	**05 16 48.1**	**+0.5**
LCR2	**La Lucha 2**	**0.25**	**46**	P		**Pb**	**05 16 42.8**	**-0.3**
LCR2				S		**Sb**	**05 16 47.9**	**0.0**
PURI	**Puriscal**	**0.30**	**336**	*eP*		**Pb**	**05 16 43.4**	**-0.3**
AMPA	**Desamparados**	**0.35**	**21**	*eP*		**Pb**	**05 16 43.6**	**-0.8**
AMPA				*eS*		**Sb**	**05 16 50.2**	**+0.2**
SANTA	**Santa Ana**	**0.36**	**0**	*eP*		**Pb**	**05 16 44.0**	**-0.9**
SANTA				*eS*		**Sb**	**05 16 50.6**	**+0.3**
LUJA	**Lujan**	**0.37**	**18**	*eP*		**Pb**	**05 16 44.2**	**-0.5**
LUJA				*eS*		**Sb**	**05 16 51.0**	**+0.5**
TRIO	**Tres Rios**	**0.39**	**30**	*eP*		**Pb**	**05 16 44.2**	**-0.7**
TRIO				*eS*		**Sb**	**05 16 51.1**	**+0.2**
ECI	**Escuela Centro**	**0.39**	**20**	*eP*		**Pb**	**05 16 44.6**	**-0.4**
ECI				*eS*		**Sb**	**05 16 51.8**	**+0.7**
SJS3	**Mercedes San J**	**0.39**	**20**	*eP*		**Pb**	**05 16 44.7**	**-0.3**
SJS3				*eS*		**Sb**	**05 16 51.9**	**+0.9**
SJS	**Escuela Geolog**	**0.39**	**20**	*eP*		**Pb**	**05 16 44.4**	**-0.6**
SJS				*eS*		**Sb**	**05 16 51.8**	**+0.8**
TAGO	**Cartago**	**0.39**	**41**	*eP*		**Pb**	**05 16 44.5**	**-0.6**
TAGO				*eS*		**Sb**	**05 16 51.8**	**+0.6**
LUPE	**Guadalupe**	**0.40**	**19**	*eP*		**Pb**	**05 16 44.6**	**-0.5**
LUPE				*eS*		**Sb**	**05 16 52.0**	**+0.7**
BELE	**Belen**	**0.41**	**360**	*eP*		**Pb**	**05 16 44.6**	**-0.5**
BELE				*eS*		**Sb**	**05 16 51.7**	**+0.4**
REPA	**Paraso**	**0.41**	**51**	*eP*		**Pb**	**05 16 44.5**	**-0.7**
REPA				*eS*		**Sb**	**05 16 51.5**	**+0.1**
DOMI	**Santo Domingo**	**0.42**	**13**	*eP*		**Pb**	**05 16 45.1**	**-0.3**
DOMI				*eS*		**Sb**	**05 16 52.8**	**+1.0**
BITO	**Garabito Jaco**	**0.43**	**277**	*eP*		**Pb**	**05 16 45.1**	**-0.3**
BUS1	**Rivas**	**0.43**	**92**	*eP*		**Pb**	**05 16 44.8**	**-1.0**
BUS1				*eS*		**Sb**	**05 16 52.1**	**-0.4**
CORON	**Coronado**	**0.44**	**24**	*eP*		**Pb**	**05 16 45.5**	**-0.2**
ATEO	**Atenas**	**0.45**	**335**	*eP*		**Pb**	**05 16 45.0**	**-0.8**
OROT	**Orotina**	**0.48**	**316**	*eP*		**Pb**	**05 16 45.2**	**-1.0**
OROT				*eS*		**Sb**	**05 16 53.0**	**-0.1**
PCAYA	**Pacayas**	**0.51**	**47**	*eP*		**Pb**	**05 16 46.0**	**-0.8**
VICA	**Volcano Irazu**	**0.54**	**39**	*eP*		**Pb**	**05 16 46.7**	**-0.7**
RAFA	**San Farael, Vo**	**0.54**	**44**	*eP*		**Pb**	**05 16 46.6**	**-0.7**
RAFA				*eS*		**Sb**	**05 16 55.1**	**+0.1**
ZEDO	**Perez Zeledon**	**0.54**	**113**	*eP*		**Pb**	**05 16 46.3**	**-0.9**
ZEDO				*eS*		**Sb**	**05 16 54.8**	**-0.1**
VINA	**Juan Vinas**	**0.54**	**53**	*eP*		**Pb**	**05 16 46.4**	**-0.9**
RAMO	**San Ramon**	**0.58**	**332**	*eP*		**Pb**	**05 16 47.6**	**-0.4**
RAMO				*eS*		**Sb**	**05 16 56.3**	**+0.2**
CVTQ	**Turrialba Volc**	**0.60**	**44**	*eP*		**Pb**	**05 16 47.7**	**-0.7**
CVTV	**Tajo**	**0.61**	**45**	*eP*		**Pb**	**05 16 47.9**	**-0.7**
VERB	**Verbena**	**0.61**	**52**	*eP*		**Pb**	**05 16 47.5**	**-0.9**
VTCV	**VTCV, Calle Va**	**0.61**	**48**	*eP*		**Pb**	**05 16 47.6**	**-0.9**
VTR0	**Volcan Turrial**	**0.61**	**43**	*eP*		**Pb**	**05 16 47.9**	**-0.8**
CVTR	**Volcan Turrial**	**0.62**	**43**	*eP*		**Pb**	**05 16 47.9**	**-0.8**
ABRB	**Las Abras (San**	**0.64**	**47**	*eP*		**Pb**	**05 16 48.2**	**-0.7**
ROBF	**Roble, Puntare**	**0.68**	**307**	*eP*		**Pb**	**05 16 48.5**	**-1.0**
CVTG	**V. Turrialba,**	**0.70**	**35**	*eP*		**Pb**	**05 16 49.2**	**-0.7**
SAJE	**San Jernim**	**0.70**	**108**	*eP*		**Pn**	**05 16 48.4**	**-1.7**
SAJE				*eS*		**Sb**	**05 16 58.7**	**-0.8**
RESJ	**San Isidro (Tu**	**0.71**	**49**	*eP*		**Pb**	**05 16 49.1**	**-0.9**
OCHAL	**Ojochal**	**0.71**	**131**	P		**Pn**	**05 16 48.1**	**-1.9**
OCHAL				S		**Sb**	**05 16 58.5**	**-0.9**
EDPE	**Pejibaye, P**	**0.73**	**124**	*eP*		**Pn**	**05 16 49.0**	**-1.4**
PILE	**Guapiles**	**0.75**	**31**	*eP*		**Pn**	**05 16 49.0**	**-0.7**
ARTO	**Ro Cuarto**	**0.77**	**358**	*eP*		**Pn**	**05 16 50.2**	**-0.8**
LCOCO	**El Coco**	**0.81**	**50**	*eP*		**Pn**	**05 16 50.4**	**-1.0**
IRES	**Siquirres**	**0.85**	**52**	*eP*		**Pn**	**05 16 51.3**	**-0.8**
CARI	**Cariari**	**0.91**	**29**	*eP*		**Pn**	**05 16 52.2**	**-0.6**
BURE	**Buenos Aires**	**0.93**	**115**	*eP*		**Pn**	**05 16 52.0**	**-1.1**
JCR1	**Jicaral**	**0.95**	**287**	*eP*		**Pn**	**05 16 52.4**	**-1.0**
DRK0	**Durika**	**0.98**	**108**	P		Pn	05 16 51.2	-2.7
DRK0				S		**Sn**	**05 17 04.0**	**-2.9**
DRK0	**Durika**	**0.98**	**108**	*eP*		Pn	05 16 51.2	-2.7
FIMO	**Fila Mora**	**1.00**	**125**	*eP*		**Pn**	**05 16 53.5**	**-0.7**
FORC	**Fortuna**	**1.01**	**332**	*eP*		**Pn**	**05 16 54.5**	**+0.2**
VACR	**Volcan Arenal**	**1.02**	**332**	*eP*		**Pn**	**05 16 54.1**	**-0.3**
JTS	**Las Juntas de**	**1.04**	**314**	*eP*		**Pn**	**05 16 54.4**	**-0.2**
JTS				*eS*		**Sn**	**05 17 08.9**	**+0.7**
JTS	**Las Juntas de**	**1.04**	**314**	*eP*		**Pn**	**05 16 54.2**	**-0.4**
CEDE	**Laguna Cedeo**	**1.04**	**331**	*eP*		**Pn**	**05 16 54.8**	**0.0**
TRT2	**Tortugero**	**1.08**	**24**	P		**Pn**	**05 16 54.6**	**-0.6**
TRT2				S		**Sn**	**05 17 09.7**	**+0.7**
TRT2	**Tortugero**	**1.08**	**24**	*eP*		**Pn**	**05 16 54.5**	**-0.6**
NYURE	**Nandayure**	**1.13**	**292**	*eP*		**Pn**	**05 16 55.2**	**-0.7**
EDP2	**Potrero Grande**	**1.14**	**119**	*eP*		**Pn**	**05 16 55.3**	**-0.7**
LAES	**El Progreso Va**	**1.14**	**80**	*eP*		**Pn**	**05 16 55.4**	**-0.5**
COVE	**Coope Vega, Sa**	**1.16**	**350**	P		**Pn**	**05 16 56.0**	**-0.3**
COVE				S		**Sn**	**05 17 12.5**	**+1.3**
CEUA	**Cerro Uatsi, L**	**1.23**	**87**	*eP*		**Pn**	**05 16 57.7**	**+0.4**
INVE	**Universidad In**	**1.25**	**316**	*eP*		**Pn**	**05 16 58.3**	**+0.8**
QUEB	**Quebradon, Cot**	**1.26**	**326**	*eP*		**Pn**	**05 16 58.5**	**+0.8**
CMARA	**Lajas Hojancha**	**1.30**	**290**	P		**Pn**	**05 16 57.1**	**-1.1**
CMARA				S		**Sn**	**05 17 14.1**	**-0.5**
CMARA	**Lajas Hojancha**	**1.30**	**290**	*eP*		**Pn**	**05 16 57.1**	**-1.1**
TIMP	**Tierras Morena**	**1.30**	**321**	*eP*		**Pn**	**05 16 59.3**	**+1.0**
INDI	**Punta indio, G**	**1.33**	**283**	P		**Pn**	**05 16 56.8**	**-1.8**
INDI				S		**Sn**	**05 17 14.6**	**-0.6**
BRIBI	**Bribri**	**1.35**	**88**	*eP*		**Pn**	**05 16 59.0**	**+0.1**
PLVR	**Palo Verde**	**1.38**	**304**	*eP*		**Pn**	**05 16 59.0**	**-0.5**
ELVJ	**El Viejo (Barb**	**1.42**	**308**	*eP*		**Pn**	**05 17 01.2**	**+1.4**
PIRO	**Carate, Puerto**	**1.43**	**144**	P		**Pn**	**05 17 00.2**	**+0.2**
CUI	**Cuipilapa**	**1.45**	**318**	*eP*		**Pn**	**05 17 00.8**	**+0.6**
ALCO	**Alturas Coton,**	**1.47**	**115**	*eP*		**Pn**	**05 16 59.5**	**-1.2**
VMAR	**Armenia, Volca**	**1.54**	**324**	*eP*		**Pn**	**05 17 02.3**	**+0.8**
MLIR3	**Monte Lirio, C**	**1.55**	**120**	*eP*		**Pb**	**05 17 06.1**	**+1.9**
MLIR3				*eS*		**Sb**	**05 17 26.7**	**+3.2**
SCLRA	**Santa Clara, W**	**1.57**	**118**	*eS*		**Sn**	**05 17 22.5**	**+1.1**
BRU2	**Volcan**	**1.67**	**117**	*eP*		**Pn**	**05 17 03.7**	**+0.3**
BRU2				AMP			05 17 04.8	
	comp=Z,278nm,0.2s							
BRU2				*eS*		**Sn**	**05 17 24.8**	**+0.9**
ELI1	**Hacienda Flor**	**1.72**	**309**	P		**Pn**	**05 17 03.7**	**-0.2**
CLLRA	**Cordillera,**	**1.76**	**118**	*eP*		**Pn**	**05 17 02.9**	**-1.7**
CLLRA	**Cordillera,**	**1.76**	**118**	*eP*		**Pn**	**05 17 04.1**	**-0.5**
JEFFS	**S de V. Baru**	**1.86**	**119**	*i* P		**Pn**	**05 17 06.9**	**+0.9**
JEFFS	**S de V. Baru**	**1.86**	**119**	*eP*		Pn	05 17 03.7	-2.3
PTPM	**Petroterminale**	**1.87**	**136**	*eP*		**Pn**	**05 17 07.9**	**+1.8**
PTPM				*eS*		**Sb**	**05 17 34.6**	**+1.9**
PBNVO	**Pueblo Nuevo,**	**2.08**	**109**	*eP*		**Pn**	**05 17 08.6**	**-0.3**
CHGR2	**Aguacate**	**2.11**	**107**	*eP*		**Pn**	**05 17 09.0**	**-0.4**
CHGR2				*eS*		**Sn**	**05 17 36.0**	**+1.4**
RBALA	**Bur**	**2.12**	**109**	*eP*		**Pn**	**05 17 08.6**	**-0.9**

IDC 09 05:21:12.3±26.0, 24.°57S×179.°99W, h550km±254km, **mb3.1/5, mbtmp4.1/5, Error ellipse: s-maj=170.2km s-min=100.0km az=89.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**31.49**	**271**	P		P	05 26 50.1	+0.4
	2.4nm,0.4s,baz=82,slow=13,SNR=10							
	2.4nm,0.4s							
STKA	**Stephens Creek**	**34.49**	**249**	P		P	05 27 13.7	-1.1
	1.0nm,0.4s,baz=66,slow=12,SNR=3.7							
	1.0nm,0.4s							
ASAR	**Alice Springs**	**41.94**	**261**	P		P	05 28 15.2	-0.3
	0.5nm,0.3s,baz=94,slow=7.3,SNR=23							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**42.37**	**267**	P		P	05 28 18.4	-0.5
	1.5nm,0.4s,baz=100,slow=6.3,SNR=39							
	1.5nm,0.4s							
FITZ	**Fitzroy Crossi**	**50.79**	**266**	P		P	05 29 23.1	+0.6
	0.6nm,0.3s,baz=106,slow=7.4,SNR=1.6							
	0.6nm,0.3s							
HFS	**Hagfors**	**143.20**	**349**	PKP		PKPdf	05 39 43.0	-0.4
	7.3nm,1.1s,baz=47,slow=2.8,SNR=4.8							

*NIED **09** 05:24:03.0, 37.°90N×143.°62E, h50km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr=2.65; Mθθ=0.44; Mφφ=2.21; Mrθ=0.83; Mθφ=1.27; Mφr=0.44; Fault plane solution: Mo2.92000×10^14^ NP1:φs=16.00000°, δ=38.00000°, λ=-108.00000°. NP2:φs=219.00000°, δ=54.00000°, λ=-76.00000°.*
*JMA **09** 05:24:03.0±0.2, 37.°9N±0.°7×14.°4E±.°, h50km, MV4.1/29, FAR E OFF MIYAGI PREF*
*IDC **09** 05:24:04.6±3.2, 37.°84N×143.°72E, h55km±28km, mb3.3/9, mbtmp3.6/12, ML3.6/3, MS3.1/1, Error ellipse: s-maj=22.8km s-min=16.4km az=113.0*

ISC 09 05:24:04.0±0.9, 37.°89N±0.°05×143.°68E±0.°07, h50km, **n26, σ19°40/37, mb3.4/8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.80**	**284**	P		**Pn**	**05 24 31.6**	**-0.9**
JIKH				S		**Sn**	**05 24 52.5**	**-1.8**
JIO	**Ouri**	**1.93**	**288**	P		**Pn**	**05 24 33.5**	**-0.8**
JIO				S		**Sn**	**05 24 55.9**	**-1.4**
JKMT	**Kesennumamotoy**	**1.97**	**299**	P		**Pn**	**05 24 34.1**	**-0.7**
OFUJ	**Ofunato**	**1.98**	**308**	P		**Pn**	**05 24 34.2**	**-0.8**
OFUJ				S		**Sn**	**05 24 57.8**	**-0.9**
JMK	**Ichinoseki**	**2.21**	**300**	P		**Pn**	**05 24 37.7**	**-0.4**
JMK				S		**Sn**	**05 25 04.0**	**-0.2**
JOM	**Ohasama**	**2.45**	**311**	P		**Pn**	**05 24 41.3**	**-0.2**
JOM				S		**Sn**	**05 25 09.8**	**-0.5**
JOTO	**OTAMA OYAMA**	**2.68**	**264**	P		**Pn**	**05 24 44.4**	**-0.2**
JOTO				S		**Sn**	**05 25 15.0**	**-0.8**
JYK	**Kaneyama**	**2.81**	**293**	*eP*		**Pn**	**05 24 46.4**	**0.0**
JANG	**Nango**	**3.00**	**326**	P		**Pn**	**05 24 48.1**	**-0.9**
JANG				*eS*		**Sn**	**05 25 22.4**	**-1.4**
JAG	**Ashikaga**	**3.68**	**248**	P		**Pn**	**05 24 57.5**	**-0.9**
JAG				S		**Sn**	**05 25 37.9**	**-2.6**
JOT	**Ohata**	**4.04**	**331**	*eP*		**Pn**	**05 25 03.7**	**+0.4**
JOT				*eS*		**Sn**	**05 25 47.3**	**-1.9**
JRY	**Ryogami san**	**4.26**	**245**	P		**Pn**	**05 25 05.5**	**-0.8**
JRY				S		**Sn**	**05 25 51.0**	**-3.8**
MJAR	**Matsushiro Arr**	**4.57**	**255**	P		**Pn**	**05 25 11.3**	**+0.7**
	1.3nm,0.3s,baz=86,slow=15,SNR=72							
MJAR				S		**Sn**	**05 26 04.1**	**+1.7**
	3.0nm,0.3s,baz=72,slow=23,SNR=5.0							
	9.1nm,0.5s							
JCH	**Churui**	**4.73**	**357**	P		**Pn**	**05 25 11.5**	**-1.2**
JCH				*eS*		**Sn**	**05 26 02.7**	**-3.5**
ASAJ	**Asahikawa**	**6.28**	**353**	P		**Pn**	**05 25 34.2**	**+0.3**
	3.2nm,0.3s,baz=242,slow=6.7,SNR=16							
	7.0nm,0.3s							
KSRS	**Korea Array**	**12.50**	**273**	P		**Pn**	**05 27 00.7**	**+1.6**
	0.1nm,0.3s,baz=85,slow=15,SNR=3.6							
	1.6nm,0.8s							
HILR	**Hailar Array B**	**20.77**	**312**	P		**P**	**05 28 40.1**	**-0.4**
	1.1nm,0.3s,baz=121,slow=11,SNR=4.7							
	1.1nm,0.3s							
MA2	**Magadan**	**22.18**	**10**	LR		LR	05 39 07.9	
	comp=Z,40nm,18.1s,baz=122,slow=41							
SONM	**Songino Array**	**28.84**	**302**	P		**P**	**05 29 59.4**	**+1.9**
	0.4nm,0.6s,baz=99,slow=9.3,SNR=3.0							
	0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**42.69**	**312**	P		**P**	**05 31 55.1**	**-0.4**
	0.3nm,0.5s,baz=79,slow=8.2,SNR=6.5							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**45.20**	**302**	P		**P**	**05 32 15.2**	**-0.7**
	0.3nm,0.8s,baz=78,slow=11,SNR=5.9							
	0.3nm,0.8s							
KURBB	**Kurchatov Arra**	**46.91**	**308**	P		**P**	**05 32 30.5**	**+1.3**
	0.3nm,0.6s,baz=82,slow=8.6,SNR=8.3							
	0.3nm,0.6s							
ILAR	**Eielson Array**	**47.80**	**33**	P		**P**	**05 32 36.9**	**+0.9**
	0.5nm,0.7s,baz=254,slow=6.2,SNR=7.5							
	0.5nm,0.7s							
WRA	**Warramunga Arr**	**58.19**	**190**	P		**P**	**05 33 52.7**	**-0.2**
	1.5nm,0.6s,baz=9.1,slow=7.0,SNR=20							
	1.5nm,0.6s							
ASAR	**Alice Springs**	**61.91**	**190**	P		**P**	**05 34 17.4**	**-1.0**
	0.5nm,0.6s,baz=7.4,slow=7.0,SNR=4.7							
	0.5nm,0.6s							
PDAR	**Pinedale Array**	**75.77**	**47**	P		**P**	**05 35 45.2**	**+0.4**
	0.3nm,0.7s,baz=277,slow=1.2,SNR=3.4							
	0.3nm,0.7s							

IDC 09 05:32:44.9±6.9, 32.°60S×137.°19E, h0km, **mbtmp2.9/3, ML2.9/3, Error ellipse: s-maj=85.4km s-min=21.8km az=21.0, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**3.80**	**80**	Pn		Pn	05 33 44.4	-0.4
	0.3nm,0.3s,baz=261,slow=5.1,SNR=3.7							
STKA				Pg		Pb	05 33 54.5	+1.6
	0.4nm,0.3s,baz=265,slow=14,SNR=6.7							
STKA				Sn		Sn	05 34 30.6	+0.4
	0.8nm,0.3s,baz=324,slow=18,SNR=4.3							
STKA				Lg		Lg	05 34 46.2	
	0.8nm,0.3s,baz=347,slow=14,SNR=6.1							
	1.3nm,0.4s							
ASAR	**Alice Springs**	**9.36**	**341**	Pn		Pn	05 35 02.7	+1.5
	0.1nm,0.3s,baz=172,slow=9.5,SNR=5.3							
ASAR				Sn		Sn	05 36 47.5	+0.3
	0.1nm,0.3s,baz=165,slow=22,SNR=5.5							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**12.86**	**348**	Pn		Pn	05 35 47.8	-1.3
	0.1nm,0.3s,baz=165,slow=11,SNR=2.1							
	0.2nm,0.4s							

*IDC **09** 05:35:08.6±0.9, 2.°96S×129.°99E, h0km, mb4.0/8, mbtmp4.0/11, ML3.8/3, MS3.1/3, Error ellipse: s-maj=29.3km s-min=16.9km az=74.0*
*DJA **09** 05:35:12.8±0.5, 3.°5S±3.°×13.°0E±.°, h13km±5km, M4.4/21, mB5.2/3, mb4.6/5, MLv4.3/21, Mw(mB)4.5/3*

ISC 09 05:35:12.4±0.6, 2.°91S±0.°06×129.°84E±0.°05, h25km, **n32, σ19°64/32, mb4.0/8, Seram**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSAI	**Masohi**	**1.01**	**245**	P		**Pb**	**05 35 32.0**	**+0.7**
KRAI	**Karang Ratu**	**1.50**	**254**	P		**Pb**	**05 35 40.5**	**+0.8**
BNDI	**Bandanaira**	**1.60**	**178**	P		**Pb**	**05 35 43.6**	**+2.2**
BNDI	**Bandanaira**	**1.60**	**178**	P		**Pb**	**05 35 42.7**	**+1.3**
AAI	**Ambon**	**1.82**	**245**	P		**Pb**	**05 35 45.2**	**+0.1**
FAKI	**Fak Fak**	**2.40**	**90**	P		**Pn**	**05 35 50.7**	**+0.5**
FAKI	**Fak Fak**	**2.40**	**90**	P		**Pn**	**05 35 50.5**	**+0.3**
SIJI	**Sorong**	**2.48**	**35**	Pn		**Pn**	**05 35 51.0**	**-0.3**
	26nm,0.3s,baz=55,slow=21,SNR=45							
SIJI				Sn		**Sn**	**05 36 20.5**	**-0.2**
	46nm,0.3s,baz=50,slow=23,SNR=18							
	54nm,0.2s							
SIJI	**Sorong**	**2.48**	**35**	P		**Pn**	**05 35 51.4**	**+0.1**
SWI	**Sorong**	**2.48**	**35**	P		**Pn**	**05 35 51.5**	**+0.3**
NLAI	**Namlea**	**2.76**	**263**	P		**Pn**	**05 35 58.1**	**+3.0**
KMPI	**Kaimana, Papua**	**3.93**	**101**	P		**Pn**	**05 36 12.8**	**+1.6**
SANI	**Sanana**	**3.95**	**282**	P		**Pn**	**05 36 12.3**	**+0.8**
SANI	**Sanana**	**3.95**	**282**	P		**Pn**	**05 36 11.7**	**+0.2**
RKPI	**Ransiki, Papua**	**4.55**	**72**	P		**Pn**	**05 36 20.4**	**+0.7**
BAKI	**Biak**	**6.49**	**75**	P		**Pn**	**05 36 47.4**	**+1.0**
BATI	**Baumata**	**9.50**	**220**	LR		LR	05 41 04.1	
	comp=Z,188nm,20.7s,baz=42,slow=37							
KAPI	**Kappang**	**10.28**	**258**	LR		LR	05 42 49.2	
	comp=Z,84nm,18.8s,baz=64,slow=44							
GENI	**Genyem**	**10.32**	**88**	P		**Pn**	**05 37 40.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**15.65**	**195**	Pn		**Pn**	**05 38 51.8**	**+0.3**
	0.4nm,0.3s,baz=31,slow=8.5,SNR=7.8							
	2.0nm,0.5s							
KKM	**Kota Kinabalu**	**16.26**	**303**	P		**Pn**	**05 38 56.6**	**-2.8**
COEN	**Coen**	**17.14**	**131**	P		**Pn**	**05 39 10.5**	**0.0**
WRA	**Warramunga Arr**	**17.49**	**166**	P		**Pn**	**05 39 11.7**	**-3.1**
	0.3nm,0.3s,baz=350,slow=12,SNR=13							
	1.4nm,0.5s							
QIS	**Mount Isa**	**19.96**	**152**	P		**P**	**05 39 42.8**	**-0.1**
ASAR	**Alice Springs**	**21.00**	**170**	P		**P**	**05 39 54.0**	**-0.3**
	4.4nm,0.5s,baz=350,slow=11,SNR=49							
ASAR				S		**S**	**05 43 42.3**	**-4.9**
	3.2nm,1.1s,baz=353,slow=22,SNR=6.4							
	4.4nm,0.5s							
CTA	**Charters Tower**	**23.41**	**138**	P		**P**	**05 40 17.5**	**-2.2**
	2.5nm,1.0s,baz=338,slow=11,SNR=4.5							
	2.5nm,1.0s							
CMAR	**Chiang Mai Arr**	**37.10**	**306**	P		**P**	**05 42 22.6**	**+1.3**
	1.6nm,0.3s,baz=137,slow=8.3,SNR=9.8							
CMAR				LR		LR	05 59 02.7	
	comp=Z,17nm,21.3s,baz=95,slow=38							
	1.6nm,0.3s							
SONM	**Songino Array**	**54.55**	**341**	P		**P**	**05 44 39.9**	**+1.4**
	0.8nm,0.9s,baz=153,slow=8.3,SNR=3.7							
	0.8nm,0.9s							
MKAR	**Makanchi Array**	**64.76**	**326**	P		**P**	**05 45 49.8**	**+0.9**
	0.4nm,0.4s,baz=124,slow=7.4,SNR=8.8							
	0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**67.88**	**333**	P		**P**	**05 46 08.3**	**-0.3**
	0.4nm,0.3s,baz=117,slow=1.7,SNR=4.9							
	0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**68.98**	**328**	P		**P**	**05 46 16.5**	**+0.9**
	1.2nm,0.3s,baz=127,slow=5.7,SNR=19							
	1.2nm,0.3s							
BVAR	**Borovoye Array**	**74.55**	**327**	P		**P**	**05 46 49.8**	**+0.7**
	1.2nm,0.7s,baz=111,slow=8.1,SNR=6.5							
	1.2nm,0.7s							

MEX 09 05:44:28.1±0.8, 15.°52N×95.°07W, h19km±47km, **MD4.3, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**1.03**	**284**	*eP*		Pb	05 44 44.2	-3.1
HUIG				*eS*		Sb	05 44 56.1	-4.4
CARR	**Arriaga**	**1.33**	**57**	*eP*		Pn	05 44 47.6	-4.0
CARR				*i* S		Sn	05 45 00.6	-8.2
CMIG	**Matias Romero**	**1.57**	**7**	*eP*		Pn	05

Tensor Solution. s40 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.12±.13; $M_{\theta\theta}$-0.53±.14; $M_{\phi\phi}$0.64±.14; $M_{r\theta}$0.31±.25; $M_{\theta\phi}$0.22±.16; $M_{r\phi}$0.01±.13: Fault plane solution: $M_0$1.02000×10^{19} NP1:ϕ_s222.80000°,δ81.50000°, λ326.50000°. NP2:ϕ_s318.40000°,δ56.90000°, λ-169.90000°.

*NEIC **09** 06:04:30.5,5°.47S×152°.12E,h30km*

*NEIC **09** 06:04:30.5,5°.47S×152°.12E,h30km,Moment Tensor Solution. Duration:5s3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.85; $M_{\theta\theta}$-0.83; $M_{\phi\phi}$-0.02; $M_{r\theta}$0.52; $M_{\theta\phi}$-0.55; $M_{r\phi}$1.25; Fault plane solution: $M_0$1.68000×10^{18} NP1: ϕ_s269.08000°,δ27.06000°,λ143.45000°. NP2: ϕ_s32.51000°,δ74.28000°,λ67.68000°. Principal axes: T 1.7404, Plg55.0000°, Azm274.0000°; N -0.1269, Plg21.0000°, Azm39.0000°; P -1.6134, Plg26.0000°, Azm140.0000°;*

*IDC **09** 06:04:30.5±0.8,5°.40S×152°.09E,h43km±5km,mb5.5/38, mbtmp5.8/42,ML4.3/4,MS5.7/58 Error ellipse: s-maj=7.8km s-min=6.3km az=94.0*

*GCMT **09** 06:04:33.0±0.1,5°.60S×152°.14E,h36km,MW6.1/162, Moment Tensor Solution. s162,c366; s158,c526; Duration: 2s8 Moment tensor: Scale 10^{18}Nm; M_{rr}0.96±.01; $M_{\theta\theta}$-0.91±.01; $M_{\phi\phi}$-0.05±.01; $M_{r\theta}$0.47±.01; $M_{\theta\phi}$-1.00±.01; $M_{r\phi}$1.32±.02: Best double couple: $M_0$1.95200×10^{18} NP1:ϕ_s269.00000°,δ33.00000°, λ147.00000°. NP2:ϕ_s28.00000°,δ72.00000°,λ61.00000°. Principal axes: T 1.8790, Plg54.0000°, Azm263.0000°; N 0.1450, Plg27.0000°, Azm37.0000°; P -2.0250, Plg22.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*DJA **09** 06:04:35.9±0.5,6°.5S×2°.×15°.2E±°,h88km±4km,M6.2/201, mb6.6/185,mb6.0/201,MLv7.2/1,Mw6.0/169, Mw(mB)6.4/185,MwMwp6.0/164,Mwp6.0/164*

ISC 09 06:04:30.3±0.3,**5°.42S**±0°.03×**152°.09E**±0°.03,**h46**km±1km, **h47**km:**pP-P,n2118,c1979**/1927,**mb6.2**/532,**MS6.0**/488, **144C-48D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.23**	**4**			**Pn**	**06 04 53.2**	**+2.1**
RABL	**Rabaul**	**1.23**	**4**	P		**Pn**	**06 04 53.2**	**+2.1**
RABL	**Rabaul**	**1.23**	**4**	⇓P		**Pn**	**06 04 53.1**	**+2.0**
MANU	**Manus Island**	**5.78**	**305**			Pn	06 05 59.4	+5.8
MANU	**Manus Island**	**5.78**	**305**	P		Pn	06 05 59.6	+5.9
MANU	**Manus Island**	**5.78**	**305**	⇑P		Pn	06 06 00.0	+6.4
PMG	**Port Moresby**	**6.29**	**231**	P		**Pn**	**06 06 01.5**	**+0.9**
	143nm,0.3s,baz=46,slow=5.9,SNR=296							
PMG				S		**Sn**	**06 07 11.6**	**+0.5**
	5µm,0.8s,baz=320,slow=5.6,SNR=6.0							
	3µm,0.6s							
PMG	**Port Moresby**	**6.29**	**231**			**Pn**	**06 06 02.3**	**+1.7**
PMG	**Port Moresby**	**6.29**	**231**	S		**Sn**	**06 07 14.5**	**+3.4**
	6µm,0.8s							
PMG	**Port Moresby**	**6.29**	**231**	P		**Pn**	**06 06 03.5**	**+2.9**
	6µm,0.8s							
PMG	**Port Moresby**	**6.29**	**231**	S		**Sn**	**06 07 14.6**	**+3.4**
	6µm,0.8s							
PMG	**Port Moresby**	**6.29**	**231**	*de*P		**Pn**	**06 06 00.6**	**0.0**
PMG					MLR	MLR		
	comp=Z,45µm,13.0s							
PMG	**Port Moresby**	**6.29**	**231**	P		**Pn**	**06 06 02.4**	**+1.8**
PMG	**Port Moresby**	**6.29**	**231**	⇑P		**Pn**	**06 06 02.3**	**+1.7**
PMG	**Port Moresby**	**6.29**	**231**	P		**Pn**	**06 06 03.7**	**+3.1**
TATA	**Tatamba Isabel**	**8.21**	**111**	P		**Pn**	**06 06 27.5**	**+0.5**
	comp=Z,5µm,1.3s							
TATA	**Tatamba Isabel**	**8.21**	**111**	S		**Sn**	**06 08 00.8**	**+2.4**
	comp=Z,5µm,1.3s							
TATA	**Tatamba Isabel**	**8.21**	**111**	P		**Pn**	**06 06 27.4**	**+0.5**
SAVO	**Savo Central**	**8.51**	**116**	P		**Pn**	**06 06 32.6**	**+1.5**
	comp=Z,3µm,1.8s							
SAVO	**Savo Central**	**8.51**	**116**	P		**Pn**	**06 06 32.1**	**+1.0**
HNR	**Honiara**	**8.75**	**118**	P		**Pn**	**06 06 33.6**	**-0.7**
	comp=Z,4.8nm,0.3s,baz=16,slow=10,SNR=29							
HNR				S		**Sn**	**06 08 13.6**	**+1.9**
	comp=Z,212nm,1.0s,baz=296,slow=21,SNR=5.0							
HNR				LR		LR	06 10 04.7	
	comp=Z,3µm,21.2s,baz=10,slow=38							
	comp=Z,107nm,0.8s							
HNR	**Honiara**	**8.75**	**118**			**Pn**	**06 06 34.0**	**-0.3**
HNR	**Honiara**	**8.75**	**118**	P		**Pn**	**06 06 36.9**	**+2.5**
	comp=Z,4µm,1.7s							
HNR	**Honiara**	**8.75**	**118**	S		**Sn**	**06 08 14.0**	**+2.3**
	comp=Z,4µm,1.7s							
HNR	**Honiara**	**8.75**	**118**	P		**Pn**	**06 06 35.3**	**+0.9**
HNR	**Honiara**	**8.75**	**118**	⇓P		**Pn**	**06 06 34.3**	**0.0**
ALEG	**Aligegeo Malai**	**9.16**	**112**	P		**Pn**	**06 06 42.7**	**+2.7**
	comp=Z,1µm,1.8s							
ALEG	**Aligegeo Malai**	**9.16**	**112**	P		**Pn**	**06 06 40.4**	**+0.4**
NGOA	**Tingoa Renbel**	**9.96**	**128**	P		**Pn**	**06 06 52.8**	**+1.8**
	comp=Z,10µm,1.7s							
NGOA	**Tingoa Renbel**	**9.96**	**128**	P		**Pn**	**06 06 52.5**	**+1.5**
HURO	**Huro Makira**	**10.94**	**118**	P		**Pn**	**06 07 05.7**	**+1.4**
	comp=Z,3µm,1.0s							
HURO	**Huro Makira**	**10.94**	**118**	S		**Sn**	**06 09 07.3**	**+2.0**
	comp=Z,3µm,1.0s							
HURO	**Huro Makira**	**10.94**	**118**	P		**Pn**	**06 07 04.7**	**+0.4**
JAY	**Jayapura**	**11.72**	**284**	P		**Pn**	**06 07 15.3**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=113,slow=8.2,SNR=36							
JAY				LR		LR	06 11 15.4	
	comp=Z,111µm,20.0s,baz=96,slow=34							
	comp=Z,148nm,1.2s							
JAY	**Jayapura**	**11.72**	**284**	P		**Pn**	**06 07 16.2**	**+1.2**
JAY	**Jayapura**	**11.72**	**284**	P		**Pn**	**06 07 17.6**	**+2.6**
	comp=Z,63µmcomp=Z,43µmcomp=Z,666nm,1.6s							
MMPI	**Meraukе**	**12.01**	**255**	P		**Pn**	**06 07 21.0**	**+2.1**
	comp=Z,34µmcomp=Z,67µmcomp=Z,4µm,1.9s							
COEN	**Coen**	**12.21**	**225**	P		**Pn**	**06 07 21.1**	**-0.6**
	comp=Z,773nm,1.4s,comp=Z,0.0nm							
COEN	**Coen**	**12.21**	**225**			**Pn**	**06 07 22.1**	**+0.4**
COEN	**Coen**	**12.21**	**225**	P		**Pn**	**06 07 22.5**	**+0.8**
	comp=Z,773nm,1.4s							
COEN	**Coen**	**12.21**	**225**	S		**Sn**	**06 09 37.6**	**+1.2**
	comp=Z,773nm,1.4s							
COEN	**Coen**	**12.21**	**225**	P		**Pn**	**06 07 22.9**	**+1.2**
COEN	**Coen**	**12.21**	**225**	⇓P		**Pn**	**06 07 22.3**	**+0.7**
GENI	**Genyem**	**12.22**	**283**	P		**Pn**	**06 07 24.9**	**+3.1**
	comp=Z,3µm,2.0s							
GENI	**Genyem**	**12.22**	**283**	S		**Sn**	**06 09 39.9**	**+3.2**
	comp=Z,3µm,2.0s							
GENI	**Genyem**	**12.22**	**283**	P		**Pn**	**06 07 25.7**	**+3.9**
GENI	**Genyem**	**12.22**	**283**	⇑P		**Pn**	**06 07 23.0**	**+1.2**
GENI	**Genyem**	**12.22**	**283**	P		**Pn**	**06 07 24.8**	**+3.0**
	comp=Z,3µm,2.0s							
SMPI	**Sarmi**	**13.78**	**284**	P		**Pn**	**06 07 46.2**	**+3.1**
	comp=Z,3µm,1.8s							
MTSU	**Mount Surprise**	**14.74**	**210**	P		**Pn**	**06 07 55.9**	**-0.1**
	comp=Z,835nm,1.2s							
MTSU	**Mount Surprise**	**14.74**	**210**	P		**Pn**	**06 07 57.6**	**+1.6**
	comp=Z,835nm,1.2s							
AUAYR	**Ayr State High**	**14.79**	**198**	P		**Pn**	**06 07 57.0**	**+0.4**
	comp=Z,391nm,1.4s							
CTA	**Charters Tower**	**15.64**	**201**	P		**Pn**	**06 08 08.6**	**+0.8**
	comp=Z,166nm,1.8s							
CTA	**Charters Tower**	**15.64**	**201**	P		**Pn**	**06 08 09.4**	**+1.6**
	comp=Z,2.0nm,0.3s,baz=23,slow=12,SNR=39							
CTA				S		**Sn**	**06 11 02.0**	**+1.8**
	comp=Z,27nm,0.9s,baz=52,slow=18,SNR=1.0							
CTA				LR		LR	06 13 39.2	
	comp=Z,34µm,19.0s,baz=20,slow=35							
	comp=Z,268nm,1.1s							
CTAO	**Charters Tower**	**15.64**	**201**			**Pn**	**06 08 07.8**	**0.0**
CTAO	**Charters Tower**	**15.64**	**201**	P		**Pn**	**06 08 08.5**	**+0.7**
	comp=Z,151nm,1.7s							
CTAO	**Charters Tower**	**15.64**	**201**	P		**Pn**	**06 08 08.4**	**+0.7**
SRPI	**Serui, Papua**	**16.20**	**282**	P		**Pn**	**06 08 15.1**	**+0.2**
	comp=Z,29µmcomp=Z,504nm,1.4s							
BAKI	**Biak**	**16.49**	**284**	P		**P**	**06 08 21.2**	**+0.5**
	comp=Z,37µmcomp=Z,2µm,1.3s							
AUNRC	**North Rockhamp**	**17.89**	**185**	P		**P**	**06 08 35.9**	**-0.1**
	comp=Z,521nm,1.7s							
RKPI	**Ransiki, Papua**	**18.29**	**282**	P		**Pn**	**06 08 42.5**	**+1.6**
	comp=Z,43µmcomp=Z,987nm,1.8s							
GD1S	**Gladstone Soft**	**18.34**	**183**	P		**Pn**	**06 08 41.7**	**+0.4**
	comp=Z,242nm,1.0s							
KMPI	**Kaimana, Papua**	**18.41**	**275**	P		**Pn**	**06 08 42.8**	**+0.5**
	comp=Z,16µmcomp=Z,526nm,0.7s							
MWPI	**Manokwari, Pap**	**18.56**	**283**	P		**Pn**	**06 08 45.6**	**+1.5**
	comp=Z,59µmcomp=Z,2µm,1.7s							
KOUNC	**Koumac, New Ca**	**19.15**	**143**	P		**P**	**06 08 50.4**	**+0.5**
	comp=Z,1µm,1.6s							
KOUNC	**Koumac, New Ca**	**19.15**	**143**	⇑P		**P**	**06 08 50.4**	**+0.5**
QIS	**Mount Isa**	**19.32**	**218**	P		**Pn**	**06 08 53.0**	**-0.3**
	comp=Z,2µm,1.2s,comp=Z,0.0nm							
QIS	**Mount Isa**	**19.32**	**218**	P		**Pn**	**06 08 53.2**	**0.0**
	comp=Z,2µm,1.2s							
EIDS	**Eidsvold**	**19.86**	**183**	P		**P**	**06 08 58.4**	**+0.8**
	comp=Z,897nm,1.6s,comp=Z,0.0nm							
EIDS	**Eidsvold**	**19.86**	**183**			**P**	**06 08 57.7**	**+0.1**
EIDS					IAmb	IAmb	06 09 02.2	
	comp=Z,1µm,1.3s							
EIDS	**Eidsvold**	**19.86**	**183**	P		**P**	**06 08 58.3**	**+0.7**
	comp=Z,897nm,1.6s							
EIDS	**Eidsvold**	**19.86**	**183**	⇓P		**P**	**06 08 58.3**	**+0.7**
DVP	**Devils Point**	**19.93**	**129**	P		**Pn**	**06 08 59.5**	**-0.9**
	comp=Z,25µm,1.2s							
FAKI	**Fak Fak**	**19.94**	**276**			**Pn**	**06 09 00.4**	**-0.1**
FAKI					IAmb	IAmb	06 09 11.8	
	comp=Z,2µm,1.6s							
FAKI	**Fak Fak**	**19.94**	**276**	P		**Pn**	**06 09 00.5**	**-0.1**
	comp=Z,674nm,1.6s							
FAKI	**Fak Fak**	**19.94**	**276**	⇑P		**P**	**06 08 57.8**	**-0.8**
FAKI	**Fak Fak**	**19.94**	**276**	P		**Pn**	**06 09 01.0**	**+0.4**
	comp=Z,24µmcomp=Z,679nm,1.5s							
RTV	**Rentapao**	**20.16**	**129**	P		**P**	**06 09 01.8**	**+0.9**
	comp=Z,5µm,2.1s							
GUMO	**Guam**	**20.20**	**339**	P		Pn	06 09 03.3	-0.3
	comp=Z,2µm,1.2s,baz=170,slow=5.2,SNR=28							
GUMO				S		**S**	**06 12 44.3**	**-1.5**
	comp=Z,68nm,1.0s,baz=0.2,slow=18,SNR=1.1							
GUMO				LR		LR	06 15 45.7	
	comp=Z,9µm,20.8s,baz=156,slow=34							
	comp=Z,2µm,1.2s							
GUMO	**Guam**	**20.20**	**339**			Pn	06 09 04.3	+0.7
GUMO					IAmb	IAmb	06 09 05.6	
	comp=Z,3µm,1.3s							
GUMO	**Guam**	**20.20**	**339**	P		Pn	06 09 03.7	+0.1
	comp=Z,729nm,1.0s							
GUMO	**Guam**	**20.20**	**339**	P		Pn	06 09 04.3	+0.7
GUMO					pmax	pmax		
	comp=Z,3µm,1.3s							
GUMO	**Guam**	**20.20**	**339**	⇑P		Pn	06 09 03.9	+0.3
KDU	**Kakadu**	**20.66**	**248**	P		**P**	**06 09 06.8**	**+0.4**
	comp=Z,2µm,1.3s,comp=Z,0.0nm							
SAUI	**Saumlaki**	**20.80**	**262**		IAMs_20	IAMs_20	06 18 01.9	
	comp=Z,81µm,21.0s							
SAUI	**Saumlaki**	**20.80**	**262**	P		Pn	06 09 10.2	-0.6
	comp=Z,4µm,1.7s							
SAUI	**Saumlaki**	**20.80**	**262**	⇑P		**P**	**06 09 06.9**	**-1.1**
SAUI	**Saumlaki**	**20.80**	**262**	P		Pn	06 09 09.6	-1.2
RMQ	**Roma**	**21.19**	**188**	P		**P**	**06 09 14.6**	**+2.6**
RMQ	**Roma**	**21.19**	**188**	P		**P**	**06 09 13.0**	**+1.0**
	comp=Z,166nm,1.4s							
SIJI	**Sorong**	**21.27**	**282**	P		**P**	**06 09 15.1**	**+2.1**
	comp=Z,803nm,1.1s,baz=98,slow=8.9,SNR=117							
SIJI				S		**S**	**06 13 09.4**	**+2.3**
	comp=Z,25nm,0.9s,baz=276,slow=20,SNR=2.2							
	comp=Z,803nm,1.1s							
SIJI	**Sorong**	**21.27**	**282**	P		**P**	**06 09 14.6**	**+1.6**
	comp=Z,28µmcomp=Z,2µm,1.4s							
SWI	**Sorong**	**21.28**	**282**	P		**P**	**06 09 14.7**	**+1.6**
	comp=Z,34µmcomp=Z,2µm,1.4s							
DZM	**Mont Dzumac**	**21.61**	**141**	P		**P**	**06 09 16.9**	**+0.2**
	comp=Z,517nm,1.0s,baz=337,slow=10,SNR=84							
DZM				S		**S**	**06 13 15.1**	**+1.4**
	comp=Z,11nm,0.9s,baz=300,slow=19,SNR=1.2							
DZM				LR		LR	06 16 37.7	
	comp=Z,53µm,21.5s,baz=308,slow=34							
	comp=Z,517nm,1.0s							
DZM	**Mont Dzumac**	**21.61**	**141**	P		**P**	**06 09 16.9**	**+0.2**
DZM					IAmb	IAmb	06 09 23.6	
	comp=Z,1µm,1.3s							
DZM	**Mont Dzumac**	**21.61**	**141**	P		**P**	**06 09 16.6**	**0.0**
	comp=Z,949nm,1.3s							
DZM	**Mont Dzumac**	**21.61**	**141**	⇓P		**P**	**06 09 16.7**	**+0.1**
ONTNC	**Ouen Toro**	**21.79**	**142**			**P**	**06 09 18.1**	**-0.3**
ONTNC					IAmb	IAmb	06 09 35.8	
	comp=Z,1µm,1.3s							
ONTNC	**Ouen Toro**	**21.79**	**142**	P		**P**	**06 09 17.9**	**-0.5**
	comp=Z,894nm,1.4s							
ONTNC	**Ouen Toro**	**21.79**	**142**	⇓P		**P**	**06 09 17.9**	**-0.5**
INH	**Isangel**	**21.84**	**132**	P		**P**	**06 09 19.9**	**+0.8**
	comp=Z,2µm,1.7s							
TARA	**Tarawa**	**21.87**	**73**		IAMs_20	IAMs_20	06 17 15.7	
	comp=Z,52µm,19.0s							
TARA	**Tarawa**	**21.87**	**73**	P		**P**	**06 09 21.3**	**+1.9**
	comp=Z,1µm,1.7s							
TARA	**Tarawa**	**21.87**	**73**	⇑P		**P**	**06 09 21.4**	**+2.0**
MTN	**Manton Dam**	**21.95**	**249**	P		**P**	**06 09 20.5**	**+0.2**
	comp=Z,3µm,1.4s,comp=Z,0.0nm							
MTN	**Manton Dam**	**21.95**	**249**	P		**P**	**06 09 20.6**	**+0.2**
TW1H	**Toowoomba 1 Ha**	**22.00**	**180**	P		**P**	**06 09 21.3**	**+0.5**
	comp=Z,338nm,0.8s							
DRS	**Darwin Rock St**	**22.05**	**250**	P		**P**	**06 09 21.3**	**0.0**
	comp=Z,976nm,1.0s							
OUENC	**Ouen Island, N**	**22.11**	**141**	P		**P**	**06 09 21.6**	**-0.3**
	comp=Z,771nm,1.6s							
BNDI	**Bandanaira**	**22.12**	**271**	P		**P**	**06 09 23.7**	**+1.6**
	comp=Z,4µm,1.5s							
BNDI	**Bandanaira**	**22.12**	**271**	P		**P**	**06 09 23.4**	**+1.3**
MARNC	**Mare, Loyalty**	**22.22**	**137**	P		**P**	**06 09 21.8**	**-1.3**
MARNC					IAmb	IAmb	06 09 25.8	
	comp=Z,2µm,1.3s							
MARNC	**Mare, Loyalty**	**22.22**	**137**	P		**P**	**06 09 23.1**	**+0.1**
	comp=Z,1µm,1.1s							
MARNC	**Mare, Loyalty**	**22.22**	**137**	⇓P		**P**	**06 09 22.5**	**-0.5**
QLP	**Quilpie**	**22.34**	**199**	P		**P**	**06 09 24.6**	**+0.2**
	comp=Z,2µm,1.5s,comp=Z,0.0nm							
QLP	**Quilpie**	**22.34**	**199**	P		**P**	**06 09 25.0**	**+0.7**
	comp=Z,2µm,1.5s							
QLP	**Quilpie**	**22.34**	**199**	⇑P		**P**	**06 09 24.8**	**+0.4**
WB0	**Warramunga Arr**	**22.36**	**229**	P		**P**	**06 09 24.9**	**+0.2**
WR8	**Warramunga Arr**	**22.39**	**228**	P		**P**	**06 09 25.4**	**+0.3**
WR8					IAmb	IAmb	06 09 27.8	
	comp=Z,3µm,1.4s							
WRAB	**Tennant Creek**	**22.49**	**229**	P		**P**	**06 09 26.3**	**+0.3**
WRAB					IAmb	IAmb	06 09 28.7	
	comp=Z,1µm,0.8s							
WRAB	**Tennant Creek**	**22.49**	**229**	P		**P**	**06 09 26.1**	**+0.1**
	comp=Z,860nm,1.5s							
WRAB	**Tennant Creek**	**22.49**	**229**	*ic*P		**P**	**06 09 26.1**	**+0.1**
WRAB					pmax	pmax		
	comp=Z,2µm,1.1s							
WRAB					MLR	MLR		
	comp=Z,29µm,17.0s							
WRA	**Warramunga Arr**	**22.50**	**229**	P		**P**	**06 09 26.4**	**+0.2**
	comp=Z,655nm,0.7s,baz=54,slow=9.9,SNR=274							
WRA				PcP		**PcP**	**06 13 20.0**	**+0.9**
	comp=Z,93nm,1.0s,baz=46,slow=1.8,SNR=5.0							
WRA				S		**S**	**06 13 30.4**	**+0.2**
	comp=Z,80nm,1.0s,baz=45,slow=16,SNR=11							
WRA				ScP		**ScP**	**06 16 53.2**	**+0.1**
	comp=Z,34nm,1.0s,baz=41,slow=2.5,SNR=6.2							
WRA				ScS		**ScS**	**06 20 41.0**	**+2.4**
	comp=Z,5.6nm,1.2s,baz=46,slow=5.1,SNR=1.7							
	comp=Z,655nm,0.7s							
WRA	**Warramunga Arr**	**22.50**	**229**	P		**P**	**06 09 24.7**	**-1.5**
WRA	**Warramunga Arr**	**22.50**	**229**	P		**P**	**06 09 24.7**	**-1.5**
WRA					pmax	pmax		
	comp=Z,260nm,1.2s							
PINNC	**Pines Island,**	**22.63**	**141**	P		**P**	**06 09 26.4**	**-1.2**
PINNC					IAmb	IAmb	06 09 32.7	
	comp=Z,1µm,1.2s							
PINNC	**Pines Island,**	**22.63**	**141**	P		**P**	**06 09 27.5**	**0.0**
	comp=Z,247µm,2.0s							
GC1S	**Gold Coast 1 S**	**22.66**	**177**	P		**P**	**06 09 28.5**	**+0.8**
	comp=Z,220nm,0.9s							
MSAI	**Masohi**	**23.18**	**274**	P		**P**	**06 09 33.9**	**+0.7**
	comp=Z,43µmcomp=Z,17µmcomp=Z,775nm,0.8s							
KRAI	**Karang Ratu**	**23.71**	**274**	P		**P**	**06 09 38.7**	**+0.4**
	comp=Z,14µmcomp=Z,521nm,1.9s							
AAI	**Ambon**	**23.88**	**273**	P		**P**	**06 09 40.0**	**+0.1**
	comp=Z,39µmcomp=Z,11µmcomp=Z,674nm,1.6s							
INKA	**Innaminka**	**24.68**	**205**	P		**P**	**06 09 47.5**	**+0.6**
ARMA	**Armidale**	**24.87**	**181**	P		**P**	**06 09 50.3**	**+1.4**
	comp=Z,168nm,2.0s,comp=Z,0.0nm							
ARMA	**Armidale**	**24.87**	**181**	P		**P**	**06 09 49.1**	**+0.3**
ARMA	**Armidale**	**24.87**	**181**	P		**P**	**06 09 48.9**	**+0.1**
	comp=Z,168nm,2.0s							
ARMA	**Armidale**	**24.87**	**181**	⇑P		**P**	**06 09 50.2**	**+1.4**
NLAI	**Namlea**	**25.01**	**274**	P		**P**	**06 09 51.5**	**+1.3**
	comp=Z,38µmcomp=Z,9µmcomp=Z,478nm,0.5s							
KNRA	**Kununurra**	**25.06**	**244**	P		**P**	**06 09 51.3**	**+0.7**
	comp=Z,5µm,1.6s,comp=Z,0.0nm							
KNRA	**Kununurra**	**25.06**	**244**	P		**P**	**06 09 51.6**	**+1.0**
AS31	**Alice Springs**	**25.21**	**222**	P		**P**	**06 09 52.3**	**+0.4**
ASAR	**Alice Springs**	**25.21**	**222**	P		**P**	**06 09 52.4**	**+0.4**
	comp=Z,335nm,0.5s,baz=58,slow=9.3,SNR=540							
ASAR				PcP		**PcP**	**06 13 26.2**	**+1.4**
	comp=Z,71nm,1.1s,baz=61,slow=2.3,SNR=5.1							
ASAR				S		**S**	**06 14 17.6**	**+3.1**
	comp=Z,74nm,1.2s,baz=52,slow=14,SNR=5.6							
ASAR				ScP		**ScP**	**06 17 01.4**	**+1.0**
	comp=Z,48nm,1.1s,baz=49,slow=3.0,SNR=12							
ASAR				LR		LR	06 20 22.8	
	comp=Z,10µm,18.1s,baz=41,slow=38							
ASAR				ScS		**ScS**	**06 20 50.4**	**+1.1**
	comp=Z,2.8nm,1.0s,baz=33,slow=8.8,SNR=2.9							
ASAR				SKKS		**SKKSdf**	**06 43 12.3**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=226,slow=2.4,SNR=6.2							
ASAR				P3KP			06 43 47.6	
	comp=Z,2.2nm,1.1s,baz=261,slow=2.1,SNR=4.5							
	comp=Z,335nm,0.5s							
AUALC	**St Philip's Co**	**25.24**	**222**	P		**P**	**06 09 52.8**	**+0.6**
	comp=Z,1µm,1.8s							
GAMI	**Galela, Maluku**	**25.32**	**286**	P		**P**	**06 09 54.0**	**+1.0**
	comp=Z,15µmcomp=Z,530nm,1.2s							
TNTI	**Ternate**	**25.44**	**283**	P		**P**	**06 09 54.1**	**0.0**
TNTI	**Ternate**	**25.44**	**283**	P		**P**	**06 09 55.5**	**+1.4**
	comp=Z,271nm,1.5s							
TNTI	**Ternate**	**25.44**	**283**	P		**P**	**06 09 55.8**	**+1.7**
SANI	**Sanana**	**26.25**	**276**	P		**P**	**06 10 00.0**	**-1.4**
SANI	**Sanana**	**26.25**	**276**	P		**P**	**06 10 01.2**	**-0.3**
	comp=Z,437nm,0.7s							
SANI	**Sanana**	**26.25**	**276**	⇑P		**P**	**06 10 00.1**	**-1.4**
SANI	**Sanana**	**26.25**	**276**	P		**P**	**06 10 01.6**	**+0.1**
	comp=Z,28µmcomp=Z,8µmcomp=Z,440nm,0.7s							
CMSA	**Cobar Meteorol**	**26.66**	**192**	P		**P**	**06 10 04.7**	**-0.2**
	comp=Z,210nm,1.1s,comp=Z,0.0nm							
CMSA	**Cobar Meteorol**	**26.66**	**192**	P		**P**	**06 10 04.4**	**-0.5**
	comp=Z,210nm,1.1s							
LHI	**Lord Howe Isla**	**26.77**	**167**	P		**P**	**06 10 06.6**	**+0.7**
	comp=Z,314nm,1.5s,comp=Z,0.0nm							
LHI	**Lord Howe Isla**	**26.77**	**167**	P		**P**	**06 10 05.9**	**0.0**
FUNA	**Funafuti**	**27.08**	**98**	P		**P**	**06 10 08.7**	**-0.2**
FUNA	**Funafuti**	**27.08**	**98**	P		**P**	**06 10 09.9**	**+1.0**
	comp=Z,996nm,1.7s							
FUNA	**Funafuti**	**27.08**	**98**	⇑P		**P**	**06 10 09.4**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**27.79**	**31**	T		T	06 39 08.6	
	baz=208,slow=76,SNR=8.4							
H11S2	**WAKE ISLAND Hy**	**27.79**	**31**	T		T	06 38 58.8	
	baz=208,slow=76,SNR=119							
H11S1	**WAKE ISLAND Hy**	**27.80**	**31**	T		T	06 39 23.2	
	baz=208,slow=76,SNR=91							
SOEI	**Soe**	**27.90**	**259**	P		**P**	**06 10 17.2**	**+0.9**
SOEI	**Soe**	**27.90**	**259**	P		**P**	**06 10 17.4**	**+1.0**
SOEI					IAMs_20	IAMs_20	06 23 27.0	
	comp=Z,56µm,22.0s							
SOEI	**Soe**	**27.90**	**259**	P		**P**	**06 10 17.3**	**+0.9**
	comp=Z,2µm,1.7s							
SGSI	**Sangihe**	**28.03**	**288**	P		**P**	**06 10 18.1**	**+0.7**
	comp=Z,28µmcomp=Z,1µm,1.2s							
MNI	**Manado**	**28.06**	**283**	P		**P**	**06 10 17.3**	**-0.4**
	comp=Z,25µmcomp=Z,9µmcomp=Z,503nm,1.2s							
STKA	**Stephens Creek**	**28.09**	**199**	P		**P**	**06 10 17.0**	**-0.8**
	comp=Z,933nm,1.6s,comp=Z,0.0nm							
STKA	**Stephens Creek**	**28.09**	**199**	P		**P**	**06 10 17.1**	**-0.6**
	comp=Z,175nm,1.1s,baz=7.3,slow=8.9,SNR=106	

KAPI **Kappang** 32.20 269 ⇑P P 06 10 53.8 -0.6
KAPI **Kappang** 32.20 269 P P 06 10 54.8 +0.5
comp=Z,197nm,1.4s
SPSI **Sidrap Palu** 32.24 271 P P 06 10 54.4 -0.3
comp=Z,20µmcomp=Z,100nm,1.2s
TTSI **Tana Toraja** 32.26 273 P P 06 10 55.9 +1.0
PCI **Palu** 32.50 277 P P 06 10 57.4 +0.4
comp=Z,19µmcomp=Z,6µmcomp=Z,372nm,1.1s
TOO **Toolangi** 32.56 190 P P 06 10 57.9 +0.7
comp=Z,25nm,1.3s,comp=Z,0.0nm
TOO **Toolangi** 32.56 190 P P 06 10 57.4 +0.2
TOO **Toolangi** 32.56 190 ⇑P P 06 10 59.8 +2.5
ARPS **Mount Arapiles** 32.58 195 P P 06 10 57.2 -0.2
comp=Z,256nm,1.4s
MPSI **Mapaga** 32.65 279 P P 06 10 56.6 -1.6
comp=Z,16µmcomp=Z,121nm,0.7s
WBSI **Waikabubak, Su** 32.67 261 P P 06 10 58.1 -0.4
BRAT **Ballarat** 32.83 192 P P 06 11 00.1 +0.6
comp=Z,33nm,0.9s
MMSI **Mamuju** 33.20 273 P P 06 11 02.0 -1.1
DBNI **Kabupaten Domp** 33.66 263 P P 06 11 04.7 -2.4
comp=Z,133nm,0.8s
JCJ **Chichijima** 33.72 344 P P 06 11 08.5 +1.2
comp=Z,174nm,0.7s,baz=249,slow=9.0,SNR=3.8
JCJ LR LR 06 24 58.7
comp=Z,7µm,19.6s,baz=162,slow=36
comp=Z,174nm,0.7s
MGBR **Mount Gambier** 33.83 197 P P 06 11 08.1 -0.1
MGBR IAmb IAmb 06 11 10.5
comp=Z,604nm,1.2s
FORT **Forrest** 33.86 219 P P 06 11 08.4 -0.2
comp=Z,241nm,1.7s,comp=Z,0.0nm
FORT **Forrest** 33.86 219 P P 06 11 08.7 +0.1
PLAI **Plampang** 34.20 262 P P 06 11 11.5 -0.3
comp=Z,771nm,1.3s
PLAI **Plampang** 34.20 262 P P 06 11 10.4 -1.4
comp=Z,14µmcomp=Z,10µmcomp=Z,760nm,1.3s
MBWA **Marble Bar** 35.05 240 P P 06 11 19.2 +0.2
MBWA **Marble Bar** 35.05 240 P P 06 11 18.9 -0.1
comp=Z,378nm,1.2s
MBWA **Marble Bar** 35.05 240 P P 06 11 19.0 0.0
MBWA P P 06 11 19.0 0.0
MBWA S S 06 16 47.2 -1.2
MBWA S S 06 16 47.2 -1.2
MBWA **Marble Bar** 35.05 240 ⇑P P 06 11 19.0 -0.1
MBWA **Marble Bar** 35.05 240 P P 06 11 19.1 +0.2
MBWA PcP PcP 06 13 51.0 +0.7
TWSI **Taliwang, Sumb** 35.08 263 P P 06 11 18.6 -0.8
comp=Z,13µmcomp=Z,6µmcomp=Z,438nm,1.5s
PSA00 **Pilbara Seismi** 35.10 240 P P 06 11 19.7 +0.2
PSA00 **Pilbara Seismi** 35.10 240 P P 06 11 19.7 +0.2
PSA00 **Pilbara Seismi** 35.10 240 P P 06 11 19.1 -0.4
comp=Z,929nm,1.5s
PSAB3 **Pilbara Seismi** 35.10 240 P P 06 11 19.4 -0.1
comp=Z,974nm,1.8s,comp=Z,0.0nm
MYLDM **Lahad Datu** 35.15 287 P P 06 11 20.5 +0.5
MYLDM IAmb IAmb 06 11 24.9
comp=Z,974nm,1.4s
MYLDM IAMs_20 IAMs_20 06 23 46.6
comp=Z,27µm,20.0s
MYLDM **Lahad Datu** 35.15 287 P P 06 11 21.1 +1.1
comp=Z,561nm,1.5s
MYLDM **Lahad Datu** 35.15 287 ⇑P P 06 11 21.0 +1.1
MYLDM **Lahad Datu** 35.15 287 P P 06 11 21.5 +1.5
comp=Z,26µmcomp=Z,12µmcomp=Z,561nm,1.5s
BKB **Balikpapan** 35.37 275 P P 06 11 20.8 -1.0
BKB IAmb IAmb 06 11 24.9
comp=Z,387nm,1.6s
BKB **Balikpapan** 35.37 275 P P 06 11 22.6 +0.8
GLAD **Gladstone** 35.60 185 P P 06 11 23.7 +0.3
comp=Z,58nm,0.8s
OUZ **Omahuta** 35.68 149 ⇓P P 06 11 25.3 +1.1
OUZ **Omahuta** 35.68 149 P P 06 11 25.5 +1.3
KLNI **Mataram** 35.84 263 P P 06 11 24.9 -1.1
comp=Z,13µmcomp=Z,11µmcomp=Z,649nm,1.5s
KHKI **Kahang-Kahang** 36.32 263 P P 06 11 29.7 -0.3
comp=Z,14µmcomp=Z,6µmcomp=Z,316nm,1.0s
TGY **Tagaytay City** 36.49 302 LR LR 06 24 07.5
comp=Z,14µm,21.7s,baz=117,slow=32
AFI **Afiamalu** 36.56 106 P P 06 11 31.0 -1.1
AFI IAmb IAmb 06 11 33.9
comp=Z,635nm,1.1s
AFI **Afiamalu** 36.56 106 P P 06 11 32.4 +0.2
comp=Z,201nm,1.3s
AFI **Afiamalu** 36.56 106 P P 06 11 31.0 -1.1
AFI pmax pmax
comp=Z,635nm,1.2s
AFI **Afiamalu** 36.56 106 ⇓P P 06 11 32.4 +0.2
AFI **Afiamalu** 36.56 106 P P 06 11 32.6 +0.4
AFI **Afiamalu** 36.56 106 P P 06 11 32.2 +0.1
WCZ **Waipu Caves** 36.62 149 P P 06 11 33.4 +1.1
SRBI **Singaraja** 36.70 264 P P 06 11 32.5 -0.8
comp=Z,14µmcomp=Z,8µmcomp=Z,250nm,1.0s
DNP **Denpasar** 36.73 263 P P 06 11 34.4 +0.9
IGBI **Denpasar** 36.80 263 P P 06 11 33.7 -0.4
RAO **Raoul Island** 36.95 133 LR LR 06 23 49.3
comp=Z,22µm,21.7s,baz=289,slow=31
RAO **Raoul Island** 36.95 133 P P 06 11 34.4 -0.8
RAO **Raoul Island** 36.95 133 IAMs_20 IAMs_20 06 23 50.2
comp=Z,25µm,22.0s
RAO **Raoul Island** 36.95 133 P P 06 11 35.1 -0.1
comp=Z,1µm,1.3s
RAO **Raoul Island** 36.95 133 P P 06 11 34.4 -0.8
RAO pmax pmax
comp=Z,2µm,1.4s
RAO **Raoul Island** 36.95 133 P P 06 11 35.4 +0.2
GLKZ **Green Lake** 36.96 133 P P 06 11 36.5 +1.3
RTBI **Rangdo, Negare** 36.99 263 P P 06 11 35.5 -0.2
comp=Z,13µmcomp=Z,11µmcomp=Z,453nm,1.4s
JMZ **Minamidaito 2** 37.08 328 P P 06 11 38.0 +1.8
comp=Z,567nm,1.4s
MOO **Moorlands** 37.12 186 P P 06 11 36.6 +0.2
comp=Z,72nm,0.9s
MOO **Moorlands** 37.12 186 P P 06 11 36.1 -0.4
BBKI **Banjar Baru** 37.18 271 P P 06 11 39.8 +2.4
comp=Z,17µmcomp=Z,7µmcomp=Z,283nm,1.3s
MTKI **Muara Teweh, K** 37.39 276 P P 06 11 40.3 +1.2
GRZ **Great Barrier** 37.44 148 P P 06 11 40.8 +1.6
TAU **Tasmania Unive** 37.57 186 P P 06 11 39.6 -0.6
TAU **Tasmania Unive** 37.57 186 IAMs_20 IAMs_20 06 25 42.7
comp=Z,23µm,19.0s
TAU **Tasmania Unive** 37.57 186 P P 06 11 39.6 -0.6
TAU pmax pmax
comp=Z,241nm,1.6s
KKM **Kota Kinabalu** 37.58 287 P P 06 11 38.8 -2.0
KKM IAmb IAmb 06 11 43.9
comp=Z,728nm,1.6s
KKM **Kota Kinabalu** 37.58 287 P P 06 11 41.2 +0.4
comp=Z,304nm,1.6s
KKM **Kota Kinabalu** 37.58 287 ⇑P P 06 11 40.2 -0.6
KKM **Kota Kinabalu** 37.58 287 P P 06 11 41.2 +0.4
comp=Z,15µmcomp=Z,6µmcomp=Z,304nm,1.6s
ABJI **Asem Bagus** 37.67 264 P P 06 11 41.1 -0.4
comp=Z,11µmcomp=Z,8µmcomp=Z,234nm,1.4s
JAGI **Jajag, Banyuwa** 37.77 263 P P 06 11 41.1 -1.2
JAGI IAmb IAmb 06 11 42.0
comp=Z,876nm,1.2s
JAGI **Jajag, Banyuwa** 37.77 263 P P 06 11 42.1 -0.2
comp=Z,616nm,1.2s
JAGI **Jajag, Banyuwa** 37.77 263 P P 06 11 40.7 -1.6
comp=Z,12µmcomp=Z,9µmcomp=Z,612nm,1.2s
KMMI **Kalianget** 37.92 266 P P 06 11 43.6 0.0
comp=Z,15µmcomp=Z,7µmcomp=Z,204nm,1.1s
KUZ **Kuaotunu** 37.95 148 P P 06 11 44.3 +0.8
comp=Z,163nm,1.5s
KUZ **Kuaotunu** 37.95 148 P P 06 11 44.0 +0.5
MEEK **Meekatharra** 38.26 233 P P 06 11 46.6 +0.2
comp=Z,686nm,0.5s
BLJI **Banyuglugur** 38.30 264 P P 06 11 46.6 -0.2
comp=Z,12µmcomp=Z,6µmcomp=Z,167nm,1.5s
GMJI **Gumukmas** 38.46 264 P P 06 11 47.4 -0.7
comp=Z,5µmcomp=Z,167nm,1.3s
TOZ **Tahuroa Road** 38.59 150 P P 06 11 49.5 +0.5
TOZ **Tahuroa Road** 38.59 150 P P 06 11 50.4 +1.5
HIZ **Hauiti** 38.89 151 P P 06 11 51.5 +0.1
HIZ **Hauiti** 38.89 151 P P 06 11 53.4 +2.0
TLZ **Tolley Road** 39.08 150 P P 06 11 54.4 +1.3
VRZ **Vera Road** 39.33 152 P P 06 11 55.9 +0.9
NIUE **Niue** 39.41 114 P P 06 11 56.3 +0.2
NIUE IAmb IAmb 06 11 58.4
comp=Z,606nm,1.2s
NIUE **Niue** 39.41 114 P P 06 11 57.1 +1.1
comp=Z,435nm,1.2s
NIUE **Niue** 39.41 114 P P 06 11 57.4 +1.3
JOW **Kunigami** 39.49 325 P P 06 11 58.0 +1.4
comp=Z,286nm,1.0s,baz=147,slow=8.0,SNR=20
JOW LR LR 06 25 16.9
comp=Z,20µm,21.8s,baz=136,slow=32
comp=Z,286nm,1.0s
JOW **Kunigami** 39.49 325 P P 06 11 58.0 +1.4
JOW IAmb IAmb 06 11 59.9
comp=Z,715nm,1.2s
JOW **Kunigami** 39.49 325 P P 06 11 57.9 +1.3
comp=Z,592nm,1.6s
JOW **Kunigami** 39.49 325 ⇑P P 06 11 58.3 +1.7
QRZ **Quartz Range** 39.73 156 IAMs_20 IAMs_20 06 26 05.7
comp=Z,32µm,20.0s
QRZ **Quartz Range** 39.73 156 P P 06 11 59.6 +1.2
NGZ **Ngauruhoe** 39.77 151 P P 06 12 00.0 +1.1
HAZ **Te Kaha** 39.80 148 P P 06 11 59.6 +0.7
URZ **Urewera** 39.82 149 LR LR 06 26 44.1
comp=Z,21µm,19.9s,baz=318,slow=34
URZ **Urewera** 39.82 149 ⇓P P 06 11 59.1 0.0
URZ **Urewera** 39.82 149 P P 06 11 59.2 0.0
MXZ **Matakaoa Point** 39.94 147 P P 06 12 00.4 +0.2
comp=Z,131nm,2.1s
MXZ **Matakaoa Point** 39.94 147 P P 06 12 01.0 +0.9
RTZ **Ruatahuna** 40.02 149 IAMs_20 IAMs_20 06 26 32.4
comp=Z,23µm,20.0s
RTZ **Ruatahuna** 40.02 149 P P 06 12 00.8 -0.2
JHJ **Hachijo jima 2** 40.07 344 LR LR 06 28 49.7
comp=Z,5µm,18.2s,baz=196,slow=36
MWZ **Matawai** 40.09 148 P P 06 12 00.5 -1.0
SJI **Sawahan** 40.11 264 P P 06 12 01.9 -0.1
comp=Z,9µmcomp=Z,263nm,1.2s
SNJI **Sawahan-Nganju** 40.12 264 P P 06 12 02.8 +0.6
comp=Z,14µmcomp=Z,10µmcomp=Z,696nm,1.6s
BKZ **Black Stump Fm** 40.20 150 P P 06 12 02.5 +0.2
comp=Z,70nm,2.2s
BKZ **Black Stump Fm** 40.20 150 P P 06 12 02.6 +0.2
DSZ **Denniston Nort** 40.22 157 IAMs_20 IAMs_20 06 26 11.5
comp=Z,29µm,21.0s
DSZ **Denniston Nort** 40.22 157 P P 06 12 03.0 +0.6
PUZ **Puketiti** 40.28 147 P P 06 12 02.7 -0.3
MRNZ **Matariki Terra** 40.30 156 P P 06 12 03.9 +0.8
GIRL **Giralia** 40.34 241 P P 06 12 04.2 +0.5
NGJI **Ngawi** 40.41 265 P P 06 12 05.9 +1.5
NNZ **Nelson** 40.41 155 IAMs_20 IAMs_20 06 27 25.7
comp=Z,30µm,20.0s
NNZ **Nelson** 40.41 155 P P 06 12 04.4 +0.4
SBUM **Sibu** 40.58 280 P P 06 12 06.1 +0.3
SBUM **Sibu** 40.58 280 P P 06 12 06.3 +0.5
comp=Z,61nm,2.5s
SBUM **Sibu** 40.58 280 ⇑P P 06 12 06.1 +0.3
SBUM **Sibu** 40.58 280 P P 06 12 06.1 +0.3
TSZ **Takapari Road** 40.63 152 P P 06 12 05.5 -0.4
THZ **Tophouse** 40.67 156 P P 06 12 05.8 -0.4
THZ IAMs_20 IAMs_20 06 27 15.5
comp=Z,27µm,20.0s
THZ **Tophouse** 40.67 156 P P 06 12 06.0 -0.3
PCJI **Pacitan** 40.70 264 P P 06 12 06.7 -0.1
comp=Z,15µmcomp=Z,1µm,1.7s
TCW **Tory Channel** 40.79 154 P P 06 12 07.4 +0.3
TUWZ **Tuamarina** 40.82 155 P P 06 12 08.2 +0.8
DVHZ **Dannevirke** 40.92 152 P P 06 12 07.0 -1.2
INZ **Inchbonnie** 40.92 158 IAMs_20 IAMs_20 06 27 25.2
comp=Z,25µm,20.0s
INZ **Inchbonnie** 40.92 158 P P 06 12 07.7 -0.5
MRZ **Mangatainoka R** 40.93 152 IAMs_20 IAMs_20 06 26 12.4
comp=Z,29µm,22.0s
MRZ **Mangatainoka R** 40.93 152 P P 06 12 07.9 -0.4
YOJ **Yonaguni jima** 41.04 318 IAmb IAmb 06 12 12.8
comp=Z,1µm,1.5s
YOJ **Yonaguni jima** 41.04 318 P P 06 12 10.7 +1.3
comp=Z,444nm,1.4s
YOJ **Yonaguni jima** 41.04 318 ⇑P P 06 12 11.2 +1.8
FOZ **Fox Glacier** 41.05 160 IAMs_20 IAMs_20 06 26 19.6
comp=Z,33µm,22.0s
HOWZ **Holdsworth Sta** 41.09 153 P P 06 12 09.0 -0.7
ANWZ **Angora Road** 41.19 151 P P 06 12 10.8 +0.3
BHW **Baring Head** 41.21 154 IAMs_20 IAMs_20 06 26 41.8
comp=Z,22µm,21.0s
BFZ **Birch Farm** 41.26 152 P P 06 12 12.3 +1.3
LTZ **Lake Taylor** 41.28 157 P P 06 12 10.7 -0.5
MTW **Mount Morrison** 41.29 153 P P 06 12 10.7 -0.6
TWGBT **Beinan** 41.31 314 P P 06 12 13.0 +1.3
comp=Z,84nm,2.2s
TWG **Pinlang** 41.32 314 IAMs_20 IAMs_20 06 25 53.7
comp=Z,23µm,20.0s
UGM **Wanagama** 41.34 264 P P 06 12 11.9 -0.3
UGM IAmb IAmb 06 12 13.7
comp=Z,483nm,1.3s
UGM **Wanagama** 41.34 264 P P 06 12 12.4 +0.2
comp=Z,222nm,1.1s
UGM **Wanagama** 41.34 264 P P 06 12 13.1 +0.9
comp=Z,13µmcomp=Z,9µmcomp=Z,218nm,1.3s
KLBR **Kellerberrin** 41.37 227 P P 06 12 11.2 -0.9
comp=Z,520nm,0.8s
MORW **Morawa** 41.41 231 P P 06 12 12.2 -0.2
MORW IAmb IAmb 06 12 13.8
comp=Z,1µm,1.4s
MORW **Morawa** 41.41 231 P P 06 12 12.3 -0.2
comp=Z,717nm,1.5s
MORW **Morawa** 41.41 231 ⇑P P 06 12 12.2 -0.2
SMRI **Semarang** 41.42 266 IAmb IAmb 06 13 04.4
comp=Z,2µm,2.0s
SMRI **Semarang** 41.42 266 P P 06 12 13.8 +1.0
comp=Z,384nm,1.2s
SMRI **Semarang** 41.42 266 P P 06 12 14.5 +1.7
comp=Z,17µmcomp=Z,10µmcomp=Z,386nm,1.2s
PAWZ **Paruwai Farm** 41.44 153 P P 06 12 12.3 -0.2
KHZ **Kahutara** 41.47 156 ⇑P P 06 12 11.6 -1.2
KHZ **Kahutara** 41.47 156 P P 06 12 12.2 -0.5
MSZ **Milford Sound** 41.48 163 P P 06 12 11.6 -1.2
YULB **Yu-li** 41.52 315 P P 06 12 14.4 +1.0
comp=Z,227nm,1.6s
BLDU **Ballidu** 41.64 229 P P 06 12 13.5 -0.8
comp=Z,336nm,2.1s
RPZ **Rata Peaks** 41.64 159 IAMs_20 IAMs_20 06 27 13.2
comp=Z,30µm,21.0s
RPZ **Rata Peaks** 41.64 159 P P 06 12 14.7 +0.5
OXZ **Oxford** 41.66 158 IAMs_20 IAMs_20 06 27 46.7
comp=Z,25µm,20.0s
OXZ **Oxford** 41.66 158 P P 06 12 13.7 -0.6
MHCZ **Mount Hutt** 41.66 159 P P 06 12 15.0 +0.6
GVZ **Greta Valley S** 41.73 157 IAMs_20 IAMs_20 06 28 00.7
comp=Z,25µm,20.0s
GVZ **Greta Valley S** 41.73 157 P P 06 12 14.6 -0.3
NACB **Ninganchiao** 41.81 316 IAmb IAmb 06 12 18.8
comp=Z,581nm,1.3s
NACB IAMs_20 IAMs_20 06 26 01.0
comp=Z,23µm,21.0s
NACB **Ninganchiao** 41.81 316 P P 06 12 17.1 +1.3
comp=Z,362nm,1.9s
LBZ **Lake Benmore** 41.93 161 IAMs_20 IAMs_20 06 29 06.9
comp=Z,32µm,20.0s
LBZ **Lake Benmore** 41.93 161 P P 06 12 16.9 +0.4
TPUB **Ta-pu** 41.94 314 P P 06 12 17.0 +0.2
TPUB IAmb IAmb 06 12 20.0
comp=Z,778nm,1.8s
TPUB IAMs_20 IAMs_20 06 26 15.3
comp=Z,27µm,21.0s
TPUB **Ta-pu** 41.94 314 P P 06 12 17.6 +0.8
comp=Z,156nm,1.1s
DCZ **Deep Cove** 41.99 164 P P 06 12 16.8 -0.1
SSLB **Suanglung** 42.01 315 P P 06 12 18.5 +1.0
comp=Z,125nm,1.4s
JSU **Suzuyama** 42.13 332 P P 06 12 19.2 +1.0
comp=Z,125nm,2.8s
MLZ **Mavora Lakes** 42.17 163 P P 06 12 18.7 +0.2
TMZ **Timaru** 42.21 160 P P 06 12 17.4 -1.4
MQZ **McQueen's Vall** 42.22 158 IAMs_20 IAMs_20 06 28 25.4
comp=Z,22µm,20.0s
MQZ **McQueen's Vall** 42.22 158 P P 06 12 19.0 +0.3
KSM **Kuching** 42.29 278 P P 06 12 21.2 +1.4
comp=Z,0.6nm,0.9s
KSM **Kuching** 42.29 278 P P 06 12 19.6 -0.2
YHNB **Yeheng** 42.29 316 IAmb IAmb 06 12 23.0
comp=Z,850nm,1.3s
YHNB IAMs_20 IAMs_20 06 26 06.6
comp=Z,30µm,22.0s
YHNB **Yeheng** 42.29 316 P P 06 12 21.5 +1.5
comp=Z,537nm,1.3s
TATO **Taipei** 42.41 317 P P 06 12 21.8 +1.2
TATO IAmb IAmb 06 12 23.5
comp=Z,738nm,1.4s
TATO **Taipei** 42.41 317 IAMs_20 IAMs_20 06 26 43.6
comp=Z,31µm,21.0s
TATO **Taipei** 42.41 317 P P 06 12 21.9 +1.3
comp=Z,465nm,1.6s
TATO **Taipei** 42.41 317 P P 06 12 22.8 +2.2
TATO P P 06 12 22.8 +2.2
NWAO **Narrogin (SRO)** 42.45 225 LR LR 06 32 36.6
comp=Z,29µm,18.1s,baz=52,slow=40
JMN **Monobe** 42.58 337 P P 06 12 22.3 +0.3
JMN IAmb IAmb 06 12 24.1
comp=Z,516nm,1.3s
JMN **Monobe** 42.58 337 P P 06 12 22.5 +0.6
comp=Z,330nm,1.5s
JMN **Monobe** 42.58 337 ⇑P P 06 12 22.3 +0.3
ODZ **Otahua Downs** 42.67 161 IAMs_20 IAMs_20 06 29 21.4
comp=Z,29µm,20.0s
CTJI **Waduk Cacaban** 42.67 266 P P 06 12 24.3 +1.3
comp=Z,13µmcomp=Z,8µmcomp=Z,358nm,1.6s
SCJI **Gunung Srandil** 42.68 265 P P 06 12 23.4 +0.3
comp=Z,4µmcomp=Z,315nm,1.3s
MUN **Mundaring** 42.69 227 P P 06 12 22.6 -0.3
comp=Z,592nm,1.5s
KPJI **Karang Pucung** 42.92 265 P P 06 12 25.5 +0.5
comp=Z,15µmcomp=Z,10µmcomp=Z,525nm,1.1s
INU **Inuyama** 42.96 342 P P 06 12 24.1 -0.9
INU **Inuyama** 42.96 342 P P 06 12 25.7 +0.8
comp=Z,78nm,1.6s
INU **Inuyama** 42.96 342 ⇑P P 06 12 23.9 -1.0
JGF **Kuroka** 43.09 342 P P 06 12 25.5 -0.5
JGF **Kuroka** 43.09 342 P P 06 12 27.5 +1.5
comp=Z,40nm,0.7s
AUALB **St Joseph's Co** 43.14 222 P P 06 12 26.8 +0.4
comp=Z,312nm,2.0s
JNU **Nakatsue** 43.29 334 P P 06 12 28.0 +0.3
comp=Z,106nm,0.9s,baz=120,slow=4.9,SNR=33
JNU PcP PcP 06 14 17.3 +1.2
comp=Z,134nm,1.0s,baz=121,slow=3.2,SNR=6.2
JNU ScP ScP 06 18 04.7 +0.9
comp=Z,69nm,1.1s,baz=79,slow=3.0,SNR=8.9
JNU LR LR 06 29 10.6
comp=Z,5µm,20.2s,baz=180,slow=34
comp=Z,106nm,0.9s
AUHAR **St Anne's Scho** 43.49 226 P P 06 12 30.0 +0.7
comp=Z,308nm,2.3s
JCJI **Jatiwangi** 43.58 266 P P 06 12 31.5 +1.2
comp=Z,17µmcomp=Z,1µm,1.9s
MJAR **Matsushiro Arr** 43.72 344 P P 06 12 27.7 -3.3
comp=Z,24nm,1.1s,baz=173,slow=7.8,SNR=22
MJAR PcP PcP 06 14 18.3 +0.8
comp=Z,96nm,1.1s,baz=169,slow=3.6,SNR=21
MJAR ScP ScP 06 18 06.7 +1.2
comp=Z,79nm,1.1s,baz=172,slow=4.6,SNR=32
MJAR LR LR 06 29 13.2
comp=Z,9µm,21.6s,baz=174,slow=34
MJAR **Matsushiro Arr** 43.72 344 P P 06 12 30.0 -1.1
MJAR **Matsushiro Arr** 43.72 344 P P 06 12 30.0 -1.1
MJAR pmax pmax
comp=Z,21nm,1.0s
MAJO **Matsushiro** 43.72 344 P P 06 12 29.8 -1.3
MAJO **Matsushiro** 43.72 344 P P 06 12 32.4 +1.3
comp=Z,49nm,1.1s
MAJO **Matsushiro** 43.72 344 *d* ⇓P P 06 12 28.3 -2.8
MAJO pmax pmax
comp=Z,120nm,1.7s
JOHN **Johnston Islan** 43.87 59 IAMs_20 IAMs_20 06 27 30.7
comp=Z,21µm,22.0s
BBJI **Bungbulang** 44.19 265 P P 06 12 34.8 -0.5
BBJI IAmb IAmb 06 12 36.1
comp=Z,2µm,1.8s
BBJI **Bungbulang** 44.19 265 P P 06 12 34.7 -0.6
comp=Z,419nm,1.4s
BBJI **Bungbulang** 44.19 265 P P 06 12 34.4 -0.9
comp=Z,1µm,1.5s comp=Z,9µmcomp=Z,429nm,1.2s
LEM **Lembang** 44.23 266 LR LR 06 37 03.1
comp=Z,4µm,18.1s,baz=104,slow=44
KNMB **Chin-men Tao** 44.26 314 IAmb IAmb 06 12 38.8
comp=Z,678nm,1.3s
TPI **Tanjungpandan** 44.39 272 P P 06 12 37.6 +0.8
comp=Z,16µmcomp=Z,5µmcomp=Z,240nm,1.0s
QZH2 **Quanzhou** 44.41 314 ⇑ *i* P **P** 06 12 37.9 +1.2
QZH2 sP **sP** 06 12 52.4 -2.8
QZH2 PcP **PP** 06 14 21.2 +0.1
QZH2 ScP **ScP** 06 18 09.5 +1.0
QZH2 S **S** 06 19 10.2 +1.8
QZH2 pmax pmax
comp=Z,710nm,1.1s
QZH2 pmax pmax
comp=Z,3µm,5.8s
QZH2 LR LR
comp=Z,12µm,19.9s
QZH2 LR LR
comp=Z,15µm,19.9s
QZH2 LR LR
comp=Z,18µm,20.6s
DBJI **Dramaga** 45.09 266 P P 06 12 42.7 +0.3
comp=Z,11µmcomp=Z,236nm,1.6s
SKJI **Sukabumi** 45.28 266 P P 06 12 44.5 +0.6
comp=Z,13µmcomp=Z,20µmcomp=Z,1µm,1.8s
H01W1 **Cape Leeuwin H** 45.66 225 P P 06 12 46.8 +0.5
baz=172,slow=74
H01W3 **Cape Leeuwin H** 45.67 225 P P 06 12 47.3 +0.9
baz=172,slow=74
H01W2 **Cape Leeuwin H** 45.67 225 P P 06 12 46.6 +0.2
baz=172
PPBI **Pangkal Pinang** 45.95 272 P P 06 12 48.8 -0.4
XMI **Christmas Isla** 46.19 261 P P 06 12 52.0 +1.0
comp=Z,1µm,1.4s
XMI **Christmas Isla** 46.19 261 ⇑P P 06 12 52.1 +1.0
HKC **Hong Kong Obse** 46.21 308 ⇑P P 06 12 54.0 +2.9
HKPS **Hong Kong Po S** 46.23 308 IAMs_20 IAMs_20 06 28 53.0
comp=Z,16µm,21.0s
HKPS **Hong Kong Po S** 46.23 308 P P 06 12 53.5 +2.3
comp=Z,584nm,1.4s
SSE **Sheshan** 46.80 323 P P 06 12 56.5 +1.0
SSE PcP **PcP** 06 14 28.4 +0.2
SSE S **S** 06 19 45.2 +2.6
SSE pmax pmax
comp=Z,92nm,1.8s
SSE pmax pmax
comp=Z,1µm,4.3s
SSE LR LR
comp=Z,4µm,20.4s
SSE **Sheshan** 46.80 323 P P 06 12 56.5 +1.0
SSE PcP **PcP** 06 14 29.7 +1.5
KLI **Kotabumi** 47.03 268 P P 06 12 58.2 +0.5
comp=Z,11µmcomp=Z,5µmcomp=Z,274nm,2.0s
GZH2 **Guangzhou** 47.34 309 ⇑ *i* P **P** 06 13 01.9 +2.0
GZH2 pP **pP** 06 13 12.7 -0.2
GZH2 PcP **PcP** 06 14 32.1 +1.8
GZH2 PP **PP** 06 14 51.0 -0.5
GZH2 S **S** 06 19 52.8 +2.2
GZH2 sS **sS** 06 20 10.7 +0.1
GZH2 pmax pmax
comp=Z,400nm,1.3s
GZH2 LR LR
comp=Z,7µm,22.8s
GZH2 LR LR
comp=Z,13µm,19.7s
GZH2 LR LR
comp=Z,25µm,22.9s
KASI **Kota Agung** 47.36 267 P P 06 12 58.9 -1.4
comp=Z,12µmcomp=Z,4µmcomp=Z,169nm,1.1s
TJN **Taejon** 47.59 333 P P 06 13 02.0 +0.4
comp=Z,1µm,1.7s
DSRI **Dabo** 47.68 274 P P 06 13 02.9 +0.2
comp=Z,14µmcomp=Z,6µmcomp=Z,188nm,1.1s
MDSI **Maura Dua** 47.73 269 P P 06 13 01.7 -1.4
comp=Z,7µmcomp=Z,387nm,1.6s
LWLI **Liwa** 47.82 268 P P 06 13 03.4 -0.6
comp=Z,11µmcomp=Z,7µmcomp=Z,505nm,0.8s
TPRI **Tanjung Pinang** 47.91 276 P P 06 13 05.1 +0.6
comp=Z,14µmcomp=Z,12µmcomp=Z,210nm,1.1s
QIZ **Qiongzhong** 48.18 301 P P 06 13 07.3 +0.8
QIZ IAmb IAmb 06 13 10.0
comp=Z,438nm,1.3s
QIZ **Qiongzhong** 48.18 301 P P 06 13 07.8 +1.3
comp=Z,311nm,1.7s
QIZ **Qiongzhong** 48.18 301 P P 06 13 07.9 +1.4
QIZ sP **pP** 06 13 18.8 -0.8
QIZ PP **PP** 06 14 58.6 -0.6
QIZ S **S** 06 20 05.7 +3.0
QIZ pmax pmax
comp=Z,240nm,1.4s
QIZ pmax pmax
comp=Z,3µm,4.5s
QIZ LR LR
comp=Z,4µm,22.3s
QIZ LR LR
comp=Z,8µm,23.9s
QIZ LR LR

comp=Z,15μm,26.5s
KSRS Korea Array 48.24 334 P **P** **06 13 06.7 +0.1**
comp=Z,42nm,1.1s,baz=152,slow=9.0,SNR=84
KSRS PcP **PcP** **06 14 34.1 +1.0**
comp=Z,38nm,0.9s,baz=155,slow=4.6,SNR=13
KSRS ScP **ScP** **06 18 25.1 +0.9**
comp=Z,28nm,1.1s,baz=143,slow=5.6,SNR=17
comp=Z,42nm,1.1s
KSAR Wonju Array Be 48.24 334 P **P** **06 13 07.1 +0.4**
KSAR Wonju Array Be 48.24 334 P **P** **06 13 07.1 +0.4**
KS19 Wonju Array Si 48.30 334 P **P** **06 13 07.2 +0.1**
MYKOM Kota Tinggi 48.71 277 P **P** **06 13 10.6 -0.1**
MYKOM IAmb IAmb 06 13 12.7
comp=Z,1μm,2.0s
MYKOM Kota Tinggi 48.71 277 P **P** **06 13 10.9 +0.3**
comp=Z,201nm,2.0s
MYKOM Kota Tinggi 48.71 277 ⇑P **P** **06 13 10.7 0.0**
MYKOM Kota Tinggi 48.71 277 P **P** **06 13 11.0 +0.3**
comp=Z,14μmcomp=Z,6μmcomp=Z,201nm,2.0s
BTDF Bukit Timah Da 48.72 277 P **P** **06 13 11.3 +0.5**
comp=Z,84nm,1.9s
BTDF Bukit Timah Da 48.72 277 P **P** **06 13 11.5 +0.7**
INCN Inchon 48.84 333 P **P** **06 13 12.4 +1.2**
INCN IAmb IAmb 06 13 13.8
comp=Z,697nm,1.3s
INCN Inchon 48.84 333 P **P** **06 13 12.4 +1.2**
comp=Z,435nm,1.5s
INCN Inchon 48.84 333 P **P** **06 13 12.4 +1.2**
INCN pmax pmax
comp=Z,697nm,1.3s
INCN Inchon 48.84 333 P **P** **06 13 12.4 +1.2**
INCN P **P** **06 13 12.4 +1.2**
INCN S **S** **06 20 12.5 +1.1**
INCN S **S** **06 20 12.5 +1.1**
INCN Inchon 48.84 333 ⇑P **P** **06 13 12.4 +1.2**
INCN Inchon 48.84 333 P **P** **06 13 12.4 +1.2**
INCN PcP **PcP** **06 14 37.1 +1.7**
NJ2 Nanjing 48.88 322 *i*P **P** **06 13 13.3 +1.6**
NJ2 pP **pP** **06 13 23.8 -1.0**
NJ2 PcP **PcP** **06 14 36.9 +1.3**
NJ2 PP **PP** **06 15 06.1 +0.7**
NJ2 ScP **ScP** **06 18 28.1 +1.0**
NJ2 S **S** **06 20 17.6 +5.4**
NJ2 ScS **ScS** **06 23 00.8 +0.5**
NJ2 pmax pmax
comp=Z,140nm,1.5s
NJ2 pmax pmax
comp=Z,3μm,3.5s
NJ2 LR LR
comp=Z,14μm,23.7s
NJ2 LR LR
comp=Z,10μm,19.9s
NJ2 LR LR
comp=Z,20μm,19.9s
RAR Rarotonga 49.18 113 LR LR 06 30 58.8
comp=Z,3μm,22.0s,baz=286,slow=32
RAR Rarotonga 49.18 113 P **P** **06 13 15.1 +0.9**
comp=Z,96nm,1.8s
RAR Rarotonga 49.18 113 P **P** **06 13 15.2 +1.0**
KSI Kapahiang 49.36 270 P **P** **06 13 16.9 +1.2**
comp=Z,13μmcomp=Z,164nm,0.9s
HJU Haeju 49.70 333 P **P** **06 13 18.7 +0.9**
HJU S **S** **06 20 24.0 +0.4**
HJU AmB
comp=Z,2μm,2.3s
HJU AMS AMS
comp=Z,60nm,2.3s
MASI Maura Aman, Be 49.75 270 P **P** **06 13 18.1 -0.6**
comp=Z,16μmcomp=Z,7μmcomp=Z,428nm,0.8s
ASAJ Asahikawa 50.05 351 P **P** **06 13 21.8 +1.5**
comp=Z,38nm,1.0s,baz=216,slow=12,SNR=8.5
ASAJ ScP **ScP** **06 18 31.1 -0.7**
comp=Z,26nm,1.2s,baz=296,slow=27,SNR=3.0
ASAJ LR LR 06 32 45.3
comp=Z,4μm,21.5s,baz=184,slow=34
comp=Z,38nm,1.0s
CNSH ChangSha 50.40 314 P **P** **06 13 24.4 +1.1**
CNSH S **S** **06 20 42.4 +8.8**
CNSH pmax pmax
comp=Z,280nm,1.3s
CNSH LR LR
comp=Z,6μm,20.6s
CNSH LR LR
comp=Z,6μm,22.7s
CNSH LR LR
comp=Z,10μm,22.4s
HHU Hamhung 50.48 336 P **P** **06 13 24.2 +0.5**
HHU pP **sP** **06 13 43.3 +1.0**
HHU S **S** **06 20 34.9 +0.6**
HHU AmB
comp=Z,647nm,2.3s
HHU AMS AMS
comp=Z,2μm,12.2s
PYAG Pyongyang 50.51 333 S **S** **06 20 35.5 +0.7**
KUR Kuril'sk 50.57 356 *e*P **P** **06 13 24.7 +0.5**
KUR *e* 06 15 20.6
KUR *e*S **S** **06 20 37.6 +2.3**
KUR *e* 06 23 12.7
KUR *e*SS **SS** **06 24 08.8 -1.3**
KUR MLR MLR
comp=E,3μm,16.0s
KUR MLR MLR
comp=N,3μm,13.0s
KRJI Kerinci 50.61 272 P **P** **06 13 26.3 +1.0**
comp=N,13μmcomp=N,19μmcomp=N,595nm,0.9s
GULI GuiLin 50.74 309 P **P** **06 13 27.2 +1.3**
GULI pmax pmax
comp=N,290nm,1.4s
GULI LR LR
comp=N,7μm,20.6s
GULI LR LR
comp=N,10μm,20.1s
GULI LR LR
comp=N,18μm,19.5s
WHN Wuhan 50.82 317 ⇑P **P** **06 13 28.2 +1.8**
WHN sP **pP** **06 13 40.9 +1.3**
WHN PcP **PcP** **06 14 44.2 +1.4**
WHN ScP **ScP** **06 18 35.9 +0.5**
WHN S **S** **06 20 43.3 +4.0**
WHN sS **sS** **06 21 00.4 -0.8**
WHN pmax pmax
comp=N,1μm,1.2s
WHN pmax pmax
comp=N,6μm,3.3s
WHN LR LR
comp=N,32μm,21.2s
WHN LR LR
comp=N,54μm,21.2s
WHN LR LR
comp=N,72μm,21.9s
XMAS Kiritimati 50.95 83 P **P** **06 13 29.0 +1.3**
comp=N,355nm,1.1s
BKNI Bangkinang 51.29 275 P **P** **06 13 29.8 -0.5**
BKNI Bangkinang 51.29 275 P **P** **06 13 29.6 -0.6**
BKNI IAmb IAmb 06 13 34.2
comp=Z,746nm,1.5s
BKNI Bangkinang 51.29 275 P **P** **06 13 30.6 +0.3**
comp=Z,372nm,1.5s
BKNI Bangkinang 51.29 275 P **P** **06 13 30.6 +0.3**
comp=Z,15μmcomp=Z,10μmcomp=Z,372nm,1.5s
PSTR Posyet 51.61 340 *i*P **P** **06 13 32.2 +0.1**
VLA Vladivostok 51.67 341 *d i*P **P** **06 13 32.9 +0.4**
VLA pmax pmax
comp=Z,223nm,1.8s
PDSI Padang 51.72 273 P **P** **06 13 31.5 -2.0**
comp=Z,9μmcomp=Z,249nm,0.7s
PPI Padang Panjang 51.84 274 P **P** **06 13 33.0 -1.4**
comp=Z,13μmcomp=Z,6μmcomp=Z,340nm,1.1s
IPM Ipoh 51.94 280 P **P** **06 13 35.0 -0.1**
IPM IAmb IAmb 06 14 50.0
comp=Z,523nm,1.2s
IPM Ipoh 51.94 280 P **P** **06 13 34.7 -0.4**
comp=Z,224nm,1.6s
IPM Ipoh 51.94 280 P **P** **06 13 34.5 -0.6**
comp=Z,13μmcomp=Z,5μmcomp=Z,224nm,1.6s
SUJ Sinuiju 51.94 333 P **P** **06 13 35.2 +0.6**
DL2 Dalian 52.35 330 P **P** **06 13 38.6 +0.9**
DL2 pP **pP** **06 13 49.0 -1.8**
DL2 sP **sP** **06 13 56.9 +0.7**
DL2 PcP **PcP** **06 14 49.4 +1.1**
DL2 ScP **ScP** **06 18 42.7 +0.9**
DL2 PcS **PcS** **06 18 46.5 -0.1**
DL2 S **S** **06 21 00.1 +0.1**
DL2 sS **sS** **06 21 23.7 +1.9**
DL2 pmax pmax
comp=Z,270nm,1.2s
DL2 pmax pmax
comp=Z,1μm,5.8s
DL2 LR LR
comp=Z,5μm,18.5s
DL2 LR LR
comp=Z,7μm,17.7s
DL2 LR LR
comp=Z,13μm,23.5s
KULM Kulim 52.45 281 IAmb IAmb 06 13 40.2
comp=Z,518nm,1.5s
KULM Kulim 52.45 281 P **P** **06 13 38.3 -0.6**
comp=Z,229nm,1.5s
KULM Kulim 52.45 281 ⇑P **P** **06 13 38.5 -0.4**
KULM Kulim 52.45 281 P **P** **06 13 38.3 -0.6**
comp=Z,13μmcomp=Z,5μmcomp=Z,229nm,1.5s
USRK Ussuriysk Ar. 52.61 342 P **P** **06 13 39.2 -0.3**
comp=Z,34nm,1.1s,baz=159,slow=8.1,SNR=33
USRK PcP **PcP** **06 14 50.4 +1.2**
comp=Z,54nm,1.1s,baz=180,slow=3.8,SNR=7.3
USRK ScP **ScP** **06 18 43.7 +0.9**
comp=Z,47nm,1.2s,baz=174,slow=3.6,SNR=14
comp=Z,34nm,1.1s
TIA Tai'an 52.80 324 P **P** **06 13 41.3 +0.2**
TIA PcP **PcP** **06 14 50.5 +0.4**
TIA S **S** **06 21 00.1 -6.3**
TIA SS **SS** **06 24 40.5 -5.3**
TIA pmax pmax
comp=Z,140nm,1.3s
TIA pmax pmax
comp=Z,2μm,7.9s
TIA LR LR
comp=Z,5μm,19.6s
TIA LR LR
comp=Z,11μm,20.1s
TIA LR LR
comp=Z,13μm,20.1s
MNSI Mandailing Nat 52.80 275 P **P** **06 13 40.3 -1.2**
comp=Z,339nm,0.8s
YSS Yuzhno-Sakhali 52.80 352 P **P** **06 13 40.5 -0.3**
YSS Yuzhno-Sakhali 52.80 352 P **P** **06 13 41.8 +1.0**
comp=Z,59nm,1.2s
YSS Yuzhno-Sakhali 52.80 352 *α i*P **P** **06 13 40.4 -0.4**
YSS *e**PP **pP** **06 13 52.4 -1.4**
YSS *e* 06 14 51.4
YSS *e* 06 15 38.9
YSS *e*S **S** **06 21 03.6 -2.3**
YSS *e*SS **SS** **06 24 41.9 -3.5**
YSS pmax pmax
comp=Z,30nm,1.2s
YSS pmax pmax
comp=Z,800nm,4.4s
YSS pmax pmax
comp=N,800nm,4.2s
YSS pmax pmax
comp=E,600nm,4.6s
YSS smax smax
comp=N,1μm,11.3s
YSS smax smax
comp=E,1μm,9.0s
YSS MLR MLR
comp=Z,4μm,17.0s
YSS MLR MLR
comp=N,3μm,15.0s
YSS MLR MLR
comp=E,2μm,18.0s
SISI Saibi 53.05 272 P **P** **06 13 42.5 -0.8**
comp=E,16μmcomp=E,8μmcomp=E,218nm,1.4s
RPSI Rantau Prapat 53.71 277 P **P** **06 13 47.1 -1.1**
RPSI IAmb IAmb 06 14 55.1
comp=Z,244nm,1.2s
PSI Prapat 53.73 277 P **P** **06 13 46.8 -1.7**
comp=Z,235nm,1.7s
PSI Prapat 53.73 277 P **P** **06 13 47.1 -1.4**
PSI pmax pmax
comp=Z,244nm,1.2s
PSI MLR MLR
comp=Z,9μm,22.0s
PSI Prapat 53.73 277 P **P** **06 13 46.8 -1.7**
comp=Z,13μmcomp=Z,6μmcomp=Z,217nm,1.7s
SNY Shenyang 53.74 334 ⇑P **P** **06 13 47.9 +0.1**
SNY S **S** **06 21 13.4 -5.5**
SNY pmax pmax
comp=Z,1μm,4.8s
SNY LR LR
comp=Z,3μm,19.4s
SNY LR LR
comp=Z,4μm,22.5s
SNY LR LR
comp=Z,7μm,22.6s
MDJ Mudanjiang 53.76 340 **P** **06 13 47.9 -0.1**
MDJ Mudanjiang 53.76 340 P **P** **06 13 48.0 +0.1**
comp=Z,84nm,1.9s
MDJ Mudanjiang 53.76 340 P **P** **06 13 47.8 -0.1**
MDJ PcP **PcP** **06 14 54.4 +0.9**
MDJ PcS **PcS** **06 18 50.4 -2.2**
MDJ S **S** **06 21 21.0 +1.9**
MDJ sS pS 06 21 34.5 +0.3
MDJ pmax pmax
comp=Z,98nm,1.9s
MDJ pmax pmax
comp=Z,2μm,4.5s
MDJ LR LR
comp=Z,5μm,20.0s
MDJ LR LR
comp=Z,2μm,19.7s
MDJ LR LR
comp=Z,8μm,21.7s
ENH Enshi 54.06 314 **P** **06 13 51.5 +1.1**
ENH IAMs_20 IAMs_20 06 33 24.4
comp=Z,13μm,22.0s
ENH Enshi 54.06 314 P **P** **06 13 51.2 +0.7**
comp=Z,586nm,1.4s
ENH Enshi 54.06 314 P **P** **06 13 51.6 +1.1**
ENH PcP **PcP** **06 14 56.6 +1.6**
TSI Tuntungan 54.19 278 P **P** **06 13 51.0 -0.7**
comp=Z,12μmcomp=Z,392nm,1.3s
GYA Guiyang 54.21 308 ⇑P **P** **06 13 53.3 +1.5**
GYA pP pP 06 14 04.1 -0.9
GYA sP sP 06 14 08.7 -1.8
GYA PcP **PcP** **06 14 57.2 +1.4**
GYA S **S** **06 21 27.5 +1.4**
GYA sS sS 06 21 46.7 -1.0
GYA pmax pmax
comp=Z,190nm,1.2s
GYA pmax pmax
comp=Z,3μm,5.1s
GYA LR LR
comp=Z,8μm,20.0s
GYA LR LR
comp=Z,10μm,19.1s
GYA LR LR
comp=Z,19μm,20.0s
LYN LuoYang 54.55 320 ⇑P **P** **06 13 54.6 +0.7**
LYN PcP **PcP** **06 14 58.0 +1.2**
LYN ScP **ScP** **06 18 53.0 +1.5**
LYN S **S** **06 21 29.1 -1.0**
LYN sS pS 06 21 44.6 -0.2
LYN ScS **ScS** **06 23 40.4 +0.9**
LYN SS **SS** **06 25 11.5 -2.0**
LYN pmax pmax
comp=Z,320nm,1.3s
LYN pmax pmax
comp=Z,2μm,6.5s
LYN LR LR
comp=Z,16μm,22.0s
LYN LR LR
comp=Z,21μm,21.2s
LYN LR LR
comp=Z,36μm,21.6s
CN2 Changchun 54.58 337 *e*P **P** **06 13 52.6 -1.3**
CN2 PcP **PcP** **06 14 57.0 +0.4**
CN2 ScP **ScP** **06 18 50.8 -0.6**
CN2 *e*S **S** **06 21 33.3 +3.1**
CN2 pmax pmax
comp=Z,2μm,8.5s
CN2 LR LR
comp=Z,7μm,18.6s
CN2 LR LR
comp=Z,3μm,18.6s
CN2 LR LR
comp=Z,8μm,17.6s
GSI Gunungsitoli 54.85 275 P **P** **06 13 55.5 -1.0**
comp=Z,406nm,1.4s
GSI Gunungsitoli 54.85 275 ⇑P **P** **06 13 55.2 -1.3**
GSI Gunungsitoli 54.85 275 P **P** **06 13 55.2 -1.3**
comp=Z,14μmcomp=Z,8μmcomp=Z,409nm,1.4s
COCO West Island 54.94 259 P **P** **06 13 58.0 +0.9**
COCO West Island 54.94 259 P **P** **06 13 58.6 +1.6**
comp=Z,659nm,1.8s
COCO West Island 54.94 259 P **P** **06 13 58.0 +0.9**
COCO pmax pmax
comp=Z,2μm,1.4s
COCO West Island 54.94 259 P **P** **06 13 58.8 +1.7**
COCO West Island 54.94 259 ⇑P **P** **06 13 58.6 +1.6**
COCO West Island 54.94 259 P **P** **06 13 58.8 +1.7**
comp=Z,660nm,1.8s
KCSI Kotacane, Aceh 54.98 278 P **P** **06 13 55.1 -2.3**
comp=Z,7μmcomp=Z,124nm,1.6s
UGL Uglegorsk 54.98 352 *e*P **P** **06 13 56.7 0.0**
UGL *e*S **S** **06 21 35.6 +0.3**
UGL smax smax
comp=E,3μm,17.0s
UGL smax smax
comp=N,7μm,18.0s
HNS HongShan 55.02 324 ⇑P **P** **06 13 58.0 +0.7**
HNS PcP **PcP** **06 14 59.8 +1.3**
HNS ScP **ScP** **06 18 54.8 +1.3**
HNS S **S** **06 21 34.8 -1.5**
HNS pmax pmax
comp=N,330nm,1.5s
HNS pmax pmax
comp=N,3μm,5.4s
HNS LR LR
comp=N,7μm,19.1s
HNS LR LR
comp=N,11μm,19.0s
HNS LR LR
comp=N,16μm,21.8s
BNX BinXian 55.49 339 ⇑P **P** **06 14 00.3 -0.2**
BNX pP **pP** **06 14 10.5 -2.9**
BNX sP **sP** **06 14 14.5 -4.2**
BNX PcP **PcP** **06 14 59.7 -0.4**
BNX S **S** **06 21 39.2 -3.1**
BNX pmax pmax
comp=N,130nm,1.4s
BNX pmax pmax
comp=N,2μm,4.2s
BNX LR LR
comp=N,5μm,18.8s
BNX LR LR
comp=N,3μm,18.4s
BNX LR LR
comp=N,6μm,18.5s
KIP Kipapa 55.71 60 IAMs_20 IAMs_20 06 33 05.3
comp=Z,14μm,20.0s
KIP Kipapa 55.71 60 P **P** **06 14 04.0 +1.5**
comp=Z,56nm,1.6s
KIP Kipapa 55.71 60 P **P** **06 14 03.8 +1.3**
comp=Z,56nm,1.6s
SKR Severo-Kuril's 55.99 3 *e*P P 06 14 24.5 +21
SKR *e* 06 16 13.6
SKR pmax pmax
comp=Z,2μm,3.4s
SKR MLR MLR
comp=Z,5μm,16.0s
BJI2 Beijing 56.01 327 P **P** **06 14 04.7 +0.4**
BJI2 pP **pP** **06 14 14.6 -3.1**
BJI2 PcP **PcP** **06 15 03.9 +1.6**
BJI2 ScP **ScP** **06 18 58.8 +1.0**
BJI2 PcS **PcS** **06 19 03.1 +0.5**
BJI2 S **S** **06 21 46.2 -3.2**
BJI2 sS **pS** **06 22 05.8 +1.3**
BJI2 ScS **ScS** **06 23 51.2 +1.4**
BJI2 SS **SS** **06 25 39.2 +2.9**
BJI2 pmax pmax
comp=Z,45nm,1.6s
BJI2 pmax pmax
comp=Z,1μm,7.7s
BJI2 LR LR
comp=Z,4μm,20.8s
BJI2 LR LR
comp=Z,2μm,21.6s
BJI2 LR LR
comp=Z,6μm,23.3s
BJT Baijiatuau 56.01 327 **P** **06 14 05.0 +0.7**
BJT IAmb IAmb 06 15 04.8
comp=Z,259nm,1.2s
BJT Baijiatuau 56.01 327 P **P** **06 14 05.0 +0.7**
comp=Z,116nm,1.9s
BJT Baijiatuau 56.01 327 P **P** **06 14 05.0 +0.7**
BJT pmax pmax
comp=Z,259nm,1.2s
LHMI Lhok Sumawe 56.07 280 P **P** **06 14 05.2 0.0**
comp=Z,632nm,1.4s
LHMI Lhok Sumawe 56.07 280 P **P** **06 14 05.0 -0.2**
comp=Z,12μmcomp=Z,10μmcomp=Z,633nm,1.4s
SNSI Sinabang, Aceh 56.24 277 P **P** **06 14 06.1 -0.4**
comp=Z,12μmcomp=Z,7μmcomp=Z,284nm,1.5s
MLSI Meulaboh, Aceh 56.44 279 P **P** **06 14 06.3 -1.6**
TIY Taiyuan 56.58 323 *e*P **P** **06 14 09.5 +0.9**
TIY S **S** **06 21 58.3 +1.0**
TIY pmax pmax
comp=Z,120nm,1.0s
TIY pmax pmax
comp=Z,2μm,6.5s
TIY LR LR
comp=Z,9μm,22.0s
TIY LR LR
comp=Z,6μm,21.3s
TIY LR LR
comp=Z,14μm,22.7s
XAN Xi'an 56.59 317 ⇓P **P** **06 14 08.7 +0.1**
XAN pP pP 06 14 21.1 -0.9
XAN S **S** **06 22 01.6 +4.2**
XAN pmax pmax
comp=Z,380nm,1.4s
XAN pmax pmax
comp=Z,2μm,5.3s
XAN LR LR
comp=Z,10μm,22.7s
XAN LR LR
comp=Z,11μm,22.7s
XAN LR LR
comp=Z,18μm,20.6s
TYV Tymovskoe 56.65 353 *e*P **P** **06 14 08.6 0.0**
TYV *e*S **S** **06 21 58.6 +1.1**
TYV pmax pmax
comp=Z,1μm,5.6s
TYV pmax pmax
comp=Z,40nm,1.3s
TYV smax smax
comp=N,3μm,11.7s
TYV smax smax
comp=E,1μm,11.7s
KMI2 Kunming 56.75 305 ⇑P **P** **06 14 12.1 +1.9**
KMI2 pP pP 06 14 21.5 -2.0
KMI2 sP sP 06 14 24.4 -4.6
KMI2 PcP **PcP** **06 15 07.8 +2.0**
KMI2 PP **PP** **06 16 16.1 -0.8**
KMI2 S S 06 21 49.5 -11
KMI2 SS **SS** **06 25 48.7 -0.3**
KMI2 pmax pmax
comp=E,240nm,1.2s
KMI2 pmax pmax
comp=E,3μm,7.0s
KMI2 LR LR
comp=E,5μm,18.9s
KMI2 LR LR
comp=E,4μm,21.2s
KMI2 LR LR
comp=E,6μm,21.2s
KLR Kul'dur 57.24 344 LR LR 06 36 09.5
comp=E,2μm,21.9s,baz=166,slow=33
KLR Kul'dur 57.24 344 *ce*P **P** **06 14 12.9 0.0**
KLR pmax pmax
comp=Z,152nm,1.6s
POHA Pohakuloa 57.26 62 IAMs_20 IAMs_20 06 33 50.4
comp=Z,11μm,22.0s
CM31 Chiang Mai Arr 57.50 296 P **P** **06 14 16.7 +1.3**
CM31 IAmb IAmb 06 14 18.6
comp=Z,514nm,1.3s
CM31 Chiang Mai Arr 57.50 296 P **P** **06 14 17.0 +1.7**
CM31 P **P** **06 14 17.0 +1.7**
CMAR Chiang Mai Arr 57.50 296 P **P** **06 14 16.9 +1.6**
comp=Z,97nm,1.0s,baz=113,slow=5.4,SNR=341
CMAR ScP **ScP** **06 19 06.2 +1.3**
comp=Z,7.1nm,1.0s,baz=104,slow=4.1,SNR=4.7
CMAR LR LR 06 37 09.4
comp=Z,3μm,21.6s,baz=105,slow=34
CMAR PKPPKP **P'P'df** **06 44 02.0 -1.0**
comp=Z,2.2nm,0.9s,baz=288,slow=3.7,SNR=4.1

CMAR PKP2bc **P'P'bc** 06 44 14.0 -1.0
comp=Z,13nm,1.1s,baz=284,slow=3.5,SNR=17
comp=Z,97nm,1.0s
CMAR Chiang Mai Arr 57.50 296 P **P**
GRNR Gornyy 57.58 348 *eP* **P** 06 14 13.4 -1.9
CHTO Chiang Mai 57.62 296 P **P** 06 14 17.4 +1.2
CHTO IAmb IAmb 06 14 19.1
comp=Z,542nm,1.4s
CHTO Chiang Mai 57.62 296 P **P** 06 14 17.1 +0.9
comp=Z,198nm,1.6s
CHTO Chiang Mai 57.62 296 P **P** 06 14 17.4 +1.2
CHTO pmax pmax
comp=Z,542nm,1.4s
CHTO Chiang Mai 57.62 296 P **P** 06 14 17.6 +1.4
CHTO P **P** 06 14 17.6 +1.4
CHTO S **S** 06 22 11.6 +0.2
CHTO S **S** 06 22 11.6 +0.2
CHTO Chiang Mai 57.62 296 ⇑P **P** 06 14 17.4 +1.2
CHTO Chiang Mai 57.62 296 P **P** 06 14 16.9 +0.7
comp=Z,14μmcomp=Z,7μmcomp=Z,332nm,1.6s
CHTO Chiang Mai 57.62 296 P **P** 06 14 17.4 +1.2
CHTO PcP **PcP** 06 15 10.9 +1.9
PZH PanZhiHua 58.15 306 ⇑P **P** 06 14 20.8 +0.9
PZH pP **pP** 06 14 31.6 -1.7
PZH sP **sP** 06 14 38.0 -0.7
PZH PP **PP** 06 16 27.4 -1.8
PZH S **S** 06 22 18.1 -0.3
PZH sS **sS** 06 22 39.2 -1.2
PZH pmax pmax
comp=Z,130nm,1.3s
PZH pmax pmax
comp=Z,2μm,6.4s
PZH LR LR
comp=Z,6μm,21.2s
PZH LR LR
comp=Z,5μm,21.8s
PZH LR LR
comp=Z,6μm,22.9s
PPT Papeete 58.22 107 P **P** 06 14 21.5 +1.1
comp=Z,56nm,1.0s,baz=340,slow=6.2,SNR=3.8
PPT LR LR 06 34 43.6
comp=Z,4μm,21.9s,baz=270,slow=31
comp=Z,56nm,1.0s
PET Petropavlovsk 58.49 5 *eP* **P** 06 14 22.1 +0.5
PET *e* 06 15 12.5
PET *eS* **S** 06 22 25.2 +3.6
PET *ePS* **PnS** 06 22 41.5 +2.8
PET pmax pmax
comp=Z,1μm,16.4s
PET MLR MLR
comp=Z,4μm,18.0s
PET MLR MLR
comp=Z,3μm,19.0s
PEA0B Petropavlovsk- 58.50 4 P **P** 06 14 21.9 +0.2
PEA0B IAmb IAmb 06 15 14.2
comp=Z,170nm,1.1s
PEA0B Petropavlovsk- 58.50 4 P **P** 06 14 21.9 +0.2
PEA0B pmax pmax
comp=Z,170nm,1.1s
PETK Petropavlovsk- 58.50 4 P **P** 06 14 22.5 +0.8
comp=Z,23nm,0.8s,baz=152,slow=6.2,SNR=68
PETK LR LR 06 35 48.9
comp=Z,7μm,21.9s,baz=190,slow=32
comp=Z,23nm,0.8s
PETK Petropavlovsk- 58.50 4 P **P** 06 14 22.6 +0.9
CD2 Chengdu 58.60 311 ⇑P **P** 06 14 23.8 +0.9
CD2 PP **PP** 06 16 31.2 -1.9
CD2 S **S** 06 22 22.0 -2.0
CD2 sS sS 06 22 44.0 -1.9
CD2 ScS **ScS** 06 24 07.8 -1.5
CD2 pmax pmax
comp=Z,310nm,1.1s
CD2 pmax pmax
comp=Z,5μm,4.3s
CD2 LR LR
comp=Z,11μm,22.2s
CD2 LR LR
comp=Z,20μm,22.2s
CD2 LR LR
comp=Z,22μm,22.2s
XLT XiLinHaoTe 58.85 330 *eP* **P** 06 14 25.1 +0.7
XLT PcP **PcP** 06 15 14.7 +1.2
XLT PP **PP** 06 16 42.2 +7.2
XLT ScP **ScP** 06 19 11.2 +0.8
XLT S **S** 06 22 25.9 -0.9
XLT pmax pmax
comp=Z,350nm,1.3s
XLT pmax pmax
comp=Z,2μm,3.8s
XLT LR LR
comp=Z,390nm,22.7s
XLT LR LR
comp=Z,4μm,24.6s
XLT LR LR
comp=Z,8μm,24.8s
HHC Hu-ho-hao-te 59.14 325 *eP* **P** 06 14 27.7 +1.2
HHC pP pP 06 14 38.2 -1.8
HHC sP sP 06 14 42.0 -3.4
HHC S **S** 06 22 33.4 +2.6
HHC sS sS 06 22 50.3 -2.4
HHC ScS **ScS** 06 24 09.3 -3.6
HHC pmax pmax
comp=Z,220nm,1.1s
HHC pmax pmax
comp=Z,2μm,5.7s
HHC LR LR
comp=Z,8μm,18.7s
HHC LR LR
comp=Z,6μm,20.4s
HHC LR LR
comp=Z,10μm,17.9s
HEH HeiHe 59.42 342 *eP* **P** 06 14 27.6 -0.5
HEH sP **sP** 06 14 44.6 -1.7
HEH S **S** 06 22 40.3 +6.6
HEH sS **sS** 06 22 58.5 +2.7
HEH pmax pmax
comp=Z,62nm,1.2s
HEH pmax pmax
comp=Z,2μm,8.1s
HEH LR LR
comp=Z,3μm,19.8s
HEH LR LR
comp=Z,3μm,17.8s
HEH LR LR
comp=Z,8μm,19.5s
BTO2 Baotou 60.05 324 ⇑*i*P **P** 06 14 33.9 +1.1
BTO2 pP **pP** 06 14 43.7 -2.6
BTO2 sP **sP** 06 14 48.0 -3.7
BTO2 S **S** 06 22 41.8 -0.7
BTO2 sS **pS** 06 23 00.2 +2.0
BTO2 pmax pmax
comp=Z,360nm,1.2s
BTO2 pmax pmax
comp=Z,6μm,8.3s
BTO2 LR LR
comp=Z,19μm,22.3s
BTO2 LR LR
comp=Z,12μm,19.0s
BTO2 LR LR
comp=Z,25μm,20.5s
TNCH TengChong 60.21 303 ⇑P **P** 06 14 35.3 +1.1
TNCH pP pP 06 14 46.4 -1.3
TNCH sP sP 06 14 49.5 -3.6
TNCH S **S** 06 22 46.5 +1.3
TNCH sS sS 06 23 07.2 -0.2
TNCH pmax pmax
comp=Z,390nm,1.2s
TNCH pmax pmax
comp=Z,3μm,4.1s
TNCH LR LR
comp=Z,2μm,17.4s
TNCH LR LR
comp=Z,2μm,18.1s
TNCH LR LR
comp=Z,6μm,20.0s
SHEM Shemya Is, Ala 60.87 15 LR LR 06 37 59.1
comp=Z,8μm,20.1s,baz=201,slow=33
LZH Lanzhou 61.18 316 P **P** 06 14 42.3 +1.6
LZH pP pP 06 14 53.4 -0.8
LZH sP sP 06 15 01.5 +1.9
LZH PcP **PcP** 06 15 25.5 +2.4
LZH ScP **ScP** 06 19 22.8 +1.7
LZH S **S** 06 22 55.7 -1.6
LZH pmax pmax
comp=Z,330nm,1.5s
LZH pmax pmax
comp=Z,1μm,5.5s
LZH LR LR
comp=Z,3μm,17.2s
LZH LR LR
comp=Z,8μm,17.5s
LZH LR LR
comp=Z,11μm,16.1s
LZDM Lanzhou Array 61.22 316 P **P** 06 14 42.6 +1.5
comp=Z,62nm,0.7s,baz=121,slow=7.6,SNR=198
LZDM ScP **ScP** 06 19 21.8 +0.4
comp=Z,26nm,1.2s,baz=134,slow=4.3,SNR=3.8
LZDM LR LR 06 40 27.5
comp=Z,6μm,19.6s,baz=100,slow=35
LZDM PKPPKP **P'P'df** 06 43 56.0 -0.1
comp=Z,1.1nm,0.6s,baz=293,slow=7.6,SNR=5.4
LZDM PKP2bc **P'P'bc** 06 44 04.9 -0.1
comp=Z,0.2nm,0.2s,baz=70,slow=1.7,SNR=7.2
comp=Z,62nm,0.7s
HIA Hailar 61.31 336 **P** 06 14 41.7 +0.6
HIA Hailar 61.31 336 P **P** 06 14 41.6 +0.6
comp=Z,110nm,1.2s
HIA Hailar 61.31 336 P **P** 06 14 41.7 +0.6
HIA pmax pmax
comp=Z,146nm,1.2s
HIA MLR MLR
comp=Z,5μm,20.0s
PBA Port Blair 61.42 286 P **P** 06 14 42.0 -0.3
HILR Hailar Array B 61.54 337 P **P** 06 14 43.1 +0.5
comp=Z,38nm,0.8s,baz=139,slow=9.2,SNR=24
HILR LR LR 06 38 10.5
comp=Z,3μm,21.7s,baz=100,slow=33
comp=Z,38nm,0.8s
DGPR DIGLIPUR 61.58 288 *eP* **P** 06 14 42.2 -1.3
DGPR IAmb IAmb 06 14 45.6
comp=Z,119nm,1.0s
DGPR *eS* **S** 06 22 57.6 -5.0
DRV Dumont d'Urvil 61.71 185 P **P** 06 14 44.0 +0.6
ZEA Zeya 62.53 344 *eP* **P** 06 14 49.2 0.0
ZEA *e* 06 15 29.4
ZEA *eS* **S** 06 23 14.9 +1.6
ZEA pmax pmax
comp=N,100nm,4.5s
ZEA pmax pmax
comp=Z,500nm,5.6s
ZEA pmax pmax
comp=E,100nm,5.1s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,60nm,1.0s
ZEA smax smax
comp=E,400nm,8.2s
ZEA smax smax
comp=N,700nm,13.2s
KIWB Kanaga Island 62.81 21 P **P** 06 14 51.4 +0.4
KIWB IAmb IAmb 06 14 53.5
comp=Z,415nm,1.2s
ADK Adak 63.00 21 P **P** 06 14 53.4 +1.1
ADK IAmb IAmb 06 14 54.6
comp=Z,540nm,1.4s
ADK Adak 63.00 21 P **P** 06 14 53.5 +1.2
comp=Z,125nm,1.6s
ADK Adak 63.00 21 P **P** 06 14 53.4 +1.1
ADK pmax pmax
comp=Z,540nm,1.4s
ADK Adak 63.00 21 ⇑P **P** 06 14 53.4 +1.1
PASG PASIGHAT 64.00 305 *eP* **P** 06 14 55.0 -4.5
PASG IAmb IAmb 06 15 02.4
comp=Z,806nm,1.5s
IMP Imphal 64.01 301 *eP* **P** 06 14 55.0 -4.6
IMP IAmb IAmb 06 15 01.1
comp=Z,350nm,1.1s
IMP *eS* **S** 06 23 30.6 -2.4
SAIH SAIHA 64.08 298 *eP* P 06 14 55.0 -5.1
SAIH IAmb IAmb 06 15 01.5
comp=Z,612nm,1.2s
SAIH *eS* **S** 06 23 33.2 -0.7
ATKA Atka Island 64.17 22 IAMs_20 IAMs_20 06 38 10.0
comp=Z,9μm,20.0s
KOHI KOHIMA 64.17 302 *eP* P 06 14 55.4 -5.4
KOHI IAmb IAmb 06 15 02.3
comp=Z,833nm,1.5s
KOHI *eS* **S** 06 23 32.6 -2.5
MA2 Magadan 64.80 359 P **P** 06 15 03.4 -0.6
comp=Z,45nm,1.1s,baz=161,slow=7.4,SNR=16
MA2 LR LR 06 42 20.3
comp=Z,3μm,19.9s,baz=186,slow=35
comp=Z,45nm,1.1s
MA2 Magadan 64.80 359 P **P** 06 15 03.8 -0.2
MA2 Magadan 64.80 359 P **P** 06 15 04.9 +0.9
comp=Z,84nm,1.3s
MA2 Magadan 64.80 359 *c i*P **P** 06 15 03.4 -0.6
MA2 pmax pmax
comp=Z,132nm,1.7s
MA2 MLR MLR
comp=Z,4μm,20.0s
MA2 Magadan 64.80 359 P **P** 06 15 03.5 -0.5
comp=Z,2μmcomp=Z,82nm,1.3s
MA2 Magadan 64.80 359 ⇑P **P** 06 15 03.6 -0.4
ITAN ITANAGAR 64.99 303 *eP* P 06 15 01.1 -4.8
ITAN IAmb IAmb 06 15 09.1
comp=Z,880nm,1.1s
ZIRO ZIRO 65.02 304 *eP* **P** 06 15 03.5 -2.9
ZIRO IAmb IAmb 06 15 09.1
comp=Z,589nm,1.3s
ZIRO *eS* **S** 06 23 41.6 -4.0
BRDH Bariadhala 65.32 298 LR LR 06 42 03.6
comp=Z,4μm,21.5s,baz=150,slow=34
GTA2 Gaotai 65.71 318 P **P** 06 15 11.7 +1.2
GTA2 PcP **PcP** 06 15 42.1 +0.6
GTA2 PP **PP** 06 17 34.5 -1.1
GTA2 S **S** 06 23 53.9 +0.4
GTA2 sS sS 06 24 17.2 +1.3
GTA2 ScS **SKSac** 06 25 01.3 -1.3
GTA2 pmax pmax
comp=Z,220nm,1.4s
GTA2 pmax pmax
comp=Z,3μm,8.4s
GTA2 LR LR
comp=Z,5μm,21.1s
GTA2 LR LR
comp=Z,6μm,23.1s
GTA2 LR LR
comp=Z,8μm,24.7s
CIT Chita 65.96 335 *eP* **P** 06 15 12.8 +1.1
CIT *e* 06 15 20.6
CIT *e* 06 15 28.6
CIT *e* 06 15 43.4
CIT *e* 06 17 41.6
CIT *e* 06 19 17.8
CIT *e* 06 23 58.4
CIT pmax pmax
comp=Z,580nm,1.7s
SHL Shillong 66.01 301 P **P** 06 15 13.2 +0.5
SHL Shillong 66.01 301 *eP* **P** 06 15 08.6 -4.2
SHL IAmb IAmb 06 15 15.0
comp=Z,580nm,1.2s
SHL *eS* **S** 06 23 55.8 -2.0
SHL Shillong 66.01 301 P **P** 06 15 13.2 +0.5
SHL pmax pmax
comp=Z,727nm,1.2s
SHL Shillong 66.01 301 P **P** 06 15 13.5 +0.7
SNR=191
AGT Agartala 66.03 299 *eP* P 06 15 07.3 -5.4
AGT IAmb IAmb 06 15 19.2
comp=Z,283nm,0.4s
AGT *eS* **S** 06 23 54.9 -2.7
ULN Ulaanbaatar 66.15 329 P **P** 06 15 14.4 +1.3
ULN IAmb IAmb 06 15 16.2
comp=Z,303nm,1.2s
ULN Ulaanbaatar 66.15 329 IAMs_20 IAMs_20 06 41 15.0
comp=Z,10μm,21.0s
ULN Ulaanbaatar 66.15 329 *c i*P **P** 06 15 14.2 +1.0
ULN pmax pmax
comp=Z,222nm,1.2s
ULN Ulaanbaatar 66.15 329 P **P** 06 15 15.0 +1.8
ULN P **P** 06 15 15.0 +1.8
ULN S **S** 06 23 58.3 -0.3
ULN S **S** 06 23 58.3 -0.3
ULN Ulaanbaatar 66.15 329 ⇑P **P** 06 15 14.6 +1.4
ULN Ulaanbaatar 66.15 329 P **P** 06 15 14.2 +1.0
ULN Ulaanbaatar 66.15 329 P **P** 06 15 14.8 +1.6
ULN PcP **PcP** 06 15 44.5 +1.3
GUWA GUWAHATI 66.38 302 *eP* **P** 06 15 11.3 -3.5
GUWA IAmb IAmb 06 15 15.5
comp=Z,353nm,1.4s
GUWA *eS* **S** 06 23 58.9 -2.9
SONM Songino Array 66.47 328 P **P** 06 15 16.5 +1.2
comp=Z,144nm,1.0s,baz=140,slow=5.5,SNR=346
SONM LR LR 06 42 51.3
comp=Z,10μm,20.7s,baz=134,slow=35
SONM PKPPKP **P'P'df** 06 43 48.2 +1.8
comp=Z,2.9nm,1.0s,baz=267,slow=1.8,SNR=12
comp=Z,144nm,1.0s
SONM Songino Array 66.47 328 P **P** 06 15 16.4 +1.2
SONM IAmb IAmb 06 15 18.1
comp=Z,290nm,1.1s
SONM Songino Array 66.47 328 P **P** 06 15 16.4 +1.2
SONM pmax pmax
comp=Z,290nm,1.1s
TAWA Tawang 66.70 303 *eP* **P** 06 15 14.0 -3.3
TAWA IAmb IAmb 06 15 21.8
comp=Z,360nm,0.9s
NIKH Nikolski High 66.87 24 P **P** 06 15 18.0 +0.6
baz=223
CASY Casey 67.22 197 P **P** 06 15 19.6 +0.2
CASY Casey 67.22 197 IAMs_20 IAMs_20 06 43 19.8
comp=Z,10μm,19.0s
CASY Casey 67.22 197 ⇑P **P** 06 15 19.6 +0.2
GOMU GeErMu 67.66 313 P **P** 06 15 23.8 +0.5
GOMU pP pP 06 15 33.0 -4.0
GOMU sP sP 06 15 36.9 -5.5
GOMU S **S** 06 24 17.5 -0.1
GOMU pmax pmax
comp=Z,100nm,1.3s
GOMU LR LR
comp=Z,5μm,20.2s
GOMU LR LR
comp=Z,11μm,21.8s
DHUB DHUBRI 67.77 301 *eP* **P** 06 15 19.4 -4.3
DHUB IAmb IAmb 06 15 26.0
comp=Z,770nm,1.7s
DHUB *eS* **S** 06 24 16.9 -1.6
LSA Lhasa 68.01 305 P **P** 06 15 27.2 +1.5
LSA IAmb IAmb 06 15 28.6
comp=Z,484nm,1.4s
LSA Lhasa 68.01 305 P **P** 06 15 23.0 -2.7
LSA S **S** 06 24 17.9 -4.4
LSA pmax pmax
comp=Z,230nm,1.2s
LSA LR LR
comp=N,2μm,20.3s
LSA LR LR
comp=E,2μm,23.4s
LSA LR LR
comp=Z,3μm,21.6s
LSA Lhasa 68.01 305 P **P** 06 15 26.7 +1.0
LSA Lhasa 68.01 305 P **P** 06 15 27.2 +1.5
LSA pmax pmax
comp=Z,484nm,1.4s
LSA Lhasa 68.01 305 P **P** 06 15 27.2 +1.5
LSA P **P** 06 15 27.2 +1.5
SEY Seymchan 68.16 0 P **P** 06 15 25.1 -0.2
comp=Z,6.8nm,0.4s,baz=173,slow=5.1,SNR=22
SEY S **S** 06 24 22.9 +1.0
comp=Z,0.5nm,0.2s,baz=336,slow=23,SNR=1.1
SEY LR LR 06 45 14.9
comp=Z,2μm,18.8s,baz=183,slow=36
comp=Z,6.8nm,0.4s
SEY Seymchan 68.16 0⇓*eP* **P** 06 15 26.1 +0.7
SEY pmax pmax
comp=Z,99nm,1.6s
SEY MLR MLR
comp=Z,4μm,20.0s
UNV Unalaska Valle 68.48 25 P **P** 06 15 27.4 -0.1
UNV IAmb IAmb 06 15 29.2
comp=Z,353nm,1.4s
UNV Unalaska Valle 68.48 25 P **P** 06 15 28.2 +0.6
baz=225
P08K Saint George I 69.30 22 P **P** 06 15 33.7 +1.1
baz=221
YAK Yakutsk 69.44 349 P **P** 06 15 33.5 +0.2
comp=Z,18nm,0.4s,baz=180,slow=0.4,SNR=33
YAK LR LR 06 44 16.2
comp=Z,3μm,21.8s,baz=150,slow=34
comp=Z,18nm,0.4s
YAK Yakutsk 69.44 349 P **P** 06 15 33.5 +0.2
YAK Yakutsk 69.44 349 *c i*P **P** 06 15 33.3 0.0
YAK pmax pmax
comp=Z,259nm,1.8s
SPIA Saint Paul Isl 69.48 21 P **P** 06 15 34.8 +1.1
baz=220
ZAK Zakamensk 69.66 329 *eP* **P** 06 15 35.6 +0.5
ZAK pmax pmax
comp=Z,508nm,1.4s
BWNR Bhubaneshwar 69.88 294 *eP* **P** 06 15 34.0 -2.9
BWNR IAmb IAmb 06 15 40.0
comp=Z,285nm,1.2s
BWNR *eS* **S** 06 24 42.0 -1.8
BOD Bodaibo 70.12 339 *eP* **P** 06 15 36.7 -0.9
BOD pmax pmax
comp=Z,161nm,1.5s
TLY Talaya 70.26 330 P **P** 06 15 39.6 +0.9
TLY Talaya 70.26 330 *c i*P **P** 06 15 39.4 +0.7
TLY pmax pmax
comp=Z,126nm,1.2s
TLY MLR MLR
comp=Z,7μm,18.0s
TLY Talaya 70.26 330 P **P** 06 15 39.9 +1.2
TLY S **S** 06 24 49.2 +2.0
TLY Talaya 70.26 330 P **P** 06 15 39.9 +1.2
TLY PcP **PcP** 06 16 02.1 +2.0
IRK Irkutsk 70.30 331 *eP* **P** 06 15 38.7 -0.2
IRK *eS* **S** 06 24 50.4 +2.8
IRK pmax pmax
comp=Z,327nm,1.5s
FALS False Pass 70.49 25 IAmb IAmb 06 16 22.2
comp=Z,346nm,1.0s
FALS False Pass 70.49 25 P **P** 06 15 40.7 +0.8
comp=Z,348nm,1.4s
FALS False Pass 70.49 25 P **P** 06 15 40.5 +0.6
baz=228
BOK Bokaro 70.71 297 *eP* **P** 06 15 39.2 -2.8
BOK IAmb IAmb 06 15 43.5
comp=Z,526nm,1.7s
GAYA Gaya 71.55 298 *eP* **P** 06 15 44.0 -3.0
GAYA IAmb IAmb 06 15 48.3
comp=Z,161nm,1.5s
GAYA *eS* **S** 06 25 01.2 -1.9
MOY Mondy 71.58 329 *eP* **P** 06 15 47.9 +1.1
MOY pmax pmax
comp=Z,519nm,3.0s
RAGD RAYAGADA 71.82 292 *eP* **P** 06 15 45.1 -3.6
RAGD IAmb IAmb 06 15 51.8
comp=Z,476nm,1.5s
RAGD *eS* **S** 06 25 03.7 -2.7
STMR SITAMARHI 72.03 300 *eP* **P** 06 15 46.1 -3.8
STMR IAmb IAmb 06 15 52.4
comp=Z,750nm,0.5s
STMR *eS* **S** 06 25 08.0 -0.6
SDPT Sand Point 72.09 26 P **P** 06 15 50.5 +0.9
comp=Z,589nm,1.4s
SDPT Sand Point 72.09 26 P **P** 06 15 50.0 +0.4
baz=230,SNR=7.6
JHSG JHARSUGUGA 72.10 295 *eP* **P** 06 15 48.0 -2.4
JHSG IAmb IAmb 06 15 52.8
comp=Z,314nm,1.1s
JHSG *eS* **S** 06 25 07.5 -2.0
CNBA Chernabura Isl 72.15 27 IAMs_20 IAMs_20 06 43 14.2
comp=Z,10μm,18.0s
CHNA Chernabura Isl 72.15 27 P **P** 06 15 50.9 +0.9
comp=Z,448nm,1.5s
CHNA Chernabura Isl 72.15 27 P **P** 06 15 50.7 +0.7
baz=231,SNR=7.0
HALK Hakmana 72.19 278 ⇑P **P** 06 15 51.1 0.0
VNDA Vanda 72.24 178 P **P** 06 15 50.5 +0.4
comp=Z,35nm,0.9s,baz=332,slow=6.6,SNR=51
VNDA S **S** 06 25 12.2 +2.9
comp=Z,1.3nm,0.9s,baz=137,slow=14,SNR=1.7
VNDA LR LR 06 45 24.6
comp=Z,3μm,19.1s,baz=349,slow=34
comp=Z,35nm,0.9s
VNDA Vanda 72.24 178 P **P** 06 15 50.6 +0.4
PALK Pallekele 72.33 279 P **P** 06 15 52.0 0.0
PALK Pallekele 72.33 279 *i* P **P** 06 15 52.4 +0.5
SNR=39
PALK Pallekele 72.33 279 *c i*P **P** 06 15 52.0 0.0
PALK pmax pmax
comp=Z,206nm,1.1s
PALK Pallekele 72.33 279 P **P** 06 15 53.1 +1.1

PALK S **S** **06 25 10.2 -2.4**
PALK Pallekele 72.33 279 P **P** **06 15 52.5 +0.5**
comp=Z,5μmcomp=Z,91nm,1.2s
MALK Mahakanadarawa 72.65 280 P **P** **06 15 54.2 +0.4**
SBA Scott Base 72.80 177 P **P** **06 15 54.6 +1.1**
SBA Scott Base 72.80 177 P **P** **06 15 54.6 +1.1**
SBA pmax pmax
comp=Z,126nm,1.4s
KNGR Kungurtug, Tuv 72.82 327*c i*P **P** **06 15 55.4 +1.2**
KNGR pmax pmax
comp=Z,362nm,1.1s
KNGR MLR MLR
comp=Z,3μm,17.0s
M11K Mekoryuk 73.28 20 P **P** **06 15 58.4 +1.9**
baz=224,SNR=26
VLK Valmikinagar 73.38 301 *e*P P 06 15 52.2 -5.6
VLK IAmb IAmb 06 16 00.9
comp=Z,904nm,1.6s
GKPR Gorakhpur 73.61 300 *e*P **P** **06 15 57.0 -2.2**
GKPR IAmb IAmb 06 16 01.9
comp=Z,604nm,0.8s
GKPR *e*S S 06 25 52.6 +26
BLSP Bilaspur 73.62 295 *e*P **P** **06 15 56.0 -3.4**
BLSP IAmb IAmb 06 16 00.1
comp=Z,299nm,1.3s
VAR Varanasi 73.63 298 *e*P **P** **06 15 55.9 -3.5**
VAR IAmb IAmb 06 15 57.0
comp=Z,206nm,0.6s
VAR *e*S **SKiKP** **06 25 22.5 -3.4**
VJD Vijayawada 73.89 289 *e*P **P** **06 15 58.3 -2.7**
VJD IAmb IAmb 06 16 09.8
comp=Z,621nm,1.6s
BILL Bilibino 73.97 6 P **P** **06 16 01.4 +0.8**
BILL Bilibino 73.97 6*c i*P **P** **06 16 01.0 +0.5**
BILL pmax pmax
comp=Z,128nm,1.2s
BILL Bilibino 73.97 6 P **P** **06 16 01.9 +1.4**
GAMB Gambell 74.17 16 IAMs_20 IAMs_20 06 46 37.4
comp=Z,9μm,19.0s
GAMB Gambell 74.17 16 P **P** **06 16 03.2 +1.5**
baz=218,SNR=75
O14K Tigyukauivet M 74.30 23 IAmb IAmb 06 16 05.7
comp=Z,776nm,1.4s
O14K IAMs_20 IAMs_20 06 44 40.9
comp=Z,8μm,21.0s
O14K Tigyukauivet M 74.30 23 P **P** **06 16 04.3 +1.7**
baz=229
O14K S **S** **06 25 33.8 +0.8**
baz=229
M13K Dall Lake 74.31 21 IAmb IAmb 06 16 06.1
comp=Z,653nm,1.1s
M13K Dall Lake 74.31 21 P **P** **06 16 04.8 +2.2**
baz=226
AIS Amsterdam Isla 74.47 232 IAMs_20 IAMs_20 06 48 36.4
comp=Z,6μm,20.0s
CHIR Chirikof Islan 74.56 28 IAMs_20 IAMs_20 06 42 31.9
comp=Z,9μm,22.0s
CHIR Chirikof Islan 74.56 28 P **P** **06 16 05.8 +1.6**
comp=Z,708nm,1.6s
CHIR Chirikof Islan 74.56 28 P **P** **06 16 05.4 +1.2**
baz=235,SNR=5.2
N14K Kuskokwak Cree 74.58 22 IAmb IAmb 06 16 07.1
comp=Z,602nm,1.2s
N14K Kuskokwak Cree 74.58 22 P **P** **06 16 05.6 +1.5**
baz=228
ALBI Allahabad 74.68 298 *e*P **P** **06 16 02.0 -3.6**
ALBI IAmb IAmb 06 16 07.5
comp=Z,823nm,1.6s
R16K Pilot Point 74.73 25 IAMs_20 IAMs_20 06 45 13.3
comp=Z,7μm,21.0s
R16K Pilot Point 74.73 25 P **P** **06 16 06.3 +1.2**
baz=232
O15K Ungalikthiuk R 74.81 23 IAmb IAmb 06 16 08.5
comp=Z,707nm,1.3s
O15K Ungalikthiuk R 74.81 23 P **P** **06 16 07.0 +1.4**
baz=230
K13K Kusilvak Mount 74.92 20 IAmb IAmb 06 16 09.4
comp=Z,387nm,1.1s
K13K Kusilvak Mount 74.92 20 P **P** **06 16 08.0 +1.9**
baz=225,SNR=124
M14K Bethel 75.04 21 P **P** **06 16 08.7 +1.9**
baz=228,SNR=105
L14K Kuka Creek 75.18 21 P **P** **06 16 09.6 +2.0**
baz=227
R17L Mt. Peulik Vol 75.29 26 P **P** **06 16 09.7 +1.3**
baz=234,SNR=37
PLK4 Peulik 4 75.29 26 IAMs_20 IAMs_20 06 45 08.1
comp=Z,7μm,21.0s
N15K Kwethluk River 75.35 23 IAmb IAmb 06 16 11.9
comp=Z,516nm,1.1s
N15K IAMs_20 IAMs_20 06 45 33.6
comp=Z,7μm,21.0s
N15K Kwethluk River 75.35 23 P **P** **06 16 10.6 +1.9**
baz=230
BRCI Bahraich 75.40 300 *e*P **P** **06 16 08.0 -1.7**
P16K Nushagak River 75.46 24 IAmb IAmb 06 16 11.4
comp=Z,455nm,1.2s
P16K Nushagak River 75.46 24 P **P** **06 16 10.1 +0.9**
baz=232,SNR=10
M15K Kasigluk River 75.47 22 P **P** **06 16 10.8 +1.5**
baz=229
SII Sitkinak Islan 75.64 27 IAMs_20 IAMs_20 06 46 40.5
comp=Z,6μm,20.0s
SII Sitkinak Islan 75.64 27 P **P** **06 16 11.8 +1.4**
comp=Z,640nm,1.2s
SII Sitkinak Islan 75.64 27 P **P** **06 16 11.9 +1.4**
baz=236,SNR=9.6
WMQ Urumqi 75.72 318 ⇑P **P** **06 16 12.2 +1.0**
WMQ pP PcP 06 16 20.5 -3.3
WMQ S **S** **06 25 51.5 +1.9**
WMQ sS pS 06 26 06.7 0.0
WMQ SS **SS** **06 30 41.8 -0.4**
WMQ pmax pmax
comp=Z,100nm,1.1s
WMQ pmax pmax
comp=Z,3μm,4.1s
WMQ LR LR
comp=Z,4μm,21.1s
WMQ LR LR
comp=Z,4μm,22.7s
WMQ LR LR
comp=Z,6μm,24.3s
WMQ Urumqi 75.72 318 P **P** **06 16 12.7 +1.4**
O16K Kokwok River B 75.76 24 P **P** **06 16 11.9 +0.9**
baz=232
Q16K King Salmon 75.79 25 P **P** **06 16 11.6 +0.5**
baz=233,SNR=6.3
L15K Ungalak Mounta 75.83 21 P **P** **06 16 12.7 +1.4**
baz=228
LKN LUCKNOW 75.83 299 *e*P **P** **06 16 07.4 -4.7**
LKN IAmb IAmb 06 16 13.5
comp=Z,836nm,1.3s
LKN *e*S **S** **06 25 47.5 -3.8**
J14K Nanvaranak Lak 75.86 19 P **P** **06 16 13.5 +2.1**
baz=226,SNR=221
Q17K Contact Creek 75.87 25 P **P** **06 16 12.8 +1.0**
baz=234
HYB Hyderabad 76.03 289 *e*P **P** **06 16 13.0 -0.4**
HYB *es*P **pP** **06 16 29.1 +1.9**
HYB *e*S **S** **06 25 56.0 +2.1**
N16K Nishlik Lake 76.05 23 P **P** **06 16 15.0 +2.3**
baz=231
ACHA Angle Creek He 76.08 26 IAmb IAmb 06 16 16.6
comp=Z,411nm,1.3s
P17K Kvichak River 76.19 24 IAMs_20 IAMs_20 06 45 21.9
comp=Z,7μm,21.0s
P17K Kvichak River 76.19 24 P **P** **06 16 13.8 +0.4**
baz=233
K15K Wolf Creek Mou 76.23 20 P **P** **06 16 15.7 +2.0**
baz=228,SNR=200
NGP Nagpur 76.27 293 *e*P P 06 16 08.5 -6.2
NGP IAmb IAmb 06 16 15.2
comp=Z,356nm,1.6s
O17K Koliganek Bris 76.27 24 P **P** **06 16 15.3 +1.4**
baz=232
M16K Timber Creek 76.33 22 IAMs_20 IAMs_20 06 46 05.5
comp=Z,7μm,21.0s
M16K Timber Creek 76.33 22 P **P** **06 16 16.3 +2.1**
baz=230
OHAK Old Harbor 76.42 27 P **P** **06 16 15.9 +1.1**
comp=Z,331nm,1.4s
OHAK Old Harbor 76.42 27 P **P** **06 16 16.4 +1.6**
baz=236,SNR=16
L16K Owhat River 76.58 21 IAmb IAmb 06 16 18.7
comp=Z,592nm,1.3s
L16K IAMs_20 IAMs_20 06 45 13.0
comp=Z,7μm,22.0s
L16K Owhat River 76.58 21 P **P** **06 16 17.2 +1.6**
baz=230
ANM Nome 76.58 17 IAmb IAmb 06 16 18.9
comp=Z,534nm,1.3s
ANM IAMs_20 IAMs_20 06 46 31.1
comp=Z,7μm,20.0s
ANM Nome 76.58 17 P **P** **06 16 17.5 +1.9**
baz=224,SNR=232
TNA Tin City 76.59 16 IAMs_20 IAMs_20 06 47 51.3
comp=Z,8μm,20.0s
TNA Tin City 76.59 16 P **P** **06 16 16.7 +1.2**
baz=221,SNR=43
N17K Nushagak Hills 76.70 23 IAmb IAmb 06 16 19.3
comp=Z,274nm,1.1s
N17K Nushagak Hills 76.70 23 P **P** **06 16 18.6 +2.3**
baz=232
P18K Big Mountain, 76.81 25 IAmb IAmb 06 16 19.9
comp=Z,257nm,1.2s
P18K Big Mountain, 76.81 25 P **P** **06 16 17.4 +0.3**
baz=234,SNR=21
F14K Arctic Creek 76.97 17 P **P** **06 16 19.4 +1.7**
baz=223
KDAK Kodiak Island 77.05 27 P **P** **06 16 19.2 +0.9**
comp=Z,190nm,1.0s,baz=168,slow=2.7,SNR=22
KDAK LR LR 06 45 05.5
comp=Z,6μm,21.7s,baz=231,slow=32
comp=Z,190nm,1.0s
KDAK Kodiak Island 77.05 27 P **P** **06 16 19.4 +1.1**
KDAK IAmb IAmb 06 16 21.1
comp=Z,450nm,1.2s
KDAK Kodiak Island 77.05 27 IAMs_20 IAMs_20 06 44 42.6
comp=Z,7μm,22.0s
KDAK Kodiak Island 77.05 27*c i*P **P** **06 16 19.6 +1.3**
KDAK pmax pmax
comp=Z,330nm,1.1s
KDAK Kodiak Island 77.05 27 P **P** **06 16 19.8 +1.5**
baz=237
O18K Koktuh Hills 77.09 24 IAMs_20 IAMs_20 06 45 16.6
comp=Z,6μm,21.0s
O18K Koktuh Hills 77.09 24 P **P** **06 16 19.3 +0.8**
baz=234,SNR=21
M17K Holitna River 77.14 22 IAmb IAmb 06 16 22.6
comp=Z,391nm,1.1s
M17K Holitna River 77.14 22 P **P** **06 16 21.4 +2.6**
baz=232
J16K Anvik River 77.21 20 P **P** **06 16 21.5 +2.4**
baz=228,SNR=153
L17K Donlin 77.28 22 P **P** **06 16 22.0 +2.4**
baz=231,SNR=118
G15K Niukluk 77.29 18 P **P** **06 16 21.1 +1.6**
baz=225
N18K Kilae Creek 77.30 23 P **P** **06 16 22.2 +2.5**
baz=233,SNR=74
JHNI Jhansi 77.53 297 *e*P **P** **06 16 18.9 -2.8**
JHNI IAmb IAmb 06 16 22.7
comp=Z,216nm,1.1s
I17K Unalakleet 77.58 19 P **P** **06 16 23.6 +2.4**
baz=228,SNR=176
H16K Elim 77.59 18 P **P** **06 16 22.9 +1.7**
baz=227,SNR=150
F15K North Star Dit 77.62 17 IAmb IAmb 06 16 24.7
comp=Z,465nm,1.4s
F15K IAMs_20 IAMs_20 06 46 41.5
comp=Z,7μm,21.0s
F15K North Star Dit 77.62 17 P **P** **06 16 23.1 +1.8**
baz=224
K17K Iditarod 77.64 21 P **P** **06 16 23.8 +2.3**
baz=231,SNR=202
O19K Port Alsworth 77.65 24 IAMs_20 IAMs_20 06 46 28.4
comp=Z,7μm,22.0s
O19K Port Alsworth 77.65 24 P **P** **06 16 22.5 +0.8**
baz=235,SNR=20
J17K VAM Dome 77.81 20 P **P** **06 16 25.0 +2.5**
baz=230,SNR=240
M18K Stony River 77.81 23 P **P** **06 16 24.8 +2.3**
baz=233
L18K Granite Mounta 77.92 22 P **P** **06 16 25.7 +2.6**
baz=232
N19K Bonanza Creek 77.94 24 IAmb IAmb 06 16 26.3
comp=Z,470nm,1.5s
N19K IAMs_20 IAMs_20 06 51 17.1
comp=Z,6μm,19.0s
N19K Bonanza Creek 77.94 24 P **P** **06 16 24.9 +1.6**
baz=235
ILSW Iliamna Southw 78.02 25 IAmb IAmb 06 16 25.7
comp=Z,691nm,1.3s
AKL Akola 78.05 292 *e*P **P** **06 16 20.9 -3.8**
AKL IAmb IAmb 06 16 24.9
comp=Z,159nm,2.0s
G16K Koyuk River 78.08 18 IAmb IAmb 06 16 27.3
comp=Z,641nm,1.2s
G16K IAMs_20 IAMs_20 06 47 47.7
comp=Z,6μm,20.0s
G16K Koyuk River 78.08 18 P **P** **06 16 25.8 +1.9**
baz=226
BHPL Bhopal 78.15 295 *e*P **P** **06 16 22.4 -2.9**
BHPL IAmb IAmb 06 16 25.4
comp=Z,418nm,1.7s
BHPL *e*S **S** **06 26 15.5 -1.3**
DGZ Jazzator, Alta 78.15 323*c i*P **P** **06 16 25.3 +0.4**
DGZ pmax pmax
comp=Z,225nm,1.1s
DGZ MLR MLR
comp=Z,7μm,18.0s
NRDN NARMADA NAGAR 78.28 294 *e*P **P** **06 16 22.8 -3.2**
NRDN *ex* x 06 16 29.2
NRDN IAmb IAmb 06 16 29.2
comp=Z,886nm,2.0s
NRDN *e*S **S** **06 26 16.1 -2.1**
RED Redoubt Volcan 78.41 25 IAmb IAmb 06 16 27.8
comp=Z,748nm,1.5s
TIXI Tiksi 78.42 353 P **P** **06 16 25.8 +0.1**
comp=Z,11nm,0.5s,baz=168,slow=7.0,SNR=25
TIXI S **S** **06 26 17.2 -0.5**
comp=Z,4.0nm,0.3s,baz=343,slow=4.1,SNR=12
comp=Z,11nm,0.5s
TIXI Tiksi 78.42 353 P **P** **06 16 25.0 -0.7**
TIXI Tiksi 78.42 353*ce*P **P** **06 16 25.1 -0.6**
TIXI pmax pmax
comp=Z,57nm,1.3s
TIXI MLR MLR
comp=Z,3μm,18.0s
GUNA GUNA 78.50 296 *e*P **P** **06 16 24.9 -2.3**
GUNA IAmb IAmb 06 16 28.7
comp=Z,842nm,1.6s
H17K Granite Mounta 78.53 19 IAmb IAmb 06 16 30.0
comp=Z,740nm,1.2s
H17K Granite Mounta 78.53 19 P **P** **06 16 28.6 +2.1**
baz=229
CNPM China Poot 78.58 26 IAMs_20 IAMs_20 06 45 16.0
comp=Z,9μm,22.0s
L19K White Mountain 78.59 22 IAMs_20 IAMs_20 06 48 29.4
comp=Z,5μm,20.0s
L19K White Mountain 78.59 22 P **P** **06 16 29.1 +2.3**
baz=234
G17K Kiwalik Mounta 78.67 18 P **P** **06 16 29.3 +2.1**
baz=228
J18K Innoko River 78.68 21 IAmb IAmb 06 16 30.3
comp=Z,542nm,1.1s
J18K Innoko River 78.68 21 P **P** **06 16 29.1 +1.8**
baz=232
BRLK Bradley Lake 78.86 26 IAmb IAmb 06 16 30.9
comp=Z,506nm,1.0s
BRLK IAMs_20 IAMs_20 06 45 13.9
comp=Z,9μm,22.0s
HNLY HANLEY 78.87 305 *e*P **P** **06 16 25.9 -3.8**
HNLY IAmb IAmb 06 16 32.7
comp=Z,580nm,1.2s
HNLY *e*S **S** **06 26 19.3 -5.9**
ZSN Zaisan 78.89 320*c i*P **P** **06 16 29.6 +0.8**
ZSN *e*S **S** **06 26 25.7 +1.9**
ZSN pmax pmax
comp=Z,183nm,1.6s
ZSN Zaisan 78.89 320⇑*i*P **P** **06 16 29.7 +0.8**
comp=Z,182nm,1.6s
ZSN *e*S **S** **06 26 25.7 +1.9**
BRSE Bradley Lake S 78.91 26 P **P** **06 16 30.0 +1.4**
baz=238,SNR=22
H08S2 Diego Garcia H 79.01 263 P **P** **06 16 31.9 +2.1**
baz=18,slow=6.8,SNR=17
H08S3 Diego Garcia H 79.02 263 P **P** **06 16 31.1 +1.1**
baz=18,slow=6.8,SNR=9.8
H08S1 Diego Garcia H 79.03 263 P **P** **06 16 31.6 +1.6**
baz=18,slow=6.8,SNR=11
MERT Meerut 79.04 301 *e*P **P** **06 16 26.9 -3.2**
MERT IAmb IAmb 06 16 31.4
comp=Z,384nm,0.8s
MERT *e*S **S** **06 26 22.2 -3.9**
DGAR Diego Garcia 79.07 264*c i*P **P** **06 16 31.1 +0.6**
DGAR pmax pmax
comp=Z,1μm,1.2s
DGAR MLR MLR
comp=Z,3μm,20.0s
DGAR Diego Garcia 79.07 264 P **P** **06 16 32.3 +1.8**
SPCR Spurr Chakacha 79.08 24 P **P** **06 16 29.9 +0.3**
baz=237,SNR=28
M20K Styx River 79.08 23 IAmb IAmb 06 16 32.9
comp=Z,667nm,1.2s
M20K IAMs_20 IAMs_20 06 52 06.7
comp=Z,6μm,19.0s
M20K Styx River 79.08 23 P **P** **06 16 31.3 +1.7**
baz=236
F17K Baldwin Pennin 79.12 17 IAmb IAmb 06 16 33.0
comp=Z,577nm,1.1s
F17K IAMs_20 IAMs_20 06 48 09.6
comp=Z,8μm,21.0s
F17K Baldwin Pennin 79.12 17 P **P** **06 16 31.7 +2.1**
baz=227
H18K Honhosa River 79.17 19 IAmb IAmb 06 16 32.7
comp=Z,312nm,1.4s
H18K Honhosa River 79.17 19 P **P** **06 16 31.2 +1.2**
baz=230,SNR=74
KLP Kalpa 79.18 303 *e*P P 06 16 24.8 -6.3
KLP IAmb IAmb 06 16 33.7
comp=Z,530nm,1.9s
KLP *e*S **S** **06 26 25.4 -2.7**
KAAM Kaadhehdhoo 79.19 272 P **P** **06 16 33.0 +1.9**
SNR=37
KAAM Kaadhehdhoo 79.19 272 P **P** **06 16 32.9 +1.8**
CAPN Captain Cook N 79.28 25 P **P** **06 16 32.8 +2.2**
baz=238,SNR=6.1
C16K Lisburne Hills 79.29 15 IAmb IAmb 06 16 33.4
comp=Z,423nm,1.5s
C16K IAMs_20 IAMs_20 06 49 15.7
comp=Z,8μm,20.0s
C16K Lisburne Hills 79.29 15 P **P** **06 16 31.9 +1.4**
baz=223
JMIU JAMIA UNIVERSI 79.34 300 *e*P P 06 16 25.9 -5.8
JMIU IAmb IAmb 06 16 32.9
comp=Z,171nm,0.6s
JMIU *e*S **S** **06 26 25.5 -3.8**
J19K Poorman 79.39 21 IAmb IAmb 06 16 34.7
comp=Z,732nm,1.3s
J19K Poorman 79.39 21 P **P** **06 16 33.2 +2.1**
baz=233,SNR=130
E17K Hotham Inlet 79.39 17 P **P** **06 16 33.4 +2.3**
baz=227,SNR=525
GCSA Galena City Sc 79.41 20 P **P** **06 16 32.9 +1.7**
baz=232,SNR=174
NDI New Delhi 79.43 300 *e*P **P** **06 16 27.8 -4.4**
NDI IAmb IAmb 06 16 33.2
comp=Z,194nm,1.0s
NPLP NPLP New Delhi 79.46 300 *e*P **P** **06 16 27.8 -4.5**
NPLP IAmb IAmb 06 16 33.6
comp=Z,802nm,1.6s
NPLP *e*S **S** **06 26 28.3 -2.2**
AYAN Aya Nagar 79.46 300 *e*P **P** **06 16 27.9 -4.4**
AYAN IAmb IAmb 06 16 32.8
comp=Z,501nm,1.3s
AYAN *e*S **S** **06 26 27.4 -3.2**
D17K Noatak River 79.47 16 P **P** **06 16 33.6 +2.1**
baz=225,SNR=206
SLKM Skilak Lake 79.53 25 IAMs_20 IAMs_20 06 46 24.2
comp=Z,7μm,22.0s
G18K Tagagawik 79.56 18 IAmb IAmb 06 16 35.0
comp=Z,512nm,1.2s
G18K Tagagawik 79.56 18 P **P** **06 16 33.7 +1.6**
baz=230
K20K Telida 79.57 22 IAMs_20 IAMs_20 06 48 18.2
comp=Z,6μm,20.0s
K20K Telida 79.57 22 P **P** **06 16 34.4 +2.2**
baz=235,SNR=165
SEW Seward 79.65 26 IAMs_20 IAMs_20 06 46 11.4
comp=Z,11μm,22.0s
SEW Seward 79.65 26 P **P** **06 16 34.5 +1.8**
baz=240,SNR=35
HMDM Hanimaadhoo 79.67 278 P **P** **06 16 36.4 +2.6**
SNR=6.0
HMDM Hanimaadhoo 79.67 278 P **P** **06 16 33.1 -0.7**
comp=Z,14μmcomp=Z,627nm,2.0s
O22K Cooper Landing 79.73 25 IAMs_20 IAMs_20 06 46 17.4
comp=Z,11μm,22.0s
O22K Cooper Landing 79.73 25 P **P** **06 16 34.5 +1.5**
baz=239,SNR=41
RDOG Red Dog Mine 79.77 16 IAmb IAmb 06 16 36.5
comp=Z,438nm,1.2s
RDOG IAMs_20 IAMs_20 06 49 41.4
comp=Z,7μm,20.0s
RDOG Red Dog Mine 79.77 16 P **P** **06 16 35.0 +1.9**
baz=226
SKT Skwentna 79.77 24 P **P** **06 16 33.2 -0.2**
baz=237,SNR=37
SUA Susitna One 79.81 24 IAmb IAmb 06 16 35.5
comp=Z,276nm,1.0s
SUA Susitna One 79.81 24 P **P** **06 16 34.2 +0.5**
baz=238,SNR=35
KUDL Kundal 79.94 300 *e*P **P** **06 16 30.8 -4.1**
KUDL IAmb IAmb 06 16 36.1
comp=Z,129nm,0.9s
KUDL *e*S **S** **06 26 30.3 -5.3**
E18K Tukpahlearik C 79.97 17 IAmb IAmb 06 16 37.6
comp=Z,323nm,1.1s
E18K IAMs_20 IAMs_20 06 48 05.8
comp=Z,7μm,21.0s
E18K Tukpahlearik C 79.97 17 P **P** **06 16 36.2 +1.9**
baz=228
SMLA Simla 79.99 303 *e*P **P** **06 16 32.5 -2.6**
SMLA IAmb IAmb 06 16 37.2
comp=Z,324nm,1.2s
SMLA *e*S **S** **06 26 34.2 -1.8**
C17K DeLong Mountai 79.99 15 P **P** **06 16 36.1 +1.7**
baz=225
PPLA Purkeypile 80.02 23 IAmb IAmb 06 16 37.1
comp=Z,771nm,1.5s
PPLA IAMs_20 IAMs_20 06 50 20.0
comp=Z,6μm,20.0s
PPLA Purkeypile 80.02 23 P **P** **06 16 35.5 +0.7**
baz=236,SNR=40
J20K Nowinta River 80.02 21 P **P** **06 16 36.7 +2.2**
baz=234,SNR=222
KKR Kurukshetra 80.03 302 *e*P **P** **06 16 31.0 -4.5**
KKR IAmb IAmb 06 16 34.2
comp=Z,160nm,0.3s
KKR *e*S **S** **06 26 34.5 -2.1**
RC01 Rabbit Creek A 80.03 25 IAMs_20 IAMs_20 06 48 06.4
comp=Z,8μm,21.0s
RC01 Rabbit Creek A 80.03 25 P **P** **06 16 35.9 +1.2**
baz=239,SNR=101
KAD Karad 80.12 289 *e*P P 06 16 31.0 -5.2
KAD IAmb IAmb 06 16 36.5
comp=Z,86nm,1.1s
G19K Purcell Mounta 80.21 19 P **P** **06 16 37.5 +1.9**
baz=231,SNR=308
M22K Willow 80.22 24 P **P** **06 16 36.3 +0.7**
baz=239,SNR=55
I20K Naaghedeneel 80.26 20 P **P** **06 16 38.2 +2.4**
baz=234
MK31 Makanchi Array 80.33 319 *i* P **P** **06 16 37.0 +0.3**
MK31 pmax pmax
comp=Z,315nm,1.2s
MKAR Makanchi Array 80.33 319 P **P** **06 16 37.4 +0.7**
comp=Z,144nm,1.1s,baz=100,slow=6.3,SNR=313
MKAR PP **PP** **06 19 39.9 -0.1**
comp=Z,12nm,1.0s,baz=111,slow=7.9,SNR=3.2
MKAR S **S** **06 26 37.5 -1.6**
comp=Z,0.8nm,0.9s,baz=104,slow=6.1,SNR=1.4
MKAR PKKPbc **PKKPbc** **06 35 19.6 -1.4**
comp=Z,1.2nm,0.9s,baz=280,slow=3.0,SNR=4.3
MKAR PKPPKP **P'P'df** **06 43 23.3 +0.6**
comp=Z,2.1nm,1.1s,baz=2.7,slow=2.6,SNR=6.7
MKAR LR LR 06 50 32.5
comp=Z,9μm,21.8s,baz=89,slow=34
comp=Z,144nm,1.1s
F19K Shaleruckik Mo 80.43 18 IAmb IAmb 06 16 39.6
comp=Z,364nm,1.1s
F19K IAMs_20 IAMs_20 06 49 40.9
comp=Z,5μm,20.0s
F19K Shaleruckik Mo 80.43 18 P **P** **06 16 38.3 +1.6**
baz=231
P23K Montague Islan 80.49 26 IAmb IAmb 06 16 40.1
comp=Z,737nm,1.2s
P23K IAMs_20 IAMs_20 06 48 34.7
comp=Z,5μm,20.0s
P23K Montague Islan 80.49 26 P **P** **06 16 38.8 +1.6**

baz=241,SNR=12
CUT Chulitna 80.50 24 P P 06 16 37.5 +0.3
baz=238,SNR=37
CHUM Lake Minchumin 80.52 22 P P 06 16 39.0 +1.8
baz=236,SNR=377
MAKZ Makanchi 80.53 319 P P 06 16 38.5 +0.7
MAKZ IAmb IAmb 06 16 40.1
comp=Z,377nm,1.2s
MAKZ IAMs_20 IAMs_20 06 50 39.0
comp=Z,8µm,21.0s
MAKZ Makanchi 80.53 319 P P 06 16 38.5 +0.7
MAKZ pmax pmax
comp=Z,377nm,1.3s
MAKZ Makanchi 80.53 319 P P 06 16 38.7 +0.9
MAKZ PcP PcP 06 16 46.8 +2.3
H20K Anotleneega Mo 80.54 20 P P 06 16 39.3 +1.9
baz=234
PMR Palmer 80.54 24 IAmb IAmb 06 16 39.7
comp=Z,761nm,1.3s
PMR Palmer 80.54 24 P P 06 16 38.2 +0.8
comp=Z,491nm,1.2s
PMR Palmer 80.54 24 P P 06 16 38.4 +1.0
baz=240,SNR=122
PAF Port-aux-Franc 80.62 221 P P 06 16 38.9 +0.7
PAF IAmb IAmb 06 16 40.6
comp=Z,618nm,1.2s
PAF Port-aux-Franc 80.62 221 P P 06 16 38.9 +0.7
PAF pmax pmax
comp=Z,617nm,1.2s
C18K Utukok River 80.64 16 IAmb IAmb 06 16 40.8
comp=Z,365nm,1.4s
C18K IAMs_20 IAMs_20 06 50 31.4
comp=Z,8µm,20.0s
C18K Utukok River 80.64 16 P P 06 16 39.2 +1.3
baz=227
ALCI Alchi Leh 80.66 306 eP P 06 16 33.9 -5.3
ALCI IAmb IAmb 06 16 41.0
comp=Z,142nm,0.7s
ALCI eS S 06 26 41.2 -2.5
Q23K Middleton Isla 80.70 27 P P 06 16 39.9 +1.7
baz=242
BHK Bhakra 80.70 303 eP P 06 16 34.9 -4.1
BHK IAmb IAmb 06 16 39.6
comp=Z,723nm,1.9s
BHK eS S 06 26 33.7 -10
GHO Glory Hole Cre 80.72 24 IAmb IAmb 06 16 41.0
comp=Z,549nm,1.2s
GHO IAMs_20 IAMs_20 06 50 20.5
comp=Z,6µm,20.0s
KNK Knik Glacier 80.73 25 IAMs_20 IAMs_20 06 48 25.9
comp=Z,9µm,21.0s
KNK Knik Glacier 80.73 25 P P 06 16 39.9 +1.4
baz=240,SNR=53
WUS Wushi 80.81 313 IAmb IAmb 06 16 42.5
comp=Z,361nm,1.3s
WUS Wushi 80.81 313 IAMs_20 IAMs_20 06 51 44.6
comp=Z,7µm,21.0s
KTH Kantishna Hill 80.86 22 IAmb IAmb 06 16 41.0
comp=Z,578nm,1.2s
KTH IAMs_20 IAMs_20 06 50 56.2
comp=Z,5µm,20.0s
DHRM DHARAMSHALA 80.95 304 eP P 06 16 38.0 -2.6
DHRM IAmb IAmb 06 16 42.2
comp=Z,494nm,1.3s
SML Sawmill 80.98 24 IAMs_20 IAMs_20 06 50 17.5
comp=Z,7µm,20.0s
SML Sawmill 80.98 24 P P 06 16 41.3 +1.4
baz=240,SNR=96
E19K Redstone River 80.99 18 IAmb IAmb 06 16 43.1
comp=Z,665nm,1.1s
E19K IAMs_20 IAMs_20 06 49 58.7
comp=Z,7µm,20.0s
E19K Redstone River 80.99 18 P P 06 16 41.8 +2.1
baz=231
TRF Thorofare Moun 81.04 23 IAmb IAmb 06 16 42.0
comp=Z,349nm,1.2s
TRF IAMs_20 IAMs_20 06 51 11.1
comp=Z,7µm,20.0s
TRF Thorofare Moun 81.04 23 P P 06 16 40.6 +0.3
baz=238,SNR=62
HIN Hinchinbrook I 81.08 26 IAMs_20 IAMs_20 06 48 32.1
comp=Z,7µm,21.0s
BPAW Bear Paw Mtn. 81.12 22 IAmb IAmb 06 16 42.5
comp=Z,494nm,1.3s
BPAW Bear Paw Mtn. 81.12 22 P P 06 16 41.1 +0.6
baz=238,SNR=104
SHLS Shalkode 81.17 315 c iP P 06 16 40.5 -0.8
SHLS eS S 06 26 46.5 -1.6
SHLS pmax pmax
comp=Z,201nm,1.4s
SHLS Shalkode 81.17 315⇑ iP P 06 16 40.5 -0.8
comp=Z,201nm,1.4s
SHLS eS S 06 26 46.5 -1.6
PDGK Podgornoye 81.19 315 P P 06 16 41.3 -0.2
F20K Avaraart Lake 81.20 18 IAmb IAmb 06 16 44.4
comp=Z,436nm,1.4s
F20K Avaraart Lake 81.20 18 P P 06 16 42.9 +2.1
baz=233
TSSA Tissa 81.20 304 eP P 06 16 37.1 -4.8
TSSA IAmb IAmb 06 16 43.6
comp=Z,246nm,0.8s
TSSA eS S 06 26 44.5 -4.5
M23K Glacier View 81.22 25 P P 06 16 42.3 +1.2
baz=241,SNR=29
AJM Ajmer 81.24 298 eP P 06 16 37.9 -4.1
AJM IAmb IAmb 06 16 42.2
comp=Z,321nm,1.5s
AJM eS S 06 26 46.4 -3.0
ZAA0 Zalesovo Array 81.28 327 P P 06 16 41.4 -0.1
ZALV Zalesovo Beam 81.28 327 P P 06 16 41.2 -0.3
comp=Z,46nm,0.5s,baz=107,slow=5.1,SNR=174
ZALV S S 06 26 45.9 -2.6
comp=Z,9.4nm,1.1s,baz=119,slow=8.9,SNR=8.9
ZALV PKKPbc PKKPbc 06 35 17.1 -2.0
comp=Z,0.4nm,0.3s,baz=296,slow=4.8,SNR=4.2
ZALV PKPPKP P'P'df 06 43 20.6 +0.2
comp=Z,6.0nm,1.2s,baz=272,slow=4.3,SNR=6.4
ZALV LR LR 06 51 13.4
comp=Z,7µm,21.9s,baz=112,slow=34
comp=Z,46nm,0.5s
ZALV Zalesovo Beam 81.28 327 P P 06 16 41.4 -0.1
ZALV Zalesovo Beam 81.28 327 P P 06 16 41.4 -0.1
H21K Melozitna Rive 81.34 20 IAmb IAmb 06 16 44.9
comp=Z,459nm,1.4s
H21K Melozitna Rive 81.34 20 P P 06 16 43.5 +1.8
baz=236
I21K Tanana 81.36 21 P P 06 16 43.7 +2.0
baz=236,SNR=256
WAT1 Susitna Watana 81.40 24 P P 06 16 42.9 +0.9
baz=240
SCM Sheep Creek Mo 81.41 25 IAMs_20 IAMs_20 06 47 11.8
comp=Z,9µm,22.0s
SCM Sheep Creek Mo 81.41 25 P P 06 16 43.8 +1.6
baz=241,SNR=49
THN Thein Dam 81.44 304 eP P 06 16 37.0 -5.9
THN IAmb IAmb 06 16 45.0
comp=Z,471nm,1.2s
THN eS S 06 26 48.7 -2.5
UZB Uzynbulak 81.47 315 c iP P 06 16 43.6 +0.6
UZB eS S 06 26 52.6 +1.3
UZB pmax pmax
comp=Z,222nm,1.3s
UZB Uzynbulak 81.47 315⇑ iP P 06 16 43.7 +0.6
comp=Z,222nm,1.3s
UZB eS S 06 26 52.7 +1.3
EYAK Cordova Ski Ar 81.48 26 IAmb IAmb 06 16 45.5
comp=Z,612nm,1.3s
EYAK Cordova Ski Ar 81.48 26 P P 06 16 43.8 +1.4
comp=Z,308nm,1.6s
EYAK Cordova Ski Ar 81.48 26 P P 06 16 44.3 +1.9
baz=243,SNR=11
G21K Allakaket 81.59 19 IAmb IAmb 06 16 46.0
comp=Z,346nm,1.2s
G21K IAMs_20 IAMs_20 06 48 21.6
comp=Z,6µm,21.0s
G21K Allakaket 81.59 19 P P 06 16 44.5 +1.5
baz=235,SNR=150
WAT6 Susitna Watana 81.60 24 P P 06 16 44.3 +1.0
baz=241,SNR=179
MCK McKinley 81.71 23 IAMs_20 IAMs_20 06 51 40.7
comp=Z,6µm,19.0s
MCK McKinley 81.71 23 P P 06 16 44.1 +0.5
baz=239,SNR=469
UDPR Udaipur 81.73 296 eP P 06 16 41.2 -3.5
UDPR IAmb IAmb 06 16 45.0
comp=Z,590nm,1.9s
UDPR eS S 06 26 49.9 -4.7

KPKS Kokpek 81.80 315 eP P 06 16 45.4 +0.8
KPKS eS S 06 26 56.2 +1.6
KPKS Kokpek 81.80 315 eP P 06 16 45.5 +0.8
KPKS eS S 06 26 56.2 +1.6
E20K Nigu River 81.80 17 P P 06 16 46.0 +1.9
baz=232
KAIM Kayak Island 81.80 27 P P 06 16 46.4 +2.2
baz=244,SNR=5.8
KLU Klutina 81.84 25 IAMs_20 IAMs_20 06 47 41.3
comp=Z,7µm,22.0s
KLU Klutina 81.84 25 P P 06 16 46.5 +2.0
baz=242,SNR=152
RAGM Ragged Mountai 81.88 27 IAMs_20 IAMs_20 06 47 18.4
comp=Z,11µm,22.0s
SATY Saty 81.88 315 c iP P 06 16 45.8 +0.7
SATY eS S 06 26 57.0 +1.4
SATY pmax pmax
comp=Z,184nm,1.5s
SATY Saty 81.88 315⇑ iP P 06 16 45.9 +0.7
comp=Z,184nm,1.5s
SATY eS S 06 26 57.1 +1.4
D20K Etivluk River 81.96 17 IAmb IAmb 06 16 47.9
comp=Z,450nm,1.4s
D20K IAMs_20 IAMs_20 06 49 43.4
comp=Z,8µm,21.0s
D20K Etivluk River 81.96 17 P P 06 16 46.3 +1.4
baz=232
TARG Taragay, Kyrgy 81.97 313 IAmb IAmb 06 16 59.0
comp=Z,250nm,1.3s
DHY Denali Highway 81.99 24 IAmb IAmb 06 16 48.0
comp=Z,655nm,1.2s
DHY Denali Highway 81.99 24 P P 06 16 46.5 +1.2
baz=241,SNR=106
F21K Alatna River 82.01 19 IAmb IAmb 06 16 48.1
comp=Z,315nm,1.4s
F21K Alatna River 82.01 19 P P 06 16 46.7 +1.5
baz=235
M24K Tolsona, Glenn 82.02 25 IAMs_20 IAMs_20 06 49 17.0
comp=Z,8µm,20.0s
M24K Tolsona, Glenn 82.02 25 P P 06 16 47.5 +2.2
baz=242,SNR=75
NEA2 Nenana 82.09 22 IAmb IAmb 06 16 47.4
comp=Z,614nm,1.2s
NEA2 IAMs_20 IAMs_20 06 49 14.0
comp=Z,6µm,20.0s
NEA2 Nenana 82.09 22 P P 06 16 46.1 +0.5
baz=239,SNR=259
BMRM Bremner River 82.17 26 IAMs_20 IAMs_20 06 49 47.0
comp=Z,10µm,20.0s
BMRM Bremner River 82.17 26 P P 06 16 47.8 +1.7
baz=244,SNR=55
I23K Minto, Yukon-K 82.27 21 IAmb IAmb 06 16 49.6
comp=Z,213nm,1.2s
I23K IAMs_20 IAMs_20 06 49 10.7
comp=Z,5µm,20.0s
I23K Minto, Yukon-K 82.27 21 P P 06 16 47.3 +0.8
baz=239,SNR=80
JMU Jammu 82.28 304 eP P 06 16 43.9 -3.4
JMU IAmb IAmb 06 16 50.0
comp=Z,111nm,1.3s
JMU eS S 06 26 57.2 -2.6
BERG Berg Lake 82.32 27 IAMs_20 IAMs_20 06 47 28.9
comp=Z,9µm,22.0s
BGLC Bering Glacier 82.39 27 P P 06 16 49.6 +2.4
baz=245
TDK Taldyqorghan 82.40 317 c iP P 06 16 48.5 +0.9
TDK pmax pmax
comp=Z,249nm,1.0s
TDK MLR MLR
comp=Z,3µm,20.0s
TDK Taldyqorghan 82.40 317⇑ iP P 06 16 48.5 +0.9
comp=Z,249nm,1.0s
TDK LR LR 06 52 06.3
N25K Chitina, Valde 82.46 26 P P 06 16 49.5 +1.8
baz=244,SNR=51
G22K Bettles 82.48 19 P P 06 16 49.0 +1.5
baz=27
KDJ Kajisay 82.53 314 IAmb IAmb 06 16 51.5
comp=Z,537nm,1.2s
H23K Yukon River 82.56 21 P P 06 16 49.6 +1.6
baz=239
HARP HAARP 82.58 25 P P 06 16 49.9 +1.6
baz=243,SNR=30
ARXS Arharly 82.59 316 eP P 06 16 48.5 -0.3
CCB Clear Creek Bu 82.59 22 IAmb IAmb 06 16 49.8
comp=Z,586nm,1.2s
CCB IAMs_20 IAMs_20 06 50 52.1
comp=Z,5µm,20.0s
SNH Sunshine Point 82.62 27 IAMs_20 IAMs_20 06 46 26.9
comp=Z,6µm,22.0s
COLA College 82.69 22 P P 06 16 49.0 +0.3
COLA IAMs_20 IAMs_20 06 51 34.6
comp=Z,5µm,20.0s
COLA College 82.69 22 P P 06 16 48.7 0.0
comp=Z,333nm,1.3s
COLA College 82.69 22 c iP P 06 16 48.7 0.0
COLA pmax pmax
comp=Z,556nm,1.1s
COLA College 82.69 22 P P 06 16 49.1 +0.4
baz=240
BKNR BIKANER 82.71 299 eP P 06 16 45.9 -3.7
BKNR IAmb IAmb 06 16 50.5
comp=Z,697nm,1.3s
BKNR eS S 06 26 59.2 -5.1
PAX Paxson 82.71 24 IAmb IAmb 06 16 51.5
comp=Z,374nm,1.3s
PAX IAMs_20 IAMs_20 06 50 33.2
comp=Z,5µm,20.0s
PAX Paxson 82.71 24 P P 06 16 50.0 +1.0
baz=243,SNR=64
PAX S S 06 27 02.3 -0.9
baz=243
GLB Gilahina Butte 82.72 26 IAMs_20 IAMs_20 06 49 24.6
comp=Z,6µm,21.0s
CRQM Cirque 82.73 27 IAMs_20 IAMs_20 06 47 44.2
comp=Z,6µm,22.0s
WAX Waxell Ridge 82.73 27 IAMs_20 IAMs_20 06 47 51.7
comp=Z,6µm,22.0s
CRQE Cirque 82.75 27 P P 06 16 50.9 +1.6
baz=245,SNR=50
VRDI Verde Repeater 82.79 26 IAMs_20 IAMs_20 06 48 02.3
comp=Z,8µm,21.0s
HDA Harding Lake 82.80 23 IAmb IAmb 06 16 51.2
comp=Z,454nm,1.4s
HDA IAMs_20 IAMs_20 06 54 26.6
comp=Z,5µm,19.0s
HDA Harding Lake 82.80 23 P P 06 16 49.8 +0.5
baz=241,SNR=86
G23K Bananza Creek 82.86 20 IAmb IAmb 06 16 52.8
comp=Z,360nm,1.1s
G23K IAMs_20 IAMs_20 06 48 27.1
comp=Z,8µm,22.0s
G23K Bananza Creek 82.86 20 P P 06 16 51.3 +1.7
baz=238
TGL Tana Glacier 82.87 27 IAMs_20 IAMs_20 06 47 47.4
comp=Z,6µm,22.0s
MDOK Medeo 82.87 315 eP P 06 16 51.0 +0.7
MDOK eS S 06 27 07.3 +1.6
MDOK Medeo 82.87 315 eP P 06 16 51.1 +0.7
MDOK eS S 06 27 07.3 +1.6
MDOK LR LR 06 53 36.8
TNSS Tian-Shan 82.91 314 eP P 06 16 51.2 +0.3
TNSS Tian-Shan 82.91 314 eP P 06 16 51.3 +0.3
POKR Poker Plat Res 82.96 22 IAmb IAmb 06 16 51.7
comp=Z,320nm,1.2s
POKR IAMs_20 IAMs_20 06 52 02.9
comp=Z,5µm,20.0s
POKR Poker Plat Res 82.96 22 P P 06 16 50.2 0.0
baz=241,SNR=54
K24K Donnelly Dome 82.97 23 IAmb IAmb 06 16 54.2
comp=Z,453nm,1.1s
K24K IAMs_20 IAMs_20 06 49 05.1
comp=Z,5µm,20.0s
K24K Donnelly Dome 82.97 23 P P 06 16 51.5 +1.3
baz=242,SNR=39
ILAR Eielson Array 83.00 22 P P 06 16 50.0 -0.3
comp=Z,230nm,1.0s,baz=254,slow=4.5,SNR=641
ILAR S S 06 26 59.0 -6.8
comp=Z,7.4nm,1.1s,baz=267,slow=10.0,SNR=15
ILAR PKKPbc PKKPbc 06 35 16.8 +1.1
comp=Z,0.7nm,0.8s,baz=338,slow=1.5,SNR=6.7
ILAR PKPPKP P'P'df 06 43 14.8 -1.8
comp=Z,2.2nm,1.1s,baz=350,slow=1.8,SNR=7.6
comp=Z,230nm,1.0s
ILAR Eielson Array 83.00 22 P P 06 16 50.5 +0.2
ILAR Eielson Array 83.00 22 P P 06 16 50.5 +0.2

ISLE Juniper Island 83.02 27 IAmb IAmb 06 16 53.6
comp=Z,455nm,1.1s
ISLE IAMs_20 IAMs_20 06 47 38.5
comp=Z,6µm,22.0s
KSH2 Kashi 83.03 310 P P 06 16 52.3 +1.1
KSH2 pP pP 06 17 07.1 +1.7
KSH2 S S 06 27 10.1 +2.6
KSH2 pmax pmax
comp=Z,170nm,1.3s
KSH2 pmax pmax
comp=Z,4µm,6.4s
KSH2 LR LR
comp=Z,2µm,23.7s
KSH2 LR LR
comp=Z,3µm,22.0s
KSH2 LR LR
comp=Z,5µm,24.0s
MESA MESA 83.03 27 IAmb IAmb 06 16 54.2
comp=Z,581nm,1.2s
MESA MESA 83.03 27 P P 06 16 52.9 +2.1
baz=246,SNR=16
MCARA McCarthy VSAT 83.04 26 IAMs_20 IAMs_20 06 48 10.0
comp=Z,6µm,22.0s
MCARA McCarthy VSAT 83.04 26 P P 06 16 52.4 +1.8
baz=245,SNR=54
COLD Coldfoot 83.08 19 IAmb IAmb 06 16 54.1
comp=Z,496nm,1.3s
COLD Coldfoot 83.08 19 P P 06 16 52.5 +1.9
baz=238,SNR=178
H24K Noodor Dome 83.16 21 IAMs_20 IAMs_20 06 49 50.2
comp=Z,6µm,21.0s
H24K Noodor Dome 83.16 21 P P 06 16 51.8 +0.6
baz=240,SNR=69
ULHL Ulahol 83.23 314 P P 06 16 53.6 +1.3
SNR=74
RIDG Independent Ri 83.31 24 IAMs_20 IAMs_20 06 53 21.0
comp=Z,7µm,20.0s
RIDG Independent Ri 83.31 24 P P 06 16 53.2 +1.2
baz=243,SNR=159
GRNC Granite Creek 83.34 27 IAmb IAmb 06 16 55.5
comp=Z,235nm,1.1s
MENT Mentasta 83.41 24 IAmb IAmb 06 16 55.6
comp=Z,304nm,1.1s
MENT Mentasta 83.41 24 P P 06 16 54.2 +1.7
comp=Z,301nm,1.3s
M26K Nabesna, AK 83.48 25 IAmb IAmb 06 16 56.1
comp=Z,314nm,1.3s
M26K Nabesna, AK 83.48 25 P P 06 16 54.6 +1.6
baz=245
J25K Salcha River, 83.50 23 IAMs_20 IAMs_20 06 54 48.4
comp=Z,5µm,19.0s
J25K Salcha River, 83.50 23 P P 06 16 53.9 +0.9
baz=243
TABL Table Mountain 83.50 27 IAmb IAmb 06 16 56.4
comp=Z,419nm,1.0s
BOOM Boomskoye usch 83.50 314 IAmb IAmb 06 16 58.2
comp=Z,431nm,1.3s
BARN Barnard Glacie 83.51 27 IAmb IAmb 06 16 56.6
comp=Z,480nm,1.1s
KUU Kurty 83.55 315 eP P 06 16 54.4 +0.8
KUU pmax pmax
comp=Z,269nm,1.2s
KUU MLR MLR
comp=Z,2µm,17.0s
KUU Kurty 83.55 315 eP P 06 16 54.5 +0.8
comp=Z,269nm,1.2s
KUU LR LR 06 53 46.9
comp=Z,2µm,17.1s
DOT Dot Lake 83.58 24 IAMs_20 IAMs_20 06 53 08.2
comp=Z,6µm,20.0s
A21K Barrow 83.59 15 P P 06 16 54.3 +1.1
baz=231
L26K Log Cabin Wild 83.60 24 IAmb IAmb 06 16 56.5
comp=Z,302nm,1.0s
L26K IAMs_20 IAMs_20 06 48 52.8
comp=Z,11µm,22.0s
L26K Log Cabin Wild 83.60 24 P P 06 16 55.2 +1.7
baz=245,SNR=119
CTG Chitna Glacier 83.62 27 P P 06 16 55.8 +2.0
baz=247,SNR=96
E23K Chandalar 83.70 19 P P 06 16 55.9 +1.9
baz=238
LOGN Logan Glacier 83.71 27 IAmb IAmb 06 16 57.5
comp=Z,305nm,1.0s
G24K Hadweenzic Riv 83.73 20 IAmb IAmb 06 16 57.1
comp=Z,389nm,1.2s
G24K Hadweenzic Riv 83.73 20 P P 06 16 55.7 +1.7
baz=240,SNR=130
NIL Nilore 83.74 305 P P 06 16 55.5 +0.6
NIL IAmb IAmb 06 16 57.0
comp=Z,554nm,1.2s
NIL IAMs_20 IAMs_20 06 53 29.2
comp=Z,5µm,22.0s
NIL Nilore 83.74 305 P P 06 16 55.6 +0.6
NIL pmax pmax
comp=Z,554nm,1.3s
NIL MLR MLR
comp=Z,6µm,22.0s
NIL Nilore 83.74 305 P P 06 16 55.5 +0.6
SCRK Sand Creek 83.75 23 IAmb IAmb 06 16 57.1
comp=Z,441nm,1.2s
SCRK Sand Creek 83.75 23 P P 06 16 55.7 +1.3
baz=244,SNR=220
PCA Pinnacle 83.78 28 IAmb IAmb 06 16 57.7
comp=Z,324nm,1.0s
PINM Pinnacle 83.78 28 P P 06 16 56.4 +1.8
baz=248,SNR=17
KURK Kurchatov 83.82 322 P P 06 16 55.3 +0.4
KURK IAmb IAmb 06 16 58.1
comp=Z,323nm,1.2s
KURK Kurchatov 83.82 322 IAMs_20 IAMs_20 06 52 04.7
comp=Z,6µm,22.0s
KURK Kurchatov 83.82 322 c iP P 06 16 55.0 +0.2
KURK pmax pmax
comp=Z,531nm,1.7s
KURK Kurchatov 83.82 322 P P 06 16 55.4 +0.6
KURK S SKSac 06 27 11.5 -2.5
KURBB Kurchatov Arra 83.85 322 P P 06 16 55.2 +0.3
comp=Z,97nm,1.0s,baz=104,slow=4.1,SNR=201
KURBB PP PP 06 20 09.1 +0.3
comp=Z,2.4nm,0.4s,baz=120,slow=6.2,SNR=2.4
KURBB S SKSac 06 27 14.0 -0.2
comp=Z,1.0nm,0.8s,baz=114,slow=5.1,SNR=6.9
KURBB PKPPKP P'P'df 06 43 16.4 +0.3
comp=Z,0.6nm,0.4s,baz=296,slow=3.1,SNR=15
KURBB LR LR 06 53 14.2
comp=Z,5µm,21.7s,baz=114,slow=35
comp=Z,97nm,1.0s
KURBB Kurchatov Arra 83.85 322 P P 06 16 54.6 -0.4
TKM2 Tokmak 2 83.85 314 P P 06 16 56.6 +1.1
SNR=143
PRP Porcupine Dome 83.86 22 IAMs_20 IAMs_20 06 52 19.6
comp=Z,6µm,20.0s
PRP Porcupine Dome 83.86 22 P P 06 16 54.2 -0.7
baz=242,SNR=29
M27K Edge Creek, AK 83.94 25 IAMs_20 IAMs_20 06 50 08.8
comp=Z,6µm,20.0s
M27K Edge Creek, AK 83.94 25 P P 06 16 57.6 +2.1
baz=246
BCPM Bancas Point 84.01 28 IAMs_20 IAMs_20 06 48 33.7
comp=Z,5µm,21.0s
O28M Mount Upton 84.06 27 IAmb IAmb 06 16 59.5
comp=Z,334nm,1.1s
O28M Mount Upton 84.06 27 P P 06 16 58.2 +2.0
baz=248
J26L Joseph Creek 84.15 23 IAmb IAmb 06 16 59.2
comp=Z,283nm,1.2s
J26L IAMs_20 IAMs_20 06 49 49.3
comp=Z,6µm,22.0s
J26L Joseph Creek 84.15 23 P P 06 16 57.9 +1.6
baz=244,SNR=163
L27K Beaver Creek, 84.25 25 IAMs_20 IAMs_20 06 49 31.1
comp=Z,6µm,22.0s
L27K Beaver Creek, 84.25 25 P P 06 16 58.7 +1.9
baz=246
KBK Karagaybulak 84.25 314 P P 06 16 58.8 +1.3
SNR=54
BCAR Beaver Creek A 84.27 25 P P 06 16 58.8 +1.9
YUK3 Moose Creek 84.32 26 P P 06 16 59.4 +1.9
baz=247,SNR=105
BVCY Beaver Creek 84.40 26 P P 06 16 59.9 +2.3
baz=247,SNR=39
YUK8 Steele Glacier 84.45 27 P P 06 17 00.3 +2.2
baz=248,SNR=92
CHMS Chumysh 84.47 314 P P 06 16 59.4 +1.0
SNR=73
UCH Uchtor 84.48 313 P P 06 17 00.7 +1.7
SNR=278

FRU1 Bishkek 84.52 314 IAmb IAmb 06 17 00.8
comp=Z,407nm,1.3s
QSPA South Pole Qui 84.54 180 P P 06 16 58.7 +0.2
comp=Z,113nm,1.1s,baz=3.9,slow=1.6,SNR=61
QSPA PKKPbc PKKPbc 06 35 09.9 -2.5
comp=Z,4.2nm,0.6s,baz=232,slow=1.3,SNR=4.6
QSPA PKPPKP P'P'df 06 43 19.4 +3.9
comp=Z,1.3nm,0.4s,baz=21,slow=1.2,SNR=3.3
QSPA LR LR 06 51 45.9
comp=Z,2µm,20.3s,baz=20,slow=34
comp=Z,113nm,1.1s
QSPA South Pole Qui 84.54 180 P P 06 16 58.6 +0.2
QSPA IAmb IAmb 06 17 00.1
comp=Z,283nm,1.4s
QSPA South Pole Qui 84.54 180 P P 06 16 58.7 +0.2
QSPA x x 06 17 17.8
AAK Ala-Archa 84.58 314 S SKSac 06 27 20.3 +0.6
comp=Z,1.2nm,0.5s,baz=257,slow=2.1,SNR=8.7
AAK LR LR 06 55 05.6
comp=Z,11µm,21.0s,baz=103,slow=36
AAK Ala-Archa 84.58 314 P P 06 17 00.4 +1.3
SNR=149
AAK Ala-Archa 84.58 314 P P 06 17 00.6 +1.4
AAK IAmb IAmb 06 17 01.3
comp=Z,366nm,1.4s
AAK Ala-Archa 84.58 314 *i* P P 06 17 00.4 +1.3
SNR=166
AAK Ala-Archa 84.58 314 *c i* P P 06 16 59.6 +0.5
AAK pmax pmax
comp=Z,163nm,1.2s
AAK MLR MLR
comp=Z,11µm,21.0s
AAK Ala-Archa 84.58 314 P P 06 17 00.6 +1.4
AAK S SKSac 06 27 19.9 +0.2
AAK Ala-Archa 84.58 314 P P 06 17 00.5 +1.3
AAK PcP PcP 06 17 03.4 +0.8
JASL Jaisalmer 84.61 298 *e* P P 06 16 57.9 -1.5
JASL IAmb IAmb 06 16 59.8
comp=Z,556nm,1.5s
O29M Mount Kennedy 84.63 28 IAMs_20 IAMs_20 06 49 17.2
comp=Z,6µm,21.0s
O29M Mount Kennedy 84.63 28 P P 06 17 01.4 +2.5
baz=249
SGDS Sogindy 84.66 314 *e* P P 06 17 00.2 +0.9
USP Ospenovka 84.71 314 P P 06 17 00.8 +1.1
SNR=281
MAW Mawson 84.73 203 P P 06 16 58.7 -0.4
comp=Z,104nm,1.0s,baz=94,slow=5.1,SNR=13
MAW LR LR 06 51 44.9
comp=Z,7µm,21.2s,baz=84,slow=33
comp=Z,104nm,1.0s
F25K Christian Rive 84.78 20 IAmb IAmb 06 17 03.0
comp=Z,273nm,1.2s
F25K Christian Rive 84.78 20 P P 06 17 01.6 +2.1
baz=242
YUK6 Outpost Mounta 84.96 27 P P 06 17 02.9 +2.2
baz=249,SNR=30
YUK4 Talbot Arm 84.97 27 P P 06 17 03.5 +2.8
baz=249,SNR=99
S31K Pelican 84.99 31 IAMs_20 IAMs_20 06 48 08.6
comp=Z,10µm,20.0s
S31K Pelican 84.99 31 P P 06 17 02.7 +2.2
baz=251,SNR=12
E25K Arctic Village 85.06 19 IAmb IAmb 06 17 04.2
comp=Z,311nm,1.3s
E25K Arctic Village 85.06 19 P P 06 17 02.9 +2.1
baz=242,SNR=148
BMAR Burnt Mountain 85.07 20 P P 06 17 03.1 +2.2
EKS2 Erkin-Say 85.10 314 P P 06 17 03.2 +1.5
SNR=287
G26K Porcupine Rive 85.14 21 P P 06 17 03.6 +2.5
baz=244
SIT Sitka 85.17 32 IAmb IAmb 06 17 05.2
comp=Z,395nm,1.3s
SIT Sitka 85.17 32 P P 06 17 03.2 +1.7
comp=Z,258nm,1.6s
SIT Sitka 85.17 32 P P 06 17 03.7 +2.2
baz=252,SNR=8.9
BHUJ Bhuj 85.20 294 *e* P P 06 16 59.1 -3.2
BHUJ IAmb IAmb 06 17 03.2
comp=Z,909nm,2.0s
BHUJ *e* S SKSac 06 27 20.9 -3.0
HYT Haines Junctio 85.31 28 P P 06 17 04.7 +2.3
baz=250,SNR=146
P30M Million Dollar 85.33 28 P P 06 17 04.6 +2.2
baz=251
F26K Sheenjek River 85.34 20 P P 06 17 04.6 +2.4
baz=244,SNR=236
I27K Kandik River 85.36 22 IAMs_20 IAMs_20 06 53 17.3
comp=Z,6µm,20.0s
I27K Kandik River 85.36 22 P P 06 17 04.2 +1.8
baz=246,SNR=269
D25K Kavik River 85.37 18 IAmb IAmb 06 17 05.1
D25K IAMs_20 IAMs_20 06 53 00.3
comp=Z,6µm,21.0s
D25K Kavik River 85.37 18 P P 06 17 03.8 +1.5
baz=241
BTLS Baital 85.41 316 *e* P P 06 17 00.4 -2.6
BTLS pmax pmax
comp=Z,930nm,1.8s
M29M Somme Creek 85.44 26 IAmb IAmb 06 17 06.5
comp=Z,322nm,1.1s
M29M IAMs_20 IAMs_20 06 49 34.6
comp=Z,6µm,22.0s
M29M Somme Creek 85.44 26 P P 06 17 05.1 +2.2
baz=249
H27K Steamboat Moun 85.65 22 P P 06 17 06.0 +2.2
baz=246,SNR=415
DIB Dawson Inlet, 85.66 36 IAmb IAmb 06 17 17.1
comp=Z,512nm,2.0s
H02S2 DAWSON INLET T 85.66 36 P P 06 17 05.5 +1.4
SNR=5.1
S32K Killisnoo 85.68 31 IAmb IAmb 06 17 07.8
comp=Z,398nm,1.3s
S32K Killisnoo 85.68 31 P P 06 17 06.4 +2.3
baz=253,SNR=16
L29M L29M 85.82 25 IAMs_20 IAMs_20 06 49 51.4
comp=Z,7µm,22.0s
L29M L29M 85.82 25 P P 06 17 07.2 +2.4
baz=249
G27K Doyon Strip 85.84 21 IAmb IAmb 06 17 08.2
comp=Z,305nm,1.2s
G27K IAMs_20 IAMs_20 06 53 23.1
comp=Z,6µm,20.0s
G27K Doyon Strip 85.84 21 P P 06 17 06.7 +2.0
baz=246
BESE Bessie Mountai 85.87 30 IAMs_20 IAMs_20 06 49 17.9
comp=Z,10µm,20.0s
CRAG Craig 85.89 33 IAmb IAmb 06 17 10.2
comp=Z,456nm,1.7s
CRAG Craig 85.89 33 P P 06 17 05.8 +0.7
comp=Z,187nm,1.9s
CRAG Craig 85.89 33 P P 06 17 07.5 +2.4
baz=254,SNR=5.3
SKAG Skagway 85.90 29 IAmb IAmb 06 17 08.9
comp=Z,523nm,1.4s
SKAG Skagway 85.90 29 P P 06 17 06.9 +1.8
comp=Z,252nm,1.5s
SKAG Skagway 85.90 29 P P 06 17 07.4 +2.3
baz=252,SNR=22
I28M Miner Creek 85.95 23 IAMs_20 IAMs_20 06 52 34.8
comp=Z,6µm,20.0s
I28M Miner Creek 85.95 23 P P 06 17 07.0 +1.6
baz=248,SNR=173
O30N Mendenhall 85.95 28 IAMs_20 IAMs_20 06 49 55.9
comp=Z,6µm,21.0s
O30N Mendenhall 85.95 28 P P 06 17 07.5 +2.1
baz=251,SNR=92
R32K Eaglecrest 85.95 31 P P 06 17 07.7 +2.3
baz=253,SNR=15
JIS Juneau Island 86.02 31 P P 06 17 06.3 +0.6
comp=Z,269nm,1.9s
U33K Whale Pass 86.07 33 IAmb IAmb 06 17 09.7
comp=Z,486nm,1.5s
U33K IAMs_20 IAMs_20 06 49 01.5
comp=Z,6µm,20.0s
U33K Whale Pass 86.07 33 P P 06 17 08.3 +2.3
baz=254,SNR=10
HG4B Hotspring 86.19 37 IAmb IAmb 06 17 09.6
comp=Z,203nm,1.2s
M30M Minto, Yukon 86.22 26 P P 06 17 08.7 +2.0
baz=251,SNR=155
J29N Klondike Camp 86.26 24 IAMs_20 IAMs_20 06 50 36.1
comp=Z,8µm,22.0s
J29N Klondike Camp 86.26 24 P P 06 17 09.3 +2.4
baz=249,SNR=247
N31M Braeburn, Yuko 86.32 27 IAMs_20 IAMs_20 06 50 22.6
comp=Z,6µm,21.0s
N31M Braeburn, Yuko 86.32 27 P P 06 17 09.7 +2.5
baz=252,SNR=149
NRIK Noril'sk 86.32 341 P P 06 17 07.0 0.0
comp=Z,78nm,0.8s,baz=127,slow=4.9,SNR=120
NRIK S SKSac 06 27 29.8 +0.7
comp=Z,8.1nm,1.1s,baz=187,slow=21,SNR=13
NRIK LR LR 06 55 41.6
comp=Z,2µm,19.8s,baz=119,slow=36
comp=Z,78nm,0.8s
NRIK Noril'sk 86.32 341 P P 06 17 07.1 +0.1
NRIK IAmb IAmb 06 17 10.0
comp=Z,176nm,1.1s
NRIK Noril'sk 86.32 341 *c i* P P 06 17 06.8 -0.2
NRIK pmax pmax
comp=Z,3µm,18.8s
K29M Barlow Dome 86.33 25 IAMs_20 IAMs_20 06 52 05.3
comp=Z,6µm,21.0s
K29M Barlow Dome 86.33 25 P P 06 17 09.6 +2.3
baz=250
T33K Petersburg 86.35 32 P P 06 17 09.8 +2.5
baz=254,SNR=12
WHY Whitehorse 86.48 28 P P 06 17 10.1 +2.0
WHY Whitehorse 86.48 28 P P 06 17 10.2 +2.1
baz=252,SNR=87
I29M Ogilvie Camp, 86.55 23 IAMs_20 IAMs_20 06 50 18.7
comp=Z,6µm,22.0s
I29M Ogilvie Camp, 86.55 23 P P 06 17 09.8 +1.6
baz=249,SNR=208
WRAK Wrangell Islan 86.57 33 IAMs_20 IAMs_20 06 49 16.5
comp=Z,7µm,20.0s
WRAK Wrangell Islan 86.57 33 P P 06 17 10.8 +2.3
baz=255,SNR=19
V35K Ketchikan 86.69 34 IAmb IAmb 06 17 12.5
comp=Z,514nm,1.4s
V35K IAMs_20 IAMs_20 06 49 57.7
comp=Z,6µm,20.0s
V35K Ketchikan 86.69 34 P P 06 17 11.2 +2.2
baz=256,SNR=31
P32M Atlin 86.73 29 IAmb IAmb 06 17 12.9
comp=Z,424nm,1.3s
P32M IAMs_20 IAMs_20 06 53 03.5
comp=Z,8µm,19.0s
P32M Atlin 86.73 29 P P 06 17 11.3 +2.1
baz=254,SNR=49
F28M Old Crow 86.80 21 IAmb IAmb 06 17 12.7
comp=Z,354nm,1.1s
F28M IAMs_20 IAMs_20 06 52 12.2
comp=Z,6µm,21.0s
F28M Old Crow 86.80 21 P P 06 17 11.5 +2.2
baz=248,SNR=292
DZA Taraz 86.91 313 *e* P P 06 17 11.4 +0.9
DZA pmax pmax
comp=Z,167nm,1.1s
DZA Taraz 86.91 313 *e* P P 06 17 11.4 +0.9
comp=Z,167nm,1.1s
MAYO Mayo, Yukon 86.94 25 P P 06 17 12.5 +2.4
baz=251,SNR=171
D27M Malcolm River 87.06 19 IAMs_20 IAMs_20 06 52 12.3
comp=Z,6µm,22.0s
D27M Malcolm River 87.06 19 P P 06 17 13.1 +2.4
baz=246
J30M Hart River 87.07 24 IAMs_20 IAMs_20 06 53 08.5
comp=Z,5µm,20.0s
J30M Hart River 87.07 24 P P 06 17 13.3 +2.3
baz=251,SNR=431
M31M Drury Creek, Y 87.16 27 IAMs_20 IAMs_20 06 52 44.0
comp=Z,7µm,20.0s
M31M Drury Creek, Y 87.16 27 P P 06 17 13.2 +1.9
baz=253,SNR=166
G29M Pine Creek 87.21 22 P P 06 17 13.3 +1.9
baz=249
RUBB Prince Rupert 87.22 35 IAmb IAmb 06 17 14.6
comp=Z,273nm,1.2s
KBU Kabul Universi 87.25 305 P P 06 17 12.0 -0.6
I30M Mount Dempster 87.26 24 IAMs_20 IAMs_20 06 51 07.8
comp=Z,7µm,21.0s
I30M Mount Dempster 87.26 24 P P 06 17 13.5 +1.6
baz=251,SNR=262
Q32M Nakina River 87.27 30 IAmb IAmb 06 17 16.0
comp=Z,474nm,1.4s
Q32M IAMs_20 IAMs_20 06 49 52.0
comp=Z,10µm,21.0s
Q32M Nakina River 87.27 30 P P 06 17 14.5 +2.4
baz=255
E28M Babbage River 87.29 20 IAMs_20 IAMs_20 06 55 51.3
comp=Z,5µm,20.0s
E28M Babbage River 87.29 20 P P 06 17 13.8 +2.0
baz=248
KBL Kabul 87.33 305 P P 06 17 12.0 -1.0
KBL Kabul 87.33 305 P P 06 17 12.0 -1.0
KBL pmax pmax
comp=Z,127nm,1.6s
KBL Kabul 87.33 305 P P 06 17 12.3 -0.7
SNR=39
P33M Teslin, Yukon 87.33 29 IAmb IAmb 06 17 15.5
comp=Z,404nm,1.4s
P33M IAMs_20 IAMs_20 06 52 00.5
comp=Z,9µm,20.0s
P33M Teslin, Yukon 87.33 29 P P 06 17 13.8 +1.6
baz=254,SNR=83
N32M Quiet Lake 87.46 28 IAMs_20 IAMs_20 06 52 03.3
comp=Z,7µm,20.0s
N32M Quiet Lake 87.46 28 P P 06 17 14.9 +2.1
baz=254
KK31 Karatay Array 87.54 314 P P 06 17 13.9 +0.4
KK31 Karatay Array 87.54 314 P P 06 17 14.0 +0.4
KK31 pmax pmax
comp=Z,1µm,1.7s
KKAR Karatay Array 87.54 314 P P 06 17 14.0 +0.5
KKAR Karatay Array 87.54 314 P P 06 17 14.0 +0.5
S34M Telegraph Cree 87.58 31 P P 06 17 15.9 +2.6
baz=256,SNR=82
U35K Hyder 87.70 33 P P 06 17 15.7 +1.7
U35K IAmb IAmb 06 17 17.5
comp=Z,508nm,1.6s
U35K IAMs_20 IAMs_20 06 50 19.6
comp=Z,7µm,20.0s
U35K Hyder 87.70 33 P P 06 17 16.1 +2.1
baz=257
IUG luzhnay 87.73 313 *e* P P 06 17 15.3 +0.7
IUG *e* S SKSac 06 27 39.8 +0.6
IUG pmax pmax
comp=Z,164nm,1.6s
IUG luzhnay 87.73 313 *e* P P 06 17 15.4 +0.7
comp=Z,164nm,1.6s
IUG *e* S SKSac 06 27 39.9 +0.6
E29M Blow River 87.77 20 IAmb IAmb 06 17 18.1
comp=Z,424nm,1.5s
E29M Blow River 87.77 20 P P 06 17 15.5 +1.5
baz=249,SNR=124
T35M Bob Quinn 87.83 32 IAmb IAmb 06 17 18.6
comp=Z,431nm,1.4s
T35M IAMs_20 IAMs_20 06 49 54.8
comp=Z,8µm,20.0s
T35M Bob Quinn 87.83 32 P P 06 17 17.2 +2.6
baz=257,SNR=42
G30M tAoh Zraii Nji 87.90 22 IAMs_20 IAMs_20 06 54 08.3
comp=Z,6µm,20.0s
G30M tAoh Zraii Nji 87.90 22 P P 06 17 16.2 +1.5
baz=251
BRLS Borolday 88.02 313 *e* P P 06 17 16.7 +0.9
BRLS *e* S SKSac 06 27 41.9 +1.2
BRLS pmax pmax
comp=Z,267nm,1.9s
BRLS Borolday 88.02 313 *e* P P 06 17 16.8 +0.9
comp=Z,267nm,1.9s
BRLS *e* S SKSac 06 27 41.9 +1.2
BBB Bella Bella 88.02 37 P P 06 17 14.5 -1.0
comp=Z,36nm,1.0s,baz=299,slow=3.9,SNR=6.1
BBB LR LR 06 55 03.3
comp=Z,2µm,18.0s,baz=265,slow=34
comp=Z,36nm,1.0s
R33M Jennings River 88.03 30 IAMs_20 IAMs_20 06 50 26.1
comp=Z,9µm,21.0s
R33M Jennings River 88.03 30 P P 06 17 18.0 +2.3
baz=256,SNR=104
CHM Chimkent 88.07 313 *e* P P 06 17 16.9 +0.8
CHM pmax pmax
comp=Z,193nm,1.6s
CHM MLR MLR
comp=Z,1µm,21.0s
CHM Chimkent 88.07 313 *e* P P 06 17 16.1 0.0
comp=Z,193nm,1.6s
CHM LR LR 06 55 50.1
comp=Z,1µm,20.6s
H31M Peel River 88.25 23 IAMs_20 IAMs_20 06 51 37.7
comp=Z,5µm,21.0s
H31M Peel River 88.25 23 P P 06 17 18.2 +1.7
baz=253
F30M Barrier River 88.26 21 IAMs_20 IAMs_20 06 57 43.8
comp=Z,5µm,19.0s
F30M Barrier River 88.26 21 P P 06 17 18.1 +1.7
baz=251
DLBC Dease Lake 88.28 31 P P 06 17 17.6 +0.9
comp=Z,238nm,1.2s,baz=232,slow=5.1,SNR=86
DLBC LR LR 06 51 32.9
comp=Z,10µm,20.1s,baz=249,slow=32
comp=Z,238nm,1.2s
DLBC Dease Lake 88.28 31 P P 06 17 19.3 +2.6
baz=257,SNR=90
G31M Satah River 88.61 22 IAMs_20 IAMs_20 06 54 26.0
comp=Z,5µm,20.0s
G31M Satah River 88.61 22 P P 06 17 19.5 +1.5
baz=253
JCC Jacoby Creek, 88.89 49 IAMs_20 IAMs_20 06 54 17.6
comp=Z,8µm,19.0s
KBO Bosley Butte 88.94 48 IAMs_20 IAMs_20 06 57 19.9
comp=Z,6µm,18.0s
KRPM Rodgers 88.94 49 IAMs_20 IAMs_20 06 56 25.0
comp=Z,8µm,19.0s
F31M Tsiigehtchic 88.96 22 IAMs_20 IAMs_20 06 54 40.4
comp=Z,7µm,20.0s
F31M Tsiigehtchic 88.96 22 P P 06 17 20.7 +1.1
baz=253
KMRM Mail Ridge 89.05 50 IAmb IAmb 06 17 35.9
comp=Z,145nm,1.4s
WTLY Watson Lake, Y 89.26 29 P P 06 17 23.7 +2.4
baz=258
INK Inuvik 89.28 21 P P 06 17 22.0 +0.8
comp=Z,214nm,1.1s,baz=253,slow=4.2,SNR=234
INK LR LR 06 58 29.2
comp=Z,3µm,18.4s,baz=242,slow=36
comp=Z,214nm,1.1s
INK Inuvik 89.28 21 P P 06 17 22.0 +0.8
INK Inuvik 89.28 21 P P 06 17 22.2 +1.1
baz=253
BVA0 Borovoye Array 89.31 323 P P 06 17 19.9 -1.8
BVAR Borovoye Array 89.31 323 P P 06 17 21.1 -0.6
comp=Z,48nm,0.5s,baz=107,slow=5.0,SNR=140
BVAR PP PP 06 20 53.7 +0.8
comp=Z,5.8nm,0.9s,baz=90,slow=7.8,SNR=2.6
BVAR S SKSac 06 27 46.6 -1.4
comp=Z,4.2nm,1.0s,baz=111,slow=7.9,SNR=5.1
BVAR LR LR 07 00 04.2
comp=Z,4µm,18.1s,baz=89,slow=37
comp=Z,48nm,0.5s
BORK Borovoye 89.36 323 P P 06 17 21.5 -0.3
BORK IAmb IAmb 06 17 23.7
comp=Z,388nm,1.4s
BORK Borovoye 89.36 323 IAMs_20 IAMs_20 06 59 37.1
comp=Z,6µm,19.0s
BORK Borovoye 89.36 323 *c i* P P 06 17 21.3 -0.5
BORK pmax pmax
comp=Z,481nm,1.7s
BORK MLR MLR
comp=Z,5µm,18.0s
BORK Borovoye 89.36 323 P P 06 17 21.5 -0.3
O02D Mt. Diablo Mer 89.74 50 IAmb IAmb 06 17 39.1
comp=Z,167nm,1.4s
M02C Callahan 89.85 49 IAMs_20 IAMs_20 06 50 02.0
comp=Z,9µm,21.0s
NLWA Neilton Lookou 89.92 43 IAmb IAmb 06 17 28.6
comp=Z,129nm,1.2s
COR Corvallis 89.93 45 IAMs_20 IAMs_20 06 50 26.1
comp=Z,9µm,21.0s
F03A Seaside 89.94 44 IAmb IAmb 06 17 47.7
comp=Z,275nm,1.2s
WISH Wishkah 89.95 43 IAmb IAmb 06 17 29.7
comp=Z,521nm,1.8s
YBH Teka Blue Hor 90.00 48 LR LR 06 50 19.4
comp=Z,660nm,21.9s,baz=276,slow=31
FORD Fort Ord Natur 90.11 53 IAMs_20 IAMs_20 06 49 46.1
comp=Z,10µm,22.0s
BUCK Buck Mountain 90.11 46 IAmb IAmb 06 17 29.0
comp=Z,301nm,1.4s
B04A Port Angeles 90.26 42 IAmb IAmb 06 17 29.4
comp=Z,136nm,1.3s
H04D Lebanon 90.33 45 IAmb IAmb 06 17 29.8
comp=Z,255nm,1.4s
F04D Rainier, OR 90.33 44 IAmb IAmb 06 19 01.1
comp=Z,304nm,1.7s
L04D Klamath Falls 90.36 48 IAmb IAmb 06 17 30.8
comp=Z,357nm,1.7s
M03C McCloud 90.38 49 IAmb IAmb 06 17 31.1
comp=Z,322nm,1.5s
SUTB Sutter Butte 90.39 51 IAMs_20 IAMs_20 06 53 28.6
comp=Z,8µm,20.0s
HULI Fort Hunter Li 90.47 54 IAMs_20 IAMs_20 06 52 07.7
comp=Z,8µm,20.0s
I04A Tendick Farm, 90.47 46 IAmb IAmb 06 17 30.0
comp=Z,194nm,1.4s
O03E Paynes Creek 90.50 50 IAMs_20 IAMs_20 06 50 37.5
comp=Z,9µm,21.0s
J04A Umpqua Nationa 90.62 47 IAmb IAmb 06 17 31.3
comp=Z,304nm,1.3s
ORV Oroville 90.65 51 IAMs_20 IAMs_20 06 51 11.4
comp=Z,8µm,20.0s
H04A Detroit Lake 90.74 45 IAmb IAmb 06 17 31.1
comp=Z,140nm,1.4s
K04D Chiloquin, OR 90.81 47 IAmb IAmb 06 17 32.2
comp=Z,213nm,1.3s
TOAD Toad River Com 90.82 31 P P 06 17 30.3 +1.7
baz=261
HATC Hat Creek Radi 90.82 49 IAmb IAmb 06 18 21.9
comp=Z,270nm,1.8s
HATC IAMs_20 IAMs_20 06 55 12.8
comp=Z,7µm,19.0s
A04D Lummi Island 90.87 41 IAmb IAmb 06 17 33.3
comp=Z,176nm,1.1s
WIFE Three Sisters- 90.93 46 IAmb IAmb 06 17 32.7
comp=Z,239nm,1.4s
AFDM Forest Hills D 90.99 51 IAmb IAmb 06 17 33.1
comp=Z,148nm,1.7s
PKD Bear Valley Ra 91.02 54 IAmb IAmb 06 17 43.1
comp=Z,243nm,1.7s
HOOD Mount Hood Mea 91.19 45 IAmb IAmb 06 17 33.6
comp=Z,296nm,1.5s
J05D Fort Rock, OR 91.26 47 IAmb IAmb 06 17 34.4
comp=Z,287nm,1.3s
I05D Terrebonne, OR 91.30 46 IAmb IAmb 06 17 34.2
comp=Z,268nm,1.4s
G05A Wamic 91.41 45 IAmb IAmb 06 17 49.2
comp=Z,146nm,1.2s
K05A Summer Lake 91.45 47 IAmb IAmb 06 17 35.5
comp=Z,274nm,1.4s
PINE Pine Mountain 91.53 46 IAmb IAmb 06 17 35.7
comp=Z,229nm,1.3s
KOTAN Kotaneelee Air 91.60 30 P P 06 17 34.1 +2.0
baz=262
MPK Martis Peak 91.76 51 IAmb IAmb 06 17 37.1
comp=Z,243nm,1.5s
G06A Carlson Farm, 91.89 45 IAmb IAmb 06 17 36.7
comp=Z,237nm,1.8s
PNTR Pine Nut 92.07 51 IAmb IAmb 06 17 53.8
comp=Z,169nm,1.5s
VES Vestal, Richgr 92.19 54 IAmb IAmb 06 17 38.1
comp=Z,94nm,1.3s
VES IAMs_20 IAMs_20 06 52 00.2
comp=Z,6µm,20.0s
MXC Moxie City 92.26 44 IAmb IAmb 06 17 38.5
comp=Z,104nm,1.5s
PAHR Pah Rah Range 92.29 51 IAmb IAmb 06 17 54.6
comp=Z,166nm,1.8s
WRGLY Wrigley 92.30 27 IAmb IAmb 06 17 38.4
comp=Z,206nm,1.1s
WRGLY Wrigley 92.30 27 P P 06 17 37.2 +1.9
baz=262
MDPB Devils Postpil 92.35 53 IAmb IAmb 06 17 39.7
comp=Z,115nm,1.5s
OSI Osito Audit: C 92.38 56 IAMs_20 IAMs_20 06 51 14.3
comp=Z,7µm,21.0s
F07A Phinny Hill Vi 92.45 44 IAmb IAmb 06 17 39.5
comp=Z,169nm,1.4s
E07A Sunnyside 92.56 44 IAmb IAmb 06 17 39.9
comp=Z,156nm,1.4s
I07A Izee 92.59 46 IAmb IAmb 06 17 40.3
comp=Z,170nm,1.4s
ISA Isabella, Lake 92.67 55 IAMs_20 IAMs_20 06 52 24.0
comp=Z,7µm,20.0s
HAWA Hanford 92.77 44 IAmb IAmb 06 17 40.9
comp=Z,154nm,1.4s
WAH2 Wahluke Slope 92.78 43 IAmb IAmb 06 17 40.8
comp=Z,151nm,1.4s
PASC Pasadena Art C 92.78 56 IAmb IAmb 06 17 41.6
comp=Z,109nm,1.3s

PASC IAMs_20 IAMs_20 06 51 14.1
comp=Z,7µm,22.0s
EPH Ephrata 92.81 43 IAmb IAmb 06 17 40.7
comp=Z,191nm,1.4s
TPO Tropico Hills 92.81 55 IAmb IAmb 06 18 00.1
comp=Z,187nm,1.7s
A36M Sachs Harbour 92.85 18 IAMs_20 IAMs_20 07 01 54.0
comp=Z,5µm,19.0s
A36M Sachs Harbour 92.85 18 P **P** **06 17 38.6 +1.0**
baz=261
SYO Syowa Base 92.85 199|| *e*P **P** **06 17 36.6 -1.2**
SYO Syowa Base 92.85 199|| *e*P **P** **06 17 40.1 +2.3**
LHV Little Huntoon 92.85 52 IAmb IAmb 06 17 42.1
comp=Z,151nm,1.5s
C36M Paulatuk 92.86 21 IAMs_20 IAMs_20 06 54 25.4
comp=Z,5µm,22.0s
C36M Paulatuk 92.86 21 P **P** **06 17 38.6 +0.8**
baz=262
MWC Mount Wilson 92.89 56 IAmb IAmb 06 17 42.4
comp=Z,143nm,1.2s
MWC IAMs_20 IAMs_20 06 50 32.0
comp=Z,7µm,22.0s
HRA Herat 92.90 304 IAmb IAmb 06 17 41.4
comp=Z,92nm,1.1s
NVAR Mina Array Bea 93.03 52 P **P** **06 17 41.0 +1.4**
comp=Z,20nm,1.0s,baz=258,slow=5.9,SNR=76
NVAR S **SKSac** **06 28 09.4 -0.8**
comp=Z,0.8nm,0.8s,baz=301,slow=6.1,SNR=2.7
NVAR PKKPbc **PKKPdf** **06 34 46.8 -1.8**
comp=Z,0.4nm,0.5s,baz=59,slow=6.3,SNR=2.5
NVAR PKPPKP **P'P'df** **06 42 58.8 -1.6**
comp=Z,0.4nm,0.5s,baz=202,slow=1.6,SNR=4.0
NVAR LR LR 06 52 06.9
comp=Z,10µm,21.5s,baz=270,slow=31
comp=Z,20nm,1.0s
CWC Cottonwood Cre 93.05 54 IAmb IAmb 06 17 42.9
comp=Z,110nm,1.5s
G08A Pilot Rock 93.08 45 IAmb IAmb 06 17 42.3
comp=Z,153nm,1.4s
WVOR Wild Horse Val 93.08 48 IAmb IAmb 06 17 42.7
comp=Z,153nm,1.4s
WVOR IAMs_20 IAMs_20 06 52 09.6
comp=Z,9µm,22.0s
E08A Dider Farm, El 93.10 44 IAmb IAmb 06 17 42.5
comp=Z,173nm,1.4s
CRZF Crozet Islands 93.12 223 IAMs_20 IAMs_20 06 56 46.7
comp=Z,5µm,20.0s
YPT Yellepit 93.13 44 IAmb IAmb 06 17 42.6
comp=Z,256nm,1.5s
NV11 Mina Array Sit 93.14 52 IAmb IAmb 06 17 58.5
comp=Z,213nm,1.7s
NGCH Negor - Chabah 93.15 295 P **P** **06 17 41.4 +1.3**
SNR=8.3
DSP Deep Springs 93.21 53 IAmb IAmb 06 17 43.8
comp=Z,148nm,1.5s
BFSC Mount Baldy Ra 93.22 56 IAmb IAmb 06 17 53.3
comp=Z,130nm,1.7s
BFSC IAMs_20 IAMs_20 06 50 41.8
comp=Z,7µm,22.0s
D08A Wollman Farm, 93.24 43 IAmb IAmb 06 17 43.0
comp=Z,149nm,1.5s
J08A Circle Bar Ran 93.27 47 IAmb IAmb 06 17 43.4
comp=Z,109nm,1.3s
LRMC Laurel Mtn Rad 93.30 55 IAMs_20 IAMs_20 06 53 03.6
comp=Z,6µm,21.0s
ELS Elsinore Mount 93.37 57 IAmb IAmb 06 17 54.3
comp=Z,183nm,2.0s
CLC China Lake 93.39 55 IAmb IAmb 06 17 44.5
comp=Z,123nm,1.5s
CCCA Chr Cany lake 93.56 55 IAmb IAmb 06 17 47.7
comp=Z,199nm,1.5s
CPE Camp Elliot 93.58 57 IAmb IAmb 06 17 55.5
comp=Z,338nm,1.9s
CPE IAMs_20 IAMs_20 06 55 58.4
comp=Z,5µm,19.0s
DPP Dos Picos Cty 93.73 57 IAmb IAmb 06 17 46.4
comp=Z,147nm,1.6s
E09A Wood Farm, Sta 93.73 44 IAmb IAmb 06 17 45.2
comp=Z,224nm,1.4s
CBX Cerro Bola 93.92 58 IAmb IAmb 06 18 06.7
comp=Z,197nm,1.9s
BAR Barrett 93.94 58 IAMs_20 IAMs_20 06 56 07.7
comp=Z,5µm,18.0s
QSM Queen of Sheba 93.99 54 IAmb IAmb 06 17 47.0
comp=Z,110nm,1.4s
GSC Goldstone, Bar 94.00 55 IAmb IAmb 06 17 57.0
comp=Z,210nm,1.9s
FURC Furnace Creek, 94.03 54 IAmb IAmb 06 17 47.4
comp=Z,192nm,1.4s
FURC IAMs_20 IAMs_20 06 52 49.9
comp=Z,8µm,21.0s
DNR Dunn Ranch,Anz 94.03 57 IAmb IAmb 06 18 00.6
comp=Z,197nm,1.9s
GWY Greenwater Val 94.17 54 IAmb IAmb 06 17 58.7
comp=Z,131nm,1.6s
PFO Pinyon Flats O 94.17 57 LR LR 06 51 43.9
comp=Z,5µm,21.8s,baz=270,slow=30
PFO Pinyon Flats O 94.17 57 *de*P **P** **06 17 46.9 +2.1**
PFO pmax pmax
comp=Z,65nm,1.4s
PFO MLR MLR
comp=Z,8µm,18.0s
BMO Blue Mountains 94.21 45 IAmb IAmb 06 17 47.4
comp=Z,171nm,1.4s
BMO IAMs_20 IAMs_20 06 53 44.4
comp=Z,7µm,20.0s
WCT Wildcat Mounta 94.24 54 IAmb IAmb 06 17 48.3
comp=Z,123nm,1.4s
PMD Palm Desert 94.25 57 IAmb IAmb 06 17 58.2
comp=Z,165nm,1.9s
F10A Beach Ranch, E 94.33 44 IAmb IAmb 06 17 47.7
comp=Z,122nm,1.4s
SHOC Shoshone, Teco 94.47 54 IAmb IAmb 06 17 49.2
comp=Z,128nm,1.3s
SHOC IAMs_20 IAMs_20 06 53 30.6
comp=Z,5µm,20.0s
JLN Jalan Bani Buh 94.49 292 P **P** **06 17 46.2 -0.1**
SNR=15
ESJX Sierra Juarez 94.50 58 IAmb IAmb 06 18 00.6
comp=Z,260nm,1.9s
NEW Newport 94.53 42 LR LR 06 57 21.5
comp=Z,3µm,18.8s,baz=266,slow=34
NEW Newport 94.53 42 IAmb IAmb 06 17 48.6
comp=Z,99nm,1.3s
NEW Newport 94.53 42 IAMs_20 IAMs_20 06 59 35.6
comp=Z,5µm,19.0s
TPNV Topopah Spring 94.55 53 IAmb IAmb 06 17 49.9
comp=Z,204nm,1.7s
TPNV IAMs_20 IAMs_20 06 52 46.7
comp=Z,8µm,21.0s
YUH Yuha Desert 94.56 58 IAmb IAmb 06 18 00.2
comp=Z,229nm,2.0s
VTX Valle De La Tr 94.61 59 IAmb IAmb 06 17 51.3
comp=Z,96nm,1.3s
WBK Wadi Bani Khal 94.93 292 P **P** **06 17 48.2 -0.1**
SNR=7.8
S11A Rachel 94.99 53 IAmb IAmb 06 19 23.4
comp=Z,147nm,1.6s
BC3 Big Chuckawall 95.02 57 IAMs_20 IAMs_20 06 59 46.2
comp=Z,5µm,19.0s
DANC Danby, Needles 95.13 56 IAMs_20 IAMs_20 06 52 37.1
comp=Z,7µm,22.0s
PLID Pearl Lake 95.15 45 IAMs_20 IAMs_20 06 57 28.2
comp=Z,7µm,19.0s
RPN Rapa Nui 95.15 118 LR LR 06 53 08.9
comp=Z,5µm,21.6s,baz=267,slow=31
MFID Camas Ranch 95.20 47 IAmb IAmb 06 17 52.3
comp=Z,157nm,1.6s
SVE Sverdlovsk 95.29 327 *e*P **P** **06 17 48.7 -0.5**
SVE *e*S **SKSac** **06 28 21.0 -0.2**
SVE *e* 06 35 39.7
SVE pmax pmax
comp=E,64nm,1.9s
SVE MLR MLR
comp=E,6µm,20.0s
IRM Iron Mountain 95.30 56 IAmb IAmb 06 17 53.6
comp=Z,163nm,1.7s
IRM IAMs_20 IAMs_20 06 51 43.7
comp=Z,6µm,22.0s
AB31 Akbulak array 95.47 319 P **P** **06 17 49.1 -1.1**
AB31 IAmb IAmb 06 17 51.4
comp=Z,140nm,1.4s
AB31 Akbulak array 95.47 319 *i* P **P** **06 17 48.4 -1.8**
ABKAR Akbulak array 95.47 319 P **P** **06 17 48.9 -1.2**
GLA Glamis 95.51 57 IAmb IAmb 06 18 04.7
comp=Z,249nm,1.9s
GLA IAMs_20 IAMs_20 07 01 41.3
comp=Z,5µm,18.0s

ELK Elko 95.53 50 LR LR 06 54 40.5
comp=Z,10µm,20.8s,baz=284,slow=32
V12A Nelson 95.61 55 IAmb IAmb 06 17 55.0
comp=Z,129nm,1.6s
JMDO Jabal Madar 95.71 292 P **P** **06 17 52.1 +0.2**
SNR=7.2
MHTO MHTO 95.75 290 P **P** **06 17 51.6 -0.5**
SNR=20
BIDO Bidbid 95.76 293 P **P** **06 17 53.0 +0.9**
SNR=15
NEE2 Needles Airpor 95.76 56 IAmb IAmb 06 18 05.3
comp=Z,239nm,1.9s
NEE2 IAMs_20 IAMs_20 06 53 06.9
comp=Z,7µm,22.0s
BLYC Blythe 95.79 57 IAmb IAmb 06 18 05.7
comp=Z,123nm,1.6s
SMDO Samad 95.80 293 P **P** **06 17 52.2 -0.2**
SNR=7.5
ELIB Princess Elisa 96.03 194 *d*P **P** **06 17 52.4 -0.1**
comp=Z,30nm,1.5s
MSEY Mahe Island 96.12 265 P **P** **06 17 54.7 +0.7**
YKAW3 Yellowknife Wh 96.30 28 IAmb IAmb 06 17 57.6
comp=Z,165nm,1.3s
YKA Yellowknife Ar 96.30 28 P **P** **06 17 54.8 +1.1**
comp=Z,28nm,0.9s,baz=281,slow=5.4,SNR=160
YKA S **SKSac** **06 28 26.3 0.0**
comp=Z,0.2nm,0.6s,baz=280,slow=8.9,SNR=2.0
YKA PKKP **PKKPbc** **06 34 39.8 -2.3**
comp=Z,5.5nm,1.1s,baz=76,slow=2.4,SNR=21
YKA PKPPKP **P'P'df** **06 42 51.0 -1.2**
comp=Z,0.1nm,0.3s,baz=58,slow=1.4,SNR=6.1
YKA LR LR 06 57 43.3
comp=Z,7µm,20.0s,baz=276,slow=33
comp=Z,28nm,0.9s
YKAW1 Yellowknife Wh 96.36 28 IAmb IAmb 06 17 58.0
comp=Z,163nm,1.2s
HOQ Hoqain 96.51 293 P **P** **06 17 55.1 -0.5**
SNR=20
ARTI Arti 96.53 326 S **SKSac** **06 28 23.8 -4.0**
comp=Z,0.9nm,0.2s,baz=286,slow=22,SNR=11
ARTI PKKPbc PKKPbc 06 34 38.7 -2.5
comp=Z,1.2nm,0.5s,baz=251,slow=8.0,SNR=1.7
ARTI PKPPKP **P'P'df** **06 42 53.5 +1.3**
comp=Z,1.1nm,0.5s,baz=267,slow=5.0,SNR=4.7
ARTI LR LR 07 01 05.5
comp=Z,13µm,21.7s,baz=96,slow=35
ARTI Arti 96.53 326 P **P** **06 17 53.7 -1.2**
ARTI IAmb IAmb 06 17 55.0
comp=Z,239nm,1.4s
ARTI Arti 96.53 326 *c i*P **P** **06 17 53.4 -1.5**
ARTI pmax pmax
comp=Z,184nm,1.3s
ARTI MLR MLR
comp=Z,13µm,21.0s
BSY Bisya 96.57 292 P **P** **06 17 55.4 -0.5**
SNR=9.9
BELA Belgrano 2 96.73 179 P **P** **06 17 55.0 -0.4**
AKTO Aktyubinsk 96.74 320 S **SKSac** **06 28 27.3 -1.8**
comp=Z,2.3nm,0.5s,baz=236,slow=19,SNR=11
AKTO PKKPbc PKKPbc 06 34 38.2 -2.2
comp=Z,0.6nm,0.3s,baz=234,slow=6.8,SNR=3.7
AKTO PKPPKP **P'P'df** **06 42 53.5 +1.2**
comp=Z,0.8nm,0.3s,baz=264,slow=6.7,SNR=1.6
AKTO LR LR 07 01 44.0
comp=Z,7µm,20.4s,baz=78,slow=36
AKTO Aktyubinsk 96.74 320 P **P** **06 17 53.2 -2.8**
EDM Edmonton 97.04 37 IAmb IAmb 06 18 00.3
comp=Z,200nm,1.3s
Y14A Wickenburg 97.06 57 IAmb IAmb 06 18 14.5
comp=Z,122nm,2.0s
SOHO SOHO 97.25 294 *i* P **P** **06 17 57.9 -0.9**
SNR=7.1
SOHO SOHO 97.25 294 P **P** **06 17 58.5 -0.4**
KNB Kanab 97.30 53 IAmb IAmb 06 18 02.9
comp=Z,127nm,1.5s
DUG Dugway, Tooele 97.36 50 IAMs_20 IAMs_20 06 55 04.0
comp=Z,7µm,21.0s
MDH Madha 97.52 295 *i* P **P** **06 17 58.7 -1.3**
SNR=5.3
MDH Madha 97.52 295 P **P** **06 17 59.5 -0.5**
BANOM Banah 97.54 295 P **P** **06 17 60.0 -0.2**
BANOM Banah 97.54 295 P **P** **06 17 59.8 -0.4**
DLMT Dillon 97.56 45 IAmb IAmb 06 18 12.5
comp=Z,124nm,1.8s
DLMT IAMs_20 IAMs_20 06 55 51.0
comp=Z,7µm,20.0s
UOSS Minazif 97.58 294 P **P** **06 17 59.3 -1.1**
UOSS IAmb IAmb 06 18 00.7
comp=Z,100nm,1.6s
UOSS Minazif 97.58 294 *i* P **P** **06 17 59.3 -1.1**
SNR=5.9
UOSS Minazif 97.58 294 P **P** **06 17 59.7 -0.7**
MSFE Esma-Masafi 97.64 295 *i* P **P** **06 18 00.0 -0.6**
SNR=9.5
MASF Masafi 97.64 295 P **P** **06 18 00.7 0.0**
SNR=7.1
HATD Hatta, Dubai 97.65 294 *i* P **P** **06 17 59.6 -1.1**
SNR=11
HATD Hatta, Dubai 97.65 294 P **P** **06 18 00.6 -0.1**
SNR=5.6
SHME Shamm 97.69 295 *i* P **P** **06 18 00.3 -0.5**
SNR=5.0
SHME Shamm 97.69 295 P Pdif 06 18 01.3 +0.4
ASHO Ashiyiah 97.71 294 *i* P **P** **06 17 59.7 -1.3**
SNR=5.4
ASHO Ashiyiah 97.71 294 P **P** **06 18 00.2 -0.7**
SNR=5.3
SHAO Shalim 97.79 287 P **P** **06 18 00.2 -1.2**
SHAO Shalim 97.79 287 P **P** **06 18 00.9 -0.5**
ALNE Al Ain 97.96 293 *i* P **P** **06 18 01.0 -1.1**
SNR=12
ALNE Al Ain 97.96 293 P **P** **06 18 01.8 -0.3**
SNR=10
NAZ Nazwa, Dubai 98.08 294 P **P** **06 18 01.5 -1.0**
UMQ Umm Al-Quwin 98.10 295 P Pdif 06 18 02.8 +0.1
FAQ Al Faqa, Dubai 98.13 294 *i* P **P** **06 18 01.5 -1.3**
SNR=7.7
FAQ Al Faqa, Dubai 98.13 294 P **P** **06 18 02.4 -0.4**
BOZ Bozeman (W) 98.24 45 IAMs_20 IAMs_20 06 55 20.9
comp=Z,7µm,21.0s
HWUT Hardware Ranch 98.32 49 IAMs_20 IAMs_20 06 58 37.2
comp=Z,7µm,20.0s
ASUD Al Ashush, Dub 98.37 294 *i* P **P** **06 18 03.5 -0.4**
SNR=7.3
ASUD Al Ashush, Dub 98.37 294 P **P** **06 18 03.3 -0.5**
DMTO DMTO 98.42 287 P Pdif 06 18 04.4 +0.1
DMTO P **PcP** **06 18 04.5 +0.3**
WUAZ Wupatki 98.44 55 IAMs_20 IAMs_20 06 54 33.8
comp=Z,6µm,22.0s
YHL Hebgen Lake 98.57 46 IAmb IAmb 06 18 25.7
comp=Z,137nm,1.9s
TUC Tucson 98.89 58 IAMs_20 IAMs_20 07 02 02.9
comp=Z,5µm,18.0s
MOOW Moose Ponds 98.90 47 IAMs_20 IAMs_20 06 55 42.4
comp=Z,5µm,22.0s
HMU Henry Mountain 98.96 53 IAmb IAmb 06 18 09.8
comp=Z,88nm,1.5s
LOHW Long Hollow 99.00 47 P **Pdif** **06 18 06.6 0.0**
LOHW IAMs_20 IAMs_20 06 55 43.2
comp=Z,7µm,22.0s
RBK Rabkut 99.11 287 P **Pdif** **06 18 07.3 -0.1**
SNR=9.8
LPIG La Paz 99.12 67 LR LR 06 54 36.5
comp=Z,10µm,22.0s,baz=270,slow=30
DOK Doka 99.24 288 P **Pdif** **06 18 07.0 -0.8**
SNR=9.3
YMP Mirror Lake Pl 99.30 46 IAmb IAmb 06 18 26.3
comp=Z,162nm,1.9s
EGMT Eagleton 99.46 42 IAmb IAmb 06 18 11.2
comp=Z,121nm,1.6s
EGMT IAMs_20 IAMs_20 07 02 57.1
comp=Z,7µm,18.0s
NVL N'lazarevskaya 99.50 192 *e*P **Pdif** **06 18 07.9 -0.1**
NVL *e* 06 22 11.7
NVL *e*PPP PPP 06 24 18.5
NVL *e*S **SKSac** **06 28 43.5 +1.1**
NVL *e*PS PS 06 31 10.4 +0.8
NVL *e*SS **SS** **06 36 30.0 +3.2**
NVL *e*SSS SSS 06 40 19.5
NVL pmax pmax
comp=Z,42nm,1.6s
NVL MLR MLR
comp=Z,6µm,19.0s
PDAR Pinedale Array 99.79 48 P **Pdif** **06 18 10.6 +0.4**
comp=Z,11nm,1.1s,baz=259,slow=3.0,SNR=39
PDAR PP **PP** **06 22 16.2 +1.1**
comp=Z,5.5nm,1.2s,baz=270,slow=3.0,SNR=4.1

PDAR PKKPbc **PKKPbc** **06 34 31.3 -0.7**
comp=Z,0.4nm,0.6s,baz=102,slow=4.5,SNR=4.2
PDAR PKPPKP 06 42 45.3
comp=Z,1.6nm,1.0s,baz=102,slow=6.2,SNR=5.9
PDAR LR LR 07 01 26.8
comp=Z,5µm,18.0s,baz=260,slow=34
comp=Z,11nm,1.1s
RLMT Red Lodge 99.92 45 IAMs_20 IAMs_20 06 56 25.3
comp=Z,8µm,22.0s
ABTO Aybut 99.97 287 P **Pdif** **06 18 10.7 -0.5**
SNR=9.8
MZR Muzera 100.01 292 *i* P **Pdif** **06 18 10.9 -0.3**
SNR=8.4
MZR Muzera 100.01 292 P **Pdif** **06 18 11.3 +0.1**
SNR=5.2
MVCO Mesa Verde 100.75 53 IAMs_20 IAMs_20 06 55 32.0
comp=Z,7µm,22.0s
RES Resolute Bay 101.18 14 P **Pdif** **06 18 15.3 0.0**
comp=Z,48nm,1.1s,baz=313,slow=5.5,SNR=58
SNAA Sanae 101.32 188 IAMs_20 IAMs_20 07 04 20.9
comp=Z,6µm,20.0s
HAYD Hayden 101.60 50 IAMs_20 IAMs_20 06 58 27.0
comp=Z,4µm,21.0s
K22A Casper 102.03 48 IAMs_20 IAMs_20 07 01 05.3
comp=Z,6µm,20.0s
VOI Vohitsoka 102.07 246 IAMs_20 IAMs_20 07 00 25.7
comp=Z,4µm,20.0s
VOI Vohitsoka 102.07 246 P **Pdif** **06 18 20.1 -0.5**
ABPO Ambohimpanom 102.19 249 IAMs_20 IAMs_20 07 03 45.1
comp=Z,6µm,19.0s
ANMO Albuquerque 102.47 56 IAMs_20 IAMs_20 06 56 16.3
comp=Z,3µm,21.0s
ANMO Albuquerque 102.47 56 IAMs_20 IAMs_20 06 56 16.3
comp=Z,3µm,21.0s
ANMO Albuquerque 102.47 56 *ce*P **Pdif** **06 18 24.4 +2.2**
ANMO pmax pmax
comp=Z,20nm,2.3s
ANMO MLR MLR
comp=Z,2µm,17.0s
EPT El Paso 102.53 59 IAMs_20 IAMs_20 06 59 46.4
comp=Z,5µm,19.0s
ISCO Idaho Springs 102.90 51 IAMs_20 IAMs_20 06 57 56.5
comp=Z,7µm,22.0s
BELG Belogornoye 103.09 322 PKPPKP 06 42 40.8
comp=Z,4.2nm,0.9s,baz=153,slow=3.8,SNR=4.1
DGMT Dagmar 103.13 42 IAMs_20 IAMs_20 07 04 11.0
comp=Z,5µm,19.0s
MNTX Cornudas Mount 103.49 59 IAMs_20 IAMs_20 07 01 57.8
comp=Z,6µm,18.0s
FFC Flin Flon 103.59 35 IAMs_20 IAMs_20 07 09 36.9
comp=Z,4µm,18.0s
SPITS Spitsbergen Ar 103.82 351 Pdiff **Pdif** **06 18 26.4 -0.7**
comp=Z,15nm,1.1s,baz=72,slow=5.4,SNR=5.3
T25A Trinidad 104.02 53 IAMs_20 IAMs_20 07 01 00.5
comp=Z,4µm,20.0s
MAK Makhachkala 104.34 313 *e*P **Pdif** **06 18 25.7 -4.3**
MAK *e* 06 22 48.1
MAK *e* 06 29 04.7
MAK *e* 06 29 53.8
MAK *e*PS **PS** **06 32 05.5 +3.3**
MAK *e*SS SS 06 37 35.7 -0.2
MAK *e*SSS SSS 06 41 37.2
MAK pmax pmax
comp=Z,195nm,1.2s
MAK MLR MLR
comp=Z,6µm,20.0s
TXAR Lajitas Array 105.05 61 PKiKP **PKiKP** **06 22 48.9 +0.6**
comp=Z,1.7nm,1.1s,baz=278,slow=2.3,SNR=2.5
TXAR PP **PP** **06 22 55.6 +0.8**
comp=Z,1.5nm,1.0s,baz=242,slow=2.7,SNR=3.4
TXAR PKKPbc **PKKPbc** **06 34 16.5 +0.6**
comp=Z,1.0nm,0.7s,baz=110,slow=3.9,SNR=6.1
TXAR PKKPab **PKKPab** **06 34 33.2 +0.1**
comp=Z,10nm,1.0s,baz=116,slow=5.7,SNR=23
TXAR PKPPKP 06 42 37.6
comp=Z,1.7nm,1.1s,baz=111,slow=2.8,SNR=5.8
PMSA Palmer Station 105.06 165 IAMs_20 IAMs_20 07 00 46.8
comp=Z,4µm,20.0s
PMSA Palmer Station 105.06 165 *e*P **Pdif** **06 18 28.4 -4.3**
ADZR Andozero 105.17 335 *e*P **Pdif** **06 18 30.8 -2.4**
ADZR 06 22 55.9
ADZR pmax pmax
comp=Z,55nm,1.1s
ADZR MLR MLR
comp=Z,5µm,19.0s
TULEG Thule 105.52 9 IAMs_20 IAMs_20 07 04 53.7
comp=Z,3µm,20.0s
OGNE Ogallala 105.52 49 IAMs_20 IAMs_20 07 05 06.1
comp=Z,4µm,19.0s
MSTX Muleshoe 105.56 56 IAMs_20 IAMs_20 07 03 44.7
comp=Z,4µm,19.0s
KLMR Klimovskoe 105.60 332 *e*P **Pdif** **06 18 33.2 -2.0**
KLMR *e* 06 22 56.6
KLMR *e* 06 29 13.7
KLMR SS SS 06 37 53.7 +1.8
KLMR SSS SSS 06 41 51.2
KLMR pmax pmax
comp=Z,88nm,1.5s
KLMR MLR MLR
comp=Z,9µm,21.0s
APA Apatity 105.67 340|| *i*P **Pdif** **06 18 32.9 -2.5**
APA *i* 06 22 58.2
APA *i* S **Sdif** **06 30 18.9 -9.4**
APA *i* PS **PS** **06 32 15.5 +0.5**
APA pmax pmax
comp=Z,15nm,1.2s
APA MLR MLR
comp=Z,5µm,24.1s
MDND Maddock 106.26 42 IAMs_20 IAMs_20 07 06 38.1
comp=Z,6µm,19.0s
AMTX Amarillo 106.39 55 IAMs_20 IAMs_20 06 59 48.6
comp=Z,6µm,22.0s
VRH Novokhopyorsk 106.91 322 *e*P **Pdif** **06 18 34.3 -7.0**
VRH pmax pmax
comp=Z,10.0nm,1.0s
VRH pmax pmax
comp=Z,10.0nm,0.9s
VRH MLR MLR
comp=Z,3µm,23.0s
NEEM North Greenlan 106.97 5 *i* P **PKiKP** **06 22 51.6 +0.9**
GOF Gofitskoye 107.25 315 *ce*P **Pdif** **06 18 42.5 -0.4**
ARCES ARCESS Array B 107.25 343 PKiKP **PKiKP** **06 22 51.6 +0.5**
comp=Z,3.8nm,0.6s,baz=81,slow=1.5,SNR=14
ARCES PKKP **PKKPab** **06 34 21.6 -1.0**
comp=Z,4.0nm,0.9s,baz=243,slow=1.4,SNR=3.9
KIV Kislovodsk 107.68 314 IAMs_20 IAMs_20 07 11 40.7
comp=Z,4µm,19.0s
KIV Kislovodsk 107.68 314 *e*P **Pdif** **06 18 44.2 -0.8**
KIV *e* 06 23 12.3
KIV *e*PPP PPP 06 25 29.8
KIV *e* 06 29 21.8
KIV *e*PS **PS** **06 32 35.6 -1.4**
KIV *e*SS SS 06 38 21.4 -0.1
KIV *e*SSS SSS 06 42 26.1
KIV pmax pmax
comp=Z,12nm,1.0s
KIV Kislovodsk 107.68 314 P **Pdif** **06 18 44.2 -0.8**
MOS Moscow 108.09 327 *i* P **Pdif** **06 18 44.0 -2.4**
MOS *e*SS SS 06 38 21.2 -4.8
MOS pmax pmax
comp=Z,115nm,1.5s
MOS MLR MLR
comp=E,8µm,21.0s
MOS MLR MLR
comp=Z,8µm,21.0s
ULM Lac du Bonnet 108.17 39 PKiKP **PKiKP** **06 22 53.8 +0.4**
comp=Z,11nm,1.1s,baz=343,slow=2.3,SNR=5.5
ULM PKKP **PKKPab** **06 34 18.3 -0.4**
comp=Z,12nm,1.0s,baz=94,slow=5.2,SNR=8.5
LPSR Galich'ya Gora 108.25 324 *e*P **Pdif** **06 18 44.9 -2.3**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR pmax pmax
comp=Z,10.0nm,1.1s
LPSR MLR MLR
comp=Z,4µm,18.0s
ABTX Abilene, Hawle 108.28 58 IAMs_20 IAMs_20 06 59 48.8
comp=Z,4µm,22.0s
BGNE Belgrade 108.36 48 IAMs_20 IAMs_20 07 08 05.2
comp=Z,4µm,19.0s
VORD Divnogorie 108.46 322 *e*P **Pdif** **06 18 46.1 -2.0**
VORD pmax pmax
comp=Z,6.0nm,1.2s
VSR Storozhevoye 108.47 322 *e*P **Pdif** **06 18 44.1 -4.1**
VSR pmax pmax
comp=Z,5.0nm,1.2s

VSR					pmax	pmax			
	comp=Z,7,0nm,1.0s								
VSR					MLR	MLR			
	comp=Z,2µm,18.0s								
AGMN	**Agassiz Nation**	**108.63**	**41**		IAMs_20	IAMs_20	07 08 28.6		
	comp=Z,5µm,19.0s								
WMOK	**Wichita Mounta**	**108.78**	**55**		IAMs_20	IAMs_20	07 01 11.8		
	comp=Z,4µm,21.0s								
OBN	**Obninsk**	**108.86**	**327**		P	**Pdif**	**06 18 49.8**	**0.0**	
UNM	**Universidad Na**	**109.44**	**72**		IAMs_20	IAMs_20	07 01 52.3		
	comp=Z,4µm,20.0s								
OK029	**Liberty Lake**	**109.73**	**54**		IAMs_20	IAMs_20	07 10 55.8		
	comp=Z,4µm,19.0s								
OK048	**Pawnee Station**	**110.05**	**53**		IAMs_20	IAMs_20	07 04 18.3		
	comp=Z,4µm,21.0s								
WHTX	**Lake Whitney,**	**110.19**	**58**		IAMs_20	IAMs_20	07 06 20.4		
	comp=Z,5µm,19.0s								
735A	**Kenedy**	**110.20**	**61**		IAMs_20	IAMs_20	07 01 07.8		
	comp=Z,7µm,21.0s								
Z35A	**Perchaven, San**	**110.21**	**57**		IAMs_20	IAMs_20	07 09 24.7		
	comp=Z,5µm,19.0s								
OK052	**Battle Ridge R**	**110.22**	**54**		IAMs_20	IAMs_20	07 03 52.9		
	comp=Z,4µm,20.0s								
T35A	**Sooner Cattle**	**110.32**	**53**		IAMs_20	IAMs_20	07 10 19.4		
	comp=Z,4µm,19.0s								
N35A	**Tabor**	**110.33**	**48**		IAMs_20	IAMs_20	07 07 27.1		
	comp=Z,5µm,19.0s								
MG03	**Isla Dawson**	**111.04**	**155**		IAMs_20	IAMs_20	06 59 44.6		
	comp=Z,6µm,22.0s								
ANN	**Anapa**	**111.20**	**316**	*i* PKIKP		**PKiKP**	**06 22 57.6**	**-1.6**	
ANN				*e*			06 29 35.3		
ANN				*e*PS		**PS**	**06 33 08.0**	**-3.1**	
ANN					pmax	pmax			
	comp=Z,88nm,1.4s								
ANN					MLR	MLR			
	comp=Z,5µm,22.0s								
FINES	**FINESS Array B**	**111.32**	**335**	PKiKP		**PKiKP**	**06 22 58.9**	**0.0**	
	comp=Z,4.6nm,0.8s,baz=107,slow=6.4,SNR=12								
SPMN	**Marine on St.**	**111.41**	**43**		IAMs_20	IAMs_20	07 03 11.3		
	comp=Z,6µm,22.0s								
MG01	**Puerto William**	**111.43**	**157**		IAMs_20	IAMs_20	07 01 14.8		
	comp=Z,6µm,21.0s								
EYMN	**Ely**	**111.55**	**40**		IAMs_20	IAMs_20	07 09 48.8		
	comp=Z,5µm,18.0s								
MG05	**Puerto Natales**	**111.59**	**152**		IAMs_20	IAMs_20	07 02 23.5		
	comp=Z,4µm,20.0s								
HKT	**Hockley**	**111.80**	**60**	⇑*i* PKIKP		**PKiKP**	**06 23 01.8**	**+1.1**	
U38A	**Gravette**	**112.08**	**53**		IAMs_20	IAMs_20	07 06 00.1		
	comp=Z,4µm,20.0s								
Z38A	**Mt. Pleasant**	**112.10**	**56**		IAMs_20	IAMs_20	07 07 24.7		
	comp=Z,5µm,21.0s								
N38A	**Joes South For**	**112.13**	**48**		IAMs_20	IAMs_20	07 10 45.8		
	comp=Z,5µm,18.0s								
NATX	**Nacogdoches**	**112.58**	**58**		IAMs_20	IAMs_20	07 14 47.6		
	comp=Z,4µm,18.0s								
SUMG	**Summit**	**112.61**	**3**	*i* P		**PKiKP**	**06 23 02.5**	**+0.9**	
MIAR	**Mount Ida**	**113.06**	**55**		IAMs_20	IAMs_20	07 08 37.0		
	comp=Z,5µm,20.0s								
L40A	**Anamosa**	**113.31**	**46**		IAMs_20	IAMs_20	07 05 15.9		
	comp=Z,4µm,22.0s								
SAQQ	**Saqqaq**	**113.63**	**9**	*i* P		**PKiKP**	**06 23 03.7**	**+0.7**	
KIBK	**Kibwezi**	**113.67**	**265**	P		**Pdif**	**06 19 12.6**	**+0.3**	
KIBK				PKP		**PKiKP**	**06 23 03.9**	**-1.0**	
KIBK	**Kibwezi**	**113.67**	**265**		IAMs_20	IAMs_20	07 10 48.3		
	comp=Z,3µm,20.0s								
MNK	**Minsk**	**113.75**	**328**	*i* P		**Pdif**	**06 19 12.7**	**+1.1**	
	comp=E,27nm,1.1s								
MNK				*i* P		**Pdif**	**06 19 12.7**	**+1.1**	
	comp=N,27nm,1.1s								
MNK				*i* P		**Pdif**	**06 19 12.7**	**+1.1**	
	comp=Z,29nm,0.9s,baz=64								
MNK				*i* PP		**PP**	**06 23 57.6**	**+0.9**	
MNK				*i* PPP		PPP	06 26 22.1		
MNK				*i* SKS		**SKSdf**	**06 30 11.6**	**-0.4**	
MNK				*i* PS		**PS**	**06 33 33.7**	**-0.4**	
MNK				*i* SS		**SS**	**06 39 31.7**	**-10**	
MNK				*i* SSS		SSS	06 44 16.0		
MNK				*i* LRM		MLR	07 12 03.7		
	comp=N,6µm,21.3s								
MNK				*i* LRM		MLR	07 12 03.7		
	comp=Z,8µm,20.7s								
MNK				*i* LRM		MLR	07 12 13.3		
	comp=E,3µm,20.9s								
MNK	**Minsk**	**113.75**	**328**	*i* P		**Pdif**	**06 19 12.6**	**+1.1**	
MNK				*i*			06 23 57.5		
MNK				*i* PPP		PPP	06 26 22.0		
MNK				*i*			06 30 11.6		
MNK				*i* PS		**PS**	**06 33 33.7**	**-0.4**	
MNK					pmax	pmax			
	comp=Z,29nm,0.9s								
MNK					pmax	pmax			
	comp=N,27nm,1.1s								
MNK					pmax	pmax			
	comp=E,27nm,1.1s								
MNK					MLR	MLR			
	comp=N,6µm,21.0s								
MNK					MLR	MLR			
	comp=Z,8µm,21.0s								
MNK					MLR	MLR			
	comp=E,3µm,21.0s								
GDH	**Godhavn**	**114.06**	**10**	*i* P		**PKiKP**	**06 23 04.6**	**+0.7**	
AY03	**Cochrane**	**114.43**	**148**		IAMs_20	IAMs_20	07 04 19.9		
	comp=Z,3µm,19.0s								
L42A	**Oliver, Polo**	**114.44**	**46**		IAMs_20	IAMs_20	07 13 33.8		
	comp=Z,5µm,19.0s								
AKASG	**Malin Array Be**	**114.58**	**324**	PKiKP		**PKiKP**	**06 23 05.3**	**-0.1**	
	comp=Z,2.9nm,0.5s,baz=61,slow=2.2,SNR=16								
AKASG				PP		**PP**	**06 24 01.9**	**-0.8**	
	comp=Z,16nm,1.1s,baz=60,slow=6.8,SNR=9.8								
AKASG				PKKPbc		**PKKPbc**	**06 33 44.2**	**-1.4**	
	comp=Z,0.4nm,0.4s,baz=261,slow=3.7,SNR=5.4								
AKBB	**Malin Array Si**	**114.58**	**324**	⇓*i* PKIKP		**PKiKP**	**06 23 05.4**	**0.0**	
KIEV	**Kiev**	**114.59**	**324**		IAMs_20	IAMs_20	07 14 14.2		
	comp=Z,5µm,20.0s								
KMBO	**Kilima Mbogo**	**114.60**	**266**	PKiKP		**PKiKP**	**06 23 07.3**	**+0.4**	
	comp=Z,6.9nm,0.9s,baz=94,slow=0.7,SNR=8.4								
KMBO				PP		**PP**	**06 24 04.4**	**-0.1**	
	comp=Z,1.1nm,0.3s,baz=117,slow=9.4,SNR=6.7								
H43A	**Windswept, Lux**	**115.05**	**43**		IAMs_20	IAMs_20	07 05 24.8		
	comp=Z,5µm,22.0s								
KIRS	**Kirsehir-Merke**	**115.12**	**311**	⇑P		**PKiKP**	**06 23 05.7**	**-1.3**	
143A	**Socs Landing,**	**115.16**	**56**		IAMs_20	IAMs_20	07 10 27.8		
	comp=Z,6µm,20.0s								
P43A	**Skaggs, Pawnee**	**115.16**	**49**		IAMs_20	IAMs_20	07 12 30.2		
	comp=Z,4µm,20.0s								
BR131	**Keskin Array S**	**115.18**	**311**	⇑*i* PKIKP		**PKiKP**	**06 23 06.4**	**-0.8**	
BRTR	**Keskin Array B**	**115.18**	**311**	PKP		**PKiKP**	**06 23 06.8**	**-0.3**	
	comp=Z,5.7nm,1.1s,baz=144,slow=3.9,SNR=9.5								
BRTR				PP		**PP**	**06 24 07.7**	**0.0**	
	comp=Z,9.6nm,1.1s,baz=117,slow=4.4,SNR=6.6								
BRTR				PKKPbc		**PKKPbc**	**06 33 43.5**	**0.0**	
	comp=Z,1.5nm,0.9s,baz=193,slow=5.1,SNR=3.8								
L44A	**Lake County Fo**	**115.65**	**46**		IAMs_20	IAMs_20	07 16 13.7		
	comp=Z,5µm,18.0s								
M44A	**Midewin, Midew**	**115.78**	**46**		IAMs_20	IAMs_20	07 07 01.3		
	comp=Z,6µm,21.0s								
VBMS	**Vicksburg**	**115.98**	**57**		IAMs_20	IAMs_20	07 14 40.6		
	comp=Z,4µm,19.0s								
SORM	**Soroca**	**116.11**	**322**	⇓P		**PKPdf**	**06 23 08.4**	**-0.1**	
SORM	**Soroca**	**116.11**	**322**	⇓PKIKP		**PKPdf**	**06 23 08.4**	**-0.1**	
RNPP9	**Sopachiv**	**116.19**	**326**	P		**Pdif**	**06 19 22.2**	**-0.3**	
RNPP8	**Varash**	**116.25**	**326**	P		**Pdif**	**06 19 22.0**	**-0.8**	
RNPP5	**Staryi Chortor**	**116.28**	**326**	P		**Pdif**	**06 19 22.6**	**-0.3**	
GO07	**Milladeo Hill,**	**116.41**	**144**		IAMs_20	IAMs_20	07 02 58.8		
	comp=Z,4µm,20.0s								
SUW	**Suwalki**	**116.41**	**329**	*e*Pdif		**Pdif**	**06 19 23.4**	**0.0**	
SUW				*e*P		**PKiKP**	**06 23 09.1**	**+0.2**	
SUW	**Suwalki**	**116.41**	**329**		IAMs_20	IAMs_20	07 14 10.1		
	comp=Z,5µm,20.0s								
OXF	**Oxford**	**116.44**	**54**		IAMs_20	IAMs_20	07 10 42.5		
	comp=Z,4µm,20.0s								
Y45A	**Yeager Farm, C**	**116.47**	**55**		IAMs_20	IAMs_20	07 07 11.3		
	comp=Z,4µm,21.0s								
SFJD	**Kangerlussuaq**	**116.57**	**10**	PKP		**PKiKP**	**06 23 08.9**	**+0.1**	
	comp=Z,11nm,0.6s,baz=341,slow=1.0,SNR=9.7								
SFJD	**Kangerlussuaq**	**116.57**	**10**	*i* P		**PKiKP**	**06 23 08.9**	**+0.1**	
E46A	**Sault Ste Mari**	**116.70**	**40**		IAMs_20	IAMs_20	07 13 38.0		
	comp=Z,6µm,20.0s								
SFIN	**Lafayette**	**116.76**	**47**		IAMs_20	IAMs_20	07 11 03.2		
	comp=Z,4µm,20.0s								
MDUB	**Mudurnu**	**116.78**	**313**			**PKPdf**	**06 23 10.1**	**-0.1**	
HFS	**Hagfors**	**116.99**	**338**	PKP		**PKPdf**	**06 23 09.2**	**-0.6**	
	comp=Z,3.0nm,0.5s,baz=94,slow=4.5,SNR=19								
346A	**Big Creek Wild**	**117.02**	**58**		IAMs_20	IAMs_20	07 07 40.0		
	comp=Z,5µm,21.0s								
146A	**Union**	**117.11**	**56**		IAMs_20	IAMs_20	07 15 20.5		
	comp=Z,5µm,18.0s								
NB2	**NORSAR Subarra**	**117.25**	**340**	PKPdf		**PKPdf**	**06 23 10.3**	**-0.1**	
	comp=Z,52nm,1.4s,baz=44,slow=1.8								
NB2	**NORSAR Subarra**	**117.25**	**340**	PKPdf		**PKPdf**	**06 23 10.3**	**-0.1**	
NB2				AMP			06 23 10.3		
	comp=Z,52nm,1.4s								
NOA	**NORSAR Array B**	**117.25**	**340**	PKP		**PKPdf**	**06 23 10.3**	**-0.1**	
	comp=Z,12nm,1.1s,baz=48,slow=2.0,SNR=10								
TPGR	**Topolog**	**117.29**	**318**	⇑P		**PKiKP**	**06 23 11.9**	**+1.0**	
WVT	**Waverly**	**117.33**	**52**			**PKiKP**	**06 23 10.8**	**-0.4**	
WVT	**Waverly**	**117.33**	**52**	PKIKP		**PKPdf**	**06 23 10.8**	**-0.4**	
WVT				MLR		MLR			
	comp=Z,7µm,19.0s								
CFR	**Carcaliu**	**117.36**	**319**	⇑P		**PKiKP**	**06 23 11.2**	**+0.2**	
CFR	**Carcaliu**	**117.36**	**319**	⇑PKIKP		**PKiKP**	**06 23 11.2**	**+0.2**	
LL02	**Futaleuf**	**117.41**	**145**		IAMs_20	IAMs_20	07 07 31.1		
	comp=Z,3µm,19.0s								
TIRR	**Tirgusor**	**117.44**	**318**		IAMs_20	IAMs_20	07 15 21.5		
	comp=Z,5µm,22.0s								
MFTR	**Murfatlar**	**117.53**	**318**	⇑P		**PKPdf**	**06 23 11.2**	**-0.1**	
EFI	**East Falkland**	**117.56**	**159**		IAMs_20	IAMs_20	07 06 12.6		
	comp=Z,4µm,20.0s								
TLBR	**Topalu**	**117.65**	**318**	⇓P		**PKPdf**	**06 23 10.6**	**-0.9**	
Z47A	**Carrollton**	**117.81**	**55**		IAMs_20	IAMs_20	07 09 26.9		
	comp=Z,5µm,20.0s								
APG	**El Apazote**	**117.88**	**76**	PKP		**PKiKP**	**06 23 13.5**	**+0.4**	
	comp=Z,0.4nm,0.9s,baz=160,slow=11,SNR=5.0								
APG				PKKPab		**PKKPab**	**06 33 37.9**	**+1.1**	
	comp=Z,0.6nm,0.7s,baz=104,slow=14,SNR=4.0								
WCI	**Wyandotte Cave**	**117.96**	**49**		IAMs_20	IAMs_20	07 09 43.4		
	comp=Z,6µm,20.0s								
ICOR	**Ion Corvin**	**117.97**	**318**	⇑P		**PKiKP**	**06 23 12.9**	**+0.7**	
H03S2	**Juan Fernandez**	**117.99**	**133**	T		T	08 32 12.7		
	baz=238,slow=74,SNR=4.8								
H03S1	**Juan Fernandez**	**118.00**	**133**	T		T	08 32 13.3		
	baz=238,slow=74,SNR=5.1								
H03S3	**Juan Fernandez**	**118.01**	**133**	T		T	08 32 14.5		
	baz=238,slow=74,SNR=5.7								
H03N3	**Juan Fernandez**	**118.17**	**133**	T		T	08 32 28.1		
	baz=241,slow=72,SNR=3.3								
H03N2	**Juan Fernandez**	**118.18**	**132**	T		T	08 32 27.5		
	baz=241,slow=72,SNR=3.6								
H03N1	**Juan Fernandez**	**118.19**	**133**	T		T	08 32 24.8		
	baz=241,slow=72,SNR=8.0								
O48B	**Farmland**	**118.21**	**47**		IAMs_20	IAMs_20	07 14 04.6		
	comp=Z,4µm,20.0s								
BURAR	**Bucovina Array**	**118.25**	**322**			**PKiKP**	**06 23 13.3**	**+0.5**	
BURAR	**Bucovina Array**	**118.25**	**322**	⇑P		**PKiKP**	**06 23 13.1**	**+0.3**	
BURAR	**Bucovina Array**	**118.25**	**322**	⇑PKIKP		**PKiKP**	**06 23 13.1**	**+0.3**	
X48A	**Hartselle**	**118.36**	**54**		IAMs_20	IAMs_20	07 16 44.2		
	comp=Z,3µm,19.0s								
R9F13	**Warsaw-Wawer**	**118.38**	**328**	*e*PKiKP		**PKiKP**	**06 23 13.8**	**+1.1**	
R9F13				*e*PP		**PP**	**06 24 27.0**	**-2.1**	
R9F13				*e*SKSdf		**SKSdf**	**06 30 25.9**	**+4.9**	
R9F13				*e*SS		**SS**	**06 40 47.3**	**+5.3**	
TURR	**Turia**	**118.40**	**320**	⇑P		**PKPdf**	**06 23 12.8**	**-0.2**	
PRD	**Provadia**	**118.58**	**317**	*e*P		**PKiKP**	**06 23 14.6**	**+1.2**	
MLR	**Muntele Rosu**	**118.67**	**320**	PKKPbc		PKKPbc	06 33 29.7	-1.6	
	comp=Z,2.3nm,0.8s,baz=155,slow=8.7,SNR=3.7								
MLR	**Muntele Rosu**	**118.67**	**320**		IAMs_20	IAMs_20	07 16 24.8		
	comp=Z,5µm,21.0s								
MLR	**Muntele Rosu**	**118.67**	**320**	⇑P		**PKPdf**	**06 23 13.7**	**0.0**	
MLR	**Muntele Rosu**	**118.67**	**320**	⇑PKIKP		**PKPdf**	**06 23 13.7**	**0.0**	
BOSA	**Boshof**	**118.68**	**233**	PKP		**PKiKP**	**06 23 14.6**	**+0.3**	
	comp=Z,22nm,1.0s,baz=123,slow=2.0,SNR=17								
N49A	**Columbus Grove**	**118.70**	**46**		IAMs_20	IAMs_20	07 12 35.5		
	comp=Z,5µm,19.0s								
LRAL	**Lakeview Retre**	**118.72**	**55**		IAMs_20	IAMs_20	07 10 54.0		
	comp=Z,5µm,21.0s								
BEL	**Belsk**	**118.77**	**328**	*e*Pdif		**Pdif**	**06 19 34.2**	**+0.2**	
BEL				*e*P		**PKiKP**	**06 23 15.0**	**+1.5**	
R49A	**Shelbyville**	**118.79**	**49**		IAMs_20	IAMs_20	07 15 02.3		
	comp=Z,4µm,19.0s								
KWP	**Kalwaria Pacla**	**118.82**	**325**	*e*Pdif		**Pdif**	**06 19 34.5**	**+0.2**	
KWP				*e*P		**PKiKP**	**06 23 14.5**	**+0.8**	
O49A	**Covington**	**118.83**	**47**		IAMs_20	IAMs_20	07 10 51.9		
	comp=Z,4µm,21.0s								
DOPR	**Dopca**	**118.83**	**320**	⇑P		**PKPdf**	**06 23 12.9**	**-1.0**	
Y49A	**Blount Mountai**	**119.01**	**54**		IAMs_20	IAMs_20	07 07 44.5		
	comp=Z,5µm,22.0s								
BORU	**Boraas**	**119.03**	**336**	*i* P		**PKiKP**	**06 23 14.3**	**+0.5**	
BRAL	**Brewton**	**119.08**	**57**		IAMs_20	IAMs_20	07 13 18.8		
	comp=Z,5µm,21.0s								
BMR	**Baia Mare**	**119.27**	**323**	⇑P		**PKiKP**	**06 23 15.0**	**+0.4**	
BMR	**Baia Mare**	**119.27**	**323**	⇑PKIKP		**PKiKP**	**06 23 15.0**	**+0.4**	
VOIR		**119.27**	**320**	⇓P		**PKPdf**	**06 23 14.4**	**-0.4**	
VOIR		**119.27**	**320**	⇓PKIKP		**PKPdf**	**06 23 14.4**	**-0.4**	
DEL	**Delary**	**119.34**	**335**	*i* P		**PKiKP**	**06 23 14.8**	**+0.3**	
JMB	**Yambol**	**119.43**	**316**	P		**PKPdf**	**06 23 14.4**	**-0.7**	
JMB	**Yambol**	**119.43**	**316**	*e*P		**PKiKP**	**06 23 15.7**	**+0.6**	
ONAU	**Onsala**	**119.53**	**337**	*i* P		**PKiKP**	**06 23 15.3**	**+0.5**	
W50A	**Signal Mountai**	**119.55**	**52**		IAMs_20	IAMs_20	07 11 45.6		
	comp=Z,6µm,20.0s								
ARR	**Arges**	**119.56**	**320**	⇓P		**PKiKP**	**06 23 16.1**	**+0.7**	
CJR	**Cluj-Napoca**	**119.63**	**322**	⇑P		**PKiKP**	**06 23 15.8**	**+0.3**	
CJR	**Cluj-Napoca**	**119.63**	**322**	⇑PKIKP		**PKiKP**	**06 23 15.8**	**+0.3**	
HUMR	**Humele**	**119.68**	**319**	⇑P		**PKiKP**	**06 23 16.1**	**+0.5**	
PLCA	**Paso Flores**	**119.71**	**144**	PKP		**PKiKP**	**06 23 16.2**	**+0.3**	
	comp=Z,3.9nm,0.8s,baz=232,slow=2.9,SNR=15								
PLCA				PKKPbc		**PKKPbc**	**06 33 27.1**	**-0.2**	
	comp=Z,32nm,1.0s,baz=53,slow=5.9,SNR=34								
PLCA	**Paso Flores**	**119.71**	**144**	*e*P		**PKPdf**	**06 23 11.8**	**-4.0**	
ELND	**Elena**	**119.72**	**317**	⇑P		**PKiKP**	**06 23 15.8**	**+0.2**	
BROLN	**Tlhalogang**	**119.76**	**242**	*i* P		**PKPdf**	**06 23 15.5**	**-0.9**	
ACSO	**Alum Creek Sta**	**119.79**	**46**		IAMs_20	IAMs_20	07 13 17.4		
	comp=Z,5µm,21.0s								
BJUU	**Bjuv**	**119.96**	**335**	*i* P		**PKiKP**	**06 23 16.5**	**+0.8**	
N51A	**Ashland**	**119.98**	**45**		IAMs_20	IAMs_20	07 10 44.5		
	comp=Z,4µm,20.0s								
X51A	**Calhoun**	**120.08**	**53**		IAMs_20	IAMs_20	07 12 38.7		
	comp=Z,5µm,20.0s								
DRGR		**120.14**	**322**	⇑P		**PKPdf**	**06 23 16.4**	**0.0**	
DRGR		**120.14**	**322**	⇑PKIKP		**PKPdf**	**06 23 16.4**	**0.0**	
OJC	**Ojcow**	**120.15**	**327**	*e*Pdif		**Pdif**	**06 19 41.1**	**+0.9**	
OJC				*e*P		**PKiKP**	**06 23 16.5**	**+0.2**	
S51A	**Beattyville**	**120.18**	**49**		IAMs_20	IAMs_20	07 13 11.0		
	comp=Z,5µm,20.0s								
HOMB	**Homborsund**	**120.20**	**339**	*i* P		**PKiKP**	**06 23 16.7**	**+0.6**	
LPHEP	**Lephephe**	**120.25**	**239**	*i* P		**PKPdf**	**06 23 17.2**	**-0.1**	
NIE	**Niedzica**	**120.29**	**326**	*e*Pdif		**Pdif**	**06 19 41.6**	**+0.8**	
NIE				*e*P		**PKiKP**	**06 23 17.4**	**+0.7**	
ARG	**Arkhangelos**	**120.33**	**309**	P		**PKPdf**	**06 23 15.1**	**-1.9**	
ALN	**Alexandroupoli**	**120.35**	**315**	P		**PKPdf**	**06 23 14.4**	**-2.4**	
SUR	**Sutherland**	**120.38**	**227**		IAMs_20	IAMs_20	07 11 52.5		
	comp=Z,4µm,21.0s								
SUR		**120.38**	**227**	P		**PKiKP**	**06 23 19.1**	**+1.5**	
PLVB	**Pleven**	**120.38**	**318**	⇑P		**PKPdf**	**06 23 16.8**	**-0.1**	
DEV	**Deva**	**120.44**	**321**	⇑P		**PKiKP**	**06 23 17.4**	**+0.4**	
DEV	**Deva**	**120.44**	**321**	⇑PKIKP		**PKiKP**	**06 23 17.4**	**+0.4**	
BI05	**Punta Hualpn**	**120.45**	**139**		IAMs_20	IAMs_20	07 04 12.4		
	comp=Z,3µm,22.0s								
EZN	**Ezine**	**120.53**	**313**	P		**PKPdf**	**06 23 16.7**	**-0.5**	
KDZ	**Kurdzhali**	**120.57**	**316**	P		**PKPdf**	**06 23 14.5**	**-2.8**	
SNART	**Snartemo**	**120.61**	**339**	*i* P		**PKiKP**	**06 23 17.6**	**+0.6**	
RDO	**Rodhopi**	**120.62**	**315**	P		**PKPdf**	**06 23 16.4**	**-1.0**	
O52A	**Adamsville**	**120.65**	**46**		IAMs_20	IAMs_20	07 14 30.9		
	comp=Z,5µm,20.0s								
152A	**Waverly Hall**	**120.67**	**55**		IAMs_20	IAMs_20	07 17 18.7		
	comp=Z,4µm,19.0s								
GADA	**Gvkgeada**	**120.71**	**314**	P		**PKPdf**	**06 23 16.5**	**-1.0**	
GZR	**Gura Zlata**	**120.73**	**321**	⇑P		**PKPdf**	**06 23 17.5**	**-0.1**	
GZR	**Gura Zlata**	**120.73**	**321**	⇑PKIKP		**PKPdf**	**06 23 17.5**	**-0.1**	
Q52A	**Bidwell**	**120.74**	**47**		IAMs_20	IAMs_20	07 13 08.6		
	comp=Z,5µm,20.0s								
LSZ	**Lusaka**	**120.75**	**249**			**PKiKP**	**06 23 19.2**	**+0.6**	
LSZ	**Lusaka**	**120.75**	**249**		IAMs_20	IAMs_20	07 10 00.8		
	comp=Z,5µm,22.0s								
LSZ	**Lusaka**	**120.75**	**249**	PKIKP		**PKiKP**	**06 23 19.2**	**+0.6**	
LSZ	**Lusaka**	**120.75**	**249**	P		**PKiKP**	**06 23 19.3**	**+0.7**	
PRK	**Paraskevi**	**120.77**	**313**	P		**PKPdf**	**06 23 16.7**	**-1.1**	
PLD	**Plovdiv**	**120.78**	**317**	P		**PKPdf**	**06 23 16.7**	**-1.0**	
PLD	**Plovdiv**	**120.78**	**317**	*e*P		**PKiKP**	**06 23 17.9**	**+0.1**	
352A	**Blakely**	**120.79**	**57**		IAMs_20	IAMs_20	07 14 55.9		
	comp=Z,4µm,20.0s								
SMG	**Samos**	**120.86**	**311**	P		**PKPdf**	**06 23 16.8**	**-1.2**	
SMTH	**Samothraki Isl**	**120.87**	**314**	P		**PKPdf**	**06 23 16.8**	**-1.1**	
LANS	**Liptovska Anna**	**120.89**	**326**	*e*P		**Pdif**	**06 19 45.6**	**+2.0**	
LANS				*e*			06 23 19.0		
LANS	**Liptovska Anna**	**120.89**	**326**	*e*PDIFF		**Pdif**	**06 19 45.6**	**+2.0**	
LANS	**Liptovska Anna**	**120.89**	**326**	*e*PKP		**PKiKP**	**06 23 19.0**	**+1.1**	
RZN	**Rozhen**	**120.97**	**316**	P		**PKPdf**	**06 23 17.0**	**-1.3**	
RZN	**Rozhen**	**120.97**	**316**	*e*P		**PKPdf**	**06 23 18.3**	**0.0**	
PGB	**Panagyurishte**	**121.03**	**317**	*e*P		**PKiKP**	**06 23 19.7**	**+1.4**	
SIGR	**SIGRI**	**121.08**	**313**	P		**PKPdf**	**06 23 17.2**	**-1.1**	
KHWEE	**KHWEE**	**121.11**	**240**	*i* P		**PKPdf**	**06 23 18.7**	**-0.4**	
MBAR	**Mbarara**	**121.13**	**266**		IAMs_20	IAMs_20	07 14 57.0		
	comp=Z,3µm,20.0s								
MBAR	**Mbarara**	**121.13**	**266**	P		**PKiKP**	**06 23 20.6**	**+1.1**	
HERR	**Herculane**	**121.19**	**320**	⇑P		**PKPdf**	**06 23 18.0**	**-0.3**	
P53A	**Whipple**	**121.20**	**47**		IAMs_20	IAMs_20	07 16 16.7		
	comp=Z,4µm,20.0s								
CHOS	**Chios island**	**121.22**	**312**	P		**PKPdf**	**06 23 17.5**	**-1.2**	
OKC	**Ostrava-Krasne**	**121.25**	**327**	*e*PKIKP		**PKiKP**	**06 23 20.0**	**+1.5**	
OKC				MLR		MLR			
	comp=Z,6µm,22.0s								
OKC	**Ostrava-Krasne**	**121.25**	**327**	*e*PKPDF		**PKiKP**	**06 23 20.0**	**+1.5**	
OKC				AMS		AMS	07 16 10.0		
	comp=Z,6µm,22.0s								
PSZ	**Piszkesteto**	**121.28**	**324**		IAMs_20	IAMs_20	07 20 08.4		
	comp=Z,3µm,20.0s								
PSZ	**Piszkesteto**	**121.28**	**324**	⇑P		**PKiKP**	**06 23 19.1**	**+0.4**	
PSZ	**Piszkesteto**	**121.28**	**324**	⇑PKIKP		**PKiKP**	**06 23 19.1**	**+0.4**	
LIA	**Limnos Island**	**121.32**	**314**	P		**PKPdf**	**06 23 17.7**	**-1.0**	
BZS	**Buzias**	**121.36**	**321**	⇑P		**PKPdf**	**06 23 18.5**	**-0.2**	
BZS	**Buzias**	**121.36**	**321**	⇑PKIKP		**PKPdf**	**06 23 18.5**	**-0.2**	

IDI **Anoyia** 123.12 309 P **PKPdf** 06 23 20.8 -1.6
MAGU **Magoula** 123.20 312 P **PKPdf** 06 23 21.0 -1.4
FLTG **Flechtingen** 123.22 332 *e*PKPdf **PKiKP** 06 23 22.3 0.0
baz=52,slow=1.9
FLTG *e*PP **PP** 06 25 03.3 +1.2
baz=55,slow=6.6
HSKC **Hora Svate Kat** 123.27 330 *e*PKPDF **PKiKP** 06 23 22.8 +0.3
HSKC AMS AMS 07 16 30.0
comp=Z,6μm,22.6s
656A **Willston** 123.29 58 IAMs_20 IAMs_20 07 15 12.4
comp=Z,4μm,20.0s
VILL **Villia** 123.31 313 P **PKPdf** 06 23 19.9 -2.9
ATAL **Atalanti** 123.33 313 P **PKPdf** 06 23 20.3 -2.4
JTS **Las Juntas de** 123.35 81 PKP **PKiKP** 06 23 24.0 +0.4
comp=Z,12nm,0.5s,baz=215,slow=22,SNR=9.8
LKR **Lokris** 123.36 313 P **PKPdf** 06 23 20.4 -2.4
456A **Hilliard** 123.39 57 IAMs_20 IAMs_20 07 12 59.7
comp=Z,4μm,21.0s
RONA **Rosalia, Austr** 123.45 326 *i* PKP **PKiKP** 06 23 23.0 0.0
comp=Z,32nm,1.2s,SNR=15
RONA *e*SKKP **SKKPbc** 06 36 58.9 -1.1
comp=Z,7.1nm,1.8s
KGCAE **Kacgae** 123.55 238 *i* P **PKPdf** 06 23 23.8 +0.1
AXAR **Agios Charalam** 123.56 314 P **PKPdf** 06 23 21.5 -1.7
CONA **Conrad Observa** 123.57 326 *i* PKP **PKiKP** 06 23 23.2 0.0
comp=Z,12nm,1.0s,SNR=12
CONA *e*SKKP **SKKPbc** 06 36 57.0 -2.7
comp=Z,10nm,1.7s
KZN **Kozani** 123.58 316 P **PKPdf** 06 23 21.6 -1.6
ZVC **Zvikov** 123.59 328 *e*PKPDF **PKiKP** 06 23 23.8 +0.7
ZVC AMS AMS 07 17 20.0
comp=Z,6μm,20.9s
VA01 **Torpederas** 123.60 136 IAMs_20 IAMs_20 07 06 12.0
comp=Z,4μm,21.0s
LONY **Lake Ozonia** 123.61 39 IAMs_20 IAMs_20 07 12 07.2
comp=Z,4μm,21.0s
ASSE **Asse, Remlinge** 123.62 333 *e*PKPdf **PKiKP** 06 23 23.3 +0.3
baz=52,slow=1.9
P57A **Homestead Farm** 123.62 45 IAMs_20 IAMs_20 07 16 42.7
comp=Z,5μm,21.0s
LTK **Loutraki** 123.62 313 P **PKPdf** 06 23 21.6 -1.7
AGG **Agios Georgios** 123.70 314 P **PKPdf** 06 23 21.7 -1.7
NEUB **Neuenburg** 123.70 331 *e*PKPdf **PKiKP** 06 23 23.2 -0.1
baz=52,slow=1.9
THL **Klokotos Trika** 123.71 315 P **PKPdf** 06 23 21.7 -1.6
IVA **Berane** 123.72 319⇑ *i* PKP **PKPdf** 06 23 23.3 -0.1
IMMV **Iera Moni Meta** 123.76 309 P **PKPdf** 06 23 21.8 -1.8
Y57A **Sumter** 123.77 52 IAMs_20 IAMs_20 07 18 38.5
comp=Z,5μm,18.0s
RETH **Rethem/Aller,** 123.80 334 *e*PKPdf **PKiKP** 06 23 23.8 +0.5
baz=52,slow=1.9
PVY **Plav** 123.81 319⇑ *i* PKP **PKPdf** 06 23 23.4 -0.3
MT02 **Curacav** 123.82 136 IAMs_20 IAMs_20 07 06 31.5
comp=Z,3μm,22.0s
PLE **Pljevlja** 123.84 320⇑ *i* PKP **PKPdf** 06 23 23.7 0.0
MAKR **Makrakomi, Fth** 123.84 314 P **PKPdf** 06 23 23.2 -0.5
LKGWB **Lokgwabe** 123.86 236 *i* P **PKPdf** 06 23 23.6 -0.7
TANN **Tannenbergstha** 123.88 330 *e*PKPdf **PKiKP** 06 23 23.7 0.0
baz=52,slow=1.9
GVD **Gavdhos** 123.89 309 P **PKPdf** 06 23 23.0 -0.8
CKRC **Cesky Krumlov** 123.90 328 *e*PKIKP **PKiKP** 06 23 24.5 +0.7
CKRC MLR MLR
comp=Z,9μm,21.9s
CKRC **Cesky Krumlov** 123.90 328 *e*PKPDF **PKiKP** 06 23 24.5 +0.7
CKRC AMS AMS 07 17 20.0
comp=Z,9μm,21.9s
PHP **Peshkopia** 123.90 318 P **PKPdf** 06 23 22.3 -1.4
OHR **Ohrid** 123.91 317 *i* P **PKiKP** 06 23 24.1 0.0
CLZ **Clausthal** 123.95 332 *e*PKPdf **PKiKP** 06 23 24.1 +0.3
baz=52,slow=1.9
KOME **Kolasin** 123.98 319⇑ *i* PKP **PKPdf** 06 23 23.8 -0.1
PLN **Plauen** 123.98 330 *e*PKPdf **PKiKP** 06 23 23.9 0.0
baz=52,slow=1.9
NKC **Novy Kostel** 124.00 330 *e*PKIKP **PKiKP** 06 23 24.6 +0.7
NKC MLR MLR
comp=Z,6μm,18.9s
NKC **Novy Kostel** 124.00 330 *e*PKPDF **PKiKP** 06 23 24.6 +0.7
NKC AMS AMS 07 19 00.0
comp=Z,6μm,18.9s
KPRO **Kipourio** 124.01 315 P **PKPdf** 06 23 23.2 -0.8
NEST **Nestorio** 124.03 316 P **PKPdf** 06 23 23.3 -0.8
PENT **Pentalofos** 124.06 316 P **PKPdf** 06 23 23.4 -0.8
KALE **Kalithea** 124.08 313 P **PKPdf** 06 23 21.3 -2.9
VA06 **Catapilco** 124.11 136 IAMs_20 IAMs_20 07 07 29.2
comp=Z,3μm,21.0s
GUR **Goura** 124.11 313 P **PKPdf** 06 23 21.6 -2.8
EVR **Evrytania** 124.11 314 P **PKPdf** 06 23 21.6 -2.7
VLI **Veliai** 124.12 311 P **PKPdf** 06 23 21.6 -2.7
KBN **Korca** 124.13 316 P **PKPdf** 06 23 23.0 -1.3
SERG **Sergoula** 124.13 313 P **PKPdf** 06 23 22.6 -1.7
ARSA **Arzberg** 124.14 326 *i* PKP **PKPdf** 06 23 24.1 +0.1
comp=Z,12nm,1.0s,SNR=7.2
MOX **Moxa** 124.14 331 *e*PKPdf **PKiKP** 06 23 24.2 0.0
baz=52,slow=1.9
MOX *e*PP **PP** 06 25 08.7 +0.4
baz=55,slow=6.6
MOX *e*L L 07 22 48.8
comp=Z,3μm,20.8s
ANX **Ano Chora** 124.16 314 P **PKPdf** 06 23 22.6 -1.8
KOGS **Kog** 124.17 324 *i* PKPdf **PKiKP** 06 23 24.2 -0.1
HDC **Heredia** 124.17 82 IAMs_20 IAMs_20 07 06 58.1
comp=Z,5μm,21.0s
GEC2 **GERESS Array S** 124.21 328 *e*PKPdf **PKPdf** 06 23 24.2 +0.1
baz=52,slow=1.9
GERES **GERESS Array B** 124.21 328 PKP **PKiKP** 06 23 24.8 +0.3
comp=Z,4.6nm,0.6s,baz=318,slow=7.8,SNR=4.2
GERES SKP **SKPdf** 06 26 56.7 +0.6
comp=Z,2.5nm,0.9s,baz=78,slow=1.4,SNR=1.8
KLV **Kalivryta, Ach** 124.21 313 P **PKPdf** 06 23 22.6 -1.9
UPM **Unac-Piva** 124.21 320⇑ *i* PKP **PKPdf** 06 23 24.0 -0.5
EFP **Efpalio** 124.24 313 P **PKPdf** 06 23 22.6 -1.8
MANZ **Manzenberg** 124.32 330 *e*PKPdf **PKiKP** 06 23 24.6 +0.1
baz=52,slow=1.9
TETR **Tetrakomo, Epi** 124.32 315 P **PKPdf** 06 23 22.8 -1.9
GTTG **Gottingen** 124.33 332 *e*PKPdf **PKiKP** 06 23 24.8 +0.3
baz=52,slow=1.9
GTTG *e*PP **PP** 06 25 11.6 +2.1
baz=55,slow=6.6
PDG **Podgorica** 124.35 319⇑ P **PKPdf** 06 23 24.2 -0.2
PDG **Podgorica** 124.35 319⇑ *i* PKP **PKPdf** 06 23 24.5 0.0
PRMD **Pramanda** 124.37 315 P **PKPdf** 06 23 22.9 -1.9
Y58A **Scranton** 124.38 52 IAMs_20 IAMs_20 07 20 14.6
comp=Z,4μm,18.0s
NKME **Niksic** 124.39 319⇑ *i* PKP **PKPdf** 06 23 24.3 -0.4
ROTZ **Rotzenmuhle** 124.41 330 *e*PKPdf **PKiKP** 06 23 24.7 0.0
baz=52,slow=1.9
PVO **Paravola** 124.44 314 P **PKPdf** 06 23 23.0 -1.8
WET **Wettzell** 124.45 329 *e*PKPdf **PKiKP** 06 23 24.9 +0.1
baz=52,slow=1.9
JAN **Janina** 124.49 315 P **PKPdf** 06 23 23.9 -1.1
MOA **Molln** 124.49 327 *i* PKP **PKPdf** 06 23 24.6 -0.1
comp=Z,14nm,1.2s,SNR=6.5
VA03 **San Esteban** 124.51 136 IAMs_20 IAMs_20 07 06 50.7
comp=Z,3μm,21.0s
CEME **Cevo** 124.51 319⇑ *i* PKP **PKPdf** 06 23 24.5 -0.4
BLY **Banja Luka** 124.52 322 ⇑P **PKiKP** 06 23 25.5 +0.4
DWPF **Disney Wildern** 124.53 60 IAMs_20 IAMs_20 07 13 33.3
comp=Z,4μm,20.0s
AMPL **Ampelaki** 124.54 314 P **PKPdf** 06 23 23.9 -1.1
DRO **Drossia** 124.56 313 P **PKPdf** 06 23 24.0 -1.1
ULC **Ulcinj** 124.57 318⇑ *i* PKP **PKPdf** 06 23 24.8 -0.2
BRY **Bratogost** 124.59 320⇑ *i* PKP **PKPdf** 06 23 24.8 -0.4
BUM **Brajici-Budva** 124.64 319⇑ *i* PKP **PKPdf** 06 23 25.2 0.0
RLS **Riolos of Patr** 124.70 313 P **PKPdf** 06 23 24.4 -0.9
ITM **Ithomi** 124.70 312 P **PKPdf** 06 23 24.4 -1.0
AXS **Araxos** 124.71 313 P **PKPdf** 06 23 24.4 -0.9
AMT **Artemida-Makis** 124.73 313 P **PKPdf** 06 23 24.4 -1.0
SOKA **Soboth** 124.74 325 *i* PKP **PKPdf** 06 23 25.2 0.0
comp=Z,29nm,1.2s,SNR=22
SOKA *e*SKKP **SKKPbc** 06 36 52.4 -3.3
comp=Z,2.6nm,1.2s
IBBN **Ibbenburen** 124.80 334 *e*PKPdf **PKiKP** 06 23 25.5 +0.2
baz=52,slow=1.9
UBBA **Unterbreizbach** 124.81 332 *e*PKPdf **PKiKP** 06 23 25.6 +0.3
baz=52,slow=1.9
HCY **Herceg Novi** 124.84 319⇑ *i* PKP **PKPdf** 06 23 25.5 0.0
BIOA **Bad Ischl, Aus** 124.93 327 *i* PKP **PKPdf** 06 23 25.3 -0.2
comp=Z,18nm,1.1s,SNR=14
BIOA *e*SKS **SKSac** 06 30 25.8 +0.2
comp=Z,10nm,1.2s
BIOA SKKP **SKKPbc** 06 36 52.9 -2.2
comp=Z,6.5nm,1.4s
PYL **PYLOS** 124.95 312 P **PKPdf** 06 23 24.8 -1.0
GRA1 **Grafenberg Arr** 124.95 330 IAMs_20 IAMs_20 07 18 26.2
comp=Z,5μm,22.0s
GRF **Grafenberg Arr** 124.95 330 *e*PKPdf **PKiKP** 06 23 25.7 -0.1
baz=52,slow=1.9
GRF *e*L L 07 18 48.2
comp=Z,4μm,21.3s
GRFO **Grafenberg** 124.95 330 IAMs_20 IAMs_20 07 18 48.2
comp=Z,4μm,20.0s
GRTLG **Ghanzi** 124.98 239 *i* P **PKPdf** 06 23 26.1 -0.4
LKD2 **Lefkada island** 124.99 314 P **PKPdf** 06 23 24.9 -1.0
NYDR **Nydri-Lefkada** 124.99 314 P **PKPdf** 06 23 24.9 -0.9
EVGI **Lefkada island** 125.06 314 P **PKPdf** 06 23 25.0 -1.0
OBKA **Obir** 125.11 325 *i* PKP **PKPdf** 06 23 25.8 -0.2
comp=Z,22nm,1.3s,SNR=9.8
OBKA *e*SKS **SKSac** 06 30 26.9 +0.5
comp=Z,9.2nm,1.4s
KOOLE **Kule** 125.18 237 *i* P **PKPdf** 06 23 26.3 -0.6
FSK **Fiskardo** 125.19 314 P **PKPdf** 06 23 25.3 -0.9
KEK **Kerkira** 125.20 316 P **PKPdf** 06 23 25.3 -0.9
BOJS **Bojanci** 125.27 324 *i* PKPdf **PKiKP** 06 23 26.6 +0.1
KASTN **Kahler Asten** 125.28 333 *e*PKPdf **PKiKP** 06 23 26.6 +0.1
baz=52,slow=1.9
VLS **Valsamata** 125.29 314 P **PKPdf** 06 23 25.5 -1.0
RJOB **Jochberg** 125.36 327 *e*PKPdf **PKPdf** 06 23 25.9 -0.4
baz=52,slow=1.9
LJU **Ljubljana** 125.39 325 *i* PKPdf **PKiKP** 06 23 26.8 0.0
KBA **Koelnbreinsper** 125.45 326 *i* PKP **PKPdf** 06 23 26.0 -0.7
comp=Z,22nm,1.2s,SNR=20
KBA *e*SKKP **SKKPbc** 06 36 51.9 -1.6
comp=Z,4.6nm,1.3s
Y60A **Bolivia** 125.49 52 IAMs_20 IAMs_20 07 11 41.8
comp=Z,5μm,22.0s
061Z **Oohoppi** 125.49 62 IAMs_20 IAMs_20 07 24 31.9
comp=Z,3μm,19.0s
AAGR **Agrelo** 125.49 138‖ *e*P **PKiKP** 06 23 28.4 +0.9
CO03 **El Pedregal** 125.50 134 IAMs_20 IAMs_20 07 07 21.1
comp=Z,3μm,21.0s
HNH **Hanover** 125.50 39 IAMs_20 IAMs_20 07 19 29.9
comp=Z,5μm,20.0s
D62A **Allapoint, All** 125.52 34 IAMs_20 IAMs_20 07 16 32.9
comp=Z,5μm,21.0s
MYKA **Terra Mystica** 125.55 326 *e*PKP **PKPdf** 06 23 26.5 -0.3
comp=Z,16nm,1.1s
MYKA *e*SKS **SKSac** 06 30 28.5 +0.8
comp=Z,6.4nm,1.2s
LESA **Schwarzleotal** 125.61 327 *i* PKP **PKPdf** 06 23 27.0 +0.1
comp=Z,30nm,1.3s,SNR=9.2
LESA *e*SKS **SKSac** 06 30 28.7 +0.8
comp=Z,12nm,1.6s
LESA *e*SKKP **SKKPbc** 06 36 51.1 -1.7
comp=Z,5.9nm,1.1s
AUSP **Uspallata** 125.62 136‖ *e*P **PKiKP** 06 23 29.0 +0.9
BUG **Bochum-Univer** 125.63 334 *e*PKPdf **PKiKP** 06 23 27.0 0.0
baz=52,slow=1.9
060A **Indiantown** 125.71 61 IAMs_20 IAMs_20 07 18 27.4
comp=Z,3μm,19.0s
H62A **Milan** 125.73 37 IAMs_20 IAMs_20 07 19 27.8
comp=Z,5μm,20.0s
FUR **Furstenfeldbru** 125.90 329 *e*PKPdf **PKPdf** 06 23 27.5 +0.1
baz=52,slow=1.9
RTLS **Leoncito** 125.93 136 *e*P **PKiKP** 06 23 28.7 0.0
XAUDM **Khaudum** 125.94 243 *i* P **PKiKP** 06 23 29.1 +0.3
TNS **Taunus Mts** 125.94 332 *e*PKPdf **PKiKP** 06 23 27.9 +0.1
baz=52,slow=1.9
TNS *e*PP **PP** 06 25 21.7 +1.4
baz=55,slow=6.6
ABTA **Abfaltersbach** 126.11 326 *i* PKP **PKPdf** 06 23 27.8 -0.1
comp=Z,41nm,1.3s,SNR=15
ABTA *e*SKS **SKSac** 06 30 29.3 -0.1
comp=Z,7.7nm,1.1s
WATA **Walderalm** 126.26 328 *i* PKP **PKPdf** 06 23 28.4 +0.2
comp=Z,46nm,1.2s,SNR=14
WATA *e*SKKP **SKKPbc** 06 36 48.1 -2.6
comp=Z,7.9nm,1.5s
WTTA **Wattenberg** 126.27 327 *e*PKP **PKiKP** 06 23 28.6 -0.1
comp=Z,82nm,1.3s,SNR=20
WTTA *e*SKS **SKSac** 06 30 30.7 +0.5
comp=Z,20nm,1.4s
TRQA **Tornquist** 126.40 147 IAMs_20 IAMs_20 07 17 36.6
comp=Z,2μm,18.0s
EKA **Esdalemuir Ar** 126.42 343 PKP **PKiKP** 06 23 28.7 +0.2
comp=Z,9.7nm,0.6s,baz=9.2,slow=2.4,SNR=16
MOTA **Moosalm** 126.50 328 *i* PKP **PKPdf** 06 23 28.8 +0.1
comp=Z,58nm,1.3s,SNR=12
SQTA **Sankt Quirin** 126.52 328 *e*PKP **PKPdf** 06 23 28.8 +0.1
comp=Z,55nm,1.3s,SNR=14
STU **Stuttgart** 126.56 330 IAMs_20 IAMs_20 07 19 53.7
comp=Z,3μm,21.0s
STU **Stuttgart** 126.56 330 *e*PKPdf **PKPdf** 06 23 28.8 +0.2
baz=52,slow=1.9
RETA **Reutte** 126.59 328 *e*PKP **PKPdf** 06 23 28.9 +0.1
comp=Z,25nm,1.4s,SNR=6.2
RETA *e*SKKP **SKKPbc** 06 36 46.4 -3.1
comp=Z,14nm,1.8s
BTNL **Ternell** 126.74 334 *d*PKPdf **PKiKP** 06 23 29.8 +0.5
MEM **Membach** 126.78 334 *d*PKPdf **PKiKP** 06 23 29.6 +0.2
BEBN **Eben Emael** 126.79 334 *d*PKPdf **PKiKP** 06 23 29.8 +0.4
UBR **Ueberruh** 126.81 329 *e*PKPdf **PKPdf** 06 23 29.1 -0.1
baz=52,slow=1.9
MATE **Matera** 126.88 318 ⇑P **PKiKP** 06 23 29.7 -0.1
AC05 **El Transito** 126.90 132 IAMs_20 IAMs_20 07 08 18.4
comp=Z,3μm,22.0s
FETA **Feichten** 126.91 328 *e*PKP **PKiKP** 06 23 29.8 -0.2
comp=Z,50nm,1.2s,SNR=13
FETA SKKP **SKKPbc** 06 36 45.6 -2.9
comp=Z,9.1nm,1.4s
BHOU **Houvegnez** 126.96 333 *d*PKPdf **PKiKP** 06 23 30.1 +0.3
BSTI **Sart Tilman** 126.99 334 *d*PKPdf **PKiKP** 06 23 30.2 +0.4
DAVA **Damuels** 127.18 328 *e*PKPdf **PKPdf** 06 23 30.3 +0.3
comp=Z,40nm,1.3s,SNR=8.9
BCLA **Clavier** 127.23 334 *d*PKPdf **PKiKP** 06 23 30.5 +0.2
BFO **Black Forest** 127.28 330 IAMs_20 IAMs_20 07 24 41.8
comp=Z,4μm,21.0s
BFO **Black Forest** 127.28 330 *e*PKPdf **PKPdf** 06 23 29.9 -0.1
baz=52,slow=1.9
BGES **Gesves** 127.35 334 *d*PKP **PKiKP** 06 23 31.4 +0.9
UCC **Uccle** 127.35 335 *d*PKP **PKiKP** 06 23 30.4 -0.1
WLF **Walferdange** 127.39 333 PKP **PKiKP** 06 23 30.5 -0.2
WLF **Walferdange** 127.39 333 *d*PKP **PKiKP** 06 23 31.3 +0.7
WLF **Walferdange** 127.39 333 *e*PKPdf **PKiKP** 06 23 31.2 +0.5
baz=52,slow=1.9
RCHB **Rochefort** 127.45 334 *d*PKPdf **PKiKP** 06 23 30.6 -0.1
TIP **Timpagrande** 127.54 316 IAMs_20 IAMs_20 07 22 39.1
comp=Z,3μm,21.0s
TIP **Timpagrande** 127.54 316 ⇓P **PKPdf** 06 23 30.5 -0.4
BMRD **Maredsous** 127.55 334 *d*PKPdf **PKiKP** 06 23 31.4 +0.5
DOU **Dourbes** 127.77 334 *d*PKPdf **PKiKP** 06 23 31.3 -0.1
EMMW **East Machias** 127.83 35 IAMs_20 IAMs_20 07 21 56.1
comp=Z,4μm,19.0s
AGUA **GUANDACOL** 127.83 134⇑ *e*P **PKiKP** 06 23 34.2 +1.9
ATAH **Atahualpa** 128.10 103 PKP **PKiKP** 06 23 34.5 +0.9
comp=Z,45nm,1.0s,baz=282,slow=2.7,SNR=29
ATAH SKP **SKPdf** 06 27 05.7 +0.8
comp=Z,15nm,0.9s,baz=310,slow=15,SNR=4.0
NNA **Nana** 128.36 110 PKP **PKiKP** 06 23 34.2 +0.6
comp=Z,44nm,1.1s,baz=283,slow=3.4,SNR=8.2
BCIP **Isla Barro Col** 128.40 83 IAMs_20 IAMs_20 07 07 40.7
comp=Z,4μm,22.0s
VCA **Vinchina** 128.46 134‖ *e*P **PKiKP** 06 23 34.2 +0.5
ACLC **CERRO LA CRUZ** 128.96 135 *e*P **PKPdf** 06 23 32.0 -2.0
PB14 **IPOC Station P** 128.99 128 PKP **PKPdf** 06 23 33.5 -0.9
PB14 **IPOC Station P** 128.99 128 IAMs_20 IAMs_20 07 09 53.5
comp=Z,3μm,21.0s
OTAV **Otavalo** 129.28 94 IAMs_20 IAMs_20 07 13 59.1
comp=Z,3μm,19.0s
OTAV **Otavalo** 129.28 94 ⇑PKIKP **PKiKP** 06 23 35.8 -0.3
TINO **Tinogasta** 129.31 133 *e*P **PKiKP** 06 23 35.3 0.0
AANI **Anillaco** 129.33 134‖ *e*P **PKPdf** 06 23 34.7 +0.1
MTDJ **Mount Denham** 129.96 71 IAMs_20 IAMs_20 07 14 25.6
comp=Z,3μm,20.0s
PB05 **IPOC Station P** 130.03 126 IAMs_20 IAMs_20 07 11 14.0
comp=Z,3μm,21.0s
PB06 **IPOC Station P** 130.60 126 IAMs_20 IAMs_20 07 11 41.3
comp=Z,3μm,21.0s
BBAC **Balboa, Cauca** 130.67 92 PKP **PKiKP** 06 23 39.1 +0.5
comp=Z,1μmcomp=Z,53nm,1.6s
PB03 **IPOC Station P** 130.78 125 IAMs_20 IAMs_20 07 11 28.1
comp=Z,3μm,21.0s
PB07 **IPOC Station P** 130.82 125 IAMs_20 IAMs_20 07 11 21.2
comp=Z,3μm,22.0s
POPC **Popayan, Colom** 131.28 91 PKP **PKiKP** 06 23 39.6 -0.2
comp=Z,1μmcomp=Z,78nm,1.5s
PB09 **IPOC Station P** 131.31 125 IAMs_20 IAMs_20 07 11 55.2
comp=Z,3μm,20.0s
FSA **Cafayete** 131.58 132 *e*P **PKiKP** 06 23 40.8 +0.7
AF01 **San Pedro de A** 131.59 127 IAMs_20 IAMs_20 07 10 25.4
comp=Z,3μm,21.0s
APAC **Apartado, Choc** 131.62 84 PKP **PKiKP** 06 23 41.7 +1.5
comp=Z,78nm,2.4s
PB12 **IPOC Station P** 131.86 121 IAMs_20 IAMs_20 07 09 44.1
comp=Z,5μm,22.0s
PB11 **IPOC Station P** 131.92 123 IAMs_20 IAMs_20 07 09 36.6
comp=Z,3μm,22.0s
GTBY **Guantanamo Bay** 131.93 68 IAMs_20 IAMs_20 07 13 00.9
comp=Z,3μm,22.0s
AP01 **Chacalluta** 131.95 121 IAMs_20 IAMs_20 07 10 40.6
comp=Z,4μm,20.0s
DBBC **Dabeiba** 131.98 85 PKP **PKiKP** 06 23 42.5 +1.5
PB08 **IPOC Station P** 132.17 123 PKP **PKPdf** 06 23 40.5 -0.1
ORTC **Ortega, Tolima** 132.81 90 PKP **PKiKP** 06 23 42.9 +0.2
comp=Z,2μmcomp=Z,107nm,1.8s
SJCC **San Jacinto, C** 132.98 82 PKP **PKiKP** 06 23 44.3 +1.3
PB18 **Visviri** 133.02 120 IAMs_20 IAMs_20 07 11 49.1
comp=Z,4μm,21.0s
PRAC **Prado** 133.15 90 PKP **PKiKP** 06 23 43.5 +0.1
comp=Z,3μmcomp=Z,95nm,1.9s
ROSC **El Rosal** 133.78 88 PKhKP PKPpre 06 23 39.7
comp=Z,17nm,0.6s,baz=298,slow=2.8,SNR=18
ROSC SKP **SKPdf** 06 27 15.8 +0.4
comp=Z,29nm,1.1s,baz=112,slow=17,SNR=4.2
SPBC **San Pablo de B** 134.06 87 PKP **PKiKP** 06 23 46.4 +1.2
comp=Z,3μmcomp=Z,118nm,1.9s
KEST **Kesra** 134.37 316 PKP **PKPdf** 06 23 44.5 +0.6
comp=Z,28nm,1.0s,baz=340,slow=1.7,SNR=16
KEST SKPbc **SKPbc** 06 27 10.4 +0.4
comp=Z,88nm,1.0s,baz=27,slow=1.6,SNR=18
KEST **Kesra** 134.37 316 P **PKiKP** 06 23 45.1 -0.2
LPAZ **La Paz** 134.74 119 PKhKP PKPpre 06 23 32.7
comp=Z,1.9nm,0.7s,baz=204,slow=1.0,SNR=5.1
LPAZ PKP **PKiKP** 06 23 46.5 -0.7
comp=Z,18nm,0.9s,baz=22,slow=4.7,SNR=17
LPAZ SKPbc **SKPbc** 06 27 12.9 +0.5
comp=Z,39nm,1.4s,baz=162,slow=14,SNR=5.5
OCAC **Ocana** 134.85 84 PKP **PKiKP** 06 23 46.7 -0.2
comp=Z,3μmcomp=Z,101nm,2.1s
MAHO **Mahon** 135.09 325 IAMs_20 IAMs_20 07 24 59.0
comp=Z,3μm,22.0s
CMAH **Djebel Manchou** 135.17 319 P **SKPdf** 06 27 13.9 -2.9
GRTK **Grand Turk** 135.22 65 IAMs_20 IAMs_20 07 20 03.7
comp=Z,3μm,21.0s
ABSA **Djebel Ababsia** 135.33 318 P **SKPdf** 06 27 15.4 -1.8
PAMC **Pamplona, Colo** 135.46 85 PKP **PKiKP** 06 23 48.3 -0.3
SDDR **Presa de Saban** 135.66 68 IAMs_20 IAMs_20 07 20 45.5
comp=Z,4μm,20.0s
CKFL **Kef-Lekhel** 135.75 319 P **SKPdf** 06 27 15.5 -2.5
CASM **Ain Smara** 135.99 319 P **SKPdf** 06 27 16.2 -2.1
DFRA **Djebel Bou Aff** 136.22 320 P **SKPdf** 06 27 18.0 -0.8
SET **Setif** 136.73 320 P **SKPdf** 06 27 20.0 +0.3
CPUP **Villa Florida** 137.47 139 PKhKP PKPpre 06 23 38.1
comp=Z,2.3nm,1.1s,baz=182,slow=9.9,SNR=3.2
CPUP PKP **PKPdf** 06 23 50.3 +0.5
comp=Z,9.1nm,1.0s,baz=279,slow=3.5,SNR=4.4
SDV **Santo Domingo** 137.49 83 PKhKP PKPpre 06 23 42.8
comp=Z,6.3nm,0.9s,baz=56,slow=2.5,SNR=7.4
SDV PKP **PKPdf** 06 23 51.4 +1.0
comp=Z,105nm,1.0s,baz=198,slow=0.6,SNR=54
SDV SKP **SKPbc** 06 27 22.5 +2.1
comp=Z,42nm,1.2s,baz=258,slow=12,SNR=14
SDV **Santo Domingo** 137.49 83 IAMs_20 IAMs_20 07 15 35.7
comp=Z,3μm,22.0s
SDV **Santo Domingo** 137.49 83 *e*P **PKPdf** 06 23 44.8 -5.6
CNLB **Canela** 139.03 149 *e*P **PKPdf** 06 23 48.6 -4.1
PBRG **Braganca** 139.15 336 *e*PKPdf **PKPdf** 06 23 45.0 -7.5
PGAV **Gavieira, Arco** 139.62 337 *e*PKPdF 06 23 54.2
PGAV *e*SKP **SKPdf** 06 27 24.6 -0.1
PGAV *e*LQ LQ 07 15 58.5
PGAV *e*LR LR 07 21 34.0
PGAV *i* IAMs_20 IAMs_20 07 29 47.6
comp=Z,4μm,20.0s
ESDC **Sonseca Array** 139.63 331 PKhKP PKPpre 06 23 44.7
comp=Z,10nm,1.0s,baz=26,slow=3.6,SNR=25
ESDC PP **PP** 06 26 47.3 -0.7
comp=Z,23nm,1.1s,baz=30,slow=6.7,SNR=12
ESDC SKPbc **SKPbc** 06 27 25.8 +0.3
comp=Z,10nm,1.1s,baz=17,slow=4.0,SNR=5.2
CART **Cartagena** 139.66 326 PKP **PKPdf** 06 23 52.4 -1.0
CART **Cartagena** 139.66 326 IAMs_20 IAMs_20 07 28 35.9
comp=Z,4μm,22.0s
PCAB **Cabril** 139.75 337 *e*PKPdf **PKPdf** 06 23 54.7 +1.1
PCAB *e*SKP **SKPdf** 06 27 24.4 -0.4
MVO **Moncorvo** 139.80 335 *e*PKPdf **PKPdf** 06 23 47.6 -6.2
MVO *e*SKP **SKPbc** 06 27 28.7 +2.8
MVO *e*LQ LQ 07 17 12.2
MVO *e*LR LR 07 22 13.1
MVO *i* IAMs_20 IAMs_20 07 33 00.9
comp=Z,3μm,18.0s
POLO **Lamas de Olo** 139.94 336 *e*PKPdf **PKPdf** 06 23 47.9 -6.2
POLO *e*SKP **SKPbc** 06 27 30.4 +4.1
ITAB **Concordia** 139.97 145 *e*P **PKPdf** 06 23 49.1 -5.3
PVRL **Vila Real** 139.99 336 *e*PKPdf **PKPdf** 06 23 48.5 -5.5
PVRL *e*SKP **SKPbc** 06 27 32.2 +5.8
PVIS **Viseu** 140.54 336 *e*PKPdf **PKPdf** 06 23 48.5 -6.5
PVIS *e*SKP **SKPbc** 06 27 31.4 +3.5
SJG **San Juan** 140.60 68 IAMs_20 IAMs_20 07 23 42.5
comp=Z,3μm,20.0s
MTE **Manteigas** 140.66 335 IAMs_20 IAMs_20 07 33 03.2
comp=Z,3μm,19.0s
MTE **Manteigas** 140.66 335 *e*PKPdf **PKPdf** 06 23 49.5 -5.8
MTE *e*SKP **SKPbc** 06 27 30.4 +2.2
MTE *e*LQ LQ 07 17 19.9
MTE *e*LR LR 07 21 06.2
MTE *i* IAMs_20 IAMs_20 07 33 36.4
comp=Z,3μm,20.0s
PCBR **Castelo Branco** 141.10 335 *e*PKPdf **PKPdf** 06 23 51.1 -4.9
PCBR *e*SKP **SKPbc** 06 27 31.1 +1.9
AMBA **Amambai (Brazi** 141.34 138 *e*P **PKPdf** 06 23 51.1 -5.9
PCAS **Casmilo, Conde** 141.34 336 *e*PKPdf **PKPdf** 06 23 51.7 -4.8
PCAS *e*SKP **SKPdf** 06 27 31.0 +3.4
PMRV **Marv??o** 141.40 334 *e*PKPdf **PKPdf** 06 23 51.6 -5.1
PMRV *e*SKP **SKPbc** 06 27 33.5 +3.4
PMRV *e*LR LR 07 17 52.2
PMRV *i* IAMs_20 IAMs_20 07 30 57.3
comp=Z,4μm,20.0s
PSARD **Sardoal** 141.59 335 *e*PKPdf **PKPdf** 06 23 51.5 -5.4
PSARD *e*SKP **SKPbc** 06 27 34.6 +4.1
BDQN **Bodoquena, MS** 141.74 133 *e*P **PKPdf** 06 23 52.0 -5.7
PSBE **So Bento** 141.92 336 *e*PKPdf **PKPdf** 06 23 53.3 -4.3
PSBE *e*SKP **SKPbc** 06 27 35.8 +4.3
PESTR **Estremoz** 141.95 334 *e*PKPdf **PKPdf** 06 23 52.9 -4.8
PESTR *e*SKP **SKPbc** 06 27 34.9 +3.3
EDA **Edea** 142.03 269 IAMs_20 IAMs_20 07 27 48.0
comp=Z,3μm,22.0s
PMTG **Montargil** 142.06 335 *e*PKPdf **PKPdf** 06 23 53.4 -4.4
PMTG *e*SKP **SKPbc** 06 27 34.7 +3.0
EMAL **Malaga-Limoner** 142.11 329 PKP **PKPdf** 06 23 52.6 -5.3
PARRA **Arraiolos** 142.19 334 *e*PKPdf **PKPdf** 06 23 53.9 -4.1
PARRA *e*SKP **SKPbc** 06 27 35.9 +3.9
TEFE **Tefe** 142.26 103 *e*P **PKPdf** 06 23 54.8 -4.0
PBAR **Barrancos** 142.27 333 *e*PKPdf **PKPdf** 06 23 54.1 -4.1
PBAR *e*SKP **SKPbc** 06 27 35.1 +2.8
WMELI **Melilla** 142.39 326 PKP **PKPdf** 06 23 54.1 -4.3
EVO **Evora** 142.41 334 PKP **PKPdf** 06 23 53.6 -4.8
EVO **Evora** 142.41 334 *e*PKPdf **PKPdf** 06 23 54.9 -3.5
*e*SKP **SKPbc** 06 27 36.5 +3.9
AQDB **Aquidauana** 142.48 134 *e*P **PKPdf** 06 23 54.2 -4.9
MOE **Montemor** 142.57 334 *e*PKPdf **PKPdf** 06 23 55.2 -3.5
MOE *e*SKP **SKPbc** 06 27 37.0 +3.9
PMAFR **Mafra** 142.59 336 *e*PKPdf **PKPdf** 06 23 56.0 -2.7
LIS **Lisbon** 142.74 335 *e*PKP **PKPdf** 06 23 56.8 -2.1
LIS IAMs_20 IAMs_20 07 29 43.8
comp=E,5μm,18.1s
LIS **Lisbon** 142.74 335 *e*PKPdf **PKPdf** 06 23 56.9 -2.1
LIS **Lisbon** 142.74 335 *e*PKIKP **PKPdf** 06 23 56.8 -2.1
PTLB **Pontes e Lacer** 142.76 124 *e*P **PKPdf** 06 23 55.8 -3.8
PBEJ **Beja** 142.77 333 *e*PKPdf **PKPdf** 06 23 56.3 -2.8
PBEJ *e*SKP **SKPbc** 06 27 36.9 +3.4
MESJ **Messejana** 143.08 334 *e*PKP PKPbc 06 23 57.4 +0.9
MESJ IAMs_20 IAMs_20 07 26 04.7
comp=Z,3μm,20.4s
MESJ **Messejana** 143.08 334 *e*PKPdf PKPbc 06 23 57.2 +0.7

SFS	**San Fernando**	**143.24**	**330**	PKP	PKPbc	06 23 57.8	+0.8		
SABA	**Saba**	**143.40**	**68**	IAMs_20	IAMs_20	07 18 03.7			
	comp=Z,4µm,22.0s								
PBDV	**Barranco-do-Ve**	**143.44**	**333**	*e*PKPdf	PKPbc	06 23 58.9	+1.4		
PBDV				*e*SKP	**SKPbc**	**06 27 39.9**	**+4.7**		
SMRT	**St. Maarten**	**143.44**	**67**	IAMs_20	IAMs_20	07 21 17.8			
	comp=Z,4µm,22.0s								
LDASE	**Londrina, Braz**	**143.48**	**143**	*e*P	PKPab	06 23 57.3	+0.2		
PTEO	**Sao Teotonio**	**143.54**	**334**	*e*PKPdf	**PKPdf**	**06 23 59.1**	**-1.3**		
PTEO				*e*SKP	**SKPbc**	**06 27 38.6**	**+3.2**		
SEUS	**St. Eustatius**	**143.68**	**68**	IAMs_20	IAMs_20	07 18 11.0			
	comp=Z,4µm,22.0s								
MORF	**Marmelete**	**143.71**	**334**	*e*PKP	PKPbc	06 23 58.7	+0.3		
MORF				IAMs_20	IAMs_20	07 30 22.6			
	comp=E,5µm,27.1s								
MORF	**Marmelete**	**143.71**	**334**	*e*PKPdf	**PKPdf**	**06 23 59.8**	**-1.0**		
MORF				*e*SKP	**SKPbc**	**06 27 37.4**	**+1.5**		
MORF	**Marmelete**	**143.71**	**334**	*e*PKIKP	PKPbc	06 23 58.7	+0.3		
PFVI	**Vila Bisbo**	**143.93**	**334**	*e*PKPdf	**PKPdf**	**06 24 00.5**	**-0.7**		
PFVI				*e*SKP	**SKPbc**	**06 27 39.8**	**+3.4**		
FRTB	**Fartura**	**144.44**	**144**	*e*P	**PKPab**	**06 23 57.0**	**-3.7**		
MBFL	**Flemmings, Mon**	**144.58**	**69**	*e*P	PKPbc	06 24 01.6	0.0		
MBWH	**Windy Hill**	**144.60**	**69**	*e*P	**PKPab**	**06 24 00.5**	**-0.9**		
MBWH				x	x	07 13 58.9			
PCMB	**Pacaembu**	**144.71**	**140**	*e*P	**PKPab**	**06 23 59.4**	**-2.3**		
ANWB	**Willy Bob**	**144.73**	**67**	IAMs_20	IAMs_20	07 22 45.8			
	comp=Z,4µm,21.0s								
ANWB	**Willy Bob**	**144.73**	**67**	*e*P	**PKPab**	**06 24 01.3**	**-0.6**		
ANWB				x	x	07 13 57.6			
PP1B	**Ponte de Pedra**	**144.90**	**131**	*e*P	**PKPab**	**06 23 58.0**	**-4.5**		
IFR	**Ifrane**	**144.93**	**326**	PKP	**PKPdf**	**06 24 03.2**	**-0.1**		
PET01	**Itanhaem-SP**	**144.96**	**148**	*e*P	**PKPab**	**06 23 58.3**	**-4.2**		
DHSZ	**Broadband at M**	**145.11**	**69**	*e*P	**PKPbc**	**06 24 02.8**	**-0.5**		
DHSZ				x	x	07 13 37.3			
GDHS	**Morne Mazeau,**	**145.11**	**69**	IAMs_20	IAMs_20	07 23 42.0			
	comp=Z,4µm,22.0s								
ATGZ	**Broadband at L**	**145.19**	**70**	*e*P	PKiKP	06 24 15.9	+8.2		
MMLZ	**Guadeloupe Bro**	**145.25**	**70**	*e*P	**PKPbc**	**06 24 02.5**	**-1.2**		
SALV	**Santo Antonio**	**145.28**	**128**	*e*P	**PKPbc**	**06 24 00.5**	**-3.4**		
CBE	**Ff, Capester**	**145.31**	**70**	IAMs_20	IAMs_20	07 23 59.2			
	comp=Z,3µm,20.0s								
ABD	**La Joyeuse, An**	**145.32**	**69**	IAMs_20	IAMs_20	07 19 27.5			
	comp=Z,4µm,22.0s								
SPB	**Sao Paulo**	**145.44**	**147**	*e*P	**PKPbc**	**06 24 00.7**	**-3.4**		
DSLB	**Salisbury**	**145.63**	**71**	*e*P	**PKPab**	**06 24 05.9**	**+0.6**		
DSLB				x	x	07 12 53.2			
C2SB	**Chapadao do Su**	**145.63**	**135**	*e*P	**PKPdf**	**06 24 01.1**	**-3.5**		
MAGL	**Barre de l'ile**	**145.64**	**70**	IAMs_20	IAMs_20	07 23 47.1			
	comp=Z,4µm,21.0s								
DWS	**Wesley**	**145.70**	**70**	*e*P	**PKPdf**	**06 24 04.7**	**-0.1**		
DWS				x	x	07 13 37.0			
DSDZ	**La Diserade, G**	**145.75**	**69**	*e*P	**PKPbc**	**06 24 05.3**	**+0.1**		
DSDZ				x	x	07 12 10.0			
GDSD	**La Dsirade Is**	**145.75**	**69**	IAMs_20	IAMs_20	07 23 20.0			
	comp=Z,4µm,22.0s								
H05N1	**Guadeloupe/Mar**	**145.76**	**69**	PKPbc	**PKPdf**	**06 24 04.9**	**+0.1**		
	SNR=9.4								
H07N1	**FLORES T-PHASE**	**145.76**	**4**	PKPbc	**PKPab**	**06 24 05.7**	**+0.6**		
	SNR=7.0								
DLPL	**La Plaine**	**145.81**	**71**	*e*P	**PKPdf**	**06 24 05.1**	**+0.2**		
DLPL				x	x	07 13 37.2			
SVN	**Savane Anatole**	**146.00**	**71**	IAMs_20	IAMs_20	07 24 29.9			
	comp=Z,2µm,21.0s								
SVN	**Savane Anatole**	**146.00**	**71**	*e*P	**PKPdf**	**06 24 05.1**	**-0.2**		
GRGR	**Grenville**	**146.02**	**76**	IAMs_20	IAMs_20	07 28 56.6			
	comp=Z,2µm,22.0s								
GRGR	**Grenville**	**146.02**	**76**	*e*P	**PKPdf**	**06 24 04.3**	**-1.0**		
GRGR				x	x	07 11 37.6			
H07S1	**FLORES T-PHASE**	**146.06**	**5**	PKPbc	**PKPab**	**06 24 07.2**	**+0.9**		
	SNR=34								
BIM	**Bigot**	**146.16**	**72**	*e*P	**PKPab**	**06 24 07.7**	**+0.4**		
VAO	**Valinhos**	**146.16**	**147**	*e*P	**PKPdf**	**06 24 02.0**	**-3.5**		
MACA	**Manacapuru-AM**	**146.17**	**104**	*e*P	**PKPdf**	**06 24 00.2**	**-5.5**		
SVB	**Belmont**	**146.22**	**74**	*e*P	**PKPdf**	**06 24 04.5**	**-1.2**		
RCLB	**Rio Claro- Sao**	**146.32**	**146**	*e*P	**PKPdf**	**06 24 00.5**	**-5.3**		
AVE	**Averroes**	**146.34**	**328**	PKP	**PKPdf**	**06 24 05.6**	**+0.2**		
AVE	**Averroes**	**146.34**	**328**	IAMs_20	IAMs_20	07 36 50.3			
	comp=Z,2µm,20.0s								
SLBI	**Saint Lucia, B**	**146.35**	**73**	*e*P	**PKPdf**	**06 24 06.2**	**+0.3**		
SLBI				x	x	07 12 32.5			
MPOM	**Morne Pois Mar**	**146.37**	**72**	IAMs_20	IAMs_20	07 31 02.8			
	comp=Z,3µm,22.0s								
H05S1	**Guadeloupe/Mar**	**146.40**	**72**	PKPbc	**PKPbc**	**06 24 07.2**	**-0.1**		
	SNR=6.2								
MCLT	**Moule a Chique**	**146.44**	**73**	*e*P	**PKPdf**	**06 24 06.3**	**+0.3**		
MCLT				x	x	06 40 40.3			
TRN	**Trinidad (W)**	**146.45**	**79**	*e*P	**PKiKP**	**06 24 11.7**	**+1.3**		
TRN				x	x	07 12 37.9			
SRBC	**Serra Branca**	**146.54**	**0**	*e*PKP	**PKiKP**	**06 24 09.3**	**-0.7**		
PGRA	**Graciosa**	**146.54**	**0**	*e*PKP	**PKPab**	**06 24 08.7**	**+0.7**		
PARB	**Paraibuna**	**146.59**	**149**	*e*P	**PKPdf**	**06 24 01.2**	**-5.1**		
ITRB	**Iturama**	**146.67**	**139**	*e*P	**PKPdf**	**06 24 02.5**	**-3.9**		
PDRB	**Porto dos Gac**	**146.71**	**121**	*e*P	**PKPdf**	**06 24 00.7**	**-5.9**		
BB19B	**Bebedouro**	**146.80**	**143**	*e*P	**PKPdf**	**06 24 02.9**	**-3.7**		
PAGU	**Agualva, Azore**	**146.80**	**359**	*e*PKP	**PKPab**	**06 24 09.4**	**+0.3**		
ROSA	**Rosais**	**146.85**	**0**	*e*PKP	**PKiKP**	**06 24 11.3**	**+0.7**		
PSCM	**Serra do Cume**	**146.87**	**359**	*e*PKP	**PKiKP**	**06 24 10.0**	**-0.7**		
ADH	**Angra Heroismo**	**146.91**	**359**	*e*PKP	**PKPab**	**06 24 09.8**	**+0.4**		
PCED	**Cedros**	**146.94**	**1**	*e*PKP	**PKPab**	**06 24 09.7**	**+0.1**		
PMAN	**Manadas**	**146.94**	**0**	*e*PKP	**PKiKP**	**06 24 10.4**	**-0.3**		
CALA	**Caldeira**	**146.98**	**1**	*e*PKP	**PKPab**	**06 24 10.2**	**+0.3**		
HOR	**Horta**	**147.04**	**1**	*e*PKP	**PKPab**	**06 24 10.2**	**+0.3**		
PICO	**Pico**	**147.07**	**1**	*e*PKP	**PKPab**	**06 24 10.4**	**+0.3**		
PPNO	**Prainha do Nor**	**147.10**	**1**	*e*PKP	**PKPbc**	**06 24 08.8**	**0.0**		
PCAN	**Candelaria**	**147.10**	**1**	*e*PKP	**PKiKP**	**06 24 11.1**	**0.0**		
PID	**Ribeirinha**	**147.13**	**0**	*e*PKP	**PKPab**	**06 24 10.7**	**+0.3**		
BOAV	**Boa Vista**	**147.33**	**94**	*e*P	**PKPdf**	**06 24 03.9**	**-3.8**		
BART	**Pico Bartolome**	**147.70**	**356**	*e*PKP	**PKiKP**	**06 24 11.6**	**-0.9**		
PGRON	**Lagoa das Cont**	**147.72**	**356**	*e*PKP	**PKiKP**	**06 24 12.5**	**+0.1**		
CMLA	**Cha da Macela**	**147.74**	**356**	*e*PKP	**PKiKP**	**06 24 11.7**	**-0.7**		
CLDB	**Colider**	**147.87**	**120**	*e*P	**PKPdf**	**06 24 04.8**	**-3.7**		
TIO	**Tiouine**	**148.06**	**325**	PKP	**PKPdf**	**06 24 09.3**	**+0.8**		
ARAG	**Araguaiana, MT**	**148.37**	**132**	*e*P	**PKPdf**	**06 24 05.8**	**-3.4**		
PSMN	**Pico do Norte,**	**148.46**	**356**	*e*PKP	**PKPbc**	**06 24 10.9**	**-1.4**		
BSCB	**Bom Sucesso**	**148.96**	**148**	*e*P	**PKPdf**	**06 24 06.6**	**-3.6**		
DUB01	**Friburgo-RJ**	**149.22**	**153**	*e*P	**PKPdf**	**06 24 05.5**	**-5.1**		
IPMB	**Ipameri, GO**	**149.31**	**140**	*e*P	**PKPdf**	**06 24 07.4**	**-3.4**		
CAM01	**Campos-RJ**	**149.76**	**154**	*e*P	**PKPdf**	**06 24 07.5**	**-3.8**		
NPGB	**Novo Progresso**	**149.94**	**114**	*e*P	**PKPdf**	**06 24 08.0**	**-3.9**		
PMPST	**Porto Santo, M**	**150.44**	**340**	*e*PKPdf	**PKPdf**	**06 24 10.2**	**-1.9**		
PMPS	**Porto Santo**	**150.46**	**340**	*e*PKPdf	**PKPdf**	**06 24 13.9**	**+1.7**		
PMAR	**Madeira**	**150.98**	**341**	*e*PKPdf	**PKPdf**	**06 24 13.6**	**+0.4**		
PMOZ	**Porto Moniz, M**	**150.96**	**341**	*e*PKPdf	**PKPdf**	**06 24 14.4**	**+1.4**		
FUL	**Funchal**	**151.02**	**341**	*e*PKPdf	**PKPdf**	**06 24 13.8**	**+0.8**		
SNDB	**Serra Nova Dou**	**151.03**	**127**	*e*P	**PKPdf**	**06 24 09.4**	**-4.1**		
BDFB	**Brasília**	**151.12**	**137**	PKP	**PKiKP**	**06 24 13.4**	**-0.3**		
	comp=Z,50nm,1.2s,baz=353,slow=0.9,SNR=15								
BDFB				PKPbc	**PKiKP**	**06 24 20.0**	**-0.2**		
	comp=Z,40nm,0.9s,baz=267,slow=0.8,SNR=41								
ALF01	**Guarapari-ES**	**151.22**	**154**	*e*P	**PKPdf**	**06 24 10.2**	**-3.4**		
DIAM	**Diamantina, MG**	**151.77**	**147**	*e*P	**PKPdf**	**06 24 09.5**	**-5.2**		
RIB01	**Linhares ES**	**152.52**	**154**	*e*P	**PKPdf**	**06 24 12.1**	**-3.6**		
SJMB	**Sao Joao De Ma**	**152.69**	**152**	*e*P	**PKPdf**	**06 24 12.6**	**-3.3**		
BSFB	**Barra de Sao F**	**152.74**	**152**	*e*P	**PKPdf**	**06 24 13.1**	**-2.9**		
JANB	**Januaria**	**153.96**	**142**	*e*P	**PKPdf**	**06 24 14.4**	**-3.5**		
GUA01	**Guaratinga, BA**	**155.17**	**152**	*e*P	**PKPdf**	**06 24 12.7**	**-6.7**		
PRPB	**Paraupebas**	**155.29**	**117**	*e*P	**PKPdf**	**06 24 14.4**	**-5.4**		
SDBA	**SAO DESIDERIO**	**155.52**	**136**	*e*P	**PKPdf**	**06 24 12.8**	**-7.3**		
SMTB	**Santa Maria do**	**155.79**	**126**	*e*P	PKPdf	06 24 11.6	-8.9		
CMC01	**Camacan, BA**	**156.37**	**151**	*e*P	**PKPdf**	**06 24 17.5**	**-3.6**		
NBIT	**Itapeh - BA**	**156.78**	**151**	*e*P	**PKPdf**	**06 24 16.1**	**-5.5**		
DBIC	**Dimbokro**	**157.04**	**274**	PKP	**PKPdf**	**06 24 21.8**	**-0.2**		
	comp=Z,26nm,1.1s,baz=135,slow=1.6,SNR=14								
DBIC				PKPbc	**pPKPdf**	**06 24 33.2**	**-2.9**		
	comp=Z,32nm,1.1s,baz=153,slow=1.9,SNR=9.2								
DBIC				PKPab	**PKPab**	**06 24 53.0**	**+0.5**		
	comp=Z,210nm,0.9s,baz=109,slow=3.7,SNR=37								
DBIC				PP	**PP**	**06 28 30.7**	**-0.7**		
	comp=Z,20nm,1.2s,baz=135,slow=6.4,SNR=6.7								
DBIC	**Dimbokro**	**157.04**	**274**	⇑PKIKP	**PKPdf**	**06 24 22.2**	**+0.2**		
NBPS	**Pedro II - PI**	**163.33**	**126**	*e*P	**PKPdf**	**06 24 25.8**	**-3.3**		
NBPA	**Parau_RN**	**165.59**	**140**	*e*P	**PKPdf**	**06 24 25.9**	**-5.1**		
NBPV	**Pedro Velho**	**166.12**	**148**	*e*P	**PKPdf**	**06 24 28.7**	**-2.8**		
RCBR	**Riachuelo**	**166.27**	**144**	PKPab	**PKPab**	**06 25 32.4**	**-0.2**		
	comp=Z,1.9nm,0.8s,baz=88,slow=21,SNR=1.4								
RCBR	**Riachuelo**	**166.27**	**144**	*e*P	**PKPdf**	**06 24 28.6**	**-3.1**		

MEX 09 06:39:39.0±0.6, 16.47N×95.13W, h5km±7km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.67**	**21**	*e*P	Pg	06 39 50.6	-1.2
CMIG				*e*S	Sg	06 39 59.5	-0.9
HUIG	**Huatulco**	**1.17**	**234**	*e*P	Pg	06 40 00.1	-1.3
HUIG				*e*S	Sg	06 40 15.8	-0.8
CARR	**Arriaga**	**1.19**	**100**	*e*P	Pg	06 40 00.2	-1.7
CARR				*i* S	Sg	06 40 16.0	-1.3
UXUV	**UXUV**	**1.27**	**48**	*i* P	Pg	06 40 01.5	-1.9
UXUV				*i* S	Sg	06 40 18.5	-1.3
NEUV	**Arroyo Zacate**	**1.40**	**333**	*i* P	Pn	06 40 03.9	-1.3
NEUV				*i* S	Sb	06 40 22.6	-1.2
OXLC	**Oaxaca**	**1.62**	**292**	*e*P	Pn	06 40 07.0	-1.5
OXLC				*e*S	Sn	06 40 28.6	-1.3
OXBJ	**Oaxaca**	**1.64**	**292**	*e*P	Pg	06 40 16.3	+5.8
OXBJ				*e*S	Sg	06 40 37.1	+5.4
VHO	**Vista Hermosa**	**1.65**	**292**	*e*P	Pn	06 40 08.4	-0.5
VHO				*e*S	Sn	06 40 30.4	-0.2
TGIG		**1.95**	**81**	*e*P	Pn	06 40 12.5	-0.4
TGIG				*e*S	Sn	06 40 38.1	+0.3
PCIG		**1.99**	**112**	*e*P	Pn	06 40 12.6	-0.7
PEIG	**Puerto Escondi**	**1.99**	**257**	*e*P	Pn	06 40 10.1	-3.4
PEIG				*e*S	Sn	06 40 36.9	-1.9
PMUV	**Sontecomapan**	**2.07**	**0**	*e*P	Pb	06 40 17.7	+0.6
YOIG	**Yosondua**	**2.35**	**280**	*e*P	Pn	06 40 19.3	+0.8
YOIG				*e*S	Sb	06 40 49.7	-1.7
TOIG	**Toxpalan**	**2.46**	**312**	*e*P	Pn	06 40 19.4	-0.5
TOIG				*e*S	Sn	06 40 51.3	+0.9
TXIG	**Tlaxiaco**	**2.64**	**288**	*e*P	Pn	06 40 23.8	+1.2
TXIG				*e*S	Sb	06 41 00.2	+0.2
PNIG	**Pinotepa**	**2.88**	**269**	*e*P	Pn	06 40 24.4	-1.2
PNIG				*e*S	Sn	06 41 02.8	+2.2
CCIG	**Comitan**	**2.88**	**93**	*e*P	Pn	06 40 24.6	-1.2
CCIG				*e*S	Sn	06 41 03.4	+2.4
TPIG	**Tehuac#an**	**2.88**	**313**	*e*P	Pn	06 40 27.4	+1.6
TPIG				*e*S	Sb	06 41 06.2	-0.6
HLIG	**Huajuapan de L**	**2.89**	**298**	*e*P	Pn	06 40 27.4	+1.4
HLIG				*e*S	Sn	06 40 59.5	-1.8
PATR	**El Naranjo**	**3.09**	**115**	*e*P	Pn	06 40 28.4	-0.4
PAVE	**Pavencul**	**3.11**	**114**	*e*P	Pn	06 40 29.2	+0.2
THIG		**3.17**	**119**	*e*S	Sn	06 41 05.0	-2.8
FTIG	**Fresnillo de T**	**3.21**	**297**	*e*P	Pn	06 40 31.5	+1.2
FTIG				*e*S	Sn	06 41 10.0	+1.0
CHUJ	**Union Juarez**	**3.21**	**115**	*e*P	Pn	06 40 30.7	+0.3
JAUV	**Jalcomulco**	**3.29**	**331**	*e*P	Pn	06 40 30.6	-0.8
JAUV				*e*S	Sn	06 41 09.9	-1.1
TLIG	**Tlapa**	**3.46**	**289**	*e*P	Pn	06 40 36.1	+2.3
TLIG				*e*S	Sn	06 41 15.9	+0.6
CXUV	**Coxquihui**	**4.37**	**328**	*e*P	Pn	06 40 45.7	-0.4
CXUV				*e*S	Sn	06 41 38.1	+0.7

IDC 09 06:43:28.4±1.6, 2.79S×130.31E, h0km, mb3.4/2, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=52.4km s-min=21.7km az=96.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.13**	**27**	Pn	Pn	06 44 05.5	+0.2
	4.3nm,0.3s,baz=231,slow=22,SNR=26						
SIJI				Sn	Sn	06 44 33.5	+1.0
	8.4nm,0.3s,baz=239,slow=23,SNR=8.8						
	8.9nm,0.5s						
WRA	**Warramunga Arr**	**17.50**	**167**	P	Pn	06 47 34.1	+0.1
	0.1nm,0.3s,baz=351,slow=12,SNR=5.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**21.05**	**171**	P	P	06 48 13.8	-0.3
	3.8nm,0.8s,baz=348,slow=10,SNR=26						
	3.8nm,0.8s						
MKAR	**Makanchi Array**	**64.92**	**326**	P	P	06 54 09.8	0.0
	0.1nm,0.4s,baz=126,slow=7.3,SNR=1.6						
	0.1nm,0.4s						

SOME 09 06:57:06.2, 42.17N×84.88E, h10km
NNC 09 06:57:15.9±4.8, 42.35N×84.45E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=39.1km s-min=23.3km az=148.0
ISC 09 06:57:03.7±3.0, 42.1N±0.1×84.94E±0.10, h10km, n31, σ2.29/42, 6C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.64**	**293**	Pg	**Pb**	**06 58 11.3**	**+3.1**
	5.2nm,0.4s						
KTMS				Lg	Lg	06 58 58.3	
	40nm,0.5s						
KTMS	**Ketmen**	**3.64**	**293**	*e*P	**Pb**	**06 58 11.3**	**+3.1**
	5.2nm,0.4s						
KTMS				*e*S	**Sg**	**06 58 58.3**	**-2.2**
	40nm,0.5s						
SHLS	**Shalkode**	**4.18**	**286**	Pg	**Pb**	**06 58 16.4**	**-1.0**
	14nm,0.3s						
SHLS				Lg	Lg	06 59 07.1	
	72nm,0.6s						
SHLS	**Shalkode**	**4.18**	**286**	*e*P	**Pb**	**06 58 16.4**	**-1.0**
	14nm,0.3s						
SHLS				*e*S	**Sb**	**06 59 07.1**	**-0.9**
	72nm,0.6s						
PDGK	**Podgornoye**	**4.20**	**289**	⇓Pn	**Pb**	**06 58 14.6**	**-3.1**
	1.9nm,0.9s						
PDGK				⇓Pg	**Pg**	**06 58 26.7**	**+2.5**
	4.1nm,0.6s						
PDGK				⇑Lg	Lg	06 59 17.7	
	39nm,0.7s						
DJR	**Jarkent**	**4.38**	**302**	Pg	**Pb**	**06 58 25.1**	**+4.3**
	5.9nm,0.7s						
DJR				Lg	Lg	06 59 22.1	
	6.6nm,0.6s						
DJR	**Jarkent**	**4.38**	**302**	*e*P	**Pb**	**06 58 25.1**	**+4.3**
	5.9nm,0.7s						
DJR				*e*S	**Sg**	**06 59 22.1**	**-2.1**
	6.6nm,0.6s						
UZB	**Uzynbulak**	**4.49**	**285**	Pg	**Pb**	**06 58 27.5**	**+4.8**
	4.8nm,0.4s						
UZB				Lg	Lg	06 59 26.3	
	25nm,0.5s						
UZB	**Uzynbulak**	**4.49**	**285**	*e*P	**Pb**	**06 58 27.6**	**+4.8**
	4.8nm,0.4s						
UZB				*e*S	**Sg**	**06 59 26.3**	**-1.7**
	25nm,0.5s						
KNOS	**Konyrlen**	**4.78**	**300**	Pg	**Pg**	**06 58 33.1**	**-2.1**
	3.1nm,0.3s						
KNOS				Lg	Lg	06 59 36.0	
	13nm,0.3s						
SATY	**Saty**	**4.92**	**283**	Pg	**Pg**	**06 58 35.8**	**-2.1**
	9.0nm,0.5s						
SATY				Lg	Lg	06 59 40.5	
	23nm,0.4s						
MK31	**Makanchi Array**	**5.06**	**339**	⇑Pn	**Pb**	**06 58 29.4**	**-3.0**
	0.2nm,0.3s,baz=167,slow=16,SNR=8.0						
MK31				⇑Pg	**Pg**	**06 58 43.5**	**+2.8**
	2.7nm,0.5s,baz=151,slow=17,SNR=45						
MK31				⇓Lg	Lg	06 59 47.4	
	2.4nm,0.3s,baz=174,slow=27,SNR=5.6						
MAKZ	**Makanchi**	**5.16**	**337**	⇑Pg	**Pg**	**06 58 44.4**	**+1.8**
	3.2nm,0.7s						
MAKZ				⇑Lg	Lg	06 59 49.3	
	8.2nm,0.8s						
KURS	**Kuram**	**5.17**	**288**	Pg	**Pg**	**06 58 40.8**	**-2.0**
	5.5nm,1.0s						
KURS				Lg	Lg	06 59 49.3	
	9.3nm,0.5s						
ZSN	**Zaisan**	**5.35**	**359**	Pg	**Pg**	**06 58 45.1**	**-1.0**
	2.4nm,0.3s						
ZSN				Lg	Lg	06 59 56.5	
	8.0nm,0.6s						
ZSN	**Zaisan**	**5.35**	**359**	*e*P	**Pg**	**06 58 45.1**	**-1.0**
	2.4nm,0.3s						
ZSN				*e*S	**Sg**	**06 59 56.5**	**+1.0**
	8.0nm,0.6s						
ARXS	**Arharly**	**5.62**	**294**	Pg	**Pg**	**06 58 50.0**	**-1.2**
	2.4nm,0.3s						
ARXS				Lg	Lg	07 00 04.9	
	15nm,0.6s						
ARXS	**Arharly**	**5.62**	**294**	*e*P	**Pg**	**06 58 50.0**	**-1.2**
	2.4nm,0.3s						
ARXS				*e*S	**Sg**	**07 00 04.9**	**+0.9**
	15nm,0.6s						
KOTS	**Kotyrbulak**	**5.88**	**284**	Pg	**Pg**	**06 58 54.9**	**-1.5**
	4.4nm,0.4s						
KOTS				Lg	Lg	07 00 12.7	
	19nm,0.7s						
KOTS	**Kotyrbulak**	**5.88**	**284**	*e*P	**Pg**	**06 58 54.9**	**-1.5**
	4.4nm,0.4s						
KOTS				*e*S	**Sg**	**07 00 12.7**	**+0.1**
	19nm,0.7s						
TNSS	**Tian-Shan**	**5.98**	**282**	Pg	**Pg**	**06 58 57.2**	**-1.1**
	1.1nm,0.3s						
TNSS				Lg	Lg	07 00 17.3	
	3.2nm,0.7s						
TNSS	**Tian-Shan**	**5.98**	**282**	*e*P	**Pg**	**06 58 57.1**	**-1.1**
	1.1nm,0.3s						
TNSS				*e*S	**Sg**	**07 00 17.3**	**+1.6**
	3.2nm,0.7s						
IZV	**Izvestkoviy**	**6.22**	**281**	Pg	**Pg**	**06 59 01.3**	**-1.6**
	2.7nm,0.3s						
IZV				Lg	Lg	07 00 23.9	
	14nm,0.4s						
IZV	**Izvestkoviy**	**6.22**	**281**	*e*P	**Pg**	**06 59 01.3**	**-1.6**
	2.7nm,0.3s						
IZV				*e*S	**Sg**	**07 00 23.9**	**+0.5**
	14nm,0.4s						
KTBS	**Karatobe**	**6.28**	**288**	P	**Pg**	**06 59 02.3**	**-1.6**
	2.3nm,0.6s						
KTBS	**Karatobe**	**6.28**	**288**	*e*P	**Pg**	**06 59 02.3**	**-1.6**
	2.3nm,0.6s						
KTBS				*e*S	**Sg**	**07 00 25.3**	**+0.1**
	0.7nm,0.2s						
DGS	**Degeres**	**6.86**	**283**	Pg	**Pg**	**06 59 13.1**	**-1.9**
	1.7nm,0.5s						
DGS				Lg	Lg	07 00 44.2	
	8.0nm,0.5s						
DGS	**Degeres**	**6.86**	**283**	*e*P	**Pg**	**06 59 13.1**	**-1.9**
	1.7nm,0.5s						
DGS				*e*S	**Sg**	**07 00 44.2**	**+0.5**
	8.0nm,0.5s						
SEM	**Semipalatinsk**	**8.92**	**340**	Pg	Pg	06 59 50.3	-4.2
	7.6nm,0.2s						
SEM				Lg	Lg	07 01 47.9	
	6.2nm,0.2s						
SEM	**Semipalatinsk**	**8.92**	**340**	*e*P	Pg	06 59 50.3	-4.2
	7.6nm,0.2s						
SEM				*e*S	**Sg**	**07 01 47.9**	**-2.0**
	6.2nm,0.2s						
KURK	**Kurchatov**	**9.66**	**335**	⇑Lg	Lg	07 02 10.4	
	2.8nm,0.9s						

JSN 09 06:59:33.7±1.0, 18.11N×75.16W, h0km±315km, MD3.7, MW3.2, Presumed earthquake
SSNC 09 06:59:36.4±1.6, 18.16N×75.54W, h7km±17km, MD3.2, ML2.1, MW2.3, Presumed earthquake
ISC 09 06:59:36.2±3.2, 18.4N±0.1×75.44W±0.08, h14km±28km, n11, σ0.94/22, 1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STH	**Stony Hill**	**1.33**	**258**	⇓*i* P	**Pb**	**07 00 01.2**	**+0.1**
GTBY	**Guantanamo Bay**	**1.59**	**11**	*e*P	**Pb**	**07 00 04.9**	**-0.5**
GTBY				*i* P	**Pn**	**07 00 05.2**	**+1.3**
GTBY				*e*S	**Sb**	**07 00 25.4**	**+0.1**
GTBY				IAML		07 00 29.6	
	9.6nm,0.2s						
GTBY				IAML		07 00 30.8	
	comp=Z,16nm,0.2s						

FOMA	**Nahampoana Res**	**31.38**	**35**	P		**P**	**07 12 02.0**	**+0.9**
GRTLG	**Ghanzi**	**31.74**	**349**			**P**	**07 12 02.6**	**-1.9**
BELA	**Belgrano 2**	**33.26**	**200**	P		**P**	**07 12 16.4**	**-0.8**
VOI	**Vohitsoka**	**34.16**	**33**	P		**P**	**07 12 25.9**	**+0.3**
KSANE	**Kasane**	**34.95**	**356**	P		**P**	**07 12 32.6**	**+0.2**
KSANE				IAmb		IAmb	07 13 04.1	
	comp=Z,32nm,1.6s							
ABPO	**Ambohimpanom**	**36.99**	**32**			**P**	**07 12 51.9**	**+1.9**
LSZ	**Lusaka**	**37.41**	**1**	P		**P**	**07 12 53.8**	**+0.3**
QSPA	**South Pole Qui**	**37.45**	**180**	P		**P**	**07 12 53.3**	**-0.1**
	comp=Z,23nm,0.8s,baz=248,slow=3.2,SNR=26							
QSPA				LR		LR	07 27 38.5	
	comp=Z,644nm,19.2s,baz=272,slow=35							
	comp=Z,23nm,0.8s							
QSPA	**South Pole Qui**	**37.45**	**180**			**P**	**07 12 53.5**	**+0.1**
QSPA				IAmb		IAmb	07 12 54.4	
	comp=Z,60nm,1.4s							
CASY	**Casey**	**40.83**	**142**	P		**P**	**07 13 22.4**	**+0.9**
CASY				IAmb		IAmb	07 13 23.3	
	comp=Z,26nm,0.7s							
VNDA	**Vanda**	**46.92**	**168**	P		**P**	**07 14 10.4**	**+0.2**
	comp=Z,8.4nm,0.7s,baz=240,slow=8.4,SNR=27							
VNDA				LR		LR	07 33 03.1	
	comp=Z,429nm,21.0s,baz=229,slow=35							
	comp=Z,8.4nm,0.7s							
VNDA	**Vanda**	**46.92**	**168**			**P**	**07 14 11.1**	**+0.8**
SBA	**Scott Base**	**47.24**	**169**	P		**P**	**07 14 14.3**	**+1.5**
H10S2	**ASCENSION HYDR**	**55.45**	**306**	T		T	08 15 46.1	
	baz=148,slow=74,SNR=18							
H10S3	**ASCENSION HYDR**	**55.46**	**306**	T		T	08 15 47.2	
	baz=72,slow=74,SNR=19							
MG05	**Puerto Natales**	**56.28**	**227**	P		**P**	**07 15 21.0**	**+0.5**
MG05				IAmb		IAmb	07 15 21.5	
	comp=Z,11nm,0.8s							
GO08	**Villa O'Higgin**	**58.57**	**230**			**P**	**07 15 35.7**	**-1.0**
GO08				IAmb		IAmb	07 15 39.1	
	comp=Z,35nm,1.9s							
COYC	**Coyhaique**	**60.43**	**233**	P		**P**	**07 15 49.7**	**+0.2**
COYC				IAmb		IAmb	07 15 51.1	
	comp=Z,14nm,1.1s							
TRQA	**Tornquist**	**60.59**	**245**	P		**P**	**07 15 50.8**	**-0.1**
TRQA				IAmb		IAmb	07 15 52.2	
	comp=Z,20nm,0.9s							
AY01	**Puyuhuapi**	**61.54**	**233**	P		**P**	**07 15 56.2**	**-0.9**
AY01				IAmb		IAmb	07 15 58.2	
	comp=Z,34nm,1.6s							
LL02	**Futaleuf**	**62.05**	**235**	P		**P**	**07 15 59.1**	**-1.5**
LL02				IAmb		IAmb	07 16 02.0	
	comp=Z,17nm,1.3s							
GO07	**Milladeo Hill,**	**63.00**	**234**	P		**P**	**07 16 06.3**	**-0.7**
PLCA	**Paso Flores**	**63.21**	**237**	P		**P**	**07 16 08.7**	**+0.2**
	comp=Z,11nm,1.0s,baz=147,slow=7.3,SNR=16							
	comp=Z,11nm,1.0s							
PLCA	**Paso Flores**	**63.21**	**237**	P		**P**	**07 16 08.1**	**-0.4**
PLCA				IAmb		IAmb	07 16 09.7	
	comp=Z,19nm,1.1s							
LL05	**Los Muermos**	**64.18**	**235**	P		**P**	**07 16 14.5**	**-0.3**
LR05	**Currie**	**64.32**	**237**	P		**P**	**07 16 15.7**	**0.0**
GO06	**Curarrehue**	**64.53**	**238**	P		**P**	**07 16 16.6**	**-0.6**
DBIC	**Dimbokro**	**65.32**	**324**	P		**P**	**07 16 22.4**	**0.0**
	comp=Z,13nm,0.9s,baz=191,slow=7.9,SNR=9.5							
	comp=Z,13nm,0.9s							
DBIC	**Dimbokro**	**65.32**	**324**	P		**P**	**07 16 22.2**	**-0.2**
CPUP	**Villa Florida**	**66.51**	**257**	P		**P**	**07 16 30.1**	**0.0**
	comp=Z,5.0nm,0.7s,baz=139,slow=7.3,SNR=17							
	comp=Z,5.0nm,0.7s							
CPUP	**Villa Florida**	**66.51**	**257**	P		**P**	**07 16 30.0**	**0.0**
CPUP				IAmb		IAmb	07 16 30.7	
	comp=Z,11nm,0.9s							
BI02	**San Fabin de**	**66.62**	**240**	P		**P**	**07 16 30.8**	**+0.1**
BI02				IAmb		IAmb	07 16 32.7	
	comp=Z,13nm,1.1s							
GO05	**Hualane**	**68.22**	**241**	P		**P**	**07 16 41.0**	**+0.1**
MT08	**Bocatoma Ro**	**68.39**	**243**	P		**P**	**07 16 42.3**	**+0.2**
MT08				IAmb		IAmb	07 16 44.0	
	comp=Z,17nm,1.1s							
MT16	**CCHEN**	**68.67**	**243**	P		**P**	**07 16 43.5**	**-0.2**
MT01	**Popeta**	**68.73**	**242**	IAmb		IAmb	07 16 45.1	
	comp=Z,12nm,1.0s							
PEL	**Peldehue**	**68.98**	**243**	P		**P**	**07 16 45.4**	**-0.2**
BDFB	**Brasilia**	**69.01**	**272**	P		**P**	**07 16 46.9**	**+0.8**
	comp=Z,5.5nm,0.9s,baz=76,slow=6.3,SNR=7.7							
	comp=Z,5.5nm,0.9s							
MT02	**Curacav**	**69.14**	**242**	P		**P**	**07 16 46.5**	**0.0**
MT02				IAmb		IAmb	07 16 47.4	
	comp=Z,18nm,0.9s							
AQDB	**Aquidauana**	**69.96**	**262**	P		**P**	**07 16 52.1**	**+0.3**
AQDB				IAmb		IAmb	07 16 54.2	
	comp=Z,21nm,1.5s							
CO03	**El Pedregal**	**70.75**	**244**	P		**P**	**07 16 56.0**	**-0.5**
CO03				IAmb		IAmb	07 16 57.6	
	comp=Z,10nm,0.9s							
CO01	**Juntas del Tor**	**71.08**	**245**	P		**P**	**07 16 59.2**	**+0.3**
CO05	**La Serena**	**71.76**	**245**	P		**P**	**07 17 02.2**	**-0.4**
AC05	**El Transito**	**72.06**	**246**	P		**P**	**07 17 04.7**	**+0.1**
AC05				IAmb		IAmb	07 17 05.7	
	comp=Z,12nm,0.8s							
LCO	**Las Campanas**	**72.16**	**246**	P		**P**	**07 17 05.0**	**-0.4**
LCO				IAmb		IAmb	07 17 06.3	
	comp=Z,23nm,1.0s							
AC02	**Maricunga**	**72.96**	**248**	P		**P**	**07 17 10.2**	**-0.3**
AC04	**Llanos de Chal**	**72.99**	**246**	IAmb		IAmb	07 17 11.2	
	comp=Z,23nm,1.0s							
PTLB	**Pontes e Lacer**	**75.90**	**263**	P		**P**	**07 17 26.3**	**-0.8**
PB03	**IPOC Station P**	**77.04**	**251**	IAmb		IAmb	07 17 34.9	
	comp=Z,36nm,1.5s							
STKA	**Stephens Creek**	**78.04**	**127**	P		**P**	**07 17 38.7**	**-0.2**
	comp=Z,3.5nm,0.9s,baz=304,slow=8.4,SNR=3.4							
	comp=Z,3.5nm,0.9s							
PB11	**IPOC Station P**	**78.78**	**252**	P		**P**	**07 17 43.3**	**0.0**
PB11				IAmb		IAmb	07 17 44.6	
	comp=Z,14nm,0.9s							
PB16	**IPOC Station P**	**79.81**	**253**	P		**P**	**07 17 49.0**	**-0.5**
LPAZ	**La Paz**	**80.61**	**256**	P		**P**	**07 17 53.9**	**0.0**
	comp=Z,2.7nm,0.8s,baz=172,slow=9.9,SNR=5.7							
	comp=Z,2.7nm,0.8s							
ASAR	**Alice Springs**	**80.75**	**117**	P		**P**	**07 17 53.8**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=209,slow=4.9,SNR=38							
	comp=Z,2.4nm,0.7s							
ASAR	**Alice Springs**	**80.75**	**117**			**P**	**07 17 54.0**	**+0.1**
AS31	**Alice Springs**	**80.75**	**117**	P		**P**	**07 17 54.7**	**+0.9**
HYB	**Hyderabad**	**82.58**	**48**	*eP*		**P**	**07 18 04.2**	**+0.9**
WRA	**Warramunga Arr**	**83.99**	**115**	P		**P**	**07 18 09.7**	**-1.1**
	comp=Z,2.6nm,0.9s,baz=216,slow=4.1,SNR=10							
	comp=Z,2.6nm,0.9s							
WR8	**Warramunga AR**	**84.07**	**115**	P		**P**	**07 18 10.7**	**-0.5**
WB0	**Warramunga Arr**	**84.16**	**115**			**P**	**07 18 11.3**	**-0.4**
WB0				IAmb		IAmb	07 18 29.0	
	comp=Z,21nm,1.6s							
MDP	**Montagnes des**	**88.15**	**281**	LR		LR	07 53 38.2	
	comp=Z,1µm,18.7s,baz=89,slow=33							
KEST	**Kesra**	**89.56**	**345**	P		**P**	**07 18 37.2**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=59,slow=8.6,SNR=2.5							
	comp=Z,2.2nm,0.8s							
MDT	**Midelt**	**89.74**	**333**	LR		LR	07 55 07.3	
	comp=Z,2µm,21.9s,baz=227,slow=33							
MD01	**Midelt array s**	**89.84**	**333**	P		**P**	**07 18 39.8**	**+0.9**
BRTR	**Keskin Array B**	**92.27**	**5**	P		**P**	**07 18 49.1**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=164,slow=6.5,SNR=3.6							
	comp=Z,0.5nm,0.7s							
ESDC	**Sonseca Array**	**96.06**	**336**	P		**P**	**07 19 07.3**	**0.0**
	comp=Z,1.0nm,0.8s,baz=174,slow=5.1,SNR=5.4							
	comp=Z,1.0nm,0.8s							
KECS	**Kecovo**	**101.06**	**355**	*e*PDIFF		**Pdif**	**07 19 32.8**	**+3.4**
MODS	**Modra-Piesok**	**101.15**	**353**	*e*PDIFF		**Pdif**	**07 19 35.8**	**+5.9**
PZH	**PanZhiHua**	**101.75**	**62**	P		**Pdif**	**07 19 36.1**	**+2.8**
WMQ	**Urumqi**	**109.19**	**42**	Pdif		**Pdif**	**07 20 11.3**	**+5.5**
WMQ	**Urumqi**	**109.19**	**42**	SKS		**SKSdf**	**07 31 22.7**	**+1.8**
XAN	**Xi'an**	**111.49**	**62**	PKP		**PKiKP**	**07 24 18.2**	**+4.0**
ZALV	**Zalesovo Beam**	**116.50**	**34**	PKP		**PKiKP**	**07 24 22.9**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=72,slow=4.8,SNR=3.5							
HHC	**Hu-ho-hao-te**	**117.97**	**59**	*eP*		**PKPdf**	**07 24 23.3**	**-3.2**
SONM	**Songino Array**	**120.49**	**50**	PKP		**PKPdf**	**07 24 30.2**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=180,slow=3.0,SNR=4.6							
SONM	**Songino Array**	**120.49**	**50**			**PKiKP**	**07 24 31.0**	**-0.3**
ARCES	**ARCESS Array B**	**122.00**	**359**	PKP		**PKPdf**	**07 24 32.8**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=224,slow=2.5,SNR=4.2							
SCHQ	**Schefferville**	**132.46**	**309**	PKP		**PKiKP**	**07 24 53.9**	**-0.8**
	comp=Z,2.9nm,1.0s,baz=43,slow=5.5,SNR=3.6							
TXAR	**Lajitas Array**	**137.48**	**256**	PKP		**PKPdf**	**07 25 02.7**	**-1.2**
	comp=Z,0.9nm,1.0s,baz=140,slow=6.0,SNR=6.2							
TXAR				SKPbc		**SKPbc**	**07 28 36.7**	**-0.2**
	comp=Z,1.4nm,1.1s,baz=138,slow=2.0,SNR=6.2							
ULM	**Lac du Bonnet**	**145.50**	**289**	PKPbc		**PKPdf**	**07 25 16.6**	**-0.8**
	comp=Z,17nm,1.0s,baz=94,slow=2.5,SNR=16							
PDAR	**Pinedale Array**	**149.93**	**268**	PKP		**PKPdf**	**07 25 24.2**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=294,slow=2.9,SNR=2.7							
PDAR				PKPbc		**sPKPdf**	**07 25 29.1**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=113,slow=4.2,SNR=9.3							
PETK	**Petropavlovsk-**	**150.41**	**69**	PKPbc		**PKPbc**	**07 25 29.9**	**-0.9**
	comp=Z,4.5nm,0.7s,baz=218,slow=1.0,SNR=8.4							
NVAR	**Mina Array Bea**	**152.48**	**252**	PKP		**PKPdf**	**07 25 29.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=97,slow=1.9,SNR=2.2							
NVAR				PKPbc		**PKiKP**	**07 25 36.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=109,slow=2.4,SNR=8.1							
YKA	**Yellowknife Ar**	**157.88**	**311**	PKPbc		PKPdf	07 25 46.2	+11
	comp=Z,0.2nm,0.7s,baz=11,slow=1.5,SNR=4.6							
YKA				PKPab		**PKPab**	**07 26 09.4**	**+0.7**
	comp=Z,2.9nm,0.9s,baz=78,slow=4.4,SNR=24							
ILAR	**Eielson Array**	**167.64**	**349**	PKPab		**PKPab**	**07 26 52.5**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=349,slow=2.5,SNR=5.1							

CATAC ***09*** *07:13:14.4±0.6, 13°N±3°×9°0W±°, h17km±3km, M3.3/17, MLv3.3/17, Error ellipse: s-maj=7.3km s-min=6.2km az=105.4, confirmed*

SNET ***09*** *07:13:15.2±0.9, 13°.27N×90°.10W, h15km, ML3.4, Presumed earthquake*

GCG ***09*** *07:13:16.2±1.1, 13°.41N×90°.09W, h35km±8km, MD3.7, ML3.8, Presumed earthquake*

ISC 09 07:13:15.5±1.6, 13°.38N±0°.06×89°.98W±0°.05, h14km±10km, n34, σ0s85/53, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
FAME	**Alcaldia de Sa**	**0.47**	**356**	P		**Pn**	**07 13 26.5**	**-1.3**
NUBE	**Las Nubes**	**0.56**	**20**	P		**Pn**	**07 13 28.5**	**-0.7**
NUBE				S		**Sn**	**07 13 38.0**	**-0.4**
NUBE	**Las Nubes**	**0.56**	**20**	*i* P		**Pn**	**07 13 28.5**	**-0.7**
NUBE				*e*S		**Sn**	**07 13 38.3**	**-0.1**
NUBE	**Las Nubes**	**0.56**	**20**	*i* P		**Pn**	**07 13 28.5**	**-0.7**
CEVE	**Cerro Verde**	**0.57**	**38**	P		**Pn**	**07 13 29.2**	**-0.2**
CEVE	**Cerro Verde**	**0.57**	**38**	*i* P		**Pn**	**07 13 29.3**	**-0.2**
CEVE				*e*S		**Sn**	**07 13 39.9**	**+1.2**
SBLS	**San Blas**	**0.58**	**37**	*i* P		**Pn**	**07 13 28.3**	**-0.3**
SBLS				*e*S		**Sn**	**07 13 39.7**	**+0.7**
JAYA	**Jayaque - finc**	**0.59**	**62**	P		**Pn**	**07 13 29.1**	**-0.5**
JAYA				S		**Sn**	**07 13 40.1**	**+1.0**
JAYA	**Jayaque - finc**	**0.59**	**62**	*e*P		**Pn**	**07 13 29.2**	**-0.5**
JAYA				*e*S		**Sn**	**07 13 39.8**	**+0.7**
JAYA	**Jayaque - finc**	**0.59**	**62**	*i* P		**Pn**	**07 13 29.1**	**-0.5**
JAYA				*i* S		**Sn**	**07 13 38.8**	**-0.3**
RTR	**El Retiro**	**0.61**	**32**	*e*P		**Pn**	**07 13 29.8**	**-0.2**
LOAL	**Lomas de Alarc**	**0.65**	**17**	P		**Pn**	**07 13 30.0**	**-0.4**
LOAL				S		**Sn**	**07 13 40.9**	**+0.4**
LALI	**Alcalda de L**	**0.65**	**80**	*i* P		**Pn**	**07 13 29.7**	**-0.6**
SLOZ	**Alcaldia de Sa**	**0.67**	**16**	P		**Pn**	**07 13 30.1**	**-0.6**
SLOZ	**Alcaldia de Sa**	**0.67**	**16**	*e*P		**Pn**	**07 13 30.2**	**-0.6**
SLOZ				*e*S		**Sn**	**07 13 41.5**	**+0.4**
CEDA	**San Andres**	**0.71**	**53**	P		**Pn**	**07 13 31.0**	**-0.2**
CEDA				S		**Sn**	**07 13 42.7**	**+0.7**
PMON	**Piamonte**	**0.73**	**63**	P		**Pn**	**07 13 31.2**	**-0.4**
PMON				S		**Sn**	**07 13 43.6**	**+1.1**
UNIC	**Universidad Ca**	**0.73**	**35**	P		**Pn**	**07 13 31.2**	**-0.4**
UNIC				S		**Sn**	**07 13 43.3**	**+0.7**
UEES	**Universidad Ev**	**0.80**	**65**	P		**Pn**	**07 13 32.3**	**-0.2**
PCG5	**San Vicente Pa**	**0.92**	**335**	*i* P		**Pn**	**07 13 35.4**	**+1.2**
FG16	**Alotenango, Sa**	**1.03**	**330**	*i* P		**Pn**	**07 13 37.9**	**+2.1**
FG16				IAML			07 14 04.2	
	comp=N,2µm,0.2s							
PAVA	**Las Pavas**	**1.07**	**72**	P		**Pn**	**07 13 36.5**	**+0.3**
PAVA				S		**Sn**	**07 13 52.4**	**+1.5**
MTO3	**Montecristo**	**1.18**	**31**	P		**Pg**	**07 13 37.5**	**-0.8**
MTO3				S		**Sn**	**07 13 54.4**	**+0.5**
MTO3	**Montecristo**	**1.18**	**31**	*i* P		**Pg**	**07 13 37.5**	**-0.8**
SCLA	**Alcaldia de Sa**	**1.26**	**75**	P		**Pb**	**07 13 38.8**	**-0.3**
SCLA				S		**Sg**	**07 13 57.9**	**+1.7**
LLGN	**La Laguna**	**1.27**	**52**	P		**Pn**	**07 13 38.7**	**-0.4**
LLGN				S		**Sg**	**07 13 58.0**	**+1.3**
ESQI	**Esquipulas**	**1.33**	**28**	P		**Pb**	**07 13 39.7**	**-0.6**
ESQI				S		**Sg**	**07 14 00.2**	**+1.7**
PACA	**Pacayal**	**1.61**	**87**	P		**Pn**	**07 13 43.8**	**+0.1**
PACA				S		**Sg**	**07 14 09.1**	**+1.5**
RANC	**El Ranchito**	**1.65**	**88**	P		**Pb**	**07 13 44.7**	**-1.0**
STG5	**El Palmar, Qui**	**1.68**	**308**	*i* P		**Pg**	**07 13 46.9**	**-0.9**
APG	**El Apazote**	**1.69**	**344**	*i* P		**Pn**	**07 13 44.0**	**-0.8**
CNRM	**Centro Naciona**	**1.76**	**87**	P		**Pb**	**07 13 46.9**	**-0.8**
LCND	**La Caada**	**2.04**	**92**	P		**Pn**	**07 13 49.4**	**0.0**
CNCH	**Conchagua**	**2.09**	**92**	P		**Pn**	**07 13 49.8**	**-0.5**
CNCH				S		**Sb**	**07 14 18.9**	**-0.4**

JMA ***09*** *07:36:13.4±0.1, 35°.9N±0°.3×140°.5E±0°.4, h37km±1km, MV3.7/40, NORTHERN CHIBA PREF*

JMA Felt II J1 at NORTHERN CHIBA PREF .

IDC ***09*** *07:36:13.6±4.4, 35°.72N×140°.40E, h33km±34km, mb3.6/13, mbtmp3.8/15, ML3.8/2, MS4.2/2, Error ellipse: s-maj=19.4km s-min=14.7km az=79.0*

NEIC ***09*** *07:36:14.4±1.8, 35°.84N±0°.07×140°.58E±0°.02, h40km±10km, mb4.0/13, Error ellipse: s-maj=9.9km s-min=2.6km az=176.0*

ISC 09 07:36:13.7±0.6, 35°.84N±0°.04×140°.53E±0°.06, h35km, n63, σ1s15/57, mb3.9/19, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JIHU	**Itakohorinouch**	**0.13**	**359**	⇓*i* P		**Pn**	**07 36 20.2**	**+0.3**
JIHU				⇓S		**Sn**	**07 36 25.2**	**+1.0**
JSMT	**Sammumatsuo**	**0.20**	**198**	*i* P		**Pn**	**07 36 21.0**	**+0.5**
JSMT				S		**Sn**	**07 36 26.8**	**+1.6**
JYT	**Yasato**	**0.47**	**325**	⇓*i* P		**Pn**	**07 36 22.9**	**-1.0**
JYT				⇓S		**Sn**	**07 36 29.4**	**-1.7**
JHO	**Hitachi**	**0.77**	**2**	⇓*i* P		**Pn**	**07 36 27.1**	**-1.0**
JHO				⇓S		**Sn**	**07 36 36.6**	**-1.9**
BSO4	**Boso 4**	**0.86**	**190**	⇓P		**Pn**	**07 36 30.1**	**+0.9**
BSO3	**Boso 3**	**1.03**	**181**	P		**Pn**	**07 36 31.9**	**+0.5**
JAG	**Ashikaga**	**1.05**	**304**	⇓*i* P		**Pn**	**07 36 30.5**	**-1.4**
MJAR	**Matsushiro Arr**	**2.00**	**291**	Pn		**Pn**	**07 36 44.1**	**-0.9**
	2.4nm,0.3s,baz=97,slow=7.4,SNR=151							
MJAR				Sn		**Sn**	**07 37 08.1**	**-0.8**
	3.7nm,0.3s,baz=228,slow=46,SNR=5.5							
MJAR	**Matsushiro Arr**	**2.00**	**291**			**Pn**	**07 36 45.3**	**+0.3**
MAJO	**Matsushiro**	**2.00**	**291**			**Pn**	**07 36 45.4**	**+0.3**
MJB9	**Matsu-Tunnel**	**2.01**	**291**			**Pn**	**07 36 45.6**	**+0.6**
JSG	**Sagara**	**2.24**	**239**			**Pn**	**07 36 50.1**	**+1.9**
JGF	**Kuroka**	**2.59**	**266**			**Pn**	**07 36 55.6**	**+2.5**
JHJ	**Hachijo jima 2**	**2.78**	**193**	Pn		**Pn**	**07 36 54.6**	**-1.0**
	63nm,0.3s,baz=81,slow=21,SNR=7.1							
JHJ				Sn		**Sn**	**07 37 25.1**	**-2.9**
	89nm,0.3s,baz=195,slow=23,SNR=8.0							
	90nm,0.3s							
JHJ2	**Mitsune**	**2.78**	**192**	Pn		**Pn**	**07 36 56.6**	**+0.9**
INU	**Inuyama**	**2.90**	**261**			**Pn**	**07 36 59.3**	**+1.9**
JMN	**Monobe**	**5.86**	**251**	Pn		**Pn**	**07 37 38.3**	**+0.3**
ASAJ	**Asahikawa**	**8.42**	**10**	Pn		**Pn**	**07 38 14.2**	**+1.1**
	1.1nm,0.3s,baz=210,slow=16,SNR=8.8							
	3.7nm,0.4s							
JKA	**Kamikawa-asahi**	**8.42**	**10**			**Pn**	**07 38 13.3**	**+0.2**
JCJ	**Chichijima**	**8.83**	**170**	Pn		**Pn**	**07 38 18.6**	**-0.2**
KSRS	**Korea Array**	**10.26**	**283**	Pn		Pn	07 38 43.8	+5.5
	0.1nm,0.3s,baz=101,slow=16,SNR=5.3							
BJT	**Baijiatuau**	**19.64**	**290**			**Pn**	**07 40 40.1**	**-0.7**
KNMB	**Chin-men Tao**	**22.20**	**245**	P		**P**	**07 41 06.3**	**-0.6**
ENH	**Enshi**	**26.54**	**267**	P		**P**	**07 41 47.3**	**-0.8**
ENH				IAmb		IAmb	07 41 48.2	
	comp=Z,8.9nm,0.9s							
SONM	**Songino Array**	**27.89**	**306**	P		**P**	**07 41 58.4**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=112,slow=8.5,SNR=3.2							
	comp=Z,0.5nm,0.5s							
SONM	**Songino Array**	**27.89**	**306**	P		**P**	**07 42 00.1**	**-0.1**
SONM				IAmb		IAmb	07 42 13.5	
	comp=Z,2.0nm,1.2s							
SEY	**Seymchan**	**28.10**	**12**	LR		LR	07 54 43.7	
	comp=Z,439nm,20.5s,baz=48,slow=39							
H11N2	**WAKE ISLAND Hy**	**28.19**	**118**	T		T	08 11 23.4	
	baz=310,slow=75,SNR=22							
H11N1	**WAKE ISLAND Hy**	**28.20**	**118**	T		T	08 11 22.1	
	baz=310,slow=75,SNR=19							
H11N3	**WAKE ISLAND Hy**	**28.21**	**118**	T		T	08 11 25.0	
	baz=310,slow=75,SNR=17							
H11S1	**WAKE ISLAND Hy**	**28.85**	**120**	T		T	08 12 07.6	
	baz=312,slow=75,SNR=78							
H11S3	**WAKE ISLAND Hy**	**28.85**	**120**	T		T	08 12 03.1	
	baz=312,slow=75,SNR=37							
H11S2	**WAKE ISLAND Hy**	**28.86**	**120**	T		T	08 12 13.0	
	baz=312,slow=75,SNR=38							
ZALV	**Zalesovo Beam**	**42.20**	**313**	P		**P**	**07 44 02.8**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=90,slow=5.8,SNR=5.3							
	comp=Z,1.6nm,0.8s							
ZALV	**Zalesovo Beam**	**42.20**	**313**	P		**P**	**07 44 01.2**	**-1.6**
SHL	**Shillong**	**42.69**	**270**	P		**P**	**07 44 07.5**	**+0.1**
MKAR	**Makanchi Array**	**44.16**	**303**	P		**P**	**07 44 19.6**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=85,slow=10,SNR=8.3							
	comp=Z,0.7nm,0.6s							
MKAR	**Makanchi Array**	**44.16**	**303**	P		**P**	**07 44 19.8**	**+1.0**
PMG	**Port Moresby**	**45.43**	**171**	LR		LR	08 02 09.6	
	comp=Z,334nm,20.3s,baz=295,slow=34							
C18K	**Utukok River**	**45.66**	**26**	P		**P**	**07 44 30.9**	**+0.3**
C18K				IAmb		IAmb	07 44 35.0	
	comp=Z,1.9nm,0.9s							
H18K	**Honhosa River**	**46.04**	**31**	P		**P**	**07 44 33.5**	**0.0**
KURK	**Kurchatov**	**46.12**	**309**	P		**P**	**07 44 34.6**	**+0.4**
KURK				IAmb		IAmb	07 44 37.7	
	comp=Z,3.0nm,0.7s							
KURBB	**Kurchatov Arra**	**46.18**	**309**	P		**P**	**07 44 35.3**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=82,slow=7.6,SNR=17							
	comp=Z,1.7nm,0.6s							
N18K	**Kilae Creek**	**46.74**	**37**	P		**P**	**07 44 38.1**	**-0.9**
E19K	**Redstone River**	**46.86**	**28**	P		**P**	**07 44 40.7**	**+0.7**
E19K				IAmb		IAmb	07 44 43.6	
	comp=Z,2.3nm,1.1s							
ILAR	**Eielson Array**	**50.89**	**32**	P		**P**	**07 45 12.1**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=275,slow=6.0,SNR=6.8							
	comp=Z,0.8nm,0.9s							
ILAR	**Eielson Array**	**50.89**	**32**	P		**P**	**07 45 10.6**	**-0.2**
BMAR	**Burnt Mountain**	**51.72**	**28**	P		**P**	**07 45 18.4**	**+1.3**
F26K	**Sheenjek River**	**51.88**	**28**	P		**P**	**07 45 18.3**	**+0.1**
F26K				IAmb		IAmb	07 45 29.2	
	comp=Z,0.5nm,0.7s							
WRA	**Warramunga AR**	**55.78**	**187**	P		**P**	**07 45 46.1**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=2.0,slow=7.3,SNR=7.9							
	comp=Z,0.8nm,0.5s							
WRA	**Warramunga Arr**	**55.78**	**187**	P		**P**	**07 45 45.2**	**-2.0**
F31M	**Tsiigehtchic**	**55.87**	**28**	P		**P**	**07 45 47.1**	**-0.2**
AS31	**Alice Springs**	**59.51**	**187**	P		**P**	**07 46 13.7**	**+0.3**
AS31				IAmb		IAmb	07 46 29.6	
	comp=Z,0.9nm,0.9s							
ASAR	**Alice Springs**	**59.51**	**187**	P		**P**	**07 46 12.3**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=16,slow=10,SNR=13							
	comp=Z,0.4nm,0.5s							
YKA	**Yellowknife Ar**	**65.20**	**30**	P		**P**	**07 46 51.3**	**+0.3**
	comp=Z,0.1nm,0.7s,baz=235,slow=6.6,SNR=2.2							
	comp=Z,0.1nm,0.7s							
FINES

ESDC Sonseca Array 56.93 298 P **P** **08 24 00.9 -0.2**
0.5nm,0.7s,baz=62,slow=7.6,SNR=2.6
0.5nm,0.7s
ILAR Eielson Array 75.32 15 P **P** **08 25 57.1 -1.0**
0.7nm,1.1s,baz=301,slow=4.8,SNR=4.8
0.7nm,1.1s
YKA Yellowknife Ar 81.62 2 P **P** **08 26 31.9 -0.8**
0.3nm,0.6s,baz=346,slow=6.0,SNR=6.3
0.3nm,0.6s
WRA Warramunga Arr 82.47 121 P **P** **08 26 36.4 -1.4**
0.1nm,0.4s,baz=304,slow=7.2,SNR=1.3
0.1nm,0.4s
ASAR Alice Springs 84.69 124 P **P** **08 26 48.4 -0.8**
0.2nm,0.6s,baz=314,slow=4.6,SNR=2.1
0.2nm,0.6s

MEX 09 08:16:59.1±0.3, 19°44N×102°31W, h14km±4km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.22**	**95**	*i* P	Pg	08 17 03.0	-1.0
URUA				*e*S	Sg	08 17 06.1	-1.3
SOMAC	**Volcano de Col**	**1.25**	**274**	*e*S	Sg	08 17 40.4	+0.7
CEGR	**Campo Tres**	**1.47**	**268**	*e*P	Pb	08 17 26.0	-0.3
CEGR				*e*S	Sg	08 17 45.8	-0.7
MMIG	**Aquila**	**1.51**	**221**	*e*P	Pn	08 17 24.0	-1.8
MMIG				*e*S	Sn	08 17 45.7	+0.3
CDAR	**Ciudad de Arme**	**1.69**	**253**	*e*P	Pn	08 17 28.9	+0.6
ZIIG	**Zihuatanejo**	**1.99**	**156**	*e*S	Sn	08 17 54.9	-2.3
ARIG	**Puente Sto Nin**	**2.18**	**122**	*e*P	Pn	08 17 36.5	+1.4
ARIG				*e*S	Sb	08 18 04.0	-1.5

*IDC **09** 08:29:02.6±0.4, 13°.33N×88°.81W, h52km±3km, mb4.1/20, mbtmp4.4/23, MS4.0/34, Error ellipse: s-maj=16.5km s-min=7.3km az=48.0*

*CATAC **09** 08:29:02.7±0.3, 13°N±2°×8°9W±°, h26km±2km, M5.1/64, mb5.3/9, mB5.4/7, MLv5.3/64, Mw(mB)4.8/7, Error ellipse: s-maj=4.5km s-min=1.9km az=32.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr2.06; Mθθ-1.70; Mϕϕ-0.36; Mrθ-0.07; Mrϕ1.38; Mθϕ-0.80; Fault plane solution: M₀2.48537×10¹⁶ NP1:ϕs141.58463°, δ53.09665°, λ116.41396°. NP2:ϕs281.98698°, δ44.26092°, λ59.35677°. Principal axes: T 2.3608, Plg68.5916°, Azm111.1008°; N 0.2329, Plg20.8380°, Azm304.9771°; P -2.5936, Plg4.6928°, Azm213.1866°; confirmed*

*SNET **09** 08:29:03.7±1.2, 13°.10N×89°.23W, h47km, ML5.1, Presumed earthquake*

*NEIC **09** 08:29:04.3±1.4, 13°.13N±0°.06×89°.10W±0°.05, h67km±6km, mb4.8/297, Mww4.8/10, Error ellipse: s-maj=10.0km s-min=4.0km az=219.0*

*NEIC **09** 08:29:04.6, 13°.14N×89°.11W, h60km*

*NEIC **09** 08:29:04.6, 13°.04N×89°.11W, h60km, Moment Tensor Solution. Duration: 1s2 Moment tensor: Scale 10¹⁶Nm; Mrr1.65; Mθθ-2.19; Mϕϕ0.54; Mrθ0.25; Mθϕ0.65; Mϕr-0.59; Fault plane solution: M₀2.17000×10¹⁶ NP1: ϕs260.54000°, δ44.30000°, λ56.42000°. NP2: ϕs123.39000°, δ54.42000°, λ118.36000°. Principal axes: T 1.9013, Plg67.0000°, Azm91.0000°; N 0.4698, Plg23.0000°, Azm286.0000°; P -2.3711, Plg5.0000°, Azm194.0000°;*

*GCG **09** 08:29:05.5±1.8, 13°.16N×89°.39W, h38km±21km, MD4.7, ML5.0, Presumed earthquake*

ISC 09 08:29:02.3±0.3, 13°.08N±0°.04×89°.21W±0°.03, h57km±2km, h57km;pP-P, n425,σ1s53/360, mb4.8/136, MS4.1/32, 3C-41D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.42**	**345**	⇓P	**Pn**	**08 29 13.5**	**+0.2**
LALI	**Alcalda de L**	**0.42**	**345**	*e*P	**Pn**	**08 29 13.5**	**+0.2**
LALI				*e*S	**Sn**	**08 29 21.0**	**-0.2**
LALI	**Alcalda de L**	**0.42**	**345**	*i* P	**Pn**	**08 29 13.4**	**+0.2**
LALI				*i* S	**Sn**	**08 29 20.5**	**-0.6**
LALI				IAML		08 29 22.5	
	comp=E,70μm,0.3s						
PANCS	**Alcalda de**	**0.53**	**3**	⇓P	**Pn**	**08 29 14.8**	**+0.3**
PANCS				S	**Sn**	**08 29 24.0**	**+0.6**
JAYA	**Jayaque - finc**	**0.62**	**338**	⇓P	**Pn**	**08 29 15.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.62**	**338**	*i* P	**Pn**	**08 29 15.8**	**+0.2**
JAYA				*i* S	**Sn**	**08 29 25.3**	**0.0**
TECO	**Alcaldia de Te**	**0.62**	**42**	⇓P	**Pn**	**08 29 15.9**	**+0.4**
TECO				S	**Sn**	**08 29 26.7**	**+1.6**
UTEC	**Universidad Te**	**0.62**	**1**	⇓P	**Pn**	**08 29 16.2**	**+0.6**
UTEC				S	**Sn**	**08 29 26.5**	**+1.3**
SEMO	**Seminario San**	**0.62**	**359**	⇓P	**Pn**	**08 29 16.2**	**+0.6**
SEMO				S	**Sn**	**08 29 26.5**	**+1.2**
COEG	**Centro de Oper**	**0.63**	**31**	⇓P	**Pn**	**08 29 16.2**	**+0.5**
IGN	**Direccin Gen**	**0.64**	**3**	⇓P	**Pn**	**08 29 16.5**	**+0.7**
IGN	**Direccin Gen**	**0.64**	**3**	*e*P	**Pn**	**08 29 16.6**	**+0.9**
IGN				*e*S	**Sn**	**08 29 27.0**	**+1.6**
UDBS	**Universidad Do**	**0.64**	**5**	⇓P	**Pn**	**08 29 16.6**	**+0.8**
UEES	**Universidad Ev**	**0.64**	**357**	⇓P	**Pn**	**08 29 16.4**	**+0.6**
UEES				S	**Sn**	**08 29 27.1**	**+1.5**
PMON	**Piamonte**	**0.64**	**351**	⇓P	**Pn**	**08 29 16.3**	**+0.5**
PMON	**Piamonte**	**0.64**	**351**	*e*P	**Pn**	**08 29 16.3**	**+0.5**
PMON				*e*S	**Sn**	**08 29 26.6**	**+0.9**
BOQS	**Boqueron**	**0.66**	**354**	⇓*i*P	**Pn**	**08 29 16.8**	**+0.7**
LFU	**La Fuente**	**0.68**	**8**	⇓*i*P	**Pn**	**08 29 17.2**	**+0.9**
LBRS	**Las Brisas**	**0.68**	**14**	⇓*i*P	**Pn**	**08 29 17.2**	**+0.9**
PAVA	**Las Pavas**	**0.69**	**23**	⇓P	**Pn**	**08 29 17.1**	**+0.7**
PAVA	**Las Pavas**	**0.69**	**23**	*i* P	**Pn**	**08 29 17.1**	**+0.7**
CEDA	**San Andres**	**0.74**	**346**	⇓P	**Pn**	**08 29 17.6**	**+0.6**
CEDA	**San Andres**	**0.74**	**346**	*i* P	**Pn**	**08 29 17.6**	**+0.6**
CEDA				*e*S	**Sn**	**08 29 29.2**	**+1.4**
SCLA	**Alcaldia de Sa**	**0.78**	**37**	⇓P	**Pn**	**08 29 18.6**	**+1.2**
CEVE	**Cerro Verde**	**0.85**	**332**	⇓P	**Pn**	**08 29 19.0**	**+0.5**
CEVE				S	**Sn**	**08 29 31.6**	**+1.2**
CEVE	**Cerro Verde**	**0.85**	**332**	*e*P	**Pn**	**08 29 19.1**	**+0.5**
PACA	**Pacayal**	**0.95**	**66**	⇓P	**Pn**	**08 29 21.1**	**+1.4**
PACA				S	**Sn**	**08 29 34.9**	**+2.4**
UNIC	**Universidad Ca**	**0.96**	**340**	⇓P	**Pn**	**08 29 20.6**	**+0.8**
UNIC				S	**Sn**	**08 29 34.3**	**+1.6**
RANC	**El Ranchito**	**0.96**	**68**	⇑P	**Pn**	**08 29 21.2**	**+1.3**
NUBE	**Las Nubes**	**0.99**	**326**	⇓P	**Pn**	**08 29 20.6**	**+0.3**
NUBE	**Las Nubes**	**0.99**	**326**	*e*P	**Pn**	**08 29 20.6**	**+0.3**
NUBE				*e*S	**Sn**	**08 29 34.0**	**+0.4**
NUBE	**Las Nubes**	**0.99**	**326**	*i* P	**Pn**	**08 29 20.6**	**+0.3**
NUBE				*i* S	**Sn**	**08 29 33.6**	**0.0**
LOAL	**Lomas de Alarc**	**1.07**	**329**	⇓P	**Pn**	**08 29 22.3**	**+1.0**
LOAL	**Lomas de Alarc**	**1.07**	**329**	*e*P	**Pn**	**08 29 22.4**	**+1.0**
LOAL				*e*S	**Sn**	**08 29 37.6**	**+2.3**
CNRM	**Centro Naciona**	**1.09**	**68**	⇓P	**Pn**	**08 29 22.9**	**+1.5**
CNRM				S	**Sn**	**08 29 38.8**	**+3.2**
FAME	**Alcaldia de Sa**	**1.09**	**314**	⇓P	**Pn**	**08 29 21.5**	**0.0**
SLOZ	**Alcaldia de Sa**	**1.10**	**329**	⇓P	**Pn**	**08 29 22.5**	**+0.9**
LLGN	**La Laguna**	**1.11**	**13**	⇓P	**Pn**	**08 29 23.1**	**+1.3**
CAHU	**Cacacuatique**	**1.19**	**54**	⇓*i*P	**Pn**	**08 29 25.2**	**+2.2**
LCND	**La Caada**	**1.30**	**80**	⇓P	**Pn**	**08 29 25.7**	**+1.4**
LCND				S	**Sn**	**08 29 43.5**	**+2.7**
LCND	**La Caada**	**1.30**	**80**	*e*P	**Pn**	**08 29 26.2**	**+1.8**
MTO3	**Montecristo**	**1.32**	**354**		**Pn**	**08 29 26.0**	**+1.2**
MTO3	**Montecristo**	**1.32**	**354**	⇓P	**Pn**	**08 29 26.0**	**+1.2**
MTO3	**Montecristo**	**1.32**	**354**	*e*P	**Pn**	**08 29 26.0**	**+1.2**
MTO3	**Montecristo**	**1.32**	**354**	*i* P	**Pn**	**08 29 26.0**	**+1.2**
ESSJ	**San Jos, E**	**1.35**	**291**	⇓P	Pn	08 29 31.2	+6.3
CNCH	**Conchagua**	**1.35**	**81**	⇓P	**Pn**	**08 29 26.2**	**+1.1**
CNCH	**Conchagua**	**1.35**	**81**	*e*P	**Pn**	**08 29 26.2**	**+1.1**
CNCH				*e*S	**Sn**	**08 29 44.7**	**+2.6**
ESQI	**Esquipulas**	**1.48**	**355**		**Pn**	**08 29 28.4**	**+1.6**
ESQI				Sn	**Sn**	**08 29 45.8**	**+0.6**
ESQI	**Esquipulas**	**1.48**	**355**	⇓P	**Pn**	**08 29 28.5**	**+1.6**
ESQI				S	**Sn**	**08 29 48.0**	**+2.8**
ZAFR2	**Estanzuela, Za**	**1.50**	**355**	*i* P	Pn	08 29 34.3	+7.3
PCG5	**San Vicente Pa**	**1.60**	**315**	*i* P	**Pn**	**08 29 32.7**	**+4.1**
CSGN	**Cosiguina Volc**	**1.61**	**93**	⇓P	**Pn**	**08 29 28.9**	**+0.3**
CSGN				S	**Sn**	**08 29 50.2**	**+1.8**
FG16	**Alotenango, Sa**	**1.74**	**313**	*i* P	Pn	08 29 36.2	+5.8
GCG4	**OSOP**	**1.98**	**320**	*i* P	**Pn**	**08 29 34.7**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.12**	**62**		**Pn**	**08 29 37.0**	**+1.5**
TGUH	**Tegucigalpa,Un**	**2.12**	**62**	⇓P	**Pn**	**08 29 37.1**	**+1.5**
CRIN	**San Cristobal**	**2.14**	**100**		**Pn**	**08 29 36.9**	**+1.2**
CRIN	**San Cristobal**	**2.14**	**100**	⇓P	**Pn**	**08 29 37.0**	**+1.2**
APG	**El Apazote**	**2.27**	**328**	P	**Pn**	**08 29 39.1**	**+1.4**
	comp=E,9.6nm,0.3s,baz=147,slow=9.7,SNR=120						
APG				S	**Sn**	**08 30 06.7**	**+2.1**
	comp=E,50nm,0.4s,baz=207,slow=14,SNR=6.1						
APG				LR	LR	08 30 39.4	
	comp=E,199nm,20.6s,baz=74,slow=42						
APG	**El Apazote**	**2.27**	**328**	*i* P	**Pn**	**08 29 39.0**	**+1.4**
HERN	**Volcan Telica**	**2.37**	**101**		**Pn**	**08 29 39.4**	**+0.5**
HERN	**Volcan Telica**	**2.37**	**101**	P	**Pn**	**08 29 39.2**	**+0.3**
HERN				S	**Sn**	**08 30 07.4**	**+0.6**
POLN	**Al Sur del Vol**	**2.38**	**100**	⇓P	**Pn**	**08 29 39.4**	**+0.5**
POLN				S	**Sn**	**08 30 06.8**	**-0.2**
STG5	**El Palmar, Qui**	**2.46**	**303**	*i* P	Pn	08 29 45.3	+5.2
STG8	**El Palmar, Qui**	**2.49**	**304**	*i* P	Pn	08 29 46.5	+5.8
STG2	**El Palmar, Qui**	**2.50**	**303**	*i* P	Pn	08 29 46.3	+5.5
CNGA	**Al SSO del Vol**	**2.51**	**103**	P	**Pn**	**08 29 41.4**	**+0.6**
CNGN	**Cerro Negro**	**2.52**	**103**		**Pn**	**08 29 41.4**	**+0.5**
CNGN	**Cerro Negro**	**2.52**	**103**	⇓P	**Pn**	**08 29 40.9**	**+0.1**
CNGN				S	**Sn**	**08 30 13.3**	**+3.0**
AVCB	**Coban**	**2.65**	**334**	*i* P	**Pn**	**08 29 45.1**	**+2.4**
AVCB				IAML		08 30 32.4	
	comp=E,15μm,0.6s						
COPN	**Copaltepe**	**2.71**	**109**	⇓P	**Pn**	**08 29 42.6**	**-0.8**
IZABA	**Izabal, Puerto**	**2.71**	**13**	P	**Pn**	**08 29 45.7**	**+2.3**
OCON	**Estacion meteo**	**2.71**	**78**	P	**Pn**	**08 29 44.8**	**+1.2**
SOKI	**Kika Raxquin**	**2.75**	**309**	*i* P	**Pn**	**08 29 46.6**	**+2.3**
SOKI				IAML		08 30 28.1	
	comp=N,10μm,0.6s						
LIMN	**Finca el Limon**	**2.77**	**90**	⇑P	**Pn**	**08 29 45.5**	**+1.1**
RTAL	**Retalhuleu**	**2.81**	**301**		**Pn**	**08 29 46.8**	**+2.0**
RTAL	**Retalhuleu**	**2.81**	**301**	P	**Pn**	**08 29 47.2**	**+2.3**
AMTN	**Mateare**	**2.84**	**107**	P	**Pn**	**08 29 46.4**	**+1.2**
APYN	**Apoyeque**	**2.91**	**106**	P	**Pn**	**08 29 47.7**	**+1.4**
RCVN	**Varillal2**	**2.98**	**80**	P	**Pn**	**08 29 48.5**	**+1.2**
RCON	**San Juan de Ri**	**3.00**	**82**	P	**Pn**	**08 29 48.8**	**+1.2**
TISN	**Laguna Tiscapa**	**3.02**	**108**	P	**Pn**	**08 29 45.1**	**-2.5**
USIM	**UNAN**	**3.02**	**108**		**Pn**	**08 29 48.5**	**+0.8**
UNAN	**Cigeo UNAN**	**3.02**	**108**	P	**Pn**	**08 29 48.1**	**+0.3**
MGAN	**Managua**	**3.04**	**107**		**Pn**	**08 29 48.1**	**+0.2**
MGAN	**Managua**	**3.04**	**107**	P	**Pn**	**08 29 48.6**	**+0.7**
MGAN				S	**Sn**	**08 30 21.8**	**-1.3**
RCPN	**Sur Rio San Ju**	**3.06**	**81**	P	**Pn**	**08 29 49.8**	**+1.4**
MAS3	**Al N del Volca**	**3.14**	**109**	P	**Pn**	**08 29 49.5**	**+0.1**
HUEH	**Huehuetenango**	**3.15**	**315**		**Pn**	**08 29 52.1**	**+2.5**
HUEH	**Huehuetenango**	**3.15**	**315**	P	**Pn**	**08 29 53.0**	**+3.3**
HUEH	**Huehuetenango**	**3.15**	**315**	*i* P	**Pn**	**08 29 53.2**	**+3.5**
MASN	**Masaya**	**3.18**	**110**	P	**Pn**	**08 29 51.5**	**+1.6**
MATN	**Matagalpa**	**3.20**	**92**	P	**Pn**	**08 29 49.9**	**-0.4**
SMCA	**Catarina**	**3.30**	**303**	*i* P	**Pn**	**08 29 52.3**	**+0.7**
THIG		**3.48**	**302**	*i* P	**Pn**	**08 29 55.0**	**+1.0**
THIG				IAML		08 30 48.6	
	comp=N,9μm,0.7s						
BOAB	**BOACO BROADBAN**	**3.51**	**100**		**Pn**	**08 29 54.8**	**+0.4**
BOAB	**BOACO BROADBAN**	**3.51**	**100**	⇓P	**Pn**	**08 29 54.7**	**+0.2**
PETF	**Flores**	**3.87**	**351**		**Pn**	**08 30 02.1**	**+2.7**
PETF	**Flores**	**3.87**	**351**	⇓P	**Pn**	**08 30 02.3**	**+2.9**
PETF	**Flores**	**3.87**	**351**	*i* P	**Pn**	**08 30 02.3**	**+2.9**
CARN	**Rivas**	**4.07**	**117**	P	**Pn**	**08 30 04.0**	**+2.0**
CCIG	**Comitan**	**4.26**	**319**		**Pn**	**08 30 07.1**	**+2.1**
CCIG	**Comitan**	**4.26**	**319**	⇓P	**Pn**	**08 30 07.5**	**+2.5**
CCIG	**Comitan**	**4.26**	**319**	*i* P	**Pn**	**08 30 07.4**	**+2.5**
CCIG				IAML		08 31 43.3	
	comp=E,804nm,0.6s						
ELI1	**Hacienda Flor**	**4.32**	**124**	P	**Pn**	**08 30 08.9**	**+3.4**
SIUN	**Universidad Ur**	**4.36**	**81**		**Pn**	**08 30 07.5**	**+1.3**
JUD3	**Juan Diaz 3**	**4.61**	**128**		**Pn**	**08 30 12.2**	**+2.5**
CMARA	**Lajas Hojancha**	**4.79**	**129**	P	**Pn**	**08 30 14.3**	**+2.2**
INDI	**Punta indio, G**	**4.83**	**131**	P	**Pn**	**08 30 14.7**	**+2.1**
JTS	**Las Juntas de**	**5.00**	**123**	P	**Pn**	**08 30 17.1**	**+2.1**
	comp=E,52nm,0.3s,baz=312,slow=18,SNR=56						
JTS				S	**Sn**	**08 31 07.9**	**-3.6**
	comp=E,93nm,0.4s,baz=292,slow=15,SNR=3.6						
JTS	**Las Juntas de**	**5.00**	**123**		**Pn**	**08 30 16.9**	**+1.9**
JTS	**Las Juntas de**	**5.00**	**123**	P	**Pn**	**08 30 17.3**	**+2.4**
TGIG		**5.28**	**315**	*i* P	**Pn**	**08 30 19.7**	**+1.0**
BILN	**Bilwi Airport**	**5.75**	**80**	Pn	**Pn**	**08 30 26.6**	**+1.4**
BILN	**Bilwi Airport**	**5.75**	**80**	P	**Pn**	**08 30 27.3**	**+2.0**
HDC	**Heredia**	**5.85**	**121**		**Pn**	**08 30 27.6**	**+0.9**
HDC	**Heredia**	**5.85**	**121**	*e*P	**Pn**	**08 30 30.6**	**+3.9**
TRT2	**Tortugero**	**5.91**	**114**	P	**Pn**	**08 30 28.6**	**+1.2**
TRT2				S	**Sn**	**08 31 36.9**	**+3.0**
RAFA	**San Farael, Vo**	**6.13**	**120**		**Pn**	**08 30 32.1**	**+1.4**
QUEP	**Quepos**	**6.13**	**126**	P	**Pn**	**08 30 30.9**	**+0.5**
CMIG	**Matias Romero**	**6.78**	**307**	P	**Pn**	**08 30 41.8**	**+2.5**
	comp=E,24nm,0.5s,baz=110,slow=10,SNR=49						
CMIG				S	**Sn**	**08 31 59.4**	**+4.3**
	comp=E,161nm,0.7s,baz=356,slow=23,SNR=6.8						
CMIG				LR	LR	08 32 53.0	
	comp=E,313nm,19.9s,baz=112,slow=33						
TEIG	**Tepich**	**7.17**	**7**		**Pn**	**08 30 45.8**	**+1.2**
PIRO	**Carate, Puerto**	**7.41**	**128**		**Pn**	**08 30 52.2**	**+4.4**
PRVC	**Isla de Provid**	**7.64**	**87**	P	**Pn**	**08 30 52.5**	**+1.4**
BRU2	**Volcan**	**7.69**	**123**	P	**Pn**	**08 30 54.8**	**+2.9**
BRU2				S	**Sn**	**08 32 18.6**	**+1.0**
MYIG	**Merida**	**7.86**	**356**	P	**Pn**	**08 30 56.2**	**+2.2**
TLIG	**Tlapa**	**10.07**	**297**		**Pn**	**08 31 27.4**	**+3.0**
TLIG	**Tlapa**	**10.07**	**297**	P	**Pn**	**08 31 27.9**	**+3.5**
SOR	**Soroa**	**11.32**	**31**		**Pn**	**08 31 41.7**	**+0.3**
SOR	**Soroa**	**11.32**	**31**	*e*P	**Pn**	**08 31 45.7**	**+4.3**
MTDJ	**Mount Denham**	**12.35**	**64**	Pn	**Pn**	**08 31 55.2**	**-0.4**
CAMR	**Camarioca**	**12.41**	**36**	Pn	**Pn**	**08 31 56.2**	**-0.1**
CAMR	**Camarioca**	**12.41**	**36**	*e*P	**Pn**	**08 32 00.4**	**+4.1**
MGV	**Manicaragua**	**12.57**	**43**	*e*P	**Pn**	**08 32 01.4**	**+3.0**
MOIG	**Morelia**	**13.23**	**301**		**Pn**	**08 32 09.6**	**+1.9**
CCCC	**Cccc**	**13.59**	**52**	*e*P	**P**	**08 32 23.0**	**+3.5**
PAYG	**Puerto Ayora**	**13.70**	**185**		**Pn**	**08 32 16.4**	**+2.4**
QMBU	**Quimbuelo**	**15.50**	**61**	*e*P	**P**	**08 32 45.9**	**+5.0**
NMDO	**Nuevo Mundo**	**15.51**	**59**	Pn	**Pn**	**08 32 36.4**	**-1.2**
ZAIG	**Zacatecas**	**15.94**	**309**	Pn	**Pn**	**08 32 43.9**	**+0.5**
060A	**Indiantown**	**16.17**	**30**	Pn	**Pn**	**08 32 44.3**	**-1.6**
HBVL	**Hebbronville**	**16.50**	**329**		**Pn**	**08 32 50.6**	**+0.5**
DWPF	**Disney Wildern**	**16.63**	**25**		**Pn**	**08 32 51.0**	**-0.6**
OTAV	**Otavalo**	**16.63**	**139**	Pn	**Pn**	**08 32 50.5**	**-1.7**
ROSC	**El Rosal**	**16.82**	**118**	P	**Pn**	**08 32 52.9**	**-1.7**
	comp=E,3.5nm,0.4s,baz=344,slow=23,SNR=1.8						
ROSC				LR	LR	08 40 31.4	
	comp=E,167nm,22.0s,baz=310,slow=42						
ROSC	**El Rosal**	**16.82**	**118**	Pn	**Pn**	**08 32 53.4**	**-1.1**
656A	**Willston**	**17.36**	**20**		**Pn**	**08 33 00.8**	**+0.1**
553A	**Crawfordville**	**17.59**	**14**	P	**Pn**	**08 33 03.5**	**-0.1**
HKT	**Hockley**	**17.88**	**341**	P	**Pn**	**08 33 07.6**	**+0.7**
833A	**Chaparral WMA,**	**17.90**	**330**	P	**P**	**08 33 07.2**	**-0.1**
EF04	**Eagle Ford 04**	**17.93**	**335**	P	**Pn**	**08 33 09.0**	**+1.4**
346A	**Big Creek Wild**	**18.23**	**359**		**Pn**	**08 33 11.6**	**+0.4**
SDV	**Santo Domingo**	**18.70**	**101**	P	**P**	**08 33 14.5**	**-1.9**
	comp=E,36nm,0.7s,baz=284,slow=5.5,SNR=44						
SDV				LR	LR	08 42 03.4	
	comp=E,194nm,20.3s,baz=282,slow=42						
SDV	**Santo Domingo**	**18.70**	**101**		**P**	**08 33 16.0**	**-0.5**
SDV				IAmb	IAmb	08 33 18.2	
	comp=Z,36nm,0.7s						
SDV	**Santo Domingo**	**18.70**	**101**	*e*P	**P**	**08 33 16.7**	**+0.2**
HNDO	**Hondo**	**18.85**	**332**		**Pn**	**08 33 19.1**	**+0.2**
TIGA	**Tifton**	**18.99**	**15**	IAmb	IAmb	08 33 25.8	
	comp=Z,43nm,0.7s						
435B	**Jarrell**	**19.24**	**338**	P	**Pn**	**08 33 23.3**	**-0.2**
NATX	**Nacogdoches**	**19.26**	**346**		**P**	**08 33 22.5**	**+0.3**
DRIO	**Del Rio**	**19.41**	**329**		**Pn**	**08 33 25.2**	**-0.3**
146A	**Union**	**19.47**	**0**	IAmb	IAmb	08 33 35.6	
	comp=Z,84nm,1.6s						
143A	**Socs Landing,**	**19.64**	**354**	IAmb	IAmb	08 33 34.1	
	comp=Z,85nm,1.3s						
DR12	**Loma Pena Alta**	**19.89**	**71**	P	**P**	**08 33 29.0**	**-0.2**
152A	**Waverly Hall**	**19.93**	**11**	IAmb	IAmb	08 33 47.4	
	comp=Z,32nm,1.1s						
Z47A	**Carrollton**	**20.06**	**3**	IAmb	IAmb	08 33 50.0	
	comp=Z,46nm,0.9s						
BRDY	**Brady**	**20.24**	**335**		Pn	08 33 34.5	-0.9
BRDY				IAmb	IAmb	08 33 36.0	
	comp=Z,51nm,0.8s						
Z41A	**Richland Creek**	**20.36**	**351**	IAmb	IAmb	08 33 42.6	
	comp=Z,62nm,1.0s						
SAND	**Sanderson**	**20.62**	**327**		**P**	**08 33 38.0**	**+0.9**
Z38A	**Mt. Pleasant**	**20.77**	**346**	IAmb	IAmb	08 34 00.5	
	comp=Z,27nm,0.6s						
Y49A	**Blount Mountai**	**20.84**	**7**		**P**	**08 33 40.0**	**+0.5**
Y49A				IAmb	IAmb	08 33 57.2	
	comp=Z,44nm,0.9s						
OZNA	**Ozona**	**20.89**	**330**		**P**	**08 33 41.3**	**+1.3**
OZNA				IAmb	IAmb	08 34 00.3	
	comp=Z,34nm,1.1s						
GOGA	**Godfrey**	**20.91**	**14**		**P**	**08 33 40.4**	**+0.3**
GOGA				IAmb	IAmb	08 33 57.3	
	comp=Z,31nm,1.1s						
TXAR	**Lajitas Array**	**21.02**	**323**	P	**P**	**08 33 43.7**	**+2.3**
	comp=Z,5.8nm,0.6s,baz=144,slow=8.4,SNR=70						
TXAR				PcP	**PcP**	**08 37 48.2**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=139,slow=4.2,SNR=5.1						
TXAR				LR	LR	08 43 27.5	
	comp=Z,147nm,19.0s,baz=120,slow=41						
	comp=Z,5.8nm,0.6s						
TXAR	**Lajitas Array**	**21.02**	**323**		**P**	**08 33 43.0**	**+1.6**
Y52A	**Lilburn**	**21.22**	**12**	IAmb	IAmb	08 34 00.6	
	comp=Z,39nm,0.9s						
X48A	**Hartselle**	**21.37**	**5**	IAmb	IAmb	08 34 02.4	
	comp=Z,34nm,1.1s						
RGRS	**Roger Stewart**	**21.39**	**21**	IAmb	IAmb	08 34 03.7	
	comp=Z,110nm,0.9s						
Z35A	**Perchaven, San**	**21.46**	**341**	IAmb	IAmb	08 34 09.5	
	comp=Z,27nm,0.8s						
ABTX	**Abilene, Hawle**	**21.68**	**336**		**P**	**08 33 48.6**	**+0.2**
ABTX				IAmb	IAmb	08 34 08.8	
	comp=Z,43nm,1.2s						
SGCY	**Sterling City**	**21.71**	**332**		**P**	**08 33 49.6**	**+0.8**
MIAR	**Mount Ida**	**21.74**	**350**	P	**P**	**08 33 49.5**	**+0.6**
MIAR				IAmb	IAmb	08 34 09.0	
	comp=Z,38nm,1.1s						
UALR	**University of**	**21.79**	**353**	IAmb	IAmb	08 34 10.2	
	comp=Z,40nm,0.8s						
HODGE	**Hodges**	**21.99**	**16**	IAmb	IAmb	08 34 10.5	
	comp=Z,28nm,0.9s						
MNHN	**Monahans**	**22.05**	**328**	IAmb	IAmb	08 34 14.0	
	comp=Z,41nm,1.2s						
229A	**Bryant Ranch,**	**22.08**	**330**	IAmb	IAmb	08 33 56.8	
	comp=Z,15nm,0.8s						
SWET	**Sewanee**	**22.24**	**7**	IAmb	IAmb	08 34 11.4	
	comp=Z,24nm,0.8s						
WTFS	**Witchita Falls**	**22.25**	**339**	IAmb	IAmb	08 34 18.6	
	comp=Z,21nm,0.7s						
TPB01	**Permian Basin**	**22.29**	**325**	IAmb	IAmb	08 34 14.5	
	comp=Z,8.9nm,0.6s						
WHAR	**Woolly Hollow**	**22.29**	**353**	IAmb	IAmb	08 34 14.8	
	comp=Z,28nm,0.9s						
SLBS	**Sierra La Lagu**	**22.30**	**301**	P	**P**	**08 33 56.1**	**+0.9**
SLBS				IAmb	IAmb	08 34 14.2	
	comp=Z,61nm,1.3s						
Y57A	**Sumter**	**22.34**	**20**	IAmb	IAmb	08 34 17.3	
	comp=Z,36nm,0.8s						
HBAR	**Harrisburg**	**22.42**	**357**	P	**P**	**08 33 56.4**	**+0.1**
Y58A	**Scranton**	**22.48**	**21**	IAmb	IAmb	08 34 19.6	
	comp=Z,40nm,0.8s						
APMT	**Aspermont**	**22.48**	**336**		**P**	**08 33 56.8**	**-0.2**
APMT				IAmb	IAmb	08 34 17.8	
	comp=Z,89nm,1.6s						
TPB06	**Permian Basin**	**22.53**	**327**	IAmb	IAmb	08 34 03.2	
	comp=Z,16nm,0.8s						
BG3	**Lake Jocassee**	**22.55**	**14**	IAmb	IAmb	08 34 15.5	
	comp=Z,26nm,0.9s						

comp=Z,12nm,0.7s
PV02 Paradox Valley 30.46 329 IAmb IAmb 08 35 14.7
comp=Z,11nm,0.9s
PV13 Radium Mtn., P 30.47 329 IAmb IAmb 08 35 44.5
comp=Z,25nm,1.6s
PV18 Skein Mesa, Pa 30.58 329 IAmb IAmb 08 35 14.9
comp=Z,25nm,0.9s
PV11 David Mesa, Pa 30.60 329 IAmb IAmb 08 35 16.5
comp=Z,14nm,0.7s
PV19 Morning Glory 30.67 329 IAmb IAmb 08 35 15.5
comp=Z,16nm,0.8s
PV20 West Nyswonger 30.68 329 IAmb IAmb 08 35 15.2
comp=Z,13nm,0.7s
PV04 Paradox Valley 30.69 329 IAmb IAmb 08 35 15.9
comp=Z,12nm,0.8s
I42A Draeger Farm, 30.71 0 IAmb IAmb 08 35 28.0
comp=Z,17nm,0.8s
PV10 Paradox Valley 30.75 329 IAmb IAmb 08 35 15.7
comp=Z,19nm,0.9s
ESJX Sierra Juarez 30.92 312 IAmb IAmb 08 35 31.7
comp=Z,12nm,0.9s
ECSD EROS Data Cent 31.21 350 IAmb IAmb 08 36 21.3
comp=Z,30nm,1.6s
YUH Yuha Desert 31.24 313 IAmb IAmb 08 35 35.0
comp=Z,26nm,1.4s
IRM Iron Mountain 31.54 316 IAmb IAmb 08 35 37.5
comp=Z,18nm,1.2s
O20A White River Ci 31.73 332 IAmb IAmb 08 35 25.2
comp=Z,21nm,0.9s
BORC Borrego Spring 31.92 314 IAmb IAmb 08 35 42.0
comp=Z,18nm,1.3s
SRU San Rafael Swe 32.06 328 IAmb IAmb 08 35 44.3
comp=Z,25nm,1.8s
G40A Rib Lake 32.10 359 IAmb IAmb 08 35 39.9
comp=Z,12nm,1.0s
PFO Pinyon Flats O 32.14 314 LR LR 08 49 50.0
comp=Z,310nm,18.9s,baz=72,slow=39
PFO Pinyon Flats O 32.14 314 P P **08 35 27.4 +2.7**
PFO x x 08 35 41.7
PFO PcP **PcP** **08 38 09.0 -3.7**
P17A Butcher Ranch, 32.44 328 IAmb IAmb 08 35 31.3
comp=Z,11nm,0.8s
MACA Manacapuru-AM 32.59 118 P **08 35 27.9 -0.8**
MACA Manacapuru-AM 32.59 118 *eP* P **08 35 27.7 -1.0**
SADO Sadowa 32.74 13 P P **08 35 28.7 -0.9**
comp=Z,4.4nm,0.6s,baz=218,slow=9.0,SNR=9.8
SADO LR LR 08 49 02.4
comp=Z,393nm,19.1s,baz=203,slow=37
comp=Z,4.4nm,0.6s
SADO Sadowa 32.74 13 P P **08 35 29.3 -0.3**
SADO IAmb IAmb 08 35 46.3
comp=Z,18nm,1.3s
BFSC Mount Baldy Ra 33.31 314 P P **08 35 36.1 +1.1**
BFSC IAmb IAmb 08 35 52.8
comp=Z,14nm,1.2s
RSSD Black Hills 33.45 340 P **08 35 36.6 +0.5**
RSSD IAmb IAmb 08 35 39.8
comp=Z,7.9nm,0.7s
RSSD Black Hills 33.45 340 P P **08 35 37.6 +1.5**
RSSD PcP **PcP** **08 38 17.0 +0.7**
GWY Greenwater Val 33.73 318 IAmb IAmb 08 35 56.9
comp=Z,16nm,1.4s
TPNV Topopah Spring 33.92 319 IAmb IAmb 08 35 58.9
comp=Z,10nm,1.2s
TCUT Toone Canyon 34.01 329 IAmb IAmb 08 36 16.4
comp=Z,17nm,1.2s
CLC China Lake 34.14 316 IAmb IAmb 08 35 59.4
comp=Z,11nm,1.0s
PDAR Pinedale Array 34.43 333 P P **08 35 44.9 +0.2**
comp=Z,2.2nm,0.8s,baz=133,slow=8.7,SNR=18
PDAR PcP **PcP** **08 38 19.2 +0.1**
comp=Z,2.3nm,0.7s,baz=94,slow=4.9,SNR=16
PDAR LR LR 08 52 43.9
comp=Z,226nm,19.0s,baz=94,slow=41
comp=Z,2.2nm,0.8s
PDAR Pinedale Array 34.43 333 P P **08 35 45.3 +0.7**
HWUT Hardware Ranch 34.46 330 IAmb IAmb 08 36 23.7
comp=Z,12nm,1.2s
AHID Auburn Hatcher 35.12 331 IAmb IAmb 08 35 54.0
comp=Z,10nm,0.7s
LOHW Long Hollow 35.56 333 IAmb IAmb 08 35 58.0
comp=Z,9.1nm,0.8s
LPAZ La Paz 35.85 144 P P **08 35 58.6 +1.0**
comp=Z,3.2nm,0.6s,baz=298,slow=5.9,SNR=3.6
LPAZ LR LR 08 51 00.7
comp=Z,186nm,21.2s,baz=320,slow=37
comp=Z,3.2nm,0.6s
LPAZ La Paz 35.85 144 P P **08 35 57.7 +0.1**
FLWY Flagg Ranch 35.98 333 IAmb IAmb 08 36 21.5
comp=Z,7.4nm,0.8s
NVAR Mina Array Bea 36.11 320 P P **08 36 00.4 +1.2**
comp=Z,5.0nm,0.8s,baz=137,slow=6.9,SNR=26
NVAR pP **pP** **08 36 15.7 +2.1**
comp=Z,9.9nm,0.8s,baz=142,slow=7.5,SNR=19
NVAR PcP **PcP** **08 38 25.8 +1.6**
comp=Z,5.8nm,0.8s,baz=138,slow=3.9,SNR=11
NVAR LR LR 08 52 26.8
comp=Z,353nm,19.5s,baz=102,slow=39
comp=Z,5.0nm,0.8s
H17A Grant Village 36.17 334 IAmb IAmb 08 36 04.6
comp=Z,32nm,1.9s
RLMT Red Lodge 36.22 336 IAmb IAmb 08 36 03.1
comp=Z,13nm,1.0s
YMP Mirror Lake Pl 36.27 334 IAmb IAmb 08 36 45.1
comp=Z,15nm,1.0s
YNE Yellowstone No 36.43 335 IAmb IAmb 08 36 04.8
comp=Z,8.1nm,0.9s
YMR Madison River 36.56 334 IAmb IAmb 08 36 07.2
comp=Z,12nm,0.8s
YHL Hebgen Lake 36.80 334 IAmb IAmb 08 36 10.5
comp=Z,6.3nm,0.8s
ULM Lac du Bonnet 37.47 353 P P **08 36 09.1 -1.2**
comp=Z,6.5nm,0.8s,baz=169,slow=8.3,SNR=9.7
ULM pP **pP** **08 36 22.8 -2.0**
comp=Z,12nm,0.8s,baz=170,slow=9.1,SNR=8.6
ULM LR LR 08 54 01.7
comp=Z,272nm,18.9s,baz=160,slow=40
comp=Z,6.5nm,0.8s
ULM Lac du Bonnet 37.47 353 IAmb IAmb 08 36 24.7
comp=Z,18nm,1.1s
VILB Vilhena 38.68 131 P P **08 36 21.4 +0.5**
VILB Vilhena 38.68 131 *eP* P **08 36 21.4 +0.5**
EGMT Eagleton 38.82 338 P P **08 36 22.6 +0.9**
F10A Beach Ranch, E 40.45 330 IAmb IAmb 08 37 06.5
comp=Z,10nm,0.9s
PDRB Porto dos Gac 40.50 126 *eP* P **08 36 33.6 -2.5**
YBH Yreka Blue Hor 40.78 321 LR LR 08 55 24.0
comp=Z,21nm,20.3s,baz=125,slow=39
CLDB Colider 40.82 124 *eP* P **08 36 37.9 -0.7**
FFC Flin Flon 42.74 349 P **08 36 54.2 +0.3**
FFC Flin Flon 42.74 349 P P **08 36 53.8 0.0**
FFC x x 08 37 08.7
FFC pP **pP** **08 37 10.6 +2.0**
FFC sP **sP** **08 37 18.7 +3.5**
SALV Santo Antonio 43.91 130 *eP* P **08 37 03.6 -0.1**
AC02 Maricunga 44.21 154 P **08 37 07.4 +0.8**
GNW Green Mountain 44.36 328 P P **08 37 07.4 +0.4**
EDM Edmonton 44.41 339 P **08 37 07.2 -0.2**
RPN Rapa Nui 44.48 206 LR LR 08 50 47.0
comp=Z,249nm,21.7s,baz=47,slow=29
DRLN Deer Lake 44.52 29 P P **08 37 08.0 -0.2**
SNDB Serra Nova Dou 45.10 122 *eP* P **08 37 12.4 -0.9**
SCHQ Schefferville 45.20 18 P P **08 37 11.6 -2.0**
comp=Z,6.1nm,0.8s,baz=238,slow=4.0,SNR=13
comp=Z,6.1nm,0.8s
FCC Fort Churchill 45.75 356 IAmb IAmb 08 37 32.9
comp=Z,12nm,0.8s
MURT Porto Murtinho 46.41 138 *eP* P **08 37 23.4 0.0**
SMTB Santa Maria do 46.73 116 *eP* P **08 37 25.8 -0.4**
ARAG Araguaiana, MT 46.76 127 *eP* P **08 37 25.7 -0.6**
AQDB Aquidauana 46.88 135 P P **08 37 27.4 +0.2**
AQDB IAmb IAmb 08 37 43.6
comp=Z,12nm,1.0s
AQDB Aquidauana 46.88 135 *eP* P **08 37 27.2 0.0**
CO03 El Pedregal 47.15 158 IAmb IAmb 08 37 31.6
comp=Z,12nm,1.0s
H03N2 Juan Fernandez 47.28 168 T T 09 27 56.8
baz=347,slow=76,SNR=90
H03N1 Juan Fernandez 47.29 168 T T 09 27 55.9
baz=347,slow=76,SNR=98
H03N3 Juan Fernandez 47.30 168 T T 09 27 54.7
baz=347,slow=76,SNR=111
CO02 Combarbal 47.37 159 IAmb IAmb 08 37 33.8
comp=Z,15nm,0.8s
KUQ Kuujjuaa 47.62 15 P **08 37 31.6 -0.8**
AMBA Amambai (Brazi 49.02 137 *eP* P **08 37 43.6 -0.2**
MT01 Popeta 49.71 160 P P **08 37 49.9 +1.1**
MT01 IAmb IAmb 08 38 17.2
comp=Z,14nm,1.2s
MT09 Talagante 49.72 160 P P **08 37 50.5 +1.4**
MT09 IAmb IAmb 08 37 51.1
comp=Z,9.6nm,0.8s
BDFB Brasilia 49.75 124 P P **08 37 49.7 +0.2**
comp=Z,4.9nm,0.7s,baz=297,slow=11,SNR=8.8
BDFB pP **pP** **08 38 02.8 -1.7**
comp=Z,6.3nm,0.6s,baz=285,slow=12,SNR=6.5
comp=Z,4.9nm,0.7s
BDFB Brasilia 49.75 124 P P **08 37 49.2 -0.3**
BDFB IAmb IAmb 08 38 04.0
comp=Z,7.9nm,0.8s
BBB Bella Bella 49.91 330 LR LR 09 02 16.2
comp=Z,274nm,18.5s,baz=93,slow=40
CPUP Villa Florida 49.96 142 P P **08 37 50.7 -0.1**
comp=Z,5.9nm,1.0s,baz=328,slow=10.0,SNR=7.8
CPUP PcP **PcP** **08 39 11.9 +1.6**
comp=Z,2.2nm,0.6s,baz=163,slow=1.8,SNR=3.3
comp=Z,5.9nm,1.0s
CPUP Villa Florida 49.96 142 P P **08 37 51.5 +0.7**
CPUP IAmb IAmb 08 37 52.2
comp=Z,20nm,1.4s
CPUP Villa Florida 49.96 142 P P **08 37 50.8 0.0**
CPUP x x 08 38 07.1
CPUP PcP **PcP** **08 39 11.6 +1.3**
BO01 Tunca 50.25 160 P **08 37 53.3 +0.4**
BO01 IAmb IAmb 08 37 55.6
comp=Z,13nm,1.1s
IPMB Ipameri, GO 50.88 126 *eP* P **08 37 57.2 -0.8**
JANB Januaria 52.50 121 *eP* P **08 38 09.3 -0.8**
YKAW1 Yellowknife Wh 52.53 346 P **08 38 09.6 0.0**
YKA Yellowknife Ar 52.57 345 P P **08 38 09.5 -0.3**
comp=Z,3.7nm,0.4s,baz=146,slow=7.0,SNR=138
YKA pP **pP** **08 38 23.7 -1.3**
comp=Z,7.3nm,0.8s,baz=151,slow=6.7,SNR=9.9
YKA LR LR 09 04 01.0
comp=Z,192nm,18.6s,baz=104,slow=40
comp=Z,3.7nm,0.4s
YKA Yellowknife Ar 52.57 345 P P **08 38 10.0 +0.2**
FRB Frobisher Bay 52.64 11 P P **08 38 08.7 -1.6**
comp=Z,4.8nm,0.3s,baz=210,slow=7.6,SNR=30
FRB pP **pP** **08 38 22.5 -3.0**
comp=Z,9.3nm,0.7s,baz=217,slow=7.4,SNR=7.4
FRB LR LR 09 01 07.4
comp=Z,363nm,18.5s,baz=208,slow=37
comp=Z,4.8nm,0.3s
FRTB Fartura 53.06 133 *eP* P **08 38 13.3 -0.8**
DLBC Dease Lake 54.62 335 LR LR 09 04 45.5
comp=Z,161nm,18.8s,baz=111,slow=39
WRGLY Wrigley 55.59 342 IAmb IAmb 08 38 47.5
comp=Z,13nm,1.2s
PLCA Paso Flores 56.26 163 P P **08 38 38.1 +1.1**
comp=Z,4.2nm,0.9s,baz=305,slow=7.2,SNR=8.8
PLCA LR LR 08 57 04.8
comp=Z,132nm,20.8s,baz=13,slow=30
comp=Z,4.2nm,0.9s
PLCA Paso Flores 56.26 163 P P **08 38 38.5 +1.4**
PLCA IAmb IAmb 08 40 23.7
comp=Z,20nm,1.8s
PLCA Paso Flores 56.26 163 P P **08 38 38.6 +1.6**
PLCA x x 08 38 55.1
PLCA sP **sP** **08 39 03.1 +4.4**
PLCA PcP **PcP** **08 39 32.5 -1.5**
ILON Igloolik, Nuna 56.45 3 P P **08 38 37.8 -0.1**
CMC01 Camacan, BA 56.70 118 *eP* P **08 38 38.9 -1.7**
GUA01 Guaratinga, BA 57.03 120 *eP* P **08 38 41.5 -1.3**
BSFB Barra de Sao F 57.24 123 *eP* P **08 38 43.3 -1.0**
RIB01 Linhares ES 57.85 123 *eP* P **08 38 47.4 -1.2**
CAM01 Campos-RJ 58.13 126 *eP* P **08 38 49.4 -1.1**
LL02 Futaleuf 58.21 165 IAmb IAmb 08 38 52.8
comp=Z,15nm,1.4s
AY01 Puyuhuapi 59.17 166 IAmb IAmb 08 38 59.6
comp=Z,8.1nm,0.9s
SFJD Kangerlussuaq 59.60 17 LR LR 09 06 47.9
comp=Z,140nm,18.1s,baz=226,slow=38
POIN Pond Inlet 59.97 4 P **08 39 01.9 -0.6**
M29M Somme Creek 60.34 336 IAmb IAmb 08 39 08.0
comp=Z,11nm,1.1s
COYC Coyhaique 60.39 166 P **08 39 06.4 +0.8**
COYC Coyhaique 60.39 166 P P **08 39 07.3 +1.7**
COYC pP **sP** **08 39 24.9 -2.6**
F31M Tsiigehtchic 61.61 342 IAmb IAmb 08 39 14.4
comp=Z,9.1nm,0.9s
RES Resolute Bay 61.68 358 LR LR 09 05 59.9
comp=Z,162nm,20.9s,baz=198,slow=36
RES Resolute Bay 61.68 358 P **08 39 13.2 -0.8**
AY03 Cochrane 61.87 167 P P **08 39 18.3 +2.7**
INK Inuvik 62.10 343 P **08 39 16.6 -0.3**
INK IAmb IAmb 08 39 17.3
comp=Z,6.5nm,0.8s
G29M Pine Creek 62.64 340 IAmb IAmb 08 39 23.4
comp=Z,9.3nm,1.0s
A36M Sachs Harbour 62.69 348 IAmb IAmb 08 39 20.7
comp=Z,8.6nm,0.8s
J26L Joseph Creek 63.36 337 IAmb IAmb 08 39 47.8
comp=Z,9.8nm,1.3s
E29M Blow River 63.44 342 IAmb IAmb 08 39 41.9
comp=Z,12nm,1.4s
J25K Salcha River, 64.10 337 IAmb IAmb 08 40 23.1
comp=Z,12nm,1.6s
ILAR Eielson Array 64.76 336 P P **08 39 33.9 -0.7**
comp=Z,2.9nm,1.0s,baz=168,slow=4.6,SNR=21
ILAR pP **pP** **08 39 48.6 -1.6**
comp=Z,2.5nm,0.9s,baz=163,slow=3.4,SNR=6.1
comp=Z,2.9nm,1.0s
ILAR Eielson Array 64.76 336 P **08 39 34.4 -0.2**
D27M Malcolm River 64.84 342 P P **08 39 35.3 +0.1**
RND Reindeer 65.02 335 P P **08 39 36.8 +0.4**
F26K Sheenjek River 65.07 340 IAmb IAmb 08 40 25.2
comp=Z,14nm,1.6s
BMAR Burnt Mountain 65.09 339 P P **08 39 37.1 +0.4**
COLA College 65.18 336 P P **08 39 36.9 -0.3**
COLA x x 08 39 52.8
COLA pP **pP** **08 39 55.1 +2.3**
D25K Kavik River 66.56 341 IAmb IAmb 08 39 47.3
comp=Z,7.5nm,0.8s
E23K Chandalar 67.10 339 IAmb IAmb 08 40 11.6
comp=Z,7.1nm,0.9s
F21K Alatna River 68.18 338 IAmb IAmb 08 40 14.0
comp=Z,7.1nm,0.8s
D20K Etivluk River 69.76 339 IAmb IAmb 08 40 28.2
comp=Z,15nm,1.2s
F15K North Star Dit 72.18 335 IAmb IAmb 08 41 32.5
comp=Z,22nm,1.8s
EKA Eskdalemuir Ar 77.12 36 P P **08 40 47.1 -2.5**
comp=Z,3.4nm,0.8s,baz=270,slow=5.1,SNR=3.5
comp=Z,3.4nm,0.8s
ESDC Sonseca Array 78.15 52 P P **08 40 53.0 -2.8**
comp=Z,0.7nm,0.7s,baz=293,slow=5.3,SNR=5.1
ESDC pP **pP** **08 41 09.0 -2.8**
comp=Z,0.8nm,0.6s,baz=276,slow=5.4,SNR=4.1
ESDC LR LR 09 08 40.9
comp=Z,104nm,19.7s,baz=284,slow=31
comp=Z,0.7nm,0.7s
MDT Midelt 78.55 59 LR LR 09 09 03.0
comp=Z,104nm,21.2s,baz=300,slow=31
SPITS Spitsbergen Ar 80.44 12 P P **08 41 06.5 -1.0**
comp=Z,11nm,1.0s,baz=172,slow=1.7,SNR=14
SPITS pP **pP** **08 41 23.1 -0.5**
comp=Z,4.4nm,0.7s,baz=183,slow=1.7,SNR=2.7
SPITS LR LR 09 16 36.3
comp=Z,129nm,21.7s,baz=294,slow=36
comp=Z,11nm,1.0s
DBIC Dimbokro 83.04 85 LR LR 09 15 25.7
comp=Z,69nm,18.5s,baz=314,slow=34
NOA NORSAR Array B 83.65 29 LR LR 09 16 31.4
comp=Z,68nm,20.3s,baz=295,slow=34
ARCES ARCESS Array B 86.15 19 P P **08 41 36.3 -0.7**
comp=Z,4.8nm,1.0s,baz=287,slow=3.7,SNR=2.0
ARCES pP **pP** **08 41 50.9 -2.4**
comp=Z,2.7nm,0.7s,baz=356,slow=1.6,SNR=2.4
ARCES LR LR 09 18 23.5
comp=Z,54nm,19.1s,baz=308,slow=34
comp=Z,4.8nm,1.0s
ARCES ARCESS Array B 86.15 19 P P **08 41 36.4 -0.6**
TUE Stuetta 86.43 43 P P **08 41 38.5 -0.7**
DAVOX Davos/Dischmat 86.70 43 LR LR 09 17 17.3
comp=Z,193nm,21.6s,baz=277,slow=34
GERES GERESS Array B 88.57 40 P P **08 41 47.5 -1.7**
comp=Z,0.3nm,0.6s,baz=280,slow=5.9,SNR=1.7
GERES pP **pP** **08 42 03.3 -2.2**
comp=Z,0.2nm,0.4s,baz=267,slow=8.0,SNR=3.4
comp=Z,0.3nm,0.6s
FINES FINESS Array B 90.16 26 P P **08 41 55.4 -0.8**
comp=Z,3.4nm,0.9s,baz=277,slow=5.0,SNR=4.1
FINES LR LR 09 21 40.3
comp=Z,68nm,20.9s,baz=300,slow=35
comp=Z,3.4nm,0.9s
FINES FINESS Array B 90.16 26 P P **08 41 56.2 0.0**
MODS Modra-Piesok 90.96 40 *eP* P **08 42 00.1 -0.2**
TIXI Tiksi 91.70 349 LR LR 09 26 33.8
comp=Z,66nm,21.1s,baz=10.0,slow=38
TIXI Tiksi 91.70 349 P **08 42 02.8 -0.4**
AKASG Malin Array Be 96.98 34 LR LR 09 23 45.6
comp=Z,48nm,20.0s,baz=324,slow=34
NRIK Noril'sk 97.76 1 LR LR 09 28 56.3
comp=Z,136nm,19.0s,baz=337,slow=37
YAK Yakutsk 99.17 343 LR LR 09 36 51.4
comp=Z,89nm,18.1s,baz=77,slow=41
ZALV Zalesovo Beam 113.05 4 PKiKP **PKiKP** **08 47 32.5 -0.6**
comp=Z,0.7nm,0.4s,baz=296,slow=1.8,SNR=4.1
KURK Kurchatov 115.59 9 **PKiKP** **08 47 37.5 -0.6**
KURBB Kurchatov Arra 115.67 9 PKP **PKiKP** **08 47 37.5 -0.8**
comp=Z,1.0nm,0.6s,baz=342,slow=2.0,SNR=14
BOSA Boshof 117.51 116 PKP **PKiKP** **08 47 42.9 +0.3**
comp=Z,4.4nm,1.0s,baz=41,slow=7.5,SNR=3.7
SONM Songino Array 117.79 348 PKP **PKPdf** **08 47 42.3 -0.3**
comp=Z,1.4nm,0.7s,baz=337,slow=1.9,SNR=8.9
SONM pPKP **pPKPdf** **08 47 58.5 -1.0**
comp=Z,2.5nm,0.7s,baz=356,slow=1.6,SNR=12
SONM Songino Array 117.79 348 **PKiKP** **08 47 42.8 +0.2**
KSRS Korea Array 118.82 327 PKP **PKiKP** **08 47 45.4 +0.7**
comp=Z,1.4nm,0.8s,baz=42,slow=3.8,SNR=6.1
KSRS pPKP **pPKPdf** **08 48 00.6 -1.0**
comp=Z,3.6nm,0.8s,baz=357,slow=1.7,SNR=8.0
LSZ Lusaka 119.45 100 PKP **PKPdf** **08 47 46.3 -0.3**
comp=Z,0.8nm,0.4s,baz=289,slow=4.4,SNR=1.7
LSZ pPKP **pPKPdf** **08 48 02.1 -1.4**
comp=Z,2.5nm,0.6s,baz=316,slow=3.7,SNR=3.3
MKAR Makanchi Array 119.92 7 PKP **PKPdf** **08 47 45.8 -0.9**
comp=Z,1.1nm,0.8s,baz=342,slow=2.2,SNR=10
MKAR pPKP **pPKPdf** **08 48 01.3 -2.2**
comp=Z,1.0nm,0.7s,baz=313,slow=2.4,SNR=6.9
HHC Hu-ho-hao-te 123.00 341 *eP* **PKPdf** **08 47 49.0 -3.8**
WMQ Urumqi 123.31 3 *e*PKP **PKiKP** **08 47 54.0 +0.5**
WMQ LR LR
comp=Z,170nm,24.7s
HNS HongShan 124.99 337 ⇑PKP **PKiKP** **08 47 57.2 +0.3**
GTA2 Gaotai 127.05 351 *e*PKP **PKPdf** **08 48 00.8 +0.1**
GTA2 pPKP pPKPdf 08 48 16.5 -1.0
NJ2 Nanjing 127.69 330 *eP* **PKiKP** **08 48 03.2 +0.8**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
LZH Lanzhou 129.57 346 *e*PKP **PKiKP** **08 48 07.3 +0.9**
LZH pPKP pPKPdf 08 48 21.9 -0.6
LZDM Lanzhou Array 129.73 346 PKP **PKiKP** **08 48 07.3 +0.4**
comp=Z,2.3nm,0.6s,baz=252,slow=0.5,SNR=6.5
LZDM pPKP **pPKPdf** **08 48 22.4 -0.6**
comp=Z,3.3nm,0.6s,baz=325,slow=1.8,SNR=0.9
STKA Stephens Creek 129.94 239 PKP **PKiKP** **08 48 07.5 +0.6**
comp=Z,2.8nm,0.9s,baz=356,slow=20,SNR=4.1
XAN Xi'an 130.07 340 ⇓PKP **PKPdf** **08 48 06.9 +0.4**
XAN sPKP 08 48 23.3
WRA Warramunga Arr 137.78 255 PKP **PKiKP** **08 48 22.6 -0.6**
comp=Z,3.7nm,0.9s,baz=89,slow=2.2,SNR=13
WRA pPKP **pPKPdf** **08 48 38.2 +0.1**
comp=Z,3.4nm,0.7s,baz=92,slow=2.1,SNR=6.9
ASAR Alice Springs 137.90 249 PKhKP PKPpre 08 48 08.9
comp=Z,0.4nm,0.6s,baz=96,slow=2.9,SNR=2.3
ASAR PKP **PKiKP** **08 48 22.7 -0.6**
comp=Z,1.7nm,0.8s,baz=100,slow=1.8,SNR=7.5
ASAR pPKP pPKPdf 08 48 38.0 -0.3
comp=Z,1.3nm,0.6s,baz=94,slow=2.2,SNR=4.5
PZH PanZhiHua 139.24 345 PKP **PKPdf** **08 48 23.7 -0.2**
FITZ Fitzroy Crossi 146.10 257 PKPbc **PKPab** **08 48 38.6 +1.0**
comp=Z,13nm,0.6s,baz=130,slow=2.4,SNR=31
FITZ pPKP **pPKPdf** **08 48 53.0 +0.1**
comp=Z,15nm,0.7s,baz=116,slow=5.7,SNR=9.0
CMAR Chiang Mai Arr 147.65 345 PKPbc **PKPbc** **08 48 41.6 +0.3**
comp=Z,8.4nm,0.7s,baz=342,slow=3.5,SNR=38
CMAR pPKPbc **pPKPdf** **08 48 55.5 0.0**
comp=Z,15nm,0.8s,baz=339,slow=3.5,SNR=12

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*DJA **09** 08:40:55.6±0.5, 3˚S±3˚×13˚0E±˚, h23km±6km, M3.8/13, mb3.9/1, MLv3.7/13*
*IDC **09** 08:40:57.9±3.5, 2.˚99S×130.˚31E, h74km±44km, mb3.5/4, mbtmp3.8/7, ML3.6/3, MS4.1/1, Error ellipse: s-maj=65.6km s-min=15.3km az=90.0*
ISC 09 08:40:54.2±0.8, 2.˚92S±0.˚06×129.˚95E±0.˚05, h25km, n17, σ1°34/17, mb3.8/3, Seram

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.10**	**247**	P		**Pb**	**08 41 15.8**	**+1.1**
BNDI	**Bandanaira**	**1.59**	**182**	P		**Pb**	**08 41 23.8**	**+0.8**
KRAI	**Karang Ratu**	**1.60**	**256**	P		**Pb**	**08 41 23.6**	**+0.5**
AAI	**Ambon**	**1.91**	**246**	P		**Pb**	**08 41 27.6**	**-0.8**
FAKI	**Fak Fak**	**2.30**	**90**	P		**Pn**	**08 41 31.6**	**+1.0**
SIJI	**Sorong**	**2.43**	**33**	P		**Pn**	**08 41 32.5**	**+0.1**
	3.6nm,0.3s,baz=215,slow=23,SNR=9.9							
SIJI				S		**Sn**	**08 42 02.0**	**+0.8**
	55nm,0.2s,baz=231,slow=23,SNR=12							
	23nm,0.3s							
SIJI	**Sorong**	**2.43**	**33**	P		**Pn**	**08 41 33.1**	**+0.7**
SWI	**Sorong**	**2.43**	**33**	P		**Pn**	**08 41 33.3**	**+0.9**
NLAI	**Namlea**	**2.86**	**264**	P		**Pn**	**08 41 40.0**	**+1.7**
KMPI	**Kaimana, Papua**	**3.82**	**101**	P		**Pn**	**08 41 53.6**	**+2.1**
FITZ	**Fitzroy Crossi**	**15.66**	**195**	P		**Pn**	**08 44 33.0**	**-0.4**
	0.3nm,0.3s,baz=25,slow=9.9,SNR=6.0							
	1.2nm,0.5s							
WRA	**Warramunga Arr**	**17.45**	**166**	P		**Pn**	**08 44 52.9**	**-3.2**
	0.4nm,0.3s,baz=349,slow=11,SNR=12							
	3.6nm,0.9s							
ASAR	**Alice Springs**	**20.98**	**170**	P		**P**	**08 45 34.7**	**-1.1**
	19nm,1.0s,baz=348,slow=10,SNR=72							
	19nm,1.0s							
MJAR	**Matsushiro Arr**	**40.01**	**10**	LR		LR	09 03 55.0	
	comp=Z,304nm,21.9s,baz=1.0,slow=34							
MKAR	**Makanchi Array**	**64.82**	**326**	P		**P**	**08 51 30.6**	**-0.5**
	0.2nm,0.5s,baz=126,slow=7.3,SNR=2.0							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**67.93**	**333**	P		**P**	**08 51 50.4**	**-0.3**
	0.3nm,0.4s,baz=140,slow=7.6,SNR=1.7							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**69.04**	**328**	P		**P**	**08 51 57.8**	**0.0**
	0.5nm,0.6s,baz=124,slow=5.7,SNR=5.5							
	0.5nm,0.6s							

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*IDC **09** 08:48:48.1±0.8, 12.˚69N×92.˚51E, h0km, mb3.7/12, mbtmp3.7/14, ML3.7/2, MS3.9/2, Error ellipse: s-maj=24.3km s-min=16.4km az=65.0*
*NEIC **09** 08:48:50.6±0.7, 12.˚84N±0.˚03×92.˚6E±0.˚1, h10km±1km, mb4.4/7, Error ellipse: s-maj=20.8km s-min=4.3km az=267.0*
*NDI **09** 08:48:51.7±1.1, 12.˚89N×92.˚64E, h12km, ML4.4, MW4.4*
ISC 09 08:48:49.8±0.5, 12.°85N±0.°05×92.°53E±0.°05, h10km, n46, σ1°93/47, mb3.8/16, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**0.50**	**50**	*eP*		**Pb**	**08 49 00.1**	**-0.7**
DGPR				*eS*		**Sg**	**08 49 05.8**	**-0.6**
DGPR				IAML			08 49 11.4	
	comp=N,16μm,0.5s							
DGPR				IAML			08 49 11.4	
	comp=E,26μm,0.6s							
PBA	**Port Blair**	**1.21**	**170**			**Pg**	**08 49 14.4**	**+1.4**
PBA	**Port Blair**	**1.21**	**170**	*eP*		**Pg**	**08 49 14.7**	**+1.7**
PBA				IAML			08 49 20.1	
	comp=N,8μm,0.3s							
PBA				IAML			08 49 20.5	
	comp=E,10μm,0.1s							
PBA				*eS*		**Sn**	**08 49 31.8**	**+2.6**
CMBY	**CAMPBELL BAY**	**5.97**	**167**	*eP*		**Pn**	**08 50 17.6**	**-0.6**
CMBY				*eS*		**Sn**	**08 51 20.4**	**-6.3**
CMBY				IAML			08 51 49.6	
	comp=N,2μm,0.3s							
CMBY				IAML			08 51 50.1	
	comp=E,1μm,0.2s							
CM31	**Chiang Mai Arr**	**8.31**	**47**	Pn		**Pn**	**08 50 50.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**8.31**	**47**	Pn		**Pn**	**08 50 51.7**	**+1.2**
	comp=E,0.2nm,0.3s,baz=238,slow=14,SNR=7.0							
CMAR				Sn		**Sn**	**08 52 20.9**	**-3.7**
	comp=E,0.3nm,0.3s,baz=233,slow=28,SNR=2.3							
	comp=E,2.4nm,1.0s							
CMAR	**Chiang Mai Arr**	**8.31**	**47**			**Pn**	**08 50 50.0**	**-0.5**
CHTO	**Chiang Mai**	**8.55**	**45**	Pn		**Pn**	**08 50 54.0**	**+0.2**
LHMI	**Lhok Sumawe**	**8.74**	**150**	Pn		**Pn**	**08 50 55.9**	**-0.4**
VIS	**Vishakhapatnam**	**10.11**	**300**	*eP*		**Pn**	**08 51 17.7**	**+2.6**

VIS					IAML		08 53 01.2	
	comp=E,89nm,0.6s							
VIS					IAML		08 53 01.2	
	comp=N,88nm,0.8s							
VIS				eS		Sn	08 53 03.0	-5.7
RAGD	**RAYAGADA**	10.79	307	eP		Pn	08 51 25.4	+0.9
RAGD				eS		Sn	08 53 18.6	-6.8
IPM	**Ipoh**	11.82	134	Pn		Pn	08 51 38.0	-0.5
MDRS	**Chennai**	11.98	272	eP		Pn	08 51 42.7	+2.0
MDRS				eS		Sn	08 53 50.0	-4.5
MDRS				IAML			08 53 50.6	
	comp=E,166nm,0.2s							
MDRS				IAML			08 54 00.8	
	comp=N,41nm,0.6s							
KOHI	**KOHIMA**	12.89	6	eP		Pn	08 51 53.0	-0.2
KOHI				eS		Sn	08 54 05.3	-12
PALK	**Pallekele**	12.90	246	Pn		Pn	08 51 52.5	-0.9
	comp=N,0.4nm,0.3s,baz=77,slow=20,SNR=1.5							
PALK				Sn		Sn	08 54 06.8	-10
	comp=N,3.3nm,0.3s,baz=335,slow=13,SNR=11							
	comp=N,3.3nm,0.8s							
ENH	**Enshi**	23.38	39	P		P	08 53 58.8	0.0
ENH				IAmb		IAmb	08 54 09.0	
	comp=Z,11nm,0.8s							
LZDM	**Lanzhou Array**	25.11	22	P		P	08 54 17.2	+1.9
	comp=Z,0.4nm,0.3s,baz=323,slow=9.6,SNR=4.7							
	comp=Z,0.4nm,0.3s							
H08S3	**Diego Garcia H**	28.48	225	T		T	09 24 18.8	
	baz=44,slow=76,SNR=36							
H08S2	**Diego Garcia H**	28.48	225	T		T	09 24 24.5	
	baz=44,slow=76,SNR=48							
H08S1	**Diego Carcia H**	28.50	225	T		T	09 24 25.3	
	baz=44,slow=76,SNR=28							
AAK	**Ala-Archa**	33.54	336	P		P	08 55 30.8	+0.8
AAK				IAmb		IAmb	08 55 35.2	
	comp=Z,2.7nm,0.5s							
MKAR	**Makanchi Array**	34.91	348	P		P	08 55 42.7	+1.0
	comp=Z,1.4nm,1.0s,baz=171,slow=9.9,SNR=8.6							
	comp=Z,1.4nm,1.0s							
MKAR	**Makanchi Array**	34.91	348	P		P	08 55 42.5	+0.8
SONM	**Songino Array**	36.75	16	P		P	08 55 58.9	+1.3
	comp=Z,1.2nm,0.9s,baz=201,slow=8.7,SNR=6.3							
	comp=Z,1.2nm,0.9s							
SONM	**Songino Array**	36.75	16	P		P	08 55 57.6	+0.1
SONM				IAmb		IAmb	08 56 11.9	
	comp=Z,4.5nm,1.4s							
KURBB	**Kurchatov Arra**	39.36	346	P		P	08 56 20.0	+0.6
	comp=Z,1.1nm,0.9s,baz=157,slow=8.2,SNR=4.4							
	comp=Z,1.1nm,0.9s							
KSRS	**Korea Array**	39.95	46	P		P	08 56 24.7	+0.3
	comp=Z,0.8nm,0.7s,baz=240,slow=8.4,SNR=2.8							
	comp=Z,0.8nm,0.7s							
ZALV	**Zalesovo Beam**	41.45	353	P		P	08 56 37.2	+0.6
	comp=Z,1.3nm,0.8s,baz=170,slow=9.0,SNR=6.1							
	comp=Z,1.3nm,0.8s							
ZALV	**Zalesovo Beam**	41.45	353	P		P	08 56 37.1	+0.5
BVAR	**Borovoye Array**	43.80	341	P		P	08 56 56.6	+0.9
	comp=Z,0.2nm,0.3s,baz=132,slow=8.6,SNR=1.5							
	comp=Z,0.2nm,0.3s							
MJAR	**Matsushiro Arr**	47.17	52	P		P	08 57 24.0	+1.3
	comp=Z,0.7nm,0.7s,baz=246,slow=7.0,SNR=4.5							
	comp=Z,0.7nm,0.7s							
ARTI	**Arti**	50.76	336	P		P	08 57 50.6	+0.7
ARTI				IAmb		IAmb	08 58 10.1	
	comp=Z,3.5nm,0.5s							
WB0	**Warramunga Arr**	52.43	128	P		P	08 58 02.0	-0.9
WRA	**Warramunga Arr**	52.49	128	P		P	08 58 02.4	-1.0
	comp=Z,0.6nm,0.6s,baz=308,slow=7.9,SNR=10							
WRA				PcP		PcP	08 59 13.7	-0.3
	comp=Z,0.3nm,0.3s,baz=307,slow=3.8,SNR=1.8							
	comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	52.49	128	P		P	08 58 01.8	-1.6
WR8	**Warramunga Arr**	52.62	128	P		P	08 58 02.6	-1.7
WR8				IAmb		IAmb	08 58 14.3	
	comp=Z,4.2nm,1.1s							
ASAR	**Alice Springs**	54.35	132	P		P	08 58 16.1	-0.9
	comp=Z,0.6nm,0.5s,baz=308,slow=6.6,SNR=17							
ASAR				PcP		PcP	08 59 20.1	-0.9
	comp=Z,0.2nm,0.6s,baz=314,slow=4.6,SNR=1.2							
	comp=Z,0.6nm,0.5s							
ASAR	**Alice Springs**	54.35	132	P		P	08 58 16.3	-0.8
BRTR	**Keskin Array B**	58.04	309	P		P	08 58 43.7	+0.3
	comp=Z,0.7nm,0.7s,baz=117,slow=8.3,SNR=2.6							
BRTR				LR		LR	09 25 18.2	
	comp=Z,90nm,18.8s,baz=5.5,slow=38							
	comp=Z,0.7nm,0.7s							
BRTR	**Keskin Array B**	58.04	309	P		P	08 58 43.5	+0.1
FINES	**FINESS Array B**	67.60	332	P		P	08 59 47.4	+0.9
	comp=Z,3.2nm,1.0s,baz=190,slow=7.7,SNR=3.6							
	comp=Z,3.2nm,1.0s							
H04N2	**CROZET ISLANDS**	69.22	209	T		T	10 15 27.5	
	baz=43,slow=74,SNR=25							
H04N1	**CROZET ISLANDS**	69.23	209	T		T	10 15 28.2	
	baz=43,slow=74,SNR=40							
H04N3	**CROZET ISLANDS**	69.24	209	T		T	10 15 27.0	
	baz=43,slow=74,SNR=44							
SUR	**Sutherland**	81.89	234	LR		LR	09 32 26.7	
	comp=Z,91nm,22.0s,baz=237,slow=32							
PLCA	**Paso Flores**	148.51	205	PKPbc		PKPdf	09 08 36.4	+2.7
	comp=Z,1.0nm,0.8s,baz=231,slow=7.3,SNR=2.9							

*NEIC **09** 08:57:52.5±1.6, 17.89N±0.04×66.84W±0.01, h10km±2km, ML3.4/29, Md3.4/5(RSPR), Error ellipse: s-maj=6.6km s-min=2.9km az=12.0*
*RSPR **09** 08:57:53.2, 17.97N×66.88W, h16km, MD3.4/5*
*OSPL **09** 08:57:53.3±0.3, 18.00N×66.88W, h18km±4km, ML3.0, Presumed earthquake*
*SDD **09** 08:57:53.2±0.6, 17.97N×66.86W, h20km±5km, MD3.8, ML3.0, MW3.4, Presumed earthquake*

ISC 09 08:57:51.8±1.0, 17.95N±0.06×66.88W±0.02, h25km±5km, n36, σ0.44/63, 10C-10D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	0.03	360	⇑iP	Pb	08 57 56.0	-0.2
GBPR				eS	Sb	08 57 58.0	-1.0
MLPR	**Magueyes Islan**	0.16	277		Pb	08 57 57.3	+0.3
MLPR				Sg	Sb	08 58 00.2	-0.3
MLPR				IAML		08 58 00.8	
	9μm,0.2s						
MLPR				IAML		08 58 00.9	
	6μm,0.2s						
CRPR	**Cabo Rojo, PR**	0.23	285	Pg	Pb	08 57 58.2	+0.3
CRPR				Sg	Sb	08 58 01.8	-0.1
CRPR				IAML		08 58 01.9	
	11μm,0.4s						
CRPR				IAML		08 58 02.1	
	5μm,0.2s						
CRPR	**Cabo Rojo, PR**	0.23	285	⇓ePg	Pb	08 57 58.1	+0.3
CRPR				⇑eSg	Sb	08 58 01.6	-0.3
CRPR				IAML		08 58 01.8	
	comp=N,10μm,0.2s						
CRPR	**Cabo Rojo, PR**	0.23	285	⇓iP	Pb	08 57 58.2	+0.3
CRPR				eS	Sb	08 58 01.8	-0.1
CRPR	**Cabo Rojo, PR**	0.23	285	iP	Pb	08 57 58.2	+0.3
CRPR				eS	Sb	08 58 01.7	-0.2
CRPR				IAML		08 58 01.9	
	comp=Z,6μm,0.2s						
OBIP	**Obispado Ponce**	0.28	70		Pb	08 57 58.6	0.0
OBIP				Sg	Sb	08 58 02.6	-0.5
OBIP	**Obispado Ponce**	0.28	70	⇓eP	Pb	08 57 58.7	+0.2
OBIP				eS	Sb	08 58 02.8	-0.3
OBIP	**Obispado Ponce**	0.28	70	iP	Pb	08 57 58.7	+0.2
OBIP				eS	Sb	08 58 02.6	-0.5
OBIP				IAML		08 58 03.0	
	comp=Z,2μm,0.5s						
LSP	**Las Mesas**	0.30	319	⇓iP	Pb	08 57 59.1	+0.2
LSP				eS	Sb	08 58 04.0	+0.3
CELP	**Cerrillos**	0.31	66		Pb	08 57 59.3	+0.3
CELP				Sg	Sb	08 58 03.8	-0.2
CELP				IAML		08 58 04.1	
	comp=Z,6μm,0.2s						
CELP				IAML		08 58 04.2	
	comp=Z,5μm,0.4s						
UUPR	**Utuado, UPR, P**	0.34	27		Pb	08 57 59.4	-0.1
UUPR				Sg	Sb	08 58 03.6	-1.1
PRSN	**Puerto Rico Se**	0.37	317	Pg	Pb	08 58 00.0	+0.2
PRSN				Sg	Sb	08 58 05.5	0.0
PRSN	**Puerto Rico Se**	0.37	317	⇑ePg	Pb	08 58 00.1	+0.2
PRSN				⇑eSg	Sb	08 58 05.3	-0.1
PRSN				IAML		08 58 07.9	
	comp=N,6μm,0.2s						
PRSN	**Puerto Rico Se**	0.37	317	⇑iP	Pb	08 58 00.1	+0.2
PRSN				eS	Sb	08 58 05.4	0.0
AGPR	**Aguadilla, PR**	0.56	337	⇑ePg	Pb	08 58 03.2	0.0
AGPR				⇓eSg	Sb	08 58 10.5	-0.2
AGPR				IAML		08 58 12.4	
	comp=N,1μm,0.2s						
AGPR	**Aguadilla, PR**	0.56	337	⇑eP	Pb	08 58 03.1	0.0
AGPR				eS	Sb	08 58 10.9	+0.1
ECPR	**Experimental S**	0.61	53		Pb	08 58 04.0	0.0
ECPR				IAML		08 58 14.7	
	comp=N,4μm,0.2s						
ECPR	**Experimental S**	0.61	53	⇓eP	Pb	08 58 04.0	0.0
ECPR				eS	Sb	08 58 12.3	+0.1
SJG	**San Juan**	0.71	77		Pb	08 58 05.7	+0.1
SJG	**San Juan**	0.71	77	Sg	Sb	08 58 15.1	0.0
SJG	**San Juan**	0.71	77	⇑ePg	Pb	08 58 05.7	+0.1
SJG				⇑eSg	Sb	08 58 14.5	-0.5
SJG	**San Juan**	0.71	77	⇓iP	Pb	08 58 05.7	+0.1
SJG				eS	Sb	08 58 14.5	-0.5
SJG	**San Juan**	0.71	77	iP	Pb	08 58 05.7	+0.1
SJG				eS	Sb	08 58 15.2	+0.1
SJG				IAML		08 58 16.4	
	comp=Z,431nm,0.3s						
IDE	**Isla Desecheo**	0.71	308	⇑eP	Pn	08 58 06.1	-0.2
IDE				eS	Sn	08 58 16.1	-0.4
PDPR	**Patillas Dam,**	0.82	85		Pn	08 58 07.7	-0.1
PDPR				Sg	Sn	08 58 18.6	-0.5
GCPR	**Guaynabo City**	0.84	65		Pb	08 58 07.7	0.0
GCPR				Sg	Sb	08 58 18.0	-0.6
GCPR	**Guaynabo City**	0.84	65	⇓eP	Pb	08 58 07.8	0.0
GCPR				eS	Sb	08 58 18.5	-0.1
HUMP	**Col San Antoni**	1.00	79	Pg	Pn	08 58 10.3	0.0
HUMP				Sg	Sn	08 58 24.4	+0.9
HUMP				IAML		08 58 28.0	
	comp=Z,803nm,0.2s						
HUMP				IAML		08 58 28.2	
	comp=Z,682nm,0.2s						
HUMP	**Col San Antoni**	1.00	79	⇓eP	Pn	08 58 10.2	0.0
HUMP				eS	Sn	08 58 24.6	+1.1
PCDR	**Punta Cana, DR**	1.53	292	⇑ePg	Pb	08 58 19.3	-0.3
PCDR				IAML		08 58 47.0	
	comp=N,198nm,0.5s						
CUPR	**Culebra, Puert**	1.56	77		Pb	08 58 19.8	-0.2
MIDR	**Miches**	2.30	297	⇑ePg	Pb	08 58 32.2	-0.5
MIDR				IAML		08 59 14.1	
	comp=N,33nm,1.7s						
DR12	**Loma Pena Alta**	2.52	290		Pb	08 58 35.3	-1.1
HATOM	**Hato Mayor del**	2.52	290	⇑ePg	Pb	08 58 35.5	-0.9
HATOM				IAML		08 59 14.8	
	comp=N,32nm,0.3s						
SC01	**Santiago de lo**	3.93	293		Pn	08 58 51.8	+1.2

IDC 09 09:12:05.8±2.8, 5.84N×127.06E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=257.0km s-min=24.1km az=67.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	26.60	165	P	P	09 17 46.9	+0.8
	0.3nm,0.7s,baz=345,slow=9.4,SNR=1.4						
	0.3nm,0.7s						
ASAR	**Alice Springs**	30.08	167	P	P	09 18 16.3	-0.9
	0.7nm,1.1s,baz=359,slow=10,SNR=1.8						
	0.7nm,1.1s						
MKAR	**Makanchi Array**	56.03	324	P	P	09 21 46.3	-0.2
	0.4nm,0.4s,baz=116,slow=7.7,SNR=11						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	60.16	327	P	P	09 22 15.5	+0.2
	0.4nm,0.5s,baz=125,slow=6.7,SNR=1.7						
	0.4nm,0.5s						

*IDC **09** 09:22:17.9±3.7, 31.92S×69.84W, h83km±34km, mb3.1/2, mbtmp3.4/4, Error ellipse: s-maj=39.2km s-min=27.7km az=133.0*
*SJA **09** 09:22:18.6±0.7, 31.97S×69.95W, h120km±3km, ML3.7, MW3.8*
*GUC **09** 09:22:20.7±0.8, 31.95S×70.26W, h132km±4km, ML3.8*

ISC 09 09:22:20.5±0.8, 31.94S±0.02×70.03W±0.03, h114km±5km, n79, σ1.32/137, 26C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	0.64	77	eP	Pn	09 22 38.2	-1.0
RTLS				eS	Sn	09 22 51.6	-1.5
RTLS				IAML		09 22 51.9	
	comp=Z,6μm,0.3s						
CO04	**Los Peladeros**	0.81	263	⇑iP	Pn	09 22 39.8	-0.6
CO04				iS	Sn	09 22 54.5	-1.0
CO04				IAML		09 22 55.8	
	comp=E,5μm,0.3s						
VA03	**San Esteban**	0.93	208	⇑iP	Pn	09 22 41.4	0.0
VA03				iS	Sn	09 22 56.9	-0.2
VA03	**San Esteban**	0.93	208	eP	Pn	09 22 40.6	-0.8
VA03				eS	Sn	09 22 57.8	+0.6
VA03				IAML		09 22 59.5	
	comp=Z,2μm,0.2s						
CO02	**Combarbal**	1.11	312	⇑iP	Pn	09 22 43.2	0.0
CO02				iS	Sn	09 23 00.7	+0.3
CO02	**Combarbal**	1.11	312	eP	Pn	09 22 43.2	0.0
CO02				eS	Sn	09 23 01.1	+0.7
VA06	**Catapilco**	1.23	240	⇑iP	Pn	09 22 43.7	-0.7
VA06				iS	Sn	09 23 01.5	-1.1
VA06				IAML		09 23 02.8	
	comp=E,2μm,0.5s						
CO03	**El Pedregal**	1.24	333	⇓iP	Pn	09 22 44.8	+0.2
CO03				iS	Sn	09 23 03.1	+0.2
CO03				IAML		09 23 04.5	
	comp=E,2μm,0.1s						
CO03	**El Pedregal**	1.24	333	eP	Pn	09 22 44.7	0.0
CO03				eS	Sn	09 23 03.6	+0.7
CO03				IAML		09 23 05.7	
	comp=Z,1μm,0.2s						
PEL	**Peldehue**	1.32	205	⇑iP	Pn	09 22 45.2	-0.3
PEL				iS	Sn	09 23 04.2	-0.2
PEL				IAML		09 23 05.9	
	comp=N,2μm,0.3s						
PEL	**Peldehue**	1.32	205	eP	Pn	09 22 45.2	-0.3
PEL				eS	Sn	09 23 05.2	+0.8
PEL				IAML		09 23 05.7	
	comp=Z,778nm,0.2s						
ROCH	**El Roble**	1.32	219	⇑iP	Pn	09 22 45.3	-0.3
ROCH				iS	Sn	09 23 04.1	-0.6
ROCH				IAML		09 23 09.5	
	comp=E,2μm,0.5s						
SJA	**San Juan**	1.32	72	eP	Pn	09 22 32.5	-13
SJA				IAML		09 23 06.3	
	comp=Z,776nm,0.3s						
MT10	**Hacienda Santa**	1.39	198	⇑iP	Pn	09 22 46.8	+0.3
MT10				iS	Sn	09 23 06.6	+0.5
MT04	**Ro Olivares**	1.46	183	⇑iP	Pn	09 22 47.9	+0.6
MT04				iS	Sn	09 23 08.8	+1.1
MT04	**Ro Olivares**	1.46	183	eP	Pn	09 22 47.3	0.0
MT04				eS	Sn	09 23 17.6	+10
RTLL	**Cerro Villicun**	1.46	66	eP	Pn	09 22 46.2	-0.9
RTLL				eS	Sn	09 23 05.7	-1.7
RTLL				IAML		09 23 06.3	
	comp=Z,2μm,0.4s						
MT08	**Bocatoma Ro**	1.50	179	⇑iP	Pn	09 22 48.6	+0.9
MT08				iS	Sn	09 23 09.7	+1.3
MT08	**Bocatoma Ro**	1.50	179	eP	Pn	09 22 48.1	+0.4
MT08				eS	Sn	09 23 08.0	-0.4
MT14	**Cerro Cal¡n**	1.51	196	⇑iP	Pn	09 22 48.0	+0.3
MT14				iS	Sn	09 23 08.8	+0.4
MT14				IAML		09 23 17.4	
	comp=N,2μm,0.5s						
MT16	**CCHEN**	1.54	195	⇑iP	Pn	09 22 48.3	+0.3
MT16				iS	Sn	09 23 09.9	+0.9
MT16				IAML		09 23 11.6	
	comp=E,841nm,0.6s						
MT05	**Renca**	1.56	202	⇑iP	Pn	09 22 48.4	+0.1
MT05				iS	Sn	09 23 09.7	+0.2
MT05	**Renca**	1.56	202	eP	Pn	09 22 47.8	-0.6
MT05				eS	Sn	09 23 11.1	+1.6
MT05				IAML		09 23 11.7	
	comp=Z,814nm,0.3s						
ACCO	**Cerro Coronel**	1.59	32	eP	Pn	09 22 48.8	-0.1
MT03	**Universidad Ad**	1.60	194	⇑iP	Pn	09 22 49.1	+0.4
MT03				iS	Sn	09 23 10.7	+0.4
MT03				IAML		09 23 15.0	
	comp=E,2μm,0.4s						
MT03	**Universidad Ad**	1.60	194	eP	Pn	09 22 48.5	-0.3
MT03				eS	Sn	09 23 11.2	+0.9
MT03				IAML		09 23 15.4	
	comp=Z,800nm,0.1s						
MT02	**Curacav**	1.61	215	⇑iP	Pn	09 22 47.9	-0.9
MT02				iS	Sn	09 23 09.8	-0.6
MT02	**Curacav**	1.61	215	eP	Pn	09 22 48.2	-0.6
MT02				eS	Sn	09 23 10.9	+0.5
MT02				IAML		09 23 16.5	
	comp=Z,431nm,0.6s						
MT15	**Las Vizcachas**	1.70	193	⇑iP	Pn	09 22 50.1	+0.2
MT15				iS	Sn	09 23 13.0	+0.6
MT15				IAML		09 23 15.5	
	comp=N,2μm,0.4s						
VA01	**Torpederas**	1.74	231	⇑iP	Pn	09 22 49.4	-0.9
VA01	**Torpederas**	1.74	231	eP	Pn	09 22 49.0	-1.3
MT13	**San Alfonso**	1.81	187	⇑iP	Pn	09 22 51.8	+0.4
MT13				iS	Sn	09 23 16.1	+1.2
MT13				IAML		09 23 22.0	
	comp=E,632nm,0.3s						
MT13	**San Alfonso**	1.81	187	eP	Pn	09 22 51.3	-0.1
MT13				eS	Sn	09 23 16.6	+1.7
MT13				IAML		09 23 21.6	
	comp=Z,359nm,0.3s						
AROD	**Rodeo**	1.84	15	eP	Pn	09 22 52.9	+0.9
AROD				eS	Sn	09 23 15.4	-0.5
MT12	**Pirque**	1.84	194	⇑iP	Pn	09 22 51.8	+0.1
MT12				iS	Sn	09 23 15.3	-0.1
MT12				IAML		09 23 20.6	
	comp=N,1μm,0.3s						
GO04	**Tololo Observa**	1.88	339	⇑iP	Pn	09 22 52.5	0.0
GO04				iS	Sn	09 23 16.5	-0.3
GO04				IAML		09 23 19.2	
	comp=E,2μm,0.4s						
GO04	**Tololo Observa**	1.88	339	eP	Pn	09 22 52.8	+0.3
GO04				eS	Sn	09 23 17.3	+0.5
GO04				IAML		09 23 18.9	
	comp=Z,770nm,0.5s						
LMEL	**Las Melosas**	1.90	184	⇑iP	Pn	09 22 53.2	+0.6
LMEL				iS	Sn	09 23 18.5	+1.4
ACDV	**Cuesta del Vie**	1.93	24	eP	Pn	09 22 53.7	+0.7
ACDV				eS	Sn	09 23 16.2	-1.6
ACDV				IAML		09 23 20.6	
	comp=Z,276nm,0.5s						
CO01	**Juntas del Tor**	1.96	358	iP	Pn	09 22 54.8	+1.3
CO01				iS	Sn	09 23 20.3	+1.8
CO01	**Juntas del Tor**	1.96	358	eP	Pn	09 22 54.2	+0.8
CO01				eS	Sn	09 23 21.2	+2.6
MT09	**Talagante**	2.00	203	⇑iP	Pn	09 22 53.1	-0.7
MT09				iS	Sn	09 23 18.8	-0.4
MT09				IAML		09 23 22.0	
	comp=N,732nm,0.2s						
BO04	**La Punta**	2.10	193	⇑iP	Pn	09 22 54.9	0.0
BO04				iS	Sn	09 23 21.1	-0.2
BO04				IAML		09 23 22.6	
	comp=N,702nm,0.3s						
VA05	**Santo Domingo**	2.17	218	iP	Pn	09 22 54.5	-1.3
VA05				iS	Sn	09 23 21.2	-1.5
VA05				IAML		09 23 31.0	
	comp=E,695nm,0.5s						
MT01	**Popeta**	2.17	208	⇑iP	Pn	09 22 54.8	-1.0
MT01				IAML		09 23 23.2	
	comp=E,346nm,0.1s						
MT01	**Popeta**	2.17	208	eP	Pn	09 22 55.0	-0.8
MT01				eS	Sn	09 23 22.5	-0.4
MT01				IAML		09 23 28.3	
	comp=Z,241nm,0.6s						
CO05	**La Serena**	2.27	333	iP	Pn	09 22 56.6	-0.5
CO05				iS	Sn	09 23 22.8	-2.3
BO01	**Tunca**	2.59	200	⇑iP	Pn	09 23 00.3	-1.0
BO01				iS	Sn	09 23 29.1	-3.5
BO01				IAML		09 23 33.9	
	comp=E,186nm,0.3s						
BO01	**Tunca**	2.59	200	eP	Pn	09 23 00.4	-0.9
BO01				eS	Sn	09 23 31.9	-0.7
BO01				IAML		09 23 36.4	
	comp=Z,155nm,0.2s						
BO02	**Sierra Bellavi**	2.91	192	⇑iP	Pn	09 23 05.0	-0.4
BO02				iS	Sn	09 23 39.4	-0.7
BO02	**Sierra Bellavi**	2.91	192	eP	Pn	09 23 04.5	-1.0
BO02				eS	Sn	09 23 40.8	+0.7
BO02				IAML		09 23 42.3	
	comp=Z,243nm,0.2s						
LCO	**Las Campanas**	2.98	349	iP	Pn	09 23 06.3	-0.4
LCO				iS	Sn	09 23 40.2	-1.9
LCO	**Las Campanas**	2.98	349	eP	Pn	09 23 06.5	-0.1
LCO				eS	Sn	09 23 42.5	+0.4
LCO				IAML		09 23 45.3	
	comp=Z,389nm,0.2s						
AC05	**El Transito**	3.10	356	iP	Pn	09 23 08.6	+0.4
AC05				iS	Sn	09 23 42.3	-2.5
AC05	**El Transito**	3.10	356	eP	Pn	09 23 08.1	-0.1
AC05				eS	Sn	09 23 46.0	+1.2
AC05				IAML		09 23 47.0	
	comp=Z,115nm,0.4s						
RFA	**San Rafael**	3.11	155	eP	Pn	09 23 06.8	-1.3
RFA				eS	Sn	09 23 56.5	+12
RFA				IAML		09 24 20.7	
	comp=Z,73nm,0.3s						
GO05	**Hualane**	3.44	207	iP	Pn	09 23 10.0	-2.5
GO05				iS	Sn	09 23 49.3	-3.3
GO05				IAML		09 23 53.3	
	comp=E,74nm,0.3s						
GO05	**Hualane**	3.44	207	eP	Pn	09 23 10.5	-2.0
GO05				eS	Sn	09 23 51.5	-1.1
GO05				IAML		09 24 02.8	
	comp=Z,72nm,1.1s						
ACLC	**CERRO LA CRUZ**	3.65	47	eP	Pn	09 23 14.8	-0.7
ACLC				eS	Sn	09 23 57.8	-0.2
ACLC				IAML		09 24 18.1	
	comp=Z,137nm,0.6s						
MRA	**San Martin**	3.69	99	eP	Pn	09 23 14.3	-1.5
MRA				eS	Sn	09 24 05.2	+6.5
MRA				IAML		09 24 17.1	
	comp=Z,148nm,0.5s						
AC04	**Llanos de Chal**	3.83	346	⇑iP	Pn	09 23 17.1	-0.7
AC04	**Llanos de Chal**	3.83	346	eP	Pn	09 23 17.4	-0.3
AC04				eS	Sn	09 24 00.2	-1.8
AC04				IAML		09 24 10.5	
	comp=Z,52nm,0.3s						
ML02	**Panimavida**	3.98	196	iP	Pn	09 23 18.1	-1.5
ML02	**Panimavida**	3.98	196	eP	Pn	09 23 18.3	-1.3
ML02				eS	Sn	09 24 02.9

KNET ***09*** *09:35:47.8±7.9, 43˚.36N×72˚.95E, h20km±34km, ml1.9, Error ellipse: s-maj=64.8km s-min=29.0km az=156.0*

SOME ***09*** *09:35:52.9, 41˚.73N×73˚.38E, h5km*

KRNET ***09*** *09:35:53.1±0.1, 41˚.77N×73˚.34E, h23km, mb2.1*

NNC ***09*** *09:35:54.6±0.9, 41˚.82N×73˚.37E, h16km±6km, mb3.6, mpv3.1, Error ellipse: s-maj=8.7km s-min=3.7km az=177.0*

ISC 09 09:35:53.5±1.2, **41˚.76N**±0˚.04×**73˚.33E**±0˚.03, **h11**km±12km, **n31**, σ1§**26**/47, **16C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.75**	**82**	⇑*e*P		**Pg**	**09 36 07.4**	**-0.6**
ARLS				⇑*e*S		**Sg**	**09 36 17.8**	**0.0**
SALK	**Salom-Alik**	**0.95**	**157**	⇑*e*P		**Pb**	**09 36 11.0**	**-1.0**
SALK				⇑*e*S		**Sb**	**09 36 23.9**	**-0.8**
MNAS	**Manas**	**0.95**	**320**	⇑*e*P		**Pb**	**09 36 11.0**	**-1.1**
MNAS				⇑*e*S		**Sb**	**09 36 23.9**	**-0.9**
EKS2	**Erkin-Say**	**0.96**	**20**	⇑P		**Pb**	**09 36 10.9**	**-1.3**
	1.3nm,0.1s,SNR=7.6							
EKS2	**Erkin-Say**	**0.96**	**20**	⇑*e*P		**Pb**	**09 36 10.9**	**-1.3**
EKS2				⇑*e*S		**Sb**	**09 36 23.9**	**-1.0**
MRKS	**Merke**	**0.99**	**355**	P		**Pb**	**09 36 11.9**	**-0.7**
	4.5nm,0.1s							
MRKS				S		**Sb**	**09 36 25.7**	**0.0**
	5.6nm,0.3s							
MRKS	**Merke**	**0.99**	**355**	*e*P		**Pb**	**09 36 11.9**	**-0.7**
	4.5nm,0.1s							
MRKS				*e*S		**Sb**	**09 36 25.7**	**0.0**
	5.6nm,0.3s							
UCH	**Uchtor**	**0.99**	**62**	⇓P		**Pb**	**09 36 11.8**	**-1.2**
	4.2nm,0.1s,SNR=20							
UCH	**Uchtor**	**0.99**	**62**	⇓*e*P		**Pb**	**09 36 11.8**	**-1.2**
UCH				⇓*e*S		**Sb**	**09 36 25.2**	**-1.1**
AAK	**Ala-Archa**	**1.23**	**44**	⇓P		**Pn**	**09 36 16.0**	**-0.7**
	1.7nm,0.1s							
AAK				⇓S		**Sn**	**09 36 34.1**	**+0.7**
	3.0nm,0.2s							
AAK	**Ala-Archa**	**1.23**	**44**	⇑P		**Pn**	**09 36 15.8**	**-1.0**
	4.6nm,1.2s							
AAK				⇓S		**Sb**	**09 36 32.5**	**-0.2**
	1.2nm,0.5s							
AAK	**Ala-Archa**	**1.23**	**44**	⇑*e*P		**Pn**	**09 36 15.6**	**-1.1**
AAK				⇑*e*S		**Sb**	**09 36 31.8**	**-0.9**
USP	**Ospenovka**	**1.73**	**29**	⇑S		Sn	09 36 25.1	-21
	4.2nm,0.2s,SNR=15							
TKM2	**Tokmak 2**	**2.04**	**55**	⇑del			09 36 31.7	
	5.7nm,0.2s,SNR=15							
ULHL	**Ulahol**	**2.22**	**76**	⇑P		**Pb**	**09 36 34.3**	**+0.6**
	3.4nm,0.2s,SNR=16							
ULHL				⇑S		**Sg**	**09 37 06.9**	**+2.1**
	4.3nm,0.4s							
KST	**Kastek**	**2.33**	**56**	Pg		**Pb**	**09 36 37.2**	**+1.6**
	4.6nm,0.2s							
KST				Lg		Lg	09 37 09.2	
	10nm,0.5s							
KST	**Kastek**	**2.33**	**56**	*e*P		**Pb**	**09 36 37.2**	**+1.6**
	4.6nm,0.2s							
KST				*e*S		**Sg**	**09 37 09.2**	**+0.8**
	10nm,0.5s							
DGS	**Degeres**	**2.33**	**50**	Pg		**Pb**	**09 36 36.4**	**+0.9**
	2.3nm,0.2s							
DGS				Lg		Lg	09 37 07.7	
	5.0nm,0.5s							
DGS	**Degeres**	**2.33**	**50**	*e*P		**Pb**	**09 36 36.4**	**+0.9**
	2.3nm,0.2s							
DGS				*e*S		**Sg**	**09 37 07.7**	**-0.7**
	5.0nm,0.5s							
KK31	**Karatay Array**	**2.48**	**304**	⇓Pg		**Pb**	**09 36 39.6**	**+1.5**
	2.1nm,0.3s,baz=123,slow=17,SNR=23							
KK31				Lg		Lg	09 37 16.2	
	2.0nm,0.4s,baz=125,slow=28,SNR=7.4							
IUG	**Iuzhnay**	**2.49**	**280**	Pg		**Pg**	**09 36 41.3**	**0.0**
	3.5nm,0.1s							
IUG				Lg		Lg	09 37 15.6	
	54nm,0.2s							
IUG	**Iuzhnay**	**2.49**	**280**	*e*P		**Pg**	**09 36 41.3**	**0.0**
	3.5nm,0.1s							
IUG				*e*S		**Sg**	**09 37 15.6**	**+2.0**
	54nm,0.2s							
KRBS	**Karabastau**	**2.59**	**41**	Pg		**Pb**	**09 36 39.7**	**-0.2**
	4.9nm,0.3s							
KRBS				Lg		Lg	09 37 13.1	
	1.1nm,0.4s							
KRBS	**Karabastau**	**2.59**	**41**	*e*P		**Pb**	**09 36 39.7**	**-0.2**
	4.9nm,0.3s							
KRBS				*e*S		**Sb**	**09 37 13.1**	**+1.3**
	1.1nm,0.4s							
MTBS	**Maitube**	**2.67**	**58**	Pg		**Pb**	**09 36 42.4**	**+1.1**
	1.3nm,0.1s							
MTBS				Lg		Lg	09 37 17.9	
	1.4nm,0.1s							
MTBS	**Maitube**	**2.67**	**58**	*e*P		**Pb**	**09 36 42.4**	**+1.1**
	1.3nm,0.1s							
MTBS				*e*S		**Sg**	**09 37 17.9**	**-1.3**
	1.4nm,0.1s							
TNSS	**Tian-Shan**	**2.96**	**63**	Pg		**Pb**	**09 36 48.3**	**+1.8**
	0.6nm,0.1s							
TNSS				Lg		Lg	09 37 28.0	
	0.9nm,0.5s							
TNSS	**Tian-Shan**	**2.96**	**63**	*e*P		**Pb**	**09 36 48.3**	**+1.8**
	0.6nm,0.1s							
TNSS				*e*S		**Sg**	**09 37 27.9**	**-0.8**
	0.9nm,0.5s							
MDOK	**Medeo**	**3.08**	**62**	Pg		**Pb**	**09 36 50.2**	**+1.8**
	6.4nm,0.3s							
MDOK				Lg		Lg	09 37 30.9	
	1.8nm,0.2s							
KTBS	**Karatobe**	**3.14**	**51**	Pg		**Pb**	**09 36 50.4**	**+1.1**
	1.9nm,0.2s							
KTBS				Lg		Lg	09 37 31.4	
	0.3nm,0.1s							
KTBS	**Karatobe**	**3.14**	**51**	*e*P		**Pb**	**09 36 50.4**	**+1.1**
	1.9nm,0.2s							
KTBS				*e*S		**Sb**	**09 37 31.4**	**+3.7**
	0.3nm,0.1s							

IDC 09 09:36:06.6±31.0, **30˚.24N**×**138˚.91E, h678**km±371km, **mb3.0/6, mbtmp4.1/6, Error ellipse: s-maj=292.5km s-min=24.9km az=75.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**45.24**	**318**	P		P	09 43 26.6	-0.1
	0.5nm,0.3s,baz=116,slow=7.3,SNR=2.8							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**46.27**	**307**	P		P	09 43 34.2	-0.4
	0.2nm,0.4s,baz=96,slow=9.0,SNR=6.3							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**48.80**	**313**	P		P	09 43 52.6	-0.5
	2.6nm,0.2s,baz=89,slow=7.3,SNR=4.1							
	2.6nm,0.2s							
FITZ	**Fitzroy Crossi**	**49.73**	**197**	P		P	09 44 00.3	0.0
	1.7nm,0.5s,baz=41,slow=8.5,SNR=2.0							
	1.7nm,0.5s							
BVAR	**Borovoye Array**	**53.79**	**316**	P		P	09 44 29.4	+0.7
	1.5nm,0.4s,baz=90,slow=7.1,SNR=13							
	1.5nm,0.4s							
FINES	**FINESS Array B**	**73.85**	**333**	P		P	09 46 34.6	-0.1
	3.4nm,1.0s,baz=66,slow=4.6,SNR=6.6							
	3.4nm,1.0s							

BJI ***09*** *09:42:23.1, 41˚.51S×149˚.83E, h570km, mB5.0/28, mb5.4/91*

MOS ***09*** *09:42:24.7±0.8, 41˚.58S×149˚.42E, h569km, mb5.1/33, Error ellipse: s-maj=9.1km s-min=5.4km az=111.5*

NEIC ***09*** *09:42:24.6±1.7, 41˚.58S±0˚.09×149˚.52E±0˚.09, h552km±7km, mb5.3/95, Mww5.5/7, Error ellipse: s-maj=13.8km s-min=12.9km az=62.0*

IDC ***09*** *09:42:25.4±0.5, 41˚.71S×149˚.43E, h568km±4km, mb4.5/31, mbtmp5.5/36, Error ellipse: s-maj=9.0km s-min=5.9km az=99.0*

NEIC ***09*** *09:42:25.6, 41˚.31S×150˚.06E, h550km, Moment Tensor Solution. Duration: 2§9 Moment tensor: Scale 10¹⁷Nm; Mrr-0.22; Mθθ-0.95; Mϕϕ 1.16; Mrθ 0.68; Mθϕ-1.51; Mϕr-0.76; Fault plane solution: Mo2.12000×10¹⁷ NP1: ϕs199.82000°, δ66.96000°, λ7.64000°. NP2:ϕs106.81000°, δ82.97000°, λ156.78000°. Principal axes: T 2.3408, Plg21.0000°, Azm61.0000°; N -0.5559, Plg66.0000°, Azm271.0000°; P -1.7850, Plg11.0000°, Azm155.0000°;*

GFZ ***09*** *09:42:25.3, 4˚.64S×149˚.50E, h553km, MW5.3, Moment Tensor Solution. s74 Moment tensor: Mrr 0.25; Mθθ-0.80; Mϕϕ 0.55; Mrθ 0.03; Mθϕ-0.81; Mϕr-0.51; Fault plane solution: NP1:ϕs107.00000°, δ65.00000°, λ165.00000°. NP2:ϕs203.00000°, δ77.00000°, λ26.00000°. Principal axes: T 1.1800, Plg28.0000°, Azm67.0000°; N 0.0300, Plg61.0000°, Azm229.0000°; P -1.2000, Plg8.0000°, Azm333.0000°;*

NEIC ***09*** *09:42:25.6, 4˚.61S×149˚.46E, h550km*

GCMT ***09*** *09:42:26.6±0.3, 4˚.57S±0˚.02×149˚.47E±0˚.03, h568km±2km, MW5.4/91, Moment Tensor Solution. s91,c135; Duration: 1§3 Moment tensor: Scale 10¹⁷Nm; Mrr 0.35±.04; Mθθ-1.20±.06; Mϕϕ 0.85±.07; Mrθ 0.26±.06; Mθϕ-1.18±.06; Mϕr-0.85±.07; Best double couple: Mo1.81900×10¹⁷ NP1:ϕs106.00000°, δ67.00000°, λ161.00000°. NP2:ϕs204.00000°, δ72.00000°, λ25.00000°. Principal axes: T 1.8930, Plg30.0000°, Azm67.0000°; N -0.1460, Plg60.0000°, Azm238.0000°; P -1.7460, Plg4.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

DJA ***09*** *09:42:26.3±0.4, 5˚.5S×3˚×14˚.9E±˚, h578km±4km, M5.2/105, mB5.7/63, mb5.3/105, MLv5.9/1, Mw5.3/18, Mw(mB)5.2/63, MwMwp5.3/2, Mwp5.5/2*

ISC 09 09:42:25.2±0.3, **4˚.67S**±0˚.03×**149˚.48E**±0˚.04, **h568**km±2km, **h570km**:**pP-P, n931**, σ1§**12**/1078, **mb5.3**/235, **13C-22D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.72**	**80**	P		**P**	**09 43 38.0**	**-2.3**
MANU	**Manus Island**	**3.35**	**321**			**P**	**09 43 44.0**	**0.0**
PMG	**Port Moresby**	**5.24**	**206**	P		**P**	**09 43 59.0**	**+0.9**
	3µm,1.1s,baz=22,slow=7.3,SNR=339							
PMG				S		**S**	**09 45 13.6**	**-0.4**
	1µm,1.0s,baz=144,slow=24,SNR=22							
PMG	**Port Moresby**	**5.24**	**206**			**P**	**09 43 58.9**	**+0.7**
PMG	**Port Moresby**	**5.24**	**206**	S		**S**	**09 45 14.2**	**+0.2**
	3µm,1.0s							
PMG	**Port Moresby**	**5.24**	**206**	P		**P**	**09 43 59.1**	**+0.9**
	3µm,1.0s							
PMG	**Port Moresby**	**5.24**	**206**	S		**S**	**09 45 14.3**	**+0.2**
	3µm,1.0s							
PMG	**Port Moresby**	**5.24**	**206**	P		**P**	**09 43 59.0**	**+0.9**
	9.7nm20µm3µm,1.0s							
JAY	**Jayapura**	**9.01**	**283**	P		**P**	**09 44 32.6**	**-1.0**
	446nm,0.5s,baz=115,slow=4.4,SNR=147							
JAY				S		**S**	**09 46 16.1**	**-2.8**
	719nm,1.1s,baz=206,slow=23,SNR=12							
JAY	**Jayapura**	**9.01**	**283**	P		**P**	**09 44 32.9**	**-0.7**
	7µm756nm,0.7s							
GENI	**Genyem**	**9.51**	**282**	P		**P**	**09 44 37.9**	**-0.7**
	1µm,0.7s							
GENI	**Genyem**	**9.51**	**282**	S		**S**	**09 46 27.8**	**-0.3**
	1µm,0.7s							
GENI	**Genyem**	**9.51**	**282**	P		**P**	**09 44 38.9**	**+0.3**
	12µm1µm,0.7s							
MMPI	**Merauke**	**9.79**	**247**	P		**P**	**09 44 41.5**	**+0.2**
TATA	**Tatamba Isabel**	**10.91**	**110**	P		**P**	**09 44 52.3**	**-0.4**
	299nm,0.7s							
COEN	**Coen**	**11.13**	**214**	P		**P**	**09 44 55.8**	**+0.8**
	comp=Z,505nm,0.9s							
COEN	**Coen**	**11.13**	**214**			**P**	**09 44 55.6**	**+0.6**
COEN	**Coen**	**11.13**	**214**	P		**P**	**09 44 55.7**	**+0.8**
	comp=Z,504nm,0.9s							
COEN	**Coen**	**11.13**	**214**	S		**S**	**09 46 59.4**	**+1.4**
	comp=Z,504nm,0.9s							
SAVO	**Savo Central**	**11.19**	**114**	P		**P**	**09 44 57.9**	**+2.3**
SAVO	**Savo Central**	**11.19**	**114**	S		**S**	**09 47 01.1**	**+1.9**
HNR	**Honiara**	**11.42**	**115**	P		**P**	**09 44 59.0**	**+1.1**
	comp=Z,20nm,0.7s,baz=240,slow=22,SNR=5.9							
HNR				S		**S**	**09 47 03.6**	**+0.1**
	comp=Z,50nm,0.9s,baz=104,slow=8.1,SNR=4.7							
NGOA	**Tingoa Renbel**	**12.51**	**124**	P		**P**	**09 45 08.6**	**-0.5**
	comp=Z,2µm,0.7s							
SRPI	**Serui, Papua**	**13.50**	**281**	P		**P**	**09 45 19.9**	**+0.5**
	comp=Z,112nm,0.5s							
BAKI	**Biak**	**13.79**	**284**	P		**P**	**09 45 22.5**	**+0.2**
	comp=Z,223nm,0.7s							
MTSU	**Mount Surprise**	**14.30**	**200**	P		**P**	**09 45 28.6**	**+1.1**
	comp=Z,743nm,0.8s							
MTSU	**Mount Surprise**	**14.30**	**200**	P		**P**	**09 45 28.4**	**+0.9**
	comp=Z,743nm,0.8s							
AUAYR	**Ayr State High**	**14.96**	**188**	P		**P**	**09 45 34.7**	**+0.8**
	comp=Z,1µm,0.9s							
RKPI	**Ransiki, Papua**	**15.59**	**281**	P		**P**	**09 45 40.5**	**+0.2**
	comp=Z,6µmcomp=Z,312nm,0.9s							
CTA	**Charters Tower**	**15.65**	**191**	P		**P**	**09 45 41.3**	**+0.6**
	comp=Z,234nm,0.9s							
CTA	**Charters Tower**	**15.65**	**191**	P		**P**	**09 45 41.3**	**+0.6**
	comp=Z,297nm,0.6s,baz=1.8,slow=10,SNR=673							
CTA	**Charters Tower**	**15.65**	**191**	P		**P**	**09 45 41.3**	**+0.6**
	comp=Z,17nm,0.9s							
CTAO	**Charters Tower**	**15.65**	**191**			**P**	**09 45 41.3**	**+0.6**
CTAO	**Charters Tower**	**15.65**	**191**	P		**P**	**09 45 41.3**	**+0.6**
	comp=Z,214nm,0.9s							
CTAO	**Charters Tower**	**15.65**	**191**	P		**P**	**09 45 41.3**	**+0.6**
KMPI	**Kaimana, Papua**	**15.76**	**273**	P		**P**	**09 45 39.7**	**-2.2**
	comp=Z,9µmcomp=Z,1µm,0.9s							
MWPI	**Manokwari, Pap**	**15.86**	**283**	P		P	09 45 54.8	+12
FAKI	**Fak Fak**	**17.27**	**275**			**P**	**09 45 55.8**	**0.0**
FAKI	**Fak Fak**	**17.27**	**275**	P		**P**	**09 45 56.7**	**+0.9**
	comp=Z,330nm,0.9s							
FAKI	**Fak Fak**	**17.27**	**275**	S		**S**	**09 48 46.3**	**-0.9**
	comp=Z,330nm,0.9s							
FAKI	**Fak Fak**	**17.27**	**275**	P		**P**	**09 45 55.7**	**0.0**
	comp=Z,3µmcomp=Z,326nm,0.9s							
SAUI	**Saumlaki**	**18.36**	**259**			**P**	**09 46 06.2**	**+0.5**
SAUI	**Saumlaki**	**18.36**	**259**	P		**P**	**09 46 07.7**	**+2.0**
	comp=Z,2µm,1.1s							
SAUI	**Saumlaki**	**18.36**	**259**	P		**P**	**09 46 07.2**	**+1.5**
QIS	**Mount Isa**	**18.48**	**210**	P		**P**	**09 46 07.3**	**+0.6**
	comp=Z,139nm,0.8s							
QIS	**Mount Isa**	**18.48**	**210**	P		**P**	**09 46 07.4**	**+0.7**
	comp=Z,139nm,0.8s							
QIS	**Mount Isa**	**18.48**	**210**	S		**S**	**09 49 07.3**	**+0.6**
	comp=Z,139nm,0.8s							
SIJI	**Sorong**	**18.57**	**281**	P		**P**	**09 46 07.7**	**+0.1**
	comp=Z,66nm,0.6s,baz=173,slow=22,SNR=14							
SIJI	**Sorong**	**18.57**	**281**	P		**P**	**09 46 07.2**	**-0.4**
	comp=Z,104nm,0.7s							
SWI	**Sorong**	**18.58**	**281**	P		**P**	**09 46 07.0**	**-0.7**
	comp=Z,3µmcomp=Z,158nm,0.7s							
KDU	**Kakadu**	**18.59**	**244**	P		**P**	**09 46 07.3**	**-0.4**
	comp=Z,205nm,0.9s							
AUNRC	**North Rockhamp**	**18.60**	**177**	P		**P**	**09 46 08.7**	**+1.0**
	comp=Z,1µm,0.7s							
AUNRC	**North Rockhamp**	**18.60**	**177**	S		**S**	**09 49 08.6**	**+0.2**
	comp=Z,1µm,0.7s							
GUMO	**Guam**	**18.70**	**346**	P		**P**	**09 46 08.3**	**-0.4**
	comp=Z,225nm,0.5s,baz=161,slow=12,SNR=21							
GUMO	**Guam**	**18.70**	**346**			**P**	**09 46 08.6**	**-0.1**
GUMO	**Guam**	**18.70**	**346**	P		**P**	**09 46 09.4**	**+0.7**
	comp=Z,307nm,1.5s							
GUMO	**Guam**	**18.70**	**346**	P		**P**	**09 46 08.6**	**-0.1**
GD1S	**Gladstone Soft**	**19.13**	**175**	P		**P**	**09 46 13.6**	**+1.1**
	comp=Z,537nm,0.9s							
BNDI	**Bandanaira**	**19.51**	**270**	P		**P**	**09 46 16.5**	**+0.4**
BNDI	**Bandanaira**	**19.51**	**270**	S		**S**	**09 49 24.3**	**+1.0**
BNDI	**Bandanaira**	**19.51**	**270**	P		**P**	**09 46 16.2**	**+0.1**
MTN	**Manton Dam**	**19.85**	**245**	P		**P**	**09 46 18.6**	**-0.5**
	comp=Z,118nm,0.6s							
MTN	**Manton Dam**	**19.85**	**245**			**P**	**09 46 18.9**	**-0.3**
DRS	**Darwin Rock St**	**19.91**	**246**	P		**P**	**09 46 20.5**	**+0.8**
	comp=Z,99nm,0.9s							
DPSS	**Saipan**	**20.11**	**350**			**P**	**09 46 20.8**	**-0.7**
MSAI	**Masohi**	**20.54**	**273**	P		P	09 46 42.4	+17
EIDS	**Eidsvold**	**20.64**	**176**	P		**P**	**09 46 26.4**	**+0.2**
	comp=Z,221nm,1.1s							
EIDS	**Eidsvold**	**20.64**	**176**			**P**	**09 46 26.7**	**+0.5**
EIDS	**Eidsvold**	**20.64**	**176**	P		**P**	**09 46 26.2**	**0.0**
	comp=Z,221nm,1.1s							
WR8	**Warramunga Arr**	**21.06**	**223**	P		**P**	**09 46 30.5**	**+0.4**
KRAI	**Karang Ratu**	**21.07**	**273**	P		**P**	**09 46 30.1**	**-0.2**
	comp=Z,5µmcomp=Z,76nm,0.7s							
WRAB	**Tennant Creek**	**21.15**	**223**	P		**P**	**09 46 31.2**	**+0.4**
WRAB	**Tennant Creek**	**21.15**	**223**	P		**P**	**09 46 31.6**	**+0.7**
	comp=Z,97nm,1.1s							
WRAB	**Tennant Creek**	**21.15**	**223**	*ce*P		**P**	**09 46 31.0**	**+0.1**
WRAB					pmax	pmax		
	comp=Z,239nm,1.7s							
WB2	**Warramunga Arr**	**21.15**	**223**	P		**P**	**09 46 31.3**	**+0.4**
WR1	**Warramunga Arr**	**21.16**	**223**	P		**P**	**09 46 31.3**	**+0.3**
WRA	**Warramunga Arr**	**21.16**	**223**	P		**P**	**09 46 30.4**	**-0.6**
	comp=Z,38nm,0.4s,baz=48,slow=9.6,SNR=228							
WRA				S		**S**	**09 49 47.8**	**-1.7**
	comp=Z,66nm,0.8s,baz=44,slow=16,SNR=8.3							
WRA					ScP	**ScP**	**09 52 56.6**	**+0.6**
	comp=Z,34nm,0.9s,baz=43,slow=2.8,SNR=9.2							
WRA					PKPPKP	**P'P'df**	**10 21 39.5**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=180,slow=3.6,SNR=4.7							
	comp=Z,38nm,0.4s							
WRA	**Warramunga Arr**	**21.16**	**223**	P		**P**	**09 46 29.6**	**-1.4**
WB1	**Warramunga Ar.**	**21.17**	**223**	P		**P**	**09 46 31.8**	**+0.7**
AAI	**Ambon**	**21.25**	**272**	P		P	**09 46 31.7**	**-0.1**
	comp=Z,2µmcomp=Z,163nm,0.7s							
KOUNC	**Kounac, New Ca**	**21.37**	**139**	P		**P**	**09 46 34.3**	**+1.5**
	comp=Z,113nm,1.1s							
RMQ	**Roma**	**21.71**	**182**	P		**P**	**09 46 36.4**	**+0.6**
	comp=Z,104nm,0.9s							
RMQ	**Roma**	**21.71**	**182**	P		**P**	**09 46 36.6**	**+0.8**
	comp=Z,104nm,0.9s							
QLP	**Quilpie**	**22.36**	**192**	P		**P**	**09 46 41.9**	**+0.3**
	comp=Z,533nm,0.9s							
QLP	**Quilpie**	**22.36**	**192**	P		**P**	**09 46 41.9**	**+0.3**
	comp=Z,533nm,0.9s							
NLAI	**Namlea**	**22.37**	**273**	P		**P**	**09 46 42.4**	**+0.6**
	comp=Z,98nm,0.6s							
TW1H	**Toowoomba 1 Ha**	**22.88**	**174**	P		**P**	**09 46 47.4**	**+1.2**
	comp=Z,389nm,0.8s							
KNRA	**Kununurra**	**23.11**	**240**	P		**P**	**09 46 47.9**	**-0.5**
	comp=Z,70nm,0.9s							
KNRA	**Kununurra**	**23.11**	**240**			**P**	**09 46 47.9**	**-0.5**
SANI	**Sanana**	**23.59**	**276**	P		**P**	**09 46 52.8**	**+0.1**
	comp=Z,67nm,0.9s							
SANI	**Sanana**	**23.59**	**276**	P		**P**	**09 46 53.6**	**+0.9**
	comp=Z,67nm,0.8s							
GC1S	**Gold Coast 1 S**	**23.68**	**171**	P		**P**	**09 46 54.4**	**+1.1**
DZM	**Mont Dzumac**	**23.86**	**138**	P		**P**	**09 46 55.1**	**0.0**
DZM	**Mont Dzumac**	**23.86**	**138**	P		**P**	**09 46 55.2**	**0.0**
	comp=Z,121nm,0.8s							
ONTNC	**Ouen Toro**	**24.04**	**138**	P		**P**	**09 46 56.2**	**-0.3**
AS31	**Alice Springs**	**24.13**	**217**	P		**P**	**09 46 57.1**	**-0.3**
ASAR	**Alice Springs**	**24.13**	**217**	P		**P**	**09 46 57.5**	**0.0**
	comp=Z,27nm,0.7s,baz=50,slow=7.9,SNR=408							
ASAR				PcP		**PcP**	**09 50 18.5**	**-0.1**
	comp=Z,4.6nm,0.6s,baz=44,slow=3.0,SNR=1.6							
ASAR				S		**S**	**09 50 34.3**	**-1.9**
	comp=Z,39nm,1.0s,baz=35,slow=25,SNR=8.1							
ASAR				ScP		**ScP**	**09 53 04.3**	**+0.5**
	comp=Z,17nm,0.8s,baz=48,slow=3.4,SNR=7.9							
	comp=Z,27nm,0.7s							
ASAR	**Alice Springs**	**24.13**	**217**	P		**P**	**09 46 57.0**	**-0.4**
AUALC	**St Philip's Co**	**24.16**	**217**	P		**P**	**09 46 58.2**	**+0.5**
	comp=Z,42nm,0.7s							
INKA	**Innaminka**	**24.41**	**199**	P		**P**	**09 46 59.6**	**-0.1**
MNI	**Manado**	**25.35**	**283**	P		**P**	**09 47 08.2**	**-0.1**
SOEI	**Soe**	**25.50**	**257**	P		**P**	**09 47 09.9**	**+0.1**
SOEI	**Soe**	**25.50**	**257**	P		**P**	**09 47 11.1**	**+1.3**
	comp=Z,170nm,1.0s							
SOEI	**Soe**	**25.50**	**257**	P		**P**	**09 47 09.9**	**+0.1**
	comp=Z,2µmcomp=Z,173nm,0.8s							
ARMA	**Armidale**	**25.70**	**176**	P		**P**	**09 47 12.5**	**+1.3**
	comp=Z,265nm,1.3s							
ARMA	**Armidale**	**25.70**	**176**	P		**P**	**09 47 12.2**	**+1.0**
ARMA	**Armidale**	**25.70**	**176**	P		**P**	**09 47 12.2**	**+1.0**
	comp=Z,265nm,1.3s							
BATI	**Baumata**	**26.17**	**256**	P		**P**	**09 47 16.4**	**+0.9**
	comp=Z,253nm,0.8s,baz=200,slow=0.8,SNR=21							
	comp=Z,253nm,0.8s							
BATI	**Baumata**	**26.17**	**256**	P		**P**	**09 47 17.1**	**+1.6**
	comp=Z,2µmcomp=Z,314nm,1.0s							
FITZ	**Fitzroy Crossi**	**26.86**	**238**	P		**P**	**09 47 20.6**	**-0.8**
	comp=Z,99nm,0.5s,baz=51,slow=8.4,SNR=333							
	comp=Z,99nm,0.5s							
LUWI	**Luwuk**	**26.91**	**277**	P		**P**	**09 47 22.9**	**+0.8**
CMSA	**Cobar Meteorol**	**26.97**	**187**	P		**P**	**09 47 22.4**	**+0.1**
	comp=Z,156nm,0.9s							
CMSA	**Cobar Meteorol**	**26.97**	**187**	P		**P**	**09 47 22.3**	**+0.1**
	comp=Z,156nm,0.9s							
MMRI	**Maumere**	**27.33**	**260**	P		**P**	**09 47 25.4**	**-0.3**
MMRI	**Maumere**	**27.33**	**260**	P		**P**	**09 47 26.3**	**+0.6**
	comp=Z,215nm,0.7s							
MMRI	**Maumere**	**27.33**	**260**	P		**P**	**09 47 25.4**	**-0.3**
	comp=Z,3µmcomp=Z,217nm,0.6s							
KKSI	**Kolaka, Sulawe**	**27.75**	**270**	P		**P**	**09 47 31.8**	**+2.5**
	comp=Z,45nm,0.6s							
EDFI	**Ende, Flores**	**27.88**	**260**	P		**P**	**09 47 29.7**	**-1.0**
	comp=Z,2µmcomp=Z,226nm,0.8s							
MRSI	**Marisa**	**27.98**	**280**	P		**P**	**09 47 31.1**	**-0.3**
	comp=Z,1µmcomp=Z,93nm,0.7s							
APSI	**Ampana**	**28.04**	**277**	P		**P**	**09 47 33.1**	**+1.2**
	comp=Z,2µmcomp=Z,

comp=Z,80nm,0.9s
BBOO Buckleboo 30.68 203 P **P** **09 47 53.5 -0.9**
comp=Z,104nm,0.8s
MSVF Nonsavu 30.83 117 P **P** **09 47 57.3 +1.2**
MSVF IAmb IAmb 09 47 58.0
comp=Z,44nm,0.7s
MSVF Nonsavu 30.83 117 P **P** **09 47 57.2 +1.2**
comp=Z,86nm,0.7s
MSVF Nonsavu 30.83 117 P **P** **09 47 57.3 +1.2**
MSVF pmax pmax
comp=Z,44nm,0.7s
AUMAR Marden Senior 31.70 197 P **P** **09 48 03.6 +0.5**
comp=Z,293nm,0.8s
PLAI Plampang 31.74 261 P **P** **09 48 02.2 -1.6**
comp=Z,153nm,0.7s
PLAI Plampang 31.74 261 P **P** **09 48 02.1 -1.7**
comp=Z,2µmcomp=Z,154nm,0.7s
GHSS Government Hou 31.74 197 P **P** **09 48 04.2 +0.8**
comp=Z,382nm,0.7s
AUMBR Murray Bridge 31.75 196 P **P** **09 48 03.8 +0.3**
comp=Z,548nm,0.9s
DGTI Dogotuki 31.87 114 P **P** **09 48 04.9 +0.1**
comp=Z,96nm,1.1s
MILA Mila 32.23 180 P **P** **09 48 08.9 +1.2**
comp=Z,76nm,0.9s
MILA Mila 32.23 180 P **P** **09 48 08.4 +0.7**
JCJ Chichijima 32.35 348 P **P** **09 48 06.8 -2.0**
TWSI Taliwang, Sumb 32.61 261 P **P** **09 48 10.6 -0.6**
comp=Z,91nm,0.8s
ARPS Mount Arapiles 32.71 191 P **P** **09 48 12.3 +0.6**
comp=Z,115nm,1.1s
TOO Toolangi 32.95 186 P **P** **09 48 13.9 +0.2**
comp=Z,101nm,0.9s
TOO Toolangi 32.95 186 P **P** **09 48 14.9 +1.2**
TOO IAmb IAmb 09 48 15.6
comp=Z,69nm,0.8s
TOO Toolangi 32.95 186 P **P** **09 48 14.9 +1.2**
TOO pmax pmax
comp=Z,69nm,0.9s
BRAT Ballarat 33.12 188 P **P** **09 48 15.8 +0.8**
comp=Z,79nm,0.8s
MBWA Marble Bar 33.20 238 P **P** **09 48 15.4 -0.7**
comp=Z,59nm,0.8s
MBWA Marble Bar 33.20 238 P **P** **09 48 15.2 -0.8**
MBWA IAmb IAmb 09 49 53.9
comp=Z,75nm,1.0s
PSAC2 Pilbara Seismi 33.23 237 P **P** **09 48 15.3 -1.0**
comp=Z,65nm,1.2s
PSA00 Pilbara Seismi 33.28 237 P **P** **09 48 16.3 -0.5**
comp=Z,65nm,1.5s
PSA00 Pilbara Seismi 33.28 237 P **P** **09 48 15.9 -0.8**
PSA00 IAmb IAmb 09 49 55.3
comp=Z,145nm,1.2s
PSA00 Pilbara Seismi 33.28 237 P **P** **09 48 15.9 -0.8**
PSA00 IAmb IAmb 09 49 55.3
comp=Z,116nm,1.3s
PSA00 Pilbara Seismi 33.28 237 P **P** **09 48 16.1 -0.6**
comp=Z,65nm,1.5s
PSAB3 Pilbara Seismi 33.28 237 P **P** **09 48 16.0 -0.7**
comp=Z,47nm,1.3s
KLNI Mataram 33.36 262 P **P** **09 48 14.5 -3.0**
comp=Z,5µmcomp=Z,105nm,0.8s
MGBR Mount Gambier 33.90 193 P **P** **09 48 22.8 +1.2**
BBKI Banjar Baru 34.56 271 P **P** **09 48 27.7 +0.1**
KKM Kota Kinabalu 34.87 287 P **P** **09 48 29.2 -1.1**
KKM IAmb IAmb 09 48 31.1
comp=Z,93nm,0.9s
KKM Kota Kinabalu 34.87 287 P **P** **09 48 30.1 -0.2**
comp=Z,135nm,0.9s
KKM Kota Kinabalu 34.87 287 P **P** **09 48 29.7 -0.6**
comp=Z,135nm,0.9s
JMZ Minamidaito 2 35.10 331 P **P** **09 48 32.5 +0.7**
JAGI Jajag, Banyuwa 35.28 262 P **P** **09 48 32.0 -1.6**
JAGI IAmb IAmb 09 50 10.4
comp=Z,86nm,0.8s
JAGI Jajag, Banyuwa 35.28 262 P **P** **09 48 32.2 -1.4**
comp=Z,78nm,0.9s
JAGI Jajag, Banyuwa 35.28 262 P **P** **09 48 31.3 -2.3**
comp=Z,77nm,0.9s
GLAD Gladstone 36.18 182 P **P** **09 48 41.8 +1.3**
comp=Z,90nm,0.7s
CORO Coronation Par 36.69 183 P **P** **09 48 45.9 +1.3**
comp=Z,79nm,0.7s
MEEK Meekatharra 36.69 230 P **P** **09 48 44.8 -0.2**
comp=Z,101nm,1.3s
MEEK Meekatharra 36.69 230 P **P** **09 48 44.5 -0.5**
comp=Z,101nm,1.3s
KMBL Kambalda 37.11 221 P **P** **09 48 47.7 -0.6**
comp=Z,19nm,0.8s
JOW Kunigami 37.43 328 P **P** **09 48 52.0 +1.0**
comp=Z,208nm,0.7s,baz=159,slow=10,SNR=31
comp=Z,208nm,0.7s
JOW Kunigami 37.43 328 P **P** **09 48 52.0 +1.0**
JOW Kunigami 37.43 328 P **P** **09 48 52.0 +1.0**
comp=Z,417nm,1.0s
SJI Sawahan 37.60 263 P **P** **09 48 52.1 -0.6**
SNJI Sawahan-Nganju 37.61 263 P **P** **09 48 52.9 0.0**
comp=Z,58nm,1.0s
MOO Moorlands 37.67 183 P **P** **09 48 54.5 +1.8**
comp=Z,163nm,1.3s
MOO Moorlands 37.67 183 P **P** **09 48 54.2 +1.5**
comp=Z,163nm,1.3s
MOO Moorlands 37.67 183 P **P** **09 48 53.8 +1.1**
OUZ Omahuta 37.70 147 P **P** **09 48 54.2 +1.2**
SBUM Sibu 37.89 280 P **P** **09 48 55.8 +0.9**
SBUM Sibu 37.89 280 P **P** **09 48 55.1 +0.1**
comp=Z,26nm,1.2s
SBUM Sibu 37.89 280 P **P** **09 48 56.0 +1.0**
TAU Tasmania Unive 38.13 183 P **P** **09 48 57.9 +1.4**
TAU Tasmania Unive 38.13 183 P **P** **09 48 57.8 +1.4**
comp=Z,169nm,1.1s
TAU Tasmania Unive 38.13 183 P **P** **09 48 57.9 +1.4**
TAU pmax pmax
comp=Z,291nm,1.4s
PCJI Pacitan 38.21 263 P **P** **09 48 56.7 -0.8**
comp=Z,181nm,0.8s
GIRL Giralia 38.46 239 P **P** **09 49 00.1 +0.7**
GIRL IAmb IAmb 09 49 27.7
comp=Z,161nm,1.2s
YOJ Yonaguni jima 38.75 320 P **P** **09 49 01.8 +0.1**
YOJ Yonaguni jima 38.75 320 P **P** **09 49 02.2 +0.5**
YOJ Yonaguni jima 38.75 320 P **P** **09 49 01.8 +0.1**
YOJ pmax pmax
comp=Z,381nm,0.8s
TWGBT Beinan 38.94 316 P **P** **09 49 03.2 -0.1**
comp=Z,117nm,0.8s
TWG Pinlang 38.94 316 P **P** **09 49 01.8 -1.5**
TWG IAmb IAmb 09 49 02.7
comp=Z,70nm,0.6s
YULB Yu-li 39.16 317 P **P** **09 49 04.2 -0.9**
YULB Yu-li 39.16 317 P **P** **09 49 05.2 +0.1**
comp=Z,294nm,0.7s
AFI Afiamalu 39.27 106 P **P** **09 49 05.8 -0.4**
AFI IAmb IAmb 09 49 08.2
comp=Z,83nm,1.0s
AFI Afiamalu 39.27 106 P **P** **09 49 05.8 -0.4**
AFI pmax pmax
comp=Z,83nm,1.0s
NACB Ninganchiao 39.49 318 P **P** **09 49 07.3 -0.4**
NACB Ninganchiao 39.49 318 P **P** **09 49 08.2 +0.5**
comp=Z,507nm,0.7s
TPUB Ta-pu 39.56 316 P **P** **09 49 07.2 -1.1**
TPUB Ta-pu 39.56 316 P **P** **09 49 07.9 -0.4**
comp=Z,331nm,0.7s
SSLB Suanglung 39.66 317 P **P** **09 49 09.0 -0.1**
SSLB Suanglung 39.66 317 P **P** **09 49 09.2 +0.1**
comp=Z,217nm,0.7s
YHNB Yeheng 39.97 318 P **P** **09 49 11.7 +0.1**
YHNB Yeheng 39.97 318 P **P** **09 49 12.4 +0.8**
comp=Z,673nm,0.8s
KUZ Kuaotunu 39.99 146 P **P** **09 49 13.0 +1.5**
comp=Z,178nm,1.1s
KUZ Kuaotunu 39.99 146 P **P** **09 49 12.0 +0.6**
KLBR Kellerberrin 40.03 224 P **P** **09 49 11.0 -1.0**
comp=Z,49nm,0.7s
TATO Taipei 40.10 319 P **P** **09 49 12.7 +0.1**
TATO Taipei 40.10 319 P **P** **09 49 13.3 +0.7**
comp=Z,582nm,0.9s
TATO Taipei 40.10 319 P **P** **09 49 12.9 +0.3**
TATO x x 09 50 43.3
TATO x x 09 51 50.8
JSU Suzuyama 40.28 334 P **P** **09 49 13.8 -0.2**
JSU IAmb IAmb 09 49 14.6
comp=Z,100nm,0.8s
JSU Suzuyama 40.28 334 P **P** **09 49 14.3 +0.3**
comp=Z,144nm,1.4s

KPJI Karang Pucung 40.40 264 P **P** **09 49 14.6 -0.5**
comp=Z,91nm,1.3s
JSG Sagara 40.55 346 P **P** **09 49 15.4 -0.6**
JSG Sagara 40.55 346 P **P** **09 49 16.7 +0.7**
comp=Z,669nm,1.1s
TOZ Tahuroa Road 40.59 148 P **P** **09 49 17.5 +1.3**
TOZ IAmb IAmb 09 49 18.6
comp=Z,42nm,0.8s
TOZ Tahuroa Road 40.59 148 P **P** **09 49 17.6 +1.3**
HIZ Hauiti 40.84 149 P **P** **09 49 19.8 +1.6**
HIZ IAmb IAmb 09 49 21.1
comp=Z,262nm,1.5s
HIZ Hauiti 40.84 149 P **P** **09 49 20.2 +2.0**
JMN Monobe 40.94 340 P **P** **09 49 19.7 +0.5**
JMN Monobe 40.94 340 P **P** **09 49 19.9 +0.8**
comp=Z,303nm,1.1s
TGRZ Tauranga 41.00 147 P **P** **09 49 21.0 +1.5**
KHEZ Kahui Hut 41.01 151 P **P** **09 49 20.4 +0.7**
comp=Z,323nm,1.0s
QPRZ Ohinepanea 41.24 147 P **P** **09 49 22.5 +1.1**
VRZ Vera Road 41.25 150 P **P** **09 49 23.6 +2.1**
OMRZ Omania 41.33 147 P **P** **09 49 24.0 +1.8**
HLRZ Highlands Stat 41.43 147 P **P** **09 49 25.4 +2.4**
WATZ Wairara 41.44 148 P **P** **09 49 24.9 +1.9**
INU Inuyama 41.49 345 P **P** **09 49 23.3 -0.1**
comp=Z,180nm,1.4s
JNU Nakatsue 41.51 336 P **P** **09 49 23.8 +0.1**
comp=Z,259nm,1.0s,baz=147,slow=2.0,SNR=88
JNU ScP **ScP** **09 54 04.0 -0.1**
comp=Z,21nm,0.9s,baz=131,slow=4.8,SNR=5.1
comp=Z,259nm,1.0s
QRZ Quartz Range 41.53 153 P **P** **09 49 24.4 +0.7**
QRZ IAmb IAmb 09 49 25.7
comp=Z,40nm,0.8s
QRZ Quartz Range 41.53 153 P **P** **09 49 24.6 +1.0**
TWVZ Taurewa 41.55 149 P **P** **09 49 25.6 +1.6**
KATZ Kakaramea 41.62 149 P **P** **09 49 26.5 +1.9**
PRRZ Plateau Road 41.63 148 P **P** **09 49 26.1 +1.6**
JGF Kuroka 41.64 345 P **P** **09 49 24.5 -0.1**
JGF IAmb IAmb 09 49 25.9
comp=Z,310nm,1.7s
JGF Kuroka 41.64 345 P **P** **09 49 24.7 +0.1**
comp=Z,114nm,1.2s
WTVZ West Tongariro 41.67 149 P **P** **09 49 26.8 +1.9**
BBJI Bungbulang 41.67 264 P **P** **09 49 24.5 -0.8**
comp=Z,86nm,0.8s
BBJI Bungbulang 41.67 264 P **P** **09 49 24.8 -0.5**
comp=Z,87nm,0.8s
NTVZ North Tongarir 41.70 149 P **P** **09 49 26.9 +1.7**
RITZ Rihia Road 41.70 149 P **P** **09 49 27.6 +2.5**
NGZ Ngauruhoe 41.72 149 P **P** **09 49 27.0 +1.7**
TMVZ Te Maari 41.73 149 P **P** **09 49 27.4 +2.0**
OTVZ Oturere 41.74 149 P **P** **09 49 27.6 +2.1**
ETVZ East Tongariro 41.74 149 P **P** **09 49 27.7 +2.2**
SNVZ South Ngauruho 41.75 149 P **P** **09 49 27.6 +2.0**
MAVZ Matarangi 41.77 149 P **P** **09 49 27.8 +1.9**
TRVZ Turoa 41.78 149 P **P** **09 49 27.9 +1.9**
WNVZ Wahanoa 41.83 149 P **P** **09 49 28.1 +1.8**
URZ Urewera 41.84 147 P **P** **09 49 26.8 +0.6**
comp=Z,113nm,0.8s
URZ Urewera 41.84 147 P **P** **09 49 26.6 +0.4**
WAZ Wanganui 41.85 150 P **P** **09 49 27.9 +1.7**
HAZ Te Kaha 41.86 146 P **P** **09 49 26.6 +0.4**
KNMB Chin-men Tao 41.88 315 P **P** **09 49 26.7 +0.1**
KNMB IAmb IAmb 09 49 28.2
comp=Z,168nm,0.9s
TKNZ Takaka Hill 41.89 153 P **P** **09 49 27.2 +0.7**
DSZ Denniston Nort 41.96 155 P **P** **09 49 27.5 +0.4**
DSZ IAmb IAmb 09 49 28.9
comp=Z,76nm,0.9s
DSZ Denniston Nort 41.96 155 P **P** **09 49 27.7 +0.6**
MXZ Matakaoa Point 42.02 145 P **P** **09 49 28.0 +0.4**
RTZ Ruatahuna 42.03 147 P **P** **09 49 27.7 0.0**
RTZ Ruatahuna 42.03 147 P **P** **09 49 28.2 +0.5**
QZH2 Quanzhou 42.04 316↓ *i*P **P** **09 49 28.5 +0.6**
QZH2 S **S** **09 55 06.8 +0.1**
MRNZ Matariki Terra 42.09 154 P **P** **09 49 27.9 -0.2**
MWZ Matawai 42.12 147 P **P** **09 49 28.9 +0.4**
BKZ Black Stump Fm 42.17 148 P **P** **09 49 28.9 0.0**
BKZ IAmb IAmb 09 49 30.1
comp=Z,37nm,0.7s
BKZ Black Stump Fm 42.17 148 P **P** **09 49 29.7 +0.9**
comp=Z,44nm,0.6s
BKZ Black Stump Fm 42.17 148 P **P** **09 49 29.1 +0.3**
NNZ Nelson 42.23 153 P **P** **09 49 29.9 +0.7**
NNZ Nelson 42.23 153 P **P** **09 49 29.3 +0.1**
MJAR Matsushiro Arr 42.33 346 P **P** **09 49 29.6 -0.4**
comp=Z,93nm,0.9s,baz=170,slow=8.9,SNR=143
MJAR ScP **ScP** **09 54 08.1 +0.9**
comp=Z,14nm,0.8s,baz=167,slow=4.7,SNR=10
comp=Z,93nm,0.9s
MJAR Matsushiro Arr 42.33 346 P **P** **09 49 30.0 0.0**
MJAR IAmb IAmb 09 49 31.6
comp=Z,113nm,0.9s
MAJO Matsushiro 42.33 346 P **P** **09 49 30.3 +0.3**
MAJO Matsushiro 42.33 346 P **P** **09 49 29.9 -0.1**
comp=Z,260nm,0.9s
MAJO Matsushiro 42.33 346 *i*P **P** **09 49 29.4 -0.6**
MAJO pmax pmax
comp=Z,192nm,1.0s
MAJO Matsushiro 42.33 346 P **P** **09 49 29.0 -1.0**
MAJO ScP **ScP** **09 54 08.0 +0.7**
MJB9 Matsu-Tunnel 42.33 346 P **P** **09 49 29.1 -0.9**
PUZ Puketiti 42.34 146 P **P** **09 49 30.1 0.0**
THZ Tophouse 42.45 154 P **P** **09 49 30.9 0.0**
THZ IAmb IAmb 09 49 32.6
comp=Z,53nm,0.8s
THZ Tophouse 42.45 154 P **P** **09 49 31.0 0.0**
TSZ Takapari Road 42.56 150 P **P** **09 49 32.2 +0.3**
INZ Inchbonnie 42.63 156 P **P** **09 49 32.0 -0.2**
KNZ Kokohu 42.70 147 P **P** **09 49 33.0 +0.2**
MRZ Mangatainoka R 42.83 151 P **P** **09 49 33.6 -0.3**
SNZO South Karori 42.91 152 P **P** **09 49 35.0 +0.6**
comp=Z,52nm,1.3s
PXZ Pawanui 43.00 149 P **P** **09 49 35.1 -0.1**
LTZ Lake Taylor 43.01 155 P **P** **09 49 35.6 +0.2**
BFZ Birch Farm 43.18 150 P **P** **09 49 37.0 +0.4**
comp=Z,176nm,0.9s
BFZ Birch Farm 43.18 150 P **P** **09 49 35.9 -0.7**
KHZ Kahutara 43.26 154 P **P** **09 49 37.0 -0.1**
comp=Z,63nm,1.2s
KHZ Kahutara 43.26 154 P **P** **09 49 36.3 -0.8**
OXZ Oxford 43.37 156 P **P** **09 49 37.4 -0.6**
GVZ Greta Valley S 43.49 155 P **P** **09 49 38.7 -0.3**
HKPS Hong Kong Po S 43.72 309 P **P** **09 49 41.8 +0.7**
SSE Sheshan 44.65 325 P **P** **09 49 48.1 0.0**
SSE S **S** **09 55 45.7 +2.1**
SSE pmax pmax
comp=Z,57nm,0.9s
GZH2 Guangzhou 44.86 310↓ *i*P **P** **09 49 50.6 +0.8**
GZH2 S **S** **09 55 49.4 +2.7**
GZH2 pmax pmax
comp=Z,190nm,0.8s
DSRI Dabo 45.03 274 P **P** **09 49 51.3 0.0**
comp=Z,50nm,0.8s
QIZ Qiongzhong 45.57 302 P **P** **09 49 56.4 +1.1**
comp=Z,115nm,0.9s
QIZ Qiongzhong 45.57 302 P **P** **09 49 56.1 +0.8**
QIZ S **S** **09 55 58.9 +2.0**
QIZ sS **sS** **09 59 04.2 +2.0**
QIZ pmax pmax
comp=Z,100nm,0.9s
TJN Taejon 45.77 335 P **P** **09 49 56.8 +0.3**
comp=Z,214nm,1.3s
MYKOM Kota Tinggi 46.03 277 P **P** **09 50 00.3 +1.4**
comp=Z,38nm,1.4s
KSRS Korea Array 46.46 336 P **P** **09 50 02.1 +0.4**
comp=Z,54nm,0.7s,baz=153,slow=8.0,SNR=192
KSRS ScP **ScP** **09 54 25.2 +0.9**
comp=Z,7.1nm,0.7s,baz=147,slow=5.5,SNR=9.1
comp=Z,54nm,0.7s
KS19 Wonju Array Si 46.53 336 P **P** **09 50 02.3 0.0**
KS19 IAmb IAmb 09 50 02.7
comp=Z,54nm,0.7s
NJ2 Nanjing 46.71 324↓ *i*P **P** **09 50 04.6 +0.9**
NJ2 ScP **ScP** **09 54 26.2 +0.7**
NJ2 S **S** **09 56 15.4 +3.1**
NJ2 pmax pmax
comp=Z,170nm,0.7s
NJ2 pmax pmax
comp=Z,320nm,4.3s
INCN Inchon 47.02 335 P **P** **09 50 06.0 0.0**
INCN Inchon 47.02 335 P **P** **09 50 06.6 +0.6**
comp=Z,125nm,1.5s

INCN Inchon 47.02 335 P **P** **09 50 06.0 0.0**
INCN pmax pmax
comp=Z,406nm,1.8s
CNSH ChangSha 48.02 315 P **P** **09 50 14.7 +1.1**
CNSH pmax pmax
comp=Z,71nm,1.1s
WHN Wuhan 48.51 318↓ *i*P **P** **09 50 18.0 +0.8**
WHN S **S** **09 56 40.2 +3.0**
WHN pmax pmax
comp=Z,420nm,0.8s
JKA Kamikawa-asahi 48.95 353 P **P** **09 50 20.5 +0.3**
JKA IAmb IAmb 09 50 21.9
comp=Z,66nm,0.6s
ASAJ Asahikawa 48.95 353 P **P** **09 50 21.5 +1.3**
comp=Z,58nm,0.6s,baz=220,slow=9.5,SNR=96
ASAJ ScP **ScP** **09 54 36.8 +2.1**
comp=Z,9.2nm,0.8s,baz=223,slow=8.9,SNR=3.6
comp=Z,58nm,0.6s
PDSI Padang 49.09 273 P **P** **09 50 20.1 -1.7**
comp=Z,4µmcomp=Z,33nm,0.6s
PPI Padang Panjang 49.19 273 P **P** **09 50 21.5 -1.1**
comp=Z,3µmcomp=Z,90nm,1.0s
IPM Ipoh 49.24 280 P **P** **09 50 22.4 -0.5**
IPM IAmb IAmb 09 50 23.8
comp=Z,66nm,1.3s
IPM Ipoh 49.24 280 P **P** **09 50 22.3 -0.7**
comp=Z,46nm,1.0s
IPM Ipoh 49.24 280 P **P** **09 50 22.8 -0.2**
KULM Kulim 49.76 281 P **P** **09 50 26.1 -0.6**
KULM IAmb IAmb 09 50 27.3
comp=Z,39nm,0.6s
KULM Kulim 49.76 281 P **P** **09 50 26.5 -0.2**
comp=Z,69nm,0.9s
KULM Kulim 49.76 281 P **P** **09 50 26.3 -0.4**
comp=Z,69nm,0.9s
PSTR Posyet 50.05 342 *i*P **P** **09 50 28.6 +0.3**
MNSI Mandailing Nat 50.14 275 P **P** **09 50 29.1 -0.4**
comp=Z,54nm,0.9s
VLA Vladivostok 50.16 343 *i*P **P** **09 50 29.1 0.0**
VLA pmax pmax
comp=Z,42nm,0.7s
DL2 Dalian 50.43 332 P **P** **09 50 31.4 +0.3**
DL2 *ep*P **pwP** **09 52 18.9 -1.0**
DL2 S **S** **09 57 01.1 -1.8**
DL2 pmax pmax
comp=Z,180nm,0.8s
DL2 pmax pmax
comp=Z,460nm,5.2s
TIA Tai'an 50.70 326 P **P** **09 50 32.8 -0.4**
TIA pmax pmax
comp=Z,190nm,0.6s
PSI Prapat 51.05 277 P **P** **09 50 36.2 -0.1**
comp=Z,19nm,0.7s
PSI Prapat 51.05 277 P **P** **09 50 35.2 -1.1**
USRK Ussuriysk Ar. 51.13 344 P **P** **09 50 36.5 +0.5**
comp=Z,51nm,0.7s,baz=177,slow=8.3,SNR=82
USRK PP **PP** **09 52 36.6 -4.5**
comp=Z,9.3nm,0.8s,baz=175,slow=11,SNR=4.8
USRK ScP **ScP** **09 54 45.0 +0.9**
comp=Z,7.3nm,0.8s,baz=205,slow=3.2,SNR=5.7
comp=Z,51nm,0.7s
ENH Enshi 51.67 315 P **P** **09 50 39.8 -0.6**
ENH IAmb IAmb 09 50 41.6
comp=Z,322nm,1.4s
ENH Enshi 51.67 315 P **P** **09 50 40.5 +0.1**
comp=Z,154nm,1.4s
ENH Enshi 51.67 315 P **P** **09 50 40.2 -0.2**
ENH ScP **ScP** **09 54 47.0 +0.1**
GYA Guiyang 51.71 309↓ P **P** **09 50 41.5 +0.7**
GYA ScP **ScP** **09 54 48.2 +1.0**
GYA S **S** **09 57 23.2 +2.4**
GYA pmax pmax
comp=Z,63nm,0.8s
YSS Yuzhno-Sakhali 51.74 354 P **P** **09 50 40.6 +0.2**
YSS Yuzhno-Sakhali 51.74 354 P **P** **09 50 41.0 +0.6**
comp=Z,52nm,0.9s
YSS Yuzhno-Sakhali 51.74 354*ce*P **P** **09 50 40.3 -0.1**
YSS pmax pmax
comp=Z,40nm,1.0s
SNY Shenyang 51.95 336↓ P **P** **09 50 41.8 -0.2**
SNY pmax pmax
comp=Z,47nm,0.7s
MDJ Mudanjiang 52.20 342 P **P** **09 50 43.6 -0.2**
MDJ IAmb IAmb 09 50 45.3
comp=Z,71nm,1.0s
MDJ Mudanjiang 52.20 342 P **P** **09 50 44.5 +0.7**
comp=Z,91nm,1.0s
MDJ Mudanjiang 52.20 342 P **P** **09 50 44.2 +0.4**
MDJ S **S** **09 57 32.9 +6.4**
MDJ pmax pmax
comp=Z,87nm,0.9s
KCSI Kotacane, Aceh 52.29 278 P **P** **09 50 43.1 -2.0**
comp=Z,2µmcomp=Z,38nm,0.7s
LYN LuoYang 52.31 321↓ P **P** **09 50 44.8 0.0**
LYN pP pP 09 52 34.7 +3.5
LYN ScP **ScP** **09 54 50.0 +0.5**
LYN S **S** **09 57 26.3 -2.0**
LYN pmax pmax
comp=Z,190nm,0.8s
LYN pmax pmax
comp=Z,260nm,4.5s
CN2 Changchun 52.88 338 *ep*P **P** **09 50 47.9 -0.8**
CN2 *eS* **S** **09 57 35.6 +0.1**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
HNS HongShan 52.90 325↓ P **P** **09 50 49.0 +0.1**
HNS ScP **ScP** **09 54 53.3 +1.3**
HNS S **S** **09 57 35.7 -0.3**
HNS pmax pmax
comp=Z,220nm,1.1s
XMAS Kiritimati 53.45 84 P **P** **09 50 53.5 +0.2**
XMAS IAmb IAmb 09 50 54.9
comp=Z,206nm,0.8s
XMAS Kiritimati 53.45 84 P **P** **09 50 54.9 +1.6**
comp=Z,252nm,0.9s
MLSI Meulaboh, Aceh 53.75 279 P **P** **09 50 54.1 -1.4**
comp=Z,239nm,0.9s
BNX BinXian 53.90 341↓ P **P** **09 50 55.5 -0.4**
BNX pP **pwP** **09 52 49.3 +2.5**
BNX S **S** **09 57 49.4 +0.6**
BNX sS **SKiKP** **10 01 03.2 -1.1**
BNX pmax pmax
comp=Z,90nm,0.6s
BJI2 Beijing 53.99 329 P **P** **09 50 56.3 -0.3**
BJI2 ScP **ScP** **09 54 57.5 +0.8**
BJT Baijiatuau 53.99 329 P **P** **09 50 57.1 +0.5**
comp=Z,40nm,1.6s
KMI2 Kunming 54.19 306↓ P **P** **09 50 59.9 +1.3**
KMI2 S **S** **09 57 55.7 +1.8**
KMI2 pmax pmax
comp=Z,82nm,0.9s
KMI2 pmax pmax
comp=Z,310nm,4.2s
XAN Xi'an 54.28 318↓ P **P** **09 50 58.5 -0.3**
XAN S **S** **09 57 52.8 -1.6**
XAN pmax pmax
comp=Z,220nm,0.7s
XAN pmax pmax
comp=Z,150nm,4.2s
XAN Xi'an 54.28 318 P **P** **09 50 58.4 -0.5**
XAN PcP **PcP** **09 51 53.9 -0.1**
XAN ScP **ScP** **09 54 58.3 +0.1**
TIY Taiyuan 54.43 324 *eP* **P** **09 50 59.4 -0.4**
TIY pmax pmax
comp=Z,62nm,0.9s
CMAR Chiang Mai Arr 54.83 296 P **P** **09 51 04.2 +1.3**
comp=Z,58nm,0.8s,baz=121,slow=5.6,SNR=260
CMAR pP **pP** **09 52 51.1 +0.3**
comp=Z,2.3nm,0.7s,baz=117,slow=5.9,SNR=1.8
CMAR PKPPKP 10 21 00.1
comp=Z,0.4nm,0.3s,baz=318,slow=2.3,SNR=1.3
CMAR PKP2bc **P'P'bc** **10 21 17.6 +0.1**
comp=Z,1.6nm,0.9s,baz=292,slow=4.1,SNR=7.1
comp=Z,58nm,0.8s
CHTO Chiang Mai 54.95 297 P **P** **09 51 04.5 +0.8**
CHTO IAmb IAmb 09 51 05.7
comp=Z,118nm,1.2s
CHTO Chiang Mai 54.95 297 P **P** **09 51 04.7 +0.9**
comp=Z,52nm,1.1s
CHTO Chiang Mai 54.95 297 P **P** **09 51 04.6 +0.8**
CHTO pmax pmax
comp=Z,118nm,1.3s
CHTO Chiang Mai 54.95 297 P **P** **09 51 03.4 -0.4**
comp=Z,1µmcomp=Z,86nm,1.1s

SKR	**Severo-Kuril's**	**55.43**	**5**	*e*P		**P**		**09 51 05.6**	**-0.8**
SKR				*e*				09 53 24.7	
SKR				*e*S	S			09 58 24.9	+16
SKR				*e*SS		**SS**		**10 02 04.8**	**-0.6**
SKR					pmax	pmax			
	comp=Z,2µm,4.2s								
SKR					pmax	pmax			
	comp=Z,151nm,1.6s								
SKR					MLR	MLR			
	comp=Z,2µm,20.0s								
PZH	**PanZhiHua**	**55.61**	**307**		P	**P**		**09 51 08.5**	**+0.2**
TYV	**Tymovskoe**	**55.62**	**355**	*e*P		**P**		**09 51 08.2**	**+0.5**
TYV				*e*S		**S**		**09 58 10.2**	**-0.8**
TYV					pmax	pmax			
	comp=Z,33nm,0.7s								
TYV					pmax	pmax			
	comp=Z,200nm,3.4s								
TYV					smax	smax			
	comp=N,500nm,5.0s								
TYV					smax	smax			
	comp=E,500nm,5.0s								
KLR	**Kul'dur**	**55.85**	**346**	*ce*P		**P**		**09 51 09.5**	**+0.1**
KLR					pmax	pmax			
	comp=Z,35nm,0.8s								
CD2	**Chengdu**	**56.16**	**312**	⇓P		**P**		**09 51 12.3**	**+0.3**
CD2				S		**S**		**09 58 20.7**	**+1.8**
CD2				ScS		**ScS**		**10 00 01.0**	**-2.1**
CD2					pmax	pmax			
	comp=Z,250nm,0.6s								
CD2					pmax	pmax			
	comp=Z,700nm,6.8s								
XLT	**XiLinHaoTe**	**56.93**	**332**	*e*P		**P**		**09 51 17.0**	**0.0**
XLT				ScP		**ScP**		**09 55 10.2**	**+0.5**
XLT				S		**S**		**09 58 26.0**	**-2.3**
XLT					pmax	pmax			
	comp=Z,76nm,1.2s								
XLT					pmax	pmax			
	comp=Z,330nm,4.1s								
HHC	**Hu-ho-hao-te**	**57.05**	**326**	*e*P		**P**		**09 51 18.2**	**+0.2**
HHC				S		**S**		**09 58 29.0**	**-1.1**
HHC					pmax	pmax			
	comp=Z,59nm,0.8s								
HHC					pmax	pmax			
	comp=Z,230nm,5.2s								
KIP	**Kipapa**	**57.60**	**61**	P		**P**		**09 51 22.7**	**+0.8**
KIP	**Kipapa**	**57.60**	**61**	P		**P**		**09 51 22.5**	**+0.6**
	comp=Z,132nm,1.2s								
KIP	**Kipapa**	**57.60**	**61**	P		**P**		**09 51 22.7**	**+0.8**
	comp=Z,132nm,1.2s								
KIP	**Kipapa**	**57.60**	**61**	*ce*P		**P**		**09 51 22.6**	**+0.8**
KIP					pmax	pmax			
	comp=Z,298nm,0.8s								
TNCH	**TengChong**	**57.62**	**303**	⇓P		**P**		**09 51 22.9**	**+0.7**
TNCH				PcP		**PcP**		**09 52 07.6**	**0.0**
TNCH				pP		pP		09 53 17.4	+5.5
TNCH				sP		sP		09 54 09.9	-2.8
TNCH				S		**S**		**09 58 38.0**	**0.0**
TNCH				sS		sS		10 01 56.8	+2.4
TNCH					pmax	pmax			
	comp=Z,150nm,0.8s								
HEH	**HeiHe**	**57.93**	**343**	*e*P		**P**		**09 51 23.2**	**-0.3**
HEH				sP		**sP**		**09 54 15.5**	**+1.6**
HEH				ScP		**ScP**		**09 55 13.2**	**-0.6**
HEH				S		**S**		**09 58 37.6**	**-3.0**
HEH				ScS		**ScS**		**10 00 11.7**	**-3.5**
HEH					pmax	pmax			
	comp=Z,70nm,0.9s								
BTO2	**Baotou**	**57.93**	**325**	*e*P		**P**		**09 51 24.0**	**+0.1**
BTO2				pP		**pP**		**09 53 10.9**	**-2.5**
BTO2				PP		**PP**		**09 53 42.6**	**+1.1**
BTO2				S		**S**		**09 58 45.0**	**+3.7**
BTO2				sS		**sS**		**10 01 51.3**	**-6.7**
BTO2				SS		**SS**		**10 02 49.6**	**+4.3**
BTO2					pmax	pmax			
	comp=Z,120nm,1.0s								
BTO2					pmax	pmax			
	comp=Z,380nm,5.8s								
PEA0B	**Petropavlovsk-**	**57.98**	**6**	P		**P**		**09 51 24.6**	**+0.8**
PEA0B	**Petropavlovsk-**	**57.98**	**6**	P		**P**		**09 51 24.6**	**+0.8**
PEA0B					pmax	pmax			
	comp=Z,70nm,1.4s								
PETK	**Petropavlovsk-**	**57.98**	**6**	P		**P**		**09 51 24.6**	**+0.7**
	comp=Z,11nm,0.7s,baz=158,slow=6.3,SNR=36								
PETK				PcP		**PcP**		**09 52 08.0**	**-0.1**
	comp=Z,6.2nm,0.5s,baz=124,slow=4.5,SNR=7.6								
	comp=Z,11nm,0.7s								
PETK	**Petropavlovsk-**	**57.98**	**6**	P		**P**		**09 51 24.4**	**+0.5**
PETK	**Petropavlovsk-**	**57.98**	**6**	P		**P**		**09 51 24.4**	**+0.5**
OVEH	**Oceanview Est**	**58.85**	**64**	P		**P**		**09 51 30.9**	**+0.4**
OVEH				IAmb		IAmb		09 51 32.0	
	comp=Z,407nm,0.7s								
LZH	**Lanzhou**	**58.86**	**317**	P		**P**		**09 51 31.5**	**+1.2**
LZH				sP		sP		09 54 18.3	-3.0
LZH				ScP		**ScP**		**09 55 19.8**	**+1.2**
LZH				S		**S**		**09 58 54.7**	**+1.4**
LZH					pmax	pmax			
	comp=Z,250nm,1.5s								
LZH					pmax	pmax			
	comp=Z,170nm,4.1s								
DGPR	**DIGLIPUR**	**58.88**	**288**	*e*P		**P**		**09 51 28.8**	**-1.8**
DGPR				IAML				09 51 34.3	
	comp=Z,27nm,0.6s								
DGPR				*e*S		**S**		**09 58 55.0**	**+1.2**
LZDM	**Lanzhou Array**	**58.89**	**317**	P		**P**		**09 51 31.7**	**+0.9**
	comp=Z,119nm,0.8s,baz=149,slow=6.4,SNR=272								
LZDM				PKP2bc		**P'P'bc**		**10 21 07.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=235,slow=5.2,SNR=3.6								
	comp=Z,119nm,0.8s								
POHA	**Pohakuloa**	**59.24**	**64**	P		**P**		**09 51 34.1**	**+0.8**
	comp=Z,396nm,0.8s								
HIA	**Hailar**	**59.61**	**338**	P		**P**		**09 51 35.3**	**+0.4**
	comp=Z,192nm,0.8s								
HILR	**Hailar Array B**	**59.84**	**338**	P		**P**		**09 51 36.7**	**+0.2**
	comp=Z,69nm,0.7s,baz=140,slow=8.4,SNR=92								
	comp=Z,69nm,0.7s								
PPT	**Papeete**	**60.92**	**107**	P		**P**		**09 51 45.8**	**+1.6**
	comp=Z,78nm,0.9s,baz=66,slow=4.6,SNR=9.4								
	comp=Z,78nm,0.9s								
ZEA	**Zeya**	**61.11**	**345**	*e*P		**P**		**09 51 45.4**	**+0.7**
ZEA					pmax	pmax			
	comp=E,20nm,1.1s								
ZEA					pmax	pmax			
	comp=N,70nm,0.8s								
ZEA					pmax	pmax			
	comp=Z,160nm,0.8s								
IMP	**Imphal**	**61.39**	**301**	*e*P		**P**		**09 51 46.2**	**-1.0**
IMP				IAmb		IAmb		09 51 47.5	
	comp=Z,84nm,0.7s								
IMP				*e*S		**S**		**09 59 25.6**	**+0.6**
SAIH	**SAIHA**	**61.43**	**299**	*e*P		**P**		**09 51 47.9**	**+0.4**
SAIH				IAmb		IAmb		09 51 48.8	
	comp=Z,74nm,0.6s								
SAIH				*e*S		**S**		**09 59 26.9**	**+1.1**
KOHI	**KOHIMA**	**61.57**	**302**	*e*P		**P**		**09 51 47.6**	**-0.9**
KOHI				IAmb		IAmb		09 51 48.6	
	comp=Z,78nm,0.6s								
KOHI				*e*S		**S**		**09 59 27.9**	**+0.6**
DRV	**Dumont d'Urvil**	**62.24**	**184**	P		**P**		**09 51 51.8**	**0.0**
DRV				PcP		**PcP**		**09 52 25.1**	**0.0**
ZIRO	**ZIRO**	**62.44**	**304**	*e*P		**P**		**09 51 54.2**	**+0.1**
ZIRO				IAmb		IAmb		09 51 55.4	
	comp=Z,116nm,0.5s								
ZIRO				*e*S		**S**		**09 59 39.1**	**+1.0**
TEZP	**TEZPUR**	**62.99**	**303**	*e*P		**P**		**09 51 56.6**	**-0.8**
TEZP				IAmb		IAmb		09 51 58.1	
	comp=Z,88nm,0.6s								
TEZP				*e*S		**S**		**09 59 46.4**	**+2.1**
SHL	**Shillong**	**63.40**	**301**	*e*P		**P**		**09 52 00.4**	**+0.1**
SHL				IAmb		IAmb		09 52 01.1	
	comp=Z,137nm,1.1s								
SHL				*e*S		**S**		**09 59 49.4**	**-0.4**
GTA2	**Gaotai**	**63.41**	**319**	P		**P**		**09 52 00.9**	**+0.8**
GTA2				S		**S**		**09 59 50.6**	**+1.3**
GTA2				ScS		**ScS**		**10 00 58.2**	**+0.6**
GTA2					pmax	pmax			
	comp=Z,87nm,1.0s								
MA2	**Magadan**	**64.05**	**1**	P		**P**		**09 52 04.0**	**+0.5**
	comp=Z,7.2nm,0.7s,baz=159,slow=5.9,SNR=8.7								
	comp=Z,7.2nm,0.7s								
MA2	**Magadan**	**64.05**	**1**	*ce*P		**P**		**09 52 04.0**	**+0.5**
MA2					pmax	pmax			
	comp=Z,8.0nm,0.7s								
TAWA	**Tawang**	**64.11**	**304**	*e*P		**P**		**09 52 05.3**	**+0.3**
TAWA				IAmb		IAmb		09 52 06.7	
	comp=Z,170nm,1.1s								
TAWA				*e*S		**S**		**10 00 00.8**	**+2.2**
ULN	**Ulaanbaatar**	**64.17**	**330**	P		**P**		**09 52 05.9**	**+1.1**
ULN				IAmb		IAmb		09 52 06.7	
	comp=Z,93nm,0.9s								
ULN	**Ulaanbaatar**	**64.17**	**330**	*ce*P		**P**		**09 52 05.5**	**+0.8**
ULN					pmax	pmax			
	comp=Z,107nm,1.0s								
ULN	**Ulaanbaatar**	**64.17**	**330**	P		**P**		**09 52 05.2**	**+0.5**
ULN	**Ulaanbaatar**	**64.17**	**330**	P		**P**		**09 52 05.6**	**+0.8**
ULN				x		x		09 54 03.8	
CIT	**Chita**	**64.20**	**336**	*e*P		**P**		**09 52 05.2**	**+0.5**
CIT				*e*				09 52 33.2	
CIT				*e*				09 54 34.0	
CIT					pmax	pmax			
	comp=Z,157nm,1.3s								
SONM	**Songino Array**	**64.48**	**329**	P		**P**		**09 52 07.4**	**+0.7**
	comp=Z,77nm,0.7s,baz=146,slow=4.5,SNR=304								
SONM				pP		**pP**		**09 54 00.4**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=142,slow=7.2,SNR=1.4								
SONM				ScP				09 55 43.0	
	comp=Z,4.5nm,0.9s,baz=141,slow=5.7,SNR=3.6								
SONM				PKP2bc		**P'P'bc**		**10 20 51.9**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=304,slow=2.7,SNR=9.2								
	comp=Z,77nm,0.7s								
SONM	**Songino Array**	**64.48**	**329**	P		**P**		**09 52 07.5**	**+0.8**
SONM				IAmb		IAmb		09 52 09.1	
	comp=Z,94nm,0.8s								
SONM	**Songino Array**	**64.48**	**329**	P		**P**		**09 52 07.5**	**+0.8**
SONM					pmax	pmax			
	comp=Z,94nm,0.8s								
ATKA	**Atka Island**	**64.50**	**24**	P		**P**		**09 52 06.3**	**-0.2**
ATKA				IAmb		IAmb		09 52 07.1	
	comp=Z,126nm,0.8s								
GOMU	**GeErMu**	**65.24**	**313**	P		**P**		**09 52 12.3**	**+0.3**
GOMU					pmax	pmax			
	comp=Z,28nm,0.8s								
LSA	**Lhasa**	**65.45**	**306**	P		**P**		**09 52 10.5**	**-3.0**
LSA					pmax	pmax			
	comp=Z,110nm,0.7s								
NIKH	**Nikolski High**	**67.30**	**26**	P		**P**		**09 52 23.8**	**0.0**
	baz=226								
SEY	**Seymchan**	**67.45**	**1**	P		**P**		**09 52 25.3**	**+0.7**
	comp=Z,3.1nm,0.5s,baz=166,slow=6.4,SNR=25								
	comp=Z,3.1nm,0.5s								
SEY	**Seymchan**	**67.45**	**1**	*ce*P		**P**		**09 52 25.7**	**+1.1**
SEY					pmax	pmax			
	comp=Z,13nm,1.3s								
ZAK	**Zakamensk**	**67.69**	**330**	*e*P		**P**		**09 52 26.2**	**-0.3**
ZAK				*e*				09 54 23.7	
ZAK					pmax	pmax			
	comp=Z,139nm,1.0s								
ZAK					pmax	pmax			
	comp=Z,24nm,1.4s								
YAK	**Yakutsk**	**68.23**	**350**	P		**P**		**09 52 29.3**	**0.0**
	comp=Z,28nm,0.6s,baz=145,slow=2.3,SNR=16								
	comp=Z,28nm,0.6s								
YAK	**Yakutsk**	**68.23**	**350**	P		**P**		**09 52 29.5**	**+0.2**
YAK	**Yakutsk**	**68.23**	**350**	*ce*P		**P**		**09 52 29.5**	**+0.2**
YAK					pmax	pmax			
	comp=Z,41nm,0.8s								
TLY	**Talaya**	**68.34**	**331**	P		**P**		**09 52 30.8**	**+0.5**
TLY	**Talaya**	**68.34**	**331**	*i* P		**P**		**09 52 30.7**	**+0.5**
TLY					pmax	pmax			
	comp=Z,52nm,1.1s								
TLY	**Talaya**	**68.34**	**331**	P		**P**		**09 52 30.8**	**+0.5**
TLY				PcP		**PcP**		**09 52 55.1**	**+4.2**
IRK	**Irkutsk**	**68.40**	**332**	*e*P		**P**		**09 52 28.1**	**-2.5**
IRK				*e*				10 00 50.3	
IRK					pmax	pmax			
	comp=Z,89nm,1.2s								
BOD	**Bodaibo**	**68.52**	**341**	*e*P		**P**		**09 52 30.6**	**-0.6**
BOD					pmax	pmax			
	comp=Z,43nm,1.0s								
VIS	**Vishakhapatnam**	**68.92**	**291**	*e*P		**P**		**09 52 37.6**	**+3.2**
VIS				IAmb		IAmb		09 52 44.1	
	comp=Z,49nm,1.4s								
VIS				*e*S		**S**		**10 00 58.2**	**+3.6**
UNV	**Unalaska Valle**	**68.92**	**26**	P		**P**		**09 52 33.7**	**0.0**
UNV				IAmb		IAmb		09 52 34.3	
	comp=Z,76nm,0.7s								
UNV	**Unalaska Valle**	**68.92**	**26**	P		**P**		**09 52 34.5**	**+0.8**
UNV	**Unalaska Valle**	**68.92**	**26**	P		**P**		**09 52 33.9**	**+0.3**
	baz=228								
AKUT	**Akutan**	**69.44**	**26**	P		**P**		**09 52 37.0**	**+0.3**
P08K	**Saint George I**	**69.58**	**23**	P		**P**		**09 52 37.7**	**+0.2**
	baz=224								
MOY	**Mondy**	**69.62**	**330**	*e*P		**P**		**09 52 38.9**	**+0.8**
MOY					pmax	pmax			
	comp=Z,79nm,2.3s								
PALK	**Pallekele**	**69.64**	**279**	P		**P**		**09 52 39.3**	**+0.4**
PALK	**Pallekele**	**69.64**	**279**	P		**P**		**09 52 39.3**	**+0.4**
PALK					pmax	pmax			
	comp=Z,13nm,0.6s								
SPIA	**Saint Paul Isl**	**69.73**	**22**	P		**P**		**09 52 38.9**	**+0.4**
	baz=223								
KNGR	**Kungurtug, Tuv**	**70.79**	**328**	*i* P		**P**		**09 52 45.7**	**+0.7**
KNGR					pmax	pmax			
	comp=Z,75nm,1.0s								
FALS	**False Pass**	**70.95**	**27**	P		**P**		**09 52 45.8**	**+0.1**
	baz=230								
CCD	**Concordia, Ant**	**71.97**	**187**	P		**P**		**09 52 51.9**	**0.0**
CCD				x		**pP**		**09 54 51.0**	**+3.4**
SDPT	**Sand Point**	**72.59**	**27**	P		**P**		**09 52 54.9**	**-0.2**
	baz=233								
CHNA	**Chernabura Isl**	**72.69**	**28**	P		**P**		**09 52 55.9**	**+0.2**
	baz=234								
VNDA	**Vanda**	**73.10**	**177**	P		**P**		**09 52 58.4**	**+0.6**
	comp=Z,21nm,0.8s,baz=333,slow=6.9,SNR=70								
	comp=Z,21nm,0.8s								
VNDA	**Vanda**	**73.10**	**177**	P		**P**		**09 52 58.5**	**+0.7**
VNDA	**Vanda**	**73.10**	**177**	P		**P**		**09 52 58.5**	**+0.7**
VNDA					pmax	pmax			
	comp=Z,19nm,0.8s								
HYB	**Hyderabad**	**73.32**	**290**	*e*P		**P**		**09 52 59.9**	**-0.3**
HYB				*e*PcP		**PcP**		**09 53 13.2**	**+0.2**
HYB				*e*pP		**pP**		**09 54 56.0**	**-1.2**
HYB				*e*PP		**PP**		**09 55 53.6**	**-0.6**
WMQ	**Urumqi**	**73.42**	**318**	*e*P		**P**		**09 53 01.2**	**+0.9**
WMQ				pP		pP		09 55 00.3	+2.4
WMQ				PP		**PP**		**09 55 53.0**	**-1.5**
WMQ				S		**S**		**10 01 43.4**	**-1.1**
WMQ					pmax	pmax			
	comp=Z,51nm,1.5s								
BILL	**Bilibino**	**73.50**	**7**	P		**P**		**09 53 00.9**	**+0.7**
BILL	**Bilibino**	**73.50**	**7**	*ce*P		**P**		**09 53 00.7**	**+0.5**
BILL					pmax	pmax			
	comp=Z,35nm,0.9s								
BILL	**Bilibino**	**73.50**	**7**	P		**P**		**09 53 00.5**	**+0.4**
M11K	**Mekoryuk**	**73.50**	**21**	P		**P**		**09 53 01.0**	**+0.7**
	baz=226,SNR=6.0								
GAMB	**Gambell**	**74.18**	**17**	P		**P**		**09 53 04.5**	**+0.5**
GAMB	**Gambell**	**74.18**	**17**	P		**P**		**09 53 04.5**	**+0.5**
	baz=220,SNR=12								
M13K	**Dall Lake**	**74.57**	**22**	P		**P**		**09 53 07.5**	**+1.2**
	baz=229,SNR=30								
O14K	**Tigyukauivet M**	**74.64**	**24**	P		**P**		**09 53 07.5**	**+0.8**
	baz=232								
N14K	**Kuskokwak Cree**	**74.89**	**23**	P		**P**		**09 53 08.8**	**+0.7**
	baz=231,SNR=7.7								
K13K	**Kusilvak Mount**	**75.11**	**21**	P		**P**		**09 53 09.8**	**+0.5**
K13K	**Kusilvak Mount**	**75.11**	**21**	P		**P**		**09 53 10.2**	**+0.9**
	baz=228								
CHIR	**Chirikof Islan**	**75.13**	**29**	P		**P**		**09 53 09.9**	**+0.4**
	baz=238								
O15K	**Ungalikthiuk R**	**75.18**	**24**	P		**P**		**09 53 10.1**	**+0.3**
O15K				IAmb		IAmb		09 53 11.4	
	comp=Z,116nm,0.8s								
O15K	**Ungalikthiuk R**	**75.18**	**24**	P		**P**		**09 53 10.6**	**+0.8**
	baz=233								
R16K	**Pilot Point**	**75.19**	**26**	P		**P**		**09 53 10.3**	**+0.5**
	baz=235								
M14K	**Bethel**	**75.31**	**22**	P		**P**		**09 53 11.2**	**+0.8**
M14K				IAmb		IAmb		09 53 12.2	
	comp=Z,239nm,1.2s								
M14K	**Bethel**	**75.31**	**22**	P		**P**		**09 53 11.1**	**+0.7**
	baz=230,SNR=29								
L14K	**Kuka Creek**	**75.42**	**22**	P		**P**		**09 53 11.5**	**+0.5**
L14K				IAmb		IAmb		09 53 12.8	
	comp=Z,167nm,0.7s								
L14K	**Kuka Creek**	**75.42**	**22**	P		**P**		**09 53 12.0**	**+0.9**
	baz=230,SNR=82								
N15K	**Kwethluk River**	**75.67**	**23**	P		**P**		**09 53 13.5**	**+0.9**
	baz=232								
M15K	**Kasigluk River**	**75.77**	**23**	P		**P**		**09 53 13.4**	**+0.5**
	baz=232								
R17L	**Mt. Peulik Vol**	**75.77**	**27**	P		**P**		**09 53 13.3**	**+0.2**
	baz=236								
P16K	**Nushagak River**	**75.86**	**25**	P		**P**		**09 53 13.4**	**-0.1**
	baz=235								
DGZ	**Jazzator, Alta**	**76.00**	**324**	*i* P		**P**		**09 53 15.0**	**+0.3**
DGZ					pmax	pmax			
	comp=Z,81nm,1.1s								
J14K	**Nanvaranak Lak**	**76.03**	**20**	P		**P**		**09 53 15.3**	**+0.9**
	baz=229								
L15K	**Ungalak Mounta**	**76.08**	**22**	P		**P**		**09 53 14.9**	**+0.2**
	baz=231								
O16K	**Kokwok River B**	**76.14**	**25**	P		**P**		**09 53 15.3**	**+0.2**
	baz=234								
SII	**Sitkinak Islan**	**76.20**	**28**	P		**P**		**09 53 15.9**	**+0.4**
	baz=239								
Q16K	**King Salmon**	**76.23**	**26**	P		**P**		**09 53 14.8**	**-0.7**
	baz=236								
Q17K	**Contact Creek**	**76.33**	**26**	P		**P**		**09 53 16.1**	**-0.3**
	baz=237								
N16K	**Nishlik Lake**	**76.39**	**24**	P		**P**		**09 53 17.4**	**+1.0**
	baz=234								
K15K	**Wolf Creek Mou**	**76.45**	**21**	P		**P**		**09 53 17.7**	**+0.9**
	baz=231								
TNA	**Tin City**	**76.60**	**17**	P		**P**		**09 53 17.4**	**0.0**
	baz=224,SNR=13								
P17K	**Kvichak River**	**76.61**	**25**	P		**P**		**09 53 18.5**	**+0.8**
	baz=236								
M16K	**Timber Creek**	**76.64**	**23**	P		**P**		**09 53 18.6**	**+0.8**
	baz=233,SNR=23								
O17K	**Koliganek Bris**	**76.66**	**25**	P		**P**		**09 53 18.2**	**+0.3**
	baz=235								
ZSN	**Zaisan**	**76.66**	**321**	*d* iP		**P**		**09 53 18.7**	**+0.5**
ZSN	**Zaisan**	**76.66**	**321**	⇓*i*P		**P**		**09 53 18.7**	**+0.5**
ANM	**Nome**	**76.66**	**18**	P		**P**		**09 53 18.6**	**+0.8**
	baz=226,SNR=80								
L16K	**Owhat River**	**76.85**	**22**	P		**P**		**09 53 19.6**	**+0.6**
	baz=233								
OHAK	**Old Harbor**	**76.96**	**28**	P		**P**		**09 53 20.0**	**+0.4**
	comp=Z,64nm,1.1s								
OHAK	**Old Harbor**	**76.96**	**28**	P		**P**		**09 53 19.8**	**+0.2**
	baz=239								
F14K	**Arctic Creek**	**77.01**	**17**	P		**P**		**09 53 20.3**	**+0.6**
	baz=225								
N17K	**Nushagak Hills**	**77.05**	**24**	P		**P**		**09 53 21.0**	**+1.0**
	baz=235								
P18K	**Big Mountain,**	**77.24**	**26**	P		**P**		**09 53 20.3**	**-0.8**
	baz=237								
TIXI	**Tiksi**	**77.36**	**353**	*i* P		**P**		**09 53 20.7**	**-0.8**
TIXI					pmax	pmax			
	comp=Z,7.0nm,0.8s								
G15K	**Niukluk**	**77.38**	**18**	P		**P**		**09 53 21.9**	**+0.2**
	baz=228								
J16K	**Anvik River**	**77.41**	**21**	P		**P**		**09 53 23.1**	**+1.1**
	baz=231								
M17K	**Holitna River**	**77.46**	**23**	P		**P**		**09 53 23.4**	**+1.2**
	baz=235								
O18K	**Koktuh Hills**	**77.50**	**25**	P		**P**		**09 53 22.1**	**-0.4**
	baz=237								
L17K	**Donlin**	**77.56**	**22**	P		**P**		**09 53 23.8**	**+1.1**
	baz=234								
KDAK	**Kodiak Island**	**77.58**	**28**	P		**P**		**09 53 23.2**	**+0.3**
	baz=240								
N18K	**Kilae Creek**	**77.67**	**24**	P		**P**		**09 53 24.5**	**+1.1**
	baz=236								
F15K	**North Star Dit**	**77.67**	**18**	P		**P**		**09 53 23.8**	**+0.5**
	baz=227								
H16K	**Elim**	**77.72**	**19**	P		**P**		**09 53 24.0**	**+0.4**
	baz=230,SNR=64								
I17K	**Unalakleet**	**77.76**	**20**	P		**P**		**09 53 24.8**	**+1.1**
	baz=231,SNR=28								
K17K	**Iditarod**	**77.90**	**22**	P		**P**		**09 53 25.3**	**+0.8**
	baz=234								
O19K	**Port Alsworth**	**78.06**	**25**	P		**P**		**09 53 24.9**	**-0.5**
	baz=238								
MK31	**Makanchi Array**	**78.06**	**320**	*ce*P		**P**		**09 53 26.0**	**+0.1**
MKAR	**Makanchi Array**	**78.06**	**320**	P		**P**		**09 53 26.2**	**+0.3**
	comp=Z,33nm,0.9s,baz=107,slow=6.4,SNR=242								
MKAR				pP		**pP**		**09 55 25.6**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=109,slow=6.2,SNR=3.4								
MKAR				S		**S**		**10 02 35.0**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=98,slow=9.6,SNR=5.0								
MKAR				PKKPbc		**PKKPbc**		**10 12 19.9**	**-2.4**
	comp=Z,0.6nm,0.6s,baz=286,slow=1.5,SNR=7.4								
MKAR				PKPPKP		**P'P'df**		**10 20 22.9**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=266,slow=3.6,SNR=3.8								
	comp=Z,33nm,0.9s								
M18K	**Stony River**	**78.15**	**24**	P		**P**		**09 53 26.9**	**+1.0**
	baz=236								
G16K	**Koyuk River**	**78.17**	**19**	P		**P**		**09 53 26.7**	**+0.7**
	baz=229								
L18K	**Granite Mounta**	**78.22**	**23**	P		**P**		**09 53 27.4**	**+1.1**
	baz=235								
MAKZ	**Makanchi**	**78.27**	**320**	P		**P**		**09 53 27.3**	**+0.3**
MAKZ				IAmb		IAmb		09 53 28.3	
	comp=Z,58nm,0.9s								
MAKZ	**Makanchi**	**78.27**	**320**	P		**P**		**09 53 27.3**	**+0.3**
MAKZ				pmax		pmax			
	comp=Z,58nm,1.0s								
MAKZ	**Makanchi**	**78.27**	**320**	P		**P**		**09 53 27.0**	**+0.1**
MAKZ				PcP		**PcP**		**09 53 35.9**	**+2.1**
MAKZ				x		**pP**		**09 55 27.9**	**+1.6**
N19K	**Bonanza Creek**	**78.32**	**25**	P		**P**		**09 53 27.3**	**+0.3**
	baz=238								
H17K	**Granite Mounta**	**78.68**	**20**	P		**P**		**09 53 29.4**	**+0.7**
	baz=232,SNR=34	

TDK pmax pmax
comp=Z,45nm,0.7s
TDK Taldygorghan 80.07 317 *e*P **P 09 53 37.0 +0.5**
comp=Z,44nm,0.7s
SEW Seward 80.12 26 P **P 09 53 36.3 0.0**
baz=242
SKT Skwentna 80.14 24 P **P 09 53 35.0 -1.5**
baz=240,SNR=9.3
O22K Cooper Landing 80.18 26 P **P 09 53 36.3 -0.4**
baz=242,SNR=8.8
SUA Susitna One 80.21 25 P **P 09 53 36.0 -1.0**
baz=241,SNR=8.4
ARXS Arharly 80.24 316 *e*P **P 09 53 35.4 -2.1**
J20K Nowinta River 80.27 22 P **P 09 53 37.8 +0.7**
baz=237,SNR=30
PPLA Purkeypile 80.34 23 P **P 09 53 37.0 -0.7**
baz=239,SNR=8.2
G19K Purcell Mounta 80.35 19 P **P 09 53 38.0 +0.5**
baz=234
RC01 Rabbit Creek A 80.46 25 P **P 09 53 37.8 -0.3**
baz=242,SNR=17
I20K Naaghedeneel 80.48 21 P **P 09 53 38.7 +0.6**
baz=237
MDOK Medeo 80.50 315 *e*P **P 09 53 39.4 +0.5**
MDOK Medeo 80.50 315 *e*P **P 09 53 39.4 +0.5**
F19K Shaleruckik Mo 80.53 19 P **P 09 53 38.4 0.0**
baz=234
TNSS Tian-Shan 80.53 315 *e*P **P 09 53 39.5 +0.1**
TNSS Tian-Shan 80.53 315 *e*P **P 09 53 39.6 +0.1**
KSH2 Kashi 80.56 311 P **P 09 53 40.2 +0.8**
KSH2 pP pP 09 55 40.2 +0.5
KSH2 S **S 10 03 01.3 +1.0**
M22K Willow 80.61 25 P **P 09 53 38.0 -0.9**
baz=241,SNR=8.8
C18K Utukok River 80.64 16 P **P 09 53 39.0 0.0**
baz=230
H20K Anotleneega Mo 80.72 20 P **P 09 53 39.9 +0.5**
baz=236
CHUM Lake Minchumin 80.80 22 P **P 09 53 40.1 +0.3**
baz=239,SNR=68
ULHL Ulahol 80.83 314 P **P 09 53 41.6 +0.8**
SNR=18
CUT Chulitna 80.87 24 P **P 09 53 39.2 -1.0**
baz=241,SNR=15
PMR Palmer 80.95 25 P **P 09 53 40.3 -0.4**
comp=Z,94nm,0.9s
PMR Palmer 80.95 25 P **P 09 53 40.2 -0.4**
baz=242,SNR=24
P23K Montague Islan 80.99 27 P **P 09 53 41.0 +0.1**
baz=244
E19K Redstone River 81.08 18 P **P 09 53 41.9 +0.7**
baz=234
KNK Knik Glacier 81.16 25 P **P 09 53 41.7 -0.1**
baz=243,SNR=11
KUU Kurty 81.19 316 *e*P **P 09 53 42.7 +0.4**
KUU Kurty 81.19 316 *e*P **P 09 53 42.7 +0.4**
F20K Avaraart Lake 81.32 19 P **P 09 53 43.1 +0.7**
baz=235
TRF Thorofare Moun 81.36 23 P **P 09 53 41.9 -1.1**
baz=241,SNR=22
SML Sawmill 81.39 25 P **P 09 53 42.9 -0.1**
baz=243,SNR=24
BPAW Bear Paw Mtn. 81.41 23 P **P 09 53 42.3 -0.7**
baz=240,SNR=24
TKM2 Tokmak 2 81.46 314 P **P 09 53 44.6 +0.6**
SNR=31
H21K Melozitna Rive 81.54 21 P **P 09 53 43.9 +0.3**
baz=238
I21K Tanana 81.59 21 P **P 09 53 44.3 +0.4**
baz=239,SNR=35
KURK Kurchatov 81.64 323 P **P 09 53 44.5 +0.1**
KURK IAmb IAmb 09 53 45.3
comp=Z,65nm,1.0s
KURK Kurchatov 81.64 323 *ce*P **P 09 53 44.2 -0.2**
KURK pmax pmax
comp=Z,100nm,1.3s
KURK Kurchatov 81.64 323 P **P 09 53 44.2 -0.2**
KURK x x 09 55 52.6
M23K Glacier View 81.64 25 P **P 09 53 43.8 -0.4**
baz=244,SNR=12
KURBB Kurchatov Arra 81.66 323 P **P 09 53 44.5 -0.1**
comp=Z,33nm,0.9s,baz=113,slow=4.0,SNR=100
KURBB pP **pP 09 55 45.5 +0.6**
comp=Z,1.1nm,0.3s,baz=108,slow=4.7,SNR=2.1
KURBB PKKPbc **PKKPbc 10 12 12.5 -1.8**
comp=Z,1.5nm,0.7s,baz=285,slow=2.8,SNR=6.7
KURBB PKPPKP **P'P'df 10 20 16.3 +0.1**
comp=Z,0.1nm,0.3s,baz=298,slow=3.0,SNR=4.3
comp=Z,33nm,0.9s
G21K Allakaket 81.76 20 P **P 09 53 44.9 +0.2**
baz=238
WAT1 Susitna Watana 81.77 24 P **P 09 53 44.4 -0.5**
baz=243
SCM Sheep Creek Mo 81.83 25 P **P 09 53 45.5 +0.2**
baz=244,SNR=15
KBK Karagaybulak 81.86 314 P **P 09 53 46.7 +0.7**
SNR=12
E20K Nigu River 81.86 18 P **P 09 53 45.7 +0.4**
baz=235
EYAK Cordova Ski Ar 81.97 27 P **P 09 53 45.9 0.0**
baz=246
WAT6 Susitna Watana 81.99 25 P **P 09 53 45.8 -0.4**
baz=244,SNR=24
D20K Etivluk River 82.00 17 P **P 09 53 46.3 +0.3**
baz=234,SNR=38
MCK McKinley 82.03 23 P **P 09 53 45.5 -0.7**
baz=242,SNR=72
UCH Uchtor 82.07 314 P **P 09 53 48.7 +1.2**
SNR=38
CHMS Chumysh 82.08 314 P **P 09 53 47.5 +0.6**
SNR=22
F21K Alatna River 82.14 19 P **P 09 53 46.7 0.0**
baz=238
H22K Ishtalitna Cre 82.17 21 P **P 09 53 46.9 +0.1**
H22K Ishtalitna Cre 82.17 21 P **P 09 53 47.4 +0.5**
baz=240
AAK Ala-Archa 82.18 314 P **P 09 53 48.4 +0.8**
SNR=24
AAK Ala-Archa 82.18 314 P **P 09 53 48.2 +0.6**
AAK Ala-Archa 82.18 314 *ce*P **P 09 53 48.3 +0.7**
AAK pmax pmax
comp=Z,37nm,1.3s
SGDS Sogindy 82.28 315 *e*P **P 09 53 48.3 +0.4**
KLU Klutina 82.29 26 P **P 09 53 48.0 +0.4**
baz=245,SNR=26
USP Ospenovka 82.33 315 P **P 09 53 48.8 +0.6**
SNR=65
KAIM Kayak Island 82.33 28 P **P 09 53 48.2 +0.5**
baz=247
DHY Denali Highway 82.36 24 P **P 09 53 47.9 -0.1**
baz=244,SNR=47
NEA2 Nenana 82.38 22 P **P 09 53 47.0 -0.9**
baz=242,SNR=36
M24K Tolsona, Glenn 82.44 25 P **P 09 53 48.9 +0.5**
baz=245,SNR=20
I23K Minto, Yukon-K 82.54 22 P **P 09 53 48.3 -0.3**
baz=242,SNR=21
BMRM Bremner River 82.66 27 P **P 09 53 49.5 0.0**
BMRM IAmb IAmb 09 53 50.6
comp=Z,91nm,1.1s
BMRM Bremner River 82.66 27 P **P 09 53 49.6 +0.2**
baz=246,SNR=6.5
EKS2 Erkin-Say 82.70 314 P **P 09 53 51.1 +0.9**
SNR=45
H23K Yukon River 82.79 21 P **P 09 53 50.2 +0.2**
baz=241
BERG Berg Lake 82.84 27 P **P 09 53 50.2 -0.1**
BERG IAmb IAmb 09 53 51.3
comp=Z,66nm,0.7s
N25K Chitina, Valde 82.92 26 P **P 09 53 51.2 +0.4**
baz=246,SNR=12
COLA College 82.98 22 P **P 09 53 49.8 -1.1**
comp=Z,76nm,0.9s
COLA College 82.98 22 *i* P **P 09 53 49.6 -1.2**
COLA pmax pmax
comp=Z,76nm,0.9s
COLA College 82.98 22 P **P 09 53 49.8 -1.1**
baz=243
HARP HAARP 82.99 25 P **P 09 53 51.3 +0.3**
baz=246,SNR=9.2
G23K Bananza Creek 83.05 20 P **P 09 53 51.8 +0.5**
baz=241
BTLS Baital 83.06 316 P P 09 53 46.7 -5.1
PAX Paxson 83.10 25 P **P 09 53 51.3 -0.4**
baz=246,SNR=14
HDA Harding Lake 83.12 23 P **P 09 53 50.6 -1.0**
baz=244,SNR=41
GLB Gilahina Butte 83.20 26 P **P 09 53 52.0 -0.1**
GLB IAmb IAmb 09 53 53.2
comp=Z,55nm,0.7s
COLD Coldfoot 83.24 20 P **P 09 53 52.7 +0.6**
baz=241
POKR Poker Plat Res 83.25 22 P **P 09 53 50.6 -1.6**
baz=244,SNR=11
CRQE Cirque 83.25 27 P **P 09 53 52.7 +0.2**
baz=248,SNR=7.9
ILAR Eielson Array 83.30 23 P **P 09 53 51.2 -1.3**
comp=Z,74nm,0.6s,baz=251,slow=4.9,SNR=1041
ILAR S **SKSac 10 03 21.9 +1.4**
comp=Z,0.6nm,1.0s,baz=274,slow=7.4,SNR=5.0
ILAR PKKPbc **PKKPdf 10 12 05.2 +3.7**
comp=Z,0.2nm,0.5s,baz=4.4,slow=1.3,SNR=5.6
comp=Z,74nm,0.6s
K24K Donnelly Dome 83.32 24 P **P 09 53 52.5 -0.2**
baz=245,SNR=8.8
H24K Noodor Dome 83.41 22 P **P 09 53 52.3 -0.7**
baz=243,SNR=34
MCARA McCarthy VSAT 83.52 27 P **P 09 53 54.2 +0.5**
baz=248,SNR=7.1
A21K Barrow 83.53 15 P **P 09 53 53.7 +0.2**
baz=234
MESA MESA 83.57 28 P **P 09 53 54.7 +0.5**
baz=249
RIDG Independent Ri 83.67 24 P **P 09 53 54.4 -0.1**
baz=246,SNR=28
MENT Mentasta 83.82 25 P **P 09 53 55.6 +0.4**
comp=Z,92nm,1.2s
J25K Salcha River, 83.82 23 P **P 09 53 54.9 -0.3**
baz=245,SNR=176
E23K Chandalar 83.84 19 P **P 09 53 56.0 +0.7**
baz=241
M26K Nabesna, AK 83.92 26 P **P 09 53 56.2 +0.5**
baz=248,SNR=7.6
G24K Hadweenzic Riv 83.94 21 P **P 09 53 56.0 +0.3**
baz=243
L26K Log Cabin Wild 84.01 25 P **P 09 53 56.5 +0.4**
baz=247,SNR=50
SCRK Sand Creek 84.12 24 P **P 09 53 56.6 -0.1**
baz=247,SNR=26
CTG Chitna Glacier 84.13 27 P **P 09 53 57.3 +0.5**
baz=250,SNR=19
PRP Porcupine Dome 84.14 22 P **P 09 53 54.5 -2.3**
baz=245,SNR=13
E24K Your Creek 84.23 19 P **P 09 53 57.4 +0.3**
baz=242
BTK Batken 84.34 311 P **P 09 53 58.1 -0.2**
BTK Batken 84.34 311 P **P 09 53 58.1 -0.2**
BTK pmax pmax
comp=Z,16nm,1.0s
PCA Pinnacle 84.34 28 P **P 09 53 58.1 +0.3**
PCA IAmb IAmb 09 53 59.3
comp=Z,56nm,0.8s
PINM Pinnacle 84.34 28 P **P 09 53 58.3 +0.5**
baz=250
M27K Edge Creek, AK 84.39 26 P **P 09 53 58.9 +0.8**
baz=249
J26L Joseph Creek 84.49 24 P **P 09 53 58.7 +0.2**
baz=247,SNR=52
DZA Taraz 84.51 314 *e*P **P 09 53 59.4 +0.4**
DZA pmax pmax
comp=Z,40nm,0.9s
DZA Taraz 84.51 314 *e*P **P 09 53 59.5 +0.4**
comp=Z,40nm,0.9s
O28M Mount Upton 84.59 28 P **P 09 53 59.9 +0.6**
baz=250
L27K Beaver Creek, 84.67 25 P **P 09 54 00.1 +0.7**
baz=249,SNR=47
KBL Kabul 84.77 305 P **P 09 53 59.4 -1.3**
KBL Kabul 84.77 305 P **P 09 53 59.4 -1.3**
KBL pmax pmax
comp=Z,11nm,0.8s
NRIK Noril'sk 84.78 342 P **P 09 53 59.0 -0.7**
comp=Z,13nm,0.7s,baz=124,slow=4.0,SNR=36
NRIK pP **pP 09 56 02.5 +0.9**
comp=Z,7.0nm,1.0s,baz=122,slow=5.1,SNR=2.9
comp=Z,13nm,0.7s
NRIK Noril'sk 84.78 342 P **P 09 53 59.4 -0.3**
NRIK Noril'sk 84.78 342 *i* P **P 09 53 59.1 -0.6**
NRIK pmax pmax
comp=Z,13nm,0.8s
YUK3 Moose Creek 84.81 27 P **P 09 54 00.9 +0.6**
baz=250,SNR=41
BVCY Beaver Creek 84.85 26 P **P 09 54 01.1 +0.8**
baz=250,SNR=53
YUK8 Steele Glacier 84.96 27 P **P 09 54 02.0 +1.0**
baz=251,SNR=22
F25K Christian Rive 84.98 20 P **P 09 54 01.6 +0.8**
baz=245
BRZS Berezniki 85.11 321 *e*P **P 09 54 02.3 +0.6**
BRZS Berezniki 85.11 321 *e*P **P 09 54 02.4 +0.6**
KKAR Karatay Array 85.14 314 P **P 09 54 02.4 +0.4**
KKAR Karatay Array 85.14 314 P **P 09 54 02.4 +0.4**
O29M Mount Kennedy 85.20 28 P **P 09 54 03.3 +1.2**
baz=252
E25K Arctic Village 85.23 20 P **P 09 54 02.7 +0.7**
baz=245,SNR=25
QSPA South Pole Qui 85.29 180 P **P 09 54 01.8 -0.7**
comp=Z,5.8nm,0.5s,baz=330,slow=1.3,SNR=9.1
comp=Z,5.8nm,0.5s
QSPA South Pole Qui 85.29 180 P **P 09 54 02.4 -0.1**
IUG luzhnay 85.31 313 *e*P **P 09 54 03.4 +0.4**
IUG pmax pmax
comp=Z,23nm,0.8s
IUG luzhnay 85.31 313 *e*P **P 09 54 03.5 +0.4**
comp=Z,23nm,0.8s
G26K Porcupine Rive 85.37 21 P **P 09 54 03.6 +1.0**
baz=247
D25K Kavik River 85.48 19 P **P 09 54 03.6 +0.4**
baz=244
YUK4 Talbot Arm 85.49 27 P **P 09 54 05.0 +1.4**
baz=252,SNR=73
YUK6 Talbot Mounta 85.50 28 P **P 09 54 04.4 +0.8**
baz=252,SNR=11
F26K Sheenjek River 85.54 21 P **P 09 54 04.4 +0.9**
baz=246
BRLS Boroldav 85.61 314 *e*P **P 09 54 04.8 +0.5**
BRLS Boroldav 85.61 314 *e*P **P 09 54 04.8 +0.5**
CHM Chimkent 85.65 313 *e*P **P 09 54 04.9 +0.4**
CHM Chimkent 85.65 313 *e*P **P 09 54 05.0 +0.4**
I27K Kandik River 85.67 23 P **P 09 54 04.8 +0.6**
baz=249,SNR=72
S31K Pelican 85.67 31 P **P 09 54 05.0 +0.8**
baz=254
HYT Haines Junctio 85.86 28 P **P 09 54 06.3 +1.1**
baz=253,SNR=89
SIT Sitka 85.91 32 P **P 09 54 06.1 +0.8**
baz=255
M29M Somme Creek 85.92 26 P **P 09 54 06.3 +0.9**
baz=252
P30M Million Dollar 85.92 29 P **P 09 54 06.4 +1.0**
baz=253
H27K Steamboat Moun 85.93 22 P **P 09 54 06.2 +0.8**
baz=249
G27K Doyon Strip 86.10 22 P **P 09 54 06.8 +0.7**
baz=249
L29M L29M 86.27 26 P **P 09 54 08.0 +1.0**
baz=252
I28M Miner Creek 86.28 23 P **P 09 54 07.4 +0.4**
baz=250
S32K Killisnoo 86.40 32 P **P 09 54 08.4 +0.8**
baz=255,SNR=8.2
O30N Mendenhall 86.51 28 P **P 09 54 09.1 +0.8**
baz=254,SNR=43
SKAG Skagway 86.53 30 P **P 09 54 09.2 +1.0**
comp=Z,91nm,1.1s
SKAG Skagway 86.53 30 P **P 09 54 09.1 +0.9**
baz=255,SNR=9.0
H02S2 DAWSON INLET T 86.58 36 P **P 09 54 08.8 +0.2**
SNR=10.0
R32K Eaglecrest 86.63 31 P **P 09 54 09.8 +1.1**
baz=256,SNR=5.5
J29N Klondike Camp 86.65 24 P **P 09 54 09.9 +1.1**
baz=252,SNR=32
M30M Minto, Yukon 86.69 26 P **P 09 54 09.7 +0.7**
baz=253,SNR=40
JIS Juneau Island 86.70 31 P **P 09 54 10.1 +1.1**
comp=Z,62nm,0.9s
K29M Barlow Dome 86.75 25 P **P 09 54 10.3 +1.0**
baz=253,SNR=81
N31M Braeburn, Yuko 86.85 28 P **P 09 54 10.8 +1.0**
baz=254,SNR=19
U33K Whale Pass 86.86 33 P **P 09 54 10.7 +0.9**
baz=257
I29M Ogilvie Camp, 86.89 24 P **P 09 54 10.1 +0.3**
baz=252,SNR=17
F28M Old Crow 87.03 21 P **P 09 54 11.1 +0.7**
baz=250
WHY Whitehorse 87.06 29 P **P 09 54 11.5 +0.7**
baz=255,SNR=19
BVAR Borovoye Array 87.16 324 P **P 09 54 10.0 -1.4**
comp=Z,9.0nm,0.8s,baz=106,slow=5.3,SNR=44
BVAR pP **pP 09 56 14.3 +0.4**
comp=Z,3.5nm,0.8s,baz=101,slow=6.2,SNR=3.9
comp=Z,9.0nm,0.8s
BORK Borovoye 87.20 324 P **P 09 54 10.5 -1.1**
BORK Borovoye 87.20 324 P **P 09 54 10.5 -1.1**
BORK pmax pmax
comp=Z,13nm,0.7s
D27M Malcolm River 87.22 20 P **P 09 54 12.1 +0.7**
baz=249
WRAK Wrangell Islan 87.35 33 P **P 09 54 12.8 +0.7**
baz=258
P32M Atlin 87.36 30 P **P 09 54 12.9 +0.7**
baz=256,SNR=15
MAYO Mayo, Yukon 87.38 26 P **P 09 54 13.1 +0.9**
baz=254,SNR=7.7
J30M Hart River 87.46 25 P **P 09 54 13.4 +0.7**
baz=254
E28M Babbage River 87.48 20 P **P 09 54 13.2 +0.7**
baz=251
G29M Pine Creek 87.48 22 P **P 09 54 13.0 +0.4**
baz=252
V35K Ketchikan 87.52 34 P **P 09 54 13.6 +0.6**
baz=258
I30M Mount Dempster 87.62 24 P **P 09 54 13.6 +0.2**
baz=254
M31M Drury Creek, Y 87.67 27 P **P 09 54 13.8 +0.1**
baz=256,SNR=12
EPYK Eagle Plains 87.82 23 P **P 09 54 14.4 +0.2**
baz=253
Q32M Nakina River 87.94 31 P **P 09 54 15.9 +0.7**
baz=258
P33M Teslin, Yukon 87.94 29 P **P 09 54 15.2 +0.2**
baz=257,SNR=8.6
E29M Blow River 87.98 21 P **P 09 54 15.1 +0.2**
E29M Blow River 87.98 21 P **P 09 54 14.9 0.0**
baz=252
N32M Quiet Lake 88.03 28 P **P 09 54 15.5 +0.2**
N32M IAmb IAmb 09 54 16.9
comp=Z,44nm,0.8s
N32M Quiet Lake 88.03 28 P **P 09 54 15.8 +0.5**
baz=257
G30M tAoh Zraii Nji 88.18 22 P **P 09 54 15.2 -0.7**
G30M IAmb IAmb 09 54 16.7
comp=Z,65nm,1.1s
G30M tAoh Zraii Nji 88.18 22 P **P 09 54 15.6 -0.3**
baz=254
S34M Telegraph Cree 88.31 32 P **P 09 54 16.8 +0.2**
S34M IAmb IAmb 09 54 18.7
comp=Z,124nm,1.6s
S34M Telegraph Cree 88.31 32 P **P 09 54 17.5 +0.9**
baz=259,SNR=8.4
F30M Barrier River 88.52 22 P **P 09 54 17.5 +0.1**
baz=254
T35M Bob Quinn 88.59 33 P **P 09 54 18.9 +0.9**
baz=259,SNR=6.8
H31M Peel River 88.60 24 P **P 09 54 17.8 0.0**
baz=256
R33M Jennings River 88.68 30 P **P 09 54 19.3 +0.8**
baz=259
G31M Satah River 88.91 23 P **P 09 54 19.3 +0.2**
baz=256
DLBC Dease Lake 88.98 31 P **P 09 54 20.4 +0.6**
baz=260,SNR=6.7
F31M Tsiigehtchic 89.23 22 P **P 09 54 20.3 -0.4**
baz=256,SNR=40
INK Inuvik 89.52 21 PKiKP **PKiKP 09 59 14.6 -0.7**
comp=Z,1.0nm,0.6s,baz=281,slow=14,SNR=2.2
INK Inuvik 89.52 21 P **P 09 54 21.5 -0.4**
baz=256,SNR=52
WTLY Watson Lake, Y 89.89 30 P **P 09 54 24.8 +0.8**
baz=260,SNR=15
TOAD Toad River Com 91.52 31 P **P 09 54 31.3 -0.2**
baz=264,SNR=13
WRGLY Wrigley 92.81 27 P **P 09 54 37.4 +0.2**
baz=265,SNR=7.1
A36M Sachs Harbour 92.94 18 P **P 09 54 37.1 -0.6**
baz=264
C36M Paulatuk 93.08 21 P **P 09 54 37.4 -1.0**
baz=265
AB31 Akbulak array 93.19 319 P **P 09 54 37.8 -1.5**
ABKAR Akbulak array 93.19 319 P **P 09 54 37.8 -1.5**
ARTI Arti 94.46 326 *c* P **P 09 54 43.3 -1.6**
ARTI 09 58 40.9
ARTI S **SKSac 10 04 23.2 -2.4**
ARTI pmax pmax
comp=Z,5.0nm,0.9s
NVAR Mina Array Bea 94.61 52 P **P 09 54 46.7 +0.4**
comp=Z,5.6nm,0.8s,baz=250,slow=6.5,SNR=29
NVAR PP **PP 09 58 45.9 +1.4**
comp=Z,4.5nm,0.9s,baz=272,slow=6.5,SNR=3.9
comp=Z,5.6nm,0.8s
PFO Pinyon Flats O 95.94 57 *i* P **P 09 54 52.7 +0.3**
PFO pmax pmax
comp=Z,18nm,0.9s
YKA Yellowknife Ar 96.85 28 P **P 09 54 55.1 -0.4**
comp=Z,6.3nm,0.9s,baz=282,slow=5.6,SNR=52
YKA PP **PP 09 58 59.3 -1.1**
comp=Z,1.5nm,0.9s,baz=278,slow=8.3,SNR=5.7
YKA PKiKP **PKiKP 09 59 27.8 -0.3**
comp=Z,0.4nm,0.5s,baz=291,slow=1.4,SNR=8.9
YKA PKKPbc **PKKPbc 10 11 34.2 -3.1**
comp=Z,0.1nm,0.6s,baz=178,slow=18,SNR=4.8
comp=Z,6.3nm,0.9s
NVL N'lazarevskaya 99.66 193 *e*P **Pdif 09 55 07.5 -0.4**
NVL *e* 09 59 21.0
NVL *e*PPP PPP 10 01 34.2
NVL *e*S **SKSac 10 04 51.2 -0.3**
NVL *e*PS **PS 10 08 38.9 +0.7**
NVL *e*SS **SS 10 13 01.5 +2.4**
NVL *e*SSS SSS 10 17 00.3
NVL pmax pmax
comp=Z,61nm,2.0s
BELG Belogornoye 100.91 322 *i* P **Pdif 09 55 12.3 -1.5**
BELG pmax pmax
comp=Z,1.0nm,1.0s
PDAR Pinedale Array 101.20 47 P **Pdif 09 55 15.1 -0.7**
comp=Z,8.3nm,0.9s,baz=231,slow=2.2,SNR=57
PDAR PKiKP **PKiKP 09 59 36.9 0.0**
comp=Z,3.0nm,1.0s,baz=164,slow=1.2,SNR=5.6
SPITS Spitsbergen Ar 102.68 351 Pdiff **Pdif 09 55 20.2 -1.0**
comp=Z,6.9nm,0.9s,baz=98,slow=8.9,SNR=2.7
KLMR Klimovskoe 103.71 332 *e*P **Pdif 09 55 24.2 -1.9**
KLMR *e* 09 59 48.0
KLMR pmax pmax
comp=Z,27nm,1.7s
APA Apatity 104.05 339 *e*P **Pdif 09 55 39.5 +12**
APA pmax pmax
comp=Z,5.0nm,1.0s
APA MLR MLR
comp=Z,2μm,6.1s
ARCES ARCESS Array B 105.75 342 Pdiff **Pdif 09 55 35.4 +0.3**
comp=Z,2.6nm,0.7s,baz=352,slow=5.5,SNR=2.3
ARCES PKiKP **PKiKP 09 59 43.7 -0.4**
comp=Z,1.8nm,0.5s,baz=80,slow=1.5,SNR=10
ARCES PKKPbc **PKKPbc 10 11 07.0 -5.0**
comp=Z,1.1nm,0.4s,baz=250,slow=2.6,SNR=7.0
TXAR Lajitas Array 106.97 61 Pdiff **Pdif 09 55 42.0 +0.5**
comp=Z,0.5nm,0.7s,baz=268,slow=3.1,SNR=6.1
TXAR PKiKP **PKiKP 09 59 47.8 +0.1**
comp=Z,1.2nm,0.7s,baz=191,slow=1.6,SNR=12
TXAR PP **PP 10 00 14.7 -1.5**
comp=Z,2.8nm,0.9s,baz=258,slow=6.3,SNR=10
ULM Lac du Bonnet 109.20 38 PKiKP **PKiKP 09 59 50.0 -1.1**
comp=Z,6.2nm,0.6s,baz=184,slow=0.4,SNR=8.7
FINES FINESS Array B 109.54 335 PKiKP **PKiKP 09 59 50.8 -0.5**
comp=Z,3.0nm,0.8s,baz=107,slow=3.0,SNR=12
MNK Minsk 111.73 328 *i* P **Pdif 09 56 02.8 +0.9**
comp=E,30nm,0.8s
MNK *i* P **Pdif 09 56 02.8 +0.9**
comp=N,17nm,0.7s
MNK *i* P **Pdif 09 56 02.8 +0.9**
comp=Z,12nm,0.6s,baz=66
MNK *i* pP **pPdif 09 58 07.8 +1.8**
MNK *i* sP **sPdif 09 59 04.2 +1.9**
MNK *i* PP **PP 10 00 47.9 -1.0**
MNK *i* PPP PPP 10 03 18.6
MNK *i* SKS **SKSdf 10 06 15.0 +0.8**
MNK *i* SS **SS 10 15 45.1 +2.9**
MNK *i* SSS SSS 10 19 57.5
MNK Minsk 111.73 328 *i* P **Pdif 09 56 02.8 +0.9**
MNK *i* 10 00 47.9

MNK			*i* PPP	PPP	10 03 18.5		
MNK			*i*		10 06 14.9		
MNK			*i* SS	SS	10 15 45.1	+2.9	
MNK			*i* SSS	SSS	10 19 57.4		
MNK			pmax	pmax			
	comp=Z,12nm,0.6s						
MNK			pmax	pmax			
	comp=N,17nm,0.7s						
MNK			pmax	pmax			
	comp=E,30nm,0.8s						
AKASG	**Malin Array Be**	**112.44 324**	PKiKP	**PKiKP**	**09 59 56.2**	**-0.9**	
	comp=E,2.9nm,0.5s,baz=56,slow=2.5,SNR=13						
AKASG			PP	**PP**	**10 00 53.7**	**-0.3**	
	comp=E,1.9nm,0.6s,baz=62,slow=6.0,SNR=6.3						
BRTR	**Keskin Array B**	**112.73 311**	PKiKP	**PKiKP**	**09 59 57.0**	**-1.4**	
	comp=E,1.0nm,0.6s,baz=79,slow=1.8,SNR=4.6						
BRTR			PP	**PP**	**10 00 57.1**	**+0.3**	
	comp=E,1.6nm,0.8s,baz=142,slow=6.3,SNR=5.5						
BRTR			SKP	**SKPdf**	**10 02 39.0**	**-1.4**	
	comp=E,1.0nm,0.7s,baz=96,slow=0.6,SNR=5.3						
BRTR			PKKPbc	**PKKPbc**	**10 10 48.4**	**-0.9**	
	comp=E,1.1nm,0.6s,baz=208,slow=2.9,SNR=4.6						
BRTR	**Keskin Array B**	**112.73 311**	*i* PKiKP	**PKiKP**	**09 59 57.0**	**-1.4**	
HFS	**Hagfors**	**115.31 337**	PKP	**PKPdf**	**10 00 01.5**	**-1.0**	
	comp=E,5.7nm,0.9s,baz=192,slow=2.7,SNR=6.0						
NB2	**NORSAR Subarra**	**115.63 339**	PKPdf	**PKPdf**	**10 00 02.2**	**-0.9**	
	comp=Z,1.5nm,0.7s,baz=45,slow=1.9						
NOA	**NORSAR Array B**	**115.63 339**	PKP	**PKPdf**	**10 00 02.0**	**-1.1**	
	comp=Z,1.4nm,0.7s,baz=246,slow=3.2,SNR=4.6						
NOA	**NORSAR Array B**	**115.63 339**	PKiKP	**PKiKP**	**10 00 02.0**	**-1.1**	
BOSA	**Boshof**	**117.02 235**	PKP	**PKPdf**	**10 00 06.4**	**-0.5**	
	comp=Z,2.3nm,0.6s,baz=96,slow=1.5,SNR=10						
BOSA			PKKPbc	**PKKPbc**	**10 10 34.3**	**-0.3**	
	comp=Z,1.5nm,0.7s,baz=300,slow=2.5,SNR=5.5						
LSZ	**Lusaka**	**118.58 250**	PKKPbc	PKKPbc	10 10 29.1	+0.3	
	comp=Z,3.4nm,0.6s,baz=219,slow=0.3,SNR=7.7						
LANS	**Liptovska Anna**	**118.80 325**	*e*PKP	**PKiKP**	**10 00 10.5**	**+0.9**	
STEB	**Steborice**	**119.35 326**	*e*PKPDF	**PKPdf**	**10 00 10.4**	**-0.1**	
MORC	**Moravsky Berou**	**119.56 326**	*e*PKP	**PKPdf**	**10 00 10.6**	**-0.4**	
OSTC	**Ostas**	**119.86 328**	*e*PKIKP	**PKPdf**	**10 00 11.5**	**0.0**	
OSTC	**Ostas**	**119.86 328**	*e*PKPDF	**PKPdf**	**10 00 11.5**	**0.0**	
DPC	**Dobruska-Polom**	**119.92 327**	*e*PKIKP	**PKPdf**	**10 00 11.7**	**0.0**	
DPC	**Dobruska-Polom**	**119.92 327**	*e*PKPDF	**PKPdf**	**10 00 11.7**	**0.0**	
JAVC	**Velka Javorina**	**119.97 325**	*e*PKP	**PKiKP**	**10 00 12.3**	**+0.3**	
UPC	**Upice**	**120.00 328**	*e*PKIKP	**PKPdf**	**10 00 11.7**	**-0.1**	
UPC	**Upice**	**120.00 328**	*e*PKPDF	**PKPdf**	**10 00 11.7**	**-0.1**	
SRO	**Srobarova**	**120.12 324**	*e*PKIKP	**PKiKP**	**10 00 12.5**	**+0.3**	
SRO	**Srobarova**	**120.12 324**	*e*PKP	**PKiKP**	**10 00 12.5**	**+0.3**	
VRAC	**Vranov**	**120.33 326**	*e*PKP	**PKPdf**	**10 00 12.0**	**-0.5**	
MODS	**Modra-Piesok**	**120.44 325**	*e*PKP	**PKiKP**	**10 00 12.8**	**0.0**	
MODS			*e*		10 02 55.0		
KRUC	**Moravsky**	**120.58 326**	*e*PKP	**PKPdf**	**10 00 12.3**	**-0.6**	
PVCC	**Panska Ves**	**120.75 328**	*e*PKIKP	**PKPdf**	**10 00 13.1**	**-0.1**	
PVCC	**Panska Ves**	**120.75 328**	*e*PKPDF	**PKPdf**	**10 00 13.1**	**-0.1**	
BRG	**Berggiesshubel**	**120.88 329**	*e*PKPdf	**PKPdf**	**10 00 13.1**	**-0.4**	
	baz=52,slow=2.0						
BRG	**Berggiesshubel**	**120.88 329**	⫝̸PKPf		10 00 13.2		
BRG			Amp		10 00 14.2		
	comp=Z,8.8nm,0.8s						
TREC	**Trest**	**120.95 327**	*e*PKIKP	**PKPdf**	**10 00 13.6**	**-0.1**	
TREC	**Trest**	**120.95 327**	*e*PKPDF	**PKPdf**	**10 00 13.6**	**-0.1**	
PRU	**Pruhonice**	**121.07 328**	*e*PKIKP	**PKPdf**	**10 00 13.5**	**-0.3**	
PRU	**Pruhonice**	**121.07 328**	*e*PKPDF	**PKPdf**	**10 00 13.5**	**-0.3**	
CLL	**Collm**	**121.10 330**	*i* PKIKP	**PKPdf**	**10 00 13.3**	**-0.5**	
CLL			pmax	pmax			
	comp=Z,9.0nm,0.6s						
CLL	**Collm**	**121.10 330**	*i* PKPdf	**PKPdf**	**10 00 13.3**	**-0.5**	
	comp=Z,9.0nm,0.6s						
CLL	**Collm**	**121.10 330**	*e*PKPdf	**PKPdf**	**10 00 13.5**	**-0.3**	
	baz=52,slow=2.0						
HSKC	**Hora Svate Kat**	**121.30 329**	*e*PKPDF	**PKPdf**	**10 00 14.2**	**-0.1**	
FLTG	**Flechtingen**	**121.34 331**	*e*PKPdf	**PKPdf**	**10 00 14.0**	**-0.2**	
	baz=52,slow=2.0						
RONA	**Rosalia, Austr**	**121.35 325**	*i* PKP	**PKPdf**	**10 00 14.1**	**-0.4**	
	comp=Z,2.8nm,0.6s						
CONA	**Conrad Observa**	**121.48 325**	*i* PKP	**PKPdf**	**10 00 14.4**	**-0.4**	
	comp=Z,5.4nm,0.5s,SNR=10						
ZVC	**Zvikov**	**121.57 327**	*e*PKPDF	**PKPdf**	**10 00 14.6**	**-0.2**	
PLCA	**Paso Flores**	**121.83 145**	PKP	**PKiKP**	**10 00 16.3**	**+0.3**	
	comp=Z,9.9nm,0.7s,baz=244,slow=2.1,SNR=54						
PLCA			SKP	**SKPdf**	**10 02 57.3**	**-0.4**	
	comp=Z,1.0nm,0.9s,baz=315,slow=1.8,SNR=3.1						
PLCA	**Paso Flores**	**121.83 145**	*e*P	**PKPdf**	**10 00 14.5**	**-1.3**	
CKRC	**Cesky Krumlov**	**121.86 327**	*e*PKIKP	**PKiKP**	**10 00 15.6**	**0.0**	
CKRC	**Cesky Krumlov**	**121.86 327**	*e*PKPDF	**PKiKP**	**10 00 15.6**	**0.0**	
NKC	**Novy Kostel**	**122.03 329**	*e*PKIKP	**PKPdf**	**10 00 15.8**	**+0.1**	
NKC	**Novy Kostel**	**122.03 329**	*e*PKPDF	**PKPdf**	**10 00 15.8**	**+0.1**	
ARSA	**Arzberg**	**122.03 325**	*i* PKP	**PKPdf**	**10 00 14.9**	**-0.9**	
	comp=Z,1.3nm,0.5s						
SCHQ	**Schefferville**	**122.05 24**	PKP	**PKPdf**	**10 00 15.1**	**-0.5**	
	comp=Z,7.4nm,0.6s,baz=26,slow=2.1,SNR=18						
SCHQ			SKP	**SKPdf**	**10 02 57.4**	**-0.2**	
	comp=Z,2.6nm,0.8s,baz=252,slow=9.6,SNR=2.0						
KHC	**Kasperske Hory**	**122.08 327**	*e*PKPDF	**PKPdf**	**10 00 15.0**	**-0.9**	
GEC2	**GERESS Array S**	**122.17 327**	*e*PKPdf	**PKPdf**	**10 00 15.6**	**-0.6**	
	baz=52,slow=2.0						
GERES	**GERESS Array B**	**122.17 327**	PKP	**PKPdf**	**10 00 15.9**	**-0.2**	
	comp=Z,8.3nm,0.5s,baz=51,slow=2.4,SNR=43						
GERES			SKP	**SKPdf**	**10 02 57.9**	**-0.3**	
	comp=Z,0.7nm,0.6s,baz=105,slow=1.1,SNR=2.9						
MANZ	**Manzenberg**	**122.35 329**	*e*PKPdf	**PKPdf**	**10 00 16.0**	**-0.4**	
	baz=52,slow=2.0						
MOA	**Molln**	**122.42 326**	*i* PKP	**PKPdf**	**10 00 15.7**	**-0.8**	
	comp=Z,3.3nm,0.5s						
WET	**Wettzell**	**122.44 328**	*e*PKPdf	**PKPdf**	**10 00 16.4**	**-0.1**	
	baz=52,slow=2.0						
PERS	**Pernice**	**122.60 324**	*i* PKPdf	**PKPdf**	**10 00 16.1**	**-0.9**	
SOKA	**Soboth**	**122.62 324**	*i* PKP	**PKPdf**	**10 00 16.4**	**-0.7**	
	comp=Z,3.9nm,0.6s,SNR=9.1						
OBKA	**Obir**	**123.00 324**	*i* PKP	**PKPdf**	**10 00 16.9**	**-0.9**	
	comp=Z,3.3nm,0.6s,SNR=4.2						
LJU	**Ljubljana**	**123.26 324**	*i* PKPdf	**PKPdf**	**10 00 18.0**	**-0.2**	
RJOB	**Jochberg**	**123.31 326**	*e*PKPdf	**PKPdf**	**10 00 17.3**	**-1.0**	
	baz=52,slow=2.0						
KBA	**Koelnbreinsper**	**123.37 325**	*i* PKP	**PKPdf**	**10 00 17.3**	**-1.3**	
	comp=Z,3.7nm,0.6s,SNR=8.0						
KBA	**Koelnbreinsper**	**123.37 325**	*e*P	**PKPdf**	**10 00 17.3**	**-1.3**	
	comp=Z,3.7nm,0.6s,SNR=8.0						
MYKA	**Terra Mystica**	**123.45 325**	*i* PKP	**PKPdf**	**10 00 17.6**	**-1.0**	
	comp=Z,4.6nm,0.7s						
LESA	**Schwarzleotal**	**123.55 326**	*i* PKP	**PKPdf**	**10 00 18.0**	**-0.8**	
	comp=Z,9.4nm,0.5s,SNR=12						
LESA	**Schwarzleotal**	**123.55 326**	*e*P	**PKPdf**	**10 00 18.0**	**-0.8**	
	comp=Z,9.4nm,0.5s,SNR=12						
CADS	**Cadrg**	**123.62 324**	*i* PKPdf	**PKPdf**	**10 00 17.7**	**-1.2**	
BUG	**Bochum--Univer**	**123.78 333**	*e*PKPdf	**PKiKP**	**10 00 19.2**	**-0.1**	
	baz=52,slow=2.0						
ABTA	**Abfaltersbach**	**124.03 326**	*i* PKP	**PKPdf**	**10 00 18.7**	**-1.1**	
	comp=Z,8.6nm,0.6s,SNR=12						
TNS	**Taunus Mts**	**124.03 331**	*e*PKPdf	**PKPdf**	**10 00 19.6**	**0.0**	
	baz=52,slow=2.0						
WATA	**Walderalm**	**124.21 327**	*i* PKP	**PKPdf**	**10 00 19.4**	**-0.8**	
	comp=Z,5.9nm,0.6s,SNR=9.4						
WTTA	**Wattenberg**	**124.22 326**	*i* PKP	**PKPdf**	**10 00 19.8**	**-0.5**	
	comp=Z,12nm,0.5s,SNR=12						
MOTA	**Moosalm**	**124.47 327**	*i* PKP	**PKPdf**	**10 00 20.1**	**-0.6**	
	comp=Z,12nm,0.5s,SNR=11						
MOTA	**Moosalm**	**124.47 327**	*e*P	**PKPdf**	**10 00 20.1**	**-0.6**	
	comp=Z,12nm,0.5s,SNR=11						
SQTA	**Sankt Quirin**	**124.48 327**	*i* PKP	**PKPdf**	**10 00 20.3**	**-0.3**	
	comp=Z,9.0nm,0.6s,SNR=7.5						
RETA	**Reutte**	**124.56 327**	*i* PKP	**PKPdf**	**10 00 20.3**	**-0.4**	
	comp=Z,1.8nm,0.5s,SNR=5.3						
STU	**Stuttgart**	**124.60 329**	*e*PKPdf	**PKPdf**	**10 00 20.8**	**+0.1**	
	baz=52,slow=2.0						
UBR	**Ueberruh**	**124.80 328**	*e*PKPdf	**PKPdf**	**10 00 20.9**	**-0.2**	
	baz=52,slow=2.0						
FETA	**Feichten**	**124.86 327**	*i* PKP	**PKPdf**	**10 00 21.3**	**-0.2**	
	comp=Z,8.2nm,0.6s,SNR=13						
FETA	**Feichten**	**124.86 327**	*e*P	**PKPdf**	**10 00 21.3**	**-0.2**	
	comp=Z,8.2nm,0.6s,SNR=13						
EKA	**Eskdalemuir Ar**	**124.90 341**	PKP	**PKPdf**	**10 00 20.5**	**-0.5**	
	comp=Z,5.0nm,0.4s,baz=29,slow=2.2,SNR=8.3						
DAVA	**Damuels**	**125.16 327**	*i* PKP	**PKPdf**	**10 00 22.0**	**0.0**	
	comp=Z,16nm,0.7s						
HDC	**Heredia**	**126.63 81**	*e*P	**PKPdf**	**10 00 23.3**	**-2.4**	
OTAV	**Otavalo**	**131.93 94**	*e*P	**PKPdf**	**10 00 33.7**	**-2.5**	
KEST	**Kesra**	**132.02 315**	PKP	**PKiKP**	**10 00 35.9**	**-0.5**	
	comp=Z,4.3nm,0.7s,baz=286,slow=4.4,SNR=6.7						
KEST			SKPbc	**SKPbc**	**10 03 08.9**	**-0.1**	
	comp=Z,26nm,0.9s,baz=341,slow=2.2,SNR=15						
ROSC	**El Rosal**	**136.36 88**	PKhKP	PKPpre	10 00 33.6		
	comp=Z,7.6nm,0.4s,baz=184,slow=21,SNR=8.0						
ROSC			PKP	**PKPdf**	**10 00 45.1**	**+0.7**	
	comp=Z,81nm,0.7s,baz=122,slow=2.3,SNR=26						
ROSC			SKPbc	**SKPbc**	**10 03 23.5**	**-0.3**	
	comp=Z,6.8nm,0.4s,baz=68,slow=4.0,SNR=4.0						
PBRG	**Braganca**	**137.36 334**	*e*tx	**SKPdf**	**10 03 26.9**	**+0.4**	
LPAZ	**La Paz**	**137.38 120**	PKhKP	PKPpre	10 00 35.0		
	comp=Z,3.6nm,0.5s,baz=72,slow=0.5,SNR=9.6						
LPAZ			SKP	**SKPbc**	**10 03 28.4**	**+1.4**	
	comp=Z,3.3nm,0.4s,baz=6.5,slow=2.7,SNR=4.7						
LPAZ	**La Paz**	**137.38 120**	*e*P	**PKPdf**	**10 00 41.6**	**-4.8**	
ESDC	**Sonseca Array**	**137.69 329**	PKhKP	PKPpre	10 00 39.2		
	comp=Z,0.9nm,0.7s,baz=359,slow=3.9,SNR=6.3						
ESDC			SKP	**SKPbc**	**10 03 26.3**	**-0.2**	
	comp=Z,1.3nm,0.7s,baz=27,slow=2.5,SNR=5.6						
PCAB	**Cabril**	**137.99 335**	*e*tx	**SKPdf**	**10 03 27.2**	**-0.4**	
MVO	**Moncorvo**	**138.00 333**	*e*PKPdf	**PKiKP**	**10 00 48.8**	**+0.4**	
MVO			*e*tx	**SKPdf**	**10 03 27.5**	**-0.2**	
POLO	**Lamas de Olo**	**138.17 334**	*e*PKPdf	**PKiKP**	**10 00 49.6**	**+0.8**	
POLO			*e*tx	**SKPdf**	**10 03 28.1**	**0.0**	
PVRL	**Vila Real**	**138.21 334**	*e*tx	**SKPdf**	**10 03 28.3**	**+0.3**	
PVIS	**Viseu**	**138.75 334**	*e*tx	**SKPdf**	**10 03 29.8**	**+0.8**	
MTE	**Manteigas**	**138.85 333**	*e*PKPdf	**PKPdf**	**10 00 48.6**	**+0.8**	
MTE			*e*tx	**SKPdf**	**10 03 30.4**	**+1.2**	
PCBR	**Castelo Branco**	**139.27 332**	*e*PKPdf	**PKPdf**	**10 00 48.8**	**+0.3**	
PCAS	**Casmilo, Conde**	**139.56 334**	*e*PKPdf	**PKPdf**	**10 00 49.3**	**+0.3**	
PCAS			*e*tx	**SKPdf**	**10 03 31.4**	**+1.0**	
PMRV	**Marv??o**	**139.56 332**	*e*PKPdf	**PKPdf**	**10 00 49.5**	**+0.4**	
PMRV			*e*tx	**SKPdf**	**10 03 31.9**	**+1.5**	
CPUP	**Villa Florida**	**139.71 141**	PKhKP	PKPpre	10 00 42.8		
	comp=Z,3.0nm,0.7s,baz=243,slow=2.5,SNR=12						
CPUP			PKP	**PKPdf**	**10 00 50.6**	**+0.9**	
	comp=Z,9.8nm,0.7s,baz=19,slow=0.7,SNR=9.4						
CPUP			SKPbc	**SKPbc**	**10 03 31.7**	**-0.7**	
	comp=Z,5.4nm,0.9s,baz=333,slow=3.1,SNR=4.6						
PSARD	**Sardoal**	**139.77 333**	*e*PKPdf	**PKiKP**	**10 00 51.8**	**-0.2**	
SDV	**Santo Domingo**	**139.97 82**	*e*P	**PKPdf**	**10 00 47.5**	**-3.2**	
PSBE	**So Bento**	**140.13 333**	*e*PKPdf	**PKiKP**	**10 00 53.0**	**+0.3**	
PSBE			*e*tx	**SKPdf**	**10 03 33.6**	**+2.2**	
PMTG	**Montargil**	**140.23 332**	*e*PKPdf	**PKiKP**	**10 00 52.8**	**-0.1**	
PARRA	**Arraiolos**	**140.35 332**	*e*tx	**SKPdf**	**10 03 34.0**	**+2.2**	
PBAR	**Barrancos**	**140.37 330**	*e*tx	**SKPdf**	**10 03 34.3**	**+2.5**	
EVO	**Evora**	**140.56 332**	*e*PKPdf	**PKPdf**	**10 00 51.0**	**+0.1**	
EVO			*e*tx	**SKPdf**	**10 03 34.8**	**+2.7**	
MOE	**Montemor**	**140.73 332**	*e*PKPdf	**PKiKP**	**10 00 54.1**	**+0.1**	
MOE			*e*tx	**SKPdf**	**10 03 33.4**	**+0.9**	
PMAFR	**Mafra**	**140.80 333**	*e*PKPdf	**PKPdf**	**10 00 49.9**	**-1.4**	
PBEJ	**Beja**	**140.89 331**	*e*PKPdf	**PKPdf**	**10 00 52.4**	**+0.9**	
PBEJ			*e*tx	**SKPdf**	**10 03 36.0**	**+3.2**	
MESJ	**Messejana**	**141.21 331**	*e*PKPdf	**PKPdf**	**10 00 51.1**	**-0.9**	
PCVE	**Castro Verde**	**141.29 331**	*e*PKPdf	**PKiKP**	**10 00 54.8**	**-0.4**	
PCVE			*e*tx	**SKPdf**	**10 03 37.4**	**+4.0**	
MURT	**Porto Murtinho**	**142.74 136**	*e*P	**PKPdf**	**10 00 52.3**	**-2.9**	
AMBA	**Amambai (Brazi**	**143.62 140**	*e*P	PKPbc	10 00 55.7	0.0	
PTGB	**Pitanga**	**144.05 145**	*e*P	**PKPab**	**10 00 57.2**	**0.0**	
BDQN	**Bodoquena, MS**	**144.13 135**	*e*P	PKPbc	10 00 57.2	-0.1	
AQDB	**Aquidauana**	**144.85 136**	*e*P	**PKPdf**	**10 00 56.9**	**-2.1**	
TEFE	**Tefe**	**144.97 103**	*e*P	**PKPdf**	**10 00 58.5**	**-0.8**	
TRCB	**Terra Rica**	**145.19 143**	*e*P	**PKPdf**	**10 00 58.8**	**-0.7**	
PTLB	**Pontes e Lacer**	**145.33 126**	*e*P	**PKPdf**	**10 00 59.0**	**-0.8**	
LDASE	**Londrina, Braz**	**145.62 145**	*e*P	**PKPdf**	**10 00 59.0**	**-1.3**	
VILB	**Vilhena**	**145.72 121**	*e*P	**PKPdf**	**10 00 59.2**	**-1.4**	
FRTB	**Fartura**	**146.53 147**	*e*P	**PKPdf**	**10 01 00.8**	**-0.9**	
PCMB	**Pacaembu**	**146.91 143**	*e*P	**PKPdf**	**10 01 02.0**	**-0.4**	
PP1B	**Ponte de Pedra**	**147.33 133**	*e*P	**PKPdf**	**10 01 03.2**	**0.0**	
SALV	**Santo Antonio**	**147.78 130**	*e*P	**PKPdf**	**10 01 02.6**	**-1.3**	
C2SB	**Chapadao do Su**	**147.98 137**	*e*P	**PKPdf**	**10 01 01.9**	**-2.2**	
VAO	**Valinhos**	**148.15 150**	*e*P	**PKPdf**	**10 01 03.7**	**-0.8**	
RCLB	**Rio Claro- Sao**	**148.35 149**	*e*P	**PKPdf**	**10 01 03.9**	**-0.9**	
MACA	**Manacapuru-AM**	**148.88 104**	*e*P	**PKPdf**	**10 01 03.9**	**-1.9**	
PDRB	**Porto dos Gac**	**149.32 122**	*e*P	**PKPdf**	**10 01 05.4**	**-1.0**	
BOAV	**Boa Vista**	**149.98 93**	*e*P	**PKPdf**	**10 01 06.0**	**-1.5**	
CLDB	**Colider**	**150.48 122**	*e*P	**PKPdf**	**10 01 07.7**	**-0.5**	
ARAG	**Araguaiana, MT**	**150.78 134**	*e*P	**PKPdf**	**10 01 07.3**	**-1.4**	
IPMB	**Ipameri, GO**	**151.52 143**	*e*P	**PKPdf**	**10 01 09.3**	**-0.5**	
ITTB	**Itaituba**	**153.27 109**	*e*P	**PKPdf**	**10 01 11.3**	**-1.1**	
BDFB	**Brasilia**	**153.41 140**	PKP	**PKPdf**	**10 01 13.5**	**+0.9**	
	comp=Z,12nm,0.9s,baz=175,slow=2.0,SNR=16						
BDFB			PKPbc	**PKiKP**	**10 01 20.9**	**0.0**	
	comp=Z,21nm,0.5s,baz=219,slow=0.7,SNR=46						
SNDB	**Serra Nova Dou**	**153.54 129**	*e*P	**PKPdf**	**10 01 13.9**	**+1.1**	
DBIC	**Dimbokro**	**154.38 276**	PKP	**PKPdf**	**10 01 13.7**	**-0.2**	
	comp=Z,5.7nm,0.9s,baz=207,slow=2.9,SNR=3.8						
DBIC			PKPbc	**PKiKP**	**10 01 22.3**	**-0.5**	
	comp=Z,3.2nm,0.6s,baz=155,slow=2.0,SNR=4.4						
DBIC			PKPab	**PKPab**	**10 01 40.1**	**0.0**	
	comp=Z,4.7nm,0.6s,baz=161,slow=5.8,SNR=4.2						
DBIC			pPKPbc	**pPKPbc**	**10 03 35.7**	**+1.6**	
	comp=Z,4.3nm,0.8s,baz=208,slow=4.2,SNR=3.0						
SMTB	**Santa Maria do**	**158.32 128**	*e*P	**PKPdf**	**10 01 19.9**	**+0.9**	

WEL 09 09:48:40.1±1.6, 39.°S±4.°×17.°5E±.°, *h*7km±10km, M0.8/5, ML0.8/7, MLv0.8/5, Error ellipse: s-maj=6.5km s-min=5.0km az=88.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.08**	**216**	P	Pg	09 48 43.0	+0.8
FWVZ	**Far West T-bar**	**0.12**	**105**	P	Pg	09 48 43.6	+0.8
FWVZ				S	Sg	09 48 46.1	+1.3
TRVZ	**Turoa**	**0.13**	**124**	P	Pg	09 48 43.8	+0.7
TWVZ	**Taurewa**	**0.16**	**9**	P	Pg	09 48 44.2	+0.8
TWVZ				S	Sg	09 48 47.1	+1.5
MTVZ	**Mangateitei**	**0.17**	**163**	P	Pg	09 48 43.9	+0.3
WTVZ	**West Tongariro**	**0.18**	**52**	P	Pg	09 48 44.6	+0.9
WTVZ				S	Sg	09 48 47.8	+1.5
SNVZ	**South Ngauruho**	**0.18**	**78**	P	Pg	09 48 44.9	+0.9
SNVZ				S	Sg	09 48 48.1	+1.5
OTVZ	**Oturere**	**0.21**	**73**	P	Pg	09 48 45.1	+0.8
OTVZ				S	Sg	09 48 48.7	+1.4
KRVZ	**Karewarewa**	**0.22**	**54**	P	Pg	09 48 45.3	+0.7
KRVZ				S	Sg	09 48 49.0	+1.4

IDC 09 09:52:36.5±2.3, 3.°15S×149.°61E, *h*0km, *mb*3.3/3, *mbtmp*3.3/3, Error ellipse: s-maj=94.4km s-min=36.7km az=122.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.38**	**221**	P	P	09 57 36.4	-0.1
	0.6nm,0.7s,baz=45,slow=11,SNR=1.5 0.6nm,0.7s						
MKAR	**Makanchi Array**	**77.01**	**319**	P	P	10 04 31.6	+0.2
	0.2nm,0.4s,baz=116,slow=5.7,SNR=1.7 0.2nm,0.4s						
ILAR	**Eielson Array**	**81.86**	**23**	P	P	10 04 57.3	-0.1
	0.1nm,0.5s,baz=251,slow=4.6,SNR=4.9 0.1nm,0.5s						

MEX 09 10:00:58.9±0.9, 16.°36N×98.°12W, *h*15km±2km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.03**	**351**	*i* P	Pg	10 01 00.4	-1.3
PNIG				*i* S	Sg	10 01 02.9	-0.7
YOIG	**Yosondua**	**0.74**	**48**	*i* P	Pg	10 01 10.6	-2.8
YOIG				*i* S	Sg	10 01 20.6	-2.7
TXIG	**Tlaxiaco**	**0.95**	**21**	*e*P	Pb	10 01 14.1	-3.2
TXIG				*e*S	Sb	10 01 26.1	-3.6
MGIG	**Malinaltepec**	**1.00**	**331**	*e*P	Pb	10 01 14.5	-3.5
MGIG				*e*S	Sb	10 01 27.4	-3.6
PEIG	**Puerto Escondi**	**1.00**	**111**	*e*P	Pb	10 01 14.2	-3.9
PEIG				*e*S	Sb	10 01 27.9	-3.2
CRIG	**Cruz Grande**	**1.04**	**291**	*e*P	Pb	10 01 14.9	-3.7
CRIG				*e*S	Sb	10 01 28.3	-3.7
TLIG	**Tlapa**	**1.27**	**340**	*e*P	Pn	10 01 19.1	-3.2
TLIG				*e*S	Sb	10 01 34.1	-4.7
VHO	**Vista Hermosa**	**1.51**	**62**	*e*P	Pn	10 01 22.7	-2.9
VHO				*e*S	Sn	10 01 41.4	-3.6
FTIG	**Fresnillo de T**	**1.54**	**360**	*e*P	Pn	10 01 23.6	-2.3
FTIG				*e*S	Sn	10 01 42.1	-3.6
DAIG	**Los Arroyos**	**1.60**	**294**	*e*P	Pn	10 01 24.1	-2.7
DAIG				*e*S	Sn	10 01 45.0	-2.2
TOIG	**Toxpalan**	**2.00**	**30**	*e*P	Pn	10 01 32.2	0.0
TOIG				*e*S	Sn	10 01 51.5	-5.6
HUIG	**Huatulco**	**2.02**	**107**	*e*P	Pn	10 01 31.3	-1.2
MEIG	**Mezcala**	**2.12**	**318**	*e*P	Pn	10 01 33.3	-0.5
MEIG				*e*S	Sn	10 01 56.3	-3.6

IDC 09 10:02:49.2±14.0, 4.°47S×148.°99E, *h*241km±155km, *mb*2.6/3, *mbtmp*3.2/3, Error ellipse: s-maj=113.3km s-min=56.0km az=112.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.99**	**222**	P	P	10 07 14.6	+0.1
	0.3nm,0.5s,baz=46,slow=10,SNR=7.3 0.3nm,0.5s						
ASAR	**Alice Springs**	**24.01**	**216**	P	P	10 07 42.0	-0.4
	0.2nm,0.4s,baz=39,slow=9.0,SNR=5.6 0.2nm,0.4s						
MKAR	**Makanchi Array**	**77.60**	**320**	P	P	10 14 19.2	+0.3
	0.3nm,0.6s,baz=109,slow=4.8,SNR=4.0 0.3nm,0.6s						

*IDC **09** 10:27:31.5±1.4, 16.°60S×179.°83W, h480km±16km, mb4.0/19, mbtmp4.8/20, Error ellipse: s-maj=14.8km s-min=9.7km az=137.0*
*NOU **09** 10:27:33.7, 16.°58S×179.°74W, h512km, mb4.6/54, Fiji Islands Region*
*BGR **09** 10:27:34.0, 16.°57S×179.°12W, h500km*
*NEIC **09** 10:27:35.0±1.4, 16.°5S±0.°1×179.°9W±0.°1, h510km±2km, mb4.5/70, Error ellipse: s-maj=17.9km s-min=13.2km az=133.0*

ISC 09 10:27:34.1±0.5, 16.°54S±0.°07×179.°80W±0.°06, *h*510km±5km, *n*494, σ0.°92/486, *mb*4.6/85, 28C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**0.19**	**211**	P	**P**	**10 28 35.4**	**+0.2**
TAVE	**Taveuni**	**0.19**	**211**	S	**S**	**10 29 25.7**	**+0.9**
DGTI	**Dogotuki**	**0.50**	**299**	P	**P**	**10 28 35.3**	**-0.2**
DGTI	**Dogotuki**	**0.50**	**299**	S	**S**	**10 29 26.3**	**+1.1**
LKBA	**Tubou, Lakemba**	**1.93**	**151**	P	**P**	**10 28 39.7**	**-0.1**
LKBA	**Tubou, Lakemba**	**1.93**	**151**	S	**S**	**10 29 33.1**	**-0.1**
MSVF	**Nonsavu**	**2.37**	**240**	P	**P**

COEN IAmb IAmb 10 33 51.5
comp=Z,8.8nm,0.8s
COEN Coen 35.78 269 P **P** **10 33 50.7 +0.6**
comp=Z,12nm,1.0s
GLAD Gladstone 36.93 222 P **P** **10 33 58.6 -0.7**
comp=Z,34nm,0.7s
TOO Toolangi 37.03 229 P **P** **10 34 00.6 +0.4**
INKA Innaminka 38.05 246 P **P** **10 34 09.2 +0.5**
INKA IAmb IAmb 10 34 10.1
comp=Z,12nm,0.9s
STKA Stephens Creek 38.15 239 P **P** **10 34 09.8 +0.4**
comp=Z,6.6nm,0.3s,baz=81,slow=9.5,SNR=26
comp=Z,6.6nm,0.3s
STKA Stephens Creek 38.15 239 P **P** **10 34 09.9 +0.4**
STKA Stephens Creek 38.15 239 P **P** **10 34 09.5 +0.1**
TAU Tasmania Unive 38.39 220 P **P** **10 34 11.4 +0.2**
comp=Z,26nm,1.5s
QIS Mount Isa 38.62 258 P **P** **10 34 12.7 -0.8**
comp=Z,7.3nm,2.4s
MGBR Mount Gambier 40.69 231 P **P** **10 34 30.7 +0.8**
HTT Hallett 40.72 238 P **P** **10 34 30.3 +0.1**
comp=Z,19nm,0.7s
BBOO Buckleboo 42.92 239 **P** **10 34 47.2 -0.4**
BBOO IAmb IAmb 10 34 48.0
comp=Z,17nm,0.8s
BBOO Buckleboo 42.92 239 P **P** **10 34 47.5 -0.1**
comp=Z,26nm,0.7s
MLH Mauna Loa 43.11 35 P **P** **10 34 50.8 +1.4**
WR8 Warramunga Arr 43.43 258 P **P** **10 34 50.8 -1.0**
WRAB Tennant Creek 43.58 258 P **P** **10 34 52.5 -0.4**
comp=Z,5.7nm,0.9s
WRA Warramunga Arr 43.59 258 P **P** **10 34 51.6 -1.3**
comp=Z,1.7nm,0.4s,baz=98,slow=5.9,SNR=105
WRA ScP **ScP** **10 39 35.1 +2.9**
comp=Z,1.6nm,0.9s,baz=80,slow=3.7,SNR=7.3
WRA S **S** **10 40 40.9 -4.3**
comp=Z,1.1nm,0.6s,baz=91,slow=14,SNR=6.9
comp=Z,1.7nm,0.4s
WRA Warramunga Arr 43.59 258 **P** **10 34 51.8 -1.2**
AS31 Alice Springs 43.90 253 **P** **10 34 54.8 -0.6**
ASAR Alice Springs 43.90 253 P **P** **10 34 55.0 -0.4**
comp=Z,28nm,0.3s,baz=85,slow=8.7,SNR=1309
ASAR ScP **ScP** **10 39 36.8 +3.2**
comp=Z,3.4nm,0.8s,baz=102,slow=4.1,SNR=15
ASAR S **S** **10 40 46.8 -2.8**
comp=Z,4.4nm,0.8s,baz=85,slow=16,SNR=21
comp=Z,28nm,0.3s
MTN Manton Dam 47.51 268 P **P** **10 35 23.3 +0.2**
MTN IAmb IAmb 10 35 23.5
comp=Z,19nm,0.9s
KNRA Kununurra 49.31 263 P **P** **10 35 36.4 0.0**
KNRA IAmb IAmb 10 36 00.0
comp=Z,18nm,1.2s
SOEI Soe 54.74 270 P **P** **10 36 15.5 -0.3**
comp=Z,84nm,1.0s
PSA00 Pilbara Seismi 56.97 255 P **P** **10 36 31.0 -0.1**
PSA00 IAmb IAmb 10 36 31.6
comp=Z,21nm,0.9s
PSA00 Pilbara Seismi 56.97 255 P **P** **10 36 31.2 +0.1**
PSA00 IAmb IAmb 10 36 31.6
comp=Z,45nm,1.0s
PSA00 Pilbara Seismi 56.97 255 P **P** **10 36 31.0 -0.1**
comp=Z,51nm,0.8s
MBWA Marble Bar 57.12 255 P **P** **10 36 32.1 0.0**
MBWA IAmb IAmb 10 36 51.8
comp=Z,22nm,1.1s
MBWA Marble Bar 57.12 255 P **P** **10 36 31.6 -0.5**
comp=Z,14nm,1.6s
MEEK Meekatharra 57.67 249 P **P** **10 36 35.0 -0.8**
comp=Z,23nm,2.0s
KLBR Kellerberrin 58.25 243 P **P** **10 36 40.2 +0.6**
comp=Z,100nm,0.8s
BLDU Ballidu 59.17 244 P **P** **10 36 45.8 0.0**
comp=Z,24nm,1.6s
MUN Mundaring 59.56 242 P **P** **10 36 47.9 -0.5**
MORW Morawa 59.81 246 P **P** **10 36 50.1 -0.1**
MORW IAmb IAmb 10 37 25.9
comp=Z,41nm,1.4s
MORW Morawa 59.81 246 P **P** **10 36 49.3 -0.9**
comp=Z,21nm,1.1s
PLAI Plampang 61.18 269 P **P** **10 36 59.4 -0.1**
comp=Z,19nm,0.8s
H01W1 Cape Leeuwin H 61.23 239 P **P** **10 37 00.8 +1.7**
baz=227
H01W3 Cape Leeuwin H 61.25 239 P **P** **10 36 58.3 -0.9**
baz=227
H01W2 Cape Leeuwin H 61.25 239 P **P** **10 36 58.2 -1.1**
baz=227
VNDA Vanda 61.69 184 P **P** **10 37 01.9 +0.2**
comp=Z,3.4nm,0.7s,baz=353,slow=8.8,SNR=8.8
comp=Z,3.4nm,0.7s
VNDA Vanda 61.69 184 P **P** **10 37 03.3 +1.7**
SBA Scott Base 61.70 183 P **P** **10 37 04.2 +2.5**
SBA IAmb IAmb 10 37 04.8
comp=Z,26nm,1.1s
JAGI Jajag, Banyuwa 64.75 268 P **P** **10 37 21.7 -0.8**
CASY Casey 66.82 204 P **P** **10 37 35.2 +0.8**
KKM Kota Kinabalu 67.12 284 P **P** **10 37 36.0 -1.4**
NIKH Nikolski High 69.87 7 P **P** **10 37 52.6 -0.5**
baz=191
UNV Unalaska Valle 71.03 8 P **P** **10 37 59.4 -0.5**
UNV Unalaska Valle 71.03 8 P **P** **10 37 59.3 -0.5**
baz=194
PEA0B Petropavlovsk- 72.03 346 P **P** **10 38 05.9 +0.1**
PETK Petropavlovsk- 72.03 346 P **P** **10 38 06.0 +0.2**
comp=Z,7.8nm,1.0s,baz=112,slow=8.7,SNR=7.0
comp=Z,7.8nm,1.0s
PETK Petropavlovsk- 72.03 346 P **P** **10 38 06.0 +0.2**
FALS False Pass 72.47 10 P **P** **10 38 07.6 -0.7**
baz=196
CHNA Chernabura Isl 73.15 12 P **P** **10 38 11.3 -0.8**
baz=200
P08K Saint George I 73.37 6 P **P** **10 38 12.3 -1.0**
baz=190
SDPT Sand Point 73.46 11 P **P** **10 38 12.5 -1.4**
baz=199
QSPA South Pole Qui 73.50 180 P **P** **10 38 14.0 -0.4**
comp=Z,19nm,0.8s,baz=28,slow=1.1,SNR=19
comp=Z,19nm,0.8s
QSPA South Pole Qui 73.50 180 P **P** **10 38 14.8 +0.4**
QSPA IAmb IAmb 10 38 16.0
comp=Z,19nm,0.8s
SPIA Saint Paul Isl 73.87 5 P **P** **10 38 16.2 0.0**
baz=190
CHIR Chirikof Islan 74.92 14 P **P** **10 38 21.3 -0.9**
baz=204
SII Sitkinak Islan 75.93 14 P **P** **10 38 26.5 -1.3**
baz=205
R16K Pilot Point 76.11 12 P **P** **10 38 27.8 -0.9**
baz=202
SAO San Andreas Ge 76.38 45 P **P** **10 38 31.6 +0.8**
R17L Mt. Peulik Vol 76.42 13 P **P** **10 38 29.4 -1.2**
baz=203
PKD Bear Valley Ra 76.56 46 P **P** **10 38 33.2 +1.3**
PKD IAmb IAmb 10 39 11.5
comp=Z,24nm,1.1s
OHAK Old Harbor 76.74 14 P **P** **10 38 30.8 -1.4**
baz=206
KMRM Mail Ridge 76.84 41 P **P** **10 38 35.1 +1.8**
O14K Tigyukauivet M 77.03 10 P **P** **10 38 33.0 -0.8**
baz=198
Q17K Contact Creek 77.10 13 P **P** **10 38 33.5 -0.9**
baz=204
O15K Ungalikthiuk R 77.20 10 P **P** **10 38 34.6 -0.2**
baz=200
Q16K King Salmon 77.33 12 P **P** **10 38 35.1 -0.3**
baz=203
P16K Nushagak River 77.39 11 P **P** **10 38 34.9 -0.8**
baz=201
KDAK Kodiak Island 77.41 15 P **P** **10 38 35.2 -0.7**
baz=207
M11K Mekoryuk 77.44 7 **P** **10 38 36.7 +0.8**
M11K IAmb IAmb 10 38 38.5
comp=Z,17nm,0.9s
M11K Mekoryuk 77.44 7 P **P** **10 38 35.8 -0.2**
baz=193
N14K Kuskokwak Cree 77.60 9 P **P** **10 38 36.4 -0.5**
baz=198
M13K Dall Lake 77.83 8 P **P** **10 38 38.0 -0.1**
baz=196
P17K Kvichak River 77.85 12 P **P** **10 38 37.6 -0.6**
baz=203
ORV Oroville 77.87 42 P **P** **10 38 39.5 +0.7**
ESJX Sierra Juarez 77.89 51 P **P** **10 38 39.9 +0.5**
O16K Kokwok River B 77.90 11 P **P** **10 38 37.7 -0.8**
baz=201
N15K Kwethluk River 78.09 10 P **P** **10 38 39.1 -0.4**
baz=199
BORC Borrego Spring 78.14 50 P **P** **10 38 40.9 +0.5**
BNX BinXian 78.22 325 ⇓P **P** **10 38 41.4 +0.8**
BNX pmax pmax
comp=Z,5.0nm,1.0s
O17K Koliganek Bris 78.25 12 P **P** **10 38 39.9 -0.5**
baz=202
P18K Big Mountain, 78.28 13 P **P** **10 38 39.5 -1.1**
baz=204
YBH Yreka Blue Hor 78.33 40 P **P** **10 38 42.6 +1.3**
comp=Z,0.8nm,0.8s,baz=185,slow=2.6,SNR=29
YBH Yreka Blue Hor 78.33 40 **P** **10 38 42.0 +0.6**
YBH IAmb IAmb 10 38 43.5
comp=Z,14nm,1.0s
M14K Bethel 78.35 9 P **P** **10 38 40.8 -0.1**
baz=198
M15K Kasigluk River 78.49 9 P **P** **10 38 41.4 -0.2**
baz=199
CLC China Lake 78.54 47 P **P** **10 38 43.6 +1.0**
CLC IAmb IAmb 10 38 44.5
comp=Z,16nm,1.2s
CCCA Chr Cany lake 78.56 48 P **P** **10 38 43.9 +1.1**
CCCA IAmb IAmb 10 38 44.8
comp=Z,20nm,1.2s
N16K Nishlik Lake 78.60 10 P **P** **10 38 42.1 -0.2**
baz=201
O18K Koktuh Hills 78.70 12 P **P** **10 38 42.5 -0.3**
baz=204
L14K Kuka Creek 78.82 8 P **P** **10 38 43.2 -0.1**
baz=197
GSC Goldstone, Bar 78.85 48 P **P** **10 38 44.9 +0.5**
L04D Klamath Falls 78.85 40 P **P** **10 38 45.5 +1.3**
L04D IAmb IAmb 10 38 46.0
comp=Z,23nm,0.9s
PNTR Pine Nut 78.86 43 **P** **10 38 45.9 +1.4**
DSP Deep Springs 79.07 46 **P** **10 38 46.2 +1.0**
DSP IAmb IAmb 10 38 47.5
comp=Z,19nm,1.0s
M16K Timber Creek 79.09 10 P **P** **10 38 44.7 -0.2**
baz=200
K13K Kusilvak Mount 79.13 7 P **P** **10 38 45.2 +0.2**
baz=195
O19K Port Alsworth 79.20 13 P **P** **10 38 45.1 -0.4**
baz=205
ILSW Iliamna Southw 79.26 13 P **P** **10 38 45.8 -0.1**
ILSW IAmb IAmb 10 38 46.4
comp=Z,25nm,0.9s
L15K Ungalak Mounta 79.31 9 P **P** **10 38 45.6 -0.4**
baz=198
N18K Kilae Creek 79.33 12 P **P** **10 38 45.2 -1.0**
baz=203
GWY Greenwater Val 79.38 47 **P** **10 38 46.6 -0.7**
NVAR Mina Array Bea 79.38 45 P **P** **10 38 48.1 +0.9**
comp=Z,8.7nm,0.7s,baz=225,slow=8.3,SNR=54
comp=Z,8.7nm,0.7s
NVAR Mina Array Bea 79.38 45 P **P** **10 38 48.4 +1.2**
NV11 Mina Array Sit 79.48 45 P **P** **10 38 48.2 +0.5**
NV11 IAmb IAmb 10 38 49.5
comp=Z,20nm,1.3s
J04A Umpqua Nationa 79.55 39 P **P** **10 38 49.1 +1.1**
BRSE Bradley Lake S 79.60 14 P **P** **10 38 46.6 -1.0**
baz=208
L16K Owhat River 79.65 10 P **P** **10 38 47.5 -0.3**
baz=200
M17K Holitna River 79.71 11 P **P** **10 38 48.7 +0.6**
M17K IAmb IAmb 10 38 50.4
comp=Z,13nm,0.8s
M17K Holitna River 79.71 11 P **P** **10 38 48.1 -0.1**
baz=202
N19K Bonanza Creek 79.73 12 P **P** **10 38 47.7 -0.7**
baz=205
K15K Wolf Creek Mou 79.89 9 P **P** **10 38 48.7 -0.4**
baz=198
K05A Summer Lake 80.00 40 P **P** **10 38 51.7 +1.4**
K05A IAmb IAmb 10 38 52.4
comp=Z,25nm,1.0s
J14K Nanvaranak Lak 80.06 8 P **P** **10 38 50.0 +0.1**
baz=196
M18K Stony River 80.09 11 P **P** **10 38 49.4 -0.7**
baz=203
J05D Fort Rock, OR 80.10 39 P **P** **10 38 51.5 +0.7**
SEW Seward 80.23 15 P **P** **10 38 50.3 -0.5**
baz=210
L17K Donlin 80.24 10 P **P** **10 38 50.4 -0.6**
baz=201
GAMB Gambell 80.31 4 P **P** **10 38 51.9 +0.7**
baz=188
CAPN Captain Cook N 80.41 14 P **P** **10 38 51.4 -0.4**
baz=208
Q23K Middleton Isla 80.46 17 P **P** **10 38 51.4 -0.7**
baz=212
O22K Cooper Landing 80.49 15 P **P** **10 38 51.6 -0.6**
baz=209
SPCR Spurr Chakacha 80.56 13 P **P** **10 38 52.2 -0.5**
baz=207
L18K Granite Mounta 80.60 11 P **P** **10 38 52.8 0.0**
baz=202
K17K Iditarod 80.79 10 P **P** **10 38 53.1 -0.6**
baz=201
J16K Anvik River 80.97 9 **P** **10 38 55.7 +1.0**
J16K IAmb IAmb 10 38 56.7
comp=Z,22nm,1.1s
J16K Anvik River 80.97 9 P **P** **10 38 54.7 0.0**
baz=199
M20K Styx River 80.98 12 P **P** **10 38 54.0 -0.9**
baz=206
RC01 Rabbit Creek A 81.02 14 P **P** **10 38 54.4 -0.6**
baz=209
SUA Susitna One 81.12 14 P **P** **10 38 55.3 -0.3**
baz=208
WVOR Wild Horse Val 81.25 41 P **P** **10 38 56.7 -0.1**
WVOR IAmb IAmb 10 38 58.7
comp=Z,18nm,1.1s
J17K VABM Dome 81.30 9 P **P** **10 38 56.7 +0.3**
baz=200
M22K Willow 81.52 14 P **P** **10 38 57.5 0.0**
baz=209
I17K Unalakleet 81.53 8 P **P** **10 38 57.6 +0.1**
baz=198
I07A Izee 81.59 39 P **P** **10 38 58.8 +0.4**
I07A IAmb IAmb 10 39 00.3
comp=Z,15nm,0.7s
PMR Palmer 81.61 14 P **P** **10 38 58.2 +0.3**
baz=210
ANM Nome 81.61 6 **P** **10 38 58.3 +0.4**
ANM Nome 81.61 6 P **P** **10 38 58.6 +0.7**
baz=194,SNR=8.1
KNK Knik Glacier 81.61 15 P **P** **10 38 57.9 -0.2**
baz=210
J18K Innoko River 81.75 10 P **P** **10 38 59.1 -0.4**
baz=202
BBB Bella Bella 81.77 29 P **P** **10 38 59.5 +0.5**
comp=Z,17nm,0.9s,baz=348,slow=5.1,SNR=4.8
comp=Z,17nm,0.9s
BGLC Bering Glacier 81.89 18 P **P** **10 38 59.7 +0.3**
baz=215
TUC Tucson 81.94 53 **P** **10 39 02.1 +1.6**
TUC IAmb IAmb 10 39 03.1
comp=Z,11nm,1.0s
SML Sawmill 81.98 14 P **P** **10 38 59.7 -0.3**
baz=210
H16K Elim 82.04 8 P **P** **10 39 00.3 +0.2**
baz=197,SNR=19
CUT Chulitna 82.06 13 P **P** **10 39 00.1 -0.1**
baz=208
M23K Glacier View 82.12 15 P **P** **10 39 00.5 -0.2**
baz=211
K20K Telida 82.13 11 P **P** **10 39 00.9 +0.3**
baz=205
SIT Sitka 82.13 23 P **P** **10 39 00.2 -0.5**
baz=223
SEY Seymchan 82.16 348 P **P** **10 39 00.8 0.0**
comp=Z,6.7nm,0.8s,baz=148,slow=6.0,SNR=24
comp=Z,6.7nm,0.8s
G15K Nikuluk 82.17 7 P **P** **10 39 01.0 +0.2**
baz=195
LCMT Little Creek M 82.20 48 P **P** **10 39 02.7 +0.9**
BMRM Bremner River 82.22 16 P **P** **10 39 00.8 -0.5**
baz=214
SCM Sheep Creek Mo 82.25 15 P **P** **10 39 00.4 -0.9**
baz=211
U33K Whale Pass 82.29 24 P **P** **10 39 01.0 -0.6**
baz=225
KLU Klutina 82.31 16 P **P** **10 39 01.5 -0.2**
baz=213
V35K Ketchikan 82.35 25 P **P** **10 39 01.4 -0.5**
baz=226
TNA Tin City 82.35 5 P **P** **10 39 01.9 +0.2**
baz=192
F14K Arctic Creek 82.40 6 P **P** **10 39 02.6 +0.6**
baz=193
J19K Poorman 82.43 10 P **P** **10 39 02.7 +0.5**
baz=203
ELK Elko 82.59 44 P **P** **10 39 04.2 +0.3**
comp=Z,8.2nm,0.8s,baz=250,slow=5.2,SNR=35
comp=Z,8.2nm,0.8s
H17K Granite Mounta 82.64 8 P **P** **10 39 02.9 -0.2**
baz=199
S32K Killisnoo 82.71 23 P **P** **10 39 02.9 -0.7**
baz=223
G16K Koyuk River 82.75 7 P **P** **10 39 04.4 +0.7**
baz=197
N25K Chitina, Valde 82.76 16 P **P** **10 39 03.6 -0.4**
baz=214
M24K Tolsona, Glenn 82.77 15 P **P** **10 39 04.2 +0.2**
baz=212
WAT6 Susitna Watana 82.79 14 P **P** **10 39 03.7 -0.5**
baz=211
F15K North Star Dit 82.80 6 P **P** **10 39 04.3 +0.3**
baz=195
WRAK Wrangell Islan 82.81 24 P **P** **10 39 03.3 -0.9**
baz=225
WAT1 Susitna Watana 82.82 14 P **P** **10 39 04.0 -0.2**
baz=210
T33K Petersburg 82.86 24 P **P** **10 39 04.1 -0.3**
baz=225
J20K Nowinta River 82.86 11 P **P** **10 39 04.5 +0.2**
baz=205
GCSA Galena City Sc 82.92 10 P **P** **10 39 05.0 +0.4**
baz=202
CHUM Lake Minchumin 82.94 12 P **P** **10 39 04.1 -0.6**
baz=206,SNR=8.9
TRF Thorofare Moun 82.98 13 P **P** **10 39 04.6 -0.6**
baz=208
H18K Honhosa River 83.07 9 P **P** **10 39 04.8 -0.5**
baz=201
G17K Kiwalik Mounta 83.07 8 P **P** **10 39 05.7 +0.3**
baz=198
CTG Chitna Glacier 83.15 18 P **P** **10 39 04.6 -1.4**
baz=217
HARP HAARP 83.28 15 P **P** **10 39 06.9 +0.4**
baz=213
DHY Denali Highway 83.31 14 P **P** **10 39 06.7 0.0**
baz=211
O28M Mount Upton 83.33 18 P **P** **10 39 06.6 -0.5**
baz=218
I20K Naaghedeneel 83.37 11 P **P** **10 39 07.1 +0.3**
baz=204
BPAW Bear Paw Mtn. 83.41 12 P **P** **10 39 06.6 -0.5**
baz=208
MCK McKinley 83.52 13 P **P** **10 39 07.1 -0.6**
baz=210
BELA Belgrano 2 83.68 173 P **P** **10 39 08.2 -0.2**
PAX Paxson 83.68 15 P **P** **10 39 08.0 -0.5**
baz=213
G18K Tagagawik 83.72 9 P **P** **10 39 09.1 +0.5**
baz=200
M26K Nabesna, AK 83.84 16 P **P** **10 39 09.9 +0.6**
baz=215
P30M Million Dollar 83.85 20 P **P** **10 39 09.3 -0.1**
baz=221
YUK8 Steele Glacier 83.87 18 P **P** **10 39 09.4 -0.3**
baz=218
F17K Baldwin Pennin 83.89 7 P **P** **10 39 10.2 +0.8**
baz=198
H20K Anotleneega Mo 83.94 10 P **P** **10 39 09.8 +0.2**
baz=204
YUK6 Outpost Mounta 84.03 19 P **P** **10 39 10.4 -0.2**
baz=220
T35M Bob Quinn 84.04 25 P **P** **10 39 09.8 -0.6**
baz=227
YUK3 Moose Creek 84.05 18 P **P** **10 39 10.8 +0.2**
baz=218
M27K Edge Creek, AK 84.11 17 P **P** **10 39 10.9 +0.1**
baz=216
I21K Tanana 84.17 11 P **P** **10 39 10.5 -0.3**
baz=207
G19K Purcell Mounta 84.19 9 P **P** **10 39 11.1 +0.2**
G19K Purcell Mounta 84.19 9 P **P** **10 39 11.2 +0.4**
baz=202
HYT Haines Junctio 84.21 19 P **P** **10 39 10.4 -0.9**
baz=220
NEA2 Nenana 84.24 13 P **P** **10 39 11.0 -0.2**
baz=210
F18K Selawik 84.25 8 P **P** **10 39 11.5 +0.4**
baz=199
YUK4 Talbot Arm 84.25 19 P **P** **10 39 10.9 -0.7**
baz=220
L26K Log Cabin Wild 84.26 16 P **P** **10 39 11.1 -0.3**
baz=215
K24K Donnelly Dome 84.31 14 P **P** **10 39 11.5 -0.1**
baz=213
S34M Telegraph Cree 84.33 24 P **P** **10 39 11.0 -0.7**
baz=226
E17K Hotham Inlet 84.44 7 P **P** **10 39 12.5 +0.4**
baz=197
BVCY Beaver Creek 84.44 17 P **P** **10 39 12.4 +0.1**
baz=217
H21K Melozitna Rive 84.45 11 P **P** **10 39 12.4 +0.1**
baz=206
RIDG Independent Ri 84.48 15 P **P** **10 39 12.2 -0.3**
RIDG IAmb IAmb 10 39 13.2
comp=Z,16nm,1.0s
RIDG Independent Ri 84.48 15 P **P** **10 39 12.0 -0.5**
baz=214
HDA Harding Lake 84.55 14 P **P** **10 39 12.8 +0.1**
baz=212
P32M Atlin 84.56 22 P **P** **10 39 12.9 -0.1**
baz=224
O30N Mendenhall 84.62 20 P **P** **10 39 12.3 -0.9**
baz=222
Q32M Nakina River 84.63 23 P **P** **10 39 12.8 -0.7**
baz=225
I23K Minto, Yukon-K 84.67 12 P **P** **10 39 13.0 -0.2**
baz=209
L27K Beaver Creek, 84.70 16 P **P** **10 39 13.1 -0.4**
baz=216
F19K Shaleruckik Mo 84.73 9 P **P** **10 39 13.8 +0.3**
baz=201
COLA College 84.75 13 P **P** **10 39 13.6 0.0**
COLA IAmb IAmb 10 39 13.9
comp=Z,14nm,0.8s
COLA College 84.75 13 P **P** **10 39 13.6 0.0**
baz=211
ILAR Eielson Array 84.87 14 P **P** **10 39 13.3 -0.9**
comp=Z,4.9nm,0.6s,baz=229,slow=5.4,SNR=107
comp=Z,4.9nm,0.6s
ILAR Eielson Array 84.87 14 P **P** **10 39 13.6 -0.6**
SCRK Sand Creek 84.89 15 P **P** **10 39 14.4 -0.1**
baz=214
D17K Noatak River 84.89 6 P **P** **10 39 14.9 +0.6**
baz=196
E18K Tukpahlearik C 84.91 7 P **P** **10 39 15.0 +0.6**
baz=198
H22K Ishtalitna Cre 84.93 11 P **P** **10 39 14.8 +0.2**
H22K Ishtalitna Cre 84.93 11 P **P** **10 39 14.8 +0.2**
baz=207
BILL Bilibino 84.95 355 **P** **10 39 15.0 +0.4**
BILL IAmb IAmb 10 39 15.5
comp=Z,11nm,0.9s
POKR Poker Plat Res 85.05 13 P **P** **10 39 14.6 -0.5**
baz=211
J25K Salcha River, 85.08 14 P **P** **10 39 15.3 -0.1**
baz=213
G21K Allakaket 85.11 10 P **P** **10 39 15.3 -0.1**
baz=205
DLBC Dease Lake 85.12 24 P **P** **10 39 14.9 -0.8**
baz=227
M29M Somme Creek 85.16 18 P **P** **10 39 15.5 -0.4**
baz=220
NEW Newport 85.20 37 P **P** **10 39 16.5 +0.2**
comp=Z,3.9nm,0.6s,baz=240,slow=5.5,SNR=14
comp=Z,3.9nm,0.6s
H23K Yukon River 85.22 12 P **P** **10 39 16.0 0.0**
baz=209
F20K Avaraart Lake 85.23 9 P **P** **10 39 15.8 -0.1**
baz=203
N31M Braeburn, Yuko 85.26 20 P **P** **10 39 16.0 -0.3**
baz=222
P33M Teslin, Yukon 85.32 21 P **P** **10 39 16.0 -0.7**
baz=225
HHC Hu-ho-hao-te 85.37 315 *e*P **P** **10 39 17.7 +0.3**
HHC pmax pmax
comp=Z,4.0nm,0.5s
HHC pmax pmax

comp=Z,150nm,5.8s
E19K Redstone River 85.39 9 P **P** 10 39 16.6 -0.1
baz=202
R33M Jennings River 85.42 23 P **P** 10 39 16.8 -0.5
baz=226
J26L Joseph Creek 85.43 15 P **P** 10 39 16.9 -0.2
baz=215
H24K Noodor Dome 85.57 13 P **P** 10 39 17.7 0.0
baz=211
C17K DeLong Mountai 85.63 6 P **P** 10 39 18.8 +0.8
baz=196
F21K Alatna River 85.75 10 P **P** 10 39 18.7 +0.2
baz=205
M30M Minto, Yukon 85.76 18 **P** 10 39 18.4 -0.3
M30M IAmb IAmb 10 39 19.7
comp=Z,7.6nm,0.8s
M30M Minto, Yukon 85.76 18 P **P** 10 39 18.5 -0.2
baz=221,SNR=5.4
L29M L29M 85.77 18 P **P** 10 39 18.9 +0.2
baz=220
PRP Porcupine Dome 85.81 14 P **P** 10 39 18.5 -0.5
baz=213
N32M Quiet Lake 85.90 21 P **P** 10 39 18.9 -0.5
baz=224
G23K Bananza Creek 85.91 11 P **P** 10 39 19.2 -0.1
baz=209
M31M Drury Creek, Y 86.23 20 P **P** 10 39 20.4 -0.5
baz=223
E20K Nigu River 86.28 9 P **P** 10 39 21.1 0.0
baz=203
ANMO Albuquerque 86.31 52 P **P** 10 39 22.6 +0.5
comp=Z,6.3nm,0.8s,baz=206,slow=5.6,SNR=27
comp=Z,6.3nm,0.8s
ANMO Albuquerque 86.31 52 **P** 10 39 22.8 +0.7
ANMO IAmb IAmb 10 39 24.2
comp=Z,7.6nm,0.9s
COLD Coldfoot 86.33 11 P **P** 10 39 20.9 -0.3
baz=208
G24K Hadweenzic Riv 86.40 12 P **P** 10 39 21.7 +0.1
baz=211
TXAR Lajitas Array 86.40 58 P **P** 10 39 24.2 +1.6
comp=Z,2.1nm,0.8s,baz=216,slow=5.6,SNR=20
comp=Z,2.1nm,0.8s
TXAR Lajitas Array 86.40 58 P **P** 10 39 23.4 +0.8
K29M Barlow Dome 86.51 17 P **P** 10 39 21.6 -0.7
baz=220
D20K Etivluk River 86.65 8 P **P** 10 39 22.3 -0.4
baz=202
J29N Klondike Camp 86.78 17 P **P** 10 39 23.3 -0.3
baz=220
MAYO Mayo, Yukon 86.80 18 P **P** 10 39 23.8 +0.3
baz=222
I27K Kandik River 86.81 15 P **P** 10 39 23.3 -0.3
baz=216
I28M Miner Creek 87.11 16 P **P** 10 39 24.7 -0.3
baz=218
E23K Chandalar 87.17 11 P **P** 10 39 25.5 +0.2
baz=209
TOAD Toad River Com 87.29 25 P **P** 10 39 26.0 +0.1
baz=232
PDAR Pinedale Array 87.29 44 P **P** 10 39 26.9 +0.2
comp=Z,5.1nm,0.5s,baz=218,slow=2.9,SNR=79
comp=Z,5.1nm,0.5s
PDAR Pinedale Array 87.29 44 P **P** 10 39 27.4 +0.8
H27K Steamboat Moun 87.33 15 P **P** 10 39 26.7 +0.7
baz=216
PZH PanZhiHua 87.34 298 P **P** 10 39 27.5 +0.4
E24K Your Creek 87.39 11 P **P** 10 39 26.3 0.0
baz=210
G26K Porcupine Rive 87.40 13 P **P** 10 39 26.3 0.0
baz=214
I29M Ogilvie Camp, 87.46 16 P **P** 10 39 26.8 +0.2
baz=220
F25K Christian Rive 87.54 12 P **P** 10 39 26.9 -0.1
baz=213
G27K Doyon Strip 87.77 14 P **P** 10 39 28.5 +0.4
baz=216
I30M Mount Dempster 87.88 17 P **P** 10 39 28.6 -0.1
baz=221
F26K Sheenjek River 87.94 13 P **P** 10 39 29.3 +0.5
baz=214
E25K Arctic Village 88.00 12 P **P** 10 39 29.3 +0.2
baz=213
EPYK Eagle Plains 88.66 16 P **P** 10 39 32.2 -0.1
baz=221
G29M Pine Creek 88.74 15 P **P** 10 39 32.6 0.0
baz=220
F28M Old Crow 88.84 14 P **P** 10 39 32.8 -0.2
baz=218
D25K Kavik River 88.87 11 P **P** 10 39 33.1 -0.1
baz=212
H31M Peel River 88.89 17 P **P** 10 39 33.2 -0.1
baz=223
A21K Barrow 89.07 7 P **P** 10 39 34.3 +0.4
baz=202
G30M tAoh Zraii Nji 89.25 16 P **P** 10 39 34.7 -0.3
baz=221
E28M Babbage River 89.70 14 P **P** 10 39 37.2 +0.2
baz=218
G31M Satah River 89.73 16 P **P** 10 39 37.1 0.0
baz=223
F30M Barrier River 89.84 15 P **P** 10 39 37.8 +0.2
baz=222
D27M Malcolm River 89.89 13 P **P** 10 39 38.5 +0.6
baz=217
E29M Blow River 89.91 14 P **P** 10 39 38.1 +0.2
baz=220
F31M Tsiigehtchic 90.25 16 P **P** 10 39 39.7 +0.2
baz=224
ELIB Princess Elisa 90.35 187 *d*P **P** 10 39 39.8 -0.5
comp=Z,3.9nm,0.6s
WRGLY Wrigley 90.66 22 P **P** 10 39 41.6 +0.1
baz=233
INK Inuvik 90.93 16 P **P** 10 39 42.1 -0.5
baz=224
RSSD Black Hills 91.52 44 P **P** 10 39 46.2 0.0
RSSD IAmb IAmb 10 39 47.3
comp=Z,8.3nm,1.0s
SONM Songino Array 91.65 320 P **P** 10 39 46.7 +0.1
comp=Z,0.9nm,1.0s,baz=143,slow=2.6,SNR=4.7
comp=Z,0.9nm,1.0s
VNA3 Neumayer Olymp 92.17 177 ⇑P **P** 10 39 49.2 +0.7
comp=Z,18nm,0.8s
VNA2 Neumayer--Watz 92.60 178 ⇑P **P** 10 39 50.7 +0.2
comp=Z,13nm,0.7s,baz=181,slow=4.2
YKA Yellowknife Ar 93.66 25 P **P** 10 39 55.1 -0.2
comp=Z,1.7nm,0.8s,baz=257,slow=4.9,SNR=31
comp=Z,1.7nm,0.8s
C36M Paulatuk 94.19 17 P **P** 10 39 56.8 -0.7
baz=233
A36M Sachs Harbour 95.50 15 P **P** 10 40 02.8 -0.7
baz=232
ZALV Zalesovo Beam 106.34 322 PKiKP **PKiKP** 10 44 59.6 -0.6
comp=Z,0.3nm,0.3s,baz=49,slow=4.4,SNR=2.1
MKAR Makanchi Array 107.23 315 PKiKP **PKiKP** 10 45 01.8 -0.4
comp=Z,0.1nm,0.4s,baz=107,slow=1.4,SNR=2.0
BVAR Borovoye Array 114.95 321 PKiKP PKPdf 10 45 16.3 -0.3
comp=Z,0.7nm,0.4s,baz=112,slow=2.4,SNR=6.3
SPITS Spitsbergen Ar 117.83 356 PKP **PKPdf** 10 45 20.8 -0.7
comp=Z,1.9nm,0.5s,baz=81,slow=5.5,SNR=9.0
ARCES ARCESS Array B 124.74 349 PKP **PKPdf** 10 45 35.1 +0.2
comp=Z,3.9nm,0.7s,baz=9.5,slow=1.5,SNR=10
FINES FINESS Array B 131.51 344 PKP **PKiKP** 10 45 48.6 -0.5
comp=Z,1.7nm,0.6s,baz=48,slow=2.8,SNR=9.9
FINES SKPbc **SKPab** 10 48 27.7 +1.0
comp=Z,1.0nm,0.5s,baz=48,slow=4.1,SNR=7.8
NOA NORSAR Array B 134.86 352 PKP **PKiKP** 10 45 55.5 -0.5
comp=Z,1.5nm,0.8s,baz=87,slow=1.7,SNR=3.3
AKASG Malin Array Be 138.74 332 PKP **PKPdf** 10 46 01.7 -0.1
comp=Z,0.3nm,0.3s,baz=48,slow=1.4,SNR=2.3
EKA Eskdalemuir Ar 141.20 3 PKhKP PKPpre 10 46 01.2
comp=Z,3.1nm,0.8s,baz=19,slow=2.8,SNR=3.8
BRTR Keskin Array B 142.88 315 PKhKP PKPpre 10 46 08.0
comp=Z,2.0nm,0.8s,baz=336,slow=2.7,SNR=6.8
CFR Carcaliu 143.07 327 ⇑P PKPbc 10 46 08.3 +0.7
TPGR Topolog 143.13 326 ⇑P PKPbc 10 46 07.9 -0.1
ODBI Odobesti 143.23 328 ⇑P **PKPdf** **10 46 10.1 +0.1**
VRI Vrincioaia 143.33 328 ⇑P PKPbc 10 46 09.1 +0.6
TIRR Tirgusor 143.39 325 ⇑P PKPbc 10 46 08.8 +0.1
TURR Turia 143.55 329 ⇑P **PKPdf** **10 46 09.9 -0.7**
COVR Voineasa-Covas 143.60 329 ⇑P PKPab 10 46 08.6 -0.7
OZUR 143.63 330 ⇑P **PKPdf** **10 46 10.4 -0.4**
OSTC Ostas 143.70 343 *e*PKP **PKPdf** **10 46 10.4 -0.3**
STEB Steborice 143.79 341 *e*PKP **PKPdf** **10 46 10.5 -0.4**
UPC Upice 143.81 343 *e*PKP **PKPdf** **10 46 10.7 -0.2**
CLL Collm 143.84 346 *i* PKPdf PKPab 10 46 10.1 +0.2
comp=Z,17nm,0.8s
CLL *i* PKiKP **PKiKP** **10 46 13.6 -1.0**
comp=Z,3.0nm,0.6s
CLL Collm 143.84 346 *e*PKPbc PKPab 10 46 10.1 +0.2
baz=18,slow=3.1
NEHR Nehoiu 143.85 328 ⇑P PKPab 10 46 10.4 +0.2
DPC Dobruska-Polom 143.86 342 *e*PKP **PKPdf** **10 46 11.0 0.0**
CLZ Clausthal 143.86 349 *e*PKPbc PKPab 10 46 10.5 +0.4
baz=18,slow=3.1
LANS Liptovska Anna 143.89 338 *e*PKP **PKPdf** **10 46 11.8 +0.7**
DOPR Dopca 143.91 330 ⇑P **PKPdf** **10 46 11.8 +0.5**
ISR Istrita 143.94 328 ⇑P PKPbc 10 46 10.3 -0.2
MLR Muntele Rosu 143.98 329 ⇑P **PKPdf** **10 46 11.3 -0.3**
MORC Moravsky Berou 144.00 341 ⇑P PKPbc 10 46 09.9 -0.6
MORC Moravsky Berou 144.00 341 *e*PKP **PKPdf** **10 46 11.1 -0.2**
BRG Berggiesshubel 144.02 345 *e*PKPbc **PKPdf** **10 46 11.0 -0.3**
baz=18,slow=3.1
BRG Berggiesshubel 144.02 345 *i* PKP **PKPdf** **10 46 11.0 -0.2**
BRG Amp 10 46 12.5
comp=Z,14nm,0.9s
KECS Kecovo 144.08 337 *e*PKP **PKPdf** **10 46 11.8 +0.4**
PVCC Panska Ves 144.18 344 *e*PKP **PKPdf** **10 46 11.9 +0.4**
NEUB Neuenburg 144.20 348 *e*PKPbc **PKPdf** **10 46 11.5 0.0**
baz=18,slow=3.1
GTTG Gottingen 144.22 350 *e*PKPbc **PKPdf** **10 46 11.6 0.0**
baz=18,slow=3.1
MDB Medias 144.27 331 ⇑P **PKPdf** **10 46 12.5 +0.7**
HSKC Hora Svate Kat 144.39 345 *e*PKP **PKPab** **10 46 12.1 0.0**
MARR Marisel-Cluj 144.44 333 ⇑P **PKPab** **10 46 12.7 +0.2**
VOIR 144.46 329 ⇑P **PKPab** **10 46 13.0 +0.5**
DRGR 144.53 333 ⇑P **PKPab** **10 46 12.6 -0.1**
PRU Pruhonice 144.68 344 *e*PKP **PKPab** **10 46 13.2 +0.1**
VRAC Vranov 144.70 341 *e*PKP **PKPab** **10 46 14.0 +0.7**
ARR Arges 144.71 330 ⇓P **PKPab** **10 46 13.9 +0.4**
JAVC Velka Javorina 144.75 340 *e*PKP **PKPab** **10 46 14.5 +1.0**
MOX Moxa 144.76 347 *e*PKPbc **PKPab** **10 46 13.4 0.0**
baz=18,slow=3.1
TANN Tannbergstha 144.80 346 *e*PKPbc **PKPab** **10 46 13.7 +0.1**
baz=18,slow=3.1
PLN Plauen 144.80 347 *e*PKPbc **PKPab** **10 46 13.6 0.0**
baz=18,slow=3.1
KRUC Moravsky 144.98 341 *e*PKP PKPbc 10 46 13.8 +0.2
LOZB Loznitsa 145.10 325 ⇑P **PKPdf** **10 46 13.0 -0.4**
ZVC Zvikov 145.27 344 *e*PKP **PKPab** **10 46 15.2 -0.2**
MANZ Manzenberg 145.28 346 *e*PKPbc **PKPab** **10 46 15.1 -0.4**
baz=18,slow=3.1
MODS Modra-Piesok 145.31 340 *e*PKP **PKPab** **10 46 16.3 +0.7**
MODS *e* 11 13 25.8
SIRR Siria 145.39 333 ⇑P **PKPbc** **10 46 14.5 -0.4**
ROTZ Rotzenmuhle 145.46 346 *e*PKPbc **PKPab** **10 46 15.7 -0.4**
baz=18,slow=3.1
GZR Gura Zlata 145.57 331 ⇑P **PKPbc** **10 46 15.4 -0.1**
KHC Kasperske Hory 145.72 344 *e*PKP **PKPbc** **10 46 15.5 -0.3**
GRF Grafenberg Arr 145.75 347 *e*PKPbc **PKPab** **10 46 16.7 -0.6**
baz=18,slow=3.1
ELND Elena 145.78 326 ⇑P **PKPbc** **10 46 15.9 -0.3**
CKRC Cesky Krumlov 145.81 343 *e*PKP **PKPab** **10 46 16.9 -0.7**
BZS Buzias 145.92 333 ⇑P **PKPdf** **10 46 15.2 +0.5**
GEC2 GERESS Array S 145.95 344 *e*PKPbc **PKPbc** **10 46 17.1 +0.6**
baz=18,slow=3.1
GERES GERESS Array B 145.95 344 PKPbc **PKPbc** **10 46 16.9 +0.4**
comp=Z,1.6nm,0.6s,baz=29,slow=3.0,SNR=8.1
HERR Herculane 146.12 331 ⇑P **PKPbc** **10 46 17.4 +0.4**
CONA Conrad Observa 146.15 341 *i* PKP **PKPbc** **10 46 17.9 +0.8**
comp=Z,4.4nm,0.7s,SNR=7.3
CONA Conrad Observa 146.15 341 *e*P **PKPbc** **10 46 17.9 +0.8**
comp=Z,4.4nm,0.7s,SNR=7.3
RONA Rosalia, Austr 146.22 340 *e*PKP **PKPbc** **10 46 18.0 +0.8**
comp=Z,16nm,1.1s,SNR=9.1
RONA Rosalia, Austr 146.22 340 P **PKPbc** **10 46 18.0 +0.8**
comp=Z,16nm,1.1s,SNR=9.1
MDVR Moldovita 146.52 332 ⇓P **PKPbc** **10 46 18.3 +0.1**
MORH Mrgy, Hungar 146.66 336 ⇓P **PKPbc** **10 46 18.3 -0.1**
MOA Molln 146.70 343 *e*PKP **PKPbc** **10 46 19.0 +0.5**
comp=Z,3.5nm,0.7s,SNR=7.0
MOA Molln 146.70 343 P **PKPbc** **10 46 19.0 +0.5**
comp=Z,3.5nm,0.7s,SNR=7.0
ARSA Arzberg 146.86 341 *e*PKP **PKPbc** **10 46 19.6 +0.6**
comp=Z,2.1nm,0.6s,SNR=4.6
BIOA Bad Ischl, Aus 147.02 343 *i* PKP **PKPbc** **10 46 19.6 +0.1**
comp=Z,2.3nm,0.5s
FUR Furstenfeldbru 147.18 346 *e*PKPbc **PKPbc** **10 46 20.4 +0.7**
baz=18,slow=3.1
BOVS Bovan 147.40 330 ⇑P **PKPbc** **10 46 20.8 +0.4**
SOKA Soboth 147.52 341 *i* PKP **PKPbc** **10 46 20.7 -0.1**
comp=Z,2.7nm,0.6s,SNR=7.6
LESA Schwarzleotal 147.53 344 *i* PKP **PKPbc** **10 46 20.9 +0.1**
comp=Z,3.1nm,0.5s
KBA Koelnbreinsper 147.66 343 *e*PKP **PKPbc** **10 46 20.9 -0.4**
comp=Z,3.4nm,0.6s,SNR=8.0
KBA Koelnbreinsper 147.66 343 *e*P **PKPbc** **10 46 20.9 -0.4**
comp=Z,3.4nm,0.6s,SNR=8.0
OBKA Obir 147.82 341 *i* PKP **PKPbc** **10 46 21.2 -0.4**
comp=Z,3.5nm,0.9s
WATA Walderalm 147.88 345 *i* PKP **PKPbc** **10 46 21.9 +0.1**
comp=Z,3.5nm,0.6s
UBR Ueberruh 147.89 347 *e*PKPbc **PKPbc** **10 46 22.4 +0.7**
baz=18,slow=3.1
RETA Reutte 147.93 346 *e*PKPbc **PKPbc** **10 46 22.1 +0.3**
comp=Z,2.0nm,0.5s,SNR=4.7
WTTA Wattenberg 147.94 345 *i* PKP **PKPbc** **10 46 22.3 +0.3**
comp=Z,5.1nm,0.5s
MYKA Terra Mystica 147.99 342 *i* PKP **PKPbc** **10 46 21.6 -0.4**
comp=Z,6.7nm,0.6s,SNR=6.5
MOTA Moosalm 147.99 346 *i* PKP **PKPbc** **10 46 22.6 +0.6**
comp=Z,4.0nm,0.6s
SQTA Sankt Quirin 148.08 346 *i* PKP **PKPbc** **10 46 22.6 +0.3**
comp=Z,4.3nm,0.6s,SNR=6.3
ABTA Abtsitersbach 148.19 344 *i* PKP **PKPbc** **10 46 22.2 -0.3**
comp=Z,8.2nm,0.7s,SNR=12
LJU Ljubljana 148.25 341 *i* PKPdf **PKPbc** **10 46 22.9 +0.3**
FETA Feichten 148.38 346 *i* PKP **PKPbc** **10 46 23.5 +0.4**
comp=Z,6.8nm,0.8s
BLY Banja Luka 148.45 337 ⇑P **PKPbc** **10 46 23.1 0.0**
BOJS Bojanci 148.49 340 *i* PKPbc **PKiKP** **10 46 23.9 -0.5**
CEY Cerknica 148.55 341 *i* PKPdf **PKPbc** **10 46 23.6 +0.2**
PDG Podgorica 149.47 332 ⇑P **PKPbc** **10 46 25.6 0.0**
ESDC Sonseca Array 156.67 8 PKPab **PKPab** **10 47 03.4 0.0**
comp=Z,0.3nm,0.7s,baz=330,slow=5.1,SNR=4.5

*CATAC **09** 10:34:42.1±2.9, 7°N±8°×8°0W±°, h3km±22km, M4.2/9, MLv4.2/9, Error ellipse: s-maj=17.0km s-min=4.8km az=169.2, confirmed*
*RSNC **09** 10:34:43.5±1.1, 7°N±4°×8°0W±°, h0km, M3.3, mb3.7, ML2.9 UPA **09** 10:34:44.3±4.4, 7°47N×80°47W, h10km±11km, MD4.5, MW4.4, Presumed earthquake*
ISC 09 10:34:42.0±0.9, **7°43N**±0°03×**80°51W**±0°02, **h13**km±6km, **n62**, σ1**°46**/100, **24C-13D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOSI3	**Tonosi**	**0.07**	**108**	⇓*i*P	**Pg**	**10 34 45.0**	**+0.3**
TOSI3				*i* S	**Sg**	**10 34 46.5**	**0.0**
ACHO3	**Achotines, Los**	**0.34**	**93**	⇓*i*P	**Pb**	**10 34 49.2**	**-0.7**
ACHO3				*e*S	**Sb**	**10 34 54.2**	**-1.0**
CACAO	**El Cacao, Vera**	**0.36**	**256**	⇑*i*P	**Pb**	**10 34 49.3**	**-1.0**
CACAO				*i* S	**Sg**	**10 34 53.9**	**-0.2**
AZU	**Azuero**	**0.43**	**33**	⇓*i*P	**Pb**	**10 34 51.1**	**-0.4**
AZU				*i* S	**Sb**	**10 34 57.2**	**-0.7**
PCRI3	**Pocri, Los San**	**0.45**	**60**	⇓*i*P	**Pb**	**10 34 51.5**	**-0.4**
PCRI3				*i* S	**Sb**	**10 34 58.2**	**-0.3**
PEDA3	**Pedasi**	**0.49**	**79**	⇓*i*P	**Pb**	**10 34 51.8**	**-0.8**
PEDA3				*i* S	**Sb**	**10 34 58.8**	**-0.9**
MARI3	**Mariato, Verag**	**0.52**	**295**	⇑*i*P	**Pb**	**10 34 52.6**	**-0.5**
MARI3				*i* S	**Sb**	**10 35 00.5**	**-0.1**
CHIT3	**Chitre**	**0.53**	**10**	⇑*e*P	**Pb**	**10 34 52.9**	**-0.4**
CHIT3				*i* S	**Sg**	**10 35 00.2**	**+0.7**
GMAL	**Guarumal, Vera**	**0.79**	**295**	⇑*e*P	**Pb**	**10 34 57.6**	**0.0**
GMAL				*i* S	**Sn**	**10 35 09.3**	**-1.3**
STIA3	**Santiago, Vera**	**0.81**	**325**	*e*P	**Pg**	**10 34 57.6**	**-0.1**
CRIS3	**El Cristo, Coc**	**0.82**	**353**	⇑*e*P	**Pb**	**10 34 57.8**	**-0.5**
CRIS3				*i* S	**Sb**	**10 35 09.5**	**+0.2**
RSUS3	**Rio de Jesus,**	**0.84**	**311**	⇑*i*P	**Pb**	**10 34 58.2**	**-0.5**
RSUS3				*i* S	**Sg**	**10 35 09.6**	**0.0**
MESA3	**La Mesa, Verag**	**0.98**	**317**	⇑*e*P	**Pb**	**10 35 00.3**	**-0.5**
MESA3				*i* S	**Sg**	**10 35 13.8**	**+0.1**
PNME	**Penonome**	**1.06**	**10**	⇑*e*P	**Pb**	**10 35 01.9**	**-0.5**
PNME				*i* S	**Sb**	**10 35 15.9**	**-0.3**
SAFE3	**Santa Fe, Vera**	**1.22**	**333**	⇑*e*P	**Pn**	**10 35 04.1**	**-0.8**
SAFE3				*i* S	**Sb**	**10 35 19.9**	**-0.8**
PVID3	**Puerto Vidal,**	**1.25**	**300**	⇓*i*P	**Pn**	**10 35 04.7**	**-0.6**
PVID3				*i* S	**Sb**	**10 35 20.3**	**-1.2**
NANC3	**Nancito, Chiri**	**1.45**	**304**	⇑*e*P	**Pn**	**10 35 08.0**	**-0.1**
REME3	**Remedios, Chir**	**1.53**	**301**	⇓*i*P	**Pb**	**10 35 09.8**	**-0.5**
REME3				*i* S	**Sg**	**10 35 31.5**	**+0.2**
CHOR3	**La Chorrera**	**1.64**	**27**	⇑*e*P	**Pg**	**10 35 12.7**	**-0.8**
CHOR3				*i* S	**Sg**	**10 35 35.4**	**+0.7**
ZANG	**Zanguenga, Cho**	**1.64**	**23**	⇓*e*P	**Pb**	**10 35 12.1**	**-0.2**
ZANG				*i* S	**Sg**	**10 35 34.2**	**-0.8**
ARRA3	**Arraijan, Pana**	**1.74**	**29**	⇓*i*P	**Pb**	**10 35 13.2**	**-0.7**
ARRA3				*i* S	**Sb**	**10 35 35.9**	**+0.1**
FLAM	**Flamenco Islan**	**1.76**	**33**	*e*P	**Pb**	**10 35 13.6**	**-0.7**
FLAM				*i* S	**Sb**	**10 35 37.3**	**+1.0**
BCIP	**Isla Barro Col**	**1.85**	**21**	P	**Pb**	**10 35 15.0**	**-0.7**
BCIP				S	**Sb**	**10 35 40.1**	**+1.3**
BCIP	**Isla Barro Col**	**1.85**	**21**	P	**Pb**	**10 35 14.7**	**-1.1**
BCIP				S	**Sb**	**10 35 39.6**	**+0.8**
BCIP	**Isla Barro Col**	**1.85**	**21**	⇓*e*P	**Pb**	**10 35 14.4**	**-1.3**
BCIP				*i* S	**Sg**	**10 35 40.4**	**-1.2**
GAMB1	**Gamboa**	**1.86**	**25**	⇑*e*P	**Pn**	**10 35 13.9**	**+0.3**
GAMB1				*i* S	**Sb**	**10 35 40.0**	**+0.9**
FRIJ	**El Hiral**	**1.94**	**24**	⇓*i*P	**Pb**	**10 35 16.6**	**-0.7**
FRIJ				*i* S	**Sb**	**10 35 42.0**	**+0.5**
CHIR3	**Chiriqui UPA,**	**2.04**	**298**	⇑*e*P	**Pb**	**10 35 18.2**	**-0.8**
LOMA3	**Las Lomas, Chi**	**2.11**	**298**	⇑*e*P	**Pb**	**10 35 19.9**	**-0.4**
PEDE3	**Pedregal, Chir**	**2.12**	**297**	⇑*e*P	**Pb**	**10 35 20.7**	**+0.4**
LOCO3	**Loma Colorada,**	**2.12**	**297**	⇑*e*P	**Pb**	**10 35 19.7**	**-0.8**
DVD	**David**	**2.17**	**298**	⇑*e*P	**Pb**	**10 35 20.3**	**-0.9**
CHGR2	**Aguacate**	**2.20**	**313**	⇑*e*P	**Pb**	**10 35 20.0**	**-1.9**
CHPO	**Chepo, Panama**	**2.21**	**39**	⇑*i*P	**Pb**	**10 35 20.6**	**-1.4**
CHPO				*i* S	**Sb**	**10 35 49.5**	**+0.2**
BAGA3	**Bagala, Chiriq**	**2.25**	**297**	*e*P	**Pb**	**10 35 22.1**	**-0.4**
BQSF3	**Alto Boquete,**	**2.31**	**305**	*e*P	**Pb**	**10 35 22.2**	**-1.4**
PTAR3	**Potrerillos Ar**	**2.33**	**303**	⇑*e*P	**Pb**	**10 35 22.8**	**-1.3**
LNBQ3	**Los Naranjos,**	**2.34**	**305**	⇑*e*P	**Pb**	**10 35 22.5**	**-1.7**
LNBQ3				*i* S	**Sb**	**10 35 52.6**	**-0.7**
CNTA3	**Canitas, Panam**	**2.40**	**42**	⇑*e*P	**Pn**	**10 35 22.0**	**-0.9**
LIMO3	**Limones**	**2.42**	**286**	⇑*e*P	**Pb**	**10 35 26.6**	**+1.0**
LIMO3				*e*S	**Sg**	**10 36 01.7**	**+1.6**
LESP3	**La Esperanza,**	**2.46**	**293**	⇑*e*P	**Pb**	**10 35 25.1**	**-1.0**
LESP3				*i* S	**Sg**	**10 35 58.8**	**-2.3**
PTPM	**Petroterminale**	**2.47**	**288**	*e*P	**Pb**	**10 35 26.3**	**-0.1**
PTPM				*i* S	**Sg**	**10 36 05.9**	**+4.4**
BRU2	**Volcan**	**2.55**	**302**	P	**Pb**	**10 35 26.1**	**-1.7**
BRU2				S	**Sb**	**10 35 59.9**	**+0.8**
BRU2	**Volcan**	**2.55**	**302**	⇓*i*P	**Pb**	**10 35 26.0**	**-1.7**
BRU2				*i* S	**Sg**	**10 36 01.9**	**-2.2**
CDITO	**Canoas**	**2.60**	**296**	P	**Pb**	**10 35 26.9**	**-1.6**
CDITO				S	**Sb**	**10 36 02.1**	**+1.7**
TOTI	**Torti**	**2.64**	**55**	*e*P	**Pn**	**10 35 23.8**	**-0.6**
MLIR3	**Monte Lirio, C**	**2.66**	**301**	*e*P	**Pb**	**10 35 28.6**	**-1.1**
PTAC	**Punta Ardita,**	**2.70**	**96**	P	**Pn**	**10 35 25.0**	**-0.2**
PTAC				S	**Sn**	**10 35 53.7**	**-4.0**
UPD2	**Meteti**	**2.71**	**66**	*e*P	**Pb**	**10 35 29.2**	**-1.3**
CNI2	**El Empalme, Bo**	**2.77**	**316**	*e*P	**Pb**	**10 35 30.2**	**-1.3**
CNI2				*i* S	**Sg**	**10 36 08.7**	**-2.5**
PIRO	**Carate, Puerto**	**2.96**	**289**	*e*P	**Pb**	**10 35 34.2**	**-0.6**
PTJ1	**Puerto Jimnez**	**2.97**	**292**	S	**Sg**	**10 36 15.0**	**-2.7**
DRK0	**Durika**	**3.26**	**304**	P	**Pn**	**10 35 35.0**	**+1.9**
DRK0				S	**Sb**	**10 36 17.7**	**-2.0**
DRK0	**Durika**	**3.26**	**304**	*e*P	**Pn**	**10 35 35.2**	**+2.1**
OCHAL	**Ojochal**	**3.52**	**298**	P	**Pb**	**10 35 42.4**	**-1.8**
OCHAL				S	**Sb**	**10 36 27.2**	**+0.3**
APAC	**Apartado, Choc**	**3.92**	**83**	P	**Pn**	**10 35 45.5**	**+3.4**
APAC				S	**Sn**	**10 36 29.6**	**+1.5**
DBBC	**Dabeiba**	**4.29**	**95**	P	**Pn**	**10 35 48.6**	**+1.4**
TRT2	**Tortugero**	**4.45**	**315**	P	**Pn**	**10 35 52.5**	**+3.2**
TRT2				S	**Sn**	**10 36 46.4**	**+5.4**
CBOC	**Ciudad Bolivar**	**4.73**	**109**	P	**Pn**	**10 35 53.4**	**0.0**
UREC	**San Jos de Ur**	**4.95**	**86**	P	**Pn**	**10 35 58.4**	**+2.2**
JTS	**Las Juntas de**	**5.23**	**303**	⇓*e*P	Pb	10 36 07.1	-6.3
PTBC	**PUERTO BERRIO,**	**6.08**	**98**	P	**Pn**	**10 36 14.4**	**+2.7**

JMA 09 10:52:28.7±0.1, **36°2N**±0°2×**137°7E**±0°2, **h3**km±1km,
MV-0.1/13, **HIDA MOUNTAINS REGION, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGN	**Niukaw**	**0.30**	**274**	*e*P	Pg	10 52 34.8	+0.3
JGN				*e*S	Sg	10 52 39.0	+0.5

IDC 09 11:09:11.8±6.3, **9°86S×153°42E, h0**km, **mb3.5**/4, **mbtmp3.6**/5, **ML3.3**/1, **Error ellipse: s-maj=181.0km s-min=29.9km az=114.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**12.29**	**213**	Pn	Pn	11 12 09.3	+1.0
	0.1nm,0.3s,baz=30,slow=13,SNR=1.2						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**20.96**	**239**	P	P	11 13 56.2	-0.5
	1.2nm,0.7s,baz=60,slow=10,SNR=8.6						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**23.14**	**231**	P	P	11 14 19.5	-0.4
	0.8nm,0.7s,baz=58,slow=10,SNR=13						
	0.8nm,0.7s						
SONM	**Songino Array**	**70.93**	**329**	P	P	11 20 31.4	+0.3
	0.9nm,1.1s,baz=131,slow=5.9,SNR=2.8						
	0.9nm,1.1s						
MKAR	**Makanchi Array**	**84.53**	**319**	P	P	11 21 47.0	+0.1
	0.3nm,0.7s,baz=109,slow=6.6,SNR=3.8						
	0.3nm,0.7s						

*IDC **09** 11:28:13.9±3.0, 6°90N×126°94E, h75km±29km, mb3.4/8, mbtmp3.7/8, MS2.9/1, Error ellipse: s-maj=36.5km s-min=16.3km az=69.0*
ISC 09 11:28:12.4±0.9, **6°9N**±0°2×**127°0E**±0°1, **h60**km, **n10**, σ0°**68**/11, **mb3.5/8, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.44**	**276**	P	**Pn**	**11 28 36.2**	**-0.1**
	373nm,0.4s,baz=116,slow=3.3,SNR=9.3						
DAV				LR	LR	11 28 53.9	
	comp=Z,173nm,19.7s,baz=292,slow=30						
DAV				S	**Sn**	**11 28 54.7**	**+0.5**
	385nm,0.4s,baz=74,slow=22,SNR=11						
WRA	**Warramunga Arr**	**27.65**	**165**	P	**P**	**11 33 54.3**	**-0.4**
	0.2nm,0.4s,baz=340,slow=10,SNR=7.7						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**29.64**	**295**	LR	LR	11 46 21.6	
	comp=Z,23nm,18.0s,baz=285,slow=37						
ASAR	**Alice Springs**	**31.14**	**168**	P	**P**	**11 34 25.7**	**+0.1**
	0.3nm,0.3s,baz=338,slow=7.4,SNR=26						
ASAR				PcP	**PcP**	**11 37 20.4**	**+0.6**
	0.4nm,0.7s,baz=356,slow=2.5,SNR=7.1						
	0.3nm,0.3s						
PETK	**Petropavlovsk-**	**52.38**	**23**	P	**P**	**11 37 19.6**

KEKS				S		Sg	11 31 54.9	+0.9
BSWZ	**Blackbirch Sta**	**0.26**	**296**	P		Pg	11 31 50.6	-0.9
BSWZ				S		Sg	11 31 53.9	-1.6
MGCS	**Blenheim Marlb**	**0.37**	**330**	P		Pg	11 31 52.6	-0.7
MGCS				S		Sg	11 31 57.9	-0.7
TUWZ	**Tuamarina**	**0.44**	**335**	P		Pg	11 31 54.6	0.0
TUWZ				S		Sg	11 32 00.3	-0.4
BWRS	**Waikakaho Road**	**0.45**	**331**	P		Pg	11 31 54.0	-0.6
BWRS				S		Sg	11 31 59.7	-1.1
QCCS	**Picton Queen C**	**0.56**	**347**	P		Pg	11 31 55.9	-1.0
QCCS				S		Sg	11 32 02.9	-1.5
TCW	**Tory Channel**	**0.62**	**6**	P		Pb	11 31 57.4	-0.5
TCW				S		Sb	11 32 05.8	-0.4
SNZO	**South Karori**	**0.65**	**37**	P		Pg	11 31 59.0	+0.6
SNZO	**South Karori**	**0.65**	**37**	S		Sn	11 32 09.3	-0.3
BHW	**Baring Head**	**0.66**	**51**	P		Pn	11 31 59.9	-0.1
WEL	**Wellington**	**0.70**	**39**	P		Pg	11 32 00.0	+0.7
WEL				S		Sn	11 32 11.6	+0.7
KHZ	**Kahutara**	**0.76**	**219**	P		Pn	11 32 01.6	+0.2
KHZ	**Kahutara**	**0.76**	**219**	S		Sn	11 32 12.8	+0.5
KHZ	**Kahutara**	**0.76**	**219**	P		Pn	11 32 01.6	+0.2
KHZ				S		Sn	11 32 13.8	+1.5
NNZ	**Nelson**	**0.86**	**315**	P		Pb	11 32 01.0	-1.0
MSWZ	**Moikau Station**	**0.90**	**63**	P		Pn	11 32 04.0	+0.7
THZ	**Tophouse**	**0.96**	**274**	P		Pb	11 32 03.3	-0.4
CAW	**Cannon Point**	**0.98**	**43**	P		Pg	11 32 04.9	+0.3
CAW				S		Sn	11 32 19.0	+1.2
PAWZ	**Paruwai Farm**	**1.03**	**65**	P		Pn	11 32 05.5	+0.3
DUWZ	**D'Urville Isla**	**1.05**	**349**	P		Pb	11 32 04.4	-0.8
DUWZ				S		Sb	11 32 17.7	-0.8
KIW	**Kapiti Island**	**1.11**	**30**	P		Pn	11 32 06.5	+0.3
MRNZ	**Matariki Terra**	**1.16**	**291**	P		Pn	11 32 06.8	-0.1
MRNZ				S		Sb	11 32 21.8	+0.1
MTW	**Mount Morrison**	**1.19**	**56**	P		Pn	11 32 07.6	+0.2
TRWZ	**Traveller**	**1.21**	**69**	P		Pn	11 32 07.7	+0.2
TKNZ	**Takaka Hill**	**1.22**	**310**	P		Pn	11 32 07.4	-0.4
OGWZ	**Otaki Gorge**	**1.25**	**36**	P		Pb	11 32 08.9	+0.2
HOWZ	**Holdsworth Sta**	**1.37**	**47**	P		Pn	11 32 10.0	+0.2
GVZ	**Greta Valley S**	**1.42**	**217**	P		Pn	11 32 10.9	+0.3
TMWZ	**Te Maipa**	**1.47**	**61**	P		Pn	11 32 11.1	-0.1
MRZ	**Mangatainoka R**	**1.57**	**42**	P		Pn	11 32 12.9	+0.3
QRZ	**Quartz Range**	**1.60**	**308**	P		Pn	11 32 14.0	+1.0
QRZ	**Quartz Range**	**1.60**	**308**	P		Pn	11 32 13.8	+0.8
TIWZ	**Tintock**	**1.66**	**51**	P		Pn	11 32 11.7	-2.1
LTZ	**Lake Taylor**	**1.71**	**236**	P		Pn	11 32 15.0	+0.5
AMCZ	**Amberley**	**1.76**	**220**	P		Pn	11 32 15.1	0.0
DSZ	**Denniston Nort**	**1.78**	**272**	P		Pn	11 32 16.9	+1.4
OHWZ	**Ohakea**	**1.83**	**28**	P		Pb	11 32 17.9	-0.6
PRWZ	**Pori Road**	**1.85**	**47**	P		Pn	11 32 16.4	-0.1
POWZ	**Post Office Ro**	**1.87**	**40**	P		Pn	11 32 16.9	+0.3
BFZ	**Birch Farm**	**1.93**	**54**	P		Pn	11 32 16.8	-0.7
BFZ	**Birch Farm**	**1.93**	**54**	P		Pn	11 32 16.8	-0.7
OKCZ	**Okains Bay**	**2.07**	**203**	P		Pn	11 32 19.1	-0.3
DVHZ	**Dannevirke**	**2.14**	**45**	P		Pn	11 32 19.7	-0.7
WAZ	**Wanganui**	**2.16**	**17**	P		Pb	11 32 23.4	-0.8
OXZ	**Oxford**	**2.18**	**226**	P		Pn	11 32 20.1	-0.8
MQZ	**McQueen's Vall**	**2.19**	**211**	P		Pn	11 32 19.9	-1.1
ANWZ	**Angora Road**	**2.20**	**52**	P		Pn	11 32 20.7	-0.5
TSZ	**Takapari Road**	**2.22**	**38**	P		Pn	11 32 21.7	+0.1
INZ	**Inchbonnie**	**2.22**	**245**	P		Pn	11 32 22.2	+0.7
LREZ	**Lake Rotokare**	**2.37**	**4**	P		Pb	11 32 26.2	-1.6
PRHZ	**Porangahau**	**2.42**	**51**	P		Pn	11 32 23.5	-0.8
RACZ	**Rakaia**	**2.42**	**218**	P		Pn	11 32 23.8	-0.5
NMEZ	**Namu Road**	**2.43**	**354**	P		Pb	11 32 29.6	+0.9
PNHZ	**Pukenui**	**2.45**	**39**	P		Pn	11 32 24.2	-0.4
WPHZ	**Waipukurau**	**2.46**	**45**	P		Pn	11 32 24.3	-0.4
PREZ	**Palmer Road**	**2.48**	**355**	P		Pb	11 32 28.6	-1.1
KHEZ	**Kahui Hut**	**2.54**	**357**	P		Pb	11 32 29.7	-0.9
KHEZ	**Kahui Hut**	**2.54**	**357**	P		Pb	11 32 29.5	-1.2
NBEZ	**Newall Road No**	**2.57**	**354**	P		Pb	11 32 31.0	-0.1
MHCZ	**Mount Hutt**	**2.57**	**228**	P		Pn	11 32 25.9	-0.5
MTVZ	**Mangateitei**	**2.63**	**22**	P		Pn	11 32 29.2	+2.0
DREZ	**Durham Road**	**2.64**	**0**	P		Pb	11 32 30.8	-1.5
PKE	**Pukeiti**	**2.64**	**357**	P		Pb	11 32 31.7	-0.6
PKVZ	**Pokaka**	**2.69**	**20**	P		Pn	11 32 29.7	+1.8
MOVZ	**Moawhango**	**2.70**	**27**	P		Pn	11 32 28.8	+0.6
PXZ	**Pawanui**	**2.71**	**49**	P		Pn	11 32 25.3	-2.9
WNVZ	**Wahianoa**	**2.72**	**24**	P		Pn	11 32 29.8	+1.3
WACZ	**Wakanui South**	**2.73**	**218**	P		Pn	11 32 27.9	-0.5
TRVZ	**Turoa**	**2.73**	**23**	P		Pn	11 32 30.3	+1.6
VRZ	**Vera Road**	**2.74**	**9**	P		Pn	11 32 30.8	+2.2
KRHZ	**Kereru**	**2.74**	**38**	P		Pn	11 32 28.1	-0.6
WHVZ	**Whangaehu Hut**	**2.76**	**23**	P		Pb	11 32 34.1	-0.4
MAVZ	**Matarangi**	**2.77**	**23**	P		Pb	11 32 34.0	-0.6
FWVZ	**Far West T-bar**	**2.77**	**22**	P		Pb	11 32 34.0	-0.8
TUVZ	**Tukino**	**2.79**	**24**	P		Pn	11 32 30.7	+1.2
COVZ	**Chateau Observ**	**2.82**	**22**	P		Pb	11 32 34.1	-1.5
WVZ	**Waitaha Valley**	**2.84**	**243**	P		Pn	11 32 31.6	+1.6
NGZ	**Ngauruhoe**	**2.86**	**23**	P		Pn	11 32 32.1	+1.6
SNVZ	**South Ngauruho**	**2.86**	**23**	P		Pn	11 32 32.1	+1.6
KAHZ	**Kahuranaki**	**2.88**	**46**	P		Pn	11 32 29.7	-0.9
OTVZ	**Oturere**	**2.89**	**23**	P		Pn	11 32 32.0	+1.1
NNVZ	**North Ngauruho**	**2.91**	**22**	P		Pn	11 32 32.6	+1.5
WTVZ	**West Tongariro**	**2.92**	**22**	P		Pn	11 32 32.9	+1.8
TWVZ	**Taurewa**	**2.92**	**19**	P		Pn	11 32 32.5	+1.4
ETVZ	**East Tongariro**	**2.93**	**24**	P		Pn	11 32 32.7	+1.4
TMVZ	**Te Maari**	**2.95**	**24**	P		Pn	11 32 32.7	+1.1
KRVZ	**Karewarewa**	**2.95**	**23**	P		Pb	11 32 37.9	+0.2
RPZ	**Rata Peaks**	**2.98**	**230**	P		Pn	11 32 33.4	+1.5
MCHZ	**McNeill Hill**	**3.05**	**40**	P		Pn	11 32 32.2	-0.8
ARCZ	**Arundel**	**3.06**	**225**	P		Pn	11 32 32.5	-0.6
KATZ	**Kakaramea**	**3.08**	**22**	P		Pb	11 32 39.0	-0.8
RITZ	**Rihia Road**	**3.12**	**25**	P		Pb	11 32 40.8	+0.2
BKZ	**Black Stump Fm**	**3.19**	**34**	P		Pn	11 32 34.3	-0.5
HIZ	**Hauiti**	**3.35**	**9**	P		Pn	11 32 39.2	+2.1
HIZ	**Hauiti**	**3.35**	**9**	P		Pn	11 32 39.6	+2.5
ODZ	**Otahua Downs**	**4.12**	**218**	P		Pn	11 32 47.2	-0.4
URZ	**Urewera**	**4.21**	**33**	P		Pn	11 32 50.0	+1.1

IDC 09 11:33:02.1±16.0, 17°35S×178°64W, h535km±195km, mb2.8/5, mbtmp3.7/5, Error ellipse: s-maj=136.7km s-min=51.8km az=163.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.52**	**259**	P	P	11 40 26.3	-0.1
	0.4nm,0.5s,baz=95,slow=7.7,SNR=13 0.4nm,0.5s						
ASAR	**Alice Springs**	**44.73**	**254**	P	P	11 40 27.9	-0.2
	3.0nm,0.6s,baz=88,slow=8.5,SNR=83 3.0nm,0.6s						
ILAR	**Eielson Array**	**85.40**	**13**	P	P	11 44 42.3	-0.2
	0.3nm,0.6s,baz=198,slow=4.7,SNR=4.3 0.3nm,0.6s						
TXAR	**Lajitas Array**	**85.89**	**58**	P	P	11 44 45.6	-0.2
	0.2nm,0.8s,baz=206,slow=5.4,SNR=3.6 0.2nm,0.8s						
PDAR	**Pinedale Array**	**87.11**	**44**	P	P	11 44 51.7	+0.3
	0.3nm,0.9s,baz=205,slow=2.1,SNR=1.9 0.3nm,0.9s						
GERES	**GERESS Array B**	**147.02**	**345**	PKPbc	PKPbc	11 51 44.2	-0.7
	0.3nm,0.4s,baz=40,slow=1.7,SNR=2.2						

IDC 09 11:37:51.0±2.8, 23°04S×175°50W, h0km, mb3.9/4, mbtmp3.8/4, MS3.6/3, Error ellipse: s-maj=201.2km s-min=35.7km az=161.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.69**	**86**	LR	LR	11 46 06.5	
	comp=Z,119nm,18.7s,baz=241,slow=34						
DZM	**Mont Dzumac**	**16.71**	**270**	*e*P	P	11 41 50.7	+1.6
	70nm,27.6s						
DZM				*e*LR	LR	11 45 55.5	
	69nm,21.6s						
PPT	**Papeete**	**24.90**	**82**	LR	LR	11 50 38.9	
	comp=Z,78nm,19.5s,baz=292,slow=31						
ASAR	**Alice Springs**	**46.25**	**259**	P	P	11 46 18.2	-0.2
	0.5nm,0.8s,baz=95,slow=6.7,SNR=12 0.5nm,0.8s						
WRA	**Warramunga Arr**	**46.60**	**264**	P	P	11 46 20.7	-0.4
	1.0nm,0.5s,baz=102,slow=8.4,SNR=15 1.0nm,0.5s						
ELK	**Elko**	**84.60**	**42**	LR	LR	12 26 44.8	
	comp=Z,72nm,18.0s,baz=80,slow=35						
TXAR	**Lajitas Array**	**86.50**	**56**	P	P	11 50 35.9	-0.2
	0.3nm,1.0s,baz=222,slow=4.6,SNR=3.2 0.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**93.14**	**289**	P	P	11 51 08.1	+0.6
	0.7nm,0.3s,baz=131,slow=3.3,SNR=6.7 0.7nm,0.3s						

*SJA **09** 11:44:34.6±1.7, 33°77S×71°01W, h98km±4km, ML3.4, MW3.5*

*GUC **09** 11:44:36.9±0.5, 33°75S×70°94W, h94km±2km, ML3.5*

ISC 09 11:44:36.2±1.4, 33°76S±0°03×70°99W±0°04, h93km±7km, n51, σ0°68/79, 16C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT09	**Talagante**	**0.01**	**191**	⇑*i*P	**Pn**	**11 44 49.5**	**0.0**
MT09				*e*S	**Sn**	**11 44 59.2**	**-0.1**
MT09				IAML		11 44 59.6	
	comp=N,3μm,0.2s						
MT01	**Popeta**	**0.24**	**245**	⇑*e*P	**Pn**	**11 44 50.2**	**+0.4**
MT01				IAML		11 45 00.5	
	comp=N,2μm,0.2s						
MT01	**Popeta**	**0.24**	**245**	*i* P	**Pn**	**11 44 49.4**	**-0.4**
MT01				⇓*e*S	**Sn**	**11 45 00.2**	**+0.4**
MT01				IAML		11 45 00.7	
	comp=Z,1μm,0.2s						
MT12	**Pirque**	**0.36**	**86**	⇑*i*P	**Pn**	**11 44 50.3**	**-0.2**
MT12				*e*S	**Sn**	**11 45 00.7**	**-0.3**
MT12				IAML		11 45 05.3	
	comp=E,4μm,0.3s						
BO04	**La Punta**	**0.39**	**126**	⇑*e*P	**Pn**	**11 44 50.4**	**-0.2**
BO04				*e*S	**Sn**	**11 45 00.6**	**-0.7**
BO04				IAML		11 45 02.8	
	comp=E,2μm,0.2s						
MT05	**Renca**	**0.42**	**29**	⇑*i*P	**Pn**	**11 44 51.1**	**+0.3**
MT05	**Renca**	**0.42**	**29**	*i* P	**Pn**	**11 44 50.4**	**-0.5**
MT05				*e*S	**Sn**	**11 45 02.2**	**+0.5**
MT05				IAML		11 45 04.4	
	comp=Z,2μm,0.2s						
MT15	**Las Vizcachas**	**0.43**	**68**	⇑*e*P	**Pn**	**11 44 50.8**	**-0.1**
MT03	**Universidad Ad**	**0.48**	**56**	*e*P	**Pn**	**11 44 51.1**	**-0.2**
MT03				IAML		11 45 04.2	
	comp=E,5μm,0.3s						
MT03	**Universidad Ad**	**0.48**	**56**	*i* P	**Pn**	**11 44 50.4**	**-0.9**
MT03				*e*S	**Sn**	**11 45 02.8**	**+0.3**
MT03				IAML		11 45 04.1	
	comp=Z,3μm,0.2s						
MT16	**CCHEN**	**0.51**	**49**	*e*P	**Pn**	**11 44 51.4**	**-0.1**
MT02	**Curacav**	**0.52**	**346**	⇑*e*P	**Pn**	**11 44 51.9**	**+0.4**
MT02				*e*S	**Sn**	**11 45 02.9**	**+0.1**
MT02				IAML		11 45 04.0	
	comp=E,3μm,0.2s						
MT02	**Curacav**	**0.52**	**346**	*i* P	**Pn**	**11 44 51.1**	**-0.4**
MT02				*e*S	**Sn**	**11 45 03.5**	**+0.8**
MT02				IAML		11 45 04.4	
	comp=Z,1μm,0.4s						
MT14	**Cerro Cal¡n**	**0.52**	**46**	*e*P	**Pn**	**11 44 51.6**	**0.0**
MT14				IAML		11 45 05.0	
	comp=N,3μm,0.1s						
VA05	**Santo Domingo**	**0.54**	**281**	*e*P	**Pn**	**11 44 51.9**	**+0.4**
VA05				*e*S	**Sn**	**11 45 03.4**	**+0.4**
VA05				IAML		11 45 06.1	
	comp=N,2μm,0.3s						
MT13	**San Alfonso**	**0.58**	**88**	*e*P	**Pn**	**11 44 52.2**	**+0.1**
MT13				*e*P	**Sn**	**11 45 04.1**	**+0.2**
MT13	**San Alfonso**	**0.58**	**88**	*i* P	**Pn**	**11 44 51.5**	**-0.6**
MT13				⇓*e*S	**Sn**	**11 45 04.1**	**+0.2**
MT13				IAML		11 45 06.0	
	comp=Z,2μm,0.2s						
MT10	**Hacienda Santa**	**0.61**	**38**	⇑*i*P	**Pn**	**11 44 52.5**	**+0.1**
MT10				*e*S	**Sn**	**11 45 04.2**	**-0.3**
MT10				IAML		11 45 05.1	
	comp=E,4μm,0.5s						
BO01	**Tunca**	**0.63**	**187**	*e*P	**Pn**	**11 44 52.9**	**+0.4**
BO01				*e*S	**Sn**	**11 45 04.7**	**+0.2**
BO01				IAML		11 45 05.2	
	comp=E,2μm,0.3s						
BO01	**Tunca**	**0.63**	**187**	*i* P	**Pn**	**11 44 52.0**	**-0.4**
BO01				IAML		11 45 06.0	
	comp=Z,968nm,0.6s						
LMEL	**Las Melosas**	**0.66**	**98**	⇑*e*P	**Pn**	**11 44 53.0**	**+0.2**
LMEL				*e*S	**Sn**	**11 45 05.1**	**-0.1**
LMEL				IAML		11 45 06.2	
	comp=N,4μm,0.2s						
PEL	**Peldehue**	**0.67**	**22**	⇑*i*P	**Pn**	**11 44 53.0**	**+0.2**
PEL				*e*S	**Sn**	**11 45 05.4**	**+0.3**
PEL				IAML		11 45 06.2	
	comp=N,3μm,0.2s						
ROCH	**El Roble**	**0.79**	**358**	⇑*e*P	**Pn**	**11 44 54.4**	**+0.2**
ROCH				⇑*e*P	**Pn**	**11 44 54.4**	**+0.2**
ROCH				*e*S	**Sn**	**11 45 07.8**	**+0.4**
ROCH				*e*S	**Sn**	**11 45 07.9**	**+0.4**
ROCH				IAML		11 45 09.2	
	comp=N,2μm,0.3s						
MT04	**Ro Olivares**	**0.79**	**64**	⇑*e*P	**Pn**	**11 44 54.2**	**0.0**
MT04				*e*S	**Sn**	**11 45 07.3**	**-0.3**
MT04				IAML		11 45 08.2	
	comp=N,2μm,0.4s						
MT04	**Ro Olivares**	**0.79**	**64**	*i* P	**Pn**	**11 44 53.4**	**-0.8**
MT04				*e*S	**Sn**	**11 45 07.6**	**0.0**
MT04				IAML		11 45 09.6	
	comp=Z,1μm,0.2s						
MT08	**Bocatoma Ro**	**0.87**	**69**	⇑*i*P	**Pn**	**11 44 55.0**	**0.0**
MT08				*i* S	**Sn**	**11 44 85.5**	**-0.5**
MT08	**Bocatoma Ro**	**0.87**	**69**	*i* P	**Pn**	**11 44 54.3**	**-0.7**
MT08				*e*S	**Sn**	**11 45 10.0**	**+1.0**
MT08				IAML		11 45 13.7	
	comp=Z,446nm,0.3s						
VA01	**Torpederas**	**0.92**	**323**	*e*P	**Pn**	**11 44 56.2**	**+0.9**
VA01				*e*S	**Sn**	**11 45 10.1**	**+0.6**
VA01				IAML		11 45 12.6	
	comp=E,2μm,0.2s						
VA01	**Torpederas**	**0.92**	**323**	*i* P	**Pn**	**11 44 55.5**	**+0.3**
VA01				IAML		11 45 12.0	
	comp=Z,873nm,0.3s						
BO02	**Sierra Bellavi**	**1.04**	**171**	*e*P	**Pn**	**11 44 57.1**	**+0.4**
BO02				*e*S	**Sn**	**11 45 12.3**	**+0.2**
BO02	**Sierra Bellavi**	**1.04**	**171**	*i* P	**Pn**	**11 44 56.3**	**-0.4**
BO02				IAML		11 45 14.1	
	comp=Z,2μm,0.2s						
VA03	**San Esteban**	**1.06**	**20**	*e*	**Pn**	**11 44 54.1**	**-2.8**
VA03				⇑*e*P	**Pn**	**11 44 57.0**	**+0.1**
VA03				*e*S	**Sn**	**11 45 12.1**	**-0.4**
VA03				IAML		11 45 15.1	
	comp=E,3μm,0.2s						
VA03	**San Esteban**	**1.06**	**20**	*i* P	**Pn**	**11 44 56.2**	**-0.8**
VA03				IAML		11 45 14.6	
	comp=Z,2μm,0.4s						
VA06	**Catapilco**	**1.23**	**348**	*e*P	**Pn**	**11 44 59.2**	**+0.4**
VA06				*e*S	**Sn**	**11 45 15.4**	**-0.3**
VA06				IAML		11 45 16.8	
	comp=E,2μm,0.4s						
GO05	**Hualane**	**1.47**	**212**	*e*P	**Pn**	**11 45 01.9**	**+0.1**
GO05	**Hualane**	**1.47**	**212**	*i* P	**Pn**	**11 45 01.3**	**-0.5**
GO05				IAML		11 45 24.8	
	comp=Z,440nm,0.7s						
AAGR	**Ágrelo**	**1.93**	**70**	*i* P	**Pn**	**11 45 08.9**	**+1.2**
ARCO	**CERRO ARCO**	**1.95**	**62**	*i* P	**Pn**	**11 45 09.6**	**+1.5**
ASAL	**Salagasta**	**2.15**	**58**	*i* P	**Pn**	**11 45 11.9**	**+1.4**
ASAL				IAML		11 45 41.4	
	comp=Z,0.1nm,0.9s						
RFA	**San Rafael**	**2.32**	**116**	*i* P	**Pn**	**11 45 12.2**	**-0.5**
RFA				IAML		11 45 44.5	
	comp=Z,29nm,0.4s						
CO02	**Combarbal**	**2.55**	**360**	*i* P	**Pn**	**11 45 15.6**	**-0.4**
CO02				IAML		11 45 53.5	
	comp=Z,396nm,0.4s						
BI02	**San Fabin de**	**2.91**	**185**	⇑*e*P	**Pn**	**11 45 21.5**	**+0.9**
BI02				*e*S	**Sn**	**11 45 55.5**	**+0.7**
BI02				IAML		11 45 57.8	
	comp=N,177nm,0.2s						
BI02	**San Fabin de**	**2.91**	**185**	*i* P	**Pn**	**11 45 21.0**	**+0.3**
BI02				IAML		11 45 58.4	
	comp=Z,132nm,0.5s						
CO03	**El Pedregal**	**2.92**	**5**	*i* P	**Pn**	**11 45 20.9**	**0.0**
CO03				IAML		11 45 57.3	
	comp=Z,356nm,0.2s						
RTLL	**Cerro Villicun**	**3.22**	**42**	*i* P	**Pn**	**11 45 24.6**	**-0.2**
RTLL				IAML		11 46 04.9	
	comp=Z,81nm,0.6s						
BI05	**Punta Hualpn**	**3.48**	**211**	*i* P	**Pn**	**11 45 26.6**	**-1.7**
BI05				IAML		11 46 08.0	
	comp=Z,47nm,0.7s						
ACCO	**Cerro Coronel**	**3.56**	**28**	*i* P	**Pn**	**11 45 30.2**	**+0.5**
AROD	**Rodeo**	**3.81**	**20**	*i* P	**Pn**	**11 45 34.4**	**+1.3**
MRA	**San Martin**	**4.62**	**75**	*i* P	**Pn**	**11 45 43.6**	**-0.2**
MRA				IAML		11 46 53.4	
	comp=Z,16nm,0.6s						
LCO	**Las Campanas**	**4.74**	**3**	*i* P	**Pn**	**11 45 44.4**	**-1.3**
LCO				IAML		11 46 42.9	
	comp=Z,96nm,0.6s						
AC05	**El Transito**	**4.95**	**7**	*i* P	**Pn**	**11 45 47.1**	**-1.2**
AC05				IAML		11 47 04.0	
	comp=Z,35nm,0.7s						

IDC 09 11:57:33.3±2.0, 3°41S×149°82E, h0km, mb3.2/4, mbtmp3.3/4, MS2.8/1, Error ellipse: s-maj=97.0km s-min=27.9km az=118.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.32**	**221**	P	P	12 02 33.2	+0.4
	0.2nm,0.3s,baz=44,slow=9.5,SNR=6.7 0.2nm,0.3s						
ASAR	**Alice Springs**	**25.34**	**216**	P	P	12 03 01.6	-0.6
	0.5nm,1.0s,baz=38,slow=9.5,SNR=2.0 0.5nm,1.0s						
KSRS	**Korea Array**	**45.46**	**335**	LR	LR	12 22 25.7	
	comp=Z,11nm,20.3s,baz=0.0,slow=33						
MKAR	**Makanchi Array**	**77.33**	**319**	P	P	12 09 30.2	+0.2
	0.2nm,0.4s,baz=103,slow=6.9,SNR=2.7 0.2nm,0.4s						
ILAR	**Eielson Array**	**82.02**	**23**	P	P	12 09 55.1	0.0
	0.2nm,0.6s,baz=256,slow=4.7,SNR=7.0 0.2nm,0.6s						

*IDC **09** 12:23:23.8±1.3, 3°90S×151°06E, h0km, mb3.8/13, mbtmp3.9/15, ML1.9/1, MS3.4/8, Error ellipse: s-maj=39.5km s-min=18.8km az=118.0*

ISC 09 12:23:29.3±1.1, 3°9S±0°1×151°0E±0°2, h35km, n20, σ0°77/15, mb3.8/13, MS3.5/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.66**	**215**	Pn	**Pn**	**12 25 05.3**	**+0.6**
	1.5nm,0.3s,baz=69,slow=10.0,SNR=6.6 9.8nm,0.6s						
JAY	**Jayapura**	**10.35**	**277**	Pn	**Pn**	**12 25 55.1**	**-0.3**
	22nm,1.0s,baz=68,slow=12,SNR=5.6						
JAY				LR	LR	12 29 27.9	
	comp=Z,292nm,19.5s,baz=344,slow=35						
HNR	**Honiara**	**10.47**	**122**	LR	LR	12 29 55.8	
	comp=Z,15nm,19.8s,baz=28,slow=38						
CTA	**Charters Tower**	**16.75**	**196**	LR	LR	12 33 49.5	
	comp=Z,85nm,18.2s,baz=32,slow=37						
SIJI	**Sorong**	**19.92**	**278**	LR	LR	12 35 55.9	
	comp=Z,96nm,18.2s,baz=126,slow=38						
WRA	**Warramunga Arr**	**22.75**	**224**	P	**P**	**12 28 27.8**	**-0.9**
	1.1nm,0.7s,baz=49,slow=10,SNR=9.5 1.1nm,0.7s						
DZM	**Mont Dzumac**	**23.48**	**142**	LR	LR	12 36 27.1	
	comp=Z,316nm,19.4s,baz=27,slow=33						
ASAR	**Alice Springs**	**25.66**	**218**	P	**P**	**12 28 56.1**	**+0.1**
	0.7nm,0.7s,baz=52,slow=8.5,SNR=9.6 0.7nm,0.7s						
KAPI	**Kappang**	**31.15**	**267**	LR	LR	12 42 25.7	
	comp=Z,32nm,20.8s,baz=90,slow=37						
CMAR	**Chiang Mai Arr**	**55.85**	**295**	P	**P**	**12 33 03.6**	**-0.1**
	0.3nm,0.3s,baz=115,slow=6.1,SNR=5.1						
CMAR				LR	LR	12 56 27.0	
	comp=Z,15nm,19.0s,baz=90,slow=36 0.3nm,0.3s						
PETK	**Petropavlovsk-**	**57.07**	**5**	P	**P**	**12 33 13.0**	**+1.1**
	3.1nm,0.6s,baz=149,slow=6.3,SNR=7.6 3.1nm,0.6s						
LZDM	**Lanzhou Array**	**59.36**	**316**	P	**P**	**12 33 29.4**	**+0.8**
	0.5nm,0.3s,baz=91,slow=8.6,SNR=4.0 0.5nm,0.3s						
SONM	**Songino Array**	**64.60**	**328**	P	**P**	**12 34 02.5**	**-0.8**
	0.3nm,0.5s,baz=147,slow=3.4,SNR=2.3 0.3nm,0.5s						
MKAR	**Makanchi Array**	**78.45**	**319**	P	**P**	**12 35 27.6**	**+0.9**
	0.8nm,0.9s,baz=109,slow=5.7,SNR=5.7 0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**79.40**	**327**	P	**P**	**12 35 32.2**	**+0.5**
	1.3nm,0.7s,baz=122,slow=5.4,SNR=6.3						
ZALV				LR	LR	13 10 50.6	
	comp=Z,29nm,19.1s,baz=18,slow=36 1.3nm,0.7s						
KURBB	**Kurchatov Arra**	**81.97**	**322**	P	**P**	**12 35 45.7**	**+0.1**
	0.6nm,0.9s,baz=115,slow=4.1,SNR=4.4						
KURBB				LR	LR	13 11 12.8	
	comp=Z,23nm,21.9s,baz=170,slow=35 0.6nm,0.9s						
ILAR	**Eielson Array**	**82.01**	**22**	P	**P**	**12 35 44.4**	**-1.1**
	0.5nm,0.9s,baz=234,slow=5.2,SNR=4.0 0.5nm,0.9s						
NRIK	**

IDC 09 13:08:13.9±2.2, 10°18S×125°04E, h0km, mb2.9/1, mbtmp3.0/3, ML2.9/2, Error ellipse: s-maj=196.0km s-min=34.6km az=55.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.22**	**138**	Pn	Pn	13 11 22.7	-0.3
	0.1nm,0.3s,baz=318,slow=12,SNR=7.7						
WRA				Sn	Sn	13 13 45.3	-5.5
	0.1nm,0.3s,baz=320,slow=24,SNR=5.9						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**15.86**	**149**	Pn	Pn	13 11 59.0	+0.4
	baz=323,slow=12,SNR=1.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**68.34**	**330**	P	P	13 19 17.1	0.0
	baz=140,slow=4.7,SNR=1.2						

*NOU **09** 13:18:44.0, 16°58S×173°22W, h0km, mb4.4/5, Tonga Islands*
*IDC **09** 13:20:10.1±3.9, 20°49S×178°17W, h510km±41km, mb3.5/14, mbtmp4.4/16, Error ellipse: s-maj=22.2km s-min=16.7km az=73.0*
*NEIC **09** 13:20:15.7±1.0, 20°4S±0°1×178°3W±0°1, h567km±3km, mb4.5/49, Error ellipse: s-maj=17.6km s-min=16.2km az=144.0*

ISC 09 13:20:16.5±0.4, 20°63S±0°07×178°33W±0°06, h587km, n132, σ1988/130, mb4.4/38, 16C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.47**	**310**	P	**P**	**13 21 41.5**	**-3.2**
NIUE	**Niue**	**8.06**	**80**	P	**P**	**13 22 13.3**	**-2.6**
NIUE	**Niue**	**8.06**	**80**	P	**P**	**13 22 13.2**	**-2.8**
NIUE				S	**S**	**13 23 55.4**	**+1.5**
GLKZ	**Green Lake**	**8.60**	**178**	S	**S**	**13 24 00.6**	**-2.6**
AFI	**Afiamalu**	**9.16**	**44**	S	S	13 24 02.8	-11
MARNC	**Mare, Loyalty**	**12.76**	**264**	P	**P**	**13 23 01.7**	**-1.3**
DZM	**Mont Dzumac**	**14.26**	**262**	P	**P**	**13 23 14.4**	**-3.9**
	11nm,1.0s,baz=134,slow=22,SNR=5.7						
DZM	**Mont Dzumac**	**14.26**	**262**	P	**P**	**13 23 17.9**	**-0.4**
DZM	**Mont Dzumac**	**14.26**	**262**	P	**P**	**13 23 18.9**	**+0.7**
OUZ	**Omahuta**	**16.18**	**204**	P	**P**	**13 23 39.4**	**+3.5**
OUZ	**Omahuta**	**16.18**	**204**	P	**P**	**13 23 38.9**	**+3.0**
WCZ	**Waipu Caves**	**16.55**	**201**	P	**P**	**13 23 42.4**	**+3.1**
KUZ	**Kuaotunu**	**16.87**	**197**	P	**P**	**13 23 46.0**	**+3.8**
WIAZ	**Waiheke Island**	**17.08**	**198**	P	**P**	**13 23 46.8**	**+2.7**
MBAZ	**Motutapu North**	**17.13**	**199**	P	**P**	**13 23 47.7**	**+3.2**
ETAZ	**East Tamaki Re**	**17.29**	**198**	P	**P**	**13 23 48.1**	**+2.1**
WMGZ	**Waiomatatini S**	**17.36**	**189**	P	**P**	**13 23 48.7**	**+2.1**
MKAZ	**Moumakai**	**17.36**	**198**	P	**P**	**13 23 48.9**	**+2.2**
HAZ	**Te Kaha**	**17.39**	**190**	P	**P**	**13 23 48.1**	**+1.2**
PUZ	**Puketiti**	**17.63**	**189**	P	**P**	**13 23 49.7**	**+0.6**
TOZ	**Tahuroa Road**	**17.86**	**196**	P	**P**	**13 23 52.9**	**+1.7**
TOZ	**Tahuroa Road**	**17.86**	**196**	P	**P**	**13 23 53.7**	**+2.5**
MWZ	**Matawai**	**18.00**	**191**	P	**P**	**13 23 52.0**	**-0.5**
MWZ				S	**S**	**13 26 45.3**	**-2.8**
URZ	**Urewera**	**18.00**	**192**	P	**P**	**13 23 49.9**	**-2.6**
	9.3nm,0.6s,baz=333,slow=4.3,SNR=9.9						
URZ				S	**S**	**13 26 45.6**	**-2.4**
	4.5nm,0.8s,baz=202,slow=22,SNR=1.7						
URZ	**Urewera**	**18.00**	**192**	P	**P**	**13 23 52.3**	**-0.2**
URZ	**Urewera**	**18.00**	**192**	P	**P**	**13 23 51.7**	**-0.8**
URZ				S	**S**	**13 26 43.6**	**-4.4**
RTZ	**Ruatahuna**	**18.37**	**192**	P	**P**	**13 23 56.0**	**0.0**
MTHZ	**Maungataniwha**	**18.63**	**192**	P	**P**	**13 23 59.8**	**+1.5**
BKZ	**Black Stump Fm**	**19.00**	**192**	P	**P**	**13 24 02.7**	**+1.0**
TMVZ	**Te Maari**	**19.12**	**194**	P	**P**	**13 24 01.9**	**-0.9**
ETVZ	**East Tongariro**	**19.14**	**194**	P	**P**	**13 24 02.8**	**-0.2**
OTVZ	**Oturere**	**19.18**	**194**	P	**P**	**13 24 03.5**	**+0.1**
TUVZ	**Tukino**	**19.28**	**194**	P	**P**	**13 24 04.5**	**+0.2**
WNVZ	**Wahianoa**	**19.35**	**194**	P	**P**	**13 24 05.1**	**+0.1**
PNHZ	**Pukenui**	**19.78**	**193**	P	**P**	**13 24 08.4**	**-0.3**
MRZ	**Mangatainoka R**	**20.63**	**193**	P	**P**	**13 24 14.2**	**-2.1**
NNZ	**Nelson**	**21.69**	**197**	P	**P**	**13 24 26.0**	**+0.2**
HNR	**Honiara**	**23.72**	**295**	P	**P**	**13 24 42.4**	**-1.8**
EIDS	**Eidsvold**	**28.51**	**255**	P	**P**	**13 25 26.7**	**+0.5**
EIDS				IAmb	IAmb	13 25 27.8	
	comp=Z,30nm,1.4s						
ARMA	**Armidale**	**28.73**	**244**	P	**P**	**13 25 29.5**	**+1.4**
CTAO	**Charters Tower**	**33.17**	**265**	P	**P**	**13 26 06.5**	**+0.4**
CTAO				IAmb	IAmb	13 26 07.4	
	comp=Z,23nm,1.0s						
PMG	**Port Moresby**	**35.07**	**283**	P	**P**	**13 26 21.8**	**-0.1**
COEN	**Coen**	**37.28**	**274**	P	**P**	**13 26 40.5**	**+0.4**
COEN				IAmb	IAmb	13 26 41.6	
	comp=Z,13nm,0.9s						
STKA	**Stephens Creek**	**37.45**	**244**	P	**P**	**13 26 41.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=60,slow=12,SNR=3.1						
	comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	**37.45**	**244**	P	**P**	**13 26 41.8**	**+0.5**
STKA				IAmb	IAmb	13 27 17.0	
	comp=Z,20nm,1.2s						
INKA	**Innaminka**	**37.86**	**251**	P	**P**	**13 26 46.1**	**+1.4**
BBOO	**Buckleboo**	**42.21**	**244**	P	**P**	**13 27 19.9**	**+0.7**
BBOO				IAmb	IAmb	13 27 20.7	
	comp=Z,16nm,1.3s						
WR8	**Warramunga Arr**	**44.12**	**262**		**P**	**13 27 34.1**	**-0.2**
WR8				IAmb	IAmb	13 27 35.7	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**44.19**	**257**	P	**P**	**13 27 35.1**	**+0.4**
ASAR	**Alice Springs**	**44.19**	**257**	P	**P**	**13 27 35.3**	**+0.5**
	comp=Z,16nm,0.7s,baz=89,slow=8.0,SNR=417						
ASAR				PcP	**PcP**	**13 29 07.7**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=110,slow=4.1,SNR=4.7						
ASAR				S	**S**	**13 33 25.1**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=93,slow=14,SNR=7.8						
	comp=Z,16nm,0.7s						
WB0	**Warramunga Arr**	**44.25**	**263**		**P**	**13 27 35.5**	**+0.2**
WB0				IAmb	IAmb	13 27 35.9	
	comp=Z,13nm,0.6s						
WRAB	**Tennant Creek**	**44.27**	**262**	P	**P**	**13 27 35.3**	**-0.1**
WRAB				IAmb	IAmb	13 27 36.2	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**44.27**	**262**	P	**P**	**13 27 35.3**	**-0.2**
	comp=Z,8.9nm,0.6s,baz=96,slow=7.7,SNR=131						
WRA				S	**S**	**13 33 25.8**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=102,slow=13,SNR=3.3						
	comp=Z,8.9nm,0.6s						
MTN	**Manton Dam**	**48.85**	**271**	P	**P**	**13 28 09.8**	**-0.2**
MTN				IAmb	IAmb	13 28 11.2	
	comp=Z,16nm,0.9s						
SAUI	**Saumlaki**	**50.21**	**277**	P	**P**	**13 28 19.2**	**-0.7**
KNRA	**Kununurra**	**50.34**	**266**	P	**P**	**13 28 21.0**	**+0.2**
KNRA				IAmb	IAmb	13 28 54.8	
	comp=Z,20nm,1.2s						
FAKI	**Fak Fak**	**51.23**	**283**	P	**P**	**13 28 27.4**	**0.0**
FAKI				IAmb	IAmb	13 28 53.4	
	comp=Z,52nm,1.3s						
MBWA	**Marble Bar**	**57.52**	**258**	P	**P**	**13 29 11.5**	**+0.2**
MBWA				IAmb	IAmb	13 29 51.1	
	comp=Z,38nm,1.3s						
VNDA	**Vanda**	**57.75**	**185**	P	**P**	**13 29 13.2**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=56,slow=3.6,SNR=2.3						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**57.75**	**185**	P	**P**	**13 29 14.4**	**+2.6**
MORW	**Morawa**	**59.49**	**248**	P	**P**	**13 29 24.9**	**+0.5**
MORW				IAmb	IAmb	13 30 04.0	
	comp=Z,33nm,1.4s						
QSPA	**South Pole Qui**	**69.43**	**180**	P	**P**	**13 30 27.8**	**+1.3**
	comp=Z,7.2nm,0.8s,baz=29,slow=1.9,SNR=7.9						
	comp=Z,7.2nm,0.8s						
QSPA	**South Pole Qui**	**69.43**	**180**	P	**P**	**13 30 28.4**	**+1.9**
QSPA				IAmb	IAmb	13 30 30.1	
	comp=Z,11nm,0.9s						
KKM	**Kota Kinabalu**	**69.49**	**285**	P	**P**	**13 30 27.9**	**+0.2**
KKM				IAmb	IAmb	13 30 41.1	
	comp=Z,33nm,1.2s						
UGM	**Wanagama**	**69.65**	**269**	P	**P**	**13 30 28.7**	**+0.1**
MJAR	**Matsushiro Arr**	**70.13**	**324**	P	**P**	**13 30 30.1**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=164,slow=6.2,SNR=8.4						
	comp=Z,1.8nm,0.7s						
MJAR	**Matsushiro Arr**	**70.13**	**324**	P	**P**	**13 30 29.1**	**-1.9**
MAJO	**Matsushiro**	**70.14**	**324**	P	**P**	**13 30 29.0**	**-1.9**
MAJO				IAmb	IAmb	13 30 46.6	
	comp=Z,18nm,1.3s						
KIWB	**Kanaga Island**	**72.18**	**1**	P	**P**	**13 30 42.0**	**-0.5**
ADK	**Adak**	**72.22**	**1**	P	**P**	**13 30 42.2**	**-0.5**
UNV	**Unalaska Valle**	**74.87**	**7**	P	**P**	**13 30 56.8**	**-0.8**
PEA0B	**Petropavlovsk-**	**76.32**	**345**	P	**P**	**13 31 05.8**	**+0.1**
PETK	**Petropavlovsk-**	**76.32**	**345**	P	**P**	**13 31 05.5**	**-0.2**
	comp=Z,4.8nm,0.7s,baz=114,slow=5.9,SNR=10						
	comp=Z,4.8nm,0.7s						
PETK	**Petropavlovsk-**	**76.32**	**345**	P	**P**	**13 31 05.8**	**0.0**
KSRS	**Korea Array**	**76.78**	**319**	P	**P**	**13 31 09.4**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=124,slow=6.5,SNR=5.0						
	comp=Z,1.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**78.90**	**326**	P	**P**	**13 31 20.7**	**+0.9**
	comp=Z,4.3nm,0.7s,baz=113,slow=4.3,SNR=4.8						
	comp=Z,4.3nm,0.7s						
N14K	**Kuskokwak Cree**	**81.41**	**8**	P	**P**	**13 31 33.2**	**+0.8**
N14K				IAmb	IAmb	13 31 34.0	
	comp=Z,22nm,0.8s						
P17K	**Kvichak River**	**81.55**	**11**	P	**P**	**13 31 33.7**	**+0.4**
O16K	**Kokwok River B**	**81.64**	**10**	P	**P**	**13 31 33.1**	**-0.6**
L14K	**Kuka Creek**	**82.66**	**8**	P	**P**	**13 31 39.5**	**+0.7**
M16K	**Timber Creek**	**82.86**	**9**	P	**P**	**13 31 41.0**	**+1.1**
M16K				IAmb	IAmb	13 31 42.1	
	comp=Z,32nm,1.4s						
K15K	**Wolf Creek Mou**	**83.72**	**8**	P	**P**	**13 31 45.1**	**+1.0**
L18K	**Granite Mounta**	**84.35**	**10**	P	**P**	**13 31 47.8**	**+0.6**
N25K	**Chitina, Valde**	**86.30**	**15**	P	**P**	**13 31 57.1**	**+0.4**
N25K				IAmb	IAmb	13 31 57.8	
	comp=Z,24nm,1.4s						
ELIB	**Princess Elisa**	**86.47**	**187**	*d*P	**P**	**13 31 59.0**	**+1.5**
	comp=Z,5.3nm,0.8s						
RND	**Reindeer**	**86.90**	**13**	P	**P**	**13 31 59.4**	**0.0**
RND				IAmb	IAmb	13 31 59.9	
	comp=Z,11nm,1.1s						
TXAR	**Lajitas Array**	**87.39**	**57**	P	**P**	**13 32 02.3**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=214,slow=8.3,SNR=6.3						
	comp=Z,0.5nm,0.8s						
CCB	**Clear Creek Bu**	**88.21**	**13**	P	**P**	**13 32 05.1**	**-0.3**
CCB				IAmb	IAmb	13 32 05.7	
	comp=Z,5.1nm,0.8s						
COLA	**College**	**88.41**	**13**	P	**P**	**13 32 06.0**	**-0.3**
COLA				IAmb	IAmb	13 32 06.7	
	comp=Z,6.3nm,0.8s						
ILAR	**Eielson Array**	**88.51**	**13**	P	**P**	**13 32 06.3**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=223,slow=4.9,SNR=14						
	comp=Z,1.9nm,0.9s						
ILAR	**Eielson Array**	**88.51**	**13**	P	**P**	**13 32 06.4**	**-0.4**
H22K	**Ishtalitna Cre**	**88.65**	**11**	IAmb	IAmb	13 32 09.0	
	comp=Z,6.7nm,1.1s						
HILR	**Hailar Array B**	**88.78**	**325**	P	**P**	**13 32 08.0**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=134,slow=11,SNR=3.8						
	comp=Z,2.6nm,0.6s						
J26L	**Joseph Creek**	**89.01**	**14**	IAmb	IAmb	13 32 11.1	
	comp=Z,6.5nm,1.0s						
E19K	**Redstone River**	**89.22**	**8**	P	**P**	**13 32 10.6**	**+0.5**
E19K				IAmb	IAmb	13 32 11.3	
	comp=Z,4.3nm,0.8s						
PDAR	**Pinedale Array**	**89.27**	**43**	P	**P**	**13 32 11.6**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=239,slow=4.8,SNR=1.9						
	comp=Z,0.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.87**	**290**	P	**P**	**13 32 15.8**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=122,slow=3.1,SNR=14						
	comp=Z,1.0nm,0.4s						
K29M	**Barlow Dome**	**89.99**	**17**	P	**P**	**13 32 14.3**	**+0.4**
MKAR	**Makanchi Array**	**111.06**	**313**	PKiKP	**PKiKP**	**13 37 43.6**	**-0.4**
	comp=Z,0.2nm,0.8s,baz=89,slow=2.1,SNR=5.1						
KURBB	**Kurchatov Arra**	**113.33**	**317**	PKiKP	**PKiKP**	**13 37 49.0**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=106,slow=1.4,SNR=6.5						
BVAR	**Borovoye Array**	**118.98**	**320**	PKP	**PKPdf**	**13 37 59.0**	**0.0**
	comp=Z,0.7nm,0.4s,baz=48,slow=2.2,SNR=6.5						
AKASG	**Malin Array Be**	**142.98**	**331**	PKhKP	PKPpre	13 38 41.5	
	comp=Z,3.8nm,0.5s,baz=44,slow=4.3,SNR=42						
AKASG	**Malin Array Be**	**142.98**	**331**		**PKPdf**	**13 38 41.8**	**-2.2**
AKBB	**Malin Array Si**	**142.98**	**331**		**PKPdf**	**13 38 41.5**	**-2.4**
KIEV	**Kiev**	**142.99**	**331**		**PKPdf**	**13 38 41.5**	**-2.4**
KIEV	**Kiev**	**142.99**	**331**	⇓P	PKPdf	13 38 19.6	-24
SORM	**Soroca**	**145.16**	**328**	⇓P	**PKPdf**	**13 38 40.8**	**-7.0**
EKA	**Eskdalemuir Ar**	**145.16**	**5**	PKPbc	**PKPab**	**13 38 49.6**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=23,slow=1.8,SNR=3.8						
BRTR	**Keskin Array B**	**146.70**	**312**	PKPbc	**PKPbc**	**13 38 54.1**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=124,slow=5.4,SNR=8.8						
BUR08	**Bucovina Ar. S**	**147.01**	**330**		**PKiKP**	**13 38 55.8**	**-0.2**
BURAR	**Bucovina Array**	**147.03**	**330**	⇑P	PKPdf	13 38 40.9	-10
TESR	**Tescani**	**147.11**	**328**	⇑P	**PKPdf**	**13 38 52.4**	**+1.3**
CFR	**Carcaliu**	**147.21**	**324**	⇑P	**PKPab**	**13 39 06.0**	**+7.6**
TPGR	**Topolog**	**147.26**	**324**	⇑P	PKPab	13 39 08.0	+9.4
PLOR	**Plostina**	**147.56**	**327**	⇑P	**PKiKP**	**13 38 57.2**	**+0.1**
MMAI	**Mount Meron Ar**	**147.61**	**299**	PKPbc	**PKPbc**	**13 38 57.0**	**+0.8**
	comp=Z,8.6nm,0.8s,baz=10,slow=5.1,SNR=3.8						
TURR	**Turia**	**147.74**	**327**	⇓P	**PKPbc**	**13 38 55.3**	**-0.7**
NEHR	**Nehoiu**	**148.03**	**326**	⇑P	**PKiKP**	**13 38 59.7**	**+1.6**
DOPR	**Dopca**	**148.12**	**328**	⇑P	**PKPbc**	**13 38 55.6**	**-1.4**
MLR	**Muntele Rosu**	**148.17**	**327**		**PKiKP**	**13 38 58.4**	**-0.1**
MLR	**Muntele Rosu**	**148.17**	**327**	⇑P	**PKiKP**	**13 38 59.0**	**+0.6**
VOIR		**148.66**	**328**	⇑P	**PKPbc**	**13 38 59.1**	**+0.7**
ARR	**Arges**	**148.92**	**328**	⇑P	**PKiKP**	**13 39 00.7**	**+0.8**
PSZ	**Piszkesteto**	**149.06**	**336**	⇓P	PKPdf	13 38 32.7	-22
SIRR	**Siria**	**149.65**	**332**	⇑P	**PKPdf**	**13 38 48.7**	**-6.6**
GZR	**Gura Zlata**	**149.80**	**330**	⇑P	**PKPdf**	**13 38 57.3**	**+1.7**
BZS	**Buzias**	**150.17**	**331**	⇑P	**PKPdf**	**13 38 54.5**	**-1.6**
GERES	**GERESS Array B**	**150.25**	**344**	PKPbc	**PKPbc**	**13 39 02.4**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=46,slow=4.5,SNR=6.0						
HERR	**Herculane**	**150.35**	**329**	⇓P	**PKPbc**	**13 39 02.1**	**-0.3**
MDVR	**Moldovita**	**150.76**	**330**	⇑P	**PKPbc**	**13 39 01.6**	**-1.7**
MORH	**Mrgy, Hungar**	**150.94**	**335**	⇑P	PKPdf	13 38 46.2	-11
BOVS	**Bovan**	**151.62**	**328**	⇑P	**PKiKP**	**13 39 10.2**	**+4.7**

*AEIC **09** 13:32:27.5±0.9, 59°72N±0°05×148°06W±0°05, h12km±6km, Error ellipse: s-maj=7.0km s-min=3.8km az=170.0*

NEIC 09 13:32:25.3±0.9, 59°72N±0°03×148°02W±0°05, h10km±2km, ML3.7/170, MLS.5(AEIC), Error ellipse: s-maj=4.7km s-min=3.8km az=221.0, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P23K	**Montague Islan**	**0.42**	**47**	Pg	Pn	13 32 36.3	-1.1
P23K	**Montague Islan**	**0.42**	**47**		Sb	13 32 43.8	+2.5
SEW	**Seward**	**0.82**	**299**	Pg	Pb	13 32 41.4	-0.2
SEW				Sg	Sb	13 32 52.2	-0.5
SEW				IAML		13 32 54.4	
	comp=E,2μm,0.3s						
MID	**Middleton Isla**	**0.90**	**108**	Pg	Pn	13 32 43.8	-0.2
MID				IAML		13 33 05.9	
	comp=E,2μm,0.7s						
MID				IAML		13 33 09.5	
	comp=N,2μm,0.5s						
HIN	**Hinchinbrook I**	**1.02**	**47**	Pg	Pn	13 32 45.7	-0.1
HIN					Sn	13 32 59.9	-0.3
O22K	**Cooper Landing**	**1.15**	**313**		Pg	13 32 47.3	0.0
O22K				Sg	Sb	13 33 01.8	-0.4
SLKM	**Skilak Lake**	**1.36**	**307**		Pn	13 32 50.1	-0.2
SLKM	**Skilak Lake**	**1.36**	**307**		Sb	13 33 07.9	-0.3
BRSE	**Bradley Lake S**	**1.38**	**272**		Pn	13 32 50.5	-0.1
BRSE					Sg	13 33 09.6	0.0
EYAK	**Cordova Ski Ar**	**1.41**	**53**	Pn	Pn	13 32 50.8	-0.3
EYAK				IAML		13 33 10.9	
	comp=N,1μm,0.8s						
EYAK	**Cordova Ski Ar**	**1.41**	**53**		Sn	13 33 09.3	-0.4
BRLK	**Bradley Lake**	**1.45**	**273**	Pn	Pn	13 32 51.3	-0.3
BRLK				IAML		13 33 13.6	
	comp=E,824nm,0.4s						
BRLK				IAML		13 33 14.5	
	comp=N,709nm,0.6s						
BRLK	**Bradley Lake**	**1.45**	**273**		Sn	13 33 10.3	-0.4
RC01	**Rabbit Creek A**	**1.62**	**329**		Sn	13 33 15.0	+0.2
RC01					Sb	13 33 15.2	-0.5
RC01	**Rabbit Creek A**	**1.62**	**329**	Pn	Pn	13 32 53.2	-0.7
RC01				IAML		13 33 17.6	
	comp=E,1μm,0.3s						
CNPM	**China Poot**	**1.64**	**265**		Sb	13 33 16.8	+0.4
CNPM					Sg	13 33 17.0	-1.1
CNPM	**China Poot**	**1.64**	**265**		Pn	13 32 54.1	-0.1
KNK	**Knik Glacier**	**1.72**	**353**	Pn	Pn	13 32 54.6	-0.7
KNK				IAML		13 33 28.6	
	comp=E,814nm,1.0s						
KNK				IAML		13 33 33.2	
	comp=N,717nm,0.6s						
KNK	**Knik Glacier**	**1.72**	**353**		Sb	13 33 18.3	-0.3
DIV	**Divide**	**1.81**	**37**		Pn	13 32 56.4	-0.2
DIV				IAML		13 33 30.7	
	comp=E,644nm,1.2s						
DIV				IAML		13 33 31.1	
	comp=N,754nm,0.6s						
DIV	**Divide**	**1.81**	**37**		Sn	13 33 18.9	-0.6
RAGM	**Ragged Mountai**	**1.81**	**67**		Sn	13 33 20.4	+0.8
RAGM	**Ragged Mountai**	**1.81**	**67**	Pn	Pn	13 32 56.5	-0.1
KAIM	**Kayak Island**	**1.83**	**82**	Pn	Pn	13 32 56.6	-0.2
KAIM				IAML		13 33 35.1	
	comp=N,528nm,0.6s						
KAIM				IAML		13 33 40.6	
	comp=E,630nm,1.0s						
PMR	**Palmer**	**1.96**	**344**		Pn	13 32 58.1	-0.5
PMR				IAML		13 33 34.4	
	comp=E,449nm,0.4s						
KLU	**Klutina**	**2.06**	**29**		Pn	13 33 00.3	+0.2
KLU				IAML		13 33 33.5	
	comp=E,714nm,0.7s						
SML	**Sawmill**	**2.10**	**356**		Pn	13 33 00.5	-0.1
SML				IAML		13 33 37.5	
	comp=E,539nm,0.8s						
SML				IAML		13 33 41.3	
	comp=N,481nm,0.9s						
GHO	**Glory Hole Cre**	**2.11**	**348**		Pn	13 33 00.5	-0.2
GHO				IAML		13 33 34.9	
	comp=E,629nm,0.6s						
BMRM	**Bremner River**	**2.11**	**52**		Pn	13 33 00.6	-0.1
BMRM				IAML		13 33 43.0	
	comp=N,587nm,0.8s						
BMRM				IAML		13 33 44.9	
	comp=E,439nm,0.9s						
SCM	**Sheep Creek Mo**	**2.15**	**9**		Pn	13 33 00.9	-0.4
SCM				IAML		13 33 36.6	
	comp=N,428nm,0.9s						
SCM				IAML		13 33 44.2	
	comp=E,532nm,0.8s						
SUCK	**Suckling Hills**	**2.17**	**79**		Pn	13 33 01.7	+0.2
SUA	**Susitna One**	**2.21**	**324**		Pn	13 33 02.3	+0.2
SUA	**Susitna One**	**2.21**	**324**	IAML		13 33 41.0	
	comp=N,390nm,0.8s						
SUA				IAML		13 33 41.7	
	comp=E,456nm,0.8s						
BERG	**Berg Lake**	**2.27**	**71**		Pn	13 33 02.8	0.0
M22K	**Willow**	**2.29**	**334**		Pn	13 33 02.4	-0.6
RDT	**Redoubt**	**2.36**	**293**		Pn	13 33 03.4	-0.6
GRIN	**Grindle Hills**	**2.43**	**74**		Pn	13 33 05.2	+0.2
SPU	**Mount Spurr**	**2.48**	**308**		Pn	13 33 05.8	0.0
RDWB	**Redoubt West**	**2.54**	**290**		Pn	13 33 05.8	-0.8
IVE	**Iliamna Volcan**	**2.54**	**279**		Pn	13 33 06.3	-0.3
IVE					Pb	13 33 06.8	-4.1
N25K	**Chitina, Valde**	**2.54**	**40**		Pn	13 33 06.9	+0.3
N25K				IAML		13 33 37.4	
	comp=N,325nm,0.3s						
N25K				IAML		13 33 46.4	
	comp=E,274nm,0.6s						
RDJH	**Redoubt Jeurge**	**2.55**	**292**		Pn	13 33 06.1	-0.7
SPCR	**Spurr Chakacha**	**2.55**	**308**		Pn	13 33 07.0	+0.2
ILS	**Iliamna Low So**	**2.56**	**278**		Pn	13 33 07.8	+0.9
M24K	**Tolsona, Glenn**	**2.56**	**20**	IAML		13 34 03.3	
	comp=N,453nm,0.8s						
ILSW	**Iliamna Southw**	**2.60**	**278**		Pn	13 33 07.4	0.0
ILSW				IAML		13 33 48.9	
	comp=E,228nm,0.6s						
ILSW				IAML		13 33 50.0	
	comp=N,272nm,0.7s						
CKL	**Chakachamna La**	**2.60**	**307**		Pn	13 33 07.4	-0.2
CRQM	**Cirque**	**2.65**	**65**		Pn	13 33 08.4	+0.2
CRQM				IAML		13 33 58.6	
	comp=N,371nm,1.0s						
CRQM				IAML		13 34 03.9	
	comp=E,241nm,0.8s						
SNH	**Sunshine Point**	**2.65**	**78**		Pn	13 33 08.3	+0.3
SNH	**Sunshine Point**	**2.65**	**78**	IAML		13 33 58.4	
	comp=N,258nm,2.4s						
SNH				IAML		13 33 58.9	
	comp=E,252nm,1.0s						
WAX	**Waxell Ridge**	**2.69**	**72**	IAML		13 33 59.5	
	comp=E,340nm,0.5s						
GLB	**Gilahina Butte**	**2.71**	**48**	IAML		13 33 57.0	
	comp=N,320nm,0.7s						
GLB				IAML		13 33 57.3	
	comp=E,269nm,0.7s						
VRDI	**Verde Repeater**	**2.73**	**54**	IAML		13 33 50.2	
	comp=N,203nm,0.6s						
TGL	**Tana Glacier**	**2.79**	**66**		Pn	13 33 10.4	+0.3
TGL	**Tana Glacier**	**2.79**	**66**	IAML		13 34 10.7	
	comp=N,191nm,1.1s						
SPNN	**North Nagishla**	**2.84**	**308**		Pn	13 33 11.3	+0.4
SKT	**Skwentna**	**2.85**	**324**		Pn	13 33 10.8	0.0
BARK	**Barkley Ridge**	**2

DOT	**Dot Lake**	**4.38**	**24**	IAML			13 34 49.7		
	comp=E,72nm,1.0s								
DOT				IAML			13 34 52.2		
	comp=N,61nm,1.2s								
YUK8	**Steele Glacier**	**4.38**	**65**			Pn	13 33 33.2	+1.2	
YUK8						Pb	13 33 33.7	-8.7	
L27K	**Beaver Creek,**	**4.49**	**39**			Pn	13 33 34.1	+0.8	
BCAR	**Beaver Creek A**	**4.50**	**39**			Pn	13 33 33.7	+0.2	
Q16K	**King Salmon**	**4.56**	**261**			Pn	13 33 35.2	+1.0	
O17K	**Koliganek Bris**	**4.59**	**275**			Pn	13 33 35.2	+0.5	
BPAW	**Bear Paw Mtn.**	**4.62**	**344**			Pn	13 33 35.1	0.0	
BPAW	**Bear Paw Mtn.**	**4.62**	**344**	IAML			13 34 47.1		
	comp=E,57nm,0.6s								
BPAW				IAML			13 34 53.8		
	comp=N,51nm,1.1s								
CHUM	**Lake Minchumin**	**4.65**	**336**			Pn	13 33 35.7	+0.2	
N17K	**Nushagak Hills**	**4.66**	**284**	IAML			13 35 00.2		
	comp=N,62nm,0.7s								
K20K	**Telida**	**4.66**	**324**			Pn	13 33 35.5	-0.2	
K20K	**Telida**	**4.66**	**324**	IAML			13 35 00.2		
	comp=E,54nm,1.2s								
SCRK	**Sand Creek**	**4.69**	**22**	IAML			13 34 58.6		
	comp=E,60nm,0.7s								
HDA	**Harding Lake**	**4.74**	**6**			Pn	13 33 37.2	+0.5	
HDA						Pb	13 33 37.5	-11	
HDA	**Harding Lake**	**4.74**	**6**	IAML			13 34 55.0		
	comp=N,79nm,0.7s								
HDA				IAML			13 34 59.4		
	comp=E,75nm,0.9s								
WRH	**Wood River Hil**	**4.78**	**360**			Pn	13 33 38.1	+0.9	
WRH	**Wood River Hil**	**4.78**	**360**	IAML			13 35 05.2		
	comp=E,57nm,1.5s								
WRH				IAML			13 35 07.5		
	comp=N,49nm,1.0s								
O29M	**Mount Kennedy**	**4.78**	**79**			Pn	13 33 38.1	+0.8	
PLK4	**Peulik 4**	**4.83**	**248**			Pn	13 33 38.9	+0.9	
PLK4	**Peulik 4**	**4.83**	**248**	IAML			13 35 16.4		
	comp=N,74nm,2.3s								
PLK4				IAML			13 35 32.6		
	comp=E,61nm,2.9s								
PLK5	**Peulik 5**	**4.91**	**253**			Pn	13 33 40.1	+1.1	
L18K	**Granite Mounta**	**4.91**	**304**			Pn	13 33 39.0	-0.1	
L18K	**Granite Mounta**	**4.91**	**304**	IAML			13 35 05.8		
	comp=E,46nm,1.7s								
L18K				IAML			13 35 15.3		
	comp=N,46nm,1.8s								
NEA2	**Nenana**	**4.92**	**355**			Pn	13 33 40.0	+0.8	
CCB	**Clear Creek Bu**	**4.95**	**1**	IAML			13 35 05.2		
	comp=E,38nm,1.6s								
J25K	**Salcha River,**	**5.07**	**13**	IAML			13 35 05.9		
	comp=E,44nm,0.8s								
ILAR	**Eielson Array**	**5.10**	**5**			Pn	13 33 41.9	+0.1	
O16K	**Kokwok River B**	**5.11**	**273**			Pn	13 33 42.6	+0.8	
O16K	**Kokwok River B**	**5.11**	**273**	IAML			13 35 13.3		
	comp=N,30nm,0.7s								
COLA	**College**	**5.18**	**1**			Pn	13 33 43.9	+1.2	
J26L	**Joseph Creek**	**5.24**	**22**	IAML			13 35 17.5		
	comp=E,42nm,1.8s								
J20K	**Nowinta River**	**5.33**	**330**			Pn	13 33 44.5	-0.3	
J20K	**Nowinta River**	**5.33**	**330**	IAML			13 35 15.0		
	comp=N,49nm,1.1s								
M29M	**Somme Creek**	**5.39**	**55**			Pn	13 33 46.8	+1.1	
M29M	**Somme Creek**	**5.39**	**55**	IAML			13 34 50.0		
	comp=E,46nm,0.8s								
POKR	**Poker Plat Res**	**5.43**	**3**			Pn	13 33 46.7	+0.5	
N16K	**Nishlik Lake**	**5.43**	**283**			Pn	13 33 46.1	-0.2	
N16K						Pb	13 33 46.4	-14	
L17K	**Donlin**	**5.57**	**300**			Pn	13 33 47.9	-0.2	
J19K	**Poorman**	**5.60**	**323**			Pn	13 33 48.7	+0.2	
I21K	**Tanana**	**5.78**	**343**			Pn	13 33 51.7	+0.6	
K17K	**Iditarod**	**5.81**	**306**			Pn	13 33 51.5	+0.1	
L29M	**L29M**	**5.84**	**50**			Pn	13 33 52.8	+0.9	
PRP	**Porcupine Dome**	**5.94**	**10**			Pn	13 33 53.8	+0.5	
O30N	**Mendenhall**	**6.04**	**75**			Pn	13 33 54.6	0.0	
N15K	**Kwethluk River**	**6.08**	**279**		Pn	Pn	13 33 55.2	0.0	
M30M	**Minto, Yukon**	**6.15**	**57**			Pn	13 33 56.6	+0.5	
H21K	**Melozitna River**	**6.36**	**342**			Pn	13 33 59.1	+0.2	
K29M	**Barlow Dome**	**6.47**	**46**			Pn	13 34 01.4	+0.7	
GCSA	**Galena City Sc**	**6.52**	**324**			Pn	13 34 01.5	+0.3	
I27K	**Kandik River**	**6.60**	**24**			Pn	13 34 03.5	+1.2	
WHY	**Whitehorse**	**6.62**	**76**			Pn	13 34 02.6	-0.1	
IM02	**Indian Mountai**	**6.84**	**340**			Pn	13 34 05.7	+0.2	
I28M	**Miner Creek**	**6.85**	**30**			Pn	13 34 06.4	+0.6	
FYU	**Fort Yukon**	**6.99**	**9**			Pn	13 34 08.4	+0.8	
G24K	**Hadweenzic Riv**	**7.02**	**2**			Pn	13 34 08.7	+0.7	
K15K	**Wolf Creek Mou**	**7.06**	**297**			Pn	13 34 08.6	+0.1	
G23K	**Bananza Creek**	**7.08**	**354**			Pn	13 34 09.8	+0.9	
H18K	**Honhosa River**	**7.26**	**323**			Pn	13 34 11.5	+0.2	
J30M	**Hart River**	**7.33**	**43**			Pn	13 34 13.2	+0.9	
G26K	**Porcupine Rive**	**7.51**	**13**			Pn	13 34 14.7	+0.1	
G18K	**Tagagawik**	**7.88**	**326**			Pn	13 34 19.8	0.0	
BMAR	**Burnt Mountain**	**7.89**	**10**			Pn	13 34 20.1	+0.1	
F26K	**Sheenjek River**	**8.19**	**10**			Pn	13 34 24.4	+0.3	
F31M	**Tsiigehtchic**	**10.00**	**33**			Pn	13 34 48.7	-0.1	
A36M	**Sachs Harbour**	**15.28**	**27**			Pn	13 36 00.8	+0.1	

*DNK **09** 13:32:51.7±3.0, 81°.22N×2°.96W, h30^{km}±22^{km}, ML3.6, Presumed earthquake*

*BER **09** 13:32:51.5±2.7, 81°.20N×3°.80W, h10^{km}, Mw4.9, ML4.8(NAO), Confirmed Earthquake*

*BJI **09** 13:32:51.0, 81°.20N×4°.00W, h10^{km}, mB5.1/11, mb4.5/50, Ms4.6/13, Ms7 4.4/15*

*IDC **09** 13:32:51.0±0.4, 81°.15N×3°.83W, h0^{km}, mb4.3/30, mbtmp4.3/32, ML4.8/2, MS3.9/55, Error ellipse: s-maj=12.5km s-min=8.9km az=29.0*

*MOS **09** 13:32:51.0±1.1, 81°.06N×4°.33W, h10^{km}, mb5.0/39, Error ellipse: s-maj=31.8km s-min=7.1km az=93.6*

*NEIC **09** 13:32:53.0±1.1, 81°.18N±0°.09×3°.9W±0°.4, h10^{km}±1^{km}, mb5.0/327, Error ellipse: s-maj=14.8km s-min=10.9km az=192.0*

*KOLA **09** 13:32:53.3, 81°.29N×1°.78W, h0^{km}, ML3.5, Error ellipse: s-maj=44.0km s-min=13.5km az=40.0, Greenland sea, Knipovich ridge, north*

*GCMT **09** 13:32:53.0±0.2, 81°.05N±0°.04×4°.18W±0°.09, h12^{km}, MW4.8/90, Moment Tensor Solution. s23,c24; s90,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.70±.06; $M_{\theta\theta}$=0.01±.07; $M_{\phi\phi}$ 1.71±.05; $M_{r\theta}$=0.21±.34; $M_{r\phi}$=0.28±.05; $M_{\theta\phi}$=0.03±.20; Best double couple: $M_0$1.74000×10^{16} NP1:ϕ_s164.00000°, δ46.00000°, λ-100.00000°. Principal axes: T 1.7540, Plg0.0000°, Azm261.0000°; N -0.0260, Plg7.0000°, Azm171.0000°; P -1.7260, Plg83.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*FCIAR **09** 13:32:54.0, 81°.45N×1°.65E, h10^{km}, station OMEGA has station magnitude of 3.90 station ZFI2 has station magnitude of 4.00*

ISC 09 13:32:52.2±0.8, 81°.13N±0°.04×3°.67W±0°.03, h9^{km}±4^{km}, n650, σ2^{s}02/516, mb4.9/227, MS4.0/58, 21C-2D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NOR	**Nord**	**2.02**	**290**	Pn		**Pn**	**13 33 24.0**	**-2.3**
NOR				Sn		**Sn**	**13 33 48.2**	**-3.4**
NOR	**Nord**	**2.02**	**290**	*e*P		**Pn**	**13 33 23.9**	**-2.5**
NOR				*e*S		**Sn**	**13 33 47.4**	**-4.2**
NOR	**Nord**	**2.02**	**290**	*i* P		**Pn**	**13 33 24.4**	**-2.0**
NOR				*i* S		**Sn**	**13 33 47.7**	**-3.9**
NOR				IAML			13 33 55.5	
	comp=Z,616nm,0.4s							
KBS	**Kingsbay**	**3.49**	**121**	Pn		**Pn**	**13 33 46.5**	**-0.1**
KBS	**Kingsbay**	**3.49**	**121**	Pn		**Pn**	**13 33 43.7**	**-2.9**
KBS	**Kingsbay**	**3.49**	**121**	*e*P		**Pn**	**13 33 43.5**	**-3.1**
KBS				IAML			13 33 45.9	
	comp=Z,227nm,0.3s							
KBS				*e*S		Sn	13 34 19.8	-8.1
KBS	**Kingsbay**	**3.49**	**121**	*ce*P		**Pn**	**13 33 49.5**	**+2.9**
KBS				pmax		pmax		
	comp=Z,1.0nm,0.7s							
KBS	**Kingsbay**	**3.49**	**121**	P		**Pn**	**13 33 43.3**	**-3.3**
KBS				S		Sn	13 34 19.3	-8.6
KBS	**Kingsbay**	**3.49**	**121**	*i* P		**Pn**	**13 33 43.9**	**-2.6**
KBS				*i* S		Sn	13 34 19.9	-8.0
BRBB	**Barentsburg B**	**4.42**	**124**	Pn		**Pn**	**13 33 57.4**	**-1.9**
BRBB				Sn		**Sn**	**13 34 45.7**	**-5.1**
BRBB	**Barentsburg B**	**4.42**	**124**	*e*P		**Pn**	**13 33 57.4**	**-1.9**
BRBB	**Barentsburg B**	**4.42**	**124**	P		**Pn**	**13 33 57.5**	**-1.8**
BRBB				S		**Sn**	**13 34 45.5**	**-5.3**
BRBA	**Barentsburg A**	**4.45**	**124**	Pn		**Pn**	**13 33 57.9**	**-1.8**
BRBA				Sn		**Sn**	**13 34 47.3**	**-4.2**
BRBA	**Barentsburg A**	**4.45**	**124**	*e*P		**Pn**	**13 33 57.9**	**-1.8**
SPA0	**Spitsbergen Ar**	**4.64**	**119**	Pn		**Pn**	**13 33 59.8**	**-2.5**
	baz=330,slow=7.9							
SPA0				Sn		**Sn**	**13 34 51.4**	**-4.9**
	baz=321,slow=37							
SPA0	**Spitsbergen Ar**	**4.64**	**119**	Pn		**Pn**	**13 33 59.8**	**-2.5**
SPA0				Sn		**Sn**	**13 34 51.4**	**-4.9**
SPA0	**Spitsbergen Ar**	**4.64**	**119**	*e*P		**Pn**	**13 33 58.7**	**-3.7**
SPA0				*e*S		Sn	13 34 48.5	-7.8
SPITS	**Spitsbergen Ar**	**4.64**	**119**	Pn		**Pn**	**13 33 59.9**	**-2.5**
	baz=354,slow=7.0							
SPITS				Sn		**Sn**	**13 34 51.0**	**-5.3**
	baz=309,slow=16							
	comp=Z,390nm,0.4s							
SPITS	**Spitsbergen Ar**	**4.64**	**119**	P		**Pn**	**13 33 59.6**	**-2.8**
SPITS				S		**Sn**	**13 34 50.5**	**-5.8**
SPB2	**Spitsbergen Ar**	**4.65**	**119**	Pn		**Pn**	**13 33 59.7**	**-2.7**
HSPB	**Hornsund (broa**	**5.49**	**129**	*e*P		**Pn**	**13 34 12.5**	**-1.4**
HSPB	**Hornsund (broa**	**5.49**	**129**	Pn		**Pn**	**13 34 12.1**	**-1.9**
HSPB	**Hornsund (broa**	**5.49**	**129**	*e*P		**Pn**	**13 34 11.9**	**-2.0**
HSPB				IAML			13 34 12.9	
	comp=Z,293nm,0.4s							
HSPB	**Hornsund (broa**	**5.49**	**129**	*e*P		Pn	13 34 08.3	-5.6
HSPB				*e*S		**Sn**	**13 35 09.8**	**-7.1**
HSPB	**Hornsund (broa**	**5.49**	**129**	P		**Pn**	**13 34 11.7**	**-2.2**
HSPB				S		**Sn**	**13 35 11.2**	**-5.8**
HOPEN	**Hopen**	**7.14**	**115**	Pn		**Pn**	**13 34 33.4**	**-3.3**
HOPEN	**Hopen**	**7.14**	**115**	*e*P		**Pn**	**13 34 33.6**	**-3.0**
HOPEN				IAML			13 34 36.6	
	comp=Z,65nm,0.3s							
DBG	**Daneborg**	**7.66**	**216**	Pn		**Pn**	**13 34 41.0**	**-2.7**
DBG				Sn		Sn	13 35 59.7	-11
DBG	**Daneborg**	**7.66**	**216**	*e*P		**Pn**	**13 34 40.6**	**-3.0**
DBG				*e*S		Sn	13 35 59.6	-11
DBG	**Daneborg**	**7.66**	**216**	*i* P		**Pn**	**13 34 41.2**	**-2.5**
DBG				*i* S		Sn	13 36 00.4	-10
DBG				IAML			13 36 12.8	
	comp=Z,107nm,0.4s							
ZFI2	**Zemlya Franca-**	**7.85**	**67**	*e*P		**Pn**	**13 34 42.8**	**-3.5**
ZFI2				*e*S		Sn	13 36 02.1	-13
	comp=Z,46nm,0.6s							
OMEGA	**Omega**	**7.88**	**67**	*e*P		**Pn**	**13 34 42.8**	**-3.8**
	comp=Z,42nm,0.7s							
OMEGA				*e*S		Sn	13 36 02.1	-14
	comp=Z,37nm,0.4s							
BJO1	**Bjornoya**	**8.11**	**133**	*e*P		**Pn**	**13 34 49.1**	**-0.7**
BEAR	**Bear Island, N**	**8.11**	**133**	Pn		**Pn**	**13 34 48.4**	**-1.5**
	baz=345,slow=14							
NEEM	**North Greenlan**	**9.27**	**272**	*i* P		**Pn**	**13 35 02.3**	**-3.8**
NEEM	**North Greenlan**	**9.27**	**272**	*i* P		Pn	13 35 01.1	-5.0
NEEM				*i* S		Sn	13 36 38.6	-12
NEEM				IAML			13 36 46.0	
	comp=Z,182nm,0.4s							
SUMG	**Summit**	**11.37**	**241**	Pn		Pn	13 35 29.7	-5.1
SUMG	**Summit**	**11.37**	**241**	*i* P		**Pn**	**13 35 30.9**	**-3.9**
SUMG	**Summit**	**11.37**	**241**	P		Pn	13 35 29.7	-5.1
SUMG	**Summit**	**11.37**	**241**	*i* P		**Pn**	**13 35 30.9**	**-3.9**
SUMG				*i* S		Sn	13 37 25.5	-16
SUMG				IAML			13 37 35.6	
	comp=Z,125nm,0.4s							
SCO	**Scoresbysund**	**11.49**	**212**	Pn		**Pn**	**13 35 35.0**	**-1.1**
SCO	**Scoresbysund**	**11.49**	**212**	*e*		**Pn**	**13 35 36.2**	**0.0**
SCO	**Scoresbysund**	**11.49**	**212**	P		**Pn**	**13 35 35.0**	**-1.1**
SCO	**Scoresbysund**	**11.49**	**212**	*e*P		**Pn**	**13 35 35.2**	**-0.9**
SCO				*i* S		Sn	13 37 33.5	-11
HAMF	**Hammerfest**	**12.23**	**134**	P		**Pn**	**13 35 44.8**	**-1.4**
HAMF	**Hammerfest**	**12.23**	**134**	*e*P		**Pn**	**13 35 44.9**	**-1.3**
KULLO	**Kullorsuaq**	**12.44**	**268**	*i* P		Pn	13 35 42.4	-6.6
KULLO				*i* S		Sn	13 37 52.4	-15
KULLO				IAML			13 37 59.3	
	comp=Z,116nm,0.5s							
TULEG	**Thule**	**12.67**	**284**	Pn		Pn	13 35 45.2	-6.9
TULEG	**Thule**	**12.67**	**284**	*i* P		Pn	13 35 44.8	-7.3
TULEG	**Thule**	**12.67**	**284**	*i* P		Pn	13 35 44.4	-7.8
TULEG				*i* S		Sn	13 37 55.9	-17
TULEG				IAML			13 38 00.8	
	comp=Z,129nm,0.4s							
JETT	**Jettan, Norway**	**12.92**	**140**	*e*P		**Pn**	**13 35 54.6**	**-1.1**
VADS	**Vadso**	**13.39**	**126**	P		**Pn**	**13 35 59.8**	**-2.2**
VADS	**Vadso**	**13.39**	**126**	*e*P		**Pn**	**13 35 59.8**	**-2.2**
KEV	**Kevo**	**13.45**	**130**	P		**Pn**	**13 36 00.7**	**-2.2**
ARA0	**ARCESS Array S**	**13.48**	**133**	Pn		**Pn**	**13 36 01.6**	**-1.7**
	baz=337,slow=12							
ARA0	**ARCESS Array S**	**13.48**	**133**	Pn		**Pn**	**13 36 01.6**	**-1.7**
ARCES	**ARCESS Array B**	**13.48**	**133**	Pn		**Pn**	**13 36 01.1**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=348,slow=10,SNR=23							
ARCES				LR		LR	13 40 40.9	
	comp=Z,444nm,20.8s,baz=346,slow=35							
	comp=Z,9.9nm,0.6s							
ARCES	**ARCESS Array B**	**13.48**	**133**	Pn		**Pn**	**13 36 02.9**	**-0.4**
ARCES	**ARCESS Array B**	**13.48**	**133**	P		**Pn**	**13 36 02.9**	**-0.4**
KIF	**Kilpisjarvi**	**13.49**	**140**	P		**Pn**	**13 36 02.2**	**-1.2**
KIF	**Kilpisjarvi**	**13.49**	**140**	*e*P		**Pn**	**13 36 02.1**	**-1.2**
KTK1	**Kautokeino**	**13.73**	**137**	P		**Pn**	**13 36 07.1**	**+0.4**
KTK1	**Kautokeino**	**13.73**	**137**	*e*P		**Pn**	**13 36 07.5**	**+0.8**
UPNV	**Upernavik**	**13.78**	**263**	*i* P		Pn	13 36 00.8	-6.6
UPNV	**Upernavik**	**13.78**	**263**	*i* P		Pn	13 36 01.1	-6.2
HEF	**Hetta**	**14.36**	**137**	P		**Pn**	**13 36 15.4**	**+0.1**
HEF	**Hetta**	**14.36**	**137**	*e*P		**Pn**	**13 36 15.7**	**+0.4**
NUUG	**Nuugaatsiaq**	**14.42**	**257**	*i* P		Pn	13 36 09.8	-6.3
SAATT	**Saattut**	**14.83**	**254**	*i* P		Pn	13 36 15.9	-5.8
SALU	**Saltoluokta**	**14.86**	**145**	*e*P		**Pn**	**13 36 25.2**	**+3.1**
VAGH	**Vaagaholmen**	**15.08**	**154**	*e*P		**Pn**	**13 36 27.0**	**+2.0**
NIAQ	**Niaqornat**	**15.16**	**256**	*i* P		**Pn**	**13 36 19.0**	**-7.0**
SAQQ	**Saqqaq**	**15.60**	**253**	*i* P		Pn	13 36 23.6	-8.3
LVZ	**Lovozero**	**16.16**	**123**	*i* P		**Pn**	**13 36 40.4**	**+1.3**
ILULI	**Ilulissat**	**16.20**	**250**	*e*P		Pn	13 36 31.0	-8.7
APA0	**Apatity Array**	**16.22**	**125**	P		**Pn**	**13 36 34.5**	**-5.3**
	baz=331,slow=12							
APA0	**Apatity Array**	**16.22**	**125**	P		**Pn**	**13 36 34.5**	**-5.3**
APA	**Apatity**	**16.31**	**125**	*e*P		**Pn**	**13 36 34.8**	**-6.2**
APA				pmax		pmax		
	comp=Z,22nm,1.0s							
GDH	**Godhavn**	**16.53**	**253**	*i* P		**Pn**	**13 36 37.3**	**-6.5**
GDH	**Godhavn**	**16.53**	**253**	*i* P		Pn	13 36 36.2	-7.6
BORG	**Borgarnes**	**17.09**	**206**	LR		LR	13 42 56.4	
	comp=Z,216nm,18.4s,baz=347,slow=35							
POIN	**Pond Inlet**	**17.21**	**283**	P		Pn	13 36 44.2	-8.1
ANGG	**Ammassalik, Gr**	**17.79**	**229**	*i* P		**Pn**	**13 36 55.9**	**-3.7**
RES	**Resolute Bay**	**17.92**	**300**	P		**Pn**	**13 36 55.5**	**-5.6**
	comp=Z,25nm,0.5s,baz=29,slow=12,SNR=98							
RES				S		Sn	13 40 03.4	-17
	comp=Z,7.0nm,0.3s,baz=307,slow=18,SNR=4.7							
RES				LR		LR	13 44 05.7	
	comp=Z,437nm,21.3s,baz=19,slow=38							
RES	**Resolute Bay**	**17.92**	**300**	Pn		**Pn**	**13 36 55.2**	**-5.9**
RES	**Resolute Bay**	**17.92**	**300**	P		**Pn**	**13 36 55.2**	**-5.9**
RES				pmax		pmax		
	comp=Z,96nm,1.5s							
SFJD	**Kangerlussuaq**	**18.19**	**247**	P		**Pn**	**13 36 58.3**	**-6.1**
	comp=Z,17nm,0.6s,baz=11,slow=10,SNR=25							
SFJD				S		Sn	13 40 05.5	-22
	comp=Z,42nm,0.5s,baz=303,slow=12,SNR=9.9							
SFJD				LR		LR	13 44 21.0	
	comp=Z,1μm,18.1s,baz=16,slow=38							
SFJD	**Kangerlussuaq**	**18.19**	**247**	Pn		**Pn**	**13 36 58.5**	**-5.9**
SFJD	**Kangerlussuaq**	**18.19**	**247**	*i* P		**Pn**	**13 36 58.6**	**-5.9**
SFJD	**Kangerlussuaq**	**18.19**	**247**	P		**Pn**	**13 36 58.5**	**-5.9**
SFJD				pmax		pmax		
	comp=Z,39nm,1.0s							
SFJD	**Kangerlussuaq**	**18.19**	**247**	*i* P		**Pn**	**13 36 58.3**	**-6.1**
ADZR	**Andozero**	**20.41**	**122**	*e*P		**P**	**13 37 27.8**	**-1.2**
ADZR				pmax		pmax		
	comp=Z,30nm,0.8s							
LSH	**Leshukonskoye**	**20.53**	**112**	*e*P		**P**	**13 37 28.6**	**-1.7**
NC405	**NORSAR Array S**	**20.57**	**158**	P		Pn	13 37 33.1	+0.1
NC405				IAmb		IAmb	13 37 39.3	
	comp=Z,95nm,1.6s							
NOA	**NORSAR Array B**	**20.61**	**159**	P		**P**	**13 37 31.2**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=349,slow=10,SNR=6.4							
NOA				LR		LR	13 44 30.0	
	comp=Z,119nm,18.1s,baz=355,slow=34							
	comp=Z,3.0nm,0.9s							
ILON	**Igloolik, Nuna**	**20.76**	**282**			**P**	**13 37 32.1**	**-0.6**
NRA0	**NORESS Array S**	**20.93**	**159**	P		**P**	**13 37 34.4**	**-0.3**
	baz=344,slow=11							
NRA0	**NORESS Array S**	**20.93**	**159**	P		**P**	**13 37 34.4**	**-0.3**
FIA0	**FINESS Array S**	**21.39**	**139**	P		**P**	**13 37 40.0**	**+0.5**
	baz=349,slow=14							
FIA0	**FINESS Array S**	**21.39**	**139**	P		**P**	**13 37 40.0**	**+0.5**
FIA1	**FINESS Array S**	**21.39**	**139**	P		**P**	**13 37 39.9**	**+0.3**
FINES	**FINESS Array B**	**21.39**	**139**	P		**P**	**13 37 40.1**	**+0.5**
	comp=Z,9.3nm,0.7s,baz=348,slow=11,SNR=36							
FINES				PcP		**PcP**	**13 41 41.8**	**-0.7**
	comp=Z,6.0nm,0.8s,baz=0.0,slow=1.9,SNR=9.4							
FINES				LR		LR	13 45 27.6	
	comp=Z,233nm,21.7s,baz=12,slow=35							
	comp=Z,9.3nm,0.7s							
FINES	**FINESS Array B**	**21.39**	**139**	P		**P**	**13 37 39.8**	**+0.2**
HFS	**Hagfors**	**21.66**	**156**	P		**P**	**13 37 43.3**	**+0.8**
	comp=Z,18nm,0.9s,baz=8.9,slow=10,SNR=12							
	comp=Z,18nm,0.9s							
HFS	**Hagfors**	**21.66**	**156**	P		**P**	**13 37 43.1**	**+0.6**
	baz=350,slow=9.3							
HFS	**Hagfors**	**21.66**	**156**	P		**P**	**13 37 43.1**	**+0.6**
NRIK	**Noril'sk**	**22.72**	**67**	P		**P**	**13 37 54.0**	**+0.2**
	comp=Z,10nm,0.8s,baz=357,slow=7.8,SNR=14							
NRIK				LR		LR	13 47 33.5	
	comp=Z,547nm,21.4s,baz=348,slow=39							
	comp=Z,10nm,0.8s							
NRIK	**Noril'sk**	**22.72**	**67**			**P**	**13 37 53.5**	**-0.3**
NRIK				IAmb		IAmb	13 38 04.2	
	comp=Z,40nm,1.1s							
NRIK	**Noril'sk**	**22.72**	**67**	*i* P		**P**	**13 37 53.5**	**-0.3**
NRIK				pmax		pmax		
	comp=Z,37nm,1.1s							
NRS	**Narsarsuaq**	**23.05**	**236**	P		**P**	**13 37 57.4**	**+0.1**
NRS	**Narsarsuaq**	**23.05**	**236**	P		**P**	**13 37 57.4**	**+0.1**
NRS				pmax		pmax		
	comp=Z,76nm,0.9s							
IVI	**Ivigtut**	**23.37**	**239**	P		**P**	**13 38 00.5**	**0.0**
KLMR	**Klimovskoe**	**23.54**	**123**	*e*P		**P**	**13 38 04.7**	**+2.6**
KLMR				pmax		pmax		
	comp=Z,122nm,1.5s							
KLMR	**Klimovskoe**	**23.54**	**123**	*e*P		**P**	**13 38 01.3**	**-0.8**
FRB	**Frobisher Bay**	**23.92**	**263**	LR		LR	13 48 00.5	
	comp=Z,333nm,19.1s,baz=41,slow=38							
A36M	**Sachs Harbour**	**24.00**	**319**			**P**	**13 38 06.0**	**-0.5**
A36M	**Sachs Harbour**	**24.00**	**319**	P		**P**	**13 38 04.9**	**-1.6**
	baz=19,SNR=13							
TIXI	**Tiksi**	**25.34**	**33**	P		**P**	**13 38 19.5**	**+0.8**
	comp=Z,8.1nm,0.9s,baz=20,slow=8.3,SNR=28							
TIXI				LR		LR	13 47 21.2	
	comp=Z,74nm,18.6s,baz=8.0,slow=34							
	comp=Z,8.1nm,0.9s							
TIXI	**Tiksi**	**25.34**	**33**			**P**	**13 38 19.5**	**+0.8**
TIXI	**Tiksi**	**25.34**	**33**	*ce*P		**P**	**13 38 20.3**	**+1.6**
TIXI				pmax		pmax		
	comp=Z,18nm,1.3s							
C36M	**Paulatuk**	**26.39**	**317**	P		**P**	**13 38 28.2**	**-0.1**
C36M				IAmb		IAmb	13 38 44.7	
	comp=Z,26nm,1.1s							
C36M	**Paulatuk**	**26.39**	**317**	P		**P**	**13 38 28.9**	**+0.6**
	baz=18,SNR=8.2							
A21K	**Barrow**	**27.04**	**341**	P		**P**	**13 38 34.0**	**-0.1**
	baz=9.0							
KIRV	**Kirov**	**27.08**	**113**	LR		LR	13 51 01.8	
	comp=Z,243nm,19.2s,baz=339,slow=40							
KIRV	**Kirov**	**27.08**	**113**	*ce*P		**P**	**13 38 35.5**	**+1.0**
BLKN	**Baker Lake**	**27.57**	**290**			**P**	**13 38 38.8**	**-0.1**
BLKN				IAmb		IAmb	13 38 40.0	
	comp=Z,29nm,0.9s							
NACGM	**Naroch**	**27.90**	**141**	*e*P		**P**	**13 38 43.0**	**+

baz=8.3
G29M Pine Creek 30.11 326 P **P** 13 39 01.1 -0.4
baz=13
BMAR Burnt Mountain 30.14 331 P **P** 13 39 02.1 +0.3
C17K DeLong Mountai 30.18 345 P **P** 13 39 02.8 +0.8
baz=6.3
CLL Collm 30.42 159⇑ *i*P P 13 38 57.9 -6.4
CLL pmax pmax
comp=Z,12nm,0.9s
CLL Collm 30.42 159⇑ *i*P P 13 38 57.9 -6.4
comp=Z,12nm,0.9s
SVE Sverdlovsk 30.43 102 *e*P **P** 13 39 05.7 +1.3
SVE pmax pmax
comp=N,21nm,1.3s
C16K Lisburne Hills 30.46 347 P **P** 13 39 05.0 +0.5
baz=5.7
ARTI Arti 30.52 105 LR LR 13 53 53.9
comp=N,252nm,18.0s,baz=348,slow=41
ARTI Arti 30.52 105 P **P** 13 39 06.5 +1.4
ARTI Arti 30.52 105*d i*P **P** 13 39 06.3 +1.2
ARTI S **S** 13 44 08.3 +2.1
ARTI pmax pmax
comp=Z,22nm,1.0s
G27K Doyon Strip 30.52 329 P **P** 13 39 05.4 +0.2
baz=12
EPYK Eagle Plains 30.53 325 P **P** 13 39 05.7 +0.5
baz=13
G26K Porcupine Rive 30.55 330 P **P** 13 39 05.7 +0.4
baz=11
RDOG Red Dog Mine 30.59 345 **P** 13 39 06.0 +0.4
RDOG IAmb IAmb 13 39 07.0
comp=Z,16nm,0.8s
RDOG Red Dog Mine 30.59 345 P **P** 13 39 06.2 +0.6
baz=6.3,SNR=7.8
COLD Coldfoot 30.73 335 **P** 13 39 06.9 -0.1
COLD Coldfoot 30.73 335 P **P** 13 39 07.0 +0.1
baz=9.7,SNR=9.8
H31M Peel River 30.86 322 P **P** 13 39 07.9 -0.3
baz=13
E19K Redstone River 30.92 340 P **P** 13 39 08.7 +0.1
baz=7.8
BILL Bilibino 30.92 7 P **P** 13 39 07.7 -1.0
BILL IAmb IAmb 13 39 17.0
comp=Z,20nm,1.3s
BILL Bilibino 30.92 7*ce*P **P** 13 39 09.0 +0.4
BILL pmax pmax
comp=Z,14nm,1.3s
F21K Alatna River 30.94 338 P **P** 13 39 08.8 0.0
baz=8.8
D17K Noatak River 30.95 345 P **P** 13 39 09.6 +0.8
baz=6.2,SNR=15
FYU Fort Yukon 31.04 331 P **P** 13 39 10.4 +0.8
FYU IAmb IAmb 13 39 20.2
comp=Z,20nm,0.8s
G24K Hadweenzic Riv 31.07 333 P **P** 13 39 09.5 -0.4
baz=10
H27K Steamboat Moun 31.08 328 P **P** 13 39 09.8 -0.2
baz=12
E18K Tukpahlearik C 31.12 343 P **P** 13 39 10.5 +0.2
baz=6.9
G23K Bananza Creek 31.23 335 P **P** 13 39 10.6 -0.8
baz=9.6
F20K Avaraart Lake 31.24 339 P **P** 13 39 10.7 -0.7
baz=8.2
E17K Hotham Inlet 31.51 344 P **P** 13 39 13.7 -0.1
baz=6.5
LPSR Galich'ya Gora 31.51 128 *e*P **P** 13 39 14.0 +0.1
LPSR pmax pmax
comp=Z,90nm,1.0s
F19K Shaleruckik Mo 31.57 341 P **P** 13 39 14.4 +0.1
baz=7.5
I30M Mount Dempster 31.62 324 P **P** 13 39 14.8 -0.2
baz=13
G21K Allakaket 31.65 337 P **P** 13 39 15.3 +0.3
G21K Allakaket 31.65 337 P **P** 13 39 15.3 +0.3
baz=8.6
I29M Ogilvie Camp, 31.66 325 P **P** 13 39 15.0 -0.1
baz=12
I27K Kandik River 31.70 328 P **P** 13 39 16.0 +0.4
I27K IAmb IAmb 13 39 25.5
comp=Z,23nm,1.5s
I27K Kandik River 31.70 328 P **P** 13 39 16.0 +0.4
baz=11
I28M Miner Creek 31.72 327 P **P** 13 39 15.8 +0.1
I28M IAmb IAmb 13 40 02.2
comp=Z,29nm,1.9s
I28M Miner Creek 31.72 327 P **P** 13 39 15.6 -0.2
baz=12
YKAW3 Yellowknife Wh 31.81 305 P **P** 13 39 16.5 +0.1
YKAW1 Yellowknife Wh 31.87 305 **P** 13 39 17.1 +0.2
YKA Yellowknife Ar 31.88 305 P **P** 13 39 16.9 -0.1
comp=Z,3.2nm,0.9s,baz=8.4,slow=9.4,SNR=46
YKA PcP **PcP** 13 42 06.8 -0.3
comp=Z,0.8nm,0.5s,baz=1.4,slow=3.4,SNR=5.3
YKA LR LR 13 51 36.3
comp=Z,424nm,18.1s,baz=314,slow=35
comp=Z,3.2nm,0.9s
F18K Selawik 31.89 342 P **P** 13 39 17.2 +0.1
baz=7.0,SNR=12
H24K Noodor Dome 31.95 333 P **P** 13 39 17.7 0.0
H24K IAmb IAmb 13 39 28.1
comp=Z,14nm,1.1s
H24K Noodor Dome 31.95 333 P **P** 13 39 17.4 -0.4
baz=9.9
PRP Porcupine Dome 32.10 331 IAmb IAmb 13 39 29.8
comp=Z,16nm,1.1s
PRP Porcupine Dome 32.10 331 P **P** 13 39 19.3 +0.2
baz=10,SNR=5.9
F17K Baldwin Pennin 32.12 343 P **P** 13 39 19.8 +0.7
baz=6.5
H22K Ishtalitna Cre 32.13 336 P **P** 13 39 19.6 +0.3
baz=9.0,SNR=6.5
SCHQ Schefferville 32.19 256 P **P** 13 39 19.8 0.0
comp=Z,4.8nm,0.4s,baz=17,slow=6.4,SNR=23
SCHQ LR LR 13 52 41.6
comp=Z,490nm,18.8s,baz=18,slow=37
comp=Z,4.8nm,0.4s
G19K Purcell Mounta 32.22 340 P **P** 13 39 20.5 +0.5
baz=7.6
MORC Moravsky Berou 32.22 154 *e*P **P** 13 39 20.7 +0.4
WRGLY Wrigley 32.24 313 IAmb IAmb 13 39 42.9
comp=Z,17nm,1.3s
WRGLY Wrigley 32.24 313 P **P** 13 39 20.7 +0.6
baz=15
J30M Hart River 32.25 323 P **P** 13 39 20.9 +0.4
J30M IAmb IAmb 13 39 29.7
comp=Z,30nm,1.6s
J30M Hart River 32.25 323 P **P** 13 39 20.3 -0.1
baz=12
AKASG Malin Array Be 32.30 140 P **P** 13 39 20.9 +0.1
comp=Z,2.3nm,0.6s,baz=350,slow=9.3,SNR=8.6
AKASG PcP **PcP** 13 42 07.9 -0.5
comp=Z,0.8nm,0.4s,baz=356,slow=3.0,SNR=8.0
AKASG LR LR 13 53 14.6
comp=Z,129nm,18.3s,baz=2.5,slow=38
comp=Z,2.3nm,0.6s
AKBB Malin Array Si 32.30 140*ce*P **P** 13 39 19.3 -1.5
AKBB pmax pmax
comp=Z,29nm,1.5s
H21K Melozitna Rive 32.46 337 P **P** 13 39 22.9 +0.8
H21K IAmb IAmb 13 39 32.0
comp=Z,17nm,1.1s
H21K Melozitna Rive 32.46 337 P **P** 13 39 22.4 +0.3
baz=8.6,SNR=6.7
VORR Voronezh 32.46 128 *e*P **P** 13 39 22.8 +0.6
VORR pmax pmax
comp=Z,60nm,0.4s
J29N Klondike Camp 32.55 325 P **P** 13 39 23.3 +0.3
baz=12
G18K Tagagawik 32.55 341 IAmb IAmb 13 39 24.1
comp=Z,36nm,1.9s
G18K Tagagawik 32.55 341 P **P** 13 39 23.6 +0.7
baz=7.1
FCC Fort Churchill 32.59 285 **P** 13 39 23.2 -0.1
FCC Fort Churchill 32.59 285 P **P** 13 39 23.2 -0.1
FCC pmax pmax
comp=Z,64nm,1.9s
VRAC Vranov 32.63 155 LR LR 13 51 50.9
comp=Z,107nm,19.3s,baz=340,slow=35
VRAC Vranov 32.63 155 *e*P **P** 13 39 24.5 +0.7
POKR Poker Plat Res 32.63 332 IAmb IAmb 13 39 35.0
comp=Z,28nm,1.1s
POKR Poker Plat Res 32.63 332 P **P** 13 39 23.9 +0.2
baz=9.8,SNR=5.8
I23K Minto, Yukon-K 32.74 334 IAmb IAmb 13 39 27.7
comp=Z,18nm,1.0s
I23K Minto, Yukon-K 32.74 334 P **P** 13 39 25.2 +0.7
baz=9.4,SNR=9.7
H20K Anotleneega Mo 32.74 338 P **P** 13 39 25.0 +0.3
baz=8.0,SNR=11
BELG Belogornoye 32.85 118 *i* P **P** 13 39 26.0 +0.4
BELG pmax pmax
comp=Z,19nm,1.1s
KRUC Moravsky 32.86 155 *e*P **P** 13 39 26.0 +0.2
I21K Tanana 32.88 336 IAmb IAmb 13 39 28.4
comp=Z,16nm,1.0s
I21K Tanana 32.88 336 P **P** 13 39 26.3 +0.5
baz=8.7,SNR=9.1
VSR Storozhevoye 32.90 128 *e*P **P** 13 39 25.5 -0.6
VSR pmax pmax
comp=Z,40nm,1.2s
COLA College 32.91 333 *i* P **P** 13 39 25.5 -0.5
COLA pmax pmax
comp=Z,22nm,1.2s
COLA College 32.91 333 P **P** 13 39 26.4 +0.4
baz=9.7
GERES GERESS Array B 32.91 159 P **P** 13 39 28.4 +2.0
comp=Z,2.5nm,0.9s,baz=10,slow=8.1,SNR=7.2
comp=Z,2.5nm,0.9s
ILAR Eielson Array 32.94 332 P **P** 13 39 27.2 +0.9
comp=Z,6.0nm,1.1s,baz=4.8,slow=7.6,SNR=19
ILAR PcP **PcP** 13 42 09.5 -0.5
comp=Z,2.1nm,0.8s,baz=332,slow=3.1,SNR=10
comp=Z,6.0nm,1.1s
ILAR Eilson Array 32.94 332 **P** 13 39 27.0 +0.7
J26L Joseph Creek 32.95 329 P **P** 13 39 26.7 +0.2
baz=11
J25K Salcha River, 32.98 331 P **P** 13 39 26.9 +0.1
baz=10
LANS Liptovska Anna 32.98 152 *e*P P 13 39 34.3 +7.4
LANS Liptovska Anna 32.98 152 *e*P P 13 39 34.3 +7.4
F15K North Star Dit 33.00 346 IAmb IAmb 13 39 29.1
comp=Z,16nm,0.9s
F15K North Star Dit 33.00 346 P **P** 13 39 27.6 +0.8
baz=5.4
G17K Kiwalik Mounta 33.04 343 P **P** 13 39 27.9 +0.7
baz=6.5
K29M Barlow Dome 33.08 324 IAmb IAmb 13 39 44.1
comp=Z,30nm,1.6s
K29M Barlow Dome 33.08 324 P **P** 13 39 28.3 +0.6
baz=12,SNR=5.5
MAYO Mayo, Yukon 33.17 323 P **P** 13 39 28.7 +0.3
baz=12
G16K Koyuk River 33.22 344 P **P** 13 39 30.1 +1.4
baz=6.0
VRH Novokhopyorsk 33.23 125 *e*P **P** 13 39 28.4 -0.6
VRH pmax pmax
comp=Z,100nm,0.7s
TNA Tin City 33.26 348 P **P** 13 39 29.5 +0.4
TNA Tin City 33.26 348 P **P** 13 39 30.1 +1.0
baz=4.5
NEA2 Nenana 33.27 333 IAmb IAmb 13 39 39.1
comp=Z,20nm,1.3s
NEA2 Nenana 33.27 333 P **P** 13 39 29.6 +0.4
baz=9.3
H18K Honhosa River 33.27 341 P **P** 13 39 29.9 +0.6
baz=7.0
F14K Arctic Creek 33.30 347 P **P** 13 39 30.7 +1.3
baz=5.0
HDA Harding Lake 33.30 332 P **P** 13 39 30.0 +0.5
baz=9.8
WRH Wood River Hil 33.32 333 IAmb IAmb 13 39 31.9
comp=Z,15nm,1.2s
I20K Naaghedeneel 33.41 338 P **P** 13 39 31.3 +0.9
baz=8.0
SCRK Sand Creek 33.50 329 P **P** 13 39 31.4 0.0
baz=10
H17K Granite Mounta 33.56 342 IAmb IAmb 13 39 41.6
comp=Z,17nm,1.2s
H17K Granite Mounta 33.56 342 P **P** 13 39 32.3 +0.5
baz=6.6
GCSA Galena City Sc 33.60 340 P **P** 13 39 32.4 +0.4
baz=7.3,SNR=9.2
MODS Modra-Piesok 33.60 154 *e*P P 13 39 41.8 +10
G15K Niukluk 33.69 345 P **P** 13 39 34.0 +1.1
baz=5.5
RIDG Independent Ri 33.80 330 P **P** 13 39 34.1 +0.2
baz=10
K24K Donnelly Dome 33.81 331 P **P** 13 39 34.3 +0.3
baz=9.9
L29M L29M 33.86 324 P **P** 13 39 33.7 -0.7
baz=12
BPAW Bear Paw Mtn. 33.89 335 IAmb IAmb 13 39 45.4
comp=Z,25nm,1.3s
BPAW Bear Paw Mtn. 33.89 335 P **P** 13 39 35.5 +0.9
baz=8.7
CONA Conrad Observa 33.95 156 *e*pP pP 13 39 43.6 +6.4
comp=Z,5.6nm,1.0s
J20K Nowinta River 34.01 337 P **P** 13 39 36.7 +1.1
baz=7.9
MCK McKinley 34.11 333 P **P** 13 39 37.6 +1.0
baz=9.1
ANM Nome 34.17 346 **P** 13 39 37.7 +0.7
ANM IAmb IAmb 13 39 39.1
comp=Z,12nm,0.8s
ANM Nome 34.17 346 P **P** 13 39 37.7 +0.7
ANM pmax pmax
comp=Z,12nm,0.8s
ANM Nome 34.17 346 P **P** 13 39 38.0 +1.0
baz=5.1,SNR=11
CHUM Lake Minchumin 34.19 336 P **P** 13 39 38.0 +0.8
baz=8.3,SNR=7.4
RONA Rosalia, Austr 34.21 156 *e*pP pP 13 39 46.3 +6.9
comp=Z,4.0nm,0.9s
BCAR Beaver Creek A 34.22 327 **P** 13 39 38.2 +0.6
L27K Beaver Creek, 34.23 327 IAmb IAmb 13 39 47.8
comp=Z,34nm,1.7s
L27K Beaver Creek, 34.23 327 P **P** 13 39 38.1 +0.5
baz=11
M30M Minto, Yukon 34.26 323 P **P** 13 39 38.4 +0.5
baz=12
MOTA Moosalm 34.27 162 *e*pP pP 13 39 46.8 +6.7
comp=Z,4.3nm,0.7s
J19K Poorman 34.28 338 IAmb IAmb 13 39 40.4
comp=Z,42nm,1.5s
J19K Poorman 34.28 338 P **P** 13 39 38.7 +0.8
baz=7.5
WATA Walderalm 34.31 161 *e*pP pP 13 39 47.2 +6.9
comp=Z,8.1nm,1.1s
L26K Log Cabin Wild 34.39 329 P **P** 13 39 39.4 +0.4
baz=10
M31M Drury Creek, Y 34.40 321 P **P** 13 39 39.2 +0.1
baz=12
KTH Kantishna Hill 34.43 335 IAmb IAmb 13 39 49.8
comp=Z,30nm,1.3s
TRF Thorofare Moun 34.49 334 P **P** 13 39 40.0 +0.1
baz=8.7
M29M Somme Creek 34.54 324 P **P** 13 39 40.8 +0.4
baz=11
PAX Paxson 34.61 330 P **P** 13 39 41.1 +0.1
baz=9.8
I17K Unalakleet 34.65 342 P **P** 13 39 42.3 +1.1
baz=6.2
DHY Denali Highway 34.65 332 IAmb IAmb 13 39 43.2
comp=Z,24nm,1.1s
DHY Denali Highway 34.65 332 P **P** 13 39 41.4 0.0
baz=9.3,SNR=6.0
KBA Koelnbreinsper 34.66 159 *e*pP pP 13 39 50.1 +6.7
comp=Z,2.6nm,0.9s
BVCY Beaver Creek 34.78 326 P **P** 13 39 42.7 +0.2
baz=11
YAK Yakutsk 34.82 37 **P** 13 39 42.5 -0.1
YAK IAmb IAmb 13 39 43.8
comp=Z,19nm,0.7s
YAK Yakutsk 34.82 37*ce*P **P** 13 39 42.9 +0.3
YAK pmax pmax
comp=Z,26nm,1.0s
K20K Telda 34.82 337 P **P** 13 39 43.1 +0.4
baz=7.8
J18K Innoko River 34.87 339 P **P** 13 39 43.8 +0.7
baz=7.2
M27K Edge Creek, AK 34.93 327 P **P** 13 39 43.9 +0.1
baz=10
ABTA Abfaltersbach 34.94 160 *e*pP pP 13 39 51.7 +6.0
comp=Z,4.4nm,1.2s
M26K Nabesna, AK 34.98 328 P **P** 13 39 44.6 +0.5
baz=10
WAT1 Susitna Watana 34.98 333 P **P** 13 39 44.7 +0.6
baz=9.0
J17K VABM Dome 35.06 341 P **P** 13 39 45.1 +0.4
baz=6.5
TUE Stuetta 35.07 164 P **P** 13 39 46.6 +1.4
MYKA Terra Mystica 35.12 159 *e*pP pP 13 39 54.2 +6.9
comp=Z,7.5nm,1.2s
SOKA Soboth 35.15 157 *e*pP pP 13 39 49.0 +1.5
comp=Z,8.3nm,1.9s
HARP HAARP 35.15 330 P **P** 13 39 45.1 -0.5
baz=9.7
GAMB Gambell 35.16 351 **P** 13 39 45.9 +0.4
GAMB IAmb IAmb 13 39 46.9
comp=Z,14nm,0.8s
GAMB Gambell 35.16 351 P **P** 13 39 45.9 +0.4
baz=3.3,SNR=11
PPLA Purkeypile 35.16 335 IAmb IAmb 13 39 60.0
comp=Z,48nm,1.4s
PPLA Purkeypile 35.16 335 P **P** 13 39 46.2 +0.4
baz=8.2
WAT6 Susitna Watana 35.17 332 P **P** 13 39 45.3 -0.5
baz=9.1
N31M Braeburn, Yuko 35.24 322 P **P** 13 39 46.8 +0.5
baz=12
J16K Anvik River 35.25 342 IAmb IAmb 13 39 48.5
comp=Z,22nm,0.8s
J16K Anvik River 35.25 342 P **P** 13 39 46.6 +0.3
baz=6.1,SNR=16
OBKA Obir 35.29 158 *e*pP pP 13 39 51.2 +2.5
comp=Z,5.0nm,0.9s
N32M Quiet Lake 35.30 320 P **P** 13 39 46.2 -0.7
baz=12
YUK3 Moose Creek 35.38 326 P **P** 13 39 47.4 -0.4
baz=11
CUT Chulitna 35.52 334 P **P** 13 39 48.6 -0.1
baz=8.5
SEY Seymchan 35.55 19 *e*P **P** 13 39 46.0 -3.0
SEY pmax pmax
comp=Z,22nm,1.9s
BORK Borovoye 35.58 94 **P** 13 39 50.7 +1.4
BORK Borovoye 35.58 94*ce*P **P** 13 39 50.5 +1.2
BORK pmax pmax
comp=Z,19nm,1.8s
BVAR Borovoye Array 35.61 94 P **P** 13 39 50.2 +0.7
comp=Z,2.2nm,0.7s,baz=353,slow=10,SNR=11
BVAR PcP **PcP** 13 42 17.8 -0.1
comp=Z,2.0nm,0.6s,baz=299,slow=4.8,SNR=4.3
BVAR LR LR 13 57 34.5
comp=Z,302nm,18.2s,baz=331,slow=42
comp=Z,2.2nm,0.7s
YUK4 Talbot Arm 35.64 324 P **P** 13 39 49.4 -0.6
baz=11
K17K Iditarod 35.70 340 IAmb IAmb 13 40 00.9
comp=Z,32nm,1.4s
K17K Iditarod 35.70 340 P **P** 13 39 51.2 +1.0
baz=6.6
SCM Sheep Creek Mo 35.88 331 P **P** 13 39 52.2 +0.3
baz=9.1
N25K Chitina, Valde 35.89 329 P **P** 13 39 52.7 +0.7
baz=9.6
J14K Nanvaranak Lak 35.91 344 IAmb IAmb 13 39 53.9
comp=Z,13nm,0.7s
J14K Nanvaranak Lak 35.91 344 P **P** 13 39 52.8 +0.7
baz=5.3
M23K Glacier View 35.95 332 P **P** 13 39 52.9 +0.5
baz=9.0
O30N Mendenhall 35.97 322 P **P** 13 39 52.9 +0.3
baz=11
SML Sawmill 35.98 332 P **P** 13 39 52.5 -0.2
baz=8.8
YUK6 Outpost Mounta 36.01 324 P **P** 13 39 53.3 +0.1
baz=11
SKT Skwentna 36.03 335 P **P** 13 39 52.4 -0.7
SKT IAmb IAmb 13 39 53.9
comp=Z,19nm,1.0s
SKT Skwentna 36.03 335 P **P** 13 39 52.9 -0.2
baz=8.1
L19K White Mountain 36.04 337 P **P** 13 39 53.6 +0.4
baz=7.4
HYT Haines Junctio 36.05 323 IAmb IAmb 13 40 26.6
comp=Z,27nm,1.6s
HYT Haines Junctio 36.05 323 P **P** 13 39 53.6 +0.1
baz=11
L18K Granite Mounta 36.11 339 P **P** 13 39 53.9 +0.2
baz=6.9
KLU Klutina 36.11 330 P **P** 13 39 54.0 +0.2
baz=9.3
P33M Teslin, Yukon 36.20 319 P **P** 13 39 54.3 -0.3
baz=12
M20K Styx River 36.23 336 P **P** 13 39 55.1 +0.2
baz=7.7
AKTO Attyubinsk 36.24 108 LR LR 13 57 26.8
comp=Z,255nm,18.2s,baz=12,slow=41
PMR Palmer 36.25 333 P **P** 13 39 55.3 +0.4
baz=8.6
CTG Chitna Glacier 36.26 326 P **P** 13 39 55.4 +0.2
baz=10
L17K Donlin 36.28 340 P **P** 13 39 55.9 +0.8
baz=6.5
K15K Wolf Creek Mou 36.28 343 P **P** 13 39 56.2 +1.0
baz=5.8
TEOL Teolo 36.28 162 P **P** 13 39 57.5 +2.1
TEOL IAmb IAmb 13 40 04.9
comp=Z,22nm,0.7s
O28M Mount Upton 36.35 325 P **P** 13 39 56.4 +0.3
baz=10
KNK Knik Glacier 36.38 332 P **P** 13 39 56.8 +0.7
baz=8.7
SUA Susitna One 36.49 334 P **P** 13 39 57.8 +0.7
baz=8.2
BMRM Bremner River 36.53 329 P **P** 13 39 57.4 0.0
baz=9.5
CRQE Cirque 36.62 328 P **P** 13 39 58.9 +0.7
baz=9.8
O29M Mount Kennedy 36.66 324 P **P** 13 39 59.3 +0.6
baz=11
TOAD Toad River Com 36.71 312 P **P** 13 40 00.3 +1.4
baz=13
L16K Owhat River 36.76 341 P **P** 13 40 00.7 +1.4
baz=6.2
K13K Kusilvak Mount 36.77 345 P **P** 13 40 00.1 +0.7
K13K IAmb IAmb 13 40 10.8
comp=Z,65nm,1.8s
K13K Kusilvak Mount 36.77 345 P **P** 13 40 00.7 +1.3
baz=4.9
M18K Stony River 36.78 338 P **P** 13 40 00.7 +1.2
baz=7.0
RC01 Rabbit Creek A 36.79 333 P **P** 13 40 00.4 +0.8
baz=8.4
R33M Jennings River 36.81 317 P **P** 13 40 00.8 +0.9
baz=12
SPCR Spurr Chakacha 36.85 335 P **P** 13 40 00.6 +0.5
baz=7.8
L15K Ungalak Mounta 36.89 343 P **P** 13 40 01.4 +1.0
baz=5.7
P32M Atlin 36.90 320 P **P** 13 40 01.0 +0.4
baz=11
ZALV Zalesovo Beam 36.94 79 P **P** 13 40 01.8 +0.9
comp=Z,1.9nm,0.6s,baz=352,slow=9.0,SNR=12
ZALV PcP **PcP** 13 42 21.3 -0.5
comp=Z,1.5nm,0.5s,baz=291,slow=5.0,SNR=5.3
ZALV LR LR 13 59 07.2
comp=Z,275nm,18.5s,baz=344,slow=43
comp=Z,1.9nm,0.6s
ZALV Zalesovo Beam 36.94 79 P **P** 13 40 01.4 +0.5
M17K Holitna River 36.96 339 P **P** 13 40 02.1 +1.1
baz=6.6
MLR Muntele Rosu 37.15 145 LR LR 13 54 05.9
comp=Z,177nm,20.6s,baz=3.0,slow=34
BGLC Bering Glacier 37.26 328 P **P** 13 40 03.9 +0.4
baz=9.6
L14K Kuka Creek 37.28 343 P **P** 13 40 04.3 +0.6
L14K IAmb IAmb 13 40 13.5
comp=Z,29nm,1.4s
L14K Kuka Creek 37.28 343 P **P** 13 40 04.2 +0.6
baz=5.4
Q32M Nakina River 37.37 318 P **P** 13 40 05.3 +0.6
baz=12
SLKM Skilak Lake 37.40 333 P **P** 13 40 05.1 +0.3
SLKM IAmb IAmb 13 40 33.8
comp=Z,31nm,1.2s
M16K Timber Creek 37.42 340 P **P** 13 40 05.9 +1.0
baz=6.2,SNR=10
KAIM Kayak Island 37.54 328 P **P** 13 40 06.3 +0.4
baz=9.3
N18K Kilae Creek 37.59 338 P **P** 13 40 07.3 +0.9
baz=6.9
DLBC Dease Lake 37.65 316 PcP **PcP** 13 42 24.5 +0.5
comp=Z,1.7nm,0.7s,baz=291,slow=0.8,SNR=4.5
FFC Flin Flon 37.66 290 **P** 13 40 07.0 0.0
FFC Flin Flon 37.66 290 P **P** 13 40 07.0 0.0
FFC pmax pmax
comp=Z,9.0nm,1.2s
ABKAR Akbulak array 37.67 106 P **P** 13 40 07.9 +0.8
P23K Montague Islan 37.70 331 P **P** 13 40 08.2 +0.8
baz=8.7

N17K Nushagak Hills 37.82 339 P P 13 40 09.1 +0.8
baz=6.5
M15K Kasigluk River 37.84 342 P P 13 40 08.9 +0.5
baz=5.8,SNR=7.6
M14K Bethel 37.84 343 P P 13 40 09.1 +0.6
baz=5.5
N16K Nishlik Lake 37.96 340 P P 13 40 10.4 +0.8
baz=6.2
O19K Port Alsworth 37.98 337 P P 13 40 10.1 +0.5
baz=7.2
OSSC Osservatorio P 38.09 162 P P 13 40 13.4 +2.6
M13K Dall Lake 38.24 344 IAmb IAmb 13 40 14.2
comp=Z,15nm,0.7s
M13K Dall Lake 38.24 344 P P 13 40 12.6 +0.9
baz=5.1
N15K Kwethluk River 38.33 341 P P 13 40 13.7 +1.1
baz=5.8
O18K Koktuh Hills 38.38 337 P P 13 40 13.6 +0.6
O18K IAmb IAmb 13 40 23.8
comp=Z,34nm,1.4s
O18K Koktuh Hills 38.38 337 P P 13 40 13.2 +0.2
baz=6.9
M11K Mekoryuk 38.38 346 P P 13 40 13.9 +1.0
baz=4.4
O17K Koliganek Bris 38.57 339 P P 13 40 15.3 +0.7
baz=6.5
N14K Kuskokwak Cree 38.65 342 IAmb IAmb 13 40 17.3
comp=Z,21nm,0.8s
N14K Kuskokwak Cree 38.65 342 P P 13 40 16.3 +1.0
baz=5.4
O16K Kokwok River B 38.80 339 P P 13 40 17.2 +0.7
baz=6.2
MA2 Magadan 38.82 21 LR LR 13 55 33.7
comp=Z,63nm,18.2s,baz=320,slow=35
MA2 Magadan 38.82 21 *ce*P P 13 40 15.7 -1.0
MA2 pmax pmax
comp=Z,13nm,1.0s
P18K Big Mountain, 38.84 337 P P 13 40 17.1 +0.2
baz=6.8
BRZS Berezniki 38.91 93 *e*P P 13 40 19.5 +1.9
BRZS Berezniki 38.91 93 *e*P P 13 40 19.6 +1.9
T35M Bob Quinn 39.10 316 P P 13 40 20.0 +0.8
baz=11
P17K Kvichak River 39.11 338 P P 13 40 19.4 +0.3
baz=6.5
KURK Kurchatov 39.12 87 PcP 13 42 29.0 +0.4
KURK Kurchatov 39.12 87 P P 13 40 20.5 +1.2
KURK Kurchatov 39.12 87 *ce*P P 13 40 20.8 +1.5
KURK pmax pmax
comp=Z,16nm,1.3s
KURBB Kurchatov Arra 39.20 87 P P 13 40 21.0 +1.1
comp=Z,8.0nm,0.9s,baz=352,slow=7.1,SNR=56
KURBB PcP PcP 13 42 29.0 +0.2
comp=Z,2.0nm,0.6s,baz=339,slow=3.3,SNR=10
KURBB LR LR 13 59 34.3
comp=Z,263nm,19.4s,baz=207,slow=41
comp=Z,8.0nm,0.9s
O14K Tigyukauivet M 39.30 342 P P 13 40 21.0 +0.2
O14K IAmb IAmb 13 40 30.2
comp=Z,34nm,1.2s
O14K Tigyukauivet M 39.30 342 P P 13 40 21.3 +0.6
baz=5.4
O15K Ungalikthiuk R 39.31 341 IAmb IAmb 13 40 22.6
comp=Z,24nm,0.9s
O15K Ungalikthiuk R 39.31 341 P P 13 40 21.0 +0.2
baz=5.8
P16K Nushagak River 39.36 339 P P 13 40 21.6 +0.4
baz=6.2
BATG Bathurst New B 39.42 252 P P 13 40 22.5 +0.6
BATG IAmb IAmb 13 41 11.7
comp=Z,67nm,1.8s
Q16K King Salmon 39.63 338 P P 13 40 24.0 +0.5
baz=6.4
SEM Semipalatinsk 39.67 85 *e*P P 13 40 25.3 +1.1
SEM Semipalatinsk 39.67 85 *e*P P 13 40 25.4 +1.1
LMQ La Malbaie 39.80 256 P P 13 40 25.7 +0.7
LMQ IAmb IAmb 13 40 36.7
comp=Z,39nm,1.6s
KDAK Kodiak Island 40.27 335 *i* P P 13 40 27.6 -1.2
KDAK pmax pmax
comp=Z,51nm,0.8s
KDAK Kodiak Island 40.27 335 P P 13 40 29.1 +0.3
baz=7.2
KIV Kislovodsk 40.48 126 *e*P P 13 40 35.2 +4.4
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,98nm,16.0s
E62A Clayton Lake 40.58 255 P P 13 40 32.2 +0.7
E62A IAmb IAmb 13 41 18.5
comp=Z,101nm,2.0s
SHA1 Shidzhatmaz 40.69 126 *i* P P 13 40 35.1 +2.4
EDM Edmonton 40.72 300 P P 13 40 32.8 +0.2
EDM IAmb IAmb 13 40 34.3
comp=Z,23nm,1.0s
EDM Edmonton 40.72 300 P P 13 40 32.8 +0.2
EDM pmax pmax
comp=Z,23nm,1.0s
KBZ Khabaz 40.73 126 P P 13 40 33.5 +0.8
comp=Z,14nm,0.9s,baz=328,slow=3.5,SNR=14
KBZ LR LR 13 58 14.4
comp=Z,138nm,19.5s,baz=350,slow=37
comp=Z,14nm,0.9s
KBZ Khabaz 40.73 126 *ce*P P 13 40 35.0 +2.3
KBZ pmax pmax
comp=Z,29nm,0.9s
R16K Pilot Point 40.79 339 P P 13 40 34.2 +1.1
baz=6.1
ULM Lac du Bonnet 41.10 283 P P 13 40 36.0 +0.3
comp=Z,18nm,0.6s,baz=13,slow=8.8,SNR=3.0
ULM LR LR 13 57 33.8
comp=Z,344nm,20.3s,baz=16,slow=36
comp=Z,18nm,0.6s
ULM Lac du Bonnet 41.10 283 P 13 40 36.2 +0.5
ULM IAmb IAmb 13 40 37.0
comp=Z,22nm,0.8s
ULM Lac du Bonnet 41.10 283 P P 13 40 36.2 +0.5
ULM pmax pmax
comp=Z,22nm,0.8s
EPLO Experimental L 41.33 280 P 13 40 37.8 +0.2
EPLO IAmb IAmb 13 40 38.8
comp=Z,32nm,0.7s
DGZ Jazzator, Alta 41.46 79 *i* P P 13 40 40.2 +1.3
DGZ pmax pmax
comp=Z,9.0nm,1.7s
MOY Mondy 41.55 65 *e*P P 13 40 41.8 +2.3
ESDC Sonseca Array 41.59 180 P P 13 40 40.1 +0.2
comp=Z,2.4nm,1.0s,baz=358,slow=7.3,SNR=8.4
comp=Z,2.4nm,1.0s
ESDC Sonseca Array 41.59 180 P 13 40 41.9 +2.0
GGN Saint George 41.65 252 P P 13 40 40.5 +0.3
GGN IAmb IAmb 13 40 50.8
comp=Z,38nm,1.3s
PKME Peaks-Kenny Pk 41.87 255 P P 13 40 42.6 +0.6
TLY Talaya 41.90 63 *ce*P P 13 40 44.2 +1.9
TLY pmax pmax
comp=Z,6.0nm,1.2s
KNGR Kungurtug, Tuv 42.09 69 *i* P P 13 40 44.6 +0.7
KNGR pmax pmax
comp=Z,6.0nm,0.9s
ZEA Zeya 42.75 41 *e*P P 13 40 51.0 +1.8
ZEA pmax pmax
comp=Z,10.0nm,0.9s
AGMN Agassiz Nation 43.00 282 P 13 40 51.6 +0.4
AGMN IAmb IAmb 13 40 53.5
comp=Z,42nm,1.3s
ZSN Zaisan 43.26 82 *e*P P 13 40 54.6 +1.2
ZSN Zaisan 43.26 82 *e*P P 13 40 54.7 +1.2
MK31 Makanchi Array 43.51 85 *ce*P P 13 40 56.6 +1.2
MKAR Makanchi Array 43.51 85 P P 13 40 56.5 +1.1
comp=Z,2.2nm,0.6s,baz=343,slow=7.6,SNR=29
MKAR PcP PcP 13 42 42.4 -0.7
comp=Z,0.7nm,0.5s,baz=313,slow=3.5,SNR=6.7
MKAR LR LR 14 02 40.6
comp=Z,182nm,18.2s,baz=334,slow=41
comp=Z,2.2nm,0.6s
MKAR Makanchi Array 43.51 85 P P 13 40 56.2 +0.8
MKAR Makanchi Array 43.51 85 P P 13 40 56.2 +0.8
MKAR 13 42 42.4
BBB Bella Bella 43.58 313 LR LR 13 58 47.1
comp=Z,100nm,21.2s,baz=31,slow=36
BR131 Keskin Array S 43.61 137 *i* P P 13 40 58.3 +1.8
BRTR Keskin Array B 43.61 137 P P 13 40 58.2 +1.8
comp=Z,1.7nm,0.8s,baz=353,slow=4.9,SNR=6.3
BRTR LR LR 14 00 02.1
comp=Z,59nm,21.1s,baz=346,slow=37
comp=Z,1.7nm,0.8s

E38A The Farm, Brul 43.99 277 P 13 40 59.6 +0.4
E38A IAmb IAmb 13 41 00.9
comp=Z,40nm,1.3s
DGMT Dagmar 44.07 290 IAmb IAmb 13 41 01.8
comp=Z,16nm,0.8s
GNI Garni 44.48 125 LR LR 14 00 13.8
comp=Z,116nm,20.4s,baz=344,slow=37
GNI Garni 44.48 125 *i* P P 13 41 06.1 +2.6
GNI pmax pmax
comp=Z,37nm,2.0s
TDK Taldyqorghan 44.65 89 *e*P P 13 41 06.2 +1.6
TDK pmax pmax
comp=Z,10.0nm,0.4s
TDK Taldyqorghan 44.65 89 *e*P P 13 41 06.2 +1.6
comp=Z,9.5nm,0.4s
BRLS Borolday 45.25 98 *e*P P 13 41 12.8 +3.5
BRLS Borolday 45.25 98 *e*P P 13 41 12.9 +3.5
KKAR Karatay Array 45.28 97 P P 13 41 11.2 +1.6
KKAR Karatay Array 45.28 97 P P 13 41 11.2 +1.6
L64A Middleborough 45.36 255 P P 13 41 11.1 +0.9
KUU Kurty 45.41 91 *e*P P 13 41 12.3 +1.7
KUU Kurty 45.41 91 *e*P P 13 41 12.4 +1.7
F33A 5 Mile Ranch, 45.46 282 IAmb IAmb 13 41 12.6
comp=Z,30nm,1.4s
SPMN Marine on St. 45.53 278 IAmb IAmb 13 41 20.7
comp=Z,20nm,1.2s
PETK Petropavlovsk- 45.61 16 LR LR 13 59 46.4
comp=Z,54nm,19.2s,baz=22,slow=35
KEST Kesra 45.78 165 P P 13 41 14.3 +0.6
comp=Z,3.0nm,0.6s,baz=301,slow=9.1,SNR=4.3
comp=Z,3.0nm,0.6s
CHM Chimkent 45.91 99 *e*P P 13 41 16.4 +1.8
CHM pmax pmax
comp=Z,16nm,1.3s
CHM Chimkent 45.91 99 *e*P P 13 41 16.5 +1.8
comp=Z,16nm,1.3s
SONM Songino Array 46.04 62 P P 13 41 16.5 +0.8
comp=Z,3.3nm,0.8s,baz=337,slow=6.4,SNR=17
SONM PcP PcP 13 42 52.4 +0.5
comp=Z,2.2nm,0.6s,baz=319,slow=2.9,SNR=7.3
SONM LR LR 14 01 38.4
comp=Z,437nm,21.8s,baz=359,slow=38
comp=Z,3.3nm,0.8s
SONM Songino Array 46.04 62 P P 13 41 16.8 +1.1
SONM IAmb IAmb 13 41 27.6
comp=Z,20nm,1.8s
HILR Hailar Array B 46.05 49 P P 13 41 16.9 +1.2
comp=Z,0.8nm,0.4s,baz=3.8,slow=8.9,SNR=3.9
HILR PcP PcP 13 42 51.6 -0.2
comp=Z,1.8nm,0.4s,baz=328,slow=5.1,SNR=5.4
HILR LR LR 14 01 31.6
comp=Z,74nm,18.3s,baz=155,slow=37
comp=Z,0.8nm,0.4s
NEW Newport 46.08 302 P P 13 41 16.3 +0.5
comp=Z,4.8nm,0.9s,baz=7.4,slow=6.7,SNR=12
NEW LR LR 14 00 42.0
comp=Z,437nm,19.2s,baz=16,slow=36
comp=Z,4.8nm,0.9s
ULN Ulaanbaatar 46.10 61 P 13 41 17.1 +0.9
ULN IAmb IAmb 13 41 19.3
comp=Z,11nm,0.8s
ULN Ulaanbaatar 46.10 61 *ce*P P 13 41 18.6 +2.4
ULN pmax pmax
comp=Z,18nm,1.3s
LAO LASA Array 46.11 291 IAmb IAmb 13 41 18.5
comp=Z,16nm,1.0s
MDOK Medeo 46.24 91 *e*P P 13 41 18.8 +1.5
MDOK Medeo 46.24 91 *e*P P 13 41 18.9 +1.5
B08A Colvile Reser 46.27 304 IAmb IAmb 13 41 19.9
comp=Z,15nm,1.1s
TNSS Tian-Shan 46.34 91 *e*P P 13 41 19.7 +1.2
TNSS Tian-Shan 46.34 91 *e*P P 13 41 19.7 +1.2
AAK Ala-Archa 46.35 94 LR LR 14 03 48.7
comp=Z,152nm,18.8s,baz=338,slow=40
AAK Ala-Archa 46.35 94 P 13 41 20.3 +2.1
AAK IAmb IAmb 13 41 29.3
comp=Z,9.2nm,0.8s
AAK Ala-Archa 46.35 94 *ce*P P 13 41 21.0 +2.7
AAK pmax pmax
comp=Z,24nm,1.6s
UZB Uzynbulak 46.56 89 *e*P P 13 41 21.5 +1.7
UZB Uzynbulak 46.56 89 *e*P P 13 41 21.5 +1.7
SHLS Shalkode 46.62 88 *e*P P 13 41 22.2 +2.0
SHLS pmax pmax
comp=Z,10.0nm,1.5s
SHLS Shalkode 46.62 88 *e*P P 13 41 22.3 +2.0
comp=Z,10nm,1.5s
MSO Missoula 47.06 298 IAmb IAmb 13 41 25.2
comp=Z,24nm,1.2s
WMQ Urumqi 47.24 80 *e*P P 13 41 27.9 +2.8
WMQ pP pwP 13 41 34.9 +3.6
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ LR LR
comp=Z,180nm,24.1s
JFWS Jewell Farm 47.39 275 IAmb IAmb 13 41 28.8
comp=Z,11nm,0.6s
ARSB Arslanbob 47.40 95 IAmb IAmb 13 41 42.7
comp=Z,32nm,1.7s
GNW Green Mountain 47.49 307 IAmb IAmb 13 41 28.9
comp=Z,14nm,0.9s
KLR Kul'dur 47.66 38 LR LR 14 01 59.3
comp=Z,13nm,20.3s,baz=4.5,slow=37
KLR Kul'dur 47.66 38 *ce*P P 13 41 20.2 -8.0
KLR pmax pmax
comp=Z,29nm,5.1s
BOZ Bozeman (W) 47.94 296 IAmb IAmb 13 41 32.4
comp=Z,19nm,1.8s
RLMT Red Lodge 48.08 294 IAmb IAmb 13 41 35.2
comp=Z,16nm,1.4s
LON Longmire 48.17 306 IAmb IAmb 13 41 33.9
comp=Z,29nm,1.5s
RSSD Black Hills 48.30 288 P 13 41 33.5 0.0
RSSD IAmb IAmb 13 41 35.3
comp=Z,15nm,0.9s
RSSD Black Hills 48.30 288 P P 13 41 33.5 0.0
RSSD pmax pmax
comp=Z,15nm,0.9s
N49A Columbus Grove 48.39 268 IAmb IAmb 13 41 37.8
comp=Z,18nm,1.1s
O54A Avella 48.53 264 IAmb IAmb 13 41 36.2
comp=Z,13nm,0.7s
YHH Holmes Hill 48.63 295 P P 13 41 36.3 +0.2
YHB Horse Butte 48.71 295 IAmb IAmb 13 43 12.6
comp=Z,19nm,1.4s
O52A Adamsville 48.82 266 IAmb IAmb 13 41 38.5
comp=Z,13nm,0.7s
O49A Covington 49.14 268 P P 13 41 39.9 +0.2
Q56A Snyder Ridge, 49.46 263 IAmb IAmb 13 41 46.4
comp=Z,24nm,1.1s
MOOW Moose Ponds 49.63 295 P P 13 41 43.8 +0.2
KSH2 Kashi 49.94 93 P P 13 41 48.8 +2.8
KSH2 sP pwP 13 41 55.6 +3.4
KSH2 pmax pmax
comp=Z,4.0nm,1.2s
KSH2 LR LR
comp=Z,220nm,9.3s
KSH2 LR LR
comp=Z,300nm,11.0s
Q52A Bidwell 50.02 266 IAmb IAmb 13 41 49.4
comp=Z,40nm,1.5s
K22A Casper 50.10 290 IAmb IAmb 13 41 47.9
comp=Z,11nm,0.7s
Q51A Peebles 50.12 267 IAmb IAmb 13 41 48.2
comp=Z,10nm,0.8s
PDAR Pinedale Array 50.43 293 P P 13 41 50.1 +0.4
comp=Z,2.5nm,1.1s,baz=25,slow=3.9,SNR=14
PDAR LR LR 14 02 50.9
comp=Z,128nm,20.9s,baz=0.0,slow=36
comp=Z,2.5nm,1.1s
PDAR Pinedale Array 50.43 293 P P 13 41 49.8 +0.1
MMAI Mount Meron Ar 50.43 137 LR LR 14 04 46.1
comp=Z,29nm,19.5s,baz=324,slow=38
BNX BinXian 50.67 43 ⇑P P 13 41 51.2 0.0
BNX pmax pmax
comp=Z,4.0nm,0.9s
R50A Paris 51.00 268 IAmb IAmb 13 41 54.8
comp=Z,12nm,0.6s
R49A Shelbyville 51.12 269 IAmb IAmb 13 41 55.8
comp=Z,14nm,0.7s
T59A Double "B" Far 51.24 261 IAmb IAmb 13 41 57.2
comp=Z,14nm,0.7s
ASF Jabal al Asfar 51.43 135 LR LR 14 04 42.6
comp=Z,47nm,18.3s,baz=30,slow=37
J05D Fort Rock, OR 51.51 304 IAmb IAmb 13 42 00.7
comp=Z,16nm,0.9s
S51A Beattyville 51.52 267 P 13 41 57.9 +0.3

S51A IAmb IAmb 13 41 58.2
comp=Z,9.9nm,0.7s
K05A Summer Lake 52.01 304 IAmb IAmb 13 42 04.1
comp=Z,30nm,1.4s
KSU1 Kansas State U 52.10 280 IAmb IAmb 13 42 03.2
comp=Z,15nm,0.9s
R40A Maddies Statio 52.22 276 IAmb IAmb 13 42 03.2
comp=Z,12nm,0.8s
U56A King 52.28 263 IAmb IAmb 13 42 04.8
comp=Z,12nm,0.9s
T50A Nancy 52.31 268 IAmb IAmb 13 42 04.6
comp=Z,16nm,0.7s
U54A Nelsons Funny 52.34 265 IAmb IAmb 13 42 05.3
comp=Z,20nm,0.8s
CN2 Changchun 52.38 45 *e*P P 13 42 01.6 -2.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
TZTN Tazewell 52.58 267 IAmb IAmb 13 42 07.0
comp=Z,10nm,0.8s
V58A Windy Hill, Pi 52.63 262 IAmb IAmb 13 42 07.5
comp=Z,12nm,0.9s
BSUT Blindstream Ca 52.79 294 IAmb IAmb 13 42 17.7
comp=Z,16nm,1.0s
CBKS Cedar Bluff 52.85 283 IAmb IAmb 13 42 08.6
comp=Z,28nm,1.1s
V55A Taylorsville 52.90 264 P P 13 42 08.8 +0.8
V55A IAmb IAmb 13 42 09.4
comp=Z,15nm,0.8s
YBH Yreka Blue Hor 53.22 305 LR LR 14 03 54.8
comp=Z,19nm,19.7s,baz=12,slow=35
GTA2 Gaotai 53.29 70 *e*P P 13 42 12.1 +1.1
GTA2 sP pwP 13 42 18.7 +1.5
GTA2 pmax pmax
comp=Z,5.0nm,0.9s
GTA2 LR LR
comp=Z,230nm,16.3s
GTA2 LR LR
comp=Z,200nm,16.3s
GTA2 LR LR
comp=Z,230nm,20.7s
V53A Saluda 53.32 266 IAmb IAmb 13 42 12.5
comp=Z,18nm,1.0s
TKL Tuckaleechee C 53.48 267 LR LR 14 04 27.4
comp=Z,208nm,19.2s,baz=16,slow=36
TKL Tuckaleechee C 53.48 267 IAmb IAmb 13 42 13.4
comp=Z,8.9nm,0.7s
Q24A Divide 53.52 288 IAmb IAmb 13 42 14.3
comp=Z,23nm,0.9s
HHC Hu-ho-hao-te 53.60 58 *e*P P 13 42 14.6 +1.4
HHC pmax pmax
comp=Z,4.0nm,0.5s
HHC pmax pmax
comp=Z,92nm,5.6s
ASAJ Asahikawa 53.68 30 PcP PcP 13 43 19.7 0.0
comp=Z,10.0nm,0.9s,baz=316,slow=2.2,SNR=11
JKA Kamikawa-asahi 53.68 30 PcP 13 43 19.7 0.0
EIL Elat 53.70 138 LR LR 14 06 58.6
comp=Z,35nm,20.1s,baz=2.0,slow=38
V48A Smith Brothers 53.88 270 IAmb IAmb 13 42 15.6
comp=Z,10nm,0.6s
BIRD Birdtown, Kers 53.96 263 IAmb IAmb 13 42 17.2
comp=Z,16nm,0.8s
PAULI Pauline 54.00 264 P P 13 42 16.4 +0.3
PAULI IAmb IAmb 13 42 17.3
comp=Z,20nm,1.0s
BG3 Lake Jocassee 54.01 266 IAmb IAmb 13 42 17.3
comp=Z,17nm,0.8s
W52A Murphy 54.06 267 IAmb IAmb 13 42 17.6
comp=Z,12nm,0.8s
LCAR Lake Charles 54.23 274 IAmb IAmb 13 42 21.0
comp=Z,23nm,1.6s
U38A Gravette 54.36 277 IAmb IAmb 13 42 18.5
comp=Z,11nm,0.8s
Q16A Castle Valley 54.43 294 IAmb IAmb 13 42 29.4
comp=Z,18nm,1.0s
JSC Jenkinsville 54.44 264 P P 13 42 20.0 +0.7
JSC Jenkinsville 54.44 264 P P 13 42 20.0 +0.7
JSC pmax pmax
comp=Z,22nm,0.7s
PV07 Paradox Valley 54.54 291 IAmb IAmb 13 42 21.9
comp=Z,15nm,1.1s
PV15 Paradox Valley 54.61 291 IAmb IAmb 13 42 22.4
comp=Z,15nm,0.9s
PV16 Nyswonger Mesa 54.71 292 IAmb IAmb 13 42 34.5
comp=Z,21nm,0.9s
PV03 Paradox Valley 54.75 292 IAmb IAmb 13 42 23.6
comp=Z,22nm,1.0s
PV18 Skein Mesa, Pa 54.77 292 P 13 42 22.1 +0.2
PAHR Pah Rah Range 54.78 302 IAmb IAmb 13 42 34.8
comp=Z,34nm,2.0s
TCRU Three Creeks R 54.92 295 IAmb IAmb 13 42 25.4
comp=Z,9.8nm,1.0s
T25A Trinidad 55.20 287 IAmb IAmb 13 42 34.3
comp=Z,16nm,1.5s
Y52A Lilburn 55.29 266 IAmb IAmb 13 42 26.3
comp=Z,19nm,1.1s
HMU Henry Mountain 55.33 293 IAmb IAmb 13 43 04.1
comp=Z,21nm,1.5s
MTPU Mount Pierson 55.44 295 IAmb IAmb 13 42 37.3
comp=Z,15nm,1.3s
RTBA Rita Blanca 55.63 285 IAmb IAmb 13 42 29.1
comp=Z,23nm,1.2s
GOGA Godfrey 55.64 266 IAmb IAmb 13 42 28.6
comp=Z,13nm,0.8s
Y49A Blount Mountai 55.66 269 IAmb IAmb 13 42 27.9
comp=Z,9.2nm,0.8s
MVCO Mesa Verde 55.73 291 IAmb IAmb 13 42 40.7
comp=Z,33nm,1.4s
GOMU GeErMu 55.78 75 P P 13 42 30.8 +1.4
GOMU PcP PcP 13 43 29.0 +0.6
GOMU pmax pmax
comp=Z,10.0nm,1.1s
NVAR Mina Array Bea 55.90 300 P P 13 42 30.1 0.0
comp=Z,4.3nm,1.0s,baz=17,slow=6.1,SNR=13
NVAR LR LR 14 06 32.4
comp=Z,220nm,19.9s,baz=42,slow=36
comp=Z,4.3nm,1.0s
X40A Basin Creek Fa 56.03 275 IAmb IAmb 13 42 31.5
comp=Z,29nm,1.6s
MIAR Mount Ida 56.09 276 IAmb IAmb 13 42 32.1
comp=Z,13nm,0.8s
KNB Kanab 56.53 295 IAmb IAmb 13 42 39.9
comp=Z,19nm,1.2s
PH02 Texas Public H 56.54 284 IAmb IAmb 13 42 35.5
comp=Z,15nm,0.9s
152A Waverly Hall 56.56 267 IAmb IAmb 13 42 35.5
comp=Z,29nm,1.7s
X34A Smith Ranch, M 56.69 280 P P 13 42 36.0 +0.5
LZH Lanzhou 57.22 67 *e*P P 13 42 48.4 +9.0
LZH sP pwP 13 42 59.0 +13
LZH pmax pmax
comp=Z,7.0nm,1.5s
LZH LR LR
comp=N,190nm,18.2s
LZH LR LR
comp=E,240nm,16.5s
LZH LR LR
comp=Z,300nm,17.9s
LZDM Lanzhou Array 57.32 67 P P 13 42 40.1 -0.2
comp=Z,0.3nm,0.3s,baz=22,slow=8.1,SNR=5.1
comp=Z,0.3nm,0.3s
HNS HongShan 57.41 56 ⇑P P 13 42 41.9 +1.5
HNS pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 57.65 289 LR LR 14 08 07.2
comp=Z,236nm,19.3s,baz=24,slow=37
ANMO Albuquerque 57.65 289 P 13 42 42.7 +0.2
ANMO IAmb IAmb 13 42 43.9
comp=Z,12nm,1.2s
ANMO Albuquerque 57.65 289 *ce*P P 13 42 43.1 +0.6
ANMO pmax pmax
comp=Z,18nm,1.7s
WUAZ Wupatki 57.80 293 IAmb IAmb 13 42 45.5
comp=Z,18nm,1.0s
W18A Petrified Fore 57.96 292 IAmb IAmb 13 42 46.1
comp=Z,16nm,0.9s
MSTX Muleshoe 58.06 285 IAmb IAmb 13 42 48.9
comp=Z,24nm,1.4s
V12A Nelson 58.09 297 IAmb IAmb 13 42 47.5
comp=Z,11nm,0.9s
APMT Aspermont 58.29 282 IAmb IAmb 13 42 48.3
comp=Z,16nm,1.0s
PLPT Palo Pinto 58.52 280 P P 13 42 48.9 +0.6
Y22A Socorro 58.72 289 IAmb IAmb 13 42 51.3
comp=Z,11nm,1.1s
GSC Goldstone, Bar 58.77 298 IAmb IAmb 13 43 00.2
comp=Z,9.8nm,1.1s

KSRS	**Korea Array**	**58.92**	**44**	P	**P**	**13 42 50.5**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=355,slow=6.7,SNR=5.2						
KSRS				PcP	**PcP**	**13 43 39.5**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=355,slow=4.8,SNR=5.1						
KSRS				LR	LR	14 07 51.0	
	comp=Z,34nm,20.9s,baz=345,slow=36						
	comp=T,1.6nm,0.8s						
WHTX	**Lake Whitney,**	**59.19**	**279**	lAmb	lAmb	13 42 54.0	
	comp=Z,8.1nm,0.8s						
129A	**Stewart Farms,**	**59.24**	**284**	lAmb	lAmb	13 43 03.7	
	comp=Z,4.7nm,0.9s						
128A	**Castleberry Fa**	**59.34**	**284**	lAmb	lAmb	13 43 04.1	
	comp=Z,7.4nm,1.0s						
IRM	**Iron Mountain**	**59.67**	**297**	lAmb	lAmb	13 43 06.2	
	comp=Z,12nm,1.2s						
ODSA	**Odessa**	**59.84**	**284**	lAmb	lAmb	13 42 58.9	
	comp=Z,12nm,0.9s						
XAN	**Xi'an**	**59.94**	**62**	⇑P	**P**	**13 42 58.6**	**+0.4**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BRDY	**Brady**	**60.12**	**281**	lAmb	lAmb	13 43 00.7	
	comp=Z,13nm,0.9s						
PFO	**Pinyon Flats O**	**60.39**	**298**	LR	LR	14 09 46.3	
	comp=Z,178nm,18.6s,baz=29,slow=37						
MNHN	**Monahans**	**60.64**	**284**	lAmb	lAmb	13 43 04.2	
	comp=Z,11nm,0.8s						
PECS	**Pecos**	**60.77**	**285**	lAmb	lAmb	13 43 08.2	
	comp=Z,22nm,1.6s						
MJAR	**Matsushiro Arr**	**60.84**	**35**	P	**P**	**13 43 04.0**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=352,slow=6.8,SNR=7.7						
MJAR				PcP	**PcP**	**13 43 47.6**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=19,slow=4.8,SNR=4.2						
	comp=Z,3.6nm,0.9s						
MJAR	**Matsushiro Arr**	**60.84**	**35**	lAmb	lAmb	13 45 03.5	
	comp=Z,19nm,1.9s						
TUC	**Tucson**	**60.87**	**292**		**P**	**13 43 05.1**	**+0.4**
TUC				lAmb	lAmb	13 43 06.6	
	comp=Z,13nm,1.0s						
TUC	**Tucson**	**60.87**	**292**	P	**P**	**13 43 05.1**	**+0.4**
TUC				pmax	pmax		
	comp=Z,13nm,1.0s						
TPB05	**Hovey Rd**	**61.14**	**285**	lAmb	lAmb	13 43 09.1	
	comp=Z,8.1nm,0.8s						
TPB01	**Permian Basin**	**61.18**	**285**	lAmb	lAmb	13 43 08.4	
	comp=Z,11nm,0.9s						
LSA	**Lhasa**	**61.60**	**80**	P	**P**	**13 43 10.4**	**+0.3**
HNDO	**Hondo**	**61.89**	**280**	lAmb	lAmb	13 43 12.4	
	comp=Z,8.6nm,1.1s						
SAND	**Sanderson**	**61.90**	**283**	lAmb	lAmb	13 43 15.2	
	comp=Z,14nm,1.5s						
TXAR	**Lajitas Array**	**62.74**	**285**	P	**P**	**13 43 17.2**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=41,slow=5.0,SNR=42						
TXAR				LR	LR	14 10 24.3	
	comp=Z,149nm,20.2s,baz=16,slow=36						
	comp=Z,3.3nm,0.8s						
TXAR	**Lajitas Array**	**62.74**	**285**	P	**P**	**13 43 17.4**	**+0.2**
TXAR	**Lajitas Array**	**62.74**	**285**	P	**P**	**13 43 17.5**	**+0.2**
NJ2	**Nanjing**	**63.20**	**53**	*e*P	**P**	**13 43 20.4**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WHN	**Wuhan**	**64.11**	**58**	P	**P**	**13 43 26.8**	**+0.6**
HSIG		**64.13**	**292**	lAmb	lAmb	13 43 35.7	
	comp=Z,17nm,1.1s						
HBVL	**Hebbronville**	**64.21**	**279**	P	**P**	**13 43 27.7**	**+0.8**
JHJ	**Hachijo jima 2**	**64.37**	**34**	LR	LR	14 11 46.4	
	comp=Z,11nm,18.8s,baz=7.0,slow=36						
PZH	**PanZhiHua**	**66.33**	**71**	P	**P**	**13 43 43.5**	**+2.7**
GYA	**Guiyang**	**67.08**	**66**	P	**P**	**13 43 47.1**	**+1.5**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TNCH	**TengChong**	**67.30**	**74**	P	**P**	**13 43 49.7**	**+2.6**
TNCH				pP	pwP	13 43 54.2	+0.8
TNCH				sP	sP	13 43 56.1	+6.4
TNCH				pmax	pmax		
	comp=Z,9.0nm,1.7s						
CRPR	**Cabo Rojo, PR**	**68.31**	**246**	P	**P**	**13 43 53.8**	**+0.6**
BRDH	**Bariadhala**	**68.57**	**81**	LR	LR	14 19 22.0	
	comp=Z,214nm,19.8s,baz=350,slow=41						
LPIG	**La Paz**	**68.87**	**290**	LR	LR	14 17 22.1	
	comp=Z,108nm,21.1s,baz=357,slow=39						
CMIG	**Matias Romero**	**73.42**	**274**	LR	LR	14 19 25.6	
	comp=Z,104nm,21.1s,baz=359,slow=38						
TLIG	**Tlapa**	**73.52**	**278**		**P**	**13 44 25.6**	**+0.5**
TLIG				lAmb	lAmb	13 44 35.6	
	comp=Z,18nm,1.1s						
CMAR	**Chiang Mai Arr**	**73.82**	**75**	P	**P**	**13 44 26.5**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=343,slow=6.6,SNR=9.7						
CMAR				LR	LR	14 20 21.7	
	comp=Z,85nm,19.9s,baz=325,slow=39						
	comp=Z,1.2nm,0.8s						
MTO3	**Montecristo**	**75.20**	**268**	lAmb	lAmb	13 44 45.3	
	comp=Z,13nm,1.1s						
SDV	**Santo Domingo**	**77.78**	**248**		**P**	**13 44 49.9**	**+0.3**
SDV				lAmb	lAmb	13 44 50.7	
	comp=Z,11nm,0.7s						
JTS	**Las Juntas de**	**78.55**	**263**	LR	LR	14 20 27.7	
	comp=Z,241nm,19.4s,baz=61,slow=36						
MDP	**Montagnes des**	**79.12**	**230**	LR	LR	14 17 56.9	
	comp=Z,76nm,18.2s,baz=299,slow=34						
PALK	**Pallekele**	**81.99**	**94**	LR	LR	14 23 59.3	
	comp=Z,108nm,21.1s,baz=348,slow=37						
PSI	**Prapat**	**89.19**	**77**	P	**P**	**13 45 47.5**	**-0.6**
PSI				pmax	pmax		
	comp=Z,16nm,0.8s						
RPSI	**Rantau Prapat**	**89.29**	**77**		**P**	**13 45 47.5**	**-0.9**
MYLDM	**Lahad Datu**	**89.64**	**57**		**P**	**13 45 51.1**	**+1.1**
ATAH	**Atahualpa**	**94.66**	**254**	LR	LR	14 30 27.9	
	comp=Z,43nm,20.5s,baz=5.1,slow=36						
LEM	**Lembang**	**99.94**	**70**	LR	LR	14 36 01.6	
	comp=Z,70nm,19.1s,baz=352,slow=38						
WRA	**Warramunga Arr**	**116.33**	**45**	PKP	**PKiKP**	**13 51 34.6**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=334,slow=2.5,SNR=2.7						
ASAR	**Alice Springs**	**119.96**	**46**	PKP	**PKPdf**	**13 51 41.0**	**-1.2**
	comp=Z,1.3nm,1.0s,baz=6.4,slow=1.7,SNR=7.2						
ASAR				PKKPbc	**PKKPab**	**14 01 49.9**	**-2.5**
	comp=Z,0.4nm,0.8s,baz=172,slow=4.2,SNR=5.6						
PLCA	**Paso Flores**	**126.57**	**240**	PKP	**PKiKP**	**13 51 54.1**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=13,slow=2.9,SNR=4.1						
NVL	**N'lazarevskaya**	**151.94**	**169**	*e*PKIKP	**PKPdf**	**13 52 41.0**	**+2.3**
NVL				*e*		13 56 29.2	
NVL				*e*PPP	PPP	13 59 54.0	
NVL				*e*SS	SS	14 15 57.9	+3.9
NVL				*e*SSS	SSS	14 21 43.4	

IDC 09 13:46:50.4±2.0, 10.79S×161.35E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=48.0km s-min=30.2km az=124.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.93**	**314**	Pn	Pn	13 47 24.5	0.0
	1.6nm,0.3s,baz=231,slow=23,SNR=8.2						
HNR				Sn	Sn	13 47 44.8	-4.7
	11nm,0.3s,baz=156,slow=22,SNR=19						
WRA	**Warramunga Arr**	**27.55**	**247**	P	P	13 52 38.5	-0.8
	0.4nm,0.7s,baz=76,slow=9.2,SNR=4.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**29.10**	**240**	P	P	13 52 53.6	+0.5
	0.4nm,1.0s,baz=65,slow=11,SNR=7.2						
	0.4nm,1.0s						
SONM	**Songino Array**	**75.95**	**325**	P	P	13 58 39.7	+0.4
	0.7nm,0.5s,baz=140,slow=6.3,SNR=7.0						
	0.7nm,0.5s						
ILAR	**Eielson Array**	**84.69**	**20**	P	P	13 59 25.6	-0.3
	0.2nm,0.5s,baz=246,slow=3.8,SNR=5.6						
	0.2nm,0.5s						

IDC 09 13:49:16.9±2.1, 3.72S×126.72E, h0km, mb2.9/2, mbtmp3.0/3, ML3.0/1, MS2.8/2, Error ellipse: s-maj=166.1km s-min=29.4km az=65.0, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**10.78**	**354**	LR	LR	13 56 42.2	
	comp=Z,121nm,19.5s,baz=316,slow=41						
WRA	**Warramunga Arr**	**17.76**	**156**	P	Pn	13 53 25.0	-0.7
	baz=334,slow=12,SNR=1.1						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**21.01**	**161**	P	P	13 54 01.9	-0.3
	0.2nm,0.4s,baz=338,slow=11,SNR=7.6						
	0.2nm,0.4s						
HNR	**Honiara**	**33.48**	**101**	LR	LR	14 09 58.1	
	comp=Z,5.2nm,18.4s,baz=82,slow=37						
MKAR	**Makanchi Array**	**63.72**	**328**	P	P	13 59 50.8	+0.4
	0.1nm,0.6s,baz=122,slow=4.9,SNR=1.8						
	0.1nm,0.6s						

*ISK **09** 13:49:55.0, 39.04N×27.67E, h14km, ML2.2/16*
AFAD 09 13:49:55.4, 39.05N×27.68E, h7km, ML2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.20**	**148**	P	Pg	13 50 00.0	+0.6
AKHS				S	Sg	13 50 03.3	+1.2
AKHS				lAML		13 50 04.0	
	comp=E,460nm,0.3s						
AKS	**Akhisar**	**0.20**	**148**	Pg	Pg	13 49 59.8	+0.4
AKS				Sg	Sg	13 50 03.3	+1.2
STEP	**BALIKESIR_Sava**	**0.33**	**5**	P	Pg	13 50 01.8	-0.1
STEP				S	Sg	13 50 07.0	+0.7
STEP				lAML		13 50 07.0	
	comp=N,140nm,0.5s						
GOMA	**Golmarmara-Man**	**0.39**	**151**	Pg	Pg	13 50 02.7	-0.2
GOMA				Sg	Sg	13 50 09.1	+1.1
CAMT	**Merkez**	**0.41**	**224**	P	Pg	13 50 03.7	+0.2
GORD	**Gordes-Manisa**	**0.41**	**110**	Pg	Pg	13 50 03.8	+0.4
GORD				Sg	Sg	13 50 10.2	+1.3
ZEDA	**zmir-Bergama**	**0.47**	**260**	P	Pg	13 50 05.0	+0.4
ZEDA				S	Sb	13 50 12.3	-1.0
ZEDA				lAML		13 50 13.0	
	comp=N,95nm,0.6s						
KTTT	**Salihli**	**0.48**	**138**	P	Pg	13 50 05.2	+0.4
KTTT				S	Sg	13 50 12.2	+1.2
BALB	**Balikesir**	**0.61**	**15**	Pg	Pg	13 50 07.8	+0.6
BALB				Sg	Sb	13 50 17.2	-0.1
BUHA	**Balikesir, Bur**	**0.65**	**314**	P	Pg	13 50 07.3	-0.6
BALY	**Balya**	**0.69**	**356**	P	Pg	13 50 08.9	+0.1
BKES	**Balkesir-Mer**	**0.71**	**16**	P	Pb	13 50 09.8	-0.4
BKES				S	Sg	13 50 19.1	+0.7
YAYO	**Edremit-Balk**	**0.73**	**320**	Pg	Pg	13 50 09.7	+0.2
BAGT	**Foa**	**0.76**	**239**	P	Pb	13 50 10.7	-0.1
DEMI	**Demirci**	**0.81**	**90**	P	Pg	13 50 10.8	-0.2
DEMI				S	Sg	13 50 22.2	+0.8
DEMI				lAML		13 50 23.0	
	comp=E,52nm,0.2s						
DEMI				lAML		13 50 25.0	
	comp=N,68nm,0.4s						
AYVA	**Ayvalik**	**0.81**	**289**	P	Pn	13 50 13.1	-0.1
FOCM	**Foa**	**0.81**	**246**	Pg	Pg	13 50 10.9	-0.1
BLCB	**Balcova**	**0.83**	**217**	Pg	Pb	13 50 11.7	-0.4
ODEM	**Odemis-Izmir**	**0.83**	**158**	Pg	Pg	13 50 11.7	+0.3
DUVT	**Torbali**	**0.85**	**192**	P	Pb	13 50 12.7	+0.3
MANT	**Manisa**	**0.89**	**129**	P	Pg	13 50 12.5	+0.1
DST	**Duirsunbey**	**0.92**	**52**	Pg	Pb	13 50 13.5	-0.2
KULA	**Kula-Manisa**	**0.94**	**124**	Pg	Pg	13 50 13.3	-0.1
YENI	**Yenice-Canakka**	**0.95**	**339**	Pg	Pb	13 50 14.0	-0.2
SUSR	**Susurluk-Balik**	**0.97**	**19**	Pg	Pg	13 50 14.0	0.0
CMHT	**Manyas**	**0.99**	**13**	P	Pg	13 50 14.3	-0.1
GONE	**Gonen-Balikesi**	**1.00**	**0**	Pg	Pb	13 50 14.9	-0.1
SIMA	**Simav-Kutahya**	**1.02**	**88**	Pg	Pg	13 50 14.8	-0.1
ATIT	**Gnen**	**1.04**	**355**	P	Pg	13 50 15.5	+0.2
CANM	**Can-anakkale**	**1.08**	**334**	Pn	Pg	13 50 16.2	+0.1
USAK	**Uak-Merkez**	**1.10**	**107**	P	Pg	13 50 16.1	-0.4
AYDB	**Zeytinkoy-Aydi**	**1.11**	**171**	Pn	Pg	13 50 16.7	0.0
BAYC	**CANAKKALE_Bayr**	**1.12**	**309**	P	Pb	13 50 17.2	+0.2
NAZL	**Nazilli-Aydin**	**1.19**	**156**	Pn	Pg	13 50 17.6	-0.5

ATH 09 13:49:55.7, 37.32N×26.93E, h18km±3km, ML2.3/2, Manual Solution by A.Agalos First location: 2020/02/09 13:49:03, This location: 2020/02/09 13:59:17 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 8 km, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNA	**Kalymnos**	**0.36**	**175**	P	Pg	13 50 03.4	0.0
KLNA				S	Sg	13 50 08.6	+0.1
SMG	**Samos**	**0.40**	**349**	P	Pb	13 50 04.1	-0.1
SMG				S	Sg	13 50 09.4	-0.1
GCAM	**G?zelcaml?**	**0.45**	**32**	P	Pn	13 50 07.2	-0.1
KRL1	**Karlovasi Samo**	**0.51**	**340**	P	Pg	13 50 06.0	+0.1
KRL1				S	Sg	13 50 12.7	0.0
DGB	**zmir**	**0.73**	**357**	P	Pn	13 50 10.6	-0.5
DGB				S	Sn	13 50 21.2	-0.6
DGB				lAML		13 50 23.0	
	comp=N,41nm,0.2s						
AYDN	**Tasoluk**	**0.83**	**65**	P	Pn	13 50 14.9	+2.3
CHOS	**Chios island**	**1.27**	**327**	P	Pn	13 50 18.8	+0.2
CHOS				S	Sb	13 50 35.1	-0.1

IDC 09 13:51:13.2±7.7, 6.07S×145.73E, h88km±59km, mb2.9/2, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=83.7km s-min=49.9km az=46.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.61**	**157**	P	Pn	13 52 06.8	-0.1
	6.3nm,0.3s,baz=11,slow=6.3,SNR=8.7						
PMG				S	Sn	13 52 49.0	+0.5
	10nm,0.3s,baz=99,slow=24,SNR=11						
CTA	**Charters Tower**	**13.94**	**178**	P	Pn	13 54 27.7	+0.8
	0.2nm,0.3s,baz=0.4,slow=16,SNR=1.3						
	2.5nm,0.9s						
WRA	**Warramunga Arr**	**17.68**	**218**	P	P	13 55 13.6	+0.1
	baz=43,slow=11,SNR=1.5						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**20.87**	**212**	P	P	13 55 47.6	-0.7
	0.3nm,0.8s,baz=47,slow=8.9,SNR=4.5						
	0.3nm,0.8s						
STKA	**Stephens Creek**	**25.96**	**188**	P	P	13 56 37.9	+0.3
	1.7nm,0.9s,baz=1.4,slow=12,SNR=2.3						
	1.7nm,0.9s						

*IDC **09** 14:00:04.6±5.5, 30.33S×178.25W, h0km, mb3.9/3, mbtmp3.9/3, MS3.1/1, Error ellipse: s-maj=211.9km s-min=51.9km az=151.0*
*NEIC **09** 14:00:05.3±0.5, 30.26S±0.09×178.2W±0.2, h6km±2km, mb4.5/10, Error ellipse: s-maj=23.0km s-min=9.8km az=110.0*
ISC 09 14:00:08.5±1.1, 30.3S±0.1×178.2W±0.2, h35km, n22, σ0.86/15, mb4.3/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.07**	**13**	Pg	**Pn**	**14 00 25.4**	**-1.6**
RPZ	**Rata Peaks**	**15.89**	**210**	Pn	**Pn**	**14 03 47.6**	**-1.8**
DZM	**Mont Dzumac**	**16.04**	**297**	LR	LR	14 07 47.1	
	comp=Z,81nm,21.3s,baz=43,slow=29						
HNR	**Honiara**	**29.11**	**311**	P	**P**	**14 06 06.2**	**+0.1**
TOO	**Toolangi**	**30.86**	**247**	P	**P**	**14 06 21.4**	**0.0**
TOO				lAmb	lAmb	14 06 22.8	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	**34.34**	**257**	P	**P**	**14 06 52.5**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=107,slow=11,SNR=3.5						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**34.34**	**257**	P	**P**	**14 06 52.0**	**+0.1**
BBOO	**Buckleboo**	**38.84**	**254**	P	**P**	**14 07 30.2**	**-0.1**
BBOO				lAmb	lAmb	14 07 50.4	
	comp=Z,14nm,1.3s						
TAOE	**Nuku Hiva Isla**	**41.41**	**67**	P	**P**	**14 07 52.6**	**+0.8**
ASAR	**Alice Springs**	**42.95**	**267**	P	**P**	**14 08 04.8**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=103,slow=7.5,SNR=20						
	comp=Z,0.7nm,0.6s						
WR8	**Warramunga Arr**	**43.79**	**272**	P	**P**	**14 08 11.2**	**+0.1**
WR8				lAmb	lAmb	14 08 50.4	
	comp=Z,8.5nm,1.4s						
WRA	**Warramunga Arr**	**43.93**	**272**	P	**P**	**14 08 13.1**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=111,slow=8.1,SNR=20						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**43.93**	**272**	P	**P**	**14 08 12.1**	**-0.1**
WB0	**Warramunga Arr**	**43.96**	**272**	P	**P**	**14 08 12.6**	**+0.2**
WB0				lAmb	lAmb	14 08 15.3	
	comp=Z,9.0nm,1.4s						
JGF	**Kuroka**	**77.75**	**324**	P	**P**	**14 12 02.5**	**+0.7**
H03S2	**Juan Fernandez**	**80.65**	**124**	T	T	15 41 48.6	
	baz=238,slow=74,SNR=2.6						
H03S1	**Juan Fernandez**	**80.67**	**124**	T	T	15 41 49.8	
	baz=238,slow=74,SNR=3.8						
H03S3	**Juan Fernandez**	**80.67**	**124**	T	T	15 41 48.4	
	baz=238,slow=74,SNR=3.2						
H03N3	**Juan Fernandez**	**80.85**	**123**	T	T	15 42 00.4	
	baz=233						
H03N2	**Juan Fernandez**	**80.85**	**123**	T	T	15 42 05.0	
	baz=233						
H03N1	**Juan Fernandez**	**80.86**	**123**	T	T	15 41 59.9	
	baz=233						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	**PKPbc**	**14 19 41.6**	**+1.0**
	comp=Z,4.5nm,0.9s,baz=48,slow=2.8,SNR=6.7						

*MEX **09** 14:00:31.9±0.8, 30.09N×114.32W, h10km±9km, MD4.3*
*ECX **09** 14:00:32.4±0.3, 30.08N×114.37W, h10km±5km, ML2.9*
ISC 09 14:00:31.0±1.1, 30.09N±0.04×114.32W±0.05, h13km±9km, n14, σ1.9/01/25, 2C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGB	**San Luis Gonza**	**0.27**	**196**	⇓*e*P	**Pg**	**14 00 37.2**	**+0.7**
SLGB				*e*S	**Sg**	**14 00 40.9**	**+0.6**
SLGB				lAML		14 00 50.0	
	comp=N,2μm,0.9s						
SLGB				⇑*e*		14 00 50.0	
SFX	**San Felipe**	**1.05**	**334**	*e*P	**Pg**	**14 00 50.5**	**-0.8**
SFX				*e*S	**Sg**	**14 01 04.7**	**-0.4**
SFX				lAML		14 01 06.4	
	comp=E,261nm,0.5s						
SFX				⇓*e*		14 01 06.4	
SFX	**San Felipe**	**1.05**	**334**	*e*P	**Pg**	**14 00 50.6**	**-0.8**
SFX				*e*S	**Sg**	**14 01 04.0**	**-1.1**
BAHB	**Baha de los**	**1.32**	**150**	*e*P	**Pn**	**14 00 53.3**	**-1.8**
BAHB				*e*S	**Sb**	**14 01 12.0**	**-0.4**
SPIG	**San Pedro Mart**	**1.38**	**314**	⇑*e*P	**Pn**	**14 00 55.9**	**-0.4**
SPIG				*e*S	**Sb**	**14 01 14.5**	**0.0**
SPIG	**San Pedro Mart**	**1.38**	**314**	*e*P	**Pn**	**14 00 55.7**	**-0.6**
SPIG				*e*S	**Sb**	**14 01 13.9**	**-0.6**
SQX	**San Quintin**	**1.43**	**290**	*e*P	**Pn**	**14 00 56.5**	**-0.2**
SQX				*e*S	**Sn**	**14 01 15.1**	**-0.4**
SQX				lAML		14 01 20.0	
	comp=N,291nm,0.3s						
ECBX	**El Chinero**	**1.52**	**336**	*e*P	**Pn**	**14 00 57.1**	**-0.8**
ECBX				*e*S	**Sn**	**14 01 17.4**	**-0.2**
LAPR	**La Primavera**	**1.78**	**76**	lAML		14 01 51.2	
	comp=N,112nm,1.0s						
LAPR				*e*		14 01 51.2	
VTX	**Valle De La Tr**	**1.81**	**316**	*e*P	**Pn**	**14 01 02.6**	**+0.5**
CBX	**Cerro Bola**	**2.99**	**318**	*e*P	**Pn**	**14 01 19.5**	**+1.2**
CBX				*e*S	**Sb**	**14 02 00.8**	**-0.1**
TJIG	**Tijuana**	**3.09**	**320**	*e*P	**Pn**	**14 01 20.7**	**+1.1**
TJIG				*e*S	**Sn**	**14 01 58.5**	**+2.1**
HSIG		**3.12**	**109**	*e*P	**Pn**	**14 01 19.0**	**-1.0**
HSIG				*e*S	**Sn**	**14 01 57.6**	**+0.4**
TUC	**Tucson**	**3.75**	**53**	*e*P	**Pn**	**14 01 30.2**	**+1.4**
TUC				*e*S	**Sn**	**14 02 14.6**	**+1.7**

*IDC **09** 14:15:26.8±2.1, 30.09S×178.08W, h0km, mb4.2/4, mbtmp4.1/5, ML3.3/1, MS3.6/7, Error ellipse: s-maj=58.4km s-min=20.3km az=123.0*
ISC 09 14:15:32.5±2.2, 30.3S±0.2×178.1W±0.4, h35km, n26, σ1.9/18/7, mb4.1/4, MS3.6/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.10**	**8**	Pn	Pn	14 15 45.7	-5.7
	124nm,0.3s,baz=120,slow=20,SNR=10.0						
URZ	**Urewera**	**8.84**	**205**	Pn	**Pn**	**14 17 37.6**	**0.0**
	0.3nm,0.3s,baz=47,slow=18,SNR=2.0						
URZ				LR	LR	14 20 44.8	
	comp=Z,457nm,21.8s,baz=25,slow=35						
	8.9nm,1.0s						
HNR	**Honiara**	**29.20**	**311**	LR	LR	14 31 14.4	
	comp=Z,4.6nm,18.1s,baz=264,slow=33						
CTA	**Charters Tower**	**33.71**	**279**	LR	LR	14 33 28.5	
	comp=Z,90nm,18.0s,baz=64,slow=32						
STKA	**Stephens Creek**	**34.41**	**257**	P	**P**	**14 22 17.4**	**+0.9**
	4.8nm,0.9s,baz=106,slow=11,SNR=5.3						
	4.8nm,0.9s						
PMG	**Port Moresby**	**38.51**	**295**	LR	LR	14 34 40.0	
	comp=Z,74nm,20.0s,baz=152,slow=30						
ASAR	**Alice Springs**	**43.03**	**267**	P	**P**	**14 23 27.6**	**-1.3**
	1.8nm,0.8s,baz=104,slow=6.9,SNR=14						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**44.01**	**272**	P	**P**	**14 23 36.1**	**-0.8**
	2.9nm,0.9s,baz=111,slow=8.0,SNR=18						
	2.9nm,0.9s						
JAY	**Jayapura**	**47.80**	**297**	LR	LR	14 41 17.4	
	comp=Z,88nm,19.6s,baz=12,slow=32						
PMSA	**Palmer Station**	**72.35**	**156**	LR	LR	14 52 25.7	
	comp=Z,48nm,19.6s,baz=237,slow=31						
MJAR	**Matsushiro Arr**	**78.15**	**325**	LR	LR	15 01 44.9	
	comp=Z,25nm,18.7s,baz=118,slow=36						
H03S2	**Juan Fernandez**	**80.57**	**124**	T	T	15 57 10.2	
	baz=237,slow=74,SNR=17						
H03S1	**Juan Fernandez**	**80.58**	**124**	T	T	15 57 11.4	
	baz=237,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**80.58**	**124**	T	T	15 57 16.2	
	baz=237,slow=74,SNR=21						
H03N3	**Juan Fernandez**	**80.76**	**123**	T	T	15 57 24.6	
	baz=241,slow=72,SNR=6.7						
H03N2	**Juan Fernandez**	**80.76**	**123**	T	T	15 57 26.9	
	baz=241,slow=72,SNR=7.0						
H03N1	**Juan Fernandez**	**80.78**	**123**	T	T	15 57 24.8	
	baz=241,slow=72,SNR=9.4						
ASAJ	**Asahikawa**	**82.35**	**333**	LR	LR	14 55 40.6	
	comp=Z,31nm,21.4s,baz=104,slow=29						
CMAR	**Chiang Mai Arr**	**93.30**	**289**	P	**P**	**14 28 45.1**	**+1.1**
	0.4nm,0.5s,baz=145,slow=4.2,SNR=4.7						
	0.4nm,0.5s						
H10S3	**ASCENSION HYDR**	**37.81**	**155**	T	T	17 09 31.4	
	baz=204,slow=74,SNR=34						
**H10S2

WRA	**Warramunga Arr**	**57.65**	**187**	P	**P**	**14 43 58.8**	**-1.9**
	0.3nm,0.8s,baz=2.4,slow=7.2,SNR=1.5						
	0.3nm,0.8s						

IDC 09 14:54:47.6±32.0, 23°34'N×143°13'E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=624.8km s-min=230.7km az=173.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.87**	**192**	P	P	15 02 56.1	+0.2
	0.6nm,0.6s,baz=13,slow=8.5,SNR=14						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**47.58**	**191**	P	P	15 03 24.8	-0.5
	0.3nm,0.7s,baz=11,slow=9.7,SNR=6.5						
	0.3nm,0.7s						
STKA	**Stephens Creek**	**54.93**	**182**	P	P	15 04 20.2	-0.1
	1.1nm,0.6s,baz=342,slow=6.4,SNR=3.0						
	1.1nm,0.6s						

*IDC **09** 15:09:15.7±0.8,2°91S×130°00E,h0km,mb4.1/10, mbtmp4.2/14,ML4.2/4,MS3.6/15,Error ellipse: s-maj=25.3km s-min=13.9km az=77.0*
*NEIC **09** 15:09:18.1±1.2,2°93S±0°06×129°91E±0°06,h10km±1km, mb4.3/20,Error ellipse: s-maj=10.4km s-min=9.6km az=86.0*
*DJA **09** 15:09:18.8±0.2,3°S±2°×13°0E±°,h10km,M4.7/25,mB5.0/1, mb4.9/7,MLv4.6/25,Mw(mB)4.4/1*

ISC 09 15:09:20.1±0.4,2°96S±0°04×129°91E±0°04,h25km,n94, σ1s51/87,mb4.3/18,MS3.5/13,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.05**	**249**	P	**Pn**	**15 09 39.8**	**+0.5**
BNDI	**Bandanaira**	**1.55**	**180**	P	**Pb**	**15 09 49.3**	**+1.2**
BNDI	**Bandanaira**	**1.55**	**180**	P	**Pb**	**15 09 49.1**	**+1.0**
KRAI	**Karang Ratu**	**1.55**	**257**	P	**Pn**	**15 09 48.1**	**+1.9**
AAI	**Ambon**	**1.86**	**247**	P	**Pn**	**15 09 51.4**	**+1.0**
FAKI	**Fak Fak**	**2.34**	**89**		**Pn**	**15 09 57.1**	**+0.1**
FAKI	**Fak Fak**	**2.34**	**89**	P	**Pn**	**15 09 57.3**	**+0.3**
FAKI	**Fak Fak**	**2.34**	**89**	S	**Sn**	**15 10 26.2**	**+1.3**
FAKI	**Fak Fak**	**2.34**	**89**	P	**Pn**	**15 09 57.1**	**+0.1**
SIJI	**Sorong**	**2.48**	**33**	Pn	**Pn**	**15 09 57.4**	**-1.6**
	50nm,0.3s,baz=220,slow=16,SNR=150						
SIJI				Sn	**Sn**	**15 10 25.5**	**-3.0**
	35nm,0.3s,baz=224,slow=23,SNR=7.9						
	107nm,0.3s						
SIJI	**Sorong**	**2.48**	**33**	P	**Pn**	**15 09 57.6**	**-1.4**
SWI	**Sorong**	**2.48**	**33**	P	**Pn**	**15 09 57.0**	**-2.0**
NLAI	**Namlea**	**2.82**	**264**	P	**Pn**	**15 10 04.9**	**+1.3**
KMPI	**Kaimana, Papua**	**3.85**	**100**	P	**Pn**	**15 10 18.4**	**+0.6**
SANI	**Sanana**	**4.02**	**283**	P	**Pn**	**15 10 18.8**	**-1.4**
SANI	**Sanana**	**4.02**	**283**	S	**Sn**	**15 11 04.8**	**-1.7**
SANI	**Sanana**	**4.02**	**283**	P	**Pn**	**15 10 18.1**	**-2.1**
TNTI	**Ternate**	**4.50**	**326**	Pn	**Pn**	**15 10 26.2**	**-0.5**
RKPI	**Ransiki, Papua**	**4.50**	**71**	P	**Pn**	**15 10 26.2**	**-0.6**
MWPI	**Manokwari, Pap**	**4.59**	**64**	P	**Pn**	**15 10 29.4**	**+1.3**
SAUI	**Saumlaki**	**5.17**	**165**	Pn	**Pn**	**15 10 35.9**	**-0.1**
SRPI	**Serui, Papua**	**6.42**	**80**	P	**Pn**	**15 10 52.4**	**-0.7**
	0.4nm67nm,0.7s						
BAKI	**Biak**	**6.44**	**74**	P	**Pn**	**15 10 54.1**	**+0.7**
	0.5nm160nm,1.0s						
LUWI	**Luwuk**	**7.38**	**285**	Pn	**Pn**	**15 11 06.2**	**-0.3**
LUWI	**Luwuk**	**7.38**	**285**	P	**Pn**	**15 11 07.0**	**+0.6**
LUWI	**Luwuk**	**7.38**	**285**	S	**Sn**	**15 12 28.6**	**-0.9**
SOEI	**Soe**	**8.77**	**219**	Pn	**Pn**	**15 11 24.4**	**-1.1**
DRS	**Darwin Rock St**	**9.46**	**174**	P	**Pn**	**15 11 36.8**	**+1.9**
DRS	**Darwin Rock St**	**9.46**	**174**	S	**Sn**	**15 13 24.2**	**+3.7**
BATI	**Baumata**	**9.50**	**220**	Pn	**Pn**	**15 11 35.3**	**-0.2**
	1.6nm,0.3s,baz=104,slow=4.2,SNR=3.8						
BATI				LR	LR	15 16 19.1	
	comp=Z,349nm,18.5s,baz=68,slow=44						
	14nm,0.7s						
MTN	**Manton Dam**	**9.89**	**173**		**Pn**	**15 11 41.4**	**+0.6**
GENI	**Genyem**	**10.25**	**88**	P	**Pn**	**15 11 47.2**	**+1.4**
GENI	**Genyem**	**10.25**	**88**	S	**Sn**	**15 13 41.0**	**+1.0**
KAPI	**Kappang**	**10.34**	**258**	LR	LR	15 16 56.1	
	comp=Z,332nm,20.2s,baz=75,slow=44						
KNRA	**Kununurra**	**12.68**	**185**	Pn	**Pn**	**15 12 17.6**	**-1.4**
PLAI	**Plampang**	**13.40**	**244**	P	**Pn**	**15 12 29.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**15.61**	**195**	Pn	**Pn**	**15 12 58.0**	**-0.7**
	1.0nm,0.3s,baz=26,slow=6.1,SNR=14						
FITZ				Sn	**Sn**	**15 15 46.9**	**-4.1**
	baz=331,slow=19,SNR=1.9						
	3.4nm,0.5s						
COEN	**Coen**	**17.06**	**131**	Pn	**Pn**	**15 13 15.8**	**-1.3**
COEN				IAmb	IAmb	15 13 35.7	
	comp=Z,12nm,0.8s						
COEN	**Coen**	**17.06**	**131**	P	**Pn**	**15 13 16.9**	**-0.2**
WB0	**Warramunga Arr**	**17.27**	**166**		**Pn**	**15 13 17.2**	**-2.5**
WB0				IAmb	IAmb	15 13 36.6	
	comp=Z,20nm,1.2s						
WRAB	**Tennant Creek**	**17.41**	**166**	Pn	**Pn**	**15 13 19.0**	**-2.5**
WRA	**Warramunga Arr**	**17.42**	**166**	P	**Pn**	**15 13 18.9**	**-2.7**
	comp=Z,1.1nm,0.3s,baz=339,slow=13,SNR=34						
WRA				S	**Sn**	**15 16 30.1**	**-4.8**
	comp=Z,1.4nm,0.8s,baz=348,slow=24,SNR=3.8						
	comp=Z,1.1nm,0.3s						
WRA	**Warramunga Arr**	**17.42**	**166**	P	**Pn**	**15 13 22.6**	**+1.0**
WR8	**Warramunga Arr**	**17.47**	**165**		**Pn**	**15 13 23.1**	**+0.8**
SBUM	**Sibu**	**18.48**	**287**		**Pn**	**15 13 36.0**	**+1.2**
QIS	**Mount Isa**	**19.88**	**152**	P	**P**	**15 13 49.7**	**-0.1**
MTSU	**Mount Surprise**	**20.66**	**138**	P	**P**	**15 13 59.8**	**+1.6**
AS31	**Alice Springs**	**20.94**	**170**		**P**	**15 14 00.7**	**-0.5**
AS31				IAmb	IAmb	15 14 09.0	
	comp=Z,9.3nm,0.5s						
ASAR	**Alice Springs**	**20.94**	**170**	P	**P**	**15 14 00.6**	**-0.7**
	comp=Z,19nm,0.6s,baz=350,slow=11,SNR=252						
ASAR				S	**S**	**15 17 48.4**	**-5.2**
	comp=Z,1.4nm,0.8s,baz=352,slow=22,SNR=5.6						
ASAR				LR	LR	15 22 47.2	
	comp=Z,269nm,19.4s,baz=340,slow=39						
	comp=Z,19nm,0.6s						
GUMO	**Guam**	**22.15**	**42**	LR	LR	15 22 20.1	
	comp=Z,63nm,18.4s,baz=194,slow=36						
LEM	**Lembang**	**22.54**	**259**	LR	LR	15 24 43.1	
	comp=Z,333nm,19.8s,baz=98,slow=41						
CTA	**Charters Tower**	**23.33**	**138**	P	**P**	**15 14 26.1**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=262,slow=22,SNR=6.0						
CTA				LR	LR	15 25 20.1	
	comp=Z,180nm,18.9s,baz=323,slow=41						
	comp=Z,2.6nm,0.7s						
CTA	**Charters Tower**	**23.33**	**138**	P	**P**	**15 14 27.3**	**+0.7**
CTAO	**Charters Tower**	**23.33**	**138**	P	**P**	**15 14 26.8**	**+0.2**
CTAO				IAmb	IAmb	15 14 36.2	
	comp=Z,9.8nm,0.9s						
CTAO	**Charters Tower**	**23.33**	**138**	P	**P**	**15 14 27.4**	**+0.8**
INKA	**Innaminka**	**26.73**	**158**	P	**P**	**15 14 57.9**	**+0.2**
INKA				IAmb	IAmb	15 15 21.6	
	comp=Z,7.3nm,1.4s						
BBOO	**Buckleboo**	**30.25**	**170**	P	**P**	**15 15 29.6**	**+0.5**
STKA	**Stephens Creek**	**30.79**	**160**	P	**P**	**15 15 33.6**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=345,slow=8.6,SNR=17						
STKA				LR	LR	15 29 44.7	
	comp=Z,144nm,18.4s,baz=336,slow=40						
	comp=Z,1.7nm,0.4s						
STKA	**Stephens Creek**	**30.79**	**160**	P	**P**	**15 15 33.7**	**-0.2**
STKA	**Stephens Creek**	**30.79**	**160**	P	**P**	**15 15 33.8**	**-0.2**
CMSA	**Cobar Meteorol**	**32.08**	**154**	P	**P**	**15 15 45.6**	**+0.4**
JNU	**Nakatsue**	**35.90**	**1**	LR	LR	15 31 15.4	
	comp=Z,48nm,19.7s,baz=176,slow=37						
SYDH	**Sydney Hard Ro**	**36.29**	**150**	P	**P**	**15 16 22.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**37.19**	**306**	P	**P**	**15 16 29.9**	**+0.4**
	comp=Z,3.2nm,0.9s,baz=134,slow=7.4,SNR=19						
CMAR				LR	LR	15 33 12.3	
	comp=Z,62nm,21.5s,baz=135,slow=39						
	comp=Z,3.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.19**	**306**	P	**P**	**15 16 29.0**	**-0.6**
CHTO	**Chiang Mai**	**37.37**	**307**	P	**P**	**15 16 31.4**	**+0.3**
CHTO				IAmb	IAmb	15 16 34.1	
	comp=Z,10nm,1.1s						
PZH	**PanZhiHua**	**39.99**	**319**	P	**P**	**15 16 55.6**	**+2.4**
MJAR	**Matsushiro Arr**	**40.06**	**10**	P	**P**	**15 16 51.9**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=192,slow=9.6,SNR=2.0						
MJAR				LR	LR	15 31 27.7	
	comp=Z,66nm,20.1s,baz=195,slow=33						
	comp=Z,0.8nm,0.5s						
KSAR	**Wonju Array Be**	**40.24**	**358**	P	**P**	**15 16 55.9**	**+1.0**
LZH	**Lanzhou**	**45.85**	**330**	*eP*	P	15 17 48.4	+7.8
LZH				pP	sP	15 17 53.4	+2.2
LZH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
HHC	**Hu-ho-hao-te**	**46.72**	**341**	*eP*	**P**	**15 17 50.0**	**+2.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,95nm,5.4s						
ASAJ	**Asahikawa**	**48.23**	**12**	LR	LR	15 38 53.6	
	comp=Z,35nm,19.9s,baz=203,slow=37						
LSA	**Lhasa**	**49.29**	**314**	P	**P**	**15 18 08.7**	**+0.9**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PALK	**Pallekele**	**50.15**	**282**	LR	LR	15 41 39.1	
	comp=Z,106nm,19.4s,baz=104,slow=39						
SONM	**Songino Array**	**54.62**	**341**	P	**P**	**15 18 45.9**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=165,slow=8.7,SNR=4.4						
	comp=Z,1.2nm,0.9s						
SONM	**Songino Array**	**54.62**	**341**	IAmb	IAmb	15 18 47.8	
	comp=Z,3.5nm,1.5s						
BKZ	**Black Stump Fm**	**55.53**	**137**	P	**P**	**15 18 53.2**	**-0.3**
WMQ	**Urumqi**	**60.00**	**326**	*eP*	P	15 19 17.0	-7.8
WMQ				pP	pP	15 19 30.9	-1.7
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
PETK	**Petropavlovsk-**	**60.55**	**19**	LR	LR	15 42 01.4	
	comp=Z,24nm,21.7s,baz=156,slow=32						
YAK	**Yakutsk**	**64.82**	**360**	P	**P**	**15 19 56.5**	**0.0**
MKAR	**Makanchi Array**	**64.84**	**326**	P	**P**	**15 19 56.7**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=111,slow=8.1,SNR=7.9						
MKAR				LR	LR	15 50 03.5	
	comp=Z,42nm,18.1s,baz=304,slow=38						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**64.84**	**326**	P	**P**	**15 19 56.5**	**-0.6**
MAKZ	**Makanchi**	**65.02**	**326**	P	**P**	**15 19 58.1**	**-0.2**
MAKZ				IAmb	IAmb	15 20 00.6	
	comp=Z,4.2nm,1.2s						
ZALV	**Zalesovo Beam**	**67.95**	**333**	P	**P**	**15 20 15.3**	**-1.5**
	comp=Z,2.0nm,0.8s,baz=142,slow=5.5,SNR=6.4						
	comp=Z,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**67.95**	**333**	P	**P**	**15 20 16.1**	**-0.7**
KBL	**Kabul**	**68.14**	**309**	P	**P**	**15 20 17.9**	**-0.8**
KURBB	**Kurchatov Arra**	**69.06**	**328**	P	**P**	**15 20 23.6**	**-0.2**
	comp=Z,2.1nm,0.2s,baz=126,slow=6.1,SNR=6.9						
	comp=Z,2.1nm,0.2s						
KURK	**Kurchatov**	**69.06**	**328**	P	**P**	**15 20 23.4**	**-0.4**
KURK				IAmb	IAmb	15 20 28.3	
	comp=Z,5.1nm,0.9s						
BVAR	**Borovoye Array**	**74.63**	**327**	P	**P**	**15 20 56.6**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=112,slow=5.2,SNR=4.1						
	comp=Z,0.7nm,0.5s						
AB31	**Akbulak array**	**79.32**	**321**	P	**P**	**15 21 23.1**	**-0.6**
AB31				IAmb	IAmb	15 21 23.7	
	comp=Z,2.2nm,0.8s						
ABKAR	**Akbulak array**	**79.32**	**321**	P	**P**	**15 21 23.0**	**-0.7**
M14K	**Bethel**	**82.07**	**27**	P	**P**	**15 21 39.5**	**+1.3**
KDAK	**Kodiak Island**	**85.85**	**32**	LR	LR	15 57 53.6	
	comp=Z,62nm,19.6s,baz=233,slow=34						
BMAR	**Burnt Mountain**	**90.98**	**23**	P	**P**	**15 22 22.7**	**+0.8**

*NEIC **09** 15:10:00.5±1.1,22°43N±0°09×143°4E±0°1,h222km±7km, mb4.2/51,Error ellipse: s-maj=18.3km s-min=11.6km az=67.0*
*IDC **09** 15:10:02.9±5.1,22°40N×143°49E,h252km±43km, mb3.7/21,mbtmp4.3/23,Error ellipse: s-maj=28.0km s-min=16.3km az=171.0*

ISC 09 15:10:02.2±0.5, 22°35N±0°07×143°40E±0°09, h250km, n93, σ1s02/89, mb4.2/47, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.85**	**347**	S	S	15 11 52.9	-22
	48nm,0.3s,baz=286,slow=21,SNR=1.7						
JCJ	**Chichijima**	**4.85**	**347**	Pn	**Pn**	**15 11 13.0**	**-3.1**
DPSS	**Saipan**	**7.43**	**162**	Pn	**Pn**	**15 11 46.9**	**-1.5**
GUMO	**Guam**	**8.83**	**171**	Pn	**Pn**	**15 12 04.6**	**-1.5**
INU	**Inuyama**	**14.10**	**338**		**P**	**15 13 09.7**	**-2.2**
JMN	**Monobe**	**14.10**	**326**	P	**P**	**15 13 11.7**	**-0.4**
JGF	**Kuroka**	**14.21**	**340**	Pn	**Pn**	**15 13 10.1**	**-2.8**
MJAR	**Matsushiro Arr**	**14.84**	**343**	P	**Pn**	**15 13 18.4**	**-2.1**
	1.2nm,0.3s,baz=157,slow=6.8,SNR=25						
MJAR	**Matsushiro Arr**	**14.84**	**343**		**Pn**	**15 13 18.2**	**-2.3**
MAJO	**Matsushiro**	**14.84**	**343**	P	**Pn**	**15 13 18.3**	**-2.1**
JNU	**Nakatsue**	**15.41**	**317**	P	**Pn**	**15 13 26.8**	**-0.6**
	14nm,0.8s,baz=170,slow=3.1,SNR=8.0						
KSRS	**Korea Array**	**20.12**	**322**	P	Pn	15 14 18.4	-4.2
	4.9nm,0.6s,baz=147,slow=8.5,SNR=41						
	4.9nm,0.6s						
ASAJ	**Asahikawa**	**21.71**	**358**	P	**P**	**15 14 34.3**	**+0.9**
	7.6nm,1.0s,baz=262,slow=7.1,SNR=7.2						
	7.6nm,1.0s						
BJT	**Baijiatuan**	**29.03**	**314**	P	**P**	**15 15 38.5**	**-0.7**
LUWI	**Luwuk**	**30.75**	**224**	P	**P**	**15 15 52.6**	**-1.9**
HILR	**Hailar Array B**	**32.94**	**331**	P	**P**	**15 16 13.4**	**+0.1**
	2.9nm,0.5s,baz=142,slow=8.0,SNR=5.1						
	2.9nm,0.5s						
LZDM	**Lanzhou Array**	**36.97**	**300**	P	**P**	**15 16 49.2**	**+0.9**
	2.3nm,0.5s,baz=126,slow=7.5,SNR=12						
	2.3nm,0.5s						
ULN	**Ulaanbaatar**	**38.59**	**320**	P	**P**	**15 17 01.4**	**0.0**
SONM	**Songino Array**	**38.97**	**320**	P	**P**	**15 17 05.5**	**+1.0**
	1.4nm,0.5s,baz=131,slow=7.5,SNR=14						
	1.4nm,0.5s						
SONM	**Songino Array**	**38.97**	**320**	P	**P**	**15 17 04.6**	**+0.1**
GTA2	**Gaotai**	**40.72**	**305**	P	**P**	**15 17 19.4**	**+0.5**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK	**Yakutsk**	**40.76**	**350**	P	**P**	**15 17 18.7**	**0.0**
YAK				IAmb	IAmb	15 17 19.8	
	comp=Z,9.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.74**	**273**	P	**P**	**15 17 27.4**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=67,slow=9.4,SNR=4.2						
	comp=Z,0.4nm,0.3s						
KULM	**Kulim**	**44.64**	**254**	P	**P**	**15 17 51.1**	**+0.6**
KULM				IAmb	IAmb	15 18 03.4	
	comp=Z,17nm,1.3s						
SHL	**Shillong**	**46.95**	**285**	P	**P**	**15 18 09.3**	**+0.6**
SHL				IAmb	IAmb	15 18 10.2	
	comp=Z,8.8nm,0.4s						
LSA	**Lhasa**	**47.19**	**290**		**P**	**15 18 12.0**	**+1.2**
TIXI	**Tiksi**	**50.02**	**354**	P	**P**	**15 18 31.2**	**+0.2**
N14K	**Kuskokwak Cree**	**53.51**	**31**	P	**P**	**15 18 57.5**	**+0.7**
ZAA0	**Zalesovo Array**	**53.82**	**321**	P	**P**	**15 18 59.6**	**+0.3**
ZAA0				IAmb	IAmb	15 19 00.5	
	comp=Z,3.1nm,0.6s						
ZALV	**Zalesovo Beam**	**53.82**	**321**	P	**P**	**15 18 59.7**	**+0.4**
	comp=Z,3.2nm,0.5s,baz=107,slow=8.5,SNR=18						
ZALV				PcP	**PcP**	**15 20 01.7**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=102,slow=5.0,SNR=5.2						
	comp=Z,3.2nm,0.5s						
ZALV	**Zalesovo Beam**	**53.82**	**321**	P	**P**	**15 18 59.6**	**+0.3**
MKAR	**Makanchi Array**	**54.40**	**312**	P	**P**	**15 19 04.8**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=91,slow=9.3,SNR=36						
	comp=Z,2.6nm,0.6s						
MKAR	**Makanchi Array**	**54.40**	**312**	P	**P**	**15 19 04.6**	**+1.0**
MAKZ	**Makanchi**	**54.62**	**312**		**P**	**15 19 06.1**	**+0.9**
MAKZ				IAmb	IAmb	15 19 07.3	
	comp=Z,4.3nm,0.9s						
P16K	**Nushagak River**	**55.04**	**33**	P	**P**	**15 19 08.9**	**+1.0**
O18K	**Koktuh Hills**	**56.62**	**32**	P	**P**	**15 19 20.2**	**+1.0**
KURK	**Kurchatov**	**57.13**	**317**		**P**	**15 19 23.4**	**+0.6**
KURK				IAmb	IAmb	15 19 24.8	
	comp=Z,6.7nm,0.8s						
KURBB	**Kurchatov Arra**	**57.18**	**317**	P	**P**	**15 19 24.1**	**+1.0**
	comp=Z,6.4nm,0.5s,baz=95,slow=7.6,SNR=39						
	comp=Z,6.4nm,0.5s						
NRIK	**Noril'sk**	**57.45**	**340**	P	**P**	**15 19 25.1**	**+0.4**
	comp=Z,5.4nm,0.7s,baz=111,slow=8.2,SNR=11						
	comp=Z,5.4nm,0.7s						
NRIK	**Noril'sk**	**57.45**	**340**		**P**	**15 19 25.1**	**+0.4**
NRIK				IAmb	IAmb	15 19 26.3	
	comp=Z,4.9nm,0.7s						
J20K	**Nowinta River**	**58.17**	**27**	P	**P**	**15 19 30.5**	**+0.7**
J20K				IAmb	IAmb	15 19 40.6	
	comp=Z,6.0nm,1.4s						
BOOM	**Boomskoye usch**	**58.87**	**307**	IAmb	IAmb	15 19 37.8	
	comp=Z,5.2nm,0.5s						
AAK	**Ala-Archa**	**59.93**	**307**	P	**P**	**15 19 43.7**	**+1.3**
AAK				IAmb	IAmb	15 19 44.2	
	comp=Z,2.1nm,0.5s						
GHO	**Glory Hole Cre**	**60.01**	**31**	P	**P**	**15 19 43.0**	**+0.5**
ARSB	**Arslanbob**	**61.15**	**306**	P	**P**	**15 19 52.2**	**+1.5**
ILAR	**Eielson Array**	**61.37**	**27**	P	**P**	**15 19 50.5**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=264,slow=5.5,SNR=13						
	comp=Z,1.1nm,0.8s						
ILAR	**Eielson Array**	**61.37**	**27**	P	**P**	**15 19 50.7**	**-0.8**
NIUE	**Niue**	**61.45**	**128**	P	**P**	**15 19 52.9**	**+0.2**
BVAR	**Borovoye Array**	**62.30**	**319**	P	**P**	**15 19 58.9**	**+0.9**
	comp=Z,3.0nm,0.4s,baz=88,slow=6.9,SNR=28						
	comp=Z,3.0nm,0.4s						
BORK	**Borovoye**	**62.35**	**319**	P	**P**	**15 19 59.2**	**+1.0**
BORK				IAmb	IAmb	15 20 00.2	
	comp=Z,7.1nm,0.9s						
BMAR	**Burnt Mountain**	**62.67**	**24**	P	**P**	**15 20 02.1**	**+1.9**
J26L	**Joseph Creek**	**62.76**	**28**	P	**P**	**15 20 01.2**	**+0.3**
J26L				IAmb	IAmb	15 20 28.6	
	comp=Z,4.7nm,1.4s						
KK31	**Karatay Array**	**62.81**	**308**	P	**P**	**15 20 02.5**	**+1.0**
KK31				IAmb	IAmb	15 20 03.6	
	comp=Z,3.6nm,0.8s						
KKAR	**Karatay Array**	**62.81**	**308**	P	**P**	**15 20 02.6**	**+1.1**
L27K	**Beaver Creek,**	**63.42**	**29**	P	**P**	**15 20 05.7**	**+0.6**
L27K				IAmb	IAmb	15 20 16.3	
	comp=Z,5.6nm,1.3s						
I28M	**Miner Creek**	**64.36**	**27**	P	**P**	**15 20 12.0**	**+0.7**
M29M	**Somme Creek**	**64.96**	**30**	P	**P**	**15 20 15.8**	**+0.6**
M29M				IAmb	IAmb	15 20 17.2	
	comp=Z,4.2nm,1.1s						
G30M	**tAoh Zraii Nji**	**65.89**	**25**	P	**P**	**15 20 21.8**	**+0.8**
G30M				IAmb	IAmb	15 20 51.2	
	comp=Z,7.4nm,1.5s						
G31M	**Satah River**	**66.66**	**25**	IAmb	IAmb	15 20 27.2	
	comp=Z,5.6nm,0.7s						
AB31	**Akbulak array**	**69.22**	**316**	P	**P**	**15 20 42.8**	**+0.7**
AB31				IAmb	IAmb	15 20 43.6	
	comp=Z,4.4nm,0.6s						
ABKAR	**Akbulak array**	**69.22**	**316**	P	**P**	**15 20 42.7**	**+0.7**
C36M	**Paulatuk**	**70.18**	**22**	P	**P**	**15 20 48.0**	**+0.5**
SPITS	**Spitsbergen Ar**	**75.22**	**350**	P	**P**	**15 21 17.3**	**+0.3**
	comp=Z,5.0nm,0.9s,baz=82,slow=5.7,SNR=1.3						
	comp=Z,5.0nm,0.9s						
YKAW3	**Yellowknife Wh**	**75.76**	**28**	P	**P**	**15 21 20.9**	**+0.7**
YKA	**Yellowknife Ar**	**75.78**	**28**	P	**P**	**15 21 20.9**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=7.5,slow=6.7,SNR=17						
	comp=Z,1.3nm,0.8s						
YKA	**Yellowknife Ar**	**75.78**	**28**	P	**P**	**15 21 20.7**	**+0.4**
RES	**Resolute Bay**	**76.39**	**13**	P	**P**	**15 21 24.9**	**+1.3**
RES				IAmb	IAmb	15 21 25.7	
	comp=Z,3.8nm,0.8s						
B08A	**Colville Reser**	**78.25**	**43**	P	**P**	**15 21 34.3**	**-0.1**
ARCES	**ARCESS Array B**	**78.36**	**341**	P	**P**	**15 21 35.2**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=46,slow=3.5,SNR=12						
	comp=Z,1.8nm,0.5s						
ARCES	**ARCESS Array B**	**78.36**	**341**	IAmb	IAmb	15 21 37.8	
	comp=Z,14nm,1.3s						
TULEG	**Thule**	**79.39**	**7**	P	**P**	**15 21 41.1**	**+1.1**
TAOE	**Nuku Hiva Isla**	**81.00**	**103**	P	**P**	**15 21 50.1**	**+0.3**
POIN	**Pond Inlet**	**81.20**	**12**	P	**P**	**15 21 50.5**	**+0.8**
POIN				IAmb	IAmb	15 21 51.4	
	comp=Z,2.4nm,0.8s						
KBZ	**Khabaz**	**82.06**	**314**	P	**P**	**15 21 55.4**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=164,slow=3.6,SNR=7.4						
	comp=Z,5.5nm,0.8s						
NVAR	**Mina Array Bea**	**82.58**	**52**	P	**P**	**15 21 58.3**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=296,slow=5.2,SNR=4.2						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**82.58**	**52**	P	**P**	**15 21 58.0**	**+0.1**
FIA1	**FINESS Array S**	**82.68**	**335**	P	**P**	**15 21 57.9**	**+0.3**
FINES	**FINESS Array B**	**82.68**	**335**	P	**P**	**15 21 57.5**	**-0.1**
	comp=Z,3.8nm,0.4s,baz=63,slow=4.8,SNR=61						
	comp=Z,3.8nm,0.4s						
FINES	**FINESS Array B**	**82.68**	**335**	P	**P**	**15 21 57.4**	**-0.2**
ILON	**Igloolik, Nuna**	**82.96**	**15**	P	**P**	**15 21 58.8**	**-0.1**
ILON				IAmb	IAmb	15 22 00.2	
	comp=Z,3.8nm,0.9s						
GWY	**Greenwater Val**	**84.66**	**53**	P	**P**	**15 22 08.1**	**-0.3**
GWY				IAmb	IAmb	15 22 14.7	
	comp=Z,4.1nm,1.3s						
FFC	**Flin Flon**	**85.17**	**32**	P	**P**	**15 22 11.2**	**+0.9**
FFC				IAmb	IAmb	15 22 12.2	
	comp=Z,4.6nm,0.8s	

KARS				Sg	Sb	15 38 40.0	+0.3	
AHAN	**Ardahan-Merkez**	**0.79**	**262**	P	Pg	15 38 28.4	+0.3	
AHAN				S	Sg	15 38 39.1	+0.7	
AHAN				IAML		15 38 43.0		
	comp=E,35nm,0.3s							
BOZK	**Kars-Merkez-Bo**	**0.86**	**217**	P	Pb	15 38 30.2	+0.1	
BOZK				S	Sg	15 38 41.0	+0.3	
DIGO	**Kars**	**0.89**	**194**	P	Pg	15 38 29.8	-0.3	
DIGO				S	Sg	15 38 40.4	-1.3	
DIGO				IAML		15 38 47.0		
	comp=N,40nm,0.6s							
GOLE	**Ardahan-G¶le**	**0.92**	**241**	P	Pg	15 38 30.8	+0.3	
GOLE				S	Sb	15 38 43.7	+0.1	
GOLE				IAML		15 38 45.0		
	comp=E,51nm,0.2s							
TBLG	**Delisi**	**0.93**	**61**	Pg	Pg	15 38 30.5	-0.2	
TBLG				Sg	Sg	15 38 43.3	+0.5	
SENK	**Senkaya-Erzuru**	**1.22**	**234**	Pn	Pn	15 38 36.9	+0.4	
SENK				Sn	Sn	15 38 54.7	+1.4	
GNI	**Garni**	**1.40**	**144**	Pn	Pn	15 38 39.1	+0.3	
DDEM	**Demirkent**	**1.49**	**256**	P	Pn	15 38 40.3	+0.3	
DDEM				S	Sn	15 38 58.4	-1.4	
DBAD	**Bademkaya**	**1.51**	**261**	P	Pn	15 38 40.6	+0.3	
DBAD				S	Sn	15 38 58.5	-1.5	
DBAD				IAML		15 39 10.0		
	comp=N,18nm,1.4s							

IDC 09 15:43:23.7±2.4, 6°09'S×129°68'E, h0km, mb3.5/1, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=156.7km s-min=31.8km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.50**	**162**	Pn	Pn	15 46 48.6	-1.7
	0.1nm,0.3s,baz=345,slow=13,SNR=6.9						
WRA				Sn	Sn	15 49 24.3	-7.7
	0.1nm,0.3s,baz=348,slow=24,SNR=2.4						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**17.95**	**167**	P	P	15 47 35.8	+0.3
	0.1nm,0.3s,baz=343,slow=12,SNR=9.1						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**67.29**	**327**	P	P	15 54 20.4	0.0
	0.3nm,0.6s,baz=119,slow=6.9,SNR=4.7						
	0.3nm,0.6s						

*CATAC **09** 15:56:16.7±0.5, 14°N±3°×93°2W±°, h19km±3km, M3.4/14, MLv3.4/14, Error ellipse: s-maj=7.1km s-min=3.9km az=43.2, confirmed*

*GCG **09** 15:56:17.4±1.3, 14°24N×91°84W, h51km±17km, MD3.6, ML3.5, Presumed earthquake*

ISC 09 15:56:16.6±2.3, 14°18N±0°08×91°89W±0°07, h14km±12km, n23, σ1°27/33, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.39**	**28**	P	Pn	15 56 27.6	-0.3
RTAL				S	Sn	15 56 35.5	+0.3
STG2	**El Palmar, Qui**	**0.56**	**62**	*i* P	Pb	15 56 29.4	+1.1
STG5	**El Palmar, Qui**	**0.57**	**66**	*i* P	Pb	15 56 29.1	+0.7
STG8	**El Palmar, Qui**	**0.59**	**62**	*i* P	Pb	15 56 29.9	+1.0
SMCA	**Catarina**	**0.70**	**345**	*i* P	Pb	15 56 30.6	0.0
SMCA				IAML		15 56 43.3	
	comp=N,1µm,0.1s						
SOKI	**Kika Raxquin**	**0.79**	**36**	*e*P	Pg	15 56 32.2	+0.1
THIG		**0.81**	**333**	*i* P	Pb	15 56 32.2	-0.4
THIG				*i* S	Sb	15 56 43.5	0.0
THIG				IAML		15 56 44.5	
	comp=N,571nm,0.3s						
ESSG	**Sabana Grande**	**1.04**	**78**	*i* P	Pb	15 56 35.1	-1.5
HUEH	**Huehuetenango**	**1.20**	**18**	*i* P	Pn	15 56 38.3	-0.9
HUEH				S	Sg	15 56 56.2	+0.9
FG16	**Alotenango, Sa**	**1.34**	**86**	*i* P	Pn	15 56 35.7	-5.5
FG16				IAML		15 56 54.1	
	comp=E,4µm,0.2s						
QUIS	**Sacapulas**	**1.35**	**35**	*i* P	Pn	15 56 40.8	-0.5
PCG5	**San Vicente Pa**	**1.47**	**88**	*i* P	Pn	15 56 38.3	-4.5
APG	**El Apazote**	**1.60**	**59**	*i* P	Pn	15 56 43.1	-1.7
FAME	**Alcaldia de Sa**	**1.85**	**100**	P	Pn	15 56 49.2	+1.2
FAME				S	Sb	15 57 12.7	-0.5
SLOZ	**Alcaldia de Sa**	**2.05**	**94**	P	Pn	15 56 50.1	-0.6
LOAL	**Lomas de Alarc**	**2.05**	**95**	P	Pn	15 56 50.5	-0.3
LOAL				S	Sb	15 57 17.9	-1.3
NUBE	**Las Nubes**	**2.06**	**97**	P	Pn	15 56 52.0	+0.9
NUBE				S	Sb	15 57 17.7	-1.9
CCIG	**Comitan**	**2.11**	**353**	P	Pn	15 56 51.1	-0.6
CCIG				S	Sn	15 57 18.8	+0.9
CEVE	**Cerro Verde**	**2.22**	**99**	P	Pn	15 56 53.5	+0.1
CEVE				S	Sn	15 57 21.6	+0.8
JAYA	**Jayaque - finc**	**2.42**	**102**	P	Pn	15 56 56.2	+0.2
JAYA				S	Sn	15 57 26.7	+1.1
MTO3	**Montecristo**	**2.46**	**85**	P	Pn	15 56 57.4	+0.9
MTO3				S	Sn	15 57 28.1	+1.5
PMON	**Piamonte**	**2.54**	**100**	P	Pn	15 56 57.3	-0.3
PMON				S	Sn	15 57 29.8	+1.4
LALI	**Alcalda de L**	**2.58**	**105**	P	Pn	15 56 58.3	+0.2

*NEIC **09** 15:57:37.6±1.4, 15°76N±0°04×98°46W±0°04, h10km±2km, mb3.9/5, Md4.3/131(MEX), Error ellipse: s-maj=7.0km s-min=5.9km az=127.0*

*MEX **09** 15:57:42.1±0.8, 15°83N×98°45W, h16km±9km, MD4.3*

ISC 09 15:57:35.6±1.6, 15°81N±0°04×98°48W±0°02, h3km±11km, n119, σ1°82/218, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.67**	**31**		Pn	15 57 52.1	0.0
PNIG					Sb	15 58 00.1	+0.2
PNIG	**Pinotepa**	**0.67**	**31**	*i* P	Pn	15 57 52.1	0.0
PNIG				*e*S	Sb	15 58 00.1	+0.2
CRIG	**Cruz Grande**	**1.11**	**326**		Pn	15 57 59.3	+1.1
CRIG					Sb	15 58 12.3	-0.2
CRIG	**Cruz Grande**	**1.11**	**326**	*e*P	Pn	15 57 59.3	+1.1
CRIG				*e*S	Sb	15 58 12.3	-0.2
PEIG	**Puerto Escondi**	**1.30**	**81**		Pg	15 58 01.9	+1.3
PEIG					Sb	15 58 16.6	-1.3
PEIG	**Puerto Escondi**	**1.30**	**81**	*e*P	Pg	15 58 01.9	+1.3
PEIG				*e*S	Sb	15 58 16.6	-1.3
YOIG	**Yosondua**	**1.38**	**41**		Pg	15 58 03.0	+0.9
YOIG					Sb	15 58 19.1	-1.3
YOIG	**Yosondua**	**1.38**	**41**	*e*P	Pg	15 58 03.0	+0.9
YOIG				*e*S	Sb	15 58 19.1	-1.3
TXIG	**Tlaxiaco**	**1.59**	**25**		Pg	15 58 06.5	+0.3
TXIG					Sn	15 58 24.8	-1.5
TXIG	**Tlaxiaco**	**1.59**	**25**	*e*P	Pg	15 58 06.5	+0.3
TXIG				*e*S	Sn	15 58 24.8	-1.5
DAIG	**Los Arroyos**	**1.65**	**317**		Pg	15 58 07.3	0.0
DAIG					Sn	15 58 25.7	-1.6
DAIG	**Los Arroyos**	**1.65**	**317**	*e*P	Pg	15 58 07.3	0.0
DAIG				*e*S	Sn	15 58 25.7	-1.6
TLIG	**Tlapa**	**1.75**	**357**		Pb	15 58 08.6	+0.2
TLIG	**Tlapa**	**1.75**	**357**		Sb	15 58 29.6	-1.2
TLIG	**Tlapa**	**1.75**	**357**	*e*P	Pb	15 58 08.5	+0.1
TLIG				*e*S	Sb	15 58 29.6	-1.2
HMTT	**Tlapaneco**	**1.98**	**358**		Pb	15 58 12.5	+0.1
HMTT					Sb	15 58 36.1	-1.4
HMTT	**Tlapaneco**	**1.98**	**358**	*e*P	Pb	15 58 12.5	+0.1
HMTT				*e*S	Sb	15 58 36.1	-1.4
OXIG	**Oaxaca**	**2.10**	**53**		Pb	15 58 13.2	-1.2
OXIG					Sn	15 58 38.6	0.0
VHO	**Vista Hermosa**	**2.10**	**53**	*e*P	Pb	15 58 13.2	-1.2
VHO				*e*S	Sn	15 58 38.6	0.0
OXBJ	**Oaxaca**	**2.10**	**53**		Pn	15 58 11.2	-0.8
OXBJ					Sn	15 58 37.1	-1.6
OXBJ	**Oaxaca**	**2.10**	**53**	*e*P	Pn	15 58 11.2	-0.8
OXBJ				*e*S	Sn	15 58 37.1	-1.6
CAIG	**El Cayaco**	**2.11**	**306**		Pb	15 58 14.7	+0.2
CAIG					Sn	15 58 37.6	-1.1
CAIG	**El Cayaco**	**2.11**	**306**	*e*P	Pb	15 58 14.7	+0.2
CAIG				*e*S	Sn	15 58 37.6	-1.1
HLIG	**Huajuapan de L**	**2.11**	**18**		Pb	15 58 13.8	-0.9
HLIG					Sn	15 58 39.1	0.0
HLIG	**Huajuapan de L**	**2.11**	**18**	*e*P	Pb	15 58 13.8	-0.9
HLIG				*e*S	Sn	15 58 39.1	0.0
FTIG	**Fresnillo de T**	**2.12**	**9**		Pb	15 58 13.9	-0.8
FTIG					Sb	15 58 39.5	-1.9
FTIG	**Fresnillo de T**	**2.12**	**9**	*e*P	Pb	15 58 13.9	-0.8
FTIG				*e*S	Sb	15 58 39.5	-1.9
OXLC	**Oaxaca**	**2.12**	**54**		Pn	15 58 12.9	+0.8
OXLC					Sn	15 58 38.5	-0.7
OXLC	**Oaxaca**	**2.12**	**54**	*e*P	Pn	15 58 12.9	+0.8
OXLC				*e*S	Sn	15 58 38.5	-0.7
HUIG	**Huatulco**	**2.29**	**91**		Pb	15 58 16.1	-1.5
HUIG					Sn	15 58 40.4	-2.7
HUIG	**Huatulco**	**2.29**	**91**	*e*P	Pb	15 58 16.1	-1.5
HUIG				*e*S	Sn	15 58 40.4	-2.7
MEIG	**Mezcala**	**2.37**	**333**		Pb	15 58 18.2	-0.8
MEIG					Sn	15 58 45.8	+0.6
MEIG	**Mezcala**	**2.37**	**333**	*e*P	Pb	15 58 18.2	-0.8
MEIG				*e*S	Sn	15 58 45.8	+0.6
TOIG	**Toxpalan**	**2.65**	**31**		Pb	15 58 21.4	-2.4
TOIG					Sn	15 58 52.1	-0.1
TOIG	**Toxpalan**	**2.65**	**31**	*e*P	Pb	15 58 21.4	-2.4
TOIG				*e*S	Sn	15 58 52.1	-0.1
PLIG	**Platanillo**	**2.75**	**339**		Pb	15 58 23.9	-1.7
PLIG					Sn	15 58 54.1	-0.4
PLIG	**Platanillo**	**2.75**	**339**	*e*P	Pb	15 58 23.9	-1.7
PLIG				*e*S	Sn	15 58 54.1	-0.4
TPIG	**Tehuac#an**	**2.81**	**22**		Pn	15 58 23.5	+1.8
TPIG					Sn	15 58 56.1	-0.1
TPIG	**Tehuac#an**	**2.81**	**22**	*e*P	Pn	15 58 23.5	+1.8
TPIG				*e*S	Sn	15 58 56.1	-0.1
ARIG	**Puente Sto Nin**	**3.04**	**324**		Pb	15 58 27.2	-3.2
ARIG					Sn	15 59 02.4	+0.8
ARIG	**Puente Sto Nin**	**3.04**	**324**	*e*P	Pb	15 58 27.2	-3.2
ARIG				*e*S	Sn	15 59 02.4	+0.8
YAIG	**Yautepec**	**3.09**	**350**		Pb	15 58 28.1	-3.3
YAIG					Sb	15 59 05.8	-3.8
YAIG	**Yautepec**	**3.09**	**350**	*e*P	Pb	15 58 28.1	-3.3
YAIG				*e*S	Sb	15 59 05.8	-3.8
PBXN	**Popocatepetl**	**3.19**	**357**	*e*P	Pg	15 58 31.8	-5.0
PBXN					Sn	15 59 04.7	-1.3
PBXN					Sb	15 59 09.9	-2.9
NEUV	**Arroyo Zacate**	**3.19**	**53**		Pn	15 58 28.8	+2.0
NEUV					Sn	15 59 06.3	+0.9
NEUV	**Arroyo Zacate**	**3.19**	**53**	*e*P	Pn	15 58 28.8	+2.0
NEUV				*e*S	Sn	15 59 06.3	+0.9
PBPN	**Popocatepetl**	**3.22**	**358**	*e*P	Pb	15 58 31.1	-2.7
PBPN				*e*S	Sn	15 59 07.0	+0.2
PPM	**Popocatepetl**	**3.24**	**358**	*e*P	Pb	15 58 31.0	-3.2
PPM				*e*S	Sn	15 59 08.9	+1.6
PPIG	**Popocatepetl**	**3.24**	**358**		Pb	15 58 31.0	-3.2
PPIG					Sn	15 59 08.9	+1.6
PPSX	**Xalitzintla**	**3.26**	**360**	*e*P	Pn	15 58 29.1	+1.1
PPSX				*e*S	Sn	15 59 06.7	-0.8
MAVM	**Malinalco, Edo**	**3.28**	**343**		Pb	15 58 33.1	-1.5
MAVM					Sb	15 59 11.3	-3.7
MAVM	**Malinalco, Edo**	**3.28**	**343**	*e*P	Pb	15 58 33.1	-1.5
MAVM				*e*S	Sb	15 59 11.3	-3.7
AMVM	**AMECAMECA**	**3.32**	**355**		Pb	15 58 33.1	-2.2
AMVM					Sn	15 59 06.2	-2.8
AMVM	**AMECAMECA**	**3.32**	**355**	*e*P	Pb	15 58 33.1	-2.2
AMVM				*e*S	Sn	15 59 06.2	-2.8
ZIIG	**Zihuatanejo**	**3.37**	**302**		Pb	15 58 34.1	-2.0
ZIIG					Sn	15 59 08.0	-1.8
ZIIG	**Zihuatanejo**	**3.37**	**302**	*e*P	Pb	15 58 34.1	-2.0
ZIIG				*e*S	Sn	15 59 08.0	-1.8
MPVM	**San Francisco**	**3.41**	**352**		Pn	15 58 32.8	+2.8
MPVM					Sn	15 59 10.1	-1.1
MPVM	**San Francisco**	**3.41**	**352**	*e*P	Pn	15 58 32.8	+2.8
MPVM				*e*S	Sn	15 59 10.1	-1.1
MZVM		**3.44**	**348**		Pn	15 58 32.2	+2.1
MZVM					Sb	15 59 15.3	-4.1
MZVM		**3.44**	**348**	*e*P	Pn	15 58 32.2	+2.1
MZVM				*e*S	Sb	15 59 15.3	-4.1
TLVM	**San Miguel Top**	**3.44**	**349**		Sn	15 59 11.4	-0.7
TLVM					Sn	15 58 34.4	-3.1
TLVM	**San Miguel Top**	**3.44**	**349**	*e*P	Pb	15 58 34.4	-3.1
TLVM				*e*S	Sn	15 59 11.4	-0.7
XCVM	**Xochimilco**	**3.48**	**350**		Pn	15 58 33.3	+2.3
XCVM					Sn	15 59 12.1	-0.8
XCVM	**Xochimilco**	**3.48**	**350**	*e*P	Pn	15 58 33.3	+2.3
XCVM				*e*S	Sn	15 59 12.1	-0.8
THVM	**De Xico**	**3.51**	**352**		Pb	15 58 35.3	-3.4
THVM					Sn	15 59 12.4	-1.3
THVM	**De Xico**	**3.51**	**352**	*e*P	Pb	15 58 35.3	-3.4
THVM				*e*S	Sn	15 59 12.4	-1.3
AOVM	**Tlapan**	**3.53**	**347**		Pn	15 58 32.5	+0.6
AOVM					Sn	15 59 12.8	-1.7
AOVM	**Tlapan**	**3.53**	**347**	*e*P	Pn	15 58 32.5	+0.6
AOVM				*e*S	Sn	15 59 12.8	-1.7
UNM	**Universidad Na**	**3.56**	**349**	*e*S	Sn	15 59 16.6	+1.6
INVM	**La Marquesa**	**3.57**	**346**		Pn	15 58 36.8	-2.8
INVM					Sn	15 59 14.1	-1.1
INVM	**La Marquesa**	**3.57**	**346**	*e*P	Pb	15 58 36.8	-2.8
INVM				*e*S	Sn	15 59 14.1	-1.1
MCRU	**Las Cruces**	**3.57**	**348**	*e*P	Pn	15 58 34.4	+2.1
MCRU				*e*S	Sn	15 59 13.5	-1.7
BJVM	**Benito Juarez**	**3.61**	**350**		Sn	15 59 15.8	-0.2
BJVM	**Benito Juarez**	**3.61**	**350**	*e*S	Sn	15 59 15.8	-0.2
TXVM	**Universitario**	**3.63**	**354**		Pb	15 58 37.7	-2.9
TXVM					Sn	15 59 18.0	+1.4
TXVM	**Universitario**	**3.63**	**354**	*e*P	Pb	15 58 37.7	-2.9
TXVM				*e*S	Sn	15 59 18.0	+1.4
TOVM	**TOLUCA**	**3.64**	**342**		Pn	15 58 35.6	+2.3
TOVM					Sn	15 59 17.9	+1.1
TOVM	**TOLUCA**	**3.64**	**342**	*e*P	Pn	15 58 35.6	+2.3
TOVM				*e*S	Sn	15 59 17.9	+1.1
MHVM	**Bosque de Chap**	**3.65**	**349**		Pn	15 58 34.9	+1.6
MHVM					Sn	15 59 17.5	+0.5
MHVM	**Bosque de Chap**	**3.65**	**349**	*e*P	Pn	15 58 34.9	+1.6
MHVM				*e*S	Sn	15 59 17.5	+0.5
PBVM	**Pinon**	**3.66**	**351**		Pn	15 58 34.9	+1.7
PBVM					Sn	15 59 17.6	+0.7
PBVM	**Pinon**	**3.66**	**351**	*e*P	Pn	15 58 34.9	+1.7
PBVM				*e*S	Sn	15 59 17.6	+0.7
CTVM	**Cuauhtemoc**	**3.67**	**350**		Pn	15 58 35.3	+1.7
CTVM					Sn	15 59 18.5	+0.9
CTVM	**Cuauhtemoc**	**3.67**	**350**	*e*P	Pn	15 58 35.3	+1.7
CTVM				*e*S	Sn	15 59 18.5	+0.9
CMIG	**Matias Romero**	**3.68**	**69**		Pn	15 58 35.6	+2.1
CMIG					Sn	15 59 17.8	+0.3
CMIG	**Matias Romero**	**3.68**	**69**	*e*P	Pn	15 58 35.6	+2.1
CMIG				*e*S	Sn	15 59 17.8	+0.3
APVM	**Azcapotzalco**	**3.72**	**349**		Sn	15 59 20.0	+1.1
APVM	**Azcapotzalco**	**3.72**	**349**	*e*S	Sn	15 59 20.0	+1.1
AZVM	**Cuida Lopez Ma**	**3.83**	**349**		Pn	15 58 38.1	+2.3
AZVM					Sn	15 59 20.7	-0.9
AZVM	**Cuida Lopez Ma**	**3.83**	**349**	*e*P	Pn	15 58 38.1	+2.3
AZVM				*e*S	Sn	15 59 20.7	-0.9
JAUV	**Jalcomulco**	**3.88**	**24**		Pn	15 58 37.6	+1.3
JAUV					Sn	15 59 25.5	+3.0
JAUV	**Jalcomulco**	**3.88**	**24**	*e*P	Pn	15 58 37.6	+1.3
JAUV				*e*S	Sn	15 59 25.5	+3.0
PMUV	**Sontecomapan**	**4.21**	**49**		Pn	15 58 42.0	+1.1
PMUV					Sn	15 59 31.7	+1.0
PMUV	**Sontecomapan**	**4.21**	**49**	*e*P	Pn	15 58 42.0	+1.1
PMUV				*e*S	Sn	15 59 31.7	+1.0
LVIG	**Laguna Verde**	**4.36**	**27**		Pn	15 58 45.0	+2.1
LVIG					Sn	15 59 35.0	+0.7
LVIG	**Laguna Verde**	**4.36**	**27**	*e*P	Pn	15 58 45.0	+2.1
LVIG				*e*S	Sn	15 59 35.0	+0.7
UXUV	**UXUV**	**4.42**	**70**		Pn	15 58 46.2	+2.5
UXUV					Sn	15 59 33.6	-2.2
UXUV	**UXUV**	**4.42**	**70**	*e*P	Pn	15 58 46.2	+2.5
UXUV				*e*S	Sn	15 59 33.6	-2.2
CXUV	**Coxquihui**	**4.42**	**11**		Pn	15 58 48.2	+4.5
CXUV					Sn	15 59 37.9	+2.0
CXUV	**Coxquihui**	**4.42**	**11**	*e*P	Pn	15 58 48.2	+4.5
CXUV				*e*S	Sn	15 59 37.9	+2.0
DHIG	**Demacu**	**4.50**	**353**		Pb	15 58 54.7	-0.7
DHIG					Sn	15 59 37.8	-0.1
DEIG	**Demacu**	**4.50**	**353**	*e*P	Pb	15 58 54.7	-0.7
DEIG				*e*S	Sn	15 59 37.8	-0.2
MOIG	**Morelia**	**4.63**	**327**		Sn	15 59 44.7	+3.4
MOIG	**Morelia**	**4.63**	**327**	*e*S	Sn	15 59 44.7	+3.4
PCIG		**5.07**	**90**		Pn	15 58 54.5	+1.9
PCIG					Sn	15 59 48.9	-2.9
PCIG		**5.07**	**90**	*e*P	Pn	15 58 54.5	+1.9
PCIG				*e*S	Sn	15 59 48.9	-2.9
TGIG		**5.24**	**79**		Sn	15 59 56.0	+0.1
TGIG		**5.24**	**79**	*e*S	Sn	15 59 56.0	+0.1
CTUV	**Llano Grande**	**5.63**	**1**		Pn	15 59 03.4	+3.0
CTUV					Sn	16 00 05.2	-0.4
CTUV	**Llano Grande**	**5.63**	**1**	*e*P	Pn	15 59 03.4	+3.0
CTUV				*e*S	Sn	16 00 05.2	-0.4
INCO	**Volcan de Coli**	**6.12**	**308**	*e*P	Pn	15 59 11.3	+3.9
INCO				*e*S	Sn	16 00 20.8	+2.5
SOMAC	**Volcano de Col**	**6.14**	**308**	*e*P	Pn	15 59 12.4	+4.7
SOMAC				*e*S	Sn	16 00 20.7	+2.0
CEGR	**Campo Tres**	**6.24**	**306**	*e*P	Pn	15 59 11.8	+3.0
CEGR				*e*S	Sn	16 00 21.0	+0.2
TEIG	**Tepich**	**10.66**	**64**	Pn	Pn	16 00 10.0	+0.7
SRIG	**Santa Rosalia**	**17.16**	**314**	P	P	16 01 39.0	+0.8
121A	**Cookes Peak, D**	**18.67**	**335**	P	Pn	16 01 56.1	+0.7
121A				IAmb	IAmb	16 02 06.2	
	comp=Z,3.7nm,1.0s						
ANMO	**Albuquerque**	**20.36**	**341**	P	Pn	16 02 13.8	-1.8
GOGA	**Godfrey**	**22.17**	**35**	P	P	16 02 33.6	+0.7
GOGA				IAmb	IAmb	16 02 35.9	
	comp=Z,5.3nm,1.0s						
HAWA	**Hanford**	**35.19**	**334**	P	P	16 04 31.2	+0.2
HAWA				IAmb	IAmb	16 04 56.5	
	comp=Z,4.6nm,1.2s						

*NEIC **09** 16:10:15.9±1.5, 4°92N±0°06×126°82E±0°10, h88km±7km, mb4.6/37, Error ellipse: s-maj=15.0km s-min=7.6km az=67.0*

*IDC **09** 16:10:15.3±1.4, 5°01N×126°73E, h81km±12km, mb3.9/20, mbtmp4.2/23, MS3.0/9, Error ellipse: s-maj=27.0km s-min=9.3km az=68.0*

*DJA **09** 16:10:16.6±0.9, 5°N±4°×12°7E±°, h30km±14km, M4.6/13, mB5.0/3, mb4.6/7, MLv4.6/13, Mw(mB)4.4/3*

ISC 09 16:10:15.5±0.4, 4°92N±0°05×126°79E±0°07, h88km, n113, σ1°38/109, mb4.5/43, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.75**	**226**	P	Pn	16 10 43.1	-1.4
DAV	**Davao City (W)**	**2.46**	**331**	P	Pn	16 10 52.0	-1.7
	206nm,0.4s,baz=144,slow=3.3,SNR=7.4						
DAV				S	Sn	16 11 20.7	-2.4
	261nm,0.3s,baz=295,slow=23,SNR=11						
DAV	**Davao City (W)**	**2.46**	**331**		Pn	16 10 53.9	+0.1
DAV					Sn	16 11 23.0	-0.1
DAV	**Davao City (W)**	**2.46**	**331**	P	Pn	16 10 56.2	+2.4
MNI	**Manado**	**3.96**	**210**	P	Pn	16 11 13.9	-0.2
TNTI	**Ternate**	**4.16**	**172**		Pn	16 11 17.0	+0.4
TNTI	**Ternate**	**4.16**	**172**	P	Pn	16 11 17.1	+0.4
MRSI	**Marisa**	**6.55**	**228**	P	Pn	16 11 49.8	+0.5
SANI	**Sanana**	**6.96**	**187**	P	Pn	16 11 52.0	-3.0
SANI	**Sanana**	**6.96**	**187**	P	Pn	16 11 51.8	-3.2
LUWI	**Luwuk**	**7.15**	**214**	Pn	Pn	16 11 58.2	+0.7
SWI	**Sorong**	**7.27**	**142**	P	Pn	16 11 59.9	+0.8
	0.1nm25nm,1.0s						
SIJI	**Sorong**	**7.28**	**142**	P	Pn	16 11 59.4	+0.2
	12nm,0.5s,baz=315,slow=22,SNR=9.7						
SIJI				S	Sn	16 13 17.8	-2.7
	6.3nm,0.6s,baz=5.3,slow=24,SNR=1.6						
SIJI	**Sorong**	**7.28**	**142**	P	Pn	16 12 00.0	+0.7
	0.1nm22nm,1.0s						
NLAI	**Namlea**	**8.11**	**178**	P	Pn	16 12 10.4	-0.1
	1um35nm,0.4s						
MPSI	**Mapaga**	**8.25**	**237**	P	Pn	16 12 12.9	+0.4
FAKI	**Fak Fak**	**9.50**	**145**	Pn	Pn	16 12 29.7	+0.1
SAUI	**Saumlaki**	**13.58**	**161**	Pn	Pn	16 13 23.0	-1.5
SBUM	**Sibu**	**14.74**	**261**		P	16 13 44.2	+0.8
SOEI	**Soe**	**14.79**	**190**	P	Pn	16 13 33.4	-6.9
BATI	**Baumata**	**15.34**	**192**	P	Pn	16 13 49.0	+1.7
	19nm,0.6s,baz=347,slow=23,SNR=1.7						
PLAI	**Plampang**	**16.34**	**213**	P	Pn	16 13 58.1	-1.7
DRS	**Darwin Rock St**	**17.71**	**167**	P	P	16 14 13.7	-2.5
MTN	**Manton Dam**	**18.16**	**166**	P	P	16 14 20.9	-0.3
MTN				IAmb	IAmb	16 14 21.7	
	comp=Z,15nm,0.8s						
JAGI	**Jajag, Banyuwa**	**18.32**	**224**	P	P	16 14 23.4	+0.5
JAGI				IAmb	IAmb	16 14 30.4	
	comp=Z,49nm,1.2s						
JAGI	**Jajag, Banyuwa**	**18.32**	**224**	P	Pn	16 14 25.9	+1.9
TPUB	**Ta-pu**	**19.22**	**343**	P	P	16 14 32.3	-0.5
TPUB				IAmb	IAmb	16 14 34.0	
	comp=Z,66nm,1.4s						
SSLB	**Suanglung**	**19.59**	**344**	P	P	16 14 37.0	+0.2
SSLB				IAmb	IAmb	16 15 06.8	
	comp=Z,62nm,1.4s						
GUMO	**Guam**	**19.80**	**63**	LR	LR	16 22 43.5	
	comp=Z,39nm,18.9s,baz=245,slow=38						
UGM	**Wanagama

XLT					pmax	pmax			
	comp=Z,66nm,4.8s								
ASAJ	**Asahikawa**	**41.45**	**17**		LR	LR	16 39 36.7		
	comp=Z,16nm,18.0s,baz=160,slow=43								
LSA	**Lhasa**	**41.72**	**310**			**P**	**16 17 56.0**	**-0.5**	
LSA	**Lhasa**	**41.72**	**310**		P	**P**	**16 17 53.0**	**-3.5**	
GTA2	**Gaotai**	**42.21**	**328**	*eP*	P	**P**	**16 17 59.6**	**-0.4**	
GTA2					pP	pP	16 18 09.0	-11	
GTA2					pmax	pmax			
	comp=Z,2.0nm,0.6s								
HILR	**Hailar Array B**	**44.88**	**354**		P	**P**	**16 18 21.1**	**-0.1**	
	comp=Z,2.2nm,0.5s,baz=173,slow=9.9,SNR=14								
HILR					PcP	**PcP**	**16 20 02.5**	**+1.1**	
	comp=Z,0.9nm,0.4s,baz=145,slow=5.2,SNR=6.2								
	comp=Z,2.2nm,0.5s								
ULN	**Ulaanbaatar**	**46.02**	**342**			**P**	**16 18 30.6**	**+0.2**	
ULN					IAmb	IAmb	16 18 32.2		
	comp=E,8.1nm,0.7s								
SONM	**Songino Array**	**46.20**	**341**		P	**P**	**16 18 32.0**	**+0.2**	
	comp=Z,3.0nm,0.7s,baz=155,slow=8.6,SNR=17								
SONM					PcP	**PcP**	**16 20 07.1**	**+0.9**	
	comp=Z,0.5nm,0.6s,baz=163,slow=3.6,SNR=2.8								
	comp=Z,3.0nm,0.7s								
SONM	**Songino Array**	**46.20**	**341**		P	**P**	**16 18 32.1**	**+0.4**	
WMQ	**Urumqi**	**51.80**	**324**	*eP*	P	**P**	**16 19 16.1**	**+1.6**	
WMQ					pmax	pmax			
	comp=Z,10.0nm,0.9s								
WMQ					LR	LR			
	comp=N,770nm,22.1s								
WMQ					LR	LR			
	comp=E,950nm,24.3s								
WMQ					LR	LR			
	comp=Z,170nm,24.1s								
PETK	**Petropavlovsk-**	**54.32**	**22**		P	**P**	**16 19 33.2**	**+0.5**	
	comp=Z,3.5nm,0.7s,baz=189,slow=5.5,SNR=6.5								
	comp=Z,3.5nm,0.7s								
PETK	**Petropavlovsk-**	**54.32**	**22**		P	**P**	**16 19 32.3**	**-0.5**	
MKAR	**Makanchi Array**	**56.63**	**325**		P	**P**	**16 19 49.0**	**-0.4**	
	comp=Z,1.9nm,0.5s,baz=118,slow=7.3,SNR=28								
MKAR					PcP	**PcP**	**16 20 45.8**	**+0.9**	
	comp=Z,0.7nm,0.6s,baz=122,slow=6.0,SNR=1.6								
	comp=Z,1.9nm,0.5s								
MKAR	**Makanchi Array**	**56.63**	**325**			**P**	**16 19 48.7**	**-0.8**	
MAKZ	**Makanchi**	**56.81**	**325**			**P**	**16 19 50.1**	**-0.7**	
YAK	**Yakutsk**	**57.03**	**2**			**P**	**16 19 51.7**	**-0.3**	
KDJ	**Kajisay**	**57.51**	**318**		P	**P**	**16 19 56.5**	**+0.4**	
KDJ					IAmb	IAmb	16 19 57.6		
	comp=Z,5.0nm,1.2s								
MA2	**Magadan**	**57.55**	**14**		LR	LR	16 48 38.2		
	comp=Z,13nm,18.7s,baz=81,slow=40								
ZALV	**Zalesovo Beam**	**59.57**	**333**		P	**P**	**16 20 08.3**	**-1.5**	
	comp=Z,0.6nm,0.3s,baz=131,slow=6.6,SNR=5.4								
	comp=Z,0.6nm,0.3s								
ARSB	**Arslanbob**	**60.06**	**315**		P	**P**	**16 20 13.5**	**-0.1**	
ARSB					IAmb	IAmb	16 20 28.1		
	comp=Z,5.7nm,1.4s								
KURBB	**Kurchatov Arra**	**60.78**	**327**		P	**P**	**16 20 17.7**	**-0.5**	
	comp=Z,3.9nm,0.7s,baz=124,slow=6.7,SNR=21								
	comp=Z,3.9nm,0.7s								
KURK	**Kurchatov**	**60.78**	**327**		P	**P**	**16 20 17.9**	**-0.3**	
KURK					IAmb	IAmb	16 20 21.7		
	comp=Z,4.4nm,0.6s								
RTZ	**Ruatahuna**	**63.46**	**138**		P	**P**	**16 20 36.5**	**+0.1**	
BVAR	**Borovoye Array**	**66.37**	**327**		P	**P**	**16 20 54.9**	**0.0**	
	comp=Z,2.3nm,0.6s,baz=125,slow=9.3,SNR=14								
	comp=Z,2.3nm,0.6s								
BORK	**Borovoye**	**66.42**	**327**			**P**	**16 20 55.3**	**0.0**	
BORK					IAmb	IAmb	16 20 58.9		
	comp=Z,4.7nm,0.7s								
TIXI	**Tiksi**	**66.66**	**1**		P	**P**	**16 20 56.6**	**+0.1**	
NRIK	**Noril'sk**	**69.30**	**346**		P	**P**	**16 21 13.4**	**+0.4**	
	comp=Z,4.6nm,0.6s,baz=129,slow=5.8,SNR=13								
	comp=Z,4.6nm,0.6s								
NRIK	**Noril'sk**	**69.30**	**346**			**P**	**16 21 13.4**	**+0.4**	
NRIK					IAmb	IAmb	16 21 14.4		
	comp=Z,5.2nm,0.7s								
AB31	**Akbulak array**	**71.28**	**320**		P	**P**	**16 21 24.3**	**-1.2**	
ABKAR	**Akbulak array**	**71.28**	**320**		P	**P**	**16 21 24.1**	**-1.4**	
ARTI	**Arti**	**74.06**	**327**		P	**P**	**16 21 42.0**	**+0.2**	
ARTI					IAmb	IAmb	16 21 44.7		
	comp=Z,7.1nm,1.0s								
M14K	**Bethel**	**76.62**	**29**		P	**P**	**16 21 56.9**	**+0.6**	
M14K					IAmb	IAmb	16 22 08.3		
	comp=Z,16nm,1.5s								
I23K	**Minto, Yukon-K**	**82.98**	**25**		P	**P**	**16 22 31.9**	**+1.2**	
I23K					IAmb	IAmb	16 22 33.2		
	comp=Z,12nm,1.4s								
RND	**Reindeer**	**83.10**	**27**		P	**P**	**16 22 32.1**	**+0.7**	
RND					IAmb	IAmb	16 22 32.8		
	comp=Z,7.8nm,1.3s								
SML	**Sawmill**	**83.27**	**28**		P	**P**	**16 22 32.8**	**+0.5**	
CCB	**Clear Creek Bu**	**83.62**	**26**		P	**P**	**16 22 34.7**	**+0.7**	
HDA	**Harding Lake**	**83.98**	**26**		P	**P**	**16 22 35.9**	**+0.1**	
HDA					IAmb	IAmb	16 22 38.3		
	comp=Z,8.1nm,1.2s								
ILAR	**Eielson Array**	**84.01**	**25**		P	**P**	**16 22 34.7**	**-1.3**	
	comp=Z,0.4nm,0.6s,baz=247,slow=5.3,SNR=15								
	comp=Z,0.4nm,0.6s								
F28M	**Old Crow**	**86.77**	**23**		P	**P**	**16 22 50.6**	**+0.9**	
F31M	**Tsiigehtchic**	**89.12**	**22**		P	**P**	**16 23 01.3**	**+0.5**	
F31M					IAmb	IAmb	16 23 36.8		
	comp=Z,5.1nm,1.4s								
BRTR	**Keskin Array B**	**89.32**	**310**		P	**P**	**16 23 00.8**	**-1.8**	
	comp=Z,1.3nm,0.9s,baz=355,slow=3.0,SNR=3.9								
	comp=Z,1.3nm,0.9s								
SPITS	**Spitsbergen Ar**	**89.34**	**349**		P	**P**	**16 23 01.6**	**-0.1**	
	comp=Z,3.4nm,0.8s,baz=90,slow=7.5,SNR=5.5								
	comp=Z,3.4nm,0.8s								
ARCES	**ARCESS Array B**	**89.36**	**340**		P	**P**	**16 23 02.1**	**+0.2**	
	comp=Z,1.1nm,0.6s,baz=90,slow=6.1,SNR=6.2								
	comp=Z,1.1nm,0.6s								
ARCES	**ARCESS Array B**	**89.36**	**340**		P	**P**	**16 23 02.2**	**+0.2**	
FINES	**FINESS Array B**	**90.82**	**332**		P	**P**	**16 23 08.5**	**-0.4**	
	comp=Z,1.4nm,0.6s,baz=54,slow=3.3,SNR=14								
FINES					LR	LR	17 09 14.8		
	comp=Z,167nm,19.1s,baz=238,slow=39								
	comp=Z,1.4nm,0.6s								
FINES	**FINESS Array B**	**90.82**	**332**		P	**P**	**16 23 08.8**	**-0.1**	
MLR	**Muntele Rosu**	**94.09**	**316**		LR	LR	17 09 00.4		
	comp=Z,102nm,18.1s,baz=333,slow=38								
SCHQ	**Schefferville**	**119.39**	**9**		PKP	**PKiKP**	**16 28 56.0**	**+1.1**	
	comp=Z,2.6nm,0.7s,baz=342,slow=2.6,SNR=5.0								

*IDC **09** 16:19:35.9±3.9, 17°.61N×101°.97W, h0km, mb3.7/4, mbtmp3.6/7, ML3.1/3, MS3.4/2, Error ellipse: s-maj=87.8km s-min=34.6km az=31.0*
*NEIC **09** 16:19:37.3±0.9, 17°.51N±0°.07×102°.06W±0°.05, h20km±7km, mb4.1/19, Md4.3/95(MEX), Error ellipse: s-maj=10.8km s-min=6.0km az=200.0*
*MEX **09** 16:19:38.5±0.8, 17°.52N×102°.11W, h17km±532km, MD4.3*
ISC 09 16:19:35.6±1.3, 17°.47N±0°.04×102°.10W±0°.03, h15km±8km, n129, σ1.8s91/201, mb4.1/11, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UON	**La Union**	**0.56**	**28**	*eP*		**Pb**	**16 19 48.0**	**+0.8**
UON				*eS*		**Sb**	**16 19 55.3**	**+0.3**
ZIIG	**Zihuatanejo**	**0.62**	**78**			**Pb**	**16 19 48.5**	**+0.4**
ZIIG						**Sg**	**16 19 56.3**	**+0.3**
ZIIG	**Zihuatanejo**	**0.62**	**78**	*i*	P	**Pb**	**16 19 48.5**	**+0.4**
ZIIG				*eS*		**Sg**	**16 19 56.3**	**+0.3**
PET2	**Petatlan**	**0.80**	**86**			**Pg**	**16 19 51.0**	**-0.1**
PET2						**Sg**	**16 20 00.5**	**-1.2**
PET2	**Petatlan**	**0.80**	**86**	*eP*		**Pg**	**16 19 51.0**	**-0.1**
PET2				*eS*		**Sg**	**16 20 00.5**	**-1.2**
MMIG	**Aquila**	**1.44**	**304**			**Pn**	**16 20 00.3**	**-0.9**
MMIG						**Sn**	**16 20 16.4**	**-3.4**
MMIG	**Aquila**	**1.44**	**304**	*eP*		**Pn**	**16 20 00.2**	**-0.9**
MMIG				*eP*		**Pn**	**16 20 00.3**	**-0.9**
MMIG				*eS*		**Sn**	**16 20 16.2**	**-3.6**
MMIG				*eS*		**Sn**	**16 20 16.4**	**-3.4**
CAIG	**El Cayaco**	**1.80**	**103**			**Pn**	**16 20 05.7**	**-0.4**
CAIG	**El Cayaco**	**1.80**	**103**	*eP*		**Pn**	**16 20 05.7**	**-0.4**
ARIG	**Puente Sto Nin**	**1.85**	**64**			**Pn**	**16 20 06.9**	**+0.1**
ARIG						**Sn**	**16 20 27.6**	**-2.3**
ARIG	**Puente Sto Nin**	**1.85**	**64**	*eP*		**Pn**	**16 20 06.9**	**+0.1**
ARIG				*eS*		**Sn**	**16 20 27.6**	**-2.3**
URUA	**Uruapan**	**1.94**	**1**			**Pn**	**16 20 08.9**	**+0.7**
URUA						**Sn**	**16 20 33.0**	**+0.6**
URUA	**Uruapan**	**1.94**	**1**	*eP*		**Pn**	**16 20 08.9**	**+0.7**
URUA				*eS*		**Sn**	**16 20 33.0**	**+0.6**
MOIG	**Morelia**	**2.35**	**21**			**Pn**	**16 20 13.3**	**-0.7**
DAIG	**Los Arroyos**	**2.38**	**101**			**Pn**	**16 20 13.7**	**-0.4**
DAIG	**Los Arroyos**	**2.38**	**101**	*eP*		**Pn**	**16 20 13.7**	**-0.4**
MEIG	**Mezcala**	**2.40**	**79**			**Pn**	**16 20 15.9**	**+1.4**
MEIG	**Mezcala**	**2.40**	**79**	*eP*		**Pn**	**16 20 15.9**	**+1.4**
COMA	**Comala**	**2.43**	**320**			**Pn**	**16 20 15.8**	**+0.9**
COMA						**Sn**	**16 20 43.3**	**-1.0**
COMA	**Comala**	**2.43**	**320**	*eP*		**Pn**	**16 20 15.8**	**+0.9**
COMA				*eS*		**Sn**	**16 20 43.3**	**-1.0**
PLIG	**Platanillo**	**2.63**	**69**			**Pn**	**16 20 18.0**	**+0.3**
PLIG	**Platanillo**	**2.63**	**69**	*eP*		**Pn**	**16 20 18.0**	**+0.3**
MAVM	**Malinalco, Edo**	**2.88**	**59**			**Pn**	**16 20 21.4**	**+0.3**
MAVM						**Sn**	**16 20 54.5**	**-1.2**
MAVM	**Malinalco, Edo**	**2.88**	**59**	*eP*		**Pn**	**16 20 21.4**	**+0.3**
MAVM				*eS*		**Sn**	**16 20 54.5**	**-1.2**
TOVM	**TOLUCA**	**2.92**	**52**			**Pn**	**16 20 22.1**	**+0.3**
TOVM						**Sn**	**16 20 55.7**	**-1.0**
TOVM	**TOLUCA**	**2.92**	**52**	*eP*		**Pn**	**16 20 22.1**	**+0.3**
TOVM				*eS*		**Sn**	**16 20 55.7**	**-1.0**
CRIG	**Cruz Grande**	**2.93**	**104**			**Pn**	**16 20 21.9**	**+0.2**
CRIG	**Cruz Grande**	**2.93**	**104**	*eP*		**Pn**	**16 20 21.9**	**+0.2**
INVM	**La Marquesa**	**3.15**	**55**			**Pn**	**16 20 25.2**	**+0.1**
INVM						**Sn**	**16 21 01.5**	**-1.0**
INVM	**La Marquesa**	**3.15**	**55**	*eP*		**Pn**	**16 20 25.2**	**+0.1**
INVM				*eS*		**Sn**	**16 21 01.5**	**-1.0**
AOVM	**Tlapan**	**3.18**	**55**			**Pn**	**16 20 24.8**	**-0.8**
AOVM						**Sn**	**16 21 02.0**	**-1.5**
AOVM	**Tlapan**	**3.18**	**55**	*eP*		**Pn**	**16 20 24.8**	**-0.8**
AOVM				*eS*		**Sn**	**16 21 02.0**	**-1.5**
MZVM		**3.21**	**57**			**Pn**	**16 20 27.0**	**+1.4**
MZVM						**Sn**	**16 21 02.0**	**-1.6**
MZVM		**3.21**	**57**	*eP*		**Pn**	**16 20 27.0**	**+1.4**
MZVM				*eS*		**Sn**	**16 21 02.0**	**-1.6**
MCRU	**Las Cruces**	**3.26**	**55**	*eP*		**Pn**	**16 20 25.7**	**-0.9**
MCRU				*eS*		**Sn**	**16 21 03.4**	**-1.9**
TLVM	**San Miguel Top**	**3.28**	**58**			**Pn**	**16 20 27.0**	**+0.1**
TLVM						**Sn**	**16 21 04.3**	**-1.5**
TLVM	**San Miguel Top**	**3.28**	**58**	*eP*		**Pn**	**16 20 27.0**	**+0.1**
TLVM				*eS*		**Sn**	**16 21 04.3**	**-1.5**
UNM	**Universidad Na**	**3.33**	**56**	Pn		**Pn**	**16 20 27.8**	**+0.3**
XCVM	**Xochimilco**	**3.34**	**58**			**Pn**	**16 20 27.5**	**-0.1**
XCVM						**Sn**	**16 21 03.9**	**-3.2**
XCVM	**Xochimilco**	**3.34**	**58**	*eP*		**Pn**	**16 20 27.5**	**-0.1**
XCVM				*eS*		**Sn**	**16 21 03.9**	**-3.2**
IGIG	**Irapuato, Guan**	**3.34**	**12**			**Pn**	**16 20 26.6**	**-0.9**
IGIG	**Irapuato, Guan**	**3.34**	**12**	*eP*		**Pn**	**16 20 26.6**	**-0.9**
MHVM	**Bosque de Chap**	**3.35**	**54**			**Pn**	**16 20 27.1**	**-0.6**
MHVM						**Sn**	**16 21 04.7**	**-2.7**
MHVM	**Bosque de Chap**	**3.35**	**54**	*eP*		**Pn**	**16 20 27.1**	**-0.6**
MHVM				*eS*		**Sn**	**16 21 04.7**	**-2.7**
TLIG	**Tlapa**	**3.37**	**88**			**Pn**	**16 20 28.5**	**+0.6**
AZVM	**Cuida Lopez Ma**	**3.40**	**51**			**Pn**	**16 20 28.6**	**+0.2**
AZVM						**Sn**	**16 21 06.6**	**-2.0**
AZVM	**Cuida Lopez Ma**	**3.40**	**51**	*eP*		**Pn**	**16 20 28.6**	**+0.2**
AZVM				*eS*		**Sn**	**16 21 06.6**	**-2.0**
MPVM	**San Francisco**	**3.40**	**59**			**Pn**	**16 20 27.4**	**-0.9**
MPVM						**Sn**	**16 21 05.8**	**-2.7**
MPVM	**San Francisco**	**3.40**	**59**	*eP*		**Pn**	**16 20 27.4**	**-0.9**
MPVM				*eS*		**Sn**	**16 21 05.8**	**-2.7**
THVM	**De Xico**	**3.48**	**58**			**Pn**	**16 20 28.9**	**-0.6**
THVM						**Sn**	**16 21 08.3**	**-2.4**
THVM	**De Xico**	**3.48**	**58**	*eP*		**Pn**	**16 20 28.9**	**-0.6**
THVM				*eS*		**Sn**	**16 21 08.3**	**-2.4**
JRQG	**Juriquilla Cam**	**3.57**	**26**			**Pn**	**16 20 29.1**	**-1.6**
JRQG						**Sn**	**16 21 10.5**	**-2.3**
JRQG	**Juriquilla Cam**	**3.57**	**26**	*eP*		**Pn**	**16 20 29.1**	**-1.6**
JRQG				*eS*		**Sn**	**16 21 10.5**	**-2.3**
PBXN	**Popocatepetl**	**3.61**	**64**			**Pn**	**16 20 31.0**	**-0.4**
PBXN				*eP*		**Pn**	**16 20 31.0**	**-0.4**
PBXN				*eS*		**Sn**	**16 21 12.1**	**-2.0**
PBXN				*eS*		Sb	16 21 13.3	-10
PBPN	**Popocatepetl**	**3.65**	**64**	*eP*		**Pn**	**16 20 30.4**	**-1.6**
PBPN				*eS*		**Sn**	**16 21 12.7**	**-2.3**
PPIG	**Popocatepetl**	**3.66**	**64**			**Pn**	**16 20 29.1**	**-3.0**
PPIG						**Sn**	**16 21 15.5**	**+0.2**
PPM	**Popocatepetl**	**3.66**	**64**	*eP*		**Pn**	**16 20 29.1**	**-3.1**
PPM				*eS*		**Sn**	**16 21 15.5**	**+0.2**
PBCV	**Popocatepetl**	**3.68**	**65**	*eP*		**Pn**	**16 20 31.7**	**-0.7**
PBCV				*eS*		**Sn**	**16 21 14.8**	**-0.9**
PPSX	**Xalitzintla**	**3.76**	**64**	*eP*		**Pn**	**16 20 31.7**	**-1.8**
PPSX				*eS*		**Sn**	**16 21 14.8**	**-2.9**
FTIG	**Fresnillo de T**	**3.80**	**83**			**Pn**	**16 20 34.2**	**+0.4**
FTIG						**Sn**	**16 21 12.8**	**-5.5**
FTIG	**Fresnillo de T**	**3.80**	**83**	*eP*		**Pn**	**16 20 34.2**	**+0.4**
FTIG				*eS*		**Sn**	**16 21 12.8**	**-5.5**
PNIG	**Pinotepa**	**3.95**	**105**			**Pn**	**16 20 36.0**	**+0.3**
PNIG						**Sn**	**16 21 17.2**	**-4.6**
PNIG	**Pinotepa**	**3.95**	**105**	*eP*		**Pn**	**16 20 36.0**	**+0.3**
PNIG				*eS*		**Sn**	**16 21 17.2**	**-4.6**
DHIG	**Demacu**	**4.04**	**45**			**Pn**	**16 20 37.5**	**+0.4**
DHIG						**Sn**	**16 21 24.3**	**0.0**
DEIG	**Demacu**	**4.04**	**45**	*eP*		**Pn**	**16 20 37.5**	**+0.4**
DEIG				*eS*		**Sn**	**16 21 24.3**	**0.0**
HLIG	**Huajuapan de L**	**4.11**	**84**			**Pn**	**16 20 39.2**	**+1.1**
HLIG						**Sn**	**16 21 21.8**	**-4.3**
HLIG	**Huajuapan de L**	**4.11**	**84**	*eP*		**Pn**	**16 20 39.2**	**+1.1**
HLIG				*eS*		**Sn**	**16 21 21.8**	**-4.3**
TXIG	**Tlaxiaco**	**4.14**	**92**			**Pn**	**16 20 38.9**	**+0.3**
TXIG						**Sn**	**16 21 21.5**	**-5.4**
TXIG	**Tlaxiaco**	**4.14**	**92**	*eP*		**Pn**	**16 20 38.9**	**+0.3**
TXIG				*eS*		**Sn**	**16 21 21.5**	**-5.4**
ANIG	**Ahuacatlan**	**4.23**	**328**			**Pn**	**16 20 37.9**	**-1.8**
ANIG	**Ahuacatlan**	**4.23**	**328**	*eP*		**Pn**	**16 20 37.9**	**-1.8**
YOIG	**Yosondua**	**4.39**	**97**			**Pn**	**16 20 42.6**	**+0.5**
YOIG						**Sn**	**16 21 32.8**	**-0.4**
YOIG	**Yosondua**	**4.39**	**97**	*eP*		**Pn**	**16 20 42.6**	**+0.5**
YOIG				*eS*		**Sn**	**16 21 32.8**	**-0.4**
AAIG	**Aguscalientes**	**4.48**	**357**			**Pn**	**16 20 45.4**	**+2.2**
AAIG						**Sb**	**16 21 42.5**	**-5.6**
AAIG	**Aguscalientes**	**4.48**	**357**	*eP*		**Pn**	**16 20 45.4**	**+2.2**
AAIG				*eS*		**Sb**	**16 21 42.5**	**-5.6**
TPIG	**Tehuac#an**	**4.60**	**78**			**Pn**	**16 20 43.1**	**-1.8**
TPIG						**Sn**	**16 21 38.8**	**+0.6**
TPIG	**Tehuac#an**	**4.60**	**78**	*eP*		**Pn**	**16 20 43.1**	**-1.8**
TPIG				*eS*		**Sn**	**16 21 38.8**	**+0.6**
TOIG	**Toxpalan**	**4.83**	**82**			**Pn**	**16 20 49.2**	**+1.2**
TOIG						**Sn**	**16 21 43.4**	**-0.4**
TOIG	**Toxpalan**	**4.83**	**82**	*eP*		**Pn**	**16 20 49.2**	**+1.2**
TOIG				*eS*		**Sn**	**16 21 43.4**	**-0.4**
PEIG	**Puerto Escondi**	**4.96**	**106**			**Pn**	**16 20 50.8**	**+1.1**
PEIG						**Sn**	**16 21 47.6**	**+0.7**
PEIG	**Puerto Escondi**	**4.96**	**106**	*eP*		**Pn**	**16 20 50.8**	**+1.1**
PEIG				*eS*		**Sn**	**16 21 47.6**	**+0.7**
CXUV	**Coxquihui**	**5.04**	**57**			**Pn**	**16 20 51.2**	**+0.4**
CXUV	**Coxquihui**	**5.04**	**57**	*eP*		**Pn**	**16 20 51.2**	**+0.4**
OXIG	**Oaxaca**	**5.14**	**94**			**Pn**	**16 20 54.8**	**+2.5**
OXIG						**Sn**	**16 21 46.5**	**-5.0**
VHO	**Vista Hermosa**	**5.14**	**94**	*eP*		**Pn**	**16 20 54.8**	**+2.6**
VHO				*eS*		**Sn**	**16 21 46.5**	**-5.0**
ZAIG	**Zacatecas**	**5.29**	**355**			**Pn**	**16 20 54.8**	**+0.4**
ZAIG	**Zacatecas**	**5.29**	**355**			**Sn**	**16 21 52.7**	**-2.5**
ZAIG	**Zacatecas**	**5.29**	**355**	*eP*		**Pn**	**16 20 53.3**	**-1.1**
ZAIG				*eS*		**Sn**	**16 21 52.7**	**-2.5**
CTUV	**Llano Grande**	**5.32**	**41**			**Pn**	**16 20 54.7**	**+0.2**
CTUV	**Llano Grande**	**5.32**	**41**	*eP*		**Pn**	**16 20 54.7**	**+0.2**
JAUV	**Jalcomulco**	**5.37**	**69**			**Pn**	**16 20 54.6**	**-0.7**
JAUV	**Jalcomulco**	**5.37**	**69**	*eP*		**Pn**	**16 20 54.6**	**-0.7**
HUIG	**Huatulco**	**5.99**	**106**			**Pn**	**16 21 04.4**	**+0.7**
HUIG	**Huatulco**	**5.99**	**106**	*eP*		**Pn**	**16 21 04.4**	**+0.7**
NEUV	**Arroyo Zacate**	**6.01**	**87**			**Pn**	**16 21 03.0**	**-1.0**
NEUV						**Sn**	**16 22 07.4**	**-5.1**
NEUV	**Arroyo Zacate**	**6.01**	**87**	*eP*		**Pn**	**16 21 03.0**	**-1.0**
NEUV				*eS*		**Sn**	**16 22 07.4**	**-5.1**
CMIG	**Matias Romero**	**6.90**	**92**	Pn		**Pn**	**16 21 17.3**	**+1.0**
	0.4nm,0.3s,baz=271,slow=13,SNR=6.8							
CMIG					Lg	Lg	16 23 05.3	
	0.4nm,0.3s,baz=16,slow=20,SNR=3.8							
CMIG					LR	LR	16 24 00.4	
	comp=Z,128nm,19.7s,baz=206,slow=39							
	0.9nm,0.3s							
CMIG	**Matias Romero**	**6.90**	**92**			**Pn**	**16 21 16.2**	**-0.1**
CMIG						**Sn**	**16 22 34.4**	**-0.2**
CMIG	**Matias Romero**	**6.90**	**92**	*eP*		**Pn**	**16 21 16.2**	**-0.1**
CMIG				*eS*		**Sn**	**16 22 34.4**	**-0.2**
UXUV	**UXUV**	**7.59**	**90**			**Pn**	**16 21 24.9**	**-0.8**
UXUV						**Sn**	**16 22 48.3**	**-3.4**
UXUV	**UXUV**	**7.59**	**90**	*eP*		**Pn**	**16 21 24.9**	**-0.8**
UXUV				*eS*		**Sn**	**16 22 48.3**	**-3.4**
TXAR	**Lajitas Array**	**11.89**	**353**	Pn		**Pn**	**16 22 27.8**	**+3.0**
	baz=171,slow=13,SNR=5.4							
	0.6nm,0.9s							
POST	**Post**	**15.54**	**2**			**P**	**16 23 18.5**	**-0.1**
POST					IAmb	IAmb	16 23 20.6	
	comp=Z,14nm,0.9s							
PLPT	**Palo Pinto**	**15.65**	**12**	P		**P**	**16 23 19.9**	**+0.2**
PLPT					IAmb	IAmb	16 23 20.8	
	comp=Z,8.0nm,0.6s							
ANMO	**Albuquerque**	**17.83**	**348**	P		**P**	**16 23 45.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=152,slow=7.3,SNR=4.2							
	comp=Z,0.3nm,0.3s							
MIAR	**Mount Ida**	**18.63**	**23**	P		**P**	**16 23 51.6**	**-1.1**
WHAR	**Wooly Hollow**	**19.78**	**24**			**P**	**16 24 05.2**	**-0.1**
WHAR					IAmb	IAmb	16 24 06.2	
	comp=Z,13nm,0.9s							
FCAR	**Ozark Folk Cen**	**20.37**	**24**	P		**P**	**16 24 11.7**	**0.0**
LRAL	**Lakeview Retre**	**20.61**	**38**	P		**P**	**16 24 13.8**	**-0.5**
LRAL					IAmb	IAmb	16 24 14.5	
	comp=Z,6.9nm,0.6s							
MGMO	**Mountain Grove**	**21.43**	**22**	P		**P**	**16 24 22.5**	**-0.7**
Y49A	**Blount Mountai**	**21.54**	**38**	P		**P**	**16 24 24.5**	**+0.1**
Y49A					IAmb	IAmb	16 24 28.5	
	comp=Z,6.4nm,0.7s							
R40A	**Maddies Statio**	**22.45**	**21**	P		**P**	**16 24 33.1**	**-1.0**
R40A					IAmb	IAmb	16 24 33.3	
	comp=Z,4.2nm,0.6s							
Q16A	**Castle Valley**	**22.79**	**341**	P		**P**	**16 24 38.3**	**+0.4**
Q16A					IAmb	IAmb	16 24 40.1	
	comp=Z,5.1nm,1.0s							
P40A	**Paris**	**23.65**	**20**	P		**P**	**16 24 45.6**	**-0.8**
P40A					IAmb	IAmb	16 24 48.4	
	comp=Z,3.6nm,0.9s							
P43A	**Skaggs, Pawnee**	**24.64**	**24**	P		**P**	**16 24 55.2**	**-0.4**
NVAR	**Mina Array Bea**	**25.24**	**329**	P		**P**	**16 25 04.0**	**+2.7**
	comp=Z,3.4nm,0.8s,baz=151,slow=12,SNR=12							
	comp=Z,3.4nm,0.8s							
PD31	**Pinedale Array**	**26.00**	**347**			**P**	**16 25 08.6**	**+0.4**
PDAR	**Pinedale Array**	**26.00**	**347**	P		**P**	**16 25 08.9**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=156,slow=10.0,SNR=12							
	comp=Z,1.2nm,0.8s							
PDAR	**Pinedale Array**	**26.00**	**347**	P		**P**	**16 25 08.7**	**+0.5**
ECSD	**EROS Data Cent**	**26.59**	**9**	P		**P**	**16 25 13.3**	**+0.1**
ECSD					IAmb	IAmb	16 25 16.4	
	comp=Z,3.8nm,0.7s							
YKA	**Yellowknife Ar**	**45.82**	**352**	P		**P**	**16 27 57.4**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=166,slow=6.6,SNR=8.3				

CELP				IAML		17 08 22.6		
	comp=Z,1μm,0.3s							
CELP				IAML		17 08 23.5		
	comp=Z,1μm,0.1s							
UUPR	**Utuado, UPR, P**	**0.43**	**35**	Pg	**Pg**	**17 08 15.2**	**+0.3**	
AGPR	**Aguadilla, PR**	**0.58**	**348**		**Pg**	**17 08 17.5**	**-0.1**	
AGPR				IAML		17 08 25.3		
	comp=Z,2μm,0.5s							
AGPR				IAML		17 08 25.3		
	comp=Z,2μm,0.4s							
AGPR	**Aguadilla, PR**	**0.58**	**348**	⇑*e*Pg	**Pg**	**17 08 17.6**	**-0.1**	
AGPR				⇑*e*Sg	**Sg**	**17 08 25.0**	**-0.5**	
AGPR				IAML		17 08 25.9		
	comp=N,2μm,0.2s							
AGPR	**Aguadilla, PR**	**0.58**	**348**	⇑*i*P	**Pg**	**17 08 17.6**	**-0.1**	
AGPR				*e*S	**Sg**	**17 08 25.1**	**-0.3**	
IDE	**Isla Desecheo**	**0.68**	**316**		**Pg**	**17 08 18.9**	**-0.5**	
IDE					**Sg**	**17 08 28.1**	**-0.3**	
IDE	**Isla Desecheo**	**0.68**	**316**	⇑*i*P	**Pg**	**17 08 18.9**	**-0.5**	
IDE				*e*S	**Sg**	**17 08 28.1**	**-0.3**	
EMPR	**Esperanza - Ma**	**0.72**	**37**		**Pb**	**17 08 20.7**	**-0.1**	
EMPR					**Sb**	**17 08 30.8**	**+0.3**	
EMPR	**Esperanza - Ma**	**0.72**	**37**	⇓*i*P	**Pb**	**17 08 20.7**	**-0.1**	
EMPR				*e*S	**Sb**	**17 08 30.8**	**+0.3**	
ECPR	**Experimental S**	**0.72**	**54**	Pg	**Pg**	**17 08 20.2**	**-0.1**	
ECPR				IAML		17 08 31.3		
	comp=N,1μm,0.2s							
ECPR				IAML		17 08 35.2		
	comp=N,2μm,0.2s							
SJG	**San Juan**	**0.82**	**75**		**Pg**	**17 08 22.0**	**-0.2**	
SJG				IAML		17 08 36.7		
	comp=N,531nm,0.2s							
SJG	**San Juan**	**0.82**	**75**	⇑*e*Pg	**Pg**	**17 08 22.3**	**+0.1**	
SJG				⇑*e*Sg	**Sb**	**17 08 34.5**	**+1.1**	
SJG	**San Juan**	**0.82**	**75**	⇑*i*P	**Pg**	**17 08 22.3**	**+0.1**	
SJG				*e*S	**Sg**	**17 08 32.7**	**-0.3**	
SJG	**San Juan**	**0.82**	**75**	*i*P	**Pg**	**17 08 22.3**	**+0.1**	
SJG				*e*S	**Sg**	**17 08 33.4**	**+0.4**	
SJG				IAML		17 08 35.7		
	comp=Z,182nm,0.6s							
PDPR	**Patillas Dam,**	**0.92**	**82**		**Pg**	**17 08 24.2**	**+0.1**	
PDPR				IAML		17 08 41.4		
	comp=Z,602nm,0.3s							
GCPR	**Guaynabo City**	**0.95**	**64**	Pg	**Pb**	**17 08 24.4**	**-0.2**	
GCPR	**Guaynabo City**	**0.95**	**64**		**Sb**	**17 08 37.1**	**0.0**	
GCPR	**Guaynabo City**	**0.95**	**64**	⇑*i*P	**Pb**	**17 08 24.4**	**-0.2**	
GCPR				*e*S	**Sb**	**17 08 37.1**	**0.0**	
HUMP	**Col San Antoni**	**1.10**	**77**		**Pb**	**17 08 27.3**	**0.0**	
HUMP					**Sb**	**17 08 41.9**	**+0.3**	
HUMP	**Col San Antoni**	**1.10**	**77**	IAML		17 08 45.6		
	comp=Z,477nm,0.3s							
HUMP				IAML		17 08 45.7		
	comp=Z,821nm,0.4s							
HUMP	**Col San Antoni**	**1.10**	**77**	⇓*i*P	**Pb**	**17 08 27.3**	**0.0**	
HUMP				*e*S	**Sb**	**17 08 41.9**	**+0.3**	
CUPR	**Culebra, Puert**	**1.67**	**76**		**Pb**	**17 08 37.0**	**+0.1**	

*IDC **09** 17:11:50.6±3.2, 0.°57S×96.°67E, h0km, mb3.4/4, mbtmp3.4/5, Error ellipse: s-maj=124.5km s-min=24.2km az=59.0*
*DJA **09** 17:11:55.1±0.5, 0.°5S±4.°×9.°7E±.°, h65km±29km, M4.4/23, mB5.1/2, mb4.4/7, MLv4.3/23, Mw(mB)4.5/2*

ISC 09 17:11:55.8±1.7, 0.°4S±0.°1×96.°7E±0.°2, h35km, n14, σ1℗35/15, mb3.4/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**1.63**	**79**	P		**Pn**	**17 12 22.1**	**+0.1**
GSI	**Gunungsitoli**	**1.88**	**29**	P		**Pn**	**17 12 25.2**	**-0.3**
SNSI	**Sinabang, Aceh**	**2.77**	**353**	P		**Pn**	**17 12 36.7**	**-1.0**
SNSI				S		**Sn**	**17 13 07.7**	**-2.2**
MNSI	**Mandailing Nat**	**3.12**	**68**	P		**Pn**	**17 12 43.4**	**+0.8**
PDSI	**Padang**	**3.83**	**98**	P		**Pn**	**17 12 52.1**	**-0.2**
KCSI	**Kotacane, Aceh**	**4.01**	**16**	P		**Pn**	**17 12 54.4**	**-0.3**
MLSI	**Meulaboh, Aceh**	**4.60**	**357**	P		**Pn**	**17 13 02.8**	**-0.1**
MASI	**Maura Aman, Be**	**6.21**	**116**	P		**Pn**	**17 13 25.8**	**+0.7**
	0.3nm35nm,1.1s							
EGSI	**Enggano, Bengk**	**7.48**	**132**	P		**Pn**	**17 13 41.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**18.83**	**7**	P		**Pn**	**17 16 14.8**	**+1.3**
	0.6nm,0.5s,baz=193,slow=11,SNR=8.0							
WRA	**Warramunga Arr**	**41.69**	**120**	P		**P**	**17 19 41.9**	**+0.5**
	0.5nm,0.9s,baz=298,slow=8.0,SNR=1.5							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**42.90**	**125**	P		**P**	**17 19 48.9**	**-2.5**
	0.2nm,0.7s,baz=296,slow=7.7,SNR=4.3							
	0.2nm,0.7s							
MKAR	**Makanchi Array**	**48.62**	**347**	P		**P**	**17 20 38.1**	**+2.0**
	0.5nm,0.7s,baz=168,slow=9.2,SNR=6.5							
	0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**55.01**	**351**	P		**P**	**17 21 24.5**	**+0.9**
	0.3nm,0.3s,baz=182,slow=7.2,SNR=1.8							
	0.3nm,0.3s							

IDC 09 17:14:35.4±2.0, 16.°80S×178.°08W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=123.5km s-min=24.9km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.15**	**258**	P		P	17 22 54.3	+0.1
	0.7nm,0.5s,baz=96,slow=7.3,SNR=28							
	0.7nm,0.5s							
ASAR	**Alice Springs**	**45.40**	**253**	P		P	17 22 55.9	-0.3
	4.1nm,0.6s,baz=87,slow=8.9,SNR=127							
	4.1nm,0.6s							
ILAR	**Eielson Array**	**84.74**	**13**	P		P	17 27 10.7	-0.3
	0.2nm,0.4s,baz=223,slow=5.3,SNR=7.5							
	0.2nm,0.4s							
TXAR	**Lajitas Array**	**85.14**	**58**	P		P	17 27 14.6	+0.7
	0.3nm,0.6s,baz=216,slow=7.3,SNR=4.5							
	0.3nm,0.6s							
PDAR	**Pinedale Array**	**86.33**	**43**	P		P	17 27 19.2	-0.5
	0.3nm,0.7s,baz=197,slow=4.5,SNR=3.6							
	0.3nm,0.7s							

*IDC **09** 17:42:57.0±1.4, 14.°18N×147.°07E, h0km, mb3.6/10, mbtmp3.6/10, Error ellipse: s-maj=41.9km s-min=23.5km az=90.0*

ISC 09 17:43:02.2±1.3, 14.°2N±0.°2×147.°0E±0.°3, h35km, n11, σ0℗67/11, mb3.7/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.12**	**201**	P		**P**	**17 50 00.7**	**-0.4**
	0.3nm,0.7s,baz=20,slow=8.8,SNR=2.4							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**39.73**	**199**	P		**P**	**17 50 32.0**	**+0.4**
	0.6nm,1.1s,baz=21,slow=8.1,SNR=2.2							
	0.6nm,1.1s							
LZDM	**Lanzhou Array**	**44.41**	**307**	P		**P**	**17 51 10.6**	**+0.6**
	0.7nm,0.5s,baz=103,slow=6.5,SNR=1.5							
	0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**46.26**	**282**	P		**P**	**17 51 24.6**	**0.0**
	0.3nm,0.5s,baz=88,slow=6.8,SNR=4.2							
	0.3nm,0.5s							
SONM	**Songino Array**	**47.51**	**323**	P		**P**	**17 51 33.8**	**-0.3**
	0.3nm,0.5s,baz=114,slow=4.2,SNR=2.7							
	0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**62.40**	**324**	P		**P**	**17 53 20.9**	**-0.5**
	0.7nm,0.7s,baz=103,slow=5.3,SNR=4.0							
	0.7nm,0.7s							
MKAR	**Makanchi Array**	**62.56**	**316**	P		**P**	**17 53 23.4**	**+0.7**
	0.4nm,0.6s,baz=90,slow=7.3,SNR=6.3							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**65.56**	**319**	P		**P**	**17 53 42.6**	**+0.3**
	2.7nm,0.8s,baz=98,slow=7.2,SNR=19							
	2.7nm,0.8s							
ILAR	**Eielson Array**	**67.16**	**25**	P		**P**	**17 53 52.9**	**+0.6**
	0.2nm,0.5s,baz=248,slow=6.0,SNR=4.2							
	0.2nm,0.5s							
BVAR	**Borovoye Array**	**70.80**	**322**	P		**P**	**17 54 15.4**	**+0.4**
	1.0nm,0.5s,baz=107,slow=7.2,SNR=7.5							
	1.0nm,0.5s							
FINES	**FINESS Array B**	**91.53**	**336**	P		**P**	**17 56 03.8**	**-1.2**
	5.9nm,1.1s,baz=48,slow=4.1,SNR=4.6							

*ISK **09** 17:45:25.4, 39.°07N×27.°81E, h14km, ML3.7/23*
*AFAD **09** 17:45:25.6, 39.°07N×27.°82E, h7km±2km, MW3.6*
*ATH **09** 17:45:27.9, 39.°13N×27.°76E, h20km±4km, ML3.1/8, Manual Solution by A.Agalos First location: 2020/02/09 17:46:58, This location: 2020/02/09 18:35:57 ML*

Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km
*THE **09** 17:45:28.7, 39.°1N±0.°2×28.°8E±2.°5, h47km±27km, M3.1/11, MLh3.1/11*

ISC 09 17:45:25.9±0.8, 39.°07N±0.°01×27.°83E±0.°01, h14km±6km, n120, σ0℗71/157, 6C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.19**	**183**	P		**Pg**	**17 45 30.2**	**-0.1**
AKHS				S		**Sg**	**17 45 33.8**	**+0.5**
AKS	**Akhisar**	**0.19**	**183**	Pg		**Pg**	**17 45 29.8**	**-0.5**
AKS				Sg		**Sg**	**17 45 33.2**	**-0.1**
SOMA	**Soma-Manisa**	**0.24**	**291**	Pg		**Pg**	**17 45 30.8**	**-0.4**
SOMA				Sg		**Sg**	**17 45 34.9**	**+0.1**
GORD	**Gordes-Manisa**	**0.32**	**120**	Pg		**Pg**	**17 45 32.6**	**+0.1**
GORD				Sg		**Sb**	**17 45 38.2**	**-0.2**
STEP	**BALIKESIR_Sava**	**0.32**	**345**	P		**Pg**	**17 45 32.1**	**-0.4**
STEP				S		**Sg**	**17 45 37.1**	**+0.1**
GOMA	**Golmarmara-Man**	**0.37**	**169**	Pg		**Pg**	**17 45 33.3**	**-0.1**
GOMA				Sg		**Sb**	**17 45 39.2**	**-0.5**
KTTT	**Salihli**	**0.43**	**151**	P		**Pg**	**17 45 34.5**	**-0.1**
KTTT				S		**Sg**	**17 45 40.9**	**+0.4**
CAMT	**Merkez**	**0.51**	**231**	P		**Pb**	**17 45 36.4**	**-0.3**
CAMT				S		**Sb**	**17 45 44.1**	**+0.2**
BALB	**Balikesir**	**0.57**	**4**	Pg		**Pg**	**17 45 36.6**	**-0.6**
BALB				Sg		**Sb**	**17 45 46.3**	**+0.7**
ZEDA	**zmir-Bergama**	**0.59**	**260**	P		**Pg**	**17 45 37.7**	**+0.2**
ZEDA				S		**Sg**	**17 45 45.6**	**+0.2**
BKES	**Balkesir-Mer**	**0.67**	**7**	P		**Pg**	**17 45 38.6**	**-0.3**
BKES				S		**Sg**	**17 45 47.6**	**-0.2**
BALY	**Balya**	**0.69**	**347**	P		**Pg**	**17 45 39.2**	**-0.2**
BALY				S		**Sg**	**17 45 47.9**	**-0.6**
DEMI	**Demirci**	**0.69**	**92**	P		**Pg**	**17 45 39.6**	**+0.1**
DEMI				S		**Sg**	**17 45 48.0**	**-0.7**
IZMD	**zmir-Dikili-**	**0.70**	**263**	P		**Pb**	**17 45 39.8**	**-0.2**
IZMD				S		**Sg**	**17 45 48.7**	**-0.2**
DKL	**Dikili**	**0.72**	**270**	Pg		**Pb**	**17 45 40.0**	**-0.1**
BUHA	**Balikesir, Bur**	**0.72**	**307**	P		**Pg**	**17 45 39.8**	**-0.2**
DURS	**Dursunbey**	**0.73**	**43**	P		**Pg**	**17 45 39.6**	**-0.6**
YAYO	**Edremit-Balk**	**0.80**	**313**	Pg		**Pg**	**17 45 40.9**	**-0.5**
BLKS	**Balkesir-Sus**	**0.81**	**8**	P		**Pb**	**17 45 41.0**	**-0.8**
BLKS				P		**Pb**	**17 45 41.0**	**-0.8**
MANT	**Manisa**	**0.81**	**135**	P		**Pg**	**17 45 41.3**	**-0.4**
MANT				S		**Sg**	**17 45 52.0**	**-0.2**
DSTT	**Dursunbey**	**0.81**	**49**	Pg		**Pb**	**17 45 40.9**	**+1.9**
ODEM	**Odemis-Izmir**	**0.81**	**166**	Pg		**Pb**	**17 45 41.6**	**-0.2**
KULA	**Kula-Manisa**	**0.86**	**130**	Pg		**Pb**	**17 45 42.3**	**-0.2**
BAGT	**Foa**	**0.86**	**242**	P		**Pg**	**17 45 42.7**	**0.0**
BAGT				S		**Sg**	**17 45 54.0**	**0.0**
DUVT	**Torbali**	**0.90**	**199**	P		**Pb**	**17 45 43.0**	**-0.2**
SMAA	**Simav-Kutahya**	**0.90**	**88**	Pg		**Pg**	**17 45 43.6**	**+0.3**
SIMA	**Simav-Kutahya**	**0.90**	**89**	Pg		**Pb**	**17 45 43.5**	**+0.2**
AYVA	**Ayvalik**	**0.91**	**286**	P		**Pg**	**17 45 43.6**	**0.0**
AYVA				S		**Sg**	**17 45 55.9**	**+0.3**
SUSR	**Susurluk-Balik**	**0.92**	**13**	Pg		**Pb**	**17 45 42.7**	**-0.8**
BLCB	**Balcova**	**0.92**	**222**	Pg		**Pb**	**17 45 43.2**	**-0.3**
FOCM	**Foa**	**0.93**	**248**	Pg		**Pb**	**17 45 43.2**	**-0.5**
IZMR	**zmir-demi**	**0.94**	**174**	P		**Pb**	**17 45 43.8**	**0.0**
IZMR				S		**Sb**	**17 45 55.3**	**-0.7**
CMHT	**Manyas**	**0.95**	**7**	P		**Pb**	**17 45 43.7**	**-0.4**
CMHT				S		**Sb**	**17 45 56.5**	**+0.1**
YENI	**Yenice-Canakka**	**0.98**	**333**	Pg		**Pb**	**17 45 44.3**	**-0.3**
GONE	**Gonen-Balikesi**	**0.98**	**354**	Pg		**Pb**	**17 45 44.8**	**+0.1**
USAK	**Uak-Merkez**	**1.00**	**110**	P		**Pb**	**17 45 44.7**	**-0.2**
USAK				S		**Sb**	**17 45 57.4**	**-0.5**
ATIT	**Gnen**	**1.03**	**349**	P		**Pb**	**17 45 45.6**	**0.0**
ATIT				S		**Sb**	**17 45 59.0**	**+0.1**
SHAP	**Saphane-Kutahy**	**1.09**	**92**	Pn		**Pg**	**17 45 47.3**	**+0.4**
KRBN	**Karaburun**	**1.10**	**245**	Pn		**Pg**	**17 45 46.9**	**-0.2**
CANM	**Can-anakkale**	**1.11**	**328**	Pn		**Pb**	**17 45 46.7**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.12**	**177**	Pn		**Pb**	**17 45 46.9**	**-0.2**
NAZL	**Nazilli-Aydin**	**1.16**	**161**	Pn		**Pb**	**17 45 47.9**	**+0.2**
KARB	**zmir-Karabur**	**1.18**	**250**	P		**Pb**	**17 45 48.1**	**+0.2**
KARB				S		**Sg**	**17 46 03.9**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.20**	**305**	P		**Pb**	**17 45 48.3**	**0.0**
EMET	**Ktahya-Emet**	**1.20**	**75**	P		**Pb**	**17 45 48.9**	**+0.4**
EMET				S		**Sb**	**17 46 04.2**	**+0.4**
GMLD	**Gumuldur**	**1.22**	**216**	Pn		**Pb**	**17 45 48.6**	**-0.1**
PRK	**Paraskevi**	**1.22**	**275**	P		**Pg**	**17 45 49.1**	**-0.3**
PRK	**Paraskevi**	**1.22**	**279**	P		**Pb**	**17 45 48.9**	**+0.2**
PRK				S		**Sb**	**17 46 04.2**	**-0.1**
GEDZ	**Gediz**	**1.23**	**91**	Pn		**Pg**	**17 45 49.9**	**+0.2**
SULTU	**Buldan**	**1.25**	**144**	P		**Pb**	**17 45 49.3**	**-0.1**
SULTU				S		**Sb**	**17 46 05.4**	**0.0**
DGB	**zmir**	**1.26**	**216**	P		**Pn**	**17 45 48.8**	**-0.2**
DGB				S		**Sg**	**17 46 06.1**	**-0.3**
ORLT	**Orhaneli**	**1.28**	**40**	P		**Pb**	**17 45 50.0**	**+0.2**
ORLT				S		**Sn**	**17 46 06.6**	**+0.3**
GDZ	**Gediz**	**1.29**	**89**	P		**Pb**	**17 45 50.5**	**+0.5**
GDZ				S		**Sn**	**17 46 06.8**	**+0.1**
BAND	**Balkesir-Ban**	**1.30**	**9**	⇓P		**Pb**	**17 45 50.1**	**0.0**
BAND				⇓S		**Sg**	**17 46 07.5**	**-0.4**
BAND	**Balkesir-Ban**	**1.30**	**9**	P		**Pb**	**17 45 50.0**	**-0.1**
BAND				S		**Sb**	**17 46 06.2**	**-0.5**
ZEYE	**Izmir, Urla-Ze**	**1.33**	**232**	P		**Pb**	**17 45 50.1**	**-0.4**
ZEYE				S		**Sb**	**17 46 07.6**	**+0.3**
ESEN	**Aydn-Nazilli**	**1.33**	**162**	P		**Pb**	**17 45 50.1**	**-0.3**
ESEN				S		**Sb**	**17 46 08.0**	**+0.5**
KOCA	**Canakkale, Ayv**	**1.38**	**289**	P		**Pb**	**17 45 51.0**	**-0.4**
EZN	**Ezine**	**1.39**	**304**	P		**Pb**	**17 45 51.2**	**-0.3**
LAPS	**Lapseki, ANA**	**1.41**	**328**	P		**Pn**	**17 45 51.1**	**0.0**
AYDN	**Tasoluk**	**1.41**	**178**	P		**Pn**	**17 45 51.1**	**0.0**
AYDN				S		**Sb**	**17 46 09.5**	**-0.2**
EAG2	**Marmaro, Chios**	**1.44**	**249**	P		**Pg**	**17 45 53.2**	**-0.4**
EAG2				S		**Sb**	**17 46 11.0**	**+0.4**
GCAM	**G?zelcaml?**	**1.44**	**199**	Pn		**Pn**	**17 45 51.3**	**-0.2**
GCAM	**G?zelcaml?**	**1.44**	**199**	P		**Pn**	**17 45 50.5**	**-1.0**
ULDT	**Uludag**	**1.48**	**43**	P		**Pn**	**17 45 51.8**	**-0.3**
PASA	**Karahalli, USA**	**1.49**	**118**	P		**Pb**	**17 45 52.9**	**-0.4**
PASA				S		**Sb**	**17 46 12.9**	**+0.9**
CNKL	**anakkale-Mer**	**1.49**	**312**	P		**Pn**	**17 45 52.6**	**0.0**
SIGR	**SIGRI**	**1.54**	**276**	P		**Pn**	**17 45 53.3**	**+0.4**
SIGR	**SIGRI**	**1.54**	**276**	P		**Pn**	**17 45 53.2**	**+0.4**
SIGR				S		**Sn**	**17 46 12.4**	**-0.1**
KRL1	**Karlovasi Samo**	**1.55**	**215**	P		**Pn**	**17 45 54.6**	**+0.3**
SMG	**Samos**	**1.56**	**210**	P		**Pn**	**17 45 53.1**	**-0.1**
BNAZ	**Uak-Banaz**	**1.65**	**103**	P		**Pb**	**17 45 55.9**	**-0.2**
DDIM	**Aydin, Didim**	**1.67**	**196**	P		**Pg**	**17 45 57.7**	**-0.4**
DNIZ	**Denizli-Tavas-**	**1.73**	**146**	P		**Pn**	**17 45 56.2**	**+0.6**
GADA	**Gvkgeada**	**1.86**	**308**	P		**Pn**	**17 45 58.1**	**+0.8**
YER	**Yerkesik**	**1.96**	**169**	P		**Pn**	**17 45 59.2**	**+0.4**
CAVK	**Edirne/Enez-Ca**	**2.06**	**322**	⇓P		**Pn**	**17 46 01.1**	**+1.1**
ENEZ	**Enez**	**2.10**	**323**	P		**Pn**	**17 46 01.8**	**+1.2**
ENEZ				P		**Pn**	**17 46 01.8**	**+1.2**
LIA	**Limnos Island**	**2.21**	**293**	P		**Pn**	**17 46 02.9**	**+0.9**
LIA	**Limnos Island**	**2.21**	**293**	P		**Pn**	**17 46 02.6**	**+0.6**
SMTH	**Samothraki Isl**	**2.26**	**309**	P		**Pn**	**17 46 03.4**	**+0.6**
SMTH	**Samothraki Isl**	**2.26**	**309**	P		**Pn**	**17 46 03.0**	**+0.3**
ALN	**Alexandroupoli**	**2.28**	**324**	P		**Pn**	**17 46 03.8**	**+0.7**
ALN	**Alexandroupoli**	**2.28**	**324**	P		**Pn**	**17 46 03.4**	**+0.4**
ISP	**Isparta**	**2.46**	**120**	P		**Pn**	**17 46 07.7**	**+2.1**
RDO	**Rodhopi**	**2.72**	**321**	P		**Pn**	**17 46 10.3**	**+1.3**
RDO	**Rodhopi**	**2.72**	**321**	P		**Pn**	**17 46 10.0**	**+1.0**
THAS	**Thassos island**	**2.84**	**304**	P		**Pn**	**17 46 10.9**	**+0.2**
AOS2	**Alonissos-2**	**3.10**	**273**	P		**Pn**	**17 46 15.2**	**+0.9**
KAVA	**Kavala**	**3.19**	**308**	P		**Pn**	**17 46 16.3**	**+0.8**
KAVA	**Kavala**	**3.19**	**308**	P		**Pn**	**17 46 16.0**	**+0.5**
OUR	**Ouranopolis**	**3.22**	**294**	P		**Pn**	**17 46 16.8**	**+0.8**
OUR	**Ouranopolis**	**3.22**	**294**	P		**Pn**	**17 46 16.6**	**+0.6**
KSL	**Kastellorizon**	**3.23**	**154**	P		**Pn**	**17 46 19.2**	**+3.1**
VLY	**Voula,Athens**	**3.39**	**250**	P		**Pn**	**17 46 19.2**	**+0.9**
DIM	**Dimitrovgrad**	**3.43**	**331**	P		**Pn**	**17 46 20.0**	**+1.2**
RZN	**Rozhen**	**3.53**	**319**	P		**Pn**	**17 46 21.7**	**+1.3**
KARP	**Karpathos**	**3.56**	**189**	P		**Pn**	**17 46 21.4**	**+0.7**
PLG	**Polygyros**	**3.62**	**292**	P		**Pn**	**17 46 22.6**	**+1.1**
PLG	**Polygyros**	**3.62**	**292**	P		**Pn**	**17 46 22.2**	**+0.7**
NVR	**Nevrokopi**	**3.79**	**308**	P		**Pn**	**17 46 24.9**	**+1.0**
NVR				P		**Pn**	**17 46 24.9**	**+1.0**
NVR	**Nevrokopi**	**3.79**	**308**	P		**Pn**	**17 46 24.6**	**+0.7**
SRS	**Serrai**	**3.84**	**304**	P		**Pn**	**17 46 25.3**	**+0.8**
SRS	**Serrai**	**3.84**	**304**	P		**Pn**	**17 46 25.0**	**+0.5**
PLD	**Plovdiv**	**3.87**	**324**	P		**Pn**	**17 46 26.1**	**+1.3**
MMB	**Musomishta**	**3.98**	**310**	P		**Pn**	**17 46 27.9**	**+1.4**
ELND	**Elena**	**4.13**	**340**	⇑P		**Pn**	**17 46 29.2**	**+0.7**
LOZB	**Loznitsa**	**4.40**	**348**	⇓P		**Pn**	**17 46 33.2**	**+1.0**
SZH	**Strazhitsa**	**4.42**	**342**	P		**Pn**	**17 46 34.0**	**+1.6**
MAKR	**Makrakomi, Fth**	**4.43**	**271**	P		**Pn**	**17 46 33.1**	**+0.4**
MLR	**Muntele Rosu**	**6.57**	**348**	⇑P		**Pn**	**17 47 03.3**	**+1.2**
VOIR		**6.69**	**343**	⇑P		**Pn**	**17 47 05.2**	**+1.5**
VRI	**Vrincioaia**	**6.84**	**354**	⇓P		**Pn**	**17 47 06.5**	**+0.8**
SEV	**Sevastopol'**	**7.00**	**37**	*e*P		**Pn**	**17 47 08.3**	**+0.5**
SEV	**Sevastopol'**	**7.00**	**37**	pmax	pmax		17 47 18.9	
	comp=Z,2.0nm,0.5s							
SEV	**Sevastopol'**	**7.00**	**37**	*e*S		**Sn**	**17 48 24.1**	**-3.0**
SEV	**Sevastopol'**	**7.00**	**37**	smax	smax		17 48 28.0	
	comp=N,1.0nm,0.4s							
TURR	**Turia**	**7.11**	**350**	⇑P		**Pn**	**17 47 11.4**	**+2.0**
MDVR	**Moldovita**	**7.30**	**323**	⇑P		**Pn**	**17 47 12.8**	**+0.7**
BZS	**Buzias**	**8.00**	**327**	⇓P		**Pn**	**17 47 22.2**	**+0.7**

WEL 09 18:12:21.5±1.0, 45.°S±4.°×16.°7E±.°, h26km±6km, M3.7/12, ML3.3/9, MLv3.7/12, Error ellipse: s-maj=8.9km s-min=5.1km az=110.3, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.20**	**166**	P		**Pn**	18 12 29.2	+0.3
TAFS	**Te Anau Fire S**	**0.47**	**109**	P		**Pn**	18 12 32.3	-0.3
TAFS				S		**Sn**	18 12 40.7	+0.7
MLZ	**Mavora Lakes**	**0.74**	**98**	P		**Pb**	18 12 35.7	-0.1
MLZ				S		**Sn**	18 12 46.9	+0.2
MSZ	**Milford Sound**	**0.84**	**46**	P		**Pb**	18 12 36.6	-0.9
MSZ				S		**Sn**	18 12 49.6	+0.4
WHZ	**Wether Hill Ro**	**0.87**	**136**	P		**Pb**	18 12 37.7	-0.3
WHZ				S		**Sn**	18 12 49.9	-0.1
MOSS	**Mossburn Schoo**	**0.91**	**117**	P		**Pn**	18 12 38.4	-0.1
MOSS				S		**Sn**	18 12 51.3	+0.5
RRKS	**Rarakau**	**0.92**	**163**	P		**Pb**	18 12 39.0	+0.2
RRKS				S		**Sn**	18 12 52.0	+0.9
PYZ	**Puysegur Point**	**0.94**	**197**	P		**Pn**	18 12 38.3	-0.7
QTPS	**Queenstown Pol**	**1.14**	**79**	P		**Pn**	18 12 41.8	-0.1
WKZ	**Wanaka**	**1.44**	**73**	P		**Pn**	18 12 46.3	+0.4
WNPS	**Wanaka Nationa**	**1.57**	**69**	P		**Pn**	18 12 48.7	+1.0
EAZ	**Earnscleugh**	**1.57**	**89**	P		**Pn**	18 12 47.9	+0.2
EAZ				S		**Sn**	18 13 06.0	-1.2
APZ	**The Paps**	**1.69**	**158**	P		**Pn**	18 12 49.5	+0.2
MECS	**Makarora Emerg**	**1.85**	**57**	P		**Pn**	18 12 52.5	+1.0
TUZ	**Tuapeka**	**1.92**	**112**	P		**Pn**	18 12 51.9	-0.5
SYZ	**Scrubby Hill**	**1.92**	**132**	P		**Pn**	18 12 52.0	-0.4
TWAS	**Twizel Area Sc**	**2.38**	**66**	P		**Pn**	18 12 58.3	-0.5
LBZ	**Lake Benmore**	**2.38**	**69**	P		**Pn**	18 12 57.9	-0.9
ODZ	**Otahua Downs**	**2.53**	**86**	P		**Pn**	18 12 59.8	-1.0
HHSZ	**Highcliff Hill**	**2.54**	**105**	P		**Pn**	18 13 00.7	-0.4
FOZ

MLv2.7/10
CNRM ***09*** *18:31:09.0, 35°.46N×3°.40W, h31km, ML2.4*
MDD ***09*** *18:31:11.1±0.7, 35°.29N×3°.44W, h5km±5km, mb_Lg2.4/11, Error ellipse: s-maj=4.9km s-min=4.4km az=118.0*
INMG ***09*** *18:31:12.6±1.3, 35°.37N×3°.50W, h8km±6km, ML1.8, Error ellipse: s-maj=5.4km s-min=3.0km az=109.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

ISC 09 18:31:08.6±1.1, 35°.21N±0°.02×3°.50W±0°.03, h12km±9km, n39, σ1°31/76, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PALE	**Palemas**	**0.36**	**272**	P		**Pn**	**18 31 19.0**	**-0.7**
PALE				S		**Sb**	**18 31 26.8**	**+4.3**
EMEL	**Melilla**	**0.46**	**78**	Pg		**Pg**	**18 31 18.1**	**+0.5**
EMEL				Pg		**Pg**	**18 31 18.2**	**-0.4**
EMEL				Sg		**Sg**	**18 31 23.8**	**+0.1**
EMEL				Sg		**Sb**	**18 31 24.0**	**-1.4**
EMLI	**Melilla**	**0.46**	**78**	Pg		**Pg**	**18 31 18.1**	**+0.4**
EMLI				Sg		**Sg**	**18 31 23.8**	**0.0**
WMELI	**Melilla**	**0.47**	**76**	Pg		**Pg**	**18 31 17.9**	**+0.2**
WMELI				Sg		**Sg**	**18 31 24.2**	**+0.3**
AKLM	**AKL**	**0.75**	**203**	P		**Pn**	**18 31 27.5**	**+2.4**
AKLM				S		**Sn**	**18 31 39.0**	**+2.5**
EALB	**Alboran**	**0.83**	**27**	Pg		**Pb**	**18 31 25.5**	**+0.6**
EALB				Sg		**Sb**	**18 31 36.9**	**+0.8**
EALB	**Alboran**	**0.83**	**27**	Pg		**Pb**	**18 31 25.2**	**+0.3**
EALB				Pg		**Pb**	**18 31 25.4**	**+0.6**
EALB				Sg		**Sg**	**18 31 34.3**	**-1.1**
EALB				Sg		**Sb**	**18 31 34.6**	**-1.4**
EALB				*i* IVmb_Lg			18 31 37.3	
TAF	**Taforalt**	**0.98**	**113**	P		**Pn**	**18 31 28.3**	**+0.1**
TAF				S		**Sb**	**18 31 41.4**	**+1.0**
JBK	**JBK**	**1.16**	**138**	P		**Pn**	**18 31 31.2**	**+0.3**
JBK				S		**Sn**	**18 31 47.0**	**+0.2**
SMIR	**Smir Dam**	**1.60**	**288**	P		**Pn**	**18 31 35.9**	**-0.9**
SMIR				S		**Sn**	**18 31 56.0**	**-1.4**
ELGU	**Los Guajares,**	**1.66**	**357**	Pn		**Pn**	**18 31 37.2**	**-0.6**
ELGU	**Los Guajares,**	**1.66**	**357**	Pn		**Pn**	**18 31 37.1**	**-0.6**
ELGU				Sn		**Sn**	**18 31 57.5**	**-1.5**
ELGU				*i* IVmb_Lg			18 32 03.5	
ECEU	**Ceuta**	**1.68**	**295**	Pn		**Pn**	**18 31 37.8**	**0.0**
ECEU				Sn		**Sn**	**18 31 58.3**	**-1.0**
ECEU	**Ceuta**	**1.68**	**295**	Sn		**Sb**	**18 31 59.3**	**-1.2**
EMIJ	**Mijas**	**1.70**	**323**	Pn		**Pb**	**18 31 39.2**	**-0.7**
EMIJ				Sn		**Sn**	**18 31 59.6**	**-0.3**
EMIJ				*i* IVmb_Lg			18 32 06.1	
EMAL	**Malaga-Limoner**	**1.73**	**334**	Pn		**Pn**	**18 31 38.4**	**0.0**
EMAL				Sn		**Sn**	**18 32 00.7**	**+0.2**
EGOR	**Sierra Gorda,**	**1.96**	**346**	Pn		**Pn**	**18 31 42.9**	**+1.0**
EGOR	**Sierra Gorda,**	**1.96**	**346**	Pn		**Pn**	**18 31 42.9**	**+1.0**
EGOR				Sn		**Sn**	**18 32 06.5**	**0.0**
EGOR				*i* IVmb_Lg			18 32 20.8	
ENIJ	**Nijar**	**2.05**	**30**	Sn		**Sn**	**18 32 07.0**	**-1.6**
IFR	**Ifrane**	**2.15**	**219**	Pn		**Pn**	**18 31 43.7**	**-0.8**
IFR				Sn		**Sn**	**18 32 10.6**	**-0.6**
MD31	**MD31**	**2.55**	**204**	P		**Pb**	**18 31 53.5**	**-1.0**
MD31				S		**Sb**	**18 32 26.3**	**+0.5**
MDT	**Midelt**	**2.55**	**201**	P		**Pb**	**18 31 53.7**	**-0.8**
MDT				S		**Sg**	**18 32 27.0**	**-3.7**
EQES	**Quesada**	**2.62**	**8**	Pn		**Pn**	**18 31 52.1**	**+1.3**
EQES				Sn		**Sn**	**18 32 22.1**	**-0.6**
EQES				*i* IVmb_Lg			18 32 26.6	
EADA	**Adamuz**	**3.08**	**344**	Pn		**Pn**	**18 31 58.6**	**+1.4**
EADA				Sn		**Sn**	**18 32 33.5**	**-0.4**
EADA				*i* IVmb_Lg			18 32 35.8	
ECAB	**El Cabril**	**3.25**	**332**	Pn		**Pn**	**18 32 01.2**	**+1.7**
ECAB				Sn		**Sn**	**18 32 38.7**	**0.0**
ECAB				*i* IVmb_Lg			18 32 47.8	
ETOB	**Tobarra**	**3.77**	**24**	Pn		**Pn**	**18 32 07.6**	**+0.9**
ETOB				Sn		**Sn**	**18 32 49.5**	**-1.7**
ETOB				*i* IVmb_Lg			18 32 59.8	
PVAQ	**Vaqueiros**	**4.05**	**304**	*eP*		**Pn**	**18 32 12.7**	**+2.3**
PVAQ				*eS*		**Sn**	**18 32 57.6**	**-0.2**
PVAQ				*i* IAML			18 33 02.5	
PVAQ				*i* IAML			18 33 03.3	
PVAQ				*i* IAML			18 33 05.5	
PBAR	**Barrancos**	**4.11**	**317**	Pn		**Pn**	**18 32 11.0**	**-0.1**
PBAR				Sn		**Sn**	**18 32 58.4**	**-0.8**
PBAR	**Barrancos**	**4.11**	**317**	*eP*		**Pn**	**18 32 12.8**	**+1.7**
PBAR				*eS*		**Sn**	**18 32 58.8**	**-0.4**
PBAR				*i* IAML			18 33 01.8	
PBAR				*i* IAML			18 33 05.5	
PBAR				*i* IAML			18 33 05.8	
PBDV	**Barranco-do-Ve**	**4.12**	**301**	Pn		**Pn**	**18 32 11.5**	**+0.2**
PBDV				Sn		**Sn**	**18 32 58.6**	**-0.9**
PBDV	**Barranco-do-Ve**	**4.12**	**301**	*eP*		**Pn**	**18 32 13.8**	**+2.4**
PBDV				*eS*		**Sn**	**18 32 59.5**	**+0.1**
PBDV				*i* IAML			18 33 04.2	
PBDV				*i* IAML			18 33 06.0	
PCVE	**Castro Verde**	**4.39**	**305**	Pn		**Pn**	**18 32 14.9**	**-0.2**
PCVE				Sn		**Sn**	**18 33 05.8**	**-0.3**
PCVE	**Castro Verde**	**4.39**	**305**	*eP*		**Pn**	**18 32 17.2**	**+2.1**
PCVE				*eS*		**Sn**	**18 33 07.5**	**+1.4**
EBAD	**Badajoz**	**4.52**	**323**	Pn		**Pn**	**18 32 18.2**	**+1.3**
EBAD				Sn		**Sn**	**18 33 08.6**	**-0.9**
EBAD				*i* IVmb_Lg			18 33 15.1	
MESJ	**Messejana**	**4.62**	**306**	*eP*		**Pn**	**18 32 20.5**	**+2.3**
EVO	**Evora**	**4.91**	**314**	Pn		**Pn**	**18 32 22.8**	**+0.6**
EVO				Sn		**Sn**	**18 33 18.4**	**-0.6**
PARRA	**Arraiolos**	**5.12**	**316**	*eP*		**Pn**	**18 32 26.9**	**+1.8**
PARRA				*eS*		**Sn**	**18 33 23.7**	**-0.4**
PMRV	**Marv??o**	**5.23**	**325**	*eP*		**Pn**	**18 32 27.7**	**+1.0**
PSARD	**Sardoal**	**5.74**	**321**	*eP*		**Pn**	**18 32 36.3**	**+2.6**
PSARD				*eS*		**Sn**	**18 33 38.2**	**-1.4**

IDC ***09*** *18:33:14.8±6.0, 18°.24S×177°.88W, h539km±68km, mb3.0/6, mbtmp3.9/6, Error ellipse: s-maj=36.6km s-min=27.9km az=176.0*

ISC 09 18:33:15.3±1.0, 18°.2S±0°.2×177°.9W±0°.2, h550km, n8, σ0°97/10, mb3.3/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	**Urewera**	**20.42**	**191**	P		**P**	**18 37 14.2**	**-0.8**
	3.2nm,0.4s,baz=42,slow=12,SNR=1.7 3.2nm,0.4s							
WRA	**Warramunga Arr**	**45.02**	**260**	P		**P**	**18 40 42.8**	**+0.3**
	0.8nm,0.6s,baz=94,slow=7.1,SNR=21							
WRA				PcP		**PcP**	**18 42 11.9**	**+0.1**
	0.1nm,0.3s,baz=92,slow=3.1,SNR=1.5 0.8nm,0.6s							
ASAR	**Alice Springs**	**45.14**	**255**	P		**P**	**18 40 44.6**	**+1.2**
	1.0nm,0.4s,baz=91,slow=7.6,SNR=43							
ASAR				PcP		**PcP**	**18 42 12.4**	**+0.2**
	0.3nm,0.4s,baz=104,slow=3.9,SNR=9.5 1.0nm,0.4s							
MJAR	**Matsushiro Arr**	**68.44**	**323**	P		**P**	**18 43 22.6**	**-0.1**
	0.4nm,0.4s,baz=143,slow=5.8,SNR=2.0 0.4nm,0.4s							
TXAR	**Lajitas Array**	**85.78**	**57**	P		**P**	**18 44 58.7**	**+1.5**
	0.5nm,0.8s,baz=246,slow=3.6,SNR=6.2 0.5nm,0.8s							
ILAR	**Eielson Array**	**86.10**	**13**	P		**P**	**18 44 56.8**	**-0.9**
	0.3nm,0.5s,baz=204,slow=4.0,SNR=2.6 0.3nm,0.5s							
BRTR	**Keskin Array B**	**145.33**	**315**	PKPbc		**PKPbc**	**18 51 51.9**	**-0.5**
	0.7nm,0.6s,baz=91,slow=3.2,SNR=4.3							
GERES	**GERESS Array B**	**148.04**	**345**	PKPbc		**PKiKP**	**18 51 59.5**	**-1.1**
	0.2nm,0.3s,baz=34,slow=5.0,SNR=1.8							

GCMT 09 18:43:16.0±0.3, 36°.51S±0°.02×98°.74W±0°.02, h17km±1km, MW4.9/93, Moment Tensor Solution. s22,c23; s93,c113; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.62±.12; $M_{\theta\theta}$-0.13±.11; $M_{\phi\phi}$0.75±.10; $M_{r\theta}$-0.07±.26; $M_{\theta\phi}$-2.36±.10; $M_{\phi r}$0.71±.25; Best double couple: M_o2.50400×10^{16} NP1: ϕ_s275.00000°, δ73.00000°, λ-176.00000°. NP2: ϕ_s184.00000°, δ87.00000°, λ-18.00000°. Principal axes: T 2.8160, Plg10.0000°, Azm231.0000°; N -0.6240, Plg72.0000°, Azm354.0000°; P -2.1920, Plg15.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southeast of Easter Island

IDC ***09*** *18:47:52.2±1.2, 30°.40S×177°.33W, h0km, mb4.2/4, mbtmp4.2/5, ML3.3/1, MS3.4/1 Error ellipse: s-maj=35.1km s-min=25.5km az=119.0*

ISC 09 18:47:57.5±1.3, 30°.36S±0°.08×177°.5W±0°.2, h33km, n24, σ1°22/16, mb4.2/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**1.16**	**343**	Pn		**Pn**	**18 48 17.2**	**-0.1**
	313nm,0.3s,baz=117,slow=4.1,SNR=14							
RAO				Sn		**Sn**	**18 48 30.1**	**-1.9**
	1µm,0.3s,baz=109,slow=20,SNR=13							
URZ	**Urewera**	**9.04**	**208**	Pn		**Pn**	**18 50 06.1**	**+0.5**
	0.3nm,0.3s,baz=42,slow=16,SNR=1.4							
URZ				Sn		**Sn**	**18 51 43.1**	**-3.1**
	2.2nm,0.3s,baz=232,slow=23,SNR=8.9 6.3nm,0.7s							
STKA	**Stephens Creek**	**34.88**	**257**	P		**P**	**18 54 47.6**	**+1.7**
	2.7nm,0.8s,baz=107,slow=12,SNR=8.3 2.7nm,0.8s							
ASAR	**Alice Springs**	**43.52**	**267**	P		**P**	**18 55 58.6**	**+0.5**
	0.7nm,0.4s,baz=105,slow=7.6,SNR=34							
ASAR				PcP		**PcP**	**18 57 44.9**	**-0.9**
	0.1nm,0.5s,baz=100,slow=3.7,SNR=1.2 0.7nm,0.4s							
WRA	**Warramunga Arr**	**44.50**	**272**	P		**P**	**18 56 06.5**	**+0.5**
	2.4nm,0.3s,baz=110,slow=8.2,SNR=134							
WRA				PcP		**PcP**	**18 57 49.4**	**+0.3**
	0.4nm,0.9s,baz=121,slow=2.9,SNR=1.9 2.4nm,0.3s							
VNDA	**Vanda**	**48.18**	**186**	LR		LR	19 11 29.8	
	comp=Z,45nm,21.6s,baz=86,slow=29							
FITZ	**Fitzroy Crossi**	**52.77**	**270**	P		**P**	**18 57 10.6**	**+0.9**
	2.5nm,0.7s,baz=141,slow=6.5,SNR=2.4 2.5nm,0.7s							
H03S2	**Juan Fernandez**	**80.15**	**123**	T		T	20 29 15.5	
	baz=236,slow=74							
H03S1	**Juan Fernandez**	**80.16**	**123**	T		T	20 29 19.6	
	baz=236,slow=74							
H03S3	**Juan Fernandez**	**80.16**	**123**	T		T	20 29 20.4	
	baz=236,slow=74							
H03N3	**Juan Fernandez**	**80.34**	**123**	T		T	20 29 29.0	
	baz=234,slow=72							
H03N2	**Juan Fernandez**	**80.34**	**123**	T		T	20 29 29.0	
	baz=234,slow=72							
H03N1	**Juan Fernandez**	**80.35**	**123**	T		T	20 29 29.0	
	baz=234,slow=72							
MKAR	**Makanchi Array**	**118.06**	**310**	PKP		**PKPdf**	**19 06 40.1**	**-0.6**
	0.1nm,0.5s,baz=101,slow=1.5,SNR=4.2							
KURBB	**Kurchatov Arra**	**121.36**	**314**	PKP		**PKPdf**	**19 06 46.6**	**-0.2**
	0.6nm,0.4s,baz=108,slow=2.2,SNR=5.0							
BVAR	**Borovoye Array**	**126.66**	**316**	PKP		**PKPdf**	**19 06 57.0**	**+0.1**
	0.7nm,0.5s,baz=163,slow=1.5,SNR=6.2							
H10S3	**ASCENSION HYDR**	**37.59**	**154**	T		T	21 41 37.1	
	baz=204,slow=74,SNR=8.3							
H10S2	**ASCENSION HYDR**	**37.59**	**154**	T		T	21 41 38.7	
	baz=16,slow=74,SNR=10							
H10N3	**ASCENSION HYDR**	**38.67**	**154**	T		T	21 42 57.6	
	baz=203,slow=75,SNR=21							
H10N1	**ASCENSION HYDR**	**38.67**	**154**	T		T	21 42 58.1	
	baz=203,slow=75,SNR=23							
H10N2	**ASCENSION HYDR**	**38.69**	**154**	T		T	21 43 03.0	
	baz=203,slow=75,SNR=22							
FINES	**FINESS Array B**	**145.25**	**340**	PKPbc		**PKPdf**	**19 07 31.4**	**+0.5**
	3.4nm,0.4s,baz=49,slow=4.4,SNR=39							
HFS	**Hagfors**	**149.28**	**349**	PKPbc		**PKiKP**	**19 07 42.7**	**-0.5**
	9.9nm,1.1s,baz=60,slow=5.8,SNR=4.5							
AKASG	**Malin Array Be**	**151.51**	**323**	PKPbc		**PKPbc**	**19 07 47.4**	**-0.3**
	1.7nm,0.6s,baz=51,slow=2.6,SNR=6.1							

KRSC 09 18:50:45.3±0.7, 48°.93N×155°.71E, h8km±25km, Ml3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**1.78**	**8**	*eP*		Pn	18 51 17.0	+0.6
SKR				*eS*		Sn	18 51 39.9	+0.7
ASAK	**Asacha**	**3.73**	**21**	*eP*		Pn	18 51 46.2	+2.9
MTVR	**Mutnovka**	**3.89**	**23**	*eP*		Pn	18 51 48.6	+3.0
MTVR				*eS*		Sn	18 52 36.0	+4.4
GRL	**Gorelyy**	**3.93**	**22**	*eP*		Pn	18 51 49.8	+3.7

TAP ***09*** *18:58:14.7, 24°.07N×122°.97E, h35km, ML2.8, D*
JMA ***09*** *18:58:15.5±0.1, 24°.0N±0°.4×123°.0E±0°.5, h15km, MV1.4/7, NEAR ISHIGAKIJIMA ISLAND*

ISC 09 18:58:12.3±1.3, 23°.92N±0°.04×122°.95E±0°.03, h15km±10km, n35, σ0°89/65, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JYNG	**Yonagunijimaku**	**0.53**	**360**	*eP*		**Pb**	**18 58 24.0**	**+0.8**
JYNG				*eS*		**Sb**	**18 58 30.0**	**-0.7**
YOJ	**Yonaguni jima**	**0.54**	**6**	*eP*		**Pb**	**18 58 24.1**	**+0.7**
YOJ				*eS*		**Sb**	**18 58 30.4**	**-0.7**
YOJ	**Yonaguni jima**	**0.54**	**6**	*eP*		**Pb**	**18 58 24.0**	**+0.5**
YOJ				*eS*		**Sb**	**18 58 30.6**	**-0.5**
EOS4	**EOS4**	**0.61**	**289**	*eP*		**Pn**	**18 58 26.6**	**+0.5**
EOS4				*eS*		**Sn**	**18 58 35.6**	**+0.2**
EOS3	**EOS3**	**0.68**	**302**	*eP*		**Pn**	**18 58 27.9**	**+0.6**
EOS3				*eS*		**Sn**	**18 58 37.6**	**+0.1**
EOS2	**EOS2**	**0.82**	**307**	*eP*		**Pn**	**18 58 30.2**	**+1.0**
EOS2				*eS*		**Sn**	**18 58 42.5**	**+1.6**
IRIF	**Iriomote-Funau**	**0.82**	**60**	*eP*		**Pn**	**18 58 29.2**	**-0.1**
JKRS	**Kuro-shima**	**1.02**	**72**	*eS*		**Sn**	**18 58 46.2**	**+0.2**
JIJ	**Ishigaki jima**	**1.18**	**68**	*eP*		**Pg**	**18 58 35.9**	**+0.8**
JIJ				*eS*		**Sn**	**18 58 50.1**	**+0.1**
EWUT	**Wuta**	**1.19**	**296**	*eP*		**Pg**	**18 58 35.8**	**+0.5**
EWUT				*eS*		**Sn**	**18 58 51.4**	**+1.1**
NACB	**Ninganchiao**	**1.26**	**282**	*eS*		**Sb**	**18 58 51.3**	**-0.5**
NDS	**Dongshan**	**1.33**	**302**	*eP*		**Pb**	**18 58 37.3**	**+0.4**
NDS				*eS*		**Sb**	**18 58 54.1**	**+0.3**
ETLH	**Xiulin Townshi**	**1.37**	**282**	*eP*		**Pb**	**18 58 38.2**	**+0.5**
ETLH				*eS*		**Sn**	**18 58 54.1**	**-0.7**
JISG	**Ishigakijimahi**	**1.41**	**62**	*eP*		**Pg**	**18 58 38.6**	**-0.9**
LATG	**Datong**	**1.43**	**296**	*eP*		**Pg**	**18 58 39.6**	**-0.3**
LATG				*eS*		**Sg**	**18 58 58.5**	**-0.2**
WARBT	**Fenglin Townsh**	**1.44**	**262**	*eP*		**Pn**	**18 58 38.0**	**+0.1**
WARBT				*eS*		**Sn**	**18 58 55.2**	**-1.4**
ENTT	**Nioudou**	**1.45**	**300**	*eP*		**Pg**	**18 58 39.7**	**-0.5**
ENTT				*eS*		**Sn**	**18 58 57.2**	**+0.5**
HGSD	**Ruisui**	**1.46**	**253**	*eP*		**Pn**	**18 58 38.5**	**+0.4**
HGSD				*eS*		**Sn**	**18 58 56.3**	**-0.6**
TIPB	**Shuangxi**	**1.46**	**316**	*eP*		**Pn**	**18 58 38.1**	**-0.1**
TIPB				*eS*		**Sn**	**18 58 54.8**	**-2.3**
FUSB	**Fushanzhiwuyua**	**1.50**	**304**	*eP*		**Pg**	**18 58 40.5**	**-0.6**
FUSB				*eS*		**Sn**	**18 58 58.8**	**+0.9**
NNSB	**Datong**	**1.52**	**290**	*eP*		**Pb**	**18 58 40.0**	**-0.2**
SXI1	**Grass Mountain**	**1.52**	**320**	*eP*		**Pn**	**18 58 39.4**	**+0.4**
SXI1				*eS*		**Sn**	**18 58 55.7**	**-2.9**
NWLT	**Wulai**	**1.57**	**303**	*eP*		**Pb**	**18 58 40.6**	**-0.4**
NWLT				*eS*		**Sn**	**18 59 00.1**	**+0.4**
YULB	**Yu-li**	**1.60**	**251**	*eP*		**Pn**	**18 58 40.6**	**+0.5**
YULB				*eS*		**Sn**	**18 59 00.3**	**-0.1**
YHNB	**Yeheng**	**1.62**	**298**	*eP*		**Pb**	**18 58 41.3**	**-0.5**
YHNB				*eS*		**Sn**	**18 59 00.9**	**0.0**
OWD	**Renai**	**1.62**	**272**	*eP*		**Pn**	**18 58 41.3**	**+0.8**
OWD				*eS*		**Sn**	**18 58 59.9**	**-1.2**
NSK	**Sanguang**	**1.63**	**298**	*eP*		**Pg**	**18 58 44.5**	**+0.7**
NSK				*eS*		**Sn**	**18 59 02.3**	**+0.9**
WUSB	**Renai**	**1.68**	**273**	*eP*		**Pb**	**18 58 42.8**	**-0.2**
WUSB				*eS*		**Sn**	**18 59 01.9**	**-0.5**
SSLB	**Suanglung**	**1.83**	**266**	*eP*		**Pb**	**18 58 46.4**	**+0.9**
SSLB				*eS*		**Sn**	**18 59 07.0**	**+0.9**
ELDTW	**Lidau**	**1.92**	**248**	*eP*		**Pn**	**18 58 44.7**	**+0.2**
ELDTW				*eS*		**Sn**	**18 59 07.1**	**-1.3**
WHYT	**Xinyi Township**	**1.93**	**264**	*eP*		**Pb**	**18 58 47.5**	**+0.3**
WHYT				*eS*		**Sb**	**18 59 11.0**	**-0.1**
ALS	**Alishan**	**2.01**	**259**	*eP*		**Pb**	**18 58 49.1**	**+0.5**
ALS				*eS*		**Sn**	**18 59 11.3**	**+0.5**
STYH	**Taoyuan**	**2.13**	**250**	*eP*		**Pb**	**18 58 51.3**	**+0.8**
STYH				*eS*		**Sn**	**18 59 15.0**	**+1.6**
TPUB	**Ta-pu**	**2.21**	**254**	*eP*		**Pb**	**18 58 50.6**	**-1.4**
TPUB				*eS*		**Sn**	**18 59 17.1**	**+1.5**
WTP	**Ta-pu**	**2.24**	**253**	*eP*		**Pb**	**18 58 51.3**	**-1.2**
WTP				*eS*		**Sb**	**18 59 19.3**	**-0.9**

IDC ***09*** *19:00:17.0±1.0, 24°.07N×142°.93E, h0km, mb3.7/10, mbtmp3.7/10, MS2.9/1, Error ellipse: s-maj=31.2km s-min=21.5km az=85.0*

ISC 09 19:00:21.5±1.0, 24°.1N±0°.2×142°.9E±0°.2, h29km, n11, σ0°46/10, mb3.6/10, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ASAJ	**Asahikawa**	**20.02**	**359**	LR		LR	19 18 05.5	
	comp=Z,29nm,18.1s,baz=147,slow=53							
CMAR	**Chiang Mai Arr**	**41.25**	**271**	P		**P**	**19 08 04.8**	**+0.5**
	0.3nm,0.5s,baz=58,slow=8.7,SNR=4.3 0.3nm,0.5s							
WRA	**Warramunga Arr**	**44.52**	**192**	P		**P**	**19 08 30.3**	**-0.3**
	0.9nm,0.8s,baz=15,slow=7.8,SNR=13 0.9nm,0.8s							
ASAR	**Alice Springs**	**48.23**	**191**	P		**P**	**19 08 59.8**	**0.0**
	0.5nm,1.0s,baz=20,slow=11,SNR=1.3 0.5nm,1.0s							
ZALV	**Zalesovo Beam**	**52.24**	**321**	P		**P**	**19 09 29.5**	**-0.3**
	0.3nm,0.4s,baz=106,slow=9.1,SNR=2.3 0.3nm,0.4s							
MKAR	**Makanchi Array**	**52.96**	**311**	P		**P**	**19 09 34.8**	**-0.5**
	0.3nm,0.5s,baz=87,slow=8.5,SNR=7.4 0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**55.67**	**316**	P		**P**	**19 09 54.1**	**-0.8**
	1.2nm,0.5s,baz=90,slow=7.7,SNR=7.0 1.2nm,0.5s							
ILAR	**Eielson Array**	**60.07**	**28**	P		**P**	**19 10 25.6**	**0.0**
	0.3nm,0.7s,baz=268,slow=6.0,SNR=4.1 0.3nm,0.7s							
BVAR	**Borovoye Array**	**60.75**	**319**	P		**P**	**19 10 30.3**	**-0.1**
	1.3nm,0.5s,baz=88,slow=6.3,SNR=9.1 1.3nm,0.5s							
FINES	**FINESS Array B**	**80.97**	**334**	P		**P**	**19 12 33.4**	**+0.4**
	4.2nm,1.0s,baz=62,slow=5.5,SNR=6.1 4.2nm,1.0s							
NVAR	**Mina Array Bea**	**81.87**	**52**	P		**P**	**19 12 38.7**	**+0.1**
	0.4nm,0.5s,baz=307,slow=5.5,SNR=2.5 0.4nm,0.5s							

IDC 09 19:03:13.2±14.0, 14°.61S×166°.34E, h0km, mb3.6/3, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=243.9km s-min=39.1km az=60.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.43**	**179**	Pn		Pn	19 05 04.1	+1.1
	1.9nm,0.3s,baz=342,slow=20,SNR=16							
DZM				Sn		Sn	19 06 26.3	-1.8
	0.3nm,0.3s,baz=152,slow=21,SNR=1.5 4.8nm,0.4s							
STKA	**Stephens Creek**	**28.40**	**228**	P		P	19 09 08.5	-1.0
	1.0nm,0.5s,baz=46,slow=12,SNR=4.6 1.0nm,0.5s							
WRA	**Warramunga Arr**	**30.99**	**256**	P		P	19 09 33.6	+1.0
	0.4nm,0.9s,baz=81,slow=8.5,SNR=1.6 0.4nm,0.9s							
ASAR	**Alice Springs**	**31.88**	**249**	P		P	19 09 40.5	0.0
	0.2nm,0.5s,baz=82,slow=8.9,SNR=5.6 0.2nm,0.5s							

BJI ***09*** *19:10:46.5, 20°.59N×93°.80E, h65km, mB4.7/6, mb4.2/34, ML4.3/1, Ms3.9/9, Ms7 3.7/8*
NEIC ***09*** *19:10:46.7±2.1, 20°.54N±0°.06×93°.87E±0°.07, h51km±6km, mb4.6/39, Error ellipse: s-maj=9.4km s-min=8.3km az=55.0*
IDC ***09*** *19:10:46.8±1.4, 20°.60N×93°.97E, h52km±12km, mb4.0/26, mbtmp4.2/29, MS3.7/28, Error ellipse: s-maj=15.1km s-min=8.3km az=43.0*
BKK ***09*** *19:10:47.6±0.5, 21°.N±3°.×9°.4E±°, h40km±7km, M4.8/12, MLv4.8/12*
NDI ***09*** *19:10:47.2±1.7, 20°.57N×93°.83E, h51km, ML4.5, MW4.5*

ISC 09 19:10:46.7±0.3, 20°.63N±0°.04×93°.87E±0°.05, h52km, n143, σ1°67/142, mb4.5/51, MS3.8/26, 1C, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SAIH	**SAIHA**	**2.02**	**336**	*eP*		**Pn**	**19 11 20.3**	**+1.8**
SAIH				*eS*		**Sn**	**19 11 44.1**	**+1.5**
SAIH				IAML			19 11 51.0	
	comp=N,3µm,0.7s							
SAIH				IAML			19 11 51.6	
	comp=E,3µm,0.5s							
BRDH	**Bariadhala**	**2.90**	**315**	P		**Pn**	**19 11 32.4**	**+2.0**
	comp=E,348nm,0.4s,baz=86,slow=5.7,SNR=7.9							
BRDH				S		**Sn**	**19 12 07.7**	**+3.6**
	comp=E,559nm,0.3s,baz=236,slow=20,SNR=7.3							
BRDH				LR		LR	19 13 21.1	
	comp=E,1µm,20.1s,baz=136,slow=52							
MORE	**Moreh**	**3.61**	**6**			**Pn**	**19 11 41.6**	**+1.5**
AGT	**Agartala**	**4.05**	**324**	*eP*		**Pn**	**19 11 48.1**	**+2.0**
AGT				IAML			19 12 15.3	
	comp=E,562nm,0.7

KHLT	**Khaolaem Dam**	**7.34**	**141**	P		**Pn**	**19 12 31.3**	**0.0**
PASG	**PASIGHAT**	**7.51**	**10**	*e*P		**Pn**	**19 12 33.9**	**+0.2**
PBA	**Port Blair**	**8.99**	**187**	Pn		**Pn**	**19 12 52.9**	**-1.0**
PZH	**PanZhiHua**	**9.29**	**50**	P		**Pn**	**19 13 01.1**	**+3.0**
KMI2	**Kunming**	**9.34**	**60**	P		Pn	19 13 08.2	+9.4
KMI2				LR		LR		
	comp=N,210nm,7.5s							
KMI2				LR		LR		
	comp=E,250nm,9.5s							
KMI2				LR		LR		
	comp=Z,400nm,26.7s							
LSA	**Lhasa**	**9.36**	**345**			**Pn**	**19 12 58.9**	**-0.4**
LSA	**Lhasa**	**9.36**	**345**	P		Pn	19 12 54.5	-4.8
LSA				S		**Sn**	**19 14 38.4**	**-5.0**
LSA				LR		LR		
	comp=N,200nm,14.7s							
LSA				LR		LR		
	comp=E,300nm,19.4s							
GOMU	**GeErMu**	**15.53**	**3**	P		**Pn**	**19 14 23.9**	**+1.3**
GOMU				pmax		pmax		
	comp=E,9.0nm,0.9s							
KCSI	**Kotacane, Aceh**	**17.43**	**167**	P		**P**	**19 14 47.5**	**+0.6**
LZDM	**Lanzhou Array**	**17.53**	**27**	P		**Pn**	**19 14 47.1**	**-0.6**
	comp=E,0.8nm,0.5s,baz=207,slow=13,SNR=4.7							
TSI	**Tuntungan**	**17.63**	**164**	P		**P**	**19 14 49.5**	**+0.4**
	comp=E,69nm,1.5s							
LZH	**Lanzhou**	**17.70**	**27**	*e*P		P	19 14 58.3	+8.3
LZH				pP		sP	19 15 08.0	-0.5
LZH				sP		pP	19 15 12.6	+11
LZH				pmax		pmax		
	comp=Z,9.0nm,1.6s							
PSI	**Prapat**	**18.40**	**164**	P		**Pn**	**19 15 01.5**	**+3.3**
PALK	**Pallekele**	**18.41**	**226**	P		**P**	**19 14 56.9**	**-0.9**
	comp=Z,5.3nm,0.5s,baz=36,slow=13,SNR=5.2							
PALK				S		Sn	19 18 06.7	-17
	comp=Z,3.7nm,0.4s,baz=301,slow=20,SNR=6.8							
PALK				LR		LR	19 21 44.4	
	comp=Z,186nm,21.5s,baz=46,slow=36							
RPSI	**Rantau Prapat**	**18.50**	**164**			**P**	**19 14 56.7**	**-2.0**
XAN	**Xi'an**	**18.87**	**42**	P		**Pn**	**19 15 06.3**	**+2.6**
XAN				pP		pP	19 15 17.2	+2.7
XAN				pmax		pmax		
	comp=Z,11nm,0.8s							
GTA2	**Gaotai**	**19.46**	**14**	*e*P		**P**	**19 15 10.2**	**+1.0**
GTA2				pmax		pmax		
	comp=Z,3.0nm,0.7s							
GSI	**Gunungsitoli**	**19.55**	**169**			**P**	**19 15 08.6**	**-1.6**
GSI				IAmb		IAmb	19 15 17.6	
	comp=Z,22nm,0.8s							
GSI	**Gunungsitoli**	**19.55**	**169**	P		**P**	**19 15 10.6**	**+0.4**
	comp=Z,36nm,0.8s							
WHN	**Wuhan**	**20.91**	**58**	P		Pn	19 15 30.6	+2.7
WHN				pP		pP	19 15 38.6	+1.8
WHN				pmax		pmax		
	comp=Z,32nm,0.7s							
MYKOM	**Kota Tinggi**	**21.11**	**151**	P		**P**	**19 15 25.6**	**-1.5**
MYKOM				IAmb		IAmb	19 15 28.6	
	comp=Z,34nm,1.0s							
PDSI	**Padang**	**22.36**	**162**	P		**P**	**19 15 41.7**	**+1.1**
	comp=Z,23nm,1.0s							
NIL	**Nilore**	**22.41**	**310**	P		**P**	**19 15 39.9**	**-1.2**
NIL				IAmb		IAmb	19 15 51.5	
	comp=Z,22nm,0.8s							
WMQ	**Urumqi**	**23.69**	**349**	*e*P		**P**	**19 15 55.9**	**+2.2**
WMQ				pP		pP	19 16 04.6	-2.2
WMQ				LR		LR		
	comp=Z,450nm,6.7s							
WMQ				LR		LR		
	comp=Z,120nm,16.5s							
WUS	**Wushi**	**23.98**	**332**	P		**P**	**19 15 57.8**	**+1.2**
WUS				IAmb		IAmb	19 16 30.1	
	comp=Z,11nm,0.7s							
BTO2	**Baotou**	**24.24**	**31**	*e*P		**P**	**19 15 59.0**	**+0.1**
BTO2				pP		**pP**	**19 16 13.6**	**+1.3**
BTO2				sP		**sP**	**19 16 20.7**	**+2.1**
BTO2				PP		**PnPn**	**19 16 35.6**	**+4.8**
BTO2				pmax		pmax		
	comp=Z,19nm,0.7s							
BTO2				pmax		pmax		
	comp=Z,280nm,9.3s							
KSH2	**Kashi**	**24.25**	**324**	P		**P**	**19 15 59.9**	**+0.9**
KSH2				pmax		pmax		
	comp=Z,7.0nm,0.7s							
HNS	**HongShan**	**24.63**	**43**	⇑P		**P**	**19 16 01.7**	**-0.6**
HNS				pmax		pmax		
	comp=Z,4.0nm,1.0s							
TARG	**Taragay, Kyrgy**	**25.04**	**331**			**P**	**19 16 07.9**	**+1.4**
TARG				IAmb		IAmb	19 16 31.3	
	comp=Z,9.1nm,0.8s							
NJ2	**Nanjing**	**25.05**	**58**	*e*P		**P**	**19 16 07.6**	**+1.5**
NJ2				pmax		pmax		
	comp=Z,3.0nm,0.6s							
HHC	**Hu-ho-hao-te**	**25.15**	**33**	*e*P		**P**	**19 16 08.0**	**+0.9**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,96nm,5.2s							
TGY	**Tagaytay City**	**26.61**	**100**	LR		LR	19 28 39.1	
	comp=Z,105nm,19.0s,baz=110,slow=40							
AAK	**Ala-Archa**	**27.32**	**328**	P		**P**	**19 16 27.8**	**+1.1**
	comp=Z,1.4nm,1.0s,baz=55,slow=12,SNR=2.9							
	comp=Z,1.4nm,1.0s							
BTK	**Batken**	**27.62**	**320**			**P**	**19 16 30.9**	**+1.6**
BTK				IAmb		IAmb	19 17 13.7	
	comp=Z,8.2nm,0.8s							
MKAR	**Makanchi Array**	**27.75**	**343**	P		**P**	**19 16 31.3**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=150,slow=9.0,SNR=27							
MKAR				LR		LR	19 30 15.0	
	comp=Z,178nm,19.6s,baz=172,slow=42							
	comp=Z,2.1nm,0.6s							
MKAR	**Makanchi Array**	**27.75**	**343**	P		**P**	**19 16 30.1**	**-0.2**
MAKZ	**Makanchi**	**27.85**	**342**			**P**	**19 16 31.6**	**+0.3**
SONM	**Songino Array**	**28.97**	**18**	P		**P**	**19 16 42.0**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=204,slow=9.9,SNR=8.5							
SONM				ScP		**ScP**	**19 23 27.4**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=188,slow=4.4,SNR=3.8							
SONM				LR		LR	19 30 40.5	
	comp=Z,163nm,20.3s,baz=188,slow=41							
	comp=Z,1.2nm,0.4s							
SONM	**Songino Array**	**28.97**	**18**	P		**P**	**19 16 41.4**	**+0.1**
XLT	**XiLinHaoTe**	**29.67**	**34**	*e*P		**P**	**19 16 48.2**	**+0.7**
XLT				pmax		pmax		
	comp=Z,4.0nm,2.1s							
JOW	**Kunigami**	**32.03**	**72**	LR		LR	19 30 28.9	
	comp=Z,116nm,21.3s,baz=352,slow=37							
KURBB	**Kurchatov Arra**	**32.28**	**342**	P		**P**	**19 17 11.0**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=156,slow=8.6,SNR=16							
KURBB				ScP		**ScP**	**19 23 37.8**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=138,slow=3.2,SNR=1.7							
KURBB				LR		LR	19 32 48.0	
	comp=Z,160nm,18.2s,baz=196,slow=41							
	comp=Z,4.3nm,0.8s							
KURK	**Kurchatov**	**32.34**	**342**	P		**P**	**19 17 11.3**	**+0.5**
KURK				IAmb		IAmb	19 17 33.0	
	comp=Z,5.9nm,0.7s							
DAV	**Davao City (W)**	**33.52**	**109**	LR		LR	19 32 34.8	
	comp=Z,81nm,18.5s,baz=308,slow=39							
KSRS	**Korea Array**	**33.93**	**53**	LR		LR	19 34 04.6	
	comp=Z,46nm,18.4s,baz=240,slow=41							
ZAA0	**Zalesovo Array**	**33.97**	**350**			**P**	**19 17 24.9**	**-0.2**
ZAA0				IAmb		IAmb	19 17 29.6	
	comp=Z,6.5nm,1.2s							
ZALV	**Zalesovo Beam**	**33.97**	**350**	P		**P**	**19 17 25.5**	**+0.5**
	comp=Z,2.0nm,0.3s,baz=166,slow=8.2,SNR=19							
	comp=Z,2.0nm,0.3s							
ZALV	**Zalesovo Beam**	**33.97**	**350**			**P**	**19 17 25.2**	**+0.2**
HILR	**Hailar Array B**	**35.45**	**29**	P		**P**	**19 17 37.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=212,slow=10,SNR=2.1							
	comp=Z,0.5nm,0.3s							
LUWI	**Luwuk**	**35.56**	**124**	P		**P**	**19 17 36.0**	**-3.2**
BVAR	**Borovoye Array**	**37.05**	**336**	P		**P**	**19 17 51.7**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=129,slow=9.3,SNR=8.3							
BVAR				PcP		**PcP**	**19 20 11.4**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=154,slow=2.8,SNR=3.0							
	comp=Z,1.1nm,0.4s							
AB31	**Akbulak array**	**39.30**	**325**			**P**	**19 18 10.4**	**-0.1**
ABKAR	**Akbulak array**	**39.30**	**325**	P		**P**	**19 18 11.2**	**+0.7**
AKTO	**Aktyubinsk**	**40.99**	**325**	LR		LR	19 37 49.9	
	comp=Z,154nm,21.5s,baz=208,slow=40							
MJAR	**Matsushiro Arr**	**41.66**	**58**	P		**P**	**19 18 30.5**	**+0.4**
	comp=Z,4.1nm,1.2s,baz=201,slow=15,SNR=3.0							
MJAR				LR		LR	19 38 21.0	
	comp=Z,80nm,18.0s,baz=272,slow=40							
	comp=Z,4.1nm,1.2s							
SOEI	**Soe**	**42.49**	**132**	P		**P**	**19 18 35.3**	**-1.9**
ARTI	**Arti**	**44.33**	**332**	P		**P**	**19 18 50.2**	**-1.3**
ARTI				IAmb		IAmb	19 18 55.5	
	comp=Z,8.9nm,0.5s							
YAK	**Yakutsk**	**48.16**	**22**	P		**P**	**19 19 20.8**	**-0.6**
	comp=Z,19nm,0.6s,baz=43,slow=0.3,SNR=14							
YAK				LR		LR	19 41 29.2	
	comp=Z,100nm,19.7s,baz=273,slow=38							
	comp=Z,19nm,0.6s							
YAK	**Yakutsk**	**48.16**	**22**	P		**P**	**19 19 20.4**	**-1.0**
NRIK	**Noril'sk**	**48.86**	**357**	P		**P**	**19 19 26.3**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=223,slow=2.0,SNR=2.4							
NRIK				LR		LR	19 43 25.2	
	comp=Z,71nm,21.3s,baz=250,slow=40							
	comp=Z,1.7nm,0.4s							
NRIK	**Noril'sk**	**48.86**	**357**	P		**P**	**19 19 25.8**	**-0.9**
NRIK				IAmb		IAmb	19 20 07.0	
	comp=Z,7.1nm,1.3s							
FITZ	**Fitzroy Crossi**	**49.52**	**139**	LR		LR	19 41 37.2	
	comp=Z,96nm,20.9s,baz=193,slow=37							
KNRA	**Kununurra**	**49.76**	**134**	P		**P**	**19 19 32.5**	**-1.7**
ASF	**Jabal al Asfar**	**51.79**	**295**	LR		LR	19 46 53.8	
	comp=Z,50nm,19.8s,baz=38,slow=42							
MMAI	**Mount Meron Ar**	**53.02**	**296**	LR		LR	19 45 40.6	
	comp=Z,43nm,19.4s,baz=76,slow=39							
TIXI	**Tiksi**	**54.88**	**13**	P		**P**	**19 20 11.0**	**-0.5**
	comp=Z,5.5nm,0.3s,baz=185,slow=3.7,SNR=34							
	comp=Z,5.5nm,0.3s							
TIXI	**Tiksi**	**54.88**	**13**			**P**	**19 20 10.7**	**-0.7**
TIXI				IAmb		IAmb	19 20 22.3	
	comp=Z,19nm,1.4s							
MA2	**Magadan**	**55.81**	**31**	LR		LR	19 46 56.7	
	comp=Z,98nm,19.7s,baz=132,slow=39							
WB0	**Warramunga Arr**	**56.44**	**133**	P		**P**	**19 20 22.3**	**-1.1**
WB0				IAmb		IAmb	19 20 25.5	
	comp=Z,5.0nm,0.6s							
WRA	**Warramunga Arr**	**56.52**	**133**	P		**P**	**19 20 23.7**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=316,slow=7.8,SNR=62							
	comp=Z,4.6nm,0.7s							
WRA	**Warramunga Arr**	**56.52**	**133**			**P**	**19 20 23.0**	**-1.0**
WR8	**Warramunga Arr**	**56.65**	**133**			**P**	**19 20 24.2**	**-0.6**
WR8				IAmb		IAmb	19 20 30.6	
	comp=Z,8.1nm,0.8s							
PETK	**Petropavlovsk-**	**58.09**	**40**	LR		LR	19 49 14.4	
	comp=Z,57nm,20.0s,baz=62,slow=40							
AKASG	**Malin Array Be**	**58.30**	**318**	P		**P**	**19 20 36.4**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=84,slow=6.5,SNR=5.3							
	comp=Z,0.7nm,0.4s							
AS31	**Alice Springs**	**58.82**	**136**			**P**	**19 20 39.4**	**-0.8**
ASAR	**Alice Springs**	**58.82**	**136**	P		**P**	**19 20 40.2**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=316,slow=6.8,SNR=52							
	comp=Z,3.8nm,0.7s							
ASAR	**Alice Springs**	**58.82**	**136**	P		**P**	**19 20 38.4**	**-1.7**
COEN	**Coen**	**59.41**	**121**	P		**P**	**19 20 41.1**	**-3.2**
COEN				IAmb		IAmb	19 20 49.8	
	comp=Z,7.7nm,1.1s							
BURAR	**Bucovina Array**	**60.75**	**314**	P		**P**	**19 20 53.9**	**+0.7**
FINES	**FINESS Array B**	**61.49**	**330**	P		**P**	**19 20 57.8**	**0.0**
	comp=Z,6.6nm,0.6s,baz=122,slow=6.9,SNR=11							
	comp=Z,2.6nm,0.6s							
VOI	**Vohitsoka**	**62.46**	**230**	P		**P**	**19 21 04.3**	**-0.7**
ARCES	**ARCESS Array B**	**63.30**	**339**	P		**P**	**19 21 10.0**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=90,slow=7.3,SNR=4.5							
	comp=Z,1.9nm,0.8s							
ARCES	**ARCESS Array B**	**63.30**	**339**	P		**P**	**19 21 10.0**	**+0.2**
BILL	**Bilibino**	**64.46**	**23**	P		**P**	**19 21 17.4**	**0.0**
BILL				IAmb		IAmb	19 21 29.4	
	comp=Z,12nm,1.3s							
LANS	**Liptovska Anna**	**64.56**	**316**	*e*P		**P**	**19 21 17.7**	**-0.8**
MBAR	**Mbarara**	**65.19**	**259**	LR		LR	19 49 54.9	
	comp=Z,54nm,19.8s,baz=198,slow=36							
INKA	**Innaminka**	**66.09**	**135**	P		**P**	**19 21 29.2**	**+0.7**
BBOO	**Buckleboo**	**66.70**	**142**	P		**P**	**19 21 31.7**	**-0.7**
BBOO				IAmb		IAmb	19 21 35.9	
	comp=Z,23nm,1.5s							
HFS	**Hagfors**	**67.46**	**328**	P		**P**	**19 21 36.6**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=118,slow=5.7,SNR=12							
	comp=Z,3.1nm,0.6s							
GERES	**GERESS Array B**	**68.37**	**316**	P		**P**	**19 21 43.2**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=68,slow=8.7,SNR=6.2							
	comp=Z,0.9nm,0.5s							
CLL	**Collm**	**68.53**	**318**	*i* P		**P**	**19 21 46.8**	**+3.1**
NB2	**NORSAR Subarra**	**68.64**	**329**	P		**P**	**19 21 46.4**	**+2.2**
	comp=Z,2.3nm,0.7s,baz=87,slow=6.2							
NOA	**NORSAR Array B**	**68.64**	**329**	P		**P**	**19 21 44.1**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=86,slow=6.1,SNR=3.6							
NOA				LR		LR	19 53 11.1	
	comp=Z,66nm,21.0s,baz=10.0,slow=37							
	comp=Z,1.0nm,0.6s							
STKA	**Stephens Creek**	**69.39**	**138**	P		**P**	**19 21 48.9**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=331,slow=6.5,SNR=8.1							
	comp=Z,2.4nm,0.6s							
STKA	**Stephens Creek**	**69.39**	**138**	P		**P**	**19 21 48.3**	**-0.9**
LSZ	**Lusaka**	**73.71**	**246**			**P**	**19 22 15.6**	**-0.1**
LSZ				IAmb		IAmb	19 22 17.6	
	comp=Z,7.2nm,0.6s							
KEST	**Kesra**	**73.95**	**303**	P		**P**	**19 22 17.4**	**+0.5**
	comp=Z,2.6nm,1.0s,baz=255,slow=6.5,SNR=2.8							
	comp=Z,2.6nm,1.0s							
JMIC	**Jan Mayen**	**74.62**	**341**	LR		LR	20 00 28.7	
	comp=Z,93nm,18.0s,baz=110,slow=40							
EKA	**Eskdalemuir Ar**	**77.17**	**324**	P		**P**	**19 22 35.6**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=80,slow=6.0,SNR=4.5							
	comp=Z,1.5nm,0.6s							
LBTB	**Lobatse**	**80.37**	**239**	LR		LR	19 55 02.4	
	comp=Z,39nm,18.5s,baz=72,slow=33							
LBTB	**Lobatse**	**80.37**	**239**			**P**	**19 22 51.9**	**-1.1**
LBTB				IAmb		IAmb	19 22 54.9	
	comp=Z,10.0nm,0.8s							
H21K	**Melozitna Rive**	**80.50**	**23**	P		**P**	**19 22 51.3**	**-1.6**
H21K				IAmb		IAmb	19 23 06.2	
	comp=Z,9.7nm,1.2s							
E24K	**Your Creek**	**80.71**	**20**	P		**P**	**19 22 53.5**	**-0.5**
E24K				IAmb		IAmb	19 23 19.0	
	comp=Z,3.8nm,0.8s							
BOSA	**Boshof**	**82.33**	**236**	P		**P**	**19 23 03.7**	**+0.4**
	comp=Z,13nm,0.7s,baz=70,slow=3.3,SNR=35							
BOSA				LR		LR	19 54 03.1	
	comp=Z,45nm,21.9s,baz=34,slow=32							
	comp=Z,13nm,0.7s							
BOSA	**Boshof**	**82.33**	**236**			**P**	**19 23 03.5**	**+0.1**
ESDC	**Sonseca Array**	**82.86**	**310**	P		**P**	**19 23 06.8**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=44,slow=5.3,SNR=4.9							
	comp=Z,0.4nm,0.7s							
ILAR	**Eielson Array**	**83.08**	**22**	P		**P**	**19 23 06.3**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=295,slow=4.9,SNR=7.3							
	comp=Z,0.6nm,0.7s							
A36M	**Sachs Harbour**	**83.87**	**11**			**P**	**19 23 10.1**	**-0.3**
A36M				IAmb		IAmb	19 23 11.8	
	comp=Z,7.9nm,0.7s							
KDAK	**Kodiak Island**	**84.53**	**30**	LR		LR	20 07 13.9	
	comp=Z,88nm,18.2s,baz=20,slow=40							
WIN	**Windhoek**	**86.30**	**244**	P		**P**	**19 23 24.0**	**+0.4**
SUR	**Sutherland**	**87.47**	**234**	LR		LR	19 56 34.0	
	comp=Z,97nm,21.1s,baz=28,slow=31							
YKA	**Yellowknife Ar**	**94.13**	**13**	P		**P**	**19 23 59.4**	**0.0**
	comp=Z,0.4nm,0.7s,baz=331,slow=4.9,SNR=8.4							
YKA				PKKPbc		**PKKPdf**	**19 40 59.1**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=168,slow=1.9,SNR=4.1							
	comp=Z,0.4nm,0.7s							
FRB	**Frobisher Bay**	**94.78**	**352**	LR		LR	20 12 20.6	
	comp=Z,57nm,18.5s,baz=92,slow=39							
DBIC	**Dimbokro**	**95.78**	**279**	LR		LR	20 12 44.0	
	comp=Z,40nm,18.2s,baz=71,slow=39							
PDAR	**Pinedale Array**	**113.32**	**19**	PKKPbc		PKKPbc	19 40 10.7	+5.5
	comp=Z,0.3nm,0.6s,baz=157,slow=3.3,SNR=4.2							
TXAR	**Lajitas Array**	**127.52**	**19**	PKP		**PKPdf**	**19 29 47.1**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=302,slow=2.3,SNR=4.9							
CPUP	**Villa Florida**	**153.01**	**252**	PKPbc		**PKPbc**	**19 30 38.7**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=90,slow=3.9,SNR=4.1							
CPUP				PKPab		**PKPab**	**19 30 50.6**	**+0.2**
	comp=Z,5.4nm,0.8s,baz=85,slow=3.7,SNR=11							

*NDI **09** 19:37:27.0±3.1, 23.°11N×94.°91E, h26km±23km, ML4.2, MW4.2*
*BKK **09** 19:37:29.8±1.0, 23.°N±4.°×9.°5E±.°, h26km±9km, M3.8/6, MLv3.8/6*
*NEIC **09** 19:37:29.4±2.0, 23.°05N±0.°06×94.°85E±0.°08, h134km±9km, mb4.2/18, Error ellipse: s-maj=11.9km s-min=8.5km az=64.0*
*IDC **09** 19:37:29.0±1.6, 22.°99N×94.°80E, h133km±16km, mb3.9/11, mbtmp4.2/14, Error ellipse: s-maj=19.8km s-min=10.3km az=54.0*
ISC 09 19:37:28.6±0.5, 23.°15N±0.°04×94.°80E±0.°05, h134km, n71, σ1°89/83, mb4.2/19, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.18**	**337**			**Pn**	**19 37 55.3**	**+1.8**
SAIH	**SAIHA**	**1.80**	**249**	*e*P		**Pn**	**19 37 59.5**	**-1.0**
SAIH				*e*S		**Sn**	**19 38 21.0**	**-3.9**
SAIH				IAML			19 38 26.3	
	comp=E,855nm,0.3s							
SAIH				IAML			19 38 30.9	
	comp=N,966nm,0.6s							
IMP	**Imphal**	**1.85**	**335**	*e*P		**Pn**	**19 38 00.7**	**-0.3**
IMP				*e*S		**Sn**	**19 38 24.0**	**-2.0**
IMP				IAML			19 38 28.7	
	comp=N,2μm,0.2s							
IMP				IAML			19 38 29.1	
	comp=E,1μm,0.3s							
KOHI	**KOHIMA**	**2.64**	**346**	*e*P		**Pn**	**19 38 09.9**	**-0.9**
KOHI				*e*S		**Sn**	**19 38 41.1**	**-2.4**
KOHI				IAML			19 38 46.9	
	comp=N,2μm,0.6s							
KOHI				IAML			19 38 47.4	
	comp=E,1μm,0.4s							
BRDH	**Bariadhala**	**2.95**	**262**	P		**Pn**	**19 38 15.1**	**+0.4**
	comp=E,174nm,0.3s,baz=69,slow=23,SNR=1.1							
BRDH				S		**Sn**	**19 38 50.5**	**+0.2**
	comp=E,684nm,0.3s,baz=239,slow=22,SNR=18							
MOKO	**MOKOCHONG**	**3.17**	**355**	*e*P		**Pn**	**19 38 16.1**	**-1.6**
MOKO				*e*S		**Sn**	**19 38 52.3**	**-3.4**
MOKO				IAML			19 38 59.0	
	comp=N,875nm,0.3s							
MOKO				IAML			19 39 00.1	
	comp=E,2μm,0.1s							
AGT	**Agartala**	**3.35**	**283**	*e*P		**Pn**	**19 38 18.5**	**-1.3**
AGT				*e*S		**Sn**	**19 38 56.6**	**-2.8**
AGT				IAML			19 39 02.9	
	comp=N,592nm,0.6s							
AGT				IAML			19 39 04.7	
	comp=E,989nm,0.4s							
SHL	**Shillong**	**3.59**	**313**			**Pn**	**19 38 24.7**	**+1.5**
JORH	**JORHAT**	**3.62**	**352**	*e*P		Pn	19 38 20.4	-2.9
JORH				*e*S		**Sn**	**19 39 00.9**	**-4.9**
JORH				IAML			19 39 10.5	
	comp=E,1μm,0.1s							
JORH				IAML			19 39 12.6	
	comp=N,1μm,0.1s							
TEZP	**TEZPUR**	**3.91**	**333**	*e*P		**Pn**	**19 38 27.1**	**0.0**
TEZP				*e*S		**Sn**	**19 39 09.2**	**-3.3**
TEZP				IAML			19 39 15.8	
	comp=N,879nm,0.2s							
TEZP				IAML			19 39 16.0	
	comp=E,818nm,0.1s							
ITAN	**ITANAGAR**	**4.10**	**346**	*e*P		**Pn**	**19 38 28.6**	**-1.1**
ITAN				*e*S		**Sn**	**19 39 13.8**	**-3.4**
ITAN				IAML			19 39 18.3	
	comp=N,623nm,0.3s							
ITAN				IAML			19 39 19.8	
	comp=E,569nm,0.2s							
GUWA	**GUWAHATI**	**4.15**	**318**	*e*P		**Pn**	**19 38 29.4**	**-0.9**
GUWA				*e*S		**Sn**	**19 39 14.4**	**-3.9**
GUWA				IAML			19 39 15.6	
	comp=E,417nm,0.2s							
GUWA				IAML			19 39 16.6	
	comp=N,528nm,0.2s							
ZIRO	**ZIRO**	**4.45**	**349**	*e*P		**Pn**	**19 38 32.3**	**-2.2**
ZIRO				*e*S		**Sn**	**19 39 22.8**	**-3.0**
ZIRO				IAML			19 39 27.2	
	comp=E,952nm,0.5s							
ZIRO				IAML			19 39 31.0	
	comp=N,810nm,0.4s							
PASG	**PASIGHAT**	**4.92**	**5**	*e*P		**Pn**	**19 38 39.5**	**-1.1**
CMAI	**Chiengmai2**	**5.08**	**128**	P		**Pn**	**19 38 42.9**	**-0.1**
TAWA	**Tawang**	**5.16**	**330**	*e*P		**Pn**	**19 38 43.3**	**-1.0**
TAWA				*e*S		**Sn**	**19 39 39.2**	**-3.9**
TAWA				IAML			19 39 44.6	
	comp=N,893nm,0.1s							
TAWA				IAML			19 39 46.0	
	comp=E,755nm,0.4s							
DHUB	**DHUBRI**	**5.23**	**304**	*e*P		**Pn**	**19 38 43.3**	**-1.5**
DHUB				*e*S		**Sn**	**19 39 39.7**	**-4.4**
DHUB				IAML			19 39 42.5	
	comp=N,777nm,0.5s							
DHUB				IAML			19 39 43.8	
	comp=E,851nm,0.4s							
CHTO	**Chiang Mai**	**5.79**	**137**			**Pn**	**19 38 51.9**	**-0.5**
CHTO	**Chiang Mai**	**5.79**	**137**	P		**Pn**	**19 38 52.3**	**-0.1**
CHTO	**Chiang Mai**	**5.79**	**137**	P		**Pn**	**19 38 52.2**	**-0.1**
CM31	**Chiang Mai Arr**	**6.06**	**140**			**Pn**	**19 38 55.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**6.06**	**140**	P		**Pn**	**19 38 54.6**	**-1.4**
	comp=E,2.5nm,0.4s,baz=324,slow=13,SNR=35						

WRA	**Warramunga Arr**	**57.64**	**135**	P	**P**	**19 47 04.5**	**-0.4**
	comp=Z,7.7nm,0.5s,baz=320,slow=7.5,SNR=113						
	comp=Z,7.7nm,0.5s						
WRA	**Warramunga Arr**	**57.64**	**135**	P	**P**	**19 47 04.3**	**-0.7**
FINES	**FINESS Array B**	**59.78**	**329**	P	**P**	**19 47 20.4**	**+1.2**
	comp=Z,2.7nm,0.9s,baz=67,slow=3.6,SNR=1.4						
	comp=Z,2.7nm,0.9s						
AS31	**Alice Springs**	**60.07**	**138**	P	**P**	**19 47 21.8**	**0.0**
AS31				IAmb	IAmb	19 47 22.5	
	comp=Z,2.7nm,0.6s						
ASAR	**Alice Springs**	**60.07**	**138**	P	**P**	**19 47 21.9**	**+0.1**
	comp=Z,6.1nm,0.5s,baz=320,slow=6.9,SNR=76						
	comp=Z,6.1nm,0.5s						
ASAR	**Alice Springs**	**60.07**	**138**	P	**P**	**19 47 20.8**	**-1.0**
ARCES	**ARCESS Array B**	**61.29**	**338**	P	**P**	**19 47 30.9**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=105,slow=7.6,SNR=6.8						
	comp=Z,0.4nm,0.3s						
STKA	**Stephens Creek**	**70.69**	**139**	P	**P**	**19 48 29.8**	**-0.1**
	comp=Z,2.5nm,0.6s,baz=326,slow=8.9,SNR=6.2						
	comp=Z,2.5nm,0.6s						
STKA	**Stephens Creek**	**70.69**	**139**	P	**P**	**19 48 28.6**	**-1.3**
BDFB	**Brasilia**	**144.22**	**275**	PKP	**PKPab**	**19 56 48.8**	**+1.1**
	comp=Z,3.1nm,0.5s,baz=19,slow=1.6,SNR=6.6						

*NEIC **09** 19:38:52.2±1.4, 56.1°S±0.1°×27.5°W±0.2, h100km±5km, mb4.7/26, Error ellipse: s-maj=20.2km s-min=12.4km az=200.0*
*IDC **09** 19:38:55.7±2.6, 56.13°S×27.47°W, h126km±22km, mb3.9/8, mbtmp4.4/10, MS3.2/5, Error ellipse: s-maj=25.2km s-min=15.0km az=66.0*

ISC 09 19:38:53.6±0.6, 56.14°S±0.09°×27.64°W±0.09°, h112km, n54, σ0s91/47, mb4.6/17, 3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.40**	**286**	Pn	**Pn**	**19 40 11.6**	**-0.1**
HOPE				Sn	**Sn**	**19 41 09.8**	**-2.7**
VNA3	**Neumayer Olymp**	**16.99**	**160**	⇓P	**P**	**19 42 43.7**	**-0.3**
	comp=Z,19nm,0.7s						
VNA2	**Neumayer--Watz**	**17.20**	**157**	⇓P	**Pn**	**19 42 46.0**	**-0.5**
	comp=Z,20nm,0.6s,baz=315,slow=13						
EFI	**East Falkland**	**18.39**	**271**	P	**P**	**19 43 00.4**	**+0.9**
EFI				IAmb	IAmb	19 43 02.8	
	comp=Z,28nm,0.9s						
SNAA	**Sanae**	**18.76**	**156**	⇓P	**P**	**19 43 03.2**	**-0.3**
	comp=Z,875nm,0.6s						
SNAA	**Sanae**	**18.76**	**156**	P	**P**	**19 43 02.8**	**-0.6**
	comp=Z,34nm,0.6s,baz=292,slow=11,SNR=47						
SNAA	**Sanae**	**18.76**	**156**		**P**	**19 43 02.5**	**-0.9**
SNAA				IAmb	IAmb	19 43 05.5	
	comp=Z,36nm,0.7s						
PMSA	**Palmer Station**	**19.65**	**229**	P	**Pn**	**19 43 16.5**	**+1.0**
	comp=Z,24nm,0.8s,baz=100,slow=6.6,SNR=5.4						
PMSA	**Palmer Station**	**19.65**	**229**	P	**P**	**19 43 13.5**	**+0.4**
PMSA				IAmb	IAmb	19 43 30.8	
	comp=Z,46nm,1.1s						
BELA	**Belgrano 2**	**21.97**	**184**	P	**P**	**19 43 36.7**	**-1.1**
BELA				IAmb	IAmb	19 43 39.6	
	comp=Z,37nm,0.9s						
GO08	**Villa O'Higgin**	**28.08**	**267**	P	**P**	**19 44 34.8**	**+0.5**
GO08				IAmb	IAmb	19 44 35.7	
	comp=Z,11nm,0.8s						
TRQA	**Tornquist**	**29.13**	**294**	P	**P**	**19 44 43.1**	**-0.6**
PLCA	**Paso Flores**	**31.77**	**281**	P	**P**	**19 45 06.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=75,slow=4.2,SNR=4.0						
PLCA				LR	LR	19 57 57.3	
	comp=Z,33nm,18.1s,baz=134,slow=36						
	comp=Z,0.9nm,0.7s						
QSPA	**South Pole Qui**	**34.11**	**180**	P	**P**	**19 45 27.7**	**+0.5**
	comp=Z,4.7nm,0.5s,baz=204,slow=4.9,SNR=6.2						
	comp=Z,4.7nm,0.5s						
QSPA	**South Pole Qui**	**34.11**	**180**	P	**P**	**19 45 26.9**	**-0.3**
QSPA				IAmb	IAmb	19 45 29.1	
	comp=Z,9.7nm,0.9s						
BO02	**Sierra Bellavi**	**36.21**	**288**	P	**P**	**19 45 45.9**	**+0.5**
CPUP	**Villa Florida**	**36.68**	**312**	P	**P**	**19 45 50.0**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=150,slow=7.3,SNR=5.8						
	comp=Z,1.4nm,0.5s						
MT02	**Curacav**	**37.58**	**289**	P	**P**	**19 45 56.4**	**-0.5**
MT02				IAmb	IAmb	19 46 01.5	
	comp=Z,11nm,1.0s						
VA03	**San Esteban**	**37.65**	**290**	P	**P**	**19 45 57.5**	**-0.1**
VA03				IAmb	IAmb	19 46 06.0	
	comp=Z,4.6nm,0.6s						
CO02	**Combarbal**	**39.11**	**291**	P	**P**	**19 46 09.9**	**0.0**
CO02				IAmb	IAmb	19 46 11.1	
	comp=Z,7.9nm,0.5s						
CO01	**Juntas del Tor**	**39.62**	**293**	P	**P**	**19 46 15.0**	**+0.7**
CO01				IAmb	IAmb	19 46 16.2	
	comp=Z,5.6nm,0.7s						
MAW	**Mawson**	**40.22**	**144**	LR	LR	20 01 57.6	
	comp=Z,136nm,18.3s,baz=77,slow=34						
BDFB	**Brasilia**	**43.32**	**331**	P	**P**	**19 46 46.4**	**+2.0**
	comp=Z,1.8nm,0.6s,baz=158,slow=11,SNR=3.6						
BDFB				LR	LR	20 03 33.4	
	comp=Z,31nm,19.8s,baz=193,slow=34						
	comp=Z,1.8nm,0.6s						
PB14	**IPOC Station P**	**44.16**	**298**	P	**P**	**19 46 50.1**	**-1.2**
PB14				IAmb	IAmb	19 46 52.0	
	comp=Z,7.2nm,1.0s						
PB09	**IPOC Station P**	**45.98**	**301**	P	**P**	**19 47 05.9**	**+0.3**
PB09				IAmb	IAmb	19 47 08.1	
	comp=Z,16nm,1.1s						
PB07	**IPOC Station P**	**46.35**	**300**	P	**P**	**19 47 08.2**	**-0.3**
VNDA	**Vanda**	**46.47**	**183**	P	**P**	**19 47 10.3**	**+1.8**
	comp=Z,3.0nm,0.7s,baz=198,slow=6.4,SNR=8.0						
	comp=Z,3.0nm,0.7s						
VNDA	**Vanda**	**46.47**	**183**	P	**P**	**19 47 09.2**	**+0.7**
PB02	**IPOC Station P**	**46.70**	**301**	P	**P**	**19 47 11.2**	**+0.1**
PB01	**IPOC Station P**	**46.74**	**301**	P	**P**	**19 47 11.9**	**+0.5**
PB08	**IPOC Station P**	**47.36**	**302**		**P**	**19 47 15.8**	**-0.8**
SIV	**San Ignacio**	**47.46**	**314**	LR	LR	20 07 19.3	
	comp=Z,13nm,20.0s,baz=111,slow=36						
GO01	**Chusmiza**	**47.78**	**302**	P	**P**	**19 47 19.8**	**-0.2**
GO01				IAmb	IAmb	19 47 22.0	
	comp=Z,13nm,0.9s						
PB11	**IPOC Station P**	**47.92**	**302**		**P**	**19 47 19.5**	**-1.1**
H10S2	**ASCENSION HYDR**	**48.16**	**17**	T	T	20 39 30.1	
	baz=189,slow=74,SNR=16						
H10S3	**ASCENSION HYDR**	**48.16**	**17**	T	T	20 39 30.1	
	baz=31,slow=74,SNR=18						
PB16	**IPOC Station P**	**49.08**	**303**	P	**P**	**19 47 29.5**	**-0.5**
PB16				IAmb	IAmb	19 47 32.2	
	comp=Z,4.3nm,0.5s						
H10N1	**ASCENSION HYDR**	**49.28**	**17**	T	T	20 40 52.9	
	baz=188,slow=74						
H10N3	**ASCENSION HYDR**	**49.28**	**17**	T	T	20 40 54.5	
	baz=188,slow=74						
H10N2	**ASCENSION HYDR**	**49.30**	**17**	T	T	20 40 54.5	
	baz=188,slow=74						
LPAZ	**La Paz**	**50.23**	**306**	P	**P**	**19 47 40.0**	**+1.3**
	comp=Z,6.9nm,0.7s,baz=133,slow=4.6,SNR=23						
LPAZ				LR	LR	20 09 17.4	
	comp=Z,9.6nm,20.1s,baz=76,slow=36						
	comp=Z,6.9nm,0.7s						
LPAZ	**La Paz**	**50.23**	**306**		**P**	**19 47 38.2**	**-0.5**
BOAV	**Boa Vista**	**64.20**	**323**	P	**P**	**19 49 15.5**	**-0.7**
DBIC	**Dimbokro**	**65.36**	**25**	P	**P**	**19 49 24.2**	**+0.5**
	comp=Z,4.6nm,0.9s,baz=220,slow=6.1,SNR=4.9						
	comp=Z,4.6nm,0.9s						
DBIC	**Dimbokro**	**65.36**	**25**	P	**P**	**19 49 23.1**	**-0.6**
OTAV	**Otavalo**	**69.50**	**304**	P	**P**	**19 49 51.0**	**+0.6**
ASAR	**Alice Springs**	**98.98**	**163**	PKP	Pdif	19 52 20.6	-0.8
	comp=Z,0.5nm,0.9s,baz=174,slow=3.2,SNR=4.1						
	comp=Z,0.5nm,0.9s						
WRA	**Warramunga Arr**	**102.69**	**163**	PKKPbc	PKKPbc	20 08 35.9	+2.0
	comp=Z,0.9nm,1.2s,baz=3.1,slow=2.9,SNR=6.5						
FINES	**FINESS Array B**	**124.58**	**28**	PKP	**PKPdf**	**19 57 37.8**	**-0.4**
	comp=Z,3.5nm,1.0s,baz=247,slow=2.9,SNR=3.6						
YKA	**Yellowknife Ar**	**136.07**	**318**	PKP	**PKPdf**	**19 57 59.8**	**0.0**
	comp=Z,0.5nm,0.7s,baz=122,slow=1.8,SNR=10						
YKA				SKPbc	**SKPbc**	**20 01 19.1**	**-2.0**
	comp=Z,0.8nm,1.0s,baz=126,slow=2.3,SNR=7.2						
MKAR	**Makanchi Array**	**137.15**	**72**	PKP	**PKiKP**	**19 58 03.2**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=270,slow=1.4,SNR=2.2						
KURBB	**Kurchatov Arra**	**137.57**	**65**	SKPbc	**SKPbc**	**20 01 25.1**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=234,slow=3.0,SNR=4.8						
ILAR	**Eielson Array**	**149.99**	**312**	PKPbc	**PKPbc**	**19 58 29.1**	**-0.1**
	comp=Z,5.2nm,0.8s,baz=126,slow=1.9,SNR=50						
SONM	**Songino Array**	**150.98**	**87**	PKPbc	**PKiKP**	**19 58 32.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=217,slow=4.5,SNR=6.6						

*IDC **09** 19:39:15.5±1.0, 2.94°S×129.97E, h0km, mb3.8/6, mbtmp3.8/8, ML3.8/3, Error ellipse: s-maj=29.7km s-min=16.6km az=76.0*
*DJA **09** 19:39:19.1±0.4, 3.3°S±2.1°×13.0E±1.1°, h12km±3km, M3.9/18, MLv3.9/18*

ISC 09 19:39:17.1±1.9, 2.76°S±0.05°×130.01°E±0.04°, h12km±14km, n19, σ1s30/25, mb4.0/6, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.23**	**242**	P	**Pn**	**19 39 40.2**	**0.0**
MSAI				S	**Sg**	**19 39 57.5**	**+0.7**
KRAI	**Karang Ratu**	**1.71**	**251**	P	**Pb**	**19 39 47.9**	**-0.6**
KRAI				S	**Sb**	**19 40 10.0**	**0.0**
BNDI	**Bandanaira**	**1.75**	**184**	P	**Pb**	**19 39 50.3**	**+1.0**
BNDI				S	**Sg**	**19 40 13.9**	**+0.3**
AAI	**Ambon**	**2.04**	**243**	P	**Pn**	**19 39 51.9**	**+0.6**
AAI				S	**Sn**	**19 40 17.7**	**+1.0**
FAKI	**Fak Fak**	**2.24**	**94**	P	**Pb**	**19 39 57.8**	**+0.3**
SIJI	**Sorong**	**2.26**	**34**	Pn	**Pb**	**19 39 57.1**	**-0.8**
	9.0nm,0.3s,baz=77,slow=5.8,SNR=270						
SIJI				Sn	**Sb**	**19 40 26.3**	**+0.5**
	14nm,0.3s,baz=269,slow=23,SNR=12						
SIJI	**Sorong**	**2.26**	**34**	P	**Pb**	**19 39 57.0**	**-0.8**
SIJI				S	**Sb**	**19 40 25.6**	**-0.2**
SWI	**Sorong**	**2.26**	**33**	P	**Pb**	**19 39 56.8**	**-1.1**
NLAI	**Namlea**	**2.95**	**261**	P	**Pn**	**19 40 05.1**	**+1.3**
SANI	**Sanana**	**4.08**	**280**	P	**Pn**	**19 40 19.4**	**-0.1**
RKPI	**Ransiki, Papua**	**4.34**	**73**	P	**Pn**	**19 40 25.1**	**+2.1**
FITZ	**Fitzroy Crossi**	**15.84**	**195**	Pn	**Pn**	**19 42 59.2**	**-0.9**
	0.3nm,0.3s,baz=12,slow=12,SNR=6.9						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**17.59**	**166**	P	**Pn**	**19 43 18.9**	**-3.4**
	0.4nm,0.3s,baz=342,slow=12,SNR=21						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**21.12**	**170**	P	**P**	**19 44 00.5**	**-1.5**
	3.3nm,0.4s,baz=345,slow=10,SNR=84						
	3.3nm,0.4s						
CTA	**Charters Tower**	**23.41**	**139**	P	**P**	**19 44 25.2**	**-1.0**
	3.1nm,0.8s,baz=309,slow=20,SNR=9.5						
	3.1nm,0.8s						
STKA	**Stephens Creek**	**30.95**	**161**	P	**P**	**19 45 32.9**	**-1.3**
	1.5nm,0.7s,baz=348,slow=11,SNR=4.7						
	1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.15**	**306**	P	**P**	**19 46 30.4**	**+2.2**
	0.5nm,0.8s,baz=124,slow=9.9,SNR=2.0						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**64.73**	**326**	P	**P**	**19 49 56.2**	**+0.8**
	0.2nm,0.4s,baz=109,slow=8.4,SNR=4.9						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**68.94**	**328**	P	**P**	**19 50 22.7**	**+0.7**
	0.4nm,0.4s,baz=128,slow=6.1,SNR=4.1						
	0.4nm,0.4s						

JMA 09 19:59:32.4±0.3, 27.7°N±2.1°×141.1°E±1.1°, h158km, MV3.8/17, W OFF OGASAWARA, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.33**	**104**	*e*P	Pn	20 00 01.2	+0.3
CBIJ				*e*S	Sn	20 00 22.8	+0.1
JHH2	**Haha-jima-NKT2**	**1.51**	**121**	*e*P	Pn	20 00 02.8	+0.1
JHH2				*e*S	Sn	20 00 25.7	-0.2
BSO1	**Boso 1**	**7.21**	**2**	*e*P	Pn	20 01 14.2	-0.4
BSO3	**Boso 3**	**7.35**	**359**	*e*P	Pn	20 01 15.9	-0.9
JOD2	**Odawara 2**	**7.94**	**350**	*e*P	Pn	20 01 24.8	-0.1
JHO	**Hitachi**	**9.16**	**359**	*e*P	Pn	20 01 38.6	-2.5

*NEIC **09** 20:04:05.1±0.7, 17.92°N±0.03°×67.009°W±0.009, h10km±1km, ML3.1/31, Md3.0/7(RSPR), Error ellipse: s-maj=5.5km s-min=2.3km az=9.0*
*RSPR **09** 20:04:05.8, 17.95°N×67.01°W, h8km, MD3.0/7*
*SDD **09** 20:04:06.0±1.5, 17.93°N×66.99°W, h13km±8km, MD3.6, ML2.9, MW3.1, Presumed earthquake*

ISC 09 20:04:04.7±1.0, 17.94°N±0.05°×67.00°W±0.02°, h16km±5km, n40, σ0s46/59, 15C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.05**	**306**		**Pg**	**20 04 07.7**	**0.0**
MLPR				IAML		20 04 09.3	
	16µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.12**	**303**		**Sg**	**20 04 10.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.12**	**303**		**Pg**	**20 04 08.3**	**0.0**
CRPR				IAML		20 04 10.9	
	8µm,0.2s						
CRPR				IAML		20 04 11.8	
	8µm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.12**	**303**	*e*Pg	**Pg**	**20 04 08.4**	**+0.1**
CRPR				⇑*e*Sg	**Sg**	**20 04 10.7**	**0.0**
CRPR				IAML		20 04 10.9	
	comp=N,10µm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.12**	**303**	⇑*i*P	**Pb**	**20 04 08.6**	**-0.1**
CRPR				*e*S	**Sg**	**20 04 10.6**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.12**	**74**		**Pb**	**20 04 08.8**	**+0.1**
GBPR					**Sb**	**20 04 11.2**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.12**	**74**	⇑*i*P	**Pb**	**20 04 08.8**	**+0.1**
GBPR				*e*S	**Sb**	**20 04 11.2**	**-0.1**
LSP	**Las Mesas**	**0.25**	**341**		**Pb**	**20 04 10.8**	**0.0**
LSP	**Las Mesas**	**0.25**	**341**	⇑*i*P	**Pb**	**20 04 10.8**	**0.0**
PRSN	**Puerto Rico Se**	**0.31**	**334**		**Pb**	**20 04 11.8**	**0.0**
PRSN					**Sb**	**20 04 16.2**	**-0.4**
PRSN	**Puerto Rico Se**	**0.31**	**334**	IAML		20 04 17.3	
	comp=N,21µm,0.3s						
PRSN				IAML		20 04 19.5	
	comp=N,9µm,0.3s						
PRSN	**Puerto Rico Se**	**0.31**	**334**	⇑*e*Pg	**Pb**	**20 04 11.7**	**-0.2**
PRSN				⇑*e*Sg	**Sg**	**20 04 15.2**	**-0.4**
PRSN				IAML		20 04 17.3	
	comp=N,13µm,0.3s						
PRSN	**Puerto Rico Se**	**0.31**	**334**	⇓*i*P	**Pb**	**20 04 11.8**	**0.0**
PRSN				*e*S	**Sb**	**20 04 16.2**	**-0.4**
OBIP	**Obispado Ponce**	**0.39**	**75**		**Sb**	**20 04 19.0**	**-0.1**
OBIP	**Obispado Ponce**	**0.39**	**75**		**Pb**	**20 04 13.1**	**-0.2**
OBIP				IAML		20 04 19.4	
	comp=N,457nm,0.7s						
OBIP	**Obispado Ponce**	**0.39**	**75**	⇓*i*P	**Pb**	**20 04 13.2**	**0.0**
OBIP				*e*S	**Sb**	**20 04 19.0**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.41**	**41**		**Pb**	**20 04 13.3**	**-0.3**
CELP	**Cerrillos**	**0.42**	**72**		**Pb**	**20 04 13.7**	**-0.1**
CELP				IAML		20 04 20.4	
	comp=N,1µm,0.6s						
AGPR	**Aguadilla, PR**	**0.53**	**349**		**Pb**	**20 04 15.7**	**0.0**
AGPR				IAML		20 04 23.4	
	comp=N,2µm,0.4s						
AGPR				IAML		20 04 23.5	
	comp=N,2µm,0.5s						
AGPR	**Aguadilla, PR**	**0.53**	**349**	⇑*e*Pg	**Pb**	**20 04 15.7**	**0.0**
AGPR				⇑*e*Sg	**Sb**	**20 04 23.0**	**-0.2**
AGPR				IAML		20 04 24.0	
	comp=N,1µm,0.3s						
AGPR	**Aguadilla, PR**	**0.53**	**349**	⇑*i*P	**Pb**	**20 04 15.7**	**0.0**
AGPR				*e*S	**Sb**	**20 04 23.0**	**-0.2**
IDE	**Isla Desecheo**	**0.63**	**315**		**Pb**	**20 04 17.3**	**-0.1**
IDE					**Sb**	**20 04 26.0**	**+0.1**
IDE	**Isla Desecheo**	**0.63**	**315**	⇑*i*P	**Pb**	**20 04 17.3**	**-0.1**
IDE				*e*S	**Sb**	**20 04 26.0**	**+0.1**
EMPR	**Esperanza - Ma**	**0.70**	**40**		**Pb**	**20 04 18.8**	**+0.3**
EMPR					**Sb**	**20 04 28.9**	**+1.0**
EMPR	**Esperanza - Ma**	**0.70**	**40**	⇓*i*P	**Pb**	**20 04 18.8**	**+0.3**
EMPR				*e*S	**Sb**	**20 04 28.9**	**+1.0**
ECPR	**Experimental S**	**0.71**	**58**		**Pg**	**20 04 18.4**	**-0.2**
ECPR				IAML		20 04 32.9	
	comp=N,671nm,0.2s						
ECPR				IAML		20 04 41.6	
	comp=N,675nm,0.2s						
SJG	**San Juan**	**0.83**	**78**		**Pb**	**20 04 20.6**	**-0.2**
SJG	**San Juan**	**0.83**	**78**	IAML		20 04 32.9	
	comp=N,412nm,0.4s						
SJG	**San Juan**	**0.83**	**78**	⇑*e*Pg	**Pb**	**20 04 20.4**	**-0.3**
SJG				⇑*e*Sg	**Sg**	**20 04 32.3**	**+0.5**
SJG	**San Juan**	**0.83**	**78**	⇑*e*P	**Pb**	**20 04 20.6**	**-0.2**
SJG				*e*S	**Sg**	**20 04 32.3**	**+0.5**
PDPR	**Patillas Dam,**	**0.94**	**85**		**Pb**	**20 04 22.4**	**-0.1**
GCPR	**Guaynabo City**	**0.95**	**67**		**Pb**	**20 04 22.6**	**-0.2**
GCPR					**Sb**	**20 04 34.5**	**-0.6**
GCPR	**Guaynabo City**	**0.95**	**67**	⇑*e*P	**Pb**	**20 04 22.6**	**-0.2**
GCPR				*e*S	**Sb**	**20 04 34.5**	**-0.6**
HUMP	**Col San Antoni**	**1.11**	**79**		**Pb**	**20 04 25.4**	**-0.2**
HUMP					**Sn**	**20 04 40.5**	**-0.1**
HUMP	**Col San Antoni**	**1.11**	**79**	IAML		20 04 43.6	
	comp=N,275nm,0.3s						
HUMP				IAML		20 04 43.9	
	comp=N,561nm,0.5s						
HUMP	**Col San Antoni**	**1.11**	**79**	⇓*e*P	**Pb**	**20 04 25.4**	**-0.2**
HUMP				*e*S	**Sn**	**20 04 40.5**	**-0.1**
PCDR	**Punta Cana, DR**	**1.43**	**294**	⇑*e*Pg	**Pn**	**20 04 30.3**	**+0.3**
PCDR				IAML		20 04 58.8	
	comp=N,120nm,0.3s						
HIDR	**Higuey Centro**	**1.75**	**292**	⇑*e*Pg	**Pb**	**20 04 36.3**	**-0.2**
HIDR				⇑*e*Sg	**Sg**	**20 04 59.9**	**-1.3**
HIDR				IAML		20 05 08.6	
	comp=N,127nm,0.2s						
MIDR	**Miches**	**2.20**	**298**	⇑*e*Sg	**Sb**	**20 05 12.6**	**+1.3**
MIDR				IAML		20 05 18.0	
	comp=N,63nm,1.3s						
HATOM	**Hato Mayor del**	**2.41**	**291**	⇑*e*Pg	**Pb**	**20 04 47.3**	**-0.5**
HATOM				⇑*e*Sg	**Sb**	**20 05 18.9**	**+1.6**
HATOM				IAML		20 05 25.7	
	comp=N,33nm,0.9s						

*SFS **09** 20:15:01.3, 35.23°N×3.61°W, h0km, ML2.5/4, ML2.1/5, MLv1.9/5*
*MDD **09** 20:15:03.8±2.2, 35.20°N×3.47°W, h21km±32km, mb_Lg2.4/3, Error ellipse: s-maj=33.3km s-min=14.7km az=121.0*
*CNRM **09** 20:15:04.3, 35.26°N×3.36°W, h0km, ML1.7*

ISC 09 20:15:03.1±1.3, 35.26°N±0.03°×3.43°W±0.03°, h17km±11km, n14, σ1s29/27, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMEL	**Melilla**	**0.39**	**84**	P	**Pb**	**20 15 12.2**	**+0.6**
EMEL				S	**Sb**	**20 15 18.7**	**+1.3**
EMEL				*i* lVmb_Lg		20 15 19.1	
EMLI	**Melilla**	**0.40**	**84**	P	**Pb**	**20 15 11.9**	**+0.2**
EMLI				S	**Sg**	**20 15 16.8**	**+0.1**
WMELI	**Melilla**	**0.40**	**82**	P	**Pb**	**20 15 11.4**	**-0.3**
WMELI				S	**Sb**	**20 15 18.4**	**+0.8**
PALE	**Palemas**	**0.42**	**264**	P	**Pb**	**20 15 12.6**	**+0.5**
PALE				S	**Sb**	**20 15 19.2**	**+1.1**
EALB	**Alboran**	**0.75**	**25**	P	**Pn**	**20 15 19.4**	**+0.4**
EALB				S	**Sb**	**20 15 30.0**	**+2.2**
EALB	**Alboran**	**0.75**	**25**	P	**Pb**	**20 15 18.4**	**+0.7**
EALB				S	**Sb**	**20 15 30.0**	**+2.2**
EALB				*i* lVmb_Lg		20 15 30.9	
AKLM	**AKL**	**0.83**	**205**	P	**Pn**	**20 15 19.7**	**-0.4**
AKLM				S	**Sn**	**20 15 31.9**	**-0.1**
TAF	**Taforalt**	**0.95**	**118**	P	**Pb**	**20 15 21.6**	**+0.5**
TAF				S	**Sb**	**20 15 34.5**	**+1.1**
JBK	**JBK**	**1.17**	**142**	P	**Pg**	**20 15 24.9**	**-0.7**
JBK				S	**Sg**	**20 15 40.3**	**-0.6**
ELGU	**Los Guajares,**	**1.61**	**354**	P	**Pn**	**20 15 30.6**	**-0.3**
ELGU				S	**Sn**	**20 15 47.8**	**-3.6**
ELGU	**Los Guajares,**	**1.61**	**354**	P	**Pn**	**20 15 31.1**	**+0.2**
ELGU				S	**Sn**	**20 15 50.6**	**-0.7**
ELGU				*i* lVmb_Lg		20 15 52.5	
EMAL	**Malaga-Limoner**	**1.70**	**332**	S	**Sn**	**20 15 51.6**	**-1.9**
MDT	**Midelt**	**2.63**	**202**	P	**Pb**	**20 15 50.9**	**+1.1**
MDT				S	**Sb**	**20 16 23.3**	**+1.4**
MD31	**MD31**	**2.63**	**205**	P	**Pb**	**20 15 50.2**	**+0.3**
MD31				S	**Sb**	**20 16 22.5**	**+0.7**

*SDD **09** 20:18:05.8±1.4, 19.45°N×65.70W, h99km±57km, MD3.7, ML3.7, MW3.7, Presumed earthquake*
*OSPL **09** 20:18:05.3±1.1, 19.13°N×65.39W, h106km±53km, ML3.6, Presumed earthquake*
*NEIC **09** 20:18:07.2±1.1, 19.29°N±0.05°×65.75W±0.05°, h35km±2km, ML3.7/39, Md3.7/9(RSPR), Error ellipse: s-maj=9.7km s-min=6.5km az=132.0*
*RSPR **09** 20:18:07.2, 19.36°N×65.70W, h29km±32km, MD3.7/9*
*IDC **09** 20:18:17.7±5.8, 18.52°N×64.87W, h226km±59km, mb3.1/6, mbtmp3.9/8, MS2.8/1, Error ellipse: s-maj=44.6km s-min=21.7km az=83.0*

ISC 09 20:18:03.4±0.7, 19.38°N±0.04°×65.74°W±0.03°, h16km, n84, σ1s41/113, mb3.6/6, 13C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCPR	**Guaynabo City**	**1.11**	**197**		**Pb**	**20 18 24.4**	**+0.1**
GCPR	**Guaynabo City**	**1.11**	**197**		**Sg**	**20 18 38.5**	**-0.9**
GCPR	**Guaynabo City**	**1.11**	**197**	⇑*i*P	**Pb**	**20 18 24.5**	**+0.2**
GCPR				*e*S	**Sg**	**20 18 38.5**	**-0.9**
CUPR	**Culebra, Puert**	**1.15**	**158**		**Pb**	**20 18 25.1**	**+0.2**
EMPR	**Esperanza - Ma**	**1.17**	**220**		**Pn**	**20 18 26.1**	**+1.0**
EMPR					**Sb**

CRPR	Cabo Rojo, PR	1.88	224	⇑	*i*	P	Pb	20 18 37.1	-0.3
CRPR				⇑	*i*	S	Sn	20 18 58.4	0.0
CRPR						IAML		20 19 07.9	
	comp=N,471nm,0.7s								
CRPR	Cabo Rojo, PR	1.88	224	⇓	*i*	P	Pn	20 18 37.0	+2.1
CRPR					*e*	S	Sb	20 18 60.0	-0.7
CRPR	Cabo Rojo, PR	1.88	224		*i*	P	Pn	20 18 36.4	+1.5
CRPR						IAML		20 19 07.9	
	comp=Z,356nm,0.5s								
IDE	Isla Desecheo	1.92	239				Pn	20 18 36.5	+1.1
IDE							Sn	20 18 59.0	-0.2
IDE	Isla Desecheo	1.92	239	⇓	*i*	P	Pn	20 18 36.5	+1.1
IDE						S	Sn	20 18 59.0	-0.2
HIDR	Higuey Centro	2.92	255	⇑	*i*	P	Pn	20 18 48.7	-0.5
HIDR				⇑	*i*	S	Sn	20 19 22.3	-1.8
HIDR						IAML		20 19 28.2	
	comp=N,251nm,0.2s								
HIDR	Higuey Centro	2.92	255	⇑	*i*	P	Pn	20 18 50.5	+1.2
HIDR						S	Sn	20 19 22.8	-1.3
DR12	Loma Pena Alta	3.49	261				Pn	20 18 58.1	+1.0
SKI	Saint Kitts	3.50	125		*e*	P	Pn	20 18 60.0	+2.8
SKI						S	Sn	20 19 37.7	-0.6
MBWH	Windy Hill	4.27	127		x		Pn	20 19 10.0	+2.1
BANI	BANI	4.48	258		Pn		Pn	20 19 12.0	+1.2
DHSZ	Broadband at M	4.88	129		*e*	P	Pn	20 19 15.6	-0.7
DHSZ					x			20 20 13.7	
ABD	La Joyeuse, An	4.97	125	⇑	*e*	P	Pn	20 19 19.6	+2.2
ABD						S	Sn	20 20 13.4	-1.2
ATGZ	Broadband at L	5.03	130		*e*	P	Pn	20 19 20.4	+2.2
ATGZ						S	Sn	20 20 19.5	+3.6
MMLZ	Guadeloupe Bro	5.10	130		*e*	P	Pn	20 19 20.5	+1.2
MMLZ						S	Sn	20 20 17.0	-0.9
CBE	Ff, Capester	5.13	129		Pn		Pn	20 19 21.2	+1.6
CBE	Ff, Capester	5.13	129				Sn	20 20 20.4	+1.8
CBE	Ff, Capester	5.13	129	⇑	*e*	P	Pn	20 19 21.6	+2.0
CBE						S	Sn	20 20 20.4	+1.8
LOPP1	Punta Rusia, P	5.17	276		*i*	P	Pn	20 19 21.9	+1.8
TBG	Guadaloupe-3	5.25	131		*e*	P	Pn	20 19 24.4	+3.2
SDDR	Presa de Saban	5.26	267				Pn	20 19 23.1	+1.7
SDDR						IAML		20 20 31.4	
	comp=N,78nm,0.6s								
SDDR	Presa de Saban	5.26	267		*e*	P	Pn	20 19 23.2	+1.7
SDDR						IVmB_BB		20 19 26.1	
	comp=Z,591nm,0.1s								
SDDR					*e*	S	Sn	20 20 22.0	+0.2
SDDR						IAML		20 20 25.8	
	comp=Z,48nm,0.2s								
SDDR						IAML		20 20 29.4	
	comp=Z,59nm,0.2s								
SDDR	Presa de Saban	5.26	267		*e*	P	Pn	20 19 23.2	+1.7
SDDR					*e*	S	Sn	20 20 20.6	-1.3
SDDR	Presa de Saban	5.26	267	⇑	*i*	P	Pn	20 19 23.4	+2.0
SDDR					*e*	S	Sn	20 20 22.1	+0.3
SDDR	Presa de Saban	5.26	267		*i*	P	Pn	20 19 23.2	+1.7
DSDZ	La Diserade, G	5.39	124		x		Pn	20 19 24.6	+1.3
H05N1	Guadeloupe/Mar	5.40	124		P		Pn	20 19 23.3	0.0
	SNR=3.1								
H05N1					S		Sn	20 20 20.3	-5.0
LONE3	El Aguacate, B	5.47	263		*i*	P	Pn	20 19 26.4	+2.0
GRTK	Grand Turk	5.49	294		*e*	P	Pn	20 19 23.4	-1.1
GRTK					*e*	S	Sn	20 20 18.7	-8.5
GRTK						IAML		20 20 23.1	
	comp=Z,94nm,0.1s								
GRTK						IAML		20 20 25.8	
	comp=Z,120nm,0.2s								
DSLB	Salisbury	5.69	133		*e*	P	Pn	20 19 31.1	+3.8
DSLB					*e*	S	Sn	20 20 30.5	-1.8
BIM	Bigot	6.58	137		Pn		Pn	20 19 40.3	+0.7
BIM	Bigot	6.58	137		x		Pn	20 19 40.7	+1.1
MASC	Masc	8.04	277		*e*	P	Pn	20 19 57.6	-1.9
MASC						IVmB_BB		20 20 00.2	
	comp=Z,139nm,0.2s								
MASC				⇓	*e*	S	Sn	20 21 21.9	-8.2
MASC						IAML		20 21 23.7	
	comp=E,8.4nm,0.1s								
MASC						IAML		20 21 26.6	
	comp=N,16nm,0.2s								
QMBU	Quimbuelo	8.58	277		*e*	P	Pn	20 20 04.4	-2.7
QMBU					*e*	S	Sn	20 21 34.4	-9.2
QMBU						IAML		20 21 39.8	
	comp=N,23nm,0.2s								
QMBU						IAML		20 21 41.0	
	comp=E,34nm,0.2s								
MOAC	Moa	8.76	280			IAML		20 20 08.2	
	comp=Z,16nm,0.2s								
MOAC					*e*	S	Sn	20 21 38.4	-10
NMDO	Nuevo Mundo	8.77	279		*e*	P	Pn	20 20 06.2	-3.4
NMDO					*e*	S	Sn	20 21 38.5	-10
RCC	Rio Carpintero	9.40	275		*e*	P	Pn	20 20 16.0	-2.2
RCC					*e*	S	Sn	20 21 56.0	-7.7
PINC	Pinares de May	9.52	278		*e*	P	Pn	20 20 15.8	-4.1
PINC					*e*	S	Sn	20 21 55.4	-11
MARVS	Santiago de Cu	9.59	275		*e*	P	Pn	20 20 16.8	-4.1
HLGC	Holguin	9.81	281		*e*	P	Pn	20 20 25.1	+1.1
LMGC	Las Mercedes	10.63	276		*e*	P	Pn	20 20 33.2	-1.9
CCCC	Cccc	11.43	281		*e*	P	Pn	20 20 31.6	-15
CCCC					*e*	S	Sn	20 22 33.6	-20
SDV	Santo Domingo	11.46	205		P		Pn	20 20 52.2	+5.6
	comp=Z,3.7nm,0.5s,baz=45,slow=11,SNR=5.7								
SDV						S	Sn	20 22 55.6	+1.1
	comp=Z,2.2nm,0.5s,baz=3.4,slow=11,SNR=2.2								
SDV						LR	LR	20 25 41.3	
	comp=Z,47nm,19.2s,baz=79,slow=40								
ROSC	El Rosal	16.70	211		P		Pn	20 21 55.5	-1.7
	comp=Z,3.5nm,0.4s,baz=106,slow=22,SNR=1.5								
SCHQ	Schefferville	35.40	359		P		P	20 24 58.5	0.0
	comp=Z,2.1nm,0.7s,baz=199,slow=8.0,SNR=4.0								
	comp=Z,2.1nm,0.7s								
LPAZ	La Paz	35.52	184		P		P	20 24 46.5	-14
	comp=Z,2.4nm,0.4s,baz=326,slow=6.6,SNR=4.6								
	comp=Z,2.4nm,0.4s								
TXAR	Lajitas Array	35.81	293		P		P	20 25 04.6	+2.2
	comp=Z,0.5nm,0.8s,baz=113,slow=9.6,SNR=4.7								
	comp=Z,0.5nm,0.8s								
PDAR	Pinedale Array	43.55	312		P		P	20 26 07.7	+0.8
	comp=Z,0.3nm,0.8s,baz=230,slow=8.9,SNR=2.6								
	comp=Z,0.3nm,0.8s								
YKA	Yellowknife Ar	54.52	335		P		P	20 27 29.5	-0.7
	comp=Z,0.3nm,0.7s,baz=118,slow=6.3,SNR=5.6								
	comp=Z,0.3nm,0.7s								
ILAR	Eielson Array	68.88	333		P		P	20 29 06.6	-0.5
	comp=Z,0.5nm,0.7s,baz=101,slow=4.3,SNR=6.6								
	comp=Z,0.5nm,0.7s								

*IDC **09** 20:26:21.1±1.5,44˚.45N×105˚.66W,h0km,mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=57.3km s-min=9.9km az=144.0*

*NEIC **09** 20:26:22.4±1.9,44˚.29N±0˚.04×105˚.4W±0˚.3, h0km±2km, ML3.0/28, Error ellipse: s-maj=31.9km s-min=5.4km az=94.0*

ISC 09 20:26:20.6±1.0,44˚24N±0˚.06×105˚35W±0˚.05,h0km,n19, σ1s24/18,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.95	96	Pg	Pb	20 26 41.0	+0.8
K22A	Casper	1.79	209		Pb	20 26 54.7	+0.3
K22A				IAML		20 27 28.7	
	98nm,0.3s						
LAO	LASA Array	2.54	346		Pn	20 27 03.2	0.0
LAO				IAML		20 27 53.7	
	115nm,0.9s						
RLMT	Red Lodge	2.94	289		Pg	20 27 15.8	-1.0
RLMT				IAML		20 27 53.9	
	32nm,4.9s						
RLMT				IAML		20 28 03.0	
	31nm,2.0s						
BW06	Boulder Array	3.39	246		Pg	20 27 24.4	-1.2
PD31	Pinedale Array	3.39	246		Pg	20 27 24.4	-1.3
PDAR	Pinedale Array	3.39	246	Pn	Pn	20 27 16.8	+1.7
	0.5nm,0.3s,baz=57,slow=16,SNR=19						
PDAR				Pg	Pg	20 27 23.9	-1.8
	5.4nm,0.3s,baz=68,slow=19,SNR=33						
PDAR				Lg	Lg	20 28 05.0	
	1.8nm,0.3s,baz=60,slow=36,SNR=1.6						
	0.6nm,0.3s						
PDAR	Pinedale Array	3.39	246		Pg	20 27 24.5	-1.1
YNE	Yellowstone No	3.42	285	Pn	Pn	20 27 14.9	-0.5
YNE				IAML		20 28 10.2	
	comp=N,31nm,0.9s						
YNE				IAML		20 28 10.4	
	comp=E,25nm,0.6s						
YMP	Mirror Lake Pl	3.48	280	IAML		20 28 21.2	
	comp=E,43nm,1.4s						
LOHW	Long Hollow	3.85	263		Pb	20 27 31.2	+1.7
LOHW				IAML		20 28 31.9	
	comp=E,13nm,2.7s						
LOHW				IAML		20 29 08.6	
	comp=E,15nm,5.0s						
FLWY	Flagg Ranch	3.85	270		Pb	20 27 29.6	0.0
FLWY				IAML		20 28 35.8	
	comp=E,34nm,2.5s						
YPP	Pitchstone Pla	3.92	273		Pb	20 27 32.8	+2.0
YPP				IAML		20 28 35.1	
	comp=N,21nm,4.9s						
YPP				IAML		20 28 41.2	
	comp=E,22nm,5.0s						
MOOW	Moose Ponds	3.92	265	Pg	Pb	20 27 31.1	+0.3
YHH	Holmes Hill	3.98	280		Pb	20 27 33.5	+1.7
YMR	Madison River	4.05	278	Pg	Pb	20 27 33.0	+0.1
DGMT	Dagmar	4.32	10	Pg	Pb	20 27 38.2	+0.7
I10CA	LAC DU BONNET	8.71	43	I	I	21 16 20.0	
	baz=231,slow=290,SNR=5.3						
ULM	Lac du Bonnet	8.82	44	Pn	Pn	20 28 28.9	-0.4
	comp=E,0.3nm,0.3s,baz=239,slow=12,SNR=1.8						
ULM				Lg	Lg	20 30 51.0	
	comp=E,0.2nm,0.3s,baz=135,slow=21,SNR=3.8						
	comp=E,0.7nm,0.4s						

*IDC **09** 20:33:25.6±0.4,2˚.06S×79˚.38W, h89km±3km, mb4.0/15, mbtmp4.4/20, MS3.4/15, Error ellipse: s-maj=19.0km s-min=8.3km az=70.0*

*IGQ **09** 20:33:27.5±0.2,2˚.5S±1˚×8˚.0W±˚, h72km±2km, M5.0/43, Mjma4.9/43, ML5.2/29, MLv4.8/42, Ms(BB)4.8/24*

*NEIC **09** 20:33:28.1±2.1,2˚.14S±0˚.08×79˚.4W±0˚.1, h109km±6km, mb4.6/51, Error ellipse: s-maj=19.5km s-min=10.3km az=75.0*

*VAO **09** 20:33:29.6±0.7,2˚.23S×79˚.09W, h98km±4km, mb4.9, Presumed earthquake*

ISC 09 20:33:24.9±0.4,2˚20S±0˚.03×79˚63W±0˚.03,h92km±3km, n251,σ1s74/285,mb4.5/38,38C-24D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	Milagro-Astudi	0.11	135	⇓	P	20 33 38.8	+0.9
MILO					S	20 33 49.0	+1.5
GYE3	Ecuador-Guayaq	0.27	280	⇓	P	20 33 39.3	+0.9
GYE3					S	20 33 49.0	+0.6
AGUAY	Guayaquil	0.35	295		P	20 33 39.6	+0.8
AGUAY					S	20 33 49.9	+0.7
AC07	Ecuador-Guayaq	0.35	278	⇓	P	20 33 40.0	+1.1
AC07					S	20 33 50.3	+1.0
ABAB	Ecuador-Univer	0.41	17		P	20 33 38.7	-0.6
ABAB					S	20 33 49.0	-0.9
COHC	Cochancay	0.46	125	⇑	P	20 33 40.1	+0.5
COHC					S	20 33 50.4	0.0
JSCH	Cashca Tororas	0.81	54	⇑	P	20 33 43.4	+0.3
JSCH					S	20 33 56.3	-0.4
MORR	Playas El Morr	0.83	238	⇓	P	20 33 45.3	+2.4
MORR					S	20 34 00.4	+4.1
ISPG	Isla Puna-Puer	0.93	215	⇓	P	20 33 47.1	+3.0
AZOG	Ecuador-Azogue	0.96	125	⇑	P	20 33 46.5	+1.9
AZOG					S	20 34 01.3	+2.0
ACUE	Ecuador-Cuenca	0.97	136	⇑	P	20 33 47.2	+2.4
ACUE					S	20 34 03.7	+4.0
CSOL	CASCOL	0.98	303	⇓	P	20 33 45.6	+1.1
CSOL					S	20 34 00.3	+1.1
PCRA	Pucara 2	1.01	173	⇓	P	20 33 46.3	+0.9
PCRA					S	20 34 01.5	+1.0
CHSH	Refugio Sur-Vo	1.04	47	⇑	P	20 33 47.1	+1.3
CHSH					S	20 34 02.3	+1.0
ACH2	Ecuador-Machal	1.07	189		P	20 33 47.6	+2.0
TAMH	Tambohuasha Ch	1.07	53	⇑	P	20 33 47.5	+1.3
TAMH					S	20 34 03.3	+1.4
ARIO	Riobamba	1.08	60		P	20 33 47.4	+1.3
ARIO					S	20 34 02.9	+1.0
PORT	Chimborazo Vol	1.13	50	⇑	P	20 33 48.5	+1.6
PORT					S	20 34 04.3	+1.1
IGUA	Igualata	1.22	55	⇑	P	20 33 49.4	+1.5
JIPI	JIPIJAPA	1.24	312	⇓	P	20 33 49.3	+1.6
JIPI				⇓	S	20 34 06.5	+1.7
SANGA	Volcan Sangay	1.27	83	⇑	P	20 33 50.1	+1.7
PPLP	Puerto Lpez	1.31	300		P	20 33 49.9	+1.4
PPLP	Puerto Lpez	1.31	300	⇓	P	20 33 49.7	+1.2
BIL2	Estacion Bilba	1.35	57	⇑	P	20 33 51.3	+2.1
SALI	Salinas	1.36	271	⇑	P	20 33 50.7	+1.7
BBIL	Ulba Tungurahu	1.37	57	⇑	P	20 33 51.3	+1.9
BBIL					S	20 34 09.9	+1.9
AAM2	Ambato 2 (Merc	1.38	48		P	20 33 51.9	+2.3
BPAT	Tungurahua Vol	1.39	60	⇑	P	20 33 51.5	+1.7
BPAT					S	20 34 10.2	+1.6
JUI6	Juive	1.40	57	⇓	P	20 33 51.6	+1.8
ARNL	Arenillas	1.41	198	⇓	P	20 33 51.1	+1.4
ARNL					S	20 34 09.8	+1.6
PECV	Mancha de Ca P	1.47	344	⇑	P	20 33 53.7	+3.1
BOSC	San Juan Bosco	1.48	130	⇑	P	20 33 54.0	+3.3
BOSC					S	20 33 54.3	+2.4
ASLC	Ecuador-Salced	1.55	42		P	20 33 54.3	+2.4
ASLC					S	20 34 14.8	+2.7
AMNT	Manta-Manabi	1.67	319		P	20 33 54.5	+1.6
PIS1	Pisayambo	1.69	48	⇑	P	20 33 55.4	+1.7
PIS1					S	20 34 19.0	+3.6
ABH2	Ecuador-Univer	1.71	333		P	20 33 55.3	+1.8
ISPT	Isla de la Pla	1.71	303	⇑	P	20 33 55.0	+1.5
ILLI	Illinizas Sur	1.73	32		P	20 33 56.3	+2.1
PUYO	Puyo, Santa Ro	1.76	66	⇑	P	20 33 55.8	+1.7
PUYO					S	20 34 17.9	+1.6
ABH3	Manabi, Bahia	1.78	334		P	20 33 55.1	+0.7
SRAM	San Ramn-Vol	1.79	37		P	20 33 57.2	+2.3
APUY	Puyo	1.79	66	⇑	P	20 33 55.2	+0.6
BRRN	Barrancas-Volc	1.82	39	⇑	P	20 33 57.2	+1.8
ALJ1	Ecuador-Loja-U	1.83	166		P	20 33 56.9	+1.6
ALJ1					S	20 34 19.3	+1.1
LAMO	ALAMOR	1.84	192		P	20 33 57.6	+2.2
SLOR	San Lorenzo -	1.85	38	⇑	P	20 33 57.4	+1.7
VCES	Cotopaxi	1.86	42	⇑	P	20 33 57.5	+1.5
BMOR	Cotopaxi Volca	1.87	39	⇑	P	20 33 57.9	+1.7
BMOR					S	20 34 23.3	+3.6
SUCR	Mariscal Sucre	1.92	36		P	20 33 58.9	+2.2
BREF	Cotopaxi Volca	1.93	38	⇑	P	20 33 59.2	+2.2
AMAC	Ecuador-Machac	1.96	33		P	20 33 59.2	+2.1
BTAM	Cotopaxi Volca	1.96	39	⇑	P	20 33 59.0	+1.8
TAMB	Tambo	1.96	40		P	20 33 58.9	+1.7
BVC2	Cotopaxi Volca	1.96	39	⇑	P	20 33 59.2	+2.0
AZAM	Ecuador-Zamora	1.98	160	⇑	P	20 33 59.0	+2.0
VC1	Cotopaxi 1	1.98	38	⇑	P	20 33 59.7	+2.2
ASDO	Santo Domingo	1.99	15		P	20 33 56.8	-0.4
PITA	Cotopaxi Volc	2.02	36		P	20 34 00.5	+2.5
GONZ	Gonzanam	2.04	173	⇓	P	20 34 00.4	+2.2
GONZ					S	20 34 25.1	+1.8
TOMA	Boca Toma-Volc	2.07	35		P	20 34 00.9	+2.3
PKYU	Pakayacu	2.11	75	⇑	P	20 34 00.8	+2.1
PKYU					S	20 34 27.2	+2.7
TAIS	Taisha	2.14	95	⇑	P	20 34 01.0	+1.9
ANTM	Antisana-La Mi	2.17	40	⇑	P	20 34 01.5	+1.5
AMCR	Ecuador-Macara	2.18	188		P	20 34 01.0	+1.4
ANTG	Antisana-Guama	2.18	39	⇑	P	20 34 01.7	+1.6
MCRA	Macar, Loja	2.18	188	⇓	P	20 34 00.9	+1.2
MCRA					S	20 34 26.3	+0.2
ARDO	Archidona, Ten	2.19	57	⇑	P	20 34 01.0	+1.2
GGPT	Toaza - Volcan	2.21	27		P	20 34 02.5	+2.1
ZALD	Colegio Gonzal	2.21	30		P	20 34 03.4	+3.0
JUA2	San Juan 2	2.23	28		P	20 34 02.7	+2.0
ANTS	Antisana-Sarah	2.24	41	⇑	P	20 34 02.6	+1.7
TING	Casa Alexandra	2.24	32		P	20 34 04.9	+4.2
GGPC	Guagua Pichinc	2.26	27		P	20 34 03.9	+2.7
GGPC					S	20 34 31.6	+2.8
TERV	Terraza Guagua	2.26	27	⇓	P	20 34 03.3	+2.1
ANTI	Antisana	2.28	40	⇑	P	20 34 03.1	+1.6
YANA	Yana	2.33	27		P	20 34 03.8	+1.8
PUEM	Granja Avicola	2.41	32		P	20 34 06.3	+3.4
PULU	Pululahua	2.48	27		P	20 34 06.4	+2.5
PAC1	Pacto, Paraso	2.59	19		P	20 34 05.6	+0.4
ZUMB	Zumba	2.69	170	⇓	P	20 34 09.8	+3.2
ZUMB					S	20 34 41.7	+3.3
OTAV	Otavalo	2.69	26		Pn	20 34 09.0	+2.1
OTAV	Otavalo	2.69	26	*e*	P	20 34 08.1	+1.2
OTAV				*e*	S	20 34 41.0	+2.0
OTAV	Otavalo	2.69	26	⇓	P	20 34 08.4	+1.6
OTAV	Otavalo	2.69	26		P	20 34 08.5	+1.6
	3µm20µm966nm,0.7s						

CAYR	Refugio Cayamb	2.74	36		P		Pn	20 34 09.7	+2.1
ANGU	Angureal	2.76	36	⇑	P		Pn	20 34 10.1	+2.2
CUSE	Cuicocha Este	2.78	26	⇓	P		Pn	20 34 09.8	+1.9
CUIC	Cuicocha-Domo	2.79	27	⇓	P		Pn	20 34 10.0	+1.9
COTA	Cotacachi	2.83	27	⇓	P		Pn	20 34 10.8	+2.0
IMBA	Imbabura, San	2.85	30		P		Pn	20 34 11.7	+2.8
REVS	Reventador Sur	2.90	44	⇑	P		Pn	20 34 11.0	+1.6
URCU	Urcuqui	2.96	28	⇓	P		Pn	20 34 12.6	+2.2
YAHU	Yahuarcocha	2.99	31		P		Pn	20 34 13.4	+2.6
AES2	Ecuador-Puerto	3.17	360		P		Pn	20 34 13.4	+0.5
ALIT	Ecuador-Imbabu	3.24	23		P		Pn	20 34 15.9	+2.0
LITE1	Lita	3.24	23		P		Pn	20 34 15.7	+1.8
CASC	Dorado de Casc	3.26	45	⇑	P		Pn	20 34 15.9	+1.7
LNGL	El Angel-Carch	3.34	29		P		Pn	20 34 17.5	+1.8
BONI	La Bonita	3.37	39		P		Pn	20 34 17.5	+1.7
CHL1	Volcn Chiles	3.42	30	⇓	P		Pn	20 34 18.3	+1.6
CHMA	Chilma	3.42	27		P		Pn	20 34 18.4	+1.8
ECEN	Cerro Negro	3.43	29	⇓	P		Pn	20 34 18.6	+1.7
CHL2	Volcn Chiles	3.44	30		P		Pn	20 34 21.2	+4.3
SNLR	San Lorenzo-Es	3.56	13		P		Pn	20 34 18.5	+0.4
CMBC	Cumbal	3.61	30		P		Pn	20 34 22.6	+3.5
	914nm,0.8s								
CRUC	La Cruz	4.61	36		P		Pn	20 34 34.9	+2.3
BBAC	Balboa, Cauca	4.83	30		P		Pn	20 34 39.0	+3.6
BBAC	Balboa, Cauca	4.83	30		P		Pn	20 34 37.7	+2.2
	2µm3µm199nm,0.7s								
ATAH	Atahualpa	5.05	166		P		Pn	20 34 41.6	+2.9
	84nm,0.5s,baz=19,slow=9.5,SNR=72								
ATAH					S		Sn	20 35 40.5	+4.4
	322nm,0.5s,baz=16,slow=17,SNR=8.6								
ATAH						LR	LR	20 37 02.4	
	comp=Z,339nm,21.8s,baz=326,slow=42								
PTLC	Puerto Leguiza	5.38	64		P		Pn	20 34 40.9	-1.9
	4µm4µm267nm,1.1s								
POPC	Popayan, Colom	5.56	32		P		Pn	20 34 45.8	+0.3
	842nm48nm,0.7s								
GARC	Garzon, Huila	6.01	44		P		Pn	20 34 52.7	+1.1
	2µm123nm,0.5s								
JAMC	Jamundi, Valle	6.14	29		P		Pn	20 34 53.5	+0.1
	2µm92nm,0.6s								
ROSC	El Rosal	8.78	37		P		Pn	20 35 28.5	-1.0
	5.5nm,0.4s,baz=303,slow=23,SNR=2.1								
ROSC	El Rosal	8.78	37		Pn		Pn	20 35 28.0	-1.5
CZSB	Cruzeiro do Su	8.82	129				Pn	20 35 28.8	-0.9
CZSB	Cruzeiro do Su	8.82	129		*e*	P	Pn	20 35 28.8	-0.9
NNA	Nana	10.11	164		P		Pn	20 35 48.0	+0.7
	46nm,0.4s,baz=324,slow=12,SNR=33								
NNA					S		Sn	20 37 36.1	-2.8
	136nm,0.5s,baz=278,slow=15,SNR=20								
NNA	Nana	10.11	164				Pn	20 35 48.2	+0.8
I20EC	Galapagos	10.85	278		I		I	21 38 40.0	
	baz=98,slow=317,SNR=1.0								
JTS	Las Juntas de	13.49	337		P		P	20 36 38.1	-0.6
	3.7nm,0.5s,baz=110,slow=21,SNR=1.2								
JTS					S		Sn	20 38 46.6	-15
	2.2nm,0.4s,baz=106,slow=20,SNR=1.4								
SDV	Santo Domingo	14.21	39		P		Pn	20 36 41.1	-1.1
	2.0nm,0.5s,baz=257,slow=11,SNR=12								
SDV						LR	LR	20 43 05.3	
	comp=Z,160nm,20.4s,baz=241,slow=42								
SDV	Santo Domingo	14.21	39		Pn		Pn	20 36 41.8	-0.4
SDV	Santo Domingo	14.21	39		*e*	P	Pn	20 36 43.2	+1.0
TEFE	Tefe	15.04	95		*e*	P	Pn	20 36 48.1	-4.5
LPAZ	La Paz	18.01	142		P		Pn	20 37 30.9	+0.9
	11nm,0.5s,baz=326,slow=8.8,SNR=25								
LPAZ					S		S	20 40 41.2	-10
	2.8nm,0.6s,baz=7.2,slow=12,SNR=1.6								
LPAZ	La Paz	18.01	142				Pn	20 37 30.8	+0.9
LPAZ	La Paz	18.01	142		*e*	P	Pn	20 37 29.8	-0.2
PB18	Visviri	18.26	148				Pn	20 37 32.8	-0.1
PB12	IPOC Station P	18.69	151				Pn	20 37 35.5	-0.1
PB12						IAmb	IAmb	20 37 41.7	
	comp=Z,42nm,1.2s								
PB16	IPOC Station P	18.86	149				Pn	20 37 41.2	+1.1
PB16						IAmb	IAmb	20 37 43.1	
	comp=Z,27nm,0.8s								
MACA	Manacapuru-AM	18.95	93		P		P	20 37 36.7	-2.4
BOAV	Boa Vista	19.64	77		P		P

comp=Z,34nm,18.9s,baz=113,slow=38
NBPS Pedro II - PI 38.18 94 *e*P **P 20 40 35.5 -0.6**
DIAM Diamantina, MG 38.71 117 *e*P **P 20 40 39.9 -0.6**
TXAR Lajitas Array 38.89 326 P **P 20 40 43.6 +1.8**
comp=Z,0.2nm,0.7s,baz=152,slow=8.5,SNR=3.8
TXAR pP **pP 20 41 03.8 +0.5**
comp=Z,0.6nm,0.8s,baz=148,slow=9.7,SNR=3.8
TXAR PcP **PcP 20 42 52.8 +1.7**
comp=Z,1.3nm,0.7s,baz=155,slow=6.5,SNR=11
PARB Paraibuna 39.07 125 *e*P **P 20 40 43.0 -0.4**
SLBS Sierra La Lagu 39.14 313 P **P 20 40 45.7 +1.7**
SLBS IAmb IAmb 20 40 48.4
comp=Z,5.9nm,0.8s
TRQA Tornquist 39.19 158 P **P 20 40 45.0 +0.9**
TRQA IAmb IAmb 20 40 46.6
comp=Z,20nm,1.2s
PLCA Paso Flores 39.23 169 P **P 20 40 46.0 +1.6**
comp=Z,3.5nm,0.7s,baz=337,slow=9.2,SNR=26
PLCA pP **pP 20 41 07.0 +0.9**
comp=Z,1.8nm,0.6s,baz=336,slow=8.5,SNR=3.6
comp=Z,3.5nm,0.7s
PLCA Paso Flores 39.23 169 P 20 40 44.5 0.0
PLCA Paso Flores 39.23 169 *e*P **P 20 40 46.1 +1.6**
T42A Van Buren 40.46 346 P **P 20 40 54.6 +0.1**
SJMB Sao Joao De Ma 41.07 116 *e*P **P 20 40 59.0 -0.9**
CMC01 Camacan, BA 41.64 111 *e*P **P 20 41 04.3 -0.4**
CAM01 Campos-RJ 41.76 121 *e*P **P 20 41 04.8 -0.7**
RIB01 Linhares ES 41.97 117 *e*P **P 20 41 06.5 -0.8**
NBPA Parau_RN 42.55 96 *e*P **P 20 41 11.3 -0.8**
ANMO Albuquerque 44.70 328 LR LR 21 00 13.7
comp=Z,47nm,18.8s,baz=86,slow=36
ANMO Albuquerque 44.70 328 P 20 41 30.4 +1.2
ANMO IAmb IAmb 20 41 54.0
comp=Z,19nm,1.4s
ECSD EROS Data Cent 48.20 344 P **P 20 41 55.9 -0.3**
PFO Pinyon Flats O 49.72 319 LR LR 21 01 17.9
comp=Z,59nm,18.2s,baz=233,slow=34
PDAR Pinedale Array 52.27 332 P **P 20 42 28.2 +1.0**
comp=Z,0.4nm,0.6s,baz=127,slow=9.8,SNR=5.4
PDAR pP **pP 20 42 50.5 +0.9**
comp=Z,1.4nm,1.0s,baz=150,slow=6.8,SNR=5.8
PDAR PcP **PcP 20 43 38.1 +0.6**
comp=Z,0.4nm,0.5s,baz=131,slow=6.1,SNR=3.9
PDAR LR LR 21 05 30.4
comp=Z,30nm,18.5s,baz=24,slow=37
comp=Z,0.4nm,0.6s
EPLO Experimental L 53.08 349 P **P 20 42 31.7 -1.2**
NVAR Mina Array Bea 53.90 323 P **P 20 42 40.6 +1.3**
comp=Z,0.3nm,0.3s,baz=193,slow=12,SNR=2.0
NVAR pP **pP 20 43 03.6 +1.7**
comp=Z,1.7nm,0.7s,baz=113,slow=8.3,SNR=4.6
NVAR LR LR 21 04 40.7
comp=Z,52nm,18.1s,baz=314,slow=35
comp=Z,0.3nm,0.3s
ULM Lac du Bonnet 54.08 347 P **P 20 42 39.1 -1.0**
comp=Z,6.0nm,0.6s,baz=146,slow=7.6,SNR=12
ULM pP **pP 20 43 01.6 -1.0**
comp=Z,4.3nm,0.6s,baz=160,slow=8.5,SNR=5.5
comp=Z,6.0nm,0.6s
SCHQ Schefferville 57.81 9 P **P 20 43 05.8 -0.9**
comp=Z,1.7nm,0.6s,baz=220,slow=10.0,SNR=4.3
comp=Z,1.7nm,0.6s
NEW Newport 59.91 332 LR LR 21 14 38.7
comp=Z,54nm,18.4s,baz=296,slow=41
YKA Yellowknife Ar 69.73 344 P **P 20 44 25.2 +0.4**
comp=Z,1.4nm,0.5s,baz=143,slow=5.0,SNR=25
YKA pP **PcP 20 44 47.1 +0.1**
comp=Z,1.8nm,0.8s,baz=141,slow=4.8,SNR=10
comp=Z,1.4nm,0.5s
YKA Yellowknife Ar 69.73 344 P 20 44 24.8 0.0
DBIC Dimbokro 75.15 83 P **P 20 44 57.6 -0.4**
comp=Z,7.7nm,0.7s,baz=282,slow=6.3,SNR=11
DBIC LR LR 21 15 54.7
comp=Z,30nm,18.1s,baz=12,slow=34
comp=Z,7.7nm,0.7s
RES Resolute Bay 77.33 356 LR LR 21 21 03.0
comp=Z,31nm,18.4s,baz=12,slow=37
MD01 Midelt array s 78.53 56 P **P 20 45 17.7 +0.8**
G31M Satah River 78.88 341 IAmb IAmb 20 45 43.0
comp=Z,6.0nm,0.8s
A36M Sachs Harbour 79.56 347 P 20 45 21.6 +0.1
I28M Miner Creek 80.08 338 P **P 20 45 25.9 +1.4**
G29M Pine Creek 80.12 340 IAmb IAmb 20 45 26.3
comp=Z,5.7nm,0.6s
ESDC Sonseca Array 80.41 49 P **P 20 45 27.2 +0.4**
comp=Z,1.7nm,0.9s,baz=265,slow=5.5,SNR=11
ESDC pP **pP 20 45 50.8 0.0**
comp=Z,1.3nm,1.1s,baz=259,slow=4.2,SNR=2.7
comp=Z,1.7nm,0.9s
ILAR Eielson Array 82.47 337 P **P 20 45 37.8 +0.7**
comp=Z,1.2nm,0.8s,baz=120,slow=4.7,SNR=14
ILAR pP **pP 20 46 00.7 -0.4**
comp=Z,1.0nm,0.9s,baz=121,slow=4.0,SNR=5.0
comp=Z,1.2nm,0.8s
ILAR Eielson Array 82.47 337 P 20 45 37.6 +0.5
I23K Minto, Yukon-K 83.58 336 IAmb IAmb 20 46 07.8
comp=Z,7.3nm,1.0s
SNAA Sanae 83.78 162 P **P 20 45 44.9 +1.1**
comp=Z,3.2nm,0.6s,baz=251,slow=7.7,SNR=5.5
comp=Z,3.2nm,0.6s
SNAA Sanae 83.78 162 P 20 45 44.5 +0.7
D25K Kavik River 84.00 341 P **P 20 45 46.0 +1.1**
D25K IAmb IAmb 20 45 47.0
comp=Z,4.1nm,0.7s
EKA Eskdalemuir Ar 84.13 34 P **P 20 45 45.6 -0.1**
comp=Z,1.9nm,0.6s,baz=266,slow=3.3,SNR=5.5
comp=Z,1.9nm,0.6s
G23K Bananza Creek 84.36 338 IAmb IAmb 20 45 49.4
comp=Z,8.4nm,1.3s
D23K Nanushuk River 85.32 340 P **P 20 45 52.4 +0.9**
D23K IAmb IAmb 20 45 54.1
comp=Z,5.0nm,0.9s
QSPA South Pole Qui 87.87 180 P **P 20 46 05.6 +1.5**
comp=Z,8.3nm,0.8s,baz=155,slow=2.1,SNR=8.0
comp=Z,8.3nm,0.8s
E18K Tukpahlearik C 88.55 338 IAmb IAmb 20 46 32.3
comp=Z,6.8nm,1.4s
KEST Kesra 90.44 54 P **P 20 46 14.5 -2.3**
comp=Z,2.4nm,0.7s,baz=346,slow=8.3,SNR=4.3
comp=Z,2.4nm,0.7s
ELIB Princess Elisa 91.93 162 *d*P **P 20 46 23.9 +0.9**
comp=Z,4.8nm,0.8s
ZST Bratislava 96.13 42 *e*PDIFF **P 20 46 45.5 +2.9**
MODS Modra-Piesok 96.23 42 *e*PDIFF **P 20 46 44.6 +1.5**
BVAR Borovoye Array 123.59 21 PKP **PKPdf 20 52 10.9 -1.0**
comp=Z,0.8nm,0.6s,baz=258,slow=5.7,SNR=2.7
ZALV Zalesovo Beam 126.86 11 PKP **PKiKP 20 52 18.1 -0.5**
comp=Z,2.5nm,0.4s,baz=279,slow=2.0,SNR=20
ZALV pPKP **pPKPdf 20 52 42.1 -1.4**
comp=Z,1.0nm,0.6s,baz=293,slow=1.1,SNR=2.8
ZALV Zalesovo Beam 126.86 11 PKiKP 20 52 17.9 -0.7
STKA Stephens Creek 128.27 226 PKP **PKiKP 20 52 22.2 +0.2**
comp=Z,0.8nm,0.9s,baz=147,slow=9.1,SNR=2.8
KURK Kurchatov 128.28 17 PKPdf **PKiKP 20 52 21.7 +0.2**
KURBB Kurchatov Arra 128.33 18 PKP **PKiKP 20 52 21.6 0.0**
comp=Z,2.5nm,0.6s,baz=325,slow=2.3,SNR=23
KURBB pPKP **pPKPdf 20 52 45.6 -0.8**
comp=Z,0.9nm,0.6s,baz=323,slow=2.2,SNR=4.9
MKAR Makanchi Array 132.88 17 PKP **PKiKP 20 52 30.1 -0.9**
comp=Z,0.5nm,0.4s,baz=309,slow=2.3,SNR=20
MKAR pPKP **pPKPdf 20 52 53.4 -1.8**
comp=Z,0.2nm,0.4s,baz=319,slow=2.1,SNR=2.0
SONM Songino Array 134.24 354 PKP **PKiKP 20 52 33.1 -0.8**
comp=Z,0.9nm,0.7s,baz=324,slow=1.0,SNR=8.9
SONM pPKP **pPKPdf 20 52 58.5 +0.6**
comp=Z,0.4nm,0.5s,baz=305,slow=0.5,SNR=2.6
KSRS Korea Array 136.73 328 PKP **PKPdf 20 52 36.1 -1.0**
comp=Z,0.5nm,0.4s,baz=3.0,slow=0.6,SNR=2.9
ASAR Alice Springs 138.46 230 PKhKP PKPpre 20 52 32.2
comp=Z,0.3nm,0.7s,baz=135,slow=3.2,SNR=2.6
ASAR pPKP **PKPdf 20 52 39.7 -1.2**
comp=Z,0.5nm,0.7s,baz=110,slow=1.8,SNR=6.5
WRA Warramunga Arr 140.06 235 PKhKP PKPpre 20 52 37.5
comp=Z,0.5nm,0.5s,baz=124,slow=2.6,SNR=10.0
WRA PKP **PKPdf 20 52 43.3 -0.6**
comp=Z,0.5nm,0.6s,baz=114,slow=2.4,SNR=8.5
HHC Hu-ho-hao-te 140.22 347 *e*P **PKPdf 20 52 44.2 +0.5**
GTA2 Gaotai 142.88 1 *e*PKP **PKPdf 20 52 48.3 -0.2**
NJ2 Nanjing 145.58 332 *e*P **PKPab 20 52 53.7 -0.1**
NJ2 pmax pmax
comp=Z,4.0nm,0.7s
GOMU GeErMu 145.78 8 PKPbc **PKPdf 20 52 53.3 -0.7**
LZH Lanzhou 146.13 355 PKPbc **PKPab 20 52 56.3 +0.3**
LZH pPKP pPKPdf 20 53 20.2 +0.4
LZH sPKP sPKPab 20 53 34.5 +4.0
LZDM Lanzhou Array 146.27 355 PKPbc **PKPab 20 52 57.0 +0.2**
comp=Z,1.7nm,0.4s,baz=321,slow=2.1,SNR=17
LZDM pPKPbc **pPKPdf 20 53 20.2 0.0**
comp=Z,3.7nm,0.6s,baz=270,slow=0.9,SNR=4.5
XAN Xi'an 147.33 347 PKPbc **PKPbc 20 52 57.3 -1.4**
LSA Lhasa 151.28 17 P **PKPdf 20 53 00.6 -2.6**
LSA pmax pmax
comp=Z,3.0nm,0.8s
PZH PanZhiHua 155.80 357 PKP **PKPdf 20 53 07.3 -2.0**
CMAR Chiang Mai Arr 163.78 5 PKP **PKPdf 20 53 17.5 -0.8**
comp=Z,0.9nm,0.7s,baz=293,slow=1.6,SNR=9.5
CMAR PKPab **PKPab 20 54 09.7 -1.0**
comp=Z,0.3nm,0.4s,baz=320,slow=3.5,SNR=4.5

*IDC **09** 20:52:09.1±5.8, 15°.12S×173°.92W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=223.6km s-min=58.3km az=134.0*
*NEIC **09** 20:52:17.5±1.7, 15°.48S±0°.06×174°.0W×0°.2, h49km±18km, mb4.6/12, Error ellipse: s-maj=27.4km s-min=9.0km az=89.0*
ISC 09 20:52:15.9±0.8,**15°.50S**±0°.08×**173°.89W**±0°.09,**h50**km,**n19**, σ1§**62**/21,**mb4.5/8**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.58**	**52**			**Pn**	**20 52 57.2**	**+1.8**
AFI						**Sn**	**20 53 23.7**	**-1.9**
NIUE	**Niue**	**5.19**	**134**			**Pn**	**20 54 34.1**	**+3.1**
NIUE				Sn		**Sn**	**20 54 26.3**	**-3.3**
THZ	**Tophouse**	**28.55**	**201**	P		**P**	**20 58 07.0**	**0.0**
THZ				IAmb	IAmb		20 58 29.3	
	comp=Z,25nm,1.4s							
COEN	**Coen**	**41.51**	**266**	P		**P**	**20 59 58.4**	**-0.3**
COEN				IAmb	IAmb		21 00 25.0	
	comp=Z,10.0nm,1.3s							
STKA	**Stephens Creek**	**43.58**	**240**	P		**P**	**21 00 16.4**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=65,slow=7.7,SNR=4.1							
	comp=Z,1.8nm,0.6s							
STKA	**Stephens Creek**	**43.58**	**240**	P		**P**	**21 00 11.6**	**-3.7**
STKA				IAmb	IAmb		21 00 19.1	
	comp=Z,28nm,1.2s							
INKA	**Innaminka**	**43.67**	**246**	P		**P**	**21 00 15.2**	**-0.8**
BBOO	**Buckleboo**	**48.35**	**240**	P		**P**	**21 00 53.3**	**+0.4**
WR0	**Warramunga Arr**	**49.17**	**257**	P		**P**	**21 00 58.8**	**-0.5**
WR0				IAmb	IAmb		21 01 05.9	
	comp=Z,7.2nm,1.3s							
WR8	**Warramunga Arr**	**49.21**	**257**	P		**P**	**21 00 60.0**	**+0.3**
WR8				IAmb	IAmb		21 01 22.8	
	comp=Z,5.2nm,1.1s							
WB0	**Warramunga Arr**	**49.32**	**257**	P		**P**	**21 01 00.9**	**+0.4**
WB0				IAmb	IAmb		21 01 18.7	
	comp=Z,7.3nm,1.4s							
WB2	**Warramunga Arr**	**49.35**	**257**	P		**P**	**21 01 01.3**	**+0.6**
WRA	**Warramunga Arr**	**49.36**	**257**	P		**P**	**21 01 01.2**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=92,slow=7.4,SNR=38							
	comp=Z,1.1nm,0.5s							
WRA	**Warramunga Arr**	**49.36**	**257**	P		**P**	**21 01 00.1**	**-0.7**
AS31	**Alice Springs**	**49.63**	**252**	P		**P**	**21 01 03.2**	**+0.4**
ASAR	**Alice Springs**	**49.63**	**252**	P		**P**	**21 01 03.3**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=90,slow=7.7,SNR=49							
	comp=Z,1.9nm,0.3s							
ASAR	**Alice Springs**	**49.63**	**252**	P		**P**	**21 01 01.9**	**-1.0**
MTN	**Manton Dam**	**53.26**	**265**	P		**P**	**21 01 30.9**	**+0.9**
BRTR	**Keskin Array B**	**145.94**	**320**	PKPbc		**PKPdf**	**21 11 49.3**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=53,slow=2.0,SNR=4.6							

*IDC **09** 20:57:33.7±1.9, 6°.21S×106°.42E, h161km±11km, mb3.2/5, mbtmp3.8/6, Error ellipse: s-maj=47.7km s-min=19.5km az=55.0*
*DJA **09** 20:57:35.3±0.4, 7°.5S×6°.×10°.6E±°, h147km±4km, M3.1/18, MLv3.1/18*
ISC 09 20:57:34.0±0.8,**6°.2S**±0°.2×**106°.6E**±0°.1,**h150**km,**n15**, σ2§**12**/17,**mb3.2/5**,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DBJI	**Dramaga**	**0.41**	**154**	P		**Pn**	**20 57 55.9**	**+0.9**
DBJI				S		**Sn**	**20 58 13.6**	**+2.6**
SBJI	**Serang**	**0.44**	**278**	P		**Pn**	**20 57 56.7**	**+1.7**
LEM	**Lembang**	**1.22**	**121**	P		**Pn**	**20 58 03.3**	**+2.3**
	79nm,0.7s,baz=285,slow=5.0,SNR=16							
LEM				S		**Sn**	**20 58 24.5**	**+3.0**
	32nm,0.5s,baz=301,slow=19,SNR=3.8							
LEM	**Lembang**	**1.22**	**121**	P		**Pn**	**20 58 03.2**	**+2.3**
BBJI	**Bungbulang**	**1.66**	**140**	P		**Pn**	**20 58 05.3**	**-0.1**
KASI	**Kota Agung**	**2.16**	**288**	P		**Pn**	**20 58 12.5**	**+1.5**
KPJI	**Karang Pucung**	**2.61**	**116**	P		**Pn**	**20 58 18.5**	**+2.0**
LWLI	**Liwa**	**2.75**	**295**	P		**Pn**	**20 58 21.9**	**+3.5**
BATI	**Baumata**	**17.38**	**104**	P		**Pn**	**21 01 29.1**	**+1.4**
	5.9nm,0.3s,baz=278,slow=13,SNR=9.9							
WRA	**Warramunga Arr**	**30.24**	**120**	P		**P**	**21 03 29.8**	**-1.1**
	0.4nm,0.7s,baz=288,slow=9.9,SNR=2.9							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**31.51**	**126**	P		**P**	**21 03 41.5**	**-0.6**
	0.7nm,0.5s,baz=295,slow=7.7,SNR=17							
	0.7nm,0.5s							
STKA	**Stephens Creek**	**41.50**	**133**	P		**P**	**21 05 06.0**	**-0.5**
	2.2nm,0.3s,baz=304,slow=10,SNR=6.5							
	2.2nm,0.3s							
SONM	**Songino Array**	**53.79**	**360**	P		**P**	**21 06 39.8**	**-1.3**
	0.2nm,0.5s,baz=174,slow=7.4,SNR=1.6							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**56.98**	**340**	P		**P**	**21 07 01.7**	**-2.1**
	0.2nm,0.7s,baz=150,slow=5.6,SNR=1.7							
	0.2nm,0.7s							
LPAZ	**La Paz**	**157.06**	**193**	PKPab		**PKPab**	**21 17 42.3**	**-2.1**
	1.0nm,0.4s,baz=217,slow=5.0,SNR=6.7							

*IDC **09** 21:08:24.0±10.0, 29°.95N×131°.19E, h0km, mb3.8/6, mbtmp3.8/6, MS4.6/1, Error ellipse: s-maj=251.2km s-min=91.7km az=2.0*
*JMA **09** 21:08:32.7±0.1, 30°.4N±0°.4×131°.1E±0°.6, h31km, MV2.8/27, NEAR TANEGASHIMA ISLAND*
*NEIC **09** 21:08:32.8±1.1, 30°.40N±0°.03×131°.12E±0°.10, h35km±2km, mb4.3/13, Error ellipse: s-maj=14.3km s-min=5.4km az=97.0*
ISC 09 21:08:32.0±1.2,**30°.38N**±0°.06×**131°.09E**±0°.07,**h32**km±6km, **n36**, σ0§**60**/38,**mb4.2**/13,**Kyushu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JMTN	**Minamitane**	**0.17**	**277**	*i* P		**Pn**	**21 09 38.5**	**+0.2**
JMTN				S		**Sb**	**21 08 43.0**	**+0.5**
JTN	**Tanegashima 3**	**0.29**	**341**	P		**Pb**	**21 08 39.5**	**-0.2**
JTN				S		**Sb**	**21 08 44.5**	**-0.3**
JYAK	**Yakushimahirau**	**0.52**	**255**	*i* P		**Pn**	**21 08 43.2**	**0.0**
JYAK				S		**Sn**	**21 08 51.1**	**+0.1**
JKC	**Kuchinoerabu**	**0.78**	**277**	P		**Pn**	**21 08 47.2**	**+0.5**
JKC				S		**Sn**	**21 08 58.1**	**+0.9**
JTSR	**Tashiro 2**	**0.80**	**350**	P		**Pb**	**21 08 47.1**	**-0.5**
JTSR				*e*S		**Sb**	**21 08 57.6**	**-0.5**
JNAR	**Kushima--Naru**	**1.16**	**8**	P		**Pn**	**21 08 53.2**	**+1.3**
JNN	**Nakanoshima**	**1.18**	**243**	*e*P		**Pb**	**21 08 53.7**	**-0.2**
JSU	**Suzuyama**	**1.25**	**334**			**Pn**	**21 08 53.7**	**+0.5**
JSU				Sn		**Sn**	**21 09 09.6**	**+0.5**
JSU	**Suzuyama**	**1.25**	**334**	*i* P		**Pn**	**21 08 53.8**	**+0.5**
JNKG	**Nichinankitago**	**1.30**	**11**	*e*P		**Pn**	**21 08 55.3**	**+1.3**
JMN	**Monobe**	**4.09**	**35**	Pn		**Pn**	**21 09 31.9**	**-0.5**
SONM	**Songino Array**	**25.74**	**320**	P		**P**	**21 13 59.4**	**-0.2**
	0.2nm,0.3s,baz=141,slow=10,SNR=4.7							
	0.2nm,0.3s							
SONM	**Songino Array**	**25.74**	**320**	P		**P**	**21 13 58.7**	**-1.0**
JAY	**Jayapura**	**33.97**	**163**	LR		LR	21 26 02.1	
	comp=Z,1μm,19.6s,baz=354,slow=32							
H11N2	**WAKE ISLAND Hy**	**34.00**	**100**	T		T	21 51 12.6	
	baz=294							
H11N1	**WAKE ISLAND Hy**	**34.00**	**100**	T		T	21 51 15.0	
	baz=294							
H11N3	**WAKE ISLAND Hy**	**34.01**	**100**	T		T	21 51 15.0	
	baz=294							
MKAR	**Makanchi Array**	**40.83**	**308**	P		**P**	**21 16 10.4**	**-0.1**
	0.2nm,0.6s,baz=107,slow=8.3,SNR=3.1							
	0.2nm,0.6s							
KURK	**Kurchatov**	**43.69**	**313**	P		**P**	**21 16 33.7**	**-0.1**
KURK				IAmb	IAmb		21 16 56.4	
	comp=Z,4.4nm,1.4s							
KURBB	**Kurchatov Arra**	**43.74**	**313**	P		**P**	**21 16 33.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=104,slow=15,SNR=1.5							
	comp=Z,0.3nm,0.3s							
BVAR	**Borovoye Array**	**48.97**	**316**	P		**P**	**21 17 14.7**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=95,slow=9.2,SNR=16							
	comp=Z,1.0nm,0.4s							
BORK	**Borovoye**	**49.02**	**316**	P		**P**	**21 17 15.8**	**+0.2**
BORK				IAmb	IAmb		21 17 16.4	
	comp=Z,2.4nm,0.5s							
WRA	**Warramunga Arr**	**50.13**	**176**	P		**P**	**21 17 24.6**	**+0.3**
WR8	**Warramunga Arr**	**50.15**	**176**	P		**P**	**21 17 25.5**	**+1.0**
WR8				IAmb	IAmb		21 17 28.4	
	comp=Z,6.5nm,1.2s							
G16K	**Koyuk River**	**53.07**	**29**	P		**P**	**21 17 45.7**	**0.0**
G16K				IAmb	IAmb		21 18 08.6	
	comp=Z,4.2nm,1.5s							
H17K	**Granite Mounta**	**54.04**	**29**	P		**P**	**21 17 53.3**	**+0.3**
H17K				IAmb	IAmb		21 18 01.7	
	comp=Z,2.0nm,0.8s							
O16K	**Kokwok River B**	**54.72**	**36**	P		**P**	**21 17 56.5**	**-1.4**
O16K				IAmb	IAmb		21 18 17.1	
	comp=Z,5.7nm,1.1s							
AB31	**Akbulak array**	**55.73**	**311**	P		**P**	**21 18 05.5**	**+0.1**
ABKAR	**Akbulak array**	**55.73**	**311**	P		**P**	**21 18 05.4**	**0.0**
ARTI	**Arti**	**55.87**	**320**	P		**P**	**21 18 05.8**	**-0.5**
ARCES	**ARCESS Array B**	**67.09**	**338**	P		**P**	**21 19 22.0**	**+0.2**
	comp=Z,4.3nm,1.0s,baz=53,slow=6.5,SNR=2.7							
	comp=Z,4.3nm,1.0s							
FIA1	**FINESS Array S**	**70.51**	**331**	P		**P**	**21 19 43.0**	**-0.2**
FINES	**FINESS Array B**	**70.51**	**331**	P		**P**	**21 19 42.5**	**-0.7**
	comp=Z,4.2nm,0.9s,baz=57,slow=5.1,SNR=9.9							
	comp=Z,4.2nm,0.9s							
FINES	**FINESS Array B**	**70.51**	**331**	P		**P**	**21 19 43.1**	**-0.2**
RES	**Resolute Bay**	**71.00**	**12**	P		**P**	**21 19 46.2**	**+0.2**
RES				IAmb	IAmb		21 19 55.3	
	comp=Z,4.2nm,1.4s							
BNN	**Bunyan**	**75.36**	**307**	P		**P**	**21 20 12.9**	**+0.3**

*IDC **09** 21:10:55.5±1.8, 5°.40S×142°.58E, h0km, mb3.5/3, mbtmp3.4/6, ML3.4/3, Error ellipse: s-maj=55.0km s-min=25.8km az=87.0*
ISC 09 21:11:00.5±1.4,**5°.67S**±0°.08×**142°.2E**±0°.2,**h35**km,**n6**, σ2§**54**/8,**mb3.5**/3,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAY	**Jayapura**	**3.46**	**335**	Pn		**Pn**	**21 11 50.8**	**-1.1**
	4.5nm,0.3s,baz=155,slow=13,SNR=21							
JAY				Sn		**Sn**	**21 12 32.7**	**+1.0**
	5.3nm,0.3s,baz=189,slow=13,SNR=5.0							
	11nm,0.3s							
WRA	**Warramunga Arr**	**16.10**	**208**	Pn		**P**	**21 14 47.0**	**-0.3**
	0.1nm,0.3s,baz=27,slow=13,SNR=6.1							
WRA				Sn		**Sn**	**21 17 38.6**	**-3.3**
	baz=29,slow=23,SNR=1.8							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**19.58**	**203**	P		**Pn**	**21 15 30.8**	**+3.6**
	0.1nm,0.3s,baz=36,slow=7.6,SNR=8.2							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**74.23**	**322**	P		**P**	**21 22 33.1**	**-0.8**
	0.5nm,0.9s,baz=130,slow=6.2,SNR=2.0							
	0.5nm,0.9s							
BVAR	**Borovoye Array**	**83.70**	**325**	P		**P**	**21 23 27.5**	**+1.8**
	0.2nm,0.6s,baz=113,slow=3.3,SNR=2.0							
	0.2nm,0.6s							
ILAR	**Eielson Array**	**87.10**	**24**	P		**P**	**21 23 41.0**	**-1.4**
	0.3nm,0.8s,baz=250,slow=3.9,SNR=2.0							
	0.3nm,0.8s							

*IDC **09** 21:19:31.0±3.7, 4°.25N×127°.28E, h112km±40km, mb3.4/6, mbtmp3.8/7, Error ellipse: s-maj=69.8km s-min=18.7km az=59.0*
ISC 09 21:19:30.0±1.2,**4°.3N**±0°.3×**127°.2E**±0°.4,**h100**km,**n7**, σ1§**12**/8,**mb3.6**/6,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**6.51**	**141**	P		**Pn**	**21 21 05.1**	**+1.7**
	6.0nm,0.3s,baz=342,slow=19,SNR=13							
SIJI				S		**Sn**	**21 22 14.8**	**-1.4**
	10nm,0.9s,baz=45,slow=7.1,SNR=1.7							
WRA	**Warramunga Arr**	**25.05**	**164**	P		**P**	**21 24 44.5**	**-0.7**
	0.8nm,0.6s,baz=343,slow=10,SNR=11							
	0.8nm,0.6s							
ASAR	**Alice Springs**	**28.51**	**167**	P		**P**	**21 25 16.5**	**+0.3**
	0.3nm,0.5s,baz=350,slow=7.1,SNR=5.3							
	0.3nm,0.5s							
CTA	**Charters Tower**	**30.59**	**143**	P		**P**	**21 25 34.0**	**-0.7**
	1.1nm,0.3s,baz=333,slow=11,SNR=1.9							
	1.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**31.02**	**299**	P		**P**	**21 25 38.5**	**0.0**
	0.3nm,0.3s,baz=118,slow=6.4,SNR=1.7							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**57.40**	**325**	P		**P**	**21 29 08.4**	**+0.2**
	0.3nm,0.4s,baz=116,slow=8.6,SNR=3.8							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**61.56**	**327**	P		**P**	**21 29 36.1**	**-0.6**
	0.6nm,0.5s,baz=123,slow=6.8,SNR=2.3							
	0.6nm,0.5s							

*BJI **09** 21:23:53.6, 2°.09S×139°.38E, h10km, mB5.1/7, mb4.8/43, Ms4.7/2*
*IDC **09** 21:23:58.5±0.5, 1°.71S×138°.88E, h0km, mb4.6/18, mbtmp4.6/22, ML5.0/3, MS3.8/24, Error ellipse: s-maj=16.3km s-min=10.2km az=55.0*
*DJA **09** 21:24:01.6±0.5, 1°.S±3°.×13°.9E±°, h36km±8km, M5.1/19, mb4.8/19, mB5.6/6, MLv5.2/15, Mw(mB)5.1/6*
*NEIC **09** 21:24:03.9±1.1, 1°.73S±0°.09×138°.9E±0°.1, h32km±4km, mb4.9/104, Error ellipse: s-maj=15.8km s-min=12.9km az=67.0*
ISC 09 21:24:02.4±0.5,**1°.82S**±0°.05×**138°.83E**±0°.04,**h28**km±3km, **h28**km:**pP-P**,**n208**,σ1§**33**/189,**mb4.8**/77,**MS3.7**/23,**2D**, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GENI	**Genyem**	**1.54**	**120**	P		**Pn**	**21 24 28.7**	**+0.6**
GENI				S		**Sb**	**21 24 50.1**	**+0.5**
JAY	**Jayapura**	**2.00**	**110**	Pn		**Pn**	**21 24 33.5**	**-0.9**
	32nm,0.3s,baz=260,slow=8.6,SNR=59							
JAY				Sn		**Sn**	**21 24 57.1**	**-1.5**
	200nm,0.3s,baz=0.0,slow=20,SNR=5.9							
JAY				Lg		Lg	21 25 01.9	
	280nm,0.3s,baz=0.0,slow=20,SNR=8.3							
JAY	**Jayapura**	**2.00**	**110**	P		**Pn**	**21 24 33.5**	**-0.9**
JAY				S		**Sn**	**21 24 59.1**	**+0.6**
SRPI	**Serui, Papua**	**2.59

WRAB IAmb IAmb 21 28 21.6
comp=Z,55nm,0.7s
WRA Warramunga Arr 18.54 193 P P 21 28 17.0 0.0
comp=Z,6.1nm,0.3s,baz=16,slow=13,SNR=155
WRA S **Sn 21 31 34.5 -9.4**
comp=Z,16nm,0.9s,baz=11,slow=21,SNR=10
comp=Z,56nm,0.7s
WRA Warramunga Arr 18.54 193 P P 21 28 16.1 -0.9
MPSI Mapaga 19.05 276 P P 21 28 21.3 -1.3
comp=Z,22nm,0.7s
KAPI Kappang 19.30 260 LR LR 21 37 18.8
comp=Z,173nm,18.5s,baz=82,slow=41
CTA Charters Tower 19.55 159 P Pn 21 28 29.5 -0.1
comp=Z,1.1nm,0.3s,baz=332,slow=11,SNR=12
comp=Z,7.2nm,0.6s
CTAO Charters Tower 19.55 159 Pn 21 28 29.5 -0.1
FITZ Fitzroy Crossi 20.72 218 P P 21 28 41.2 +0.4
comp=Z,13nm,0.8s,baz=47,slow=15,SNR=14
FITZ S **S 21 32 24.9 -6.0**
comp=Z,21nm,1.0s,baz=76,slow=19,SNR=3.6
FITZ LR LR 21 37 48.1
comp=Z,353nm,21.0s,baz=36,slow=40
comp=Z,13nm,0.8s
PLAI Plampang 22.07 251 P P 21 28 57.0 +1.5
comp=Z,42nm,0.9s
AS31 Alice Springs 22.23 192 P 21 28 58.0 +0.9
AS31 IAmb IAmb 21 29 01.2
comp=Z,21nm,0.7s
ASAR Alice Springs 22.23 192 P P 21 28 58.6 +1.5
comp=Z,52nm,0.7s,baz=19,slow=10,SNR=289
ASAR S **S 21 33 00.1 -0.4**
comp=Z,11nm,0.9s,baz=15,slow=24,SNR=7.6
comp=Z,52nm,0.7s
ASAR Alice Springs 22.23 192 P 21 28 58.8 +1.7
HNR Honiara 22.32 111 LR LR 21 37 21.7
comp=Z,7.6nm,20.3s,baz=24,slow=36
KKM Kota Kinabalu 23.89 289 P P 21 29 12.6 -1.6
INKA Innaminka 25.84 176 P 21 29 33.1 +1.5
EIDS Eidsvold 26.23 154 P 21 29 37.3 +2.1
EIDS IAmb IAmb 21 29 41.1
comp=Z,32nm,0.9s
PSA00 Pilbara Seismi 26.97 222 P 21 29 42.7 +0.8
STKA Stephens Creek 30.01 175 P P 21 30 09.7 +0.8
comp=Z,9.6nm,0.6s,baz=346,slow=9.7,SNR=12
comp=Z,9.6nm,0.6s
STKA Stephens Creek 30.01 175 P 21 30 09.4 +0.5
JOW Kunigami 30.25 341 LR LR 21 40 27.3
comp=Z,146nm,19.2s,baz=180,slow=33
BBOO Buckleboo 30.94 185 P 21 30 18.4 +1.3
BBOO IAmb IAmb 21 30 22.3
comp=Z,18nm,1.0s
LEM Lembang 31.50 260 LR LR 21 45 04.2
comp=Z,186nm,18.9s,baz=24,slow=40
DZM Mont Dzumac 33.56 129 LR LR 21 43 49.0
comp=Z,180nm,19.9s,baz=9.5,slow=35
H11S3 WAKE ISLAND Hy 34.04 52 T T 22 06 29.6
baz=236,slow=75,SNR=264
H11S2 WAKE ISLAND Hy 34.05 52 T T 22 06 30.4
baz=236,slow=75,SNR=244
H11S1 WAKE ISLAND Hy 34.06 52 T T 22 06 32.4
baz=236,slow=75,SNR=182
JHJ Hachijo jima 2 34.76 1 LR LR 21 42 17.2
comp=Z,202nm,21.9s,baz=138,slow=32
H11N1 WAKE ISLAND Hy 34.88 51 T T 22 07 43.0
baz=228,slow=76,SNR=20
H11N2 WAKE ISLAND Hy 34.90 51 T T 22 07 49.1
baz=228,slow=76,SNR=21
H11N3 WAKE ISLAND Hy 34.90 51 T T 22 07 44.4
baz=228,slow=76,SNR=16
JNU Nakatsue 35.56 348 LR LR 21 44 13.9
comp=Z,123nm,18.1s,baz=168,slow=34
NWAO Narrogin (SRO) 37.00 211 LR LR 21 47 29.6
comp=Z,405nm,18.3s,baz=16,slow=38
MJAR Matsushiro AR 38.17 359 LR LR 21 44 32.9
comp=Z,130nm,19.9s,baz=173,slow=32
IPM Ipoh 38.29 280 P 21 31 20.5 -0.4
IPM IAmb IAmb 21 31 22.3
comp=Z,19nm,0.6s
KULM Kulim 38.78 281 P 21 31 25.2 +0.1
KULM IAmb IAmb 21 31 25.9
comp=Z,16nm,0.8s
WHN Wuhan 39.75 326 ⇓P **P 21 31 33.5 +0.7**
WHN pmax pmax
comp=Z,32nm,1.0s
RPSI Rantau Prapat 40.14 276 P 21 31 36.4 0.0
RPSI IAmb IAmb 21 31 37.6
comp=Z,19nm,1.0s
KSRS Korea Array 40.36 347 P P 21 31 36.4 -1.4
comp=Z,1.4nm,0.9s,baz=159,slow=10,SNR=2.1
KSRS LR LR 21 46 45.5
comp=Z,83nm,19.9s,baz=155,slow=34
comp=Z,1.4nm,0.9s
GSI Gunungsitoli 41.36 274 P 21 31 45.9 -0.6
GSI IAmb IAmb 21 31 47.3
comp=Z,27nm,0.8s
ENH Enshi 42.44 321 P P 21 31 54.7 -0.4
LYN LuoYang 43.83 328 P P 21 32 06.6 +0.4
LYN pmax pmax
comp=Z,27nm,1.0s
CM31 Chiang Mai Arr 44.10 299 P P 21 32 09.4 +0.8
CM31 IAmb IAmb 21 32 10.2
comp=Z,18nm,1.4s
CMAR Chiang Mai Arr 44.10 299 P P 21 32 08.9 +0.2
comp=Z,2.8nm,0.7s,baz=120,slow=6.6,SNR=27
CMAR PcP **PcP 21 33 55.6 +2.0**
comp=Z,2.2nm,0.9s,baz=148,slow=2.2,SNR=7.3
comp=Z,2.8nm,0.7s
CMAR Chiang Mai Arr 44.10 299 P P 21 32 08.9 +0.2
CMAR **PcP 21 33 54.8 +1.1**
CHTO Chiang Mai 44.24 299 P P 21 32 09.9 +0.1
CHTO Chiang Mai 44.24 299 P P 21 32 10.0 +0.2
CHTO sP **sP 21 32 23.4 +1.9**
XAN Xi'an 45.42 324 P P 21 32 18.6 -0.4
XAN pP **pP 21 32 27.9 +0.4**
ASAJ Asahikawa 45.86 4 LR LR 21 49 53.0
comp=Z,90nm,19.0s,baz=172,slow=34
USRK Ussuriysk Ar. 46.22 353 P P 21 32 24.0 -1.0
comp=Z,5.7nm,0.9s,baz=188,slow=9.9,SNR=3.3
comp=Z,5.7nm,0.9s
BJT Baijiatuau 46.52 336 P 21 32 27.0 -0.4
BJT IAmb IAmb 21 32 28.4
comp=Z,12nm,1.1s
BJT Baijiatuau 46.52 336 P P 21 32 27.1 -0.3
BNX BinXian 48.43 349 ⇓P **P 21 32 41.7 -0.5**
BNX pmax pmax
comp=Z,23nm,0.9s
LZH Lanzhou 49.85 323 P P 21 32 54.4 +0.9
LZH sP pP 21 33 01.8 -0.2
LZH pmax pmax
comp=Z,21nm,1.6s
LZDM Lanzhou Array 49.85 322 P P 21 32 54.1 +0.5
comp=Z,2.4nm,0.7s,baz=145,slow=9.0,SNR=11
comp=Z,2.4nm,0.7s
XLT XiLinHaoTe 49.87 339 *eP* **P 21 32 53.2 -0.2**
XLT sP pP 21 33 02.9 +1.0
XLT pmax pmax
comp=Z,6.0nm,0.9s
XLT pmax pmax
comp=Z,110nm,5.6s
BTO2 Baotou 49.91 331 *eP* **P 21 32 53.4 -0.4**
BTO2 pP **pP 21 32 58.1 -4.2**
BTO2 sP **sP 21 33 00.4 -5.3**
BTO2 pmax pmax
comp=Z,25nm,0.9s
BTO2 pmax pmax
comp=Z,440nm,12.1s
KLR Kul'dur 51.22 354 LR LR 21 51 31.7
comp=Z,24nm,20.7s,baz=194,slow=32
HEH HeiHe 52.79 351 *eP* **P 21 33 14.9 -0.1**
HEH pmax pmax
comp=Z,17nm,1.0s
SHL Shillong 52.93 304 P 21 33 16.4 -0.4
SHL IAmb IAmb 21 33 17.7
comp=Z,7.6nm,0.8s
GTA2 Gaotai 54.51 323 P P 21 33 28.6 +0.5
GTA2 sP sP 21 33 40.1 +0.1
GTA2 pmax pmax
comp=Z,7.0nm,0.9s
GTA2 LR LR
comp=Z,230nm,15.1s
LSA Lhasa 55.25 308 P 21 33 34.3 +0.3
LSA Lhasa 55.25 308 P P 21 33 31.3 -2.7
LSA pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 56.71 335 P 21 33 44.3 +0.5
ULN Ulaanbaatar 56.71 335 P P 21 33 44.1 +0.4

ULN pP **pP 21 33 53.0 +0.6**
SONM Songino Array 56.97 334 P P 21 33 45.9 +0.3
comp=Z,1.9nm,0.6s,baz=153,slow=7.5,SNR=17
SONM LR LR 21 58 45.0
comp=Z,126nm,19.2s,baz=134,slow=37
comp=Z,1.9nm,0.6s
SONM Songino Array 56.97 334 P 21 33 44.7 -0.8
PETK Petropavlovsk- 56.97 13 P P 21 33 45.4 +0.1
comp=Z,5.2nm,0.9s,baz=183,slow=6.4,SNR=2.8
PETK LR LR 21 56 21.1
comp=Z,59nm,21.1s,baz=194,slow=34
comp=Z,5.2nm,0.9s
PETK Petropavlovsk- 56.97 13 P P 21 33 45.1 -0.2
PET Petropavlovsk 57.12 14 P P 21 33 44.6 -1.7
comp=Z,59nm,2.2s
PALK Pallekele 58.69 280 LR LR 22 01 57.6
comp=Z,54nm,18.4s,baz=100,slow=39
TLY Talaya 61.06 336 P 21 34 13.9 +0.2
TLY IAmb IAmb 21 34 15.7
comp=Z,6.5nm,0.9s
MA2 Magadan 61.93 7 LR LR 21 59 43.6
comp=Z,27nm,20.3s,baz=116,slow=35
RAR Rarotonga 62.76 113 LR LR 21 58 33.3
comp=Z,61nm,19.7s,baz=292,slow=33
YAK Yakutsk 64.06 355 LR LR 21 59 44.7
comp=Z,94nm,20.5s,baz=127,slow=34
YAK Yakutsk 64.06 355 P 21 34 32.9 -0.6
WMQ Urumqi 64.39 321 P P 21 34 36.9 +0.8
WMQ PcP **PcP 21 35 09.5 -0.9**
ZSN Zaisan 67.92 324 *eP* **P 21 34 59.3 +0.6**
WUS Wushi 68.85 316 P 21 35 05.1 +0.3
MKAR Makanchi Array 69.16 322 P P 21 35 07.0 +0.6
comp=Z,14nm,0.9s,baz=110,slow=8.0,SNR=100
comp=Z,14nm,0.9s
MKAR Makanchi Array 69.16 322 P 21 35 06.7 +0.3
MAKZ Makanchi 69.36 322 P 21 35 07.5 -0.1
MAKZ Makanchi 69.36 322 P P 21 35 08.0 +0.3
SHLS Shalkode 69.44 318 *eP* **P 21 35 07.5 -0.9**
comp=Z,4.8nm,0.8s
UZB Uzynbulak 69.73 318 *eP* **P 21 35 10.8 +0.6**
comp=Z,7.7nm,0.8s
PRZ Przheval'sk 69.90 317 P 21 35 11.3 0.0
PRZ IAmb IAmb 21 35 14.2
comp=Z,14nm,0.9s
TARG Taragay, Kyrgy 70.03 316 P 21 35 13.7 +1.3
KPKS Kokpek 70.08 318 *eP* **P 21 35 13.0 +0.7**
SATY Saty 70.11 317 *eP* **P 21 35 13.3 +0.8**
comp=Z,7.9nm,1.0s
KDJ Kajisay 70.61 316 P 21 35 16.4 +0.7
KDJ IAmb IAmb 21 35 17.7
comp=Z,6.7nm,0.8s
KSH2 Kashi 70.74 313 P P **21 35 17.5 +1.0**
KSH2 pmax pmax
comp=Z,7.0nm,1.1s
TDK Taldyqorghan 70.86 319 *eP* **P 21 35 17.8 +0.9**
comp=Z,10nm,0.8s
MDOK Medeo 71.08 317 *eP* **P 21 35 19.2 +0.8**
TNSS Tian-Shan 71.10 317 *eP* **P 21 35 19.4 +0.5**
NRN Naryn 71.19 315 P P **21 35 19.3 0.0**
ZAA0 Zalesovo Array 71.23 330 P 21 35 18.7 -0.2
ZAA0 IAmb IAmb 21 35 19.4
comp=Z,7.3nm,0.8s
ZALV Zalesovo Beam 71.23 330 P P 21 35 18.5 -0.4
comp=Z,7.3nm,0.7s,baz=114,slow=6.2,SNR=35
ZALV LR LR 22 07 18.8
comp=Z,31nm,19.6s,baz=2.5,slow=36
comp=Z,7.3nm,0.7s
ZALV Zalesovo Beam 71.23 330 P 21 35 18.6 -0.3
TKM2 Tokmak 2 71.98 316 P P **21 35 24.9 +0.9**
SNR=9.0
UCH Uchtor 72.50 315 P P 21 35 28.9 +1.5
SNR=12
CHMS Chumysh 72.59 316 P P 21 35 27.9 +0.5
SNR=5.6
AAK Ala-Archa 72.65 316 P 21 35 27.6 -0.3
USP Ospenovka 72.86 316 P P **21 35 29.8 +0.8**
SNR=18
KURK Kurchatov 73.06 325 P 21 35 29.7 -0.2
KURK IAmb IAmb 21 35 31.2
comp=Z,12nm,0.8s
KURK Kurchatov 73.06 325 P P **21 35 29.9 -0.1**
KURK x x 21 35 38.8
KURBB Kurchatov Arra 73.07 325 P P 21 35 30.4 +0.4
comp=Z,12nm,0.8s,baz=113,slow=5.6,SNR=64
comp=Z,12nm,0.8s
EKS2 Erkin-Say 73.16 316 P P 21 35 32.1 +1.2
SNR=9.4
ARSB Arslanbob 73.30 314 P 21 35 31.7 -0.1
ARSB IAmb IAmb 21 35 33.9
comp=Z,12nm,1.1s
TIXI Tiksi 73.63 357 LR LR 22 05 59.6
comp=Z,65nm,20.7s,baz=194,slow=34
TIXI Tiksi 73.63 357 P 21 35 31.4 -1.4
KKAR Karatay Array 75.58 315 P P **21 35 44.8 0.0**
IUG Iuzhnay 75.66 314 *eP* **P 21 35 46.3 +0.9**
comp=Z,14nm,1.4s
CHM Chimkent 76.01 314 *eP* **P 21 35 48.3 +1.0**
comp=Z,4.3nm,0.7s
BRLS Boroldoy 76.04 315 *eP* **P 21 35 48.3 +0.8**
BRZS Berezniki 76.30 323 *eP* **P 21 35 49.5 +0.7**
K13K Kusilvak Mount 76.53 24 P 21 35 50.2 +0.5
K13K IAmb IAmb 21 35 52.0
comp=Z,14nm,1.1s
VNDA Vanda 76.65 175 P P 21 35 51.2 +1.0
comp=Z,1.3nm,0.8s,baz=302,slow=14,SNR=1.6
comp=Z,1.3nm,0.8s
VNDA Vanda 76.65 175 P P 21 35 50.9 +0.7
L14K Kuka Creek 77.05 25 P P 21 35 52.9 +0.3
M14K Bethel 77.07 26 P 21 35 52.4 -0.4
J14K Nanvaranak Lak 77.39 23 P 21 35 54.9 +0.3
K15K Wolf Creek Mou 77.98 24 P 21 35 58.4 +0.5
M16K Timber Creek 78.50 26 P P 21 36 01.3 +0.4
M16K IAmb IAmb 21 36 03.0
comp=Z,14nm,0.9s
L16K Owhat River 78.58 25 P P 21 36 01.5 +0.3
L16K IAmb IAmb 21 36 03.1
comp=Z,12nm,1.1s
BVAR Borovoye Array 78.65 325 P P 21 36 02.5 +0.6
comp=Z,16nm,0.7s,baz=114,slow=7.3,SNR=94
comp=Z,16nm,0.7s
BORK Borovoye 78.70 325 P 21 36 02.3 +0.2
BORK Borovoye 78.70 325 P P **21 36 02.6 +0.5**
BORK sP **sP 21 36 16.0 +1.6**
J16K Anvik River 78.82 24 P 21 36 03.5 +1.0
J16K IAmb IAmb 21 36 05.2
comp=Z,11nm,1.1s
NRIK Noril'sk 78.91 344 P P 21 36 03.1 +0.2
comp=Z,11nm,1.1s,baz=122,slow=4.7,SNR=11
comp=Z,11nm,1.1s
NRIK Noril'sk 78.91 344 P 21 36 02.4 -0.5
NRIK IAmb IAmb 21 36 04.4
comp=Z,16nm,1.1s
I17K Unalakleet 79.07 23 P 21 36 03.9 +0.1
I17K IAmb IAmb 21 36 07.2
comp=Z,22nm,1.3s
N17K Nushagak Hills 79.08 27 P P 21 36 04.8 +0.8
N17K IAmb IAmb 21 36 06.1
comp=Z,10nm,0.9s
G16K Koyuk River 79.16 21 IAmb IAmb 21 36 06.4
comp=Z,11nm,1.3s
M17K Holitna River 79.33 26 IAmb IAmb 21 36 08.1
comp=Z,16nm,0.9s
N18K Kilae Creek 79.73 27 IAmb IAmb 21 36 10.0
comp=Z,12nm,1.0s
L18K Granite Mounta 79.99 25 IAmb IAmb 21 36 11.4
comp=Z,9.8nm,0.9s
E18K Tukpahlearik C 80.76 20 IAmb IAmb 21 36 15.3
comp=Z,18nm,1.6s
M20K Styx River 81.41 26 IAmb IAmb 21 36 18.7
comp=Z,14nm,0.8s
K20K Telida 81.54 25 IAmb IAmb 21 36 18.9
comp=Z,8.7nm,1.0s
J20K Nowinta River 81.81 24 IAmb IAmb 21 36 20.9
comp=Z,8.4nm,0.8s
F20K Avaraart Lake 82.31 21 IAmb IAmb 21 36 24.3
comp=Z,14nm,1.6s
D20K Etivluk River 82.68 19 IAmb IAmb 21 36 25.2
comp=Z,26nm,1.8s
KTH Kantishna Hill 82.93 25 IAmb IAmb 21 36 25.3
comp=Z,9.4nm,0.8s
RND Reindeer 83.77 26 P 21 36 28.6 -0.3
MCK McKinley 83.83 25 P P **21 36 29.1 -0.1**
MCK IAmb IAmb 21 36 29.8
comp=Z,7.1nm,0.9s
SCM Sheep Creek Mo 84.02 27 P P 21 36 31.0 +0.8
I23K Minto, Yukon-K 84.07 24 P P **21 36 30.6 +0.3**

I23K IAmb IAmb 21 36 32.0
comp=Z,5.1nm,0.8s
AB31 Akbulak array 84.12 320 P 21 36 31.1 +0.2
AB31 IAmb IAmb 21 36 32.4
comp=Z,11nm,1.1s
ABKAR Akbulak array 84.12 320 P 21 36 31.4 +0.5
G23K Bananza Creek 84.29 22 P 21 36 32.0 +0.5
G23K IAmb IAmb 21 36 35.7
comp=Z,21nm,2.0s
DHY Denali Highway 84.33 26 P P **21 36 32.1 +0.2**
DHY IAmb IAmb 21 36 33.2
comp=Z,11nm,0.8s
WRH Wood River Hil 84.40 25 P 21 36 31.5 -0.5
WRH IAmb IAmb 21 36 32.0
comp=Z,6.8nm,1.1s
CCB Clear Creek Bu 84.57 24 P 21 36 32.0 -0.8
CCB IAmb IAmb 21 36 33.1
comp=Z,8.9nm,1.0s
DIV Divide 84.57 28 P P **21 36 33.6 +0.6**
KLU Klutina 84.58 28 P P 21 36 33.5 +0.4
D23K Nanushuk River 84.77 20 P P 21 36 34.9 +1.1
E23K Chandalar 84.86 21 P P 21 36 35.5 +1.1
E23K IAmb IAmb 21 36 37.0
comp=Z,7.0nm,0.8s
HDA Harding Lake 84.86 25 P P 21 36 34.1 -0.2
ILAR Eielson Array 84.98 24 P P **21 36 33.7 -1.2**
comp=Z,4.1nm,0.9s,baz=258,slow=4.8,SNR=23
comp=Z,4.1nm,0.9s
ILAR Eielson Array 84.98 24 P 21 36 34.4 -0.5
D24K Happy Valley 85.47 20 P P 21 36 37.9 +0.7
D24K IAmb IAmb 21 36 40.5
comp=Z,8.2nm,0.7s
GLB Gilahina Butte 85.56 28 P P 21 36 38.5 +0.5
CRQM Cirque 85.74 29 P P 21 36 39.7 +0.7
ARTI Arti 86.21 327 P P 21 36 40.0 -1.2
ARTI IAmb IAmb 21 36 41.6
comp=Z,4.7nm,0.6s
ARTI Arti 86.21 327 P P 21 36 40.5 -0.7
ARTI PcP **PcP 21 36 43.4 -0.4**
ARTI sP **sP 21 36 55.0 +1.5**
D25K Kavik River 86.35 20 P P 21 36 42.3 +0.6
BARN Barnard Glacie 86.51 29 P P 21 36 43.7 +0.8
CTGM Chitina Glacie 86.65 29 P 21 36 43.9 +0.5
QSPA South Pole Qui 88.12 180 P P 21 36 51.1 +0.7
comp=Z,2.0nm,0.3s,baz=29,slow=3.0,SNR=2.1
QSPA LR LR 22 17 12.3
comp=Z,168nm,19.2s,baz=352,slow=36
comp=Z,2.0nm,0.3s
QSPA South Pole Qui 88.12 180 P P 21 36 50.0 -0.4
QSPA IAmb IAmb 21 36 54.7
comp=Z,10nm,1.4s
BBB Bella Bella 93.31 38 LR LR 22 14 54.8
comp=Z,79nm,18.5s,baz=258,slow=33
YKA Yellowknife Ar 99.22 27 P Pdif 21 37 41.3 0.0
comp=Z,0.7nm,0.8s,baz=291,slow=5.5,SNR=11
comp=Z,0.7nm,0.8s
YKA Yellowknife Ar 99.22 27 P Pdif 21 37 41.8 +0.5
PLCA Paso Flores 129.89 151 PKP **PKiKP 21 43 11.8 +1.1**
comp=Z,2.1nm,0.8s,baz=161,slow=2.5,SNR=4.9
DBIC Dimbokro 143.48 279 PKP PKPbc 21 43 33.5 +0.6
comp=Z,6.3nm,0.8s,baz=136,slow=6.2,SNR=8.2
DBIC Dimbokro 143.48 279 PKPbc 21 43 33.6 +0.8
ROSC El Rosal 146.78 84 PKPbc **PKPdf 21 43 42.5 +0.7**
comp=Z,4.4nm,0.3s,baz=215,slow=12,SNR=4.2
ROSC El Rosal 146.78 84 PKPdf 21 43 42.2 +0.4
LPAZ La Paz 147.87 125 PKPbc **PKPbc 21 43 46.5 -0.3**
comp=Z,7.7nm,0.9s,baz=215,slow=2.5,SNR=14
LPAZ La Paz 147.87 125 PKPab **PKiKP 21 43 48.0 -0.6**
CPUP Villa Florida 147.96 152 PKPbc **PKiKP 21 43 47.1 -0.7**
comp=Z,9.6nm,1.1s,baz=206,slow=3.6,SNR=10.0
CPUP Villa Florida 147.96 152 PKPab **PKiKP 21 43 47.8 0.0**

DJA 09 21:24:52.6±0.4, 4°S±3°×12°9E±°, h180km±4km, M4.0/17, MLv4.0/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.67**	**108**	P	Pn	21 25 18.8	+0.6
BNDI				S	Sn	21 25 38.4	+0.6
MSAI	**Masohi**	**1.02**	**340**	P	Pn	21 25 20.0	-0.5
MSAI				S	Sn	21 25 41.5	-0.5
AAI	**Ambon**	**1.24**	**300**	P	Pn	21 25 22.6	+0.4
KRAI	**Karang Ratu**	**1.32**	**318**	P	Pn	21 25 23.6	+0.7
KRAI				S	Sn	21 25 45.6	-0.8
NLAI	**Namlea**	**2.41**	**296**	P	Pn	21 25 34.9	+0.6
NLAI				S	Sn	21 26 07.9	+1.2
FAKI	**Fak Fak**	**3.28**	**65**	P	Pn	21 25 43.1	-1.6
SANI	**Sanana**	**3.97**	**304**	P	Pn	21 25 53.1	-0.3
SAUI	**Saumlaki**	**4.17**	**151**	P	Pn	21 25 56.0	+0.1

*IDC **09** 21:33:42.5±4.5, 8°32S×148°70E, h85km±34km, mb3.5/4, mbtmp3.7/5, Error ellipse: s-maj=68.5km s-min=26.0km az=119.0*

ISC 09 21:33:44.7±2.9, 8°2S±0°4×148°4E±0°6, h100km, n6, σ1°25/7, mb4.0/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**1.71**	**227**	P	**Pn**	**21 34 11.7**	**-1.8**
PMG	40nm,0.3s,baz=56,slow=7.9,SNR=23			S	**Sn**	**21 34 36.6**	**+1.1**
WRA	**Warramunga Arr**	**17.93**	**228**	P	**Pn**	**21 37 48.6**	**+0.9**
ASAR	247nm,0.4s,baz=0.0,slow=20,SNR=47 0.4nm,0.4s,baz=55,slow=11,SNR=5.1 **Alice Springs**	**20.71**	**221**	P	**P**	**21 38 17.8**	**+0.7**
FITZ	0.4nm,0.7s,baz=52,slow=9.9,SNR=1.7 0.4nm,0.7s **Fitzroy Crossi**	**24.22**	**244**	P	**P**	**21 38 52.1**	**-0.2**
MJAR	2.1nm,0.8s,baz=61,slow=10,SNR=1.4 2.1nm,0.8s **Matsushiro AR**	**45.56**	**348**	P	**P**	**21 41 54.4**	**-0.2**
PETK	0.8nm,0.4s,baz=175,slow=7.8,SNR=4.1 0.8nm,0.4s **Petropavlovsk-**	**61.61**	**6**	P	**P**	**21 43 52.0**	**+0.5**
	6.5nm,1.0s,baz=165,slow=7.2,SNR=5.1 6.5nm,1.0s						

*NEIC **09** 21:33:49.0±2.0, 15°.92N±0°.05×94°.26W±0°.04, h78km±8km, mb4.2/51, Md4.5/81(MEX), Error ellipse: s-maj=7.1km s-min=5.6km az=196.0*
*MEX **09** 21:33:49.9±1.0, 15°.94N×94°.26W, h81km±12km, MD4.5*
*GCG **09** 21:33:49.1±2.3, 15°.98N×94°.23W, h35km±31km, MD4.8, ML4.6, Presumed earthquake*
*CATAC **09** 21:33:49.0±1.0, 16°N±4°×9°4W±°, h20km±9km, M4.7/11, mb4.9/1, mB5.6/1, MLv4.5/11, Mw(mB)5.1/1, Error ellipse: s-maj=11.0km s-min=5.7km az=52.6, confirmed*
*IDC **09** 21:33:50.2±1.6, 16°.20N×94°.00W, h75km±7km, mb3.6/9, mbtmp3.9/11, MS3.5/2, Error ellipse: s-maj=43.6km s-min=7.6km az=32.0*

ISC 09 21:33:48.6±0.7, 15°.92N±0°.03×94°.26W±0°.02, h80km±7km, n177, σ2°03/256, mb4.1/16, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CARR	**Arriaga**	**0.46**	**45**	*eP*	**Pn**	**21 34 01.9**	**-0.1**
CARR				*i* S	**Sn**	**21 34 11.8**	**-0.1**
PCIG		**1.02**	**102**		**Pn**	**21 34 07.6**	**-0.3**
PCIG					**Sn**	**21 34 22.0**	**-0.3**
PCIG		**1.02**	**102**	*eP*	**Pn**	**21 34 07.6**	**-0.3**
PCIG				*eS*	**Sn**	**21 34 22.0**	**-0.3**
CMIG	**Matias Romero**	**1.31**	**333**	P	**Pn**	**21 34 11.7**	**+0.1**
CMIG	169nm,0.3s,baz=167,slow=13,SNR=769 S				**Sn**	**21 34 27.9**	**-0.9**
CMIG	1000nm,0.4s,baz=66,slow=24,SNR=23 LR	LR		21 34 46.4			
CMIG	comp=Z,60nm,19.7s,baz=68,slow=46 **Matias Romero**	**1.31**	**333**		**Pn**	**21 34 11.7**	**+0.1**
CMIG					**Sn**	**21 34 28.2**	**-0.5**
CMIG	**Matias Romero**	**1.31**	**333**	*eP*	**Pn**	**21 34 11.7**	**+0.1**
CMIG				*eS*	**Sn**	**21 34 28.2**	**-0.5**
TGIG		**1.38**	**52**		**Pn**	**21 34 12.0**	**-0.5**
TGIG					**Sn**	**21 34 28.8**	**-1.7**
TGIG		**1.38**	**52**	*i* P	**Pn**	**21 34 11.9**	**-0.5**
TGIG				*i* S	**Sn**	**21 34 27.1**	**-3.3**
TGIG		**1.38**	**52**	*i* P	**Pn**	**21 34 12.0**	**-0.5**
TGIG				*i* S	**Sn**	**21 34 27.5**	**-2.9**
TGIG		**1.38**	**52**	*eP*	**Pn**	**21 34 12.0**	**-0.5**
TGIG				*eS*	**Sn**	**21 34 28.8**	**-1.7**
UXUV	**UXUV**	**1.39**	**4**		**Pn**	**21 34 13.1**	**+0.5**
UXUV					**Sn**	**21 34 30.0**	**-0.6**

UXUV	UXUV	1.39	4	*e*P		Pn	21 34 13.1	+0.5
UXUV				*e*S		Sn	21 34 30.0	-0.6
TGBT	Tuxtla Gutierr	1.41	53			Pn	21 34 12.1	-0.6
TGBT						Sn	21 34 29.0	-2.0
TGBT	Tuxtla Gutierr	1.41	53	*e*P		Pn	21 34 12.1	-0.6
TGBT				*i* S		Sn	21 34 29.0	-2.0
HUIG	Huatulco	1.79	265			Pn	21 34 16.9	-0.8
HUIG						Sn	21 34 36.9	-3.0
HUIG	Huatulco	1.79	265	*i* P		Pn	21 34 16.9	-0.8
HUIG				*i* S		Sn	21 34 36.7	-3.1
HUIG				IAML			21 34 41.7	
	comp=N,2µm,0.4s							
HUIG	Huatulco	1.79	265	*i* P		Pn	21 34 16.9	-0.8
HUIG				*i* S		Sn	21 34 36.7	-3.1
HUIG				IAML			21 34 41.7	
	comp=N,2µm,0.4s							
HUIG	Huatulco	1.79	265	*e*P		Pn	21 34 16.9	-0.8
HUIG				*e*S		Sn	21 34 36.9	-3.0
CCIG	Comitan	2.07	80			Pn	21 34 20.9	-0.7
CCIG	Comitan	2.07	80	P		Pn	21 34 21.7	0.0
CCIG				S		Sn	21 34 41.4	-5.4
CCIG	Comitan	2.07	80	*i* P		Pn	21 34 21.4	-0.2
CCIG	Comitan	2.07	80	*i* P		Pn	21 34 21.4	-0.2
CCIG	Comitan	2.07	80	*e*P		Pn	21 34 21.4	-0.2
CCIG				*e*S		Sn	21 34 42.5	-4.3
PATR	El Naranjo	2.11	112			Pn	21 34 22.4	+0.2
PATR						Sn	21 34 47.4	-0.4
PATR	El Naranjo	2.11	112	*e*P		Pn	21 34 22.4	+0.2
PATR				*e*S		Sn	21 34 47.4	-0.4
TUIG	Tuzandepetl	2.11	356			Pn	21 34 20.8	-1.2
TUIG						Sn	21 34 47.0	-0.4
TUIG	Tuzandepetl	2.11	356	*e*P		Pn	21 34 20.8	-1.2
TUIG				*e*S		Sn	21 34 47.0	-0.4
PAVE	Pavencul	2.13	110			Pn	21 34 23.0	+0.5
PAVE						Sn	21 34 48.5	+0.2
PAVE	Pavencul	2.13	110	*e*P		Pn	21 34 23.0	+0.5
PAVE				*e*S		Sn	21 34 48.5	+0.2
THIG		2.17	117			Pn	21 34 22.7	-0.1
THIG						Sn	21 34 48.3	-0.6
THIG		2.17	117	*i* P		Pn	21 34 23.1	+0.3
THIG				*i* S		Sn	21 34 47.5	-1.3
THIG				IAML			21 34 52.1	
	comp=E,3µm,0.4s							
THIG		2.17	117	*i* P		Pn	21 34 23.7	+0.9
THIG				*i* S		Sn	21 34 47.5	-1.3
THIG				IAML			21 34 52.1	
	comp=E,3µm,0.4s							
THIG		2.17	117	*e*P		Pn	21 34 22.7	-0.1
THIG				*e*S		Sn	21 34 48.3	-0.6
CHUJ	Union Juarez	2.23	111	*e*P		Pn	21 34 24.2	+0.4
CHUJ				*e*S		Sn	21 34 50.9	+0.2
NEUV	Arroyo Zacate	2.32	321			Pn	21 34 24.6	-0.2
NEUV						Sn	21 34 52.2	-0.3
NEUV	Arroyo Zacate	2.32	321	*e*P		Pn	21 34 24.6	-0.2
NEUV				*e*S		Sn	21 34 52.2	-0.3
SMCA	Catarina	2.35	116	*i* S		Sn	21 34 51.7	-1.7
SMCA				IAML			21 34 55.1	
	comp=N,2µm,0.5s							
SMCA	Catarina	2.35	116	*i* P		Pn	21 34 25.8	+0.5
SMCA				*i* S		Sn	21 34 51.5	-1.9
SMCA				IAML			21 34 55.1	
	comp=N,2µm,0.5s							
VHSA	Villahermosa	2.41	31			Pn	21 34 26.8	+0.8
VHSA						Sn	21 34 54.0	-0.6
VHSA	Villahermosa	2.41	31	*e*P		Pn	21 34 26.8	+0.8
VHSA				*e*S		Sn	21 34 54.0	-0.6
OXLC	Oaxaca	2.61	296			Pn	21 34 29.0	+0.1
OXLC						Sn	21 34 58.9	-0.9
OXLC	Oaxaca	2.61	296	*e*P		Pn	21 34 29.0	+0.1
OXLC				*e*S		Sn	21 34 58.9	-0.9
OXBJ	Oaxaca	2.63	296			Pn	21 34 32.4	+3.2
OXBJ						Sn	21 35 00.3	+0.1
OXBJ	Oaxaca	2.63	296	*e*P		Pn	21 34 32.4	+3.2
OXBJ				*e*S		Sn	21 35 00.3	+0.1
OXIG	Oaxaca	2.64	296			Pn	21 34 31.2	+1.9
OXIG						Sn	21 35 00.8	+0.3
VHO	Vista Hermosa	2.64	296	*e*P		Pn	21 34 31.2	+1.9
VHO				*e*S		Sn	21 35 00.8	+0.3
HUEH	Huehuetenango	2.72	102			Pn	21 34 30.0	-0.5
HUEH	Huehuetenango	2.72	102	*i* P		Pn	21 34 32.9	+2.4
HUEH				IAML			21 35 18.9	
	comp=E,4µm,0.5s							
HUEH	Huehuetenango	2.72	102	*e*P		Pn	21 34 30.1	-0.3
HUEH				*e*S		Sn	21 35 01.9	-0.6
PMUV	Sontecomapan	2.74	343			Pn	21 34 29.5	-1.1
PMUV						Sn	21 34 58.8	-3.9
PMUV	Sontecomapan	2.74	343	*e*P		Pn	21 34 29.5	-1.1
PMUV				*e*S		Sn	21 34 58.8	-3.9
PEIG	Puerto Escondi	2.78	272			Pn	21 34 30.4	-0.7
PEIG						Sn	21 35 01.4	-2.3
PEIG	Puerto Escondi	2.78	272	*e*P		Pn	21 34 30.4	-0.7
PEIG				*e*S		Sn	21 35 01.4	-2.3
RTAL	Retalhuleu	2.83	119			Pn	21 34 31.9	+0.1
RTAL	Retalhuleu	2.83	119	P		Pn	21 34 33.0	+1.3
RTAL				S		Sn	21 35 06.9	+1.9
RTAL	Retalhuleu	2.83	119	*e*P		Pn	21 34 32.0	+0.3
RTAL				*e*S		Sn	21 35 05.1	+0.1
SOKI	Kika Raxquin	2.96	111	*i* P		Pn	21 34 36.5	+2.7
SOKI	Kika Raxquin	2.96	111	*i* P		Pn	21 34 36.3	+2.4
QUIS	Sacapulas	3.11	101	*i* P		Pn	21 34 36.5	+0.9
QUIS				IAML			21 35 34.4	
	comp=E,2µm,0.4s							
QUIS	Sacapulas	3.11	101	*i* P		Pn	21 34 36.6	+0.9
QUIS				IAML			21 35 34.4	
	comp=E,2µm,0.4s							
STG8	El Palmar, Qui	3.16	117	*i* P		Pn	21 34 32.3	-4.1
STG8	El Palmar, Qui	3.16	117	*i* P		Pn	21 34 32.5	-4.0
STG8				*i* S		Sn	21 35 05.5	-7.8
STG5	El Palmar, Qui	3.19	118	*i* P		Pn	21 34 32.1	-4.5
STG5	El Palmar, Qui	3.19	118	*i* P		Pn	21 34 32.8	-3.9
YOIG	Yosondua	3.29	287			Pn	21 34 39.6	+1.4
YOIG						Sn	21 35 15.9	-0.5
YOIG	Yosondua	3.29	287	*e*P		Pn	21 34 39.6	+1.4
YOIG				*e*S		Sn	21 35 15.9	-0.5
TOIG	Toxpalan	3.45	309			Pn	21 34 41.6	+1.4
TOIG						Sn	21 35 21.7	+1.6
TOIG	Toxpalan	3.45	309	*e*P		Pn	21 34 41.6	+1.4
TOIG				*e*S		Sn	21 35 21.7	+1.6
TXIG	Tlaxiaco	3.62	292			Pn	21 34 43.7	+1.0
TXIG						Sn	21 35 24.2	-0.2
TXIG	Tlaxiaco	3.62	292	*e*P		Pn	21 34 43.7	+1.0
TXIG				*e*S		Sn	21 35 24.2	-0.2
PNIG	Pinotepa	3.75	278			Pn	21 34 44.3	+0.1
PNIG						Sn	21 35 23.1	-4.1
PNIG	Pinotepa	3.75	278	*e*P		Pn	21 34 44.3	+0.1
PNIG				*e*S		Sn	21 35 23.1	-4.1
APG	El Apazote	3.77	103	P		Pn	21 34 44.9	+0.2
	comp=E,1.3nm,0.3s,baz=227,slow=20,SNR=29							
APG				S		Sn	21 35 26.3	-1.7
	comp=E,16nm,0.4s,baz=196,slow=12,SNR=8.8							
APG	El Apazote	3.77	103	*i* P		Pn	21 34 44.8	+0.2
APG	El Apazote	3.77	103	*i* P		Pn	21 34 44.8	+0.2
APG				*i* S		Sn	21 35 26.3	-1.7
TPIG	Tehuac#an	3.87	310			Pn	21 34 46.9	+0.9
TPIG						Sn	21 35 25.8	-4.6
TPIG	Tehuac#an	3.87	310	*e*P		Pn	21 34 46.9	+0.9
TPIG				*e*S		Sn	21 35 25.8	-4.6
HLIG	Huajuapan de L	3.89	300			Pn	21 34 48.4	+2.1
HLIG						Sn	21 35 30.6	-0.4
HLIG	Huajuapan de L	3.89	300	*e*P		Pn	21 34 48.4	+2.1
HLIG				*e*S		Sn	21 35 30.6	-0.4
JAUV	Jalcomulco	4.20	325			Pn	21 34 50.0	-0.4
JAUV						Sn	21 35 34.2	-4.0
JAUV	Jalcomulco	4.20	325	*e*P		Pn	21 34 50.0	-0.4
JAUV				*e*S		Sn	21 35 34.2	-4.0
FTIG	Fresnillo de T	4.20	299			Pn	21 34 52.2	+1.7
FTIG						Sn	21 35 37.5	-1.0
FTIG	Fresnillo de T	4.20	299	*e*P		Pn	21 34 52.2	+1.7
FTIG				*e*S		Sn	21 35 37.5	-1.0
SCIG	Sabancuy	4.22	44			Pn	21 34 50.0	-0.5
SCIG						Sn	21 35 36.9	-1.7
SCIG	Sabancuy	4.22	44	*e*P		Pn	21 34 50.0	-0.5
SCIG				*e*S		Sn	21 35 36.9	-1.7
LVIG	Laguna Verde	4.31	332			Pn	21 34 49.5	-2.2
LVIG						Sn	21 35 34.2	-6.6
LVIG	Laguna Verde	4.31	332	*e*P		Pn	21 34 49.5	-2.2
LVIG				*e*S		Sn	21 35 34.2	-6.6
PETF	Flores	4.33	76			Pn	21 34 52.2	+0.2
PETF	Flores	4.33	76	P		Pn	21 34 52.4	+0.3
PETF	Flores	4.33	76	*i* P		Pn	21 34 52.4	+0.3
PETF				*i* S		Sn	21 35 37.9	-3.5
PETF				IAML			21 35 42.9	
	comp=E,1µm,0.5s							
PETF	Flores	4.33	76	*i* P		Pn	21 34 52.4	+0.3
PETF				IAML			21 35 42.9	
	comp=E,1µm,0.6s							
PETF	Flores	4.33	76	*e*P		Pn	21 34 52.4	+0.3
PETF				*e*S		Sn	21 35 38.5	-2.8
MGIG	Malinaltepec	4.40	288			Pn	21 34 54.9	+1.7
MGIG						Sn	21 35 41.9	-1.3
MGIG	Malinaltepec	4.40	288	*e*P		Pn	21 34 54.9	+1.7
MGIG				*e*S		Sn	21 35 41.9	-1.3
TLIG	Tlapa	4.44	292			Pn	21 34 54.5	+0.8
TLIG	Tlapa	4.44	292	*e*P		Pn	21 34 55.1	+1.4
TLIG				*e*S		Sn	21 35 46.1	+1.8
FAME	Alcaldia de Sa	4.59	116	P		Pn	21 34 59.6	+3.9
FAME				S		Sn	21 35 50.9	+3.1
SLOZ	Alcaldia de Sa	4.71	113	P		Pn	21 34 54.2	-3.2
CRIG	Cruz Grande	4.75	281			Pn	21 34 58.0	+0.2
CRIG						Sn	21 35 44.3	-7.3
CRIG	Cruz Grande	4.75	281	*e*P		Pn	21 34 58.0	+0.2
CRIG				*e*S		Sn	21 35 44.3	-7.3
NUBE	Las Nubes	4.77	114	P		Pn	21 35 01.1	+2.8
NUBE				S		Sn	21 35 56.1	+3.8
ZAFR2	Estanzuela, Za	4.92	105	*i* P		Pn	21 34 56.0	-4.2
ZAFR2	Estanzuela, Za	4.92	105	*i* P		Pn	21 34 55.9	-4.2
MTO3	Montecristo	4.96	107			Pn	21 35 00.7	-0.2
MTO3	Montecristo	4.96	107	P		Pn	21 35 00.9	0.0
JAYA	Jayaque - finc	5.17	115	P		Pn	21 35 06.4	+2.8
JAYA				S		Sn	21 36 05.8	+3.7
JAYA	Jayaque - finc	5.17	115	*i* P		Pn	21 35 06.1	+2.4
PPM	Popocatepetl	5.21	308	*e*P		Pn	21 35 06.4	+1.8
PPM				*e*S		Sn	21 36 01.3	-2.3
PPIG	Popocatepetl	5.21	308			Pn	21 35 06.4	+1.8
PPIG						Sn	21 36 01.3	-2.4
PMON	Piamonte	5.26	114	P		Pn	21 35 09.2	+4.3
PMON				S		Sn	21 36 08.1	+3.8
CXUV	Coxquihui	5.29	324			Pn	21 35 06.1	+1.0
CXUV						Sn	21 36 04.3	-0.5
CXUV	Coxquihui	5.29	324	*e*P		Pn	21 35 06.1	+1.0
CXUV				*e*S		Sn	21 36 04.3	-0.5
IZABA	Izabal, Puerto	5.46	91	*e*S		Sn	21 36 05.4	-3.6
PQSS	Presa 15 de Se	5.96	112	P		Pn	21 35 14.7	+0.3
CTUV	Llano Grande	6.75	326			Pn	21 35 24.8	-0.4
CTUV						Sn	21 36 36.9	-3.7
CTUV	Llano Grande	6.75	326	*e*P		Pn	21 35 24.8	-0.4
CTUV				*e*S		Sn	21 36 36.9	-3.7
TEIG	Tepich	7.12	52			Pn	21 35 28.4	-1.7
MOIG	Morelia	7.59	301			Pn	21 35 36.4	-0.4
JTS	Las Juntas de	10.65	121	P		Pn	21 36 18.7	+0.3
	comp=E,5.1nm,0.5s,baz=331,slow=10.0,SNR=1.6							
JTS	Las Juntas de	10.65	121			Pn	21 36 17.6	-0.8
833A	Chaparral WMA,	13.23	340			Pn	21 36 53.6	+0.4
HNDO	Hondo	14.31	342			Pn	21 37 09.4	+1.9
435B	Jarrell	15.11	349			P	21 37 20.7	-0.3
SAND	Sanderson	15.73	334			P	21 37 28.2	+0.2
BRDY	Brady	15.90	345			P	21 37 30.3	+0.4
TXAR	Lajitas Array	15.91	329	P		P	21 37 30.2	+0.1
	comp=E,1.1nm,0.8s,baz=146,slow=13,SNR=13							
OZNA	Ozona	16.20	338	Pn		Pn	21 37 31.7	+0.1
OZNA				IAmb	IAmb		21 37 35.1	
	comp=Z,20nm,1.2s							
ALPN	Alpine	16.76	331			P	21 37 40.1	+0.5
SGCY	Sterling City	17.11	340			P	21 37 44.2	+0.9
SGCY				IAmb	IAmb		21 37 47.8	
	comp=Z,11nm,0.9s							
MNHN	Monahans	17.20	335			P	21 37 45.4	+1.1
MNHN				IAmb	IAmb		21 37 50.7	
	comp=Z,11nm,0.7s							
PLPT	Palo Pinto	17.22	348			Pn	21 37 44.2	+0.2
PLPT				IAmb	IAmb		21 37 51.3	
	comp=Z,8.0nm,0.5s							
ABTX	Abilene, Hawle	17.33	345			P	21 37 46.0	+0.3
ABTX				IAmb	IAmb		21 37 54.1	
	comp=Z,8.4nm,0.6s							
VHRN	Van Horn	17.76	328	P		Pn	21 37 52.7	+2.0
ODSA	Odessa	17.80	336			Pn	21 37 51.5	+0.2
ODSA				IAmb	IAmb		21 37 54.9	
	comp=Z,26nm,1.2s							
APMT	Aspermont	18.12	344			Pn	21 37 56.0	+0.9
APMT				IAmb	IAmb		21 38 05.2	
	comp=Z,7.5nm,0.5s							
WTFS	Witchita Falls	18.17	349	P		Pn	21 37 58.1	+2.5
POST	Post	18.29	340			Pn	21 37 57.6	+0.5
POST				IAmb	IAmb		21 38 01.3	
	comp=Z,8.3nm,0.9s							
CLNB	Carlsbad	18.47	333	P		Pn	21 37 59.4	0.0
MIAR	Mount Ida	18.56	2			P	21 37 59.7	+0.6
GDL2	Guadalupe Moun	18.63	332	P		Pn	21 38 01.2	-0.1
DKNS	Dickens	18.67	342	IAmb	IAmb		21 38 05.4	
	comp=Z,6.7nm,0.6s							
W35A	Tecumseh	19.30	353	IAmb	IAmb		21 38 47.1	
	comp=Z,8.7nm,0.6s							
MSTX	Muleshoe	19.54	338	IAmb	IAmb		21 38 15.7	
	comp=Z,16nm,1.0s							
SMWD	Samnorwood	19.84	345	IAmb	IAmb		21 38 19.9	
	comp=Z,11nm,0.6s							
FCAR	Ozark Folk Cen	19.98	5	P		P	21 38 14.9	+0.3
FCAR				IAmb	IAmb		21 38 18.3	
	comp=Z,16nm,1.4s							
FPAL	Fort Paine	20.10	21	P		P	21 38 14.1	-2.0
X51A	Calhoun	20.40	23	P		P	21 38 18.7	-0.4
121A	Cookes Peak, D	20.60	326	P		P	21 38 21.0	-0.5
121A				IAmb	IAmb		21 38 25.9	
	comp=Z,12nm,0.9s							
W50A	Signal Mountai	20.80	21	P		P	21 38 23.9	+0.3
W50A				IAmb	IAmb		21 38 30.2	
	comp=Z,7.8nm,0.7s							
Y22A	Socorro	21.29	330	IAmb	IAmb		21 38 32.8	
	comp=Z,8.0nm,1.1s							
TKL	Tuckaleechee C	21.77	24	P		P	21 38 32.2	-1.7
	comp=Z,1.3nm,0.4s,baz=200,slow=12,SNR=6.4							
TKL				LR	LR		21 47 08.9	
	comp=Z,60nm,19.4s,baz=353,slow=37							
	comp=Z,1.3nm,0.4s							
TKL	Tuckaleechee C	21.77	24	IAmb	IAmb		21 38 41.6	
	comp=Z,6.3nm,0.8s							
RTBA	Rita Blanca	21.79	341			P	21 38 34.8	+0.6
RTBA				IAmb	IAmb		21 38 37.8	
	comp=Z,9.5nm,0.7s							
ANMO	Albuquerque	21.88	332	P		P	21 38 36.7	+1.5
	comp=Z,1.1nm,0.7s,baz=172,slow=13,SNR=4.3							
	comp=Z,1.1nm,0.7s							
ANMO	Albuquerque	21.88	332	P		P	21 38 34.1	-1.1
TUC	Tucson	22.17	320			P	21 38 39.6	+1.3
T25A	Trinidad	22.97	339	IAmb	IAmb		21 38 51.9	
	comp=Z,8.8nm,1.1s							
PV02	Paradox Valley	25.61	333	IAmb	IAmb		21 39 41.2	
	comp=Z,11nm,1.2s							
PV23	Carpenter Ridg	25.93	333	IAmb	IAmb		21 39 17.1	
	comp=Z,6.4nm,0.7s							
PDAR	Pinedale Array	29.79	337	P		P	21 39 49.7	+1.5
	comp=Z,0.8nm,0.8s,baz=149,slow=8.2,SNR=7.5							
	comp=Z,0.8nm,0.8s							
PDAR	Pinedale Array	29.79	337	P		P	21 39 48.5	+0.3
NVAR	Mina Array Bea	30.82	321	P		P	21 40 00.5	+3.2
	comp=Z,4.3nm,0.8s,baz=133,slow=9.4,SNR=14							
	comp=Z,4.3nm,0.8s							
NVAR	Mina Array Bea	30.82	321	P		P	21 39 58.2	+0.9
LOHW	Long Hollow	30.91	337	P		P	21 39 59.4	+1.4
LOHW				IAmb	IAmb		21 40 01.0	
	comp=Z,3.4nm,0.8s							
HLID	Hailey	32.46	332			P	21 40 13.5	+1.9
HLID				IAmb	IAmb		21 40 17.2	
	comp=Z,2.9nm,0.9s							
MCMT	McKenzie Canyo	32.81	335	P		P	21 40 14.7	0.0
J08A	Circle Bar Ran	34.26	328	P		P	21 40 28.6	+1.4
F10A	Beach Ranch, E	35.59	332	P		P	21 40 39.0	+0.4
YKA	Yellowknife Ar	48.68	348	P		P	21 42 24.6	+0.1
	comp=Z,1.1nm,0.8s,baz=156,slow=6.8,SNR=10							
	comp=Z,1.1nm,0.8s							
INK	Inuvik	57.99	344	LR	LR		22 10 36.2	
	comp=Z,94nm,18.1s,baz=348,slow=38							
ILAR	Eielson Array	60.23	337	P		P	21 43 48.8	+0.6
	comp=Z,0.5nm,0.8s,baz=158,slow=4.6,SNR=8.6							
	comp=Z,0.5nm,0.8s							
SPITS	Spitsbergen Ar	78.65	11	P		P	21 45 40.8	-0.7
	comp=Z,7.4nm,0.9s,baz=268,slow=13,SNR=1.9							
	comp=Z,7.4nm,0.9s							
ESDC	Sonseca Array	80.24	52	P		P	21 45 49.9	-1.0
	comp=Z,0.6nm,1.0s,baz=302,slow=4.5,SNR=2.1							
	comp=Z,0.6nm,1.0s							
ESDC	Sonseca Array	80.24	52	P		P	21 45 50.4	-0.5
ARCES	ARCESS Array B	85.00	18	P		P	21 46 15.1	+0.2
	comp=Z,1.3nm,0.6s,baz=294,slow=3.9,SNR=5.6							
	comp=Z,1.3nm,0.6s							
ARCES	ARCESS Array B	85.00	18	P		P	21 46 15.6	+0.6
WRA	Warramunga Arr	133.71	257	PKP		PKiKP	21 52 58.1	-0.2
	comp=Z,0.2nm,0.5s,baz=87,slow=2.1,SNR=4.9							

*IDC **09** 21:35:50.1±1.2, 65.11N×138.81W, h0km, mb4.5/1, mbtmp3.4/3, ML2.9/2, Error ellipse: s-maj=44.8km s-min=10.9km az=0.0*

*ANF **09** 21:35:50.8±0.2, 64.95N×138.66W, h8km±1km, ML3.3/60, Error ellipse: s-maj=1.1km s-min=0.9km az=92.0*

*PGC **09** 21:35:51.5±0.1, 64.94N×138.68W, h10km, ML3.1/38, ML2.9(AEIC), 104km northeast of Dawson, Yt Southern Yukon Territory, Canada*

ISC 09 21:35:51.2±1.0, 64.95N±0.01×138.64W±0.02, h14km±7km, n148, σ1°54/251, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I29M	Ogilvie Camp,	0.44	18	P	Pg	21 36 00.1	+0.2
	baz=202,SNR=421						
I29M				S	Sg	21 36 06.4	+0.5
	baz=202						
I29M	Ogilvie Camp,	0.44	18	P	Pg	21 36 00.2	+0.2
I29M				S	Sg	21 36 06.4	+0.5
J29N	Klondike Camp	0.53	160	P	Pg	21 36 01.1	-0.4
	baz=338,SNR=66						
J29N				S	Sg	21 36 07.9	-0.6
	baz=338						
J29N	Klondike Camp	0.53	160	P	Pg	21 36 01.3	-0.2
J29N				S	Sg	21 36 07.5	-1.0
I28M	Miner Creek	0.75	313	P	Pg	21 36 05.1	-0.6
	baz=133						
I28M				S	Sb	21 36 15.6	-0.5
	baz=133						
I28M	Miner Creek	0.75	313	P	Pg	21 36 05.0	-0.6
I28M				S	Sb	21 36 15.6	-0.5
I30M	Mount Dempster	1.00	73	P	Pg	21 36 09.8	-0.6
	baz=256,SNR=976						
I30M				S	Sb	21 36 24.1	+0.7
	baz=256						
I30M	Mount Dempster	1.00	73	P	Pg	21 36 10.0	-0.4
I30M				S	Sb	21 36 24.0	+0.7
J30M	Hart River	1.06	110	P	Pg	21 36 10.9	-0.6
	baz=292						
J30M				S	Sg	21 36 25.5	+0.2
	baz=292						
J30M	Hart River	1.06	110	P	Pg	21 36 10.7	-0.8
J30M				S	Sg	21 36 25.5	+0.2
K29M	Barlow Dome	1.21	156	P	Pb	21 36 13.5	-0.3
	baz=336,SNR=356						
K29M				S	Sg	21 36 29.2	-0.9
	baz=336						
K29M	Barlow Dome	1.21	156	P	Pb	21 36 13.3	-0.5
K29M				S	Sg	21 36 29.6	-0.5
I27K	Kandik River	1.42	299	P	Pn	21 36 16.8	+0.2
	baz=117						
I27K				S	Sg	21 36 36.2	-0.5
	baz=117						
H27K	Steamboat Moun	1.76	318	P	Pn	21 36 21.6	+0.3
	baz=136						
H27K				S	Sb	21 36 44.7	-0.5
	baz=136						
H27K	Steamboat Moun	1.76	318	Pn	Pn	21 36 21.6	+0.3
H27K				Sn	Sn	21 36 43.8	+0.3
MAYO	Mayo, Yukon	1.81	137	Sb	Sg	21 36 48.7	-0.5
	baz=319						
MAYO	Mayo, Yukon	1.81	137	Pn	Pn	21 36 22.4	+0.5
MAYO				Sn	Sn	21 36 44.4	-0.2
L29M	L29M	1.86	173	P	Pn	21 36 23.0	+0.5
	baz=353						
L29M				S	Sn	21 36 47.5	+1.7
	baz=353						
L29M	L29M	1.86	173	Pn	Pn	21 36 23.1	+0.5
L29M				Sn	Sn	21 36 45.5	-0.4
G29M	Pine Creek	1.99	7	P	Pn	21 36 24.5	+0.1
	baz=188						
G29M				S	Sn	21 36 50.1	+1.0
	baz=188						
G29M	Pine Creek	1.99	7	Pn	Pn	21 36 24.3	-0.2
H31M	Peel River	2.00	62	P	Pn	21 36 25.1	+0.6
	baz=247,SNR=336						
H31M				S	Sn	21 36 51.0	+1.7
	baz=247						
H31M	Peel River	2.00	62	Pn	Pn	21 36 24.8	+0.4
J26L	Joseph Creek	2.16	260	P	Pn	21 36 26.4	-0.4
	baz=76,SNR=210						
J26L				S	Sn	21 36 54.3	+0.9
	baz=76						
G27K	Doyon Strip	2.25	328	P	Pn	21 36 28.2	+0.2
	baz=146						
G27K				S	Sn	21 36 56.6	+1.2
	baz=146						
G27K	Doyon Strip	2.25	328	Pn	Pn	21 36 28.1	+0.2
G27K				Sn	Sn	21 36 54.2	-1.2
G30M	tAoh Zraii Nji	2.27	25	P	Pn	21

RIDG Sb **Sb** **21 37 21.8 +2.1**
baz=63
M27K **Edge Creek, AK** **2.97 211** P **Pn** **21 36 38.0 0.0**
baz=27
M27K Sb **Sb** **21 37 22.6 +2.5**
baz=27
F31M **Tsiigehtchic** **3.20 36** P **Pn** **21 36 41.2 +0.3**
baz=221,SNR=86
F31M S **Sn** **21 37 19.5 +0.8**
baz=221
F31M **Tsiigehtchic** **3.20 36** Pn **Pn** **21 36 40.9 0.0**
F31M Sn **Sn** **21 37 17.0 -1.8**
M26K **Nabesna, AK** **3.21 219** P **Pn** **21 36 41.5 +0.3**
baz=35,SNR=23
M26K Sb **Sb** **21 37 29.5 +2.7**
baz=35
YUK3 **Moose Creek** **3.29 195** P **Pn** **21 36 43.0 +0.6**
baz=13,SNR=200
YUK3 Sb **Sb** **21 37 31.3 +2.1**
baz=13
YUK3 **Moose Creek** **3.29 195** Pn **Pn** **21 36 42.8 +0.4**
YUK3 Sn **Sn** **21 37 19.9 -1.5**
K24K **Donnelly Dome** **3.31 253** Sb **Sg** **21 37 33.3 -3.9**
baz=66
YUK2 **White River** **3.32 198** Pn **Pn** **21 36 43.3 +0.5**
YUK2 Sg **Sg** **21 37 34.0 -3.8**
M31M **Drury Creek, Y** **3.34 143** P **Pn** **21 36 43.6 +0.6**
baz=327,SNR=8.5
M31M S **Sn** **21 37 24.1 +1.6**
baz=327
M31M **Drury Creek, Y** **3.34 143** Pn **Pn** **21 36 43.1 +0.1**
M31M Sg **Sb** **21 37 34.5 +3.8**
E29M **Blow River** **3.47 5** P **Pn** **21 36 44.9 +0.1**
baz=186
E29M S **Sn** **21 37 25.4 -0.2**
baz=186
E29M **Blow River** **3.47 5** Pn **Pn** **21 36 44.5 -0.2**
ILAR **Eielson Array** **3.53 271** Pn **Pn** **21 36 44.6 -0.8**
0.7nm,0.3s,baz=80,slow=17,SNR=6.9
ILAR Lg Lg 21 37 37.0
7.2nm,0.3s,baz=73,slow=29,SNR=16
1.2nm,0.4s
F26K **Sheenjek River** **3.54 324** P **Pn** **21 36 45.2 -0.5**
baz=139,SNR=37
F26K S **Sn** **21 37 27.2 -0.2**
baz=139
F26K **Sheenjek River** **3.54 324** Pn **Pn** **21 36 45.2 -0.5**
BRWY **Burwash Landin** **3.59 183** Pn **Pn** **21 36 47.0 +0.6**
BRWY Sg **Sb** **21 37 41.8 +3.9**
PAX **Paxson** **3.61 240** P **Pn** **21 36 46.8 +0.2**
baz=53
PAX S **Sn** **21 37 28.6 -0.4**
baz=53
PAX **Paxson** **3.61 240** Pn **Pn** **21 36 47.0 +0.3**
PAX Sn **Sn** **21 37 27.9 -1.2**
HDA **Harding Lake** **3.61 265** Sb **Sb** **21 37 40.1 +1.8**
baz=78
YUK4 **Talbot Arm** **3.61 180** P **Pn** **21 36 46.5 -0.4**
baz=359,SNR=234
YUK4 Sb **Sb** **21 37 38.8 +0.1**
baz=359
YUK4 **Talbot Arm** **3.61 180** Pn **Pn** **21 36 46.5 -0.4**
E28M **Babbage River** **3.69 355** P **Pn** **21 36 48.0 +0.2**
baz=174,SNR=70
E28M S **Sn** **21 37 31.2 +0.1**
baz=174
E28M **Babbage River** **3.69 355** Pn **Pn** **21 36 47.6 -0.1**
E28M Sn **Sn** **21 37 29.3 -1.8**
N31M **Braeburn, Yuko** **3.71 158** S **Sn** **21 37 33.5 +2.2**
baz=341
N31M **Braeburn, Yuko** **3.71 158** Pn **Pn** **21 36 47.7 -0.2**
YUK8 **Steele Glacier** **3.71 188** P **Pn** **21 36 48.5 +0.2**
baz=7.0,SNR=102
YUK8 Sb **Sb** **21 37 45.5 +4.0**
baz=7.0
YUK8 **Steele Glacier** **3.71 188** Pn **Pn** **21 36 49.1 +0.9**
YUK8 Sg **Sb** **21 37 44.5 +3.0**
POKR **Poker Plat Res** **3.73 277** P **Pn** **21 36 47.9 -0.4**
baz=88
POKR Sb **Sb** **21 37 43.7 +1.8**
baz=88
YUK5 **Granite Creek** **3.84 174** Pn **Pn** **21 36 49.9 -0.1**
YUK5 Sg **Sb** **21 37 49.0 +3.8**
HARP **HAARP** **3.87 232** P **Pn** **21 36 49.9 -0.3**
baz=45
HARP Sb **Sb** **21 37 49.2 +3.5**
baz=45
F25K **Christian Rive** **3.88 316** P **Pn** **21 36 50.7 +0.3**
baz=130
F25K Sg **Sg** **21 37 57.3 +1.6**
baz=130
F25K **Christian Rive** **3.88 316** Pn **Pn** **21 36 50.3 -0.1**
COLA **College** **3.93 273** P **Pn** **21 36 50.9 0.0**
baz=85
COLA Sb **Sb** **21 37 50.1 +2.8**
baz=85
INK **Inuvik** **3.94 29** P **Pn** **21 36 51.1 0.0**
baz=214,SNR=22
INK S **Sn** **21 37 36.2 -0.9**
baz=214
INK **Inuvik** **3.94 29** Pn **Pn** **21 36 51.4 +0.2**
INK Sn **Sn** **21 37 36.2 -0.9**
H24K **Noodor Dome** **3.97 287** P **Pn** **21 36 51.6 0.0**
baz=99
H24K S **Sn** **21 37 37.5 -0.4**
baz=99
MMPY **Sheldon Lake,** **4.02 122** P **Pn** **21 36 53.9 +1.6**
baz=309,SNR=29
MMPY S **Sn** **21 37 41.3 +2.1**
baz=309
MMPY **Sheldon Lake,** **4.02 122** Pn **Pn** **21 36 53.7 +1.4**
YUK6 **Outpost Mounta** **4.02 178** P **Pn** **21 36 53.5 +1.1**
baz=358
YUK6 **Outpost Mounta** **4.02 178** Pn **Pn** **21 36 52.9 +0.4**
G24K **Hadweenzic Riv** **4.04 300** P **Pn** **21 36 52.5 -0.1**
baz=112
G24K Sb **Sb** **21 37 54.8 +4.1**
baz=112
MCARA **McCarthy VSAT** **4.09 211** P **Pn** **21 36 54.6 +1.4**
baz=27,SNR=40
MCARA S **Sn** **21 37 42.1 +1.2**
baz=27
MCARA **McCarthy VSAT** **4.09 211** Pn **Pn** **21 36 53.8 +0.6**
PTPK **Patty Peak** **4.15 207** Pn **Pn** **21 36 54.8 +0.5**
PTPK Sg **Sb** **21 37 58.8 +4.7**
HYT **Haines Junctio** **4.17 172** P **Pn** **21 36 55.5 +1.1**
baz=353,SNR=15
HYT Sb **Sb** **21 37 58.3 +3.8**
baz=353
HYT **Haines Junctio** **4.17 172** Pn **Pn** **21 36 54.8 +0.4**
CTGM **Chitina Glacie** **4.18 198** Pn **Pn** **21 36 55.0 +0.4**
CTG **Chitna Glacier** **4.18 198** S **Sn** **21 37 44.5 +1.2**
baz=16
O28M **Mount Upton** **4.25 190** P **Pn** **21 36 56.7 +1.0**
baz=8.6
O28M S **Sn** **21 37 46.2 +1.1**
baz=8.6
O28M **Mount Upton** **4.25 190** Pn **Pn** **21 36 56.1 +0.5**
O28M Sn **Sn** **21 37 43.8 -1.3**
BALM **Baldy** **4.27 205** Pn **Pn** **21 36 56.0 +0.1**
BALM Sn **Sn** **21 37 44.5 -1.0**
LOGN **Logan Glacier** **4.28 196** Pn **Pn** **21 36 57.1 +1.2**
DHY **Denali Highway** **4.28 248** P **Pn** **21 36 56.4 +0.5**
baz=60
DHY S **Sn** **21 37 46.7 +1.0**
baz=60
N25K **Chitina, Valde** **4.30 221** P **Pn** **21 36 56.8 +0.7**
baz=36
N25K **Chitina, Valde** **4.30 221** Pn **Pn** **21 36 56.8 +0.7**
O30N **Mendenhall** **4.35 163** P **Pn** **21 36 57.5 +0.7**
baz=345,SNR=31
O30N S **Sn** **21 37 48.6 +1.3**
baz=345
O30N **Mendenhall** **4.35 163** Pn **Pn** **21 36 57.3 +0.4**
O30N Sn **Sn** **21 37 46.3 -1.0**
KIAG **Kiagna River** **4.38 205** Pn **Pn** **21 36 57.8 +0.5**
D27M **Malcolm River** **4.41 349** P **Pn** **21 36 57.8 +0.1**
baz=167
D27M S **Sn** **21 37 48.4 -0.5**
baz=167
D27M **Malcolm River** **4.41 349** Pn **Pn** **21 36 57.7 0.0**
D27M Sn **Sn** **21 37 47.1 -1.8**
GRNC **Granite Creek** **4.46 200** Pn **Pn** **21 36 58.6 +0.1**
NEA2 **Nenana** **4.48 270** P **Pn** **21 36 57.4 -1.2**
baz=81
NEA2 Sb **Sb** **21 38 07.3 +4.0**
baz=81
I23K **Minto, Yukon-K** **4.55 277** P **Pn** **21 36 58.3 -1.1**
baz=88
I23K Sb **Sb** **21 38 09.3 +4.1**
baz=88
N32M **Quiet Lake** **4.57 144** P **Pn** **21 37 00.8 +0.9**
baz=329
N32M S **Sn** **21 37 54.5 +1.8**
baz=329
N32M **Quiet Lake** **4.57 144** Pn **Pn** **21 37 00.2 +0.3**
WHY **Whitehorse** **4.63 156** P **Pn** **21 37 01.6 +0.8**
baz=340
WHY S **Sn** **21 37 55.4 +1.0**
baz=340
WHY **Whitehorse** **4.63 156** Sn **Sn** **21 37 53.4 -0.9**
MCK **McKinley** **4.64 259** P **Pn** **21 37 01.3 +0.6**
baz=70
MCK S **Sn** **21 37 55.6 +1.2**
baz=70
O29M **Mount Kennedy** **4.66 180** P **Pn** **21 37 02.9 +1.7**
baz=359
O29M S **Sn** **21 37 56.8 +1.7**
baz=359
O29M **Mount Kennedy** **4.66 180** Pn **Pn** **21 37 01.7 +0.5**
O29M Sg **Sg** **21 38 16.0 -4.6**
TABL **Table Mountain** **4.67 195** Pn **Pn** **21 37 01.0 -0.4**
WAT6 **Susitna Watana** **4.68 244** P **Pn** **21 37 02.7 +1.2**
baz=55
WAT6 S **Sn** **21 37 55.3 -0.4**
baz=55
KLU **Klutina** **4.78 227** Sb **Sb** **21 38 16.1 +4.1**
baz=40
BMRM **Bremner River** **4.83 217** P **Pn** **21 37 04.8 +1.4**
baz=31
WAT1 **Susitna Watana** **4.87 249** P **Pn** **21 37 05.0 +1.1**
baz=60
WAT1 S **Sn** **21 38 00.9 +0.9**
baz=60
P30M **Million Dollar** **4.90 170** Sb **Sb** **21 38 20.9 +5.3**
baz=351
P30M **Million Dollar** **4.90 170** Pn **Pn** **21 37 04.5 +0.1**
P30M Sg **Sg** **21 38 24.3 -4.1**
SCM **Sheep Creek Mo** **5.00 235** Sb **Sb** **21 38 23.4 +5.0**
baz=47
G23K **Bananza Creek** **5.00 296** P **Pn** **21 37 06.1 +0.3**
baz=106
G23K S **Sn** **21 38 03.4 0.0**
baz=106
E24K **Your Creek** **5.04 313** P **Pn** **21 37 07.1 +0.8**
baz=124
E24K S **Sn** **21 38 05.2 +0.9**
baz=124
C27K **Jago River** **5.10 340** P **Pn** **21 37 07.6 +0.7**
baz=155,SNR=24
C27K S **Sn** **21 38 06.7 +1.1**
baz=155
C27K **Jago River** **5.10 340** Pn **Pn** **21 37 07.8 +0.8**
M23K **Glacier View** **5.17 236** Sb **Sb** **21 38 27.1 +4.0**
baz=48
COLD **Coldfoot** **5.23 301** P **Pn** **21 37 09.8 +0.9**
baz=111
COLD **Coldfoot** **5.23 301** Pn **Pn** **21 37 08.7 -0.2**
TRF **Thorofare Moun** **5.31 259** P **Pn** **21 37 10.5 +0.5**
baz=68
TRF S **Sn** **21 38 11.8 +0.8**
baz=68
D25K **Kavik River** **5.33 329** P **Pn** **21 37 12.0 +1.7**
baz=142
D25K S **Sn** **21 38 11.7 +0.4**
baz=142
D25K **Kavik River** **5.33 329** Pn **Pn** **21 37 08.9 -1.3**
D25K Sn **Sn** **21 38 09.2 -2.2**
SML **Sawmill** **5.38 239** P **Pn** **21 37 12.7 +1.8**
baz=50
E23K **Chandalar** **5.39 310** P **Pn** **21 37 12.4 +1.3**
baz=120
E23K S **Sn** **21 38 13.7 +0.8**
baz=120
BPAW **Bear Paw Mtn.** **5.40 267** P **Pn** **21 37 10.3 -0.9**
baz=75
BPAW Sb **Sb** **21 38 32.7 +2.9**
baz=75
H22K **Ishtalitna Cre** **5.40 286** P **Pn** **21 37 10.4 -0.8**
baz=94
P33M **Teslin, Yukon** **5.46 148** Pn **Pn** **21 37 12.8 +0.8**
P33M Sn **Sn** **21 38 12.7 -1.9**
D24K **Happy Valley** **5.80 321** S **Sn** **21 38 24.8 +1.9**
baz=132
Q32M **Nakina River** **6.71 151** Pn **Pn** **21 37 29.9 +0.5**
C36M **Paulatuk** **7.18 46** P **Pn** **21 37 35.2 -0.3**
baz=239,SNR=32
C36M **Paulatuk** **7.18 46** Pn **Pn** **21 37 35.1 -0.3**
YKA **Yellowknife Ar** **10.91 92** Pn **Pn** **21 38 25.4 -1.2**
0.1nm,0.3s,baz=294,slow=14,SNR=6.2
YKA Sn **Sn** **21 40 21.9 -6.3**
0.1nm,0.3s,baz=288,slow=12,SNR=4.6
0.1nm,0.3s
FINES **FINESS Array B** **53.41 9** P **P** **21 45 09.6 -0.1**
6.6nm,1.1s,baz=340,slow=10,SNR=3.9
6.6nm,1.1s

*SDD **09** 21:39:13.0±1.5, 17°.77N×67°.05W, h33km±13km, MD3.0, ML3.5, MW3.5, Presumed earthquake*
*OSPL **09** 21:39:13.9±0.3, 17°.79N×66°.88W, h9km±6km, ML3.3, Presumed earthquake*
*NEIC **09** 21:39:13.6±0.8, 17°.82N±0°.03×66°.87W±0°.01, h10km±2km, ML3.5/31, Md3.3/7(RSPR), Error ellipse: s-maj=5.7km s-min=3.0km az=7.0*
*NEIC **09** 21:39:13.4±1.1, 17°.819N±0°.009×66°.86W±0°.01, h10km±1km, ML3.5/37, Md3.3/7(RSPR), Error ellipse: s-maj=3.1km s-min=1.9km az=346.0*
*RSPR **09** 21:39:14.1, 17°.85N×66°.88W, h10km, MD3.3/7*

ISC 09 21:39:13.5±1.0, 17°.87N±0°.05×66°.88W±0°.02, h18km±2km, n55, σ0°46/98, 3C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.11**	**358**			**Pg**		**21 39 17.4**	**+0.2**
GBPR						Sg		21 39 19.8	+0.1
GBPR	**Guanica, Bosqu**	**0.11**	**358**	⇓	*i*P	**Pg**		**21 39 17.4**	**+0.2**
GBPR					*e*S	Sg		21 39 19.8	+0.1
MLPR	**Magueyes Islan**	**0.19**	**302**	Pg		**Pg**		**21 39 18.3**	**+0.1**
MLPR				Sg		**Sg**		**21 39 21.6**	**+0.1**
MLPR				IAML				21 39 22.6	
8μm,0.1s									
MLPR	**Magueyes Islan**	**0.19**	**302**	Pg		**Pg**		**21 39 18.4**	**+0.1**
MLPR				Sg		**Sg**		**21 39 21.7**	**+0.1**
MLPR				IAML				21 39 22.1	
15μm,0.5s									
MLPR				IAML				21 39 22.6	
8μm,0.1s									
CRPR	**Cabo Rojo, PR**	**0.26**	**302**	Pg		**Pg**		**21 39 19.5**	**+0.2**
CRPR				Sg		**Sb**		**21 39 23.8**	**+0.1**
CRPR				IAML				21 39 24.2	
9μm,0.3s									
CRPR	**Cabo Rojo, PR**	**0.26**	**302**	Pg		**Pg**		**21 39 19.6**	**+0.2**
CRPR				Sg		**Sg**		**21 39 23.3**	**-0.1**
CRPR				IAML				21 39 24.2	
17μm,0.5s									
CRPR				IAML				21 39 24.2	
9μm,0.3s									
CRPR	**Cabo Rojo, PR**	**0.26**	**302**	⇓	*e*Pg	**Pg**		**21 39 19.6**	**+0.2**
CRPR				⇓	*e*Sg	**Sb**		**21 39 23.9**	**+0.2**
CRPR				IAML				21 39 24.1	
comp=N,12μm,0.2s									
CRPR	**Cabo Rojo, PR**	**0.26**	**302**	⇑	*i*P	**Pb**		**21 39 19.6**	**0.0**
CRPR					*e*S	**Sb**		**21 39 23.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.26**	**302**	*i*	P	**Pb**		**21 39 19.6**	**0.0**
CRPR					*e*S	**Sb**		**21 39 23.8**	**+0.1**
CRPR				IAML				21 39 24.0	
comp=Z,11μm,0.3s									
OBIP	**Obispado Ponce**	**0.31**	**56**			**Pg**		**21 39 20.2**	**+0.1**
OBIP				Sg		**Sg**		**21 39 24.4**	**-0.4**
OBIP	**Obispado Ponce**	**0.31**	**56**	Pg		**Pg**		**21 39 20.3**	**+0.1**
OBIP				Sg		**Sb**		**21 39 25.2**	**0.0**
OBIP				IAML				21 39 25.9	
comp=N,1μm,0.7s									
OBIP	**Obispado Ponce**	**0.31**	**56**	⇓	*i*P	**Pb**		**21 39 20.5**	**0.0**
OBIP					*e*S	**Sb**		**21 39 25.3**	**0.0**
OBIP	**Obispado Ponce**	**0.31**	**56**	*i*	P	**Pb**		**21 39 20.5**	**0.0**
OBIP					*e*S	**Sb**		**21 39 25.3**	**+0.1**
OBIP				IAML				21 39 25.6	
comp=Z,1μm,0.5s									
CELP	**Cerrillos**	**0.35**	**54**			**Pg**		**21 39 21.0**	**+0.2**
CELP				Sg		**Sg**		**21 39 26.1**	**+0.2**
CELP				IAML				21 39 27.4	
comp=Z,4μm,0.8s									
CELP	**Cerrillos**	**0.35**	**54**	Pg		**Pg**		**21 39 21.1**	**+0.2**
CELP				Sg		**Sb**		**21 39 26.3**	**-0.1**
CELP				IAML				21 39 27.4	
comp=Z,4μm,0.8s									
CELP				IAML				21 39 29.2	
comp=Z,3μm,0.3s									
LSP	**Las Mesas**	**0.36**	**327**			**Pb**		**21 39 21.6**	**+0.1**
LSP						**Sb**		**21 39 26.9**	**0.0**
LSP	**Las Mesas**	**0.36**	**327**	⇑	*i*P	**Pb**		**21 39 21.6**	**+0.1**
LSP					*e*S	**Sb**		**21 39 26.9**	**0.0**
UUPR	**Utuado, UPR, P**	**0.41**	**21**	Pg		**Pg**		**21 39 21.6**	**-0.3**
UUPR				Sg		**Sg**		**21 39 27.2**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.41**	**21**	Pg		**Pg**		**21 39 22.0**	**+0.1**
UUPR				Sg		**Sg**		**21 39 27.9**	**+0.2**
UUPR				IAML				21 39 28.6	
comp=Z,19μm,0.4s									
UUPR				IAML				21 39 32.1	
comp=Z,18μm,0.4s									
PRSN	**Puerto Rico Se**	**0.43**	**324**			**Pg**		**21 39 22.4**	**+0.1**
PRSN				Sg		**Sb**		**21 39 28.8**	**0.0**
PRSN	**Puerto Rico Se**	**0.43**	**324**	Pg		**Pg**		**21 39 22.4**	**+0.1**
PRSN				Sg		**Sb**		**21 39 29.0**	**+0.2**
PRSN				IAML				21 39 32.0	
comp=Z,9μm,0.3s									
PRSN				IAML				21 39 33.2	
comp=Z,8μm,0.3s									
PRSN	**Puerto Rico Se**	**0.43**	**324**	⇑	*e*Pg	**Pb**		**21 39 22.6**	**-0.1**
PRSN				⇓	*e*Sg	**Sb**		**21 39 29.5**	**+0.7**
PRSN				IAML				21 39 33.1	
comp=N,5μm,0.3s									
PRSN	**Puerto Rico Se**	**0.43**	**324**	⇑	*i*P	**Pb**		**21 39 22.5**	**-0.1**
PRSN					*e*S	**Sb**		**21 39 28.7**	**-0.1**
AGPR	**Aguadilla, PR**	**0.64**	**339**			**Pg**		**21 39 26.0**	**-0.1**
AGPR				Sg		**Sg**		**21 39 33.1**	**-1.5**
AGPR	**Aguadilla, PR**	**0.64**	**339**	Pg		**Pg**		**21 39 25.9**	**-0.1**
AGPR				Sg		**Sb**		**21 39 34.9**	**+0.3**
AGPR				IAML				21 39 40.3	
comp=N,1μm,0.4s									
AGPR				IAML				21 39 40.7	
comp=N,1μm,0.3s									
AGPR	**Aguadilla, PR**	**0.64**	**339**	⇑	*e*Pg	**Pg**		**21 39 26.1**	**-0.1**
AGPR					*e*Sg	**Sg**		**21 39 34.1**	**-0.5**
AGPR				IAML				21 39 40.3	
comp=N,959nm,0.2s									
AGPR	**Aguadilla, PR**	**0.64**	**339**	⇑	*i*P	**Pg**		**21 39 26.1**	**-0.1**
AGPR					*e*S	**Sb**		**21 39 35.1**	**+0.5**
ECPR	**Experimental S**	**0.66**	**47**			**Pb**		**21 39 26.3**	**-0.2**
ECPR				Sg		**Sg**		**21 39 34.8**	**-0.6**
ECPR				IAML				21 39 39.7	
comp=N,2μm,0.2s									
ECPR				IAML				21 39 40.3	
comp=N,2μm,0.3s									
ECPR	**Experimental S**	**0.66**	**47**	Pg		**Pb**		**21 39 26.2**	**-0.3**
ECPR				Sg		**Sb**		**21 39 36.2**	**+0.8**
ECPR				IAML				21 39 39.7	
comp=N,2μm,0.2s									
ECPR				IAML				21 39 40.3	
comp=N,2μm,0.3s									
EMPR	**Esperanza - Ma**	**0.69**	**28**			**Pg**		**21 39 27.2**	**+0.2**
EMPR						**Sg**		**21 39 37.3**	**+1.0**
EMPR	**Esperanza - Ma**	**0.69**	**28**	⇑	*i*P	**Pg**		**21 39 27.2**	**+0.2**
EMPR					*e*S	**Sg**		**21 39 37.3**	**+1.0**
SJG	**San Juan**	**0.73**	**71**	Pg		**Pb**		**21 39 27.3**	**-0.3**
SJG	**San Juan**	**0.73**	**71**	Pg		**Pb**		**21 39 27.4**	**-0.3**
SJG				Sg		**Sg**		**21 39 37.9**	**+0.3**
SJG				IAML				21 39 40.9	
comp=N,3μm,0.4s									
SJG				IAML				21 39 41.0	
comp=N,3μm,0.6s									
SJG	**San Juan**	**0.73**	**71**	*e*P		**Pb**		**21 39 27.4**	**-0.2**
SJG				*e*S		**Sg**		**21 39 37.6**	**+0.1**
SJG	**San Juan**	**0.73**	**71**	⇓	*e*Pg	**Pb**		**21 39 27.5**	**-0.2**
SJG				⇓	*e*Sg	**Sn**		**21 39 40.4**	**+0.8**
SJG	**San Juan**	**0.73**	**71**	⇑	*e*P	**Pb**		**21 39 27.6**	**-0.1**
SJG					*e*S	**Sg**		**21 39 37.9**	**+0.3**
SJG	**San Juan**	**0.73**	**71**	*i*	P	**Pb**		**21 39 27.5**	**-0.1**
SJG				IAML				21 39 40.8	
comp=Z,1μm,0.3s									
IDE	**Isla Desecheo**	**0.77**	**312**			**Pb**		**21 39 28.3**	**-0.1**
IDE						**Sb**		**21 39 38.2**	**-0.2**
IDE	**Isla Desecheo**	**0.77**	**312**	⇑	*i*P	**Pb**		**21 39 28.3**	**-0.1**
IDE					*e*S	**Sb**		**21 39 38.2**	**-0.2**
PDPR	**Patillas Dam,**	**0.82**	**79**	Pg		**Pb**		**21 39 29.1**	**-0.2**
PDPR				Sg		**Sg**		**21 39 40.9**	**+0.4**
PDPR	**Patillas Dam,**	**0.82**	**79**	Pg		**Pb**		**21 39 29.2**	**-0.2**
PDPR				IAML				21 39 43.9	
comp=Z,932nm,0.6s									
PDPR				IAML				21 39 45.4	
comp=Z,493nm,0.1s									
GCPR	**Guaynabo City**	**0.87**	**60**	Pg		**Pb**		**21 39 29.6**	**-0.5**
GCPR				Sg		**Sb**		**21 39 41.1**	**-0.3**
GCPR	**Guaynabo City**	**0.87**	**60**	⇓	*i*P	**Pb**		**21 39 29.9**	**-0.2**
GCPR					*e*S	**Sb**		**21 39 41.5**	**+0.1**
HUMP	**Col San Antoni**	**1.01**	**74**	Pg		**Pb**		**21 39 32.1**	**-0.3**
HUMP				Sg		**Sg**		**21 39 46.3**	**-0.2**
HUMP				IAML				21 39 48.8	
comp=Z,1μm,0.4s									
HUMP				IAML				21 39 49.8	
comp=Z,1μm,0.3s									
HUMP	**Col San Antoni**	**1.01**	**74**	Pg		**Pb**		**21 39 32.2**	**-0.3**
HUMP				IAML				21 39 48.8	
comp=Z,1μm,0.4s									
HUMP				IAML				21 39 49.8	
comp=Z,1μm,0.3s									
HUMP	**Col San Antoni**	**1.01**	**74**	⇓	*i*P	**Pb**		**21 39 32.6**	**+0.1**
HUMP					*e*S	**Sn**		**21 39 46.7**	**+0.1**
CUPR	**Culebra, Puert**	**1.58**	**74**	Pn		**Pb**		**21 39 42.0**	**-0.1**
CUPR				Sn		**Sb**		**21 40 02.1**	**+0.4**
CUPR	**Culebra, Puert**	**1.58**	**74**	Pn		**Pb**		**21 39 41.6**	**-0.5**
SABA	**Saba**	**3.47**	**94**	Pn		**Pn**		**21 40 07.2**	**+0.6**
SMRT	**St. Maarten**	**3.62**	**87**	Pn		**Pn**		**21 40 08.8**	**0.0**
SDDR	**Presa de Saban**	**4.33**	**285**			**Pn**		**21 40 18.1**	**-0.4**
SDDR				IAML				21 41 28.6	
comp=Z,41nm,2.0s									
SDDR				IAML				21 41 45.8	
comp=Z,39nm,0.9s									
SDDR	**Presa de Saban**	**4.33**	**285**	*e*S		**Sn**		**21 41 08.9**	**+0.2**
MBWH	**Windy Hill**	**4.61**	**103**	x		**Pn**		**21 40 22.8**	**+0.4**
ATGZ	**Broadband at L**	**5.23**	**109**	*e*P		**Pn**		**21 40 30.9**	**+0.1**
MMLZ	**Guadeloupe Bro**	**5.30**	**109**	x		x		21 40 40.8	
MMLZ				x		**Pn**		**21 40 28.9**	**-3.0**

IDC 09 21:48:04.4±3.6, 11°.41S×120°.58E, h0km, mb3.1/1, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=270.5km s-min=34.2km az=48.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.72**	**124**	Pn		Pn		21 51 45.6	-1.8
0.1nm,0.3s,baz=296,slow=13,SNR=5.9									
WRA				Sn		Sn		21 54 32.3	-10
0.1nm,0.3s,baz=319,slow=30,SNR=5.7									
0.3nm,0.7s									
ASAR	**Alice Springs**	**17.59**	**136**	P		P		21 52 12.4	+0.2
0.1nm,0.3s,baz=310,slow=12,SNR=5.0									
ASAR				S		Sn		21 55 16.8	-11
0.3nm,0.6s,baz=307,slow=22,SNR=1.6									
0.2nm,0.4s									
MKAR	**Makanchi Array**	**67.30**	**333**	P		P		21 59 01.1	0.0
0.1nm,0.7s,baz=123,slow=7.4,SNR=1.5									
0.1nm,0.7s									

*AEIC **09** 21:49:28.5±1.3, 52°.6N±0°.3×170°.2W±0°.2, h80km±6km, Error ellipse: s-maj=39.9km s-min=4.9km az=161.0*

NEIC 09 21:49:27.7±1.2, 52°.2N±0°.3×170°.0W±0°.2, h83km±22km, ML3.5/16, ML3.1(AEIC), Error ellipse: s-maj=43.8km s-min=7.3km az=161.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**0.58**	**19**				Pn	21 49 41.8	-0.6
CLCO							Sn	21 49 52.8	-0.6
CLES	**Cleveland East**	**0.59**	**8**				Pn	21 49 41.4	-1.1
CLES							Sn	21 49 52.4	-1.2
CLES				IAML				21 49 56.7	
comp=E,2μm,0.2s									
CLES				IAML				21 49 56.8	
comp=N,2μm,0.2s									

NIKH	**Nikolski High**	**1.03**	**44**			Sn	21 50 00.6	-1.2
NIKH	**Nikolski High**	**1.03**	**44**			Pn	21 49 47.2	-0.1
NIKH					IAML		21 50 01.8	
	comp=N,1μm,0.6s							
NIKH					IAML		21 50 01.9	
	comp=E,576nm,0.6s							
OKSP	**Okmok Steeple**	**1.47**	**46**			Pn	21 49 52.7	0.0
OKER	**Okmok East Rim**	**1.71**	**44**			Pn	21 49 56.2	+0.2
OKER						Sn	21 50 18.3	+0.9
OKFG	**Magazine Ridge**	**1.74**	**47**			Pn	21 49 56.6	+0.3
MGOD	**Makushin Gods**	**2.46**	**50**			Pn	21 50 06.2	+0.3
KOFP	**Korovin Flat P**	**2.50**	**272**			Pn	21 50 06.4	+0.1
KOFP						Sn	21 50 35.7	-0.3
MREP	**Makushin Rep't**	**2.53**	**50**			Pn	21 50 07.4	+0.6
KOKV	**Korovin Volcan**	**2.54**	**274**			Pn	21 50 07.8	+0.9
KOKV						Sn	21 50 38.0	+1.1
ATKA	**Atka Island**	**2.56**	**271**			Pn	21 50 06.9	-0.2
ATKA					IAML		21 50 43.3	
	comp=N,114nm,1.1s							
ATKA					IAML		21 50 44.1	
	comp=E,115nm,0.6s							
KOKL	**Mount Kliuchef**	**2.56**	**273**			Pn	21 50 07.3	+0.1
MNAT	**Makushin Natee**	**2.61**	**50**			Pn	21 50 08.4	+0.6
UNV	**Unalaska Valle**	**2.67**	**52**			Pn	21 50 08.5	0.0
AKRB	**Akutan Reef Bi**	**3.04**	**50**			Pn	21 50 14.7	+1.0
LVA	**Lava Point**	**3.08**	**50**			Pn	21 50 13.8	-0.4
LVA					IAML		21 51 04.2	
	comp=E,105nm,1.2s							
LVA					IAML		21 51 09.1	
	comp=N,174nm,0.7s							
AKBBA	**Akutan Broad B**	**3.09**	**51**			Pn	21 50 15.4	+1.1
AKGG	**Akutan Green G**	**3.12**	**50**			Pn	21 50 15.7	+1.0
AKUT	**Akutan**	**3.19**	**52**	Pn		Pn	21 50 15.0	-0.6
GSTD	**Great Sitkin T**	**3.77**	**270**			Pn	21 50 26.6	+3.1
ADK	**Adak**	**4.12**	**268**	Pn		Pn	21 50 28.8	+0.6
KIWB	**Kanaga Island**	**4.41**	**268**	Pn		Pn	21 50 32.5	+0.4

*IDC **09** 21:49:37.3±2.0, 15°.47S×177°.90W, h0km, mb3.7/6, mbtmp3.7/6, MS3.8/27, Error ellipse: s-maj=129.5km s-min=23.8km az=151.0*

ISC 09 21:49:42.4±1.9, 15°.6S±0°.8×177°.8W±0°.4, h35km, n33, σ1s16/7, mb3.7/6, MS4.0/27, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.20**	**244**	LR		LR	21 58 38.1	
	comp=Z,802nm,21.0s,baz=44,slow=33							
HNR	**Honiara**	**22.52**	**283**	LR		LR	22 02 50.1	
	comp=Z,13nm,19.7s,baz=202,slow=35							
URZ	**Urewera**	**23.00**	**190**	LR		LR	22 01 25.2	
	comp=Z,610nm,21.1s,baz=34,slow=31							
CTA	**Charters Tower**	**34.42**	**257**	LR		LR	22 09 18.4	
	comp=Z,194nm,18.4s,baz=60,slow=34							
PMG	**Port Moresby**	**34.69**	**276**	LR		LR	22 09 27.7	
	comp=Z,83nm,20.1s,baz=104,slow=34							
WRA	**Warramunga Arr**	**45.62**	**257**	P		**P**	**21 58 00.2**	**+0.4**
	0.7nm,0.8s,baz=94,slow=6.1,SNR=6.1							
	0.7nm,0.8s							
ASAR	**Alice Springs**	**45.97**	**252**	P		**P**	**21 58 01.9**	**-0.6**
	4.0nm,0.8s,baz=89,slow=8.1,SNR=22							
ASAR					LR	LR	22 16 58.0	
	comp=Z,121nm,18.5s,baz=96,slow=36							
	4.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**53.97**	**259**	LR		LR	22 21 44.6	
	comp=Z,197nm,18.8s,baz=107,slow=36							
BATI	**Baumata**	**57.13**	**268**	LR		LR	22 22 25.7	
	comp=Z,120nm,20.2s,baz=134,slow=34							
DAV	**Davao City (W)**	**60.39**	**288**	LR		LR	22 23 35.5	
	comp=Z,42nm,20.2s,baz=103,slow=34							
VNDA	**Vanda**	**62.77**	**185**	LR		LR	22 23 18.9	
	comp=Z,74nm,18.8s,baz=326,slow=32							
RPN	**Rapa Nui**	**64.16**	**113**	LR		LR	22 20 02.5	
	comp=Z,108nm,21.9s,baz=262,slow=28							
ASAJ	**Asahikawa**	**69.54**	**331**	LR		LR	22 25 46.7	
	comp=Z,98nm,21.4s,baz=164,slow=31							
PETK	**Petropavlovsk-**	**71.61**	**345**	LR		LR	22 31 42.8	
	comp=Z,52nm,18.4s,baz=123,slow=35							
LEM	**Lembang**	**73.34**	**267**	LR		LR	22 33 56.3	
	comp=Z,63nm,18.2s,baz=292,slow=36							
KDAK	**Kodiak Island**	**76.05**	**14**	LR		LR	22 27 46.1	
	comp=Z,122nm,20.9s,baz=177,slow=30							
YBH	**Yreka Blue Hor**	**76.41**	**39**	LR		LR	22 26 54.8	
	comp=Z,9.4nm,19.3s,baz=268,slow=29							
NVAR	**Mina Array Bea**	**77.40**	**44**	P		**P**	**22 01 34.4**	**+0.1**
	0.3nm,0.3s,baz=301,slow=4.3,SNR=1.4							
	0.3nm,0.3s							
KLR	**Kul'dur**	**78.43**	**329**	LR		LR	22 32 01.2	
	comp=Z,18nm,19.2s,baz=128,slow=32							
MA2	**Magadan**	**79.14**	**344**	LR		LR	22 29 04.0	
	comp=Z,57nm,21.9s,baz=116,slow=30							
BBB	**Bella Bella**	**80.05**	**28**	LR		LR	22 30 41.4	
	comp=Z,91nm,18.3s,baz=215,slow=31							
SEY	**Seymchan**	**81.67**	**347**	LR		LR	22 32 08.9	
	comp=Z,67nm,21.6s,baz=138,slow=31							
DLBC	**Dease Lake**	**83.52**	**23**	LR		LR	22 32 15.8	
	comp=Z,114nm,18.9s,baz=216,slow=31							
ILAR	**Eielson Array**	**83.54**	**13**	P		**P**	**22 02 05.6**	**-0.7**
	0.4nm,0.9s,baz=213,slow=6.5,SNR=8.7							
	0.4nm,0.9s							
TXAR	**Lajitas Array**	**84.31**	**58**	P		**P**	**22 02 10.4**	**-0.8**
	0.2nm,0.7s,baz=276,slow=5.0,SNR=2.8							
	0.2nm,0.7s							
PDAR	**Pinedale Array**	**85.32**	**43**	P		**P**	**22 02 18.0**	**+1.8**
	0.6nm,0.8s,baz=202,slow=1.6,SNR=4.2							
PDAR					LR	LR	22 33 37.5	
	comp=Z,23nm,19.8s,baz=290,slow=31							
	0.6nm,0.8s							
MAW	**Mawson**	**86.19**	**200**	LR		LR	22 37 29.8	
	comp=Z,133nm,19.3s,baz=96,slow=33							
CMIG	**Matias Romero**	**88.00**	**72**	LR		LR	22 35 29.3	
	comp=Z,62nm,18.1s,baz=196,slow=31							
CMAR	**Chiang Mai Arr**	**88.63**	**289**	LR		LR	22 43 44.4	
	comp=Z,9.2nm,18.0s,baz=140,slow=37							
YKA	**Yellowknife Ar**	**92.03**	**25**	LR		LR	22 37 14.7	
	comp=Z,60nm,21.9s,baz=352,slow=31							
TIXI	**Tiksi**	**94.08**	**345**	LR		LR	22 40 07.3	
	comp=Z,67nm,21.4s,baz=190,slow=32							
ATAH	**Atahualpa**	**97.12**	**99**	LR		LR	22 35 39.9	
	comp=Z,60nm,21.9s,baz=261,slow=28							
BRTR	**Keskin Array B**	**143.51**	**317**	PKP		**PKPdf**	**22 09 14.5**	**+0.6**
	0.9nm,0.8s,baz=81,slow=7.6,SNR=4.4							

*VIE **09** 22:08:39.2±0.2, 49°.88N×18°.55E, h0km, mb2.5/4, ml2.3/4, Error ellipse: s-maj=2.0km s-min=1.6km az=145.0 22 km ENE of Ostrava Suspected Mining induced.*
*IPEC **09** 22:08:39.5±0.3, 49°.82N×18°.56E, h1km, ML2.1/6, Error ellipse: s-maj=1.8km s-min=1.4km az=71.0*
*PRU **09** 22:08:40.4, 49°.80N×18°.53E, h0km, Mining Induced Event Csm, E=9.5e+04*

ISC 09 22:08:39.2±0.8, 49°.77N±0°.03×18°.56E±0°.02, h0km, n28, σ0s71/49, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.28**	**284**	*e*PG		**Pg**	**22 08 45.2**	**+0.8**
OKC				*e*SG		**Sg**	**22 08 49.1**	**+1.1**
	comp=Z,170nm,0.6s							
STEB	**Steborice**	**0.54**	**288**	*e*PG		**Pg**	**22 08 49.7**	**+0.3**
STEB				*e*SG		**Sg**	**22 08 56.6**	**+0.3**
	comp=Z,38nm,0.4s							
MAUC	**Maruska**	**0.63**	**230**	*e*PG		**Pb**	**22 08 52.5**	**-0.5**
MORC	**Moravsky Berou**	**0.66**	**271**	*e*Pg		**Pg**	**22 08 52.3**	**+0.5**
	baz=86							
MORC				*e*Sg		**Sg**	**22 09 00.4**	**+0.1**
	41nm,0.5s,baz=86							
LOSC	**Losov**	**0.79**	**259**	*e*Pg		**Pg**	**22 08 54.8**	**+0.6**
	baz=75							
LOSC				*e*Sg		**Sg**	**22 09 04.6**	**+0.2**
	31nm,0.3s,baz=75							
ANAC	**Anensky vrch**	**0.82**	**292**	*e*Pg		**Pg**	**22 08 54.7**	**-0.2**
	baz=108							
ANAC				*e*Sg		**Sg**	**22 09 04.9**	**-0.6**
	21nm,0.3s,baz=108							
LANS	**Liptovska Anna**	**0.86**	**136**	*e*PG		**Pb**	**22 08 56.9**	**-0.1**
LANS				*e*SG		**Sb**	**22 09 09.9**	**+0.9**
LANS				*e*LG		Lg	22 09 15.4	
OJC	**Ojcow**	**0.92**	**60**	*e*Pg		**Pg**	**22 08 56.0**	**-0.7**
OJC				*e*Sg		**Sg**	**22 09 08.4**	**-0.2**
JAVC	**Velka Javorina**	**1.08**	**213**	*e*Pg		**Pn**	**22 09 01.4**	**-0.2**
	baz=31							
NIE	**Niedzica**	**1.19**	**107**	*e*Pg		**Pb**	**22 09 02.7**	**+0.1**
NIE				*e*Sg		**Sn**	**22 09 20.9**	**+1.0**
VRAC	**Vranov**	**1.36**	**251**	*e*Pg		**Pg**	**22 09 05.3**	**0.0**
	baz=68							
VRAC				*e*Sg		**Sg**	**22 09 22.8**	**-0.1**
	27nm,0.6s,baz=68							
DPC	**Dobruska-Polom**	**1.55**	**293**	*e*PG		**Pn**	**22 09 07.7**	**-0.4**
DPC				*e*SG		**Sn**	**22 09 28.6**	**-0.4**
	comp=Z,24nm,0.7s							
KRUC	**Moravsky**	**1.58**	**244**	*e*Pg		**Pn**	**22 09 08.6**	**+0.1**
	baz=61							
KRUC				*e*Sg		**Sn**	**22 09 29.5**	**-0.1**
	25nm,0.6s,baz=61							
MODS	**Modra-Piesok**	**1.63**	**212**	*e*PG		**Pb**	**22 09 09.7**	**-0.5**
MODS				*e*SN		**Sg**	**22 09 32.3**	**+0.7**
MODS				*e*LG		Lg	22 09 33.0	
OSTC	**Ostas**	**1.70**	**298**	*e*PG		**Pn**	**22 09 10.2**	**+0.1**
OSTC				*e*SG		**Sb**	**22 09 33.5**	**+0.3**
UPC	**Upice**	**1.80**	**295**	*e*PG		**Pn**	**22 09 11.7**	**+0.3**
UPC				*e*SG		**Sb**	**22 09 35.8**	**-0.2**
	73nm,0.8s							
CHVC	**Chvalec**	**1.81**	**298**	*e*PG		**Pn**	**22 09 11.9**	**+0.3**
KECS	**Kecovo**	**1.81**	**135**	*e*PN		**Pn**	**22 09 11.6**	**+0.1**
KECS				*e*SN		**Sb**	**22 09 36.4**	**+0.2**
KECS				*e*LG		Lg	22 09 42.3	
KSP	**Ksiaz**	**1.81**	**307**	*e*Pg		**Pb**	**22 09 13.2**	**+0.1**
KSP				*e*Sg		**Sb**	**22 09 36.6**	**+0.3**
ZST	**Bratislava**	**1.85**	**212**	*e*SN		**Sb**	**22 09 37.0**	**-0.4**
TREC	**Trest**	**2.06**	**258**	*e*PG		**Pn**	**22 09 16.1**	**+1.1**
TREC				*e*SG		**Sg**	**22 09 45.0**	**-0.3**
RONA	**Rosalia, Austr**	**2.56**	**217**	*e*Pn		**Pn**	**22 09 21.6**	**-0.3**
	2.8nm,0.5s							
RONA				Sn		**Sn**	**22 09 54.9**	**+1.1**
	4.6nm,0.4s							
CONA	**Conrad Observa**	**2.56**	**225**	*e*Pn		**Pn**	**22 09 21.3**	**-0.7**
	1.4nm,0.3s							
CONA				Sn		**Sn**	**22 09 53.4**	**-0.6**
	2.8nm,0.6s							
CKRC	**Cesky Krumlov**	**2.94**	**253**	*e*SG		**Sg**	**22 10 13.7**	**+0.1**
	comp=Z,10nm,0.6s							
BRG	**Berggiesshubel**	**3.16**	**292**	Pg		**Pb**	**22 09 36.7**	**+0.6**
BRG				Sg		**Sg**	**22 10 18.3**	**-2.3**
BRG				Amp			22 10 25.3	
	comp=Z,4.9nm,0.5s							
ARSA	**Arzberg**	**3.23**	**220**	*e*Pn		**Pn**	**22 09 30.7**	**-0.4**
	comp=Z,1.5nm,0.4s							
KHC	**Kasperske Hory**	**3.31**	**261**	*e*PG		**Pb**	**22 09 39.0**	**+0.2**
KHC				*e*SG		**Sg**	**22 10 23.0**	**-2.6**
MOA	**Molln**	**3.43**	**237**	*e*Pn		**Pn**	**22 09 33.3**	**-0.5**
	comp=Z,0.5nm,0.3s							

*IDC **09** 22:10:31.6±2.8, 38°.05N×21°.28E, h0km, mb3.6/4, mbtmp3.4/7, ML2.9/3, MS3.5/2, Error ellipse: s-maj=55.8km s-min=24.9km az=12.0*
*ATH **09** 22:10:35.2, 37°.81N×21°.25E, h8km±1km, ML3.2/25, Manual Solution by M.Papanikolaou First location: 2020/02/09 22:11:27, This location: 2020/02/09 22:44:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*
*THE **09** 22:10:35.5, 38°.N±2°.×2°.1E±°, h5km±2km, M3.1/18, MLh3.1/18*

ISC 09 22:10:34.9±0.9, 37°.79N±0°.03×21°.22E±0°.02, h26km±8km, n89, σ0s97/101, mb3.5/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.33**	**36**	P		**Pb**	**22 10 42.5**	**0.0**
RLS				S		**Sb**	**22 10 46.9**	**-0.7**
ORTH	**Orthonies,Zaky**	**0.42**	**278**	P		**Pb**	**22 10 44.2**	**+0.4**
ORTH				S		**Sb**	**22 10 49.9**	**0.0**
DRO	**Drossia**	**0.42**	**68**	P		**Pb**	**22 10 43.8**	**0.0**
DRO	**Drossia**	**0.42**	**68**	P		**Pb**	**22 10 43.8**	**0.0**
DRO				S		**Sb**	**22 10 49.5**	**-0.5**
AXS	**Araxos**	**0.42**	**17**	P		**Pb**	**22 10 43.9**	**0.0**
AXS				S		**Sb**	**22 10 49.7**	**-0.3**
RTZL	**Ratzakli, Kefa**	**0.45**	**309**	P		**Pb**	**22 10 44.1**	**-0.3**
RTZL	**Ratzakli, Kefa**	**0.45**	**309**	P		**Pb**	**22 10 44.3**	**-0.1**
RTZL				S		**Sb**	**22 10 50.4**	**-0.4**
AMT	**Artemida-Makis**	**0.47**	**124**	P		**Pb**	**22 10 44.4**	**-0.3**
VLS	**Valsamata**	**0.63**	**308**	P		**Pb**	**22 10 47.5**	**+0.2**
VLS	**Valsamata**	**0.63**	**308**	P		**Pb**	**22 10 47.4**	**+0.1**
VLS				S		**Sb**	**22 10 56.2**	**+0.4**
KFL1	**Kefalonia,Entr**	**0.68**	**303**	P		**Pb**	**22 10 48.0**	**-0.2**
KFL1				S		**Sb**	**22 10 57.6**	**+0.4**
ARG2	**Argostoli**	**0.69**	**304**	P		**Pb**	**22 10 48.8**	**+0.4**
AGRP	**Agrapidokambos**	**0.72**	**33**	P		**Pb**	**22 10 48.6**	**-0.3**
AGRP				S		**Sn**	**22 10 59.6**	**-0.1**
ZIRI	**Ziria, Aigiali**	**0.77**	**48**	P		**Pb**	**22 10 49.8**	**+0.1**
KLV	**Kalavryta, Ach**	**0.78**	**71**	P		**Pb**	**22 10 49.8**	**+0.1**
KLV	**Kalavryta, Ach**	**0.78**	**71**	P		**Pb**	**22 10 49.8**	**0.0**
KLV				S		**Sb**	**22 10 59.5**	**-0.6**
MALA	**Malamata, Dori**	**0.79**	**40**	P		**Pb**	**22 10 50.1**	**0.0**
MALA				S		**Sb**	**22 11 01.1**	**+0.8**
DMLN	**Damoulianata-K**	**0.80**	**304**	P		**Pb**	**22 10 50.5**	**+0.3**
DMLN	**Damoulianata-K**	**0.80**	**304**	P		**Pb**	**22 10 50.1**	**-0.1**
DMLN				S		**Sn**	**22 11 02.3**	**+0.6**
AGEO	**AgiosGiorgios,**	**0.82**	**54**	P		**Pb**	**22 10 50.4**	**-0.1**
ITM	**Ithomi**	**0.83**	**137**	P		**Pb**	**22 10 50.0**	**-0.8**
EFP	**Efpalio**	**0.83**	**40**	P		**Pb**	**22 10 51.0**	**+0.3**
EFP	**Efpalio**	**0.83**	**40**	P		**Pb**	**22 10 50.6**	**-0.1**
EFP				S		**Sb**	**22 11 01.8**	**+0.3**
TEME	**Temeni, Aigial**	**0.83**	**58**	P		**Pb**	**22 10 50.9**	**+0.1**
FSK	**Fiskardo**	**0.84**	**322**	P		**Pb**	**22 10 50.5**	**-0.4**
MG00	**Magoula, Dorid**	**0.85**	**43**	P		**Pb**	**22 10 50.5**	**-0.4**
PVO	**Paravola**	**0.86**	**16**	P		**Pn**	**22 10 52.1**	**+0.8**
PVO	**Paravola**	**0.86**	**16**	P		**Pn**	**22 10 51.5**	**+0.3**
PVO				S		**Sb**	**22 11 02.5**	**+0.3**
TRIZ	**Trizonia**	**0.88**	**49**	P		**Pb**	**22 10 51.4**	**-0.2**
GUR	**Goura**	**0.90**	**80**	P		**Pb**	**22 10 51.4**	**-0.5**
EVGI	**Lefkada island**	**0.94**	**332**	P		**Pb**	**22 10 51.8**	**-0.7**
KALE	**Kalithea**	**0.94**	**50**	P		**Pn**	**22 10 53.1**	**+0.6**
KALE	**Kalithea**	**0.94**	**50**	P		**Pb**	**22 10 52.3**	**-0.3**
ANX	**Ano Chora**	**0.97**	**34**	P		**Pb**	**22 10 52.9**	**-0.2**
PYL	**PYLOS**	**0.99**	**155**	P		**Pb**	**22 10 52.5**	**-0.9**
DRAG	**Dragano-Lefkad**	**1.02**	**330**	P		**Pb**	**22 10 53.5**	**-0.5**
LKD2	**Lefkada island**	**1.09**	**336**	P		**Pn**	**22 10 54.5**	**0.0**
TSLK	**Tsoukalades, L**	**1.12**	**337**	P		**Pn**	**22 10 55.5**	**+0.6**
AMPL	**Ampelaki**	**1.13**	**360**	P		**Pb**	**22 10 56.5**	**+0.7**
AMPL	**Ampelaki**	**1.13**	**360**	P		**Pb**	**22 10 56.0**	**+0.2**
EVR	**Evrytania**	**1.21**	**22**	P		**Pb**	**22 10 57.3**	**0.0**
LTK	**Loutraki**	**1.40**	**80**	P		**Pb**	**22 11 01.0**	**+0.6**
LTK	**Loutraki**	**1.40**	**80**	P		**Pb**	**22 11 00.8**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.41**	**30**	P		**Pb**	**22 11 01.4**	**+0.7**
AXAR	**Agios Charalam**	**1.49**	**49**	P		**Pb**	**22 11 02.1**	**+0.2**
AGG	**Agios Georgios**	**1.51**	**35**	P		**Pb**	**22 11 02.2**	**0.0**
TETR	**Tetrakomo, Epi**	**1.55**	**2**	P		**Pb**	**22 11 03.2**	**+0.2**
TETR	**Tetrakomo, Epi**	**1.55**	**2**	P		**Pb**	**22 11 02.7**	**-0.3**
LKR	**Lokris**	**1.64**	**58**	P		**Pb**	**22 11 04.4**	**-0.1**
LKR	**Lokris**	**1.64**	**58**	P		**Pb**	**22 11 04.0**	**-0.5**
VIL2	**Platees**	**1.67**	**75**	P		**Pb**	**22 11 04.7**	**-0.3**
ATAL	**Atalanti**	**1.68**	**57**	P		**Pb**	**22 11 04.6**	**-0.6**
MET2	**Kameni Chora,**	**1.68**	**95**	P		**Pb**	**22 11 04.3**	**-0.9**
VILL	**Villia**	**1.69**	**77**	P		**Pb**	**22 11 05.2**	**-0.2**
MET5	**Makryloggos,Me**	**1.71**	**95**	P		**Pb**	**22 11 05.4**	**-0.2**
PRMD	**Pramanda**	**1.74**	**357**	P		**Pb**	**22 11 05.8**	**-0.3**
PRMD	**Pramanda**	**1.74**	**357**	P		**Pn**	**22 11 05.2**	**+1.7**
VLI	**Veliai**	**1.74**	**128**	P		**Pb**	**22 11 05.9**	**-0.2**
MAGU	**Magoula**	**1.84**	**80**	P		**Pb**	**22 11 06.7**	**-1.1**
STFN	**Stefani**	**1.88**	**78**	P		**Pn**	**22 11 07.1**	**+1.8**
THL	**Klokotos Trika**	**1.88**	**19**	P		**Pb**	**22 11 07.8**	**-0.6**
ATH	**Athens Observa**	**1.98**	**84**	P		**Pb**	**22 11 08.8**	**-1.5**
ATHU	**Athens Univers**	**2.04**	**84**	P		**Pb**	**22 11 09.7**	**-1.5**
ATHU				S		**Sb**	**22 11 36.2**	**+0.1**
ATHU	**Athens Univers**	**2.04**	**84**	P		**Pn**	**22 11 09.4**	**+1.8**
VLY	**Voula,Athens**	**2.04**	**88**	P		**Pn**	**22 11 09.5**	**+1.9**
VLY	**Voula,Athens**	**2.04**	**88**	P		**Pn**	**22 11 09.1**	**+1.6**
PTL	**Penteli**	**2.11**	**82**	P		**Pn**	**22 11 10.4**	**+1.9**
PTL				S		**Sb**	**22 11 38.6**	**+0.4**
PTL	**Penteli**	**2.11**	**82**	P		**Pn**	**22 11 10.1**	**+1.6**
KPRO	**Kipourio**	**2.16**	**3**	P		**Pb**	**22 11 11.7**	**-1.7**
DION	**Dionisos Attik**	**2.17**	**82**	P		**Pn**	**22 11 11.4**	**+2.1**
DION				S		**Sb**	**22 11 39.9**	**0.0**
DION	**Dionisos Attik**	**2.17**	**82**	P		**Pn**	**22 11 11.2**	**+1.9**
NEO	**Neokhori**	**2.18**	**45**	P		**Pn**	**22 11 10.8**	**+1.3**
KEK	**Kerkira**	**2.22**	**330**	P		**Pn**	**22 11 10.3**	**+0.3**
KYMI	**Kymi, Euboea I**	**2.42**	**69**	P		**Pn**	**22 11 15.1**	**+2.3**
KYMI	**Kymi, Euboea I**	**2.42**	**69**	P		**Pn**	**22 11 14.1**	**+1.3**
AOS2	**Alonissos-2**	**2.46**	**56**	P		**Pn**	**22 11 14.9**	**+1.6**
AOS	**Alonnisos**	**2.50**	**56**	P		**Pn**	**22 11 15.5**	**+1.6**
ANKY	**Antikythira Is**	**2.55**	**138**	P		**Pn**	**22 11 16.8**	**+2.3**
KARY	**Karystos**	**2.56**	**84**	P		**Pn**	**22 11 16.1**	**+1.5**
NEST	**Nestorio**	**2.62**	**357**	P		**Pn**	**22 11 18.1**	**+2.5**
BRTR	**Keskin Array B**	**9.89**	**75**	Pn		**Pn**	**22 12 57.6**	**+2.1**
	0.1nm,0.3s,baz=262,slow=12,SNR=1.7							
	0.2nm,0.5s							
GERES	**GERESS Array B**	**12.32**	**336**	Pn		**Pn**	**22 13 27.0**	**-1.6**
	baz=184,slow=2.7,SNR=1.7							
	0.4nm,0.7s							
ESDC	**Sonseca Array**	**19.72**	**283**	P		**P**	**22 15 02.6**	**+0.2**
	baz=87,slow=11,SNR=5.3							
	0.8nm,0.8s							
FINES	**FINESS Array B**	**23.87**	**6**	P		**P**	**22 15 43.8**	**-2.1**
	4.8nm,0.9s,baz=184,slow=15,SNR=5.0							
	4.8nm,0.9s							
ARTI	**Arti**	**30.88**	**41**	LR		LR	22 28 58.3	
	comp=Z,140nm,20.3s,baz=232,slow=36							
JMIC	**Jan Mayen**	**36.68**	**344**	LR		LR	22 32 39.0	
	comp=Z,47nm,18.7s,baz=110,slow=36							
KURBB	**Kurchatov Arra**	**42.02**	**53**	P		P	22 18 21.8	-2.0
	0.2nm,0.2s,baz=282,slow=8.7,SNR=1.8							
	0.2nm,0.2s							
MKAR	**Makanchi Array**	**45.03**	**58**	P		P	22 18 46.6	-1.7
	0.2nm,0.5s,baz=284,slow=6.4,SNR=4.4							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**45.54**	**48**	P		**P**	**22 18 52.5**	**+0.4**
	0.3nm,0.3s,baz=269,slow=8.3,SNR=1.9							
	0.3nm,0.3s							

IDC 09 22:28:07.0±2.2, 3°.89S×127°.85E, h0km, mb3.4/2, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=138.4km s-min=30.3km az=66.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.16**	**159**	P		P	22 32 07.0	-1.4
	0.1nm,0.3s,baz=337,slow=13,SNR=6.0							
	0.2nm,0.8s							
ASAR	**Alice Springs**	**20.51**	**164**	P		P	22 32 47.7	+0.8
	0.9nm,0.5s,baz=348,slow=10,SNR=7.6							
	0.9nm,0.5s							
MKAR	**Makanchi Array**	**64.47**	**327**	P		P	22 38 45.4	-0.1
	0.8nm,1.2s,baz=145,slow=6.5,SNR=1.7							
	0.8nm,1.2s							

*OSPL **09** 22:28:58.4±1.8, 18°.10N×69°.00W, h119km±17km, ML2.6, Presumed earthquake*
*SDD **09** 22:28:58.8±2.5, 18°.17N×68°.93W, h98km±18km, MD3.6, ML2.9, MW3.6, Presumed earthquake*

ISC 09 22:28:58.0±1.5, 18°.14N±0°.09×68°.99W±0°.03, h91km±14km, n23, σ1s55/32, 17C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HIDR	**Higuey Centro**	**0.52**	**30**	↑*e*Pg		**Pn**	**22 29 12.6**	**-0.4**
HIDR				↑*e*Sg		**Sn**	**22 29 25.6**	**+1.6**
HIDR					IAML		22 29 27.1	
	comp=N,303nm,0.3s							
PCDR	**Punta Cana, DR**	**0.68**	**57**	↑*e*Pg		**Pn**	**22 29 14.4**	**0.0**
PCDR					IAML		22 29 32.4	
	comp=N,189nm,0.8s							
HATOM	**Hato Mayor del**	**0.74**	**330**	*e*Pg		**Pn**	**22 29 13.7**	**-1.3**
HATOM				↑*e*Sg		**Sn**	**22 29 27.2**	**-0.6**
HATOM					IAML		22 29 30.6	
	comp=N,101nm,0.5s							
MIDR	**Miches**	**0.84**	**356**	↑*e*Pg		**Pn**	**22 29 14.4**	**-1.6**
MIDR				↑*e*Sg		**Sn**	**22 29 29.9**	**+0.5**
MIDR					IAML		22 29 32.1	
	comp=N,156nm,0.2s						

*NEIC **09** 23:12:10.8±0.6,60.65N±0.02×129.61W±0.08,h10km±7km, mb4.0/9,Mwr4.1/25,Error ellipse: s-maj=6.2km s-min=1.8km az=68.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.94; $M_{\theta\theta}$-1.22; $M_{\phi\phi}$0.28; $M_{r\theta}$0.77; $M_{\theta\phi}$1.29; $M_{r\phi}$0.61; Fault plane solution: M_{0}1.96000×10^{15} NP1:ϕ_s84.32000°,δ66.58000°, λ39.76000°. NP2:ϕ_s336.02000°,δ54.06000°,λ150.60000°. Principal axes: T 1.9038, Plg44.0000°, Azm305.0000°; N 0.1039, Plg45.0000°, Azm110.0000°; P -2.0077, Plg8.0000°, Azm208.0000°;*

*ANF **09** 23:12:10.1±0.1,60.65N×129.69W,h0km,ML4.9/27 Error ellipse: s-maj=1.5km s-min=1.1km az=67.0*

ISC 09 23:12:11.0±0.4, 60.63N±0.02×129.70W±0.02, h10km, n281, σ2ŝ17/347, mb3.9/16, MS3.5/12, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WTLY	**Watson Lake, Y**	**0.68**	**139**		**Pg**	**23 12 23.9**	**-0.3**
WTLY				Sg	**Sg**	**23 12 32.8**	**-0.3**
WTLY	**Watson Lake, Y**	**0.68**	**139**	P	**Pg**	**23 12 23.8**	**-0.3**
	baz=324,SNR=270						
WTLY				S	**Sg**	**23 12 32.3**	**-0.8**
	baz=324						
WTLY	**Watson Lake, Y**	**0.68**	**139**	P	**Pg**	**23 12 23.6**	**-0.5**
WTLY				S	**Sg**	**23 12 32.3**	**-0.8**
R33M	**Jennings River**	**1.39**	**208**		**Pn**	**23 12 37.1**	**+0.5**
R33M				Sn	**Sn**	**23 12 55.7**	**+0.7**
R33M	**Jennings River**	**1.39**	**208**	P	**Pn**	**23 12 37.1**	**+0.5**
	baz=28						
R33M				S	**Sn**	**23 12 55.7**	**+0.7**
	baz=28						
R33M	**Jennings River**	**1.39**	**208**	P	**Pn**	**23 12 37.0**	**+0.5**
R33M				S	**Sn**	**23 12 53.7**	**-1.3**
P33M	**Teslin, Yukon**	**1.60**	**256**		**Pn**	**23 12 39.9**	**+0.5**
P33M				Sg	**Sb**	**23 13 02.5**	**+1.5**
P33M	**Teslin, Yukon**	**1.60**	**256**	P	**Pn**	**23 12 39.7**	**+0.3**
	baz=73,SNR=1000						
P33M				S	**Sb**	**23 13 02.0**	**+1.0**
	baz=73						
P33M	**Teslin, Yukon**	**1.60**	**256**	Pn	**Pn**	**23 12 39.9**	**+0.5**
P33M				Sn	**Sb**	**23 13 02.1**	**+1.1**
N32M	**Quiet Lake**	**1.74**	**289**	P	**Pn**	**23 12 41.2**	**0.0**
	baz=105						
N32M				Sb	**Sg**	**23 13 06.7**	**-0.1**
	baz=105						
N32M	**Quiet Lake**	**1.74**	**289**	Pn	**Pn**	**23 12 41.7**	**+0.5**
N32M				Sn	**Sg**	**23 13 06.6**	**-0.1**
Q32M	**Nakina River**	**2.12**	**219**		**Pn**	**23 12 47.0**	**+0.4**
Q32M	**Nakina River**	**2.12**	**219**	P	**Pn**	**23 12 47.2**	**+0.6**
	baz=37						
Q32M				Sg	**Sg**	**23 13 19.9**	**+0.9**
	baz=37						
Q32M	**Nakina River**	**2.12**	**219**	Pn	**Pn**	**23 12 47.3**	**+0.7**
MMPY	**Sheldon Lake,**	**2.13**	**340**		**Pn**	**23 12 47.0**	**+0.3**
MMPY	**Sheldon Lake,**	**2.13**	**340**	P	**Pn**	**23 12 47.1**	**+0.3**
	baz=158,SNR=417						
MMPY				Sb	**Sg**	**23 13 17.6**	**-1.8**
	baz=158						
MMPY	**Sheldon Lake,**	**2.13**	**340**	Pn	**Pn**	**23 12 47.0**	**+0.3**
DLBC	**Dease Lake**	**2.20**	**185**	Pn	**Pn**	**23 12 47.7**	**+0.1**
	18nm,0.3s,baz=349,slow=20,SNR=75						
DLBC				Pg	**Pg**	**23 12 52.5**	**-0.7**
	80nm,0.3s,baz=357,slow=10,SNR=87						
DLBC				LR	LR	23 13 17.3	
	comp=Z,198nm,21.3s,baz=292,slow=30						
DLBC				Sn	**Sb**	**23 13 18.4**	**+0.2**
	145nm,0.3s,baz=81,slow=27,SNR=6.2 128nm,0.3s						
DLBC	**Dease Lake**	**2.20**	**185**	P	**Pn**	**23 12 47.7**	**+0.1**
	baz=5.4,SNR=108						
DLBC				Sb	**Sb**	**23 13 19.6**	**+1.3**
	baz=5.4						
DLBC	**Dease Lake**	**2.20**	**185**	Pn	**Pn**	**23 12 47.9**	**+0.3**
DLBC				Sg	**Sb**	**23 13 19.5**	**+1.3**
P32M	**Atlin**	**2.27**	**244**		**Pn**	**23 12 48.9**	**+0.5**
P32M	**Atlin**	**2.27**	**244**	P	**Pn**	**23 12 48.8**	**+0.3**
	baz=61,SNR=1000						
P32M				Sb	**Sb**	**23 13 22.0**	**+2.0**
	baz=61						
P32M	**Atlin**	**2.27**	**244**	Pn	**Pn**	**23 12 49.1**	**+0.7**
P32M				Sg	**Sb**	**23 13 22.1**	**+2.2**
FARO	**Faro, Yukon**	**2.38**	**314**	Pn	**Pn**	**23 12 49.7**	**-0.3**
FARO				Sg	**Sg**	**23 13 26.9**	**-0.4**
WHY	**Whitehorse**	**2.55**	**273**		**Pn**	**23 12 52.4**	**-0.1**
WHY	**Whitehorse**	**2.55**	**273**	P	**Pn**	**23 12 52.2**	**-0.2**
	baz=88,SNR=176						
WHY				Sb	**Sb**	**23 13 30.6**	**+2.2**
	baz=88						
WHY	**Whitehorse**	**2.55**	**273**	Pn	**Pn**	**23 12 52.3**	**-0.2**
WHY				Sg	**Sg**	**23 13 31.5**	**-1.4**
M31M	**Drury Creek, Y**	**2.75**	**307**		**Pn**	**23 12 54.7**	**-0.5**
M31M	**Drury Creek, Y**	**2.75**	**307**	P	**Pn**	**23 12 54.8**	**-0.3**
	baz=122,SNR=75						
M31M				Sb	**Sb**	**23 13 36.8**	**+2.7**
	baz=122						
M31M	**Drury Creek, Y**	**2.75**	**307**	Pn	**Pn**	**23 12 55.2**	**0.0**
M31M				Sg	**Sg**	**23 13 37.5**	**-1.8**
S34M	**Telegraph Cree**	**2.82**	**196**		**Pn**	**23 12 56.5**	**+0.4**
S34M	**Telegraph Cree**	**2.82**	**196**	P	**Pn**	**23 12 56.5**	**+0.4**
	baz=15,SNR=640						
S34M				Sb	**Sb**	**23 13 38.4**	**+2.5**
	baz=15						
S34M	**Telegraph Cree**	**2.82**	**196**	Pn	**Pn**	**23 12 56.3**	**+0.2**
KOTAN	**Kotaneelee Air**	**2.85**	**98**	Sb	**Sg**	**23 13 39.9**	**-2.4**
	baz=283						
KOTAN	**Kotaneelee Air**	**2.85**	**98**	Sg	**Sg**	**23 13 39.9**	**-2.4**
TOAD	**Toad River Com**	**2.88**	**126**	P	**Pn**	**23 12 57.0**	**+0.1**
	baz=311						
TOAD				Sb	**Sg**	**23 13 40.7**	**-2.6**
	baz=311						
TOAD	**Toad River Com**	**2.88**	**126**	Pn	**Pn**	**23 12 56.3**	**-0.6**
SKAG	**Skagway**	**3.06**	**250**		**Pn**	**23 12 59.7**	**+0.4**
SKAG	**Skagway**	**3.06**	**250**	P	**Pn**	**23 12 59.7**	**+0.4**
	baz=65,SNR=9.0						
SKAG				Sb	**Sb**	**23 13 45.8**	**+3.1**
	baz=65						
N31M	**Braeburn, Yuko**	**3.08**	**289**		**Pn**	**23 12 59.6**	**0.0**
N31M	**Braeburn, Yuko**	**3.08**	**289**	P	**Pn**	**23 12 59.8**	**+0.1**
	baz=103,SNR=11						
N31M				Sb	**Sb**	**23 13 46.7**	**+3.3**
	baz=103						
N31M	**Braeburn, Yuko**	**3.08**	**289**	Pn	**Pn**	**23 12 59.8**	**+0.1**
N31M				Sg	**Sb**	**23 13 47.0**	**+3.5**
NBC1	**NorthernBC 1**	**3.10**	**106**	Pn	**Pn**	**23 12 59.1**	**-0.7**
NBC1				Sg	**Sg**	**23 13 46.4**	**-3.9**
NAHA	**Nahanni Butte**	**3.12**	**80**	Pn	**Pn**	**23 12 59.8**	**-0.3**
O30N	**Mendenhall**	**3.15**	**275**		**Pn**	**23 13 00.8**	**+0.2**
O30N	**Mendenhall**	**3.15**	**275**	P	**Pn**	**23 13 00.9**	**+0.4**
	baz=89,SNR=142						
O30N				Sb	**Sb**	**23 13 48.8**	**+3.4**
	baz=89						
O30N	**Mendenhall**	**3.15**	**275**	Pn	**Pn**	**23 13 00.8**	**+0.2**
O30N				Sg	**Sb**	**23 13 49.3**	**+4.0**
BESE	**Bessie Mountai**	**3.33**	**234**		**Pn**	**23 13 03.6**	**+0.5**
BESE	**Bessie Mountai**	**3.33**	**234**	Pn	**Pn**	**23 13 03.6**	**+0.5**
BESE				Sg	**Sb**	**23 13 53.7**	**+3.1**
R32K	**Eaglecrest**	**3.41**	**228**		**Pn**	**23 13 05.0**	**+0.8**
R32K	**Eaglecrest**	**3.41**	**228**	P	**Pn**	**23 13 04.9**	**+0.8**
	baz=44,SNR=6.2						
R32K				Sb	**Sb**	**23 13 56.3**	**+3.5**
	baz=44						
PLBC	**Pleasant Camp**	**3.54**	**254**	Pn	**Pn**	**23 13 06.4**	**+0.4**
PLBC				Sg	**Sb**	**23 14 00.8**	**+4.1**
P30M	**Million Dollar**	**3.64**	**265**	P	**Pn**	**23 13 07.5**	**+0.1**
	baz=79						
P30M				Sb	**Sb**	**23 14 03.4**	**+3.9**
	baz=79						
P30M	**Million Dollar**	**3.64**	**265**	Pn	**Pn**	**23 13 07.3**	**-0.1**
P30M				Sg	**Sb**	**23 14 03.5**	**+3.9**
T35M	**Bob Quinn**	**3.67**	**185**		**Pn**	**23 13 08.3**	**+0.6**
T35M	**Bob Quinn**	**3.67**	**185**	P	**Pn**	**23 13 08.5**	**+0.7**
	baz=4.9						
T35M				Sb	**Sg**	**23 14 06.2**	**-2.5**
	baz=4.9						
T35M	**Bob Quinn**	**3.67**	**185**	Pn	**Pn**	**23 13 08.4**	**+0.7**
HYT	**Haines Junctio**	**3.84**	**276**		**Pn**	**23 13 10.7**	**+0.6**
HYT	**Haines Junctio**	**3.84**	**276**	P	**Pn**	**23 13 10.5**	**+0.4**
	baz=89,SNR=132						
HYT				Sb	**Sb**	**23 14 09.5**	**+4.2**
	baz=89						
HYT	**Haines Junctio**	**3.84**	**276**	Pn	**Pn**	**23 13 10.5**	**+0.4**
HYT				Sg	**Sb**	**23 14 09.2**	**+3.9**
M30M	**Minto, Yukon**	**3.91**	**303**		**Pn**	**23 13 10.7**	**-0.4**
M30M	**Minto, Yukon**	**3.91**	**303**	P	**Pn**	**23 13 10.4**	**-0.7**
	baz=116,SNR=377						
M30M				Sb	**Sg**	**23 14 12.6**	**-3.9**
	baz=116						
M30M	**Minto, Yukon**	**3.91**	**303**	Pn	**Pn**	**23 13 10.6**	**-0.5**
M30M				Sg	**Sb**	**23 14 12.0**	**+4.6**
WRGLY	**Wrigley**	**3.94**	**46**		**Pn**	**23 13 11.8**	**+0.5**
WRGLY	**Wrigley**	**3.94**	**46**	P	**Pn**	**23 13 11.4**	**+0.1**
	baz=231,SNR=39						
WRGLY				Sb	**Sg**	**23 14 13.1**	**-4.1**
	baz=231						
FNSB	**Fort Nelson**	**3.97**	**114**	Pn	**Pn**	**23 13 11.6**	**-0.3**
YUK5	**Granite Creek**	**4.02**	**281**	Pn	**Pn**	**23 13 12.8**	**+0.2**
YUK5				Sg	**Sb**	**23 14 14.7**	**+4.1**
S32K	**Killisnoo**	**4.05**	**221**		**Pn**	**23 13 13.9**	**+1.1**
S32K	**Killisnoo**	**4.05**	**221**	P	**Pn**	**23 13 13.5**	**+0.6**
	baz=37						
S32K				Sb	**Sb**	**23 14 16.0**	**+4.8**
	baz=37						
MAYO	**Mayo, Yukon**	**4.16**	**318**		**Pn**	**23 13 14.5**	**0.0**
MAYO	**Mayo, Yukon**	**4.16**	**318**	Sb	**Sb**	**23 14 19.0**	**+4.5**
	baz=132						
YUK7	**Dusty Glacier**	**4.17**	**272**	Pn	**Pn**	**23 13 15.7**	**+1.0**
YUK7				Sg	**Sb**	**23 14 19.2**	**+4.4**
T33K	**Petersburg**	**4.18**	**205**	Sb	**Sg**	**23 14 21.2**	**-3.9**
	baz=23						
YUK6	**Outpost Mounta**	**4.26**	**278**	P	**Pn**	**23 13 16.0**	**0.0**
	baz=90,SNR=26						
YUK6				Sb	**Sb**	**23 14 22.6**	**+5.1**
	baz=90						
YUK6	**Outpost Mounta**	**4.26**	**278**	Pn	**Pn**	**23 13 16.0**	**0.0**
YUK6				Sg	**Sb**	**23 14 23.0**	**+5.5**
S31K	**Pelican**	**4.29**	**234**		**Pn**	**23 13 17.2**	**+1.1**
S31K	**Pelican**	**4.29**	**234**	P	**Pn**	**23 13 16.6**	**+0.5**
	baz=49,SNR=64						
S31K				Sb	**Sb**	**23 14 22.9**	**+5.0**
	baz=49						
O29M	**Mount Kennedy**	**4.41**	**270**	P	**Pn**	**23 13 17.8**	**-0.1**
	baz=82						
O29M				Sb	**Sb**	**23 14 27.8**	**+6.1**
	baz=82						
O29M	**Mount Kennedy**	**4.41**	**270**	Pn	**Pn**	**23 13 17.9**	**0.0**
O29M				Sg	**Sb**	**23 14 27.6**	**+6.0**
YUK4	**Talbot Arm**	**4.42**	**283**	P	**Pn**	**23 13 17.5**	**-0.6**
	baz=96,SNR=132						
YUK4				Sb	**Sb**	**23 14 26.4**	**+4.3**
	baz=96						
YUK4	**Talbot Arm**	**4.42**	**283**	Pn	**Pn**	**23 13 17.5**	**-0.6**
YUK4				Sg	**Sb**	**23 14 26.5**	**+4.5**
WRAK	**Wrangell Islan**	**4.44**	**199**		**Pn**	**23 13 18.9**	**+0.6**
WRAK	**Wrangell Islan**	**4.44**	**199**	P	**Pn**	**23 13 18.5**	**+0.2**
	baz=18						
WRAK				Sb	**Sg**	**23 14 29.6**	**-3.9**
	baz=18						
WRAK	**Wrangell Islan**	**4.44**	**199**	Pn	**Pn**	**23 13 18.3**	**0.0**
M29M	**Somme Creek**	**4.57**	**297**	P	**Pn**	**23 13 19.5**	**-0.7**
	baz=109						
M29M				Sb	**Sg**	**23 14 33.8**	**-3.9**
	baz=109						
M29M	**Somme Creek**	**4.57**	**297**	Pn	**Pn**	**23 13 19.4**	**-0.8**
M29M				Sg	**Sg**	**23 14 34.4**	**-3.3**
BRWY	**Burwash Landin**	**4.61**	**283**	Pn	**Pn**	**23 13 20.6**	**0.0**
BRWY				Sg	**Sg**	**23 14 34.7**	**-4.0**
SIT	**Sitka**	**4.62**	**222**	Pn	**Pn**	**23 13 22.1**	**+1.4**
SIT	**Sitka**	**4.62**	**222**	P	**Pn**	**23 13 21.8**	**+1.1**
	baz=37						
SIT				Sb	**Sg**	**23 14 35.0**	**-4.2**
	baz=37						
L29M	**L29M**	**4.70**	**306**	P	**Pn**	**23 13 20.9**	**-1.0**
	baz=118						
L29M				Sb	**Sg**	**23 14 37.7**	**-4.1**
	baz=118						
L29M	**L29M**	**4.70**	**306**	Pn	**Pn**	**23 13 21.1**	**-0.8**
L29M				Sg	**Sg**	**23 14 36.7**	**-5.1**
U35K	**Hyder**	**4.73**	**182**		**Pn**	**23 13 23.6**	**+1.4**
U35K	**Hyder**	**4.73**	**182**	Sb	**Sg**	**23 14 38.5**	**-4.1**
	baz=2.5						
NBC5	**NorthernBC 5**	**4.78**	**128**	Pn	**Pn**	**23 13 22.2**	**-0.8**
U33K	**Whale Pass**	**4.87**	**203**		**Pn**	**23 13 25.2**	**+1.1**
U33K	**Whale Pass**	**4.87**	**203**	P	**Pn**	**23 13 24.8**	**+0.6**
	baz=21						
U33K				Sb	**Sg**	**23 14 42.3**	**-4.9**
	baz=21						
K29M	**Barlow Dome**	**4.88**	**315**	P	**Pn**	**23 13 22.8**	**-1.5**
	baz=127						
K29M				Sb	**Sg**	**23 14 42.4**	**-4.9**
	baz=127						
K29M	**Barlow Dome**	**4.88**	**315**	Pn	**Pn**	**23 13 23.1**	**-1.2**
K29M				Sg	**Sg**	**23 14 41.6**	**-5.7**
YUK8	**Steele Glacier**	**4.95**	**282**	P	**Pn**	**23 13 25.4**	**-0.2**
	baz=93,SNR=31						
YUK8	**Steele Glacier**	**4.95**	**282**	Pn	**Pn**	**23 13 25.3**	**-0.2**
BCPM	**Bancas Point**	**4.99**	**267**	Pn	**Pn**	**23 13 25.9**	**+0.1**
J30M	**Hart River**	**5.01**	**325**		**Pn**	**23 13 26.1**	**-0.1**
J30M	**Hart River**	**5.01**	**325**	P	**Pn**	**23 13 26.3**	**+0.1**
	baz=139						
J30M	**Hart River**	**5.01**	**325**	Pn	**Pn**	**23 13 26.0**	**-0.2**
J30M				Sg	**Sg**	**23 14 46.3**	**-5.2**
O28M	**Mount Upton**	**5.16**	**276**	Pn	**Pn**	**23 13 29.1**	**+0.7**
O28M	**Mount Upton**	**5.16**	**276**	P	**Pn**	**23 13 29.1**	**+0.7**
	baz=87						
O28M	**Mount Upton**	**5.16**	**276**	Pn	**Pn**	**23 13 28.9**	**+0.6**
O28M				Sg	**Sb**	**23 14 50.4**	**+7.0**
PCA	**Pinnacle**	**5.27**	**269**		**Pn**	**23 13 32.1**	**+2.4**
YUK3	**Moose Creek**	**5.33**	**287**	P	**Pn**	**23 13 30.4**	**-0.3**
	baz=97,SNR=180						
YUK3	**Moose Creek**	**5.33**	**287**	Pn	**Pn**	**23 13 30.4**	**-0.3**
YUK3				Sg	**Sb**	**23 14 55.2**	**+7.0**
V35K	**Ketchikan**	**5.41**	**192**		**Pn**	**23 13 32.2**	**+0.6**
V35K	**Ketchikan**	**5.41**	**192**	P	**Pn**	**23 13 33.2**	**+1.6**
	baz=10						
CRAG	**Craig**	**5.48**	**201**		**Pn**	**23 13 32.5**	**0.0**
J29N	**Klondike Camp**	**5.50**	**318**	Sg	**Sg**	**23 15 01.2**	**-6.1**
YUK2	**White River**	**5.51**	**287**	Pn	**Pn**	**23 13 33.0**	**-0.1**
YUK2				Sg	**Sg**	**23 15 01.4**	**-6.3**
I30M	**Mount Dempster**	**5.53**	**329**		**Pn**	**23 13 33.8**	**+0.5**
I30M	**Mount Dempster**	**5.53**	**329**	P	**Pn**	**23 13 34.1**	**+0.8**
	baz=143,SNR=78						
I30M	**Mount Dempster**	**5.53**	**329**	Pn	**Pn**	**23 13 33.9**	**+0.6**
LOGN	**Logan Glacier**	**5.55**	**277**		**Pn**	**23 13 34.0**	**+0.3**
H31M	**Peel River**	**5.60**	**340**		**Pn**	**23 13 34.2**	**-0.1**
H31M	**Peel River**	**5.60**	**340**	P	**Pn**	**23 13 34.3**	**-0.1**
	baz=155,SNR=153						
H31M	**Peel River**	**5.60**	**340**	Pn	**Pn**	**23 13 34.1**	**-0.1**
H31M				Sg	**Sg**	**23 15 07.9**	**-2.7**
BVCY	**Beaver Creek**	**5.63**	**293**	P	**Pn**	**23 13 34.7**	**0.0**
	baz=103,SNR=6.4						
BVCY	**Beaver Creek**	**5.63**	**293**	Pn	**Pn**	**23 13 34.7**	**0.0**
TABL	**Table Mountain**	**5.65**	**273**	Sg	**Sg**	**23 15 07.1**	**-5.2**
CTGM	**Chitina Glacie**	**5.71**	**278**	Pn	**Pn**	**23 13 36.1**	**+0.3**
CTGM				Sg	**Sg**	**23 15 08.0**	**-6.0**
CTG	**Chitna Glacier**	**5.71**	**278**	P	**Pn**	**23 13 36.9**	**+1.0**
	baz=88						
M27K	**Edge Creek, AK**	**6.08**	**292**	P	**Pn**	**23 13 41.5**	**+0.6**
	baz=101						
MESA	**MESA**	**6.09**	**271**	Sn	**Sn**	**23 14 48.7**	**-2.1**
I29M	**Ogilvie Camp,**	**6.16**	**324**	Sg	**Sg**	**23 15 22.4**	**-5.9**
BALM	**Baldy**	**6.20**	**279**	Pn	**Pn**	**23 13 43.2**	**+0.6**
KIAG	**Kiagna River**	**6.21**	**278**	Pn	**Pn**	**23 13 42.6**	**-0.1**
L27K	**Beaver Creek,**	**6.24**	**298**	P	**Pn**	**23 13 42.3**	**-0.7**
	baz=107,SNR=54						
L27K	**Beaver Creek,**	**6.24**	**298**	Pn	**Pn**	**23 13 42.4**	**-0.7**
L27K				Sg	**Sg**	**23 15 25.1**	**-5.8**
MCARA	**McCarthy VSAT**	**6.53**	**282**	P	**Pn**	**23 13 47.1**	**+0.2**
	baz=90						
MCARA	**McCarthy VSAT**	**6.53**	**282**	Pn	**Pn**	**23 13 47.0**	**+0.1**
MCARA				Sg	**Sg**	**23 15 35.0**	**-5.2**
EPYK	**Eagle Plains**	**6.56**	**334**	P	**Pn**	**23 13 47.4**	**0.0**
	baz=148						
EPYK	**Eagle Plains**	**6.56**	**334**	Pn	**Pn**	**23 13 48.4**	**+1.0**
EPYK				Sg	**Sg**	**23 15 34.8**	**-6.5**
M26K	**Nabesna, AK**	**6.61**	**291**	P	**Pn**	**23 13 48.5**	**+0.5**
	baz=99,SNR=13						
G31M	**Satah River**	**6.63**	**344**	P	**Pn**	**23 13 48.1**	**-0.3**
	baz=160						
G31M	**Satah River**	**6.63**	**344**	Pn	**Pn**	**23 13 47.9**	**-0.4**
I28M	**Miner Creek**	**6.71**	**321**	P	**Pn**	**23 13 49.2**	**-0.2**
	baz=131						
I28M	**Miner Creek**	**6.71**	**321**	Pn	**Pn**	**23 13 48.9**	**-0.6**
I28M				Sg	**Sg**	**23 15 39.4**	**-6.6**
GRNB	**Grenville Isla**	**6.80**	**181**	Pn	**Pn**	**23 13 50.8**	**+0.1**
FSJB	**Fort St James**	**6.83**	**152**	Sg	Sg	23 15 40.9	-9.2
L26K	**Log Cabin Wild**	**6.89**	**296**	P	**Pn**	**23 13 51.4**	**-0.6**
	baz=104						
G30M	**tAoh Zraii Nji**	**7.00**	**338**	P	**Pn**	**23 13 53.4**	**0.0**
	baz=152						
G30M	**tAoh Zraii Nji**	**7.00**	**338**	Pn	**Pn**	**23 13 53.0**	**-0.4**
F31M	**Tsiigehtchic**	**7.07**	**347**	P	**Pn**	**23 13 54.1**	**-0.1**
	baz=163,SNR=8.4						
F31M	**Tsiigehtchic**	**7.07**	**347**	Pn	**Pn**	**23 13 53.7**	**-0.5**
BNAB	**Bonilla**	**7.17**	**184**	Sg	**Sg**	**23 15 54.0**	**-6.9**
N25K	**Chitina, Valde**	**7.28**	**284**	P	**Pn**	**23 13 57.0**	**-0.4**
	baz=91						
N25K	**Chitina, Valde**	**7.28**	**284**	Pn	**Pn**	**23 13 57.5**	**+0.1**
G29M	**Pine Creek**	**7.30**	**333**	P	**Pn**	**23 13 57.2**	**-0.4**
	baz=146						
G29M	**Pine Creek**	**7.30**	**333**	Pn	**Pn**	**23 13 57.1**	**-0.4**
GRIB	**Gribbell Islan**	**7.32**	**177**	Pn	**Pn**	**23 13 57.7**	**0.0**
I27K	**Kandik River**	**7.35**	**318**	P	**Pn**	**23 13 57.9**	**-0.4**
	baz=127						
DOT	**Dot Lake**	**7.38**	**300**	Pn	**Pn**	**23 13 58.0**	**-0.6**
DOT				Sg	**Sg**	**23 15 59.9**	**-7.5**
YKA	**Yellowknife Ar**	**7.45**	**69**	Pn	**Pn**	**23 13 58.8**	**-0.7**
	1.4nm,0.3s,baz=267,slow=13,SNR=72						
YKA				Sn	**Sn**	**23 15 21.2**	**-2.7**
	1.1nm,0.3s,baz=316,slow=25,SNR=1.1						
YKA				Lg	Lg	23 16 00.6	
	3.6nm,0.3s,baz=350,slow=24,SNR=6.4 2.8nm,0.5s						
YKAW3	**Yellowknife Wh**	**7.45**	**68**	Pn	**Pn**	**23 13 58.9**	**-0.7**
SCRK	**Sand Creek**	**7.45**	**303**	P	**Pn**	**23 13 59.3**	**-0.4**
	baz=110,SNR=35						
J26L	**Joseph Creek**	**7.49**	**307**	P	**Pn**	**23 13 59.3**	**-0.8**
	baz=115						
F30M	**Barrier River**	**7.50**	**342**	P	**Pn**	**23 14 00.2**	**0.0**
	baz=156						
F30M	**Barrier River**	**7.50**	**342**	Pn	**Pn**	**23 13 59.9**	**-0.2**
YKAW1	**Yellowknife Wh**	**7.50**	**69**	Pn	**Pn**	**23 13 59.7**	**-0.5**
DI2B	**Dawson Inlet**	**7.60**	**193**	Pn	**Pn**	**23 14 00.9**	**-0.6**
DIB	**Dawson Inlet,**	**7.60**	**193**	Pn	**Pn**	**23 14 01.4**	**-0.1**
BUTB	**Butedale**	**7.62**	**174**	Pn	**Pn**	**23 14 00.9**	**-1.0**
H27K	**Steamboat Moun**	**7.72**	**322**	P	**Pn**	**23 14 02.6**	**-0.6**
	baz=131						
H27K	**Steamboat Moun**	**7.72**	**322**	Pn	**Pn**	**23 14 02.7**	**-0.6**
RIDG	**Independent Ri**	**7.74**	**300**	P	**Pn**	**23 14 03.1**	**-0.4**
	baz=107						
PAX	**Paxson**	**7.83**	**294**	P	**Pn**	**23 14 04.4**	**-0.4**
	baz=100						
PAX	**Paxson**	**7.83**	**294**	Pn	**Pn**	**23 14 04.9**	**0.0**
PAX				Sg	**Sg**	**23 16 13.5**	**-8.4**
INK	**Inuvik**	**7.88**	**350**	Pn	**Pn**	**23 14 04.5**	**-1.0**
	5.1nm,0.6s,baz=194,slow=5.1,SNR=3.0						
INK				Sn	**Sn**	**23 15 31.6**	**-3.0**
	0.8nm,0.3s,baz=149,slow=15,SNR=3.3						
INK				Lg	Lg	23 16 09.4	
	baz=190,slow=27						
INK	**Inuvik**	**7.88**	**350**	P	**Pn**	**23 14 04.9**	**-0.6**
	baz=166,SNR=34						
INK	**Inuvik**	**7.88**	**350**	Pn	**Pn**	**23 14 04.7**	**-0.8**
G27K	**Doyon Strip**	**8.15**	**325**	P	**Pn**	**23 14 08.9**	**-0.2**
	baz=134						
G27K	**Doyon Strip**	**8.15**	**325**	Pn	**Pn**	**23 14 09.0**	**-0.2**
J25K	**Salcha River,**	**8.24**	**306**	P	**Pn**	**23 14 10.6**	**0.0**
	baz=112						
F28M	**Old Crow**	**8.29**	**332**	P	**Pn**	**23 14 10.8**	**-0.3**
	baz=142,SNR=14						
F28M	**Old Crow**	**8.29**	**332**	Pn	**Pn**	**23 14 10.8**	**-0.3**
BBB	**Bella Bella**	**8.51**	**173**	Pn	**Pn**	**23 14 16.0**	**+1.9**
	0.6nm,0.3s,baz=16,slow=14,SNR=4.6						
BBB				Lg	Lg	23 16 32.0	
	1.4nm,0.3s,baz=279,slow=22,SNR=5.5						
BBB				LR	LR	23 18 06.9	
	comp=Z,170nm,21.5s,baz=1.5,slow=42 9.8nm,1.1s						
E29M	**Blow River**	**8.55**	**339**	P	**Pn**	**23 14 14.8**	**+0.3**
	baz=151						
E29M	**Blow River**	**8.55**	**339**	Pn	**Pn**	**23 14 14.5**	**0.0**
PRP	**Porcupine Dome**	**8.68**	**311**	P	**Pn**	**23 14 16.4**	**-0.2**
	baz=117						
DHY	**Denali Highway**	**8.70**	**294**	P	**Pn**	**23 14 16.3**	**-0.6**
	baz=98						
HDA	**Harding Lake**	**8.82**	**303**	P	**Pn**	**23 14 17.8**	**-0.5**
	baz=107						
G26K	**Porcupine Rive**	**8.87**	**322**	P	**Pn**	**23 14 18.7**	**-0.3**
	baz=129						
G26K	**Porcupine Rive**	**8.87**

F17K	**Baldwin Pennin**	**15.09 306**	Pn	**Pn**	**23 15 44.9**	**+1.0**
F17K			IAmb	IAmb	23 15 52.9	
	comp=Z,8.6nm,1.1s					
F17K	**Baldwin Pennin**	**15.09 306**	P	**Pn**	**23 15 43.9**	**+0.1**
	baz=98					
C19K	**Lookout Ridge**	**15.10 317**	Pn	**Pn**	**23 15 44.6**	**+0.5**
C19K	**Lookout Ridge**	**15.10 317**	P	**Pn**	**23 15 43.4**	**-0.7**
	baz=109					
A21K	**Barrow**	**15.15 326**	P	**Pn**	**23 15 44.6**	**+0.1**
	baz=121					
K15K	**Wolf Creek Mou**	**15.22 290**	Pn	**Pn**	**23 15 46.8**	**+1.2**
K15K			IAmb	IAmb	23 16 04.5	
	comp=Z,9.4nm,1.1s					
C18K	**Utukok River**	**15.52 314**	P	**Pn**	**23 15 49.2**	**-0.4**
	baz=106					
M14K	**Bethel**	**15.71 285**	Pn	**Pn**	**23 15 53.1**	**+1.1**
O14K	**Tigyukauivet M**	**15.80 279**	P	**Pn**	**23 15 52.3**	**-0.8**
	baz=71					
N14K	**Kuskokwak Cree**	**15.80 281**	Pn	**Pn**	**23 15 53.9**	**+0.8**
N14K	**Kuskokwak Cree**	**15.80 281**	P	**Pn**	**23 15 51.9**	**-1.3**
	baz=73					
FFC	**Flin Flon**	**15.88 100**	Pn	**Pn**	**23 15 53.3**	**-1.0**
BLKN	**Baker Lake**	**15.88 62**	Pn	**Pn**	**23 15 52.0**	**-2.2**
BLKN			IAmb	IAmb	23 16 03.0	
	comp=Z,6.9nm,0.9s					
L14K	**Kuka Creek**	**15.93 287**	P	**P**	**23 15 58.0**	**-0.4**
L14K			IAmb	IAmb	23 16 03.1	
	comp=Z,16nm,1.4s					
L14K	**Kuka Creek**	**15.93 287**	P	**Pn**	**23 15 54.2**	**-0.6**
	baz=78					
D17K	**Noatak River**	**15.99 310**	P	**Pn**	**23 15 54.9**	**-0.8**
	baz=100					
J14K	**Nanvaranak Lak**	**16.09 292**	P	**P**	**23 16 02.9**	**+2.7**
J14K			IAmb	IAmb	23 16 04.5	
	comp=Z,14nm,0.8s					
J14K	**Nanvaranak Lak**	**16.09 292**	P	**Pn**	**23 15 56.0**	**-0.9**
	baz=82					
G15K	**Niukluk**	**16.15 300**	P	**Pn**	**23 15 55.9**	**-1.7**
	baz=90					
C17K	**DeLong Mountai**	**16.18 313**	P	**Pn**	**23 15 56.7**	**-1.4**
	baz=102					
ANM	**Nome**	**16.73 299**	P	**Pn**	**23 16 04.0**	**-1.0**
	baz=87					
C16K	**Lisburne Hills**	**16.93 312**	P	**Pn**	**23 16 05.8**	**-1.8**
	baz=99					
RES	**Resolute Bay**	**18.86 28**	P	**P**	**23 16 29.2**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=248,slow=11,SNR=12					
RES			Lg	Lg	23 21 58.2	
	comp=Z,0.1nm,0.3s,baz=315,slow=20,SNR=4.5					
	comp=Z,3.8nm,0.8s					
YBH	**Yreka Blue Hor**	**19.40 164**	LR	LR	23 23 56.8	
	comp=Z,13nm,19.6s,baz=326,slow=36					
ULM	**Lac du Bonnet**	**21.57 104**	P	**P**	**23 16 60.0**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=338,slow=6.2,SNR=3.6					
ULM			Sn	Sn	23 21 11.8	+4.4
	comp=Z,0.2nm,0.3s,baz=326,slow=11,SNR=1.8					
ULM			Lg	Lg	23 23 24.4	
	comp=Z,0.2nm,0.3s,baz=310,slow=23,SNR=2.9					
ULM			LR	LR	23 25 12.8	
	comp=Z,123nm,20.7s,baz=359,slow=36					
	comp=Z,0.7nm,0.5s					
PDAR	**Pinedale Array**	**21.65 137**	P	**P**	**23 17 03.5**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=349,slow=6.4,SNR=13					
PDAR			LR	LR	23 25 32.4	
	comp=Z,128nm,18.4s,baz=318,slow=37					
	comp=Z,0.9nm,0.6s					
ELK	**Elko**	**21.82 149**	LR	LR	23 25 03.1	
	comp=Z,101nm,21.4s,baz=335,slow=35					
NVAR	**Mina Array Bea**	**23.35 157**	P	**P**	**23 17 21.1**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=343,slow=9.6,SNR=5.1					
	comp=Z,0.9nm,0.5s					
PFO	**Pinyon Flats O**	**28.38 156**	LR	LR	23 30 03.1	
	comp=Z,73nm,19.4s,baz=233,slow=38					
ANMO	**Albuquerque**	**29.75 139**	LR	LR	23 31 27.5	
	comp=Z,96nm,18.5s,baz=334,slow=39					
TXAR	**Lajitas Array**	**35.82 139**	P	**P**	**23 19 13.4**	**+3.0**
	comp=Z,0.1nm,0.7s,baz=344,slow=3.2,SNR=1.7					
	comp=Z,0.1nm,0.7s					
MA2	**Magadan**	**37.39 304**	LR	LR	23 37 01.0	
	comp=Z,65nm,18.6s,baz=77,slow=40					
TIXI	**Tiksi**	**37.41 329**	LR	LR	23 36 14.8	
	comp=Z,49nm,21.9s,baz=34,slow=39					
TKL	**Tuckaleechee C**	**38.35 109**	LR	LR	23 35 50.9	
	comp=Z,241nm,18.4s,baz=344,slow=37					
NRIK	**Noril'sk**	**47.61 343**	P	**P**	**23 20 46.9**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=29,slow=5.5,SNR=8.8					
	comp=Z,2.4nm,0.7s					
ASAJ	**Asahikawa**	**51.85 294**	LR	LR	23 47 07.5	
	comp=Z,37nm,18.4s,baz=357,slow=40					
NOA	**NORSAR Array B**	**54.98 22**	P	**P**	**23 21 40.3**	**-1.4**
	comp=Z,1.2nm,0.8s,baz=284,slow=5.7,SNR=3.9					
	comp=Z,1.2nm,0.8s					
FINES	**FINESS Array B**	**56.84 14**	P	**P**	**23 21 55.4**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=340,slow=12,SNR=1.0					
	comp=Z,1.7nm,0.8s					
ZALV	**Zalesovo Beam**	**62.51 338**	P	**Pn**	**23 22 33.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=18,slow=5.2,SNR=4.9					
	comp=Z,0.5nm,0.5s					
SONM	**Songino Array**	**62.77 321**	LR	LR	23 54 39.6	
	comp=Z,79nm,21.3s,baz=19,slow=41					
KSRS	**Korea Array**	**63.72 300**	P	**P**	**23 22 43.7**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=46,slow=7.0,SNR=2.3					
	comp=Z,1.0nm,0.7s					
BVAR	**Borovoye Array**	**65.56 347**	P	**P**	**23 22 54.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=0.0,slow=3.3,SNR=1.9					
	comp=Z,0.4nm,0.7s					
KURBB	**Kurchatov Arra**	**66.80 341**	P	**P**	**23 23 01.4**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=18,slow=5.9,SNR=6.0					
	comp=Z,0.8nm,0.8s					
SDV	**Santo Domingo**	**67.42 113**	LR	LR	23 52 37.2	
	comp=Z,39nm,21.1s,baz=262,slow=36					
AKASG	**Malin Array Be**	**67.73 14**	P	**P**	**23 23 08.2**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=350,slow=6.4,SNR=5.4					
	comp=Z,0.6nm,0.5s					
MKAR	**Makanchi Array**	**69.83 337**	P	**P**	**23 23 20.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=36,slow=6.4,SNR=8.5					
MKAR			LR	LR	23 55 50.6	
	comp=Z,34nm,20.8s,baz=326,slow=38					
	comp=Z,0.6nm,0.7s					
ESDC	**Sonseca Array**	**70.67 42**	P	**P**	**23 23 29.0**	**+2.5**
	comp=Z,0.7nm,1.0s,baz=307,slow=4.8,SNR=2.0					
	comp=Z,0.7nm,1.0s					
BRTR	**Keskin Array B**	**79.07 13**	P	**P**	**23 24 17.2**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=23,slow=7.8,SNR=3.9					
	comp=Z,0.5nm,0.8s					
CMAR	**Chiang Mai Arr**	**92.03 315**	P	**P**	**23 25 20.6**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=38,slow=3.8,SNR=5.2					

*NNC **09** 23:13:18.6±1.3, 37.93N×71.31E, h68km±45km, mb3.1, mpv3.1, Error ellipse: s-maj=10.3km s-min=9.4km az=175.0*

*KRNET **09** 23:13:29.6±0.1, 39.39N×71.69E, mb2.7*

ISC 09 23:13:28.7±3.1, 39.0N±0.2×71.46E±0.0, h50km, n7, σ2s45/11, 7C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BTK	**Batken**	**1.18**	**336**	⇑	*eP*	**Pn**	**23 13 47.7**	**-1.3**
BTK				⇑	*eS*	**Sn**	**23 14 00.9**	**-3.2**
SFK	**Sufi-Kurgan**	**1.89**	**56**	⇓	*eP*	**Pn**	**23 13 58.3**	**-0.5**
SFK				⇓	*eS*	**Sn**	**23 14 19.2**	**-2.4**
SALK	**Salom-Alik**	**2.63**	**43**	⇓	*eP*	**Pn**	**23 14 09.4**	**+0.5**
SALK				⇓	*eS*	**Sn**	**23 14 38.4**	**-1.2**
ARK	**Arkit**	**2.84**	**8**	⇑	*eP*	**Pn**	**23 14 12.3**	**+0.6**
ARK				⇑	*eS*	**Sn**	**23 14 43.3**	**-1.4**
KK31	**Karatay Array**	**4.18**	**350**	⇑	P	**Pn**	**23 14 33.9**	**+3.9**
	0.3nm,0.2s,baz=175,slow=12,SNR=27							
KK31				⇑	S	Sn	23 15 33.2	+16
	2.3nm,0.6s,baz=169,slow=21,SNR=4.8							
AAK	**Ala-Archa**	**4.32**	**31**	⇓	P	**Pn**	**23 14 35.3**	**+3.3**
	7.4nm,1.3s							
AAK				⇑	S	Sn	23 15 35.7	+15
	2.7nm,1.1s							
AB31	**Akbulak array**	**13.17**	**325**	⇓	P	**Pn**	**23 16 33.3**	**+0.4**
	0.4nm,0.7s,baz=140,slow=11,SNR=4.3							

*SSNC **09** 23:41:25.7±1.7, 19.04N×80.28W, h8km±11km, MD3.1, ML2.4, Presumed earthquake*

*JSN **09** 23:41:28.2±2.8, 19.64N×79.73W, h15km±97km, MD4.1, MW4.7, Presumed earthquake*

ISC 09 23:41:25.0±1.9, 19.22N±0.07×79.84W±0.06, h2km±14km, n13, σ2s16/18, 1D, Cuba region

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

LCCY	**Blossom Villag**	**0.50**	**333**	*eP*	**Pg**	**23 41 37.2**	**+2.7**
LCCY				*eS*	**Sb**	**23 41 45.7**	**+1.6**
LCCY				IAML		23 41 47.6	
	comp=N,74nm,0.1s						
LCCY				IAML		23 41 48.3	
	comp=E,39nm,0.1s						
CBCY	**The Bluff, Cay**	**0.52**	**9**	*eP*	**Pn**	**23 41 40.1**	**+0.7**
CBCY				*eS*	**Sn**	**23 41 50.9**	**+2.1**
CBCY				IAML		23 41 53.0	
	comp=N,156nm,0.2s						
CBCY				IAML		23 41 54.9	
	comp=E,104nm,0.2s						
MTDJ	**Mount Denham**	**2.40**	**114**	*eP*	**Pb**	**23 42 07.4**	**-1.6**
MTDJ				*eS*	**Sb**	**23 42 37.6**	**-1.5**
MTDJ				IAML		23 42 38.2	
	comp=E,32nm,0.1s						
MTDJ				IAML		23 42 40.0	
	comp=E,39nm,0.1s						
CCCC	**Cccc**	**2.77**	**44**	*iP*	**Pg**	**23 42 18.5**	**+0.4**
LMGC	**Las Mercedes**	**2.80**	**72**	*eP*	**Pb**	**23 42 15.7**	**0.0**
LMGC				*eS*	**Sg**	**23 42 52.2**	**-2.8**
LMGC				IAML		23 42 55.4	
	comp=N,9.0nm,0.1s						
LMGC				IAML		23 42 57.5	
	comp=E,6.2nm,0.1s						
MGV	**Manicaragua**	**2.87**	**357**	*eP*	**Pn**	**23 42 11.5**	**-0.4**
MGV				*eS*	**Sn**	**23 42 45.9**	**-1.1**
MGV				IAML		23 42 48.2	
	comp=N,12nm,0.1s						
STH	**Stony Hill**	**3.09**	**111**	⇓ *iP*	**Pn**	**23 42 16.9**	**+2.0**
CHIV	**Chivirico**	**3.32**	**76**	*eP*	**Pb**	**23 42 24.4**	**-0.1**
YAR	**Yar**	**3.47**	**70**	*eP*	**Pb**	**23 42 26.1**	**-1.1**
HLGC	**Holguin**	**3.92**	**64**	*eP*	**Pb**	**23 42 31.8**	**-3.1**
RCC	**Rio Carpintero**	**3.98**	**78**	*eP*	**Pn**	**23 42 30.6**	**+3.5**
PINC	**Pinares de May**	**4.01**	**71**	*eP*	**Pb**	**23 42 35.3**	**-1.1**
SOR	**Soroa**	**4.62**	**321**	*eP*	**Pn**	**23 42 33.1**	**-2.8**

*IDC **09** 23:53:12.3±0.9, 0.02N×123.25E, h154km±9km, mb3.5/11, mbtmp4.0/14, Error ellipse: s-maj=18.0km s-min=10.6km az=76.0*

*DJA **09** 23:53:14.1±0.3, 0.5S±3.2°×12.3E±.°, h135km±4km, M4.5/25, mb4.5/7, mB5.5/3, MLv4.5/25, Mw(mB)5.0/3, MwMwp5.3/1, Mwp5.5/1*

ISC 09 23:53:12.8±0.6, 0.04S±0.05×123.22E±0.06, h162km, n28, σ1s46/35, mb3.8/13, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LUWI	**Luwuk**	**1.09**	**204**	P		**Pn**	**23 53 38.1**	**-1.4**
LUWI				S		**Sn**	**23 53 57.2**	**-2.9**
MRSI	**Marisa**	**1.37**	**292**	P		**Pn**	**23 53 41.2**	**-0.9**
MRSI				S		**Sn**	**23 54 02.2**	**-2.3**
APSI	**Ampana**	**1.79**	**241**	P		**Pn**	**23 53 45.8**	**-0.6**
MNI	**Manado**	**2.19**	**48**	P		**Pn**	**23 53 50.6**	**-0.3**
MPSI	**Mapaga**	**3.34**	**276**	P		**Pn**	**23 54 05.7**	**+0.8**
SANI	**Sanana**	**3.42**	**126**	P		**Pn**	**23 54 03.5**	**-2.4**
PCI	**Palu**	**3.49**	**256**	P		**Pn**	**23 54 08.3**	**+1.4**
TTSI	**Tana Toraja**	**4.52**	**229**	P		**Pn**	**23 54 20.6**	**+0.4**
NLAI	**Namlea**	**5.02**	**129**	P		**Pn**	**23 54 27.0**	**+0.3**
SPSI	**Sidrap Palu**	**5.20**	**221**	P		**Pn**	**23 54 31.1**	**+1.9**
KAPI	**Kappang**	**6.03**	**215**	P		**Pn**	**23 54 41.8**	**+1.7**
	7.3nm,0.4s,baz=21,slow=6.5,SNR=4.9							
KAPI				S		**Sn**	**23 55 48.9**	**+0.3**
	12nm,0.6s,baz=18,slow=22,SNR=5.9							
KRAI	**Karang Ratu**	**6.12**	**122**	P		**Pn**	**23 54 43.1**	**+1.9**
	13µm32nm,0.7s							
MSAI	**Masohi**	**6.59**	**120**	P		**Pn**	**23 54 46.0**	**-1.5**
	6µm74nm,0.8s							
SIJI	**Sorong**	**8.09**	**96**	P		**Pn**	**23 55 08.3**	**+0.8**
	11nm,0.5s,baz=200,slow=22,SNR=2.3							
FITZ	**Fitzroy Crossi**	**18.11**	**173**	P		**P**	**23 57 13.4**	**+0.9**
	3.4nm,0.6s,baz=5.3,slow=9.3,SNR=11							
WRA	**Warramunga Arr**	**22.58**	**152**	P		**P**	**23 58 00.3**	**+0.5**
	1.4nm,0.5s,baz=329,slow=10,SNR=31							
WRA				pP		**pP**	**23 58 27.4**	**-2.0**
	0.7nm,0.7s,baz=335,slow=10,SNR=2.5							
	1.4nm,0.5s							
ASAR	**Alice Springs**	**25.68**	**157**	P		**P**	**23 58 29.8**	**+1.8**
	0.3nm,0.4s,baz=344,slow=14,SNR=5.4							
ASAR				pP		**pP**	**23 58 59.9**	**-1.2**
	1.1nm,0.9s,baz=327,slow=7.2,SNR=3.5							
ASAR				PcP		**PcP**	**00 01 55.2**	**+1.0**
	0.7nm,0.5s,baz=346,slow=2.2,SNR=9.2							
	0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**30.11**	**309**	P		**P**	**23 59 08.8**	**+1.4**
	0.8nm,0.5s,baz=136,slow=7.2,SNR=5.8							
	0.8nm,0.5s							
STKA	**Stephens Creek**	**36.13**	**153**	P		**P**	**23 59 58.9**	**-0.6**
	1.2nm,0.5s,baz=342,slow=9.5,SNR=3.6							
	1.2nm,0.5s							
MJAR	**Matsushiro Arr**	**38.97**	**19**	P		**P**	**00 00 22.4**	**-0.9**
	1.1nm,0.4s,baz=192,slow=9.8,SNR=5.4							
	1.1nm,0.4s							
XLT	**XiLinHaoTe**	**44.21**	**353**	*eP*		**P**	**00 01 09.4**	**+3.5**
XLT				pmax		pmax		
	comp=Z,4.0nm,0.8s							
XLT				pmax		pmax		
	comp=Z,170nm,5.3s							
ASAJ	**Asahikawa**	**47.23**	**19**	P		**P**	**00 01 30.1**	**+0.7**
	comp=Z,7.0nm,0.9s,baz=233,slow=5.1,SNR=1.9							
	comp=Z,7.0nm,0.9s							
HILR	**Hailar Array B**	**49.49**	**357**	P		**P**	**00 01 46.1**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=176,slow=10,SNR=8.6							
	comp=Z,1.5nm,0.6s							
SONM	**Songino Array**	**49.88**	**345**	P		**P**	**00 01 49.9**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=158,slow=8.7,SNR=8.7							
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**58.76**	**328**	P		**P**	**00 02 53.9**	**0.0**
	comp=Z,0.4nm,0.4s,baz=122,slow=8.6,SNR=24							
MKAR				pP		**pP**	**00 03 30.7**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=123,slow=9.0,SNR=1.9							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**63.10**	**330**	P		**P**	**00 03 22.3**	**-0.7**
	comp=Z,1.1nm,1.0s,baz=138,slow=6.5,SNR=9.4							
	comp=Z,1.1nm,1.0s							
NRIK	**Noril'sk**	**73.28**	**348**	P		**P**	**00 04 25.6**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=139,slow=5.3,SNR=3.6							
	comp=Z,0.9nm,0.4s							
SPITS	**Spitsbergen Ar**	**93.46**	**349**	P		**P**	**00 06 08.7**	**-0.8**
	comp=Z,7.8nm,1.0s,baz=133,slow=6.1,SNR=1.9							

IDC 09 23:53:30.2±11.0, 25.27S×178.17W, h491km±163km, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=248.7km s-min=75.1km az=85.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	**Urewera**	**13.56**	**196**	P		P	23 56 25.4	+0.2
	1.9nm,0.3s,baz=329,slow=5.9,SNR=1.8							
URZ				S		S	23 58 48.8	-0.8
	5.6nm,0.7s,baz=289,slow=20,SNR=6.8							
CTA	**Charters Tower**	**33.17**	**272**	P		P	23 59 25.5	+0.1
	3.2nm,0.9s,baz=114,slow=16,SNR=2.8							
	3.2nm,0.9s							
STKA	**Stephens Creek**	**35.80**	**250**	P		P	23 59 47.5	+0.1
	2.0nm,0.9s,baz=115,slow=17,SNR=3.2							
	2.0nm,0.9s							
ASAR	**Alice Springs**	**43.47**	**262**	P		P	00 00 49.5	0.0
	0.4nm,0.4s,baz=94,slow=7.6,SNR=7.7							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**43.99**	**267**	P		P	00 00 53.2	-0.4
	0.4nm,0.3s,baz=104,slow=7.7,SNR=17							
	0.4nm,0.3s							

*IDC **09** 23:55:19.2±4.2, 13.99N×124.11E, h139km±37km, mb3.5/10, mbtmp3.9/11, MS3.2/4, Error ellipse: s-maj=48.6km s-min=11.9km az=64.0*

ISC 09 23:55:14.8±0.9, 14.1N±0.1×124.4E±0.1, h100km, n21, σ1s20/11, mb3.9/10, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**3.38**	**270**	P		**Pn**	**23 56 06.5**	**+0.8**
	262nm,0.3s,baz=129,slow=13,SNR=5.5							
TGY				S		**Sn**	**23 56 45.6**	**+0.5**
	313nm,0.4s,baz=156,slow=20,SNR=3.3							
JNU	**Nakatsue**	**19.82**	**16**	LR		LR	00 06 53.7	
	comp=Z,41nm,19.8s,baz=209,slow=35							
KSRS	**Korea Array**	**23.46**	**7**	LR		LR	00 08 37.1	
	comp=Z,33nm,21.8s,baz=175,slow=34							
CMAR	**Chiang Mai Arr**	**24.83**	**283**	P		**P**	**00 00 25.4**	**-2.6**
	0.6nm,0.3s,baz=95,slow=7.4,SNR=5.5							
	0.6nm,0.3s							

MJAR	**Matsushiro Arr**	**25.52**	**26**	LR		LR	00 10 21.4	
	comp=Z,41nm,18.5s,baz=165,slow=35							
FITZ	**Fitzroy Crossi**	**32.02**	**178**	P		**P**	**00 01 30.7**	**-1.2**
	2.3nm,0.8s,baz=356,slow=12,SNR=1.9							
	2.3nm,0.8s							
WRA	**Warramunga Arr**	**35.21**	**164**	P		P	00 01 59.0	-0.6
	0.7nm,0.5s,baz=337,slow=9.1,SNR=7.0							
	0.7nm,0.5s							
SONM	**Songino Array**	**36.82**	**340**	P		**P**	**00 02 13.5**	**+0.2**
	0.9nm,0.7s,baz=152,slow=7.4,SNR=5.4							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**38.67**	**166**	P		**P**	**00 02 29.2**	**+0.3**
	1.2nm,0.4s,baz=338,slow=6.6,SNR=23							
ASAR				PcP		**PcP**	**00 04 39.6**	**+0.4**
	0.7nm,0.5s,baz=339,slow=3.1,SNR=5.0							
	1.2nm,0.4s							
H11S3	**WAKE ISLAND Hy**	**40.73**	**78**	T		T	00 46 18.6	
	baz=270,slow=75,SNR=249							
H11S1	**WAKE ISLAND Hy**	**40.75**	**78**	T		T	00 46 21.1	
	baz=270,slow=75,SNR=151							
H11S2	**WAKE ISLAND Hy**	**40.75**	**78**	T		T	00 46 15.2	
	baz=270,slow=75,SNR=283							
H11N1	**WAKE ISLAND Hy**	**40.93**	**76**	T		T	00 46 34.7	
	baz=268,slow=75,SNR=155							
H11N2	**WAKE ISLAND Hy**	**40.94**	**76**	T		T	00 46 56.2	
	baz=268,slow=75,SNR=101							
H11N3	**WAKE ISLAND Hy**	**40.95**	**76**	T		T	00 46 39.2	
	baz=268,slow=75,SNR=120							
MKAR	**Makanchi Array**	**47.91**	**322**	P		P	00 03 41.5	-1.6
	0.6nm,0.6s,baz=116,slow=6.6,SNR=9.1							
	0.6nm,0.6s							
STKA	**Stephens Creek**	**48.59**	**160**	P		**P**	**00 03 49.3**	**+0.9**
	3.9nm,0.6s,baz=337,slow=11,SNR=9.2							
	3.9nm,0.6s							
ZALV	**Zalesovo Beam**	**50.42**	**331**	P		**P**	**00 04 01.4**	**-0.5**
	0.6nm,0.7s,baz=106,slow=11,SNR=2.1							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**51.92**	**324**	P		**P**	**00 04 13.6**	**+0.4**
	1.3nm,0.9s,baz=125,slow=7.3,SNR=5.2							
	1.3nm,0.9s							
BVAR	**Borovoye Array**	**57.51**	**325**	P		**P**	**00 04 54.4**	**+0.8**
	0.8nm,0.6s,baz=159,slow=12,SNR=1.9							
	0.8nm,0.6s							
NOA	**NORSAR Array B**	**88.54**	**333**	LR		LR	00 53 43.6	
	comp=Z,62nm,20.9s,baz=5.0,slow=40							

IDC 10 00:00:18.9±2.2, 10.97S×121.13E, h0km, mb3.2/1, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=174.3km s-min=28.7km az=54.0, Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**8.32**	**149**	Pn		Pn	00 02 20.2	-0.6
	0.9nm,0.3s,baz=335,slow=8.0,SNR=20							
FITZ				Sn		Sn	00 03 48.6	-7.0
	1.8nm,0.3s,baz=186,slow=20,SNR=12							
	2.4nm,0.4s							
WRA	**Warramunga Arr**	**15.53**	**127**	Pn		Pn	00 03 59.2	-0.2
	0.1nm,0.3s,baz=305,slow=13,SNR=2.2							
WRA				Sn		Sn	00 06 42.8	-10
	0.2nm,0.3s,baz=296,slow=27,SNR=6.4							
	0.5nm,1.0s							
ASAR	**Alice Springs**	**17.53**	**138**	P		P	00 04 25.8	-0.3
	0.1nm,0.3s,baz=312,slow=12,SNR=4.3							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**67.16**	**332**	P		P	00 11 14.7	0.0
	0.2nm,0.6s,baz=146,slow=7.4,SNR=2.3							
	0.2nm,0.6s							

*NOU **10** 00:17:28.5, 21.65N×178.57W, h565km, mb4.8/30, Fiji Islands Region*

*NEIC **10** 00:17:28.7±1.5, 21.6S±0.1×178.7W±0.1, h546km±8km, mb4.6/28, Error ellipse: s-maj=23.4km s-min=17.0km az=140.0*

*IDC **10** 00:17:30.3±3.4, 21.47S×178.94W, h560km±37km, mb3.7/16, mbtmp4.6/17, Error ellipse: s-maj=19.4km s-min=15.4km az=78.0*

ISC 10 00:17:28.4±0.4, 21.66S±0.06×178.76W±0.07, h550km, n197, σ1s38/198, mb4.5/38, 25C-7D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LKBA	**Tubou, Lakemba**	**3.41**	**359**	P		**P**	**00 18 47.6**	**+1.4**
MSVF	**Nonsavu**	**4.93**	**322**			**P**	**00 18 59.4**	**+1.6**
MSVF	**Nonsavu**	**4.93**	**322**	P		**P**	**00 18 59.5**	**+1.6**
DGTI	**Dogotuki**	**5.52**	**345**	P		**P**	**00 19 04.0**	**+1.1**
GLKZ	**Green Lake**	**7.61**	**174**	P		**P**	**00 19 23.9**	**+1.8**
GLKZ				S		**S**	**00 20 55.9**	**+0.4**
NIUE	**Niue**	**8.67**	**74**	P		**P**	**00 19 33.5**	**+0.5**
AFI	**Afiamalu**	**10.18**	**42**	P		**P**	**00 19 46.1**	**-2.3**
AFI	**Afiamalu**	**10.18**	**42**	P		**P**	**00 19 46.9**	**-1.5**
MARNC	**Mare, Loyalty**	**12.29**	**268**	P		**P**	**00 20 11.2**	**+1.2**
PINNC	**Pines Island,**	**12.82**	**263**	P		**P**	**00 20 16.8**	**+1.3**
DZM	**Mont Dzumac**	**13.75**

TAU				IAmb	IAmb	00 23 50.0		
	comp=Z,19nm,1.1s							
STKA	**Stephens Creek**	**36.66**	**245**	P	**P**	**00 23 48.1**	**-0.8**	
	comp=Z,1.1nm,0.4s,baz=96,slow=13,SNR=5.2							
	comp=Z,1.1nm,0.4s							
STKA	**Stephens Creek**	**36.66**	**245**	P	**P**	**00 23 48.2**	**-0.8**	
STKA				IAmb	IAmb	00 23 52.7		
	comp=Z,11nm,1.1s							
COEN	**Coen**		**36.97 275**	P	**P**	**00 23 52.0**	**+0.3**	
COEN				IAmb	IAmb	00 23 53.1		
	comp=Z,21nm,0.7s							
COEN	**Coen**		**36.97 275**	P	**P**	**00 23 52.4**	**+0.7**	
BBOO	**Buckleboo**	**41.41**	**245**	P	**P**	**00 24 27.1**	**-0.2**	
WR0	**Warramunga Arr**	**43.56**	**263**	P	**P**	**00 24 43.3**	**-1.0**	
WR0				IAmb	IAmb	00 24 46.5		
	comp=Z,8.9nm,0.8s							
AS31	**Alice Springs**		**43.57 258**	P	**P**	**00 24 44.6**	**+0.2**	
ASAR	**Alice Springs**		**43.58 258**	P	**P**	**00 24 44.4**	**0.0**	
	comp=Z,25nm,0.8s,baz=98,slow=8.1,SNR=191							
ASAR				PcP	**pP**	**00 26 20.1**	**-1.7**	
	comp=Z,3.0nm,0.7s,baz=97,slow=4.7,SNR=6.9							
ASAR				S	**S**	**00 30 30.4**	**-3.8**	
	comp=Z,6.3nm,0.8s,baz=94,slow=16,SNR=28							
	comp=Z,25nm,0.8s							
ASAR	**Alice Springs**		**43.58 258**	P	**P**	**00 24 44.3**	**-0.1**	
WR8	**Warramunga Arr**	**43.60**	**263**	P	**P**	**00 24 43.9**	**-0.7**	
WR8				IAmb	IAmb	00 24 45.4		
	comp=Z,13nm,0.7s							
WB0	**Warramunga Arr**		**43.73 264**	P	**P**	**00 24 44.5**	**-1.2**	
WB2	**Warramunga Arr**		**43.74 263**	P	**P**	**00 24 45.2**	**-0.5**	
WB1	**Warramunga Ar.**		**43.74 263**	P	**P**	**00 24 45.0**	**-0.7**	
WRAB	**Tennant Creek**		**43.74 263**	P	**P**	**00 24 45.1**	**-0.6**	
WRAB				IAmb	IAmb	00 24 45.9		
	comp=Z,29nm,0.9s							
WRAB	**Tennant Creek**		**43.74 263**	P	**P**	**00 24 44.8**	**-0.9**	
WRA	**Warramunga Arr**		**43.75 263**	P	**P**	**00 24 45.1**	**-0.7**	
	comp=Z,26nm,0.8s,baz=97,slow=5.3,SNR=219							
WRA				S	**S**	**00 30 32.4**	**-4.3**	
	comp=Z,1.4nm,0.8s,baz=98,slow=14,SNR=6.7							
	comp=Z,26nm,0.8s							
WRA	**Warramunga Arr**		**43.75 263**	P	**P**	**00 24 43.7**	**-2.1**	
FORT	**Forrest**		**48.19 248**	P	**P**	**00 25 19.1**	**-0.2**	
FORT				IAmb	IAmb	00 25 35.2		
	comp=Z,11nm,0.9s							
MTN	**Manton Dam**		**48.48 272**		**P**	**00 25 21.1**	**-0.5**	
KNRA	**Kununurra**		**49.89 267**		**P**	**00 25 32.0**	**-0.1**	
KNRA				IAmb	IAmb	00 25 32.7		
	comp=Z,24nm,0.7s							
SOEI	**Soe**		**55.84 273**	P	**P**	**00 26 15.0**	**+0.4**	
VNDA	**Vanda**		**56.70 185**	P	**P**	**00 26 22.8**	**+3.4**	
	comp=Z,2.7nm,0.6s,baz=337,slow=7.1,SNR=9.8							
	comp=Z,2.7nm,0.6s							
PSA00	**Pilbara Seismi**		**56.72 258**	P	**P**	**00 26 20.4**	**-0.2**	
MBWA	**Marble Bar**		**56.92 258**	P	**P**	**00 26 21.7**	**-0.1**	
MBWA				IAmb	IAmb	00 26 21.9		
	comp=Z,12nm,0.5s							
SANI	**Sanana**		**57.12 282**	P	**P**	**00 26 23.8**	**+0.5**	
QSPA	**South Pole Qui**		**68.41 180**	P	**P**	**00 27 37.3**	**+2.0**	
	comp=Z,8.9nm,0.7s,baz=47,slow=1.5,SNR=10							
	comp=Z,8.9nm,0.7s							
MJAR	**Matsushiro Arr**		**70.73 324**	P	**P**	**00 27 49.0**	**-0.3**	
	comp=Z,7.7nm,0.8s,baz=158,slow=5.7,SNR=14							
	comp=Z,7.7nm,0.8s							
MJAR	**Matsushiro Arr**		**70.73 324**		**P**	**00 27 49.1**	**-0.3**	
LEM	**Lembang**		**72.32 270**	P	**P**	**00 28 00.4**	**+1.0**	
	comp=Z,14nm,0.4s,baz=73,slow=7.7,SNR=3.7							
	comp=Z,14nm,0.4s							
TPUB	**Ta-pu**		**74.02 304**	P	**P**	**00 28 07.8**	**-0.9**	
TPUB	**Ta-pu**		**74.02 304**	P	**P**	**00 28 08.7**	**0.0**	
PETK	**Petropavlovsk-**		**77.21 346**	P	**P**	**00 28 25.5**	**-0.1**	
	comp=Z,8.9nm,0.8s,baz=208,slow=4.2,SNR=7.0							
	comp=Z,8.9nm,0.8s							
USRK	**Ussuriysk Ar.**		**79.53 326**	P	**P**	**00 28 39.2**	**+1.0**	
	comp=Z,9.4nm,0.9s,baz=124,slow=3.3,SNR=8.4							
	comp=Z,9.4nm,0.9s							
NJ2	**Nanjing**		**80.08 310**	*e*P	**P**	**00 28 42.9**	**+1.5**	
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.8s							
NVAR	**Mina Array Bea**	**82.35**	**44**	P	**P**	**00 28 54.1**	**+0.8**	
	comp=Z,1.3nm,0.7s,baz=240,slow=5.7,SNR=4.4							
	comp=Z,1.3nm,0.7s							
IPM	**Ipoh**		**82.58 278**	P	**P**	**00 28 54.7**	**0.0**	
IPM				IAmb	IAmb	00 28 55.6		
	comp=Z,17nm,0.6s							
N15K	**Kwethluk River**	**82.94**	**9**	P	**P**	**00 28 56.2**	**+0.8**	
BNX	**BinXian**	**82.96**	**325**	⇑P	**P**	**00 28 55.9**	**0.0**	
BNX				pmax	pmax			
	comp=Z,11nm,0.8s							
PSI	**Prapat**		**83.89 275**	P	**P**	**00 29 01.1**	**-0.3**	
GSI	**Gunungsitoli**		**84.59 274**	P	**P**	**00 29 04.9**	**+0.2**	
ELIB	**Princess Elisa**	**85.42**	**187**	*d*P	**P**	**00 29 07.9**	**+0.1**	
	comp=Z,3.0nm,0.8s							
HNS	**HongShan**	**85.81**	**313**	⇓P	**P**	**00 29 10.6**	**+0.6**	
HNS				pmax	pmax			
	comp=Z,7.0nm,1.0s							
HEH	**HeiHe**	**85.92**	**329**	*e*P	**P**	**00 29 10.5**	**+0.3**	
HEH				pmax	pmax			
	comp=Z,14nm,1.1s							
LYN	**LuoYang**	**85.94**	**310**	P	**P**	**00 29 11.5**	**+0.8**	
LYN				pmax	pmax			
	comp=Z,13nm,0.8s							
ENH	**Enshi**	**86.11**	**305**	P	**P**	**00 29 11.2**	**-0.4**	
GYA	**Guiyang**	**86.61**	**300**	P	**P**	**00 29 14.4**	**+0.2**	
GYA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
TRF	**Thorofare Moun**	**87.73**	**12**	P	**P**	**00 29 18.1**	**-0.5**	
TRF				IAmb	IAmb	00 29 18.8		
	comp=Z,7.2nm,0.9s							
RND	**Reindeer**	**87.98**	**13**	P	**P**	**00 29 19.6**	**-0.1**	
RND				IAmb	IAmb	00 29 20.4		
	comp=Z,8.1nm,0.9s							
TXAR	**Lajitas Array**	**88.27**	**58**	P	**P**	**00 29 24.0**	**+2.1**	
	comp=Z,0.9nm,0.8s,baz=213,slow=6.0,SNR=9.4							
	comp=Z,0.9nm,0.8s							
XAN	**Xi'an**	**88.27**	**308**	⇓P	**P**	**00 29 22.1**	**+0.4**	
XAN	**Xi'an**	**88.27**	**308**	S	**S**	**00 39 24.2**	**+3.5**	
XAN				pmax	pmax			
	comp=Z,11nm,0.9s							
XAN				pmax	pmax			
	comp=Z,120nm,4.6s							
HILR	**Hailar Array B**	**89.39**	**325**	P	**P**	**00 29 26.3**	**-0.3**	
	comp=Z,2.4nm,0.6s,baz=129,slow=6.3,SNR=16							
	comp=Z,2.4nm,0.6s							
ILAR	**Eielson Array**	**89.60**	**13**	P	**P**	**00 29 25.5**	**-1.6**	
	comp=Z,0.6nm,0.7s,baz=215,slow=4.7,SNR=6.3							
	comp=Z,0.6nm,0.7s							
HHC	**Hu-ho-hao-te**	**89.66**	**315**	*e*P	**P**	**00 29 29.1**	**+1.0**	
CMAR	**Chiang Mai Arr**	**89.84**	**290**	P	**P**	**00 29 30.7**	**+1.4**	
	comp=Z,5.2nm,0.8s,baz=133,slow=3.3,SNR=36							
	comp=Z,5.2nm,0.8s							
CHTO	**Chiang Mai**		**89.97 290**		**P**	**00 29 30.3**	**+0.4**	
CHTO				IAmb	IAmb	00 29 31.6		
	comp=Z,7.0nm,0.7s							
CHTO	**Chiang Mai**		**89.97 290**	P	**P**	**00 29 29.6**	**-0.3**	
PDAR	**Pinedale Array**	**90.29**	**44**	P	**P**	**00 29 31.8**	**+0.6**	
	comp=Z,0.5nm,0.7s,baz=270,slow=1.5,SNR=5.1							
	comp=Z,0.5nm,0.7s							
PZH	**PanZhiHua**		**90.63 298**	P	**P**	**00 29 33.7**	**+0.8**	
BTO2	**Baotou**		**90.73 314**	*e*P	**P**	**00 29 31.6**	**-1.5**	
BTO2				pmax	pmax			
	comp=Z,8.0nm,0.6s							
BTO2				pmax	pmax			
	comp=Z,380nm,5.1s							
C19K	**Lookout Ridge**	**91.56**	**7**	P	**P**	**00 29 36.2**	**+0.1**	
C19K				IAmb	IAmb	00 29 37.4		
	comp=Z,3.8nm,1.1s							
LZDM	**Lanzhou Array**		**92.97 308**	P	**P**	**00 29 45.2**	**+1.5**	
	comp=Z,0.5nm,0.3s,baz=27,slow=3.6,SNR=4.5							
	comp=Z,0.5nm,0.3s							
ZALV	**Zalesovo Beam**	**110.95**	**321**	PKiKP	**PKiKP**	**00 34 57.6**	**-1.4**	
	comp=Z,0.5nm,0.6s,baz=100,slow=3.2,SNR=2.6							
MKAR	**Makanchi Array**	**111.47**	**313**	PKiKP	**PKiKP**	**00 34 59.1**	**-1.2**	
	comp=Z,0.2nm,0.6s,baz=108,slow=4.7,SNR=5.5							
KURBB	**Kurchatov Arra**	**114.41**	**317**	PKP	PKPdf	00 35 04.7	-1.1	
	comp=Z,0.2nm,0.3s,baz=83,slow=2.3,SNR=3.2							
BVAR	**Borovoye Array**	**119.50**	**320**	PKP	**PKPdf**	**00 35 14.7**	**-0.8**	
	comp=Z,1.0nm,0.4s,baz=127,slow=0.6,SNR=13							
KBL	**Kabul**		**119.82 298**		**PKiKP**	**00 35 16.8**	**-0.3**	
ARCES	**ARCESS Array B**	**129.92**	**349**	PKP	**PKPdf**	**00 35 33.8**	**-1.2**	
	comp=Z,1.0nm,0.5s,baz=355,slow=2.9,SNR=8.0							
FINES	**FINESS Array B**	**136.67**	**343**	PKP	**PKPdf**	**00 35 47.0**	**-0.9**	
	comp=Z,8.2nm,1.0s,baz=8.7,slow=0.7,SNR=5.8							
HFS	**Hagfors**	**140.56**	**350**	PKhKP	PKPpre	00 35 47.5		
	comp=Z,1.2nm,0.3s,baz=66,slow=3.6,SNR=9.1							
LODK	**Lodwar**	**142.23**	**246**		**PKPdf**	**00 35 57.1**	**-2.3**	
AKASG	**Malin Array Be**	**143.67**	**330**	PKP	PKPab	00 35 58.7	-0.9	
	comp=Z,17nm,0.7s,baz=43,slow=4.4,SNR=67							

AKASG	**Malin Array Be**	**143.67**	**330**		PKPbc	00 35 58.9	-0.8	
KIEV	**Kiev**	**143.68**	**330**		PKPab	00 35 58.7	-1.0	
KIEV	**Kiev**	**143.68**	**330**	⇑P	PKPab	00 35 58.1	-1.6	
ARPR	**Arapgir-MALATY**	**143.89**	**307**	PKPdf	**PKPdf**	**00 36 02.0**	**+0.3**	
GAZ	**Gaziantep**	**145.30**	**304**		**PKPab**	**00 36 05.9**	**-0.6**	
BNN	**Bunyan**	**145.80**	**308**		**PKPab**	**00 36 07.1**	**-1.4**	
SORM	**Soroca**	**145.81**	**327**	⇑P	**PKPbc**	**00 36 05.4**	**-0.8**	
EKA	**Eskdalemuir Ar**	**146.21**	**5**	PKPbc	**PKPbc**	**00 36 06.3**	**-0.9**	
	comp=Z,2.5nm,0.8s,baz=0.2,slow=2.9,SNR=2.7							
BR131	**Keskin Array S**	**147.07**	**311**		**PKPbc**	**00 36 09.8**	**-0.4**	
BRTR	**Keskin Array B**	**147.07**	**311**	PKPbc	**PKPbc**	**00 36 09.8**	**-0.4**	
	comp=Z,3.9nm,0.7s,baz=137,slow=4.8,SNR=24							
KIRS	**Kirşehir-Merke**	**147.10**	**309**	⇑P	**PKPbc**	**00 36 10.2**	**0.0**	
GIRR	**Girov**	**147.53**	**327**	⇑P	**PKPab**	**00 36 14.5**	**-0.5**	
GHRR		**147.64**	**325**	⇑P	**PKiKP**	**00 36 12.4**	**-0.3**	
BURAR	**Bucovina Array**	**147.70**	**329**	PKPbc	**PKiKP**	**00 36 12.4**	**-0.5**	
BURAR	**Bucovina Array**	**147.70**	**329**	⇑P	**PKPbc**	**00 36 11.3**	**-0.2**	
TESR	**Tescani**	**147.75**	**326**	⇑P	**PKPbc**	**00 36 09.5**	**-2.0**	
MMAI	**Mount Meron Ar**	**147.75**	**298**	PKPbc	**PKiKP**	**00 36 12.7**	**-0.8**	
	comp=Z,6.5nm,0.6s,baz=38,slow=9.6,SNR=8.1							
CFR	**Carcaliu**	**147.80**	**323**	⇑P	**PKPbc**	**00 36 10.6**	**-1.0**	
TPGR	**Topolog**	**147.84**	**322**	⇑P	**PKiKP**	**00 36 12.0**	**-1.2**	
ONER	**Baraj Valea Uz**	**148.00**	**326**	⇑P	**PKPbc**	**00 36 11.1**	**-1.1**	
VRI	**Vrincioaia**	**148.13**	**325**	⇑P	**PKPbc**	**00 36 11.3**	**-1.2**	
PLOR	**Plostina**	**148.18**	**325**	⇑P	**PKPbc**	**00 36 12.2**	**-0.4**	
TURR	**Turia**	**148.38**	**326**	⇓P	**PKiKP**	**00 36 13.2**	**-1.2**	
COVR	**Voineasa-Covas**	**148.42**	**326**	⇑P	**PKiKP**	**00 36 11.7**	**-1.6**	
DOPR	**Dopca**	**148.76**	**327**	⇑P	**PKiKP**	**00 36 13.8**	**-1.3**	
MLR	**Muntele Rosu**	**148.79**	**325**		**PKPbc**	**00 36 13.6**	**-0.7**	
MLR	**Muntele Rosu**	**148.79**	**325**	⇑P	**PKPbc**	**00 36 13.7**	**-0.7**	
DPC	**Dobruska-Polom**	**149.00**	**341**	*e*PKP	**PKiKP**	**00 36 15.3**	**-0.2**	
DPC				*e*PKPAB	**PKPab**	**00 36 21.7**	**+0.8**	
MESR	**Meseseni**	**149.10**	**331**	⇑P	**PKiKP**	**00 36 16.0**	**+0.2**	
CJR	**Cluj-Napoca**	**149.12**	**329**	⇑P	**PKiKP**	**00 36 15.0**	**-0.9**	
MARR	**Marisel-Cluj**	**149.37**	**330**	⇓P	**PKPbc**	**00 36 14.9**	**-0.8**	
ARR	**Arges**	**149.56**	**326**	⇓P	**PKiKP**	**00 36 16.7**	**-0.2**	
HSKC	**Hora Svate Kat**	**149.56**	**345**	⇑*e*PKP	**PKiKP**	**00 36 17.0**	**+0.4**	
PRU	**Pruhonice**	**149.84**	**343**	⇑*e*PKP	**PKiKP**	**00 36 16.8**	**-0.3**	
PRU				*e*PKPAB	**PKPab**	**00 36 24.8**	**+0.4**	
KRUC	**Moravsky**	**150.11**	**340**	*e*PKP	**PKiKP**	**00 36 17.3**	**-0.4**	
KRUC				*e*		00 36 25.5		
MODS	**Modra-Piesok**	**150.41**	**338**	*e*PKP	**PKiKP**	**00 36 18.7**	**+0.3**	
MODS				*e*		00 36 27.8		
BAGH	**Balkesir-Ban**	**150.56**	**315**	⇑P	**PKPbc**	**00 36 17.8**	**-0.7**	
BTNL	**Ternell**	**150.88**	**354**	*d*PKP	**PKiKP**	**00 36 18.7**	**-0.6**	
PLVB	**Pleven**	**150.89**	**324**	⇑P	**PKiKP**	**00 36 18.9**	**-0.6**	
CKRC	**Cesky Krumlov**	**150.96**	**342**	⇑*e*PKP	**PKiKP**	**00 36 19.4**	**-0.1**	
GERES	**GERESS Array B**	**151.11**	**343**	PKPbc	**PKiKP**	**00 36 19.1**	**-0.9**	
	comp=Z,1.5nm,0.6s,baz=17,slow=6.3,SNR=3.5							
CONA	**Conrad Observa**	**151.27**	**339**	*i* PKP	**PKiKP**	**00 36 20.1**	**-0.2**	
	comp=Z,1.6nm,0.4s							
RONA	**Rosalia, Austr**	**151.33**	**339**	*i* PKP	**PKiKP**	**00 36 20.2**	**-0.1**	
	comp=Z,3.2nm,0.5s							
MORH	**Mrgy, Hungar**	**151.69**	**334**	⇑P	**PKiKP**	**00 36 20.8**	**-0.3**	
KBA	**Koelnbreinsper**	**152.81**	**342**	*i* PKP	**PKiKP**	**00 36 23.1**	**-0.5**	
	comp=Z,1.2nm,0.5s							
OBKA	**Obir**	**152.95**	**340**	*i* PKP	**PKiKP**	**00 36 23.3**	**-0.5**	
	comp=Z,1.2nm,0.5s							
WATA	**Walderalm**	**153.06**	**344**	*i* PKP	**PKiKP**	**00 36 23.8**	**-0.2**	
	comp=Z,2.2nm,0.5s							
WTTA	**Wattenberg**	**153.11**	**344**	*i* PKP	**PKiKP**	**00 36 23.6**	**-0.6**	
	comp=Z,1.5nm,0.4s							
SQTA	**Sankt Quirin**	**153.25**	**345**	*i* PKP	**PKiKP**	**00 36 24.1**	**-0.3**	
	comp=Z,0.8nm,0.4s							
ABTA	**Abfaltersbach**	**153.35**	**343**	*e*PKP	**PKiKP**	**00 36 23.8**	**-0.9**	
	comp=Z,1.1nm,0.5s							
FUORN	**Ofenpass-Fuorn**	**154.04**	**346**		**PKPab**	**00 36 43.1**	**+0.5**	

*SNET **10** 00:38:33.9±3.8, 12°.55N×87°.76W, h101km, ML3.4, Presumed earthquake*
*CATAC **10** 00:38:35.7±0.4, 12°N±3°×8°W±°, h29km, M3.5/19, MLv3.5/19, Error ellipse: s-maj=6.6km s-min=2.5km az=32.3, confirmed*

ISC 10 00:38:35.4±1.5, 12°.48N±0°.06×87°.80W±0°.04, h21km±4km, n34, σ0°93/51, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.54**	**26**	P		P	**Pn**	**00 38 48.8**	**+0.7**
CSGN				S			**Sn**	**00 38 58.7**	**+2.1**
CRIN	**San Cristobal**	**0.76**	**74**	P		P	**Pn**	**00 38 52.1**	**+1.0**
CRIN				S			**Sn**	**00 39 03.7**	**+1.7**
CNCH	**Conchagua**	**0.79**	**358**	P		P	**Pn**	**00 38 51.5**	**+0.1**
CNCH	**Conchagua**	**0.79**	**358**	*e*P		P	**Pn**	**00 38 51.9**	**+0.4**
CNCH				*e*S			**Sn**	**00 39 03.4**	**+0.7**
ALEN	**Leon**	**0.91**	**92**	P		P	**Pn**	**00 38 52.5**	**-0.5**
ALEN				S			**Sb**	**00 39 05.4**	**+1.3**
HERN	**Volcan Telica**	**0.95**	**82**	P		P	**Pn**	**00 38 53.9**	**+0.2**
POLN	**Al Sur del Vol**	**0.98**	**80**	P		P	**Pn**	**00 38 54.3**	**+0.3**
POLN				S			**Sn**	**00 39 08.2**	**+1.0**
BLLM	**Bellamira**	**1.04**	**336**	*e*P		P	**Pb**	**00 38 55.1**	**+0.2**
LCY	**Lacayo**	**1.05**	**333**	*e*P		P	**Pb**	**00 38 55.3**	**+0.3**
RANC	**El Ranchito**	**1.06**	**333**	*e*P		P	**Pb**	**00 38 55.4**	**+0.2**
RANC				*e*S			**Sn**	**00 39 09.9**	**+0.5**
CNGA	**Al SSO del Vol**	**1.07**	**89**	P		P	**Pn**	**00 38 55.5**	**+0.2**
CNGA				S		P	**Sb**	**00 39 10.3**	**+1.4**
CNGN	**Cerro Negro**	**1.08**	**89**	P		P	**Pn**	**00 38 55.4**	**+0.1**
CNGN				S		P	**Sb**	**00 39 09.9**	**+1.9**
PACA	**Pacayal**	**1.10**	**333**	P		P	**Pn**	**00 38 55.5**	**-0.3**
PACA				S		P	**Sb**	**00 39 11.2**	**+1.2**
PACA	**Pacayal**	**1.10**	**333**	*e*P		P	**Pb**	**00 38 56.1**	**+0.2**
PACA				*e*S		P	**Sb**	**00 39 10.3**	**+0.4**
TECA	**Tecapa**	**1.22**	**326**	*e*P		P	**Pn**	**00 38 57.5**	**+0.1**
COPN	**Copaltepe**	**1.22**	**104**	P		P	**Pn**	**00 38 56.6**	**-0.7**
MOM2	**El Cardon**	**1.29**	**92**	P		P	**Pn**	**00 38 58.6**	**+0.4**
MOM2				S			**Sn**	**00 39 15.5**	**+0.7**
SAPS	**Ciudad Sandino**	**1.40**	**103**	S		P	**Sn**	**00 39 17.7**	**0.0**
SCLA	**Alcaldia de Sa**	**1.51**	**323**	P		P	**Pn**	**00 39 01.3**	**0.0**
SCLA				S			**Sb**	**00 39 21.2**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.51**	**323**	*e*P		P	**Pn**	**00 39 01.4**	**0.0**
LIMN	**Finca el Limon**	**1.51**	**68**	P		P	**Pn**	**00 39 01.2**	**-0.2**
LIMN				S		P	**Sb**	**00 39 20.5**	**-1.2**
UNAN	**Cigeo UNAN**	**1.54**	**104**	P		P	**Pn**	**00 39 01.6**	**-0.1**
UNAN				S		P	**Sn**	**00 39 21.1**	**0.0**
COEG	**Centro de Oper**	**1.54**	**317**	S		P	**Sn**	**00 39 19.8**	**-1.5**
MGAN	**Managua**	**1.56**	**102**	S		P	**Sn**	**00 39 21.3**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.65**	**18**	P		P	**Pb**	**00 39 03.3**	**-1.9**
TGUH				S		P	**Sb**	**00 39 23.2**	**-2.3**
PAVA	**Las Pavas**	**1.65**	**318**	S		P	**Sn**	**00 39 23.5**	**-0.5**
MAS3	**Al N del Volca**	**1.65**	**106**	P		P	**Pn**	**00 39 03.2**	**-0.1**
MAS3				S		P	**Sn**	**00 39 23.7**	**-0.2**
OCON	**Estacion meteo**	**1.72**	**48**	P		P	**Pn**	**00 39 04.2**	**-0.1**
RCON	**San Juan de Ri**	**1.89**	**58**	P		P	**Pn**	**00 39 07.0**	**+0.4**
RCVN	**Varillal2**	**1.91**	**55**	P		P	**Pn**	**00 39 07.1**	**+0.2**
PMON	**Piamonte**	**1.92**	**310**	P		P	**Pn**	**00 39 07.1**	**+0.1**
PMON	**Piamonte**	**1.92**	**310**	*e*P		P	**Pn**	**00 39 08.3**	**+1.3**
RCPN	**Sur Rio San Ju**	**1.96**	**58**	P		P	**Pn**	**00 39 07.7**	**+0.1**
BOAB	**BOACO BROADBAN**	**2.08**	**91**	P		P	**Pn**	**00 39 08.7**	**-0.5**
BOAB				S			**Sn**	**00 39 32.5**	**-2.0**

*IDC **10** 00:47:02.0±4.5, 14°.34S×172°.21E, h599km±74km, mb2.9/5, mbtmp3.9/6, Error ellipse: s-maj=107.3km s-min=29.4km az=151.0*
*NEIC **10** 00:47:03.0±0.5, 14°.8S±0°.1×172°.6E±0°.1, h629km±13km, mb4.2/16, Error ellipse: s-maj=23.8km s-min=4.9km az=127.0*

ISC 10 00:47:00.9±0.6, 14°.5S±0°.1×172°.4E±0°.1, h600km, n30, σ1s35/30, mb4.0/13, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.28**	**121**	P		P	**P**	**00 48 45.9**	**+1.3**
MARNC	**Mare, Loyalty**	**8.10**	**210**	P		P	**P**	**00 49 00.4**	**-0.7**
PINNC	**Pines Island,**	**9.34**	**210**	P		P	**P**	**00 49 13.8**	**+0.7**
DZM	**Mont Dzumac**	**9.43**	**216**	P		P	**P**	**00 49 15.4**	**+1.3**
	7.2nm,0.4s,baz=50,slow=22,SNR=13								
DZM	**Mont Dzumac**	**9.43**	**216**	P		P	**P**	**00 49 15.2**	**+1.1**
ONTNC	**Ouen Toro**	**9.61**	**215**	P		P	**P**	**00 49 16.8**	**+1.1**
NIUE	**Niue**	**17.49**	**107**	P		P	**P**	**00 50 33.3**	**+1.4**
LHI	**Lord Howe Isla**	**20.89**	**214**	P		P	**P**	**00 51 04.5**	**+1.9**
EIDS	**Eidsvold**	**22.76**	**238**	P		P	**P**	**00 51 20.3**	**+0.9**
EIDS				IAmb		IAmb		00 51 38.1	
	comp=Z,5.0nm,0.9s								
LBZ	**Lake Benmore**	**29.84**	**183**	P		P	**P**	**00 52 18.0**	**-3.1**
LBZ				IAmb		IAmb		00 52 31.1	
	comp=Z,14nm,1.1s								
STKA	**Stephens Creek**	**33.03**	**233**	P		P	**P**	**00 52 48.6**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=60,slow=9.3,SNR=5.5								
	comp=Z,1.9nm,0.5s								

STKA	**Stephens Creek**	**33.03**	**233**	P		**P**	**00 52 48.5**	**+0.2**
TOO	**Toolangi**	**33.15**	**221**	P		**P**	**00 52 48.2**	**-1.1**
WB0	**Warramunga Arr**	**36.67**	**256**	P		**P**	**00 53 18.8**	**0.0**
WRAB	**Tennant Creek**	**36.72**	**256**	P		**P**	**00 53 19.3**	**+0.2**
WRAB				IAmb		IAmb	00 53 19.4	
	comp=Z,3.9nm,0.8s							
WRA	**Warramunga Arr**	**36.73**	**256**	P		**P**	**00 53 18.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=79,slow=6.1,SNR=6.0							
	comp=Z,0.2nm,0.3s							
AS31	**Alice Springs**	**37.43**	**250**	P		**P**	**00 53 25.1**	**+0.2**
ASAR	**Alice Springs**	**37.43**	**250**	P		**P**	**00 53 24.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=77,slow=9.1,SNR=17							
	comp=Z,1.1nm,0.5s							
BBOO	**Buckleboo**	**37.72**	**235**	P		**P**	**00 53 26.5**	**-0.6**
BBOO				IAmb		IAmb	00 53 28.9	
	comp=Z,3.1nm,1.0s							
FAKI	**Fak Fak**	**41.27**	**282**	P		**P**	**00 53 56.5**	**+0.7**
FAKI				IAmb		IAmb	00 54 02.4	
	comp=Z,25nm,1.0s							
KNRA	**Kununurra**	**42.12**	**263**	P		**P**	**00 54 02.7**	**+0.3**
KNRA				IAmb		IAmb	00 54 07.4	
	comp=Z,16nm,1.1s							
FORT	**Forrest**	**43.73**	**241**	P		**P**	**00 54 14.1**	**-0.6**
FORT				IAmb		IAmb	00 54 26.4	
	comp=Z,18nm,1.1s							
L14K	**Kuka Creek**	**78.15**	**12**	P		**P**	**00 57 60.0**	**+1.2**
O18K	**Koktuh Hills**	**78.58**	**16**	P		**P**	**00 58 02.6**	**+1.4**
O18K				IAmb		IAmb	00 58 21.4	
	comp=Z,4.6nm,1.2s							
K15K	**Wolf Creek Mou**	**79.25**	**12**	P		**P**	**00 58 06.4**	**+1.8**
ILAR	**Eielson Array**	**84.85**	**16**	P		**P**	**00 58 32.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=235,slow=4.9,SNR=7.3							
	comp=Z,0.5nm,0.6s							
ILAR	**Eielson Array**	**84.85**	**16**	P		**P**	**00 58

WR8	Warramunga Arr	36.29	200	P	P	01 09 40.8	-1.3
WR8				IAmb	IAmb	01 10 21.5	
	comp=Z,9.7nm,1.4s						
WRA	Warramunga Arr	36.33	200	P	P	01 09 42.0	-0.4
	comp=Z,2.3nm,0.8s,baz=20,slow=9.4,SNR=13						
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	36.33	200	P	P	01 09 41.5	-0.9
HNS	HongShan	36.50	315	⇑P	P	01 09 43.9	+0.1
HNS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJT	Baijiatuau	36.94	319	P	P	01 09 47.1	-0.4
ENH	Enshi	37.71	301	P	P	01 09 54.0	-0.2
ENH				IAmb	IAmb	01 09 55.8	
	comp=Z,19nm,1.4s						
XAN	Xi'an	39.34	306	P	P	01 10 03.2	-4.7
XAN				pP	pP	01 10 09.9	-6.0
XAN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
PETK	Petropavlovsk-	39.50	10	P	P	01 10 10.9	+2.1
	comp=Z,2.3nm,0.7s,baz=186,slow=8.7,SNR=1.6						
AS31	Alice Springs	39.94	199	P	P	01 10 13.4	+0.5
ASAR	Alice Springs	39.95	199	P	P	01 10 13.1	+0.1
	comp=Z,0.6nm,0.6s,baz=30,slow=7.5,SNR=8.4						
	comp=Z,0.6nm,0.6s						
ASAR	Alice Springs	39.95	199	P	P	01 10 12.7	-0.3
HHC	Hu-ho-hao-te	40.35	317	eP	P	01 10 18.4	+2.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,66nm,5.5s						
BTO2	Baotou	41.41	316	eP	P	01 10 25.2	+0.2
BTO2				pP	pP	01 10 29.9	-3.2
BTO2				sP	sP	01 10 32.4	-3.9
BTO2				pmax	pmax		
	comp=Z,15nm,0.8s						
BTO2				pmax	pmax		
	comp=Z,280nm,7.5s						
CD2	Chengdu	42.65	300	P	P	01 10 37.3	+2.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH	PanZhiHua	43.66	293	P	P	01 10 45.6	+2.1
LZH	Lanzhou	43.95	307	eP	P	01 10 46.9	+1.2
LZH				sP	pP	01 10 54.9	+1.1
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZDM	Lanzhou Array	44.02	307	P	P	01 10 47.7	+1.2
	comp=Z,2.5nm,0.3s,baz=140,slow=7.2,SNR=21						
	comp=Z,2.5nm,0.3s						
MBWA	Marble Bar	44.27	217	P	P	01 10 47.7	-0.5
CMAR	Chiang Mai Arr	45.96	282	P	P	01 11 02.8	+1.0
	comp=Z,1.0nm,0.4s,baz=81,slow=6.2,SNR=9.4						
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	45.96	282	P	P	01 11 02.4	+0.6
ULN	Ulaanbaatar	46.75	324	P	P	01 11 06.9	-0.8
SONM	Songino Array	47.11	323	P	P	01 11 10.6	+0.1
	comp=Z,1.4nm,0.5s,baz=142,slow=7.9,SNR=11						
	comp=Z,1.4nm,0.5s						
SONM	Songino Array	47.11	323	P	P	01 11 11.1	+0.6
GTA2	Gaotai	48.07	310	eP	P	01 11 18.8	+0.7
GTA2				sP	sP	01 11 29.4	0.0
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BBOO	Buckleboo	48.12	192	P	P	01 11 18.1	-0.2
BBOO				IAmb	IAmb	01 11 23.4	
	comp=Z,8.7nm,1.1s						
SEY	Seymchan	48.56	3	P	P	01 11 21.2	-0.1
	comp=Z,2.3nm,0.6s,baz=182,slow=3.0,SNR=8.0						
	comp=Z,2.3nm,0.6s						
GOMU	GeErMu	51.05	305	P	P	01 11 42.0	+0.8
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	53.27	296	P	P	01 11 58.2	+0.3
LSA	Lhasa	53.27	296	P	P	01 11 55.5	-2.4
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ	Urumqi	57.90	313	eP	P	01 12 36.8	+6.4
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
N15K	Kwethluk River	59.62	28	P	P	01 12 43.7	+1.6
N15K				IAmb	IAmb	01 13 03.4	
	comp=Z,11nm,1.2s						
M16K	Timber Creek	60.49	27	P	P	01 12 49.2	+1.2
M16K				IAmb	IAmb	01 13 32.7	
	comp=Z,5.9nm,1.3s						
N17K	Nushagak Hills	61.08	28	P	P	01 12 53.3	+1.3
N17K				IAmb	IAmb	01 13 21.2	
	comp=Z,6.5nm,1.2s						
K17K	Iditarod	61.51	25	P	P	01 12 55.9	+1.0
K17K				IAmb	IAmb	01 13 18.5	
	comp=Z,11nm,1.5s						
ZAA0	Zalesovo Array	62.01	324	P	P	01 12 57.7	-0.6
ZAA0				IAmb	IAmb	01 13 01.7	
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	62.01	324	P	P	01 12 57.5	-0.9
	comp=Z,2.7nm,0.7s,baz=112,slow=6.6,SNR=13						
	comp=Z,2.7nm,0.7s						
ZALV	Zalesovo Beam	62.01	324	P	P	01 12 57.1	-1.2
F17K	Baldwin Pennin	62.14	21	P	P	01 12 59.4	+0.4
F17K				IAmb	IAmb	01 13 26.9	
	comp=Z,3.7nm,0.8s						
MKAR	Makanchi Array	62.16	315	P	P	01 13 00.0	+0.3
	comp=Z,6.2nm,0.5s,baz=90,slow=8.2,SNR=124						
	comp=Z,6.2nm,0.5s						
MKAR	Makanchi Array	62.16	315	P	P	01 12 59.9	+0.3
MAKZ	Makanchi	62.38	315	P	P	01 13 01.4	+0.4
G19K	Purcell Mounta	63.48	22	P	P	01 13 09.3	+1.3
J20K	Nowinta River	63.81	25	P	P	01 13 11.1	+0.9
J20K				IAmb	IAmb	01 13 20.0	
	comp=Z,4.6nm,1.2s						
PPLA	Purkeypile	64.17	26	P	P	01 13 13.2	+0.4
KTH	Kantishna Hill	64.93	26	P	P	01 13 17.1	-0.5
KURK	Kurchatov	65.12	319	P	P	01 13 18.2	-0.7
KURBB	Kurchatov Arra	65.17	319	P	P	01 13 19.0	-0.3
	comp=Z,20nm,0.7s,baz=98,slow=6.9,SNR=218						
	comp=Z,20nm,0.7s						
KDJ	Kajisay	65.35	310	P	P	01 13 20.3	-0.6
KDJ				IAmb	IAmb	01 13 22.5	
	comp=Z,3.8nm,1.1s						
KNK	Knik Glacier	65.39	29	P	P	01 13 21.0	+0.4
SML	Sawmill	65.55	28	P	P	01 13 21.3	-0.4
NRIK	Noril'sk	65.92	340	P	P	01 13 22.8	-1.0
	comp=Z,2.1nm,0.7s,baz=112,slow=10,SNR=6.2						
	comp=Z,2.1nm,0.7s						
I23K	Minto, Yukon-K	66.08	25	P	P	01 13 25.3	+0.4
D22K	Ayikyak River	66.16	20	P	P	01 13 25.6	+0.2
D22K				IAmb	IAmb	01 13 27.9	
	comp=Z,5.8nm,1.4s						
BOOM	Boomskoye usch	66.29	310	P	P	01 13 26.6	-0.3
BOOM				IAmb	IAmb	01 13 30.9	
	comp=Z,2.0nm,0.6s						
G23K	Bananza Creek	66.32	23	P	P	01 13 27.2	+0.7
KSH2	Kashi	66.51	307	P	P	01 13 29.4	+1.0
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
D23K	Nanushuk River	66.86	20	P	P	01 13 31.1	+1.2
D23K				IAmb	IAmb	01 13 37.8	
	comp=Z,6.0nm,1.4s						
ILAR	Eielson Array	66.98	25	P	P	01 13 29.2	-1.5
	comp=Z,1.0nm,0.4s,baz=252,slow=5.5,SNR=29						
	comp=Z,1.0nm,0.4s						
ILAR	Eielson Array	66.98	25	P	P	01 13 30.0	-0.7
PAX	Paxson	67.13	27	P	P	01 13 32.5	+0.7
PAX				IAmb	IAmb	01 13 34.0	
	comp=Z,3.3nm,0.8s						
RIDG	Independent Ri	67.58	27	P	P	01 13 35.6	+1.0
RIDG				IAmb	IAmb	01 13 54.7	
	comp=Z,8.3nm,1.2s						
DOT	Dot Lake	67.91	27	P	P	01 13 36.6	-0.1
DOT				IAmb	IAmb	01 14 17.3	
	comp=Z,5.2nm,1.2s						
J26L	Joseph Creek	68.30	26	P	P	01 13 39.1	-0.1
J26L				IAmb	IAmb	01 13 41.7	
	comp=Z,4.5nm,0.7s						
GRNC	Granite Creek	68.43	30	P	P	01 13 40.3	+0.1
D25K	Kavik River	68.44	21	P	P	01 13 40.2	+0.3
D25K				IAmb	IAmb	01 14 09.3	
	comp=Z,4.5nm,1.0s						
ARSB	Arslanbob	68.48	309	P	P	01 13 40.6	-0.2
ARSB				IAmb	IAmb	01 13 41.7	
	comp=Z,9.9nm,0.8s						
BMAR	Burnt Mountain	68.57	23	P	P	01 13 41.1	+0.3
BCAR	Beaver Creek A	68.80	28	P	P	01 13 42.2	-0.1
H27K	Steamboat Moun	69.49	24	P	P	01 13 47.0	+0.5
BVAR	Borovoye Array	70.40	321	P	P	01 13 52.1	-0.1
	comp=Z,9.4nm,0.8s,baz=100,slow=6.8,SNR=44						
	comp=Z,9.4nm,0.8s						
BORK	Borovoye	70.44	321	P	P	01 13 52.3	-0.2
HYT	Haines Junctio	70.51	30	P	P	01 13 53.8	+0.9
HYT				IAmb	IAmb	01 13 55.7	
	comp=Z,5.7nm,0.8s						
K29M	Barlow Dome	70.81	27	P	P	01 13 55.2	+0.5
K29M				IAmb	IAmb	01 13 57.0	
	comp=Z,3.1nm,0.8s						
N31M	Braeburn, Yuko	71.39	30	P	P	01 13 59.2	+1.0
N31M				IAmb	IAmb	01 14 10.9	
	comp=Z,13nm,1.4s						
J30M	Hart River	71.40	26	P	P	01 13 59.1	+0.9
J30M				IAmb	IAmb	01 14 06.1	
	comp=Z,4.1nm,1.1s						
INK	Inuvik	72.84	23	P	P	01 14 06.2	-0.4
A36M	Sachs Harbour	75.72	19	P	P	01 14 22.7	-0.6
A36M				IAmb	IAmb	01 14 25.5	
	comp=Z,4.8nm,0.8s						
ABKAR	Akbulak array	77.14	318	P	P	01 14 30.9	-1.0
ARTI	Arti	77.21	325	P	P	01 14 31.5	-0.6
ARTI				IAmb	IAmb	01 14 36.4	
	comp=Z,12nm,1.3s						
YKAW3	Yellowknife Wh	81.20	28	P	P	01 14 53.2	-0.6
YKA	Yellowknife Ar	81.22	28	P	P	01 14 53.6	-0.3
	comp=Z,0.7nm,0.6s,baz=292,slow=6.1,SNR=18						
	comp=Z,0.7nm,0.6s						
YKA	Yellowknife Ar	81.22	28	P	P	01 14 53.1	-0.7
SPITS	Spitsbergen Ar	83.48	351	P	P	01 15 05.8	+0.3
	comp=Z,5.2nm,0.9s,baz=42,slow=6.7,SNR=1.4						
	comp=Z,5.2nm,0.9s						
PLID	Pearl Lake	84.88	45	P	P	01 15 13.9	+0.4
NVAR	Mina Array Bea	84.91	52	P	P	01 15 15.0	+1.2
	comp=Z,0.7nm,0.7s,baz=311,slow=5.2,SNR=2.2						
	comp=Z,0.7nm,0.7s						
ARCES	ARCESS Array B	86.81	342	P	P	01 15 22.3	0.0
	comp=Z,3.2nm,0.8s,baz=79,slow=4.8,SNR=2.6						
	comp=Z,3.2nm,0.8s						
ARCES	ARCESS Array B	86.81	342	P	P	01 15 21.7	-0.6
DUG	Dugway, Tooele	88.52	49	P	P	01 15 31.5	+0.2
DUG				IAmb	IAmb	01 15 33.7	
	comp=Z,2.4nm,0.8s						
PDAR	Pinedale Array	90.02	46	P	P	01 15 39.0	+0.7
	comp=Z,0.3nm,0.7s,baz=292,slow=1.5,SNR=3.5						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	90.02	46	P	P	01 15 38.3	-0.1
FINES	FINESS Array B	91.14	336	P	P	01 15 40.0	-2.8
	comp=Z,5.0nm,1.0s,baz=143,slow=3.8,SNR=5.6						
FINES	FINESS Array B	91.14	336	P	P	01 15 40.5	-2.3
AC02	Maricunga	144.34	116	PKPdf	PKPab	01 22 14.3	+0.7
DBIC	Dimbokro	144.90	305	PKP	PKPab	01 22 15.3	0.0
	comp=Z,9.5nm,0.6s,baz=68,slow=2.4,SNR=22						
DBIC	Dimbokro	144.90	305		PKPab	01 22 15.5	+0.2
LPAZ	La Paz	146.30	98	PKPbc	PKPbc	01 22 20.7	+0.2
	comp=Z,1.6nm,0.6s,baz=63,slow=0.8,SNR=3.2						
LPAZ	La Paz	146.30	98		PKPdf	01 22 17.4	-1.9
SIV	San Ignacio	153.08	97	PKPbc	PKPbc	01 22 36.2	-0.5
	comp=Z,0.8nm,0.6s,baz=238,slow=3.3,SNR=5.8						

MEX 10 01:12:49.7±0.5, 15.71N×95.62W, h42km±10km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
HUIG	Huatulco	0.47	277	eP		Pn	01 12 58.5	-1.7
HUIG				eS		Sn	01 13 05.7	-1.9
PEIG	Puerto Escondi	1.50	281	eP		Pn	01 13 12.2	-1.9
PEIG				eS		Sn	01 13 31.6	-0.9
CMIG	Matias Romero	1.54	27	eP		Pn	01 13 12.3	-2.5
CMIG				eS		Sn	01 13 30.1	-3.5
VHO	Vista Hermosa	1.72	322	eP		Pn	01 13 16.0	-1.4
VHO				eS		Sn	01 13 35.8	-2.5
NEUV	Arroyo Zacate	2.00	355	eP		Pn	01 13 20.0	-1.0
UXUV	UXUV	2.13	41	eP		Pn	01 13 21.2	-1.6
UXUV				eS		Sn	01 13 46.9	-1.2
YOIG	Yosondua	2.17	302	eP		Pn	01 13 22.2	-1.4
YOIG				eS		Sn	01 13 45.4	-4.1
PNIG	Pinotepa	2.50	286	eP		Pn	01 13 26.8	-1.2
PNIG				eS		Sn	01 13 53.2	-4.0
TXIG	Tlaxiaco	2.57	307	eP		Pn	01 13 27.7	-1.4
TXIG				eS		Sn	01 13 58.3	-0.9
TGIG		2.62	66	eP		Pn	01 13 26.4	-3.2
TGIG				eS		Sn	01 14 01.1	+0.8
TOIG	Toxpalan	2.74	330	eP		Pn	01 13 31.0	-0.4
TOIG				eS		Sn	01 14 06.1	+2.8
HLIG	Huajuapan de L	2.97	316	eP		Pn	01 13 30.2	-4.3
HLIG				eS		Sn	01 14 11.0	+2.0
MGIG	Malinaltepec	3.26	298	eP		Pn	01 13 42.0	+3.4
MGIG				eS		Sn	01 14 13.7	-2.5
TLIG	Tlapa	3.37	303	eP		Pn	01 13 40.3	+0.3
TLIG				eS		Sn	01 14 11.6	-7.2

JSN 10 02:04:34.2±2.1, 18.32N×80.96W, h15km±999km, MD4.6, MW4.9, Presumed earthquake
SSNC 10 02:04:36.9±1.3, 19.10N×80.73W, h5km, ML2.4, Presumed earthquake

ISC 10 02:04:34.6±2.1, 19.09N±0.09×80.70W±0.09, h10km, n8, σ1§10/11, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
LCCY	Blossom Villag	0.82	45	eP		Pn	02 04 52.1	-0.1
CBCY	The Bluff, Cay	1.10	54	eP		Pg	02 04 55.5	-0.2
CBCY				eS		Sg	02 05 09.7	-0.3
CBCY				IAML			02 05 12.2	
	comp=N,53nm,0.1s							
CBCY				IAML			02 05 16.6	
	comp=E,136nm,0.4s							
MGV	Manicaragua	3.08	12	eP		Pn	02 05 23.4	0.0
MGV				eS		Sn	02 06 00.5	+0.1
MTDJ	Mount Denham	3.12	105	eP		Pn	02 05 24.0	0.0
MTDJ				eS		Sn	02 06 01.2	-0.2
CCCC	Cccc	3.47	52	eP		Pb	02 05 35.5	-0.6
STH	Stony Hill	3.82	105	⇑P		Pn	02 05 33.5	-0.1
SOR	Soroa	4.27	330	eP		Pn	02 05 40.4	+0.6
YAR	Yar	4.28	72	eP		Pn	02 05 42.8	+2.9

IDC 10 02:10:29.9±3.7, 22.95S×179.72E, h511km±35km, mb3.1/5, mbtmp4.0/5, Error ellipse: s-maj=116.0km s-min=23.8km az=158.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
STKA	Stephens Creek	34.84	247	P		P	02 16 38.4	+0.5
	1.5nm,0.5s,baz=69,slow=5.8,SNR=4.4							
	1.5nm,0.5s							
ASAR	Alice Springs	41.94	260	P		P	02 17 35.1	-0.6
	1.9nm,0.5s,baz=100,slow=7.2,SNR=23							
ASAR				ScP		ScP	02 22 20.6	-0.5
	0.5nm,0.7s,baz=97,slow=4.1,SNR=5.5							
	1.9nm,0.5s							
WRA	Warramunga Arr	42.22	265	P		P	02 17 37.8	-0.1
	2.9nm,0.5s,baz=103,slow=8.1,SNR=51							
	2.9nm,0.5s							
NVAR	Mina Array Bea	84.25	44	P		P	02 22 07.6	-0.1
	0.3nm,0.4s,baz=262,slow=4.5,SNR=1.9							
	0.3nm,0.4s							
TXAR	Lajitas Array	90.15	58	P		P	02 22 35.7	0.0
	0.2nm,0.7s,baz=230,slow=4.7,SNR=3.6							
	0.2nm,0.7s							

ISK 10 02:19:57.9, 36.44N×26.79E, h118km±1km, ML2.7/18
GII 10 02:19:58.5±0.0, 36.03N±0.03×26.953E±0.010, h0km, Mws3.4, confirmed
ATH 10 02:19:59.2, 36.43N×26.81E, h102km±5km, Manual Solution by M.Charalampakis First location: 2020/02/10 02:21:15, This location: 2021/10/05 05:38:24 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
THE 10 02:20:00.0, 36°N±3°×27°E±°, h97km±6km, M3.0/10, mb3.5/2, MLh3.0/10
AFAD 10 02:20:01.3, 36.53N×26.80E, h38km±4km, ML2.5
IDC 10 02:20:04.5±6.2, 36.29N×27.58E, h150km±39km, mb3.4/2, mbtmp3.6/4, Error ellipse: s-maj=77.9km s-min=29.3km az=55.0

ISC 10 02:19:56.7±1.2, 36.35N±0.04×26.94E±0.05, h129km±8km, n127, σ1§46/178, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
DAT	Datca	0.64	54	Pg		Pn	02 20 17.5	+0.9
DAT				Sg		Sn	02 20 31.9	+0.1
KARP	Karpathos	0.82	167	Pg		Pn	02 20 19.4	+1.4
KARP	Karpathos	0.82	167	P		Pn	02 20 19.3	+1.4
KARP				S		Sn	02 20 34.6	+0.5
KARP	Karpathos	0.82	167	P		Pn	02 20 19.1	+1.1
KARP				S		Sn	02 20 34.0	-0.1
ARG	Arkhangelos	0.97	98	Pn		Pn	02 20 21.4	+2.2
ARG	Arkhangelos	0.97	98	P		Pn	02 20 21.3	+2.1
ARG				S		Sn	02 20 38.0	+1.8
ARG	Arkhangelos	0.97	98	P		Pn	02 20 21.2	+2.1
ARG				S		Sn	02 20 36.7	+0.5
RDI1	Rhodes Town Ha	1.04	84	P		Pn	02 20 21.7	+1.8
RDI1				S		Sn	02 20 38.1	+0.7
DDIM	Aydin, Didim	1.13	12	P		Pn	02 20 20.5	-0.2
TURN	Turunc	1.14	68	Pn		Pn	02 20 22.4	+1.7
TURN	Turunc	1.14	68	P		Pn	02 20 22.2	+1.4
TURN				S		Sn	02 20 37.4	-1.7
TURN				IAML			02 20 40.0	
	comp=E,130nm,0.5s							
TURN				IAML			02 20 41.0	
	comp=N,163nm,0.3s							
THR8	Santorini-Mono	1.18	273	P		Pn	02 20 20.8	-0.4
THERA	Ancient Thera,	1.18	271	P		Pn	02 20 20.7	-0.5
THERA	Ancient Thera,	1.18	271	P		Pn	02 20 20.9	-0.4
THR3	Thira Island,	1.24	273	P		Pn	02 20 21.6	-0.2
THR6	Thira Island,	1.24	271	P		Pn	02 20 21.8	0.0
THR9	Santorini-Faro	1.28	271	P		Pn	02 20 21.6	-0.6
SAP3	Santorini-Thir	1.29	274	P		Pn	02 20 22.1	-0.2
SIT2	Siteia	1.33	211	P		Pn	02 20 24.1	+1.3
SIT2				S		Sn	02 20 42.2	-0.3
YER	Yerkesik	1.33	54	Pn		Pn	02 20 24.9	+2.0
YER				Sn		Sn	02 20 43.9	+1.0
YER	Yerkesik	1.33	54	P		Pn	02 20 25.0	+2.1
YER				S		Sn	02 20 44.1	+1.1
APE	Apeiranthos	1.34	303	Pn		Pn	02 20 22.4	-0.5
APE	Apeiranthos	1.34	303	P		Pn	02 20 22.6	-0.3
APE				S		Sn	02 20 39.9	-3.1
APE	Apeiranthos	1.34	303	P		Pn	02 20 22.0	-1.0
APE	Apeiranthos	1.34	303	P		Pn	02 20 22.4	-0.5
SMG	Samos	1.36	357	P		Pn	02 20 23.1	-0.1
SMG	Samos	1.36	357	P		Pn	02 20 23.0	-0.1
ZKR	Zakros	1.36	206	Pn		Pn	02 20 25.2	+2.0
ZKR				Sn		Sn	02 20 44.5	+1.1
ZKR	Zakros	1.36	206	P		Pn	02 20 25.1	+1.9
ZKR				S		Sn	02 20 43.0	+0.2
GCAM	G?zelcaml?	1.37	10	Pn		Pn	02 20 23.6	+0.4
GCAM	G?zelcaml?	1.37	10	P		Pn	02 20 23.4	+0.2
MULA	Mugla, Merkez-	1.43	50	P		Pn	02 20 25.4	+1.4
MULA				S		Sn	02 20 45.1	+0.2
MULA				IAML			02 20 48.0	
	comp=E,61nm,0.4s							
KRL1	Karlovasi Samo	1.46	353	P		Pn	02 20 24.1	-0.1
DALY	Dalyan (Mula)	1.46	71	Pn		Pn	02 20 27.1	+2.9
DALY				Sn		Sn	02 20 47.5	+2.4
AYDN	Tasoluk	1.51	30	P		Pn	02 20 25.7	+0.9
AYDN				S		Sn	02 20 49.8	+3.4
NPS	Neapolis	1.53	225	P		Pn	02 20 26.2	+1.2
NPS	Neapolis	1.53	225	P		Pn	02 20 25.5	+0.5
SABU	Mula-Dalaman	1.70	73	P		Pn	02 20 29.6	+2.5
SABU				S		Sn	02 20 50.4	+0.2
AYDB	Zeytinkoy-Aydi	1.77	25	Pn		Pn	02 20 28.8	+0.9
ESEN	Aydn-Nazilli	1.83	38	P		Pn	02 20 30.0	+1.5
ESEN				S		Sn	02 20 50.8	-2.1
DNZT	Denizli-Tavas-	1.92	60	P		Pn	02 20 31.8	+2.1
DNZT				S		Sn	02 20 54.8	0.0
TAVA	DENIZLI_Tavas	1.94	54	P		Pn	02 20 31.9	+2.0
TAVA				S		Sn	02 20 54.4	-0.9
TAVA				IAML			02 20 57.0	
	comp=N,32nm,0.5s							
NAZL	Nazilli-Aydin	1.94	33	Pn		Pn	02 20 31.4	+1.5
IZMR	zmir-demi	1.96	24	P		Pn	02 20 30.3	+0.3
IZMR				S		Sn	02 20 49.5	-6.1
IDI	Anoyia	1.97	238	Pn		Pn	02 20 30.3	0.0
IDI	Anoyia	1.97	238	P		Pn	02 20 30.4	0.0
CAME	Cameli-Denizli	1.99	72	Pn		Pn	02 20 33.0	+2.4
CAEL	Denizli, Camel	2.06	67	P		Pn	02 20 33.1	+1.6
CAEL				S		Sn	02 20 58.1	-0.1
DNIZ	Denizli-Tavas-	2.11	52	P		Pn	02 20 34.0	+2.0
DNIZ				S		Sn	02 20 59.0	-0.1
ODEM	Odemis-Izmir	2.13	25	Pn		Pn	02 20 33.4	+1.2
CHOS	Chios island	2.15	341	Pn		Pn	02 20 32.3	-0.2
CHOS	Chios island	2.15	341	P		Pn	02 20 32.3	-0.2
AKAS	Kas	2.16	92	Pn		Pn	02 20 35.4	+2.7
KNIK	Mula-Seydike	2.18	76	P		Pn	02 20 35.2	+2.3
KNIK				S		Sn	02 20 59.7	-0.9
KNIK				IAML			02 21 03.0	
	comp=E,53nm,0.4s							
KNIK				IAML			02 21 05.0	
	comp=N,39nm,0.3s							
APMY	Acipayam-Deniz	2.20	59	Pn		Pn	02 20 35.3	+2.2
SULTU	Buldan	2.24	40	P		Pn	02 20 35.3	+1.6
SULTU				S		Sn	02 21 02.1	0.0
SULTU				IAML			02 21 05.0	
	comp=E,46nm,0.7s							
SULTU				IAML			02 21 11.0	
	comp=N,25nm,0.8s							
GOLH	Golhisar	2.29	66	P		Pn	02 20 36.8	+2.6
GOLH				S		Sn	02 21 02.2	-0.8
GOLH				IAML			02 21 06.0	
	comp=N,51nm,0.3s							
GOLH				IAML			02 21 13.0	
	comp=E,42nm,0.5s							
EAG2	Marmaro, Chios	2.29	343	P		Pn	02 20 34.2	+0.1
CAMT	Merkez	2.41	7	P		Pn	02 20 35.8	+0.1
VAM	Vamos	2.41	248	P		Pn	02 20 35.8	+0.1
CHAN	Chania	2.49	251	P		Pn	02 20 36.9	+0.3
MANT	Manisa	2.50	31	P		Pn	02 20 37.8	+0.9
MANT				S		Sn	02 21 04.9	-3.1
KTTT	Salihli	2.51	21	P		Pn	02

ANX	**Ano Chora**	**4.58**	**301**	P		**Pn**	02 21 05.5 +1.4
AMPL	**Ampelaki**	**5.22**	**301**	P		**Pn**	02 21 14.4 +1.8
	0.0nm7.3nm,1.1s						
CSS	**Mathiatis**	**5.39**	**103**	P		**Pn**	02 21 15.5 +0.6
CSS				S		**Sn**	02 22 15.5 -0.4
PRMD	**Pramanda**	**5.60**	**306**	P		**Pn**	02 21 19.4 +1.6
BRTR	**Keskin Array B**	**6.27**	**55**	P		**Pn**	02 21 29.7 +2.8
	1.8nm,0.7s,baz=228,slow=13,SNR=13						
MMC7	**Mount Meron ar**	**7.71**	**113**	P		**Pn**	02 21 46.8 +0.4
MMA0B	**Mount Meron ar**	**7.72**	**113**	P		**Pn**	02 21 47.0 +0.5
MMA0B				S		**Sn**	02 23 12.1 -0.4
MMAI	**Mount Meron Ar**	**7.72**	**113**	P		**Pn**	02 21 47.1 +0.6
	1.0nm,0.3s,baz=311,slow=13,SNR=20						
MMAI				S		**Sn**	02 23 09.8 -2.6
	0.9nm,0.3s,baz=295,slow=28,SNR=9.8						
GEM	**Giv'at Ha'Em**	**7.83**	**111**	P		**Pn**	02 21 48.2 +0.4
GEM				S		**Sn**	02 23 14.8 -0.2
NATI	**Neve Ativ**	**7.86**	**110**	P		**Pn**	02 21 48.8 +0.6
NATI				S		**Sn**	02 23 15.4 -0.3
MMLI	**Mount Malkishu**	**8.02**	**117**	P		**Pn**	02 21 50.7 +0.3
MMLI				S		**Sn**	02 23 18.7 -0.9
KSHT	**Keshet**	**8.04**	**112**	P		**Pn**	02 21 51.5 +0.7
KSHT				S		**Sn**	02 23 20.2 0.0
SALP	**Salfit**	**8.06**	**120**	P		**Pn**	02 21 51.1 +0.2
SALP				S		**Sn**	02 23 19.3 -1.2
AMAZ	**Amatzia**	**8.19**	**124**	P		**Pn**	02 21 52.4 -0.2
AMAZ				S		**Sn**	02 23 21.6 -1.9
HMDT	**Nahal Hemdat**	**8.20**	**117**	P		**Pn**	02 21 53.2 +0.4
HMDT				S		**Sn**	02 23 22.9 -0.8
KZIT	**Kziot**	**8.25**	**129**	P		**Pn**	02 21 54.7 +1.1
KZIT				S		**Sn**	02 23 22.9 -2.3
YTIR	**Yattir**	**8.42**	**124**	P		**Pn**	02 21 55.9 0.0
YTIR				S		**Sn**	02 23 27.7 -1.7
DSI	**Dead Sea**	**8.48**	**122**	P		**Pn**	02 21 56.4 -0.2
DSI				S		**Sn**	02 23 29.0 -1.6
MSBI	**Mazada**	**8.62**	**123**	P		**Pn**	02 21 58.3 -0.1
MSBI				S		**Sn**	02 23 32.1 -1.8
GHAJ	**Ghor Haditha**	**8.77**	**123**	P		**Pn**	02 22 00.4 +0.1
GHAJ				S		**Sn**	02 23 36.0 -1.5
ZFRI	**Zfri**	**8.99**	**128**	P		**Pn**	02 22 03.2 -0.1
ZFRI				S		**Sn**	02 23 40.6 -2.3
KRMI	**Paran Flat**	**9.01**	**131**	P		**Pn**	02 22 03.2 -0.5
KRMI				S		**Sn**	02 23 39.8 -3.7
PRNI	**Paran**	**9.01**	**129**	P		**Pn**	02 22 03.5 -0.3
PRNI				S		**Sn**	02 23 41.4 -2.2
HRFI	**Mount Harif**	**9.25**	**131**	P		**Pn**	02 22 06.8 -0.3
HRFI				S		**Sn**	02 23 47.1 -2.4
MBRI	**Mt Berech**	**9.35**	**132**	P		**Pn**	02 22 08.1 -0.3
MBRI				S		**Sn**	02 23 50.0 -1.9
EIL	**Elat**	**9.46**	**132**	P		**Pn**	02 22 09.3 -0.5
EIL				S		**Sn**	02 23 51.9 -2.6
FINES	**FINESS Array B**	**25.12**	**359**	P		P	02 25 16.1 +6.9
	4.5nm,0.9s,baz=175,slow=17,SNR=1.6						
	4.5nm,0.9s						
MKAR	**Makanchi Array**	**41.92**	**58**	P		P	02 27 36.6 +2.2
	0.3nm,0.5s,baz=269,slow=7.7,SNR=5.5						
	0.3nm,0.5s						

TAP 10 02:26:34.9,21°.97N×121°.30E,h68km,ML3.9,2C-4D,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.25**	**74**	⇑*i*P	Pn	02 26 45.6	+0.1
LAY				*i* S	Sn	02 26 53.5	+0.1
LYUB	**Lan-yu**	**0.27**	**84**	*i* P	Pn	02 26 45.0	-0.7
LYUB				*i* S	Sn	02 26 52.4	-1.1
TSEB	**Hengchuen, Pin**	**0.37**	**259**	*i* P	Pn	02 26 46.0	-0.4
TSEB				*i* S	Sn	02 26 57.0	+2.2
SMST	**Manzhou Townsh**	**0.43**	**277**	P	Pn	02 26 47.4	+0.6
SMST				S	Sn	02 26 56.4	+0.7
TWKBT	**Hengchun**	**0.45**	**266**	⇑*i*P	Pn	02 26 47.9	+0.8
TWKBT				S	Sn	02 26 57.1	+1.2
TWK1	**Hengchun**	**0.46**	**266**	*i* P	Pn	02 26 48.0	+0.9
TWK1				*i* S	Sn	02 26 57.4	+1.4
HEN	**Hengchun**	**0.52**	**274**	*e*P	Pn	02 26 46.8	-0.9
HEN				*e*S	Sn	02 26 59.2	+2.1
SLIU	**Shizi**	**0.52**	**298**	*e*P	Pn	02 26 47.8	0.0
SLIU				*e*S	Sn	02 26 59.1	+1.9
TAW	**Tawu**	**0.53**	**316**	*i* P	Pn	02 26 48.0	+0.1
TAW				*i* S	Sn	02 26 57.5	+0.1
EAST	**Anshuo**	**0.58**	**315**	⇓*i*P	Pn	02 26 48.7	+0.2
EAST				*i* S	Sn	02 26 58.7	+0.3
ECL	**Taimali**	**0.70**	**333**	*i* P	Pn	02 26 49.5	-0.1
ECL				*e*S	Sn	02 27 00.1	-0.4
SCZT	**Fangliau**	**0.74**	**303**	*i* P	Pn	02 26 50.9	+0.7
SCZT				S	Sn	02 27 03.5	+2.1
TTN	**Taitung**	**0.79**	**350**	P	Pn	02 26 51.7	+1.0
TTN				*i* S	Sn	02 27 05.1	+2.7
TWGBT	**Beinan**	**0.86**	**347**	⇓*i*P	Pn	02 26 51.5	-0.1
TWGBT				S	Sn	02 27 04.4	+0.4
TWG	**Pinlang**	**0.87**	**346**	⇓P	Pn	02 26 51.6	-0.2
TWG				S	Sn	02 27 04.2	+0.1
MASBT	**Mashibuluo**	**0.88**	**316**	⇓P	Pn	02 26 52.7	+0.8
MASBT				*e*S	Sn	02 27 05.5	+1.1
WLCH	**Liuqiu**	**0.93**	**294**	*e*P	Pn	02 26 55.1	+2.7
WLCH				*e*S	Sn	02 27 10.2	+4.8
TWP	**Hsiaoliuchiu**	**0.94**	**293**	*e*P	Pn	02 26 55.5	+3.0
SSD	**Sandimen**	**0.98**	**322**	P	Pn	02 26 54.5	+1.4
SSD				S	Sn	02 27 06.6	-0.1
ECS	**Chishang**	**1.12**	**356**	P	Pn	02 26 55.5	+0.6
ECS				S	Sn	02 27 10.2	+0.4
CHKT	**Chengkung**	**1.12**	**3**	*e*P	Pn	02 26 55.0	+0.1
CHKT				*i* S	Sn	02 27 10.6	+0.8
WSSB	**Gushan**	**1.17**	**305**	*e*P	Pn	02 26 57.0	+1.5
WSSB				*e*S	Sn	02 27 13.9	+3.1
TWM1	**Shoushan**	**1.17**	**317**	*i* P	Pn	02 26 57.9	+2.4
CHKH	**Chenggong**	**1.22**	**4**	P	Pn	02 26 56.6	+0.4
CHKH				S	Sn	02 27 12.7	+0.7
FULB	**Fuli**	**1.22**	**360**	*e*P	Pn	02 26 56.5	+0.3
FULB				*e*S	Sn	02 27 14.6	+2.5
ELDTW	**Lidau**	**1.24**	**348**	*e*P	Pn	02 26 56.8	+0.3
ELDTW				*i* S	Sn	02 27 12.5	-0.1
SGST	**Jiashian**	**1.29**	**329**	*i* P	Pn	02 26 59.5	+2.4
STYH	**Taoyuan**	**1.29**	**338**	*e*P	Pn	02 26 58.4	+1.4
STYH				*e*S	Sn	02 27 16.5	+3.0
ECBN	**Changbin**	**1.35**	**6**	*e*P	Pn	02 26 58.0	+0.2
ECBN				*e*S	Sn	02 27 16.0	+1.1
TWF1	**Yuli**	**1.37**	**0**	*e*P	Pn	02 26 58.1	-0.1
TWF1				S	Sn	02 27 17.3	+1.6
CHN1	**Nanshi**	**1.40**	**330**	*e*P	Pn	02 27 00.4	+1.8
CHN1				S	Sn	02 27 16.9	+0.7
YULB	**Yu-li**	**1.41**	**0**	*e*P	Pn	02 26 58.6	-0.1
YULB				*e*S	Sn	02 27 17.9	+1.3
WTP	**Ta-pu**	**1.42**	**334**	*e*P	Pn	02 27 00.9	+2.1
SNST	**Tainan City**	**1.44**	**329**	*e*P	Pn	02 26 59.8	+0.7
TPUB	**Ta-pu**	**1.46**	**335**	*e*P	Pn	02 27 00.3	+1.0
TPUB				*e*S	Sn	02 27 18.6	+0.9
TWK	**Hsinying**	**1.49**	**330**	*e*P	Pn	02 27 00.7	+1.0
CHN4	**Tsaushan**	**1.52**	**335**	P	Pn	02 27 02.5	+2.4
HGSD	**Ruisui**	**1.52**	**4**	P	Pn	02 27 01.0	+0.9
HGSD				S	Sn	02 27 20.4	+1.4
EHY	**Hungye**	**1.53**	**1**	P	Pn	02 27 00.4	+0.2
EHY				*e*S	Sn	02 27 19.8	+0.5
YUS	**Yu-Shan**	**1.54**	**348**	*e*P	Pn	02 27 02.7	+1.8
YUS				*i* S	Sn	02 27 21.1	+0.7
WCKO	**Fanlu**	**1.59**	**337**	*e*P	Pn	02 27 02.6	+1.5
ALS	**Alishan**	**1.60**	**344**	*i* P	Pn	02 27 04.0	+2.6
TSCK	**Chigu Township**	**1.62**	**317**	P	Pn	02 27 02.1	+0.8
EGFH	**Guangfu**	**1.69**	**4**	*e*P	Pn	02 27 03.3	+0.8
CHN5	**Tsauling**	**1.71**	**341**	P	Pn	02 27 04.5	+1.8
CHY	**Chiayi**	**1.72**	**332**	*e*P	Pn	02 27 04.0	+1.2
WARBT	**Fenglin Townsh**	**1.74**	**3**	*e*P	Pn	02 27 03.6	+0.6
WARBT				*e*S	Sn	02 27 24.9	+0.6
WHYT	**Xinyi Township**	**1.76**	**347**	*e*P	Pn	02 27 06.5	+3.1
VWDT	**VWDT**	**1.78**	**355**	*e*P	Pn	02 27 05.2	+1.7
SHUL	**Shoufeng**	**1.82**	**8**	*e*P	Pn	02 27 05.8	+1.7
WSL	**Shuilin Townsh**	**1.83**	**328**	*e*P	Pn	02 27 03.8	-0.5
WSL				*e*S	Sn	02 27 27.9	+1.4
SSLB	**Suanglung**	**1.83**	**350**	*e*P	Pn	02 27 06.8	+2.4
WDLH	**Douliu**	**1.85**	**338**	*e*P	Pn	02 27 05.4	+1.0
WSF	**Szhu**	**1.93**	**329**	*e*S	Sn	02 27 29.4	+0.5
SMLT	**Sun Moon Lake**	**1.94**	**349**	*e*P	Pn	02 27 07.0	+1.2
TYC	**Yuchr**	**1.96**	**348**	P	Pn	02 27 07.8	+1.8
OWD	**Renai**	**1.98**	**357**	*e*P	Pn	02 27 08.1	+1.7
OWD				*i* S	Sn	02 27 32.2	+1.9
WDGT	**Dungji**	**1.98**	**311**	*e*P	Pn	02 27 06.2	-0.1
WDGT				*e*S	Sn	02 27 29.6	-0.6
ETM	**Tongmen**	**1.99**	**5**	*e*P	Pn	02 27 08.2	+1.8
WUSB	**Renai**	**2.02**	**355**	*e*P	Pn	02 27 08.6	+1.7
WUSB				S	Sn	02 27 33.2	+2.0
LXIB	**Xiulin Townshi**	**2.04**	**3**	*e*P	Pn	02 27 07.6	+0.3
LXIB				*i* S	Sn	02 27 32.4	+0.6
TWD	**Chiawan**	**2.12**	**7**	*e*P	Pn	02 27 10.3	+2.2
VCHM	**Qimei**	**2.12**	**306**	*i* P	Pn	02 27 08.0	-0.1
VCHM				*i* S	Sn	02 27 32.4	-1.0
NACB	**Ninganchiao**	**2.21**	**7**	*e*P	Pn	02 27 10.4	+1.0
PHUB	**P'eng-hu**	**2.21**	**314**	*e*P	Pn	02 27 09.0	-0.4
PHUB				S	Sn	02 27 35.0	-0.6
ETLH	**Xiulin Townshi**	**2.23**	**4**	*e*P	Pn	02 27 12.1	+2.3
PNG	**Penghu**	**2.26**	**315**	*e*P	Pn	02 27 10.3	+0.3
PNG				S	Sn	02 27 35.6	-1.2
FUSS	**Fushou**	**2.27**	**359**	*e*P	Pn	02 27 13.2	+2.8
TWT	**Tachien**	**2.27**	**357**	*e*S	Sn	02 27 39.1	+1.6
EOS4	**EOS4**	**2.34**	**24**	*e*S	Sn	02 27 38.4	+0.2
EAHA	**Aohua**	**2.38**	**10**	*e*S	Sn	02 27 42.5	+2.7
NNSB	**Datong**	**2.45**	**2**	*e*P	Pn	02 27 15.0	+2.3
NNSB				S	Sn	02 27 44.0	+2.4
NNS	**Nan Shan**	**2.46**	**2**	*e*S	Sn	02 27 44.4	+2.5
EOS3	**EOS3**	**2.49**	**22**	*e*P	Pn	02 27 14.3	+1.3
EOS3				*i* S	Sn	02 27 43.0	+0.8
LATG	**Datong**	**2.56**	**5**	*e*P	Pn	02 27 16.4	+2.1
YHNB	**Yeheng**	**2.69**	**2**	*e*P	Pn	02 27 17.9	+1.9
NSK	**Sanguang**	**2.69**	**1**	*e*P	Pn	02 27 18.8	+2.8
NSK				S	Sn	02 27 50.8	+3.3
TWY	**Chenhua**	**3.30**	**5**	*e*P	Pn	02 27 25.6	+1.4
TWY				*i* S	Sn	02 28 01.6	-0.6
VWUC	**VWUC**	**3.45**	**331**	*e*P	Pn	02 27 27.2	+1.0
VWUC				*e*S	Sn	02 28 03.9	-2.0
ZPLA	**Ao Xicun**	**3.80**	**301**	P	Pn	02 27 31.2	+0.1
ZPLA				S	Sn	02 28 12.9	-1.7
DSXP	**Dongshan**	**3.96**	**297**	*e*P	Pn	02 27 34.1	+0.8
DSXP				*i* S	Sn	02 28 16.9	-1.7
AXDP	**Jialang**	**4.22**	**314**	*i* P	Pn	02 27 37.0	+0.2
XPSS	**Dashiqiu**	**5.04**	**349**	*e*P	Pn	02 27 49.3	+1.4
XPSS				*i* S	Sn	02 28 42.3	-2.5

*DJA **10** 02:49:19.4±0.4,8°.S×3°.×12°.0E±°, h173km±5km, M3.9/15, mB4.8/1, mb4.0/2, MLv3.9/15, Mw(mB)4.1/1*
*IDC **10** 02:49:21.2±1.8,8°.05S×119°.96E, h195km±14km, mb3.5/7, mbtmp4.0/11, Error ellipse: s-maj=46.5km s-min=9.1km az=54.0*

ISC 10 02:49:18.8±0.8,8°.34S±0°.05×119°.64E±0°.04,h181km±6km, n26,σ1°.46/38,mb3.9/6,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.32**	**191**	P	**Pn**	**02 49 49.1**	**-0.1**
WBSI				S	**Sn**	**02 50 12.9**	**0.0**
DBNI	**Kabupaten Domp**	**1.32**	**263**	P	**Pn**	**02 49 49.5**	**+0.3**
DBNI				S	**Sn**	**02 50 12.4**	**-0.3**
WSI	**Waingapu**	**1.47**	**154**	P	**Pn**	**02 49 51.1**	**+0.5**
WSI				S	**Sn**	**02 50 14.7**	**-0.6**
PLAI	**Plampang**	**1.91**	**255**	P	**Pn**	**02 49 55.5**	**+0.6**
PLAI				S	**Sn**	**02 50 22.9**	**0.0**
EDFI	**Ende, Flores**	**2.07**	**102**	P	**Pn**	**02 49 56.7**	**-0.1**
EDFI				S	**Sn**	**02 50 26.1**	**-0.1**
BASI	**Baing, Sumba**	**2.08**	**154**	P	**Pn**	**02 49 57.4**	**+0.5**
BASI				S	**Sn**	**02 50 26.6**	**+0.1**
BSSI	**Bau Bau, Buton**	**2.34**	**21**	P	**Pn**	**02 49 59.4**	**-0.4**
MMRI	**Maumere**	**2.59**	**97**	P	**Pn**	**02 50 02.9**	**+0.3**
MMRI				S	**Sn**	**02 50 37.1**	**+0.5**
TWSI	**Taliwang, Sumb**	**2.76**	**262**	P	**Pn**	**02 50 04.7**	**+0.1**
KAPI	**Kappang**	**3.31**	**2**	P	**Pn**	**02 50 11.2**	**-0.1**
	16nm,0.7s,baz=150,slow=7.0,SNR=5.4						
KAPI	**Kappang**	**3.31**	**2**	P	**Pn**	**02 50 11.4**	**+0.1**
KLNI	**Mataram**	**3.51**	**268**	P	**Pn**	**02 50 13.8**	**0.0**
KHKI	**Kahang-Kahang**	**3.99**	**269**	P	**Pn**	**02 50 19.3**	**-0.5**
BATI	**Baumata**	**4.38**	**115**	P	**Pn**	**02 50 27.0**	**+2.1**
	48nm,0.4s,baz=284,slow=9.8,SNR=2.9						
BATI				S	**Sn**	**02 51 16.1**	**-0.5**
	50nm,0.3s,baz=340,slow=18,SNR=4.2						
BATI	**Baumata**	**4.38**	**115**	P	**Pn**	**02 50 26.7**	**+1.8**
SOEI	**Soe**	**4.78**	**107**	P	**Pn**	**02 50 30.9**	**+0.8**
JAGI	**Jajag, Banyuwa**	**5.43**	**268**	P	**Pn**	**02 50 39.3**	**+0.8**
FITZ	**Fitzroy Crossi**	**11.32**	**150**	P	**Pn**	**02 51 57.6**	**+2.0**
	2.4nm,0.4s,baz=336,slow=9.6,SNR=16						
FITZ				S	**Sn**	**02 53 56.1**	**-5.3**
	3.8nm,0.4s,baz=47,slow=11,SNR=11						
WRA	**Warramunga Arr**	**18.32**	**131**	P	**Pn**	**02 53 21.2**	**-0.5**
	1.0nm,0.3s,baz=304,slow=12,SNR=45						
WRA				S	**S**	**02 56 38.9**	**-0.7**
	2.4nm,0.6s,baz=308,slow=24,SNR=7.3						
ASAR	**Alice Springs**	**20.47**	**140**	P	**P**	**02 53 44.6**	**+1.9**
	1.5nm,0.4s,baz=315,slow=8.9,SNR=30						
ASAR				S	**S**	**02 57 18.2**	**-3.9**
	1.9nm,0.7s,baz=321,slow=22,SNR=8.9						
ASAR				ScP	**ScP**	**03 01 06.5**	**-0.3**
	0.4nm,0.5s,baz=344,slow=2.5,SNR=5.3						
	1.5nm,0.4s						
STKA	**Stephens Creek**	**31.07**	**142**	P	**P**	**02 55 22.8**	**+2.8**
	2.0nm,0.5s,baz=315,slow=11,SNR=7.5						
	2.0nm,0.5s						
SONM	**Songino Array**	**57.15**	**349**	P	**P**	**02 58 46.6**	**-0.1**
	0.6nm,0.5s,baz=172,slow=8.2,SNR=5.4						
	0.6nm,0.5s						
HILR	**Hailar Array B**	**57.65**	**0**	P	**P**	**02 58 50.0**	**-0.1**
	0.7nm,0.3s,baz=185,slow=8.7,SNR=1.9						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**64.16**	**332**	P	**P**	**02 59 34.0**	**-0.1**
	1.5nm,0.6s,baz=155,slow=7.2,SNR=18						
	1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**68.66**	**339**	P	**P**	**03 00 00.9**	**-1.5**
	0.8nm,0.4s,baz=157,slow=3.8,SNR=4.5						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**68.66**	**333**	P	**P**	**03 00 01.8**	**-0.6**
	0.2nm,0.3s,baz=134,slow=6.6,SNR=1.8						
	0.2nm,0.3s						

*SOME **10** 02:50:55.0,40°.20N×77°.38E, h10km*
*KRNET **10** 02:50:56.9±0.1,40°.27N×77°.35E, h35km, mb3.6*
*NNC **10** 02:50:58.3±1.4,40°.34N×77°.49E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=9.8km s-min=7.1km az=173.0*

ISC 10 02:50:57.3±1.9,40°.29N±0°.07×77°.39E±0°.04,h7km±11km, n45,σ1°.38/72,17C-17D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.47**	**12**	⇑*e*P	**Pn**	**02 51 24.3**	**-0.3**
TARG				⇑*e*S	**Sb**	**02 51 44.3**	**0.0**
JNKS	**Jany-Kuch**	**1.54**	**300**	⇑*e*P	**Pn**	**02 51 24.5**	**-0.9**
JNKS				⇑*e*S	**Sn**	**02 51 44.6**	**-1.3**
NRN	**Naryn**	**1.55**	**318**	⇓*e*P	**Pn**	**02 51 25.2**	**-0.5**
NRN				⇓*e*S	**Sn**	**02 51 45.8**	**-0.4**
KDJ	**Kajisay**	**1.84**	**355**	⇑*e*P	**Pn**	**02 51 29.9**	**+0.3**
KDJ				⇑*e*S	**Sb**	**02 51 54.0**	**-0.8**
ULHL	**Ulahol**	**2.13**	**337**	⇑*e*P	**Pn**	**02 51 33.8**	**+0.2**
ULHL				⇑*e*S	**Sn**	**02 52 00.8**	**+0.3**
PRZ	**Przheval'sk**	**2.32**	**19**	⇓*e*P	**Pn**	**02 51 36.9**	**+0.8**
PRZ				⇓*e*S	**Sn**	**02 52 06.1**	**+1.1**
BOOM	**Boomskoye usch**	**2.45**	**334**	⇓*e*P	**Pn**	**02 51 38.3**	**+0.4**
BOOM				⇓*e*S	**Sn**	**02 52 08.4**	**+0.2**
TNSS	**Tian-Shan**	**2.76**	**353**	Pg	**Pb**	**02 51 48.1**	**+0.9**
	21nm,0.4s						
TNSS				Lg	Lg	02 52 26.0	
	20nm,0.6s						
TNSS	**Tian-Shan**	**2.76**	**353**	*e*P	**Pb**	**02 51 47.9**	**+0.7**
	21nm,0.4s						
TNSS				*e*S	**Sg**	**02 52 26.0**	**-0.1**
	20nm,0.6s						
IZV	**Izvestkoviy**	**2.80**	**348**	Pg	**Pb**	**02 51 47.7**	**-0.2**
	27nm,0.5s						
IZV				Lg	Lg	02 52 26.5	
	138nm,0.5s						
IZV	**Izvestkoviy**	**2.80**	**348**	*e*P	**Pb**	**02 51 47.6**	**-0.2**
	27nm,0.5s						
IZV				*e*S	**Sg**	**02 52 25.6**	**-1.7**
	138nm,0.5s						
SATY	**Saty**	**2.87**	**15**	Pg	**Pb**	**02 51 50.3**	**+1.4**
	16nm,0.4s						
SATY				Lg	Lg	02 52 29.2	
	54nm,0.7s						
MDOK	**Medeo**	**2.88**	**355**	Pg	**Pb**	**02 51 49.8**	**+0.7**
	34nm,0.4s						
MDOK				Lg	Lg	02 52 30.4	
	94nm,0.5s						
UCH	**Uchtor**	**2.90**	**313**	⇓*e*P	**Pn**	**02 51 44.5**	**+0.1**
UCH				⇓*e*S	**Sn**	**02 52 19.3**	**-0.5**
MTBS	**Maitube**	**2.92**	**346**	Pg	**Pb**	**02 51 50.8**	**+1.0**
	14nm,0.3s						
MTBS				Lg	Lg	02 52 31.0	
	91nm,0.4s						
MTBS	**Maitube**	**2.92**	**346**	*e*P	**Pb**	**02 51 50.9**	**+1.0**
	14nm,0.3s						
MTBS				*e*S	**Sg**	**02 52 31.0**	**-0.3**
	91nm,0.4s						
KNDC	**Almaty**	**2.94**	**354**	⇓Pg	**Pb**	**02 51 51.4**	**+1.3**
	28nm,0.3s						
KNDC				⇑Lg	Lg	02 52 32.9	
	136nm,0.5s						
KST	**Kastek**	**2.95**	**339**	Pg	**Pb**	**02 51 51.1**	**+0.9**
	8.6nm,0.4s						
KST				Lg	Lg	02 52 32.4	
	52nm,0.4s						
KST	**Kastek**	**2.95**	**339**	*e*P	**Pb**	**02 51 51.7**	**+1.4**
	8.6nm,0.4s						
KST				*e*S	**Sg**	**02 52 32.4**	**+0.4**
	52nm,0.4s						
TKM2	**Tokmak 2**	**2.95**	**334**	⇓*e*P	**Pn**	**02 51 45.1**	**+0.3**
TKM2				⇓*e*S	**Sn**	**02 52 20.4**	**-0.2**
SFK	**Sufi-Kurgan**	**2.99**	**266**	⇑*e*P	**Pn**	**02 51 45.2**	**-0.2**
SFK				⇑*e*S	**Sn**	**02 52 20.4**	**-1.2**
UZB	**Uzynbulak**	**3.10**	**23**	Pg	**Pb**	**02 51 54.6**	**+1.6**
	4.1nm,0.2s						
UZB				Lg	Lg	02 52 36.5	
	23nm,0.4s						
UZB	**Uzynbulak**	**3.10**	**23**	*e*P	**Pb**	**02 51 54.0**	**+1.1**
	4.1nm,0.2s						
UZB				*e*S	**Sg**	**02 52 36.5**	**-0.5**
	23nm,0.4s						
DGS	**Degeres**	**3.19**	**338**	Pg	**Pb**	**02 51 54.8**	**+0.5**
	10.0nm,0.6s						
DGS				Lg	Lg	02 52 39.0	
	39nm,0.6s						
DGS	**Degeres**	**3.19**	**338**	*e*P	**Pb**	**02 51 55.5**	**+1.3**
	10.0nm,0.6s						
DGS				*e*S	**Sg**	**02 52 39.0**	**-0.6**
	39nm,0.6s						
AAK	**Ala-Archa**	**3.20**	**318**	⇑Pn	**Pb**	**02 51 51.5**	**-3.0**
	0.7nm,0.4s						
AAK				⇓Pg	**Pg**	**02 52 00.8**	**+2.2**
	2.3nm,0.4s						
AAK				⇓Lg	Lg	02 52 39.5	
	24nm,0.7s						
AAK	**Ala-Archa**	**3.20**	**318**	⇓*e*P	**Pn**	**02 51 48.5**	**+0.4**
AAK				⇓*e*S	**Sn**	**02 52 26.1**	**-0.5**
KURS	**Kuram**	**3.25**	**10**	Pg	**Pb**	**02 51 55.2**	**-0.1**
	7.1nm,0.4s						
KURS				Lg	Lg	02 52 38.7	
	20nm,0.8s						
SHLS	**Shalkode**	**3.26**	**28**	Pg	**Pg**	**02 51 58.4**	**-1.3**
	15nm,0.6s						
SHLS				Lg	Lg	02 52 45.0	
	31nm,0.6s						
SHLS	**Shalkode**	**3.26**	**28**	*e*P	**Pg**	**02 51 59.1**	**-0.6**
	15nm,0.6s						
SHLS				*e*S	**Sg**	**02 52 45.0**	**+3.2**
	31nm,0.6s						
KPKS	**Kokpek**	**3.32**	**17**	Pg	**Pb**	**02 51 57.3**	**+0.8**
	0.3nm,0.3s						
KPKS				Lg	Lg	02 52 42.6	
	27nm,0.6s						
KPKS	**Kokpek**	**3.32**	**17**	*e*P	**Pb**	**02 51 57.7**	**+1.2**
	0.3nm,0.3s						
KPKS				*e*S	**Sg**	**02 52 42.6**	**-1.1**
	27nm,0.6s						
PDGK	**Podgornoye**	**3.42**	**27**	⇓Pn	**Pn**	**02 51 53.0**	**+1.9**
	3.8nm,0.5s						
PDGK				⇓Pg	**Pg**	**02 52 01.5**	**-1.2**
	8.5nm,0.6s						
PDGK				⇑Lg	Lg	02 52 44.6	
	68nm,0.8s						
KTBS	**Karatobe**	**3.46**	**351**	Pg	**Pb**	**02 51 59.9**	**+1.0**
	8.1nm,0.7s						
KTBS				Lg	Lg	02 52 47.8	
	25nm,0.5s						
KTBS	**Karatobe**	**3.46**	**351**	*e*P	**Pb**	**02 52 00.7**	**+1.8**
	8.1nm,0.7s

PAVA			eS		Sb	02 53 13.6	+0.1
COEG	**Centro de Oper**	**1.86 232**	eP		Pb	02 52 50.0	-0.3
COEG			eS		Sb	02 53 13.9	+0.2
ESQI	**Esquipulas**	**1.92 263**	P		Pg	02 52 51.7	-1.3
ESQI			S		Sg	02 53 17.1	-0.9
ESQI	**Esquipulas**	**1.92 263**	eP		Pg	02 52 51.7	-1.3
ESQI			eS		Sg	02 53 16.8	-1.1
ZAFR2	**Estanzuela, Za**	**1.92 264**	*i* P		Pg	02 52 55.5	+2.3
ZAFR2			*i* S		Sg	02 53 23.8	+5.6
LBRS	**Las Brisas**	**1.92 237**	eP		Pb	02 52 50.8	-0.6
MTO3	**Montecristo**	**1.96 259**	P		Pb	02 52 52.1	+0.1
MTO3			S		Sg	02 53 18.2	-1.2
MTO3	**Montecristo**	**1.96 259**	*i* P		Pb	02 52 52.3	+0.3
LIMN	**Finca el Limon**	**1.98 150**	P		Pb	02 52 52.9	+0.7
LIMN			S		Sb	02 53 18.8	+1.9
LFU	**La Fuente**	**1.98 239**	eP		Pb	02 52 51.7	-0.6
LOMA	**Loma Larga**	**2.08 237**	eP		Pn	02 52 48.8	-2.4
UEES	**Universidad Ev**	**2.10 240**	P		Pb	02 52 53.7	-0.6
UEES	**Universidad Ev**	**2.10 240**	eP		Pb	02 52 54.2	-0.2
UEES			eS		Sb	02 53 21.2	+0.7
CRIN	**San Cristobal**	**2.10 171**	P		Pb	02 52 54.0	-0.3
CRIN			S		Sb	02 53 21.7	+1.3
BOQS	**Boqueron**	**2.12 241**	eP		Pb	02 52 54.5	-0.4
PMON	**Piamonte**	**2.16 241**	P		Pb	02 52 55.0	-0.5
PMON			S		Sb	02 53 23.9	+1.6
PMON	**Piamonte**	**2.16 241**	eP		Pb	02 52 55.4	-0.1
CEDA	**San Andres**	**2.19 244**	eP		Pb	02 52 55.4	-0.5
CEDA			eS		Sb	02 53 23.2	+0.2
UNIC	**Universidad Ca**	**2.25 249**	P		Pb	02 52 56.4	-0.6
UNIC			S		Sb	02 53 25.6	+0.7
JAYA	**Jayaque - finc**	**2.31 241**	P		Pb	02 52 57.5	-0.5
JAYA			S		Sb	02 53 28.3	+1.9
JAYA	**Jayaque - finc**	**2.31 241**	eP		Pb	02 52 57.4	-0.5
JAYA	**Jayaque - finc**	**2.31 241**	*i* P		Pb	02 52 57.4	-0.5
JAYA			eS		Sb	02 53 27.7	+1.2
MATN	**Matagalpa**	**2.32 142**	P		Pb	02 52 57.6	-0.6
MATN			S		Sb	02 53 28.2	+1.3
RBDL	**Robledal**	**2.34 254**	eP		Pb	02 52 57.7	-0.8
SNJE	**San Jose**	**2.35 247**	eP		Pb	02 52 58.0	-0.6
CNGN	**Cerro Negro**	**2.37 164**	P		Pb	02 52 59.1	+0.2
CNGN			S		Sb	02 53 30.5	+2.4
SBLS	**San Blas**	**2.37 247**	eP		Pb	02 52 59.2	+0.1
SLOZ	**Alcaldia de Sa**	**2.45 252**	P		Pb	02 53 00.0	-0.3
SLOZ			S		Sb	02 53 30.1	-0.5
SLOZ	**Alcaldia de Sa**	**2.45 252**	eP		Pb	02 53 00.1	-0.3
NUBE	**Las Nubes**	**2.49 250**	P		Pb	02 53 00.6	-0.5
NUBE			S		Sb	02 53 31.6	-0.2
NUBE	**Las Nubes**	**2.49 250**	eP		Pb	02 53 00.5	-0.6
NUBE	**Las Nubes**	**2.49 250**	*i* P		Pb	02 53 00.5	-0.6
NUBE			eS		Sb	02 53 33.4	+1.5
COPN	**Copaltepe**	**2.70 164**	P		Pb	02 53 05.0	+0.4
FAME	**Alcaldia de Sa**	**2.73 250**	P		Pb	02 53 04.3	-0.7
SIUN	**Universidad Ur**	**2.74 113**	P		Pb	02 53 02.7	-2.5
APG	**El Apazote**	**3.00 275**	*i* P		Pb	02 53 09.7	0.0

GCG ***10*** *02:54:29.6±3.6, 14˚.78N×87˚.08W, h7km±84km, MD4.9, ML5.0, Presumed earthquake*

IDC ***10*** *02:54:32.2±0.7, 14˚.61N×87˚.46W, h0km, mb4.1/10, mbtmp4.0/13, ML3.1/4, MS3.0/5, Error ellipse: s-maj=18.6km s-min=11.7km az=34.0*

NEIC ***10*** *02:54:35.3±2.4, 14˚.65N±0˚.02×87˚.46W±0˚.05, h10km±1km, mb4.4/67, Error ellipse: s-maj=9.0km s-min=2.9km az=71.0*

CATAC ***10*** *02:54:36.3, 15˚N±1˚×87˚W±˚, h3km±1km, M3.9/5, MLv3.9/5, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.95; $M_{\theta\theta}$=0.22; $M_{\phi\phi}$=1.17; $M_{r\theta}$=0.27; $M_{\theta\phi}$=0.44; $M_{\phi r}$=0.28; Fault plane solution: M_0=1.22854×10^{15} NP1: ϕ_s=218.95481°, δ45.10153°, λ-55.44983°. NP2: ϕ_s=354.66486°, δ54.30817°, λ-119.64599°. Principal axes: T 1.3168, Plg4.9663°, Azm105.2183°; N -0.2014, Plg23.6864°, Azm13.0337°; P -1.1154, Plg65.7354°, Azm206.3327°; confirmed*

SNET ***10*** *02:54:38.0±6.2, 14˚.46N×87˚.49W, h4km, ML4.7, Presumed earthquake*

ISC 10 02:54:33.7±1.2, 14°.67N±0°.03×87°.42W±0°.02, h6km±8km, n170, σ1s22/181, mb4.3/31, MS3.0/3, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TGUH	**Tegucigalpa,Un**	**0.63**	**167**	Pg		**Pb**	**02 54 46.9**	**-0.3**
TGUH				Sg		**Sb**	**02 54 55.3**	**-1.0**
TGUH	**Tegucigalpa,Un**	**0.63**	**167**	P		**Pb**	**02 54 46.9**	**-0.3**
TGUH				S		**Sb**	**02 54 55.8**	**-0.5**
CAHU	**Cacacuatique**	**1.18**	**221**	eP		**Pn**	**02 54 57.5**	**+0.6**
OCON	**Estacion meteo**	**1.38**	**138**	P		**Pg**	**02 54 60.0**	**-0.3**
OCON				S		**Sn**	**02 55 19.6**	**+1.4**
CNRM	**Centro Naciona**	**1.40**	**211**	P		**Pg**	**02 55 00.9**	**+0.4**
CNRM				S		**Sn**	**02 55 20.7**	**+2.3**
CNCH	**Conchagua**	**1.45**	**196**	P		**Pg**	**02 55 01.4**	**-0.1**
CNCH				S		**Sn**	**02 55 22.4**	**+2.6**
BLLM	**Bellamira**	**1.46**	**213**	eP		**Pg**	**02 55 01.5**	**-0.2**
PACA	**Pacayal**	**1.48**	**216**	P		**Pg**	**02 55 02.0**	**-0.2**
PACA				S		**Sg**	**02 55 23.0**	**+1.6**
PACA	**Pacayal**	**1.48**	**216**	eP		**Pg**	**02 55 02.0**	**-0.2**
VSM	**San Miguel**	**1.49**	**214**	eP		**Pg**	**02 55 01.9**	**-0.4**
RANC	**El Ranchito**	**1.49**	**214**	eP		**Pg**	**02 55 02.2**	**-0.2**
LCY	**Lacayo**	**1.50**	**214**	eP		**Pg**	**02 55 02.2**	**-0.4**
PQSS	**Presa 15 de Se**	**1.52**	**227**	eP		Pn	02 54 54.5	-6.9
IZABA	**Izabal, Puerto**	**1.54**	**313**	P		**Pn**	**02 55 01.9**	**+0.2**
IZABA				S		**Sn**	**02 55 21.9**	**0.0**
IZABA	**Izabal, Puerto**	**1.54**	**313**	eP		**Pn**	**02 55 01.8**	**+0.2**
LLGN	**La Laguna**	**1.56**	**251**	P		**Pb**	**02 55 02.6**	**-0.4**
LLGN				S		**Sg**	**02 55 24.4**	**+0.5**
TECA	**Tecapa**	**1.57**	**222**	eP		**Pn**	**02 55 02.7**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.59**	**233**	P		**Pb**	**02 55 03.6**	**0.0**
SCLA				S		**Sg**	**02 55 26.0**	**+1.0**
RCVN	**Varillal2**	**1.61**	**132**	P		**Pb**	**02 55 03.6**	**-0.4**
RCVN				S		**Sg**	**02 55 26.0**	**+0.4**
CSGN	**Cosiguina Volc**	**1.69**	**185**	P		**Pg**	**02 55 05.8**	**-0.4**
CSGN				S		**Sg**	**02 55 29.2**	**+1.0**
RCON	**San Juan de Ri**	**1.71**	**134**	P		**Pb**	**02 55 04.8**	**-0.7**
RCON				S		**Sg**	**02 55 28.7**	**+0.1**
RCPN	**Sur Rio San Ju**	**1.72**	**131**	P		**Pb**	**02 55 05.7**	**-0.1**
RCPN				S		**Sg**	**02 55 29.4**	**+0.3**
TECO	**Alcaldia de Te**	**1.74**	**230**	P		**Pb**	**02 55 05.4**	**-0.6**
TECO	**Alcaldia de Te**	**1.74**	**230**	eP		**Pb**	**02 55 05.3**	**-0.6**
TECO				eS		**Sg**	**02 55 29.3**	**-0.2**
PAVA	**Las Pavas**	**1.75**	**237**	P		**Pb**	**02 55 06.0**	**-0.4**
PAVA				S		**Sg**	**02 55 30.6**	**+0.5**
PAVA	**Las Pavas**	**1.75**	**237**	eP		**Pb**	**02 55 05.9**	**-0.4**
PAVA				eS		**Sg**	**02 55 29.5**	**-0.6**
LBRS	**Las Brisas**	**1.83**	**240**	eP		**Pb**	**02 55 07.3**	**-0.3**
ESQI	**Esquipulas**	**1.86**	**267**	Pn		**Pn**	**02 55 06.2**	**0.0**
ESQI	**Esquipulas**	**1.86**	**267**	P		**Pb**	**02 55 08.0**	**-0.3**
ESQI				S		**Sg**	**02 55 32.8**	**-0.8**
ESQI	**Esquipulas**	**1.86**	**267**	eP		**Pb**	**02 55 07.9**	**-0.3**
ESQI				eS		**Sg**	**02 55 33.5**	**-0.1**
ZAFR2	**Estanzuela, Za**	**1.87**	**267**	eP		**Pg**	**02 55 09.0**	**-0.6**
ZAFR2				*i* S		**Sg**	**02 55 39.9**	**+6.0**
LFU	**La Fuente**	**1.88**	**241**	eP		**Pb**	**02 55 08.2**	**-0.4**
MTO3	**Montecristo**	**1.90**	**262**	Pn		**Pn**	**02 55 06.2**	**-0.6**
MTO3	**Montecristo**	**1.90**	**262**	P		**Pb**	**02 55 08.3**	**-0.5**
MTO3				S		**Sb**	**02 55 33.7**	**+0.8**
MTO3	**Montecristo**	**1.90**	**262**	*i* P		**Pn**	**02 55 06.4**	**-0.4**
LIMN	**Finca el Limon**	**1.90**	**147**	P		**Pb**	**02 55 09.0**	**+0.1**
LIMN				S		**Sg**	**02 55 34.8**	**-0.1**
LOMA	**Loma Larga**	**1.98**	**239**	eP		**Pn**	**02 55 05.1**	**-2.8**
CRIN	**San Cristobal**	**2.00**	**170**	Pn		**Pn**	**02 55 08.9**	**+0.8**
UEES	**Universidad Ev**	**2.00**	**242**	P		**Pb**	**02 55 10.0**	**-0.6**
UEES				S		**Sg**	**02 55 36.9**	**-1.2**
PIC2	**El Picacho**	**2.00**	**243**	eP		**Pb**	**02 55 10.6**	**-0.2**
BOQS	**Boqueron**	**2.03**	**243**	eP		**Pb**	**02 55 10.8**	**-0.3**
PMON	**Piamonte**	**2.07**	**243**	P		**Pb**	**02 55 11.4**	**-0.4**
POLN	**Al Sur del Vol**	**2.10**	**164**	P		**Pb**	**02 55 11.8**	**-0.4**
POLN				S		**Sg**	**02 55 39.7**	**-1.5**
CEDA	**San Andres**	**2.10**	**246**	eP		**Pg**	**02 55 13.8**	**-0.2**
CEDA				eS		**Sg**	**02 55 40.3**	**-0.9**
HERN	**Volcan Telica**	**2.13**	**164**	Pn		**Pn**	**02 55 10.9**	**+1.0**
QUEN	**Al S del Volca**	**2.14**	**165**	P		**Pb**	**02 55 12.1**	**-0.8**
UNIC	**Universidad Ca**	**2.17**	**252**	P		**Pb**	**02 55 12.6**	**-0.9**
UNIC	**Universidad Ca**	**2.17**	**252**	eP		**Pb**	**02 55 12.6**	**-0.9**
UNIC				eS		**Sg**	**02 55 42.7**	**-0.9**
JAYA	**Jayaque - finc**	**2.21**	**243**	*i* P		**Pb**	**02 55 13.1**	**-1.1**
JAYA				*i* S		**Sg**	**02 55 43.8**	**-1.1**
MATN	**Matagalpa**	**2.26**	**140**	P		**Pb**	**02 55 13.8**	**-1.3**
SNJE	**San Jose**	**2.26**	**250**	eP		**Pb**	**02 55 14.5**	**-0.6**
CNGN	**Cerro Negro**	**2.27**	**162**	Pn		**Pb**	**02 55 13.5**	**-1.7**
CNGN	**Cerro Negro**	**2.27**	**162**	P		**Pb**	**02 55 14.7**	**-0.5**
SBLS	**San Blas**	**2.29**	**249**	eP		**Pb**	**02 55 15.3**	**-0.3**
CEVE	**Cerro Verde**	**2.29**	**249**	eP		**Pb**	**02 55 14.8**	**-0.8**
SLOZ	**Alcaldia de Sa**	**2.38**	**255**	P		**Pb**	**02 55 15.9**	**-1.1**
LOAL	**Lomas de Alarc**	**2.38**	**254**	eP		**Pb**	**02 55 17.9**	**+0.9**
MOM2	**El Cardon**	**2.40**	**158**	P		**Pb**	**02 55 17.8**	**+0.4**
NUBE	**Las Nubes**	**2.41**	**252**	P		**Pb**	**02 55 16.3**	**-1.3**
NUBE	**Las Nubes**	**2.41**	**252**	*i* P		**Pn**	**02 55 13.5**	**-0.4**
NUBE				*i* S		**Sb**	**02 55 49.1**	**+1.4**
COPN	**Copaltepe**	**2.61**	**162**	P		**Pb**	**02 55 19.9**	**-1.0**
FAME	**Alcaldia de Sa**	**2.65**	**252**	P		**Pb**	**02 55 20.0**	**-1.5**
SIUN	**Universidad Ur**	**2.74**	**110**	Pn		**Pn**	**02 55 18.8**	**+0.5**
SIUN	**Universidad Ur**	**2.74**	**110**	P		**Pn**	**02 55 18.9**	**+0.7**
TISN	**Laguna Tiscapa**	**2.75**	**156**	P		**Pb**	**02 55 21.3**	**-2.1**
MGAN	**Managua**	**2.76**	**155**	Pn		**Pn**	**02 55 19.4**	**+0.9**
BOAB	**BOADO BROADBAN**	**2.79**	**142**	Pn		**Pn**	**02 55 19.7**	**+0.7**
APG	**El Apazote**	**2.96**	**277**	Pn		**Pn**	**02 55 20.9**	**-0.5**

5.3nm,0.3s,baz=93,slow=14,SNR=32

APG				Pg		**Pb**	**02 55 26.2**	**-0.8**

5.4nm,0.3s,baz=108,slow=14,SNR=51

APG				Lg		Lg	02 56 03.5	

23nm,0.3s,baz=75,slow=19,SNR=15

APG	**El Apazote**	**2.96**	**277**	*e*P		**Pn**	**02 55 21.4**	**0.0**
APG				*i* S		**Sb**	**02 56 03.6**	**+0.1**
AVCB	**Coban**	**2.99**	**286**	eS		**Sb**	**02 56 06.5**	**+2.2**
AVCB				IAML			02 56 11.8	

comp=E,12μm,0.5s

PETF	**Flores**	**3.24**	**314**	*i* P		**Pn**	**02 55 21.7**	**-3.4**
PETF				IAML			02 56 19.2	

comp=N,3μm,0.5s

BILN	**Bilwi Airport**	**3.97**	**98**	Pn		**Pn**	**02 55 36.0**	**+0.8**
BILN	**Bilwi Airport**	**3.97**	**98**	P		**Pn**	**02 55 35.7**	**+0.6**
HUEH	**Huehuetenango**	**4.00**	**280**	Pn		**Pn**	**02 55 35.7**	**0.0**
HUEH	**Huehuetenango**	**4.00**	**280**	*e*P		**Pg**	**02 55 47.8**	**-2.6**
HUEH	**Huehuetenango**	**4.00**	**280**	IAML			02 56 49.2	

comp=E,2μm,0.5s

RTAL	**Retalhuleu**	**4.14**	**268**	Pn		**Pn**	**02 55 39.2**	**+1.7**
CCIG	**Comitan**	**4.82**	**290**	Pn		**Pn**	**02 55 48.4**	**+1.4**
JUD3	**Juan Diaz 3**	**4.84**	**157**	Pn		**Pn**	**02 55 47.3**	**+0.1**
JTS	**Las Juntas de**	**4.98**	**151**	Pn		**Pn**	**02 55 47.7**	**-1.4**

comp=E,0.2nm,0.3s,baz=56,slow=22,SNR=1.0

JTS				Pg		**Pb**	**02 56 00.5**	**-0.9**

comp=E,2.5nm,0.3s,baz=298,slow=15,SNR=4.9

JTS				Sn		**Sn**	**02 56 48.4**	**+1.4**

comp=E,2.6nm,0.3s,baz=19,slow=22,SNR=1.6

JTS				Lg		Lg	02 57 09.4	

comp=E,3.1nm,0.3s,baz=248,slow=20,SNR=3.9

JTS				LR		LR	02 57 48.8	

comp=E,30nm,18.6s,baz=286,slow=40

comp=E,3.0nm,0.5s

JTS	**Las Juntas de**	**4.98**	**151**	Pn		**Pn**	**02 55 48.1**	**-1.0**
TEIG	**Tepich**	**5.58**	**352**	Pn		**Pn**	**02 55 58.7**	**+1.4**
CMIG	**Matias Romero**	**7.57**	**289**	Pn		**Pn**	**02 56 24.3**	**-0.3**

comp=E,1.2nm,0.3s,baz=81,slow=12,SNR=8.8

CMIG				Pg		**Pb**	**02 56 49.6**	**+4.1**

comp=E,0.9nm,0.3s,baz=96,slow=15,SNR=6.1

CMIG				Lg		Lg	02 58 28.2	

comp=E,1.3nm,0.3s,baz=33,slow=22,SNR=5.3

comp=E,4.2nm,0.4s

LCCY	**Blossom Village**	**8.59**	**54**	*e*P		**Pn**	**02 56 40.5**	**+1.8**
CBCY	**The Bluff, Cay**	**8.89**	**54**	*e*P		**Pn**	**02 56 45.2**	**+2.5**
SOR	**Soroa**	**9.09**	**27**	Pn		**Pn**	**02 56 46.5**	**+0.9**
SOR	**Soroa**	**9.09**	**27**	*e*P		**Pn**	**02 56 47.6**	**+2.0**
CAMR	**Camarioca**	**10.12**	**34**	Pn		**Pn**	**02 57 01.9**	**+2.4**
MTDJ	**Mount Denham**	**10.12**	**68**	Pn		**Pn**	**02 57 00.3**	**+0.6**
MTDJ	**Mount Denham**	**10.12**	**68**	*e*P		**Pn**	**02 57 01.6**	**+1.9**
MGV	**Manicaragua**	**10.22**	**43**	*e*P		**Pn**	**02 57 00.5**	**-0.6**
CCCC	**Cccc**	**11.25**	**53**	*e*P		Pn	02 57 25.1	+10
YAR	**Yar**	**11.97**	**60**	*e*P		**Pn**	**02 57 26.2**	**+1.2**
656A	**Willston**	**15.31**	**16**	Pn		**Pn**	**02 58 10.1**	**-0.3**
SDV	**Santo Domingo**	**17.41**	**107**	P		**P**	**02 58 38.8**	**-0.1**

comp=E,0.2nm,0.3s,baz=319,slow=5.6,SNR=4.1

SDV				LR		LR	03 04 51.1	

comp=E,48nm,20.6s,baz=280,slow=36

comp=E,0.9nm,0.4s

833A	**Chaparral WMA,**	**17.55**	**323**			**P**	**02 58 41.1**	**+1.0**
HNDO	**Hondo**	**18.40**	**325**			**P**	**02 58 51.2**	**+1.6**
DRIO	**Del Rio**	**19.08**	**322**	P		**Pn**	**02 58 58.1**	**+0.3**
WHTX	**Lake Whitney,**	**19.52**	**334**	P		**Pn**	**02 59 03.6**	**+0.5**
WHTX				IAmb		IAmb	02 59 05.4	

comp=E,19nm,0.8s

BRDY	**Brady**	**19.65**	**329**	P		**Pn**	**02 59 04.8**	**+0.2**
BRDY				IAmb		IAmb	02 59 05.9	

comp=E,9.8nm,0.8s

FW13	**Cleburne**	**19.82**	**334**	P		**Pn**	**02 59 06.7**	**0.0**
FW13				IAmb		IAmb	02 59 08.5	

comp=E,14nm,0.9s

SAND	**Sanderson**	**20.37**	**321**	P		Pn	02 59 12.5	-0.7
FW06	**Azle**	**20.42**	**335**	P		Pn	02 59 13.4	-0.3
FW06				IAmb		IAmb	02 59 14.8	

comp=E,14nm,0.7s

OZNA	**Ozona**	**20.49**	**324**	P		Pn	02 59 14.2	-0.4
OZNA				IAmb		IAmb	02 59 15.3	

comp=E,17nm,0.9s

MIAR	**Mount Ida**	**20.55**	**345**	P		Pn	02 59 15.1	-0.1
MIAR				IAmb		IAmb	02 59 47.2	

comp=E,16nm,1.4s

PLPT	**Palo Pinto**	**20.60**	**333**	P		Pn	02 59 15.2	-0.7
PLPT				IAmb		IAmb	02 59 17.2	

comp=E,17nm,1.0s

TXAR	**Lajitas Array**	**20.93**	**317**	P		**P**	**02 59 18.7**	**+1.4**

comp=E,3.6nm,0.7s,baz=129,slow=8.0,SNR=43

comp=E,3.6nm,0.7s

TX31	**Lajitas Ar. Si**	**20.93**	**317**			**P**	**02 59 17.7**	**+0.4**
WHAR	**Wooly Hollow**	**20.99**	**349**	P		Pn	02 59 19.4	-1.0
FCAR	**Ozark Folk Cen**	**21.54**	**350**	P		**P**	**02 59 24.8**	**+1.0**
MNHN	**Monahans**	**21.74**	**322**	P		**P**	**02 59 25.4**	**-0.6**
APMT	**Aspermont**	**21.86**	**330**	P		**P**	**02 59 28.0**	**+0.9**
W35A	**Tecumseh**	**22.09**	**339**	P		**P**	**02 59 30.0**	**+0.3**
W35A				IAmb		IAmb	02 59 32.8	

comp=E,10nm,0.9s

PBMO	**Poplar Bluff**	**22.18**	**354**	IAmb		IAmb	02 59 37.8	

comp=E,7.5nm,0.8s

129A	**Stewart Farms,**	**22.19**	**326**	IAmb		IAmb	02 59 34.9	

comp=E,5.8nm,0.7s

T47A	**Sharon Grove**	**22.23**	**1**	P		**P**	**02 59 31.3**	**+0.3**
T47A				IAmb		IAmb	02 59 34.8	

comp=E,15nm,1.0s

V58A	**Windy Hill, Pi**	**22.31**	**18**	P		**P**	**02 59 33.6**	**+1.6**
V58A				IAmb		IAmb	02 59 35.7	

comp=E,11nm,0.9s

POST	**Post**	**22.34**	**327**	IAmb		IAmb	02 59 36.0	

comp=E,13nm,0.8s

FNO	**Franklin**	**22.38**	**338**	IAmb		IAmb	02 59 35.2	

comp=E,30nm,1.2s

TUL3	**Leonard**	**22.44**	**342**	IAmb		IAmb	02 59 36.0	

comp=E,25nm,1.1s

128A	**Castleberry Fa**	**22.52**	**325**	IAmb		IAmb	02 59 36.0	

comp=E,6.6nm,0.8s

VHRN	**Van Horn**	**22.74**	**318**	P		**P**	**02 59 36.2**	**-0.6**
OK052	**Battle Ridge R**	**22.83**	**340**	P		**P**	**02 59 38.1**	**+0.6**
OK048	**Pawnee Station**	**23.27**	**340**	P		**P**	**02 59 42.3**	**+0.3**
SMWD	**Samnorwood**	**23.39**	**333**	P		**P**	**02 59 43.2**	**-0.1**
SMWD				IAmb		IAmb	02 59 45.0	

comp=E,13nm,1.1s

WCI	**Wyandotte Cave**	**23.48**	**2**	P		**P**	**02 59 44.4**	**+0.2**
WCI				IAmb		IAmb	02 59 45.9	

comp=E,8.2nm,0.7s

LPIG	**La Paz**	**23.51**	**297**	LR		LR	03 10 26.0	

comp=E,52nm,19.9s,baz=79,slow=41

MSTX	**Muleshoe**	**23.71**	**327**	P		**P**	**02 59 47.0**	**+0.4**
MSTX				IAmb		IAmb	02 59 52.1	

comp=E,17nm,1.0s

OLIL	**Olney**	**23.97**	**359**	IAmb		IAmb	02 59 51.3	

comp=E,17nm,0.8s

Q44A	**Meyer Farm, Va**	**24.18**	**357**	IAmb		IAmb	02 59 52.9	

comp=E,14nm,0.8s

PDAR	**Pinedale Array**	**33.85**	**330**	P		**P**	**03 01 17.4**	**+0.1**

comp=E,0.9nm,1.0s,baz=150,slow=8.2,SNR=4.6

PDAR				PcP		**PcP**	**03 03 55.9**	**-0.3**

comp=E,0.5nm,0.7s,baz=142,slow=3.6,SNR=4.8

comp=E,0.9nm,1.0s

TBO	**Thunder Bay**	**33.92**	**358**	P		**P**	**03 01 16.2**	**-1.3**
TBO				IAmb		IAmb	03 01 39.7	

comp=E,9.4nm,1.3s

SNOW	**Snow King Moun**	**34.96**	**330**	P		**P**	**03 01 28.1**	**+1.3**
SNOW				IAmb		IAmb	03 01 30.2	

comp=E,13nm,1.3s

LOHW	**Long Hollow**	**34.99**	**330**	IAmb		IAmb	03 01 29.8	

comp=E,5.2nm,1.2s

NVAR	**Mina Array Bea**	**36.08**	**317**	P		**P**	**03 01 39.5**	**+2.9**

comp=E,2.2nm,1.1s,baz=105,slow=8.4,SNR=3.5

NVAR	**Mina Array Bea**	**36.08**	**317**	P		**P**	**03 01 37.9**	**+1.3**
ULM	**Lac du Bonnet**	**36.14**	**351**	P		**P**	**03 01 35.0**	**-1.6**

comp=E,2.0nm,0.7s,baz=151,slow=7.8,SNR=4.2

ULM				LR		LR	03 20 32.4	

comp=E,47nm,18.5s,baz=13,slow=43

comp=E,2.0nm,0.7s

LPAZ	**La Paz**	**36.19**	**147**	LR		LR	03 17 22.0	

comp=E,23nm,18.7s,baz=344,slow=38

QLMT	**Earthquake Lak**	**36.30**	**331**	P		**P**	**03 01 40.2**	**+1.9**
BCYI	**Bear Canyon**	**36.89**	**328**	P		**P**	**03 01 44.5**	**+1.1**
DLMT	**Dillon**	**37.25**	**330**	IAmb		IAmb	03 01 52.9	

comp=Z,4.6nm,1.0s

LRM	**Limekiln Ridge**	**37.52**	**331**	P		**P**	**03 01 49.7**	**+1.0**
H04A	**Detroit Lake**	**41.96**	**323**	P		**P**	**03 02 25.5**	**0.0**
H04A				IAmb		IAmb	03 02 33.5	

comp=Z,4.9nm,0.9s

LON	**Longmire**	**42.95**	**325**	P		**P**	**03 02 35.0**	**+1.4**
LON				IAmb		IAmb	03 02 36.8	

comp=Z,4.8nm,1.1s

SCHQ	**Schefferville**	**43.16**	**17**	P		**P**	**03 02 33.8**	**-1.2**

comp=Z,2.1nm,0.7s,baz=230,slow=8.5,SNR=5.0

comp=Z,2.1nm,0.7s

YKA	**Yellowknife Ar**	**51.49**	**344**	P		**P**	**03 03 39.7**	**0.0**

comp=Z,0.6nm,0.6s,baz=142,slow=6.7,SNR=12

comp=Z,0.6nm,0.6s

YKA	**Yellowknife Ar**	**51.49**	**344**	P		**P**	**03 03 39.9**	**+0.1**
PLCA	**Paso Flores**	**57.30**	**165**	P		**P**	**

HIDR	**Higuey Centro**	**1.90**	**290**	⇑*e*Pg	**Pn**	**02 57 03.8 +0.7**
HIDR				IAML		02 57 34.4
	comp=N,63nm,0.2s					
MIDR	**Miches**	**2.34**	**297**	⇑*e*Pg	**Pb**	**02 57 12.2 -1.1**
MIDR				IAML		02 58 13.8
	comp=N,32nm,2.4s					
HATOM	**Hato Mayor del**	**2.55**	**290**	⇑*e*Pg	**Pb**	**02 57 15.4 -1.7**
HATOM				IAML		02 58 03.6
	comp=N,39nm,2.4s					

*IDC **10** 03:22:33.1±2.2,38°.93N×141°.58E,h119km±19km,mb3.3/4, mbtmp3.6/7,Error ellipse: s-maj=34.5km s-min=17.0km az=100.0*
*JMA **10** 03:22:35.0±0.1,38°.9N±0°.3×141°.3E±0°.5,h114km, MV3.7/39,SOUTHERN IWATE PREF*
JMA Felt I J1 at SOUTHERN IWATE PREF .
ISC 10 03:22:33.7±1.0,38°.90N±0°.06×141°.40E±0°.08,h123km±6km, n28,σ0°.80/30,mb3.5/4,8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.11**	**145**	P	**Pn**	**03 22 50.9**	**+0.4**
JKMT				S	**Sn**	**03 23 02.7**	**-0.5**
JMK	**Ichinoseki**	**0.15**	**291**	P	**Pn**	**03 22 50.6**	**+0.1**
JMK				*e*S	**Sn**	**03 23 02.3**	**-1.0**
OFUJ	**Ofunato**	**0.28**	**50**	P	**Pn**	**03 22 51.8**	**+0.8**
OFUJ				*e*S	**Sn**	**03 23 04.0**	**0.0**
JIO	**Ouri**	**0.45**	**185**	P	**Pn**	**03 22 51.9**	**+0.2**
JIO				*e*S	**Sn**	**03 23 04.4**	**-0.9**
JOM	**Ohasama**	**0.58**	**352**	P	**Pn**	**03 22 52.8**	**+0.3**
JOM				*e*S	**Sn**	**03 23 06.2**	**-0.5**
JRG	**Rokugo**	**0.77**	**310**	⇓P	**Pn**	**03 22 54.1**	**+0.2**
JRG				⇓*e*S	**Sn**	**03 23 08.5**	**-0.7**
JOU	**Okura**	**0.78**	**227**	⇓P	**Pn**	**03 22 54.0**	**0.0**
JOU				⇓*e*S	**Sn**	**03 23 08.6**	**-0.8**
JYK	**Kaneyama**	**0.81**	**272**	⇓P	**Pn**	**03 22 54.0**	**-0.3**
JMM	**Marumori**	**1.14**	**205**	*e*S	**Sn**	**03 23 14.0**	**-1.2**
JYS	**Shirataka**	**1.24**	**237**	⇓P	**Pn**	**03 22 58.5**	**0.0**
JYA	**Atsumi**	**1.35**	**257**	⇓P	**Pn**	**03 22 59.3**	**-0.3**
JAH	**Hinai**	**1.42**	**336**	⇓*e*P	**Pn**	**03 23 00.9**	**+0.5**
JANG	**Nango**	**1.48**	**4**	P	**Pn**	**03 23 01.3**	**+0.3**
JOTO	**OTAMA OYAMA**	**1.58**	**212**	P	**Pn**	**03 23 02.6**	**+0.3**
JAW	**Awa shima**	**1.74**	**256**	*e*P	**Pn**	**03 23 03.9**	**-0.2**
MJAR	**Matsushiro Arr**	**3.45**	**228**	P	**Pn**	**03 23 26.5**	**+0.4**
	1.4nm,0.4s,baz=27,slow=14,SNR=12						
ASAJ	**Asahikawa**	**5.29**	**9**	P	**Pn**	**03 23 49.0**	**-1.4**
	1.8nm,0.3s,baz=202,slow=19,SNR=7.7						
ASAJ				S	**Sn**	**03 24 48.8**	**-1.6**
	5.4nm,0.6s,baz=180,slow=20,SNR=1.7						
USRK	**Ussuriysk Ar.**	**8.82**	**310**	P	**Pn**	**03 24 40.1**	**+2.1**
	1.6nm,0.4s,baz=122,slow=14,SNR=4.9						
H11N2	**WAKE ISLAND Hy 29.15**	**124**		T	T	03 59 01.8	
	baz=316,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy 29.16**	**124**		T	T	03 59 02.1	
	baz=316,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy 29.17**	**124**		T	T	03 59 02.8	
	baz=316,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy 29.92**	**126**		T	T	03 59 58.9	
	baz=318,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy 29.92**	**126**		T	T	04 00 02.7	
	baz=318,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy 29.93**	**126**		T	T	04 00 00.9	
	baz=318,slow=76,SNR=15						
ZALV	**Zalesovo Beam**	**40.67**	**311**	P	**P**	**03 30 01.8**	**+0.3**
	0.4nm,0.5s,baz=100,slow=7.5,SNR=2.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**43.14**	**300**	P	**P**	**03 30 22.4**	**+0.6**
	0.3nm,0.4s,baz=89,slow=9.6,SNR=8.3						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**44.86**	**307**	P	**P**	**03 30 36.1**	**+0.7**
	1.5nm,0.5s,baz=81,slow=7.9,SNR=7.9						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**58.90**	**188**	P	**P**	**03 32 19.9**	**+0.1**
	0.6nm,1.1s,baz=5.7,slow=6.7,SNR=4.6						
	0.6nm,1.1s						

IDC 10 03:36:18.0±18.0,18°.72S×174°.66W,h0km,mb3.9/4, mbtmp3.9/4,MS3.5/2,Error ellipse: s-maj=447.3km s-min=48.2km az=37.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.84**	**261**	P	P	03 43 29.6	+1.4
	1.3nm,0.4s,baz=108,slow=9.6,SNR=2.3						
CTA				LR	LR	03 56 53.0	
	comp=Z,63nm,18.6s,baz=69,slow=34						
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**47.99**	**260**	P	P	03 44 59.1	-0.1
	0.3nm,0.3s,baz=96,slow=7.8,SNR=7.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**48.01**	**255**	P	P	03 44 57.9	-1.4
	0.5nm,0.5s,baz=89,slow=6.1,SNR=5.7						
	0.5nm,0.5s						
VNDA	**Vanda**	**59.98**	**186**	P	P	03 46 25.8	0.0
	1.6nm,0.9s,baz=50,slow=7.9,SNR=1.6						
	1.6nm,0.9s						
JOW	**Kunigami**	**71.50**	**308**	LR	LR	04 13 03.2	
	comp=Z,30nm,20.4s,baz=308,slow=31						

IDC 10 03:39:12.9±3.2,25°.66S×177°.46W,h258km±34km, mb3.6/7,mbtmp4.3/9,Error ellipse: s-maj=47.5km s-min=21.4km az=167.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.60**	**186**	P	Pn	03 40 13.2	+0.8
	295nm,0.4s,baz=88,slow=22,SNR=6.1						
RAO				S	S	03 40 44.1	-16
	2µm,0.9s,baz=78,slow=21,SNR=12						
URZ	**Urewera**	**13.38**	**199**	P	Pn	03 42 11.2	-1.8
	2.2nm,0.3s,baz=342,slow=20,SNR=7.1						
URZ				S	S	03 44 25.4	-16
	4.9nm,0.5s,baz=54,slow=18,SNR=7.8						
CTA	**Charters Tower**	**33.82**	**272**	P	P	03 45 31.8	+0.6
	3.8nm,0.7s,baz=101,slow=9.4,SNR=6.5						
	3.8nm,0.7s						
ASAR	**Alice Springs**	**44.05**	**262**	P	P	03 46 54.8	-0.9
	1.9nm,0.9s,baz=102,slow=7.9,SNR=12						
	1.9nm,0.9s						
WRA	**Warramunga Arr**	**44.61**	**267**	P	P	03 46 60.0	-0.2
	1.4nm,0.8s,baz=98,slow=6.8,SNR=12						
	1.4nm,0.8s						
PETK	**Petropavlovsk-**	**81.36**	**345**	P	P	03 51 00.1	-0.3
	7.9nm,0.7s,baz=124,slow=6.1,SNR=8.5						
	7.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**92.29**	**289**	P	P	03 51 53.9	-0.3
	0.9nm,0.3s,baz=113,slow=2.0,SNR=6.1						
	0.9nm,0.3s						
PDAR	**Pinedale Array**	**92.37**	**43**	P	P	03 51 53.4	-1.0
	0.3nm,0.6s,baz=233,slow=5.5,SNR=4.0						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**93.21**	**13**	P	P	03 51 56.6	-0.8
	0.4nm,0.9s,baz=219,slow=7.0,SNR=6.5						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**115.04**	**312**	PKP	PKiKP	03 57 23.7	+0.7
	0.3nm,0.6s,baz=102,slow=1.8,SNR=3.0						
BVAR	**Borovoye Array**	**123.28**	**318**	PKP	PKiKP	03 57 39.1	+0.2
	0.7nm,0.5s,baz=17,slow=1.5,SNR=3.6						
FINES	**FINESS Array B**	**140.83**	**342**	PKP	PKPdf	03 58 12.1	+0.8
	6.0nm,1.0s,baz=56,slow=2.5,SNR=2.4						
NOA	**NORSAR Array B**	**144.14**	**353**	PKP	PKPab	03 58 15.8	+0.1
	2.7nm,1.1s,baz=12,slow=2.4,SNR=4.1						
HFS	**Hagfors**	**144.69**	**350**	PKP	PKPdf	03 58 18.0	-0.2
	4.4nm,0.5s,baz=64,slow=3.4,SNR=25						
AKASG	**Malin Array Be**	**147.69**	**328**	PKPbc	PKPbc	03 58 27.1	+0.4
	5.4nm,0.8s,baz=45,slow=4.2,SNR=10						
BRTR	**Keskin Array B**	**150.48**	**306**	PKPbc	PKPbc	03 58 32.7	-1.4
	0.7nm,0.7s,baz=132,slow=2.1,SNR=5.3						
MMAI	**Mount Meron Ar**	**150.52**	**292**	PKPbc	PKiKP	03 58 35.3	+0.3
	4.0nm,0.7s,baz=119,slow=8.4,SNR=2.7						

*SDD **10** 03:46:02.3±2.4,19°.80N×71°.01W,h70km±16km,MD3.3, ML2.2,MW3.6,Presumed earthquake*
*OSPL **10** 03:46:05.4±0.9,19°.71N×70°.95W,h0km±10km,ML1.7, Presumed earthquake*
ISC 10 03:46:01.5±2.6,19°.9N±0°.1×70°.94W±0°.07,h58km±15km, n10,σ2°17/16,8C-1D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUDR	**Luperon**	**0.03**	**200**	⇑*e*Pg	**Pn**	**03 46 11.6**	**+1.4**
LUDR				⇑*e*Sg	**Sn**	**03 46 18.7**	**+2.3**
LOPP1	**Punta Rusia, P**	**0.25**	**254**	*i* P	**Pn**	**03 46 10.1**	**-1.0**
LOPP1				*e*S	**Sn**	**03 46 14.2**	**-3.7**
LOPP1				IAML		03 46 14.9	
	comp=Z,213nm,0.3s						
SC01	**Santiago de lo**	**0.53**	**158**	⇑*e*Sg	**Sn**	**03 46 23.6**	**+1.1**
SC01				IAML		03 46 51.2	
	comp=N,52nm,3.2s						
MCDR	**Montecristi**	**0.67**	**268**	⇑*e*Sg	**Sn**	**03 46 26.1**	**+0.7**
MCDR				IAML		03 46 51.0	
	comp=N,72nm,2.8s						
REDR	**Restauracion**	**0.86**	**210**	⇑*e*Pg	**Pn**	**03 46 18.5**	**+0.7**
REDR				⇓*e*Sg	**Sn**	**03 46 27.8**	**-1.8**
REDR				IAML		03 46 29.5	
	comp=N,59nm,0.2s						
SDDR	**Presa de Saban**	**0.99**	**199**	⇑*e*Pg	**Pn**	**03 46 19.7**	**+0.3**
SDDR				⇑*e*Sg	**Sn**	**03 46 29.9**	**-2.7**
SDDR				IAML		03 46 32.2	
	comp=N,32nm,2.0s						
SDDR	**Presa de Saban**	**0.99**	**199**	*i* P	**Pn**	**03 46 19.3**	**-0.1**
SDDR				*e*S	**Sn**	**03 46 30.1**	**-2.5**
SDDR				IAML		03 46 30.7	
	comp=Z,11nm,0.6s						
LONE3	**El Aguacate, B**	**1.40**	**201**	*i* P	**Pn**	**03 46 26.7**	**+1.7**
LONE3				*e*S	**Sn**	**03 46 43.0**	**+0.6**
LONE3				IAML		03 46 46.9	
	comp=Z,8.1nm,2.4s						
LODU1	**El Espartillar**	**1.64**	**198**	*i* P	**Pn**	**03 46 31.4**	**+3.3**
LODU1				IAML		03 46 53.2	
	comp=Z,49nm,1.7s						
HIDR	**Higuey Centro**	**2.48**	**122**	⇑*e*Pg	**Pn**	**03 46 38.4**	**-1.2**
HIDR				IAML		03 47 06.3	
	comp=N,37nm,1.6s						

*IDC **10** 04:03:54.3±1.9,2°.47S×141°.09E,h0km,mb3.2/2, mbtmp3.2/3,ML3.5/1,MS3.4/1,Error ellipse: s-maj=32.5km s-min=11.8km az=179.0*
*DJA **10** 04:03:57.2±1.0,2°.5±7°.7×14°.1E±°,h10km,M3.5/3,MLv3.5/3*
ISC 10 04:03:58.3±1.3,2°.5S±0°.2×140°.55E±0°.06,h24km,n7, σ1°.06/8,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.16**	**101**	Pg	**Pb**	**04 04 02.7**	**-0.7**
	969nm,0.3s,baz=119,slow=19,SNR=889						
JAY				Lg	Lg	04 04 06.3	
	3µm,0.3s,baz=128,slow=17,SNR=244						
JAY	**Jayapura**	**0.16**	**101**	P	**Pb**	**04 04 02.3**	**-1.1**
JAY				S	**Sb**	**04 04 06.2**	**-0.6**
GENI	**Genyem**	**0.40**	**254**	P	**Pb**	**04 04 05.6**	**-1.1**
GENI				S	**Sb**	**04 04 12.1**	**-0.4**
WRA	**Warramunga Arr**	**18.38**	**199**	P	**Pn**	**04 08 11.9**	**+0.2**
	0.2nm,0.3s,baz=22,slow=12,SNR=7.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**22.02**	**196**	P	**P**	**04 08 52.3**	**+1.2**
	0.5nm,0.6s,baz=31,slow=10,SNR=7.1						
	0.5nm,0.6s						
LEM	**Lembang**	**33.10**	**261**	LR	LR	04 25 41.2	
	comp=Z,57nm,19.6s,baz=352,slow=39						
MKAR	**Makanchi Array**	**70.74**	**322**	P	**P**	**04 15 13.4**	**+0.8**
	0.2nm,0.7s,baz=129,slow=6.4,SNR=2.2						
	0.2nm,0.7s						

*IDC **10** 04:27:30.4±1.8,50°.60N×130°.34W,h0km,mb3.5/2, mbtmp3.3/8,ML3.3/6,MS3.2/1,Error ellipse: s-maj=24.6km s-min=15.4km az=66.0*
*PGC **10** 04:27:31.0±1.4,50°.56N×130°.31W,h10km,MLSn3.1/28, Mw3.7/28,199km west of Port Hardy, Bc Vancouver Island, Canada Region*
ISC 10 04:27:31.3±1.2,50°.55N±0°.06×130°.24W±0°.08,h10km,n54, σ1°62/58,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPEB	**Brooks Peninsu**	**1.63**	**103**	Pn	**Pn**	**04 27 58.0**	**-2.0**
PACB	**Port Alice, BC**	**1.75**	**93**	Pn	**Pn**	**04 28 00.1**	**-1.6**
PACB				Sn	**Sn**	**04 28 20.4**	**-3.7**
PHC	**Port Hardy**	**1.79**	**84**	Pn	**Pn**	**04 28 01.1**	**-1.2**
PHC				Sn	**Sn**	**04 28 22.3**	**-2.7**
JEDB	**Jedway, Haida**	**1.85**	**341**	Pn	**Pn**	**04 28 00.1**	**-3.0**
FHBB	**Fair Harbour**	**2.06**	**103**	Pn	**Pn**	**04 28 04.2**	**-1.7**
BBB	**Bella Bella**	**2.11**	**38**	Pn	**Pn**	**04 28 05.3**	**-1.2**
	4.2nm,0.3s,baz=223,slow=6.0,SNR=193						
BBB				Sn	**Sn**	**04 28 30.4**	**-2.5**
	26nm,0.3s,baz=313,slow=11,SNR=12						
	13nm,0.3s						
BBB	**Bella Bella**	**2.11**	**38**	Pn	**Pn**	**04 28 05.4**	**-1.2**
EDB	**Eliza Dome**	**2.11**	**107**	Pn	**Pn**	**04 28 05.0**	**-1.7**
BAIB	**Barry Inlet**	**2.24**	**336**	Pn	**Pn**	**04 28 05.7**	**-2.8**
TAHB	**Tahsis**	**2.38**	**105**	Pn	**Pn**	**04 28 09.0**	**-1.3**
TAHB				Sn	**Sn**	**04 28 35.9**	**-3.6**
WOSB	**Woss**	**2.38**	**98**	Pn	**Pn**	**04 28 09.7**	**-0.7**
WOSB				Sn	**Sn**	**04 28 37.3**	**-2.3**
NTKA	**Nootka**	**2.52**	**111**	Pn	**Pn**	**04 28 10.6**	**-1.6**
NCSB	**Newcastle Ridg**	**2.67**	**92**	Pn	**Pn**	**04 28 13.5**	**-1.0**
NCSB				Sn	**Sn**	**04 28 44.5**	**-2.5**
BUTB	**Butedale**	**2.75**	**23**	Pn	**Pn**	**04 28 14.4**	**-1.1**
GDR	**Gold River**	**2.81**	**104**	Pn	**Pn**	**04 28 15.0**	**-1.2**
GRIB	**Gribbell Islan**	**2.88**	**13**	Pn	**Pn**	**04 28 15.6**	**-1.6**
BNAB	**Bonilla**	**2.96**	**355**	Pn	**Pn**	**04 28 16.5**	**-1.8**
CBB	**Campbell River**	**3.17**	**98**	Pn	**Pn**	**04 28 20.6**	**-0.5**
CBB				Sn	**Sn**	**04 28 56.6**	**-2.4**
MYRA	**Myra Falls**	**3.17**	**107**	Pn	**Pn**	**04 28 20.1**	**-1.1**
GRNB	**Grenville Isla**	**3.31**	**3**	Pn	**Pn**	**04 28 21.6**	**-1.5**
KITB	**Kitimat**	**3.67**	**15**	Pn	**Pn**	**04 28 26.8**	**-1.2**
KITB				Sn	**Sn**	**04 29 08.5**	**-2.7**
BFSB	**Bamfield**	**3.73**	**115**	Pn	**Pn**	**04 28 28.6**	**-0.3**
B927	**Port Alberni**	**3.75**	**109**	Pn	**Pn**	**04 28 28.5**	**-0.6**
PABB	**Port Alberni**	**3.75**	**109**	Pn	**Pn**	**04 28 29.1**	**-0.1**
RUBB	**Prince Rupert**	**3.78**	**360**	Pn	**Pn**	**04 28 28.3**	**-1.3**
TXDB	**Texada**	**3.83**	**101**	Pn	**Pn**	**04 28 29.8**	**-0.4**
SHB	**Sechelt**	**4.21**	**101**	Pn	**Pn**	**04 28 35.4**	**-0.1**
PTRF	**Port Renfrew**	**4.29**	**116**	Pn	**Pn**	**04 28 37.0**	**+0.4**
CLRS	**Cowichan Lake**	**4.32**	**111**	Pn	**Pn**	**04 28 36.7**	**-0.3**
WPB	**Watts Point**	**4.61**	**98**	Pn	**Pn**	**04 28 41.4**	**+0.4**
SYMB	**Survey Mountai**	**4.64**	**113**	Pn	**Pn**	**04 28 41.9**	**+0.5**
B010	**North Saanich**	**4.80**	**111**	Pn	**Pn**	**04 28 44.2**	**+0.6**
PGC	**Sidney**	**4.80**	**111**	Pn	**Pn**	**04 28 44.5**	**+0.9**
B009	**North Saanich**	**4.80**	**111**	Pn	**Pn**	**04 28 44.3**	**+0.7**
B011	**North Saanich**	**4.80**	**111**	Pn	**Pn**	**04 28 43.2**	**-0.4**
SNB	**Saturna Island**	**4.92**	**108**	Pn	**Pn**	**04 28 45.1**	**-0.2**
LLLB	**Lillooet**	**5.32**	**86**	Pn	**Pn**	**04 28 51.3**	**+0.5**
FSJB	**Fort St James**	**5.34**	**41**	Pn	**Pn**	**04 28 51.2**	**+0.2**
NBC8	**Simpson Ranch**	**7.62**	**35**	Pn	**Pn**	**04 29 23.9**	**+1.6**
NBC8				Sn	**Sn**	**04 30 48.1**	**-0.7**
DLBC	**Dease Lake**	**7.91**	**1**	Pn	**Pn**	**04 29 26.7**	**+0.4**
	0.3nm,0.3s,baz=176,slow=17,SNR=8.6						
	1.3nm,0.5s						
DLBC	**Dease Lake**	**7.91**	**1**	Pn	**Pn**	**04 29 26.9**	**+0.7**
NBC5	**NorthernBC 5**	**8.28**	**30**	Pn	**Pn**	**04 29 32.6**	**+1.2**
NBC5				Sn	**Sn**	**04 31 05.1**	**+0.1**
NEW	**Newport**	**8.85**	**100**	Pn	**Pn**	**04 29 40.1**	**+0.9**
	0.2nm,0.3s,baz=286,slow=21,SNR=2.0						
NEW				LR	LR	04 33 13.4	
	comp=Z,125nm,18.1s,baz=295,slow=38						
	0.8nm,0.4s						
YKA	**Yellowknife Ar**	**14.70**	**30**	Pn	**Pn**	**04 30 57.4**	**-1.6**
	0.1nm,0.3s,baz=227,slow=12,SNR=7.5						
	0.1nm,0.6s						
NVAR	**Mina Array Bea**	**14.78**	**140**	Pn	**Pn**	**04 31 02.9**	**+2.3**
	0.1nm,0.3s,baz=344,slow=15,SNR=1.4						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**16.15**	**111**	Pn	**P**	**04 31 22.3**	**+0.5**
	baz=309,slow=9.4,SNR=4.4						
	0.9nm,0.8s						
ULM	**Lac du Bonnet**	**21.79**	**77**	P	**P**	**04 32 25.9**	**+2.7**
	1.6nm,0.8s,baz=279,slow=9.6,SNR=4.8						
	1.6nm,0.4s						
H11N2	**WAKE ISLAND Hy 57.83**	**262**		T	T	05 40 03.7	
	baz=42,slow=76,SNR=95						
H11N3	**WAKE ISLAND Hy 57.83**	**262**		T	T	05 40 00.7	
	baz=42,slow=76,SNR=134						
H11N1	**WAKE ISLAND Hy 57.84**	**262**		T	T	05 40 02.9	
	baz=42,slow=76,SNR=82						
H11S1	**WAKE ISLAND Hy 58.85**	**261**		T	T	05 41 27.5	
	baz=47,slow=75,SNR=8.0						
H11S2	**WAKE ISLAND Hy 58.87**	**261**		T	T	05 41 30.5	
	baz=47,slow=75,SNR=8.6						
H11S3	**WAKE ISLAND Hy 58.87**	**261**		T	T	05 41 24.6	
	baz=47,slow=75,SNR=7.0						
MKAR	**Makanchi Array**	**79.05**	**338**	P	**P**	**04 39 34.9**	**-0.5**
	0.1nm,0.5s,baz=20,slow=5.7,SNR=2.0						
	0.1nm,0.5s						

*BER **10** 04:32:22.5±3.5,77°.45N×28°.66E,h15km±18km,ML3.1, ML3.3(NAO),Confirmed Earthquake*
*NAO **10** 04:32:22.2±0.5,77°.43N×28°.26E,h10km,ML3.0*
*KOLA **10** 04:32:23.3,77°.49N×27°.05E,h0km,ML2.4,Error ellipse: s-maj=24.6km s-min=22.8km az=160.0, Spitsbergen,Barentz Sea*
*FCIAR **10** 04:32:26.0,77°.77N×28°.44E,h10km,station OMEGA has station magnitude of 3.90 station ZFI2 has station magnitude of 3.80*
ISC 10 04:32:20.7±0.8,77°.32N±0°.04×28°.38E±0°.04,h10km,n37, σ2°.43/63,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPEN	**Hopen**	**1.12**	**225**	Pb	**Pb**	**04 32 43.0**	**+0.9**
HOPEN				Sb	**Sg**	**04 32 58.3**	**+1.6**
HOPEN	**Hopen**	**1.12**	**225**	*e*P	**Pb**	**04 32 43.0**	**+0.9**
HOPEN				*e*S	**Sg**	**04 32 58.3**	**+1.6**
HOPEN				IAML		04 33 02.2	
	comp=Z,484nm,0.3s						
SPA0	**Spitsbergen Ar**	**2.70**	**294**	Pn	**Pn**	**04 33 03.6**	**-0.4**
	baz=109,slow=14						
SPA0				Sn	**Sn**	**04 33 33.9**	**-2.9**
	baz=98,slow=22						
SPA0	**Spitsbergen Ar**	**2.70**	**294**	Pn	**Pn**	**04 33 03.6**	**-0.4**
SPA0				Sn	**Sn**	**04 33 33.9**	**-2.9**
SPA0	**Spitsbergen Ar**	**2.70**	**294**	*e*P	**Pn**	**04 33 03.2**	**-0.9**
SPA0				*e*S	**Sn**	**04 33 33.8**	**-2.9**
SPITS	**Spitsbergen Ar**	**2.70**	**294**	P	**Pn**	**04 33 03.7**	**-0.4**
SPITS				S	**Sn**	**04 33 32.1**	**-4.6**
HSPB	**Hornsund (broa**	**2.88**	**270**	Pn	**Pn**	**04 33 06.5**	**-0.1**
HSPB				Pg	**Pb**	**04 33 14.2**	**+2.1**
HSPB	**Hornsund (broa**	**2.88**	**270**	*e*P	**Pn**	**04 33 06.4**	**-0.1**
HSPB				*e*		04 33 14.7	
HSPB	**Hornsund (broa**	**2.88**	**270**	*e*S	**Sb**	**04 33 47.7**	**+0.3**
HSPB	**Hornsund (broa**	**2.88**	**270**	P	**Pn**	**04 33 06.2**	**-0.3**
HSPB				S	**Sn**	**04 33 39.2**	**-2.0**
HSPB	**Hornsund (broa**	**2.88**	**270**	*e*P	**Pb**	**04 33 11.7**	**-0.4**
BRBA	**Barentsburg A**	**3.12**	**291**	Pn	**Pn**	**04 33 09.9**	**+0.1**
BRBA				Sn	**Sn**	**04 33 45.0**	**-2.1**
BRBA				Sg	**Sb**	**04 33 58.7**	**+4.6**
BRBA	**Barentsburg A**	**3.12**	**291**	*e*P	**Pn**	**04 33 10.2**	**+0.4**
BRBB	**Barentsburg B**	**3.13**	**291**	Pn	**Pn**	**04 33 10.2**	**+0.3**
BRBB				Sn	**Sn**	**04 33 44.6**	**-2.6**
BRBB				Sg	**Sb**	**04 33 58.5**	**+4.2**
BRBB	**Barentsburg B**	**3.13**	**291**	*e*P	**Pn**	**04 33 10.3**	**+0.3**
BRBB	**Barentsburg B**	**3.13**	**291**	P	**Pn**	**04 33 09.9**	**+0.1**
BRBB				S	**Sn**	**04 33 44.8**	**-2.4**
BEAR	**Bear Island, N**	**3.65**	**224**	Pg	**Pb**	**04 33 29.3**	**+4.2**
	baz=31,slow=18						
BEAR				Sn	**Sn**	**04 33 56.8**	**-3.2**
	baz=33,slow=37						
BEAR				Sg	**Sg**	**04 34 17.0**	**-0.6**
	baz=31,slow=37						
KBS	**Kingsbay**	**3.75**	**303**	Pn	**Pn**	**04 33 17.6**	**-0.9**
KBS				Sn	**Sn**	**04 33 58.8**	**-3.8**
KBS				Sg	**Sb**	**04 34 14.8**	**+2.6**
KBS	**Kingsbay**	**3.75**	**303**	*e*P	**Pn**	**04 33 17.8**	**-0.7**
KBS				*e*S	**Sn**	**04 33 59.1**	**-3.5**
KBS				IAML		04 34 19.7	
	comp=Z,111nm,0.5s						
KBS	**Kingsbay**	**3.75**	**303**	P	**Pn**	**04 33 17.4**	**-1.0**
KBS				S	**Sn**	**04 33 58.9**	**-3.7**
OMEGA	**Omega**	**5.04**	**37**	*e*P	**Pn**	**04 33 37.0**	**+0.9**
OMEGA				*e*S	**Sn**	**04 34 32.5**	**-1.7**
	comp=Z,86nm,1.1s						
ZFI2	**Zemlya Franca-**	**5.04**	**37**	*e*P	**Pn**	**04 33 37.0**	**+0.9**
	comp=Z,72nm,1.2s						
ZFI2				*e*S	**Sn**	**04 34 32.5**	**-1.8**
VADS	**Vadso**	**7.25**	**177**	Pn	**Pn**	**04 34 07.5**	**+1.1**
VADS				Sn	**Sn**	**04 35 26.2**	**-2.4**
VADS	**Vadso**	**7.25**	**177**	S	**Sn**	**04 35 27.2**	**-1.5**
VADS	**Vadso**	**7.25**	**177**	P	**Pn**	**04 34 09.2**	**+2.7**
KEV	**Kevo**	**7.62**	**184**	Pn	**Pn**	**04 34 12.8**	**+1.3**
ARA0	**ARCESS Array S**	**7.87**	**187**	Pn	**Pn**	**04 34 17.7**	**+2.7**
	baz=4.6,slow=10						
ARA0				Sn	**Sn**	**04 35 41.5**	**-2.6**
	baz=15,slow=22						
ARA0	**ARCESS Array S**	**7.87**	**187**	Pn	**Pn**	**04 34 17.7**	**+2.7**
ARA0				Sn	**Sn**	**04 35 41.5**	**-2.6**
ARCES	**ARCESS Array B**	**7.87**	**187**	S	**Sn**	**04 35 40.9**	**-3.1**
ARCES	**ARCESS Array B**	**7.87**	**187**	P	**Pn

0.1nm,0.3s,baz=347,slow=10,SNR=2.2
0.3nm,0.7s
MKAR Makanchi Array 66.94 327 P P 05 02 40.7 -0.1
0.3nm,0.5s,baz=118,slow=7.7,SNR=7.0
0.3nm,0.5s
KURBB Kurchatov Arra 71.24 329 P P 05 03 07.6 +0.2
0.4nm,0.6s,baz=137,slow=6.2,SNR=4.1
0.4nm,0.6s

PGC 10 04:53:22.1±0.7, 50°46'N×130°09'W, h10km, MLSn2.9/14, Mw3.5/14, 185km west of Port Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPEB	**Brooks Peninsu**	**1.52**	**101**	Pn	Pn	04 53 47.0	-2.3
BPEB				Sn	Sn	04 54 04.0	-5.2
PACB	**Port Alice, BC**	**1.66**	**90**	Pn	Pn	04 53 49.4	-1.9
PHC	**Port Hardy**	**1.71**	**81**	Pn	Pn	04 53 50.7	-1.3
PHC				Sn	Sn	04 54 10.4	-3.4
FHBB	**Fair Harbour**	**1.95**	**101**	Pn	Pn	04 53 53.4	-1.8
JEDB	**Jedway, Haida**	**1.96**	**340**	Pn	Pn	04 53 52.8	-2.6
JEDB				Sn	Sn	04 54 15.8	-4.2
BBB	**Bella Bella**	**2.12**	**35**	Pn	Pn	04 53 56.5	-1.1
BBB				Sn	Sn	04 54 20.5	-3.5
TAHB	**Tahsis**	**2.27**	**103**	Pn	Pn	04 53 57.9	-1.8
WOSB	**Woss**	**2.28**	**96**	Pn	Pn	04 53 58.7	-1.1
GDR	**Gold River**	**2.70**	**103**	Pn	Pn	04 54 03.9	-1.7
BUTB	**Butedale**	**2.79**	**21**	Pn	Pn	04 54 06.5	-0.4
BUTB				Sn	Sn	04 54 40.0	-0.7
GRIB	**Gribbell Islan**	**2.94**	**11**	Pn	Pn	04 54 07.5	-1.4
GRIB				Sn	Sn	04 54 40.2	-4.0
BNAB	**Bonilla**	**3.05**	**354**	Pn	Pn	04 54 08.4	-2.0
MYRA	**Myra Falls**	**3.06**	**106**	Pn	Pn	04 54 09.4	-1.1
CBB	**Campbell River**	**3.06**	**96**	Pn	Pn	04 54 09.3	-1.2
GRNB	**Grenville Isla**	**3.39**	**1**	Pn	Pn	04 54 13.7	-1.4
GRNB				Sn	Sn	04 54 50.9	-4.4
TXDB	**Texada**	**3.72**	**100**	Pn	Pn	04 54 19.6	0.0
RUBB	**Prince Rupert**	**3.87**	**359**	Pn	Pn	04 54 20.9	-0.7
SHB	**Sechelt**	**4.10**	**100**	Pn	Pn	04 54 24.0	-0.8
LLLB	**Lillooet**	**5.24**	**85**	Pn	Pn	04 54 40.8	+0.3

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*IDC **10** 04:59:33.2±1.9, 3°.62N×125°.32E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=197.7km s-min=23.5km az=65.0*
*DJA **10** 04:59:44.0±0.7, 4°.N±.5'×12°.6E±°, h79km±7km, M4.5/14, mb4.5/7, mB5.3/4, MLv4.4/14, Mw(mB)4.8/4*
ISC 10 04:59:37.3±1.4, 4°.2N±0°.1×126°.8E±0°.1, h36km, n12, σ1§64/13, mb3.3/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.38**	**248**	P	**Pn**	**05 00 01.8**	**+1.7**
SGSI				S	**Sn**	**05 00 16.6**	**-0.5**
MNI	**Manado**	**3.38**	**216**	P	**Pn**	**05 00 28.6**	**+1.0**
MNI				S	**Sn**	**05 01 03.8**	**-2.7**
TNTI	**Ternate**	**3.46**	**171**	P	Pn	05 00 34.0	+5.3
MRSI	**Marisa**	**6.12**	**233**	P	**Pn**	**05 01 07.0**	**+1.8**
SANI	**Sanana**	**6.27**	**188**	P	**Pn**	**05 01 07.7**	**+0.3**
5μm35nm,0.7s
LUWI Luwuk 6.60 218 P **Pn** **05 01 13.8 +2.0**
0.4nm77nm,0.7s
APSI Ampana 7.25 226 P **Pn** **05 01 21.8 +1.1**
0.1nm25nm,0.7s
NLAI Namlea 7.41 178 P **Pn** **05 01 25.1 +2.2**
WRA Warramunga Arr 25.12 163 P **P** **05 04 58.9 -0.1**
0.4nm,0.6s,baz=338,slow=10,SNR=8.1
0.4nm,0.6s
ASAR Alice Springs 28.56 166 P **P** **05 05 30.1 +0.1**
0.2nm,0.5s,baz=339,slow=9.9,SNR=1.4
0.2nm,0.5s
MKAR Makanchi Array 57.21 325 P **P** **05 09 19.7 -1.3**
0.1nm,0.3s,baz=121,slow=7.2,SNR=5.1
0.1nm,0.3s
KURBB Kurchatov Arra 61.38 327 P **P** **05 09 49.0 -0.6**
0.2nm,0.5s,baz=127,slow=7.2,SNR=1.8
0.2nm,0.5s

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*JSN **10** 05:12:36.0±1.6, 18°.53N×80°.89W, h46km±999km, MD4.3, MW4.7, Presumed earthquake*
*SSNC **10** 05:12:36.7±1.2, 19°.00N×80°.76W, h12km±8km, MD3.2, ML2.6, Presumed earthquake*
ISC 10 05:12:36.1±3.1, 19°.0N±0°.1×80°.7W±0°.2, h35km, n10, σ1§31/15, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.92**	**42**	*i* P	**Pn**	**05 12 52.4**	**-0.2**
LCCY				*i* S	**Sn**	**05 13 04.3**	**-0.3**
LCCY				IAML		05 13 05.2	
comp=N,63nm,0.2s
LCCY IAML 05 13 05.3
comp=E,104nm,0.2s
CBCY The Bluff, Cay 1.19 51 *i* P **Pn** **05 12 55.9 -0.4**
CBCY *i* S **Sn** **05 13 10.7 -0.6**
CBCY IAML 05 13 11.0
comp=E,115nm,0.3s
CBCY IAML 05 13 11.3
comp=N,141nm,0.3s
MTDJ Mount Denham 3.13 103 *i* P **Pn** **05 13 23.6 +0.5**
MTDJ *e*S **Sn** **05 13 57.0 -2.5**
MTDJ Mount Denham 3.13 103 *i* P **Pn** **05 13 23.3 +0.1**
MGV Manicaragua 3.19 13 *i* P **Pn** **05 13 23.9 +0.1**
MGV *i* S **Sn** **05 14 00.2 -0.4**
CCCC Cccc 3.56 51 *i* P Pn 05 13 34.5 +5.6
LMGC Las Mercedes 3.68 72 *i* P **Pn** **05 13 31.9 +1.3**
LMGC *i* S **Sn** **05 14 12.2 -0.6**
LMGC IAML 05 14 16.6
comp=N,16nm,0.1s
LMGC IAML 05 14 17.0
comp=E,13nm,0.1s
CHIV Chivirico 4.20 76 *i* P **Pn** **05 13 39.5 +1.9**
RCC Rio Carpintero 4.87 77 *i* P **Pn** **05 13 48.8 +2.0**
RCC *e*S **Sn** **05 14 40.8 -1.2**
GTBY Guantanamo Bay 5.39 79 *i* P **Pn** **05 13 55.7 +1.6**

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*JSN **10** 05:22:14.4±0.9, 18°.70N×81°.27W, h50km±999km, MD4.4, MW4.2, Presumed earthquake*
*SSNC **10** 05:22:16.4±1.5, 18°.98N×81°.15W, h25km±26km, MD3.3, ML2.7, Presumed earthquake*
ISC 10 05:22:15.7±2.2, 18°.96N±0°.09×81°.1W±0°.1, h35km, n10, σ0§59/15, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.17**	**53**	*i* P	**Pn**	**05 22 35.4**	**-0.2**
LCCY				*i* S	**Sn**	**05 22 49.4**	**-1.0**
LCCY				IAML		05 22 50.0	
comp=E,33nm,0.1s
LCCY IAML 05 22 50.1
comp=N,54nm,0.1s
CBCY The Bluff, Cay 1.46 58 *i* P **Pn** **05 22 39.1 -0.5**
CBCY *i* S **Sn** **05 22 58.0 +0.4**
CBCY IAML 05 22 58.7
comp=E,21nm,0.2s
CBCY IAML 05 22 58.8
comp=N,32nm,0.1s
MGV Manicaragua 3.30 18 *i* P **Pn** **05 23 04.7 -0.2**
MGV *i* S **Sn** **05 23 43.0 +0.2**
MGV IAML 05 23 43.3
comp=E,128nm,0.2s
MGV IAML 05 23 43.5
comp=N,11nm,0.2s
MTDJ Mount Denham 3.43 102 *i* P **Pn** **05 23 07.3 +0.4**
MTDJ *i* S **Sn** **05 23 46.5 +0.1**
MTDJ IAML 05 23 48.0
comp=N,65nm,0.4s
MTDJ IAML 05 23 48.1
comp=N,16nm,0.2s
MTDJ Mount Denham 3.43 102 *i* P **Pn** **05 23 06.2 -0.6**
MTDJ *i* S **Sn** **05 23 46.2 -0.3**
CCCC Cccc 3.82 54 *i* P Pn 05 23 17.0 +4.9
LMGC Las Mercedes 3.99 73 *i* P **Pn** **05 23 15.7 +1.3**
LMGC *i* S **Sn** **05 24 00.5 +0.5**
LMGC *e*Sg IAML 05 24 03.2
LMGC IAML 05 24 04.6
comp=E,5.8nm,0.1s
LMGC IAML 05 24 04.6
comp=N,7.9nm,0.1s

STH	**Stony Hill**	**4.14**	**102**	*i* P	**Pn**	**05 23 16.3**	**-0.2**
SOR	**Soroa**	**4.22**	**335**	*i* P	**Pn**	**05 23 17.7**	**+0.1**
RCC	**Rio Carpintero**	**5.17**	**78**	*i* P	**Pn**	**05 23 30.6**	**-0.1**

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*DJA **10** 05:22:54.2±0.2, 7°.S±3'×10°.5E±°, h10km, M5.0/50, mB5.6/7, mb5.0/13, MLv4.8/50, Mw(mB)5.1/7, MwMwp5.3/1, Mwp5.5/1*
*BJI **10** 05:22:55.0, 6°.90S×105°.30E, h60km, mB5.2/10, mb4.7/38, Ms4.5/3, Ms7 4.2/5*
*NEIC **10** 05:22:56.6±1.9, 6°.77S±0°.10×105°.29E±0°.06, h52km±6km, mb4.9/57, Error ellipse: s-maj=15.0km s-min=7.9km az=196.0*
*IDC **10** 05:22:58.5±2.1, 6°.66S×105°.32E, h71km±16km, mb4.4/28, mbtmp4.7/31, MS3.6/31, Error ellipse: s-maj=20.1km s-min=8.1km az=40.0*
ISC 10 05:22:55.7±0.6, 6°.91S±0°.06×105°.24E±0°.04, h53km±4km, n211, σ1§15/197, mb4.8/65, MS3.6/30, 2C-1D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**1.18**	**49**	P	**Pn**	**05 23 15.4**	**-0.5**
BLSI	**Bandar Lampung**	**1.53**	**0**	P	**Pn**	**05 23 20.9**	**+0.2**
DBJI	**Dramaga**	**1.54**	**77**	P	**Pn**	**05 23 20.3**	**-0.5**
DBJI				S	**Sn**	**05 23 41.2**	**+1.5**
KASI	**Kota Agung**	**1.56**	**332**	P	**Pn**	**05 23 21.8**	**+0.7**
KASI				S	**Sn**	**05 23 41.8**	**+1.6**
TNG	**Tangerang**	**1.57**	**63**	P	**Pn**	**05 23 21.0**	**-0.3**
TNG				S	**Sn**	**05 23 41.6**	**+1.0**
KLI	**Kotabumi**	**2.06**	**349**	P	**Pn**	**05 23 29.2**	**+1.2**
LWLI	**Liwa**	**2.21**	**328**	P	**Pn**	**05 23 31.0**	**+0.9**
LEM	**Lembang**	**2.36**	**88**	P	**Pn**	**05 23 34.4**	**+2.2**
387nm,0.6s,baz=307,slow=11,SNR=3.8
LEM S **Sn** **05 24 03.5 +3.4**
966nm,0.8s,baz=288,slow=20,SNR=5.0
LEM LR LR 05 24 42.0
comp=Z,828nm,18.1s,baz=286,slow=45
LEM Lembang 2.36 88 P **Pn** **05 23 32.1 -0.1**
BBJI Bungbulang 2.45 103 **Pn** **05 23 32.8 -0.6**
BBJI Sn **Sn** **05 24 00.4 -1.8**
BBJI Bungbulang 2.45 103 P **Pn** **05 23 32.4 -1.0**
MDSI Maura Dua 2.62 336 P **Pn** **05 23 37.0 +1.3**
EGSI Enggano, Bengk 3.33 297 P **Pn** **05 23 46.6 +1.3**
MNAI Manna 3.40 318 **Pn** **05 23 47.5 +1.2**
MNAI Sn **Sn** **05 24 26.1 +0.7**
MNAI Manna 3.40 318 P **Pn** **05 23 47.1 +0.8**
KPJI Karang Pucung 3.69 97 P **Pn** **05 23 51.9 +1.7**
CTJI Waduk Cacaban 3.92 92 P **Pn** **05 23 53.7 +0.3**
PMBI Palembang 3.98 353 P **Pn** **05 23 56.1 +1.9**
KSI Kapahiang 4.17 321 P **Pn** **05 23 58.9 +2.0**
UBSI University, Be 4.30 316 P **Pn** **05 23 59.6 +1.0**
TPI Tanjungpandan 4.77 30 P **Pn** **05 24 05.5 +0.4**
MASI Maura Aman, Be 4.79 321 P **Pn** **05 24 07.5 +2.1**
PPBI Pangkal Pinang 4.79 11 P **Pn** **05 24 07.1 +1.6**
SMRI Semarang 5.16 92 Pn **Pn** **05 24 11.3 +0.8**
SMRI Semarang 5.16 92 P **Pn** **05 24 11.5 +1.0**
0.8nm87nm,0.6s
UGM Wanagama 5.33 101 Pn **Pn** **05 24 14.4 +1.5**
UGM Wanagama 5.33 101 P **Pn** **05 24 14.0 +1.1**
0.9nm18μm92nm,0.9s
PCJI Pacitan 6.02 103 P **Pn** **05 24 22.5 +0.2**
0.7nm96nm,0.7s
NGJI Ngawi 6.19 95 P **Pn** **05 24 27.1 +2.5**
DSRI Dabo 6.42 354 P **Pn** **05 24 28.5 +0.8**
0.4nm60nm,0.6s
SNJI Sawahan-Nganju 6.52 98 P **Pn** **05 24 32.3 +3.0**
0.5nm95nm,0.7s
SJI Sawahan 6.53 98 P **Pn** **05 24 30.1 +0.8**
0.5nm3μm63nm,0.5s
PPSI Pulau Pagai 6.64 308 P **Pn** **05 24 30.6 -0.2**
PDSI Padang 7.63 321 P **Pn** **05 24 46.1 +1.8**
JAGI Jajag, Banyuwa 8.97 101 **Pn** **05 25 04.4 +1.7**
GSI Gunungsitoli 11.18 317 **Pn** **05 25 32.1 -0.8**
KAPI Kappang 14.55 83 P **Pn** **05 26 19.9 +1.1**
3.6nm,0.3s,baz=213,slow=12,SNR=1.5
KAPI LR LR 05 32 32.0
comp=Z,192nm,18.6s,baz=254,slow=40
TOLI2 Tolitoli 17.43 63 **P** **05 26 56.8 +0.8**
MYLDM Lahad Datu 17.87 48 **Pn** **05 26 58.2 -2.5**
BATI Baumata 18.51 101 P **P** **05 27 07.5 -0.4**
42nm,0.4s,baz=232,slow=19,SNR=9.4
BATI S **S** **05 30 36.6 +0.1**
83nm,0.7s,baz=315,slow=20,SNR=4.2
SOEI Soe 19.04 100 **P** **05 27 13.5 -0.3**
SOEI IAmb IAmb 05 27 22.8
comp=Z,61nm,0.6s
MBWA Marble Bar 19.93 137 P **P** **05 27 23.6 +0.2**
PSA00 Pilbara Seismi 20.29 137 P **P** **05 27 27.6 +0.3**
PSA00 IAmb IAmb 05 27 40.4
comp=Z,79nm,1.9s
PSA00 Pilbara Seismi 20.29 137 P **P** **05 27 27.9 +0.6**
PSA00 IAmb IAmb 05 27 40.5
comp=Z,26nm,1.9s
FITZ Fitzroy Crossi 22.78 121 LR LR 05 36 36.2
comp=Z,87nm,21.6s,baz=330,slow=36
KNRA Kununurra 24.64 113 P **P** **05 28 11.2 -0.3**
KNRA IAmb IAmb 05 28 13.0
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 25.96 346 P **P** **05 28 21.1 -2.3**
comp=Z,2.7nm,0.6s,baz=162,slow=8.4,SNR=18
CMAR LR LR 05 38 54.1
comp=Z,82nm,21.8s,baz=160,slow=37
comp=Z,2.7nm,0.6s
CMAR Chiang Mai Arr 25.96 346 P **P** **05 28 20.9 -2.6**
QIZ Qiongzhong 26.17 10 P **P** **05 28 25.4 +0.1**
QIZ S **S** **05 32 55.0 +1.3**
QIZ LR LR
comp=Z,290nm,13.7s
MTN Manton Dam 26.17 105 **P** **05 28 25.6 +0.2**
MTN IAmb IAmb 05 28 34.5
comp=Z,37nm,1.2s
CHTO Chiang Mai 26.30 346 **P** **05 28 24.6 -2.0**
NWAO Narrogin (SRO) 28.19 158 LR LR 05 39 28.2
comp=Z,152nm,20.7s,baz=247,slow=35
PALK Pallekele 28.24 299 LR LR 05 39 10.2
comp=Z,66nm,19.6s,baz=120,slow=34
H01W3 Cape Leeuwin H 29.03 165 T T 05 59 11.6
baz=344,slow=76,SNR=768
H01W1 Cape Leeuwin H 29.04 165 T T 05 59 13.6
baz=344,slow=76,SNR=742
H01W2 Cape Leeuwin H 29.04 165 T T 05 59 12.7
baz=344,slow=76,SNR=996
WB0 Warramunga Arr 31.05 117 P **P** **05 29 08.1 -0.8**
WRA Warramunga Arr 31.06 118 P **P** **05 29 08.9 -0.1**
comp=Z,4.0nm,0.8s,baz=290,slow=10,SNR=60
WRA PcP **PcP** **05 32 04.1 +0.2**
comp=Z,2.0nm,0.6s,baz=303,slow=2.0,SNR=8.3
comp=Z,4.0nm,0.8s
WRA Warramunga Arr 31.06 118 P **P** **05 29 08.7 -0.3**
WRA **PcP** **05 32 04.5 +0.6**
WRAB Tennant Creek 31.07 118 P **P** **05 29 09.1 0.0**
WRAB x x 05 29 19.1
WRAB pP **pP** **05 29 21.3 -1.1**
WRAB x x 05 29 25.0
WRAB PcP **PcP** **05 32 04.0 +0.1**
WR8 Warramunga Arr 31.21 117 P **P** **05 29 10.6 +0.3**
WR8 IAmb IAmb 05 29 11.2
comp=Z,7.4nm,0.7s
ASAR Alice Springs 32.17 124 P **P** **05 29 18.9 0.0**
comp=Z,0.7nm,0.3s,baz=303,slow=8.2,SNR=15
ASAR PcP **PcP** **05 32 07.5 +0.6**
comp=Z,1.8nm,0.3s,baz=303,slow=2.3,SNR=12
ASAR S **S** **05 34 31.3 +3.1**
comp=Z,0.4nm,0.7s,baz=298,slow=16,SNR=4.6
ASAR LR LR 05 42 21.7
comp=Z,96nm,21.8s,baz=283,slow=36
comp=Z,0.7nm,0.3s
ASAR Alice Springs 32.17 124 P **P** **05 29 18.8 0.0**
ASAR **PcP** **05 32 08.0 +1.1**
AS31 Alice Springs 32.17 124 P **P** **05 29 19.1 +0.3**
H08S2 Diego Garcia H 32.49 267 T T 06 03 37.5
baz=90,slow=76,SNR=183
H08S3 Diego Garcia H 32.50 267 T T 06 03 36.5
baz=90,slow=76,SNR=362
H08S1 Diego Carcia H 32.51 267 T T 06 03 39.0
baz=90,slow=76,SNR=164
PZH PanZhiHua 33.38 354 P **P** **05 29 32.3 +2.9**
YOJ Yonaguni jima 35.67 28 P **P** **05 29 49.0 0.0**
COEN Coen 37.92 104 **P** **05 30 07.6 -0.7**
COEN IAmb IAmb 05 30 12.8
comp=Z,7.4nm,0.8s
LSA Lhasa 38.83 340 **P** **05 30 15.7 -0.6**
NJ2 Nanjing 40.86 18 *e*P **P** **05 30 35.2 +2.7**
NJ2 pmax pmax
comp=Z,4.0nm,0.6s
XAN Xi'an 40.87 5 ⇓P **P** **05 30 31.1 -1.6**
XAN pmax pmax
comp=Z,6.0nm,0.7s
XAN pmax pmax
comp=Z,270nm,6.1s
PMG Port Moresby 41.55 96 **P** **05 30 38.1 -0.4**
PMG IAmb IAmb 05 30 39.7
comp=Z,38nm,0.7s
PMG Port Moresby 41.55 96 P **P** **05 30 38.7 +0.1**
PMG x x 05 30 49.3
PMG pP **pP** **05 30 50.8 -1.6**
PMG x x 05 30 54.1
CTA Charters Tower 41.85 112 LR LR 05 50 04.1
comp=Z,36nm,19.2s,baz=243,slow=39
STKA Stephens Creek 42.01 131 P **P** **05 30 43.0 +0.9**
comp=Z,3.4nm,0.4s,baz=313,slow=7.7,SNR=11
STKA PcP **PcP** **05 32 37.0 +0.5**
comp=Z,2.0nm,0.5s,baz=292,slow=1.9,SNR=2.1
STKA LR LR 05 49 23.3
comp=Z,83nm,20.4s,baz=277,slow=38
comp=Z,3.4nm,0.4s
STKA Stephens Creek 42.01 131 P **P** **05 30 43.2 +1.1**
LZDM Lanzhou Array 42.66 358 P **P** **05 30 46.3 -1.3**
comp=Z,0.6nm,0.3s,baz=187,slow=10,SNR=5.9
LZDM PcP **PcP** **05 32 37.9 -1.0**
comp=Z,2.2nm,0.4s,baz=186,slow=5.7,SNR=9.8
comp=Z,0.6nm,0.3s
GOMU GeErMu 43.98 348 P **P** **05 30 59.3 +1.0**
GOMU pmax pmax
comp=Z,3.0nm,1.1s
HNS HongShan 44.95 11 ⇑P **P** **05 31 06.4 +0.8**
HNS pmax pmax
comp=Z,4.0nm,0.6s
GTA2 Gaotai 46.44 354 P **P** **05 31 16.3 -1.2**
GTA2 PcP **PcP** **05 32 52.3 +0.8**
GTA2 pmax pmax
comp=Z,10.0nm,0.7s
JNU Nakatsue 46.67 30 LR LR 05 50 37.8
comp=Z,34nm,21.5s,baz=204,slow=36
HHC Hu-ho-hao-te 47.87 6 *e*P **P** **05 31 31.1 +2.5**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,140nm,7.2s
JMN Monobe 48.69 32 P **P** **05 31 34.3 -0.6**
KSRS Korea Array 48.95 24 P **P** **05 31 36.5 -0.4**
comp=Z,3.1nm,0.6s,baz=222,slow=7.7,SNR=13
KSRS LR LR 05 51 46.3
comp=Z,17nm,21.9s,baz=205,slow=36
comp=Z,3.1nm,0.6s
NIL Nilore 50.46 325 **P** **05 31 48.2 -0.3**
NIL IAmb IAmb 05 31 48.6
comp=Z,29nm,1.2s
WMQ Urumqi 52.93 344 *e*P **P** **05 32 09.6 +2.9**
MJAR Matsushiro Arr 53.13 33 P **P** **05 32 05.5 -2.8**
comp=Z,1.7nm,0.5s,baz=208,slow=7.7,SNR=5.1
MJAR LR LR 05 55 24.7
comp=Z,27nm,20.1s,baz=65,slow=37
comp=Z,1.7nm,0.5s
KSH2 Kashi 53.44 331 P **P** **05 32 10.2 -0.4**
KSH2 pmax pmax
comp=Z,8.0nm,0.7s
WUS Wushi 53.49 336 IAmb IAmb 05 32 12.4
comp=Z,5.1nm,0.7s
WUS Wushi 53.49 336 P **P** **05 32 10.7 -0.3**
KBL Kabul 53.56 323 **P** **05 32 11.2 -0.5**
KBL IAmb IAmb 05 32 13.1
comp=Z,8.0nm,0.7s
CN2 Changchun 53.68 18 P **P** **05 32 10.4 -1.7**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 54.51 1 P **P** **05 32 17.7 -0.6**
comp=Z,2.8nm,0.5s,baz=180,slow=8.6,SNR=24
SONM PcP **PcP** **05 33 21.2 +0.1**
comp=Z,4.2nm,0.5s,baz=178,slow=3.6,SNR=16
SONM LR LR 05 57 41.9
comp=Z,125nm,18.9s,baz=182,slow=38
comp=Z,2.8nm,0.5s
SONM Songino Array 54.51 1 P **P** **05 32 17.9 -0.4**
SONM PcP **PcP** **05 33 20.9 -0.2**
SONM IAmb IAmb 05 33 22.4
comp=Z,4.3nm,0.6s
TARG Taragay, Kyrgy 54.52 335 P **P** **05 32 19.3 +0.5**
ULN Ulaanbaatar 54.56 1 **P** **05 32 18.2 -0.4**
NRN Naryn 55.06 333 IAmb IAmb 05 33 25.8
comp=Z,9.9nm,1.4s
KDJ Kajisay 55.12 335 P **P** **05 32 22.7 -0.2**
KDJ IAmb IAmb 05 32 24.3
comp=Z,5.8nm,0.6s
DRK Karamyk 55.56 329 P **P** **05 32 26.5 +0.3**
MDJ Mudanjiang 55.78 21 IAmb IAmb 05 32 28.4
comp=Z,9.6nm,0.8s
MDJ Mudanjiang 55.78 21 P **P** **05 32 26.6 -0.7**
MDJ pmax pmax
comp=Z,20nm,2.1s
BNX BinXian 56.03 19 ⇑P **P** **05 32 27.8 -1.3**
BNX pmax pmax
comp=Z,22nm,0.7s
USRK Ussuriysk Ar. 56.31 23 P **P** **05 32 29.9 -1.2**
comp=Z,11nm,0.6s,baz=197,slow=6.2,SNR=16
comp=Z,11nm,0.6s
ARSB Arslanbob 56.37 331 **P** **05 32 31.9 +0.1**
ARSB IAmb IAmb 05 32 33.1
comp=Z,8.7nm,0.7s
BTK Batken 56.49 329 IAmb IAmb 05 32 36.3
comp=Z,10nm,1.1s
AAK Ala-Archa 56.70 333 LR LR 05 59 39.3
comp=Z,33nm,18.8s,baz=230,slow=39
MKAR Makanchi Array 57.22 341 P **P** **05 32 36.2 -1.4**
comp=Z,2.7nm,0.4s,baz=148,slow=8.1,SNR=46
MKAR LR LR 06 00 15.6
comp=Z,58nm,19.1s,baz=205,slow=39
comp=Z,2.7nm,0.4s
MAKZ Makanchi 57.34 341 P **P** **05 32 37.4 -0.9**
HILR Hailar Array B 57.63 11 P **P** **05 32 39.4 -1.1**
comp=Z,9.0nm,0.4s,baz=190,slow=8.3,SNR=35
comp=Z,9.0nm,0.4s
TLY Talaya 58.37 359 P **P** **05 32 45.9 +0.4**
TLY IAmb IAmb 05 34 21.1
comp=Z,3.7nm,0.5s
KK31 Karatay Array 58.91 331 P **P** **05 32 48.4 -1.1**
KKAR Karatay Array 58.91 331 P **P** **05 32 48.9 -0.6**
HEH HeiHe 60.09 16 *e*P **P** **05 32 56.2 -1.2**
HEH pmax pmax
comp=Z,18nm,0.5s
H04N2 CROZET ISLANDS 60.20 220 T T 06 38 32.0
baz=65,slow=74,SNR=1017
H04N1 CROZET ISLANDS 60.22 220 T T 06 38 33.3
baz=65,slow=74,SNR=490
H04N3 CROZET ISLANDS 60.22 220 T T 06 38 30.0
baz=65,slow=74,SNR=398
H04S1 CROZET ISLANDS 60.40 219 T T 06 38 31.9
baz=68,slow=76,SNR=28
H04S3 CROZET ISLANDS 60.42 219 T T 06 38 30.5
baz=68,slow=76,SNR=16
H04S2 CROZET ISLANDS 60.42 219 T T 06 38 31.9
baz=68,slow=76,SNR=18
KLR Kul'dur 60.51 20 LR LR 05 59 37.9
comp=Z,9.0nm,20.0s,baz=198,slow=36
KURBB Kurchatov Arra 61.78 341 P **P** **05 33 08.1 -0.8**
comp=Z,1.3nm,0.5s,baz=153,slow=6.2,SNR=12
KURBB PcP **PcP** **05 33 49.6 0.0**
comp=Z,2.0nm,0.6s,baz=155,slow=3.4,SNR=8.1
KURBB LR LR 06 04 40.3
comp=Z,52nm,19.9s,baz=172,slow=41
comp=Z,1.3nm,0.5s
KURK Kurchatov 61.83 341 P **P** **05 33 08.3 -0.9**
ZAA0 Zalesovo Array 63.02 347 IAmb IAmb 05 33 16.4
comp=Z,6.3nm,0.4s
ZALV Zalesovo Beam 63.02 347 **P** **05 33 15.8 -1.3**
comp=Z,6.2nm,0.3s,baz=153,slow=6.0,SNR=32
ZALV LR LR 06 02 51.7
comp=Z,126nm,20.2s,baz=144,slow=38
comp=Z,6.2nm,0.3s
ZALV Zalesovo Beam 63.02 347 **P** **05 33 15.6 -1.5**
RAYN Ar Rayn 65.68 300 P **P** **05 33 36.7 +1.5**
RAYN pP **pP** **05 33 49.0 -0.5**
RAYN sP **sP** **05 33 55.1 -0.1**
BVAR Borovoye Array 66.61 338 P **P** **05 33 39.8 -0.7**
comp=Z,3.1nm,0.3s,baz=127,slow=7.0,SNR=28
comp=Z,3.1nm,0.3s
BORK Borovoye 66.65 338 **P** **05 33 40.3 -0.4**
BORK IAmb IAmb 05 33 40.9
comp=Z,4.8nm,0.4s
BORK Borovoye 66.65 338 P **P** **05 33 40.2 -0.6**

BORK				x	x	05 34 00.5
FURI	**Furi**	**68.17 282**		LR	LR	05 59 47.8
	comp=Z,33nm,20.2s,baz=30,slow=32					
ABKAR	**Akbulak array**	**68.45 330**			**P**	**05 33 52.2 +0.1**
AKTO	**Aktyubinsk**	**70.16 330**	P		**P**	**05 34 02.5 -0.2**
	comp=Z,6.8nm,0.4s,baz=121,slow=7.6,SNR=24					
	comp=Z,6.8nm,0.4s					
RTZ	**Ruatahuna**	**71.46 128**	P		**P**	**05 34 11.4 +0.4**
URZ	**Urewera**	**71.53 128**	LR		LR	06 07 31.1
	comp=Z,42nm,18.1s,baz=245,slow=37					
ARTI	**Arti**	**73.84 335**	P		**P**	**05 34 24.4 -0.2**
	comp=Z,37nm,0.5s,baz=138,slow=3.4,SNR=56					
ARTI				LR	LR	06 10 42.9
	comp=Z,72nm,18.3s,baz=13,slow=39					
	comp=Z,37nm,0.5s					
ARTI	**Arti**	**73.84 335**			**P**	**05 34 24.7 +0.1**
ARTI	**Arti**	**73.84 335**	P		**P**	**05 34 24.8 +0.1**
ARTI			pP		**PcP**	**05 34 38.6 -1.3**
ARTI			x		x	05 34 44.6
PEA0B	**Petropavlovsk-**	**74.37 30**	P		**P**	**05 34 26.8 -1.0**
PETK	**Petropavlovsk-**	**74.37 30**	P		**P**	**05 34 26.6 -1.2**
	comp=Z,5.5nm,0.6s,baz=156,slow=2.9,SNR=6.7					
	comp=Z,5.5nm,0.6s					
PETK	**Petropavlovsk-**	**74.37 30**	P		**P**	**05 34 26.8 -1.0**
MBAR	**Mbarara**	**74.54 271**	LR		LR	06 01 15.8
	comp=Z,36nm,21.3s,baz=132,slow=31					
PET	**Petropavlovsk**	**74.79 30**	P		**P**	**05 34 29.3 -0.9**
KBZ	**Khabaz**	**75.41 318**	P		**P**	**05 34 34.7 +0.7**
	comp=Z,3.6nm,0.9s,baz=169,slow=5.2,SNR=4.9					
	comp=Z,3.6nm,0.9s					
MA2	**Magadan**	**75.45 22**	LR		LR	06 08 52.8
	comp=Z,30nm,19.8s,baz=240,slow=37					
ASF	**Jabal al Asfar**	**75.67 306**	LR		LR	06 07 56.4
	comp=Z,27nm,20.6s,baz=39,slow=36					
VNDA	**Vanda**	**76.38 169**	LR		LR	06 02 57.0
	comp=Z,51nm,20.2s,baz=293,slow=31					
NRIK	**Noril'sk**	**77.05 354**	P		**P**	**05 34 42.1 -0.7**
	comp=Z,11nm,0.5s,baz=142,slow=4.7,SNR=20					
	comp=Z,11nm,0.5s					
NRIK	**Noril'sk**	**77.05 354**	IAmb		IAmb	05 34 43.1
	comp=Z,25nm,1.1s					
MMAI	**Mount Meron Ar**	**77.13 306**	P		**P**	**05 34 46.3 +2.2**
	comp=Z,2.8nm,0.6s,baz=74,slow=5.1,SNR=1.9					
	comp=Z,2.8nm,0.6s					
KIRV	**Kirov**	**79.02 334**	P		**P**	**05 34 54.5 +0.6**
	comp=Z,18nm,0.7s,baz=84,slow=5.9,SNR=4.9					
	comp=Z,18nm,0.7s					
TIXI	**Tiksi**	**79.93 7**	LR		LR	06 14 23.0
	comp=Z,60nm,21.7s,baz=192,slow=39					
TIXI	**Tiksi**	**79.93 7**			**P**	**05 34 57.0 -1.6**
TIXI			IAmb		IAmb	05 34 57.7
	comp=Z,12nm,0.6s					
TIXI	**Tiksi**	**79.93 7**	P		**P**	**05 34 57.0 -1.6**
TIXI			sP		**pP**	**05 35 15.0 +1.4**
BR104	**Keskin Array S**	**80.46 312**	P		**P**	**05 35 02.0 -0.3**
	comp=Z,7.0nm,0.8s					
BR131	**Keskin Array S**	**80.47 312**			**P**	**05 35 02.7 +0.3**
BR131			IAmb		IAmb	05 35 03.5
	comp=Z,6.0nm,0.7s					
BRTR	**Keskin Array B**	**80.47 312**	P		**P**	**05 35 02.6 +0.3**
	comp=Z,3.7nm,0.7s,baz=140,slow=6.8,SNR=24					
BRTR				LR	LR	06 12 28.1
	comp=Z,35nm,18.2s,baz=36,slow=37					
	comp=Z,3.7nm,0.7s					
BRTR	**Keskin Array B**	**80.47 312**			**P**	**05 35 02.4 0.0**
BR105	**Keskin Array S**	**80.48 312**	P		**P**	**05 35 02.1 -0.4**
	comp=Z,65nmcomp=Z,7.2nm,0.8s					
BR106	**Keskin Array S**	**80.48 312**	P		**P**	**05 35 02.1 -0.4**
	comp=Z,4.6nm,0.8s					
SUR	**Sutherland**	**81.65 238**	LR		LR	06 04 05.4
	comp=Z,72nm,20.4s,baz=140,slow=30					
QSPA	**South Pole Qui**	**83.08 180**	LR		LR	06 06 19.2
	comp=Z,56nm,21.4s,baz=320,slow=31					
AK09	**Malin Array Si**	**86.48 322**	P		**P**	**05 35 32.3 -0.5**
AK10	**Malin Array Si**	**86.49 322**	P		**P**	**05 35 32.0 -0.9**
AK08	**Malin Array Si**	**86.50 322**	P		**P**	**05 35 32.2 -0.7**
AK07	**Malin Array Si**	**86.51 322**	P		**P**	**05 35 32.0 -0.9**
AK06	**Malin Array Si**	**86.52 322**	P		**P**	**05 35 32.7 -0.3**
AKASG	**Malin Array Be**	**86.54 322**	P		**P**	**05 35 32.9 -0.2**
	comp=Z,0.5nm,0.3s,baz=87,slow=4.9,SNR=5.6					
	comp=Z,0.5nm,0.3s					
AKBB	**Malin Array Si**	**86.54 322**			**P**	**05 35 33.0 -0.1**
AKBB			IAmb		IAmb	05 38 29.3
	comp=Z,22nm,1.6s					
AK01	**Malin Array Si**	**86.54 322**	P		**P**	**05 35 32.7 -0.4**
AK03	**Malin Array Si**	**86.55 322**	P		**P**	**05 35 32.7 -0.4**
KIEV	**Kiev**	**86.55 322**			**P**	**05 35 32.8 -0.3**
KIEV			IAmb		IAmb	05 38 29.3
	comp=Z,22nm,1.6s					
AK11	**Malin Array Si**	**86.57 322**	P		**P**	**05 35 32.0 -1.2**
AK16	**Malin Array Si**	**86.60 322**	P		**P**	**05 35 32.8 -0.6**
AK18	**Malin Array Si**	**86.64 322**	P		**P**	**05 35 32.8 -0.8**
AK22	**Malin Array Si**	**86.65 322**	P		**P**	**05 35 32.9 -0.7**
AK21	**Malin Array Si**	**86.67 322**	P		**P**	**05 35 33.0 -0.7**
AK19	**Malin Array Si**	**86.67 322**	P		**P**	**05 35 33.0 -0.7**
AK20	**Malin Array Si**	**86.68 322**	P		**P**	**05 35 33.0 -0.8**
LUBAR	**Lubar, Ukraine**	**87.25 321**	P		**P**	**05 35 35.8 -0.8**
MLR	**Muntele Rosu**	**87.43 316**			**P**	**05 35 39.3 +1.6**
MLR			IAmb		IAmb	05 35 42.8
	comp=Z,27nm,1.5s					
BURAR	**Bucovina Array**	**88.37 318**			**P**	**05 35 43.4 +1.3**
BURAR			IAmb		IAmb	05 35 47.5
	comp=Z,5.7nm,0.7s					
BUR08	**Bucovina Ar. S**	**88.39 318**	IAmb		IAmb	05 35 47.6
	comp=Z,8.6nm,0.9s					
RNPP5	**Staryi Chortor**	**88.71 322**	P		**P**	**05 35 43.1 -0.4**
FIA1	**FINESS Array S**	**90.86 332**	P		**P**	**05 35 54.0 +0.7**
FINES	**FINESS Array B**	**90.86 332**	P		**P**	**05 35 53.6 +0.3**
	comp=Z,3.0nm,0.4s,baz=106,slow=4.5,SNR=43					
	comp=Z,3.0nm,0.4s					
FINES	**FINESS Array B**	**90.86 332**	P		**P**	**05 35 54.0 +0.7**
ARCES	**ARCESS Array B**	**92.84 340**	P		**P**	**05 36 02.1 -0.3**
	comp=Z,1.1nm,0.4s,baz=98,slow=6.5,SNR=15					
	comp=Z,1.1nm,0.4s					
ARCES	**ARCESS Array B**	**92.84 340**			**P**	**05 36 02.3 0.0**
MODS	**Modra-Piesok**	**93.75 318**	*eP*		**P**	**05 36 10.9 +3.9**
GERES	**GERESS Array B**	**96.16 318**	P		**P**	**05 36 18.1 0.0**
	comp=Z,0.3nm,0.4s,baz=106,slow=8.7,SNR=1.5					
	comp=Z,0.3nm,0.4s					
F15K	**North Star Dit**	**96.29 25**	P		**P**	**05 36 17.9 -0.3**
SPB2	**Spitsbergen Ar**	**96.47 348**	P		**P**	**05 36 18.3 -0.5**
SPITS	**Spitsbergen Ar**	**96.48 348**	P		**P**	**05 36 17.9 -1.0**
	comp=Z,1.9nm,0.4s,baz=113,slow=8.3,SNR=22					
SPITS			LR		LR	06 26 09.6
	comp=Z,59nm,18.0s,baz=178,slow=39					
	comp=Z,1.9nm,0.4s					
HFS	**Hagfors**	**96.71 330**	P		**P**	**05 36 21.8 +1.6**
	comp=Z,7.6nm,1.1s,baz=121,slow=5.6,SNR=6.3					
	comp=Z,7.6nm,1.1s					
G16K	**Koyuk River**	**97.23 25**	P		Pdif	05 36 22.7 +0.2
G16K			IAmb		IAmb	05 36 23.2
	comp=Z,3.9nm,0.8s					
NOA	**NORSAR Array B**	**97.95 331**	LR		LR	06 25 37.3
	comp=Z,22nm,18.1s,baz=280,slow=38					
H18K	**Honhosa River**	**98.92 25**	P		Pdif	05 36 30.1 +0.1
H18K			IAmb		IAmb	05 40 00.6
	comp=Z,18nm,1.8s					
YKA	**Yellowknife Ar**	**117.37 20**	PKP		**PKPdf**	**05 41 34.6 -0.5**
	comp=Z,0.2nm,0.6s,baz=354,slow=2.1,SNR=6.8					
SCHQ	**Schefferville**	**131.78 354**	PKP		**PKiKP**	**05 42 03.4 -0.5**
	comp=Z,2.2nm,0.9s,baz=357,slow=2.5,SNR=5.8					
PDAR	**Pinedale Array**	**132.94 35**	PKP		**PKPdf**	**05 42 06.0 +0.3**
	comp=Z,0.4nm,0.6s,baz=139,slow=0.1,SNR=4.3					
MMNY	**Mt. Morris Dam**	**144.21 4**	PKPdf		PKPbc	05 42 24.1 -0.2
TXAR	**Lajitas Array**	**144.80 47**	PKP		**PKPdf**	**05 42 27.3 -0.4**
	comp=Z,1.7nm,0.4s,baz=311,slow=1.0,SNR=90					
M52A	**Chesterland**	**145.01 9**			PKPbc	05 42 26.5 -0.4
UCCT	**U. Connecticut**	**145.18 357**			**PKPdf**	**05 42 27.5 -0.2**
PAOC	**Oil Creek Stat**	**145.26 6**	PKPbc		**PKPab**	**05 42 27.4 -0.3**
KSCT	**Kent School, K**	**145.31 358**	PKPbc		**PKPdf**	**05 42 27.7 -0.2**
BDFB	**Brasilia**	**145.31 230**	PKPbc		**PKPab**	**05 42 30.5 +1.7**
	comp=Z,0.8nm,0.4s,baz=187,slow=8.1,SNR=2.2					
SSPA	**Standing Stone**	**146.30 4**			**PKPab**	**05 42 30.9 -0.8**
SIV	**San Ignacio**	**153.52 211**	PKPbc		**PKiKP**	**05 42 50.0 +0.4**
	comp=Z,0.8nm,0.7s,baz=131,slow=9.3,SNR=2.8					

*NEIC **10** 05:23:25.6±0.9, 17.81N±0.02×66.85W±0.01, h10km±1km, ML3.0/25, Md3.3/6(RSPR), Error ellipse: s-maj=4.0km s-min=2.9km az=24.0*
*OSPL **10** 05:23:26.5±0.3, 17.85N×66.85W, h11km±3km, ML2.4, Presumed earthquake*
*SDD **10** 05:23:26.8±1.1, 17.92N×66.84W, h20km±9km, MD3.6, ML2.8, MW3.0, Presumed earthquake*
*RSPR **10** 05:23:26.0, 17.85N×66.85W, h11km, MD3.2/6*

ISC 10 05:23:26.2±1.2, 17.88N±0.06×66.83W±0.02, h18km±5km, n44, σ0 80/64, 19C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.10**	**334**			**Pg**	**05 23 29.6**	**-0.3**
GBPR						**Sg**	**05 23 31.9**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.10**	**334**	*ePn*		**Pg**	**05 23 29.6**	**-0.3**
GBPR				*eS*		**Sg**	**05 23 31.9**	**-0.4**
MLPR	**Magueyes Islan**	**0.22**	**293**			**Pg**	**05 23 31.0**	**-0.4**
MLPR					Sg	**Sg**	**05 23 34.2**	**-0.7**
MLPR					IAML		05 23 34.9	
	3µm,0.2s							
OBIP	**Obispado Ponce**	**0.27**	**54**			**Pg**	**05 23 32.2**	**-0.1**
OBIP						**Sg**	**05 23 36.5**	**+0.2**
OBIP	**Obispado Ponce**	**0.27**	**54**	IAML			05 23 37.2	
	comp=N,264nm,0.2s							
OBIP	**Obispado Ponce**	**0.27**	**54**	*ePn*		**Pg**	**05 23 32.2**	**-0.1**
OBIP				*eS*		**Sg**	**05 23 36.5**	**+0.2**
OBIP	**Obispado Ponce**	**0.27**	**54**	*iP*		**Pg**	**05 23 32.1**	**-0.1**
OBIP				*eS*		**Sg**	**05 23 36.5**	**+0.2**
OBIP				IAML			05 23 37.1	
	comp=Z,485nm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.29**	**295**			**Pg**	**05 23 32.1**	**-0.5**
CRPR						**Sg**	**05 23 36.2**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.29**	**295**	IAML			05 23 36.5	
	comp=Z,3µm,0.2s							
CRPR				IAML			05 23 36.7	
	comp=Z,2µm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.29**	**295**	*ePg*		**Pg**	**05 23 32.1**	**-0.5**
CRPR				*eSg*		**Sg**	**05 23 36.1**	**-0.7**
CRPR				IAML			05 23 36.4	
	comp=N,2µm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.29**	**295**	*ePn*		**Pg**	**05 23 32.1**	**-0.5**
CRPR				*eS*		**Sg**	**05 23 36.2**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.29**	**295**	*iP*		**Pg**	**05 23 32.1**	**-0.5**
CRPR				*eS*		**Sg**	**05 23 36.1**	**-0.8**
CRPR				IAML			05 23 36.4	
	comp=Z,3µm,0.2s							
CELP	**Cerrillos**	**0.31**	**52**			**Pg**	**05 23 32.8**	**-0.1**
CELP				IAML			05 23 38.1	
	comp=Z,2µm,0.4s							
LSP	**Las Mesas**	**0.38**	**320**			**Pg**	**05 23 33.6**	**-0.5**
LSP	**Las Mesas**	**0.38**	**320**	*ePn*		**Pg**	**05 23 33.6**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.38**	**16**			**Pg**	**05 23 33.6**	**-0.6**
PRSN	**Puerto Rico Se**	**0.44**	**318**			**Pg**	**05 23 34.6**	**-0.7**
PRSN						**Sg**	**05 23 41.9**	**+0.5**
PRSN	**Puerto Rico Se**	**0.44**	**318**	IAML			05 23 43.4	
	comp=Z,2µm,0.2s							
PRSN				IAML			05 23 44.5	
	comp=Z,3µm,0.3s							
PRSN	**Puerto Rico Se**	**0.44**	**318**	*ePg*		**Pg**	**05 23 34.6**	**-0.7**
PRSN				*eSg*		**Sg**	**05 23 42.0**	**+0.5**
PRSN				IAML			05 23 44.4	
	comp=N,2µm,0.2s							
PRSN	**Puerto Rico Se**	**0.44**	**318**	*ePn*		**Pg**	**05 23 34.6**	**-0.7**
PRSN				*eS*		**Sg**	**05 23 41.9**	**+0.5**
ECPR	**Experimental S**	**0.62**	**46**			**Pg**	**05 23 37.8**	**-0.8**
ECPR				IAML			05 23 48.0	
	comp=N,890nm,0.2s							
ECPR				IAML			05 23 49.3	
	comp=N,875nm,0.2s							
AGPR	**Aguadilla, PR**	**0.64**	**336**			**Pg**	**05 23 37.8**	**-1.0**
AGPR				IAML			05 23 46.5	
	comp=N,449nm,0.6s							
AGPR				IAML			05 23 48.1	
	comp=N,472nm,0.3s							
AGPR	**Aguadilla, PR**	**0.64**	**336**	*ePg*		**Pg**	**05 23 37.8**	**-1.0**
AGPR				*eSg*		**Sg**	**05 23 45.8**	**-1.6**
AGPR				IAML			05 23 48.1	
	comp=N,554nm,0.2s							
AGPR	**Aguadilla, PR**	**0.64**	**336**	*ePn*		**Pg**	**05 23 37.8**	**-1.0**
AGPR				*eS*		**Sg**	**05 23 47.4**	**0.0**
EMPR	**Esperanza - Ma**	**0.66**	**26**			**Pg**	**05 23 38.7**	**-0.5**
EMPR						**Sg**	**05 23 48.1**	**+0.1**
EMPR	**Esperanza - Ma**	**0.66**	**26**	*eP*		**Pg**	**05 23 38.7**	**-0.5**
EMPR				*eS*		**Sg**	**05 23 48.1**	**+0.1**
SJG	**San Juan**	**0.69**	**71**			**Pg**	**05 23 39.5**	**-0.3**
SJG				IAML			05 23 49.9	
	comp=N,424nm,0.2s							
SJG	**San Juan**	**0.69**	**71**	*ePg*		**Pg**	**05 23 39.2**	**-0.6**
SJG				*eSg*		**Sg**	**05 23 48.1**	**-0.9**
SJG	**San Juan**	**0.69**	**71**	*eP*		**Pg**	**05 23 39.0**	**-0.8**
SJG				*eS*		**Sg**	**05 23 49.2**	**+0.2**
SJG	**San Juan**	**0.69**	**71**	*iP*		**Pg**	**05 23 39.3**	**-0.6**
SJG				*eS*		**Sg**	**05 23 48.7**	**-0.2**
SJG				IAML			05 23 52.2	
	comp=Z,142nm,0.6s							
PDPR	**Patillas Dam,**	**0.78**	**80**			**Pg**	**05 23 41.1**	**-0.5**
IDE	**Isla Desecheo**	**0.79**	**309**			**Pg**	**05 23 40.3**	**-1.4**
IDE	**Isla Desecheo**	**0.79**	**309**	*eP*		**Pg**	**05 23 40.3**	**-1.4**
GCPR	**Guaynabo City**	**0.83**	**59**			**Pg**	**05 23 41.3**	**-1.2**
GCPR						**Sg**	**05 23 52.8**	**-0.7**
GCPR	**Guaynabo City**	**0.83**	**59**	*eP*		**Pg**	**05 23 41.3**	**-1.2**
GCPR				*eS*		**Sg**	**05 23 52.8**	**-0.7**
HUMP	**Col San Antoni**	**0.97**	**75**			**Pg**	**05 23 43.9**	**-1.2**
HUMP						**Sg**	**05 23 56.9**	**-1.0**
HUMP	**Col San Antoni**	**0.97**	**75**	IAML			05 24 00.3	
	comp=Z,489nm,0.3s							
HUMP				IAML			05 24 00.3	
	comp=Z,412nm,0.2s							
HUMP	**Col San Antoni**	**0.97**	**75**	*eP*		**Pg**	**05 23 43.9**	**-1.2**
HUMP				*eS*		**Sg**	**05 23 56.9**	**-1.0**
CUPR	**Culebra, Puert**	**1.53**	**74**	Pn		**Pn**	**05 23 53.5**	**+0.7**
PCDR	**Punta Cana, DR**	**1.60**	**293**	*ePg*		**Pn**	**05 23 54.5**	**+0.8**
PCDR				IAML			05 24 24.9	
	comp=N,179nm,1.3s							
HIDR	**Higuey Centro**	**1.92**	**292**	*ePn*		**Pn**	**05 23 58.8**	**+0.7**
HIDR				IAML			05 24 29.6	
	comp=N,67nm,0.2s							
MIDR	**Miches**	**2.37**	**298**	*ePg*		**Pn**	**05 24 06.2**	**+2.0**
MIDR				IAML			05 24 49.6	
	comp=N,46nm,3.3s							
DR12	**Loma Pena Alta**	**2.58**	**291**	Pn		**Pn**	**05 24 08.6**	**+1.4**
HATOM	**Hato Mayor del**	**2.58**	**291**	*ePg*		**Pn**	**05 24 08.7**	**+1.5**
HATOM				IAML			05 24 55.4	
	comp=N,20nm,1.6s							

*IDC **10** 05:41:19.3±1.1, 22.1N×143.2E, h0km, mb3.4/8, mbtmp3.5/9, ML2.9/1, Error ellipse: s-maj=40.6km s-min=21.2km az=86.0*
ISC 10 05:41:24.5±1.1, 22.1N±0.1×143.2E±0.3, h35km, n10, σ0 54/10, mb3.5/9, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.05**	**344**		Pn	**Pn**	**05 44 54.7**	**+0.1**
	0.1nm,0.3s,baz=153,slow=18,SNR=1.6							
	0.5nm,0.3s							
SONM	**Songino Array**	**39.06**	**320**	P	P	**P**	**05 48 48.3**	**+0.1**
	0.2nm,0.4s,baz=127,slow=8.2,SNR=1.7							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**42.65**	**192**	P	P	**P**	**05 49 18.5**	**+0.6**
	0.6nm,0.6s,baz=7.6,slow=7.8,SNR=9.2							
	0.6nm,0.6s							
ASAR	**Alice Springs**	**46.36**	**192**	P	P	**P**	**05 49 46.9**	**-0.6**
	0.4nm,1.0s,baz=21,slow=8.4,SNR=1.5							
	0.4nm,1.0s							
MKAR	**Makanchi Array**	**54.45**	**312**	P	P	**P**	**05 50 48.5**	**0.0**
	0.1nm,0.4s,baz=95,slow=8.2,SNR=1.8							
	0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**57.26**	**317**	P	P	**P**	**05 51 07.7**	**-0.8**
	0.3nm,0.4s,baz=100,slow=7.5,SNR=1.6							
	0.3nm,0.4s							
ILAR	**Eielson Array**	**61.70**	**27**	P	P	**P**	**05 51 39.4**	**+0.5**
	0.3nm,0.8s,baz=238,slow=5.2,SNR=1.7							
	0.3nm,0.8s							
BVAR	**Borovoye Array**	**62.39**	**319**	P	P	**P**	**05 51 44.1**	**+0.3**
	1.0nm,0.3s,baz=97,slow=8.6,SNR=9.5							
	1.0nm,0.3s							
YKA	**Yellowknife Ar**	**76.11**	**28**	P	P	**P**	**05 53 07.9**	**-0.6**
	0.1nm,0.3s,baz=296,slow=5.9,SNR=2.0							
	0.1nm,0.3s							
FINES	**FINESS Array B**	**82.85**	**334**	P	P	**P**	**05 53 45.2**	**+0.1**
	8.5nm,1.1s,baz=78,slow=3.3,SNR=4.4							

*SJA **10** 05:49:33.8±0.6, 19.21S×69.45W, h104km±3km, ML3.4, MW3.5*
*GUC **10** 05:49:35.2±0.7, 19.19S×69.42W, h99km±3km, ML3.7*
ISC 10 05:49:35.0±1.5, 19.25S±0.03×69.51W±0.06, h102km±10km, n27, σ1 8 15/44, 2C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.51**	**145**	*iP*		**Pn**	**05 49 51.2**	**-0.4**
GO01				*i* S		**Sn**	**05 50 04.2**	**0.0**
GO01	**Chusmiza**	**0.51**	**145**	*eP*		**Pn**	**05 49 51.3**	**-0.4**
GO01				*eS*		**Sn**	**05 50 04.5**	**+0.4**
GO01				IAML			05 50 04.9	
	comp=Z,1µm,0.1s							
PB11	**IPOC Station P**	**0.53**	**195**	*iP*		**Pn**	**05 49 51.5**	**0.0**
PB11				*i* S		**Sn**	**05 50 04.1**	**+0.4**
PB11				IAML			05 50 05.3	
	comp=E,4µm,0.2s							
PB11	**IPOC Station P**	**0.53**	**195**	*eP*		**Pn**	**05 49 51.5**	**0.0**
PB11				*eS*		**Sn**	**05 50 04.6**	**+0.9**
PB11				IAML			05 50 04.8	
	comp=Z,1µm,0.3s							
PX02	**IPOC Station P**	**0.71**	**293**	*iP*		**Pn**	**05 49 51.8**	**-1.0**
PB16	**IPOC Station P**	**0.91**	**360**	*iP*		**Pn**	**05 49 54.7**	**-0.6**
PB16				*i* S		**Sn**	**05 50 09.7**	**-0.7**
PB16	**IPOC Station P**	**0.91**	**360**	*eP*		**Pn**	**05 49 54.7**	**-0.6**
PB16				*eS*		**Sn**	**05 50 10.3**	**-0.1**
PB16				IAML			05 50 11.4	
	comp=Z,452nm,0.4s							
PB08	**IPOC Station P**	**0.95**	**160**	*iP*		**Pn**	**05 49 55.6**	**+0.1**
PB08				*i* S		**Sn**	**05 50 11.3**	**+0.5**
PB08	**IPOC Station P**	**0.95**	**160**	*eP*		**Pn**	**05 49 55.3**	**-0.2**
PB08				*eS*		**Sn**	**05 50 11.6**	**+0.8**
PB08				IAML			05 50 12.5	
	comp=Z,458nm,0.4s							
PB12	**IPOC Station P**	**1.00**	**309**	*iP*		**Pn**	**05 49 55.4**	**-0.3**
PB12				*i* S		**Sn**	**05 50 11.1**	**-0.3**
PB12				IAML			05 50 11.7	
	comp=N,2µm,0.2s							
PB12	**IPOC Station P**	**1.00**	**309**	*eP*		**Pn**	**05 49 55.4**	**-0.3**
PB12				*eS*		**Sn**	**05 50 11.4**	**+0.1**
PB12				IAML			05 50 11.5	
	comp=Z,627nm,0.2s							
TA02	**Huaiquique**	**1.17**	**210**	*iP*		**Pn**	**05 49 57.6**	**+0.1**
TA02				*i* S		**Sn**	**05 50 15.3**	**+0.8**
TA02				IAML			05 50 16.4	
	comp=N,2µm,0.2s							
TA02	**Huaiquique**	**1.17**	**210**	*eP*		**Pn**	**05 49 57.6**	**+0.1**
TA02				*eS*		**Sn**	**05 50 16.3**	**+1.8**
TA02				IAML			05 50 16.6	
	comp=Z,689nm,0.1s							
AP01	**Chacalluta**	**1.18**	**318**	*iP*		**Pn**	**05 49 57.6**	**0.0**
AP01				*eS*		**Sn**	**05 50 13.4**	**-1.2**
AP01	**Chacalluta**	**1.18**	**318**	*eP*		**Pn**	**05 49 57.9**	**+0.3**
AP01				*eS*		**Sn**	**05 50 15.6**	**+1.0**
AP01				IAML			05 50 18.9	
	comp=Z,551nm,0.5s							
PB18	**Visviri**	**1.65**	**1**	*eP*		**Pn**	**05 50 05.2**	**+1.3**
PB01	**IPOC Station P**	**1.79**	**179**	*iP*		**Pn**	**05 50 05.2**	**+0.1**
PB01				*i* S		**Sn**	**05 50 28.9**	**+1.0**
PB01				IAML			05 50 30.3	
	comp=E,1µm,0.1s							
PB01	**IPOC Station P**	**1.79**	**179**	*eP*		**Pn**	**05 50 05.3**	**+0.3**
PB01				IAML			05 50 30.4	
	comp=Z,302nm,0.2s							
PB02	**IPOC Station P**	**2.09**	**190**	*iP*		**Pn**	**05 50 09.3**	**+0.3**
PB02				*i* S		**Sn**	**05 50 33.3**	**-1.6**
PB02				IAML			05 50 41.8	
	comp=E,522nm,0.6s							
PB02	**IPOC Station P**	**2.09**	**190**	*eP*		**Pn**	**05 50 09.4**	**+0.4**
PB02				IAML			05 50 42.0	
	comp=Z,439nm,0.4s							
PB07	**IPOC Station P**	**2.49**	**188**	*eP*		**Pn**	**05 50 15.1**	**+0.8**
PB07				IAML			05 50 51.9	
	comp=E,265nm,0.5s							
PB07	**IPOC Station P**	**2.49**	**188**	*eP*		**Pn**	**05 50 15.1**	**+0.8**
PB07				IAML			05 50 54.0	
	comp=Z,194nm,0.3s							
PB09	**IPOC Station P**	**2.55**	**174**	*iP*		**Pn**	**05 50 15.7**	**+0.7**
PB09				*i* S		**Sn**	**05 50 39.9**	**-5.7**
PB09	**IPOC Station P**	**2.55**	**174**	*eP*		**Pn**	**05 50 15.8**	**+0.7**
PB09				IAML			05 50 58.5	
	comp=Z,84nm,0.3s							
LPAZ	**La Paz**	**3.22**	**24**	*eP*		**Pn**	**05 50 25.0**	**+0.6**
PB06	**IPOC Station P**	**3.44**	**181**	*eP*		**Pn**	**05 50 27.6**	**+0.7**
PB06				IAML			05 51 36.9	
	comp=E,65nm,0.5s							
PB05	**IPOC Station P**	**3.64**	**190**	*

BOVS				*e*Sn	**Sn**	**06 11 18.5**	**+0.7**
ZAGS	**Zajecar**	**2.03**	**358**	*e*Pn	**Pn**	**06 10 55.7**	**+0.8**
ZAGS				*e*Sn	**Sn**	**06 11 20.2**	**-0.6**
KUBS	**Kucevo**	**2.67**	**350**	*e*Pn	**Pn**	**06 11 03.1**	**-0.7**
KUBS				*e*Sn	**Sn**	**06 11 38.3**	**+1.6**

NEIC ***10*** *06:14:00.4±1.3, 17°.85N±0°.03×66°.88W±0°.01, h10km±1km, ML2.5/25, Md3.3/5(RSPR), Error ellipse: s-maj=5.3km s-min=2.8km az=4.0*

OSPL ***10*** *06:14:01.4±2.0, 17°.94N×66°.88W, h17km±10km, ML2.1, Presumed earthquake*

SDD ***10*** *06:14:01.6±2.0, 17°.93N×66°.87W, h16km±17km, MD3.5, ML2.6, MW3.1, Presumed earthquake*

RSPR ***10*** *06:14:01.0, 17°.90N×66°.88W, h12km, MD3.2/5*

ISC 10 06:14:00.6±1.0, 17°.91N±0°.05×66°.86W±0°.02, h18km±4km, n43, σ0§47/66, 20C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**347**		**Pg**	**06 14 03.9**	**-0.1**
GBPR					**Sg**	**06 14 05.9**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.07**	**347**	⇑*e*P	**Pg**	**06 14 03.9**	**-0.1**
GBPR				*e*S	**Sg**	**06 14 05.9**	**-0.4**
MLPR	**Magueyes Islan**	**0.18**	**289**		**Pg**	**06 14 05.3**	**0.0**
MLPR				IAML		06 14 08.7	
	1µm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.25**	**292**		**Pg**	**06 14 06.3**	**-0.1**
CRPR				IAML		06 14 10.1	
	1µm,0.3s						
CRPR				IAML		06 14 10.3	
	897nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.25**	**292**		**Sg**	**06 14 09.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.25**	**292**	⇑*e*Pg	**Pg**	**06 14 06.3**	**-0.1**
CRPR				⇑*e*Sg	**Sg**	**06 14 09.9**	**-0.4**
CRPR				IAML		06 14 10.1	
	comp=N,942nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.25**	**292**	⇑*e*P	**Pg**	**06 14 06.3**	**-0.1**
CRPR				*e*S	**Sg**	**06 14 10.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.25**	**292**	*i* P	**Pg**	**06 14 06.3**	**0.0**
CRPR				*e*S	**Sg**	**06 14 09.8**	**-0.5**
CRPR				IAML		06 14 10.2	
	comp=Z,805nm,0.1s						
OBIP	**Obispado Ponce**	**0.28**	**62**		**Pg**	**06 14 06.9**	**+0.1**
OBIP					**Sb**	**06 14 11.4**	**0.0**
OBIP	**Obispado Ponce**	**0.28**	**62**	⇓*e*P	**Pg**	**06 14 07.0**	**+0.1**
OBIP				*e*S	**Sb**	**06 14 11.7**	**+0.3**
OBIP	**Obispado Ponce**	**0.28**	**62**	*i* P	**Pg**	**06 14 07.0**	**+0.2**
OBIP				*e*S	**Sb**	**06 14 11.3**	**-0.2**
OBIP				IAML		06 14 11.9	
	comp=Z,226nm,0.3s						
CELP	**Cerrillos**	**0.32**	**59**		**Pg**	**06 14 07.6**	**+0.1**
CELP				IAML		06 14 12.7	
	comp=Z,364nm,0.5s						
LSP	**Las Mesas**	**0.34**	**321**		**Pg**	**06 14 07.8**	**-0.1**
LSP					**Sg**	**06 14 13.1**	**+0.3**
LSP	**Las Mesas**	**0.34**	**321**	⇑*e*P	**Pg**	**06 14 07.8**	**-0.1**
LSP				*e*S	**Sg**	**06 14 13.1**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.37**	**22**		**Pg**	**06 14 08.1**	**-0.3**
PRSN	**Puerto Rico Se**	**0.41**	**319**		**Pg**	**06 14 08.8**	**-0.2**
PRSN					**Sg**	**06 14 15.1**	**+0.4**
PRSN	**Puerto Rico Se**	**0.41**	**319**	IAML		06 14 16.3	
	comp=Z,1µm,0.3s						
PRSN				IAML		06 14 17.1	
	comp=Z,803nm,0.2s						
PRSN	**Puerto Rico Se**	**0.41**	**319**	⇑*e*Pg	**Pg**	**06 14 08.8**	**-0.2**
PRSN				⇑*e*Sg	**Sg**	**06 14 14.5**	**-0.2**
PRSN				IAML		06 14 15.9	
	comp=N,583nm,0.3s						
PRSN	**Puerto Rico Se**	**0.41**	**319**	⇓*e*P	**Pg**	**06 14 08.8**	**-0.2**
PRSN				*e*S	**Sg**	**06 14 15.1**	**+0.4**
AGPR	**Aguadilla, PR**	**0.60**	**337**		**Pg**	**06 14 12.1**	**-0.6**
AGPR				IAML		06 14 20.3	
	comp=N,148nm,0.5s						
AGPR				IAML		06 14 24.3	
	comp=N,211nm,0.7s						
AGPR	**Aguadilla, PR**	**0.60**	**337**	⇑*e*Pg	**Pg**	**06 14 12.0**	**-0.6**
AGPR				⇑*e*Sg	**Sg**	**06 14 19.9**	**-0.8**
AGPR				IAML		06 14 24.3	
	comp=N,166nm,0.4s						
AGPR	**Aguadilla, PR**	**0.60**	**337**	⇓*e*P	**Pg**	**06 14 12.1**	**-0.6**
AGPR				*e*S	**Sg**	**06 14 20.1**	**-0.6**
ECPR	**Experimental S**	**0.63**	**49**		**Pg**	**06 14 12.5**	**-0.5**
ECPR				IAML		06 14 22.8	
	comp=N,248nm,0.2s						
EMPR	**Esperanza - Ma**	**0.65**	**29**		**Pb**	**06 14 13.6**	**+0.2**
EMPR					**Sb**	**06 14 22.4**	**+0.3**
EMPR	**Esperanza - Ma**	**0.65**	**29**	⇑*e*P	**Pb**	**06 14 13.6**	**+0.2**
EMPR				*e*S	**Sb**	**06 14 22.4**	**+0.3**
SJG	**San Juan**	**0.71**	**73**		**Pg**	**06 14 14.2**	**-0.3**
SJG	**San Juan**	**0.71**	**73**	IAML		06 14 24.8	
	comp=N,146nm,0.5s						
SJG				IAML		06 14 25.4	
	comp=N,117nm,0.3s						
SJG	**San Juan**	**0.71**	**73**	⇑*e*Pg	**Pg**	**06 14 14.2**	**-0.3**
SJG				⇑*e*Sg	**Sg**	**06 14 23.5**	**-0.5**
SJG	**San Juan**	**0.71**	**73**	⇑*e*P	**Pg**	**06 14 14.2**	**-0.3**
SJG				*e*S	**Sb**	**06 14 24.1**	**+0.2**
SJG	**San Juan**	**0.71**	**73**	*i* P	**Sg**	**06 14 14.2**	**-0.3**
SJG				*e*S	**Sg**	**06 14 23.7**	**-0.3**
SJG				IAML		06 14 24.9	
	comp=Z,64nm,0.3s						
IDE	**Isla Desecheo**	**0.75**	**309**		**Pg**	**06 14 14.7**	**-0.6**
IDE					**Sg**	**06 14 24.6**	**-0.7**
IDE	**Isla Desecheo**	**0.75**	**309**	⇑*e*P	**Pg**	**06 14 14.7**	**-0.6**
IDE				*e*S	**Sg**	**06 14 24.6**	**-0.7**
PDPR	**Patillas Dam,**	**0.81**	**82**	Pg	**Pb**	**06 14 16.2**	**0.0**
GCPR	**Guaynabo City**	**0.84**	**62**		**Pb**	**06 14 16.3**	**-0.4**
GCPR					**Sg**	**06 14 28.0**	**-0.2**
GCPR	**Guaynabo City**	**0.84**	**62**	⇑*e*P	**Pb**	**06 14 16.3**	**-0.4**
GCPR				*e*S	**Sg**	**06 14 28.0**	**-0.2**
HUMP	**Col San Antoni**	**0.99**	**76**		**Pb**	**06 14 19.1**	**-0.2**
HUMP					**Sb**	**06 14 31.7**	**-0.3**
HUMP	**Col San Antoni**	**0.99**	**76**	IAML		06 14 35.9	
	comp=Z,140nm,0.3s						
HUMP				IAML		06 14 35.9	
	comp=Z,101nm,0.3s						
HUMP	**Col San Antoni**	**0.99**	**76**	⇑*e*P	**Pb**	**06 14 19.1**	**-0.2**
HUMP				*e*S	**Sb**	**06 14 31.7**	**-0.3**
CUPR	**Culebra, Puert**	**1.56**	**75**	Pn	**Pb**	**06 14 28.6**	**-0.3**
PCDR	**Punta Cana, DR**	**1.56**	**293**	⇑*e*Pg	**Pn**	**06 14 28.8**	**+1.2**
PCDR				IAML		06 15 11.0	
	comp=N,162nm,1.2s						
HIDR	**Higuey Centro**	**1.89**	**291**	⇑*e*Pg	**Pn**	**06 14 32.6**	**+0.6**
HIDR				IAML		06 15 21.1	
	comp=N,34nm,1.9s						
MIDR	**Miches**	**2.33**	**298**	⇑*e*Pg	**Pb**	**06 14 43.2**	**+1.0**
MIDR				IAML		06 15 56.8	
	comp=N,38nm,2.3s						
HATOM	**Hato Mayor del**	**2.55**	**290**	⇑*e*Pg	**Pb**	**06 14 44.3**	**-1.6**
HATOM				IAML		06 16 05.2	
	comp=N,24nm,3.2s						

BEO ***10*** *06:20:13.9±0.5, 41°.81N×22°.26E, h0km, ML2.0/5*

SKO ***10*** *06:20:13.4, 41°.73N×22°.30E, h16km, ML2.5*

ISC 10 06:20:12.9±1.2, 41°.80N±0°.03×22°.29E±0°.04, h1km±11km, n12, σ0§59/22, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.52**	**156**	⇑*i*Pg	**Pg**	**06 20 22.9**	**+0.1**
VAY				*i* Sg	**Sg**	**06 20 30.1**	**+0.6**
VAY				*e*Lg	Lg	06 20 30.2	
	comp=N,664nm,0.3s						
VAY				*e*Lg	Lg	06 20 30.5	
	comp=E,320nm,0.2s						
SKO	**Skopje**	**0.66**	**286**	*i* Pg	**Pb**	**06 20 27.0**	**-0.3**
BOSS	**Bosilegrad**	**0.71**	**11**	*e*Pg	**Pg**	**06 20 26.5**	**-0.1**
BOSS				*e*Sg	**Sg**	**06 20 35.5**	**-0.4**
VTS	**Vitosha**	**1.08**	**40**	*e*Pg	**Pg**	**06 20 33.2**	**-0.4**
VTS				*e*Sg	**Sg**	**06 20 48.1**	**+0.5**
BARS	**Barje**	**1.08**	**341**	*e*Pg	**Pg**	**06 20 32.9**	**-0.7**
BARS				*e*Sg	**Sg**	**06 20 47.5**	**-0.2**
SRS	**Serrai**	**1.19**	**124**	*e*Pg	**Pn**	**06 20 36.5**	**-0.2**
SRS				*e*Sg	**Sb**	**06 20 51.8**	**-0.3**
OHR	**Ohrid**	**1.31**	**239**	*i* Pg	**Pg**	**06 20 38.3**	**+0.2**
OHR				*i* Sg	**Sn**	**06 20 55.5**	**-1.2**
OHR				*e*Lg	Lg	06 20 57.0	
	comp=N,10nm,0.4s						
OHR				*e*Lg	Lg	06 20 58.4	
	comp=E,18nm,0.4s						

ZAPS	**Zavoj**	**1.50**	**10**	*e*Pg	**Pn**	**06 20 41.2**	**+0.2**
ZAPS				*e*Sg	**Sn**	**06 21 00.8**	**-0.4**
SELS	**Selova**	**1.67**	**329**	*e*Pg	**Pn**	**06 20 44.0**	**+0.7**
SELS				*e*Sg	**Sb**	**06 21 05.9**	**0.0**
BLKB	**Belogradchik**	**1.85**	**9**	*e*Pn	**Pn**	**06 20 46.0**	**+0.2**
BLKB				*e*Sn	**Sb**	**06 21 12.1**	**+0.9**
BOVS	**Bovan**	**1.89**	**347**	*e*Pn	**Pn**	**06 20 47.3**	**+1.0**
ZAGS	**Zajecar**	**2.02**	**359**	*e*Pn	**Pn**	**06 20 48.5**	**+0.4**
ZAGS				*e*Sn	**Sn**	**06 21 14.4**	**+0.5**

ASRS ***10*** *06:35:07.0±0.5, 55°.89N×86°.06E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 10 06:35:05.9±7.6, 55°.83N×86°.82E, h0km, mbtmp2.6/3, ML2.1/3, Error ellipse: s-maj=78.1km s-min=36.0km az=33.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.21**	**212**	I	I	06 51 20.0	
	baz=33,slow=316,SNR=2.6						
ZALV	**Zalesovo Beam**	**2.21**	**212**	Pn	Pn	06 35 43.5	-0.3
	1.0nm,0.3s,baz=19,slow=16,SNR=14						
ZALV				Sn	Sn	06 36 11.2	-0.6
	1.5nm,0.3s,baz=26,slow=24,SNR=7.3						
	2.0nm,0.2s						
KURBB	**Kurchatov Arra**	**7.21**	**227**	Pn	Pn	06 36 52.2	-0.2
	baz=46,slow=14,SNR=1.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**9.48**	**199**	Pn	Pn	06 37 24.2	+0.6
	baz=17,slow=12,SNR=1.8						
	0.2nm,0.7s						

CATAC ***10*** *06:35:51.0, 13°N±5°×9°0W±°, h10km±6km, M4.2/17, MLv4.2/17, confirmed*

GCG ***10*** *06:35:53.9±1.4, 13°.00N×90°.35W, h13km±29km, MD4.5, Presumed earthquake*

SNET ***10*** *06:35:54.0±0.7, 12°.90N×90°.21W, h18km, ML3.9, Presumed earthquake*

NEIC ***10*** *06:35:55.3±2.2, 12°.89N±0°.07×90°.15W±0°.08, h35km±2km, mb4.2/21, Error ellipse: s-maj=15.8km s-min=9.5km az=228.0*

IDC ***10*** *06:35:59.7±2.2, 13°.28N×89°.66W, h72km±15km, mb3.5/7, mbtmp3.8/9, MS3.4/5, Error ellipse: s-maj=44.1km s-min=10.6km az=47.0*

ISC 10 06:35:50.6±1.7, 12°.79N±0°.05×90°.33W±0°.04, h13km±10km, n99, σ1§50/114, mb4.1/17, MS3.4/5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**1.09**	**17**	P	**Pb**	**06 36 10.9**	**-0.5**
FAME				S	**Sg**	**06 36 24.9**	**-0.9**
LALI	**Alcalda de L**	**1.21**	**55**	*i* P	**Pn**	**06 36 13.1**	**-0.1**
JAYA	**Jayaque - finc**	**1.22**	**45**	P	**Pn**	**06 36 13.4**	**-0.1**
JAYA				S	**Sb**	**06 36 31.6**	**+2.3**
JAYA	**Jayaque - finc**	**1.22**	**45**	*i* P	**Pn**	**06 36 13.4**	**-0.1**
JAYA	**Jayaque - finc**	**1.22**	**45**	*i* P	**Pn**	**06 36 13.5**	**-0.1**
NUBE	**Las Nubes**	**1.23**	**26**	P	**Pn**	**06 36 13.4**	**-0.3**
NUBE				S	**Sb**	**06 36 29.7**	**0.0**
NUBE	**Las Nubes**	**1.23**	**26**	*i* P	**Pn**	**06 36 13.4**	**-0.3**
NUBE	**Las Nubes**	**1.23**	**26**	*i* P	**Pn**	**06 36 13.3**	**-0.4**
NUBE				*i* S	**Sb**	**06 36 27.5**	**-2.2**
CEVE	**Cerro Verde**	**1.24**	**34**	P	**Pn**	**06 36 13.9**	**0.0**
CEVE				S	**Sn**	**06 36 33.4**	**+2.7**
SBLS	**San Blas**	**1.25**	**34**	*e*P	**Pn**	**06 36 14.1**	**0.0**
SNJE	**San Jose**	**1.28**	**33**	*i* P	**Pn**	**06 36 14.4**	**-0.1**
LOAL	**Lomas de Alarc**	**1.31**	**24**	P	**Pn**	**06 36 15.1**	**+0.4**
LOAL				S	**Sb**	**06 36 32.8**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.34**	**24**	P	**Pn**	**06 36 15.2**	**+0.1**
SLOZ				S	**Sb**	**06 36 33.2**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.34**	**24**	*i* P	**Pn**	**06 36 15.2**	**+0.1**
PMON	**Piamonte**	**1.35**	**47**	P	**Pn**	**06 36 15.3**	**0.0**
PMON				S	**Sn**	**06 36 35.7**	**+2.4**
PMON	**Piamonte**	**1.35**	**47**	*e*P	**Pn**	**06 36 15.6**	**+0.2**
CEDA	**San Andres**	**1.36**	**42**	P	**Pn**	**06 36 15.5**	**+0.1**
CEDA				S	**Sn**	**06 36 35.7**	**+2.3**
CEDA	**San Andres**	**1.36**	**42**	*i* P	**Pn**	**06 36 15.5**	**+0.1**
PANCS	**Alcalda de**	**1.39**	**54**	P	**Pn**	**06 36 16.2**	**+0.4**
PANCS				S	**Sn**	**06 36 33.6**	**-0.6**
BOQS	**Boqueron**	**1.39**	**47**	*e*P	**Pn**	**06 36 16.8**	**+0.8**
UEES	**Universidad Ev**	**1.41**	**49**	P	**Pn**	**06 36 16.2**	**+0.1**
UEES				S	**Sn**	**06 36 36.9**	**+2.3**
UEES	**Universidad Ev**	**1.41**	**49**	*e*P	**Pn**	**06 36 16.1**	**+0.1**
UNIC	**Universidad Ca**	**1.41**	**33**	P	**Pn**	**06 36 16.2**	**+0.2**
UNIC				S	**Sn**	**06 36 34.8**	**+0.2**
UNIC	**Universidad Ca**	**1.41**	**33**	*e*P	**Pn**	**06 36 16.3**	**+0.2**
SEMO	**Seminario San**	**1.41**	**50**	P	**Pn**	**06 36 16.4**	**+0.3**
SEMO				S	**Sn**	**06 36 37.1**	**+2.4**
UTEC	**Universidad Te**	**1.43**	**51**	P	**Pn**	**06 36 16.0**	**-0.3**
UTEC				S	**Sn**	**06 36 37.3**	**+2.2**
RBDL	**Robledal**	**1.46**	**26**	*i* P	**Pn**	**06 36 17.3**	**+0.5**
RBDL				*e*S	**Sn**	**06 36 36.3**	**+0.3**
IGN	**Direccin Gen**	**1.46**	**51**	P	**Pn**	**06 36 17.0**	**+0.2**
IGN				S	**Sn**	**06 36 36.6**	**+0.8**
UDBS	**Universidad Do**	**1.47**	**51**	P	**Pn**	**06 36 17.2**	**+0.3**
UDBS				S	**Sn**	**06 36 37.1**	**+1.0**
LFU	**La Fuente**	**1.52**	**51**	*e*P	**Pn**	**06 36 17.8**	**+0.2**
LBRS	**Las Brisas**	**1.57**	**53**	*e*P	**Pn**	**06 36 18.7**	**+0.4**
COEG	**Centro de Oper**	**1.64**	**60**	*i* P	**Pn**	**06 36 19.3**	**+0.1**
PAVA	**Las Pavas**	**1.64**	**56**	P	**Pn**	**06 36 20.0**	**+0.7**
PAVA				S	**Sn**	**06 36 43.3**	**+3.0**
PAVA	**Las Pavas**	**1.64**	**56**	*i* P	**Pn**	**06 36 19.9**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.81**	**60**	P	**Pn**	**06 36 22.1**	**+0.6**
SCLA				S	**Sn**	**06 36 48.2**	**+3.8**
MTO3	**Montecristo**	**1.86**	**31**		**Pn**	**06 36 23.1**	**+0.7**
MTO3	**Montecristo**	**1.86**	**31**	P	**Pn**	**06 36 23.0**	**+0.6**
MTO3				S	**Sn**	**06 36 48.1**	**+2.2**
MTO3	**Montecristo**	**1.86**	**31**	*i* P	**Pn**	**06 36 23.0**	**+0.6**
MTO3	**Montecristo**	**1.86**	**31**	*i* P	**Pn**	**06 36 23.0**	**+0.6**
STG5	**El Palmar, Qui**	**1.88**	**328**	*e*P	**Pg**	**06 36 27.8**	**+1.0**
PQSS	**Presa 15 de Se**	**1.92**	**64**	P	Pn	06 36 16.2	-6.8
LLGN	**La Laguna**	**1.92**	**45**	P	**Pn**	**06 36 23.3**	**+0.1**
LLGN				S	**Sn**	**06 36 50.3**	**+3.0**
STG8	**El Palmar, Qui**	**1.92**	**329**	*e*P	**Pg**	**06 36 28.6**	**+1.1**
ESQI	**Esquipulas**	**2.00**	**29**		**Pn**	**06 36 24.9**	**+0.5**
ESQI	**Esquipulas**	**2.00**	**29**	P	**Pn**	**06 36 25.5**	**+1.1**
ESQI				S	**Sn**	**06 36 52.4**	**+3.0**
ESQI	**Esquipulas**	**2.00**	**29**	*e*P	**Pn**	**06 36 25.6**	**+1.3**
ZAFR2	**Estanzuela, Za**	**2.02**	**28**	*i* P	**Pb**	**06 36 29.1**	**+1.9**
BLLM	**Bellamira**	**2.14**	**72**	*e*P	**Pn**	**06 36 26.8**	**+0.6**
APG	**El Apazote**	**2.20**	**357**	P	**Pn**	**06 36 28.4**	**+1.2**
	12nm,0.5s,baz=147,slow=11,SNR=134						
APG				S	**Sn**	**06 36 54.3**	**-0.1**
	5.6nm,0.5s,baz=86,slow=16,SNR=3.7						
APG	**El Apazote**	**2.20**	**357**	*i* P	**Pn**	**06 36 28.7**	**+1.5**
LCND	**La Caada**	**2.44**	**78**	*e*P	**Pn**	**06 36 30.9**	**+0.7**
HUEH	**Huehuetenango**	**2.76**	**336**		**Pb**	**06 36 37.2**	**-2.7**
HUEH	**Huehuetenango**	**2.76**	**336**	*e*P	**Pb**	**06 36 37.2**	**-2.7**
CRIN	**San Cristobal**	**3.21**	**91**		**Pn**	**06 36 42.0**	**+1.2**
TGUH	**Tegucigalpa,Un**	**3.23**	**67**		**Pn**	**06 36 41.9**	**+0.6**
HERN	**Volcan Telica**	**3.42**	**93**		**Pn**	**06 36 43.9**	**+0.1**
CNGN	**Cerro Negro**	**3.56**	**94**	Pn	**Pn**	**06 36 45.3**	**-0.4**
CCIG	**Comitan**	**3.88**	**334**		**Pn**	**06 36 53.6**	**+3.3**
MGAN	**Managua**	**4.04**	**99**	Pn	**Pn**	**06 36 53.2**	**+1.0**
PETF	**Flores**	**4.13**	**6**	Pn	**Pn**	**06 36 54.2**	**+0.7**
BOAB	**BOACO BROADBAN**	**4.57**	**94**		**Pn**	**06 36 59.6**	**0.0**
JUD3	**Juan Diaz 3**	**5.38**	**119**		**Pn**	**06 37 13.3**	**+2.7**
SIUN	**Universidad Ur**	**5.49**	**80**	Pn	**Pn**	**06 37 11.2**	**-1.0**
JTS	**Las Juntas de**	**5.83**	**115**	P	**Pn**	**06 37 19.6**	**+2.8**
	4.7nm,0.3s,baz=300,slow=20,SNR=14						
JTS				S	**Sn**	**06 38 20.1**	**-3.6**
	9.3nm,0.5s,baz=283,slow=19,SNR=1.7						
JTS	**Las Juntas de**	**5.83**	**115**	Pn	**Pn**	**06 37 17.8**	**+0.9**
CMIG	**Matias Romero**	**6.13**	**315**	P	**Pn**	**06 37 24.3**	**+3.3**
	5.0nm,0.5s,baz=127,slow=12,SNR=12						
CMIG				S	**Sn**	**06 38 33.7**	**+2.6**
	3.6nm,0.5s,baz=104,slow=19,SNR=1.3						
TEIG	**Tepich**	**7.65**	**15**	Pn	**Pn**	**06 37 43.5**	**+1.6**
SDV	**Santo Domingo**	**19.73**	**99**	P	**P**	**06 40 19.6**	**-0.9**
	2.1nm,0.6s,baz=306,slow=8.7,SNR=2.8						
TXAR	**Lajitas Array**	**20.60**	**325**	P	Pn	06 40 32.7	+0.7
	0.5nm,0.4s,baz=138,slow=9.2,SNR=13						
	0.5nm,0.4s						
TX31	**Lajitas Ar. Si**	**20.60**	**325**	P	Pn	06 40 30.5	-1.6
ALPN	**Alpine**	**21.39**	**327**	P	**P**	**06 40 40.8**	**+2.5**
FPAL	**Fort Paine**	**22.07**	**10**	P	**P**	**06 40 43.7**	**-1.8**
FPAL				IAmb	IAmb	06 41 09.9	
	comp=Z,6.0nm,1.0s						

SWET	**Sewanee**	**22.68**	**9**	P	**P**	**06 40 50.9**	**-1.1**
SWET				IAmb	IAmb	06 41 32.4	
	comp=Z,5.5nm,0.9s						
W35A	**Tecumseh**	**23.04**	**346**	IAmb	IAmb	06 40 58.9	
	comp=Z,6.5nm,0.6s						
FNO	**Franklin**	**23.26**	**345**	P	**P**	**06 40 57.4**	**-0.6**
TKL	**Tuckaleechee C**	**23.52**	**13**	LR	LR	06 49 37.6	
	comp=Z,88nm,20.5s,baz=306,slow=36						
PBMO	**Poplar Bluff**	**23.89**	**360**	P	**P**	**06 41 04.1**	**+0.1**
PBMO				IAmb	IAmb	06 41 07.2	
	comp=Z,5.7nm,1.0s						
T47A	**Sharon Grove**	**24.27**	**6**		**P**	**06 41 06.8**	**-0.9**
SIUC	**Southern Illin**	**24.84**	**2**	IAmb	IAmb	06 41 13.2	
	comp=Z,9.0nm,0.9s						
121A	**Cookes Peak, D**	**25.33**	**324**	IAmb	IAmb	06 41 22.0	
	comp=Z,4.7nm,0.9s						
WCI	**Wyandotte Cave**	**25.59**	**7**	P	**P**	**06 41 19.0**	**-0.6**
WCI				IAmb	IAmb	06 41 21.3	
	comp=Z,11nm,1.0s						
P40A	**Paris**	**26.68**	**357**	P	**P**	**06 41 28.8**	**-0.6**
P40A				IAmb	IAmb	06 41 58.0	
	comp=Z,15nm,1.5s						
PV23	**Carpenter Ridg**	**30.48**	**330**	IAmb	IAmb	06 42 07.3	
	comp=Z,7.0nm,0.9s						
MTPU	**Mount Pierson**	**31.80**	**326**	IAmb	IAmb	06 42 20.1	
	comp=Z,2.1nm,0.7s						
SADO	**Sadowa**	**33.27**	**15**	LR	LR	06 56 27.1	
	comp=Z,65nm,19.4s,baz=100,slow=38						
PDAR	**Pinedale Array**	**34.20**	**334**	P	**P**	**06 42 36.4**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=142,slow=7.8,SNR=1.9						
PDAR				PcP	**PcP**	**06 45 13.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=149,slow=4.6,SNR=1.8						
PDAR				LR	LR	07 00 28.4	
	comp=Z,36nm,18.0s,baz=356,slow=43						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**35.62**	**321**	P	**P**	**06 42 52.5**	**+3.9**
	comp=Z,1.7nm,0.7s,baz=127,slow=5.1,SNR=8.7						
	comp=Z,1.7nm,0.7s						
ULM	**Lac du Bonnet**	**37.63**	**354**	P	**P**	**06 43 03.0**	**-2.1**
	comp=Z,2.3nm,0.7s,baz=167,slow=11,SNR=5.1						
	comp=Z,2.3nm,0.7s						
NEW	**Newport**	**41.80**	**333**	LR	LR	07 04 10.9	
	comp=Z,88nm,18.4s,baz=305,slow=41						
SCHQ	**Schefferville**	**45.81**	**19**	P	**P**	**06 44 09.3**	**-2.8**
	comp=Z,3.7nm,0.5s,baz=224,slow=9.2,SNR=14						
SCHQ				LR	LR	07 04 32.1	
	comp=Z,55nm,20.4s,baz=223,slow=38						
	comp=Z,3.7nm,0.5s						
KUQ	**Kuujjuuaa**	**48.18**	**15**	P	**P**	**06 44 28.5**	**-2.0**
YKA	**Yellowknife Ar**	**52.57**	**346**	P	**P**	**06 45 02.6**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=151,slow=6.9,SNR=19						
	comp=Z,0.4nm,0.4s						
ILON	**Igloolik, Nuna**	**56.80**	**4**	P	**P**	**06 45 32.7**	**-1.6**
ILON				IAmb	IAmb	06 45 33.2	
	comp=Z,2.4nm,0.7s						
RES	**Resolute Bay**	**61.93**	**359**	P	**P**	**06 46 08.1**	**-1.6**
ILAR	**Eielson Array**	**64.58**	**337**	P	**P**	**06 46 26.8**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=114,slow=7.3,SNR=5.3						
	comp=Z,0.5nm,0.8s						
BMAR	**Burnt Mountain**	**64.98**	**340**	P	**P**	**06 46 30.2**	**+0.1**
HHC	**Hu-ho-hao-te**	**122.91**	**340**	*e*P	**PKiKP**	**06 54 49.1**	**+1.7**
ASAR	**Alice Springs**	**136.77**	**249**	PKP	**PKiKP**	**06 55 16.8**	**+1.2**
	comp=Z,0.7nm,1.0s,baz=102,slow=4.8,SNR=2.9						
CMAR	**Chiang Mai Arr**	**147.63**	**343**	PKPbc	**PKPbc**	**06 55 36.4**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=28,slow=2.4,SNR=4.2						

IDC ***10*** *06:46:24.7±1.3, 36°.71N×54°.81E, h0km, mb3.6/10, mbtmp3.8/18, ML3.5/8, MS3.4/9, Error ellipse: s-maj=23.8km s-min=13.6km az=6.0*

TEH ***10*** *06:46:26.2, 36°.71N×54°.86E, h8km±48km, ML4.2, Presumed earthquake*

THR ***10*

KVAR				Sn	Sn	06 51 14.5	-8.9	
	baz=107,slow=19							
	comp=Z,1.7nm,0.3s							
AKTO	**Aktyubinsk**	**13.80**	**9**	Pn	**Pn**	**06 49 38.8**	**-3.1**	
	comp=Z,0.3nm,0.3s,baz=187,slow=12,SNR=6.8							
AKTO				Sn	**Sn**	**06 52 10.0**	**-5.2**	
	comp=Z,0.2nm,0.3s,baz=281,slow=18,SNR=1.4							
AKTO				LR	LR	06 56 25.1		
	comp=Z,174nm,18.9s,baz=40,slow=43							
	comp=Z,2.3nm,0.6s							
ASF	**Jabal al Asfar**	**15.50**	**258**	LR	LR	06 57 19.4		
	comp=Z,63nm,19.1s,baz=32,slow=42							
AAK	**Ala-Archa**	**16.19**	**63**	Pn	**Pn**	**06 50 12.0**	**-1.9**	
	comp=Z,0.2nm,0.3s,baz=234,slow=11,SNR=18							
AAK				LR	LR	06 57 00.4		
	comp=Z,78nm,20.0s,baz=270,slow=39							
	comp=Z,8.7nm,0.9s							
BELG	**Belogornoye**	**16.39**	**344**	Pn	**Pn**	**06 50 12.9**	**-3.3**	
	comp=Z,0.6nm,0.3s,baz=143,slow=20,SNR=5.9							
BELG				Sn	Sn	06 53 07.5	-10	
	comp=Z,0.7nm,0.3s,baz=128,slow=19,SNR=5.9							
KSH2	**Kashi**	**16.51**	**76**	P	**Pn**	**06 50 16.7**	**-1.3**	
KSH2				pP	pP	06 50 23.7	-0.3	
KSH2				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BRTR	**Keskin Array B**	**16.90**	**286**	Pn	**P**	**06 50 26.2**	**+1.3**	
	comp=Z,0.1nm,0.3s,baz=83,slow=6.0,SNR=3.9							
	comp=Z,0.6nm,0.9s							
EIL	**Elat**	**18.08**	**253**	LR	LR	06 59 27.3		
	comp=Z,49nm,18.6s,baz=160,slow=43							
BVAR	**Borovoye Array**	**19.52**	**29**	P	**P**	**06 50 54.9**	**+1.2**	
	comp=Z,0.1nm,0.3s,baz=217,slow=11,SNR=17							
BVAR				S	**Sn**	**06 54 28.6**	**-5.2**	
	comp=Z,0.4nm,0.4s,baz=243,slow=25,SNR=1.5							
	comp=Z,3.4nm,0.6s							
ARTI	**Arti**	**19.72**	**6**	P	**P**	**06 50 56.4**	**+0.6**	
	comp=Z,0.3nm,0.3s,baz=179,slow=9.0,SNR=7.9							
	comp=Z,3.4nm,0.7s							
KURBB	**Kurchatov Arra**	**21.87**	**43**	P	**P**	**06 51 21.0**	**+2.0**	
	comp=Z,0.7nm,0.3s,baz=243,slow=11,SNR=7.4							
	comp=Z,0.7nm,0.3s							
KIRV	**Kirov**	**22.07**	**352**	P	**P**	**06 51 22.4**	**+1.4**	
	comp=Z,9.9nm,0.7s,baz=164,slow=18,SNR=2.1							
	comp=Z,9.9nm,0.7s							
MKAR	**Makanchi Array**	**22.66**	**55**	P	**P**	**06 51 29.3**	**+1.7**	
	comp=Z,1.5nm,0.9s,baz=252,slow=8.9,SNR=9.2							
	comp=Z,1.5nm,0.9s							
AKASG	**Malin Array Be**	**22.98**	**315**	P	**P**	**06 51 31.9**	**+1.1**	
	comp=Z,0.5nm,0.4s,baz=121,slow=8.8,SNR=1.5							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**26.86**	**41**	P	**P**	**06 52 07.1**	**+0.3**	
	comp=Z,0.4nm,0.4s,baz=244,slow=9.3,SNR=3.7							
	comp=Z,0.4nm,0.4s							
NRIK	**Noril'sk**	**37.11**	**19**	LR	LR	07 11 23.3		
	comp=Z,74nm,18.2s,baz=337,slow=40							
PALK	**Pallekele**	**37.68**	**135**	LR	LR	07 11 24.0		
	comp=Z,42nm,18.1s,baz=12,slow=40							
CMAR	**Chiang Mai Arr**	**42.72**	**103**	P	**P**	**06 54 22.6**	**-1.0**	
	comp=Z,1.1nm,0.3s,baz=315,slow=8.0,SNR=4.1							
CMAR				LR	LR	07 16 29.7		
	comp=Z,11nm,20.1s,baz=190,slow=42							
	comp=Z,1.1nm,0.3s							
ESDC	**Sonseca Array**	**45.55**	**292**	P	**P**	**06 54 46.2**	**-0.1**	
	comp=Z,0.3nm,0.7s,baz=76,slow=6.8,SNR=5.0							
ESDC				LR	LR	07 18 04.6		
	comp=Z,107nm,18.7s,baz=336,slow=42							
	comp=Z,0.3nm,0.7s							
KSRS	**Korea Array**	**56.83**	**65**	P	**P**	**06 56 11.5**	**+0.6**	
	comp=Z,1.3nm,0.8s,baz=284,slow=4.7,SNR=2.3							
	comp=Z,1.3nm,0.8s							
ILAR	**Eielson Array**	**77.31**	**9**	P	**P**	**06 58 20.5**	**-0.1**	
	comp=Z,0.3nm,1.0s,baz=338,slow=6.0,SNR=2.3							
	comp=Z,0.3nm,1.0s							
YKA	**Yellowknife Ar**	**80.67**	**355**	P	**P**	**06 58 41.0**	**+2.1**	
	comp=Z,0.1nm,0.6s,baz=5.1,slow=5.7,SNR=3.9							
	comp=Z,0.1nm,0.6s							
JAY	**Jayapura**	**88.18**	**94**	LR	LR	07 41 31.2		
	comp=Z,66nm,19.6s,baz=349,slow=38							

*ASRS **10** 07:00:35.0±1.4, 54.°12N×86.°45E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **10** 06:59:35.9±2.4, **54.°67N×83.°79E, h0km, mbtmp2.5**/2, **ML2.4**/2, **Error ellipse: s-maj=19.1km s-min=11.9km az=169.0, Southwestern Siberia***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**140**	I	I	07 05 01.4	
	0.1nm,1.9s,baz=316,slow=332,SNR=2.9						
ZALV	**Zalesovo Beam**	**0.94**	**140**	Pg	Pg	06 59 53.6	-0.3
	1.8nm,0.3s,baz=324,slow=18,SNR=19						
ZALV				Lg	Lg	07 00 07.2	
	12nm,0.3s,baz=324,slow=29,SNR=57						
KURBB	**Kurchatov Arra**	**5.16**	**220**	Pn	Pn	07 00 54.3	-0.1
	0.1nm,0.3s,baz=40,slow=13,SNR=2.0						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.94**	**187**	Pn	Pn	07 01 32.7	+0.2
	0.1nm,0.3s,baz=7.0,slow=12,SNR=5.4						
MKAR				Sn	Sn	07 03 02.0	-1.0
	0.1nm,0.3s,baz=4.2,slow=28,SNR=2.1						
	0.1nm,0.4s						

*NNC **10** 07:00:30.1±1.9, 51.°66N×74.°12E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=33.4km s-min=12.1km az=27.0, Suspected Mining explosion.*
*IDC **10** 07:00:32.4±1.0, 52.°00N×74.°56E, h0km, mbtmp2.5/4, ML1.7/3, Error ellipse: s-maj=34.1km s-min=8.2km az=29.0*
ISC 10 07:00:32.3±1.0, 52.°0N±0.°1×74.°51E±0.°06, h0km, n10, σ1§71/11, 5C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**2.71**	**293**	⇑Pg	**Pb**	**07 01 19.3**	**-2.3**
	2.2nm,0.8s,baz=137,slow=14						
BVA0				⇓Lg	Lg	07 01 53.4	
	6.6nm,0.7s,baz=121,slow=26						
BVAR	**Borovoye Array**	**2.71**	**293**	Pn	**Pn**	**07 01 17.0**	**0.0**
	0.1nm,0.3s,baz=108,slow=17,SNR=14						
BVAR				Sn	**Sn**	**07 01 51.7**	**+1.2**
	0.3nm,0.3s,baz=111,slow=26,SNR=24						
	1.9nm,0.5s						
KURBB	**Kurchatov Arra**	**2.89**	**118**	Pn	**Pn**	**07 01 18.3**	**-1.2**
	0.1nm,0.3s,baz=298,slow=15,SNR=4.5						
KURBB				Lg	Lg	07 02 00.4	
	0.1nm,0.3s,baz=302,slow=32,SNR=4.9						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**2.89**	**118**	⇑Pg	**Pb**	**07 01 22.9**	**-1.8**
	1.4nm,0.6s						
KURBB				⇓Lg	Lg	07 02 02.3	
	17nm,0.7s,baz=5.4,slow=31						
KURK	**Kurchatov**	**2.89**	**115**	⇑Pg	**Pb**	**07 01 24.8**	**+0.1**
	0.3nm,0.5s						
KURK				⇑Lg	Lg	07 02 02.4	
	4.8nm,0.8s						
I46RU	**ZALESOVO INFRA**	**6.51**	**69**	I	I	07 38 38.4	
	0.1nm,1.0s,baz=251,slow=322,SNR=5.2						
ZALV	**Zalesovo Beam**	**6.51**	**69**	Pn	**Pn**	**07 02 10.2**	**+0.8**
	0.9nm,0.6s,baz=256,slow=12,SNR=1.5						
MK31	**Makanchi Array**	**7.29**	**133**	⇓Pg	**Pb**	**07 02 41.2**	**+1.5**
	0.3nm,0.6s,baz=27,slow=14,SNR=8.9						
MK31				⇓Sn	**Sn**	**07 03 45.4**	**+1.8**
	1.1nm,0.7s						
MK31				⇑Lg	Lg	07 04 21.3	
	2.7nm,0.9s,baz=323,slow=30,SNR=4.9						
MKAR	**Makanchi Array**	**7.29**	**133**	Pn	**Pn**	**07 02 20.7**	**+0.6**
	baz=322,slow=9.1,SNR=2.4						
MKAR				Sn	**Sn**	**07 03 41.2**	**-2.3**
	0.1nm,0.3s,baz=320,slow=22,SNR=3.1						
MKAR				Lg	Lg	07 04 18.5	
	0.1nm,0.3s,baz=320,slow=25,SNR=7.0						
	0.1nm,0.6s						
AAK	**Ala-Archa**	**9.40**	**180**	Lg	Lg	07 05 24.1	
	0.2nm,0.3s,baz=78,slow=19,SNR=3.8						

*NNC **10** 07:13:10.8±0.9, 49.°94N×78.°46E, h0km, mpv1.9, Error ellipse: s-maj=21.4km s-min=4.2km az=88.0, Suspected Mining explosion.*
*IDC **10** 07:13:12.8±1.1, 50.°05N×78.°76E, h0km, mbtmp2.1/2, ML1.5/2, Error ellipse: s-maj=14.6km s-min=6.7km az=64.0*
ISC 10 07:13:07.7±3.3, 50.°04N±0.°04×77.°9E±0.°3, h0km, n15, σ1§21/27, 14C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.67**	**35**	⇑P	**Pn**	**07 13 23.6**	**-0.8**
KUR07				⇓S	**Sb**	**07 13 33.0**	**+1.1**
KUR06	**Kurchatov Arra**	**0.68**	**34**	⇑P	**Pn**	**07 13 23.4**	**-1.2**
KUR06				⇑S	**Sb**	**07 13 33.9**	**+1.5**
KUR17	**Kurchatov Arra**	**0.69**	**30**	⇓P	**Pn**	**07 13 24.3**	**-0.4**
KUR17				⇑S	**Sb**	**07 13 34.1**	**+1.5**
KUR16	**Kurchatov Arra**	**0.69**	**32**	⇑P	**Pn**	**07 13 24.3**	**-0.4**
KUR16				⇑S	**Sb**	**07 13 33.7**	**+0.9**
KURBB	**Kurchatov Arra**	**0.70**	**34**	Pg	**Pn**	**07 13 24.1**	**-0.7**
	0.2nm,0.3s,baz=165,slow=19,SNR=13						
KURBB				Lg	Lg	07 13 33.2	
	0.4nm,0.3s,baz=165,slow=32,SNR=6.5						
KURBB	**Kurchatov Arra**	**0.70**	**34**	⇑P	**Pn**	**07 13 24.0**	**-0.9**
	3.3nm,0.5s						
KURBB				⇓S	**Sb**	**07 13 34.1**	**+1.1**
	8.6nm,0.7s						
KUR15	**Kurchatov Arra**	**0.71**	**35**	⇑P	**Pn**	**07 13 24.1**	**-0.8**
KUR15				⇓S	**Sb**	**07 13 33.4**	**+0.1**
KUR14	**Kurchatov Arra**	**0.72**	**37**	⇓P	**Pb**	**07 13 23.8**	**+0.7**
KUR14				⇑S	**Sb**	**07 13 33.2**	**-0.3**
KUR05	**Kurchatov Arra**	**0.72**	**33**	⇑P	**Pn**	**07 13 24.3**	**-0.8**
KUR05				⇓S	**Sb**	**07 13 34.5**	**+0.9**
KUR04	**Kurchatov Arra**	**0.74**	**32**	⇓P	**Pn**	**07 13 24.9**	**-0.5**
KUR04				⇑S	**Sb**	**07 13 34.6**	**+0.6**
KURK	**Kurchatov**	**0.81**	**33**	⇑P	**Pb**	**07 13 24.7**	**0.0**
	0.5nm,0.5s						
KURK				⇑S	**Sb**	**07 13 36.1**	**0.0**
	6.4nm,0.9s						
MK31	**Makanchi Array**	**4.36**	**136**	⇓Pn	**Pn**	**07 14 16.8**	**+1.6**
	baz=316,slow=10.0,SNR=5.2						
MK31				⇓Pg	**Pb**	**07 14 27.1**	**+1.9**
	baz=264,slow=27,SNR=4.6						
MK31				⇑Lg	Lg	07 15 19.8	
	0.7nm,0.5s,baz=329,slow=27,SNR=8.8						
MKAR	**Makanchi Array**	**4.36**	**136**	Pn	**Pn**	**07 14 16.1**	**+0.9**
	baz=320,slow=10,SNR=5.7						
MKAR				Pg	**Pb**	**07 14 23.2**	**-1.9**
	0.1nm,0.3s,baz=331,slow=17,SNR=5.3						
MKAR				Sn	**Sn**	**07 15 03.7**	**-3.0**
	0.1nm,0.3s,baz=321,slow=27,SNR=1.7						
MKAR				Lg	Lg	07 15 17.8	
	0.3nm,0.3s,baz=328,slow=26,SNR=11						
	0.1nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.79**	**45**	I	I	07 43 50.0	
	0.1nm,0.9s,baz=220,slow=329,SNR=7.6						
ZALV	**Zalesovo Beam**	**5.79**	**45**	Pn	**Pn**	**07 14 35.6**	**+0.9**
	0.1nm,0.3s,baz=232,slow=14,SNR=1.9						
	0.2nm,0.3s						

*ASRS **10** 07:22:17.0±2.2, 53.°71N×91.°05E, h0km, M3.2(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **10** 07:22:24.1±3.2, 53.°70N×90.°71E, h0km, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=26.9km s-min=23.1km az=51.0*
*NNC **10** 07:22:25.6±3.5, 53.°73N×90.°40E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=27.8km s-min=22.1km az=34.0, Suspected Mining explosion.*
ISC 10 07:22:27.1±4.0, 53.°7N±0.°1×90.°3E±0.°2, h0km, n11, σ1§55/13, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.26**	**277**	⇓Pg	**Pb**	**07 23 24.9**	**-0.9**
	3.5nm,0.6s						
ZAA0				⇑Lg	Lg	07 24 12.6	
	50nm,1.1s						
ZALV	**Zalesovo Beam**	**3.26**	**277**	Pn	**Pn**	**07 23 21.6**	**+2.2**
	1.0nm,0.3s,baz=96,slow=14,SNR=13						
ZALV				Lg	Lg	07 24 13.3	
	0.9nm,0.3s,baz=93,slow=32,SNR=3.6						
	2.1nm,0.4s						
KURK	**Kurchatov**	**7.77**	**252**	⇓Pn	**Pn**	**07 24 22.0**	**+0.7**
	0.4nm,0.7s						
KURK				⇑Sn	**Sn**	**07 25 49.5**	**-0.4**
	1.3nm,0.7s						
KURK				⇑Lg	Lg	07 26 39.5	
	13nm,1.0s						
KURBB	**Kurchatov Arra**	**7.86**	**252**	Pn	**Pn**	**07 24 22.8**	**+0.2**
	0.1nm,0.3s,baz=64,slow=15,SNR=7.8						
KURBB				Sn	**Sn**	**07 25 53.1**	**+1.0**
	0.1nm,0.3s,baz=62,slow=24,SNR=7.9						
KURBB				Lg	Lg	07 26 40.4	
	0.1nm,0.3s,baz=65,slow=28,SNR=9.1						
	1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**7.86**	**252**	⇑Pn	**Pn**	**07 24 22.7**	**+0.2**
	2.5nm,0.7s						
KURBB				⇓Sn	**Sn**	**07 25 53.5**	**+1.3**
	10nm,0.7s						
KURBB				⇑Lg	Lg	07 26 41.7	
	39nm,1.0s						
MK31	**Makanchi Array**	**8.60**	**220**	Pn	**Pn**	**07 24 32.5**	**-0.2**
	0.6nm,0.5s,baz=41,slow=13,SNR=12						
MK31				Sn	**Sn**	**07 26 12.1**	**+1.7**
	1.0nm,0.6s,baz=39,slow=23,SNR=5.1						
MK31				Lg	Lg	07 26 56.4	
	6.2nm,0.9s,baz=7.4,slow=46,SNR=3.6						
MKAR	**Makanchi Array**	**8.60**	**220**	Pn	**Pn**	**07 24 32.0**	**-0.7**
	0.2nm,0.3s,baz=34,slow=12,SNR=12						
MKAR				Sn	**Sn**	**07 26 11.9**	**+1.5**
	0.3nm,0.3s,baz=36,slow=23,SNR=7.1						
MKAR				Lg	Lg	07 27 00.6	
	0.2nm,0.3s,baz=38,slow=26,SNR=5.5						
	0.6nm,0.5s						
SONM	**Songino Array**	**11.75**	**113**	Lg	Lg	07 28 15.0	
	0.1nm,0.3s,baz=297,slow=23,SNR=9.0						
I34MN	**SONGINO INFRAS**	**11.78**	**114**	I	I	08 29 20.0	
	baz=309,slow=327,SNR=1.4						
BVAR	**Borovoye Array**	**11.91**	**275**	Sn	**Sn**	**07 27 28.4**	**-3.1**
	baz=80,slow=25,SNR=2.1						
BVAR				Lg	Lg	07 28 57.3	
	baz=85,slow=20,SNR=1.3						
AAK	**Ala-Archa**	**15.24**	**230**	Lg	Lg	07 30 30.9	
	0.3nm,0.3s,baz=358,slow=22,SNR=0.9						

*NORS **10** 07:24:44.8, 42.°66N×45.°63E, h30km, MPVA4.1*
*MOS **10** 07:24:44.7, 42.°70N×45.°64E, h28km, MPVA4.2*
*TIF **10** 07:24:46.1, 42.°77N×45.°56E, h19km±1km*
*DRS **10** 07:24:47.7, 42.°76N×45.°74E, h6km*
ISC 10 07:24:46.9±0.9, 42.°73N±0.°02×45.°64E±0.°01, h31km±9km, n93, σ1§18/173, 2C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.42**	**58**	*i* Pg	**Pn**	**07 24 55.8**	**-1.1**
DVE				*e*S	**Sn**	**07 25 02.4**	**-1.4**
DVE	**Vedeno**	**0.42**	**58**	*i* Pg	**Pn**	**07 24 55.8**	**-1.1**
DVE				*e*Sg	**Sn**	**07 25 02.4**	**-1.4**
BTLR	**Botlikh**	**0.44**	**99**	*i* Pg	**Pb**	**07 24 55.4**	**-1.1**
BTLR				*i* S	**Sb**	**07 25 02.8**	**-0.2**
BTLR				pmax	pmax		
	comp=Z,96nm,0.1s						
BTLR	**Botlikh**	**0.44**	**99**	*e*Pg	**Pb**	**07 24 56.0**	**-0.5**
BTLR				*e*Sg	**Sb**	**07 25 02.2**	**-0.7**
GROC	**Groznyy**	**0.49**	**14**	*i* PG	**Pn**	**07 24 57.3**	**-0.4**
GROC				*i* S	**Sn**	**07 25 03.8**	**-1.4**
GROC				pmax	pmax		
	comp=Z,941nm,0.4s						
GROC				smax	smax		
	comp=Z,1.0nm,1.1s						
GROC	**Groznyy**	**0.49**	**14**	*i* Pg	**Pn**	**07 24 57.4**	**-0.3**
GROC				*e*Sg	**Sn**	**07 25 05.0**	**-0.2**
KMGR	**Komgaron**	**0.66**	**300**	*i* PG	**Pn**	**07 25 00.3**	**+0.2**
KMGR				*e*S	**Sn**	**07 25 11.1**	**+1.7**
KMGR	**Komgaron**	**0.66**	**300**	*i* Pg	**Pn**	**07 25 00.3**	**+0.2**
KMGR				*e*Sg	**Sn**	**07 25 11.1**	**+1.7**
CHRG	**Chargali**	**0.66**	**233**	P	**Pb**	**07 24 59.2**	**-1.0**
CHRG				S	**Sb**	**07 25 08.4**	**-0.7**
VLKR	**Vladikavkaz**	**0.77**	**294**	*e*PG	**Pn**	**07 25 01.6**	**-0.2**
VLKR				*e*S	**Sn**	**07 25 14.1**	**+1.7**
VLKR	**Vladikavkaz**	**0.77**	**294**	*e*Pg	**Pn**	**07 25 01.6**	**-0.2**
VLKR				*e*Sg	**Sn**	**07 25 14.1**	**+1.7**
DLMR	**Dylym**	**0.80**	**65**	*i* PG	**Pn**	**07 25 02.0**	**-0.1**
DLMR				*e*S	**Sn**	**07 25 13.3**	**+0.3**
DLMR	**Dylym**	**0.80**	**65**	*i* Pg	**Pn**	**07 25 02.0**	**-0.1**
DLMR				*e*Sg	**Sn**	**07 25 13.3**	**+0.3**
XNZR	**Khunzakh**	**0.81**	**103**	*e*Pg	**Pn**	**07 25 02.3**	**-0.1**
XNZR				*e*Sg	**Sn**	**07 25 13.4**	**+0.1**
HNZR	**Khunzah**	**0.81**	**102**	*e*PG	**Pn**	**07 25 02.3**	**-0.1**
HNZR				*e*S	**Sn**	**07 25 13.4**	**-0.1**
TLTR	**Tlyarata**	**0.82**	**139**	*i* PG	**Pn**	**07 25 01.9**	**-0.5**
TLTR				*e*S	**Sb**	**07 25 12.8**	**-0.7**
TLTR	**Tlyarata**	**0.82**	**139**	*i* Pg	**Pn**	**07 25 01.9**	**-0.5**
TLTR				*e*Sg	**Sb**	**07 25 12.8**	**-0.7**
UNCR	**Uncukul**	**0.85**	**91**	*e*PG	**Pb**	**07 25 03.4**	**+0.1**
UNCR				*e*S	**Sn**	**07 25 15.3**	**+1.0**
GUDG	**Gudauri**	**0.90**	**253**	P	**Pn**	**07 25 02.8**	**-0.8**
GUDG				S	**Sb**	**07 25 14.9**	**-0.9**
GUDG	**Gudauri**	**0.90**	**253**	PG	**Pn**	**07 25 02.8**	**-0.8**
GUDG				S	**Sb**	**07 25 14.9**	**-0.9**
GUDG	**Gudauri**	**0.90**	**253**	*e*Pg	**Pn**	**07 25 03.2**	**-0.4**
GUDG				*e*Sg	**Sb**	**07 25 15.1**	**-0.8**
DBC	**Dubki**	**0.92**	**71**	*e*PG	**Pb**	**07 25 03.8**	**-0.7**
DBC				*e*S	**Sn**	**07 25 16.9**	**+0.8**
KRNR	**Karanay**	**0.94**	**84**	*e*PG	**Pb**	**07 25 04.5**	**-0.3**
KRNR				*e*S	**Sn**	**07 25 17.6**	**+1.1**
KRNR	**Karanay**	**0.94**	**84**	*e*Pg	**Pb**	**07 25 04.5**	**-0.3**
KRNR				*e*Sg	**Sn**	**07 25 17.6**	**+1.1**
LACR	**Lac**	**0.99**	**276**	*e*PG	**Pn**	**07 25 04.0**	**-0.8**
LACR				*e*S	**Sb**	**07 25 17.8**	**-0.6**
LACR	**Lac**	**0.99**	**276**	*e*Pg	**Pn**	**07 25 04.0**	**-0.8**
LACR				*e*Sg	**Sb**	**07 25 17.8**	**-0.6**
LGD	**Lagodekhi**	**1.00**	**153**	P	**Pb**	**07 25 05.1**	**-0.6**
LGD				S	**Sb**	**07 25 18.5**	**-0.1**
LGD	**Lagodekhi**	**1.00**	**153**	PG	**Pb**	**07 25 05.1**	**-0.6**
LGD				S	**Sb**	**07 25 18.5**	**-0.1**
ARKR	**Arakani**	**1.01**	**97**	*e*PG	**Pb**	**07 25 05.3**	**-0.6**
ARKR				*e*S	**Sb**	**07 25 19.2**	**+0.4**
ARKR	**Arakani**	**1.01**	**97**	*e*Pg	**Pb**	**07 25 05.3**	**-0.6**
ARKR				*e*Sg	**Sb**	**07 25 19.2**	**+0.4**
BTKR	**Batakoyurt**	**1.03**	**309**	*e*PG	**Pb**	**07 25 06.0**	**-0.2**
BTKR				*e*S	**Sb**	**07 25 22.8**	**+3.4**
BTKR	**Batakoyurt**	**1.03**	**309**	*e*Pg	**Pb**	**07 25 06.0**	**-0.2**
BTKR				*e*Sg	**Sb**	**07 25 22.8**	**+3.4**
GNBR	**Gunib**	**1.04**	**109**	*e*PG	**Pb**	**07 25 05.9**	**-0.5**
GNBR				*e*S	**Sb**	**07 25 20.0**	**+0.4**
GNBR	**Gunib**	**1.04**	**109**	*e*Pg	**Pb**	**07 25 05.9**	**-0.5**
GNBR				*e*Sg	**Sb**	**07 25 20.0**	**+0.4**
BUJR	**Buynaksk**	**1.09**	**85**	*e*PG	**Pb**	**07 25 07.0**	**-0.1**
BUJR				*e*S	**Sb**	**07 25 22.4**	**+1.4**
BUJR	**Buynaksk**	**1.09**	**85**	*e*Pg	**Pb**	**07 25 07.0**	**-0.1**
BUJR				*e*Sg	**Sb**	**07 25 22.4**	**+1.4**
ARNR	**Ardon**	**1.09**	**295**	*e*PG	**Pn**	**07 25 04.3**	**-1.8**
ARNR				*e*S	**Sn**	**07 25 21.0**	**-0.1**
ARNR	**Ardon**	**1.09**	**295**	*e*Pg	**Pn**	**07 25 04.3**	**-1.8**
ARNR				*e*Sg	**Sb**	**07 25 21.0**	**-0.1**
SEAG	**Tbilisi Sea**	**1.15**	**213**	P	**Pb**	**07 25 08.5**	**+0.3**
SEAG				S	**Sb**	**07 25 25.0**	**+2.3**
SEAG	**Tbilisi Sea**	**1.15**	**213**	PG	**Pb**	**07 25 08.5**	**+0.3**
SEAG				S	**Sb**	**07 25 25.0**	**+2.3**
TBLG	**Delisi**	**1.20**	**214**	P	**Pb**	**07 25 09.0**	**-0.2**
TBLG				S	**Sb**	**07 25 26.1**	**+1.8**
TBLG	**Delisi**	**1.20**	**214**	*e*PG	**Pb**	**07 25 08.9**	**-0.2**
KORR	**Kora**	**1.21**	**288**	*e*PG	**Pb**	**07 25 08.8**	**-0.4**
KORR				*e*S	**Sb**	**07 25 24.2**	**-0.3**
BTNK	**Botanikuri**	**1.22**	**211**	PG	**Pb**	**07 25 09.3**	**-0.1**
BTNK				S	**Sb**	**07 25 27.3**	**+2.5**
KMKR	**Kumukh**	**1.24**	**118**	*e*PG	**Pb**	**07 25 08.6**	**-1.2**
KMKR				*e*S	**Sb**	**07 25 25.1**	**-0.4**
DGRG	**David-gareji**	**1.29**	**189**	P	**Pb**	**07 25 11.5**	**+0.8**
DGRG	**David-gareji**	**1.29**	**189**	*e*PG	**Pb**	**07 25 11.5**	**+0.8**
STDR	**Stavd-Durt**	**1.32**	**299**	*e*PG	**Pb**	**07 25 10.9**	**-0.2**
STDR				*e*S	**Sb**	**07 25 29.5**	**+1.8**
STDR	**Stavd-Durt**	**1.32**	**299**	*e*Pg	**Pb**	**07 25 10.9**	**-0.2**
STDR				*e*Sg	**Sb**	**07 25 29.4**	**+1.8**
MAK	**Makhachkala**	**1.39**	**80**	⇑*i* PG	**Pb**	**07 25 11.6**	**-0.6**
MAK				*e*S	**Sb**	**07 25 31.1**	**+1.4**
MAK				pmax	pmax		
	comp=Z,95nm,0.2s						
MAK				smax	smax		
	comp=N,275nm,0.3s						
MAK				smax	smax		
	comp=N,228nm,0.4s						
MAK	**Makhachkala**	**1.39**	**80**	*e*Pg	**Pb**	**07 25 11.7**	**-0.6**
MAK				*e*Sg	**Sb**	**07 25 30.4**	**+0.7**
PRTR	**Priterechnaya**	**1.42**	**316**	*e*PG	**Pb**	**07 25 12.2**	**-0.6**
PRTR				*e*S	**Sb**	**07 25 32.1**	**+1.5**
PRTR	**Priterechnaya**	**1.42**	**316**	*e*Pg	**Pb**	**07 25 12.2**	**-0.6**
PRTR				*e*Sg	**Sb**	**07 25 32.1**	**+1.5**
KANR	**Karaman**	**1.44**	**70**	*e*PG	**Pb**	**07 25 14.1**	**+1.1**
KANR				*e*S	**Sb**	**07 25 32.8**	**+1.9**
KANR	**Karaman**	**1.44

*IDC **10** 08:15:52.5±0.6, 13°.95N×144°.87E, h180km±4km, mb3.3/13, mbtmp3.7/13, Error ellipse: s-maj=28.3km s-min=15.5km az=87.0*
*NEIC **10** 08:15:54.1±0.7, 14°.0N±0°.1×144°.6E±0°.2, h176km±6km, mb4.2/14, Error ellipse: s-maj=30.1km s-min=10.7km az=111.0*

ISC 10 08:15:53.2±0.6, **13°.93N**±0°.08×**144°.6E**±0°.1, **h176**km, **n36**, σ1**§03**/35, **mb3.8**/21, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.46**	**138**	P			**Pn**	**08 16 18.4**	**+1.0**
	402nm,0.3s,baz=3.5,slow=19,SNR=86								
GUMO				S			**Sn**	**08 16 36.5**	**+0.6**
	452nm,0.3s,baz=17,slow=19,SNR=31								
DPSS	**Saipan**	**1.77**	**42**	Pn			**Pn**	**08 16 28.4**	**+0.9**
DPSS				Sn			**Sn**	**08 16 54.2**	**+0.1**
FAKI	**Fak Fak**	**20.72**	**217**	P			**P**	**08 20 20.1**	**-0.1**
JMN	**Monobe**	**21.97**	**336**	P			**P**	**08 20 30.0**	**-3.1**
MAJO	**Matsushiro**	**23.22**	**347**	P			**P**	**08 20 44.9**	**+0.2**
MAJO				IAmb			IAmb	08 20 55.1	
	comp=Z,16nm,1.2s								
MJB9	**Matsu-Tunnel**	**23.23**	**347**	P			**P**	**08 20 46.0**	**+1.3**
MJB9				IAmb			IAmb	08 21 24.5	
	comp=Z,22nm,1.4s								
KSRS	**Korea Array**	**27.72**	**331**	P			**P**	**08 21 23.8**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=150,slow=11,SNR=4.9 comp=Z,1.2nm,0.8s								
WB0	**Warramunga Arr**	**34.95**	**197**	P			**P**	**08 22 28.5**	**-0.1**
WB0				IAmb			IAmb	08 22 35.2	
	comp=Z,4.4nm,1.1s								
WR8	**Warramunga Arr**	**35.10**	**197**	P			**P**	**08 22 30.2**	**+0.3**
WR8				IAmb			IAmb	08 22 50.9	
	comp=Z,6.7nm,1.2s								
WRA	**Warramunga Arr**	**35.13**	**197**	P			**P**	**08 22 29.6**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=18,slow=9.1,SNR=14 comp=Z,1.2nm,0.8s								
AS31	**Alice Springs**	**38.79**	**196**	P			**P**	**08 23 01.4**	**+0.3**
ASAR	**Alice Springs**	**38.79**	**196**	P			**P**	**08 23 01.0**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=1.6,slow=7.3,SNR=2.1 comp=Z,0.3nm,0.8s								
ASAR	**Alice Springs**	**38.79**	**196**	P			**P**	**08 23 01.3**	**+0.2**
HILR	**Hailar Array B**	**40.93**	**335**	P			**P**	**08 23 19.6**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=142,slow=14,SNR=2.0 comp=Z,0.3nm,0.3s								
LZDM	**Lanzhou Array**	**42.64**	**308**	P			**P**	**08 23 33.5**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=122,slow=5.2,SNR=2.2 comp=Z,0.4nm,0.3s								
CMAR	**Chiang Mai Arr**	**43.95**	**282**	P			**P**	**08 23 43.1**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=82,slow=12,SNR=2.2 comp=Z,1.0nm,0.3s								
SONM	**Songino Array**	**46.28**	**325**	P			**P**	**08 24 01.4**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=128,slow=6.3,SNR=2.1 comp=Z,0.3nm,0.4s								
BBOO	**Buckleboo**	**47.18**	**190**	P			**P**	**08 24 07.6**	**-0.6**
BBOO				IAmb			IAmb	08 24 17.4	
	comp=Z,14nm,1.3s								
CLES	**Cleveland East**	**52.93**	**33**	P			**P**	**08 24 51.6**	**+0.4**
MK31	**Makanchi Array**	**61.03**	**316**	P			**P**	**08 25 48.8**	**+0.4**
MKAR	**Makanchi Array**	**61.03**	**316**	P			**P**	**08 25 48.5**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=94,slow=8.5,SNR=9.7 comp=Z,0.6nm,0.5s								
MKAR	**Makanchi Array**	**61.03**	**316**	P			**P**	**08 25 48.4**	**0.0**
ZALV	**Zalesovo Beam**	**61.17**	**324**	P			**P**	**08 25 49.3**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=108,slow=9.3,SNR=1.8 comp=Z,0.5nm,0.5s								
KURK	**Kurchatov**	**64.13**	**320**	P			**P**	**08 26 09.0**	**+0.3**
KURK				IAmb			IAmb	08 26 09.7	
	comp=Z,2.9nm,0.7s								
KURBB	**Kurchatov Array**	**64.17**	**320**	P			**P**	**08 26 09.1**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=103,slow=7.1,SNR=8.0 comp=Z,2.1nm,0.6s								
D22K	**Ayikyak River**	**67.42**	**20**	P			**P**	**08 26 30.3**	**+0.9**
D22K				IAmb			IAmb	08 26 38.9	
	comp=Z,3.8nm,1.3s								
ILAR	**Eielson Array**	**68.39**	**25**	P			**P**	**08 26 32.2**	**-3.4**
	comp=Z,0.2nm,0.6s,baz=255,slow=6.0,SNR=5.4 comp=Z,0.2nm,0.6s								
BVAR	**Borovoye Array**	**69.47**	**322**	P			**P**	**08 26 42.8**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=104,slow=8.1,SNR=9.2 comp=Z,1.6nm,0.5s								
BMAR	**Burnt Mountain**	**69.91**	**23**	P			**P**	**08 26 44.0**	**-0.9**
J30M	**Hart River**	**72.84**	**26**	P			**P**	**08 27 02.8**	**+0.1**
J30M				IAmb			IAmb	08 27 38.0	
	comp=Z,4.6nm,1.5s								
AB31	**Akbulak array**	**76.09**	**318**	P			**P**	**08 27 21.6**	**+0.1**
ABKAR	**Akbulak array**	**76.09**	**318**	P			**P**	**08 27 21.4**	**0.0**
YKA	**Yellowknife Ar**	**82.70**	**27**	P			**P**	**08 27 55.5**	**-1.4**
	comp=Z,0.1nm,0.7s,baz=294,slow=6.3,SNR=2.3 comp=Z,0.1nm,0.7s								
H03N2	**Juan Fernandez**	**136.07**	**124**	T			T	11 04 53.2	
	baz=258,slow=72,SNR=3.5								
H03N3	**Juan Fernandez**	**136.08**	**124**	T			T	11 04 54.5	
	baz=258,slow=72,SNR=3.9								
H03N1	**Juan Fernandez**	**136.09**	**124**	T			T	11 04 54.9	
	baz=258,slow=72,SNR=3.8								

*UPA **10** 08:16:49.2±2.5, 9°.14N×83°.71W, h13km±7km, MW3.9, Presumed earthquake*
*UCR **10** 08:16:49.5±1.1, 9°.05N×83°.76W, h34km±1km, MW4.2, Fault plane solution: NP1:φs261.40000°, δ75.23000°, λ2.66000°., Presumed earthquake*
*CATAC **10** 08:16:50.2, 9°N±2°×84°W±°, h22km±3km, M4.0/17, MLv4.0/17, confirmed*

ISC 10 08:16:49.8±0.9, **9°.10N**±0°.02×**83°.74W**±0°.02, **h32**km±7km, **n145**, σ0**§94**/178, **47C-22D**, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OCHAL	**Ojochal**	**0.10**	**90**	P			**Pb**	**08 16 55.5**	**+0.2**
EDPE	**Pejibaye, P**	**0.18**	**70**	∥*e*P			**Pn**	**08 16 56.2**	**-0.2**
EDPE				*e*S			**Sn**	**08 17 00.9**	**+0.5**
ZEDO	**Perez Zeledon**	**0.26**	**13**	∥*e*P			**Pn**	**08 16 57.5**	**-0.1**
ZEDO				*e*S			**Sn**	**08 17 03.7**	**+1.1**
PANP	**Palmar Norte**	**0.31**	**116**	∥*e*P			**Pb**	**08 16 57.3**	**-0.3**
PANP				*e*S			**Sn**	**08 17 03.7**	**+0.1**
SAJE	**San Jernim**	**0.34**	**43**	∥*e*P			**Pb**	**08 16 58.0**	**-0.1**
SAJE				*e*S			**Sn**	**08 17 04.5**	**0.0**
FIMO	**Fila Mora**	**0.40**	**106**	∥*e*P			**Pn**	**08 16 58.8**	**-0.7**
BURE	**Buenos Aires**	**0.41**	**79**	∥*e*P			**Pb**	**08 16 58.7**	**-0.2**
BUS1	**Rivas**	**0.45**	**359**	∥*e*P			**Pn**	**08 17 00.1**	**-0.4**
DRK0	**Durika**	**0.52**	**72**	*i*P			**Pb**	**08 16 58.9**	**-1.9**
DRK0				*i*S			**Sb**	**08 17 07.2**	**-1.1**
DRK0	**Durika**	**0.52**	**72**	∥*i*P			**Pb**	**08 16 58.9**	**-1.9**
DRK0				*i*S			**Sb**	**08 17 07.0**	**-1.3**
DRK0	**Durika**	**0.52**	**72**	∥*e*P			**Pb**	**08 16 58.8**	**-1.9**
QUEP	**Quepos**	**0.53**	**309**	P			**Pb**	**08 17 00.3**	**-0.6**
QUEP				S			**Sn**	**08 17 08.9**	**-0.1**
QUEP	**Quepos**	**0.53**	**309**	∥*e*P			**Pb**	**08 17 00.2**	**-0.6**
SVQ2	**Quepos**	**0.53**	**308**	∥*e*P			**Pb**	**08 17 00.2**	**-0.6**
PIEC	**Cerro El Cedra**	**0.56**	**338**	*e*P			**Pb**	**08 17 01.3**	**-0.2**
EDP2	**Potrero Grande**	**0.56**	**98**	∥*e*P			**Pb**	**08 17 00.9**	**-0.5**
PITB	**Pirrs, San**	**0.62**	**334**	*e*P			**Pn**	**08 17 02.5**	**-0.1**
PICV	**PH. Pirrs**	**0.69**	**320**	*e*P			**Pn**	**08 17 02.9**	**-0.5**
LCR2	**La Lucha 2**	**0.69**	**338**	P			**Pn**	**08 17 03.4**	**-0.2**
LCR2	**La Lucha 2**	**0.69**	**338**	*e*P			**Pn**	**08 17 03.3**	**-0.3**
LCR2				*e*S			**Sn**	**08 17 13.9**	**+0.6**
LCR2	**La Lucha 2**	**0.69**	**338**	*e*P			**Pn**	**08 17 03.1**	**-0.4**
JIME	**Puerto Jimenez**	**0.69**	**143**	∥*e*P			**Pn**	**08 17 02.6**	**-0.8**
PTJ1	**Puerto Jimnez**	**0.71**	**142**	P			**Pn**	**08 17 02.9**	**-0.7**
PTJ1	**Puerto Jimnez**	**0.71**	**142**	*e*P			**Pn**	**08 17 03.0**	**-0.7**
PTJ1				*i*S			**Sn**	**08 17 14.8**	**+1.4**
PTJ1	**Puerto Jimnez**	**0.71**	**142**	∥*e*P			**Pn**	**08 17 02.8**	**-0.7**
EDAD	**Golfito**	**0.72**	**128**	∥*e*P			**Pn**	**08 17 02.0**	**-1.8**
REPA	**Paraso**	**0.73**	**350**	*e*P			**Pb**	**08 17 04.1**	**-0.2**
FITO	**Golfito**	**0.75**	**129**	∥*e*P			**Pn**	**08 17 02.3**	**-1.9**
TAGO	**Cartago**	**0.78**	**347**	∥*e*P			**Pb**	**08 17 04.9**	**-0.2**
PIRO	**Carate, Puerto**	**0.80**	**150**	P			**Pn**	**08 17 04.1**	**-0.8**
PIRO				S			**Sb**	**08 17 16.1**	**+0.3**
PIRO	**Carate, Puerto**	**0.80**	**150**	*e*P			**Pn**	**08 17 04.1**	**-0.8**
PIRO				*e*S			**Sb**	**08 17 15.8**	**0.0**
PIRO	**Carate, Puerto**	**0.80**	**150**	∥*e*P			**Pn**	**08 17 04.1**	**-0.8**
TURIB	**Turrialba**	**0.81**	**4**	∥*e*P			**Pn**	**08 17 05.0**	**0.0**
ACOS	**Acosta**	**0.81**	**329**	∥*e*P			**Pn**	**08 17 04.7**	**-0.4**
PCAYA	**Pacayas**	**0.82**	**355**	∥*e*P			**Pb**	**08 17 05.5**	**-0.2**
TRIO	**Tres Rios**	**0.84**	**343**	∥*e*P			**Pn**	**08 17 05.4**	**-0.2**
VERB	**Verbena**	**0.84**	**3**	∥*e*P			**Pb**	**08 17 05.9**	**-0.2**
AMPA	**Desamparados**	**0.85**	**338**	*e*P			**Pb**	**08 17 05.2**	**-0.5**
RAFA	**San Farael, Vo**	**0.86**	**355**	*e*P			**Pb**	**08 17 06.2**	**-0.3**
VTCV	**VTCV, Calle Va**	**0.88**	**1**	∥*e*P			**Pb**	**08 17 06.5**	**-0.2**
LUJA	**Lujan**	**0.88**	**338**	∥*e*P			**Pn**	**08 17 06.2**	**0.0**
ECI	**Escuela Centro**	**0.89**	**340**	∥*e*P			**Pn**	**08 17 06.4**	**+0.2**
SJS3	**Mercedes San J**	**0.89**	**340**	∥*e*P			**Pb**	**08 17 06.5**	**-0.3**
SJS	**Escuela Geolog**	**0.89**	**340**	∥*e*P			**Pn**	**08 17 06.4**	**+0.1**
CENT	**San Jose**	**0.89**	**338**	*e*P			**Pb**	**08 17 07.3**	**+0.3**
LUPE	**Guadalupe**	**0.90**	**340**	∥*e*P			**Pn**	**08 17 06.6**	**+0.2**
CVTV	**Tajo**	**0.90**	**360**	∥*e*P			**Pb**	**08 17 07.0**	**-0.2**
CVTQ	**Turrialba Volc**	**0.90**	**358**	*e*P			**Pb**	**08 17 07.0**	**-0.2**
ABRB	**Las Abras (San**	**0.90**	**2**	∥*e*P			**Pb**	**08 17 07.0**	**-0.1**
MEXI	**Barrio Mexico**	**0.90**	**338**	∥*e*P			**Pn**	**08 17 06.6**	**+0.2**
NELY	**Ciudad Neily**	**0.91**	**119**	∥*e*P			**Pn**	**08 17 05.2**	**-1.1**
CORON	**Coronado**	**0.91**	**344**	∥*e*P			**Pb**	**08 17 07.0**	**-0.1**
ALCO	**Alturas Coton,**	**0.91**	**99**	*e*P			**Pn**	**08 17 05.1**	**-1.4**
VTR0	**Volcan Turrial**	**0.91**	**359**	*e*P			**Pb**	**08 17 07.2**	**-0.2**
PAVB	**Pavas, San Jos**	**0.92**	**336**	*e*P			**Pb**	**08 17 06.5**	**-0.1**
CVTR	**Volcan Turrial**	**0.92**	**359**	*e*P			**Pb**	**08 17 07.1**	**-0.4**
TIBA	**Tibas**	**0.92**	**339**	*e*P			**Pn**	**08 17 06.8**	**+0.1**
RESJ	**San Isidro (Tu**	**0.93**	**6**	∥*e*P			**Pn**	**08 17 07.5**	**-0.1**
PURI	**Puriscal**	**0.93**	**323**	∥*e*P			**Pn**	**08 17 06.8**	**0.0**
SANTA	**Santa Ana**	**0.94**	**332**	∥*e*P			**Pn**	**08 17 06.7**	**-0.2**
DOMI	**Santo Domingo**	**0.94**	**339**	∥*e*P			**Pb**	**08 17 07.4**	**-0.3**
CEUA	**Cerro Uatsi, L**	**0.95**	**57**	∥*e*P			**Pb**	**08 17 08.0**	**+0.2**
LAES	**El Progreso Va**	**0.95**	**46**	∥*e*P			**Pb**	**08 17 07.3**	**-0.5**
MLIR3	**Monte Lirio, C**	**0.96**	**108**	*e*P			**Pn**	**08 17 06.6**	**-0.5**
MLIR3				*e*S			**Sb**	**08 17 20.4**	**0.0**
MLIR3				*e*S			**Sn**	**08 17 21.2**	**+1.4**
HDC	**Heredia**	**0.97**	**338**	*e*P			**Pn**	**08 17 07.5**	**+0.2**
HEME	**Heredia, Merce**	**0.97**	**336**	∥*e*P			**Pb**	**08 17 08.8**	**+0.5**
BELE	**Belen**	**0.98**	**333**	∥*e*P			**Pn**	**08 17 07.4**	**0.0**
SCLRA	**Santa Clara, W**	**0.98**	**105**	*e*P			**Pn**	**08 17 07.2**	**-0.3**
LCOCO	**El Coco**	**1.00**	**11**	∥*e*P			**Pb**	**08 17 08.3**	**-0.3**
CDITO	**Canoas**	**1.01**	**121**	P			**Pn**	**08 17 06.6**	**-1.1**
CDITO				S			**Sn**	**08 17 20.6**	**-0.2**
IRES	**Siquirres**	**1.02**	**13**	∥*e*P			**Pn**	**08 17 08.7**	**-0.3**
UELA	**Alajuela**	**1.02**	**333**	∥*e*P			**Pn**	**08 17 08.4**	**+0.3**
CVTG	**V. Turrialba,**	**1.04**	**358**	*e*P			**Pb**	**08 17 09.3**	**-0.1**
BRIBI	**Bribri**	**1.05**	**60**	∥*e*P			**Pb**	**08 17 09.4**	**0.0**
LPPC	**Paso Canoas**	**1.05**	**122**	*e*P			**Pb**	**08 17 07.1**	**-1.3**
TAAN	**Batan**	**1.05**	**22**	∥*e*P			**Pb**	**08 17 09.2**	**-0.3**
ATEO	**Atenas**	**1.08**	**324**	∥*e*P			**Pn**	**08 17 09.0**	**+0.3**
BRU2	**Volcan**	**1.08**	**106**	P			**Pn**	**08 17 08.2**	**-0.8**
BRU2	**Volcan**	**1.08**	**106**	∥*e*P			**Pn**	**08 17 07.8**	**-1.1**
BRU2				*e*P			**Pn**	**08 17 08.1**	**-0.8**
BRU2				*e*S			**Sn**	**08 17 22.5**	**-0.4**
BRU2				*e*S			**Sn**	**08 17 22.6**	**-0.4**
BRU2	**Volcan**	**1.08**	**106**	*e*P			**Pn**	**08 17 07.8**	**-1.1**
PILE	**Guapiles**	**1.11**	**358**	∥*e*P			**Pb**	**08 17 10.1**	**-0.4**
GREC	**Grecia**	**1.12**	**330**	∥*e*P			**Pb**	**08 17 10.2**	**-0.5**
LESP3	**La Esperanza,**	**1.17**	**126**	∥*e*P			**Pn**	**08 17 08.9**	**-1.0**
LESP3				*e*P			**Pn**	**08 17 08.9**	**-1.0**
PALD	**Palmares**	**1.17**	**324**	∥*e*P			**Pn**	**08 17 10.3**	**+0.2**
CLLRA	**Cordillera,**	**1.17**	**107**	∥*e*P			**Pn**	**08 17 09.2**	**-0.9**
CLLRA	**Cordillera,**	**1.17**	**107**	∥*e*P			**Pn**	**08 17 09.2**	**-0.9**
VPS8	**V Poas**	**1.18**	**335**	∥*e*P			**Pb**	**08 17 11.4**	**-0.4**
ARIEL	**Armuelles**	**1.20**	**132**	∥*e*P			**Pb**	**08 17 12.8**	**+0.9**
ARIEL	**Armuelles**	**1.20**	**132**	*e*P			**Pb**	**08 17 12.6**	**+0.7**
RAMO	**San Ramon**	**1.22**	**324**	∥*e*P			**Pn**	**08 17 11.1**	**+0.3**
PTPM	**Petroterminale**	**1.23**	**136**	*e*P			**Pn**	**08 17 11.2**	**+0.3**
PTPM				*e*S			**Sb**	**08 17 29.4**	**+1.3**
PTPA	**Petro Terminal**	**1.24**	**136**	∥*e*P			**Pn**	**08 17 10.7**	**-0.3**
CARI	**Cariari**	**1.26**	**0**	*e*P			**Pb**	**08 17 12.4**	**-0.6**
JEFFS	**S de V. Baru**	**1.27**	**110**	∥*i*P			**Pn**	**08 17 10.6**	**-0.8**
JEFFS	**S de V. Baru**	**1.27**	**110**	∥*e*P			**Pn**	**08 17 10.4**	**-1.0**
CNI2	**El Empalme, Bo**	**1.30**	**75**	*i*P			**Pn**	**08 17 11.5**	**-0.2**
CNI2				*i*S			**Sb**	**08 17 29.5**	**-0.4**
PTAR3	**Potrerillos Ar**	**1.30**	**108**	*e*P			**Pn**	**08 17 11.4**	**-0.4**
PTAR3				*e*S			**Sb**	**08 17 28.9**	**-1.2**
BQP1	**Boquete Panama**	**1.31**	**105**	*e*P			**Pn**	**08 17 11.6**	**-0.4**
ROBF	**Roble, Puntare**	**1.31**	**312**	∥*e*P			**Pn**	**08 17 12.0**	**0.0**
LIMO3	**Limones**	**1.32**	**139**	*e*P			**Pn**	**08 17 12.3**	**+0.3**
LIMO3				*e*S			**Sb**	**08 17 31.8**	**+1.3**
LMNES	**Limones**	**1.32**	**139**	*e*P			**Pn**	**08 17 11.9**	**-0.2**
LMNES				*e*S			**Sb**	**08 17 30.4**	**-0.2**
LMNES	**Limones**	**1.32**	**139**	*e*P			**Pn**	**08 17 11.8**	**-0.3**
ARTO	**Ro Cuarto**	**1.32**	**339**	∥*e*P			**Pb**	**08 17 13.2**	**-0.9**
LNBQ3	**Los Naranjos,**	**1.32**	**103**	*e*P			**Pn**	**08 17 11.2**	**-1.0**
LNBQ3				*e*S			**Sb**	**08 17 29.7**	**-1.1**
DAP26	**falda E V. Bar**	**1.34**	**103**	∥*e*P			**Pn**	**08 17 11.6**	**-0.9**
BQSF3	**Alto Boquete,**	**1.34**	**105**	*e*P			**Pn**	**08 17 12.3**	**-0.1**
BQSF3				*e*S			**Sb**	**08 17 31.1**	**-0.2**
BAGA3	**Bagala, Chiriq**	**1.36**	**117**	*e*P			**Pn**	**08 17 13.1**	**+0.5**
PAQE	**Paquera**	**1.38**	**301**	*e*P			**Pn**	**08 17 11.9**	**-0.9**
QUEU	**Ciudad Quesada**	**1.39**	**331**	*e*P			**Pb**	**08 17 14.7**	**-0.7**
DVD	**David**	**1.44**	**117**	∥*e*P			**Pn**	**08 17 14.1**	**+0.5**
DVD				*e*P			**Pn**	**08 17 14.1**	**+0.5**
DVD				*e*S			**Sn**	**08 17 32.0**	**-0.2**
DVD				*e*S			**Sb**	**08 17 31.7**	**-2.2**
ITAL	**Pital**	**1.44**	**339**	*e*P			**Pb**	**08 17 14.9**	**-1.2**
TRT2	**Tortugero**	**1.45**	**0**	P			**Pb**	**08 17 15.1**	**-1.2**
TRT2				S			**Sb**	**08 17 35.0**	**+0.7**
TRT2	**Tortugero**	**1.45**	**0**	∥*e*P			**Pn**	**08 17 14.8**	**+1.0**
PSOM3	**Paja de Sombre**	**1.46**	**106**	*e*P			**Pn**	**08 17 13.4**	**-0.6**
PSOM3				*e*S			**Sn**	**08 17 33.0**	**+0.8**
LOCO3	**Loma Colorada,**	**1.48**	**117**	*e*P			**Pn**	**08 17 14.9**	**+0.7**
PEDE3	**Pedregal, Chir**	**1.49**	**118**	*e*P			**Pn**	**08 17 15.0**	**+0.7**
LOMA3	**Las Lomas, Chi**	**1.49**	**116**	*e*P			**Pb**	**08 17 15.5**	**-1.4**
BGUAL	**Bijagual, Pana**	**1.51**	**113**	*e*P			**Pn**	**08 17 14.0**	**-0.7**
PBNVO	**Pueblo Nuevo,**	**1.55**	**98**	∥*e*P			**Pn**	**08 17 14.5**	**-0.7**
CHIR3	**Chiriqui UPA,**	**1.56**	**116**	*e*P			**Pn**	**08 17 16.0**	**+0.6**
RBALA	**Bur**	**1.59**	**98**	*e*P			**Pn**	**08 17 15.2**	**-0.6**
RBALA				*e*S			**Sn**	**08 17 34.0**	**-1.1**
RBALA	**Bur**	**1.59**	**98**	*e*P			**Pn**	**08 17 15.1**	**-0.6**
CHGR2	**Aguacate**	**1.59**	**96**	*e*P			**Pn**	**08 17 15.6**	**-0.1**
CHGR2				*e*S			**Sn**	**08 17 35.6**	**+0.4**
JTS	**Las Juntas de**	**1.68**	**315**	P			**Pn**	**08 17 17.5**	**+0.4**
JTS	**Las Juntas de**	**1.68**	**315**	*e*P			**Pn**	**08 17 17.4**	**+0.4**
JTS				*e*S			**Sn**	**08 17 39.0**	**+1.5**
JTS	**Las Juntas de**	**1.68**	**315**	*e*P			**Pn**	**08 17 17.1**	**+0.1**
TABAC	**Tabacon**	**1.72**	**324**	∥*e*P			**Pb**	**08 17 19.3**	**-1.6**
CMARA	**Lajas Hojancha**	**1.89**	**299**	P			**Pn**	**08 17 19.7**	**-0.3**
INDI	**Punta indio, G**	**1.90**	**294**	P			**Pn**	**08 17 18.8**	**-1.1**
REME3	**Remedios, Chir**	**2.08**	**114**	*e*P			**Pn**	**08 17 23.9**	**+1.4**
RMDIO	**Remedios, Chir**	**2.08**	**114**	*e*P			**Pn**	**08 17 24.0**	**+1.5**
NANC3	**Nancito, Chiri**	**2.16**	**113**	*e*P			**Pn**	**08 17 25.1**	**+1.4**
PDCAN	**Manzana , Fuen**	**2.18**	**111**	*e*P			**Pn**	**08 17 25.2**	**+1.4**
UPAL	**Upala**	**2.18**	**325**	P			**Pn**	**08 17 25.3**	**+1.4**
ELI1	**Hacienda Flor**	**2.35**	**311**	P			**Pb**	**08 17 29.5**	**-2.0**
SAFE3	**Santa Fe, Vera**	**2.70**	**102**	*e*P			**Pn**	**08 17 32.8**	**+1.8**
MESA3	**La Mesa, Verag**	**2.70**	**110**	*e*P			**Pn**	**08 17 33.1**	**+2.0**
CARN	**Rivas**	**2.72**	**320**	P			**Pb**	**08 17 34.9**	**-2.8**
RSUS1	**Rio de Jesus,**	**2.78**	**113**	*e*P			**Pn**	**08 17 34.1**	**+1.9**
GMAL	**Guarumal, Vera**	**2.81**	**118**	*e*P			**Pn**	**08 17 34.2**	**+1.9**
STIA3	**Santiago, Vera**	**2.91**	**110**	*e*P			**Pn**	**08 17 36.7**	**+2.7**
MARI3	**Mariato, Verag**	**3.08**	**118**	*e*P			**Pn**	**08 17 39.4**	**+3.1**
CRIS3	**El Cristo, Coc**	**3.20**	**105**	*e*P			**Pn**	**08 17 39.8**	**+1.9**
CACAO	**El Cacao, Vera**	**3.34**	**121**	*e*P			**Pn**	**08 17 42.0**	**+2.1**
BOAB	**BOACO BROADBAN**	**3.83**	**331**	P			**Pn**	**08 17 48.3**	**+1.7**

*NOU **10** 08:51:49.4, 30°.68S×175°.83W, h278km, mb4.3/6, Kermadec Islands Region*
*WEL **10** 08:52:48.9±0.7, 34°.5S×178°.0E±1°.2, h178km±19km, M4.2/12, mB4.7/3, ML4.0/13, MLv4.2/12, Mw(mB)4.0/3, Error ellipse: s-maj=17.4km s-min=4.9km az=111.4*

ISC 10 08:52:46.9±1.2, **34°.09S**±0°.07×**179°.8E**±0°.1, **h200**km, **n42**, σ3**§04**/46, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.67**	**199**	P			**Pn**	**08 53 47.9**	**-3.4**
MXZ	**Matakaoa Point**	**3.67**	**199**	P			**Pn**	**08 53 47.7**	**+3.2**
MXZ				S			**Sn**	**08 54 31.4**	**+1.6**
WMGZ	**Waiomatatini S**	**3.89**	**196**	P			**Pn**	**08 53 51.1**	**+3.9**
HAZ	**Te Kaha**	**4.00**	**203**	P			**Pn**	**08 53 52.9**	**+4.2**
PKGZ	**Pakihiroa**	**4.02**	**200**	P			**Pn**	**08 53 52.2**	**+3.4**
GRZ	**Great Barrier**	**4.15**	**237**	P			**Pn**	**08 53 53.9**	**+3.4**
PUZ	**Puketiti**	**4.16**	**197**	P			**Pn**	**08 53 53.5**	**+2.9**
PUZ				S			**Sn**	**08 54 41.8**	**+0.8**
RUGZ	**Raukumara Rang**	**4.23**	**203**	P			**Pn**	**08 53 55.2**	**+3.6**
KUZ	**Kuaotunu**	**4.25**	**230**	P			**Pn**	**08 53 55.8**	**+4.1**
TWGZ	**Tauwhareparae**	**4.33**	**199**	P			**Pn**	**08 53 57.0**	**+4.2**
CNGZ	**Carnagh Statio**	**4.57**	**196**	P			**Pn**	**08 53 58.9**	**+3.2**
OPRZ	**Ohinepanea**	**4.57**	**214**	P			**Pn**	**08 53 59.5**	**+3.8**
MWZ	**Matawai**	**4.61**	**203**	P			**Pn**	**08 53 59.4**	**+3.0**
TKGZ	**Te Karaka**	**4.62**	**199**	P			**Pn**	**08 53 58.7**	**+2.4**
URZ	**Urewera**	**4.69**	**207**	P			**Pn**	**08 54 02.0**	**+4.7**
URZ	**Urewera**	**4.69**	**207**	P			**Pn**	**08 54 00.6**	**+3.3**
RAGZ	**Rawiri**	**4.80**	**203**	P			**Pn**	**08 54 01.5**	**+2.7**
WCZ	**Waipu Caves**	**4.83**	**246**	P			**Pn**	**08 54 02.4**	**+3.3**
RIGZ	**Rimuhau**	**4.89**	**199**	P			**Pn**	**08 54 02.8**	**+2.9**
MUGZ	**Murupara**	**5.01**	**208**	P			**Pn**	**08 54 04.6**	**+3.2**
RTZ	**Ruatahuna**	**5.05**	**206**	P			**Pn**	**08 54 04.4**	**+2.4**
SNGZ	**Shannon Statio**	**5.08**	**202**	P			**Pn**	**08 54 05.7**	**+3.4**
GLKZ	**Green Lake**	**5.19**	**23**	P			**Pn**	**08 54 03.1**	**-0.6**
GLKZ				S			**Sn**	**08 55 02.3**	**-2.2**
MHGZ	**Mahia Peninsul**	**5.28**	**196**	P			**Pn**	08 54 09.2	+4.4
RAHZ	**Arahi**	**5.29**	**204**	P			**Pn**	**08 54 08.0**	**+3.1**

HUMP	**Col San Antoni**	**2.85**	**96**			**Pn**	**09 22 15.6**	**+0.6**
HUMP				IAML			09 22 55.0	
	comp=Z,60nm,0.3s							
HUMP				IAML			09 22 55.9	
	comp=Z,91nm,0.2s							
CUPR	**Culebra, Puert**	**3.37**	**92**	Pn		**Pn**	**09 22 22.9**	**+0.9**
CUPR				IAML			09 23 04.8	
	comp=Z,28nm,2.1s							
CUPR				IAML			09 23 10.6	
	comp=Z,25nm,2.5s							
GRTK	**Grand Turk**	**3.71**	**325**	*e*P		**Pn**	**09 22 23.9**	**-2.6**
GRTK				*e*S		**Sn**	**09 23 07.4**	**-2.0**
GRTK				IAML			09 23 09.6	
	comp=Z,15nm,0.1s							
GRTK				IAML			09 23 10.2	
	comp=Z,24nm,0.2s							
QMBU	**Quimbuelo**	**5.90**	**288**	*e*P		Pn	09 22 52.1	-4.1
QMBU				*e*S		**Sn**	**09 23 56.8**	**-5.8**

IDC ***10*** *09:24:37.4±1.1,21°.45S×115°.15E, h0km, mb4.0/7, mbtmp4.2/11, ML4.2/3, MS3.4/10, Error ellipse: s-maj=32.0km s-min=18.6km az=38.0*

NEIC ***10*** *09:24:39.0±2.7,21°.45S±0°.08×114°.99E±0°.07, h10km±1km, mb4.3/11, Error ellipse: s-maj=14.3km s-min=10.7km az=152.0*

AUST ***10*** *09:24:39.9±0.4,21°.5±3"×11°.5E±", h10km, ML4.4/11, Error ellipse: s-maj=8.5km s-min=5.3km az=127.1, confirmed*

ISC 10 09:24:39.1±0.6, 21°.46S±0°.06×115°.19E±0°.06, h10km, n69, σ1s86/67, mb4.2/16, MS3.4/5, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIRL	**Giralia**	**1.48**	**217**	P	**Pn**	**09 25 04.7**	**-1.0**
GIRL	**Giralia**	**1.48**	**217**		**Pn**	**09 25 05.0**	**-0.7**
MBWA	**Marble Bar**	**4.24**	**87**	P	**Pn**	**09 25 47.1**	**+3.3**
MBWA				S	**Sn**	**09 26 34.3**	**+0.8**
MBWA	**Marble Bar**	**4.24**	**87**		**Pn**	**09 25 47.2**	**+3.4**
PSA00	**Pilbara Seismi**	**4.33**	**92**	P	**Pn**	**09 25 47.9**	**+2.8**
PSA00				S	**Sn**	**09 26 36.3**	**+0.6**
PSA00	**Pilbara Seismi**	**4.33**	**92**		**Pn**	**09 25 48.2**	**+3.1**
PSAB3	**Pilbara Seismi**	**4.34**	**93**	P	**Pn**	**09 25 47.7**	**+2.5**
PSAC2	**Pilbara Seismi**	**4.34**	**92**	P	**Pn**	**09 25 48.8**	**+3.0**
MEEK	**Meekatharra**	**6.03**	**149**	P	**Pn**	**09 26 10.0**	**+1.6**
	comp=Z,59nm,0.7s,comp=Z,2.7nm						
MEEK				S	**Sn**	**09 27 18.4**	**+0.9**
CAAN	**Eighty Mile Be**	**6.32**	**71**	P	**Pn**	**09 26 15.7**	**+3.3**
	comp=Z,109nm,0.9s,comp=Z,0.5nm						
MORW	**Morawa**	**7.62**	**174**	P	**Pn**	**09 26 30.3**	**+0.2**
	comp=Z,33nm,0.7s,comp=Z,0.4nm						
MORW	**Morawa**	**7.62**	**174**		**Pn**	**09 26 30.6**	**+0.4**
BLDU	**Ballidu**	**9.22**	**172**	P	**Pn**	**09 26 52.3**	**+0.1**
	comp=Z,19nm,0.5s,comp=Z,0.2nm						
KLBR	**Kellerberrin**	**10.35**	**168**	P	**Pn**	**09 27 08.4**	**+0.8**
	comp=Z,40nm,0.7s,comp=Z,0.4nm						
FITZ	**Fitzroy Crossi**	**10.39**	**73**	Pn	**Pn**	**09 27 09.1**	**+0.9**
	comp=Z,2.5nm,0.3s,baz=250,slow=7.3,SNR=136						
FITZ				Sn	**Sn**	**09 29 01.9**	**-2.9**
	comp=Z,4.8nm,0.3s,baz=324,slow=23,SNR=3.2						
FITZ				Lg	Lg	09 30 07.7	
	comp=Z,3.5nm,0.3s,baz=154,slow=6.5,SNR=3.4						
FITZ				LR	LR	09 31 19.0	
	comp=Z,154nm,21.1s,baz=236,slow=38						
	comp=Z,166nm,0.5s						
MUN	**Mundaring**	**10.52**	**175**	P	**Pn**	**09 27 10.0**	**+0.1**
	comp=Z,41nm,1.1s,comp=Z,0.2nm						
KMBL	**Kambalda**	**11.54**	**150**	P	**Pn**	**09 27 23.4**	**-0.6**
	comp=Z,7.5nm,0.5s						
NWAO	**Narrogin (SRO)**	**11.57**	**171**	Pn	**Pn**	**09 27 23.8**	**-0.5**
	comp=Z,3.3nm,0.4s,baz=334,slow=10,SNR=6.4						
NWAO				Sn	**Sn**	**09 29 33.1**	**-0.5**
	comp=Z,7.2nm,0.3s,baz=79,slow=23,SNR=4.0						
NWAO				Lg	Lg	09 30 41.3	
	comp=Z,21nm,0.3s,baz=84,slow=21,SNR=9.0						
NWAO				LR	LR	09 32 02.3	
	comp=Z,173nm,18.4s,baz=54,slow=38						
WRKA	**Warakurna**	**12.56**	**109**	P	**Pn**	**09 27 37.8**	**-0.2**
	comp=Z,15nm,0.6s						
PLAI	**Plampang**	**12.80**	**12**	P	**Pn**	**09 27 40.5**	**-0.8**
	comp=Z,39nm,1.2s						
BATI	**Baumata**	**13.84**	**37**	LR	LR	09 33 45.1	
	comp=Z,174nm,20.6s,baz=272,slow=40						
KNRA	**Kununurra**	**14.09**	**68**	P	**Pn**	**09 27 58.5**	**-0.4**
	comp=Z,29nm,0.8s						
KNRA	**Kununurra**	**14.09**	**68**		**Pn**	**09 27 58.1**	**-0.8**
FORT	**Forrest**	**14.81**	**131**	P	**Pn**	**09 28 07.1**	**-1.6**
	comp=Z,23nm,0.6s						
FORT	**Forrest**	**14.81**	**131**		**Pn**	**09 28 07.7**	**-1.0**
KAPI	**Kappang**	**16.94**	**16**	LR	LR	09 35 15.8	
	comp=Z,40nm,20.5s,baz=198,slow=38						
ASAR	**Alice Springs**	**17.42**	**101**	P	**Pn**	**09 28 40.8**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=274,slow=12,SNR=35						
ASAR				S	**Sn**	**09 31 51.4**	**-5.2**
	comp=Z,3.0nm,0.5s,baz=270,slow=23,SNR=4.3						
ASAR				Lg	Lg	09 33 47.3	
	baz=285,slow=26						
ASAR				LR	LR	09 35 33.6	
	comp=Z,146nm,18.6s,baz=293,slow=38						
	comp=Z,4.5nm,0.7s						
ASAR	**Alice Springs**	**17.42**	**101**	Pn	**Pn**	**09 28 43.3**	**+0.9**
AS31	**Alice Springs**	**17.43**	**101**		**Pn**	**09 28 40.8**	**-1.7**
MTN	**Manton Dam**	**17.46**	**63**	P	**Pn**	**09 28 43.5**	**+0.6**
	comp=Z,19nm,1.0s						
MTN	**Manton Dam**	**17.46**	**63**	Pn	**Pn**	**09 28 42.6**	**-0.4**
MTN				IAmb	IAmb	09 29 04.6	
	comp=Z,44nm,1.4s						
WRA	**Warramunga Arr**	**17.98**	**89**	P	**Pn**	**09 28 48.0**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=268,slow=14,SNR=23						
WRA				S	**Sn**	**09 32 03.2**	**-6.8**
	comp=Z,2.9nm,0.5s,baz=268,slow=24,SNR=4.7						
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	**17.98**	**89**	Pn	**Pn**	**09 28 48.6**	**-0.7**
WRAB	**Tennant Creek**	**17.99**	**89**		**P**	**09 28 51.4**	**+1.4**
WRAB				IAmb	IAmb	09 28 53.8	
	comp=Z,10nm,0.8s						
WB10	**Warramunga Arr**	**18.05**	**88**	P	**Pn**	**09 28 47.8**	**-2.4**
WB0	**Warramunga Arr**	**18.05**	**88**	Pn	**Pn**	**09 28 48.7**	**-1.5**
WB0				IAmb	IAmb	09 28 54.3	
	comp=Z,21nm,0.9s						
WR8	**Warramunga Arr**	**18.13**	**89**	Pn	**Pn**	**09 28 50.6**	**-0.5**
WR8				IAmb	IAmb	09 28 55.4	
	comp=Z,20nm,0.8s						
MULG	**Mulgathing**	**19.10**	**121**	P	**Pn**	**09 29 03.1**	**+0.2**
	comp=Z,15nm,1.1s						
OOD	**Oodnadatta**	**19.66**	**113**	P	**Pn**	**09 29 09.6**	**0.0**
	comp=Z,8.8nm,0.5s						
BBOO	**Buckleboo**	**21.70**	**126**	P	**P**	**09 29 32.1**	**+1.8**
	comp=Z,40nm,0.9s						
BBOO	**Buckleboo**	**21.70**	**126**		**P**	**09 29 31.1**	**+0.8**
BBOO				IAmb	IAmb	09 29 34.8	
	comp=Z,25nm,0.8s						
LCRK	**Leigh Creek**	**22.52**	**118**	P	**P**	**09 29 41.0**	**+1.8**
	comp=Z,13nm,1.4s						
QIS	**Mount Isa**	**22.81**	**92**	P	**P**	**09 29 43.1**	**+0.8**
	comp=Z,17nm,1.0s						
YAPP	**Yappala Statio**	**23.07**	**122**	P	**P**	**09 29 46.8**	**+1.9**
	comp=Z,5.5nm,1.3s						
NAPP	**Napperby**	**23.45**	**125**	P	**P**	**09 29 51.0**	**+2.3**
	comp=Z,24nm,0.6s						
INKA	**Innaminka**	**24.04**	**110**	P	**P**	**09 29 56.1**	**+1.7**
	comp=Z,7.7nm,1.2s						
INKA	**Innaminka**	**24.04**	**110**		**P**	**09 29 55.4**	**+0.9**
INKA				IAmb	IAmb	09 30 03.7	
	comp=Z,4.8nm,0.7s						
SDAN	**Sedan**	**24.90**	**127**	P	**P**	**09 30 04.6**	**+2.4**
	comp=Z,5.9nm,1.4s						
STKA	**Stephens Creek**	**25.71**	**119**	P	**P**	**09 30 12.2**	**+2.5**
	comp=Z,67nm,2.1s						
STKA	**Stephens Creek**	**25.71**	**119**	P	**P**	**09 30 10.8**	**+1.1**
	comp=Z,11nm,0.7s,baz=295,slow=9.1,SNR=21						
STKA				LR	LR	09 40 46.8	
	comp=Z,283nm,18.3s,baz=214,slow=38						
	comp=Z,11nm,0.7s						
STKA	**Stephens Creek**	**25.71**	**119**		**P**	**09 30 11.0**	**+1.3**
COEN	**Coen**	**27.65**	**79**	P	**P**	**09 30 28.2**	**+0.9**
COEN				IAmb	IAmb	09 31 06.2	
	comp=Z,11nm,1.1s						
CTA	**Charters Tower**	**29.05**	**93**	LR	LR	09 43 21.3	
	comp=Z,61nm,20.4s,baz=243,slow=39						
ARMA	**Armidale**	**33.84**	**113**	P	**P**	**09 31 23.3**	**+1.4**
CMAR	**Chiang Mai Arr**	**42.74**	**337**	P	**P**	**09 32 36.0**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=169,slow=7.1,SNR=4.6						
CMAR				LR	LR	09 52 49.4	
	comp=Z,25nm,18.2s,baz=150,slow=40						
	comp=Z,1.1nm,0.3s						
H08S2	**Diego Garcia H**	**43.39**	**282**	T	T	10 18 18.9	
	baz=114,slow=76,SNR=29						
H08S3	**Diego Garcia H**	**43.41**	**282**	T	T	10 18 19.8	
	baz=114,slow=76,SNR=70						
H08S1	**Diego Carcia H**	**43.41**	**282**	T	T	10 18 27.4	
	baz=114,slow=76,SNR=9.2						
PALK	**Pallekele**	**44.28**	**306**	LR	LR	09 48 41.3	
	comp=Z,45nm,20.4s,baz=93,slow=33						
DZM	**Mont Dzumac**	**47.41**	**101**	LR	LR	09 53 11.0	
	comp=Z,64nm,18.6s,baz=355,slow=36						
KSRS	**Korea Array**	**59.81**	**12**	P	**P**	**09 34 44.8**	**+0.3**
	comp=Z,4.1nm,0.8s,baz=190,slow=7.6,SNR=16						
	comp=Z,4.1nm,0.8s						
SONM	**Songino Array**	**69.42**	**354**	P	**P**	**09 35 48.1**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=176,slow=8.2,SNR=1.5						
	comp=Z,0.6nm,0.7s						
KSH2	**Kashi**	**70.78**	**328**	P	**P**	**09 35 55.8**	**-0.1**
KSH2				sP	sP	09 36 05.6	+5.3
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**74.15**	**337**	P	**P**	**09 36 14.8**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=125,slow=6.4,SNR=4.0						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**74.15**	**337**	P	**P**	**09 36 14.4**	**-1.2**
KURBB	**Kurchatov Arra**	**78.72**	**337**	P	**P**	**09 36 40.9**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=154,slow=4.3,SNR=2.6						
	comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**79.53**	**342**	P	**P**	**09 36 45.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=173,slow=4.1,SNR=1.8						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**126.96**	**26**	PKP	**PKiKP**	**09 43 43.1**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=306,slow=2.6,SNR=5.1						
TXAR	**Lajitas Array**	**144.16**	**69**	PKP	PKPbc	09 44 13.7	-0.2
	comp=Z,0.2nm,0.5s,baz=301,slow=2.8,SNR=5.2						

IDC ***10*** *09:46:16.9±1.8,32°.19S×72°.33W, h0km, mbtmp3.5/2, ML3.7/2, Error ellipse: s-maj=136.2km s-min=36.0km az=95.0*

SJA ***10*** *09:46:19.2±0.7,32°.28S×71°.83W, h16km±1km, ML3.8, MW3.8*

GUC ***10*** *09:46:22.0±0.8,32°.28S×71°.74W, h34km±2km, ML3.8*

ISC 10 09:46:18.7±1.2, 32°.22S±0°.02×71°.85W±0°.04, h12km±8km, n81, σ1s73/124, 1C-17D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.58**	**126**	⇓*i*P	**Pn**	**09 46 31.9**	**-0.8**
VA06				*i* S	**Sb**	**09 46 39.0**	**0.0**
VA06				IAML		09 46 40.0	
	comp=E,19μm,0.5s						
CO04	**Los Peladeros**	**0.77**	**77**	⇓*i*P	**Pn**	**09 46 35.1**	**-0.5**
CO04				*i* S	**Sb**	**09 46 44.7**	**+0.1**
CO04				IAML		09 46 48.4	
	comp=N,10μm,0.2s						
VA01	**Torpederas**	**0.82**	**168**	*e*P	**Pn**	**09 46 36.2**	**+0.2**
VA01				*e*S	**Sb**	**09 46 46.5**	**+0.6**
VA01	**Torpederas**	**0.82**	**168**	*e*P	**Pg**	**09 46 32.5**	**-2.1**
VA01				*e*S	**Sb**	**09 46 45.9**	**0.0**
ROCH	**El Roble**	**1.03**	**137**	⇓*i*P	**Pn**	**09 46 39.1**	**-0.2**
ROCH				*i* S	**Sb**	**09 46 51.4**	**-0.9**
ROCH				IAML		09 46 54.2	
	comp=N,4μm,0.5s						
MT02	**Curacav**	**1.20**	**150**	⇓*i*P	**Pg**	**09 46 41.6**	**-0.3**
MT02				*i* S	**Sb**	**09 46 55.7**	**-1.1**
MT02				IAML		09 46 58.2	
	comp=E,722nm,0.5s						
MT02	**Curacav**	**1.20**	**150**	*e*P	**Pg**	**09 46 41.6**	**-0.3**
MT02				*e*S	**Sb**	**09 46 56.6**	**-0.2**
MT02				IAML		09 46 59.7	
	comp=Z,1μm,0.5s						
VA03	**San Esteban**	**1.23**	**117**	*i* P	**Pb**	**09 46 41.8**	**-0.1**
VA03				*i* S	**Sb**	**09 46 57.4**	**-0.4**
VA03				IAML		09 46 59.1	
	comp=N,8μm,0.3s						
VA03	**San Esteban**	**1.23**	**117**	*e*P	**Pn**	**09 46 41.7**	**-0.1**
VA03				*e*S	**Sg**	**09 46 58.2**	**-0.1**
VA03				IAML		09 47 00.2	
	comp=Z,3μm,0.2s						
CO02	**Combarbal**	**1.25**	**36**	⇓*i*P	**Pg**	**09 46 43.4**	**+0.6**
CO02				*i* S	**Sg**	**09 46 59.4**	**+0.4**
CO02	**Combarbal**	**1.25**	**36**	*e*P	**Pn**	**09 46 37.9**	**-4.2**
CO02				*e*P	**Pg**	**09 46 43.3**	**+0.6**
CO02				*e*S	**Sg**	**09 46 59.7**	**+0.7**
CO02				IAML		09 47 00.8	
	comp=Z,5μm,0.2s						
PEL	**Peldehue**	**1.35**	**133**	⇓*i*P	**Pb**	**09 46 43.8**	**-0.2**
PEL				*i* S	**Sb**	**09 47 00.1**	**-1.1**
PEL	**Peldehue**	**1.35**	**133**	*e*P	**Pb**	**09 46 43.9**	**-0.1**
PEL				*e*S	**Sg**	**09 47 02.0**	**-0.3**
PEL				IAML		09 47 08.7	
	comp=Z,949nm,1.0s						
VA05	**Santo Domingo**	**1.45**	**172**	*i* P	**Pb**	**09 46 45.5**	**-0.1**
VA05				*i* S	**Sb**	**09 47 03.6**	**-0.4**
VA05				IAML		09 47 12.3	
	comp=E,2μm,0.4s						
MT05	**Renca**	**1.50**	**141**	*i* P	**Pb**	**09 46 46.2**	**-0.3**
MT05				*i* S	**Sn**	**09 47 04.7**	**-0.3**
MT05				IAML		09 47 08.7	
	comp=E,2μm,0.3s						
MT05	**Renca**	**1.50**	**141**	*e*P	**Pb**	**09 46 46.5**	**0.0**
MT05				*e*S	**Sg**	**09 47 07.0**	**0.0**
MT05				IAML		09 47 10.0	
	comp=Z,583nm,0.3s						
MT10	**Hacienda Santa**	**1.53**	**134**	⇓*i*P	**Pb**	**09 46 46.8**	**-0.3**
MT10				*i* S	**Sn**	**09 47 05.6**	**-0.2**
MT10				IAML		09 47 08.3	
	comp=N,4μm,0.8s						
MT14	**Cerro Cal¡n**	**1.61**	**137**	⇓*i*P	**Pb**	**09 46 48.0**	**-0.5**
MT14				*i* S	**Sn**	**09 47 07.9**	**0.0**
MT14				IAML		09 47 10.0	
	comp=E,2μm,0.4s						
MT16	**CCHEN**	**1.65**	**137**	⇓*i*P	**Pb**	**09 46 48.5**	**-0.5**
MT16				*i* S	**Sb**	**09 47 08.9**	**-0.9**
CO03	**El Pedregal**	**1.70**	**36**	⇓*i*P	**Pb**	**09 46 50.4**	**+0.5**
CO03				*i* S	**Sb**	**09 47 12.5**	**+1.2**
CO03				IAML		09 47 17.4	
	comp=N,2μm,0.1s						
CO03	**El Pedregal**	**1.70**	**36**	*e*P	**Pb**	**09 46 50.5**	**+0.6**
CO03				*e*S	**Sg**	**09 47 13.1**	**-0.3**
CO03				IAML		09 47 13.8	
	comp=Z,1μm,0.3s						
MT03	**Universidad Ad**	**1.70**	**139**	*i* P	**Pb**	**09 46 49.2**	**-0.8**
MT03				*i* S	**Sb**	**09 47 10.6**	**-0.8**
MT03				IAML		09 47 18.4	
	comp=N,2μm,0.3s						
MT03	**Universidad Ad**	**1.70**	**139**	*e*P	**Pb**	**09 46 49.4**	**-0.6**
MT03				*e*S	**Sb**	**09 47 11.8**	**+0.5**
MT03				IAML		09 47 18.6	
	comp=Z,988nm,0.3s						
MT09	**Talagante**	**1.71**	**155**	⇓*i*P	**Pb**	**09 46 50.0**	**-0.2**
MT09				*i* S	**Sb**	**09 47 11.1**	**-0.7**
MT09				IAML		09 47 19.2	
	comp=N,972nm,0.4s						
MT01	**Popeta**	**1.72**	**163**	⇑*i*P	**Pb**	**09 46 49.5**	**-0.6**
MT01	**Popeta**	**1.72**	**163**	*e*P	**Pb**	**09 46 49.6**	**-0.5**
MT01				*e*S	**Sn**	**09 47 09.7**	**-0.5**
MT01				IAML		09 47 20.0	
	comp=Z,697nm,0.5s						
MT15	**Las Vizcachas**	**1.78**	**141**	⇓*i*P	**Pb**	**09 46 50.6**	**-0.8**
MT15				*i* S	**Sn**	**09 47 12.2**	**+0.3**
MT15				IAML		09 47 14.8	
	comp=N,2μm,0.2s						
MT12	**Pirque**	**1.87**	**144**	⇓*i*P	**Pb**	**09 46 51.7**	**-1.0**
MT12				*i* S	**Sb**	**09 47 14.9**	**-1.1**
MT12				IAML		09 47 19.7	
	comp=N,2μm,0.3s						
MT04	**Ro Olivares**	**1.87**	**130**	⇓*i*P	**Pb**	**09 46 51.8**	**-1.1**
MT04				*i* S	**Sn**	**09 47 14.3**	**0.0**
MT04	**Ro Olivares**	**1.87**	**130**	*e*P	**Pb**	**09 46 52.1**	**-0.8**
MT04				*e*S	**Sb**	**09 47 15.9**	**-0.4**
MT04				IAML		09 47 17.0	
	comp=Z,413nm,0.3s						
MT08	**Bocatoma Ro**	**1.97**	**129**	⇓*i*P	**Pb**	**09 46 53.9**	**-0.8**
MT08				*i* S	**Sn**	**09 47 17.5**	**+0.6**
MT08	**Bocatoma Ro**	**1.97**	**129**	*e*P	**Pb**	**09 46 54.0**	**-0.6**
MT08				*e*S	**Sb**	**09 47 19.6**	**+0.3**
MT08				IAML		09 47 23.6	
	comp=Z,325nm,0.8s						
MT13	**San Alfonso**	**2.01**	**139**	*i* P	**Pb**	**09 46 54.1**	**-1.2**
MT13				*i* S	**Sn**	**09 47 18.3**	**+0.6**
MT13				IAML		09 47 25.8	
	comp=N,1μm,0.5s						
MT13	**San Alfonso**	**2.01**	**139**	*e*P	**Pb**	**09 46 54.4**	**-0.9**
MT13				*e*S	**Sb**	**09 47 19.7**	**-0.6**
MT13				IAML		09 47 35.0	
	comp=Z,437nm,0.6s						
BO04	**La Punta**	**2.05**	**150**	⇓*i*P	**Pb**	**09 46 54.7**	**-1.2**
BO04				*i* S	**Sn**	**09 47 19.2**	**+0.6**
BO04				IAML		09 47 27.3	
	comp=E,703nm,0.3s						
LMEL	**Las Melosas**	**2.13**	**140**	⇓*i*P	**Pb**	**09 46 55.8**	**-1.7**
LMEL				*i* S	**Sn**	**09 47 21.1**	**+0.3**
LMEL				IAML		09 47 31.0	
	comp=N,728nm,0.2s						
GO04	**Tololo Observa**	**2.23**	**24**	*i* S	**Sb**	**09 47 27.4**	**+0.7**
GO04	**Tololo Observa**	**2.23**	**24**	*e*P	**Pb**	**09 46 59.5**	**+0.4**
GO04				*e*S	**Sb**	**09 47 28.0**	**+1.2**
GO04				IAML		09 47 30.5	
	comp=Z,2μm,0.7s						
BO01	**Tunca**	**2.26**	**164**	*i* P	**Pn**	**09 46 57.1**	**+1.3**
BO01	**Tunca**	**2.26**	**164**	*e*P	**Pn**	**09 46 57.2**	**+1.4**
BO01				*e*S	**Sn**	**09 47 24.5**	**+0.9**
CO05	**La Serena**	**2.35**	**13**	*i* S	**Sb**	**09 47 30.5**	**+0.5**
CO05				IAML		09 47 38.9	
	comp=E,1μm,0.4s						
ARCO	**CERRO ARCO**	**2.54**	**105**	*e*P	**Pn**	**09 46 59.6**	**-0.4**
ARCO				*e*S	**Sb**	**09 47 35.1**	**-0.6**
ARCO				IAML		09 47 45.7	
	comp=Z,356nm,0.6s						
ASAL	**Salagasta**	**2.58**	**99**	*e*P	**Pb**	**09 47 06.0**	**+1.0**
ASAL				*e*S	**Sg**	**09 47 49.0**	**+7.3**
AAGR	**Agrelo**	**2.69**	**109**	*e*P	**Pb**	**09 47 06.9**	**0.0**
AAGR				*e*S	**Sg**	**09 47 45.6**	**+0.3**
AAGR				IAML		09 47 54.6	
	comp=Z,212nm,0.7s						
CO01	**Juntas del Tor**	**2.70**	**34**	*i* P	**Pb**	**09 47 05.2**	**-1.9**
CO01				*i* S	**Sb**	**09 47 38.0**	**-2.2**
CO01				IAML		09 47 44.3	
	comp=N,624nm,0.3s						
CO01	**Juntas del Tor**	**2.70**	**34**	*e*P	**Pb**	**09 47 05.2**	**-1.9**
CO01				*e*S	**Sb**	**09 47 39.4**	**-0.8**
CO01				IAML		09 47 44.5	
	comp=Z,380nm,0.2s						
BO02	**Sierra Bellavi**	**2.72**	**161**	*i* P	**Pn**	**09 47 03.7**	**+1.5**
BO02				*i* S	**Sn**	**09 47 36.3**	**+1.2**
BO02	**Sierra Bellavi**	**2.72**	**161**	*e*P	**Pn**	**09 47 03.9**	**+1.6**
BO02				*e*S	**Sn**	**09 47 37.4**	**+2.3**
BO02				IAML		09 47 47.7	
	comp=Z,399nm,0.5s						
GO05	**Hualane**	**2.78**	**181**	*e*P	**Pn**	**09 47 03.8**	**+0.7**
GO05				*e*S	**Sn**	**09 47 38.3**	**+1.7**
GO05				IAML		09 47 55.9	
	comp=Z,144nm,0.7s						
SJA	**San Juan**	**2.89**	**77**	*e*P	Pn	09 46 53.0	-12
SJA				IAML		09 47 57.5	
	comp=Z,183nm,0.2s						
ACCO	**Cerro Coronel**	**2.89**	**56**	*e*P	**Pb**	**09 47 09.4**	**-1.0**
ACCO				*e*S	**Sg**	**09 47 49.8**	**-1.7**
AROD	**Rodeo**	**2.89**	**46**	*e*P	**Pb**	**09 47 09.3**	**-1.1**
AROD				*e*S	**Sb**	**09 47 45.2**	**-0.6**
RTLL	**Cerro Villicun**	**3.01**	**74**	*e*P	**Pb**	**09 47 10.9**	**-1.4**
RTLL				*e*P	Pn	09 47 11.3	+5.0
RTLL				*e*S	**Sb**	**09 47 46.7**	**-2.4**
RTLL				IAML		09 48 02.3	
	comp=Z,411nm,0.6s						
AVIZ	**Vizcacheras**	**3.08**	**115**	*e*P	**Pb**	**09 47 11.3**	**-2.1**
ACDV	**Cuesta del Vie**	**3.11**	**50**	*e*S	**Sb**	**09 47 50.1**	**-1.8**
ACDV				IAML		09 48 05.4	
	comp=Z,209nm,0.6s						
LCO	**Las Campanas**	**3.35**	**18**	*e*P	**Pn**	**09 47 12.3**	**+1.2**
LCO				*e*S	**Sn**	**09 47 52.7**	**+1.8**
LCO				IAML		09 48 09.9	
	comp=Z,432nm,0.6s						
ML02	**Panimavida**	**3.55**	**174**	*e*P	**Pg**	**09 47 27.3**	**+0.5**
ML02				IAML		09 48 20.2	
	comp=Z,243nm,0.7s						
AC05	**El Transito**	**3.64**	**22**	*e*P	**Pn**	**09 47 17.7**	**+2.8**
AC05				*e*S	**Sn**	**09 47 56.3**	**-1.5**
AC05				IAML		09 48 18.9	
	comp=Z,213nm,0.8s						
RFA	**San Rafael**	**3.81**	**133**	*e*P	**Pn**	**09 47 20.7**	**+3.5**
RFA				*e*S	**Sn**	**09 47 54.2**	**-7.7**
RFA				IAML		09 48 22.4	
	comp=Z,64nm,1.3s						
AC04	**Llanos de Chal**	**4.06**	**10**	*e*P	**Pn**	**09 47 21.7**	**+1.1**
AC04				*e*S	**Sb**	**09 48 17.5**	**-1.6**
AC04				IAML		09 48 36.3	
	comp=Z,167nm,0.5s						
BI02	**San Fabin de**	**4.46**	**174**	*e*P	**Pn**	**09 47 27.4**	**+1.2**
BI02				IAML		09 49 26.1	
	comp=Z,118nm,0.8s						
VCA	**Vinchina**	**4.69**	**43**	*e*P	Pn	09 47 34.0	+4.6
VCA				*e*S	**Sb**	**09 48 32.4**	**-5.0**
VCA				IAML		09 48 46.1	
	comp=Z,256nm,0.6s						
ACLC	**CERRO LA CRUZ**	**5.05**	**58**	*e*P	**Pn**	**09 47 37.9**	**+3.4**

PB01				IAML		09 48 40.3	
	comp=E,83nm,0.3s						
PB07	**IPOC Station P**	**2.34 286**	⇑	*e*P	**Pn**	**09 48 08.8**	**+0.3**
PB07				IAML		09 48 39.3	
	comp=N,167nm,0.2s						
PB02	**IPOC Station P**	**2.50 295**		*e*P	**Pn**	**09 48 10.1**	**-0.1**
PB02				IAML		09 48 42.5	
	comp=N,159nm,0.3s						
PB02	**IPOC Station P**	**2.50 295**		Pg	**Pn**	**09 48 10.4**	**+0.2**
PB02				Sg	**Sn**	**09 48 41.8**	**-1.0**
PB02				IAML		09 48 42.3	
	comp=N,132nm,0.4s						
PB05	**IPOC Station P**	**2.58 259**	⇑	*e*P	**Pn**	**09 48 11.2**	**0.0**
PB05				IAML		09 48 46.1	
	comp=E,35nm,0.2s						
PB08	**IPOC Station P**	**2.73 324**		*e*P	**Pn**	**09 48 14.3**	**+1.0**
PB08				IAML		09 48 51.7	
	comp=E,25nm,0.2s						
PB08	**IPOC Station P**	**2.73 324**		Pg	**Pn**	**09 48 14.3**	**+1.0**
GO01	**Chusmiza**	**3.15 329**		*e*P	**Pn**	**09 48 18.8**	**+0.2**
GO01	**Chusmiza**	**3.15 329**		Pg	**Pn**	**09 48 18.8**	**+0.2**
PB11	**IPOC Station P**	**3.32 321**		*e*P	**Pn**	**09 48 19.4**	**-1.0**
PB11	**IPOC Station P**	**3.32 321**		Pg	**Pn**	**09 48 19.7**	**-0.7**
PB14	**IPOC Station P**	**3.51 230**		Pg	**Pn**	**09 48 22.4**	**-0.4**
PB16	**IPOC Station P**	**4.46 334**		Pg	**Pn**	**09 48 35.4**	**0.0**

*IDC **10** 10:11:02.1±0.5,36˚.39N×144˚.19E,h0km,mb4.5/27, mbtmp4.5/34,ML4.3/6,MS3.8/44,Error ellipse: s-maj=13.4km s-min=12.4km az=173.0*

*BJI **10** 10:11:03.7,36˚.54N×144˚.03E,h14km,mB5.0/13,mb4.7/61, Ms4.1/16,Ms7 4.0/18*

*NIED **10** 10:11:07.0,36˚.50N×143˚.89E,h57km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-3.67; Mθθ 0.85; Mϕϕ 2.82; Mrθ-2.51; Mθϕ 2.05; Mϕr-2.78; Fault plane solution: M0 5.40000×10¹⁵ NP1: ϕs204.00000°,δ24.00000°,λ-105.00000°. NP2: ϕs39.00000°,δ67.00000°,λ-84.00000°.*

*JMA **10** 10:11:07.0±0.2,36˚.5N±0˚.6×14˚.4E±˚,h57km,MD5.0/65, MW4.6/65,FAR E OFF CENTRAL HONSHU*

*NEIC **10** 10:11:07.7±1.8,36˚.41N±0˚.04×144˚.1E±0˚.1,h32km±4km, mb4.8/178,Error ellipse: s-maj=13.1km s-min=5.1km az=105.0*

ISC 10 10:11:07.4±0.5,36˚45N±0˚.05×144˚01E±0˚.05,h31km±2km, h31km:pP-P,n484,σ1s28/414,mb4.8/128,MS3.9/44,3C-3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**2.66**	**285**	P	**Pn**	**10 11 47.0**	**-1.2**
ONAJ				*e*S	**Sn**	**10 12 16.7**	**-2.7**
JFK	**Kawauchi**	**2.68**	**291**	P	**Pn**	**10 11 47.3**	**-1.1**
JFK				A	A	10 11 47.3	
	comp=N,4.0nm,0.9s,comp=E,4.0nm,0.8s						
JFK				*e*S	**Sn**	**10 12 17.0**	**-2.7**
JIKH	**Ishinomakikobu**	**2.75**	**313**	P	**Pn**	**10 11 48.0**	**-1.3**
JIKH				*e*S	**Sn**	**10 12 18.1**	**-3.4**
JHYU	**Hitachinakayam**	**2.77**	**269**	P	**Pn**	**10 11 48.8**	**-0.7**
JHYU				*e*S	**Sn**	**10 12 18.8**	**-3.0**
JHO	**Hitachi**	**2.78**	**274**	P	**Pn**	**10 11 48.6**	**-1.1**
JHO				*e*S	**Sn**	**10 12 19.4**	**-2.8**
JMST	**Minamisoumatoc**	**2.81**	**298**	A	A	10 11 49.0	
	comp=N,14nm,1.0s,comp=E,8.0nm,1.1s						
BSO1	**Boso 1**	**3.05**	**235**	*e*P	**Pn**	**10 11 52.4**	**-0.6**
BSO1				*e*S	**Sn**	**10 12 27.7**	**-0.4**
JYT	**Yasato**	**3.09**	**267**	P	**Pn**	**10 11 52.8**	**-1.2**
JOTO	**OTAMA OYAMA**	**3.15**	**292**	P	**Pn**	**10 11 54.6**	**-0.2**
JOTO				A	A	10 11 54.6	
	comp=N,17nm,1.0s,comp=E,21nm,1.0s						
JOTO				*e*S	**Sn**	**10 12 29.9**	**-1.4**
JOFO	**Osakifurukawao**	**3.27**	**312**	A	A	10 11 55.6	
	comp=N,18nm,0.8s,comp=E,20nm,0.5s						
JOU	**Okura**	**3.28**	**307**	A	A	10 11 55.8	
	comp=N,7.0nm,1.8s,comp=E,7.0nm,1.4s						
BSO3	**Boso 3**	**3.29**	**241**	*e*P	**Pn**	**10 11 56.6**	**+0.1**
BSO3				*e*S	**Sn**	**10 12 34.7**	**+0.3**
BSO4	**Boso 4**	**3.32**	**245**	*e*P	**Pn**	**10 11 57.1**	**+0.1**
JSB	**Shiboa**	**3.33**	**280**	A	A	10 11 56.5	
	comp=N,11nm,1.2s,comp=E,11nm,1.0s						
JMK	**Ichinoseki**	**3.34**	**319**	P	**Pn**	**10 11 56.1**	**-1.3**
JMK				*e*S	**Sn**	**10 12 33.1**	**-2.9**
JYAR	**Yonezawaarcadi**	**3.42**	**297**	A	A	10 11 57.6	
	comp=N,18nm,1.1s,comp=E,12nm,1.2s						
JAG	**Ashikaga**	**3.67**	**271**	P	**Pn**	**10 12 01.3**	**-0.8**
JAG				*e*S	**Sn**	**10 12 41.4**	**-3.0**
JRY	**Ryogami san**	**4.15**	**266**	P	**Pn**	**10 12 07.9**	**-0.8**
JRY				*e*S	**Sn**	**10 12 52.5**	**-3.7**
MJAR	**Matsushiro Arr**	**4.68**	**273**	Pn	**Pn**	**10 12 15.8**	**0.0**
	comp=E,3.4nm,0.3s,baz=89,slow=15,SNR=128						
MJAR				Sn	**Sn**	**10 13 08.1**	**-1.0**
	comp=E,5.8nm,0.3s,baz=244,slow=28,SNR=5.4						
MJAR				LR	LR	10 14 11.7	
	comp=E,773nm,20.9s,baz=96,slow=39 comp=E,31nm,0.4s						
MJAR	**Matsushiro Arr**	**4.68**	**273**		**Pn**	**10 12 16.4**	**+0.6**
MAJO	**Matsushiro**	**4.68**	**273**		**Pn**	**10 12 16.8**	**+0.9**
MJB9	**Matsu-Tunnel**	**4.68**	**273**		**Pn**	**10 12 17.8**	**+1.9**
JHJ2	**Mitsune**	**4.79**	**227**	Pn	**Pn**	**10 12 17.0**	**-0.4**
JHJ2					**Sn**	**10 13 07.8**	**-4.1**
JHJ2	**Mitsune**	**4.79**	**227**	P	**Pn**	**10 12 16.0**	**-1.4**
JHJ	**Hachijo jima 2**	**4.81**	**228**	Pn	**Pn**	**10 12 16.4**	**-1.2**
	comp=E,106nm,0.3s,baz=338,slow=22,SNR=24						
JHJ				Sn	**Sn**	**10 13 07.7**	**-4.6**
	comp=E,406nm,0.3s,baz=43,slow=24,SNR=16 comp=E,228nm,0.2s						
JSG	**Sagara**	**5.07**	**251**	Pn	**Pn**	**10 12 22.7**	**+1.5**
JNY	**Yasuok**	**5.11**	**260**	*e*P	**Pn**	**10 12 22.9**	**+1.1**
JHMK	**Hamakita**	**5.34**	**254**	*e*P	**Pn**	**10 12 25.6**	**+0.7**
HMMJ	**Hamamatsu 2**	**5.36**	**255**	*e*P	**Pn**	**10 12 26.4**	**+1.2**
HMMJ				*e*S	**Sn**	**10 13 25.6**	**-0.3**
JOT	**Ohata**	**5.44**	**336**	*e*P	**Pn**	**10 12 25.3**	**-1.0**
JGF	**Kuroka**	**5.46**	**263**		**Pn**	**10 12 28.0**	**+1.4**
INU	**Inuyama**	**5.78**	**261**		**Pn**	**10 12 31.2**	**+0.2**
JCH	**Churui**	**6.18**	**356**	⇓*e*P	**Pn**	**10 12 33.8**	**-2.7**
JCH				⇓*e*S	Sn	10 13 38.0	-8.0
JIE	**Ise**	**6.31**	**253**	*e*P	**Pn**	**10 12 38.6**	**+0.5**
JOSM	**Okushiri--Mats**	**6.64**	**329**	*e*P	**Pn**	**10 12 41.3**	**-1.4**
JKA	**Kamikawa-asahi**	**7.74**	**352**		**Pn**	**10 12 56.1**	**-1.8**
JKA	**Kamikawa-asahi**	**7.74**	**352**		**Sn**	**10 14 18.2**	**-6.1**
ASAJ	**Asahikawa**	**7.74**	**352**	Pn	**Pn**	**10 12 56.6**	**-1.2**
	comp=E,19nm,0.3s,baz=207,slow=13,SNR=116						
ASAJ				Sn	**Sn**	**10 14 18.2**	**-6.1**
	comp=E,4.4nm,0.3s,baz=90,slow=27,SNR=4.3						
ASAJ				LR	LR	10 16 17.4	
	comp=E,304nm,21.6s,baz=190,slow=40 comp=E,93nm,0.5s						
JMN	**Monobe**	**8.73**	**255**		**Pn**	**10 13 13.0**	**+1.4**
JCJ	**Chichijima**	**9.45**	**190**	Pn	Pn	10 13 04.0	-17
	comp=E,17nm,0.3s,baz=116,slow=23,SNR=5.6						
JCJ				Sn	Sn	10 14 41.8	-25
	comp=E,38nm,0.3s,baz=285,slow=22,SNR=10						
JCJ				LR	LR	10 17 42.7	
	comp=E,107nm,18.7s,baz=337,slow=43						
JCJ	**Chichijima**	**9.45**	**190**		**Pn**	**10 13 17.9**	**-3.5**
YSS	**Yuzhno-Sakhali**	**10.54**	**355**		**Pn**	**10 13 35.6**	**-0.6**
JNU	**Nakatsue**	**11.30**	**257**	Pn	**Pn**	**10 13 46.7**	**0.0**
	comp=E,0.6nm,0.3s,baz=79,slow=9.1,SNR=6.0						
JNU				LR	LR	10 18 52.7	
	comp=E,572nm,18.6s,baz=77,slow=41 comp=E,15nm,0.8s						
USRK	**Ussuriysk Ar.**	**12.00**	**314**	Pn	**Pn**	**10 13 57.0**	**+0.8**
	comp=E,1.6nm,0.3s,baz=122,slow=14,SNR=14 comp=E,22nm,0.7s						
KSRS	**Korea Array**	**12.91**	**279**	Pn	**Pn**	**10 14 10.3**	**+1.6**
	comp=E,0.4nm,0.3s,baz=92,slow=14,SNR=13						
KSRS				LR	LR	10 18 38.4	
	comp=E,317nm,20.8s,baz=85,slow=35 comp=E,5.0nm,0.8s						
MDJ	**Mudanjiang**	**13.66**	**311**	Pn	**Pn**	**10 14 18.9**	**+0.1**
MDJ	**Mudanjiang**	**13.66**	**311**	P	**Pn**	**10 14 19.1**	**+0.3**
MDJ				sP	P	10 14 29.7	+2.5
MDJ				S	**Sn**	**10 16 51.2**	**+1.9**
MDJ				pmax	pmax		
	comp=E,16nm,0.8s						
MDJ				LR	LR		
	comp=E,560nm,9.5s						
MDJ				LR	LR		
	comp=E,440nm,11.2s						
MDJ				LR	LR		
	comp=E,630nm,12.0s						
BNX	**BinXian**	**15.56**	**312**	⇑P	**Pn**	**10 14 42.6**	**-1.8**
BNX				pmax	pmax		
	comp=E,13nm,1.1s						
KLR	**Kul'dur**	**15.60**	**329**	LR	LR	10 20 33.3	
	comp=E,89nm,19.6s,baz=144,slow=36						
CN2	**Changchun**	**15.97**	**303**	P	**Pn**	**10 14 48.5**	**-1.1**
CN2				S	**Sn**	**10 17 45.6**	**0.0**
CN2				pmax	pmax		
	comp=E,10.0nm,1.0s						
CN2				LR	LR		
	comp=E,230nm,14.0s						
CN2				LR	LR		
	comp=E,390nm,14.0s						
CN2				LR	LR		
	comp=E,330nm,16.0s						
PETK	**Petropavlovsk-**	**19.23**	**26**	P	**P**	**10 15 27.2**	**-1.6**
	comp=E,4.2nm,0.9s,baz=201,slow=7.4,SNR=1.7						
NJ2	**Nanjing**	**21.23**	**265**	*e*P	**P**	**10 15 51.8**	**+1.1**
NJ2				pmax	pmax		
	comp=E,7.0nm,0.7s						
TIA	**Tai'an**	**21.64**	**277**	P	**P**	**10 15 53.1**	**-2.0**
TIA				pmax	pmax		
	comp=E,12nm,1.4s						
TIA				LR	LR		
	comp=E,260nm,15.7s						
TIA				LR	LR		
	comp=E,300nm,15.4s						
TIA				LR	LR		
	comp=E,360nm,20.6s						
HILR	**Hailar Array B**	**21.94**	**314**	P	**P**	**10 15 57.7**	**-0.5**
	comp=E,18nm,0.6s,baz=112,slow=13,SNR=18 comp=E,18nm,0.6s						
BJI2	**Beijing**	**22.12**	**288**	P	**P**	**10 16 00.9**	**+0.7**
BJI2				pmax	pmax		
	comp=E,5.0nm,0.7s						
BJT	**Baijiatuao**	**22.12**	**288**		**P**	**10 16 01.7**	**+1.5**
XLT	**XiLinHaoTe**	**22.53**	**298**	*e*P	**P**	**10 16 04.0**	**-0.7**
XLT				pP	pP	10 16 07.8	-3.4
XLT				PP	**PnPn**	**10 16 31.2**	**+2.8**
XLT				pmax	pmax		
	comp=E,17nm,1.1s						
GUMO	**Guam**	**22.77**	**178**	LR	LR	10 24 19.4	
	comp=E,82nm,19.4s,baz=52,slow=35						
HNS	**HongShan**	**23.41**	**281**	⇑P	**P**	**10 16 11.9**	**-1.7**
HNS				S	**S**	**10 20 20.3**	**-4.4**
HNS				pmax	pmax		
	comp=E,14nm,0.8s						
HNS				LR	LR		
	comp=E,240nm,12.3s						
HNS				LR	LR		
	comp=E,340nm,13.5s						
SSLB	**Suanglung**	**23.53**	**244**	P	**P**	**10 16 14.5**	**-0.4**
SSLB				IAmb	IAmb	10 16 20.0	
	comp=Z,24nm,1.0s						
TPUB	**Ta-pu**	**24.06**	**243**	P	**P**	**10 16 20.3**	**+0.4**
TIY	**Taiyuan**	**25.17**	**282**	*e*P	**P**	**10 16 32.2**	**+2.2**
TIY				pmax	pmax		
	comp=Z,15nm,0.9s						
WHN	**Wuhan**	**25.37**	**265**	⇑P	**P**	**10 16 32.6**	**+0.9**
WHN				pP	**pP**	**10 16 37.6**	**-1.2**
WHN				pmax	pmax		
	comp=Z,42nm,0.8s						
WHN				LR	LR		
	comp=Z,730nm,15.7s						
HHC	**Hu-ho-hao-te**	**25.64**	**290**	*e*P	**P**	**10 16 35.3**	**+1.1**
HHC				sP	sP	10 16 46.8	+2.3
HHC				S	**S**	**10 20 58.3**	**-2.2**
HHC				sS	sS	10 21 13.8	+1.7
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
LYN	**LuoYang**	**25.70**	**275**	P	**P**	**10 16 35.8**	**+1.1**
LYN				pP	pP	10 16 39.9	-1.8
LYN				pmax	pmax		
	comp=Z,42nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**26.07**	**124**	T	T	10 43 36.8	
	baz=315,slow=74,SNR=22						
H11N1	**WAKE ISLAND Hy**	**26.08**	**124**	T	T	10 43 27.1	
	baz=315,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**26.09**	**124**	T	T	10 43 47.7	
	baz=315,slow=74,SNR=22						
H11S1	**WAKE ISLAND Hy**	**26.80**	**126**	T	T	10 44 39.2	
	baz=312,slow=74,SNR=29						
H11S3	**WAKE ISLAND Hy**	**26.80**	**126**	T	T	10 44 41.2	
	baz=312,slow=74,SNR=22						
H11S2	**WAKE ISLAND Hy**	**26.82**	**126**	T	T	10 44 46.6	
	baz=312,SNR=9.6						
BTO2	**Baotou**	**26.92**	**290**	*e*P	**P**	**10 16 47.8**	**+2.0**
BTO2				pP	**pP**	**10 16 52.0**	**-1.0**
BTO2				sP	**sP**	**10 16 54.8**	**-1.3**
BTO2				PP	**PnPn**	**10 17 33.5**	**+5.1**
BTO2				S	**S**	**10 21 27.9**	**+7.1**
BTO2				pmax	pmax		
	comp=Z,24nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,410nm,8.7s						
YAK	**Yakutsk**	**27.14**	**345**	LR	LR	10 27 57.3	
	comp=Z,219nm,19.8s,baz=122,slow=37						
XAN	**Xi'an**	**28.67**	**276**	⇓P	**P**	**10 17 01.6**	**+0.2**
XAN				pmax	pmax		
	comp=Z,20nm,0.7s						
ULN	**Ulaanbaatar**	**29.41**	**304**		**P**	**10 17 08.3**	**+0.3**
SONM	**Songino Array**	**29.84**	**304**	P	**P**	**10 17 13.1**	**+1.3**
	comp=Z,5.8nm,0.9s,baz=104,slow=9.2,SNR=23						
SONM				LR	LR	10 29 31.9	
	comp=Z,146nm,18.4s,baz=52,slow=37 comp=Z,5.8nm,0.9s						
SONM	**Songino Array**	**29.84**	**304**		**P**	**10 17 11.6**	**-0.3**
LZH	**Lanzhou**	**32.23**	**282**	*e*P	P	10 17 41.2	+8.2
LZH				sP	pwP	10 17 56.5	+8.2
LZH				pmax	pmax		
	comp=Z,10.0nm,1.5s						
LZH				LR	LR		
	comp=N,210nm,16.5s						
LZH				LR	LR		
	comp=E,310nm,14.1s						
LZH				LR	LR		
	comp=Z,310nm,17.5s						
TLY	**Talaya**	**32.29**	**311**	P	**P**	**10 17 33.4**	**+0.2**
LZDM	**Lanzhou Array**	**32.37**	**281**	P	**P**	**10 17 35.2**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=77,slow=6.7,SNR=4.5 comp=Z,1.1nm,0.4s						
DAV	**Davao City (W)**	**33.74**	**214**	LR	LR	10 30 10.9	
	comp=Z,45nm,20.8s,baz=34,slow=34						
CD2	**Chengdu**	**33.77**	**272**	P	**P**	**10 17 46.9**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA2	**Gaotai**	**34.76**	**289**	P	**P**	**10 17 56.8**	**+1.8**
GTA2				PcP	**PcP**	**10 20 28.9**	**+0.8**
GTA2				pmax	pmax		
	comp=Z,24nm,1.0s						
GTA2				LR	LR		
	comp=Z,250nm,15.5s						
GTA2				LR	LR		
	comp=Z,240nm,14.7s						
GTA2				LR	LR		
	comp=Z,270nm,17.1s						
TIXI	**Tiksi**	**36.14**	**352**	LR	LR	10 35 47.8	
	comp=Z,96nm,18.4s,baz=187,slow=41						
TIXI	**Tiksi**	**36.14**	**352**		**P**	**10 18 05.8**	**-0.5**
TIXI	**Tiksi**	**36.14**	**352**	PcP	**PcP**	**10 20 28.0**	**-3.4**
NIKH	**Nikolski High**	**36.60**	**48**	P	**P**	**10 18 13.3**	**+2.9**
	baz=262						
SPIA	**Saint Paul Isl**	**36.63**	**41**	P	**P**	**10 18 12.1**	**+1.6**
	baz=255						
P08K	**Saint George I**	**36.86**	**42**	P	**P**	**10 18 14.4**	**+1.8**
	baz=257						
PZH	**PanZhiHua**	**37.14**	**267**	P	**P**	**10 18 16.6**	**+1.1**
UNV	**Unalaska Valle**	**38.11**	**47**	P	**P**	**10 18 25.5**	**+2.3**
	baz=263						
GAMB	**Gambell**	**38.16**	**30**	P	**P**	**10 18 23.9**	**+0.5**
	baz=246						
JAY	**Jayapura**	**38.88**	**185**	LR	LR	10 31 11.8	
	comp=Z,32nm,21.9s,baz=9.0,slow=31						
FALS	**False Pass**	**40.01**	**46**	P	**P**	**10 18 40.5**	**+1.5**
	baz=265						
TNA	**Tin City**	**40.36**	**29**	P	**P**	**10 18 42.1**	**+0.4**
TNA	**Tin City**	**40.36**	**29**	P	**P**	**10 18 42.8**	**+1.0**
	baz=248						
K13K	**Kusilvak Mount**	**40.59**	**35**	P	**P**	**10 18 45.2**	**+1.4**
	baz=255						
M13K	**Dall Lake**	**40.86**	**37**	P	**P**	**10 18 47.6**	**+1.6**
	baz=258						
F14K	**Arctic Creek**	**40.94**	**29**	P	**P**	**10 18 47.6**	**+0.9**
	baz=250,SNR=5.7						
ANM	**Nome**	**41.02**	**31**		**P**	**10 18 48.3**	**+0.9**
ANM	**Nome**	**41.02**	**31**	P	**P**	**10 18 48.1**	**+0.8**
	baz=252,SNR=5.9						
J14K	**Nanvaranak Lak**	**41.29**	**34**	P	**P**	**10 18 50.4**	**+0.9**
	baz=256						
L14K	**Kuka Creek**	**41.37**	**36**	P	**P**	**10 18 51.2**	**+1.0**
	baz=258						
N14K	**Kuskokwak Cree**	**41.59**	**38**	P	**P**	**10 18 53.7**	**+1.7**
	baz=261						
M14K	**Bethel**	**41.60**	**37**	P	**P**	**10 18 52.4**	**+0.3**
M14K				IAmb	IAmb	10 18 54.3	
	comp=Z,60nm,1.9s						
M14K	**Bethel**	**41.60**	**37**	P	**P**	**10 18 53.0**	**+1.0**
	baz=259						
F15K	**North Star Dit**	**41.68**	**29**	P	**P**	**10 18 53.7**	**+1.0**
	baz=251						
O14K	**Tigyukauivet M**	**41.70**	**39**	P	**P**	**10 18 54.4**	**+1.6**
	baz=262						
G15K	**Niukluk**	**41.70**	**30**	P	**P**	**10 18 54.2**	**+1.3**
	baz=253						
SDPT	**Sand Point**	**41.73**	**45**	P	**P**	**10 18 54.9**	**+1.6**
	baz=267						
L15K	**Ungalak Mounta**	**42.00**	**35**	P	**P**	**10 18 55.8**	**+0.5**
	baz=259						
K15K	**Wolf Creek Mou**	**42.10**	**35**	P	**P**	**10 18 56.8**	**+0.6**
	baz=258						
M15K	**Kasigluk River**	**42.20**	**37**	P	**P**	**10 18 57.6**	**+0.6**
	baz=261						
CHNA	**Chernabura Isl**	**42.22**	**46**	P	**P**	**10 18 58.5**	**+1.3**
	baz=268						
C16K	**Lisburne Hills**	**42.33**	**25**	P	**P**	**10 18 58.2**	**+0.2**
	baz=248						
N15K	**Kwethluk River**	**42.42**	**38**	P	**P**	**10 18 59.4**	**+0.6**
	baz=262						
O15K	**Ungalikthiuk R**	**42.42**	**39**	P	**P**	**10 18 59.7**	**+0.8**
	baz=263						
G16K	**Koyuk River**	**42.50**	**30**	P	**P**	**10 18 59.7**	**+0.4**
	baz=254						
J16K	**Anvik River**	**42.73**	**33**	P	**P**	**10 19 01.6**	**+0.4**
	baz=258						
I17K	**Unalakleet**	**42.81**	**32**	P	**P**	**10 19 02.1**	**+0.2**
	baz=257						
D17K	**Noatak River**	**42.92**	**27**	P	**P**	**10 19 03.2**	**+0.5**
	baz=251,SNR=6.4						
L16K	**Owhat River**	**42.95**	**36**	P	**P**	**10 19 03.3**	**+0.3**
	baz=261						
WMQ	**Urumqi**	**42.96**	**298**	*e*P	**P**	**10 19 06.5**	**+2.9**
M16K	**Timber Creek**	**43.09**	**37**	P	**P**	**10 19 04.3**	**+0.1**
	baz=262						
RDOG	**Red Dog Mine**	**43.10**	**26**	P	**P**	**10 19 04.7**	**+0.4**
	baz=251						
N16K	**Nishlik Lake**	**43.11**	**38**	P	**P**	**10 19 05.4**	**+1.0**
	baz=263						
C17K	**DeLong Mountai**	**43.15**	**25**	P	**P**	**10 19 04.8**	**+0.1**
	baz=250						
E17K	**Hotham Inlet**	**43.19**	**28**	P	**P**	**10 19 05.3**	**+0.4**
	baz=253						
CHTO	**Chiang Mai**	**43.19**	**258**	P	**P**	**10 19 06.3**	**+0.7**
G17K	**Kiwalik Mounta**	**43.21**	**30**	P	**P**	**10 19 05.6**	**+0.4**
	baz=256						
F17K	**Baldwin Pennin**	**43.22**	**29**	P	**P**	**10 19 05.5**	**+0.3**
	baz=254						
O16K	**Kokwok River B**	**43.35**	**39**	P	**P**	**10 19 07.8**	**+1.5**
	baz=264						
P16K	**Nushagak River**	**43.35**	**40**	P	**P**	**10 19 07.9**	**+1.6**
	baz=265						
H17K	**Granite Mounta**	**43.38**	**31**	P	**P**	**10 19 07.5**	**+1.0**
	baz=257						
CMAR	**Chiang Mai Arr**	**43.39**	**258**	P	**P**	**10 19 07.8**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=46,slow=6.6,SNR=19						
CMAR				LR	LR	10 39 35.4	
	comp=Z,82nm,18.3s,baz=25,slow=39 comp=Z,3.6nm,0.8s						
R16K	**Pilot Point**	**43.46**	**42**	P	**P**	**10 19 08.8**	**+1.5**
	baz=267						
L17K	**Donlin**	**43.56**	**35**	P	**P**	**10 19 09.1**	**+1.1**
	baz=261						
K17K	**Iditarod**	**43.65**	**34**	IAmb	IAmb	10 19 11.0	
	comp=Z,14nm,1.0s						
K17K	**Iditarod**	**43.65**	**34**	P	**P**	**10 19 09.7**	**+0.9**
	baz=261,SNR=5.2						
E18K	**Tukpahlearik C**	**43.74**	**27**	P	**P**	**10 19 10.1**	**+0.7**
	baz=254						
ZAA0	**Zalesovo Array**	**43.85**	**313**	P	**P**	**10 19 10.5**	**+0.1**
ZAA0				IAmb	IAmb	10 19 12.0	
	comp=Z,18nm,0.9s						
ZALV	**Zalesovo Beam**	**43.85**	**313**	P	**P**	**10 19 11.3**	**+0.8**
	comp=Z,14nm,0.8s,baz=97,slow=7.6,SNR=24						
ZALV				PcP	**PcP**	**10 20 55.9**	**-0.5**
	comp=Z,6.5nm,0.6s,baz=89,slow=2.6,SNR=8.0						
ZALV				LR	LR	10 38 16.9	
	comp=Z,133nm,18.3s,baz=102,slow=37 comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	**43.85**	**313**	P	**P**	**10 19 10.8**	**+0.4**
O17K	**Koliganek Bris**	**43.87**	**39**	P	**P**	**10 19 10.9**	**+0.4**
	baz=265						
M17K	**Holitna River**	**43.87**	**36**	P	**P**	**10 19 10.7**	**+0.1**
	baz=263						
F18K	**Selawik**	**43.88**	**29**	P	**P**	**10 19 10.9**	**+0.4**
	baz=256						
N17K	**Nushagak Hills**	**43.89**	**38**	P	**P**	**10 19 11.1**	**+0.4**
	baz=264						
C18K	**Utukok River**	**43.90**	**26**	P	**P**	**10 19 10.6**	**-0.1**
	baz=252						
Q16K	**King Salmon**	**44.01**	**40**	P	**P**	**10 19 12.5**	**+0.8**
	baz=267						
H18K	**Honhosa River**	**44.07**	**31**	P	**P**	**10 19 12.8**	**+0.8**
	baz=258,SNR=5.2						
G18K	**Tagagawik**	**44.11**	**30**	P	**P**	**10 19 12.6**	**+0.2**
	baz=257,SNR=12						
R17L	**Mt. Peulik Vol**	**44.12**	**42**	P	**P**	**10 19 13.7**	**+1.1**
	baz=268						
P17K	**Kvichak River**	**44.16**	**40**	P	**P**	**10 19 13.2**	**+0.4**
	baz=266						
L18K	**Granite Mounta**	**44.32**	**35**	P	**P**	**10 19 14.8**	**+0.6**
	baz=263						
Q17K	**Contact Creek**	**44.40**	**41**	P	**P**	**10 19 16.3**	**+1.4**
	baz=268						
J18K	**Innoko River**	**44.48**	**33**	P	**P**	**10 19 16.6**	**+1.2**
	baz=262						
N18K	**Kilae Creek**	**44.55**	**37**	P	**P**	**10 19 17.1**	**+1.1**
	baz=265						
C19K	**Lookout Ridge**	**44.59**	**25**	P	**P**	**10 19 16.9**	**+0.6**
	baz=253						

KDAK	**Kodiak Island**	46.15	42	P	P	10 19 29.5	+0.8	
	baz=271							
A21K	**Barrow**	46.19	23	P	P	10 19 29.5	+0.7	
	baz=254,SNR=12							
MKAR	**Makanchi Array**	46.19	303	P	P	10 19 30.4	+1.1	
	comp=Z,8.7nm,0.8s,baz=88,slow=8.6,SNR=8.1							
MKAR				LR	LR	10 39 07.8		
	comp=Z,100nm,18.2s,baz=104,slow=36							
	comp=Z,8.7nm,0.8s							
MKAR	**Makanchi Array**	46.19	303	P	P	10 19 28.9	-0.4	
G21K	**Allakaket**	46.28	29	P	P	10 19 30.0	+0.4	
	baz=262,SNR=6.1							
SPCR	**Spurr Chakacha**	46.37	37	P	P	10 19 30.8	+0.3	
	baz=268							
F21K	**Alatna River**	46.39	28	P	P	10 19 31.3	+0.8	
	baz=261							
MAKZ	**Makanchi**	46.40	303	P	P	10 19 31.8	+0.9	
MAKZ				sP	pwP	10 19 44.9	-1.6	
MAKZ				PcP	PcP	10 21 05.0	-0.4	
E21K	**Killik River**	46.42	27	P	P	10 19 31.2	+0.5	
	baz=259							
SPU	**Mount Spurr**	46.44	37	P	P	10 19 31.1	+0.1	
SPU				IAmb	IAmb	10 19 32.7		
	comp=Z,13nm,1.2s							
H21K	**Melozitna Rive**	46.45	31	IAmb	IAmb	10 19 32.8		
	comp=Z,10nm,1.0s							
H21K	**Melozitna River**	46.45	31	P	P	10 19 31.3	+0.4	
	baz=263,SNR=8.0							
PPLA	**Purkeypile**	46.46	35	P	P	10 19 32.0	+0.7	
	baz=266							
SKT	**Skwentna**	46.72	36	P	P	10 19 34.0	+0.9	
	baz=268							
I21K	**Tanana**	46.74	31	P	P	10 19 33.6	+0.5	
	baz=264							
D22K	**Ayikyak River**	46.96	26	P	P	10 19 35.6	+0.7	
	baz=260							
B22K	**Teshekpuk Lake**	46.98	24	P	P	10 19 35.4	+0.4	
	baz=258							
BRDH	**Bariadhala**	47.04	268	LR	LR	10 41 01.6		
	comp=Z,122nm,19.8s,baz=40,slow=38							
KTH	**Kantishna Hill**	47.07	34	IAmb	IAmb	10 19 37.2		
	comp=Z,9.6nm,1.0s							
BPAW	**Bear Paw Mtn.**	47.08	33	P	P	10 19 36.0	+0.1	
	baz=266							
BRSE	**Bradley Lake S**	47.08	39	P	P	10 19 37.1	+1.2	
	baz=271							
SUA	**Susitna One**	47.08	37	P	P	10 19 36.9	+0.8	
	baz=269							
G22K	**Bettles**	47.12	29	P	P	10 19 36.5	+0.3	
	baz=263							
TRF	**Thorofare Moun**	47.35	34	P	P	10 19 38.5	+0.3	
	baz=268							
M22K	**Willow**	47.38	36	P	P	10 19 38.8	+0.5	
	baz=269							
RC01	**Rabbit Creek A**	47.57	37	P	P	10 19 39.9	+0.2	
	baz=270							
COLD	**Coldfoot**	47.66	29	P	P	10 19 40.2	-0.2	
	baz=264							
G23K	**Bananza Creek**	47.68	29	P	P	10 19 40.9	+0.4	
	baz=265							
D23K	**Nanushuk River**	47.69	26	P	P	10 19 41.2	+0.6	
	baz=262							
SEW	**Seward**	47.72	38	P	P	10 19 41.9	+1.0	
	baz=271							
H23K	**Yukon River**	47.80	31	P	P	10 19 42.0	+0.5	
	baz=266							
I23K	**Minto, Yukon-K**	47.84	32	IAmb	IAmb	10 21 11.3		
	comp=Z,6.7nm,0.9s							
I23K	**Minto, Yukon-K**	47.84	32	P	P	10 19 42.3	+0.6	
	baz=267							
PMR	**Palmer**	47.86	36	P	P	10 19 42.2	+0.3	
	baz=270,SNR=7.8							
KURK	**Kurchatov**	47.93	309	P	P	10 19 43.5	+0.8	
KURK	**Kurchatov**	47.93	309	P	P	10 19 42.9	+0.2	
KURK				pP	sP	10 19 52.2	-0.7	
NEA2	**Nenana**	47.94	32	IAmb	IAmb	10 19 44.3		
	comp=Z,15nm,1.0s							
NEA2	**Nenana**	47.94	32	P	P	10 19 43.0	+0.5	
	baz=268,SNR=9.0							
E23K	**Chandalar**	47.97	28	IAmb	IAmb	10 19 44.8		
	comp=Z,12nm,0.9s							
E23K	**Chandalar**	47.97	28	P	P	10 19 43.6	+0.8	
	baz=264,SNR=11							
MCK	**McKinley**	47.97	33	P	P	10 19 43.5	+0.7	
	baz=269							
RND	**Reindeer**	48.00	34	IAmb	IAmb	10 19 43.9		
	comp=Z,18nm,1.1s							
KURBB	**Kurchatov Arra**	48.00	309	P	P	10 19 43.7	+0.5	
	comp=Z,22nm,0.7s,baz=82,slow=7.8,SNR=22							
KURBB				LR	LR	10 40 41.3		
	comp=Z,114nm,19.2s,baz=164,slow=37							
	comp=Z,22nm,0.7s							
HNR	**Honiara**	48.03	159	LR	LR	10 41 08.0		
	comp=Z,5.1nm,18.4s,baz=59,slow=38							
WAT1	**Susitna Watana**	48.13	35	P	P	10 19 44.5	+0.4	
	baz=270							
KNK	**Knik Glacier**	48.18	37	P	P	10 19 45.6	+1.1	
KNK				IAmb	IAmb	10 19 46.0		
	comp=Z,10nm,0.8s							
KNK	**Knik Glacier**	48.18	37	P	P	10 19 44.7	+0.2	
	baz=271							
SML	**Sawmill**	48.23	36	P	P	10 19 45.3	+0.4	
	baz=271							
WRH	**Wood River Hil**	48.35	32	IAmb	IAmb	10 21 12.6		
	comp=Z,11nm,1.1s							
D24K	**Happy Valley**	48.37	26	P	P	10 19 46.5	+0.6	
	baz=264							
E24K	**Your Creek**	48.39	28	P	P	10 19 46.9	+0.8	
	baz=265							
COLA	**College**	48.47	32	P	P	10 19 47.7	+1.1	
COLA	**College**	48.47	32	P	P	10 19 46.9	+0.3	
	baz=268							
H24K	**Noodor Dome**	48.49	31	IAmb	IAmb	10 19 48.9		
	comp=Z,7.2nm,1.0s							
H24K	**Noodor Dome**	48.49	31	P	P	10 19 47.6	+0.7	
	baz=268,SNR=6.4							
WAT6	**Susitna Watana**	48.50	35	P	P	10 19 46.8	-0.3	
	baz=271							
M23K	**Glacier View**	48.52	36	P	P	10 19 46.9	-0.3	
	baz=271							
POKR	**Poker Plat Res**	48.65	32	P	P	10 19 48.8	+0.8	
	baz=269,SNR=6.7							
DHY	**Denali Highway**	48.66	34	P	P	10 19 48.8	+0.4	
	baz=271							
G24K	**Hadweenzic Riv**	48.69	30	IAmb	IAmb	10 19 50.7		
	comp=Z,15nm,1.1s							
G24K	**Hadweenzic Riv**	48.69	30	P	P	10 19 48.9	+0.5	
	baz=267							
SCM	**Sheep Creek Mo**	48.71	36	P	P	10 19 49.0	+0.3	
	baz=272							
P23K	**Montague Islan**	48.75	38	P	P	10 19 49.0	+0.1	
	baz=273							
HDA	**Harding Lake**	48.85	33	IAmb	IAmb	10 19 50.0		
	comp=Z,6.2nm,0.7s							
HDA	**Harding Lake**	48.85	33	P	P	10 19 49.5	-0.1	
	baz=270,SNR=5.5							
ILAR	**Eielson Array**	48.88	32	P	P	10 19 49.4	-0.4	
	comp=Z,6.0nm,0.8s,baz=264,slow=6.4,SNR=66							
	comp=Z,6.0nm,0.8s							
ILAR	**Eielson Array**	48.88	32	P	P	10 19 49.7	-0.1	
M24K	**Tolsona, Glenn**	49.24	36	P	P	10 19 52.7	0.0	
	baz=272							
D25K	**Kavik River**	49.26	26	IAmb	IAmb	10 19 54.2		
	comp=Z,6.1nm,0.8s							
D25K	**Kavik River**	49.26	26	P	P	10 19 53.2	+0.5	
	baz=266,SNR=9.0							
Q23K	**Middleton Isla**	49.33	39	P	P	10 19 54.3	+1.1	
	baz=275							
K24K	**Donnelly Dome**	49.37	33	P	P	10 19 54.0	+0.4	
	baz=271							
KLU	**Klutina**	49.40	36	P	P	10 19 54.3	+0.4	
	baz=273,SNR=7.2							
F25K	**Christian Rive**	49.44	28	IAmb	IAmb	10 19 56.5		
	comp=Z,7.1nm,0.8s							
F25K	**Christian Rive**	49.44	28	P	P	10 19 54.9	+0.8	
	baz=268							
PRP	**Porcupine Dome**	49.46	31	IAmb	IAmb	10 20 29.3		
	comp=Z,18nm,1.7s							
PRP	**Porcupine Dome**	49.46	31	P	P	10 19 54.2	-0.2	
	baz=270							
J25K	**Salcha River,**	49.53	32	P	P	10 19 54.8	-0.1	
	baz=271							
PAX	**Paxson**	49.53	34	IAmb	IAmb	10 19 56.4		
	comp=Z,7.6nm,1.0s							
PAX	**Paxson**	49.53	34	P	P	10 19 54.8	-0.1	
	baz=272							
EYAK	**Cordova Ski Ar**	49.54	38	P	P	10 19 55.4	+0.5	
	baz=274							
HARP	**HAARP**	49.71	35	P	P	10 19 56.7	+0.5	
	baz=273							
RIDG	**Independent Ri**	49.78	33	P	P	10 19 56.4	-0.4	
RIDG				IAmb	IAmb	10 19 57.5		
	comp=Z,16nm,1.4s							
RIDG	**Independent Ri**	49.78	33	P	P	10 19 56.5	-0.4	
	baz=272							
BMAR	**Burnt Mountain**	49.84	29	P	P	10 19 58.8	+1.6	
F26K	**Sheenjek River**	50.02	28	P	P	10 19 58.9	+0.4	
	baz=273							
N25K	**Chitina, Valde**	50.02	36	P	P	10 19 58.9	+0.3	
	baz=274							
BMRM	**Bremner River**	50.07	37	IAmb	IAmb	10 20 03.0		
	comp=Z,16nm,1.0s							
BMRM	**Bremner River**	50.07	37	P	P	10 19 59.3	+0.4	
	baz=275							
G26K	**Porcupine Rive**	50.15	29	P	P	10 19 59.7	+0.3	
	baz=270							
SCRK	**Sand Creek**	50.16	33	IAmb	IAmb	10 20 00.6		
	comp=Z,8.1nm,0.9s							
SCRK	**Sand Creek**	50.16	33	P	P	10 19 59.7	0.0	
	baz=273,SNR=6.0							
C27K	**Jago River**	50.21	26	P	P	10 19 60.0	+0.1	
	baz=268							
KAIM	**Kayak Island**	50.26	38	P	P	10 20 01.4	+1.0	
	baz=276							
J26L	**Joseph Creek**	50.31	32	P	P	10 20 01.4	+0.6	
	baz=273							
GLB	**Gilahina Butte**	50.41	36	P	P	10 20 01.7	+0.1	
GLB				IAmb	IAmb	10 20 03.4		
	comp=Z,16nm,1.3s							
L26K	**Log Cabin Wild**	50.50	34	IAmb	IAmb	10 20 04.1		
	comp=Z,11nm,0.8s							
L26K	**Log Cabin Wild**	50.50	34	P	P	10 20 03.1	+0.9	
	baz=274,SNR=7.9							
VRDI	**Verde Repeater**	50.60	37	IAmb	IAmb	10 20 09.2		
	comp=Z,14nm,0.9s							
MCARA	**McCarthy VSAT**	50.79	36	P	P	10 20 04.9	+0.5	
	baz=276,SNR=7.4							
CRQE	**Cirque**	50.83	37	P	P	10 20 05.2	+0.4	
	baz=276,SNR=7.6							
TGL	**Tana Glacier**	50.95	37	IAmb	IAmb	10 20 07.9		
	comp=Z,21nm,1.1s							
WAX	**Waxell Ridge**	50.98	38	P	P	10 20 07.0	+1.2	
G27K	**Doyon Strip**	51.00	29	P	P	10 20 07.1	+1.2	
	baz=272							
H27K	**Steamboat Moun**	51.08	30	P	P	10 20 08.0	+1.4	
	baz=273,SNR=8.3							
I27K	**Kandik River**	51.08	31	P	P	10 20 07.4	+0.9	
	baz=274							
D27M	**Malcolm River**	51.18	26	P	P	10 20 08.3	+1.0	
	baz=271							
L27K	**Beaver Creek,**	51.19	34	P	P	10 20 08.7	+1.3	
	baz=275,SNR=5.3							
BCAR	**Beaver Creek A**	51.20	34	P	P	10 20 08.3	+0.8	
ISLE	**Juniper Island**	51.21	37	P	P	10 20 08.3	+0.6	
ISLE				IAmb	IAmb	10 20 08.7		
	comp=Z,18nm,1.0s							
M27K	**Edge Creek, AK**	51.23	35	P	P	10 20 09.0	+1.1	
	baz=276							
MESA	**MESA**	51.46	38	P	P	10 20 09.2	-0.4	
MESA	**MESA**	51.46	38	P	P	10 20 10.6	+1.0	
	baz=278							
GRNC	**Granite Creek**	51.48	37	P	P	10 20 10.4	+0.6	
GRNC				IAmb	IAmb	10 20 11.3		
	comp=Z,14nm,0.7s							
BARN	**Barnard Glacie**	51.48	37	IAmb	IAmb	10 20 11.4		
	comp=Z,11nm,1.0s							
F28M	**Old Crow**	51.65	28	IAmb	IAmb	10 20 13.1		
	comp=Z,17nm,1.4s							
F28M	**Old Crow**	51.65	28	P	P	10 20 11.5	+0.7	
	baz=274,SNR=7.2							
CTG	**Chitna Glacier**	51.65	37	P	P	10 20 11.3	+0.3	
	baz=278							
BVCY	**Beaver Creek**	51.70	35	P	P	10 20 11.9	+0.7	
	baz=277							
E28M	**Babbage River**	51.72	27	IAmb	IAmb	10 20 13.5		
	comp=Z,10.0nm,1.1s							
E28M	**Babbage River**	51.72	27	P	P	10 20 11.8	+0.5	
	baz=273							
I28M	**Miner Creek**	51.79	31	P	P	10 20 12.5	+0.6	
	baz=275							
TABL	**Table Mountain**	51.82	38	P	P	10 20 12.6	+0.2	
YUK3	**Moose Creek**	51.97	36	P	P	10 20 13.8	+0.4	
	baz=278							
O28M	**Mt Hunt Upton**	52.23	37	P	P	10 20 15.4	-0.1	
	baz=279							
PINM	**Pinnacle**	52.31	38	P	P	10 20 16.5	+0.7	
	baz=279							
E29M	**Blow River**	52.34	27	IAmb	IAmb	10 20 18.2		
	comp=Z,12nm,0.9s							
E29M	**Blow River**	52.34	27	P	P	10 20 16.8	+0.9	
	baz=275,SNR=14							
H29M	**Whitestone**	52.36	30	P	P	10 20 16.9	+0.8	
	baz=276							
G29M	**Pine Creek**	52.42	29	P	P	10 20 17.6	+1.1	
	baz=276							
I29M	**Ogilvie Camp,**	52.48	31	P	P	10 20 17.6	+0.7	
	baz=277,SNR=8.1							
BVAR	**Borovoye Array**	52.51	313	P	P	10 20 17.8	+0.5	
	comp=Z,9.5nm,0.8s,baz=79,slow=7.9,SNR=24							
BVAR				PcP	PcP	10 21 27.6	+0.1	
	comp=Z,3.6nm,0.8s,baz=67,slow=4.8,SNR=4.5							
BVAR				LR	LR	10 43 28.4		
	comp=Z,87nm,19.4s,baz=20,slow=37							
	comp=Z,9.5nm,0.8s							
BORK	**Borovoye**	52.54	313	P	P	10 20 18.4	+0.9	
BORK				IAmb	IAmb	10 20 19.5		
	comp=Z,12nm,0.9s							
BORK	**Borovoye**	52.54	313	P	P	10 20 17.8	+0.2	
BORK				sP	pwP	10 20 31.1	-2.3	
BORK				PcP	PcP	10 21 26.4	-1.2	
AAK	**Ala-Archa**	52.60	300	P	P	10 20 19.0	+0.7	
	comp=Z,3.6nm,0.9s,baz=67,slow=14,SNR=3.5							
AAK				LR	LR	10 44 33.1		
	comp=Z,197nm,18.2s,baz=67,slow=38							
	comp=Z,3.6nm,0.9s							
J29N	**Klondike Camp**	52.63	32	IAmb	IAmb	10 21 03.4		
	comp=Z,26nm,1.9s							
J29N	**Klondike Camp**	52.63	32	P	P	10 20 18.7	+0.6	
	baz=277							
M29M	**Somme Creek**	52.80	35	P	P	10 20 20.4	+0.9	
	baz=279							
L29M	**L29M**	52.85	34	P	P	10 20 20.4	+0.7	
	baz=278							
YUK4	**Talbot Arm**	52.89	36	P	P	10 20 21.5	+1.2	
	baz=279							
KSH2	**Kashi**	52.97	295	P	P	10 20 27.4	+6.3	
KSH2				pmax	pmax			
	comp=Z,9.0nm,0.9s							
EPYK	**Eagle Plains**	53.00	30	P	P	10 20 21.2	+0.4	
	baz=277							
K29M	**Barlow Dome**	53.01	33	IAmb	IAmb	10 20 23.2		
	comp=Z,9.7nm,0.9s							
K29M	**Barlow Dome**	53.01	33	P	P	10 20 22.0	+1.0	
	baz=278							
YUK6	**Outpost Mounta**	53.09	37	P	P	10 20 23.2	+1.5	
	baz=280							
O29M	**Mount Kennedy**	53.10	37	IAmb	IAmb	10 20 24.3		
	comp=Z,20nm,1.3s							
O29M	**Mount Kennedy**	53.10	37	P	P	10 20 23.5	+1.8	
	baz=280							
G30M	**tAoh Zraii Nji**	53.12	29	P	P	10 20 22.3	+0.6	
	baz=277							
F30M	**Barrier River**	53.21	28	P	P	10 20 23.7	+1.4	
	baz=277							
I30M	**Mount Dempster**	53.30	31	IAmb	IAmb	10 20 24.9		
	comp=Z,12nm,0.9s							
I30M	**Mount Dempster**	53.30	31	P	P	10 20 24.4	+1.2	
	baz=278							
J30M	**Hart River**	53.42	32	P	P	10 20 24.9	+0.9	
	baz=279							
HYT	**Haines Junctio**	53.52	37	P	P	10 20 26.3	+1.4	
	baz=281,SNR=12							
M30M	**Minto, Yukon**	53.54	34	P	P	10 20 25.2	+0.4	
	baz=280							
MAYO	**Mayo, Yukon**	53.77	33	P	P	10 20 27.7	+1.3	
	baz=280							
G31M	**Satah River**	53.89	29	P	P	10 20 28.0	+0.8	
	baz=279							
P30M	**Million Dollar**	53.93	37	P	P	10 20 28.9	+1.2	
	baz=282							
INK	**Inuvik**	53.96	27	IAmb	IAmb	10 20 29.0		
	comp=Z,6.2nm,0.8s							
INK	**Inuvik**	53.96	27	P	P	10 20 28.2	+0.6	
	baz=279,SNR=9.0							
F31M	**Tsiigehtchic**	54.01	28	IAmb	IAmb	10 20 29.7		
	comp=Z,16nm,1.6s							
F31M	**Tsiigehtchic**	54.01	28	P	P	10 20 28.5	+0.4	
	baz=279,SNR=5.5							
H31M	**Peel River**	54.04	30	IAmb	IAmb	10 20 30.2		
	comp=Z,11nm,0.8s							
H31M	**Peel River**	54.04	30	P	P	10 20 29.3	+0.9	
	baz=280							
O30N	**Mendenhall**	54.22	37	P	P	10 20 31.0	+1.2	
	baz=282							
N31M	**Braeburn, Yuko**	54.22	36	IAmb	IAmb	10 20 40.2		
	comp=Z,11nm,1.1s							
N31M	**Braeburn, Yuko**	54.22	36	P	P	10 20 31.0	+1.2	
	baz=282							
M31M	**Drury Creek, Y**	54.71	35	IAmb	IAmb	10 21 07.8		
	comp=Z,22nm,1.7s							
M31M	**Drury Creek, Y**	54.71	35	P	P	10 20 34.5	+1.1	
	baz=282							
S31K	**Pelican**	54.77	40	P	P	10 20 35.3	+1.6	
	baz=284							
WHY	**Whitehorse**	54.82	37	P	P	10 20 35.5	+1.2	
WHY	**Whitehorse**	54.82	37	P	P	10 20 35.5	+1.2	
	baz=283							
SIT	**Sitka**	55.47	41	P	P	10 20 40.6	+1.8	
	baz=285							
N32M	**Quiet Lake**	55.56	36	P	P	10 20 39.7	+0.2	
	baz=284							
P32M	**Atlin**	55.64	38	P	P	10 20 41.3	+1.2	
	baz=285							
P33M	**Teslin, Yukon**	55.92	37	IAmb	IAmb	10 20 44.4		
	comp=Z,12nm,1.1s							
P33M	**Teslin, Yukon**	55.92	37	P	P	10 20 43.6	+1.5	
	baz=285,SNR=5.9							
A36M	**Sachs Harbour**	56.02	22	IAmb	IAmb	10 20 44.8		
	comp=Z,11nm,0.8s							
A36M	**Sachs Harbour**	56.02	22	P	P	10 20 43.4	+0.8	
	baz=284,SNR=15							
CTA	**Charters Tower**	56.27	177	LR	LR	10 41 53.4		
	comp=Z,37nm,21.9s,baz=30,slow=33							
WB0	**Warramunga Arr**	56.64	191	P	P	10 20 47.8	+0.2	
WB0				IAmb	IAmb	10 21 00.7		
	comp=Z,15nm,1.4s							
NIL	**Nilore**	56.78	290	P	P	10 20 49.5	+0.9	
WR8	**Warramunga Arr**	56.81	191	P	P	10 20 48.0	-0.7	
WR8				IAmb	IAmb	10 21 01.7		
	comp=Z,20nm,1.4s							
WRA	**Warramunga Arr**	56.82	191	P	P	10 20 47.1	-1.8	
	comp=Z,2.3nm,0.8s,baz=12,slow=7.2,SNR=15							
	comp=Z,2.3nm,0.8s							
WRA	**Warramunga Arr**	56.82	191	P	P	10 20 48.5	-0.3	
R33M	**Jennings River**	57.05	37	P	P	10 20 51.0	+0.7	
	baz=287							
C36M	**Paulatuk**	57.08	25	IAmb	IAmb	10 20 50.7		
	comp=Z,7.0nm,0.8s							
C36M	**Paulatuk**	57.08	25	P	P	10 20 50.2	+0.1	
	baz=286,SNR=8.4							
CRAG	**Craig**	57.10	42	P	P	10 20 51.5	+1.0	
	baz=288							
WRAK	**Wrangell Islan**	57.22	41	P	P	10 20 52.8	+1.5	
	baz=288							
S34M	**Telegraph Cree**	57.40	39	P	P	10 20 54.2	+1.6	
	baz=288							
DLBC	**Dease Lake**	57.80	38	P	P	10 20 56.8	+1.4	
	baz=288							
WTLY	**Watson Lake, Y**	57.88	36	P	P	10 20 57.2	+1.2	
	baz=288							
V35K	**Ketchikan**	57.96	42	P	P	10 20 58.4	+1.9	
	baz=289							
T35M	**Bob Quinn**	58.15	40	P	P	10 20 59.5	+1.6	
	baz=289							
ARTI	**Arti**	58.28	319	LR	LR	10 48 27.5		
	comp=Z,229nm,18.3s,baz=48,slow=38							
ARTI	**Arti**	58.28	319	P	P	10 20 59.2	+0.4	
ARTI	**Arti**	58.28	319	P	P	10 20 59.1	+0.3	
ARTI				pP	pP	10 21 08.0	+1.6	
ARTI				sP	sP	10 21 12.0	+2.7	
ARTI				PcP	PcP	10 21 49.2	-0.4	
U35K	**Hyder**	58.62	41	P	P	10 21 03.1	+2.1	
	baz=290							
WRGLY	**Wrigley**	59.26	32	IAmb	IAmb	10 21 07.9		
	comp=Z,13nm,1.3s							
WRGLY	**Wrigley**	59.26	32	P	P	10 21 06.6	+1.2	
	baz=290							
KBL	**Kabul**	59.57	292	P	P	10 21 07.4	-0.9	
KBL				IAmb	IAmb	10 21 09.3		
	comp=Z,10.0nm,1.0s							
AB31	**Akbulak array**	59.91	311	IAmb	IAmb	10 21 15.9		
	comp=Z,6.2nm,0.8s							
ABKAR	**Akbulak array**	59.91	311	P	P	10 21 09.7	-0.4	
TOAD	**Toad River Com**	60.02	37	P	P	10 21 12.1	+1.3	
	baz=292							
ASAR	**Alice Springs**	60.54	191	P	P	10 21 13.7	-1.0	
	comp=Z,1.9nm,0.8s,baz=11,slow=6.2,SNR=10							
ASAR				LR	LR	10 46 35.0		
	comp=Z,48nm,20.8s,baz=9.0,slow=35							
	comp=Z,1.9nm,0.8s							
AKTO	**Aktyubinsk**	60.61	313	LR	LR	10 48 23.0		
	comp=Z,141nm,18.6s,baz=284,slow=37							
SPITS	**Spitsbergen Ar**	61.50	349	LR	LR	10 48 52.5		
	comp=Z,57nm,20.1s,baz=21,slow=37							
YKAW3	**Yellowknife Wh**	63.23	31	P	P	10 21 32.2	-0.1	
YKA	**Yellowknife Ar**	63.26	31	P	P	10 21 32.1	-0.4	
	comp=Z,2.0nm,0.8s,baz=303,slow=7.3,SNR=34							
YKA				PcP	PcP	10 22 09.4	-0.1	
	comp=Z,0.7nm,0.6s,baz=306,slow=4.9,SNR=11							
	comp=Z,2.0nm,0.8s							
YKAW1	**Yellowknife Wh**	63.31	31	P	P	10 21 32.9	0.0	
PALK	**Pallekele**	64.30	260	LR	LR	10 50 41.4		
	comp=Z,37nm,20.8s,baz=59,slow=37							
ARCES	**ARCESS Array B**	65.27	340	P	P	10 21 45.2	-0.5	
	comp=Z,1.8nm,0.7s,baz=45,slow=5.7,SNR=4.2							
ARCES				LR	LR	10 54 18.9		
	comp=Z,61nm,18.1s,baz=26,slow=40							
	comp=Z,1.8nm,0.7s							
TULEG	**Thule**	65.40	8	IAmb	IAmb	10 21 46.1		
	comp=Z,8.4nm,0.7s							
POIN	**Pond Inlet**	67.36	13	IAmb	IAmb	10 21 59.1		
	comp=Z,7.5nm,0.8s							
STKA	**Stephens Creek**	68.00	182	P	P	10 22 02.7	-0.7	
	comp=Z,2.4nm,0.7s,baz=20,slow=9.2,SNR=4.9							
STKA				LR	LR	10 50 49.9		
	comp=Z,39nm,21.7s,baz=25,slow=35							
	comp=Z,2.4nm,0.7s							
NEW	**Newport**	69.08	45	IAmb	IAmb	10 22 16.9		
	comp=Z,9.7nm,1.3s							
ILON	**Igloolik, Nuna**	69.27	16	IAmb	IAmb	10 22

comp=Z,8.2nm,0.8s,baz=38,slow=5.7,SNR=14
NOA LR LR 11 00 52.1
comp=Z,85nm,18.5s,baz=30,slow=40
comp=Z,8.2nm,0.8s
GWY Greenwater Val 75.99 55 IAmb IAmb 10 22 52.5
comp=Z,7.0nm,0.8s
AK03 Malin Array Si 76.01 324 P **P** **10 22 50.6 -0.7**
AKASG Malin Array Be 76.03 323 P **P** **10 22 51.3 -0.1**
comp=Z,3.8nm,0.6s,baz=46,slow=6.2,SNR=15
AKASG LR LR 10 58 01.0
comp=Z,112nm,18.1s,baz=254,slow=37
comp=Z,3.8nm,0.6s
AKASG Malin Array Be 76.03 323 IAmb IAmb 10 22 53.3
comp=Z,14nm,1.7s
AKBB Malin Array Si 76.03 323 P **P** **10 22 51.6 +0.2**
AK01 Malin Array Si 76.04 323 P **P** **10 22 50.5 -1.0**
KIEV Kiev 76.04 323 P **P** **10 22 51.5 +0.1**
KIEV IAmb IAmb 10 22 52.3
comp=Z,20nm,1.2s
KIEV Kiev 76.04 323 P **P** **10 22 50.7 -0.8**
comp=Z,72nm,2.8s
KIEV Kiev 76.04 323 P **P** **10 22 51.4 0.0**
AK04 Malin Array Si 76.04 324 P **P** **10 22 50.5 -1.0**
AK09 Malin Array Si 76.05 323 P **P** **10 22 50.7 -0.9**
AK08 Malin Array Si 76.06 323 P **P** **10 22 50.7 -0.9**
AK22 Malin Array Si 76.06 324 P **P** **10 22 50.7 -0.9**
AK02 Malin Array Si 76.06 323 P **P** **10 22 50.7 -0.9**
AK21 Malin Array Si 76.06 324 P **P** **10 22 50.7 -0.9**
AK11 Malin Array Si 76.07 323 P **P** **10 22 50.7 -0.9**
AK10 Malin Array Si 76.08 323 P **P** **10 22 50.5 -1.2**
AK18 Malin Array Si 76.10 324 P **P** **10 22 51.0 -0.7**
AK12 Malin Array Si 76.10 323 P **P** **10 22 50.9 -0.9**
AK20 Malin Array Si 76.10 324 P **P** **10 22 50.5 -1.3**
PDAR Pinedale Array 76.57 47 P **P** **10 22 54.0 -1.1**
comp=Z,1.0nm,0.7s,baz=277,slow=1.4,SNR=7.8
comp=Z,1.0nm,0.7s
LUBAR Lubar, Ukraine 77.25 324 P **P** **10 22 57.9 -0.4**
P17A Butcher Ranch, 77.86 50 IAmb IAmb 10 23 03.5
comp=Z,7.6nm,0.8s
RDMU Red Mountain 77.90 48 IAmb IAmb 10 23 03.8
comp=Z,10nm,0.9s
KNB Kanab 78.02 53 IAmb IAmb 10 23 04.8
comp=Z,6.8nm,0.9s
RAR Rarotonga 78.14 128 LR LR 10 55 40.3
comp=Z,29nm,19.6s,baz=280,slow=34
SRU San Rafael Swe 78.21 50 IAmb IAmb 10 23 05.2
comp=Z,8.7nm,0.7s
HMU Henry Mountain 78.79 51 IAmb IAmb 10 23 08.4
comp=Z,7.3nm,0.7s
ULM Lac du Bonnet 78.83 34 P **P** **10 23 05.8 -1.3**
comp=Z,2.4nm,0.8s,baz=302,slow=8.7,SNR=5.3
comp=Z,2.4nm,0.8s
PV23 Carpenter Ridg 79.55 50 IAmb IAmb 10 23 13.4
comp=Z,11nm,0.8s
PV04 Paradox Valley 79.65 50 IAmb IAmb 10 23 13.4
comp=Z,7.9nm,0.9s
PV05 Paradox Valley 79.72 50 IAmb IAmb 10 23 13.8
comp=Z,9.6nm,0.8s
PV03 Paradox Valley 79.77 50 IAmb IAmb 10 23 27.3
comp=Z,28nm,1.7s
PV13 Radium Mtn., P 79.85 50 IAmb IAmb 10 23 14.3
comp=Z,10.0nm,0.8s
PV02 Paradox Valley 79.87 50 IAmb IAmb 10 23 14.6
comp=Z,21nm,1.2s
BUR08 Bucovina Ar. S 80.04 323 P **P** **10 23 14.4 +0.5**
BURAR Bucovina Array 80.05 323 P **P** **10 23 14.2 +0.2**
EPLO Experimental L 80.21 34 IAmb IAmb 10 23 14.6
comp=Z,8.3nm,0.9s
BRTR Keskin Array B 80.79 313 P **P** **10 23 18.7 +0.6**
comp=Z,3.0nm,0.7s,baz=103,slow=3.2,SNR=15
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 80.79 313 P **P** **10 23 18.4 +0.2**
MLR Muntele Rosu 81.17 321 LR LR 11 01 23.3
comp=Z,118nm,18.8s,baz=8.0,slow=37
MDUB Mudurnu 81.73 315 P **P** **10 23 23.8 +0.7**
F33A 5 Mile Ranch, 81.74 38 IAmb IAmb 10 23 23.1
comp=Z,12nm,1.0s
MORC Moravsky Berou 81.97 328 *eP* **P** **10 23 24.6 +0.5**
PPT Papeete 82.51 118 LR LR 10 55 17.1
comp=Z,76nm,19.5s,baz=293,slow=32
VRAC Vranov 82.73 328 LR LR 11 03 52.8
comp=Z,142nm,18.5s,baz=332,slow=38
VRAC Vranov 82.73 328 *eP* **P** **10 23 27.9 -0.1**
KRUC Moravsky 83.00 328 *eP* **P** **10 23 29.3 -0.1**
ECSD EROS Data Cent 83.06 40 IAmb IAmb 10 23 29.9
comp=Z,6.7nm,1.0s
MODS Modra-Piesok 83.15 327 *eP* **P** **10 23 28.9 -1.3**
T25A Trinidad 83.19 48 IAmb IAmb 10 23 32.0
comp=Z,7.3nm,0.9s
ANMO Albuquerque 83.35 51 P **P** **10 23 31.8 0.0**
ANMO Albuquerque 83.35 51 P **P** **10 23 32.2 +0.5**
MMAI Mount Meron Ar 84.00 307 P **P** **10 23 35.8 +0.8**
comp=Z,4.7nm,0.6s,baz=17,slow=12,SNR=5.8
MMAI LR LR 11 03 56.9
comp=Z,58nm,19.2s,baz=336,slow=38
comp=Z,4.7nm,0.6s
SCHQ Schefferville 85.30 17 LR LR 11 06 27.9
comp=Z,66nm,18.1s,baz=331,slow=39
MNTX Cornudas Mount 86.14 53 IAmb IAmb 10 23 46.7
comp=Z,16nm,1.8s
AMTX Amarillo 86.34 49 IAmb IAmb 10 23 48.0
comp=Z,7.9nm,0.8s
EIL Elat 86.44 304 LR LR 11 07 13.2
comp=Z,42nm,18.6s,baz=324,slow=39
DAVOX Davos/Dischmat 87.49 330 LR LR 11 10 20.7
comp=Z,197nm,19.0s,baz=254,slow=41
TXAR Lajitas Array 88.80 54 P **P** **10 23 58.4 -0.2**
comp=Z,1.6nm,0.6s,baz=312,slow=3.9,SNR=25
comp=Z,1.6nm,0.6s
HHAR Hobbs 89.84 43 IAmb IAmb 10 24 03.7
comp=Z,4.2nm,0.7s
CCM Cathedral Cave 89.98 40 P **P** **10 24 03.2 -0.6**
BRDY Brady 90.44 50 IAmb IAmb 10 24 06.4
comp=Z,7.6nm,1.2s
T42A Van Buren 90.83 41 IAmb IAmb 10 24 08.4
comp=Z,5.7nm,0.9s
KEST Kesra 96.74 324 LR LR 11 11 16.7
comp=Z,64nm,21.6s,baz=342,slow=37
ESDC Sonseca Array 98.71 336 LR LR 11 15 20.2
comp=Z,255nm,18.1s,baz=338,slow=39
H03N2 Juan Fernandez 144.88 98 T T 13 12 12.1
baz=291,slow=76,SNR=4.0
H03N3 Juan Fernandez 144.89 98 T T 13 12 20.7
baz=291,slow=76,SNR=4.6
H03N1 Juan Fernandez 144.90 98 T T 13 12 24.0
baz=291,slow=76,SNR=4.2
LPAZ La Paz 145.14 63 PKPbc **PKPbc** **10 30 42.2 -0.3**
comp=Z,2.0nm,0.6s,baz=5.2,slow=0.5,SNR=6.1
PLCA Paso Flores 152.76 110 PKPbc **PKPbc** **10 31 01.1 +0.2**
comp=Z,1.5nm,1.0s,baz=187,slow=8.1,SNR=1.3
PLCA PKPab **sPKPbc** **10 31 11.9 -0.2**
comp=Z,0.9nm,0.7s,baz=234,slow=7.5,SNR=3.0

*IDC **10** 10:12:33.0±0.8, 41.74N×89.51E, h0km, mb3.9/11, mbtmp3.8/15, ML3.2/4, MS3.4/3, Error ellipse: s-maj=31.8km s-min=13.1km az=47.0*
*NEIC **10** 10:12:34.4±1.8, 41.66N±0.06×89.3E±0.1, h10km±1km, mb4.0/10, Error ellipse: s-maj=16.7km s-min=9.9km az=253.0*

ISC 10 10:12:34.0±0.6, **41.73N**±0.08×**89.37E**±0.08, **h10**km, **n40, σ1s45/40, mb3.8**/13, **4C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**7.17**	**317**	⇑Pn	**Pn**	**10 14 20.4**	**+1.6**
	0.4nm,0.2s,baz=137,slow=14,SNR=108						
MK31				Pg	**Pb**	**10 14 41.1**	**+2.6**
	1.2nm,0.3s,baz=134,slow=14,SNR=4.5						
MK31				⇑Sn	**Sn**	**10 15 38.3**	**-2.0**
	3.9nm,0.5s						
MK31				⇑Lg	Lg	10 16 16.2	
	14nm,0.6s,baz=128,slow=27,SNR=3.9						
MKAR	**Makanchi Array**	**7.17**	**317**	Pn	**Pn**	**10 14 20.2**	**+1.4**
	1.5nm,0.3s,baz=129,slow=13,SNR=58						
MKAR				Sn	**Sn**	**10 15 40.5**	**+0.2**
	2.0nm,0.3s,baz=126,slow=28,SNR=3.5						
MKAR				Lg	Lg	10 16 25.1	
	3.1nm,0.3s,baz=138,slow=28,SNR=5.6						
	2.3nm,0.4s						
MKAR	**Makanchi Array**	**7.17**	**317**		**Pn**	**10 14 19.5**	**+0.7**
MAKZ	**Makanchi**	**7.34**	**316**		**Pn**	**10 14 22.8**	**+1.6**
PDGK	**Podgornoye**	**7.47**	**286**	⇓Pn	**Pn**	**10 14 23.7**	**+0.6**
	8.0nm,0.6s						
PDGK				⇑Sn	**Sn**	**10 15 45.4**	**-2.5**
	22nm,0.7s						

WUS Wushi 7.64 269 **Pn** **10 14 26.3 +0.8**
AAK Ala-Archa 11.08 280 LR LR 10 19 45.3
comp=Z,74nm,20.5s,baz=282,slow=39
KURBB Kurchatov Arra 11.63 324 Pn **Pn** **10 15 19.9 +0.1**
0.1nm,0.3s,baz=128,slow=13,SNR=4.3
KURBB Lg Lg 10 18 46.3
0.1nm,0.3s,baz=143,slow=29,SNR=5.6
KURBB LR LR 10 20 24.3
comp=Z,103nm,21.6s,baz=182,slow=40
0.5nm,0.3s
KURK Kurchatov 11.66 324 **Pn** **10 15 19.9 -0.3**
ZAA0 Zalesovo Array 12.60 348 Pn Pn 10 15 29.5 -3.6
ZALV Zalesovo Beam 12.60 348 Pn **Pn** **10 15 32.4 -0.7**
0.5nm,0.3s,baz=171,slow=14,SNR=6.5
ZALV Sn **Sn** **10 17 47.7 -5.6**
0.8nm,0.3s,baz=169,slow=25,SNR=7.1
0.8nm,0.3s
ZALV Zalesovo Beam 12.60 348 Pn 10 15 29.1 -4.0
SONM Songino Array 13.54 57 Lg Lg 10 19 45.0
0.3nm,0.3s,baz=249,slow=33,SNR=5.6
KKAR Karatay Array 14.00 282 Pn **Pn** **10 15 51.9 -0.4**
NIL Nilore 15.08 243 Pn **Pn** **10 16 05.0 -2.0**
SHL Shillong 16.26 172 Pn **Pn** **10 16 22.2 -0.4**
SHL IAmb IAmb 10 16 27.4
comp=Z,7.4nm,0.5s
BVAR Borovoye Array 17.05 318 P **Pn** **10 16 32.0 -0.3**
comp=Z,0.1nm,0.3s,baz=113,slow=11,SNR=4.6
comp=Z,0.9nm,0.4s
ENH Enshi 19.84 119 P **P** **10 17 04.2 -0.8**
ENH IAmb IAmb 10 17 42.0
comp=Z,14nm,0.8s
AB31 Akbulak array 21.86 300 P **P** **10 17 27.0 +0.5**
AB31 IAmb IAmb 10 17 33.5
comp=Z,1.7nm,0.8s
ABKAR Akbulak array 21.86 300 P **P** **10 17 26.9 +0.3**
CHTO Chiang Mai 24.26 157 P **P** **10 17 50.0 -1.3**
CHTO IAmb IAmb 10 18 17.6
comp=Z,3.3nm,1.2s
CMAR Chiang Mai Arr 24.60 158 P **P** **10 17 54.6 +0.3**
comp=Z,0.5nm,0.3s,baz=340,slow=9.4,SNR=6.1
comp=Z,0.5nm,0.3s
CMAR Chiang Mai Arr 24.60 158 P **P** **10 17 52.5 -1.9**
KSRS Korea Array 29.85 85 P **P** **10 18 42.2 +0.9**
comp=Z,0.6nm,0.6s,baz=285,slow=9.8,SNR=2.4
comp=Z,0.6nm,0.6s
BR131 Keskin Array S 41.65 286 P **P** **10 20 21.7 -0.9**
BR131 IAmb IAmb 10 20 59.1
comp=Z,7.3nm,1.4s
BRTR Keskin Array B 41.65 286 P **P** **10 20 24.4 +1.8**
comp=Z,1.0nm,0.8s,baz=108,slow=7.9,SNR=5.1
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 41.65 286 P **P** **10 20 21.6 -1.0**
FIA1 FINESS Array S 41.99 320 P **P** **10 20 24.3 -0.6**
FINES FINESS Array B 41.99 320 P **P** **10 20 25.3 +0.4**
comp=Z,5.8nm,0.9s,baz=130,slow=13,SNR=3.7
comp=Z,5.8nm,0.9s
ARCES ARCESS Array B 42.55 332 P **P** **10 20 30.0 +0.7**
comp=Z,2.6nm,0.9s,baz=87,slow=6.4,SNR=7.7
comp=Z,2.6nm,0.9s
HFS Hagfors 48.18 319 P **P** **10 21 14.8 +0.7**
comp=Z,16nm,1.2s,baz=81,slow=9.3,SNR=10
comp=Z,16nm,1.2s
NC405 NORSAR Array S 48.90 321 P **P** **10 21 20.5 +0.9**
NB2 NORSAR Subarra 49.15 321 P **P** **10 21 21.8 +0.2**
comp=Z,0.4nm,0.4s,baz=76,slow=7.9
NOA NORSAR Array B 49.15 321 P **P** **10 21 21.9 +0.2**
comp=Z,0.6nm,0.4s,baz=75,slow=7.8,SNR=1.7
comp=Z,0.6nm,0.4s
CASP Castiglione de 56.03 300 P **P** **10 22 13.8 +0.9**
ILAR Eielson Array 65.11 23 P **P** **10 23 14.5 +0.1**
comp=Z,0.3nm,0.6s,baz=317,slow=4.7,SNR=4.2
comp=Z,0.3nm,0.6s
FRB Frobisher Bay 73.41 350 LR LR 10 59 14.3
comp=Z,137nm,18.3s,baz=328,slow=38
WRA Warramunga Ar 74.14 136 P **P** **10 24 10.9 +0.3**
comp=Z,1.4nm,1.1s,baz=331,slow=5.8,SNR=3.7
comp=Z,1.4nm,1.1s
YKA Yellowknife Ar 74.35 11 P **P** **10 24 11.6 +0.3**
comp=Z,0.2nm,0.6s,baz=337,slow=6.3,SNR=6.6
comp=Z,0.2nm,0.6s
ASAR Alice Springs 77.03 139 P **P** **10 24 27.6 +0.5**
comp=Z,0.8nm,0.9s,baz=339,slow=5.0,SNR=2.8
comp=Z,0.8nm,0.9s

IDC 10 10:14:43.4±12.0, **2.00N**×100.69W, **h0**km, **mb3.5**/3, **mbtmp3.5**/3, **MS3.3**/3, **Error ellipse: s-maj=607.2km s-min=230.7km az=86.0, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**16.05**	**20**	LR	LR	10 23 17.2	
	comp=Z,74nm,21.1s,baz=224,slow=32						
LPIG	**La Paz**		**23.87 338**	LR	LR	10 27 04.2	
	comp=Z,84nm,18.6s,baz=16,slow=31						
TXAR	**Lajitas Array**		**27.34 354**	P	P	10 20 30.4	+0.1
	0.7nm,0.9s,baz=168,slow=13,SNR=5.6						
	0.7nm,0.9s						
ANMO	**Albuquerque**		**33.22 351**	LR	LR	10 32 58.9	
	comp=Z,47nm,19.0s,baz=331,slow=33						
PDAR	**Pinedale Array**		**41.36 350**	P	P	10 22 31.1	-0.4
	0.7nm,0.7s,baz=140,slow=7.3,SNR=8.1						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**		**61.25 353**	P	P	10 25 00.1	+0.1
	0.2nm,0.8s,baz=172,slow=5.5,SNR=3.8						
	0.2nm,0.8s						

*IGQ **10** 10:18:01.4±0.7, 0.3S±3.8×81.1W±, h12km±3km, M4.1/9, Mjma4.0/9, MLv3.9/9, Ms(BB)4.3/6*
*RSNC **10** 10:18:08.6±0.9, 0.1N±7.8×80.0W±, h0km, M3.5, mB4.7, mb4.5, ML3.0, Mw(mB)4.0*

ISC 10 10:17:52.6±1.5, **0.14N**±0.04×**80.77W**±0.05, **h6**km±11km, **n80, σ1s50/93, 8C-1D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABH3	**Manabi, Bahia**	**0.82**	**155**	⇑P	**Pn**	**10 18 11.3**	**+0.7**
ABH3				S	**Sb**	**10 18 19.0**	**-1.4**
ABH2	**Ecuador-Univer**	**0.88**	**155**	⇑P	**Pn**	**10 18 13.0**	**+1.5**
ABH2				S	**Sn**	**10 18 23.2**	**-1.4**
AMNT	**Manta-Manabi**	**1.08**	**178**	P	**Pn**	**10 18 16.7**	**+2.5**
AMNT				S	**Sn**	**10 18 28.2**	**-1.3**
PECV	**Mancha de Ca P**	**1.17**	**142**	⇑P	**Pb**	**10 18 14.6**	**-0.6**
AES2	**Ecuador-Puerto**	**1.41**	**53**	P	Pg	10 18 28.4	+8.8
ISPT	**Isla de la Pla**	**1.43**	**192**	P	**Pg**	**10 18 22.8**	**+2.8**
ISPT				S	**Sn**	**10 18 39.1**	**+1.0**
JIPI	**JIPIJAPA**	**1.51**	**172**	P	**Pg**	**10 18 23.7**	**+2.1**
JIPI				S	**Sn**	**10 18 40.9**	**+0.6**
PPLP	**Puerto Lpez**	**1.68**	**180**	⇑P	**Pg**	**10 18 25.4**	**+0.6**
PPLP				P	**Pb**	**10 18 26.0**	**+2.1**
PPLP				S	**Sg**	**10 18 45.2**	**-1.4**
ASDO	**Santo Domingo**	**1.70**	**104**	P	**Pg**	**10 18 27.9**	**+2.7**
ASDO				S	**Sb**	**10 18 46.7**	**+0.8**
CSOL	**CASCOL**	**1.82**	**170**	P	**Pg**	**10 18 27.2**	**-0.5**
PAC1	**Pacto, Paraso**	**1.98**	**86**	P	**Pg**	**10 18 33.0**	**+2.3**
PAC1	**Pacto, Paraso**	**1.98**	**86**	P	**Pg**	**10 18 33.4**	**+2.7**
PAC1				S	**Sg**	**10 18 57.2**	**+0.7**
GGPT	**Toaza - Volcan**	**2.18**	**100**	⇑P	**Pg**	**10 18 35.1**	**+0.6**
TERV	**Terraza Guagua**	**2.19**	**98**	P	**Pg**	**10 18 35.7**	**+1.0**
JUA2	**San Juan 2**	**2.20**	**99**	⇑P	**Pg**	**10 18 35.8**	**+1.0**
GGPC	**Guagua Pichinc**	**2.20**	**98**	⇑P	**Pg**	**10 18 35.7**	**+0.8**
ILLI	**Illinizas Sur**	**2.21**	**113**	P	**Pg**	**10 18 34.9**	**-0.3**
YANA	**Yana**	**2.22**	**97**	P	**Pg**	**10 18 36.3**	**+1.1**
SNLR	**San Lorenzo-Es**	**2.24**	**59**	P	**Pg**	**10 18 43.4**	**+7.8**
PULU	**Pululahua**	**2.27**	**93**	P	**Pg**	**10 18 37.1**	**+0.9**
OTAV	**Otavalo**	**2.32**	**88**	P	**Pg**	**10 18 38.3**	**+1.1**
OTAV	**Otavalo**	**2.32**	**88**	P	**Pg**	**10 18 37.8**	**+0.6**
OTAV				S	**Sn**	**10 19 03.1**	**+2.2**
SALI	**Salinas**	**2.32**	**185**	P	**Pg**	**10 18 37.8**	**+0.6**
ALIBE	**La Libertad**	**2.37**	**182**	P	**Pg**	**10 18 36.9**	**-1.3**
CUSE	**Cuicocha Este**	**2.38**	**86**	P	**Pg**	**10 18 39.7**	**+1.4**
SUCR	**Mariscal Sucre**	**2.41**	**109**	P	**Pg**	**10 18 39.1**	**+0.2**
SUCR				S	**Sb**	**10 19 07.6**	**+0.9**
CUIC	**Cuicocha-Domo**	**2.42**	**86**	P	**Pg**	**10 18 40.0**	**+1.0**
PUEM	**Granja Avicola**	**2.42**	**97**	P	**Pg**	**10 18 41.5**	**+2.4**
TOMA	**Boca Toma-Volc**	**2.42**	**105**	P	**Pg**	**10 18 39.9**	**+0.8**
TOMA				S	**Sb**	**10 19 08.1**	**+0.9**
COTA	**Cotacachi**	**2.44**	**86**	P	**Pg**	**10 18 42.1**	**+2.5**
PITA	**Cotopaxi Volc**	**2.44**	**107**	P	**Pg**	**10 18 39.6**	**+0.1**
BREF	**Cotopaxi Volca**	**2.47**	**109**	P	**Pg**	**10 18 40.4**	**+0.4**
BMOR	**Cotopaxi Volca**	**2.47**	**111**	P	**Pg**	**10 18 40.4**	**+0.3**
BRRN	**Barrancas-Volc**	**2.48**	**112**	P	**Pg**	**10 18 40.1**	**0.0**
BVC2	**Cotopaxi Volca**	**2.49**	**109**	P	**Pg**	**10 18 40.3**	**-0.2**
VC1	**Cotopaxi 1**	**2.50**	**108**	P	**Pg**	**10 18 40.5**	**-0.1**
LITE1	**Lita**	**2.50**	**75**	P	**Pg**	**10 18 41.4**	**+0.9**
CHSH	**Refugio Sur-Vo**	**2.50**	**131**	P	**Pg**	**10 18 40.3**	**-0.4**
BTAM	**Cotopaxi Volca**	**2.51**	**109**	⇑P	**Pg**	**10 18 40.5**	**-0.4**
URCU	**Urcuqui**	**2.53**	**83**	P	**Pg**	**10 18 42.8**	**+1.5**
TAMB	**Tambo**	**2.54**	**109**	⇓P	**Pg**	**10 18 41.4**	**0.0**
VCES	**Cotopaxi**	**2.56**	**112**	P	**Pg**	**10 18 41.5**	**-0.2**
PORT	**Chimborazo Vol**	**2.56**	**129**	P	**Pb**	**10 18 39.9**	**+0.6**
JSCH	**Cashca Tororas**	**2.58**	**136**	P	**Pb**	**10 18 39.4**	**-0.1**
ANTG	**Antisana-Guama**	**2.60**	**104**	P	**Pg**	**10 18 42.0**	**-0.6**
TAMH	**Tambohuasha Ch**	**2.60**	**130**	P	**Pg**	**10 18 40.9**	**-1.7**
ANTM	**Antisana-La Mi**	**2.64**	**105**	P	**Pg**	**10 18 43.2**	**-0.1**
PIS1	**Pisayambo**	**2.67**	**117**	P	**Pg**	**10 18 42.8**	**-1.1**
ANTI	**Antisana**	**2.68**	**103**	P	**Pg**	**10 18 44.6**	**+0.6**
ANTS	**Antisana-Sarah**	**2.68**	**104**	P	**Pg**	**10 18 44.0**	**-0.1**
IGUA	**Igualata**	**2.68**	**127**	P	**Pg**	**10 18 42.6**	**-1.5**
MILO	**Milagro-Astudi**	**2.70**	**153**	P	**Pn**	**10 18 37.5**	**+1.0**
YAHU	**Yahuarcocha**	**2.71**	**85**	P	**Pg**	**10 18 48.3**	**+3.6**
ANGU	**Angureal**	**2.77**	**92**	P	**Pg**	**10 18 46.2**	**+0.5**
CAYR	**Refugio Cayamb**	**2.77**	**93**	P	**Pg**	**10 18 46.5**	**+0.8**
BBIL	**Ulba Tungurahu**	**2.78**	**125**	P	**Pg**	**10 18 44.3**	**-1.7**
JUI6	**Juive**	**2.78**	**124**	P	**Pg**	**10 18 44.2**	**-1.8**
MORR	**Playas El Morr**	**2.80**	**171**	P	**Pg**	**10 18 45.2**	**-1.1**
CHMA	**Chilma**	**2.80**	**75**	P	**Pg**	**10 18 47.9**	**+1.5**
BMAS	**Trigal station**	**2.82**	**126**	P	**Pb**	**10 18 43.0**	**-0.6**
LNGL	**El Angel-Carch**	**2.83**	**78**	P	**Pg**	**10 18 48.6**	**+1.6**
BPAT	**Tungurahua Vol**	**2.85**	**125**	P	**Pg**	**10 18 46.3**	**-1.1**
ECEN	**Cerro Negro**	**2.88**	**76**	P	**Pg**	**10 18 48.9**	**+0.9**
CHL1	**Volcn Chiles**	**2.90**	**77**	P	**Pg**	**10 18 49.3**	**+1.0**
CHL2	**Volcn Chiles**	**2.93**	**77**	P	**Pg**	**10 18 49.2**	**+0.3**
COHC	**Cochancay**	**3.00**	**150**	P	**Pb**	**10 18 45.2**	**-1.3**
TULM	**Tulcn-Chalpat**	**3.04**	**79**	P	**Pg**	**10 18 52.6**	**+1.7**
CMBC	**Cumbal**	**3.05**	**75**	P	**Pg**	**10 18 51.4**	**+0.2**
ISPG	**Isla Puna-Puer**	**3.15**	**169**	P	**Pb**	**10 18 50.5**	**-2.5**
REVS	**Reventador Sur**	**3.16**	**94**	P	**Pg**	**10 18 52.8**	**-0.5**
ARDO	**Archidona, Ten**	**3.18**	**111**	P	**Pg**	**10 18 52.2**	**-1.4**
SANGA	**Volcan Sangay**	**3.24**	**132**	P	**Pb**	**10 18 51.4**	**+0.5**
CASC	**Dorado de Casc**	**3.43**	**90**	P	**Pg**	**10 18 58.0**	**-0.5**
CASC				S	**Sb**	**10 19 39.2**	**+3.2**
PCRA	**Pucara 2**	**3.56**	**159**	P	**Pb**	**10 18 53.6**	**-2.8**
GCUF	**Volcan Galeras**	**3.59**	**73**	P	**Pg**	**10 19 01.1**	**-0.4**
BBAC	**Balboa, Cauca**	**3.99**	**62**	P	**Pb**	**10 19 02.0**	**-1.5**
BBAC				S	**Sb**	**10 19 50.0**	**-2.1**
CRUC	**La Cruz**	**4.08**	**70**	P	**Pg**	**10 19 10.8**	**0.0**
POPC	**Popayan, Colom**	**4.74**	**60**	P	**Pb**	**10 19 14.3**	**-1.9**
POPC				S	**Sb**	**10 20 09.3**	**-4.4**
JAMC	**Jamundi, Valle**	**5.11**	**53**	P	**Pb**	**10 19 20.8**	**-1.8**
YOTC	**Yotoco, Valle**	**5.84**	**49**	P	**Pb**	**10 19 32.0**	**-3.0**

*KRNET **10** 10:21:56.5±0.1, 41.81N×77.23E, h19km, mb3.4*
*SOME **10** 10:21:57.7, 41.88N×77.18E, h10km*
*NNC **10** 10:21:58.8±0.8, 41.91N×77.26E, h0km, mb4.3, mpv4.1, Error ellipse: s-maj=5.3km s-min=3.4km az=179.0*
*KNET **10** 10:21:59.0±0.3, 41.80N×77.03E, h11km±1km, ml3.0, Error ellipse: s-maj=4.2km s-min=1.8km az=38.0*

ISC 10 10:21:56.5±1.2, **41.80N**±0.03×**77.17E**±0.02, **h1**km±10km, **n76, σ0s97/138, 46C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.33**	**1**	⇑*eP*	**Pg**	**10 22 03.3**	**+0.5**
KDJ				⇑*iS*	**Sg**	**10 22 07.7**	**+0.6**
TARG	**Taragay, Kyrgy**	**0.48**	**99**	⇑*iP*	**Pg**	**10 22 05.3**	**-0.4**
TARG				⇑*iS*	**Sg**	**10 22 11.2**	**-0.7**
ULHL	**Ulahol**	**0.82**	**303**	⇑P	**Pg**	**10 22 13.0**	**+0.7**
	49nm,0.1s						
ULHL				⇑S	**Sb**	**10 22 24.9**	**-0.6**
	112nm,0.1s						
ULHL	**Ulahol**	**0.82**	**303**	⇑*iP*	**Pg**	**10 22 12.7**	**+0.4**
ULHL				⇑*iS*	**Sg**	**10 22 24.3**	**+1.3**
NRN	**Naryn**	**0.95**	**248**	⇑*iP*	**Pg**	**10 22 15.5**	**+0.7**
NRN				⇑*iS*	**Sb**	**10 22 29.0**	**-0.3**
ANVS	**Anan'yevo**	**1.05**	**20**	⇑*iP*	**Pg**	**10 22 15.7**	**-0.9**
ANVS				⇑*iS*	**Sg**	**10 22 29.5**	**-0.7**
PRZ	**Przheval'sk**	**1.14**	**53**	⇑*iP*	**Pg**	**10 22 17.0**	**-1.3**
PRZ				⇑*iS*	**Sg**	**10 22 32.1**	**-1.0**
BOOM	**Boomskoye usch**	**1.15**	**307**	⇑*iP*	**Pb**	**10 22 18.1**	**-1.2**
BOOM				⇑*iS*	**Sg**	**10 22 33.8**	**+0.4**
TNSS	**Tian-Shan**	**1.25**	**352**	P	**Pb**	**10 22 20.3**	**-0.8**
	33nm,0.1s						
TNSS				S	**Sb**	**10 22 35.8**	**-2.0**
	39nm,0.2s						
TNSS	**Tian-Shan**	**1.25**	**352**	*eP*	**Pb**	**10 22 20.3**	**-0.8**
	33nm,0.1s						
TNSS				*eS*	**Sb**	**10 22 36.4**	**-1.4**
	39nm,0.2s						
IZV	**Izvestkoviy**	**1.30**	**342**	P	**Pn**	**10 22 20.9**	**-1.1**
	97nm,0.2s						
IZV				S	**Sb**	**10 22 37.5**	**-1.7**
	239nm,0.1s						
IZV	**Izvestkoviy**	**1.30**	**342**	*eP*	**Pn**	**10 22 20.9**	**-1.1**
	97nm,0.2s						
IZV				*eS*	**Sb**	**10 22 37.5**	**-1.7**
	239nm,0.1s						
MDOK	**Medeo**	**1.36**	**356**	Pg	**Pb**	**10 22 22.3**	**-0.6**
	110nm,0.2s						
MDOK				Lg	Lg	10 22 39.5	
	123nm,0.2s						
JNKS	**Jany-Kuch**	**1.38**	**238**	⇑*iP*	**Pn**	**10 22 22.3**	**-0.9**
JNKS				⇑*iS*	**Sb**	**10 22 40.8**	**-0.8**
AAA	**Alma-Ata**	**1.42**	**352**	P	**Pg**	**10 22 24.3**	**+0.5**
	386nm,0.2s						
AAA				S	**Sg**	**10 22 42.9**	**+0.8**
	16nm,0.1s						
AAA	**Alma-Ata**	**1.42**	**352**	*eP*	**Pg**	**10 22 24.3**	**+0.5**
	386nm,0.2s						
AAA				*eS*	**Sg**	**10 22 42.9**	**+0.8**
	16nm,0.1s						
KNDC	**Almaty**	**1.42**	**354**	⇑P	**Pg**	**10 22 24.0**	**+0.2**
	183nm,0.7s						
KNDC				⇓S	**Sg**	**10 22 43.5**	**+1.3**
	402nm,0.5s						
KOTS	**Kotyrbulak**	**1.43**	**358**	P	**Pg**	**10 22 24.0**	**0.0**
	66nm,0.1s						
KOTS				S	**Sg**	**10 22 42.3**	**-0.2**

	65nm,0.2s							
UZB				S	Sb	10 22 55.5	-1.4	
	218nm,0.2s							
UZB	**Uzynbulak**	**1.92**	**45**	*e*P	Pb	10 22 31.6	-0.8	
	65nm,0.2s							
UZB				*e*S	Sb	10 22 55.5	-1.4	
	218nm,0.2s							
KTBS	**Karatobe**	**1.94**	**349**	P	Pg	10 22 33.2	-0.6	
	89nm,0.3s							
KTBS				S	Sg	10 22 58.4	-0.6	
	61nm,0.2s							
KTBS	**Karatobe**	**1.94**	**349**	*e*P	Pg	10 22 33.2	-0.6	
	89nm,0.3s							
KTBS				*e*S	Sg	10 22 58.4	-0.6	
	61nm,0.2s							
KPKS	**Kokpek**	**2.00**	**33**	P	Pb	10 22 33.3	-0.5	
	13nm,0.1s							
KPKS				S	Sb	10 22 58.4	-0.8	
	107nm,0.3s							
KPKS	**Kokpek**	**2.00**	**33**	*e*P	Pb	10 22 33.3	-0.5	
	13nm,0.1s							
KPKS				*e*S	Sb	10 22 58.4	-0.8	
	107nm,0.3s							
UCH	**Uchtor**	**2.03**	**283**	⇑P	Pb	10 22 34.9	+0.4	
	15nm,0.2s,SNR=21							
UCH				⇑S	Sg	10 23 01.8	+0.1	
	45nm,0.3s							
UCH	**Uchtor**	**2.03**	**283**	⇑*e*P	Pn	10 22 32.9	+0.6	
UCH				⇑*i*S	Sb	10 22 59.7	-0.7	
ARLS	**Aral**	**2.13**	**273**	⇓*i*P	Pn	10 22 34.1	+0.7	
ARLS				⇓*i*S	Sb	10 23 01.6	-1.5	
FRU1	**Bishkek**	**2.14**	**299**	⇓*i*P	Pb	10 22 34.5	-1.6	
FRU1				⇓*i*S	Sb	10 23 02.2	-1.0	
CHMS	**Chumysh**	**2.16**	**304**	⇑P	Pb	10 22 36.9	+0.5	
	33nm,0.5s,SNR=16							
CHMS				⇓S	Sg	10 23 06.1	+0.3	
	53nm,0.2s							
CHMS	**Chumysh**	**2.16**	**304**	⇑*i*P	Pb	10 22 34.5	-1.9	
CHMS				⇑*i*S	Sb	10 23 02.0	-1.6	
AAK	**Ala-Archa**	**2.16**	**294**	⇑P	Pb	10 22 36.5	0.0	
	15nm,0.2s,SNR=32							
AAK				⇓S	Sg	10 23 05.8	-0.1	
	69nm,0.3s							
AAK	**Ala-Archa**	**2.16**	**294**	⇑Pn	Pb	10 22 37.1	+0.6	
	95nm,0.5s							
AAK				⇓Sn	Sg	10 23 06.0	+0.1	
	256nm,0.5s							
AAK	**Ala-Archa**	**2.16**	**294**	*i* P	Pb	10 22 34.7	-1.8	
AAK				*e*S	Sb	10 23 02.4	-1.4	
SHLS	**Shalkode**	**2.17**	**51**	Pg	Pg	10 22 40.3	+2.3	
	67nm,0.2s							
SHLS				Lg	Lg	10 23 10.6		
	281nm,0.4s							
SHLS	**Shalkode**	**2.17**	**51**	*e*P	Pg	10 22 40.3	+2.3	
	67nm,0.2s							
SHLS				*e*S	Sg	10 23 10.6	+4.5	
	281nm,0.4s							
KUU	**Kurty**	**2.18**	**344**	Pg	Pb	10 22 37.0	+0.2	
	18nm,0.2s							
KUU				Lg	Lg	10 23 04.6		
	47nm,0.2s							
KUU	**Kurty**	**2.18**	**344**	*e*P	Pb	10 22 37.0	+0.2	
	18nm,0.2s							
KUU				*e*S	Sb	10 23 04.6	+0.3	
	47nm,0.2s							
KRBS	**Karabastau**	**2.19**	**330**	Pg	Pb	10 22 37.0	0.0	
	57nm,0.3s							
KRBS				Lg	Lg	10 23 04.6		
	26nm,0.2s							
KRBS	**Karabastau**	**2.19**	**330**	*e*P	Pb	10 22 37.0	0.0	
	57nm,0.3s							
KRBS				*e*S	Sb	10 23 04.6	-0.1	
	26nm,0.2s							
ARXS	**Arharly**	**2.46**	**11**	Pg	Pb	10 22 41.2	-0.3	
	15nm,0.3s							
ARXS				Lg	Lg	10 23 12.6		
	312nm,0.3s							
ARXS	**Arharly**	**2.46**	**11**	*e*P	Pb	10 22 41.2	-0.3	
	15nm,0.3s							
ARXS				*e*S	Sb	10 23 12.6	+0.3	
	312nm,0.3s							
USP	**Ospenovka**	**2.46**	**307**	⇑P	Pb	10 22 41.2	-0.4	
	19nm,0.2s,SNR=14							
USP				⇑S	Sb	10 23 13.4	+1.0	
	112nm,0.3s							
USP	**Ospenovka**	**2.46**	**307**	⇓*e*P	Pn	10 22 38.7	+0.9	
USP				⇓*i*S	Sn	10 23 09.3	+0.8	
SGDS	**Sogindy**	**2.50**	**312**	Pg	Pg	10 22 43.6	-0.8	
	9.2nm,0.1s							
SGDS				Lg	Lg	10 23 16.0		
	258nm,0.4s							
EKS2	**Erkin-Say**	**2.67**	**290**	⇑*i*P	Pn	10 22 41.7	+1.0	
EKS2				⇑*i*S	Sn	10 23 14.6	+0.9	
SALK	**Salom-Alik**	**2.69**	**251**	⇑*i*P	Pn	10 22 42.1	+1.0	
SALK				⇑*i*S	Sn	10 23 15.0	+0.7	
KTMS	**Ketmen**	**2.86**	**54**	Pg	Pb	10 22 48.1	-0.4	
	6.0nm,0.2s							
KTMS				Lg	Lg	10 23 24.1		
	59nm,0.3s							
KTMS	**Ketmen**	**2.86**	**54**	*e*P	Pb	10 22 48.1	-0.4	
	6.0nm,0.2s							
KTMS				*e*S	Sb	10 23 24.1	0.0	
	59nm,0.3s							
KNOS	**Konyrlen**	**2.95**	**29**	Pg	Pb	10 22 49.5	-0.5	
	3.1nm,0.2s							
KNOS				Lg	Lg	10 23 26.1		
	88nm,0.4s							
MRKS	**Merke**	**3.08**	**289**	Pg	Pg	10 22 54.8	-0.7	
	11nm,0.3s							
MRKS				Lg	Lg	10 23 35.5		
	65nm,0.3s							
MRKS	**Merke**	**3.08**	**289**	*e*P	Pg	10 22 54.8	-0.7	
	11nm,0.3s							
MRKS				*e*S	Sg	10 23 35.5	+0.2	
	65nm,0.3s							
DJR	**Jarkent**	**3.17**	**36**	Pg	Pb	10 22 53.1	-0.7	
	3.6nm,0.2s							
DJR				Lg	Lg	10 23 32.9		
	64nm,0.3s							
DJR	**Jarkent**	**3.17**	**36**	*e*P	Pb	10 22 53.1	-0.7	
	3.6nm,0.2s							
DJR				*e*S	Sb	10 23 32.9	-0.1	
	64nm,0.3s							
SFK	**Sufi-Kurgan**	**3.31**	**238**	⇑*e*P	Pn	10 22 50.7	+1.1	
SFK				⇑*e*S	Sn	10 23 30.1	+0.4	
TDK	**Taldyqorghan**	**3.32**	**15**	Pg	Pb	10 22 56.6	+0.3	
	28nm,0.2s							
TDK				Lg	Lg	10 23 38.5		
	151nm,0.3s							
TDK	**Taldyqorghan**	**3.32**	**15**	*e*P	Pb	10 22 56.6	+0.3	
	28nm,0.2s							
TDK				*e*S	Sb	10 23 38.5	+1.3	
	151nm,0.3s							
MNAS	**Manas**	**3.54**	**283**	⇓*e*P	Pn	10 22 53.8	+1.0	
MNAS				⇓*i*S	Sn	10 23 35.5	+0.2	
KAPS	**Kapalarasan**	**3.83**	**24**	Pg	Pb	10 23 05.3	+0.4	
	1.4nm,0.1s							
KAPS				Lg	Lg	10 23 53.5		
	37nm,0.2s							
ARK	**Arkit**	**3.90**	**272**	⇑*i*P	Pn	10 22 58.9	+1.3	
ARK				⇑*i*S	Sn	10 23 44.3	+0.2	
BTLS	**Baital**	**3.96**	**326**	Pg	Pb	10 23 07.1	+0.1	
	11nm,0.3s							
BTLS				Lg	Lg	10 23 56.8		
	26nm,0.3s							
BTLS	**Baital**	**3.96**	**326**	*e*P	Pb	10 23 07.2	+0.1	
	11nm,0.3s							
BTLS				*e*S	Sb	10 23 56.8	+1.4	
	26nm,0.3s							
TRKS	**Terek-Say**	**4.53**	**269**	⇑*i*P	Pn	10 23 07.4	+1.0	
TRKS				⇑*i*S	Sn	10 23 58.9	-0.8	
KK31	**Karatay Array**	**5.10**	**287**	⇓Pg	Pg	10 23 32.2	-2.0	
	0.6nm,0.3s,baz=99,slow=16,SNR=11							
KK31				Lg	Lg	10 24 38.6		
	5.9nm,0.4s,baz=102,slow=29,SNR=19							
BTK	**Batken**	**5.12**	**252**	⇑*e*P	Pn	10 23 15.5	+1.1	
BTK				⇑*i*S	Sn	10 24 13.4	-0.8	

*IDC **10** 10:37:14.8±1.7,20°.53N×93°.65E,h0km,mb3.4/6, mbtmp3.4/7,Error ellipse: s-maj=51.5km s-min=17.8km az=50.0*

ISC 10 10:37:19.9±1.9,20°.6N±0°.3×93°.7E±0°.3,h35km,n7,σ0s53/7, mb3.4/6,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**5.36**	**112**	Pn	Pn	**10 38 37.4**	**-0.1**
	1.0nm,0.4s,baz=297,slow=14,SNR=5.4						
CMAR				Lg	Lg	10 40 05.8	
	baz=292,slow=29						
MKAR	**Makanchi Array**	**27.79**	**343**	P	P	**10 43 05.7**	**+0.2**
	0.1nm,0.5s,baz=144,slow=11,SNR=2.0						
	0.1nm,0.5s						
SONM	**Songino Array**	**29.09**	**18**	P	P	**10 43 17.1**	**-0.2**
	0.3nm,0.5s,baz=200,slow=11,SNR=2.7						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**32.31**	**342**	P	P	**10 43 45.0**	**-0.5**
	0.5nm,0.7s,baz=158,slow=8.2,SNR=4.4						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**34.03**	**351**	P	P	**10 44 01.0**	**+0.6**
	0.5nm,0.4s,baz=167,slow=6.8,SNR=2.6						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**56.59**	**133**	P	P	**10 47 00.1**	**+0.6**
	0.4nm,0.8s,baz=318,slow=7.7,SNR=4.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**58.87**	**136**	P	P	**10 47 15.1**	**-0.4**
	0.2nm,0.9s,baz=309,slow=6.7,SNR=1.4						
	0.2nm,0.9s						

IDC 10 10:46:32.2±57.0,16°.38S×176°.29W,h0km,mb4.2/3, mbtmp4.2/3,Error ellipse: s-maj=1074.0km s-min=173.9km az=78.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.14**	**240**	P	P	10 54 18.8	+0.4
	1.4nm,0.5s,baz=79,slow=10,SNR=3.6						
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**46.91**	**258**	P	P	10 55 04.4	-0.5
	0.6nm,0.6s,baz=95,slow=7.3,SNR=22						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**47.16**	**253**	P	P	10 55 06.8	0.0
	9.0nm,0.6s,baz=89,slow=7.9,SNR=201						
	9.0nm,0.6s						

STR 10 10:48:49.3±0.4,45°N±3°×°±°,h0km,MLv1.8/11,LOCSAT earthModelID auvergne_taup-2.11 preliminary,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSB	**Saint Sauveur**	**0.18**	**118**	Pg	Pg	10 48 52.4	-0.4
SSB				Sg	Sg	10 48 55.1	+0.1
COLF	**Collangettes**	**0.47**	**290**	Pg	Pg	10 49 57.7	-0.5
COLF				Sg	Sg	10 49 04.8	+0.5
LBL	**Lubilhac**	**0.77**	**260**	Pg	Pg	10 49 03.3	-0.7
LBL				Sg	Sg	10 49 14.9	+1.0
PLDF	**La Plantade**	**0.78**	**321**	Pg	Pg	10 49 03.8	-0.4
PLDF				Sg	Sg	10 49 14.6	+0.3
OGSM	**Saint Maurice**	**1.00**	**75**	Pg	Pg	10 49 08.6	0.0
AGO	**Saint Agoulin**	**1.08**	**310**	Pg	Pg	10 49 09.6	-0.4
AGO				Sg	Sg	10 49 24.3	+0.2
VERF	**Verneugheol**	**1.34**	**287**	Pg	Pg	10 49 14.8	-0.4
VERF				Sg	Sg	10 49 32.6	+0.1
LEUC	**Leucamp**	**1.39**	**245**	Pg	Pg	10 49 15.1	-0.8
LEUC				Sn	Sg	10 49 33.6	-0.3

STR 10 10:49:33.2±0.0,44°.1N±0°.3×7°.7E±0°.1,h5km,MLv1.0/5, LOCSAT earthModelID alpes_taup-2.11 preliminary, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIAF	**les Granges de**	**0.07**	**247**	Pg	Pg	10 49 34.9	-0.1
PIAF				Sg	Sg	10 49 36.1	0.0
PIAF	**les Granges de**	**0.07**	**247**	Pg	Pg	10 49 34.9	0.0
PIAF				Sg	Sg	10 49 36.2	0.0
SAOF	**Saorge**	**0.20**	**216**	Pg	Pg	10 49 37.3	+0.3
SAOF				Sg	Sg	10 49 39.3	-0.3
RORO	**Rocca Rossa**	**0.26**	**97**	Pg	Pg	10 49 38.2	0.0
RORO				Sg	Sg	10 49 42.1	+0.5
TURF	**col de Turini**	**0.29**	**234**	Pg	Pg	10 49 38.1	+0.2
TURF				Sg	Sg	10 49 42.9	+0.3
MON	**Monaco**	**0.46**	**207**	Pg	Pg	10 49 41.8	-0.3
MON				Sg	Sg	10 49 48.1	0.0

*BGSI **10** 10:49:46.6±1.4,20°.13S×23°.21E,h0km,s9km,ML4.0*

ISC 10 10:49:44.6±1.1,20°.14S±0°.05×23°.25E±0°.03,h10km,n30, σ1s85/41,Botswana

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRTLG	**Ghanzi**	**2.25**	**237**	*i* P	Pn	**10 50 22.7**	**+0.5**
GRTLG				*i* S	Sn	**10 50 49.3**	**-0.8**
GRTLG				IAML		10 50 55.4	
	comp=N,2μm,0.2s						
GRTLG	**Ghanzi**	**2.25**	**237**	P	Pn	**10 50 23.1**	**+0.9**
XAUDM	**Khaudum**	**2.41**	**311**	*i* P	Pn	**10 50 25.5**	**+1.3**
XAUDM				*i* S	Sn	**10 50 53.9**	**0.0**
XAUDM				IAML		10 51 03.1	
	comp=N,4μm,0.6s						
XAUDM	**Khaudum**	**2.41**	**311**	P	Pn	**10 50 23.3**	**-0.9**
KHWEE	**KHWEE**	**2.73**	**132**	*i* P	Pn	**10 50 30.5**	**+1.9**
KHWEE				*i* S	Sn	**10 51 02.9**	**+1.1**
KHWEE				IAML		10 51 18.0	
	comp=N,5μm,0.5s						
KHWEE				IAML		10 51 19.3	
	comp=E,6μm,0.4s						
KHWEE	**KHWEE**	**2.73**	**132**	P	Pb	**10 50 33.8**	**+0.2**
SOOWA	**Sowa**	**2.82**	**99**	*i* P	Pn	**10 50 31.3**	**+1.4**
SOOWA				*i* S	Sn	**10 51 05.3**	**+1.4**
SOOWA				IAML		10 51 15.9	
	comp=E,1μm,0.4s						
SOOWA	**Sowa**	**2.82**	**99**	P	Pn	**10 50 31.5**	**+1.7**
KGCAE	**Kacgae**	**2.87**	**200**	*i* P	Pn	**10 50 32.2**	**+1.7**
KGCAE				*i* S	Sn	**10 51 05.9**	**+0.7**
KGCAE				IAML		10 51 18.7	
	comp=N,1μm,0.3s						
KGCAE				IAML		10 51 18.8	
	comp=E,1μm,0.4s						
KGCAE	**Kacgae**	**2.87**	**200**	P	Pn	**10 50 32.3**	**+1.8**
KSANE	**Kasane**	**2.95**	**38**	*i* P	Pn	**10 50 32.2**	**+0.6**
KSANE				IAML		10 51 20.8	
	comp=N,1μm,0.3s						
KSANE				IAML		10 51 22.6	
	comp=N,1μm,0.5s						
KSANE	**Kasane**	**2.95**	**38**	P	Pn	**10 50 31.5**	**-0.2**
BROLN	**Tlhalogang**	**3.94**	**105**	*i* P	Pn	**10 50 46.4**	**+1.0**
BROLN				*i* S	Sn	**10 51 32.7**	**+0.9**
BROLN				IAML		10 51 49.7	
	comp=E,238nm,0.6s						
BROLN				IAML		10 51 50.5	
	comp=E,310nm,0.6s						
BROLN	**Tlhalogang**	**3.94**	**105**	P	Pn	**10 50 46.9**	**+1.6**
KOOLE	**Kule**	**4.01**	**225**	*i* P	Pn	**10 50 48.0**	**+1.7**
KOOLE				*i* S	Sn	**10 51 32.6**	**-0.9**
KOOLE				IAML		10 51 53.5	
	comp=N,641nm,0.2s						
KOOLE				IAML		10 51 54.0	
	comp=N,660nm,0.3s						
KOOLE	**Kule**	**4.01**	**225**	P	Pn	**10 50 50.5**	**+4.2**
LPHEP	**Lephephe**	**4.02**	**143**	*i* P	Pn	**10 50 48.4**	**+2.0**
LPHEP				IAML		10 51 55.7	
	comp=E,322nm,0.5s						
MREMI	**Moremi**	**4.60**	**122**	P	Pn	**10 50 55.7**	**+1.4**
BLWY	**Bulawayo**	**5.04**	**91**	*i* P	Pn	**10 51 00.1**	**-0.3**
BLWY				*i* S	Sn	10 51 52.6	-6.2
LBTB	**Lobatse**	**5.31**	**156**	*i* P	Pn	**10 51 05.1**	**+0.9**
LBTB	**Lobatse**	**5.31**	**156**	P	Pn	**10 51 04.5**	**+0.4**
TSUM	**Tsumeb**	**5.42**	**279**	*i* P	Pn	**10 51 06.0**	**+0.4**
TSUM				*i* S	Sn	**10 52 07.8**	**-0.4**
TSUM	**Tsumeb**	**5.42**	**279**	P	Pn	**10 51 05.8**	**+0.2**
MAKGR	**Makgori**	**5.82**	**166**	*i* P	Pn	**10 51 11.6**	**+0.4**
WIN	**Windhoek**	**6.22**	**246**	P	Pn	**10 51 16.4**	**-0.3**
MUSN	**Musina, Limpop**	**6.53**	**110**	*i* P	Pn	**10 51 20.9**	**+0.1**
MUSN				*i* S	Sn	**10 52 31.4**	**-4.0**
LSZ	**Lusaka**	**6.75**	**45**	*i* P	Pn	**10 51 23.9**	**-0.1**
LSZ				*i* S	Sn	**10 52 36.1**	**-5.0**
LSZ	**Lusaka**	**6.75**	**45**	P	Pn	**10 51 23.6**	**-0.4**
BOSA	**Boshof**	**8.63**	**168**	*i* P	Pn	**10 51 49.7**	**0.0**
BOSA				*i* S	Sn	**10 53 21.4**	**-5.8**
BOSA	**Boshof**	**8.63**	**168**	P	Pn	**10 51 49.6**	**0.0**

*SJA **10** 10:57:00.0±0.7,20°.21S×69°.09W,h114km±3km,ML3.4, MW3.5*

*GUC **10** 10:57:02.1±0.8,20°.15S×69°.10W,h109km±4km,ML3.4*

ISC 10 10:57:01.8±1.6,20°.19S±0°.03×69°.12W±0°.09,h108km±9km, n25,σ0s56/42,1C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.06**	**326**	*e*P	Pn	**10 57 16.9**	**-0.3**
PB08				*e*S	Sn	**10 57 28.2**	**-0.4**
PB08				IAML		10 57 28.9	
	comp=E,5μm,0.2s						
PB08	**IPOC Station P**	**0.06**	**326**	*i* P	Pn	**10 57 16.9**	**-0.3**
PB08				*i* S	Sn	**10 57 29.3**	**+0.7**
PB08				IAML		10 57 30.6	
	comp=Z,2μm,0.2s						
GO01	**Chusmiza**	**0.53**	**352**	*e*P	Pn	**10 57 18.8**	**-0.4**
GO01				*i* S	Sn	**10 57 31.6**	**-0.5**
GO01	**Chusmiza**	**0.53**	**352**	*i* P	Pn	**10 57 18.7**	**-0.4**
GO01				*i* S	Sn	**10 57 32.6**	**+0.5**
GO01				IAML		10 57 34.6	
	comp=Z,914nm,0.5s						
PB11	**IPOC Station P**	**0.67**	**310**	*e*P	Pn	**10 57 19.6**	**-0.2**
PB11				*i* S	Sn	**10 57 33.4**	**0.0**
PB11				IAML		10 57 34.4	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**0.67**	**310**	*i* P	Pn	**10 57 19.5**	**-0.3**
PB11				*i* S	Sn	**10 57 34.4**	**+1.1**
PB11				IAML		10 57 34.7	
	comp=Z,1μm,0.1s						
PB01	**IPOC Station P**	**0.91**	**202**	*e*P	Pn	**10 57 22.3**	**+0.3**
PB01				*e*S	Sn	**10 57 38.2**	**+0.9**
PB01				IAML		10 57 39.4	
	comp=N,1μm,0.1s						
PB01	**IPOC Station P**	**0.91**	**202**	*i* P	Pn	**10 57 21.6**	**-0.4**
PB01				*i* S	Sn	**10 57 37.2**	**-0.1**
PB01				IAML		10 57 39.7	
	comp=Z,972nm,0.2s						
TA02	**Huaiquique**	**0.96**	**265**	⇑*i*P	Pn	**10 57 22.5**	**+0.2**
TA02	**Huaiquique**	**0.96**	**265**	*i* P	Pn	**10 57 21.9**	**-0.4**
TA02				*i* S	Sn	**10 57 37.9**	**+0.1**
TA02				IAML		10 57 41.8	
	comp=Z,1μm,0.1s						
PB02	**IPOC Station P**	**1.34**	**213**	*e*P	Pn	**10 57 27.1**	**+0.5**
PB02				IAML		10 57 47.9	
	comp=E,554nm,0.2s						
PB02	**IPOC Station P**	**1.34**	**213**	*i* P	Pn	**10 57 26.5**	**-0.1**
PB02				*i* S	Sn	**10 57 45.9**	**+0.4**
PB02				IAML		10 57 51.5	
	comp=Z,632nm,0.3s						
PB09	**IPOC Station P**	**1.60**	**184**	*e*P	Pn	**10 57 30.5**	**+0.7**
PB09				IAML		10 57 56.3	
	comp=E,314nm,0.5s						
PB09	**IPOC Station P**	**1.60**	**184**	*i* P	Pn	**10 57 29.9**	**+0.1**
PB09				*i* S	Sn	**10 57 50.5**	**-0.6**
PB09				IAML		10 57 54.9	
	comp=Z,232nm,0.2s						
PB07	**IPOC Station P**	**1.69**	**205**	*e*P	Pn	**10 57 31.2**	**+0.3**
PB07				IAML		10 57 55.3	
	comp=N,610nm,0.1s						
PB07	**IPOC Station P**	**1.69**	**205**	*i* P	Pn	**10 57 30.5**	**-0.4**
PB07				*i* S	Sn	**10 57 53.2**	**+0.1**
PB07				IAML		10 57 55.2	
	comp=Z,276nm,0.2s						
PB16	**IPOC Station P**	**1.89**	**349**	*e*P	Pn	**10 57 34.1**	**+0.3**
PB16				*e*S	Sn	**10 57 58.0**	**-0.1**
PB16	**IPOC Station P**	**1.89**	**349**	*i* P	Pn	**10 57 33.8**	**0.0**
PB16				*i* S	Sn	**10 57 58.8**	**+0.6**
PB16				IAML		10 58 06.2	
	comp=Z,66nm,0.4s						
PB12	**IPOC Station P**	**1.94**	**324**	*e*P	Pn	**10 57 33.5**	**-0.5**
PB12				IAML		10 58 01.4	
	comp=E,174nm,0.1s						
PB12	**IPOC Station P**	**1.94**	**324**	*i* P	Pn	**10 57 33.5**	**-0.5**
PB12				*i* S	Sn	**10 57 59.0**	**+0.3**
PB12				IAML		10 57 59.7	
	comp=Z,125nm,0.5s						
AP01	**Chacalluta**	**2.15**	**327**	*i* P	Pn	**10 57 36.2**	**-0.4**
AP01				*e*S	Sn	**10 58 03.9**	**+0.6**
AP01				IAML		10 58 24.1	
	comp=Z,215nm,0.2s						
PB06	**IPOC Station P**	**2.54**	**190**	*e*P	Pn	**10 57 43.2**	**+1.5**
PB06				IAML		10 58 13.9	
	comp=E,188nm,0.2s						
PB06	**IPOC Station P**	**2.54**	**190**	*i* P	Pn	**10 57 41.4**	**-0.3**
PB06				*i* S	Sn	**10 58 11.6**	**-0.8**
PB06				IAML		10 58 15.9	
	comp=Z,111nm,0.1s						
PB05	**IPOC Station P**	**2.83**	**201**	IAML		10 58 18.2	
	comp=E,75nm,0.5s						
PB05	**IPOC Station P**	**2.83**	**201**	*i* P	Pn	**10 57 45.4**	**-0.2**
PB05				*i* S	Sn	**10 58 18.2**	**-1.2**
PB05				IAML		10 58 32.5	
	comp=Z,43nm,0.9s						

*IDC **10** 11:24:40.2±3.1,1°.39N×98°.71E,h0km,mb3.4/5, mbtmp3.4/6,MS3.0/2,Error ellipse: s-maj=143.2km s-min=22.9km az=57.0*

*DJA **10** 11:24:45.3±0.2,2°.N±1°×9°.9E±°,h10km,M3.9/24, MLv3.9/24*

ISC 10 11:24:43.2±0.7,1°.80N±0°.04×99°.11E±0°.05,h10km,n20, σ1s26/21,mb3.3/5,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**1.01**	**350**	P	Pg	**11 25 00.5**	**-2.2**
MNSI	**Mandailing Nat**	**1.10**	**155**	P	Pn	**11 25 05.2**	**+0.5**
GSI	**Gunungsitoli**	**1.61**	**252**	P	Pb	**11 25 12.5**	**-0.5**
GSI				S	Sg	**11 25 35.1**	**+0.1**
TSI	**Tuntungan**	**1.78**	**342**	P	Pn	**11 25 15.0**	**+1.0**
PBSI	**Pulau Batu**	**2.02**	**204**	P	Pb	**11 25 19.9**	**-0.1**
PBSI				S	Sg	**11 25 47.9**	**-0.2**
KCSI	**Kotacane, Aceh**	**2.17**	**322**	P	Pb	**11 25 22.5**	**-0.1**
BKNI	**Bangkinang**	**2.42**	**127**	P	Pg	**11 25 29.5**	**-0.2**
PPI	**Padang Panjang**	**2.58**	**150**	P	Pg	**11 25 32.9**	**+0.1**
SNSI	**Sinabang, Aceh**	**2.85**	**282**	P	Pn	**11 25 30.2**	**+1.5**
PDSI	**Padang**	**3.01**	**153**	P	Pb	**11 25 35.3**	**-1.7**
IPM	**Ipoh**	**3.28**	**36**	P	Pn	**11 25 36.8**	**+2.1**
MLSI	**Meulaboh, Aceh**	**3.65**	**312**	P	Pn	**11 25 40.7**	**+1.0**
KULM	**Kulim**	**3.79**	**24**	P	Pn	**11 25 43.2**	**+1.4**
CMAR	**Chiang Mai Arr**	**16.56**	**359**	Pn	P	**11 28 38.0**	**-0.2**
	0.6nm,0.3s,baz=192,slow=13,SNR=4.9						
CMAR				LR	LR	11 35 20.6	
	comp=Z,46nm,18.5s,baz=145,slow=38						
PALK	**Pallekele**	**19.13**	**287**	LR	LR	11 36 13.6	
	comp=Z,39nm,19.2s,baz=98,slow=37						
WRA	**Warramunga Arr**	**40.76**	**124**	P	P	**11 32 23.7**	**-1.1**
	0.5nm,0.9s,baz=299,slow

0.1nm,0.3s
ILAR Eielson Array 85.28 24 P **P** 11 45 25.7 **-0.8**
0.4nm,0.9s,baz=254,slow=4.5,SNR=4.3
0.4nm,0.9s

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*CNRM **10** 11:42:09.0, 35˚.14N×6˚.78W, h22km, ML2.1*
*MDD **10** 11:42:13.7±1.2, 35˚.71N×6˚.40W, h0km, mb_Lg3.0/6, Error ellipse: s-maj=10.5km s-min=5.6km az=11.0*
*IGIL **10** 11:42:13.7, 35˚.43N×6˚.44W, h38km, ML2.2*
*SFS **10** 11:42:14.4, 35˚.57N×6˚.49W, h21km, ML3.1/10, ML3.3/10, MLv3.2/10*
INMG 10 11:42:14.3±1.5, 35˚.44N×6˚.43W, h31km, ML2.3, 1C-1D, Error ellipse: s-maj=5.0km s-min=3.0km az=62.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Costa de Marrocos, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSA	**Sarsar**	**0.75**	**138**	P	Pn	11 42 24.6	-4.2
RSA				S	Sb	11 42 35.6	-3.2
CHEFC	**Chefchaouen**	**0.95**	**110**	P	Pn	11 42 30.4	-1.3
ECEU	**Ceuta**	**0.97**	**62**	P	Pn	11 42 31.9	+0.1
PBDV	**Barranco-do-Ve**	**2.17**	**326**	eP	Pn	11 42 46.1	-2.2
PBDV				eS	Sn	11 43 10.0	-4.2
PBDV	**Barranco-do-Ve**	**2.17**	**326**	eP	Pn	11 42 46.6	-1.7
PBDV				eS	Sn	11 43 10.6	-3.6
PBDV				i IAML		11 43 11.1	
PBDV				i IAML		11 43 12.6	
PBDV				i IAML		11 43 15.0	
PVAQ	**Vaqueiros**	**2.22**	**332**	eP	Pn	11 42 47.3	-1.6
PVAQ				eS	Sn	11 43 11.8	-3.5
PVAQ				i IAML		11 43 13.0	
PVAQ				i IAML		11 43 14.0	
PVAQ				i IAML		11 43 15.9	
PVAQ	**Vaqueiros**	**2.22**	**332**	P	Pn	11 42 46.8	-2.1
AKLM	**AKL**	**2.30**	**113**	P	Pn	11 42 47.3	-2.9
AKLM				S	Sn	11 43 15.9	-1.7
EMIN	**Mina Concepcio**	**2.33**	**355**	P	Pn	11 42 48.9	-1.6
EMIN				S	Sn	11 43 13.9	-4.1
EGOR	**Sierra Gorda,**	**2.51**	**48**	P	Pn	11 42 52.6	-0.4
EGOR				S	Sn	11 43 22.2	-0.5
EGOR	**Sierra Gorda,**	**2.51**	**48**	Pn	Pn	11 42 52.7	-0.3
EGOR				Sn	Sn	11 43 18.4	-4.3
PCVE	**Castro Verde**	**2.54**	**330**	P	Pn	11 42 51.8	-1.5
PCVE				S	Sn	11 43 19.7	-3.6
PCVE	**Castro Verde**	**2.54**	**330**	eP	Pn	11 42 52.0	-1.4
PCVE				eS	Sn	11 43 20.1	-3.2
PCVE				i IAML		11 43 20.7	
PCVE				i IAML		11 43 20.7	
PCVE				i IAML		11 43 21.2	
PFVI	**Vila Bisbo**	**2.57**	**312**	P	Pn	11 42 51.2	-2.5
PFVI				S	Sn	11 43 20.1	-3.8
PFVI	**Vila Bisbo**	**2.57**	**312**	eP	Pn	11 42 51.7	-2.1
PFVI				eS	Sn	11 43 20.9	-3.0
PFVI				i IAML		11 43 23.2	
PFVI				i IAML		11 43 23.6	
PFVI				i IAML		11 43 24.0	
PFVI	**Vila Bisbo**	**2.57**	**312**	P	Pn	11 42 49.3	-4.5
PFVI				S	Sn	11 43 21.0	-3.0
MORF	**Marmelete**	**2.58**	**317**	eP	Pn	11 42 52.1	-1.9
MORF				eS	Sn	11 43 20.4	-4.0
MORF				IAML		11 43 24.8	
	comp=N,12nm,0.2s						
MORF	**Marmelete**	**2.58**	**317**	eP	Pn	11 42 52.1	-1.9
MORF				eS	Sn	11 43 20.6	-3.8
MORF				i IAML		11 43 22.7	
MORF				i IAML		11 43 23.3	
MORF				i IAML		11 43 23.9	
ECAB	**El Cabril**	**2.75**	**17**	P	Pn	11 42 55.2	-1.1
ECAB				S	Sn	11 43 24.6	-3.9
ECAB	**El Cabril**	**2.75**	**17**	Pn	Pn	11 42 55.1	-1.2
ECAB				Sn	Sn	11 43 24.6	-3.9
ECAB				i IVmb_Lg		11 43 26.3	
PBAR	**Barrancos**	**2.77**	**350**	P	Pn	11 42 55.2	-1.4
PBAR				S	Sn	11 43 24.6	-4.4
PBAR	**Barrancos**	**2.77**	**350**	eP	Pn	11 42 55.5	-1.1
PBAR				eS	Sn	11 43 25.3	-3.6
PBAR				i IAML		11 43 26.3	
PBAR				i IAML		11 43 30.8	
PBAR				i IAML		11 43 31.9	
MESJ	**Messejana**	**2.79**	**329**	eP	Pn	11 42 55.1	-1.7
MESJ				eS	Sn	11 43 25.4	-4.1
MESJ				IAML		11 43 27.2	
	comp=N,8.9nm,0.4s						
MESJ	**Messejana**	**2.79**	**329**	eP	Pn	11 42 55.2	-1.6
MESJ				eS	Sn	11 43 26.5	-2.9
MESJ				i IAML		11 43 28.3	
MESJ				i IAML		11 43 30.3	
MESJ				i IAML		11 43 30.4	
PTEO	**Sao Teotonio**	**2.80**	**319**	eP	Pn	11 42 55.1	-1.8
PTEO				eS	Sn	11 43 25.8	-3.8
PTEO				i IAML		11 43 26.2	
PTEO				i IAML		11 43 27.9	
PTEO				i IAML		11 43 28.0	
PBEJ	**Beja**	**2.83**	**336**	eS	Sn	11 43 26.5	-3.8
PBEJ				i IAML		11 43 28.5	
PBEJ				i IAML		11 43 28.6	
PBEJ				i IAML		11 43 29.2	
MD31	**MD31**	**2.92**	**151**	P	Pn	11 42 52.8	-5.9
MD31				S	Sn	11 43 26.9	-5.8
MDT	**Midelt**	**3.03**	**150**	P	Pn	11 42 54.6	-5.5
MDT				S	Sn	11 43 29.8	-5.7
EADA	**Adamuz**	**3.10**	**28**	P	Pn	11 43 00.1	-1.0
EADA				S	Sn	11 43 32.5	-4.7
EADA	**Adamuz**	**3.10**	**28**	Pn	Pn	11 42 59.5	-1.6
EADA				Sn	Sn	11 43 33.1	-4.0
EADA				i IVmb_Lg		11 44 16.3	
SRHM	**Skhour des Reh**	**3.21**	**203**	P	Pn	11 42 57.1	-5.5
SRHM				S	Sn	11 43 33.6	-6.1
EVO	**Evora**	**3.33**	**338**	P	Pn	11 43 02.8	-1.5
EVO				S	Sn	11 43 38.8	-4.0
EVO	**Evora**	**3.33**	**338**	eP	Pn	11 43 02.8	-1.5
EVO				eS	Sn	11 43 38.6	-4.3
EVO				i IAML		11 43 41.2	
EVO				i IAML		11 43 42.1	
EVO				i IAML		11 43 42.5	
EBAD	**Badajoz**	**3.34**	**352**	P	Pn	11 43 03.4	-1.0
EBAD				S	Sn	11 43 38.3	-4.7
EBAD	**Badajoz**	**3.34**	**352**	Pn	Pn	11 43 03.8	-0.6
EBAD				Sn	Sn	11 43 38.7	-4.3
EBAD				i IVmb_Lg		11 43 47.0	
MOE	**Montemor**	**3.44**	**334**	eP	Pn	11 43 04.9	-0.9
MOE				eS	Sn	11 43 41.4	-4.0
MOE				i IAML		11 43 42.8	
MOE				i IAML		11 43 42.9	
MOE				i IAML		11 43 43.3	
PESTR	**Estremoz**	**3.54**	**345**	eS	Sn	11 43 44.4	-3.6
PARRA	**Arraiolos**	**3.60**	**340**	eP	Pn	11 43 06.5	-1.5
PARRA				eS	Sn	11 43 44.8	-4.8
PARRA				i IAML		11 43 47.3	
PARRA				i IAML		11 43 47.8	
PARRA				i IAML		11 43 47.9	
TISM	**Timmit**	**3.71**	**180**	P	Pn	11 43 01.5	-8.0
TISM				S	Sn	11 43 41.4	-11
PMTG	**Montargil**	**3.89**	**339**	eP	Pn	11 43 10.8	-1.2
PMTG				eS	Sn	11 43 53.0	-3.6
PMTG				i IAML		11 43 54.7	
PMTG				i IAML		11 43 55.7	
PMTG				i IAML		11 43 56.1	
PMRV	**Marv??o**	**4.05**	**349**	eP	Pn	11 43 13.2	-0.9
PMRV				eS	Sn	11 43 56.2	-4.4
PMRV				i IAML		11 43 57.9	
PMRV				i IAML		11 43 58.7	
PMRV				i IAML		11 43 58.9	
PMAFR	**Mafra**	**4.18**	**328**	eP	Pn	11 43 15.1	-0.8
CIBOR	**Castaar de Ib**	**4.26**	**11**	Pn	Pn	11 43 16.4	-0.7
CIBOR				Sn	Sn	11 44 00.2	-5.6
PSARD	**Sardoal**	**4.37**	**342**	eS	Sn	11 44 03.3	-5.2
PSARD				i IAML		11 44 05.7	
PSARD				i IAML		11 44 06.5	
PSARD				i IAML		11 44 06.8	
PCBR	**Castelo Branco**	**4.47**	**350**	eP	Pn	11 43 19.5	-0.4
PCBR				eS	Sn	11 44 06.8	-4.0
PCBR				i IAML		11 44 07.8	
PCBR				i IAML		11 44 09.0	
PCBR				i IAML		11 44 09.3	
OUZM	**OUZ**	**4.53**	**184**	P	Pn	11 43 14.6	-6.3
OUZM				S	Sn	11 44 04.7	-7.8
EPLA	**Plasencia**	**4.62**	**3**	Pn	Pn	11 43 21.3	-0.8
EPLA				Sn	Sn	11 44 09.4	-5.3
EPLA				i IVmb_Lg		11 44 12.9	
ETOB	**Tobarra**	**5.05**	**49**	P	Pn	11 43 26.0	-1.9
ETOB				S	Sn	11 44 20.7	-4.5
ETOB	**Tobarra**	**5.05**	**49**	Pn	Pn	11 43 25.6	-2.3
ETOB				i IVmb_Lg		11 45 58.2	
EVIV	**Cofrentes, Val**	**5.70**	**46**	Pn	Pn	11 43 34.6	-2.3
MVO	**Moncorvo**	**5.73**	**355**	eS	Sn	11 44 37.7	-4.4
MVO				i IAML		11 44 38.5	
MVO				i IAML		11 44 38.6	
MVO				i IAML		11 44 39.0	

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*IDC **10** 12:12:34.7±1.3, 1˚.33N×98˚.94E, h94km±8km, mb4.0/9, mbtmp4.2/10, Error ellipse: s-maj=44.2km s-min=14.3km az=58.0*
*NEIC **10** 12:12:36.6±1.8, 1˚.43N±0˚.06×98˚.96E±0˚.06, h98km±5km, mb4.7/41, Error ellipse: s-maj=9.1km s-min=7.3km az=131.0*
*DJA **10** 12:12:38.4±0.2, 2˚N±1˚×9˚9E±˚, h79km±4km, M4.3/32, MLv4.3/32*
ISC 10 12:12:36.0±0.6, 1˚.52N±0˚.04×98˚.90E±0˚.05, h103km±5km, n89, σ1$72/104, mb4.6/31, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.99**	**137**	P	Pn	12 12 57.2	**+0.6**
RPSI	**Rantau Prapat**	**1.16**	**1**		Pn	12 13 00.1	**+1.6**
RPSI				Sn	Sn	12 13 17.4	**+1.9**
PSI	**Prapat**	**1.27**	**1**	P	Pn	12 13 00.3	**+0.4**
PSI				S	Sn	12 13 16.8	**-1.0**
GSI	**Gunungsitoli**	**1.34**	**261**		Pn	12 13 02.1	**+1.6**
GSI				Sn	Sn	12 13 20.2	**+1.1**
GSI	**Gunungsitoli**	**1.34**	**261**	P	Pn	12 13 02.2	**+1.7**
GSI				S	Sn	12 13 19.9	**+0.8**
PBSI	**Pulau Batu**	**1.68**	**201**	P	Pn	12 13 05.6	**+0.8**
PBSI				S	Sn	12 13 27.1	**+0.5**
TSI	**Tuntungan**	**1.99**	**350**	P	Pn	12 13 11.0	**+2.3**
KCSI	**Kotacane, Aceh**	**2.28**	**331**	P	Pn	12 13 13.8	**+1.4**
PPI	**Padang Panjang**	**2.47**	**143**	P	Pn	12 13 16.5	**+1.6**
SNSI	**Sinabang, Aceh**	**2.71**	**289**	P	Pn	12 13 19.7	**+1.6**
PDSI	**Padang**	**2.88**	**147**	P	Pn	12 13 21.1	**+0.8**
IPM	**Ipoh**	**3.62**	**36**	Pn	Pn	12 13 31.9	**+1.7**
IPM	**Ipoh**	**3.62**	**36**	P	Pn	12 13 32.2	**+1.9**
MLSI	**Meulaboh, Aceh**	**3.69**	**318**	P	Pn	12 13 32.6	**+1.5**
KULM	**Kulim**	**4.13**	**25**	Pn	Pn	12 13 39.3	**+2.2**
KULM	**Kulim**	**4.13**	**25**	P	Pn	12 13 38.9	**+1.8**
LHMI	**Lhok Sumawe**	**4.16**	**332**	Pn	Pn	12 13 38.8	**+1.3**
LHMI	**Lhok Sumawe**	**4.16**	**332**	P	Pn	12 13 40.0	**+2.5**
PPSI	**Pulau Pagai**	**4.40**	**165**	P	Pn	12 13 42.5	**+1.8**
KRJI	**Kerinci**	**4.41**	**144**	P	Pn	12 13 42.8	**+1.8**
MYKOM	**Kota Tinggi**	**4.96**	**87**	Pn	Pn	12 13 49.3	**+1.1**
MYKOM	**Kota Tinggi**	**4.96**	**87**	P	Pn	12 13 49.8	**+1.6**
MNAI	**Manna**	**7.11**	**145**	Pn	Pn	12 14 15.9	**-1.6**
CMBY	**CAMPBELL BAY**	**7.37**	**318**	IAML		12 13 44.4	
	comp=E,795nm,0.2s						
CMBY				IAML		12 13 46.4	
	comp=N,502nm,0.6s						
CMBY				eP	Pn	12 14 18.9	**-2.0**
CMBY				eS	Sn	12 15 36.6	**-6.4**
PBA	**Port Blair**	**11.77**	**329**	eP	Pn	12 15 17.2	**-3.5**
PBA				IAML		12 16 22.8	
	comp=E,102nm,0.0s						
PBA				IAML		12 16 22.9	
	comp=N,208nm,0.0s						
PBA				eS	Sn	12 17 14.6	-16
DGPR	**DIGLIPUR**	**13.00**	**333**	IAML		12 14 57.6	
	comp=N,137nm,0.4s						
DGPR				IAML		12 15 02.2	
	comp=E,138nm,0.6s						
DGPR				eP	Pn	12 15 33.0	-3.9
DGPR				eS	Sn	12 17 44.4	-16
CMAR	**Chiang Mai Arr**	**16.83**	**0**	P	**P**	**12 16 27.7**	**+1.8**
	comp=E,1.3nm,0.6s,baz=187,slow=10,SNR=11						
CMAR	**Chiang Mai Arr**	**16.83**	**0**	P	**P**	**12 16 27.2**	**+1.3**
KKM	**Kota Kinabalu**	**17.85**	**75**	P	**P**	**12 16 35.3**	**-2.0**
KKM				IAmb	IAmb	12 16 49.8	
	comp=Z,46nm,1.4s						
BKB	**Balikpapan**	**18.21**	**99**	P	**P**	**12 16 38.7**	**-2.4**
TOLI2	**Tolitoli**	**21.88**	**91**	P	**P**	**12 17 21.6**	**+0.7**
IMP	**Imphal**	**23.66**	**349**	IAmb	IAmb	12 14 44.8	
	comp=Z,15nm,0.2s						
IMP				eP	**P**	**12 17 36.6**	**-1.7**
IMP				eS	**S**	**12 21 43.4**	**-2.2**
KOHI	**KOHIMA**	**24.50**	**350**	eP	**P**	**12 17 43.2**	**-2.7**
KOHI				IAmb	IAmb	12 18 15.1	
	comp=Z,9.7nm,0.6s						
KOHI				eS	**S**	**12 21 56.1**	**-3.0**
SHL	**Shillong**	**24.84**	**345**	P	**P**	**12 17 50.3**	**+1.2**
SHL				IAmb	IAmb	12 17 51.6	
	comp=Z,20nm,0.4s						
SHL	**Shillong**	**24.84**	**345**	eP	**P**	**12 17 45.7**	**-3.4**
SHL				IAmb	IAmb	12 17 51.5	
	comp=Z,14nm,0.5s						
SHL				eS	**S**	**12 22 01.0**	**-3.7**
KNRA	**Kununurra**	**34.11**	**121**	P	**P**	**12 19 08.6**	**-2.6**
MORW	**Morawa**	**34.57**	**153**	P	**P**	**12 19 16.1**	**+1.2**
WB0	**Warramunga Arr**	**40.74**	**123**	P	**P**	**12 20 05.5**	**-1.7**
WB0				IAmb	IAmb	12 20 05.8	
	comp=Z,5.7nm,0.6s						
WRA	**Warramunga Arr**	**40.78**	**123**	P	**P**	**12 20 05.4**	**-2.1**
	comp=Z,3.6nm,0.6s,baz=302,slow=9.1,SNR=59						
WRA				PcP	**PcP**	**12 22 06.8**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=316,slow=2.5,SNR=5.3						
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**40.78**	**123**	P	**P**	**12 20 06.1**	**-1.4**
WRA					**PcP**	**12 22 07.0**	**+0.1**
WRAB	**Tennant Creek**	**40.78**	**123**	P	**P**	**12 20 06.3**	**-1.3**
WRAB				IAmb	IAmb	12 20 06.7	
	comp=Z,5.6nm,0.8s						
WB2	**Warramunga Arr**	**40.79**	**123**	P	**P**	**12 20 06.3**	**-1.3**
WB2				IAmb	IAmb	12 20 06.7	
	comp=Z,8.1nm,0.8s						
WR8	**Warramunga Arr**	**40.92**	**123**	P	**P**	**12 20 07.1**	**-1.6**
WR8				IAmb	IAmb	12 20 07.8	
	comp=Z,7.7nm,0.7s						
AS31	**Alice Springs**	**42.25**	**129**	P	**P**	**12 20 17.1**	**-2.4**
ASAR	**Alice Springs**	**42.25**	**129**	P	**P**	**12 20 17.6**	**-1.8**
	comp=Z,1.2nm,0.5s,baz=300,slow=8.0,SNR=52						
ASAR				PcP	**PcP**	**12 22 11.9**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=309,slow=2.9,SNR=5.4						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**42.25**	**129**	P	**P**	**12 20 17.9**	**-1.6**
ASAR				PcP	**PcP**	**12 22 12.4**	**+0.7**
FORT	**Forrest**	**42.45**	**142**	P	**P**	**12 20 20.6**	**-0.4**
FORT				IAmb	IAmb	12 20 49.2	
	comp=Z,9.8nm,0.9s						
WUS	**Wushi**	**43.31**	**338**	P	**P**	**12 20 30.1**	**+2.2**
WUS				IAmb	IAmb	12 20 30.7	
	comp=Z,3.3nm,0.5s						
TARG	**Taragay, Kyrgy**	**44.30**	**337**	P	**P**	**12 20 38.7**	**+2.5**
KSRS	**Korea Array**	**44.63**	**33**	P	**P**	**12 20 38.5**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=221,slow=9.2,SNR=18						
	comp=Z,3.8nm,0.7s						
KS19	**Wonju Array Si**	**44.64**	**33**	P	**P**	**12 20 39.5**	**+1.1**
KS19				IAmb	IAmb	12 20 40.0	
	comp=Z,9.9nm,0.8s						
SONM	**Songino Array**	**46.59**	**7**	P	**P**	**12 20 55.6**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=196,slow=10.0,SNR=4.3						
	comp=Z,0.7nm,0.3s						
MKAR	**Makanchi Array**	**47.36**	**345**	P	**P**	**12 21 00.8**	**+1.2**
	comp=Z,1.2nm,0.4s,baz=161,slow=8.1,SNR=32						
MKAR				pP	**pP**	**12 21 23.8**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=153,slow=9.0,SNR=4.3						
	comp=Z,1.2nm,0.4s						
MAKZ	**Makanchi**	**47.46**	**344**	P	**P**	**12 21 02.0**	**+1.6**
BBOO	**Buckleboo**	**48.96**	**138**	P	**P**	**12 21 10.3**	**-1.8**
BBOO				IAmb	IAmb	12 21 39.1	
	comp=Z,16nm,1.4s						
INKA	**Innaminka**	**49.62**	**129**	P	**P**	**12 21 16.7**	**-0.6**
KURBB	**Kurchatov Arra**	**51.88**	**344**	P	**P**	**12 21 34.7**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=162,slow=7.0,SNR=5.3						
	comp=Z,1.7nm,0.3s						
KURK	**Kurchatov**	**51.94**	**344**	P	**P**	**12 21 35.1**	**+0.9**
ZAA0	**Zalesovo Array**	**53.53**	**350**	P	**P**	**12 21 46.9**	**+1.1**
ZAA0				IAmb	IAmb	12 21 47.4	
	comp=Z,3.7nm,0.5s						
ZALV	**Zalesovo Beam**	**53.53**	**350**	P	**P**	**12 21 46.9**	**+1.1**
	comp=Z,4.2nm,0.4s,baz=162,slow=6.8,SNR=19						
ZALV				pP	**pP**	**12 22 09.9**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=184,slow=5.9,SNR=3.1						
	comp=Z,4.2nm,0.4s						
BVAR	**Borovoye Array**	**56.52**	**340**	P	**P**	**12 22 08.0**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=144,slow=10,SNR=8.9						
BVAR				pP	**pP**	**12 22 31.1**	**-1.7**
	comp=Z,0.9nm,0.6s,baz=155,slow=8.5,SNR=2.7						
	comp=Z,1.8nm,0.6s						
BORK	**Borovoye**	**56.56**	**340**	P	**P**	**12 22 07.9**	**+0.2**
EIDS	**Eidsvold**	**57.10**	**122**	P	**P**	**12 22 12.1**	**0.0**
JKA	**Kamikawa-asahi**	**57.40**	**36**	P	**P**	**12 22 14.6**	**+0.8**
AB31	**Akbulak array**	**58.04**	**331**	P	**P**	**12 22 19.1**	**+0.9**
ABKAR	**Akbulak array**	**58.04**	**331**	P	**P**	**12 22 18.8**	**+0.5**
TIXI	**Tiksi**	**72.58**	**10**	P	**P**	**12 23 52.3**	**+0.6**
FIA1	**FINESS Array S**	**80.50**	**332**	P	**P**	**12 24 37.3**	**+0.9**
FINES	**FINESS Array B**	**80.50**	**332**	P	**P**	**12 24 37.0**	**+0.6**
	comp=Z,3.7nm,1.0s,baz=127,slow=5.0,SNR=4.2						
	comp=Z,3.7nm,1.0s						
FINES	**FINESS Array B**	**80.50**	**332**	P	**P**	**12 24 37.5**	**+1.0**
BKZ	**Black Stump Fm**	**81.36**	**130**	P	**P**	**12 24 41.1**	**-0.5**
BKZ				IAmb	IAmb	12 25 02.5	
	comp=Z,26nm,1.5s						
J16K	**Anvik River**	**93.37**	**26**	P	**P**	**12 25 40.8**	**+1.5**
J16K				IAmb	IAmb	12 25 59.6	
	comp=Z,3.0nm,1.2s						
E19K	**Redstone River**	**93.90**	**22**	P	**P**	**12 25 43.4**	**+1.7**
E19K				IAmb	IAmb	12 26 09.3	
	comp=Z,5.5nm,1.5s						
H18K	**Honhosa River**	**93.97**	**24**	P	**P**	**12 25 43.0**	**+0.9**
H18K				IAmb	IAmb	12 26 20.5	
	comp=Z,6.0nm,1.4s						
J17K	**VABM Dome**	**94.03**	**26**	P	**P**	**12 25 43.9**	**+1.5**
J17K				IAmb	IAmb	12 26 10.3	
	comp=Z,3.0nm,1.3s						
K17K	**Iditarod**	**94.51**	**27**	P	**P**	**12 25 46.2**	**+1.6**
K17K				IAmb	IAmb	12 25 53.3	
	comp=Z,5.0nm,1.2s						
E21K	**Killik River**	**94.83**	**21**	P	**P**	**12 25 47.0**	**+1.0**
E21K				IAmb	IAmb	12 25 47.4	
	comp=Z,1.7nm,0.6s						
J19K	**Poorman**	**95.39**	**25**	P	**P**	**12 25 50.0**	**+1.4**
G21K	**Allakaket**	**95.56**	**23**	P	**P**	**12 25 50.5**	**+1.1**
G21K				IAmb	IAmb	12 25 51.3	
	comp=Z,1.3nm,0.8s						
J20K	**Nowinta River**	**95.97**	**25**	P	**P**	**12 25 52.7**	**+1.5**
J20K				IAmb	IAmb	12 26 35.9	
	comp=Z,3.0nm,1.2s						
H21K	**Melozitna Rive**	**96.09**	**23**	P	**P**	**12 25 53.2**	**+1.4**
K20K	**Telida**	**96.23**	**26**	P	**P**	**12 25 53.9**	**+1.5**
D24K	**Happy Valley**	**96.37**	**19**	P	**P**	**12 25 54.2**	**+1.2**
D24K				IAmb	IAmb	12 26 24.7	
	comp=Z,4.6nm,1.4s						
TXAR	**Lajitas Array**	**142.49**	**33**	PKP	**PKPdf**	**12 31 55.0**	**-2.7**
	comp=Z,0.1nm,0.4s,baz=233,slow=0.3,SNR=5.1						
BDFB	**Brasilia**	**144.49**	**245**	PKPdf	**PKPab**	**12 32 00.4**	**+0.3**
Y57A	**Sumter**	**144.64**	**359**		**PKPab**	**12 31 58.7**	**-1.3**
LRAL	**Lakeview Retre**	**145.18**	**9**	PKPbc	**PKPbc**	**12 32 02.6**	**+0.7**
GOGA	**Godfrey**	**145.18**	**3**	PKPbc	**PKPbc**	**12 32 02.7**	**+0.9**
BO02	**Sierra Bellavi**	**145.53**	**195**	PKPdf	**PKPdf**	**12 32 04.2**	**+1.4**

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*IDC **10** 12:18:49.7±1.3, 51˚.92N×169˚.49W, h0km, mb3.7/7, mbtmp3.7/10, ML3.2/3, Error ellipse: s-maj=37.8km s-min=20.8km az=171.0*
*NEIC **10** 12:18:51.8±1.4, 51˚.79N±0˚.05×169˚.8W±0˚.1, h10km±1km, ML3.1/10, ML2.7(AEIC), Error ellipse: s-maj=13.7km s-min=8.1km az=266.0*
*AEIC **10** 12:18:56.1±3.0, 51˚.99N±0˚.05×169˚.5W±0˚.1, h8km±5km, Error ellipse: s-maj=9.4km s-min=7.3km az=70.0*
ISC 10 12:18:51.2±0.9, 51˚.78N±0˚.08×169˚.68W±0˚.09, h10km, n33, σ1$00/28, mb3.9/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**1.00**	**359**		**Pn**	**12 19 12.0**	**+0.6**
CLCO					**Sg**	**12 19 24.0**	**+0.4**
CLES	**Cleveland East**	**1.05**	**353**		**Pn**	**12 19 12.8**	**+0.8**
CLES	**Cleveland East**	**1.05**	**353**	IAML		12 19 37.8	
	comp=E,1µm,0.6s						
NIKH	**Nikolski High**	**1.29**	**23**		**Pn**	**12 19 15.7**	**+0.3**
NIKH					**Sb**	**12 19 31.1**	**-1.2**
NIKH	**Nikolski High**	**1.29**	**23**	IAML		12 19 48.0	
	comp=N,248nm,0.8s						
OKFG	**Magazine Ridge**	**1.96**	**33**		**Pn**	**12 19 25.3**	**+0.9**
MGOD	**Makushin Gods**	**2.64**	**39**		**Pn**	**12 19 35.0**	**+1.1**
MGOD					**Sn**	**12 20 06.1**	**+0.2**
MREP	**Makushin Rep't**	**2.70**	**40**		**Pn**	**12 19 35.8**	**+1.0**
UNV	**Unalaska Valle**	**2.83**	**42**		**Pn**	**12 19 37.5**	**+1.1**
UNV					**Sn**	**12 20 10.7**	**+0.2**
UNV	**Unalaska Valle**	**2.83**	**42**	IAML		12 20 12.9	
	comp=N,47nm,1.2s						
AKMO	**Akutan Morgan**	**3.21**	**42**		**Sn**	**12 20 20.9**	**+1.0**
LVA	**Lava Point**	**3.25**	**41**	Pn	**Pn**	**12 19 41.7**	**-0.5**
LVA				IAML		12 20 58.8	
	comp=E,85nm,1.4s						
AKUT	**Akutan**	**3.34**	**44**	Pn	**Pn**	**12 19 45.4**	**+2.0**
AKUT				IAML		12 21 43.8	
	comp=N,33nm,1.5s						
AKUT				IAML		12 21 54.5	
	comp=E,48nm,1.3s						
SDPT	**Sand Point**	**6.54**	**53**	Pn	**Pn**	**12 20 29.3**	**+1.9**
P18K	**Big Mountain,**	**11.16**	**41**	Pn	**Pn**	**12 21 32.2**	**+1.6**
N17K	**Nushagak Hills**	**11.17**	**34**	Pn	**Pn**	**12 21 31.5**	**+0.7**
O18K	**Koktuh Hills**	**11.45**	**39**	Pn	**Pn**	**12 21 35.6**	**+1.0**
KDAK	**Kodiak Island**	**11.54**	**52**	Pn	**Pn**	**12 21 35.

KARP				S	Sn	12 27 51.8	-0.6	
ZKR	**Zakros**	**1.13**	**283**	Pn	Pg	12 27 54.4	+7.0	
ZKR	**Zakros**	**1.13**	**283**	P	Pg	12 27 56.0	+8.7	
ZKR	**Zakros**	**1.13**	**283**	P	Pg	12 27 54.7	+7.4	
ZKR				S	Sn	12 28 09.1	+7.5	
ARG	**Arkhangelos**	**1.42**	**19**	Pn	**Pn**	**12 27 50.8**	**+0.3**	
ARG	**Arkhangelos**	**1.42**	**19**	P	**Pn**	**12 27 50.3**	**-0.3**	
ARG				S	**Sn**	**12 28 03.2**	**-5.6**	
ARG	**Arkhangelos**	**1.42**	**19**	P	**Pn**	**12 27 50.5**	**0.0**	
ARG				S	**Sn**	**12 28 04.4**	**-4.4**	
NPS	**Neapolis**	**1.65**	**284**	P	Pg	12 28 01.9	+4.8	
NPS				S	Sg	12 28 27.6	+9.0	
NPS	**Neapolis**	**1.65**	**284**	P	Pg	12 27 59.8	+2.6	
NPS				S	**Sg**	**12 28 19.7**	**+1.1**	
YAZI	**Mula-Dat§a-**	**1.81**	**357**	P	**Pb**	**12 27 58.1**	**0.0**	
YAZI				S	**Sb**	**12 28 22.4**	**+1.9**	
YAZI				IAML		12 28 27.0		
	comp=E,42nm,0.7s							
YAZI				IAML		12 28 29.0		
	comp=N,40nm,0.5s							
DAT	**Datca**	**1.86**	**0**	Pn	**Pb**	**12 27 59.1**	**+0.1**	
DAT	**Datca**	**1.86**	**0**	P	**Pb**	**12 27 58.2**	**-0.8**	
DAT				S	**Sn**	**12 28 18.5**	**-1.2**	
TURN	**Turunc**	**1.98**	**16**	Pn	**Pn**	**12 27 59.7**	**+1.5**	
TURN	**Turunc**	**1.98**	**16**	P	**Pb**	**12 28 00.6**	**-0.5**	
TURN				S	**Sb**	**12 28 27.9**	**+2.5**	
TURN				IAML		12 28 33.0		
	comp=N,64nm,0.7s							
TURN				IAML		12 28 39.0		
	comp=E,42nm,0.6s							
KSL	**Kastellorizon**	**2.09**	**52**	P	**Pn**	**12 28 01.3**	**+1.7**	
KSL				S	**Sn**	**12 28 26.8**	**+1.6**	
KSL	**Kastellorizon**	**2.09**	**52**	P	**Pn**	**12 28 00.2**	**+0.6**	
DALY	**Dalyan (Mula)**	**2.14**	**24**	Pn	**Pn**	**12 28 01.6**	**+1.3**	
AKAS	**Kas**	**2.15**	**50**	Pn	**Pn**	**12 28 01.3**	**+0.6**	
BODT	**Bodrum**	**2.20**	**355**	Pn	**Pb**	**12 28 04.1**	**-0.7**	
BODT	**Bodrum**	**2.20**	**355**	P	**Pb**	**12 28 03.7**	**-1.1**	
BODT				S	**Sn**	**12 28 28.4**	**+0.4**	
IDI	**Anoyia**	**2.23**	**282**	P	Pg	12 28 11.2	+2.9	
SABU	**Mula-Dalaman**	**2.26**	**30**	P	**Pn**	**12 28 02.4**	**+0.3**	
SABU				S	**Sg**	**12 28 41.3**	**+3.0**	
SABU				IAML		12 28 47.0		
	comp=N,30nm,0.8s							
SABU				IAML		12 28 51.0		
	comp=E,42nm,0.9s							
THERA	**Ancient Thera,**	**2.26**	**312**	P	**Pg**	**12 28 08.7**	**-0.2**	
THR9	**Santorini-Faro**	**2.33**	**310**	P	**Pg**	**12 28 10.0**	**-0.2**	
SNT5	**Nea Kammeni, S**	**2.34**	**312**	P	**Pg**	**12 28 09.8**	**-0.5**	
THR3	**Thira Island,**	**2.34**	**312**	P	**Pg**	**12 28 09.8**	**-0.5**	
YER	**Yerkesik**	**2.34**	**14**	Pn	**Pn**	**12 28 04.9**	**+1.7**	
YER	**Yerkesik**	**2.34**	**14**	P	**Pn**	**12 28 04.7**	**+1.6**	
YER				S	**Sn**	**12 28 30.2**	**-1.3**	
SAP3	**Santorini-Thir**	**2.39**	**312**	P	**Pg**	**12 28 10.5**	**-0.8**	
MLSB	**Milas**	**2.43**	**4**	Pn	**Pb**	**12 28 06.4**	**-2.3**	
CAME	**Cameli-Denizli**	**2.51**	**34**	Pn	**Pn**	**12 28 06.9**	**+1.3**	
ELL	**Elmali**	**2.68**	**45**	Pn	**Pn**	**12 28 08.9**	**+1.0**	
DNZT	**Denizli-Tavas-**	**2.68**	**26**	P	**Pn**	**12 28 09.3**	**+1.4**	
DNZT				S	**Sb**	**12 28 48.7**	**+3.0**	
DNZT				IAML		12 29 03.0		
	comp=E,20nm,0.7s							
APE	**Apeiranthos**	**2.74**	**324**	Pn	**Pg**	**12 28 14.0**	**-4.1**	
TAVA	**DENIZLI_Tavas**	**2.81**	**23**	P	**Pn**	**12 28 10.1**	**+0.3**	
TAVA				S	**Sb**	**12 28 50.5**	**+1.0**	
TAVA				IAML		12 28 58.0		
	comp=E,23nm,0.7s							
TAVA				IAML		12 29 02.0		
	comp=N,25nm,1.0s							
SMG	**Samos**	**2.89**	**349**	P	**Pb**	**12 28 13.3**	**-3.4**	
APMY	**Acipayam-Deniz**	**2.96**	**28**	Pn	**Pn**	**12 28 13.1**	**+1.4**	
ESEN	**Aydn-Nazilli**	**2.99**	**12**	P	**Pb**	**12 28 15.4**	**-2.9**	
ESEN				S	**Sb**	**12 28 54.9**	**+0.4**	
ESEN				IAML		12 29 05.0		
	comp=E,14nm,0.5s							
ESEN				IAML		12 29 08.0		
	comp=N,12nm,0.7s							
AYDB	**Zeytinkoy-Aydi**	**3.08**	**5**	Pn	**Pn**	**12 28 16.3**	**+2.8**	
KORT	**Korkueli**	**3.11**	**46**	Pn	**Pn**	**12 28 14.8**	**+1.0**	
NAZL	**Nazilli-Aydin**	**3.15**	**11**	Pn	**Pn**	**12 28 16.9**	**+2.6**	
ODEM	**Odemis-Izmir**	**3.43**	**7**	Pn	**Pn**	**12 28 20.6**	**+2.5**	

*IDC **10** 12:54:07.1±2.8,2°.54N×94°.65W, h0km, mb3.6/5, mbtmp3.6/6, ML3.2/1, MS3.7/25, Error ellipse: s-maj=142.9km s-min=56.5km az=72.0*

ISC 10 12:54:08.0±2.7,2°.4N±0°.3×94°.8W±0°.7, h10km, n35, σ1§05/7, mb3.5/5, MS3.8/22, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**12.54**	**51**	LR	LR	13 00 44.5	
	comp=Z,348nm,19.0s,baz=220,slow=32						
APG	**El Apazote**	**13.24**	**19**	LR	LR	13 01 14.7	
	comp=Z,35nm,18.8s,baz=236,slow=33						
CMIG	**Matias Romero**	**14.60**	**360**	Pn	**Pn**	**12 57 35.2**	**+0.4**
	0.1nm,0.3s,baz=197,slow=9.6,SNR=4.9						
	0.5nm,0.4s						
ATAH	**Atahualpa**	**18.91**	**120**	LR	LR	13 04 41.4	
	comp=Z,147nm,18.1s,baz=295,slow=34						
SDV	**Santo Domingo**	**24.89**	**74**	LR	LR	13 08 08.9	
	comp=Z,85nm,20.3s,baz=258,slow=34						
LPIG	**La Paz**	**26.27**	**327**	LR	LR	13 07 39.7	
	comp=Z,109nm,20.4s,baz=128,slow=31						
TXAR	**Lajitas Array**	**28.09**	**343**	P	**P**	**12 59 59.8**	**-0.3**
	0.6nm,0.9s,baz=152,slow=8.8,SNR=4.8						
TXAR				LR	LR	13 09 57.0	
	comp=Z,176nm,21.9s,baz=138,slow=34						
	0.6nm,0.9s						
SJG	**San Juan**	**32.14**	**59**	LR	LR	13 11 25.8	
	comp=Z,55nm,19.7s,baz=212,slow=32						
LPAZ	**La Paz**	**32.24**	**126**	LR	LR	13 13 24.8	
	comp=Z,44nm,18.8s,baz=311,slow=36						
RPN	**Rapa Nui**	**32.53**	**205**	LR	LR	13 10 19.0	
	comp=Z,200nm,19.6s,baz=38,slow=30						
ANMO	**Albuquerque**	**34.15**	**343**	LR	LR	13 13 50.5	
	comp=Z,181nm,18.5s,baz=154,slow=35						
TKL	**Tuckaleechee C**	**34.64**	**16**	LR	LR	13 14 36.0	
	comp=Z,201nm,19.2s,baz=182,slow=36						
PFO	**Pinyon Flats O**	**37.08**	**329**	LR	LR	13 13 35.1	
	comp=Z,166nm,18.4s,baz=148,slow=32						
H03N2	**Juan Fernandez**	**38.66**	**159**	T	T	13 43 11.9	
	baz=334,slow=77,SNR=101						
H03N1	**Juan Fernandez**	**38.67**	**159**	T	T	13 43 16.7	
	baz=334,slow=77,SNR=114						
H03N3	**Juan Fernandez**	**38.68**	**159**	T	T	13 43 12.1	
	baz=334,slow=77,SNR=106						
NVAR	**Mina Array Bea**	**41.81**	**332**	P	**P**	**13 01 59.3**	**+1.0**
	0.5nm,0.8s,baz=134,slow=8.7,SNR=1.8						
NVAR				LR	LR	13 16 48.8	
	comp=Z,124nm,18.8s,baz=334,slow=33						
	0.5nm,0.8s						
MDP	**Montagnes des**	**42.15**	**85**	LR	LR	13 18 14.0	
	comp=Z,81nm,19.9s,baz=296,slow=34						
PDAR	**Pinedale Array**	**42.30**	**344**	P	**P**	**13 02 02.5**	**+0.2**
	1.6nm,1.1s,baz=139,slow=9.2,SNR=4.3						
PDAR				LR	LR	13 19 10.3	
	comp=Z,165nm,18.2s,baz=147,slow=36						
	1.6nm,1.1s						
ELK	**Elko**	**42.41**	**337**	LR	LR	13 18 46.6	
	comp=Z,107nm,21.5s,baz=118,slow=35						
SADO	**Sadowa**	**44.40**	**16**	LR	LR	13 20 05.3	
	comp=Z,158nm,20.0s,baz=148,slow=35						
ULM	**Lac du Bonnet**	**47.69**	**359**	LR	LR	13 24 55.5	
	comp=Z,116nm,18.0s,baz=188,slow=39						
PLCA	**Paso Flores**	**48.30**	**155**	LR	LR	13 18 29.9	
	comp=Z,117nm,20.4s,baz=318,slow=30						
NEW	**Newport**	**49.57**	**341**	LR	LR	13 22 48.3	
	comp=Z,62nm,18.0s,baz=174,slow=35						
BDFB	**Brasilia**	**49.61**	**113**	LR	LR	13 23 26.1	
	comp=Z,64nm,19.5s,baz=99,slow=36						
SCHQ	**Schefferville**	**57.01**	**19**	LR	LR	13 29 00.5	
	comp=Z,54nm,19.1s,baz=236,slow=37						
USHA	**Ushuaia**	**61.05**	**163**	LR	LR	13 25 23.4	
	comp=Z,304nm,18.6s,baz=268,slow=31						
YKA	**Yellowknife Ar**	**61.75**	**350**	P	**P**	**13 04 25.8**	**-0.7**
	0.9nm,1.1s,baz=160,slow=6.0,SNR=8.1						
	0.9nm,1.1s						
KDAK	**Kodiak Island**	**71.31**	**331**	LR	LR	13 33 17.9	
	comp=Z,106nm,18.6s,baz=109,slow=33						
SFJD	**Kangerlussuaq**	**71.35**	**17**	LR	LR	13 37 15.2	
	comp=Z,126nm,18.1s,baz=154,slow=36						
ILAR	**Eielson Array**	**72.50**	**339**	P	**P**	**13 05 33.7**	**-1.1**
	0.4nm,0.9s,baz=134,slow=3.9,SNR=4.4						
	0.4nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**97.29**	**289**	T	T	14 55 04.1	
	baz=86,slow=75,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**97.30**	**289**	T	T	14 55 09.2	
	baz=86,slow=75,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**97.31**	**289**	T	T	14 55 05.5	
	baz=86,slow=75,SNR=6.2						
KURBB	**Kurchatov Arra**	**126.88**	**5**	PKP	**PKPdf**	**13 13 13.5**	**+1.2**
	1.0nm,1.1s,baz=323,slow=1.6,SNR=5.5						

*SJA **10** 13:00:03.6±0.8,22°.63S×67°.54W, h189km±9km, ML3.4, MW3.5*
*GUC **10** 13:00:04.1±0.7,22°.59S×67°.61W, h200km±10km, ML3.9*
*SCB **10** 13:00:05.7±1.3,22°.56S×67°.53W, h149km±17km, MB5.4, ML3.8/3, Error ellipse: s-maj=5.3km s-min=4.5km az=0.0*

ISC 10 13:00:02.6±1.6,22°.61S±0°.04×67°.51W±0°.04, h192km±14km, n55, σ1§74/75, 1C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.70**	**241**	*eP*	Pn	13 00 45.5	+15
AF01				IAML		13 01 29.4	
	comp=Z,142nm,0.7s						
PB09	**IPOC Station P**	**1.79**	**296**	*i*/*P*	**Pn**	**13 00 40.0**	**+1.4**
PB09	**IPOC Station P**	**1.79**	**296**	*eP*	**Pn**	**13 00 40.2**	**+1.5**
PB09				*eS*	**Sn**	**13 01 01.1**	**-5.4**
PB09				IAML		13 01 06.6	
	comp=Z,154nm,0.7s						
PB09	**IPOC Station P**	**1.79**	**296**	Pg	**Pn**	**13 00 39.7**	**+1.0**
YJA	**Yavi**	**1.90**	**77**	*eP*	**Pn**	**13 00 41.9**	**+2.0**
YJA				*eS*	**Sn**	**13 01 08.3**	**-0.5**
YJA				IAML		13 01 08.4	
	comp=Z,7.6nm,0.8s						
YJA	**Yavi**	**1.90**	**77**	Pg	**Pn**	**13 00 41.1**	**+1.1**
PB06	**IPOC Station P**	**1.91**	**267**	*eP*	**Pn**	**13 00 41.0**	**+1.2**
PB06				*eS*	**Sn**	**13 01 08.3**	**-0.2**
PB06				IAML		13 01 10.7	
	comp=E,403nm,0.1s						
PB06	**IPOC Station P**	**1.91**	**267**	*eP*	**Pn**	**13 00 40.9**	**+1.2**
PB06				*eS*	**Sn**	**13 01 09.0**	**+0.5**
PB06				IAML		13 01 10.5	
	comp=Z,312nm,0.3s						
PB06	**IPOC Station P**	**1.91**	**267**	Pg	**Pn**	**13 00 40.9**	**+1.2**
SALTA		**1.94**	**146**	*eP*	**Pn**	**13 00 38.8**	**-1.7**
SALTA				*eP*		13 00 38.9	
SALTA				IAML		13 01 22.8	
	comp=Z,15nm,2.1s						
MOCB	**Mochara**	**2.20**	**53**	Pg	**Pn**	**13 00 44.4**	**+1.2**
PB07	**IPOC Station P**	**2.37**	**291**	*i P*	**Pn**	**13 00 45.7**	**+1.0**
PB07				*eS*	**Sn**	**13 01 15.5**	**-2.0**
PB07				IAML		13 01 15.9	
	comp=N,517nm,0.3s						
PB07	**IPOC Station P**	**2.37**	**291**	*eP*	**Pn**	**13 00 45.8**	**+1.0**
PB07				*eS*	**Sn**	**13 01 16.6**	**-0.9**
PB07				IAML		13 01 16.7	
	comp=Z,335nm,0.4s						
PB01	**IPOC Station P**	**2.41**	**310**	*eP*	**Pn**	**13 00 45.9**	**+0.8**
PB01				IAML		13 01 18.7	
	comp=E,302nm,0.1s						
PB01	**IPOC Station P**	**2.41**	**310**	*eP*	**Pn**	**13 00 46.1**	**+1.0**
PB01				*eS*	**Sn**	**13 01 18.1**	**0.0**
PB01				IAML		13 01 19.9	
	comp=E,161nm,0.1s						
PB01	**IPOC Station P**	**2.41**	**310**	Pg	**Pn**	**13 00 46.1**	**+1.0**
PB01				Sg	**Sn**	**13 01 16.3**	**-1.8**
PB01				IAML		13 01 18.6	
	comp=Z,269nm,0.2s						
PB05	**IPOC Station P**	**2.50**	**264**	*eP*	**Pn**	**13 00 47.0**	**+0.9**
PB05				IAML		13 01 20.1	
	comp=E,290nm,0.5s						
PB05	**IPOC Station P**	**2.50**	**264**	*eP*	**Pn**	**13 00 47.2**	**+1.1**
PB05				*eS*	**Sn**	**13 01 19.2**	**-0.7**
PB05				IAML		13 01 19.8	
	comp=Z,175nm,0.4s						
PB02	**IPOC Station P**	**2.56**	**300**	*i*/*P*	**Pn**	**13 00 47.4**	**+0.6**
PB02				IAML		13 01 24.5	
	comp=E,249nm,0.2s						
PB02	**IPOC Station P**	**2.56**	**300**	*eP*	**Pn**	**13 00 47.8**	**+0.9**
PB02				*eS*	**Sn**	**13 01 20.6**	**-0.6**
PB02				IAML		13 01 25.7	
	comp=Z,294nm,0.3s						
PB02	**IPOC Station P**	**2.56**	**300**	Pg	**Pn**	**13 00 47.7**	**+0.9**
PB02				Sg	**Sn**	**13 01 19.3**	**-1.9**
PB02				IAML		13 01 24.4	
	comp=Z,210nm,0.3s						
SLA	**San Lorenzo**	**2.80**	**139**	*eP*	**Pn**	**13 00 52.4**	**+2.8**
SLA	**San Lorenzo**	**2.80**	**139**	*eP*	**Pn**	**13 00 46.9**	**-2.7**
SLA				IAML		13 01 29.1	
	comp=Z,2.2nm,0.6s						
PB08	**IPOC Station P**	**2.89**	**328**	*i*/*P*	**Pn**	**13 00 52.9**	**+1.9**
PB08				IAML		13 01 30.9	
	comp=E,136nm,0.4s						
PB08	**IPOC Station P**	**2.89**	**328**	*eP*	**Pn**	**13 00 53.1**	**+2.1**
PB08				*eS*	**Sn**	**13 01 29.4**	**+0.8**
PB08				IAML		13 01 31.8	
	comp=Z,83nm,0.5s						
PB08	**IPOC Station P**	**2.89**	**328**	Pg	**Pn**	**13 00 52.8**	**+1.8**
GO01	**Chusmiza**	**3.32**	**331**	*eP*	**Pn**	**13 00 57.5**	**+1.3**
GO01	**Chusmiza**	**3.32**	**331**	*eP*	**Pn**	**13 00 57.8**	**+1.5**
GO01				*eS*	**Sn**	**13 01 38.8**	**+0.7**
GO01				IAML		13 01 39.9	
	comp=Z,96nm,0.1s						
GO01	**Chusmiza**	**3.32**	**331**	Pg	**Pn**	**13 00 57.7**	**+1.5**
PB14	**IPOC Station P**	**3.33**	**232**	*i*/*P*	**Pn**	**13 00 57.5**	**+1.4**
PB14	**IPOC Station P**	**3.33**	**232**	*eP*	**Pn**	**13 00 57.8**	**+1.6**
PB14				*eS*	**Sn**	**13 01 37.2**	**-0.8**
PB14				IAML		13 01 38.8	
	comp=Z,160nm,0.3s						
PB14	**IPOC Station P**	**3.33**	**232**	Pg	**Pn**	**13 00 57.9**	**+1.8**
TA02	**Huaiquique**	**3.37**	**313**	*eP*	**Pn**	**13 00 58.2**	**+1.9**
TA02				*eS*	**Sn**	**13 01 36.5**	**-1.8**
TA02				IAML		13 01 39.9	
	comp=Z,181nm,0.1s						
PB11	**IPOC Station P**	**3.47**	**324**	*eP*	**Pn**	**13 00 58.1**	**+0.4**
PB11	**IPOC Station P**	**3.47**	**324**	*eP*	**Pn**	**13 00 54.8**	**-2.9**
PB11				*eS*	**Sn**	**13 01 39.1**	**-1.7**
PB11				IAML		13 01 40.2	
	comp=Z,152nm,0.2s						
PB11	**IPOC Station P**	**3.47**	**324**	Pg	**Pn**	**13 00 58.4**	**+0.7**
PB11				Sg	**Sn**	**13 01 38.8**	**-2.0**
PB11				IAML		13 01 40.0	
	comp=Z,426nm,0.2s						
SOEO	**Opoqueri**	**4.04**	**355**	Pg	**Pn**	**13 01 07.0**	**+1.9**
AC02	**Maricunga**	**4.46**	**199**	*eP*	**Pn**	**13 01 13.0**	**+2.6**
AC02				IAML		13 02 40.2	
	comp=Z,73nm,0.8s						
AC01	**Pan de Azucar**	**4.51**	**218**	*eP*	**Pn**	**13 01 11.4**	**+0.8**
AC01				*i* S	**Sn**	**13 02 02.9**	**-1.2**
AC01				IAML		13 02 08.9	
	comp=Z,29nm,0.1s						
PB16	**IPOC Station P**	**4.64**	**336**	*eP*	**Pn**	**13 01 14.5**	**+1.6**
PB16	**IPOC Station P**	**4.64**	**336**	*eP*	**Pn**	**13 01 15.0**	**+2.1**
PB16				*eS*	**Sn**	**13 02 07.1**	**-0.9**
PB16				IAML		13 02 13.3	
	comp=Z,34nm,0.6s						
PB16	**IPOC Station P**	**4.64**	**336**	Pg	**Pn**	**13 01 14.8**	**+1.9**
SOET	**ToroToro**	**4.74**	**20**	Pg	**Pn**	**13 01 15.5**	**+1.5**
PB12	**IPOC Station P**	**4.77**	**326**	*eP*	**Pn**	**13 01 13.4**	**-0.6**
PB12	**IPOC Station P**	**4.77**	**326**	*eP*	**Pn**	**13 01 13.8**	**-0.2**
PB12				*eS*	**Sn**	**13 02 06.0**	**-4.2**
PB12				IAML		13 02 11.3	
	comp=Z,57nm,0.2s						
AOEA	**Aiquile**	**4.89**	**26**	Pg	**Pn**	**13 01 17.0**	**+1.2**
AOEA	**Aiquile**	**4.89**	**26**	Pg	**Pn**	**13 01 17.1**	**+1.2**
GO03	**Copiapo**	**5.54**	**206**	*eP*	**Pn**	**13 01 24.4**	**+0.4**
GO03	**Copiapo**	**5.54**	**206**	*eP*	**Pn**	**13 01 24.6**	**+0.7**
GO03				*eS*	**Sn**	**13 02 28.4**	**+0.3**
GO03				IAML		13 02 30.8	
	comp=Z,16nm,0.3s						
BBOJ	**La Paz, Jacaqu**	**5.64**	**353**	Pg	**Pn**	**13 01 28.0**	**+2.3**
SOEJ	**Jacaque**	**5.64**	**353**	Pg	**Pn**	**13 01 27.5**	**+1.8**
BBOE	**La Paz, Chanca**	**5.78**	**356**	Pg	**Pn**	**13 01 29.8**	**+2.3**
BBOD	**La Paz, Gloria**	**6.03**	**350**	Pg	**Pn**	**13 01 33.4**	**+2.7**
LPAZ	**La Paz**	**6.31**	**355**	Pg	**Pn**	**13 01 36.8**	**+2.3**
BBOB	**La Paz, Bander**	**6.46**	**355**	Pg	**Pn**	**13 01 38.8**	**+2.5**

*TAP **10** 13:28:43.6,24°.64N×122°.86E, h142km, ML2.8, D*
*JMA **10** 13:28:44.2±0.4,25°.N±4°.×122°.9E±0°.9, h115km±4km, MV1.6/7, NW OFF ISHIGAKIJIMA IS*

ISC 10 13:28:42.1±2.4,24°.67N±0°.09×122°.95E±0°.04, h143km±16km, n33, σ1§03/56, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.21**	**165**	*eP*	**Pn**	**13 29 03.3**	**+1.7**
EOS3	**EOS3**	**0.69**	**237**	P	**Pn**	**13 29 04.4**	**+0.8**
EOS2	**EOS2**	**0.70**	**249**	*eP*	**Pn**	**13 29 04.7**	**+1.0**
EOS2				*eS*	**Sn**	**13 29 20.0**	**0.0**
IRIF	**Iriomote-Funau**	**0.79**	**115**	*eP*	**Pn**	**13 29 04.4**	**0.0**
EOS4	**EOS4**	**0.79**	**227**	P	**Pn**	**13 29 05.4**	**+1.3**
EOS4				S	**Sn**	**13 29 20.6**	**-0.2**
EGS		**0.94**	**281**	*eP*	**Pn**	**13 29 07.3**	**+1.6**
JKRS	**Kuro-shima**	**1.06**	**114**	*eP*	**Pn**	**13 29 07.8**	**+1.1**
JKRS				*eS*	**Sn**	**13 29 25.2**	**-0.2**
TIPB	**Shuangxi**	**1.06**	**287**	*eP*	**Pn**	**13 29 06.2**	**-0.6**
JIJ	**Ishigaki jima**	**1.13**	**105**	*eP*	**Pn**	**13 29 08.0**	**+0.7**
JIJ				*eS*	**Sn**	**13 29 25.2**	**-1.3**
JISG	**Ishigakijimahi**	**1.24**	**93**	*eP*	**Pn**	**13 29 08.8**	**+0.4**
JISG				S	**Sn**	**13 29 27.1**	**-1.3**
FUSB	**Fushanzhiwuya**	**1.24**	**274**	*eP*	**Pn**	**13 29 08.4**	**-0.1**
ENTT	**Nioudou**	**1.26**	**269**	*eP*	**Pn**	**13 29 09.2**	**+0.5**
LATG	**Datong**	**1.30**	**264**	*eP*	**Pn**	**13 29 09.6**	**+0.4**
LATG				*i* S	**Sn**	**13 29 29.9**	**+0.1**
NWLT	**Wulai**	**1.32**	**275**	*eP*	**Pn**	**13 29 09.8**	**+0.5**
NWLT				*eS*	**Sn**	**13 29 29.0**	**-1.0**
NACB	**Ninganchiao**	**1.33**	**249**	*eP*	**Pn**	**13 29 09.6**	**+0.3**
NACB				*eS*	**Sn**	**13 29 29.0**	**-1.1**
YM08	**YM08**	**1.34**	**293**	*eS*	**Sn**	**13 29 30.6**	**+0.3**
ETLH	**Xiulin Townshi**	**1.42**	**251**	*eP*	**Pn**	**13 29 10.6**	**+0.3**
ETLH				*eS*	**Sn**	**13 29 29.9**	**-1.9**
YHNB	**Yeheng**	**1.43**	**270**	*eP*	**Pn**	**13 29 10.7**	**+0.2**
YHNB				*eS*	**Sn**	**13 29 31.1**	**-1.1**
NNSB	**Datong**	**1.45**	**261**	*eP*	**Pn**	**13 29 11.1**	**+0.4**
NNSB				*eS*	**Sn**	**13 29 32.0**	**-0.2**
NSK	**Sanguang**	**1.45**	**271**	*eP*	**Pn**	**13 29 10.7**	**+0.1**
NSK				*eS*	**Sn**	**13 29 30.9**	**-1.5**
SHUL	**Shoufeng**	**1.54**	**236**	*eP*	**Pn**	**13 29 12.4**	**+0.9**
SHUL				*eS*	**Sn**	**13 29 33.3**	**-0.8**
LXIB	**Xiulin Townshi**	**1.54**	**246**	*eP*	**Pn**	**13 29 11.8**	**0.0**
LXIB				*eS*	**Sn**	**13 29 33.0**	**-1.4**
TWT	**Tachien**	**1.67**	**256**	*eP*	**Pn**	**13 29 14.2**	**+1.0**
WARBT	**Fenglin Townsh**	**1.71**	**237**	*eP*	**Pn**	**13 29 13.6**	**+0.1**
WARBT				*eS*	**Sn**	**13 29 35.5**	**-2.0**
OWD	**Renai**	**1.77**	**247**	*eP*	**Pn**	**13 29 14.8**	**+0.6**
OWD				*eS*	**Sn**	**13 29 36.5**	**-2.3**
WUSB	**Renai**	**1.80**	**248**	P	**Pn**	**13 29 15.7**	**+1.1**
WUSB				*eS*	**Sn**	**13 29 38.5**	**-1.0**
HGSD	**Ruisui**	**1.82**	**230**	*eP*	**Pn**	**13 29 15.4**	**+0.7**
HGSD				*eS*	**Sn**	**13 29 39.4**	**-0.3**
WHP	**Taichung City**	**1.87**	**258**	*eP*	**Pn**	**13 29 17.1**	**+1.8**
WHP				*eS*	**Sn**	**13 29 40.4**	**-0.3**
VWDT	**VWDT**	**1.89**	**241**	*eP*	**Pn**	**13 29 16.2**	**+0.8**
VWDT				*eS*	**Sn**	**13 29 39.9**	**-1.1**
WCS	**Beigang Elemen**	**1.96**	**252**	*eP*	**Pn**	**13 29 17.9**	**+1.6**
WCS				*eS*	**Sn**	**13 29 42.3**	**-0.1**
YULB	**Yu-li**	**1.97**	**230**	*eP*	**Pn**	**13 29 17.0**	**+0.5**
YULB				*eS*	**Sn**	**13 29 41.5**	**-1.4**
SSLB	**Suanglung**	**2.02**	**245**	*eP*	**Pn**	**13 29 18.4**	**+1.3**
WHYT	**Xinyi Township**	**2.15**	**244**	*eP*	**Pn**	**13 29 19.8**	**+1.2**
WHYT				*eS*	**Sn**	**13 29 47.0**	**+0.4**

*IDC **10** 13:33:09.4±0.9,2°.94S×129°.76E, h0km, mb3.8/7, mbtmp3.8/10, ML3.9/3, MS3.2/4, Error ellipse: s-maj=34.6km s-min=17.7km az=69.0*
*DJA **10** 13:33:14.3±0.4,3°.S±2°.×13°.0E±°, h26km±3km, M4.1/18, mB5.0/1, mb4.4/3, MLv3.9/18, Mw(mB)4.3/1*

ISC 10 13:33:13.7±1.6,2°.84S±0°.06×129°.86E±0°.04, h28km±13km, n24, σ1§43/29, mb3.8/7, MS3.2/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.06**	**241**	P	**Pb**	**13 33 35.1**	**+1.6**
MSAI				S	**Sn**	**13 33 48.0**	**+1.4**
KRAI	**Karang Ratu**	**1.54**	**252**	P	**Pb**	**13 33 42.0**	**+0.4**
BNDI	**Bandanaira**	**1.68**	**178**	P	**Pn**	**13 33 41.9**	**+0.7**
AAI	**Ambon**	**1.86**	**243**	P	**Pb**	**13 33 46.5**	**-0.7**
AAI				S	**Sb**	**13 34 09.0**

ANTB			Sg	Sn	13 44 52.5	0.0
DEMR	**Demre-Antalya**	**0.49 248**	Pg	Pn	**13 44 43.1**	**+0.2**
ELL	**Elmali**	**0.56 305**	Pg	Pn	**13 44 43.3**	**-0.3**
ELL			Sg	Sn	**13 44 53.7**	**-0.1**
ELL	**Elmali**	**0.56 305**	P	Pn	**13 44 43.2**	**-0.3**
ELL			S	Sn	**13 44 54.3**	**+0.5**
KORT	**Korkueli**	**0.58 350**	Pg	Pn	**13 44 43.3**	**-0.6**
KORT	**Korkueli**	**0.58 350**	P	Pn	**13 44 42.9**	**-1.0**
KORT			S	Sn	**13 44 54.3**	**0.0**
KORT			S	Sn	**13 44 54.3**	**0.0**
KORT			IAML		13 44 55.0	
	comp=N,785nm,0.6s					
KORT			IAML		13 44 55.0	
	comp=E,1µm,0.4s					
KORT			IAML		13 44 55.0	
	comp=E,1µm,0.4s					
KORT			IAML		13 44 56.0	
	comp=N,965nm,0.5s					
AKAS	**Kas**	**0.73 255**	Pg	Pn	**13 44 45.6**	**+0.2**
AKAS			Sg	Sn	**13 44 57.3**	**+0.4**
AKAS	**Kas**	**0.73 255**	P	Pn	**13 44 45.3**	**0.0**
AKAS			S	Sn	**13 44 56.7**	**-0.2**
AKAS			IAML		13 44 59.0	
	comp=N,1µm,0.4s					
AKAS			IAML		13 44 59.0	
	comp=E,982nm,0.5s					
KSL	**Kastellorizon**	**0.77 249**	P	Pn	**13 44 46.1**	**+0.4**
KSL			S	Sn	**13 44 56.4**	**-1.1**
KSL	**Kastellorizon**	**0.77 249**	P	Pn	**13 44 46.1**	**+0.4**
KSL			S	Sn	**13 44 56.8**	**-0.7**
KSL	**Kastellorizon**	**0.77 249**	P	Pn	**13 44 46.1**	**+0.4**
KSL			S	Sn	**13 44 57.5**	**0.0**
KNIK	**Mula-Seydike**	**0.83 300**	P	Pn	**13 44 47.8**	**+1.2**
KNIK			S	Sn	**13 44 56.7**	**-2.4**
MNVG	**Manavgat-Antal**	**0.84 64**	Pg	Pn	**13 44 46.9**	**+0.4**
BUCA	**Burdur, Bucak-**	**0.90 4**	P	Pn	**13 44 48.6**	**+1.2**
IZZE	**Mula-Seydike**	**1.00 271**	P	Pn	**13 44 48.6**	**+0.1**
IZZE			S	Sn	**13 45 03.3**	**+0.8**
BCK	**Bucak**	**1.04 5**	Pg	Pn	**13 44 49.2**	**+0.2**
CAME	**Cameli-Denizli**	**1.07 299**	Pg	Pn	**13 44 49.9**	**+0.4**
GOLH	**Golhisar**	**1.09 318**	P	Pn	**13 44 50.2**	**+0.5**
CAEL	**Denizli, Camel**	**1.16 307**	P	Pn	**13 44 51.8**	**+1.3**
ALAN	**Alanya-ANTALYA**	**1.27 84**	Pn	Pn	**13 44 52.2**	**+0.4**
ISP	**Isparta**	**1.39 2**	Pn	Pn	**13 44 54.0**	**+0.4**
ISP	**Isparta**	**1.39 2**	P	Pn	**13 44 53.4**	**-0.1**
ISP			S	Sn	**13 45 11.8**	**+0.4**
APMY	**Acipayam-Deniz**	**1.40 318**	Pn	Pn	**13 44 54.5**	**+0.9**
DNZT	**Denizli-Tavas-**	**1.44 307**	P	Pn	**13 44 55.1**	**+1.0**
SEDI	**Konya, Seydise**	**1.45 45**	P	Pn	**13 44 55.1**	**+0.8**
SEDI			S	Sn	**13 45 13.2**	**+0.4**
INCE	**Denizli-Bozkur**	**1.47 331**	P	Pn	**13 44 54.0**	**-0.5**
INCE			S	Sn	**13 45 14.8**	**+1.7**
SEYD	**Seydisehir-KON**	**1.47 48**	Pn	Pn	**13 44 55.1**	**+0.6**
GAZI	**Gazipasa**	**1.50 97**	Pn	Pn	**13 44 55.3**	**+0.4**
GAZI	**Gazipasa**	**1.50 97**	P	Pn	**13 44 54.6**	**-0.3**
DALY	**Dalyan (Mula)**	**1.51 285**	Pn	Pn	**13 44 55.7**	**+0.7**
BASM	**Basmaki-Afyon**	**1.53 347**	Pn	Pn	**13 44 55.7**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.62 310**	P	Pn	**13 44 56.2**	**-0.3**
TAVA			S	Sn	**13 45 15.9**	**-0.9**
DNIZ	**Denizli-Tavas-**	**1.66 317**	P	Pn	**13 44 56.8**	**-0.2**
DNIZ			S	Sn	**13 45 19.2**	**+1.6**
HDMB	**Hadim**	**1.71 71**	Pn	Pn	**13 44 58.5**	**+0.8**
TURN	**Turunc**	**1.82 282**	Pn	Pn	**13 45 00.3**	**+1.2**
TURN	**Turunc**	**1.82 282**	P	Pn	**13 44 58.9**	**-0.2**
TURN			S	Sn	**13 45 21.9**	**+0.5**
KZIL	**AFYON_Kizioren**	**1.85 352**	P	Pn	**13 44 56.8**	**-2.8**
KZIL			S	Sn	**13 45 19.7**	**-2.4**
YER	**Yerkesik**	**1.89 293**	Pn	Pn	**13 45 01.0**	**+0.9**
YER	**Yerkesik**	**1.89 293**	P	Pn	**13 45 01.0**	**+0.9**
YER			S	Sn	**13 45 21.9**	**-1.3**
ARG	**Arkhangelos**	**1.91 264**	Pn	Pn	**13 45 00.8**	**+0.6**
ARG	**Arkhangelos**	**1.91 264**	P	Pn	**13 45 00.8**	**+0.6**
ARG			S	Sn	**13 45 20.0**	**-3.4**
ARG	**Arkhangelos**	**1.91 264**	P	Pn	**13 45 00.4**	**+0.3**
ARG			S	Sn	**13 45 23.8**	**+0.4**
ARG	**Arkhangelos**	**1.91 264**	P	Pn	**13 45 00.6**	**+0.4**
ARG			S	Sn	**13 45 23.4**	**+0.1**
DOGA	**KONYA_Doganhis**	**1.93 29**	P	Pn	**13 45 02.2**	**+1.6**
YVAC	**Isparta, Yalva**	**1.94 18**	P	Pn	**13 45 01.1**	**+0.4**
YVAC			S	Sn	**13 45 25.2**	**+0.8**
SDAG	**Sultandagi-AFY**	**2.04 10**	Pn	Pn	**13 45 03.0**	**+0.9**
AKMS	**Akamas**	**2.07 132**	P	Pn	**13 45 03.8**	**+1.4**
AKMS			S	Sn	**13 45 27.1**	**-0.2**
AKMS			AML	AML	13 45 37.9	
	0.1nm,0.2s					
AKMS			AML	AML	13 45 38.0	
	0.2nm,0.3s					
AKMS	**Akamas**	**2.07 132**	P	Pn	**13 45 01.8**	**-0.6**
AKMS			S	Sn	**13 45 26.8**	**-0.5**
PASA	**Karahalli, USA**	**2.07 338**	P	Pn	**13 45 02.8**	**+0.3**
PASA			S	Sn	**13 45 26.8**	**-0.6**
SULTU	**Buldan**	**2.12 321**	P	Pn	**13 45 03.3**	**+0.2**
SULTU			S	Sn	**13 45 27.4**	**-1.3**
SHUT	**Suhut-Afyon**	**2.12 2**	Pn	Pn	**13 45 03.7**	**+0.5**
KONT	**Konya--Tatoy**	**2.14 44**	Pn	Pn	**13 45 04.4**	**+1.0**
ALFC	**Alefka**	**2.15 126**	P	Pn	**13 45 03.1**	**-0.3**
ALFC			S	Sn	**13 45 27.6**	**-1.6**
ALFC			AML	AML	13 45 29.8	
	0.3nm,0.2s					
ALFC			AML	AML	13 45 30.6	
	0.3nm,0.2s					
ALFC	**Alefka**	**2.15 126**	P	Pn	**13 45 03.0**	**-0.4**
ALFC			S	Sn	**13 45 28.6**	**-0.6**
BNAZ	**Uak-Banaz**	**2.30 348**	P	Pn	**13 45 06.0**	**+0.5**
BNAZ			S	Sn	**13 45 32.3**	**-0.6**
LADK	**Ladik-KONYA**	**2.33 40**	Pn	Pn	**13 45 06.7**	**+0.7**
MLSB	**Milas**	**2.33 293**	Pn	Pn	**13 45 07.8**	**+1.9**
DAT	**Datca**	**2.35 278**	Pn	Pn	**13 45 07.9**	**+1.7**
DAT	**Datca**	**2.35 278**	P	Pn	**13 45 07.3**	**+1.0**
DAT			S	Sn	**13 45 32.5**	**-1.7**
KRMN	**Karaman**	**2.36 71**	Pn	Pn	**13 45 07.8**	**+1.4**
TROD	**Troodos**	**2.44 126**	P	Pn	**13 45 08.0**	**+0.4**
TROD			S	Sn	**13 45 36.1**	**-0.6**
TROD			AML	AML	13 45 42.4	
	0.1nm,0.5s					
TROD			AML	AML	13 45 42.6	
	0.1nm,0.7s					
BECE	**Buyukeceli-Mer**	**2.51 95**	Pn	Pn	**13 45 10.1**	**+1.8**
XYLS	**Xyliatos**	**2.53 123**	P	Pn	**13 45 08.5**	**-0.1**
XYLS			S	Sn	**13 45 37.7**	**-0.8**
XYLS			AML	AML	13 45 41.9	
	0.1nm,0.3s					
XYLS			AML	AML	13 45 43.1	
	0.1nm,0.3s					
IKL	**Isikli**	**2.60 93**	Pn	Pn	**13 45 10.9**	**+1.3**
KEBE	**Keben-Mersin**	**2.61 89**	Pn	Pn	**13 45 11.3**	**+1.5**
BODT	**Bodrum**	**2.62 285**	Pn	Pn	**13 45 11.8**	**+2.0**
BODT	**Bodrum**	**2.62 285**	P	Pn	**13 45 12.3**	**+2.5**
BODT			S	Sn	**13 45 37.8**	**-2.8**
APOL	**The Sanctuary**	**2.62 131**	P	Pn	**13 45 11.4**	**+1.6**
APOL			S	Sn	**13 45 40.1**	**-0.6**
CSS	**Mathiatis**	**2.75 121**	Pn	Pn	**13 45 13.5**	**+1.9**
CSS	**Mathiatis**	**2.75 121**	P	Pn	**13 45 13.3**	**+1.7**
CSS	**Mathiatis**	**2.75 121**	P	Pn	**13 45 10.4**	**-1.1**
ASGA	**Asgata**	**2.79 125**	P	Pn	**13 45 13.5**	**+1.3**
ASGA			S	Sn	**13 45 44.9**	**+0.1**
ASGA			AML	AML	13 45 54.9	
	0.1nm,0.2s					
ASGA			AML	AML	13 45 57.4	
	0.1nm,0.2s					
ASGA	**Asgata**	**2.79 125**	P	Pn	**13 45 11.6**	**-0.6**
KARP	**Karpathos**	**2.82 253**	Pn	Pn	**13 45 14.2**	**+1.6**
KARP	**Karpathos**	**2.82 253**	P	Pn	**13 45 13.6**	**+1.0**
KARP	**Karpathos**	**2.82 253**	P	Pn	**13 45 13.8**	**+1.1**
CHBY	**Cihanbeyli**	**2.89 41**	Pn	Pn	**13 45 14.3**	**+0.8**
MVOU	**Mavrovouni**	**2.93 118**	P	Pn	**13 45 14.7**	**+0.7**
OSC1	**CSNet OBS 1**	**2.99 167**	P	Pn	**13 45 15.3**	**+0.4**
OSC1			S	Sn	**13 45 48.0**	**-1.6**
SMG	**Samos**	**3.18 295**	P	Pn	**13 45 17.1**	**-0.2**
SMG			S	Sn	**13 45 51.0**	**-3.1**
SMG	**Samos**	**3.18 295**	P	Pn	**13 45 17.9**	**+0.6**
OSC2	**CSNet OBS 4**	**3.66 156**	P	Pn	**13 45 25.5**	**+1.6**
OSC2			S	Sn	**13 46 04.1**	**-1.7**
ZKR	**Zakros**	**3.70 251**	P	Pn	**13 45 26.3**	**+1.8**
ZKR	**Zakros**	**3.70 251**	P	Pn	**13 45 25.9**	**+1.5**
CHOS	**Chios island**	**4.02 300**	P	Pn	**13 45 29.3**	**+0.4**
THERA	**Ancient Thera,**	**4.03 271**	P	Pn	**13 45 29.6**	**+0.6**
THR3	**Thira Island,**	**4.09 271**	P	Pn	**13 45 31.4**	**+1.6**
SNT5	**Nea Kammeni, S**	**4.09 271**	P	Pn	**13 45 31.1**	**+1.2**
NPS	**Neapolis**	**4.11 255**	P	Pn	**13 45 31.4**	**+1.3**
THR9	**Santorini-Faro**	**4.13 271**	P	Pn	**13 45 31.5**	**+1.2**
BRTR	**Keskin Array B**	**4.13 36**	P	Pn	**13 45 30.2**	**-0.3**
	2.2nm,0.3s,baz=215,slow=15,SNR=57					
BRTR			S	Sn	**13 46 16.8**	**-0.9**
	14nm,0.5s,baz=208,slow=26,SNR=21					
	7.9nm,0.4s					
IDI	**Anoyia**	**4.67 258**	P	Pn	**13 45 38.9**	**+1.1**
MMAI	**Mount Meron Ar**	**5.30 129**	P	Pn	**13 45 46.4**	**0.0**
	4.4nm,0.3s,baz=320,slow=14,SNR=18					
MMAI			S	Sn	**13 46 43.2**	**-2.9**
	2.1nm,0.3s,baz=318,slow=30,SNR=9.2					
	2.1nm,0.2s					
FINES	**FINESS Array B**	**25.19 355**	P	P	**13 49 47.2**	**-0.8**
	3.7nm,0.9s,baz=183,slow=20,SNR=1.5					
	3.7nm,0.9s					
KURBB	**Kurchatov Arra**	**36.95 52**	P	P	**13 51 31.8**	**+0.3**
	0.2nm,0.3s,baz=277,slow=9.0,SNR=2.1					
	0.2nm,0.3s					
MKAR	**Makanchi Array**	**39.46 58**	P	P	**13 51 53.1**	**+0.4**
	0.1nm,0.3s,baz=285,slow=6.5,SNR=2.0					
	0.1nm,0.3s					

*IDC **10** 13:51:06.9±2.0, 10°.44S×119°.09E, h0km, mb3.5/2, mbtmp3.4/6, ML3.2/4, Error ellipse: s-maj=70.9km s-min=23.5km az=49.0*
*DJA **10** 13:51:13.9±0.7, 10°.5±4°×11°.9E±°, h25km±5km, M3.7/13, mb3.9/3, MLv3.6/13*
ISC 10 13:51:12.6±1.7, 10°.41S±0°.08×119°.20E±0°.04, h31km±13km, n19, σ1°60/27, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.79**	**14**	P	**Pb**	**13 51 27.7**	**-0.1**
WBSI				S	**Sn**	**13 51 37.7**	**-0.6**
WSI	**Waingapu**	**1.31**	**56**	P	**Pb**	**13 51 36.7**	**+0.1**
WSI				S	**Sb**	**13 51 52.7**	**-0.4**
BASI	**Baing, Sumba**	**1.37**	**82**	P	**Pn**	**13 51 37.1**	**+1.5**
DBNI	**Kabupaten Domp**	**2.09**	**335**	P	**Pn**	**13 51 47.3**	**+1.9**
PLAI	**Plampang**	**2.10**	**318**	P	**Pn**	**13 51 46.4**	**+0.7**
PLAI				S	**Sn**	**13 52 12.6**	**+1.8**
TWSI	**Taliwang, Sumb**	**2.82**	**306**	P	**Pn**	**13 51 57.5**	**+2.0**
TWSI				S	**Sn**	**13 52 29.5**	**+1.0**
EDFI	**Ende, Flores**	**2.96**	**56**	P	**Pn**	**13 51 58.5**	**+0.9**
EDFI				S	**Sn**	**13 52 32.6**	**+0.5**
MMRI	**Maumere**	**3.48**	**60**	P	**Pn**	**13 52 06.4**	**+1.8**
MMRI				S	**Sn**	**13 52 46.2**	**+1.4**
KLNI	**Mataram**	**3.64**	**303**	P	**Pn**	**13 52 09.1**	**+2.3**
KHKI	**Kahang-Kahang**	**4.08**	**300**	P	**Pn**	**13 52 13.9**	**+1.1**
BATI	**Baumata**	**4.40**	**88**	Pn	**Pn**	**13 52 17.5**	**+0.2**
	3.3nm,0.3s,baz=0.2,slow=17,SNR=2.1						
	11nm,0.4s						
BATI	**Baumata**	**4.40**	**88**	P	**Pn**	**13 52 18.3**	**+1.0**
BATI				S	**Sn**	**13 53 10.6**	**+3.1**
BSSI	**Bau Bau, Buton**	**4.43**	**17**	P	**Pn**	**13 52 17.6**	**0.0**
SOEI	**Soe**	**5.04**	**83**	P	**Pn**	**13 52 28.1**	**+2.0**
	0.2nm24nm,1.4s						
SOEI				S	**Sn**	**13 53 25.5**	**+2.1**
	0.2nm24nm,1.4s						
FITZ	**Fitzroy Crossi**	**9.87**	**141**	Pn	**Pn**	**13 53 30.4**	**-1.9**
	0.1nm,0.3s,baz=331,slow=13,SNR=1.7						
FITZ				Sn	Sn	13 55 14.1	-8.1
	0.3nm,0.3s,baz=306,slow=21,SNR=1.4						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**17.41**	**125**	P	**Pn**	**13 55 10.7**	**-2.6**
	0.1nm,0.3s,baz=299,slow=13,SNR=1.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**19.25**	**135**	P	**P**	**13 55 34.6**	**0.0**
	baz=323,slow=12,SNR=6.4						
	0.5nm,0.8s						
SONM	**Songino Array**	**59.09**	**350**	P	**P**	**14 01 08.9**	**-1.1**
	0.5nm,0.6s,baz=168,slow=7.8,SNR=3.6						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**65.79**	**333**	P	**P**	**14 01 54.0**	**-0.7**
	0.1nm,0.3s,baz=155,slow=7.2,SNR=2.1						
	0.1nm,0.3s						

*IDC **10** 13:54:48.3±5.0, 21°.98S×69°.42W, h0km, mbtmp3.6/2, ML3.6/2, Error ellipse: s-maj=531.9km s-min=29.4km az=98.0*
*SJA **10** 13:54:48.5±0.8, 20°.94S×70°.88W, h14km±2km, ML3.7, MW3.8*
*GUC **10** 13:54:52.9±0.8, 20°.87S×70°.80W, h18km±22km, ML3.7*
ISC 10 13:54:50.5±2.2, 20°.90S±0°.03×70°.83W±0°.07, h18km±8km, n31, σ1°01/44, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.90**	**46**	*e*P	**Pb**	**13 55 08.0**	**+0.3**
TA02	**Huaiquique**	**0.90**	**46**	*i* P	**Pb**	**13 55 07.2**	**-0.4**
TA02				*i* S	**Sn**	**13 55 21.0**	**+0.1**
TA02				IAML		13 55 21.1	
	comp=Z,2µm,0.6s						
TA02				IAML		13 55 21.4	
	comp=Z,2µm,1.9s						
PB02	**IPOC Station P**	**0.97**	**116**	↓*i* P	**Pb**	**13 55 09.0**	**+0.1**
PB02				*e*S	**Sb**	**13 55 21.8**	**+0.4**
PB02				IAML		13 55 24.6	
	comp=E,8µm,0.4s						
PB02	**IPOC Station P**	**0.97**	**116**	*i* P	**Pb**	**13 55 09.2**	**+0.4**
PB02				*i* S	**Sb**	**13 55 21.2**	**-0.1**
PB02				IAML		13 55 25.2	
	comp=Z,7µm,0.4s						
HMBC	**Humberstone**	**1.07**	**55**	↑*i* P	**Pb**	**13 55 10.1**	**-0.6**
HMBC				*e*S	**Sb**	**13 55 23.8**	**-0.6**
HMBC				IAML		13 55 26.6	
	comp=E,4µm,0.2s						
HMBC	**Humberstone**	**1.07**	**55**	*i* P	**Pb**	**13 55 10.1**	**-0.6**
HMBC				IAML		13 55 30.1	
	comp=Z,2µm,0.4s						
PB07	**IPOC Station P**	**1.21**	**133**	*e*P	**Pb**	**13 55 13.0**	**0.0**
PB07				*e*S	**Sn**	**13 55 28.7**	**0.0**
PB07	**IPOC Station P**	**1.21**	**133**	*i* P	**Pn**	**13 55 11.5**	**-1.2**
PB07				*i* S	**Sn**	**13 55 28.7**	**0.0**
PB07				IAML		13 55 33.6	
	comp=Z,1µm,0.6s						
PB01	**IPOC Station P**	**1.26**	**97**	↑*i* P	**Pn**	**13 55 13.4**	**0.0**
PB01				*e*S	**Sb**	**13 55 29.6**	**-0.2**
PB01				IAML		13 55 32.0	
	comp=N,4µm,0.4s						
PB01	**IPOC Station P**	**1.26**	**97**	*i* P	**Pn**	**13 55 13.6**	**+0.2**
PB01				*i* S	**Sg**	**13 55 31.4**	**-0.1**
PB01				IAML		13 55 31.6	
	comp=Z,2µm,0.5s						
PB11	**IPOC Station P**	**1.58**	**44**	↑*i* P	**Pn**	**13 55 17.9**	**+0.1**
PB11				*e*S	**Sn**	**13 55 38.6**	**+0.8**
PB11				IAML		13 55 43.1	
	comp=N,2µm,0.6s						
PB11	**IPOC Station P**	**1.58**	**44**	*i* P	**Pb**	**13 55 18.9**	**-0.4**
PB11				*i* S	**Sg**	**13 55 41.5**	**+0.1**
PB11				IAML		13 55 46.2	
	comp=Z,1µm,0.4s						
PB09	**IPOC Station P**	**1.73**	**122**	*e*P	**Pb**	**13 55 21.9**	**0.0**
PB09				*e*S	**Sb**	**13 55 43.7**	**+0.4**
PB09				IAML		13 55 50.5	
	comp=E,1µm,0.9s						
PB09	**IPOC Station P**	**1.73**	**122**	*i* P	**Pb**	**13 55 21.0**	**-0.9**
PB09				*i* S	**Sb**	**13 55 45.0**	**+1.6**
PB09				IAML		13 55 49.6	
	comp=Z,639nm,0.5s						
PB08	**IPOC Station P**	**1.74**	**65**	*e*P	**Pn**	**13 55 20.2**	**0.0**
PB08				IAML		13 55 47.5	
	comp=N,603nm,0.2s						
PB08	**IPOC Station P**	**1.74**	**65**	*i* P	**Pn**	**13 55 21.4**	**+1.1**
PB08				*i* S	**Sg**	**13 55 46.3**	**-0.5**
PB08				IAML		13 55 51.3	
	comp=Z,319nm,0.6s						
GO01	**Chusmiza**	**1.96**	**52**	*e*P	**Pn**	**13 55 24.1**	**+0.7**
GO01				IAML		13 55 52.4	
	comp=N,1µm,0.3s						
GO01	**Chusmiza**	**1.96**	**52**	*i* P	**Pb**	**13 55 24.9**	**-1.1**
GO01				*i* S	**Sb**	**13 55 52.0**	**+1.7**
GO01				IAML		13 55 52.1	
	comp=Z,445nm,0.3s						
GO01				IAML		13 55 52.3	
	comp=Z,515nm,0.9s						
PB05	**IPOC Station P**	**2.03**	**164**	↓*i* P	**Pn**	**13 55 24.0**	**-0.1**
PB05	**IPOC Station P**	**2.03**	**164**	*i* P	**Pn**	**13 55 23.9**	**-0.1**
PB05				IAML		13 56 00.8	
	comp=Z,151nm,0.6s						
PB06	**IPOC Station P**	**2.15**	**147**	*e*P	**Pn**	**13 55 26.1**	**+0.5**
PB06				IAML		13 56 02.1	
	comp=N,474nm,0.6s						
PB06	**IPOC Station P**	**2.15**	**147**	*i* P	**Pn**	**13 55 26.1**	**+0.5**
PB06				IAML		13 56 01.4	
	comp=Z,260nm,0.8s						
PB12	**IPOC Station P**	**2.32**	**12**	*e*P	**Pn**	**13 55 28.4**	**+0.5**
PB12				IAML		13 56 07.1	
	comp=E,355nm,0.2s						
PB12	**IPOC Station P**	**2.32**	**12**	*i* P	**Pn**	**13 55 29.6**	**+1.6**
PB12				*i* S	**Sb**	**13 55 60.0**	**-0.3**
PB12				IAML		13 56 06.7	
	comp=Z,345nm,0.8s						
AP01	**Chacalluta**	**2.55**	**10**	IAML		13 56 21.9	
	comp=Z,475nm,1.1s						
PB16	**IPOC Station P**	**2.83**	**26**	*e*P	**Pn**	**13 55 37.9**	**+2.4**
PB16				IAML		13 56 27.1	
	comp=E,206nm,0.7s						
PB16	**IPOC Station P**	**2.83**	**26**	*i* P	**Pn**	**13 55 37.8**	**+2.4**
PB16				*i* S	**Sb**	**13 56 13.5**	**-2.1**
PB16				IAML		13 56 24.2	
	comp=Z,246nm,1.1s						
AF01	**San Pedro de A**	**3.20**	**130**	IAML		13 56 55.0	
	comp=Z,782nm,0.5s						
LPAZ	**La Paz**	**5.25**	**30**	Pn	Pb	13 56 16.6	-5.5
LPAZ	comp=Z,1.1nm,0.3s,baz=194,slow=6.6,SNR=12			Sn	**Sb**	**13 57 22.3**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=108,slow=3.2,SNR=3.6						
	comp=Z,3.5nm,0.3s						
PLCA	**Paso Flores**	**19.78**	**179**	P	P	13 59 08.1	-12
	baz=4.4,slow=13,SNR=2.5						
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**146.16**	**34**	PKPbc	**PKPab**	**14 14 30.2**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=317,slow=1.6,SNR=7.5						

*IDC **10** 14:03:59.6±0.7, 36°.29N×137°.44E, h241km±18km, mb3.2/4, mbtmp3.7/4, Error ellipse: s-maj=84.5km s-min=19.3km az=70.0*
*JMA **10** 14:03:59.4±0.3, 36°N±1°×13°8E±°, h244km±2km, MV2.7/23, HIDA MOUNTAINS REGION*
ISC 10 14:03:59.3±0.9, 36°.3N±0°.1×137°.6E±0°.1, h241km±7km, n14, σ0°80/18, mb3.2/4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JGN	**Niukaw**	**0.22**	**256**	P	**Pn**	**14 04 30.9**	**+0.2**
MAT	**Matsushiro**	**0.57**	**62**	P	**Pn**	**14 04 31.8**	**+0.3**
MAT				*e*S	**S**	**14 04 56.6**	**-0.2**
MJAR	**Matsushiro Arr**	**0.58**	**62**	P	**Pn**	**14 04 31.9**	**+0.4**
	16nm,0.4s,baz=245,slow=3.6,SNR=85						
MJAR				S	**S**	**14 04 58.7**	**+2.0**
	5.7nm,0.7s,baz=282,slow=18,SNR=8.6						
JYTA	**Yamagatataniai**	**0.96**	**225**	P	**Pn**	**14 04 33.0**	**-0.3**
JYTA				S	**S**	**14 04 58.7**	**-1.1**
JRY	**Ryogami san**	**1.10**	**103**	S	**S**	**14 05 01.0**	**-0.3**
JAG	**Ashikaga**	**1.52**	**84**	P	**Pn**	**14 04 37.1**	**+0.1**
JAG				S	**S**	**14 05 05.1**	**-1.4**
JIE	**Ise**	**2.01**	**201**	P	**Pn**	**14 04 41.7**	**+0.5**
JWT	**Wachi**	**2.03**	**241**	*e*P	**Pn**	**14 04 41.7**	**+0.3**
JNS	**Sasagawa**	**2.08**	**42**	P	**Pn**	**14 04 42.2**	**+0.4**
JTNC	**Tanabenakahech**	**2.93**	**214**	P	**Pn**	**14 04 51.2**	**+0.6**
KURBB	**Kurchatov Arra**	**44.04**	**308**	P	**P**	**14 11 42.8**	**-0.4**
	0.4nm,0.4s,baz=86,slow=8.4,SNR=5.3						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**56.00**	**184**	P	**P**	**14 13 13.1**	**+0.1**
	0.4nm,0.4s,baz=360,slow=7.5,SNR=8.3						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**59.72**	**184**	P	**P**	**14 13 39.2**	**+0.5**
	0.4nm,0.9s,baz=359,slow=6.1,SNR=9.0						
	0.4nm,0.9s						
FINES	**FINESS Array B**	**68.02**	**331**	P	**P**	**14 14 32.0**	**-0.2**
	2.3nm,0.9s,baz=62,slow=5.5,SNR=3.5						
	2.3nm,0.9s						

*IDC **10** 14:08:23.8±2.4, 48°.20N×40°.82E, h0km, mb2.9/1, mbtmp3.7/4, ML2.8/3, Error ellipse: s-maj=157.4km s-min=11.1km az=66.0*
ISC 10 14:08:20.2±4.0, 48°.7N±0°.3×42°.4E±0°.9, h10km, n6, σ1°99/6, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KVAR	**Kislovodsk Arr**	**4.73**	**177**	Pg	**Pb**	**14 09 44.0**	**+0.8**
	baz=345,slow=18						
KVAR				Lg	Lg	14 10 48.6	
	baz=322,slow=22						
KBZ	**Khabaz**	**4.96**	**175**	Pn	**Pn**	**14 09 35.3**	**+0.6**
	1.2nm,0.3s,baz=338,slow=11,SNR=38						
KBZ				Sn	**Sn**	**14 10 30.0**	**-2.1**
	1.0nm,0.3s,baz=161,slow=22,SNR=4.4						
KBZ				Lg	Lg	14 10 51.6	
	1.0nm,0.3s,baz=7.9,slow=13,SNR=5.0						
	2.9nm,0.2s						
BELG	**Belogornoye**	**5.02**	**40**	Lg	Lg	14 11 30.9	
	1.7nm,0.3s,baz=202,slow=16,SNR=5.9						
FINES	**FINESS Array B**	**15.76**	**330**	Pn	**Pn**	**14 12 00.1**	**-1.8**
	0.1nm,0.3s,baz=142,slow=14,SNR=1.4						
	4.0nm,0.9s						
HFS	**Hagfors**	**20.05**	**316**	P	**Pn**	**14 12 54.2**	**-0.7**
	0.1nm,0.3s,baz=122,slow=10,SNR=1.9						
	5.2nm,0.9s						
NOA	**NORSAR Array B**	**21.52**	**317**	P	**P**	**14 13 10.7**	**+1.6**
	0.4nm,0.7s,baz

PXZ	**Pawanui**	**15.16**	**187**	P	**P**	**14 17 26.6**	**+0.7**
PXZ				S	**S**	**14 20 00.4**	**-3.5**
WAZ	**Wanganui**	**15.19**	**193**	P	**P**	**14 17 30.1**	**+3.8**
TSZ	**Takapari Road**	**15.31**	**190**	P	**P**	**14 17 28.2**	**+0.6**
BFZ	**Birch Farm**	**15.88**	**189**	P	**P**	**14 17 33.3**	**-0.1**
BFZ	**Birch Farm**	**15.88**	**189**	P	**P**	**14 17 33.8**	**+0.3**
BFZ				S	**S**	**14 20 12.6**	**-4.9**
MRZ	**Mangatainoka R**	**15.96**	**191**	P	**P**	**14 17 33.3**	**-1.0**
SNZO	**South Karori**	**16.75**	**192**	P	**P**	**14 17 44.2**	**+1.8**
QRZ	**Quartz Range**	**16.81**	**198**		**P**	**14 17 45.0**	**+1.9**
QRZ				IAmb	IAmb	14 17 45.9		
	comp=Z,27nm,0.9s							
QRZ	**Quartz Range**	**16.81**	**198**	P	**P**	**14 17 44.5**	**+1.5**
QRZ	**Quartz Range**	**16.81**	**198**	P	**P**	**14 17 44.5**	**+1.5**
TUWZ	**Tuamarina**	**17.02**	**194**	P	**P**	**14 17 45.7**	**+0.6**
BSWZ	**Blackbirch Sta**	**17.30**	**194**	P	**P**	**14 17 49.3**	**+1.5**
THZ	**Tophouse**	**17.58**	**196**	P	**P**	**14 17 50.9**	**+0.4**
DSZ	**Denniston Nort**	**17.86**	**199**	P	**P**	**14 17 54.1**	**+1.1**
DSZ	**Denniston Nort**	**17.86**	**199**	P	**P**	**14 17 54.4**	**+1.3**
KHZ	**Kahutara**	**18.05**	**194**	P	**P**	**14 17 54.5**	**-0.1**
KHZ	**Kahutara**	**18.05**	**194**	P	**P**	**14 17 54.7**	**+0.1**
GVZ	**Greta Valley S**	**18.69**	**195**	P	**P**	**14 18 00.5**	**0.0**
LTZ	**Lake Taylor**	**18.70**	**197**	P	**P**	**14 18 01.0**	**+0.3**
INZ	**Inchbonnie**	**18.87**	**198**		**P**	**14 18 02.6**	**+0.4**
INZ	**Inchbonnie**	**18.87**	**198**	P	**P**	**14 18 03.9**	**+1.8**
OXZ	**Oxford**	**19.27**	**196**	P	**P**	**14 18 06.3**	**+0.5**
OXZ	**Oxford**	**19.27**	**196**	P	**P**	**14 18 06.3**	**+0.5**
WVZ	**Waitaha Valley**	**19.40**	**199**	P	**P**	**14 18 08.6**	**+1.6**
RPZ	**Rata Peaks**	**19.89**	**198**	P	**P**	**14 18 13.3**	**+1.8**
	comp=Z,17nm,0.6s,baz=201,slow=0.8,SNR=15							
	comp=Z,17nm,0.6s							
RPZ	**Rata Peaks**	**19.89**	**198**	P	**P**	**14 18 13.1**	**+1.5**
RPZ	**Rata Peaks**	**19.89**	**198**	P	**P**	**14 18 13.4**	**+1.8**
RPZ	**Rata Peaks**	**19.89**	**198**	P	**P**	**14 18 13.5**	**+2.0**
FOZ	**Fox Glacier**	**20.10**	**201**	P	**P**	**14 18 14.3**	**+1.0**
TMZ	**Timaru**	**20.52**	**197**	P	**P**	**14 18 19.0**	**+1.7**
JCZ	**Jackson Bay**	**20.92**	**202**	P	**P**	**14 18 22.0**	**+1.1**
JCZ	**Jackson Bay**	**20.92**	**202**	P	**P**	**14 18 22.3**	**+1.3**
ODZ	**Otahua Downs**	**21.23**	**197**	P	**P**	**14 18 25.4**	**+1.8**
ODZ	**Otahua Downs**	**21.23**	**197**	P	**P**	**14 18 25.2**	**+1.6**
WKZ	**Wanaka**	**21.51**	**200**	P	**P**	**14 18 27.0**	**+0.8**
MLZ	**Mavora Lakes**	**22.28**	**201**	P	**P**	**14 18 36.0**	**+2.8**
WHZ	**Wether Hill Ro**	**22.80**	**201**	P	**P**	**14 18 39.6**	**+1.9**
ARMA	**Armidale**	**25.13**	**251**	P	**P**	**14 19 00.3**	**+1.5**
ARMA				IAmb	IAmb	14 19 17.1		
	comp=Z,33nm,1.5s							
SYDH	**Sydney Hard Ro**	**26.38**	**244**	P	**P**	**14 19 10.9**	**+1.2**
CAN	**Canberra**	**28.12**	**241**	P	**P**	**14 19 26.4**	**+1.3**
CAN	**Canberra**	**28.12**	**241**	P	**P**	**14 19 26.9**	**+1.8**
MILA	**Mila**	**28.44**	**238**	P	**P**	**14 19 29.5**	**+1.6**
CMSA	**Cobar Meteorol**	**30.30**	**250**	P	**P**	**14 19 44.9**	**+0.9**
TOO	**Toolangi**	**31.40**	**238**	P	**P**	**14 19 54.9**	**+1.5**
TAU	**Tasmania Unive**	**31.79**	**228**	P	**P**	**14 19 58.4**	**+1.9**
TAU	**Tasmania Unive**	**31.79**	**228**	P	**P**	**14 19 58.5**	**+1.9**
STKA	**Stephens Creek**	**33.81**	**250**	P	**P**	**14 20 14.7**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=78,slow=10,SNR=7.5							
	comp=Z,1.5nm,0.3s							
STKA	**Stephens Creek**	**33.81**	**250**	P	**P**	**14 20 14.5**	**+0.6**
STKA				IAmb	IAmb	14 20 26.4		
	comp=Z,50nm,1.4s							
STKA	**Stephens Creek**	**33.81**	**250**	P	**P**	**14 20 14.5**	**+0.6**
PMG	**Port Moresby**	**34.34**	**291**	P	**P**	**14 20 17.9**	**-0.6**
PMG				IAmb	IAmb	14 20 19.2		
	comp=Z,22nm,1.4s							
COEN	**Coen**	**35.75**	**281**	P	**P**	**14 20 30.5**	**+0.1**
HTT	**Hallett**	**36.13**	**247**	P	**P**	**14 20 32.5**	**-0.8**
BBOO	**Buckleboo**	**38.51**	**248**	P	**P**	**14 20 52.4**	**-0.5**
BBOO				IAmb	IAmb	14 21 19.7		
	comp=Z,19nm,1.5s							
BBOO	**Buckleboo**	**38.51**	**248**	P	**P**	**14 20 52.5**	**-0.4**
AS31	**Alice Springs**	**41.31**	**262**	P	**P**	**14 21 15.0**	**-0.6**
ASAR	**Alice Springs**	**41.32**	**262**	P	**P**	**14 21 15.5**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=92,slow=7.8,SNR=47							
ASAR				S	**S**	**14 26 50.2**	**-2.9**
	comp=Z,0.4nm,0.8s,baz=98,slow=15,SNR=5.0							
	comp=Z,0.9nm,0.3s							
ASAR	**Alice Springs**	**41.32**	**262**	P	**P**	**14 21 14.8**	**-0.8**
WR8	**Warramunga Arr**	**41.64**	**268**	P	**P**	**14 21 17.4**	**-0.7**
WRAB	**Tennant Creek**	**41.78**	**268**	P	**P**	**14 21 18.6**	**-0.7**
WB0	**Warramunga Arr**	**41.78**	**268**	P	**P**	**14 21 18.5**	**-0.8**
WB0				IAmb	IAmb	14 21 20.2		
	comp=Z,6.7nm,0.4s							
WRA	**Warramunga Arr**	**41.79**	**268**	P	**P**	**14 21 18.7**	**-0.6**
	comp=Z,4.3nm,0.5s,baz=99,slow=7.1,SNR=92							
	comp=Z,4.3nm,0.5s							
MTN	**Manton Dam**	**46.99**	**276**	P	**P**	**14 21 58.8**	**-0.8**
KNRA	**Kununurra**	**48.13**	**271**	P	**P**	**14 22 07.9**	**-0.2**
KNRA				IAmb	IAmb	14 22 46.9		
	comp=Z,29nm,1.4s							
MJAR	**Matsushiro Arr**	**72.47**	**326**	P	**P**	**14 24 46.6**	**-2.6**
	comp=Z,21nm,0.9s,baz=166,slow=5.1,SNR=4.6							
	comp=Z,2.1nm,0.9s							
ELIB	**Princess Elisa**	**81.92**	**187**	*d*P	**P**	**14 25 40.1**	**-0.3**
N15K	**Kwethluk River**	**86.49**	**10**	P	**P**	**14 26 03.6**	**+1.0**
N15K				IAmb	IAmb	14 26 29.2		
	comp=Z,24nm,1.5s							
J16K	**Anvik River**	**89.38**	**9**	P	**P**	**14 26 16.0**	**0.0**
J16K				IAmb	IAmb	14 26 33.3		
	comp=Z,5.5nm,1.4s							
SUA	**Susitna One**	**89.46**	**14**	P	**P**	**14 26 16.6**	**0.0**
GHO	**Glory Hole Cre**	**90.14**	**14**	P	**P**	**14 26 19.6**	**0.0**
GHO				IAmb	IAmb	14 26 44.5		
	comp=Z,5.8nm,1.1s							
F17K	**Baldwin Pennin**	**92.32**	**8**	P	**P**	**14 26 29.6**	**+0.1**
F17K				IAmb	IAmb	14 26 35.8		
	comp=Z,4.8nm,1.3s							
FINES	**FINESS Array B**	**139.28**	**341**	PKhKP	PKPpre	14 32 34.7		
	comp=Z,13nm,1.1s,baz=77,slow=4.1,SNR=4.5							
NOA	**NORSAR Array B**	**143.05**	**350**	PKP	PKPab	14 32 46.1	-1.1	
	comp=Z,0.5nm,0.4s,baz=16,slow=4.8,SNR=3.7							
HFS	**Hagfors**	**143.49**	**348**	PKP	PKPab	14 32 47.8	-1.0	
	comp=Z,4.2nm,0.4s,baz=67,slow=5.0,SNR=24							
AKASG	**Malin Array Be**	**145.56**	**326**	PKPbc	**PKPdf**	**14 32 54.5**	**+0.2**	
	comp=Z,1.0nm,0.4s,baz=46,slow=4.1,SNR=7.4							
MMAI	**Mount Meron Ar**	**147.62**	**293**	PKPbc	**PKPbc**	**14 33 01.6**	**-0.4**	
	comp=Z,1.7nm,0.4s,baz=50,slow=7.8,SNR=6.3							
BRTR	**Keskin Array B**	**147.76**	**306**	PKPbc	**PKPbc**	**14 33 00.5**	**-1.7**	
	comp=Z,1.2nm,0.6s,baz=124,slow=4.3,SNR=5.9							
EKA	**Eskdalemuir Ar**	**149.62**	**3**	PKPbc	**PKPbc**	**14 33 04.9**	**-1.1**	
	comp=Z,0.8nm,0.5s,baz=343,slow=2.4,SNR=3.5							
BMRD	**Maredsous**	**154.38**	**352**	*d*PKPdf	**PKPdf**	**14 33 08.4**	**+0.4**	

*IDC **10** 14:52:09.1±0.6,33˚.37N×141˚.53E, h0km,mb4.0/20, mbtmp4.0/23,ML3.5/3,MS3.2/6, Error ellipse: s-maj=15.9km s-min=15.1km az=23.0*

*JMA **10** 14:52:16.5±0.5,34˚.N±1˚×14˚1E±˚, h26km, MV3.6/25, E OFF HACHIJOJIMA ISLAND*

*NIED **10** 14:52:16.5,33˚.60N×141˚.21E, h26km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.10; Mθθ0.06; Mϕϕ-1.15; Mrθ-0.84; Mθϕ0.41; Mϕr1.27; Fault plane solution: M0 1.94000×10¹⁵ NP1: ϕs179.00000°,δ21.00000°,λ118.00000°. NP2: ϕs330.00000°,δ72.00000°,λ80.00000°.*

*NEIC **10** 14:52:17.3±1.4,33˚.36N±0˚.07×141˚.30E±0˚.08, h52km±6km, mb4.6/35 Error ellipse: s-maj=12.9km s-min=6.1km az=136.0*

ISC 10 14:52:15.7±0.5,33˚.43N±0˚.06×141˚.41E±0˚.06, h41km, n98, σ1§26/88, mb4.3/44, MS3.2/3, 1C-2D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BSO1	**Boso 1**	**1.27**	**344**	P		**Pn**	**14 52 35.7**	**-0.8**
JHJ2	**Mitsune**	**1.37**	**257**			**Pn**	**14 52 39.6**	**+1.2**
JHJ2	**Mitsune**	**1.37**	**257**	P		**Pn**	**14 52 38.5**	**+0.1**
JHJ2				*e*S		**Sn**	**14 52 54.0**	**-1.4**
JHCJ	**Hachijojimakas**	**1.40**	**256**	*e*P		**Pn**	**14 52 39.5**	**+0.8**
JHJ	**Hachijo jima 2**	**1.40**	**258**	Pn		**Pn**	**14 52 38.2**	**-0.6**
	114nm,0.3s,baz=98,slow=23,SNR=12							
JHJ				Sn		**Sn**	**14 52 53.8**	**-2.2**
	184nm,0.3s,baz=86,slow=24,SNR=8.6							
BSO3	**Boso 3**	**1.56**	**332**	P		**Pn**	**14 52 40.4**	**-0.3**
JMKN	**Mikurajimanish**	**1.59**	**287**	*e*P		**Pn**	**14 52 40.8**	**-0.6**
BSO4	**Boso 4**	**1.79**	**331**	*e*P		**Pn**	**14 52 43.6**	**-0.5**
JIM2	**Oshima 3**	**2.09**	**309**	*e*P		**Pn**	**14 52 47.6**	**-0.7**
JIM2				*e*S		**Sn**	**14 53 10.4**	**-2.6**
KTJ3	**Kamata3**	**2.45**	**308**	P		**Pn**	**14 52 52.8**	**-0.4**
JIZS	**Izushimoda**	**2.46**	**302**	P		**Pn**	**14 52 53.6**	**+0.2**
JGF	**Kuroka**	**3.99**	**304**			**Pn**	**14 53 15.8**	**+1.5**
MJAR	**Matsushiro Arr**	**4.07**	**321**	Pn		**Pn**	**14 53 15.2**	**-0.3**
	0.7nm,0.3s,baz=185,slow=16,SNR=34							
MJAR				Sn		**Sn**	**14 54 05.4**	**+3.5**
	1.1nm,0.3s,baz=165,slow=20,SNR=8.7							
	11nm,0.8s							
MJAR	**Matsushiro Arr**	**4.07**	**321**			**Pn**	**14 53 15.6**	**+0.1**
MAJO	**Matsushiro**	**4.07**	**321**			**Pn**	**14 53 16.1**	**+0.6**
MJB9	**Matsu-Tunnel**	**4.08**	**321**			**Pn**	**14 53 16.7**	**+1.1**
INU	**Inuyama**	**4.11**	**299**			**Pn**	**14 53 17.1**	**+1.1**
JCJ	**Chichijima**	**6.35**	**174**	Pn		Pn	14 53 34.9	-12
	11nm,0.3s,baz=297,slow=19,SNR=1.3							
JNU	**Nakatsue**	**8.82**	**271**	LR		LR	14 57 27.5	
	comp=Z,165nm,21.8s,baz=82,slow=36							
JKA	**Kamikawa-asahi**	**10.71**	**5**			**Pn**	**14 54 43.4**	**-3.1**
ASAJ	**Asahikawa**	**10.71**	**5**	Pn		**Pn**	**14 54 43.4**	**-3.1**
	1.5nm,0.3s,baz=222,slow=8.0,SNR=9.9							
	4.6nm,0.3s							
KSRS	**Korea Array**	**11.71**	**294**	Pn		**Pn**	**14 55 01.1**	**+0.9**
	0.1nm,0.3s,baz=105,slow=14,SNR=2.7							
KSRS				LR		LR	14 59 37.4	
	comp=Z,146nm,18.4s,baz=55,slow=38							
	0.7nm,0.7s							
JOW	**Kunigami**	**13.13**	**243**	LR		LR	15 00 08.9	
	comp=Z,106nm,18.9s,baz=50,slow=36							
BNX	**BinXian**	**16.33**	**323**	⇓P		**Pn**	**14 56 00.0**	**-2.0**
BNX				pmax		pmax		
	comp=Z,5.0nm,1.6s							
NJ2	**Nanjing**	**19.02**	**272**	*e*P		**Pn**	**14 56 34.0**	**-1.2**
NJ2				pmax		pmax		
	comp=Z,2.0nm,0.5s							
YHNB	**Yeheng**	**19.55**	**249**	Pn		**Pn**	**14 56 42.6**	**+1.0**
YHNB				IAmb		IAmb	14 56 42.8	
	comp=Z,30nm,1.1s							
TWG	**Pinlang**	**20.78**	**245**	P		Pn	14 56 53.6	-2.4
TWG				IAmb		IAmb	14 57 06.3	
	comp=Z,62nm,1.5s							
TPUB	**Ta-pu**	**20.85**	**246**	P		**P**	**14 56 54.0**	**-0.1**
HNS	**HongShan**	**22.09**	**288**	⇑P		**P**	**14 57 11.0**	**+3.7**
HNS				pmax		pmax		
	comp=Z,5.0nm,1.1s							
XLT	**XiLinHaoTe**	**22.29**	**305**	*e*P		**P**	**14 57 11.1**	**+1.6**
XLT				pmax		pmax		
	comp=Z,5.0nm,0.8s							
HILR	**Hailar Array B**	**22.74**	**322**	P		**P**	**14 57 14.7**	**+0.4**
	comp=Z,3.7nm,0.6s,baz=126,slow=11,SNR=4.9							
	comp=Z,3.7nm,0.6s							
PETK	**Petropavlovsk-**	**22.87**	**26**	LR		LR	15 06 14.6	
	comp=Z,60nm,21.9s,baz=102,slow=37							
HHC	**Hu-ho-hao-te**	**24.84**	**296**	*e*P		**P**	**14 57 36.3**	**+2.0**
HHC				pmax		pmax		
	comp=Z,2.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,190nm,6.2s							
XAN	**Xi'an**	**26.97**	**280**	⇓P		P	14 57 45.0	-8.6
XAN				pmax		pmax		
	comp=Z,5.0nm,1.5s							
ULN	**Ulaanbaatar**	**29.51**	**310**			**P**	**14 58 16.9**	**+0.6**
YAK	**Yakutsk**	**29.59**	**349**	P		**P**	**14 58 17.6**	**+1.0**
YAK				IAmb		IAmb	14 58 47.6	
	comp=Z,6.3nm,0.6s							
SONM	**Songino Array**	**29.93**	**309**	P		**P**	**14 58 20.9**	**+1.0**
	comp=Z,4.2nm,1.0s,baz=112,slow=8.9,SNR=15							
	comp=Z,4.2nm,1.0s							
SONM	**Songino Array**	**29.93**	**309**	P		**P**	**14 58 20.7**	**+0.8**
LZDM	**Lanzhou Array**	**30.99**	**285**	P		**P**	**14 58 28.6**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=138,slow=10.0,SNR=5.3							
	comp=Z,0.4nm,0.3s							
GTA2	**Gaotai**	**33.81**	**292**	*e*P		**P**	**14 58 55.0**	**+0.9**
GTA2				pmax		pmax		
	comp=Z,2.0nm,0.9s							
PZH	**PanZhiHua**	**34.89**	**269**	P		**P**	**14 59 04.6**	**+1.0**
MIDW	**Midway**	**35.61**	**87**	P		**P**	**14 59 11.3**	**+1.8**
GOMU	**GeErMu**	**38.08**	**288**	P		**P**	**14 59 31.2**	**+0.3**
GOMU				pmax		pmax		
	comp=Z,5.0nm,1.0s							
CHTO	**Chiang Mai**	**40.53**	**260**			**P**	**14 59 50.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**40.70**	**259**	P		**P**	**14 59 51.4**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=47,slow=7.4,SNR=12							
CMAR				LR		LR	15 18 22.0	
	comp=Z,36nm,18.1s,baz=350,slow=39							
	comp=Z,1.3nm,0.8s							
WMQ	**Urumqi**	**42.56**	**300**	*e*P		**P**	**15 00 10.0**	**+2.4**
PMG	**Port Moresby**	**42.95**	**172**	LR		LR	15 16 27.0	
	comp=Z,26nm,18.1s,baz=286,slow=34							
TNA	**Tin City**	**44.02**	**28**	P		**P**	**15 00 20.0**	**+1.2**
ZALV	**Zalesovo Beam**	**44.40**	**315**	P		**P**	**15 00 21.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=89,slow=6.5,SNR=6.2							
	comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	**46.11**	**305**	P		**P**	**15 00 36.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=88,slow=8.7,SNR=15							
	comp=Z,1.4nm,0.5s							
MKAR	**Makanchi Array**	**46.11**	**305**	P		**P**	**15 00 36.0**	**+0.1**
MAKZ	**Makanchi**	**46.32**	**305**	P		**P**	**15 00 37.7**	**+0.2**
MTN	**Manton Dam**	**47.05**	**194**	P		**P**	**15 00 41.9**	**-1.4**
KURK	**Kurchatov**	**48.21**	**311**			**P**	**15 00 51.1**	**-1.0**
KURK				IAmb		IAmb	15 00 53.0	
	comp=Z,4.5nm,0.9s							
KURK	**Kurchatov**	**48.21**	**311**			**PcP**	**15 02 17.7**	**-1.1**
KURBB	**Kurchatov Arra**	**48.28**	**311**	P		**P**	**15 00 52.9**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=88,slow=7.7,SNR=22							
KURBB				PcP		**PcP**	**15 02 17.7**	**-1.3**
	comp=Z,0.9nm,0.9s,baz=100,slow=3.9,SNR=4.1							
	comp=Z,1.5nm,0.5s							
P18K	**Big Mountain,**	**48.47**	**38**	P		**P**	**15 00 54.8**	**+0.8**
P18K				IAmb		IAmb	15 00 54.9	
	comp=Z,12nm,1.5s							
BPAW	**Bear Paw Mtn.**	**50.76**	**32**	P		**P**	**15 01 12.4**	**+1.0**
BPAW				IAmb		IAmb	15 01 13.3	
	comp=Z,2.9nm,0.5s							
KSH2	**Kashi**	**52.35**	**296**	P		P	15 01 30.2	+6.4
KSH2				pmax		pmax		
	comp=Z,2.0nm,1.0s							
SCM	**Sheep Creek Mo**	**52.40**	**35**	P		**P**	**15 01 25.7**	**+1.9**
ILAR	**Eielson Array**	**52.56**	**31**	P		**P**	**15 01 24.1**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=265,slow=5.6,SNR=8.5							
	comp=Z,0.6nm,0.8s							
BVAR	**Borovoye Array**	**53.04**	**314**	P		**P**	**15 01 28.1**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=90,slow=7.7,SNR=9.7							
	comp=Z,2.6nm,0.9s							
BORK	**Borovoye**	**53.08**	**314**	P		**P**	**15 01 29.0**	**+0.2**
BORK				IAmb		IAmb	15 01 34.1	
	comp=Z,3.7nm,0.8s							
WB0	**Warramunga Arr**	**53.32**	**188**	P		**P**	**15 01 29.6**	**-1.2**
WB0				IAmb		IAmb	15 01 35.5	
	comp=Z,8.4nm,1.0s							
WR8	**Warramunga Arr**	**53.49**	**188**			**P**	**15 01 30.9**	**-1.2**
WR8				IAmb		IAmb	15 01 37.0	
	comp=Z,6.1nm,0.8s							
WRA	**Warramunga Arr**	**53.50**	**188**	P		**P**	**15 01 30.9**	**-1.2**
	comp=Z,2.1nm,0.5s,baz=5.8,slow=7.5,SNR=30							
	comp=Z,2.1nm,0.5s							
WRA	**Warramunga Arr**	**53.50**	**188**	P		**P**	**15 01 30.6**	**-1.5**
BCAR	**Beaver Creek A**	**54.89**	**33**	P		**P**	**15 01 42.8**	**+0.8**
AS31	**Alice Springs**	**57.22**	**188**	P		**P**	**15 01 58.0**	**-0.9**
ASAR	**Alice Springs**	**57.23**	**188**	P		**P**	**15 01 57.8**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=3.7,slow=6.9,SNR=18							
	comp=Z,0.7nm,0.5s							
ASAR	**Alice Springs**	**57.23**	**188**	P		**P**	**15 01 58.2**	**-0.7**
INK	**Inuvik**	**57.60**	**26**	P		**P**	**15 02 02.6**	**+1.5**
ARTI	**Arti**	**59.19**	**320**	P		**P**	**15 02 12.1**	**-0.2**
AB31	**Akbulak array**	**60.30**	**312**			**P**	**15 02 19.9**	**-0.1**
AB31				IAmb		IAmb	15 02 45.9	
	comp=Z,4.3nm,1.2s							
ABKAR	**Akbulak array**	**60.30**	**312**	P		**P**	**15 02 19.8**	**-0.2**
YKA	**Yellowknife Ar**	**66.93**	**29**	P		**P**	**15 03 03.0**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=300,slow=7.3,SNR=3.8							
	comp=Z,0.1nm,0.4s							
FINES	**FINESS Array B**	**72.00**	**333**	P		**P**	**15 03 35.0**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=52,slow=7.5,SNR=4.3							
	comp=Z,3.9nm,0.8s							
K05A	**Summer Lake**	**73.25**	**50**	P		**P**	**15 03 44.0**	**+1.0**
K05A				IAmb		IAmb	15 04 14.2	
	comp=Z,15nm,1.4s							
KBZ	**Khabaz**	**73.27**	**312**	P		**P**	**15 03 42.3**	**-0.4**
	comp=Z,4.3nm,0.9s,baz=52,slow=1.7,SNR=8.0							
	comp=Z,4.3nm,0.9s							
GNI	**Garni**	**73.88**	**308**	P		**P**	**15 03 47.0**	**+0.4**
AKASG	**Malin Array Be**	**77.15**	**323**	P		**P**	**15 04 04.2**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=49,slow=4.9,SNR=4.2							
	comp=Z,0.7nm,0.5s							
NVAR	**Mina Array Bea**	**77.17**	**52**	P		**P**	**15 04 05.1**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=276,slow=6.5,SNR=4.8							
	comp=Z,0.9nm,0.7s							
NOA	**NORSAR Array B**	**77.51**	**338**	P		**P**	**15 04 05.5**	**-1.3**
	comp=Z,1.4nm,0.9s,baz=40,slow=5.7,SNR=3.9							
	comp=Z,1.4nm,0.9s							
H17A	**Grant Village**	**78.64**	**44**	IAmb		IAmb	15 04 20.4	
	comp=Z,4.6nm,0.9s							
PDAR	**Pinedale Array**	**80.20**	**45**	P		**P**	**15 04 21.4**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=293,slow=2.2,SNR=5.0							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**80.20**	**45**	P		**P**	**15 04 23.8**	**+1.6**
BRTR	**Keskin Array B**	**81.25**	**312**	P		**P**	**15 04 27.6**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=129,slow=3.3,SNR=8.3							
	comp=Z,1.9nm,0.9s							
SRU	**San Rafael Swe**	**81.79**	**48**	IAmb	IAmb	15 04 35.2		
	comp=Z,2.9nm,0.8s							
RAYN	**Ar Rayn**	**82.03**	**293**	P		**P**	**15 04 32.2**	**+0.2**
RAYN				IAmb	IAmb	15 04 37.1		
	comp=Z,3.3nm,0.8s							
LANS	**Liptovska Anna**	**82.93**	**326**	*e*P		P	15 04 41.4	+5.1
PV23	**Carpenter Ridg**	**83.13**	**48**	IAmb	IAmb	15 04 43.5		
	comp=Z,7.9nm,0.9s							
PV20	**West Nyswonger**	**83.23**	**48**	P		**P**	**15 04 38.6**	**+0.4**
PV20				IAmb	IAmb	15 04 42.9		
	comp=Z,6.5nm,0.8s							
PV19	**Morning Glory**	**83.24**	**48**	IAmb	IAmb	15 04 43.4		
	comp=Z,7.4nm,0.8s							
PV18	**Skein Mesa, Pa**	**83.32**	**48**	P		**P**	**15 04 39.6**	**+0.9**
PV18				IAmb	IAmb	15 04 43.9		
	comp=Z,7.9nm,0.9s							
PV13	**Radium Mtn., P**	**83.43**	**48**	IAmb	IAmb	15 04 52.6		
	comp=Z,12nm,1.4s							
MODS	**Modra-Piesok**	**84.50**	**326**	*e*P	P		15 04 51.3	+7.0
TXAR	**Lajitas Array**	**92.32**	**52**	P		**P**	**15 05 22.6**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=295,slow=2.6,SNR=5.3							
	comp=Z,0.6nm,0.9s							
LPAZ	**La Paz**	**148.38**	**65**	PKPbc	**PKiKP**		**15 11 59.9**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=114,slow=0.9,SNR=4.5							

*JMA **10** 14:52:37.3±0.5,45˚.40N×150˚.90E, h88km±7km, **mb4.5**/3, **msha5.4**/4, **Kuril Islands***

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**2.15**	**267**	*e*P		Pn	14 53 05.0	+0.1
KUR				AMB		AMB	14 53 07.4	
	110nm,0.7s							
KUR				*e*S		Sn	14 53 30.1	-0.8
KUR				A		A	14 53 35.9	
	680nm,0.5s							
KUR				A		A	14 53 35.9	
	220nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**3.84**	**251**	*e*P		Pn	14 53 27.2	-0.5
YUK				AMB		AMB	14 53 30.1	
	70nm,0.6s							
YUK				*e*S		Sn	14 54 10.0	-1.7
YUK				A		A	14 54 11.9	
	120nm,0.6s							
YUK				A		A	14 54 11.9	
	160nm,0.6s							
GLVR	**Golovnino**	**4.19**	**249**	*e*P		Pn	14 53 32.3	-0.1
GLVR				*e*S		Sn	14 54 18.3	-1.8
GLVR				A		A	14 54 22.8	
	150nm,0.4s							
GLVR				A		A	14 54 22.8	

MD31				S	Sn	15 06 29.5	-10		
MDT	**Midelt**	**3.16**	**150**	P	Pn	15 06 01.2	-3.2		
MDT				S	Sn	15 06 32.5	-10		
EVO	**Evora**	**3.20**	**338**	Pn	**Pn**	**15 06 06.8**	**+1.9**		
EVO				S	**Sn**	**15 06 41.8**	**-1.5**		
EVO	**Evora**	**3.20**	**338**	*eS*	**Sn**	**15 06 43.6**	**+0.2**		
EBAD	**Badajoz**	**3.21**	**352**	Pn	**Pn**	**15 06 07.7**	**+2.7**		
EBAD				S	**Sn**	**15 06 42.0**	**-1.5**		
EBAD	**Badajoz**	**3.21**	**352**	Pn	**Pn**	**15 06 07.5**	**+2.5**		
EBAD				S	**Sn**	**15 06 42.0**	**-1.5**		
EBAD				*i* IVmb_Lg		15 06 44.7			
MOE	**Montemor**	**3.31**	**333**	*eP*	**Pn**	**15 06 08.7**	**+2.3**		
MOE				*eS*	**Sn**	**15 06 46.0**	**+0.1**		
MOE				*i* IAML		15 06 46.2			
MOE				*i* IAML		15 06 47.2			
MOE				*i* IAML		15 06 47.6			
PARRA	**Arraiolos**	**3.47**	**339**	*eP*	**Pn**	**15 06 10.0**	**+1.4**		
PARRA				*eS*	**Sn**	**15 06 48.0**	**-2.0**		
PARRA				*i* IAML		15 06 50.7			
PARRA				*i* IAML		15 06 51.2			
PARRA				*i* IAML		15 06 51.8			
PMTG	**Montargil**	**3.76**	**339**	*eP*	**Pn**	**15 06 13.9**	**+1.3**		
PMTG				*eS*	**Sn**	**15 06 56.8**	**-0.4**		
PMTG				*i* IAML		15 06 57.8			
PMTG				*i* IAML		15 06 58.5			
PMTG				*i* IAML		15 06 59.4			
PSIM	**Granatula de C**	**3.90**	**33**	Pn	**Pn**	**15 06 15.8**	**+1.2**		
PSIM				Sn	**Sn**	**15 06 58.1**	**-2.6**		
PMRV	**Marv??o**	**3.92**	**349**	*eS*	**Sn**	**15 07 00.8**	**-0.2**		
PMRV				*i* IAML		15 07 02.2			
PMRV				*i* IAML		15 07 02.4			
PMRV				*i* IAML		15 07 02.4			
CIBOR	**Castaar de Ib**	**4.14**	**11**	Pn	**Pn**	**15 06 19.9**	**+2.0**		
CIBOR				Sn	**Sn**	**15 07 04.1**	**-2.4**		
PSARD	**Sardoal**	**4.24**	**342**	*eP*	**Pn**	**15 06 21.4**	**+2.2**		
PSARD				*eS*	**Sn**	**15 07 06.7**	**-2.3**		
PSARD				*i* IAML		15 07 09.0			
PSARD				*i* IAML		15 07 09.8			
PSARD				*i* IAML		15 07 10.1			
OUZM	**OUZ**	**4.66**	**183**	P	Pn	15 06 20.2	-4.9		
ETOB	**Tobarra**	**4.99**	**51**	Pn	**Pn**	**15 06 29.8**	**+0.2**		
ETOB	**Tobarra**	**4.99**	**51**	Pn	**Pn**	**15 06 29.7**	**+0.2**		
ETOB				Sn	**Sn**	**15 07 26.1**	**-1.4**		
ETOB				*i* IVmb_Lg		15 08 16.9			
GUD	**Guadarrama**	**5.38**	**19**	Pn	**Pn**	**15 06 36.2**	**+1.2**		
GUD				*i* IVmb_Lg		15 07 13.0			
GUD				Sn	**Sn**	**15 07 34.8**	**-2.5**		

*IDC **10** 15:08:47.4±1.2,59.°91S×26.°08W,h0km,mb4.0/2, mbtmp4.2/3,ML4.7/1,MS3.5/3, Error ellipse: s-maj=126.1km s-min=35.3km az=52.0*

ISC 10 15:08:49.2±1.2,59.°9S±0.°5×26.°0W±0.°7,h16km,n15, σ0°79/9,3C-2D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat** comp=Z,5.5nm,0.2s	**12.97**	**153**	⇑P	**Pn**	**15 11 52.1**	**-0.4**
VNA3	**Neumayer Olymp** comp=Z,4.7nm,0.2s	**13.12**	**156**	⇓P	**Pn**	**15 11 54.2**	**-0.4**
VNA3				⇑S	Sn	15 14 04.7	-15
VNA2	**Neumayer--Watz** comp=Z,7.2nm,0.4s,baz=315,slow=16	**13.37**	**153**	⇓P	**Pn**	**15 11 57.3**	**-0.6**
VNA2	comp=E,1.1nm,0.2s			⇑S	Sn	15 14 10.1	-16
SNAA	**Sanae** comp=E,3.4nm,0.3s,baz=304,slow=13,SNR=2.5 comp=E,9.1nm,0.4s	**14.95**	**151**	Pn	**Pn**	**15 12 19.7**	**+0.1**
PMSA	**Palmer Station** comp=E,123nm,18.0s,baz=47,slow=34	**18.10**	**238**	LR	LR	15 19 09.0	
PLCA	**Paso Flores** comp=E,45nm,20.9s,baz=140,slow=34	**33.48**	**285**	LR	LR	15 27 46.8	
H04S2	**CROZET ISLANDS** baz=224,slow=76,SNR=4.0	**45.48**	**110**	T	T	16 06 04.0	
H04S3	**CROZET ISLANDS** baz=224,slow=76,SNR=4.2	**45.49**	**110**	T	T	16 06 14.4	
H04S1	**CROZET ISLANDS** baz=224,slow=76,SNR=2.9	**45.50**	**110**	T	T	16 06 17.5	
LBTB	**Lobatse** comp=E,90nm,18.6s,baz=261,slow=31	**49.66**	**69**	LR	LR	15 34 49.6	
SIV	**San Ignacio** comp=E,0.7nm,0.5s,baz=145,slow=9.9,SNR=3.6 comp=E,0.7nm,0.5s	**50.76**	**314**	P	**P**	**15 17 48.0**	**-0.3**
ASAR	**Alice Springs** comp=E,0.8nm,1.0s,baz=188,slow=5.4,SNR=5.7 comp=E,0.8nm,1.0s	**95.08**	**162**	P	**P**	**15 22 12.3**	**+1.1**
YKA	**Yellowknife Ar** comp=E,0.7nm,0.7s,baz=124,slow=1.4,SNR=15	**139.44**	**314**	PKP	**PKiKP**	**15 28 15.3**	**-1.0**
SONM	**Songino Array** comp=E,0.7nm,0.8s,baz=228,slow=3.8,SNR=6.1	**150.12**	**92**	PKPbc	**PKiKP**	**15 28 38.7**	**-0.2**
ILAR	**Eielson Array** comp=E,0.8nm,0.9s,baz=125,slow=0.9,SNR=7.2	**153.07**	**306**	PKPbc	**PKiKP**	**15 28 45.2**	**+0.9**

IDC 10 15:33:04.8±2.0,6.°01S×127.°05E,h0km,mb3.5/2, mbtmp3.3/4,ML3.0/2,Error ellipse: s-maj=311.7km s-min=27.9km az=65.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=331,slow=13,SNR=5.2 0.4nm,0.9s	**15.56**	**154**	Pn	Pn	15 36 47.1	+1.5
ASAR	**Alice Springs** 0.1nm,0.3s,baz=347,slow=12,SNR=9.2 0.3nm,0.4s	**18.76**	**160**	P	P	15 37 24.8	-0.7
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=110,slow=7.2,SNR=5.5 0.1nm,0.4s	**65.81**	**328**	P	P	15 43 50.7	-1.3
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=123,slow=7.4,SNR=5.4 0.3nm,0.5s	**70.15**	**330**	P	P	15 44 20.5	+1.3

*IDC **10** 16:06:09.4±1.3,7.°31S×128.°85E,h147km±12km,mb3.7/12, mbtmp4.2/19,Error ellipse: s-maj=11.7km s-min=9.5km az=64.0*

*NEIC **10** 16:06:11.0±1.8,7.°24S±0.°07×128.°79E±0.°07,h156km±7km, mb4.3/17,Error ellipse: s-maj=11.0km s-min=9.0km az=149.0*

*DJA **10** 16:06:12.6±0.4,7.°S±3.°×12.°9E±.°,h126km±13km,M4.8/17, mB5.5/3,mb4.9/7,MLv4.8/17,Mw(mB)5.0/3*

ISC 10 16:06:09.9±0.4,7.°33S±0.°05×128.°78E±0.°04,h150km,n86, σ1°58/87,mb4.1/24,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.58**	**105**		**Pn**	**16 06 54.2**	**+2.1**
SAUI	**Saumlaki**	**2.58**	**105**	P	**Pn**	**16 06 54.4**	**+2.3**
SAUI				S	**Sn**	**16 07 25.0**	**+0.4**
BNDI	**Bandanaira**	**3.00**	**22**	P	**Pn**	**16 06 59.9**	**+2.5**
AAI	**Ambon**	**3.66**	**351**	P	**Pn**	**16 07 09.5**	**+3.6**
KRAI	**Karang Ratu**	**4.00**	**355**	P	**Pn**	**16 07 14.7**	**+4.4**
SOEI	**Soe**	**5.07**	**241**		**Pn**	**16 07 26.2**	**+1.8**
SOEI	**Soe**	**5.07**	**241**	P	**Pn**	**16 07 25.9**	**+1.5**
SOEI	**Soe** 3.0nm5µm295nm,0.6s	**5.07**	**241**	P	**Pn**	**16 07 26.7**	**+2.3**
DRS	**Darwin Rock St**	**5.49**	**158**	P	**Pn**	**16 07 30.7**	**+0.9**
FAKI	**Fak Fak**	**5.58**	**38**	Pn	**Pn**	**16 07 30.3**	**-0.8**
BATI	**Baumata** 550nm,0.5s,baz=116,slow=2.4,SNR=78	**5.81**	**240**	P	**Pn**	**16 07 35.3**	**+1.1**
BATI	351nm,0.4s,baz=58,slow=18,SNR=11			S	**Sn**	**16 08 40.7**	**+0.7**
BATI	**Baumata**	**5.81**	**240**	P	**Pn**	**16 07 35.9**	**+1.8**
MTN	**Manton Dam**	**5.95**	**157**		**Pn**	**16 07 36.4**	**+0.3**
MMRI	**Maumere**	**6.61**	**258**	Pn	**Pn**	**16 07 45.1**	**+0.4**
SIJI	**Sorong** 7.3nm,0.3s,baz=229,slow=20,SNR=29	**6.88**	**21**	P	**Pn**	**16 07 47.5**	**-1.0**
SIJI	13nm,0.3s,baz=287,slow=19,SNR=6.7			S	**Sn**	**16 09 03.7**	**-2.0**
SWI	**Sorong** 0.2nm20nm,0.6s	**6.88**	**21**	P	**Pn**	**16 07 51.5**	**+3.0**
EDFI	**Ende, Flores**	**7.16**	**258**	P	**Pn**	**16 07 54.2**	**+2.0**
RKPI	**Ransiki, Papua**	**7.90**	**43**	P	**Pn**	**16 08 05.2**	**+3.1**
KNRA	**Kununurra**	**8.30**	**180**		**Pn**	**16 08 07.1**	**-0.3**
KAPI	**Kappang** 5.2nm,0.7s,baz=181,slow=22,SNR=1.2	**9.26**	**284**	P	**Pn**	**16 08 19.8**	**-0.5**
PLAI	**Plampang**	**10.99**	**261**	P	**Pn**	**16 08 43.4**	**+0.3**
PLAI	**Plampang**	**10.99**	**261**	S	**Sn**	**16 10 44.1**	**-0.7**
FITZ	**Fitzroy Crossi** 3.5nm,0.3s,baz=21,slow=10,SNR=20	**11.13**	**196**	P	**Pn**	**16 08 44.0**	**-0.9**
FITZ				S	Sn	16 10 41.2	-6.9
	43nm,0.7s,baz=74,slow=18,SNR=9.8						
JAY	**Jayapura** 17nm,0.9s,baz=241,slow=2.4,SNR=2.1	**12.81**	**69**	P	**Pn**	**16 09 05.5**	**-1.3**
JAY	20nm,1.0s,baz=344,slow=19,SNR=2.2			S	**Sn**	**16 11 28.5**	**-0.1**
WB0	**Warramunga Arr**	**13.51**	**157**		Pn	16 09 13.0	-2.8
WRAB	**Tennant Creek**	**13.65**	**157**	Pn	**Pn**	**16 09 15.1**	**-2.3**
WRA	**Warramunga Arr** 3.3nm,0.7s,baz=332,slow=13,SNR=37	**13.65**	**157**	P	**Pn**	**16 09 15.2**	**-2.3**
WRA	8.1nm,0.5s,baz=338,slow=21,SNR=8.4			S	Sn	16 11 41.6	-7.2
WRA	**Warramunga Arr**	**13.65**	**157**		Pn	16 09 14.6	-2.9
WR8	**Warramunga Arr**	**13.73**	**157**		Pn	16 09 15.1	-3.3
COEN	**Coen**	**15.60**	**116**		**Pn**	**16 09 41.7**	**-0.3**
COEN	**Coen**	**15.60**	**116**	P	**Pn**	**16 09 44.6**	**+1.6**
COEN	**Coen**	**15.60**	**116**	S	**S**	**16 12 39.3**	**+1.5**
MBWA	**Marble Bar**	**16.30**	**212**	P	**Pn**	**16 09 51.1**	**+0.7**
QIS	**Mount Isa**	**16.82**	**143**	P	**P**	**16 09 57.1**	**+0.7**
AS31	**Alice Springs**	**16.98**	**164**	P	**P**	**16 09 59.1**	**+1.0**
ASAR	**Alice Springs** 5.5nm,0.7s,baz=334,slow=8.6,SNR=107	**16.98**	**164**	P	**P**	**16 09 58.8**	**+0.7**
ASAR	2.2nm,0.6s,baz=312,slow=18,SNR=6.7			S	**S**	**16 13 02.7**	**-4.7**
ASAR	**Alice Springs**	**16.98**	**164**		**P**	**16 09 59.2**	**+1.1**
PMG	**Port Moresby** 32nm,0.8s,baz=292,slow=5.4,SNR=13	**18.30**	**98**	P	**P**	**16 10 12.8**	**+0.1**
PMG	4.2nm,0.8s,baz=330,slow=20,SNR=1.7			S	**S**	**16 13 32.5**	**-1.8**
PMG	**Port Moresby**	**18.30**	**98**		**P**	**16 10 13.2**	**+0.6**
PMG	**Port Moresby**	**18.30**	**98**	P	**P**	**16 10 14.1**	**+1.4**
PMG	**Port Moresby**	**18.30**	**98**	P	**Pn**	**16 10 16.4**	**+1.9**
MTSU	**Mount Surprise**	**18.56**	**127**	P	**P**	**16 10 17.4**	**+1.9**
BBJI	**Bungbulang** comp=Z,8.0nm,0.6s	**20.95**	**268**	P	**P**	**16 10 39.9**	**-1.5**
BBJI				IAmb	IAmb	16 10 42.2	
BBJI	**Bungbulang**	**20.95**	**268**	P	**P**	**16 10 42.0**	**+0.7**
CTA	**Charters Tower** comp=Z,1.8nm,0.5s,baz=277,slow=12,SNR=7.2	**21.16**	**129**	P	**P**	**16 10 43.8**	**+0.3**
CTA	comp=Z,1.4nm,0.7s,baz=321,slow=6.5,SNR=1.2 comp=Z,1.8nm,0.5s			S	**S**	**16 14 26.9**	**-3.5**
CTA	**Charters Tower**	**21.16**	**129**	P	**P**	**16 10 45.3**	**+1.8**
MEEK	**Meekatharra**	**21.50**	**206**	P	**P**	**16 10 47.5**	**+0.4**
QLP	**Quilpie**	**24.14**	**144**	P	**P**	**16 11 14.6**	**+2.4**
MORW	**Morawa**	**24.74**	**207**	P	**P**	**16 11 19.0**	**+1.4**
BBOO	**Buckleboo**	**26.24**	**166**	P	**P**	**16 11 31.3**	**+0.2**
BBOO	comp=Z,24nm,1.4s			IAmb	IAmb	16 12 04.2	
STKA	**Stephens Creek** comp=Z,1.2nm,0.3s,baz=318,slow=10,SNR=3.2 comp=Z,1.2nm,0.3s	**27.19**	**156**	P	**P**	**16 11 40.6**	**+1.0**
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.7s,baz=142,slow=7.1,SNR=13 comp=Z,1.4nm,0.7s	**39.02**	**311**	P	**P**	**16 13 22.1**	**-0.1**
CHTO	**Chiang Mai**	**39.24**	**312**	P	**P**	**16 13 25.3**	**+1.2**
CHTO	comp=Z,4.2nm,0.9s			IAmb	IAmb	16 13 25.8	
KMI2	**Kunming**	**41.04**	**323**	P	**P**	**16 13 40.8**	**+1.8**
KMI2	comp=Z,6.0nm,1.2s			pmax	pmax		
KSRS	**Korea Array** comp=Z,0.5nm,0.7s,baz=169,slow=5.1,SNR=1.8 comp=Z,0.5nm,0.7s	**44.55**	**359**	P	**P**	**16 14 05.4**	**-1.5**
LZDM	**Lanzhou Array** comp=Z,1.8nm,0.5s,baz=168,slow=10,SNR=11 comp=Z,1.8nm,0.5s	**49.09**	**333**	P	**P**	**16 14 42.0**	**-0.6**
LZH	**Lanzhou**	**49.13**	**333**	*eP*	P	16 14 35.7	-7.0
LZH	comp=Z,21nm,1.6s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**50.49**	**343**	*eP*	**P**	**16 14 55.1**	**+2.3**
LSA	**Lhasa**	**51.60**	**317**	P	**P**	**16 14 59.2**	**-2.5**
LSA	comp=Z,7.0nm,0.6s			pmax	pmax		
GTA2	**Gaotai**	**53.77**	**332**	P	**P**	**16 15 17.7**	**+0.6**
GTA2	comp=Z,7.0nm,0.7s			pmax	pmax		
HILR	**Hailar Array B** comp=Z,0.3nm,0.3s,baz=181,slow=5.8,SNR=1.8 comp=Z,0.3nm,0.3s	**57.19**	**353**	P	**P**	**16 15 41.0**	**-0.2**
SONM	**Songino Array** comp=Z,0.4nm,0.4s,baz=155,slow=7.6,SNR=2.4 comp=Z,0.4nm,0.4s	**58.38**	**342**	P	**P**	**16 15 50.0**	**+0.3**
SONM	**Songino Array** comp=Z,2.3nm,1.3s	**58.38**	**342**	IAmb	IAmb	16 15 52.0	
PETK	**Petropavlovsk-** comp=Z,1.9nm,0.8s,baz=211,slow=6.9,SNR=1.2 comp=Z,1.9nm,0.8s	**65.02**	**19**	P	**P**	**16 16 33.6**	**-0.3**
KSH2	**Kashi**	**67.52**	**318**	P	**P**	**16 16 51.1**	**+0.8**
KSH2	comp=Z,4.0nm,0.8s			pmax	pmax		
MKAR	**Makanchi Array** comp=Z,3.2nm,0.4s,baz=117,slow=8.4,SNR=175 comp=Z,3.2nm,0.4s	**67.84**	**327**	P	**P**	**16 16 52.7**	**+0.7**
MKAR	**Makanchi Array**	**67.84**	**327**	P	**P**	**16 16 52.4**	**+0.4**
MAKZ	**Makanchi**	**68.02**	**327**	P	**P**	**16 16 53.4**	**+0.3**
BOOM	**Boomskoye usch**	**69.03**	**321**	P	**P**	**16 17 00.5**	**+0.9**
BOOM	comp=Z,7.6nm,1.2s			IAmb	IAmb	16 17 01.5	
AAK	**Ala-Archa**	**70.01**	**320**	P	**P**	**16 17 06.7**	**+1.1**
AAK	comp=Z,2.8nm,0.8s			IAmb	IAmb	16 17 07.7	
ZAA0	**Zalesovo Array** comp=Z,1.9nm,0.7s	**71.34**	**334**	P	**P**	**16 17 12.5**	**-0.7**
ZAA0				IAmb	IAmb	16 17 13.2	
ZALV	**Zalesovo Beam** comp=Z,2.0nm,0.6s,baz=120,slow=5.9,SNR=9.9 comp=Z,2.0nm,0.6s	**71.34**	**334**	P	**P**	**16 17 12.5**	**-0.7**
ZALV	**Zalesovo Beam**	**71.34**	**334**	P	**P**	**16 17 12.6**	**-0.6**
KURBB	**Kurchatov Arra** comp=Z,4.8nm,0.5s,baz=132,slow=5.0,SNR=32 comp=Z,4.8nm,0.5s	**72.16**	**329**	P	**P**	**16 17 18.2**	**+0.1**
KURK	**Kurchatov**	**72.17**	**329**	P	**P**	**16 17 18.4**	**+0.2**
KURK	comp=Z,7.5nm,0.9s			IAmb	IAmb	16 17 19.9	
VNDA	**Vanda** comp=Z,1.4nm,0.9s,baz=337,slow=7.7,SNR=1.8 comp=Z,1.4nm,0.9s	**72.27**	**173**	P	**P**	**16 17 19.2**	**+0.8**
VNDA	**Vanda** comp=Z,8.4nm,1.5s	**72.27**	**173**	IAmb	IAmb	16 17 21.7	
KKAR	**Karatay Array**	**72.79**	**319**	P	**P**	**16 17 22.4**	**+0.3**
TIXI	**Tiksi**	**78.81**	**0**	P	**P**	**16 17 55.5**	**-0.2**
TIXI	comp=Z,4.3nm,1.1s			IAmb	IAmb	16 17 56.3	
AB31	**Akbulak array**	**82.01**	**322**	P	**P**	**16 18 12.6**	**-0.6**
ABKAR	**Akbulak array**	**82.01**	**322**	P	**P**	**16 18 12.8**	**-0.5**
P17K	**Kvichak River**	**88.55**	**30**	P	**P**	**16 18 45.3**	**0.0**
EKA	**Eskdalemuir Ar** comp=Z,0.5nm,0.4s,baz=32,slow=3.4,SNR=1.6	**118.87**	**331**	PKP	**PKPdf**	**16 24 40.6**	**+0.1**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.8s,baz=312,slow=1.8,SNR=3.5	**126.14**	**59**	PKP	**PKPdf**	**16 24 55.2**	**-0.1**
ESDC	**Sonseca Array** comp=Z,0.9nm,0.5s,baz=9.8,slow=5.4,SNR=3.7	**126.88**	**315**	PKP	**PKPdf**	**16 24 54.5**	**-1.9**
CPUP	**Villa Florida** comp=Z,1.6nm,0.4s,baz=200,slow=2.5,SNR=5.7	**146.02**	**170**	PKPbc	**PKPdf**	**16 25 32.6**	**+0.7**

*MOS **10** 16:27:42.4±1.2,48.°37N×153.°48E,h124km,mb4.0/9,Error ellipse: s-maj=12.3km s-min=9.1km az=98.2*

*SKHL **10** 16:27:44.1±0.9,48.°20N×153.°50E,h140km±5km,mb4.4/2, msha5.0/2*

*IDC **10** 16:27:47.5±1.9,48.°38N×153.°01E,h142km±17km, mb3.4/15,mbtmp3.8/19,MS3.6/1,Error ellipse: s-maj=23.0km s-min=12.3km az=128.0*

*NEIC **10** 16:27:47.8±1.6,48.°4N±0.°1×153.°0E±0.°2,h144km±9km, mb4.1/15,Error ellipse: s-maj=22.1km s-min=11.4km az=129.0*

ISC 10 16:27:46.8±0.6,48.°29N±0.°07×153.°45E±0.°07,h150km,n79, σ1°82/73,mb3.9/30,4C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.96**	**35**	*eP*	Pn	16 28 25.8	-7.8
SKR				*eS*	**Sn**	**16 29 01.9**	**-8.0**
SKR	comp=Z,331nm,0.9s			pmax	pmax		
SKR	comp=E,105nm,0.9s			smax	smax		
SKR	comp=N,232nm,0.7s			smax	smax		
SKR	comp=Z,4µm,11.0s			MLR	MLR		
SKR	comp=N,6µm,15.0s			MLR	MLR		
SKR	comp=E,5µm,14.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**2.96**	**35**	*eP*	**Pn**	**16 28 32.0**	**-1.6**
SKR	comp=E,40nm,0.6s			AMB	AMB	16 28 34.8	
SKR	comp=E,50nm,0.3s			*eS*	**Sn**	**16 29 08.1**	**-1.8**
SKR				A	A	16 29 11.9	
SKR	comp=E,50nm,0.3s			A	A	16 29 11.9	
PAU	**Pauzhetka**	**3.86**	**33**	*eP*	**Pn**	**16 28 44.7**	**-0.4**
PAU	comp=E,20nm,0.2s			AMB	AMB	16 28 48.5	
PAU				*eS*	**Sn**	**16 29 31.3**	**+0.9**
PAU	comp=E,60nm,0.3s			A	A	16 29 32.7	
PAU	comp=E,80nm,0.3s			A	A	16 29 32.7	
KUR	**Kuril'sk**	**4.90**	**234**	*eP*	**Pn**	**16 28 57.8**	**-1.0**
PEA0B	**Petropavlovsk-**	**5.53**	**28**	Pn	**Pn**	**16 29 08.4**	**+1.2**
PEA0B	**Petropavlovsk-** comp=E,4.8nm,0.7s,baz=214,slow=13,SNR=10.0	**5.53**	**28**	⇑*e*PN	**Pn**	**16 29 04.3**	**-2.9**
PETK	**Petropavlovsk-** comp=E,4.6nm,0.8s,baz=143,slow=16,SNR=2.8	**5.53**	**28**	P	**Pn**	**16 29 08.8**	**+1.6**
PETK				S	**Sn**	**16 30 12.3**	**+2.3**
NMR	**Nemuro--Hokkai**	**7.29**	**230**	*eP*	Pn	16 29 24.5	-6.2
YSS	**Yuzhno-Sakhali**	**7.35**	**264**	⇑*e*PN	**Pn**	**16 29 32.8**	**+1.4**
YSS	**Yuzhno-Sakhali**	**7.35**	**264**	*eP*	**Pn**	**16 29 30.8**	**-0.6**
TYV	**Tymovskoe**	**7.47**	**294**	*e*PN	**Pn**	**16 29 31.7**	**-1.3**
TYV				*eS*	**Sn**	**16 30 58.8**	**+2.4**
TYV	comp=Z,4.0nm,1.0s			pmax	pmax		
TYV	comp=Z,300nm,5.1s			pmax	pmax		
TYV	comp=N,6.0nm,1.3s			smax	smax		
TYV	comp=E,5.0nm,1.3s			smax	smax		
TYV	comp=N,200nm,5.5s			smax	smax		
AKK	**Akkeshi**	**8.00**	**232**	*eP*	Pn	16 29 34.3	-5.9
JKA	**Kamikawa-asahi**	**8.60**	**245**		**Pn**	**16 29 46.0**	**-2.1**
ASAJ	**Asahikawa** comp=N,18nm,0.6s,baz=70,slow=13,SNR=27	**8.60**	**245**	P	**Pn**	**16 29 46.5**	**-1.7**
ASAJ	**Asahikawa**	**8.60**	**245**	PN	**Pn**	**16 29 46.0**	**-2.1**
NKL	**Nikolayevsk**	**9.44**	**306**	*eP*	**Pn**	**16 29 59.5**	**+0.3**
KLR	**Kul'dur**	**14.34**	**282**	⇓*e*P	**P**	**16 31 05.8**	**+0.3**
KLR	comp=Z,11nm,2.7s			pmax	pmax		
KLR	**Kul'dur**	**14.34**	**282**	*eP*	**Pn**	**16 31 01.7**	**-1.1**
USRK	**Ussuriysk Ar.** comp=Z,3.4nm,0.5s,baz=63,slow=13,SNR=16	**15.38**	**263**	P	**Pn**	**16 31 13.3**	**-2.5**
MJAR	**Matsushiro Arr** comp=Z,0.6nm,0.6s,baz=7.1,slow=14,SNR=1.5	**16.22**	**229**	P	**Pn**	**16 31 25.2**	**-1.0**
MJAR	**Matsushiro Arr**	**16.22**	**229**	P	**Pn**	**16 31 25.5**	**-0.7**
ZEA	**Zeya**	**17.31**	**298**	*eP*	**P**	**16 31 37.9**	**-0.3**
INU	**Inuyama** comp=Z,23nm,1.4s	**17.76**	**229**	P	**P**	**16 31 43.0**	**-0.3**
INU				IAmb	IAmb	16 31 58.4	
YAK	**Yakutsk**	**19.17**	**325**	⇑*e*P	**P**	**16 31 58.2**	**-0.2**
YAK	comp=Z,8.0nm,0.9s			pmax	pmax		
YAK	**Yakutsk**	**19.17**	**325**	*eP*	**P**	**16 31 58.3**	**-0.2**
BILL	**Bilibino**	**20.84**	**14**	⇓*i*P	**P**	**16 32 12.9**	**-3.4**
BILL	comp=Z,20nm,4.3s			pmax	pmax		
BILL	**Bilibino**	**20.84**	**14**	*eP*	**P**	**16 32 13.0**	**-3.4**
KSRS	**Korea Array** comp=Z,1.7nm,0.7s,baz=49,slow=10.0,SNR=8.8 comp=Z,1.7nm,0.7s	**21.51**	**249**	P	**P**	**16 32 22.5**	**-1.3**
HILR	**Hailar Array B** comp=Z,0.9nm,0.5s,baz=75,slow=11,SNR=2.5	**22.08**	**286**	P	**P**	**16 32 26.6**	**-2.9**
HILR	comp=Z,152nm,21.0s,baz=205,slow=35 comp=Z,0.9nm,0.5s			LR	LR	16 40 20.0	
JMZ	**Minamidaito 2**	**28.40**	**226**	P	**P**	**16 33 25.2**	**-1.8**
N15K	**Kwethluk River**	**29.01**	**48**	P	**P**	**16 33 34.1**	**+1.9**
N15K	comp=Z,6.9nm,1.1s			IAmb	IAmb	16 34 13.7	
G18K	**Tagagawik**	**30.40**	**37**	P	**P**	**16 33 46.7**	**+2.3**
G18K	comp=Z,5.7nm,1.5s			IAmb	IAmb	16 33 52.0	
H11N2	**WAKE ISLAND Hy** baz=342,slow=76,SNR=13	**30.50**	**154**	T	T	17 05 41.6	
H11N1	**WAKE ISLAND Hy** baz=342,slow=76,SNR=22	**30.51**	**154**	T	T	17 05 48.8	
H11N3	**WAKE ISLAND Hy** baz=342,slow=76,SNR=4.9	**30.51**	**154**	T	T	17 05 48.9	
H11S1	**WAKE ISLAND Hy** baz=342,slow=76,SNR=48	**31.60**	**155**	T	T	17 07 09.0	
H11S3	**WAKE ISLAND Hy** baz=342,slow=76,SNR=42	**31.61**	**155**	T	T	17 07 09.1	
H11S2	**WAKE ISLAND Hy** baz=342,slow=76,SNR=40	**31.62**	**155**	T	T	17 07 08.5	
H23K	**Yukon River**	**34.11**	**38**	P	**P**	**16 34 19.4**	**+2.7**
H23K	comp=Z,5.1nm,1.4s			IAmb	IAmb	16 34 40.9	
D25K	**Kavik River**	**35.54**	**32**	P	**P**	**16 34 31.7**	**+2.7**
D25K	comp=Z,5.1nm,1.5s			IAmb	IAmb	16 35 13.8	
C27K	**Jago River**	**36.50**	**32**	P	**P**	**16 34 39.8**	**+2.7**
C27K	comp=Z,3.8nm,1.2s			IAmb	IAmb	16 34 40.3	
NRIK	**Noril'sk**	**37.57**	**328**	⇑*e*P	**P**	**16 34 46.7**	**+0.6**
NRIK	comp=Z,5.0nm,1.6s			pmax	pmax		
I30M	**Mount Dempster**	**39.61**	**38**	P	**P**	**16 35 06.0**	**+2.7**
I30M	comp=Z,3.2nm,1.4s			IAmb	IAmb	16 35 13.8	
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.4s,baz=96,slow=8.9,SNR=2.2 comp=Z,0.3nm,0.4s	**41.91**	**305**	P	**P**	**16 35 20.7**	**-1.4**
BESE	**Bessie Mountai**	**41.94**	**48**	P	**P**	**16 35 24.4**	**+2.0**
DGZ	**Jazzator, Alta**	**42.07**	**298**	⇓*e*P	**P**	**16 35 23.7**	**0.0**
DGZ	comp=Z,2.0nm,1.4s			pmax	pmax		
MK31	**Makanchi Array**	**46.45**	**296**	*d*iP	**P**	**16 35 57.4**	**-0.9**
MKAR	**Makanchi Array** comp=Z,2.3nm,0.8s,baz=66,slow=7.3,SNR=19 comp=Z,2.3nm,0.8s	**46.45**	**296**	P	**P**	**16 35 57.5**	**-0.8**
MAKZ	**Makanchi**	**46.63**	**296**	P	**P**	**16 35 59.0**	**-0.7**
MAKZ	comp=Z

OBN				*e*PPP	PPP	16 41 59.2		
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
NOA	**NORSAR Array B**	**66.85**	**341**	P	**P**	**16 38 23.0**	**+1.0**	
	comp=Z,0.4nm,0.7s,baz=336,slow=6.8,SNR=1.1							
	comp=Z,0.4nm,0.7s							
NOA	**NORSAR Array B**	**66.85**	**341**	P	**P**	**16 38 23.0**	**+1.0**	
HFS	**Hagfors**	**67.10**	**339**	P	**P**	**16 38 24.0**	**+0.4**	
	comp=Z,6.6nm,1.0s,baz=29,slow=3.4,SNR=6.1							
	comp=Z,6.6nm,1.0s							
HFS	**Hagfors**	**67.10**	**339**	P	**P**	**16 38 24.0**	**+0.4**	
WRA	**Warramunga Arr**	**70.04**	**199**	P	**P**	**16 38 43.5**	**+1.2**	
	comp=Z,0.7nm,1.1s,baz=346,slow=6.7,SNR=1.7							
	comp=Z,0.7nm,1.1s							
AS31	**Alice Springs**	**73.74**	**199**	P	**P**	**16 39 05.8**	**+1.6**	
ASAR	**Alice Springs**	**73.74**	**199**	P	**P**	**16 39 06.0**	**+1.7**	
	comp=Z,0.5nm,0.9s,baz=17,slow=5.7,SNR=4.3							
	comp=Z,0.5nm,0.9s							
ASAR	**Alice Springs**	**73.74**	**199**	P	**P**	**16 39 06.0**	**+1.7**	
EKA	**Eskdalemuir Ar**	**74.90**	**346**	P	**P**	**16 39 10.8**	**+0.2**	
	comp=Z,2.0nm,0.7s,baz=14,slow=4.6,SNR=3.7							
	comp=Z,2.0nm,0.7s							
H03N2	**Juan Fernandez**	**138.51**	**89**	T	T	19 21 57.8		
	baz=308,slow=77,SNR=8.6							
H03N1	**Juan Fernandez**	**138.53**	**89**	T	T	19 21 59.5		
	baz=308,slow=77,SNR=9.5							
H03N3	**Juan Fernandez**	**138.53**	**89**	T	T	19 22 04.1		
	baz=308,slow=77,SNR=5.7							

IDC 10 16:34:57.6±1.1,5°21N×125°96E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=99.2km s-min=17.3km az=71.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.88**	**348**	Pn	Pn	16 35 30.9	-0.2
	49nm,0.3s,baz=119,slow=10,SNR=1.6						
DAV				Sn	Sg	16 35 58.4	+0.1
	95nm,0.3s,baz=102,slow=20,SNR=5.4						
WRA	**Warramunga Arr**	**26.32**	**162**	P	P	16 40 35.6	+0.3
	0.4nm,0.7s,baz=342,slow=10.0,SNR=14						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**29.73**	**165**	P	P	16 41 06.0	+0.1
	0.2nm,0.7s,baz=349,slow=8.2,SNR=4.8						
ASAR				PcP	PcP	16 44 09.6	-0.6
	0.4nm,0.6s,baz=1.0,slow=2.5,SNR=5.9						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**55.91**	**325**	P	P	16 44 37.5	0.0
	0.2nm,0.4s,baz=115,slow=7.5,SNR=12						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**60.09**	**327**	P	P	16 45 06.1	-0.5
	0.4nm,0.7s,baz=126,slow=6.4,SNR=2.1						
	0.4nm,0.7s						

*IDC **10** 16:49:04.7±1.1,17°.20S×177°.48W,h0km,mb4.0/8, mbtmp4.0/8,Error ellipse: s-maj=43.8km s-min=22.5km az=140.0*
*NEIC **10** 16:49:06.3±0.7,17°.29S±0°.08×177°.53W±0°.06,h10km±1km, mb4.6/13,Error ellipse: s-maj=14.9km s-min=8.6km az=157.0*
ISC 10 16:49:05.7±0.6,17°30S±0°.09×177°59W±0°.10,h10km,n25, σ0s93/28,mb4.3/12,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.49**	**105**	Pn	**Pn**	**16 50 54.5**	**-0.6**
FUNA	**Funafuti**	**9.27**	**340**	Pn	**Pn**	**16 51 20.5**	**+1.1**
RAO	**Raoul Island**	**11.90**	**181**	Pn	**Pn**	**16 51 56.3**	**+0.7**
URZ	**Urewera**	**21.39**	**192**	P	**P**	**16 53 55.2**	**+1.7**
	12nm,1.1s,baz=315,slow=2.2,SNR=1.8						
	12nm,1.1s						
HNR	**Honiara**	**23.20**	**287**	P	**P**	**16 54 12.7**	**-0.3**
HNR				IAmb	IAmb	16 54 16.7	
	comp=Z,20nm,1.2s						
THZ	**Tophouse**	**25.71**	**197**	P	**P**	**16 54 36.0**	**-0.2**
THZ				IAmb	IAmb	16 54 40.1	
	comp=Z,28nm,1.4s						
DSZ	**Denniston Nort**	**26.01**	**198**	P	**P**	**16 54 39.2**	**+0.3**
FOZ	**Fox Glacier**	**28.25**	**200**	P	**P**	**16 54 59.1**	**+0.2**
COEN	**Coen**	**37.89**	**269**	P	**P**	**16 56 23.0**	**-0.4**
COEN				IAmb	IAmb	16 56 30.6	
	comp=Z,15nm,1.4s						
BBOO	**Buckleboo**	**44.39**	**241**	P	**P**	**16 57 16.6**	**0.0**
WR8	**Warramunga Arr**	**45.36**	**259**	P	**P**	**16 57 24.5**	**-0.1**
WR8				IAmb	IAmb	16 57 29.8	
	comp=Z,6.8nm,1.2s						
WRA	**Warramunga Arr**	**45.52**	**259**	P	**P**	**16 57 27.8**	**+2.0**
	comp=Z,1.0nm,0.4s,baz=97,slow=8.0,SNR=20						
WRA				PcP	**PcP**	**16 59 06.7**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=109,slow=1.8,SNR=2.0						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**45.52**	**259**	P	**P**	**16 57 25.8**	**0.0**
WRA					**PcP**	**16 59 04.1**	**-0.6**
AS31	**Alice Springs**	**45.71**	**254**	P	**P**	**16 57 27.1**	**-0.2**
ASAR	**Alice Springs**	**45.71**	**254**	P	**P**	**16 57 28.8**	**+1.4**
	comp=Z,3.7nm,1.1s,baz=94,slow=7.2,SNR=59						
ASAR				PcP	**PcP**	**16 59 06.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=101,slow=3.2,SNR=4.8						
	comp=Z,3.7nm,1.1s						
ASAR	**Alice Springs**	**45.71**	**254**	P	**P**	**16 57 27.6**	**+0.2**
KNRA	**Kununurra**	**51.33**	**264**	P	**P**	**16 58 10.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**53.90**	**260**	P	**P**	**16 58 30.0**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=91,slow=8.3,SNR=2.5						
	comp=Z,4.1nm,0.9s						
SOEI	**Soe**	**56.86**	**270**	P	**P**	**16 58 50.2**	**-1.1**
MBWA	**Marble Bar**	**58.98**	**255**	P	**P**	**16 59 04.1**	**-1.9**
KKM	**Kota Kinabalu**	**69.36**	**284**	P	**P**	**17 00 14.1**	**-0.2**
PETK	**Petropavlovsk-**	**73.30**	**345**	P	**P**	**17 00 37.0**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=155,slow=5.9,SNR=2.3						
	comp=Z,2.2nm,0.7s						
TXAR	**Lajitas Array**	**85.01**	**57**	P	**P**	**17 01 41.5**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=240,slow=5.9,SNR=2.9						
	comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**85.12**	**13**	P	**P**	**17 01 42.2**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=220,slow=4.8,SNR=7.9						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**86.37**	**43**	P	**P**	**17 01 48.5**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=208,slow=2.4,SNR=2.2						
	comp=Z,0.3nm,0.8s						

*IDC **10** 16:54:27.1±0.7,6°.12N×126°.28E,h148km±6km,mb3.5/15, mbtmp4.0/17,MS2.7/1,Error ellipse: s-maj=27.2km s-min=8.6km az=64.0*
*NEIC **10** 16:54:27.5±1.8,6°.05N±0°.07×126°.2E±0°.1,h146km±5km, mb4.5/30,Error ellipse: s-maj=16.9km s-min=8.3km az=65.0*
ISC 10 16:54:27.1±0.4,6°07N±0°.05×126°23E±0°.08,h150km,n58, σ0s71/63,mb4.2/27,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.19**	**327**	P	**Pn**	**16 54 53.2**	**-0.3**
	271nm,0.3s,baz=277,slow=5.1,SNR=13						
DAV				S	**Sn**	**16 55 13.7**	**-0.1**
	376nm,0.3s,baz=111,slow=18,SNR=3.7						
TNTI	**Ternate**	**5.38**	**168**	Pn	**Pn**	**16 55 44.3**	**-1.3**
TOLI2	**Tolitoli**	**7.33**	**228**		**Pn**	**16 56 10.1**	**-1.5**
SIJI	**Sorong**	**8.53**	**144**	P	**Pn**	**16 56 27.6**	**-0.1**
	9.3nm,0.6s,baz=346,slow=20,SNR=2.4						
SIJI				S	**Sn**	**16 58 00.6**	**-2.0**
	2.1nm,0.4s,baz=3.0,slow=23,SNR=1.5						
TGY	**Tagaytay City**	**9.53**	**327**	P	**Pn**	**16 56 40.0**	**-1.0**
	83nm,0.2s,baz=148,slow=19,SNR=1.3						
TGY				S	Sn	16 58 08.1	-19
	383nm,0.3s,baz=146,slow=6.0,SNR=7.8						
SBUM	**Sibu**	**14.42**	**256**	P	**P**	**16 57 48.5**	**+1.5**
SOEI	**Soe**	**15.84**	**187**	P	**Pn**	**16 58 02.6**	**+0.5**
SOEI				IAmb	IAmb	16 58 33.6	
	comp=Z,26nm,1.1s						
BATI	**Baumata**	**16.37**	**189**	P	**P**	**16 58 08.8**	**+0.3**
	comp=Z,38nm,0.9s,baz=102,slow=9.4,SNR=4.8						
SSLB	**Suanglung**	**18.34**	**344**	P	**P**	**16 58 30.6**	**+0.5**
SSLB				IAmb	IAmb	16 58 54.7	
	comp=Z,31nm,1.4s						
MTN	**Manton Dam**	**19.41**	**165**	P	**P**	**16 58 41.5**	**-0.3**
MTN				IAmb	IAmb	16 59 16.4	
	comp=Z,33nm,1.2s						
KNRA	**Kununurra**	**21.75**	**173**	P	**P**	**16 59 07.1**	**+0.2**
KNRA				IAmb	IAmb	16 59 33.6	
	comp=Z,39nm,1.4s						
FITZ	**Fitzroy Crossi**	**24.02**	**181**	P	**P**	**16 59 28.9**	**+0.7**
	comp=Z,2.8nm,0.5s,baz=10.0,slow=9.5,SNR=12						
	comp=Z,2.8nm,0.5s						

JSU	**Suzuyama**	**25.61**	**8**	P	**P**	**16 59 41.7**	**-1.0**	
PMG	**Port Moresby**	**25.91**	**126**	P	**P**	**16 59 45.1**	**-0.3**	
	comp=Z,5.8nm,0.5s,baz=59,slow=4.2,SNR=7.7							
	comp=Z,5.8nm,0.5s							
PMG	**Port Moresby**	**25.91**	**126**	P	**P**	**16 59 45.3**	**-0.1**	
PMG				IAmb	IAmb	16 59 47.3		
	comp=Z,12nm,1.0s							
COEN	**Coen**	**26.05**	**140**	P	**P**	**16 59 47.1**	**+0.4**	
COEN				IAmb	IAmb	16 59 53.5		
	comp=Z,14nm,1.4s							
WB0	**Warramunga Arr**	**26.90**	**163**	P	**P**	**16 59 54.6**	**+0.4**	
WB0				IAmb	IAmb	17 00 05.7		
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**27.05**	**163**	P	**P**	**16 59 56.1**	**+0.5**	
	comp=Z,0.2nm,0.4s,baz=335,slow=11,SNR=6.9							
	comp=Z,0.2nm,0.4s							
WRA	**Warramunga Arr**	**27.05**	**163**	P	**P**	**16 59 55.8**	**+0.2**	
WR8	**Warramunga Arr**	**27.11**	**163**	P	**P**	**16 59 56.5**	**+0.4**	
MBWA	**Marble Bar**	**27.80**	**193**	P	**P**	**17 00 02.3**	**0.0**	
MBWA				IAmb	IAmb	17 00 13.3		
	comp=Z,23nm,1.2s							
PSA00	**Pilbara Seismi**	**28.17**	**193**	P	**P**	**17 00 05.5**	**-0.1**	
PSA00				IAmb	IAmb	17 00 34.9		
	comp=Z,20nm,1.2s							
CMAR	**Chiang Mai Arr**	**29.31**	**297**	P	**P**	**17 00 15.2**	**-0.6**	
	comp=Z,0.4nm,0.7s,baz=112,slow=8.4,SNR=4.2							
CMAR				PcP	**PcP**	**17 03 20.8**	**+2.0**	
	comp=Z,0.5nm,0.7s,baz=161,slow=1.4,SNR=4.7							
CMAR				LR	LR	17 13 10.0		
	comp=Z,15nm,19.2s,baz=210,slow=38							
	comp=Z,0.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**29.31**	**297**		**PcP**	**17 03 19.9**	**+1.1**	
CHTO	**Chiang Mai**	**29.44**	**298**	P	**P**	**17 00 16.0**	**-0.9**	
AS31	**Alice Springs**	**30.49**	**166**	P	**P**	**17 00 26.3**	**+0.2**	
ASAR	**Alice Springs**	**30.49**	**166**	P	**P**	**17 00 26.4**	**+0.4**	
	comp=Z,0.4nm,0.4s,baz=340,slow=7.2,SNR=23							
ASAR				PcP	**PcP**	**17 03 22.6**	**+0.8**	
	comp=Z,0.4nm,0.4s,baz=350,slow=2.5,SNR=5.8							
	comp=Z,0.4nm,0.4s							
KSRS	**Korea Array**	**31.28**	**3**	P	**P**	**17 00 32.4**	**-0.4**	
	comp=Z,0.5nm,0.5s,baz=189,slow=9.0,SNR=2.5							
	comp=Z,0.5nm,0.5s							
CTAO	**Charters Tower**	**32.61**	**143**	P	**P**	**17 00 45.0**	**+0.3**	
CTAO				IAmb	IAmb	17 00 56.5		
	comp=Z,20nm,1.5s							
MORW	**Morawa**	**36.28**	**195**	P	**P**	**17 01 16.1**	**-0.1**	
FORT	**Forrest**	**36.68**	**177**	P	**P**	**17 01 20.2**	**+0.7**	
FORT				IAmb	IAmb	17 01 34.1		
	comp=Z,8.4nm,0.8s							
NWAO	**Narrogin (SRO)**	**39.71**	**192**	P	**P**	**17 01 45.3**	**+0.4**	
BBOO	**Buckleboo**	**39.78**	**167**	P	**P**	**17 01 46.1**	**+0.7**	
BBOO				IAmb	IAmb	17 02 02.3		
	comp=Z,24nm,1.4s							
STKA	**Stephens Creek**	**40.48**	**160**	P	**P**	**17 01 52.0**	**+0.8**	
	comp=Z,0.7nm,0.3s,baz=352,slow=10,SNR=3.7							
	comp=Z,0.7nm,0.3s							
SONM	**Songino Array**	**44.94**	**341**	P	**P**	**17 02 26.4**	**-0.7**	
	comp=Z,0.4nm,0.7s,baz=147,slow=8.0,SNR=2.2							
	comp=Z,0.4nm,0.7s							
MKAR	**Makanchi Array**	**55.37**	**325**	P	**P**	**17 03 45.6**	**0.0**	
	comp=Z,0.8nm,0.4s,baz=117,slow=7.5,SNR=32							
MKAR				PcP	**PcP**	**17 04 44.4**	**+0.2**	
	comp=Z,0.5nm,0.6s,baz=129,slow=3.7,SNR=6.0							
	comp=Z,0.8nm,0.4s							
MKAR	**Makanchi Array**	**55.37**	**325**	P	**P**	**17 03 45.0**	**-0.5**	
MAKZ	**Makanchi**	**55.56**	**324**	P	**P**	**17 03 46.7**	**-0.2**	
KDJ	**Kajisay**	**56.29**	**318**	P	**P**	**17 03 52.5**	**+0.1**	
KDJ				IAmb	IAmb	17 03 55.8		
	comp=Z,3.3nm,1.0s							
ZALV	**Zalesovo Beam**	**58.29**	**333**	P	**P**	**17 04 05.7**	**-0.3**	
	comp=Z,0.3nm,0.3s,baz=139,slow=8.0,SNR=2.0							
	comp=Z,0.3nm,0.3s							
ZALV	**Zalesovo Beam**	**58.29**	**333**	P	**P**	**17 04 05.5**	**-0.5**	
KURBB	**Kurchatov Arra**	**59.52**	**327**	P	**P**	**17 04 14.2**	**-0.3**	
	comp=Z,1.2nm,0.5s,baz=128,slow=7.1,SNR=23							
	comp=Z,1.2nm,0.5s							
KURK	**Kurchatov**	**59.52**	**327**	P	**P**	**17 04 13.9**	**-0.5**	
KURK				IAmb	IAmb	17 04 14.7		
	comp=Z,2.2nm,0.6s							
SMY	**Shemya**	**60.72**	**31**	P	**P**	**17 04 23.2**	**+0.6**	
BVAR	**Borovoye Array**	**65.10**	**327**	P	**P**	**17 04 51.1**	**-0.5**	
	comp=Z,0.8nm,0.6s,baz=140,slow=8.9,SNR=7.0							
	comp=Z,0.8nm,0.6s							
BORK	**Borovoye**	**65.15**	**327**	P	**P**	**17 04 51.7**	**-0.2**	
TIXI	**Tiksi**	**65.53**	**1**	P	**P**	**17 04 54.5**	**+0.6**	
TIXI				IAmb	IAmb	17 05 15.3		
	comp=Z,3.5nm,1.1s							
NRIK	**Noril'sk**	**68.06**	**346**	P	**P**	**17 05 10.2**	**+0.2**	
	comp=Z,2.0nm,0.5s,baz=128,slow=4.9,SNR=6.3							
	comp=Z,2.0nm,0.5s							
NRIK	**Noril'sk**	**68.06**	**346**	P	**P**	**17 05 10.5**	**+0.5**	
NRIK				IAmb	IAmb	17 05 11.6		
	comp=Z,2.7nm,0.7s							
AB31	**Akbulak array**	**70.04**	**320**	P	**P**	**17 05 22.0**	**-0.7**	
ABKAR	**Akbulak array**	**70.04**	**320**	P	**P**	**17 05 22.0**	**-0.6**	
NIKH	**Nikolski High**	**70.21**	**36**	P	**P**	**17 05 23.4**	**-0.2**	
ILAR	**Eielson Array**	**83.22**	**26**	P	**P**	**17 06 37.1**	**+0.7**	
	comp=Z,0.6nm,1.0s,baz=252,slow=4.9,SNR=2.7							
	comp=Z,0.6nm,1.0s							
ILAR	**Eielson Array**	**83.22**	**26**	P	**P**	**17 06 36.7**	**+0.3**	
SPITS	**Spitsbergen Ar**	**88.10**	**349**	P	**P**	**17 07 00.7**	**+0.4**	
	comp=Z,8.1nm,0.9s,baz=87,slow=7.9,SNR=4.3							
FINES	**FINESS Array B**	**89.55**	**332**	P	**P**	**17 07 06.6**	**-0.7**	
	comp=Z,3.8nm,1.0s,baz=90,slow=2.8,SNR=3.4							
	comp=Z,3.8nm,1.0s							
FINES	**FINESS Array B**	**89.55**	**332**	P	**P**	**17 07 07.1**	**-0.2**	
TXAR	**Lajitas Array**	**120.54**	**51**	PKP	**PKPdf**	**17 13 00.4**	**-1.4**	
	comp=Z,0.1nm,0.4s,baz=341,slow=3.4,SNR=1.1							

*BGSI **10** 17:13:47.2±1.5,26°.92S×27°.78E,h116km±40km,ML4.2*
*NEIC **10** 17:13:48.7±1.2,26°.42S±0°.05×27°.4E±0°.1,h5km±1km, mb4.5/4,Error ellipse: s-maj=21.6km s-min=9.2km az=90.0*
*IDC **10** 17:13:48.0±1.4,26°.41S×27°.37E,h0km,mb4.0/2, mbtmp4.4/7,ML4.5/4,MS2.6/1,Error ellipse: s-maj=19.8km s-min=15.7km az=101.0*
ISC 10 17:13:48.0±0.8,26°37S±0°.05×27°35E±0°.06,h5km,n44, σ2s61/57,mb4.2/4,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.08**	**310**	Pn	**Pb**	**17 14 26.4**	**0.0**
	88nm,0.3s,baz=135,slow=13,SNR=986						
LBTB				Lg	Lg	17 14 55.2	
	524nm,0.3s,baz=212,slow=20,SNR=93						
LBTB				LR	LR	17 15 09.7	
	comp=Z,127nm,19.1s,baz=132,slow=38						
	354nm,0.4s						
LBTB	**Lobatse**	**2.08**	**310**		**Pn**	**17 14 26.0**	**+2.3**
LBTB	**Lobatse**	**2.08**	**310**	P	**Pb**	**17 14 26.3**	**0.0**
MAKGR	**Makgori**	**2.36**	**283**	*i* P	**Pb**	**17 14 30.9**	**-0.2**
MAKGR				*i* S	**Sb**	**17 15 02.2**	**+1.6**
MAKGR				IAML		17 15 13.0	
	comp=N,8μm,0.6s						
BOSA	**Boshof**	**2.91**	**219**	Pn	**Pn**	**17 14 36.0**	**+0.9**
	comp=N,67nm,0.3s,baz=41,slow=13,SNR=1571						
BOSA				Lg	Lg	17 15 19.1	
	comp=N,173nm,0.3s,baz=326,slow=19,SNR=24						
	comp=N,149nm,0.3s						
BOSA	**Boshof**	**2.91**	**219**		**Pn**	**17 14 35.8**	**+0.8**
BOSA	**Boshof**	**2.91**	**219**	P	**Pn**	**17 14 36.1**	**+1.1**
LPHEP	**Lephephe**	**3.29**	**335**	*i* P	**Pn**	**17 14 43.1**	**+2.8**
LPHEP				IAML		17 15 37.4	
	comp=E,786nm,0.5s						
MREMI	**Moremi**	**3.79**	**1**	P	**Pn**	**17 14 48.2**	**+1.1**
MSNA	**Messina**	**4.69**	**32**	*i* P	Pn	17 15 04.9	+5.3
MSNA				*i* S	**Sn**	**17 15 54.7**	**+0.3**
MSNA				IAML		17 16 18.6	
	comp=Z,221nm,0.8s						
KHWEE	**KHWEE**	**4.74**	**338**		**Pn**	**17 15 01.5**	**+1.3**
KHWEE	**KHWEE**	**4.74**	**338**	*i* P	**Pn**	**17 15 03.4**	**+3.1**
KHWEE				*i* S	**Sn**	**17 15 59.3**	**+3.6**
KHWEE				IAML		17 16 20.3	
	comp=N,1μm,0.4s						
BROLN	**Tlhalogang**	**5.25**	**360**	*i* P	**Pn**	**17 15 07.7**	**+0.4**
BROLN				*i* S	**Sn**	**17 16 07.0**	**-1.2**
BROLN				IAML		17 16 34.3	
	comp=E,147nm,0.6s						
BROLN	**Tlhalogang**	**5.25**	**360**	P	**Pn**	**17 15 08.1**	**+0.8**
UPI	**Upington**	**5.77**	**249**	*i* P	**Pn**	**17 15 17.1**	**+2.6**
UPI				*i* S	**Sn**	**17 16 14.6**	**-6.5**
UPI				IAML		17 16 56.9	
	comp=Z,178nm,0.8s						
KGCAE	**Kacgae**	**5.85**	**306**		**Pn**	**17 15 17.6**	**+2.1**

KGCAE	**Kacgae**	**5.85**	**306**	*i* P	**Pn**	**17 15 17.0**	**+1.5**	
KGCAE				*i* S	**Sn**	**17 16 23.6**	**+0.6**	
KGCAE				IAML		17 16 59.4		
	comp=E,649nm,0.5s							
KGCAE	**Kacgae**	**5.85**	**306**	P	**Pn**	**17 15 18.3**	**+2.8**	
GRHM	**Grahamstown, E**	**6.93**	**187**		**Pn**	**17 15 30.2**	**-0.1**	
ARMS	**Ukamas**	**6.98**	**255**	*i* P	**Pn**	**17 15 34.8**	**+3.8**	
ARMS				*i* S	**Sb**	**17 17 22.2**	**+8.7**	
ARMS				IAML		17 17 38.5		
	comp=Z,974nm,0.4s							
KOOLE	**Kule**	**7.33**	**296**		**Pn**	**17 15 36.4**	**+0.6**	
KOOLE	**Kule**	**7.33**	**296**	*i* P	**Pn**	**17 15 35.2**	**-0.7**	
KOOLE				*i* S	**Sn**	**17 16 55.3**	**-4.2**	
KOOLE				IAML		17 17 44.5		
	comp=N,239nm,0.6s							
GRTLG	**Ghanzi**	**7.51**	**310**		**Pn**	**17 15 39.0**	**+0.6**	
GRTLG	**Ghanzi**	**7.51**	**310**	*i* P	**Pn**	**17 15 39.1**	**+0.8**	
GRTLG				*i* S	**Sn**	**17 17 01.3**	**-2.7**	
GRTLG				IAML		17 17 53.6		
	comp=N,206nm,0.5s							
GRTLG	**Ghanzi**	**7.51**	**310**	P	**Pn**	**17 15 39.2**	**+0.8**	
SUR	**Sutherland**	**8.27**	**222**	Pn	**Pn**	**17 15 49.4**	**+0.6**	
	comp=N,5.0nm,0.3s,baz=53,slow=16,SNR=77							
SUR				Sn	**Sn**	**17 17 18.4**	**-4.3**	
	comp=N,3.6nm,0.3s,baz=121,slow=22,SNR=1.7							
SUR				Lg	Lg	17 18 06.3		
	comp=N,17nm,0.3s,baz=127,slow=21,SNR=6.2							
	comp=N,47nm,0.7s							
SUR	**Sutherland**	**8.27**	**222**		**Pn**	**17 15 49.2**	**+0.4**	
GOBN	**Gobabis**	**8.64**	**295**	*i* P	**Pn**	**17 15 54.7**	**+0.7**	
GOBN				IAML		17 18 26.9		
	comp=Z,41nm,0.8s							
KSANE	**Kasane**	**8.77**	**346**		**Pn**	**17 15 56.0**	**+0.4**	
KSANE	**Kasane**	**8.77**	**346**	*i* P	**Pn**	**17 15 55.3**	**-0.3**	
KSANE				*i* S	**Sn**	**17 17 29.8**	**-5.2**	
KSANE				IAML		17 18 32.2		
	comp=E,127nm,0.6s							
KSANE	**Kasane**	**8.77**	**346**	P	**Pn**	**17 15 56.2**	**+0.6**	
AUSN	**Aus**	**9.94**	**266**	*i* P	**Pn**	**17 16 12.4**	**+0.7**	
AUSN				*i* S	**Sn**	**17 17 56.5**	**-7.2**	
AUSN				IAML		17 19 09.8		
	comp=Z,1μm,2.7s							
WIN	**Windhoek**	**10.08**	**290**	Pn	**Pn**	**17 16 15.8**	**+2.2**	
LSZ	**Lusaka**	**11.07**	**4**	Pn	**Pn**	**17 16 26.2**	**-0.9**	
	comp=Z,2.1nm,0.3s,baz=189,slow=13,SNR=29							
LSZ				Sn	**Sn**	**17 18 27.2**	**-4.3**	
	comp=Z,1.9nm,0.3s,baz=66,slow=7.0,SNR=6.1							
LSZ				Lg	Lg	17 19 30.1		
	comp=Z,1.7nm,0.3s,baz=117,slow=20,SNR=3.4							
	comp=Z,12nm,0.6s							
LSZ	**Lusaka**	**11.07**	**4**		**Pn**	**17 16 25.7**	**-1.5**	
TSUM	**Tsumeb**	**11.49**	**306**	Pn	**Pn**	**17 16 32.6**	**-0.3**	
	comp=Z,6.8nm,0.4s,baz=132,slow=12,SNR=20							
TSUM				Sn	**Sn**	**17 18 38.7**	**-3.1**	
	comp=Z,0.9nm,0.3s,baz=49,slow=19,SNR=3.7							
TSUM				Lg	Lg	17 19 48.9		
	comp=Z,2.6nm,0.3s,baz=56,slow=12,SNR=6.0							
TSUM	**Tsumeb**	**11.49**	**306**		**Pn**	**17 16 33.5**	**+0.5**	
TSUM	**Tsumeb**	**11.49**	**306**	P	**Pn**	**17 16 33.5**	**+0.5**	
MBAR	**Mbarara**	**25.83**	**8**	P	**P**	**17 19 19.9**	**-0.8**	
MBAR				IAmb	IAmb	17 19 24.6		
	comp=Z,6.5nm,1.1s							
KIBK	**Kibwezi**	**26.01**	**25**	P	**P**	**17 19 21.9**	**-0.3**	
SNAA	**Sanae**	**48.36**	**192**	P	**P**	**17 22 30.7**	**+0.3**	
QSPA	**South Pole Qui**	**63.81**	**180**	P	**P**	**17 24 21.6**	**+0.5**	
QSPA				IAmb	IAmb	17 24 23.3		
	comp=Z,4.3nm,0.8s							
ESDC	**Sonseca Array**	**71.91**	**335**	P	**P**	**17 25 13.8**	**+1.6**	
	comp=Z,0.9nm,0.5s,baz=163,slow=5.9,SNR=5.5							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**88.11**	**34**	P	**P**	**17 26 40.1**	**+0.6**	
	comp=Z,0.7nm,0.7s,baz=224,slow=5.2,SNR=9.7							
	comp=Z,0.7nm,0.7s							

*IDC **10** 17:15:18.6±2.7,7°.09S×68°.51E,h0km,mb3.6/5, mbtmp3.6/5,M

RUS				*eS*		**Sn**	**17 19 56.2**	**-1.5**
MTVR	**Mutnovka**	**1.62**	**8**	*eP*		**Pg**	**17 19 38.6**	**0.0**
MTVR				*eS*		**Sn**	**17 19 57.6**	**-0.6**
GRL	**Gorelyy**	**1.68**	**5**	*eP*		**Pg**	**17 19 39.8**	**0.0**
GRL				*eS*		**Sn**	**17 19 59.5**	**-0.1**
KRMR	**Karymshinskiy**	**1.96**	**5**	*eP*		**Pb**	**17 19 43.8**	**+0.1**
KRMR				*eS*		**Sn**	**17 20 07.3**	**+1.0**
APC	**Apacha**	**2.09**	**349**	*eP*		**Pb**	**17 19 45.4**	**-0.5**
APC				*eS*		**Sn**	**17 20 09.5**	**0.0**
PET	**Petropavlovsk**	**2.21**	**13**	*eP*		**Pb**	**17 19 46.8**	**-1.0**
PET				*eS*		**Sn**	**17 20 11.9**	**-0.5**
DALK	**Dalny**	**2.23**	**14**	*eP*		**Pb**	**17 19 47.3**	**-0.9**
DALK				*eS*		**Sn**	**17 20 12.7**	**-0.2**
PETK	**Petropavlovsk-**	**2.23**	**358**	Pn		**Pb**	**17 19 47.6**	**-0.8**
	1.6nm,0.3s,baz=187,slow=14,SNR=41							
PETK				Sn		**Sb**	**17 20 16.4**	**+0.1**
	1.7nm,0.3s,baz=198,slow=14,SNR=6.2							
	6.3nm,0.5s							
UGLR	**Uglovaya**	**2.41**	**14**	*eP*		**Pb**	**17 19 50.5**	**-1.0**
AVH	**Avacha**	**2.46**	**13**	*eP*		**Pb**	**17 19 51.5**	**-0.6**
AVH				*eS*		**Sn**	**17 20 19.8**	**+1.2**
SMAR	**Somma**	**2.46**	**14**	*eP*		**Pb**	**17 19 51.3**	**-1.0**
KOK	**Koryaka**	**2.47**	**11**	*eP*		**Pb**	**17 19 51.9**	**-0.4**
SDLR	**Sedlovina**	**2.49**	**15**	*eP*		**Pb**	**17 19 50.9**	**-1.8**
SDLR				*eS*		**Sn**	**17 20 18.0**	**-1.5**
KRER	**Koryakskii**	**2.49**	**13**	*eP*		**Pb**	**17 19 51.8**	**-1.0**
KRER				*eS*		**Sn**	**17 20 20.8**	**+1.0**
KRX	**Arik**	**2.54**	**11**	*eP*		**Pb**	**17 19 52.5**	**-1.0**
KRX				*eS*		**Sn**	**17 20 22.0**	**+1.4**
GNL	**Ganaly**	**2.82**	**1**	*eP*		**Pb**	**17 19 56.3**	**-2.1**
H11N2	**WAKE ISLAND Hy**	**31.90**	**164**	T		T	17 59 33.4	
	baz=350,slow=76,SNR=20							
H11N3	**WAKE ISLAND Hy**	**31.91**	**164**	T		T	17 59 29.8	
	baz=350,slow=76,SNR=15							
H11N1	**WAKE ISLAND Hy**	**31.91**	**164**	T		T	17 59 34.9	
	baz=350,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**33.06**	**164**	T		T	18 00 46.3	
	baz=350,slow=76,SNR=14							
H11S3	**WAKE ISLAND Hy**	**33.07**	**164**	T		T	18 00 47.6	
	baz=350,slow=76,SNR=16							
H11S2	**WAKE ISLAND Hy**	**33.08**	**164**	T		T	18 00 50.0	
	baz=350,slow=76,SNR=7.0							
KURBB	**Kurchatov Arra**	**47.83**	**302**	P		**P**	**17 27 45.4**	**-0.3**
	0.3nm,0.2s,baz=54,slow=7.9,SNR=4.2							
	0.3nm,0.2s							
CMAR	**Chiang Mai Arr**	**56.35**	**258**	P		**P**	**17 28 49.2**	**-0.2**
	0.3nm,0.6s,baz=45,slow=6.0,SNR=4.3							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**77.17**	**202**	P		**P**	**17 31 01.9**	**-0.1**
	0.2nm,0.8s,baz=19,slow=4.5,SNR=4.1							
	0.2nm,0.8s							
H03N2	**Juan Fernandez**	**135.62**	**89**	T		T	20 09 07.0	
	baz=314,slow=77,SNR=15							
H03N1	**Juan Fernandez**	**135.63**	**89**	T		T	20 09 08.4	
	baz=314,slow=77,SNR=15							
H03N3	**Juan Fernandez**	**135.63**	**89**	T		T	20 09 08.6	
	baz=314,slow=77,SNR=13							

*NEIC **10** 17:30:36.6±0.9,20.4S±0.2×177.7W±0.1,h537km±7km, mb4.5/24,Error ellipse: s-maj=24.8km s-min=14.6km az=158.0*

*IDC **10** 17:30:36.5±2.8,20.6S×177.63W,h545km±31km, mb3.4/10,mbtmp4.3/11,Error ellipse: s-maj=20.7km s-min=13.6km az=132.0*

ISC 10 17:30:36.5±0.6,20.5S±0.1×177.60W±0.09,h550km,n45, σ0s99/46,mb4.4/22,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.95**	**303**		**P**	**17 32 03.7**	**-2.3**
NIUE	**Niue**	**7.36**	**80**	P	**P**	**17 32 26.4**	**-1.6**
PINNC	**Pines Island,**	**14.07**	**259**	P	**P**	**17 33 36.6**	**+0.2**
URZ	**Urewera**	**18.29**	**193**	P	**P**	**17 34 15.4**	**-1.3**
	3.0nm,0.3s,baz=335,slow=22,SNR=1.6						
URZ				S	**S**	**17 37 13.9**	**-2.1**
	20nm,1.2s,baz=61,slow=19,SNR=2.4						
THZ	**Tophouse**	**22.68**	**199**	P	**P**	**17 34 58.2**	**+1.7**
THZ				IAmb	IAmb	17 35 04.8	
	comp=Z,25nm,1.4s						
DSZ	**Denniston Nort**	**23.01**	**201**	P	**P**	**17 35 00.5**	**+1.1**
EIDS	**Eidsvold**	**29.21**	**254**	P	**P**	**17 35 54.2**	**0.0**
EIDS				IAmb	IAmb	17 36 22.2	
	comp=Z,11nm,1.3s						
ARMA	**Armidale**	**29.41**	**244**	P	**P**	**17 35 57.1**	**+1.1**
ARMA				IAmb	IAmb	17 36 07.7	
	comp=Z,26nm,1.4s						
CTAO	**Charters Tower**	**33.86**	**264**	P	**P**	**17 36 34.0**	**0.0**
CTAO				IAmb	IAmb	17 36 34.9	
	comp=Z,14nm,0.7s						
PMG	**Port Moresby**	**35.71**	**283**	P	**P**	**17 36 48.9**	**-0.5**
PMG				IAmb	IAmb	17 36 50.4	
	comp=Z,12nm,0.8s						
COEN	**Coen**	**37.96**	**273**	P	**P**	**17 37 08.1**	**+0.3**
STKA	**Stephens Creek**	**38.13**	**244**	P	**P**	**17 37 09.0**	**0.0**
	comp=Z,2.9nm,0.5s,baz=98,slow=12,SNR=9.2						
	comp=Z,2.9nm,0.5s						
STKA	**Stephens Creek**	**38.13**	**244**	P	**P**	**17 37 09.7**	**+0.7**
INKA	**Innaminka**	**38.56**	**251**		**P**	**17 37 13.3**	**+0.8**
BBOO	**Buckleboo**	**42.89**	**244**	P	**P**	**17 37 46.8**	**-0.1**
BBOO				IAmb	IAmb	17 38 26.3	
	comp=Z,16nm,1.4s						
WR8	**Warramunga Arr**	**44.82**	**262**		**P**	**17 38 01.7**	**-0.4**
WR8				IAmb	IAmb	17 38 03.1	
	comp=Z,8.0nm,0.9s						
AS31	**Alice Springs**	**44.88**	**257**		**P**	**17 38 02.7**	**+0.2**
ASAR	**Alice Springs**	**44.88**	**257**	P	**P**	**17 38 02.8**	**+0.2**
	comp=Z,17nm,0.7s,baz=89,slow=7.7,SNR=358						
ASAR				S	**S**	**17 44 00.4**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=94,slow=15,SNR=9.0						
	comp=Z,17nm,0.7s						
ASAR	**Alice Springs**	**44.88**	**257**		**P**	**17 38 02.6**	**+0.1**
WB0	**Warramunga Arr**	**44.95**	**262**	P	**P**	**17 38 02.6**	**-0.5**
WRAB	**Tennant Creek**	**44.96**	**262**	P	**P**	**17 38 02.7**	**-0.5**
WRAB				IAmb	IAmb	17 38 03.5	
	comp=Z,17nm,1.1s						
WRA	**Warramunga Arr**	**44.97**	**262**	P	**P**	**17 38 02.8**	**-0.5**
	comp=Z,7.9nm,0.6s,baz=98,slow=7.9,SNR=172						
	comp=Z,7.9nm,0.6s						
WRA	**Warramunga Arr**	**44.97**	**262**		**P**	**17 38 01.7**	**-1.6**
MTN	**Manton Dam**	**49.54**	**270**	P	**P**	**17 38 37.1**	**-0.5**
FORT	**Forrest**	**49.64**	**247**	P	**P**	**17 38 38.0**	**-0.1**
FORT				IAmb	IAmb	17 38 39.0	
	comp=Z,11nm,0.8s						
KNRA	**Kununurra**	**51.03**	**266**	P	**P**	**17 38 48.5**	**+0.1**
KNRA				IAmb	IAmb	17 39 10.0	
	comp=Z,22nm,1.2s						
SOEI	**Soe**	**56.88**	**272**	P	**P**	**17 39 31.2**	**+1.4**
PSA00	**Pilbara Seismi**	**58.03**	**257**	P	**P**	**17 39 37.5**	**0.0**
PSA00				IAmb	IAmb	17 39 38.2	
	comp=Z,11nm,0.7s						
MBWA	**Marble Bar**	**58.22**	**257**	P	**P**	**17 39 38.4**	**-0.3**
MJAR	**Matsushiro Arr**	**70.43**	**323**	P	**P**	**17 40 55.5**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=158,slow=6.3,SNR=9.8						
	comp=Z,3.6nm,0.7s						
MJAR	**Matsushiro Arr**	**70.43**	**323**	P	**P**	**17 40 55.3**	**-0.4**
SSLB	**Suanglung**	**74.28**	**303**	P	**P**	**17 41 17.1**	**-1.2**
SSLB				IAmb	IAmb	17 41 56.7	
	comp=Z,36nm,1.3s						
TPUB	**Ta-pu**	**74.29**	**303**	P	**P**	**17 41 17.2**	**-1.0**
KSRS	**Korea Array**	**77.13**	**318**	P	**P**	**17 41 34.2**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=125,slow=7.6,SNR=3.0						
	comp=Z,0.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**79.17**	**326**	P	**P**	**17 41 44.9**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=126,slow=6.6,SNR=2.6						
	comp=Z,3.9nm,0.6s						
NVAR	**Mina Array Bea**	**80.76**	**43**	P	**P**	**17 41 53.9**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=238,slow=4.1,SNR=2.9						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**86.74**	**57**	P	**P**	**17 42 24.1**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=235,slow=4.4,SNR=3.7						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**88.70**	**43**	P	**P**	**17 42 32.6**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=244,slow=4.6,SNR=2.5						
	comp=Z,0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**90.47**	**289**	P	**P**	**17 42 42.5**	**+2.3**
	comp=Z,1.0nm,0.9s,baz=96,slow=4.1,SNR=8.8						
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.47**	**289**	P	**P**	**17 42 42.2**	**+1.9**
BVAR	**Borovoye Array**	**119.31**	**320**	PKP	**PKiKP**	**17 48 23.6**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=116,slow=3.4,SNR=3.6						
AKASG	**Malin Array Be**	**143.19**	**331**	PKhKP	PKPpre	17 49 05.9	
	comp=Z,0.3nm,0.4s,baz=43,slow=4.2,SNR=7.0						
LODK	**Lodwar**	**143.69**	**247**		**PKPdf**	**17 49 10.4**	**+0.3**
BRTR	**Keskin Array B**	**147.11**	**313**	PKPbc	**PKiKP**	**17 49 19.7**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=122,slow=2.2,SNR=5.4						
MMAI	**Mount Meron Ar**	**148.14**	**300**	PKPbc	**PKiKP**	**17 49 21.9**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=101,slow=2.6,SNR=2.2						

IDC 10 17:46:02.4±1.6,22.56N×94.59E,h0km,mb3.5/5, mbtmp3.4/6,ML3.2/1,Error ellipse: s-maj=110.7km s-min=15.9km az=55.0,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.77**	**134**	Pn	Pn	17 47 29.9	+0.6
	0.2nm,0.3s,baz=312,slow=14,SNR=2.1						
CMAR				Lg	Lg	17 49 06.9	
	0.1nm,0.3s,baz=292,slow=12,SNR=1.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**26.14**	**341**	P	P	17 51 38.8	+0.5
	0.3nm,0.4s,baz=150,slow=9.9,SNR=19						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**30.69**	**340**	P	P	17 52 18.5	-0.2
	0.3nm,0.3s,baz=147,slow=8.7,SNR=2.9						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**35.58**	**335**	P	P	17 53 01.0	-0.4
	0.2nm,0.4s,baz=140,slow=11,SNR=1.8						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**57.37**	**134**	P	P	17 55 52.5	-0.3
	0.2nm,0.3s,baz=320,slow=7.5,SNR=13						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**59.77**	**138**	P	P	17 56 09.2	-0.2
	0.3nm,0.5s,baz=322,slow=7.2,SNR=14						
	0.3nm,0.5s						

*TEH **10** 18:19:58.6,38.27N×47.41E,h10km±524km,ML2.5, Presumed earthquake*

*AZER **10** 18:19:59.2,38.29N×47.37E,h2km,ml2.1*

ISC 10 18:19:59.4±1.1,38.29N±0.04×47.38E±0.04,h12km±9km, n14,σ0s79/22,Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHRS	**Heris**	**0.26**	**276**	Pg	**Pg**	**18 20 05.2**	**+0.3**
IHRS				Sg	**Sg**	**18 20 09.6**	**+0.9**
GRMI	**Germi**	**0.66**	**38**	Pg	**Pg**	**18 20 11.5**	**-0.7**
LRK	**Lerik**	**0.83**	**65**	P	**Pg**	**18 20 15.2**	**-0.4**
LRK				S	**Sb**	**18 20 26.9**	**-0.4**
YRD	**Yardimli**	**0.92**	**47**	P	**Pg**	**18 20 16.5**	**-0.7**
YRD				S	**Sb**	**18 20 29.5**	**-0.4**
IHSH	**Hashtrud**	**0.99**	**185**	Pg	**Pg**	**18 20 17.8**	**-0.7**
IHSH				Sg	**Sb**	**18 20 31.8**	**0.0**
ASTR	**Astara**	**1.14**	**76**	S	**Sn**	**18 20 37.1**	**+0.2**
QRD	**Qoradiz**	**1.17**	**358**	P	**Pg**	**18 20 21.6**	**-0.3**
QRD				S	**Sn**	**18 20 38.1**	**+0.5**
LKRN	**Lenkeran, Azer**	**1.18**	**69**	S	**Sn**	**18 20 38.1**	**+0.4**
GLBA	**Clilabad**	**1.24**	**40**	P	**Pn**	**18 20 23.2**	**+0.6**
GLBA				S	**Sn**	**18 20 41.4**	**+2.1**
ORD	**Ordubad**	**1.26**	**301**	P	**Pn**	**18 20 22.6**	**-0.3**
ORD				S	**Sg**	**18 20 39.5**	**-0.4**
BLQ	**Beylaqan**	**1.44**	**6**	S	**Sg**	**18 20 46.6**	**+0.9**
SBZ	**Shahbuz**	**1.80**	**308**	P	**Pb**	**18 20 32.4**	**-0.1**
SBZ				S	**Sg**	**18 20 57.1**	**-0.3**
AGDM	**Agdam**	**1.83**	**354**	S	**Sg**	**18 20 58.2**	**0.0**
GANJ	**Ganja**	**2.49**	**341**	S	**Sb**	**18 21 13.3**	**-1.4**

*NDI **10** 18:20:07.8±2.2,13.14N×93.20E,h45km±13km,ML4.8, MW4.8*

*BJI **10** 18:20:08.4,13.03N×93.24E,h63km,mb4.6/68,mB5.1/14, Ms4.1/11,Ms7 3.9/9*

*IDC **10** 18:20:08.6±1.6,13.05N×93.29E,h42km±13km,mb4.1/30, mbtmp4.4/31,ML4.8/2,MS3.6/15,Error ellipse: s-maj=13.6km s-min=11.3km az=66.0*

*BKK **10** 18:20:09.4±0.3,13°N±2°×93°3E±°,h51km,M4.8/49, mB5.3/35,mb5.0/37,Mjma4.7/49,ML5.2/23,MLv4.6/2, Mw(mB)4.7/35,MwMwp7.7/1,Mwp7.3/1*

*NEIC **10** 18:20:09.3±2.2,13.13N±0.06×93.29E±0.08,h40km±5km, mb4.9/83,Error ellipse: s-maj=11.4km s-min=7.8km az=104.0*

ISC 10 18:20:09.2±0.5,13.11N±0.05×93.17E±0.05,h48km±3km, h49km:pP-P,n345,σ1s11/324,mb4.8/86,MS3.7/13,3C-1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**0.24**	**286**	*eP*	**Pn**	**18 20 16.4**	**-1.2**
DGPR				*eS*	**Sn**	**18 20 22.5**	**-1.1**
DGPR				IAML		18 20 23.9	
	comp=N,5μm,0.6s						
DGPR				IAML		18 20 26.2	
	comp=E,3μm,0.5s						
PBA	**Port Blair**	**1.50**	**196**		**Pn**	**18 20 35.2**	**+1.5**
PBA	**Port Blair**	**1.50**	**196**	*eP*	**Pn**	**18 20 33.0**	**-0.8**
PBA				*eS*	**Sn**	**18 20 51.1**	**-1.0**
PBA				IAML		18 21 02.1	
	comp=E,4μm,0.4s						
PBA				IAML		18 21 03.5	
	comp=N,3μm,0.4s						
KHLT	**Khaolaem Dam**	**5.53**	**72**	P	**Pn**	**18 21 30.4**	**+1.4**
	comp=N,1.5nmcomp=N,1.4nmcomp=N,4μmcomp=N,586nm,0.8s						
CMBY	**CAMPBELL BAY**	**6.11**	**173**	*eP*	Pn	18 21 31.3	-5.6
CMBY				IAML		18 22 23.6	
	comp=N,1μm,0.5s						
CMBY				IAML		18 22 32.5	
	comp=E,1μm,1.0s						
CMBY				*eS*	Sn	18 22 36.8	-8.8
RNTT	**Ranong**	**6.39**	**125**	P	**Pn**	**18 21 41.1**	**+0.3**
UTHA	**Uthaitani**	**6.55**	**67**	P	**Pn**	**18 21 44.5**	**+1.4**
	comp=E,0.5nmcomp=E,0.3nmcomp=E,78nm,0.7s						
MHMT	**Maesarieng**	**6.81**	**42**	P	**Pn**	**18 21 46.4**	**-0.2**
	comp=E,0.6nmcomp=E,0.3nmcomp=E,2μmcomp=E,172nm,0.7s						
PKDT	**Phuket**	**7.26**	**135**	P	**Pn**	**18 21 54.1**	**+1.3**
CM13	**Chiang Mai Arr**	**7.64**	**46**	P	**Pn**	**18 21 58.5**	**+0.5**
	comp=E,0.2nmcomp=E,794nmcomp=E,82nm,0.7s						
CM05	**Chiang Mai Arr**	**7.66**	**46**	P	**Pn**	**18 21 58.7**	**+0.5**
	comp=E,0.2nmcomp=E,861nmcomp=E,78nm,0.6s						
CM15	**Chiang Mai Arr**	**7.68**	**45**	P	**Pn**	**18 21 59.0**	**+0.5**
	comp=E,0.2nmcomp=E,1μmcomp=E,115nm,0.6s						
CM01	**Chiang Mai Arr**	**7.68**	**46**	P	**Pn**	**18 21 58.8**	**+0.3**
	comp=E,0.3nmcomp=E,1μmcomp=E,158nm,0.8s						
CM04	**Chiang Mai Arr**	**7.68**	**46**	P	**Pn**	**18 21 59.0**	**+0.5**
	comp=E,0.3nmcomp=E,2μmcomp=E,160nm,0.6s						
CM02	**Chiang Mai Arr**	**7.68**	**46**	P	**Pn**	**18 21 59.0**	**+0.5**
	comp=E,0.2nmcomp=E,872nmcomp=E,95nm,0.7s						
CM31	**Chiang Mai Arr**	**7.69**	**46**		**Pn**	**18 21 58.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**7.69**	**46**	P	**Pn**	**18 21 59.1**	**+0.4**
	comp=E,12nm,0.3s,baz=236,slow=16,SNR=192						
CMAR				S	**Sn**	**18 23 23.5**	**-1.1**
	comp=E,18nm,0.9s,baz=236,slow=28,SNR=6.0						
CMAR				LR	LR	18 25 43.5	
	comp=E,244nm,18.5s,baz=225,slow=44						
CMAR	**Chiang Mai Arr**	**7.69**	**46**		**Pn**	**18 21 58.5**	**-0.2**
CM09	**Chiang Mai Arr**	**7.72**	**46**	P	**Pn**	**18 21 59.7**	**+0.7**
	comp=E,0.2nmcomp=E,1μmcomp=E,138nm,0.7s						
CHTO	**Chiang Mai**	**7.94**	**44**		**Pn**	**18 22 01.9**	**-0.2**
CHTO	**Chiang Mai**	**7.94**	**44**	P	**Pn**	**18 22 02.1**	**0.0**
	comp=E,0.2nmcomp=E,0.3nmcomp=E,957nmcomp=E,125nm,0.8s						
LAMP	**Lampang**	**8.23**	**48**	P	**Pn**	**18 22 07.0**	**+1.0**
	comp=E,0.4nmcomp=E,1μmcomp=E,136nm,0.7s						
UTTA	**Uttaradit**	**8.48**	**56**	P	**Pn**	**18 22 10.5**	**+1.0**
	comp=E,0.2nmcomp=E,980nmcomp=E,104nm,0.8s						
CMAI	**Chiengmai2**	**8.82**	**39**	P	**Pn**	**18 22 14.4**	**+0.1**
	comp=E,0.4nmcomp=E,47nm,0.6s						
SAIH	**SAIHA**	**9.33**	**359**	*eP*	**Pn**	**18 22 19.2**	**-2.0**
SAIH				*eS*	Sn	18 23 53.4	-11
KHON	**Khomkaen**	**9.88**	**70**	P	**Pn**	**18 22 29.9**	**+1.3**
	comp=E,41nm,0.9s						
VIS	**Vishakhapatnam**	**10.53**	**297**	*eP*	**Pn**	**18 22 35.0**	**-2.6**
VIS				*eS*	Sn	18 24 24.2	-10
VIS				IAML		18 24 28.6	
	comp=E,2μm,0.3s						
VIS				IAML		18 24 30.0	
	comp=N,1μm,0.3s						
KULM	**Kulim**	**10.72**	**136**	Pn	**Pn**	**18 22 40.2**	**0.0**
MORE	**Moreh**	**11.12**	**5**		**Pn**	**18 22 43.3**	**-2.3**
SKNT	**Sakolnakorn**	**11.13**	**68**	P	**Pn**	**18 22 47.4**	**+1.6**
	comp=N,0.7nmcomp=N,2μmcomp=N,33nm,0.8s						
RAGD	**RAYAGADA**	**11.14**	**304**	*eP*	**Pn**	**18 22 43.2**	**-2.7**
RAGD				*eS*	Sn	18 24 38.5	-11
RAGD				IAML		18 24 45.6	
	comp=N,931nm,0.3s						
RAGD				IAML		18 24 46.2	
	comp=E,842nm,0.4s						
IMP	**Imphal**	**11.68**	**4**	*eP*	**Pn**	**18 22 50.5**	**-2.9**
IMP				*eS*	Sn	18 24 48.4	-14
IMP				IAML		18 25 03.9	
	comp=E,300nm,0.8s						
IMP				IAML		18 25 07.0	
	comp=N,180nm,0.2s						
PANO	**Nakornpanom**	**11.76**	**69**	P	**Pn**	**18 22 57.1**	**+2.8**
SHL	**Shillong**	**12.45**	**355**	Pn	Pn	18 22 58.5	-5.4
KOHI	**KOHIMA**	**12.57**	**4**	*eP*	**Pn**	**18 23 03.6**	**-2.0**
KOHI				*eS*	Sn	18 25 10.1	-14
KOHI				IAML		18 25 29.2	
	comp=N,350nm,0.6s						
KOHI				IAML		18 25 30.4	
	comp=E,230nm,0.8s						
MDRS	**Chennai**	**12.59**	**271**	*eP*	**Pn**	**18 23 04.6**	**-1.0**
MDRS				*eS*	Sn	18 25 11.9	-13
MDRS				IAML		18 25 19.9	
	comp=E,224nm,0.3s						
MDRS				IAML		18 25 20.6	
	comp=N,416nm,0.8s						
TEZP	**TEZPUR**	**13.44**	**359**	*eP*	**Pn**	**18 23 13.3**	**-4.0**
TEZP				*eS*	Sn	18 25 30.5	-15
PALK	**Pallekele**	**13.57**	**246**	P	**Pn**	**18 23 18.1**	**-1.0**
	comp=N,1.0nm,0.3s,baz=56,slow=19,SNR=5.4						
PALK				S	Sn	18 25 39.9	-8.5
	comp=N,11nm,0.5s,baz=159,slow=18,SNR=7.1						
PALK				LR	LR	18 28 21.5	
	comp=N,270nm,20.0s,baz=62,slow=36						
	comp=N,9.9nm,0.9s						
HYB	**Hyderabad**	**14.73**	**289**	*eP*	**P**	**18 23 41.6**	**+1.8**
KMI2	**Kunming**	**15.00**	**36**	P	**Pn**	**18 23 40.0**	**+1.6**
KMI2				pmax	pmax		
	comp=N,10.0nm,1.2s						
KMI2				LR	LR		
	comp=N,250nm,16.1s						
KMI2				LR	LR		
	comp=N,210nm,15.5s						
PZH	**PanZhiHua**	**15.57**	**30**	P	**Pn**	**18 23 46.6**	**+1.0**
LSA	**Lhasa**	**16.61**	**354**		**Pn**	**18 23 57.6**	**-1.7**
LSA	**Lhasa**	**16.61**	**354**	P	**Pn**	**18 23 52.4**	**-6.8**
QIZ	**Qiongzhong**	**17.07**	**68**	P	**Pn**	**18 24 03.6**	**-0.9**
QIZ				S	**Sn**	**18 27 12.7**	**-0.8**
QIZ				LR	LR		
	comp=N,160nm,9.3s						
QIZ				LR	LR		
	comp=N,460nm,9.4s						
QIZ				LR	LR		
	comp=N,280nm,21.6s						
GYA	**Guiyang**	**18.35**	**42**	⇓P	**Pn**	**18 24 20.7**	**+0.3**
GYA				sP	sP	18 24 38.4	+1.8
GYA				pmax	pmax		
	comp=N,14nm,1.2s						
CD2	**Chengdu**	**20.23**	**27**	P	**P**	**18 24 40.8**	**+0.4**
CD2				pmax	pmax		
	comp=N,40nm,0.6s						
ENH	**Enshi**	**22.79**	**39**		**P**	**18 25 05.3**	**-2.5**
GOMU	**GeErMu**	**23.04**	**3**	P	**P**	**18 25 10.5**	**-0.2**
GOMU				pP	pP	18 25 20.7	-1.4
GOMU				pmax	pmax		
	comp=N,10.0nm,0.9s						
LZDM	**Lanzhou Array**	**24.64**	**21**	P	**P**	**18 25 26.4**	**+0.7**
	comp=N,11nm,0.5s,baz=200,slow=7.9,SNR=64						
LZDM				ScP	**ScP**	**18 32 38.6**	**+1.2**
	comp=N,0.4nm,0.4s,baz=176,slow=5.7,SNR=5.1						
LZDM				LR	LR	18 36 31.2	
	comp=N,136nm,21.4s,baz=175,slow=40						
	comp=N,11nm,0.5s						
LZH	**Lanzhou**	**24.81**	**21**	*eP*	**P**	**18 25 27.9**	**+0.8**
LZH				pP	pP	18 25 37.2	-2.1
LZH				sP	sP	18 25 43.8	-1.2
LZH				pmax	pmax		
	comp=N,42nm,1.6s						
XAN	**Xi'an**	**25.28**	**32**	⇑P	**P**	**18 25 29.8**	**-1.4**
XAN				pP	pP	18 25 40.6	-2.8
XAN				pmax	pmax		
	comp=N,38nm,0.7s						
XAN				pmax	pmax		
	comp=N,240nm,4.7s						
WHN	**Wuhan**	**26.14**	**45**	P	**P**	**18 25 38.6**	**-0.3**
GTA2	**Gaotai**	**26.91**	**11**	P	**P**	**18 25 47.0**	**+1.1**
GTA2				pP	pP	18 25 59.0	+0.6
GTA2				pmax	pmax		
	comp=N,15nm,0.9s						
LYN	**LuoYang**	**27.60**	**36**	P	**P**	**18 25 52.0**	**0.0**
LYN				pmax	pmax		
	comp=N,22nm,0.8s						
NJ2	**Nanjing**	**30.16**	**47**	*eP*	**P**	**18 26 16.2**	**+1.4**
NJ2				pmax	pmax		
	comp=N,6.0nm,0.8s						
KSH2	**Kashi**	**30.25**	**332**	P	**P**	**18 26 17.0**	**+1.3**
KSH2				pP	pP	18 26 29.7	+1.4
KSH2				pmax	pmax		
	comp=N,2.0nm,1.0s						
HNS	**HongShan**	**30.91**	**35**	⇑P	**P**	**18 26 21.4**	**+0.1**
HNS				pmax	pmax		
	comp=N,27nm,0.7

comp=Z,101nm,18.8s,baz=235,slow=40
comp=Z,14nm,0.6s
JNU Nakatsue 39.70 53 LR LR 18 46 05.4
comp=Z,69nm,18.9s,baz=282,slow=39
CN2 Changchun 41.25 36 P **P** **18 27 49.6 0.0**
CN2 PcP **PcP** **18 29 48.4 +0.7**
CN2 S **S** **18 33 58.4 -1.7**
CN2 pmax pmax
comp=Z,20nm,1.0s
ZAA0 Zalesovo Array 41.27 353 **P** **18 27 49.8 +0.2**
ZALV Zalesovo Beam 41.27 353 P **P** **18 27 50.4 +0.8**
comp=Z,7.0nm,0.6s,baz=177,slow=8.6,SNR=36
comp=Z,7.0nm,0.6s
ZALV Zalesovo Beam 41.27 353 **P** **18 27 49.9 +0.3**
HILR Hailar Array B 42.40 26 P **P** **18 27 59.2 +0.2**
comp=Z,3.4nm,0.6s,baz=205,slow=9.8,SNR=6.4
comp=Z,3.4nm,0.6s
BNX BinXian 43.53 35 ⇑P **P** **18 28 07.6 -0.5**
BNX pmax pmax
comp=Z,21nm,0.7s
BVAR Borovoye Array 43.76 340 P **P** **18 28 09.8 0.0**
comp=Z,2.2nm,0.7s,baz=150,slow=11,SNR=9.8
comp=Z,2.2nm,0.7s
BORK Borovoye 43.80 340 **P** **18 28 09.6 -0.5**
AB31 Akbulak array 45.23 330 **P** **18 28 21.0 -0.6**
ABKAR Akbulak array 45.23 330 P **P** **18 28 22.5 +0.9**
USRK Ussuriysk Ar. 45.37 39 P **P** **18 28 22.2 -0.6**
comp=Z,3.5nm,0.7s,baz=245,slow=9.5,SNR=2.8
comp=Z,3.5nm,0.7s
HEH HeiHe 46.38 30 *e*P **P** **18 28 30.2 -0.5**
HEH pmax pmax
comp=Z,9.0nm,1.1s
MJAR Matsushiro Arr 46.53 52 P **P** **18 28 31.9 -0.2**
comp=Z,2.2nm,0.8s,baz=248,slow=6.7,SNR=4.1
MJAR PcP **PcP** **18 30 05.7 -0.2**
comp=Z,3.5nm,0.6s,baz=225,slow=2.5,SNR=11
MJAR LR LR 18 50 51.5
comp=Z,79nm,20.0s,baz=261,slow=40
comp=Z,2.2nm,0.8s
MJAR Matsushiro Arr 46.53 52 IAmb IAmb 18 30 19.2
comp=Z,30nm,1.9s
KLR Kul'dur 47.98 33 LR LR 18 52 00.2
comp=Z,30nm,19.6s,baz=254,slow=40
ARTI Arti 50.78 336 P **P** **18 29 05.7 +1.3**
WRA Warramunga Arr 52.16 128 P **P** **18 29 13.9 -1.4**
comp=Z,2.4nm,0.6s,baz=309,slow=7.8,SNR=53
WRA PcP **PcP** **18 30 25.9 -0.7**
comp=Z,1.8nm,0.6s,baz=316,slow=3.3,SNR=9.4
comp=Z,2.4nm,0.6s
WRAB Tennant Creek 52.16 128 P **P** **18 29 12.9 -2.3**
WRAB IAmb IAmb 18 29 14.3
comp=Z,8.2nm,0.6s
WRAB Tennant Creek 52.16 128 P **P** **18 29 14.0 -1.3**
WRAB PcP **PcP** **18 30 25.8 -0.8**
YSS Yuzhno-Sakhali 53.35 41 **P** **18 29 23.1 -0.6**
YSS IAmb IAmb 18 29 25.4
comp=Z,27nm,1.3s
YSS Yuzhno-Sakhali 53.35 41 P **P** **18 29 23.4 -0.3**
YSS sP **pP** **18 29 39.4 +2.6**
FURI Furi 53.57 271 LR LR 18 50 28.2
comp=Z,69nm,20.0s,baz=56,slow=34
ASAR Alice Springs 54.06 132 P **P** **18 29 27.9 -1.3**
comp=Z,1.5nm,0.6s,baz=309,slow=7.0,SNR=46
ASAR PcP **PcP** **18 30 33.5 -0.2**
comp=Z,1.5nm,0.7s,baz=326,slow=4.0,SNR=9.0
ASAR ScP **ScP** **18 34 25.2 -2.9**
comp=Z,0.6nm,0.7s,baz=310,slow=4.7,SNR=6.1
comp=Z,1.5nm,0.6s
YAK Yakutsk 55.39 20 **P** **18 29 37.3 -0.9**
YAK IAmb IAmb 18 29 38.3
comp=Z,11nm,0.6s
YAK Yakutsk 55.39 20 P **P** **18 29 37.5 -0.8**
EIL Elat 56.11 297 LR LR 18 57 60.0
comp=Z,30nm,18.3s,baz=232,slow=40
NRIK Noril'sk 56.30 358 P **P** **18 29 44.4 -0.3**
comp=Z,2.4nm,0.7s,baz=143,slow=7.1,SNR=3.9
comp=Z,2.4nm,0.7s
PMG Port Moresby 58.09 110 P **P** **18 29 55.4 -2.7**
comp=Z,5.3nm,0.7s,baz=287,slow=14,SNR=2.0
comp=Z,5.3nm,0.7s
PMG Port Moresby 58.09 110 IAmb IAmb 18 30 06.9
comp=Z,10nm,1.0s
BRTR Keskin Array B 58.36 309 P **P** **18 29 59.9 -0.1**
comp=Z,2.0nm,0.8s,baz=116,slow=7.7,SNR=11
comp=Z,2.0nm,0.8s
TIXI Tiksi 62.33 12 **P** **18 30 25.3 -0.9**
TIXI IAmb IAmb 18 30 26.4
comp=Z,16nm,1.2s
TIXI Tiksi 62.33 12 P **P** **18 30 25.8 -0.4**
MBAR Mbarara 63.35 263 LR LR 18 56 08.1
comp=Z,60nm,19.3s,baz=90,slow=34
AKASG Malin Array Be 63.51 320 P **P** **18 30 35.2 +0.8**
comp=Z,0.3nm,0.4s,baz=80,slow=5.0,SNR=1.8
comp=Z,0.3nm,0.4s
PETK Petropavlovsk- 64.38 37 P **P** **18 30 39.5 -0.7**
comp=Z,2.4nm,0.6s,baz=237,slow=4.0,SNR=7.1
comp=Z,2.4nm,0.6s
STKA Stephens Creek 64.44 135 P **P** **18 30 39.8 -1.0**
comp=Z,1.0nm,0.5s,baz=326,slow=7.1,SNR=4.3
comp=Z,1.0nm,0.5s
FINES FINESS Array B 67.67 331 P **P** **18 31 01.5 +0.4**
comp=Z,3.9nm,0.9s,baz=104,slow=8.0,SNR=7.2
comp=Z,3.9nm,0.9s
ARCES ARCESS Array B 70.05 340 P **P** **18 31 16.5 +0.8**
comp=Z,3.3nm,0.9s,baz=89,slow=6.3,SNR=6.8
comp=Z,3.3nm,0.9s
LSZ Lusaka 70.20 248 LR LR 18 59 21.6
comp=Z,90nm,18.2s,baz=36,slow=34
LSZ Lusaka 70.20 248 P **P** **18 31 19.4 +1.7**
LSZ Lusaka 70.20 248 P **P** **18 31 19.5 +1.7**
LSZ sP **sP** **18 31 35.9 -1.2**
BILL Bilibino 71.62 22 P **P** **18 31 24.9 -0.4**
GERES GERESS Array B 73.33 317 P **P** **18 31 36.9 +0.9**
comp=Z,1.3nm,0.7s,baz=77,slow=7.8,SNR=3.5
comp=Z,1.3nm,0.7s
HFS Hagfors 73.49 329 P **P** **18 31 37.3 +0.8**
comp=Z,1.7nm,0.7s,baz=106,slow=7.9,SNR=6.7
comp=Z,1.7nm,0.7s
CLL Collm 73.74 320 *e*P **P** **18 31 39.0 +0.8**
KSANE Kasane 73.79 247 **P** **18 31 40.8 +1.6**
KSANE IAmb IAmb 18 31 41.7
comp=Z,7.6nm,0.7s
SPITS Spitsbergen Ar 74.55 348 P **P** **18 31 43.2 +0.7**
comp=Z,15nm,1.1s,baz=103,slow=6.9,SNR=4.6
comp=Z,15nm,1.1s
NOA NORSAR Array B 74.73 330 P **P** **18 31 44.3 +0.4**
comp=Z,2.0nm,0.8s,baz=90,slow=5.8,SNR=3.6
comp=Z,2.0nm,0.8s
LBTB Lobatse 75.97 240 P **P** **18 31 53.0 +1.4**
BOSA Boshof 77.60 237 P **P** **18 32 01.5 +0.7**
comp=Z,4.9nm,0.6s,baz=84,slow=4.6,SNR=17
comp=Z,4.9nm,0.6s
BOSA Boshof 77.60 237 P **P** **18 32 00.4 -0.4**
BOSA IAmb IAmb 18 32 02.6
comp=Z,5.6nm,0.7s
BOSA Boshof 77.60 237 P **P** **18 32 02.0 +1.2**
GAMB Gambell 80.61 27 P **P** **18 32 16.5 +0.1**
baz=280
TSUM Tsumeb 81.05 248 LR LR 19 03 48.1
comp=Z,69nm,21.5s,baz=98,slow=32
TNA Tin City 81.83 25 P **P** **18 32 22.8 -0.1**
baz=283
C16K Lisburne Hills 82.13 22 P **P** **18 32 25.1 +0.7**
baz=285
F14K Arctic Creek 82.49 24 P **P** **18 32 27.0 +0.6**
baz=285
C17K DeLong Mountai 82.84 21 P **P** **18 32 29.2 +1.0**
baz=287
EKA Eskdalemuir Ar 82.90 325 P **P** **18 32 29.8 +1.1**
comp=Z,1.5nm,0.7s,baz=65,slow=8.7,SNR=1.7
comp=Z,1.5nm,0.7s
RDOG Red Dog Mine 83.07 22 P **P** **18 32 30.6 +1.2**
baz=288
F15K North Star Dit 83.10 24 P **P** **18 32 30.0 +0.4**
baz=286
D17K Noatak River 83.11 22 P **P** **18 32 31.0 +1.4**
baz=288,SNR=12
ANM Nome 83.12 25 IAmb IAmb 18 32 40.7
comp=Z,13nm,1.5s
ANM Nome 83.12 25 P **P** **18 32 30.1 +0.4**
baz=286
MAW Mawson 83.44 191 P **P** **18 32 32.4 +1.3**
comp=Z,20nm,1.0s,baz=49,slow=9.3,SNR=1.8
comp=Z,20nm,1.0s
C18K Utukok River 83.48 21 IAmb IAmb 18 32 33.3
comp=Z,9.2nm,0.9s
C18K Utukok River 83.48 21 P **P** **18 32 32.8 +1.2**
baz=289
G15K Niukluk 83.55 25 P **P** **18 32 32.6 +0.7**
baz=287
E17K Hotham Inlet 83.77 22 P **P** **18 32 33.9 +0.9**
baz=289,SNR=9.5
C19K Lookout Ridge 83.87 20 IAmb IAmb 18 32 35.7
comp=Z,12nm,1.1s
C19K Lookout Ridge 83.87 20 P **P** **18 32 34.8 +1.2**
baz=291
M11K Mekoryuk 83.90 29 P **P** **18 32 33.3 -0.4**
baz=286
E18K Tukpahlearik C 84.10 22 IAmb IAmb 18 32 37.1
comp=Z,7.8nm,0.8s
E18K Tukpahlearik C 84.10 22 P **P** **18 32 35.7 +1.1**
baz=290,SNR=9.5
G16K Koyuk River 84.11 24 IAmb IAmb 18 32 36.4
comp=Z,9.3nm,1.1s
G16K Koyuk River 84.11 24 P **P** **18 32 35.9 +1.2**
baz=288
K13K Kusilvak Mount 84.18 28 P **P** **18 32 35.4 +0.3**
baz=287
F17K Baldwin Pennin 84.19 23 IAmb IAmb 18 32 37.0
comp=Z,7.9nm,0.8s
F17K Baldwin Pennin 84.19 23 P **P** **18 32 36.4 +1.3**
baz=289
NIKH Nikolski High 84.39 37 P **P** **18 32 35.6 -0.8**
baz=284
H16K Eilim 84.39 25 P **P** **18 32 37.1 +1.0**
baz=289
J14K Nanvaranak Lak 84.43 27 P **P** **18 32 36.9 +0.6**
baz=288
F18K Selawik 84.74 23 P **P** **18 32 39.1 +1.2**
baz=291,SNR=8.7
G17K Kiwalik Mounta 84.74 24 P **P** **18 32 38.8 +0.8**
baz=290
H17K Granite Mounta 85.23 24 IAmb IAmb 18 32 42.8
comp=Z,9.9nm,1.0s
H17K Granite Mounta 85.23 24 P **P** **18 32 40.7 +0.3**
baz=291
M13K Dall Lake 85.24 29 P **P** **18 32 40.3 -0.2**
baz=288
L14K Kuka Creek 85.26 28 P **P** **18 32 40.2 -0.4**
baz=288
I17K Unalakleet 85.28 25 P **P** **18 32 41.0 +0.4**
baz=290
E19K Redstone River 85.30 21 P **P** **18 32 41.7 +0.9**
baz=293
E20K Nigu River 85.34 20 P **P** **18 32 41.9 +0.9**
baz=294
F19K Shaleruckik Mo 85.35 22 IAmb IAmb 18 32 43.6
comp=Z,27nm,1.9s
F19K Shaleruckik Mo 85.35 22 P **P** **18 32 41.7 +0.8**
baz=292,SNR=5.2
B22K Teshekpuk Lake 85.35 18 P **P** **18 32 42.1 +1.2**
baz=296
G18K Tagagawik 85.37 23 P **P** **18 32 41.7 +0.6**
baz=292
K15K Wolf Creek Mou 85.46 27 P **P** **18 32 42.1 +0.5**
baz=289
J16K Anvik River 85.53 26 P **P** **18 32 42.9 +1.0**
baz=290
L15K Ungalak Mounta 85.69 27 P **P** **18 32 42.8 0.0**
baz=290
H18K Honhosa River 85.76 24 P **P** **18 32 43.7 +0.6**
baz=292
M14K Bethel 85.78 28 P **P** **18 32 43.0 -0.2**
baz=289
G19K Purcell Mounta 85.87 23 IAmb IAmb 18 32 45.3
comp=Z,9.4nm,0.9s
G19K Purcell Mounta 85.87 23 P **P** **18 32 44.2 +0.7**
baz=293
F20K Avaraart Lake 86.00 22 IAmb IAmb 18 32 45.8
comp=Z,8.7nm,0.8s
F20K Avaraart Lake 86.00 22 P **P** **18 32 45.1 +1.0**
baz=294
E21K Killik River 86.01 20 P **P** **18 32 45.0 +0.7**
baz=296
J17K VABM Dome 86.13 25 IAmb IAmb 18 32 47.1
comp=Z,9.7nm,1.0s
J17K VABM Dome 86.13 25 P **P** **18 32 45.3 +0.4**
baz=292
N14K Kuskokwak Cree 86.19 29 P **P** **18 32 44.3 -0.9**
baz=290
D22K Ayikyak River 86.24 19 IAmb IAmb 18 32 47.3
comp=Z,6.8nm,0.8s
D22K Ayikyak River 86.24 19 P **P** **18 32 47.1 +1.7**
baz=297
M15K Kasigluk River 86.39 28 P **P** **18 32 46.2 0.0**
baz=290
L16K Owhat River 86.58 27 P **P** **18 32 47.8 +0.7**
baz=291
O14K Tigyukauivet M 86.62 30 P **P** **18 32 46.7 -0.6**
baz=290
K17K Iditarod 86.71 26 **P** **18 32 49.0 +1.2**
K17K IAmb IAmb 18 32 49.7
comp=Z,11nm,0.8s
K17K Iditarod 86.71 26 P **P** **18 32 48.2 +0.5**
baz=292
F21K Alatna River 86.72 21 P **P** **18 32 48.9 +1.1**
baz=296
D23K Nanushuk River 86.84 19 IAmb IAmb 18 32 50.9
comp=Z,9.0nm,0.9s
D23K Nanushuk River 86.84 19 P **P** **18 32 49.9 +1.6**
baz=299
N15K Kwethluk River 86.85 29 IAmb IAmb 18 32 51.0
comp=Z,12nm,0.9s
N15K Kwethluk River 86.85 29 P **P** **18 32 48.5 -0.1**
baz=291
L17K Donlin 86.94 26 P **P** **18 32 49.5 +0.6**
baz=292
H20K Anzaneega Mo 86.97 23 P **P** **18 32 49.9 +0.9**
baz=295,SNR=10
G21K Allakaket 87.03 22 IAmb IAmb 18 32 50.7
comp=Z,7.8nm,0.8s
G21K Allakaket 87.03 22 P **P** **18 32 49.9 +0.7**
baz=296
M16K Timber Creek 87.06 28 P **P** **18 32 49.7 +0.2**
baz=292
J18K Innoko River 87.08 25 P **P** **18 32 50.3 +0.7**
baz=294
ESDC Sonseca Array 87.13 310 P **P** **18 32 51.4 +1.0**
comp=Z,0.3nm,0.5s,baz=74,slow=6.3,SNR=1.9
comp=Z,0.3nm,0.5s
ESDC Sonseca Array 87.13 310 P **P** **18 32 51.3 +1.0**
J19K Poorman 87.31 24 IAmb IAmb 18 32 53.2
comp=Z,7.4nm,1.0s
J19K Poorman 87.31 24 P **P** **18 32 51.2 +0.6**
baz=294
D24K Happy Valley 87.33 18 P **P** **18 32 51.6 +0.9**
baz=300
O15K Ungalikthiuk R 87.34 30 P **P** **18 32 50.5 -0.4**
baz=291
N16K Nishlik Lake 87.35 28 P **P** **18 32 50.9 -0.1**
baz=292
I20K Naaghedeneel 87.42 23 P **P** **18 32 51.8 +0.7**
baz=296
G22K Bettles 87.55 21 P **P** **18 32 52.6 +0.9**
baz=298
L18K Granite Mounta 87.60 26 P **P** **18 32 52.8 +0.7**
baz=294
M17K Holitna River 87.60 27 P **P** **18 32 52.3 +0.3**
baz=293
E23K Chandalar 87.63 20 IAmb IAmb 18 32 54.0
comp=Z,10nm,1.4s
E23K Chandalar 87.63 20 P **P** **18 32 53.4 +1.2**
baz=300
H21K Melozitna Rive 87.67 22 P **P** **18 32 53.2 +0.9**
baz=297,SNR=8.9
J20K Nowinta River 87.82 24 IAmb IAmb 18 32 56.6
comp=Z,5.2nm,0.8s
J20K Nowinta River 87.82 24 P **P** **18 32 53.8 +0.7**
baz=296
COLD Coldfoot 87.84 20 P **P** **18 32 54.7 +1.6**
baz=299
E24K Your Creek 87.98 19 P **P** **18 32 54.8 +0.9**
baz=301
O16K Kokwok River B 88.00 29 P **P** **18 32 53.8 -0.2**
baz=292
N17K Nushagak Hills 88.06 28 P **P** **18 32 54.6 +0.3**
baz=293
H22K Ishtalitna Cre 88.08 22 P **P** **18 32 55.6 +1.2**
baz=298
G23K Bananza Creek 88.16 21 P **P** **18 32 55.9 +1.2**
baz=300
I21K Tanana 88.19 23 IAmb IAmb 18 32 57.6
comp=Z,8.7nm,1.0s
I21K Tanana 88.19 23 P **P** **18 32 56.3 +1.5**
baz=298
K20K Telida 88.21 25 P **P** **18 32 55.6 +0.6**
baz=296,SNR=5.4
P16K Nushagak River 88.27 29 P **P** **18 32 55.3 0.0**
baz=293
M18K Stony River 88.27 27 P **P** **18 32 55.6 +0.3**
baz=294
L19K White Mountain 88.40 26 IAmb IAmb 18 32 58.1
comp=Z,6.3nm,1.0s
L19K White Mountain 88.40 26 P **P** **18 32 56.3 +0.4**
baz=295
O17K Koliganek Bris 88.40 28 P **P** **18 32 56.0 +0.1**
baz=293
CHUM Lake Minchumin 88.67 24 P **P** **18 32 57.6 +0.5**
baz=298,SNR=5.3
H23K Yukon River 88.77 21 P **P** **18 32 58.8 +1.2**
baz=300
E25K Arctic Village 88.89 19 P **P** **18 32 59.5 +1.4**
baz=304
R16K Pilot Point 89.04 31 P **P** **18 32 58.6 -0.4**
baz=293
BPAW Bear Paw Mtn. 89.09 23 IAmb IAmb 18 33 01.5
comp=Z,10.0nm,1.0s
BPAW Bear Paw Mtn. 89.09 23 P **P** **18 33 00.1 +1.0**
baz=299,SNR=8.3
N19K Bonanza Creek 89.15 27 **P** **18 33 00.6 +1.1**
N19K Bonanza Creek 89.15 27 P **P** **18 33 00.4 +0.8**
baz=296
F25K Christian Rive 89.16 19 IAmb IAmb 18 34 53.5
comp=Z,4.9nm,0.5s
F25K Christian Rive 89.16 19 P **P** **18 33 00.3 +0.9**
baz=303
I23K Minto, Yukon-K 89.18 22 P **P** **18 33 00.3 +0.9**
baz=300
PPLA Purkeypile 89.18 25 P **P** **18 32 59.8 0.0**
baz=298
O18K Koktuh Hills 89.23 28 P **P** **18 32 59.8 0.0**
baz=295
M20K Styx River 89.26 26 IAmb IAmb 18 33 02.0
comp=Z,5.0nm,0.6s
M20K Styx River 89.26 26 P **P** **18 33 01.0 +0.9**
baz=297
H24K Noodor Dome 89.36 21 P **P** **18 32 59.8 -0.6**
baz=301
P18K Big Mountain, 89.42 28 P **P** **18 33 01.2 +0.4**
baz=295
NEA2 Nenana 89.57 22 IAmb IAmb 18 33 03.3
comp=Z,4.6nm,0.8s
NEA2 Nenana 89.57 22 P **P** **18 33 01.9 +0.5**
baz=300
F26K Sheenjek River 89.57 19 P **P** **18 33 03.1 +1.7**
baz=305
Q17K Contact Creek 89.59 30 P **P** **18 33 00.9 -0.7**
baz=294
D27M Malcolm River 89.59 17 P **P** **18 33 02.8 +1.3**
baz=308
R17L Mt. Peulik Vol 89.62 30 P **P** **18 33 00.8 -0.9**
baz=294
TRF Thorofare Moun 89.67 24 P **P** **18 33 01.1 -0.9**
baz=299
SKT Skwentna 89.88 25 P **P** **18 33 03.1 +0.2**
baz=298,SNR=7.1
SPCR Spurr Chakacha 89.96 26 P **P** **18 33 03.2 -0.1**
baz=298
CCD Concordia, Ant 89.99 173 P **P** **18 33 04.0 +0.6**
MCK McKinley 90.06 23 P **P** **18 33 03.7 0.0**
baz=300
G26K Porcupine Rive 90.12 19 IAmb IAmb 18 33 06.0
comp=Z,7.5nm,0.7s
G26K Porcupine Rive 90.12 19 P **P** **18 33 05.0 +1.2**
baz=305
ILAR Eielson Array 90.28 22 P **P** **18 33 04.3 -0.3**
comp=Z,1.4nm,0.7s,baz=287,slow=4.5,SNR=17
comp=Z,1.4nm,0.7s
ILAR Eielson Array 90.28 22 P **P** **18 33 03.5 -1.1**
PRP Porcupine Dome 90.35 21 IAmb IAmb 18 33 07.0
comp=Z,5.3nm,0.9s
PRP Porcupine Dome 90.35 21 P **P** **18 33 05.9 +0.8**
baz=304
E28M Babbage River 90.40 17 IAmb IAmb 18 35 02.3
comp=Z,3.9nm,0.9s
E28M Babbage River 90.40 17 P **P** **18 33 06.4 +1.2**
baz=309
HDA Harding Lake 90.45 22 P **P** **18 33 05.1 -0.3**
baz=302
SUA Susitna One 90.46 26 P **P** **18 33 04.8 -0.9**
baz=299
M22K Willow 90.58 25 P **P** **18 33 06.2 +0.2**
baz=299
CHIR Chirikof Islan 90.74 32 P **P** **18 33 06.0 -1.0**
baz=295
G27K Doyon Strip 90.88 19 P **P** **18 33 08.1 +0.7**
baz=307
J25K Salcha River, 90.91 22 P **P** **18 33 08.3 +0.7**
baz=304
F28M Old Crow 90.93 18 P **P** **18 33 08.8 +1.2**
baz=309
DHY Denali Highway 91.00 23 P **P** **18 33 08.4 +0.2**
baz=302
E29M Blow River 91.00 17 IAmb IAmb 18 35 44.6
comp=Z,14nm,1.6s
E29M Blow River 91.00 17 P **P** **18 33 09.1 +1.2**
baz=311
PMR Palmer 91.07 25 P **P** **18 33 08.6 +0.3**
baz=300
RC01 Rabbit Creek A 91.07 26 P **P** **18 33 08.7 +0.4**
baz=300,SNR=6.6
WAT6 Susitna Watana 91.12 24 P **P** **18 33 08.6 -0.2**
baz=302
K24K Donnelly Dome 91.21 22 P **P** **18 33 09.6 +0.6**
baz=303
H27K Steamboat Moun 91.27 19 IAmb IAmb 18 33 12.3
comp=Z,3.1nm,0.8s
H27K Steamboat Moun 91.27 19 P **P** **18 33 10.8 +1.5**
baz=307
SML Sawmill 91.29 25 P **P** **18 33 09.5 +0.1**
baz=301
BRSE Bradley Lake S 91.30 27 P **P** **18 33 09.0 -0.5**
baz=299
KNK Knik Glacier 91.44 25 P **P** **18 33 10.0 -0.2**
baz=301
M23K Glacier View 91.54 25 P **P** **18 33 11.0 +0.4**
baz=302
RIDG Independent Ri 91.59 22 P **P** **18 33 11.0 +0.2**
baz=304
J26L Joseph Creek 91.61 21 P **P** **18 33 11.5 +0.5**
baz=305
I27K Kandik River 91.62 20 P **P** **18 33 12.1 +1.1**
baz=307
SEW Seward 91.68 26 P **P** **18 33 11.1 -0.1**
baz=300
SCRK Sand Creek 91.77 22 IAmb IAmb 18 33 13.6
comp=Z,6.9nm,1.2s
SCRK Sand Creek 91.77 22 P **P** **18 33 12.5 +0.8**
baz=305
PAX Paxson 91.79 23 P **P** **18 33 12.3 +0.5**
baz=304
G29M Pine Creek 91.93 18 P **P** **18 33 13.7 +1.4**
baz=310
M24K Tolsona, Glenn 91.99 24 P **P** **18 33 13.3 +0.6**
baz=303
HARP HAARP 92.23 23 P **P** **18 33 14.1 +0.4**
baz=304
INK Inuvik 92.25 16 P **P** **18 33 13.8 +0.1**
comp=Z,1.4nm,0.5s,baz=333,slow=5.7,SNR=9.6
comp=Z,1.4nm,0.5s
INK Inuvik 92.25 16 P **P** **18 33 14.8 +1.1**
baz=315
I28M Miner Creek 92.27 20 P **P** **18 33 15.2 +1.2**
baz=309
H29M Whitestone 92.28 19 P **P** **18 33 15.1 +1.2**
baz=310
G30M tAoh Zraii Nji 92.42 17 P **P** **18 33 15.9 +1.3**
baz=312
KLU Klutina 92.43 24 P **P** **18 33 15.1 +0.3**
baz=303
L26K Log Cabin Wild 92.55 22 P **P** **18 33 16.1 +0.8**
baz=306
N25K Chitina, Valde 92.89 24 P **P** **18 33 16.9 0.0**
baz=304
G31M Satah River 93.02 17 P **P** **18 33 19.4 +2.1**
baz=314
M26K Nabesna, AK 93.05 23 IAmb IAmb 18 33 21.2
comp=Z,8.0nm,1.2s
M26K Nabesna, AK 93.05 23 P **P** **18 33 19.3 +1.7**
baz=306
L27K Beaver Creek, 93.09 22 P **P** **18 33 19.5 +1.8**
baz=307
BMRM Bremner River 93.25 24 P **P** **18 33 18.7 +0.2**
baz=304

Q23K	**Middleton Isla**	**93.38**	**26**	P		**P**	**18 33 19.3**	**+0.3**
	baz=303							
M27K	**Edge Creek, AK**	**93.50**	**23**	P		**P**	**18 33 19.8**	**+0.1**
	baz=307							
I30M	**Mount Dempster**	**93.56**	**19**	IAmb		IAmb	18 33 21.2	
	comp=Z,9.2nm,1.4s							
MCARA	**McCarthy VSAT**	**93.64**	**24**	P		**P**	**18 33 20.0**	**-0.2**
	baz=306							
H31M	**Peel River**	**93.78**	**18**	P		**P**	**18 33 21.2**	**+0.4**
	baz=314							
BVCY	**Beaver Creek**	**93.84**	**22**	P		**P**	**18 33 22.2**	**+1.0**
	baz=308							
CRQE	**Cirque**	**93.98**	**24**	P		**P**	**18 33 22.4**	**+0.4**
	baz=306							
J30M	**Hart River**	**94.00**	**19**	P		**P**	**18 33 22.3**	**+0.2**
	baz=312							
K29M	**Barlow Dome**	**94.10**	**20**	P		**P**	**18 33 22.8**	**+0.3**
	baz=311							
L29M	**L29M**	**94.37**	**21**	P		**P**	**18 33 24.2**	**+0.5**
	baz=310							
CTG	**Chitna Glacier**	**94.54**	**23**	P		**P**	**18 33 24.4**	**-0.2**
	baz=307							
M29M	**Somme Creek**	**94.69**	**21**	P		**P**	**18 33 25.6**	**+0.4**
	baz=310							
YUK8	**Steele Glacier**	**94.95**	**23**	P		**P**	**18 33 26.5**	**-0.1**
	baz=309							
O28M	**Mount Upton**	**95.11**	**23**	P		**P**	**18 33 26.9**	**-0.5**
	baz=308							
M30M	**Minto, Yukon**	**95.19**	**21**	P		**P**	**18 33 27.7**	**+0.3**
	baz=311							
YUK4	**Talbot Arm**	**95.33**	**22**	P		**P**	**18 33 28.8**	**+0.5**
	baz=310							
HYT	**Haines Junctio**	**96.09**	**22**	P		**P**	**18 33 32.1**	**+0.4**
	baz=311							
N31M	**Braeburn, Yuko**	**96.27**	**21**	P		**P**	**18 33 33.1**	**+0.7**
	baz=312							
O30N	**Mendenhall**	**96.64**	**22**	P		**P**	**18 33 34.3**	**+0.2**
	baz=312							
PDAR	**Pinedale Array**	**120.61**	**19**	PKP		**PKiKP**	**18 38 56.8**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=114,slow=1.8,SNR=2.7							
PDAR	**Pinedale Array**	**120.61**	**19**			**PKPdf**	**18 38 56.0**	**-0.3**
NVAR	**Mina Array Bea**	**120.87**	**29**	PKP		**PKPdf**	**18 38 56.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=293,slow=3.8,SNR=3.9							
TXAR	**Lajitas Array**	**134.78**	**21**	PKP		**PKPdf**	**18 39 24.2**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=168,slow=1.4,SNR=4.6							
PLCA	**Paso Flores**	**149.00**	**204**	PKPbc		**PKiKP**	**18 39 53.3**	**-0.4**
	comp=Z,3.2nm,0.8s,baz=169,slow=5.2,SNR=8.4							
PLCA	**Paso Flores**	**149.00**	**204**	PKPbc		**PKiKP**	**18 39 53.1**	**-0.6**

IDC 10 18:35:00.1±1.5, 1°15N×123°52E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=238.2km s-min=23.2km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.49**	**154**	P	P	18 40 10.2	-1.6
	0.4nm,0.7s,baz=329,slow=11,SNR=2.5						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**26.65**	**158**	P	P	18 40 42.5	+1.6
	0.4nm,0.7s,baz=337,slow=8.9,SNR=1.9						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**57.92**	**328**	P	P	18 44 54.7	+0.5
	0.3nm,0.5s,baz=114,slow=8.2,SNR=10.0						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**62.24**	**329**	P	P	18 45 22.8	-0.9
	0.4nm,0.7s,baz=127,slow=5.7,SNR=4.5						
	0.4nm,0.7s						

*IDC **10** 18:41:54.6±1.7, 35°04S×72°66W, h0km, mb3.7/2, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=89.3km s-min=33.2km az=80.0*
*SJA **10** 18:42:01.7±0.6, 35°10S×71°23W, h105km±2km, ML3.7, MW3.7*
*GUC **10** 18:42:03.4±0.5, 35°08S×71°14W, h98km±2km, ML3.9*
ISC 10 18:42:03.5±1.0, 35°11S±0°04×71°18W±0°05, h98km±6km, n50, σ1§01/59, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BO02	**Sierra Bellavi**	**0.46**	**46**	*i* P	**Pn**	**18 42 18.7**	**-0.2**
BO02				*e*S	**Sn**	**18 42 30.5**	**+0.1**
BO02				IAML		18 42 31.8	
	comp=E,18μm,0.2s						
BO02	**Sierra Bellavi**	**0.46**	**46**	*e*P	**Pn**	**18 42 18.5**	**-0.4**
BO02				*e*S	**Sn**	**18 42 31.3**	**+0.9**
GO05	**Hualane**	**0.62**	**279**	*i* P	**Pn**	**18 42 20.7**	**+0.7**
GO05				*e*S	**Sn**	**18 42 33.5**	**+1.1**
GO05				IAML		18 42 35.1	
	comp=N,6μm,0.4s						
GO05	**Hualane**	**0.62**	**279**	*e*P	**Pn**	**18 42 16.4**	**-3.6**
GO05				IAML		18 42 34.7	
	comp=Z,3μm,0.2s						
ML02	**Panimavida**	**0.68**	**196**	*e*P	**Pn**	**18 42 21.1**	**+0.5**
ML02				IAML		18 42 36.1	
	comp=Z,1μm,0.3s						
BO01	**Tunca**	**0.72**	**7**	*i* P	**Pn**	**18 42 20.8**	**-0.2**
BO01				*e*S	**Sn**	**18 42 33.8**	**-0.2**
BO01				IAML		18 42 34.6	
	comp=E,7μm,0.2s						
BO01	**Tunca**	**0.72**	**7**	*e*P	**Pn**	**18 42 20.4**	**-0.5**
BO01				*e*S	**Sn**	**18 42 34.1**	**+0.2**
BO01				IAML		18 42 34.5	
	comp=Z,3μm,0.5s						
BO04	**La Punta**	**1.21**	**23**	*i* P	**Pn**	**18 42 26.1**	**-0.2**
BO04				*e*S	**Sn**	**18 42 43.2**	**-0.2**
BO04				IAML		18 42 44.7	
	comp=N,2μm,0.2s						
MT01	**Popeta**	**1.24**	**357**	IAML		18 42 44.7	
	comp=E,7μm,0.3s						
MT01	**Popeta**	**1.24**	**357**	*e*P	**Pn**	**18 42 26.2**	**-0.3**
MT01				*e*S	**Sn**	**18 42 43.9**	**0.0**
MT01				IAML		18 42 45.0	
	comp=Z,2μm,0.2s						
MT09	**Talagante**	**1.34**	**7**	*i* P	**Pn**	**18 42 27.6**	**-0.3**
MT09				IAML		18 42 48.5	
	comp=N,4μm,0.2s						
MT12	**Pirque**	**1.47**	**21**	IAML		18 42 51.3	
	comp=N,1μm,0.3s						
MT13	**San Alfonso**	**1.55**	**29**	*i* P	**Pn**	**18 42 30.6**	**+0.2**
MT13				IAML		18 42 53.5	
	comp=E,1μm,0.3s						
MT13	**San Alfonso**	**1.55**	**29**	*e*P	**Pn**	**18 42 30.7**	**+0.3**
MT13				*e*S	**Sn**	**18 42 51.2**	**+0.4**
MT13				IAML		18 42 54.5	
	comp=Z,748nm,0.3s						
BI02	**San Fabin de**	**1.55**	**183**	*e*P	**Pn**	**18 42 29.9**	**-0.5**
BI02				IAML		18 42 53.9	
	comp=Z,368nm,0.4s						
EDS3	**Malargue**	**1.60**	**115**	*e*P	**Pn**	**18 42 31.0**	**0.0**
MT15	**Las Vizcachas**	**1.61**	**21**	*i* P	**Pn**	**18 42 27.9**	**-3.2**
MT15				IAML		18 42 52.8	
	comp=E,3μm,0.2s						
MT03	**Universidad Ad**	**1.71**	**19**	*i* P	**Pn**	**18 42 32.1**	**-0.2**
MT03				IAML		18 42 57.1	
	comp=N,2μm,0.3s						
MT03	**Universidad Ad**	**1.71**	**19**	*e*P	**Pn**	**18 42 32.2**	**-0.1**
MT03				*e*S	**Sn**	**18 42 54.3**	**+0.1**
MT03				IAML		18 42 56.0	
	comp=Z,1μm,0.1s						
MT05	**Renca**	**1.75**	**12**	IAML		18 42 58.2	
	comp=E,1μm,0.4s						
MT05	**Renca**	**1.75**	**12**	*e*P	**Pn**	**18 42 32.6**	**-0.3**
MT05				*e*S	**Sn**	**18 42 54.0**	**-1.2**
MT05				IAML		18 42 57.5	
	comp=Z,880nm,0.4s						
MT14	**Cerro Calįn**	**1.79**	**18**	*i* P	**Pn**	**18 42 33.0**	**-0.4**
MT14				IAML		18 42 57.4	
	comp=E,2μm,0.1s						
MT02	**Curacav**	**1.84**	**1**	*e*P	**Pn**	**18 42 33.7**	**-0.3**
MT02				*e*S	**Sn**	**18 42 57.0**	**-0.2**
MT02				IAML		18 43 00.3	
	comp=Z,346nm,0.4s						
MT04	**Ro Olivares**	**1.91**	**27**	IAML		18 43 01.0	
	comp=E,988nm,0.1s						
MT04	**Ro Olivares**	**1.91**	**27**	*e*P	**Pn**	**18 42 35.0**	**-0.1**
MT04				*e*S	**Sn**	**18 42 59.2**	**+0.2**
MT04				IAML		18 43 02.3	
	comp=Z,435nm,0.2s						
MT10	**Hacienda Santa**	**1.91**	**17**	*i* P	**Pn**	**18 42 35.2**	**+0.2**
MT10				IAML		18 42 59.9	
	comp=E,2μm,0.5s						
MT08	**Bocatoma Ro**	**1.92**	**31**	*e*P	**Pn**	**18 42 35.3**	**+0.1**
MT08				*e*S	**Sn**	**18 43 00.5**	**+1.2**
PEL	**Peldehue**	**2.00**	**12**	IAML		18 43 03.0	
	comp=E,1μm,0.2s						
PEL	**Peldehue**	**2.00**	**12**	*e*P	Pn	18 42 30.2	-5.9
PEL				*e*S	**Sn**	**18 43 00.6**	**-0.3**
PEL				IAML		18 43 05.8	
	comp=Z,554nm,0.5s						
VA01	**Torpederas**	**2.12**	**349**	*i* P	**Pn**	**18 42 37.4**	**-0.1**
VA01				IAML		18 43 04.0	
	comp=N,866nm,0.2s						
VA01	**Torpederas**	**2.12**	**349**	*e*P	**Pn**	**18 42 36.9**	**-0.6**
VA01				IAML		18 43 07.0	
	comp=Z,250nm,0.3s						
ROCH	**El Roble**	**2.14**	**4**	IAML		18 43 06.6	
	comp=E,911nm,0.5s						
ROCH				IAML		18 43 08.7	
	comp=N,539nm,0.3s						
RFA	**San Rafael**	**2.26**	**82**	*e*P	**Pn**	**18 42 38.2**	**-1.2**
RFA				*e*S	**Sn**	**18 43 05.0**	**-1.9**
VA03	**San Esteban**	**2.40**	**13**	*i* P	**Pn**	**18 42 40.9**	**-0.4**
VA03	**San Esteban**	**2.40**	**13**	*e*P	**Pn**	**18 42 40.9**	**-0.4**
VA03				*e*S	**Sn**	**18 43 09.8**	**-0.4**
VA03				IAML		18 43 14.7	
	comp=Z,329nm,0.3s						
CANA	**Caviahue**	**2.77**	**178**	*e*P	Pn	18 42 43.0	-3.3
CANA				*e*S	Sn	18 43 05.5	-14
ASAL	**Salagasta**	**3.18**	**39**	*e*P	**Pn**	**18 42 52.0**	**+0.3**
ASAL				*e*S	Sn	18 43 18.0	-11
RTLS	**Leoncito**	**3.66**	**26**	*e*P	**Pn**	**18 42 58.5**	**+0.2**
RTLS				*e*S	**Sn**	**18 43 43.3**	**+2.7**
RTLS				IAML		18 43 44.0	
	comp=Z,118nm,0.3s						
CO02	**Combarbal**	**3.90**	**2**	*e*P	**Pn**	**18 43 00.4**	**-1.0**
CO02				*e*S	**Sn**	**18 43 47.1**	**+0.9**
CO02				IAML		18 44 07.8	
	comp=Z,118nm,0.5s						
CO03	**El Pedregal**	**4.28**	**6**	*e*P	**Pn**	**18 43 05.6**	**-0.9**
CO03				*e*S	**Sn**	**18 43 53.8**	**-1.6**
CO03				IAML		18 43 59.7	
	comp=Z,70nm,0.3s						
RTLL	**Cerro Villicun**	**4.40**	**32**	*e*P	**Pn**	**18 43 07.2**	**-0.9**
RTLL				*e*S	**Sn**	**18 43 56.6**	**-1.7**
RTLL				IAML		18 43 58.1	
	comp=Z,52nm,0.4s						
ACCO	**Cerro Coronel**	**4.85**	**22**	*e*P	**Pn**	**18 43 13.4**	**-1.0**
AROD	**Rodeo**	**5.13**	**17**	*e*P	**Pn**	**18 43 17.8**	**-0.6**
PLCA	**Paso Flores**	**5.64**	**175**	Pn	**Pn**	**18 43 23.9**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=5.9						
	comp=Z,1.0nm,0.4s						
H03S1	**Juan Fernandez**	**6.50**	**279**	T	T	18 49 43.4	
	baz=97,slow=75,SNR=59						
H03S3	**Juan Fernandez**	**6.51**	**279**	T	T	18 49 36.8	
	baz=97,slow=75,SNR=85						
H03S2	**Juan Fernandez**	**6.52**	**279**	T	T	18 49 45.6	
	baz=97,slow=75,SNR=80						
LPAZ	**La Paz**	**18.94**	**9**	P	**Pn**	**18 46 20.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=175,slow=11,SNR=5.8						
	comp=Z,1.6nm,0.6s						
TXAR	**Lajitas Array**	**71.04**	**330**	P	**P**	**18 53 11.3**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=150,slow=9.6,SNR=6.4						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	**85.07**	**333**	P	**P**	**18 54 28.0**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=190,slow=3.1,SNR=4.5						
	comp=Z,0.3nm,0.6s						

*MEX **10** 18:55:29.6±0.7, 14°05N×92°84W, h10km, MD4.0*
*GCG **10** 18:55:30.2±1.5, 13°98N×92°59W, h35km±999km, MD3.9, ML4.0, Presumed earthquake*
*CATAC **10** 18:55:32.0±0.7, 14°N±3°×9°3W±°, h26km±5km, M3.6/11, MLv3.6/11, Error ellipse: s-maj=8.9km s-min=4.5km az=50.5, confirmed*
ISC 10 18:55:25.6±2.1, 13°99N±0°07×92°72W±0°05, h7km±11km, n32, σ1§56/49, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.01**	**26**	*e*P	**Pg**	**18 55 45.1**	**0.0**
THIG				*e*S	**Sb**	**18 55 58.3**	**-0.6**
SMCA	**Catarina**	**1.06**	**36**	*i* P	**Pb**	**18 55 47.6**	**+1.3**
RTAL	**Retalhuleu**	**1.12**	**62**	*e*P	**Pb**	**18 55 48.6**	**+1.2**
RTAL				*e*S	**Sn**	**18 56 04.2**	**+0.7**
RTAL	**Retalhuleu**	**1.12**	**62**	P	**Pn**	**18 55 49.2**	**+1.4**
RTAL				S	**Sn**	**18 56 03.8**	**+0.3**
PATR	**El Naranjo**	**1.21**	**23**	*e*P	**Pg**	**18 55 48.9**	**0.0**
PATR				*e*S	**Sn**	**18 56 05.5**	**-0.5**
CHUJ	**Union Juarez**	**1.24**	**28**	*e*P	**Pg**	**18 55 49.7**	**+0.1**
CHUJ				*e*S	**Sb**	**18 56 04.7**	**-1.2**
PAVE	**Pavencul**	**1.30**	**24**	*e*P	**Pb**	**18 55 50.5**	**-0.1**
PAVE				*e*S	**Sg**	**18 56 06.4**	**-1.2**
STG2	**El Palmar, Qui**	**1.37**	**71**	*i* S	**Sb**	**18 56 07.3**	**-2.3**
STG5	**El Palmar, Qui**	**1.39**	**73**	*i* P	**Pb**	**18 55 50.6**	**-1.4**
STG5				*e*S	**Sb**	**18 56 06.8**	**-3.2**
STG8	**El Palmar, Qui**	**1.40**	**71**	*i* P	**Pb**	**18 55 51.1**	**-1.1**
SOKI	**Kika Raxquin**	**1.52**	**57**	*i* P	**Pn**	**18 55 54.2**	**+0.7**
HUEH	**Huehuetenango**	**1.77**	**42**	*e*P	**Pb**	**18 55 58.8**	**+0.3**
HUEH				*e*S	**Sg**	**18 56 22.1**	**-0.4**
HUEH	**Huehuetenango**	**1.77**	**42**	P	**Pb**	**18 55 58.9**	**+0.4**
HUEH				S	**Sb**	**18 56 19.2**	**-1.7**
PCIG		**1.77**	**344**	*e*P	**Pn**	**18 55 56.5**	**-0.1**
PCIG				*e*S	Sn	18 56 11.9	-7.6
QUIS	**Sacapulas**	**2.04**	**50**	*i* P	**Pb**	**18 56 03.4**	**+0.4**
QUIS				IAML		18 56 34.0	
	comp=E,485nm,0.4s						
FG16	**Alotenango, Sa**	**2.16**	**82**	*i* P	Pn	18 55 58.8	-3.4
FG16				IAML		18 56 25.5	
	comp=N,3μm,0.3s						
CCIG	**Comitan**	**2.35**	**14**	*e*P	**Pn**	**18 56 06.4**	**+1.6**
CCIG				*e*S	**Sn**	**18 56 34.0**	**+0.1**
CCIG	**Comitan**	**2.35**	**14**	P	**Pb**	**18 56 09.1**	**+0.7**
CCIG				S	**Sn**	**18 56 34.9**	**+1.0**
CCIG	**Comitan**	**2.35**	**14**	*i* P	**Pn**	**18 56 07.8**	**+3.1**
APG	**El Apazote**	**2.40**	**65**	*i* P	**Pn**	**18 56 07.8**	**+2.2**
CARR	**Arriaga**	**2.52**	**333**	*e*P	**Pn**	**18 56 08.0**	**+1.0**
CARR				*e*S	**Sn**	**18 56 37.4**	**-0.7**
FAME	**Alcaldia de Sa**	**2.63**	**93**	P	**Pn**	**18 56 11.1**	**+2.7**
FAME				S	**Sn**	**18 56 37.7**	**-3.0**
TGIG		**2.80**	**352**	*e*P	**Pn**	**18 56 12.2**	**+1.3**
TGIG				*e*S	**Sn**	**18 56 43.7**	**-1.2**
TGIG		**2.80**	**352**	*i* P	**Pn**	**18 56 13.0**	**+2.1**
NUBE	**Las Nubes**	**2.85**	**91**	P	**Pn**	**18 56 15.0**	**+3.4**
NUBE				S	**Sn**	**18 56 44.1**	**-2.2**
CEVE	**Cerro Verde**	**3.01**	**93**	S	**Sn**	**18 56 50.4**	**+0.1**
JAYA	**Jayaque - finc**	**3.19**	**96**	P	**Pn**	**18 56 18.7**	**+2.3**
JAYA				S	**Sn**	**18 56 54.4**	**-0.4**
MTO3	**Montecristo**	**3.28**	**82**	P	**Pn**	**18 56 20.0**	**+2.3**
MTO3				S	**Sn**	**18 56 57.3**	**+0.3**
UXUV	**UXUV**	**3.58**	**338**	*e*P	**Pn**	**18 56 23.9**	**+2.3**
UXUV				*e*S	**Sn**	**18 57 04.6**	**+0.4**
CMIG	**Matias Romero**	**3.72**	**326**	*e*P	**Pn**	**18 56 24.6**	**+1.0**
CMIG				*e*S	**Sn**	**18 57 06.9**	**-0.8**
HUIG	**Huatulco**	**3.73**	**299**	*e*P	Pn	18 56 23.0	-0.6
HUIG				*e*S	Sn	18 57 02.9	-4.8
NEUV	**Arroyo Zacate**	**4.75**	**322**	*e*P	**Pn**	**18 56 37.7**	**+0.2**

*IDC **10** 19:02:29.1±9.4, 35°99N×71°57E, h56km±78km, mb3.4/4, mbtmp3.7/9, ML3.4/5, Error ellipse: s-maj=77.9km s-min=32.1km az=32.0*
*NNC **10** 19:02:42.5±4.6, 37°18N×71°11E, h104km±83km, mb3.3, mpv3.8, Error ellipse: s-maj=40.1km s-min=27.2km az=172.0*
ISC 10 19:02:41.4±2.1, 37°1N±0°2×71°2E±0°1, h100km, n20, σ1§17/23, mb3.5/3, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**5.76**	**26**	P	**Pn**	**19 04 05.8**	**+0.9**
	SNR=11						
EKS2	**Erkin-Say**	**5.93**	**19**	P	**Pn**	**19 04 08.0**	**+1.1**
	SNR=9.4						
KK31	**Karatay Array**	**6.04**	**356**	⇓P	**Pn**	**19 04 08.9**	**+0.6**
	5.6nm,0.3s,baz=175,slow=12,SNR=127						
KK31				⇑S	**Sn**	**19 05 14.2**	**-1.8**
	3.2nm,0.3s,baz=179,slow=25,SNR=6.9						
AAK	**Ala-Archa**	**6.12**	**24**	P	**Pn**	**19 04 10.2**	**+0.8**
	3.0nm,0.3s,baz=205,slow=8.8,SNR=24						
AAK				S	**Sn**	**19 05 18.0**	**-0.1**
	3.2nm,0.3s,baz=36,slow=6.6,SNR=8.7						
	7.3nm,0.5s						
AAK	**Ala-Archa**	**6.12**	**24**	P	**Pn**	**19 04 10.4**	**+1.0**
	SNR=6.9						
AAK	**Ala-Archa**	**6.12**	**24**	⇑P	**Pn**	**19 04 10.2**	**+0.8**
	2.3nm,0.5s						
AAK				⇑S	**Sn**	**19 05 17.6**	**-0.5**
	2.1nm,0.5s						
CHMS	**Chumysh**	**6.53**	**24**	P	**Pn**	**19 04 15.5**	**+0.6**
	SNR=8.8						
USP	**Ospenovka**	**6.70**	**21**	P	**Pn**	**19 04 17.4**	**+0.3**
	SNR=6.8						
TKM2	**Tokmak 2**	**6.76**	**29**	P	**Pn**	**19 04 18.9**	**+0.7**
	SNR=12						
PDGK	**Podgornoye**	**8.92**	**43**	⇑P	**Pn**	**19 04 45.7**	**-1.8**
	1.7nm,0.5s						
PDGK				⇑S	**Sn**	**19 06 28.0**	**+1.7**
	8.2nm,1.3s						
MKAR	**Makanchi Array**	**12.76**	**37**	P	**Pn**	**19 05 37.4**	**-1.6**
	0.1nm,0.3s,baz=221,slow=14,SNR=7.9						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**14.54**	**19**	P	**Pn**	**19 06 03.9**	**+1.8**
	0.1nm,0.3s,baz=194,slow=13,SNR=6.7						
	0.5nm,0.5s						
AB31	**Akbulak array**	**14.65**	**330**	P	**Pn**	**19 06 01.8**	**-1.7**
	0.9nm,0.3s,baz=135,slow=12,SNR=69						
BVAR	**Borovoye Array**	**15.96**	**358**	P	**P**	**19 06 22.6**	**+1.0**
	baz=178,slow=14,SNR=7.4						
	0.9nm,0.6s						
AKTO	**Aktyubinsk**	**16.35**	**329**	P	**P**	**19 06 26.6**	**+0.7**
	0.7nm,0.3s,baz=147,slow=11,SNR=10						
	2.2nm,0.3s						
AKTO	**Aktyubinsk**	**16.35**	**329**	⇓P	**P**	**19 06 25.9**	**0.0**
	1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**19.34**	**25**	P	**P**	**19 06 58.4**	**-0.3**
	1.4nm,0.4s,baz=223,slow=10,SNR=10.0						
	1.4nm,0.4s						
HFS	**Hagfors**	**42.69**	**322**	P	**P**	**19 10 29.2**	**+1.2**
	4.8nm,1.0s,baz=97,slow=12,SNR=2.0						
	4.8nm,1.0s						
NOA	**NORSAR Array B**	**44.00**	**323**	P	**P**	**19 10 39.2**	**+0.6**
	0.5nm,0.6s,baz=96,slow=8.2,SNR=1.2						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**84.48**	**125**	P	P	19 14 51.2	-12
	0.2nm,0.8s,baz=312,slow=6.1,SNR=1.2						
	0.2nm,0.8s						

MEX 10 19:04:27.4±0.3, 19°45N×102°31W, h16km±3km, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URUA	**Uruapan**	**0.22**	**97**	*e*P	Pg	19 04 31.5	-1.1
URUA				*e*S	Sg	19 04 34.7	-1.5
INCO	**Volcan de Coli**	**1.23**	**274**	*e*P	Pb	19 04 50.5	+0.1
INCO				*e*S	Sg	19 05 07.4	+0.2
SOMAC	**Volcano de Col**	**1.25**	**274**	*e*P	Pb	19 04 50.9	+0.1
SOMAC				*e*S	Sg	19 05 07.7	-0.2
CEGR	**Campo Tres**	**1.46**	**268**	*e*P	Pn	19 04 53.8	+0.5
CEGR				*e*S	Sb	19 05 13.4	+0.6
MMIG	**Aquila**	**1.52**	**221**	*e*P	Pn	19 04 53.9	0.0
MMIG				*e*S	Sb	19 05 13.8	-0.3
CDAR	**Ciudad de Arme**	**1.69**	**253**	*e*P	Pb	19 04 57.2	-0.8
CDAR				*e*S	Sb	19 05 19.2	+0.2
ZIIG	**Zihuatanejo**	**2.00**	**156**	*e*P	Pn	19 05 01.3	+0.8
ZIIG				*e*S	Sn	19 05 26.1	+0.9
CJM	**Chamela**	**2.58**	**272**	*e*P	Pb	19 05 10.9	-2.4
CJM				*e*S	Sb	19 05 43.0	-1.8

*IDC **10** 19:19:12.4±1.2, 4°65N×147°25E, h0km, mb3.6/9, mbtmp3.7/10, ML3.3/1, Error ellipse: s-maj=41.7km s-min=20.9km az=104.0*
ISC 10 19:19:17.8±1.2, 4°5N±0°1×147°1E±0°2, h35km, n14, σ1§51/12, mb3.6/9, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**9.41**	**223**	Pn	**Pn**	**19 21 30.8**	**-0.2**
	0.3nm,0.3s,baz=356,slow=19,SNR=1.7						
JAY				Sn	**Sn**	**19 23 13.1**	**-2.6**
	1.1nm,0.3s,baz=135,slow=20,SNR=1.2						
	16nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**23.71**	**52**	T	T	19 48 58.7	
	baz=236						
H11S2	**WAKE ISLAND Hy**	**23.72**	**52**	T	T	19 48 59.3	
	baz=236						
H11S1	**WAKE ISLAND Hy**	**23.73**	**52**	T	T	19 49 02.9	
	baz=236						
WRA	**Warramunga Arr**	**27.30**	**207**	P	**P**	**19 25 01.0**	**+1.7**
	0.5nm,0.7s,baz=26,slow=8.6,SNR=8.0						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**30.78**	**204**	P	**P**	**19 25 32.2**	**+2.0**
	0.4nm,0.8s,baz=24,slow=9.4,SNR=5.1						
	0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**48.98**	**291**	P	**P**	**19 28 03.2**	**+1.9**
	0.4nm,0.7s,baz=115,slow=5.1,SNR=4.4						
	0.4nm,0.7s						
SONM	**Songino Array**	**55.47**	**328**	P	**P**	**19 28 48.8**	**-0.5**
	0.4nm,0.7s,baz=133,slow=7.3,SNR=2.9						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**69.61**	**318**	P	**P**	**19 30 23.5**	**-0.1**
	0.4nm,0.7s,baz=106,slow=7.6,SNR=4.5						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**73.00**	**322**	P	**P**	**19 30 43.0**	**-1.0**
	1.4nm,0.7s,baz=108,slow=5.5,SNR=6.7						
	1.4nm,0.7s						
ILAR	**Eielson Array**	**75.91**	**24**	P	**P**	**19 30 59.3**	**-1.3**
	0.4nm,0.6s,baz=249,slow=5.7,SNR=5.2						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**78.42**	**323**	P	**P**	**19 31 15.1**	**+0.1**
	0.6nm,0.5s,baz=111,slow=8.0,SNR=3.7						
	0.6nm,0.5s					

VIS	**Vishakhapatnam**	**12.86**	**317**	*e*P		Pn	19 50 26.0	-5.7
VIS				*e*S		Sn	19 52 37.9	-16
VIS				IAML			19 52 46.6	
	comp=N,133nm,0.1s							
VIS				IAML			19 52 46.7	
	comp=E,163nm,0.3s							
IMP	**Imphal**	**16.39**	**5**	*e*P		**Pn**	**19 51 12.8**	**-6.0**
IMP				IAmb		IAmb	19 51 22.5	
	comp=Z,6.7nm,0.4s							
IMP				*e*S		Sn	19 54 03.2	-17
KOHI	**KOHIMA**	**17.29**	**5**	*e*P		**Pn**	**19 51 25.2**	**-4.9**
KOHI				IAmb		IAmb	19 51 33.1	
	comp=Z,22nm,0.3s							
KOHI				*e*S		Sn	19 54 24.7	-17
LSA	**Lhasa**	**21.22**	**357**	P		**P**	**19 52 16.2**	**+1.5**
H08S3	**Diego Garcia H**	**25.52**	**232**	T		T	20 19 20.6	
	baz=51,slow=75,SNR=187							
H08S2	**Diego Garcia H**	**25.53**	**232**	T		T	20 19 18.3	
	baz=51,slow=75,SNR=89							
H08S1	**Diego Carcia H**	**25.54**	**232**	T		T	20 19 17.2	
	baz=51,slow=75,SNR=63							
ENH	**Enshi**	**26.95**	**34**	P		**P**	**19 53 10.2**	**+0.5**
ENH				IAmb		IAmb	19 53 42.8	
	comp=Z,7.8nm,1.3s							
LZDM	**Lanzhou Array**	**29.27**	**19**	P		**P**	**19 53 30.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=208,slow=8.4,SNR=3.6							
	comp=Z,0.3nm,0.3s							
WUS	**Wushi**	**34.72**	**342**	P		**P**	**19 54 19.3**	**+1.0**
WUS				IAmb		IAmb	19 54 20.6	
	comp=Z,7.5nm,0.7s							
TARG	**Taragay, Kyrgy**	**35.64**	**341**			**P**	**19 54 25.6**	**-0.9**
TARG				IAmb		IAmb	19 54 28.9	
	comp=Z,3.3nm,0.6s							
NRN	**Naryn**	**36.00**	**339**	P		**P**	**19 54 31.0**	**+1.6**
DRK	**Karamyk**	**36.07**	**332**	P		**P**	**19 54 32.0**	**+1.9**
DRK				IAmb		IAmb	19 55 04.6	
	comp=Z,7.4nm,0.7s							
KDJ	**Kajisay**	**36.21**	**341**	P		**P**	**19 54 33.0**	**+2.0**
KDJ				IAmb		IAmb	19 54 33.6	
	comp=Z,3.4nm,0.7s							
AAK	**Ala-Archa**	**37.59**	**338**	P		**P**	**19 54 44.4**	**+1.6**
AAK				IAmb		IAmb	19 54 46.3	
	comp=Z,3.5nm,0.8s							
MKAR	**Makanchi Array**	**39.24**	**349**	P		**P**	**19 54 56.9**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=168,slow=8.3,SNR=26							
MKAR				PcP		**PcP**	**19 57 05.7**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=189,slow=3.9,SNR=2.9							
	comp=Z,1.0nm,0.5s							
KK31	**Karatay Array**	**39.57**	**335**	P		**P**	**19 55 00.5**	**+1.3**
KK31				IAmb		IAmb	19 55 01.3	
	comp=Z,3.5nm,0.7s							
KKAR	**Karatay Array**	**39.57**	**335**	P		**P**	**19 55 00.6**	**+1.4**
SONM	**Songino Array**	**41.03**	**14**	P		**P**	**19 55 13.0**	**+1.7**
	comp=Z,1.3nm,0.8s,baz=203,slow=8.6,SNR=10							
SONM				PcP		**PcP**	**19 57 11.6**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=132,slow=2.1,SNR=2.7							
	comp=Z,1.3nm,0.8s							
SONM	**Songino Array**	**41.03**	**14**	P		**P**	**19 55 12.3**	**+1.0**
KSRS	**Korea Array**	**43.15**	**42**	P		**P**	**19 55 29.3**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=241,slow=9.3,SNR=4.4							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**43.66**	**347**	P		**P**	**19 55 33.4**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=166,slow=7.3,SNR=12							
KURBB				PcP		**PcP**	**19 57 20.5**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=170,slow=3.0,SNR=4.4							
	comp=Z,2.0nm,0.8s							
KURK	**Kurchatov**	**43.72**	**347**	P		**P**	**19 55 33.8**	**+0.7**
KURK	**Kurchatov**	**43.72**	**347**			**PcP**	**19 57 20.5**	**+0.9**
ZALV	**Zalesovo Beam**	**45.84**	**354**	P		**P**	**19 55 50.4**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=170,slow=9.0,SNR=3.7							
	comp=Z,0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**45.84**	**354**	P		**P**	**19 55 50.0**	**+0.2**
BVAR	**Borovoye Array**	**47.98**	**342**	P		**P**	**19 56 07.2**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=144,slow=8.9,SNR=9.5							
BVAR				PcP		**PcP**	**19 57 34.3**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=82,slow=3.1,SNR=3.6							
	comp=Z,0.8nm,0.4s							
BORK	**Borovoye**	**48.02**	**342**	P		**P**	**19 56 07.4**	**+0.5**
BORK				IAmb		IAmb	19 56 08.1	
	comp=Z,2.2nm,0.7s							
AB31	**Akbulak array**	**49.00**	**332**	P		**P**	**19 56 14.8**	**+0.3**
AB31				IAmb		IAmb	19 56 17.1	
	comp=Z,4.9nm,1.4s							
ABKAR	**Akbulak array**	**49.00**	**332**	P		**P**	**19 56 14.8**	**+0.3**
WB0	**Warramunga Arr**	**49.85**	**125**	P		**P**	**19 56 22.1**	**+0.6**
WB0				IAmb		IAmb	19 57 05.7	
	comp=Z,10.0nm,1.4s							
WRA	**Warramunga Arr**	**49.90**	**125**	P		**P**	**19 56 22.6**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=300,slow=9.4,SNR=19							
WRA				PcP		**PcP**	**19 57 42.7**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=305,slow=3.5,SNR=6.2							
	comp=Z,0.6nm,0.5s							
WRA	**Warramunga Arr**	**49.90**	**125**	P		**P**	**19 56 22.3**	**+0.5**
WR8	**Warramunga Arr**	**50.03**	**125**	P		**P**	**19 56 23.7**	**+0.8**
ASAR	**Alice Springs**	**51.51**	**129**	P		**P**	**19 56 34.7**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=301,slow=7.4,SNR=14							
ASAR				PcP		**PcP**	**19 57 47.3**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=300,slow=3.8,SNR=10							
	comp=Z,0.5nm,0.5s							
ARTI	**Arti**	**54.81**	**338**	P		**P**	**19 56 58.2**	**+0.5**
YAK	**Yakutsk**	**60.02**	**19**	P		**P**	**19 57 34.8**	**+0.4**
H04N2	**CROZET ISLANDS**	**65.36**	**210**	T		T	21 09 35.4	
	baz=46,slow=75,SNR=86							
H04N1	**CROZET ISLANDS**	**65.36**	**210**	T		T	21 09 32.2	
	baz=46,slow=75,SNR=95							
H04N3	**CROZET ISLANDS**	**65.37**	**210**	T		T	21 09 27.7	
	baz=46,slow=75,SNR=83							
TIXI	**Tiksi**	**67.04**	**12**	P		**P**	**19 58 20.8**	**+0.2**
FINES	**FINESS Array B**	**71.49**	**332**	P		**P**	**19 58 47.4**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=81,slow=8.9,SNR=4.8							
	comp=Z,3.0nm,0.8s							
ARCES	**ARCESS Array B**	**74.22**	**340**	P		**P**	**19 59 02.7**	**-1.7**
	comp=Z,4.3nm,1.0s,baz=107,slow=6.0,SNR=5.9							
	comp=Z,4.3nm,1.0s							
ARCES	**ARCESS Array B**	**74.22**	**340**	P		**P**	**19 59 03.9**	**-0.5**
ESDC	**Sonseca Array**	**89.63**	**310**	P		**P**	**20 00 26.8**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=73,slow=4.2,SNR=4.2							
	comp=Z,0.3nm,0.4s							

*SDD **10** 19:49:46.5±2.1, 19°.62N×70°.28W, h15km±15km, MD3.2, ML2.7, MW3.2, Presumed earthquake*
*OSPL **10** 19:49:47.1±2.5, 19°.55N×70°.24W, h0km±11km, ML2.7, Presumed earthquake*
*SSNC **10** 19:49:48.0±1.8, 19°.60N×70°.24W, h20km±29km, MD3.5, ML2.7, Presumed earthquake*
ISC 10 19:49:45.4±1.0, 19°.62N±0°.03×70°.23W±0°.03, h31km±8km, n30, σ1°07/43, 3C-7D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CADR	**Cabrera**	**0.28**	**79**	⇓*e*Pg		**Pb**	**19 49 52.6**	**0.0**
CADR				⇑*e*Sg		**Sn**	**19 49 59.0**	**+0.6**
CADR				IAML			19 49 59.4	
	comp=N,2μm,0.2s							
CADR				IAML			19 50 00.7	
	comp=E,729nm,0.4s							
SFDR	**San Fco. de Ma**	**0.33**	**182**	⇓*e*Pg		**Pb**	**19 49 52.6**	**-0.7**
SFDR				⇓*e*Sg		**Sb**	**19 49 58.2**	**-0.5**
SFDR				IAML			19 49 58.6	
	comp=E,2μm,0.3s							
SFDR				IAML			19 49 58.6	
	comp=N,1μm,0.2s							
NADR	**Nagua**	**0.44**	**126**	*e*Pg		**Pn**	**19 49 55.3**	**-0.1**
NADR				IAML			19 50 06.9	
	comp=E,834nm,0.2s							
NADR				IAML			19 50 07.0	
	comp=N,944nm,0.2s							
SC01	**Santiago de lo**	**0.51**	**248**	*e*Pg		**Pb**	**19 49 55.6**	**-0.4**
SC01				IAML			19 50 07.9	
	comp=E,232nm,0.7s							
SC01				IAML			19 50 09.4	
	comp=N,255nm,0.3s							
SC01	**Santiago de lo**	**0.51**	**248**	*i* P		**Pb**	**19 49 55.4**	**-0.6**
DR08	**Loma La Naviza**	**0.68**	**163**	⇑*e*Pg		**Pb**	**19 49 58.0**	**-0.8**
DR08				⇓*e*Sg		**Sb**	**19 50 08.0**	**0.0**
DR08				IAML			19 50 09.0	
	comp=N,7μm,0.2s							
DR08				IAML			19 50 09.1	
	comp=E,6μm,0.1s							
LUDR	**Luperon**	**0.74**	**292**	IAML			19 50 15.5	
	comp=E,937nm,0.5s							
ABDR	**Alto Bandera**	**0.88**	**205**	*e*Pg		**Pn**	**19 50 01.0**	**-0.9**
ABDR				IAML			19 50 15.9	
	comp=E,6.7nm,0.2s							
ABDR				IAML			19 50 28.1	
	comp=N,0.2nm,0.6s							
LOPP1	**Punta Rusia, P**	**0.95**	**285**	*i* P		**Pb**	**19 50 03.7**	**+0.4**
LOPP1				*e*S		**Sb**	**19 50 17.4**	**+2.0**
LOPP1				IAML			19 50 21.6	
	comp=Z,133nm,0.4s							
SMDR	**Samana, DR**	**1.03**	**108**	*e*Pg		**Pb**	**19 50 04.9**	**+0.2**
SMDR				IAML			19 50 25.6	
	comp=N,191nm,0.7s							
HATOM	**Hato Mayor del**	**1.15**	**136**	*e*Pg		**Pb**	**19 50 06.3**	**-0.4**
HATOM				IAML			19 50 23.7	
	comp=N,58nm,0.6s							
HATOM				⇓*e*Sg		**Sb**	**19 50 23.9**	**+2.6**
HATOM				IAML			19 50 24.0	
	comp=E,83nm,0.3s							
SDDR	**Presa de Saban**	**1.18**	**238**	*e*P		**Pn**	**19 50 05.8**	**-0.1**
SDDR				*e*S		**Sb**	**19 50 21.8**	**-0.5**
SDDR				IAML			19 50 25.5	
	comp=E,78nm,0.4s							
SDDR				IAML			19 50 25.7	
	comp=E,81nm,0.4s							
SDDR	**Presa de Saban**	**1.18**	**238**	*e*Pg		**Pn**	**19 50 05.7**	**-0.1**
SDDR				⇑*e*Sg		**Sb**	**19 50 22.1**	**-0.2**
SDDR				IAML			19 50 25.3	
	comp=N,80nm,0.5s							
SDDR				IAML			19 50 25.4	
	comp=E,82nm,0.3s							
SDDR	**Presa de Saban**	**1.18**	**238**	*i* P		**Pn**	**19 50 05.7**	**-0.1**
SDDR				IAML			19 50 27.6	
	comp=Z,49nm,0.9s							
REDR	**Restauracion**	**1.19**	**248**	*e*Pg		**Pb**	**19 50 10.0**	**+2.6**
REDR				IAML			19 50 32.1	
	comp=N,711nm,0.1s							
REDR				IAML			19 50 32.2	
	comp=E,300nm,0.3s							
SDD	**Santo Domingo**	**1.19**	**165**	*i* P		**Pb**	**19 50 06.9**	**-0.4**
SDD				*e*S		**Sb**	**19 50 22.2**	**-0.1**
BANI	**BANI**	**1.22**	**186**	*e*Pg		**Pb**	**19 50 08.1**	**+0.1**
BANI				⇓*e*Sg		**Sb**	**19 50 24.5**	**+1.0**
BANI				IAML			19 50 25.6	
	comp=E,420nm,0.1s							
BANI				IAML			19 50 26.2	
	comp=N,428nm,0.1s							
MIDR	**Miches**	**1.28**	**119**	*e*Pg		**Pb**	**19 50 09.0**	**+0.2**
MIDR				IAML			19 50 28.9	
	comp=E,98nm,0.3s							
MIDR				IAML			19 50 31.1	
	comp=N,78nm,0.3s							
MIDR				IAML			19 50 31.1	
	comp=N,67nm,0.1s							
MCDR	**Montecristi**	**1.37**	**282**	*e*Pg		**Pb**	**19 50 10.4**	**0.0**
MCDR				IAML			19 50 30.5	
	comp=N,189nm,0.3s							
MCDR				IAML			19 50 32.5	
	comp=E,189nm,0.1s							
LODA1	**ITESIL, Dajabo**	**1.39**	**267**	*e*S		**Sb**	**19 50 29.5**	**+1.3**
LODA1				IAML			19 50 32.5	
	comp=Z,1μm,3.1s							
LODU1	**El Espartillar**	**1.72**	**223**	*i* P		**Pb**	**19 50 16.6**	**+0.2**
LODU1				IAML			19 50 43.2	
	comp=Z,87nm,0.3s							
PODR	**Polo**	**1.75**	**215**	*i* P		**Pb**	**19 50 16.9**	**-0.2**
JIDR	**Jimani**	**1.90**	**234**	*e*Pg		**Pb**	**19 50 19.0**	**-0.4**
JIDR				IAML			19 50 45.9	
	comp=N,117nm,0.7s							
JIDR				IAML			19 50 48.2	
	comp=E,205nm,0.3s							
GRTK	**Grand Turk**	**2.07**	**336**	*e*P		**Pb**	**19 50 20.2**	**-2.0**
GRTK				*e*S		**Sb**	**19 50 48.2**	**+0.6**
GRTK				IAML			19 50 48.9	
	comp=E,122nm,0.2s							
GRTK				IAML			19 50 49.1	
	comp=E,116nm,0.8s							
GRTK	**Grand Turk**	**2.07**	**336**	*e*Pg		**Pb**	**19 50 20.8**	**-1.5**
GRTK				*e*Sg		**Sb**	**19 50 48.1**	**+0.6**
GRTK				IAML			19 50 51.8	
	comp=E,112nm,0.2s							
GRTK				IAML			19 50 54.5	
	comp=N,158nm,3.4s							
GRTK	**Grand Turk**	**2.07**	**336**	*i* P		**Pb**	**19 50 20.9**	**-1.3**
GRTK				*e*S		**Sb**	**19 50 48.2**	**+0.6**
GRTK				IAML			19 50 50.8	
	comp=Z,127nm,2.0s							
LOBH	**Bahia de las A**	**2.20**	**218**	*i* P		**Pb**	**19 50 23.9**	**-0.5**
LOBH				IAML			19 50 59.5	
	comp=Z,56nm,1.2s							
MASC	**Masc**	**3.81**	**279**	*e*P		**Pn**	**19 50 41.8**	**-0.1**
MASC				*e*S		**Sn**	**19 51 25.5**	**-0.1**
MASC				*e*Sg		Sb	19 51 27.1	-10
QMBU	**Quimbuelo**	**4.35**	**278**	*e*P		**Pn**	**19 50 51.5**	**+2.1**
QMBU				*e*S		**Sn**	**19 51 36.9**	**-2.2**
NMDO	**Nuevo Mundo**	**4.57**	**283**	⇓*e*S		**Sn**	**19 51 43.3**	**-1.1**

*IDC **10** 19:51:59.6±0.4, 59°.81S×25°.92W, h0km, mb4.7/13, mbtmp4.6/13, MS4.7/39, Error ellipse: s-maj=17.7km s-min=13.5km az=22.0*
*MOS **10** 19:52:00.4±1.0, 59°.84S×26°.15W, h10km, mb5.1/9, Error ellipse: s-maj=27.7km s-min=13.2km az=115.1*
*BJI **10** 19:52:00.0, 59°.90S×25°.90W, h10km, Ms5.4/4, Ms7 5.1/5*
*NEIC **10** 19:52:01.5±1.7, 59°.83S±0°.10×25°.9W±0°.2, h10km±1km, mb5.1/72, Error ellipse: s-maj=19.1km s-min=14.3km az=226.0*
*GCMT **10** 19:52:08.5±0.1, 60°.18S±0°.01×25°.09W±0°.02, h18km, MW5.3/118, Moment Tensor Solution. s78,c122; s118,c195; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.64±.02; Mθθ0.09±.02; Mϕϕ-0.72±.01; Mrθ-0.08±.04; Mrϕ-0.41±.01; Mθϕ0.61±.04; Best double couple: Mo1.00000×10^17 NP1:ϕ228.00000°, δ33.00000°, λ132.00000°. NP2:ϕ1.00000°, δ66.00000°, λ67.00000°. Principal axes: T 0.9320, Plg62.0000°, Azm235.0000°; N 0.1350, Plg21.0000°, Azm11.0000°; P -1.0670, Plg18.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 10 19:52:01.9±0.3, 59°.82S±0°.06×25°.87W±0°.06, h16km, n271, σ1°30/236, mb5.0/47, MS4.7/41, 9C-19D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.02**	**309**			**Pn**	**19 53 56.2**	**-1.3**
HOPE	**Hope Point**	**8.02**	**309**	P		**Pn**	**19 53 56.2**	**-1.3**
VNA1	**Neumayer--Stat**	**13.05**	**153**	⇑P		**Pn**	**19 55 03.9**	**-2.4**
	comp=Z,95nm,0.4s							
VNA3	**Neumayer Olymp**	**13.21**	**157**	⇓P		**Pn**	**19 55 05.3**	**-3.3**
	comp=Z,52nm,0.3s							
VNA3				⇓S		Sn	19 57 14.6	-20
	comp=E,173nm,0.8s							
VNA2	**Neumayer--Watz**	**13.45**	**153**	⇓P		**Pn**	**19 55 09.4**	**-2.4**
	comp=Z,46nm,0.6s,baz=316,slow=15							
VNA2				⇓S		Sn	19 57 23.4	-17
	comp=E,45nm,0.6s,baz=321,slow=18							
SNAA	**Sanae**	**15.03**	**151**	⇑P		**Pn**	**19 55 30.2**	**-3.3**
	comp=Z,876nm,0.3s							
SNAA				⇓S		Sn	19 58 02.2	-17
	comp=N,705nm,0.5s							
SNAA	**Sanae**	**15.03**	**151**	Pn		**Pn**	**19 55 30.5**	**-2.9**
	comp=N,11nm,0.3s,baz=315,slow=14,SNR=51							
SNAA				Sn		Sn	19 58 04.9	-14
	comp=N,1.3nm,0.3s,baz=345,slow=20,SNR=3.5							
SNAA				LR		LR	20 00 17.1	
	comp=N,2μm,19.8s,baz=357,slow=33							
SNAA	**Sanae**	**15.03**	**151**	Pn		**Pn**	**19 55 30.2**	**-3.3**
SNAA				IAmb		IAmb	19 55 35.8	
	comp=Z,64nm,0.8s							
SNAA	**Sanae**	**15.03**	**151**	*d* iP		**Pn**	**19 55 29.9**	**-3.5**
ESPZ	**Base Esperanza**	**15.14**	**243**			**Pn**	**19 55 36.4**	**+1.7**
PMSA	**Palmer Station**	**18.21**	**238**	LR		LR	20 02 41.9	
	comp=Z,3μm,18.5s,baz=84,slow=35							
BELA	**Belgrano 2**	**18.37**	**186**	P		**P**	**19 56 16.4**	**+0.9**
NVL	**N'lazarevskaya**	**18.79**	**141**	*e*P		**P**	**19 56 19.1**	**-1.0**
NVL				*e*S		**Sn**	**19 59 50.5**	**+0.3**
NVL				pmax		pmax		
	comp=Z,93nm,1.7s							
NVL				MLR		MLR		
	comp=Z,2μm,19.0s							
EFI	**East Falkland**	**19.70**	**280**			**Pn**	**19 56 32.3**	**+0.7**
EFI				IAmb		IAmb	19 56 44.9	
	comp=Z,119nm,1.0s							
EFI	**East Falkland**	**19.70**	**280**	⇓*e*P		**Pn**	**19 56 31.2**	**-0.4**
EFI				pmax		pmax		
	comp=Z,122nm,1.5s							
USHA	**Ushuaia**	**23.19**	**264**	P		**P**	**19 57 08.5**	**+0.9**
	comp=Z,123nm,1.0s,baz=120,slow=11,SNR=15							
USHA				S		**S**	**20 01 19.9**	**+1.5**
	comp=Z,11nm,0.6s,baz=247,slow=15,SNR=1.5							
	comp=Z,123nm,1.0s							
MG03	**Isla Dawson**	**24.72**	**264**			**P**	**19 57 22.2**	**+0.1**
MG03				IAmb		IAmb	19 57 37.9	
	comp=Z,29nm,0.8s							
GO10	**Punta Arenas**	**25.39**	**265**	P		**P**	**19 57 28.9**	**+0.7**
MG04	**Isla Riesco**	**25.82**	**265**	P		**P**	**19 57 32.9**	**+0.9**
MG04				IAmb		IAmb	19 57 58.7	
	comp=Z,32nm,0.7s							
MG05	**Puerto Natales**	**26.96**	**267**			**P**	**19 57 42.3**	**0.0**
MG05				IAmb		IAmb	19 57 52.5	
	comp=Z,34nm,0.6s							
GO09	**Cerro Castillo**	**27.12**	**268**	P		**P**	**19 57 43.5**	**-0.3**
GO09				IAmb		IAmb	19 57 53.8	
	comp=Z,22nm,0.6s							
GO08	**Villa O'Higgin**	**28.98**	**272**			**P**	**19 58 00.3**	**-0.2**
QSPA	**South Pole Qui**	**30.41**	**180**	P		**P**	**19 58 13.7**	**+0.5**
	comp=Z,6.0nm,0.5s,baz=176,slow=11,SNR=11							
QSPA				LR		LR	20 10 17.9	
	comp=Z,1μm,18.9s,baz=188,slow=36							
	comp=Z,6.0nm,0.5s							
QSPA	**South Pole Qui**	**30.41**	**180**	P		**P**	**19 58 14.8**	**+1.7**
QSPA				IAmb		IAmb	19 58 29.4	
	comp=Z,37nm,0.9s							
TRQA	**Tornquist**	**31.57**	**297**	P		**P**	**19 58 24.4**	**+1.0**
TRQA				IAmb		IAmb	19 58 38.6	
	comp=Z,27nm,0.9s							
TRQA	**Tornquist**	**31.57**	**297**	P		**P**	**19 58 24.5**	**+1.0**
TRQA				pmax		pmax		
	comp=Z,27nm,0.9s							
AY01	**Puyuhuapi**	**31.80**	**278**			**P**	**19 58 25.0**	**-0.3**
AY01				IAmb		IAmb	19 58 38.2	
	comp=Z,20nm,0.9s							
LL02	**Futaleuf**	**32.29**	**280**			**P**	**19 58 29.2**	**-0.5**
PLCA	**Paso Flores**	**33.49**	**284**	P		**P**	**19 58 40.3**	**0.0**
	comp=Z,5.8nm,0.6s,baz=146,slow=7.2,SNR=37							
PLCA				LR		LR	20 12 36.2	
	comp=Z,1μm,18.2s,baz=169,slow=37							
	comp=Z,5.8nm,0.6s							
PLCA	**Paso Flores**	**33.49**	**284**			**P**	**19 58 40.4**	**+0.1**
PLCA	**Paso Flores**	**33.49**	**284**	P		**P**	**19 58 40.4**	**+0.1**
PLCA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
PLCA	**Paso Flores**	**33.49**	**284**	*e*P		**P**	**19 58 39.0**	**-1.4**
PLTB	**Pedras Altas**	**33.59**	**314**	P		**P**	**19 58 41.0**	**-0.2**
PLTB				IAmb		IAmb	19 59 03.9	
	comp=Z,13nm,0.7s							
PLTB	**Pedras Altas**	**33.59**	**314**	*e*P		**P**	**19 58 40.8**	**-0.4**
GO06	**Curarrehue**	**34.83**	**285**	P		**P**	**19 58 52.3**	**+0.4**
LR04	**Corral**	**35.56**	**282**	P		**P**	**19 58 58.3**	**+0.3**
MAW	**Mawson**	**36.74**	**140**	LR		LR	20 12 30.4	
	comp=Z,1μm,19.8s,baz=250,slow=34							
BI02	**San Fabin de**	**37.03**	**288**			**P**	**19 59 10.4**	**-0.4**
ML02	**Panimavida**	**37.83**	**289**	P		**P**	**19 59 17.5**	**+0.1**
ML02				IAmb		IAmb	19 59 30.2	
	comp=Z,31nm,0.6s							
BO02	**Sierra Bellavi**	**38.31**	**290**	P		**P**	**19 59 21.1**	**-0.5**
BO02				IAmb		IAmb	19 59 34.7	
	comp=Z,22nm,0.7s							
GO05	**Hualane**	**38.68**	**289**			**P**	**19 59 24.9**	**+0.2**
GO05				IAmb		IAmb	19 59 39.5	
	comp=Z,31nm,0.8s							
BO01	**Tunca**	**38.78**	**290**			**P**	**19 59 25.5**	**+0.1**
BO04	**La Punta**	**38.89**	**291**	P		**P**	**19 59 26.7**	**+0.3**
BO04				IAmb		IAmb	19 59 42.2	
	comp=Z,25nm,0.8s							
MT08	**Bocatoma Ro**	**39.06**	**292**	P		**P**	**19 59 29.1**	**+1.1**
MT08				IAmb		IAmb	19 59 43.4	
	comp=Z,23nm,0.7s							
MT09	**Talagante**	**39.24**	**291**	P		**P**	**19 59 29.9**	**+0.4**
MT01	**Popeta**	**39.29**	**291**	P		**P**	**19 59 30.1**	**+0.4**
MT01				IAmb		IAmb	19 59 40.4	
	comp=Z,36nm,0.6s							
MT05	**Renca**	**39.44**	**292**	P		**P**	**19 59 31.5**	**+0.5**
PEL	**Peldehue**	**39.62**	**292**			**P**	**19 59 33.2**	**+0.7**
PEL	**Peldehue**	**39.62**	**292**	P		**P**	**19 59 33.2**	**+0.7**
PEL				pmax		pmax		
	comp=Z,59nm,0.5s							
MT02	**Curacav**	**39.74**	**291**	IAmb		IAmb	19 59 49.7	
	comp=Z,24nm,0.7s							
VA03	**San Esteban**	**39.87**	**292**	IAmb		IAmb	19 59 54.8	
	comp=Z,48nm,0.8s							
CPUP	**Villa Florida**	**39.87**	**313**	P		**P**	**19 59 34.5**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=150,slow=7.9,SNR=6.8							
CPUP				LR		LR	20 16 51.0	
	comp=Z,712nm,19.1s,baz=158,slow=37							
	comp=Z,1.6nm,0.3s							
CPUP	**Villa Florida**	**39.87**	**313**			**P**	**19 59 35.4**	**+0.8**
CPUP	**Villa Florida**	**39.87**	**313**	P		**P**	**19 59 35.4**	**+0.8**
CPUP				pmax		pmax		
	comp=Z,6.0nm,0.9s							
VA06	**Catapilco**	**40.39**	**292**	IAmb		IAmb	19 59 50.8	
	comp=Z,35nm,0.6s							
SUR	**Sutherland**	**41.13**	**69**	LR		LR	20 13 11.1	
	comp=Z,1.2nm,18.3s,baz=206,slow=31							
CO02	**Combarbal**	**41.38**	**293**	IAmb		IAmb	19 59 59.0	
	comp=Z,20nm,0.6s							
CO03	**El Pedregal**	**41.54**	**294**	IAmb		IAmb	20 00 04.3	

PB11	**IPOC Station P**	**50.69 303**			**P**		**20 01 00.3**	**-0.4**
PB11				IAmb	IAmb		20 01 13.6	
	comp=Z,24nm,1.0s							
SIV	**San Ignacio**	**50.70 314**		LR	LR		20 23 41.5	
	comp=Z,653nm,19.3s,baz=153,slow=38							
TSUM	**Tsumeb**	**51.05 57**		LR	LR		20 17 44.4	
	comp=Z,1μm,21.6s,baz=209,slow=30							
PB16	**IPOC Station P**	**51.89 304**			**P**		**20 01 10.4**	**+0.2**
PB16				IAmb	IAmb		20 01 25.2	
	comp=Z,26nm,1.5s							
QNGWA	**Qangwa**	**52.30 61**		P	**P**		**20 01 14.4**	**+1.7**
QNGWA				IAmb	IAmb		20 01 33.3	
	comp=Z,46nm,1.8s							
PB18	**Visviri**	**52.55 304**		IAmb	IAmb		20 01 52.6	
	comp=Z,29nm,1.0s							
LPAZ	**La Paz**	**53.16 306**		P	**P**		**20 01 20.1**	**+0.4**
	comp=Z,4.4nm,0.3s,baz=129,slow=2.0,SNR=19							
LPAZ				LR	LR		20 24 24.6	
	comp=Z,630nm,20.4s,baz=154,slow=37							
	comp=Z,4.4nm,0.3s							
LPAZ	**La Paz**	**53.16 306**			**P**		**20 01 20.0**	**+0.4**
LPAZ				IAmb	IAmb		20 01 52.7	
	comp=Z,38nm,1.4s							
LPAZ	**La Paz**	**53.16 306**		P	**P**		**20 01 20.0**	**+0.4**
LPAZ				pmax	pmax			
	comp=Z,38nm,1.5s							
LPAZ	**La Paz**	**53.16 306**		*e*P	**P**		**20 01 18.1**	**-1.5**
VILB	**Vilhena**	**53.21 317**			**P**		**20 01 18.1**	**-1.2**
VILB				IAmb	IAmb		20 01 31.8	
	comp=Z,15nm,0.7s							
VILB	**Vilhena**	**53.21 317**		*e*P	**P**		**20 01 18.4**	**-0.9**
PDRB	**Porto dos Gac**	**53.31 321**		*e*P	**P**		**20 01 18.6**	**-1.4**
CLDB	**Colider**	**53.71 323**		*e*P	**P**		**20 01 21.7**	**-1.3**
RCBR	**Riachuelo**	**54.41 348**		LR	LR		20 19 44.2	
	comp=Z,202nm,21.8s,baz=178,slow=31							
NPGB	**Novo Progresso**	**57.21 324**		*e*P	**P**		**20 01 47.1**	**-1.0**
LSZ	**Lusaka**	**59.19 65**		LR	LR		20 23 30.4	
	comp=Z,2μm,21.6s,baz=209,slow=32							
LSZ	**Lusaka**	**59.19 65**		P	**P**		**20 02 01.1**	**-1.1**
LSZ	**Lusaka**	**59.19 65**		P	**P**		**20 02 01.1**	**-1.1**
LSZ				pmax	pmax			
	comp=Z,8.0nm,0.9s							
NNA	**Nana**	**60.70 299**		LR	LR		20 27 35.5	
	comp=Z,342nm,21.3s,baz=139,slow=35							
NNA	**Nana**	**60.70 299**	⇓	*e*P	**P**		**20 02 13.1**	**+0.7**
NNA				pmax	pmax			
	comp=Z,38nm,1.4s							
RPN	**Rapa Nui**	**63.73 261**		LR	LR		20 24 48.7	
	comp=Z,366nm,18.1s,baz=124,slow=31							
OPO	**Ambohidratompo**	**65.62 85**		LR	LR		20 26 11.6	
	comp=Z,537nm,18.9s,baz=352,slow=31							
ATAH	**Atahualpa**	**65.70 300**		LR	LR		20 29 43.4	
	comp=Z,340nm,21.0s,baz=155,slow=34							
BOAV	**Boa Vista**	**67.70 322**			**P**		**20 02 56.4**	**-1.8**
BOAV				IAmb	IAmb		20 03 00.5	
	comp=Z,19nm,1.3s							
BOAV	**Boa Vista**	**67.70 322**		*e*P	**P**		**20 02 56.7**	**-1.6**
MDP	**Montagnes des**	**68.10 331**		LR	LR		20 29 58.3	
	comp=Z,317nm,21.4s,baz=161,slow=34							
DBIC	**Dimbokro**	**68.36 23**		P	**P**		**20 03 02.3**	**0.0**
	comp=Z,6.8nm,0.9s,baz=220,slow=7.1,SNR=6.0							
DBIC				LR	LR		20 25 42.9	
	comp=Z,516nm,21.0s,baz=196,slow=30							
	comp=Z,6.8nm,0.9s							
DBIC	**Dimbokro**	**68.36 23**		IAmb	IAmb		20 03 14.7	
	comp=Z,16nm,1.1s							
DBIC	**Dimbokro**	**68.36 23**		P	**P**		**20 03 02.3**	**0.0**
DBIC				pmax	pmax			
	comp=Z,16nm,1.1s							
EDA	**Edea**	**69.44 39**		P	**P**		**20 03 09.9**	**+0.8**
OTAV	**Otavalo**	**72.34 304**			**P**		**20 03 26.7**	**-0.6**
OTAV	**Otavalo**	**72.34 304**		P	**P**		**20 03 26.7**	**-0.6**
OTAV				pmax	pmax			
	comp=Z,49nm,1.5s							
OTAV	**Otavalo**	**72.34 304**		*e*P	**P**		**20 03 25.8**	**-1.5**
MBAR	**Mbarara**	**73.32 61**		LR	LR		20 32 23.9	
	comp=Z,1μm,19.7s,baz=201,slow=33							
ROSC	**El Rosal**	**74.84 309**		LR	LR		20 37 13.2	
	comp=Z,460nm,22.0s,baz=217,slow=36							
RPZ	**Rata Peaks**	**75.89 193**		LR	LR		20 34 50.0	
	comp=Z,255nm,19.6s,baz=166,slow=34							
SDV	**Santo Domingo**	**77.17 314**		LR	LR		20 39 38.0	
	comp=Z,1μm,19.8s,baz=143,slow=37							
SDV	**Santo Domingo**	**77.17 314**			**P**		**20 03 54.1**	**-0.8**
SDV				IAmb	IAmb		20 03 58.2	
	comp=Z,10nm,0.7s							
SDV	**Santo Domingo**	**77.17 314**		*e*P	**P**		**20 03 54.4**	**-0.6**
URZ	**Urewera**	**80.44 198**		LR	LR		20 36 55.2	
	comp=Z,286nm,20.1s,baz=164,slow=34							
NWAO	**Narrogin (SRO)**	**82.70 149**		LR	LR		20 38 00.1	
	comp=Z,224nm,19.6s,baz=242,slow=33							
SJG	**San Juan**	**84.27 322**		LR	LR		20 42 03.0	
	comp=Z,251nm,20.5s,baz=164,slow=36							
TBI	**Tubuai**	**85.22 230**		*e*P	**P**		**20 04 34.3**	**-3.2**
	comp=Z,450nm,26.5s							
TBI				*e*S	**SKSac**		**20 15 05.7**	**+4.1**
	comp=Z,722nm,25.0s							
TBI				*e*LQ	LQ		20 27 44.3	
	comp=Z,3μm,29.8s							
TBI				*e*LR	LR		20 31 38.5	
	comp=Z,2μm,22.0s							
FURI	**Furi**	**85.30 64**		LR	LR		20 40 14.3	
	comp=Z,575nm,18.1s,baz=206,slow=34							
STKA	**Stephens Creek**	**88.05 169**		P	**P**		**20 04 51.8**	**+0.6**
	comp=Z,4.7nm,0.9s,baz=202,slow=7.5,SNR=7.7							
STKA				LR	LR		20 42 41.1	
	comp=Z,594nm,18.5s,baz=198,slow=34							
	comp=Z,4.7nm,0.9s							
STKA	**Stephens Creek**	**88.05 169**	⇓	*e*P	**P**		**20 04 49.8**	**-1.4**
ATD	**Arta Tunnel**	**89.52 66**		LR	LR		20 43 26.9	
	comp=Z,35nm,18.3s,baz=194,slow=34							
PPT2	**Papeete2**	**90.47 233**		*e*P	P		20 04 56.0	-6.8
PPT2	comp=Z,69nm,23.8s			*e*S	**S**		**20 16 00.0**	**+2.8**
	comp=Z,218nm,29.2s							
PPT2				*e*LR	LR		20 33 53.3	
	comp=Z,250nm,20.2s							
PPT2				*e*LR	LR		20 33 59.5	
	comp=Z,214nm,21.2s							
PPT	**Papeete**	**90.49 233**		LR	LR		20 39 15.1	
	comp=Z,486nm,18.1s,baz=166,slow=31							
RAR	**Rarotonga**	**90.94 222**		LR	LR		20 40 60.0	
	comp=Z,168nm,18.2s,baz=160,slow=32							
INKA	**Innaminka**	**92.06 168**			**P**		**20 05 08.8**	**-1.2**
MDT	**Midelt**	**93.96 18**		LR	LR		20 43 31.1	
	comp=Z,619nm,18.8s,baz=209,slow=33							
TAOE	**Nuku Hiva Isla**	**94.20 245**		*e*LR	LR		20 35 43.9	
	comp=Z,518nm,23.3s							
CMIG	**Matias Romero**	**94.53 296**		LR	LR		20 43 42.6	
	comp=Z,200nm,19.5s,baz=142,slow=33							
ASAR	**Alice Springs**	**95.17 161**		P	**P**		**20 05 24.2**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=183,slow=4.0,SNR=47							
ASAR				LR	LR		20 44 31.4	
	comp=Z,794nm,21.9s,baz=187,slow=33							
	comp=Z,2.4nm,0.7s							
ASAR	**Alice Springs**	**95.17 161**			**P**		**20 05 23.6**	**-0.8**
ASAR	**Alice Springs**	**95.17 161**		P	**P**		**20 05 23.6**	**-0.8**
AS31	**Alice Springs**	**95.17 161**			**P**		**20 05 23.6**	**-0.9**
DZM	**Mont Dzumac**	**97.78 192**		*e*LR	LR		20 37 07.0	
	comp=Z,456nm,22.4s							
WRA	**Warramunga Arr**	**98.89 161**		P	**P**		**20 05 40.7**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=192,slow=4.9,SNR=4.9							
	comp=Z,0.5nm,0.9s							
WRA	**Warramunga Arr**	**98.89 161**		IAmb	IAmb		20 05 42.6	
	comp=Z,1.2nm,1.6s							
FITZ	**Fitzroy Crossi**	**98.97 153**		P	**P**		**20 05 40.4**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=158,slow=19,SNR=1.2							
FITZ				LR	LR		20 47 39.4	
	comp=Z,266nm,20.3s,baz=200,slow=34							
	comp=Z,1.3nm,0.7s							
KEST	**Kesra**	**99.55 28**		LR	LR		20 48 35.9	
	comp=Z,431nm,18.1s,baz=269,slow=34							
DBJI	**Dramaga**	**104.01 131**		P		**Pdif**	**20 06 07.2**	**+3.1**
ZST	**Bratislava**	**113.21 30**		*e*P		**Pdif**	**20 06 43.7**	**-0.3**
ZST	**Bratislava**	**113.21 30**		*e*PDIFF		**Pdif**	**20 06 43.7**	**-0.3**
MODS	**Modra-Piesok**	**113.42 30**		*e*P		**Pdif**	**20 06 47.2**	**+2.3**
MODS	**Modra-Piesok**	**113.42 30**		*e*PDIFF		**Pdif**	**20 06 47.2**	**+2.3**
ANMO	**Albuquerque**	**115.10 296**	⇕	*i*PKIKP		**PKiKP**	**20 10 43.2**	**+1.4**
SHA1	**Shidzhatmaz**	**117.42 49**	⇓	*i*PKIKP		**PKPdf**	**20 10 44.4**	**-1.6**
AKT	**Akhty**	**117.54 54**		*e*PKIKP		**PKiKP**	**20 10 49.8**	**+3.7**
AKT				MLR	MLR			
	comp=Z,2μm,24.0s							
KIV	**Kislovodsk**	**117.62 49**		*i* PKIKP		**PKiKP**	**20 10 46.8**	**+0.6**
KIV				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,195nm,22.0s							

MAK	**Makhachkala**	**118.68 53**		*e*P		**Pdif**	**20 07 04.3**	**-4.1**
MAK				pmax	pmax			
	comp=Z,24nm,0.4s							
SCHQ	**Schefferville**	**118.89 334**		PKP		**PKiKP**	**20 10 48.1**	**0.0**
	comp=Z,4.9nm,0.6s,baz=187,slow=4.0,SNR=18							
PDAR	**Pinedale Array**	**122.89 299**		PKP		**PKPdf**	**20 10 56.1**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=146,slow=2.8,SNR=14							
CMAR	**Chiang Mai Arr**	**123.05 112**		PKP		**PKiKP**	**20 10 57.3**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=213,slow=2.2,SNR=8.4							
ULM	**Lac du Bonnet**	**123.42 314**		PKP		**PKPdf**	**20 10 56.6**	**-0.4**
	comp=Z,6.4nm,0.6s,baz=150,slow=2.9,SNR=13							
NVAR	**Mina Array Bea**	**123.44 290**		PKP		**PKiKP**	**20 10 58.8**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=149,slow=2.1,SNR=5.7							
NOA	**NORSAR Array B**	**123.90 21**		PKP		**PKiKP**	**20 10 57.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=206,slow=2.1,SNR=2.0							
OBN	**Obninsk**	**124.89 38**		*e*PKIKP		**PKiKP**	**20 11 00.6**	**+0.7**
OBN				*e*PPP		PPP	20 15 31.2	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BELG	**Belogornoye**	**126.44 47**	⇓	*e*PKIKP		**PKiKP**	**20 11 03.2**	**+0.1**
FINES	**FINESS Array B**	**127.39 28**		PKP		**PKiKP**	**20 11 04.5**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=215,slow=1.7,SNR=4.4							
KSH2	**Kashi**	**128.35 76**		PKP		**PKiKP**	**20 11 14.3**	**+6.7**
QIZ	**Qiongzhong**	**128.45 122**		PKP		**PKiKP**	**20 11 07.7**	**-0.5**
QIZ				PP		**PP**	**20 13 12.3**	**-0.2**
QIZ				SS		SS	20 30 30.1	+2.5
QIZ				LR		LR		
	comp=Z,310nm,14.5s							
QIZ				LR		LR		
	comp=Z,340nm,18.1s							
AAK	**Ala-Archa**	**130.50 73**		PKP		**PKiKP**	**20 11 11.5**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=191,slow=3.2,SNR=5.4							
AAK	**Ala-Archa**	**130.50 73**	⇓	*e*PKIKP		**PKPdf**	**20 11 10.4**	**-0.6**
KLMR	**Klimovskoe**	**130.51 36**		*e*PKIKP		**PKPdf**	**20 11 10.1**	**0.0**
KLMR				*e*			20 13 26.4	
KLMR				pmax	pmax			
	comp=Z,49nm,1.9s							
PZH	**PanZhiHua**	**131.25 109**		PKP		**PKiKP**	**20 11 13.8**	**0.0**
KIRV	**Kirov**	**131.91 43**	⇓	*e*PKIKP		**PKiKP**	**20 11 13.8**	**0.0**
SUMG	**Summit**	**132.41 355**		*i* P		**PKiKP**	**20 11 15.3**	**+0.3**
ARTI	**Arti**	**133.56 50**	⇓	*e*PKIKP		**PKPdf**	**20 11 15.8**	**-0.3**
ARCES	**ARCESS Array B**	**134.19 23**		PKP		**PKPdf**	**20 11 17.3**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=248,slow=1.3,SNR=10							
KULLO	**Kvarsuaq**	**135.74 348**		*i* P		PKPpre	20 11 12.0	
BORK	**Borovoye**	**136.13 60**	⇓	*e*PKIKP		**PKPdf**	**20 11 20.7**	**-0.3**
BVAR	**Borovoye Array**	**136.14 60**		PKP		**PKiKP**	**20 11 21.6**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=236,slow=2.6,SNR=6.3							
DAG	**Danmarks Havn**	**136.42 2**		*i* P		**PKPdf**	**20 11 21.0**	**+0.2**
MK31	**Makanchi Array**	**137.33 74**	⇓	*e*PKIKP		**PKiKP**	**20 11 24.4**	**-0.9**
MKAR	**Makanchi Array**	**137.33 74**		PKhKP		PKPpre	20 11 17.9	
	comp=Z,0.5nm,0.6s,baz=231,slow=2.3,SNR=6.9							
MKAR				PKP		**PKPdf**	**20 11 24.0**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=230,slow=2.5,SNR=6.7							
WMQ	**Urumqi**	**137.87 82**		*e*PKP		**PKiKP**	**20 11 26.1**	**-0.5**
WMQ				LR	LR			
	comp=Z,220nm,14.9s							
NEEM	**North Greenlan**	**137.91 352**		*i* P		PKPpre	20 11 14.6	
KURBB	**Kurchatov Arra**	**138.19 68**		PKP		**PKPdf**	**20 11 24.5**	**-0.3**
	comp=Z,1.3nm,0.2s,baz=231,slow=3.2,SNR=4.3							
KURK	**Kurchatov**	**138.29 68**	⇑	*e*PKIKP		**PKiKP**	**20 11 26.1**	**-1.0**
YKA	**Yellowknife Ar**	**139.39 315**		PKP		**PKPdf**	**20 11 27.1**	**+0.4**
	comp=Z,6.4nm,0.8s,baz=128,slow=1.3,SNR=24							
YKA				SKP		**SKPdf**	**20 15 00.8**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=116,slow=1.5,SNR=7.4							
LZDM	**Lanzhou Array**	**139.96 104**		PKP		**PKiKP**	**20 11 30.1**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=122,slow=1.9,SNR=5.3							
SPITS	**Spitsbergen Ar**	**140.12 12**		PKhKP		PKPpre	20 11 22.0	
	comp=Z,15nm,1.0s,baz=171,slow=3.8,SNR=7.5							
SPITS				PKP		**PKPdf**	**20 11 25.8**	**-1.8**
	comp=Z,15nm,1.0s,baz=201,slow=4.5,SNR=2.3							
LZH	**Lanzhou**	**140.14 104**		*e*PKP		**PKiKP**	**20 11 34.1**	**+2.5**
GTA2	**Gaotai**	**140.75 96**		*e*PKP		**PKiKP**	**20 11 33.0**	**+0.3**
XAN	**Xi'an**	**140.93 111**		PKP		**PKPdf**	**20 11 31.4**	**+0.9**
DGZ	**Jazzator, Alta**	**141.82 75**	⇑	*e*PKIKP		**PKPdf**	**20 11 32.5**	**+0.8**
ZALV	**Zalesovo Beam**	**143.28 68**		PKhKP		PKPpre	20 11 30.3	
	comp=Z,0.7nm,0.3s,baz=228,slow=3.8,SNR=4.7							
ZALV				PKP		**PKPdf**	**20 11 34.8**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=223,slow=3.2,SNR=8.2							
NJ2	**Nanjing**	**143.71 124**		*e*PKP		**PKPdf**	**20 11 35.9**	**+0.5**
P33M	**Teslin, Yukon**	**145.21 303**		P		**PKPab**	**20 11 36.8**	**-0.2**
	baz=122							
TIY	**Taiyuan**	**145.57 111**		*e*PKPbc		**PKiKP**	**20 11 40.9**	**-1.7**
HNS	**HongShan**	**146.38 114**	⇑	PKPbc		**PKPab**	**20 11 41.6**	**-0.4**
TIA	**Tai'an**	**146.50 118**		PKPbc		**PKPbc**	**20 11 41.8**	**+0.2**
BTO2	**Baotou**	**146.72 105**		*e*PKPbc		**PKPbc**	**20 11 42.4**	**+0.1**
BTO2				PP		**PP**	**20 15 11.3**	**+4.7**
KNGR	**Kungurtug, Tuv**	**147.38 81**	⇓	*e*PKP2		**PKPbc**	**20 11 43.4**	**-0.4**
HYT	**Haines Junctio**	**147.52 302**		P		**PKPbc**	**20 11 44.1**	**+0.3**
	baz=116							
HHC	**Hu-ho-hao-te**	**147.62 107**		*e*PKPbc		**PKPdf**	**20 11 39.4**	**-2.6**
M30M	**Minto, Yukon**	**148.04 305**		P		**PKPbc**	**20 11 45.0**	**-0.1**
	baz=117							
H31M	**Peel River**	**148.46 312**		P		**PKPbc**	**20 11 45.8**	**-0.3**
	baz=114							
O28M	**Mount Upton**	**148.65 301**		P		**PKiKP**	**20 11 47.7**	**-0.8**
	baz=118							
M29M	**Somme Creek**	**148.68 304**		P		**PKPbc**	**20 11 46.0**	**-0.8**
	baz=116							
YUK8	**Steele Glacier**	**148.71 302**		P		**PKPbc**	**20 11 47.5**	**+0.3**
	baz=117							
J30M	**Hart River**	**148.72 309**		P		**PKPbc**	**20 11 46.6**	**-0.3**
	baz=114							
K29M	**Barlow Dome**	**148.90 307**		P		**PKPbc**	**20 11 47.4**	**0.0**
	baz=115							
INK	**Inuvik**	**149.10 316**		P		**PKPbc**	**20 11 47.5**	**0.0**
	baz=110,SNR=16							
CTG	**Chitina Glacier**	**149.24 301**		P		**PKPbc**	**20 11 48.5**	**+0.1**
	baz=117							
G30M	**tAoh Zraii Nji**	**149.61 313**		P		**PKPbc**	**20 11 48.7**	**-0.2**
	baz=111,SNR=15							
MOY	**Mondy**	**149.76 82**		*e*PKP2		**PKPbc**	**20 11 49.9**	**0.0**
MOY				pmax	pmax			
	comp=Z,62nm,3.1s							
CRQE	**Cirque**	**149.91 299**		P		**PKiKP**	**20 11 50.3**	**-0.6**
	baz=116							
SONM	**Songino Array**	**150.07 92**		PKPbc		**PKiKP**	**20 11 51.0**	**-0.6**
	comp=Z,4.0nm,0.6s,baz=221,slow=2.8,SNR=30							
SONM				PKPab		**sPKPbc**	**20 11 57.4**	**+0.3**
	comp=Z,12nm,1.0s,baz=228,slow=2.7,SNR=18							
M27K	**Edge Creek, AK**	**150.08 303**		P		**PKPbc**	**20 11 49.6**	**-0.7**
	baz=114							
ZAK	**Zakamensk**	**150.13 85**		*e*PKIKP		**PKPbc**	**20 11 50.6**	**-0.2**
ZAK				pmax	pmax			
	comp=Z,37nm,1.4s							
H29M	**Whitestone**	**150.14 311**		P		**PKPbc**	**20 11 50.0**	**-0.2**
	baz=110							
MCARA	**Mccarthy VSAT**	**150.16 301**		P		**PKiKP**	**20 11 50.7**	**-0.5**
	baz=115							
L27K	**Beaver Creek,**	**150.34 304**		P		**PKPbc**	**20 11 50.0**	**-0.9**
	baz=113							
ULN	**Ulaanbaatar**	**150.43 93**	⇓	*e*PKIKP		**PKPbc**	**20 11 49.4**	**-2.2**
I28M	**Miner Creek**	**150.47 309**		P		**PKPbc**	**20 11 49.9**	**-1.2**
	baz=111							
E29M	**Blow River**	**150.67 315**		P		**PKPbc**	**20 11 51.3**	**-0.1**
	baz=107,SNR=20							
N25K	**Chitina, Valde**	**150.94 300**		P		**PKPbc**	**20 11 51.6**	**-0.7**
	baz=114							
EYAK	**Cordova Ski Ar**	**151.00 298**		P		**PKiKP**	**20 11 53.1**	**+0.2**
	baz=115							
TLY	**Talaya**	**151.10 84**	⇓	*i*PKIKP		**PKPbc**	**20 11 52.7**	**-0.2**
F28M	**Old Crow**	**151.15 314**		P		**PKiKP**	**20 11 52.7**	**-0.4**
	baz=107,SNR=17							
I27K	**Kandik River**	**151.19 309**		P		**PKiKP**	**20 11 52.8**	**-0.4**
	baz=109,SNR=12							
E28M	**Babbage River**	**151.31 316**		P		**PKiKP**	**20 11 52.9**	**-0.5**
	baz=106							
H27K	**Steamboat Moun**	**151.35 310**		P		**PKiKP**	**20 11 54.1**	**+0.5**
	baz=108							
NRIK	**Noril'sk**	**151.42 43**		PKPbc		**PKiKP**	**20 11 53.6**	**0.0**
	comp=Z,2.1nm,0.5s,baz=29,slow=3.0,SNR=4.7							
NRIK	**Noril'sk**	**151.42 43**	⇑	*i*PKIKP		**PKiKP**	**20 11 53.4**	**-0.1**
KLU	**Klutina**	**151.47 300**		P		**PKiKP**	**20 11 53.7**	**-0.3**
	baz=114,SNR=5.6							
P23K	**Montague Islan**	**151.51 296**		P		**PKPbc**	**20 11 53.3**	**-0.2**
	baz=116							
SCRK	**Sand Creek**	**151.59 305**		P		**PKPbc**	**20 11 53.4**	**-0.4**
	baz=111,SNR=22							
J26L	**Joseph Creek**	**151.59 306**		P		**PKiKP**	**20 11 54.6**	**+0.4**
	baz=110,SNR=14							
IRK	**Irkutsk**	**151.75 83**		*e*PKIKP		**PKPbc**	**20 11 51.4**	**-3.0**
IRK				pmax	pmax			
	comp=Z,46nm,2.2s							
M24K	**Tolsona, Glenn**	**151.82 301**		P		**PKiKP**	**20 11 54.8**	**+0.1**
	baz=113,SNR=6.2							
RIDG	**Independent Ri**	**151.86 304**		P		**PKPbc**	**20 11 53.4**	**-0.9**
	baz=110,SNR=11							

KSRS	**Korea Array**	**152.04 131**		PKPbc		**PKiKP**	**20 11 56.0**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=202,slow=1.7,SNR=7.5							
KSRS				PKPab		**PKPab**	**20 12 04.7**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=216,slow=2.5,SNR=6.2							
XLT	**XiLinHaoTe**	**152.12 108**		*e*PKPbc		**PKPbc**	**20 11 55.4**	**-0.2**
XLT				pPKP		sPKPab	20 12 19.3	+8.0
J25K	**Salcha River,**	**152.37 306**		P		**PKPbc**	**20 11 55.3**	**-0.2**
	baz=109,SNR=7.3							
WAT6	**Susitna Watana**	**152.68 301**		P		**PKPbc**	**20 11 55.9**	**-0.5**
	baz=111,SNR=10							
PRP	**Porcupine Dome**	**152.71 308**		P		**PKPbc**	**20 11 55.2**	**-1.1**
	baz=107							
F26K	**Sheenjek River**	**152.75 313**		P		**PKiKP**	**20 11 57.2**	**+0.8**
	baz=104							
KDAK	**Kodiak Island**	**152.94 289**		P		**PKiKP**	**20 11 57.2**	**+0.2**
	baz=117							
HDA	**Harding Lake**	**152.95 305**		P		**PKiKP**	**20 11 56.6**	**-0.3**
	baz=108,SNR=5.4							
C27K	**Jago River**	**153.00 317**		P		**PKiKP**	**20 11 58.0**	**+1.2**
	baz=100							
ILAR	**Eielson Array**	**153.04 306**		PKPbc		**PKiKP**	**20 11 57.1**	**0.0**
	comp=Z,7.6nm,0.9s,baz=143,slow=1.6,SNR=14							
ILAR				PKPab		**PKPab**	**20 12 07.4**	**-1.1**
	comp=Z,4.7nm,0.6s,baz=330,slow=1.2,SNR=8.8							
F25K	**Christian Rive**	**153.28 312**		P		**PKiKP**	**20 11 58.5**	**+1.0**
	baz=103							
E25K	**Arctic Village**	**153.37 313**		P		**PKiKP**	**20 11 58.1**	**+0.4**
	baz=102							
COLA	**College**	**153.46 306**	⇓	*e*PKIKP		**PKPdf**	**20 11 50.6**	**+0.5**
H24K	**Noodor Dome**	**153.73 308**		P		**PKiKP**	**20 11 58.8**	**+0.3**
	baz=105							
G24K	**Hadweenzic Riv**	**153.78 310**		P		**PKPbc**	**20 11 57.6**	**-0.8**
	baz=103							
NEA2	**Nenana**	**153.88 305**		P		**PKiKP**	**20 11 58.7**	**-0.1**
	baz=106							
TRF	**Thorofare Moun**	**154.06 302**		P		**PKPbc**	**20 11 58.2**	**-1.1**
	baz=108							
SKT	**Skwentna**	**154.13 298**		P		**PKPbc**	**20 11 58.9**	**-0.4**
	baz=110							
MJAR	**Matsushiro Arr**	**154.53 149**		PKPbc		**PKiKP**	**20 12 01.7**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=186,slow=4.0,SNR=4.7							
MJAR				PKPab		**PKPab**	**20 12 13.7**	**-1.9**
	comp=Z,3.3nm,0.8s,baz=164,slow=3.9,SNR=5.5							
BPAW	**Bear Paw Mtn.**	**154.55 303**		P		**PKiKP**	**20 12 00.6**	**+0.4**
	baz=106							
COLD	**Coldfoot**	**154.94 311**		P		**PKiKP**	**20 12 00.8**	**-0.1**
	baz=100							
HILR	**Hailar Array B**	**157.89 102**		PKPab		**PKPab**	**20 12 29.7**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=228,slow=3.7,SNR=2.7							
HEH	**HeiHe**	**162.06 110**		*e*P		**P

MLPR	**Magueyes Islan**	**0.10**	**295**			**Pb**	**20 08 04.8**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.18**	**297**		Pg	**Pn**	**20 08 05.9**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.18**	**297**	⇑	*e*Pg	**Pn**	**20 08 06.0**	**-0.6**
CRPR				⇑	*e*Sg	**Sb**	**20 08 09.3**	**+0.7**
CRPR					IAML		20 08 09.7	
	comp=N,7μm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.18**	**297**	⇑	*i*P	**Pn**	**20 08 06.0**	**-0.6**
CRPR					*e*S	**Sb**	**20 08 09.5**	**+0.9**
CRPR	**Cabo Rojo, PR**	**0.18**	**297**		*i* P	**Pn**	**20 08 06.0**	**-0.6**
CRPR					*e*S	**Sb**	**20 08 09.3**	**+0.7**
CRPR					IAML		20 08 09.6	
	comp=Z,8μm,0.2s							
LSP	**Las Mesas**	**0.28**	**332**			**Pn**	**20 08 07.7**	**-0.4**
LSP						**Sn**	**20 08 12.8**	**-0.8**
LSP	**Las Mesas**	**0.28**	**332**	⇑	*i*P	**Pn**	**20 08 07.7**	**-0.4**
LSP					*e*S	**Sn**	**20 08 12.8**	**-0.8**
OBIP	**Obispado Ponce**	**0.34**	**70**			**Pb**	**20 08 07.4**	**+0.2**
OBIP						**Sb**	**20 08 12.3**	**-0.2**
OBIP	**Obispado Ponce**	**0.34**	**70**		IAML		20 08 12.9	
	comp=N,349nm,0.2s							
OBIP	**Obispado Ponce**	**0.34**	**70**	⇓	*i*P	**Pb**	**20 08 07.4**	**+0.2**
OBIP					*e*S	**Sb**	**20 08 12.3**	**-0.2**
OBIP	**Obispado Ponce**	**0.34**	**70**		*i* P	**Pb**	**20 08 07.4**	**+0.2**
OBIP					*e*S	**Sb**	**20 08 12.2**	**-0.2**
OBIP					IAML		20 08 12.7	
	comp=Z,618nm,0.2s							
PRSN	**Puerto Rico Se**	**0.35**	**327**		Pg	**Pn**	**20 08 08.6**	**-0.4**
PRSN					IAML		20 08 17.6	
	comp=Z,2μm,0.3s							
PRSN					IAML		20 08 17.8	
	comp=Z,3μm,0.3s							
PRSN	**Puerto Rico Se**	**0.35**	**327**	⇑	*e*Pg	**Pn**	**20 08 08.6**	**-0.4**
PRSN				⇑	*e*Sg	**Sn**	**20 08 14.7**	**-0.4**
PRSN					IAML		20 08 17.7	
	comp=N,2μm,0.2s							
CELP	**Cerrillos**	**0.38**	**67**		Pg	**Pb**	**20 08 08.0**	**+0.3**
CELP					IAML		20 08 13.9	
	comp=N,1μm,0.3s							
UUPR	**Utuado, UPR, P**	**0.39**	**33**		Pg	**Pb**	**20 08 08.3**	**+0.3**
UUPR					Sg	**Sb**	**20 08 13.5**	**-0.2**
AGPR	**Aguadilla, PR**	**0.56**	**344**		Pg	**Pn**	**20 08 12.0**	**+0.1**
AGPR					IAML		20 08 20.3	
	comp=N,912nm,0.4s							
AGPR					IAML		20 08 20.4	
	comp=N,691nm,0.3s							
AGPR	**Aguadilla, PR**	**0.56**	**344**	⇑	*e*Pg	**Pn**	**20 08 12.0**	**+0.1**
AGPR				⇑	*e*Sg	**Sn**	**20 08 20.0**	**-0.4**
AGPR					IAML		20 08 24.5	
	comp=N,567nm,0.2s							
AGPR	**Aguadilla, PR**	**0.56**	**344**	⇑	*e*P	**Pn**	**20 08 12.1**	**+0.2**
AGPR					*e*S	**Sn**	**20 08 20.1**	**-0.4**
EMPR	**Esperanza - Ma**	**0.68**	**36**			**Pn**	**20 08 13.7**	**+0.2**
EMPR						**Sn**	**20 08 23.1**	**-0.1**
EMPR	**Esperanza - Ma**	**0.68**	**36**	⇑	*i*P	**Pn**	**20 08 13.7**	**+0.2**
EMPR					*e*S	**Sn**	**20 08 23.1**	**-0.1**
ECPR	**Experimental S**	**0.68**	**55**		Pg	**Pb**	**20 08 12.8**	**+0.1**
ECPR					IAML		20 08 24.2	
	comp=N,1μm,0.2s							
ECPR					IAML		20 08 24.9	
	comp=N,1μm,0.2s							
IDE	**Isla Desecheo**	**0.68**	**312**			**Pn**	**20 08 14.4**	**+0.8**
IDE						**Sn**	**20 08 24.0**	**+0.6**
IDE	**Isla Desecheo**	**0.68**	**312**	⇑	*i*P	**Pn**	**20 08 14.4**	**+0.8**
IDE					*e*S	**Sn**	**20 08 24.0**	**+0.6**
SJG	**San Juan**	**0.78**	**76**			**Pb**	**20 08 14.6**	**+0.1**
SJG	**San Juan**	**0.78**	**76**		IAML		20 08 25.8	
	comp=N,806nm,0.3s							
SJG					IAML		20 08 26.2	
	comp=N,496nm,0.3s							
SJG	**San Juan**	**0.78**	**76**	⇓	*e*Pg	**Pb**	**20 08 14.5**	**+0.1**
SJG				⇑	*e*Sg	**Sb**	**20 08 24.8**	**+0.2**
SJG	**San Juan**	**0.78**	**76**	⇓	*i*P	**Pb**	**20 08 14.6**	**+0.1**
SJG					*e*S	**Sb**	**20 08 25.0**	**+0.4**
SJG	**San Juan**	**0.78**	**76**		*i* P	**Pb**	**20 08 14.6**	**+0.1**
SJG					*e*S	**Sb**	**20 08 24.9**	**+0.4**
SJG					IAML		20 08 25.7	
	comp=Z,261nm,0.3s							
PDPR	**Patillas Dam,**	**0.88**	**84**			**Pn**	**20 08 16.3**	**0.0**
GCPR	**Guaynabo City**	**0.90**	**65**			**Pb**	**20 08 16.5**	**-0.1**
GCPR						**Sb**	**20 08 28.5**	**+0.3**
GCPR	**Guaynabo City**	**0.90**	**65**	⇑	*i*P	**Pb**	**20 08 16.5**	**-0.1**
GCPR					*e*S	**Sb**	**20 08 28.5**	**+0.3**
HUMP	**Col San Antoni**	**1.06**	**78**			**Pb**	**20 08 19.6**	**+0.3**
HUMP						**Sb**	**20 08 32.6**	**-0.1**
HUMP	**Col San Antoni**	**1.06**	**78**			**Pb**	**20 08 19.1**	**-0.1**
HUMP					IAML		20 08 36.4	
	comp=Z,325nm,0.4s							
HUMP					IAML		20 08 36.5	
	comp=Z,458nm,0.3s							
HUMP	**Col San Antoni**	**1.06**	**78**	⇑	*i*P	**Pb**	**20 08 19.6**	**+0.3**
HUMP					*e*S	**Sb**	**20 08 32.6**	**-0.1**
CUPR	**Culebra, Puert**	**1.63**	**76**		Pn	**Pb**	**20 08 29.0**	**+0.2**
MIDR	**Miches**	**2.26**	**298**	⇑	*e*Pg	**Pb**	**20 08 39.7**	**+0.1**
MIDR					IAML		20 09 37.6	
	comp=N,38nm,3.3s							
DR12	**Loma Pena Alta**	**2.47**	**291**		Pn	**Pb**	**20 08 43.5**	**+0.2**
HATOM	**Hato Mayor del**	**2.47**	**291**	⇑	*e*Pg	**Pb**	**20 08 42.5**	**-0.7**
HATOM					IAML		20 09 26.9	
	comp=N,26nm,1.1s							

*IGIL **10** 20:19:21.2, 36˚.54N×7˚.60W, h11km, ML1.2*
*SFS **10** 20:19:21.6, 36˚.55N×7˚.50W, h24km, ML2.6/9, ML2.7/9, MLv2.7/9*
*MDD **10** 20:19:21.2±0.9, 36˚.57N×7˚.45W, h15km±5km, mb_Lg2.4/8, Error ellipse: s-maj=7.1km s-min=3.4km az=12.0*
INMG 10 20:19:21.6±1.6, 36˚.55N×7˚.51W, h18km±5km, ML1.7,1D, Error ellipse: s-maj=5.6km s-min=3.2km az=45.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.77**	**334**	P	Pb	20 19 35.8	-0.7
PBDV				S	Sb	20 19 45.9	-0.8
PBDV	**Barranco-do-Ve**	**0.77**	**334**	⇓ *e*P	Pb	20 19 35.9	-0.6
PBDV				*e*S	Sb	20 19 46.0	-0.6
PBDV				*i* IAML		20 19 46.4	
PBDV				*i* IAML		20 19 46.7	
PBDV				*i* IAML		20 19 47.4	
PVAQ	**Vaqueiros**	**0.87**	**349**	*e*P	Pb	20 19 37.3	-0.9
PVAQ				*e*S	Sb	20 19 48.5	-1.0
PVAQ				*i* IAML		20 19 49.2	
PVAQ				*i* IAML		20 19 49.2	
PVAQ				*i* IAML		20 19 49.4	
PCVE	**Castro Verde**	**1.16**	**339**	*e*P	Pn	20 19 41.6	-1.4
PCVE				*e*S	Sb	20 19 55.9	-2.0
PCVE				*i* IAML		20 19 56.5	
PCVE				*i* IAML		20 19 56.7	
PCVE				*i* IAML		20 19 57.1	
MORF	**Marmelete**	**1.19**	**310**	*e*P	Pn	20 19 41.1	-2.3
MORF	**Marmelete**	**1.19**	**310**	*e*P	Pn	20 19 41.1	-2.2
PFVI	**Vila Bisbo**	**1.21**	**299**	P	Pn	20 19 40.9	-2.7
PFVI	**Vila Bisbo**	**1.21**	**299**	*e*P	Pn	20 19 41.4	-2.2
ESPR	**Espera**	**1.37**	**76**	S	Sn	20 20 00.4	-3.0
EMIN	**Mina Concepcio**	**1.39**	**29**	P	Pn	20 19 44.5	-1.5
EMIN				S	Sn	20 20 00.6	-3.4
EMIN	**Mina Concepcio**	**1.39**	**29**	Pn	Pn	20 19 44.0	-2.1
EMIN				Sn	Sn	20 20 01.2	-2.8
EMIN				*i* IVmb_Lg		20 20 08.6	
PTEO	**Sao Teotonio**	**1.39**	**316**	*e*P	Pn	20 19 44.4	-1.7
PTEO				*e*S	Sn	20 20 00.8	-3.2
MESJ	**Messejana**	**1.41**	**336**	*e*P	Pn	20 19 44.6	-1.7
MESJ				*e*S	Sn	20 20 01.9	-2.5
MESJ				IAML		20 20 04.7	
	comp=E,2.6nm,0.1s						
MESJ	**Messejana**	**1.41**	**336**	*e*P	Pn	20 19 45.0	-1.4
MESJ				*e*S	Sn	20 20 01.9	-2.5
MESJ				*i* IAML		20 20 04.2	
MESJ				*i* IAML		20 20 05.3	
MESJ				*i* IAML		20 20 09.6	
PBEJ	**Beja**	**1.50**	**349**	*e*S	Sn	20 20 04.3	-2.5
PBEJ				*i* IAML		20 20 07.1	
PBEJ				*i* IAML		20 20 10.5	
PBEJ				*i* IAML		20 20 13.1	
PBAR	**Barrancos**	**1.66**	**13**	P	Pn	20 19 48.5	-1.4
PBAR				S	Sn	20 20 08.5	-2.4
PBAR	**Barrancos**	**1.66**	**13**	*e*P	Pn	20 19 48.6	-1.3
PBAR				*e*S	Sn	20 20 08.5	-2.3
PBAR				*i* IAML		20 20 13.3	
PBAR				*i* IAML		20 20 14.6	
PBAR				*i* IAML		20 20 16.2	
ECEU	**Ceuta**	**1.84**	**110**	P	Pn	20 19 50.6	-1.7
E1302	**La Puebla de C**	**1.91**	**72**	Pn	Pn	20 19 52.1	-1.2
E1302				Sn	Sn	20 20 13.9	-3.0
EVO	**Evora**	**2.02**	**349**	P	Pn	20 19 53.3	-1.4
EVO				S	Sn	20 20 16.8	-2.8
EVO	**Evora**	**2.02**	**349**	*e*P	Pn	20 19 53.5	-1.3
EVO				*e*S	Sn	20 20 16.5	-3.1
EVO				*i* IAML		20 20 16.6	
EVO				*i* IAML		20 20 17.7	
EVO				*i* IAML		20 20 18.9	
MOE	**Montemor**	**2.08**	**342**	*e*P	Pn	20 19 54.4	-1.2
MOE				*e*S	Sn	20 20 19.4	-1.6
MOE				*i* IAML		20 20 19.9	
MOE				*i* IAML		20 20 20.0	
EBAD	**Badajoz**	**2.24**	**10**	P	Pn	20 19 56.7	-1.0
EBAD				S	Sn	20 20 23.2	-1.8
EBAD	**Badajoz**	**2.24**	**10**	Pn	Pn	20 19 56.3	-1.5
EBAD				Sn	Sn	20 20 22.0	-2.9
EBAD				*i* IVmb_Lg		20 20 34.1	
ECAB	**El Cabril**	**2.26**	**47**	P	Pn	20 19 56.8	-1.3
ECAB				S	Sn	20 20 21.0	-4.6
ECAB	**El Cabril**	**2.26**	**47**	Pn	Pn	20 19 56.5	-1.6
ECAB				Sn	Sn	20 20 22.0	-3.5
PARRA	**Arraiolos**	**2.30**	**350**	*e*P	Pn	20 19 57.3	-1.3
PARRA				*e*S	Sn	20 20 23.7	-2.8
PARRA				*i* IAML		20 20 24.6	
PARRA				*i* IAML		20 20 24.7	
PARRA				*i* IAML		20 20 24.9	
PESTR	**Estremoz**	**2.31**	**358**	S	Sn	20 20 24.2	-2.7
PESTR	**Estremoz**	**2.31**	**358**	*e*S	Sn	20 20 24.6	-2.2
PESTR				*i* IAML		20 20 24.9	
PESTR				*i* IAML		20 20 25.2	
PESTR				*i* IAML		20 20 25.3	
EMAL	**Malaga-Limoner**	**2.49**	**84**	P	Pn	20 19 59.3	-1.9
PMTG	**Montargil**	**2.58**	**348**	*e*P	Pn	20 20 01.0	-1.4
PMTG				*e*S	Sn	20 20 31.2	-2.1
PMTG				*i* IAML		20 20 32.3	
PMTG				*i* IAML		20 20 32.5	
PMTG				*i* IAML		20 20 34.2	
EGOR	**Sierra Gorda,**	**2.79**	**77**	S	Sn	20 20 35.8	-2.9
EADA	**Adamuz**	**2.84**	**54**	P	Pn	20 20 04.3	-1.8
EADA				S	Sn	20 20 34.7	-5.2
EADA	**Adamuz**	**2.84**	**54**	Pn	Pn	20 20 04.3	-1.8
EADA				*i* IVmb_Lg		20 20 07.8	
PMRV	**Marv??o**	**2.87**	**2**	*e*P	Pn	20 20 05.3	-1.3
PMRV				*e*S	Sn	20 20 37.9	-2.8
PMRV				*i* IAML		20 20 38.1	
PMRV				*i* IAML		20 20 38.2	
PMRV				*i* IAML		20 20 38.3	
PSARD	**Sardoal**	**3.09**	**351**	*e*P	Pn	20 20 08.4	-1.1
PSARD				*e*S	Sn	20 20 43.4	-2.6
PSARD				*i* IAML		20 20 43.9	
PSARD				*i* IAML		20 20 44.6	
PSARD				*i* IAML		20 20 45.0	
PSBE	**So Bento**	**3.13**	**341**	*e*P	Pn	20 20 08.9	-1.2
PCBR	**Castelo Branco**	**3.28**	**0**	*e*P	Pn	20 20 11.0	-1.1
PCBR				*e*S	Sn	20 20 48.2	-2.6
PCBR				*i* IAML		20 20 48.8	
PCBR				*i* IAML		20 20 48.8	
PCBR				*i* IAML		20 20 48.9	
CIBOR	**Castaar de Ib**	**3.49**	**27**	Pn	Pn	20 20 13.6	-1.4
CIBOR				Sn	Sn	20 20 51.2	-4.7
PSIM	**Granatula de C**	**3.74**	**52**	Pn	Pn	20 20 16.3	-2.2
PSIM				Sn	Sn	20 20 57.4	-4.8
EQES	**Quesada**	**3.76**	**69**	Pn	Pn	20 20 17.1	-1.7
EQES				Sn	Sn	20 20 58.2	-4.4
EQES				*i* IVmb_Lg		20 21 20.7	
PAB	**San Pablo**	**3.89**	**39**	Pn	Pn	20 20 18.4	-2.2
PAB				Sn	Sn	20 21 00.3	-5.7
PAB				*i* IVmb_Lg		20 21 12.8	
MVO	**Moncorvo**	**4.62**	**5**	*e*S	Sn	20 21 19.1	-4.8
POLO	**Lamas de Olo**	**4.82**	**357**	*e*S	Sn	20 21 24.8	-4.1
ELOB	**Lobios**	**5.33**	**356**	Sn	Sn	20 21 35.8	-5.5

*SFS **10** 20:20:08.0, 36˚.97N×5˚.84W, h0km, ML2.4/6, ML2.4/6, MLv2.5/6*
*MDD **10** 20:20:07.2±1.2, 36˚.91N×5˚.83W, h12km±9km, mb_Lg1.8/7, Error ellipse: s-maj=8.5km s-min=4.4km az=19.0*
ISC 10 20:20:07.1±1.0, 36.97N±0.04×5.83W±0.03, h5km±10km, n15,σ0.87/27, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPR	**Espera**	**0.10**	**192**	Pg	**Pg**	**20 20 08.8**	**-0.5**
ESPR				Sg	**Sg**	**20 20 11.6**	**+0.8**
ESPR	**Espera**	**0.10**	**192**	Pg	**Pg**	**20 20 08.8**	**-0.5**
ESPR				*i* IVmb_Lg		20 20 10.4	
ESPR				Sg	**Sg**	**20 20 11.2**	**+0.4**
E1302	**La Puebla de C**	**0.50**	**71**	Pg	**Pg**	**20 20 15.2**	**-1.5**
E1302				Sg	**Sg**	**20 20 24.2**	**+1.0**
E1302				*i* IVmb_Lg		20 20 27.8	
EMIN	**Mina Concepcio**	**1.04**	**320**	Pg	**Pg**	**20 20 26.9**	**-0.2**
EMIN				Sg	**Sg**	**20 20 41.8**	**+1.2**
EMIN	**Mina Concepcio**	**1.04**	**320**	Pg	**Pg**	**20 20 27.0**	**-0.1**
EMIN				Sg	**Sg**	**20 20 41.6**	**+0.9**
EMIN				*i* IVmb_Lg		20 20 46.7	
ECAB	**El Cabril**	**1.15**	**16**	Pg	**Pg**	**20 20 28.3**	**-0.9**
ECAB				Sg	**Sg**	**20 20 44.3**	**+0.2**
ECAB	**El Cabril**	**1.15**	**16**	Pg	**Pg**	**20 20 28.3**	**-0.9**
ECAB				Sg	**Sg**	**20 20 44.6**	**+0.4**
ECAB				*i* IVmb_Lg		20 20 47.6	
EGOR	**Sierra Gorda,**	**1.38**	**84**	Pn	**Pg**	**20 20 35.0**	**+1.3**
EGOR				Sn	**Sb**	**20 20 51.2**	**-0.4**
EGOR	**Sierra Gorda,**	**1.38**	**84**	Pg	**Pn**	**20 20 32.4**	**-0.9**
EGOR				*i* IVmb_Lg		20 20 49.2	
EGOR				Sg	**Sb**	**20 20 50.7**	**-0.9**
PBAR	**Barrancos**	**1.54**	**322**	Pn	**Pn**	**20 20 34.2**	**-1.1**
PBAR				Sn	**Sn**	**20 20 55.7**	**+0.1**
PBAR	**Barrancos**	**1.54**	**322**	*e*S	**Sn**	**20 20 55.3**	**-0.3**
PBAR				IAML		20 20 57.3	
PBAR				IAML		20 20 59.9	
PBAR				IAML		20 21 00.1	
EADA	**Adamuz**	**1.56**	**39**	Pn	**Pn**	**20 20 36.1**	**+0.6**
EADA				Sn	**Sn**	**20 20 56.6**	**+0.5**
EADA	**Adamuz**	**1.56**	**39**	Pg	**Pn**	**20 20 36.1**	**+0.6**
EADA				Sg	**Sn**	**20 20 57.0**	**+0.9**
EADA				*i* IVmb_Lg		20 20 57.5	
PVAQ	**Vaqueiros**	**1.57**	**287**	*e*Sg	**Sg**	**20 20 58.5**	**+1.0**
PVAQ				IAML		20 20 59.1	
PVAQ				IAML		20 21 01.4	
PVAQ				IAML		20 21 02.3	
PCVE	**Castro Verde**	**1.88**	**291**	*e*Sg	**Sg**	**20 21 08.6**	**+1.0**

*NEIC **10** 20:37:18.4±1.8, 55˚.46N±0.06×157˚.03W±0.04, h10km±1km, mb4.2/13, ML3.6/44, ML3.5(AEIC), Error ellipse: s-maj=9.7km s-min=3.6km az=165.0*
*IDC **10** 20:37:19.5±1.2, 56˚.05N×157˚.82W, h0km, mb3.9/16, mbtmp3.9/18, ML3.6/2, MS3.4/1, Error ellipse: s-maj=30.5km s-min=14.4km az=171.0*
*AEIC **10** 20:37:21.4±2.8, 55˚.55N±0.05×157˚.01W±0.07, h10km±4km, Error ellipse: s-maj=8.0km s-min=4.5km az=152.0*
ISC 10 20:37:19.6±0.7, 55˚.53N±0.06×157˚.03W±0.03, h20km, n136,σ1.9/11/128, mb4.0/20, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.85**	**69**		**Pb**	**20 37 36.8**	**+1.1**
CHIR				IAML		20 37 53.2	
	comp=E,2μm,0.8s						
CHIR				IAML		20 37 53.2	
	comp=N,2μm,0.7s						
CHIR	**Chirikof Islan**	**0.85**	**69**		**Sn**	**20 37 48.6**	**+0.4**
VNSG	**Veniaminof 6**	**1.31**	**298**		**Pn**	**20 37 43.1**	**+0.3**
VNSG					**Sb**	**20 38 00.7**	**+0.9**
BPBCA	**Veniaminof**	**1.33**	**324**		**Pn**	**20 37 43.8**	**+0.8**
BPBCA					**Pb**	**20 37 44.0**	**+0.2**
VNKR	**Veniaminof 5**	**1.42**	**292**		**Pn**	**20 37 44.6**	**+0.4**
VNKR					**Sn**	**20 38 03.1**	**+0.8**
ANPB	**Aniakchak Plen**	**1.46**	**332**		**Pn**	**20 37 45.6**	**+0.8**
VNNF	**Veniaminof 3**	**1.50**	**301**		**Pn**	**20 37 46.2**	**+0.9**
ANNE	**Aniakchak Nort**	**1.50**	**338**		**Pn**	**20 37 46.7**	**+1.2**
AZAC	**Aniakchak**	**1.53**	**334**		**Pn**	**20 37 47.0**	**+1.2**
VNSS	**Veniaminof 8**	**1.54**	**298**		**Pn**	**20 37 46.7**	**+0.7**
ANNW	**Aniakchak Nort**	**1.59**	**336**		**Pb**	**20 37 48.1**	**-0.2**
VNFG	**Fog Glacier, M**	**1.61**	**299**		**Pn**	**20 37 48.0**	**+1.0**
CNBA	**Chernabura Isl**	**1.63**	**245**		**Pn**	**20 37 46.2**	**-0.8**
CNBA				IAML		20 38 14.2	
	comp=E,669nm,0.7s						
CNBA				IAML		20 38 20.4	
	comp=N,501nm,0.5s						
CNBA	**Chernabura Isl**	**1.63**	**245**		**Sb**	**20 38 10.4**	**+1.4**
SII	**Sitkinak Islan**	**1.90**	**56**		**Pn**	**20 37 51.5**	**+0.6**
SII					**Sn**	**20 38 13.8**	**-0.5**
SII	**Sitkinak Islan**	**1.90**	**56**	IAML		20 38 37.0	
	comp=E,848nm,0.7s						
SDPT	**Sand Point**	**1.97**	**266**		**Pn**	**20 37 51.2**	**-0.6**
SDPT				IAML		20 38 29.9	
	comp=E,542nm,0.7s						
SDPT	**Sand Point**	**1.97**	**266**		**Sn**	**20 38 15.7**	**-0.2**
R16K	**Pilot Point**	**2.07**	**352**		**Pn**	**20 37 55.2**	**+2.0**
R16K				IAML		20 38 35.7	
	comp=E,465nm,1.0s						
R16K				IAML		20 38 58.9	
	comp=N,492nm,1.1s						
R16K	**Pilot Point**	**2.07**	**352**		**Sb**	**20 38 21.7**	**0.0**
PLK4	**Peulik 4**	**2.15**	**10**		**Pn**	**20 37 55.9**	**+1.6**
PLK4				IAML		20 38 38.0	
	comp=N,665nm,0.9s						
PLBL	**Peulik Blue Cr**	**2.18**	**3**		**Pn**	**20 37 56.2**	**+1.5**
PLK1	**Peulik 1**	**2.29**	**6**		**Pn**	**20 37 57.7**	**+1.5**
PLK5	**Peulik 5**	**2.48**	**2**		**Pn**	**20 38 00.3**	**+1.5**
PS1A	**Pavlof South-1**	**2.69**	**270**		**Pn**	**20 38 01.3**	**-0.3**
PS1A					**Sn**	**20 38 35.2**	**+1.7**
OHAK	**Old Harbor**	**2.69**	**49**		**Pn**	**20 38 02.0**	**+0.4**
OHAK				IAML		20 39 05.9	
	comp=N,215nm,0.7s						
PS4A	**Pavlof South-4**	**2.76**	**268**		**Pn**	**20 38 02.1**	**-0.4**
HAG	**Hague Volcano**	**2.79**	**268**		**Pn**	**20 38 02.8**	**-0.3**
ANCK	**Angle Creek**	**2.81**	**17**		**Pn**	**20 38 04.7**	**+1.3**
CNTC	**Contact Creek**	**2.82**	**12**		**Pn**	**20 38 04.7**	**+1.1**
PNTA	**Pavlof North-7**	**2.83**	**270**		**Pn**	**20 38 03.8**	**+0.1**
ACHA	**Angle Creek He**	**2.85**	**18**		**Pn**	**20 38 05.5**	**+1.5**
DTNA	**Dutton South F**	**3.01**	**265**		**Pn**	**20 38 05.6**	**-0.5**
DT1	**Dutton Round H**	**3.03**	**264**		**Sn**	**20 38 43.5**	**+1.5**
KAWH	**Katmai**	**3.12**	**22**		**Pn**	**20 38 08.5**	**+0.9**
KARR	**Katmai Rainbow**	**3.24**	**22**		**Pn**	**20 38 10.4**	**+1.2**
KDAK	**Kodiak Island**	**3.34**	**45**	Pn	**Pn**	**20 38 10.6**	**+0.1**
	comp=N,1.2nm,0.3s,baz=124,slow=0.9,SNR=22						
KDAK				Pg	**Pb**	**20 38 21.1**	**+3.1**
	comp=N,8.5nm,0.3s,baz=250,slow=8.3,SNR=11						
KDAK				Sn	**Sn**	**20 38 47.9**	**-1.6**
	comp=N,6.3nm,0.3s,baz=245,slow=16,SNR=2.1						
KDAK				Lg	Lg	20 39 07.8	
	comp=N,3.6nm,0.3s,baz=248,slow=17,SNR=5.5 comp=N,5.0nm,0.3s						
KDAK	**Kodiak Island**	**3.34**	**45**		**Pn**	**20 38 11.1**	**+0.6**
KDAK	**Kodiak Island**	**3.34**	**45**	IAML		20 39 23.3	
	comp=N,101nm,0.9s						
KDAK				IAML		20 39 24.7	
	comp=N,125nm,0.8s						
P16K	**Nushagak River**	**3.55**	**352**		**Pn**	**20 38 14.9**	**+1.4**
P16K				IAML		20 39 24.1	
	comp=N,202nm,1.1s						
P17K	**Kvichak River**	**3.69**	**5**		**Pn**	**20 38 16.0**	**+0.6**
FALS	**False Pass**	**3.72**	**262**		**Pn**	**20 38 15.1**	**-0.7**
FALS	**False Pass**	**3.72**	**262**		**Sn**	**20 39 00.2**	**+1.2**
O15K	**Ungalikthiuk R**	**3.96**	**339**		**Pn**	**20 38 19.5**	**+0.4**
O15K				IAML		20 39 35.7	
	comp=E,65nm,0.9s						
P18K	**Big Mountain,**	**4.00**	**13**		**Pn**	**20 38 20.2**	**+0.6**
O16K	**Kokwok River B**	**4.12**	**352**		**Pn**	**20 38 21.2**	**-0.1**
O17K	**Koliganek Bris**	**4.26**	**360**		**Pn**	**20 38 24.2**	**+1.0**
O14K	**Tigyukauivet M**	**4.38**	**330**		**Pn**	**20 38 25.8**	**+0.9**
O14K	**Tigyukauivet M**	**4.38**	**330**	IAML		20 39 58.1	
	comp=E,48nm,1.1s						
O14K				IAML		20 40 02.0	
	comp=N,64nm,1.0s						
ILSW	**Iliamna Southw**	**4.93**	**23**	Pn	**Pn**	**20 38 33.9**	**+1.3**
ILSW				IAML		20 39 58.2	
	comp=E,28nm,0.8s						
N15K	**Kwethluk River**	**4.94**	**342**		**Pn**	**20 38 33.4**	**+0.9**
N15K				IAML		20 40 14.7	
	comp=N,55nm,0.8s						
N15K				IAML		20 40 25.8	
	comp=E,48nm,1.2s						
N17K	**Nushagak Hills**	**5.02**	**359**		**Pn**	**20 38 35.2**	**+1.6**
N17K				IAML		20 40 11.1	
	comp=E,30nm,0.9s						
N16K	**Nishlik Lake**	**5.05**	**350**		**Pn**	**20 38 35.0**	**+1.0**
N14K	**Kuskokwak Cree**	**5.07**	**332**		**Pn**	**20 38 35.1**	**+0.9**
CNPM	**China Poot**	**5.08**	**36**	Pn	**Pn**	**20 38 33.4**	**-1.2**
CNPM				IAML		20 42 05.4	
	comp=N,62nm,0.6s						
N18K	**Kilae Creek**	**5.21**	**6**		**Pn**	**20 38 37.3**	**+1.0**
N18K				IAML		20 40 25.8	
	comp=E,23nm,1.2s

baz=28
H11N3 WAKE ISLAND Hy 44.85 232 T T 21 34 01.1
H11N1 WAKE ISLAND Hy 44.86 232 T T 21 33 50.7
baz=28
TXAR Lajitas Array 45.80 102 P P 20 45 48.4 +8.6
comp=Z,0.3nm,0.6s,baz=305,slow=4.4,SNR=4.0
comp=Z,0.3nm,0.6s
SPITS Spitsbergen Ar 46.49 2 P **P** **20 45 43.9 -0.7**
comp=Z,6.6nm,0.9s,baz=348,slow=12,SNR=1.4
comp=Z,6.6nm,0.9s
ARCES ARCESS Array B 55.23 359 P **P** **20 46 49.5 -1.0**
comp=Z,2.2nm,0.8s,baz=21,slow=7.8,SNR=5.2
comp=Z,2.2nm,0.8s
SONM Songino Array 55.67 306 P **P** **20 46 53.1 -1.0**
comp=Z,0.4nm,0.7s,baz=35,slow=5.4,SNR=4.0
comp=Z,0.4nm,0.7s
FINES FINESS Array B 63.35 358 P **P** **20 47 46.0 -0.6**
comp=Z,6.2nm,1.0s,baz=12,slow=9.8,SNR=9.0
comp=Z,6.2nm,1.0s
NOA NORSAR Array B 63.41 6 P **P** **20 47 47.2 +0.1**
comp=Z,1.1nm,0.9s,baz=353,slow=6.3,SNR=1.7
comp=Z,1.1nm,0.9s
KURK Kurchatov 64.47 324 P **P** **20 47 54.2 0.0**
KURK Kurchatov 64.47 324 IAmb IAmb 20 47 55.3
comp=Z,1.2nm,0.8s
KURBB Kurchatov Arra 64.58 324 P **P** **20 47 54.2 -0.7**
comp=Z,0.5nm,0.3s,baz=27,slow=6.3,SNR=1.3
comp=Z,0.5nm,0.3s
BVAR Borovoye Array 64.97 331 P **P** **20 47 56.4 -1.0**
comp=Z,0.4nm,0.5s,baz=50,slow=4.5,SNR=2.3
comp=Z,0.4nm,0.5s
MKAR Makanchi Array 66.53 320 P **P** **20 48 07.0 -0.6**
comp=Z,0.4nm,0.7s,baz=31,slow=4.5,SNR=5.8
comp=Z,0.4nm,0.7s
AKTO Aktyubinsk 70.44 337 P **P** **20 48 31.0 -1.0**
comp=Z,0.9nm,0.6s,baz=45,slow=8.6,SNR=3.6
comp=Z,0.9nm,0.6s
AKASG Malin Array Be 74.01 356 P **P** **20 48 52.4 -0.9**
comp=Z,0.6nm,0.4s,baz=9.4,slow=5.8,SNR=5.0
comp=Z,0.6nm,0.4s
KSH2 Kashi 75.61 320 P **P** **20 49 03.1 +0.2**
KSH2 pmax pmax
comp=Z,2.0nm,0.9s
ESDC Sonseca Array 82.42 21 P **P** **20 49 40.9 +0.8**
comp=Z,0.4nm,0.7s,baz=346,slow=5.9,SNR=2.2
comp=Z,0.4nm,0.7s
CMAR Chiang Mai Arr 82.64 292 P **P** **20 49 41.1 -0.4**
comp=Z,0.4nm,0.4s,baz=15,slow=6.4,SNR=4.9
comp=Z,0.4nm,0.4s
BRTR Keskin Array B 84.68 352 P **P** **20 49 51.8 -0.1**
comp=Z,0.9nm,0.8s,baz=353,slow=6.3,SNR=4.4
comp=Z,0.9nm,0.8s
H03N2 Juan Fernandez 110.68 119 T T 22 55 48.1
baz=325,slow=77,SNR=3.2
H03N1 Juan Fernandez 110.69 119 T T 22 55 52.3
baz=325,slow=77,SNR=2.8
H03N3 Juan Fernandez 110.69 119 T T 22 55 50.1
baz=325,slow=77,SNR=6.1

*IDC **10** 20:37:50.5±0.9,60.°11S×26.°17W,h0km,mb4.0/4,*
mbtmp4.1/5,ML4.8/1,MS3.7/3,Error ellipse: s-maj=49.7km
s-min=27.0km az=23.0
*NEIC **10** 20:37:52.2±1.5,60.°1S±0.°1×26.°2W±0.°3,h10km±1km,*
mb4.5/20,Error ellipse: s-maj=30.1km s-min=15.3km
az=45.0
ISC 10 20:37:52.8±0.6,60.°1S±0.°1×26.°2W±0.°1,h16km,n49,
σ0s69/43,mb4.4/12,4C-2D,South Sandwich Islands
region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**8.08**	**312**	Pn	**Pn**	**20 39 49.6**	**+0.3**
HOPE				Sn	Sn	20 41 05.9	-14
VNA1	**Neumayer--Stat**	**12.87**	**153**	⇑P	**Pn**	**20 40 54.8**	**+0.1**
	comp=Z,19nm,0.5s						
VNA3	**Neumayer Olymp**	**13.01**	**156**	⇑P	**Pn**	**20 40 56.4**	**-0.3**
	comp=Z,11nm,0.5s						
VNA3				⇓S	Sn	20 43 08.3	-13
	comp=E,7.9nm,0.5s						
VNA2	**Neumayer--Watz**	**13.27**	**153**	⇑P	**Pn**	**20 40 59.0**	**-1.1**
	comp=Z,14nm,0.5s,baz=319,slow=15						
VNA2				⇓S	Sn	20 43 15.1	-12
	comp=E,1.9nm,0.3s,baz=312,slow=22						
SNAA	**Sanae**	**14.86**	**151**	⇑P	**Pn**	**20 41 21.2**	**-0.7**
	comp=Z,234nm,0.4s						
SNAA	**Sanae**	**14.86**	**151**	Pn	**Pn**	**20 41 21.3**	**-0.7**
	comp=Z,4.3nm,0.3s,baz=309,slow=14,SNR=24						
SNAA				LR	LR	20 45 46.0	
	comp=Z,141nm,18.4s,baz=360,slow=32						
	comp=Z,14nm,0.4s						
SNAA	**Sanae**	**14.86**	**151**		**Pn**	**20 41 20.9**	**-1.1**
BELA	**Belgrano 2**	**18.07**	**186**	P	**P**	**20 42 03.6**	**+0.7**
EFI	**East Falkland**	**19.59**	**281**	P	**P**	**20 42 19.4**	**-0.5**
EFI				IAmb	IAmb	20 42 24.6	
	comp=Z,50nm,1.4s						
QSPA	**South Pole Qui**	**30.13**	**180**	P	**P**	**20 44 01.5**	**+0.1**
TRQA	**Tornquist**	**31.56**	**298**	P	**P**	**20 44 13.4**	**-0.8**
TRQA				IAmb	IAmb	20 44 17.7	
	comp=Z,4.5nm,0.9s						
PLCA	**Paso Flores**	**33.41**	**285**	P	**P**	**20 44 31.1**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=175,slow=6.4,SNR=4.6						
PLCA				LR	LR	20 57 01.9	
	comp=Z,94nm,18.8s,baz=173,slow=34						
	comp=Z,1.0nm,0.7s						
PLCA	**Paso Flores**	**33.41**	**285**	P	**P**	**20 44 30.9**	**+0.5**
PLCA				IAmb	IAmb	20 44 31.7	
	comp=Z,2.7nm,0.9s						
BO04	**La Punta**	**38.84**	**292**	P	**P**	**20 45 17.5**	**+0.7**
BO04				IAmb	IAmb	20 45 19.4	
	comp=Z,13nm,1.1s						
MT08	**Bocatoma Ro**	**39.02**	**293**	P	**P**	**20 45 19.2**	**+0.6**
MT08				IAmb	IAmb	20 45 22.4	
	comp=Z,7.1nm,0.9s						
MT09	**Talagante**	**39.20**	**292**	P	**P**	**20 45 19.9**	**0.0**
MT02	**Curacav**	**39.69**	**292**	P	**P**	**20 45 24.3**	**+0.4**
MT02				IAmb	IAmb	20 45 38.5	
	comp=Z,18nm,1.1s						
VA03	**San Esteban**	**39.83**	**293**	P	**P**	**20 45 24.2**	**-1.0**
VA03				IAmb	IAmb	20 45 35.9	
	comp=Z,15nm,0.9s						
CO04	**Los Peladeros**	**40.63**	**293**	P	**P**	**20 45 32.9**	**+0.9**
CO02	**Combarbal**	**41.35**	**294**	P	**P**	**20 45 37.6**	**-0.2**
CO01	**Juntas del Tor**	**41.98**	**296**	P	**P**	**20 45 41.5**	**-1.6**
CO01				IAmb	IAmb	20 45 56.7	
	comp=Z,5.7nm,0.8s						
AC05	**El Transito**	**43.03**	**297**		**P**	**20 45 50.7**	**-0.9**
H04S2	**CROZET ISLANDS**	**45.53**	**110**	T	T	21 35 33.9	
	baz=224,slow=75,SNR=5.6						
H04S3	**CROZET ISLANDS**	**45.55**	**110**	T	T	21 35 31.5	
	baz=224,slow=75,SNR=5.3						
H04S1	**CROZET ISLANDS**	**45.55**	**110**	T	T	21 35 25.3	
	baz=224,slow=75,SNR=4.1						
PB07	**IPOC Station P**	**49.06**	**302**	P	**P**	**20 46 39.7**	**+0.6**
PB01	**IPOC Station P**	**49.50**	**303**	P	**P**	**20 46 42.8**	**+0.4**
PB01				IAmb	IAmb	20 46 53.7	
	comp=Z,4.9nm,0.9s						
GO01	**Chusmiza**	**50.60**	**304**	P	**P**	**20 46 51.0**	**-0.2**
GO01				IAmb	IAmb	20 47 07.9	
	comp=Z,9.4nm,1.4s						
PTLB	**Pontes e Lacer**	**50.62**	**317**	P	**P**	**20 46 49.7**	**-1.1**
H10S2	**ASCENSION HYDR**	**51.78**	**15**	T	T	21 42 56.6	
	baz=33,slow=74,SNR=4.0						
H10S3	**ASCENSION HYDR**	**51.78**	**15**	T	T	21 42 51.1	
	baz=187,slow=74,SNR=4.4						
LPAZ	**La Paz**	**53.20**	**307**	P	**P**	**20 47 10.8**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=126,slow=7.0,SNR=4.0						
	comp=Z,1.2nm,0.7s						
LSZ	**Lusaka**	**59.46**	**66**	P	**P**	**20 47 55.4**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=41,slow=14,SNR=1.7						
LSZ				LR	LR	21 09 20.3	
	comp=Z,119nm,19.9s,baz=322,slow=32						
	comp=Z,0.4nm,0.3s						
LSZ	**Lusaka**	**59.46**	**66**	IAmb	IAmb	20 48 09.9	
	comp=Z,2.8nm,1.1s						
ASAR	**Alice Springs**	**94.95**	**162**	P	**P**	**20 51 14.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=180,slow=5.0,SNR=4.7						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**127.72**	**29**	PKP	**PKiKP**	**20 56 55.6**	**-0.6**
	comp=Z,4.5nm,0.9s,baz=270,slow=13,SNR=2.1						
AAK	**Ala-Archa**	**130.74**	**73**	PKP	**PKPdf**	**20 57 02.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=242,slow=6.0,SNR=3.6						
BVAR	**Borovoye Array**	**136.42**	**61**	PKP	**PKPdf**	**20 57 12.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=254,slow=1.0,SNR=3.2						
MKAR	**Makanchi Array**	**137.56**	**75**	PKP	**PKPdf**	**20 57 15.3**	**+0.6**
	comp=Z,0.2nm,0.8s,baz=192,slow=1.1,SNR=3.9						
YKA	**Yellowknife Ar**	**139.48**	**314**	PKP	**PKPdf**	**20 57 17.8**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=121,slow=1.5,SNR=20						
ZALV	**Zalesovo Beam**	**143.54**	**68**	PKP	**PKPdf**	**20 57 24.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=204,slow=3.2,SNR=2.1						
SONM	**Songino Array**	**150.22**	**93**	PKPbc	**PKPbc**	**20 57 41.8**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=212,slow=2.6,SNR=14						
SONM	**Songino Array**	**150.22**	**93**		**PKPdf**	**20 57 38.3**	**+1.5**
VRDI	**Verde Repeater**	**150.28**	**300**	PKPbc	**PKPbc**	**20 57 41.7**	**0.0**
G29M	**Pine Creek**	**150.32**	**312**	PKPbc	**PKPbc**	**20 57 41.5**	**0.0**
BCAR	**Beaver Creek A**	**150.35**	**304**	PKPbc	**PKiKP**	**20 57 41.8**	**-0.7**
L27K	**Beaver Creek,**	**150.37**	**304**	PKPbc	**PKiKP**	**20 57 42.0**	**-0.5**
ILAR	**Eielson Array**	**153.07**	**306**	PKPbc	**PKiKP**	**20 57 47.7**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=140,slow=1.3,SNR=9.9						
ILAR	**Eielson Array**	**153.07**	**306**		**PKPbc**	**20 57 46.8**	**-1.0**

*SSNC **10** 20:46:47.4±1.9,19.°30N×78.°80W,h25km±12km,ML3.1,*
Presumed earthquake
*JSN **10** 20:46:47.8±1.5,19.°34N×78.°49W,h0km±932km,MD3.9,*
MW3.9,Presumed earthquake
ISC 10 20:46:40.7±1.4,19.°51N±0.°05×78.°64W±0.°03,h18km±4km,
n16,σ2s15/30,Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBCY	**The Bluff, Cay**	**1.08**	**282**	*i* S	**Sn**	**20 47 15.4**	**0.0**
CBCY				IAML		20 47 15.8	
	comp=N,297nm,0.3s						
CBCY				IAML		20 47 17.1	
	comp=E,246nm,0.0s						
LCCY	**Blossom Villag**	**1.37**	**277**	*i* P	**Pg**	**20 47 07.6**	**+0.5**
LCCY				*i* S	**Sn**	**20 47 22.4**	**-0.2**
LCCY				IAML		20 47 23.4	
	comp=N,690nm,0.1s						
LCCY				IAML		20 47 23.5	
	comp=E,515nm,0.2s						
LMGC	**Las Mercedes**	**1.64**	**70**	*e*P	**Pg**	**20 47 15.6**	**+3.4**
LMGC				*e*S	**Sg**	**20 47 36.0**	**+2.5**
LMGC				*e*Sg	**Sb**	**20 47 37.8**	**+7.2**
LMGC				IAML		20 47 38.7	
	comp=E,122nm,0.2s						
LMGC				IAML		20 47 39.5	
	comp=N,106nm,0.1s						
MTDJ	**Mount Denham**	**1.65**	**140**	*e*P	**Pg**	**20 47 12.8**	**+0.3**
MTDJ				*e*S	**Sb**	**20 47 31.9**	**+0.8**
MTDJ				IAML		20 47 33.4	
	comp=N,176nm,0.6s						
MTDJ				IAML		20 47 38.0	
	comp=N,255nm,0.2s						
CCCC	**Cccc**	**1.87**	**26**	*e*P	Pg	20 47 22.5	+5.8
CHIV	**Chivirico**	**2.15**	**77**	*e*P	**Pg**	**20 47 22.1**	**+0.1**
CHIV				*e*S	**Sg**	**20 47 48.0**	**-1.8**
YAR	**Yar**	**2.31**	**68**	*e*P	**Pg**	**20 47 26.0**	**+0.9**
YAR				*e*S	**Sg**	**20 47 54.1**	**-0.9**
YAR				IAML		20 47 57.4	
	comp=N,57nm,0.9s						
YAR				IAML		20 47 58.8	
	comp=E,69nm,0.7s						
MARVS	**Santiago de Cu**	**2.62**	**79**	*e*P	**Pb**	**20 47 29.0**	**+1.7**
MARVS				*e*S	**Sb**	**20 47 59.0**	**-0.1**
MARVS				IAML		20 48 02.2	
	comp=N,36nm,0.5s						
MARVS				IAML		20 48 02.7	
	comp=E,28nm,0.3s						
HLGC	**Holguin**	**2.79**	**60**	*e*P	**Pg**	**20 47 34.2**	**+0.1**
RCC	**Rio Carpintero**	**2.81**	**80**	*e*P	**Pb**	**20 47 31.8**	**+1.4**
RCC				*e*S	**Sb**	**20 48 04.1**	**-0.4**
RCC				IAML		20 48 06.5	
	comp=E,15nm,0.3s						
RCC				IAML		20 48 08.1	
	comp=N,15nm,0.2s						
PINC	**Pinares de May**	**2.85**	**70**	*i* P	**Pg**	**20 47 33.8**	**-1.5**
PINC				*e*P	**Pg**	**20 47 33.9**	**-1.5**
PINC				*e*S	**Sg**	**20 48 10.2**	**-2.1**
PINC				IAML		20 48 10.9	
	comp=E,34nm,0.3s						
PINC				IAML		20 48 12.1	
	comp=N,29nm,0.2s						
MGV	**Manicaragua**	**2.88**	**334**	*e*P	**Pb**	**20 47 32.2**	**+0.7**
MGV				*e*S	**Sb**	**20 48 04.9**	**-1.4**
MGV				IAML		20 48 09.5	
	comp=N,18nm,0.1s						
GTBY	**Guantanamo Bay**	**3.35**	**82**	*e*P	**Pb**	**20 47 39.8**	**+0.3**
GTBY				*e*S	**Sb**	**20 48 18.0**	**-2.0**
GTBY				IAML		20 48 20.4	
	comp=N,30nm,0.9s						
GTBY				IAML		20 48 21.4	
	comp=N,41nm,0.4s						
NMDO	**Nuevo Mundo**	**3.59**	**72**	*i* P	**Pb**	**20 47 41.2**	**-2.5**
NMDO				*i* S	**Sb**	**20 48 26.7**	**-0.3**
QMBU	**Quimbuelo**	**3.67**	**79**	*e*P	**Pb**	**20 47 44.7**	**-0.3**
QMBU				*e*S	**Sb**	**20 48 25.4**	**-3.8**
QMBU				IAML		20 48 29.1	
	comp=N,24nm,0.3s						
QMBU				IAML		20 48 34.2	
	comp=E,20nm,0.4s						
MASC	**Masc**	**4.20**	**80**	*e*P	**Pb**	**20 47 52.9**	**-1.2**
MASC				*e*S	**Sb**	**20 48 44.8**	**+0.3**
MASC				IAML		20 48 46.3	
	comp=N,23nm,0.6s						
MASC				IAML		20 48 47.7	
	comp=E,26nm,0.5s						

*IDC **10** 20:56:57.6±6.0,37.°53N×71.°92E,h141km±38km,mb3.5/7,*
mbtmp3.8/12,Error ellipse: s-maj=60.1km s-min=26.3km
az=160.0
*NNC **10** 20:56:60.0±3.0,37.°74N×71.°75E,h152km±43km,mb2.9,*
mpv3.8,Error ellipse: s-maj=28.9km s-min=17.4km
az=13.0
ISC 10 20:56:56.3±1.5,37.°5N±0.°1×71.°8E±0.°1,h130km,n17,
σ0s98/20,mb3.6/7,1C-3D,Afghanistan-Tajikistan border
region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.50**	**21**	P	**Pn**	**20 58 17.9**	**+1.7**
	5.1nm,0.3s,baz=176,slow=6.2,SNR=42						
AAK				S	**Sn**	**20 59 19.5**	**+1.0**
	6.8nm,0.4s,baz=319,slow=22,SNR=20						
AAK	**Ala-Archa**	**5.50**	**21**	⇑P	**Pn**	**20 58 17.7**	**+1.6**
	1.0nm,0.4s						
AAK				⇓S	**Sn**	**20 59 19.4**	**+0.9**
	9.7nm,0.6s						
KK31	**Karatay Array**	**5.67**	**350**	P	**Pn**	**20 58 19.4**	**+1.0**
	21nm,0.4s,baz=175,slow=12,SNR=415						
KK31				⇓S	**Sn**	**20 59 21.4**	**-0.9**
	21nm,0.4s,baz=188,slow=24,SNR=16						
MK31	**Makanchi Array**	**12.07**	**37**	P	**Pn**	**20 59 43.7**	**-0.3**
	0.5nm,0.5s,baz=222,slow=9.6,SNR=4.8						
MKAR	**Makanchi Array**	**12.07**	**37**	P	**Pn**	**20 59 43.7**	**-0.3**
	0.6nm,0.9s,baz=225,slow=10,SNR=4.6						
KURBB	**Kurchatov Arra**	**13.94**	**18**	P	**P**	**21 00 09.8**	**-2.2**
	1.2nm,0.5s,baz=207,slow=11,SNR=9.0						
AB31	**Akbulak array**	**14.55**	**327**	P	**Pn**	**21 00 15.4**	**-0.4**
	0.8nm,0.3s,baz=136,slow=14,SNR=47						
BVAR	**Borovoye Array**	**15.54**	**357**	P	**Pn**	**21 00 27.6**	**-0.5**
	1.2nm,0.5s,baz=163,slow=9.9,SNR=11						
AKTO	**Aktyubinsk**	**16.26**	**327**	⇓P	**P**	**21 00 38.0**	**+0.4**
	0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**18.71**	**24**	P	**P**	**21 01 04.8**	**+0.4**
	1.3nm,0.3s,baz=220,slow=11,SNR=8.2						
BRTR	**Keskin Array B**	**29.78**	**286**	P	**P**	**21 02 51.6**	**+0.7**
	0.3nm,0.5s,baz=99,slow=7.4,SNR=2.3						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**37.02**	**325**	P	**P**	**21 03 53.6**	**+0.5**
	3.5nm,1.0s,baz=130,slow=10,SNR=5.0						
	3.5nm,1.0s						
ARCES	**ARCESS Array B**	**40.47**	**337**	P	**P**	**21 04 22.3**	**+0.6**
	0.5nm,0.4s,baz=116,slow=8.2,SNR=6.2						
	0.5nm,0.4s						
HFS	**Hagfors**	**42.69**	**321**	P	**P**	**21 04 40.1**	**+0.3**
	1.4nm,0.5s,baz=90,slow=11,SNR=7.0						
	1.4nm,0.5s						
TIXI	**Tiksi**	**44.58**	**22**	P	**P**	**21 04 54.6**	**-0.2**
	2.3nm,0.2s,baz=287,slow=3.6,SNR=4.8						
	2.3nm,0.2s						
ESDC	**Sonseca Array**	**57.58**	**298**	P	**P**	**21 06 32.5**	**0.0**
	0.5nm,0.8s,baz=68,slow=7.4,SNR=2.1						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**80.19**	**3**	P	**P**	**21 08 51.5**	**-0.3**
	0.2nm,0.5s,baz=350,slow=5.8,SNR=3.4						
	0.2nm,0.5s						

IDC 10 21:23:20.5±3.8,5.°45S×131.°34E,h0km,mb3.1/1,
mbtmp3.1/3,ML2.5/2,Error ellipse: s-maj=257.8km
s-min=33.8km az=73.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.70**	**169**	Pn	Pn	21 26 49.9	-0.1
	baz=350,slow=12,SNR=1.0						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**18.29**	**172**	P	Pn	21 27 35.8	-0.1
	0.1nm,0.3s,baz=347,slow=11,SNR=4.5						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**67.68**	**326**	P	P	21 34 19.7	0.0
	0.1nm,0.7s,baz=111,slow=8.0,SNR=1.7						
	0.1nm,0.7s						

*ISK **10** 21:43:15.6,36.°62N×27.°94E,h72km,ML2.1/9*
*THE **10** 21:43:15.8,37°N±2°×2°8E±°,h72km±3km,M2.5/10,*
MLh2.5/10
*ATH **10** 21:43:17.7,36.°60N×27.°78E,h48km±5km,ML2.6/6,*
Manual Solution by A.Papageorgiou First location:
2020/02/10 21:44:33, This location: 2021/11/15 09:52:50
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 1
km; Longitude uncertainty: 2 km
ISC 10 21:43:15.8±1.4,36.°60N±0.°03×27.°99E±0.°04,h73km±7km,
n31,σ0s82/50,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDI1	**Rhodes Town Ha**	**0.24**	**128**	P	**Pn**	**21 43 28.1**	**+1.1**
RDI1				S	**Sn**	**21 43 34.7**	**-0.5**
DATC	**Datca-Mugla**	**0.30**	**301**	Pg	**Pn**	**21 43 27.2**	**-0.2**
DATC				Sg	**Sn**	**21 43 35.7**	**-0.2**
DAT	**Datca**	**0.35**	**291**	Pg	**Pn**	**21 43 27.5**	**-0.4**
DAT				Sg	**Sn**	**21 43 36.3**	**-0.4**
DAT	**Datca**	**0.35**	**291**	P	**Pn**	**21 43 27.7**	**-0.2**
DAT				S	**Sn**	**21 43 36.3**	**-0.4**
ARG	**Arkhangelos**	**0.40**	**164**	Pg	**Pn**	**21 43 28.5**	**+0.3**
ARG				Sg	**Sn**	**21 43 37.8**	**+0.7**
ARG	**Arkhangelos**	**0.40**	**164**	P	**Pn**	**21 43 28.3**	**+0.1**
ARG				S	**Sn**	**21 43 37.1**	**0.0**
ARG	**Arkhangelos**	**0.40**	**164**	P	**Pn**	**21 43 28.4**	**+0.3**
ARG				S	**Sn**	**21 43 36.3**	**-0.8**
DALY	**Dalyan (Mula)**	**0.58**	**68**	Pg	**Pn**	**21 43 30.3**	**+0.6**
DALY				Sg	**Sn**	**21 43 40.8**	**+0.9**
YER	**Yerkesik**	**0.58**	**24**	Pg	**Pn**	**21 43 30.0**	**+0.2**
YER	**Yerkesik**	**0.58**	**24**	P	**Pn**	**21 43 30.2**	**+0.4**
YER				S	**Sn**	**21 43 40.1**	**0.0**
BODA	**Bodrum-Mula**	**0.62**	**314**	Pg	**Pn**	**21 43 30.0**	**-0.1**
BODT	**Bodrum**	**0.71**	**310**	Pg	**Pn**	**21 43 32.4**	**+1.3**
BODT	**Bodrum**	**0.71**	**310**	P	**Pn**	**21 43 31.8**	**+0.7**
BODT				S	**Sn**	**21 43 43.6**	**+1.1**
YKAV	**Yalikavak-Bodr**	**0.77**	**313**	Pg	**Pn**	**21 43 31.4**	**-0.4**
KLNA	**Kalymnos**	**0.89**	**294**	P	**Pn**	**21 43 32.0**	**-1.1**
KLNA				S	**Sn**	**21 43 42.3**	**-3.7**
KARP	**Karpathos**	**1.25**	**213**	P	**Pn**	**21 43 37.5**	**-0.2**
KARP				S	**Sn**	**21 43 53.6**	**-0.4**
KARP	**Karpathos**	**1.25**	**213**	P	**Pn**	**21 43 37.6**	**-0.1**
KARP				S	**Sn**	**21 43 53.0**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**1.34**	**357**	Pn	**Pn**	**21 43 39.1**	**+0.1**
KSL	**Kastellorizon**	**1.36**	**109**	P	**Pn**	**21 43 38.3**	**-0.9**
KSL				S	**Sn**	**21 43 55.7**	**-0.9**
SMG	**Samos**	**1.44**	**321**	P	**Pn**	**21 43 40.0**	**-0.1**
SMG				S	**Sn**	**21 43 58.8**	**+0.5**
SMG	**Samos**	**1.44**	**321**	P	**Pn**	**21 43 40.1**	**0.0**
SMG				S	**Sn**	**21 43 57.9**	**-0.5**
BLCB	**Balcova**	**1.93**	**337**	Pn	**Pn**	**21 43 46.5**	**-0.1**
BLCB	**Balcova**	**1.93**	**337**	P	**Pn**	**21 43 46.3**	**-0.3**
BLCB				S	**Sn**	**21 44 09.9**	**-0.1**
APE	**Apeiranthos**	**2.02**	**284**	P	**Pn**	**21 43 48.5**	**+0.6**
APE				S	**Sn**	**21 44 13.8**	**+1.4**
APE	**Apeiranthos**	**2.02**	**284**	P	**Pn**	**21 43 48.1**	**+0.2**
THERA	**Ancient Thera,**	**2.04**	**264**	S	**Sn**	**21 44 13.6**	**+1.0**
ZKR	**Zakros**	**2.07**	**225**	P	**Pn**	**21 43 49.1**	**+0.7**
ZKR				S	**Sn**	**21 44 13.8**	**+0.4**
ZKR	**Zakros**	**2.07**	**225**	P	**Pn**	**21 43 48.9**	**+0.4**
NPS	**Neapolis**	**2.35**	**236**	P	**Pn**	**21 43 52.6**	**+0.4**
NPS	**Neapolis**	**2.35**	**236**	P	**Pn**	**21 43 52.4**	**+0.2**
IDI	**Anoyia**	**2.83**	**243**	P	**Pn**	**21 43 59.2**	**+0.3**

IDC 10 21:48:24.7±1.7,11.°51S×165.°50E,h0km,mb3.7/4,
mbtmp3.8/5,Error ellipse: s-maj=51.5km s-min=31.5km
az=122.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.54**	**175**	Pn	Pn	21 50 57.4	+0.2
	5.2nm,0.3s,baz=258,slow=19						
DZM				Sn	Sn	21 52 49.1	-7.0
	0.2nm,0.3s,baz=61,slow=19,SNR=2.1						
WRA	**Warramunga Arr**	**31.10**	**250**	P	P	21 54 45.5	+0.4
	0.6nm,0.7s,baz=81,slow=9.4,SNR=4.7						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**32.37**	**244**	P	P	21 54 55.5	-0.7
	0.4nm,0.7s,baz=73,slow=9.3,SNR=4.3						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**84.03**	**19**	P	P	22 00 56.5	-0.3
	0.5nm,0.8s,baz=236,slow=4.7,SNR=5.5						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**93.70**	**317**	P	P	22 01 44.0	+0.6
	0.3nm,0.7s,baz=106,slow=5.2,SNR=3.6						
	0.3nm,0.7s						

*ROM **10** 21:53:51.3±0.1,41.°694N±0.°005×15.°904E±0.°005,*
h12km,ML2.7/64,Error ellipse: s-maj=0.6km s-min=0.4km
az=147.0
ISC 10 21:53:51.2±0.9,41.°74N±0.°03×15.°91E±0.°04,h15km±5km,
n22,σ0s75/33,1C,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAG	**Monte S. Angel**	**0.02**	**188**	⇑P	**Pg**	**21 53 54.0**	**+0.1**
MSAG				S	**Sg**	**21 53 55.7**	**-0.1**
CAPA	**

VULT				AML	AML		
	comp=N,1605µm,1.1s						
CAFE	**Carife**	**0.87**	**216**	P	**Pn**	**21 54 08.9**	**-0.1**
SGG	**Gregorio Mates**	**1.20**	**254**	AML	AML		
	comp=E,151µm,0.8s						
SGG				AML	AML		
	comp=E,151µm,1.2s						
SGG				AML	AML		
	comp=N,149µm,0.4s						
PAOL	**Paolisi**	**1.23**	**236**	AML	AML		
	comp=E,278µm,0.6s						
PAOL				AML	AML		
	comp=N,260µm,0.6s						
LSTV	**Lastovo**	**1.26**	**35**	*e*Pg	**Pb**	**21 54 14.8**	**+0.1**
LSTV				Sg	**Sn**	**21 54 32.0**	**+1.0**
HVAR	**Hvar**	**1.50**	**15**	*e*Pg	**Pg**	**21 54 19.1**	**-0.8**
HVAR				Sg	**Sn**	**21 54 37.3**	**+0.5**
STON	**Ston**	**1.75**	**49**	*e*Pn	**Pn**	**21 54 21.4**	**+0.5**
STON				Sn	**Sn**	**21 54 42.2**	**-0.7**
ZIRJ	**Zirje**	**1.93**	**354**	*e*Pn	**Pn**	**21 54 23.3**	**-0.1**
ZIRJ				Sn	**Sb**	**21 54 49.7**	**-0.3**
RICI	**Ricice**	**1.98**	**27**	*e*Pn	**Pn**	**21 54 23.7**	**-0.4**
MORI	**Morici**	**2.13**	**356**	*i* Pn	**Pn**	**21 54 26.4**	**+0.1**
MORI				Sn	**Sn**	**21 54 54.2**	**+1.6**
KIJV	**Kijevo**	**2.30**	**9**	*e*Pn	**Pn**	**21 54 29.8**	**+1.2**
KIJV				Sn	**Sb**	**21 54 59.3**	**-1.3**
DUGI	**Dugi Otok**	**2.34**	**345**	*e*Pn	**Pn**	**21 54 28.9**	**-0.3**
DUGI				Sn	**Sn**	**21 54 57.5**	**-0.2**
VIRC	**Vir**	**2.63**	**346**	*i* Pn	**Pn**	**21 54 33.4**	**+0.3**
VIRC				Sn	**Sn**	**21 55 04.8**	**0.0**
NVLJ	**Novalja**	**2.93**	**345**	*e*Pn	**Pn**	**21 54 38.1**	**+0.9**
NVLJ				Sn	**Sn**	**21 55 13.6**	**+1.5**

*ISK **10** 22:04:08.9, 38°.26N×38°.88E, h5km, ML3.9/14*
*IDC **10** 22:04:10.8±1.0, 38°.44N×38°.87E, h0km, mb3.6/6, mbtmp3.5/12, ML3.2/6, MS3.2/2, Error ellipse: s-maj=17.9km s-min=10.5km az=162.0*
*AFAD **10** 22:04:10.6, 38°.35N×38°.89E, h7km±1km, MW3.9*
ISC 10 22:04:10.9±1.1, 38°.33N±0°.02×38°.89E±0°.02, h4km±9km, n65, σ0°88/68, mb3.6/5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.19**	**24**	P	**Pg**	**22 04 15.0**	**+0.4**
ELZG				S	**Sg**	**22 04 17.8**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.33**	**81**	Pg	**Pg**	**22 04 17.0**	**-0.4**
MAYA	**Malatya/Merkez**	**0.36**	**270**	P	**Pg**	**22 04 18.3**	**+0.3**
MAYA				S	**Sg**	**22 04 23.3**	**+0.6**
MAYA				IAML		22 04 24.0	
	comp=N,2µm,0.2s						
MAYA				IAML		22 04 26.0	
	comp=E,1µm,0.7s						
ELZ	**Elazig**	**0.44**	**34**	P	**Pg**	**22 04 19.2**	**-0.2**
ELZ				S	**Sg**	**22 04 25.0**	**-0.2**
ELZ				IAML		22 04 26.0	
	comp=N,8µm,0.2s						
ELZ				IAML		22 04 26.0	
	comp=E,1µm,0.3s						
NARI	**Adyaman-Kaht**	**0.45**	**193**	P	**Pg**	**22 04 20.3**	**+0.7**
KAHTU	**Kahta**	**0.56**	**203**	P	**Pg**	**22 04 22.3**	**+0.6**
MDNT	**Maden**	**0.63**	**84**	P	**Pg**	**22 04 22.6**	**-0.4**
AZEY	**Adyaman-Merk**	**0.72**	**225**	P	**Pb**	**22 04 25.4**	**-0.7**
HANM	**anlurfa/Hi**	**0.74**	**180**	P	**Pg**	**22 04 25.5**	**+0.3**
AKCD	**Akcadag**	**0.76**	**268**	P	**Pg**	**22 04 25.2**	**-0.2**
MCKZ	**Bingol**	**0.80**	**5**	P	**Pg**	**22 04 25.5**	**-0.7**
KOVA	**Elazig, Kovanc**	**0.82**	**62**	P	**Pg**	**22 04 25.8**	**-0.8**
ARPR	**Arapgir-MALATY**	**0.88**	**331**	Pg	**Pb**	**22 04 27.7**	**-1.2**
ARPR				Sg	**Sn**	**22 04 41.9**	**-1.7**
URFA	**Urfa**	**0.89**	**183**	Pg	**Pg**	**22 04 25.3**	**-2.6**
URFA				Sg	**Sg**	**22 04 38.1**	**-1.2**
HEKM	**Malatya_Hekimh**	**0.91**	**307**	P	**Pg**	**22 04 28.0**	**-0.4**
TNCL	**Tunceli-Merkez**	**0.94**	**33**	P	**Pg**	**22 04 28.0**	**-0.9**
DIYA	**Diyarbakir**	**1.05**	**112**	P	**Pg**	**22 04 31.3**	**+0.3**
AKCA	**Adyaman/G¶l**	**1.09**	**241**	P	**Pb**	**22 04 31.9**	**-0.4**
ILIC	**ilic-Erzincan**	**1.15**	**348**	Pn	**Pg**	**22 04 32.2**	**-0.8**
SANL	**SANLIURFA_Merk**	**1.16**	**176**	P	**Pn**	**22 04 34.3**	**+0.4**
MDIV		**1.19**	**327**	P	**Pb**	**22 04 33.2**	**-0.9**
MAYK		**1.23**	**70**	P	**Pg**	**22 04 33.3**	**-1.1**
ERZN	**Erzincan**	**1.42**	**27**	Pn	**Pg**	**22 04 38.1**	**0.0**
GZT	**Gaziantep**	**1.43**	**228**	P	**Pn**	**22 04 37.2**	**-0.5**
SURC	**SANLIURFA_SURC**	**1.46**	**189**	P	**Pg**	**22 04 39.1**	**+0.2**
EUZM	**Uzumlu**	**1.52**	**24**	P	**Pn**	**22 04 38.7**	**-0.3**
BNGB	**Bingl**	**1.55**	**64**	Pn	**Pb**	**22 04 39.8**	**-0.5**
BNGB				Sn	**Sg**	**22 05 02.0**	**+1.2**
NZIP	**Nizip/Gaziante**	**1.60**	**217**	P	**Pn**	**22 04 39.8**	**-0.3**
KHMN	**Narli-Kahraman**	**1.66**	**236**	P	**Pn**	**22 04 40.6**	**-0.2**
YEDI	**Yedisu-Bingol**	**1.70**	**49**	Pn	**Pn**	**22 04 41.7**	**+0.1**
GAZ	**Gaziantep**	**1.76**	**230**	Pn	**Pn**	**22 04 41.2**	**-1.0**
KMRS	**Kahramanmaras**	**1.77**	**243**	Pn	**Pn**	**22 04 41.5**	**-0.9**
SLHN	**Bingol, Solhan**	**1.79**	**69**	P	**Pb**	**22 04 43.5**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.83**	**95**	Pn	**Pn**	**22 04 42.1**	**-1.1**
SVAN	**Silvan-Diyarba**	**1.83**	**95**	P	**Pn**	**22 04 42.5**	**-0.7**
KELT	**Kelkit**	**1.84**	**9**	P	**Pg**	**22 04 45.1**	**-1.1**
SARI	**SarD1z-Kayseri**	**1.94**	**273**	Pn	**Pn**	**22 04 44.3**	**-0.6**
KARO	**Karliova-Bingo**	**1.95**	**59**	Pn	**Pn**	**22 04 45.1**	**+0.1**
SUSE	**Susehri**	**1.95**	**344**	P	**Pb**	**22 04 46.8**	**-0.4**
SVSK	**Karacayir**	**2.16**	**318**	Pn	**Pn**	**22 04 48.4**	**+0.7**
VRTB	**Varto-Mus**	**2.17**	**67**	Pn	**Pn**	**22 04 48.4**	**+0.4**
BAYT	**Aydıntepe-Bayb**	**2.28**	**25**	Pn	**Pn**	**22 04 50.1**	**+0.6**
GURO	**Guroymak-BITLI**	**2.48**	**84**	Pn	**Pn**	**22 04 52.2**	**0.0**
KOPR	**Koprukoy-ERZUR**	**2.84**	**53**	Pn	**Pn**	**22 04 57.8**	**+0.5**
MLAZ	**Malazgirt-MUS**	**2.98**	**73**	Pn	**Pn**	**22 04 59.7**	**+0.6**
BRTR	**Keskin Array B**	**4.32**	**290**	Pn	**Pn**	**22 05 18.8**	**+1.2**
	2.0nm,0.3s,baz=120,slow=14,SNR=50						
BRTR				Lg	Lg	22 06 27.1	
	0.3nm,0.3s,baz=116,slow=23,SNR=3.7						
BRTR				LR	LR	22 07 17.0	
	comp=Z,156nm,21.3s,baz=314,slow=44 6.9nm,0.5s						
BEIL	**Beino**	**4.36**	**211**	*e*P	**Pn**	**22 05 18.2**	**+0.2**
GNI	**Garni**	**4.90**	**66**	Pn	**Pn**	**22 05 27.2**	**+1.7**
	0.9nm,0.3s,baz=299,slow=3.5,SNR=5.7 3.2nm,0.5s						
ZAHL	**Zahle**	**5.08**	**209**	*e*P	**Pn**	**22 05 28.6**	**+0.7**
BHL	**Bhannes**	**5.13**	**212**	*e*P	**Pn**	**22 05 29.3**	**+0.6**
DQRL	**Deir Qamar**	**5.34**	**211**	*e*P	**Pn**	**22 05 32.9**	**+1.4**
RCY	**Rachaya**	**5.42**	**208**	*e*P	**Pn**	**22 05 33.7**	**+1.0**
QRWL	**Qaraoun**	**5.43**	**210**	*e*P	**Pn**	**22 05 32.7**	**0.0**
MMAI	**Mount Meron Ar**	**6.01**	**209**	Pn	**Pn**	**22 05 41.6**	**+1.0**
	2.0nm,0.3s,baz=25,slow=16,SNR=12						
MMAI				Lg	Lg	22 07 23.4	
	6.3nm,0.3s,baz=28,slow=31,SNR=4.1 1.4nm,0.4s						
KBZ	**Khabaz**	**6.19**	**28**	Pn	**Pn**	**22 05 42.8**	**-0.2**
	0.1nm,0.3s,baz=251,slow=5.6,SNR=4.9 0.7nm,0.5s						
KVAR	**Kislovodsk Arr**	**6.32**	**26**	Pn	**Pn**	**22 05 46.2**	**+1.3**
	baz=215,slow=13 2.0nm,0.8s						
ASF	**Jabal al Asfar**	**6.35**	**195**	Pn	**Pn**	**22 05 46.8**	**+1.3**
	0.9nm,0.3s,baz=64,slow=5.7,SNR=6.4						
ASF				Lg	Lg	22 07 29.9	
	2.2nm,0.3s,baz=15,slow=6.3,SNR=4.0 1.5nm,0.5s						
EIL	**Elat**	**9.23**	**202**	Lg	Lg	22 09 05.3	
	0.5nm,0.3s,baz=63,slow=16,SNR=2.4						
AKTO	**Aktyubinsk**	**18.20**	**42**	LR	LR	22 16 22.5	
	comp=Z,188nm,20.3s,baz=10,slow=40						
GERES	**GERESS Array B**	**20.96**	**308**	P	Pn	22 08 56.1	-1.4
	0.9nm,0.5s,baz=129,slow=10,SNR=5.9 0.9nm,0.5s						
FINES	**FINESS Array B**	**24.48**	**345**	P	**P**	**22 09 31.8**	**+1.0**
	3.6nm,0.9s,baz=185,slow=11,SNR=4.7 3.6nm,0.9s						
KURBB	**Kurchatov Arra**	**30.47**	**53**	P	**P**	**22 10 25.9**	**+1.2**
	0.6nm,0.6s,baz=267,slow=9.0,SNR=6.0 0.6nm,0.6s						
MKAR	**Makanchi Array**	**32.72**	**61**	P	**P**	**22 10 46.0**	**+1.5**
	0.5nm,0.6s,baz=271,slow=7.0,SNR=6.6 0.5nm,0.6s						
ESDC	**Sonseca Array**	**33.10**	**286**	P	**P**	**22 10 47.1**	**-0.8**
	0.3nm,0.6s,baz=75,slow=8.9,SNR=4.9 0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**34.77**	**48**	P	**P**	**22 11 03.0**	**+0.8**
	0.4nm,0.3s,baz=268,slow=10,SNR=2.5 0.4nm,0.3s						

TRN 10 22:04:41.2, 16°.05N×61°.39W, h16km, MD3.7, South-east of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMLZ	**Guadeloupe Bro**	**0.27**	**269**	*e*P	Pn	22 04 49.6	-1.0
MMLZ				*e*S	Sn	22 04 54.2	-2.1
TBG	**Guadaloupe-3**	**0.31**	**232**	*e*P	Pn	22 04 50.2	-1.0
TBG				*e*S	Sb	22 04 54.9	+1.6
ATGZ	**Broadband at L**	**0.33**	**279**	*e*P	Pn	22 04 50.6	-0.7
ATGZ				*e*S	Sb	22 04 55.0	+1.3
DSDZ	**La Diserade, G**	**0.41**	**50**	*e*P	Pb	22 04 51.3	+1.2
DSDZ				*e*S	Sb	22 04 57.9	+1.8
DHSZ	**Broadband at M**	**0.42**	**302**	*e*P	Pn	22 04 52.3	-0.5
DHSZ				*e*S	Sn	22 04 58.7	-1.5
DWS	**Wesley**	**0.48**	**171**	*e*P	Pn	22 04 53.3	-0.2
DWS				*e*S	Sn	22 05 00.7	-0.9
DSLB	**Salisbury**	**0.61**	**183**	*e*P	Pn	22 04 55.3	+0.1
DSLB				*e*S	Sn	22 05 05.1	+0.3
DLPL	**La Plaine**	**0.72**	**169**	*e*P	Pn	22 04 58.2	+1.4
DLPL				*e*S	Sn	22 05 09.1	+1.4
MLYT	**Lee's Yard**	**1.02**	**311**	*e*P	Pg	22 05 03.8	+2.7
MLYT				*e*S	Sn	22 05 18.8	+3.8
MBWH	**Windy Hill**	**1.03**	**312**	*e*P	Pg	22 05 02.6	+1.3
MBWH				*e*S	Sn	22 05 17.8	+2.5
MBFL	**Flemmings, Mon**	**1.05**	**312**	*e*P	Pg	22 05 03.0	+1.3
MBFL				*e*S	Sn	22 05 17.7	+1.9
SVN	**Savane Anatole**	**1.22**	**170**	*e*P	Pg	22 05 05.7	+0.9
SVN				*e*S	Sg	22 05 23.7	+3.1
BIM	**Bigot**	**1.55**	**169**	*e*P	Pg	22 05 10.5	-0.6
BIM				*e*S	Sg	22 05 30.8	-0.6
ANWB	**Willy Bob**	**1.66**	**347**	*e*P	Pb	22 05 11.8	+0.4
ANWB				*e*S	Sg	22 05 33.9	-0.8
SKI	**Saint Kitts**	**1.82**	**315**	*e*P	Pb	22 05 14.3	+0.1
SKI				*e*S	Sb	22 05 38.1	+1.3
SLBI	**Saint Lucia, B**	**2.05**	**169**	*e*P	Pb	22 05 18.2	+0.1
SLBI				*e*S	Sb	22 05 43.0	-0.5

*BJI **10** 22:46:47.9, 35°.18N×27°.83E, h8km, mB5.4/19, mb4.7/71, Ms4.9/22, Ms7 4.6/23*
*NAO **10** 22:46:47.9, 35°.23N×27°.80E, h10km, MB4.9*
*AFAD **10** 22:46:47.7, 35°.04N×27°.82E, h15km±3km, MW4.9*
*MOS **10** 22:46:48.9±1.0, 35°.10N×27°.89E, h12km, mb5.3/48, MS4.7/17, Error ellipse: s-maj=4.8km s-min=2.8km az=86.5*
*IDC **10** 22:46:48.7±0.5, 35°.26N×27°.80E, h0km, mb4.6/29, mbtmp4.6/43, ML4.3/12, MS4.3/58, Error ellipse: s-maj=11.8km s-min=10.3km az=2.0*
*GII **10** 22:46:49.7±0.0, 35°.066N±0°.002×27°.965E±0°.001, h0km, Mws4.9, confirmed*
*ISK **10** 22:46:49.6, 35°.17N×27°.97E, h4km, ML4.8/57*
*NEIC **10** 22:46:50.8±2.4, 35°.17N±0°.04×27°.91E±0°.05, h10km±1km, mb5.2/229, Mww4.9/26, Error ellipse: s-maj=8.1km s-min=6.2km az=224.0*
*MED_RC **10** 22:46:50.0±0.2, 35°.06N×27°.89E, h14km, MW5.0/85, Moment Tensor Solution. Body waves: s11,c12;Mantle waves: s85,c114; Duration: 1ŧ3 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.74±.19; $M_{\theta\theta}$1.66±.14; $M_{\phi\phi}$1.08±.12; $M_{r\theta}$-0.61±.25; $M_{\theta\phi}$2.29±.14; $M_{r\phi}$-2.38±.27; Best double couple: M_{o}4.11000×10^{16} NP1:ϕ_s253.00000°, δ34.00000°, λ-48.00000°. NP2:ϕ_s26.00000°, δ65.00000°, λ-114.00000°. Principal axes: T 4.3000, Plg17.0000°, Azm134.0000°; N -0.3700, Plg22.0000°, Azm37.0000°; P -3.9200, Plg62.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
*MCSM **10** 22:46:50.3±1.4, 35°N±3°×2°8E±°, h10km±9km, mb4.8, mB5.0, MLv4.8, Mw(mB)4.3*
*NEIC **10** 22:46:51, 35°.30N×27°.76E, h12km, Moment Tensor Solution. Duration: 1ŧ7 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.52; $M_{\theta\theta}$1.28; $M_{\phi\phi}$ 1.24; $M_{r\theta}$-0.31; $M_{\theta\phi}$ 1.41; $M_{r\phi}$-1.06; Fault plane solution: M_{o}2.82000×10^{16} NP1: ϕ_s236.82000°, δ35.89000°, λ-71.29000°. NP2:ϕ_s34.13000°, δ56.27000°, λ-103.07000°. Principal axes: T 2.8498, Plg10.0000°, Azm133.0000°; N -0.0507, Plg11.0000°, Azm41.0000°; P -2.7992, Plg75.0000°, Azm266.0000°;*
*GCMT **10** 22:46:51.8±0.2, 35°.08N±0°.02×27°.76E±0°.02, h18km, MW5.0/105, Moment Tensor Solution. s59,c74; s105,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.25±.16; $M_{\theta\theta}$1.19±.11; $M_{\phi\phi}$2.05±.12; $M_{r\theta}$-1.22±.30; $M_{\theta\phi}$2.80±.09; $M_{r\phi}$-2.29±.30; Best double couple: M_{o}4.66200×10^{16} NP1:ϕ_s234.00000°, δ30.00000°, λ-70.00000°. NP2:ϕ_s31.00000°, δ62.00000°, λ-101.00000°. Principal axes: T 5.2150, Plg17.0000°, Azm129.0000°; N -1.1160, Plg10.0000°, Azm36.0000°; P -4.1090, Plg70.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **10** 22:46:51, 35°.20N×27°.88E, h12km*
*NIC **10** 22:46:51.0, 35°.16N×27°.87E, h45km±6km, Ml4.6/17*
*ATH **10** 22:46:51.2, 35°.20N×28°.04E, h9km±4km, ML4.7/24, Manual Solution by A.Agalos First location: 2020/02/10 22:48:13, This location: 2020/02/10 23:04:43 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*THE **10** 22:46:52.3, 35°N±4°×2°8E±°, h4km±9km, M4.5/52, MLh4.5/52*
*PDG **10** 22:46:53.2±1.0, 35°.06N×28°.00E, h30km±2km, ML5.0/11, Error ellipse: s-maj=1.4km s-min=0.9km az=90.0*
*BGR **10** 22:46:54.4±3.5, 35°.33N×27°.74E, h10km, mb4.7, Error ellipse: s-maj=75.6km s-min=62.3km az=15.0*
*GFZ **10** 22:46:54.9, 35°.08N×27°.88E, h19km, MW5.0, Moment Tensor Solution. s39 Moment tensor: M_{rr}-3.17; $M_{\theta\theta}$1.56; $M_{\phi\phi}$1.61; $M_{r\theta}$-0.12; $M_{\phi\phi}$2.75; $M_{r\phi}$-2.20; Fault plane solution: NP1:ϕ_s250.00000°, δ39.00000°, λ-48.00000°. NP2:ϕ_s22.00000°, δ62.00000°, λ-117.00000°. Principal axes: T 4.7000, Plg12.0000°, Azm132.0000°; N -0.5000, Plg24.0000°, Azm36.0000°; P -4.1900, Plg62.0000°, Azm247.0000°;*
*HLW **10** 22:46:58.3, 34°.57N×28°.07E, h16km±5km, Ml4.8*
ISC 10 22:46:50.3±0.8, 35°.18N±0°.02×27°.91E±0°.02, h8km±5km, n1428, σ1ŧ50/1464, mb5.1/210, MS4.5/63, 71C-44D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.71**	**301**		**Pg**	**22 47 04.4**	**+0.3**
KARP				Sg	**Sb**	**22 47 14.9**	**-0.1**
KARP	**Karpathos**	**0.71**	**301**	Pg	**Pb**	**22 47 04.9**	**-0.1**
KARP				Sg	**Sb**	**22 47 15.6**	**+0.6**
KARP	**Karpathos**	**0.71**	**301**	P	**Pg**	**22 47 03.8**	**-0.2**
KARP				S	**Sb**	**22 47 14.3**	**-0.6**
KARP	**Karpathos**	**0.71**	**301**	P	**Pg**	**22 47 04.4**	**+0.3**
KARP				S	**Sb**	**22 47 15.3**	**+0.3**
KARP				AML	AML	22 47 19.9	
	103nm,0.9s						
KARP				AML	AML	22 47 26.6	
	100nm,0.7s						
KARP	**Karpathos**	**0.71**	**301**	P	**Pg**	**22 47 04.1**	**+0.1**
KARP				S	**Sb**	**22 47 15.8**	**+0.8**
ARG	**Arkhangelos**	**1.05**	**10**	Pg	**Pg**	**22 47 09.9**	**-0.6**
ARG					**Sn**	**22 47 27.1**	**+0.8**
ARG	**Arkhangelos**	**1.05**	**10**	Pg	**Pb**	**22 47 10.7**	**-0.1**
ARG	**Arkhangelos**	**1.05**	**10**	P	**Pg**	**22 47 10.1**	**-0.4**
ARG				S	**Sg**	**22 47 23.9**	**-0.3**
ARG	**Arkhangelos**	**1.05**	**10**	P	**Pg**	**22 47 09.9**	**-0.6**
ARG						22 47 27.1	
ARG	**Arkhangelos**	**1.05**	**10**	P	**Pg**	**22 47 10.1**	**-0.4**
ARG				S	**Sg**	**22 47 24.3**	**+0.1**
ARG				AML	AML	22 47 34.0	
	47nm,1.1s						
ARG				AML	AML	22 47 38.1	
	60nm,1.2s						
ARG	**Arkhangelos**	**1.05**	**10**	P	**Pg**	**22 47 10.6**	**0.0**
ARG				S	**Sb**	**22 47 24.6**	**-0.2**
RODB	**Rodos**	**1.29**	**11**	P	**Pg**	**22 47 15.7**	**+0.5**
RDI1	**Rhodes Town Ha**	**1.30**	**11**	P	**Pg**	**22 47 15.8**	**+0.6**
ZKR	**Zakros**	**1.39**	**268**	Pn	**Pg**	**22 47 17.4**	**+0.5**
ZKR				Sn	**Sg**	**22 47 37.3**	**+2.4**
ZKR	**Zakros**	**1.39**	**268**	P	**Pg**	**22 47 16.8**	**-0.1**
ZKR	**Zakros**	**1.39**	**268**	P	**Pg**	**22 47 18.1**	**+1.2**
ZKR				S	**Sg**	**22 47 38.0**	**+3.1**
SIT2	**Siteia**	**1.47**	**272**	P	**Pg**	**22 47 19.1**	**+0.5**
YAZI	**Mula-Dat§a-**	**1.54**	**346**	P	**Pb**	**22 47 19.2**	**0.0**
YAZI				S	**Sg**	**22 47 41.3**	**+1.3**
YAZI				IAML		22 47 48.0	
	comp=E,6µm,1.4s						
YAZI				IAML		22 47 50.0	
	comp=N,5µm,1.0s						
DAT	**Datca**	**1.57**	**350**	Pn	**Pb**	**22 47 19.6**	**-0.1**
DAT				Sn	**Sg**	**22 47 41.3**	**+0.4**
DAT	**Datca**	**1.57**	**350**	P	**Pn**	**22 47 18.6**	**0.0**
DAT				S	**Sn**	**22 47 38.3**	**-0.9**
DAT	**Datca**	**1.57**	**350**	P	**Pg**	**22 47 20.2**	**-0.3**
DAT				S	**Sg**	**22 47 43.5**	**+2.6**
DAT				IAML		22 47 51.0	
	comp=E,6µm,1.0s						
DAT				IAML		22 47 58.0	
	comp=N,5µm,1.3s						
DATC	**Datca-Mugla**	**1.59**	**353**	Pn	**Pb**	**22 47 19.8**	**-0.2**
TURN	**Turunc**	**1.62**	**10**	P	**Pg**	**22 47 21.3**	**-0.1**
TURN				S	**Sg**	**22 47 44.2**	**+1.9**
TURN				IAML		22 47 48.0	
	comp=E,3µm,0.7s						
TURN				IAML		22 47 52.0	
	comp=N,4µm,0.6s						
IZZE	**Mula-Seydike**	**1.65**	**40**	P	**Pn**	**22 47 20.2**	**+0.6**
KSL	**Kastellorizon**	**1.68**	**54**	P	**Pn**	**22 47 20.1**	**+0.2**
KSL				S	**Sn**	**22 47 41.7**	**+0.1**
KSL	**Kastellorizon**	**1.68**	**54**	P	**Pn**	**22 47 19.7**	**-0.3**
KSL				S	**Sn**	**22 47 40.4**	**-1.2**
KSL				AML	AML	22 48 15.9	
	21nm,2.0s						
KSL				AML	AML	22 48 19.6	
	9.9nm,1.7s						
KSL	**Kastellorizon**	**1.68**	**54**	P	**Pn**	**22 47 20.1**	**+0.2**
KSL				S	**Sn**	**22 47 40.7**	**-0.9**
AKAS	**Kas**	**1.74**	**52**		**Pn**	**22 47 21.1**	**+0.1**
AKAS	**Kas**	**1.74**	**52**	P	**Pb**	**22 47 21.9**	**-0.7**
FETY	**Fethiye**	**1.74**	**33**	S	**Sn**	**22 47 43.0**	**-0.3**
FETY	**Fethiye**	**1.74**	**33**	P	**Pn**	**22 47 12.8**	**-9.1**
DALY	**Dalyan (Mula)**	**1.74**	**20**	Pn	**Pn**	**22 47 21.6**	**+0.7**
SABU	**Mula-Dalaman**	**1.85**	**27**	P	**Pn**	**22 47 23.3**	**+0.8**
NPS	**Neapolis**	**1.88**	**273**	P	**Pb**	**22 47 25.1**	**+0.2**
NPS				S	**Sg**	**22 47 51.6**	**+0.8**
NPS	**Neapolis**	**1.88**	**273**	P	**Pb**	**22 47 25.2**	**+0.3**
NPS				S	**Sg**	**22 47 50.9**	**+0.1**
BODA	**Bodrum-Mula**	**1.89**	**348**	Pn	**Pn**	**22 47 23.6**	**+0.7**
BDRM	**Kayabasi**	**1.92**	**349**	P	**Pn**	**22 47 24.2**	**+0.9**
BDRM				S	**Sb**	**22 47 50.1**	**+0.3**
BDRM				IAML		22 48 04.0	
	comp=E,4µm,1.2s						
KLNA	**Kalymnos**	**1.93**	**337**	P	**Pn**	**22 47 24.6**	**+1.1**
DEMR	**Demre-Antalya**	**1.94**	**56**	Pn	**Pn**	**22 47 23.6**	**0.0**
BODT	**Bodrum**	**1.94**	**346**	Pn	**Pn**	**22 47 24.8**	**+1.1**
BODT	**Bodrum**	**1.94**	**346**	P	**Pn**	**22 47 24.8**	**+1.1**
BODT				S	**Sn**	**22 47 49.0**	**+0.7**
YER	**Yerkesik**	**1.98**	**9**	Pn	**Pn**	**22 47 25.2**	**+1.0**
YER	**Yerkesik**	**1.98**	**9**	P	**Pb**	**22 47 25.5**	**-1.1**
YER				S	**Sn**	**22 47 50.3**	**+1.1**
YKAV	**Yalikavak-Bodr**	**2.01**	**346**	Pn	**Pn**	**22 47 25.8**	**+1.3**
CAME	**Cameli-Denizli**	**2.09**	**32**	Pn	**Pn**	**22 47 25.8**	**-0.1**
MULA	**Mugla, Merkez-**	**2.10**	**9**	P	**Pb**	**22 47 29.4**	**+0.6**
KNIK	**Mula-Seydike**	**2.14**	**39**	P	**Pn**	**22 47 27.6**	**+1.0**
CAEL	**Denizli, Camel**	**2.25**	**30**	P	**Pn**	**22 47 29.4**	**+1.4**
ELL	**Elmali**	**2.26**	**45**		**Pn**	**22 47 28.9**	**+0.8**
ELL	**Elmali**	**2.26**	**45**	Pn	**Pn**	**22 47 28.6**	**+0.5**
ELL	**Elmali**	**2.26**	**45**	P	**Pn**	**22 47 28.9**	**+0.8**
ELL	**Elmali**	**2.26**	**45**	S	**Sn**	**22 47 54.7**	**-1.5**
ELL				AML	AML	22 48 36.2	
	20nm,1.2s						
ELL				AML	AML	22 48 42.1	
	11nm,1.1s						
DNZT	**Denizli-Tavas-**	**2.28**	**23**	P	**Pb**	**22 47 30.2**	**-1.7**
AKUM	**Antalya-Kumluc**	**2.29**	**59**	P	**Pn**	**22 47 29.7**	**+1.3**
THERA	**Ancient Thera,**	**2.31**	**302**	P	**Pn**	**22 47 29.6**	**+0.9**
THERA				S	**Sn**	**22 47 58.8**	**+1.6**
THERA	**Ancient Thera,**	**2.31**	**302**	P	**Pn**	**22 47 29.5**	**+0.8**
THERA				S	**Sn**	**22 47 58.4**	**+1.2**
THR8	**Santorini-Mono**	**2.32**	**303**	P	**Pn**	**22 47 29.7**	**+0.9**
THR8	**Santorini-Mono**	**2.32**	**303**	P	**Pn**	**22 47 29.9**	**+1.0**
IACM	**Heraklion**	**2.32**	**274**	P	**Pb**	**22 47 31.5**	**-1.0**
IACM				S	**Sb**	**22 48 01.9**	**+0.5**
IACM	**Heraklion**	**2.32**	**274**	P	**Pb**	**22 47 32.0**	**-0.5**
DDIM	**Aydin, Didim**	**2.34**	**347**	P	**Pn**	**22 47 30.0**	**+0.9**
THR6	**Thira Island,**	**2.35**	**301**	P	**Pn**	**22 47 30.6**	**+1.3**
THR6	**Thira Island,**	**2.35**	**301**	P	**Pn**	**22 47 30.9**	**+0.9**
THR3	**Thira Island,**	**2.38**	**302**	P	**Pn**	**22 47 30.4**	**+0.7**
THR3	**Thira Island,**	**2.38**	**302**	P	**Pn**	**22 47 30.7**	**+1.1**
SNT5	**Nea Kammeni, S**	**2.38**

ISP					pmax	pmax			
	comp=Z,168nm,1.3s								
ISP	**Isparta**	**3.38**	**38**	P	**Pn**	**Pn**	**22 47 44.5**	**+1.0**
KULA	**Kula-Manisa**	**3.38**	**10**	Pn	**Pn**	**Pn**	**22 47 44.9**	**+1.3**
PASA	**Karahalli, USA**	**3.41**	**21**	P	**Pn**	**Pn**	**22 47 44.6**	**+0.7**
KNDR	**Palaiochora Ch**	**3.51**	**272**	Pn	**Pn**	**Pn**	**22 47 47.4**	**+2.3**
KNDR	**Palaiochora Ch**	**3.51**	**272**	P	**Pn**	**Pn**	**22 47 47.2**	**+2.1**
KTTT	**Salihli**	**3.51**	**2**	P	**Pn**	**Pn**	**22 47 45.6**	**+0.4**
GOMA	**Golmarmara-Man**	**3.52**	**0**	Pn	**Pn**	**Pn**	**22 47 46.7**	**+1.3**
CHOS	**Chios island**	**3.53**	**336**	Pn	**Pn**	**Pn**	**22 47 47.0**	**+1.4**
CHOS	**Chios island**	**3.53**	**336**	P	**Pn**	**Pn**	**22 47 45.9**	**+0.3**
CHOS	**Chios island**	**3.53**	**336**	P	**Pn**	**Pn**	**22 47 46.6**	**+1.0**
KZIL	**AFYON_Kizioren**	**3.56**	**30**	P	**Pn**	**Pn**	**22 47 47.2**	**+1.2**
BAGT	**Foa**	**3.57**	**347**	P	**Pn**	**Pn**	**22 47 47.6**	**+1.5**
CAMT	**Merkez**	**3.59**	**353**	P	**Pn**	**Pn**	**22 47 47.0**	**+0.6**
ALAN	**Alanya-ANTALYA**	**3.62**	**66**	Pn	**Pn**	**Pn**	**22 47 46.8**	**0.0**
AKMS	**Akamas**	**3.63**	**91**	P	**Pn**	**Pn**	**22 47 45.9**	**-1.1**
AKMS				S	**Sn**	**Sn**	**22 48 28.2**	**-1.9**
AKMS				AML	AML	AML	22 48 33.3	
	comp=Z,3.6nm,0.5s								
AKMS				AML	AML	AML	22 48 34.9	
	comp=Z,4.4nm,0.6s								
AKMS	**Akamas**	**3.63**	**91**	P	**Pn**	**Pn**	**22 47 46.0**	**-0.9**
USAK	**Uak-Merkez**	**3.64**	**14**	P	**Pn**	**Pn**	**22 47 48.1**	**+1.0**
FOCM	**Foa**	**3.65**	**345**	Pn	**Pn**	**Pn**	**22 47 48.9**	**+1.8**
EAG2	**Marmaro, Chios**	**3.66**	**337**	P	**Pn**	**Pn**	**22 47 48.0**	**+0.9**
AKHS	**Akhisar**	**3.69**	**359**	P	**Pn**	**Pn**	**22 47 48.3**	**+0.5**
AKS	**Akhisar**	**3.69**	**359**	Pn	**Pn**	**Pn**	**22 47 49.2**	**+1.4**
AFYN	**Afyon-Dinar-K**	**3.73**	**33**	P	**Pn**	**Pn**	**22 47 51.4**	**+3.1**
GORD	**Gordes-Manisa**	**3.73**	**3**	Pn	**Pn**	**Pn**	**22 47 49.7**	**+1.4**
ANKY	**Antikythira Is**	**3.82**	**282**	P	**Pn**	**Pn**	**22 47 51.4**	**+1.9**
ANKY	**Antikythira Is**	**3.82**	**282**	P	**Pn**	**Pn**	**22 47 52.0**	**+2.6**
BNAZ	**Uak-Banaz**	**3.83**	**24**	P	**Pn**	**Pn**	**22 47 52.3**	**+2.5**
ZEDA	**zmir-Bergama**	**3.84**	**350**	P	**Pn**	**Pn**	**22 47 50.3**	**+0.6**
ALFC	**Alefka**	**3.84**	**89**	P	**Pn**	**Pn**	**22 47 48.8**	**-1.0**
ALFC				S	**Sn**	**Sn**	**22 48 34.1**	**-1.2**
ALFC				AML	AML	AML	22 48 41.6	
	comp=Z,3.1nm,0.7s								
ALFC				AML	AML	AML	22 48 42.0	
	comp=Z,3.1nm,0.5s								
ALFC	**Alefka**	**3.84**	**89**	P	**Pn**	**Pn**	**22 47 48.7**	**-1.2**
NATA	**Nata**	**3.85**	**95**	P	**Pn**	**Pn**	**22 47 49.0**	**-0.9**
NATA				S	**Sn**	**Sn**	**22 48 34.4**	**-1.0**
NATA				AML	AML	AML	22 48 40.0	
	comp=Z,9.2nm,0.5s								
NATA				AML	AML	AML	22 48 40.7	
	comp=Z,8.5nm,0.9s								
NATA	**Nata**	**3.85**	**95**	P	**Pn**	**Pn**	**22 47 49.4**	**-0.5**
MATC	**Matruh**	**3.86**	**189**	P	**Pn**	**Pn**	**22 47 51.0**	**+0.9**
SEYD	**Seydisehir-KON**	**3.88**	**54**	Pn	**Pn**	**Pn**	**22 47 51.2**	**+0.8**
IZMD	**zmir-Dikili-**	**3.88**	**349**	P	**Pn**	**Pn**	**22 47 51.4**	**+1.0**
DEMI	**Demirci**	**3.91**	**9**	P	**Pn**	**Pn**	**22 47 51.5**	**+0.7**
DKL	**Dikili**	**3.97**	**349**	Pn	**Pn**	**Pn**	**22 47 53.2**	**+1.7**
SHAP	**Saphane-Kutahy**	**3.98**	**15**	Pn	**Pn**	**Pn**	**22 47 53.4**	**+1.6**
SHUT	**Suhut-Afyon**	**3.98**	**31**	Pn	**Pn**	**Pn**	**22 47 53.3**	**+1.5**
SOMA	**Soma-Manisa**	**3.98**	**356**	Pn	**Pn**	**Pn**	**22 47 53.4**	**+1.7**
KARY	**Karystos**	**3.99**	**317**	P	**Pn**	**Pn**	**22 47 53.1**	**+1.4**
KARY	**Karystos**	**3.99**	**317**	P	**Pn**	**Pn**	**22 47 53.7**	**+1.9**
SIMA	**Simav-Kutahya**	**3.99**	**12**	Pn	**Pn**	**Pn**	**22 47 53.2**	**+1.3**
SMAA	**Simav-Kutahya**	**4.01**	**12**	Pn	**Pn**	**Pn**	**22 47 54.0**	**+1.9**
GEDZ	**Gediz**	**4.04**	**17**	Pn	**Pn**	**Pn**	**22 47 54.2**	**+1.6**
SDAG	**Sultandagi-AFY**	**4.05**	**36**	Pn	**Pn**	**Pn**	**22 47 54.3**	**+1.5**
TROD	**Troodos**	**4.08**	**92**	P	**Pn**	**Pn**	**22 47 51.9**	**-1.3**
TROD				S	**Sn**	**Sn**	**22 48 39.9**	**-1.3**
TROD				AML	AML	AML	22 48 51.1	
	comp=Z,1.9nm,0.6s								
TROD				AML	AML	AML	22 48 56.3	
	comp=Z,2.6nm,0.7s								
AFYO	**Afyonkarahisar**	**4.08**	**27**	P	**Pb**	**Pb**	**22 47 58.4**	**-4.1**
KTHA	**Kythira Island**	**4.08**	**287**	P	**Pn**	**Pn**	**22 47 54.7**	**+1.5**
GDZ	**Gediz**	**4.10**	**17**	P	**Pn**	**Pn**	**22 47 54.3**	**+0.8**
APOL	**The Sanctuary**	**4.10**	**96**	P	**Pn**	**Pn**	**22 47 52.7**	**-0.7**
APOL				S	**Sn**	**Sn**	**22 48 40.1**	**-1.5**
APOL				AML	AML	AML	22 48 44.4	
	comp=Z,4.2nm,0.9s								
APOL				AML	AML	AML	22 48 46.5	
	comp=Z,3.6nm,0.6s								
HDMB	**Hadim**	**4.12**	**63**	Pn	**Pn**	**Pn**	**22 47 55.1**	**+1.4**
OSC2	**CSNet OBS 4**	**4.18**	**119**	P	**Pn**	**Pn**	**22 47 54.2**	**-0.2**
OSC2				AML	AML	AML	22 48 57.4	
	comp=Z,1.7nm,1.1s								
OSC2				AML	AML	AML	22 48 59.4	
	comp=Z,2.8nm,1.1s								
STEP	**BALIKESIR_Sava**	**4.19**	**358**	P	**Pn**	**Pn**	**22 47 55.9**	**+1.3**
XYLS	**Xyliatos**	**4.22**	**91**	P	**Pn**	**Pn**	**22 47 54.0**	**-1.0**
XYLS				S	**Sn**	**Sn**	**22 48 43.7**	**-0.8**
XYLS				AML	AML	AML	22 48 48.4	
	comp=Z,1.9nm,0.5s								
XYLS				AML	AML	AML	22 48 50.8	
	comp=Z,1.9nm,0.5s								
AYVA	**Ayvalik**	**4.24**	**347**	P	**Pn**	**Pn**	**22 47 56.6**	**+1.5**
VLY	**Voula,Athens**	**4.25**	**310**	P	**Pn**	**Pn**	**22 47 57.6**	**+2.1**
VLY	**Voula,Athens**	**4.25**	**310**	P	**Pn**	**Pn**	**22 47 56.7**	**+1.3**
PRK	**Paraskevi**	**4.26**	**343**	P	**Pn**	**Pn**	**22 47 56.3**	**+0.7**
DION	**Dionisos Attik**	**4.31**	**313**	P	**Pn**	**Pn**	**22 47 58.1**	**+1.9**
DION	**Dionisos Attik**	**4.31**	**313**	P	**Pn**	**Pn**	**22 47 58.1**	**+1.9**
SLUM	**Salum**	**4.31**	**212**	P	**Pn**	**Pn**	**22 47 57.4**	**+1.1**
VLI	**Veliai**	**4.31**	**292**	P	**Pn**	**Pn**	**22 47 57.1**	**+0.8**
VLI	**Veliai**	**4.31**	**292**	P	**Pn**	**Pn**	**22 47 56.5**	**+0.3**
ATHU	**Athens Univers**	**4.33**	**311**	P	**Pn**	**Pn**	**22 47 58.3**	**+1.8**
PTL	**Penteli**	**4.33**	**313**	P	**Pn**	**Pn**	**22 47 58.4**	**+1.8**
PTL	**Penteli**	**4.33**	**313**	P	**Pn**	**Pn**	**22 47 58.4**	**+1.8**
SIGR	**SIGRI**	**4.35**	**338**	Pn	**Pn**	**Pn**	**22 47 58.4**	**+1.7**
SIGR	**SIGRI**	**4.35**	**338**	P	**Pn**	**Pn**	**22 47 58.0**	**+1.3**
ATHP	**Athens-Neo Psi**	**4.36**	**311**	P	**Pn**	**Pn**	**22 47 58.5**	**+1.6**
BUHA	**Balikesir, Bur**	**4.37**	**352**	P	**Pn**	**Pn**	**22 47 57.8**	**+0.9**
ATH	**Athens Observa**	**4.38**	**311**	P	**Pn**	**Pn**	**22 47 58.7**	**+1.6**
ATH	**Athens Observa**	**4.38**	**311**	P	**Pn**	**Pn**	**22 47 59.0**	**+1.9**
ASGA	**Asgata**	**4.40**	**94**	P	**Pn**	**Pn**	**22 47 56.5**	**-1.0**
ASGA				S	**Sn**	**Sn**	**22 48 48.2**	**-0.8**
ASGA				AML	AML	AML	22 48 54.0	
	comp=Z,3.9nm,0.8s								
ASGA				AML	AML	AML	22 48 56.0	
	comp=Z,3.6nm,0.8s								
ASGA	**Asgata**	**4.40**	**94**	P	**Pn**	**Pn**	**22 47 55.5**	**-2.0**
MET5	**Makryloggos,Me**	**4.41**	**305**	P	**Pn**	**Pn**	**22 47 59.7**	**+2.2**
DURS	**Dursunbey**	**4.44**	**6**	P	**Pn**	**Pn**	**22 47 59.0**	**+1.0**
TVSB	**Tavsanli**	**4.44**	**16**	Pn	**Pn**	**Pn**	**22 47 59.8**	**+1.7**
BALB	**Balikesir**	**4.45**	**360**	Pn	**Pn**	**Pn**	**22 47 58.3**	**+0.1**
BALB	**Balikesir**	**4.45**	**360**	Pn	**Pn**	**Pn**	**22 47 59.8**	**+1.6**
CSS	**Mathiatis**	**4.45**	**91**	Pn	**Pn**	**Pn**	**22 47 56.8**	**-1.4**
CSS	**Mathiatis**	**4.45**	**91**	Pn	**Pn**	**Pn**	**22 47 57.5**	**-0.7**
CSS	**Mathiatis**	**4.45**	**91**	P	**Pn**	**Pn**	**22 47 57.3**	**-0.9**
CSS				S	**Sn**	**Sn**	**22 48 49.1**	**-1.1**
CSS				AML	AML	AML	22 48 55.5	
	comp=Z,2.3nm,1.1s								
CSS				AML	AML	AML	22 48 58.0	
	comp=Z,2.4nm,0.9s								
CSS	**Mathiatis**	**4.45**	**91**	P	**Pn**	**Pn**	**22 47 56.8**	**-1.4**
CSS	**Mathiatis**	**4.45**	**91**	P	**Pn**	**Pn**	**22 47 57.2**	**-1.1**
YAYO	**Edremit-Balk**	**4.47**	**352**	Pn	**Pn**	**Pn**	**22 48 00.7**	**+2.2**
ATHAL	**Athalassa**	**4.50**	**89**	P	**Pn**	**Pn**	**22 47 58.4**	**-0.4**
ATHAL				S	**Sn**	**Sn**	**22 48 50.6**	**-0.7**
ATHAL				AML	AML	AML	22 49 03.5	
	comp=Z,5.9nm,0.7s								
ATHAL				AML	AML	AML	22 49 19.4	
	comp=Z,8.0nm,1.0s								
KONT	**Konya--Tatoy**	**4.53**	**51**	Pn	**Pn**	**Pn**	**22 48 00.6**	**+1.4**
MAGU	**Magoula**	**4.57**	**311**	P	**Pn**	**Pn**	**22 48 01.8**	**+2.1**
KYMI	**Kymi, Euboea I**	**4.60**	**320**	P	**Pn**	**Pn**	**22 48 02.2**	**+1.9**
KYMI	**Kymi, Euboea I**	**4.60**	**320**	P	**Pn**	**Pn**	**22 48 01.6**	**+1.4**
LFK	**Lefkose**	**4.61**	**87**	Pn	**Pn**	**Pn**	**22 48 00.6**	**+0.3**
STFN	**Stefani**	**4.61**	**312**	P	**Pn**	**Pn**	**22 48 02.7**	**+2.3**
OREN	**Orenkoy-Mersin**	**4.63**	**76**	Pn	**Pn**	**Pn**	**22 48 01.6**	**+1.0**
TEVE	**Tevekalti-Mers**	**4.67**	**73**	Pn	**Pn**	**Pn**	**22 48 02.8**	**+1.5**
LADK	**Ladik-KONYA**	**4.68**	**49**	Pn	**Pn**	**Pn**	**22 48 03.2**	**+1.8**
AKK1	**Akkuyu-Mersin**	**4.69**	**77**	Pn	**Pn**	**Pn**	**22 48 02.7**	**+1.3**
AKK2	**Akkuyu-Mersin**	**4.69**	**77**	Pn	**Pn**	**Pn**	**22 48 02.4**	**+1.0**
MVOU	**Mavrovouni**	**4.70**	**90**	P	**Pn**	**Pn**	**22 48 00.9**	**-0.6**
MVOU				S	**Sn**	**Sn**	**22 48 55.2**	**-1.0**
MVOU				AML	AML	AML	22 49 11.9	
	comp=Z,1.6nm,0.9s								
MVOU				AML	AML	AML	22 49 12.9	
	comp=Z,1.7nm,0.7s								
MVOU	**Mavrovouni**	**4.70**	**90**	P	**Pn**	**Pn**	**22 48 00.8**	**-0.7**
BECE	**Buyukeceli-Mer**	**4.71**	**76**	Pn	**Pn**	**Pn**	**22 48 02.4**	**+0.8**
VILL	**Villia**	**4.75**	**310**	P	**Pn**	**Pn**	**22 48 04.5**	**+2.2**
KRMN	**Karaman**	**4.77**	**64**	Pn	**Pn**	**Pn**	**22 48 04.2**	**+1.6**
SUSR	**Susurluk-Balik**	**4.78**	**2**	Pn	**Pn**	**Pn**	**22 48 04.0**	**+1.3**
YESI	**Yesilovacik-Me**	**4.78**	**76**	Pn	**Pn**	**Pn**	**22 48 03.7**	**+1.1**
VIL2	**Platees**	**4.80**	**310**	P	**Pn**	**Pn**	**22 48 04.5**	**+1.6**
EZN	**Ezine**	**4.81**	**345**	Pn	**Pn**	**Pn**	**22 48 05.3**	**+2.3**
EZN	**Ezine**	**4.81**	**345**	P	**Pn**	**Pn**	**22 48 03.6**	**+0.6**
EZN	**Ezine**	**4.81**	**345**	Pn	**Pn**	**Pn**	**22 48 02.5**	**-0.5**
CANM	**Can-anakkale**	**4.87**	**352**	Pn	**Pn**	**Pn**	**22 48 06.0**	**+2.1**
KIZT	**Kizilcal**	**4.87**	**40**	Pn	**Pn**	**Pn**	**22 48 04.8**	**+0.7**
CIFT	**Cifteler, Eski**	**4.88**	**30**	Pn	**Pn**	**Pn**	**22 48 04.9**	**+0.9**
LTK	**Loutraki**	**4.88**	**307**	P	**Pn**	**Pn**	**22 48 06.4**	**+2.3**
LTK	**Loutraki**	**4.88**	**307**	P	**Pn**	**Pn**	**22 48 06.2**	**+2.1**
PAR1C	**Paralimni Civi**	**4.98**	**90**	P	**Pn**	**Pn**	**22 48 04.8**	**-0.6**
PAR1C				S	**Sn**	**Sn**	**22 49 01.9**	**-1.2**
PARAL	**Paralimni**	**5.03**	**90**	P	**Pn**	**Pn**	**22 48 05.9**	**-0.3**
PARAL				AML	AML	AML	22 49 23.9	
	comp=Z,2.7nm,0.9s								
PARAL				AML	AML	AML	22 49 25.8	
	comp=Z,2.9nm,1.6s								
COMU	**Canakkale**	**5.04**	**347**	Pn	**Pn**	**Pn**	**22 48 08.7**	**+2.4**
BORA	**Eskisehir**	**5.11**	**23**	Pn	**Pn**	**Pn**	**22 48 07.8**	**+0.5**
AOS	**Alonnisos**	**5.12**	**322**	P	**Pn**	**Pn**	**22 48 09.1**	**+1.8**
SVRH	**Sivrihisar-ESK**	**5.14**	**33**	Pn	**Pn**	**Pn**	**22 48 09.7**	**+1.9**
EDC	**Edincik**	**5.16**	**360**	Pn	**Pn**	**Pn**	**22 48 09.6**	**+1.7**
LIA	**Limnos Island**	**5.18**	**336**	P	**Pn**	**Pn**	**22 48 09.3**	**+1.1**
KRBG	**Karabiga-Canak**	**5.23**	**355**	Pn	**Pn**	**Pn**	**22 48 11.3**	**+2.5**
ITM	**Ithomi**	**5.23**	**294**	Pn	**Pn**	**Pn**	**22 48 10.3**	**+1.4**
ITM	**Ithomi**	**5.23**	**294**	P	**Pn**	**Pn**	**22 48 10.8**	**+1.9**
ITM	**Ithomi**	**5.23**	**294**	P	**Pn**	**Pn**	**22 48 11.0**	**+2.1**
LKR	**Lokris**	**5.24**	**313**	P	**Pn**	**Pn**	**22 48 11.1**	**+2.1**
LKR	**Lokris**	**5.24**	**313**	P	**Pn**	**Pn**	**22 48 10.3**	**+1.3**
CHBY	**Cihanbeyli**	**5.24**	**48**	Pn	**Pn**	**Pn**	**22 48 10.7**	**+1.6**
GADA	**Gvkgeada**	**5.25**	**343**	Pn	**Pn**	**Pn**	**22 48 11.7**	**+2.5**
GADA	**Gvkgeada**	**5.25**	**343**	P	**Pn**	**Pn**	**22 48 10.1**	**+1.0**
ATAL	**Atalanti**	**5.25**	**313**	P	**Pn**	**Pn**	**22 48 10.7**	**+1.5**
GUR	**Goura**	**5.26**	**303**	P	**Pn**	**Pn**	**22 48 11.5**	**+2.2**
LPK	**Lapseki**	**5.26**	**350**	Pn	**Pn**	**Pn**	**22 48 11.6**	**+2.3**
PYL	**PYLOS**	**5.28**	**291**	P	**Pn**	**Pn**	**22 48 11.1**	**+1.5**
GELI	**Tayfur-Gelibol**	**5.33**	**348**	Pn	**Pn**	**Pn**	**22 48 12.6**	**+2.4**
KLV	**Kalavryta, Ach**	**5.44**	**303**	P	**Pn**	**Pn**	**22 48 14.1**	**+2.3**
KLV	**Kalavryta, Ach**	**5.44**	**303**	P	**Pn**	**Pn**	**22 48 14.2**	**+2.4**
ADVT	**Abdulvahap**	**5.44**	**15**	Pn	**Pn**	**Pn**	**22 48 13.5**	**+1.7**
AXAR	**Agios Charalam**	**5.52**	**312**	P	**Pn**	**Pn**	**22 48 15.2**	**+2.3**
AXAR	**Agios Charalam**	**5.52**	**312**	P	**Pn**	**Pn**	**22 48 15.5**	**+2.7**
AMT	**Artemida-Makis**	**5.53**	**297**	P	**Pn**	**Pn**	**22 48 15.2**	**+2.2**
SMTH	**Samothraki Isl**	**5.61**	**341**	P	**Pn**	**Pn**	**22 48 14.9**	**+0.8**
CAVK	**Edirne/Enez-Ca**	**5.67**	**347**	⇑P	**Pn**	**Pn**	**22 48 17.3**	**+2.4**
DRO	**Drossia**	**5.70**	**301**	P	**Pn**	**Pn**	**22 48 17.8**	**+2.4**
DRO	**Drossia**	**5.70**	**301**	P	**Pn**	**Pn**	**22 48 17.8**	**+2.4**
EFP	**Efpalio**	**5.80**	**306**	P	**Pn**	**Pn**	**22 48 19.0**	**+2.3**
EFP	**Efpalio**	**5.80**	**306**	P	**Pn**	**Pn**	**22 48 19.9**	**+3.2**
AGG	**Agios Georgios**	**5.88**	**312**	P	**Pn**	**Pn**	**22 48 20.2**	**+2.4**
ANX	**Ano Chora**	**5.88**	**307**	P	**Pn**	**Pn**	**22 48 20.4**	**+2.5**
ANX	**Ano Chora**	**5.88**	**307**	P	**Pn**	**Pn**	**22 48 20.6**	**+2.7**
MDUB	**Mudurnu**	**5.89**	**25**	Pn	**Pn**	**Pn**	**22 48 18.6**	**+0.6**
ALN	**Alexandroupoli**	**5.89**	**346**	Pn	**Pn**	**Pn**	**22 48 19.8**	**+1.9**
ALN	**Alexandroupoli**	**5.89**	**346**	P	**Pn**	**Pn**	**22 48 19.9**	**+1.9**
ALN	**Alexandroupoli**	**5.89**	**346**	P	**Pn**	**Pn**	**22 48 19.8**	**+1.9**
RLS	**Riolos of Patr**	**5.92**	**301**	P	**Pn**	**Pn**	**22 48 21.3**	**+2.9**
SAHE	**Sakarya_HENDEK**	**6.12**	**21**	⇑P	**Pn**	**Pn**	**22 48 23.5**	**+2.3**
KLYT	**Kilyos**	**6.13**	**8**	Pn	**Pn**	**Pn**	**22 48 20.6**	**-0.6**
	comp=Z,1.1nmcomp=Z,2µmcomp=Z,86nm,1.0s								
EVR	**Evrytania**	**6.14**	**309**	P	**Pn**	**Pn**	**22 48 24.1**	**+2.6**
PVO	**Paravola**	**6.16**	**306**	P	**Pn**	**Pn**	**22 48 24.4**	**+2.8**
KIRS	**Kirsehir-Merke**	**6.21**	**49**	⇑P	**Pn**	**Pn**	**22 48 24.7**	**+2.3**
RDO	**Rodhopi**	**6.24**	**343**	Pn	**Pn**	**Pn**	**22 48 24.0**	**+1.3**
RDO	**Rodhopi**	**6.24**	**343**	P	**Pn**	**Pn**	**22 48 24.7**	**+1.5**
SWA2		**6.27**	**200**	P	**Pn**	**Pn**	**22 48 23.0**	**-0.1**
CTYL	**Yalikoy Yolu**	**6.29**	**3**	Pn	**Pn**	**Pn**	**22 48 23.4**	**0.0**
	comp=Z,0.8nmcomp=Z,2µmcomp=Z,152nm,0.5s								
HHAG	**Hagoal**	**6.30**	**145**	P	**Pn**	**Pn**	**22 48 23.1**	**-0.5**
BR104	**Keskin Array S**	**6.42**	**44**	Pn	**Pn**	**Pn**	**22 48 24.3**	**-1.1**
	comp=Z,0.3nmcomp=Z,436nmcomp=Z,41nm,1.1s								
BR106	**Keskin Array S**	**6.43**	**43**	Pn	**Pn**	**Pn**	**22 48 24.7**	**-0.7**
	comp=Z,0.2nmcomp=Z,370nmcomp=Z,37nm,0.8s								
BR131	**Keskin Array S**	**6.43**	**43**	Pn	**Pn**	**Pn**	**22 48 25.1**	**-0.4**
BR131	**Keskin Array S**	**6.43**	**43**	*c i*P	**Pn**	**Pn**	**22 48 26.2**	**+0.7**
BR131	**Keskin Array S**	**6.43**	**43**	P	**Pn**	**Pn**	**22 48 26.2**	**+0.7**
	SNR=24								
BR131				S	**Sn**	**Sn**	**22 49 40.4**	**+1.2**
BRTR	**Keskin Array B**	**6.43**	**43**	Pn	**Pn**	**Pn**	**22 48 25.9**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=215,slow=13,SNR=37								
BRTR				Sn	**Sn**	**Sn**	**22 49 36.0**	**-3.2**
	comp=Z,3.2nm,0.3s,baz=209,slow=24,SNR=5.8								
	comp=Z,16nm,0.8s								
BRTR	**Keskin Array B**	**6.43**	**43**	Pn	**Pn**	**Pn**	**22 48 24.8**	**-0.7**
DQRL	**Deir Qamar**	**6.50**	**101**	*e*P	**Pn**	**Pn**	**22 48 24.3**	**-2.1**
BHL	**Bhannes**	**6.52**	**99**	*e*P	**Pn**	**Pn**	**22 48 23.2**	**-3.5**
BLGI	**Bet Lehem HaGe**	**6.53**	**110**	P	**Pn**	**Pn**	**22 48 25.8**	**-0.9**
BLGI				S	**Sn**	**Sn**	**22 49 38.7**	**-2.6**
AMPL	**Ampelaki**	**6.53**	**307**	P	**Pn**	**Pn**	**22 48 29.3**	**+2.6**
MMA0B	**Mount Meron ar**	**6.58**	**107**	Pn	**Pn**	**Pn**	**22 48 26.0**	**-1.5**
MMA0B				S	**Sn**	**Sn**	**22 49 41.2**	**-1.6**
MMAI	**Mount Meron Ar**	**6.58**	**107**	Pn	**Pn**	**Pn**	**22 48 26.2**	**-1.3**
	comp=Z,32nm,0.3s,baz=308,slow=15,SNR=115								
MMAI				Sn	**Sn**	**Sn**	**22 49 40.6**	**-2.2**
	comp=Z,63nm,0.3s,baz=272,slow=25,SNR=7.5								
	comp=Z,14nm,0.3s								
VLS	**Valsamata**	**6.60**	**299**	P	**Pn**	**Pn**	**22 48 29.1**	**+1.5**
SLTI	**Sal'it**	**6.63**	**114**	P	**Pn**	**Pn**	**22 48 26.5**	**-1.6**
QRWL	**Qaraoun**	**6.63**	**102**	*e*P	**Pn**	**Pn**	**22 48 26.9**	**-1.3**
ZAHL	**Zahle**	**6.72**	**99**	*e*P	**Pn**	**Pn**	**22 48 28.1**	**-1.3**
GEM	**Giv'at Ha'Em**	**6.72**	**105**	P	**Pn**	**Pn**	**22 48 27.7**	**-1.6**
GEM				S	**Sn**	**Sn**	**22 49 43.7**	**-2.3**
SUZ	**Suez**	**6.75**	**141**	P	**Pn**	**Pn**	**22 48 29.8**	**0.0**
NATI	**Neve Ativ**	**6.76**	**104**	P	**Pn**	**Pn**	**22 48 28.0**	**-1.9**
NATI				S	**Sn**	**Sn**	**22 49 45.1**	**-1.9**
RCY	**Rachaya**	**6.77**	**102**	*e*P	**Pn**	**Pn**	**22 48 28.7**	**-1.4**
SALP	**Salfit**	**6.82**	**115**	P	**Pn**	**Pn**	**22 48 28.9**	**-1.9**
LKD2	**Lefkada island**	**6.83**	**304**	P	**Pn**	**Pn**	**22 48 32.3**	**+1.4**
BEI	**Beino**	**6.84**	**93**	*e*P	**Pn**	**Pn**	**22 48 29.9**	**-1.1**
AMAZ	**Amatzia**	**6.90**	**120**	P	**Pn**	**Pn**	**22 48 30.1**	**-1.8**
AMAZ				S	**Sn**	**Sn**	**22 49 47.6**	**-2.9**
KSHT	**Keshet**	**6.92**	**106**	P	**Pn**	**Pn**	**22 48 30.9**	**-1.2**
KSHT				S	**Sn**	**Sn**	**22 49 49.3**	**-1.7**
KZIT	**Kziot**	**6.92**	**126**	P	**Pn**	**Pn**	**22 48 30.9**	**-1.1**
KZIT				S	**Sn**	**Sn**	**22 49 48.2**	**-2.7**
PRMD	**Pramanda**	**6.95**	**311**	P	**Pn**	**Pn**	**22 48 34.8**	**+2.3**
RZN	**Rozhen**	**6.96**	**340**	P	**Pn**	**Pn**	**22 48 35.3**	**+2.5**
HMDT	**Nahal Hemdat**	**6.99**	**113**	P	**Pn**	**Pn**	**22 48 31.6**	**-1.4**
HMDT				S	**Sn**	**Sn**	**22 49 50.7**	**-1.9**
ZAF	**Zafarana**	**7.07**	**145**	P	**Pn**	**Pn**	**22 48 33.6**	**-0.6**
UJAP	**Al Uja**	**7.08**	**115**	P	**Pn**	**Pn**	**22 48 32.4**	**-1.8**
UJAP				S	**Sn**	**Sn**	**22 49 53.2**	**-1.7**
DIM	**Dimitrovgrad**	**7.09**	**346**	P	**Pn**	**Pn**	**22 48 36.2**	**+1.8**
YTIR	**Yattir**	**7.14**	**120**	P	**Pn**	**Pn**	**22 48 34.1**	**-1.0**
YTIR				S	**Sn**	**Sn**	**22 49 53.8**	**-2.7**
MMB	**Musomishta**	**7.15**	**334**	P	**Pn**	**Pn**	**22 48 37.2**	**+2.0**
ZNM	**Zenema**	**7.15**	**143**	P	**Pn**	**Pn**	**22 48 35.1**	**-0.1**
DSI	**Dead Sea**	**7.21**	**118**	P	**Pn**	**Pn**	**22 48 34.4**	**-1.7**
DSI				S	**Sn**	**Sn**	**22 49 56.3**	**-2.0**
BNN	**Bunyan**	**7.33**	**58**	Pn	**Pn**	**Pn**	**22 48 38.3**	**+0.5**
MSBI	**Mazada**	**7.34**	**120**	P	**Pn**	**Pn**	**22 48 36.1**	**-1.7**
JMB	**Yambol**	**7.38**	**352**	P	**Pn**	**Pn**	**22 48 40.0**	**+1.6**
PLD	**Plovdiv**	**7.38**	**341**	*e*P	**Pn**	**Pn**	**22 48 42.5**	**+4.1**
VAY	**Valandovo**	**7.43**	**327**	*i* P	**Pn**	**Pn**	**22 48 42.2**	**+3.2**
IDAN	**Idan**	**7.55**	**123**	P	**Pn**	**Pn**	**22 48 39.5**	**-1.3**
KKB	**Krupnik**	**7.63**	**332**	P	**Pn**	**Pn**	**22 48 45.0**	**+3.1**
KRMI	**Paran Flat**	**7.65**	**129**	P	**Pn**	**Pn**	**22 48 40.3**	**-1.8**
KRMI				S	**Sn**	**Sn**	**22 50 06.3**	**-2.7**
ZFRI	**Zfri**	**7.66**	**125**	P	**Pn**	**Pn**	**22 48 40.6**	**-1.6**
PRNI	**Paran**	**7.67**	**127**	P	**Pn**	**Pn**	**22 48 40.6**	**-1.8**
PRNI				S	**Sn**	**Sn**	**22 50 07.7**	**-1.9**
CIDE	**Kastamonu/Cide**	**7.77**	**29**	⇑P	**Pn**	**Pn**	**22 48 46.6**	**+2.9**
GAZ	**Gaziantep**	**7.78**	**72**	Pn	**Pn**	**Pn**	**22 48 42.5**	**-1.5**
KEK	**Kerkira**	**7.88**	**307**	Pn	**Pn**	**Pn**	**22 48 46.5**	**+1.3**
ELND	**Elena**	**7.90**	**349**	⇑P	**Pn**	**Pn**	**22 48 47.5**	**+2.0**
HRFI	**Mount Harif**	**7.90**	**128**	P	**Pn**	**Pn**

SORM Soroca 12.95 1 P **Pn** **22 49 54.7 +0.1**
comp=Z,25nm,1.2s
MORH Mrgy, Hungar 13.06 330 ⇑P **Pn** **22 49 57.7 +1.6**
KARS Kars 13.15 61 Pn **Pn** **22 49 59.9 +2.3**
KARS Kars 13.15 61 P **Pn** **22 49 59.9 +2.3**
AQU L'Aquila 13.38 307 P **Pn** **22 50 01.0 +0.4**
AQU L'Aquila 13.38 307 P **Pn** **22 50 00.0 -0.6**
comp=Z,41nm,1.2s
KMPD K-Podol'skiy 13.42 356 P **Pn** **22 50 00.3 -0.7**
CAMP Campotosto 13.46 307 Pn **Pn** **22 50 00.4 -1.4**
BERU Beregovo 13.62 345 P **Pn** **22 50 03.2 -0.5**
BRIU Brid 13.64 346 P **Pn** **22 50 03.4 -0.6**
STNU Starunia 13.76 350 P **Pn** **22 50 05.1 -0.5**
MUKU Mukachevo 13.82 345 P **Pn** **22 50 06.0 -0.4**
HOLU Holmets 13.95 345 P **Pn** **22 50 08.0 -0.3**
NEUR Neytrino 14.01 50‖*iP* **Pn** **22 50 11.2 +1.9**
PSZ Piszkesteto 14.06 337 Pn **Pn** **22 50 09.8 0.0**
PSZ Piszkesteto 14.06 337 ⇑P **Pn** **22 50 12.2 +2.4**
PSZ Piszkesteto 14.06 337 P **Pn** **22 50 12.2 +2.4**
GNI Garni 14.22 65 Pn **Pn** **22 50 14.3 +2.1**
comp=Z,0.3nm,0.3s,baz=282,slow=20,SNR=5.3
comp=Z,16nm,1.1s
GNI Garni 14.22 65 Pn **Pn** **22 50 13.1 +0.8**
GNI Garni 14.22 65‖*eP* **Pn** **22 50 14.4 +2.1**
GNI pmax pmax
comp=Z,77nm,2.5s
GNI Garni 14.22 65 P **Pn** **22 50 12.0 -0.2**
GNI Garni 14.22 65 P **Pn** **22 50 11.1 -1.1**
comp=Z,1μmcomp=Z,68nm,1.8s
SHA1 Shidzhatmaz 14.23 49‖*eP* **Pn** **22 50 14.4 +2.1**
MPLH Magyarpolny 14.28 330 P **Pn** **22 50 12.3 -0.5**
comp=Z,120nm,1.2s
GBRS Gornja Briga 14.36 320 *e*Pn **Pn** **22 50 13.1 -0.8**
KIV Kislovodsk 14.36 48 Pn **Pn** **22 50 15.2 +1.1**
KIV Kislovodsk 14.36 48 ⇑P **Pn** **22 50 16.8 +2.8**
KIV Kislovodsk 14.36 48 *i*P **P** **22 50 22.0 +0.8**
SNR=9.9
KIV Kislovodsk 14.36 48 *e*P **Pn** **22 50 15.6 +1.6**
KIV *e*S **Sn** **22 52 57.5 +4.0**
KIV pmax pmax
comp=Z,38nm,1.1s
KIV MLR MLR
comp=Z,260nm,13.0s
KIV Kislovodsk 14.36 48 P **Pn** **22 50 16.7 +2.7**
KVAR Kislovodsk Arr 14.37 48 Pn **Pn** **22 50 16.5 +2.3**
baz=264,slow=22
comp=Z,2.7nm,0.8s
KBZ Khabaz 14.37 49 Pn **Pn** **22 50 16.9 +2.8**
comp=Z,4.5nm,1.1s,baz=222,slow=9.3,SNR=5.7
KBZ Khabaz 14.37 49‖*eP* **Pn** **22 50 15.5 +1.5**
MURB Monte Urbino 14.38 309 Pn **Pn** **22 50 16.6 +2.3**
SRO Srobarova 14.51 333 *e*P **P** **22 50 26.4 +3.8**
SRO Srobarova 14.51 333 *e*P **P** **22 50 26.4 +3.8**
VISS Visnje 14.52 321 *i* Pn **Pn** **22 50 15.0 -1.1**
NCK Nalchik 14.69 51‖*eP* **Pn** **22 50 20.5 +2.0**
LUBAR Lubar, Ukraine 14.73 360 P **Pn** **22 50 18.2 -0.8**
KWP Kalwaria Pacla 14.94 347 *e*P **P** **22 50 24.9 -2.6**
KWP Kalwaria Pacla 14.94 347 *e*P **P** **22 50 29.9 +2.5**
JAVS Javornik 14.99 320 *e*Pn **Pn** **22 50 21.4 -1.1**
TRI Trieste 15.03 319 IAmb IAmb 22 50 26.5
comp=Z,139nm,1.5s
SOKA Soboth 15.03 324 *i* Pn **Pn** **22 50 23.2 +0.1**
comp=Z,14nm,0.7s,SNR=16
KEST Kesra 15.14 277 Pn **Pn** **22 50 24.0 -0.6**
comp=Z,0.6nm,0.3s,baz=60,slow=3.5,SNR=15
comp=Z,12nm,1.1s
KEST Kesra 15.14 277 Pn **Pn** **22 50 23.9 -0.6**
KEST IAmb IAmb 22 50 31.4
comp=Z,132nm,1.5s
KEST Kesra 15.14 277 P **Pn** **22 50 26.1 +1.5**
SNR=14
OBKA Obir 15.15 322 *e*Pn **Pn** **22 50 24.7 0.0**
comp=Z,20nm,0.9s,SNR=6.7
GOF Gofitskoye 15.19 45*ce*P **P** **22 50 31.0 +0.8**
ARSA Arzberg 15.22 326 *e*Pn **Pn** **22 50 25.9 +0.4**
comp=Z,13nm,0.7s
RONA Rosalia, Austr 15.22 329 *e*Pn **Pn** **22 50 26.7 +1.1**
comp=Z,18nm,1.1s,SNR=9.7
LANS Liptovska Anna 15.28 339 *e*P **P** **22 50 31.6 +0.3**
LANS Liptovska Anna 15.28 339 *e*P **P** **22 50 31.6 +0.3**
NIE Niedzica 15.29 341 *e*P **P** **22 50 31.4 +0.1**
NIE Niedzica 15.29 341 *e*P **Pn** **22 50 26.8 +0.4**
SABO M.te Sabotino 15.29 319 IAmb IAmb 22 50 30.1
comp=Z,235nm,1.5s
VSL Villasalto 15.35 292 IAmb IAmb 22 50 28.3
comp=Z,231nm,2.0s
MODS Modra-Piesok 15.36 332 *e*P **Pn** **22 50 29.1 +1.7**
MODS Modra-Piesok 15.36 332 *e*PN **Pn** **22 50 29.1 +1.7**
MODS Modra-Piesok 15.36 332 *e*P **P** **22 50 33.8 +1.6**
AK07 Malin Array Si 15.39 3 P **Pn** **22 50 26.9 -0.9**
SMOL Smolenice 15.42 333 *e*P **P** **22 50 31.9 -0.9**
AK13 Malin Array Si 15.45 3 P **Pn** **22 50 27.6 -0.9**
AK05 Malin Array Si 15.46 3 P **Pn** **22 50 28.1 -0.6**
AK09 Malin Array Si 15.46 3 P **Pn** **22 50 28.1 -0.5**
AK01 Malin Array Si 15.53 3 P **Pn** **22 50 28.9 -0.7**
KIEV Kiev 15.54 3 Pn **Pn** **22 50 30.0 +0.4**
KIEV Kiev 15.54 3 ⇑P **P** **22 50 32.4 -1.6**
KIEV Kiev 15.54 3 P **P** **22 50 32.2 -1.8**
KIEV Kiev 15.54 3 P **Pn** **22 50 30.0 +0.4**
KIEV pmax pmax
comp=Z,60nm,1.5s
KIEV Kiev 15.54 3 P **Pn** **22 50 29.1 -0.5**
comp=Z,161nm,1.4s
AKASG Malin Array Be 15.54 3 Pn **Pn** **22 50 29.1 -0.6**
comp=Z,4.8nm,0.3s,baz=193,slow=10,SNR=18
AKASG LR LR 22 57 21.5
comp=Z,2μm,19.2s,baz=183,slow=41
AKASG ScP **ScP** **22 59 05.7 -0.6**
comp=Z,5.2nm,1.1s,baz=231,slow=0.5,SNR=6.1
comp=Z,0.7nm,0.3s
AKASG Malin Array Be 15.54 3 P **P** **22 50 32.9 -1.2**
AKASG Malin Array Be 15.54 3 *i* P **P** **22 50 33.2 -0.9**
AKASG pmax pmax
comp=Z,36nm,1.0s
AKBB Malin Array Si 15.54 3 Pn **Pn** **22 50 29.9 +0.2**
AKBB Malin Array Si 15.54 3 P **Pn** **22 50 29.9 +0.2**
AKBB pmax pmax
comp=Z,67nm,1.5s
AKBB Malin Array Si 15.54 3 P **Pn** **22 50 29.1 -0.6**
CONA Conrad Observa 15.58 329 *i* Pn **Pn** **22 50 31.3 +1.0**
comp=Z,6.9nm,0.9s
JAVC Velka Javorina 15.62 334 *e*PN **P** **22 50 33.4 -1.7**
MYKA Terra Mystica 15.69 321 *i* Pn **Pn** **22 50 31.1 -0.6**
comp=Z,12nm,0.8s
MI28 Mi28,Pidlybu 15.75 359 P **Pn** **22 50 31.6 -0.7**
RNPP5 Staryi Chortor 16.11 355 P **Pn** **22 50 36.3 -0.7**
KBA Koelnbreinsper 16.14 322 *e*Pn **Pn** **22 50 37.3 -0.4**
comp=Z,67nm,1.1s,SNR=21
OJC Ojcow 16.15 341 *e*P **Pn** **22 50 39.1 +1.5**
OJC Ojcow 16.15 341 *e*P **Pn** **22 50 38.2 +0.6**
OJC Ojcow 16.15 341 P **Pn** **22 50 37.0 -0.6**
comp=Z,69nm,1.3s
RNPP8 Varash 16.22 355 P **Pn** **22 50 37.6 -0.8**
MOA Molln 16.23 325 *e*Pn **Pn** **22 50 37.5 -1.2**
comp=Z,11nm,0.7s
KRUC Moravsky 16.26 332 *e*PN **Pn** **22 50 39.4 +0.4**
OKC Ostrava-Krasne 16.30 337 *e*P **P** **22 50 42.5 0.0**
OKC MLR MLR
comp=Z,5μm,10.6s
OKC Ostrava-Krasne 16.30 337 *e*P **P** **22 50 42.5 0.0**
OKC AMS AMS 22 58 10.0
comp=Z,5μm,10.6s
ABTA Abfaltersbach 16.36 320 *i* Pn **Pn** **22 50 38.7 -1.6**
comp=Z,23nm,0.6s
VRAC Vranov 16.39 333 Pn **Pn** **22 50 40.2 -0.5**
comp=Z,0.7nm,0.3s,baz=150,slow=9.3,SNR=13
VRAC LR LR 22 57 19.4
comp=Z,952nm,19.8s,baz=158,slow=39
comp=Z,3.4nm,0.5s
VRAC Vranov 16.39 333 ⇑P **Pn** **22 50 42.1 +1.4**
VRAC Vranov 16.39 333 *e*PN **Pn** **22 50 40.3 -0.4**
CTI Castel Tesino 16.41 316 P **P** **22 50 42.6 -1.3**
CTI Castel Tesino 16.41 316 P **P** **22 50 42.6 -1.3**
CTI pmax pmax
comp=Z,68nm,1.0s
BIOA Bad Ischl, Aus 16.42 324 *e*Pn **Pn** **22 50 41.4 +0.4**
comp=Z,13nm,0.8s,SNR=12
MORC Moravsky Berou 16.45 336 ⇑P **Pn** **22 50 42.7 +1.3**
MORC Moravsky Berou 16.45 336 P **Pn** **22 50 42.7 +1.3**
MORC Moravsky Berou 16.45 336 *e*PN **Pn** **22 50 41.6 +0.2**
CMAH Djebel Manchou 16.66 281 P **P** **22 50 46.8 +0.1**
LESA Schwarzleotal 16.71 322 *e*Pn **Pn** **22 50 44.3 -0.6**
comp=Z,27nm,0.8s,SNR=12
AKT Akhty 16.76 62 *e*P **Pn** **22 50 45.9 +0.3**

AKT pmax pmax
comp=Z,70nm,1.4s
AKT MLR MLR
comp=Z,2μm,16.0s
TREC Trest 16.80 331 *e*P **P** **22 50 47.4 -0.8**
TREC MLR MLR
comp=Z,3μm,10.2s
TREC Trest 16.80 331 *e*P **P** **22 50 47.4 -0.8**
TREC AMS AMS 22 58 50.0
comp=Z,3μm,10.2s
RJOB Jochberg 16.86 323 *e*P **Pn** **22 50 46.8 0.0**
comp=Z,28nm,0.9s,baz=137,slow=12
CBST Bordj Sabath 16.93 280 P **Pn** **22 50 48.3 +0.6**
CKRC Cesky Krumlov 16.93 328 *e*P **Pn** **22 50 47.5 0.0**
CKRC MLR MLR
comp=Z,4μm,10.5s
CKRC Cesky Krumlov 16.93 328 *e*P **Pn** **22 50 47.5 0.0**
CKRC AMS AMS 22 58 10.0
comp=Z,4μm,10.5s
CBBAR Babar 16.94 276 P **Pn** **22 50 47.4 -0.5**
MAK Makhachkala 17.07 57*c iP* **Pn** **22 50 48.1 -1.1**
MAK *e*S **Sn** **22 53 59.6 +0.6**
MAK pmax pmax
comp=Z,452nm,1.2s
MAK MLR MLR
comp=Z,972nm,11.0s
WTTA Wattenberg 17.15 320 *e*Pn **Pn** **22 50 50.8 +0.3**
comp=Z,29nm,0.9s,SNR=11
GEC2 GERESS Array S 17.22 327 **Pn** **22 50 50.7 -0.6**
GEC2 GERESS Array S 17.22 327 *e*P **Pn** **22 50 51.1 -0.1**
comp=Z,62nm,1.1s,baz=137,slow=12
GERES GERESS Array B 17.22 327 P **Pn** **22 50 51.1 -0.1**
comp=Z,0.1nm,0.3s,baz=146,slow=13,SNR=48
GERES PcP **PcP** **22 55 34.0 -0.6**
comp=Z,1.8nm,0.9s,baz=101,slow=1.0,SNR=3.6
comp=Z,18nm,0.9s
WATA Walderalm 17.23 320 *e*Pn **Pn** **22 50 51.4 0.0**
comp=Z,33nm,0.8s,SNR=16
CSGS Sigus 17.25 279 P **Pn** **22 50 52.3 +0.6**
DPC Dobruska-Polom 17.35 334 *e*P **Pn** **22 50 53.4 +0.6**
DPC MLR MLR
comp=Z,3μm,11.4s
DPC Dobruska-Polom 17.35 334 *e*P **Pn** **22 50 53.4 +0.6**
DPC AMS AMS 22 58 50.0
comp=Z,3μm,11.4s
DPC Dobruska-Polom 17.35 334 P **Pn** **22 50 52.2 -0.6**
comp=Z,26nm,1.0s
SQTA Sankt Quirin 17.35 319 *e*Pn **Pn** **22 50 52.4 -0.6**
comp=Z,24nm,0.6s,SNR=18
BEL Belsk 17.42 345 *e*P **P** **22 50 55.5 +0.6**
BEL Belsk 17.42 345 *e*P **P** **22 50 54.9 +0.1**
CASM Ain Smara 17.43 280 P **Pn** **22 50 52.9 -1.0**
CTGD Timgad 17.44 277 P **P** **22 50 55.0 -0.4**
ZVC Zvikov 17.45 329 *e*P **Pn** **22 50 53.5 -0.5**
ZVC AMS AMS 22 58 20.0
comp=Z,3μm,10.3s
MOTA Moosalm 17.48 319 *e*Pn **Pn** **22 50 54.0 -0.6**
comp=Z,29nm,0.8s,SNR=12
FETA Feichten 17.49 318 *i* Pn **Pn** **22 50 54.8 +0.1**
comp=Z,84nm,1.0s,SNR=24
OSTC Ostas 17.56 335 *e*P **Pn** **22 50 55.7 +0.3**
OSTC MLR MLR
comp=Z,3μm,10.3s
OSTC Ostas 17.56 335 *e*P **Pn** **22 50 55.7 +0.3**
OSTC AMS AMS 22 59 00.0
comp=Z,3μm,10.3s
CBHR Beni Haroun da 17.59 281 P **Pn** **22 50 56.2 +0.4**
COAT Oued Athmania 17.59 280 P **Pn** **22 50 55.9 -0.1**
CHVC Chvalec 17.64 334 *e*P **P** **22 50 57.4 0.0**
CHVC MLR MLR
comp=Z,3μm,10.9s
CHVC Chvalec 17.64 334 *e*P **P** **22 50 57.4 0.0**
CHVC AMS AMS 22 59 00.0
comp=Z,3μm,10.9s
PRU Pruhonice 17.73 331 *e*P **Pn** **22 50 56.9 -0.6**
PRU Pruhonice 17.73 331 *e*P **Pn** **22 50 56.9 -0.6**
RETA Reutte 17.75 319 *e*Pn **Pn** **22 50 56.9 -1.0**
comp=Z,35nm,0.9s,SNR=13
KSP Ksiaz 17.77 335 *e*P **Pn** **22 50 58.3 +0.3**
KSP Ksiaz 17.77 335 *e*P **Pn** **22 50 58.0 0.0**
KSP Ksiaz 17.77 335 P **Pn** **22 50 57.4 -0.6**
comp=Z,82nm,1.2s
WET Wettzell 17.81 326 *e*P **Pn** **22 50 56.9 -1.6**
comp=Z,53nm,0.9s,baz=137,slow=12
DAVOX Davos/Dischmat 17.83 316 P **Pn** **22 50 58.5 -0.4**
comp=Z,1.2nm,0.3s,baz=138,slow=12,SNR=9.3
DAVOX LR LR 22 59 37.2
comp=Z,1μm,18.6s,baz=84,slow=43
comp=Z,7.9nm,0.8s
CJSR Ain Djasser 17.89 279 P **Pn** **22 50 59.8 +0.2**
DFRA Djebel Bou Af 17.91 281 P **Pn** **22 51 00.1 +0.2**
FUR Furstenfeldbru 17.91 321 *e*P **Pn** **22 50 58.7 -1.1**
comp=Z,103nm,0.8s,baz=137,slow=12
TUE Stuetta 17.97 315 **Pn** **22 51 00.9 +0.3**
VSR Storozhevoye 17.97 23 *e*P **P** **22 51 01.5 +0.5**
VSR pmax pmax
comp=Z,30nm,0.7s
DAVA Damuels 18.12 317 *e*Pn **Pn** **22 51 01.2 -1.3**
comp=Z,26nm,0.6s
PVCC Panska Ves 18.15 332 *e*P **Pn** **22 51 02.4 -0.2**
PVCC MLR MLR
comp=Z,4μm,9.2s
PVCC Panska Ves 18.15 332 *e*P **Pn** **22 51 02.4 -0.2**
PVCC AMS AMS 23 01 00.0
comp=Z,4μm,9.2s
RICC Richard 18.34 331 *e*P **P** **22 51 06.6 +1.5**
VORR Voronezh 18.38 23 *e*P **Pn** **22 51 04.0 -1.4**
VORR pmax pmax
comp=Z,40nm,0.6s
CAZD Ain Tagrout 18.51 280 P **P** **22 51 06.5 -0.6**
ROTZ Rotzenmuhle 18.56 327 *e*P **P** **22 51 06.6 -0.9**
comp=Z,50nm,2.5s,baz=137,slow=12
BRG Berggiesshubel 18.66 331 *e*P **P** **22 51 07.9 -0.7**
comp=Z,57nm,1.7s,baz=137,slow=12
BRG Berggiesshubel 18.66 331 *e*P **P** **22 51 08.1 -0.5**
BRG Amp 22 51 12.6
comp=Z,20nm,1.1s
BRG Berggiesshubel 18.66 331 P Pn 22 51 16.3 +7.4
BRG Amp 22 51 24.6
comp=Z,17nm,1.0s
MANZ Manzenberg 18.76 327 *e*P **P** **22 51 08.8 -1.0**
comp=Z,14nm,1.0s,baz=137,slow=12
NKC Novy Kostel 18.79 328 *e*P **Pn** **22 51 12.0 +1.5**
NKC MLR MLR
comp=Z,5μm,10.8s
NKC Novy Kostel 18.79 328 *e*P **Pn** **22 51 12.0 +1.5**
NKC AMS AMS 22 59 20.0
comp=Z,5μm,10.8s
NKC Novy Kostel 18.79 328 *e*P **Pn** **22 51 11.8 +1.3**
comp=Z,58nm,1.2s,baz=137,slow=12
WERN Wernitzgruen 18.86 328 *e*P **Pn** **22 51 11.8 +0.4**
comp=Z,19nm,0.7s,baz=137,slow=12
VRH Novokhopyorsk 18.87 28 *e*P **P** **22 51 10.5 -0.3**
VRH pmax pmax
comp=Z,37nm,0.8s
CTCHA Tamokra 18.90 281 P **Pn** **22 51 12.2 +0.3**
FBE Freiberg 18.93 331 *e*P **P** **22 51 10.8 -0.8**
comp=Z,78nm,1.3s,baz=137,slow=12
MULD Muldenberg 18.95 328 *e*P **P** **22 51 11.4 -0.3**
comp=Z,36nm,1.1s,baz=137,slow=12
BNI Bardonecchia 18.95 308 P **Pn** **22 51 13.1 +0.6**
BNI Bardonecchia 18.95 308 P **Pn** **22 51 13.1 +0.6**
BNI pmax pmax
comp=Z,26nm,1.1s
GRF Grafenberg Arr 18.96 325 *e*P **P** **22 51 11.3 -0.6**
comp=Z,64nm,0.9s,baz=137,slow=12
LPSR Galich'ya Gora 19.10 21 *e*P **P** **22 51 12.5 -0.9**
LPSR pmax pmax
comp=Z,40nm,0.6s
PLN Plauen 19.11 328 *e*P **P** **22 51 13.4 -0.1**
comp=Z,25nm,1.0s,baz=137,slow=12
SUW Suwalki 19.12 351 *e*P **P** **22 51 09.3 -4.3**
SUW Suwalki 19.12 351 *e*P **Pn** **22 51 16.0 +1.6**
RAYN Ar Rayn 19.21 122 P **Pn** **22 51 16.0 +0.3**
RAYN IAmb IAmb 22 51 18.9
comp=Z,324nm,1.8s
RAYN Ar Rayn 19.21 122 *i* P **Pn** **22 51 16.1 +0.4**
SNR=38
RAYN Ar Rayn 19.21 122 P **Pn** **22 51 15.5 -0.2**
RAYN Ar Rayn 19.21 122 P **Pn** **22 51 16.7 +0.9**
RAYN S **Sn** **22 54 51.0 -0.2**
AFRS Ain Fares 19.23 275 P **P** **22 51 14.1 -0.9**
GRZ1 Mausoleum Wald 19.23 329 *e*P **P** **22 51 14.6 -0.3**
comp=Z,23nm,1.2s,baz=137,slow=12
MNK Minsk 19.32 360 *i* P **P** **22 51 13.9 -1.9**
comp=E,70nm,1.0s

MNK *i* P **P** **22 51 13.9 -1.9**
comp=N,16nm,1.0s
MNK *i* P **P** **22 51 13.9 -1.9**
comp=Z,76nm,1.1s,baz=180
MNK *i* PP **PnPn** **22 51 29.2 -0.6**
MNK *i* PPP PPP 22 51 37.2
MNK *i* S **Sn** **22 54 51.5 -2.0**
MNK *i* SS **SnSn** **22 55 08.9 +1.3**
MNK *i* SSS SSS 22 55 22.4
MNK *i* LR LR 22 58 16.9
MNK *i* LRM MLR 22 59 40.8
comp=Z,944nm,14.9s
MNK *i* LRM MLR 23 00 08.2
comp=E,427nm,21.7s
MNK Minsk 19.32 360 *i* P **P** **22 51 13.9 -1.9**
MNK *i* S **Sn** **22 54 51.5 -2.0**
MNK pmax pmax
comp=N,16nm,1.0s
MNK pmax pmax
comp=E,70nm,1.0s
MNK pmax pmax
comp=Z,76nm,1.1s
MNK MLR MLR
comp=Z,944nm,15.0s
MNK MLR MLR
comp=E,427nm,22.0s
ABSD Ouled Sidi Bra 19.35 278 P **P** **22 51 14.1 -2.2**
MLFH Mildenfurth 19.36 329 *e*P **P** **22 51 16.5 +0.2**
comp=E,84nm,1.2s,baz=137,slow=12
STU Stuttgart 19.37 320 P **P** **22 51 15.8 -0.6**
STU Stuttgart 19.37 320 P **P** **22 51 15.8 -0.6**
STU pmax pmax
comp=Z,54nm,0.9s
CLL Collm 19.37 331⇑*iP* **P** **22 51 16.9 +0.5**
CLL *e*S **S** **22 54 59.0 +3.4**
CLL pmax pmax
comp=Z,72nm,1.3s
CLL MLR MLR
comp=Z,3μm,13.8s
CLL Collm 19.37 331 P **P** **22 51 16.2 -0.2**
comp=Z,44nm,1.3s
CLL Collm 19.37 331⇑*iP* **P** **22 51 16.9 +0.5**
comp=Z,72nm,1.3s
CLL *e*S **S** **22 54 59.0 +3.4**
CLL Collm 19.37 331 *e*P **P** **22 51 16.6 +0.2**
comp=Z,60nm,1.2s,baz=137,slow=12
MOX Moxa 19.46 328 *e*P **P** **22 51 17.3 0.0**
comp=Z,76nm,1.1s,baz=137,slow=12
ZEITZ Schloss Moritz 19.54 329 *e*P **Pn** **22 51 19.0 -0.5**
comp=Z,103nm,1.8s,baz=137,slow=12
AKET Djebel Ketaf 19.55 280 P **Pn** **22 51 19.5 -0.3**
BFO Black Forest 19.57 318 P **P** **22 51 18.2 -0.4**
BFO Black Forest 19.57 318 P **P** **22 51 18.3 -0.4**
BFO pmax pmax
comp=Z,79nm,1.2s
GKP Gorka Klasztor 19.60 341 *e*P **P** **22 51 17.5 -1.3**
GKP Gorka Klasztor 19.60 341 *e*P **P** **22 51 18.1 -0.7**
TAUT Tautenburg 19.66 328 *e*P **Pn** **22 51 20.8 -0.2**
comp=Z,79nm,1.1s,baz=137,slow=12
NACGM Naroch 19.74 358 *e*P **P** **22 51 19.6 -0.8**
comp=Z,50nm,1.0s,baz=177
RUE Ruedersdorf 20.01 334 *e*P Pn 22 51 24.7 -0.3
comp=Z,201nm,1.1s,baz=137,slow=12
ECH Echery 20.16 317 P **P** **22 51 24.4 -0.6**
ECH Echery 20.16 317 P **P** **22 51 24.5 -0.6**
ECH pmax pmax
comp=Z,52nm,1.2s
POSS Possen 20.28 328 *e*P **P** **22 51 25.8 -0.6**
comp=Z,111nm,1.1s,baz=137,slow=12
ETOS Mallorca 20.41 290 P Pn 22 51 29.2 -0.7
TNS Taunus Mts 20.66 323 *e*P Pn 22 51 32.0 -0.8
comp=Z,64nm,0.9s,baz=137,slow=12
AFDJ Sidi Ladjel 20.67 278 P **P** **22 51 30.1 -0.6**
EJON La Jonquera 20.76 298 P **P** **22 51 30.3 -1.3**
ABKD Sidi Amar 20.78 281 P **P** **22 51 31.6 -0.2**
OBN Obninsk 20.82 14 P **P** **22 51 30.9 -1.2**
comp=Z,37nm,0.4s,baz=203,slow=6.9,SNR=13
OBN LR LR 23 00 10.8
comp=Z,790nm,18.1s,baz=144,slow=39
comp=Z,37nm,0.4s
OBN Obninsk 20.82 14 P **P** **22 51 30.6 -1.4**
OBN IAmb IAmb 22 51 45.2
comp=Z,125nm,0.9s
OBN Obninsk 20.82 14*ce*P **P** **22 51 30.8 -1.2**
OBN *e*PPP PPP 22 51 57.1
OBN *e*S Sn 22 55 27.0 -2.5
OBN *e* 22 55 39.2
OBN *e*SS **SnSn** **22 55 48.3 +4.0**
OBN *e*SSS SSS 22 56 01.5
OBN pmax pmax
comp=Z,146nm,1.1s
OBN MLR MLR
comp=Z,828nm,14.0s
OBN Obninsk 20.82 14 P **P** **22 51 30.6 -1.4**
comp=Z,127nm,1.1s
GTTG Gottingen 20.83 327 *e*P **P** **22 51 31.9 -0.4**
comp=Z,109nm,1.2s,baz=137,slow=12
CLZ Clausthal 20.86 328 *e*P Pn 22 51 34.9 -0.2
comp=Z,36nm,1.1s,baz=137,slow=12
EDDR Deurdeur 20.90 280 P **P** **22 51 32.8 -0.4**
EZEK Zmalet El Emir 20.95 277 P **P** **22 51 33.7 -0.1**
EHRZ Djelida 20.96 280 P **P** **22 51 34.0 +0.1**
EARB Arib 21.04 281 P **P** **22 51 33.7 -1.0**
EBGR Bougara 21.17 279 P **P** **22 51 35.2 -0.9**
EBNR Beni Rached 21.42 281 P **P** **22 51 39.5 +0.7**
SAKB Bahrain 21.50 109 P **P** **22 51 40.5 +0.9**
SAKB S **S** **22 55 37.2 -1.0**
WLF Walferdange 21.51 319 P **P** **22 51 40.2 +0.6**
WLF Walferdange 21.51 319 P **P** **22 51 39.5 -0.1**
WLF IAmb IAmb 22 51 50.6
comp=Z,129nm,1.4s
WLF Walferdange 21.51 319 P **P** **22 51 39.5 -0.1**
WLF pmax pmax
comp=Z,129nm,1.4s
WLF Walferdange 21.51 319 *dP* **P** **22 51 41.2 +1.6**
comp=Z,38nm,1.1s
EADEB Ain Deheb 21.56 277 P **P** **22 51 38.6 -1.8**
MOS Moscow 21.62 15 *eP* **P** **22 51 38.1 -2.6**
MOS *e*S **S** **22 55 34.4 -5.7**
MOS *e* 23 02 59.6
MOS pmax pmax
comp=Z,244nm,1.3s
MOS pmax pmax
comp=E,65nm,1.2s
MOS pmax pmax
comp=N,132nm,1.3s
MOS pmax pmax
comp=Z,300nm,1.4s
MOS MLR MLR
comp=Z,700nm,14.0s
BSD Bornholm Skovb 21.87 340 *i* P **P** **22 51 39.9 -3.5**
SHMA Al-Shehemyia 21.89 109 P **P** **22 51 44.0 +0.2**
BHOU Houvegnez 21.98 320 *dP* **P** **22 51 43.3 -1.4**
BTNL Ternell 22.05 321 *dP* **P** **22 51 44.6 -0.8**
comp=Z,32nm,1.0s
MEM Membach 22.13 321 *dP* **P** **22 51 44.9 -1.3**
comp=Z,30nm,1.2s
EKMS Oued Kramis 22.14 281 P **P** **22 51 46.4 0.0**
BELG Belogornoye 22.21 33 LR LR 23 02 59.1
comp=Z,331nm,20.7s,baz=244,slow=44
BELG Belogornoye 22.21 33*d iP* **P** **22 51 47.8 +0.8**
BELG pmax pmax
comp=Z,31nm,1.1s
RCHB Rochefort 22.28 319 *dP* **P** **22 51 47.0 -0.8**
BSTI Sart Tilman 22.34 320 *dP* **P** **22 51 45.5 -3.0**
SMRA Abu-Samra 22.36 111 P **P** **22 51 49.3 +0.4**
SMRA S **S** **22 55 55.9 +1.0**
BGES Gesves 22.48 320 *dP* **P** **22 51 50.0 0.0**
comp=Z,23nm,1.3s
DOU Dourbes 22.59 318 *dP* **P** **22 51 50.9 -0.2**
BMRD Maredsous 22.61 319 *dP* **P** **22 51 52.0 +0.6**
comp=Z,17nm,1.1s
TRNA Turayna 22.67 111 P **P** **22 51 52.6 +0.4**
TRNA S **S** **22 55 57.0 -3.5**
OFRG Douar Fergoug 22.71 279 P **P** **22 51 53.1 +0.6**
LUNU Lund 22.75 339 *i* P **P** **22 51 49.6 -3.1**
ODJA Bouhanifia 22.89 279 P **P** **22 51 54.9 +0.4**
TAM Tamanrasset 23.08 244 P **P** **22 51 57.0 +0.3**
TAM Tamanrasset 23.08 244 P **P** **22 51 57.0 +0.3**
TAM pmax pmax
comp=Z,425nm,1.9s
UCC Uccle 23.10 320 *dP* **P** **22 51 54.2 -2.3**
BJUU Bjuv 23.25 339 *i* P **P** **22 51 55.2 -2.7**
VSU Vasula 23.31 358‖*eP* **P** **22 51 58.9 +0.4**
VSU pmax pmax

comp=Z,30nm,0.8s
ECHE Chera 23.31 289 P **P** 22 51 57.7 -1.1
DEL Delary 23.34 340 *i* P **P** 22 51 56.1 -2.8
EMUR La Murta 23.54 285 P **P** 22 52 01.6 +0.5
ETOB Tobarra 23.76 287 P **P** 22 52 02.9 -0.4
JRN Qarnain Island 23.82 109 P **P** 22 52 03.9 0.0
OBBL Beni Bahdel 24.08 277 P **P** 22 52 06.4 +0.1
GHWR Ruwais 24.36 111 P **P** 22 52 09.5 +0.7
ENJ Nijar 24.36 283 P **P** 22 52 06.5 -2.4
BORU Boraas 24.66 340 *i* P **P** 22 52 08.7 -2.6
PUL Pulkovo 24.66 3⇓ *eP* **P** 22 52 11.7 +0.4
PUL pmax pmax
comp=Z,211nm,1.2s
UCM Universidad Co 25.08 291 P **P** 22 52 14.2 -1.2
EALB Alboran 25.13 281 P **P** 22 52 14.2 -1.6
WMELI Melilla 25.15 279 P **P** 22 52 15.7 -0.3
MZWR Madinat Zayed 25.24 110 P **P** 22 52 18.3 +1.5
MZWR P **P** 22 52 18.3 +1.5
MZR Muzera 25.35 112 *i* P **P** 22 52 18.1 +0.2
SNR=12
MZR Muzera 25.35 112 P **P** 22 52 18.4 +0.5
SNR=5.2
MZR P **P** 22 52 18.4 +0.5
SNR=5.2
MZR S **S** 22 56 46.8 +2.3
MZR S **S** 22 56 46.8 +2.3
ESBB Sonseca Array 25.63 290 P **P** 22 52 19.2 -1.2
ESBB IAmb IAmb 22 52 21.0
comp=Z,103nm,1.6s
ESDC Sonseca Array 25.63 290 P **P** 22 52 19.9 -0.5
comp=Z,14nm,0.6s,baz=81,slow=9.5,SNR=184
ESDC PcP **PcP** 22 55 50.6 -0.4
comp=Z,1.2nm,0.8s,baz=59,slow=2.1,SNR=4.8
comp=Z,14nm,0.6s
ESDC Sonseca Array 25.63 290 P **P** 22 52 18.6 -1.7
ESDC IAmb IAmb 22 52 20.8
comp=Z,61nm,1.6s
AJN Ajban 25.68 107 P **P** 22 52 22.4 +1.6
AJN P **P** 22 52 22.4 +1.6
UMQ Umm Al-Quwin 25.74 104 P **P** 22 52 22.8 +1.4
SHME Shamm 25.88 103 P **P** 22 52 23.5 +0.9
SHME Shamm 25.88 103 P **P** 22 52 23.9 +1.2
SHME P **P** 22 52 23.9 +1.2
ASUD Al Ashush, Dub 25.92 106 P **P** 22 52 24.0 +0.9
ASUD Al Ashush, Dub 25.92 106 P **P** 22 52 24.7 +1.7
ASUD P **P** 22 52 24.7 +1.7
ASUD S **S** 22 56 54.7 +1.2
ASUD S **S** 22 56 54.7 +1.2
PAB San Pablo 25.93 289 P **P** 22 52 21.8 -1.3
PAB IAmb IAmb 22 52 28.3
comp=Z,41nm,0.9s
PAB San Pablo 25.93 289 P **P** 22 52 21.8 -1.3
PAB pmax pmax
comp=Z,41nm,1.0s
NAZ Nazwa, Dubai 26.00 105 *i* P **P** 22 52 24.6 +0.8
SNR=11
NAZ Nazwa, Dubai 26.00 105 P **P** 22 52 24.1 +0.3
SNR=5.8
NAZ P **P** 22 52 24.1 +0.3
SNR=5.8
BANOM Banah 26.06 103 P **P** 22 52 25.2 +0.8
BANOM Banah 26.06 103 P **P** 22 52 25.3 +0.9
BANOM P **P** 22 52 25.3 +0.9
FAQ Al Faqa, Dubai 26.07 106 P **P** 22 52 25.6 +1.2
FAQ P **P** 22 52 25.6 +1.2
FAQ S **S** 22 56 57.5 +1.8
FAQ S **S** 22 56 57.5 +1.8
EMAL Malaga-Limoner 26.15 283 P **P** 22 52 23.5 -1.6
MASF Masafi 26.21 104 P **P** 22 52 26.4 +0.7
MASF S **S** 22 56 57.2 -0.9
MSFE Esma-Masafi 26.21 104 P **P** 22 52 26.4 +0.6
FINES FINESS Array B 26.31 358 P **P** 22 52 24.3 -1.9
comp=Z,8.4nm,0.5s,baz=160,slow=12,SNR=48
FINES PcP **PcP** 22 55 51.5 -0.6
comp=Z,2.2nm,0.5s,baz=167,slow=3.7,SNR=6.8
FINES LR LR 23 03 52.6
comp=Z,968nm,21.3s,baz=194,slow=39
comp=Z,8.4nm,0.5s
FINES FINESS Array B 26.31 358 *i* P **P** 22 52 24.2 -2.0
FINES pmax pmax
comp=Z,9.0nm,0.4s
MDH Madha 26.35 104 P **P** 22 52 30.7 +3.7
UOSS Minazif 26.45 105 P **P** 22 52 28.9 +1.0
UOSS P **P** 22 52 28.9 +1.0
HATD Hatta, Dubai 26.45 105 P **P** 22 52 28.5 +0.6
HATD Hatta, Dubai 26.45 105 P **P** 22 52 28.5 +0.6
HATD P **P** 22 52 28.5 +0.6
HATD S **S** 22 57 01.3 -0.6
HATD S **S** 22 57 01.3 -0.6
ASHO Ashiyiah 26.46 106 *i* P **P** 22 52 28.7 +0.7
SNR=5.4
ASHO Ashiyiah 26.46 106 P **P** 22 52 28.6 +0.5
ASHO P **P** 22 52 28.6 +0.5
ALNE Al Ain 26.54 107 *i* P **P** 22 52 28.9 +0.3
SNR=12
ALNE Al Ain 26.54 107 P **P** 22 52 29.2 +0.5
SNR=5.2
ALNE P **P** 22 52 29.2 +0.5
SNR=5.2
ALNE S **S** 22 57 03.4 +0.1
ALNE S **S** 22 57 03.4 +0.1
HFS Hagfors 26.62 344 P **P** 22 52 26.7 -2.3
comp=Z,6.4nm,0.4s,baz=153,slow=10.0,SNR=31
HFS LR LR 23 03 20.5
comp=Z,1μm,19.1s,baz=174,slow=37
comp=Z,6.4nm,0.4s
KLMR Klimovskoe 26.76 13 *eP* **P** 22 52 29.8 -0.5
KLMR pmax pmax
comp=Z,151nm,1.3s
KLMR MLR MLR
comp=Z,1μm,11.0s
UMZA Um Al Zommool 26.80 110 P **P** 22 52 31.2 +0.2
UMZA P **P** 22 52 31.2 +0.2
UMZA S **S** 22 57 07.6 +0.3
UMZA S **S** 22 57 07.6 +0.3
MDT Midelt 27.00 274 LR LR 23 06 06.6
comp=Z,627nm,18.9s,baz=87,slow=43
MD01 Midelt array s 27.11 275 P **P** 22 52 33.5 -0.4
MD31 MD31 27.11 275 P **P** 22 52 33.2 -0.7
SOHO SOHO 27.11 106 *i* P **P** 22 52 34.3 +0.4
SNR=13
SOHO SOHO 27.11 106 P **P** 22 52 34.2 +0.4
SOHO P **P** 22 52 34.2 +0.4
SOHO S **S** 22 57 12.2 -0.1
SOHO S **S** 22 57 12.2 -0.1
ATD Arta Tunnel 27.17 146 LR LR 23 03 39.2
comp=Z,18nm,20.6s,baz=334,slow=37
ATD Arta Tunnel 27.17 146 P **P** 22 52 35.6 +1.1
KONO Kongsberg 27.25 340 *eP* **P** 22 52 32.6 -2.1
IFR Ifrane 27.26 276 P **P** 22 52 35.2 -0.1
ABKAR Akbulak array 27.34 49 P **P** 22 52 35.5 -0.2
KIRV Kirov 27.41 25⇓ *eP* **P** 22 52 37.9 +1.8
NC602 NORSAR Array S 27.66 343 *eP* **P** 22 52 36.1 -2.3
PBRG Braganca 27.78 294 *eP* **P** 22 52 39.1 -0.7
PBRG *i* IAmb IAmb 22 52 44.6
comp=Z,60nm,2.0s
NAO01 NORSAR Array S 27.92 342 P **P** 22 52 39.4 -1.3
FURI Furi 27.96 157 LR LR 23 05 17.9
comp=Z,2μm,18.9s,baz=338,slow=40
FURI Furi 27.96 157 P **P** 22 52 42.1 +0.3
MVO Moncorvo 27.98 293 *eP* **P** 22 52 41.0 -0.6
MVO *i* IAmb IAmb 22 52 47.5
comp=Z,75nm,1.5s
NB2 NORSAR Subarra 28.00 343 P **P** 22 52 38.3 -3.2
comp=Z,17nm,1.2s,baz=150,slow=9.3
NB2 NORSAR Subarra 28.00 343 AMP **P** 22 52 38.3 -3.2
comp=Z,17nm,1.2s
NB2 P **P** 22 52 38.3 -3.2
NOA NORSAR Array B 28.00 343 P **P** 22 52 38.3 -3.2
comp=Z,2.2nm,0.6s,baz=145,slow=9.3,SNR=11
NOA PcP **PcP** 22 55 55.2 -1.0
comp=Z,1.9nm,0.8s,baz=134,slow=3.2,SNR=3.8
NOA LR LR 23 04 34.0
comp=Z,776nm,19.4s,baz=155,slow=38
comp=Z,2.2nm,0.6s
HOQ Hoqain 28.00 106 P **P** 22 52 42.1 +0.2
SNR=10
HOQ P **P** 22 52 42.1 +0.2
SNR=10
PBAR Barrancos 28.09 286 *eP* **P** 22 52 41.6 -0.9
PBAR *i* IAmb IAmb 22 52 46.8
comp=Z,94nm,1.7s
HRA Herat 28.14 82 P **P** 22 52 42.5 -0.7
PMRV Marv??o 28.28 289 *eP* **P** 22 52 43.0 -1.2
PMRV *i* IAmb IAmb 22 52 47.8
comp=Z,57nm,1.4s
PCBR Castelo Branco 28.33 290 *eP* **P** 22 52 43.6 -1.0
PCBR *i* IAmb IAmb 22 52 48.9
comp=Z,42nm,1.8s
BSY Bisya 28.36 108 P **P** 22 52 46.0 +0.9
SNR=11
BSY P **P** 22 52 46.0 +0.9
SNR=11
MTE Manteigas 28.37 291 *eP* **P** 22 52 44.1 -0.9
MTE *i* IAmb IAmb 22 52 50.5
comp=Z,67nm,1.5s
PESTR Estremoz 28.47 288 IAmb IAmb 22 52 45.6
comp=Z,60nm,1.4s
PESTR Estremoz 28.47 288 *eP* **P** 22 52 44.6 -1.3
PESTR *i* IAmb IAmb 22 52 47.3
comp=Z,46nm,1.4s
DOK Doka 28.49 119 P **P** 22 52 46.5 +0.3
DOK P **P** 22 52 46.5 +0.3
PVRL Vila Real 28.50 293 *eP* **P** 22 52 45.7 -0.4
POLO Lamas de Olo 28.56 293 *eP* **P** 22 52 46.1 -0.6
POLO *i* IAmb IAmb 22 52 46.7
comp=Z,37nm,1.5s
PVIS Viseu 28.63 292 *eP* **P** 22 52 47.0 -0.4
BIDO Bidbid 28.68 106 P **P** 22 52 49.2 +1.4
PVAQ Vaqueiros 28.70 285 *eP* **P** 22 52 46.5 -1.4
PVAQ *i* IAmb IAmb 22 52 49.5
comp=Z,96nm,1.5s
ABTO Aybut 28.74 122 P **P** 22 52 49.1 +0.6
SNR=6.2
PCAB Cabril 28.74 294 *eP* **P** 22 52 48.1 -0.2
PCAB *i* IAmb IAmb 22 52 54.3
comp=Z,112nm,1.6s
PBEJ Beja 28.75 286 *eP* **P** 22 52 47.6 -0.8
PBEJ *i* IAmb IAmb 22 52 50.3
comp=Z,76nm,1.6s
EVO Evora 28.82 287 P **P** 22 52 47.3 -1.7
EVO Evora 28.82 287 *eP* **P** 22 52 48.4 -0.6
EVO *i* IAmb IAmb 22 52 54.5
comp=Z,46nm,1.7s
PARRA Arraiolos 28.82 288 *eP* **P** 22 52 48.0 -1.1
PARRA *i* IAmb IAmb 22 52 52.5
comp=Z,32nm,1.3s
SMDO Samad 28.86 107 P **P** 22 52 49.2 -0.4
SNR=6.1
SMDO P **P** 22 52 49.2 -0.4
SNR=6.1
PSARD Sardoal 28.87 290 *eP* **P** 22 52 48.5 -1.0
PBDV Barranco-do-Ve 28.89 285 *eP* **P** 22 52 49.0 -0.6
PBDV *i* IAmb IAmb 22 52 51.4
comp=Z,104nm,1.5s
PCVE Castro Verde 28.93 286 *eP* **P** 22 52 50.2 +0.2
PCVE *i* IAmb IAmb 22 52 51.8
comp=Z,44nm,1.7s
PGAV Gavieira, Arco 28.93 294 *eP* **P** 22 52 51.6 +1.5
PMTG Montargil 28.95 289 *eP* **P** 22 52 49.4 -0.8
PMTG *i* IAmb IAmb 22 52 51.6
comp=Z,38nm,1.5s
MESJ Messejana 29.05 286 *eP* **P** 22 52 50.4 -0.6
MESJ IAmb IAmb 22 52 55.2
comp=Z,82nm,1.8s
MESJ Messejana 29.05 286 *eP* **P** 22 52 50.4 -0.6
MESJ *i* IAmb IAmb 22 52 51.0
comp=Z,50nm,1.6s
MOE Montemor 29.09 287 *eP* **P** 22 52 50.9 -0.5
MOE *i* IAmb IAmb 22 52 53.5
comp=Z,84nm,1.5s
PCAS Casmilo, Conde 29.11 291 *eP* **P** 22 52 50.5 -1.1
PCAS *i* IAmb IAmb 22 53 06.4
comp=Z,72nm,1.8s
PTO Porto 29.17 293 *eP* **P** 22 52 52.4 +0.4
PTO *i* IAmb IAmb 22 52 53.2
comp=Z,130nm,1.6s
AVE Averroes 29.17 277 P **P** 22 52 48.5 -3.6
WSAR Wadi Sarin 29.22 106 LR LR 23 08 12.8
comp=Z,5.6nm,20.7s,baz=317,slow=44
WSAR Wadi Sarin 29.22 106 P **P** 22 52 54.8 +2.1
JMDO Jabal Madar 29.26 108 P **P** 22 52 52.9 -0.2
RBK Rabkut 29.28 120 P **P** 22 52 54.4 +1.1
SNR=7.3
RBK P **P** 22 52 54.4 +1.1
SNR=7.3
EKA Eskdalemuir Ar 29.35 323 P **P** 22 52 50.7 -2.8
comp=Z,0.7nm,0.4s,baz=123,slow=9.8,SNR=4.4
comp=Z,0.7nm,0.4s
ARTI Arti 29.62 35 P **P** 22 52 55.2 -0.7
ARTI IAmb IAmb 22 53 02.7
comp=Z,20nm,0.6s
ARTI Arti 29.62 35 *d* *iP* **P** 22 52 56.0 +0.1
ARTI 22 55 59.1
ARTI S **S** 22 57 53.4 +2.1
ARTI SS **SnSn** 22 59 18.4 -1.0
ARTI pmax pmax
comp=Z,20nm,0.9s
DMTO DMTO 29.67 119 P **P** 22 52 56.7 +0.1
DMTO P **P** 22 52 56.7 +0.1
TIO Tiouine 29.68 272 P **P** 22 52 56.5 -0.4
WBK Wadi Bani Khal 29.81 106 P **P** 22 52 59.0 +1.0
WBK P **P** 22 52 59.0 +1.0
MHTO MHTO 29.92 110 P **P** 22 52 59.7 +0.8
SHAO Shalim 29.96 118 P **P** 22 53 01.5 +2.2
SHAO P **P** 22 53 01.5 +2.2
FOO Floro 30.16 338 *eP* **P** 22 53 03.9 +3.4
DQM DQM 30.20 112 P **P** 22 53 00.5 -0.9
NGCH Negor - Chabah 30.20 100 P **P** 22 53 03.2 +1.9
JLN Jalan Bani Buh 30.40 107 P **P** 22 53 02.9 -0.2
SNR=7.9
JLN P **P** 22 53 02.9 -0.2
SNR=7.9
SVE Sverdlovsk 30.91 35 *eP* **P** 22 53 07.6 +0.3
SVE pmax pmax
comp=E,27nm,1.0s
NSS Namsos 30.94 347 *eP* **P** 22 53 05.9 -1.5
LODK Lodwar 32.35 166 P **P** 22 53 21.3 +1.0
LODK IAmb IAmb 22 53 28.2
comp=Z,44nm,1.8s
LODK Lodwar 32.35 166 P **P** 22 53 23.1 +2.7
SNR=12
APA Apatity 32.59 4 *eP* **P** 22 53 23.0 +1.1
APA *e* 22 54 34.4
APA *eS* **S** 22 58 37.7 +0.3
APA *eSS* **SnSn** 23 00 33.1 +1.9
APA pmax pmax
comp=Z,10.0nm,0.9s
APA MLR MLR
comp=Z,2μm,8.1s
LVZ Lovozero 32.99 5 *ceP* **P** 22 53 26.4 +0.9
LVZ pmax pmax
comp=Z,100nm,2.3s
CHM Chimkent 33.03 65 *eP* **P** 22 53 26.4 +0.3
CHM Chimkent 33.03 65 *eP* **P** 22 53 26.5 +0.3
FAUS Fauske 33.06 351 *eP* **P** 22 53 30.0 +4.0
BRLS Boroldaу 33.19 64 *eP* **P** 22 53 26.9 -0.6
BRLS Boroldaу 33.19 64 *eP* **P** 22 53 27.0 -0.6
IUG Iuzhnay 33.36 65 *eP* **P** 22 53 29.2 +0.2
IUG pmax pmax
comp=Z,25nm,1.4s
IUG Iuzhnay 33.36 65 *eP* **P** 22 53 29.3 +0.2
comp=Z,25nm,1.4s
STEI Steigen 33.59 351 *eP* **P** 22 53 29.2 -1.4
KBL Kabul 33.59 79 P **P** 22 53 31.1 -0.2
KBL Kabul 33.59 79 P **P** 22 53 31.1 -0.2
KBL pmax pmax
comp=Z,9.0nm,1.2s
KBL Kabul 33.59 79 P **P** 22 53 32.0 +0.7
KKAR Karatay Array 33.69 63 P **P** 22 53 30.8 -1.0
KKAR Karatay Array 33.69 63 P **P** 22 53 30.8 -1.0
KTK1 Kautokeino 33.99 357 *eP* **P** 22 53 32.5 -1.5
BTK Batken 34.09 69 IAmb IAmb 22 53 48.0
comp=Z,31nm,1.6s
DZA Taraz 34.29 64 *eP* **P** 22 53 37.3 +0.2
DZA Taraz 34.29 64 *eP* **P** 22 53 37.4 +0.2
ARA0 ARCESS Array S 34.44 359 *eP* **P** 22 53 36.8 -1.2
ARCES ARCESS Array B 34.44 359 P **P** 22 53 36.1 -1.9
comp=Z,9.2nm,0.8s,baz=176,slow=8.3,SNR=20
ARCES LR LR 23 08 43.1
comp=Z,861nm,18.4s,baz=174,slow=38
comp=Z,9.2nm,0.8s
ARCES ARCESS Array B 34.44 359 P **P** 22 53 38.2 +0.2
ARCES IAmb IAmb 22 53 45.5
comp=Z,60nm,1.4s
ARCES ARCESS Array B 34.44 359 P **P** 22 53 38.2 +0.2
ARCES pmax pmax
comp=Z,60nm,1.4s
BORK Borovoye 34.68 46 P **P** 22 53 40.4 +0.2
BORK Borovoye 34.68 46 ⇑ *iP* **P** 22 53 41.0 +0.7
BORK pmax pmax
comp=Z,16nm,1.8s
JETT Jettan, Norway 34.68 355 *eP* **P** 22 53 38.7 -1.5
BVAR Borovoye Array 34.71 46 P **P** 22 53 41.1 +0.5
comp=Z,1.9nm,0.6s,baz=261,slow=6.7,SNR=12
BVAR LR LR 23 09 59.7
comp=Z,625nm,21.6s,baz=260,slow=40
comp=Z,1.9nm,0.6s
VADS Vadso 35.01 1 *eP* **P** 22 53 41.5 -1.4
EDA Edea 35.31 212 P **P** 22 53 47.2 +1.1
EDA IAmb IAmb 22 53 48.8
comp=Z,60nm,1.4s
BRZS Berezniki 35.57 51 *eP* **P** 22 53 48.3 +0.3
BRZS Berezniki 35.57 51 *eP* **P** 22 53 48.3 +0.3
HAMF Hammerfest 35.60 358 *eP* **P** 22 53 47.5 -0.4
ARSB Arslanbob 35.61 66 IAmb IAmb 22 54 20.1
comp=Z,52nm,1.4s
MBAR Mbarara 35.69 175 LR LR 23 10 32.5
comp=Z,996nm,18.3s,baz=358,slow=40
MBAR Mbarara 35.69 175 P **P** 22 53 50.6 +1.1
MBAR Mbarara 35.69 175 P **P** 22 53 50.6 +1.1
MBAR pmax pmax
comp=Z,37nm,1.7s
MBAR Mbarara 35.69 175 P **P** 22 53 53.2 +3.7
MBAR P **P** 22 53 53.2 +3.7
EKS2 Erkin-Say 36.10 64 P **P** 22 53 53.7 +0.9
SNR=7.9
AAK Ala-Archa 36.63 64 P **P** 22 53 58.4 +1.0
SNR=11
AAK Ala-Archa 36.63 64 P **P** 22 53 56.8 -0.6
AAK Ala-Archa 36.63 64 *i* P **P** 22 53 58.0 +0.6
SNR=16
AAK Ala-Archa 36.63 64 ⇓ *iP* **P** 22 53 58.0 +0.6
AAK pmax pmax
comp=Z,15nm,1.2s
AAK Ala-Archa 36.63 64 P **P** 22 53 58.1 +0.8
SGDS Sogindy 36.68 63 *eP* **P** 22 53 57.7 0.0
FRU1 Bishkek 36.72 64 P **P** 22 53 58.3 +0.3
FRU1 IAmb IAmb 22 54 03.7
comp=Z,99nm,2.0s
FRU1 Bishkek 36.72 64 P **P** 22 53 58.3 +0.3
FRU1 pmax pmax
comp=Z,99nm,2.0s
CHMS Chumysh 36.79 63 P **P** 22 53 59.4 +0.7
SNR=7.7
KBK Karagaybulak 36.96 64 P **P** 22 54 01.2 +1.0
SNR=8.6
NIL Nilore 37.20 79 P **P** 22 54 01.9 -0.2
NIL IAmb IAmb 22 54 03.9
comp=Z,46nm,1.2s
NIL Nilore 37.20 79 P **P** 22 54 01.9 -0.2
NIL pmax pmax
comp=Z,46nm,1.3s
NIL Nilore 37.20 79 P **P** 22 54 03.1 +1.0
TKM2 Tokmak 2 37.42 63 P **P** 22 54 04.7 +0.6
SNR=9.0
KSH2 Kashi 37.85 70 P **P** 22 54 08.4 +0.7
KSH2 PcP **PcP** 22 56 25.4 +1.3
KSH2 ScP **ScP** 23 00 12.8 +0.9
KSH2 pmax pmax
comp=Z,8.0nm,1.3s
KSH2 pmax pmax
comp=Z,580nm,10.0s
TNSS Tian-Shan 38.40 63 *eP* **P** 22 54 12.6 0.0
TNSS Tian-Shan 38.40 63 *eP* **P** 22 54 12.6 0.0
MDOK Medeo 38.46 63 *eP* **P** 22 54 13.0 +0.2
MDOK Medeo 38.46 63 *eP* **P** 22 54 13.1 +0.2
KIBK Kibwezi 38.51 164 P **P** 22 54 13.1 -0.3
KIBK Kibwezi 38.51 164 P **P** 22 54 13.8 +0.4
KIBK Kibwezi 38.51 164 P **P** 22 54 17.0 +3.6
ACRG Accra 39.19 228 P **P** 22 54 18.0 -1.0
ACRG IAmb IAmb 22 54 19.8
comp=Z,58nm,1.4s
TDK Taldyqorghan 39.30 60 *eP* **P** 22 54 20.0 +0.3
TDK Taldyqorghan 39.30 60 *eP* **P** 22 54 20.1 +0.3
KURBB Kurchatov Arra 39.36 51 P **P** 22 54 20.4 +0.3
comp=Z,7.6nm,0.6s,baz=275,slow=8.8,SNR=68
KURBB PP **PP** 22 55 50.5 +0.2
comp=Z,4.1nm,0.9s,baz=278,slow=11,SNR=8.7
KURBB PcP **PcP** 22 56 28.1 -0.2
comp=Z,6.7nm,0.8s,baz=272,slow=4.0,SNR=8.3
KURBB LR LR 23 13 21.9
comp=Z,573nm,21.1s,baz=290,slow=40
comp=Z,7.6nm,0.6s
KURK Kurchatov 39.42 51 P **P** 22 54 20.2 -0.4
KURK Kurchatov 39.42 51 *d* *iP* **P** 22 54 20.5 -0.1
KURK pmax pmax
comp=Z,26nm,1.8s
KURK Kurchatov 39.42 51 P **P** 22 54 21.1 +0.5
SATY Saty 39.46 63 *eP* **P** 22 54 21.2 0.0
SATY Saty 39.46 63 *eP* **P** 22 54 21.3 0.0
KPKS Kokpek 39.62 62 *eP* **P** 22 54 22.8 +0.3
KPKS Kokpek 39.62 62 *eP* **P** 22 54 22.8 +0.3
UZB Uzynbulak 39.90 63 *eP* **P** 22 54 25.1 +0.2
UZB Uzynbulak 39.90 63 *eP* **P** 22 54 25.2 +0.2
SHLS Shalkode 40.22 63 *eP* **P** 22 54 30.0 +2.5
SHLS Shalkode 40.22 63 *eP* **P** 22 54 30.1 +2.5
SEM Semipalatinsk 40.45 51 *eP* **P** 22 54 29.5 +0.1
SEM Semipalatinsk 40.45 51 *eP* **P** 22 54 29.6 +0.1
DBIC Dimbokro 41.37 234 P **P** 22 54 37.0 -0.1
comp=Z,23nm,0.8s,baz=60,slow=9.0,SNR=20
DBIC LR LR 23 15 41.6
comp=Z,623nm,18.5s,baz=58,slow=42
comp=Z,23nm,0.8s
DBIC Dimbokro 41.37 234 P **P** 22 54 35.9 -1.2
DBIC IAmb IAmb 22 54 40.2
comp=Z,102nm,1.6s
DBIC Dimbokro 41.37 234 P **P** 22 54 35.9 -1.2
DBIC pmax pmax
comp=Z,102nm,1.6s
BORG Borgarnes 41.62 331 LR LR 23 12 43.6
comp=Z,561nm,18.3s,baz=119,slow=38
MK31 Makanchi Array 41.88 57 *d* *iP* **P** 22 54 41.3 +0.2
MKAR Makanchi Array 41.88 57 P **P** 22 54 41.2 +0.2
comp=Z,5.6nm,0.6s,baz=276,slow=6.8,SNR=59
MKAR PcP **PcP** 22 56 36.7 0.0
comp=Z,3.8nm,0.8s,baz=266,slow=4.0,SNR=2.5
MKAR ScP **ScP** 23 00 27.4 +0.1
comp=Z,0.6nm,0.9s,baz=286,slow=6.2,SNR=3.7
comp=Z,5.6nm,0.6s
ZALV Zalesovo Beam 43.37 46 P **P** 22 54 52.8 -0.2
comp=Z,4.0nm,0.6s,baz=266,slow=8.4,SNR=26
ZALV PcP **PcP** 22 56 43.1 +1.7
comp=Z,2.5nm,0.7s,baz=264,slow=5.1,SNR=2.4
ZALV LR LR 23 18 16.6
comp=Z,278nm,20.8s,baz=269,slow=44
comp=Z,4.0nm,0.6s
ZALV Zalesovo Beam 43.37 46 P **P** 22 54 52.4 -0.6
SPB2 Spitsbergen Ar 43.38 357 P **P** 22 54 52.0 -0.8
SPA0 Spitsbergen Ar 43.39 357 *eP* **P** 22 54 53.0 +0.2
SPITS Spitsbergen Ar 43.39 357 P **P** 22 54 51.3 -1.6
comp=Z,4.1nm,0.4s,baz=131,slow=10,SNR=17
SPITS PcP **PcP** 22 56 40.8 -0.4
comp=Z,1.8nm,0.4s,baz=147,slow=5.0,SNR=4.0
SPITS LR LR 23 15 14.9
comp=Z,595nm,18.7s,baz=176,slow=39
comp=Z,4.1nm,0.4s
ZSN Zaisan 43.59 56 *eP* **P** 22 54 55.0 +0.2
ZSN Zaisan 43.59 56 *eP* **P** 22 54 55.0 +0.2
KBS Kingsbay 44.36 356 *i* P **P** 22 55 00.3 -0.2
DGZ Jazzator, Alta 45.09 52 ⇓ *iP* **P** 22 55 07.4 +0.3
DGZ pmax pmax
comp=Z,17nm,1.2s
WMQ Urumqi 46.05 60 *eP* **P** 22 55 16.0 +1.4
WMQ sP sP 22 55 24.9 +7.4
WMQ pmax pmax
comp=Z,17nm,1.5s
WMQ pmax pmax
comp=Z,430nm,3.7s
WMQ LR LR
comp=Z,330nm,18.5s
DAG Danmarks Havn 46.54 347 *i* P **P** 22 55 15.0 -2.9
DAG IAmb IAmb 22 55 17.1
comp=Z,10nm,1.2s
NRIK Noril'sk 46.91 25 P **P** 22 55 21.1 +0.1
comp=Z,3.3nm,0.4s,baz=226,slow=4.1,SNR=11
NRIK LR LR 23 17 38.8
comp=Z,322nm,19.7s,baz=257,slow=40
comp=Z,3.3nm,0.4s
NRIK Noril'sk 46.91 25 P **P** 22 55 20.3 -0.6
NRIK IAmb IAmb 22 55 35.8
comp=Z,47nm,1.8s
NRIK Noril'sk 46.91 25 *d* *iP* **P** 22 55 21.0 +0.1

NRIK pmax pmax
comp=Z,27nm,1.7s
NOR Nord 49.23 352 *i* P **P** **22 55 36.2 -2.5**
NOR IAmb IAmb 22 55 38.3
comp=Z,12nm,0.6s
SUMG Summit 49.77 339 P **P** **22 55 40.6 -2.8**
SUMG Summit 49.77 339 P **P** **22 55 41.8 -1.6**
SUMG IAmb IAmb 22 57 17.6
comp=Z,26nm,1.3s
SUMG Summit 49.77 339 P **P** **22 55 41.8 -1.6**
SUMG pmax pmax
comp=Z,26nm,1.3s
SUMG Summit 49.77 339 *i* P **P** **22 55 41.0 -2.4**
SUMG IAmb IAmb 22 55 43.1
comp=Z,9.7nm,1.0s
LSZ Lusaka 50.18 180 P **P** **22 55 46.3 -0.4**
LSZ Lusaka 50.18 180 P **P** **22 55 46.3 -0.4**
LSZ pmax pmax
comp=Z,6.0nm,0.9s
LSZ Lusaka 50.18 180 P **P** **22 55 48.2 +1.5**
HMDM Hanimaadhoo 50.23 113 P **P** **22 55 48.2 +1.0**
KNGR Kungurtug, Tuv 51.40 50⇑ *i* P **P** **22 55 57.4 +1.7**
KNGR pmax pmax
comp=Z,66nm,1.7s
KSANE Kasane 52.75 183 P **P** **22 56 06.7 +0.7**
KSANE Kasane 52.75 183 *i* P **P** **22 56 06.0 +0.1**
LSA Lhasa 52.87 77 P **P** **22 56 04.1 -3.3**
LSA pmax pmax
comp=Z,8.0nm,0.9s
MOY Mondy 53.33 48 *e*P **P** **22 56 11.7 +1.7**
MOY pmax pmax
comp=Z,41nm,1.9s
GOMU GeErMu 53.34 68 P **P** **22 56 12.1 +1.5**
GOMU pmax pmax
comp=Z,9.0nm,1.4s
NEEM North Greenlan 53.56 345 *i* P **P** **22 56 09.8 -1.7**
NEEM IAmb IAmb 22 56 11.8
comp=Z,7.5nm,1.0s
SFJD Kangerlussuaq 53.74 331 LR LR 23 20 33.7
comp=Z,424nm,19.3s,baz=85,slow=38
TLY Talaya 54.94 47 P **P** **22 56 22.4 +0.8**
TLY IAmb IAmb 22 56 36.1
comp=Z,18nm,1.1s
TLY Talaya 54.94 47 *d* *i* P **P** **22 56 22.4 +0.8**
TLY pmax pmax
comp=Z,22nm,1.1s
TLY Talaya 54.94 47 P **P** **22 56 22.5 +0.9**
TSUM Tsumeb 54.96 192 LR LR 23 23 18.1
comp=Z,456nm,18.1s,baz=9.5,slow=40
TSUM Tsumeb 54.96 192 P **P** **22 56 22.7 +0.5**
TSUM IAmb IAmb 22 56 24.4
comp=Z,34nm,1.6s
ZAK Zakamensk 55.04 49 *e*P **P** **22 56 23.4 +0.9**
ZAK pmax pmax
comp=Z,27nm,1.7s
IRK Irkutsk 55.18 47 *e*P **P** **22 56 24.0 +0.7**
IRK pmax pmax
comp=Z,83nm,1.9s
PALK Pallekele 55.70 107 LR LR 23 22 24.2
comp=Z,522nm,21.2s,baz=306,slow=38
GTA2 Gaotai 55.90 63 P **P** **22 56 29.1 +0.2**
GTA2 sP sP 22 56 39.2 +7.4
GTA2 PcP **PcP** **22 57 27.0 -0.6**
GTA2 ScP **ScP** **23 01 27.5 +0.5**
GTA2 S **S** **23 04 17.4 +0.6**
GTA2 pmax pmax
comp=Z,12nm,0.9s
GTA2 LR LR
comp=Z,560nm,17.5s
GTA2 LR LR
comp=Z,420nm,20.3s
GTA2 LR LR
comp=Z,540nm,19.5s
BROLN Tlhalogang 55.97 181 *i* P **P** **22 56 29.6 +0.3**
BRDH Bariadhala 56.31 85 LR LR 23 27 22.0
comp=Z,316nm,18.9s,baz=330,slow=43
OPO Ambohidratompo 56.50 158 LR LR 23 23 19.0
comp=Z,383nm,18.8s,baz=172,slow=39
GRTLG Ghanzi 56.59 187 *i* P **P** **22 56 34.7 +1.0**
KHWEE KHWEE 56.86 183 *i* P **P** **22 56 36.8 +1.1**
TULEG Thule 57.65 344 *i* P **P** **22 56 37.7 -2.8**
TULEG IAmb IAmb 22 56 39.2
comp=Z,11nm,1.0s
SONM Songino Array 57.73 51 P **P** **22 56 43.1 +1.3**
comp=Z,6.3nm,0.8s,baz=292,slow=7.7,SNR=35
comp=Z,6.3nm,0.8s
SONM Songino Array 57.73 51 P **P** **22 56 42.3 +0.6**
SONM IAmb IAmb 22 56 52.3
comp=Z,18nm,1.0s
SONM Songino Array 57.73 51 P **P** **22 56 42.3 +0.6**
SONM pmax pmax
comp=Z,18nm,1.0s
KGCAE Kacgae 57.97 186 *i* P **P** **22 56 45.0 +1.5**
ULN Ulaanbaatar 58.14 51 P **P** **22 56 43.9 -0.7**
ULN IAmb IAmb 22 56 50.7
comp=Z,19nm,1.1s
ULN Ulaanbaatar 58.14 51⇑ *i* P **P** **22 56 45.9 +1.2**
ULN pmax pmax
comp=Z,23nm,1.1s
ULN Ulaanbaatar 58.14 51 P **P** **22 56 45.8 +1.2**
ULN P **P** **22 56 45.8 +1.2**
ULN Ulaanbaatar 58.14 51 P **P** **22 56 45.1 +0.5**
comp=Z,76nm,1.9s
LPHEP Lephephe 58.25 182 *i* P **P** **22 56 45.7 +0.2**
KOOLE Kule 58.31 188 *i* P **P** **22 56 46.1 +0.1**
LKGWB Lokgwabe 59.31 187 *i* P **P** **22 56 52.5 -0.3**
LBTB Lobatse 59.90 182 P **P** **22 56 57.5 +0.6**
LBTB IAmb IAmb 22 57 00.0
comp=Z,29nm,1.2s
LBTB Lobatse 59.90 182 P **P** **22 56 57.5 +0.6**
LBTB pmax pmax
comp=Z,29nm,1.3s
LBTB Lobatse 59.90 182 *i* P **P** **22 56 59.0 +2.1**
LZDM Lanzhou Array 60.10 65 P **P** **22 56 58.9 +0.2**
comp=Z,5.1nm,0.7s,baz=253,slow=9.1,SNR=16
comp=Z,5.1nm,0.7s
LZH Lanzhou 60.16 65 *e*P **P** **22 57 00.0 +1.1**
LZH pP sP 22 57 03.9 +2.1
LZH pmax pmax
comp=Z,15nm,1.5s
LZH LR LR
comp=Z,450nm,16.8s
LZH LR LR
comp=Z,460nm,17.9s
LZH LR LR
comp=Z,450nm,18.2s
TIXI Tiksi 60.35 21 LR LR 23 27 49.7
comp=Z,335nm,18.3s,baz=317,slow=41
TIXI Tiksi 60.35 21 P **P** **22 56 58.3 -1.0**
TIXI IAmb IAmb 22 57 07.1
comp=Z,17nm,1.2s
TIXI Tiksi 60.35 21 *d* *i* P **P** **22 56 57.8 -1.5**
TIXI pmax pmax
comp=Z,15nm,1.1s
MAKGR Makgori 60.73 183 *i* P **P** **22 57 03.4 +0.8**
FRB Frobisher Bay 61.79 330 LR LR 23 25 11.3
comp=Z,258nm,18.0s,baz=77,slow=37
CD2 Chengdu 62.27 70 P **P** **22 57 14.0 +0.9**
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 LR LR
comp=Z,240nm,8.3s
CD2 LR LR
comp=Z,380nm,10.8s
CD2 LR LR
comp=Z,390nm,14.6s
PZH PanZhiHua 62.68 76 P **P** **22 57 17.6 +1.6**
BOSA Boshof 63.50 183 P **P** **22 57 20.9 -0.2**
comp=Z,8.6nm,0.9s,baz=354,slow=5.6,SNR=9.8
BOSA LR LR 23 25 39.9
comp=Z,386nm,20.2s,baz=7.0,slow=37
comp=Z,8.6nm,0.9s
BOSA Boshof 63.50 183 P **P** **22 57 22.4 +1.3**
BOSA Boshof 63.50 183 P **P** **22 57 22.4 +1.3**
BOSA pmax pmax
comp=Z,76nm,2.0s
BOSA Boshof 63.50 183 *i* P **P** **22 57 22.3 +1.2**
HHC Hu-ho-hao-te 63.75 57 *e*P **P** **22 57 24.4 +1.6**
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,260nm,4.9s
ILON Igloolik, Nuna 64.00 338 IAmb IAmb 22 57 30.7
comp=Z,16nm,1.3s
KUQ Kuujjuuaa 64.01 324 IAmb IAmb 22 57 28.5
comp=Z,29nm,1.4s
KMI2 Kunming 64.12 76 P **P** **22 57 24.7 -0.9**
KMI2 pmax pmax
comp=Z,7.0nm,0.8s
KMI2 LR LR
comp=Z,300nm,18.3s
KMI2 LR LR
comp=Z,240nm,18.2s
KMI2 LR LR
comp=Z,240nm,23.6s
CHTO Chiang Mai 64.15 85 P **P** **22 57 24.9 -0.8**
CHTO Chiang Mai 64.15 85 P **P** **22 57 25.5 -0.2**
CHTO Chiang Mai 64.15 85 P **P** **22 57 24.9 -0.8**
CHTO pmax pmax
comp=Z,43nm,1.7s
CHTO Chiang Mai 64.15 85 P **P** **22 57 25.6 0.0**
CHTO P **P** **22 57 25.6 0.0**
CHTO Chiang Mai 64.15 85 P **P** **22 57 25.5 -0.2**
comp=Z,14nm,1.7s
RES Resolute Bay 64.22 346 LR LR 23 27 39.1
comp=Z,337nm,18.0s,baz=26,slow=38
CM31 Chiang Mai Arr 64.33 85 P **P** **22 57 26.2 -0.7**
CM31 IAmb IAmb 22 57 32.6
comp=Z,20nm,1.2s
CM31 Chiang Mai Arr 64.33 85 P **P** **22 57 27.6 +0.7**
SNR=6.2
CM31 P **P** **22 57 27.6 +0.7**
SNR=6.2
CMAR Chiang Mai Arr 64.33 85 P **P** **22 57 26.7 -0.1**
comp=Z,4.0nm,0.9s,baz=299,slow=8.1,SNR=30
CMAR LR LR 23 31 53.0
comp=Z,91nm,19.6s,baz=290,slow=42
comp=Z,4.0nm,0.9s
CMAR Chiang Mai Arr 64.33 85 P **P** **22 57 26.4 -0.4**
SCHQ Schefferville 64.62 320 P **P** **22 57 26.6 -1.6**
comp=Z,5.3nm,0.4s,baz=72,slow=3.8,SNR=28
SCHQ LR LR 23 25 59.6
comp=Z,206nm,18.8s,baz=81,slow=36
comp=Z,5.3nm,0.4s
YAK Yakutsk 64.72 31⇑ *e*P **P** **22 57 28.0 -0.7**
YAK pmax pmax
comp=Z,13nm,0.7s
XAN Xi'an 64.80 65⇓ P **P** **22 57 30.1 +0.3**
XAN pmax pmax
comp=Z,7.0nm,0.6s
XAN pmax pmax
comp=Z,360nm,6.9s
HILR Hailar Arsy 65.29 46 P **P** **22 57 34.0 +1.3**
comp=Z,2.5nm,0.7s,baz=259,slow=1.5,SNR=4.7
comp=Z,2.5nm,0.7s
HIA Hailar 65.41 46 P **P** **22 57 36.2 +2.8**
XLT XiLinHaoTe 65.47 53 *e*P **P** **22 57 34.9 +0.9**
XLT pmax pmax
comp=Z,6.0nm,1.2s
GYA Guiyang 66.59 73 P **P** **22 57 40.5 -1.0**
GYA S **S** **23 06 34.4 +1.2**
GYA pmax pmax
comp=Z,10.0nm,1.8s
ENH Enshi 66.96 68 P **P** **22 57 44.9 +1.2**
LYN LuoYang 67.18 63 P **P** **22 57 47.6 +2.6**
LYN pmax pmax
comp=Z,20nm,1.9s
ICQ Pointe Anglais 67.24 315 IAmb IAmb 22 57 50.9
comp=Z,20nm,0.8s
BJT Baijiatuan 67.27 56 P **P** **22 57 46.5 +1.0**
BJI2 Beijing 67.27 56 P **P** **22 57 46.2 +0.7**
BJI2 pmax pmax
comp=Z,7.0nm,1.3s
HNS HongShan 67.46 59⇑ P **P** **22 57 47.8 +1.1**
HNS S **S** **23 06 44.0 +0.9**
HNS pmax pmax
comp=Z,18nm,1.4s
HNS LR LR
comp=Z,470nm,19.1s
HNS LR LR
comp=Z,280nm,19.6s
ZEA Zeya 67.52 39 *e*P **P** **22 57 47.1 +0.3**
ZEA *e* 22 57 52.6
ZEA pmax pmax
comp=Z,10.0nm,1.2s
SUR Sutherland 67.53 186 LR LR 23 28 05.3
comp=Z,482nm,18.3s,baz=9.5,slow=37
SUR Sutherland 67.53 186 P **P** **22 57 49.5 +2.2**
HEH HeiHe 69.33 43 *e*P **P** **22 57 58.6 +0.4**
HEH pmax pmax
comp=Z,14nm,1.2s
TIA Tai'an 69.73 60 P **P** **22 58 01.2 +0.2**
TIA pmax pmax
comp=Z,28nm,1.2s
WHN Wuhan 70.50 66 P **P** **22 58 10.3 +4.6**
CN2 Changchun 71.47 49 P **P** **22 58 11.7 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 LR LR
comp=Z,270nm,15.0s
CN2 LR LR
comp=Z,360nm,15.0s
CN2 LR LR
comp=Z,420nm,17.0s
A36M Sachs Harbour 71.48 351 P **P** **22 58 09.8 -1.2**
A36M IAmb IAmb 22 58 10.8
comp=Z,21nm,1.1s
A36M Sachs Harbour 71.48 351 P **P** **22 58 09.6 -1.4**
baz=23
BLKN Baker Lake 71.51 338 IAmb IAmb 22 58 18.1
comp=Z,31nm,1.5s
KCSI Kotacane, Aceh 71.55 99 P **P** **22 58 15.0 +2.7**
comp=Z,16nm,1.1s
BNX BinXian 71.66 47⇑ P **P** **22 58 12.3 -0.2**
BNX pmax pmax
comp=Z,9.0nm,1.3s
KLR Kul'dur 72.27 42 LR LR 23 33 42.8
comp=Z,62nm,19.2s,baz=312,slow=39
KLR Kul'dur 72.27 42 *de*P **P** **22 58 15.8 -0.3**
KLR pmax pmax
comp=Z,20nm,1.5s
BILL Bilibino 72.47 15 P **P** **22 58 15.8 -1.2**
BILL Bilibino 72.47 15 *i* P **P** **22 58 15.6 -1.4**
BILL pmax pmax
comp=Z,24nm,1.4s
SEY Seymchan 72.67 23 LR LR 23 33 03.5
comp=Z,204nm,19.6s,baz=318,slow=38
SEY Seymchan 72.67 23⇑ P **P** **22 58 18.7 +0.5**
SEY pmax pmax
comp=Z,21nm,1.5s
QIZ Qiongzhong 72.87 79 P **P** **22 58 21.0 +0.8**
QIZ S **S** **23 07 47.8 +0.9**
QIZ LR LR
comp=Z,280nm,19.5s
QIZ LR LR
comp=Z,300nm,18.9s
QIZ LR LR
comp=Z,260nm,16.5s
KULM Kulim 72.87 96 P P 22 58 25.8 +5.6
PSI Prapat 72.90 99 P **P** **22 58 24.5 +3.9**
RPSI Rantau Prapat 72.97 99 IAmb IAmb 22 58 27.0
comp=Z,25nm,0.9s
NJ2 Nanjing 73.06 63 *e*P **P** **22 58 20.7 -0.4**
NJ2 pmax pmax
comp=Z,3.0nm,0.6s
NBPA Parau_RN 73.31 250 *e*P **P** **22 58 22.8 0.0**
A21K Barrow 73.75 2 P **P** **22 58 23.1 -1.3**
baz=356
C36M Paulatuk 73.76 350 IAmb IAmb 23 00 26.9
comp=Z,10nm,0.7s
C36M Paulatuk 73.76 350 P **P** **22 58 23.2 -1.4**
baz=24,SNR=6.9
A22K Sinclair Lake 74.10 1 P **P** **22 58 25.4 -1.1**
baz=358
MA2 Magadan 74.49 26 P **P** **22 58 30.4 +1.4**
MA2 Magadan 74.49 26 P **P** **22 58 28.3 -0.7**
comp=Z,22nm,1.5s
FCC Fort Churchill 74.73 333 IAmb IAmb 22 58 30.0
comp=Z,19nm,1.2s
B20K Meade River 75.05 2 P **P** **22 58 30.8 -1.2**
baz=356
USRK Ussuriysk Ar. 75.22 46 P **P** **22 58 33.2 -0.3**
comp=Z,7.3nm,0.6s,baz=288,slow=6.1,SNR=14
comp=Z,7.3nm,0.6s
C23K Itkillik River 75.29 359 P **P** **22 58 33.3 -0.1**
C23K Itkillik River 75.29 359 P **P** **22 58 32.5 -0.9**
baz=1.2
C27K Jago River 75.32 357 P **P** **22 58 32.6 -1.1**
baz=7.1
B21K Ikpikpuk River 75.49 1 P **P** **22 58 33.5 -1.1**
baz=358
D27M Malcolm River 75.56 356 P **P** **22 58 34.2 -0.9**
baz=9.4
D25K Kavik River 75.72 358 P **P** **22 58 35.0 -1.0**
baz=4.8
C19K Lookout Ridge 75.88 3 IAmb IAmb 22 58 37.9
comp=Z,41nm,1.6s
C19K Lookout Ridge 75.88 3 P **P** **22 58 35.8 -1.1**
baz=354
INK Inuvik 75.89 353 P **P** **22 58 35.3 -1.6**
baz=16,SNR=5.7
D24K Happy Valley 75.95 359 P **P** **22 58 36.2 -1.0**
baz=2.8
C21K Knifeblade Rid 75.96 1 P **P** **22 58 36.5 -0.8**
baz=358
E28M Babbage River 76.11 355 IAmb IAmb 22 58 38.6
comp=Z,24nm,1.4s
E28M Babbage River 76.11 355 P **P** **22 58 36.9 -1.2**
baz=11,SNR=9.8
D23K Nanushuk River 76.16 359 P **P** **22 58 37.4 -1.1**
baz=1.2
E29M Blow River 76.20 355 P **P** **22 58 37.6 -1.1**
baz=12
D22K Ayikyak River 76.25 0 P **P** **22 58 38.0 -1.0**
baz=360
C18K Utukok River 76.26 3 IAmb IAmb 22 58 47.7
comp=Z,12nm,0.8s
C18K Utukok River 76.26 3 P **P** **22 58 38.0 -1.1**
baz=352,SNR=11
PDSI Padang 76.32 101 P **P** **22 58 41.0 +0.7**
comp=Z,1µmcomp=Z,33nm,1.2s
C17K DeLong Mountai 76.33 4 P **P** **22 58 38.6 -0.9**
baz=351
D20K Etivluk River 76.36 2 P **P** **22 58 38.6 -1.1**
baz=356
C16K Lisburne Hills 76.38 5 P **P** **22 58 38.6 -1.1**
baz=349
KSAR Wonju Array Be 76.45 54 P **P** **22 58 40.3 -0.4**
KSAR Wonju Array Be 76.45 54 P **P** **22 58 40.3 -0.4**
KSRS Korea Array 76.47 54 P **P** **22 58 41.0 +0.2**
comp=Z,6.4nm,0.7s,baz=300,slow=4.9,SNR=22
KSRS LR LR 23 38 36.1
comp=Z,201nm,19.6s,baz=305,slow=41
comp=Z,6.4nm,0.7s
KSRS Korea Array 76.47 54 P **P** **22 58 41.0 +0.2**
SADO Sadowa 76.62 316 LR LR 23 34 02.8
comp=Z,394nm,18.2s,baz=78,slow=37
E27K Coleen River 76.65 356 P **P** **22 58 40.1 -1.2**
baz=8.8
F31M Tsiigehtchic 76.75 353 IAmb IAmb 22 58 41.5
comp=Z,33nm,1.3s
F31M Tsiigehtchic 76.75 353 P **P** **22 58 40.8 -1.1**
baz=15,SNR=11
RDOG Red Dog Mine 76.76 4 IAmb IAmb 22 58 44.6
comp=Z,38nm,1.7s
RDOG Red Dog Mine 76.76 4 P **P** **22 58 40.8 -1.1**
baz=351
F30M Barrier River 76.79 354 P **P** **22 58 40.8 -1.2**
baz=14
E20K Nigu River 76.83 2 P **P** **22 58 41.5 -0.9**
baz=357
E25K Arctic Village 76.90 357 P **P** **22 58 41.6 -1.1**
baz=5.5
E24K Your Creek 77.03 359 P **P** **22 58 42.4 -1.1**
baz=3.0
E23K Chandalar 77.06 359 P **P** **22 58 42.8 -0.9**
baz=2.1
D17K Noatak River 77.10 4 P **P** **22 58 42.6 -1.2**
baz=351,SNR=13
F28M Old Crow 77.11 355 IAmb IAmb 22 59 11.4
comp=Z,22nm,1.5s
F28M Old Crow 77.11 355 P **P** **22 58 42.7 -1.2**
baz=10
F26K Sheenjek River 77.27 357 P **P** **22 58 43.6 -1.2**
baz=6.7
G31M Satah River 77.31 353 P **P** **22 58 43.9 -1.1**
baz=15
F25K Christian River 77.43 357 P **P** **22 58 44.7 -1.1**
baz=5.4,SNR=6.5
G30M tAoh Zraii Nji 77.44 354 P **P** **22 58 44.5 -1.2**
baz=13
E18K Tukpahlearik C 77.51 3 P **P** **22 58 44.9 -1.2**
baz=353
BMAR Burnt Mountain 77.55 357 P **P** **22 58 46.1 -0.3**
E19K Redstone River 77.61 2 P **P** **22 58 45.3 -1.3**
baz=356
G29M Pine Creek 77.66 354 P **P** **22 58 46.0 -1.0**
baz=12
E17K Hotham Inlet 77.79 4 P **P** **22 58 46.2 -1.4**
baz=352,SNR=6.1
COLD Coldfoot 77.90 359 IAmb IAmb 22 58 57.5
comp=Z,19nm,1.2s
COLD Coldfoot 77.90 359 P **P** **22 58 47.3 -1.0**
baz=1.6
F21K Alatna River 77.91 1 P **P** **22 58 47.7 -0.7**
baz=359
G26K Porcupine Rive 77.99 357 IAmb IAmb 22 58 50.0
comp=Z,28nm,1.2s
G26K Porcupine Rive 77.99 357 P **P** **22 58 48.4 -0.3**
baz=6.9
G27K Doyon Strip 78.02 356 P **P** **22 58 48.3 -0.7**
baz=8.7
F20K Avaraart Lake 78.06 1 IAmb IAmb 22 58 57.8
comp=Z,15nm,1.1s
F20K Avaraart Lake 78.06 1 P **P** **22 58 47.6 -1.5**
baz=357
EPYK Eagle Plains 78.08 354 P **P** **22 58 47.6 -1.8**
baz=13
YKA Yellowknife Ar 78.10 343 P **P** **22 58 47.6 -1.8**
comp=Z,1.9nm,1.0s,baz=28,slow=5.6,SNR=18
YKA LR LR 23 34 02.9
comp=Z,214nm,19.3s,baz=48,slow=36
comp=Z,1.9nm,1.0s
YKA Yellowknife Ar 78.10 343 *i* P **P** **22 58 47.5 -2.0**
YKA pmax pmax
comp=Z,2.0nm,1.0s
F19K Shaleruckik Mo 78.22 2 P **P** **22 58 48.5 -1.5**
baz=355
H29M Whitestone 78.37 354 P **P** **22 58 49.3 -1.6**
baz=11
F18K Selawik 78.38 3 P **P** **22 58 49.4 -1.5**
baz=354,SNR=8.4
G24K Hadweenzic Riv 78.38 358 IAmb IAmb 22 58 59.3
comp=Z,26nm,1.6s
G24K Hadweenzic Riv 78.38 358 P **P** **22 58 49.9 -1.1**
baz=3.9
H31M Peel River 78.40 353 P **P** **22 58 49.6 -1.6**
baz=15
G23K Bananza Creek 78.42 359 P **P** **22 58 50.3 -1.0**
baz=1.7
F17K Baldwin Pennin 78.46 4 P **P** **22 58 49.7 -1.7**
baz=352
E46A Sault Ste Mari 78.50 319 IAmb IAmb 22 59 01.7
comp=Z,20nm,0.9s
H27K Steamboat Moun 78.59 356 P **P** **22 58 51.3 -0.9**
baz=8.8,SNR=8.3
G21K Allakaket 78.62 1 P **P** **22 58 50.5 -1.8**
baz=359
TNA Tin City 78.83 7 P **P** **22 58 52.9 -0.5**
baz=347
G19K Purcell Mounta 78.93 2 IAmb IAmb 22 58 54.5
comp=Z,21nm,1.2s
G19K Purcell Mounta 78.93 2 P **P** **22 58 52.4 -1.6**
baz=356,SNR=11
F15K North Star Dit 78.97 5 IAmb IAmb 22 59 01.9
comp=Z,34nm,1.7s
F15K North Star Dit 78.97 5 P **P** **22 58 53.0 -1.2**
baz=350
F14K Arctic Creek 79.06 6 P **P** **22 58 53.4 -1.3**
baz=348
MASI Maura Aman, Be 79.07 102 P **P** **22 58 58.2 +2.6**
P57A Homestead Farm 79.08 311 IAmb IAmb 22 58 55.9
comp=Z,54nm,1.7s
G18K Tagagawik 79.12 3 P **P** **22 58 53.5 -1.6**
baz=354
I30M Mount Dempster 79.17 353 P **P** **22 58 53.9 -1.6**
baz=13
I27K Kandik River 79.21 356 P **P** **22 58 54.5 -1.1**
I27K IAmb IAmb 22 59 41.5
comp=Z,42nm,1.8s
I27K Kandik River 79.21 356 P **P** **22 58 54.6 -1.1**
baz=8.7
H22K Ishtalitna Cre 79.25 360 P **P** **22 58 54.3 -1.5**
baz=0.6
I28M Miner Creek 79.25 355 IAmb IAmb 22 59 24.3
comp=Z,38nm,1.8s
I28M Miner Creek 79.25 355 P **P** **22 58 54.5 -1.4**
baz=10
H24K Noodor Dome 79.26 358 P **P** **22 58 54.2 -1.7**

baz=3.5
H23K **Yukon River** 79.30 359 P P 22 58 55.1 -1.0
baz=2.1
MDP **Montagnes des** 79.36 269 LR LR 23 35 40.8
comp=Z,67nm,18.0s,baz=38,slow=37
G17K **Kiwalik Mounta** 79.43 4 P P 22 58 55.5 -1.3
baz=353,SNR=8.9
G16K **Koyuk River** 79.44 4 P P 22 58 55.6 -1.1
baz=352
H21K **Melozitna Rive** 79.49 0 IAmb IAmb 22 59 06.3
comp=Z,24nm,1.1s
H21K **Melozitna Rive** 79.49 0 P P 22 58 56.1 -1.0
baz=359,SNR=11
PRP **Porcupine Dome** 79.50 357 P P 22 58 56.2 -1.1
baz=5.5,SNR=5.6
YSS **Yuzhno-Sakhali** 79.51 39 P P 22 58 57.3 -0.2
YSS **Yuzhno-Sakhali** 79.51 39 P P 22 58 59.3 +1.8
YSS **Yuzhno-Sakhali** 79.51 39 eP P 22 58 58.0 +0.5
YSS eS S 23 09 00.0 +0.9
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,600nm,17.0s
YSS MLR MLR
comp=N,400nm,16.0s
YSS MLR MLR
comp=E,200nm,12.0s
H20K **Anotleneega Mo** 79.63 1 P P 22 58 56.7 -1.1
baz=358
G15K **Niukluk** 79.72 5 P P 22 58 56.9 -1.4
baz=350
J30M **Hart River** 79.80 353 P P 22 58 57.4 -1.5
baz=13
H18K **Honhosa River** 79.88 3 P P 22 58 57.4 -1.8
baz=355
POKR **Poker Plat Res** 79.97 358 IAmb IAmb 22 59 00.3
comp=Z,31nm,1.4s
POKR **Poker Plat Res** 79.97 358 P P 22 58 57.9 -1.7
baz=3.9
I21K **Tanana** 79.97 360 P P 22 58 58.3 -1.4
baz=0.1
I23K **Minto, Yukon-K** 79.98 359 IAmb IAmb 22 59 12.7
comp=Z,35nm,1.7s
I23K **Minto, Yukon-K** 79.98 359 P P 22 58 58.7 -1.0
baz=2.3
H17K **Granite Mounta** 80.03 3 P P 22 58 58.9 -1.1
baz=354
ANM **Nome** 80.04 6 P P 22 58 59.0 -1.1
baz=349,SNR=7.8
GAMB **Gambell** 80.16 9 P P 22 58 59.6 -1.1
baz=344
H16K **Elim** 80.19 4 P P 22 58 59.8 -1.1
baz=352,SNR=9.8
COLA **College** 80.22 358 P P 22 59 00.8 -0.2
COLA **College** 80.22 358 eP P 22 58 59.4 -1.6
COLA pmax pmax
comp=Z,18nm,1.4s
COLA **College** 80.22 358 P P 22 58 59.8 -1.2
baz=3.5
ILAR **Eielson Array** 80.30 358 P P 22 59 00.6 -0.8
comp=Z,1.9nm,0.8s,baz=352,slow=3.6,SNR=19
comp=Z,1.9nm,0.8s
ILAR **Eielson Array** 80.30 358 P P 22 58 60.0 -1.5
ILAR **Eielson Array** 80.30 358 P P 22 59 00.0 -1.5
GCSA **Galena City Sc** 80.33 2 P P 22 59 00.7 -0.9
baz=356
I20K **Naaghedeneel** 80.34 1 P P 22 59 00.6 -1.0
baz=358
J25K **Salcha River,** 80.40 357 P P 22 59 00.9 -1.2
baz=5.6
EGSI **Enggano, Bengk** 80.41 103 P P 22 59 04.4 +1.6
comp=Z,62nm,1.3s
J26L **Joseph Creek** 80.42 356 P P 22 59 00.9 -1.4
baz=7.1
CCB **Clear Creek Bu** 80.45 358 IAmb IAmb 22 59 02.2
comp=Z,21nm,1.3s
NEA2 **Nenana** 80.53 359 P P 22 59 01.6 -1.1
baz=2.5
WRH **Wood River Hil** 80.63 358 IAmb IAmb 22 59 11.3
comp=Z,21nm,0.9s
K29M **Barlow Dome** 80.63 354 P P 22 59 02.0 -1.4
baz=12
FFC **Flin Flon** 80.65 333 P P 22 59 01.6 -1.9
FFC **Flin Flon** 80.65 333 P P 22 59 01.6 -1.9
FFC pmax pmax
comp=Z,15nm,1.0s
HDA **Harding Lake** 80.66 358 IAmb IAmb 22 59 11.3
comp=Z,18nm,1.0s
HDA **Harding Lake** 80.66 358 P P 22 59 01.8 -1.6
baz=4.2,SNR=9.5
NBIT **Itapeh - BA** 80.90 245 eP P 22 59 06.5 +1.1
JNU **Nakatsue** 80.93 56 LR LR 23 41 40.1
comp=Z,167nm,18.2s,baz=311,slow=41
J20K **Nowinta River** 80.96 1 IAmb IAmb 22 59 13.8
comp=Z,20nm,0.8s
J20K **Nowinta River** 80.96 1 P P 22 59 04.4 -0.7
baz=358
SCRK **Sand Creek** 80.97 356 IAmb IAmb 22 59 14.0
comp=Z,19nm,1.2s
SCRK **Sand Creek** 80.97 356 P P 22 59 03.7 -1.5
baz=6.7,SNR=7.0
I17K **Unalakleet** 81.03 4 IAmb IAmb 22 59 13.3
comp=Z,27nm,1.4s
I17K **Unalakleet** 81.03 4 P P 22 59 04.3 -1.1
baz=353
BPAW **Bear Paw Mtn.** 81.05 360 P P 22 59 04.6 -0.9
baz=0.9,SNR=6.2
J19K **Poorman** 81.12 2 IAmb IAmb 22 59 14.8
comp=Z,35nm,1.2s
J19K **Poorman** 81.12 2 P P 22 59 05.0 -0.9
baz=357
K24K **Donnelly Dome** 81.22 357 P P 22 59 04.9 -1.6
K24K **Donnelly Dome** 81.22 357 P P 22 59 05.1 -1.4
baz=5.2,SNR=5.2
CMC01 **Camacan, BA** 81.23 244 eP P 22 59 08.3 +1.2
RIDG **Independent Ri** 81.25 357 IAmb IAmb 22 59 14.5
comp=Z,43nm,1.5s
RIDG **Independent Ri** 81.25 357 P P 22 59 05.1 -1.5
baz=6.0
CHUM **Lake Minchumin** 81.27 0 P P 22 59 05.4 -1.3
baz=360
DOT **Dot Lake** 81.30 356 IAmb IAmb 22 59 12.2
comp=Z,32nm,1.3s
MCK **McKinley** 81.39 359 IAmb IAmb 22 59 15.1
comp=Z,38nm,1.3s
MCK **McKinley** 81.39 359 P P 22 59 06.9 -0.4
baz=2.6,SNR=5.1
L29M **L29M** 81.41 354 P P 22 59 06.6 -0.9
baz=12
MDSI **Maura Dua** 81.42 102 P P 22 59 09.1 +0.9
comp=Z,35nm,1.3s
ULM **Lac du Bonnet** 81.53 327 P P 22 59 06.7 -1.6
comp=Z,2.8nm,0.5s,baz=63,slow=5.1,SNR=7.2
ULM LR LR 23 34 30.1
comp=Z,353nm,21.9s,baz=14,slow=35
comp=Z,2.8nm,0.5s
ULM **Lac du Bonnet** 81.53 327 IAmb IAmb 22 59 07.5
comp=Z,30nm,1.5s
J17K **VABM Dome** 81.60 3 P P 22 59 07.2 -1.2
baz=354
J18K **Innoko River** 81.62 2 P P 22 59 07.1 -1.5
baz=356
LWLI **Liwa** 81.64 102 P P 22 59 12.4 +2.9
J16K **Anvik River** 81.64 4 P P 22 59 07.6 -1.0
baz=353
TRF **Thorofare Moun** 81.70 359 IAmb IAmb 22 59 17.9
comp=Z,49nm,1.6s
TRF **Thorofare Moun** 81.70 359 P P 22 59 07.7 -1.5
baz=1.5
BCAR **Beaver Creek A** 81.74 355 P P 22 59 08.5 -0.8
L27K **Beaver Creek,** 81.75 355 P P 22 59 08.3 -1.0
baz=8.5,SNR=5.1
K20K **Telida** 81.79 1 P P 22 59 08.1 -1.4
baz=358
M30M **Minto, Yukon** 81.81 353 P P 22 59 08.7 -0.9
baz=13
PETK **Petropavlovsk-** 81.86 28 LR LR 23 39 59.7
comp=Z,292nm,18.4s,baz=325,slow=39
L26K **Log Cabin Wild** 81.88 356 IAmb IAmb 22 59 13.5
comp=Z,42nm,1.6s
L26K **Log Cabin Wild** 81.88 356 P P 22 59 09.1 -0.9
baz=7.2
M31M **Drury Creek, Y** 81.91 352 IAmb IAmb 22 59 10.8
comp=Z,24nm,1.4s
M31M **Drury Creek, Y** 81.91 352 P P 22 59 09.2 -0.9
baz=14
J14K **Nanvaranak Lak** 81.98 5 IAmb IAmb 22 59 18.1
comp=Z,40nm,1.6s
J14K **Nanvaranak Lak** 81.98 5 P P 22 59 09.2 -1.1
baz=350
DHY **Denali Highway** 82.01 358 P P 22 59 08.6 -2.2
baz=3.9,SNR=5.9
PAX **Paxson** 82.05 357 P P 22 59 09.5 -1.4
baz=5.5
M29M **Somme Creek** 82.10 354 P P 22 59 10.3 -0.9
baz=11
GUA01 **Guaratinga, BA** 82.23 244 eP P 22 59 13.2 +0.8
PPLA **Purkeypile** 82.26 0 P P 22 59 10.7 -1.4
baz=360
KOTAN **Kotaneelee Air** 82.26 346 P P 22 59 11.8 -0.1
baz=23
KASI **Kota Agung** 82.28 102 P P 22 59 16.2 +3.4
comp=Z,29nm,1.4s
WAT1 **Susitna Watana** 82.29 358 P P 22 59 11.2 -0.9
baz=2.9
K17K **Iditarod** 82.32 3 IAmb IAmb 22 59 12.7
comp=Z,20nm,1.1s
K17K **Iditarod** 82.32 3 P P 22 59 11.0 -1.2
baz=355
BVCY **Beaver Creek** 82.33 355 P P 22 59 11.5 -0.8
baz=9.2
G40A **Rib Lake** 82.33 321 IAmb IAmb 22 59 30.1
comp=Z,31nm,1.6s
M27K **Edge Creek, AK** 82.45 355 P P 22 59 11.6 -1.5
baz=8.4
M26K **Nabesna, AK** 82.48 356 P P 22 59 12.4 -0.7
baz=7.5
WAT6 **Susitna Watana** 82.52 358 P P 22 59 12.4 -1.0
baz=3.6,SNR=6.5
K15K **Wolf Creek Mou** 82.57 4 IAmb IAmb 22 59 22.4
comp=Z,29nm,1.2s
K15K **Wolf Creek Mou** 82.57 4 P P 22 59 13.1 -0.4
baz=352
HARP **HAARP** 82.60 357 P P 22 59 13.2 -0.6
Q51A **Peebles** 82.62 313 IAmb IAmb 22 59 14.3
comp=Z,27nm,1.3s
K13K **Kusilvak Mount** 82.69 6 P P 22 59 13.7 -0.5
baz=350
CUT **Chulitna** 82.75 359 P P 22 59 13.7 -0.7
baz=1.5
N32M **Quiet Lake** 82.76 351 P P 22 59 14.5 -0.1
baz=16
N31M **Braeburn, Yuko** 82.77 352 P P 22 59 14.2 -0.4
baz=13
N47A **Urbana** 82.81 316 P P 22 59 13.4 -1.7
N47A IAmb IAmb 22 59 14.7
comp=Z,24nm,1.0s
L18K **Granite Mounta** 82.87 2 P P 22 59 14.5 -0.6
baz=356
L17K **Donlin** 82.90 3 P P 22 59 14.6 -0.7
baz=355
YUK3 **Moose Creek** 82.93 354 P P 22 59 14.9 -0.8
baz=9.6
M24K **Tolsona, Glenn** 82.94 357 P P 22 59 14.8 -0.7
baz=4.9
AGMN **Agassiz Nation** 82.94 326 IAmb IAmb 22 59 15.4
comp=Z,28nm,1.6s
L19K **White Mountain** 82.95 1 IAmb IAmb 22 59 16.2
comp=Z,27nm,1.2s
L19K **White Mountain** 82.95 1 P P 22 59 14.9 -0.7
baz=358
SJG **San Juan** 82.99 287 LR LR 23 32 22.0
comp=Z,37nm,18.3s,baz=34,slow=33
WTLY **Watson Lake, Y** 83.13 348 IAmb IAmb 22 59 17.4
comp=Z,13nm,1.2s
WTLY **Watson Lake, Y** 83.13 348 P P 22 59 16.5 -0.1
baz=19
SKT **Skwentna** 83.18 360 P P 22 59 15.2 -1.5
baz=0.5
L15K **Ungalak Mounta** 83.18 4 P P 22 59 16.2 -0.6
baz=352
YUK4 **Talbot Arm** 83.20 354 P P 22 59 15.6 -1.5
baz=11
M19K **Big River Lodg** 83.24 1 P P 22 59 16.1 -0.9
baz=358
SCM **Sheep Creek Mo** 83.25 358 P P 22 59 16.4 -0.8
baz=3.9
L16K **Owhat River** 83.27 4 P P 22 59 16.7 -0.5
baz=354
M20K **Styx River** 83.28 0 P P 22 59 16.9 -0.4
baz=359
M23K **Glacier View** 83.31 358 P P 22 59 16.6 -0.8
baz=3.6
SML **Sawmill** 83.31 358 P P 22 59 17.2 -0.2
baz=3.1
V55A **Taylorsville** 83.31 309 IAmb IAmb 22 59 28.5
comp=Z,21nm,1.2s
YUK8 **Steele Glacier** 83.36 354 P P 22 59 16.9 -1.0
baz=10
GHO **Glory Hole Cre** 83.36 358 IAmb IAmb 22 59 25.9
comp=Z,20nm,1.0s
N25K **Chitina, Valde** 83.36 356 P P 22 59 16.9 -0.9
baz=6.2
M22K **Willow** 83.40 359 P P 22 59 17.6 -0.2
baz=1.6
SMTB **Santa Maria do** 83.40 254 eP P 22 59 19.1 +0.5
L14K **Kuka Creek** 83.44 5 P P 22 59 17.5 -0.4
baz=351
SDBA **SAO DESIDERIO** 83.45 250 eP P 22 59 19.5 +0.7
WHY **Whitehorse** 83.47 352 P P 22 59 17.4 -0.9
baz=14
MCARA **McCarthy VSAT** 83.50 356 P P 22 59 18.0 -0.4
baz=7.4
O30N **Mendenhall** 83.50 352 P P 22 59 17.9 -0.5
baz=13
KLU **Klutina** 83.54 357 P P 22 59 17.6 -1.1
baz=5.1
PMR **Palmer** 83.54 359 P P 22 59 17.5 -1.0
PMR **Palmer** 83.54 359 P P 22 59 18.0 -0.5
baz=2.4
YUK6 **Outpost Mounta** 83.56 353 P P 22 59 18.4 -0.6
baz=11
PRPB **Parauapebas** 83.57 258 eP P 22 59 20.3 +0.8
HYT **Haines Junctio** 83.60 353 P P 22 59 18.4 -0.7
baz=12
MJAR **Matsushiro Arr** 83.62 49 P P 22 59 19.4 -0.2
comp=Z,5.8nm,0.9s,baz=306,slow=4.2,SNR=8.2
MJAR LR LR 23 39 51.7
comp=Z,149nm,19.8s,baz=320,slow=38
comp=Z,5.8nm,0.9s
MJAR **Matsushiro Arr** 83.62 49 P P 22 59 19.3 -0.2
MJAR IAmb IAmb 22 59 25.8
comp=Z,14nm,1.2s
MJAR **Matsushiro Arr** 83.62 49 P P 22 59 19.3 -0.2
MJAR pmax pmax
comp=Z,14nm,1.2s
M18K **Stony River** 83.63 2 P P 22 59 18.3 -0.7
baz=357
P33M **Teslin, Yukon** 83.64 350 P P 22 59 18.9 -0.3
baz=16
M17K **Holitna River** 83.67 3 IAmb IAmb 22 59 28.4
comp=Z,22nm,1.0s
M17K **Holitna River** 83.67 3 P P 22 59 18.8 -0.4
baz=356
TOAD **Toad River Com** 83.68 346 P P 22 59 18.8 -0.6
baz=22
SUA **Sutna One** 83.69 359 P P 22 59 18.9 -0.7
baz=1.1
KNK **Knik Glacier** 83.71 358 P P 22 59 18.8 -0.7
baz=3.0
CTG **Chitna Glacier** 83.80 355 P P 22 59 18.9 -1.2
baz=8.8
O28M **Mount Upton** 83.90 354 P P 22 59 19.5 -1.3
baz=9.8
SBUM **Sibu** 83.95 91 IAmb IAmb 22 59 28.4
comp=Z,12nm,1.2s
SBUM **Sibu** 83.95 91 P P 22 59 25.7 +4.3
SBUM **Sibu** 83.95 91 P P 22 59 23.5 +2.1
M16K **Timber Creek** 83.98 3 P P 22 59 19.2 -1.6
baz=354
BMRM **Bremner River** 84.00 356 P P 22 59 20.2 -0.9
baz=6.1
RC01 **Rabbit Creek A** 84.06 359 P P 22 59 20.9 -0.3
baz=1.9
M14K **Bethel** 84.07 5 P P 22 59 20.8 -0.5
baz=352
M11K **Mekoryuk** 84.08 7 P P 22 59 21.7 +0.4
baz=348
CRQE **Cirque** 84.13 356 P P 22 59 21.6 -0.1
baz=7.4
R33M **Jennings River** 84.16 349 IAmb IAmb 22 59 23.2
comp=Z,16nm,1.1s
R33M **Jennings River** 84.16 349 P P 22 59 21.6 -0.3
baz=17
GLI **Glacier Island** 84.20 358 P P 22 59 21.4 -0.5
baz=4.1
M15K **Kasigluk River** 84.21 4 P P 22 59 21.2 -0.7
baz=353
O29M **Mount Kennedy** 84.22 353 P P 22 59 21.5 -0.7
baz=11
P30M **Million Dollar** 84.23 352 P P 22 59 21.5 -0.7
baz=12
M13K **Dall Lake** 84.31 6 P P 22 59 22.3 -0.2
baz=351
N19K **Bonanza Creek** 84.33 1 P P 22 59 22.7 -0.1
baz=358
P32M **Atlin** 84.36 351 P P 22 59 22.8 -0.1
baz=15
CAPN **Captain Cook N** 84.40 360 P P 22 59 22.7 -0.2
baz=0.8
RIB01 **Linhares ES** 84.41 242 eP P 22 59 24.5 +0.9
BSFB **Barra de Sao F** 84.42 242 eP P 22 59 24.9 +1.2
N18K **Kilae Creek** 84.44 2 P P 22 59 23.1 0.0
baz=357
EYAK **Cordova Ski Ar** 84.48 357 P P 22 59 23.0 -0.3
baz=5.2
N16K **Nishlik Lake** 84.54 3 P P 22 59 23.7 0.0
baz=354
N17K **Nushagak Hills** 84.55 3 P P 22 59 23.4 -0.3
baz=356
PINM **Pinnacle** 84.57 354 P P 22 59 24.0 0.0
baz=9.7
SJMB **Sao Joao De Ma** 84.59 243 eP P 22 59 25.5 +1.0
MESA **MESA** 84.62 355 P P 22 59 24.2 -0.2
baz=8.3
JANB **Januaria** 84.63 248 eP P 22 59 25.1 +0.2
O22K **Cooper Landing** 84.67 359 P P 22 59 24.1 -0.2
baz=1.9
SKAG **Skagway** 84.69 351 P P 22 59 24.7 +0.3
baz=14
Q32M **Nakina River** 84.77 350 P P 22 59 24.5 -0.6
baz=16
BGLC **Bering Glacier** 84.77 356 P P 22 59 24.6 -0.2
baz=7.2
N15K **Kwethluk River** 84.77 4 P P 22 59 24.1 -0.8
baz=353
I37A **Lemond, Waseca** 84.83 322 P P 22 59 24.2 -1.3
N14K **Kuskokwak Cree** 84.92 5 P P 22 59 24.6 -0.9
baz=352
DLBC **Dease Lake** 84.92 349 LR LR 23 39 39.3
comp=Z,257nm,20.1s,baz=346,slow=37
DLBC **Dease Lake** 84.92 349 P P 22 59 26.4 +0.6
baz=18
F33A **5 Mile Ranch,** 84.94 325 IAmb IAmb 22 59 25.5
comp=Z,23nm,1.4s
KAIM **Kayak Island** 85.03 356 P P 22 59 25.0 -1.2
baz=6.3
SEW **Seward** 85.04 359 P P 22 59 25.3 -0.8
baz=2.2
TKL **Tuckaleechee C** 85.04 311 LR LR 23 38 29.2
comp=Z,218nm,18.7s,baz=46,slow=36
TKL **Tuckaleechee C** 85.04 311 IAmb IAmb 22 59 44.9
comp=Z,14nm,1.1s
P23K **Montague Islan** 85.09 358 P P 22 59 25.9 -0.6
baz=3.8
O18K **Koktuh Hills** 85.28 2 P P 22 59 27.0 -0.5
baz=357
O17K **Koliganek Bris** 85.31 3 P P 22 59 26.6 -1.0
baz=356
BRSE **Bradley Lake S** 85.42 359 P P 22 59 28.0 -0.1
baz=1.1
O16K **Kokwok River B** 85.45 3 P P 22 59 28.5 +0.3
baz=355
LEM **Lembang** 85.55 101 LR LR 23 42 54.9
comp=Z,224nm,18.1s,baz=354,slow=39
S34M **Telegraph Cree** 85.60 349 P P 22 59 30.0 +0.9
baz=17
O14K **Tigyukauivet M** 85.61 5 P P 22 59 28.3 -0.7
baz=352
U49A **Red Boiling Sp** 85.72 312 IAmb IAmb 22 59 30.4
comp=Z,22nm,1.0s
EDM **Edmonton** 85.75 338 IAmb IAmb 22 59 29.7
comp=Z,21nm,1.0s
O15K **Ungalikthiuk R** 85.78 4 P P 22 59 30.3 +0.4
baz=354
P16K **Nushagak River** 86.01 3 P P 22 59 31.7 +0.7
baz=355
DIAM **Diamantina, MG** 86.16 245 eP P 22 59 33.4 +0.8
T47A **Sharon Grove** 86.20 313 IAmb IAmb 22 59 41.7
comp=Z,23nm,1.2s
S31K **Pelican** 86.26 352 P P 22 59 33.1 +0.9
baz=13
GOGA **Godfrey** 86.29 309 P P 22 59 31.7 -1.2
GOGA IAmb IAmb 22 59 33.9
comp=Z,23nm,1.2s
GOGA **Godfrey** 86.29 309 P P 22 59 31.7 -1.2
GOGA pmax pmax
comp=Z,23nm,1.3s
W50A **Signal Mountai** 86.29 311 IAmb IAmb 22 59 33.6
comp=Z,29nm,1.2s
Q16K **King Salmon** 86.42 2 P P 22 59 32.5 -0.5
baz=356
S32K **Killisnoo** 86.53 351 P P 22 59 34.1 +0.5
baz=14
ECSD **EROS Data Cent** 86.64 323 IAmb IAmb 22 59 34.4
comp=Z,41nm,1.9s
JHJ **Hachijo jima 2** 86.81 51 LR LR 23 41 36.4
comp=Z,164nm,18.3s,baz=318,slow=38
SIT **Sitka** 87.03 351 P P 22 59 36.3 +0.2
baz=14
WRAK **Wrangell Islan** 87.23 349 P P 22 59 37.5 +0.5
baz=16
P40A **Paris** 87.29 318 IAmb IAmb 22 59 37.6
comp=Z,13nm,0.9s
ITTB **Itaituba** 87.30 263 eP P 22 59 38.4 +0.3
BOAV **Boa Vista** 87.35 271 P P 22 59 38.0 -0.4
BOAV IAmb IAmb 22 59 40.1
comp=Z,27nm,1.4s
BOAV **Boa Vista** 87.35 271 eP P 22 59 38.4 0.0
P08K **Saint George I** 87.38 10 P P 22 59 37.5 -0.3
baz=346
KDAK **Kodiak Island** 87.39 0 P P 22 59 37.4 -0.4
baz=360
FVM **French Village** 87.46 316 IAmb IAmb 22 59 38.8
comp=Z,14nm,0.9s
R16K **Pilot Point** 87.49 3 P P 22 59 38.3 0.0
baz=356
U33K **Whale Pass** 87.64 349 P P 22 59 39.5 +0.5
baz=15
BDFB **Brasilia** 87.80 249 P P 22 59 40.5 -0.1
comp=Z,16nm,0.8s,baz=91,slow=3.6,SNR=25
BDFB LR LR 23 41 42.3
comp=Z,358nm,18.1s,baz=63,slow=38
comp=Z,16nm,0.8s
BDFB **Brasilia** 87.80 249 P P 22 59 41.1 +0.5
BDFB **Brasilia** 87.80 249 P P 22 59 41.1 +0.5
BDFB pmax pmax
comp=Z,17nm,0.8s
CCM **Cathedral Cave** 87.88 316 P P 22 59 39.4 -1.2
CCM IAmb IAmb 22 59 40.6
comp=Z,14nm,0.9s
CCM **Cathedral Cave** 87.88 316 P P 22 59 39.4 -1.2
CCM pmax pmax
comp=Z,14nm,0.9s
OHAK **Old Harbor** 87.95 1 P P 22 59 40.5 0.0
baz=359
V35K **Ketchikan** 88.16 348 P P 22 59 42.3 +0.7
baz=17
SNDB **Serra Nova Dou** 88.17 254 eP P 22 59 43.1 +0.9
PMNB **Patos De Minas** 88.37 246 eP P 22 59 44.1 +0.9
T42A **Van Buren** 88.50 316 IAmb IAmb 22 59 43.7
comp=Z,18nm,1.2s
NPGB **Novo Progresso** 88.54 260 eP P 22 59 44.3 +0.3
SII **Sitkinak Islan** 88.60 1 P P 22 59 44.2 +0.6
baz=358
CHIR **Chirikof Islan** 89.31 2 P P 22 59 47.6 +0.6
baz=357
RSSD **Black Hills** 89.80 328 P P 22 59 48.8 -1.0
RSSD IAmb IAmb 22 59 50.0
comp=Z,17nm,1.3s
RSSD **Black Hills** 89.80 328 P P 22 59 48.8 -1.0
RSSD pmax pmax
comp=Z,17nm,1.3s
UNV **Unalaska Valle** 90.47 8 P P 22 59 54.3 +1.9
baz=348
BBB **Bella Bella** 90.51 346 LR LR 23 41 24.1
comp=Z,173nm,18.7s,baz=17,slow=36
MACA **Manacapuru-AM** 90.65 267 eP P 22 59 54.6 +0.7
ARAG **Araguaiana, MT** 90.77 251 eP P 22 59 55.7 +1.4
U38A **Gravette** 90.79 317 IAmb IAmb 22 59 53.9
comp=Z,10.0nm,1.1s
NIKH **Nikolski High** 91.01 10 P P 22 59 57.1 +2.2

baz=346
CLDB Colider 91.10 258 eP P 22 59 56.3 +0.3
RLMT Red Lodge 91.16 331 IAmb IAmb 22 59 57.0
comp=Z,18nm,1.5s
NEW Newport 91.25 337 P P **22 59 55.4 -0.9**
comp=Z,2.8nm,0.7s,baz=45,slow=6.0,SNR=6.9
NEW LR LR 23 44 28.0
comp=Z,162nm,18.6s,baz=28,slow=38
comp=Z,2.8nm,0.7s
MPSI Mapaga 91.44 89 P P **22 59 58.3 +0.7**
MSO Missoula 91.45 335 IAmb IAmb 22 59 57.1
comp=Z,12nm,1.4s
YNE Yellowstone No 91.55 332 IAmb IAmb 22 59 58.5
comp=Z,12nm,1.2s
BOZ Bozeman (W) 91.67 333 IAmb IAmb 22 59 58.8
comp=Z,9.9nm,1.1s
MIAR Mount Ida 91.68 315 P P **22 59 57.5 -0.9**
MIAR IAmb IAmb 22 59 58.9
comp=Z,10nm,1.1s
MIAR Mount Ida 91.68 315 P P **22 59 57.5 -0.9**
MIAR pmax pmax
comp=Z,10.0nm,1.2s
SDV Santo Domingo 91.84 282 LR LR 23 38 32.7
comp=Z,36nm,21.3s,baz=74,slow=34
SDV Santo Domingo 91.84 282 P P **22 59 58.2 -1.6**
SDV IAmb IAmb 23 00 00.3
comp=Z,14nm,1.1s
SDV Santo Domingo 91.84 282 eP P **22 59 59.0 -0.8**
K22A Casper 92.06 328 IAmb IAmb 22 59 59.2
comp=Z,16nm,1.2s
YHL Hebgen Lake 92.13 332 IAmb IAmb 23 00 10.8
comp=Z,15nm,1.5s
PDRB Porto dos Gac 92.27 257 eP P **23 00 01.5 +0.1**
LOHW Long Hollow 92.95 331 IAmb IAmb 23 00 09.7
comp=Z,5.4nm,0.6s
PDAR Pinedale Array 93.24 330 P P **23 00 04.1 -1.7**
comp=Z,3.1nm,1.2s,baz=77,slow=3.2,SNR=6.8
PDAR LR LR 23 44 58.3
comp=Z,251nm,18.9s,baz=22,slow=38
comp=Z,3.1nm,1.2s
PDAR Pinedale Array 93.24 330 P P **23 00 03.3 -2.5**
ISCO Idaho Springs 93.95 326 IAmb IAmb 23 01 35.2
comp=Z,11nm,1.6s
BMO Blue Mountains 94.32 336 IAmb IAmb 23 00 12.3
comp=Z,15nm,1.8s
KAPI Kappang 94.36 93 LR LR 23 50 19.7
comp=Z,88nm,18.2s,baz=282,slow=40
MFID Camas Ranch 95.08 334 IAmb IAmb 23 00 14.2
comp=Z,7.7nm,1.1s
YBH Yreka Blue Hor 98.85 338 LR LR 23 47 37.8
comp=Z,19nm,18.8s,baz=26,slow=37
WRA Warramunga Arr 114.36 98 PKP PKPdf 23 05 29.0 -2.1
comp=Z,0.6nm,0.9s,baz=299,slow=1.9,SNR=4.9
ASAR Alice Springs 115.84 102 PKP **PKPdf 23 05 32.2 -1.8**
comp=Z,0.9nm,0.7s,baz=253,slow=1.5,SNR=6.8
ASAR Alice Springs 115.84 102 PKPdf **PKPdf 23 05 33.6 -0.4**
CTA Charters Tower 124.15 92 PKP **PKPdf 23 05 49.3 -0.7**
comp=Z,7.9nm,1.1s,baz=288,slow=3.2,SNR=3.8
QSPA South Pole Qui 125.03 180 PKP **PKPdf 23 05 50.1 -0.1**
comp=Z,6.4nm,0.9s,baz=220,slow=4.2,SNR=4.5
QSPA South Pole Qui 125.03 180 PKPdf 23 05 49.5 -0.8
STKA Stephens Creek 125.55 107 PKP **PKiKP 23 05 52.6 -0.1**
comp=Z,7.5nm,1.1s,baz=298,slow=3.2,SNR=2.8
DZM Mont Dzumac 141.60 81 eLR LR 23 52 24.6
comp=Z,257nm,32.0s
MSVF Nonsavu 148.29 65 PKPbc 23 06 38.4 +0.7
MSVF Nonsavu 148.29 65 PKP2 **PKPbc 23 06 38.4 +0.7**
PPT2 Papeete2 162.34 352 eLR LR 00 01 58.1
comp=Z,138nm,25.2s
PPT2 eLR LR 00 02 00.3
comp=Z,114nm,22.5s
TBI Tubuai 167.99 348 eLR LR 00 04 33.7
comp=Z,1μm,26.2s
TBI eLR LR 00 04 34.3
comp=Z,796nm,28.2s

*IDC **10** 23:23:06.4±2.4,5°.03S×128°.89E, h0km, mb3.8/1, mbtmp3.7/3, ML3.5/2, Error ellipse: s-maj=170.1km s-min=31.4km az=68.0*
*NEIC **10** 23:23:31.1±2.2,5°.65S±0°.1×129°.3E±0°.2, h248km±13km, mb4.2/3, Error ellipse: s-maj=25.1km s-min=16.3km az=79.0*
ISC 10 23:23:30.8±1.1,5°.63S±0°.10×129°.3E±0°.2, h250km, n12, σ1s35/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.02**	**48**	Pn	**Pn**	**23 24 34.6**	**-0.3**
MTN	**Manton Dam**	**7.40**	**166**	Pn	**Pn**	**23 25 17.0**	**+0.4**
KNRA	**Kununurra**	**9.99**	**183**	Pn	**Pn**	**23 25 49.9**	**+0.6**
WB0	**Warramunga Arr**	**14.91**	**161**	P	**P**	**23 26 48.0**	**-1.7**
WRA	**Warramunga Arr**	**15.06**	**161**	P	**P**	**23 26 50.7**	**-0.6**
	0.1nm,0.3s,baz=343,slow=12,SNR=5.0						
WRA				Sn	**S**	**23 29 36.0**	**-2.0**
	0.1nm,0.3s,baz=338,slow=22,SNR=2.3						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**15.06**	**161**	P	**P**	**23 26 51.1**	**-0.3**
COEN	**Coen**	**16.01**	**122**	P	**P**	**23 27 02.9**	**+1.0**
COEN				IAmb	IAmb	23 27 39.6	
	comp=Z,12nm,1.2s						
PSA00	**Pilbara Seismi**	**18.28**	**209**	P	**P**	**23 27 25.9**	**-0.7**
PSA00				IAmb	IAmb	23 27 27.2	
	comp=Z,24nm,1.3s						
AS31	**Alice Springs**	**18.48**	**166**	P	**P**	**23 27 30.1**	**+1.4**
AS31				IAmb	IAmb	23 27 31.6	
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**18.48**	**166**	P	**P**	**23 27 31.1**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=349,slow=12,SNR=32						
	comp=Z,2.3nm,0.5s						
ASAR	**Alice Springs**	**18.48**	**166**	P	**P**	**23 27 29.8**	**+1.1**
MKAR	**Makanchi Array**	**66.69**	**327**	P	**P**	**23 33 54.7**	**-0.3**
	comp=Z,1.3nm,1.3s,baz=131,slow=7.9,SNR=1.8						
	comp=Z,1.3nm,1.3s						

*IDC **10** 23:39:32.2±3.1,5°.87S×129°.35E, h120km±34km, mb3.6/4, mbtmp4.2/7, MS3.9/1, Error ellipse: s-maj=57.1km s-min=17.7km az=82.0*
*NEIC **10** 23:39:33.7±2.5,5°.89S±0°.05×129°.8E±0°.1, h146km±12km, mb4.2/8, Error ellipse: s-maj=21.4km s-min=7.5km az=89.0*
*DJA **10** 23:39:57.6±0.5,3°.S±6°×13°.0E±°, h103km±8km, M4.7/7, mb5.3/1, MLv4.3/7*
ISC 10 23:39:33.1±0.6,5°.88S±0°.05×129°.84E±0°.07, h146km, n28, σ2s48/31, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.55**	**145**		**Pn**	**23 40 12.7**	**-1.9**
SAUI					**Sn**	**23 40 46.1**	**-0.5**
MSAI	**Masohi**	**2.67**	**340**	P	**Pn**	**23 40 20.9**	**+4.7**
KRAI	**Karang Ratu**	**2.92**	**330**	P	Pn	23 40 25.4	+6.1
KRAI				S	**Sn**	**23 40 50.0**	**-5.0**
FAKI	**Fak Fak**	**3.80**	**39**		**Pn**	**23 40 31.9**	**+1.3**
FAKI				Sn	**Sn**	**23 41 11.2**	**-4.1**
FAKI	**Fak Fak**	**3.80**	**39**	P	**Pn**	**23 40 32.0**	**+1.3**
SIJI	**Sorong**	**5.18**	**16**	P	**Pn**	**23 40 49.9**	**+1.1**
	34nm,0.3s,baz=197,slow=23,SNR=36						
SIJI				S	**Sn**	**23 41 46.6**	**-1.3**
	64nm,0.3s,baz=250,slow=23,SNR=20						
RKPI	**Ransiki, Papua**	**6.13**	**45**	P	**Pn**	**23 41 03.6**	**+2.1**
MTN	**Manton Dam**	**7.04**	**170**		**Pn**	**23 41 14.7**	**+1.0**
BAKI	**Biak**	**7.80**	**54**	P	**Pn**	**23 41 27.6**	**+3.7**
KNRA	**Kununurra**	**9.79**	**186**		**Pn**	**23 41 50.0**	**-0.5**
FITZ	**Fitzroy Crossi**	**12.82**	**198**	P	**Pn**	**23 42 28.2**	**-1.9**
	4.3nm,0.6s,baz=19,slow=13,SNR=20						
FITZ				S	Sn	23 44 41.4	-10
	8.3nm,0.4s,baz=72,slow=22,SNR=6.4						
WB0	**Warramunga Arr**	**14.50**	**163**		**Pn**	**23 42 50.3**	**-1.2**
WRA	**Warramunga Arr**	**14.65**	**163**	P	**Pn**	**23 42 52.6**	**-0.8**
	2.0nm,0.3s,baz=346,slow=12,SNR=28						
WRA				S	Sn	23 45 23.1	-13
	7.0nm,0.4s,baz=334,slow=24,SNR=14						
WRA	**Warramunga Arr**	**14.65**	**163**		**Pn**	**23 42 51.6**	**-1.8**
COEN	**Coen**	**15.39**	**122**		**P**	**23 43 04.5**	**+0.5**
COEN				IAmb	IAmb	23 43 48.4	
	comp=Z,15nm,1.2s						
KKM	**Kota Kinabalu**	**18.03**	**311**	P	**P**	**23 43 33.9**	**+0.7**
KKM				IAmb	IAmb	23 43 44.1	
	comp=Z,19nm,1.1s						
MBWA	**Marble Bar**	**18.07**	**212**	P	**P**	**23 43 32.9**	**-0.7**
MBWA				IAmb	IAmb	23 43 36.8	
	comp=Z,24nm,1.2s						
AS31	**Alice Springs**	**18.11**	**168**		**P**	**23 43 35.1**	**+1.1**
ASAR	**Alice Springs**	**18.11**	**168**	P	**P**	**23 43 35.2**	**+1.2**
	comp=Z,9.2nm,0.5s,baz=347,slow=10.0,SNR=125						
ASAR				S	**S**	**23 46 47.3**	**-6.8**
	comp=Z,3.9nm,0.9s,baz=358,slow=24,SNR=4.3						
PSA00	**Pilbara Seismi**	**18.36**	**211**	P	**P**	**23 43 37.2**	**+0.6**
STKA	**Stephens Creek**	**28.11**	**158**	P	**P**	**23 45 15.3**	**+4.0**
	comp=Z,1.1nm,0.6s,baz=354,slow=8.2,SNR=3.1						
	comp=Z,1.1nm,0.6s						
STKA	**Stephens Creek**	**28.11**	**158**	P	**P**	**23 45 10.8**	**-0.4**
JCJ	**Chichijima**	**34.89**	**19**	LR	LR	23 58 20.2	
	comp=Z,186nm,19.3s,baz=283,slow=32						
SONM	**Songino Array**	**57.33**	**341**	P	**P**	**23 49 05.5**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=167,slow=6.4,SNR=6.4						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**57.33**	**341**	P	**P**	**23 49 06.1**	**+0.2**
MKAR	**Makanchi Array**	**67.20**	**327**	P	**P**	**23 50 12.3**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=122,slow=7.8,SNR=26						
	comp=Z,1.9nm,0.6s						
KURBB	**Kurchatov Arra**	**71.47**	**328**	P	**P**	**23 50 38.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=125,slow=4.9,SNR=3.4						
	comp=Z,0.6nm,0.3s						
KURK	**Kurchatov**	**71.48**	**328**	P	**P**	**23 50 36.9**	**-0.8**
KURK				IAmb	IAmb	23 50 39.1	
	comp=Z,3.7nm,1.4s						

*IDC **10** 23:49:04.5±1.8,50°.38N×32°.56W, h0km, mb3.8/10, mbtmp3.9/11, ML4.1/1, MS3.4/1, Error ellipse: s-maj=62.5km s-min=18.5km az=173.0*
*NEIC **10** 23:49:07.1±1.2,50°.5N±0°.1×32°.6W±0°.2, h10km±2km, mb4.4/8, Error ellipse: s-maj=25.4km s-min=12.0km az=129.0*
ISC 10 23:49:05.9±1.2,50°.4N±0°.3×32°.54W±0°.10, h10km, n24, σ0s72/23, mb4.0/13, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRLN	**Deer Lake**	**16.14**	**276**	Pn	**Pn**	**23 52 52.3**	**-0.3**
DRLN				IAmb	IAmb	23 53 25.0	
	comp=Z,21nm,1.1s						
EKA	**Eskdalemuir Ar**	**18.35**	**63**	P	**P**	**23 53 20.6**	**+0.4**
	baz=275,slow=12						
	comp=Z,7.2nm,0.9s						
SCHQ	**Schefferville**	**21.17**	**295**	P	**P**	**23 53 49.9**	**-1.2**
	comp=Z,3.8nm,0.7s,baz=106,slow=6.2,SNR=10						
	comp=Z,3.8nm,0.7s						
SUMG	**Summit**	**22.45**	**355**	P	**P**	**23 54 05.3**	**+0.2**
NOA	**NORSAR Array B**	**26.36**	**49**	P	**P**	**23 54 41.9**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=268,slow=9.0,SNR=2.1						
	comp=Z,1.4nm,0.9s						
FINES	**FINESS Array B**	**33.51**	**48**	P	**P**	**23 55 44.9**	**-0.2**
	comp=Z,6.1nm,1.1s,baz=297,slow=10,SNR=4.6						
	comp=Z,6.1nm,1.1s						
FINES	**FINESS Array B**	**33.51**	**48**	P	**P**	**23 55 45.1**	**0.0**
FIA1	**FINESS Array S**	**33.52**	**48**	P	**P**	**23 55 46.5**	**+1.4**
FVM	**French Village**	**42.30**	**276**	P	**P**	**23 57 00.3**	**+0.8**
FVM				IAmb	IAmb	23 57 01.3	
	comp=Z,6.4nm,0.8s						
CCM	**Cathedral Cave**	**42.77**	**277**	P	**P**	**23 57 03.9**	**+0.5**
CCM				IAmb	IAmb	23 57 05.4	
	comp=Z,7.5nm,0.8s						
YKA	**Yellowknife Ar**	**43.85**	**318**	P	**P**	**23 57 11.3**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=62,slow=8.5,SNR=5.2						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**46.50**	**77**	P	**P**	**23 57 32.3**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=316,slow=8.1,SNR=2.1						
	comp=Z,0.7nm,0.8s						
SDV	**Santo Domingo**	**51.98**	**231**	LR	LR	00 17 51.6	
	comp=Z,34nm,20.4s,baz=13,slow=33						
SAND	**Sanderson**	**54.87**	**276**	P	**P**	**23 58 36.6**	**+0.1**
TX31	**Lajitas Ar. Si**	**56.28**	**277**	P	**P**	**23 58 47.4**	**+0.7**
TXAR	**Lajitas Array**	**56.28**	**277**	P	**P**	**23 58 47.3**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=62,slow=7.2,SNR=10						
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**58.30**	**44**	P	**P**	**23 59 00.1**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=305,slow=5.1,SNR=4.3						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**63.53**	**41**	P	**P**	**23 59 35.1**	**-0.9**
KURK				IAmb	IAmb	00 00 02.7	
	comp=Z,3.4nm,1.2s						
ZALV	**Zalesovo Beam**	**63.55**	**36**	P	**P**	**23 59 36.3**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=322,slow=9.1,SNR=2.0						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**63.55**	**36**	P	**P**	**23 59 37.2**	**+1.1**
KURBB	**Kurchatov Arra**	**63.56**	**42**	P	**P**	**23 59 37.1**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=322,slow=7.2,SNR=7.3						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**68.09**	**42**	P	**P**	**00 00 06.3**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=327,slow=6.5,SNR=8.9						
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**147.91**	**24**	PKPbc	**PKPbc**	**00 08 51.1**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=344,slow=2.6,SNR=5.0						
ASAR	**Alice Springs**	**151.34**	**27**	PKPbc	**PKPbc**	**00 08 59.2**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=353,slow=2.3,SNR=5.0						

*IDC **11** 00:18:42.5±1.0,6°.14S×143°.46E, h0km, mb3.8/8, mbtmp3.9/11, ML1.5/1, MS3.5/10, Error ellipse: s-maj=28.1km s-min=19.4km az=76.0*
ISC 11 00:18:47.3±0.7,6°.32S±0°.10×143°.3E±0°.1, h35km, n18, σ1s49/14, mb3.9/7, MS3.4/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.58**	**325**	Pn	**Pn**	**00 19 52.8**	**-1.4**
	23nm,0.5s,baz=135,slow=7.5,SNR=7.5						
JAY				Sn	**Sn**	**00 20 48.3**	**+2.0**
	2.2nm,0.3s,baz=75,slow=9.5,SNR=4.6						
JAY				LR	LR	00 21 52.3	
	comp=Z,752nm,19.2s,baz=102,slow=42						
PMG	**Port Moresby**	**4.89**	**129**	Pn	**Pn**	**00 19 58.5**	**0.0**
	1.5nm,0.3s,baz=10,slow=17,SNR=2.2						
PMG				Sn	**Sn**	**00 20 54.7**	**+0.8**
	3.4nm,0.3s,baz=244,slow=21,SNR=6.9						
	16nm,0.6s						
CTA	**Charters Tower**	**13.98**	**168**	LR	LR	00 27 43.0	
	comp=Z,137nm,18.4s,baz=28,slow=38						
WRA	**Warramunga Arr**	**16.11**	**212**	Pn	**Pn**	**00 22 28.1**	**-3.1**
	0.3nm,0.3s,baz=30,slow=12,SNR=14						
WRA				Lg	Lg	00 27 19.9	
	0.1nm,0.3s,baz=6.8,slow=23,SNR=5.1						
ASAR	**Alice Springs**	**19.48**	**207**	P	**Pn**	**00 23 14.8**	**+2.1**
	15nm,0.6s,baz=32,slow=11,SNR=182						
ASAR				Lg	Lg	00 29 08.9	
	baz=35,slow=29						
ASAR				LR	LR	00 30 14.5	
	comp=Z,126nm,18.2s,baz=30,slow=35						
BATI	**Baumata**	**19.82**	**257**	LR	LR	00 32 31.7	
	comp=Z,99nm,19.2s,baz=66,slow=42						
FITZ	**Fitzroy Crossi**	**20.84**	**234**	P	**P**	**00 23 27.1**	**+1.0**
	5.0nm,0.8s,baz=72,slow=12,SNR=7.3						
FITZ				LR	LR	00 32 58.0	
	comp=Z,89nm,20.3s,baz=32,slow=41						
	5.0nm,0.8s						
LEM	**Lembang**	**35.46**	**267**	LR	LR	00 42 19.3	
	comp=Z,43nm,20.6s,baz=167,slow=40						
JHJ	**Hachijo jima 2**	**39.36**	**355**	LR	LR	00 43 17.7	
	comp=Z,82nm,18.3s,baz=112,slow=38						
KSRS	**Korea Array**	**45.85**	**343**	P	**P**	**00 27 06.2**	**0.0**
	0.6nm,0.4s,baz=152,slow=7.9,SNR=4.5						
KSRS				LR	LR	00 44 18.9	
	comp=Z,32nm,20.1s,baz=340,slow=34						
	0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**50.20**	**300**	P	**P**	**00 27 40.4**	**+0.2**
	1.8nm,0.3s,baz=113,slow=7.7,SNR=5.3						
	1.8nm,0.3s						
RAR	**Rarotonga**	**56.94**	**111**	LR	LR	00 50 50.1	
	comp=Z,47nm,18.6s,baz=238,slow=34						
SONM	**Songino Array**	**62.95**	**333**	P	**P**	**00 29 10.5**	**0.0**
	0.2nm,0.8s,baz=147,slow=6.8,SNR=1.9						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**75.44**	**322**	P	**P**	**00 30 27.9**	**+0.2**
	0.5nm,1.0s,baz=111,slow=6.6,SNR=5.1						
	0.5nm,1.0s						
KURBB	**Kurchatov Arra**	**79.31**	**324**	P	**P**	**00 30 50.5**	**+1.3**
	0.5nm,0.9s,baz=106,slow=4.6,SNR=3.0						
	0.5nm,0.9s						
QSPA	**South Pole Qui**	**83.65**	**180**	LR	LR	01 08 32.2	
	comp=Z,87nm,18.9s,baz=358,slow=36						
BVAR	**Borovoye Array**	**84.88**	**325**	P	**P**	**00 31 18.7**	**+0.3**
	1.1nm,0.8s,baz=129,slow=4.0,SNR=6.2						
	1.1nm,0.8s						
ILAR	**Eielson Array**	**87.23**	**24**	P	**P**	**00 31 28.6**	**-1.2**
	0.7nm,0.8s,baz=251,slow=5.7,SNR=5.3						
	0.7nm,0.8s						

IDC 11 00:48:50.3±3.5,21°.58S×178°.60W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=179.7km s-min=43.8km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.82**	**245**	P	**P**	**00 56 00.3**	**+0.1**
	0.5nm,0.4s,baz=63,slow=8.7,SNR=1.5						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**43.74**	**258**	P	**P**	**00 56 57.4**	**-0.4**
	2.0nm,0.7s,baz=96,slow=7.9,SNR=19						
	2.0nm,0.7s						
WRA	**Warramunga Arr**	**43.91**	**263**	P	**P**	**00 56 59.0**	**-0.1**
	2.2nm,0.5s,baz=99,slow=7.1,SNR=37						
	2.2nm,0.5s						
HFS	**Hagfors**	**140.51**	**350**	PKP	PKPdf	01 08 18.6	-2.6
	1.2nm,0.3s,baz=354,slow=2.9,SNR=13						
AKASG	**Malin Array Be**	**143.67**	**330**	PKP	PKPdf	01 08 26.3	-0.8
	0.7nm,0.4s,baz=41,slow=3.3,SNR=4.4						
BRTR	**Keskin Array B**	**147.13**	**311**	PKPbc	PKPbc	01 08 35.7	-0.1
	1.1nm,1.1s,baz=61,slow=2.9,SNR=3.6						
MMAI	**Mount Meron Ar**	**147.84**	**298**	PKPbc	PKPbc	01 08 37.1	-0.7
	1.3nm,0.6s,baz=67,slow=3.7,SNR=8.1						

*SOME **11** 01:18:44.9, 42°.35N×80°.32E, h10km*
*KRNET **11** 01:18:45.8±0.1, 42°.35N×80°.38E, mb2.8*
ISC 11 01:18:37.3±3.1, 42°.31N±0°.08×80°.9E±0°.2, h10km±15km, n17, σ2s19/34, 10C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.36**	**309**	eP	**Pn**	**01 19 01.7**	**-0.7**
	9.0nm,0.2s						
SHLS				eS	**Sn**	**01 19 13.5**	**-7.0**
	71nm,0.5s						
UZB	**Uzynbulak**	**1.62**	**302**	eP	**Pb**	**01 19 08.3**	**+1.0**
	6.4nm,0.3s						
UZB				eS	**Sn**	**01 19 25.2**	**-1.8**
	5.6nm,0.2s						
PRZ	**Przheval'sk**	**1.86**	**276**	↑eP	**Pg**	**01 19 13.4**	**+0.5**
PRZ				↑eS	**Sn**	**01 19 33.5**	**+0.6**
KPKS	**Kokpek**	**2.00**	**306**	eP	**Pb**	**01 19 15.0**	**+1.3**
	0.4nm,0.3s						
KPKS				eS	**Sn**	**01 19 36.9**	**+0.6**
	19nm,0.2s						
TARG	**Taragay, Kyrgy**	**2.37**	**257**	↑eP	**Pg**	**01 19 22.7**	**-0.1**
TARG				↑eS	**Sb**	**01 19 49.7**	**-0.1**
KDJ	**Kajisay**	**2.76**	**268**	↑eP	**Pb**	**01 19 27.7**	**+0.8**
KDJ				↑eS	**Sn**	**01 19 58.2**	**+2.9**
KOTS	**Kotyrbulak**	**2.94**	**290**	eP	**Pb**	**01 19 32.0**	**+2.2**
	8.9nm,0.1s						
KOTS				eS	**Sb**	**01 20 05.9**	**+0.1**
	12nm,0.2s						
ARXS	**Arharly**	**2.94**	**311**	eP	**Pb**	**01 19 32.5**	**+2.6**
	4.3nm,0.3s						
ARXS				eS	**Sb**	**01 20 06.7**	**+0.8**
	7.2nm,0.3s						
TNSS	**Tian-Shan**	**3.00**	**285**	eP	**Pb**	**01 19 32.1**	**+1.0**
	2.3nm,0.2s						
TNSS				eS	**Sb**	**01 20 06.4**	**-1.6**
	2.9nm,0.6s						
IZV	**Izvestkoviy**	**3.24**	**284**	eP	**Pb**	**01 19 35.6**	**+0.6**
	4.6nm,0.2s						
IZV				eS	**Sb**	**01 20 12.0**	**-2.6**
	1.7nm,0.2s						
MTBS	**Maitube**	**3.39**	**286**	eP	**Pb**	**01 19 39.4**	**+1.9**
	3.5nm,0.5s						
MTBS				eS	**Sb**	**01 20 18.6**	**-0.2**
	10nm,0.4s						
KTBS	**Karatobe**	**3.39**	**296**	eP	**Pb**	**01 19 38.6**	**+1.0**
	1.6nm,0.2s						
KTBS				eS	**Sb**	**01 20 17.7**	**-1.2**
	0.1nm,0.2s						
ULHL	**Ulahol**	**3.45**	**271**	↓eP	**Pb**	**01 19 37.5**	**-1.2**
ULHL				↓eS	**Sn**	**01 20 15.1**	**+2.7**
BOOM	**Boomskoye usch**	**3.67**	**275**	↑eP	**Pb**	**01 19 40.5**	**-1.9**
BOOM				↑eS	**Sn**	**01 20 20.3**	**+2.5**
KST	**Kastek**	**3.71**	**283**	eP	**Pb**	**01 19 43.8**	**+0.8**
	2.3nm,0.2s						
KST				eS	**Sb**	**01 20 26.4**	**-1.7**
	12nm,0.3s						
NRN	**Naryn**	**3.76**	**258**	↓eP	**Pb**	**01 19 42.0**	**-1.9**
NRN				↓eS	**Sn**	**01 20 23.1**	**+3.1**
TKM2	**Tokmak 2**	**3.96**	**281**	↓eP	**Pb**	**01 19 44.5**	**-2.8**
TKM2				↓eS	**Sn**	**01 20 27.5**	**+2.7**

*IDC **11** 01:27:43.0±1.6, 1°.95N×126°.38E, h0km, mb3.8/4, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=121.0km s-min=19.7km az=69.0*
*NEIC **11** 01:27:48.6±1.9, 2°.0N±0°.1×126°.52E±0°.08, h35km±2km, mb4.5/11, Error ellipse: s-maj=21.7km s-min=8.2km az=211.0*
*DJA **11** 01:27:50.8±1.0, 2°.N±3°×12°.6E±°, h18km±8km, M3.8/9, mb4.1/1, MLv3.6/9*
ISC 11 01:27:49.3±0.8, 2°.01N±0°.09×126°.54E±0°.07, h47km, n23, σ0s88/25, mb4.1/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.48**	**146**		**Pn**	**01 28 14.6**	**+1.1**
TNTI	**Ternate**	**1.48**	**146**	P	**Pn**	**01 28 14.6**	**+1.1**
TNTI				S	**Sn**	**01 28 32.2**	**+0.5**
MNI	**Manado**	**1.79**	**252**	P	**Pn**	**01 28 19.2**	**+1.4**
MNI				S	**Sn**	**01 28 40.1**	**+0.7**
TOLI2	**Tolitoli**	**5.83**	**261**	Pn	**Pn**	**01 29 13.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**20.00**	**183**	P	**P**	**01 32 16.9**	**-1.3**
	0.1nm,0.3s,baz=2.3,slow=11,SNR=2.1						
	3.9nm,1.0s						
BBJI	**Bungbulang**	**21.07**	**243**	P	**P**	**01 32 28.5**	**-1.3**
BBJI				IAmb	IAmb	01 32 42.2	
	comp=Z,22nm,1.4s						
WB0	**Warramunga Arr**	**22.97**	**161**	P	**P**	**01 32 49.2**	**-0.8**
WB0				IAmb	IAmb	01 33 05.8	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**23.12**	**161**	P	**P**	**01 32 50.7**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=340,slow=11,SNR=22						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**23.12**	**161**	P	**P**	**01 32 51.1**	**

PCRV	**Puerto La Cruz**	**1.49**	**251**	*e*P	**Pn**	**01 42 48.2**	**-0.2**
PCRV				*e*S	**Sg**	**01 43 10.9**	**+1.1**
DMDM	**Guralp CMG5TDE**	**1.62**	**89**	*e*P	**Pn**	**01 42 49.7**	**-0.5**
DMDM				*e*S	**Sb**	**01 43 12.3**	**+0.2**
PSMG	**Mucurapo Girls**	**1.64**	**89**	*e*P	**Pn**	**01 42 50.2**	**-0.3**
PSMG				*e*S	**Sb**	**01 43 13.2**	**+0.5**
PSQC	**Port of Spain**	**1.66**	**90**	*e*P	**Pn**	**01 42 49.8**	**-0.8**
PSQC				*e*S	**Sn**	**01 43 12.8**	**+0.9**
PSGH	**Port of Spain**	**1.67**	**90**	*e*P	**Pn**	**01 42 51.0**	**+0.3**
PSGH				*e*S	**Sn**	**01 43 12.7**	**+0.6**
TRN	**Trinidad (W)**	**1.77**	**90**	*e*P	**Pn**	**01 42 51.9**	**-0.3**
TRN				*e*S	**Sn**	**01 43 14.6**	**0.0**
TRN	**Trinidad (W)**	**1.77**	**90**	*e*P	**Pn**	**01 42 51.7**	**-0.5**
TRN				*e*S	**Sn**	**01 43 15.2**	**+0.6**
GRFF	**Grenada Fort F**	**1.99**	**46**	*e*P	**Pb**	**01 42 56.9**	**-1.1**
GRFF				*e*S	**Sn**	**01 43 21.2**	**+1.0**
GRGR	**Grenville**	**2.11**	**46**	*e*P	**Sn**	**01 42 57.3**	**+0.4**
GRGR				*e*S	**Sn**	**01 43 23.0**	**-0.1**
CACV	**CAICARA DEL OR**	**4.51**	**227**	*e*P	Pn	01 43 24.6	-5.3
CACV				*e*S	Sn	01 44 11.8	-11

NOU ***11*** *01:57:36.5, 39°.47S×174°.35E, h204km, MLv3.5/19, North Island, New Zealand*
WEL ***11*** *01:57:39.5±0.8, 40°.5S±4°×17°.4E±°, h186km±6km, M3.2/48, ML2.3/2, MLv3.2/48, Error ellipse: s-maj=6.8km s-min=4.5km az=123.3*

ISC 11 01:57:33.9±1.7, 39.41S±0.05×174.29E±0.05, h226km±9km, n119, σ1°64/134, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHEZ	**Kahui Hut**	**0.24**	**298**	P	**Pn**	**01 58 05.0**	**+1.5**
KHEZ	**Kahui Hut**	**0.24**	**298**	S	**S**	**01 58 26.5**	**0.0**
KHEZ	**Kahui Hut**	**0.24**	**298**	P	**Pn**	**01 58 05.3**	**+1.8**
KHEZ				S	**S**	**01 58 26.3**	**-0.2**
NMEZ	**Namu Road**	**0.32**	**269**	P	**Pn**	**01 58 05.3**	**+1.9**
WAZ	**Wanganui**	**0.64**	**123**	P	**Pn**	**01 58 06.5**	**+2.0**
WAZ				S	**S**	**01 58 27.7**	**-0.7**
MTVZ	**Mangateitei**	**0.92**	**89**	P	**Pn**	**01 58 07.3**	**+1.4**
MTVZ				S	**S**	**01 58 29.1**	**-1.8**
TWVZ	**Taurewa**	**0.95**	**70**	P	**Pn**	**01 58 07.3**	**+1.1**
TRVZ	**Turoa**	**0.98**	**84**	P	**Pn**	**01 58 07.8**	**+1.2**
FWVZ	**Far West T-bar**	**0.99**	**82**	P	**Pn**	**01 58 07.9**	**+1.3**
COVZ	**Chateau Observ**	**1.00**	**78**	P	**Pn**	**01 58 07.8**	**+1.3**
HIZ	**Hauiti**	**1.00**	**27**	P	**Pn**	**01 58 07.0**	**+0.6**
HIZ	**Hauiti**	**1.00**	**27**	S	**S**	**01 58 30.4**	**-1.2**
HIZ	**Hauiti**	**1.00**	**27**	P	**Pn**	**01 58 07.4**	**+1.0**
MAVZ	**Matarangi**	**1.00**	**82**	P	**Pn**	**01 58 08.1**	**+1.4**
WHVZ	**Whangaehu Hut**	**1.02**	**83**	P	**Pn**	**01 58 08.6**	**+1.8**
WNVZ	**Wahianoa**	**1.02**	**86**	P	**Pn**	**01 58 08.1**	**+1.4**
NGZ	**Ngauruhoe**	**1.05**	**78**	P	**Pn**	**01 58 08.3**	**+1.5**
WTVZ	**West Tongariro**	**1.05**	**74**	P	**Pn**	**01 58 08.2**	**+1.4**
NNVZ	**North Ngauruho**	**1.07**	**75**	P	**Pn**	**01 58 08.4**	**+1.5**
TUVZ	**Tukino**	**1.07**	**83**	P	**Pn**	**01 58 08.9**	**+2.0**
SNVZ	**South Ngauruho**	**1.07**	**79**	P	**Pn**	**01 58 08.5**	**+1.5**
KRVZ	**Karewarewa**	**1.10**	**74**	P	**Pn**	**01 58 06.7**	**-0.4**
OTVZ	**Oturere**	**1.10**	**78**	P	**Pn**	**01 58 08.7**	**+1.5**
NTVZ	**North Tongarir**	**1.12**	**74**	P	**Pn**	**01 58 08.7**	**+1.5**
MOVZ	**Moawhango**	**1.14**	**90**	P	**Pn**	**01 58 08.5**	**+1.2**
MOVZ				S	**S**	**01 58 30.1**	**-3.1**
ETVZ	**East Tongariro**	**1.14**	**77**	P	**Pn**	**01 58 09.2**	**+1.8**
TMVZ	**Te Maari**	**1.14**	**76**	P	**Pn**	**01 58 09.2**	**+1.8**
KATZ	**Kakaramea**	**1.18**	**69**	P	**Pn**	**01 58 09.2**	**+1.5**
RATZ	**Rangitukua**	**1.27**	**65**	P	**Pn**	**01 58 10.0**	**+1.8**
RITZ	**Rihia Road**	**1.29**	**71**	P	**Pn**	**01 58 10.1**	**+1.7**
WATZ	**Wairara**	**1.32**	**59**	P	**Pn**	**01 58 09.5**	**+1.5**
DUWZ	**D'Urville Isla**	**1.42**	**191**	P	**Pn**	**01 58 11.0**	**+1.8**
DUWZ				S	**S**	**01 58 35.0**	**-1.9**
TSZ	**Takapari Road**	**1.45**	**117**	P	**Pn**	**01 58 11.3**	**+1.9**
TSZ				S	**S**	**01 58 35.6**	**-1.7**
HATZ	**Hinemaiaia**	**1.50**	**70**	P	**Pn**	**01 58 11.1**	**+1.2**
KIW	**Kapiti Island**	**1.53**	**162**	P	**Pn**	**01 58 11.9**	**+1.8**
KIW				S	**S**	**01 58 35.7**	**-2.7**
PNHZ	**Pukenui**	**1.56**	**109**	P	**Pn**	**01 58 12.2**	**+1.8**
WAKS	**Wakarara Rangi**	**1.56**	**104**	P	**Pn**	**01 58 12.5**	**+2.1**
OGWZ	**Otaki Gorge**	**1.56**	**155**	P	**Pn**	**01 58 12.3**	**+2.0**
OGWZ				S	**S**	**01 58 36.8**	**-2.1**
MRZ	**Mangatainoka R**	**1.60**	**142**	P	**Pn**	**01 58 12.4**	**+1.7**
MRZ				S	**S**	**01 58 37.5**	**-1.9**
KRHZ	**Kereru**	**1.63**	**99**	P	**Pn**	**01 58 12.7**	**+1.7**
KRHZ				S	**S**	**01 58 38.1**	**-1.8**
KWHZ	**Kaweka Forest**	**1.65**	**91**	P	**Pn**	**01 58 13.3**	**+2.0**
DVHZ	**Dannevirke**	**1.70**	**122**	P	**Pn**	**01 58 13.3**	**+1.8**
BKZ	**Black Stump Fm**	**1.73**	**83**	P	**Pn**	**01 58 13.8**	**+0.9**
BKZ	**Black Stump Fm**	**1.73**	**83**	S	**S**	**01 58 40.3**	**-1.2**
BKZ	**Black Stump Fm**	**1.73**	**83**	P	**Pn**	**01 58 13.3**	**+1.4**
PRWZ	**Pori Road**	**1.73**	**132**	P	**Pn**	**01 58 13.9**	**+2.1**
MRHZ	**Matea Rd**	**1.75**	**72**	P	**Pn**	**01 58 13.2**	**+1.0**
HOWZ	**Holdsworth Sta**	**1.76**	**148**	P	**Pn**	**01 58 13.8**	**+1.7**
HOWZ				S	**S**	**01 58 39.8**	**-2.2**
WPHZ	**Waipukurau**	**1.79**	**112**	P	**Pn**	**01 58 14.4**	**+2.1**
CAW	**Cannon Point**	**1.80**	**161**	P	**Pn**	**01 58 14.3**	**+1.9**
CAW				S	**S**	**01 58 40.7**	**-1.9**
TCW	**Tory Channel**	**1.80**	**180**	P	**Pn**	**01 58 14.6**	**+2.2**
TCW				S	**S**	**01 58 40.6**	**-2.0**
TIWZ	**Tintock**	**1.84**	**139**	P	**Pn**	**01 58 14.6**	**+1.8**
MCHZ	**McNeill Hill**	**1.87**	**92**	P	**Pn**	**01 58 15.6**	**+2.5**
TKNZ	**Takaka Hill**	**1.92**	**212**	P	**Pn**	**01 58 14.9**	**+1.4**
TKNZ				S	**S**	**01 58 43.9**	**-0.7**
TOZ	**Tahuroa Road**	**1.93**	**30**	P	**Pn**	**01 58 14.7**	**+1.0**
SNZO	**South Karori**	**1.93**	**171**	P	**Pn**	**01 58 15.4**	**+1.8**
SNZO	**South Karori**	**1.93**	**171**	P	**S**	**01 58 43.3**	**-1.4**
NNZ	**Nelson**	**1.94**	**201**	P	**Pn**	**01 58 15.4**	**+1.7**
NNZ				S	**S**	**01 58 43.0**	**-1.8**
QRZ	**Quartz Range**	**1.96**	**223**	P	**Pn**	**01 58 15.3**	**+1.4**
QRZ	**Quartz Range**	**1.96**	**223**	S	**S**	**01 58 43.5**	**-1.6**
BFZ	**Birch Farm**	**1.97**	**131**	P	**Pn**	**01 58 15.4**	**+1.4**
BFZ	**Birch Farm**	**1.97**	**131**	P	**S**	**01 58 43.6**	**-1.8**
BFZ	**Birch Farm**	**1.97**	**131**	P	**Pn**	**01 58 15.7**	**+1.7**
MTW	**Mount Morrison**	**1.98**	**152**	P	**Pn**	**01 58 15.6**	**+1.5**
NMHZ	**Naumai**	**1.98**	**82**	P	**Pn**	**01 58 16.7**	**+2.4**
ANWZ	**Angora Road**	**1.98**	**123**	P	**Pn**	**01 58 16.4**	**+2.3**
PRHZ	**Porangahau**	**2.00**	**116**	P	**Pn**	**01 58 16.5**	**+2.2**
TUWZ	**Tuamarina**	**2.04**	**187**	P	**Pn**	**01 58 16.4**	**+1.8**
KAHZ	**Kahuranaki**	**2.04**	**102**	P	**Pn**	**01 58 17.0**	**+2.3**
MTHZ	**Maungataniwha**	**2.06**	**75**	P	**Pn**	**01 58 16.3**	**+1.2**
PXZ	**Pawanui**	**2.08**	**108**	P	**Pn**	**01 58 17.3**	**+2.2**
TMWZ	**Te Maipa**	**2.09**	**145**	P	**Pn**	**01 58 17.0**	**+1.8**
ARHZ	**Aropaoanui**	**2.11**	**87**	P	**Pn**	**01 58 17.5**	**+2.2**
MUGZ	**Murupara**	**2.15**	**65**	P	**Pn**	**01 58 16.7**	**+0.8**
PAWZ	**Paruwai Farm**	**2.15**	**157**	P	**Pn**	**01 58 17.4**	**+1.6**
CKHZ	**Cape Kidnapper**	**2.17**	**97**	P	**Pn**	**01 58 18.4**	**+2.4**
RAHZ	**Arahi**	**2.23**	**78**	P	**Pn**	**01 58 18.5**	**+1.8**
RTZ	**Ruatahuna**	**2.24**	**70**	P	**Pn**	**01 58 17.9**	**+1.0**
MRNZ	**Matariki Terra**	**2.31**	**210**	P	**Pn**	**01 58 18.8**	**+1.4**
WHHZ	**Waihua**	**2.31**	**83**	P	**Pn**	**01 58 19.5**	**+2.0**
BSWZ	**Blackbirch Sta**	**2.33**	**188**	P	**Pn**	**01 58 19.7**	**+2.2**
CMWZ	**Cape Campbell**	**2.34**	**181**	P	**Pn**	**01 58 20.1**	**+2.4**
MKAZ	**Moumakai**	**2.40**	**17**	P	**Pn**	**01 58 20.4**	**+2.0**
URZ	**Urewera**	**2.49**	**63**	P	**Pn**	**01 58 19.7**	**+0.4**
URZ	**Urewera**	**2.49**	**63**	P	**Pn**	**01 58 20.0**	**+0.7**
THZ	**Tophouse**	**2.58**	**204**	P	**Pn**	**01 58 21.7**	**+1.5**
RAGZ	**Rawiri**	**2.60**	**71**	P	**Pn**	**01 58 21.9**	**+1.3**
MWZ	**Matawai**	**2.75**	**68**	P	**Pn**	**01 58 23.1**	**+1.0**
RIGZ	**Rimuhau**	**2.79**	**77**	P	**Pn**	**01 58 24.3**	**+1.7**
MHGZ	**Mahia Peninsul**	**2.82**	**86**	P	**Pn**	**01 58 25.0**	**+2.1**
PRGZ	**Paritu Road**	**2.84**	**81**	P	**Pn**	**01 58 24.1**	**+1.0**
TKGZ	**Te Karaka**	**2.94**	**72**	P	**Pn**	**01 58 26.2**	**+2.0**
DSZ	**Denniston Nort**	**3.00**	**218**	P	**Pn**	**01 58 26.3**	**+1.4**
RUGZ	**Raukumara Rang**	**3.02**	**63**	P	**Pn**	**01 58 25.4**	**+0.1**
KHZ	**Kahutara**	**3.06**	**190**	P	**Pn**	**01 58 27.4**	**+2.0**
KHZ	**Kahutara**	**3.06**	**190**	P	**S**	**01 59 04.7**	**-1.3**
KHZ	**Kahutara**	**3.06**	**190**	P	**Pn**	**01 58 27.3**	**+1.8**
TWGZ	**Tauwhareparae**	**3.14**	**68**	P	**Pn**	**01 58 28.0**	**+1.5**
CNGZ	**Carnagh Station**	**3.19**	**74**	P	**Pn**	**01 58 29.0**	**+1.9**
HAZ	**Te Kaha**	**3.20**	**60**	P	**Pn**	**01 58 27.4**	**+0.2**
PUZ	**Puketiti**	**3.38**	**68**	P	**Pn**	**01 58 30.2**	**+0.9**
WMGZ	**Waiomatatini S**	**3.60**	**65**	P	**Pn**	**01 58 32.6**	**+0.8**
MXZ	**Matakaoa Point**	**3.65**	**61**	P	**Pn**	**01 58 32.8**	**+0.3**
MXZ	**Matakaoa Point**	**3.65**	**61**	P	**Pn**	**01 58 33.5**	**+1.0**
GVZ	**Greta Valley S**	**3.68**	**194**	P	**Pn**	**01 58 34.0**	**+1.3**
LTZ	**Lake Taylor**	**3.70**	**204**	P	**Pn**	**01 58 34.5**	**+1.6**
AMCZ	**Amberley**	**3.96**	**198**	P	**Pn**	**01 58 37.3**	**+1.2**
OXZ	**Oxford**	**4.26**	**203**	P	**Pn**	**01 58 40.7**	**+0.9**
OKCZ	**Okains Bay**	**4.41**	**192**	P	**Pn**	**01 58 42.4**	**+0.9**
MHCZ	**Mount Hutt**	**4.60**	**205**	P	**Pn**	**01 58 44.7**	**+0.8**
RACZ	**Rakaia**	**4.61**	**200**	P	**Pn**	**01 58 44.6**	**+0.7**
RPZ	**Rata Peaks**	**4.94**	**208**	P	**Pn**	**01 58 49.4**	**+1.3**
RPZ	**Rata Peaks**	**4.94**	**208**	P	**Pn**	**01 58 48.8**	**+0.7**
ARCZ	**Arundel**	**5.10**	**206**	P	**Pn**	**01 58 50.7**	**+0.6**
TMZ	**Timaru**	**5.54**	**205**	P	**Pn**	**01 58 56.8**	**+1.2**
JCZ	**Jackson Bay**	**6.22**	**220**	P	**Pn**	**01 59 05.6**	**+1.3**
JCZ	**Jackson Bay**	**6.22**	**220**	P	**Pn**	**01 59 04.6**	**+0.4**
ODZ	**Otahua Downs**	**6.25**	**204**	P	**Pn**	**01 59 06.1**	**+1.5**
ODZ	**Otahua Downs**	**6.25**	**204**	P	**Pn**	**01 59 06.1**	**+1.5**

NEIC ***11*** *02:30:52.2±1.2, 13°.01N±0°.06×89°.48W±0°.06, h35km±2km, mb4.4/101, Error ellipse: s-maj=11.8km s-min=8.1km az=232.0*
IDC ***11*** *02:30:54.1±1.7, 13°.39N×89°.07W, h55km±11km, mb3.9/11, mbtmp4.2/14, MS3.2/5, Error ellipse: s-maj=28.1km s-min=15.2km az=52.0*
CATAC ***11*** *02:30:54.3±0.3, 13°.N±2°×8°.9W±°, h28km±2km, M4.7/35, MLv4.7/35, Error ellipse: s-maj=4.3km s-min=2.1km az=30.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.54; $M_{\theta\theta}$=1.67; $M_{\phi\phi}$=-1.12; $M_{r\theta}$=1.35; $M_{r\phi}$=0.16; $M_{\theta\phi}$=0.09; Fault plane solution: M_o=2.00382×10^{15} NP1: ϕ_s=106.97309°, δ21.37740°, λ=-63.65557°. NP2: ϕ_s=258.96981°, δ70.93428°, λ=-99.85442°. Principal axes: T 2.3136, Plg25.3077°, Azm356.6628°; N -1.1295, Plg9.3089°, Azm262.2174°; P -1.1841, Plg62.8024°, Azm153.6162°; confirmed*
SNET ***11*** *02:30:54.6±0.8, 13°.05N×89°.50W, h37km, ML4.7, Presumed earthquake*
GCG ***11*** *02:30:57.6±1.3, 13°.27N×89°.60W, h35km±21km, MD4.5, ML4.5, Presumed earthquake*

ISC 11 02:30:53.1±0.9, 13°.05N±0°.05×89°.47W±0°.03, h53km±6km, n213, σ1°56/253, mb4.4/49, MS3.3/4, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.46**	**18**	P	**Pn**	**02 31 05.6**	**+1.4**
LALI				S	**Sn**	**02 31 13.5**	**+1.5**
LALI	**Alcalda de L**	**0.46**	**18**	*i* P	**Pn**	**02 31 05.5**	**+1.3**
LALI				*i* S	**Sn**	**02 31 12.6**	**+0.6**
LALI				IAML		02 31 14.6	
	comp=E,9μm,0.3s						
JAYA	**Jayaque - finc**	**0.60**	**2**	P	**Pn**	**02 31 07.3**	**+1.3**
JAYA	**Jayaque - finc**	**0.60**	**2**	*e*P	**Pn**	**02 31 07.1**	**+1.1**
JAYA				*e*S	**Sn**	**02 31 16.1**	**+0.9**
JAYA	**Jayaque - finc**	**0.60**	**2**	*i* P	**Pn**	**02 31 07.0**	**+1.1**
PANCS	**Alcalda de**	**0.63**	**27**	P	**Pn**	**02 31 07.4**	**+1.2**
PANCS				S	**Sn**	**02 31 16.9**	**+1.4**
PMON	**Piamonte**	**0.68**	**13**	P	**Pn**	**02 31 08.0**	**+1.2**
PMON				S	**Sn**	**02 31 18.4**	**+1.7**
SEMO	**Seminario San**	**0.69**	**20**	P	**Pn**	**02 31 08.6**	**+1.6**
SEMO				S	**Sn**	**02 31 19.0**	**+1.9**
UTEC	**Universidad Te**	**0.70**	**22**	P	**Pn**	**02 31 08.5**	**+1.4**
UTEC				S	**Sn**	**02 31 18.7**	**+1.5**
UEES	**Universidad Ev**	**0.70**	**19**	P	**Pn**	**02 31 08.5**	**+1.3**
UEES				S	**Sn**	**02 31 18.9**	**+1.6**
BOQS	**Boqueron**	**0.71**	**15**	*e*P	**Pn**	**02 31 08.6**	**+1.2**
IGN	**Direccin Gen**	**0.72**	**24**	P	**Pn**	**02 31 09.0**	**+1.6**
IGN				S	**Sn**	**02 31 19.6**	**+1.9**
IGN	**Direccin Gen**	**0.72**	**24**	*e*P	**Pn**	**02 31 08.9**	**+1.4**
CEDA	**San Andres**	**0.76**	**6**	P	**Pn**	**02 31 08.9**	**+1.2**
CEDA				S	**Sn**	**02 31 20.2**	**+1.8**
CEDA	**San Andres**	**0.76**	**6**	*e*P	**Pn**	**02 31 09.0**	**+1.2**
LFU	**La Fuente**	**0.78**	**26**	*e*P	**Pn**	**02 31 09.7**	**+1.6**
CEVE	**Cerro Verde**	**0.79**	**349**	P	**Pn**	**02 31 09.8**	**+1.5**
CEVE				S	**Sn**	**02 31 21.3**	**+1.8**
CEVE	**Cerro Verde**	**0.79**	**349**	*e*P	**Pn**	**02 31 09.6**	**+1.2**
LBRS	**Las Brisas**	**0.80**	**31**	*e*P	**Pn**	**02 31 10.1**	**+1.7**
COEG	**Centro de Oper**	**0.81**	**45**	P	**Pn**	**02 31 09.5**	**+1.1**
COEG				S	**Sn**	**02 31 21.1**	**+1.5**
TECO	**Alcaldia de Te**	**0.83**	**54**	P	**Pn**	**02 31 10.2**	**+1.5**
TECO				S	**Sn**	**02 31 21.6**	**+1.5**
PAVA	**Las Pavas**	**0.84**	**38**	P	**Pn**	**02 31 10.9**	**+2.0**
PAVA				S	**Sn**	**02 31 22.8**	**+2.4**
NUBE	**Las Nubes**	**0.90**	**341**	P	**Pn**	**02 31 10.7**	**+0.9**
NUBE				S	**Sn**	**02 31 23.0**	**+1.0**
NUBE	**Las Nubes**	**0.90**	**341**	*e*P	**Pn**	**02 31 10.7**	**+0.9**
NUBE	**Las Nubes**	**0.90**	**341**	*i* P	**Pn**	**02 31 10.7**	**+0.9**
NUBE				*i* S	**Sn**	**02 31 21.6**	**-0.3**
UNIC	**Universidad Ca**	**0.93**	**355**	P	**Pn**	**02 31 11.5**	**+1.4**
UNIC				S	**Sn**	**02 31 24.6**	**+2.0**
FAME	**Alcaldia de Sa**	**0.95**	**326**	P	**Pn**	**02 31 11.5**	**+1.2**
SCLA	**Alcaldia de Sa**	**0.97**	**48**	P	**Pn**	**02 31 12.4**	**+1.8**
SCLA				S	**Sn**	**02 31 26.4**	**+2.9**
LOAL	**Lomas de Alarc**	**0.99**	**342**	P	**Pn**	**02 31 12.0**	**+1.1**
LOAL				S	**Sn**	**02 31 26.5**	**+2.5**
SLOZ	**Alcaldia de Sa**	**1.02**	**343**	P	**Pn**	**02 31 13.0**	**+1.7**
SLOZ				S	**Sn**	**02 31 26.7**	**+2.1**
PACA	**Pacayal**	**1.19**	**69**	P	**Pn**	**02 31 15.7**	**+2.0**
PACA				S	**Sn**	**02 31 31.9**	**+3.0**
RANC	**El Ranchito**	**1.21**	**71**	P	**Pn**	**02 31 16.1**	**+2.2**
RANC				S	**Sn**	**02 31 32.1**	**+2.7**
LLGN	**La Laguna**	**1.22**	**25**	P	**Pn**	**02 31 15.1**	**+1.1**
LLGN				S	**Sn**	**02 31 32.6**	**+3.1**
LLGN	**La Laguna**	**1.22**	**25**	*e*P	**Pn**	**02 31 15.3**	**+1.3**
CNRM	**Centro Naciona**	**1.33**	**71**	P	**Pn**	**02 31 17.9**	**+2.5**
CNRM				S	**Sn**	**02 31 35.5**	**+3.4**
MTO3	**Montecristo**	**1.35**	**5**		**Pn**	**02 31 16.4**	**+0.6**
MTO3				Sn	**Sn**	**02 31 32.4**	**-0.3**
MTO3	**Montecristo**	**1.35**	**5**	P	**Pn**	**02 31 16.8**	**+1.0**
MTO3				S	**Sn**	**02 31 34.5**	**+1.7**
MTO3	**Montecristo**	**1.35**	**5**	*e*P	**Pn**	**02 31 17.1**	**+1.4**
MTO3	**Montecristo**	**1.35**	**5**	*i* P	**Pn**	**02 31 17.2**	**+1.4**
PCG5	**San Vicente Pa**	**1.46**	**323**	*i* P	Pn	02 31 22.2	+5.0
PCG5				*i* S	**Sn**	**02 31 39.8**	**+4.5**
ESQI	**Esquipulas**	**1.51**	**5**		**Pn**	**02 31 18.2**	**+0.3**
ESQI	**Esquipulas**	**1.51**	**5**	P	**Pn**	**02 31 19.5**	**+1.6**
ESQI				S	**Sn**	**02 31 38.5**	**+2.0**
ESQI	**Esquipulas**	**1.51**	**5**	*e*P	**Pn**	**02 31 19.5**	**+1.6**
ZAFR2	**Estanzuela, Za**	**1.53**	**4**	*i* P	Pn	02 31 25.1	+7.0
LCND	**La Caada**	**1.56**	**80**	P	**Pn**	**02 31 20.7**	**+2.2**
LCND	**La Caada**	**1.56**	**80**	*e*P	**Pn**	**02 31 20.3**	**+1.8**
FG16	**Alotenango, Sa**	**1.58**	**320**	*i* P	Pn	02 31 25.0	+6.0
FG16				IAML		02 31 50.6	
	comp=E,24μm,0.2s						
CNCH	**Conchagua**	**1.61**	**82**	P	**Pn**	**02 31 21.5**	**+2.2**
CNCH				S	**Sn**	**02 31 42.6**	**+3.6**
CNCH	**Conchagua**	**1.61**	**82**	*e*P	**Pn**	**02 31 21.1**	**+1.9**
GCG4	**OSOP**	**1.85**	**326**	*i* P	**Pn**	**02 31 24.3**	**+1.7**
SARH	**Santa Rosa de**	**1.85**	**22**	P	**Pn**	**02 31 24.6**	**+2.0**
SARH				S	**Sn**	**02 31 47.1**	**+2.3**
SARH	**Santa Rosa de**	**1.85**	**22**	*i* P	**Pn**	**02 31 24.7**	**+2.2**
CSGN	**Cosiguina Volc**	**1.86**	**92**	P	**Pn**	**02 31 24.7**	**+2.0**
CSGN				S	**Sn**	**02 31 48.7**	**+3.6**
ESSG	**Sabana Grande**	**1.87**	**315**	*i* P	**Pn**	**02 31 23.9**	**+1.0**
ESSG				*i* S	**Sn**	**02 31 45.7**	**+0.3**
ESSG				IAML		02 31 48.4	
	comp=E,4μm,0.3s						
APG	**El Apazote**	**2.17**	**334**	P	**Pn**	**02 31 28.8**	**+1.7**
	comp=E,8.8nm,0.3s,baz=138,slow=10.0,SNR=101						
APG				S	Sn	02 31 44.2	-8.7
	comp=E,29nm,0.4s,baz=126,slow=11,SNR=13						
APG	**El Apazote**	**2.17**	**334**	*i* P	**Pn**	**02 31 28.7**	**+1.7**
STG5	**El Palmar, Qui**	**2.27**	**307**	*i* P	Pn	02 31 34.5	+6.3
STG8	**El Palmar, Qui**	**2.30**	**308**	*i* P	Pn	02 31 35.2	+6.4
STG8				IAML		02 32 09.1	
	comp=N,4μm,0.2s						
STG2	**El Palmar, Qui**	**2.31**	**307**	*i* P	Pn	02 31 35.6	+6.7
STG2				*i* S	**Sn**	**02 32 04.9**	**+8.8**
TGUH	**Tegucigalpa,Un**	**2.36**	**65**	Pn	**Pn**	**02 31 29.0**	**-0.5**
TGUH	**Tegucigalpa,Un**	**2.36**	**65**	P	**Pn**	**02 31 31.4**	**+1.9**
TGUH				S	**Sn**	**02 32 00.0**	**+2.6**
CRIN	**San Cristobal**	**2.38**	**98**		**Pn**	**02 31 29.6**	**-0.2**
CRIN	**San Cristobal**	**2.38**	**98**	P	**Pn**	**02 31 32.5**	**+2.7**
AVCB	**Coban**	**2.57**	**339**	IAML		02 32 23.8	
	comp=N,4μm,0.5s						
SOKI	**Kika Raxquin**	**2.58**	**313**	*i* P	**Pn**	**02 31 35.2**	**+2.5**
HERN	**Volcan Telica**	**2.61**	**99**		**Pn**	**02 31 33.4**	**+0.4**
HERN	**Volcan Telica**	**2.61**	**99**	P	**Pn**	**02 31 34.5**	**+1.5**
HERN				S	**Sn**	**02 32 05.8**	**+2.3**
RTAL	**Retalhuleu**	**2.61**	**304**		**Pn**	**02 31 32.1**	**-0.8**
RTAL	**Retalhuleu**	**2.61**	**304**	S	**Sn**	**02 32 06.5**	**+3.0**
POLN	**Al Sur del Vol**	**2.62**	**98**	P	**Pn**	**02 31 34.8**	**+1.8**
POLN				S	**Sn**	**02 32 04.4**	**+0.7**
YUSH	**Yuscaran**	**2.71**	**70**	P	**Pn**	**02 31 36.3**	**+2.0**
CNGA	**Al SSO del Vol**	**2.76**	**101**	P	**Pn**	**02 31 36.3**	**+1.4**
CNGA				S	**Sn**	**02 32 08.0**	**+1.0**
CNGN	**Cerro Negro**	**2.76**	**101**		**Pn**	**02 31 34.3**	**-0.6**
CNGN	**Cerro Negro**	**2.76**	**101**	P	**Pn**	**02 31 36.4**	**+1.5**
CNGN				S	**Sn**	**02 32 08.3**	**+1.2**
IZABA	**Izabal, Puerto**	**2.80**	**18**	P	**Pn**	**02 31 37.6**	**+2.1**
LEVN	**Ruinas Leon Vi**	**2.86**	**103**	P	**Pn**	**02 31 38.8**	**+2.5**
COPN	**Copaltepe**	**2.94**	**107**	P	**Pn**	**02 31 38.2**	**+0.9**
OCON	**Estacion meteo**	**2.97**	**78**	P	**Pn**	**02 31 39.4**	**+1.6**
OCON				S	**Sn**	**02 32 15.7**	**+3.4**
MOM2	**El Cardon**	**2.98**	**101**	P	**Pn**	**02 31 39.8**	**+2.0**
MOM2				S	**Sn**	**02 32 13.8**	**+1.4**
HUEH	**Huehuetenango**	**3.00**	**319**		**Pn**	**02 31 37.9**	**-0.4**
HUEH	**Huehuetenango**	**3.00**	**319**	P	**Pn**	**02 31 41.8**	**+3.4**
SMCA	**Catarina**	**3.10**	**306**	*i* P	**Pn**	**02 31 41.4**	**+1.8**
MGAN	**Managua**	**3.27**	**106**		**Pn**	**02 31 42.4**	**+0.4**
BOAB	**BOACO BROADBAN**	**3.76**	**99**		**Pn**	**02 31 47.9**	**-0.7**
PETF	**Flores**	**3.87**	**354**		**Pn**	**02 31 51.7**	**+1.6**
PETF	**Flores**	**3.87**	**354**	*i* P	**Pn**	**02 31 52.9**	**+2.8**
CCIG	**Comitan**	**4.12**	**322**		**Pn**	**02 31 52.7**	**-1.1**
CCIG	**Comitan**	**4.12**	**322**	*i* P	**Pn**	**02 31 56.9**	**+3.1**
SIUN	**Universidad Ur**	**4.62**	**81**		**Pn**	**02 32 00.0**	**-0.4**
JUD3	**Juan Diaz 3**	**4.80**	**126**		**Pn**	**02 32 04.6**	**+1.6**
TGIG		**5.12**	**317**	*i* P	**Pn**	**02 32 09.6**	**+2.3**
JTS	**Las Juntas de**	**5.20**	**121**	P	**Pn**	**02 32 09.2**	**+0.7**
	comp=N,12nm,0.3s,baz=302,slow=23,SNR=48						
JTS				S	**Sn**	**02 33 03.8**	**-3.5**
	comp=N,12nm,0.3s,baz=304,slow=21,SNR=1.6						
JTS				LR	LR	02 34 26.3	
	comp=N,149nm,20.9s,baz=250,slow=42						
JTS	**Las Juntas de**	**5.20**	**121**	Pn	**Pn**	**02 32 07.8**	**-0.6**
BILN	**Biliwi Airport**	**6.01**	**80**	P

	comp=Z,4.0nm,0.6s						
RSSD	**Black Hills**	**33.39**	**341**	P	**P**	**02 37 26.9**	**+0.1**
RSSD				IAmb	IAmb	02 37 29.6	
	comp=Z,6.3nm,1.1s						
PD31	**Pinedale Array**	**34.34**	**333**		**P**	**02 37 35.3**	**+0.2**
PDAR	**Pinedale Array**	**34.34**	**333**	P	**P**	**02 37 34.9**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=130,slow=12,SNR=15						
PDAR				PcP	**PcP**	**02 40 10.4**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=142,slow=6.5,SNR=3.5						
PDAR				ScP	**ScP**	**02 43 51.5**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=148,slow=3.9,SNR=3.6						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	**34.34**	**333**	P	**P**	**02 37 35.3**	**+0.2**
PDAR					**PcP**	**02 40 10.8**	**+0.7**
PDAR					**ScP**	**02 43 53.5**	**+2.4**
AHID	**Auburn Hatcher**	**35.03**	**332**	P	**P**	**02 37 41.5**	**+0.5**
SNOW	**Snow King Moun**	**35.42**	**333**	P	**P**	**02 37 45.5**	**+1.1**
LOHW	**Long Hollow**	**35.47**	**333**	P	**P**	**02 37 45.5**	**+0.7**
LOHW				IAmb	IAmb	02 37 46.7	
	comp=Z,5.4nm,0.7s						
MOOW	**Moose Ponds**	**35.64**	**333**		**P**	**02 37 46.9**	**+0.7**
MOOW				IAmb	IAmb	02 37 47.9	
	comp=Z,2.7nm,0.6s						
MDND	**Maddock**	**35.71**	**348**		**P**	**02 37 46.2**	**-0.3**
FLWY	**Flagg Ranch**	**35.89**	**334**	P	**P**	**02 37 49.4**	**+1.0**
FLWY				IAmb	IAmb	02 37 49.9	
	comp=Z,3.8nm,0.6s						
NVAR	**Mina Array Bea**	**35.97**	**320**	P	**P**	**02 37 50.1**	**+1.0**
	comp=Z,2.6nm,0.9s,baz=136,slow=8.2,SNR=9.2						
NVAR				PcP	**PcP**	**02 40 15.8**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=166,slow=4.1,SNR=3.5						
NVAR				ScP	**ScP**	**02 43 57.1**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=145,slow=4.6,SNR=3.7						
	comp=Z,2.6nm,0.9s						
NVAR	**Mina Array Bea**	**35.97**	**320**	P	**P**	**02 37 49.1**	**0.0**
NVAR					**PcP**	**02 40 15.6**	**+0.6**
RLMT	**Red Lodge**	**36.14**	**336**	P	**P**	**02 37 51.0**	**+0.5**
RLMT				IAmb	IAmb	02 37 52.4	
	comp=Z,6.7nm,1.1s						
YMP	**Mirror Lake Pl**	**36.19**	**335**	P	**P**	**02 37 51.6**	**+0.5**
YMP				IAmb	IAmb	02 38 04.1	
	comp=Z,7.2nm,1.0s						
YNE	**Yellowstone No**	**36.34**	**335**	P	**P**	**02 37 52.5**	**+0.2**
YNE				IAmb	IAmb	02 37 54.6	
	comp=Z,8.1nm,1.2s						
YMR	**Madison River**	**36.47**	**334**	P	**P**	**02 37 54.0**	**+0.7**
YMR				IAmb	IAmb	02 37 55.9	
	comp=Z,5.1nm,0.8s						
YHL	**Hebgen Lake**	**36.71**	**334**	P	**P**	**02 37 55.7**	**+0.2**
YHL				IAmb	IAmb	02 37 57.6	
	comp=Z,3.2nm,0.7s						
BCYI	**Bear Canyon**	**37.29**	**331**	P	**P**	**02 38 01.5**	**+1.2**
DGMT	**Dagmar**	**37.38**	**344**		**P**	**02 38 01.2**	**+0.5**
ULM	**Lac du Bonnet**	**37.47**	**353**	P	**P**	**02 37 58.5**	**-3.0**
	comp=Z,5.7nm,0.7s,baz=163,slow=9.0,SNR=8.6						
	comp=Z,5.7nm,0.7s						
ULM	**Lac du Bonnet**	**37.47**	**353**	P	**P**	**02 37 59.5**	**-1.9**
ULM				IAmb	IAmb	02 38 00.1	
	comp=Z,5.4nm,0.9s						
BOZ	**Bozeman (W)**	**37.50**	**334**	P	**P**	**02 38 02.5**	**+0.5**
BOZ				IAmb	IAmb	02 38 03.9	
	comp=Z,3.4nm,0.8s						
LRM	**Limekiln Ridge**	**38.02**	**334**	P	**P**	**02 38 06.9**	**+0.4**
EGMT	**Eagleton**	**38.75**	**338**	P	**P**	**02 38 13.1**	**+0.7**
EGMT				IAmb	IAmb	02 38 14.1	
	comp=Z,5.1nm,0.8s						
LYMT	**Lyon Mountain**	**38.87**	**335**	P	**P**	**02 38 13.6**	**0.0**
F10A	**Beach Ranch, E**	**40.34**	**330**	P	**P**	**02 38 26.4**	**+0.7**
YBH	**Yreka Blue Hor**	**40.64**	**321**	LR	LR	02 56 44.1	
	comp=Z,5.1nm,20.7s,baz=27,slow=38						
FFC	**Flin Flon**	**42.73**	**349**	P	**P**	**02 38 44.2**	**-0.7**
FFC				IAmb	IAmb	02 38 44.9	
	comp=Z,4.0nm,0.6s						
EDM	**Edmonton**	**44.35**	**340**	P	**P**	**02 38 57.5**	**-0.6**
SCHQ	**Schefferville**	**45.30**	**18**	P	**P**	**02 39 03.1**	**-2.5**
	comp=Z,2.8nm,0.5s,baz=208,slow=7.2,SNR=20						
	comp=Z,2.8nm,0.5s						
FCC	**Fort Churchill**	**45.76**	**357**	P	**P**	**02 39 07.8**	**-1.2**
FCC				IAmb	IAmb	02 39 08.3	
	comp=Z,4.6nm,0.6s						
BBB	**Bella Bella**	**49.80**	**330**	LR	LR	03 05 37.6	
	comp=Z,83nm,19.8s,baz=62,slow=42						
YKAW1	**Yellowknife Wh**	**52.49**	**346**	P	**P**	**02 39 59.7**	**-0.8**
YKAW1				IAmb	IAmb	02 40 00.2	
	comp=Z,5.3nm,0.8s						
YKA	**Yellowknife Ar**	**52.53**	**346**	P	**P**	**02 39 59.6**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=132,slow=7.5,SNR=71						
	comp=Z,1.7nm,0.4s						
YKAW3	**Yellowknife Wh**	**52.59**	**346**	P	**P**	**02 40 00.5**	**-0.8**
YKAW3				IAmb	IAmb	02 40 01.4	
	comp=Z,5.8nm,0.8s						
PLCA	**Paso Flores**	**56.31**	**163**	P	**P**	**02 40 29.2**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=344,slow=7.8,SNR=4.8						
	comp=Z,1.7nm,0.8s						
RES	**Resolute Bay**	**61.70**	**358**	P	**P**	**02 41 03.4**	**-2.0**
	comp=Z,1.7nm,0.4s,baz=173,slow=8.3,SNR=11						
	comp=Z,1.7nm,0.4s						
INK	**Inuvik**	**62.05**	**343**	P	**P**	**02 41 06.6**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=141,slow=11,SNR=7.2						
	comp=Z,1.7nm,0.7s						
INK	**Inuvik**	**62.05**	**343**	P	**P**	**02 41 06.7**	**-1.2**
INK				IAmb	IAmb	02 41 10.9	
	comp=Z,2.3nm,0.9s						
ILAR	**Eielson Array**	**64.69**	**336**	P	**P**	**02 41 24.1**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=155,slow=4.6,SNR=12						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**64.69**	**336**	P	**P**	**02 41 24.1**	**-1.3**
SPITS	**Spitsbergen Ar**	**80.52**	**12**	P	**P**	**02 42 58.0**	**-1.2**
	comp=Z,7.0nm,1.0s,baz=245,slow=1.6,SNR=5.3						
	comp=Z,7.0nm,1.0s						
WRA	**Warramunga Ar**	**137.53**	**255**	PKP	**PKPdf**	**02 50 12.9**	**+0.9**
	comp=Z,1.2nm,1.0s,baz=88,slow=2.1,SNR=6.4						
WRA				SKPbc	**SKPbc**	**02 53 42.9**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=87,slow=3.4,SNR=1.9						
WRA	**Warramunga Arr**	**137.53**	**255**		**PKPdf**	**02 50 13.6**	**+1.5**
ASAR	**Alice Springs**	**137.65**	**249**	PKP	**PKPdf**	**02 50 12.7**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=106,slow=1.5,SNR=2.6						
ASAR				SKPbc	**SKPbc**	**02 53 43.6**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=106,slow=3.1,SNR=6.0						
ASAR	**Alice Springs**	**137.65**	**249**		**PKPdf**	**02 50 13.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**147.61**	**345**	PKPbc	**PKPbc**	**02 50 32.9**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=3.4,slow=3.0,SNR=1.8						
CMAR	**Chiang Mai Arr**	**147.61**	**345**		**PKPdf**	**02 50 31.6**	**+1.7**

NNC 11 02:40:23.4±2.9, 36°99N×71°07E, h201km±31km, mb2.7, mpv3.7, 6C-2D, Error ellipse: s-maj=28.0km s-min=20.6km az=46.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.12**	**356**	⇑P	Pn	02 41 51.3	-0.8
	9.1nm,0.5s,baz=180,slow=12,SNR=113						
KK31				⇑S	S	02 43 03.5	+1.4
	3.1nm,0.3s,baz=181,slow=17,SNR=9.2						
AAK	**Ala-Archa**	**6.22**	**24**	⇑P	Pn	02 41 53.9	+0.3
	1.1nm,0.4s						
AAK				⇑S	S	02 43 05.3	+0.4
	12nm,1.0s						
AB31	**Akbulak array**	**14.68**	**330**	⇓P	P	02 43 43.0	+0.4
	0.5nm,0.3s,baz=168,slow=11,SNR=76						
AB31				⇑S	S	02 46 23.3	-1.1
	1.0nm,0.6s,baz=154,slow=23,SNR=5.1						
AKTO	**Aktyubinsk**	**16.38**	**329**	⇑P	P	02 44 01.5	+0.2
	1.7nm,0.8s						
AKTO				⇓S	S	02 47 03.0	+0.5
	1.3nm,1.4s						

*NEIC **11** 03:04:56.0±1.8, 0°09N±0°07×123°69E±0°07, h124km±8km, mb4.2/10, Error ellipse: s-maj=10.8km s-min=10.7km az=124.0*
*IDC **11** 03:04:56.1±1.9, 0°10N×123°65E, h131km±18km, mb3.6/9, mbtmp4.0/12, Error ellipse: s-maj=19.4km s-min=12.2km az=76.0*
*DJA **11** 03:04:57.6±0.3, 0°N±3°×12°4E±°, h112km±5km, M4.5/29, mB5.3/2, mb4.4/9, MLv4.5/29, Mw(mB)4.7/2*
ISC 11 03:04:56.0±0.7, 0.09N±0°05×123.62E±0°06, h132km±7km, n58, σ1§57/68, mb4.0/17, 1C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.41**	**217**		**Pn**	**03 05 23.2**	**+0.1**
LUWI					Sn	**03 05 42.5**	**-1.4**
LUWI	**Luwuk**	**1.41**	**217**	P	**Pn**	**03 05 23.6**	**+0.4**
LUWI	**Luwuk**	**1.41**	**217**	P	**Pn**	**03 05 23.3**	**+0.1**
MRSI	**Marisa**	**1.72**	**283**	P	**Pn**	**03 05 27.0**	**+0.2**
MNI	**Manado**	**1.82**	**42**	P	**Pn**	**03 05 29.3**	**+1.4**
APSI	**Ampana**	**2.21**	**243**	P	**Pn**	**03 05 34.2**	**+1.6**
TOLI2	**Tolitoli**	**3.01**	**290**		**Pn**	**03 05 43.9**	**+1.0**
TOLI2	**Tolitoli**	**3.01**	**290**	P	**Pn**	**03 05 44.8**	**+1.9**
SANI	**Sanana**	**3.18**	**132**	P	**Pn**	**03 05 42.6**	**-2.5**
SANI	**Sanana**	**3.18**	**132**	P	**Pn**	**03 05 42.4**	**-2.7**
MPSI	**Mapaga**	**3.73**	**274**	P	**Pn**	**03 05 54.8**	**+2.6**
TNTI	**Ternate**	**3.81**	**80**	Pn	**Pn**	**03 05 52.1**	**-1.2**
TNTI	**Ternate**	**3.81**	**80**	P	**Sn**	**03 06 42.5**	**+4.8**
NLAI	**Namlea**	**4.80**	**134**	P	**Pn**	**03 06 06.2**	**-0.3**
TTSI	**Tana Toraja**	**4.91**	**231**	P	**Pn**	**03 06 10.5**	**+2.5**
SPSI	**Sidrap Palu**	**5.57**	**224**	P	**Pn**	**03 06 18.8**	**+2.0**
	0.3nm26nm,0.6s						
KRAI	**Karang Ratu**	**5.85**	**125**	P	**Pn**	**03 06 21.2**	**+0.6**
	0.3nm84nm,0.7s						
MSAI	**Masohi**	**6.31**	**123**	P	**Pn**	**03 06 27.9**	**+1.2**
	0.4nm3µm102nm,0.8s						
KAPI	**Kappang**	**6.37**	**217**	P	**Pn**	**03 06 29.4**	**+1.8**
	4.7nm,0.2s,baz=105,slow=3.9,SNR=5.1						
KAPI				S	**Sn**	**03 07 39.4**	**+0.2**
	13nm,0.3s,baz=249,slow=22,SNR=7.7						
KAPI	**Kappang**	**6.37**	**217**		**Pn**	**03 06 29.0**	**+1.4**
KAPI	**Kappang**	**6.37**	**217**	P	**Pn**	**03 06 30.8**	**+3.2**
	6.2nm,0.5s						
BSSI	**Bau Bau, Buton**	**6.93**	**207**	P	**Pn**	**03 06 37.9**	**+2.8**
	0.2nm57nm,0.8s						
MYLDM	**Lahad Datu**	**7.19**	**315**		**Pn**	**03 06 39.7**	**+1.1**
MYLDM	**Lahad Datu**	**7.19**	**315**	P	**Pn**	**03 06 36.4**	**-2.2**
	64nm,0.8s						
SIJI	**Sorong**	**7.71**	**97**	P	**Pn**	**03 06 45.1**	**-0.5**
	8.6nm,0.3s,baz=275,slow=7.7,SNR=4.0						
FAKI	**Fak Fak**	**9.13**	**109**	Pn	**Pn**	**03 07 03.0**	**-1.7**
FAKI	**Fak Fak**	**9.13**	**109**	P	**Pn**	**03 07 03.3**	**-1.4**
	47nm,1.6s						
FAKI	**Fak Fak**	**9.13**	**109**	P	**Pn**	**03 07 03.0**	**-1.7**
MTN	**Manton Dam**	**14.85**	**150**	Pn	**Pn**	**03 08 19.5**	**0.0**
KNRA	**Kununurra**	**16.47**	**162**		**P**	**03 08 41.0**	**+1.2**
GENI	**Genyem**	**16.76**	**99**	P	**Pn**	**03 08 40.2**	**-2.9**
FITZ	**Fitzroy Crossi**	**18.18**	**174**	P	**P**	**03 08 58.4**	**-0.2**
	3.1nm,0.6s,baz=352,slow=7.5,SNR=15						
MYKOM	**Kota Tinggi**	**19.84**	**275**	P	**Pn**	**03 09 22.4**	**+2.8**
WB0	**Warramunga Arr**	**22.38**	**152**	P	**P**	**03 09 43.2**	**-0.4**
WB0				IAmb	IAmb	03 09 46.3	
	comp=Z,6.3nm,0.8s						
WRAB	**Tennant Creek**	**22.50**	**153**	P	**P**	**03 09 46.5**	**+1.7**
	comp=Z,4.3nm,1.1s						
WRA	**Warramunga Arr**	**22.51**	**153**	P	**P**	**03 09 44.3**	**-0.6**
	comp=Z,4.8nm,0.7s,baz=336,slow=10,SNR=28						
WRA				PcP	**PcP**	**03 13 35.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=343,slow=2.4,SNR=2.9						
	comp=Z,4.8nm,0.7s						
WRA	**Warramunga Arr**	**22.51**	**153**	P	**P**	**03 09 43.7**	**-1.2**
WRA					**PcP**	**03 13 33.9**	**-0.4**
WR8	**Warramunga Arr**	**22.59**	**152**	P	**P**	**03 09 45.5**	**-0.2**
WR8				IAmb	IAmb	03 09 48.4	
	comp=Z,6.7nm,0.7s						
COEN	**Coen**	**23.87**	**127**	P	**P**	**03 09 58.3**	**+0.7**
COEN				IAmb	IAmb	03 10 11.6	
	comp=Z,11nm,1.1s						
COEN	**Coen**	**23.87**	**127**	P	**P**	**03 09 57.9**	**+0.3**
	comp=Z,12nm,1.9s						
AS31	**Alice Springs**	**25.64**	**158**	P	**P**	**03 10 12.8**	**-0.8**
ASAR	**Alice Springs**	**25.64**	**158**	P	**P**	**03 10 13.7**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=346,slow=11,SNR=34						
ASAR				PcP	**PcP**	**03 13 41.8**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=350,slow=2.2,SNR=4.6						
ASAR				ScP	**ScP**	**03 17 07.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=348,slow=5.2,SNR=4.2						
	comp=Z,1.9nm,0.4s						
ASAR	**Alice Springs**	**25.64**	**158**	P	**P**	**03 10 12.4**	**-1.2**
ASAR					**PcP**	**03 13 39.5**	**-1.5**
ASAR					**ScP**	**03 17 05.4**	**-3.1**
QIS	**Mount Isa**	**25.80**	**144**	P	**P**	**03 10 16.5**	**+1.5**
	comp=Z,18nm,0.6s						
FORT	**Forrest**	**30.98**	**173**	P	**P**	**03 11 01.0**	**0.0**
FORT				IAmb	IAmb	03 11 17.2	
	comp=Z,9.0nm,1.0s						
STKA	**Stephens Creek**	**36.05**	**154**	P	**P**	**03 11 45.3**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=349,slow=7.7,SNR=8.3						
	comp=Z,1.8nm,0.5s						
STKA	**Stephens Creek**	**36.05**	**154**	P	**P**	**03 11 44.9**	**-0.1**
MJAR	**Matsushiro Arr**	**38.72**	**19**	P	**P**	**03 12 07.0**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=197,slow=6.9,SNR=5.9						
	comp=Z,2.1nm,0.7s						
MJAR	**Matsushiro Arr**	**38.72**	**19**	P	**P**	**03 12 07.0**	**-0.3**
MJAR				IAmb	IAmb	03 12 09.3	
	comp=Z,3.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**44.55**	**9**	P	**P**	**03 12 55.5**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=193,slow=5.9,SNR=4.7						
	comp=Z,1.6nm,0.6s						
BNX	**BinXian**	**45.58**	**4**	⇑P	P	03 13 09.8	+7.0
BNX				pmax	pmax		
	comp=Z,6.0nm,1.7s						
MKAR	**Makanchi Array**	**58.87**	**328**	P	**P**	**03 14 41.6**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=124,slow=8.7,SNR=16						
MKAR				PcP	**PcP**	**03 15 28.8**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=160,slow=2.7,SNR=11						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**62.49**	**335**	P	**P**	**03 15 04.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=153,slow=4.5,SNR=1.8						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**62.49**	**335**	P	**P**	**03 15 04.4**	**-1.0**
KURBB	**Kurchatov Arra**	**63.20**	**330**	P	**P**	**03 15 10.4**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=134,slow=5.5,SNR=16						
KURBB				PcP	**PcP**	**03 15 45.3**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=126,slow=3.6,SNR=4.7						
	comp=Z,1.2nm,0.7s						
KURK	**Kurchatov**	**63.21**	**330**	P	**P**	**03 15 10.2**	**0.0**
KURK				IAmb	IAmb	03 15 12.0	
	comp=Z,2.5nm,0.6s						
KURK					**pP**	**03 15 39.9**	**-2.4**
ILAR	**Eielson Array**	**89.71**	**25**	P	**P**	**03 17 37.4**	**-1.6**
	comp=Z,0.3nm,0.8s,baz=256,slow=5.7,SNR=2.4						
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	**89.71**	**25**	P	**P**	**03 17 39.2**	**+0.2**

*SFS **11** 03:09:55.0, 38°01N×0°70W, h6km, ML2.6/6, ML2.5/6, MLv2.5/6*
*MDD **11** 03:09:55.5±0.4, 38°02N×0°76W, h9km±3km, mb_Lg2.2/12, Error ellipse: s-maj=3.9km s-min=2.3km az=125.0*
ISC 11 03:09:54.0±0.9, 38°02N±0°04×0°72W±0°04, h11km±6km, n14, σ0§60/28, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETRV	**Los Montesinos**	**0.03**	**266**	Pg	**Pg**	**03 09 56.2**	**+0.2**
ETRV				Sg	**Sg**	**03 09 57.1**	**-0.3**
EMUR	**La Murta**	**0.45**	**246**	Pg	**Pg**	**03 10 02.9**	**+0.2**
EMUR				Sg	**Sg**	**03 10 08.5**	**-0.1**
EMUR	**La Murta**	**0.45**	**246**	Pg	**Pb**	**03 10 03.2**	**-0.7**
EMUR				Sg	**Sg**	**03 10 08.6**	**-0.1**
EMUR				*i* IVmb_Lg		03 10 10.0	
CART	**Cartagena**	**0.49**	**207**	Pg	**Pb**	**03 10 04.3**	**-0.3**
CART				Sg	**Sg**	**03 10 10.7**	**+0.8**
AFON	**Font Roja**	**0.66**	**13**	Pg	**Pn**	**03 10 08.5**	**-0.8**
AFON				Sg	**Sb**	**03 10 16.7**	**-0.1**
AFON				*i* IVmb_Lg		03 10 22.7	
EBEN2	**Beniarda presa**	**0.78**	**33**	Pg	**Pn**	**03 10 11.1**	**+0.2**
EBEN2				Sg	**Sn**	**03 10 22.3**	**-0.3**
EBEN2				*i* IVmb_Lg		03 10 27.0	
ETOB	**Tobarra**	**0.90**	**314**	Pg	**Pn**	**03 10 12.4**	**-0.2**
ETOB				Sg	**Sb**	**03 10 24.8**	**+1.2**
ETOB	**Tobarra**	**0.90**	**314**	Pg	**Pn**	**03 10 12.6**	**0.0**
ETOB				Sg	**Sn**	**03 10 25.0**	**-0.6**
ETOB				*i* IVmb_Lg		03 10 29.7	
EVIV	**Cofrentes, Val**	**1.28**	**346**	Pg	**Pg**	**03 10 19.4**	**+0.8**
EVIV				Sg	**Sn**	**03 10 36.0**	**+1.0**
EVIV				*i* IVmb_Lg		03 10 36.6	
ENIJ	**Nijar**	**1.58**	**229**	Pn	**Pn**	**03 10 22.2**	**+0.2**
ENIJ				Sn	**Sb**	**03 10 43.4**	**+0.3**
EQES	**Quesada**	**1.87**	**264**	Pg	**Pb**	**03 10 27.7**	**-0.5**
EQES				*i* IVmb_Lg		03 10 33.5	
EQES				Sg	**Sb**	**03 10 51.6**	**0.0**
EIBI	**Ibiza**	**1.91**	**58**	Pn	**Pn**	**03 10 26.8**	**+0.5**
EIBI				Sn	**Sn**	**03 10 49.4**	**-1.0**
EIBI	**Ibiza**	**1.91**	**58**	Pn	**Pn**	**03 10 26.9**	**+0.5**
EIBI				Sn	**Sn**	**03 10 49.4**	**-1.0**
EIBI				*i* IVmb_Lg		03 11 18.1	
UCM	**Universidad Co**	**3.01**	**320**	Pg	**Pg**	**03 10 51.8**	**+0.2**
UCM				Sg	**Sg**	**03 11 30.5**	**-0.1**

*SJA **11** 03:17:26.5±0.8, 30°36S×71°50W, h26km±2km, ML3.6, MW3.8*
*GUC **11** 03:17:27.4±0.8, 30°39S×71°56W, h41km±3km, ML4.0*
*NEIC **11** 03:17:29.0±1.5, 30°36S±0°01×71°45W±0°10, h35km±2km, mb4.1/4, ML4.0(GUC), Error ellipse: s-maj=14.2km s-min=3.1km az=96.0*
ISC 11 03:17:27.3±1.1, 30°35S±0°02×71°57W±0°04, h18km±4km, n105, σ1§54/145, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.33**	**190**		**Pg**	**03 17 35.7**	**+1.4**
CO06					**Sb**	**03 17 41.3**	**+1.7**
CO05	**La Serena**	**0.51**	**34**		**Pg**	**03 17 38.8**	**+1.2**
CO05					**Sb**	**03 17 46.0**	**+1.1**
CO05	**La Serena**	**0.51**	**34**	*i* P	**Pg**	**03 17 38.8**	**+1.2**
CO05				*e*S	**Sb**	**03 17 47.1**	**+2.3**
CO05				IAML		03 17 49.2	
	comp=E,8µm,0.2s						
GO04	**Tololo Observa**	**0.69**	**75**		**Pg**	**03 17 40.8**	**-0.1**
GO04					**Sg**	**03 17 49.1**	**-1.0**
GO04	**Tololo Observa**	**0.69**	**75**	*i* P	**Pg**	**03 17 40.9**	**0.0**
GO04				*e*S	**Sg**	**03 17 50.9**	**+0.8**
GO04				IAML		03 17 51.8	
	comp=E,12µm,0.4s						
GO04	**Tololo Observa**	**0.69**	**75**	*e*P	**Pg**	**03 17 40.1**	**-0.7**
GO04				IAML		03 17 53.6	
	comp=Z,6µm,0.4s						
CO03	**El Pedregal**	**0.90**	**123**		**Pb**	**03 17 43.1**	**-1.2**
CO03					**Sb**	**03 17 54.9**	**-1.3**
CO03	**El Pedregal**	**0.90**	**123**	⇓*i*P	**Pb**	**03 17 43.2**	**-1.2**
CO03	**El Pedregal**	**0.90**	**123**	*e*P	**Pb**	**03 17 43.2**	**-1.2**
CO03				*e*S	**Sb**	**03 17 55.0**	**-1.1**
CO03				IAML		03 17 56.1	
	comp=Z,1µm,0.3s						
CO02	**Combarbal**	**0.98**	**150**		**Pb**	**03 17 44.5**	**-1.3**
CO02					**Sb**	**03 17 57.4**	**-1.2**
CO02	**Combarbal**	**0.98**	**150**	*i* P	**Pb**	**03 17 44.7**	**-1.1**
CO02				*e*S	**Sb**	**03 17 57.5**	**-1.0**
CO02				IAML		03 17 58.4	
	comp=N,9µm,0.3s						
CO02	**Combarbal**	**0.98**	**150**	*e*P	**Pb**	**03 17 44.8**	**-1.1**
CO02				*e*S	**Sb**	**03 17 58.5**	**0.0**
CO02				IAML		03 18 00.3	
	comp=Z,2µm,0.3s						
CO01	**Juntas del Tor**	**1.33**	**74**		**Pn**	**03 17 50.5**	**-0.6**
CO01				Sn	**Sn**	**03 18 06.0**	**-2.5**
CO01	**Juntas del Tor**	**1.33**	**74**	*i* P	**Pn**	**03 17 50.6**	**-0.5**
CO01				*e*S	**Sn**	**03 18 05.8**	**-2.6**
CO01				IAML		03 18 08.3	
	comp=N,1µm,0.4s						
CO01	**Juntas del Tor**	**1.33**	**74**	*e*P	**Pn**	**03 17 50.5**	**-0.6**
CO01				*e*S	**Sn**	**03 18 07.8**	**-0.7**
CO01				IAML		03 18 07.8	
	comp=Z,458nm,0.3s						
LCO	**Las Campanas**	**1.53**	**30**		**Pn**	**03 17 53.5**	**-0.4**
LCO	**Las Campanas**	**1.53**	**30**	⇑*i*P	**Pn**	**03 17 53.5**	**-0.4**
LCO				*e*S	**Sn**	**03 18 13.5**	**0.0**
LCO				IAML		03 18 16.4	
	comp=Z,8µm,0.3s						
LCO				IAML		03 18 16.4	
	comp=Z,8µm,0.4s						
LCO	**Las Campanas**	**1.53**	**30**	*e*P	**Pn**	**03 17 53.5**	**-0.4**
LCO				*e*S	**Sb**	**03 18 16.7**	**+2.3**
LCO				IAML		03 18 17.2	
	comp=Z,1µm,0.5s						
CO04	**Los Peladeros**	**1.77**	**163**		**Pn**	**03 17 56.5**	**-0.7**
CO04	**Los Peladeros**	**1.77**	**163**	⇓*i*P	**Pn**	**03 17 56.5**	**-0.7**
CO04				*e*S	**Sn**	**03 18 19.4**	**+0.1**
CO04				IAML		03 18 21.9	
	comp=N,2µm,0.2s						
AROD	**Rodeo**	**1.82**	**85**	*e*P	**Pn**	**03 17 59.3**	**+1.3**
AROD				*e*S	**Sn**	**03 18 17.1**	**-3.7**
AC05	**El Transito**	**1.88**	**37**		**Pn**	**03 17 59.2**	**+0.6**
AC05	**El Transito**	**1.88**	**37**	*e*P	**Pn**	**03 17 59.2**	**+0.6**
AC05				*e*S	**Sn**	**03 18 23.0**	**+1.1**
AC05				IAML		03 18 25.0	
	comp=N,1µm,0.3s						
AC05

MT16	**CCHEN**	**3.20**	**164**	*eP*	**Pn**	**03 18 16.2**	**-0.5**
MT16				IAML		03 19 10.2	
	comp=E,191nm,0.9s						
ASAL	**Salagasta**	**3.23**	**134**	*eP*	**Pn**	**03 18 19.6**	**+2.5**
ASAL				*eS*	**Sn**	**03 18 59.0**	**+3.7**
MT03	**Universidad Ad**	**3.26**	**164**		**Pn**	**03 18 17.7**	**+0.1**
MT03	**Universidad Ad**	**3.26**	**164**	*eP*	**Pn**	**03 18 17.5**	**-0.1**
MT03				IAML		03 19 18.3	
	comp=E,495nm,0.4s						
MT03	**Universidad Ad**	**3.26**	**164**	*eP*	**Pn**	**03 18 18.4**	**+0.8**
MT03				*eS*	**Sn**	**03 18 56.9**	**+0.8**
MT03				IAML		03 19 11.8	
	comp=Z,305nm,0.7s						
MT04	**Ro Olivares**	**3.28**	**159**	*eP*	**Pn**	**03 18 19.6**	**+1.6**
MT04	**Ro Olivares**	**3.28**	**159**	*eP*	**Pn**	**03 18 15.1**	**-2.9**
MT04				*eS*	**Sn**	**03 18 57.6**	**+0.9**
MT04				IAML		03 19 08.5	
	comp=Z,201nm,0.6s						
VA05	**Santo Domingo**	**3.30**	**181**	Pn	**Pn**	**03 18 18.7**	**+0.8**
VA05	**Santo Domingo**	**3.30**	**181**	*eP*	**Pn**	**03 18 18.8**	**+0.8**
VA05				IAML		03 19 22.9	
	comp=E,252nm,0.5s						
VCA	**Vinchina**	**3.34**	**62**	*eP*	**Pn**	**03 18 21.5**	**+2.8**
VCA	**Vinchina**	**3.34**	**62**	*eP*	**Pn**	**03 18 21.1**	**+2.4**
VCA				*eS*	**Sn**	**03 18 58.9**	**+0.9**
VCA				IAML		03 19 14.5	
	comp=Z,161nm,1.0s						
ARCO	**CERRO ARCO**	**3.35**	**139**	*eP*	**Pn**	**03 18 22.0**	**+3.1**
ARCO				IAML		03 19 22.0	
	comp=Z,114nm,0.5s						
MT08	**Bocatoma Ro**	**3.36**	**157**		**Pn**	**03 18 19.9**	**+0.9**
MT08	**Bocatoma Ro**	**3.36**	**157**	*eP*	**Pn**	**03 18 21.4**	**+2.4**
MT08	**Bocatoma Ro**	**3.36**	**157**	*eP*	**Pn**	**03 18 17.5**	**-1.5**
MT08				*eS*	**Sn**	**03 19 00.0**	**+1.5**
MT08				IAML		03 19 09.4	
	comp=Z,99nm,0.6s						
MT15	**Las Vizcachas**	**3.36**	**165**	*eP*	**Pn**	**03 18 18.8**	**-0.2**
MT15				IAML		03 19 09.5	
	comp=N,548nm,0.6s						
MT09	**Talagante**	**3.45**	**172**		**Pn**	**03 18 19.8**	**-0.4**
MT09	**Talagante**	**3.45**	**172**	*eP*	**Pn**	**03 18 19.7**	**-0.6**
MT12	**Pirque**	**3.48**	**166**	*eP*	**Pn**	**03 18 20.4**	**-0.3**
MT12				IAML		03 19 24.5	
	comp=N,462nm,0.6s						
MT01	**Popeta**	**3.52**	**176**		**Pn**	**03 18 20.1**	**-0.8**
MT01	**Popeta**	**3.52**	**176**	*eP*	**Pn**	**03 18 19.8**	**-1.2**
MT01	**Popeta**	**3.52**	**176**	*eP*	**Pn**	**03 18 20.2**	**-0.8**
MT01				*eS*	**Sn**	**03 19 02.8**	**+0.7**
MT01				IAML		03 19 17.9	
	comp=Z,128nm,0.8s						
MT13	**San Alfonso**	**3.56**	**163**		**Pn**	**03 18 21.3**	**-0.4**
MT13	**San Alfonso**	**3.56**	**163**	*eP*	**Pn**	**03 18 22.7**	**+1.0**
MT13	**San Alfonso**	**3.56**	**163**	*eP*	**Pn**	**03 18 23.2**	**+1.6**
MT13				*eS*	**Sn**	**03 19 00.0**	**-3.3**
MT13				*eS*		03 19 04.5	
MT13				IAML		03 19 17.4	
	comp=Z,134nm,0.7s						
AAGR	**Agrelo**	**3.59**	**140**	*eP*	**Pn**	**03 18 25.1**	**+3.0**
AAGR				*eS*	**Sn**	**03 19 09.1**	**+4.9**
AAGR				IAML		03 19 21.6	
	comp=Z,96nm,0.7s						
LMEL	**Las Melosas**	**3.68**	**162**	*eP*	**Pn**	**03 18 24.2**	**+0.9**
BO04	**La Punta**	**3.72**	**168**		**Pn**	**03 18 23.6**	**-0.3**
BO04	**La Punta**	**3.72**	**168**	*eP*	**Pn**	**03 18 23.6**	**-0.3**
BO01	**Tunca**	**4.05**	**174**		**Pn**	**03 18 28.0**	**-0.4**
BO01	**Tunca**	**4.05**	**174**	*eP*	**Pn**	**03 18 27.9**	**-0.4**
BO01				*eS*	**Sn**	**03 19 19.5**	**+4.1**
BO01				IAML		03 19 32.4	
	comp=Z,62nm,0.5s						
AC02	**Maricunga**	**4.10**	**32**		**Pn**	**03 18 28.9**	**-0.7**
AC02	**Maricunga**	**4.10**	**32**	*eP*	**Pn**	**03 18 29.8**	**+0.3**
AC02	**Maricunga**	**4.10**	**32**	*eP*	**Pn**	**03 18 30.0**	**+0.5**
AC02				*eS*	**Sn**	**03 19 19.0**	**+1.7**
AC02				IAML		03 19 37.6	
	comp=Z,145nm,1.1s						
ACLC	**CERRO LA CRUZ**	**4.11**	**78**	*eP*	**Pn**	**03 18 30.5**	**+1.1**
ACLC				*eS*	**Sb**	**03 19 29.9**	**+1.3**
ACLC				IAML		03 19 36.2	
	comp=Z,41nm,0.4s						
TINO	**Tinogasta**	**4.17**	**58**	*eP*	**Pn**	**03 18 31.9**	**+1.8**
TINO				*eS*	**Sb**	**03 19 32.1**	**+1.8**
AC01	**Pan de Azucar**	**4.27**	**12**	Pn	**Pn**	**03 18 29.1**	**-2.2**
AC01	**Pan de Azucar**	**4.27**	**12**	*eP*	**Pn**	**03 18 29.2**	**-2.2**
AC01				IAML		03 19 42.9	
	comp=Z,72nm,0.8s						
BO02	**Sierra Bellavi**	**4.48**	**172**		**Pn**	**03 18 34.3**	**-0.1**
BO02	**Sierra Bellavi**	**4.48**	**172**	*eP*	**Pn**	**03 18 34.2**	**-0.1**
BO02				*eS*	**Sn**	**03 19 31.6**	**+5.5**
BO02				IAML		03 19 47.4	
	comp=Z,78nm,0.3s						
RFA	**San Rafael**	**5.13**	**150**	*eP*	**Pn**	**03 18 43.2**	**-0.1**
RFA				IAML		03 20 12.5	
	comp=Z,31nm,0.4s						
BI02	**San Fabin de**	**6.30**	**178**		**Pn**	**03 18 58.0**	**-1.4**
GO06	**Curarrehue**	**9.21**	**180**	Pn	**Pn**	**03 19 38.5**	**-0.8**
TRQA	**Tornquist**	**11.04**	**137**	Pn	**Pn**	**03 20 03.1**	**-1.2**
PLTB	**Pedras Altas**	**15.46**	**100**	Pn	**Pn**	**03 21 03.1**	**-1.4**
CZSB	**Cruzeiro do Su**	**22.53**	**357**	P	**P**	**03 22 26.1**	**-0.1**
CZSB				IAmb	IAmb	03 22 50.8	
	comp=Z,8.5nm,1.3s						
OTAV	**Otavalo**	**31.11**	**347**	P	**P**	**03 23 45.1**	**-0.2**
OTAV				IAmb	IAmb	03 23 49.1	
	comp=Z,6.0nm,1.3s						
SNAA	**Sanae**	**54.82**	**159**	P	**P**	**03 26 55.0**	**-0.8**

*NNC **11** 03:49:10.5±0.4,43.°14N×76.°88E,h10km±2km, mb3.4, mpv3.0, Error ellipse: s-maj=3.2km s-min=2.2km az=175.0*
*KRNET **11** 03:49:10.8±0.1,43.°13N×76.°92E,h28km,mb2.5*
*SOME **11** 03:49:11.1,43.°13N×76.°88E,h10km*
ISC 11 03:49:11.3±0.8, 43.°13N±0.°02×76.°90E±0.°02, h17km±4km, n44, σ0s83/81, 10C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAA	**Alma-Ata**	**0.08**	**9**	P	**Pg**	**03 49 14.6**	**-0.2**
	284nm,0.0s						
AAA				S	**Sg**	**03 49 16.9**	**-0.3**
	102nm,0.1s						
TNSS	**Tian-Shan**	**0.10**	**159**	P	**Pg**	**03 49 14.8**	**-0.5**
	12nm,0.1s						
TNSS				S	**Sg**	**03 49 17.3**	**-0.8**
	64nm,0.1s						
TNSS	**Tian-Shan**	**0.10**	**159**	*eP*	**Pg**	**03 49 14.8**	**-0.5**
	7.4nm,0.1s						
TNSS				*eS*	**Sg**	**03 49 17.3**	**-0.8**
	64nm,0.2s						
MDOK	**Medeo**	**0.12**	**73**	Pg	**Pg**	**03 49 14.6**	**-0.6**
	31nm,0.1s						
MDOK				Lg	Lg	03 49 16.9	
	481nm,0.1s						
KOTS	**Kotyrbulak**	**0.19**	**56**	P	**Pg**	**03 49 15.9**	**-0.3**
	47nm,0.1s						
KOTS				S	**Sg**	**03 49 19.0**	**-0.4**
	196nm,0.2s						
KOTS	**Kotyrbulak**	**0.19**	**56**	*eP*	**Pg**	**03 49 15.9**	**-0.3**
KOTS				*eS*	**Sg**	**03 49 19.0**	**-0.4**
KOTS	**Kotyrbulak**	**0.19**	**56**	*eP*	**Pg**	**03 49 15.9**	**-0.3**
	23nm,0.1s						
KOTS				*eS*	**Sg**	**03 49 19.0**	**-0.4**
	196nm,0.2s						
IZV	**Izvestkoviy**	**0.23**	**246**	P	**Pg**	**03 49 16.2**	**-0.6**
	23nm,0.1s						
IZV				S	**Sg**	**03 49 19.8**	**-0.6**
	148nm,0.1s						
IZV	**Izvestkoviy**	**0.23**	**246**	*eP*	**Pg**	**03 49 16.1**	**-0.6**
	23nm,0.1s						
IZV				*eS*	**Sg**	**03 49 19.9**	**-0.6**
	148nm,0.1s						
MTBS	**Maitube**	**0.34**	**270**	P	**Pb**	**03 49 18.6**	**-0.4**
	3.3nm,0.1s						
MTBS				S	**Sb**	**03 49 23.8**	**-0.4**
	47nm,0.2s						
MTBS	**Maitube**	**0.34**	**270**	*eP*	**Pb**	**03 49 18.6**	**-0.4**
	3.0nm,0.1s						
MTBS				*eS*	**Sb**	**03 49 23.8**	**-0.4**
	61nm,0.4s						
KTBS	**Karatobe**	**0.60**	**345**	P	**Pg**	**03 49 22.8**	**-0.5**
	2.8nm,0.1s						
KTBS				S	**Sg**	**03 49 31.0**	**-0.3**
	0.3nm,0.2s						
KTBS	**Karatobe**	**0.60**	**345**	*eP*	**Pg**	**03 49 22.8**	**-0.5**
	2.8nm,0.1s						
KTBS				*eS*	**Sg**	**03 49 31.0**	**-0.3**
	0.3nm,0.2s						
ANVS	**Anan'yevo**	**0.66**	**121**	⇓*eP*	**Pg**	**03 49 23.5**	**-0.9**
ANVS				⇓*eS*	**Sg**	**03 49 32.7**	**-0.6**
KST	**Kastek**	**0.69**	**263**	P	**Pb**	**03 49 24.8**	**-0.1**
	2.4nm,0.1s						
KST				S	**Sb**	**03 49 34.3**	**0.0**
	12nm,0.2s						
KST	**Kastek**	**0.69**	**263**	*eP*	**Pb**	**03 49 24.9**	**-0.1**
	2.4nm,0.1s						
KST				*eS*	**Sb**	**03 49 34.2**	**0.0**
	12nm,0.2s						
KUU	**Kurty**	**0.86**	**332**	P	**Pg**	**03 49 26.5**	**-1.6**
	4.3nm,0.1s						
KUU				S	**Sg**	**03 49 37.9**	**-1.7**
	17nm,0.1s						
KUU	**Kurty**	**0.86**	**332**	*eP*	**Pg**	**03 49 26.5**	**-1.6**
	4.3nm,0.1s						
KUU				*eS*	**Sg**	**03 49 37.9**	**-1.7**
	17nm,0.1s						
BOOM	**Boomskoye usch**	**0.95**	**228**	⇑*eP*	**Pg**	**03 49 29.0**	**-0.8**
BOOM				⇑*eS*	**Sb**	**03 49 42.0**	**+0.2**
TKM2	**Tokmak 2**	**0.98**	**258**	⇓*eP*	**Pg**	**03 49 29.6**	**-0.7**
TKM2				⇓*eS*	**Sb**	**03 49 43.1**	**+0.6**
KURS	**Kuram**	**0.99**	**69**	P	**Pg**	**03 49 29.7**	**-0.9**
	2.2nm,0.3s						
KURS				S	**Sg**	**03 49 42.9**	**-0.8**
	2.9nm,0.2s						
ULHL	**Ulahol**	**1.01**	**209**	⇑*eP*	**Pg**	**03 49 30.0**	**-0.9**
ULHL				⇑*eS*	**Sb**	**03 49 43.8**	**+0.4**
KDJ	**Kajisay**	**1.02**	**168**	⇓*eP*	**Pg**	**03 49 30.0**	**-1.1**
KDJ				⇓*eS*	**Sg**	**03 49 43.8**	**-0.7**
KRBS	**Karabastau**	**1.05**	**303**	P	**Pg**	**03 49 30.5**	**-1.3**
	2.5nm,0.2s						
KRBS				S	**Sb**	**03 49 45.3**	**+0.7**
	2.6nm,0.2s						
KRBS	**Karabastau**	**1.05**	**303**	*eP*	**Pb**	**03 49 31.0**	**-0.1**
KRBS				*eS*	**Sb**	**03 49 45.4**	**+0.7**
KRBS	**Karabastau**	**1.05**	**303**	*eP*	**Pb**	**03 49 31.0**	**-0.1**
	3.2nm,0.2s						
KRBS				*eS*	**Sb**	**03 49 45.4**	**+0.7**
	7.5nm,0.2s						
SATY	**Saty**	**1.11**	**93**	P	**Pg**	**03 49 30.9**	**-1.8**
	1.2nm,0.1s						
SATY				S	**Sg**	**03 49 45.0**	**-2.3**
	16nm,0.1s						
ARXS	**Arharly**	**1.27**	**32**	P	**Pn**	**03 49 34.6**	**+0.2**
	6.6nm,0.1s						
ARXS				S	**Sn**	**03 49 52.1**	**+1.0**
	21nm,0.2s						
ARXS	**Arharly**	**1.27**	**32**	*eP*	**Pn**	**03 49 34.8**	**+0.5**
	3.9nm,0.1s						
ARXS				*eS*	**Sg**	**03 49 51.9**	**-0.7**
	6.0nm,0.2s						
KPKS	**Kokpek**	**1.35**	**75**	P	**Pn**	**03 49 36.0**	**+0.6**
	0.4nm,0.1s						
KPKS				S	**Sb**	**03 49 53.6**	**+0.5**
	14nm,0.3s						
KPKS	**Kokpek**	**1.35**	**75**	*eP*	**Pn**	**03 49 36.0**	**+0.6**
	0.4nm,0.3s						
KPKS				*eS*	**Sb**	**03 49 53.6**	**+0.5**
	17nm,0.2s						
KBK	**Karagaybulak**	**1.51**	**252**	⇑*eP*	**Pn**	**03 49 38.3**	**+0.6**
KBK				⇑*eS*	**Sb**	**03 49 58.3**	**+0.5**
TARG	**Taragay, Kyrgy**	**1.55**	**154**	⇓*eP*	**Pn**	**03 49 38.9**	**+0.4**
TARG				⇓*eS*	**Sn**	**03 49 59.2**	**+0.8**
UZB	**Uzynbulak**	**1.56**	**89**	P	**Pb**	**03 49 39.5**	**-0.2**
	2.0nm,0.2s						
UZB				S	**Sn**	**03 49 59.5**	**+1.4**
	12nm,0.2s						
UZB	**Uzynbulak**	**1.56**	**89**	*eP*	**Pb**	**03 49 39.5**	**-0.2**
	5.6nm,0.3s						
UZB				*eS*	**Sn**	**03 49 59.6**	**+1.4**
	3.2nm,0.2s						
CHMS	**Chumysh**	**1.58**	**266**	⇓*eP*	**Pn**	**03 49 39.3**	**+0.8**
CHMS				⇓*eS*	**Sb**	**03 49 59.9**	**+0.2**
USP	**Ospenovka**	**1.76**	**275**	⇓*eP*	**Pn**	**03 49 41.9**	**+0.9**
USP				⇓*eS*	**Sb**	**03 50 04.4**	**-0.5**
AAK	**Ala-Archa**	**1.83**	**255**	⇓*eP*	**Pn**	**03 49 43.0**	**+0.9**
AAK				⇓*eS*	**Sn**	**03 50 06.4**	**+1.4**
SHLS	**Shalkode**	**1.88**	**88**	Pg	Pg	03 49 52.0	+4.7
SHLS				Lg	Lg	03 50 21.2	
SHLS	**Shalkode**	**1.88**	**88**	*eP*	Pg	03 49 52.5	+5.2
	4.0nm,0.3s						
SHLS				*eS*	Sg	03 50 22.0	+10
	7.4nm,0.8s						
UCH	**Uchtor**	**1.98**	**244**	⇑*eP*	**Pn**	**03 49 45.2**	**+0.9**
UCH				⇑*eS*	**Sn**	**03 50 10.1**	**+1.2**
KNOS	**Konyrlen**	**2.06**	**53**	Pg	**Pb**	**03 49 48.4**	**+0.1**
	1.7nm,0.1s						
KNOS				Lg	Lg	03 50 15.3	
	8.8nm,0.3s						
EKS2	**Erkin-Say**	**2.34**	**260**	⇑*eP*	**Pn**	**03 49 49.9**	**+0.8**
EKS2				⇑*eS*	**Sn**	**03 50 18.5**	**+1.0**
DJR	**Jarkent**	**2.42**	**59**	Pg	**Pb**	**03 49 54.3**	**-0.1**
DJR				Lg	Lg	03 50 25.0	

*IDC **11** 03:56:04.7±4.4,29.°93N×142.°77E,h0km,mb3.6/6, mbtmp3.6/8, ML2.8/1, Error ellipse: s-maj=168.7km s-min=21.2km az=70.0*
ISC 11 03:56:10.6±1.9, 30.°0N±0.°2×142.°6E±0.°4, h35km, n8, σ1s52/9, mb3.7/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**7.48**	**332**	Pn	**Pn**	**03 57 58.5**	**+1.3**
	0.1nm,0.3s,baz=155,slow=11,SNR=6.6						
MJAR				Sn	**Sn**	**03 59 18.1**	**-2.7**
	baz=330,slow=39,SNR=1.3						
	1.1nm,0.3s						
KSRS	**Korea Array**	**14.27**	**305**	Pn	**Pn**	**03 59 30.9**	**+0.8**
	1.2nm,0.8s,baz=117,slow=12,SNR=1.8						
SONM	**Songino Array**	**32.93**	**313**	P	**P**	**04 02 41.8**	**+0.1**
	0.4nm,0.8s,baz=120,slow=8.5,SNR=2.9						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**48.94**	**308**	P	**P**	**04 04 54.7**	**+1.4**
	0.2nm,0.6s,baz=102,slow=7.1,SNR=1.6						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**50.28**	**190**	P	**P**	**04 05 03.0**	**-0.6**
	0.6nm,0.4s,baz=8.2,slow=7.8,SNR=12						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**51.30**	**313**	P	**P**	**04 05 10.9**	**-0.2**
	0.9nm,0.7s,baz=86,slow=7.7,SNR=6.6						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**54.00**	**190**	P	**P**	**04 05 30.0**	**-1.3**
	0.3nm,0.4s,baz=15,slow=7.8,SNR=2.4						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**56.17**	**316**	P	**P**	**04 05 46.7**	**0.0**
	0.5nm,0.5s,baz=76,slow=6.1,SNR=2.7						
	0.5nm,0.5s						

*GCG **11** 04:17:21.3±1.1, 14.°56N×93.°09W,h31km±100km, MD3.7, Presumed earthquake*
*MEX **11** 04:17:22.1±1.0, 14.°81N×93.°24W,h7km±22km, MD4.0*
ISC 11 04:17:17.6±2.3, 14.°8N±0.°1×93.°30W±0.°07, h9km±12km, n13, σ1s73/17, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.95**	**5**	*eP*	**Pg**	**04 17 36.4**	**+0.5**
PCIG				*i S*	**Sg**	**04 17 47.6**	**-0.6**
THIG		**1.01**	**81**	*eP*	**Pg**	**04 17 37.2**	**+0.1**
THIG				*eS*	**Sg**	**04 17 49.4**	**-0.9**
THIG		**1.01**	**81**	*eP*	**Pg**	**04 17 37.2**	**+0.1**
THIG				*eS*	**Sg**	**04 17 48.7**	**-1.6**
SMCA	**Catarina**	**1.19**	**85**	*i P*	Pg	04 17 38.9	-1.6
CARR	**Arriaga**	**1.60**	**338**	*eP*	**Pn**	**04 17 45.8**	**-0.3**
CARR				*eS*	**Sn**	**04 18 05.4**	**-1.4**
CCIG	**Comitan**	**1.89**	**36**	*eP*	**Pn**	**04 17 51.6**	**+1.3**
CCIG				*eS*	**Sn**	**04 18 12.6**	**-1.7**
CCIG	**Comitan**	**1.89**	**36**	*eP*	**Pn**	**04 17 53.0**	**+2.8**
STG2	**El Palmar, Qui**	**1.89**	**99**	*eP*	Pn	04 17 45.1	-5.1
STG8	**El Palmar, Qui**	**1.91**	**99**	*eP*	Pn	04 17 46.1	-4.5
STG5	**El Palmar, Qui**	**1.92**	**100**	*i P*	Pn	04 17 46.6	-4.0
STG5				*i S*	Sn	04 18 05.4	-10
UXUV	**UXUV**	**2.68**	**342**	*eP*	**Pn**	**04 18 02.5**	**+1.6**
UXUV				*eS*	**Sn**	**04 18 34.1**	**+0.7**
CMIG	**Matias Romero**	**2.78**	**327**	*eP*	**Pn**	**04 18 02.8**	**+0.5**
CMIG				*i S*	**Sn**	**04 18 36.1**	**0.0**
NEUV	**Arroyo Zacate**	**3.80**	**321**	*eP*	**Pn**	**04 18 18.5**	**+2.2**
NEUV				*eS*	**Sn**	**04 18 57.7**	**-3.5**

*SSNC **11** 04:23:49.6±1.4, 18.°95N×80.°80W,h25km±16km, MD3.0, ML3.0, Presumed earthquake*
*JSN **11** 04:23:53.3±0.8, 18.°80N×80.°30W,h0km±71km, MW4.6, Presumed earthquake*
ISC 11 04:23:50.1±2.4, 19.°15N±0.°08×80.°5W±0.°1, h10km, n8, σ1s43/16, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCCY	**Blossom Villag**	**0.63**	**34**	*eP*	**Pn**	**04 24 05.8**	**+0.7**
LCCY				*eS*	**Sn**	**04 24 16.8**	**+1.6**
CBCY	**The Bluff, Cay**	**0.89**	**48**	*eP*	**Pn**	**04 24 08.8**	**+0.2**
CBCY				*eS*	**Sn**	**04 24 22.0**	**+0.5**
CBCY				IAML		04 24 23.7	
	comp=E,137nm,0.4s						
CBCY				IAML		04 24 24.4	
	comp=N,226nm,0.2s						
MTDJ	**Mount Denham**	**2.92**	**108**	*eP*	**Pn**	**04 24 36.8**	**+0.1**
MTDJ				*eS*	**Sn**	**04 25 10.5**	**-1.4**
MTDJ				IAML		04 25 13.9	
	comp=N,55nm,0.4s						
MTDJ				IAML		04 25 14.3	
	comp=N,53nm,0.3s						
MGV	**Manicaragua**	**2.98**	**9**	*eP*	**Pn**	**04 24 37.3**	**-0.2**
MGV				*eS*	**Sn**	**04 25 12.8**	**-0.6**
CCCC	**Cccc**	**3.25**	**51**	*eP*	**Pb**	**04 24 48.4**	**+0.4**
CCCC				*eS*	**Sg**	**04 25 33.1**	**-1.5**
LMGC	**Las Mercedes**	**3.38**	**74**	*eP*	**Pn**	**04 24 45.1**	**+2.1**
LMGC				*eS*	**Sn**	**04 25 25.2**	**+2.0**
LMGC				*eSg*	**Sb**	**04 25 28.8**	**-2.6**
STH	**Stony Hill**	**3.62**	**106**	*i P*	**Pn**	**04 24 46.7**	**+0.4**
CHIV	**Chivirico**	**3.90**	**77**	*eP*	**Pn**	**04 24 51.4**	**+1.3**
CHIV				*eS*	**Sn**	**04 25 37.3**	**+1.3**

*NNC **11** 04:25:26.6±1.7, 40.°44N×77.°98E,h0km, mb3.5, mpv3.1, Error ellipse: s-maj=11.0km s-min=9.0km az=2.0*
*SOME **11** 04:25:28.3, 40.°60N×78.°12E,h5km*
*KRNET **11** 04:25:30.1±0.1, 40.°61N×78.°00E,h16km,mb2.5*
ISC 11 04:25:28.4±2.5, 40.°52N±0.°10×77.°97E±0.°05, h13km±17km, n19, σ1s21/31, 8C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.21**	**354**	⇓*eP*	**Pg**	**04 25 51.4**	**-0.3**
TARG				⇓*eS*	**Sg**	**04 26 07.1**	**-0.4**
KDJ	**Kajisay**	**1.71**	**340**	⇓*eP*	**Pg**	**04 26 00.8**	**-0.4**
KDJ				⇓*eS*	**Sg**	**04 26 23.0**	**-0.5**
NRN	**Naryn**	**1.75**	**302**	⇑*eP*	**Pg**	**04 26 02.4**	**+0.5**
NRN				⇑*eS*	**Sg**	**04 26 25.9**	**+1.3**
JNKS	**Jany-Kuch**	**1.86**	**287**	⇑*eP*	**Pg**	**04 26 04.2**	**+0.2**
JNKS				⇑*eS*	**Sg**	**04 26 29.1**	**+1.0**
ULHL	**Ulahol**	**2.16**	**323**	⇑*eP*	**Pg**	**04 26 08.2**	**+0.8**
ULHL				⇑*eS*	**Sg**	**04 26 36.2**	**-1.5**
BOOM	**Boomskoye usch**	**2.49**	**323**	⇑*eP*	**Pb**	**04 26 13.0**	**0.0**
BOOM				⇑*eS*	**Sb**	**04 26 44.2**	**+0.6**
SATY	**Saty**	**2.55**	**7**	Pg	**Pb**	**04 26 15.7**	**+1.6**
	6.0nm,0.5s						
SATY				Lg	Lg	04 26 51.9	
	6.3nm,0.4s						
MDOK	**Medeo**	**2.73**	**346**	Pg	**Pb**	**04 26 17.5**	**+0.4**
	5.3nm,0.4s						
MDOK				Lg	Lg	04 26 54.9	
	6.2nm,0.7s						
UZB	**Uzynbulak**	**2.74**	**16**	Pg	**Pb**	**04 26 17.4**	**+0.2**
	3.5nm,0.2s						
UZB				Lg	Lg	04 26 54.9	
	3.8nm,0.4s						
UZB	**Uzynbulak**	**2.74**	**16**	*eP*	**Pb**	**04 26 17.4**	**+0.2**
	3.5nm,0.2s						
UZB				*eS*	**Sg**	**04 26 54.9**	**-1.4**
	3.8nm,0.4s						
KOTS	**Kotyrbulak**	**2.78**	**347**	Pg	**Pb**	**04 26 19.2**	**+1.2**
KOTS				Lg	Lg	04 26 58.5	
KOTS	**Kotyrbulak**	**2.78**	**347**	*eP*	**Pb**	**04 26 19.2**	**+1.2**
KOTS				*eS*	**Sg**	**04 26 58.4**	**+0.6**
	12nm,0.5s						
MTBS	**Maitube**	**2.85**	**337**	Pg	**Pb**	**04 26 19.7**	**+0.6**
	1.8nm,0.2s						
MTBS				Lg	Lg	04 26 59.1	
	4.4nm,0.4s						
MTBS	**Maitube**	**2.85**	**337**	*eP*	**Pb**	**04 26 19.7**	**+0.6**
	1.8nm,0.2s						
MTBS				*eS*	**Sg**	**04 26 59.1**	**-0.8**
	4.4nm,0.4s						
SHLS	**Shalkode**	**2.86**	**22**	Pg	**Pg**	**04 26 21.9**	**-1.2**
	2.7nm,0.2s						
SHLS				Lg	Lg	04 27 02.7	
	8.6nm,0.5s						
SHLS	**Shalkode**	**2.86**	**22**	*eP*	**Pg**	**04 26 21.9**	**-1.2**
	2.7nm,0.2s						
SHLS				*eS*	**Sg**	**04 27 02.7**	**+2.6**
	8.6nm,0.5s						
UCH	**Uchtor**	**3.11**	**304**	⇑*eP*	**Pb**	**04 26 21.9**	**-1.9**
UCH				⇑*eS*	**Sb**	**04 27 00.0**	**-1.8**
KTBS	**Karatobe**	**3.33**	**344**	Pg	**Pb**	**04 26 29.1**	**+1.8**
	2.2nm,0.3s						
KTBS				Lg	Lg	04 27 15.8	
	0.6nm,0.5s						
KTBS	**Karatobe**	**3.33**	**344**	*eP*	**Pb**	**04 26 29.1**	**+1.8**
	2.2nm,0.3s						
KTBS				*eS*	**Sg**	**04 27 15.8**	**+0.6**
	0.6nm,0.5s						

*CATAC **11** 05:30:31.3±0.3, 13.°N±2.°×8.°8W±.°, h33km±3km, M3.6/34, MLv3.6/34

CNGN	**Cerro Negro**	**1.33**	**92**	P	**Pn**	**05 30 53.3**	**-0.3**
CNGN				S	**Sn**	**05 31 10.0**	**-0.1**
LEVN	**Ruinas Leon Vi**	**1.41**	**96**	S	**Sn**	**05 31 13.5**	**+1.3**
PAVA	**Las Pavas**	**1.43**	**323**	P	**Pn**	**05 30 55.2**	**+0.1**
PAVA				S	**Sn**	**05 31 13.9**	**+1.1**
PAVA	**Las Pavas**	**1.43**	**323**	*eP*	**Pn**	**05 30 55.0**	**-0.1**
COPN	**Copaltepe**	**1.48**	**105**	P	**Pn**	**05 30 54.9**	**-0.8**
PANCS	**Alcalda de**	**1.51**	**314**	S	**Sn**	**05 31 14.6**	**-0.1**
LBRS	**Las Brisas**	**1.52**	**321**	*eP*	**Pn**	**05 30 56.6**	**+0.3**
LOMA	**Loma Larga**	**1.53**	**315**	*eP*	Pn	05 30 51.5	-4.9
LOMA				*eS*	**Sn**	**05 31 10.7**	**-4.6**
MOM2	**El Cardon**	**1.54**	**94**	S	**Sn**	**05 31 15.5**	**+0.3**
LALI	**Alcalda de L**	**1.54**	**307**	P	**Pn**	**05 30 56.3**	**-0.2**
LALI				S	**Sn**	**05 31 15.7**	**+0.4**
UDBS	**Universidad Do**	**1.57**	**317**	P	**Pn**	**05 30 57.5**	**+0.5**
UDBS				S	**Sn**	**05 31 16.7**	**+0.6**
IGN	**Direccin Gen**	**1.58**	**317**	S	**Sn**	**05 31 17.5**	**+1.2**
UTEC	**Universidad Te**	**1.59**	**316**	P	**Pn**	**05 30 57.7**	**+0.4**
UTEC				S	**Sn**	**05 31 17.4**	**+0.8**
SEMO	**Seminario San**	**1.61**	**315**	S	**Sn**	**05 31 18.0**	**+0.9**
UEES	**Universidad Ev**	**1.63**	**315**	P	**Pn**	**05 30 57.5**	**-0.3**
UEES				S	**Sn**	**05 31 18.1**	**+0.6**
UEES	**Universidad Ev**	**1.63**	**315**	*eP*	**Pn**	**05 30 57.2**	**-0.6**
UEES				*eS*	**Sn**	**05 31 17.2**	**-0.4**
PIC2	**El Picacho**	**1.66**	**315**	*eP*	**Pn**	**05 30 59.2**	**+0.9**
BOQS	**Boqueron**	**1.67**	**314**	*eP*	**Pn**	**05 30 59.3**	**+0.9**
BOQS				*eS*	**Sn**	**05 31 18.9**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.67**	**27**	P	**Pn**	**05 30 58.2**	**-0.2**
TGUH				S	**Sn**	**05 31 18.8**	**+0.1**
PMON	**Piamonte**	**1.68**	**313**	P	**Pn**	**05 30 58.9**	**+0.4**
PMON				S	**Sn**	**05 31 20.3**	**+1.5**
PMON	**Piamonte**	**1.68**	**313**	*eP*	**Pn**	**05 30 59.0**	**+0.4**
PMON				*eS*	**Sn**	**05 31 19.7**	**+0.9**
LIMN	**Finca el Limon**	**1.72**	**73**	P	**Pn**	**05 30 58.8**	**-0.3**
LIMN				S	**Sn**	**05 31 19.7**	**-0.2**
APQ2	**Apoyeque**	**1.73**	**102**	P	**Pn**	**05 30 59.1**	**0.0**
APQ2				S	**Sn**	**05 31 19.9**	**0.0**
JAYA	**Jayaque - finc**	**1.74**	**309**	P	**Pn**	**05 30 59.1**	**-0.2**
JAYA				S	**Sn**	**05 31 20.5**	**+0.1**
JAYA	**Jayaque - finc**	**1.74**	**309**	*eP*	**Pn**	**05 30 59.2**	**-0.2**
JAYA				*eS*	**Sn**	**05 31 19.1**	**-1.3**
CEDA	**San Andres**	**1.80**	**314**	S	**Sn**	**05 31 22.0**	**+0.3**
UNAN	**Cigeo UNAN**	**1.80**	**104**	P	**Pn**	**05 31 00.6**	**+0.5**
UNAN				S	**Sn**	**05 31 21.1**	**-0.6**
MGAN	**Managua**	**1.81**	**103**	P	**Pn**	**05 31 00.7**	**+0.5**
MGAN				S	**Sn**	**05 31 21.7**	**-0.4**
YUSH	**Yuscaran**	**1.82**	**40**	P	**Pn**	**05 31 00.4**	**0.0**
YUSH				S	**Sn**	**05 31 22.2**	**-0.1**
OCON	**Estacion meteo**	**1.87**	**55**	P	**Pn**	**05 31 00.5**	**-0.6**
OCON				S	**Sn**	**05 31 23.0**	**-0.4**
AERN	**Aeropuerto Man**	**1.89**	**102**	S	**Sn**	**05 31 24.2**	**+0.3**
SBLS	**San Blas**	**1.99**	**310**	*eP*	**Pn**	**05 31 03.5**	**+0.6**
SNJE	**San Jose**	**1.99**	**311**	*eP*	**Pn**	**05 31 03.2**	**+0.3**
UNIC	**Universidad Ca**	**2.03**	**314**	P	**Pn**	**05 31 03.8**	**+0.5**
UNIC				S	**Sn**	**05 31 29.0**	**+1.6**
RCON	**San Juan de Ri**	**2.07**	**63**	P	**Pn**	**05 31 04.0**	**+0.1**
RCON				S	**Sn**	**05 31 28.7**	**+0.2**
RCVN	**Varillal2**	**2.08**	**61**	P	**Pn**	**05 31 04.1**	**+0.1**
RCVN				S	**Sn**	**05 31 28.6**	**-0.2**
MATN	**Matagalpa**	**2.11**	**80**	P	**Pn**	**05 31 03.0**	**-1.4**
RCPN	**Sur Rio San Ju**	**2.14**	**63**	P	**Pn**	**05 31 05.1**	**+0.2**
RCPN				S	**Sn**	**05 31 30.8**	**+0.5**
NUBE	**Las Nubes**	**2.14**	**309**	P	**Pn**	**05 31 06.0**	**+1.0**
NUBE	**Las Nubes**	**2.14**	**309**	*eP*	**Pn**	**05 31 05.2**	**+0.2**
NUBE				*eS*	**Sn**	**05 31 30.4**	**0.0**
RBDL	**Robledal**	**2.21**	**314**	*eP*	**Pn**	**05 31 06.2**	**+0.3**
MTCO	**Montecristo**	**2.23**	**325**	P	**Pn**	**05 31 06.5**	**+0.4**
FAME	**Alcaldia de Sa**	**2.29**	**304**	P	**Pn**	**05 31 07.6**	**+0.7**
FAME				S	**Sn**	**05 31 33.9**	**0.0**
SARH	**Santa Rosa de**	**2.31**	**343**	S	**Sn**	**05 31 35.1**	**+0.9**
BOAB	**BOACO BROADBAN**	**2.34**	**92**	P	**Pn**	**05 31 07.1**	**-0.3**
BOAB				S	**Sn**	**05 31 35.1**	**+0.2**
ESQI	**Esquipulas**	**2.35**	**328**	P	**Pn**	**05 31 07.8**	**+0.1**

*IDC **11** 05:40:08.4±7.7,50°.98N×152°.69E, h317km±99km, mb3.0/13, mbtmp3.7/14, Error ellipse: s-maj=51.0km s-min=15.1km az=171.0*

ISC 11 05:40:05.6±1.2,50.7N±0°.2×152.8E±0°.1, h300km, n15, σ0s70/15, mb3.2/13, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEY	**Seymchan**	**12.26**	**359**	P	**P**	**05 42 53.5**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=163,slow=14,SNR=4.1						
MJAR	**Matsushiro Arr**	**17.60**	**222**	P	**Pn**	**05 43 54.9**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=25,slow=11,SNR=2.8						
HILR	**Hailar Array B**	**21.11**	**280**	P	**P**	**05 44 27.8**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=69,slow=8.3,SNR=6.0 1.4nm,0.4s						
SONM	**Songjino Array**	**30.02**	**283**	P	**P**	**05 45 47.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=74,slow=7.9,SNR=3.0 0.3nm,0.5s						
ILAR	**Eielson Array**	**33.68**	**42**	P	**P**	**05 46 18.1**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=270,slow=5.8,SNR=6.1 0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**40.22**	**302**	P	**P**	**05 47 12.2**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=52,slow=9.3,SNR=2.6 0.4nm,0.4s						
MKAR	**Makanchi Array**	**45.03**	**294**	P	**P**	**05 47 51.8**	**0.0**
	comp=Z,0.4nm,0.4s,baz=64,slow=8.2,SNR=8.9 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**45.17**	**300**	P	**P**	**05 47 52.9**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=68,slow=8.2,SNR=8.1 1.0nm,0.5s						
YKA	**Yellowknife Ar**	**47.93**	**39**	P	**P**	**05 48 13.9**	**0.0**
	comp=Z,0.2nm,0.5s,baz=305,slow=7.6,SNR=6.3 0.2nm,0.5s						
BVAR	**Borovoye Array**	**48.24**	**307**	P	**P**	**05 48 16.3**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=66,slow=5.0,SNR=3.7 0.5nm,0.3s						
AKTO	**Aktyubinsk**	**55.97**	**310**	P	**P**	**05 49 13.0**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=47,slow=11,SNR=2.4 0.8nm,0.4s						
FINES	**FINESS Array B**	**60.38**	**334**	P	**P**	**05 49 42.9**	**-0.1**
	comp=Z,6.9nm,1.1s,baz=50,slow=6.5,SNR=3.7 6.9nm,1.1s						
PDAR	**Pinedale Array**	**62.63**	**55**	P	**P**	**05 49 58.9**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=289,slow=10,SNR=2.2 0.1nm,0.5s						
HFS	**Hagfors**	**64.68**	**339**	P	**P**	**05 50 10.7**	**-0.7**
	comp=Z,3.1nm,1.0s,baz=75,slow=1.6,SNR=1.0 3.1nm,1.0s						
AKASG	**Malin Array Be**	**68.15**	**325**	P	**P**	**05 50 32.0**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=34,slow=7.1,SNR=3.0 0.4nm,0.5s						

*IDC **11** 05:46:37.9±0.8,33°.60N×48°.00E, h0km, mb4.0/21, mbtmp4.0/26, ML3.6/4, MS3.3/2, Error ellipse: s-maj=17.2km s-min=13.1km az=3.0*
*TEH **11** 05:46:39.2,33°.84N×48°.12E, h8km±16km, ML4.0, Presumed earthquake*
*NEIC **11** 05:46:40.1±1.9,33°.58N±0°.06×48°.02E±0°.08, h10km±1km, mb4.1/19, Error ellipse: s-maj=11.6km s-min=8.8km az=59.0*
*THR **11** 05:46:42.0±0.0,33°.82N×48°.23E, h10km±9km, ML4.1, Presumed earthquake*
*OMAN **11** 05:46:46.0±2.1,33°.07N×48°.21E, h10km, mb4.3/8, Error ellipse: s-maj=18.7km s-min=13.5km az=11.0*

ISC 11 05:46:39.4±0.4,33.64N±0°.03×48.02E±0°.04, h10km, n97, σ2s32/102, mb4.2/31, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDOB	**Doab**	**0.20**	**43**	Pg	**Pg**	**05 46 41.7**	**-1.9**
IBZA	**Bozab**	**0.83**	**351**	Pg	**Pg**	**05 46 52.5**	**-3.0**
KHF	**Cheshme Sefid,**	**1.03**	**308**	Pg	**Pg**	**05 46 58.3**	**-0.8**
IALM	**Almaboliaq**	**1.22**	**6**	Pg	**Pn**	**05 46 58.9**	**-3.8**
SNQR	**Sonqor, Kerman**	**1.25**	**345**	Pg	**Pn**	**05 47 00.4**	**-2.8**
IGHG	**Ghaleghazi**	**1.38**	**300**	Pg	**Pn**	**05 47 05.3**	**+0.3**
GTMR	**Gotvand**	**1.49**	**142**	*e*Pg	**Pg**	**05 47 09.1**	**+1.2**
GTMR				IAML		05 47 36.9	
	comp=Z,2μm,1.0s						
HAGD	**Aghdareh**	**1.50**	**38**	Pg	**Pn**	**05 47 03.2**	**-3.4**
SNGE	**Sanandaj**	**1.55**	**339**	*e*Pg	**Pb**	**05 47 08.8**	**+0.6**
SNGE				IAML		05 47 37.1	
	comp=Z,2μm,1.0s						
GLG1	**Gilan-e-Gharb**	**1.81**	**286**	Pn	**Pb**	**05 47 13.3**	**+0.6**
ASAO	**Ashtian**	**1.90**	**61**	*e*Pn	**Pn**	**05 47 12.1**	**+0.1**
ASAO				IAML		05 47 44.2	
	comp=Z,2μm,1.0s						

AMIS	**Naft Sefid**	**2.25**	**151**	Pn	**Pb**	**05 47 20.6**	**+0.6**
AHWZ	**Ahwaz**	**2.37**	**167**	Pn	**Pb**	**05 47 22.7**	**+0.7**
IPIR	**Pirpir**	**2.59**	**111**	Pn	**Pn**	**05 47 23.8**	**+2.2**
JHBN	**Jahan bin**	**2.64**	**122**	Pn	**Pn**	**05 47 25.0**	**+2.8**
IQOM	**Qom**	**2.80**	**64**	Pn	**Pn**	**05 47 24.4**	**0.0**
GHVR	**GHOM**	**2.85**	**72**	*e*Pn	**Pn**	**05 47 27.7**	**+2.8**
GHVR				IAML		05 48 17.9	
	comp=Z,870nm,1.0s						
IKLH	**Kolahrood**	**3.00**	**95**	Pn	**Pn**	**05 47 28.7**	**+1.6**
ZNJK	**Zanjan**	**3.07**	**10**	*e*Pn	**Pn**	**05 47 30.2**	**+2.1**
ZNJK				IAML		05 48 26.1	
	comp=Z,4.1nm,1.0s						
IHSB	**Hasanabad**	**3.23**	**55**	Pn	**Pn**	**05 47 30.5**	**+0.3**
IBRJ	**Brojen**	**3.23**	**121**	Pn	**Pn**	**05 47 33.0**	**+2.6**
THKV	**Tehran--Karaj**	**3.27**	**45**	*e*Pn	**Pn**	**05 47 33.2**	**+2.3**
THKV				IAML		05 48 34.9	
	comp=Z,280nm,1.0s						
KRSH	**Karshahi**	**3.44**	**83**	Pn	**Pn**	**05 47 34.4**	**+1.2**
DAMV	**Damavand**	**3.81**	**58**	*e*Pn	**Pn**	**05 47 40.6**	**+2.2**
DAMV				IAML		05 48 27.7	
	comp=Z,3.5nm,1.0s						
KLNJ	**Kolanjah**	**4.01**	**130**	*e*Pn	**Pn**	**05 47 45.3**	**+4.1**
KLNJ				IAML		05 49 15.9	
	comp=Z,150nm,1.0s						
NASN	**Na'in**	**4.10**	**101**	*e*Pn	**Pn**	**05 47 44.5**	**+2.0**
KBD	**Kabd**	**4.46**	**184**	P	Pn	05 47 40.4	-6.6
KBD				S	**Sn**	**05 48 33.4**	**-5.7**
GRMI	**Germi**	**5.16**	**359**	*e*Pn	**Pn**	**05 47 58.8**	**+2.1**
GRMI				IAML		05 49 46.2	
	comp=Z,28nm,1.0s						
YZKH	**Yazd**	**5.66**	**101**	*e*Pn	**Pn**	**05 48 06.0**	**+2.3**
YZKH				IAML		05 49 52.3	
	comp=Z,46nm,1.0s						
GURO	**Guroymak-BITLI**	**6.89**	**317**		**Pn**	**05 48 21.1**	**+0.6**
GNI	**Garni**	**7.00**	**339**	Pg	**Pb**	**05 48 44.3**	**+3.2**
	comp=Z,0.7nm,0.3s,baz=193,slow=22,SNR=2.1						
GNI				Lg	Lg	05 50 22.2	
	comp=Z,0.6nm,0.3s,baz=114,slow=18,SNR=2.3						
TABS	**Tabas**	**7.59**	**87**	*e*Pn	**Pn**	**05 48 32.8**	**+2.6**
TABS				IAML		05 50 37.0	
	comp=Z,2.4nm,1.0s						
TRNA	**Turayna**	**9.30**	**162**	P	**Pn**	**05 48 56.1**	**+2.5**
	SNR=7.1						
TRNA				S	**Sn**	**05 50 34.0**	**-4.3**
ASF	**Jabal al Asfar**	**9.46**	**264**	Pn	**Pn**	**05 48 55.5**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=281,slow=23,SNR=1.7						
ASF				Sn	**Sn**	**05 50 39.7**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=128,slow=22,SNR=1.5						
ASF				Lg	Lg	05 51 38.7	
	comp=Z,0.3nm,0.3s,baz=51,slow=12,SNR=4.3 comp=Z,1.1nm,0.3s						
ARPR	**Arapgir-MALATY**	**9.51**	**308**	Pn	**Pn**	**05 48 57.9**	**+1.4**
RAYN	**Ar Rayn**	**10.32**	**193**		**Pn**	**05 49 08.8**	**+1.2**
RAYN	**Ar Rayn**	**10.32**	**193**	P	**Pn**	**05 49 08.6**	**+1.0**
SHME	**Shamm**	**10.34**	**135**	P	**Pn**	**05 49 07.6**	**-0.2**
SHME				S	**Sn**	**05 50 59.5**	**-4.3**
BANOM	**Banah**	**10.53**	**135**	P	**Pn**	**05 49 11.0**	**+0.6**
BANOM				S	**Sn**	**05 51 04.2**	**-4.3**
MASF	**Masafi**	**10.87**	**137**	P	**Pn**	**05 49 15.8**	**+0.7**
MASF				S	**Sn**	**05 51 12.6**	**-4.3**
MDH	**Madha**	**11.01**	**137**	P	**Pn**	**05 49 17.8**	**+0.9**
MDH				S	**Sn**	**05 51 13.2**	**-6.9**
UOSS	**Minazif**	**11.23**	**138**	S	**Sn**	**05 51 18.4**	**-7.1**
HATD	**Hatta, Dubai**	**11.28**	**139**	P	**Pn**	**05 49 22.1**	**+1.4**
HATD				S	**Sn**	**05 51 20.7**	**-6.2**
ASHO	**Ashiyiah**	**11.36**	**140**	P	**Pn**	**05 49 22.0**	**+0.3**
ASHO				S	**Sn**	**05 51 23.0**	**-5.8**
MZR	**Muzera**	**11.64**	**154**	P	**Pn**	**05 49 28.5**	**+2.9**
	SNR=6.3						
MZR				S	**Sn**	**05 51 32.9**	**-2.7**
EIL	**Elat**	**11.81**	**254**	Pn	**Pn**	**05 49 29.0**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=68,slow=11,SNR=2.7						
EIL				Lg	Lg	05 52 49.2	
	comp=Z,0.2nm,0.3s,baz=62,slow=6.8,SNR=3.8						
EIL				LR	LR	05 55 26.2	
	comp=Z,51nm,18.3s,baz=76,slow=45 comp=Z,3.2nm,0.4s						
SOHO	**SOHO**	**12.05**	**140**	P	**Pn**	**05 49 29.1**	**-2.1**
BRTR	**Keskin Array B**	**13.03**	**302**	Pn	**Pn**	**05 49 47.0**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=118,slow=12,SNR=3.7 comp=Z,0.5nm,0.6s						
BSY	**Bisya**	**13.54**	**141**	P	**Pn**	**05 49 51.2**	**-0.3**
BSY				S	**Sn**	**05 52 16.7**	**-5.4**
DOK	**Doka**	**15.93**	**158**	P	**P**	**05 50 27.2**	**-0.1**
	SNR=7.3						
AB31	**Akbulak array**	**17.94**	**26**	P	**Pn**	**05 50 49.0**	**+0.1**
ABKAR	**Akbulak array**	**17.94**	**26**		**P**	**05 50 50.5**	**+1.2**
AKTO	**Aktyubinsk**	**18.32**	**21**	P	**Pn**	**05 50 53.6**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=222,slow=9.0,SNR=11 comp=Z,5.3nm,0.6s						
IDI	**Anoyia**	**19.14**	**281**	P	**P**	**05 51 03.0**	**+0.3**
	comp=Z,12nm,0.8s,baz=105,slow=12,SNR=2.1						
IDI	**Anoyia**	**19.14**	**281**	IAmb	IAmb	05 51 06.9	
	comp=Z,93nm,1.5s						
KK31	**Karatay Array**	**19.96**	**55**	P	**Pn**	**05 51 13.8**	**+0.5**
KK31				IAmb	IAmb	05 51 18.8	
	comp=Z,3.2nm,0.7s						
KKAR	**Karatay Array**	**19.96**	**55**	P	**Pn**	**05 51 13.7**	**+0.5**
MLR	**Muntele Rosu**	**20.65**	**311**	P	**P**	**05 51 19.6**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=337,slow=7.9,SNR=4.6 comp=Z,1.2nm,0.5s						
MLR	**Muntele Rosu**	**20.65**	**311**	IAmb	IAmb	05 51 29.4	
	comp=Z,11nm,1.2s						
AKASG	**Malin Array Be**	**21.91**	**327**	P	**P**	**05 51 33.4**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=136,slow=10,SNR=4.4 comp=Z,0.7nm,0.4s						
AKBB	**Malin Array Si**	**21.91**	**327**	P	**P**	**05 51 34.1**	**+1.6**
AKBB				IAmb	IAmb	05 51 52.0	
	comp=Z,4.2nm,0.8s						
KIEV	**Kiev**	**21.91**	**327**	P	**P**	**05 51 34.3**	**+1.8**
KIEV				IAmb	IAmb	05 51 34.6	
	comp=Z,14nm,1.5s						
BURAR	**Bucovina Array**	**22.12**	**316**	P	**P**	**05 51 36.4**	**+1.3**
BUR08	**Bucovina Ar. S**	**22.15**	**316**	P	**P**	**05 51 35.6**	**+0.4**
BUR08				IAmb	IAmb	05 51 42.5	
	comp=Z,18nm,1.5s						
BOOM	**Boomskoye usch**	**23.61**	**60**	P	**P**	**05 51 52.6**	**+2.0**
BOOM				IAmb	IAmb	05 52 06.8	
	comp=Z,9.7nm,1.3s						
ARTI	**Arti**	**23.84**	**14**	P	**P**	**05 51 52.2**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=202,slow=11,SNR=3.1 comp=Z,1.7nm,0.6s						
ARTI	**Arti**	**23.84**	**14**	IAmb	IAmb	05 52 01.6	
	comp=Z,7.9nm,0.9s						
TARG	**Taragay, Kyrgy**	**24.83**	**62**	P	**P**	**05 52 03.1**	**+0.9**
TARG				IAmb	IAmb	05 52 11.8	
	comp=Z,4.6nm,0.8s						
BORK	**Borovoye**	**25.10**	**33**	P	**P**	**05 52 05.3**	**+1.3**
BVAR	**Borovoye Array**	**25.12**	**33**	P	**P**	**05 52 04.9**	**+0.7**
	comp=Z,7.6nm,0.7s,baz=232,slow=8.2,SNR=21						
BVAR				PcP	**PcP**	**05 55 37.8**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=282,slow=2.8,SNR=3.3 comp=Z,7.6nm,0.7s						
KURBB	**Kurchatov Arra**	**28.01**	**44**	P	**P**	**05 52 31.1**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=244,slow=9.8,SNR=6.9 comp=Z,1.1nm,0.7s						
KURK	**Kurchatov**	**28.10**	**43**	P	**P**	**05 52 31.1**	**0.0**
KURK	**Kurchatov**	**28.10**	**43**	IAmb	IAmb	05 52 40.0	
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**29.04**	**53**	P	**P**	**05 52 40.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=245,slow=7.2,SNR=8.0						
MKAR				PcP	**PcP**	**05 55 46.8**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=256,slow=3.0,SNR=2.8 comp=Z,0.5nm,0.6s						
KBA	**Koelnbreinsper**	**29.37**	**308**	*e*P	**P**	**05 52 41.8**	**-0.9**
	comp=Z,5.4nm,0.7s						
GERES	**GERESS Array B**	**29.64**	**311**	P	**P**	**05 52 44.6**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=96,slow=7.1,SNR=2.5 comp=Z,0.9nm,0.5s						
SQTA	**Sankt Quirin**	**30.82**	**307**	*i* P	**P**	**05 52 54.2**	**-1.3**
	comp=Z,4.5nm,0.4s						
MOTA	**Moosalm**	**30.92**	**307**	*e*P	**P**	**05 52 54.8**	**-1.6**
	comp=Z,6.2nm,0.9s						
FETA	**Feichten**	**31.10**	**307**	*i* P	**P**	**05 52 57.7**	**-0.3**
	comp=Z,11nm,1.1s						
FINES	**FINESS Array B**	**31.19**	**340**	P	**P**	**05 52 59.4**	**+1.0**
	comp=Z,4.6nm,1.0s,baz=142,slow=9.6,SNR=5.7 comp=Z,4.6nm,1.0s						
DAVA	**Damuels**	**31.72**	**307**	*i* P	**P**	**05 53 02.9**	**-0.5**
	comp=Z,9.3nm,0.5s						
ZALV	**Zalesovo Beam**	**32.90**	**41**	P	**P**	**05 53 15.3**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=241,slow=7.3,SNR=6.7 comp=Z,1.6nm,0.7s						
HFS	**Hagfors**	**34.69**	**330**	P	**P**	**05 53 28.9**	**0.0**
	comp=Z,3.8nm,0.7s,baz=110,slow=11,SNR=7.1 comp=Z,3.8nm,0.7s						

ARCES	**ARCESS Array B**	**38.07**	**347**	P	**P**	**05 53 56.3**	**-1.4**
	comp=Z,3.2nm,1.0s,baz=150,slow=9.0,SNR=4.4 comp=Z,3.2nm,1.0s						
EKA	**Eskdalemuir Ar**	**41.29**	**318**	P	**P**	**05 54 24.4**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=90,slow=9.0,SNR=1.7 comp=Z,2.3nm,0.8s						
ESDC	**Sonseca Array**	**41.65**	**294**	P	**P**	**05 54 28.3**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=89,slow=8.4,SNR=2.8 comp=Z,0.5nm,0.8s						
NRIK	**Noril'sk**	**41.94**	**20**	P	**P**	**05 54 30.5**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=246,slow=6.2,SNR=3.7						
NRIK				LR	LR	06 16 03.9	
	comp=Z,112nm,20.0s,baz=312,slow=42 comp=Z,1.4nm,0.4s						
NRIK	**Noril'sk**	**41.94**	**20**	IAmb	IAmb	05 54 38.5	
	comp=Z,9.4nm,1.4s						
SPITS	**Spitsbergen Ar**	**46.68**	**351**	P	**P**	**05 55 08.2**	**+0.5**
	comp=Z,14nm,1.0s,baz=132,slow=6.0,SNR=8.3 comp=Z,14nm,1.0s						
CMAR	**Chiang Mai Arr**	**47.73**	**95**	P	**P**	**05 55 16.6**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=302,slow=8.0,SNR=7.9 comp=Z,1.5nm,0.4s						
KSRS	**Korea Array**	**63.24**	**61**	P	**P**	**05 57 07.7**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=291,slow=7.6,SNR=4.7 comp=Z,1.1nm,0.7s						
BOSA	**Boshof**	**65.57**	**202**	P	**P**	**05 57 23.3**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=4.0,slow=4.0,SNR=4.1 comp=Z,1.3nm,0.4s						
BOSA	**Boshof**	**65.57**	**202**	IAmb	IAmb	05 57 32.6	
	comp=Z,16nm,1.3s						
ILAR	**Eielson Array**	**81.21**	**6**	P	**P**	**05 58 54.9**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=321,slow=4.2,SNR=4.7 comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**83.18**	**352**	P	**P**	**05 59 06.5**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=10,slow=5.7,SNR=6.4 comp=Z,0.3nm,0.8s						
WRA	**Warramunga Arr**	**97.85**	**109**	P	**P**	**06 00 15.9**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=303,slow=4.7,SNR=2.1 comp=Z,0.3nm,0.8s						
WRA	**Warramunga Arr**	**97.85**	**109**	IAmb	IAmb	06 00 27.7	
	comp=Z,0.3nm,1.5s						

*IDC **11** 05:56:50.0±1.2,51°.96N×169°.99W, h0km, mb3.7/4, mbtmp3.7/6, ML3.2/2, Error ellipse: s-maj=58.6km s-min=23.5km az=175.0*
*AEIC **11** 05:56:54.3±1.9,52°.16N±0°.07×169°.82W±0°.07, h26km±4km, Error ellipse: s-maj=11.3km s-min=5.6km az=158.0*
*NEIC **11** 05:56:56.0±2.1,52°.22N±0°.05×169°.84W±0°.07, h35km±2km, ML3.8/18, ML3.3(AEIC), Error ellipse: s-maj=9.2km s-min=5.9km az=136.0*

ISC 11 05:56:57.1±2.0,52.3N±0°.2×169°.87W±0°.08, h46km±20km, n48, σ1s39/51, mb3.6/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLCO	**Concord Point,**	**0.50**	**10**		**Pn**	**05 57 06.8**	**-1.3**
CLCO					**Sn**	**05 57 16.7**	**+0.9**
CLES	**Cleveland East**	**0.53**	**358**		**Pn**	**05 57 07.1**	**-1.3**
CLES	**Cleveland East**	**0.53**	**358**	IAML		05 57 22.7	
	comp=E,7μm,0.2s						
CLES				IAML		05 57 25.4	
	comp=N,8μm,0.3s						
NIKH	**Nikolski High**	**0.91**	**42**		**Sn**	**05 57 25.6**	**0.0**
NIKH	**Nikolski High**	**0.91**	**42**		**Pn**	**05 57 12.1**	**-1.5**
OKSP	**Okmok Steeple**	**1.35**	**44**		**Pn**	**05 57 17.9**	**-1.7**
OKSP					**Sn**	**05 57 37.1**	**+0.8**
OKFG	**Magazine Ridge**	**1.63**	**46**		**Pn**	**05 57 22.5**	**-0.8**
MGOD	**Makushin Gods**	**2.35**	**49**		**Pn**	**05 57 32.5**	**-0.7**
MREP	**Makushin Rep't**	**2.42**	**50**		**Pn**	**05 57 33.5**	**-0.7**
MNAT	**Makushin Natee**	**2.49**	**49**		**Pn**	**05 57 34.8**	**-0.3**
UNV	**Unalaska Valle**	**2.55**	**51**		**Sn**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**3.95**	**300**	P	**Pn**	**06 18 01.1**	**-0.1**
	28nm,0.4s,baz=127,slow=10,SNR=12						
JAY				S	**Sn**	**06 18 47.0**	**+0.2**
	11nm,0.3s,baz=237,slow=19,SNR=2.1						
PMG	**Port Moresby**	**5.72**	**149**	P	**Pn**	**06 18 24.9**	**-0.3**
	9.1nm,0.2s,baz=297,slow=11,SNR=3.7						
PMG				S	**Sn**	**06 19 30.3**	**+0.7**
	8.9nm,0.3s,baz=106,slow=23,SNR=8.8						
PMG				LR	LR	06 21 06.0	
	comp=Z,89nm,21.9s,baz=200,slow=42						
CTA	**Charters Tower**	**15.63**	**173**	LR	LR	06 26 36.5	
	comp=Z,32nm,19.3s,baz=33,slow=37						
WRA	**Warramunga Arr**	**18.07**	**211**	P	**P**	**06 21 05.2**	**-0.4**
	1.5nm,0.7s,baz=33,slow=12,SNR=10.0						
ASAR	**Alice Springs**	**21.46**	**206**	P	**P**	**06 21 41.7**	**-0.6**
	0.7nm,0.6s,baz=26,slow=11,SNR=20						
	0.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.58**	**232**	P	**P**	**06 21 55.0**	**+1.0**
	2.1nm,0.4s,baz=48,slow=10,SNR=19						
	2.1nm,0.4s						
MKAR	**Makanchi Array**	**74.54**	**321**	P	**P**	**06 28 29.4**	**0.0**
	0.1nm,0.4s,baz=101,slow=6.0,SNR=2.2						
	0.1nm,0.4s						
ZALV	**Zelesovo Beam**	**76.24**	**328**	P	**P**	**06 28 39.3**	**+0.4**
	0.5nm,0.5s,baz=98,slow=6.4,SNR=2.5						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**83.89**	**324**	P	**P**	**06 29 20.1**	**0.0**
	1.3nm,0.6s,baz=107,slow=5.0,SNR=5.6						
	1.3nm,0.6s						
ILAR	**Eielson Array**	**85.25**	**24**	P	**P**	**06 29 26.5**	**-0.1**
	0.6nm,0.6s,baz=258,slow=5.0,SNR=12						
	0.6nm,0.6s						
SIV	**San Ignacio**	**147.80**	**130**	PKPbc	**PKiKP**	**06 36 37.6**	**-0.1**
	3.0nm,0.6s,baz=241,slow=3.1,SNR=19						

*IDC **11** 06:25:11.4±1.4, 14˚.49S×166˚.88E, h0km, mb3.8/5, mbtmp3.8/6, ML4.1/1, MS3.4/3, Error ellipse: s-maj=48.9km s-min=26.8km az=133.0*

ISC 11 06:25:16.4±1.2, 14˚.7S±0˚.1×167˚.0E±0˚.2, h35km, n10, σ0s96/9, mb3.8/4, MS3.4/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.34**	**184**	Pn	**Pn**	**06 27 02.4**	**+1.2**
	2.7nm,0.3s,baz=220,slow=20,SNR=8.4						
DZM				Sn	**Sn**	**06 28 22.2**	**-1.3**
	1.3nm,0.3s,baz=284,slow=20,SNR=2.1						
	5.9nm,0.4s						
HNR	**Honiara**	**8.64**	**307**	LR	LR	06 30 31.6	
	comp=Z,6.6nm,18.5s,baz=225,slow=38						
CTA	**Charters Tower**	**20.48**	**252**	P	**P**	**06 29 52.6**	**+1.2**
	2.1nm,0.7s,baz=78,slow=9.3,SNR=3.9						
CTA				LR	LR	06 37 13.9	
	comp=Z,80nm,18.3s,baz=288,slow=35						
	2.1nm,0.7s						
WRA	**Warramunga Arr**	**31.56**	**256**	P	**P**	**06 31 35.2**	**-0.6**
	0.9nm,1.0s,baz=82,slow=9.0,SNR=3.2						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**32.42**	**249**	P	**P**	**06 31 42.8**	**-0.6**
	0.6nm,0.7s,baz=73,slow=9.3,SNR=7.6						
ASAR				PcP	**PcP**	**06 34 29.8**	**-0.6**
	0.4nm,0.8s,baz=70,slow=3.9,SNR=2.6						
	0.6nm,0.7s						
SIJI	**Sorong**	**37.87**	**288**	LR	LR	06 47 51.6	
	comp=Z,57nm,18.5s,baz=118,slow=36						
YAK	**Yakutsk**	**81.93**	**343**	LR	LR	07 11 46.6	
	comp=Z,28nm,19.0s,baz=286,slow=34						
ILAR	**Eielson Array**	**86.59**	**18**	P	**P**	**06 37 55.6**	**0.0**
	1.1nm,0.7s,baz=237,slow=5.8,SNR=21						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**96.99**	**316**	P	**P**	**06 38 44.3**	**-0.2**
	0.3nm,0.6s,baz=106,slow=5.1,SNR=2.1						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**120.16**	**345**	PKP	**PKiKP**	**06 44 03.3**	**+0.2**
	2.6nm,0.8s,baz=36,slow=2.4,SNR=5.1						

*JMA **11** 06:35:23.3±0.4, 47˚.N±2˚.×14˚.2E±˚, h3km, MV3.1/14, SOUTH SAKHALIN*
*SKHL **11** 06:35:25.0±0.3, 46˚.80N×142˚.00E, h3km±1km, mb4.1/4*

ISC 11 06:35:26.6±1.1, 46˚.86N±0˚.06×142˚.09E±0˚.06, h12km±10km, n6, σ0s84/11, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHLM	**Kholmsk**	**0.20**	**354**	*e*Pg	**Pg**	**06 35 30.6**	**-0.3**
KHLM				AMB	AMB	06 35 30.7	
	280nm,0.2s						
KHLM				*e*Sg	**Sg**	**06 35 34.7**	**+0.8**
KHLM				A	A	06 35 36.1	
	2µm,0.3s						
KHLM				A	A	06 35 36.1	
	2µm,0.3s						
NEVR	**Nevel`sk**	**0.24**	**221**	*e*Pg	**Pg**	**06 35 30.9**	**-0.7**
NEVR				AMB	AMB	06 35 31.8	
	950nm,0.3s						
NEVR				*e*Sg	**Sg**	**06 35 35.5**	**+0.6**
YSS	**Yuzhno-Sakhali**	**0.47**	**78**	*e*Pg	**Pg**	**06 35 35.2**	**-0.6**
YSS				AMB	AMB	06 35 35.6	
	60nm,0.5s						
YSS				*e*Sg	**Sg**	**06 35 42.6**	**+0.5**
YSS				A	A	06 35 42.9	
	290nm,0.4s						
YSS				A	A	06 35 42.9	
	200nm,0.4s						
JWK2	**Keihoku**	**1.55**	**185**	*e*P	**Pn**	**06 35 53.9**	**-0.1**
JWK2				S	**Sb**	**06 36 15.7**	**+1.0**
JRBN	**Rebuntou**	**1.60**	**207**	*e*P	**Pn**	**06 35 53.7**	**-1.1**
JRBN				*e*S	**Sn**	**06 36 15.8**	**+0.5**
JRR	**Rishiri**	**1.80**	**198**	*e*S	**Sb**	**06 36 22.6**	**+0.5**

IDC 11 06:39:22.4±2.7, 3˚.48S×141˚.97E, h0km, mb3.1/2, mbtmp3.1/3, ML3.2/1, Error ellipse: s-maj=51.9km s-min=16.8km az=55.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.58**	**307**	Pg	Pn	06 39 50.9	-0.8
	4.3nm,0.3s,baz=146,slow=8.9,SNR=7.7						
JAY				Lg	Lg	06 40 12.6	
	7.9nm,0.3s,baz=67,slow=21,SNR=6.2						
JAY				LR	LR	06 40 46.3	
	comp=Z,253nm,18.0s,baz=5.5,slow=53						
WRA	**Warramunga Arr**	**17.97**	**204**	P	P	06 43 34.5	0.0
	0.1nm,0.3s,baz=26,slow=12,SNR=2.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**21.52**	**201**	P	P	06 44 12.8	-0.4
	0.4nm,0.7s,baz=34,slow=9.6,SNR=7.9						
	0.4nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**32.71**	**47**	T	T	07 19 49.4	
	baz=230,slow=75,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	**32.72**	**47**	T	T	07 19 48.0	
	baz=230,slow=75,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**32.73**	**47**	T	T	07 19 46.8	
	baz=230,slow=75,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**33.64**	**46**	T	T	07 21 04.8	
	baz=229,slow=76,SNR=9.5						
H11N2	**WAKE ISLAND Hy**	**33.65**	**46**	T	T	07 21 07.0	
	baz=229,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**33.65**	**46**	T	T	07 21 09.2	
	baz=229,slow=76,SNR=7.2						
MKAR	**Makanchi Array**	**72.40**	**322**	P	P	06 50 50.8	+0.3
	0.2nm,0.5s,baz=123,slow=5.3,SNR=2.0						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**85.20**	**24**	P	P	06 51 57.2	-3.2
	0.2nm,0.5s,baz=259,slow=5.6,SNR=4.2						

*SOME **11** 06:51:18.1, 40˚.70N×77˚.85E, h5km*
*NNC **11** 06:51:21.0±2.4, 40˚.66N×78˚.31E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=18.2km s-min=10.0km az=156.0*
*KRNET **11** 06:51:20.0±0.1, 40˚.74N×77˚.82E, h26km, mb3.3*

ISC 11 06:51:19.5±2.0, 40˚.70N±0˚.08×77˚.76E±0˚.04, h2km±11km, n40, σ1s33/63, 23C-8D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.02**	**2**	⇑*e*P	**Pg**	**06 51 38.5**	**-0.7**
TARG				⇑*e*S	**Sg**	**06 51 52.0**	**-0.5**
KDJ	**Kajisay**	**1.49**	**343**	⇓*e*P	**Pn**	**06 51 46.7**	**-0.9**
KDJ				⇓*e*S	**Sn**	**06 52 06.2**	**-1.5**
NRN	**Naryn**	**1.52**	**299**	⇓*e*P	**Pn**	**06 51 48.3**	**+0.2**
NRN				⇓*e*S	**Sn**	**06 52 09.1**	**+0.5**
JNKS	**Jany-Kuch**	**1.66**	**283**	⇑*e*P	**Pn**	**06 51 50.3**	**+0.4**
JNKS				⇑*e*S	**Sn**	**06 52 12.5**	**+0.6**
PRZ	**Przheval'sk**	**1.84**	**15**	⇑*e*P	**Pn**	**06 51 52.7**	**+0.3**
PRZ				⇑*e*S	**Sn**	**06 52 16.0**	**-0.4**
ULHL	**Ulahol**	**1.92**	**324**	⇑*e*P	**Pn**	**06 51 53.8**	**+0.3**
ULHL				⇑*e*S	**Sn**	**06 52 18.5**	**+0.2**
ANVS	**Anan'yevo**	**2.08**	**358**	⇓*e*P	**Pn**	**06 51 55.6**	**-0.1**
ANVS				⇓*e*S	**Sn**	**06 52 21.5**	**-0.8**
BOOM	**Boomskoye usch**	**2.25**	**323**	⇑*e*P	**Pn**	**06 51 58.4**	**+0.4**
BOOM				⇑*e*S	**Sn**	**06 52 26.3**	**-0.1**
SATY	**Saty**	**2.40**	**11**	Pg	**Pb**	**06 52 03.0**	**-0.6**
	5.2nm,0.3s						
SATY				Lg	Lg	06 52 36.4	
	39nm,0.4s						
TNSS	**Tian-Shan**	**2.41**	**346**	Pg	**Pb**	**06 52 03.6**	**-0.3**
	1.3nm,0.4s						
TNSS				Lg	Lg	06 52 37.5	
	15nm,0.8s						
TNSS	**Tian-Shan**	**2.41**	**346**	*e*P	**Pb**	**06 52 03.9**	**+0.1**
	4.7nm,0.3s						
TNSS				*e*S	**Sg**	**06 52 37.1**	**+0.2**
	15nm,0.9s						
IZV	**Izvestkoviy**	**2.48**	**340**	Pg	**Pb**	**06 52 04.0**	**-1.0**
	5.4nm,0.2s						
IZV				Lg	Lg	06 52 38.5	
	85nm,0.4s						
IZV	**Izvestkoviy**	**2.48**	**340**	*e*P	**Pb**	**06 52 04.8**	**-0.2**
	6.7nm,0.2s						
IZV				*e*S	**Sb**	**06 52 38.5**	**+2.4**
	56nm,0.4s						
MDOK	**Medeo**	**2.51**	**348**	Pg	**Pb**	**06 52 04.5**	**-1.0**
	14nm,0.3s						
MDOK				Lg	Lg	06 52 39.4	
	34nm,0.4s						
KOTS	**Kotyrbulak**	**2.57**	**349**	Pg	**Pb**	**06 52 06.3**	**-0.3**
	10.0nm,0.2s						
KOTS				Lg	Lg	06 52 42.9	
	49nm,0.2s						
KOTS	**Kotyrbulak**	**2.57**	**349**	*e*P	**Pb**	**06 52 06.5**	**0.0**
	10.0nm,0.2s						
KOTS				*e*S	**Sg**	**06 52 41.5**	**-0.7**
	49nm,0.2s						
KNDC	**Almaty**	**2.58**	**347**	⇑Pn	**Pb**	**06 52 07.7**	**+1.1**
	30nm,0.5s						
KNDC				⇑Sn	**Sg**	**06 52 42.1**	**-0.3**
	58nm,0.5s						
UZB	**Uzynbulak**	**2.62**	**21**	Pg	**Pb**	**06 52 06.5**	**-0.8**
	6.5nm,0.3s						
UZB				Lg	Lg	06 52 41.5	
	13nm,0.4s						
UZB	**Uzynbulak**	**2.62**	**21**	*e*P	**Pb**	**06 52 06.1**	**-1.2**
	6.5nm,0.3s						
UZB				*e*S	**Sb**	**06 52 40.7**	**+0.8**
	13nm,0.4s						
MTBS	**Maitube**	**2.62**	**338**	Pg	**Pb**	**06 52 06.2**	**-1.1**
	3.0nm,0.3s						
MTBS				Lg	Lg	06 52 42.8	
	27nm,0.3s						
MTBS	**Maitube**	**2.62**	**338**	*e*P	**Pb**	**06 52 07.7**	**+0.4**
	4.0nm,0.3s						
MTBS				*e*S	**Sg**	**06 52 43.3**	**-0.4**
	27nm,0.3s						
KST	**Kastek**	**2.70**	**331**	Pg	**Pb**	**06 52 07.4**	**-1.2**
	7.4nm,0.4s						
KST				Lg	Lg	06 52 44.7	
	32nm,0.4s						
KST	**Kastek**	**2.70**	**331**	*e*P	**Pb**	**06 52 08.1**	**-0.5**
	6.9nm,0.4s						
KST				*e*S	**Sb**	**06 52 44.0**	**+1.8**
	32nm,0.6s						
TKM2	**Tokmak 2**	**2.74**	**325**	⇓*e*P	**Pn**	**06 52 05.3**	**+0.5**
TKM2				⇓*e*S	**Sn**	**06 52 38.3**	**-0.4**
SHLS	**Shalkode**	**2.76**	**27**	Pg	**Pg**	**06 52 11.7**	**-0.7**
	18nm,0.3s						
SHLS				Lg	Lg	06 52 51.8	
	47nm,0.6s						
SHLS	**Shalkode**	**2.76**	**27**	*e*P	**Pg**	**06 52 12.3**	**-0.1**
	18nm,0.3s						
SHLS				*e*S	**Sg**	**06 52 51.7**	**+3.5**
	47nm,0.6s						
KURS	**Kuram**	**2.80**	**6**	Pg	**Pb**	**06 52 08.9**	**-1.4**
	4.7nm,0.3s						
KURS				Lg	Lg	06 52 47.5	
	32nm,0.6s						
ARLS	**Aral**	**2.84**	**295**	⇑*e*P	**Pn**	**06 52 06.5**	**+0.4**
ARLS				⇑*e*S	**Sn**	**06 52 41.2**	**+0.2**
KPKS	**Kokpek**	**2.84**	**14**	Pg	**Pb**	**06 52 09.0**	**-2.1**
	0.2nm,0.1s						
KPKS				Lg	Lg	06 52 46.3	
	26nm,0.3s						
KPKS	**Kokpek**	**2.84**	**14**	*e*P	**Pb**	**06 52 09.3**	**-1.8**
	0.3nm,0.2s						
KPKS				*e*S	**Sb**	**06 52 46.3**	**-0.1**
	12nm,0.6s						
PDGK	**Podgornoye**	**2.92**	**26**	⇑Pn	**Pn**	**06 52 08.4**	**+1.2**
	7.5nm,0.5s						
PDGK				⇑Lg	Lg	06 52 50.3	
	27nm,0.7s						
KTBS	**Karatobe**	**3.11**	**345**	Pg	**Pb**	**06 52 15.2**	**-0.4**
	1.9nm,0.2s						
KTBS				Lg	Lg	06 52 57.4	
	0.1nm,0.1s						
KTBS	**Karatobe**	**3.11**	**345**	*e*P	**Pb**	**06 52 15.7**	**+0.1**
	4.1nm,0.3s						
KTBS				*e*S	**Sb**	**06 52 57.4**	**+3.3**
	0.1nm,0.2s						
AAK	**Ala-Archa**	**3.12**	**309**	⇑Pn	**Pb**	**06 52 17.2**	**+1.4**
	4.4nm,0.6s						
AAK				⇑Sn	**Sg**	**06 52 59.6**	**-0.1**
	28nm,1.0s						
AAK	**Ala-Archa**	**3.12**	**309**	⇑*e*P	**Pn**	**06 52 10.6**	**+0.7**
AAK				⇑*e*S	**Sn**	**06 52 47.6**	**-0.3**
KRBS	**Karabastau**	**3.37**	**333**	Pg	**Pb**	**06 52 19.8**	**-0.3**
	4.1nm,0.3s						
KRBS				Lg	Lg	06 53 04.8	
	23nm,0.5s						
ARXS	**Arharly**	**3.51**	**1**	Pg	**Pb**	**06 52 21.8**	**-0.6**
	1.4nm,0.2s						
ARXS				Lg	Lg	06 53 08.7	
	43nm,0.4s						
KNOS	**Konyrlen**	**3.80**	**16**	Pg	**Pb**	**06 52 26.9**	**-0.6**
	2.5nm,0.5s						
KNOS				Lg	Lg	06 53 17.2	
	9.6nm,1.1s						
DJR	**Jarkent**	**3.92**	**22**	Pg	**Pb**	**06 52 28.9**	**-0.5**
	3.4nm,0.6s						
DJR				Lg	Lg	06 53 20.8	
	6.3nm,0.3s						
KK31	**Karatay Array**	**5.92**	**296**	⇑Pg	**Pg**	**06 53 13.8**	**+1.0**
	1.0nm,0.6s,baz=118,slow=14,SNR=7.2						
KK31				⇑Sn	**Sb**	**06 54 08.4**	**-6.3**
	1.4nm,0.6s,baz=103,slow=17,SNR=5.4						
KK31				⇑Lg	Lg	06 54 39.5	
	4.1nm,0.8s,baz=113,slow=27,SNR=4.0						

*IDC **11** 07:03:29.6±1.1, 0˚.80S×130˚.84E, h0km, mb3.8/3, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=24.1km s-min=12.6km az=17.0*
*DJA **11** 07:03:32.2±0.4, 1˚.S±4˚×13˚.1E±˚, h10km, M3.8/7, MLv3.8/7*

ISC 11 07:03:30.5±1.2, 1˚.02S±0˚.09×130˚.9E±0˚.1, h10km, n10, σ2s62/11, mb3.9/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.39**	**66**	P	**Pg**	**07 03 37.5**	**-0.7**
SIJI	**Sorong**	**0.39**	**67**	Pg	**Pg**	**07 03 38.0**	**-0.3**
SIJI	602nm,0.3s,baz=102,slow=18,SNR=2186						
SIJI	**Sorong**	**0.39**	**67**	P	**Pg**	**07 03 37.8**	**-0.5**
FAKI	**Fak Fak**	**2.32**	**144**	P	**Pb**	**07 04 11.9**	**-0.5**
RKPI	**Ransiki, Papua**	**3.31**	**98**	P	**Pn**	**07 04 22.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**17.74**	**197**	P	**P**	**07 07 40.6**	**+2.0**
	0.1nm,0.3s,baz=17,slow=7.2,SNR=2.1						
FITZ				S	**Sn**	**07 10 49.9**	**-5.8**
	4.1nm,1.2s,baz=124,slow=10,SNR=1.5						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**19.10**	**170**	P	**Pn**	**07 07 55.8**	**+1.4**
	0.2nm,0.3s,baz=351,slow=13,SNR=5.7						
WRA				S	Sn	07 11 14.2	-14
	0.7nm,1.1s,baz=349,slow=22,SNR=1.9						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**22.70**	**173**	P	**P**	**07 08 36.2**	**+3.7**
	0.8nm,0.5s,baz=352,slow=11,SNR=11						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**63.81**	**325**	P	**P**	**07 14 02.6**	**-0.5**
	0.5nm,0.5s,baz=115,slow=8.2,SNR=7.1						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**67.96**	**327**	P	**P**	**07 14 28.7**	**-0.9**
	0.9nm,0.3s,baz=123,slow=5.8,SNR=5.7						
	0.9nm,0.3s						

*RSNC **11** 07:10:36.4±0.0, 8˚.N±1˚×7˚.8W±˚, h4km±1km, M3.6, mb4.7, ML3.3*
*UPA **11** 07:10:36.4±2.2, 7˚.60N×77˚.64W, h13km±8km, MW4.3, Presumed earthquake*
*CATAC **11** 07:10:37.0±0.6, 8˚.N±2˚×7˚.8W±˚, h11km±3km, M4.2/12, mb4.2/3, MLv4.2/12, Error ellipse: s-maj=5.5km s-min=2.8km az=28.4, confirmed*
*NEIC **11** 07:10:40.8±1.8, 7˚.74N±0˚.05×77˚.65W±0˚.07, h35km±7km, mb4.4/14, Error ellipse: s-maj=12.5km s-min=1.5km az=51.0*
*IDC **11** 07:10:44.7±2.0, 7˚.88N×77˚.40W, h88km±20km, mb3.4/9, mbtmp3.8/12, MS3.2/1, Error ellipse: s-maj=19.6km s-min=13.6km az=56.0*

ISC 11 07:10:35.3±1.1, 7˚.71N±0˚.02×77˚.69W±0˚.02, h6km±7km, n90, σ1s55/137, mb3.9/13, 4C, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.57**	**192**	P	**Pg**	**07 10 45.8**	**-0.5**
PTAC				S	**Sg**	**07 10 53.4**	**-0.3**
PTAC	**Punta Ardita,**	**0.57**	**192**	⇑*i*P	**Pg**	**07 10 45.8**	**-0.5**
PTAC				⇑*e*S	**Sg**	**07 10 53.5**	**-0.3**
UPD2	**Meteti**	**0.89**	**339**	⇑*i*P	**Pn**	**07 10 54.3**	**-0.2**
UPD2				*e*S	**Sn**	**07 11 08.2**	**+0.5**
CAPC	**Capurgana**	**0.98**	**20**	P	**Pg**	**07 10 54.0**	**-0.2**
CAPC				S	**Sg**	**07 11 07.6**	**+0.6**
CAP2	**Capurgana**	**0.99**	**19**	P	**Pg**	**07 10 54.1**	**-0.3**
CAP2				S	**Sg**	**07 11 06.6**	**-0.8**
CAP2	**Capurgana**	**0.99**	**19**	⇑*i*P	**Pg**	**07 10 54.1**	**-0.3**
CAP2				*e*S	**Sb**	**07 11 08.1**	**-0.2**
APAC	**Apartado, Choc**	**1.12**	**80**	P	**Pg**	**07 10 56.9**	**+0.1**
APAC				S	**Sn**	**07 11 13.5**	**+0.3**
TOTI	**Torti**	**1.36**	**333**	*e*P	**Pn**	**07 11 00.8**	**-0.1**
TOTI				*e*S	**Sg**	**07 11 20.5**	**+1.3**
SOLC	**Bahia Solano**	**1.50**	**169**	P	**Pn**	**07 11 01.3**	**-1.4**
SOLC				S	**Sn**	**07 11 21.7**	**-0.9**
DBBC	**Dabeiba**	**1.62**	**115**	P	**Pn**	**07 11 03.6**	**-0.9**
DBBC				S	**Sb**	**07 11 26.3**	**-0.2**
CNTA3	**Canitas, Panam**	**1.91**	**322**	⇑*e*P	**Pb**	**07 11 09.9**	**-0.7**
CNTA3				*e*S	**Sb**	**07 11 35.6**	**+0.7**
CHPO	**Chepo, Panama**	**2.02**	**316**	*e*P	**Pn**	**07 11 11.2**	**+1.2**
CHPO				*e*S	**Sb**	**07 11 37.9**	**-0.1**
TABO3	**Taboga, Panama**	**2.14**	**300**	*e*P	**Pn**	**07 11 11.8**	**+0.2**
TABO3				*e*S	**Sb**	**07 11 41.8**	**+0.6**
UREC	**San Jos de Ur**	**2.14**	**89**	P	**Pn**	**07 11 11.5**	**-0.1**
UREC				S	**Sn**	**07 11 40.0**	**+1.5**
UREC	**San Jos de Ur**	**2.14**	**89**	*e*P	**Pn**	**07 11 11.6**	**-0.1**
UREC				*e*S	**Sn**	**07 11 36.4**	**-2.0**
FLAM	**Flamenco Islan**	**2.19**	**303**	*e*P	**Pb**	**07 11 14.4**	**-0.9**
FLAM				*e*S	**Sn**	**07 11 40.3**	**+0.7**
ARRA3	**Arraijan, Pana**	**2.31**	**303**	*e*P	**Pb**	**07 11 16.8**	**-0.7**
PEDA3	**Pedasi**	**2.32**	**266**	*e*P	**Pn**	**07 11 14.1**	**0.0**
PEDA3				*e*S	**Sn**	**07 11 40.8**	**-2.1**
PCRI3	**Pocri, Los San**	**2.41**	**269**	*e*P	**Pn**	**07 11 15.8**	**+0.5**
PCRI3				*e*S	**Sn**	**07 11 45.0**	**-0.1**
GAMB1	**Gamboa**	**2.44**	**305**	*e*P	**Pn**	**07 11 16.1**	**+0.4**
GAMB1				*e*S	**Sn**	**07 11 47.7**	**+1.8**
CBOC	**Ciudad Bolivar**	**2.48**	**138**	P	**Pn**	**07 11 14.9**	**-1.5**
CBOC				S	**Sn**	**07 11 46.1**	**-0.9**
ZANG	**Zanguenga, Cho**	**2.48**	**300**	*e*P	**Pn**	**07 11 17.2**	**+0.8**
ZANG				*e*S	**Sb**	**07 11 51.1**	**-0.1**
FRIJ	**El Hiral**	**2.51**	**307**	*e*P	**Pn**	**07 11 18.0**	**+1.3**
FRIJ				*e*S	**Sn**	**07 11 49.8**	**+2.1**
AZU	**Azuero**	**2.56**	**272**	*e*P	**Pn**	**07 11 17.6**	**+0.2**
BCIP	**Isla Barro Col**	**2.57**	**304**		**Pn**	**07 11 18.1**	**+0.6**
BCIP	**Isla Barro Col**	**2.57**	**304**	P	**Pn**	**07 11 17.9**	**+0.4**
BCIP				S	**Sn**	**07 11 50.3**	**+1.2**
BCIP	**Isla Barro Col**	**2.57**	**304**	P	**Pn**	**07 11 17.9**	**+0.4**
BCIP				S	**Sn**	**07 11 50.1**	**+1.0**
BCIP	**Isla Barro Col**	**2.57**	**304**	*e*P	**Pn**	**07 11 18.1**	**+0.6**
BCIP				*e*S	**Sn**	**07 11 50.3**	**+1.2**
CHIT3	**Chitre**	**2.71**	**275**	*e*P	**Pn**	**07 11 19.9**	**+0.4**
CHIT3				*e*S	**Sn**	**07 11 51.8**	**-0.8**
TOSI3	**Tonosi**	**2.74**	**264**	*e*P	**Pn**	**07 11 21.4**	**+1.6**
TOSI3				*e*S	**Sn**	**07 11 53.0**	**-0.3**
PIZC	**Pizarro, Choco**	**2.74**	**173**	P	**Pn**	**07 11 19.5**	**-0.4**
PIZC				S	**Sn**	**07 11 52.9**	**-0.5**
CRIS3	**El Cristo, Coc**	**2.95**	**281**	*e*P	**Pn**	**07 11 24.9**	**+2.1**
CRIS3				*e*S	**Sn**	**07 11 59.4**	**+1.0**
CACAO	**El Cacao, Vera**	**3.16**	**264**	*e*P	**Pn**	**07 11 26.2**	**+0.5**
CACAO				*e*S	**Sn**	**07 12 00.5**	**-3.3**
MARI3	**Mariato, Verag**	**3.27**	**269**	*e*P	**Pb**	**07 11 32.7**	**-1.1**
STIA3	**Santiago, Vera**	**3.27**	**277**	*e*P	**Pb**	**07 11 31.4**	**-2.5**
SJCC	**San Jacinto, C**	**3.30**	**49**	P	**Pn**	**07 11 28.3**	**+0.7**
SJCC				S	**Sn**	**07 12 07.1**	**-0.1**
SJCC	**San Jacinto, C**	**3.30**	**49**	P	**Pn**	**07 11 27.8**	**+0.2**
SJCC				S	**Sn**	**07 12 06.9**	**-0.3**
SJCC	**San Jacinto, C**	**3.30**	**49**	*e*P	**Pn**	**07 11 28.3**	**+0.7**
SJCC				*e*S	**Sn**	**07 12 07.3**	**+0.1**
PTBC	**PUERTO BERRIO,**	**3.41**	**110**	P	**Pn**	**07 11 29.5**	**+0.4**
PTBC				S	**Sn**	**07 12 11.6**	**+1.7**
SAFE3	**Santa Fe, Vera**	**3.45**	**284**	*e*P	**Pn**	**

GOGA					IAmb	IAmb	07 16 13.5		
	comp=Z,7.8nm,0.8s								
JSC	**Jenkinsville**	**26.65**	**353**		P	**P**	**07 16 16.4**	**+1.5**	
JSC					IAmb	IAmb	07 16 18.0		
	comp=Z,6.2nm,0.7s								
PB11	**IPOC Station P**	**28.42**	**164**		P	**P**	**07 16 32.8**	**+1.7**	
PB11					IAmb	IAmb	07 16 46.9		
	comp=Z,12nm,1.1s								
WVT	**Waverly**	**29.77**	**343**		P	**P**	**07 16 43.6**	**+0.9**	
WVT					IAmb	IAmb	07 16 44.7		
	comp=Z,4.2nm,0.8s								
Q51A	**Peebles**	**31.59**	**352**			**P**	**07 17 00.9**	**+2.0**	
FVM	**French Village**	**32.27**	**341**			**P**	**07 17 05.7**	**+0.8**	
P48A	**Milroy**	**32.37**	**349**		P	**P**	**07 17 05.0**	**-0.7**	
TXAR	**Lajitas Array**	**32.55**	**315**		P	**P**	**07 17 08.3**	**+0.8**	
	comp=Z,0.6nm,0.8s,baz=125,slow=7.2,SNR=5.1								
	comp=Z,0.6nm,0.8s								
CCM	**Cathedral Cave**	**32.61**	**340**			**P**	**07 17 07.0**	**-0.8**	
O48B	**Farmland**	**33.09**	**350**			**P**	**07 17 12.8**	**+0.8**	
PDAR	**Pinedale Array**	**44.77**	**326**		P	**P**	**07 18 51.7**	**+1.6**	
	comp=Z,1.0nm,0.9s,baz=141,slow=8.6,SNR=3.8								
	comp=Z,1.0nm,0.9s								
NVAR	**Mina Array Bea**	**47.67**	**316**		P	**P**	**07 19 12.9**	**-0.1**	
	comp=Z,0.4nm,0.6s,baz=126,slow=5.6,SNR=3.8								
	comp=Z,0.4nm,0.6s								
SCHQ	**Schefferville**	**47.79**	**8**		P	**P**	**07 19 10.7**	**-2.7**	
	comp=Z,2.6nm,0.7s,baz=313,slow=1.8,SNR=10								
	comp=Z,2.6nm,0.7s								
PLCA	**Paso Flores**	**48.65**	**173**		P	**P**	**07 19 20.4**	**+0.2**	
	comp=Z,2.2nm,1.0s,baz=270,slow=5.3,SNR=3.9								
	comp=Z,2.2nm,1.0s								
YKA	**Yellowknife Ar**	**60.93**	**341**		P	**P**	**07 20 47.8**	**-1.1**	
	comp=Z,0.6nm,0.7s,baz=134,slow=6.3,SNR=15								
	comp=Z,0.6nm,0.7s								
ESDC	**Sonseca Array**	**72.60**	**51**		P	**P**	**07 22 02.1**	**-1.8**	
	comp=Z,0.6nm,0.6s,baz=270,slow=5.8,SNR=3.3								
	comp=Z,0.6nm,0.6s								
ILAR	**Eielson Array**	**74.26**	**335**		P	**P**	**07 22 11.1**	**-2.0**	
	comp=Z,0.4nm,0.9s,baz=103,slow=3.9,SNR=5.0								
	comp=Z,0.4nm,0.9s								
ASAR	**Alice Springs**	**145.81**	**239**		PKPbc	**PKPdf**	**07 30 15.4**	**-0.5**	
	comp=Z,0.5nm,0.7s,baz=122,slow=3.4,SNR=5.6								
WRA	**Warramunga Arr**	**146.68**	**245**		PKPbc	**PKPdf**	**07 30 16.8**	**-0.6**	
	comp=Z,0.4nm,0.7s,baz=106,slow=3.1,SNR=2.1								

ASRS ***11*** *07:20:36.0±0.6,53.92N×84.61E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 11 07:20:37.3±0.9, 53.95N×84.59E, h0km, mbtmp2.7/2, Error ellipse: s-maj=5.5km s-min=1.7km az=94.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.13**	**92**	I	I	07 21 10.0	
	1.6nm,1.0s,baz=270,slow=335,SNR=2.4						
ZALV	**Zalesovo Beam**	**0.13**	**92**	Pg	Pg	07 20 39.4	-0.5
	25nm,0.3s,baz=272,slow=19,SNR=229						
ZALV				Lg	Lg	07 20 42.1	
	34nm,0.3s,baz=272,slow=37,SNR=244						
KURBB	**Kurchatov Arra**	**5.00**	**231**	Pn	Pn	07 21 55.5	+2.0
	0.6nm,0.4s,baz=54,slow=12,SNR=4.8						
KURBB				Lg	Lg	07 23 15.4	
	0.1nm,0.3s,baz=50,slow=29,SNR=1.4						
MKAR	**Makanchi Array**	**7.32**	**193**	Pn	Pn	07 22 26.8	+1.4
	0.2nm,0.4s,baz=9.8,slow=11,SNR=1.3						
MKAR				Sn	Sn	07 23 48.1	-1.0
	0.1nm,0.3s,baz=20,slow=20,SNR=3.5						
MKAR				Lg	Lg	07 24 24.5	
	baz=7.1,slow=36,SNR=2.8						

MDD ***11*** *07:22:20.7±0.3,41.49N×8.40W, h7km, mb_Lg3.0/33, Error ellipse: s-maj=2.1km s-min=1.5km az=88.0*
IGIL ***11*** *07:22:21.0,41.53N×8.49W, h7km*
INMG ***11*** *07:22:21.1±1.9,41.52N×8.46W, h5km±2km, ML2.5, Error ellipse: s-maj=3.9km s-min=1.6km az=94.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Braga #FELT: III (MM56) at Barcelos (Braga)*
SFS ***11*** *07:22:22.7,41.47N×8.38W, h21km, ML3.6/6, ML3.1/9, MLv2.8/9*

ISC 11 07:22:20.1±1.0, 41.52N±0.01×8.41W±0.02, h16km±8km, n60, σ1.22/135, 4C-1D, Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCAB	**Cabril**	**0.34**	**56**	⇑*i* Pg	**Pb**	**07 22 28.4**	**+0.5**
PCAB				*e*Sg	**Sb**	**07 22 33.4**	**+0.3**
PCAB				*i* IAML		07 22 34.5	
PCAB				*i* IAML		07 22 34.5	
PCAB				*i* IAML		07 22 35.0	
PTO	**Porto**	**0.41**	**201**	*e*Pg	**Pg**	**07 22 28.4**	**+0.1**
PTO				*e*Sg	**Sg**	**07 22 33.4**	**-0.5**
PTO				*i* IAML		07 22 33.5	
PTO				*i* IAML		07 22 33.6	
PTO				*i* IAML		07 22 34.1	
ELOB	**Lobios**	**0.43**	**37**	⇑Pg	**Pb**	**07 22 29.7**	**+0.3**
ELOB				Sg	**Sb**	**07 22 35.7**	**-0.1**
ELOB				*i* IVmb_Lg		07 22 36.6	
PGAV	**Gavieira, Arco**	**0.46**	**13**	⇑*i* Pg	**Pb**	**07 22 29.8**	**-0.1**
PGAV				*e*Sg	**Sb**	**07 22 35.8**	**-0.7**
PGAV				*i* IAML		07 22 37.5	
PGAV				*i* IAML		07 22 37.5	
PGAV				*i* IAML		07 22 37.9	
POLO	**Lamas de Olo**	**0.48**	**107**	⇓*e*Pg	**Pb**	**07 22 31.1**	**+0.8**
POLO				*e*Sg	**Sb**	**07 22 38.3**	**+1.1**
POLO				*i* IAML		07 22 39.6	
POLO				*i* IAML		07 22 39.7	
POLO				*i* IAML		07 22 39.7	
PVRL	**Vila Real**	**0.57**	**115**	*e*Pg	**Pb**	**07 22 32.6**	**+0.8**
PVRL				*e*Sg	**Sb**	**07 22 40.9**	**+1.1**
PVRL				*i* IAML		07 22 44.0	
PVRL				*i* IAML		07 22 44.1	
PVRL				*i* IAML		07 22 44.5	
EZAM	**Zamans**	**0.67**	**341**	Pg	**Pg**	**07 22 32.8**	**-0.3**
EZAM				Sg	**Sg**	**07 22 42.0**	**0.0**
EZAM				*i* IVmb_Lg		07 22 44.7	
PVIS	**Viseu**	**0.89**	**154**	*e*P	**Pb**	**07 22 37.9**	**+0.6**
PVIS				*e*S	**Sn**	**07 22 50.8**	**+0.1**
MVO	**Moncorvo**	**1.10**	**108**	*e*P	**Pn**	**07 22 41.3**	**+0.4**
MVO				*e*S	**Sn**	**07 22 56.7**	**+0.9**
MVO				*i* IAML		07 22 57.8	
MVO				*i* IAML		07 22 58.2	
MVO				*i* IAML		07 22 58.7	
PBRG	**Braganca**	**1.28**	**77**	*e*P	**Pn**	**07 22 43.7**	**+0.3**
PBRG				*e*S	**Sg**	**07 23 01.6**	**0.0**
PBRG				*i* IAML		07 23 03.8	
PBRG				*i* IAML		07 23 03.9	
PBRG				*i* IAML		07 23 04.2	
MTE	**Manteigas**	**1.30**	**149**	⇑*e*P	**Pg**	**07 22 45.0**	**-0.1**
MTE				*e*S	**Sn**	**07 23 01.4**	**+0.7**
MTE				*i* IAML		07 23 04.5	
MTE				*i* IAML		07 23 05.9	
MTE				*i* IAML		07 23 06.3	
EAGO	**Agolada(Pontev**	**1.30**	**10**	Pn	**Pn**	**07 22 43.8**	**+0.1**
EAGO				Pg	**Pg**	**07 22 45.1**	**-0.1**
EAGO				Sn	**Sb**	**07 23 00.0**	**-0.8**
EAGO				Sg	**Sg**	**07 23 01.9**	**-0.3**
EAGO				*i* IVmb_Lg		07 23 02.7	
ECAL	**Calabor**	**1.32**	**71**	Pn	**Pn**	**07 22 44.3**	**+0.3**
ECAL				Sn	**Sn**	**07 23 01.8**	**+0.5**
ECAL	**Calabor**	**1.32**	**71**	Pn	**Pn**	**07 22 44.1**	**+0.1**
ECAL				Pg	**Pg**	**07 22 46.0**	**+0.5**
ECAL				Sg	**Sg**	**07 23 02.2**	**-0.5**
ECAL				*i* IVmb_Lg		07 23 06.7	
STS	**Santiago**	**1.37**	**356**	Pn	**Pn**	**07 22 45.0**	**+0.4**
STS				Sg	**Sn**	**07 23 03.3**	**+0.8**
PCAS	**Casmilo, Conde**	**1.47**	**183**	*e*Pg	**Pb**	**07 22 47.6**	**+0.6**
PCAS				*e*Sg	**Sg**	**07 23 07.2**	**-0.1**
PCAS				*i* IAML		07 23 08.7	
PCAS				*i* IAML		07 23 09.0	
PCAS				*i* IAML		07 23 10.9	
EMAZ	**Mazaricos**	**1.49**	**344**	Pn	**Pb**	**07 22 47.4**	**0.0**
EMAZ				Sn	**Sb**	**07 23 06.6**	**+0.5**
EMAZ				*i* IVmb_Lg		07 23 09.3	
PCBR	**Castelo Branco**	**1.82**	**157**	*e*Pg	**Pg**	**07 22 54.3**	**-0.7**
PCBR				*e*Sg	**Sg**	**07 23 18.6**	**-0.1**
PCBR				*i* IAML		07 23 20.3	
PCBR				*i* IAML		07 23 23.6	
PCBR				*i* IAML		07 23 25.0	
PSARD	**Sardoal**	**1.93**	**174**	*e*Pg	**Pb**	**07 22 55.5**	**+0.7**
PSARD				*e*Sg	**Sb**	**07 23 20.3**	**+1.6**
PSARD				*i* IAML		07 23 24.8	
PSARD				*i* IAML		07 23 25.2	
PSARD				*i* IAML		07 23 25.5	
EJUZ	**Juzbado, Salam**	**1.95**	**102**	Sn	**Sn**	**07 23 15.9**	**-0.8**
EJUZ				Sg	**Sg**	**07 23 21.8**	**-0.9**
PSBE	**So Bento**	**2.02**	**189**	*e*Sg	**Sg**	**07 23 24.5**	**-0.7**
PSBE				*i* IAML		07 23 27.2	
PSBE				*i* IAML		07 23 29.0	
PSBE				*i* IAML		07 23 31.6	
EPON	**Pontenova**	**2.03**	**27**	Pn	**Pn**	**07 22 54.3**	**+0.5**
EPON				Pg	**Pg**	**07 22 58.5**	**-0.6**
EPON				Sn	**Sn**	**07 23 20.0**	**+1.2**
EPON				Sg	**Sg**	**07 23 24.2**	**-1.3**
EPON				*i* IVmb_Lg		07 23 27.0	
PMRV	**Marv??o**	**2.23**	**159**	*e*Pg	**Pb**	**07 23 01.2**	**+1.2**
PMRV				*e*Sg	**Sg**	**07 23 31.7**	**0.0**
PMRV				*i* IAML		07 23 32.1	
PMRV				*i* IAML		07 23 36.7	
PMRV				*i* IAML		07 23 36.8	
EPLA	**Plasencia**	**2.29**	**129**	Pn	**Pn**	**07 22 57.6**	**+0.4**
EPLA				Sn	**Sn**	**07 23 24.1**	**-1.0**
EPLA				Sg	**Sg**	**07 23 33.3**	**-0.4**
EPLA				*i* IVmb_Lg		07 23 36.8	
PMTG	**Montargil**	**2.45**	**177**	*e*Pg	**Pg**	**07 23 05.7**	**-1.4**
PMTG				*e*Sg	**Sg**	**07 23 38.6**	**-0.3**
PMTG				*i* IAML		07 23 38.9	
PMTG				*i* IAML		07 23 40.6	
PMTG				*i* IAML		07 23 41.8	
PMAFR	**Mafra**	**2.65**	**195**	Pn	**Pn**	**07 23 02.6**	**+0.5**
PMAFR	**Mafra**	**2.65**	**195**	*e*Pn	**Pn**	**07 23 02.6**	**+0.5**
PMAFR				*e*Sg	**Sg**	**07 23 46.0**	**+0.9**
PMAFR				*i* IAML		07 23 48.3	
PMAFR				*i* IAML		07 23 48.6	
PMAFR				*i* IAML		07 23 52.3	
PARRA	**Arraiolos**	**2.71**	**174**	*e*Pn	**Pn**	**07 23 03.5**	**+0.4**
PARRA				*e*Pg	**Pg**	**07 23 10.8**	**-1.3**
PARRA				*e*Sg	**Sg**	**07 23 46.4**	**-0.9**
PARRA				*i* IAML		07 23 46.8	
PARRA				*i* IAML		07 23 48.8	
PARRA				*i* IAML		07 23 49.6	
PESTR	**Estremoz**	**2.72**	**166**	Pn	**Pn**	**07 23 03.5**	**+0.3**
PESTR				Sg	**Sb**	**07 23 44.4**	**+2.9**
PESTR	**Estremoz**	**2.72**	**166**	*e*Pg	**Pg**	**07 23 11.2**	**-1.1**
PESTR				*e*Sn	**Sn**	**07 23 35.4**	**-0.3**
PESTR				*e*Sg	**Sg**	**07 23 46.8**	**-0.8**
PESTR				*i* IAML		07 23 48.4	
PESTR				*i* IAML		07 23 49.3	
PESTR				*i* IAML		07 23 50.4	
LIS	**Lisbon**	**2.85**	**192**	*e*Sg	**Sg**	**07 23 50.4**	**-1.4**
CIBOR	**Castaar de Ib**	**2.95**	**129**	Pn	**Pn**	**07 23 07.3**	**+0.9**
CIBOR				Sn	**Sn**	**07 23 41.8**	**+0.3**
CIBOR				Sg	**Sg**	**07 23 52.5**	**-2.4**
EBAD	**Badajoz**	**2.96**	**158**	Pn	**Pn**	**07 23 07.0**	**+0.6**
EBAD	**Badajoz**	**2.96**	**158**	Pn	**Pn**	**07 23 06.8**	**+0.4**
EBAD				Pg	**Pg**	**07 23 15.2**	**-1.6**
EBAD				Sn	**Sn**	**07 23 41.7**	**+0.1**
EBAD				Sg	**Sb**	**07 23 51.8**	**+3.4**
EBAD				*i* IVmb_Lg		07 23 58.3	
EARI	**Arriondas**	**2.96**	**52**	Pn	**Pn**	**07 23 08.2**	**+1.6**
EARI				Sg	**Sg**	**07 23 55.3**	**+0.1**
EARI				*i* IVmb_Lg		07 23 59.8	
MOE	**Montemor**	**2.99**	**179**	*e*Pn	**Pn**	**07 23 07.1**	**+0.3**
MOE				*e*Sn	**Sn**	**07 23 41.3**	**-1.2**
MOE				*e*Sg	**Sg**	**07 23 55.3**	**-0.9**
MOE				*i* IAML		07 23 59.1	
MOE				*i* IAML		07 24 00.1	
MOE				*i* IAML		07 24 00.4	
EVO	**Evora**	**3.00**	**174**	Sn	**Sn**	**07 23 40.5**	**-2.1**
EVO	**Evora**	**3.00**	**174**	*e*Pg	**Pg**	**07 23 16.2**	**-1.3**
EVO				*e*Sg	**Sg**	**07 23 56.4**	**0.0**
EVO				*i* IAML		07 23 59.4	
EVO				*i* IAML		07 23 59.8	
EVO				*i* IAML		07 24 00.3	
GUD	**Guadarrama**	**3.33**	**104**	Pn	**Pn**	**07 23 12.7**	**+1.0**
GUD				Sn	**Sn**	**07 23 51.6**	**+0.5**
GUD				Sg	**Sg**	**07 24 06.6**	**-0.6**
GUD				*i* IVmb_Lg		07 24 09.1	
PBAR	**Barrancos**	**3.50**	**162**	Pn	**Pn**	**07 23 14.4**	**+0.5**
PBAR				Sn	**Sn**	**07 23 53.1**	**-1.9**
PBAR	**Barrancos**	**3.50**	**162**	*e*Pn	**Pn**	**07 23 14.1**	**+0.2**
PBAR				*e*Pg	**Pg**	**07 23 26.7**	**-0.4**
PBAR				*e*Sn	**Sn**	**07 23 53.9**	**-1.1**
PBAR				*e*Sg	**Sg**	**07 24 13.2**	**+0.6**
PBAR				*i* IAML		07 24 14.3	
PBAR				*i* IAML		07 24 16.2	
PBAR				*i* IAML		07 24 20.4	
PAB	**San Pablo**	**3.67**	**121**	Pn	**Pn**	**07 23 17.2**	**+0.9**
PAB				Sn	**Sn**	**07 23 56.7**	**-2.5**
PAB				Sg	**Sg**	**07 24 14.9**	**-3.0**
PAB				*i* IVmb_Lg		07 24 18.9	
MESJ	**Messejana**	**3.68**	**178**	*e*P	**Pn**	**07 23 16.8**	**+0.5**
MESJ	**Messejana**	**3.68**	**178**	*e*Pn	**Pn**	**07 23 16.8**	**+0.5**
MESJ				*e*Sn	**Sn**	**07 23 58.8**	**-0.5**
MESJ				*i* IAML		07 24 23.7	
MESJ				*i* IAML		07 24 23.8	
MESJ				*i* IAML		07 24 26.1	
ESDC	**Sonseca Array**	**3.85**	**117**	Pn	**Pn**	**07 23 19.6**	**+0.9**
ESDC				Sn	**Sn**	**07 24 02.5**	**-1.3**
ESDC				Sg	**Sg**	**07 24 22.9**	**-0.9**
ESDC				*i* IVmb_Lg		07 24 23.6	
ESBB	**Sonseca Array**	**3.85**	**117**	Pn	**Pn**	**07 23 22.5**	**+3.7**
ESBB				Sn	**Sn**	**07 24 02.6**	**-1.2**
ESBB				Sg	**Sg**	**07 24 22.1**	**-1.7**
PCVE	**Castro Verde**	**3.89**	**176**	Pn	**Pn**	**07 23 19.4**	**+0.2**
PCVE				Sn	**Sn**	**07 24 02.2**	**-2.5**
PCVE	**Castro Verde**	**3.89**	**176**	*e*Sn	**Sn**	**07 24 03.6**	**-1.0**
PCVE				*e*Sg	**Sg**	**07 24 25.1**	**+0.1**
PCVE				*i* IAML		07 24 29.3	
PCVE				*i* IAML		07 24 29.4	
PCVE				*i* IAML		07 24 29.7	
EMIN	**Mina Concepcio**	**3.98**	**160**	Pn	**Pn**	**07 23 21.1**	**+0.7**
EMIN				Sn	**Sn**	**07 24 03.4**	**-3.3**
EMIN	**Mina Concepcio**	**3.98**	**160**	Pn	**Pn**	**07 23 21.2**	**+0.7**
EMIN				Sn	**Sn**	**07 24 08.6**	**+1.8**
EMIN				Sg	**Sg**	**07 24 24.9**	**-3.0**
EMIN				*i* IVmb_Lg		07 24 29.8	
ELAN	**Lanestosa**	**4.06**	**63**	Sg	**Sg**	**07 24 30.8**	**+0.3**
ELAN				*i* IVmb_Lg		07 24 41.5	
ECAB	**El Cabril**	**4.14**	**145**	Pn	**Pn**	**07 23 22.9**	**+0.2**
ECAB				Sn	**Sn**	**07 24 06.7**	**-4.0**
ECAB	**El Cabril**	**4.14**	**145**	Pn	**Pn**	**07 23 23.8**	**+1.1**
ECAB				Sn	**Sn**	**07 24 09.9**	**-0.9**
ECAB				Sg	**Sg**	**07 24 31.2**	**-1.8**
ECAB				*i* IVmb_Lg		07 24 34.3	
PVAQ	**Vaqueiros**	**4.14**	**172**	*e*Pn	**Pn**	**07 23 23.2**	**+0.5**
PVAQ				*e*Sn	**Sn**	**07 24 08.7**	**-2.2**
PVAQ				*e*Sg	**Sg**	**07 24 33.3**	**+0.2**
PVAQ				*i* IAML		07 24 36.2	
PVAQ				*i* IAML		07 24 37.0	
PVAQ				*i* IAML		07 24 38.4	
MORF	**Marmelete**	**4.21**	**183**	*e*P	**Pn**	**07 23 23.9**	**+0.2**
MORF	**Marmelete**	**4.21**	**183**	*e*Pn	**Pn**	**07 23 24.3**	**+0.6**
MORF				*e*Sn	**Sn**	**07 24 11.2**	**-1.4**
PBDV	**Barranco-do-Ve**	**4.29**	**175**	*e*Pn	**Pn**	**07 23 25.5**	**+0.8**
PBDV				*e*Sn	**Sn**	**07 24 13.3**	**-1.1**
PBDV				*e*Sg	**Sg**	**07 24 37.7**	**0.0**
PBDV				*i* IAML		07 24 41.0	
PBDV				*i* IAML		07 24 41.1	
PBDV				*i* IAML		07 24 44.4	
EADA	**Adamuz**	**4.46**	**137**	Sn	**Sn**	**07 24 18.7**	**0.0**
EADA				Sg	**Sg**	**07 24 41.8**	**-1.5**
EADA				*i* IVmb_Lg		07 24 50.4	
PSIM	**Granatula de C**	**4.47**	**126**	Pn	**Pn**	**07 23 27.9**	**+0.6**
PSIM				Sn	**Sn**	**07 24 17.4**	**-1.5**
PSIM				Sg	**Sg**	**07 24 41.4**	**-2.1**
ETOR	**Torete**	**4.85**	**96**	Sn	**Sn**	**07 24 26.6**	**-1.6**
ETOR				Sg	**Sg**	**07 24 53.6**	**-2.0**
ETOR				*i* IVmb_Lg		07 25 02.4	

GCG ***11*** *07:22:42.3±0.7,13.95N×89.70W, h2km±19km, MD3.0, Presumed earthquake*
SNET ***11*** *07:22:42.3±1.9,13.93N×89.73W, h7km, ML2.1, Presumed earthquake*
CATAC ***11*** *07:22:43.1±0.5,14°N±2°×9°0W±°, h4km±2km, M1.9/7, MLv1.9/7, Error ellipse: s-maj=5.0km s-min=3.1km az=152.3, confirmed*

ISC 11 07:22:42.5±0.9, 13.93N±0.03×89.72W±0.03, h13km±6km, n23, σ0.44/33, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.06**	**247**	P	**Pg**	**07 22 45.3**	**0.0**
NUBE	**Las Nubes**	**0.06**	**247**	*e*P	**Pg**	**07 22 45.3**	**0.0**
NUBE				*e*S	**Sg**	**07 22 46.6**	**-0.7**
NUBE	**Las Nubes**	**0.06**	**247**	*i* P	**Pg**	**07 22 45.3**	**0.0**
NUBE				*i* S	**Sg**	**07 22 46.8**	**-0.5**
RTR	**El Retiro**	**0.08**	**113**	*e*P	**Pg**	**07 22 45.5**	**0.0**
LOAL	**Lomas de Alarc**	**0.09**	**320**	*e*P	**Pg**	**07 22 46.0**	**+0.4**
LOAL				*e*S	**Sg**	**07 22 48.1**	**+0.5**
SLOZ	**Alcaldia de Sa**	**0.12**	**327**	P	**Pg**	**07 22 46.1**	**+0.3**
SLOZ	**Alcaldia de Sa**	**0.12**	**327**	*e*P	**Pg**	**07 22 46.2**	**+0.4**
SNJE	**San Jose**	**0.12**	**118**	*e*P	**Pg**	**07 22 46.2**	**+0.1**
SNJE				*e*S	**Sg**	**07 22 48.8**	**+0.3**
SBLS	**San Blas**	**0.13**	**133**	*e*P	**Pg**	**07 22 46.7**	**+0.6**
UNIC	**Universidad Ca**	**0.17**	**72**	P	**Pg**	**07 22 46.7**	**+0.1**
UNIC				S	**Sg**	**07 22 49.3**	**-0.2**
UNIC	**Universidad Ca**	**0.17**	**72**	*e*P	**Pg**	**07 22 46.7**	**+0.1**
UNIC				*e*S	**Sg**	**07 22 48.9**	**-0.6**
RBDL	**Robledal**	**0.19**	**10**	*e*P	**Pg**	**07 22 47.5**	**+0.5**
RBDL				*e*S	**Sg**	**07 22 50.6**	**+0.7**
FAME	**Alcaldia de Sa**	**0.30**	**254**	P	**Pb**	**07 22 49.5**	**-0.3**
JAYA	**Jayaque - finc**	**0.38**	**136**	P	**Pg**	**07 22 50.6**	**+0.4**
JAYA	**Jayaque - finc**	**0.38**	**136**	*e*P	**Pg**	**07 22 50.4**	**+0.1**
JAYA				*e*S	**Sb**	**07 22 56.5**	**-0.6**
JAYA	**Jayaque - finc**	**0.38**	**136**	*i* P	**Pg**	**07 22 50.6**	**+0.4**
PMON	**Piamonte**	**0.45**	**119**	*e*P	**Pb**	**07 22 52.4**	**0.0**
MTO3	**Montecristo**	**0.58**	**37**	P	**Pg**	**07 22 54.1**	**0.0**
MTO3	**Montecristo**	**0.58**	**37**	*e*P	**Pb**	**07 22 54.2**	**-0.5**
MTO3				*e*S	**Sb**	**07 23 02.5**	**-0.6**
MTO3	**Montecristo**	**0.58**	**37**	*i* P	**Pb**	**07 22 54.3**	**-0.5**
ESQI	**Esquipulas**	**0.73**	**30**	P	**Pb**	**07 22 56.9**	**-0.3**
ESQI	**Esquipulas**	**0.73**	**30**	*e*P	**Pg**	**07 22 58.3**	**-0.4**
ESQI				*e*S	**Sb**	**07 23 06.6**	**-0.5**
SARH	**Santa Rosa de**	**1.25**	**48**	P	**Pn**	**07 23 06.7**	**+0.8**

PTWC ***11*** *07:26:51,18.00N×66.90W, ML3.8/11*
NEIC ***11*** *07:26:51.9±1.2,17.96N±0.03×66.918W±0.009, h10km±1km, ML3.7/25, Md3.4/5(RSPR), Mwr3.5/7(SLM), Error ellipse: s-maj=4.6km s-min=2.9km az=182.0*
NEIC ***11*** *07:26:52,17.96N×66.95W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.21; Mθθ 1.34; Mϕϕ -1.13; Mrθ -0.19; Mϕθ 1.92; Mrϕ 0.68; Fault plane solution: M0 2.40000×10^14 NP1:ϕs 198.00000°, δ 80.00000°, λ -165.00000°. NP2:ϕs 105.00000°, δ 75.00000°, λ -10.00000°. Principal axes: T 2.3976, Plg4.0000°, Azm331.0000°; N -0.0001, Plg72.0000°, Azm229.0000°; P -2.3975, Plg18.0000°, Azm62.0000°;*
OSPL ***11*** *07:26:52.0±0.3,18.13N×66.98W, h12km±35km, ML3.1, Presumed earthquake*
RSPR ***11*** *07:26:52.2,17.96N×66.95W, h11km, MD3.4/5*
SDD ***11*** *07:26:53.0±2.2,17.99N×66.98W, h20km±14km, MD3.5, ML3.5, MW3.7, Presumed earthquake*

ISC 11 07:26:51.5±0.8, 17.96N±0.05×66.91W±0.02, h14km±5km, n50, σ0.65/78, 12C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.04**	**59**		**Pg**	**07 26 54.7**	**+0.6**
GBPR	**Guanica, Bosqu**	**0.04**	**59**	⇑*i* P	**Pg**	**07 26 54.7**	**+0.6**
MLPR	**Magueyes Islan**	**0.12**	**276**		**Pg**	**07 26 54.8**	**-0.2**
MLPR				Sg	**Sg**	**07 26 56.9**	**-0.5**
MLPR				IAML		07 26 57.1	
	45μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.19**	**285**		**Pg**	**07 26 55.8**	**-0.2**
CRPR				Sg	**Sg**	**07 26 58.5**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.19**	**285**	P	**Pg**	**07 26 55.8**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.19**	**285**	⇑*e*Sg	**Sg**	**07 26 58.4**	**-0.7**
CRPR				⇑*e*Pg	**Sg**	**07 26 58.5**	**-0.5**
CRPR				IAML		07 26 58.6	
	comp=N,44μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.19**	**285**	⇓*i* P	**Pg**	**07 26 55.9**	**-0.1**
CRPR				*e*S	**Sg**	**07 26 58.4**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.19**	**285**	*i* P	**Pg**	**07 26 55.8**	**-0.2**
CRPR				*e*S	**Sg**	**07 26 58.4**	**-0.7**
CRPR				IAML		07 26 58.6	
	comp=Z,73μm,0.2s						
LSP	**Las Mesas**	**0.27**	**323**		**Pg**	**07 26 57.4**	**0.0**
LSP	**Las Mesas**	**0.27**	**323**	⇓*i* P	**Pg**	**07 26 57.4**	**0.0**
OBIP	**Obispado Ponce**	**0.30**	**73**		**Pb**	**07 26 58.7**	**0.0**
OBIP	**Obispado Ponce**	**0.30**	**73**		**Sb**	**07 27 03.9**	**+0.3**
OBIP	**Obispado Ponce**	**0.30**	**73**	P	**Pb**	**07 26 58.8**	**0.0**
OBIP

CUPR	Culebra, Puert	1.59	77		Pb	07 27 20.1	-0.6
HIDR	Higuey Centro	1.83	291	⇓*e*Pg	Pn	07 27 22.3	-0.2
HIDR				⇑*e*Sg	Sn	07 27 44.6	-0.8
HIDR				IAML		07 27 56.9	
	comp=N,295nm,0.2s						
HIDR	Higuey Centro	1.83	291	⇑*e*P	Pn	07 27 22.5	0.0
HIDR				*e*S	Sn	07 27 45.6	+0.1
MIDR	Miches	2.27	297	⇓*e*Pg	Pn	07 27 28.9	+0.3
MIDR				⇑*e*Sg	Sn	07 27 57.5	+1.1
MIDR				IAML		07 28 13.1	
	comp=N,111nm,0.5s						
DR12	Loma Pena Alta	2.48	290	Pn	Pn	07 27 32.6	+1.0
HATOM	Hato Mayor del	2.48	290	⇓*e*Pg	Pn	07 27 32.8	+1.2
HATOM				⇑*e*Sg	Sn	07 28 03.8	+2.0
HATOM				IAML		07 28 13.1	
	comp=N,186nm,0.6s						
BANI	BANI	3.30	278	Pn	Pn	07 27 44.4	+1.5
SABA	Saba	3.51	95	Pn	Pn	07 27 45.2	-0.5
SC01	Santiago de lo	3.90	293	P	Pn	07 27 54.0	+2.9
BIM	Bigot	6.57	121	Pn	Pn	07 28 27.0	-0.8

IDC 11 07:39:46.9±2.6, 9.75S×119.03E, h0km, mb3.7/2, mbtmp3.5/4, ML3.3/2, MS3.7/1, Error ellipse: s-maj=165.3km s-min=26.1km az=52.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.92	126	P	Pn	07 43 57.1	-0.6
	0.1nm,0.3s,baz=296,slow=14,SNR=2.3						
	0.3nm,0.5s						
ASAR	Alice Springs	19.83	136	P	P	07 44 20.1	+0.6
	0.1nm,0.3s,baz=315,slow=11,SNR=11						
	0.8nm,0.7s						
JCJ	Chichijima	42.97	31	LR	LR	08 05 43.9	
	comp=Z,94nm,21.1s,baz=104,slow=36						
SONM	Songino Array	58.42	350	P	P	07 49 44.7	+0.2
	0.4nm,0.5s,baz=170,slow=8.8,SNR=2.8						
	0.4nm,0.5s						
MKAR	Makanchi Array	65.14	333	P	P	07 50 29.5	-0.2
	0.7nm,0.7s,baz=148,slow=7.4,SNR=8.2						
	0.7nm,0.7s						

IDC 11 07:39:53.7±0.6, 59.79S×25.80W, h0km, mb4.3/7, mbtmp4.4/8, ML5.0/1, MS3.7/14, Error ellipse: s-maj=34.4km s-min=19.9km az=30.0
NEIC 11 07:39:54.2±2.2, 60.3S±0.1×25.6W±0.2, h10km±1km, mb4.9/53, Error ellipse: s-maj=25.5km s-min=15.6km az=217.0
ISC 11 07:39:55.1±0.4, 60.0S±0.1×25.74W±0.10, h10km, n101, σ1§09/82, mb4.9/32, MS3.7/12, 7D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.16	310	Pn	Pn	07 41 57.5	+4.0
VNA1	Neumayer--Stat	12.88	153	⇓P	Pn	07 42 57.8	-0.2
	comp=Z,19nm,0.3s						
VNA3	Neumayer Olymp	13.04	157	⇓P	Pn	07 42 59.9	-0.3
	comp=Z,13nm,0.2s						
VNA3				⇓S	Sn	07 45 07.3	-18
VNA2	Neumayer--Watz	13.28	153	⇓P	Pn	07 43 02.3	-1.1
	comp=Z,19nm,0.6s,baz=319,slow=13						
VNA2				⇓S	Sn	07 45 18.6	-12
	baz=322,slow=21						
SNAA	Sanae	14.87	151	⇓P	Pn	07 43 25.5	+0.4
	comp=Z,726nm,0.5s						
SNAA	Sanae	14.87	151	Pn	Pn	07 43 25.3	+0.2
	comp=Z,6.0nm,0.3s,baz=300,slow=12,SNR=8.0						
SNAA				LR	LR	07 48 00.5	
	comp=Z,206nm,20.6s,baz=278,slow=32						
	comp=Z,27nm,0.5s						
SNAA	Sanae	14.87	151		Pn	07 43 25.4	+0.4
PMSA	Palmer Station	18.18	238	LR	LR	07 50 26.4	
	comp=Z,254nm,18.4s,baz=157,slow=35						
EFI	East Falkland	19.79	280		Pn	07 44 27.3	+0.6
MG03	Isla Dawson	24.77	264	P	P	07 45 15.3	-1.2
MG03				IAmb	IAmb	07 45 32.5	
	comp=Z,85nm,1.9s						
MG04	Isla Riesco	25.87	265	P	P	07 45 26.8	+0.3
MG04				IAmb	IAmb	07 45 54.0	
	comp=Z,38nm,1.1s						
MG05	Puerto Natales	27.02	267	P	P	07 45 36.4	-0.6
MG05				IAmb	IAmb	07 46 04.7	
	comp=Z,50nm,1.5s						
GO09	Cerro Castillo	27.18	268	P	P	07 45 38.0	-0.4
GO09				IAmb	IAmb	07 45 43.1	
	comp=Z,69nm,1.9s						
QSPA	South Pole Qui	30.26	180	LR	LR	07 58 04.1	
	comp=Z,68nm,18.1s,baz=197,slow=36						
TRQA	Tornquist	31.70	297	P	P	07 46 19.1	+0.4
AY01	Puyuhuapi	31.89	278	P	P	07 46 19.7	-0.5
AY01				IAmb	IAmb	07 46 30.6	
	comp=Z,13nm,1.1s						
PLCA	Paso Flores	33.60	285	P	P	07 46 34.7	-0.6
	comp=Z,2.5nm,0.5s,baz=148,slow=7.3,SNR=33						
PLCA				LR	LR	07 58 42.1	
	comp=Z,118nm,20.2s,baz=170,slow=34						
	comp=Z,2.5nm,0.5s						
PLCA	Paso Flores	33.60	285		P	07 46 35.1	-0.2
PLCA				IAmb	IAmb	07 46 47.2	
	comp=Z,20nm,1.8s						
PLTB	Pedras Altas	33.75	314	P	P	07 46 36.1	-0.5
PLTB				IAmb	IAmb	07 47 36.3	
	comp=Z,53nm,2.0s						
LR05	Currie	34.69	284		P	07 46 44.6	-0.1
LR05				IAmb	IAmb	07 46 48.1	
	comp=Z,9.1nm,0.7s						
GO06	Curarrehue	34.93	285		P	07 46 46.4	-0.5
MAW	Mawson	36.58	140	LR	LR	08 01 46.8	
	comp=Z,122nm,18.0s,baz=258,slow=36						
ML02	Panimavida	37.94	289	P	P	07 47 11.8	-0.6
BO01	Tunca	38.90	290		P	07 47 16.3	-4.3
BO01				IAmb	IAmb	07 47 45.3	
	comp=Z,42nm,1.6s						
BO04	La Punta	39.00	291	P	P	07 47 21.6	+0.1
MT08	Bocatoma Ro	39.18	292	P	P	07 47 24.3	+1.1
MT09	Talagante	39.36	291	P	P	07 47 23.6	-0.9
MT03	Universidad Ad	39.37	292	P	P	07 47 24.9	+0.2
MT01	Popeta	39.41	291	P	P	07 47 24.6	-0.3
MT01				IAmb	IAmb	07 47 25.4	
	comp=Z,20nm,0.5s						
MT16	CCHEN	39.43	292	P	P	07 47 25.5	+0.4
MT16				IAmb	IAmb	07 47 26.6	
	comp=Z,27nm,0.7s						
MT05	Renca	39.56	292	P	P	07 47 26.7	+0.6
PEL	Peldehue	39.74	292		P	07 47 28.5	+0.8
PEL				IAmb	IAmb	07 47 29.0	
	comp=Z,26nm,0.6s						
MT02	Curacav	39.85	291	IAmb	IAmb	07 47 28.7	
	comp=Z,22nm,1.1s						
VA03	San Esteban	39.99	292	P	P	07 47 30.3	+0.5
VA03				IAmb	IAmb	07 47 49.4	
	comp=Z,15nm,0.8s						
CPUP	Villa Florida	40.03	313	P	P	07 47 28.5	-1.5
	comp=Z,1.3nm,0.5s,baz=167,slow=7.6,SNR=7.8						
	comp=Z,1.3nm,0.5s						
CPUP	Villa Florida	40.03	313	P	P	07 47 29.6	-0.4
ZON	Zonda	40.15	296	P	P	07 47 31.0	-0.1
VA06	Catapilco	40.51	292	P	P	07 47 34.5	+0.5
VA06				IAmb	IAmb	07 47 36.3	
	comp=Z,22nm,0.5s						
CO04	Los Peladeros	40.79	293	P	P	07 47 37.1	+0.5
SUR	Sutherland	41.13	69	LR	LR	08 00 16.0	
	comp=Z,95nm,19.2s,baz=256,slow=30						
CO02	Combarbal	41.50	293	P	P	07 47 42.8	+0.4
CO03	El Pedregal	41.67	294	P	P	07 47 44.7	+1.0
CO03				IAmb	IAmb	07 48 40.2	
	comp=Z,60nm,1.9s						
CO06	Fray Jorge	42.24	293	P	P	07 47 48.5	+0.3
CO06				IAmb	IAmb	07 47 53.4	
	comp=Z,67nm,1.6s						
AC05	El Transito	43.18	296		P	07 47 56.4	+0.4
LCO	Las Campanas	43.22	295	P	P	07 47 56.3	-0.2
LCO				IAmb	IAmb	07 48 36.2	
	comp=Z,44nm,1.7s						
AC02	Maricunga	44.39	299		P	07 48 06.5	+0.4
AC01	Pan de Azucar	45.63	298	P	P	07 48 15.9	+0.3
AC01				IAmb	IAmb	07 49 42.1	
	comp=Z,21nm,1.2s						
BOSA	Boshof	46.37	71	P	P	07 48 21.6	+0.1
	comp=Z,1.0nm,0.5s,baz=217,slow=7.0,SNR=1.8						
BOSA				LR	LR	08 03 31.3	
	comp=Z,82nm,20.1s,baz=312,slow=31						
BOSA	Boshof	46.37	71	P	P	07 48 21.3	-0.1
BDFB	Brasilia	47.16	330	P	P	07 48 25.9	-1.8
	comp=Z,1.4nm,0.4s,baz=169,slow=5.2,SNR=3.8						
	comp=Z,1.4nm,0.4s						
PB06	IPOC Station P	48.19	301	P	P	07 48 35.3	-0.4
PB06				IAmb	IAmb	07 48 38.1	
	comp=Z,9.9nm,0.7s						
PB05	IPOC Station P	48.33	300	P	P	07 48 36.1	-0.6
PB05				IAmb	IAmb	07 48 47.1	
	comp=Z,10nm,0.9s						
PB02	IPOC Station P	49.55	301	IAmb	IAmb	07 49 12.6	
	comp=Z,22nm,1.1s						
LBTB	Lobatse	49.57	69	LR	LR	08 06 13.4	
	comp=Z,76nm,18.1s,baz=252,slow=32						
CASY	Casey	49.95	159	P	P	07 48 42.5	-6.0
PB11	IPOC Station P	50.83	303	P	P	07 48 54.9	-0.9
PB11				IAmb	IAmb	07 50 32.7	
	comp=Z,22nm,1.2s						
H10S2	ASCENSION HYDR	51.60	14	T	T	08 44 51.6	
	baz=184,slow=74						
H10S3	ASCENSION HYDR	51.60	14	T	T	08 44 54.4	
	baz=36,slow=74						
PB16	IPOC Station P	52.03	304	IAmb	IAmb	07 49 05.6	
	comp=Z,28nm,1.9s						
H10N1	ASCENSION HYDR	52.71	14	T	T	08 46 11.1	
	baz=190						
H10N3	ASCENSION HYDR	52.72	14	T	T	08 46 07.3	
	baz=190,slow=74						
H10N2	ASCENSION HYDR	52.73	14	T	T	08 46 16.6	
	baz=190,slow=74						
LPAZ	La Paz	53.30	306	P	P	07 49 14.7	-0.1
	comp=Z,3.8nm,0.4s,baz=104,slow=4.3,SNR=18						
LPAZ				LR	LR	08 12 17.9	
	comp=Z,62nm,20.7s,baz=210,slow=37						
	comp=Z,3.8nm,0.4s						
LPAZ	La Paz	53.30	306	P	P	07 49 14.5	-0.3
VILB	Vilhena	53.37	317	IAmb	IAmb	07 49 13.6	
	comp=Z,8.0nm,0.6s						
RPN	Rapa Nui	63.77	261	LR	LR	08 10 38.6	
	comp=Z,40nm,21.7s,baz=104,slow=29						
MDP	Montagnes des	68.27	331	LR	LR	08 18 34.3	
	comp=Z,45nm,20.0s,baz=102,slow=34						
DBIC	Dimbokro	68.48	22	P	P	07 50 55.7	-1.5
	comp=Z,3.6nm,0.8s,baz=206,slow=6.8,SNR=4.1						
	comp=Z,3.6nm,0.8s						
OTAV	Otavalo	72.48	303	P	P	07 51 21.4	-0.9
OTAV				IAmb	IAmb	07 51 43.3	
	comp=Z,11nm,1.4s						
ROSC	El Rosal	74.99	309	LR	LR	08 25 38.6	
	comp=Z,50nm,20.2s,baz=232,slow=37						
ASAR	Alice Springs	95.00	161	P	P	07 53 18.5	+0.6
	comp=Z,0.6nm,0.6s,baz=182,slow=4.3,SNR=12						
ASAR				PKKPbc	PKKPbc	08 10 11.3	+1.4
	comp=Z,0.5nm,0.5s,baz=16,slow=2.3,SNR=9.4						
ASAR				LR	LR	08 32 25.8	
	comp=Z,66nm,21.4s,baz=252,slow=33						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	98.72	161	PKKPbc	PKKPbc	08 10 01.4	+1.5
	comp=Z,0.7nm,0.5s,baz=34,slow=3.2,SNR=11						
KEST	Kesra	99.66	28	LR	LR	08 34 43.1	
	comp=Z,192nm,18.1s,baz=284,slow=33						
SCHQ	Schefferville	119.06	334	PKP	PKPdf	07 58 42.0	-0.7
	comp=Z,1.1nm,0.5s,baz=179,slow=3,SNR=11						
CMAR	Chiang Mai Arr	122.93	112	PKP	PKiKP	07 58 51.9	+0.4
	comp=Z,0.9nm,0.3s,baz=231,slow=3.5,SNR=4.5						
HWUT	Hardware Ranch	122.98	297		PKPdf	07 58 50.7	-0.2
PDAR	Pinedale Array	123.02	299	PKP	PKPdf	07 58 50.8	-0.2
	comp=Z,0.5nm,0.5s,baz=127,slow=5.5,SNR=12						
NVAR	Mina Array Bea	123.55	290	PKP	PKiKP	07 58 52.5	+0.1
	comp=Z,0.6nm,0.7s,baz=133,slow=3.8,SNR=4.7						
ULM	Lac du Bonnet	123.58	314	PKP	PKPdf	07 58 50.8	-0.7
	comp=Z,3.8nm,0.5s,baz=144,slow=2.7,SNR=11						
LOHW	Long Hollow	124.15	299		PKiKP	07 58 53.3	-0.1
MOOW	Moose Ponds	124.33	299		PKiKP	07 58 53.9	+0.2
FINES	FINESS Array B	127.50	28	PKP	PKPdf	07 58 58.1	-0.5
	comp=Z,2.9nm,0.8s,baz=270,slow=0.4,SNR=5.1						
AB31	Akbulak array	128.92	57		PKiKP	07 59 02.1	-0.3
AKTO	Aktyubinsk	129.02	55	PKP	PKPdf	07 59 01.7	-0.2
	comp=Z,1.6nm,0.8s,baz=189,slow=0.8,SNR=4.3						
PZH	PanZhiHua	131.14	109	PKP	PKPdf	07 59 05.3	-1.6
ARCES	ARCESS Array B	134.31	23	PKP	PKPdf	07 59 11.1	-0.2
	comp=Z,2.9nm,0.8s,baz=316,slow=3.3,SNR=6.0						
ILON	Igloolik, Nuna	135.14	335		PKPdf	07 59 13.4	+0.6
BVAR	Bovoye Array	136.16	60	PKP	PKPdf	07 59 15.8	+0.5
	comp=Z,0.7nm,0.6s,baz=180,slow=5.8,SNR=2.0						
YKA	Yellowknife Ar	139.55	314	PKP	PKPdf	07 59 21.4	+0.2
	comp=Z,2.6nm,0.6s,baz=120,slow=1.6,SNR=16						
YKA				SKPbc	SKPbc	08 02 55.1	-1.2
	comp=Z,0.2nm,0.7s,baz=158,slow=0.7,SNR=6.4						
ZALV	Zalesovo Beam	143.28	68	PKhKP	PKPpre	07 59 24.6	
	comp=Z,0.7nm,0.5s,baz=258,slow=4.3,SNR=3.4						
NJ2	Nanjing	143.56	124	*e*P	PKPbc	07 59 27.4	+0.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HNS	HongShan	146.26	114	⇓PKPbc	PKPab	07 59 36.2	+0.4
BTO2	Baotou	146.62	105	*e*PKPbc	PKPdf	07 59 35.0	+0.4
BTO2				PP	PP	08 03 05.2	+5.0
BTO2				pmax	pmax		
	comp=Z,14nm,0.4s						
BTO2				pmax	pmax		
	comp=Z,370nm,6.5s						
HHC	Hu-ho-hao-te	147.52	107	*e*P	PKPdf	07 59 34.3	-1.7
SONM	Songino Array	150.00	92	PKPbc	PKiKP	07 59 45.4	-0.2
	comp=Z,2.7nm,0.7s,baz=224,slow=3.3,SNR=14						
KSRS	Korea Array	151.89	131	PKPbc	PKiKP	07 59 50.3	+0.6
	comp=Z,0.9nm,0.7s,baz=204,slow=3.4,SNR=2.1						
ILAR	Eielson Array	153.18	306	PKPbc	PKPbc	07 59 51.2	-0.1
	comp=Z,1.9nm,0.5s,baz=145,slow=2.5,SNR=63						
CCB	Clear Creek Bu	153.52	305	PKPbc	PKiKP	07 59 52.1	-0.1
RND	Reindeer	153.57	302	PKPbc	PKiKP	07 59 53.2	+0.7
SUA	Susitna One	153.73	297	PKPbc	PKiKP	07 59 53.7	+0.8
H24K	Noodor Dome	153.88	308	PKPbc	PKiKP	07 59 53.3	+0.3

IDC 11 07:45:14.3±2.7, 54.32N×86.05E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=20.2km s-min=12.0km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.82	243	I	I	07 49 50.0	
	baz=63,slow=340,SNR=1.9						
ZALV	Zalesovo Beam	0.82	243	Pg	Pg	07 45 29.2	-0.7
	0.6nm,0.3s,baz=64,slow=16,SNR=12						
ZALV				Lg	Lg	07 45 42.0	
	2.7nm,0.3s,baz=62,slow=32,SNR=14						
KURBB	Kurchatov Arra	5.90	234	Pn	Pn	07 46 43.0	+0.1
	0.1nm,0.3s,baz=50,slow=13,SNR=1.4						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.91	199	Pn	Pn	07 47 11.8	+1.3
	0.2nm,0.3s,baz=23,slow=13,SNR=7.4						
	0.2nm,0.2s						

IDC 11 07:51:05.4±7.3, 19.76S×177.99W, h496km±76km, mb2.9/6, mbtmp3.7/6, Error ellipse: s-maj=104.6km s-min=25.4km az=152.0
ISC 11 07:51:04.5±0.9, 20.2S±0.2×177.8W±0.2, h500km, n9, σ0§67/11, mb3.3/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.50	193	P	P	07 54 48.6	-0.6
	2.8nm,0.3s,baz=266,slow=3.2,SNR=7.7						
URZ				S	S	07 58 09.1	+17
	4.8nm,0.9s,baz=20,slow=21,SNR=1.4						
ASAR	Alice Springs	44.77	256	P	P	07 58 33.9	+0.6
	1.5nm,0.8s,baz=88,slow=8.3,SNR=15						
ASAR				PcP	PcP	08 00 05.2	+0.2
	0.5nm,0.4s,baz=108,slow=3.9,SNR=10						
	1.5nm,0.8s						
WRA	Warramunga Arr	44.84	262	P	P	07 58 33.8	0.0
	0.3nm,0.3s,baz=97,slow=8.5,SNR=7.7						
WRA				PcP	pP	08 00 05.9	+0.2
	0.1nm,0.3s,baz=106,slow=5.6,SNR=1.3						
	0.3nm,0.3s						
NVAR	Mina Array Bea	80.70	43	P	P	08 02 25.8	+0.4
	0.4nm,0.7s,baz=236,slow=5.4,SNR=2.5						
	0.4nm,0.7s						
TXAR	Lajitas Array	86.75	57	P	P	08 02 56.5	+0.9
	0.4nm,0.7s,baz=210,slow=7.2,SNR=4.1						
	0.4nm,0.7s						
ILAR	Eielson Array	88.01	13	P	P	08 02 59.2	-1.3
	0.2nm,0.4s,baz=209,slow=4.3,SNR=4.6						
	0.2nm,0.4s						
PDAR	Pinedale Array	88.63	43	P	P	08 03 04.2	0.0
	0.2nm,0.7s,baz=229,slow=1.9,SNR=2.5						
	0.2nm,0.7s						
BRTR	Keskin Array B	146.81	313	PKPbc	PKPbc	08 09 50.5	-0.1
	0.8nm,0.5s,baz=118,slow=3.0,SNR=3.3						
GERES	GERESS Array B	150.00	345	PKPbc	PKPbc	08 09 58.1	-0.1
	0.5nm,0.5s,baz=11,slow=2.2,SNR=2.6						

UPP 11 07:53:49.1±0.1, 67.83N×20.25E, h0km, ML2.5, Confirmed Induced event
HEL 11 07:53:51.5±0.4, 67.80N×20.23E, h0km, ML1.0, Suspected explosion
ISC 11 07:53:49.8±1.0, 67.81N±0.03×20.21E±0.03, h0km, n18, σ0§80/25, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.15	19	P	Pg	07 53 51.8	-1.0
KUA				S	Sg	07 53 53.5	-1.2
RATU	Laukkuluspa	0.23	274	P	Pg	07 53 53.9	-0.3
KOVU	Salmi	0.42	358	P	Pg	07 53 57.1	-0.7
NIKU	Nikkaluokta	0.45	278	P	Pg	07 53 58.0	-0.4
LANU	Lannavaara	0.72	70	S	Sg	07 54 11.8	-1.0
LANU	Lannavaara	0.72	70	PB	Pb	07 54 05.2	0.0
LANU				SG	Sg	07 54 12.6	-0.2
SALU	Saltoluokta	0.78	237	P	Pg	07 54 04.2	-0.5
KIF	Kilpisjarvi	1.22	10	PG	Pb	07 54 13.7	0.0
	baz=194						
KIF				smax	smax	07 54 29.9	
	comp=Z,1.3nm,0.2s						
KIF				SG	Sb	07 54 30.2	+0.2
PAJU	Pajala	1.37	124	P	Pg	07 54 15.2	-0.8
PAJU	Pajala	1.37	124	PG	Pg	07 54 15.3	-0.8
PAJU				SG	Sb	07 54 34.0	-0.3
HEF	Hetta	1.43	64	smax	smax	07 54 34.3	
	comp=Z,0.7nm,0.2s						
HEF				SN	Sn	07 54 37.8	+1.4
ERTU	Ertsjaerv	1.48	148	PN	Pb	07 54 18.7	+0.6
ERTU				SN	Sn	07 54 38.8	+1.2
KLF	Kolari	1.56	110	smax	smax	07 54 37.6	
	comp=Z,0.7nm,0.2s						
KLF				SN	Sn	07 54 40.6	+1.0
KTK1	Kautokeino	1.65	41	PN	Pg	07 54 21.9	+0.6
KTK1				SG	Sg	07 54 43.2	+0.5
TOF	Tornio	2.38	135	smax	smax	07 55 01.5	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sg	07 55 05.6	-0.5
RNF	Rovaniemi	2.56	115	PG	Pb	07 54 35.3	-1.3
RNF				SG	Sb	07 55 09.5	+1.0
ARA0	ARCESS Array S	2.60	46	SB	Sb	07 55 09.6	0.0
RAJF	Raja-Jooseppi	3.11	74	SB	Sb	07 55 24.7	+0.5

GCG 11 08:06:21.2±1.1, 14.19N×92.54W, h20km±30km, MD3.5, Presumed earthquake
MEX 11 08:06:21.2±0.4, 14.27N×92.75W, h10km±29km, MD3.9
ISC 11 08:06:20.3±2.4, 14.2N±0.1×92.51W±0.08, h20km±7km, n13, σ1§33/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	Catarina	0.76	33	*e*P	Pn	08 06 36.0	+0.2
SMCA				*e*S	Sn	08 06 47.5	+0.7
PATR	El Naranjo	0.93	16	*e*P	Pb	08 06 37.1	-0.8
PATR				*e*S	Sb	08 06 50.0	+0.1
CHUJ	Union Juarez	0.95	24	*e*P	Pb	08 06 38.1	-0.2
CHUJ				*e*S	Sb	08 06 50.8	+0.3
PAVE	Pavencul	1.02	18	*e*P	Pb	08 06 38.8	-0.6
PAVE				*e*S	Sb	08 06 52.2	-0.3
STG2	El Palmar, Qui	1.12	79	*e*P	Pn	08 06 40.1	-0.8
STG5	El Palmar, Qui	1.14	81	*e*P	Pn	08 06 41.0	-0.1
STG8	El Palmar, Qui	1.14	78	*i*P	Pn	08 06 40.6	-0.8
HUEH	Huehuetenango	1.46	41	*e*P	Pn	08 06 45.7	-0.1
HUEH				*e*S	Sb	08 07 06.5	+1.3
CCIG	Comitan	2.08	10	*e*P	Pn	08 06 55.2	+1.0
CCIG				*e*S	Sn	08 07 19.6	-0.1
CCIG	Comitan	2.08	10	*e*P	Pn	08 06 56.1	+1.8
TGIG		2.61	347	*e*P	Pn	08 06 59.4	-2.1
TGIG				*e*S	Sn	08 07 28.9	-3.7
UXUV	UXUV	3.46	333	*e*P	Pn	08 07 12.8	-0.3
UXUV				*e*S	Sn	08 07 53.6	+0.1
CMIG	Matias Romero	3.66	322	*e*P	Pn	08 07 17.6	+1.7
CMIG				*e*S	Sn	08 07 52.7	-5.8

MEX 11 08:09:22.5±0.3, 14.22N×92.71W, h15km, MD3.9
GCG 11 08:09:24.1±1.6, 14.34N×92.49W, h50km±49km, MD3.8, Presumed earthquake
ISC 11 08:09:16.2±2.2, 14.06N±0.08×92.65W±0.06, h10km±12km, n16, σ2§39/28, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	Catarina	0.96	35	*i*P	Pg	08 09 37.1	+2.3
SMCA				*e*S	Sg	08 09 48.0	+0.6
PATR	El Naranjo	1.12	21	*e*P	Pg	08 09 38.4	+0.5
PATR				*e*S	Sg	08 09 51.0	-1.5
CHUJ	Union Juarez	1.15	27	*e*P	Pg	08 09 38.8	+0.4
CHUJ				*e*S	Sg	08 09 52.0	-1.4
PAVE	Pavencul	1.21	22	*e*P	Pg	08 09 39.8	+0.2
PAVE				*e*S	Sg	08 09 53.0	-2.4
STG2	El Palmar, Qui	1.29	73	*i*P	Pg	08 09 41.2	+0.2
STG2				*i*S	Sg	08 09 54.6	-3.3
STG5	El Palmar, Qui	1.31	75	*i*P	Pg	08 09 41.3	0.0
STG8	El Palmar, Qui	1.32	73	*e*P	Pg	08 09 41.8	+0.3
STG8				*i*S	Sg	08 09 55.8	-2.9
HUEH	Huehuetenango	1.67	41	*e*P	Pn	08 09 47.2	+1.5
HUEH				*e*S	Sn	08 10 08.7	+1.4
PCIG		1.72	341	*e*P	Pn	08 09 41.6	-4.6
PCIG				*e*S	Sn	08 10 00.5	-7.7
CCIG	Comitan	2.26	13	*e*P	Pn	08 09 56

LBTB	**Lobatse**	**32.81**	**35**	LR	LR	08 30 14.5	
	comp=Z,105nm,20.9s,baz=201,slow=32						
PMSA	**Palmer Station**	**34.98**	**224**	LR	LR	08 30 24.4	
	comp=Z,103nm,18.2s,baz=158,slow=30						
QSPA	**South Pole Qui**	**35.94**	**180**	P	**P**	**08 19 56.0**	**+1.2**
	comp=Z,3.8nm,0.6s,baz=232,slow=4.8,SNR=5.5						
QSPA				LR	LR	08 33 40.4	
	comp=Z,153nm,20.7s,baz=211,slow=35						
	comp=Z,3.8nm,0.6s						
QSPA	**South Pole Qui**	**35.94**	**180**	P	**P**	**08 19 54.4**	**-0.4**
QSPA				IAmb	IAmb	08 20 05.0	
	comp=Z,5.8nm,0.8s						
TSUM	**Tsumeb**	**36.22**	**19**	LR	LR	08 31 54.3	
	comp=Z,208nm,21.2s,baz=145,slow=31						
LSZ	**Lusaka**	**42.74**	**33**	LR	LR	08 36 33.6	
	comp=Z,172nm,19.9s,baz=192,slow=33						
VNDA	**Vanda**	**47.62**	**173**	P	**P**	**08 21 32.1**	**+2.2**
	comp=Z,2.8nm,0.9s,baz=205,slow=7.5,SNR=2.5						
VNDA				LR	LR	08 40 49.9	
	comp=Z,92nm,19.4s,baz=225,slow=35						
	comp=Z,2.8nm,0.9s						
VNDA	**Vanda**	**47.62**	**173**	P	**P**	**08 21 30.8**	**+1.0**
VNDA				IAmb	IAmb	08 21 51.6	
	comp=Z,12nm,1.4s						
TRQA	**Tornquist**	**47.63**	**261**	P	**P**	**08 21 29.5**	**-1.0**
H10S2	**ASCENSION HYDR**	**48.03**	**333**	T	T	09 13 17.7	
	baz=164,slow=74,SNR=18						
H10S3	**ASCENSION HYDR**	**48.04**	**333**	T	T	09 13 18.5	
	baz=56,slow=74,SNR=16						
AY01	**Puyuhuapi**	**49.41**	**247**	P	**P**	**08 21 43.3**	**-0.7**
AY01				IAmb	IAmb	08 21 45.8	
	comp=Z,9.6nm,1.1s						
LL02	**Futaleuf**	**49.78**	**249**	P	**P**	**08 21 45.6**	**-1.3**
PLCA	**Paso Flores**	**50.71**	**252**	LR	LR	08 40 15.0	
	comp=Z,24nm,20.4s,baz=136,slow=32						
PLCA	**Paso Flores**	**50.71**	**252**	P	**P**	**08 21 54.1**	**+0.1**
CPUP	**Villa Florida**	**53.35**	**275**	P	**P**	**08 22 13.7**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=142,slow=5.7,SNR=4.9						
	comp=Z,2.6nm,1.0s						
CPUP	**Villa Florida**	**53.35**	**275**	IAmb	IAmb	08 22 23.7	
	comp=Z,12nm,1.5s						
BO04	**La Punta**	**55.46**	**258**	P	**P**	**08 22 28.7**	**-0.4**
VA03	**San Esteban**	**56.32**	**259**	P	**P**	**08 22 34.5**	**-0.8**
BDFB	**Brasilia**	**56.49**	**292**	P	**P**	**08 22 37.4**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=123,slow=3.8,SNR=6.0						
	comp=Z,4.0nm,0.7s						
BDFB	**Brasilia**	**56.49**	**292**	P	**P**	**08 22 36.6**	**0.0**
BDFB				IAmb	IAmb	08 22 38.4	
	comp=Z,8.7nm,1.1s						
MBAR	**Mbarara**	**57.38**	**30**	LR	LR	08 45 29.2	
	comp=Z,129nm,19.5s,baz=46,slow=34						
EDA	**Edea**	**57.99**	**5**	P	**P**	**08 22 46.7**	**-0.4**
EDA				IAmb	IAmb	08 22 51.6	
	comp=Z,11nm,1.4s						
DBIC	**Dimbokro**	**61.37**	**348**	P	**P**	**08 23 12.6**	**+2.3**
	comp=Z,3.1nm,0.7s,baz=191,slow=4.6,SNR=3.7						
DBIC				LR	LR	08 47 03.1	
	comp=Z,78nm,18.3s,baz=354,slow=33						
	comp=Z,3.1nm,0.7s						
DBIC	**Dimbokro**	**61.37**	**348**	P	**P**	**08 23 10.9**	**+0.6**
PTLB	**Pontes e Lacer**	**62.89**	**282**	P	**P**	**08 23 20.5**	**-0.1**
PTLB				IAmb	IAmb	08 23 43.0	
	comp=Z,4.4nm,1.1s						
LPAZ	**La Paz**	**67.44**	**273**	P	**P**	**08 23 52.0**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=134,slow=3.7,SNR=5.7						
LPAZ				LR	LR	08 52 11.2	
	comp=Z,30nm,19.2s,baz=62,slow=35						
	comp=Z,2.1nm,0.8s						
LPAZ	**La Paz**	**67.44**	**273**	P	**P**	**08 23 50.8**	**-0.2**
LPAZ				IAmb	IAmb	08 23 59.7	
	comp=Z,3.0nm,0.8s						
FURI	**Furi**	**68.85**	**35**	LR	LR	08 52 45.0	
	comp=Z,72nm,19.2s,baz=180,slow=35						
H01W2	**Cape Leeuwin H**	**72.05**	**125**	T	T	09 44 00.6	
	baz=216,slow=75,SNR=8.4						
H01W3	**Cape Leeuwin H**	**72.06**	**125**	T	T	09 44 01.8	
	baz=216,slow=75,SNR=9.7						
H01W1	**Cape Leeuwin H**	**72.06**	**125**	T	T	09 44 03.5	
	baz=216,slow=75,SNR=11						
LBZ	**Lake Benmore**	**80.82**	**169**	P	**P**	**08 25 06.8**	**-1.2**
RPZ	**Rata Peaks**	**81.58**	**169**	LR	LR	09 00 54.6	
	comp=Z,74nm,18.8s,baz=98,slow=35						
PALK	**Pallekele**	**87.27**	**74**	LR	LR	08 56 23.2	
	comp=Z,50nm,18.7s,baz=356,slow=30						
EIL	**Elat**	**87.38**	**25**	LR	LR	09 02 46.3	
	comp=Z,125nm,20.5s,baz=206,slow=34						
SDV	**Santo Domingo**	**89.22**	**286**	LR	LR	09 04 36.7	
	comp=Z,54nm,18.5s,baz=68,slow=35						
ASF	**Jabal al Asfar**	**90.26**	**26**	LR	LR	09 04 15.7	
	comp=Z,85nm,19.7s,baz=218,slow=34						
ASAR	**Alice Springs**	**90.56**	**134**	P	**P**	**08 25 58.0**	**+1.3**
	comp=Z,1.5nm,0.9s,baz=201,slow=4.6,SNR=12						
	comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**96.70**	**21**	LR	LR	09 12 29.0	
	comp=Z,70nm,18.4s,baz=297,slow=37						
PDAR	**Pinedale Array**	**137.02**	**282**	PKP	**PKiKP**	**08 32 18.3**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=110,slow=3.5,SNR=3.9						
YKA	**Yellowknife Ar**	**148.70**	**309**	PKPbc	**PKiKP**	**08 32 41.5**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=88,slow=1.9,SNR=39						
YKA	**Yellowknife Ar**	**148.70**	**309**		**PKPbc**	**08 32 40.9**	**+0.5**
ILAR	**Eielson Array**	**162.71**	**318**	PKPab	**PKPab**	**08 33 45.2**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=37,slow=3.5,SNR=4.3						

*NOU **11** 08:25:17.6, 43.60S×172.08E, h3km, MLv3.8/11, South Island, New Zealand*
*WEL **11** 08:25:19.5±0.3, 44.2S×17.2E±, h5km, M3.6/28, ML3.5/13, MLv3.6/28, Error ellipse: s-maj=2.9km s-min=2.4km az=80.3*
ISC 11 08:25:19.1±0.8, 43.55S±0.02×171.99E±0.02, h15km±6km, n70, σ0.66/79, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDAL	**Greendale**	**0.09**	**119**	P	**Pg**	**08 25 22.4**	**+0.3**
DFHS	**Darfield**	**0.10**	**57**	P	**Pg**	**08 25 22.6**	**+0.3**
WCSS	**Whitecliffs**	**0.12**	**314**	P	**Pg**	**08 25 22.1**	**-0.5**
WCSS				S	**Sg**	**08 25 24.1**	**-0.9**
SHFC	**Sheffield Scho**	**0.16**	**11**	P	**Pg**	**08 25 23.0**	**-0.1**
SHFC				S	**Sg**	**08 25 25.8**	**+0.2**
DSLC	**Dunsandel Scho**	**0.20**	**129**	P	**Pb**	**08 25 24.5**	**+0.1**
RKAC	**Rakaia School**	**0.21**	**173**	P	**Pg**	**08 25 24.4**	**+0.5**
RKAC				S	**Sg**	**08 25 27.9**	**+0.9**
SPRS	**Springfield Vo**	**0.21**	**349**	P	**Pg**	**08 25 23.7**	**-0.1**
SPRS				S	**Sg**	**08 25 27.1**	**0.0**
RACZ	**Rakaia**	**0.21**	**149**	P	**Pb**	**08 25 24.8**	**+0.1**
RACZ				S	**Sb**	**08 25 28.0**	**-0.5**
OXZ	**Oxford**	**0.22**	**10**	P	**Pg**	**08 25 24.2**	**+0.2**
OXZ				S	**Sg**	**08 25 27.6**	**+0.2**
MTHS	**Methven North**	**0.23**	**265**	P	**Pg**	**08 25 24.3**	**0.0**
MTHS				S	**Sg**	**08 25 28.0**	**+0.3**
MHCZ	**Mount Hutt**	**0.30**	**272**	P	**Pg**	**08 25 25.5**	**0.0**
MHCZ				S	**Sg**	**08 25 29.8**	**0.0**
WACZ	**Wakanui South**	**0.41**	**195**	P	**Pg**	**08 25 28.2**	**+0.9**
WACZ				S	**Sg**	**08 25 34.2**	**+1.3**
MQZ	**McQueen's Vall**	**0.51**	**109**	P	**Pb**	**08 25 29.9**	**+0.2**
AMCZ	**Amberley**	**0.61**	**53**	P	**Pn**	**08 25 32.5**	**-0.7**
RPZ	**Rata Peaks**	**0.70**	**256**	P	**Pg**	**08 25 32.5**	**-0.2**
RPZ	**Rata Peaks**	**0.70**	**256**	S	**Sg**	**08 25 42.4**	**+0.5**
RPZ	**Rata Peaks**	**0.70**	**256**	P	**Pg**	**08 25 32.7**	**0.0**
ARCZ	**Arundel**	**0.71**	**235**	P	**Pg**	**08 25 33.0**	**+0.1**
AKCZ	**Akaroa Harbour**	**0.74**	**116**	P	**Pn**	**08 25 34.5**	**-0.6**
LTZ	**Lake Taylor**	**0.79**	**15**	P	**Pb**	**08 25 35.1**	**+0.6**
OKCZ	**Okains Bay**	**0.80**	**103**	P	**Pn**	**08 25 35.6**	**-0.2**
INZ	**Inchbonnie**	**0.91**	**334**	P	**Pb**	**08 25 36.8**	**+0.2**
GVZ	**Greta Valley S**	**0.96**	**53**	P	**Pn**	**08 25 37.6**	**-0.4**
WVZ	**Waitaha Valley**	**1.03**	**297**	P	**Pb**	**08 25 38.8**	**+0.2**
TMZ	**Timaru**	**1.10**	**220**	P	**Pb**	**08 25 39.4**	**-0.4**
LBZ	**Lake Benmore**	**1.55**	**237**	P	**Pn**	**08 25 46.0**	**-0.1**
FOZ	**Fox Glacier**	**1.58**	**270**	P	**Pn**	**08 25 47.5**	**+1.0**
KHZ	**Kahutara**	**1.60**	**46**	P	**Pn**	**08 25 46.5**	**-0.3**
KHZ	**Kahutara**	**1.60**	**46**	S	**Sb**	**08 26 07.0**	**-1.4**
KHZ	**Kahutara**	**1.60**	**46**	P	**Pn**	**08 25 46.6**	**-0.2**
ODZ	**Otahua Downs**	**1.78**	**212**	P	**Pn**	**08 25 48.6**	**-0.7**
ODZ	**Otahua Downs**	**1.78**	**212**	P	**Pn**	**08 25 48.6**	**-0.7**
DSZ	**Denniston Nort**	**1.80**	**356**	P	**Pn**	**08 25 49.7**	**0.0**
THZ	**Tophouse**	**1.91**	**21**	P	**Pn**	**08 25 50.8**	**-0.3**
MRNZ	**Matariki Terra**	**2.22**	**15**	P	**Pn**	**08 25 56.0**	**+0.6**
BSWZ	**Blackbirch Sta**	**2.30**	**38**	P	**Pn**	**08 25 56.6**	**+0.1**
JCZ	**Jackson Bay**	**2.38**	**256**	P	**Pn**	**08 25 58.2**	**+0.6**
JCZ	**Jackson Bay**	**2.38**	**256**	P	**Pn**	**08 25 57.7**	**+0.1**
WKZ	**Wanaka**	**2.49**	**238**	P	**Pn**	**08 25 58.6**	**-0.5**
HHSZ	**Highcliff Hill**	**2.54**	**202**	P	**Pn**	**08 25 59.2**	**-0.5**
NNZ	**Nelson**	**2.54**	**24**	P	**Pn**	**08 26 00.2**	**+0.4**
EAZ	**Earnscleugh**	**2.56**	**228**	P	**Pn**	**08 25 59.7**	**-0.3**
TUWZ	**Tuamarina**	**2.56**	**35**	P	**Pn**	**08 26 00.4**	**+0.4**
TKNZ	**Takaka Hill**	**2.61**	**16**	P	**Pn**	**08 26 01.5**	**+0.8**
QRZ	**Quartz Range**	**2.75**	**9**	P	**Pn**	**08 26 02.4**	**-0.2**
QRZ	**Quartz Range**	**2.75**	**9**	P	**Pn**	**08 26 02.3**	**-0.2**
TCW	**Tory Channel**	**2.88**	**37**	P	**Pn**	**08 26 05.3**	**+0.9**
TUZ	**Tuapeka**	**2.94**	**214**	P	**Pn**	**08 26 04.5**	**-0.6**
SNZO	**South Karori**	**3.01**	**43**	P	**Pn**	**08 26 06.6**	**+0.5**
DUWZ	**D'Urville Isla**	**3.10**	**28**	P	**Pn**	**08 26 07.9**	**+0.5**
MSZ	**Milford Sound**	**3.13**	**248**	P	**Pn**	**08 26 07.2**	**-0.7**
MLZ	**Mavora Lakes**	**3.31**	**235**	P	**Pn**	**08 26 10.0**	**-0.4**
CAW	**Cannon Point**	**3.34**	**44**	P	**Pn**	**08 26 09.7**	**-1.1**
KIW	**Kapiti Island**	**3.45**	**40**	P	**Pn**	**08 26 12.1**	**-0.2**
SYZ	**Scrubby Hill**	**3.61**	**213**	P	**Pn**	**08 26 14.1**	**-0.3**
SYZ	**Scrubby Hill**	**3.61**	**213**	P	**Pn**	**08 26 14.1**	**-0.3**
OGWZ	**Otaki Gorge**	**3.61**	**42**	P	**Pn**	**08 26 13.3**	**-1.2**
WHZ	**Wether Hill Ro**	**3.71**	**229**	P	**Pn**	**08 26 15.2**	**-0.7**
MRZ	**Mangatainoka R**	**3.93**	**44**	P	**Pn**	**08 26 17.5**	**-1.3**
APZ	**The Paps**	**4.33**	**219**	P	**Pn**	**08 26 23.8**	**-0.6**
NMEZ	**Namu Road**	**4.37**	**20**	P	**Pn**	**08 26 26.5**	**+1.7**
NBEZ	**Newall Road No**	**4.50**	**19**	P	**Pn**	**08 26 28.2**	**+1.5**
PREZ	**Palmer Road**	**4.50**	**22**	P	**Pn**	**08 26 28.0**	**+1.2**
KHEZ	**Kahui Hut**	**4.51**	**20**	P	**Pn**	**08 26 27.1**	**+0.2**
KHEZ	**Kahui Hut**	**4.51**	**20**	P	**Pn**	**08 26 28.1**	**+1.1**
PKE	**Pukeiti**	**4.60**	**20**	P	**Pn**	**08 26 29.2**	**+1.1**
WNVZ	**Wahianoa**	**5.01**	**34**	P	**Pn**	**08 26 34.3**	**+0.4**
HIZ	**Hauiti**	**5.47**	**24**	P	**Pn**	**08 26 40.8**	**+0.7**
HIZ	**Hauiti**	**5.47**	**24**	P	**Pn**	**08 26 40.9**	**+0.9**
TLZ	**Tolley Road**	**5.86**	**28**	P	**Pn**	**08 26 46.5**	**+1.0**

*IDC **11** 08:46:54.4±8.6, 36.27N×70.52E, h115km±56km, mb3.5/5, mbtmp3.9/10, MS4.2/1, Error ellipse: s-maj=69.0km s-min=37.5km az=10.0*
*NNC **11** 08:46:56.5±7.3, 36.46N×70.60E, h232km±106km, mb3.0, mpv3.9, Error ellipse: s-maj=77.5km s-min=52.8km az=50.0*
ISC 11 08:47:06.4±1.6, 37.0N±0.1×70.5E±0.1, h200km, n20, σ2.92/24, mb3.3/4, 2C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.06**	**30**	P	**Pn**	**08 48 30.9**	**-3.9**
	SNR=34						
KK31	**Karatay Array**	**6.08**	**0**	⇓P	**Pn**	**08 48 31.4**	**-3.1**
	7.1nm,0.5s,baz=192,slow=12,SNR=84						
KK31				⇓S	**Sn**	**08 49 49.9**	**+5.5**
	23nm,0.6s,baz=194,slow=22,SNR=10						
EKS2	**Erkin-Say**	**6.18**	**23**	P	**Pn**	**08 48 33.3**	**-2.7**
	SNR=27						
AAK	**Ala-Archa**	**6.41**	**28**	P	**Pn**	**08 48 34.8**	**-4.1**
	12nm,0.4s,baz=202,slow=8.0,SNR=27						
AAK				S	**Sn**	**08 49 54.3**	**+2.0**
	17nm,0.6s,baz=342,slow=16,SNR=14						
AAK	**Ala-Archa**	**6.41**	**28**	P	**Pn**	**08 48 35.3**	**-3.6**
	SNR=18						
AAK	**Ala-Archa**	**6.41**	**28**	⇓P	**Pn**	**08 48 35.1**	**-3.8**
	2.5nm,0.4s						
AAK				⇑S	**Sn**	**08 49 54.1**	**+1.8**
	22nm,1.0s						
KBK	**Karagaybulak**	**6.60**	**30**	P	**Pn**	**08 48 40.4**	**-1.0**
	SNR=5.3						
USP	**Ospenovka**	**6.96**	**25**	P	**Pn**	**08 48 43.2**	**-2.8**
	SNR=16						
TKM2	**Tokmak 2**	**7.08**	**32**	P	**Pn**	**08 48 44.1**	**-3.7**
	SNR=23						
MKAR	**Makanchi Array**	**13.13**	**38**	P	**Pn**	**08 50 04.1**	**-1.2**
	0.6nm,0.5s,baz=220,slow=15,SNR=11						
AB31	**Akbulak array**	**14.43**	**331**	⇓P	**Pn**	**08 50 19.1**	**-2.2**
	4.9nm,0.5s,baz=156,slow=13,SNR=121						
AB31				⇑S	**S**	**08 53 00.0**	**-1.6**
	1.1nm,0.5s,baz=156,slow=24,SNR=7.0						
KURBB	**Kurchatov Array**	**14.77**	**20**	P	**Pn**	**08 50 25.1**	**-0.4**
	1.9nm,0.8s,baz=207,slow=10,SNR=14						
BVAR	**Borovoye Array**	**16.01**	**360**	P	**Pn**	**08 50 42.1**	**+1.6**
	1.0nm,0.4s,baz=171,slow=10,SNR=6.7						
AKTO	**Aktyubinsk**	**16.12**	**330**	P	**P**	**08 50 43.0**	**+1.6**
	4.8nm,0.7s,baz=148,slow=13,SNR=11						
AKTO				S	**S**	**08 53 36.4**	**-3.7**
	0.5nm,0.5s,baz=165,slow=20,SNR=1.7						
ZALV	**Zalesovo Beam**	**19.62**	**26**	P	**Pn**	**08 51 21.6**	**-1.7**
	16nm,0.4s,baz=218,slow=12,SNR=39						
	16nm,0.4s						
SONM	**Songino Array**	**28.39**	**56**	P	**P**	**08 52 42.2**	**+0.2**
	0.4nm,0.5s,baz=266,slow=10,SNR=4.6						
	0.4nm,0.5s						
HFS	**Hagfors**	**42.40**	**322**	LR	LR	09 15 00.3	
	comp=Z,308nm,21.6s,baz=276,slow=39						
SPITS	**Spitsbergen Ar**	**46.89**	**347**	P	**P**	**08 55 19.4**	**+3.4**
	2.4nm,0.7s,baz=122,slow=10,SNR=1.0						
	2.4nm,0.7s						
ILAR	**Eielson Array**	**74.39**	**16**	P	**P**	**08 58 22.4**	**+0.6**
	0.2nm,0.5s,baz=322,slow=5.8,SNR=4.3						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**80.75**	**2**	P	**P**	**08 58 57.9**	**+0.9**
	0.1nm,0.5s,baz=353,slow=6.4,SNR=4.8						
	0.1nm,0.5s						

*ROM **11** 08:50:52.0±0.1, 41.776N±0.006×15.016E±0.007, h17km, ML2.9/122, Error ellipse: s-maj=0.6km s-min=0.4km az=204.0*
ISC 11 08:50:52.1±0.8, 41.77N±0.02×15.01E±0.02, h18km±3km, n67, σ1.91/74, 7C-1D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LRNO	**Larino**	**0.07**	**297**	⇑P	**Pg**	**08 50 55.4**	**-0.2**
LRNO				S	**Sg**	**08 50 58.2**	**+0.3**
MELA	**Melanico ??? S**	**0.11**	**127**	⇓P	**Pg**	**08 50 55.7**	**-0.1**
MELA				S	**Sg**	**08 50 58.7**	**+0.3**
MELA				AML	AML		
	comp=E,43950μm,0.4s						
MELA				AML	AML		
	comp=N,67850μm,0.4s						
MELA				AML	AML		
	comp=E,43950μm,0.4s						
MELA				AML	AML		
	comp=N,67850μm,0.3s						
MELA				AML	AML		
	comp=N,72050μm,0.3s						
MELA				AML	AML		
	comp=N,72050μm,1.7s						
MELA				AML	AML		
	comp=N,67850μm,1.7s						
MELA				AML	AML		
	comp=E,47600μm,0.4s						
CIGN	**Sant'Elia a Pi**	**0.14**	**212**	⇑P	**Pg**	**08 50 56.2**	**0.0**
CIGN				S	**Sg**	**08 50 59.6**	**+0.7**
CIGN				AML	AML		
	comp=E,3655μm,0.3s						
CIGN				AML	AML		
	comp=N,5215μm,0.4s						
GLNS	**Guglionesi**	**0.15**	**335**	⇑P	**Pg**	**08 50 56.5**	**+0.1**
GLNS				S	**Sg**	**08 51 00.6**	**+1.3**
MCLF	**Montecilfone**	**0.18**	**315**	⇑P	**Pb**	**08 50 56.7**	**+0.2**
MCLF				S	**Sg**	**08 51 00.4**	**+0.5**
PLTA	**Palata**	**0.20**	**305**	P	**Pb**	**08 50 56.9**	**+0.1**
PLTA				S	**Sg**	**08 51 00.6**	**+0.2**
GATE	**Gambatesa**	**0.27**	**195**	⇑P	**Pb**	**08 50 58.9**	**+0.5**
GATE				AML	AML		
	comp=N,2585μm,0.3s						
GATE				AML	AML		
	comp=E,2815μm,1.6s						
GATE				AML	AML		
	comp=E,2815μm,1.6s						
GATE				AML	AML		
	comp=E,2785μm,1.6s						
GATE				AML	AML		
	comp=E,2785μm,0.4s						
GATE				AML	AML		
	comp=N,2560μm,0.3s						
GATE				AML	AML		
	comp=E,2815μm,0.4s						
FRES	**Fresagrandinar**	**0.32**	**309**	P	**Pg**	**08 50 59.0**	**0.0**
FRES				AML	AML		
	comp=E,4965μm,0.2s						
FRES				AML	AML		
	comp=N,2520μm,0.5s						
TRIV	**Trivento**	**0.34**	**269**	P	**Pg**	**08 50 59.6**	**+0.3**
TRIV				AML	AML		
	comp=E,926μm,0.4s						
TRIV				AML	AML		
	comp=N,1471μm,0.3s						
TRIV				AML	AML		
	comp=E,950μm,1.2s						
TRIV				AML	AML		
	comp=E,925μm,0.4s						
TRIV				AML	AML		
	comp=N,1472μm,0.3s						
TRIV				AML	AML		
	comp=N,1511μm,0.3s						
TRIV				AML	AML		
	comp=E,950μm,0.8s						
TRIV				AML	AML		
	comp=E,926μm,1.6s						
BSSO	**Busso**	**0.38**	**234**	P	**Pg**	**08 51 00.1**	**0.0**
BSSO				S	**Sb**	**08 51 06.7**	**+0.6**
BSSO				AML	AML		
	comp=N,832μm,1.0s						
BSSO				AML	AML		
	comp=N,868μm,1.0s						
BSSO				AML	AML		
	comp=E,984μm,0.3s						
BSSO				AML	AML		
	comp=E,1005μm,0.4s						
SACR	**S. Croce Del S**	**0.44**	**211**	⇑P	**Pg**	**08 51 00.8**	**-0.3**
SACR				S	**Sb**	**08 51 08.1**	**+0.5**
SACR				AML	AML		
	comp=E,995μm,0.2s						
SACR				AML	AML		
	comp=N,1016μm,0.3s						
SACR				AML	AML		
	comp=N,978μm,0.3s						
SACR				AML	AML		
	comp=E,1012μm,0.2s						
PSB1	**Pescosannita**	**0.57**	**195**	⇑P	**Pb**	**08 51 02.8**	**-0.6**
PSB1				S	**Sb**	**08 51 12.2**	**+0.9**
PSB1				AML	AML		
	comp=E,748μm,0.6s						
PSB1				AML	AML		
	comp=N,568μm,0.4s						
PSB1				AML	AML		
	comp=N,569μm,0.4s						
PSB1				AML	AML		
	comp=N,568μm,0.4s						
PSB1				AML	AML		
	comp=E,750μm,0.9s						
PSB1				AML	AML		
	comp=E,748μm,1.4s						
PSB1				AML	AML		
	comp=E,750μm,1.1s						
MIDA	**Miranda**	**0.58**	**257**	P	**Pb**	**08 51 02.7**	**-0.9**
MIDA				AML	AML		
	comp=E,904μm,0.4s						
MIDA				AML	AML		
	comp=N,821μm,0.3s						
MIDA				AML	AML		
	comp=E,825μm,0.3s						
MIDA				AML	AML		
	comp=N,930μm,0.5s						
MIDA				AML	AML		
	comp=N,822μm,0.3s						
SGG	**Gregorio Mates**	**0.61**	**231**	P	**Pb**	**08 51 03.3**	**-0.9**
SGG				AML	AML		
	comp=E,1100μm,0.5s						
SGG				AML	AML		
	comp=N,1395μm,0.4s						
SGG				AML	AML		
	comp=E,1150μm,0.5s						
SGG				AML	AML		
	comp=N,1395μm,0.4s						
SGG				AML	AML		
	comp=E,1100μm,0.5s						
SGG				AML	AML		
	comp=N,1375μm,0.5s						
RNI2	**Rionero Sannit**	**0.64**	**264**	P	**Pb**	**08 51 04.2**	**-0.6**
RNI2				AML	AML		
	comp=E,1245μm,1.4s						
RNI2				AML	AML		
	comp=N,978μm,0.2s						
RNI2				AML	AML		
	comp=E,1310μm,1.4s						
RNI2				AML	AML		
	comp=N,978μm,0.2s						
RNI2				AML	AML		
	comp=N,1014μm,0.1s						
VITU	**Vitulano (BN)**	**0.65**	**206**	P	**Pb**	**08 51 04.3**	**-0.7**
VITU				AML	AML		
	comp=E,2160μm,0.4s						
VITU				AML	AML		
	comp=E,618μm,1.0s						
VITU				AML	AML		
	comp=N,2825μm,0.3s						
VITU				AML	AML		
	comp=E,618μm,1.0s						
VITU				AML	AML		
	comp=N,2795μm,0.3s						
VITU				AML	AML		
	comp=E,2160μm,1.6s						
LPEL	**Lama dei Pelig**	**0.67**	**294**	P	**Pb**	**08 51 05.0**	**-0.3**
LPEL				AML	AML		
	comp=E,3130μm,0.2s						
LPEL				AML	AML		
	comp=N,2635μm,1.3s						
LPEL				AML	AML		
	comp=N,3020μm,0.2s						
LPEL				AML	AML		
	comp=N,2640μm,1.3s						
LPEL				AML	AML		
	comp=E,3230μm,0.2s						
LPEL				AML	AML		
	comp=E,3125μm,0.2s						
MSAG	**Monte S. Angel**	**0.68**	**95**	P	**Pb**	**08 51 04.9**	**-0.5**
MSAG				AML	AML		
	comp=E,800μm,0.6s						
MSAG				AML	AML		
	comp=N,3255μm,0.4s						
MSAG				AML	AML		
	comp=N,1355μm,0.5s						
MSAG				AML	AML		
	comp=N,3255μm,1.6s						
MSAG				AML	AML		
	comp=N,1355μm,1.5s						
MSAG				AML	AML		
	comp=E,2035μm,0.6s						
VAGA	**Valle Agricola**	**0.68**	**239**	P	**Pb**	**08 51 05.0**	**-0.4**
VAGA				AML	AML		
	comp=E,1115μm,0.3s						
VAGA				AML	AML		
	comp=E,1155μm,0.3s						
VAGA				AML	AML		
	comp=N,1775μm,0.4s						
VAGA				AML	AML		
	comp=E,1155μm,1.7s						
VAGA				AML	AML		
	comp=E,1115μm,1.7s						
VAGA				AML	AML		
	comp=N,1710μm,0.4s						
SGTA	**Sant Agata di**	**0.69**	**157**	P	**Pb**	**08 51 04.8**	**-0.8**
SGTA				AML	AML		
	comp=E,1555μm,0.4s

CAFE AML AML
comp=N,627μm,0.7s
CAFE AML AML
comp=N,627μm,1.3s
CAFE AML AML
comp=E,893μm,0.5s
CAFE AML AML
comp=N,642μm,0.3s
PIGN Pignataro Magg 0.84 228 P **Pg 08 51 08.8 +0.3**
PIGN AML AML
comp=E,552μm,0.6s
PIGN AML AML
comp=N,938μm,0.5s
PIGN AML AML
comp=N,892μm,1.3s
PIGN AML AML
comp=N,938μm,0.5s
PIGN AML AML
comp=E,712μm,0.6s
PIGN AML AML
comp=N,892μm,0.7s
INTR Introdacqua 0.86 286 P **Pb 08 51 07.1 -1.3**
INTR AML AML
comp=E,946μm,1.6s
INTR AML AML
comp=N,1830μm,1.4s
INTR AML AML
comp=N,1830μm,0.6s
INTR AML AML
comp=E,946μm,0.4s
CAPA Cerignola FG 0.87 135 P **Pb 08 51 08.9 +0.4**
CAPA AML AML
comp=N,1170μm,1.0s
CAPA AML AML
comp=E,1365μm,0.8s
CAPA AML AML
comp=N,2615μm,1.1s
CAPA AML AML
comp=E,930μm,0.9s
CAPA AML AML
comp=N,2615μm,0.9s
CAPA AML AML
comp=E,1365μm,1.2s
CAPA AML AML
comp=N,1170μm,1.0s
MNT3 Montella 0.94 180 AML AML
comp=E,3870μm,1.3s
MNT3 AML AML
comp=N,3765μm,0.3s
MCI Monte Cassino 0.94 252 P **Pb 08 51 09.4 -0.3**
MCI AML AML
comp=E,802μm,1.3s
MCI AML AML
comp=N,782μm,0.3s
POFI Posta Fibreno 0.97 267 P **Pb 08 51 09.2 -1.2**
POFI AML AML
comp=N,234μm,1.2s
POFI AML AML
comp=E,274μm,0.8s
POFI AML AML
comp=E,274μm,1.2s
POFI AML AML
comp=N,234μm,0.8s
T0110 Collepietro 1.02 297 P **Pb 08 51 10.0 -1.2**
T0110 AML AML
comp=E,1665μm,1.0s
T0110 AML AML
comp=N,1201μm,0.4s
T0110 AML AML
comp=N,1201μm,1.6s
VBKN Vesuvio Bunker 1.04 205 AML AML
comp=E,2095μm,0.7s
VBKN AML AML
comp=E,2095μm,1.3s
VBKN AML AML
comp=N,1845μm,1.3s
VVLD Villa Vallelon 1.04 276 P **Pb 08 51 10.0 -1.5**
VVLD AML AML
comp=E,642μm,0.6s
VVLD AML AML
comp=N,613μm,0.4s
VVLD AML AML
comp=N,584μm,0.5s
VVLD AML AML
comp=E,699μm,0.6s
VVLD AML AML
comp=N,613μm,1.6s
VVLD AML AML
comp=N,584μm,1.5s
VVLD AML AML
comp=E,642μm,0.6s
VCRE Vesuvio Crater 1.05 205 P **Pg 08 51 12.8 +0.4**
VCRE AML AML
comp=E,2705μm,0.4s
VCRE AML AML
comp=N,1830μm,0.9s
VCRE AML AML
comp=N,1830μm,1.1s
MODR Mondragone 1.05 234 P **Pn 08 51 12.4 +0.5**
MODR AML AML
comp=N,626μm,0.4s
MODR AML AML
comp=E,513μm,0.6s
MODR AML AML
comp=N,626μm,1.6s
LRP Arpino 1.07 264 P **Pb 08 51 12.1 0.0**
LRP AML AML
comp=N,146μm,0.4s
LRP AML AML
comp=E,344μm,0.9s
PALZ Palazzo San Ge 1.10 139 P **Pb 08 51 12.7 +0.2**
PALZ AML AML
comp=N,2340μm,1.0s
PALZ AML AML
comp=E,1940μm,0.5s
PALZ AML AML
comp=N,2340μm,1.0s
TRTR Tortoreto Alta 1.31 322 P **Pg 08 51 17.6 +0.2**
TRTR AML AML
comp=E,2100μm,0.4s
TRTR AML AML
comp=E,2100μm,1.6s
TRTR AML AML
comp=N,1850μm,0.8s
GIUL Giuliano Di Ro 1.33 261 P **Pb 08 51 16.4 -0.1**
AMUR Altamura 1.48 125 P **Pn 08 51 18.2 +0.4**
AMUR AML AML
comp=N,824μm,0.3s
AMUR AML AML
comp=E,840μm,0.6s
FIAM Fiamignano 1.49 290 P **Pg 08 51 20.4 -0.4**
CERT Cerreto 1.52 277 P **Pn 08 51 18.5 +0.1**
CERT AML AML
comp=N,146μm,0.5s
CERT AML AML
comp=E,198μm,0.4s
LATB Latina 1.56 260 P **Pn 08 51 18.2 -0.6**
MCEL Monticello 1.57 157 P **Pn 08 51 19.8 +0.8**
MCEL AML AML
comp=E,184μm,0.6s
MCEL AML AML
comp=N,206μm,0.7s
MCEL AML AML
comp=E,176μm,0.6s
MCEL AML AML
comp=N,216μm,0.4s
MCEL AML AML
comp=E,176μm,1.4s
MCEL AML AML
comp=E,184μm,1.4s
MF5 Montefalcone A 1.67 317 P **Pb 08 51 21.9 -0.4**
MF5 AML AML
comp=E,544μm,0.5s
MF5 AML AML
comp=N,714μm,0.3s
LNSS Leonessa 1.68 300 P **Pb 08 51 22.3 -0.1**
LNSS AML AML
comp=E,294μm,0.7s
LNSS AML AML
comp=N,396μm,1.4s
LNSS AML AML
comp=E,294μm,1.3s
LNSS AML AML
comp=N,396μm,0.6s
MGR Morigerati 1.69 166 P **Pn 08 51 21.7 +1.0**
MGR AML AML
comp=N,160μm,0.9s
MGR AML AML
comp=E,151μm,0.4s
MGR AML AML
comp=N,160μm,1.1s
BULG Bulgheria - Ca 1.72 170 P **Pn 08 51 21.9 +0.7**
LSTV Lastovo 1.72 54 *e*Pg **Pn 08 51 21.1 +0.1**
LSTV Sg **Sn 08 51 39.1 -3.4**
NRCA Norcia 1.76 308 P **Pb 08 51 23.4 -0.4**
NRCA AML AML
comp=N,350μm,1.2s
NRCA AML AML
comp=E,340μm,0.8s
NRCA AML AML
comp=N,350μm,0.8s
HVAR Hvar 1.76 37 *e*Pg **Pn 08 51 22.3 +0.6**
HVAR Sg **Sn 08 51 41.1 -2.5**
MC2 Monte Cornacci 1.76 311 P **Pn 08 51 22.7 +0.9**
LTRZ Laterza 1.80 130 P **Pn 08 51 22.6 +0.4**
LTRZ AML AML
comp=E,524μm,1.1s
LTRZ AML AML
comp=N,784μm,1.3s
LTRZ AML AML
comp=N,784μm,0.7s
LTRZ AML AML
comp=E,524μm,0.9s
FDMO Fiordimonte 1.90 312 P **Pn 08 51 25.1 +1.5**
FDMO AML AML
comp=E,208μm,0.6s
FDMO AML AML
comp=N,220μm,0.6s
CESI CESI - Serrava 1.98 309 P **Pb 08 51 26.8 -0.9**
CESI AML AML
comp=N,306μm,0.5s
CESI AML AML
comp=E,164μm,0.4s
MORI Morici 2.15 14 *i* Pn **Pn 08 51 27.3 +0.3**
MORI Sn **Sn 08 51 50.5 -2.7**
DUGI Dugi Otok 2.22 1 *i* Pn **Pn 08 51 29.0 +1.0**
FOSV Fossato di Vic 2.25 313 P **Pn 08 51 30.4 +2.0**
FOSV AML AML
comp=N,166μm,0.4s
FOSV AML AML
comp=E,163μm,0.5s
RICI Ricice 2.33 42 *e*Pn **Pn 08 51 30.8 +1.3**
RICI Sn **Sn 08 51 56.1 -1.6**
KIJV Kijevo 2.46 24 *e*Pn **Pn 08 51 32.3 +1.1**
KIJV Sn **Sn 08 51 58.3 -2.5**
DBRK Dubrovnik 2.50 68 *e*Pn **Pn 08 51 33.7 +1.9**
DBRK Sn **Sn 08 52 01.2 -0.6**
VIRC Vir 2.52 1 *e*Pn **Pn 08 51 33.0 +0.9**
OBKA Obir 4.75 356 *e*Pn Pn 08 52 08.7 +5.9
comp=E,0.4nm,0.2s
MYKA Terra Mystica 4.95 349 *e*Pn Pn 08 52 10.5 +4.9
comp=E,1.5nm,0.3s
KBA Koelnbreinsper 5.43 348 *e*Pn Pn 08 52 17.1 +4.8
comp=E,0.8nm,0.2s
ARSA Arzberg 5.49 4 *e*Pn Pb 08 52 21.2 -6.1
comp=E,1.0nm,0.3s
LESA Schwarzleotal 5.89 344 *i* Pn **Pn 08 52 22.2 +3.8**
comp=E,0.4nm,0.1s
FETA Feichten 6.07 331 *e*Pn Pn 08 52 25.8 +4.7
comp=E,0.3nm,0.2s
WATA Walderalm 6.08 337 *e*Pn Pn 08 52 26.2 +5.1
comp=E,1.2nm,0.2s

IDC 11 08:52:43.1±11.0, 18.71S×178.02W, h16km±131km, mb2.7/4, mbtmp3.7/4, Error ellipse: s-maj=117.0km s-min=42.8km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.85**	**260**	P		P		09 00 04.6	-0.1
	0.5nm,0.4s,baz=97,slow=8.2,SNR=8.4								
	0.5nm,0.4s								
ASAR	**Alice Springs**	**44.93**	**255**	P		P		09 00 05.2	0.0
	0.7nm,0.5s,baz=89,slow=8.3,SNR=17								
ASAR				PcP		PcP		09 01 32.7	-0.3
	0.5nm,1.0s,baz=92,slow=3.6,SNR=1.9								
	0.7nm,0.5s								
TXAR	**Eielson Array**	**86.12**	**57**	P		P		09 04 20.9	+0.3
	0.3nm,0.7s,baz=235,slow=4.1,SNR=2.5								
	0.3nm,0.7s								
ILAR	**Eielson Array**	**86.59**	**13**	P		P		09 04 21.6	-0.3
	0.2nm,0.5s,baz=204,slow=3.7,SNR=6.5								
	0.2nm,0.5s								

*KRNET **11** 08:53:14.9±0.1, 41.64N×75.70E, h19km, mb4.4*
*SOME **11** 08:53:14.7, 41.57N×75.67E, h20km*
*MOS **11** 08:53:15.2±0.8, 41.64N×75.69E, h10km, mb4.0/2, Error ellipse: s-maj=6.1km s-min=5.1km az=86.0*
*NNC **11** 08:53:15.5±0.8, 41.63N×75.75E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=6.5km s-min=3.9km az=170.0*
*KNET **11** 08:53:16.2±0.4, 41.76N×75.65E, h6km±1km, ml3.5, Error ellipse: s-maj=2.1km s-min=1.3km az=166.0*
*IDC **11** 08:53:16.2±1.8, 41.77N×75.58E, h0km, mb3.5/3, mbtmp3.7/7, ML3.3/4, MS3.6/2, Error ellipse: s-maj=21.2km s-min=10.9km az=8.0*

ISC 11 08:53:16.1±0.5, 41.65N±0.02×75.67E±0.01, h10km, n133, σ1°44/201, mb3.6/4, 46C-45D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.33**	**131**	*e*PG		**Pg**		**08 53 21.0**	**-1.8**
NRN	**Naryn**	**0.33**	**131**	⇓*e*P		**Pg**		**08 53 21.0**	**-1.8**
NRN				⇓*e*S		**Sg**		**08 53 25.5**	**-1.6**
JNKS	**Jany-Kuch**	**0.59**	**183**	⇓*e*P		**Pg**		**08 53 26.2**	**-1.5**
JNKS				⇓*e*S		**Sg**		**08 53 34.5**	**-1.0**
ULHL	**Ulahol**	**0.73**	**35**	⇓P		**Pg**		**08 53 28.7**	**-1.7**
	273nm,0.2s,SNR=541								
ULHL				⇓S		**Sg**		**08 53 38.5**	**-1.5**
	1μm,0.2s								
ULHL	**Ulahol**	**0.73**	**35**	*e*PG		**Pg**		**08 53 28.7**	**-1.7**
ULHL	**Ulahol**	**0.73**	**35**	⇑*e*P		**Pg**		**08 53 28.7**	**-1.7**
ULHL				⇑*e*S		**Sg**		**08 53 38.6**	**-1.4**
BOOM	**Boomskoye usch**	**0.87**	**13**	*e*PG		**Pg**		**08 53 31.2**	**-1.7**
BOOM				*e*S		**Sg**		**08 53 42.9**	**-1.3**
BOOM	**Boomskoye usch**	**0.87**	**13**	⇑*e*P		**Pg**		**08 53 31.2**	**-1.7**
BOOM				⇑*e*S		**Sg**		**08 53 42.9**	**-1.3**
ARLS	**Aral**	**1.03**	**282**	*e*PG		**Pg**		**08 53 34.3**	**-1.7**
ARLS	**Aral**	**1.03**	**282**	⇓*e*P		**Pg**		**08 53 34.3**	**-1.7**
ARLS				⇓*e*S		**Sg**		**08 53 48.6**	**-0.8**
UCH	**Uchtor**	**1.04**	**304**	P		**Pg**		**08 53 34.9**	**-1.3**
	223nm,0.2s,SNR=259								
UCH				⇓S		**Sb**		**08 53 49.3**	**-1.1**
	523nm,0.2s								
UCH	**Uchtor**	**1.04**	**304**	*e*PG		**Pg**		**08 53 34.7**	**-1.5**
UCH	**Uchtor**	**1.04**	**304**	⇑*e*P		**Pg**		**08 53 34.7**	**-1.5**
UCH				⇑*e*S		**Sb**		**08 53 49.1**	**-1.3**
KBK	**Karagaybulak**	**1.14**	**332**	⇓P		**Pg**		**08 53 36.9**	**-1.3**
	1μm,0.1s,SNR=779								
KBK				⇓S		**Sb**		**08 53 52.3**	**-0.9**
	788nm,0.1s								
KBK	**Karagaybulak**	**1.14**	**332**	*e*PG		**Pg**		**08 53 36.3**	**-1.8**
KBK	**Karagaybulak**	**1.14**	**332**	⇑*e*P		**Pg**		**08 53 36.3**	**-1.8**
KBK				⇑*e*S		**Sg**		**08 53 51.9**	**-1.1**
KDJ	**Kajisay**	**1.23**	**66**	*e*PG		**Pb**		**08 53 37.4**	**-2.1**
KDJ				*e*S		**Sb**		**08 53 53.7**	**-1.8**
KDJ	**Kajisay**	**1.23**	**66**	⇑*e*P		**Pb**		**08 53 37.4**	**-2.1**
KDJ				⇑*e*S		**Sb**		**08 53 53.7**	**-1.8**
TKM2	**Tokmak 2**	**1.27**	**358**	⇑P		**Pn**		**08 53 39.0**	**-1.2**
	345nm,0.2s,SNR=1117								
TKM2				⇓S		**Sg**		**08 53 56.3**	**-1.0**
	608nm,0.1s								
TKM2	**Tokmak 2**	**1.27**	**358**	*e*PG		**Pn**		**08 53 38.5**	**-1.7**
TKM2	**Tokmak 2**	**1.27**	**358**	⇓*e*P		**Pn**		**08 53 38.5**	**-1.7**
TKM2				⇓*e*S		**Sb**		**08 53 55.6**	**-1.3**
AAK	**Ala-Archa**	**1.32**	**319**	Pg		**Pn**		**08 53 40.0**	**-0.8**
	88nm,0.3s,baz=134,slow=8.1,SNR=882								
AAK				Lg		Lg		08 53 56.5	
	54nm,0.3s,baz=214,slow=22,SNR=10								
AAK				LR		LR		08 54 13.0	
	comp=Z,148nm,19.1s,baz=295,slow=48								
AAK	**Ala-Archa**	**1.32**	**319**	⇑P		**Pn**		**08 53 39.8**	**-1.0**
	233nm,0.2s,SNR=801								
AAK				⇓S		**Sn**		**08 53 58.3**	**-0.3**
	344nm,0.3s								
AAK	**Ala-Archa**	**1.32**	**319**	⇑Pn		**Pn**		**08 53 39.7**	**-1.1**
	635nm,0.4s								
AAK				⇑Sn		**Sn**		**08 54 03.6**	**+5.0**
	1μm,0.4s								
AAK	**Ala-Archa**	**1.32**	**319**	PG		**Pn**		**08 53 39.7**	**-1.1**
AAK								08 54 03.6	
AAK	**Ala-Archa**	**1.32**	**319**	⇑*e*P		**Pn**		**08 53 39.5**	**-1.3**
AAK				⇑*e*S		**Sg**		**08 53 57.4**	**-1.3**
FRU1	**Bishkek**	**1.40**	**327**	*e*PG		**Pn**		**08 53 41.2**	**-0.6**
FRU1				*e*S		**Sg**		**08 54 00.3**	**-0.8**
FRU1	**Bishkek**	**1.40**	**327**	⇓*e*P		**Pn**		**08 53 41.2**	**-0.6**
FRU1				⇓*e*S		**Sg**		**08 54 00.3**	**-0.8**
KST	**Kastek**	**1.41**	**9**	P		**Pb**		**08 53 41.6**	**-1.0**
	154nm,0.1s								
KST				S		**Sg**		**08 54 00.8**	**-0.8**
	426nm,0.2s								
KST	**Kastek**	**1.41**	**9**	*e*P		**Pb**		**08 53 41.6**	**-1.0**
	154nm,0.1s								
KST				*e*S		**Sg**		**08 54 00.8**	**-0.8**
	426nm,0.2s								
FRU	**Bishkek**	**1.42**	**327**	PG		**Pn**		**08 53 41.2**	**-0.9**
CHMS	**Chumysh**	**1.51**	**334**	⇓P		**Pb**		**08 53 43.1**	**-1.2**
	180nm,0.1s,SNR=262								
CHMS				⇓S		**Sg**		**08 54 03.8**	**-1.1**
	1μm,0.5s								
CHMS	**Chumysh**	**1.51**	**334**	*e*PG		**Pn**		**08 53 42.8**	**-0.5**
CHMS	**Chumysh**	**1.51**	**334**	⇑*e*P		**Pn**		**08 53 42.8**	**-0.5**
CHMS				⇑*e*S		**Sb**		**08 54 03.1**	**-0.5**
IZV	**Izvestkoviy**	**1.56**	**26**	P		**Pn**		**08 53 43.8**	**-0.2**
	176nm,0.3s								
IZV				S		**Sg**		**08 54 05.0**	**-1.1**
	360nm,0.4s								
IZV	**Izvestkoviy**	**1.56**	**26**	*e*P		**Pn**		**08 53 43.8**	**-0.2**
	176nm,0.3s								
IZV				*e*S		**Sg**		**08 54 05.0**	**-1.1**
	360nm,0.4s								
MTBS	**Maitube**	**1.59**	**20**	P		**Pb**		**08 53 44.6**	**-1.0**
	274nm,0.1s								
MTBS				S		**Sg**		**08 54 05.7**	**-1.4**
	357nm,0.2s								
MTBS	**Maitube**	**1.59**	**20**	*e*P		**Pb**		**08 53 44.6**	**-1.0**
	274nm,0.1s								
MTBS				*e*S		**Sg**		**08 54 05.7**	**-1.4**
	483nm,0.4s								
SALK	**Salom-Alik**	**1.59**	**242**	*e*PN		**Pn**		**08 53 44.4**	**-0.1**
SALK				*e*S		**Sb**		**08 54 05.7**	**-0.2**
SALK	**Salom-Alik**	**1.59**	**242**	⇑*e*P		**Pn**		**08 53 44.4**	**-0.1**
SALK				⇑*e*S		**Sb**		**08 54 05.7**	**-0.2**
TARG	**Taragay, Kyrgy**	**1.60**	**86**	*e*PN		**Pn**		**08 53 43.7**	**-1.2**
TARG				*e*S		**Sn**		**08 54 04.8**	**-1.0**
TARG	**Taragay, Kyrgy**	**1.60**	**86**	⇓*e*P		**Pn**		**08 53 43.7**	**-1.2**
TARG				⇓*e*S		**Sn**		**08 54 04.8**	**-1.0**
TNSS	**Tian-Shan**	**1.68**	**34**	P		**Pb**		**08 53 46.2**	**-1.2**
	41nm,0.2s								
TNSS				S		**Sb**		**08 54 08.5**	**-0.3**
	81nm,0.3s								
TNSS	**Tian-Shan**	**1.68**	**34**	*e*P		**Pb**		**08 53 46.2**	**-1.2**
	41nm,0.2s								
TNSS				*e*S		**Sb**		**08 54 08.5**	**-0.3**
	81nm,0.3s								
EKS2	**Erkin-Say**	**1.74**	**306**	⇓P		**Pb**		**08 53 47.4**	**-0.7**
	354nm,0.3s,SNR=432								
EKS2				⇓S		**Sg**		**08 54 11.6**	**-0.4**
	419nm,0.5s								
EKS2	**Erkin-Say**	**1.74**	**306**	*e*PN		**Pb**		**08 53 46.9**	**-1.3**
EKS2	**Erkin-Say**	**1.74**	**306**	⇑*e*P		**Pb**		**08 53 46.9**	**-1.3**
EKS2				⇑*e*S		**Sg**		**08 54 10.1**	**-1.8**
AAA	**Alma-Ata**	**1.81**	**30**	P		**Pb**		**08 53 49.1**	**-0.4**
	347nm,0.2s								
AAA				S		**Sg**		**08 54 13.2**	**-1.2**
	24nm,0.1s								
AAA	**Alma-Ata**	**1.81**	**30**	*e*P		**Pb**		**08 53 49.1**	**-0.4**
	246nm,0.3s								
AAA				*e*S		**Sg**		**08 54 13.2**	**-1.2**
	37nm,0.2s								
MDOK	**Medeo**	**1.83**	**33**	Pg		**Pb**		**08 53 48.4**	**-1.3**
	195nm,0.3s								
MDOK				Lg		Lg		08 54 12.3	
	344nm,0.4s								
USP	**Ospenovka**	**1.84**	**332**	⇓P		**Pb**		**08 53 49.1**	**-0.7**
	292nm,0.2s,SNR=773								
USP				⇓S		**Sg**		**08 54 14.1**	**-1.1**
	330nm,0.3s								
USP	**Ospenovka**	**1.84**	**332**	*e*PN		**Pb**		**08 53 48.3**	**-1.5**
USP	**Ospenovka**	**1.84**	**332**	⇓*e*P		**Pb**		**08 53 48.3**	**-1.5**
USP				⇓*e*S		**Sb**		**08 54 12.5**	**-0.4**
KNDC	**Almaty**	**1.84**	**31**	⇓Pn		**Pb**		**08 53 49.5**	**-0.4**
	129nm,0.2s								
KNDC				⇓Sn		**Sg**		**08 54 14.3**	**-1.0**
	227nm,0.3s								
KNDC	**Almaty**	**1.84**	**31**	PN		**Pb**		**08 53 49.5**	**-0.4**
KNDC								08 54 14.2	
ANVS	**Anan'yevo**	**1.87**	**52**	*e*PN		**Pn**		**08 53 48.3**	**0.0**
ANVS				*e*S		**Sb**		**08 54 12.8**	**-1.2**
ANVS	**Anan'yevo**	**1.87**	**52**	⇑*e*P		**Pn**		**08 53 48.3**	**0.0**
ANVS				⇑*e*S		**Sb**		**08 54 12.8**	**-1.2**
KOTS	**Kotyrbulak**	**1.91**	**33**	Pg		**Pb**		**08 53 50.7**	**-0.5**
	171nm,0.3s								
KOTS				Lg		Lg		08 54 17.1	
	976nm,0.2s								
KOTS	**Kotyrbulak**	**1.91**	**33**	*e*P		**Pb**		**08 53 50.7**	**-0.5**
	196nm,0.5s								
KOTS				*e*S		**Sg**		**08 54 17.1**	**-0.5**
	976nm,0.2s								
SGDS	**Sogindy**	**1.96**	**337**	Pg		**Pb**		**08 53 51.8**	**-0.2**
	240nm,0.2s								
SGDS				Lg		Lg		08 54 17.9	
	483nm,0.3s								
ARSB	**Arslanbob**	**2.05**	**262**	*e*PN		**Pn**		**08 53 51.3**	**+0.6**
ARSB				*e*S		**Sb**		**08 54 17.9**	**-1.1**
ARSB	**Arslanbob**	**2.05**	**262**	⇑*e*P		**Pn**		**08 53 51.3**	**+0.6**
ARSB				⇑*e*S		**Sb**		**08 54 17.9**	**-1.1**
KRBS	**Karabastau**	**2.05**	**0**	Pg		**Pb**		**08 53 53.0**	**-0.5**
	418nm,0.3s								
KRBS				Lg		Lg		08 54 21.8	
	828nm,0.2s								
KRBS	**Karabastau**	**2.05**	**0**	*e*P		**Pg**		**08 53 53.6**	**-1.8**
	418nm,0.3s								
KRBS				*e*S		**Sg**		**08 54 21.5**	**-0.4**
	828nm,0.2s								
MRKS	**Merke**	**2.12**	**302**	Pg		**Pb**		**08 53 54.3**	**-0.5**
	800nm,0.4s								
MRKS				Lg		Lg		08 54 23.1	
	541nm,0.4s								
MRKS	**Merke**	**2.12**	**302**	*e*P		**Pb**		**08 53 54.6**	**-0.1**
	800nm,0.4s								
MRKS				*e*S		**Sg**		**08 54 23.1**	**-1.2**
	541nm,0.4s								
KTBS	**Karatobe**	**2.20**	**20**	Pg		**Pb**		**08 53 55.9**	**-0.1**
	213nm,0.2s								
KTBS				Lg		Lg		08 54 26.0	
	1.1nm,0.2s								
KTBS	**Karatobe**	**2.20**	**20**	*e*P		**Pb**		**08 53 55.9**	**-0.1**
	213nm,0.2s								
KTBS				*e*S		**Sg**		**08 54 26.0**	**-0.6**
	1.1nm,0.2s								
PRZ	**Przheval'sk**	**2.20**	**67**	*e*PN		**Pn**		**08 53 53.0**	**+0.1**
PRZ				*e*S		**Sn**		**08 54 20.8**	**+0.6**
PRZ	**Przheval'sk**	**2.20**	**67**	⇑*e*P		**Pn**		**08 53 53.0**	**+0.1**
PRZ				⇑*e*S		**Sn**		**08 54 20.8**	**+0.6**
KUU	**Kurty**	**2.30**	**12**	Pg		**Pb**		**08 53 56.6**	**-1.1**
	36nm,0.3s								
KUU				Lg		Lg		08 54 28.1	
	784nm,0.5s								
KUU	**Kurty**	**2.30**	**12**	*e*P		**Pb**		**08 53 57.8**	**+0.1**
	34nm,0.2s								
KUU				*e*S		**Sg**		**08 54 28.2**	**-1.7**
	847nm,0.4s								
SFK	**Sufi-Kurgan**	**2.32**	**226**	*e*PN		**Pn**		**08 53 55.0**	**+0.5**
SFK	**Sufi-Kurgan**	**2.32**	**226**	⇑*e*P		**Pn**		**08 53 55.0**	**+0.5**
SFK				⇑*e*S		**Sn**		**08 54 24.4**	**+1.2**
OHH	**Osh**	**2.45**	**244**	*e*PN		**Pn**		**08 53 56.9**	**+0.6**
OHH	**Osh**	**2.45**	**244**	⇓*e*P		**Pn**		**08 53 56.9**	**+0.6**
OHH				⇓*e*S		**Sn**		**08 54 27.4**	**+1.1**
SATY	**Saty**	**2.47**	**54**	Pg		**Pb**		**08 53 59.3**	**-1.4**
	88nm,0.4s								
SATY				Lg		Lg		08 54 31.0	
	267nm,0.4s								
KSH2	**Kashi**	**2.50**	**182**	Pn		**Pb**		**08 54 00.2**	**-1.0**
KSH2				Sn		**Sg**		**08 54 36.4**	**0.0**
KSH2				smax		smax			
	comp=N,540nm,0.6s								
KSH2				smax		smax			
	comp=E,1μm,0.9s								
MNAS	**Manas**	**2.50**	**291**	*e*PN		**Pn**		**08 53 57.7**	**+0.7**
MNAS	**Manas**	**2.50**	**291**	⇓*e*P		**Pn**		**08 53 57.7**	**+0.7**
MNAS				⇓*e*S		**Sn**		**08 54 28.9**	**+1.2**
KURS	**Kuram**	**2.61**	**44**	Pg		**Pb**		**08 54 02.3**	**-0.7**
	comp=E,89nm,0.5s								
KURS				Lg		Lg		08 54 36.6	
	comp=E,219nm,0.4s								

ARK	**Arkit**	**2.78**	**274**	PN		**Pn**	**08 54 01.5**	**+0.7**
ARK	**Arkit**	**2.78**	**274**	*e*P		**Pn**	**08 54 01.5**	**+0.7**
ARK				⇓*e*S		**Sn**	**08 54 35.5**	**+1.0**
KPKS	**Kokpek**	**2.88**	**50**	Pg		**Pb**	**08 54 07.5**	**0.0**
	comp=E,0.1nm,0.1s							
KPKS				Lg		Lg	08 54 44.4	
	comp=E,318nm,0.5s							
KPKS	**Kokpek**	**2.88**	**50**	*e*P		**Pb**	**08 54 07.3**	**-0.3**
	comp=E,113nm,1.4s							
KPKS				*e*S		**Sb**	**08 54 44.4**	**+1.6**
	comp=E,318nm,0.5s							
UZB	**Uzynbulak**	**2.90**	**58**	Pg		**Pb**	**08 54 05.3**	**-2.7**
	comp=E,117nm,0.4s							
UZB				Lg		Lg	08 54 41.6	
	comp=E,435nm,0.6s							
UZB	**Uzynbulak**	**2.90**	**58**	*e*P		**Pb**	**08 54 05.3**	**-2.7**
	comp=E,117nm,0.4s							
UZB				*e*S		**Sb**	**08 54 41.6**	**-2.0**
	comp=E,435nm,0.6s							
ARXS	**Arharly**	**3.02**	**31**	Pg		**Pb**	**08 54 09.4**	**-0.6**
	comp=E,150nm,0.3s							
ARXS				Lg		Lg	08 54 49.2	
	comp=E,836nm,0.4s							
ARXS	**Arharly**	**3.02**	**31**	*e*P		**Pb**	**08 54 09.2**	**-0.7**
	comp=E,150nm,0.3s							
ARXS				*e*S		**Sb**	**08 54 48.9**	**+2.1**
	comp=E,906nm,0.4s							
SHLS	**Shalkode**	**3.19**	**60**	Pg		**Pg**	**08 54 17.4**	**+0.2**
	comp=E,77nm,0.3s							
SHLS				Lg		Lg	08 55 02.2	
	comp=E,412nm,0.6s							
SHLS	**Shalkode**	**3.19**	**60**	*e*P		**Pg**	**08 54 17.4**	**+0.2**
	comp=E,125nm,0.4s							
SHLS				*e*S		**Sg**	**08 55 02.2**	**+3.7**
	comp=E,412nm,0.6s							
PDGK	**Podgornoye**	**3.29**	**58**	⇓Pn		**Pn**	**08 54 10.1**	**+2.3**
	comp=E,59nm,0.6s							
PDGK				⇓Lg		Lg	08 54 57.9	
	comp=E,131nm,0.5s							
PDGK	**Podgornoye**	**3.29**	**58**	PN		**Pn**	**08 54 10.0**	**+2.3**
PDGK							08 54 52.9	
TRKS	**Terek-Say**	**3.40**	**270**	*e*PN		**Pn**	**08 54 10.0**	**+0.6**
TRKS				*e*S		**Sn**	**08 54 50.1**	**+0.3**
TRKS	**Terek-Say**	**3.40**	**270**	⇓*e*P		**Pn**	**08 54 10.0**	**+0.6**
TRKS				⇓*e*S		**Sn**	**08 54 50.1**	**+0.3**
DRK	**Karamyk**	**3.66**	**235**	*e*PN		**Pn**	**08 54 13.8**	**+0.8**
DRK	**Karamyk**	**3.66**	**235**	⇓*e*P		**Pn**	**08 54 13.8**	**+0.8**
DRK				⇓*e*S		**Sn**	**08 54 56.7**	**+0.3**
KNOS	**Konyrlen**	**3.74**	**42**	Pg		**Pb**	**08 54 22.7**	**+0.4**
	comp=E,13nm,0.3s							
KNOS				Lg		Lg	08 55 11.2	
	comp=E,155nm,0.4s							
KTMS	**Ketmen**	**3.90**	**61**	Pg		**Pb**	**08 54 24.9**	**-0.2**
	comp=E,4.1nm,0.2s							
KTMS				Lg		Lg	08 55 14.7	
	comp=E,84nm,0.5s							
TDK	**Taldyqorghan**	**3.90**	**30**	Pg		**Pb**	**08 54 24.6**	**-0.5**
	comp=E,80nm,0.4s							
TDK				Lg		Lg	08 55 15.0	
	comp=E,274nm,0.3s							
TDK	**Taldyqorghan**	**3.90**	**30**	*e*P		**Pb**	**08 54 24.6**	**-0.5**
	comp=E,80nm,0.4s							
TDK				*e*S		**Sb**	**08 55 15.0**	**+2.7**
	comp=E,274nm,0.3s							
BTK	**Batken**	**4.01**	**248**	*e*PN		**Pn**	**08 54 18.6**	**+0.9**
BTK				*e*S		**Sn**	**08 55 04.9**	**+0.2**
BTK	**Batken**	**4.01**	**248**	⇑*e*P		**Pn**	**08 54 18.6**	**+0.9**
BTK				⇑*e*S		**Sn**	**08 55 04.9**	**+0.2**
DJR	**Jarkent**	**4.04**	**47**	Pg		**Pb**	**08 54 27.8**	**+0.4**
	comp=E,8.1nm,0.4s							
DJR				Lg		Lg	08 55 18.5	
	comp=E,65nm,0.5s							
KK31	**Karatay Array**	**4.09**	**293**	⇑Pn		**Pn**	**08 54 20.8**	**+2.1**
	comp=E,1.0nm,0.2s,baz=130,slow=13,SNR=122							
KK31				⇑Pg		**Pb**	**08 54 29.9**	**+1.7**
	comp=E,17nm,0.3s,baz=106,slow=16,SNR=16							
KK31				⇑Lg		Lg	08 55 23.5	
	comp=E,53nm,0.5s,baz=106,slow=28,SNR=7.3							
KK31	**Karatay Array**	**4.09**	**293**	PN		**Pn**	**08 54 21.4**	**+2.7**
KK31				*e*			08 54 30.0	
KK31							08 55 23.6	
KAPS	**Kapalarasan**	**4.52**	**35**	Pg		**Pb**	**08 54 35.8**	**+0.3**
	comp=E,36nm,0.6s							
KAPS				Lg		Lg	08 55 34.2	
	comp=E,193nm,0.4s							
MAKZ	**Makanchi**	**6.87**	**39**	⇑Pn		**Pn**	**08 55 00.3**	**+3.4**
	comp=E,4.0nm,0.8s							
MAKZ				⇑Pg		Pg	08 55 22.2	-5.3
	comp=E,5.6nm,0.8s							
MAKZ				⇑Lg		Lg	08 56 53.7	
	comp=E,16nm,1.0s							
MK31	**Makanchi Array**	**7.00**	**40**	⇓Pn		**Pn**	**08 55 01.3**	**+2.6**
	comp=E,1.7nm,0.5s,baz=216,slow=15,SNR=46							
MK31				⇑Pg		Pb	08 55 22.9	+5.0
	comp=E,3.1nm,0.4s,baz=219,slow=16,SNR=5.2							
MK31				⇑Lg		Lg	08 56 59.1	
	comp=E,12nm,0.7s,baz=229,slow=27,SNR=2.8							
MK31	**Makanchi Array**	**7.00**	**40**	*e*PN		**Pn**	**08 55 01.0**	**+2.2**
MKAR	**Makanchi Array**	**7.00**	**40**	Pn		**Pn**	**08 55 01.4**	**+2.6**
	comp=E,1.0nm,0.3s,baz=220,slow=16,SNR=34							
MKAR				Pg		Pg	08 55 23.4	-6.8
	comp=E,1.6nm,0.3s,baz=226,slow=16,SNR=6.6							
MKAR				Sn		**Sn**	**08 56 18.5**	**+0.1**
	comp=E,0.9nm,0.3s,baz=232,slow=16,SNR=3.5							
MKAR				Lg		Lg	08 56 58.0	
	comp=E,2.1nm,0.3s,baz=225,slow=24,SNR=5.8							
	comp=E,2.0nm,0.3s							
WMQ	**Urumqi**	**9.11**	**72**	P		**Pn**	**08 55 31.9**	**+4.2**
KURBB	**Kurchatov Arra**	**9.20**	**11**	Pg		Pn	08 56 03.2	+35
	comp=E,0.2nm,0.3s,baz=198,slow=18,SNR=6.0							
KURBB				Lg		Lg	08 58 02.9	
	comp=E,0.2nm,0.3s,baz=202,slow=29,SNR=5.7							
KURBB	**Kurchatov Arra**	**9.20**	**11**	⇑Pn		**Pn**	**08 55 28.8**	**+0.1**
	comp=E,8.2nm,0.8s							
KURBB				⇓Lg		Lg	08 58 12.1	
	comp=E,75nm,0.8s							
KURBB	**Kurchatov Arra**	**9.20**	**11**	P		**Pn**	**08 55 24.8**	**-3.9**
KURK	**Kurchatov**	**9.30**	**12**	⇑Pn		**Pn**	**08 55 29.4**	**-0.7**
	comp=E,1.2nm,0.7s							
KURK				⇑Lg		Lg	08 58 14.5	
	comp=E,45nm,1.0s							
KURK	**Kurchatov**	**9.30**	**12**	⇓*i*P		**Pn**	**08 55 27.0**	**-3.1**
KURK				pmax		pmax		
	comp=E,6.0nm,1.0s							
DGZ	**Jazzator, Alta**	**11.50**	**42**	⇓*i*P		**Pn**	**08 55 57.7**	**-2.8**
BVA0	**Borovoye Array**	**11.93**	**344**	⇑Pn		**Pn**	**08 56 05.0**	**-1.1**
	comp=Z,1.0nm,0.6s							
BVA0				⇑Sn		**Sn**	**08 58 23.4**	**+4.1**
	comp=Z,1.9nm,0.7s							
BVA0				⇑Lg		Lg	08 59 35.8	
	comp=Z,38nm,1.4s							
BVA0	**Borovoye Array**	**11.93**	**344**	P		Pn	08 55 58.8	-7.4
BVA0							08 58 32.9	
BVAR	**Borovoye Array**	**11.93**	**344**	Pn		**Pn**	**08 56 02.9**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=145,slow=15,SNR=6.1							
BVAR				Lg		Lg	08 59 29.6	
	comp=Z,0.1nm,0.3s,baz=158,slow=26,SNR=5.0							
BVAR				LR		LR	09 00 13.2	
	comp=Z,98nm,21.4s,baz=292,slow=35							
	comp=Z,1.9nm,0.5s							
BORK	**Borovoye**	**11.96**	**344**	*e*P		**Pn**	**08 56 05.1**	**-1.5**
AB31	**Akbulak array**	**13.39**	**310**	P		**Pn**	**08 56 25.3**	**-0.8**
ZALV	**Zalesovo Beam**	**13.74**	**23**	Pn		**Pn**	**08 56 31.7**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=216,slow=14,SNR=5.1							
ZALV				Lg		Lg	09 00 32.6	
	comp=Z,0.4nm,0.3s,baz=228,slow=23,SNR=5.4							
	comp=Z,0.8nm,0.4s							
AKTO	**Aktyubinsk**	**15.05**	**312**	Pn		**Pn**	**08 56 48.2**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=105,slow=15,SNR=10.0							
ARTI	**Arti**	**18.52**	**329**	P		**Pn**	**08 57 32.5**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=153,slow=11,SNR=3.8							
	comp=Z,2.8nm,0.5s							
ARTI	**Arti**	**18.52**	**329**	P		**P**	**08 57 31.5**	**-1.0**
ARTI				S		**S**	**09 01 00.6**	**-3.0**
SONM	**Songino Array**	**22.59**	**64**	P		**P**	**08 58 18.1**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=267,slow=10.0,SNR=5.7							
	comp=Z,1.0nm,0.8s							
KBZ	**Khabaz**	**24.10**	**286**	*e*P		**P**	**08 58 34.1**	**+2.4**
KBZ				pmax		pmax		
	comp=Z,3.0nm,1.1s							
BRTR	**Keskin Array B**	**31.71**	**281**	P		**P**	**08 59 41.9**	**+1.8**
	comp=Z,1.1nm,0.9s,baz=88,slow=4.6,SNR=4.0							
	comp=Z,1.1nm,0.9s							
BRTR	**Keskin Array B**	**31.71**	**281**	*i* P		**P**	**08 59 42.4**	**+2.3**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
MBAR	**Mbarara**	**58.42**	**236**	LR		LR	09 29 21.9	
	comp=Z,119nm,18.1s,baz=16,slow=37							
YKA	**Yellowknife Ar**	**75.88**	**5**	P		**P**	**09 05 02.5**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=354,slow=6.3,SNR=5.0							
	comp=Z,0.2nm,0.7s							

*IDC **11** 09:02:01.1±1.8,35°.49S×103°.03W,h0km,mb3.6/4, mbtmp3.6/4,MS3.7/4,Error ellipse: s-maj=76.8km s-min=33.3km az=41.0*

ISC 11 09:02:02.1±1.6,35°.6S±0°.4×103°.2W±0°.4,h10km,n15, σ0s97/8,mb3.7/4,MS3.7/3,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**9.94**	**326**	LR	LR	09 07 10.2	
	comp=Z,219nm,18.7s,baz=134,slow=31						
PLCA	**Paso Flores**	**26.06**	**111**	P	**P**	**09 07 36.2**	**+0.5**
	0.8nm,0.8s,baz=230,slow=7.6,SNR=3.0						
	0.8nm,0.6s						
ATAH	**Atahualpa**	**36.30**	**45**	LR	LR	09 20 00.9	
	comp=Z,132nm,21.4s,baz=237,slow=30						
URZ	**Urewera**	**61.85**	**241**	LR	LR	09 31 34.7	
	comp=Z,59nm,21.8s,baz=348,slow=29						
MDP	**Montagnes des**	**62.29**	**60**	LR	LR	09 36 40.1	
	comp=Z,68nm,18.6s,baz=344,slow=34						
TXAR	**Lajitas Array**	**64.58**	**360**	P	**P**	**09 12 38.6**	**-0.9**
	0.3nm,0.6s,baz=183,slow=7.3,SNR=3.8						
	0.3nm,0.6s						
H01W1	**Cape Leeuwin H**	**101.70**	**211**	T	T	11 09 28.9	
	baz=147,slow=76,SNR=6.0						
H01W2	**Cape Leeuwin H**	**101.71**	**211**	T	T	11 09 30.9	
	baz=147,slow=76,SNR=5.3						
H01W3	**Cape Leeuwin H**	**101.72**	**211**	T	T	11 09 30.1	
	baz=147,slow=76,SNR=5.5						
NRIK	**Norilʹsk**	**145.68**	**353**	PKPbc	**PKPdf**	**09 21 38.9**	**-0.8**
	0.9nm,0.5s,baz=3.2,slow=4.7,SNR=4.2						
BRTR	**Keskin Array B**	**145.80**	**70**	PKPbc	**PKPdf**	**09 21 40.1**	**-0.8**
	1.1nm,1.0s,baz=253,slow=1.3,SNR=3.7						
HILR	**Hailar Array B**	**145.93**	**308**	PKPbc	**PKPbc**	**09 21 41.5**	**+0.1**
	1.6nm,0.4s,baz=99,slow=7.7,SNR=4.6						
SONM	**Songino Array**	**154.93**	**308**	PKPab	**PKPab**	**09 22 19.3**	**+0.3**
	0.5nm,0.7s,baz=63,slow=1.6,SNR=3.8						

IDC 11 09:19:35.8±2.4,2°.68N×126°.59E,h0km,mb3.5/3, mbtmp3.6/3,MS3.9/1,Error ellipse: s-maj=208.1km s-min=28.0km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.73**	**162**	P	P	09 24 49.7	-0.1
	1.5nm,0.5s,baz=341,slow=11,SNR=8.5						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**27.13**	**165**	P	P	09 25 21.1	+0.2
	0.2nm,0.3s,baz=338,slow=10.0,SNR=7.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**58.34**	**326**	P	P	09 29 32.6	-0.2
	0.3nm,0.6s,baz=121,slow=5.1,SNR=1.2						
MKAR				LR	LR	09 57 27.1	
	comp=Z,100nm,18.3s,baz=252,slow=39						
	0.3nm,0.6s						

*NNC **11** 09:21:01.6±2.9,36°.82N×71°.01E,h149km±56km,mb2.9, mpv3.7,Error ellipse: s-maj=27.6km s-min=18.7km az=35.0*

ISC 11 09:20:59.6±3.5,36°.7N±0°.2×71°.1E±0°.1,h150km,n10, σ0s63/13,4C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.11**	**24**	P	**Pn**	**09 22 28.2**	**+0.1**
	SNR=77						
EKS2	**Erkin-Say**	**6.30**	**18**	P	**Pn**	**09 22 30.6**	**+0.3**
	SNR=8.2						
KK31	**Karatay Array**	**6.41**	**356**	⇑P	**Pn**	**09 22 32.6**	**+0.9**
	2.1nm,0.4s,baz=177,slow=13,SNR=4.7						
KK31				⇓S	**Sn**	**09 23 43.2**	**-0.7**
	10nm,0.3s,baz=184,slow=18,SNR=24						
AAK	**Ala-Archa**	**6.47**	**23**	P	**Pn**	**09 22 32.9**	**+0.2**
	SNR=25						
AAK	**Ala-Archa**	**6.47**	**23**	⇑P	**Pn**	**09 22 33.2**	**+0.5**
	2.9nm,0.4s						
AAK				⇓S	**Sn**	**09 23 46.5**	**+0.8**
	11nm,0.8s						
ULHL	**Ulahol**	**6.81**	**34**	P	**Pn**	**09 22 36.7**	**-0.4**
	SNR=7.2						
CHMS	**Chumysh**	**6.88**	**23**	P	**Pn**	**09 22 38.7**	**+0.7**
	SNR=5.5						
USP	**Ospenovka**	**7.05**	**21**	P	**Pn**	**09 22 39.8**	**-0.4**
	SNR=7.2						
TKM2	**Tokmak 2**	**7.10**	**28**	P	**Pn**	**09 22 40.7**	**-0.4**
	SNR=39						
AB31	**Akbulak array**	**14.96**	**331**	⇑P	**Pn**	**09 24 23.3**	**0.0**
	0.6nm,0.5s,baz=146,slow=11,SNR=14						
AB31				⇑S	**Sn**	**09 27 08.6**	**-0.7**
	0.6nm,0.6s						

*IDC **11** 09:53:57.1±5.3,18°.27S×178°.04W,h518km±62km,mb3.1/9, mbtmp3.9/9,Error ellipse: s-maj=28.6km s-min=22.0km az=166.0*

ISC 11 09:54:00.2±0.9,18°.3S±0°.2×178°.1W±0°.2,h557km,n11, σ0s71/13,mb3.5/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**20.27**	**191**	P	**P**	**09 57 57.1**	**-1.1**
	4.1nm,0.6s,baz=292,slow=16,SNR=7.6						
	4.1nm,0.6s						
WRA	**Warramunga Arr**	**44.81**	**260**	P	**P**	**10 01 25.8**	**+0.4**
	0.9nm,0.5s,baz=97,slow=6.9,SNR=22						
WRA				PcP	**PcP**	**10 02 55.4**	**+0.2**
	0.4nm,0.9s,baz=92,slow=3.2,SNR=1.9						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**44.92**	**255**	P	**P**	**10 01 27.1**	**+0.9**
	3.2nm,0.6s,baz=88,slow=8.8,SNR=69						
ASAR				PcP	**PcP**	**10 02 56.0**	**+0.4**
	0.3nm,0.5s,baz=103,slow=4.1,SNR=6.1						
	3.2nm,0.6s						
MJAR	**Matsushiro Arr**	**68.41**	**323**	P	**P**	**10 04 06.0**	**-0.9**
	1.0nm,0.6s,baz=159,slow=6.5,SNR=6.0						
	1.0nm,0.6s						
PETK	**Petropavlovsk-**	**74.16**	**345**	P	**P**	**10 04 40.0**	**-0.1**
	3.5nm,0.9s,baz=152,slow=5.2,SNR=1.4						
	3.5nm,0.9s						
NVAR	**Mina Array Bea**	**79.56**	**44**	P	**P**	**10 05 10.7**	**+0.6**
	0.4nm,0.6s,baz=228,slow=11,SNR=3.8						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**86.01**	**57**	P	**P**	**10 05 43.1**	**+0.6**
	0.3nm,0.7s,baz=237,slow=4.0,SNR=3.1						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**86.25**	**13**	P	**P**	**10 05 41.8**	**-1.0**
	0.4nm,0.4s,baz=221,slow=4.7,SNR=10						
	0.4nm,0.4s						
PDAR	**Pinedale Array**	**87.49**	**43**	P	**P**	**10 05 49.8**	**+0.5**
	0.1nm,0.6s,baz=237,slow=4.7,SNR=1.8						
	0.1nm,0.6s						
MMAI	**Mount Meron Ar**	**146.59**	**303**	PKPbc	**PKPbc**	**10 12 40.6**	**+0.3**
	0.6nm,0.3s,baz=117,slow=2.5,SNR=1.6						
GERES	**GERESS Array B**	**148.10**	**345**	PKPbc	**PKPbc**	**10 12 43.7**	**0.0**
	0.7nm,0.5s,baz=38,slow=2.8,SNR=2.3						

*NOU **11** 10:21:45.2,22°.81S×174°.36W,h18km,mb5.4/75,Tonga Islands Region*

*IDC **11** 10:21:45.4±0.4,22°.52S×175°.11W,h0km,mb5.1/28, mbtmp5.1/30,ML4.6/1,MS4.7/12,Error ellipse: s-maj=16.1km s-min=13.2km az=152.0*

*NEIC **11** 10:21:46.1,22°.50S×174°.72W,h26km*

*NEIC **11** 10:21:46.1,21°.90S×174°.51W,h26km,Moment Tensor Solution. Duration: 1s7 Moment tensor: Scale 10¹⁶Nm; Mrr5.23; Mθθ-1.45; Mϕϕ-3.79; Mrθ-4.35; Mθϕ-1.42; Mϕr-1.83; Fault plane solution: M₀6.80000×10¹⁶ NP1: ϕs14.38000°, δ27.65000°, λ56.70000°. NP2:ϕs230.95000°, δ67.18000°, λ106.05000°. Principal axes: T 7.4733, Plg64.0000°, Azm168.0000°; N -1.6606, Plg15.0000°, Azm45.0000°; P -5.8127, Plg21.0000°, Azm309.0000°;*

*NEIC **11** 10:21:46.1±2.5,22°.51S±0°.08×174°.7W±0°.1,h10km±1km, mb5.3/404,Mww5.2/10 Error ellipse: s-maj=19.5km s-min=12.2km az=117.0*

*MOS **11** 10:21:48.0±1.0,22°.58S×175°.30W,h21km,mb5.5/28, Error ellipse: s-maj=11.1km s-min=10.0km az=123.8*

*BJI **11** 10:21:48.6,22°.80S×174°.20W,h58km,mB5.7/26, mb5.5/57,Ms5.6/21,Ms7 5.4/22*

*GCMT **11** 10:21:50.1±0.2,22°.74S±0°.02×174°.43W±0°.01,h21km, MW5.2/117,Moment Tensor Solution. s65,c82; s117,c172; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr6.56±.25; Mθθ-2.78±.16; Mϕϕ-3.78±.15; Mrθ1.87±.29; Mθϕ-2.62±.09; Mrϕ3.22±.26; Best double couple: M₀7.27600×10¹⁶ NP1:ϕs223.00000°,δ30.00000°, λ97.00000°. NP2:ϕs35.00000°,δ60.00000°,λ86.00000°. Principal axes: T 7.6010, Plg74.0000°, Azm294.0000°; N -0.6510, Plg4.0000°, Azm37.0000°; P -6.9500, Plg15.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 10:21:45.6±0.3,22°.65S±0°.04×174°.73W±0°.05,h10km, h9km:pP-P,n889,σ1s65/713,mb5.3/307,MS5.1/27, 36C-34D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.72**	**53**	P	**Pn**	**10 23 05.9**	**-4.8**
	comp=Z,2μm,0.9s,comp=Z,5738μm						
NIUE	**Niue**	**5.72**	**53**		**Pn**	**10 23 06.2**	**-4.4**
NIUE	**Niue**	**5.72**	**53**	P	**Pn**	**10 23 06.2**	**-4.4**
	comp=Z,2μm,0.9s						
NIUE	**Niue**	**5.72**	**53**	P	**Pn**	**10 23 05.9**	**-4.8**
NIUE				S	Sn	10 24 03.8	-13
LKBA	**Tubou, Lakemba**	**5.83**	**318**	P	Pn	10 23 16.1	+4.0
	comp=Z,14nm,1.6s						
RAO	**Raoul Island**	**7.18**	**203**	Pn	**Pn**	**10 23 28.7**	**-2.0**
	comp=Z,184nm,0.3s,baz=322,slow=22,SNR=4.1						
RAO				Sn	**Sn**	**10 24 47.2**	**-5.0**
	comp=Z,242nm,0.3s,baz=234,slow=21,SNR=6.7						
RAO	**Raoul Island**	**7.18**	**203**		**Pn**	**10 23 30.5**	**-0.1**
RAO	**Raoul Island**	**7.18**	**203**	P	**Pn**	**10 23 29.5**	**-1.1**
	comp=Z,1μm,0.8s						
RAO	**Raoul Island**	**7.18**	**203**	S	**Sn**	**10 24 49.9**	**-2.4**
	comp=Z,1μm,0.8s						
RAO	**Raoul Island**	**7.18**	**203**	P	**Pn**	**10 23 30.5**	**-0.1**
GLKZ	**Green Lake**	**7.19**	**203**	P	**Pn**	**10 23 31.8**	**+1.0**
GLKZ				S	**Sn**	**10 24 50.3**	**-2.2**
TAVE	**Taveuni**	**7.66**	**320**	P	**Pn**	**10 23 40.5**	**+3.2**
	comp=Z,332nm,1.8s						
DGTI	**Dogotuki**	**8.19**	**319**	P	**Pn**	**10 23 47.3**	**+2.7**
	comp=Z,488nm,1.3s						
MSVF	**Nonsavu**	**8.36**	**304**		**Pn**	**10 23 50.0**	**+3.0**
MSVF	**Nonsavu**	**8.36**	**304**	P	Pn	10 23 51.3	+4.3
	comp=Z,520nm,1.1s						
MSVF	**Nonsavu**	**8.36**	**304**	⇓*i*P	**Pn**	**10 23 49.7**	**+2.7**
MSVF				pmax	pmax		
	comp=Z,103nm,0.8s						
AFI	**Afiamalu**	**9.13**	**18**		**Pn**	**10 23 53.9**	**-3.6**
AFI	**Afiamalu**	**9.13**	**18**	P	**Pn**	**10 23 54.9**	**-2.6**
AFI	**Afiamalu**	**9.13**	**18**	P	**Pn**	**10 23 53.9**	**-3.6**
AFI	**Afiamalu**	**9.13**	**18**	P	**Pn**	**10 23 53.5**	**-4.0**
RAR	**Rarotonga**	**13.95**	**87**	Pn	**Pn**	**10 24 59.3**	**-4.1**
	comp=Z,17nm,0.3s,baz=238,slow=4.9,SNR=22						
RAR				Sn	Sn	10 27 22.2	-16
	comp=Z,3.0nm,0.3s,baz=217,slow=19,SNR=2.0						
RAR				LR	LR	10 31 10.0	
	comp=Z,2μm,18.7s,baz=266,slow=40						
RAR	**Rarotonga**	**13.95**	**87**		Pn	10 24 58.3	-5.1
RAR	**Rarotonga**	**13.95**	**87**	P	Pn	10 24 59.0	-4.4
	comp=Z,159nm,1.0s						
RAR	**Rarotonga**	**13.95**	**87**	S	Sn	10 27 28.6	-10
	comp=Z,159nm,1.0s						
RAR	**Rarotonga**	**13.95**	**87**	P	Pn	10 24 58.3	-5.1
RAR	**Rarotonga**	**13.95**	**87**	P	Pn	10 24 57.2	-6.2
RAR				S	Sn	10 27 20.5	-18
OUZ	**Omahuta**	**16.15**	**217**	P	**Pn**	**10 25 34.9**	**+2.2**
WCZ	**Waipu Caves**	**16.30**	**213**	P	**Pn**	**10 25 37.3**	**+2.7**
PINNC	**Pines Island,**	**16.46**	**267**		**Pn**	**10 25 34.5**	**-2.3**
DVP	**Devils Point**	**16.77**	**284**	P	**P**	**10 25 43.9**	**+1.0**
	comp=Z,3μm,0.8s						
OUENC	**Ouen Island, N**	**17.03**	**267**	P	**P**	**10 25 46.4**	**+0.6**
	comp=Z,147nm,1.1s						
URZ	**Urewera**	**17.07**	**202**	P	**Pn**	**10 25 45.3**	**+1.0**
	comp=Z,2.1nm,0.3s,baz=19,slow=7.5,SNR=4.1						
URZ				S	Sn	10 28 38.9	-15
	comp=Z,8.6nm,0.6s,baz=116,slow=22,SNR=6.7						
	comp=Z,7.4nm,0.4s						
TOZ	**Tahuroa Road**	**17.23**	**207**		**P**	**10 25 50.3**	**+2.5**
DZM	**Mont Dzumac**	**17.43**	**268**	P	**Pn**	**10 25 44.8**	**-4.2**
	comp=Z,14nm,0.9s,baz=360,slow=15						
DZM	**Mont Dzumac**	**17.43**	**268**		**P**	**10 25 53.6**	**+3.3**
DZM	**Mont Dzumac**	**17.43**	**268**	P	**P**	**10 25 52.2**	**+1.9**
	comp=Z,147nm,1.0s						
RTZ	**Ruatahuna**	**17.43**	**202**	P	**P**	**10 25 51.9**	**+1.7**
TSZ	**Takapari Road**	**19.07**	**202**	P	**P**	**10 26 08.9**	**+0.7**
TSZ				S	Sn	10 29 22.2	-21
BFZ	**Birch Farm**	**19.53**	**201**	P	**P**	**10 26 11.8**	**-1.4**
	comp=Z,102nm,1.0s						
BFZ	**Birch Farm**	**19.53**	**201**	S	**S**	**10 29 50.6**	**-3.3**
	comp=Z,102nm,1.0s						
BFZ	**Birch Farm**	**19.53**	**201**	P	**P**	**10 26

AULRC Lightning Ridg 34.08 251 P P 10 28 31.5 +1.1
comp=Z,95nm,0.9s
MILA Mila 34.24 237 P P 10 28 33.1 +1.3
comp=Z,24nm,1.0s
MILA Mila 34.24 237 P P 10 28 31.7 -0.1
YNG Young 34.26 242 P P 10 28 31.7 -0.3
comp=Z,27nm,2.2s
CMSA Cobar Meteorol 36.18 247 P P 10 28 47.2 -1.2
comp=Z,80nm,0.9s
CMSA Cobar Meteorol 36.18 247 P P 10 28 48.4 -0.1
comp=Z,80nm,0.9s
CTA Charters Tower 36.36 267 P P 10 28 48.5 -1.7
comp=Z,14nm,0.6s,baz=97,slow=9.2,SNR=38
comp=Z,14nm,0.6s
CTA Charters Tower 36.36 267 P P 10 28 49.8 -0.4
comp=Z,0.7nm,0.7s
CTAO Charters Tower 36.36 267 P P 10 28 48.9 -1.3
CTAO Charters Tower 36.36 267 P P 10 28 49.3 -0.9
comp=Z,8.4nm,0.7s
CTAO Charters Tower 36.36 267 P P 10 28 48.9 -1.3
CTAO pmax pmax
comp=Z,23nm,0.9s
TOO Toolangi 37.20 237 P P 10 28 56.8 -0.3
comp=Z,15nm,1.0s
TOO Toolangi 37.20 237 P P 10 28 56.7 -0.5
TOO Toolangi 37.20 237 P P 10 28 56.7 -0.5
TOO pmax pmax
comp=Z,13nm,1.0s
MOO Moorlands 37.28 229 P P 10 28 58.3 +0.6
TAU Tasmania Unive 37.36 228 P P 10 28 58.8 +0.5
TAU lAmb lAmb 10 29 24.7
comp=Z,71nm,1.5s
TAU Tasmania Unive 37.36 228 P P 10 28 58.8 +0.5
TAU pmax pmax
comp=Z,71nm,1.5s
QLP Quilpie 37.41 255 P P 10 28 57.3 -1.7
comp=Z,29nm,0.8s
QLP Quilpie 37.41 255 P P 10 29 00.2 +1.2
comp=Z,48nm,1.2s
AUBRN Burnie High Sc 37.78 232 P P 10 29 02.0 0.0
comp=Z,32nm,0.4s
BRAT Ballarat 38.41 238 P P 10 29 07.7 +0.4
comp=Z,50nm,1.0s
MTSU Mount Surprise 38.57 269 P P 10 29 06.1 -2.8
comp=Z,12nm,0.9s
MTSU Mount Surprise 38.57 269 P P 10 29 10.0 +1.1
comp=Z,12nm,0.9s
PMG Port Moresby 38.80 284 P P 10 29 09.1 -1.7
comp=Z,92nm,1.0s,baz=123,slow=2.6,SNR=16
comp=Z,92nm,1.0s
PMG Port Moresby 38.80 284 P 10 29 09.3 -1.5
PMG lAmb lAmb 10 29 11.8
comp=Z,87nm,0.9s
PMG Port Moresby 38.80 284 P P 10 29 10.1 -0.7
comp=Z,92nm,1.0s
PMG Port Moresby 38.80 284 ⇓*iP* P 10 29 08.5 -2.3
PMG pmax pmax
comp=Z,74nm,0.9s
PMG Port Moresby 38.80 284 P P 10 29 09.6 -1.2
comp=Z,92nm,1.0s
PMG pP **pwP** 10 29 25.6 +6.5
comp=Z,92nm,1.0s
STKA Stephens Creek 39.68 247 P P 10 29 17.1 -1.0
comp=Z,93nm,1.0s
STKA Stephens Creek 39.68 247 P P 10 29 16.4 -1.6
comp=Z,12nm,0.7s,baz=91,slow=9.1,SNR=13
STKA LR LR 10 45 04.0
comp=Z,2µm,18.0s,baz=70,slow=36
comp=Z,12nm,0.7s
STKA Stephens Creek 39.68 247 P 10 29 16.8 -1.2
STKA lAmb lAmb 10 29 18.6
comp=Z,56nm,0.8s
STKA Stephens Creek 39.68 247 P P 10 29 18.2 +0.1
comp=Z,4.6nm,1.0s
STKA Stephens Creek 39.68 247 ⇓*iP* P 10 29 16.9 -1.2
ARPS Mount Arapiles 39.93 239 P P 10 29 20.5 +0.4
comp=Z,31nm,1.1s
INKA Innaminka 40.45 253 P P 10 29 23.6 -0.8
COEN Coen 40.78 275 P P 10 29 26.6 -0.7
comp=Z,40nm,1.1s
COEN Coen 40.78 275 P P 10 29 26.1 -1.2
COEN Coen 40.78 275 P P 10 29 26.9 -0.4
comp=Z,39nm,1.1s
AUMBR Murray Bridge 41.80 242 P P 10 29 36.5 +1.0
comp=Z,86nm,1.0s
HTT Hallett 42.00 245 P P 10 29 36.0 -1.2
comp=Z,28nm,0.9s
HTT Hallett 42.00 245 P P 10 29 37.0 -0.3
comp=Z,70nm,0.9s
AUJCS Jamestown Cent 42.25 245 P P 10 29 39.7 +0.4
comp=Z,33nm,1.0s
QIS Mount Isa 42.39 264 P P 10 29 37.6 -3.0
comp=Z,14nm,1.6s
QIS Mount Isa 42.39 264 P P 10 29 39.2 -1.3
comp=Z,14nm,1.6s
BBOO Buckleboo 44.39 246 P P 10 29 55.9 -0.6
comp=Z,38nm,2.0s
BBOO Buckleboo 44.39 246 P P 10 29 54.7 -1.8
BBOO lAmb lAmb 10 29 56.4
comp=Z,34nm,1.0s
BBOO Buckleboo 44.39 246 P P 10 29 57.0 +0.5
comp=Z,38nm,2.0s
AS31 Alice Springs 47.03 258 P 10 30 15.7 -1.9
ASAR Alice Springs 47.03 258 P P 10 30 15.6 -2.0
comp=Z,42nm,0.9s,baz=91,slow=8.3,SNR=213
ASAR PcP **PcP** 10 31 49.5 -0.3
comp=Z,6.5nm,0.9s,baz=109,slow=3.7,SNR=2.1
ASAR S **S** 10 37 01.7 -8.0
comp=Z,1.4nm,0.9s,baz=105,slow=14,SNR=6.9
comp=Z,42nm,0.9s
ASAR Alice Springs 47.03 258 P 10 30 15.4 -2.2
AUALC St Philip's Co 47.05 258 P P 10 30 16.2 -1.5
comp=Z,41nm,1.1s
WR8 Warramunga Arr 47.20 263 P 10 30 16.5 -2.5
WB0 Warramunga Arr 47.34 264 P 10 30 17.6 -2.4
WB0 lAmb lAmb 10 30 18.4
comp=Z,24nm,0.8s
WB1 Warramunga Ar. 47.34 263 P P 10 30 20.8 +0.8
comp=Z,43nm,0.8s
WRAB Tennant Creek 47.34 263 P P 10 30 17.9 -2.2
WRAB lAmb lAmb 10 30 18.4
comp=Z,22nm,0.8s
WRAB Tennant Creek 47.34 263 ⇓*iP* P 10 30 17.5 -2.5
WRAB pmax pmax
comp=Z,22nm,0.9s
WRA Warramunga Arr 47.35 263 P P 10 30 17.8 -2.3
comp=Z,18nm,0.8s,baz=102,slow=8.1,SNR=121
WRA PcP **PcP** 10 31 51.2 +0.2
comp=Z,7.9nm,1.0s,baz=95,slow=4.2,SNR=4.9
WRA S S 10 37 02.0 -12
comp=Z,0.3nm,0.8s,baz=92,slow=14,SNR=1.2
comp=Z,18nm,0.8s
WRA Warramunga Arr 47.35 263 P P 10 30 17.4 -2.7
JAY Jayapura 47.61 288 P P 10 30 18.9 -3.2
comp=Z,47nm,0.9s,baz=70,slow=1.7,SNR=7.0
comp=Z,47nm,0.9s
JAY Jayapura 47.61 288 P P 10 30 20.8 -1.4
comp=Z,52nm,1.1s
JAY pP **pwP** 10 30 32.3 +1.9
comp=Z,52nm,1.1s
GENI Genyem 48.04 288 P P 10 30 24.2 -1.3
comp=Z,37nm,0.5s
FORT Forrest 51.28 248 P P 10 30 47.8 -2.2
comp=Z,24nm,1.2s
WRKA Warakurna 51.84 255 P P 10 30 52.6 -1.8
comp=Z,33nm,0.9s
MTN Manton Dam 52.24 271 P P 10 30 50.9 -6.4
comp=Z,40nm,1.3s
GUMO Guam 53.51 308 S S 10 38 40.2 +0.4
KNRA Kununurra 53.57 267 P P 10 31 05.8 -1.4
comp=Z,58nm,1.1s
KNRA Kununurra 53.57 267 lAmb lAmb 10 31 09.9
comp=Z,48nm,1.1s
FITZ Fitzroy Crossi 55.78 263 P P 10 31 20.9 -2.3
comp=Z,17nm,1.0s,baz=66,slow=9.9,SNR=8.6
comp=Z,17nm,1.0s
VNDA Vanda 56.08 186 P P 10 31 27.5 +3.0
comp=Z,4.4nm,0.9s,baz=3.6,slow=8.2,SNR=4.8
VNDA LR LR 10 50 58.8
comp=Z,184nm,20.8s,baz=16,slow=31
comp=Z,4.4nm,0.9s
VNDA Vanda 56.08 186 P P 10 31 26.3 +1.9
SIJI Sorong 56.73 285 P P 10 31 28.1 -1.9
comp=Z,60nm,1.0s,baz=100,slow=4.3,SNR=13
comp=Z,60nm,1.0s
SIJI Sorong 56.73 285 P P 10 31 28.5 -1.5
comp=Z,801nmcomp=Z,57nm,1.2s
SWI Sorong 56.74 285 P P 10 31 28.7 -1.4
comp=Z,76nm,1.1s
KRAI Karang Ratu 58.27 281 P P 10 31 39.4 -1.5
comp=Z,34nm,0.9s
RPN Rapa Nui 58.90 109 LR LR 10 53 12.5
comp=Z,1µm,18.2s,baz=234,slow=32
SOEI Soe 59.61 272 P P 10 31 50.2 -0.2
SOEI Soe 59.61 272 P P 10 31 51.4 +1.0
comp=Z,140nm,1.0s
SOEI Soe 59.61 272 P P 10 31 50.4 0.0
KLBR Kellerberrin 59.93 246 P P 10 31 52.8 +0.6
comp=Z,63nm,0.8s
BATI Baumata 60.02 271 P P 10 31 52.6 -0.4
comp=Z,33nm,0.6s,baz=244,slow=3.2,SNR=4.3
comp=Z,33nm,0.6s
BATI Baumata 60.02 271 P P 10 31 52.4 -0.6
MEEK Meekatharra 60.11 251 P P 10 31 54.1 +0.5
comp=Z,17nm,0.9s
PSA00 Pilbara Seismi 60.16 257 P P 10 31 52.1 -1.8
PSA00 lAmb lAmb 10 32 19.9
comp=Z,34nm,1.4s
PSA00 Pilbara Seismi 60.16 257 P P 10 31 52.2 -1.7
PSA00 lAmb lAmb 10 31 52.5
comp=Z,13nm,1.2s
MBWA Marble Bar 60.37 258 P P 10 31 53.8 -1.5
MBWA lAmb lAmb 10 32 20.7
comp=Z,17nm,0.9s
SANI Sanana 60.98 281 P P 10 32 00.7 +1.1
comp=Z,37nm,1.0s
SANI Sanana 60.98 281 P P 10 31 58.1 -1.5
comp=Z,37nm,1.0s
MORW Morawa 61.85 248 P P 10 32 04.4 -1.0
MORW lAmb lAmb 10 32 21.9
comp=Z,32nm,1.2s
MORW Morawa 61.85 248 P P 10 32 05.6 +0.3
comp=Z,22nm,0.8s
EDFI Ende, Flores 62.35 272 P P 10 32 07.2 -1.7
comp=Z,43nm,1.0s
CASY Casey 63.35 206 P P 10 32 14.6 -0.1
LUWI Luwuk 64.32 280 P P 10 32 22.8 +0.9
comp=Z,46nm,1.1s
LUWI Luwuk 64.32 280 P P 10 32 21.1 -0.8
comp=Z,1µmcomp=Z,46nm,1.1s
APSI Ampana 65.39 280 P P 10 32 28.2 -0.7
comp=Z,1µmcomp=Z,36nm,0.9s
KAPI Kappang 65.51 275 LR LR 11 00 52.8
comp=Z,338nm,19.9s,baz=86,slow=36
DBNI Kabupaten Domp 65.55 271 P P 10 32 28.5 -1.5
comp=Z,22nm,0.8s
SPSI Sidrap Palu 65.89 276 P P 10 32 30.5 -1.6
comp=Z,15nm,0.8s
PLAI Plampang 65.93 270 P P 10 32 30.8 -1.6
comp=Z,50nm,1.0s
TWSI Taliwang, Sumb 66.79 270 P P 10 32 37.1 -0.8
comp=Z,56nm,1.2s
TOLI2 Tolitoli 67.02 281 P P 10 32 36.0 -3.4
TOLI2 Tolitoli 67.02 281 P P 10 32 40.4 +1.0
comp=Z,42nm,1.1s
QSPA South Pole Qui 67.44 180 P P 10 32 43.8 +2.5
comp=Z,23nm,1.1s,baz=43,slow=3.8,SNR=12
QSPA LR LR 11 00 29.7
comp=Z,406nm,18.6s,baz=42,slow=34
comp=Z,23nm,1.1s
QSPA South Pole Qui 67.44 180 P 10 32 43.8 +2.5
QSPA lAmb lAmb 10 32 46.7
comp=Z,34nm,1.1s
MPSI Mapaga 67.50 280 P P 10 32 41.4 -1.0
comp=Z,852nmcomp=Z,37nm,1.1s
SNJI Sawahan-Nganju 71.86 269 P P 10 33 08.9 -0.6
comp=Z,61nm,1.1s
SJI Sawahan 71.88 269 P P 10 33 09.0 -0.5
comp=Z,6µmcomp=Z,41nm,0.9s
JGF Kuroka 73.58 321 lAmb lAmb 10 34 17.9
comp=Z,57nm,1.6s
JGF Kuroka 73.58 321 P P 10 33 19.8 +0.7
comp=Z,28nm,1.1s
MJAR Mahiro Arr 73.75 322 P P 10 33 19.5 -0.5
comp=Z,7.4nm,0.7s,baz=154,slow=5.9,SNR=22
comp=Z,7.4nm,0.7s
MJAR Matsushiro Arr 73.75 322 P P 10 33 19.9 -0.1
MJAR Matsushiro Arr 73.75 322 P P 10 33 19.9 -0.1
MJAR pmax pmax
comp=Z,24nm,1.6s
MAJO Matsushiro 73.75 322 P P 10 33 20.3 +0.3
MAJO Matsushiro 73.75 322 P P 10 33 20.5 +0.5
comp=Z,24nm,0.9s
MAJO Matsushiro 73.75 322 ⇑*iP* P 10 33 18.5 -1.5
MAJO pmax pmax
comp=Z,8.0nm,0.9s
MJB9 Matsu-Tunnel 73.76 322 P P 10 33 21.0 +0.9
JOW Kunigami 73.88 309 P P 10 33 20.3 -0.7
comp=Z,19nm,1.0s,baz=252,slow=1.7,SNR=3.8
comp=Z,19nm,1.0s
JOW Kunigami 73.88 309 P P 10 33 20.5 -0.5
JOW lAmb lAmb 10 33 21.6
comp=Z,24nm,1.0s
JSU Suzuma 75.19 314 P 10 33 28.0 -0.6
NIKH Nikolski High 75.47 4 P P 10 33 30.0 +0.4
baz=186
LEM Lembang 76.04 268 P P 10 33 33.4 -0.6
comp=Z,59nm,0.9s,baz=142,slow=5.0,SNR=7.7
comp=Z,59nm,0.9s
UNV Unalaska Valle 76.50 5 P P 10 33 36.4 +1.0
baz=188
JKA Kamikawa-asahi 77.08 330 P P 10 33 39.6 +0.7
ASAJ Asahikawa 77.08 330 P P 10 33 39.6 +0.7
ASAJ pmax pmax
comp=Z,93nm,1.1s
NACB Ninganchiao 77.39 303 P P 10 33 40.3 -0.9
NACB lAmb lAmb 10 33 41.0
comp=Z,40nm,1.1s
TPI Tanjungpandan 77.52 272 P P 10 33 43.0 +0.8
SAO San Andreas Ge 77.56 41 P P 10 33 41.6 -0.2
SAO lAmb lAmb 10 33 45.7
comp=Z,34nm,1.4s
SAO San Andreas Ge 77.56 41 P P 10 33 41.6 -0.2
SAO pmax pmax
comp=Z,34nm,1.4s
SSLB Suanglung 77.69 302 P P 10 33 41.4 -1.5
SSLB lAmb lAmb 10 36 31.4
comp=Z,54nm,1.6s
SSLB Suanglung 77.69 302 P P 10 33 43.9 +1.0
comp=Z,19nm,0.9s
TPUB Ta-pu 77.69 302 P P 10 33 41.5 -1.4
TPUB Ta-pu 77.69 302 P P 10 33 42.3 -0.6
comp=Z,80nm,0.9s
YHNB Yeheng 77.83 303 P P 10 33 42.3 -1.4
YHNB Yeheng 77.83 303 P P 10 33 43.4 -0.3
comp=Z,26nm,1.0s
PMSA Palmer Station 78.11 156 LR LR 11 07 08.3
comp=Z,233nm,18.4s,baz=294,slow=35
CHNA Chernabura Isl 78.25 9 P P 10 33 46.1 +1.0
baz=194
MNRC McLaughlin Min 78.36 39 lAmb lAmb 10 33 52.2
comp=Z,36nm,1.0s
TPO Tropico Hills 78.39 44 lAmb lAmb 10 34 08.7
comp=Z,30nm,1.3s
VES Vestal, Richgr 78.44 43 lAmb lAmb 10 33 50.2
comp=Z,40nm,1.2s
SDPT Sand Point 78.63 8 P P 10 33 48.1 +0.9
baz=193
SUTB Sutter Butte 78.97 39 lAmb lAmb 10 34 04.1
comp=Z,78nm,1.9s
O02D Mt. Diablo Mer 79.03 38 lAmb lAmb 10 33 56.0
comp=Z,26nm,1.0s
P08K Saint George I 79.05 3 P P 10 33 50.7 +1.1
baz=185
PEA0B Petropavlovsk- 79.15 343 ⇓*iP* P 10 33 50.2 0.0
PETK Petropavlovsk- 79.15 343 P P 10 33 50.8 +0.5
comp=Z,37nm,0.9s,baz=113,slow=6.7,SNR=17
comp=Z,37nm,0.9s
PETK Petropavlovsk- 79.15 343 P 10 33 49.8 -0.5
YSS Yuzhno-Sakhali 79.19 332 P 10 33 51.7 +1.1
YSS Yuzhno-Sakhali 79.19 332 P P 10 33 51.3 +0.7
comp=Z,96nm,1.1s
YSS Yuzhno-Sakhali 79.19 332 *e*P P 10 33 51.7 +1.1
YSS *e* 10 34 01.2
YSS *e*S **S** 10 43 45.7 -4.6
YSS pmax pmax
comp=Z,300nm,4.3s
YSS pmax pmax
comp=Z,70nm,1.1s
KASI Kota Agung 79.40 268 P P 10 33 52.6 +0.1
comp=Z,48nm,1.0s
SPIA Saint Paul Isl 79.60 2 P P 10 33 53.0 +0.5
baz=184
O03E Paynes Creek 79.67 38 lAmb lAmb 10 33 59.3
comp=Z,36nm,1.2s
M02C Callahan 79.81 37 lAmb lAmb 10 34 09.1
comp=Z,31nm,1.2s
CHIR Chirikof Islan 79.83 11 P P 10 33 54.8 +1.0
baz=198
MDSI Maura Dua 80.08 269 P P 10 33 55.1 -1.1
comp=Z,53nm,1.0s
M03C McCloud 80.14 37 lAmb lAmb 10 34 01.3
comp=Z,39nm,1.0s
PNTR Pine Nut 80.17 40 lAmb lAmb 10 34 01.3
comp=Z,31nm,1.0s
HATC Hat Creek Radi 80.20 38 lAmb lAmb 10 34 01.4
comp=Z,38nm,1.0s
KSRS Korea Array 80.51 317 P P 10 33 58.5 +0.5
comp=Z,9.8nm,1.0s,baz=141,slow=6.1,SNR=24
comp=Z,9.8nm,1.0s
KSAR Wonju Array Be 80.53 317 P 10 33 58.1 0.0
KSAR Wonju Array Be 80.53 317 P P 10 33 58.1 0.0
NVAR Mina Array Bea 80.54 42 P P 10 34 00.6 +2.1
comp=Z,15nm,1.0s,baz=223,slow=7.8,SNR=39
comp=Z,15nm,1.0s
NVAR Mina Array Bea 80.54 42 P P 10 33 56.9 -1.6
MAW Mawson 80.57 199 P P 10 34 00.1 +2.2
comp=Z,30nm,1.0s,baz=112,slow=8.4,SNR=9.7
comp=Z,30nm,1.0s
NV11 Mina Array Sit 80.63 42 lAmb lAmb 10 34 04.8
comp=Z,54nm,1.6s
PAHR Pah Rah Range 80.69 40 lAmb lAmb 10 34 05.1
comp=Z,38nm,1.6s
SII Sitkinak Islan 80.78 11 P P 10 34 00.1 +1.1
baz=199
R16K Pilot Point 81.19 9 P P 10 34 02.0 +0.9
baz=196
INCN Inchon 81.35 317 P P 10 34 01.7 -0.8
INCN lAmb lAmb 10 34 04.6
comp=Z,28nm,0.9s
INCN Inchon 81.35 317 P P 10 34 03.3 +0.8
comp=Z,31nm,1.0s
INCN Inchon 81.35 317 P P 10 34 01.7 -0.8
INCN pmax pmax
comp=Z,28nm,0.9s
R17L Mt. Peulik Vol 81.44 10 P P 10 34 03.4 +0.9
baz=197,SNR=7.9
J04A Umpqua Nationa 81.46 36 lAmb lAmb 10 34 08.1
comp=Z,27nm,0.9s
OHAK Old Harbor 81.58 12 P P 10 34 04.3 +1.2
baz=200
S11A Rachel 81.66 43 lAmb lAmb 10 34 32.0
comp=Z,43nm,1.5s
VLA Vladivostok 81.80 324 ⇓*iP* P 10 34 05.3 +0.6
VLA pmax pmax
comp=Z,35nm,1.0s
KSI Kapahiang 81.86 269 P P 10 34 07.8 +2.0
TUC Tucson 81.95 50 P 10 34 05.3 -0.6
TUC Tucson 81.95 50 P P 10 34 05.3 -0.6
TUC pmax pmax
comp=Z,35nm,1.9s
J05D Fort Rock, OR 81.96 36 lAmb lAmb 10 34 11.9
comp=Z,39nm,1.2s
Q17K Contact Creek 82.12 10 P P 10 34 06.8 +0.7
baz=198
WIFE Three Sisters- 82.16 35 lAmb lAmb 10 34 15.8
comp=Z,21nm,1.0s
KDAK Kodiak Island 82.23 12 ⇓*iP* P 10 34 06.2 -0.4
KDAK pmax pmax
comp=Z,44nm,1.2s
KDAK Kodiak Island 82.23 12 P P 10 34 07.4 +0.8
baz=201
TYV Tymovskoe 82.26 334 *e*P P 10 34 08.0 +1.1
TYV pmax pmax
TYV comp=Z,900nm,4.0s pmax pmax
comp=Z,41nm,1.1s
H03S2 Juan Fernandez 82.27 123 T T 12 05 55.1
baz=246,slow=74,SNR=32
H03S1 Juan Fernandez 82.28 123 T T 12 05 58.0
baz=246,slow=74,SNR=33
H03S3 Juan Fernandez 82.29 123 T T 12 05 56.2
baz=246,slow=74,SNR=36
O14K Tigyukauivet M 82.35 7 P P 10 34 08.1 +0.9
baz=192
MASI Maura Aman, Be 82.37 270 P P 10 34 09.4 +0.9
comp=Z,137nm,1.7s
H04A Detroit Lake 82.38 35 lAmb lAmb 10 34 21.8
comp=Z,22nm,1.0s
Q16K King Salmon 82.39 9 P P 10 34 08.4 +1.0
baz=197
H03N2 Juan Fernandez 82.42 123 T T 12 05 54.0
baz=250,slow=71,SNR=62
H03N3 Juan Fernandez 82.42 123 T T 12 05 50.0
baz=250,slow=71,SNR=24
H03N1 Juan Fernandez 82.43 123 T T 12 05 52.3
baz=250,slow=71,SNR=22
O15K Ungalikthiuk R 82.44 8 P P 10 34 08.5 +0.9
baz=194
USRK Ussuriysk Ar. 82.46 324 P P 10 34 09.9 +1.9
comp=Z,54nm,1.0s,baz=139,slow=3.1,SNR=52
comp=Z,54nm,1.0s
USRK Ussuriysk Ar. 82.46 324 P P 10 34 10.0 +1.9
PINE Pine Mountain 82.46 36 lAmb lAmb 10 34 14.1
comp=Z,34nm,1.1s
COYC Coyhaique 82.50 136 P P 10 34 09.7 +1.1
COYC lAmb lAmb 10 34 28.1
comp=Z,19nm,1.1s
P16K Nushagak River 82.54 9 P P 10 34 09.1 +1.0
baz=196,SNR=8.9
I05D Terrebonne, OR 82.60 36 lAmb lAmb 10 34 31.3
comp=Z,18nm,1.0s
MYKOM Kota Tinggi 82.77 275 P P 10 34 11.3 +0.8
comp=Z,63nm,1.2s
MYKOM Kota Tinggi 82.77 275 P P 10 34 12.1 +1.6
WVOR Wild Horse Val 82.86 38 lAmb lAmb 10 34 16.3
comp=Z,27nm,1.1s
LCMT Little Creek M 82.90 45 lAmb lAmb 10 34 17.1
comp=Z,42nm,1.5s
P17K Kvichak River 82.92 9 P P 10 34 11.0 +0.9
baz=197,SNR=5.0
N14K Kuskokwak Cree 82.96 7 P P 10 34 11.9 +1.6
baz=192
M11K Mekoryuk 83.02 4 lAmb lAmb 10 34 15.7
comp=Z,36nm,1.1s
M11K Mekoryuk 83.02 4 P P 10 34 11.8 +1.2
baz=188
O16K Kokwok River B 83.07 8 lAmb lAmb 10 34 12.5
comp=Z,37nm,1.2s
O16K Kokwok River B 83.07 8 P P 10 34 11.6 +0.6
baz=195
HOOD Mount Hood Mea 83.09 35 lAmb lAmb 10 34 27.2
comp=Z,35nm,1.4s
CCUT Cedar City 83.13 45 lAmb lAmb 10 34 27.8
comp=Z,48nm,1.6s
KNB Kanab 83.18 45 lAmb lAmb 10 34 35.6
comp=Z,29nm,1.2s
U15A North Rim 83.20 46 lAmb lAmb 10 34 17.5
comp=Z,23nm,1.0s
M13K Dall Lake 83.28 6 P P 10 34 13.0 +1.0
baz=191
P18K Big Mountain, 83.30 10 P P 10 34 12.5 +0.3
baz=198,SNR=7.2
WUAZ Wupatki 83.30 47 lAmb lAmb 10 34 19.4
comp=Z,28nm,1.4s
SZCU Shurtz Canyon 83.34 45 lAmb lAmb 10 34 19.6
comp=Z,42nm,1.5s
N15K Kwethluk River 83.38 7 P P 10 34 13.7 +1.2
baz=194
NLWA Neilton Lookou 83.38 32 lAmb lAmb 10 34 19.2
comp=Z,38nm,1.2s
O17K Koliganek Bris 83.38 9 P P 10 34 13.3 +0.7
baz=196,SNR=6.7
I07A Izee 83.43 37 lAmb lAmb 10 34 18.7
comp=Z,20nm,1.2s
G06A Carlson Farm, 83.57 35 lAmb lAmb 10 34 21.9
comp=Z,32nm,1.2s
NJ2 Nanjing 83.59 308 *e*P P 10 34 13.5 -0.8
NJ2 pmax pmax
comp=Z,11nm,0.8s
M14K Bethel 83.74 6 P P 10 34 16.1 +1.8
baz=192
O18K Koktuh Hills 83.74 10 P P 10 34 15.5 +1.1
baz=198,SNR=13
M15K Kasigluk River 83.82 7 P P 10 34 16.2 +1.5
baz=193
N16K Nishlik Lake 83.83 8 P P 10 34 16.1 +1.2
baz=195
LON Longmire 83.97 33 lAmb lAmb 10 34 30.6
comp=Z,30nm,1.5s
GNW Green Mountain 84.01 32 lAmb lAmb 10 34 31.1
comp=Z,30nm,1.3s
MDJ Mudanjiang 84.03 324 P P 10 34 17.8 +1.6

MDJ					pmax	pmax			
	comp=Z,70nm,1.2s								
MDJ					LR	LR			
	comp=Z,1µm,15.0s								
MDJ					LR	LR			
	comp=Z,1µm,17.0s								
MDJ					LR	LR			
	comp=Z,1µm,20.3s								
N17K	**Nushagak Hills**	**84.09**	**9**		P	**P**	**10 34 17.5**	**+1.3**	
	baz=196								
MTPU	**Mount Pierson**	**84.18**	**45**		IAmb	IAmb	10 34 41.0		
	comp=Z,37nm,1.2s								
W18A	**Petrified Fore**	**84.21**	**48**		IAmb	IAmb	10 34 24.0		
	comp=Z,31nm,1.3s								
O19K	**Port Alsworth**	**84.21**	**10**		P	**P**	**10 34 17.6**	**+0.8**	
	baz=199,SNR=16								
121A	**Cookes Peak, D**	**84.22**	**51**		IAmb	IAmb	10 34 36.1		
	comp=Z,20nm,1.3s								
CLRS	**Cowichan Lake**	**84.24**	**31**		IAmb	IAmb	10 34 21.7		
	comp=Z,28nm,1.1s								
L14K	**Kuka Creek**	**84.25**	**6**		P	**P**	**10 34 18.8**	**+1.9**	
	baz=191								
M16K	**Timber Creek**	**84.34**	**8**		P	**P**	**10 34 19.5**	**+2.0**	
	baz=195								
F07A	**Phinny Hill Vi**	**84.38**	**35**		IAmb	IAmb	10 34 22.7		
	comp=Z,15nm,1.0s								
BRSE	**Bradley Lake S**	**84.41**	**12**		P	**P**	**10 34 19.1**	**+1.3**	
	baz=202								
N18K	**Kilae Creek**	**84.43**	**9**		P	**P**	**10 34 19.5**	**+1.5**	
	baz=197								
PGC	**Sidney**	**84.45**	**31**		IAmb	IAmb	10 34 23.1		
	comp=Z,19nm,0.9s								
TLIG	**Tlapa**	**84.49**	**69**		IAmb	IAmb	10 34 25.6		
	comp=Z,26nm,1.3s								
QIZ	**Qiongzhong**	**84.50**	**293**		P	**P**	**10 34 17.3**	**-1.9**	
QIZ					S	**SKSac**	**10 44 42.0**	**-1.7**	
QIZ					LR	LR			
	comp=Z,370nm,15.7s								
QIZ					LR	LR			
	comp=Z,700nm,17.7s								
QIZ					LR	LR			
	comp=Z,750nm,19.1s								
MXC	**Moxie City**	**84.63**	**34**		IAmb	IAmb	10 34 42.0		
	comp=Z,28nm,1.5s								
K13K	**Kusilvak Mount**	**84.67**	**5**		P	**P**	**10 34 20.9**	**+1.8**	
	baz=189								
RED	**Redoubt Volcan**	**84.68**	**11**		IAmb	IAmb	10 34 37.6		
	comp=Z,23nm,1.0s								
L15K	**Ungalak Mounta**	**84.70**	**6**		P	**P**	**10 34 20.7**	**+1.4**	
	baz=192,SNR=19								
N19K	**Bonanza Creek**	**84.77**	**10**		P	**P**	**10 34 21.0**	**+1.3**	
	baz=199								
LR05	**Currie**	**84.81**	**131**			**P**	**10 34 21.5**	**+1.0**	
LR05					IAmb	IAmb	10 34 26.2		
	comp=Z,28nm,1.3s								
GRNR	**Gornyy**	**84.82**	**331**	⇑	*i*P	**P**	**10 34 21.4**	**+1.3**	
GRNR					pmax	pmax			
	comp=Z,10.0nm,1.1s								
ELIB	**Princess Elisa**	**84.84**	**186**		*d*P	**P**	**10 34 17.3**	**-2.9**	
ELIB					*d*PcP	**pP**	**10 34 21.6**	**+0.2**	
PDSI	**Padang**	**84.86**	**271**		P	**P**	**10 34 21.2**	**-0.1**	
	comp=Z,28nm,0.9s								
LTY	**Liberty**	**84.89**	**34**		IAmb	IAmb	10 34 45.1		
	comp=Z,20nm,1.2s								
M17K	**Holitna River**	**84.90**	**8**		P	**P**	**10 34 22.0**	**+1.8**	
	baz=196								
L16K	**Owhat River**	**84.95**	**7**		P	**P**	**10 34 21.9**	**+1.4**	
	baz=194,SNR=18								
SEW	**Seward**	**85.00**	**12**		P	**P**	**10 34 22.0**	**+1.2**	
	baz=203								
Q23K	**Middleton Isla**	**85.04**	**14**		P	**P**	**10 34 22.2**	**+1.2**	
	baz=206								
HMU	**Henry Mountain**	**85.07**	**45**		IAmb	IAmb	10 34 27.8		
	comp=Z,36nm,1.4s								
MFID	**Camas Ranch**	**85.09**	**39**		IAmb	IAmb	10 34 27.3		
	comp=Z,35nm,1.4s								
WAH2	**Wahluke Slope**	**85.13**	**34**		IAmb	IAmb	10 34 36.6		
	comp=Z,46nm,1.5s								
M18K	**Stony River**	**85.21**	**9**		P	**P**	**10 34 23.0**	**+1.2**	
	baz=198								
CAPN	**Captain Cook N**	**85.29**	**11**		P	**P**	**10 34 23.4**	**+1.2**	
	baz=202								
O22K	**Cooper Landing**	**85.29**	**12**		P	**P**	**10 34 23.5**	**+1.3**	
	baz=203								
K15K	**Wolf Creek Mou**	**85.30**	**6**		P	**P**	**10 34 24.3**	**+2.1**	
	baz=192								
P23K	**Montague Islan**	**85.33**	**13**		P	**P**	**10 34 24.1**	**+1.7**	
	baz=205								
Q16A	**Castle Valley**	**85.33**	**44**		IAmb	IAmb	10 34 44.3		
	comp=Z,20nm,1.2s								
DL2	**Dalian**	**85.38**	**315**		P	**P**	**10 34 23.4**	**+0.2**	
DL2					S	**SKSac**	**10 44 47.8**	**-0.6**	
DL2					pmax	pmax			
	comp=Z,72nm,1.2s								
DL2					pmax	pmax			
	comp=Z,300nm,6.7s								
DL2					LR	LR			
	comp=Z,680nm,15.3s								
DL2					LR	LR			
	comp=Z,1µm,17.2s								
DL2					LR	LR			
	comp=Z,1µm,15.9s								
CRAG	**Craig**	**85.49**	**22**		P	**P**	**10 34 25.1**	**+1.8**	
	baz=218								
EPH	**Ephrata**	**85.50**	**34**		IAmb	IAmb	10 34 37.6		
	comp=Z,21nm,1.3s								
L17K	**Donlin**	**85.50**	**8**		P	**P**	**10 34 24.5**	**+1.3**	
	baz=195								
SPCR	**Spurr Chakacha**	**85.51**	**11**		P	**P**	**10 34 24.3**	**+0.9**	
	baz=201								
SPU	**Mount Spurr**	**85.52**	**11**		IAmb	IAmb	10 34 24.9		
	comp=Z,17nm,1.2s								
J14K	**Nanvaranak Lak**	**85.56**	**5**		IAmb	IAmb	10 34 37.9		
	comp=Z,33nm,1.4s								
J14K	**Nanvaranak Lak**	**85.56**	**5**		P	**P**	**10 34 25.1**	**+1.6**	
	baz=190								
PLCA	**Paso Flores**	**85.59**	**132**		P	**P**	**10 34 26.9**	**+2.3**	
	comp=Z,7.0nm,1.1s,baz=221,slow=4.8,SNR=7.4								
PLCA					LR	LR	11 06 55.1		
	comp=Z,352nm,18.2s,baz=235,slow=32								
	comp=Z,7.0nm,1.1s								
PLCA	**Paso Flores**	**85.59**	**132**			**P**	**10 34 24.6**	**+0.1**	
D08A	**Wollman Farm,**	**85.66**	**35**		IAmb	IAmb	10 34 38.7		
	comp=Z,22nm,1.3s								
TX31	**Lajitas Ar. Si**	**85.68**	**56**		IAmb	IAmb	10 34 31.0		
	comp=Z,26nm,1.2s								
TXAR	**Lajitas Array**	**85.68**	**56**		P	**P**	**10 34 27.2**	**+2.1**	
	comp=Z,13nm,1.1s,baz=216,slow=6.2,SNR=30								
	comp=Z,13nm,1.1s								
TXAR	**Lajitas Array**	**85.68**	**56**			**P**	**10 34 25.4**	**+0.3**	
E09A	**Wood Farm, Sta**	**85.73**	**35**		IAmb	IAmb	10 34 30.1		
	comp=Z,20nm,1.3s								
SNAA	**Sanae**	**85.77**	**177**		LR	LR	11 11 36.5		
	comp=Z,625nm,18.1s,baz=188,slow=35								
VNA3	**Neumayer Olymp**	**85.79**	**175**	⇓	P	**P**	**10 34 26.0**	**+1.2**	
	comp=Z,38nm,0.8s								
L18K	**Granite Mounta**	**85.79**	**8**		IAmb	IAmb	10 34 27.9		
	comp=Z,42nm,1.2s								
L18K	**Granite Mounta**	**85.79**	**8**		P	**P**	**10 34 26.5**	**+1.8**	
	baz=197								
M19K	**Big River Lodg**	**85.82**	**9**		IAmb	IAmb	10 34 30.7		
	comp=Z,56nm,1.8s								
M19K	**Big River Lodg**	**85.82**	**9**		P	**P**	**10 34 25.8**	**+0.9**	
	baz=199								
RC01	**Rabbit Creek A**	**85.85**	**12**		IAmb	IAmb	10 34 39.0		
	comp=Z,42nm,1.3s								
RC01	**Rabbit Creek A**	**85.85**	**12**		P	**P**	**10 34 26.2**	**+1.2**	
	baz=203								
SRU	**San Rafael Swe**	**85.86**	**45**		IAmb	IAmb	10 34 31.6		
	comp=Z,36nm,1.4s								
CN2	**Changchun**	**85.86**	**321**	⇑	P	**P**	**10 34 26.1**	**+0.6**	
CN2					*ep*P	pwP	10 34 43.0	+8.3	
CN2					*e*S	**S**	**10 44 54.6**	**-4.2**	
CN2					pmax	pmax			
	comp=Z,30nm,1.1s								
CN2					pmax	pmax			
	comp=Z,400nm,5.0s								
CN2					LR	LR			
	comp=Z,1µm,13.0s								
CN2					LR	LR			
	comp=Z,900nm,13.0s								
CN2					LR	LR			
	comp=Z,2µm,15.0s								
F10A	**Beach Ranch, E**	**85.88**	**36**		IAmb	IAmb	10 34 29.0		
	comp=Z,26nm,1.2s								
KAIM	**Kayak Island**	**85.93**	**15**		P	**P**	**10 34 27.0**	**+1.6**	
	baz=208								
BNX	**BinXian**	**85.94**	**324**	⇑	P	**P**	**10 34 26.4**	**+0.6**	
BNX					S	**S**	**10 45 00.2**	**+0.8**	
BNX					pmax	pmax			
	comp=Z,56nm,1.1s								
BNX					pmax	pmax			
	comp=Z,390nm,5.1s								
BNX					LR	LR			
	comp=Z,1µm,17.9s								
BNX					LR	LR			
	comp=Z,930nm,17.9s								
BNX					LR	LR			
	comp=Z,1µm,16.6s								
M20K	**Styx River**	**86.00**	**10**		P	**P**	**10 34 26.9**	**+1.1**	
	baz=200								
PLID	**Pearl Lake**	**86.01**	**37**		IAmb	IAmb	10 34 40.8		
	comp=Z,24nm,1.4s								
SUA	**Susitna One**	**86.01**	**11**		IAmb	IAmb	10 34 35.1		
	comp=Z,20nm,0.8s								
SUA	**Susitna One**	**86.01**	**11**		P	**P**	**10 34 26.7**	**+0.7**	
	baz=202,SNR=5.5								
L19K	**White Mountain**	**86.01**	**9**		IAmb	IAmb	10 34 56.5		
	comp=Z,21nm,1.2s								
L19K	**White Mountain**	**86.01**	**9**		P	**P**	**10 34 27.3**	**+1.5**	
	baz=198								
SIT	**Sitka**	**86.02**	**20**		P	**P**	**10 34 27.4**	**+1.6**	
	baz=216								
K17K	**Iditarod**	**86.07**	**8**		IAmb	IAmb	10 34 35.1		
	comp=Z,31nm,1.1s								
K17K	**Iditarod**	**86.07**	**8**		P	**P**	**10 34 27.7**	**+1.7**	
	baz=195,SNR=8.5								
GAMB	**Gambell**	**86.16**	**1**		P	**P**	**10 34 28.3**	**+1.8**	
	baz=183,SNR=12								
WHN	**Wuhan**	**86.16**	**305**		P	**P**	**10 34 28.1**	**+0.8**	
WHN					pmax	pmax			
	comp=Z,110nm,1.4s								
MVCO	**Mesa Verde**	**86.17**	**47**		IAmb	IAmb	10 34 49.4		
	comp=Z,22nm,1.4s								
EYAK	**Cordova Ski Ar**	**86.18**	**14**		P	**P**	**10 34 27.9**	**+1.2**	
	baz=207								
GLI	**Glacier Island**	**86.19**	**13**		P	**P**	**10 34 27.9**	**+1.2**	
	baz=205								
ALPN	**Alpine**	**86.21**	**55**		IAmb	IAmb	10 34 31.7		
	comp=Z,19nm,1.2s								
PV05	**Paradox Valley**	**86.23**	**46**		IAmb	IAmb	10 34 34.0		
	comp=Z,23nm,1.4s								
VNA2	**Neumayer--Watz**	**86.26**	**176**	⇓	P	**P**	**10 34 27.5**	**+0.3**	
	comp=Z,22nm,1.0s,baz=192,slow=2.6								
B08A	**Colville Reser**	**86.29**	**33**		IAmb	IAmb	10 34 41.7		
	comp=Z,41nm,1.7s								
MNSI	**Mandailing Nat**	**86.33**	**272**		P	**P**	**10 34 28.3**	**-0.2**	
	comp=Z,67nm,0.9s								
SKT	**Skwentna**	**86.36**	**11**		P	**P**	**10 34 28.8**	**+1.3**	
	baz=201								
J16K	**Anvik River**	**86.36**	**6**		P	**P**	**10 34 29.2**	**+1.7**	
	baz=193								
TPB01	**Permian Basin**	**86.37**	**54**		IAmb	IAmb	10 34 33.3		
	comp=Z,12nm,1.1s								
M22K	**Willow**	**86.39**	**11**		P	**P**	**10 34 28.9**	**+1.2**	
	baz=203,SNR=7.7								
KNK	**Knik Glacier**	**86.40**	**12**		P	**P**	**10 34 29.0**	**+1.2**	
	baz=204								
TCUT	**Toone Canyon**	**86.41**	**43**		IAmb	IAmb	10 34 55.8		
	comp=Z,20nm,1.0s								
IPM	**Ipoh**	**86.41**	**276**		P	**P**	**10 34 29.4**	**+0.5**	
	comp=Z,81nm,1.1s								
IPM	**Ipoh**	**86.41**	**276**		P	**P**	**10 34 29.6**	**+0.7**	
	comp=Z,81nm,1.1s								
PV10	**Paradox Valley**	**86.43**	**46**		IAmb	IAmb	10 35 55.5		
	comp=Z,19nm,0.7s								
PV19	**Morning Glory**	**86.43**	**46**		IAmb	IAmb	10 34 55.0		
	comp=Z,38nm,1.4s								
PMR	**Palmer**	**86.43**	**12**		P	**P**	**10 34 27.0**	**-0.8**	
	comp=Z,22nm,1.2s								
PMR	**Palmer**	**86.43**	**12**		P	**P**	**10 34 29.0**	**+1.2**	
	baz=204,SNR=5.7								
PV18	**Skein Mesa, Pa**	**86.45**	**46**		IAmb	IAmb	10 34 57.4		
	comp=Z,21nm,1.4s								
PV20	**West Nyswonger**	**86.46**	**46**		IAmb	IAmb	10 34 34.5		
	comp=Z,31nm,1.4s								
VNA1	**Neumayer--Stat**	**86.47**	**176**	⇓	P	**P**	**10 34 28.5**	**+0.4**	
	comp=Z,38nm,1.0s								
C09A	**Chrisman Ranch**	**86.48**	**34**		IAmb	IAmb	10 34 43.0		
	comp=Z,33nm,1.4s								
PV23	**Carpenter Ridg**	**86.49**	**46**		IAmb	IAmb	10 34 53.3		
	comp=Z,32nm,1.5s								
BSUT	**Blindstream Ca**	**86.49**	**43**		IAmb	IAmb	10 34 33.7		
	comp=Z,16nm,1.1s								
WRAK	**Wrangell Islan**	**86.51**	**22**		P	**P**	**10 34 30.2**	**+1.9**	
	baz=219								
LLLB	**Lillooet**	**86.53**	**31**		IAmb	IAmb	10 34 35.6		
	comp=Z,21nm,1.3s								
PV01	**Paradox Valley**	**86.61**	**46**		IAmb	IAmb	10 34 35.2		
	comp=Z,28nm,1.7s								
J17K	**VABM Dome**	**86.64**	**7**		IAmb	IAmb	10 34 32.0		
	comp=Z,35nm,1.2s								
J17K	**VABM Dome**	**86.64**	**7**		P	**P**	**10 34 30.5**	**+1.7**	
	baz=194								
MA2	**Magadan**	**86.68**	**343**			**P**	**10 34 29.4**	**+0.3**	
MA2					IAmb	IAmb	10 34 30.8		
	comp=Z,37nm,1.3s								
MA2	**Magadan**	**86.68**	**343**		P	**P**	**10 34 29.2**	**+0.1**	
	comp=Z,29nm,1.5s								
MA2	**Magadan**	**86.68**	**343**	⇓	*i*P	**P**	**10 34 29.9**	**+0.8**	
MA2					pmax	pmax			
	comp=Z,19nm,1.1s								
MA2	**Magadan**	**86.68**	**343**		P	**P**	**10 34 28.7**	**-0.4**	
	comp=Z,29nm,1.5s								
DIV	**Divide**	**86.70**	**14**		IAmb	IAmb	10 34 32.3		
	comp=Z,35nm,1.1s								
TPB05	**Hovey Rd**	**86.70**	**55**		IAmb	IAmb	10 34 34.8		
	comp=Z,15nm,1.0s								
NVL	**N'lazarevskaya**	**86.73**	**182**		*e*P	P	10 34 24.9	-4.5	
NVL					*e*SSS	SSS	10 54 15.2		
NVL					pmax	pmax			
	comp=Z,57nm,2.1s								
NVL					MLR	MLR			
	comp=Z,933nm,19.0s								
MESA	**MESA**	**86.75**	**16**		P	**P**	**10 34 30.4**	**+0.7**	
	baz=210								
SML	**Sawmill**	**86.78**	**12**		P	**P**	**10 34 30.5**	**+0.9**	
	baz=204								
BMRM	**Bremner River**	**86.81**	**14**		IAmb	IAmb	10 34 38.8		
	comp=Z,27nm,1.0s								
BMRM	**Bremner River**	**86.81**	**14**		P	**P**	**10 34 30.7**	**+0.9**	
	baz=208								
GULI	**GuiLin**	**86.84**	**299**		P	**P**	**10 34 30.2**	**-0.6**	
GULI					pmax	pmax			
	comp=Z,45nm,1.0s								
GULI					pmax	pmax			
	comp=Z,240nm,5.4s								
M23K	**Glacier View**	**86.89**	**12**		P	**P**	**10 34 31.3**	**+1.1**	
	baz=205								
I17K	**Unalakleet**	**86.94**	**6**		IAmb	IAmb	10 34 33.5		
	comp=Z,28nm,1.2s								
I17K	**Unalakleet**	**86.94**	**6**		P	**P**	**10 34 31.6**	**+1.3**	
	baz=193,SNR=8.0								
TIA	**Tai'an**	**86.97**	**311**		P	**P**			
TIA					pmax	pmax	**10 34 31.6**	**+0.5**	
	comp=Z,44nm,1.1s								
CUT	**Chulitna**	**86.97**	**11**		P	**P**	**10 34 31.3**	**+0.9**	
	baz=202								
CRQE	**Cirque**	**86.97**	**15**		P	**P**	**10 34 31.6**	**+0.9**	
	baz=209								
J18K	**Innoko River**	**86.99**	**8**		P	**P**	**10 34 32.1**	**+1.5**	
	baz=197								
KLU	**Klutina**	**86.99**	**13**		IAmb	IAmb	10 34 35.0		
	comp=Z,34nm,1.3s								
KLU	**Klutina**	**86.99**	**13**		P	**P**	**10 34 31.8**	**+1.0**	
	baz=206								
SCM	**Sheep Creek Mo**	**87.01**	**13**		IAmb	IAmb	10 34 32.7		
	comp=Z,34nm,1.1s								
SCM	**Sheep Creek Mo**	**87.01**	**13**		P	**P**	**10 34 31.5**	**+0.7**	
	baz=205								
KULM	**Kulim**	**87.07**	**277**			**P**	**10 34 32.6**	**+0.5**	
KULM	**Kulim**	**87.07**	**277**		P	**P**	**10 34 32.8**	**+0.7**	
	comp=Z,51nm,1.3s								
KULM	**Kulim**	**87.07**	**277**		P	**P**	**10 34 33.5**	**+1.4**	
PPLA	**Purkeypile**	**87.10**	**10**		P	**P**	**10 34 32.0**	**+0.7**	
	baz=201								
PINM	**Pinnacle**	**87.12**	**16**		P	**P**	**10 34 32.6**	**+1.2**	
	baz=212								
SAND	**Sanderson**	**87.16**	**56**		IAmb	IAmb	10 34 36.7		
	comp=Z,15nm,1.1s								
ANM	**Nome**	**87.23**	**4**		P	**P**	**10 34 33.2**	**+1.5**	
	baz=189								
K20K	**Telida**	**87.25**	**9**		P	**P**	**10 34 33.1**	**+1.2**	
	baz=199,SNR=9.6								
R32K	**Eaglecrest**	**87.26**	**20**		P	**P**	**10 34 33.4**	**+1.4**	
	baz=217								
VRDI	**Verde Repeater**	**87.31**	**15**		IAmb	IAmb	10 34 39.2		
	comp=Z,24nm,1.2s								
MNHN	**Monahans**	**87.33**	**55**		IAmb	IAmb	10 34 54.8		
	comp=Z,39nm,2.0s								
N25K	**Chitina, Valde**	**87.38**	**14**		P	**P**	**10 34 34.0**	**+1.3**	
	baz=208								
M24K	**Tolsona, Glenn**	**87.49**	**13**		P	**P**	**10 34 33.9**	**+0.8**	
	baz=206,SNR=5.8								
H16K	**Elim**	**87.54**	**5**		P	**P**	**10 34 34.2**	**+1.0**	
	baz=192,SNR=25								
MCARA	**McCarthy VSAT**	**87.54**	**15**		P	**P**	**10 34 34.0**	**+0.7**	
	baz=209								
CTG	**Chitna Glacier**	**87.58**	**16**		P	**P**	**10 34 34.8**	**+1.1**	
	baz=211								
WAT6	**Susitna Watana**	**87.61**	**12**		P	**P**	**10 34 34.5**	**+0.7**	
	baz=205,SNR=12								
J19K	**Poorman**	**87.64**	**8**		IAmb	IAmb	10 34 36.8		
	comp=Z,33nm,1.3s								
J19K	**Poorman**	**87.64**	**8**		P	**P**	**10 34 35.1**	**+1.4**	
	baz=198								
T35M	**Bob Quinn**	**87.68**	**23**		P	**P**	**10 34 35.9**	**+1.8**	
	baz=220								
WAT1	**Susitna Watana**	**87.68**	**12**		P	**P**	**10 34 35.0**	**+1.0**	
	baz=204								
PSI	**Prapat**	**87.70**	**274**		P	**P**	**10 34 35.8**	**+0.5**	
	comp=Z,82nm,1.1s								
PSI	**Prapat**	**87.70**	**274**		P	**P**	**10 34 34.7**	**-0.6**	
	comp=Z,768nmcomp=Z,75nm,1.1s								
O28M	**Mount Upton**	**87.71**	**16**		P	**P**	**10 34 35.3**	**+0.8**	
	baz=212								
O29M	**Mount Kennedy**	**87.74**	**17**		P	**P**	**10 34 35.8**	**+1.4**	
	baz=213								
G15K	**Niukluk**	**87.75**	**5**		P	**P**	**10 34 35.2**	**+1.1**	
	baz=190								
ODSA	**Odessa**	**87.86**	**54**		IAmb	IAmb	10 34 40.8		
	comp=Z,24nm,1.1s								
TRF	**Thorofare Moun**	**87.94**	**11**		P	**P**	**10 34 35.7**	**+0.4**	
	baz=202,SNR=9.6								
HARP	**HAARP**	**87.97**	**13**		P	**P**	**10 34 36.4**	**+1.1**	
	baz=207								
SKAG	**Skagway**	**87.97**	**19**		P	**P**	**10 34 37.2**	**+1.9**	
	baz=216								
CHUM	**Lake Minchumin**	**88.01**	**10**		P	**P**	**10 34 35.9**	**+0.5**	
	baz=201,SNR=8.4								
J20K	**Nowinta River**	**88.02**	**9**		P	**P**	**10 34 36.4**	**+1.0**	
	baz=199								
P30M	**Million Dollar**	**88.04**	**18**		P	**P**	**10 34 37.3**	**+1.5**	
	baz=214								
H17K	**Granite Mounta**	**88.05**	**6**		IAmb	IAmb	10 34 38.2		
	comp=Z,22nm,1.2s								
H17K	**Granite Mounta**	**88.05**	**6**		P	**P**	**10 34 36.4**	**+0.8**	
	baz=194								
DRIO	**Del Rio**	**88.07**	**57**		IAmb	IAmb	10 34 41.2		
	comp=Z,39nm,1.1s								
F14K	**Arctic Creek**	**88.07**	**3**		P	**P**	**10 34 36.6**	**+0.9**	
	baz=188								
TNA	**Tin City**	**88.08**	**3**		IAmb	IAmb	10 34 46.0		
	comp=Z,24nm,1.3s								
TNA	**Tin City**	**88.08**	**3**		P	**P**	**10 34 37.1**	**+1.4**	
	baz=186,SNR=12								
S34M	**Telegraph Cree**	**88.09**	**22**		P	**P**	**10 34 37.5**	**+1.6**	
	baz=220								
SNOW	**Snow King Moun**	**88.12**	**41**		IAmb	IAmb	10 34 44.0		
	comp=Z,21nm,1.4s								
DHY	**Denali Highway**	**88.13**	**12**		P	**P**	**10 34 37.1**	**+0.9**	
	baz=205								
GCSA	**Galena City Sc**	**88.20**	**8**		P	**P**	**10 34 37.9**	**+1.6**	
	baz=196,SNR=11								
YUK8	**Steele Glacier**	**88.26**	**16**		P	**P**	**10 34 38.2**	**+1.1**	
	baz=212								
G16K	**Koyuk River**	**88.27**	**5**		IAmb	IAmb	10 34 39.5		
	comp=Z,18nm,1.2s								
G16K	**Koyuk River**	**88.27**	**5**		P	**P**	**10 34 37.7**	**+1.0**	
	baz=191								
YUK6	**Outpost Mounta**	**88.33**	**17**		P	**P**	**10 34 38.9**	**+1.6**	
	baz=213								
GSI	**Gunungsitoli**	**88.37**	**272**		P	**P**	**10 34 39.5**	**+1.1**	
	comp=Z,273nm,1.0s								
GSI	**Gunungsitoli**	**88.37**	**272**		P	**P**	**10 34 40.2**	**+1.8**	
F15K	**North Star Dit**	**88.41**	**4**		IAmb	IAmb	10 34 39.9		
	comp=Z,24nm,1.5s								
F15K	**North Star Dit**	**88.41**	**4**		P	**P**	**10 34 38.4**	**+1.1**	
	baz=189								
PAX	**Paxson**	**88.41**	**13**		P	**P**	**10 34 38.3**	**+0.8**	
	baz=207								
H18K	**Honhosa River**	**88.42**	**7**		IAmb	IAmb	10 34 39.8		
	comp=Z,20nm,1.2s								
H18K	**Honhosa River**	**88.42**	**7**		P	**P**	**10 34 38.2**	**+0.8**	
	baz=195								
BPAW	**Bear Paw Mtn.**	**88.42**	**10**		IAmb	IAmb	10 35 10.9		
	comp=Z,37nm,1.8s								
BPAW	**Bear Paw Mtn.**	**88.42**	**10**		P	**P**	**10 34 38.7**	**+1.2**	
	baz=202								
MCK	**McKinley**	**88.44**	**11**		P	**P**	**10 34 38.4**	**+0.9**	
	baz=204,SNR=12								
HYT	**Haines Junctio**	**88.47**	**17**		P	**P**	**10 34 39.6**	**+1.7**	
	baz=214								
PDAR	**Pinedale Array**	**88.47**	**42**		P	**P**	**10 34 39.5**	**+1.0**	
	comp=Z,5.9nm,1.1s,baz=204,slow=3.3,SNR=18								
	comp=Z,5.9nm,1.1s								
PDAR	**Pinedale Array**	**88.47**	**42**			**P**	**10 34 37.1**	**-1.4**	
FLWY	**Flagg Ranch**	**88.50**	**40**		IAmb	IAmb	10 34 46.8		
	comp=Z,16nm,1.2s								
YUK3	**Moose Creek**	**88.50**	**16**		P	**P**	**10 34 39.6**	**+1.5**	
	baz=211,SNR=8.5								
Q32M	**Nakina River**	**88.52**	**20**		P	**P**	**10 34 39.3**	**+1.0**	
	baz=219								
G17K	**

	comp=Z,550nm,17.5s						
HNS					LR	LR	
	comp=Z,1μm,19.1s						
HNS					LR	LR	
	comp=Z,1μm,20.7s						
L27K	**Beaver Creek,**	**89.28**	**14**		IAmb	IAmb	10 34 55.5
	comp=Z,37nm,1.6s						
L27K	**Beaver Creek,**	**89.28**	**14**		P	**P**	**10 34 43.5 +1.9**
	baz=210						
R33M	**Jennings River**	**89.28**	**21**		P	**P**	**10 34 43.4 +1.6**
	baz=220						
BCAR	**Beaver Creek A**	**89.30**	**14**			**P**	**10 34 42.0 +0.4**
DOT	**Dot Lake**	**89.31**	**13**		IAmb	IAmb	10 34 45.4
	comp=Z,20nm,1.0s						
P33M	**Teslin, Yukon**	**89.33**	**19**		P	**P**	**10 34 43.3 +1.4**
	baz=218						
F17K	**Baldwin Pennin**	**89.39**	**5**		IAmb	IAmb	10 34 49.6
	comp=Z,20nm,1.1s						
F17K	**Baldwin Pennin**	**89.39**	**5**		P	**P**	**10 34 43.1 +1.3**
	baz=192						
HDA	**Harding Lake**	**89.42**	**12**		IAmb	IAmb	10 34 45.8
	comp=Z,21nm,1.0s						
HDA	**Harding Lake**	**89.42**	**12**		P	**P**	**10 34 43.0 +0.9**
	baz=206,SNR=12						
YNE	**Yellowstone No**	**89.42**	**40**		IAmb	IAmb	10 34 50.2
	comp=Z,29nm,1.7s						
LYN	**LuoYang**	**89.47**	**308**	⇑	*i*P	**P**	**10 34 44.4 +1.4**
LYN					pP	pwP	10 34 57.4 +5.1
LYN					pmax	pmax	
	comp=Z,72nm,1.1s						
LYN					LR	LR	
	comp=Z,600nm,13.1s						
LYN					LR	LR	
	comp=Z,970nm,16.9s						
LYN					LR	LR	
	comp=Z,2μm,14.9s						
N31M	**Braeburn, Yuko**	**89.49**	**18**		P	**P**	**10 34 44.0 +1.4**
	baz=216						
G19K	**Purcell Mounta**	**89.52**	**7**		IAmb	IAmb	10 34 45.2
	comp=Z,32nm,1.2s						
G19K	**Purcell Mounta**	**89.52**	**7**		P	**P**	**10 34 43.8 +1.3**
	baz=196,SNR=29						
BJT	**Baijiatuan**	**89.55**	**314**		IAmb	IAmb	10 34 46.2
	comp=Z,15nm,0.9s						
M29M	**Somme Creek**	**89.57**	**16**		P	**P**	**10 34 44.6 +1.6**
	baz=213						
H21K	**Melozitna Rive**	**89.61**	**9**		IAmb	IAmb	10 34 57.4
	comp=Z,44nm,1.8s						
H21K	**Melozitna Rive**	**89.61**	**9**		P	**P**	**10 34 44.3 +1.4**
	baz=200,SNR=6.9						
SCRK	**Sand Creek**	**89.62**	**13**		IAmb	IAmb	10 34 57.1
	comp=Z,23nm,1.3s						
SCRK	**Sand Creek**	**89.62**	**13**		P	**P**	**10 34 44.5 +1.3**
	baz=208,SNR=8.2						
I23K	**Minto, Yukon-K**	**89.67**	**10**		IAmb	IAmb	10 34 56.1
	comp=Z,57nm,1.9s						
I23K	**Minto, Yukon-K**	**89.67**	**10**		P	**P**	**10 34 44.0 +0.8**
	baz=203						
COLA	**College**	**89.68**	**11**		P	**P**	**10 34 42.5 -0.7**
	comp=Z,15nm,1.1s						
COLA	**College**	**89.68**	**11**	⇓	*i*P	**P**	**10 34 42.2 -1.0**
COLA					pmax	pmax	
	comp=Z,26nm,1.0s						
COLA	**College**	**89.68**	**11**		P	**P**	**10 34 44.0 +0.8**
	baz=205						
F18K	**Selawik**	**89.69**	**6**		P	**P**	**10 34 44.2 +0.9**
	baz=194,SNR=11						
ILAR	**Eielson Array**	**89.76**	**12**		P	**P**	**10 34 44.2 +0.6**
	comp=Z,16nm,1.1s,baz=221,slow=5.0,SNR=43						
	comp=Z,16nm,1.1s						
ILAR	**Eielson Array**	**89.76**	**12**		P	**P**	**10 34 44.1 +0.4**
AMTX	**Amarillo**	**89.80**	**52**		IAmb	IAmb	10 34 50.2
	comp=Z,32nm,1.7s						
J25K	**Salcha River,**	**89.90**	**12**		IAmb	IAmb	10 34 47.0
	comp=Z,25nm,1.1s						
J25K	**Salcha River,**	**89.90**	**12**		P	**P**	**10 34 45.9 +1.5**
	baz=207						
SNSI	**Sinabang, Aceh**	**89.94**	**273**		P	**P**	**10 34 48.3 +2.5**
POKR	**Poker Flat Res**	**89.97**	**11**		IAmb	IAmb	10 34 46.8
	comp=Z,26nm,1.3s						
POKR	**Poker Flat Res**	**89.97**	**11**		P	**P**	**10 34 45.4 +0.7**
	baz=205,SNR=6.2						
E17K	**Hotham Inlet**	**89.97**	**5**		P	**P**	**10 34 45.7 +1.1**
	baz=192,SNR=21						
N32M	**Quiet Lake**	**90.00**	**19**		P	**P**	**10 34 46.1 +1.1**
	baz=218						
M30M	**Minto, Yukon**	**90.11**	**17**		IAmb	IAmb	10 34 47.6
	comp=Z,19nm,1.2s						
M30M	**Minto, Yukon**	**90.11**	**17**		P	**P**	**10 34 46.9 +1.5**
	baz=215						
F19K	**Shaleruckik Mo**	**90.11**	**7**		IAmb	IAmb	10 34 47.6
	comp=Z,20nm,0.8s						
F19K	**Shaleruckik Mo**	**90.11**	**7**		P	**P**	**10 34 46.4 +1.1**
	baz=196						
BRDY	**Brady**	**90.16**	**56**		IAmb	IAmb	10 34 52.5
	comp=Z,32nm,1.8s						
J26L	**Joseph Creek**	**90.17**	**13**		P	**P**	**10 34 47.6 +1.8**
	baz=209						
L29M	**L29M**	**90.21**	**16**		P	**P**	**10 34 47.6 +1.7**
	baz=213						
APMT	**Aspermont**	**90.23**	**54**		IAmb	IAmb	10 35 08.8
	comp=Z,34nm,1.8s						
H23K	**Yukon River**	**90.26**	**10**		P	**P**	**10 34 47.4 +1.3**
	baz=203						
ABTX	**Abilene, Hawle**	**90.27**	**55**		IAmb	IAmb	10 34 52.2
	comp=Z,25nm,1.4s						
G21K	**Allakaket**	**90.32**	**8**		IAmb	IAmb	10 34 48.9
	comp=Z,29nm,1.4s						
G21K	**Allakaket**	**90.32**	**8**		P	**P**	**10 34 47.6 +1.3**
	baz=200						
GYA	**Guiyang**	**90.35**	**299**	⇑	P	**P**	**10 34 48.6 +1.1**
GYA					S	S	10 45 31.1 -11
GYA					pmax	pmax	
	comp=Z,27nm,1.1s						
GYA					pmax	pmax	
	comp=Z,220nm,5.9s						
GYA					LR	LR	
	comp=Z,940nm,14.6s						
E18K	**Tukpahlearik C**	**90.41**	**5**		P	**P**	**10 34 48.1 +1.5**
	baz=193						
M31M	**Drury Creek, Y**	**90.46**	**18**		P	**P**	**10 34 48.7 +1.7**
	baz=217						
D17K	**Noatak River**	**90.49**	**4**		P	**P**	**10 34 48.5 +1.5**
	baz=191,SNR=18						
WTLY	**Watson Lake, Y**	**90.55**	**21**		IAmb	IAmb	10 35 02.6
	comp=Z,32nm,1.3s						
WTLY	**Watson Lake, Y**	**90.55**	**21**		P	**P**	**10 34 49.3 +1.7**
	baz=222						
F20K	**Avaraart Lake**	**90.55**	**7**		IAmb	IAmb	10 34 49.9
	comp=Z,29nm,1.1s						
F20K	**Avaraart Lake**	**90.55**	**7**		P	**P**	**10 34 48.7 +1.4**
	baz=198,SNR=21						
H24K	**Noodor Dome**	**90.55**	**11**		P	**P**	**10 34 49.1 +1.7**
	baz=205						
MLSI	**Meulaboh, Aceh**	**90.58**	**274**		P	**P**	**10 34 51.0 +2.3**
PRP	**Porcupine Dome**	**90.68**	**12**		IAmb	IAmb	10 34 50.6
	comp=Z,27nm,1.2s						
PRP	**Porcupine Dome**	**90.68**	**12**		P	**P**	**10 34 49.3 +1.2**
	baz=207,SNR=14						
E19K	**Redstone River**	**90.77**	**7**		P	**P**	**10 34 50.0 +1.7**
	baz=196						
RDOG	**Red Dog Mine**	**90.85**	**4**		IAmb	IAmb	10 34 56.5
	comp=Z,18nm,1.2s						
RDOG	**Red Dog Mine**	**90.85**	**4**		P	**P**	**10 34 50.0 +1.3**
	baz=191,SNR=5.7						
TOAD	**Toad River Com**	**90.86**	**23**		P	**P**	**10 34 50.4 +1.4**
	baz=225						
C16K	**Lisburne Hills**	**90.91**	**3**		IAmb	IAmb	10 34 51.4
	comp=Z,23nm,1.2s						
C16K	**Lisburne Hills**	**90.91**	**3**		P	**P**	**10 34 50.3 +1.4**
	baz=189						
SMWD	**Samnorwood**	**90.95**	**52**		IAmb	IAmb	10 34 56.2
	comp=Z,20nm,1.5s						
TIY	**Taiyuan**	**90.98**	**311**		*e*P	**P**	**10 34 52.1 +2.0**
TIY					pmax	pmax	
	comp=Z,30nm,0.5s						
K29M	**Barlow Dome**	**90.98**	**16**		P	**P**	**10 34 51.0 +1.5**
	baz=214						
ZEA	**Zeya**	**90.99**	**330**		*e*P	**P**	**10 34 51.3 +1.6**
ZEA					*e*		10 35 05.1
ZEA					pmax	pmax	
	comp=Z,10.0nm,1.1s						
F21K	**Alatna River**	**90.99**	**8**		IAmb	IAmb	10 34 57.0
	comp=Z,18nm,1.4s						
F21K	**Alatna River**	**90.99**	**8**		P	**P**	**10 34 50.5 +1.1**
	baz=200						
G23K	**Bananza Creek**	**91.00**	**10**		P	**P**	**10 34 50.9 +1.4**
	baz=203						
KSCO	**Kaye Shedlock'**	**91.08**	**48**		IAmb	IAmb	10 35 13.1
	comp=Z,40nm,1.6s						
MAYO	**Mayo, Yukon**	**91.19**	**16**		P	**P**	**10 34 52.1 +1.7**
	baz=215						
EGMT	**Eagleton**	**91.22**	**37**		IAmb	IAmb	10 35 06.3
	comp=Z,42nm,1.8s						
C17K	**DeLong Mountai**	**91.25**	**4**		P	**P**	**10 34 52.1 +1.5**
	baz=191						
MTO3	**Montecristo**	**91.28**	**75**		IAmb	IAmb	10 34 58.0
	comp=Z,30nm,1.3s						
J29N	**Klondike Camp**	**91.32**	**15**		P	**P**	**10 34 52.9 +1.9**
	baz=213						
COLD	**Coldfoot**	**91.46**	**9**		IAmb	IAmb	10 34 54.6
	comp=Z,16nm,1.2s						
COLD	**Coldfoot**	**91.46**	**9**		P	**P**	**10 34 53.2 +1.6**
	baz=203,SNR=8.3						
BILL	**Bilibino**	**91.50**	**353**	⇑	*i*P	**P**	**10 34 52.6 +0.9**
BILL					pmax	pmax	
	comp=Z,11nm,1.1s						
I27K	**Kandik River**	**91.54**	**13**		IAmb	IAmb	10 34 54.9
	comp=Z,26nm,1.4s						
I27K	**Kandik River**	**91.54**	**13**		P	**P**	**10 34 53.5 +1.5**
	baz=210						
C18K	**Utukok River**	**91.56**	**5**		IAmb	IAmb	10 35 05.4
	comp=Z,15nm,1.1s						
C18K	**Utukok River**	**91.56**	**5**		P	**P**	**10 34 53.3 +1.2**
	baz=192,SNR=12						
XLT	**XiLinHaoTe**	**91.56**	**317**		*e*P	**P**	**10 34 52.5 -0.2**
XLT					pP	pwP	10 35 05.8 +3.8
XLT					S	**S**	**10 45 45.5 -7.3**
XLT					sS	sS	10 46 12.7 +17
XLT					pmax	pmax	
	comp=Z,18nm,1.0s						
XLT					LR	LR	
	comp=Z,2μm,16.2s						
XLT					LR	LR	
	comp=Z,3μm,16.2s						
E20K	**Nigu River**	**91.66**	**7**		P	**P**	**10 34 53.8 +1.2**
	baz=197						
I28M	**Miner Creek**	**91.77**	**14**		P	**P**	**10 34 54.4 +1.3**
	baz=212,SNR=12						
J30M	**Hart River**	**91.88**	**16**		IAmb	IAmb	10 35 00.7
	comp=Z,22nm,1.4s						
J30M	**Hart River**	**91.88**	**16**		P	**P**	**10 34 55.1 +1.4**
	baz=215						
D20K	**Etivluk River**	**92.05**	**7**		IAmb	IAmb	10 34 57.0
	comp=Z,27nm,1.2s						
D20K	**Etivluk River**	**92.05**	**7**		P	**P**	**10 34 55.8 +1.5**
	baz=197						
I29M	**Ogilvie Camp,**	**92.06**	**14**		IAmb	IAmb	10 35 07.8
	comp=Z,34nm,1.6s						
I29M	**Ogilvie Camp,**	**92.06**	**14**		P	**P**	**10 34 56.1 +1.7**
	baz=213,SNR=7.7						
E21K	**Killik River**	**92.09**	**8**		IAmb	IAmb	10 35 07.8
	comp=Z,21nm,1.4s						
E21K	**Killik River**	**92.09**	**8**		P	**P**	**10 34 55.6 +1.2**
	baz=199						
H27K	**Steamboat Moun**	**92.10**	**13**		IAmb	IAmb	10 35 09.4
	comp=Z,26nm,1.2s						
H27K	**Steamboat Moun**	**92.10**	**13**		P	**P**	**10 34 56.6 +2.0**
	baz=210,SNR=16						
C19K	**Lookout Ridge**	**92.14**	**5**		P	**P**	**10 34 56.1 +1.4**
	baz=194						
G26K	**Porcupine Rive**	**92.29**	**12**		P	**P**	**10 34 56.9 +1.6**
	baz=208						
E23K	**Chandalar**	**92.31**	**9**		IAmb	IAmb	10 35 11.4
	comp=Z,15nm,1.3s						
E23K	**Chandalar**	**92.31**	**9**		P	**P**	**10 34 57.3 +1.7**
	baz=203						
HILR	**Hailar Array B**	**92.36**	**324**		P	**P**	**10 34 55.4 -0.9**
	comp=Z,2.5nm,0.5s,baz=142,slow=7.5,SNR=5.2						
	comp=Z,2.5nm,0.5s						
I30M	**Mount Dempster**	**92.40**	**15**		IAmb	IAmb	10 35 09.2
	comp=Z,27nm,1.1s						
I30M	**Mount Dempster**	**92.40**	**15**		P	**P**	**10 34 57.8 +1.7**
	baz=215,SNR=17						
F25K	**Christian Rive**	**92.53**	**11**		IAmb	IAmb	10 34 59.3
	comp=Z,20nm,1.6s						
F25K	**Christian Rive**	**92.53**	**11**		P	**P**	**10 34 58.2 +1.7**
	baz=207						
BMAR	**Burnt Mountain**	**92.56**	**11**		P	**P**	**10 34 57.5 +0.7**
G27K	**Doyon Strip**	**92.57**	**12**		P	**P**	**10 34 58.5 +1.7**
	baz=210						
D22K	**Ayikyak River**	**92.66**	**8**		IAmb	IAmb	10 35 06.0
	comp=Z,23nm,1.4s						
D22K	**Ayikyak River**	**92.66**	**8**		P	**P**	**10 34 58.9 +1.7**
	baz=200						
F26K	**Sheenjek River**	**92.88**	**11**		IAmb	IAmb	10 35 12.0
	comp=Z,19nm,1.4s						
F26K	**Sheenjek River**	**92.88**	**11**		P	**P**	**10 35 00.2 +2.1**
	baz=208						
D23K	**Nanushuk River**	**93.00**	**8**		IAmb	IAmb	10 35 13.6
	comp=Z,29nm,1.6s						
D23K	**Nanushuk River**	**93.00**	**8**		P	**P**	**10 35 00.4 +1.8**
	baz=202						
E25K	**Arctic Village**	**93.01**	**11**		IAmb	IAmb	10 35 14.4
	comp=Z,30nm,1.6s						
E25K	**Arctic Village**	**93.01**	**11**		P	**P**	**10 35 00.1 +1.4**
	baz=207						
HHC	**Hu-ho-hao-te**	**93.03**	**313**		*e*P	**P**	**10 35 00.1 +0.5**
HHC					pmax	pmax	
	comp=Z,22nm,0.8s						
HHC					pmax	pmax	
	comp=Z,190nm,6.0s						
KMI2	**Kunming**	**93.03**	**296**	⇑	P	**P**	**10 35 01.6 +1.5**
KMI2					pmax	pmax	
	comp=Z,53nm,1.0s						
KMI2					pmax	pmax	
	comp=Z,180nm,3.9s						
KMI2					LR	LR	
	comp=Z,310nm,20.4s						
KMI2					LR	LR	
	comp=Z,440nm,19.2s						
KMI2					LR	LR	
	comp=Z,490nm,18.0s						
ATAH	**Atahualpa**	**93.09**	**99**		LR	LR	11 09 41.1
	comp=Z,656nm,18.2s,baz=241,slow=31						
EPYK	**Eagle Plains**	**93.26**	**14**		IAmb	IAmb	10 35 07.3
	comp=Z,13nm,1.1s						
EPYK	**Eagle Plains**	**93.26**	**14**		P	**P**	**10 35 01.3 +1.4**
	baz=215						
H31M	**Peel River**	**93.37**	**16**		IAmb	IAmb	10 35 21.8
	comp=Z,18nm,1.3s						
H31M	**Peel River**	**93.37**	**16**		P	**P**	**10 35 02.0 +1.5**
	baz=217						
G29M	**Pine Creek**	**93.42**	**14**		IAmb	IAmb	10 35 04.8
	comp=Z,16nm,1.2s						
G29M	**Pine Creek**	**93.42**	**14**		P	**P**	**10 35 01.9 +1.3**
	baz=214						
W35A	**Tecumseh**	**93.45**	**53**		IAmb	IAmb	10 35 05.8
	comp=Z,22nm,1.1s						
R32A	**Long Quarter,**	**93.53**	**50**		IAmb	IAmb	10 35 06.9
	comp=Z,17nm,1.1s						
F28M	**Old Crow**	**93.63**	**13**		P	**P**	**10 35 03.1 +1.5**
	baz=212,SNR=6.7						
CMAR	**Chiang Mai Arr**	**93.69**	**288**		P	**P**	**10 35 04.0 +0.9**
	comp=Z,31nm,0.9s,baz=124,slow=3.1,SNR=136						
	comp=Z,31nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.69**	**288**			**P**	**10 35 03.6 +0.6**
CMAR	**Chiang Mai Arr**	**93.69**	**288**	*i*	P	**P**	**10 35 04.9 +1.9**
CMAR					pmax	pmax	
	comp=Z,32nm,0.9s						
E27K	**Coleen River**	**93.78**	**12**		IAmb	IAmb	10 35 05.5
	comp=Z,15nm,1.2s						
E27K	**Coleen River**	**93.78**	**12**		P	**P**	**10 35 03.9 +1.6**
	baz=210						
CHTO	**Chiang Mai**	**93.83**	**289**			**P**	**10 35 04.4 +0.8**
CHTO	**Chiang Mai**	**93.83**	**289**		P	**P**	**10 35 05.0 +1.3**
	comp=Z,27nm,1.2s						
CHTO	**Chiang Mai**	**93.83**	**289**		P	**P**	**10 35 04.4 +0.8**
CHTO					pmax	pmax	
	comp=Z,39nm,1.1s						
CHTO	**Chiang Mai**	**93.83**	**289**		P	**P**	**10 35 04.9 +1.3**
OK052	**Battle Ridge R**	**93.86**	**53**		IAmb	IAmb	10 35 06.7
	comp=Z,14nm,1.1s						
G30M	**tAoh Zraii Nji**	**93.88**	**14**		IAmb	IAmb	10 35 05.3
	comp=Z,24nm,1.2s						
G30M	**tAoh Zraii Nji**	**93.88**	**14**		P	**P**	**10 35 04.6 +1.8**
	baz=215						
B22K	**Teshekpuk Lake**	**93.95**	**7**		P	**P**	**10 35 04.4 +1.4**
	baz=200						
D25K	**Kavik River**	**93.96**	**10**		IAmb	IAmb	10 35 05.3
	comp=Z,15nm,1.5s						
D25K	**Kavik River**	**93.96**	**10**		P	**P**	**10 35 04.4 +1.2**
	baz=206						
BTO2	**Baotou**	**94.12**	**313**		*e*P	**P**	**10 35 06.3 +1.6**
BTO2					pP	pwP	10 35 24.1 +10
BTO2					sP	sP	10 35 30.2 +24
BTO2					S	**S**	**10 46 09.8 -6.0**
BTO2					sS	sS	10 46 40.3 +22
BTO2					SS	**SS**	**10 52 38.1 +1.3**
BTO2					pmax	pmax	
	comp=Z,37nm,1.2s						
BTO2					pmax	pmax	
	comp=Z,500nm,6.6s						
BTO2					LR	LR	
	comp=Z,1μm,15.4s						
BTO2					LR	LR	
	comp=Z,2μm,16.1s						
BTO2					LR	LR	
	comp=Z,2μm,15.4s						
G31M	**Satah River**	**94.28**	**15**		IAmb	IAmb	10 35 09.0
	comp=Z,19nm,1.0s						
G31M	**Satah River**	**94.28**	**15**		P	**P**	**10 35 05.8 +1.2**
	baz=217						
F30M	**Barrier River**	**94.49**	**14**		P	**P**	**10 35 07.2 +1.6**
	baz=216						
E28M	**Babbage River**	**94.54**	**12**		IAmb	IAmb	10 35 08.6
	comp=Z,12nm,1.1s						
E28M	**Babbage River**	**94.54**	**12**		P	**P**	**10 35 07.3 +1.6**
	baz=212						
C27K	**Jago River**	**94.66**	**10**		IAmb	IAmb	10 35 20.9
	comp=Z,20nm,1.6s						
C27K	**Jago River**	**94.66**	**10**		P	**P**	**10 35 07.5 +1.2**
	baz=208						
E29M	**Blow River**	**94.68**	**13**		P	**P**	**10 35 07.3 +0.9**
	baz=214						
D27M	**Malcolm River**	**94.81**	**11**		IAmb	IAmb	10 35 22.6
	comp=Z,22nm,1.5s						
D27M	**Malcolm River**	**94.81**	**11**		P	**P**	**10 35 08.6 +1.6**
	baz=211						
F31M	**Tsiigehtchic**	**94.82**	**15**		P	**P**	**10 35 08.2 +1.2**
	baz=218,SNR=23						
YAK	**Yakutsk**	**95.25**	**337**	⇓	*i*P	**P**	**10 35 09.7 +0.6**
YAK					pmax	pmax	
	comp=Z,15nm,0.9s						
INK	**Inuvik**	**95.56**	**14**		IAmb	IAmb	10 35 23.5
	comp=Z,17nm,1.5s						
INK	**Inuvik**	**95.56**	**14**		P	**P**	**10 35 11.6 +1.2**
	baz=218,SNR=6.4						
LZH	**Lanzhou**	**96.49**	**306**		*e*P	**P**	**10 35 16.7 +1.1**
LZH					sP	pwP	10 35 35.8 +11
LZH					S	**S**	**10 46 38.5 +1.9**
LZH					pmax	pmax	
	comp=Z,20nm,1.2s						
TNCH	**TengChong**	**96.52**	**294**		P	**P**	**10 35 17.0 +0.9**
TNCH					pP	pwP	10 35 29.1 +3.8
TNCH					sP	sP	10 35 36.5 +19
TNCH					S	S	10 46 27.9 -10
TNCH					sS	sS	10 46 55.7 +16
TNCH					pmax	pmax	
	comp=Z,22nm,1.3s						
TNCH					pmax	pmax	
	comp=Z,370nm,4.9s						
TNCH					LR	LR	
	comp=Z,420nm,11.0s						
TNCH					LR	LR	
	comp=Z,450nm,13.0s						
TNCH					LR	LR	
	comp=Z,600nm,16.8s						
LZDM	**Lanzhou Array**	**96.55**	**306**		P	**P**	**10 35 16.4 +0.3**
	comp=Z,12nm,1.0s,baz=113,slow=3.4,SNR=17						
	comp=Z,12nm,1.0s						
YKA	**Yellowknife Ar**	**97.20**	**24**		P	Pdif	10 35 19.2 +1.1
	comp=Z,1.7nm,0.9s,baz=246,slow=4.5,SNR=16						
	comp=Z,1.7nm,0.9s						
YKA	**Yellowknife Ar**	**97.20**	**24**		P	Pdif	10 35 18.2 +0.2
C36M	**Paulatuk**	**98.63**	**16**		IAmb	IAmb	10 35 27.8
	comp=Z,10nm,1.2s						
C36M	**Paulatuk**	**98.63**	**16**		P	Pdif	10 35 25.6 +1.3
	baz=226						
ULN	**Ulaanbaatar**	**98.98**	**318**		P	Pdif	10 35 27.2 +0.7
ULN	**Ulaanbaatar**	**98.98**	**318**	⇑	*i*P	Pdif	10 35 27.5 +0.9
ULN					pmax	pmax	
	comp=Z,3.0nm,1.1s						
ULN	**Ulaanbaatar**	**98.98**	**318**		P	Pdif	10 35 29.2 +2.6
SONM	**Songino Array**	**99.37**	**318**		P	**Pdif**	**10 35 28.1 -0.1**
	comp=Z,0.4nm,0.4s,baz=112,slow=2.7,SNR=4.7						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**99.37**	**318**		P	**Pdif**	**10 35 28.9 +0.6**
A36M	**Sachs Harbour**	**100.20**	**14**		P	**Pdif**	**10 35 32.8 +1.6**
	baz=226						
GTA2	**Gaotai**	**100.75**	**308**		*e*P	**Pdif**	**10 35 35.8 +1.2**
GTA2					sP	pwP	10 35 57.9 +14
GTA2					pmax	pmax	
	comp=Z,4.0nm,1.6s						
WMQ	**Urumqi**	**110.63**	**310**		*e*PKP	**PKiKP**	**10 40 14.6 -4.0**
ZALV	**Zalesovo Beam**	**114.07**	**320**		PKiKP	**PKiKP**	**10 40 24.2 -0.5**
	comp=Z,1.6nm,0.8s,baz=96,slow=3.0,SNR=5.7						
ZALV					PP	**PP**	**10 41 19.6 +0.1**
	comp=Z,1.2nm,0.7s,baz=70,slow=4.7,SNR=2.5						
MK31	**Makanchi Array**	**114.88**	**312**	⇑	*i*PKiKP	PKPdf	10 40 25.9 -0.7
MKAR	**Makanchi Array**	**114.88**	**312**		PKP	PKPdf	10 40 26.3 -0.3
	comp=Z,1.1nm,0.6s,baz=90,slow=2.6,SNR=13						
BDFB	**Brasilia**		**115.44**	**121**	PKKPbc	PKKPbc	10 51 02.5 +0.6
	comp=Z,3.7nm,0.8s,baz=7.0,slow=1.2,SNR=3.8						
TARG	**Taragay, Kyrgy**	**117.48**	**306**			**PKiKP**	**10 40 33.0 +0.7**
TARG	**Taragay, Kyrgy**	**117.48**	**306**		PKiKP	**PKiKP**	**10 40 33.0 +0.7**
KURK	**Kurchatov**	**117.63**	**317**			**PKPdf**	**10 40 31.5 -0.2**
KURK	**Kurchatov**	**117.63**	**317**	⇑	*i*PKiKP	**PKPdf**	**10 40 31.2 -0.5**
KURBB	**Kurchatov Arra**	**117.69**	**316**		PKP	**PKPdf**	**10 40 31.3 -0.5**
	comp=Z,2.1nm,0.8s,baz=100,slow=1.8,SNR=19						
KURBB					PP	**PP**	**10 41 40.2 -4.8**
	comp=Z,0.8nm,0.6s,baz=119,slow=9.1,SNR=7.9						
NRN	**Naryn**	**118.79**	**306**			**PKiKP**	**10 40 35.9 +1.1**
NRN	**Naryn**	**118.79**	**306**		PKiKP	**PKiKP**	**10 40 35.9 +1.1**
BOOM	**Boomskoye usch**	**118.94**	**307**			**PKiKP**	**10 40 35.2 +0.4**
BOOM	**Boomskoye usch**	**118.94**	**307**		PKiKP	**PKiKP**	**10 40 35.2 +0.4**
AAK	**Ala-Archa**	**120.01**	**307**			**PKPdf**	**10 40 36.9 +0.1**
AAK	**Ala-Archa**	**120.01**	**307**	*d*	*i*PKiKP	**PKiKP**	**10 40 37.2 +0.3**
BTK	**Batken**	**122.61**	**304**			**PKiKP**	**10 40 42.3 +0.3**
BTK	**Batken**	**122.61**	**304**		PKiKP	**PKiKP**	**10 40 42.3 +0.3**
BVAR	**Borovoye Array**	**122.68**	**319**		PKP	**PKPdf**	**10 40 41.5 +0.2**
	comp=Z,3.9nm,0.8s,baz=93,slow=3.0,SNR=12						
BVAR					PP	**PP**	**10 42 18.1 -1.0**
	comp=Z,1.5nm,0.8s,baz=79,slow=7.5,SNR=2.5						
BORK	**Borovoye**	**122.72**	**319**			**PKiKP**	**10 40 41.9 +0.3**
BORK	**Borovoye**	**122.72**	**319**		PKiKP	**PKiKP**	**10 40 41.9 +0.3**
KK31	**Karatay Array**	**122.96**	**308**

ERBR				pmax	pmax		
	comp=Z,25nm,1.1s						
ERBR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KARS	**Kars**	**143.50 308**		**PKPdf**		**10 41 20.2**	**-0.7**
KARS	**Kars**	**143.50 308**	PKIKP	**PKPdf**		**10 41 20.2**	**-0.7**
MNK	**Minsk**	**143.94 338**	*i* PKiKP	**PKiKP**		**10 41 24.5**	**+0.1**
	comp=E,26nm,0.9s						
MNK			*i* PKiKP	**PKiKP**		**10 41 24.5**	**+0.1**
	comp=N,20nm,0.9s						
MNK			*i* PKiKP	**PKiKP**		**10 41 24.5**	**+0.1**
	comp=Z,14nm,0.8s,baz=37						
MNK			*i* pPKiKP	pPKiKP		10 41 39.7	+14
MNK			*i* PP	**PP**		**10 44 35.3**	**+1.1**
MNK			*i* PPP	PPP		10 47 46.1	
MNK			*i* SKS	**SKSdf**		**10 48 25.5**	**-4.9**
MNK			*i* SS	**SS**		**11 03 17.0**	**-0.5**
MNK			*i* SSS	SSS		11 08 40.9	
MNK	**Minsk**	**143.94 338**	*i* PKiKP	**PKiKP**		**10 41 24.5**	**+0.1**
MNK			*i*			10 44 35.3	
MNK			*i* PPP	PPP		10 47 46.1	
MNK			*i*			10 48 25.5	
MNK			*i* SS	SS		11 03 17.0	-0.5
MNK			*i* SSS	SSS		11 08 40.9	
MNK				pmax	pmax		
	comp=Z,14nm,0.8s						
MNK				pmax	pmax		
	comp=E,26nm,0.9s						
MNK				pmax	pmax		
	comp=N,20nm,0.9s						
MNK				MLR	MLR		
	comp=N,540nm,22.0s						
GURO	**Guroymak-BITLI**	**144.88 305**		**PKPdf**		**10 41 24.1**	**+0.7**
SUW	**Suwalki**	**145.88 341**	*e*PKP	**PKPab**		**10 41 26.1**	**+0.7**
MBAR	**Mbarara**	**146.10 230**	PKPbc	**PKPbc**		**10 41 27.5**	**+0.5**
	comp=N,4.7nm,0.3s,baz=99,slow=4.8,SNR=16						
MBAR	**Mbarara**	**146.10 230**		**PKPbc**		**10 41 27.4**	**+0.3**
MBAR	**Mbarara**	**146.10 230**	PKP2	**PKPbc**		**10 41 27.4**	**+0.3**
AKASG	**Malin Array Be**	**146.34 332**	PKPbc	**PKPbc**		**10 41 26.5**	**+0.1**
	comp=N,22nm,0.8s,baz=41,slow=4.3,SNR=65						
AKASG	**Malin Array Be**	**146.34 332**		**PKPdf**		**10 41 26.0**	**+0.8**
AKASG	**Malin Array Be**	**146.34 332**	PKP2	**PKPdf**		**10 41 26.0**	**+0.8**
AKBB	**Malin Array Si**	**146.34 332**		**PKPbc**		**10 41 26.4**	**0.0**
AKBB	**Malin Array Si**	**146.34 332**	PKP2	**PKPbc**		**10 41 26.4**	**0.0**
KIEV	**Kiev**	**146.35 332**		**PKPdf**		**10 41 25.8**	**+0.6**
KIEV	**Kiev**	**146.35 332**	PKIKP	**PKPdf**		**10 41 25.8**	**+0.6**
EKA	**Eskdalemuir Ar**	**146.75 9**	PKPbc	**PKPbc**		**10 41 28.1**	**+0.6**
	comp=N,8.5nm,0.7s,baz=326,slow=2.4,SNR=8.6						
ARPR	**Arapgir-MALATY**	**147.45 308**		**PKPab**		**10 41 32.0**	**-0.2**
BEL	**Belsk**	**148.49 341**	*e*PKP	**PKiKP**		**10 41 34.0**	**+0.1**
SORM	**Soroca**	**148.60 330**	⇓P	**PKiKP**		**10 41 33.9**	**-0.4**
SORM	**Soroca**	**148.60 330**	⇓PKP2	**PKiKP**		**10 41 33.9**	**-0.4**
GAZ	**Gaziantep**	**148.93 305**		**PKiKP**		**10 41 35.4**	**0.0**
KWP	**Kalwaria Pacla**	**149.76 337**	*e*PKP	**PKPbc**		**10 41 36.3**	**+0.7**
FLTG	**Flechtingen**	**150.01 353**	*e*PKPbc	**PKiKP**		**10 41 37.0**	**0.0**
	baz=12,slow=2.6						
OJC	**Ojcow**	**150.21 341**	*e*PKP	**PKiKP**		**10 41 38.0**	**+0.4**
GIRR	**Girov**	**150.32 330**	⇓P	**PKiKP**		**10 41 38.2**	**+0.3**
IBBN	**Ibbenburen**	**150.33 357**	*e*PKPbc	**PKiKP**		**10 41 38.2**	**+0.5**
	baz=12,slow=2.6						
BURAR	**Bucovina Array**	**150.40 332**	⇓P	**PKiKP**		**10 41 39.9**	**+1.7**
BURAR	**Bucovina Array**	**150.40 332**	⇓PKIKP	**PKiKP**		**10 41 39.9**	**+1.7**
TLCR		**150.41 325**	⇑P	**PKPbc**		**10 41 37.9**	**+0.6**
TLCR		**150.41 325**	⇑PKIKP	**PKPbc**		**10 41 37.9**	**+0.6**
BR131	**Keskin Array S**	**150.53 312**		**PKPbc**		**10 41 38.0**	**0.0**
BR131	**Keskin Array S**	**150.53 312**	PKIKP	**PKPbc**		**10 41 38.0**	**0.0**
BRTR	**Keskin Array B**	**150.53 312**	PKPbc	**PKPbc**		**10 41 38.5**	**+0.4**
	comp=N,15nm,1.0s,baz=149,slow=3.2,SNR=37						
BRTR	**Keskin Array B**	**150.53 312**		**PKPbc**		**10 41 37.5**	**-0.5**
BRTR	**Keskin Array B**	**150.53 312**	PKIKP	**PKPbc**		**10 41 37.5**	**-0.5**
KSP	**Ksiaz**	**150.57 346**	*e*PKP	**PKiKP**		**10 41 39.2**	**+1.0**
TESR	**Tescani**	**150.57 329**	⇓P	**PKPbc**		**10 41 38.2**	**+0.5**
CLZ	**Clausthal**	**150.59 354**	*e*PKPbc	**PKiKP**		**10 41 38.7**	**+0.3**
	baz=12,slow=2.6						
KIRS	**Kirsehir-Merke**	**150.60 311**	⇑P	**PKiKP**		**10 41 39.1**	**+0.3**
NIE	**Niedzica**	**150.76 340**	*e*PKP	**PKiKP**		**10 41 40.2**	**+1.4**
CLL	**Collm**	**150.76 350**	*i* PKIKP	**PKiKP**		**10 41 38.8**	**+0.2**
CLL			*i*			10 41 44.0	
CLL				pmax	pmax		
	comp=Z,69nm,1.5s						
CLL				pmax	pmax		
	comp=Z,40nm,1.0s						
CLL	**Collm**	**150.76 350**	*e*PKPdf	**PKPdf**		**10 41 32.0**	**-0.4**
CLL			*i* PKPbc	**PKiKP**		**10 41 38.8**	**+0.2**
	comp=Z,69nm,1.5s						
CLL			*i* PKPab	**PKPab**		**10 41 44.0**	**-1.0**
	comp=Z,40nm,1.0s						
CFR	**Carcaliu**	**150.77 326**	⇓P	**PKiKP**		**10 41 39.3**	**+0.4**
TPGR	**Topolog**	**150.84 325**	⇑P	**PKiKP**		**10 41 40.1**	**+1.0**
OSTC	**Ostas**	**150.85 346**	⇑*e*PKP	**PKiKP**		**10 41 39.7**	**+0.8**
OSTC	**Ostas**	**150.85 346**	*e*PKIKP	**PKiKP**		**10 41 39.7**	**+0.8**
VRI	**Vrincioaia**	**151.00 328**	⇓P	**PKPbc**		**10 41 39.3**	**+0.5**
VRI	**Vrincioaia**	**151.00 328**	⇓PKIKP	**PKPbc**		**10 41 39.3**	**+0.5**
DPC	**Dobruska-Polom**	**151.02 345**	⇑*e*PKP	**PKiKP**		**10 41 40.0**	**+0.7**
DPC	**Dobruska-Polom**	**151.02 345**	*e*PKIKP	**PKiKP**		**10 41 40.0**	**+0.7**
BRG	**Berggiesshubel**	**151.02 349**	*e*PKPbc	**PKiKP**		**10 41 39.7**	**+0.5**
	baz=12,slow=2.6						
BRG	**Berggiesshubel**	**151.02 349**	*e*PKP	**PKPbc**		**10 41 36.1**	**-2.5**
BRG			Amp			10 41 37.1	
	comp=Z,8.1nm,1.3s						
BRG	**Berggiesshubel**	**151.02 349**	P	**PKiKP**		**10 41 39.6**	**+0.5**
BRG			Amp			10 41 41.7	
	comp=Z,19nm,0.9s						
BRG	**Berggiesshubel**	**151.02 349**	P	**PKPab**		**10 41 44.7**	**-1.3**
BRG			Amp			10 41 45.6	
	comp=Z,20nm,0.8s						
BRG	**Berggiesshubel**	**151.02 349**	P	**PKPab**		**10 41 47.3**	**+1.3**
BRG			Amp			10 41 48.4	
	comp=Z,22nm,0.9s						
BRG			pPKP	**sPKPab**		**10 41 52.7**	**+4.8**
BRG			Amp			10 41 53.7	
	comp=Z,28nm,1.0s						
PLOR	**Plostina**	**151.05 328**	⇑P	**PKPbc**		**10 41 39.3**	**+0.4**
TURR	**Turia**	**151.21 329**	⇓P	**PKiKP**		**10 41 41.4**	**+1.6**
MORC	**Moravsky Berou**	**151.25 343**	⇑P	**PKiKP**		**10 41 40.6**	**+0.8**
MORC	**Moravsky Berou**	**151.25 343**	⇑PKIKP	**PKiKP**		**10 41 40.6**	**+0.8**
MORC	**Moravsky Berou**	**151.25 343**	*e*PKP	**PKPbc**		**10 41 39.7**	**+0.5**
LANS	**Liptovska Anna**	**151.26 340**	*e*PKIKP	**PKiKP**		**10 41 41.8**	**+2.0**
LANS	**Liptovska Anna**	**151.26 340**	*e*PKP	**PKiKP**		**10 41 41.8**	**+2.0**
KECS	**Kecovo**	**151.51 339**	*e*PKIKP	**PKiKP**		**10 41 43.8**	**+3.5**
KECS			*e*			10 41 53.4	
KECS	**Kecovo**	**151.51 339**	*e*PKP	**PKiKP**		**10 41 43.8**	**+3.5**
KECS			*e*			10 41 53.4	
MMAI	**Mount Meron Ar**	**151.51 298**	PKPbc	**PKiKP**		**10 41 42.0**	**+1.1**
	comp=Z,41nm,1.1s,baz=100,slow=1.9,SNR=15						
MAUC	**Maruska**	**151.54 343**	⇑*e*PKP	**PKiKP**		**10 41 41.4**	**+1.0**
MOX	**Moxa**	**151.62 351**	*e*PKPbc	**PKiKP**		**10 41 41.5**	**+1.0**
	baz=12,slow=2.6						
MLR	**Muntele Rosu**	**151.65 328**		**PKPbc**		**10 41 40.6**	**+0.2**
MLR	**Muntele Rosu**	**151.65 328**	⇑P	**PKiKP**		**10 41 40.9**	**0.0**
MLR	**Muntele Rosu**	**151.65 328**	⇑PKIKP	**PKiKP**		**10 41 40.9**	**0.0**
PLN	**Plauen**	**151.69 351**	*e*PKPbc	**PKiKP**		**10 41 41.4**	**+0.8**
	baz=12,slow=2.6						
TANN	**Tannenbergstha**	**151.72 350**	*e*PKPbc	**PKiKP**		**10 41 41.3**	**+0.6**
	baz=12,slow=2.6						
PRU	**Pruhonice**	**151.75 347**	⇑*e*PKP	**PKiKP**		**10 41 41.6**	**+0.9**
PRU	**Pruhonice**	**151.75 347**	*e*PKIKP	**PKiKP**		**10 41 41.6**	**+0.9**
CJR	**Cluj-Napoca**	**151.79 333**	⇓P	**PKiKP**		**10 41 42.0**	**+1.0**
CJR	**Cluj-Napoca**	**151.79 333**	⇓PKIKP	**PKiKP**		**10 41 42.0**	**+1.0**
MDUB	**Mudurnu**	**151.81 315**		**PKiKP**		**10 41 41.8**	**+0.5**
VRAC	**Vranov**	**151.92 344**	⇓P	**PKiKP**		**10 41 43.6**	**+2.5**
VRAC	**Vranov**	**151.92 344**	⇓PKIKP	**PKiKP**		**10 41 43.6**	**+2.5**
VRAC	**Vranov**	**151.92 344**	*e*PKP	**PKiKP**		**10 41 41.3**	**+0.2**
JAVC	**Velka Javorina**	**152.05 342**	*e*PKP	**PKiKP**		**10 41 43.2**	**+1.7**
DRGR		**152.09 334**	⇑P	**PKiKP**		**10 41 42.3**	**+0.6**
DRGR		**152.09 334**	⇑PKIKP	**PKiKP**		**10 41 42.3**	**+0.6**
VOIR		**152.12 329**	⇑P	**PKiKP**		**10 41 42.8**	**+1.0**
VOIR		**152.12 329**	⇑PKIKP	**PKiKP**		**10 41 42.8**	**+1.0**
MANZ	**Manzenberg**	**152.19 351**	*e*PKPbc	**PKiKP**		**10 41 42.2**	**+0.5**
	baz=12,slow=2.6						
PSZ	**Piszkesteto**	**152.20 339**		**PKPab**		**10 41 51.4**	**+0.2**
PSZ	**Piszkesteto**	**152.20 339**	⇓P	**PKiKP**		**10 41 43.4**	**+1.6**
PSZ	**Piszkesteto**	**152.20 339**	⇓PKIKP	**PKiKP**		**10 41 43.4**	**+1.6**
KRUC	**Moravsky**	**152.20 344**	*e*PKP	**PKiKP**		**10 41 41.9**	**+0.2**
ZVC	**Zvikov**	**152.35 347**	⇑*e*PKP	**PKPab**		**10 41 47.4**	**-4.2**
TNS	**Taunus Mts**	**152.36 356**	*e*PKPab	**PKPab**		**10 41 52.2**	**+0.4**
	baz=11,slow=4.7						
ARR	**Arges**	**152.37 330**	⇓P	**PKiKP**		**10 41 43.4**	**+1.1**
MODS	**Modra-Piesok**	**152.60 342**	*e*PKP	**PKiKP**		**10 41 44.5**	**+1.9**
MODS			*e*			10 41 53.8	
BORA	**Eskisehir**	**152.60 315**		**PKiKP**		**10 41 43.5**	**+0.5**
GRF	**Grafenberg Arr**	**152.60 352**	*e*PKPab	**PKPab**		**10 41 52.8**	**+0.1**
	baz=11,slow=4.7						
CSS	**Mathiatis**	**152.62 303**		**PKiKP**		**10 41 43.4**	**+0.3**
GEC2	**GERESS Array S**	**153.01 348**		**PKPab**		**10 41 53.2**	**-1.4**
GEC2	**GERESS Array S**	**153.01 348**	*e*PKPbc	**PKiKP**		**10 41 46.1**	**+2.6**
	baz=12,slow=2.6						
GERES	**GERESS Array B**	**153.01 348**	PKPbc	**PKiKP**		**10 41 44.0**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=118,slow=2.3,SNR=4.6						
WLF	**Walferdange**	**153.03 359**	*e*PKPab	**PKPab**		**10 41 55.8**	**+1.4**
	baz=11,slow=4.7						
CONA	**Conrad Observa**	**153.38 344**	*e*pPKP	**PKPab**		**10 41 54.9**	**-1.3**
	comp=Z,35nm,1.2s						
RONA	**Rosalia, Austr**	**153.48 343**	*e*PKP	**PKPab**		**10 41 53.8**	**-2.8**
	comp=Z,31nm,1.1s						
BZS	**Buzias**	**153.49 334**	⇓P	**PKPbc**		**10 41 44.4**	**+0.1**
ELND	**Elena**	**153.50 325**	⇑P	**PKPab**		**10 41 58.2**	**+1.4**
HERR	**Herculane**	**153.74 332**	⇑P	**PKiKP**		**10 41 46.0**	**+1.0**
MOA	**Molln**	**153.84 346**	*i* PKP	**PKPab**		**10 41 54.1**	**-3.9**
	comp=Z,12nm,1.2s						
MOA	**Molln**	**153.84 346**	*e*PKPab	**PKPab**		**10 41 59.2**	**+1.2**
	baz=11,slow=4.7						
ARSA	**Arzberg**	**154.10 344**	*i* pPKP	**PKPab**		**10 41 57.3**	**-1.8**
	comp=Z,9.1nm,1.0s						
ARSA	**Arzberg**	**154.10 344**	*e*PKPab	**PKPab**		**10 42 00.2**	**+1.1**
	baz=11,slow=4.7						
BIOA	**Bad Ischl, Aus**	**154.12 347**	*i* pPKiKP	**PKPab**		**10 41 58.7**	**-0.5**
	comp=Z,31nm,1.3s						
RJOB	**Jochberg**	**154.25 348**	*e*PKPab	**PKPab**		**10 42 01.0**	**+1.2**
	baz=11,slow=4.7						
BFO	**Black Forest**	**154.25 355**	*e*PKPab	**PKPab**		**10 42 00.7**	**+1.0**
	baz=11,slow=4.7						
LESA	**Schwarzleotal**	**154.57 348**	*i* pPKiKP	**PKPab**		**10 41 59.2**	**-2.0**
	comp=Z,22nm,1.4s						
SOKA	**Soboth**	**154.76 344**	*i* pPKiKP	**PKPab**		**10 42 01.1**	**-0.9**
	comp=Z,18nm,0.9s						
KBA	**Koelnbreinsper**	**154.77 347**	*e*PKPbc	**PKiKP**		**10 41 49.2**	**+1.9**
	baz=12,slow=2.6						
WATA	**Walderalm**	**154.85 350**	*i* pPKiKP	**PKPab**		**10 42 03.0**	**+0.6**
	comp=Z,18nm,1.1s						
WTTA	**Wattenberg**	**154.91 350**	*e*PKP	**PKPab**		**10 41 57.1**	**-5.7**
	comp=Z,12nm,1.1s						
MOTA	**Moosalm**	**154.91 351**	*e*PKP	**PKPab**		**10 41 56.5**	**-6.3**
	comp=Z,14nm,1.2s						
SQTA	**Sankt Quirin**	**155.02 350**	*e*PKP	**PKPab**		**10 41 57.2**	**-6.0**
	comp=Z,13nm,1.0s						
SQTA	**Sankt Quirin**	**155.02 350**	*e*PKPab	**PKPab**		**10 42 03.5**	**+0.4**
	baz=11,slow=4.7						
OBKA	**Obir**	**155.03 345**	*e*pPKiKP	**PKPab**		**10 42 01.0**	**-2.2**
	comp=Z,14nm,1.6s						
MYKA	**Terra Mystica**	**155.13 346**	*i* pPKiKP	**PKPab**		**10 42 01.7**	**-1.9**
	comp=Z,18nm,1.5s						
DAVA	**Damuels**	**155.13 353**	*i* pPKiKP	**PKPab**		**10 42 01.6**	**-2.1**
	comp=Z,15nm,1.0s						
DAVA	**Damuels**	**155.13 353**	*e*PKPab	**PKPab**		**10 42 04.8**	**+1.1**
	baz=11,slow=4.7						
ABTA	**Abfaltersbach**	**155.25 348**	*i* pPKiKP	**PKPab**		**10 42 02.0**	**-2.1**
	comp=Z,18nm,1.1s						
FETA	**Feichten**	**155.28 351**	*e*pPKiKP	**PKPab**		**10 42 04.0**	**-0.4**
	comp=Z,20nm,1.1s						
PRED	**Cave del Predi**	**155.32 346**		**PKPab**		**10 42 05.0**	**+0.6**
ESDC	**Sonseca Array**	**161.29 23**	PKP	**PKPdf**		**10 41 47.5**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=3.6,slow=2.7,SNR=4.4						
ESDC			PKPab	**pPKPab**		**10 42 31.7**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=314,slow=3.6,SNR=4.9						
DBIC	**Dimbokro**	**161.35 147**	PKP	**PKPdf**		**10 41 47.2**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=253,slow=5.3,SNR=3.1						
KEST	**Kesra**	**166.49 346**	PKPab	**PKPab**		**10 42 54.8**	**+1.5**
	comp=Z,10nm,0.9s,baz=62,slow=5.0,SNR=5.7						

IDC 11 10:24:56.2±2.1, 6.72S×130.39E, h179km±29km, mb3.2/2, mbtmp3.5/6, Error ellipse: s-maj=68.4km s-min=15.9km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.87**	**9**	P		Pn		10 26 22.5	+0.9
	3.9nm,0.4s,baz=273,slow=22,SNR=1.7								
SIJI				S		Sn		10 27 28.7	-0.2
	3.8nm,0.4s,baz=271,slow=23,SNR=1.5								
FITZ	**Fitzroy Crossi**	**12.23**	**202**	P		Pn		10 27 45.3	+0.7
	0.9nm,0.3s,baz=32,slow=11,SNR=7.4								
FITZ				S		Sn		10 29 48.2	-12
	2.4nm,0.3s,baz=354,slow=19,SNR=7.8								
WRA	**Warramunga Arr**	**13.70**	**164**	P		Pn		10 28 01.7	-1.6
	0.3nm,0.5s,baz=344,slow=13,SNR=7.3								
ASAR	**Alice Springs**	**17.19**	**169**	P		P		10 28 45.3	+0.6
	0.3nm,0.9s,baz=344,slow=11,SNR=4.4								
MKAR	**Makanchi Array**	**68.20**	**327**	P		P		10 35 36.7	-0.6
	0.4nm,0.5s,baz=122,slow=7.4,SNR=6.3								
	0.4nm,0.5s								
KURBB	**Kurchatov Arra**	**72.47**	**328**	P		P		10 36 03.8	+0.7
	0.5nm,0.6s,baz=124,slow=6.9,SNR=5.0								
	0.5nm,0.6s								

IDC 11 10:32:06.4±2.4, 9.40N×123.24E, h0km, mb3.7/4, mbtmp3.7/4, MS4.6/1, Error ellipse: s-maj=192.9km s-min=26.0km az=66.0, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**25.11**	**43**	LR		LR		10 45 24.9	
	comp=Z,1μm,21.5s,baz=172,slow=32								
FITZ	**Fitzroy Crossi**	**27.42**	**175**	P		P		10 37 54.2	+0.2
	1.4nm,0.8s,baz=24,slow=12,SNR=1.1								
	1.4nm,0.8s								
WRA	**Warramunga Arr**	**31.14**	**159**	P		P		10 38 26.2	-0.8
	0.3nm,0.5s,baz=337,slow=9.5,SNR=1.1								
	0.3nm,0.5s								
ASAR	**Alice Springs**	**34.47**	**163**	P		P		10 38 56.5	+0.3
	0.3nm,0.3s,baz=339,slow=7.7,SNR=12								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**50.96**	**325**	P		P		10 41 09.7	-0.1
	1.2nm,0.7s,baz=134,slow=8.7,SNR=5.6								
	1.2nm,0.7s								

*IDC **11** 10:36:59.7±0.3, 15.76N×147.95E, h0km, mb5.2/40, mbtmp5.2/43, ML5.2/3, MS4.7/55, Error ellipse: s-maj=12.4km s-min=8.5km az=94.0*

*DJA **11** 10:37:01.6±1.4, 16°N±3'×14°8E±', h10km±9km, M5.5/84, mB6.0/41, mb5.5/84, MLv5.3/1, Mw5.6/25, Mw(mB)5.6/41, MwMwp5.3/3, Mwp5.5/3*

*MOS **11** 10:37:01.5±0.9, 15.75N×147.84E, h21km, mb5.5/65, MS4.8/8, Error ellipse: s-maj=7.9km s-min=4.4km az=114.1*

*GFZ **11** 10:37:01.9, 15.76N×147.86E, h10km, MW5.3, Moment Tensor Solution. s30 Moment tensor: Mrr=0.75; Mθθ=0.16; Mϕϕ=0.91; Mrθ=0.08; Mrϕ=0.33; Mθϕ=0.54; Fault plane solution: NP1:ϕs=190.00000°, δ61.00000°, λ=-95.00000°. NP2:ϕs=23.00000°, δ30.00000°, λ=-78.00000°. Principal axes: T 1.1600, Plg16.0000°, Azm285.0000°; N -0.2500, Plg6.0000°, Azm193.0000°; P -0.9100, Plg73.0000°, Azm85.0000°;*

*NEIC **11** 10:37:02.5, 15.79N×147.87E, h18km*

*BJI **11** 10:37:02.2, 16.18N×147.60E, h4km, mB5.4/40, mb5.5/87, Ms5.0/82, Ms7 4.8/80*

*NEIC **11** 10:37:02.3±1.1, 15.78N±0.08×147.88E±0.09, h10km±1km, mb5.3/490, Mww5.4/23, Error ellipse: s-maj=14.7km s-min=12.8km az=105.0*

*NEIC **11** 10:37:02.5, 15.59N×147.87E, h18km, Moment Tensor Solution. Duration: 2s5 Moment tensor: Scale 10^17 Nm; Mrr=1.11; Mθθ=0.06; Mϕϕ=1.17; Mrθ=0.56; Mθϕ=0.40; Mrϕ=0.66; Fault plane solution: Mo1.49000×10^17 NP1:ϕs=0.38000°, δ30.29000°, λ=-117.20000°. NP2:ϕs=211.14000°, δ63.35000°, λ=-75.05000°. Principal axes: T 1.5315, Plg17.0000°, Azm290.0000°; N -0.0889, Plg13.0000°, Azm24.0000°; P -1.4425, Plg68.0000°, Azm150.0000°;*

*GCMT **11** 10:37:06.3±0.1, 15.70N±0.01×148.06E±0.01, h12km, MW5.3/133, Moment Tensor Solution. s76, c121; s133, c232; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=0.80±.02; Mθθ=0.19±.01; Mϕϕ=0.99±.01; Mrθ=0.41±.05; Mrϕ=0.41±.01; Mθϕ=0.33±.04; Best double couple: Mo1.11600×10^17 NP1:ϕs=354.00000°, δ38.00000°, λ=127.00000°. NP2:ϕs=217.00000°, δ61.00000°, λ=65.00000°. Principal axes: T 1.2170, Plg13.0000°, Azm290.0000°; N -0.2020, Plg22.0000°, Azm25.0000°; P -1.0150, Plg65.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 10:37:02.7±0.4, 15.78N±0.03×147.90E±0.04, h18km±1km,

h18km:pP-P, n1001, σ1s19/846, mb5.4/422, MS4.7/94, 21C-6D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**2.10**	**256**			**Pn**		**10 37 36.9**	**-0.1**
GUMO	**Guam**	**3.65**	**234**	Pn		**Pn**		**10 37 58.4**	**+0.1**
	232nm,0.3s,baz=77,slow=3.2,SNR=50								
GUMO				Sn		**Sn**		**10 38 38.2**	**-2.8**
	899nm,0.3s,baz=162,slow=19,SNR=10								
GUMO				LR		LR		10 38 52.6	
	comp=Z,4μm,19.4s,baz=72,slow=31								
	418nm,0.3s								
GUMO	**Guam**	**3.65**	**234**			**Pn**		**10 37 58.6**	**+0.2**
GUMO	**Guam**	**3.65**	**234**	P		**Pn**		**10 37 59.1**	**+0.8**
JCJ	**Chichijima**	**12.45**	**336**	Pn		Pn		10 39 46.2	-13
	23nm,0.3s,baz=248,slow=15,SNR=5.0								
JCJ				Sn		Sn		10 41 57.4	-20
	14nm,0.3s,baz=88,slow=22,SNR=1.7								
JCJ	**Chichijima**	**12.45**	**336**	Pn		**Pn**		**10 39 58.9**	**-0.2**
MANU	**Manus Island**	**17.71**	**182**	P		**Pn**		**10 41 08.7**	**+0.1**
H11S3	**WAKE ISLAND Hy**	**18.16**	**79**	P		**Pn**		**10 41 11.8**	**-2.1**
	baz=251								
H11S3				S		Sn		10 44 11.9	-24
	baz=199,slow=74,SNR=11								
H11S3				T		T		10 59 32.6	
	baz=263,slow=74,SNR=5.4								
H11S1	**WAKE ISLAND Hy**	**18.17**	**79**	P		**Pn**		**10 41 13.1**	**-1.0**
	baz=251								
H11S1				S		Sn		10 44 13.8	-23
	baz=199,slow=74,SNR=16								
H11S1				T		T		10 59 31.5	
	baz=263,slow=74,SNR=8.1								
H11S2	**WAKE ISLAND Hy**	**18.17**	**79**	P		**Pn**		**10 41 10.8**	**-3.2**
	baz=251								
H11S2				S		Sn		10 44 12.1	-24
	baz=199,slow=74,SNR=13								
H11S2				T		T		10 59 34.6	
	baz=263,slow=74,SNR=25								
JMZ	**Minamidaito 2**	**18.50**	**305**			**Pn**		**10 41 18.7**	**+0.5**
JMZ				IAmb		IAmb		10 41 25.3	
	comp=Z,209nm,1.0s								
H11N1	**WAKE ISLAND Hy**	**18.50**	**75**	P		**P**		**10 41 15.9**	**-2.0**
	baz=176,slow=74,SNR=16								
H11N1				S		Sn		10 44 22.8	-22
	baz=277,slow=18,SNR=5.1								
H11N1				T		T		10 59 58.5	
	baz=260,slow=75,SNR=5.5								
H11N2	**WAKE ISLAND Hy**	**18.51**	**75**	P		**P**		**10 41 16.5**	**-1.4**
	baz=281,slow=18,SNR=12								
H11N2				S		Sn		10 44 24.6	-20
	baz=277								
H11N2				T		T		11 00 04.4	
	baz=260,slow=75,SNR=6.5								
H11N3	**WAKE ISLAND Hy**	**18.52**	**75**	P		**P**		**10 41 15.5**	**-2.6**
	baz=337,slow=74,SNR=12								
H11N3				S		Sn		10 44 24.7	-20
	baz=277,slow=18,SNR=5.7								
H11N3				T		T		11 00 02.2	
	baz=260,slow=75,SNR=8.4								
JHJ2	**Mitsune**	**18.75**	**338**	P		**Pn**		**10 41 22.1**	**+0.9**
JHJ2	**Mitsune**	**18.75**	**338**	P		**Pn**		**10 41 22.5**	**+1.4**
	comp=Z,868nm,0.8s								
JHJ2	**Mitsune**	**18.75**	**338**	S		**Sn**		**10 44 52.1**	**+1.6**
	comp=Z,868nm,0.8s								
JHJ	**Hachijo jima 2**	**18.77**	**338**	P		**Pn**		**10 41 22.0**	**+0.6**
	comp=Z,61nm,0.3s,baz=0.6,slow=22,SNR=8.2								
JHJ				S

comp=Z,101nm,0.9s
TGY Tagaytay City 26.10 270 P **P** **10 42 36.5 +0.7**
comp=Z,338nm,0.4s,baz=137,slow=16,SNR=3.1
TGY LR LR 10 51 53.1
comp=Z,1μm,20.7s,baz=120,slow=34
YULB Yu-li 26.15 291 P **P** **10 42 36.1 -0.1**
comp=Z,134nm,0.8s
TWGBT Beinan 26.24 290 P **P** **10 42 36.6 -0.3**
comp=Z,155nm,1.1s
TATO Taipei 26.36 295 P **P** **10 42 38.1 +0.2**
TATO Taipei 26.36 295 P **P** **10 42 38.9 +0.9**
comp=Z,612nm,0.7s
YHNB Yeheng 26.38 294 P **P** **10 42 39.1 +0.9**
comp=Z,730nm,0.8s
SSLB Suanglung 26.55 292 P **P** **10 42 40.1 +0.4**
comp=Z,282nm,0.8s
MSAI Masohi 26.71 226 P **P** **10 42 41.9 +0.7**
TPUB Ta-pu 26.74 291 P **P** **10 42 40.9 -0.5**
TPUB Ta-pu 26.74 291 P **P** **10 42 40.7 -0.8**
comp=Z,155nm,1.0s
BNDI Bandanaira 26.91 223 P **P** **10 42 42.1 -0.9**
comp=Z,227nm,1.4s
KRAI Karang Ratu 27.06 227 P **P** **10 42 45.0 +0.6**
comp=Z,7μmcomp=Z,72nm,1.2s
AAI Ambon 27.46 227 P **P** **10 42 47.1 -0.9**
comp=Z,109nm,0.7s
HNR Honiara 27.74 154 LR LR 10 53 00.9
comp=Z,117nm,20.8s,baz=50,slow=35
KSRS Korea Array 27.91 324 P **P** **10 42 50.6 -1.1**
comp=Z,45nm,0.7s,baz=143,slow=8.6,SNR=112
KSRS PcP **PcP** **10 46 08.2 +1.1**
comp=Z,4.7nm,0.9s,baz=135,slow=2.0,SNR=8.5
KSRS ScP **ScP** **10 49 47.0 -0.4**
comp=Z,2.3nm,0.9s,baz=133,slow=2.8,SNR=5.0
KSRS LR LR 10 53 34.9
comp=Z,3μm,19.3s,baz=135,slow=36
comp=Z,45nm,0.7s
KSAR Wonju Array Be 27.92 324 P **P** **10 42 50.7 -1.2**
KSAR Wonju Array Be 27.92 324 P **P** **10 42 50.7 -1.2**
KS19 Wonju Array Si 27.97 324 IAmb IAmb 10 42 53.0
comp=Z,56nm,0.8s
INCN Inchon 28.66 323 P **P** **10 42 57.5 -1.0**
INCN Inchon 28.66 323 P **P** **10 42 57.5 -1.0**
INCN pmax pmax
comp=Z,29nm,0.8s
SSE Sheshan 28.76 307 P **P** **10 42 58.1 -1.3**
SSE pP **sP** **10 43 01.6 -2.9**
SSE S **S** **10 47 42.5 -5.7**
SSE pmax pmax
comp=Z,62nm,0.8s
SSE pmax pmax
comp=Z,65nm,3.5s
SSE LR LR
comp=Z,510nm,16.1s
QZH2 Quanzhou 28.89 293 P **P** **10 42 59.8 -0.9**
QZH2 S **S** **10 47 46.0 -4.4**
QZH2 pmax pmax
comp=Z,170nm,1.0s
QZH2 pmax pmax
comp=Z,290nm,5.5s
QZH2 LR LR
comp=Z,980nm,16.2s
QZH2 LR LR
comp=Z,1μm,17.1s
QZH2 LR LR
comp=Z,2μm,29.6s
MRSI Marisa 29.79 242 P **P** **10 43 08.6 -0.1**
comp=Z,66nm,1.2s
COEN Coen 29.91 189 P **P** **10 43 09.8 +0.1**
comp=Z,41nm,1.2s
COEN Coen 29.91 189 P **P** **10 43 10.1 +0.4**
comp=Z,41nm,1.2s
LUWI Luwuk 29.93 238 P **P** **10 43 09.3 -0.6**
comp=Z,180nm,0.9s
LUWI Luwuk 29.93 238 P **P** **10 43 09.3 -0.6**
comp=Z,5μmcomp=Z,180nm,0.9s
VLA Vladivostok 30.50 337 *i* P **P** **10 43 15.8 +1.1**
VLA pmax pmax
comp=Z,137nm,1.1s
PSTR Posyet 30.54 335 *i* P **P** **10 43 16.1 +1.1**
PSTR pmax pmax
comp=Z,7.0nm,0.9s
NJ2 Nanjing 30.97 307 *e*P **P** **10 43 18.7 -0.3**
NJ2 pP **sP** **10 43 23.5 -0.6**
NJ2 S **S** **10 48 23.1 +0.2**
NJ2 sS **sS** **10 48 31.6 +2.5**
NJ2 pmax pmax
comp=Z,12nm,0.8s
NJ2 pmax pmax
comp=Z,280nm,3.5s
NJ2 LR LR
comp=Z,1μm,19.9s
NJ2 LR LR
comp=Z,1μm,18.0s
NJ2 LR LR
comp=Z,3μm,20.5s
YSS Yuzhno-Sakhali 31.38 353 P **P** **10 43 23.4 +1.0**
YSS IAmb IAmb 10 43 28.6
comp=Z,44nm,0.8s
YSS Yuzhno-Sakhali 31.38 353 P **P** **10 43 23.7 +1.3**
comp=Z,67nm,0.6s
YSS Yuzhno-Sakhali 31.38 353 *e*P **P** **10 43 23.0 +0.6**
YSS *e* 10 44 20.6
YSS *e*S **S** **10 48 25.9 -3.0**
YSS *e*SSS SSS 10 50 15.6
YSS pmax pmax
comp=Z,50nm,0.7s
YSS pmax pmax
comp=Z,700nm,4.2s
YSS MLR MLR
comp=Z,2μm,19.0s
USRK Ussuriysk Ar. 31.39 338 P **P** **10 43 23.4 +0.9**
comp=Z,19nm,0.7s,baz=155,slow=9.5,SNR=45
comp=Z,19nm,0.7s
MPSI Mapaga 31.61 244 P **P** **10 43 25.1 +0.3**
comp=Z,31nm,0.7s
KDU Kakadu 32.14 209 P **P** **10 43 28.4 -1.0**
comp=Z,22nm,0.9s
DL2 Dalian 32.58 320 P **P** **10 43 32.0 -1.1**
DL2 *e*S **S** **10 48 46.3 -1.6**
DL2 pmax pmax
comp=Z,33nm,1.0s
DL2 pmax pmax
comp=Z,550nm,3.8s
DL2 LR LR
comp=Z,630nm,17.6s
DL2 LR LR
comp=Z,760nm,16.5s
DL2 LR LR
comp=Z,790nm,15.7s
MDJ Mudanjiang 32.66 335 IAmb IAmb 10 43 36.6
comp=Z,48nm,0.8s
MDJ Mudanjiang 32.66 335 P **P** **10 43 34.6 +0.9**
comp=Z,74nm,0.8s
MDJ Mudanjiang 32.66 335 P **P** **10 43 34.1 +0.4**
MDJ PcP **PcP** **10 46 20.0 +0.6**
MDJ S **S** **10 48 51.8 +2.9**
MDJ sS sS 10 48 56.7 +1.8
MDJ pmax pmax
comp=Z,74nm,1.1s
MDJ LR LR
comp=Z,790nm,11.9s
MDJ LR LR
comp=Z,640nm,8.2s
MDJ LR LR
comp=Z,1μm,15.9s
DRS Darwin Rock St 32.69 212 P **P** **10 43 34.6 +0.4**
comp=Z,50nm,0.8s
MTN Manton Dam 32.92 211 P **P** **10 43 35.2 -1.1**
comp=Z,31nm,0.8s
TTSI Tana Toraja 33.49 238 P **P** **10 43 42.3 +1.1**
comp=Z,1μmcomp=Z,25nm,0.9s
UGL Uglegorsk 33.55 353 *e*P **P** **10 43 43.4 +2.0**
UGL *e*S **S** **10 48 58.1 -4.6**
UGL pmax pmax
comp=Z,100nm,1.1s
UGL MLR MLR
comp=E,1μm,17.0s
UGL MLR MLR
comp=N,2μm,18.0s
UGL MLR MLR
comp=Z,2μm,16.0s
CN2 Changchun 33.84 330 ⇓P **P** **10 43 44.3 +0.3**
CN2 *e*sP pwP 10 43 51.0 -4.3
CN2 *e*S **S** **10 49 07.4 +0.1**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,600nm,14.0s
CN2 LR LR
comp=Z,400nm,14.0s
CN2 LR LR
comp=Z,700nm,15.0s
MTSU Mount Surprise 33.88 186 P **P** **10 43 45.0 +0.4**
comp=Z,91nm,0.8s
MTSU Mount Surprise 33.88 186 P **P** **10 43 45.5 +0.9**
comp=Z,91nm,0.8s
WHN Wuhan 34.02 302 ⇑*i*P **P** **10 43 45.0 -0.7**
WHN S **S** **10 49 08.0 -2.4**
WHN pmax pmax
comp=Z,210nm,0.9s
WHN LR LR
comp=Z,4μm,15.2s
WHN LR LR
comp=Z,3μm,13.2s
WHN LR LR
comp=Z,5μm,17.5s
SPSI Sidrap Palu 34.05 237 P **P** **10 43 50.6 +4.4**
comp=Z,795nmcomp=Z,30nm,0.8s
TIA Tai'an 34.12 312 P **P** **10 43 46.3 -0.2**
TIA S **S** **10 49 09.3 -2.5**
TIA pmax pmax
comp=Z,14nm,0.9s
TIA LR LR
comp=Z,700nm,13.7s
TIA LR LR
comp=Z,1μm,13.4s
TIA LR LR
comp=Z,1μm,15.5s
BNX BinXian 34.47 334 ⇓P **P** **10 43 49.4 0.0**
BNX S **S** **10 49 13.5 -3.5**
BNX pmax pmax
comp=Z,69nm,0.7s
BNX pmax pmax
comp=Z,370nm,5.1s
BNX LR LR
comp=Z,1μm,17.6s
BNX LR LR
comp=Z,930nm,17.8s
BNX LR LR
comp=Z,1μm,16.9s
SOEI Soe 34.51 224 P **P** **10 43 49.9 -0.4**
comp=Z,57nm,1.2s
SOEI Soe 34.51 224 P **P** **10 43 52.8 +2.5**
comp=Z,36nm,0.8s
CNSH ChangSha 34.57 297 P **P** **10 43 51.0 +0.4**
CNSH S **S** **10 49 18.1 -0.9**
CNSH pmax pmax
comp=Z,49nm,0.9s
CNSH LR LR
comp=Z,940nm,18.0s
CNSH LR LR
comp=Z,760nm,20.3s
CNSH LR LR
comp=Z,650nm,20.8s
KAPI Kappang 34.69 236 P **P** **10 43 51.5 -0.2**
comp=Z,24nm,0.7s,baz=63,slow=7.2,SNR=9.3
comp=Z,24nm,0.7s
KAPI Kappang 34.69 236 P **P** **10 43 51.1 -0.5**
KAPI IAmb IAmb 10 44 04.8
comp=Z,28nm,0.7s
KAPI Kappang 34.69 236 P **P** **10 43 52.0 +0.3**
comp=Z,26nm,1.0s
KAPI Kappang 34.69 236 *i* P **P** **10 43 51.5 -0.2**
KAPI pmax pmax
comp=Z,25nm,0.9s
KAPI Kappang 34.69 236 P **P** **10 43 51.2 -0.5**
comp=Z,26nm,1.0s
BATI Baumata 35.25 224 P **P** **10 43 55.4 -1.1**
comp=Z,17nm,0.3s,baz=64,slow=8.9,SNR=3.9
BATI LR LR 10 58 30.6
comp=Z,2μm,19.9s,baz=128,slow=37
comp=Z,17nm,0.3s
TYV Tymovskoe 35.25 354 *e*P **P** **10 43 57.4 +1.3**
TYV *e*S **S** **10 49 31.3 +2.4**
TYV pmax pmax
comp=Z,48nm,1.2s
TYV pmax pmax
comp=Z,400nm,2.9s
TYV smax smax
comp=N,6.0nm,1.3s
TYV smax smax
comp=E,6.0nm,1.3s
TYV smax smax
comp=N,500nm,5.5s
TYV smax smax
comp=E,600nm,5.5s
TYV MLR MLR
comp=Z,2μm,18.0s
EDFI Ende, Flores 35.60 229 P **P** **10 43 58.6 -1.1**
comp=Z,32nm,0.9s
CTA Charters Tower 35.68 183 P **P** **10 43 59.1 -1.0**
comp=Z,17nm,0.8s,baz=350,slow=7.6,SNR=17
CTA LR LR 10 57 02.1
comp=Z,924nm,20.4s,baz=7.0,slow=34
comp=Z,17nm,0.8s
CTA Charters Tower 35.68 183 P **P** **10 44 00.4 +0.3**
comp=Z,1.3nm,1.6s
CTAO Charters Tower 35.68 183 P **P** **10 44 00.2 +0.1**
CTAO Charters Tower 35.68 183 P **P** **10 44 00.4 +0.3**
comp=Z,16nm,1.6s
CTAO Charters Tower 35.68 183 P **P** **10 44 00.2 +0.1**
CTAO pmax pmax
comp=Z,27nm,1.0s
KLR Kul'dur 35.88 342 *ce*P **P** **10 44 02.2 +0.7**
KLR pmax pmax
comp=Z,28nm,0.8s
GRNR Gornyy 36.11 348 ⇑*i*P **P** **10 44 04.7 +1.2**
GRNR pmax pmax
comp=Z,9.0nm,1.3s
GRNR MLR MLR
comp=E,470nm,14.0s
GRNR MLR MLR
comp=N,300nm,20.0s
GRNR MLR MLR
comp=Z,640nm,15.0s
GULI GuiLin 36.30 291 P **P** **10 44 05.0 -0.5**
GULI S **S** **10 49 43.2 -2.4**
GULI pmax pmax
comp=Z,190nm,0.9s
GULI pmax pmax
comp=Z,350nm,3.5s
GULI LR LR
comp=Z,600nm,16.3s
GULI LR LR
comp=Z,530nm,21.7s
GULI LR LR
comp=Z,900nm,25.4s
HNS HongShan 36.38 313 ⇑P **P** **10 44 05.0 -1.0**
HNS S **S** **10 49 44.0 -2.6**
HNS pmax pmax
comp=Z,72nm,0.9s
HNS LR LR
comp=Z,670nm,17.7s
HNS LR LR
comp=Z,1μm,16.3s
HNS LR LR
comp=Z,2μm,15.9s
QIZ Qiongzhong 36.41 281 IAmb IAmb 10 44 09.1
comp=Z,70nm,1.1s
QIZ Qiongzhong 36.41 281 P **P** **10 44 07.8 +1.3**
comp=Z,69nm,1.0s
QIZ Qiongzhong 36.41 281 P **P** **10 44 07.3 +0.8**
QIZ S **S** **10 49 48.3 +0.8**
QIZ pmax pmax
comp=Z,62nm,0.8s
QIZ LR LR
comp=Z,500nm,14.2s
QIZ LR LR
comp=Z,340nm,13.7s
QIZ LR LR
comp=Z,720nm,12.3s
KNRA Kununurra 36.52 212 P **P** **10 44 06.7 -0.7**
comp=Z,54nm,0.8s
KNRA Kununurra 36.52 212 IAmb IAmb 10 44 09.3
comp=Z,35nm,0.8s
MTKI Muara Teweh, K 36.59 246 P **P** **10 44 07.7 -0.4**
comp=Z,64nm,0.4s
BJI2 Beijing 36.69 317 P **P** **10 44 08.2 -0.4**
BJI2 S **S** **10 49 47.9 -3.3**
BJI2 pmax pmax
comp=Z,27nm,0.9s
BJI2 LR LR
comp=Z,360nm,13.5s
BJI2 LR LR
comp=Z,400nm,13.5s
BJI2 LR LR
comp=Z,560nm,16.9s
BJT Baijiatuao 36.69 317 IAmb IAmb 10 44 11.3
comp=Z,45nm,0.9s
BJT Baijiatuao 36.69 317 P **P** **10 44 08.4 -0.2**
comp=Z,65nm,1.3s
LYN LuoYang 36.87 307 ⇑P **P** **10 44 09.3 -0.9**
LYN S **S** **10 49 52.0 -2.1**
LYN pmax pmax
comp=Z,65nm,0.8s
LYN LR LR
comp=Z,830nm,15.1s
LYN LR LR
comp=Z,2μm,19.6s
LYN LR LR
comp=Z,3μm,20.2s
QIS Mount Isa 37.02 193 P **P** **10 44 11.5 0.0**
comp=Z,58nm,1.2s
SBUM Sibu 37.55 253 P **P** **10 44 16.9 +0.7**
SBUM Sibu 37.55 253 P **P** **10 44 16.7 +0.5**
comp=Z,9.5nm,1.0s
SBUM Sibu 37.55 253 P **P** **10 44 16.3 +0.1**
WRAB Tennant Creek 37.90 201 P **P** **10 44 19.3 +0.2**
WRAB Tennant Creek 37.90 201 P **P** **10 44 18.9 -0.2**
comp=Z,96nm,0.8s
WRAB Tennant Creek 37.90 201 *d*P **P** **10 44 18.7 -0.4**
WRAB pmax pmax
comp=Z,91nm,0.8s
WRA Warramunga Arr 37.92 201 P **P** **10 44 18.4 -0.8**
comp=Z,116nm,0.8s,baz=23,slow=9.3,SNR=123
WRA PcP **PcP** **10 46 35.5 +0.3**
comp=Z,5.0nm,0.8s,baz=19,slow=3.3,SNR=4.0
WRA PKiKP **PKiKP** **10 53 49.1 -2.0**
comp=Z,0.5nm,0.7s,baz=11,slow=0.9,SNR=3.3
comp=Z,116nm,0.8s
WRA Warramunga Arr 37.92 201 P **P** **10 44 19.4 +0.2**
WRA Warramunga Arr 37.92 201 *i*P **P** **10 44 17.3 -1.9**
WRA pmax pmax
comp=Z,121nm,0.7s
ENH Enshi 37.99 299 P **P** **10 44 19.9 +0.1**
comp=Z,173nm,0.9s
PEA0B Petropavlovsk- 38.04 10 *ce*P **P** **10 44 20.8 +0.9**
PETK Petropavlovsk- 38.04 10 P **P** **10 44 20.1 +0.1**
comp=Z,18nm,0.9s,baz=174,slow=4.6,SNR=11
comp=Z,18nm,0.9s
PET Petropavlovsk 38.12 11 *e*P **P** **10 44 17.8 -2.7**
PET pmax pmax
comp=Z,46nm,0.8s
PET MLR MLR
comp=Z,2μm,19.0s
TIY Taiyuan 38.14 312 *e*P **P** **10 44 21.2 +0.1**
TIY S **S** **10 50 12.6 -1.0**
TIY pmax pmax
comp=Z,12nm,0.6s
TIY LR LR
comp=Z,710nm,15.8s
TIY LR LR
comp=Z,1μm,16.5s
TIY LR LR
comp=Z,780nm,17.9s
HEH HeiHe 38.17 339 *e*P **P** **10 44 21.2 +0.2**
HEH pP **sP** **10 44 24.2 -2.1**
HEH PcP **PcP** **10 46 35.5 0.0**
HEH S **S** **10 50 15.1 +1.6**
HEH ScP **ScP** **10 50 20.2 -2.4**
HEH pmax pmax
comp=Z,130nm,0.8s
HEH LR LR
comp=Z,920nm,15.4s
HEH LR LR
comp=Z,770nm,14.7s
HEH LR LR
comp=Z,1μm,15.2s
XLT XiLinHaoTe 38.91 323 *e*P **P** **10 44 26.0 -1.5**
XLT sP sP 10 44 32.7 +0.1
XLT PcP **PcP** **10 46 38.6 +0.5**
XLT S **S** **10 50 18.6 -6.5**
XLT ScS **ScS** **10 54 31.9 -4.8**
XLT pmax pmax
comp=Z,34nm,0.8s
XLT pmax pmax
comp=Z,160nm,5.9s
XLT LR LR
comp=Z,2μm,17.4s
XLT LR LR
comp=Z,3μm,16.6s
AUNRC North Rockhamp 38.97 176 P **P** **10 44 27.9 -0.1**
comp=Z,48nm,1.0s
TWSI Taliwang, Sumb 39.20 234 P **P** **10 44 29.7 -0.4**
comp=Z,2μmcomp=Z,70nm,0.7s
KLNI Mataram 39.63 235 P **P** **10 44 33.1 -0.5**
GYA Guiyang 39.76 292 ⇑P **P** **10 44 35.4 +0.6**
GYA S **S** **10 50 38.8 +0.5**
GYA pmax pmax
comp=Z,160nm,0.9s
GYA LR LR
comp=Z,730nm,15.0s
GYA LR LR
comp=Z,750nm,17.5s
GYA LR LR
comp=Z,2μm,21.6s
KHKI Kahang-Kahang 39.98 235 P **P** **10 44 38.0 +1.4**
comp=Z,83nm,1.1s
HHC Hu-ho-hao-te 40.15 316 *e*P **P** **10 44 37.4 -0.4**
HHC S **S** **10 50 41.2 -2.5**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,250nm,7.8s
HHC LR LR
comp=Z,710nm,13.6s
HHC LR LR
comp=Z,530nm,13.3s
HHC LR LR
comp=Z,840nm,14.5s
FITZ Fitzroy Crossi 40.17 214 P **P** **10 44 37.8 -0.3**
comp=Z,21nm,0.7s,baz=31,slow=9.8,SNR=29
FITZ PcP **PcP** **10 46 43.1 +0.9**
comp=Z,18nm,0.9s,baz=159,slow=0.7,SNR=4.4
comp=Z,21nm,0.7s
HIA Hailar 40.52 332 IAmb IAmb 10 44 53.6
comp=Z,48nm,0.7s
HIA Hailar 40.52 332 P **P** **10 44 41.5 +0.8**
comp=Z,79nm,0.9s
HILR Hailar Array B 40.72 332 P **P** **10 44 42.9 +0.5**
comp=Z,25nm,0.7s,baz=138,slow=8.3,SNR=24
HILR PcP **PcP** **10 46 43.9 +0.2**
comp=Z,13nm,0.9s,baz=125,slow=7.2,SNR=3.7
HILR LR LR 11 01 42.9
comp=Z,1μm,18.6s,baz=120,slow=36
comp=Z,25nm,0.7s
ABJI Asem Bagus 40.75 237 P P 10 44 49.1 +6.2
EIDS Eidsvold 41.01 176 P **P** **10 44 44.9 0.0**
comp=Z,22nm,0.8s
ZEA Zeya 41.19 341 *e*P **P** **10 44 46.3 +0.2**
ZEA *e*S **S** **10 51 00.3 +1.7**
ZEA pmax pmax
comp=N,30nm,0.8s
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,60nm,0.8s
ZEA pmax pmax
comp=Z,100nm,2.0s
ZEA smax smax
comp=E,200nm,4.1s
ZEA smax smax
comp=N,200nm,9.1s
ZEA MLR MLR
comp=N,400nm,17.0s
ZEA MLR MLR
comp=Z,600nm,14.0s
BLJI Banyuglugur 41.24 238 P P 10 44 52.4 +5.4
BTO2 Baotou 41.24 315 *e*P **P** **10 44 45.1 -1.8**
BTO2 pP **sP** **10 44 49.7 -2.3**
BTO2 sP **pP** **10 44 52.2 +1.6**
BTO2 S **S** **10 50 58.7 -1.4**
BTO2 sS **sS** **10 51 07.0 +0.4**
BTO2 pmax pmax
comp=Z,20nm,0.9s
BTO2 pmax pmax
comp=Z,560nm,9.5s
BTO2 LR LR

BTO2 LR LR
comp=Z,2µm,14.3s
BTO2 LR LR
comp=Z,2µm,14.4s
ASAR Alice Springs 41.52 200 P P 10 44 49.1 -0.1
comp=Z,54nm,0.7s,baz=22,slow=8.4,SNR=492
ASAR PcP **PcP 10 46 47.0 +0.4**
comp=Z,6.3nm,0.9s,baz=32,slow=3.6,SNR=2.2
ASAR PKiKP **PKiKP 10 53 52.1 -2.1**
comp=Z,0.7nm,0.9s,baz=45,slow=1.4,SNR=3.0
ASAR LR LR 11 04 19.0
comp=Z,722nm,18.1s,baz=24,slow=40
comp=Z,54nm,0.7s
AUALC St Philip's Co 41.55 200 P P 10 44 49.4 0.0
comp=Z,196nm,0.8s
GMJI Gumukmas 41.66 237 P P 10 45 06.8 +16
QLP Quilpie 42.25 185 P P 10 44 53.9 -1.2
comp=Z,176nm,0.8s
SJI Sawahan 42.73 239 P P 10 45 01.1 +1.8
comp=Z,87nm,1.0s
SNJI Sawahan-Nganju 42.77 239 P P 10 45 04.7 +5.0
CD2 Chengdu 42.95 299 P P 10 45 00.8 -0.1
CD2 S S **10 51 26.9 +1.4**
CD2 pmax pmax
comp=Z,80nm,0.8s
CD2 pmax pmax
comp=Z,520nm,4.5s
CD2 LR LR
comp=Z,2µm,15.2s
CD2 LR LR
comp=Z,1µm,12.7s
CD2 LR LR
comp=Z,1µm,15.2s
KMI2 Kunming 43.15 290 P P 10 45 04.0 +1.2
KMI2 sP pwP 10 45 08.8 -6.6
KMI2 S S **10 51 28.4 -0.5**
KMI2 pmax pmax
comp=Z,36nm,1.4s
KMI2 pmax pmax
comp=Z,310nm,6.6s
KMI2 LR LR
comp=Z,690nm,16.7s
KMI2 LR LR
comp=Z,860nm,16.7s
KMI2 LR LR
comp=Z,1µm,19.8s
AUWSH Wavell State H 43.21 173 P P 10 45 03.5 +0.7
comp=Z,84nm,1.4s
TW1H Toowoomba 1 Ha 43.24 175 P P 10 45 03.7 +0.5
comp=Z,58nm,0.8s
MA2 Magadan 43.78 2 LR LR 11 01 13.1
comp=Z,800nm,20.0s,baz=188,slow=33
MA2 Magadan 43.78 2 P P 10 45 08.3 +1.2
MA2 IAmb IAmb 10 45 21.7
comp=Z,53nm,1.1s
MA2 Magadan 43.78 2 P P 10 45 09.3 +2.2
comp=Z,53nm,1.1s
MA2 Magadan 43.78 2 *ce*P **P 10 45 09.3 +2.2**
MA2 pmax pmax
comp=Z,24nm,0.8s
MA2 Magadan 43.78 2 P P 10 45 08.2 +1.1
comp=Z,52nm,1.1s
TPI Tanjungpandan 43.85 249 P P 10 45 10.2 +1.9
comp=Z,29nm,1.0s
GC1S Gold Coast 1 S 44.01 173 P P 10 45 10.9 +1.6
LZH Lanzhou 44.04 306 *e*P **P 10 45 10.7 +1.0**
LZH pP sP 10 45 15.2 +0.3
LZH S S **10 51 38.8 -2.6**
LZH pmax pmax
comp=Z,290nm,1.2s
LZH pmax pmax
comp=Z,570nm,4.5s
LZH LR LR
comp=Z,1µm,14.1s
LZH LR LR
comp=Z,1µm,14.4s
LZH LR LR
comp=Z,2µm,15.8s
LZDM Lanzhou Array 44.12 306 P P 10 45 11.5 +0.9
comp=Z,242nm,0.8s,baz=140,slow=7.6,SNR=263
LZDM LR LR 11 02 41.3
comp=Z,827nm,21.3s,baz=95,slow=35
comp=Z,242nm,0.8s
PZH PanZhiHua 44.15 292 P P 10 45 12.2 +1.5
MSVF Nonsavu 44.63 137 P P 10 45 15.2 +0.7
MSVF IAmb IAmb 10 45 26.9
comp=Z,37nm,0.9s
MSVF Nonsavu 44.63 137 P P 10 45 15.4 +1.0
comp=Z,58nm,0.9s
MSVF Nonsavu 44.63 137 *i* P **P 10 45 15.5 +1.0**
MSVF pmax pmax
comp=Z,29nm,0.8s
DGTI Dogotuki 44.75 134 P P 10 45 16.4 +1.0
comp=Z,32nm,0.9s
KPJI Karang Pucung 44.91 242 P P 10 45 17.4 +0.7
comp=Z,55nm,1.2s
AULRC Lightning Ridg 44.94 180 P P 10 45 15.6 -1.1
comp=Z,181nm,0.8s
CIT Chita 45.28 331 *e*P **P 10 45 20.0 +0.7**
CIT *e* 10 45 31.4
CIT *e* 10 47 00.2
CIT pmax pmax
comp=Z,101nm,3.0s
DSRI Dabo 45.72 253 P P 10 45 23.7 +0.5
comp=Z,26nm,1.0s
MBWA Marble Bar 45.95 218 P P 10 45 24.9 0.0
MBWA Marble Bar 45.95 218 P P 10 45 25.1 +0.2
comp=Z,18nm,0.8s
ARMA Armidale 46.07 176 P P 10 45 25.6 -0.2
ARMA IAmb IAmb 10 45 27.0
comp=Z,37nm,0.8s
ARMA Armidale 46.07 176 P P 10 45 25.8 +0.1
comp=Z,74nm,0.8s
PSA00 Pilbara Seismi 46.20 217 P P 10 45 26.9 +0.1
PSA00 Pilbara Seismi 46.20 217 IAmb IAmb 10 45 28.6
comp=Z,26nm,0.8s
PSA00 Pilbara Seismi 46.20 217 P P 10 45 26.9 +0.1
comp=Z,46nm,0.9s
ULN Ulaanbaatar 46.36 323 P P 10 45 29.4 +1.4
ULN Ulaanbaatar 46.36 323 *ce*P **P 10 45 28.6 +0.6**
ULN pmax pmax
comp=Z,59nm,0.8s
ULN Ulaanbaatar 46.36 323 P P 10 45 29.0 +1.0
AUPHS Peel High Scho 46.69 176 P P 10 45 30.8 +0.3
comp=Z,56nm,0.9s
CHTO Chiang Mai 46.73 281 P P 10 45 31.3 +0.2
CHTO Chiang Mai 46.73 281 P P 10 45 31.3 +0.2
comp=Z,35nm,0.7s
CHTO Chiang Mai 46.73 281 P P 10 45 31.3 +0.2
CHTO pmax pmax
comp=Z,38nm,0.7s
CHTO Chiang Mai 46.73 281 P P 10 45 31.3 +0.2
comp=Z,59nm,0.7s
SONM Songino Array 46.73 322 P P 10 45 31.7 +0.8
comp=Z,50nm,0.7s,baz=138,slow=7.3,SNR=156
SONM PcP **PcP 10 47 05.2 +1.0**
comp=Z,9.3nm,0.9s,baz=129,slow=5.4,SNR=2.9
SONM LR LR 11 05 38.3
comp=Z,2µm,18.9s,baz=120,slow=37
comp=Z,50nm,0.7s
SONM Songino Array 46.73 322 P P 10 45 30.9 +0.1
SONM Songino Array 46.73 322 P P 10 45 30.9 +0.1
SONM pmax pmax
comp=Z,59nm,0.8s
CMAR Chiang Mai Arr 46.76 281 P P 10 45 32.2 +0.8
comp=Z,40nm,0.7s,baz=78,slow=6.3,SNR=232
CMAR LR LR 11 06 21.5
comp=Z,293nm,18.1s,baz=90,slow=38
comp=Z,40nm,0.7s
CMAR Chiang Mai Arr 46.76 281 P P 10 45 32.0 +0.6
CMAR Chiang Mai Arr 46.76 281 *i* P **P 10 45 32.2 +0.8**
CMAR pmax pmax
comp=Z,43nm,0.7s
TNCH TengChong 46.98 290 ⇑P **P 10 45 33.5 +0.3**
TNCH pP sP 10 45 37.2 -1.2
TNCH sP pP 10 45 38.7 +2.0
TNCH PcP **PcP 10 47 07.2 +1.6**
TNCH PP **PP 10 47 23.9 +0.1**
TNCH S S **10 52 23.3 -0.9**
TNCH sS sS 10 52 31.0 +0.4
TNCH pmax pmax
comp=Z,91nm,0.7s
TNCH pmax pmax
comp=Z,340nm,2.9s
TNCH LR LR
comp=Z,650nm,16.7s

TNCH LR LR
comp=Z,500nm,15.2s
TNCH LR LR
comp=Z,1µm,27.0s
CMSA Cobar Meteorol 47.09 183 P P 10 45 32.9 -0.7
comp=Z,22nm,0.9s
SEY Seymchan 47.21 3 LR LR 11 09 37.3
comp=Z,959nm,18.2s,baz=187,slow=42
SEY Seymchan 47.21 3 *ce*P **P 10 45 34.8 +0.6**
SEY pmax pmax
comp=Z,21nm,0.7s
KLSI 47.32 248 P P 10 45 36.4 +0.7
comp=Z,67nm,1.0s
IPM Ipoh 47.38 261 P P 10 45 37.2 +0.9
IPM IAmb IAmb 10 45 53.2
comp=Z,36nm,0.9s
IPM Ipoh 47.38 261 P P 10 45 37.8 +1.5
comp=Z,44nm,1.0s
IPM Ipoh 47.38 261 P P 10 45 39.0 +2.7
comp=Z,44nm,1.0s
KULM Kulim 47.50 263 P P 10 45 39.7 +2.5
KULM Kulim 47.50 263 P P 10 45 39.4 +2.2
comp=Z,50nm,1.3s
KULM Kulim 47.50 263 P P 10 45 40.0 +2.8
comp=Z,51nm,1.3s
MDSI Maura Dua 47.72 249 P P 10 45 38.6 -0.3
comp=Z,48nm,0.9s
AUDCS Dubbo College 47.74 179 P P 10 45 38.4 -0.2
comp=Z,35nm,1.0s
STKA Stephens Creek 47.76 187 P P 10 45 38.1 -0.8
comp=Z,14nm,0.7s,baz=354,slow=8.8,SNR=20
STKA LR LR 11 04 44.7
comp=Z,859nm,21.6s,baz=13,slow=35
comp=Z,14nm,0.7s
STKA Stephens Creek 47.76 187 P P 10 45 38.1 -0.8
comp=Z,6.0nm,1.1s
STKA Stephens Creek 47.76 187 *i* P **P 10 45 38.4 -0.5**
YAK Yakutsk 47.98 349 P P 10 45 40.8 +0.6
YAK Yakutsk 47.98 349 *e*P **P 10 45 40.7 +0.6**
YAK *e**PP **pwP 10 45 48.3 -3.2**
YAK *e* 10 47 33.0
YAK *e*S **S 10 52 37.1 +0.2**
YAK *e**SS sS 10 52 50.1 +6.8
YAK *e* 10 55 33.7
YAK pmax pmax
comp=Z,184nm,1.3s
YAK pmax pmax
comp=E,10.0nm,0.7s
YAK pmax pmax
comp=N,59nm,3.0s
YAK pmax pmax
comp=Z,266nm,4.2s
YAK pmax pmax
comp=N,262nm,4.6s
YAK pmax pmax
comp=E,161nm,4.6s
YAK smax smax
comp=N,40nm,2.3s
YAK smax smax
comp=E,12nm,1.8s
YAK MLR MLR
comp=E,410nm,20.0s
LWLI Liwa 48.06 248 P P 10 45 42.2 +0.5
GTA2 Gaotai 48.06 309 P P 10 45 41.3 -0.1
GTA2 sP pwP 10 45 53.3 -0.1
GTA2 PcP **PcP 10 47 10.7 +1.6**
GTA2 S S **10 52 37.0 -2.2**
GTA2 pmax pmax
comp=E,95nm,1.0s
GTA2 pmax pmax
comp=E,180nm,4.4s
GTA2 LR LR
comp=E,960nm,18.9s
GTA2 LR LR
comp=E,2µm,21.1s
GTA2 LR LR
comp=E,2µm,18.5s
AUJCS Jamestown Cent 49.50 190 P P 10 45 52.2 0.0
comp=E,34nm,0.9s
BBOO Buckleboo 49.62 193 P P 10 45 53.1 0.0
comp=E,156nm,0.8s
HTT Hallett 49.67 190 P P 10 45 53.8 +0.2
comp=E,37nm,1.1s
ZAK Zakamensk 49.74 324 *e*P **P 10 45 53.4 -0.6**
ZAK pmax pmax
comp=Z,30nm,1.2s
PSI Prapat 49.88 260 P P 10 45 57.3 +1.6
comp=Z,57nm,0.9s
PSI Prapat 49.88 260 P P 10 45 55.9 +0.2
PSI pmax pmax
comp=Z,48nm,1.0s
PSI Prapat 49.88 260 P P 10 45 57.2 +1.6
comp=Z,600nmcomp=Z,53nm,0.9s
RPSI Rantau Prapat 49.92 260 P P 10 45 55.9 +0.2
RPSI IAmb IAmb 10 46 12.5
comp=Z,48nm,1.0s
WOLH Wollongong Har 49.98 177 P P 10 45 56.8 +1.0
comp=Z,75nm,0.8s
FORT Forrest 50.07 202 IAmb IAmb 10 45 58.1
comp=Z,55nm,1.3s
IRK Irkutsk 50.09 326 *e*P **P 10 45 56.4 -0.2**
IRK pmax pmax
comp=Z,76nm,1.3s
TLY Talaya 50.15 326 P P 10 45 57.1 0.0
TLY Talaya 50.15 326 *ce*P **P 10 45 57.7 +0.6**
TLY pmax pmax
comp=Z,21nm,1.0s
NIKH Nikolski High 50.26 33 P P 10 45 59.0 +1.2
baz=239
AUDAR Daramalan Coll 50.76 179 P P 10 46 02.5 +0.7
comp=Z,44nm,0.9s
KCSI Kotacane, Aceh 50.76 262 P P 10 46 04.5 +2.3
comp=Z,600nmcomp=Z,28nm,0.9s
AUMTS Mt Stromlo 50.83 179 P P 10 46 02.8 +0.5
comp=Z,59nm,0.8s
CAN Canberra 50.83 179 P P 10 46 02.7 +0.4
comp=Z,80nm,0.9s
CNB Canberra Magne 50.83 178 P P 10 46 03.1 +0.8
comp=Z,72nm,0.9s
AUMHS Melrose High S 50.87 179 P P 10 46 03.4 +0.8
comp=Z,63nm,0.8s
MEEK Meekatharra 50.87 214 P P 10 46 02.6 -0.1
comp=Z,14nm,0.8s
AUMAR Marden Senior 51.15 190 P P 10 46 05.3 +0.7
comp=Z,78nm,1.1s
GOMU GeErMu 51.20 304 P P 10 46 06.0 +0.4
GOMU S S **10 53 22.8 -0.9**
GOMU pmax pmax
comp=Z,130nm,0.7s
GOMU LR LR
comp=Z,550nm,18.6s
GOMU LR LR
comp=Z,480nm,16.1s
AUMBR Murray Bridge 51.28 189 P P 10 46 06.0 +0.4
comp=Z,104nm,1.0s
MOY Mondy 51.61 325 *e*P **P 10 46 08.7 +0.6**
MOY pmax pmax
comp=Z,29nm,2.7s
P08K Saint George I 51.88 28 P P 10 46 11.1 +1.2
baz=236
SPIA Saint Paul Isl 51.89 28 P P 10 46 11.8 +1.9
baz=235
UNV Unalaska Valle 51.91 33 P P 10 46 12.2 +2.0
baz=241
AUSMG Snowy Mountain 51.92 179 P P 10 46 11.2 +0.7
comp=Z,42nm,1.0s
MILA Mila 52.56 179 P P 10 46 15.8 +0.6
BRAT Ballarat 53.17 184 P P 10 46 20.6 +1.0
comp=Z,31nm,0.8s
BRDH Bariadhala 53.31 287 LR LR 11 11 15.8
comp=Z,543nm,18.0s,baz=90,slow=38
AUKSC Keysborough Se 53.52 183 P P 10 46 22.6 +0.4
BILL Bilíbino 53.56 8 P P 10 46 23.2 +1.0
BILL IAmb IAmb 10 46 37.0
comp=Z,46nm,1.0s
BILL Bilibino 53.56 8 *ce*P **P 10 46 24.1 +2.0**
BILL pmax pmax
comp=Z,83nm,1.7s
LSA Lhasa 53.67 295 P P 10 46 22.0 -2.2
LSA pmax pmax
comp=Z,44nm,0.8s
FALS False Pass 53.98 32 P P 10 46 27.2 +1.7
baz=243
MORW Morawa 54.18 215 IAmb IAmb 10 46 27.4
comp=Z,26nm,0.8s
MORW Morawa 54.18 215 P P 10 46 26.9 -0.3
comp=Z,36nm,0.9s

BLDU Ballidu 55.03 213 P P 10 46 33.1 -0.3
comp=Z,41nm,1.2s
KLBR Kellerberrin 55.27 211 P P 10 46 34.6 -0.5
comp=Z,81nm,0.8s
GAMB Gambell 55.40 20 P P 10 46 37.0 +1.5
baz=229
M11K Mekoryuk 55.44 26 P P 10 46 37.1 +1.2
baz=237
RAO Raoul Island 55.62 143 LR LR 11 08 38.5
comp=Z,790nm,18.6s,baz=69,slow=34
SDPT Sand Point 55.72 33 P P 10 46 39.1 +1.0
baz=246
CHNA Chernabura Isl 55.98 34 P P 10 46 41.2 +1.3
baz=247
OUZ Omahuta 56.27 155 P P 10 46 43.2 +1.0
MUN Mundaring 56.37 212 P P 10 46 43.0 0.0
comp=Z,56nm,0.9s
NWAO Narrogin (SRO) 56.61 211 P P 10 46 44.5 -0.2
comp=Z,43nm,0.7s,baz=46,slow=6.3,SNR=33
NWAO LR LR 11 13 19.1
comp=Z,463nm,19.2s,baz=81,slow=38
comp=Z,43nm,0.7s
NWAO Narrogin (SRO) 56.61 211 P P 10 46 44.5 -0.2
NWAO Narrogin (SRO) 56.61 211 P P 10 46 44.7 0.0
comp=Z,42nm,0.8s
NWAO Narrogin (SRO) 56.61 211 P P 10 46 44.5 -0.2
NWAO pmax pmax
comp=Z,48nm,0.7s
M13K Dall Lake 56.66 27 IAmb IAmb 10 46 51.0
comp=Z,29nm,0.9s
M13K Dall Lake 56.66 27 P P 10 46 45.8 +1.1
baz=240
K13K Kusilvak Mount 56.91 25 IAmb IAmb 10 46 52.5
comp=Z,22nm,0.8s
K13K Kusilvak Mount 56.91 25 P P 10 46 47.6 +1.2
baz=238
TIXI Tiksi 57.01 353 LR LR 11 13 13.5
comp=Z,466nm,20.0s,baz=186,slow=38
TIXI Tiksi 57.01 353 P P 10 46 47.3 +0.3
TIXI IAmb IAmb 10 46 55.0
comp=Z,24nm,0.8s
TIXI Tiksi 57.01 353 *ce*P **P 10 46 47.4 +0.5**
TIXI pmax pmax
comp=Z,18nm,1.0s
O14K Tigyukauivet M 57.03 28 P P 10 46 48.3 +1.0
baz=243
N14K Kuskokwak Cree 57.15 28 P P 10 46 48.9 +0.8
baz=242
WCZ Waipu Caves 57.20 155 P P 10 46 49.7 +1.0
L14K Kuka Creek 57.41 26 IAmb IAmb 10 46 57.2
comp=Z,36nm,1.2s
L14K Kuka Creek 57.41 26 P P 10 46 50.9 +1.0
baz=240
M14K Bethel 57.42 27 IAmb IAmb 10 47 29.5
comp=Z,31nm,1.0s
M14K Bethel 57.42 27 P P 10 46 50.7 +0.6
baz=241
O15K Ungalikthiuk R 57.66 29 IAmb IAmb 10 46 59.0
comp=Z,27nm,0.8s
O15K Ungalikthiuk R 57.66 29 P P 10 46 52.5 +0.8
baz=244
J14K Nanvaranak Lak 57.77 24 IAmb IAmb 10 46 60.0
comp=Z,64nm,1.8s
J14K Nanvaranak Lak 57.77 24 P P 10 46 53.4 +0.9
baz=238
TNA Tin City 57.79 20 P P 10 46 53.6 +1.0
TNA Tin City 57.79 20 P P 10 46 53.1 +0.5
baz=232,SNR=5.4
WMQ Urumqi 57.81 312 *e*P **P 10 46 54.8 +1.6**
WMQ sP pwP 10 47 04.0 -1.3
WMQ pmax pmax
comp=Z,64nm,1.1s
WMQ LR LR
comp=Z,1µm,16.9s
WMQ LR LR
comp=Z,780nm,20.5s
MOO Moorlands 57.93 181 P P 10 46 53.7 -0.1
M15K Kasigluk River 57.95 27 P P 10 46 54.5 +0.7
baz=243
N15K Kwethluk River 57.97 28 P P 10 46 54.8 +0.8
baz=244
L15K Ungalak Mounta 58.07 26 P P 10 46 55.6 +1.0
baz=241
ANM Nome 58.08 22 P P 10 46 55.5 +0.9
baz=236,SNR=11
R16K Pilot Point 58.08 31 P P 10 46 55.9 +1.1
baz=248
F14K Arctic Creek 58.27 21 P P 10 46 56.9 +0.9
baz=234,SNR=12
K15K Wolf Creek Mou 58.35 25 P P 10 46 57.8 +1.2
baz=241
TAU Tasmania Unive 58.40 181 P P 10 46 57.5 +0.5
TAU IAmb IAmb 10 46 58.5
comp=Z,41nm,0.9s
TAU Tasmania Unive 58.40 181 P P 10 46 57.5 +0.5
comp=Z,67nm,0.9s
TAU Tasmania Unive 58.40 181 P P 10 46 57.5 +0.5
TAU pmax pmax
comp=Z,41nm,1.0s
CHIR Chirikof Islan 58.46 34 P P 10 46 58.5 +1.1
baz=250
P16K Nushagak River 58.46 29 P P 10 46 58.5 +1.1
baz=246
O16K Kokwok River B 58.64 29 IAmb IAmb 10 47 20.1
comp=Z,19nm,0.8s
O16K Kokwok River B 58.64 29 P P 10 46 59.3 +0.7
baz=246
N16K Nishlik Lake 58.70 28 P P 10 46 59.8 +0.7
baz=245
R17L Mt. Peulik Vol 58.71 31 P P 10 47 00.0 +0.8
baz=249
G15K Niukluk 58.80 22 P P 10 47 00.4 +0.8
baz=237
M16K Timber Creek 58.85 27 IAmb IAmb 10 47 05.7
comp=Z,22nm,0.8s
M16K Timber Creek 58.85 27 P P 10 47 00.7 +0.6
baz=244
L16K Owhat River 58.94 26 P P 10 47 01.6 +1.0
baz=243
Q16K King Salmon 58.96 30 P P 10 47 01.6 +0.8
baz=248
F15K North Star Dit 58.98 21 P P 10 47 01.5 +0.5
baz=236
DGZ Jazzator, Alta 59.09 319 *i* P **P 10 47 02.7 +0.5**
DGZ pmax pmax
comp=Z,45nm,1.0s
O17K Koliganek Bris 59.17 29 P P 10 47 03.0 +0.7
baz=247,SNR=6.4
Q17K Contact Creek 59.18 31 P P 10 47 02.6 0.0
baz=249
J16K Anvik River 59.21 24 IAmb IAmb 10 47 17.3
comp=Z,20nm,0.9s
J16K Anvik River 59.21 24 P P 10 47 03.5 +1.0
baz=241,SNR=9.2
P17K Kvichak River 59.26 30 P P 10 47 03.2 +0.3
baz=248
H16K Elim 59.26 23 P P 10 47 03.5 +0.7
baz=239
N17K Nushagak Hills 59.43 28 IAmb IAmb 10 47 10.2
comp=Z,19nm,0.6s
N17K Nushagak Hills 59.43 28 P P 10 47 05.0 +0.9
baz=246
ACHA Angle Creek He 59.44 31 IAmb IAmb 10 47 19.0
comp=Z,52nm,1.9s
SII Sitkinak Islan 59.46 33 P P 10 47 05.4 +1.0
baz=251
I17K Unalakleet 59.46 24 P P 10 47 05.4 +1.2
baz=241,SNR=7.9
G16K Koyuk River 59.61 22 P P 10 47 06.4 +1.2
baz=238
HIZ Hauiti 59.62 156 P P 10 47 06.9 +1.3
HIZ Hauiti 59.62 156 P P 10 47 06.4 +0.8
L17K Donlin 59.62 26 P P 10 47 06.2 +0.8
baz=244
M17K Holitna River 59.68 27 P P 10 47 06.6 +0.8
baz=246
J17K VABM Dome 59.87 25 IAmb IAmb 10 47 13.4
comp=Z,73nm,1.7s
J17K VABM Dome 59.87 25 P P 10 47 08.3 +1.3
baz=243
K17K Iditarod 59.88 25 IAmb IAmb 10 47 29.0
comp=Z,27nm,0.9s
K17K Iditarod 59.88 25 P P 10 47 08.3 +1.1
baz=244
P18K Big Mountain, 59.91 30 IAmb IAmb 10 47 09.0
comp=Z,28nm,1.4s
P18K Big Mountain, 59.91 30 P P 10 47 08.3 +0.9
baz=249

N18K **Kilae Creek** 60.08 28 IAmb IAmb 10 47 15.7
comp=Z,17nm,0.8s
N18K **Kilae Creek** 60.08 28 P **P** **10 47 09.4 +0.8**
baz=247
O18K **Koktuh Hills** 60.09 29 P **P** **10 47 10.3 +1.6**
O18K IAmb IAmb 10 47 14.4
comp=Z,21nm,0.7s
O18K **Koktuh Hills** 60.09 29 P **P** **10 47 09.4 +0.7**
baz=248
OHAK **Old Harbor** 60.14 32 P **P** **10 47 10.5 +1.6**
baz=252
HAZ **Te Kaha** 60.20 153 P **P** **10 47 08.8 -0.8**
C16K **Lisburne Hills** 60.24 18 IAmb IAmb 10 47 30.6
comp=Z,15nm,0.8s
C16K **Lisburne Hills** 60.24 18 P **P** **10 47 10.4 +0.9**
baz=234
H17K **Granite Mounta** 60.27 23 IAmb IAmb 10 47 24.7
comp=Z,23nm,0.8s
H17K **Granite Mounta** 60.27 23 P **P** **10 47 11.0 +1.2**
baz=241,SNR=21
G17K **Kiwalik Mounta** 60.28 22 P **P** **10 47 11.1 +1.2**
baz=240
URZ **Urewera** 60.33 154 P **P** **10 47 09.0 -1.5**
L18K **Granite Mounta** 60.34 26 P **P** **10 47 10.6 +0.2**
baz=246
ZSN **Zaisan** 60.35 316 *e*P **P** **10 47 12.2 +1.5**
ZSN pmax pmax
comp=Z,10.0nm,0.6s
ZSN **Zaisan** 60.35 316 *e*P **P** **10 47 12.2 +1.5**
comp=Z,9.5nm,0.6s
KATZ **Kakaramea** 60.35 155 P **P** **10 47 12.2 +1.3**
M18K **Stony River** 60.43 27 P **P** **10 47 11.8 +0.9**
baz=247
KRVZ **Karewarewa** 60.43 155 P **P** **10 47 12.2 +0.8**
NNVZ **North Ngauruho** 60.45 155 P **P** **10 47 12.4 +0.9**
TMVZ **Te Maari** 60.48 155 P **P** **10 47 12.1 +0.4**
COVZ **Chateau Observ** 60.48 156 P **P** **10 47 12.1 +0.4**
NGZ **Ngauruhoe** 60.49 155 P **P** **10 47 12.5 +0.7**
ETVZ **East Tongariro** 60.50 155 P **P** **10 47 12.2 +0.4**
OTVZ **Oturere** 60.50 155 P **P** **10 47 12.6 +0.7**
SNVZ **South Ngauruho** 60.51 155 P **P** **10 47 12.9 +0.8**
FWVZ **Far West T-bar** 60.54 156 P **P** **10 47 12.7 +0.5**
F17K **Baldwin Pennin** 60.55 21 P **P** **10 47 12.4 +0.8**
baz=239
MWZ **Matawai** 60.57 153 P **P** **10 47 11.2 -1.0**
D17K **Noatak River** 60.61 19 P **P** **10 47 13.2 +1.1**
baz=236,SNR=18
O19K **Port Alsworth** 60.63 29 P **P** **10 47 14.8 +2.5**
O19K IAmb IAmb 10 47 18.3
comp=Z,73nm,1.8s
O19K **Port Alsworth** 60.63 29 P **P** **10 47 13.3 +1.0**
baz=249
KDAK **Kodiak Island** 60.67 32 LR LR 11 12 23.2
comp=Z,434nm,18.9s,baz=236,slow=35
KDAK **Kodiak Island** 60.67 32 P **P** **10 47 13.2 +0.6**
baz=252
PUZ **Puketiti** 60.67 153 P **P** **10 47 13.5 +0.6**
E17K **Hotham Inlet** 60.69 20 P **P** **10 47 12.9 +0.3**
baz=238,SNR=20
N19K **Bonanza Creek** 60.77 28 IAmb IAmb 10 47 19.0
comp=Z,18nm,0.7s
N19K **Bonanza Creek** 60.77 28 P **P** **10 47 14.2 +0.8**
baz=249
QRZ **Quartz Range** 60.78 159 P **P** **10 47 13.6 +0.1**
BKZ **Black Stump Fm** 60.84 155 P **P** **10 47 13.1 -1.0**
BKZ IAmb IAmb 10 47 13.7
comp=Z,34nm,0.8s
BKZ **Black Stump Fm** 60.84 155 P **P** **10 47 12.7 -1.3**
comp=Z,54nm,0.9s
BKZ **Black Stump Fm** 60.84 155 P **P** **10 47 12.7 -1.3**
J18K **Innoko River** 60.85 25 P **P** **10 47 14.8 +0.9**
baz=245
RDOG **Red Dog Mine** 60.86 19 IAmb IAmb 10 47 36.9
comp=Z,72nm,1.8s
RDOG **Red Dog Mine** 60.86 19 P **P** **10 47 14.5 +0.7**
baz=236
RAHZ **Arahi** 60.88 154 P **P** **10 47 13.7 -0.5**
NMHZ **Naumai** 60.91 155 P **P** **10 47 14.8 +0.2**
H18K **Honhosa River** 60.95 23 IAmb IAmb 10 47 28.4
comp=Z,27nm,0.8s
H18K **Honhosa River** 60.95 23 P **P** **10 47 14.7 +0.2**
baz=243,SNR=28
CNGZ **Carnagh Statio** 60.99 153 P **P** **10 47 14.1 -0.9**
C17K **DeLong Mountai** 61.02 19 P **P** **10 47 15.7 +0.8**
baz=236
TKNZ **Takaka Hill** 61.11 159 P **P** **10 47 15.5 -0.3**
L19K **White Mountain** 61.12 27 P **P** **10 47 16.2 +0.5**
baz=248,SNR=6.4
F18K **Selawik** 61.18 21 P **P** **10 47 16.0 +0.1**
baz=241
G18K **Tagagawik** 61.19 22 IAmb IAmb 10 47 30.6
comp=Z,18nm,0.8s
G18K **Tagagawik** 61.19 22 P **P** **10 47 16.6 +0.5**
baz=242
M19K **Big River Lodg** 61.22 27 P **P** **10 47 17.1 +0.8**
baz=248
E18K **Tukpahlearik C** 61.27 20 IAmb IAmb 10 47 31.5
comp=Z,21nm,0.8s
E18K **Tukpahlearik C** 61.27 20 P **P** **10 47 17.6 +1.1**
baz=239
GCSA **Galena City Sc** 61.34 24 P **P** **10 47 17.3 +0.3**
baz=244
DSZ **Denniston Nort** 61.35 160 P **P** **10 47 17.1 -0.4**
DSZ **Denniston Nort** 61.35 160 P **P** **10 47 16.8 -0.6**
TSZ **Takapari Road** 61.39 156 P **P** **10 47 16.7 -1.0**
NNZ **Nelson** 61.42 158 P **P** **10 47 17.2 -0.7**
J19K **Poorman** 61.52 25 P **P** **10 47 19.1 +0.8**
baz=246,SNR=8.6
ZAA0 **Zalesovo Array** 61.60 323 P **P** **10 47 19.1 +0.1**
ZAA0 IAmb IAmb 10 47 23.4
comp=Z,39nm,1.1s
ZALV **Zalesovo Beam** 61.60 323 P **P** **10 47 19.1 +0.1**
comp=Z,46nm,1.0s,baz=107,slow=6.8,SNR=59
ZALV LR LR 11 14 44.3
comp=Z,884nm,18.2s,baz=98,slow=37
ZALV PKP2bc P'P'bc 11 16 33.1 -10
comp=Z,0.5nm,0.5s,baz=241,slow=8.3,SNR=4.1
comp=Z,46nm,1.0s
C18K **Utukok River** 61.72 19 IAmb IAmb 10 47 47.2
comp=Z,17nm,1.0s
C18K **Utukok River** 61.72 19 P **P** **10 47 20.5 +0.8**
baz=238
THZ **Tophouse** 61.74 159 P **P** **10 47 19.4 -0.7**
THZ **Tophouse** 61.74 159 P **P** **10 47 19.1 -1.0**
MRZ **Mangatainoka R** 61.75 156 IAmb IAmb 10 47 22.3
comp=Z,24nm,0.8s
MRZ **Mangatainoka R** 61.75 156 P **P** **10 47 18.7 -1.4**
M20K **Styx River** 61.77 27 IAmb IAmb 10 47 34.9
comp=Z,18nm,0.9s
M20K **Styx River** 61.77 27 P **P** **10 47 20.7 +0.6**
baz=249
G19K **Purcell Mounta** 61.88 22 IAmb IAmb 10 47 26.4
comp=Z,23nm,0.7s
G19K **Purcell Mounta** 61.88 22 P **P** **10 47 21.4 +0.7**
baz=243
K20K **Telida** 61.90 26 IAmb IAmb 10 47 27.1
comp=Z,17nm,0.8s
K20K **Telida** 61.90 26 P **P** **10 47 21.8 +0.9**
baz=248
F19K **Shaleruckim Mo** 61.95 21 P **P** **10 47 22.1 +1.0**
baz=242
SPCR **Spurr Chakacha** 61.95 28 P **P** **10 47 22.2 +0.9**
baz=251
MK31 **Makanchi Array** 62.00 315 P **P** **10 47 22.2 +0.3**
MK31 IAmb IAmb 10 47 29.4
comp=Z,24nm,0.8s
MK31 **Makanchi Array** 62.00 315 *ce*P **P** **10 47 22.1 +0.2**
MKAR **Makanchi Array** 62.00 315 P **P** **10 47 22.2 +0.3**
comp=Z,20nm,0.6s,baz=90,slow=7.8,SNR=140
MKAR LR LR 11 14 56.7
comp=Z,562nm,20.2s,baz=149,slow=37
comp=Z,20nm,0.6s
MKAR **Makanchi Array** 62.00 315 P **P** **10 47 22.4 +0.5**
MKAR **Makanchi Array** 62.00 315 P **P** **10 47 22.4 +0.5**
BFZ **Birch Farm** 62.03 156 P **P** **10 47 21.1 -0.9**
INZ **Inchbonnie** 62.11 161 P **P** **10 47 20.7 -1.7**
INZ **Inchbonnie** 62.11 161 P **P** **10 47 20.8 -1.7**
BRSE **Bradley Lake S** 62.18 30 P **P** **10 47 23.4 +0.6**
baz=253
J20K **Nowinta River** 62.18 25 IAmb IAmb 10 47 37.6
comp=Z,28nm,1.0s
J20K **Nowinta River** 62.18 25 P **P** **10 47 24.0 +1.3**
baz=247,SNR=13
WVZ **Waitaha Valley** 62.20 161 P **P** **10 47 22.6 -0.5**
MAKZ **Makanchi** 62.22 315 P **P** **10 47 23.9 +0.5**
MAKZ **Makanchi** 62.22 315 P **P** **10 47 23.9 +0.5**
MAKZ pmax pmax
comp=Z,36nm,0.8s
I20K **Naaghedeneel** 62.29 24 P **P** **10 47 24.6 +1.1**
baz=247
CAPN **Captain Cook N** 62.30 29 P **P** **10 47 24.7 +1.2**
baz=252
FOZ **Fox Glacier** 62.34 162 P **P** **10 47 24.7 +0.7**
H20K **Anotleneega Mo** 62.42 23 P **P** **10 47 25.5 +1.1**
baz=246
E19K **Redstone River** 62.42 21 IAmb IAmb 10 47 39.1
comp=Z,24nm,0.8s
E19K **Redstone River** 62.42 21 P **P** **10 47 25.5 +1.1**
baz=243
LTZ **Lake Taylor** 62.43 160 P **P** **10 47 24.1 -0.6**
LTZ IAmb IAmb 10 47 25.1
comp=Z,28nm,0.9s
LTZ **Lake Taylor** 62.43 160 P **P** **10 47 23.6 -1.1**
C19K **Lookout Ridge** 62.46 19 IAmb IAmb 10 47 31.9
comp=Z,24nm,0.9s
C19K **Lookout Ridge** 62.46 19 P **P** **10 47 25.7 +1.1**
baz=240
SKT **Skwentna** 62.51 28 P **P** **10 47 24.9 -0.1**
baz=251
PPLA **Purkeypile** 62.53 27 P **P** **10 47 25.6 +0.3**
baz=250,SNR=7.2
KHZ **Kahutara** 62.53 159 P **P** **10 47 22.9 -2.4**
JCZ **Jackson Bay** 62.54 163 P **P** **10 47 25.8 +0.4**
SLKM **Skilak Lake** 62.66 29 IAmb IAmb 10 47 31.7
comp=Z,30nm,1.0s
SUA **Susitna One** 62.70 28 P **P** **10 47 26.9 +0.5**
baz=252
F20K **Avaraart Lake** 62.77 22 IAmb IAmb 10 47 41.1
comp=Z,23nm,0.8s
F20K **Avaraart Lake** 62.77 22 P **P** **10 47 27.2 +0.6**
baz=244
CHUM **Lake Minchumin** 62.82 25 P **P** **10 47 27.8 +0.8**
baz=249,SNR=16
OXZ **Oxford** 62.84 160 P **P** **10 47 26.0 -1.4**
GVZ **Greta Valley S** 62.85 159 P **P** **10 47 26.2 -1.2**
MSZ **Milford Sound** 62.86 164 P **P** **10 47 27.2 -0.2**
RPZ **Rata Peaks** 62.88 161 P **P** **10 47 26.5 -1.1**
RPZ **Rata Peaks** 62.88 161 P **P** **10 47 26.3 -1.3**
O22K **Cooper Landing** 62.88 30 P **P** **10 47 28.3 +0.9**
baz=253,SNR=6.5
SEW **Seward** 62.91 30 P **P** **10 47 28.1 +0.5**
baz=254
RC01 **Rabbit Creek A** 63.05 29 P **P** **10 47 29.4 +0.8**
baz=253,SNR=17
M22K **Willow** 63.07 28 P **P** **10 47 29.1 +0.4**
baz=252,SNR=8.1
RAR **Rarotonga** 63.14 124 LR LR 11 13 21.8
comp=Z,240nm,18.3s,baz=285,slow=35
E20K **Nigu River** 63.14 20 P **P** **10 47 30.1 +0.9**
baz=243
CUT **Chulitna** 63.21 27 P **P** **10 47 30.0 +0.4**
baz=252
D20K **Etivluk River** 63.21 20 P **P** **10 47 30.4 +0.9**
baz=243
LBZ **Lake Benmore** 63.23 162 P **P** **10 47 28.6 -1.3**
H21K **Melozitna Rive** 63.28 24 IAmb IAmb 10 47 36.1
comp=Z,18nm,0.8s
H21K **Melozitna Rive** 63.28 24 P **P** **10 47 30.7 +0.6**
baz=248
G21K **Allakaket** 63.35 23 IAmb IAmb 10 48 16.5
comp=Z,25nm,1.4s
G21K **Allakaket** 63.35 23 P **P** **10 47 30.8 +0.3**
baz=247
DCZ **Deep Cove** 63.40 165 P **P** **10 47 30.4 -0.6**
DCZ IAmb IAmb 10 47 33.0
comp=Z,28nm,1.0s
BPAW **Bear Paw Mtn.** 63.45 25 P **P** **10 47 32.2 +1.0**
BPAW IAmb IAmb 10 47 45.2
comp=Z,27nm,0.9s
BPAW **Bear Paw Mtn.** 63.45 25 P **P** **10 47 31.7 +0.5**
baz=250,SNR=18
PMR **Palmer** 63.48 28 IAmb IAmb 10 48 09.2
comp=Z,21nm,1.0s
PMR **Palmer** 63.48 28 P **P** **10 47 31.7 +0.3**
comp=Z,22nm,1.5s
PMR **Palmer** 63.48 28 P **P** **10 47 32.3 +0.9**
baz=253
TRF **Thorofare Moun** 63.53 26 IAmb IAmb 10 47 37.8
comp=Z,42nm,1.2s
TRF **Thorofare Moun** 63.53 26 P **P** **10 47 31.8 -0.2**
baz=251,SNR=12
MLZ **Mavora Lakes** 63.56 164 P **P** **10 47 31.5 -0.6**
GHO **Glory Hole Cre** 63.62 28 IAmb IAmb 10 47 54.0
comp=Z,28nm,0.8s
F21K **Alatna River** 63.63 22 P **P** **10 47 32.7 +0.3**
baz=247,SNR=11
PDGK **Podgornoye** 63.69 311 P **P** **10 47 33.1 -0.3**
SHLS **Shalkode** 63.70 311 *e*P **P** **10 47 32.7 -0.7**
SHLS pmax pmax
comp=Z,13nm,0.7s
SHLS **Shalkode** 63.70 311 *e*P **P** **10 47 32.8 -0.7**
comp=Z,13nm,0.7s
KNK **Knik Glacier** 63.74 29 P **P** **10 47 33.5 +0.3**
baz=254,SNR=9.6
WUS **Wushi** 63.81 308 IAmb IAmb 10 47 51.5
comp=Z,37nm,1.2s
P23K **Montague Islan** 63.87 30 P **P** **10 47 34.3 +0.2**
baz=256
SML **Sawmill** 63.90 28 P **P** **10 47 34.5 +0.2**
baz=254,SNR=12
E21K **Killik River** 63.96 20 P **P** **10 47 35.5 +0.9**
baz=246
ODZ **Otahua Downs** 63.96 162 P **P** **10 47 33.7 -1.0**
WHZ **Wether Hill Ro** 64.00 165 P **P** **10 47 33.8 -1.2**
UZB **Uzynbulak** 64.02 311 *e*P **P** **10 47 36.8 +1.3**
UZB pmax pmax
comp=Z,10.0nm,0.6s
UZB **Uzynbulak** 64.02 311 *e*P **P** **10 47 36.9 +1.3**
comp=Z,10nm,0.6s
WAT1 **Susitna Watana** 64.09 27 P **P** **10 47 35.3 -0.2**
baz=253
M23K **Glacier View** 64.18 28 P **P** **10 47 36.9 +0.8**
baz=255
MCK **McKinley** 64.19 26 IAmb IAmb 10 47 57.4
comp=Z,14nm,0.8s
MCK **McKinley** 64.19 26 P **P** **10 47 37.2 +1.0**
baz=253
GLI **Glacier Island** 64.24 29 P **P** **10 47 37.2 +0.7**
baz=256
Q23K **Middleton Isla** 64.26 31 P **P** **10 47 37.5 +0.9**
baz=257
KPKS **Kokpek** 64.28 311 *e*P **P** **10 47 38.5 +1.3**
KPKS **Kokpek** 64.28 311 *e*P **P** **10 47 38.6 +1.3**
SCM **Sheep Creek Mo** 64.37 28 P **P** **10 47 37.9 +0.5**
baz=255,SNR=10
WAT6 **Susitna Watana** 64.38 28 P **P** **10 47 37.8 +0.3**
baz=254,SNR=9.4
NEA2 **Nenana** 64.40 25 P **P** **10 47 37.7 +0.3**
baz=252
A21K **Barrow** 64.43 17 P **P** **10 47 38.4 +0.8**
baz=242
I23K **Minto, Yukon-K** 64.45 25 P **P** **10 47 38.3 +0.5**
baz=252,SNR=13
SATY **Saty** 64.47 310 *e*P **P** **10 47 39.6 +1.1**
SATY pmax pmax
comp=Z,10.0nm,0.8s
SATY **Saty** 64.47 310 *e*P **P** **10 47 39.7 +1.1**
comp=Z,9.7nm,0.8s
TDK **Taldyqorghan** 64.55 313 *e*P **P** **10 47 40.3 +1.5**
TDK pmax pmax
comp=Z,21nm,0.9s
TDK **Taldyqorghan** 64.55 313 *e*P **P** **10 47 40.4 +1.5**
comp=Z,21nm,0.9s
D22K **Ayikyak River** 64.57 20 P **P** **10 47 39.1 +0.5**
baz=247,SNR=15
H23K **Yukon River** 64.60 24 P **P** **10 47 39.3 +0.6**
baz=251
DHY **Denali Highway** 64.68 27 P **P** **10 47 39.9 +0.4**
baz=254
G23K **Bananza Creek** 64.71 23 P **P** **10 47 40.5 +1.0**
baz=250
WRH **Wood River Hil** 64.77 26 IAmb IAmb 10 47 44.3
comp=Z,19nm,0.7s
EYAK **Cordova Ski Ar** 64.80 30 P **P** **10 47 40.9 +0.8**
baz=257
COLD **Coldfoot** 64.82 22 IAmb IAmb 10 47 46.2
comp=Z,19nm,0.8s
COLD **Coldfoot** 64.82 22 P **P** **10 47 40.8 +0.6**
baz=250,SNR=19
KURK **Kurchatov** 64.84 319 P **P** **10 47 40.6 0.0**
KURK **Kurchatov** 64.84 319 P **P** **10 47 40.9 +0.3**
TARG **Taragay, Kyrgy** 64.88 309 IAmb IAmb 10 47 56.3
comp=Z,18nm,0.9s
KURBB **Kurchatov Arra** 64.89 319 P **P** **10 47 40.9 0.0**
comp=Z,58nm,0.7s,baz=98,slow=6.8,SNR=216
KURBB PKP2bc P'P'bc 11 16 29.3 -5.5
comp=Z,0.8nm,0.3s,baz=277,slow=3.1,SNR=5.4
KURBB LR LR 11 16 57.4
comp=Z,1μm,18.2s,baz=119,slow=37
comp=Z,58nm,0.7s
KURBB **Kurchatov Arra** 64.89 319 P **P** **10 47 40.5 -0.4**
DIV **Divide** 64.92 29 IAmb IAmb 10 47 56.6
comp=Z,27nm,0.7s
B22K **Teshekpuk Lake** 64.94 19 IAmb IAmb 10 47 54.8
comp=Z,21nm,0.8s
B22K **Teshekpuk Lake** 64.94 19 P **P** **10 47 41.7 +0.9**
baz=245,SNR=12
KLU **Klutina** 64.94 29 IAmb IAmb 10 47 58.1
comp=Z,16nm,0.7s
KLU **Klutina** 64.94 29 P **P** **10 47 41.6 +0.5**
baz=256
M24K **Tolsona, Glenn** 64.97 28 P **P** **10 47 42.0 +0.7**
baz=256
COLA **College** 64.98 25 P **P** **10 47 42.1 +0.9**
COLA IAmb IAmb 10 47 56.7
comp=Z,16nm,0.8s
COLA **College** 64.98 25 P **P** **10 47 44.1 +2.9**
comp=Z,13nm,0.8s
COLA **College** 64.98 25 P **P** **10 47 42.1 +0.9**
COLA pmax pmax
comp=Z,17nm,0.8s
COLA **College** 64.98 25 P **P** **10 47 41.9 +0.7**
baz=253
NRIK **Noril'sk** 65.06 340 P **P** **10 47 42.4 +0.8**
comp=Z,21nm,0.7s,baz=110,slow=7.9,SNR=41
NRIK LR LR 11 16 53.2
comp=Z,582nm,22.0s,baz=116,slow=37
comp=Z,21nm,0.7s
NRIK **Noril'sk** 65.06 340 *c i*P **P** **10 47 42.2 +0.5**
NRIK pmax pmax
comp=Z,41nm,1.2s
POKR **Poker Plat Res** 65.22 25 IAmb IAmb 10 47 56.3
comp=Z,66nm,2.0s
POKR **Poker Plat Res** 65.22 25 P **P** **10 47 43.3 +0.5**
baz=253
HDA **Harding Lake** 65.22 26 IAmb IAmb 10 47 55.4
comp=Z,15nm,0.7s
HDA **Harding Lake** 65.22 26 P **P** **10 47 42.7 -0.1**
baz=254,SNR=9.8
H24K **Noodor Dome** 65.25 24 IAmb IAmb 10 47 50.1
comp=Z,35nm,1.3s
H24K **Noodor Dome** 65.25 24 P **P** **10 47 43.7 +0.6**
baz=253
D23K **Nanushuk River** 65.28 20 P **P** **10 47 44.3 +1.2**
baz=249
KAIM **Kayak Island** 65.32 31 P **P** **10 47 44.3 +0.8**
baz=259
E23K **Chandalar** 65.32 22 P **P** **10 47 44.7 +1.2**
baz=250
ILAR **Eielson Array** 65.35 25 P **P** **10 47 42.8 -0.8**
comp=Z,12nm,1.1s,baz=251,slow=6.3,SNR=35
ILAR PKP2bc P'P'bc 11 16 26.1 -7.2
comp=Z,1.0nm,1.0s,baz=339,slow=1.1,SNR=6.5
comp=Z,12nm,1.1s
ILAR **Eielson Array** 65.35 25 P **P** **10 47 42.5 -1.1**
BMRM **Bremner River** 65.44 30 P **P** **10 47 45.0 +0.6**
baz=258
MDOK **Medeo** 65.47 311 *e*P **P** **10 47 46.3 +1.3**
MDOK **Medeo** 65.47 311 *e*P **P** **10 47 46.3 +1.3**
PAX **Paxson** 65.49 27 IAmb IAmb 10 47 49.9
comp=Z,20nm,0.7s
PAX **Paxson** 65.49 27 P **P** **10 47 44.6 -0.1**
baz=256,SNR=12
HARP **HAARP** 65.50 28 P **P** **10 47 45.1 +0.4**
baz=257,SNR=5.5
K24K **Donnelly Dome** 65.56 27 P **P** **10 47 45.3 +0.2**
baz=256
AAA **Alma-Ata** 65.56 311 *e*P **P** **10 47 46.8 +1.3**
AAA **Alma-Ata** 65.56 311 *e*P **P** **10 47 46.9 +1.3**
N25K **Chitina, Valde** 65.58 29 IAmb IAmb 10 47 59.5
comp=Z,15nm,0.7s
N25K **Chitina, Valde** 65.58 29 P **P** **10 47 45.9 +0.6**
baz=258
G24K **Hadweenzic Riv** 65.67 23 IAmb IAmb 10 48 02.0
comp=Z,12nm,0.7s
G24K **Hadweenzic Riv** 65.67 23 P **P** **10 47 46.4 +0.7**
baz=253
E24K **Your Creek** 65.72 22 IAmb IAmb 10 48 07.2
comp=Z,16nm,0.8s
E24K **Your Creek** 65.72 22 P **P** **10 47 47.1 +1.0**
baz=251
GLB **Gilahina Butte** 65.92 29 IAmb IAmb 10 47 54.1
comp=Z,28nm,1.0s
J25K **Salcha River,** 65.94 26 P **P** **10 47 47.7 +0.1**
baz=256
RIDG **Independent Ri** 65.95 27 P **P** **10 47 48.1 +0.5**
baz=256
KUU **Kurty** 66.00 311 *e*P **P** **10 47 49.5 +1.3**
KUU pmax pmax
comp=Z,14nm,0.7s
KUU **Kurty** 66.00 311 *e*P **P** **10 47 49.5 +1.3**
comp=Z,14nm,0.7s
ULHL **Ulahol** 66.05 310 P **P** **10 47 50.0 +1.1**
SNR=13
PRP **Porcupine Dome** 66.10 25 P **P** **10 47 49.2 +0.5**
baz=255
CRQE **Cirque** 66.12 30 P **P** **10 47 49.6 +0.8**
baz=259
HYB **Hyderabad** 66.14 282 *e*P **P** **10 47 49.9 +0.3**
HYB *e*PcP **PcP** **10 48 20.0 +0.1**
HYB *e*PP **PP** **10 50 15.8 +0.5**
HYB *e*S **S** **10 56 39.1 +1.3**
NRN **Naryn** 66.23 309 IAmb IAmb 10 47 53.2
comp=Z,14nm,0.8s
MENT **Mentasta** 66.26 28 P **P** **10 47 51.2 +1.6**
comp=Z,12nm,1.0s
DOT **Dot Lake** 66.27 27 IAmb IAmb 10 48 03.1
comp=Z,21nm,0.7s
MCARA **McCarthy VSAT** 66.28 29 IAmb IAmb 10 47 55.4
comp=Z,30nm,0.8s
MCARA **McCarthy VSAT** 66.28 29 P **P** **10 47 50.3 +0.7**
baz=259
SCRK **Sand Creek** 66.37 27 IAmb IAmb 10 48 03.9
comp=Z,18nm,0.8s
SCRK **Sand Creek** 66.37 27 P **P** **10 47 50.5 +0.1**
baz=257,SNR=25
L26K **Log Cabin Wild** 66.45 28 IAmb IAmb 10 47 56.3
comp=Z,14nm,0.7s
L26K **Log Cabin Wild** 66.45 28 P **P** **10 47 51.1 +0.3**
baz=258,SNR=12
TKM2 **Tokmak 2** 66.53 310 P **P** **10 47 52.0 +0.1**
SNR=33
MESA **MESA** 66.58 31 P **P** **10 47 52.5 +0.6**
baz=261
KSH2 **Kashi** 66.61 306 P **P** **10 47 53.7 +1.3**
KSH2 pP sP 10 47 57.8 0.0
KSH2 sP pwP 10 48 05.8 +1.3
KSH2 pmax pmax
comp=Z,18nm,0.8s
KSH2 LR LR
comp=Z,600nm,9.6s
KSH2 LR LR
comp=Z,950nm,21.3s
KSH2 LR LR
comp=Z,1μm,18.2s
F25K **Christian Rive** 66.61 23 IAmb IAmb 10 48 06.6
comp=Z,20nm,0.7s
F25K **Christian Rive** 66.61 23 P **P** **10 47 52.8 +1.0**
baz=254
J26L **Joseph Creek** 66.67 26 P **P** **10 47 52.7 +0.4**
baz=257
E25K **Arctic Village** 66.78 22 IAmb IAmb 10 48 12.1
comp=Z,13nm,0.8s
E25K **Arctic Village** 66.78 22 P **P** **10 47 53.1 +0.3**
baz=254,SNR=8.3
D25K **Kavik River** 66.85 21 P **P** **10 47 54.1 +0.9**
baz=253
BMAR **Burnt Mountain** 66.96 23 P **P** **10 47 55.2 +1.2**
M27K **Edge Creek, AK** 66.99 28 P **P** **10 47 54.8 +0.4**
baz=260
CTG **Chitna Glacier** 67.01 30 P **P** **10 47 54.9 +0.4**
baz=261
KBK **Karagaybulak** 67.01 310 P **P** **10 47 57.6 +2.7**
SNR=8.7
L27K **Beaver Creek,** 67.14 28 IAmb IAmb 10 48 09.1
comp=Z,15nm,0.7s
L27K **Beaver Creek,** 67.14 28 P **P** **10 47 55.4 +0.2**
baz=260,SNR=13
G26K **Porcupine Rive** 67.14 23 IAmb IAmb 10 48 02.6
comp=Z,26nm,0.8s
G26K **Porcupine Rive** 67.14 23 P **P** **10 47 56.3 +1.2**

baz=256
CHMS Chumysh 67.15 310 P P 10 47 57.0 +1.3
SNR=6.8
BCAR Beaver Creek A 67.16 28 P P 10 47 56.1 +0.8
F26K Sheenjek River 67.19 23 IAmb IAmb 10 48 10.2
comp=Z,17nm,0.7s
F26K Sheenjek River 67.19 23 P P 10 47 56.6 +1.1
baz=256
SGDS Sogindy 67.23 311 eP P 10 47 57.5 +1.2
USP Ospenovka 67.33 311 P P 10 47 59.3 +2.5
SNR=14
UCH Uchtor 67.33 310 P P 10 47 58.1 +0.7
SNR=32
AAK Ala-Archa 67.34 310 LR LR 11 20 02.0
comp=Z,522nm,18.2s,baz=92,slow=38
AAK Ala-Archa 67.34 310 P P 10 47 57.0 0.0
SNR=14
AAK Ala-Archa 67.34 310 P P 10 47 57.3 +0.3
AAK IAmb IAmb 10 47 60.0
comp=Z,9.2nm,0.6s
AAK Ala-Archa 67.34 310 ceP P 10 47 56.7 -0.3
AAK pmax pmax
comp=Z,12nm,1.0s
PINM Pinnacle 67.41 31 P P 10 47 57.8 +0.7
baz=262
BVCY Beaver Creek 67.46 29 P P 10 47 58.1 +0.8
baz=261
O28M Mount Upton 67.53 30 IAmb IAmb 10 48 15.7
comp=Z,29nm,0.9s
O28M Mount Upton 67.53 30 P P 10 47 58.6 +0.6
baz=262
YUK3 Moose Creek 67.55 29 P P 10 47 58.3 +0.2
baz=261,SNR=6.6
I27K Kandik River 67.70 25 P P 10 47 59.2 +0.5
baz=259
YUK8 Steele Glacier 67.81 30 P P 10 48 00.8 +1.0
baz=262
C27K Jago River 67.84 21 IAmb IAmb 10 48 13.8
comp=Z,18nm,0.7s
C27K Jago River 67.84 21 P P 10 48 00.3 +0.8
baz=255,SNR=22
H27K Steamboat Moun 67.86 24 IAmb IAmb 10 48 05.7
comp=Z,18nm,0.9s
H27K Steamboat Moun 67.86 24 P P 10 48 00.6 +0.8
baz=259
EKS2 Erkin-Say 67.87 310 P P 10 48 01.9 +1.5
SNR=9.2
G27K Doyon Strip 67.93 24 P P 10 48 01.1 +0.9
baz=258
E27K Coleen River 68.24 22 P P 10 48 03.0 +0.9
baz=258
O29M Mount Kennedy 68.27 31 IAmb IAmb 10 48 17.2
comp=Z,23nm,0.8s
O29M Mount Kennedy 68.27 31 P P 10 48 02.8 +0.3
baz=264
YUK4 Talbot Arm 68.35 30 P P 10 48 04.1 +1.0
baz=263
I28M Miner Creek 68.36 25 P P 10 48 03.1 +0.2
baz=260
YUK6 Outpost Mounta 68.44 30 P P 10 48 04.0 +0.3
baz=264
ARSB Arslanbob 68.50 309 IAmb IAmb 10 48 07.6
comp=Z,27nm,0.7s
M29M Somme Creek 68.57 29 IAmb IAmb 10 48 28.5
comp=Z,16nm,0.8s
M29M Somme Creek 68.57 29 P P 10 48 05.1 +0.8
baz=263
BRZS Berezniki 68.60 318 eP P 10 48 06.1 +1.5
BRZS Berezniki 68.60 318 eP P 10 48 06.1 +1.5
D27M Malcolm River 68.69 21 IAmb IAmb 10 48 19.6
comp=Z,15nm,0.8s
D27M Malcolm River 68.69 21 P P 10 48 05.8 +0.9
baz=258
F28M Old Crow 68.77 23 IAmb IAmb 10 48 19.7
comp=Z,16nm,0.8s
F28M Old Crow 68.77 23 P P 10 48 06.4 +1.0
baz=260,SNR=14
NIL Nilore 68.80 300 P P 10 48 07.3 +1.1
NIL Nilore 68.80 300 P P 10 48 07.3 +1.1
NIL pmax pmax
comp=Z,133nm,0.8s
L29M L29M 68.81 28 P P 10 48 06.8 +1.1
baz=263
HYT Haines Junctio 68.85 30 P P 10 48 07.2 +1.1
baz=264,SNR=8.2
I29M Ogilvie Camp, 69.03 26 IAmb IAmb 10 48 13.7
comp=Z,51nm,1.5s
I29M Ogilvie Camp, 69.03 26 P P 10 48 07.7 +0.7
baz=262,SNR=10
P30M Million Dollar 69.05 31 P P 10 48 08.6 +1.3
baz=265
E28M Babbage River 69.07 22 IAmb IAmb 10 48 30.2
comp=Z,14nm,0.9s
E28M Babbage River 69.07 22 P P 10 48 08.2 +1.0
baz=260
K29M Barlow Dome 69.17 27 IAmb IAmb 10 48 22.5
comp=Z,23nm,0.8s
K29M Barlow Dome 69.17 27 P P 10 48 08.8 +0.7
baz=263
S31K Pelican 69.27 34 P P 10 48 09.5 +0.9
baz=267
M30M Minto, Yukon 69.36 29 IAmb IAmb 10 48 33.2
comp=Z,18nm,1.0s
M30M Minto, Yukon 69.36 29 P P 10 48 10.0 +0.9
baz=264,SNR=5.5
G29M Pine Creek 69.36 24 IAmb IAmb 10 48 23.7
comp=Z,39nm,1.2s
G29M Pine Creek 69.36 24 P P 10 48 10.2 +1.2
baz=262
O30N Mendenhall 69.53 31 P P 10 48 11.3 +1.1
baz=266
E29M Blow River 69.63 22 IAmb IAmb 10 48 37.7
comp=Z,45nm,1.7s
E29M Blow River 69.63 22 P P 10 48 11.8 +1.1
baz=261,SNR=6.1
SIT Sitka 69.72 35 P P 10 48 13.2 +1.9
baz=268
N31M Braeburn, Yuko 69.74 30 IAmb IAmb 10 48 26.4
comp=Z,26nm,0.8s
N31M Braeburn, Yuko 69.74 30 P P 10 48 12.4 +0.9
baz=266
J30M Hart River 69.76 26 IAmb IAmb 10 48 26.0
comp=Z,16nm,0.8s
J30M Hart River 69.76 26 P P 10 48 12.3 +0.6
baz=264
EPYK Eagle Plains 69.81 25 P P 10 48 12.6 +0.8
baz=263
I30M Mount Dempster 69.81 26 IAmb IAmb 10 48 26.4
comp=Z,11nm,0.7s
I30M Mount Dempster 69.81 26 P P 10 48 13.0 +1.0
baz=264
SKAG Skagway 69.83 32 P P 10 48 13.1 +1.1
comp=Z,25nm,1.6s
SKAG Skagway 69.83 32 P P 10 48 13.0 +1.1
baz=267
MAYO Mayo, Yukon 69.86 28 P P 10 48 12.9 +0.8
baz=265,SNR=9.2
PPT Papeete 69.96 116 P P 10 48 14.3 +0.8
comp=Z,46nm,0.8s,baz=286,slow=15,SNR=4.0
PPT LR LR 11 11 07.5
comp=Z,796nm,20.6s,baz=265,slow=29
comp=Z,46nm,0.8s
BVA0 Borovoye Array 70.06 321 P P 10 48 12.8 -0.8
BVAR Borovoye Array 70.06 321 P P 10 48 14.0 +0.5
comp=Z,22nm,0.7s,baz=96,slow=7.4,SNR=77
BVAR LR LR 11 20 10.3
comp=Z,968nm,19.0s,baz=79,slow=37
comp=Z,22nm,0.7s
G30M tAoh Zrail Nji 70.07 24 IAmb IAmb 10 48 29.4
comp=Z,16nm,0.9s
G30M tAoh Zrail Nji 70.07 24 P P 10 48 14.0 +0.6
baz=263
BORK Borovoye 70.10 321 P P 10 48 14.1 +0.3
BORK IAmb IAmb 10 48 15.4
comp=Z,22nm,0.8s
BORK Borovoye 70.10 321 ceP P 10 48 14.3 +0.5
BORK pmax pmax
comp=Z,25nm,0.8s
WHY Whitehorse 70.12 31 P P 10 48 14.4 +0.4
baz=267
S32K Killisnoo 70.14 34 P P 10 48 15.3 +1.4
baz=268
R32K Eaglecrest 70.20 33 P P 10 48 15.7 +1.4
baz=268
BTK Batken 70.22 307 IAmb IAmb 10 48 51.8
comp=Z,19nm,1.1s
KK31 Karatay Array 70.25 311 iP P 10 48 14.7 -0.3
KKAR Karatay Array 70.25 311 P P 10 48 15.2 +0.3
KKAR Karatay Array 70.25 311 P P 10 48 15.3 +0.3
F30M Barrier River 70.31 23 P P 10 48 15.6 +0.7
baz=264
M31M Drury Creek, Y 70.44 29 IAmb IAmb 10 48 29.7
comp=Z,15nm,0.7s
M31M Drury Creek, Y 70.44 29 P P 10 48 16.4 +0.6
baz=267
P32M Atlin 70.66 32 P P 10 48 18.4 +1.2
baz=268
H31M Peel River 70.71 25 P P 10 48 18.2 +0.8
baz=266
BRLS Boroldav 70.75 311 eP P 10 48 19.9 +1.9
BRLS Boroldav 70.75 311 eP P 10 48 19.9 +1.9
G31M Satah River 70.83 24 IAmb IAmb 10 48 31.9
comp=Z,31nm,0.8s
G31M Satah River 70.83 24 P P 10 48 18.9 +0.9
baz=265
CRAG Craig 70.92 36 P P 10 48 20.2 +1.5
baz=270
U33K Whale Pass 70.92 36 P P 10 48 19.8 +1.1
baz=270
CHM Chimkent 70.97 310 eP P 10 48 20.6 +1.2
CHM pmax pmax
comp=Z,8.0nm,0.4s
CHM Chimkent 70.97 310 eP P 10 48 20.6 +1.2
comp=Z,8.0nm,0.4s
T33K Petersburg 71.01 35 P P 10 48 20.7 +1.5
baz=270
N32M Quiet Lake 71.02 30 IAmb IAmb 10 48 34.1
comp=Z,42nm,1.1s
N32M Quiet Lake 71.02 30 P P 10 48 20.6 +1.3
baz=268
F31M Tsiigehtchic 71.08 24 IAmb IAmb 10 48 33.0
comp=Z,18nm,0.7s
F31M Tsiigehtchic 71.08 24 P P 10 48 20.0 +0.5
baz=266,SNR=14
P33M Teslin, Yukon 71.12 31 P P 10 48 21.0 +0.9
baz=269
INK Inuvik 71.23 23 LR LR 11 21 52.8
comp=Z,334nm,18.1s,baz=239,slow=38
INK Inuvik 71.23 23 IAmb IAmb 10 48 34.3
comp=Z,22nm,0.7s
INK Inuvik 71.23 23 P P 10 48 20.4 0.0
baz=265,SNR=21
WRAK Wrangell Islan 71.35 35 P P 10 48 22.0 +0.7
baz=270
Q32M Nakina River 71.39 33 P P 10 48 22.8 +1.0
baz=270
V35K Ketchikan 71.78 36 P P 10 48 24.8 +0.9
baz=272
S34M Telegraph Cree 71.99 34 P P 10 48 26.4 +1.2
baz=271
R33M Jennings River 72.06 32 IAmb IAmb 10 48 40.4
comp=Z,17nm,0.8s
R33M Jennings River 72.06 32 P P 10 48 26.9 +1.1
baz=271
KBL Kabul 72.18 302 P P 10 48 26.9 -0.1
KBL IAmb IAmb 10 48 29.4
comp=Z,46nm,1.0s
KBL Kabul 72.18 302 P P 10 48 26.9 -0.1
KBL pmax pmax
comp=Z,46nm,1.0s
T35M Bob Quinn 72.49 35 P P 10 48 29.9 +1.7
baz=272
DLBC Dease Lake 72.56 33 P P 10 48 29.6 +0.9
baz=272
WTLY Watson Lake, Y 73.14 31 IAmb IAmb 10 48 50.0
comp=Z,22nm,0.9s
WTLY Watson Lake, Y 73.14 31 P P 10 48 33.3 +1.3
baz=272
BBB Bella Bella 74.04 40 LR LR 11 16 28.4
comp=Z,486nm,19.8s,baz=256,slow=32
A36M Sachs Harbour 74.14 19 IAmb IAmb 10 48 58.3
comp=Z,39nm,0.8s
A36M Sachs Harbour 74.14 19 P P 10 48 38.5 +0.9
baz=272
C36M Paulatuk 74.67 22 IAmb IAmb 10 48 54.1
comp=Z,26nm,0.7s
C36M Paulatuk 74.67 22 P P 10 48 41.4 +0.7
baz=274
TOAD Toad River Com 75.04 32 P P 10 48 44.1 +0.9
baz=276
WRGLY Wrigley 75.45 28 P P 10 48 46.6 +1.2
baz=276
SVE Sverdlovsk 75.47 325 eP P 10 48 46.4 +0.8
SVE pmax pmax
comp=E,29nm,0.9s
ARTI Arti 76.76 325 LR LR 11 25 44.0
comp=E,461nm,18.4s,baz=60,slow=38
ARTI Arti 76.76 325 P P 10 48 53.3 +0.3
ARTI Arti 76.76 325 cP P 10 48 53.6 +0.6
ARTI S S 10 58 41.6 +2.4
ARTI SS SS 11 03 29.9 -4.8
ARTI pmax pmax
comp=Z,47nm,0.8s
AB31 Akbulak array 76.90 318 IAmb IAmb 10 48 57.6
comp=Z,25nm,0.7s
AB31 Akbulak array 76.90 318 iP P 10 48 53.2 -0.7
ABKAR Akbulak array 76.90 318 P P 10 48 53.7 -0.2
NLWA Neilton Lookou 77.38 44 IAmb IAmb 10 49 00.3
comp=Z,24nm,1.1s
HRA Herat 77.75 302 IAmb IAmb 10 49 01.2
comp=Z,19nm,0.8s
AKTO Aktyubinsk 77.94 319 LR LR 11 25 35.0
comp=Z,612nm,18.0s,baz=66,slow=37
GNW Green Mountain 78.05 44 IAmb IAmb 10 49 15.9
comp=Z,20nm,0.9s
LLLB Lillooet 78.12 41 IAmb IAmb 10 49 09.2
comp=Z,35nm,1.4s
D05A Enumclaw 78.68 44 IAmb IAmb 10 49 18.6
comp=Z,53nm,1.2s
H04A Detroit Lake 79.03 47 IAmb IAmb 10 49 19.8
comp=Z,30nm,1.3s
YBH Yreka Blue Hor 79.23 50 LR LR 11 18 25.9
comp=Z,22nm,18.8s,baz=274,slow=31
YBH Yreka Blue Hor 79.23 50 P P 10 49 08.6 +1.5
YBH Yreka Blue Hor 79.23 50 P P 10 49 08.6 +1.5
YBH pmax pmax
comp=Z,18nm,1.0s
HOOD Mount Hood Mea 79.27 46 IAmb IAmb 10 49 39.8
comp=Z,20nm,0.9s
J04A Umpqua Nationa 79.36 48 IAmb IAmb 10 49 33.3
comp=Z,21nm,0.7s
N02D Trinity Center 79.39 50 IAmb IAmb 10 49 24.4
comp=Z,49nm,1.6s
G05A Wanic 79.52 46 IAmb IAmb 10 49 24.7
comp=Z,87nm,1.7s
YKAW3 Yellowknife Wh 79.55 28 IAmb IAmb 10 49 21.8
comp=Z,19nm,0.7s
YKA Yellowknife Ar 79.57 28 P P 10 49 08.4 0.0
comp=Z,5.2nm,0.7s,baz=290,slow=6.2,SNR=60
YKA LR LR 11 24 59.0
comp=Z,305nm,19.1s,baz=283,slow=36
comp=Z,5.2nm,0.7s
YKA Yellowknife Ar 79.57 28 iP P 10 49 08.3 -0.1
YKA pmax pmax
comp=Z,6.0nm,0.7s
YKAW1 Yellowknife Wh 79.63 28 IAmb IAmb 10 49 22.3
comp=Z,19nm,0.8s
K04D Chiloquin, OR 79.75 49 IAmb IAmb 10 50 03.9
comp=Z,28nm,0.7s
M03C McCloud 79.76 50 IAmb IAmb 10 49 16.8
comp=Z,38nm,1.1s
MNRC McLaughlin Min 80.01 52 IAmb IAmb 10 49 14.2
comp=Z,34nm,0.9s
PINE Pine Mountain 80.08 47 IAmb IAmb 10 49 27.3
comp=Z,39nm,0.8s
CVS Carmenet Viney 80.11 53 IAmb IAmb 10 49 14.1
comp=Z,38nm,1.1s
B08A Colville Reser 80.19 43 IAmb IAmb 10 49 14.2
comp=Z,23nm,0.9s
EPH Ephrata 80.24 44 IAmb IAmb 10 49 13.8
comp=Z,20nm,0.9s
HATC Hat Creek Radi 80.34 50 IAmb IAmb 10 49 32.5
comp=Z,42nm,1.1s
K05A Summer Lake 80.34 48 IAmb IAmb 10 49 15.5
comp=Z,23nm,0.9s
SUTB Sutter Butte 80.44 52 IAmb IAmb 10 49 19.2
comp=Z,73nm,1.9s
D08A Wollman Farm, 80.75 44 IAmb IAmb 10 49 21.0
comp=Z,72nm,1.9s
E08A Dider Farm, El 80.79 44 IAmb IAmb 10 49 22.0
comp=Z,34nm,1.5s
MHC Mount Hamilton 80.96 54 IAmb IAmb 10 49 29.3
comp=Z,67nm,1.6s
KIRV Kirov 81.04 328 LR LR 11 27 38.0
comp=Z,368nm,19.4s,baz=67,slow=38
KIRV Kirov 81.04 328 iP P 10 49 15.2 -1.2
AFDM Forest Hills D 81.12 52 P P 10 49 17.6 +0.2
BBGB Big Mountain B 81.61 54 IAmb IAmb 10 49 28.3
comp=Z,43nm,1.0s
NEW Newport 81.65 42 P P 10 49 20.4 +0.4
NEW IAmb IAmb 10 49 22.0
comp=Z,21nm,0.9s
NEW Newport 81.65 42 P P 10 49 20.4 +0.4
NEW pmax pmax
comp=Z,21nm,1.0s
RES Resolute Bay 81.75 14 IAmb IAmb 10 49 34.3
comp=Z,20nm,0.8s
CMB Columbia Colle 81.78 53 IAmb IAmb 10 49 34.7
comp=Z,14nm,0.7s
PMPB Monarch Peak 81.88 55 IAmb IAmb 10 49 23.5
comp=Z,27nm,1.0s
PNTR Pine Nut 82.13 52 IAmb IAmb 10 49 46.5
comp=Z,25nm,0.7s
PKD Bear Valley Ra 82.14 55 IAmb IAmb 10 49 38.5
comp=Z,36nm,0.8s
SPITS Spitsbergen Ar 82.37 351 P P 10 49 24.1 +0.9
comp=Z,3.8nm,0.6s,baz=93,slow=6.3,SNR=9.7
comp=Z,3.8nm,0.6s
BMO Blue Mountains 82.38 46 IAmb IAmb 10 49 25.5
comp=Z,18nm,0.9s
KBS Kingsbay 82.46 352 iP P 10 49 25.2 +1.7
NOR Nord 82.49 358 iP P 10 49 25.3 +1.6
NOR IAmb IAmb 10 49 26.2
comp=Z,33nm,1.6s
EDM Edmonton 82.66 37 IAmb IAmb 10 49 38.8
comp=Z,20nm,0.7s
LHV Little Huntoon 83.16 52 IAmb IAmb 10 49 43.6
comp=Z,12nm,0.8s
NVAR Mina Array Bea 83.27 52 P P 10 49 29.8 +0.9
comp=Z,9.3nm,0.9s,baz=264,slow=6.0,SNR=39
comp=Z,9.3nm,0.9s
NVAR Mina Array Bea 83.27 52 P P 10 49 28.9 +0.1
VES Vestal, Richgr 83.32 55 IAmb IAmb 10 49 34.7
comp=Z,32nm,0.9s
MFID Camas Ranch 83.78 47 IAmb IAmb 10 49 32.9
comp=Z,18nm,1.0s
BELG Belogornoye 83.78 323 LR LR 11 28 51.3
comp=Z,704nm,18.3s,baz=83,slow=37
BELG Belogornoye 83.78 323 iP P 10 49 31.1 +0.2
BELG pmax pmax
comp=Z,22nm,0.9s
TPO Tropico Hills 84.24 56 IAmb IAmb 10 49 35.6
comp=Z,30nm,1.0s
APA Apatity 84.47 339 iP P 10 49 32.6 -1.5
APA i 10 52 46.5
APA iS SKSac 10 59 54.2 -2.7
APA eSS SS 11 05 29.4 +0.1
APA pmax pmax
comp=Z,30nm,0.8s
APA MLR MLR
comp=Z,2μm,7.8s
LRMC Laurel Mtn Rad 84.51 55 IAmb IAmb 10 49 48.5
comp=Z,15nm,0.6s
FURC Furnace Creek, 84.89 54 IAmb IAmb 10 49 56.0
comp=Z,20nm,0.9s
ELK Elko 84.94 49 IAmb IAmb 10 49 39.4
comp=Z,15nm,0.9s
KLMR Klimovskoe 85.01 332 eP P 10 49 35.3 -1.6
KLMR pmax pmax
comp=Z,78nm,1.4s
BCYI Bear Canyon 85.20 45 IAmb IAmb 10 49 44.6
comp=Z,55nm,1.6s
ELS Elsinore Mount 85.20 57 IAmb IAmb 10 52 31.3
comp=Z,21nm,0.9s
GSC Goldstone, Bar 85.25 55 IAmb IAmb 10 49 54.4
comp=Z,11nm,0.8s
TULEG Thule 85.31 8 iP P 10 49 38.9 +0.8
TULEG IAmb IAmb 10 49 40.7
comp=Z,44nm,0.8s
S11A Rachel 85.42 52 IAmb IAmb 10 49 54.7
comp=Z,27nm,1.1s
CPE Camp Elliot 85.67 57 IAmb IAmb 10 49 43.1
comp=Z,33nm,1.2s
DPP Dos Picos Cty 85.77 57 IAmb IAmb 10 49 56.5
comp=Z,19nm,1.1s
DNR Dunn Ranch,Anz 85.87 56 IAmb IAmb 10 50 09.3
comp=Z,28nm,1.2s
ARCES ARCESS Array B 85.90 343 P P 10 49 42.1 +0.9
comp=Z,19nm,0.7s,baz=58,slow=5.5,SNR=31
ARCES LR LR 11 36 25.9
comp=Z,284nm,19.1s,baz=68,slow=42
comp=Z,19nm,0.7s
ARCES ARCESS Array B 85.90 343 P P 10 49 42.2 +0.9
ARCES IAmb IAmb 10 49 54.4
comp=Z,25nm,0.7s
ARCES ARCESS Array B 85.90 343 eP P 10 49 41.5 +0.3
PFO Pinyon Flats O 85.99 56 LR LR 11 20 40.2
comp=Z,185nm,21.6s,baz=269,slow=30
BOZ Bozeman (W) 86.01 44 IAmb IAmb 10 49 48.3
comp=Z,59nm,1.8s
PMD Palm Desert 86.05 56 IAmb IAmb 10 49 44.0
comp=Z,17nm,1.1s
NEEM North Greenlan 86.31 4 iP P 10 49 44.4 +0.9
NEEM IAmb IAmb 10 49 46.4
comp=Z,28nm,1.0s
EGMT Eagleton 86.44 41 IAmb IAmb 10 49 58.0
comp=Z,17nm,0.8s
YHL Hebgen Lake 86.55 44 IAmb IAmb 10 49 48.2
comp=Z,36nm,1.1s
DANC Danby, Needles 86.56 55 IAmb IAmb 10 49 48.0
comp=Z,22nm,1.0s
YHB Horse Butte 86.57 45 IAmb IAmb 10 50 01.5
comp=Z,21nm,1.0s
PSUT Pine Spring 86.60 51 IAmb IAmb 10 49 50.7
comp=Z,14nm,0.8s
V12A Nelson 86.66 54 IAmb IAmb 10 49 47.6
comp=Z,17nm,1.1s
POIN Pond Inlet 86.72 12 IAmb IAmb 10 49 59.1
comp=Z,16nm,0.8s
YMR Madison River 86.75 45 IAmb IAmb 10 50 01.0
comp=Z,27nm,0.9s
BC3 Big Chuckawall 86.78 56 IAmb IAmb 10 49 52.1
comp=Z,16nm,1.1s
MAK Makhachkala 86.79 314 diP P 10 49 41.5 -4.6
MAK e 11 00 04.4
MAK pmax pmax
comp=Z,197nm,1.2s
ESJX Sierra Juarez 86.86 58 IAmb IAmb 10 49 48.0
comp=Z,33nm,1.4s
DUG Dugway, Tooele 86.86 49 IAmb IAmb 10 50 02.4
comp=Z,16nm,0.8s
YFT Old Faithful 86.91 45 IAmb IAmb 10 50 04.8
comp=Z,23nm,0.9s
YNR Norris Junctio 86.93 44 IAmb IAmb 10 49 50.8
comp=Z,35nm,1.1s
AKT Akhty 87.10 312 eP P 10 49 47.7 -0.2
AKT e 10 49 49.8
AKT pmax pmax
comp=Z,16nm,0.8s
FLWY Flagg Ranch 87.12 45 IAmb IAmb 10 50 02.2
comp=Z,17nm,0.7s
VTX Valle De La Tr 87.16 58 IAmb IAmb 10 49 50.9
comp=Z,22nm,1.2s
MOOW Moose Ponds 87.20 45 IAmb IAmb 10 49 54.3
comp=Z,34nm,1.8s
YMP Mirror Lake Pl 87.28 44 IAmb IAmb 10 49 52.1
comp=Z,30nm,1.0s
AHID Auburn Hatcher 87.28 46 IAmb IAmb 10 49 50.9
comp=Z,16nm,1.1s
DAG Danmarks Havn 87.29 357 iP P 10 49 48.0 +0.1
DAG IAmb IAmb 10 49 49.7
comp=Z,9.9nm,0.8s
HWUT Hardware Ranch 87.32 48 IAmb IAmb 10 49 51.0
comp=Z,17nm,0.9s
TCUT Toone Canyon 87.59 48 IAmb IAmb 10 50 03.9
comp=Z,14nm,0.7s
VRH Novokhopyorsk 87.64 323 eP P 10 49 48.8 -1.2
VRH pmax pmax
comp=Z,15nm,0.5s
RLMT Red Lodge 87.74 44 IAmb IAmb 10 50 06.3
comp=Z,18nm,0.7s
MOS Moscow 88.04 328 eP P 10 49 51.2 -0.7
MOS pmax pmax
comp=Z,55nm,0.7s
PDAR Pinedale Array 88.35 46 P P 10 49 53.9 -0.1
comp=Z,2.0nm,1.0s,baz=316,slow=4.1,SNR=11
comp=Z,2.0nm,1.0s
113A Mohawk Valley, 88.40 57 IAmb IAmb 10 50 00.4
comp=Z,34nm,1.7s
FFC Flin Flon 88.40 33 P P 10 49 53.9 +0.3
FFC IAmb IAmb 10 49 58.8
comp=Z,33nm,1.6s
FFC Flin Flon 88.40 33 P P 10 49 53.9 +0.3

FFC pmax pmax
comp=Z,33nm,1.6s
U15A North Rim 88.43 53 IAmb IAmb 10 49 57.0
comp=Z,14nm,0.9s
KULLO Kullorsuaq 88.45 7 *i* P **P** **10 49 53.9 +0.5**
KULLO IAmb IAmb 10 49 55.5
comp=Z,24nm,1.0s
P17A Butcher Ranch, 88.61 49 IAmb IAmb 10 50 10.2
comp=Z,25nm,1.5s
Y14A Wickenburg 88.65 55 IAmb IAmb 10 49 57.5
comp=Z,19nm,0.9s
LPSR Galich'ya Gora 88.67 325 *e*P **P** **10 49 54.1 -0.8**
LPSR pmax pmax
comp=Z,65nm,0.8s
OBN Obninsk 88.86 328 LR LR 11 32 32.7
comp=Z,723nm,18.9s,baz=10,slow=38
OBN Obninsk 88.86 328 *de*P **P** **10 49 55.6 -0.1**
OBN *e* 10 53 27.4
OBN *e*SS SS 11 06 35.9 +2.0
OBN *e*SSS SSS 11 10 15.0
OBN pmax pmax
comp=Z,89nm,1.7s
OBN MLR MLR
comp=Z,788nm,17.0s
OBN Obninsk 88.86 328 P **P** **10 49 55.3 -0.4**
comp=Z,40nm,0.9s
SRU San Rafael Swe 88.89 50 IAmb IAmb 10 50 11.0
comp=Z,10nm,0.7s
VORR Voronezh 88.90 324 *e*P **P** **10 49 55.4 -0.6**
VORR pmax pmax
comp=Z,52nm,0.4s
RDMU Red Mountain 89.09 48 IAmb IAmb 10 50 04.0
comp=Z,42nm,1.5s
VSR Storozhevoye 89.11 323 *e*P **P** **10 49 55.7 -1.3**
VSR pmax pmax
comp=Z,40nm,0.8s
HMU Henry Mountain 89.11 51 IAmb IAmb 10 50 12.9
comp=Z,12nm,0.8s
VORD Divnogorie 89.14 323 *e*P **P** **10 49 55.6 -1.5**
VORD pmax pmax
comp=Z,40nm,0.9s
LAO LASA Array 89.16 41 IAmb IAmb 10 50 11.4
comp=Z,23nm,0.9s
WUAZ Wupatki 89.42 53 IAmb IAmb 10 50 01.3
comp=Z,26nm,1.0s
GNI Garni 89.68 312 LR LR 11 32 52.3
comp=Z,126nm,18.2s,baz=56,slow=37
GNI Garni 89.68 312 P **P** **10 50 01.2 +1.0**
comp=Z,22nm,1.5s
KBZ Khabaz 89.69 316 P **P** **10 49 59.6 -0.3**
comp=Z,17nm,0.9s,baz=117,slow=1.8,SNR=24
KBZ LR LR 11 34 46.6
comp=Z,547nm,18.4s,baz=60,slow=39
comp=Z,17nm,0.9s
KBZ Khabaz 89.69 316 *i* P **P** **10 49 59.5 -0.3**
KBZ pmax pmax
comp=Z,25nm,1.0s
KIV Kislovodsk 89.75 316 P **P** **10 50 00.1 -0.3**
KIV Kislovodsk 89.75 316 *e*P **P** **10 50 00.0 -0.3**
KIV pmax pmax
comp=Z,20nm,1.0s
KIV Kislovodsk 89.75 316 P **P** **10 49 59.9 -0.4**
comp=Z,22nm,1.0s
SHA1 Shidzhatmaz 89.85 316 *i* P **P** **10 50 00.5 -0.5**
UPNV Upernavik 90.23 7 *i* P **P** **10 50 01.5 -0.3**
UPNV IAmb IAmb 10 50 04.0
comp=Z,28nm,0.9s
FCC Fort Churchill 90.29 27 IAmb IAmb 10 50 07.1
comp=Z,45nm,1.9s
PV20 West Nyswonger 90.29 50 IAmb IAmb 10 50 17.8
comp=Z,24nm,0.8s
PV17 East Wray Mesa 90.32 50 IAmb IAmb 10 50 05.3
comp=Z,24nm,1.3s
PV16 Nyswonger Mesa 90.34 50 IAmb IAmb 10 50 09.8
comp=Z,28nm,1.3s
PV22 Blue Mesa, Par 90.36 50 IAmb IAmb 10 50 08.9
comp=Z,32nm,1.6s
PV18 Skein Mesa, Pa 90.37 50 IAmb IAmb 10 50 04.8
comp=Z,23nm,1.1s
PV11 David Mesa, Pa 90.38 50 IAmb IAmb 10 50 06.1
comp=Z,28nm,1.1s
FINES FINESS Array B 90.40 336 P **P** **10 50 02.1 -0.7**
comp=Z,16nm,0.7s,baz=56,slow=4.6,SNR=48
comp=Z,16nm,0.7s
FINES FINESS Array B 90.40 336 P **P** **10 50 02.4 -0.4**
PV12 Saucer Basin, 90.42 50 IAmb IAmb 10 50 18.5
comp=Z,22nm,0.9s
PV13 Radium Mtn., P 90.46 50 IAmb IAmb 10 50 10.1
comp=Z,29nm,1.5s
PV02 Paradox Valley 90.51 50 IAmb IAmb 10 50 18.8
comp=Z,17nm,1.0s
ERBR Yeremizino-Bor 90.52 318 *e*P **P** **10 50 02.9 -0.9**
ERBR *e* 10 53 40.4
ERBR *e*PPP PPP 10 55 35.9
ERBR *e*S **SKSac** **11 00 31.2 -3.4**
ERBR *e* 11 00 47.2
ERBR *e*SS **SS** **11 07 01.5 +2.8**
ERBR pmax pmax
comp=Z,98nm,0.9s
LABN Labinsk 90.79 317 *e*P **P** **10 50 06.9 +1.9**
LABN *e*S **SKSac** **11 00 38.0 +1.8**
LABN *e* 11 00 51.5
LABN pmax pmax
comp=Z,24nm,0.5s
W18A Petrified Fore 90.82 53 IAmb IAmb 10 50 08.4
comp=Z,16nm,1.0s
TUC Tucson 90.93 56 P **P** **10 50 07.5 +1.4**
TUC Tucson 90.93 56 P **P** **10 50 07.5 +1.4**
TUC pmax pmax
comp=Z,10.0nm,1.0s
RSSD Black Hills 91.58 43 P **P** **10 50 08.7 -0.3**
RSSD IAmb IAmb 10 50 23.3
comp=Z,10nm,0.8s
RSSD Black Hills 91.58 43 P **P** **10 50 08.7 -0.3**
RSSD pmax pmax
comp=Z,10.0nm,0.8s
NUUG Nuugaatsiaq 91.72 7 *i* P **P** **10 50 10.0 +1.2**
NUUG IAmb IAmb 10 50 10.4
comp=Z,14nm,1.0s
SUMG Summit 91.76 2 IAmb IAmb 10 50 11.5
comp=Z,12nm,1.0s
SUMG Summit 91.76 2 *i* P **P** **10 50 09.9 +0.5**
SUMG IAmb IAmb 10 50 11.9
comp=Z,13nm,1.0s
SOC Sochi 91.88 316 *e*P P 10 50 15.1 +5.0
SOC *e*PPP PPP 10 55 54.5
SOC MLR MLR
comp=Z,393nm,20.0s
GURO Guroymak-BITLI 92.22 311 IAmb IAmb 10 50 25.3
comp=Z,35nm,1.7s
319A Douglas 92.45 57 IAmb IAmb 10 50 37.6
comp=Z,18nm,1.2s
121A Cookes Peak, D 93.24 55 IAmb IAmb 10 50 19.5
comp=Z,15nm,1.1s
VNDA Vanda 93.47 177 P **P** **10 50 16.5 -0.1**
comp=Z,8.2nm,0.9s,baz=307,slow=3.5,SNR=9.7
VNDA LR LR 11 30 33.4
comp=Z,198nm,18.0s,baz=346,slow=34
comp=Z,8.2nm,0.9s
VNDA Vanda 93.47 177 P **P** **10 50 17.9 +1.3**
VNDA IAmb IAmb 10 50 18.2
comp=Z,9.5nm,0.9s
MNK Minsk 93.52 330 *i* P **P** **10 50 16.5 -0.9**
comp=E,29nm,0.8s
MNK *i* P **P** **10 50 16.5 -0.9**
comp=N,21nm,0.8s
MNK *i* P **P** **10 50 16.5 -0.9**
comp=Z,24nm,0.8s,baz=57
MNK *i* PP **PP** **10 54 01.1 -0.4**
MNK *i* PPP PPP 10 56 01.4
MNK *i* S **SKSac** **11 00 50.7 -0.4**
MNK *i* PS **PS** **11 02 40.6 +0.5**
MNK *i* SS **SS** **11 07 44.2 +3.1**
MNK *i* SSS SSS 11 11 24.9
MNK *i* LQ LQ 11 26 34.2
MNK *i* LR LR 11 33 30.8
MNK Minsk 93.52 330 *i* P **P** **10 50 16.5 -0.9**
MNK *i* 10 54 01.0
MNK *i* PPP PPP 10 56 01.3
MNK *i* S **SKSac** **11 00 50.7 -0.4**
MNK *i* PS **PS** **11 02 40.5 +0.5**
MNK *i* SS **SS** **11 07 44.2 +3.1**
MNK *i* SSS SSS 11 11 24.8
MNK pmax pmax
comp=N,21nm,0.8s
MNK pmax pmax
comp=E,29nm,0.8s
MNK pmax pmax
comp=Z,24nm,0.8s
ULM Lac du Bonnet 93.78 35 P **P** **10 50 17.2 -1.5**
comp=Z,3.8nm,1.0s,baz=341,slow=2.8,SNR=4.6
comp=Z,3.8nm,1.0s
LPIG La Paz 94.02 64 LR LR 11 22 56.7
comp=Z,173nm,20.0s,baz=298,slow=29
RAYN Ar Rayn 94.73 296 P **P** **10 50 23.3 -0.4**
RAYN Ar Rayn 94.73 296 P **P** **10 50 23.3 -0.4**
RAYN pmax pmax
comp=Z,6.0nm,0.9s
AKASG Malin Array Be 94.89 326 P **P** **10 50 22.4 -1.3**
comp=Z,1.4nm,0.7s,baz=51,slow=4.4,SNR=5.2
AKASG PP **PP** **10 54 11.8 -0.4**
comp=Z,0.6nm,0.4s,baz=59,slow=5.5,SNR=4.0
AKASG LR LR 11 35 43.8
comp=Z,626nm,20.1s,baz=50,slow=37
comp=Z,1.4nm,0.7s
AKASG Malin Array Be 94.89 326 *i* P **P** **10 50 24.5 +0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
MNTX Cornudas Mount 95.44 55 IAmb IAmb 10 50 28.6
comp=Z,7.5nm,0.9s
HFS Hagfors 95.86 339 P **P** **10 50 27.0 -1.0**
comp=Z,4.9nm,0.6s,baz=101,slow=1.5,SNR=11
HFS LR LR 11 38 38.7
comp=Z,632nm,18.4s,baz=15,slow=39
comp=Z,4.9nm,0.6s
HFS Hagfors 95.86 339 P **P** **10 50 27.0 -1.0**
FRB Frobisher Bay 95.88 15 LR LR 11 34 08.8
comp=Z,144nm,18.9s,baz=329,slow=36
NB2 NORSAR Subarra 96.02 340 P **P** **10 50 28.2 -0.6**
comp=Z,22nm,1.2s,baz=46,slow=5.1
NB2 NORSAR Subarra 96.02 340 P **P** **10 50 28.2 -0.6**
NB2 AMP 10 50 28.2
comp=Z,22nm,1.2s
NOA NORSAR Array B 96.02 340 P **P** **10 50 27.8 -1.0**
comp=Z,4.1nm,0.8s,baz=51,slow=4.2,SNR=8.8
NOA PP **PP** **10 54 19.2 -1.4**
comp=Z,1.9nm,0.8s,baz=39,slow=6.9,SNR=3.4
NOA LR LR 11 38 06.5
comp=Z,313nm,21.3s,baz=50,slow=38
comp=Z,4.1nm,0.8s
VHRN Van Horn 96.10 56 IAmb IAmb 10 50 32.9
comp=Z,11nm,1.2s
SFJD Kangerlussuaq 96.34 7 LR LR 11 33 13.0
comp=Z,256nm,21.2s,baz=338,slow=35
TPB01 Permian Basin 96.99 55 IAmb IAmb 10 50 35.6
comp=Z,4.8nm,0.9s
ALPN Alpine 97.33 56 IAmb IAmb 10 50 42.2
comp=Z,8.1nm,1.3s
BR131 Keskin Array S 97.65 315 IAmb IAmb 10 50 37.0
comp=Z,7.4nm,1.0s
BRTR Keskin Array B 97.65 315 P **P** **10 50 35.0 -1.8**
comp=Z,4.1nm,0.9s,baz=73,slow=1.7,SNR=11
BRTR LR LR 11 39 00.3
comp=Z,183nm,19.1s,baz=33,slow=38
comp=Z,4.1nm,0.9s
BRTR Keskin Array B 97.65 315 *i* P **P** **10 50 36.5 -0.3**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
TXAR Lajitas Array 97.71 57 P **P** **10 50 36.8 -0.5**
comp=Z,1.2nm,0.9s,baz=266,slow=5.6,SNR=9.4
TXAR PP **PP** **10 54 37.4 +2.5**
comp=Z,0.2nm,0.5s,baz=287,slow=4.2,SNR=2.0
TXAR PKKPbc **PKKPbc** **11 07 13.4 +0.4**
comp=Z,0.7nm,0.9s,baz=117,slow=4.6,SNR=5.8
TXAR LR LR 11 29 11.5
comp=Z,293nm,19.0s,baz=290,slow=32
comp=Z,1.2nm,0.9s
ASF Jabal al Asfar 98.60 307 LR LR 11 40 24.4
comp=Z,127nm,19.3s,baz=54,slow=39
BORG Borgarnes 99.30 355 LR LR 11 33 01.6
comp=Z,124nm,20.2s,baz=71,slow=34
MMAI Mount Meron Ar 99.38 308 LR LR 11 42 34.0
comp=Z,164nm,18.5s,baz=49,slow=40
MLR Muntele Rosu 99.58 323 LR LR 11 38 31.8
comp=Z,666nm,19.4s,baz=53,slow=37
CLL Collm 102.49 333 *e*SKSac **SKSac** **11 01 34.0 -2.9**
CLL AMS AMS 11 40 00.0
comp=Z,1μm,18.8s
QSPA South Pole Qui 105.60 180 PKiKP **PKiKP** **10 55 24.4 -0.1**
comp=Z,2.8nm,0.8s,baz=51,slow=3.3,SNR=3.2
WATA Walderalm 106.00 331 *e*PP **PP** **10 55 39.5 +3.0**
comp=Z,6.9nm,1.0s
WTTA Wattenberg 106.02 331 *e*PP **PP** **10 55 40.0 +3.3**
comp=Z,11nm,0.9s
MOTA Moosalm 106.21 331 *e*PP **PP** **10 55 38.1 +0.1**
comp=Z,7.6nm,1.0s
SQTA Sankt Quirin 106.25 331 *e*PP **PP** **10 55 40.2 +1.9**
comp=Z,16nm,1.1s
SYO Syowa Base 111.16 202 *i*PKIKP PKiKP 10 55 43.0 +8.4
ESDC Sonseca Array 118.91 335 PKP **PKPdf** **10 55 49.5 -1.2**
comp=Z,0.2nm,0.3s,baz=34,slow=3.5,SNR=4.5
ESDC PP **PP** **10 57 05.4 -3.1**
comp=Z,3.4nm,0.9s,baz=24,slow=6.9,SNR=7.5
ESDC PKKPbc **PKKPbc** **11 06 07.3 +1.1**
comp=Z,1.6nm,1.0s,baz=214,slow=4.1,SNR=4.7
NVL N'Iazarevskaya 118.99 195 *e*PKIKP **PKPdf** **10 55 50.1 +0.5**
NVL *e* 10 57 08.6
NVL *e*PPP PPP 10 59 39.6
NVL *e* 11 02 59.8
NVL *e*PS **PS** **11 06 56.2 -0.7**
NVL *e*SS SS 11 13 27.0 -0.7
NVL *e*SSS SSS 11 17 50.9
NVL pmax pmax
comp=Z,40nm,1.8s
HDC Heredia 122.48 67 *e*P **PKPdf** **10 55 57.5 -0.7**
MD01 Midelt array s 125.02 332 **PKPdf** **10 56 03.2 +0.6**
MD31 MD31 125.02 332 **PKiKP** **10 56 03.6 +0.7**
LBTB Lobatse 125.48 250 **PKiKP** **10 56 04.5 +0.5**
LBTB Lobatse 125.48 250 PKIKP **PKiKP** **10 56 04.5 +0.5**
BOSA Boshof 125.83 246 PKP **PKPdf** **10 56 02.3 -1.9**
comp=Z,2.9nm,0.8s,baz=143,slow=4.4,SNR=4.1
OTAV Otavalo 131.56 75 *e*P **PKPdf** **10 56 14.8 -1.2**
H03S2 Juan Fernandez 134.27 122 T T 13 24 34.6
baz=261
H03S1 Juan Fernandez 134.29 122 T T 13 24 35.3
baz=261
H03S3 Juan Fernandez 134.29 122 T T 13 24 35.5
baz=261
SDV Santo Domingo 134.65 60 **PKPdf** **10 56 20.6 -0.8**
SDV Santo Domingo 134.65 60 *e*P **PKPdf** **10 56 20.2 -1.2**
PLCA Paso Flores 138.47 135 PKP **PKPdf** **10 56 25.7 -1.9**
comp=Z,3.4nm,0.8s,baz=288,slow=3.1,SNR=5.0
PLCA Paso Flores 138.47 135 **PKPdf** **10 56 26.1 -1.5**
PLCA Paso Flores 138.47 135 PKIKP **PKPdf** **10 56 26.1 -1.5**
BI02 San Fabin de 139.53 128 **PKPdf** **10 56 30.6 +0.9**
BO02 Sierra Bellavi 140.54 126 **PKPdf** **10 56 32.5 +0.9**
MT13 San Alfonso 141.26 125 **PKPdf** **10 56 33.6 +0.6**
VA03 San Esteban 141.34 123 **PKPdf** **10 56 33.9 +0.8**
CO02 Combarbal 141.38 120 **PKPdf** **10 56 34.1 +0.9**
LCO Las Campanas 142.13 117 **PKPdf** **10 56 34.9 0.0**
LCO Las Campanas 142.13 117 PKIKP **PKPdf** **10 56 34.9 0.0**
AC05 El Transito 142.53 117 **PKPdf** **10 56 32.9 -2.5**
PB16 IPOC Station P 144.19 100 PKPbc 10 56 38.5 +1.3
DBIC Dimbokro 145.00 308 PKPbc **PKPab** **10 56 39.1 -0.1**
comp=Z,115nm,0.7s,baz=70,slow=3.6,SNR=103
LPAZ La Paz 145.39 96 PKPbc **PKPdf** **10 56 42.0 +0.7**
comp=Z,14nm,0.8s,baz=318,slow=3.0,SNR=35
LPAZ La Paz 145.39 96 **PKPbc** **10 56 40.2 -1.0**
LPAZ La Paz 145.39 96 PKIKP **PKPbc** **10 56 40.2 -1.0**
LPAZ La Paz 145.39 96 *e*P **PKPbc** **10 56 39.3 -1.9**
TRQA Tornquist 145.57 136 **PKPdf** **10 56 40.2 -0.1**
TRQA Tornquist 145.57 136 PKIKP **PKPdf** **10 56 40.2 -0.1**
TRQA Tornquist 145.57 136 *e*P **PKPdf** **10 56 40.1 -0.1**
TEFE Tefe 145.75 73 *e*P **PKPdf** **10 56 40.1 -1.1**
BOAV Boa Vista 146.59 60 **PKPdf** **10 56 43.5 +0.8**
BOAV Boa Vista 146.59 60 *e*P **PKPdf** **10 56 41.6 -1.1**
MACA Manacapuru-AM 149.20 69 *e*P **PKPdf** **10 56 46.4 -0.6**
VILB Vilhena 152.64 88 **PKPbc** **10 56 59.9 +0.6**
PTLB Pontes e Lacer 153.96 93 **PKPdf** **10 56 54.8 +0.7**
PTLB Pontes e Lacer 153.96 93 *e*P **PKPdf** **10 56 53.1 -0.9**
CPUP Villa Florida 154.27 118 PKPbc **PKPbc** **10 57 01.8 -0.7**
comp=Z,21nm,0.4s,baz=295,slow=2.9,SNR=6.5
CPUP Villa Florida 154.27 118 **PKPbc** **10 57 02.8 +0.3**
PLTB Pedras Altas 154.77 133 *e*P **PKPdf** **10 56 54.1 -0.7**
CPSB Cacapava Do Su 155.62 130 *e*P **PKPdf** **10 56 56.4 +0.3**
PTGB Pitanga 159.28 119 *e*P **PKPdf** **10 57 00.5 -0.4**
TMAB Tom-Âu,PA,Br 159.37 51 *e*P **PKPdf** **10 57 00.1 -1.0**
LDASE Londrina, Braz 160.56 116 *e*P **PKPdf** **10 57 00.5 -1.8**
SNDB Serra Nova Dou 160.99 81 *e*P **PKPdf** **10 57 02.1 -0.9**
IPMB Ipameri, GO 164.42 100 *e*P **PKPdf** **10 57 05.3 -1.0**
JANB Januaria 168.20 88 *e*P **PKPdf** **10 57 09.2 -0.1**
NBPA Parau_RN 168.89 27 *e*P **PKPdf** **10 57 09.2 -0.6**
CAM01 Campos-RJ 169.13 125 *e*P **PKPdf** **10 57 09.0 -0.7**
NBPV Pedro Velho 170.19 19 *e*P **PKPdf** **10 57 09.9 -0.6**
CMC01 Camacan, BA 172.84 88 *e*P **PKPdf** **10 57 11.3 -0.4**

*BER **11** 10:38:36.2±3.6, 80.25N×1.31W, h10km, Mw3.8, ML3.3(NAO), Confirmed Earthquake*
*DNK **11** 10:38:38.6±2.4, 80.18N×0.80W, h36km±18km, ML2.6, Presumed earthquake*
*KOLA **11** 10:38:39.7, 80.78N×3.24E, h0km, ML2.5, Error ellipse: s-maj=98.4km s-min=31.1km az=40.0, Greenland sea*
*FCIAR **11** 10:38:41.0, 80.14N×2.17E, h10km, station ZFI2 has station magnitude of 3.20 station OMEGA has station magnitude of 3.20*

ISC 11 10:38:33.3±1.0, 80°23N±0.06×1°07W±0.05, h10km, n31, σ2.5 s4, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.70**	**112**	Pn	**Pn**		**10 39 18.7**	**+2.1**
KBS				Sn	**Sn**		**10 39 47.1**	**-2.1**
KBS	**Kingsbay**	**2.70**	**112**	*e*P	**Pn**		**10 39 18.3**	**+1.7**
KBS				*e*S	**Sn**		**10 39 46.5**	**-2.7**
KBS				IAML			10 39 57.5	
	comp=Z,32nm,0.6s							
KBS	**Kingsbay**	**2.70**	**112**	P	**Pn**		**10 39 18.1**	**+1.5**
KBS				S	**Sn**		**10 39 46.3**	**-3.0**
KBS	**Kingsbay**	**2.70**	**112**	*i* P	**Pn**		**10 39 18.6**	**+2.0**
KBS				*i* S	**Sn**		**10 39 47.0**	**-2.2**
NOR	**Nord**	**2.83**	**307**	Pn	**Pn**		**10 39 21.0**	**+2.7**
NOR	**Nord**	**2.83**	**307**	*e*P	**Pn**		**10 39 20.4**	**+2.0**
NOR				*e*S	**Sn**		**10 39 49.6**	**-2.8**
BRBB	**Barentsburg B**	**3.58**	**119**	Pn	**Pn**		**10 39 32.5**	**+3.7**
BRBB				Sn	**Sn**		**10 40 10.6**	**-0.5**
BRBB	**Barentsburg B**	**3.58**	**119**	*e*P	**Pn**		**10 39 32.5**	**+3.7**
BRBB				*e*S	**Sn**		**10 40 10.5**	**-0.6**
BRBB	**Barentsburg B**	**3.58**	**119**	P	**Pn**		**10 39 32.0**	**+3.5**
BRBB				S	**Sn**		**10 40 11.0**	**-0.1**
BRBA	**Barentsburg A**	**3.61**	**119**	Pn	**Pn**		**10 39 33.0**	**+3.9**
BRBA				Sn	**Sn**		**10 40 10.9**	**-0.8**
BRBA	**Barentsburg A**	**3.61**	**119**	*e*P	**Pn**		**10 39 32.4**	**+3.3**
BRBA				*e*S	**Sn**		**10 40 11.3**	**-0.4**
BRBA				IAML			10 40 15.7	
	comp=Z,22nm,0.4s							
SPA0	**Spitsbergen Ar**	**3.86**	**113**	Pn	**Pn**		**10 39 35.3**	**+2.7**
	baz=321,slow=7.4							
SPA0				Sn	**Sn**		**10 40 15.9**	**-2.0**
	baz=321,slow=16							
SPA0	**Spitsbergen Ar**	**3.86**	**113**	Pn	**Pn**		**10 39 35.3**	**+2.7**
SPA0				Sn	**Sn**		**10 40 15.9**	**-2.0**
SPA0	**Spitsbergen Ar**	**3.86**	**113**	*e*S	**Sn**		**10 40 15.1**	**-2.8**
SPITS	**Spitsbergen Ar**	**3.86**	**113**	P	**Pn**		**10 39 34.8**	**+2.2**
SPITS				S	**Sn**		**10 40 15.6**	**-2.3**
HSPB	**Hornsund (broa**	**4.60**	**126**	Pn	**Pn**		**10 39 45.8**	**+3.2**
HSPB				Sn	**Sn**		**10 40 34.7**	**-1.3**
HSPB	**Hornsund (broa**	**4.60**	**126**	*e*P	**Pn**		**10 39 45.8**	**+3.2**
HSPB				*e*S	**Sn**		**10 40 34.8**	**-1.3**
HSPB				IAML			10 40 40.6	
	comp=Z,18nm,0.6s							
HSPB	**Hornsund (broa**	**4.60**	**126**	*e*P	**Pn**		**10 39 45.4**	**+2.7**
HSPB				*e*S	**Sn**		**10 40 34.4**	**-1.5**
HSPB	**Hornsund (broa**	**4.60**	**126**	P	**Pn**		**10 39 45.3**	**+2.7**
HSPB				S	**Sn**		**10 40 35.7**	**-0.2**
DAG	**Danmarks Havn**	**4.92**	**234**	*e*P	**Pn**		**10 39 48.4**	**+1.3**
DAG				*e*S	**Sn**		**10 40 39.6**	**-4.3**
DAG	**Danmarks Havn**	**4.92**	**234**	*i* P	**Pn**		**10 39 48.3**	**+1.2**
DAG				*i* S	**Sn**		**10 40 39.6**	**-4.3**
DAG				IAML			10 40 42.5	
	comp=Z,38nm,0.5s							
HOPEN	**Hopen**	**6.39**	**112**	*e*P	**Pn**		**10 40 09.4**	**+2.2**
HOPEN				*e*S	**Sn**		**10 41 16.7**	**-3.5**
HOPEN				IAML			10 41 19.6	
	comp=Z,21nm,0.3s							
DBG	**Daneborg**	**7.24**	**225**	Pn	**Pn**		**10 40 20.1**	**+1.2**
DBG				Sn	Sn		10 41 33.2	-7.8
DBG	**Daneborg**	**7.24**	**225**	*e*P	**Pn**		**10 40 20.1**	**+1.2**
DBG				*e*S	Sn		10 41 32.9	-8.1
DBG	**Daneborg**	**7.24**	**225**	*i* P	**Pn**		**10 40 20.0**	**+1.0**
DBG				*i* S	**Sn**		**10 41 35.8**	**-5.3**
DBG				IAML			10 41 40.4	
	comp=Z,28nm,0.5s							
ZFI2	**Zemlya Franca-**	**7.86**	**62**	*e*P	**Pn**		**10 40 28.1**	**+0.7**
	comp=Z,27nm,2.0s							
ZFI2				*e*S	**Sn**		**10 41 52.3**	**-3.9**
OMEGA	**Omega**	**7.88**	**62**	*e*P	**Pn**		**10 40 28.5**	**+0.8**
	comp=Z,5.9nm,0.2s							
OMEGA				*e*S	**Sn**		**10 41 52.8**	**-4.0**
NEEM	**North Greenlan**	**9.78**	**280**	*i* P	**Pn**		**10 40 54.7**	**+0.7**
NEEM				*i* S	Sn		10 42 36.0	-7.9
NEEM	**North Greenlan**	**9.78**	**280**	*i* P	**Pn**		**10 40 54.7**	**+0.7**
NEEM				*i* S	Sn		10 42 36.0	-7.9
NEEM				IAML			10 42 45.8	
	comp=Z,11nm,0.4s							
SUMG	**Summit**	**11.36**	**248**	*i* P	**Pn**		**10 41 15.0**	**-0.6**
SUMG				*i* S	Sn		10 43 12.0	-11
SUMG	**Summit**	**11.36**	**248**	*i* P	**Pn**		**10 41 15.6**	**-0.1**
SUMG				*e*S	Sn		10 43 09.4	-13

*FUNV **11** 10:42:42.6, 9.24N×63.67W, h5km, MW3.3, Presumed earthquake*

ISC 11 10:42:39.1±1.6, 8.86N±0.09×63.69W±0.07, h10km, n9, σ2.5 s5, Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	**1.61**	**324**	*e*P	**Pn**		**10 43 06.4**	**-1.2**
PCRV				*e*S	**Sn**		**10 43 23.9**	**-4.6**
TRN	**Trinidad (W)**	**2.87**	**52**	*e*S	**Sn**		**10 43 56.3**	**-3.1**
CACV	**CAICARA DEL OR**	**3.10**	**246**	*e*P	**Pn**		**10 43 27.5**	**-0.6**
CACV				*e*S	**Sn**		**10 44 02.4**	**-2.9**
TACV	**Tcata**	**3.53**	**291**	*e*P	**Pn**		**10 43 35.3**	**+1.2**
TACV				*e*S	**Sn**		**10 44 14.7**	**-1.3**
BENV	**Beln**	**4.01**	**286**	*e*P	**Pn**		**10 43 42.5**	**+1.7**
BENV				*e*S	**Sn**		**10 44 27.0**	**-0.9**
TURV	**Turiamo**	**4.39**	**291**	*e*P	**Pn**		**10 43 47.7**	**+1.9**
TURV				*e*S	**Sn**		**10 44 34.9**	**-2.2**
MAPV	**Macapo**	**4.81**	**282**	*e*P	**Pn**		**10 43 54.0**	**+2.4**
MAPV				*e*S	**Sn**		**10 44 46.5**	**-0.9**
TEPV	**Terepaima**	**5.54**	**282**	*e*S	**Sn**		**10 45 02.7**	**-2.9**
DSLB	**Salisbury**	**6.90**	**18**	*e*P	**Pg**		**10 44 53.6**	**+2.4**

*SOF **11** 10:43:56.5, 41.76N±0.01×22.22E±0.02, h10km±2km, MD2.7/5*
*SKO **11** 10:43:58.7, 41.75N×22.29E, h14km, ML2.8*
*BEO **11** 10:44:00.0±0.4, 41.82N×22.32E, h0km, ML2.2/11*

ISC 11 10:43:58.7±1.1, 41.80N±0.02×22.30E±0.02, h6km±11km, n21, σ0.968/41, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.52**	**157**	*i* Pg	**Pg**		**10 44 08.4**	**-0.3**
VAY				*i* Sg	**Sg**		**10 44 15.5**	**0.0**
VAY				eLg	Lg		10 44 15.6	
	comp=E,670nm,0.3s							
VAY				eLg	Lg		10 44 15.6	
	comp=N,1μm,0.3s							
KKB	**Krupnik**	**0.62**	**86**	Pg	**Pg**		**10 44 10.5**	**-0.2**
KKB				Sg	**Sg**		**10 44 19.3**	**+0.6**
SKO	**Skopje**	**0.67**	**285**	*i* Pg	**Pg**		**10 44 12.0**	**+0.5**
SKO				*e*Sg	**Sg**		**10 44 20.4**	**+0.3**
BOSS	**Bosilegrad**	**0.71**	**11**	*e*Pg	**Pg**		**10 44 12.1**	**-0.2**
BOSS				*e*Sg	**Sg**		**10 44 21.4**	**-0.2**
VTS	**Vitosha**	**1.07**	**40**	Pg	**Pg**		**10 44 18.8**	**-0.6**
VTS				Sg	**Sg**		**10 44 33.2**	**-0.1**
VTS	**Vitosha**	**1.07**	**40**	*e*Pg	**Pg**		**10 44 18.7**	**-0.6**
VTS				*e*Sg	**Sg**		**10 44 33.0**	**-0.3**
PLNA	**Plana**	**1.08**	**51**	Pg	**Pg**		**10 44 19.7**	**+0.3**
PLNA				Sg	**Sb**		**10 44 34.7**	**+0.5**
BARS	**Barje**	**1.08**	**341**	*e*Pg	**Pb**		**10 44 18.4**	**-1.4**
BARS				*e*Sg	**Sg**		**10 44 32.6**	**-0.8**
MMB	**Musomishta**	**1.11**	**103**	Pg	**Pb**		**10 44 19.6**	**-0.8**
MMB				Sg	**Sb**		**10 44 34.7**	**-0.5**
SRS	**Serrai**	**1.19**	**125**	*e*Pg	**Pb**		**10 44 21.1**	**-0.5**
SRS				*e*Sg	**Sg**		**10 44 36.6**	**-0.2**
BLSH	**Balsha**	**1.28**	**34**	*e*P	**Pb**		**10 44 23.7**	**+0.4**
BLSH				Sg	**Sg**		**10 44 41.8**	**+1.9**
OHR	**Ohrid**	**1.32**	**239**	*e*Pg	**Pg**		**10 44 23.9**	**-0.1**
OHR				*i* Sg	**Sg**		**10 44 42.5**	**+1.4**
OHR				eLg	Lg		10 44 44.9	

comp=N,38nm,0.5s

OHR				*e*Lg	Lg	10 44 47.9		
	comp=E,58nm,0.7s							
ZAPS	**Zavoj**	**1.49**	**9**	*e*Pg	**Pb**	**10 44 26.8**	**-0.1**
ZAPS				*e*Sg	**Sn**	**10 44 46.0**	**0.0**
SELS	**Selova**	**1.67**	**329**	*e*Pn	**Pb**	**10 44 29.4**	**-0.4**
SELS				*e*Sn	**Sg**	**10 44 52.5**	**+0.2**
RZN	**Rozhen**	**1.83**	**92**	P	**Pn**	**10 44 31.0**	**+0.2**
RZN				S	**Sb**	**10 44 56.0**	**+0.1**
BLKB	**Belogradchik**	**1.84**	**9**	*e*Pg	**Pb**	**10 44 33.2**	**+0.4**
BLKB				*e*Sg	**Sb**	**10 44 57.0**	**+0.8**
PLD	**Plovdiv**	**1.86**	**78**	S	**Sg**	**10 44 58.9**	**+0.5**
PLD	**Plovdiv**	**1.86**	**78**	*e*Pn	**Pb**	**10 44 33.0**	**0.0**
PLD				*e*Sn	**Sb**	**10 44 56.1**	**-0.4**
ZAGS	**Zajecar**	**2.01**	**359**	*e*Pn	**Pn**	**10 44 34.2**	**+1.0**
ZAGS				*e*Sn	**Sb**	**10 45 00.7**	**-0.3**
BORS2	**Bor- Borsko je**	**2.30**	**355**	*e*Pn	**Pb**	**10 44 39.4**	**-1.2**
BORS2				*e*Sn	**Sb**	**10 45 08.6**	**-0.7**
GRUS	**Gruza**	**2.39**	**331**	*e*Pn	**Pb**	**10 44 41.6**	**-0.5**
GRUS				*e*Sn	**Sb**	**10 45 10.8**	**-1.1**

AFAD ***11*** *10:48:56.0, 37.70N×44.86E, h27km±4km, ML2.3*
TEH ***11*** *10:48:59.7, 37.56N×44.87E, h12km±29km, ML2.6, Presumed earthquake*

ISC 11 10:48:57.6±1.0, 37.55N±0.09×44.76E±0.04, h10km, n9, σ0s74/12, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOVA	**Hakkari_Yksek**	**0.38**	**276**	P	**Pg**	**10 49 05.1**	**0.0**
YOVA				IAML		10 49 12.0	
	comp=N,369nm,0.3s						
YOVA				IAML		10 49 14.0	
	comp=E,268nm,0.4s						
YOVA				S	**Sb**	**10 49 14.1**	**+1.7**
HAKT	**HAKKARI**	**0.84**	**271**	P	**Pn**	**10 49 14.9**	**-0.7**
HAKT				S	**Sn**	**10 49 27.2**	**-1.0**
HAKT				IAML		10 49 31.0	
	comp=E,80nm,0.3s						
HAKT				IAML		10 49 34.0	
	comp=N,75nm,0.4s						
IAZR	**Azarshahr**	**0.98**	**82**	Pg	**Pb**	**10 49 17.1**	**+0.3**
MAHB	**Mahabad**	**1.09**	**136**	Pg	**Pb**	**10 49 19.0**	**+0.5**
ITBZ	**Tabriz**	**1.29**	**58**	Pg	**Pg**	**10 49 22.1**	**-0.3**
ITBZ				Sg	**Sn**	**10 49 39.4**	**0.0**
IMRD	**Marand**	**1.38**	**32**	Pg	**Pg**	**10 49 24.5**	**+0.4**
PERV	**Siirt/Pervari-**	**1.80**	**283**	P	**Pg**	**10 49 32.1**	**-0.1**
PERV				S	Sn	10 49 39.4	-12
PERV				IAML		10 50 03.0	
	comp=N,40nm,0.5s						
PERV				IAML		10 50 09.0	
	comp=E,27nm,0.6s						
IHSH	**Hashtrud**	**2.01**	**96**	Pn	**Pb**	**10 49 34.4**	**0.0**
ISRB	**Sarab**	**2.32**	**82**	Pn	**Pb**	**10 49 39.5**	**-0.2**

IDC ***11*** *10:55:36.4±1.4, 6.08S×127.75E, h401km±21km, mb3.3/2, mbtmp4.2/7, Error ellipse: s-maj=31.1km s-min=15.2km az=96.0*

ISC 11 10:55:36.4±0.9, 6.1S±0.1×127.7E±0.2, h400km, n7, σ0s67/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.71**	**224**	P	**Pn**	**10 57 05.9**	**-0.1**
	24nm,0.4s,baz=42,slow=1.9,SNR=4.2						
SIJI	**Sorong**	**6.29**	**35**	P	**Pn**	**10 57 13.2**	**+0.9**
	4.5nm,0.2s,baz=247,slow=23,SNR=6.6						
SIJI				S	**S**	**10 58 29.3**	**-1.2**
	7.6nm,0.4s,baz=105,slow=22,SNR=6.8						
FITZ	**Fitzroy Crossi**	**12.10**	**189**	P	**P**	**10 58 16.9**	**-0.3**
	1.0nm,0.3s,baz=12,slow=14,SNR=7.2						
WRA	**Warramunga Arr**	**15.20**	**155**	P	**P**	**10 58 51.1**	**0.0**
	8.9nm,0.5s,baz=337,slow=11,SNR=153						
ASAR	**Alice Springs**	**18.46**	**162**	P	**P**	**10 59 26.0**	**+0.1**
	3.2nm,0.5s,baz=343,slow=10,SNR=47						
MKAR	**Makanchi Array**	**66.23**	**328**	P	**P**	**11 05 42.8**	**-0.2**
	0.3nm,0.4s,baz=126,slow=7.5,SNR=5.4						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**70.56**	**329**	P	**P**	**11 06 09.4**	**+0.1**
	1.1nm,0.2s,baz=133,slow=5.4,SNR=1.8						
	1.1nm,0.2s						

IDC ***11*** *11:00:55.7×4.8, 26.86N×143.25E, h0km, mb3.6/3, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=172.9km s-min=30.3km az=74.0*

ISC 11 11:01:00.8±1.6, 26.9N±0.2×143.0E±0.2, h32km, n6, σ1s05/6, mb3.6/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**0.76**	**285**	Pn	Pn	11 01 09.0	-6.3
	12nm,0.3s,baz=331,slow=21,SNR=6.5						
JCJ				Sn	**Sn**	**11 01 25.3**	**-0.4**
	70nm,0.3s,baz=92,slow=23,SNR=16						
MJAR	**Matsushiro Arr**	**10.45**	**338**	Pn	**Pn**	**11 03 27.5**	**-1.0**
	0.5nm,0.3s,baz=151,slow=9.8,SNR=23						
	3.6nm,0.4s						
KSRS	**Korea Array**	**16.53**	**313**	Pn	**P**	**11 04 53.4**	**+0.9**
	0.1nm,0.3s,baz=126,slow=11,SNR=4.4						
	1.1nm,0.7s						
WRA	**Warramunga Arr**	**47.31**	**191**	P	**P**	**11 09 31.1**	**-0.5**
	0.4nm,0.6s,baz=8.9,slow=8.3,SNR=1.8						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**51.16**	**310**	P	**P**	**11 10 01.7**	**+0.8**
	0.2nm,0.5s,baz=81,slow=8.9,SNR=1.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**53.70**	**315**	P	**P**	**11 10 20.3**	**+0.7**
	0.8nm,0.3s,baz=91,slow=8.3,SNR=1.9						
	0.8nm,0.3s						

MOS ***11*** *11:07:01.4±0.8, 25.07S×179.84E, h480km, mb5.0/16, Error ellipse: s-maj=10.6km s-min=8.3km az=44.1*
IDC ***11*** *11:07:02.1±0.5, 25.11S×179.88E, h480km±4km, mb4.5/30, mbtmp5.3/35, Error ellipse: s-maj=8.4km s-min=7.6km az=1.0*
NEIC ***11*** *11:07:03, 24.94S×179.96W, h500km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^17Nm; Mrr=0.38; Mθθ=0.55; Mφφ=-0.17; Mrθ=-0.13; Mrφ=-0.03; Mθφ=-1.54; Fault plane solution: M0 1.62000×10^17 NP1: φs223.70000°, δ2.42000°, λ=-52.04000°. NP2: φs72.0000°, δ88.10000°, λ=-91.49000°. Principal axes: T 1.2774, Plg43.0000°, Azm97.0000°; N 0.5470, Plg1.0000°, Azm6.0000°; P -1.8245, Plg47.0000°, Azm274.0000°;*
GFZ ***11*** *11:07:03.0, 25.06S×179.89E, h484km, MW5.4, Moment Tensor Solution. s52 Moment tensor: Mrr=0.40; Mθθ=0.07; Mφφ=0.46; Mrθ=-0.11; Mφφ=-0.27; Mφr=1.53; Fault plane solution: NP1: φs128.00000°, δ13.00000°, λ=143.00000°. NP2: φs3.00000°, δ82.00000°, λ=-78.00000°. Principal axes: T 1.6400, Plg37.0000°, Azm84.0000°; N -0.0400, Plg11.0000°, Azm182.0000°; P -1.6000, Plg51.0000°, Azm285.0000°;*
NEIC ***11*** *11:07:03, 25.14S×179.93E, h500km*
NEIC ***11*** *11:07:03.6±2.2, 25.17S±0.09×179.9E±0.1, h494km±6km, mb4.9/241, Mww5.4/12, Error ellipse: s-maj=14.4km s-min=12.1km az=124.0*
BGR ***11*** *11:07:04.6, 24.88S×179.27W, h508km±2km*
GCMT ***11*** *11:07:08.0±0.3, 25.07S±0.03×179.92E±0.03, h486km±1km, MW5.5/86, Moment Tensor Solution. s86, c125; Duration: 1s3 Moment tensor: Scale 10^17Nm; Mrr=0.57±.04; Mθθ=0.13±.08; Mφφ=0.44±.07; Mrθ=-0.25±.07; Mθφ=-0.28±.06; Mφr=-1.88±.06; Best double couple: M0 1.98100×10^17 NP1: φs133.00000°, δ12.00000°, λ=-141.00000°. NP2: φs5.00000°, δ83.00000°, λ=-81.00000°. Principal axes: T 1.8880, Plg37.0000°, Azm87.0000°; N 0.1850, Plg9.0000°, Azm184.0000°; P -2.0730, Plg51.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 11 11:07:02.6±0.3, 25.10S±0.04×179.91E±0.04, h492km±3km, h493km:pP-P, n741, σ1s24/702, mb5.0/247, 58C-49D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.57**	**155**	P	**P**	**11 08 24.0**	**-1.2**
	1μm,0.3s,baz=79,slow=9.0,SNR=9.9						
RAO				S	**S**	**11 09 29.6**	**-3.1**
	622nm,0.4s,baz=103,slow=21,SNR=3.6						
RAO	**Raoul Island**	**4.57**	**155**		**P**	**11 08 25.4**	**+0.2**
RAO	**Raoul Island**	**4.57**	**155**	P	**P**	**11 08 25.8**	**+0.6**
GLKZ	**Green Lake**	**4.58**	**155**	P	**P**	**11 08 25.6**	**+0.4**
GLKZ				S	**S**	**11 09 28.8**	**-3.9**
MSVF	**Nonsavu**	**7.53**	**346**		**P**	**11 08 53.7**	**-0.5**
MSVF	**Nonsavu**	**7.53**	**346**	*i* P	**P**	**11 08 54.0**	**-0.2**
NIUE	**Niue**	**11.16**	**60**	P	**P**	**11 09 31.3**	**-1.1**
	comp=Z,1μm,1.0s						
NIUE	**Niue**	**11.16**	**60**		**P**	**11 09 31.0**	**-1.4**
NIUE	**Niue**	**11.16**	**60**	P	**P**	**11 09 31.2**	**-1.2**
NIUE				S	**S**	**11 11 36.2**	**+0.5**
OUZ	**Omahuta**	**11.47**	**207**	P	**P**	**11 09 37.8**	**+2.4**
MARNC	**Mare, Loyalty**	**11.49**	**286**		**P**	**11 09 37.5**	**+1.7**
PINNC	**Pines Island,**	**11.67**	**280**		**P**	**11 09 40.2**	**+2.5**
GRZ	**Great Barrier**	**11.76**	**198**	P	**P**	**11 09 40.2**	**+1.8**
WCZ	**Waipu Caves**	**11.82**	**203**	P	**P**	**11 09 41.3**	**+2.2**
KUZ	**Kuaotunu**	**12.15**	**196**	P	**P**	**11 09 43.1**	**+0.4**
WIAZ	**Waiheke Island**	**12.36**	**198**	P	**P**	**11 09 46.6**	**+1.8**
MBAZ	**Motutapu North**	**12.40**	**199**	P	**P**	**11 09 47.4**	**+2.1**
RVAZ	**Riverhead Bore**	**12.50**	**200**	P	**P**	**11 09 48.6**	**+2.3**
MXZ	**Matakaoa Point**	**12.50**	**186**	P	**P**	**11 09 45.7**	**-0.6**
ETAZ	**East Tamaki Re**	**12.56**	**199**	P	**P**	**11 09 48.8**	**+1.8**
MKAZ	**Moumakai**	**12.64**	**198**	P	**P**	**11 09 48.9**	**+1.1**
KBAZ	**Karaka Road Bo**	**12.71**	**199**	P	**P**	**11 09 50.6**	**+2.1**
DZM	**Mont Dzumac**	**12.71**	**281**	*e*P	**P**	**11 09 50.4**	**+1.5**
	comp=Z,217nm,0.8s						
DZM				*e*S	**S**	**11 12 04.5**	**-1.5**
	comp=Z,191nm,1.5s						
DZM	**Mont Dzumac**	**12.71**	**281**	P	**P**	**11 09 49.9**	**+1.0**
	comp=Z,106nm,0.8s,baz=96,slow=15,SNR=24						
DZM	**Mont Dzumac**	**12.71**	**281**		**P**	**11 09 51.0**	**+2.1**
WMGZ	**Waiomatatini S**	**12.75**	**185**	P	**P**	**11 09 47.9**	**-1.1**
AWAZ	**Awhitu Peninsu**	**12.75**	**199**	P	**P**	**11 09 50.4**	**+1.4**
HAZ	**Te Kaha**	**12.75**	**188**	P	**P**	**11 09 46.9**	**-2.1**
PKGZ	**Pakihiroa**	**12.83**	**187**	P	**P**	**11 09 50.3**	**+0.5**
RUGZ	**Raukumara Rang**	**12.97**	**188**	P	**P**	**11 09 50.8**	**-0.6**
TGRZ	**Tauranga**	**12.97**	**193**	P	**P**	**11 09 52.8**	**+1.5**
PUZ	**Puketiti**	**13.01**	**186**	P	**P**	**11 09 49.9**	**-1.9**
OPRZ	**Ohinepanea**	**13.03**	**192**	P	**P**	**11 09 54.7**	**+2.8**
TOZ	**Tahuna Road**	**13.14**	**196**		**P**	**11 09 54.0**	**+0.8**
TOZ	**Tahuroa Road**	**13.14**	**196**	P	**P**	**11 09 54.1**	**+1.0**
TWGZ	**Tauwhareparae**	**13.14**	**187**	P	**P**	**11 09 52.0**	**-1.2**
KMRZ	**Kaimai**	**13.15**	**194**	P	**P**	**11 09 54.4**	**+1.2**
KARZ	**Kaharoa**	**13.26**	**193**	P	**P**	**11 09 55.3**	**+0.9**
URZ	**Urewera**	**13.34**	**190**	P	**P**	**11 09 53.8**	**-1.3**
	comp=Z,21nm,0.4s,baz=311,slow=3.6,SNR=32						
URZ				S	**S**	**11 12 15.1**	**-2.4**
	comp=Z,67nm,0.5s,baz=72,slow=20,SNR=12						
URZ	**Urewera**	**13.34**	**190**	P	**P**	**11 09 54.7**	**-0.5**
NGRZ	**Ngongotaha**	**13.35**	**193**	P	**P**	**11 09 56.8**	**+1.5**
MWZ	**Matawai**	**13.35**	**188**	P	**P**	**11 09 53.2**	**-2.2**
TKGZ	**Te Karaka**	**13.42**	**187**	P	**P**	**11 09 53.9**	**-2.1**
CNGZ	**Carnagh Statio**	**13.43**	**196**	P	**P**	**11 09 57.0**	**+0.9**
RAGZ	**Rawiri**	**13.53**	**188**	P	**P**	**11 09 56.0**	**-1.3**
MUGZ	**Murupara**	**13.60**	**191**	P	**P**	**11 09 56.9**	**-1.1**
AFI	**Afiamalu**	**13.61**	**37**		**P**	**11 09 55.1**	**-3.3**
AFI	**Afiamalu**	**13.61**	**37**	P	**P**	**11 09 55.1**	**-3.3**
AFI	**Afiamalu**	**13.61**	**37**	P	**P**	**11 09 55.1**	**-3.3**
HRRZ	**Handcock Road**	**13.61**	**192**	P	**P**	**11 09 59.6**	**+1.5**
RIGZ	**Rimuhau**	**13.69**	**187**	P	**P**	**11 09 59.2**	**+0.2**
PRRZ	**Plateau Road**	**13.69**	**192**	P	**P**	**11 09 59.6**	**+0.7**
TLZ	**Tolley Road**	**13.70**	**195**	P	**P**	**11 10 00.7**	**+1.6**
RTZ	**Ruatahuna**	**13.71**	**190**		**P**	**11 09 58.0**	**-1.1**
RTZ	**Ruatahuna**	**13.71**	**190**	P	**P**	**11 10 01.2**	**+2.0**
PRGZ	**Paritu Road**	**13.89**	**187**	P	**P**	**11 10 03.4**	**+2.3**
MTHZ	**Maungataniwha**	**13.96**	**190**	P	**P**	**11 10 04.0**	**+2.2**
RAHZ	**Arahi**	**13.98**	**189**	P	**P**	**11 10 00.9**	**-1.2**
MRHZ	**Matea Rd**	**14.01**	**191**	P	**P**	**11 10 01.0**	**-1.4**
WATZ	**Wairara**	**14.02**	**194**	P	**P**	**11 10 02.8**	**+0.3**
HIZ	**Hauiti**	**14.04**	**197**	P	**P**	**11 10 04.1**	**+1.4**
HIZ	**Hauiti**	**14.04**	**197**	P	**P**	**11 10 03.9**	**+1.3**
RATZ	**Rangitukua**	**14.17**	**193**	P	**P**	**11 10 04.1**	**+0.1**
NMHZ	**Naumai**	**14.20**	**190**	P	**P**	**11 10 03.2**	**-1.2**
RITZ	**Rihia Road**	**14.26**	**193**	P	**P**	**11 10 04.7**	**-0.3**
KATZ	**Kakaramea**	**14.29**	**193**	P	**P**	**11 10 05.5**	**+0.1**
BKZ	**Black Stump Fm**	**14.32**	**191**	P	**P**	**11 10 01.6**	**-4.1**
ARHZ	**Aropaoanui**	**14.34**	**189**	P	**P**	**11 10 07.3**	**+1.5**
NTVZ	**North Tongarir**	**14.41**	**193**	P	**P**	**11 10 06.7**	**0.0**
TMVZ	**Te Maari**	**14.42**	**193**	P	**P**	**11 10 05.9**	**-0.9**
ETVZ	**East Tongariro**	**14.44**	**193**	P	**P**	**11 10 05.9**	**-1.1**
WTVZ	**West Tongariro**	**14.45**	**194**	P	**P**	**11 10 06.4**	**-0.7**
NNVZ	**North Ngauruho**	**14.46**	**193**	P	**P**	**11 10 06.6**	**-0.7**
OTVZ	**Oturere**	**14.48**	**193**	P	**P**	**11 10 05.4**	**-2.0**
NGZ	**Ngauruhoe**	**14.50**	**193**	P	**P**	**11 10 07.9**	**+0.2**
SNVZ	**South Ngauruho**	**14.50**	**193**	P	**P**	**11 10 06.3**	**-1.4**
COVZ	**Chateau Observ**	**14.54**	**194**	P	**P**	**11 10 07.2**	**-0.8**
MCHZ	**McNeill Hill**	**14.56**	**190**	P	**P**	**11 10 06.2**	**-1.9**
TUVZ	**Tukino**	**14.58**	**193**	P	**P**	**11 10 07.3**	**-1.1**
KWHZ	**Kaweka Forest**	**14.59**	**191**	P	**P**	**11 10 06.0**	**-2.4**
TRVZ	**Turua**	**14.63**	**194**	P	**P**	**11 10 07.6**	**-1.5**
VRZ	**Vera Road**	**14.65**	**196**	P	**P**	**11 10 10.2**	**+1.2**
PKVZ	**Pokaka**	**14.66**	**194**	P	**P**	**11 10 08.3**	**-1.0**
MOVZ	**Moawhango**	**14.69**	**193**	P	**P**	**11 10 07.8**	**-1.8**
KRHZ	**Kereru**	**14.81**	**191**	P	**P**	**11 10 08.6**	**-2.2**
KAHZ	**Kahuranaki**	**14.88**	**189**	P	**P**	**11 10 10.4**	**-1.1**
PKE	**Pukeiti**	**14.92**	**198**	P	**P**	**11 10 14.5**	**+2.6**
KHEZ	**Kahui Hut**	**15.00**	**198**	P	**P**	**11 10 16.1**	**+3.2**
PREZ	**Palmer Road**	**15.01**	**197**	P	**P**	**11 10 15.9**	**+3.0**
PNHZ	**Pukenui**	**15.10**	**191**	P	**P**	**11 10 10.9**	**-3.0**
PXZ	**Pawanui**	**15.11**	**189**	P	**P**	**11 10 13.3**	**-0.5**
WPHZ	**Waipukurau**	**15.21**	**190**	P	**P**	**11 10 16.5**	**+1.6**
DVHZ	**Dannevirke**	**15.48**	**191**	P	**P**	**11 10 15.2**	**-2.6**
MRZ	**Mangatainoka R**	**15.94**	**192**		**P**	**11 10 20.2**	**-2.3**
FUNA	**Funafuti**	**16.49**	**358**		**P**	**11 10 27.0**	**-1.8**
TCW	**Tory Channel**	**16.74**	**195**	P	**P**	**11 10 29.5**	**-1.5**
BHW	**Baring Head**	**16.80**	**199**	P	**P**	**11 10 30.0**	**-0.7**
QRZ	**Quartz Range**	**16.85**	**200**		**P**	**11 10 31.3**	**-0.8**
NNZ	**Nelson**	**16.97**	**197**	P	**P**	**11 10 31.9**	**-1.4**
TUWZ	**Tuamarina**	**17.03**	**195**	P	**P**	**11 10 32.1**	**-1.7**
MRNZ	**Matariki Terra**	**17.31**	**198**	P	**P**	**11 10 35.7**	**-1.0**
BSWZ	**Blackbirch Sta**	**17.31**	**195**	P	**P**	**11 10 35.7**	**-1.1**
THZ	**Tophouse**	**17.61**	**198**		**P**	**11 10 38.6**	**-1.0**
DSZ	**Denniston Nort**	**17.91**	**200**	P	**P**	**11 10 41.8**	**-0.6**
KHZ	**Kahutara**	**18.06**	**195**		**P**	**11 10 43.3**	**-0.3**
GVZ	**Greta Valley S**	**18.70**	**196**	P	**P**	**11 10 49.8**	**+0.2**
LTZ	**Lake Taylor**	**18.73**	**198**		**P**	**11 10 48.6**	**-1.3**
INZ	**Inchbonnie**	**18.91**	**200**		**P**	**11 10 50.7**	**-0.9**
RAR	**Rarotonga**	**19.08**	**82**	P	**P**	**11 10 52.7**	**-0.6**
	comp=Z,85nm,0.9s,baz=243,slow=3.3,SNR=12						
RAR	**Rarotonga**	**19.08**	**82**	P	**P**	**11 10 53.2**	**-0.1**
RAR	**Rarotonga**	**19.08**	**82**	P	**P**	**11 10 53.2**	**-0.1**
OXZ	**Oxford**	**19.30**	**198**	P	**P**	**11 10 53.8**	**-1.2**
LHI	**Lord Howe Isla**	**19.42**	**246**	P	**P**	**11 10 59.0**	**+2.7**
	comp=Z,342nm,0.7s						
LHI	**Lord Howe Isla**	**19.42**	**246**		**P**	**11 10 58.8**	**+2.4**
LHI	**Lord Howe Isla**	**19.42**	**246**	P	**P**	**11 10 58.9**	**+2.6**
RPZ	**Rata Peaks**	**19.93**	**199**	P	**P**	**11 11 00.5**	**-0.4**
	comp=Z,24nm,0.5s,baz=161,slow=0.4,SNR=14						
RPZ	**Rata Peaks**	**19.93**	**199**		**P**	**11 11 00.8**	**0.0**
FOZ	**Fox Glacier**	**20.16**	**202**	P	**P**	**11 11 02.4**	**-0.5**
MLZ	**Mavora Lakes**	**22.35**	**202**	P	**P**	**11 11 22.9**	**+0.1**
WHZ	**Wether Hill Ro**	**22.87**	**202**	P	**P**	**11 11 28.2**	**+0.8**
HNR	**Honiara**	**24.56**	**306**	P	**P**	**11 11 42.0**	**-0.8**
HNR	**Honiara**	**24.56**	**306**	P	**P**	**11 11 42.0**	**-0.8**
ARMA	**Armidale**	**25.55**	**252**	P	**P**	**11 11 53.8**	**+2.3**
	comp=Z,109nm,0.8s						
ARMA	**Armidale**	**25.55**	**252**		**P**	**11 11 53.2**	**+1.7**
EIDS	**Eidsvold**	**26.06**	**263**	P	**P**	**11 11 56.9**	**+1.0**
	comp=Z,139nm,1.1s						
EIDS	**Eidsvold**	**26.06**	**263**		**P**	**11 11 56.8**	**+0.9**
MGCD	**Mangrove Creek**	**26.36**	**245**	P	**P**	**11 12 01.3**	**+2.8**
	comp=Z,106nm,0.7s						
TBI	**Tubuai**	**27.96**	**93**	*e*S	sS	11 18 43.5	-13
	comp=Z,6μm,40.8s						
TBI				*e*T	T	11 38 30.8	
	comp=Z,6.3nm,0.4s						
RMQ	**Roma**	**28.05**	**260**	P	**P**	**11 12 15.8**	**+2.3**
	comp=Z,87nm,1.0s						
CAN	**Canberra**	**28.49**	**242**	P	**P**	**11 12 18.2**	**+1.0**
	comp=Z,34nm,0.9s						
CAN	**Canberra**	**28.49**	**242**		**P**	**11 12 17.9**	**+0.6**
CAN	**Canberra**	**28.49**	**242**	P	**P**	**11 12 17.9**	**+0.6**
YNG	**Young**	**28.77**	**244**	P	**P**	**11 12 21.4**	**+1.6**
	comp=Z,63nm,0.9s						
MILA	**Mila**	**28.79**	**238**	P	**P**	**11 12 21.7**	**+1.8**
	comp=Z,30nm,1.1s						
PAE	**Paea**	**29.31**	**81**	*e*P	**P**	**11 12 24.3**	**-0.3**
	comp=Z,41nm,1.1s						
PAE				*e*T	T	11 38 54.8	
	comp=Z,3.6nm,0.3s						
PPT2	**Papeete2**	**29.34**	**81**	*es*S	**sS**	**11 19 22.6**	**+3.8**
	comp=Z,816nm,24.8s						
PPT2				*e*T	T	11 39 01.0	
	comp=Z,3.5nm,0.4s						
PPT	**Papeete**	**29.35**	**81**	P	**P**	**11 12 25.1**	**+0.2**
	comp=Z,89nm,0.8s,baz=224,slow=15,SNR=8.3						
	comp=Z,89nm,0.8s						
PPTF	**Pamatai, Papee**	**29.35**	**81**	P	**P**	**11 12 25.6**	**+0.5**
TIAR	**Tiarei**	**29.56**	**81**	*e*P	**P**	**11 12 26.9**	**+0.1**
	comp=Z,217nm,1.0s						
TVO	**Taravao**	**29.57**	**82**	*e*P	**P**	**11 12 26.7**	**-0.2**
	comp=Z,24nm,0.7s						
CMSA	**Cobar Meteorol**	**30.71**	**250**	P	**P**	**11 12 37.3**	**+0.7**
	comp=Z,88nm,0.8s						
CTA	**Charters Tower**	**31.42**	**272**	P	**P**	**11 12 43.7**	**+0.9**
	comp=Z,252nm,0.7s,baz=94,slow=9.9,SNR=282						
CTA				S	**S**	**11 17 14.2**	**-1.0**
	comp=Z,5.8nm,0.9s,baz=268,slow=19,SNR=6.1						
	comp=Z,252nm,0.7s						
CTAO	**Charters Tower**	**31.42**	**272**		**P**	**11 12 43.6**	**+0.9**
CTAO	**Charters Tower**	**31.42**	**272**	P	**P**	**11 12 43.6**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,253nm,0.7s						
CTAO	**Charters Tower**	**31.42**	**272**	P	**P**	**11 12 43.6**	**+0.8**
CTAO				pP	**pP**	**11 14 08.7**	**+2.2**
CTAO				PcP	**PcP**	**11 15 22.5**	**+0.8**
TOO	**Toolangi**	**31.74**	**239**	P	**P**	**11 12 46.8**	**+1.4**
	comp=Z,18nm,0.9s						
TOO	**Toolangi**	**31.74**	**239**		**P**	**11 12 46.2**	**+0.8**
TOO	**Toolangi**	**31.74**	**239**	P	**P**	**11 12 46.2**	**+0.8**
TOO				pmax	pmax		
	comp=Z,14nm,0.9s						
PMOR	**Pomariorio Ree**	**31.80**	**78**	*e*P	**P**	**11 12 46.0**	**0.0**
	comp=Z,114nm,0.9s						
QLP	**Quilpie**	**32.08**	**260**	P	**P**	**11 12 49.0**	**+0.6**
	comp=Z,223nm,1.2s						
MTSU	**Mount Surprise**	**33.73**	**275**	P	**P**	**11 13 03.6**	**+1.1**
	comp=Z,412nm,0.8s						
STKA	**Stephens Creek**	**34.22**	**250**	P	**P**	**11 13 07.2**	**+0.7**
	comp=Z,234nm,1.0s						
STKA	**Stephens Creek**	**34.22**	**250**	P	**P**	**11 13 06.9**	**+0.5**
	comp=Z,27nm,0.7s,baz=90,slow=9.6,SNR=38						
STKA				PcP	**PcP**	**11 15 30.0**	**+0.6**
	comp=Z,5.4nm,0.6s,baz=158,slow=4.7,SNR=3.6						
	comp=Z,27nm,0.7s						
STKA	**Stephens Creek**	**34.22**	**250**		**P**	**11 13 07.0**	**+0.5**
STKA	**Stephens Creek**	**34.22**	**250**	*i* P	**P**	**11 13 07.2**	**+0.7**
ARPS	**Mount Arapiles**	**34.46**	**241**	P	**P**	**11 13 09.3**	**+1.0**
	comp=Z,33nm,1.0s						
PMG	**Port Moresby**	**34.82**	**291**	P	**P**	**11 13 11.8**	**+0.1**
	comp=Z,120nm,0.8s,baz=99,slow=5.9,SNR=46						
	comp=Z,120nm,0.8s						
PMG	**Port Moresby**	**34.82**	**291**		**P**	**11 13 11.7**	**+0.1**
PMG	**Port Moresby**	**34.82**	**291**	P	**P**	**11 13 11.8**	**+0.1**
	comp=Z,2μmcomp=Z,209nm,0.9s						
PMG	**Port Moresby**	**34.82**	**291**	P	**P**	**11 13 11.5**	**-0.2**
PMG				pP	**pP**	**11 14 37.0**	**+0.1**
PMG				PcP	**sP**	**11 15 32.8**	**0.0**
INKA	**Innaminka**	**35.07**	**257**	IAmb	IAmb	11 13 16.1	
	comp=Z,68nm,1.0s						
COEN	**Coen**	**36.24**	**281**	P	**P**	**11 13 24.5**	**+1.0**
	comp=Z,201nm,0.8s						
COEN	**Coen**	**36.24**	**281**		**P**	**11 13 24.3**	**+0.8**
HTT	**Hallett**	**36.52**	**247**	P	**P**	**11 13 25.9**	**+0.2**
	comp=Z,48nm,0.9s						
QIS	**Mount Isa**	**37.32**	**269**	P	**P**	**11 13 32.6**	**+0.1**
	comp=Z,105nm,1.5s						
BBOO	**Buckleboo**	**38.91**	**248**	P	**P**	**11 13 44.3**	**-1.0**
	comp=Z,103nm,1.1s						
TAOE	**Nuku Hiva Isla**	**41.28**	**74**	*e*P	**P

MBWA	**Marble Bar**	**55.09**	**261**	P		**P**	**11**	**15**
	comp=Z,42nm,1.1s							
MBWA	**Marble Bar**	**55.09**	**261**			**P**	**11**	**15**
MBWA				IAmb		IAmb	11	15
	comp=Z,46nm,1.1s							
MBWA	**Marble Bar**	**55.09**	**261**	P		**P**	**11**	**15**
MBWA				PcP		**PcP**	**11**	**16**
MBWA				pP		**pP**	**11**	**17**
MBWA				x		x	11	17
NLAI	**Namlea**	**55.19**	**284**	P		**P**	**11**	**15**
	comp=Z,2µmcomp=Z,204nm,1.0s							
BATI	**Baumata**	**55.24**	**275**	P		**P**	**11**	**15**
	comp=Z,2µmcomp=Z,129nm,0.8s							
BLDU	**Ballidu**	**55.52**	**249**	P		**P**	**11**	**15**
	comp=Z,73nm,0.9s							
MUN	**Mundaring**	**55.69**	**247**	P		**P**	**11**	**15**
	comp=Z,46nm,0.9s							
MORW	**Morawa**	**56.39**	**251**	P		**P**	**11**	**15**
	comp=Z,48nm,0.9s							
MORW	**Morawa**	**56.39**	**251**	IAmb		IAmb	11	15
	comp=Z,51nm,1.1s							
SANI	**Sanana**	**56.73**	**285**	P		**P**	**11**	**15**
	comp=Z,2µmcomp=Z,149nm,0.8s							
TNTI	**Ternate**	**56.92**	**289**			**P**	**11**	**16**
TNTI				IAmb		IAmb	11	16
	comp=Z,88nm,0.9s							
TNTI	**Ternate**	**56.92**	**289**	P		**P**	**11**	**16**
	comp=Z,2µmcomp=Z,133nm,1.1s							
MMRI	**Maumere**	**57.15**	**276**	IAmb		IAmb	11	16
	comp=Z,80nm,0.9s							
CCD	**Concordia, Ant**	**57.55**	**195**	P		**P**	**11**	**16**
CCD				PcP		**PcP**	**11**	**16**
EDFI	**Ende, Flores**	**57.60**	**276**	P		**P**	**11**	**16**
	comp=Z,1µmcomp=Z,123nm,0.9s							
WSI	**Waingapu**	**58.49**	**274**	P		**P**	**11**	**16**
CASY	**Casey**	**59.00**	**206**			**P**	**11**	**16**
CASY				IAmb		IAmb	11	16
	comp=Z,47nm,1.0s							
WBSI	**Waikabubak, Su**	**59.32**	**274**	P		**P**	**11**	**16**
	comp=Z,124nm,0.7s							
LUWI	**Luwuk**	**60.03**	**284**			**P**	**11**	**16**
LUWI	**Luwuk**	**60.03**	**284**	P		**P**	**11**	**16**
	comp=Z,193nm,1.0s							
DBNI	**Kabupaten Domp**	**60.75**	**274**	P		**P**	**11**	**16**
	comp=Z,1µmcomp=Z,106nm,0.7s							
KAPI	**Kappang**	**60.91**	**279**	P		**P**	**11**	**16**
KAPI				IAmb		IAmb	11	16
	comp=Z,43nm,0.9s							
KAPI	**Kappang**	**60.91**	**279**	*i* P		**P**	**11**	**16**
KAPI				pmax		pmax		
	comp=Z,26nm,1.0s							
KAPI	**Kappang**	**60.91**	**279**	P		**P**	**11**	**16**
APSI	**Ampana**	**61.08**	**284**	P		**P**	**11**	**16**
	comp=Z,114nm,1.0s							
PLAI	**Plampang**	**61.11**	**274**	P		**P**	**11**	**16**
SPSI	**Sidrap Palu**	**61.36**	**280**	P		**P**	**11**	**16**
	comp=Z,55nm,0.8s							
MRSI	**Marisa**	**61.48**	**285**	P		**P**	**11**	**16**
	comp=Z,1µmcomp=Z,49nm,0.6s							
TTSI	**Tana Toraja**	**61.72**	**281**	P		**P**	**11**	**16**
TWSI	**Taliwang, Sumb**	**61.95**	**273**	P		**P**	**11**	**16**
	comp=Z,118nm,1.1s							
PMSI	**Majene**	**62.33**	**280**	P		**P**	**11**	**16**
KLNI	**Mataram**	**62.79**	**273**	P		**P**	**11**	**16**
	comp=Z,172nm,0.9s							
MPSI	**Mapaga**	**63.21**	**284**	P		**P**	**11**	**16**
	comp=Z,60nm,0.7s							
KHKI	**Kahang-Kahang**	**63.26**	**273**	P		**P**	**11**	**16**
	comp=Z,93nm,1.0s							
JCJ	**Chichijima**	**63.37**	**322**	P		**P**	**11**	**16**
IGBI	**Denpasar**	**63.49**	**273**	P		**P**	**11**	**16**
JAGI	**Jajag, Banyuwa**	**64.53**	**272**			**P**	**11**	**16**
JAGI	**Jajag, Banyuwa**	**64.53**	**272**	P		**P**	**11**	**16**
	comp=Z,126nm,1.1s							
ABJI	**Asem Bagus**	**64.73**	**273**	P		**P**	**11**	**16**
	comp=Z,81nm,0.8s							
QSPA	**South Pole Qui**	**64.99**	**180**	P		**P**	**11**	**16**
	comp=Z,46nm,1.0s,baz=38,slow=2.4,SNR=28							
	comp=Z,46nm,1.0s							
QSPA	**South Pole Qui**	**64.99**	**180**			**P**	**11**	**16**
QSPA				IAmb		IAmb	11	16
	comp=Z,43nm,0.9s							
QSPA	**South Pole Qui**	**64.99**	**180**	P		**P**	**11**	**16**
QSPA				x		x	11	17
GMJI	**Gumukmas**	**65.25**	**272**	P		**P**	**11**	**16**
	comp=Z,89nm,0.8s							
KMMI	**Kalianget**	**65.27**	**274**	P		**P**	**11**	**16**
	comp=Z,144nm,1.0s							
BLJI	**Banyuglugur**	**65.33**	**273**	P		**P**	**11**	**16**
	comp=Z,3µmcomp=Z,116nm,0.7s							
BBKI	**Banjar Baru**	**65.99**	**278**	P		**P**	**11**	**17**
	comp=Z,90nm,0.8s							
SNJI	**Sawahan-Nganju**	**66.97**	**272**	P		**P**	**11**	**17**
	comp=Z,113nm,0.9s							
SJI	**Sawahan**	**66.99**	**272**	P		**P**	**11**	**17**
	comp=Z,28µmcomp=Z,94nm,0.8s							
MTKI	**Muara Teweh, K**	**67.06**	**280**	P		**P**	**11**	**17**
	comp=Z,80nm,0.8s							
PCJI	**Pacitan**	**67.34**	**271**	P		**P**	**11**	**17**
	comp=Z,223nm,1.0s							
JHJ2	**Mitsune**	**69.34**	**325**	P		**P**	**11**	**17**
CTJI	**Waduk Cacaban**	**69.62**	**272**	P		**P**	**11**	**17**
	comp=Z,103nm,1.0s							
KPJI	**Karang Pucung**	**69.72**	**271**	P		**P**	**11**	**17**
	comp=Z,56nm,1.0s							
BBJI	**Bungbulang**	**70.83**	**271**	P		**P**	**11**	**17**
BBJI	**Bungbulang**	**70.83**	**271**	P		**P**	**11**	**17**
	comp=Z,74nm,0.8s							
SBUM	**Sibu**	**70.97**	**282**	P		**P**	**11**	**17**
SBUM	**Sibu**	**70.97**	**282**	P		**P**	**11**	**17**
JOW	**Kunigami**	**71.73**	**312**	P		**P**	**11**	**17**
	comp=Z,82nm,0.7s,baz=132,slow=6.9,SNR=27							
	comp=Z,82nm,0.7s							
DBJI	**Dramaga**	**72.01**	**271**	P		**P**	**11**	**17**
	comp=Z,195nm,1.0s							
INU	**Inuyama**	**72.54**	**324**	IAmb		IAmb	11	17
	comp=Z,70nm,1.1s							
TPI	**Tanjungpandan**	**72.77**	**275**	P		**P**	**11**	**17**
	comp=Z,47nm,1.0s							
MJAR	**Matsushiro Arr**	**72.83**	**326**	P		**P**	**11**	**17**
	comp=Z,38nm,0.8s,baz=160,slow=5.8,SNR=89							
	comp=Z,38nm,0.8s							
MJAR	**Matsushiro Arr**	**72.83**	**326**			**P**	**11**	**17**
MJAR				IAmb		IAmb	11	17
	comp=Z,49nm,0.9s							
MJAR	**Matsushiro Arr**	**72.83**	**326**	P		**P**	**11**	**17**
MJAR				pmax		pmax		
	comp=Z,49nm,0.9s							
MAJO	**Matsushiro**	**72.84**	**326**			**P**	**11**	**17**
MAJO	**Matsushiro**	**72.84**	**326**	*i* P		**P**	**11**	**17**
MAJO				pmax		pmax		
	comp=Z,53nm,0.9s							
MAJO	**Matsushiro**	**72.84**	**326**	P		**P**	**11**	**17**
MAJO				PcP		**PcP**	**11**	**17**
MAJO				sP		**sP**	**11**	**20**
TWG	**Pinlang**	**74.32**	**305**	IAmb		IAmb	11	17
	comp=Z,36nm,0.8s							
JNU	**Nakatsue**	**74.37**	**319**	P		**P**	**11**	**17**
	comp=Z,32nm,0.8s,baz=104,slow=2.6,SNR=31							
	comp=Z,32nm,0.8s							
KASI	**Kota Agung**	**74.47**	**271**	P		**P**	**11**	**17**
	comp=Z,120nm,0.9s							
KLSI		**74.61**	**272**	P		**P**	**11**	**17**
	comp=Z,54nm,0.8s							
SSLB	**Suanglung**	**74.98**	**306**	IAmb		IAmb	11	17
	comp=Z,40nm,0.7s							
LWLI	**Liwa**	**75.08**	**271**	P		**P**	**11**	**17**
MDSI	**Maura Dua**	**75.19**	**272**	P		**P**	**11**	**17**
	comp=Z,1µmcomp=Z,142nm,0.8s							
BELA	**Belgrano 2**	**75.26**	**173**	P		**P**	**11**	**17**
BELA				IAmb		IAmb	11	17
	comp=Z,28nm,0.9s							
TATO	**Taipei**	**75.30**	**307**	P		**P**	**11**	**17**
DSRI	**Dabo**	**76.52**	**276**	P		**P**	**11**	**18**
	comp=Z,53nm,0.9s							
EGSI	**Enggano, Bengk**	**76.56**	**270**	P		**P**	**11**	**18**
	comp=Z,100nm,0.8s							
MAW	**Mawson**	**76.60**	**201**	P		**P**	**11**	**18**
	comp=Z,31nm,0.8s,baz=125,slow=6.9,SNR=22							
	comp=Z,31nm,0.8s							
JKA	**Kamikawa-asahi**	**76.89**	**333**	IAmb		IAmb	11	18
	comp=Z,56nm,1.0s							
ASAJ	**Asahikawa**	**76.89**	**333**	P		**P**	**11**	**18**
	comp=Z,27nm,0.8s,baz=224,slow=10,SNR=12							
	comp=Z,27nm,0.8s							
KSI	**Kapahiang**	**76.97**	**272**	P		**P**	**11**	**18**
MASI	**Maura Aman, Be**	**77.51**	**272**	P		**P**	**11**	**18**

MYKOM	**Kota Tinggi**	**78.16**	**278**		IAmb	IAmb	11	18
	comp=Z,43nm,0.9s							
MYKOM	**Kota Tinggi**	**78.16**	**278**	P		**P**	**11**	**18**
	comp=Z,52nm,0.8s							
KSRS	**Korea Array**	**79.11**	**320**	P		**P**	**11**	**18**
	comp=Z,15nm,0.7s,baz=134,slow=5.7,SNR=58							
	comp=Z,15nm,0.7s							
KSAR	**Wonju Array Be**	**79.12**	**320**	P		**P**	**11**	**18**
KSAR	**Wonju Array Be**	**79.12**	**320**	P		**P**	**11**	**18**
YSS	**Yuzhno-Sakhali**	**79.18**	**335**			**P**	**11**	**18**
YSS	**Yuzhno-Sakhali**	**79.18**	**335**	*e*P		**P**	**11**	**18**
YSS				pmax		pmax		
	comp=Z,60nm,0.6s							
YSS	**Yuzhno-Sakhali**	**79.18**	**335**	P		**P**	**11**	**18**
INCN	**Inchon**	**79.88**	**320**	P		**P**	**11**	**18**
INCN				IAmb		IAmb	11	18
	comp=Z,55nm,1.2s							
INCN	**Inchon**	**79.88**	**320**	P		**P**	**11**	**18**
INCN				pmax		pmax		
	comp=Z,55nm,1.3s							
PDSI	**Padang**	**80.05**	**274**	P		**P**	**11**	**18**
PEA0B	**Petropavlovsk-**	**80.24**	**347**	IAmb		IAmb	11	18
	comp=Z,62nm,0.9s							
PEA0B	**Petropavlovsk-**	**80.24**	**347**	*ce*P		**P**	**11**	**18**
PETK	**Petropavlovsk-**	**80.24**	**347**	P		**P**	**11**	**18**
	comp=Z,42nm,0.8s,baz=116,slow=5.6,SNR=41							
	comp=Z,42nm,0.8s							
PETK	**Petropavlovsk-**	**80.24**	**347**	P		**P**	**11**	**18**
PETK	**Petropavlovsk-**	**80.24**	**347**	P		**P**	**11**	**18**
NJ2	**Nanjing**	**81.38**	**311**	⇓*i* P		**P**	**11**	**18**
NJ2				pmax		pmax		
	comp=Z,33nm,0.8s							
MNSI	**Mandailing Nat**	**81.58**	**275**	P		**P**	**11**	**18**
	comp=Z,61nm,0.7s							
USRK	**Ussuriysk Ar.**	**81.72**	**327**	P		**P**	**11**	**18**
	comp=Z,17nm,0.7s,baz=126,slow=4.9,SNR=22							
	comp=Z,17nm,0.7s							
IPM	**Ipoh**	**81.86**	**279**	IAmb		IAmb	11	18
	comp=Z,34nm,0.9s							
IPM	**Ipoh**	**81.86**	**279**	P		**P**	**11**	**18**
	comp=Z,42nm,1.0s							
ELIB	**Princess Elisa**	**81.87**	**187**	*d*P		**P**	**11**	**18**
	comp=Z,11nm,0.8s							
TYV	**Tymovskoe**	**82.47**	**337**	*e*P		**P**	**11**	**18**
TYV				pmax		pmax		
	comp=Z,300nm,4.4s							
TYV				pmax		pmax		
	comp=Z,37nm,1.4s							
RPSI	**Rantau Prapat**	**82.98**	**276**	IAmb		IAmb	11	18
	comp=Z,34nm,1.1s							
PSI	**Prapat**	**83.02**	**276**	P		**P**	**11**	**18**
MDJ	**Mudanjiang**	**83.21**	**326**	IAmb		IAmb	11	18
	comp=Z,35nm,1.0s							
MDJ	**Mudanjiang**	**83.21**	**326**	P		**P**	**11**	**18**
MDJ				sP		sP	11	21
MDJ				S		**SKSac**	**11**	**28**
MDJ				pmax		pmax		
	comp=Z,41nm,1.5s							
MDJ	**Mudanjiang**	**83.21**	**326**	P		**P**	**11**	**18**
DPP	**Dos Picos Cty**	**83.37**	**49**	IAmb		IAmb	11	18
	comp=Z,49nm,1.7s							
CNSH	**ChangSha**	**83.40**	**305**	P		**P**	**11**	**18**
CNSH				pmax		pmax		
	comp=Z,22nm,1.1s							
SLBS	**Sierra La Lagu**	**83.47**	**60**			**P**	**11**	**18**
SLBS				IAmb		IAmb	11	18
	comp=Z,18nm,0.8s							
SNAA	**Sanae**	**83.48**	**179**	*i* P		**P**	**11**	**18**
SNAA				pmax		pmax		
	comp=Z,10.0nm,0.9s							
VES	**Vestal, Richgr**	**83.62**	**46**	IAmb		IAmb	11	18
	comp=Z,59nm,1.6s							
WHN	**Wuhan**	**83.66**	**308**	P		**P**	**11**	**18**
WHN				pmax		pmax		
	comp=Z,130nm,1.0s							
VNA3	**Neumayer Olymp**	**83.69**	**177**	⇑P		**P**	**11**	**18**
	comp=Z,38nm,0.7s							
YUH	**Yuha Desert**	**83.87**	**50**	IAmb		IAmb	11	18
	comp=Z,50nm,1.8s							
BORC	**Borrego Spring**	**83.88**	**49**	P		**P**	**11**	**18**
ISA	**Isabella, Lake**	**83.91**	**46**	IAmb		IAmb	11	18
	comp=Z,31nm,1.4s							
SUTB	**Sutter Butte**	**84.01**	**42**	IAmb		IAmb	11	18
	comp=Z,37nm,1.4s							
O02D	**Mt. Diablo Mer**	**84.02**	**40**	IAmb		IAmb	11	18
	comp=Z,33nm,1.1s							
NVL	**N'lazarevskaya**	**84.03**	**184**	*e*P		**P**	**11**	**18**
NVL				*e*			11	21
NVL				*e*S		**SKSac**	**11**	**28**
NVL				*e*SSS		SSS	11	37
NVL				pmax		pmax		
	comp=Z,30nm,1.6s							
VNA2	**Neumayer--Watz**	**84.11**	**178**	⇑P		**P**	**11**	**18**
	comp=Z,13nm,0.6s,baz=186,slow=5.1							
AFDM	**Forest Hills D**	**84.33**	**42**			**P**	**11**	**18**
VNA1	**Neumayer--Stat**	**84.34**	**177**	P		**P**	**11**	**18**
	comp=Z,26nm,1.0s							
CLC	**China Lake**	**84.57**	**46**	IAmb		IAmb	11	18
	comp=Z,29nm,1.5s							
O03E	**Paynes Creek**	**84.68**	**41**	IAmb		IAmb	11	20
	comp=Z,50nm,1.6s							
M02C	**Callahan**	**84.76**	**39**	IAmb		IAmb	11	18
	comp=Z,28nm,1.4s							
PLK4	**Peulik 4**	**84.78**	**13**	IAmb		IAmb	11	18
	comp=Z,42nm,0.8s							
GSC	**Goldstone, Bar**	**84.80**	**47**	IAmb		IAmb	11	18
	comp=Z,28nm,1.5s							
CN2	**Changchun**	**84.80**	**324**	⇓P		**P**	**11**	**18**
CN2				*ep*P		pwP	11	20
CN2				*e*S		**S**	**11**	**28**
CN2				pmax		pmax		
	comp=Z,40nm,1.2s							
CN2				pmax		pmax		
	comp=Z,300nm,4.0s							
L02F	**Cave Junction**	**84.82**	**39**	IAmb		IAmb	11	18
	comp=Z,35nm,1.4s							
GLA	**Glamis**	**84.86**	**50**	IAmb		IAmb	11	18
	comp=Z,19nm,0.9s							
TIA	**Tai'an**	**84.99**	**314**	P		**P**	**11**	**18**
TIA				pmax		pmax		
	comp=Z,100nm,0.9s							
BNX	**BinXian**	**85.10**	**326**	⇓P		**P**	**11**	**18**
BNX				pmax		pmax		
	comp=Z,28nm,1.0s							
PNTR	**Pine Nut**	**85.26**	**43**	IAmb		IAmb	11	18
	comp=Z,44nm,1.7s							
DANC	**Danby, Needles**	**85.37**	**48**	IAmb		IAmb	11	18
	comp=Z,46nm,1.4s							
LL02	**Futaleuf**	**85.41**	**136**			**P**	**11**	**18**
113A	**Mohawk Valley,**	**85.44**	**51**	IAmb		IAmb	11	18
	comp=Z,38nm,1.7s							
KLR	**Kul'dur**	**85.53**	**331**	*ce*P		**P**	**11**	**18**
KLR				pmax		pmax		
	comp=Z,15nm,1.7s							
NVAR	**Mina Array Bea**	**85.67**	**44**	P		**P**	**11**	**18**
	comp=Z,2.1nm,0.7s,baz=220,slow=8.6,SNR=18							
NVAR				pP		**pP**	**11**	**20**
	comp=Z,4.9nm,1.1s,baz=216,slow=7.5,SNR=5.0							
	comp=Z,2.1nm,0.7s							
NVAR	**Mina Array Bea**	**85.67**	**44**	P		**P**	**11**	**18**
P16K	**Nushagak River**	**85.79**	**11**	IAmb		IAmb	11	18
	comp=Z,42nm,1.1s							
J04A	**Umpqua Nationa**	**86.37**	**38**	IAmb		IAmb	11	18
	comp=Z,34nm,1.0s							
I04A	**Tendick Farm,**	**86.55**	**38**	IAmb		IAmb	11	18
	comp=Z,31nm,1.5s							
P18K	**Big Mountain,**	**86.64**	**12**	IAmb		IAmb	11	18
	comp=Z,14nm,0.8s							
K05A	**Summer Lake**	**86.73**	**39**	IAmb		IAmb	11	18
	comp=Z,30nm,1.3s							
J05D	**Fort Rock, OR**	**86.89**	**39**	IAmb		IAmb	11	18
	comp=Z,32nm,1.1s							
WIFE	**Three Sisters-**	**87.05**	**38**	IAmb		IAmb	11	18
	comp=Z,27nm,1.2s							
ENH	**Enshi**	**87.06**	**305**	P		**P**	**11**	**18**
LYN	**LuoYang**	**87.19**	**310**	⇓*i* P		**P**	**11**	**18**
LYN				pmax		pmax		
	comp=Z,86nm,1.0s							
H04A	**Detroit Lake**	**87.25**	**37**	IAmb		IAmb	11	18
	comp=Z,22nm,1.2s							
HNS	**HongShan**	**87.26**	**314**	⇓P		**P**	**11**	**18**
HNS				pmax		pmax		
	comp=Z,47nm,1.4s							
GYA	**Guiyang**	**87.28**	**301**	⇓P		**P**	**11**	**18**
GYA				pmax		pmax		
	comp=Z,15nm,0.8s							

TUC	**Tucson**	**87.31**	**52**			**P**	**11**	**18**
TUC				IAmb		IAmb	11	20
	comp=Z,24nm,1.2s							
TUC	**Tucson**	**87.31**	**52**	P		**P**	**11**	**18**
TUC				pmax		pmax		
	comp=Z,24nm,1.3s							
PINE	**Pine Mountain**	**87.38**	**38**	IAmb		IAmb	11	19
	comp=Z,37nm,1.0s							
I05D	**Terrebonne, OR**	**87.50**	**38**	IAmb		IAmb	11	18
	comp=Z,20nm,1.0s							
PLCA	**Paso Flores**	**87.50**	**134**	P		**P**	**11**	**18**
	comp=Z,2.4nm,0.9s,baz=237,slow=7.0,SNR=6.0							
PLCA				pP		**pP**	**11**	**20**
	comp=Z,3.7nm,1.1s,baz=256,slow=7.3,SNR=4.2							
	comp=Z,2.4nm,0.9s							
M16K	**Timber Creek**	**87.51**	**10**	IAmb		IAmb	11	18
	comp=Z,23nm,1.1s							
MA2	**Magadan**	**87.71**	**346**	P		**P**	**11**	**18**
	comp=Z,19nm,0.9s,baz=136,slow=6.2,SNR=13							
	comp=Z,19nm,0.9s							
MA2	**Magadan**	**87.71**	**346**			**P**	**11**	**18**
MA2	**Magadan**	**87.71**	**346**	*ce*P		**P**	**11**	**18**
MA2				pmax		pmax		
	comp=Z,109nm,2.5s							
MA2	**Magadan**	**87.71**	**346**	P		**P**	**11**	**18**
	comp=Z,50nm,1.3s							
WVOR	**Wild Horse Val**	**87.87**	**41**	IAmb		IAmb	11	19
	comp=Z,21nm,1.2s							
319A	**Douglas**	**87.92**	**54**	IAmb		IAmb	11	20
	comp=Z,30nm,1.2s							
L16K	**Owhat River**	**88.08**	**10**	P		**P**	**11**	**19**
L16K				IAmb		IAmb	11	19
	comp=Z,17nm,1.1s							
HEH	**HeiHe**	**88.23**	**329**	*e*P		**P**	**11**	**19**
HEH				pmax		pmax		
	comp=Z,20nm,1.1s							
K15K	**Wolf Creek Mou**	**88.35**	**9**	IAmb		IAmb	11	19
	comp=Z,21nm,1.0s							
KNB	**Kanab**	**88.42**	**48**	IAmb		IAmb	11	19
	comp=Z,31nm,1.6s							
G06A	**Carlson Farm,**	**88.45**	**38**	IAmb		IAmb	11	19
	comp=Z,18nm,1.1s							
J08A	**Circle Bar Ran**	**88.52**	**40**	IAmb		IAmb	11	19
	comp=Z,23nm,1.1s							
WUAZ	**Wupatki**	**88.60**	**49**	IAmb		IAmb	11	19
	comp=Z,22nm,1.6s							
B04A	**Port Angeles**	**88.73**	**34**	IAmb		IAmb	11	19
	comp=Z,25nm,1.3s							
GNW	**Green Mountain**	**88.76**	**35**	IAmb		IAmb	11	19
	comp=Z,13nm,0.9s							
GAMB	**Gambell**	**88.82**	**4**	IAmb		IAmb	11	19
	comp=Z,26nm,1.4s							
CLRS	**Cowichan Lake**	**88.92**	**33**	IAmb		IAmb	11	19
	comp=Z,14nm,1.0s							
SPU	**Mount Spurr**	**88.92**	**13**	IAmb		IAmb	11	19
	comp=Z,12nm,1.0s							
TIY	**Taiyuan**	**88.94**	**313**	P		**P**	**11**	**19**
TIY				S		**S**	**11**	**29**
TIY				pmax		pmax		
	comp=Z,83nm,0.9s							
TIY				pmax		pmax		
	comp=Z,490nm,10.7s							
L18K	**Granite Mounta**	**89.01**	**11**	IAmb		IAmb	11	19
	comp=Z,50nm,1.7s							
X18A	**Snowflake**	**89.07**	**51**	IAmb		IAmb	11	20
	comp=Z,24nm,1.8s							
BI02	**San Fabin de**	**89.11**	**130**			**P**	**11**	**19**
K17K	**Iditarod**	**89.22**	**10**	IAmb		IAmb	11	21
	comp=Z,57nm,1.9s							
STLK	**Strandline Lak**	**89.26**	**13**	IAmb		IAmb	11	19
	comp=Z,12nm,0.9s							
XAN	**Xi'an**	**89.41**	**308**	P		**P**	**11**	**19**
G08A	**Pilot Rock**	**89.41**	**38**	IAmb		IAmb	11	19
	comp=Z,20nm,1.2s							
J16K	**Anvik River**	**89.42**	**9**	IAmb		IAmb	11	19
	comp=Z,13nm,1.0s							
SUA	**Susitna One**	**89.45**	**14**	IAmb		IAmb	11	19
	comp=Z,24nm,0.8s							
TCRU	**Three Creeks R**	**89.54**	**46**	IAmb		IAmb	11	22
	comp=Z,10nm,0.4s							
LTY	**Liberty**	**89.69**	**36**	IAmb		IAmb	11	19
	comp=Z,18nm,1.5s							
E07A	**Sunnyside**	**89.70**	**37**	IAmb		IAmb	11	19
	comp=Z,12nm,1.0s							
KMI2	**Kunming**	**89.75**	**298**	⇓P		**P**	**11**	**19**
KMI2				pmax		pmax		
	comp=Z,33nm,0.9s							
HAWA	**Hanford**	**89.77**	**37**	IAmb		IAmb	11	19
	comp=Z,23nm,1.4s							
CMAR	**Chiang Mai Arr**	**89.86**	**290**	P		**P**	**11**	**19**
	comp=Z,16nm,0.8s,baz=140,slow=3.5,SNR=92							
CMAR				pP		**pP**	**11**	**20**
	comp=Z,0.7nm,0.3s,baz=123,slow=3.5,SNR=2.7							
CMAR				PP		**PP**	**11**	**22**
	comp=Z,0.4nm,0.3s,baz=125,slow=6.8,SNR=4.2							
	comp=Z,16nm,0.8s							
CMAR	**Chiang Mai Arr**	**89.86**	**290**	P		**P**	**11**	**19**
PMR	**Palmer**	**89.92**	**14**	IAmb		IAmb	11	19
	comp=Z,17nm,1.0s							
CHTO	**Chiang Mai**	**90.02**	**291**			**P**	**11**	**19**
CHTO	**Chiang Mai**	**90.02**	**291**	P		**P**	**11**	**19**
CHTO				pmax		pmax		
	comp=Z,41nm,1.0s							
CHTO	**Chiang Mai**	**90.02**	**291**	P		**P**	**11**	**19**
BMO	**Blue Mountains**	**90.09**	**39**	IAmb		IAmb	11	19
	comp=Z,23nm,1.9s							
E08A	**Dider Farm, El**	**90.09**	**37**	IAmb		IAmb	11	19
	comp=Z,20nm,1.5s							
MFID	**Camas Ranch**	**90.11**	**41**	IAmb		IAmb	11	19
	comp=Z,20nm,1.3s							
XLT	**XiLinHaoTe**	**90.14**	**320**	*e*P		**P**	**11**	**19**
XLT				pmax		pmax		
	comp=Z,22nm,0.9s							
J18K	**Innoko River**	**90.17**	**10**	IAmb		IAmb	11	19
	comp=Z,20nm,0.9s							
SEY	**Seymchan**	**90.42**	**348**	P		**P**	**11**	**19**
	comp=Z,20nm,0.8s,baz=146,slow=5.5,SNR=66							
SEY				pP		**pP**	**11**	**20**
	comp=Z,2.2nm,0.9s,baz=138,slow=7.3,SNR=2.1							
	comp=Z,20nm,0.8s							
SEY	**Seymchan**	**90.42**	**348**	*ce*P		**P**	**11**	**19**
SEY				pmax		pmax		

	comp=Z,16nm,0.9s								
ALPN	**Alpine**	**91.64**	**57**	IAmb	IAmb	11 21 10.7			
	comp=Z,37nm,1.9s								
CD2	**Chengdu**	**91.67**	**303**	⇓P	**P**	**11 19 18.3**	**+1.3**		
CD2				pmax	pmax				
	comp=Z,80nm,1.0s								
BSUT	**Blindstream Ca**	**91.67**	**46**	IAmb	IAmb	11 19 19.5			
	comp=Z,9.4nm,0.8s								
HWUT	**Hardware Ranch**	**91.73**	**44**	IAmb	IAmb	11 19 18.9			
	comp=Z,15nm,1.6s								
ANMO	**Albuquerque**	**91.76**	**52**	*i* P	**P**	**11 19 17.3**	**-0.2**		
ANMO				pmax	pmax				
	comp=Z,1.0nm,0.9s								
BCYI	**Bear Canyon**	**92.06**	**41**	IAmb	IAmb	11 19 21.9			
	comp=Z,14nm,1.6s								
BTO2	**Baotou**	**92.23**	**314**	*e*P	**P**	**11 19 19.8**	**+0.3**		
BTO2				pmax	pmax				
	comp=Z,27nm,1.6s								
BTO2				pmax	pmax				
	comp=Z,740nm,6.9s								
M27K	**Edge Creek, AK**	**92.34**	**17**	IAmb	IAmb	11 19 21.4			
	comp=Z,11nm,1.0s								
G19K	**Purcell Mounta**	**92.63**	**9**	IAmb	IAmb	11 19 22.1			
	comp=Z,19nm,1.5s								
WRH	**Wood River Hil**	**92.69**	**13**	IAmb	IAmb	11 19 21.6			
	comp=Z,15nm,1.0s								
HDA	**Harding Lake**	**92.88**	**14**	IAmb	IAmb	11 21 30.2			
	comp=Z,32nm,2.0s								
L27K	**Beaver Creek,**	**92.94**	**16**	IAmb	IAmb	11 20 15.0			
	comp=Z,18nm,1.7s								
COLA	**College**	**93.10**	**13**	P	**P**	**11 19 22.6**	**0.0**		
COLA	**College**	**93.10**	**13**	P	**P**	**11 19 22.6**	**0.0**		
SCRK	**Sand Creek**	**93.18**	**15**	P	**P**	**11 19 23.9**	**+0.6**		
SCRK				IAmb	IAmb	11 21 48.8			
	comp=Z,15nm,1.7s								
ILAR	**Eielson Array**	**93.21**	**14**	P	**P**	**11 19 22.6**	**-0.7**		
	comp=Z,1.8nm,0.8s,baz=222,slow=4.6,SNR=16								
ILAR				pP	**pP**	**11 21 11.4**	**-1.4**		
	comp=Z,1.2nm,1.0s,baz=244,slow=5.4,SNR=3.9								
ILAR				PP	**PP**	**11 23 13.4**	**-2.2**		
	comp=Z,1.9nm,1.0s,baz=222,slow=7.5,SNR=5.0								
	comp=Z,1.8nm,0.8s								
ILAR	**Eielson Array**	**93.21**	**14**	P	**P**	**11 19 23.2**	**+0.1**		
ILAR	**Eielson Array**	**93.21**	**14**	P	**P**	**11 19 23.3**	**+0.1**		
E18K	**Tukpahlearik C**	**93.38**	**7**	IAmb	IAmb	11 19 25.6			
	comp=Z,11nm,0.9s								
BILL	**Bilibino**	**93.41**	**355**		**P**	**11 19 24.5**	**+0.5**		
BILL				IAmb	IAmb	11 19 25.8			
	comp=Z,9.0nm,1.0s								
BILL	**Bilibino**	**93.41**	**355**	*ce*P	**P**	**11 19 24.5**	**+0.5**		
BILL				pmax	pmax				
	comp=Z,9.0nm,0.9s								
DRIO	**Del Rio**	**93.53**	**59**	IAmb	IAmb	11 21 18.7			
	comp=Z,15nm,1.2s								
PDAR	**Pinedale Array**	**93.61**	**44**	P	**P**	**11 19 26.2**	**+0.4**		
	comp=Z,0.8nm,0.7s,baz=189,slow=2.8,SNR=8.2								
PDAR				pP	**pP**	**11 21 16.1**	**+0.2**		
	comp=Z,2.1nm,1.0s,baz=219,slow=1.9,SNR=6.2								
	comp=Z,0.8nm,0.7s								
J26L	**Joseph Creek**	**93.72**	**15**	IAmb	IAmb	11 19 27.5			
	comp=Z,10nm,0.9s								
C16K	**Lisburne Hills**	**93.73**	**5**	IAmb	IAmb	11 19 28.3			
	comp=Z,20nm,1.6s								
E19K	**Redstone River**	**93.84**	**9**	IAmb	IAmb	11 19 27.6			
	comp=Z,8.1nm,0.9s								
M30M	**Minto, Yukon**	**93.92**	**19**	IAmb	IAmb	11 22 02.0			
	comp=Z,21nm,1.6s								
L29M	**L29M**	**93.96**	**18**	IAmb	IAmb	11 19 28.7			
	comp=Z,14nm,1.1s								
LZH	**Lanzhou**	**94.04**	**308**	*e*P	**P**	**11 19 28.4**	**+0.5**		
LZH				pP	pwP	11 21 23.0	+0.7		
LZH				sP	sP	11 22 04.6	-1.7		
LZH				pmax	pmax				
	comp=Z,25nm,1.2s								
LZDM	**Lanzhou Array**	**94.09**	**308**	P	**P**	**11 19 29.9**	**+1.5**		
	comp=Z,5.0nm,0.8s,baz=106,slow=5.4,SNR=15								
	comp=Z,5.0nm,0.8s								
YNE	**Yellowstone No**	**94.48**	**42**	IAmb	IAmb	11 21 31.1			
	comp=Z,23nm,2.0s								
K29M	**Barlow Dome**	**94.71**	**18**	IAmb	IAmb	11 19 32.6			
	comp=Z,10nm,1.1s								
C19K	**Lookout Ridge**	**95.11**	**7**	IAmb	IAmb	11 19 33.6			
	comp=Z,15nm,1.3s								
I28M	**Miner Creek**	**95.38**	**16**	IAmb	IAmb	11 19 38.0			
	comp=Z,9.0nm,1.4s								
YAK	**Yakutsk**	**95.65**	**339**	*i* P	**P**	**11 19 34.5**	**+0.2**		
YAK				pmax	pmax				
	comp=Z,11nm,0.7s								
G26K	**Porcupine Rive**	**95.74**	**14**	IAmb	IAmb	11 19 38.0			
	comp=Z,5.3nm,0.9s								
ULN	**Ulaanbaatar**	**97.58**	**320**	*i* P	**P**	**11 19 44.0**	**+0.4**		
ULN				pmax	pmax				
	comp=Z,2.0nm,1.0s								
SONM	**Songino Array**	**97.95**	**319**	P	Pdif	11 19 45.1	-0.1		
	comp=Z,0.8nm,0.6s,baz=176,slow=4.2,SNR=5.4								
SONM				PP	**PP**	**11 23 46.0**	**-6.3**		
	comp=Z,0.8nm,0.6s,baz=129,slow=6.5,SNR=6.0								
	comp=Z,0.8nm,0.6s								
GTA2	**Gaotai**	**98.46**	**310**	*e*P	**P**	**11 19 48.3**	**+0.6**		
GTA2				pmax	pmax				
	comp=Z,7.0nm,1.7s								
YKA	**Yellowknife Ar**	**101.47**	**26**	P	**Pdif**	**11 20 00.9**	**+0.6**		
	comp=Z,0.3nm,0.9s,baz=256,slow=4.7,SNR=4.2								
YKA				PP	**PP**	**11 24 15.7**	**-2.4**		
	comp=Z,0.5nm,0.9s,baz=248,slow=8.4,SNR=4.3								
YKA				PKKPbc	**PKKPbc**	**11 36 04.8**	**-3.5**		
	comp=Z,0.2nm,0.5s,baz=34,slow=2.9,SNR=6.4								
YKA				PKKPab	PKKPdf	11 36 31.4	+17		
	comp=Z,0.7nm,1.0s,baz=45,slow=4.5,SNR=7.6								
TIXI	**Tiksi**	**102.68**	**345**	P	**Pdif**	**11 20 05.4**	**0.0**		
	comp=Z,0.7nm,0.3s,baz=134,slow=4.5,SNR=3.5								
TIXI				PP	**PKiKP**	**11 24 22.0**	**-1.0**		
	comp=Z,0.7nm,0.3s,baz=149,slow=4.4,SNR=4.6								
TIXI	**Tiksi**	**102.68**	**345**	*i* P	**Pdif**	**11 20 05.9**	**+0.4**		
TIXI				pmax	pmax				
	comp=Z,1.0nm,0.9s								
WMQ	**Urumqi**	**108.44**	**310**	Pdif	**Pdif**	**11 20 33.1**	**+1.2**		
ZALV	**Zalesovo Beam**	**112.82**	**320**	PKiKP	**PKiKP**	**11 24 41.6**	**-0.9**		
	comp=Z,2.6nm,0.8s,baz=163,slow=1.5,SNR=11								
MKAR	**Makanchi Array**	**112.90**	**312**	Pdiff	**Pdif**	**11 20 54.7**	**+3.2**		
	comp=Z,0.5nm,0.6s,baz=99,slow=6.5,SNR=4.3								
MKAR				PKiKP	**PKiKP**	**11 24 42.3**	**-0.7**		
	comp=Z,3.7nm,0.8s,baz=73,slow=2.8,SNR=27								
MKAR				PKKPbc	**PKKPbc**	**11 35 32.1**	**-0.3**		
	comp=Z,0.7nm,0.8s,baz=269,slow=4.1,SNR=5.9								
MAKZ	**Makanchi**	**113.11**	**312**	⇓PKiKP	**PKiKP**	**11 24 43.0**	**-0.4**		
NRIK	**Noril'sk**	**114.05**	**337**	PKiKP	PKPdf	11 24 44.1	-0.4		
	comp=Z,1.8nm,0.6s,baz=35,slow=3.2,SNR=5.8								
NRIK				PP	**PP**	**11 25 41.8**	**-6.6**		
	comp=Z,2.6nm,0.9s,baz=122,slow=8.3,SNR=6.5								
KURK	**Kurchatov**	**116.00**	**316**		**PKPdf**	**11 24 48.3**	**-0.4**		
KURK	**Kurchatov**	**116.00**	**316**	*c* iPKIKP	**PKPdf**	**11 24 48.4**	**-0.4**		
KURK				pmax	pmax				
	comp=Z,8.0nm,0.7s								
KURBB	**Kurchatov Arra**	**116.05**	**316**	PKP	**PKPdf**	**11 24 48.0**	**-0.9**		
	comp=Z,6.0nm,0.7s,baz=100,slow=1.9,SNR=45								
KURBB				PP	**PP**	**11 25 58.3**	**-4.5**		
	comp=Z,3.3nm,0.9s,baz=99,slow=6.7,SNR=7.6								
KSH2	**Kashi**	**116.09**	**303**	PKP	**PKiKP**	**11 24 49.7**	**+0.1**		
ILON	**Igloolik, Nuna**	**116.14**	**23**		**PKPdf**	**11 24 48.0**	**-0.4**		
AAK	**Ala-Archa**	**117.55**	**307**		**PKPdf**	**11 24 51.8**	**-0.5**		
AAK	**Ala-Archa**	**117.55**	**307**	*c* iPKIKP	**PKiKP**	**11 24 52.6**	**+0.3**		
AAK				pmax	pmax				
	comp=Z,9.0nm,2.5s								
BDFB	**Brasilia**	**118.19**	**126**	PKKPbc	PKKPbc	11 35 13.8	-0.5		
	comp=Z,2.0nm,0.5s,baz=185,slow=3.8,SNR=3.3								
TULEG	**Thule**	**119.15**	**14**	*i* P	**PKPdf**	**11 24 54.0**	**-0.2**		
KBL	**Kabul**	**120.31**	**297**		**PKiKP**	**11 24 58.4**	**+0.4**		
KBL	**Kabul**	**120.31**	**297**	PKIKP	**PKiKP**	**11 24 58.4**	**+0.4**		
KKAR	**Karatay Array**	**120.51**	**307**		**PKPdf**	**11 24 57.2**	**-0.5**		
KKAR	**Karatay Array**	**120.51**	**307**	PKIKP	**PKPdf**	**11 24 57.2**	**-0.5**		
BVAR	**Borovoye Array**	**121.28**	**318**	PKP	**PKPdf**	**11 24 58.5**	**-0.4**		
	comp=Z,7.9nm,0.5s,baz=95,slow=1.8,SNR=30								
BORK	**Borovoye**	**121.32**	**318**	*c* iPKIKP	**PKiKP**	**11 24 59.3**	**+0.2**		
BORK				pmax	pmax				
	comp=Z,19nm,1.7s								
NEEM	**North Greenlan**	**122.44**	**12**	*i* P	**PKPdf**	**11 25 00.7**	**-0.2**		
SCHQ	**Schefferville**	**123.45**	**40**	PKP	**PKPdf**	**11 25 02.0**	**-1.0**		
	comp=Z,4.7nm,0.9s,baz=249,slow=2.0,SNR=4.5								
UPNV	**Upernavik**	**123.61**	**17**	*i* P	**PKPdf**	**11 25 02.7**	**-0.1**		
NUUG	**Nuugaatsiaq**	**124.98**	**18**	*i* P	**PKPdf**	**11 25 05.3**	**-0.1**		
SPITS	**Spitsbergen Ar**	**126.30**	**356**	PKP	**PKPdf**	**11 25 07.9**	**0.0**		
	comp=Z,12nm,0.7s,baz=98,slow=7.6,SNR=3.9								
DAG	**Danmarks Havn**	**127.47**	**5**	*i* P	**PKPdf**	**11 25 09.6**	**-0.5**		
KGCAE	**Kacgae**	**127.66**	**206**		**PKiKP**	**11 25 13.5**	**+0.6**		
ARTI	**Arti**	**127.89**	**323**		**PKPdf**	**11 25 11.2**	**-0.2**		
ARTI	**Arti**	**127.89**	**323**	*i* PKIKP	**PKiKP**	**11 25 12.1**	**0.0**		
ARTI						11 31 36.8			
SFJD	**Kangerlussuaq**	**127.91**	**23**	*i* P	**PKiKP**	**11 25 11.7**	**0.0**		
ABKAR	**Akbulak array**	**127.98**	**314**		**PKPdf**	**11 25 09.4**	**-2.4**		
LSZ	**Lusaka**	**131.31**	**218**		**PKiKP**	**11 25 21.2**	**+0.8**		
LSZ	**Lusaka**	**131.31**	**218**	PKIKP	**PKiKP**	**11 25 21.2**	**+0.8**		
KIRV	**Kirov**	**131.89**	**328**	*c* iPKIKP	**PKiKP**	**11 25 20.3**	**+0.3**		
ARCES	**ARCESS Array B**	**133.03**	**348**	PKhKP	PKPpre	11 25 14.3			
	comp=Z,3.7nm,1.0s,baz=95,slow=2.8,SNR=5.3								
ARCES				PKP	**PKPdf**	**11 25 20.2**	**-0.6**		
	comp=Z,5.1nm,0.6s,baz=40,slow=1.1,SNR=15								
ARCES				SKPbc	**SKPab**	**11 28 04.8**	**0.0**		
	comp=Z,12nm,0.7s,baz=32,slow=3.6,SNR=22								
KIBK	**Kibwezi**	**134.06**	**239**		**PKiKP**	**11 25 25.4**	**-0.6**		
KLMR	**Klimovskoe**	**135.22**	**334**	*e*PKIKP	**PKPdf**	**11 25 23.6**	**-1.5**		
KLMR				*e*		11 28 09.8			
KLMR				pmax	pmax				
	comp=Z,20nm,1.3s								
AKT	**Akhty**	**137.37**	**305**	*e*PKIKP	**PKPdf**	**11 25 30.0**	**+0.1**		
AKT				*e*		11 28 12.7			
AKT				*e*		11 28 21.4			
AKT				pmax	pmax				
	comp=Z,23nm,1.6s								
MOS	**Moscow**	**138.89**	**328**	*e*PKIKP	**PKPdf**	**11 25 30.7**	**-1.3**		
MOS				*e*		11 27 17.5			
FINES	**FINESS Array B**	**139.55**	**341**	PKhKP	PKPpre	11 25 24.1			
	comp=Z,3.5nm,0.6s,baz=44,slow=2.7,SNR=19								
FINES				SKPbc	**SKPbc**	**11 28 22.5**	**+0.6**		
	comp=Z,13nm,0.7s,baz=66,slow=4.6,SNR=18								
OBN	**Obninsk**	**139.74**	**328**	⇑*i* PKIKP	**PKPdf**	**11 25 34.8**	**+1.3**		
OBN				*e*		11 27 25.6			
OBN				*e*		11 28 35.7			
OBN				*e*SS	SS	11 46 50.8	+34		
OBN				pmax	pmax				
	comp=Z,9.0nm,1.0s								
KBZ	**Khabaz**	**140.47**	**309**	PKhKP	PKPpre	11 25 31.6			
	comp=Z,1.8nm,0.7s,baz=95,slow=6.1,SNR=4.5								
KBZ	**Khabaz**	**140.47**	**309**	*i* PKIKP	**PKiKP**	**11 25 36.7**	**-1.3**		
KIV	**Kislovodsk**	**140.57**	**309**	*e*PKIKP	**PKPdf**	**11 25 36.2**	**+0.6**		
KIV				pmax	pmax				
	comp=Z,7.0nm,1.1s								
SHA1	**Shidzhatmaz**	**140.64**	**309**	*c* iPKIKP	**PKPdf**	**11 25 36.9**	**+1.0**		
KOPT	**Kop Dagi**	**143.03**	**304**		**PKPdf**	**11 25 39.7**	**-0.6**		
NB2	**NORSAR Subarra**	**143.24**	**351**	PKP	PKPab	11 25 37.1	-0.4		
	comp=Z,102nm,1.4s,baz=16,slow=3.2								
NB2				pPKP	**SKPbc**	**11 28 34.0**	**+2.7**		
	comp=Z,1.2nm,0.5s,baz=17,slow=2.5								
NB2	**NORSAR Subarra**	**143.24**	**351**	PKP	PKPab	11 25 37.1	-0.4		
NB2				AMP		11 25 37.1			
	comp=Z,102nm,1.4s								
NOA	**NORSAR Array B**	**143.24**	**351**	PKP	PKPab	11 25 37.4	-0.1		
	comp=Z,34nm,0.9s,baz=15,slow=4.8,SNR=54								
NOA				SKPbc	**SKPbc**	**11 28 32.0**	**+0.6**		
	comp=Z,1.7nm,0.6s,baz=14,slow=4.1,SNR=5.1								
NC602	**NORSAR Array S**	**143.49**	**350**	*e*P	PKPab	11 25 37.5	-0.8		
HYA	**Hoyanger**	**143.69**	**355**	*e*P	PKPab	11 25 38.3	-0.8		
HFS	**Hagfors**	**143.70**	**348**	PKP	PKPab	11 25 38.7	-0.5		
	comp=Z,82nm,0.7s,baz=69,slow=4.9,SNR=118								
ANN	**Anapa**	**143.91**	**313**	*i* PKIKP	PKPab	11 25 40.6	+0.1		
ANN				pmax	pmax				
	comp=Z,122nm,0.7s								
SKAR	**Skarslia**	**143.96**	**353**	*e*P	**PKPdf**	**11 25 40.7**	**-0.3**		
MNK	**Minsk**	**144.06**	**332**	*i* PKP	**PKPdf**	**11 25 41.1**	**-0.2**		
	comp=E,61nm,0.9s								
MNK				*i* PKP	**PKPdf**	**11 25 41.1**	**-0.2**		
	comp=N,63nm,1.1s								
MNK				*i* PKP	**PKPdf**	**11 25 41.1**	**-0.2**		
	comp=Z,256nm,0.9s,baz=46								
MNK				*i* pPKP	**pPKPdf**	**11 27 35.6**	**-2.0**		
MNK				*i* PP	**PP**	**11 29 03.0**	**+1.5**		
MNK				*i* SKS	**SKSdf**	**11 32 04.2**	**+0.8**		
MNK				*i* PPP	PPP	11 32 19.8			
MNK				*i* SKKS	**SKKSdf**	**11 41 16.0**	**-2.3**		
MNK				*i* SS	**SS**	**11 47 11.3**	**+5.4**		
MNK				*i* SSS	SSS	11 52 44.9			
MNK	**Minsk**	**144.06**	**332**	*i* PKIKP	**PKPdf**	**11 25 41.0**	**-0.2**		
MNK				*i*		11 27 35.6			
MNK				*i*		11 29 03.0			
MNK				*i*		11 32 04.2			
MNK				*i* PPP	PPP	11 32 19.8			
MNK				*i* SS	SS	11 47 11.3	+5.4		
MNK				*i* SSS	SSS	11 52 44.9			
MNK				pmax	pmax				
	comp=Z,256nm,0.9s								
MNK				pmax	pmax				
	comp=E,61nm,0.9s								
MNK				pmax	pmax				
	comp=N,63nm,1.1s								
KONO	**Kongsberg**	**144.81**	**351**		PKPbc	11 25 42.7	0.0		
KONO	**Kongsberg**	**144.81**	**351**	*e*P	PKPbc	11 25 42.7	-0.1		
KONO	**Kongsberg**	**144.81**	**351**	⇑PKIKP	PKPbc	11 25 43.0	+0.3		
ODD1	**Odda**	**144.89**	**354**	*e*P	PKPbc	11 25 43.1	0.0		
BLS5	**Blasjo**	**145.39**	**354**	*e*P	**PKPbc**	**11 25 45.0**	**+0.4**		
KMY	**Karmoy**	**145.70**	**355**	*e*P	**PKPbc**	**11 25 45.7**	**+0.4**		
AKASG	**Malin Array Be**	**145.92**	**326**	PKPbc	**PKPbc**	**11 25 45.8**	**-0.5**		
	comp=N,18nm,0.5s,baz=46,slow=4.3,SNR=84								
AKASG	**Malin Array Be**	**145.92**	**326**		**PKPdf**	**11 25 44.7**	**+0.1**		
AKASG	**Malin Array Be**	**145.92**	**326**	PKIKP	**PKPdf**	**11 25 44.7**	**+0.1**		
KIEV	**Kiev**	**145.93**	**326**		**PKPbc**	**11 25 46.0**	**-0.3**		
KIEV	**Kiev**	**145.93**	**326**	⇓P	**PKPbc**	**11 25 46.1**	**-0.3**		
KIEV	**Kiev**	**145.93**	**326**	PKIKP	**PKPbc**	**11 25 46.1**	**-0.3**		
TJOU	**Tjoern**	**146.04**	**349**	*i* P	**PKPbc**	**11 25 46.0**	**-0.4**		
BORU	**Boraas**	**146.21**	**348**	*i* P	**PKPbc**	**11 25 46.3**	**-0.6**		
HOMB	**Homborsund**	**146.29**	**352**	*e*P	**PKPbc**	**11 25 47.3**	**+0.3**		
HOMB	**Homborsund**	**146.29**	**352**	*i* P	**PKPbc**	**11 25 47.2**	**+0.1**		
SUW	**Suwalki**	**146.31**	**335**	*e*PKP	**PKPbc**	**11 25 47.3**	**0.0**		
SNART	**Snartemo**	**146.38**	**353**	*e*P	**PKPbc**	**11 25 47.9**	**+0.5**		
SNART	**Snartemo**	**146.38**	**353**	*i* P	**PKPbc**	**11 25 47.4**	**+0.1**		
ONAU	**Onsala**	**146.59**	**348**	*i* P	**PKPbc**	**11 25 47.2**	**-0.8**		
BNN	**Bunyan**	**146.80**	**303**		**PKPdf**	**11 25 47.3**	**+0.6**		
DEL	**Delary**	**147.06**	**346**	*i* P	**PKPbc**	**11 25 49.0**	**-0.2**		
BJUU	**Bjuv**	**147.61**	**346**	*i* P	**PKPbc**	**11 25 51.0**	**+0.4**		
SORM	**Soroca**	**147.91**	**323**	⇓P	**PKPbc**	**11 25 51.5**	**-0.2**		
SORM	**Soroca**	**147.91**	**323**	⇓PKIKP	**PKPbc**	**11 25 51.5**	**-0.2**		
LUNU	**Lund**	**147.92**	**346**	*i* P	**PKPbc**	**11 25 51.0**	**-0.5**		
PURM	**Purcari**	**147.94**	**319**	⇑P	**PKPbc**	**11 25 52.2**	**+0.4**		
BSD	**Bornholm Skovb**	**148.04**	**344**	*i* P	**PKPbc**	**11 25 51.2**	**-0.6**		
MMAI	**Mount Meron Ar**	**148.10**	**293**	PKPbc	**PKiKP**	**11 25 53.9**	**-0.3**		
	comp=N,35nm,0.6s,baz=38,slow=7.4,SNR=45								
KIRS	**Kirsehir-Merke**	**148.18**	**304**	⇓P	**PKPbc**	**11 25 52.9**	**0.0**		
BR131	**Keskin Array S**	**148.22**	**306**		**PKPbc**	**11 25 52.8**	**-0.2**		
BR131	**Keskin Array S**	**148.22**	**306**	PKHKP	PKPpre	11 25 52.8			
BRTR	**Keskin Array B**	**148.22**	**306**	PKP	**PKPdf**	**11 25 48.6**	**-0.3**		
	comp=N,14nm,0.8s,baz=242,slow=2.7,SNR=6.3								
BRTR				PKPbc	**PKPbc**	**11 25 53.0**	**0.0**		
	comp=N,15nm,0.7s,baz=84,slow=2.9,SNR=38								
BEL	**Belsk**	**148.92**	**335**	*e*PKP	**PKiKP**	**11 25 55.1**	**0.0**		
GKP	**Gorka Klasztor**	**148.99**	**340**	*e*PKP	**PKiKP**	**11 25 55.1**	**-0.1**		
VASR	**Vaslui**	**149.08**	**321**	⇑P	**PKiKP**	**11 25 56.0**	**+0.3**		
TLCR		**149.26**	**318**	⇑P	**PKiKP**	**11 25 55.6**	**-0.4**		
TLCR		**149.26**	**318**	⇑PKHKP	PKPpre	11 25 55.6			
VLDR	**Vladesti**	**149.35**	**320**	⇓P	**PKiKP**	**11 25 56.1**	**-0.1**		
BIR	**Birlad**	**149.38**	**321**	⇓P	**PKiKP**	**11 25 56.9**	**+0.6**		
BIR	**Birlad**	**149.38**	**321**	⇓PKP2	**PKiKP**	**11 25 56.9**	**+0.6**		
SCTR	**Scanteiesti**	**149.50**	**319**	⇑P	**PKiKP**	**11 25 57.0**	**+0.5**		
TATR	**Tatarca**	**149.51**	**319**	⇑P	**PKiKP**	**11 25 56.7**	**+0.2**		
CSS	**Mathiatis**	**149.56**	**297**		**PKPbc**	**11 25 56.5**	**+0.2**		
GHRR		**149.63**	**321**	⇓P	**PKiKP**	**11 25 57.2**	**+0.4**		
TPGR	**Topolog**	**149.67**	**318**	⇓P	**PKiKP**	**11 25 56.6**	**-0.4**		
CFR	**Carcaliu**	**149.68**	**318**	⇓P	**PKPbc**	**11 25 56.0**	**-0.1**		
CFR	**Carcaliu**	**149.68**	**318**	⇓PKHKP	PKPpre	11 25 56.0			
EKA	**Eskdalemuir Ar**	**149.71**	**3**	PKPbc	**PKPbc**	**11 25 55.9**	**0.0**		
	comp=N,4.8nm,0.5s,baz=324,slow=2.4,SNR=13								
KWP	**Kalwaria Pacla**	**149.76**	**330**	*e*PKP	**PKiKP**	**11 25 57.0**	**0.0**		
COSR	**Cosmesti PH**	**149.80**	**320**	⇓P	**PKiKP**	**11 25 57.3**	**+0.2**		
TESR	**Tescani**	**149.80**	**322**	⇑P	**PKPbc**	**11 25 56.2**	**-0.2**		
TIRR	**Tirgusor**	**149.88**	**317**	⇓P	**PKiKP**	**11 25 57.5**	**+0.2**		
TIRR	**Tirgusor**	**149.88**	**317**	⇓PKHKP	PKPpre	11 25 57.5			
BURAR	**Bucovina Array**	**149.90**	**325**		**PKiKP**	**11 25 57.6**	**+0.2**		
BURAR	**Bucovina Array**	**149.90**	**325**	⇓P	**PKiKP**	**11 25 58.0**	**+0.5**		
BURAR	**Bucovina Array**	**149.90**	**325**	⇓PKHKP	PKPpre	11 25 58.0			
ODBI	**Odobesti**	**150.00**	**320**	⇑P	**PKiKP**	**11 25 58.5**	**+1.0**		
MFTR	**Murfatlar**	**150.02**	**317**	⇓P	**PKiKP**	**11 25 58.5**	**+0.9**		
ONER	**Baraj Valea Uz**	**150.05**	**322**	⇑P	**PKiKP**	**11 25 58.2**	**+0.6**		
TLBR	**Topalu**	**150.06**	**317**	⇑P	**PKiKP**	**11 25 57.8**	**+0.1**		
MANR	**Mangalia**	**150.09**	**316**	⇑P	**PKiKP**	**11 25 58.1**	**+0.4**		
VRI	**Vrincioaia**	**150.13**	**321**	⇓P	**PKPbc**	**11 25 57.5**	**+0.3**		
VRI	**Vrincioaia**	**150.13**	**321**	⇓PKIKP	**PKPbc**	**11 25 57.5**	**+0.3**		
BSEG	**Bad Segeberg**	**150.16**	**348**	*e*PKPbc	**PKiKP**	**11 25 57.5**	**-0.1**		
	baz=24,slow=2.2								
PLOR	**Plostina**	**150.18**	**321**	⇑P	**PKiKP**	**11 25 57.9**	**-0.1**		
PLOR	**Plostina**	**150.18**	**321**	⇑PKIKP	**PKiKP**	**11 25 57.9**	**-0.1**		
ICOR	**Ion Corvin**	**150.43**	**317**	⇓P	**PKiKP**	**11 25 58.9**	**+0.4**		
COVR	**Voineasa-Covas**	**150.44**	**321**	⇑P	**PKPbc**	**11 25 58.2**	**+0.2**		
OZUR		**150.53**	**322**	⇓P	**PKiKP**	**11 25 58.9**	**+0.2**		
OJC	**Ojcow**	**150.57**	**334**	*e*PKP	**PKiKP**	**11 25 58.4**	**-0.2**		
SILT	**Síle**	**150.58**	**310**	⇓P	**PKiKP**	**11 25 58.7**	**-0.2**		
BOSR	**Bodos**	**150.61**	**322**	⇓P	**PKiKP**	**11 25 59.3**	**+0.4**		
NEHR	**Nehoiu**	**150.63**	**320**	⇑P	**PKiKP**	**11 25 58.9**	**0.0**		
RUE	**Ruedersdorf**	**150.70**	**343**	*e*PKPbc	**PKiKP**	**11 25 59.1**	**+0.4**		
	baz=24,slow=2.2								
BMR	**Baia Mare**	**150.75**	**326**	⇓P	**PKiKP**	**11 25 59.3**	**+0.3**		
BMR	**Baia Mare**	**150.75**	**326**	⇓PKIKP	**PKiKP**	**11 25 59.3**	**+0.3**		
MLR	**Muntele Rosu**	**150.79**	**321**	⇑P	**PKPbc**	**11 25 58.9**	**-0.1**		
MLR	**Muntele Rosu**	**150.79**	**321**	⇑PKIKP	**PKPbc**	**11 25 58.9**	**-0.1**		
DOPR	**Dopca**	**150.83**	**322**	⇓P	**PKiKP**	**11 26 00.1**	**+0.8**		
GORT1	**Trebel**	**150.84**	**346**	*e*PKPbc	**PKiKP**	**11 25 59.6**	**+0.7**		
	baz=24,slow=2.2								
NIE	**Niedzica**	**150.98**	**332**	*e*P

CONA	**Conrad Observa**	**153.96**	**335**	*i* PKP		**PKPab**	**11 26 22.8**	**+1.2**
	comp=Z,16nm,0.9s								
RONA	**Rosalia, Austr**	**153.97**	**334**	*i* PKP		**PKPab**	**11 26 22.4**	**+0.8**
	comp=Z,14nm,1.0s								
TNS	**Taunus Mts**	**154.06**	**347**	*e*PKPbc		**PKiKP**	**11 26 06.6**	**+0.7**
	baz=24,slow=2.2								
TNS				*e*PKPab		**PKPab**	**11 26 22.1**	**+0.2**
	baz=20,slow=4.3								
MEM	**Membach**	**154.10**	**351**	*d*PKP		**PKiKP**	**11 26 06.6**	**+0.8**
MORH	**Mrgy, Hungar**	**154.13**	**329**	⇑P		**PKPdf**	**11 25 57.3**	**-0.2**
BOVS	**Bovan**	**154.33**	**322**	⇑P		**PKPbc**	**11 26 06.8**	**+0.3**
BGES	**Gesves**	**154.44**	**352**	*d*PKP		**PKPab**	**11 26 23.7**	**+0.3**
MOA	**Molln**	**154.61**	**337**	*i* PKP		**PKPab**	**11 26 25.1**	**+0.8**
	comp=Z,19nm,1.3s								
DOU	**Dourbes**	**154.78**	**353**	*d*PKPdf		**PKPdf**	**11 25 59.3**	**+1.1**
BIOA	**Bad Ischl, Aus**	**154.96**	**338**	*i* PKP		**PKPab**	**11 26 26.8**	**+1.0**
	comp=Z,25nm,1.0s								
WLF	**Walferdange**	**155.00**	**350**	*d*PKP		**PKPab**	**11 26 26.4**	**+0.6**
WLF	**Walferdange**	**155.00**	**350**	*e*PKPab		**PKPab**	**11 26 26.2**	**+0.5**
	baz=20,slow=4.3								
RJOB	**Jochberg**	**155.21**	**339**	*e*PKPab		**PKPab**	**11 26 28.2**	**+1.3**
	baz=20,slow=4.3								
STU	**Stuttgart**	**155.27**	**345**	*e*PKPab		**PKPab**	**11 26 27.5**	**+0.5**
	baz=20,slow=4.3								
FUR	**Furstenfeldbru**	**155.29**	**342**	*e*PKPab		**PKPab**	**11 26 28.1**	**+0.9**
	baz=20,slow=4.3								
SOKA	**Soboth**	**155.31**	**335**	*i* PKP		**PKPab**	**11 26 27.6**	**+0.2**
	comp=Z,20nm,1.3s								
LESA	**Schwarzleotal**	**155.52**	**339**	*i* PKP		**PKPab**	**11 26 29.2**	**+1.0**
	comp=Z,42nm,1.7s								
KBA	**Koelnbreinsper**	**155.59**	**337**	*e*PKP		**PKPab**	**11 26 26.1**	**-2.6**
	comp=Z,6.6nm,1.3s								
OBKA	**Obir**	**155.63**	**335**	*e*PKP		**PKPab**	**11 26 26.7**	**-2.1**
	comp=Z,15nm,1.9s								
MYKA	**Terra Mystica**	**155.87**	**336**	*i* PKP		**PKPab**	**11 26 29.6**	**-0.2**
	comp=Z,16nm,0.9s								
BFO	**Black Forest**	**155.88**	**346**			**PKPab**	**11 26 30.1**	**+0.4**
BFO	**Black Forest**	**155.88**	**346**	PKP2		**PKPab**	**11 26 30.1**	**+0.4**
BFO	**Black Forest**	**155.88**	**346**	*e*PKPab		**PKPab**	**11 26 29.8**	**+0.1**
	baz=20,slow=4.3								
WATA	**Walderalm**	**155.94**	**340**	*i* PKP		**PKPab**	**11 26 30.8**	**+0.7**
	comp=Z,14nm,0.9s,SNR=4.5								
WTTA	**Wattenberg**	**155.99**	**340**	*i* PKP		**PKPab**	**11 26 31.2**	**+0.8**
	comp=Z,21nm,0.7s,SNR=6.0								
MOTA	**Moosalm**	**156.08**	**341**	*i* PKP		**PKPab**	**11 26 31.5**	**+0.7**
	comp=Z,34nm,1.0s,SNR=5.8								
SQTA	**Sankt Quirin**	**156.16**	**341**	*i* PKP		**PKPab**	**11 26 31.8**	**+0.7**
	comp=Z,18nm,0.9s,SNR=5.1								
ABTA	**Abfaltersbach**	**156.16**	**338**	*i* PKP		**PKPab**	**11 26 30.5**	**-0.6**
	comp=Z,18nm,0.9s,SNR=7.5								
IDI	**Anoyia**	**156.19**	**301**	PKPab		**PKPab**	**11 26 33.0**	**+1.4**
	comp=Z,17nm,1.0s,baz=113,slow=4.0,SNR=5.0								
DAVA	**Damuels**	**156.48**	**343**	*i* PKP		**PKPab**	**11 26 31.3**	**-1.1**
	comp=Z,23nm,1.0s								
FETA	**Feichten**	**156.48**	**341**	*i* PKP		**PKPab**	**11 26 33.5**	**+1.0**
	comp=Z,16nm,1.1s								
EDA	**Edea**	**156.62**	**207**			**PKPab**	**11 26 33.4**	**-0.3**
DAVOX	**Davos/Dischmat**	**156.94**	**342**	PKPab		**PKPab**	**11 26 35.2**	**+0.7**
	comp=Z,12nm,0.7s,baz=355,slow=6.0,SNR=15								
DBIC	**Dimbokro**	**161.12**	**165**	PKP		**PKPdf**	**11 26 06.7**	**-0.2**
	comp=Z,5.9nm,1.0s,baz=161,slow=5.8,SNR=4.4								
DBIC				PKPab		**PKPab**	**11 26 54.2**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=145,slow=14,SNR=3.0								
PGAV	**Gavieira, Arco**	**161.86**	**20**	*e*PKPdf		**PKPdf**	**11 26 07.4**	**+0.3**
PGAV				*e*PKPab		**PKPab**	**11 26 56.1**	**+0.1**
PCAB	**Cabril**	**162.17**	**20**	*e*PKPdf		**PKPdf**	**11 26 07.1**	**-0.2**
PCAS	**Casmilo, Conde**	**163.50**	**23**	*e*PKPdf		**PKPdf**	**11 26 09.8**	**+1.3**
MTE	**Manteigas**	**163.51**	**20**	*e*PKPdf		**PKPdf**	**11 26 09.7**	**+1.1**
PCBR	**Castelo Branco**	**164.04**	**21**	*e*PKPdf		**PKPdf**	**11 26 10.5**	**+1.4**
PMRV	**Marv??o**	**164.44**	**22**	*e*PKPdf		**PKPdf**	**11 27 07.9**	**+0.6**
PARRA	**Arraiolos**	**164.76**	**24**	PKPdf		**PKPdf**	**11 26 10.8**	**+1.1**
EVO	**Evora**	**165.02**	**25**	*e*PKPdf		**PKPdf**	**11 26 11.1**	**+1.2**
ESDC	**Sonseca Array**	**165.10**	**12**	PKP		**PKPdf**	**11 26 09.4**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=7.6,slow=1.9,SNR=2.6								
ESDC				PKPab		**PKPab**	**11 27 10.8**	**+0.6**
	comp=Z,5.0nm,0.9s,baz=345,slow=4.2,SNR=16								
PBEJ	**Beja**	**165.51**	**25**	*e*PKPdf		**PKPdf**	**11 26 11.2**	**+0.8**
PBAR	**Barrancos**	**165.69**	**23**	*e*PKPdf		**PKPdf**	**11 26 11.2**	**+0.7**
PBAR				*e*PKPab		**PKPab**	**11 27 13.9**	**+1.1**
PCVE	**Castro Verde**	**165.79**	**27**	*e*PKPdf		**PKPdf**	**11 26 12.2**	**+1.6**
MORF	**Marmelete**	**165.81**	**29**	*e*PKPdf		**PKPdf**	**11 26 12.3**	**+1.6**
PVAQ	**Vaqueiros**	**166.11**	**26**	*e*PKPdf		**PKPdf**	**11 26 12.1**	**+1.2**
PBDV	**Barranco-do-Ve**	**166.16**	**27**	*e*PKPdf		**PKPdf**	**11 26 12.8**	**+1.9**
KEST	**Kesra**	**166.64**	**325**	PKPab		**PKPab**	**11 27 17.6**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=204,slow=3.8,SNR=3.6								
MDT	**Midelt**	**171.35**	**26**	PKP		**PKPdf**	**11 26 15.2**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=25,slow=1.7,SNR=8.0								
MDT				PKPab		**PKPab**	**11 27 39.5**	**+1.3**
	comp=Z,2.0nm,0.9s,baz=18,slow=7.2,SNR=3.9								

STR 11 11:10:19.6±1.3, 44°N±6°×±°, h0km, MLv1.8/7, LOCSAT earthModelID auvergne_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTLF	**Montolieu**	**0.21**	**161**	Sg	Sg	11 10 24.7	-1.5
MTLF	**Montolieu**	**0.21**	**161**	Pg	Pg	11 10 22.5	-1.0
DUNF	**Dun**	**0.56**	**204**	Sg	Sg	11 10 37.3	-0.3
DUNF	**Dun**	**0.56**	**204**	Pg	Pg	11 10 30.0	-0.4
CLAF	**Gruissan**	**0.81**	**120**	Pg	Pb	11 10 36.0	-0.6
CLAF	**Gruissan**	**0.81**	**120**	Sg	Sg	11 10 35.7	-10
CARF	**Carcanieres**	**0.82**	**181**	Pg	Pg	11 10 34.8	-0.5
CARF	**Carcanieres**	**0.82**	**181**	Sg	Sg	11 10 46.4	+0.4
MLS	**Moulis**	**0.95**	**233**	Sg	Sb	11 10 51.9	-0.2
MLS	**Moulis**	**0.95**	**233**	Pg	Pg	11 10 37.6	-0.2
FILF	**Fillols**	**1.03**	**162**	Sg	Pg	11 10 52.7	+0.2
FILF	**Fillols**	**1.03**	**162**	Sg	Sg	11 10 52.9	+0.4
FILF	**Fillols**	**1.03**	**162**	Pg	Pg	11 10 38.7	-0.5
SALF	**Salau**	**1.04**	**222**	Sg	Sb	11 10 53.8	-0.9
SALF	**Salau**	**1.04**	**222**	Pg	Pg	11 10 39.0	-0.5
MONQ	**Montcuq**	**1.07**	**321**	Pg	Pn	11 10 41.8	0.0
VALC	**Valcebollere**	**1.16**	**183**	Pg	Pg	11 10 41.1	-0.7
VALC	**Valcebollere**	**1.16**	**183**	Sg	Sg	11 10 56.6	-0.1
SJAF	**Saint Jean de**	**1.19**	**152**	Sg	Sg	11 10 56.5	-1.3
SJAF	**Saint Jean de**	**1.19**	**152**	Pg	Pg	11 10 41.4	-0.9
LABF	**Labassere**	**1.58**	**253**	Pg	Pn	11 10 49.2	+0.3
LABF				Sg	Sg	11 11 10.5	+0.2

STR 11 11:10:21.2±0.5, 44°N±3°×±°, h0km, MLv1.6/7, LOCSAT earthModelID auvergne_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAJAS	**L'Hospitalet-d**	**0.50**	**180**	Pg	Pg	11 10 31.8	+0.9
LAJAS				Sg	Sg	11 10 38.3	+0.9
LEUC	**Leucamp**	**0.56**	**301**	Pg	Pg	11 10 32.2	+0.3
LEUC				Sg	Sg	11 10 39.7	+0.6
TRBF	**Trabuc cave**	**0.64**	**125**	Pg	Pg	11 10 33.1	-0.4
TRBF				Sg	Sb	11 10 46.4	+1.6
SLVF	**La Salvetat-Pe**	**0.81**	**250**	Pg	Pg	11 10 35.4	-1.4
SLVF				Sg	Sg	11 10 46.9	-0.4
FRNF	**Fournols**	**1.03**	**333**	Pg	Pg	11 10 40.9	0.0
FRNF				Sg	Sg	11 10 54.4	+0.2
SSB	**Saint Sauveur**	**1.23**	**49**	Pg	Pg	11 10 44.5	-0.4
SSB				Sg	Sg	11 11 00.7	-0.2

*CATAC **11** 11:22:38.6±0.5, 13°N±2°×9°0W±°, h6km±2km, M3.2/18, MLv3.2/18, Error ellipse: s-maj=5.4km s-min=4.8km az=24.3, confirmed*
*SNET **11** 11:22:38.8±1.5, 13°.08N×90°.08W, h16km, ML3.2, Presumed earthquake*
*GCG **11** 11:22:41.4±1.1, 13°.31N×90°.14W, h12km±18km, MD3.6, ML3.6, Presumed earthquake*

ISC 11 11:22:39.6±1.8, 13°.12N±0°.06×90°.01W±0°.05, h13km±10km, n47, σ0°.58/71, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.71**	**360**	P	**Pb**	**11 22 54.0**	**+0.1**
JAYA	**Jayaque - finc**	**0.76**	**46**	P	**Pb**	**11 22 55.0**	**+0.1**
JAYA	**Jayaque - finc**	**0.76**	**46**	*e*P	**Pb**	**11 22 54.8**	**0.0**
JAYA				*e*S	**Sn**	**11 23 06.5**	**-1.2**
JAYA	**Jayaque - finc**	**0.76**	**46**	*i* P	**Pb**	**11 22 54.9**	**+0.1**
JAYA				*i* S	**Sb**	**11 23 05.3**	**+0.1**
LALI	**Alcalda de L**	**0.77**	**62**	S	**Sb**	**11 23 06.1**	**+1.0**
CEVE	**Cerro Verde**	**0.80**	**28**	P	**Pb**	**11 22 55.6**	**+0.2**
CEVE				S	**Sb**	**11 23 06.6**	**+0.3**
CEVE	**Cerro Verde**	**0.80**	**28**	*e*P	**Pb**	**11 22 55.4**	**-0.1**
CEVE				*e*S	**Sn**	**11 23 08.5**	**-0.1**
NUBE	**Las Nubes**	**0.81**	**16**	P	**Pb**	**11 22 55.5**	**-0.1**
NUBE				S	**Sb**	**11 23 07.0**	**+0.6**
NUBE	**Las Nubes**	**0.81**	**16**	*e*P	**Pb**	**11 22 55.2**	**-0.3**
NUBE				*e*S	**Sb**	**11 23 06.0**	**-0.4**
NUBE	**Las Nubes**	**0.81**	**16**	*i* P	**Pb**	**11 22 55.3**	**-0.3**
SBLS	**San Blas**	**0.81**	**28**	*e*P	**Pb**	**11 22 55.5**	**-0.1**
SNJE	**San Jose**	**0.84**	**28**	*e*P	**Pb**	**11 22 56.0**	**-0.2**
RTR	**El Retiro**	**0.85**	**25**	*e*P	**Pb**	**11 22 56.4**	**+0.1**
PMON	**Piamonte**	**0.90**	**49**	P	**Pb**	**11 22 57.2**	**+0.1**
PMON	**Piamonte**	**0.90**	**49**	*e*P	**Pb**	**11 22 57.1**	**+0.1**
PMON				*e*S	**Sn**	**11 23 10.1**	**-0.8**
LOAL	**Lomas de Alarc**	**0.90**	**15**	P	**Pn**	**11 22 57.5**	**-0.5**
LOAL				S	**Sn**	**11 23 10.2**	**-0.7**
CEDA	**San Andres**	**0.90**	**42**	P	**Pb**	**11 22 56.9**	**-0.3**
CEDA				S	**Sn**	**11 23 10.5**	**-0.5**
SLOZ	**Alcaldia de Sa**	**0.92**	**14**	P	**Pb**	**11 22 57.4**	**-0.1**
SLOZ				S	**Sn**	**11 23 10.7**	**-0.8**
BOQS	**Boqueron**	**0.94**	**50**	*e*P	**Pb**	**11 22 57.7**	**-0.2**
PANCS	**Alcalda de**	**0.95**	**59**	S	**Sn**	**11 23 12.2**	**+0.2**
UEES	**Universidad Ev**	**0.96**	**52**	P	**Pn**	**11 22 58.4**	**-0.4**
UEES				S	**Sn**	**11 23 12.7**	**+0.4**
SEMO	**Seminario San**	**0.96**	**53**	S	**Sn**	**11 23 12.9**	**+0.4**
UNIC	**Universidad Ca**	**0.96**	**28**	P	**Pg**	**11 22 57.6**	**-0.7**
UNIC				S	**Sb**	**11 23 11.6**	**+0.7**
IGN	**Direccin Gen**	**1.01**	**54**	S	**Sn**	**11 23 14.3**	**+0.7**
UDBS	**Universidad Do**	**1.02**	**55**	P	**Pb**	**11 22 58.8**	**-0.4**
UDBS				S	**Sn**	**11 23 14.8**	**+0.9**
RBDL	**Robledal**	**1.03**	**18**	*e*P	**Pg**	**11 22 59.1**	**-0.5**
RBDL				*e*S	**Sb**	**11 23 13.1**	**+0.1**
PAVA	**Las Pavas**	**1.20**	**61**	P	**Pn**	**11 23 01.8**	**-0.4**
PAVA				S	**Sn**	**11 23 19.8**	**+1.4**
COEG	**Centro de Oper**	**1.21**	**66**	P	**Pn**	**11 23 01.4**	**-0.9**
COEG				S	**Sb**	**11 23 18.3**	**+0.4**
COEG	**Centro de Oper**	**1.21**	**66**	*e*P	**Pn**	**11 23 01.1**	**-1.1**
COEG				*e*S	**Sb**	**11 23 17.9**	**0.0**
FG16	**Alotenango, Sa**	**1.24**	**337**	*i* P	**Pg**	**11 23 05.2**	**+1.6**
FG16				IAML		11 23 31.5	
	comp=N,1μm,0.2s						
TECO	**Alcaldia de Te**	**1.27**	**71**	P	**Pn**	**11 23 02.2**	**-0.8**
TECO				S	**Sg**	**11 23 20.5**	**0.0**
SCLA	**Alcaldia de Sa**	**1.38**	**65**	P	**Pn**	**11 23 04.7**	**+0.1**
SCLA				S	**Sg**	**11 23 24.3**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.38**	**65**	*e*P	**Pn**	**11 23 04.5**	**0.0**
MTO3	**Montecristo**	**1.42**	**27**	P	**Pn**	**11 23 05.1**	**-0.2**
MTO3				S	**Sg**	**11 23 24.9**	**-0.5**
MTO3	**Montecristo**	**1.42**	**27**	*e*P	**Pn**	**11 23 04.9**	**-0.3**
MTO3	**Montecristo**	**1.42**	**27**	*i* P	**Pn**	**11 23 05.1**	**-0.2**
LLGN	**La Laguna**	**1.47**	**45**	P	**Pn**	**11 23 05.8**	**-0.1**
LLGN				S	**Sg**	**11 23 26.3**	**-0.5**
ESQI	**Esquipulas**	**1.57**	**25**	P	**Pb**	**11 23 07.9**	**-0.7**
ESQI				S	**Sg**	**11 23 29.9**	**-0.4**
ZAFR2	**Estanzuela, Za**	**1.58**	**24**	*i* P	**Pg**	**11 23 11.6**	**+1.5**
PACA	**Pacayal**	**1.68**	**78**	P	**Pb**	**11 23 09.6**	**-0.9**
PACA				S	**Sb**	**11 23 32.1**	**+0.5**
PACA	**Pacayal**	**1.68**	**78**	*e*P	**Pn**	**11 23 08.5**	**-0.3**
RANC	**El Ranchito**	**1.71**	**79**	S	**Sb**	**11 23 33.1**	**+0.7**
STG5	**El Palmar, Qui**	**1.82**	**315**	*i* P	**Pg**	**11 23 14.2**	**-0.3**
APG	**El Apazote**	**1.92**	**347**	*i* P	**Pn**	**11 23 12.2**	**0.0**
SARH	**Santa Rosa de**	**2.04**	**36**	P	**Pn**	**11 23 14.3**	**+0.5**
LCND	**La Caada**	**2.08**	**85**	P	**Pn**	**11 23 14.4**	**+0.3**
CNCH	**Conchagua**	**2.13**	**86**	P	**Pn**	**11 23 14.8**	**-0.1**
CNCH				S	**Sb**	**11 23 44.4**	**-0.1**

IDC 11 11:31:33.7±2.8, 6°.52S×130°.18E, h114km±37km, mb3.2/1, mbtmp3.6/5, Error ellipse: s-maj=71.8km s-min=21.3km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.72**	**11**	P	Pn	11 32 56.8	+0.3
	8.7nm,0.3s,baz=247,slow=23,SNR=22						
SIJI				S	Sn	11 33 56.0	-4.9
	16nm,0.2s,baz=210,slow=22,SNR=10						
FITZ	**Fitzroy Crossi**	**12.33**	**201**	P	Pn	11 34 24.5	-0.9
	2.2nm,0.7s,baz=28,slow=12,SNR=11						
FITZ				S	Sn	11 36 31.4	-10
	1.6nm,0.6s,baz=187,slow=4.7,SNR=1.6						
WRA	**Warramunga Arr**	**13.94**	**164**	P	Pn	11 34 45.3	-1.1
	0.3nm,0.6s,baz=349,slow=13,SNR=9.3						
WRA				S	Sn	11 37 09.2	-11
	0.8nm,0.4s,baz=348,slow=22,SNR=10.0						
ASAR	**Alice Springs**	**17.42**	**169**	P	Pn	11 35 31.0	+1.3
	0.5nm,0.5s,baz=348,slow=9.9,SNR=13						
ASAR				S	Sn	11 38 33.8	-10
	0.3nm,0.7s,baz=345,slow=21,SNR=2.2						
MKAR	**Makanchi Array**	**67.93**	**327**	P	P	11 42 20.1	-0.1
	0.2nm,0.4s,baz=122,slow=6.4,SNR=6.1						
	0.2nm,0.4s						

IDC 11 11:34:11.7±1.5, 12°.42N×144°.86E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=48.2km s-min=17.5km az=95.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.16**	**0**	Pn	Pn	11 34 35.8	+0.7
	50nm,0.3s,baz=180,slow=12,SNR=14						
GUMO				Sn	Sn	11 34 52.1	+0.4
	47nm,0.3s,baz=178,slow=22,SNR=5.6						
H11S3	**WAKE ISLAND Hy 21.88**	**71**		T	T	12 02 18.0	
	baz=258,slow=75,SNR=9.9						
H11S1	**WAKE ISLAND Hy 21.89**	**71**		T	T	12 02 19.1	
	baz=258,slow=75,SNR=7.4						
H11S2	**WAKE ISLAND Hy 21.89**	**71**		T	T	12 02 20.0	
	baz=258,slow=75,SNR=9.3						
H11N1	**WAKE ISLAND Hy 22.36**	**68**		T	T	12 02 51.6	
	baz=255,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy 22.37**	**68**		T	T	12 02 52.9	
	baz=255,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy 22.38**	**68**		T	T	12 02 52.9	
	baz=255,slow=75,SNR=19						
WRA	**Warramunga Arr**	**33.79**	**198**	P	P	11 40 55.5	0.0
	0.9nm,0.7s,baz=21,slow=9.6,SNR=6.2						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**37.43**	**197**	P	P	11 41 27.0	+0.1
	0.3nm,0.7s,baz=18,slow=9.8,SNR=2.5						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**62.32**	**316**	P	P	11 44 35.2	-0.8
	0.1nm,0.4s,baz=100,slow=6.6,SNR=2.0						
	0.1nm,0.4s						

*IDC **11** 11:42:00.6±2.2, 7°.33S×129°.43E, h150km±22km, mb3.5/5, mbtmp4.0/9, Error ellipse: s-maj=32.8km s-min=17.8km az=84.0*

ISC 11 11:41:59.7±0.7, 7°.25S±0°.07×129°.37E±0°.09, h150km, n18, σ2847/20, mb3.6/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.35**	**242**	P	**Pn**	**11 43 33.4**	**+2.1**
	13nm,0.3s,baz=189,slow=2.0,SNR=7.4						
BATI				S	**Sn**	**11 44 42.0**	**-0.8**
	52nm,0.4s,baz=341,slow=20,SNR=16						
SIJI	**Sorong**	**6.62**	**17**	P	**Pn**	**11 43 36.3**	**+1.5**
	2.3nm,0.3s,baz=303,slow=23,SNR=11						
SIJI				S	**Sn**	**11 44 44.2**	**-5.1**
	9.3nm,0.2s,baz=156,slow=22,SNR=9.1						
MMRI	**Maumere**	**7.19**	**259**	P	**Pn**	**11 43 38.7**	**-3.7**
LUWI	**Luwuk**	**9.02**	**313**	P	**Pn**	**11 44 07.3**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.37**	**198**	P	**Pn**	**11 44 36.2**	**-1.7**
	2.5nm,0.3s,baz=25,slow=11,SNR=28						
FITZ				S	Sn	11 46 32.4	-11
	4.8nm,0.3s,baz=71,slow=18,SNR=8.5						
PLAI	**Plampang**	**11.58**	**261**	P	**Pn**	**11 44 40.8**	**+0.1**
WRAB	**Tennant Creek**	**13.50**	**160**	P	**Pn**	**11 45 02.1**	**-3.3**
WRA	**Warramunga Arr**	**13.51**	**160**	P	**Pn**	**11 45 02.0**	**-3.5**
	3.2nm,0.4s,baz=344,slow=13,SNR=33						
WRA				S	Sn	11 47 20.9	-14
	5.1nm,0.6s,baz=340,slow=22,SNR=9.7						
WB1	**Warramunga Ar.**	**13.52**	**160**	P	**Pn**	**11 45 02.3**	**-3.4**
QIS	**Mount Isa**	**16.53**	**144**	P	**Pn**	**11 45 44.4**	**+1.3**
ASAR	**Alice Springs**	**16.89**	**166**	P	**P**	**11 45 47.1**	**+0.1**
	2.8nm,0.6s,baz=344,slow=11,SNR=60						
ASAR				S	S	11 48 44.3	-11
	1.0nm,0.7s,baz=329,slow=19,SNR=5.4						
PSA00	**Pilbara Seismi**	**16.95**	**212**	P	**Pn**	**11 45 50.5**	**+2.4**
MTSU	**Mount Surprise**	**18.14**	**128**	P	**Pn**	**11 46 04.3**	**+1.9**
STKA	**Stephens Creek**	**27.02**	**157**	P	**P**	**11 47 28.4**	**+0.4**
	1.5nm,0.8s,baz=349,slow=7.0,SNR=3.6						
	1.5nm,0.8s						
MKAR	**Makanchi Array**	**68.09**	**327**	P	**P**	**11 52 44.9**	**+1.5**
	0.7nm,0.4s,baz=124,slow=5.1,SNR=19						
	0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**71.53**	**334**	P	**P**	**11 53 04.7**	**+0.6**
	0.3nm,0.3s,baz=123,slow=5.0,SNR=2.2						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**72.40**	**329**	P	**P**	**11 53 10.7**	**+1.3**
	0.5nm,0.4s,baz=126,slow=5.4,SNR=8.9						
	0.5nm,0.4s						
BVAR	**Borovoye Array**	**77.94**	**328**	P	**P**	**11 53 42.8**	**+1.7**
	0.5nm,0.6s,baz=120,slow=5.6,SNR=1.9						
	0.5nm,0.6s						

*PGC **11** 11:50:58.9±0.5, 48°.95N×129°.21W, h10km, MLSn2.8/19, Mw3.5/19, 204km southwest of Port Alice, Bc Vancouver Island, Canada Region*
*IDC **11** 11:51:00.3±3.2, 49°.04N×128°.79W, h0km, mb3.5/1, mbtmp3.2/5, ML3.3/4, MS3.8/1, Error ellipse: s-maj=61.0km s-min=14.9km az=73.0*

ISC 11 11:50:58.9±1.2, 49°.03N±0°.05×129°.12W±0°.08, h10km, n33, σ1977/44, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NCHR	**NEPTUNE Canada**	**1.05**	**179**	P	**Pg**	**11 51 15.5**	**-3.5**
BPEB	**Brooks Peninsu**	**1.43**	**37**	Pn	**Pn**	**11 51 24.1**	**-0.8**
BPEB				Sn	**Sn**	**11 51 41.6**	**-2.3**
EDB	**Eliza Dome**	**1.56**	**56**	Pn	**Pn**	**11 51 25.9**	**-0.7**
EDB				Sn	**Sn**	**11 51 44.1**	**-2.7**
FHBB	**Fair Harbour**	**1.67**	**51**	Pn	**Pn**	**11 51 27.4**	**-0.6**
ETB	**Estevan Point**	**1.73**	**77**	Pn	**Pn**	**11 51 28.8**	**-0.2**
NTKA	**Nootka**	**1.73**	**70**	Pn	**Pn**	**11 51 28.4**	**-0.6**
HOLB	**Holberg**	**1.74**	**21**	Pn	**Pn**	**11 51 29.2**	**+0.1**
PACB	**Port Alice, BC**	**1.76**	**36**	Pn	**Pn**	**11 51 28.7**	**-0.7**
PACB				Sn	**Sn**	**11 51 49.3**	**-2.5**
TAHB	**Tahsis**	**1.81**	**61**	Pn	**Pn**	**11 51 29.5**	**-0.6**
TAHB				Sn	**Sn**	**11 51 50.8**	**-2.4**
PHC	**Port Hardy**	**2.00**	**32**	Pn	**Pn**	**11 51 32.8**	**+0.1**
PHC				Sn	**Sn**	**11 51 55.6**	**-2.2**
WOSB	**Woss**	**2.01**	**55**	Pn	**Pn**	**11 51 33.1**	**+0.2**
WOSB				Sn	**Sn**	**11 51 57.5**	**-0.6**
GDR	**Gold River**	**2.15**	**68**	Pn	**Pn**	**11 51 34.6**	**-0.2**
MYRA	**Myra Falls**	**2.38**	**76**	Pn	**Pn**	**11 51 37.9**	**-0.1**
MYRA				Sn	**Sn**	**11 52 05.3**	**-2.0**
NCSB	**Newcastle Ridg**	**2.42**	**54**	Pn	**Pn**	**11 51 39.4**	**+0.9**
NCSB				Sn	**Sn**	**11 52 08.9**	**+0.6**
BFSB	**Bamfield**	**2.63**	**93**	Pn	**Pn**	**11 51 41.0**	**-0.4**
B928	**Bamfield**	**2.63**	**93**	Pn	**Pn**	**11 51 41.0**	**-0.4**
B928				Sn	**Sn**	**11 52 10.5**	**-2.8**
CBB	**Campbell River**	**2.65**	**66**	Pn	**Pn**	**11 51 42.2**	**+0.7**
TXDB	**Texada**	**3.13**	**76**	Pn	**Pn**	**11 51 49.0**	**+0.7**
BBB	**Bella Bella**	**3.23**	**11**	Pn	**Pn**	**11 51 50.5**	**+1.0**
	12nm,0.3s,baz=192,slow=15,SNR=252						
BBB				Sn	**Sn**	**11 52 26.1**	**-1.9**
	12nm,0.3s,baz=110,slow=13,SNR=9.3						
	36nm,0.2s						
BBB	**Bella Bella**	**

MXZ	**Matakaoa Point**	**3.51**	**217**	P	Pn	12 35 16.1	-0.4
MXZ				S	Sn	12 35 59.6	+1.2
WMGZ	**Waiomatatini S**	**3.67**	**213**	P	Pn	12 35 19.5	+0.8
WMGZ				S	Sn	12 36 04.7	+2.4
PKGZ	**Pakihiroa**	**3.86**	**216**	P	Pn	12 35 21.1	-0.3
PKGZ				S	Sn	12 36 09.4	+2.3
HAZ	**Te Kaha**	**3.93**	**220**	P	Pn	12 35 22.5	+0.2
HAZ				S	Sn	12 36 10.7	+2.0
PUZ	**Puketiti**	**3.94**	**213**	P	Pn	12 35 22.4	-0.2
PUZ				S	Sn	12 36 10.1	+0.9
RUGZ	**Raukumara Rang**	**4.14**	**219**	P	Pn	12 35 24.9	-0.4
TWGZ	**Tauwhareparae**	**4.16**	**215**	P	Pn	12 35 25.9	+0.5
CNGZ	**Carnagh Station**	**4.31**	**210**	P	Pn	12 35 26.7	-0.8
TKGZ	**Te Karaka**	**4.43**	**214**	P	Pn	12 35 30.0	+0.8
TKGZ				S	Sn	12 36 21.3	+0.2
MWZ	**Matawai**	**4.50**	**217**	P	Pn	12 35 29.3	-0.9
MWZ				S	Sn	12 36 23.4	+0.5
URZ	**Urewera**	**4.66**	**221**	P	Pn	12 35 31.6	-0.7
URZ				P	Sn	12 36 27.0	+0.3
RIGZ	**Rimuhau**	**4.69**	**212**	P	Pn	12 35 32.5	-0.3
RIGZ				S	Sn	12 36 28.4	+0.9
KUZ	**Kuaotunu**	**4.70**	**244**	P	Pn	12 35 33.1	+0.3
RTZ	**Ruatahuna**	**4.99**	**219**	P	Pn	12 35 36.7	-0.3
MUGZ	**Murupara**	**5.00**	**221**	P	Pn	12 35 36.1	-0.9
MUGZ				S	Sn	12 36 34.3	-0.9
TOZ	**Tahuroa Road**	**5.31**	**235**	P	Pn	12 35 41.7	+0.5
WCZ	**Waipu Caves**	**5.53**	**256**	P	Pn	12 35 44.8	+0.4
TLZ	**Tolley Road**	**5.62**	**229**	P	Pn	12 35 46.9	+1.2
OUZ	**Omahuta**	**6.07**	**264**	P	Pn	12 35 51.1	-0.5

IDC 11 12:48:49.2±10.0, **24°.96S**×**179°.70W**, **h483**km±120km, **mb3.4/3, mbtmp4.4/4, Error ellipse: s-maj=93.7km s-min=45.8km az=25.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.53**	**191**	P	P	12 51 44.9	+1.0
	4.5nm,0.4s,baz=331,slow=2.8,SNR=8.0						
URZ				S	S	12 54 04.3	-3.9
	8.1nm,0.8s,baz=34,slow=21,SNR=6.3						
STKA	**Stephens Creek**	**34.60**	**250**	P	P	12 54 56.6	-0.2
	1.8nm,0.5s,baz=94,slow=9.6,SNR=5.0						
	1.8nm,0.5s						
ASAR	**Alice Springs**	**42.14**	**262**	P	P	12 55 58.8	+0.2
	2.3nm,0.5s,baz=93,slow=7.1,SNR=59						
	2.3nm,0.5s						
WRA	**Warramunga Arr**	**42.62**	**267**	P	P	12 56 01.8	-0.5
	2.4nm,0.3s,baz=99,slow=6.6,SNR=98						
	2.4nm,0.3s						
HFS	**Hagfors**	**143.63**	**349**	PKP	PKPdf	13 07 27.7	-0.2
	1.8nm,0.7s,baz=0.0,slow=5.9,SNR=3.5						

*AFAD **11** 12:55:23.5, 34°.80N×27°.61E, h8km±3km, ML3.3*
*IDC **11** 12:55:28.1±1.2, 35°.20N×27°.90E, h0km, mb3.8/9, mbtmp3.7/16, ML3.3/6, MS3.4/2, Error ellipse: s-maj=25.1km s-min=15.5km az=5.0*
*NEIC **11** 12:55:29.9±1.3, 35°.15N±0°.05×27°.96E±0°.03, h10km±1km, mb4.1/9, Error ellipse: s-maj=8.0km s-min=3.4km az=167.0*
*ISK **11** 12:55:30.7, 35°.22N×27°.94E, h9km, ML3.6/19*
*ATH **11** 12:55:31.7±0.3, 35°.24N×27.99E, h8km, ML3.6/13, Manual Solution by A.Andreou First location: 2020/02/11 12:56:58, This location: 2020/02/11 13:22:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*THE **11** 12:55:32.2, 35°N±13°×2°8E±1°.1, h0km±13km, M3.4/7, MLh3.4/7*

ISC 11 12:55:31.0±1.3, **35°.16N**±0°.04×**27°.94E**±0°.03, **h18**km±8km, **n97**, σ1°**59**/118, **mb3.9**/11, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.75**	**302**		**Pg**	**12 55 44.2**	**-1.4**
KARP				Sg	**Sg**	**12 55 55.3**	**-0.3**
KARP	**Karpathos**	**0.75**	**302**	Pg	**Pg**	**12 55 44.9**	**-0.8**
KARP				Sg	**Sg**	**12 55 55.2**	**-0.5**
KARP	**Karpathos**	**0.75**	**302**	P	**Pg**	**12 55 44.3**	**-1.4**
KARP				S	**Sg**	**12 55 54.3**	**-1.4**
KARP	**Karpathos**	**0.75**	**302**	P	**Pg**	**12 55 45.5**	**-0.2**
KARP				S	**Sg**	**12 55 56.0**	**+0.3**
ARG	**Arkhangelos**	**1.07**	**8**		**Pg**	**12 55 50.6**	**-1.2**
ARG				Sg	**Sg**	**12 56 03.7**	**-2.1**
ARG	**Arkhangelos**	**1.07**	**8**	Pg	**Pg**	**12 55 50.5**	**-1.2**
ARG	**Arkhangelos**	**1.07**	**8**	P	**Pb**	**12 55 51.1**	**+0.1**
ARG				S	**Sn**	**12 56 06.5**	**+0.9**
ARG	**Arkhangelos**	**1.07**	**8**	P	**Pb**	**12 55 50.8**	**-0.2**
ARG				S	**Sb**	**12 56 04.5**	**-0.2**
ZKR	**Zakros**	**1.41**	**269**	Pn	**Pn**	**12 55 57.3**	**+1.4**
ZKR	**Zakros**	**1.41**	**269**	P	**Pn**	**12 55 57.4**	**+1.5**
ZKR				S	**Sb**	**12 56 18.1**	**+3.5**
YAZI	**Mula-Dat§a-**	**1.57**	**346**	P	**Pn**	**12 55 58.9**	**+0.8**
YAZI				S	**Sg**	**12 56 24.8**	**+3.0**
YAZI				IAML		12 56 25.0	
	comp=E,242nm,1.1s						
YAZI				IAML		12 56 29.0	
	comp=N,311nm,0.4s						
DAT	**Datca**	**1.60**	**349**	Pn	**Pn**	**12 55 58.9**	**+0.4**
DAT	**Datca**	**1.60**	**349**	P	**Pn**	**12 55 59.5**	**+1.0**
DATC	**Datca-Mugla**	**1.62**	**352**	Pn	**Pn**	**12 55 59.2**	**+0.6**
TURN	**Turunc**	**1.64**	**9**	P	**Pg**	**12 56 01.1**	**-1.4**
TURN				S	**Sg**	**12 56 28.8**	**+5.0**
TURN				IAML		12 56 30.0	
	comp=N,382nm,0.9s						
TURN				IAML		12 56 43.0	
	comp=E,347nm,0.6s						
KSL	**Kastellorizon**	**1.67**	**53**	P	**Pg**	**12 56 02.3**	**-0.8**
KSL	**Kastellorizon**	**1.67**	**53**	P	**Pn**	**12 55 59.5**	**+0.2**
AKAS	**Kas**	**1.73**	**51**		**Pn**	**12 56 00.3**	**-0.1**
FETY	**Fethiye**	**1.74**	**32**	Pn	**Pn**	**12 56 00.5**	**+0.1**
FETY	**Fethiye**	**1.74**	**32**	P	**Pb**	**12 56 02.2**	**-0.3**
DALY	**Dalyan (Mula)**	**1.76**	**19**	Pn	**Pn**	**12 56 01.2**	**+0.6**
SABU	**Mula-Dalaman**	**1.86**	**26**	P	**Pn**	**12 56 02.5**	**+0.5**
SABU				S	Sg	12 56 43.4	+12
SABU				IAML		12 56 47.0	
	comp=N,214nm,1.1s						
SABU				IAML		12 56 57.0	
	comp=E,288nm,0.9s						
NPS	**Neapolis**	**1.91**	**274**	P	**Pn**	**12 56 04.6**	**+1.9**
NPS				S	**Sn**	**12 56 28.2**	**+1.9**
NPS	**Neapolis**	**1.91**	**274**	P	**Pn**	**12 55 52.0**	**+2.3**
BDRM	**Kayabasi**	**1.95**	**348**	P	**Pn**	**12 56 05.4**	**-0.6**
BDRM				S	**Sg**	**12 56 33.5**	**-0.3**
BDRM				IAML		12 56 41.0	
	comp=E,427nm,0.7s						
BODT	**Bodrum**	**1.97**	**345**	Pn	**Pn**	**12 56 04.3**	**+0.8**
BODT	**Bodrum**	**1.97**	**345**	P	**Pn**	**12 56 05.0**	**+1.5**
YER	**Yerkesik**	**2.00**	**8**	Pn	**Pn**	**12 56 04.6**	**+0.7**
YKAV	**Yalikavak-Bodr**	**2.04**	**345**	Pn	**Pn**	**12 56 05.2**	**+0.8**
CAME	**Cameli-Denizli**	**2.10**	**31**	Pn	**Pn**	**12 56 06.2**	**+0.8**
MULA	**Mugla, Merkez-**	**2.12**	**8**	P	**Pb**	**12 56 09.0**	**0.0**
MULA				S	**Sg**	**12 56 44.5**	**+5.3**
MULA				IAML		12 56 51.0	
	comp=E,223nm,0.8s						
MULA				IAML		12 57 00.0	
	comp=N,190nm,1.5s						
MLSB	**Milas**	**2.14**	**356**	Pn	**Pn**	**12 56 06.7**	**+0.8**
ELL	**Elmali**	**2.25**	**45**		**Pn**	**12 56 08.0**	**+0.5**
ELL	**Elmali**	**2.25**	**45**	Pn	**Pn**	**12 56 08.5**	**+1.0**
DNZT	**Denizli-Tavas-**	**2.29**	**22**	P	**Pn**	**12 56 09.9**	**+1.8**
DNZT				IAML		12 56 58.0	
	comp=E,100nm,0.6s						
DNZT				IAML		12 57 04.0	
	comp=N,112nm,1.3s						
THERA	**Ancient Thera,**	**2.34**	**302**	P	**Pn**	**12 56 10.4**	**+1.8**
TAVA	**DENIZLI_Tavas**	**2.44**	**19**	P	**Pn**	**12 56 11.3**	**+1.3**
TAVA				S	**Sg**	**12 56 54.1**	**+4.7**
TAVA				IAML		12 56 58.0	
	comp=E,174nm,1.0s						
TAVA				IAML		12 57 06.0	
	comp=N,175nm,0.6s						
AYDN	**Tasoluk**	**2.50**	**359**	P	**Pn**	**12 56 11.8**	**+0.9**
AYDN				S	**Sb**	**12 56 45.2**	**-0.7**
AYDN				IAML		12 56 59.0	
	comp=N,242nm,0.8s						
AYDN				IAML		12 57 03.0	
	comp=E,147nm,1.1s						
IDI	**Anoyia**	**2.50**	**274**	Pn	**Pn**	**12 56 11.6**	**+0.7**
	42nm,0.6s,baz=103,slow=13,SNR=24						
IDI	**Anoyia**	**2.50**	**274**		**Pn**	**12 56 12.2**	**+1.3**
IDI	**Anoyia**	**2.50**	**274**	Pn	**Pn**	**12 56 12.6**	**+1.7**
IDI	**Anoyia**	**2.50**	**274**	P	**Pn**	**12 56 13.3**	**+2.4**
IDI	**Anoyia**	**2.50**	**274**	P	**Pn**	**12 56 13.7**	**+2.8**
APMY	**Acipayam-Deniz**	**2.56**	**25**	Pn	**Pn**	**12 56 12.8**	**+1.1**
GCAM	**G?zelcaml?**	**2.60**	**348**	P	**Pn**	**12 56 13.4**	**+1.2**
GCAM				IAML		12 56 50.0	
	comp=N,84nm,1.0s						
GCAM				S	**Sb**	**12 56 50.5**	**+1.7**
GCAM				IAML		12 57 16.0	
	comp=E,98nm,0.6s						
ESEN	**Aydn-Nazilli**	**2.66**	**7**	P	**Pn**	**12 56 14.7**	**+1.8**
ESEN				S	**Sb**	**12 56 48.8**	**-1.6**
ESEN				IAML		12 57 12.0	
	comp=N,97nm,1.1s						
ESEN				IAML		12 57 17.0	
	comp=E,107nm,0.9s						
SMG	**Samos**	**2.70**	**341**	P	**Pn**	**12 56 14.8**	**+1.2**
VAM	**Vamos**	**3.07**	**276**	P	**Pn**	**12 56 21.4**	**+2.7**
GVD	**Gavdhos**	**3.18**	**265**	Pn	**Pn**	**12 56 22.4**	**+2.3**
GVD	**Gavdhos**	**3.18**	**265**	P	**Pn**	**12 56 22.8**	**+2.6**
IMMV	**Iera Moni Meta**	**3.25**	**277**	Pn	**Pn**	**12 56 23.5**	**+2.3**
IMMV	**Iera Moni Meta**	**3.25**	**277**	P	**Pn**	**12 56 23.6**	**+2.5**
MANT	**Manisa**	**3.37**	**8**		**Pn**	**12 56 21.6**	**-1.3**
KNDR	**Palaiochora Ch**	**3.54**	**273**	Pn	**Pn**	**12 56 27.3**	**+2.3**
AKMS	**Akamas**	**3.60**	**91**	P	**Pn**	**12 56 27.3**	**+1.3**
ALFC	**Alefka**	**3.82**	**89**	P	**Pn**	**12 56 30.2**	**+1.2**
NATA	**Nata**	**3.82**	**94**	P	**Pn**	**12 56 30.3**	**+1.3**
SEYD	**Seydisehir-KON**	**3.87**	**53**	Pn	**Pn**	**12 56 31.7**	**+2.0**
DION	**Dionisos Attik**	**4.35**	**313**	P	**Pn**	**12 56 37.4**	**+1.2**
VLI	**Veliai**	**4.35**	**292**	P	**Pn**	**12 56 37.8**	**+1.6**
CSS	**Mathiatis**	**4.42**	**91**	P	**Pn**	**12 56 38.1**	**+0.9**
ITM	**Ithomi**	**5.27**	**294**	Pn	**Pn**	**12 56 49.1**	**+0.2**
ITM	**Ithomi**	**5.27**	**294**	P	**Pn**	**12 56 50.5**	**+1.7**
GUR	**Goura**	**5.29**	**303**	P	**Pn**	**12 56 51.1**	**+1.9**
ANX	**Ano Chora**	**5.92**	**307**	P	**Pn**	**12 57 00.1**	**+2.1**
MAKR	**Makrakomi, Fth**	**6.03**	**311**	P	**Pn**	**12 57 01.1**	**+1.7**
BRTR	**Keskin Array B**	**6.43**	**43**	Pn	**Pn**	**12 57 05.4**	**+0.5**
	0.2nm,0.3s,baz=223,slow=12,SNR=4.5						
BRTR				Sn	**Sn**	**12 58 20.1**	**+2.1**
	0.1nm,0.3s,baz=221,slow=24,SNR=1.2						
	1.2nm,0.9s						
BRTR	**Keskin Array B**	**6.43**	**43**		**Pn**	**12 57 04.6**	**-0.4**
MMAI	**Mount Meron Ar**	**6.55**	**107**	Pn	**Pn**	**12 57 05.8**	**-0.7**
	3.9nm,0.3s,baz=298,slow=11,SNR=5.7						
MMAI				Sn	**Sn**	**12 58 22.2**	**+1.4**
	1.9nm,0.3s,baz=291,slow=24,SNR=1.5						
	0.9nm,0.3s						
LIT	**Litokhoron**	**6.56**	**320**	Pn	**Pn**	**12 57 07.6**	**+0.9**
EIL	**Eilat**	**8.06**	**131**	Pn	**Pn**	**12 57 27.0**	**-0.3**
	1.0nm,0.3s,baz=349,slow=12,SNR=4.6						
EIL				Sn	**Sn**	**12 58 55.9**	**-2.1**
	0.4nm,0.3s,baz=316,slow=20,SNR=2.6						
	9.1nm,0.8s						
TIP	**Timpagrande**	**9.79**	**298**	Pn	**Pn**	**12 57 49.7**	**-1.2**
KBZ	**Khabaz**	**14.37**	**49**	Pn	**Pn**	**12 58 55.3**	**+1.9**
	0.1nm,0.3s,baz=218,slow=8.3,SNR=6.9						
	1.8nm,0.8s						
AKASG	**Malin Array Be**	**15.57**	**3**	Pn	**Pn**	**12 59 08.5**	**-0.9**
	0.2nm,0.3s,baz=178,slow=10,SNR=2.2						
AKASG				LR	LR	13 05 29.5	
	comp=Z,109nm,21.8s,baz=264,slow=39						
	0.1nm,0.2s						
CTI	**Castel Tesino**	**16.44**	**316**	Pn	**Pn**	**12 59 20.1**	**-0.7**
CTI				IAmb	IAmb	12 59 31.4	
	comp=Z,9.7nm,0.8s						
GERES	**GERESS Array B**	**17.25**	**327**	P	**Pn**	**12 59 30.9**	**-0.2**
	baz=150,slow=14,SNR=3.1						
	comp=Z,1.6nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**17.56**	**316**	P	**Pn**	**12 59 33.6**	**-1.4**
FUORN				IAmb	IAmb	12 59 55.1	
	comp=Z,13nm,1.2s						
ESDC	**Sonseca Array**	**25.66**	**290**	P	**P**	**13 00 57.6**	**-2.3**
	comp=Z,1.5nm,0.7s,baz=79,slow=9.1,SNR=11						
	comp=Z,1.5nm,0.7s						
ESDC	**Sonseca Array**	**25.66**	**290**	P	**P**	**13 00 58.7**	**-1.1**
FINES	**FINESS Array B**	**26.34**	**358**	P	**P**	**13 01 04.8**	**-0.8**
	comp=Z,4.2nm,0.8s,baz=167,slow=9.0,SNR=5.3						
	comp=Z,4.2nm,0.8s						
FINES	**FINESS Array B**	**26.34**	**358**	P	**P**	**13 01 05.4**	**-0.2**
FIA1	**FINESS Array S**	**26.34**	**358**	P	**P**	**13 01 05.6**	**0.0**
HFS	**Hagfors**	**26.65**	**344**	P	**P**	**13 01 06.7**	**-1.8**
	comp=Z,1.8nm,0.6s,baz=178,slow=10,SNR=3.8						
	comp=Z,1.8nm,0.6s						
AB31	**Akbulak array**	**27.34**	**49**	P	**P**	**13 01 14.3**	**-0.5**
AB31				IAmb	IAmb	13 01 31.9	
	comp=Z,4.5nm,1.5s						
ABKAR	**Akbulak array**	**27.34**	**49**	P	**P**	**13 01 14.6**	**-0.2**
FURI	**Furi**	**27.92**	**157**	LR	LR	13 14 40.9	
	comp=Z,108nm,19.4s,baz=342,slow=41						
NC303	**NORSAR Array S**	**28.16**	**343**	P	**P**	**13 01 21.4**	**-0.6**
KURBB	**Kurchatov Arra**	**39.35**	**51**	P	**P**	**13 02 58.8**	**-0.4**
	comp=Z,0.5nm,0.2s,baz=275,slow=8.9,SNR=7.8						
KURBB				PcP	**PcP**	**13 05 08.1**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=271,slow=3.7,SNR=5.4						
	comp=Z,0.5nm,0.2s						
KURK	**Kurchatov**	**39.42**	**51**	P	**P**	**13 02 59.2**	**-0.4**
KURK					**PcP**	**13 05 05.3**	**-2.2**
PRZ	**Przheval'sk**	**39.50**	**64**	P	**P**	**13 02 59.7**	**-1.0**
PRZ				IAmb	IAmb	13 03 35.3	
	comp=Z,5.3nm,0.5s						
PRZ				PcP	**PcP**	**13 05 06.9**	**-1.3**
MKAR	**Makanchi Array**	**41.87**	**57**	P	**P**	**13 03 20.4**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=279,slow=5.1,SNR=6.7						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**41.87**	**57**	P	**P**	**13 03 19.6**	**-0.5**
ZALV	**Zalesovo Beam**	**43.36**	**46**	P	**P**	**13 03 32.7**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=274,slow=10,SNR=2.1						
	comp=Z,0.3nm,0.5s						
SPITS	**Spitsbergen Ar**	**43.41**	**357**	P	**P**	**13 03 32.6**	**+0.4**
	comp=Z,7.4nm,0.9s,baz=161,slow=9.2,SNR=1.3						
	comp=Z,7.4nm,0.9s						
SONM	**Songino Array**	**57.72**	**51**	P	**P**	**13 05 20.7**	**0.0**
	comp=Z,0.7nm,0.6s,baz=279,slow=8.1,SNR=7.9						
	comp=Z,0.7nm,0.6s						
SONM	**Songino Array**	**57.72**	**51**	IAmb	IAmb	13 05 26.6	
	comp=Z,1.8nm,1.0s						
YKA	**Yellowknife Ar**	**78.13**	**343**	P	**P**	**13 07 28.6**	**0.0**
	comp=Z,0.1nm,0.4s,baz=26,slow=5.4,SNR=2.0						
	comp=Z,0.1nm,0.4s						

*NEIC **11** 13:02:02.8±1.1, 56°.4S±0°.2×146°.9E±0°.3, h10km±2km, mb4.6/14, Error ellipse: s-maj=30.5km s-min=27.0km az=257.0*
*IDC **11** 13:02:04.0±3.8, 56°.07S×146°.49E, h0km, mb4.1/3, mbtmp4.1/3, MS3.6/2, Error ellipse: s-maj=195.1km s-min=59.1km az=62.0*

ISC 11 13:02:02.7±1.3, **56°.4S**±0°.2×**146°.8E**±0°.2, **h10**km, **n32**, σ0°**73**/18, **mb4.3/7, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**16.04**	**59**	Pn	**Pn**	**13 05 47.9**	**-0.2**
PYZ				IAmb	IAmb	13 06 18.1	
	comp=Z,108nm,1.4s						
WHZ	**Wether Hill Ro**	**16.84**	**60**	Pn	**Pn**	**13 05 57.8**	**-0.6**
WHZ				IAmb	IAmb	13 06 05.0	
	comp=Z,45nm,1.4s						
MLZ	**Mavora Lakes**	**17.31**	**60**		**Pn**	**13 06 04.8**	**+0.5**
MLZ				IAmb	IAmb	13 06 14.3	
	comp=Z,46nm,1.4s						
TOO	**Toolangi**	**18.82**	**357**	P	**Pn**	**13 06 22.7**	**-0.2**
CAN	**Canberra**	**21.10**	**5**	P	**P**	**13 06 47.7**	**+0.5**
CAN				IAmb	IAmb	13 07 13.0	
	comp=Z,30nm,1.4s						
STKA	**Stephens Creek**	**24.75**	**349**	P	**P**	**13 07 24.9**	**+0.7**
	comp=Z,6.9nm,1.0s,baz=167,slow=8.0,SNR=4.8						
	comp=Z,6.9nm,1.0s						
STKA	**Stephens Creek**	**24.75**	**349**	P	**P**	**13 07 24.8**	**+0.6**
H01W1	**Cape Leeuwin H**	**30.86**	**300**	T	T	13 41 06.3	
	baz=143,slow=75,SNR=155						
H01W2	**Cape Leeuwin H**	**30.87**	**300**	T	T	13 41 03.9	
	baz=143,slow=75,SNR=220						
H01W3	**Cape Leeuwin H**	**30.88**	**300**	T	T	13 41 07.5	
	baz=143,slow=75,SNR=212						
ASAR	**Alice Springs**	**34.00**	**339**	P	**P**	**13 08 46.5**	**0.0**
	comp=Z,0.9nm,0.6s,baz=162,slow=9.3,SNR=12						
	comp=Z,0.9nm,0.6s						
AS31	**Alice Springs**	**34.00**	**339**	P	**P**	**13 08 46.5**	**0.0**
CTA	**Charters Tower**	**36.22**	**359**	LR	LR	13 22 43.6	
	comp=Z,82nm,18.1s,baz=198,slow=34						
WR8	**Warramunga Arr**	**37.49**	**341**	P	**P**	**13 09 15.7**	**-0.7**
WR8				IAmb	IAmb	13 09 20.0	
	comp=Z,7.7nm,1.2s						
WRA	**Warramunga Arr**	**37.54**	**341**	P	**P**	**13 09 16.1**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=166,slow=7.5,SNR=20						
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	**37.54**	**341**	P	**P**	**13 09 16.1**	**-0.7**
WB0	**Warramunga Ar**	**37.70**	**341**	P	**P**	**13 09 17.2**	**-0.9**
WB0				IAmb	IAmb	13 09 22.1	
	comp=Z,9.3nm,1.1s						
FITZ	**Fitzroy Crossi**	**41.39**	**329**	LR	LR	13 25 37.2	
	comp=Z,90nm,20.8s,baz=188,slow=34						
H04S1	**CROZET ISLANDS**	**55.13**	**236**	T	T	14 12 13.7	
	baz=145,slow=75,SNR=16						
H04S2	**CROZET ISLANDS**	**55.13**	**236**	T	T	14 12 13.1	
	baz=145,slow=75,SNR=19						
H04S3	**CROZET ISLANDS**	**55.15**	**236**	T	T	14 12 09.1	
	baz=145,slow=75,SNR=16						
LUWI	**Luwuk**	**58.45**	**331**	P	**P**	**13 11 58.8**	**+0.3**
H08S2	**Diego Garcia H**	**74.98**	**279**	T	T	14 36 13.1	
	baz=147,slow=76						
H08S1	**Diego Garcia H**	**74.99**	**279**	T	T	14 36 16.3	
	baz=147						
H08S3	**Diego Garcia H**	**75.00**	**279**	T	T	14 36 12.8	
	baz=147,slow=76						
H03S2	**Juan Fernandez**	**82.12**	**143**	T	T	14 45 28.6	
	baz=202,slow=74,SNR=5.3						
H03S1	**Juan Fernandez**	**82.12**	**143**	T	T	14 45 29.8	
	baz=202,slow=74,SNR=6.1						
H03S3	**Juan Fernandez**	**82.14**	**143**	T	T	14 45 28.5	
	baz=202,slow=74,SNR=6.6						
CO04	**Los Peladeros**	**86.27**	**149**	P	**P**	**13 14 44.5**	**-0.3**
CO04				IAmb	IAmb	13 15 07.2	
	comp=Z,17nm,1.4s						
MAJO	**Matsushiro**	**92.83**	**353**	P	**P**	**13 15 14.2**	**-0.7**
MJB9	**Matsu-Tunnel**	**92.83**	**353**	P	**P**	**13 15 14.3**	**-0.6**
ILAR	**Eielson Array**	**130.91**	**31**	PKP	**PKiKP**	**13 21 15.2**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=234,slow=3.7,SNR=5.5						

*IDC **11** 13:03:28.1±2.0, 8°.76S×124°.06E, h0km, mb3.6/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=266.6km s-min=32.0km az=57.0*
*DJA **11** 13:03:40.1±0.3, 9°S±3°×12°4E±°, h10km, M2.9/6, MLv2.9/6*

ISC 11 13:03:29.7±1.4, **8°.73S**±0°.09×**124°.08E**±0°.09, **h10**km, **n7**, σ1°**10**/8, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.04**	**170**	P	Pn	13 03 58.8	+8.4
BATI	**Baumata**	**1.53**	**196**	P	**Pg**	**13 04 00.1**	**+1.1**
BATI				S	**Sb**	**13 04 17.3**	**-0.2**
MMRI	**Maumere**	**1.82**	**273**	P	**Pg**	**13 04 05.9**	**+1.3**
EDFI	**Ende, Flores**	**2.36**	**269**	P	**Pb**	**13 04 12.1**	**-0.3**
EDFI				S	**Sn**	**13 04 36.1**	**-1.6**
WRA	**Warramunga Arr**	**14.93**	**139**	Pn	**Pn**	**13 07 00.4**	**-0.5**
	0.1nm,0.3s,baz=316,slow=15,SNR=4.8						
WRA				Sn	Sn	13 09 35.5	-11
	0.2nm,0.3s,baz=321,slow=24,SNR=4.6						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**17.58**	**149**	P	**Pn**	**13 07 34.6**	**-0.4**
	0.1nm,0.3s,baz=330,slow=11,SNR=9.3						
ASAR				S	Sn	13 10 37.8	-13
	0.3nm,0.4s,baz=327,slow=23,SNR=5.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**66.61**	**330**	P	**P**	**13 14 20.6**	**+0.3**
	0.3nm,0.5s,baz=136,slow=7.7,SNR=5.7						
	0.3nm,0.5s						

*UPP **11** 13:06:36.4±0.1, 67°.84N×20°.24E, h0km, ML2.6, Confirmed Induced event*
*HEL **11** 13:06:39.0±0.3, 67°.78N×20°.35E, h0km, ML1.2, Suspected explosion*

ISC 11 13:06:36.3±0.9, **67°.81N**±0°.03×**20°.14E**±0°.03, **h0**km, **n17**, σ1°**30**/23, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.16**	**28**	P	**Pg**	**13 06 39.0**	**-0.3**
KUA				S	**Sg**	**13 06 40.6**	**-0.8**
RATU	**Laukkuluspa**	**0.21**	**273**	P	**Pg**	**13 06 41.1**	**+0.9**
KOVU	**Salmi**	**0.41**	**1**	P	**Pg**	**13 06 43.7**	**-0.4**
NIKU	**Nikkaluokta**	**0.42**	**278**	P	**Pb**	**13 06 45.5**	**-1.1**
LANU	**Lannavaara**	**0.74**	**71**	PG	**Pb**	**13 06 51.2**	**-0.8**
LANU				SG	**Sg**	**13 06 59.6**	**-0.4**
SALU	**Saltoluokta**	**0.76**	**236**	P	**Pb**	**13 06 51.5**	**-0.8**
KIF	**Kilpisjarvi**	**1.22**	**11**	PG	**Pn**	**13 07 01.7**	**+1.2**
	baz=184						
KIF				smax	smax	13 07 17.6	
	comp=Z,2.7nm,0.2s						
KIF				SG	**Sn**	**13 07 18.1**	**+0.4**
PAJU	**Pajala**	**1.40**	**123**	P	**Pn**	**13

comp=Z,16nm,0.9s
BOSA Boshof 24.45 18 P 13 12 47.4 0.0
BOSA IAmb IAmb 13 12 50.8
comp=Z,20nm,0.9s
BOSA Boshof 24.45 18 P P 13 12 47.4 0.0
BOSA pmax pmax
comp=Z,20nm,1.0s
MAW Mawson 26.77 142 LR LR 13 22 42.5
comp=Z,252nm,19.2s,baz=294,slow=34
LBTB Lobatse 28.02 17 LR LR 13 23 27.8
comp=Z,681nm,18.1s,baz=181,slow=34
LBTB Lobatse 28.02 17 P P 13 13 20.1 +0.4
LBTB IAmb IAmb 13 13 32.6
comp=Z,28nm,1.4s
LBTB Lobatse 28.02 17 P P 13 13 20.1 +0.4
LBTB pmax pmax
comp=Z,28nm,1.5s
KGCAE Kacgae 29.67 10 P P 13 13 34.0 -0.4
KGCAE IAmb IAmb 13 13 35.6
comp=Z,17nm,0.9s
BELA Belgrano 2 31.57 198 P P 13 13 50.4 -0.1
TSUM Tsumeb 33.03 1 LR LR 13 26 09.1
comp=Z,397nm,18.6s,baz=152,slow=34
TSUM Tsumeb 33.03 1 P 13 14 04.5 +0.6
TSUM IAmb IAmb 13 14 08.3
comp=Z,16nm,1.2s
KSANE Kasane 35.02 14 P P 13 14 21.1 -0.2
QSPA South Pole Qui 37.93 180 P P 13 14 45.6 -0.1
comp=Z,16nm,1.1s,baz=211,slow=2.6,SNR=12
QSPA LR LR 13 29 00.6
comp=Z,189nm,20.6s,baz=240,slow=34
comp=Z,16nm,1.1s
QSPA South Pole Qui 37.93 180 P 13 14 44.7 -1.1
LSZ Lusaka 38.00 18 P P 13 14 45.8 -0.8
LSZ Lusaka 38.00 18 P P 13 14 45.8 -0.8
LSZ pmax pmax
comp=Z,7.0nm,1.1s
ABPO Ambohimpanom 40.75 47 P P 13 15 10.0 +0.3
ABPO Ambohimpanom 40.75 47 *e*P P 13 15 10.4 +0.7
PMSA Palmer Station 41.05 220 LR LR 13 28 37.3
comp=Z,661nm,18.7s,baz=152,slow=31
USHA Ushuaia 47.77 231 LR LR 13 30 58.2
comp=Z,978nm,18.8s,baz=216,slow=30
VNDA Vanda 48.62 170 P P 13 16 12.2 +0.6
VNDA comp=Z,7.7nm,1.0s,baz=224,slow=6.9,SNR=5.2 LR LR 13 35 47.6
comp=Z,356nm,19.7s,baz=206,slow=35
comp=Z,7.7nm,1.0s
VNDA Vanda 48.62 170 P P 13 16 11.7 +0.1
VNDA Vanda 48.62 170 P P 13 16 11.7 +0.1
VNDA pmax pmax
comp=Z,77nm,2.0s
H10S2 ASCENSION HYDR 50.31 318 T T 14 10 53.9
baz=66,slow=74,SNR=352
H10S3 ASCENSION HYDR 50.32 318 T T 14 10 52.4
baz=154,slow=74,SNR=298
MBAR Mbarara 52.79 17 LR LR 13 38 07.0
comp=Z,975nm,19.3s,baz=143,slow=35
MBAR Mbarara 52.79 17 *i* P **P 13 16 43.7 -0.2**
MBAR pmax pmax
comp=Z,2.0nm,1.1s
KIBK Kibwezi 52.80 27 P P 13 16 45.9 +2.1
GO08 Villa O'Higgin 53.68 236 P P 13 16 50.4 +0.5
GO08 IAmb IAmb 13 17 02.8
comp=Z,40nm,1.6s
PLTB Pedras Altas 54.04 263 P P 13 16 52.8 0.0
PLTB IAmb IAmb 13 17 00.7
comp=Z,22nm,1.5s
TRQA Tornquist 54.74 252 P P 13 16 57.8 0.0
TRQA IAmb IAmb 13 16 59.1
comp=Z,16nm,1.1s
TRQA Tornquist 54.74 252 *e*P **P 13 16 57.9 0.0**
COYC Coyhaique 55.34 239 P P 13 17 01.8 -0.2
EDA Edea 56.17 352 P P 13 17 07.6 -0.6
AY01 Puyuhuapi 56.41 239 P 13 17 09.3 -0.4
AY01 IAmb IAmb 13 17 10.8
comp=Z,23nm,0.9s
LL02 Futaleuf 56.81 241 P 13 17 12.1 -0.5
LL02 IAmb IAmb 13 17 20.4
comp=Z,16nm,0.9s
LODK Lodwar 57.66 22 P P 13 17 18.4 -0.5
PLCA Paso Flores 57.79 244 P P 13 17 18.1 -1.6
comp=Z,4.5nm,1.0s,baz=146,slow=7.8,SNR=6.3
comp=Z,4.5nm,1.0s
PLCA Paso Flores 57.79 244 P P 13 17 18.2 -1.4
PLCA IAmb IAmb 13 17 20.7
comp=Z,9.1nm,1.1s
PLCA Paso Flores 57.79 244 *e*P **P 13 17 19.5 -0.2**
LR05 Currie 58.94 243 P P 13 17 27.0 -0.5
LR05 IAmb IAmb 13 17 34.9
comp=Z,24nm,1.1s
GO06 Curarrehue 59.09 244 P 13 17 28.1 -0.7
GO06 IAmb IAmb 13 17 36.0
comp=Z,12nm,1.1s
ACRG Accra 59.55 340 P P 13 17 32.3 +0.3
CPUP Villa Florida 60.19 265 P P 13 17 36.3 0.0
comp=Z,3.8nm,0.9s,baz=65,slow=6.2,SNR=5.9
comp=Z,3.8nm,0.9s
CPUP Villa Florida 60.19 265 P 13 17 35.9 -0.5
CPUP IAmb IAmb 13 17 40.0
comp=Z,9.8nm,1.2s
CPUP Villa Florida 60.19 265 P P 13 17 35.9 -0.5
CPUP pmax pmax
comp=Z,10.0nm,1.2s
BI02 San Fabin de 61.04 247 P P 13 17 41.4 -0.8
BI02 IAmb IAmb 13 17 47.3
comp=Z,13nm,1.1s
DBIC Dimbokro 61.63 335 P P 13 17 46.4 +0.2
DBIC comp=Z,11nm,0.8s,baz=178,slow=7.2,SNR=14 LR LR 13 37 56.8
comp=Z,192nm,20.9s,baz=179,slow=30
comp=Z,11nm,0.8s
DBIC Dimbokro 61.63 335 P 13 17 46.5 +0.3
DBIC IAmb IAmb 13 17 47.3
comp=Z,13nm,0.9s
DBIC Dimbokro 61.63 335 P P 13 17 46.5 +0.3
DBIC pmax pmax
comp=Z,13nm,0.9s
BDFB Brasilia 62.52 280 P P 13 17 53.0 +0.6
comp=Z,6.4nm,0.8s,baz=106,slow=8.5,SNR=7.9
comp=Z,6.4nm,0.8s
BDFB Brasilia 62.52 280 P P 13 17 53.2 +0.9
BDFB IAmb IAmb 13 17 56.5
comp=Z,13nm,1.1s
BDFB Brasilia 62.52 280 P P 13 17 53.2 +0.9
BDFB pmax pmax
comp=Z,13nm,1.1s
MT13 San Alfonso 62.57 250 P P 13 17 52.1 -0.5
MT13 IAmb IAmb 13 18 04.5
comp=Z,16nm,1.2s
AQDB Aquidauana 63.52 270 P P 13 17 59.4 +0.5
AQDB IAmb IAmb 13 18 02.1
comp=Z,15nm,1.3s
FURI Furi 63.73 24 LR LR 13 45 03.9
comp=Z,221nm,18.4s,baz=187,slow=35
CO03 El Pedregal 64.91 252 P P 13 18 08.1 +0.1
CO03 IAmb IAmb 13 18 39.1
comp=Z,25nm,1.5s
AC02 Maricunga 66.95 256 IAmb IAmb 13 18 25.6
comp=Z,29nm,1.7s
H01W2 Cape Leeuwin H 67.25 118 T T 14 32 16.9
baz=221,slow=75,SNR=14
H01W3 Cape Leeuwin H 67.26 118 T T 14 32 18.0
baz=221,slow=75,SNR=9.0
H01W1 Cape Leeuwin H 67.27 118 T T 14 32 18.6
baz=221,slow=75,SNR=11
PTLB Pontes e Lacer 69.45 271 IAmb IAmb 13 18 40.8
comp=Z,8.1nm,1.0s
LPAZ La Paz 74.33 264 P P 13 19 07.5 +0.6
comp=Z,2.0nm,0.7s,baz=167,slow=4.5,SNR=7.5
comp=Z,2.0nm,0.7s
PALK Pallekele 80.18 65 LR LR 13 47 09.8
comp=Z,105nm,20.2s,baz=228,slow=30
RPZ Rata Peaks 81.78 161 LR LR 13 53 08.3
comp=Z,218nm,21.8s,baz=218,slow=34
EIL Elat 83.12 16 LR LR 13 56 10.3
comp=Z,126nm,19.2s,baz=200,slow=35
STKA Stephens Creek 83.22 135 *i* P **P 13 19 55.3 +0.4**
LEM Lembang 85.04 95 LR LR 13 51 16.9
comp=Z,49nm,18.3s,baz=198,slow=31
ASF Jabal al Asfar 85.90 17 LR LR 13 57 48.9
comp=Z,219nm,19.0s,baz=199,slow=35
MMAI Mount Meron Ar 86.47 15 LR LR 13 58 28.6
comp=Z,138nm,19.0s,baz=167,slow=35
ASAR Alice Springs 86.55 125 P **P 13 20 12.2 +0.4**
comp=Z,3.9nm,1.0s,baz=207,slow=4.4,SNR=15
comp=Z,3.9nm,1.0s

ASAR Alice Springs 86.55 125 P P 13 20 10.8 -1.0
ASAR Alice Springs 86.55 125 P P 13 20 10.8 -1.0
AS31 Alice Springs 86.56 125 P P 13 20 11.5 -0.3
HYB Hyderabad 87.46 57 *e*P **P 13 20 16.5 +0.5**
KEST Kesra 87.92 354 LR LR 14 01 27.8
comp=Z,105nm,18.8s,baz=280,slow=37
URZ Urewera 88.17 164 LR LR 13 56 56.3
comp=Z,183nm,21.4s,baz=168,slow=34
WRA Warramunga Arr 89.88 123 P P 13 20 28.5 +0.9
comp=Z,1.2nm,1.0s,baz=207,slow=2.5,SNR=5.3
comp=Z,1.2nm,1.0s
WRA Warramunga Arr 89.88 123 P P 13 20 26.7 -1.0
WRA Warramunga Arr 89.88 123 P P 13 20 26.7 -1.0
WRA pmax pmax
comp=Z,1.0nm,2.0s
GNI Garni 95.18 21 LR LR 14 06 24.1
comp=Z,140nm,18.1s,baz=250,slow=37
MLR Muntele Rosu 97.72 6 LR LR 14 05 48.0
comp=Z,230nm,18.2s,baz=64,slow=36
KBZ Khabaz 98.23 19 LR LR 14 07 11.0
comp=Z,109nm,18.2s,baz=291,slow=36
KBZ Khabaz 98.23 19 *i* P Pdif 13 21 07.0 +1.9
KBZ pmax pmax
comp=Z,3.0nm,1.0s
MAK Makhachkala 98.48 22 *c i*P **P 13 21 03.1 -3.2**
MAK *e* 13 31 38.2
MAK *e*SS SS 13 39 17.0 -3.1
MAK pmax pmax
comp=Z,154nm,0.9s
MAK MLR MLR
comp=Z,366nm,17.0s
BRDH Bariadhala 98.77 64 LR LR 13 59 40.8
comp=Z,129nm,20.2s,baz=216,slow=32
DZM Mont Dzumac 101.29 151 *e*LR LR 13 54 21.2
comp=Z,538nm,26.8s
TBI Tubuai 103.75 193 *e*LR LR 13 55 33.0
comp=Z,695nm,24.5s
PPT2 Papeete2 109.43 194 *e*LR LR 13 58 06.3
comp=Z,192nm,26.5s
PPT2 *e*LR LR 13 58 06.6
comp=Z,158nm,23.5s
WMQ Urumqi 113.43 48 *e*PKP **PKiKP 13 26 07.3 +1.5**
DGZ Jazzator, Alta 117.82 44 *i* PKIKP **PKiKP 13 26 15.2 +1.0**
NJ2 Nanjing 121.60 77 *e*P **PKiKP 13 26 23.4 +1.4**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
HHC Hu-ho-hao-te 123.46 65 *e*P **PKPdf 13 26 22.1 -3.2**
SONM Songino Array 125.38 56 PKP **PKPdf 13 26 28.3 -0.4**
comp=Z,0.6nm,0.7s,baz=222,slow=1.9,SNR=4.0
TXAR Lajitas Array 131.15 266 PKP **PKPdf 13 26 37.8 -2.6**
comp=Z,1.4nm,1.0s,baz=162,slow=2.3,SNR=5.9
ANMO Albuquerque 136.72 269 *i* PKIKP **PKiKP 13 26 52.2 -0.3**
KLR Kul'dur 139.87 67 *i* PKIKP **PKPdf 13 26 56.8 +1.0**
PDAR Pinedale Array 143.44 277 PKhKP PKPpre 13 26 59.5
comp=Z,1.1nm,0.6s,baz=120,slow=6.0,SNR=12
PDAR Pinedale Array 143.44 277 PKPpre 13 26 59.3
YAK Yakutsk 143.87 48 *e*PKIKP PKPab 13 26 59.5 -0.1
YAK pmax pmax
comp=Z,13nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.3s
FFC Flin Flon 144.62 299 PKPdf 13 27 03.8 -0.2
FFC Flin Flon 144.62 299 PKIKP **PKPdf 13 27 03.8 -0.2**
YSS Yuzhno-Sakhali 145.17 77 *e*PKIKP **PKPbc 13 27 04.5 -0.3**
YSS pmax pmax
comp=Z,20nm,1.0s
TIXI Tiksi 145.19 31 PKPbc 13 27 04.0 -0.2
TIXI Tiksi 145.19 31 *c i*PKIKP **PKiKP 13 27 11.0 +2.6**
TIXI pmax pmax
comp=Z,27nm,1.7s
RES Resolute Bay 145.25 334 PKPdf 13 27 05.1 +0.6
RES Resolute Bay 145.25 334 PKIKP **PKPdf 13 27 05.1 +0.6**
NVAR Mina Array Bea 146.23 264 PKPbc **PKPbc 13 27 08.8 0.0**
comp=Z,13nm,1.0s,baz=142,slow=4.3,SNR=39
DLMT Dillon 146.68 278 PKPab 13 27 10.6 -0.3
MSO Missoula 148.21 280 PKPbc **PKPbc 13 27 14.1 +0.2**
PLID Pearl Lake 148.61 276 PKPdf **PKPdf 13 27 12.8 +1.4**
O03E Paynes Creek 149.51 263 PKPdf **PKPdf 13 27 12.8 0.0**
J04A Umpqua Nationa 151.39 268 PKPab 13 27 29.3 -0.9
YKA Yellowknife Ar 152.66 311 PKPbc **PKPbc 13 27 23.2 -0.6**
comp=Z,2.0nm,1.0s,baz=68,slow=1.6,SNR=15
YKA Yellowknife Ar 152.66 311 PKPbc 13 27 23.9 +0.1
YKA Yellowknife Ar 152.66 311 PKIKP **PKPbc 13 27 23.9 +0.1**
YKAW3 Yellowknife Wh 152.66 311 PKPbc 13 27 23.8 0.0
ILAR Eielson Array 164.99 333 PKPab **PKPab 13 28 28.8 +0.8**
comp=Z,0.8nm,0.9s,baz=7.8,slow=4.9,SNR=9.1

*IDC **11** 13:12:51.6±2.3,35°.34N×27°.84E, h0km, mb3.6/3, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=50.1km s-min=27.2km az=5.0*
*THE **11** 13:12:53.5,35°.N±5°×2°.8E±°, h2km±9km, M2.9/5, MLh2.9/5*
*ISK **11** 13:12:53.1,35°.14N×27°.92E, h11km, ML3.0/11*
*ATH **11** 13:12:54.6±0.7,35°.13N×28°.05E, h10km, ML3.1/6, Manual Solution by A.Papageorgiou First location: 2020/02/11 13:14:32, This location: 2021/10/04 09:27:11 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 3 km*

ISC 11 13:12:53.2±1.5,**35°.15N**±0°.05×**27°.98E**±0°.03,**h9**km±10km, **n36**,σ1°**00**/47,**mb3.6**/3,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KARP	**Karpathos**	**0.78**	**301**	Pg	**Pg**	**13 13 07.4**	**-0.7**
KARP				Sg	**Sb**	**13 13 18.7**	**-0.7**
KARP	**Karpathos**	**0.78**	**301**	P	**Pg**	**13 13 07.2**	**-0.9**
KARP				S	**Sb**	**13 13 19.0**	**-0.4**
KARP	**Karpathos**	**0.78**	**301**	P	**Pg**	**13 13 07.0**	**-1.1**
KARP				S	**Sb**	**13 13 19.9**	**+0.5**
ARG	**Arkhangelos**	**1.07**	**6**	Pn	**Pn**	**13 13 14.4**	**+0.1**
ARG				Sn	**Sn**	**13 13 29.9**	**+0.7**
ARG	**Arkhangelos**	**1.07**	**6**	P	**Pg**	**13 13 13.9**	**+0.1**
ARG				S	**Sb**	**13 13 28.3**	**+0.4**
ARG	**Arkhangelos**	**1.07**	**6**	P	**Pn**	**13 13 15.3**	**+1.0**
ARG				S	**Sn**	**13 13 30.0**	**+0.7**
ZKR	**Zakros**	**1.44**	**269**	Pn	**Pn**	**13 13 19.4**	**0.0**
ZKR	**Zakros**	**1.44**	**269**	P	**Pn**	**13 13 19.2**	**-0.2**
ZKR	**Zakros**	**1.44**	**269**	P	**Pg**	**13 13 22.1**	**+1.2**
ZKR				S	**Sg**	**13 13 40.8**	**+1.2**
SIT2	**Siteia**	**1.53**	**273**	P	**Pg**	**13 13 22.8**	**+0.3**
DAT	**Datca**	**1.61**	**348**	Pn	**Pb**	**13 13 22.6**	**-0.5**
DAT	**Datca**	**1.61**	**348**	P	**Pb**	**13 13 22.6**	**-0.5**
DAT				S	**Sg**	**13 13 44.9**	**0.0**
KSL	**Kastellorizon**	**1.65**	**52**	P	**Pn**	**13 13 22.4**	**+0.2**
KSL				S	**Sb**	**13 13 45.2**	**+0.8**
KSL	**Kastellorizon**	**1.65**	**52**	P	**Pn**	**13 13 22.4**	**+0.2**
KSL				S	**Sb**	**13 13 44.4**	**0.0**
FETY	**Fethiye**	**1.73**	**31**	Pn	**Pb**	**13 13 24.6**	**-0.5**
FETY	**Fethiye**	**1.73**	**31**	P	**Pn**	**13 13 23.6**	**+0.1**
DALY	**Dalyan (Mula)**	**1.75**	**18**	Pn	**Pb**	**13 13 24.7**	**-0.7**
NPS	**Neapolis**	**1.94**	**274**	P	**Pn**	**13 13 27.2**	**+0.9**
NPS				S	**Sb**	**13 13 52.4**	**-0.6**
NPS	**Neapolis**	**1.94**	**274**	P	**Pb**	**13 13 28.5**	**-0.1**
BODT	**Bodrum**	**1.98**	**344**	Pn	**Pn**	**13 13 27.7**	**+0.8**
BODT	**Bodrum**	**1.98**	**344**	P	**Pn**	**13 13 28.0**	**+1.2**
YER	**Yerkesik**	**2.00**	**7**	Pn	**Pn**	**13 13 28.2**	**+1.1**
CAME	**Cameli-Denizli**	**2.09**	**31**	Pn	**Pn**	**13 13 29.7**	**+1.3**
MLSB	**Milas**	**2.15**	**356**	Pn	**Pn**	**13 13 29.0**	**-0.1**
ELL	**Elmali**	**2.23**	**44**	Pn	**Pn**	**13 13 31.9**	**+1.5**
THERA	**Ancient Thera,**	**2.37**	**302**	P	**Pn**	**13 13 33.5**	**+1.4**
IDI	**Anoyia**	**2.53**	**274**	Pn	**Pn**	**13 13 34.9**	**+0.5**
IDI	**Anoyia**	**2.53**	**274**	P	**Pn**	**13 13 36.3**	**+1.8**
APMY	**Acipayam-Deniz**	**2.55**	**24**	Pn	**Pn**	**13 13 36.3**	**+1.6**
SMG	**Samos**	**2.71**	**341**	P	**Pn**	**13 13 39.3**	**+2.4**
IMMV	**Iera Moni Meta**	**3.28**	**277**	Pn	**Pn**	**13 13 45.6**	**+0.9**
BRTR	**Keskin Array B**	**6.41**	**43**	Pn	**Pn**	**13 14 27.8**	**-0.1**
	0.1nm,0.3s,baz=235,slow=11,SNR=1.6						
	0.3nm,0.4s						
MMAI	**Mount Meron Ar**	**6.52**	**107**	Pn	**Pn**	**13 14 29.7**	**+0.4**
	4.2nm,0.3s,baz=290,slow=13,SNR=8.0						
	1.3nm,0.2s						
ESDC	**Sonseca Array**	**25.69**	**290**	P	**P**	**13 18 21.9**	**-1.6**
	1.2nm,0.8s,baz=85,slow=9.4,SNR=4.0						
	1.2nm,0.8s						
FINES	**FINESS Array B**	**26.34**	**358**	P	**P**	**13 18 26.7**	**-2.4**
	1.7nm,0.8s,baz=182,slow=10,SNR=3.5						
	1.7nm,0.8s						
MKAR	**Makanchi Array**	**41.85**	**57**	P	**P**	**13 20 44.5**	**+1.1**
	0.2nm,0.6s,baz=277,slow=6.9,SNR=2.8						
	0.2nm,0.6s						

*VAO **11** 13:49:59.5±0.3,24°.78S×70°.51W, h10km, mb5.4, Presumed earthquake*
*SJA **11** 13:50:00.3±1.6,24°.78S×70°.97W, h40km±11km, ML5.1, MW4.8*
*MOS **11** 13:50:01.6±1.4,24°.76S×70°.70W, h39km, mb5.3/19, Error ellipse: s-maj=14.0km s-min=8.4km az=100.4*
*NEIC **11** 13:50:02.6,24°.78S×70°.90W, h36km*
*NEIC **11** 13:50:02.6±0.9,24°.79S±0°.03×70°.89W±0°.05, h36km±5km, mb5.2/209, Mww5.3/22, Mwr5.3(GUC), Error ellipse: s-maj=6.5km s-min=4.5km az=101.0*
*NEIC **11** 13:50:02.6,24°.78S×70°.68W, h36km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.30; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$0.32; $M_{r\theta}$0.05; $M_{\theta\phi}$-0.16; $M_{\phi r}$-1.14; Fault plane solution: $M_0$1.19000×10^{17} NP1: ϕ_s135.90000°,δ10.16000°,λ-130.59000°. NP2: ϕ_s356.94000°,δ82.30000°,λ-83.35000°. Principal axes: T 1.2118, Plg37.0000°, Azm81.0000°; N -0.0365, Plg7.0000°, Azm176.0000°; P -1.1753, Plg52.0000°, Azm275.0000°;*
*IDC **11** 13:50:03.7±0.4,24°.79S×70°.57W, h45km±3km, mb4.7/19, mbtmp4.9/24, MS4.4/33 Error ellipse: s-maj=14.8km s-min=11.2km az=55.0*
*GUC **11** 13:50:03.1±0.9,24°.77S×70°.76W, h55km±3km, ML5.1*
*GFZ **11** 13:50:04.0,24°.81S×70°.58W, h57km, MW5.3, Moment Tensor Solution. s43 Moment tensor: M_{rr}-0.38; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-0.57; $M_{r\theta}$0.02; $M_{\theta\phi}$-2.25; $M_{\phi r}$-9.29; Fault plane solution: NP1:ϕ_s88.00000°,δ14.00000°, λ-179.00000°. NP2:ϕ_s358.00000°,δ90.00000°, λ-75.00000°. Principal axes: T 9.1300, Plg43.0000°, Azm75.0000°; N 0.8700, Plg14.0000°, Azm178.0000°; P -9.9900, Plg43.0000°, Azm281.0000°;*
*BJI **11** 13:50:06.0,24°.80S×70°.70W, h40km, Ms5.4/2, Ms7 5.2/5*
*GCMT **11** 13:50:07.6±0.1,24°.80S±0°.01×70°.63W±0°.01, h70km±2km, MW5.3/118, Moment Tensor Solution. s82,c118; s118,c185; Duration: 1s0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.31±.22; $M_{\theta\theta}$0.52±.19; $M_{\phi\phi}$-0.20±.23; $M_{r\theta}$0.40±.10; $M_{\theta\phi}$-1.29±.15; $M_{\phi r}$-9.67±.14; Best double couple: $M_0$9.76800×10^{16} NP1:ϕ_s90.00000°,δ8.00000°, λ-177.00000°. NP2:ϕ_s357.00000°,δ90.00000°, λ-82.00000°. Principal axes: T 9.5700, Plg44.0000°, Azm79.0000°; N 0.3970, Plg8.0000°, Azm177.0000°; P -9.9670, Plg45.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 13:50:02.8±0.3,**24°.80S**±0°.03×**70°.82W**±0°.04,**h45**km±2km, **h45**km:**pP-P**,**n431**,σ1**9**±**65**/**387**,**mb5.2**/138,**MS4.5**/35, **22C-9D**,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.41**	**65**		**Pn**	**13 50 13.1**	**+0.1**
PB14					**Sn**	**13 50 20.2**	**-0.1**
PB14	**IPOC Station P**	**0.41**	**65**	*e*P	**Pn**	**13 50 13.5**	**+0.4**
PB14				*e*S	**Sn**	**13 50 20.7**	**+0.4**
PB14	**IPOC Station P**	**0.41**	**65**	*i* P	**Pn**	**13 50 13.8**	**+0.8**
PB14				*i* S	**Sn**	**13 50 21.6**	**+1.3**
PB14				IAML		13 50 23.3	
	comp=Z,84µm,0.5s						
PB10	**IPOC Station P**	**1.30**	**11**		**Pn**	**13 50 24.9**	**+0.3**
PB10	**IPOC Station P**	**1.30**	**11**	⇑*i*P	**Pn**	**13 50 25.1**	**+0.5**
PB10				*e*S	**Sn**	**13 50 41.1**	**+0.3**
PB10	**IPOC Station P**	**1.30**	**11**	*i* P	**Pn**	**13 50 24.6**	**-0.1**
PB10				*i* S	**Sn**	**13 50 41.4**	**+0.5**
PB10				IAML		13 50 55.0	
	comp=Z,6µm,1.2s						
AC01	**Pan de Azucar**	**1.36**	**172**		**Pn**	**13 50 25.9**	**+0.6**
AC01				Sn	**Sn**	**13 50 42.8**	**+0.7**
AC01	**Pan de Azucar**	**1.36**	**172**	⇑*i*P	**Pn**	**13 50 25.9**	**+0.6**
AC01				*e*S	**Sn**	**13 50 42.6**	**+0.4**
AC01				IAML		13 50 43.9	
	comp=N,40µm,0.2s						
AC01	**Pan de Azucar**	**1.36**	**172**	*i* P	**Pn**	**13 50 25.7**	**+0.4**
AC01				*i* S	**Sn**	**13 50 43.1**	**+0.9**
AC01				IAML		13 50 45.0	
	comp=Z,14µm,0.3s						
PB05	**IPOC Station P**	**2.02**	**16**		**Pn**	**13 50 34.5**	**-0.1**
PB05	**IPOC Station P**	**2.02**	**16**	⇑*i*P	**Pn**	**13 50 34.7**	**+0.2**
PB05				*e*S	**Sn**	**13 50 57.7**	**-0.9**
PB05				IAML		13 50 59.8	
	comp=N,13µm,0.7s						
PB05	**IPOC Station P**	**2.02**	**16**	*i* P	**Pn**	**13 50 34.8**	**+0.2**
PB05				*i* S	**Sn**	**13 50 58.1**	**-0.5**
PB05				IAML		13 51 12.7	
	comp=Z,7µm,0.8s						
PB06	**IPOC Station P**	**2.38**	**29**		**Pn**	**13 50 39.8**	**+0.3**
PB06	**IPOC Station P**	**2.38**	**29**	⇑*i*P	**Pn**	**13 50 39.8**	**+0.3**
PB06				IAML		13 51 24.5	
	comp=N,8µm,0.6s						
PB06	**IPOC Station P**	**2.38**	**29**	*i* P	**Pn**	**13 50 39.8**	**+0.3**
PB06				*i* S	**Sn**	**13 51 08.2**	**+0.7**
PB06				IAML		13 51 24.3	
	comp=Z,8µm,0.9s						
AC02	**Maricunga**	**2.53**	**143**		**Pn**	**13 50 43.5**	**+1.6**
AC02	**Maricunga**	**2.53**	**143**	*e*P	**Pn**	**13 50 43.5**	**+1.6**
AC02	**Maricunga**	**2.53**	**143**	*i* P	**Pn**	**13 50 43.9**	**+2.0**
AC02				IAML		13 51 26.6	
	comp=Z,8µm,0.4s						
GO03	**Copiapo**	**2.83**	**169**		**Pn**	**13 50 46.1**	**+0.5**
GO03	**Copiapo**	**2.83**	**169**	*e*P	**Pn**	**13 50 46.0**	**+0.3**
GO03				IAML		13 51 21.8	
	comp=E,9µm,0.4s						
GO03				IAML		13 51 21.8	
	comp=E,9µm,0.5s						
GO03	**Copiapo**	**2.83**	**169**	*i* P	**Pn**	**13 50 46.3**	**+0.7**
GO03				*i* S	**Sn**	**13 51 18.9**	**+0.4**
AF01	**San Pedro de A**	**3.04**	**53**		**Pn**	**13 50 49.9**	**+1.2**
AF01	**San Pedro de A**	**3.04**	**53**	*e*P	**Pn**	**13 50 50.1**	**+1.4**
AF01	**San Pedro de A**	**3.04**	**53**	*i* P	**Pn**	**13 50 49.7**	**+1.1**
AF01				IAML		13 52 01.7	
	comp=Z,26µm,1.4s						
PB07	**IPOC Station P**	**3.18**	**16**		**Pn**	**13 50 50.3**	**-0.2**
PB07	**IPOC Station P**	**3.18**	**16**	*e*P	**Pn**	**13 50 50.2**	**-0.3**
PB07				IAML		13 51 50.4	
	comp=E,6µm,0.8s						
PB07	**IPOC Station P**	**3.18**	**16**	*i* P	**Pn**	**13 50 49.9**	**-0.5**
PB07				IAML		13 51 39.3	
	comp=Z,4µm,1.3s						
PB09	**IPOC Station P**	**3.32**	**26**		**Pn**	**13 50 53.1**	**+0.7**
PB09	**IPOC Station P**	**3.32**	**26**	⇑*i*P	**Pn**	**13 50 53.3**	**+0.8**
PB09				IAML		13 51 55.7	
	comp=N,4µm,0.5s						
PB09	**IPOC Station P**	**3.32**	**26**	*i* P	**Pn**	**13 50 52.9**	**+0.4**
PB09				IAML		13 51 55.7	
	comp=E,6µm,0.9s						
AC04	**Llanos de Chal**	**3.40**	**184**		**Pn**	**13 50 52.1**	**-1.3**
AC04	**Llanos de Chal**	**3.40**	**184**	*e*P	**Pn**	**13 50 52.0**	**-1.3**
AC04				IAML		13 51 57.8	
	comp=E,3µm,0.4s						
AC04	**Llanos de Chal**	**3.40**	**184**	*i* P	**Pn**	**13 50 52.9**	**-0.5**
AC04				IAML		13 52 13.7	
	comp=Z,2µm,0.8s						
PB02	**IPOC Station P**	**3.57**	**14**		**Pn**	**13 50 55.3**	**-0.5**
PB02	**IPOC Station P**	**3.57**	**14**	*e*P	**Pn**	**13 50 55.0**	**-0.8**
PB02				IAML		13 51 38.4	
	comp=N,4µm,0.2s						
PB02	**IPOC Station P**	**3.57**	**14**	*i* P	**Pn**	**13 50 55.8**	**0.0**
PB02				IAML		13 52 01.9	
	comp=Z,5µm,0.3s						
PB01	**IPOC Station P**	**3.94**	**18**		**Pn**	**13 51 00.7**	**-0.1**
PB01	**IPOC Station P**	**3.94**	**18**	⇑*e*P	**Pn**	**13 51 00.8**	**-0.1**
AC05	**El Transito**	**4.05**	**173**		**Pn**	**13 51 03.0**	**+0.6**
AC05	**El Transito**	**4.05**	**173**	*e*P	**Pn**	**13 51 03.2**	**+0.8**
AC05	**El Transito**	**4.05**	**173**	*i* P	**Pn**	**13 51 03.4**	**+1.0**
AC05				IAML		13 52 19.7	
	comp=Z,3µm,0.9s						
SALTA		**4.12**	**83**	⇑*e*P	**Pn**	**13 51 05.4**	**+1.7**
SALTA		**4.12**	**83**	*i* P	**Pn**	**13 51 06.0**	**+2.3**
SALTA				IAML		13 52 29.7	
	comp=Z,4µm,2.5s						
LCO	**Las Campanas**	**4.20**	**179**		**Pn**	**13 51 03.9**	**-0.6**
LCO	**Las Campanas**	**4.20**	**179**	*e*P	**Pn**	**13 51 03.7**	**-0.8**
LCO	**Las Campanas**	**4.20**	**179**	*i* P	**Pn**	**13 51 04.7**	**+0.1**
LCO				IAML		13 52 25.9	
	comp=Z,5µm,0.8s						
TINO	**Tinogasta**	**4.36**	**139**	*i* P	**Pn**	**13 51

TA02 Huaiquique 4.55 8 *eP* **Pn 13 51 08.7 -0.5**
VCA Vinchina 4.56 150⇑ *eP* **Pn 13 51 12.6 +3.1**
VCA Vinchina 4.56 150 *i P* **Pn 13 51 12.3 +2.8**
VCA IAML 13 52 28.5
comp=Z,2µm,1.4s
FSA Cafayete 4.56 108 *i P* **Pn 13 51 12.2 +2.6**
SLA San Lorenzo 4.83 90 *eP* **Pn 13 51 15.1 +1.9**
SLA San Lorenzo 4.83 90 *i P* **Pn 13 51 16.8 +3.6**
SLA IAML 13 52 40.4
comp=Z,457nm,2.9s
PB08 IPOC Station P 4.89 19⇑ *eP* **Pn 13 51 13.9 -0.3**
PB11 IPOC Station P 5.13 12⇑ *eP* **Pn 13 51 16.0 -1.3**
CO01 Juntas del Tor 5.20 173 *i P* **Pn 13 51 19.6 +1.3**
CO01 IAML 13 52 50.7
comp=Z,1µm,1.4s
AHML Horco Molle 5.32 113⇑ *eP* **Pn 13 51 21.4 +1.6**
GO01 Chusmiza 5.32 17 *i P* **Pn 13 51 20.6 +0.3**
GO01 IAML 13 52 49.1
comp=Z,1µm,1.5s
YJA Yavi 5.52 63 *eP* **Pn 13 51 24.6 +1.7**
LPAZ La Paz 8.84 17 P **Pn 13 52 09.7 +1.2**
comp=Z,40nm,0.4s,baz=200,slow=5.3,SNR=184
LPAZ LR LR 13 55 54.5
comp=Z,2µm,21.9s,baz=195,slow=40
LPAZ La Paz 8.84 17 *eP* **Pn 13 52 09.3 +0.7**
LPAZ La Paz 8.84 17 P **Pn 13 52 09.3 +0.7**
comp=Z,2µmcomp=Z,71nm,0.5s
H03N1 Juan Fernandez 11.14 218 P **Pn 13 52 39.1 -0.1**
baz=109,slow=15,SNR=504
H03N1 S **Sn 13 54 38.7 -3.6**
H03N1 T T 14 04 19.9
baz=45,slow=71,SNR=373
H03N2 Juan Fernandez 11.15 218 P **Pn 13 52 39.3 -0.1**
baz=109,slow=15,SNR=411
H03N2 S **Sn 13 54 38.6 -3.9**
H03N2 T T 14 04 19.3
baz=45,slow=71,SNR=252
H03N3 Juan Fernandez 11.16 218 P **Pn 13 52 39.1 -0.4**
baz=109,slow=15,SNR=764
H03N3 S **Sn 13 54 38.4 -4.3**
H03N3 T T 14 04 19.9
baz=45,slow=71,SNR=266
VA04 Juan Fernndez 11.25 217 Pn 13 52 39.2 -1.7
H03S3 Juan Fernandez 11.43 216 P **Pn 13 52 41.8 -1.3**
baz=30,slow=20,SNR=366
H03S3 S **Sn 13 54 44.1 -5.2**
baz=256,slow=28,SNR=14
H03S1 Juan Fernandez 11.44 216 P **Pn 13 52 41.9 -1.4**
baz=30,slow=20,SNR=216
H03S1 S **Sn 13 54 44.6 -5.0**
baz=256,slow=28,SNR=7.8
H03S2 Juan Fernandez 11.45 216 P **Pn 13 52 42.0 -1.4**
baz=30,slow=20,SNR=270
H03S2 S **Sn 13 54 45.2 -4.6**
baz=256,slow=28,SNR=10
CPUP Villa Florida 12.27 100 P **Pn 13 52 53.6 -1.4**
comp=Z,14nm,1.1s,baz=288,slow=12,SNR=14
CPUP LR LR 13 58 14.3
comp=Z,2µm,20.0s,baz=276,slow=41
CPUP Villa Florida 12.27 100 Pn 13 52 54.2 -0.8
CPUP Villa Florida 12.27 100 P **Pn 13 52 54.2 -0.8**
CPUP Villa Florida 12.27 100 *eP* **Pn 13 52 51.2 -3.7**
MURT Porto Murtinho 12.54 78 *eP* **Pn 13 52 54.6 -4.0**
SIV San Ignacio 12.55 48 P **Pn 13 52 56.9 -3.4**
comp=Z,19nm,0.3s,baz=228,slow=9.4,SNR=154
PSAL Palomas, Salto 13.24 121 *eP* **Pn 13 53 05.2 -3.0**
BDQN Bodoquena, MS 13.69 74 *eP* **Pn 13 53 10.8 -3.6**
NNA Nana 13.96 335 S **Sn 13 55 50.4 -1.5**
comp=Z,12nm,0.4s,baz=206,slow=21,SNR=3.7
NNA LR LR 13 58 05.3
comp=Z,940nm,21.6s,baz=150,slow=34
PTLB Pontes e Lacer 14.37 52 *eP* Pn 13 53 18.9 -4.8
AMBA Amambai (Brazi 14.60 86 *eP* **Pn 13 53 23.3 -3.4**
AQDB Aquidauana 14.60 76 *eP* **Pn 13 53 22.7 -4.0**
LR05 Currie 15.42 183 Pn 13 53 37.2 0.0
LR05 IAmb IAmb 13 53 44.0
comp=Z,144nm,0.9s
VILB Vilhena 15.47 42 *eP* **Pn 13 53 34.3 -3.8**
PLCA Paso Flores 15.89 179 P **Pn 13 53 43.2 -0.2**
comp=Z,21nm,0.9s,baz=0.5,slow=11,SNR=14
PLCA LR LR 13 59 49.1
comp=Z,2µm,21.4s,baz=358,slow=37
PLCA Paso Flores 15.89 179 Pn 13 53 42.8 -0.6
PLCA Paso Flores 15.89 179 *eP* **Pn 13 53 43.1 -0.3**
CPSB Cacapava Do Su 16.38 114 *eP* **Pn 13 53 45.6 -4.0**
PP1B Ponte de Pedra 16.49 67 *eP* **Pn 13 53 44.5 -6.6**
PLTB Pedras Altas 16.66 118 *eP* **Pn 13 53 49.3 -3.9**
SALV Santo Antonio 16.70 61 *eP* **Pn 13 53 49.5 -4.3**
TRCB Terra Rica 16.76 87 *eP* **Pn 13 53 52.0 -2.5**
ITAB Concordia 16.97 102 *eP* **Pn 13 53 54.0 -3.0**
PTGB Pitanga 17.04 94 *eP* **Pn 13 53 55.9 -2.0**
CZSB Cruzeiro do Su 17.07 354 *eP* **P 13 53 59.8 +0.2**
CZSB Cruzeiro do Su 17.07 354 P **P 13 53 59.2 -0.4**
C2SB Chapadao do Su 17.74 74 *eP* **Pn 13 54 04.2 -2.3**
LDASE Londrina, Braz 18.04 90 *eP* **P 13 54 06.7 -3.6**
LL07 Hotel Espejo d 18.12 186 IAmb IAmb 13 54 16.8
comp=Z,268nm,1.7s
PCMB Pacaembu 18.25 84 *eP* **P 13 54 09.1 -3.5**
CNLB Canela 18.34 109 *eP* **P 13 54 10.9 -2.6**
LL02 Futaleuf 18.36 182 P **P 13 54 13.7 0.0**
GO07 Milladeo Hill, 18.42 187 IAmb IAmb 13 54 21.9
comp=Z,68nm,0.4s
PDRB Porto dos Gac 18.71 48 *eP* **P 13 54 14.1 -3.7**
ATAH Atahualpa 19.00 336 P **Pn 13 54 23.4 +1.0**
comp=Z,4.3nm,0.7s,baz=148,slow=8.4,SNR=6.2
FRTB Fartura 19.46 90 *eP* **P 13 54 23.7 -2.2**
ITRB Iturama 19.60 79 *eP* **P 13 54 25.1 -2.3**
CLDB Colider 19.88 48 *eP* **P 13 54 28.9 -1.6**
ARAG Araguaiana, MT 19.98 67 *eP* **P 13 54 29.7 -1.8**
COYC Coyhaique 20.75 183 P **P 13 54 40.0 +0.4**
COYC IAmb IAmb 13 54 45.5
comp=Z,84nm,1.1s
BB19B Bebedouro 20.86 84 *eP* **P 13 54 38.5 -2.6**
SPB Sao Paulo 21.36 92 *eP* **P 13 54 44.2 -2.2**
PET01 Itanhaem-SP 21.42 94 *eP* **P 13 54 44.8 -2.2**
RCLB Rio Claro- Sao 21.48 88 *eP* **P 13 54 44.4 -3.3**
VAO Valinhos 21.88 90 P **P 13 54 49.6 -2.5**
VAO Valinhos 21.88 90 *eP* **P 13 54 49.4 -2.6**
TEFE Tefe 21.99 17 *eP* **P 13 54 53.4 +0.2**
IPMB Ipameri, GO 22.10 77 *eP* **P 13 54 51.1 -3.3**
MCRA Macar, Loja 22.13 335 P **P 13 54 56.7 +1.9**
SNDB Serra Nova Dou 22.45 59 *eP* **P 13 54 55.1 -3.1**
NPGB Novo Progresso 23.04 43 *eP* **P 13 55 01.2 -3.1**
PARB Paraibuna 23.04 92 *eP* **P 13 55 01.6 -2.8**
BDFB Brasilia 23.23 71 P **P 13 55 03.6 -2.7**
comp=Z,238nm,1.2s,baz=250,slow=10,SNR=76
BDFB pP **pP 13 55 16.4 -1.6**
comp=Z,76nm,0.9s,baz=235,slow=7.1,SNR=12
BDFB LR LR 14 05 03.3
comp=Z,1µm,20.2s,baz=239,slow=39
comp=Z,238nm,1.2s
BDFB Brasilia 23.23 71 P **P 13 55 03.0 -3.3**
PMNB Patos De Minas 23.48 79 *eP* **P 13 55 05.2 -3.5**
MACA Manacapuru-AM 23.63 26 P **P 13 55 08.9 -1.1**
MACA IAmb IAmb 13 55 36.4
comp=Z,112nm,0.9s
MACA Manacapuru-AM 23.63 26 *eP* **P 13 55 09.5 -0.5**
GO08 Villa O'Higgin 23.66 183 P **P 13 55 08.7 -1.3**
BSCB Bom Sucesso 24.27 86 *eP* **P 13 55 13.9 -2.2**
SGC2 Sao Gabriel da 24.78 9 P **P 13 55 20.5 -0.1**
comp=Z,2µmcomp=Z,98nm,1.4s
ITTB Itaituba 24.96 38 *eP* **P 13 55 20.9 -1.4**
PTLC Puerto Leguiza 25.12 351 P **P 13 55 22.6 -1.1**
CASC Dorado de Casc 25.58 345 P **P 13 55 30.9 +2.9**
comp=Z,2µmcomp=Z,135nm,1.3s
BONI La Bonita 25.93 344 P **P 13 55 34.2 +2.9**
comp=Z,1µmcomp=Z,104nm,1.2s
OTAV Otavalo 25.97 342 *eP* **P 13 55 34.8 +3.0**
OTAV Otavalo 25.97 342 P **P 13 55 35.7 +3.9**
comp=Z,654nmcomp=Z,40nm,1.0s
DIAM Diamantina, MG 26.04 81 *eP* **P 13 55 30.2 -1.9**
DUB01 Friburgo-RJ 26.22 90 *eP* **P 13 55 32.4 -1.2**
FLOC Florencia 26.64 349 P **P 13 55 40.0 +2.5**
comp=Z,6µmcomp=Z,1µmcomp=Z,98nm,1.4s
JANB Januaria 26.69 74 *eP* **P 13 55 36.3 -1.7**
CAM01 Campos-RJ 26.92 90 *eP* **P 13 55 38.8 -1.2**
GARC Garzon, Huila 27.21 350 P **P 13 55 45.7 +2.9**
comp=Z,966nmcomp=Z,38nm,1.3s
SMTB Santa Maria do 27.23 58 *eP* **P 13 55 41.5 -1.3**
PRPB Parauapebas 27.36 51 *eP* **P 13 55 42.6 -1.4**
BBAC Balboa, Cauca 27.38 346 P **P 13 55 47.0 +2.7**
comp=Z,833nmcomp=Z,70nm,1.2s
SDBA SAO DESIDERIO 27.42 68 *eP* **P 13 55 42.8 -1.7**
POPC Popayan, Colom 27.77 347 P **P 13 55 50.6 +2.8**
comp=Z,608nmcomp=Z,46nm,1.4s
ALF01 Guarapari-ES 28.04 88 *eP* **P 13 55 49.1 -0.9**
URMC La Uribe, Meta 28.09 352 P **P 13 55 52.5 +2.0**
comp=Z,745nmcomp=Z,48nm,1.5s
SJMB Sao Joao De Ma 28.15 83 *eP* **P 13 55 49.5 -1.5**
JAMC Jamundi, Valle 28.42 348 P **P 13 55 56.2 +2.6**
comp=Z,38nm,1.3s
PRAC Prado 28.62 351 P **P 13 55 57.6 +2.4**
comp=Z,79nm,1.5s
RIB01 Linhares ES 28.68 85 *eP* **P 13 55 53.7 -2.1**
BOAV Boa Vista 28.82 22 P **P 13 55 56.6 -0.4**
BOAV Boa Vista 28.82 22 *eP* **P 13 55 56.9 0.0**
BOAV Boa Vista 28.82 22 P **P 13 55 57.2 +0.3**
comp=Z,32nm,1.3s
ORTC Ortega, Tolima 28.86 351 P **P 13 56 00.1 +2.8**
comp=Z,1µmcomp=Z,119nm,1.3s
YOTC Yotoco, Valle 29.11 349 P **P 13 56 01.3 +1.7**
comp=Z,19nm,2.0s
CHIC Chingaza 29.39 354 P **P 13 56 03.5 +1.1**
comp=Z,13nm,1.1s
ROSC El Rosal 29.66 353 LR LR 14 08 43.7
comp=Z,814nm,21.6s,baz=203,slow=38
USHA Ushuaia 30.05 177 LR LR 14 08 28.3
comp=Z,1µm,20.2s,baz=38,slow=37
GUA01 Guaratinga, BA 30.09 80 *eP* **P 13 56 07.0 -1.2**
SPBC San Pablo de B 30.43 354 P **P 13 56 12.7 +1.4**
comp=Z,6.2nm,0.7s
NORC Norcasia 30.44 352 P **P 13 56 13.1 +1.8**
comp=Z,23nm,1.2s
RUSC La Rusia 30.59 356 P **P 13 56 14.8 +1.7**
CMC01 Camacan, BA 30.80 78 *eP* **P 13 56 12.7 -1.7**
NBIT Itapeh - BA 31.04 78 *eP* **P 13 56 15.6 -1.0**
SDV Santo Domingo 33.48 0 LR LR 14 11 38.6
comp=Z,455nm,19.2s,baz=198,slow=39
SDV Santo Domingo 33.48 0 *eP* **P 13 56 36.9 -1.2**
MDP Montagnes des 34.59 33 LR LR 14 11 39.6
comp=Z,432nm,20.1s,baz=175,slow=38
NBPS Pedro II - PI 34.77 59 *eP* **P 13 56 48.7 -0.6**
NBPA Parau_RN 37.45 65 *eP* **P 13 57 11.7 -0.5**
JTS Las Juntas de 37.51 337 LR LR 14 10 16.4
comp=Z,180nm,21.7s,baz=175,slow=32
JTS Las Juntas de 37.51 337 *i P* **P 13 57 11.1 -1.4**
JTS pmax pmax
comp=Z,8.0nm,1.1s
RCBR Riachuelo 38.42 66 P **P 13 57 19.2 -1.1**
comp=Z,26nm,0.9s,baz=246,slow=14,SNR=16
RCBR pP **pP 13 57 31.5 -1.5**
comp=Z,51nm,1.1s,baz=238,slow=16,SNR=13
RCBR LR LR 14 13 44.5
comp=Z,289nm,20.2s,baz=246,slow=37
comp=Z,26nm,0.9s
RCBR Riachuelo 38.42 66 P **P 13 57 20.2 -0.1**
RCBR **pP 13 57 33.4 +0.4**
RCBR Riachuelo 38.42 66 P **P 13 57 20.2 -0.1**
RCBR *SP **pP 13 57 33.4 +0.4**
RCBR pmax pmax
comp=Z,355nm,1.3s
RCBR Riachuelo 38.42 66 *eP* **P 13 57 19.9 -0.4**
RCBR Riachuelo 38.42 66 P **P 13 57 19.9 -0.4**
RCBR x x 13 57 31.4
RCBR x x 13 57 34.4
NBPV Pedro Velho 38.61 68 *eP* **P 13 57 22.3 +0.4**
HOPE Hope Point 38.92 148 P **P 13 57 24.4 +0.4**
HOPE IAmb IAmb 13 57 26.0
comp=Z,74nm,1.2s
HOPE Hope Point 38.92 148 P **P 13 57 24.4 +0.4**
HOPE pmax pmax
comp=Z,74nm,1.2s
PMSA Palmer Station 40.21 176 LR LR 14 13 14.1
comp=Z,423nm,21.1s,baz=333,slow=35
MTO3 Montecristo 42.96 333 P **P 13 58 00.7 +2.8**
APG El Apazote 43.96 332 LR LR 14 13 16.1
comp=Z,9.2nm,18.0s,baz=291,slow=32
TLIG Tlapa 50.05 325 P **P 13 58 52.5 -0.8**
TLIG IAmb IAmb 13 58 57.0
comp=Z,28nm,1.4s
BELA Belgrano 2 55.75 171 P **P 13 59 35.4 +0.9**
553A Crawfordville 56.22 346 P **P 13 59 38.3 -0.1**
VNA3 Neumayer Olymp 57.55 160 ⇓P **P 13 59 48.0 +0.6**
comp=Z,36nm,0.8s
352A Blakely 57.57 346 P **P 13 59 47.9 0.0**
VNA1 Neumayer--Stat 57.80 160 ⇓P **P 13 59 50.1 +1.0**
comp=Z,42nm,1.1s
VNA2 Neumayer--Watz 58.15 160 ⇓P **P 13 59 52.2 +0.5**
comp=Z,22nm,0.6s,baz=288,slow=7.9
H06S1 SOCORRO T 58.32 314 T T 15 03 16.1
SNR=51
250A Grady 58.36 345 P **P 13 59 53.4 0.0**
152A Waverly Hall 58.67 346 P **P 13 59 55.3 -0.3**
152A IAmb IAmb 14 00 16.9
comp=Z,23nm,1.0s
GOGA Godfrey 59.13 348 P **P 13 59 58.4 -0.4**
GOGA IAmb IAmb 14 00 20.1
comp=Z,14nm,1.1s
GOGA Godfrey 59.13 348 P **P 13 59 58.4 -0.4**
GOGA pmax pmax
comp=Z,14nm,1.1s
HKT Hockley 59.50 335 *i P* **P 14 00 01.2 -0.1**
HKT pmax pmax
comp=Z,10.0nm,1.3s
JSC Jenkinsville 59.59 350 IAmb IAmb 14 00 41.5
comp=Z,17nm,0.6s
Y52A Lilburn 59.69 347 IAmb IAmb 14 00 24.1
comp=Z,26nm,1.3s
SNAA Sanae 59.77 160 ⇓P **P 14 00 03.5 +0.6**
comp=Z,818nm,0.9s
SNAA Sanae 59.77 160 P **P 14 00 02.9 0.0**
comp=Z,49nm,1.0s,baz=281,slow=5.1,SNR=24
comp=Z,49nm,1.0s
SNAA Sanae 59.77 160 P **P 14 00 02.9 0.0**
SNAA Sanae 59.77 160 *ce* **P 14 00 03.1 +0.2**
SNAA pmax pmax
comp=Z,87nm,1.3s
X48A Hartselle 60.91 345 IAmb IAmb 14 00 32.5
comp=Z,30nm,1.0s
DRIO Del Rio 61.04 330 IAmb IAmb 14 00 28.6
comp=Z,25nm,1.2s
V55A Taylorsville 61.12 350 IAmb IAmb 14 00 34.5
comp=Z,39nm,1.1s
W50A Signal Mountai 61.23 346 IAmb IAmb 14 00 34.9
comp=Z,35nm,1.0s
CPCT Cooper Cave 61.31 347 IAmb IAmb 14 00 35.4
comp=Z,36nm,1.0s
HPIG 61.45 324 IAmb IAmb 14 00 18.9
comp=Z,23nm,1.2s
LPIG La Paz 61.87 319 LR LR 14 21 59.4
comp=Z,94nm,21.8s,baz=134,slow=31
BRDY Brady 61.95 333 IAmb IAmb 14 00 40.6
comp=Z,12nm,1.0s
V48A Smith Brothers 62.09 345 IAmb IAmb 14 00 40.5
comp=Z,42nm,1.1s
TZTN Tazewell 62.19 348 P **P 14 00 19.5 -0.1**
TZTN IAmb IAmb 14 01 21.2
comp=Z,53nm,1.8s
CLTN Cedars of Leba 62.31 346 P **P 14 00 20.6 +0.2**
CLTN IAmb IAmb 14 00 42.0
comp=Z,18nm,1.0s
TXAR Lajitas Array 62.40 328 P **P 14 00 23.6 +2.3**
comp=Z,3.0nm,1.0s,baz=140,slow=9.9,SNR=19
TXAR LR LR 14 23 26.3
comp=Z,207nm,21.9s,baz=130,slow=32
comp=Z,3.0nm,1.0s
TXAR Lajitas Array 62.40 328 P **P 14 00 22.8 +1.6**
OZNA Ozona 62.55 331 P **P 14 00 22.3 +0.1**
OZNA IAmb IAmb 14 00 38.9
comp=Z,20nm,1.2s
WVT Waverly 62.70 345 P **P 14 00 22.8 -0.2**
WVT IAmb IAmb 14 00 44.0
comp=Z,27nm,0.9s
WVT Waverly 62.70 345 P **P 14 00 22.8 -0.2**
WVT pmax pmax
comp=Z,27nm,0.9s
WVT Waverly 62.70 345 P **P 14 00 22.0 -0.9**
WVT x x 14 00 37.0
MIAR Mount Ida 62.85 339 P **P 14 00 24.9 +0.8**
MIAR IAmb IAmb 14 00 26.1
comp=Z,34nm,1.3s
MIAR Mount Ida 62.85 339 P **P 14 00 24.9 +0.8**
MIAR pmax pmax
comp=Z,34nm,1.3s
WHAR Wooly Hollow 63.13 340 IAmb IAmb 14 00 41.8
comp=Z,20nm,1.1s
ALPN Alpine 63.25 328 IAmb IAmb 14 00 44.1
comp=Z,53nm,1.9s
LCAR Lake Charles 63.52 342 IAmb IAmb 14 00 29.8
comp=Z,35nm,1.3s
TPB05 Hovey Rd 63.55 329 IAmb IAmb 14 02 28.7
comp=Z,9.5nm,0.8s
FCAR Ozark Folk Cen 63.64 341 IAmb IAmb 14 00 30.8
comp=Z,11nm,0.9s
MNHN Monahans 63.64 330 IAmb IAmb 14 00 32.7
comp=Z,45nm,1.2s
TPB01 Permian Basin 63.79 329 IAmb IAmb 14 00 34.0
comp=Z,36nm,1.3s
PBMO Poplar Bluff 63.98 343 IAmb IAmb 14 00 53.1
comp=Z,26nm,1.1s
APMT Aspermont 64.19 333 IAmb IAmb 14 00 35.7
comp=Z,45nm,1.3s
VHRN Van Horn 64.24 328 IAmb IAmb 14 00 50.7
comp=Z,41nm,1.3s
129A Stewart Farms, 64.33 331 IAmb IAmb 14 00 50.6
comp=Z,12nm,1.2s
NVL N'lazarevskaya 64.40 159 *eP* **P 14 00 34.1 +0.3**
NVL *e* 14 01 08.1
NVL *e* 14 02 55.8
NVL *e*PPP PPP 14 04 27.2
NVL *e*S **S 14 09 10.1 +1.4**
NVL *e*SS **SS 14 13 21.6 +2.9**
NVL pmax pmax
comp=Z,83nm,1.2s
NVL MLR MLR
comp=Z,413nm,20.0s
HHAR Hobbs 64.56 339 IAmb IAmb 14 00 37.2
comp=Z,21nm,1.3s
MGMO Mountain Grove 64.85 341 IAmb IAmb 14 00 59.3
comp=Z,30nm,1.3s
DEOK Depew 65.02 337 IAmb IAmb 14 00 40.1
comp=Z,61nm,1.5s
MNTX Cornudas Mount 65.18 328 IAmb IAmb 14 00 57.8
comp=Z,29nm,1.6s
QUOK Quay 65.39 337 IAmb IAmb 14 00 42.7
comp=Z,34nm,1.2s
CCM Cathedral Cave 65.40 342 P **P 14 00 40.4 -0.3**
CCM IAmb IAmb 14 01 02.6
comp=Z,34nm,0.9s
CCM Cathedral Cave 65.40 342 P **P 14 00 40.4 -0.3**
CCM pmax pmax
comp=Z,34nm,1.0s
QSPA South Pole Qui 65.40 180 P **P 14 00 42.0 +1.4**
comp=Z,13nm,0.8s,baz=157,slow=6.0,SNR=9.0
QSPA LR LR 14 28 47.4
comp=Z,102nm,19.6s,baz=165,slow=36
comp=Z,13nm,0.8s
QSPA South Pole Qui 65.40 180 P **P 14 00 41.6 +1.0**
QSPA IAmb IAmb 14 01 07.3
comp=Z,28nm,1.1s
QSPA South Pole Qui 65.40 180 P **P 14 00 42.0 +1.4**
QSPA x x 14 00 56.5
QSPA PcP **PcP 14 01 16.6 +4.2**
OK048 Pawnee Station 65.69 337 IAmb IAmb 14 00 44.8
comp=Z,58nm,1.5s
OK051 E0350 and S346 65.73 337 IAmb IAmb 14 01 05.3
comp=Z,47nm,1.3s
SMWD Samnorwood 65.78 334 IAmb IAmb 14 00 45.7
comp=Z,42nm,1.2s
MSTX Muleshoe 65.87 331 IAmb IAmb 14 01 09.0
comp=Z,32nm,1.0s
T35A Sooner Cattle 65.99 338 IAmb IAmb 14 01 06.9
comp=Z,19nm,1.0s
BLOK Blackwell 66.10 337 IAmb IAmb 14 01 07.6
comp=Z,41nm,1.2s
P40A Paris 67.00 342 IAmb IAmb 14 01 13.0
comp=Z,41nm,1.1s
121A Cookes Peak, D 67.04 327 IAmb IAmb 14 00 56.0
comp=Z,71nm,1.8s
P38A Dawn 67.51 341 IAmb IAmb 14 01 16.3
comp=Z,54nm,1.5s
ELIB Princess Elisa 67.93 160 *dP* **P 14 00 56.8 +0.2**
ELIB *dx* x 14 01 12.4
J59A Piesco 68.01 357 IAmb IAmb 14 01 19.4
comp=Z,42nm,1.4s
R32A Long Quarter, 68.11 337 IAmb IAmb 14 01 21.4
comp=Z,33nm,0.9s
ANMO Albuquerque 68.35 329 *ce* P **P 14 00 59.2 -0.6**
ANMO pmax pmax
comp=Z,44nm,2.5s
ANMO Albuquerque 68.35 329 P **P 14 01 02.6 +2.7**
L40A Anamosa 69.15 344 IAmb IAmb 14 01 26.1
comp=Z,36nm,0.9s
T25A Trinidad 69.26 332 IAmb IAmb 14 01 23.5
comp=Z,48nm,1.6s
WBO Williamsburg 69.58 357 IAmb IAmb 14 01 08.8
comp=Z,38nm,1.2s
SADO Sadowa 69.65 354 LR LR 14 34 20.9
comp=Z,212nm,19.4s,baz=178,slow=38
G62A West of Eustis 69.68 0 P **P 14 01 07.8 +0.3**
JFWS Jewell Farm 69.72 345 P **P 14 01 08.1 +0.2**
JFWS IAmb IAmb 14 01 29.8
comp=Z,20nm,0.9s
JFWS Jewell Farm 69.72 345 P **P 14 01 08.1 +0.2**
JFWS pmax pmax
comp=Z,20nm,0.9s
TRQ Mont Tremblant 70.77 357 IAmb IAmb 14 01 36.6
comp=Z,30nm,1.1s
Q24A Divide 71.11 332 IAmb IAmb 14 01 40.7
comp=Z,20nm,1.0s
MVCO Mesa Verde 71.15 329 IAmb IAmb 14 01 42.9
comp=Z,16nm,0.9s
WUAZ Wupatki 71.21 326 IAmb IAmb 14 01 42.0
comp=Z,23nm,1.1s
DBIC Dimbokro 71.36 73 P **P 14 01 17.8 -0.7**
comp=Z,20nm,0.6s,baz=255,slow=5.9,SNR=34
DBIC LR LR 14 30 40.6
comp=Z,833nm,21.0s,baz=256,slow=34
comp=Z,20nm,0.6s
DBIC Dimbokro 71.36 73 P **P 14 01 17.6 -0.9**
DBIC Dimbokro 71.36 73 P **P 14 01 17.7 -0.9**
D62A Allapoint, All 71.56 1 P **P 14 01 19.6 +0.6**
D62A IAmb IAmb 14 01 21.5
comp=Z,19nm,0.8s
BAR Barrett 71.96 320 IAmb IAmb 14 01 25.2
comp=Z,32nm,1.4s
PV02 Paradox Valley 72.07 329 IAmb IAmb 14 01 40.8
comp=Z,58nm,1.5s
ECSD EROS Data Cent 72.19 341 IAmb IAmb 14 01 39.2
comp=Z,48nm,1.4s
PV19 Morning Glory 72.27 329 IAmb IAmb 14 01 41.6
comp=Z,67nm,1.8s
PV10 Paradox Valley 72.34 329 IAmb IAmb 14 01 47.8
comp=Z,18nm,0.9s
LDAQ Lac Daran 72.43 360 IAmb IAmb 14 01 47.0
comp=Z,44nm,1.4s
PFO Pinyon Flats O 72.52 321 LR LR 14 27 24.2
comp=Z,223nm,20.4s,baz=124,slow=31
O20A White River Ci 73.41 331 IAmb IAmb 14 01 54.5
comp=Z,30nm,0.9s
P17A Butcher Ranch, 74.02 329 IAmb IAmb 14 01 58.0
comp=Z,18nm,1.0s
ICQ Pointe Anglais 74.05 2 P **P 14 01 34.3 +0.6**
ICQ IAmb IAmb 14 01 35.7
comp=Z,14nm,0.7s
CLC China Lake 74.76 322 IAmb IAmb 14 01 42.1
comp=Z,39nm,1.7s
BSUT Blindstream Ca 74.87 330 IAmb IAmb 14 02 03.6
comp=Z,64nm,1.8s
ACRG Accra 74.96 76 P **P 14 01 39.5 -0.3**
RSSD Black Hills 75.04 336 P 14 01 41.9 +2.1
RSSD Black Hills 75.04 336 P **P 14 01 41.9 +2.1**
RSSD pmax pmax
comp=Z,10.0nm,0.9s
PDAR Pinedale Array 76.13 332 P **P 14 01 47.5 +1.4**
comp=Z,0.9nm,0.5s,baz=131,slow=7.0,SNR=20
PDAR LR LR 14 34 40.1
comp=Z,30nm,21.2s,baz=126,slow=35
comp=Z,0.9nm,0.5s
AHID Auburn Hatcher 76.80 331 IAmb IAmb 14 02 13.5
comp=Z,20nm,0.9s
NVAR Mina Array Bea 77.05 324 P **P 14 01 53.0 +1.6**
comp=Z,1.3nm,0.6s,baz=140,slow=6.2,SNR=11
NVAR LR LR 14 31 33.4
comp=Z,140nm,20.2s,baz=154,slow=32
comp=Z,1.3nm,0.6s
SNOW Snow King Moun 77.20 331 IAmb IAmb 14 02 17.0
comp=Z,15nm,0.9s
FLWY Flagg Ranch 77.68 332 IAmb IAmb 14 02 18.6
comp=Z,27nm,0.9s
ULM Lac du Bonnet 77.95 344 P **P 14 01 56.5 +0.6**
comp=Z,3.2nm,0.5s,baz=157,slow=7.1,SNR=6.0
ULM pP **pP 14 02 09.6 +1.1**
comp=Z,6.9nm,0.9s,baz=174,slow=9.0,SNR=5.1
comp=Z,3.2nm,0.5s
ULM Lac du Bonnet 77.95 344 P 14 01 56.0 +0.1
YNE Yellowstone No 78.13 333 IAmb IAmb 14 02 21.2

comp=Z,45nm,1.2s
PNTR Pine Nut 78.22 323 IAmb IAmb 14 02 24.3
comp=Z,20nm,0.9s
SUR Sutherland 78.44 120 P **P** **14 01 59.5 0.0**
comp=Z,10nm,0.7s,baz=230,slow=3.6,SNR=9.5
SUR LR LR 14 34 36.0
comp=Z,315nm,18.6s,baz=240,slow=34
comp=Z,10nm,0.7s
SUR Sutherland 78.44 120 P **P** **14 01 59.9 +0.4**
SUR IAmb IAmb 14 02 36.3
comp=Z,61nm,1.4s
YHL Hebgen Lake 78.50 332 IAmb IAmb 14 02 24.1
comp=Z,38nm,1.5s
PAHR Pah Rah Range 78.55 324 IAmb IAmb 14 02 24.2
comp=Z,21nm,1.0s
DGMT Dagmar 78.83 338 IAmb IAmb 14 02 17.9
comp=Z,24nm,0.9s
HLID Hailey 78.93 329 IAmb IAmb 14 02 26.2
comp=Z,22nm,1.0s
BCYI Bear Canyon 79.05 330 IAmb IAmb 14 02 27.0
comp=Z,25nm,1.4s
WIN Windhoek 79.06 110 P **P** **14 02 03.1 0.0**
WIN IAmb IAmb 14 02 04.5
comp=Z,44nm,1.2s
WIN Windhoek 79.06 110 P **P** **14 02 03.1 0.0**
WIN pmax pmax
comp=Z,44nm,1.2s
SCHQ Schefferville 79.38 2 P **P** **14 02 03.9 +0.2**
comp=Z,8.2nm,0.9s,baz=190,slow=7.0,SNR=8.5
comp=Z,8.2nm,0.9s
DLMT Dillon 79.52 331 IAmb IAmb 14 02 29.0
comp=Z,18nm,1.1s
ORV Oroville 79.59 323 IAmb IAmb 14 02 09.0
comp=Z,22nm,1.2s
CCD Concordia, Ant 79.92 184 P **P** **14 02 07.9 +0.9**
RAR Rarotonga 80.47 251 LR LR 14 28 41.3
comp=Z,258nm,21.6s,baz=101,slow=29
TSUM Tsumeb 80.77 107 P **P** **14 02 11.4 -0.9**
TSUM comp=Z,52nm,1.1s,baz=232,slow=4.5,SNR=30
pP **pP** **14 02 25.2 +0.1**
TSUM comp=Z,15nm,0.8s,baz=241,slow=11,SNR=4.2
LR LR 14 36 14.9
comp=Z,245nm,18.3s,baz=330,slow=34
comp=Z,52nm,1.1s
TSUM Tsumeb 80.77 107 P **P** **14 02 12.5 +0.2**
PLID Pearl Lake 80.83 329 IAmb IAmb 14 02 35.8
comp=Z,26nm,0.9s
KOOLE Kule 81.53 111 *i* P **P** **14 02 15.3 -1.0**
MAW Mawson 81.68 164 P **P** **14 02 16.7 +0.8**
MAW comp=Z,25nm,0.9s,baz=232,slow=6.5,SNR=16
LR LR 14 38 21.5
comp=Z,137nm,20.2s,baz=222,slow=36
comp=Z,25nm,0.9s
YBH Yreka Blue Hor 81.77 323 LR LR 14 36 57.2
comp=Z,6.0nm,18.5s,baz=122,slow=34
LKGWB Lokgwabe 81.95 113 *i* P **P** **14 02 18.6 +0.1**
GRTLG Ghanzi 83.05 110 *i* P **P** **14 02 23.7 -0.5**
KGCAE Kacgae 83.29 112 *i* P **P** **14 02 24.4 -1.1**
EDA Edea 83.39 83 IAmb IAmb 14 02 28.9
comp=Z,29nm,1.5s
BOSA Boshof 83.44 118 P **P** **14 02 25.6 -0.6**
comp=Z,45nm,1.0s,baz=242,slow=5.4,SNR=31
BOSA pP **pP** **14 02 41.0 +2.0**
comp=Z,13nm,0.9s,baz=268,slow=7.0,SNR=5.2
BOSA LR LR 14 36 32.2
comp=Z,477nm,19.3s,baz=237,slow=34
comp=Z,45nm,1.0s
BOSA Boshof 83.44 118 **P** **14 02 25.1 -1.0**
BOSA Boshof 83.44 118 P **P** **14 02 25.8 -0.4**
BOSA x x 14 02 36.6
BOSA x x 14 02 41.4
FFC Flin Flon 83.61 342 P **P** **14 02 25.9 -0.1**
FFC Flin Flon 83.61 342 P **P** **14 02 25.9 -0.1**
FFC pmax pmax
comp=Z,6.0nm,1.0s
PFVI Vila Bisbo 84.81 45 *eP* **P** **14 02 34.4 +1.9**
MORF Marmelete 85.03 45 *eP* **P** **14 02 35.2 +1.5**
MORF IAmb IAmb 14 02 36.7
comp=Z,55nm,1.3s
MORF Marmelete 85.03 45 *eP* **P** **14 02 35.8 +2.1**
MORF *i* IAmb IAmb 14 02 37.1
comp=Z,48nm,1.8s
MD01 Midelt array s 85.12 51 P **P** **14 02 34.9 +0.5**
PTEO Sao Teotonio 85.12 45 *eP* **P** **14 02 35.6 +1.5**
MDT Midelt 85.20 51 P **P** **14 02 35.8 +1.0**
comp=Z,11nm,1.0s,baz=237,slow=3.9,SNR=15
MDT LR LR 14 40 28.2
comp=Z,185nm,19.4s,baz=237,slow=36
comp=Z,11nm,1.0s
LBTB Lobatse 85.22 115 P **P** **14 02 35.1 -0.1**
comp=Z,26nm,1.0s,baz=249,slow=6.7,SNR=17
LBTB pP **pP** **14 02 47.9 -0.3**
comp=Z,8.7nm,0.7s,baz=237,slow=6.5,SNR=4.5
LBTB LR LR 14 38 03.5
comp=Z,180nm,18.7s,baz=244,slow=34
comp=Z,26nm,1.0s
LBTB Lobatse 85.22 115 **P** **14 02 34.3 -0.9**
LBTB **pP** **14 02 47.1 -1.0**
LBTB Lobatse 85.22 115 P **P** **14 02 35.1 -0.1**
LBTB x x 14 02 47.6
PBDV Barranco-do-Ve 85.46 45 *eP* **P** **14 02 37.8 +2.0**
PBDV *i* IAmb IAmb 14 02 38.7
comp=Z,65nm,1.2s
FCC Fort Churchill 85.46 348 IAmb IAmb 14 02 36.9
comp=Z,15nm,1.4s
PCVE Castro Verde 85.62 45 *eP* **P** **14 02 38.3 +1.8**
PCVE *i* IAmb IAmb 14 02 39.4
comp=Z,60nm,1.4s
MESJ Messejana 85.62 45 *eP* **P** **14 02 37.9 +1.3**
MESJ IAmb IAmb 14 02 39.5
comp=Z,50nm,1.2s
MESJ Messejana 85.62 45 *eP* **P** **14 02 38.4 +1.8**
MESJ *i* IAmb IAmb 14 02 40.0
comp=Z,64nm,1.6s
MESJ Messejana 85.62 45 *eP* **P** **14 02 37.9 +1.3**
PVAQ Vaqueiros 85.69 45 P **P** **14 02 37.8 +0.9**
PVAQ Vaqueiros 85.69 45 *eP* **P** **14 02 38.6 +1.7**
PVAQ *i* IAmb IAmb 14 02 40.5
comp=Z,66nm,1.5s
MOE Montemor 85.94 44 *eP* **P** **14 02 38.2 +0.1**
PBEJ Beja 85.96 45 *eP* **P** **14 02 40.1 +1.9**
PBEJ *i* IAmb IAmb 14 02 41.3
comp=Z,44nm,1.8s
LPHEP Lephephe 86.14 114 *i* P **P** **14 02 38.4 -1.4**
EVO Evora 86.16 44 *eP* **P** **14 02 40.8 +1.6**
EVO *i* IAmb IAmb 14 03 23.9
comp=Z,39nm,2.0s
PARRA Arraiolos 86.31 44 *eP* **P** **14 02 41.5 +1.6**
PARRA *i* IAmb IAmb 14 02 42.3
comp=Z,45nm,1.5s
PMTG Montargil 86.34 44 *eP* **P** **14 02 41.4 +1.3**
PMTG *i* IAmb IAmb 14 03 00.1
comp=Z,56nm,1.5s
PBAR Barrancos 86.58 45 *eP* **P** **14 02 42.5 +1.2**
PBAR *i* IAmb IAmb 14 02 43.5
comp=Z,31nm,1.5s
KSANE Kasane 87.91 109 *i* P **P** **14 02 48.2 -0.2**
BROLN Tlhalogang 88.34 112 *i* P **P** **14 02 47.8 -2.6**
ESDC Sonseca Array 89.40 45 P **P** **14 02 54.4 -0.4**
comp=Z,2.5nm,1.0s,baz=248,slow=4.1,SNR=8.4
ESDC pP **pP** **14 03 09.8 +1.9**
comp=Z,1.0nm,0.9s,baz=241,slow=4.6,SNR=2.5
ESDC LR LR 14 39 28.4
comp=Z,290nm,18.5s,baz=229,slow=33
comp=Z,2.5nm,1.0s
URZ Urewera 90.67 227 LR LR 14 34 08.7
comp=Z,301nm,21.6s,baz=78,slow=29
BLKN Baker Lake 90.98 349 IAmb IAmb 14 03 39.0
comp=Z,29nm,2.0s
RPZ Rata Peaks 91.34 220 LR LR 14 34 00.2
comp=Z,220nm,20.4s,baz=248,slow=29
LSZ Lusaka 91.61 108 P **P** **14 03 06.8 +1.0**
comp=Z,2.1nm,0.6s,baz=203,slow=5.6,SNR=6.6
LSZ pP **pP** **14 03 19.3 +0.4**
comp=Z,5.7nm,1.0s,baz=257,slow=6.1,SNR=4.5
LSZ LR LR 14 40 26.9
comp=Z,442nm,20.5s,baz=246,slow=33
comp=Z,2.1nm,0.6s
LSZ Lusaka 91.61 108 P **P** **14 03 06.5 +0.7**
LSZ **pP** **14 03 20.6 +1.7**
YKAW1 Yellowknife Wh 93.67 341 IAmb IAmb 14 03 36.4
comp=Z,6.2nm,0.8s
YKA Yellowknife Ar 93.72 341 P **P** **14 03 14.9 +0.8**
YKA pP **pP** **14 03 27.5 +0.6**
comp=Z,3.5nm,0.9s,baz=141,slow=3.8,SNR=45
comp=Z,2.9nm,0.8s,baz=140,slow=3.6,SNR=15
comp=Z,3.5nm,0.9s

YKA Yellowknife Ar 93.72 341 sP 14 03 30.1 -1.5
YKA Yellowknife Ar 93.72 341 P **P** **14 03 14.9 +0.8**
YKA *SP **sP** **14 03 30.1 -1.5**
YKAW3 Yellowknife Wh 93.77 341 IAmb IAmb 14 03 36.5
comp=Z,7.6nm,0.9s
KEST Kesra 96.67 54 LR LR 14 48 08.5
comp=Z,224nm,18.7s,baz=244,slow=36
EKA Eskdalemuir Ar 98.33 32 LR LR 14 43 46.9
comp=Z,393nm,18.4s,baz=1.0,slow=33
BMRD Maredsous 100.08 39 *e*PP **PP** **14 07 49.9 +0.4**
ILAR Eielson Array 106.45 334 PP **PP** **14 08 39.2 +2.5**
comp=Z,0.9nm,1.1s,baz=117,slow=5.0,SNR=4.8
MNK Minsk 114.77 39 *i* P **Pdif** **14 04 47.4 -1.1**
comp=E,13nm,0.7s
MNK *i* P **Pdif** **14 04 47.4 -1.1**
comp=N,13nm,0.9s
MNK *i* P **Pdif** **14 04 47.4 -1.1**
comp=Z,12nm,0.8s,baz=261
MNK *i* PKP **PKiKP** **14 08 37.3 -0.7**
MNK *i* PP **PP** **14 09 35.4 -1.5**
MNK *i* PPP PPP 14 12 00.9
MNK *i* SKS **SKSdf** **14 15 46.8 +0.5**
MNK *i* PS **PS** **14 19 14.7 -1.4**
MNK *i* SS **SS** **14 25 29.0 +0.7**
MNK *i* SKKS **SKKSdf** **14 26 46.4 -3.4**
MNK *i* SSS SSS 14 29 45.0
MNK *i* LQ LQ 14 49 20.4
MNK *i* LRM MLR 14 56 01.2
comp=N,189nm,10.5s
MNK *i* LRM MLR 14 56 10.1
comp=Z,218nm,11.4s
MNK *i* LRM MLR 14 56 15.8
comp=E,227nm,17.2s
MNK Minsk 114.77 39 *i* P **Pdif** **14 04 47.4 -1.1**
MNK *i* 14 08 37.3
MNK *i* 14 09 35.4
MNK *i* PPP PPP 14 12 00.9
MNK *i* 14 15 46.7
MNK *i* PS **PS** **14 19 14.6 -1.4**
MNK *i* SS SS 14 25 29.0 +0.7
MNK *i* SSS SSS 14 29 45.0
MNK pmax pmax
comp=E,13nm,0.7s
MNK pmax pmax
comp=Z,12nm,0.8s
MNK pmax pmax
comp=N,13nm,0.9s
MNK MLR MLR
comp=N,189nm,11.0s
MNK MLR MLR
comp=Z,218nm,11.0s
MNK MLR MLR
comp=E,227nm,17.0s
OBN Obninsk 119.83 39⇑ *e*PKiKP **PKiKP** **14 08 46.9 -0.9**
OBN *e*PPP PPP 14 12 42.2
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN MLR MLR
comp=Z,256nm,14.0s
KLMR Klimovskoe 121.22 32 *e*PKiKP **PKiKP** **14 08 49.9 -0.4**
KLMR *e* 14 09 00.7
KLMR pmax pmax
comp=Z,19nm,1.3s
KIV Kislovodsk 123.39 52 *e*PKiKP **PKiKP** **14 08 54.6 -0.7**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 123.53 53 PKP **PKiKP** **14 08 55.5 +0.1**
comp=Z,4.6nm,0.9s,baz=249,slow=5.5,SNR=6.4
BILL Bilibino 124.91 337 *i* PKiKP **PKiKP** **14 08 57.5 0.0**
BILL pmax pmax
comp=Z,2.0nm,1.0s
ASAR Alice Springs 126.19 208 PKP **PKiKP** **14 09 00.9 -0.6**
comp=Z,3.3nm,0.5s,baz=126,slow=1.5,SNR=66
ASAR pPKP **pPKPdf** **14 09 15.4 +1.1**
comp=Z,3.2nm,0.9s,baz=131,slow=1.7,SNR=11
H11S2 WAKE ISLAND Hyl 26.49 275 T T 16 28 45.4
baz=108,slow=75,SNR=1206
H11S1 WAKE ISLAND Hyl 26.50 275 T T 16 28 42.2
baz=108,slow=75,SNR=1453
H11S3 WAKE ISLAND Hyl 26.50 275 T T 16 28 41.6
baz=108,slow=75,SNR=1379
H11N3 WAKE ISLAND Hyl 26.66 277 T T 16 29 01.6
baz=107,slow=75,SNR=125
H11N1 WAKE ISLAND Hyl 26.68 277 T T 16 28 51.4
baz=107,slow=75,SNR=129
H11N2 WAKE ISLAND Hyl 26.68 277 T T 16 28 57.7
baz=107,slow=75,SNR=129
WRA Warramunga Arr 129.23 211 PKP **PKiKP** **14 09 07.5 -0.2**
comp=Z,4.4nm,0.8s,baz=166,slow=1.7,SNR=28
WRA pPKP **pPKPdf** **14 09 21.8 +1.6**
comp=Z,3.2nm,0.7s,baz=163,slow=1.7,SNR=11
ARTI Arti 131.77 35*c* *i* PKiKP **PKiKP** **14 09 10.9 -0.6**
ARTI pmax pmax
comp=Z,13nm,1.3s
TIXI Tiksi 131.81 352*c* *i* PKiKP **PKiKP** **14 09 11.3 +0.1**
TIXI pmax pmax
comp=Z,10.0nm,2.5s
SEY Seymchan 132.38 335 *i* PKiKP **PKiKP** **14 09 11.8 -0.8**
NRIK Noril'sk 133.62 10 *i* PKiKP **PKiKP** **14 09 13.6 -1.3**
PETK Petropavlovsk- 134.09 321 PKP **PKiKP** **14 09 15.9 -0.4**
comp=Z,5.8nm,1.0s,baz=84,slow=5.4,SNR=4.1
PETK Petropavlovsk- 134.09 321 PKiKP **PKiKP** **14 09 16.0 -0.4**
BORK Borovoye 139.44 36*c* *i* PKiKP **PKiKP** **14 09 27.1 -0.1**
BORK pmax pmax
comp=Z,6.0nm,1.7s
BVAR Borovoye Array 139.49 36 PKhKP PKPpre 14 09 16.5
comp=Z,0.5nm,0.5s,baz=225,slow=0.4,SNR=3.8
BVAR PKP **PKiKP** **14 09 25.5 -1.9**
comp=Z,3.2nm,0.9s,baz=323,slow=2.2,SNR=9.6
YAK Yakutsk 140.28 345*c* *i* PKiKP **PKPdf** **14 09 25.9 -0.2**
YAK pmax pmax
comp=Z,8.0nm,1.3s
KURK Kurchatov 145.03 34*c* *i* PKiKP **PKPdf** **14 09 35.3 +0.4**
KURK pmax pmax
comp=Z,77nm,1.7s
KURBB Kurchatov Arra 145.04 35 PKP **PKPdf** **14 09 35.4 +0.4**
comp=Z,28nm,0.9s,baz=300,slow=3.4,SNR=181
KURBB pPKP **pPKPdf** **14 09 47.1 -1.1**
comp=Z,6.7nm,0.8s,baz=302,slow=3.5,SNR=6.0
YSS Yuzhno-Sakhali 145.35 318 *e*PKiKP **PKPab** **14 09 36.7 +1.0**
YSS *e* 14 09 51.9
YSS pmax pmax
comp=Z,30nm,1.2s
ZALV Zalesovo Beam 145.67 26 PKPbc **PKPab** **14 09 37.1 +0.4**
comp=Z,44nm,0.9s,baz=316,slow=4.1,SNR=146
ZALV pPKPbc **pPKPdf** **14 09 50.7 +1.5**
comp=Z,19nm,0.8s,baz=324,slow=3.4,SNR=10.0
ARSB Arslanbob 145.77 52 PKPbc **PKPab** **14 09 37.8 +0.1**
ARSB Arslanbob 145.77 52 PKP2 **PKPab** **14 09 37.8 +0.1**
EKS2 Erkin-Say 145.90 50 P **PKiKP** **14 09 38.7 -2.3**
SNR=31
USP Ospenovka 146.18 48 P **PKiKP** **14 09 39.9 -1.6**
SNR=18
AAK Ala-Archa 146.41 49 P **PKiKP** **14 09 40.1 -2.0**
SNR=35
AAK Ala-Archa 146.41 49*c* *i* PKP2 **PKPab** **14 09 40.0 -0.1**
AAK pmax pmax
comp=Z,49nm,1.3s
CHMS Chumysh 146.45 49 P **PKiKP** **14 09 40.9 -1.2**
SNR=14
UCH Uchtor 146.56 50 P **PKiKP** **14 09 41.0 -1.9**
SNR=47
GRNR Gornyy 146.65 328⇓ *i* PKP2 **PKPab** **14 09 40.1 -0.4**
GRNR pmax pmax
comp=Z,4.0nm,1.1s
KBK Karagaybulak 146.71 49 P **PKPab** **14 09 40.5 -0.8**
SNR=30
TKM2 Tokmak 2 147.06 48 P **PKPbc** **14 09 40.4 -0.7**
SNR=44
ULHL Ulahol 147.75 49 P **PKPbc** **14 09 41.9 -1.1**
SNR=39
ZEA Zeya 148.09 340 *e*PKP2 **PKiKP** **14 09 44.4 -0.6**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
KSH2 Kashi 148.30 55 PKPbc **PKPbc** **14 09 43.0 -1.5**
MK31 Makanchi Array 149.32 38 *i* PKHKP PKPpre 14 09 41.3
MKAR Makanchi Array 149.32 38 PKPbc **PKiKP** **14 09 47.2 -0.6**
comp=Z,20nm,0.8s,baz=314,slow=2.5,SNR=104
MKAR pPKPbc **pPKPbc** **14 10 00.7 +0.8**
comp=Z,5.0nm,0.6s,baz=326,slow=1.8,SNR=6.6
KLR Kul'dur 149.90 330*c* *i* PKHKP PKPpre 14 09 47.6
KLR pmax pmax
comp=Z,4.0nm,1.7s
HYB Hyderabad 150.54 98 *e*PKiKP **PKiKP** **14 09 51.4 +0.2**
HEH HeiHe 150.93 336 PKPbc **PKPdf** **14 09 42.5 -2.1**
MOY Mondy 152.45 11 *e*PKiKP **PKiKP** **14 09 55.3 +1.1**
MOY pmax pmax
comp=Z,27nm,1.3s
MJAR Matsushiro Arr 152.53 302 PKPbc **PKiKP** **14 09 55.6 +0.8**
comp=Z,2.2nm,0.7s,baz=142,slow=1.2,SNR=5.8
HILR Hailar Array B 153.95 344 PKPbc **PKiKP** **14 09 58.2 +0.9**
comp=Z,2.3nm,0.7s,baz=56,slow=2.0,SNR=2.6
HILR pPKPbc **pPKPbc** **14 10 11.7 +1.1**
comp=Z,3.6nm,0.6s,baz=66,slow=5.6,SNR=4.2
ZAK Zakamensk 154.06 9 *e*PKIKP **PKPdf** **14 09 50.4 +1.0**
ZAK pmax pmax
comp=Z,8.0nm,1.5s
WMQ Urumqi 154.15 37 *e*PKPbc **PKPdf** **14 09 49.9 +0.2**
WMQ PKPab **pPKPbc** **14 10 13.6 +2.4**
WMQ LR LR
comp=Z,260nm,24.1s
BNX BinXian 154.47 329⇓ PKPbc **PKPdf** **14 09 50.6 +0.6**
SONM Songino Array 156.91 5 PKP **PKPdf** **14 09 54.8 +1.5**
comp=Z,1.6nm,0.9s,baz=255,slow=1.4,SNR=9.1
SONM pPKP **pPKPdf** **14 10 07.6 +0.8**
comp=Z,2.6nm,1.0s,baz=341,slow=1.3,SNR=6.7
SONM PKPab **PKPab** **14 10 23.9 +0.6**
comp=Z,3.9nm,0.9s,baz=328,slow=3.2,SNR=10
SONM PP **PP** **14 14 00.2 -0.8**
comp=Z,1.7nm,1.1s,baz=352,slow=3.1,SNR=4.6
KSRS Korea Array 159.64 313 pPKP pPKPdf 14 10 13.2 +3.2
comp=Z,3.0nm,1.0s,baz=47,slow=1.2,SNR=6.2
XLT XiLinHaoTe 160.13 345 *e*PKP **PKPdf** **14 09 57.6 +0.3**
XLT sPKP sPKPdf 14 10 15.1 -0.3
GOMU GeErMu 163.22 44 PKP **PKPdf** **14 10 03.0 +1.9**
GTA2 Gaotai 163.34 26 *e*PKP **PKPdf** **14 10 02.2 +1.4**
GTA2 sPKP sPKPdf 14 10 19.5 +0.6
GTA2 PKPab **PKPab** **14 10 52.3 +0.7**
HHC Hu-ho-hao-te 163.87 353 *e*PKP **PKPdf** **14 10 01.0 -0.2**
HNS HongShan 166.58 341⇑ PKP **PKPdf** **14 10 03.1 -0.3**
LZDM Lanzhou Array 167.92 22 pPKP pPKPdf 14 10 22.2 +3.9
comp=Z,0.5nm,0.3s,baz=288,slow=0.9,SNR=1.6
CMAR Chiang Mai Arr 168.58 122 PKP **PKPdf** **14 10 06.5 +1.1**
comp=Z,1.1nm,0.7s,baz=209,slow=1.1,SNR=9.1
CMAR pPKP **pPKPdf** **14 10 21.1 +2.3**
comp=Z,0.7nm,0.7s,baz=279,slow=2.0,SNR=2.9
CMAR PKPab **PKPab** **14 11 15.2 0.0**
comp=Z,2.8nm,0.9s,baz=246,slow=4.2,SNR=13
CMAR pPKPab **pPKPab** **14 11 28.6 +0.3**
comp=Z,2.1nm,0.9s,baz=245,slow=4.5,SNR=4.1
CMAR PP **PP** **14 15 04.8 +0.5**
comp=Z,0.2nm,0.3s,baz=237,slow=4.5,SNR=4.9
NJ2 Nanjing 168.84 313 *e*PKP **PKPdf** **14 10 05.6 +0.4**

NOU **11** *14:08:08.7, 36.53S 178.11E, h264km, MLv4.1/12, Off E. Coast of N. Island, N.Z.*
NEIC **11** *14:08:17.4± 1.6, 36.94S± 0.08× 177.5E± 0.1, h197km± 10km, mb4.4/9, Error ellipse: s-maj=17.0km s-min=5.8km az=129.0*
WEL **11** *14:08:17.1± 1.0, 37.3S± 7.7× 17.8E± , h183km± 7km, M4.1/72, ML4.0/8, MLv4.1/72, Error ellipse: s-maj=12.2km s-min=5.6km az=44.3*
IDC **11** *14:08:20.2± 1.5, 37.02S× 177.08E, h204km± 22km, mb3.9/2, mbtmp4.3/3, MS3.8/2, Error ellipse: s-maj=53.8km s-min=30.3km az=133.0*

ISC 11 14:08:17.4±0.8, 36.85S±0.05× 177.56E±0.06, h207km±6km, n174, σ1°§45°/184, mb4.3/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.92**	**169**	P	**Pn**	**14 08 46.0**	**-1.3**
HAZ				S	**Sn**	**14 09 08.5**	**-2.3**
MXZ	**Matakaoa Point**	**0.93**	**140**		**Pn**	**14 08 45.7**	**-1.7**
MXZ				Sn	**Sn**	**14 09 08.1**	**-2.7**
MXZ	**Matakaoa Point**	**0.93**	**140**	P	**Pn**	**14 08 45.8**	**-1.6**
MXZ	**Matakaoa Point**	**0.93**	**140**	P	**Pn**	**14 08 45.8**	**-1.6**
MXZ				S	**Sn**	**14 09 08.5**	**-2.3**
PKGZ	**Pakihiroa**	**1.10**	**158**	P	**Pn**	**14 08 47.9**	**-0.6**
PKGZ				S	**Sn**	**14 09 11.3**	**-1.6**
WHRZ	**Whale Island**	**1.11**	**205**	P	**Pn**	**14 08 49.8**	**+1.2**
RUGZ	**Raukumara Rang**	**1.12**	**175**	P	**Pn**	**14 08 47.2**	**-1.6**
MYRZ	**Mayor Island**	**1.14**	**247**	P	**Pn**	**14 08 49.3**	**+0.4**
WMGZ	**Waiomatatini S**	**1.18**	**145**	P	**Pn**	**14 08 48.2**	**-0.9**
WMGZ				S	**Sn**	**14 09 12.7**	**-1.2**
OPRZ	**Ohinepanea**	**1.28**	**219**	P	**Pn**	**14 08 50.0**	**+0.1**
PUZ	**Puketiti**	**1.34**	**156**	P	**Pn**	**14 08 49.7**	**-0.6**
PUZ				S	**Sn**	**14 09 13.0**	**-1.3**
TGRZ	**Tauranga**	**1.36**	**229**	P	**Pn**	**14 08 50.8**	**+0.3**
TWGZ	**Tauwhareparae**	**1.37**	**166**	P	**Pn**	**14 08 50.9**	**+0.3**
TWGZ				S	**Sn**	**14 09 16.7**	**+0.1**
EDRZ	**Edgecumbe**	**1.42**	**207**	P	**Pn**	**14 08 52.4**	**+1.4**
URZ	**Urewera**	**1.45**	**194**	P	**Pn**	**14 08 51.3**	**+0.1**
URZ	197nm,0.3s,baz=256,slow=4.6,SNR=1249			S	**Sn**	**14 09 17.4**	**-0.4**
URZ	**Urewera**	**1.45**	**194**	P	**Pn**	**14 08 51.1**	**-0.2**
URZ	**Urewera**	**1.45**	**194**	P	**Pn**	**14 08 51.0**	**-0.2**
URZ				S	**Sn**	**14 09 17.6**	**-0.2**
KUZ	**Kuaotunu**	**1.48**	**273**	P	**Pn**	**14 08 49.9**	**-1.6**
KUZ	**Kuaotunu**	**1.48**	**273**	P	**Pn**	**14 08 49.9**	**-1.6**
MWZ	**Matawai**	**1.48**	**181**	P	**Pn**	**14 08 51.0**	**-0.1**
MWZ				S	**Sn**	**14 09 18.3**	**-0.1**
KARZ	**Kaharoa**	**1.57**	**222**	P	**Pn**	**14 08 53.0**	**+0.7**
OMRZ	**Omania**	**1.57**	**217**	P	**Pn**	**14 08 54.3**	**+2.0**
TKGZ	**Te Karaka**	**1.60**	**172**	P	**Pn**	**14 08 52.8**	**+0.3**
TARZ	**Mount Tarawera**	**1.62**	**211**	P	**Pn**	**14 08 54.6**	**+1.8**
KMRZ	**Kaimai**	**1.63**	**232**	P	**Pn**	**14 08 53.6**	**+0.7**
RAGZ	**Rawiri**	**1.65**	**184**	P	**Pn**	**14 08 53.5**	**+0.4**
HLRZ	**Highlands Stat**	**1.70**	**214**	P	**Pn**	**14 08 55.1**	**+1.6**
RRRZ	**Republican Roa**	**1.71**	**209**	P	**Pn**	**14 08 55.1**	**+1.5**
CNGZ	**Carnagh Statio**	**1.71**	**163**	P	**Pn**	**14 08 54.2**	**+0.7**
MUGZ	**Murupara**	**1.74**	**201**	P	**Pn**	**14 08 54.2**	**+0.3**
HSRZ	**Hossack Road**	**1.80**	**215**	P	**Pn**	**14 08 56.6**	**+2.2**
GRZ	**Great Barrier**	**1.80**	**289**	P	**Pn**	**14 08 52.1**	**-2.3**
RTZ	**Ruatahuna**	**1.82**	**195**		**Pn**	**14 08 54.4**	**-0.3**
RTZ	**Ruatahuna**	**1.82**	**195**	P	**Pn**	**14 08 54.9**	**+0.1**
HRRZ	**Handcock Road**	**1.84**	**213**	P	**Pn**	**14 08 56.5**	**+1.6**
RIGZ	**Rimuhau**	**1.86**	**175**	P	**Pn**	**14 08 55.4**	**+0.4**
TOZ	**Tahuroa Road**	**1.86**	**241**		**Pn**	**14 08 54.3**	**-0.7**
TOZ	**Tahuroa Road**	**1.86**	**241**	P	**Pn**	**14 08 55.9**	**+0.9**
PRRZ	**Plateau Road**	**1.89**	**209**	P	**Pn**	**14 08 56.3**	**+1.0**
SNGZ	**Shannon Statio**	**1.94**	**185**	P	**Pn**	**14 08 56.3**	**+0.5**
MKAZ	**Moumakai**	**1.94**	**262**	P	**Pn**	**14 08 55.6**	**-0.2**
WIAZ	**Waiheke Island**	**1.95**	**271**	P	**Pn**	**14 08 55.1**	**-0.8**
ALRZ	**Allen Road**	**1.96**	**209**	P	**Pn**	**14 08 57.2**	**+1.1**
WPRZ	**Whakapapatarin**	**2.00**	**213**	P	**Pn**	**14 08 58.1**	**+1.7**
MTHZ	**Maungataniwha**	**2.08**	**196**	P	**Pn**	**14 08 57.4**	**+0.2**
PRGZ	**Paritu Road**	**2.08**	**173**	P	**Pn**	**14 08 57.7**	**+0.4**
RAHZ	**Arahi**	**2.10**	**190**	P	**Pn**	**14 08 58.2**	**+0.8**
ETAZ	**East Tamaki Re**	**2.12**	**266**	P	**Pn**	**14 08 57.7**	**+0.1**
MBAZ	**Motutapu North**	**2.14**	**271**	P	**Pn**	**14 08 57.4**	**-0.4**
KUTZ	**Kaahu Road**	**2.14**	**220**	P	**Pn**	**14 08 59.7**	**+1.9**
KNZ	**Kokohu**	**2.17**	**178**	P	**Pn**	**14 08 58.5**	**+0.4**
MRHZ	**Matea Rd**	**2.18**	**204**	P	**Pn**	**14 08 58.7**	**+0.5**
TLZ	**Tolley Road**	**2.19**	**227**	P	**Pn**	**14 09 00.4**	**+2.1**
WHTZ	**Whakaora**	**2.22**	**215**	P	**Pn**	**14 09 00.6**	**+1.9**
WHHZ	**Waihua**	**2.24**	**187**	P	**Pn**	**14 08 59.6**	**+0.8**
EPAZ	**Eden Park BICE**	**2.26**	**268**	P	**Pn**	**14 08 59.0**	**-0.1**
HBAZ	**Herne Bay Bore**	**2.27**	**269**	P	**Pn**	**14 08 59.5**	**+0.3**
MHGZ	**Mahia Peninsul**	**2.32**	**173**	P	**Pn**	**14 09 00.4**	**+0.7**
NMHZ	**Naumai**	**2.32**	**195**	P	**Pn**	**14 09 01.0**	**+1.2**
AWAZ	**Awhitu Peninsu**	**2.35**	**264**	P	**Pn**	**14 09 00.5**	**+0.4**
WATZ	**Wairara**	**2.35**	**217**	P	**Pn**	**14 09 01.7**	**+1.6**
RVAZ	**Riverhead Bore**	**2.40**	**271**	P	**Pn**	**14 09 00.2**	**-0.3**
WTAZ	**Waiatarua**	**2.40**	**267**	P	**Pn**	**14 09 00.7**	**+0.1**
ARHZ	**Aropaoanui**	**2.45**	**190**	P	**Pn**	**14 09 01.9**	**+0.8**
BKZ	**Black Stump Fm**	**2.46**	**200**		**Pn**	**14 09 00.4**	**-0.9**
BKZ	**Black Stump Fm**	**2.46**	**200**	P	**Pn**	**14 09 01.3**	**0.0**
BKZ	**Black Stump Fm**	**2.46**	**200**	P	**Pn**	**14 09 01.4**	**+0.2**
RATZ	**Rangitukua**	**2.46**	**215**	P	**Pn**	**14 09 02.5**	**+1.2**
RITZ	**Rihia Road**	**2.52**	**212**	P	**Pn**	**14 09 03.1**	**+1.2**
KATZ	**Kakaramea**	**2.59**	**214**	P	**Pn**	**14 09 04.9**	**+2.1**
MCHZ	**McNeill Hill**	**2.68**	**195**	P	**Pn**	**14 09 04.3**	**+0.7**
NTVZ	**North Tongariro**	**2.70**	**213**	P	**Pn**	**14 09 05.3**	**+1.3**
TMVZ	**Te Maari**	**2.70**	**212**	P	**Pn**	**14 09 05.1**	**+1.1**
KRVZ	**Karewarewa**	**2.71**	**214**	P	**Pn**	**14 09 05.3**	**+1.2**
ETVZ	**East Tongariro**	**2.71**	**212**	P	**Pn**	**14 09 05.0**	**+0.9**
HIZ	**Hauiti**	**2.71**	**231**		**Pn**	**14 09 06.0**	**+2.0**
HIZ	**Hauiti**	**2.71**	**231**	P	**Pn**	**14 09 06.2**	**+2.2**
HIZ	**Hauiti**	**2.71**	**231**	P	**Pn**	**14 09 06.2**	**+2.2**
KWHZ	**Kaweka Forest**	**2.72**	**199**	P	**Pn**	**14 09 04.5**	**+0.3**
WTVZ	**West Tongariro**	**2.75**	**214**	P	**Pn**	**14 09 05.4**	**+0.8**
NNVZ	**North Ngauruho**	**2.75**	**213**	P	**Pn**	**14 09 05.6**	**+1.0**
WCZ	**Waipu Caves**	**2.75**	**288**	P	**Pn**	**14 09 02.8**	**-1.7**

NGZ	**Ngauruhoe**	**2.79**	**213**	P	**Pn**	**14 09 06.4**	**+1.3**
CKHZ	**Cape Kidnapper**	**2.83**	**188**	P	**Pn**	**14 09 05.8**	**+0.5**
COVZ	**Chateau Observ**	**2.84**	**214**	P	**Pn**	**14 09 07.1**	**+1.5**
TUVZ	**Tukino**	**2.85**	**211**	P	**Pn**	**14 09 06.4**	**+0.7**
FWVZ	**Far West T-bar**	**2.88**	**213**	P	**Pn**	**14 09 06.9**	**+0.8**
MAVZ	**Matarangi**	**2.89**	**213**	P	**Pn**	**14 09 07.0**	**+0.7**
WHVZ	**Whangaehu Hut**	**2.89**	**212**	P	**Pn**	**14 09 06.9**	**+0.7**
TRVZ	**Turoa**	**2.92**	**212**	P	**Pn**	**14 09 07.2**	**+0.6**
WNVZ	**Wahianoa**	**2.92**	**211**	P	**Pn**	**14 09 07.0**	**+0.4**
MOVZ	**Moawhango**	**2.92**	**209**	P	**Pn**	**14 09 06.5**	**0.0**
KRHZ	**Kereru**	**2.94**	**198**	P	**Pn**	**14 09 06.7**	**0.0**
KAHZ	**Kahuranaki**	**2.99**	**190**	P	**Pn**	**14 09 07.7**	**+0.4**
PKVZ	**Pokaka**	**3.00**	**215**	P	**Pn**	**14 09 08.1**	**+0.7**
VRZ	**Vera Road**	**3.17**	**225**	P	**Pn**	**14 09 10.9**	**+1.5**
PXZ	**Pawanui**	**3.22**	**190**	P	**Pn**	**14 09 09.8**	**-0.1**
PNHZ	**Pukenui**	**3.24**	**199**	P	**Pn**	**14 09 09.9**	**-0.3**
WPHZ	**Waipukurau**	**3.33**	**195**	P	**Pn**	**14 09 11.0**	**-0.2**
TSZ	**Takapari Road**	**3.44**	**201**	P	**Pn**	**14 09 12.1**	**-0.5**
PRHZ	**Porangahau**	**3.49**	**192**	P	**Pn**	**14 09 13.0**	**-0.1**
DREZ	**Durham Road**	**3.54**	**228**	P	**Pn**	**14 09 16.1**	**+2.4**
WAZ	**Wanganui**	**3.54**	**214**	P	**Pn**	**14 09 14.1**	**+0.4**
OUZ	**Omahuta**	**3.60**	**296**	P	**Pn**	**14 09 12.5**	**-2.0**
OUZ	**Omahuta**	**3.60**	**296**	P	**Pn**	**14 09 12.6**	**-1.9**
DVHZ	**Dannevirke**	**3.61**	**197**	P	**Pn**	**14 09 14.0**	**-0.6**
PREZ	**Palmer Road**	**3.66**	**226**	P	**Pn**	**14 09 17.5**	**+2.2**
PKE	**Pukeiti**	**3.67**	**229**	P	**Pn**	**14 09 17.5**	**+2.2**
ANWZ	**Angora Road**	**3.70**	**193**	P	**Pn**	**14 09 15.6**	**-0.1**
KHEZ	**Kahui Hut**	**3.71**	**228**	P	**Pn**	**14 09 17.6**	**+1.7**
KHEZ	**Kahui Hut**	**3.71**	**228**	P	**Pn**	**14 09 18.0**	**+2.0**
NBEZ	**Newall Road No**	**3.79**	**229**	P	**Pn**	**14 09 18.7**	**+2.0**
OHWZ	**Ohakea**	**3.79**	**207**	P	**Pn**	**14 09 17.0**	**+0.3**
POWZ	**Post Office Ro**	**3.81**	**201**	P	**Pn**	**14 09 16.5**	**-0.5**
PRWZ	**Pori Road**	**3.90**	**198**	P	**Pn**	**14 09 17.9**	**-0.3**
BFZ	**Birch Farm**	**3.96**	**195**		**Pn**	**14 09 18.1**	**-0.7**
BFZ					**Sn**	**14 10 04.0**	**-3.4**
BFZ	**Birch Farm**	**3.96**	**195**	P	**Pn**	**14 09 18.3**	**-0.6**
BFZ	**Birch Farm**	**3.96**	**195**	P	**Pn**	**14 09 18.2**	**-0.7**
MRZ	**Mangatainoka R**	**4.11**	**202**		**Pn**	**14 09 19.7**	**-1.0**
MRZ	**Mangatainoka R**	**4.11**	**202**	P	**Pn**	**14 09 19.7**	**-1.0**
TIWZ	**Tintock**	**4.13**	**198**	P	**Pn**	**14 09 20.4**	**-0.6**
CPWZ	**Castlepoint**	**4.19**	**194**	P	**Pn**	**14 09 22.1**	**+0.4**
HOWZ	**Holdsworth Sta**	**4.35**	**201**	P	**Pn**	**14 09 22.4**	**-1.3**
OGWZ	**Otaki Gorge**	**4.38**	**205**	P	**Pn**	**14 09 23.0**	**-1.0**
TMWZ	**Te Maipa**	**4.45**	**197**	P	**Pn**	**14 09 23.9**	**-1.0**
KIW	**Kapiti Island**	**4.51**	**207**	P	**Pn**	**14 09 24.3**	**-1.4**
MTW	**Mount Morrison**	**4.59**	**200**	P	**Pn**	**14 09 25.2**	**-1.5**
CAW	**Cannon Point**	**4.68**	**204**	P	**Pn**	**14 09 26.4**	**-1.4**
TRWZ	**Traveller**	**4.77**	**197**	P	**Pn**	**14 09 27.9**	**-1.0**
PAWZ	**Paruwai Farm**	**4.82**	**200**	P	**Pn**	**14 09 27.8**	**-1.8**
DUWZ	**D'Urville Isla**	**4.86**	**215**	P	**Pn**	**14 09 28.6**	**-1.6**
MSWZ	**Moikau Station**	**4.90**	**201**	P	**Pn**	**14 09 29.0**	**-1.7**
WEL	**Wellington**	**4.93**	**205**	P	**Pn**	**14 09 29.4**	**-1.5**
SNZO	**South Karori**	**4.98**	**206**		**Sn**	**14 10 29.6**	**-0.6**
SNZO	**South Karori**	**4.98**	**206**	P	**Pn**	**14 09 28.9**	**-2.6**
BHW	**Baring Head**	**5.01**	**204**		**Sn**	**14 10 29.9**	**-1.1**
TCW	**Tory Channel**	**5.05**	**209**		**Sn**	**14 10 30.3**	**-1.6**
TCW	**Tory Channel**	**5.05**	**209**	P	**Pn**	**14 09 30.5**	**-2.0**
TUWZ	**Tuamarina**	**5.37**	**210**		**Pn**	**14 09 34.6**	**-1.9**
TUWZ	**Tuamarina**	**5.37**	**210**	P	**Pn**	**14 09 34.6**	**-1.9**
NNZ	**Nelson**	**5.44**	**215**	P	**Pn**	**14 09 35.4**	**-2.0**
TKNZ	**Takaka Hill**	**5.51**	**219**		**Pn**	**14 09 35.7**	**-2.6**
TKNZ	**Takaka Hill**	**5.51**	**219**	P	**Pn**	**14 09 36.1**	**-2.2**
QRZ	**Quartz Range**	**5.59**	**223**	P	**Pn**	**14 09 36.7**	**-2.6**
QRZ	**Quartz Range**	**5.59**	**223**	P	**Pn**	**14 09 36.9**	**-2.4**
BSWZ	**Blackbirch Sta**	**5.64**	**209**	P	**Pn**	**14 09 38.4**	**-1.6**
MRNZ	**Matariki Terra**	**5.88**	**218**	P	**Pn**	**14 09 40.7**	**-2.5**
THZ	**Tophouse**	**6.09**	**215**	P	**Pn**	**14 09 43.6**	**-2.2**
KHZ	**Kahutara**	**6.37**	**208**		**Pn**	**14 09 47.5**	**-1.8**
KHZ	**Kahutara**	**6.37**	**208**	P	**Pn**	**14 09 47.2**	**-2.2**
DSZ	**Denniston Nort**	**6.62**	**221**	P	**Pn**	**14 09 50.1**	**-2.6**
GVZ	**Greta Valley S**	**7.03**	**208**	P	**Pn**	**14 09 55.3**	**-2.6**
LTZ	**Lake Taylor**	**7.19**	**213**	P	**Pn**	**14 09 57.1**	**-2.9**
OKCZ	**Okains Bay**	**7.68**	**205**	P	**Pn**	**14 10 04.2**	**-2.2**
RPZ	**Rata Peaks**	**8.47**	**214**	P	**Pn**	**14 10 14.1**	**-2.5**
	4.4nm,0.4s,baz=270,slow=0.5,SNR=6.4						
RPZ				S	**Sn**	**14 11 45.9**	**-6.0**
	12nm,0.4s,baz=180,slow=2.6,SNR=6.3						
RPZ	**Rata Peaks**	**8.47**	**214**		**Pn**	**14 10 14.7**	**-1.9**
RPZ	**Rata Peaks**	**8.47**	**214**	P	**Pn**	**14 10 14.8**	**-1.8**
RAR	**Rarotonga**	**25.11**	**58**	P	**P**	**14 13 25.4**	**+2.1**
PPT	**Papeete**	**34.72**	**65**	LR	LR	14 26 47.8	
	comp=Z,101nm,21.9s,baz=84,slow=32						
COEN	**Coen**	**38.21**	**298**	P	**P**	**14 15 17.5**	**+0.2**
COEN				IAmb	IAmb	14 15 33.4	
	comp=Z,24nm,1.4s						
TARA	**Tarawa**	**38.25**	**352**	P	**P**	**14 15 18.2**	**+0.6**
TARA				IAmb	IAmb	14 15 19.0	
	comp=Z,12nm,0.7s						
AS31	**Alice Springs**	**39.61**	**277**	P	**P**	**14 15 29.4**	**+0.5**
ASAR	**Alice Springs**	**39.61**	**277**	P	**P**	**14 15 29.4**	**+0.4**
	comp=Z,7.4nm,0.8s,baz=117,slow=7.9,SNR=99						
	comp=Z,7.4nm,0.8s						
ASAR	**Alice Springs**	**39.61**	**277**	P	**P**	**14 15 28.9**	**0.0**
RABL	**Rabaul**	**40.00**	**318**	P	**P**	**14 15 33.9**	**+1.7**
WR8	**Warramunga Arr**	**41.07**	**282**	P	**P**	**14 15 41.2**	**+0.3**
WR8				IAmb	IAmb	14 15 41.6	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**41.21**	**282**	P	**P**	**14 15 41.9**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=121,slow=7.7,SNR=38						
	comp=Z,2.9nm,0.6s						
WRA	**Warramunga Arr**	**41.21**	**282**	P	**P**	**14 15 41.8**	**-0.2**
WB0	**Warramunga Arr**	**41.26**	**282**	P	**P**	**14 15 42.3**	**-0.2**
WB0				IAmb	IAmb	14 15 43.0	
	comp=Z,5.5nm,0.6s						
KNRA	**Kununurra**	**47.99**	**283**	P	**P**	**14 16 35.9**	**+0.3**
KNRA				IAmb	IAmb	14 16 38.0	
	comp=Z,29nm,1.3s						
PETK	**Petropavlovsk-**	**91.24**	**348**	LR	LR	14 59 36.8	
	comp=Z,69nm,18.1s,baz=73,slow=34						
FINES	**FINESS Array B**	**149.58**	**333**	PKPbc	**PKiKP**	**14 27 44.0**	**+1.7**
	comp=Z,2.5nm,1.0s,baz=54,slow=3.6,SNR=1.4						

*SOME **11** 14:13:18.2,39°.48N×74°.30E,h15km*
*KRNET **11** 14:13:24.5±0.1,39°.71N×74°.55E,h13km,mb3.1*
*NNC **11** 14:13:26.6±1.6,39°.81N×74°.52E,h0km,mb3.6,mpv3.3,*
Error ellipse: s-maj=12.2km s-min=7.2km az=173.0

ISC 11 14:13:28.0±1.6,39.79N±0.08×74.51E±0.03,h10km,n38,
σ1§76/57,15C-15D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.81**	**286**	⇑*i*P	**Pg**	**14 13 41.1**	**-2.5**
SFK				⇓*i*S	**Sg**	**14 13 53.3**	**-0.9**
SALK	**Salom-Alik**	**1.21**	**334**	⇓*i*P	**Pb**	**14 13 49.0**	**-2.1**
SALK				⇓*i*S	**Sb**	**14 14 07.3**	**+0.4**
JNKS	**Jany-Kuch**	**1.52**	**34**	⇓*e*P	**Pn**	**14 13 54.3**	**-1.1**
JNKS				⇓*i*S	**Sb**	**14 14 16.1**	**+0.3**
ARSB	**Arslanbob**	**1.93**	**323**	⇑*e*P	**Pn**	**14 14 01.5**	**+0.6**
ARSB				⇑*e*S	**Sb**	**14 14 28.9**	**+1.5**
NRN	**Naryn**	**1.99**	**34**	⇓*i*P	**Pn**	**14 14 01.9**	**-0.1**
NRN				⇓*i*S	**Sb**	**14 14 29.3**	**-0.2**
ARLS	**Aral**	**2.07**	**356**	⇓*i*P	**Pn**	**14 14 03.6**	**+0.6**
ARLS				⇓*i*S	**Sb**	**14 14 32.0**	**+0.3**
UCH	**Uchtor**	**2.43**	**360**	P	**Pn**	**14 14 10.8**	**+2.6**
	SNR=37						
UCH	**Uchtor**	**2.43**	**360**	⇓*i*P	**Pn**	**14 14 08.7**	**+0.5**
UCH				⇓*i*S	**Sb**	**14 14 41.2**	**-1.1**
ULHL	**Ulahol**	**2.78**	**28**	P	**Pn**	**14 14 15.3**	**+2.6**
	SNR=7.1						
ARK	**Arkit**	**2.79**	**317**	⇓*i*P	**Pn**	**14 14 13.5**	**+0.7**
ARK				⇓*i*S	**Sn**	**14 14 49.4**	**+2.9**
AAK	**Ala-Archa**	**2.84**	**360**	⇑Pg	**Pn**	**14 14 16.0**	**+2.5**
	2.7nm,0.5s						
AAK				⇑Lg	Lg	14 14 59.1	
	10nm,0.9s						
KBK	**Karagaybulak**	**2.88**	**6**	P	**Pn**	**14 14 17.3**	**+2.2**
	SNR=15						
BOOM	**Boomskoye usch**	**2.90**	**21**	⇑*e*P	**Pn**	**14 14 15.2**	**+0.8**
BOOM				⇑*e*S	**Sn**	**14 14 51.9**	**+2.5**
EKS2	**Erkin-Say**	**2.92**	**349**	P	**Pb**	**14 14 18.4**	**-1.8**
	SNR=6.9						
KDJ	**Kajisay**	**3.09**	**40**	⇑*e*P	**Pn**	**14 14 17.6**	**+0.7**
KDJ				⇑*e*S	**Sn**	**14 14 55.7**	**+1.7**
MNAS	**Manas**	**3.09**	**331**	⇑*e*P	**Pn**	**14 14 18.3**	**+1.3**
MNAS				⇑*e*S	**Sn**	**14 14 57.0**	**+3.0**
MRKS	**Merke**	**3.11**	**342**	Pg	**Pn**	**14 14 19.9**	**+2.8**
	3.9nm,0.5s						
MRKS				Lg	Lg	14 15 00.9	
	6.0nm,0.5s						
MRKS	**Merke**	**3.11**	**342**	*e*P	**Pn**	**14 14 19.1**	**+2.0**
	3.9nm,0.5s						
MRKS				*e*S	**Sb**	**14 15 00.9**	**-0.4**
	6.0nm,0.5s						
CHMS	**Chumysh**	**3.21**	**3**	P	**Pn**	**14 14 21.4**	**+2.9**
	SNR=5.7						
TKM2	**Tokmak 2**	**3.23**	**14**	P	**Pn**	**14 14 21.4**	**+2.5**
	SNR=12						
KST	**Kastek**	**3.43**	**18**	Pg	**Pb**	**14 14 29.1**	**+0.3**
	6.4nm,0.3s						
KST				Lg	Lg	14 15 15.9	
	18nm,0.5s						
KST	**Kastek**	**3.43**	**18**	*e*P	**Pb**	**14 14 27.9**	**-1.0**
	6.4nm,0.3s						
KST				*e*S	**Sg**	**14 15 15.9**	**-2.1**
	18nm,0.5s						
IZV	**Izvestkoviy**	**3.60**	**25**	Pg	**Pb**	**14 14 32.5**	**+0.6**
	3.3nm,0.3s						
IZV				Lg	Lg	14 15 22.1	
	18nm,0.5s						
MTBS	**Maitube**	**3.63**	**23**	Pg	**Pb**	**14 14 32.5**	**+0.2**
	2.8nm,0.4s						
MTBS				Lg	Lg	14 15 22.5	
	18nm,0.4s						
MTBS	**Maitube**	**3.63**	**23**	*e*P	**Pb**	**14 14 32.0**	**-0.4**
	2.8nm,0.4s						
MTBS				*e*S	**Sg**	**14 15 23.4**	**-1.2**
	17nm,0.3s						
TNSS	**Tian-Shan**	**3.72**	**29**	Pg	**Pb**	**14 14 35.1**	**+1.0**
	2.5nm,0.4s						
TNSS				Lg	Lg	14 15 25.9	
	5.8nm,0.6s						
TNSS	**Tian-Shan**	**3.72**	**29**	*e*P	**Pb**	**14 14 33.8**	**-0.3**
	2.5nm,0.4s						
TNSS				*e*S	**Sg**	**14 15 25.9**	**-1.7**
	4.1nm,0.5s						
MDOK	**Medeo**	**3.87**	**29**	Pg	**Pb**	**14 14 37.4**	**+1.0**
	4.5nm,0.5s						
MDOK				Lg	Lg	14 15 30.0	
	23nm,0.6s						
KOTS	**Kotyrbulak**	**3.95**	**29**	Pg	**Pb**	**14 14 39.1**	**+1.2**
	3.9nm,0.4s						
KOTS				Lg	Lg	14 15 33.5	
	23nm,0.7s						
KRBS	**Karabastau**	**4.00**	**12**	Pg	**Pb**	**14 14 39.4**	**+0.9**
	2.2nm,0.4s						
KRBS				Lg	Lg	14 15 33.6	
	15nm,0.6s						
KTBS	**Karatobe**	**4.24**	**22**	Pg	**Pb**	**14 14 43.9**	**+1.3**
	2.9nm,0.4s						
KTBS				Lg	Lg	14 15 41.2	
	0.3nm,0.7s						
KUU	**Kurty**	**4.32**	**18**	Pg	**Pb**	**14 14 44.8**	**+0.8**
	3.5nm,0.1s						
KUU				Lg	Lg	14 15 42.7	
	12nm,0.3s						
KUU	**Kurty**	**4.32**	**18**	*e*P	**Pb**	**14 14 43.8**	**-0.1**
	3.7nm,0.1s						
KUU				*e*S	**Sg**	**14 15 42.9**	**-3.7**
	4.7nm,0.1s						
SATY	**Saty**	**4.38**	**41**	Pg	**Pb**	**14 14 45.7**	**+0.6**
	2.1nm,0.4s						
SATY				Lg	Lg	14 15 44.2	
	7.6nm,0.5s						
KK31	**Karatay Array**	**4.47**	**319**	⇓Pn	**Pn**	**14 14 36.9**	**+1.1**
	0.7nm,0.4s,baz=134,slow=12						
KK31				⇓Sn	**Sn**	**14 15 30.4**	**+2.5**
	1.9nm,0.4s,baz=136,slow=22,SNR=5.8						
KK31				⇑Lg	Lg	14 15 49.4	
	2.2nm,0.5s,baz=138,slow=28						
KPKS	**Kokpek**	**4.82**	**39**	Pg	**Pb**	**14 14 53.7**	**+1.2**
	0.6nm,0.2s						
KPKS				Lg	Lg	14 15 58.3	
	6.6nm,0.4s						
KPKS	**Kokpek**	**4.82**	**39**	*e*P	**Pb**	**14 14 53.0**	**+0.4**
	0.6nm,0.2s						
KPKS				*e*S	**Sg**	**14 15 58.6**	**-4.1**
	15nm,0.5s						
PDGK	**Podgornoye**	**5.14**	**45**	⇑Pn	**Pn**	**14 14 45.1**	**0.0**
	1.2nm,0.8s						
PDGK				⇓Pg	**Pb**	**14 14 59.9**	**+1.9**
	2.6nm,0.7s						
PDGK				⇑Lg	Lg	14 16 06.0	
	8.8nm,1.3s						

IDC 11 14:26:01.2±2.2,2°.71N×127°.38E,h0km,mb3.3/3,
mbtmp3.3/3,Error ellipse: s-maj=153.1km
s-min=28.1km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.52**	**163**	P	P	14 31 13.3	+0.2
	0.6nm,0.6s,baz=343,slow=11,SNR=8.5						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**26.97**	**167**	P	P	14 31 44.6	-0.2
	0.2nm,0.6s,baz=346,slow=7.5,SNR=6.4						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.76**	**325**	P	P	14 36 01.1	0.0
	0.3nm,0.8s,baz=135,slow=5.2,SNR=1.9						
	0.3nm,0.8s						

*NEIC **11** 14:30:07.5±1.0,5°.93S±0°.06×128°.8E±0°.1,h320km±6km,*
mb4.1/8,Error ellipse: s-maj=15.9km s-min=7.5km
az=77.0
*IDC **11** 14:30:07.3±1.6,5°.94S×128°.75E,h317km±21km,mb3.0/3,*
mbtmp3.8/8,Error ellipse: s-maj=30.0km s-min=17.1km
az=83.0

ISC 11 14:30:05.6±0.5,5°.95S±0°.05×128°.75E±0°.07,h300km,n32,
σ1§48/36,mb3.5/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.24**	**129**	Pn	**Pn**	**14 31 06.5**	**+2.8**
FAKI	**Fak Fak**	**4.61**	**49**		**Pn**	**14 31 21.4**	**+2.8**
SIJI	**Sorong**	**5.64**	**27**	P	**Pn**	**14 31 33.1**	**+2.4**
	3.0nm,0.2s,baz=133,slow=23,SNR=13						
SIJI				S	**S**	**14 32 38.0**	**-1.3**
	9.1nm,0.4s,baz=90,slow=23,SNR=15						
SOEI	**Soe**	**5.83**	**229**	Pn	**Pn**	**14 31 35.8**	**+2.8**
BATI	**Baumata**	**6.57**	**230**	P	**Pn**	**14 31 43.5**	**+1.7**
	16nm,0.3s,baz=111,slow=2.4,SNR=6.4						
BATI				S	**S**	**14 32 58.5**	**-1.1**
	16nm,0.4s,baz=118,slow=23,SNR=1.7						
MTN	**Manton Dam**	**7.24**	**161**	Pn	**Pn**	**14 31 51.5**	**+1.5**
KNRA	**Kununurra**	**9.67**	**180**	Pn	**Pn**	**14 32 21.5**	**+1.9**
TOLI2	**Tolitoli**	**10.60**	**311**	P	**P**	**14 32 34.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**12.45**	**194**	P	**Pn**	**14 32 54.8**	**+1.2**
	1.3nm,0.7s,baz=15,slow=9.3,SNR=1.2						
FITZ				S	**S**	**14 35 11.3**	**-0.5**
	1.3nm,0.7s,baz=287,slow=19,SNR=1.8						
WB0	**Warramunga Arr**	**14.79**	**159**	P	**P**	**14 33 21.1**	**+0.6**
WRA	**Warramunga Arr**	**14.93**	**159**	P	**P**	**14 33 22.6**	**+0.6**
	1.1nm,0.5s,baz=340,slow=12,SNR=20						
WRA				S	**S**	**14 36 01.9**	**-3.2**
	0.6nm,0.8s,baz=342,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**14.93**	**159**	P	**P**	**14 33 22.4**	**+0.4**
WR8	**Warramunga Arr**	**15.00**	**159**	P	**P**	**14 33 23.6**	**+0.8**
WR8				IAmb	IAmb	14 33 38.8	
	comp=Z,7.9nm,1.2s						
COEN	**Coen**	**16.28**	**120**	P	**P**	**14 33 38.0**	**+1.2**
COEN				IAmb	IAmb	14 33 38.9	
	comp=Z,8.3nm,0.7s						
AS31	**Alice Springs**	**18.30**	**165**	P	**P**	**14 33 59.4**	**+0.9**
ASAR	**Alice Springs**	**18.30**	**165**	P	**P**	**14 33 59.9**	**+1.3**
	comp=Z,2.1nm,0.7s,baz=344,slow=11,SNR=58						
ASAR				S	**S**	**14 37 09.3**	**-2.6**
	comp=Z,2.5nm,0.9s,baz=348,slow=22,SNR=14						
ASAR	**Alice Springs**	**18.30**	**165**	P	**P**	**14 33 59.3**	**+0.8**
BBOO	**Buckleboo**	**27.58**	**167**	P	**P**	**14 35 25.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**38.11**	**310**	P	**P**	**14 36 56.9**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=138,slow=7.5,SNR=9.1						
	comp=Z,0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**38.11**	**310**	P	**P**	**14 36 55.7**	**-0.9**
TAU	**Tasmania Unive**	**40.31**	**159**	P	**P**	**14 37 14.0**	**-0.3**
KSAR	**Wonju Array Be**	**43.17**	**359**	P	**P**	**14 37 36.8**	**-0.6**
AMCZ	**Amberley**	**53.52**	**141**	P	**P**	**14 38 55.8**	**-0.1**
PETK	**Petropavlovsk-**	**63.73**	**19**	P	**P**	**14 40 04.2**	**-1.5**
MKAR	**Makanchi Array**	**66.67**	**327**	P	**P**	**14 40 24.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=115,slow=8.1,SNR=6.1						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**66.67**	**327**	P	**P**	**14 40 24.3**	**-0.3**
MAKZ	**Makanchi**	**66.85**	**327**	P	**P**	**14 40 25.7**	**0.0**
KURBB	**Kurchatov Arra**	**70.97**	**329**	P	**P**	**14 40 50.3**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=131,slow=5.2,SNR=6.7						
	comp=Z,0.4nm,0.6s						
KURK	**Kurchatov**	**70.98**	**329**	P	**P**	**14 40 50.3**	**-0.5**
KURK	**Kurchatov**	**70.98**	**329**	IAmb	IAmb	14 41 09.1	
	comp=Z,4.7nm,1.5s						
J16K	**Anvik River**	**86.73**	**25**	P	**P**	**14 42 15.1**	**-0.6**
J16K				IAmb	IAmb	14 42 18.2	
	comp=Z,5.5nm,1.4s						
RLMT	**Red Lodge**	**116.47**	**42**		**PKPdf**	**14 48 13.1**	**-1.3**

IDC 11 14:46:16.1±1.7,39°.82N×109°.02E,h0km,mb3.2/2,
mbtmp3.0/4,ML3.1/2,MS3.5/1,Error ellipse:
s-maj=32.4km s-min=21.4km az=108.0,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**5.71**	**229**	Pn	Pn	14 47 42.2	-0.3
	baz=44,slow=14						
LZDM				Pg	Pb	14 47 58.7	+1.8
	baz=51,slow=15						
LZDM				Lg	Lg	14 49 18.9	
	baz=49,slow=32						
	0.4nm,0.3s						
SONM	**Songino Array**	**8.23**	**348**	Pn	Pn	14 48 16.1	-0.8
	0.2nm,0.3s,baz=169,slow=15,SNR=1.5						
SONM				Lg	Lg	14 50 38.9	
	0.1nm,0.3s,baz=172,slow=31,SNR=1.4						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**23.01**	**205**	P	P	14 51 23.4	+0.8
	0.3nm,0.4s,baz=13,slow=9.5,SNR=4.3						
	0.3nm,0.4s						
ASAJ	**Asahikawa**	**25.22**	**69**	LR	LR	15 01 48.9	
	comp=Z,107nm,20.1s,baz=132,slow=37						
ASAR	**Alice Springs**	**67.30**	**155**	P	P	14 57 12.6	-0.1
	0.2nm,0.6s,baz=340,slow=6.5,SNR=5.3						
	0.2nm,0.6s						

*WEL **11** 15:02:14.6±0.8,33°.5S±5°×17°.8W±1°.4,h0km,M5.1/15,*
mB5.5/9,ML4.8/12,MLv5.1/15,Mw(mB)5.0/9,Error ellipse:
s-maj=19.7km s-min=3.1km az=108.4
*NEIC **11** 15:02:16.9±2.1,32°.83S±0°.09×178°.5W±0°.2,h10km±1km,*
mb4.8/17,Error ellipse: s-maj=24.4km s-min=12.2km
az=111.0
*IDC **11** 15:02:21.5±3.0,32°.96S×178°.80W,h42km±24km,mb4.5/3,*
mbtmp4.8/5,ML4.8/2,MS3.8/2,Error ellipse: s-maj=34.9km
s-min=19.9km az=115.0
*NOU **11** 15:02:31.2,33°.87S×178°.93W,h131km,mb4.5/23,South*
of Kermadec Islands

ISC 11 15:02:19.6±0.6,32°.94S±0°.05×178°.44W±0°.09,h32km,
n151,σ1§74/152,mb4.9/15,3D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.70**	**7**	P	**Pn**	**15 03 14.8**	**+0.3**
RAO	**Raoul Island**	**3.71**	**7**	P	**Pn**	**15 03 17.6**	**+3.0**
	108nm,0.3s,baz=270,slow=20,SNR=2.0						
RAO				S	**Sn**	**15 03 57.3**	**+0.1**
	399nm,0.3s,baz=90,slow=20,SNR=2.1						
RAO				LR	LR	15 04 45.5	
	comp=Z,717nm,20.9s,baz=132,slow=38						
	250nm,0.3s						
RAO	**Raoul Island**	**3.71**	**7**	Pn	**Pn**	**15 03 11.6**	**-3.0**
RAO	**Raoul Island**	**3.71**	**7**	P	**Pn**	**15 03 17.1**	**+2.5**
RAO				S	**Sn**	**15 03 58.5**	**+1.3**
RIZ	**Raoul Island**	**3.71**	**7**	P	**Pn**	**15 03 12.4**	**-2.3**
RIZ				S	**Sn**	**15 03 52.6**	**-4.7**
MXZ	**Matakaoa Point**	**5.32**	**209**		**Pn**	**15 03 35.7**	**-1.1**
MXZ	**Matakaoa Point**	**5.32**	**209**	P	**Pn**	**15 03 36.2**	**-0.6**
MXZ	**Matakaoa Point**	**5.32**	**209**	P	**Pn**	**15 03 36.5**	**-0.3**
MXZ				S	**Sn**	**15 04 39.8**	**+2.9**
WMGZ	**Waiomatatini S**	**5.50**	**207**	P	**Pn**	**15 03 39.6**	**+0.4**
WMGZ				S	**Sn**	**15 04 43.6**	**+2.3**
PKGZ	**Pakihiroa**	**5.67**	**209**	P	**Pn**	**15 03 40.9**	**-0.7**
PKGZ				S	**Sn**	**15 04 46.0**	**+0.3**
HAZ	**Te Kaha**	**5.71**	**212**	P	**Pn**	**15 03 41.9**	**-0.2**
HAZ				S	**Sn**

KHEZ	Kahui Hut	8.79 222	P		Pn	15 04 23.2	-1.3
BFZ	Birch Farm	8.82 207	P		Pn	15 04 21.5	-3.3
MRZ	Mangatainoka R	9.07 210	Pn		Pn	15 04 21.8	-6.4
SNZO	South Karori	9.98 211	P		Pn	15 04 36.7	-3.9
TUWZ	Tuamarina	10.42 213			Pn	15 04 40.8	-5.9
QRZ	Quartz Range	10.68 220	P		Pn	15 04 44.8	-5.5
QRZ	Quartz Range	10.68 220	P		Pn	15 04 45.9	-4.4
CTZ	Chatham Island	10.87 173	P		Pn	15 04 53.4	+0.6
CTZ	Chatham Island	10.87 173	P		Pn	15 04 53.7	+0.9
KHZ	Kahutara	11.38 212	P		Pn	15 04 54.9	-5.0
KHZ	Kahutara	11.38 212	P		Pn	15 04 54.8	-5.1
RPZ	Rata Peaks	13.54 214	P		Pn	15 05 21.8	-7.5
	3.5nm,0.5s,baz=180,slow=20,SNR=1.4						
RPZ	Rata Peaks	13.54 214	P		Pn	15 05 22.5	-6.8
ODZ	Otahua Downs	14.75 212	P		Pn	15 05 40.2	-5.6
JCZ	Jackson Bay	14.93 218	P		Pn	15 05 43.1	-5.2
MSVF	Nonsavu	15.47 347			P	15 05 59.4	-0.3
DZM	Mont Dzumac	17.21 305	LR		LR	15 11 30.1	
	comp=Z,541nm,19.4s,baz=184,slow=32						
RAR	Rarotonga	20.28 60	LR		LR	15 14 17.1	
	comp=Z,71nm,19.9s,baz=248,slow=35						
EIDS	Eidsvold	27.59 278	P		P	15 08 03.6	-0.4
CMSA	Cobar Meteorol	30.28 263	P		P	15 08 27.8	0.0
STKA	Stephens Creek	33.62 261	P		P	15 08 58.1	+1.0
	3.0nm,0.9s,baz=40,slow=7.1,SNR=3.2						
STKA	Stephens Creek	33.62 261	IAmb		IAmb	15 09 04.2	
	comp=Z,129nm,1.6s						
CTAO	Charters Tower	33.92 283			P	15 08 59.3	-0.6
CTAO			IAmb		IAmb	15 09 01.1	
	comp=Z,12nm,0.6s						
CTAO	Charters Tower	33.92 283	P		P	15 09 00.6	+0.7
INKA	Innaminka	35.44 267			P	15 09 12.5	-0.4
BBOO	Buckleboo	37.98 257	P		P	15 09 33.0	-1.5
QIS	Mount Isa	39.20 278	P		P	15 09 44.4	-0.5
PMG	Port Moresby	39.42 299	P		P	15 09 45.9	-0.8
PMG			IAmb		IAmb	15 10 04.8	
	comp=Z,23nm,1.0s						
COEN	Coen	39.68 289	P		P	15 09 48.8	-0.1
COEN			IAmb		IAmb	15 09 49.7	
	comp=Z,13nm,0.7s						
COEN	Coen	39.68 289	P		P	15 09 49.2	+0.3
AS31	Alice Springs	42.66 270	P		P	15 10 12.1	-1.3
ASAR	Alice Springs	42.66 270	P		P	15 10 12.1	-1.4
	comp=Z,11nm,0.7s,baz=110,slow=7.3,SNR=122						
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	42.66 270	P		P	15 10 11.7	-1.7
WR8	Warramunga Arr	43.74 275	P		P	15 10 20.8	-1.3
WR8			IAmb		IAmb	15 10 21.4	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	43.87 275	P		P	15 10 22.0	-1.2
WRAB	Tennant Creek	43.87 275	P		P	15 10 21.5	-1.7
WRA	Warramunga Arr	43.88 275	P		P	15 10 21.8	-1.5
	comp=Z,10nm,0.5s,baz=112,slow=10,SNR=173						
	comp=Z,10nm,0.5s						
WB0	Warramunga Arr	43.91 275	P		P	15 10 22.1	-1.4
FORT	Forrest	45.08 258	P		P	15 10 31.4	-1.3
FORT			IAmb		IAmb	15 11 43.5	
	comp=Z,18nm,1.1s						
KNRA	Kununurra	50.57 277	P		P	15 11 14.4	-1.0
PSA00	Pilbara Seismi	55.34 265	P		P	15 11 48.2	-2.3
PSA00			IAmb		IAmb	15 11 50.4	
	comp=Z,13nm,1.3s						
MBWA	Marble Bar	55.61 266	P		P	15 11 50.5	-2.0
QSPA	South Pole Qui	57.17 180	P		P	15 12 07.5	+4.3
	comp=Z,12nm,0.7s,baz=29,slow=1.5,SNR=9.0						
QSPA	South Pole Qui	57.17 180	P		P	15 12 04.1	+0.9
SNAA	Sanae	75.63 179	P		P	15 14 03.1	+2.1
	comp=Z,2.1nm,0.7s,baz=287,slow=17,SNR=2.0						
	comp=Z,2.1nm,0.7s						
VNA3	Neumayer Olymp	75.80 176	⇓P		P	15 14 04.8	+2.9
	comp=Z,14nm,0.7s						
VNA2	Neumayer--Watz	76.23 177	⇓P		P	15 14 07.6	+3.2
	comp=Z,13nm,0.6s,baz=165,slow=6.3						
VNA1	Neumayer--Stat	76.46 177	⇓P		P	15 14 09.0	+3.4
	comp=Z,16nm,0.8s						
NVAR	Mina Array Bea	90.36 43	P		P	15 15 22.0	+4.3
	comp=Z,0.5nm,0.5s,baz=202,slow=8.6,SNR=4.4						
NVAR	Mina Array Bea	90.36 43	P		P	15 15 18.4	+0.8
CMAR	Chiang Mai Arr	93.88 289	PP		PP	15 19 18.9	-1.5
	comp=Z,0.3nm,0.6s,baz=136,slow=5.8,SNR=5.0						
MKAR	Makanchi Array	119.10 309	PKP		PKPdf	15 21 04.3	-0.5
	comp=Z,0.9nm,0.7s,baz=204,slow=1.1,SNR=11						
KURK	Kurchatov	122.51 313			PKPdf	15 21 10.8	-0.3
KURBB	Kurchatov Arra	122.54 313	PKP		PKPdf	15 21 10.8	-0.5
	comp=Z,2.3nm,0.7s,baz=108,slow=2.0,SNR=20						
BVAR	Borovoye Array	127.93 314	PKP		PKPdf	15 21 20.9	-0.6
	comp=Z,1.7nm,0.6s,baz=77,slow=0.4,SNR=12						
SPITS	Spitsbergen Ar	134.20 356	PKP		PKPdf	15 21 32.0	-0.8
	comp=Z,5.0nm,0.9s,baz=177,slow=2.9,SNR=4.2						
ARCES	ARCESS Array B	140.98 347	PKP		PKPdf	15 21 46.4	+0.9
	comp=Z,3.8nm,0.7s,baz=33,slow=2.9,SNR=8.1						
KBZ	Khabaz	146.15 301	PKPbc		PKPbc	15 21 56.1	-0.2
	comp=Z,2.1nm,0.9s,baz=135,slow=2.9,SNR=2.1						
FINES	FINESS Array B	147.38 338	PKPbc		PKPbc	15 21 59.7	+0.4
	comp=Z,10nm,0.8s,baz=48,slow=3.8,SNR=16						
NB2	NORSAR Subarra	151.19 350	PKP		PKiKP	15 22 09.4	0.0
	comp=Z,3.9nm,0.6s,baz=18,slow=2.6						
NOA	NORSAR Array B	151.19 350	PKPbc		PKiKP	15 22 09.6	+0.1
	comp=Z,4.8nm,0.6s,baz=14,slow=4.1,SNR=20						
HFS	Hagfors	151.64 347	PKPbc		PKPbc	15 22 09.7	-0.2
	comp=Z,10nm,0.7s,baz=126,slow=2.6,SNR=13						
MMAI	Mount Meron Ar	151.68 280	PKPbc		PKPbc	15 22 11.1	+0.1
	comp=Z,3.9nm,0.6s,baz=62,slow=5.8,SNR=7.1						
AKASG	Malin Array Be	153.03 319	PKPbc		PKPbc	15 22 12.3	-1.0
	comp=Z,2.8nm,0.8s,baz=61,slow=2.0,SNR=5.3						
BRTR	Keskin Array B	153.38 294	PKPbc		PKPbc	15 22 14.3	-0.3
	comp=Z,1.5nm,0.7s,baz=118,slow=2.9,SNR=7.4						

IDC 11 15:08:19.6±3.3, 3°.06N×95°.91E, h0km, mb3.3/4, mbtmp3.3/5, ML3.7/1, Error ellipse: s-maj=141.0km s-min=24.6km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.59	11	Pn			Pn	15 12 02.0	+1.1
	0.1nm,0.3s,baz=179,slow=13,SNR=4.7								
	0.3nm,0.4s								
WRA	Warramunga Arr	44.11 123		P			P	15 16 29.3	-0.8
	0.4nm,0.9s,baz=302,slow=7.5,SNR=1.2								
	0.4nm,0.9s								
MKAR	Makanchi Array	45.15 347		P			P	15 16 38.9	+0.9
	0.2nm,0.5s,baz=147,slow=8.3,SNR=4.5								
	0.2nm,0.5s								
ASAR	Alice Springs	45.54 128		P			P	15 16 42.0	+0.5
	0.2nm,0.7s,baz=304,slow=8.1,SNR=3.8								
	0.2nm,0.7s								
ZALV	Zalesovo Beam	51.54 352		P			P	15 17 25.6	-1.6
	0.5nm,0.4s,baz=149,slow=5.9,SNR=3.0								
	0.5nm,0.4s								

*NEIC **11** 15:13:27.3±1.9, 0°.14N±0°.09×123°.60E±0°.07, h147km±2km, mb4.2/27, Error ellipse: s-maj=12.8km s-min=10.3km az=183.0*

*DJA **11** 15:13:28.9±0.2, 0°.N±3°×12°.4E±°, h132km±4km, M4.3/39, mB4.9/6, mb4.4/12, MLv4.4/39, Mw(mB)4.2/6*

*IDC **11** 15:13:28.4±4.3, 0°.21N×123°.69E, h158km±41km, mb3.5/11, mbtmp3.9/12, Error ellipse: s-maj=31.7km s-min=15.5km az=78.0*

ISC 11 15:13:27.8±0.5, **0°.15N**±0°.06×**123°.65E**±0°.06, **h157**km, **n67**, σ1**9**08/67, **mb4.0**/23, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.47 217					Pn	15 13 56.0	-1.6
LUWI	Luwuk	1.47 217		P			Pn	15 13 56.1	-1.5
MRSI	Marisa	1.74 281		P			Pn	15 13 59.1	-1.3
MNI	Manado	1.75 43		P			Pn	15 14 01.9	+1.3
APSI	Ampana	2.26 242		P			Pn	15 14 06.1	-0.3
TOLI2	Tolitoli	3.03 288					Pn	15 14 14.1	-1.6
SANI	Sanana	3.19 133		P			Pn	15 14 15.9	-2.0
MPSI	Mapaga	3.76 273		P			Pn	15 14 25.3	+0.2
TNTI	Ternate	3.77 80		P			Pn	15 14 24.7	-0.5
TNTI	Ternate	3.77 80		P			Pn	15 14 24.9	-0.3
PCI	Palu	3.96 255		P			Pn	15 14 28.9	+1.2
KKSI	Kolaka, Sulawe	4.73 205		P			Pn	15 14 36.9	-0.9
NLAI	Namlea	4.81 134		P			Pn	15 14 39.0	+0.1
TTSI	Tana Toraja	4.97 230		P			Pn	15 14 42.4	+1.4
MMSI	Mamuju	5.51 239		P			Pn	15 14 49.2	+1.1
	0.1nm22nm,0.5s								
SPSI	Sidrap Palu	5.63 224		P			Pn	15 14 50.8	+1.1
	0.1nm23nm,0.6s								

KRAI	Karang Ratu	5.86 126	P		Pn	15 14 53.9	+1.2
	0.2nm31nm,0.9s						
AAI	Ambon	5.92 130	P		Pn	15 14 54.2	+0.6
	0.4nm46nm,0.5s						
MSAI	Masohi	6.31 123	P		Pn	15 14 58.9	+0.2
	0.3nm1μm59nm,0.8s						
MYLDM	Lahad Datu	7.18 314	P		Pn	15 15 12.8	+2.6
	0.2nm49nm,1.4s						
SIJI	Sorong	7.68 98	P		Pn	15 15 17.6	+0.7
	18nm,0.5s,baz=307,slow=8.5,SNR=15						
SIJI			S		Sn	15 16 41.8	-1.0
	1.8nm,0.3s,baz=202,slow=19,SNR=1.3						
SIJI	Sorong	7.68 98	P		Pn	15 15 17.6	+0.7
FAKI	Fak Fak	9.12 110	Pn		Pn	15 15 35.5	-0.6
MTN	Manton Dam	14.88 150	P		Pn	15 16 51.8	+1.2
UGM	Wanagama	15.34 238	Pn		Pn	15 16 54.7	-1.6
KNRA	Kununurra	16.51 162			P	15 17 10.2	-0.1
KNRA			IAmb		IAmb	15 17 20.8	
	comp=Z,20nm,1.2s						
WB0	Warramunga Arr	22.41 153	P		P	15 18 14.0	+0.4
WB0			IAmb		IAmb	15 18 55.5	
	comp=Z,7.1nm,1.1s						
WRA	Warramunga Arr	22.54 153	P		P	15 18 15.2	+0.4
	comp=Z,0.9nm,0.5s,baz=333,slow=10,SNR=33						
	comp=Z,0.9nm,0.5s						
WR8	Warramunga Arr	22.63 153	P		P	15 18 15.8	+0.2
WR8			IAmb		IAmb	15 18 17.9	
	comp=Z,12nm,1.4s						
TPUB	Ta-pu	23.20 353	P		P	15 18 21.0	+0.2
TPUB			IAmb		IAmb	15 18 35.9	
	comp=Z,37nm,1.4s						
AS31	Alice Springs	25.68 158	P		P	15 18 44.2	+0.9
ASAR	Alice Springs	25.68 158	P		P	15 18 44.9	+1.5
	comp=Z,0.4nm,0.6s,baz=342,slow=13,SNR=13						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	25.68 158	P		P	15 18 44.8	+1.4
KSAR	Wonju Array Be	37.32 6	P		P	15 20 25.9	+1.1
MJAR	Matsushiro Arr	38.65 19	P		P	15 20 35.2	-0.8
	comp=Z,1.9nm,0.7s,baz=192,slow=9.2,SNR=5.8						
	comp=Z,1.9nm,0.7s						
MJAR	Matsushiro Arr	38.65 19	IAmb		IAmb	15 21 17.3	
	comp=Z,4.4nm,1.4s						
USRK	Ussuriysk Ar.	44.49 9	P		P	15 21 24.3	+0.9
	comp=Z,1.0nm,0.4s,baz=194,slow=6.1,SNR=4.6						
	comp=Z,1.0nm,0.4s						
ULN	Ulaanbaatar	49.67 345	P		P	15 22 03.5	-0.2
ULN			IAmb		IAmb	15 22 47.8	
	comp=Z,3.3nm,1.2s						
SONM	Songino Array	49.81 345	P		P	15 22 04.8	+0.1
	comp=Z,0.5nm,0.6s,baz=166,slow=11,SNR=4.4						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	58.84 328	P		P	15 23 09.8	0.0
	comp=Z,1.9nm,0.5s,baz=125,slow=8.5,SNR=32						
MKAR			PcP		PcP	15 23 56.8	-0.8
	comp=Z,0.5nm,0.4s,baz=163,slow=3.1,SNR=9.8						
	comp=Z,1.9nm,0.5s						
MKAR	Makanchi Array	58.84 328			PcP	15 23 57.2	-0.4
MAKZ	Makanchi	59.01 328	P		P	15 23 11.4	+0.4
PETK	Petropavlovsk-	59.90 23	P		P	15 23 17.9	+1.0
	comp=Z,1.1nm,0.4s,baz=224,slow=7.5,SNR=4.4						
	comp=Z,1.1nm,0.4s						
ZAA0	Zalesovo Array	62.45 335	P		P	15 23 32.5	-1.6
ZALV	Zalesovo Beam	62.45 335	P		P	15 23 33.0	-1.1
	comp=Z,0.6nm,0.5s,baz=124,slow=8.5,SNR=2.7						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	62.45 335	P		P	15 23 32.7	-1.4
RAO	Raoul Island	62.85 123	P		P	15 23 35.9	-1.4
KURBB	Kurchatov Arra	63.17 330	P		P	15 23 39.7	+0.8
	comp=Z,1.4nm,0.7s,baz=129,slow=6.2,SNR=15						
	comp=Z,1.4nm,0.7s						
KURK	Kurchatov	63.18 330	P		P	15 23 38.9	-0.1
KURK			IAmb		IAmb	15 23 40.5	
	comp=Z,4.1nm,0.6s						
AFI	Afiamalu	65.39 105	P		P	15 23 52.5	-1.7
TIXI	Tiksi	71.47 2	P		P	15 24 30.4	-0.3
TIXI			IAmb		IAmb	15 24 57.8	
	comp=Z,3.5nm,1.1s						
ABKAR	Akbulak array	73.02 322	P		P	15 24 39.3	-1.0
BILL	Bilibino	73.79 15	P		P	15 24 44.5	0.0
BILL			IAmb		IAmb	15 25 06.5	
	comp=Z,3.0nm,1.2s						
N14K	Kuskokwak Cree	82.22 29	P		P	15 25 32.1	+1.0
M14K	Bethel	82.28 29	P		P	15 25 32.7	+1.3
C18K	Utukok River	84.48 21	P		P	15 25 44.2	+1.6
H18K	Honhosa River	84.82 25	P		P	15 25 45.7	+1.3
H18K			IAmb		IAmb	15 26 11.2	
	comp=Z,3.3nm,1.2s						
J18K	Innoko River	85.23 26	P		P	15 25 47.8	+1.3
J18K			IAmb		IAmb	15 26 30.9	
	comp=Z,11nm,1.5s						
D20K	Etivluk River	86.13 21	P		P	15 25 52.0	+1.2
SKT	Skwentna	87.43 28	P		P	15 25 57.4	+0.2
COLD	Coldfoot	88.37 23	P		P	15 26 02.8	+1.3
COLD			IAmb		IAmb	15 26 42.3	
	comp=Z,5.2nm,1.5s						
CCB	Clear Creek Bu	89.24 25	P		P	15 26 05.7	0.0
CCB			IAmb		IAmb	15 26 06.0	
	comp=Z,5.7nm,1.4s						
ILAR	Eielson Array	89.64 25	P		P	15 26 06.7	-0.8
	comp=Z,0.3nm,0.5s,baz=268,slow=4.4,SNR=7.5						
	comp=Z,0.3nm,0.5s						
J25K	Salcha River,	90.29 26	P		P	15 26 10.4	-0.2
J25K			IAmb		IAmb	15 26 28.7	
	comp=Z,6.1nm,1.5s						
BMAR	Burnt Mountain	90.55 23	P		P	15 26 13.2	+1.5
INK	Inuvik	94.60 21	P		P	15 26 30.9	+0.6
	comp=Z,0.4nm,0.4s,baz=293,slow=4.7,SNR=4.9						
	comp=Z,0.4nm,0.4s						
INK	Inuvik	94.60 21	IAmb		IAmb	15 26 38.2	
	comp=Z,1.4nm,1.2s						

*BJI **11** 15:15:42.9, 6°.13S×150°.71E, h64km, mB5.4/16, mb4.7/56, Ms5.0/34, Ms7 4.8/37*

*IDC **11** 15:15:44.6±0.7, 5°.83S×150°.28E, h44km±6km, mb4.3/22, mbtmp4.5/24, ML3.8/3, MS4.4/46, Error ellipse: s-maj=18.5km s-min=11.9km az=97.0*

*GFZ **11** 15:15:45.5, 5°.90S×150°.16E, h43km, MW5.3, Moment Tensor Solution. s49 Moment tensor: Mrr9.41; Mθθ-9.81; Mθφ 0.40; Mrθ 2.50; Mθθ-0.84; Mθr 0.04; Fault plane solution: NP1:φ86.00000°, δ52.00000°, λ91.00000°. NP2:φ264.00000°, δ38.00000°, λ88.00000°. Principal axes: T 9.7300, Plg83.0000°, Azm3.0000°; N 0.4700, Plg1.0000°, Azm266.0000°; P -10.2000, Plg7.0000°, Azm175.0000°;*

*MOS **11** 15:15:45.5±1.2, 5°.93S×150°.31E, h66km, mb4.8/16 Error ellipse: s-maj=11.2km s-min=7.2km az=94.8*

*NEIC **11** 15:15:46.7±1.5, 5°.97S±0°.07×150°.23E±0°.08, h49km±5km, mb5.1/52, Mww5.3/17, Error ellipse: s-maj=11.5km s-min=8.9km az=118.0*

*NEIC **11** 15:15:47.1, 5°.99S×150°.24E, h46km*

*GCMT **11** 15:15:47.7±0.1, 6°.24S±0°.01×150°.22E±0°.01, h51km, MW5.3/109, Moment Tensor Solution. s109, c169; s100, c181; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.96±.02; Mθθ-1.07±.01; Mφφ 0.11±.01; Mrθ 0.29±.01; Mθφ-0.03±.01; Mφr-0.02±.01; Best double couple: M0 1.05600×10^17 NP1:φ267.00000°, δ37.00000°, λ88.00000°. NP2:φ90.00000°, δ53.00000°, λ92.00000°. Principal axes: T 1.0000, Plg82.0000°, Azm9.0000°; N 0.1110, Plg1.0000°, Azm269.0000°; P -1.1120, Plg8.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 15:15:47.1, 5°.99S×150°.04E, h46km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^17Nm; Mrr1.05; Mθθ-9.94; Mφφ-0.11; Mrθ 0.27; Mθφ-0.17; Mφr 0.07; Fault plane solution: M0 1.05000×10^17 NP1: φ259.83000°, δ37.40000°, λ91.54000°. NP2:φ79.77.89000°, δ52.61000°, λ88.82000°. Principal axes: T 1.0834, Plg82.0000°, Azm342.0000°; N -0.0773, Plg1.0000°, Azm79.0000°; P -1.0061, Plg8.0000°, Azm169.0000°;*

*DJA **11** 15:15:49.4±0.9, 6°.S±5°×15°.0E±°, h71km±6km, M5.2/32, mb5.0/32, mB5.5/13, MLv5.7/1, Mw(mB)5.0/13, MwMwp4.8/3, Mwp5.2/3*

ISC 11 15:15:46.0±0.4, **6°.00S**±0°.04×**150°.28E**±0°.04, **h51**km±3km, **h51**km:**pP-P, n258,** σ1**86**/261, **mb4.9**/89, **MS4.6**/60, **7C-3D, New Britain region**

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

I40PG	Keravat	2.41 46	P		Pn	15 16 23.6	+0.6
	baz=231,slow=35						
I40PG			S		Sn	15 16 48.6	-2.7
	baz=231,slow=35						
I40PG			I		I	15 28 10.0	
	80nm,0.6s,baz=227,slow=317,SNR=0.5						
RABL	Rabaul	2.59 46	Pn		Pn	15 16 26.9	+1.3
PMG	Port Moresby	4.59 222	P		Pn	15 16 54.6	+1.7
	208nm,0.3s,baz=47,slow=7.2,SNR=221						
PMG			S		Sn	15 17 43.9	-1.1
	2μm,0.6s,baz=7.9,slow=23,SNR=8.9						
PMG	Port Moresby	4.59 222			Pn	15 16 53.5	+0.5
PMG	Port Moresby	4.59 222	P		Pn	15 16 54.9	+2.0
PMG	Port Moresby	4.59 222	*ce*P		Pn	15 16 54.1	+1.2
PMG			pmax		pmax		
	comp=Z,1μm,0.8s						
PMG	Port Moresby	4.59 222	P		Pn	15 16 54.5	+1.6
MANU	Manus Island	4.89 323	P		Pn	15 16 58.2	+1.2
TATA	Tatamba Isabel	9.74 105	P		Pn	15 18 06.5	+2.9
	comp=Z,197nm,0.7s						
JAY	Jayapura	10.16 290	P		Pn	15 18 13.4	+4.1
	comp=Z,12nm,0.7s,baz=342,slow=20,SNR=1.2						
JAY	Jayapura	10.16 290	P		Pn	15 18 14.7	+5.3
	comp=Z,2μmcomp=Z,62nm,2.3s						
HNR	Honiara	10.16 110	P		Pn	15 18 11.5	+2.1
	comp=Z,2.0nm,0.3s,baz=282,slow=9.5,SNR=6.3						
HNR			LR		LR	15 20 42.8	
	comp=Z,24nm,21.8s,baz=9.5,slow=29						
COEN	Coen	10.56 221			Pn	15 18 14.4	-0.4
COEN	Coen	10.56 221	P		Pn	15 18 14.7	-0.1
	comp=Z,34nm,0.5s						
GENI	Geneyem	10.64 288	P		Pn	15 18 17.2	+1.3
	comp=Z,3μmcomp=Z,3μmcomp=Z,91nm,1.4s						
HURO	Huro Makira	12.32 112	P		Pn	15 18 44.0	+5.1
	comp=Z,133nm,1.8s						
MTSU	Mount Surprise	13.40 205	P		Pn	15 18 54.4	+0.8
	comp=Z,21nm,0.9s						
CTA	Charters Tower	14.54 195	P		Pn	15 19 11.2	+2.2
	comp=Z,0.3nm,0.3s,baz=11,slow=13,SNR=12						
CTA			LR		LR	15 24 45.4	
	comp=Z,2μm,18.2s,baz=12,slow=37						
	comp=Z,9.4nm,0.7s						
CTA	Charters Tower	14.54 195	P		Pn	15 19 10.9	+1.9
	comp=Z,2.2nm,1.4s						
CTAO	Charters Tower	14.54 195			Pn	15 19 09.4	+0.4
CTAO	Charters Tower	14.54 195	P		Pn	15 19 10.4	+1.4
	comp=Z,27nm,1.9s						
CTAO	Charters Tower	14.54 195	P		Pn	15 19 09.4	+0.4
AUNRC	North Rockhamp	17.25 179	P		P	15 19 46.2	+1.8
	comp=Z,104nm,1.7s						
GD1S	Gladstone Soft	17.76 177	P		P	15 19 52.7	+2.7
	comp=Z,103nm,0.8s						
QIS	Mount Isa	17.80 215	P		P	15 19 51.4	+0.9
	comp=Z,79nm,1.5s						
FAKI	Fak Fak	18.24 279	P		P	15 19 54.4	-0.9
EIDS	Eidsvold	19.28 178			P	15 20 07.8	+1.1
EIDS			IAmb		IAmb	15 20 11.2	
	comp=Z,177nm,1.3s						
EIDS	Eidsvold	19.28 178	P		P	15 20 08.5	+1.8
	comp=Z,69nm,0.8s						
SIJI	Sorong	19.65 284	P		P	15 20 10.7	-0.2
	comp=Z,0.3nm,0.3s,baz=103,slow=18,SNR=2.3						
	comp=Z,9.1nm,1.0s						
SIJI	Sorong	19.65 284	P		P	15 20 11.1	+0.3
	comp=Z,23nm,1.1s						
SWI	Sorong	19.66 284	P		P	15 20 09.4	-1.5
	comp=Z,22nm,0.9s						
MTN	Manton Dam	20.07 249			P	15 20 15.0	-0.4
DRS	Darwin Rock St	20.16 250	P		P	15 20 16.4	0.0
	comp=Z,125nm,1.1s						
GUMO	Guam	20.19 345	LR		LR	15 26 43.3	
	comp=Z,2μm,22.0s,baz=134,slow=33						
WB0	Warramunga Arr	20.64 227	P		P	15 20 21.7	+0.1
WB0			IAmb		IAmb	15 20 33.1	
	comp=Z,116nm,0.9s						
WR8	Warramunga Arr	20.68 226	P		P	15 20 22.2	+0.1
WR8			IAmb		IAmb	15 20 33.5	
	comp=Z,122nm,1.1s						
WRAB	Tennant Creek	20.78 227	P		P	15 20 23.2	+0.2
WRAB			IAmb		IAmb	15 20 34.5	
	comp=Z,95nm,0.9s						
WRAB	Tennant Creek	20.78 227	P		P	15 20 23.2	+0.2
	comp=Z,66nm,1.9s						
WRAB	Tennant Creek	20.78 227	*ce*P		P	15 20 23.3	+0.2
WRAB			pmax		pmax		
	comp=Z,94nm,1.1s						
WRA	Warramunga Arr	20.79 227	P		P	15 20 23.4	+0.2
	comp=Z,22nm,0.5s,baz=56,slow=12,SNR=70						
WRA			pP		pP	15 20 34.2	-0.5
	comp=Z,38nm,0.6s,baz=48,slow=11,SNR=17						
WRA			S		S	15 24 08.1	-4.5
	comp=Z,15nm,1.1s,baz=50,slow=20,SNR=14						
WRA			PcP		PcP	15 24 31.3	+0.4
	comp=Z,3.9nm,0.9s,baz=52,slow=2.0,SNR=4.0						
WRA			pPcP			15 24 43.5	
	comp=Z,5.8nm,0.8s,baz=42,slow=1.8,SNR=4.6						
	comp=Z,22nm,0.5s						
WRA	Warramunga Arr	20.79 227			S	15 24 10.8	-1.8
QLP	Quilpie	21.27 195	P		P	15 20 30.6	+2.4
	comp=Z,400nm,1.0s						
AUWSH	Wavell State H	21.45 173	P		P	15 20 33.0	+2.9
	comp=Z,116nm,1.8s						
TW1H	Toowoomba 1 Ha	21.49 176	P		P	15 20 31.9	+1.3
	comp=Z,84nm,0.8s						
KRAI

comp=Z,311nm,18.4s,baz=142,slow=37
MMRI Maumere 27.94 263 P **P** **15 21 32.0 +0.2**
EDFI Ende, Flores 28.48 263 P **P** **15 21 35.7 -1.2**
comp=Z,33nm,1.4s
AUJCS Jamestown Cent 29.16 200 P **P** **15 21 44.0 +1.4**
HTT Hallett 29.27 200 P **P** **15 21 44.9 +1.3**
MSVF Nonsavu 29.52 116 P **P** **15 21 48.7 +2.7**
BBOO Buckleboo 29.79 205 P **P** **15 21 49.1 +1.0**
BBOO IAmb IAmb 15 22 44.2
comp=Z,48nm,1.4s
WSI Waingapu 29.92 261 P **P** **15 21 50.2 +0.7**
KAPI Kappang 30.41 270 LR LR 15 36 39.0
comp=Z,278nm,21.8s,baz=82,slow=41
DGTI Dogotuki 30.61 112 P **P** **15 21 56.6 +1.0**
comp=Z,36nm,2.7s
AUMBR Murray Bridge 30.72 198 P **P** **15 21 57.5 +1.2**
BRAT Ballarat 31.94 190 P **P** **15 22 08.7 +1.7**
FORT Forrest 32.30 218 P **P** **15 22 10.5 +0.2**
FORT IAmb IAmb 15 22 23.1
comp=Z,50nm,1.4s
MBWA Marble Bar 33.21 240 P **P** **15 22 17.4 -1.0**
MBWA IAmb IAmb 15 22 19.9
comp=Z,19nm,0.8s
MBWA Marble Bar 33.21 240 P **P** **15 22 18.1 -0.2**
comp=Z,13nm,1.4s
MBWA Marble Bar 33.21 240 P **P** **15 22 17.5 -0.8**
MBWA pP **pP** **15 22 29.7 -1.8**
MBWA x x 15 22 36.0
PSA00 Pilbara Seismi 33.27 239 P **P** **15 22 17.9 -1.0**
PSA00 IAmb IAmb 15 22 19.5
comp=Z,48nm,1.3s
PSA00 Pilbara Seismi 33.27 239 P **P** **15 22 18.9 0.0**
comp=Z,32nm,1.2s
JCJ Chichijima 33.82 347 LR LR 15 35 36.9
comp=Z,336nm,19.1s,baz=152,slow=35
TGY Tagaytay City 35.31 305 LR LR 15 34 51.0
comp=Z,297nm,20.3s,baz=117,slow=33
JAGI Jajag, Banyuwa 35.92 264 P **P** **15 22 39.5 -2.4**
JAGI IAmb IAmb 15 22 40.8
comp=Z,35nm,0.9s
MOO Moorlands 36.40 184 P **P** **15 22 47.4 +1.8**
MEEK Meekatharra 36.49 232 P **P** **15 22 46.8 +0.1**
comp=Z,43nm,2.0s
TAU Tasmania Unive 36.85 184 P **P** **15 22 50.1 +0.7**
TAU IAmb IAmb 15 23 02.7
comp=Z,38nm,1.0s
TAU Tasmania Unive 36.85 184 P **P** **15 22 50.9 +1.5**
TAU Tasmania Unive 36.85 184 P **P** **15 22 50.1 +0.7**
TAU pmax pmax
comp=Z,38nm,1.0s
RAO Raoul Island 37.89 131 LR LR 15 36 16.6
comp=Z,503nm,19.0s,baz=119,slow=32
RAO Raoul Island 37.89 131 P **P** **15 22 58.2 -0.3**
comp=Z,848nm,0.5s
SNJI Sawahan-Nganju 38.28 265 P **P** **15 23 00.4 -1.7**
comp=Z,40nm,1.6s
GIRL Giralia 38.50 241 P **P** **15 23 04.1 +0.5**
JOW Kunigami 38.98 328 LR LR 15 35 52.1
comp=Z,909nm,21.7s,baz=147,slow=31
JOW Kunigami 38.98 328 P **P** **15 23 07.1 -0.5**
JOW IAmb IAmb 15 23 11.0
comp=Z,38nm,0.8s
JOW Kunigami 38.98 328 P **P** **15 23 08.8 +1.2**
comp=Z,55nm,0.8s
MORW Morawa 39.65 231 P **P** **15 23 12.7 -0.6**
MORW Morawa 39.65 231 P **P** **15 23 14.0 +0.8**
KLBR Kellerberrin 39.67 226 P **P** **15 23 12.4 -1.0**
comp=Z,68nm,0.6s
JHJ Hachijo jima 2 40.16 346 LR LR 15 38 01.4
comp=Z,671nm,21.9s,baz=97,slow=33
URZ Urewera 40.30 147 LR LR 15 37 39.2
comp=Z,1μm,21.9s,baz=289,slow=32
MRNZ Matariki Terra 40.55 154 P **P** **15 23 21.0 +0.5**
YULB Yu-li 40.68 317 P **P** **15 23 20.7 -1.1**
YULB IAmb IAmb 15 23 28.7
comp=Z,79nm,1.8s
NWAO Narrogin (SRO) 40.77 225 LR LR 15 41 14.6
comp=Z,1μm,18.5s,baz=66,slow=37
NACB Ninganchiao 41.01 318 P **P** **15 23 23.7 -0.7**
NACB IAmb IAmb 15 23 27.6
comp=Z,22nm,0.6s
TCW Tory Channel 41.09 152 P **P** **15 23 25.5 +0.6**
TUWZ Tuamarina 41.11 153 P **P** **15 23 25.4 +0.3**
LTZ Lake Taylor 41.48 155 P **P** **15 23 29.1 +0.9**
LTZ IAmb IAmb 15 25 04.4
comp=Z,64nm,1.6s
YHNB Yeheng 41.49 318 P **P** **15 23 28.7 +0.1**
YHNB IAmb IAmb 15 23 46.0
comp=Z,53nm,1.2s
RPZ Rata Peaks 41.77 157 LR LR 15 39 28.0
comp=Z,756nm,19.9s,baz=8.0,slow=34
LBZ Lake Benmore 42.02 159 P **P** **15 23 33.6 +1.0**
LBZ IAmb IAmb 15 24 09.5
comp=Z,62nm,1.5s
BBJI Bungbulang 42.35 266 P **P** **15 23 36.1 +0.4**
BBJI Bungbulang 42.35 266 P pP 15 23 47.4 -1.9
LEM Lembang 42.40 266 P **P** **15 23 35.7 -0.5**
comp=Z,9.1nm,0.4s,baz=182,slow=19,SNR=3.8
comp=Z,9.1nm,0.4s
TPI Tanjungpandan 42.62 272 P **P** **15 23 39.9 +2.1**
comp=Z,19nm,1.0s
JGF Kuroka 43.13 345 P **P** **15 23 41.8 +0.2**
MJAR Matsushiro Arr 43.80 346 P **P** **15 23 44.7 -2.3**
comp=Z,3.6nm,0.6s,baz=173,slow=7.5,SNR=8.9
MJAR LR LR 15 39 14.7
comp=Z,658nm,21.2s,baz=153,slow=32
comp=Z,3.6nm,0.6s
MJAR Matsushiro Arr 43.80 346 P **P** **15 23 45.6 -1.4**
MJAR Matsushiro Arr 43.80 346 P **P** **15 23 45.6 -1.4**
MJAR pmax pmax
comp=Z,4.0nm,0.9s
MAJO Matsushiro 43.80 346 P **P** **15 23 45.7 -1.3**
MAJO Matsushiro 43.80 346 P **P** **15 23 48.4 +1.4**
comp=Z,13nm,1.1s
MAJO Matsushiro 43.80 346 P **P** **15 23 45.7 -1.3**
MAJO pmax pmax
comp=Z,10.0nm,0.7s
MJB9 Matsu-Tunnel 43.81 346 P **P** **15 23 46.1 -1.0**
MDSI Maura Dua 45.93 270 P **P** **15 24 02.5 -1.8**
comp=Z,25nm,1.5s
QIZ Qiongzhong 46.96 303 P **P** **15 24 13.7 +1.4**
QIZ S **S** **15 31 01.4 +1.1**
QIZ LR LR
comp=Z,220nm,17.7s
QIZ LR LR
comp=Z,190nm,15.2s
QIZ LR LR
comp=Z,420nm,12.0s
KSRS Korea Array 48.00 336 P **P** **15 24 19.5 -0.5**
comp=Z,5.2nm,0.8s,baz=148,slow=9.0,SNR=19
comp=Z,5.2nm,0.8s
KSAR Wonju Array Be 48.00 336 P **P** **15 24 20.1 0.0**
KSAR Wonju Array Be 48.00 336 P **P** **15 24 20.1 0.0**
NJ2 Nanjing 48.25 324 *eP* **P** **15 24 23.8 +1.7**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
NJ2 LR LR
comp=Z,640nm,20.8s
NJ2 LR LR
comp=Z,490nm,19.9s
NJ2 LR LR
comp=Z,900nm,22.6s
JKA Kamikawa-asahi 50.36 353 P **P** **15 24 38.6 +0.6**
ASAJ Asahikawa 50.36 353 LR LR 15 45 16.2
comp=Z,299nm,20.8s,baz=176,slow=35
ASAJ Asahikawa 50.36 353 P **P** **15 24 38.6 +0.6**
ASAJ pmax pmax
comp=Z,144nm,1.9s
RAR Rarotonga 50.61 112 LR LR 15 42 07.4
comp=Z,59nm,20.4s,baz=270,slow=31
TIA Tai'an 52.24 326 P **P** **15 24 52.5 +0.3**
TIA pmax pmax
comp=Z,6.0nm,0.9s
USRK Ussuriysk Ar. 52.62 343 P **P** **15 24 53.9 -1.0**
comp=Z,3.7nm,0.6s,baz=108,slow=6.2,SNR=6.0
comp=Z,3.7nm,0.6s
YSS Yuzhno-Sakhali 53.14 354 *eP* **P** **15 24 56.8 -1.8**
YSS *eS* **S** **15 32 21.9 -3.6**
YSS *eSS* **SS** **15 36 04.5 -1.3**
YSS pmax pmax
comp=Z,10.0nm,0.7s
YSS MLR MLR
comp=Z,500nm,15.0s
GYA Guiyang 53.17 309 P **P** **15 24 58.7 -0.7**
GYA pP sP 15 25 19.5 +0.2
GYA S **S** **15 32 19.1 -7.8**
GYA LR LR
comp=Z,600nm,21.9s
ENH Enshi 53.18 315 P **P** **15 24 57.5 -1.8**
ENH IAmb IAmb 15 25 00.9
comp=Z,16nm,1.1s
ENH Enshi 53.18 315 P **P** **15 24 59.4 +0.1**
comp=Z,13nm,1.3s
ENH Enshi 53.18 315 P **P** **15 24 58.9 -0.4**
MDJ Mudanjiang 53.71 342 P **P** **15 25 03.5 +0.7**
MDJ IAmb IAmb 15 25 22.3
comp=Z,23nm,1.1s
MDJ Mudanjiang 53.71 342 P **P** **15 25 04.7 +1.8**
MDJ pP pP 15 25 15.6 -1.3
MDJ sP sP 15 25 27.2 +4.4
MDJ PcP **PcP** **15 26 05.8 -2.7**
MDJ S **S** **15 32 38.4 +5.1**
MDJ sS sS 15 33 01.4 +5.8
MDJ pmax pmax
comp=Z,21nm,1.9s
MDJ LR LR
comp=Z,410nm,10.0s
MDJ LR LR
comp=Z,320nm,10.0s
MDJ LR LR
comp=Z,1μm,19.9s
LYN LuoYang 53.85 321 *eP* **P** **15 25 04.9 +0.8**
LYN pmax pmax
comp=Z,360nm,6.7s
LYN LR LR
comp=Z,1μm,18.3s
LYN LR LR
comp=Z,940nm,18.4s
LYN LR LR
comp=Z,2μm,23.5s
CN2 Changchun 54.41 338 *eP* **P** **15 25 12.0 +4.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
HNS HongShan 54.45 325 ⇓P **P** **15 25 07.7 -0.7**
HNS S **S** **15 32 47.1 +3.6**
HNS pmax pmax
comp=Z,12nm,1.1s
HNS LR LR
comp=Z,610nm,19.1s
HNS LR LR
comp=Z,360nm,20.7s
HNS LR LR
comp=Z,800nm,22.3s
BNX BinXian 55.41 341 ⇓P **P** **15 25 15.1 -0.1**
BNX pP **pP** **15 25 31.9 +2.6**
BNX sP **sP** **15 25 39.7 +4.5**
BNX pmax pmax
comp=Z,23nm,1.8s
BJT Baijiatuau 55.54 329 P **P** **15 25 16.1 -0.1**
BJT Baijiatuau 55.54 329 P **P** **15 25 16.1 -0.1**
BJT pmax pmax
comp=Z,15nm,1.4s
XAN Xi'an 55.80 318 P **P** **15 25 18.0 -0.3**
CMAR Chiang Mai Arr 56.15 297 P **P** **15 25 19.1 -1.8**
comp=Z,0.3nm,0.4s,baz=112,slow=6.8,SNR=3.1
CMAR ScP **ScP** **15 30 10.1 -3.6**
comp=Z,0.2nm,0.4s,baz=106,slow=4.8,SNR=4.3
CMAR LR LR 15 48 55.3
comp=Z,94nm,21.2s,baz=105,slow=36
CMAR PKPPKP **P'P'df** **15 55 20.7 +0.5**
comp=Z,0.3nm,0.5s,baz=357,slow=1.6,SNR=5.9
CMAR PKP2ab **P'P'ab** **15 55 45.9 -5.8**
comp=Z,1.4nm,0.9s,baz=302,slow=2.0,SNR=6.5
comp=Z,0.3nm,0.4s
PZH PanZhiHua 57.04 307 P **P** **15 25 30.4 +3.0**
KLR Kul'dur 57.33 346 *ceP* **P** **15 25 28.9 +0.1**
KLR pmax pmax
comp=Z,13nm,1.3s
CD2 Chengdu 57.65 312 P **P** **15 25 31.0 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 LR LR
comp=Z,560nm,16.5s
CD2 LR LR
comp=Z,630nm,18.4s
CD2 LR LR
comp=Z,740nm,20.9s
XLT XiLinHaoTe 58.47 332 *eP* **P** **15 25 35.8 -1.2**
XLT pP pP 15 25 52.1 +0.9
XLT PcP **PcP** **15 26 24.4 -2.8**
XLT pmax pmax
comp=Z,8.0nm,1.3s
HHC Hu-ho-hao-te 58.60 326 *eP* **P** **15 25 40.9 +2.9**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,230nm,5.4s
HHC LR LR
comp=Z,350nm,16.2s
HHC LR LR
comp=Z,210nm,17.0s
HHC LR LR
comp=Z,560nm,17.0s
PETK Petropavlovsk- 59.22 5 P **P** **15 25 39.8 -2.1**
comp=Z,7.2nm,1.0s,baz=160,slow=6.5,SNR=7.2
comp=Z,7.2nm,1.0s
HEH HeiHe 59.42 343 *eP* **P** **15 25 43.3 -0.1**
HEH pmax pmax
comp=Z,17nm,0.8s
HEH LR LR
comp=Z,290nm,17.6s
HEH LR LR
comp=Z,310nm,17.3s
HEH LR LR
comp=Z,760nm,18.0s
PPT2 Papeete2 59.77 107 *eP* **P** **15 25 46.7 +0.2**
comp=Z,129nm,27.8s
PPT2 *eS* **S** **15 33 52.6 -1.9**
comp=Z,265nm,39.0s
PPT2 *eLQ* LQ 15 40 54.5
comp=Z,974nm,31.0s
PPT2 *eLR* LR 15 43 24.5
comp=Z,166nm,30.0s
PPT2 *eLR* LR 15 43 25.9
comp=Z,189nm,27.8s
TBI Tubuai 60.37 113 *eP* **P** **15 25 54.2 +3.8**
comp=Z,527nm,28.2s
TBI *eS* **S** **15 34 00.7 -1.2**
comp=Z,488nm,35.2s
TBI *eSS* **SS** **15 38 00.6 +0.3**
comp=Z,809nm,31.0s
TBI *eLQ* LQ 15 41 12.0
comp=Z,5μm,36.0s
TBI *eLR* LR 15 43 47.3
comp=Z,828nm,34.8s
TBI *eLR* LR 15 43 49.8
comp=Z,3μm,34.8s
LZH Lanzhou 60.38 318 *eP* **P** **15 25 51.3 +0.9**
LZH pP sP 15 26 09.4 -1.1
LZH pmax pmax
comp=Z,12nm,1.2s
LZH LR LR
comp=Z,410nm,15.8s
LZH LR LR
comp=Z,440nm,15.1s
LZH LR LR
comp=Z,670nm,15.5s
LZDM Lanzhou Array 60.40 317 P **P** **15 25 49.9 -1.0**
comp=Z,1.4nm,0.5s,baz=133,slow=6.3,SNR=7.7
LZDM LR LR 15 50 04.2
comp=Z,176nm,21.9s,baz=95,slow=34
comp=Z,1.4nm,0.5s
HIA Hailar 61.14 338 P **P** **15 25 54.1 -1.1**
HIA IAmb IAmb 15 25 57.3
comp=Z,11nm,0.7s
HIA Hailar 61.14 338 P **P** **15 25 57.0 +1.8**
comp=Z,17nm,0.9s
HIA Hailar 61.14 338 P **P** **15 25 54.1 -1.1**
HIA pmax pmax
comp=Z,11nm,0.7s
HILR Hailar Array B 61.37 338 P **P** **15 25 55.6 -1.1**
comp=Z,4.1nm,0.5s,baz=134,slow=8.5,SNR=7.2
HILR LR LR 15 51 15.3
comp=Z,182nm,20.8s,baz=80,slow=35
comp=Z,4.1nm,0.5s
ZEA Zeya 62.60 345 *eP* **P** **15 26 05.8 +1.0**
ZEA *e* 15 26 21.4
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.0s
BRDH Bariadhala 64.01 299 LR LR 15 54 31.7
comp=Z,143nm,20.8s,baz=189,slow=36
ADK Adak 64.19 22 P **P** **15 26 16.5 +1.1**
ADK Adak 64.19 22 P **P** **15 26 16.5 +1.1**
ADK pmax pmax
comp=Z,321nm,1.8s
GTA2 Gaotai 64.94 319 *eP* **P** **15 26 21.2 +0.5**
GTA2 sP sP 15 26 42.1 +1.2
GTA2 pmax pmax
comp=Z,2.0nm,1.1s
GTA2 LR LR
comp=Z,300nm,16.4s
GTA2 LR LR
comp=Z,290nm,17.4s
GTA2 LR LR
comp=Z,590nm,21.1s
ULN Ulaanbaatar 65.72 330 *ceP* **P** **15 26 26.5 +0.9**
ULN pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 65.72 330 P **P** **15 26 26.3 +0.7**
SONM Songino Array 66.03 329 P **P** **15 26 26.8 -0.8**
comp=Z,3.9nm,0.8s,baz=143,slow=4.9,SNR=18
SONM LR LR 15 55 12.0
comp=Z,371nm,21.0s,baz=120,slow=36
SONM PKP2ab P'P'ab 15 55 19.2 +10
comp=Z,1.1nm,0.8s,baz=265,slow=2.4,SNR=5.2
comp=Z,3.9nm,0.8s
SONM Songino Array 66.03 329 P **P** **15 26 28.2 +0.6**
SONM Songino Array 66.03 329 P **P** **15 26 28.2 +0.6**
SONM pmax pmax
comp=Z,5.0nm,1.0s
CASY Casey 66.15 196 P **P** **15 26 28.3 +0.3**
LSA Lhasa 66.87 306 P **P** **15 26 33.3 -0.5**
LSA Lhasa 66.87 306 P P 15 26 28.0 -5.8
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 66.87 306 P **P** **15 26 33.3 -0.5**
LSA pmax pmax
comp=Z,10.0nm,1.4s
SEY Seymchan 68.75 1 *ceP* **P** **15 26 44.9 +0.6**
SEY pmax pmax
comp=Z,11nm,2.5s
TAOE Nuku Hiva Isla 68.96 97 *eLR* LR 15 47 44.9
comp=Z,249nm,23.4s
ZAK Zakamensk 69.24 330 *eP* **P** **15 26 45.3 -2.4**
ZAK pmax pmax
comp=Z,8.0nm,2.2s
YAK Yakutsk 69.67 350 LR LR 15 56 19.2
comp=Z,141nm,21.8s,baz=124,slow=35
YAK Yakutsk 69.67 350 *eP* **P** **15 26 49.8 -0.2**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=N,3.0nm,3.0s
PALK Pallekele 70.66 280 LR LR 16 00 05.4
comp=N,92nm,21.9s,baz=102,slow=38
CCD Concordia, Ant 70.76 187 P **P** **15 26 57.6 +0.5**
CCD pP **pP** **15 27 09.6 -1.9**
VNDA Vanda 71.74 177 P **P** **15 27 03.3 +0.9**
comp=N,2.5nm,0.9s,baz=74,slow=5.3,SNR=2.1
VNDA pP **pP** **15 27 15.1 -1.8**
comp=N,6.6nm,0.7s,baz=325,slow=6.8,SNR=5.7
VNDA LR LR 15 57 19.5
comp=N,225nm,18.0s,baz=356,slow=35
comp=N,2.5nm,0.9s
VNDA Vanda 71.74 177 P **P** **15 27 03.5 +1.0**
VNDA IAmb IAmb 15 27 53.7
comp=Z,78nm,1.9s
VNDA Vanda 71.74 177 P **P** **15 27 03.5 +1.0**
VNDA pmax pmax
comp=Z,78nm,1.9s
HYB Hyderabad 74.53 290 *eP* **P** **15 27 19.2 -0.8**
BILL Bilibino 74.72 6 *ceP* **P** **15 27 18.7 -1.4**
BILL pmax pmax
comp=Z,9.0nm,1.5s
WMQ Urumqi 74.94 318 *eP* **P** **15 27 23.9 +1.9**
WMQ LR LR
comp=Z,450nm,7.3s
WMQ LR LR
comp=Z,310nm,18.5s
DGZ Jazzator, Alta 77.54 324 *i* P **P** **15 27 36.4 -0.3**
DGZ pmax pmax
comp=Z,2.0nm,0.7s
KDAK Kodiak Island 78.38 27 LR LR 15 56 11.1
comp=Z,188nm,21.9s,baz=244,slow=31
TIXI Tiksi 78.77 353 LR LR 16 02 17.8
comp=Z,146nm,20.3s,baz=189,slow=36
MK31 Makanchi Array 79.59 320 *ceP* **P** **15 27 49.7 +1.8**
MKAR Makanchi Array 79.59 320 P **P** **15 27 45.9 -2.0**
comp=Z,0.6nm,0.4s,baz=95,slow=8.1,SNR=14
MKAR PKKPbc PKKPbc 15 46 47.6 +10
comp=Z,0.5nm,0.8s,baz=290,slow=3.4,SNR=4.7
MKAR LR LR 16 04 18.3
comp=Z,301nm,18.2s,baz=58,slow=37
comp=Z,0.6nm,0.4s
MKAR Makanchi Array 79.59 320 P **P** **15 27 46.1 -1.8**
MKAR Makanchi Array 79.59 320 P **P** **15 27 46.1 -1.8**
MAKZ Makanchi 79.80 320 P **P** **15 27 48.1 -0.9**
MAKZ Makanchi 79.80 320 P **P** **15 27 48.1 -0.9**
MAKZ pmax pmax
comp=Z,13nm,1.7s
MAKZ Makanchi 79.80 320 P **P** **15 27 46.4 -2.7**
MAKZ PcP **PcP** **15 27 53.0 -3.6**
MAKZ pP **pP** **15 27 59.8 -4.0**
MAKZ x x 15 28 05.5
ZALV Zalesovo Beam 80.77 327 P **P** **15 27 51.2 -2.8**
comp=Z,1.6nm,0.6s,baz=122,slow=4.9,SNR=7.7
ZALV LR LR 16 03 08.7
comp=Z,295nm,20.3s,baz=120,slow=35
comp=Z,1.6nm,0.6s
ZALV Zalesovo Beam 80.77 327 P **P** **15 27 51.9 -2.1**
ZALV Zalesovo Beam 80.77 327 *i* P **P** **15 27 51.7 -2.3**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
SLKM Skilak Lake 80.81 26 P **P** **15 27 53.0 -1.2**
SLKM IAmb IAmb 15 28 39.3
comp=Z,20nm,1.2s
KSH2 Kashi 82.03 311 P **P** **15 28 02.2 +0.9**
KSH2 pmax pmax
comp=Z,3.0nm,1.0s
KSH2 LR LR
comp=Z,470nm,16.5s
KSH2 LR LR
comp=Z,580nm,18.2s
KSH2 LR LR
comp=Z,410nm,12.0s
SML Sawmill 82.25 25 P **P** **15 28 02.8 +1.1**
SML IAmb IAmb 15 28 59.0
comp=Z,50nm,1.6s
BOOM Boomskoye usch 82.61 314 P **P** **15 28 04.1 -0.2**
BOOM Boomskoye usch 82.61 314 P **P** **15 28 04.1 -0.2**
BOOM pmax pmax
comp=Z,7.0nm,1.2s
KURK Kurchatov 83.18 323 P **P** **15 28 04.9 -1.8**
KURK Kurchatov 83.18 323 *i* P **P** **15 28 05.1 -1.6**
KURK pmax pmax
comp=Z,6.0nm,1.4s
KURBB Kurchatov Arra 83.20 322 P **P** **15 28 04.1 -2.7**
comp=Z,2.2nm,1.1s,baz=117,slow=3.7,SNR=8.0
KURBB PKKPbc PKKPbc 15 46 39.4 +10
comp=Z,0.3nm,0.8s,baz=286,slow=3.6,SNR=4.1
KURBB PKPPKP **P'P'df** **15 54 34.2 +1.9**
comp=Z,0.6nm,0.9s,baz=291,slow=2.6,SNR=4.1
KURBB LR LR 16 03 50.2
comp=Z,351nm,21.8s,baz=150,slow=35
comp=Z,2.2nm,1.1s
MAW Mawson 83.51 203 LR LR 16 02 35.0
comp=Z,380nm,22.0s,baz=89,slow=34
AAK Ala-Archa 83.68 314 LR LR 16 04 50.3
comp=Z,541nm,21.9s,baz=92,slow=35
QSPA South Pole Qui 83.97 180 P **P** **15 28 11.4 +0.6**
comp=Z,17nm,1.0s,baz=344,slow=3.1,SNR=11
QSPA pP **pP** **15 28 23.7 -1.9**
comp=Z,18nm,0.7s,baz=306,slow=0.5,SNR=8.7
QSPA LR LR 16 04 17.6
comp=Z,171nm,19.3s,baz=0.0,slow=35
comp=Z,17nm,1.0s
QSPA South Pole Qui 83.97 180 P **P** **15 28 11.2 +0.4**
QSPA South Pole Qui 83.97 180 P **P** **15 28 11.0 +0.3**
QSPA pP **pP** **15 28 23.4 -2.2**
ILAR Eielson Array 84.21 23 P P 15 28 07.7 -4.1
comp=Z,0.9nm,0.6s,baz=256,slow=5.2,SNR=17
ILAR Eielson Array 84.21 23 P **P** **15 28 10.8 -1.0**
ILAR Eielson Array 84.21 23 P **P** **15 28 10.8 -1.0**
NRIK Noril'sk 86.29 342 LR LR 16 07 26.6
comp=Z,155nm,19.3s,baz=118,slow=36
NRIK Noril'sk 86.29 342 *i* P **P** **15 28 23.4 +1.4**
NRIK pmax pmax

	comp=Z,9.0nm,3.0s							
KKAR	**Karatay Array**	**86.64**	**314**	P	**P**	**15 28 23.7**	**-0.7**	
KKAR	**Karatay Array**	**86.64**	**314**	P	**P**	**15 28 23.7**	**-0.7**	
K29M	**Barlow Dome**	**87.61**	**25**	IAmb	IAmb	15 29 19.5		
	comp=Z,10nm,1.1s							
BVAR	**Borovoye Array**	**88.70**	**324**	P	**P**	**15 28 31.4**	**-2.5**	
	comp=Z,1.1nm,0.7s,baz=121,slow=5.7,SNR=5.8							
BVAR				LR	LR	16 09 35.7		
	comp=Z,104nm,18.9s,baz=82,slow=36							
	comp=Z,1.1nm,0.7s							
P33M	**Teslin, Yukon**	**88.70**	**29**	P	**P**	**15 28 33.6**	**-0.4**	
BBB	**Bella Bella**	**89.56**	**38**	LR	LR	16 00 48.0		
	comp=Z,293nm,22.0s,baz=263,slow=30							
DLBC	**Dease Lake**	**89.69**	**31**	LR	LR	16 01 35.5		
	comp=Z,342nm,21.8s,baz=218,slow=31							
INK	**Inuvik**	**90.46**	**21**	P	**P**	**15 28 39.3**	**-2.6**	
	comp=Z,1.2nm,1.0s,baz=318,slow=2.3,SNR=3.1							
INK				LR	LR	16 06 03.0		
	comp=Z,222nm,20.2s,baz=274,slow=33							
	comp=Z,1.2nm,1.0s							
INK	**Inuvik**	**90.46**	**21**	IAmb	IAmb	15 29 12.2		
	comp=Z,12nm,1.6s							
INK	**Inuvik**	**90.46**	**21**	P	**P**	**15 28 39.3**	**-2.6**	
INK				pmax	pmax			
	comp=Z,12nm,1.6s							
YBH	**Yreka Blue Hor**	**91.72**	**48**	LR	LR	16 03 23.4		
	comp=Z,29nm,20.8s,baz=278,slow=31							
NVAR	**Mina Array Bea**	**94.79**	**52**	LR	LR	16 04 08.2		
	comp=Z,239nm,21.8s,baz=280,slow=31							
ELIB	**Princess Elisa**	**95.03**	**194**	*d*P	pP	15 29 15.4	-2.8	
PFO	**Pinyon Flats O**	**95.99**	**57**	LR	LR	16 05 33.3		
	comp=Z,383nm,20.3s,baz=256,slow=31							
ARTI	**Arti**	**96.00**	**326**	LR	LR	16 11 49.2		
	comp=Z,536nm,21.7s,baz=89,slow=35							
AKTO	**Aktyubinsk**	**96.02**	**320**	LR	LR	16 12 03.9		
	comp=Z,460nm,21.1s,baz=51,slow=35							
NEW	**Newport**	**96.16**	**42**	LR	LR	16 05 03.9		
	comp=Z,254nm,21.9s,baz=276,slow=31							
RPN	**Rapa Nui**	**96.47**	**118**	LR	LR	16 04 53.8		
	comp=Z,62nm,21.1s,baz=248,slow=30							
YKA	**Yellowknife Ar**	**97.65**	**28**	P	**P**	**15 29 12.8**	**-2.2**	
	comp=Z,0.1nm,0.5s,baz=263,slow=4.8,SNR=1.9							
YKA				LR	LR	16 09 32.6		
	comp=Z,284nm,21.3s,baz=296,slow=33							
	comp=Z,0.1nm,0.5s							
NVL	**N'lazarevskaya**	**98.55**	**193**	*e*P	**P**	**15 29 18.5**	**-0.4**	
NVL				*e*		15 33 19.6		
NVL				pmax	pmax			
	comp=Z,14nm,1.4s							
MNK	**Minsk**	**113.28**	**328**	*i* P	**Pdif**	**15 30 26.4**	**+1.6**	
	comp=E,6.0nm,0.8s							
MNK				*i* P	**Pdif**	**15 30 26.4**	**+1.6**	
	comp=N,18nm,0.9s							
MNK				*i* P	**Pdif**	**15 30 26.4**	**+1.6**	
	comp=Z,4.0nm,0.7s,baz=66							
MNK				*i* PP	**PP**	**15 35 10.6**	**+2.0**	
MNK				*i* PPP	PPP	15 37 34.2		
MNK				*i* SKS	**SKSdf**	**15 41 29.2**	**+3.3**	
MNK				*i* PS	**PS**	**15 44 47.0**	**+1.8**	
MNK				*i* SS	**SS**	**15 50 55.6**	**+5.5**	
MNK				*i* SSS	SSS	15 55 08.9		
MNK				*i* LRM	MLR	16 22 28.8		
	comp=E,392nm,19.2s							
MNK				*i* LRM	MLR	16 22 42.7		
	comp=N,268nm,12.5s							
MNK				*i* LRM	MLR	16 22 56.6		
	comp=Z,303nm,14.3s							
MNK	**Minsk**	**113.28**	**328**	*i* P	**Pdif**	**15 30 26.3**	**+1.6**	
MNK				*i*		15 35 10.6		
MNK				*i* PPP	PPP	15 37 34.2		
MNK				*i* PS	**PS**	**15 44 46.9**	**+1.8**	
MNK				*i* SS	SS	15 50 55.6	+5.5	
MNK				*i* SSS	SSS	15 55 08.8		
MNK				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MNK				pmax	pmax			
	comp=N,18nm,0.9s							
MNK				pmax	pmax			
	comp=E,6.0nm,0.8s							
MNK				MLR	MLR			
	comp=E,392nm,19.0s							
MNK				MLR	MLR			
	comp=N,268nm,13.0s							
MNK				MLR	MLR			
	comp=Z,303nm,14.0s							
PLCA	**Paso Flores**	**120.29**	**145**	PKP	**PKPdf**	**15 34 31.2**	**-0.9**	
	comp=Z,1.6nm,0.5s,baz=264,slow=2.4,SNR=5.6							
LPAZ	**La Paz**	**136.01**	**121**	PKP	**PKPdf**	**15 35 03.8**	**+0.5**	
	comp=Z,1.5nm,0.5s,baz=247,slow=2.1,SNR=5.2							
LPAZ				pPKP	**pPKPdf**	**15 35 16.2**	**-2.5**	
	comp=Z,3.9nm,0.8s,baz=305,slow=1.8,SNR=4.6							
CPUP	**Villa Florida**	**138.17**	**141**	PKP	**PKPdf**	**15 35 06.7**	**+0.4**	
	comp=Z,3.0nm,1.1s,baz=288,slow=3.8,SNR=6.7							
CPUP				pPKP	**pPKPdf**	**15 35 19.5**	**-2.3**	
	comp=Z,5.2nm,0.9s,baz=261,slow=2.3,SNR=6.6							
BDFB	**Brasilia**	**151.88**	**140**	PKP	**PKPdf**	**15 35 30.5**	**+0.4**	
	comp=Z,3.1nm,0.7s,baz=188,slow=1.3,SNR=3.8							
BDFB				PKPbc	**PKPbc**	**15 35 36.4**	**-0.2**	
	comp=Z,12nm,0.8s,baz=149,slow=1.4,SNR=11							
DBIC	**Dimbokro**	**155.28**	**273**	PKPbc	**PKPdf**	**15 35 42.6**	**+7.8**	
	comp=Z,1.8nm,0.4s,baz=157,slow=6.0,SNR=4.3							

IDC 11 15:17:48.4±20.0, 0°.10N×96°.53E, h0km, mb3.7/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=532.6km s-min=128.7km az=126.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**18.40**	**7**	P	Pn	15 22 05.0	-0.1
	0.1nm,0.3s,baz=198,slow=9.2,SNR=4.2						
	0.2nm,0.3s						
H08S2	**Diego Garcia H**	**25.16**	**252**	T	T	15 50 25.2	
	baz=71,slow=75,SNR=53						
H08S3	**Diego Garcia H**	**25.17**	**252**	T	T	15 50 24.7	
	baz=71,slow=75,SNR=141						
H08S1	**Diego Garcia H**	**25.18**	**252**	T	T	15 50 25.5	
	baz=71,slow=75,SNR=28						
MKAR	**Makanchi Array**	**48.15**	**347**	P	P	15 26 30.1	-0.2
	0.5nm,0.7s,baz=150,slow=6.6,SNR=4.8						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**54.54**	**352**	P	P	15 27 18.1	0.0
	0.4nm,0.3s,baz=166,slow=6.4,SNR=3.1						
	0.4nm,0.3s						
H04N2	**CROZET ISLANDS**	**60.49**	**214**	T	T	16 35 22.1	
	baz=54,slow=75,SNR=189						
H04N1	**CROZET ISLANDS**	**60.50**	**214**	T	T	16 35 21.4	
	baz=54,slow=75,SNR=195						
H04N3	**CROZET ISLANDS**	**60.51**	**214**	T	T	16 35 24.1	
	baz=54,slow=75,SNR=182						
H04S1	**CROZET ISLANDS**	**60.83**	**214**	T	T	16 35 47.3	
	baz=52,slow=76,SNR=5.9						
H04S3	**CROZET ISLANDS**	**60.84**	**214**	T	T	16 35 51.1	
	baz=52,slow=76,SNR=10						
H04S2	**CROZET ISLANDS**	**60.84**	**214**	T	T	16 35 48.0	
	baz=52,slow=76,SNR=6.2						

IDC 11 15:24:53.3±5.4, 10°.37S×161°.25E, h51km±40km, mb3.5/6, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=37.8km s-min=22.6km az=105.0
NEIC 11 15:24:55.4±0.7, 10°.3S±0°.1×161°.2E±0°.1, h56km±8km, mb4.3/22, Error ellipse: s-maj=20.2km s-min=11.2km az=224.0

ISC 11 15:24:55.4±0.7, 10°.31S±0°.08×161°.1E±0°.1, h62km, n33, σ0.57/34, mb4.2/17, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.47**	**306**	P	**Pn**	**15 25 19.1**	**-0.5**
	8.1nm,0.3s,baz=244,slow=22,SNR=19						
HNR				S	**Sn**	**15 25 38.3**	**+0.3**
	12nm,0.3s,baz=298,slow=9.3,SNR=6.1						
HNR	**Honiara**	**1.47**	**306**		**Pn**	**15 25 19.2**	**-0.5**
HNR					**Sn**	**15 25 37.7**	**-0.3**
MARNC	**Mare, Loyalty**	**12.93**	**150**	Pn	**Pn**	**15 27 55.8**	**-0.5**
CTA	**Charters Tower**	**17.33**	**234**	P	**Pn**	**15 28 53.5**	**+0.2**
	0.2nm,0.3s,baz=57,slow=15,SNR=4.1						
	3.0nm,0.6s						
EIDS	**Eidsvold**	**17.76**	**211**	P	**P**	**15 28 58.7**	**+0.2**
INKA	**Innaminka**	**25.86**	**225**	P	**P**	**15 30 21.8**	**+0.4**
INKA				IAmb	IAmb	15 31 00.3	
	comp=Z,3.5nm,1.2s						
WR8	**Warramunga Arr**	**27.41**	**246**	P	**P**	**15 30 34.8**	**-0.6**
WR8				IAmb	IAmb	15 30 54.6	
	comp=Z,13nm,1.5s						
WB0	**Warramunga Arr**	**27.45**	**247**	P	**P**	**15 30 35.6**	**-0.2**
WB0				IAmb	IAmb	15 30 45.6	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**27.55**	**247**	P	**P**	**15 30 36.4**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=76,slow=8.9,SNR=8.2						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**27.55**	**247**	P	**P**	**15 30 35.6**	**-1.1**
AS31	**Alice Springs**	**29.17**	**239**	P	**P**	**15 30 51.0**	**-0.1**
ASAR	**Alice Springs**	**29.17**	**239**	P	**P**	**15 30 50.2**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=63,slow=10.0,SNR=6.6						
	comp=Z,0.2nm,0.4s						
TOO	**Toolangi**	**30.58**	**205**	P	**P**	**15 31 03.4**	**0.0**
TOO				IAmb	IAmb	15 31 07.8	
	comp=Z,7.8nm,1.3s						
BKZ	**Black Stump Fm**	**31.83**	**157**	P	**P**	**15 31 14.4**	**0.0**
KNRA	**Kununurra**	**31.98**	**257**	P	**P**	**15 31 15.9**	**+0.1**
BBOO	**Buckleboo**	**32.17**	**222**	P	**P**	**15 31 17.6**	**+0.2**
MGBR	**Mount Gambier**	**32.98**	**211**	P	**P**	**15 31 24.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**35.23**	**253**	P	**P**	**15 31 43.1**	**-1.0**
	comp=Z,4.2nm,0.6s,baz=68,slow=6.5,SNR=8.9						
	comp=Z,4.2nm,0.6s						
PSA00	**Pilbara Seismi**	**41.14**	**249**	P	**P**	**15 32 33.6**	**-0.2**
PSA00				IAmb	IAmb	15 32 35.4	
	comp=Z,6.3nm,1.2s						
MBWA	**Marble Bar**	**41.18**	**250**	P	**P**	**15 32 34.0**	**-0.1**
MAJO	**Matsushiro**	**51.36**	**336**	P	**P**	**15 33 53.2**	**-0.6**
MJB9	**Matsu-Tunnel**	**51.37**	**336**	P	**P**	**15 33 54.0**	**+0.1**
MJB9				IAmb	IAmb	15 33 58.2	
	comp=Z,7.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**67.69**	**295**	P	**P**	**15 35 47.5**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=131,slow=5.4,SNR=4.4						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**75.45**	**325**	P	**P**	**15 36 32.8**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=142,slow=5.4,SNR=3.7						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**75.45**	**325**	IAmb	IAmb	15 36 40.7	
	comp=Z,0.8nm,0.8s						
P18K	**Big Mountain,**	**77.78**	**21**	P	**P**	**15 36 45.6**	**-0.1**
J17K	**VABM Dome**	**79.53**	**17**	P	**P**	**15 36 55.9**	**+0.7**
J17K				IAmb	IAmb	15 37 24.7	
	comp=Z,3.3nm,1.2s						
H17K	**Granite Mounta**	**80.50**	**16**	P	**P**	**15 37 01.1**	**+0.8**
H17K				IAmb	IAmb	15 37 20.6	
	comp=Z,4.4nm,1.5s						
C18K	**Utukok River**	**83.12**	**13**	P	**P**	**15 37 14.7**	**+0.6**
ILAR	**Eielson Array**	**84.31**	**20**	P	**P**	**15 37 19.1**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=238,slow=5.0,SNR=7.1						
	comp=Z,0.2nm,0.4s						
D22K	**Ayikyak River**	**85.34**	**15**	P	**P**	**15 37 26.2**	**+0.8**
D22K				IAmb	IAmb	15 37 35.8	
	comp=Z,5.5nm,1.4s						
D25K	**Kavik River**	**87.33**	**16**	P	**P**	**15 37 35.8**	**+0.7**
D25K				IAmb	IAmb	15 38 09.2	
	comp=Z,6.1nm,1.5s						
H31M	**Peel River**	**89.28**	**22**	P	**P**	**15 37 44.9**	**+0.5**
H31M				IAmb	IAmb	15 38 02.7	
	comp=Z,3.8nm,1.3s						

SOME 11 15:35:03.3, 39°.90N×77°.30E, h5km
KRNET 11 15:35:03.8±0.1, 39°.95N×77°.27E, h14km, mb3.4
NNC 11 15:35:05.0±1.6, 39°.96N×77°.22E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=11.3km s-min=9.0km az=162.0

ISC 11 15:35:04.8±1.9, 39°.82N±0°.09×77°.35E±0°.05, h10km, n43, σ1.9/43/59, 17C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.80**	**314**	⇓*i*P	**Pn**	**15 35 34.9**	**-1.3**
JNKS				⇓*i*S	**Sn**	**15 35 57.3**	**-1.9**
NRN	**Naryn**	**1.91**	**328**	⇑*e*P	**Pn**	**15 35 36.9**	**-0.9**
NRN				⇑*i*S	**Sn**	**15 36 00.6**	**-1.5**
TARG	**Taragay, Kyrgy**	**1.94**	**10**	⇓*i*P	**Pn**	**15 35 38.0**	**-0.3**
TARG				⇓*i*S	**Sn**	**15 36 02.5**	**-0.4**
KDJ	**Kajisay**	**2.31**	**357**	⇑*e*P	**Pn**	**15 35 43.4**	**+0.2**
KDJ				⇑*i*S	**Sn**	**15 36 12.0**	**+0.2**
ULHL	**Ulahol**	**2.56**	**341**	P	**Pn**	**15 35 48.3**	**+1.6**
	SNR=31						
ULHL	**Ulahol**	**2.56**	**341**	⇑*i*P	**Pn**	**15 35 46.7**	**0.0**
ULHL				⇑*i*S	**Sn**	**15 36 17.9**	**-0.1**
PRZ	**Przheval'sk**	**2.78**	**16**	⇑*e*P	**Pn**	**15 35 49.9**	**+0.3**
PRZ				⇑*e*S	**Sn**	**15 36 24.1**	**+0.8**
BOOM	**Boomskoye usch**	**2.87**	**339**	⇑*i*P	**Pn**	**15 35 50.8**	**-0.1**
BOOM				⇑*i*S	**Sn**	**15 36 25.2**	**-0.4**
SFK	**Sufi-Kurgan**	**2.96**	**275**	⇑*i*P	**Pn**	**15 35 52.9**	**+0.8**
SFK				⇑*i*S	**Sn**	**15 36 29.3**	**+1.4**
ARLS	**Aral**	**3.07**	**313**	⇓*e*P	**Pn**	**15 35 53.6**	**0.0**
ARLS				⇓*e*S	**Sn**	**15 36 30.2**	**-0.2**
UCH	**Uchtor**	**3.22**	**319**	P	**Pn**	**15 35 58.0**	**+2.1**
	SNR=22						
TNSS	**Tian-Shan**	**3.23**	**355**	Pg	**Pb**	**15 36 01.2**	**-1.4**
	3.3nm,0.5s						
TNSS				Lg	Lg	15 36 43.2	
	21nm,0.5s						
TNSS	**Tian-Shan**	**3.23**	**355**	*e*P	**Pb**	**15 36 01.5**	**-1.1**
	3.4nm,1.1s						
TNSS				*e*S	**Sb**	**15 36 43.4**	**+1.3**
	21nm,1.0s						
IZV	**Izvestkoviy**	**3.26**	**351**	Pg	**Pb**	**15 36 01.4**	**-1.5**
	5.8nm,0.3s						
IZV				Lg	Lg	15 36 44.4	
	50nm,0.4s						
IZV	**Izvestkoviy**	**3.26**	**351**	*e*P	**Pb**	**15 36 02.2**	**-0.7**
	5.5nm,0.5s						
IZV				*e*S	**Sb**	**15 36 44.8**	**+2.1**
	54nm,1.1s						
SATY	**Saty**	**3.33**	**13**	Pg	**Pb**	**15 36 04.1**	**-0.1**
	16nm,0.4s						
SATY				Lg	Lg	15 36 48.0	
	56nm,0.6s						
MDOK	**Medeo**	**3.35**	**356**	Pg	**Pb**	**15 36 03.1**	**-1.3**
	12nm,0.5s						
MDOK				Lg	Lg	15 36 46.8	
	42nm,0.6s						
KBK	**Karagaybulak**	**3.36**	**328**	P	**Pn**	**15 36 00.0**	**+2.4**
	SNR=28						
TKM2	**Tokmak 2**	**3.37**	**338**	P	**Pn**	**15 35 60.0**	**+2.2**
	SNR=15						
MTBS	**Maitube**	**3.38**	**349**	Pg	**Pb**	**15 36 03.6**	**-1.3**
	9.1nm,0.5s						
MTBS				Lg	Lg	15 36 47.6	
	63nm,0.4s						
MTBS	**Maitube**	**3.38**	**349**	*e*P	**Pb**	**15 36 04.0**	**-0.9**
	5.5nm,0.3s						
MTBS				*e*S	**Sb**	**15 36 47.9**	**+1.8**
	63nm,0.6s						
KST	**Kastek**	**3.38**	**343**	Pg	**Pb**	**15 36 03.8**	**-1.2**
	5.5nm,0.4s						
KST				Lg	Lg	15 36 48.3	
	26nm,0.6s						
KST	**Kastek**	**3.38**	**343**	*e*P	**Pb**	**15 36 04.3**	**-0.8**
	7.5nm,0.7s						
KST				*e*S	**Sb**	**15 36 48.1**	**+1.8**
	45nm,0.7s						
KNDC	**Almaty**	**3.41**	**355**	⇑Pg	**Pb**	**15 36 05.4**	**0.0**
	14nm,0.4s						
KNDC				⇓Lg	Lg	15 36 50.0	
	203nm,0.6s						
KOTS	**Kotyrbulak**	**3.42**	**357**	Pg	**Pb**	**15 36 04.8**	**-0.8**
	7.4nm,0.5s						
KOTS				Lg	Lg	15 36 50.5	
	170nm,0.5s						
KOTS	**Kotyrbulak**	**3.42**	**357**	*e*P	**Pb**	**15 36 05.3**	**-0.3**
	15nm,0.3s						
KOTS				*e*S	**Sb**	**15 36 49.7**	**+2.5**
	170nm,0.9s						
AAK	**Ala-Archa**	**3.54**	**324**	P	**Pn**	**15 36 02.1**	**+2.0**
	SNR=13						
AAK	**Ala-Archa**	**3.54**	**324**	⇓Pn	**Pn**	**15 36 01.7**	**+1.6**
	3.0nm,0.5s						
AAK				⇑Lg	Lg	15 36 52.6	
	27nm,1.0s						
UZB	**Uzynbulak**	**3.56**	**20**	Pg	**Pb**	**15 36 08.1**	**+0.1**
	10nm,0.4s						
UZB				Lg	Lg	15 36 55.7	
	21nm,0.6s						
SHLS	**Shalkode**	**3.69**	**25**	Pg	**Pg**	**15 36 12.9**	**-2.7**
	13nm,0.6s						
SHLS				Lg	Lg	15 37 03.4	
	23nm,0.5s						
SHLS	**Shalkode**	**3.69**	**25**	*e*P	**Pg**	**15 36 13.4**	**-2.2**
	12nm,0.7s						
SHLS				*e*S	**Sg**	**15 37 04.0**	**+0.5**
	28nm,0.8s						
KURS	**Kuram**	**3.72**	**9**	Pg	**Pb**	**15 36 09.8**	**-0.9**
	6.7nm,0.6s						
KURS				Lg	Lg	15 36 58.3	
	11nm,0.6s						
CHMS	**Chumysh**	**3.73**	**329**	P	**Pn**	**15 36 04.5**	**+2.0**
	SNR=7.0						
KPKS	**Kokpek**	**3.78**	**15**	Pg	**Pb**	**15 36 11.0**	**-0.8**
	0.7nm,0.3s						
KPKS				Lg	Lg	15 37 00.5	
	40nm,0.5s						
PDGK	**Podgornoye**	**3.86**	**24**	⇑Pn	**Pn**	**15 36 05.1**	**+0.7**
	0.9nm,0.3s						
PDGK				⇓Pg	**Pb**	**15 36 13.0**	**-0.1**
	7.0nm,0.7s						
PDGK				⇑Lg	Lg	15 37 04.0	
	30nm,0.6s						
EKS2	**Erkin-Say**	**3.91**	**318**	P	**Pn**	**15 36 07.8**	**+2.7**
	SNR=23						
KTBS	**Karatobe**	**3.92**	**353**	Pg	**Pb**	**15 36 12.8**	**-1.3**
	4.4nm,0.4s						
KTBS				Lg	Lg	15 37 03.4	
	0.5nm,0.5s						
USP	**Ospenovka**	**4.05**	**329**	P	**Pn**	**15 36 10.0**	**+3.0**
	SNR=6.8						
KRBS	**Karabastau**	**4.07**	**343**	Pg	**Pb**	**15 36 15.9**	**-0.8**
	4.6nm,0.5s						
KRBS				Lg	Lg	15 37 08.9	
	13nm,0.6s						
KUU	**Kurty**	**4.14**	**350**	Pg	**Pb**	**15 36 16.5**	**-1.3**
	3.8nm,0.0s						
KUU				Lg	Lg	15 37 09.7	
	19nm,0.4s						
MRKS	**Merke**	**4.26**	**315**	Pg	**Pb**	**15 36 18.2**	**-1.7**
	6.9nm,0.4s						
MRKS				Lg	Lg	15 37 12.5	
	16nm,0.8s						
KNOS	**Konyrlen**	**4.74**	**16**	Pg	**Pb**	**15 36 30.0**	**+2.0**
	4.3nm,0.5s						
KNOS				Lg	Lg	15 37 33.9	
	9.0nm,0.5s						
KK31	**Karatay Array**	**6.09**	**305**	⇑Pg	**Pb**	**15 36 51.3**	**+0.2**
	1.0nm,0.4s,baz=133,slow=17						
KK31				⇓Lg	Lg	15 38 12.8	
	2.8nm,0.6s,baz=121,slow=26						

AFAD 11 15:40:28.9, 38°.27N×38°.80E, h7km±1km, ML2.6
ISK 11 15:40:28.5, 38°.31N×38°.83E, h5km, ML2.7/14

ISC 11 15:40:29.2±1.0, 38°.28N±0°.03×38°.82E±0°.03, h10km±8km, n24, σ0.974/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.26**	**31**	P	**Pg**	**15 40 34.6**	**+0.2**
ELZG				S	**Sg**	**15 40 38.9**	**+0.8**
ELZG				IAML		15 40 39.0	
	comp=E,5μm,0.2s						
ELZG				IAML		15 40 40.0	
	comp=N,4μm,0.5s						
MAYA	**Malatya/Merkez**	**0.31**	**279**	P	**Pg**	**15 40 35.0**	**-0.4**
MAYA				S	**Sg**	**15 40 39.9**	**+0.3**
MAYA				IAML		15 40 41.0	
	comp=N,2μm,0.2s						
MAYA				IAML		15 40 41.0	
	comp=E,959nm,0.3s						
NARI	**Adyaman-Kaht**	**0.40**	**186**	P	**Pg**	**15 40 36.9**	**-0.1**
NARI				S	**Sg**	**15 40 42.5**	**+0.2**
NARI				IAML		15 40 45.0	
	comp=N,361nm,0.7s						
NARI				IAML		15 40 45.0	
	comp=E,438nm,1.2s						
SVRC	**Sivrice-ELAZID**	**0.40**	**75**	Pg	**Pg**	**15 40 36.8**	**-0.3**
SVRC				Sg	**Sb**	**15 40 43.8**	**-0.9**
KAHTU	**Kahta**	**0.50**	**199**	P	**Pg**	**15 40 38.8**	**-0.1**
KAHTU				S	**Sb**	**15 40 46.6**	**-0.9**
KAHTU				IAML		15 40 54.0	
	comp=N,567nm,0.8s						
KAHTU				IAML		15 41 00.0	
	comp=E,413nm,0.6s						
ELZ	**Elazig**	**0.51**	**37**	P	**Pg**	**15 40 39.1**	**-0.1**
ELZ				IAML		15 40 47.0	
	comp=N,698nm,0.3s						
ELZ				S	**Sb**	**15 40 47.1**	**-0.8**
ELZ				IAML		15 40 48.0	
	comp=E,898nm,0.4s						
MDNT	**Maden**	**0.69**	**80**	P	**Pg**	**15 40 42.1**	**-0.4**
MDNT				S	**Sb**	**15 40 52.5**	**-0.5**
MDNT				IAML		15 40 54.0	
	comp=N,216nm,0.5s						
MDNT				IAML		15 40 55.0	
	comp=E,157nm,0.4s						
MCKZ	**Bingol**	**0.85**	**8**	P	**Pg**	**15 40 44.9**	**-0.6**
MCKZ				S	**Sb**	**15 40 57.7**	**+0.1**
MCKZ				IAML		15 40 58.0	
	comp=N,654nm,0.2s						
MCKZ				IAML		15 40 58.0	
	comp=E,1μm,0.3s						
KOVA	**Elazig, Kovanc**	**0.89**	**61**	P	**Pg**	**15 40 46.2**	**-0.2**
KOVA				IAML		15 41 09.0	
	comp=N,70nm,0.7s						
KOVA				IAML		15 41 10.0	
	comp=E,101nm,1.0s						
ARPR	**Arapgir-MALATY**	**0.90**	**335**	Pg	**Pb**	**15 40 46.3**	**-0.6**
ARPR				Sg	**Sb**	**15 40 59.7**	**+0.8**
TNCL	**Tunceli-Merkez**	**1.01**	**34**	P	**Pg**	**15 40 48.1**	**-0.5**
TNCL				S	**Sn**	**15 41 03.5**	**-0.3**
TNCL				IAML		15 41 05.0	
	comp=N,150nm,0.6s						
TNCL				IAML		15 41 05.0	
	comp=E,142nm,0.6s						
DYBB	**Diyarbakir**	**1.09**	**107**	Pn	**Pn**	**15 40 50.5**	**-0.1**
DYBB				Sn	**Sn**	**15 41 07.0**	**+1.2**
ILIC	**ilic-Erzincan**	**1.19**	**351**	Pn	**Pb**	**15 40 51.6**	**-0.2**
ILIC				Sn	**Sn**	**15 41 08.4**	**+0.2**
ERZN	**Erzincan**	**1.48**	**28**	Pn	**Pb**	**15 40 56.7**	**-0.2**
KHMN	**Narli-Kahraman**	**1.58**	**236**	Pn	**Pg**	**15 40 59.4**	**-0.2**
BNGB	**Bingl**	**1.62**	**63**	Pn	**Pb**	**15 40 58.8**	**-0.5**
GAZ	**Gaziantep**	**1.69**	**230**	Pn	**Pg**	**15 41 00.9**	**-0.6**
KMRS	**Kahramanmaras**	**1.70**	**244**	Pn	**Pb**	**15 41 00.5**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.88**	**93**	Pn	**Pn**	**15 41 02.2**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.89**	**275**	Pn	**Pb**	**15 41 03.2**	**-0.6**
KARO	**Karliova-Bingo**	**2.02**	**59**	Pn	**Pb**	**15 41 05.3**	**-0.9**
SVSK	**Karacayir**	**2.16**	**320**	Pn	**Pb**	**15 41 07.5**	**-0.9**
BAYT	**Aydıntepe-Bayb**	**2.35**	**26**	P

*IDC **11** 16:06:11.3±4.0,22.°54S×175.°53W,h0km,mb4.0/5, mbtmp4.0/5,Error ellipse: s-maj=142.0km s-min=34.4km az=143.0*

ISC 11 16:06:05.6±0.7,**23.°4S**±0.°1×**174.°4W**±0.°1,**h10**km,**n25**, σ0:**85**/23,**mb4.4**/10,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.96**	**45**		**Pn**	**16 07 33.0**	**-0.9**
RAO	**Raoul Island**	**6.65**	**208**	Pn	**Pn**	**16 07 43.4**	**0.0**
MSVF	**Nonsavu**	**9.08**	**307**		**Pn**	**16 08 16.1**	**-0.7**
MSWZ	**Moikau Station**	**19.97**	**203**	P	**P**	**16 10 37.5**	**-0.5**
CTAO	**Charters Tower**	**36.67**	**267**	P	**P**	**16 13 12.6**	**-0.2**
CTAO				IAmb	IAmb	16 13 26.5	
	comp=Z,9.4nm,1.2s						
AS31	**Alice Springs**	**47.22**	**259**	P	**P**	**16 14 39.4**	**+0.3**
ASAR	**Alice Springs**	**47.22**	**259**	P	**P**	**16 14 39.1**	**0.0**
	comp=Z,2.5nm,0.7s,baz=93,slow=7.5,SNR=33						
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**47.22**	**259**	P	**P**	**16 14 38.9**	**-0.2**
WR8	**Warramunga Arr**	**47.46**	**264**	P	**P**	**16 14 40.1**	**-0.8**
WR8				IAmb	IAmb	16 14 50.0	
	comp=Z,6.9nm,1.2s						
WB0	**Warramunga Arr**	**47.60**	**264**	P	**P**	**16 14 41.3**	**-0.8**
WB0				IAmb	IAmb	16 14 42.4	
	comp=Z,4.3nm,0.9s						
WRA	**Warramunga Arr**	**47.61**	**264**	P	**P**	**16 14 41.2**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=92,slow=8.5,SNR=16						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**47.61**	**264**	P	**P**	**16 14 41.5**	**-0.7**
MTN	**Manton Dam**	**52.60**	**271**	P	**P**	**16 15 20.1**	**0.0**
PSA00	**Pilbara Seismi**	**60.34**	**258**	P	**P**	**16 16 15.2**	**+0.1**
PSA00				IAmb	IAmb	16 16 25.0	
	comp=Z,17nm,1.4s						
MORW	**Morawa**	**61.90**	**248**	P	**P**	**16 16 25.8**	**+0.1**
MORW				IAmb	IAmb	16 16 54.5	
	comp=Z,16nm,1.3s						
JAGI	**Jajag, Banyuwa**	**69.75**	**269**	P	**P**	**16 17 16.5**	**+0.1**
MJAR	**Matsushiro Arr**	**74.55**	**322**	P	**P**	**16 17 43.9**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=156,slow=6.8,SNR=4.1						
	comp=Z,1.2nm,0.7s						
MJAR	**Matsushiro Arr**	**74.55**	**322**	IAmb	IAmb	16 17 54.2	
	comp=Z,4.4nm,1.4s						
PMSA	**Palmer Station**	**77.28**	**156**	P	**P**	**16 17 59.9**	**0.0**
AKUT	**Akutan**	**77.56**	**5**	P	**P**	**16 18 02.3**	**+0.9**
EFI	**East Falkland**	**86.81**	**146**	P	**P**	**16 18 49.7**	**-0.5**
R32K	**Eaglecrest**	**87.85**	**20**	P	**P**	**16 18 55.6**	**+0.8**
ILAR	**Eielson Array**	**90.42**	**11**	P	P	16 19 11.1	+4.3
	comp=Z,0.4nm,0.9s,baz=206,slow=5.7,SNR=3.2						
	comp=Z,0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**94.25**	**288**	P	**P**	**16 19 28.3**	**+2.7**
	comp=Z,0.6nm,0.6s,baz=127,slow=2.6,SNR=7.2						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**147.16**	**332**	PKPbc	**PKiKP**	**16 25 51.1**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=42,slow=4.0,SNR=5.6						

*IDC **11** 16:11:44.1±1.7,23.°76S×179.°99E,h503km±15km, mb3.5/10,mbtmp4.4/11,Error ellipse: s-maj=24.6km s-min=17.1km az=149.0*

*NEIC **11** 16:11:45.3±1.4,23.°9S±0.°1×179.°89W±0.°09,h517km±6km, mb4.6/46,Error ellipse: s-maj=19.8km s-min=7.2km az=151.0*

ISC 11 16:11:43.8±0.5,**23.°84S**±0.°06×**179.°96W**±0.°09,**h500**km, **n101**,σ1°**46**/108,**mb4.6**/34,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.69**	**162**	P	**P**	**16 13 18.9**	**+1.9**
GLKZ	**Green Lake**	**5.70**	**162**	P	**P**	**16 13 21.9**	**+4.8**
GLKZ				S	**S**	**16 14 33.1**	**-0.4**
MSVF	**Nonsavu**	**6.36**	**343**		**P**	**16 13 25.0**	**+1.2**
MARNC	**Mare, Loyalty**	**11.33**	**280**	P	**P**	**16 14 17.5**	**+2.2**
OUZ	**Omahuta**	**12.64**	**205**	P	**P**	**16 14 32.3**	**+3.3**
KUZ	**Kuaotunu**	**13.39**	**195**	P	P	16 14 43.2	+6.4
MBAZ	**Motutapu North**	**13.62**	**198**	P	P	16 14 46.9	+7.6
MKAZ	**Moumakai**	**13.87**	**196**	P	P	16 14 48.0	+6.1
HAZ	**Te Kaha**	**14.00**	**187**	P	**P**	**16 14 45.7**	**+2.4**
HAZ				S	**S**	**16 17 10.3**	**-1.1**
PKGZ	**Pakihiroa**	**14.08**	**186**	P	**P**	**16 14 46.9**	**+2.7**
PKGZ				S	**S**	**16 17 11.1**	**-1.9**
RUGZ	**Raukumara Rang**	**14.22**	**188**	P	**P**	**16 14 47.8**	**+2.1**
RUGZ				S	**S**	**16 17 15.3**	**-0.6**
TOZ	**Tahuroa Road**	**14.38**	**195**	P	**P**	**16 14 48.5**	**+1.2**
TOZ	**Tahuroa Road**	**14.38**	**195**	P	P	16 14 52.6	+5.3
TWGZ	**Tauwhareparae**	**14.40**	**187**	P	**P**	**16 14 50.0**	**+2.5**
TWGZ				S	**S**	**16 17 18.8**	**-0.3**
EDRZ	**Edgecumbe**	**14.50**	**190**	P	**P**	**16 14 51.4**	**+2.8**
URZ	**Urewera**	**14.59**	**189**	P	**P**	**16 14 49.7**	**+0.2**
	5.8nm,0.3s,baz=299,slow=2.9,SNR=21						
URZ				S	**S**	**16 17 16.6**	**-6.0**
	6.4nm,0.5s,baz=45,slow=20,SNR=12						
URZ	**Urewera**	**14.59**	**189**	P	**P**	**16 14 49.6**	**+0.1**
URZ				S	**S**	**16 17 20.0**	**-2.6**
MWZ	**Matawai**	**14.60**	**188**	P	**P**	**16 14 51.4**	**+1.7**
MWZ				S	**S**	**16 17 20.7**	**-2.4**
MUGZ	**Murupara**	**14.85**	**190**	P	**P**	**16 14 53.5**	**+1.2**
TLZ	**Tolley Road**	**14.94**	**194**	P	**P**	**16 14 57.6**	**+4.3**
RIGZ	**Rimuhau**	**14.94**	**187**	P	**P**	**16 14 55.6**	**+2.3**
MTHZ	**Maungataniwha**	**15.21**	**190**	P	**P**	**16 14 58.4**	**+2.4**
RAHZ	**Arahi**	**15.24**	**189**	P	**P**	**16 14 58.2**	**+1.9**
MRHZ	**Matea Rd**	**15.26**	**191**	P	**P**	**16 14 57.3**	**+0.8**
NMHZ	**Naumai**	**15.45**	**189**	P	**P**	**16 15 00.7**	**+2.1**
BKZ	**Black Stump Fm**	**15.57**	**190**	P	**P**	**16 14 59.2**	**-0.6**
TMVZ	**Te Maari**	**15.66**	**193**	P	**P**	**16 15 01.8**	**+0.9**
ETVZ	**East Tongariro**	**15.68**	**193**	P	**P**	**16 15 01.5**	**+0.4**
NNVZ	**North Ngauruho**	**15.70**	**193**	P	**P**	**16 15 02.9**	**+1.6**
OTVZ	**Oturere**	**15.72**	**193**	P	**P**	**16 15 01.3**	**-0.2**
MCHZ	**McNeill Hill**	**15.81**	**190**	P	**P**	**16 15 02.3**	**+0.1**
FWVZ	**Far West T-bar**	**15.83**	**193**	P	**P**	**16 15 03.7**	**+1.0**
WNVZ	**Wahianoa**	**15.89**	**193**	P	**P**	**16 15 02.8**	**-0.5**
PKVZ	**Pokaka**	**15.91**	**193**	P	**P**	**16 15 04.4**	**+1.1**
BHW	**Baring Head**	**18.04**	**193**	P	**P**	**16 15 23.8**	**-0.5**
QRZ	**Quartz Range**	**18.07**	**199**		**P**	**16 15 24.8**	**+0.2**
TKNZ	**Takaka Hill**	**18.14**	**197**	P	**P**	**16 15 24.6**	**-0.7**
TUWZ	**Tuamarina**	**18.26**	**195**	P	**P**	**16 15 25.3**	**-1.0**
THZ	**Tophouse**	**18.84**	**197**		**P**	**16 15 31.0**	**-0.6**
DSZ	**Denniston Nort**	**19.13**	**199**	P	**P**	**16 15 34.0**	**-0.4**
LTZ	**Lake Taylor**	**19.95**	**197**		**P**	**16 15 40.4**	**-1.4**
INZ	**Inchbonnie**	**20.13**	**199**		**P**	**16 15 42.4**	**-1.1**
RPZ	**Rata Peaks**	**21.16**	**198**	P	**P**	**16 15 53.4**	**+0.7**
	6.8nm,0.5s,baz=222,slow=2.5,SNR=5.6						
	6.8nm,0.5s						
RPZ	**Rata Peaks**	**21.16**	**198**	P	**P**	**16 15 53.2**	**+0.5**
DCZ	**Deep Cove**	**23.97**	**203**	P	**P**	**16 16 17.8**	**-0.1**
DCZ				IAmb	IAmb	16 16 57.5	
	comp=Z,37nm,1.4s						
ARMA	**Armidale**	**26.07**	**249**	P	**P**	**16 16 37.8**	**+0.9**
ARMA				IAmb	IAmb	16 16 39.5	
	comp=Z,18nm,0.8s						
EIDS	**Eidsvold**	**26.35**	**261**	P	**P**	**16 16 40.0**	**+0.7**
EIDS				IAmb	IAmb	16 16 41.0	
	comp=Z,12nm,0.6s						
CAN	**Canberra**	**29.20**	**240**	P	**P**	**16 17 05.0**	**+0.8**
CAN				IAmb	IAmb	16 17 06.4	
	comp=Z,14nm,0.7s						
CTAO	**Charters Tower**	**31.51**	**270**		**P**	**16 17 25.0**	**+0.7**
TOO	**Toolangi**	**32.51**	**237**	P	**P**	**16 17 33.4**	**+0.7**
TAU	**Tasmania Unive**	**33.00**	**227**	P	**P**	**16 17 37.6**	**+0.9**
TAU				IAmb	IAmb	16 17 38.2	
	comp=Z,16nm,0.7s						
PMG	**Port Moresby**	**34.51**	**289**	P	**P**	**16 17 50.2**	**+0.4**
PMG				IAmb	IAmb	16 17 50.8	
	comp=Z,22nm,0.8s						
STKA	**Stephens Creek**	**34.77**	**248**	P	**P**	**16 17 51.8**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=93,slow=8.1,SNR=8.7						
	comp=Z,3.5nm,0.5s						
STKA	**Stephens Creek**	**34.77**	**248**	P	**P**	**16 17 52.1**	**+0.3**
INKA	**Innaminka**	**35.49**	**255**		**P**	**16 17 58.7**	**+0.9**
MGBR	**Mount Gambier**	**36.35**	**238**	P	**P**	**16 18 05.8**	**+0.9**
BBOO	**Buckleboo**	**39.50**	**247**	P	**P**	**16 18 30.4**	**-0.3**
BBOO				IAmb	IAmb	16 18 31.1	
	comp=Z,18nm,0.9s						
AS31	**Alice Springs**	**42.08**	**261**		**P**	**16 18 51.5**	**+0.1**
ASAR	**Alice Springs**	**42.08**	**261**	P	**P**	**16 18 51.6**	**+0.1**
	comp=Z,14nm,0.7s,baz=96,slow=7.4,SNR=157						
ASAR				ScP	**ScP**	**16 23 38.2**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=108,slow=4.4,SNR=20						
	comp=Z,14nm,0.7s						
ASAR	**Alice Springs**	**42.08**	**261**		**P**	**16 18 51.3**	**-0.1**
WR8	**Warramunga Arr**	**42.29**	**266**		**P**	**16 18 52.6**	**-0.6**
WR8				IAmb	IAmb	16 18 53.3	
	comp=Z,14nm,0.9s						
WB0	**Warramunga Arr**	**42.44**	**266**		**P**	**16 18 53.8**	**-0.5**
WB0				IAmb	IAmb	16 18 54.5	
	comp=Z,24nm,0.7s						
WRAB	**Tennant Creek**	**42.44**	**266**	P	**P**	**16 18 53.6**	**-0.6**
WRAB				IAmb	IAmb	16 19 03.8	
	comp=Z,18nm,0.6s						
WRA	**Warramunga Arr**	**42.44**	**266**	P	**P**	**16 18 53.1**	**-1.3**
	comp=Z,19nm,0.7s,baz=90,slow=5.8,SNR=301						
WRA				ScP	**ScP**	**16 23 38.9**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=97,slow=3.7,SNR=9.9						
	comp=Z,19nm,0.7s						
FORT	**Forrest**	**46.36**	**250**		**P**	**16 19 23.7**	**-0.8**
MTN	**Manton Dam**	**47.48**	**274**	P	**P**	**16 19 32.0**	**-1.2**
MTN				IAmb	IAmb	16 19 43.0	
	comp=Z,42nm,1.5s						
KNRA	**Kununurra**	**48.72**	**270**	P	**P**	**16 19 42.4**	**-0.1**
KNRA				IAmb	IAmb	16 19 43.1	
	comp=Z,24nm,0.9s						
DES	**Desert**	**49.16**	**31**	P	**P**	**16 19 45.7**	**+0.1**
SOEI	**Soe**	**54.87**	**275**	P	**P**	**16 20 27.4**	**+0.3**
SOEI				IAmb	IAmb	16 20 38.0	
	comp=Z,39nm,1.0s						
PSA00	**Pilbara Seismi**	**55.21**	**260**	P	**P**	**16 20 28.2**	**-1.0**
NWAO	**Narrogin (SRO)**	**55.29**	**246**	P	**P**	**16 20 29.1**	**-0.5**
NWAO				IAmb	IAmb	16 20 29.9	
	comp=Z,32nm,1.4s						
MBWA	**Marble Bar**	**55.42**	**260**	P	**P**	**16 20 29.7**	**-0.9**
MBWA				IAmb	IAmb	16 20 30.7	
	comp=Z,21nm,1.1s						
MORW	**Morawa**	**56.93**	**250**	P	**P**	**16 20 40.5**	**-0.6**
MMRI	**Maumere**	**57.15**	**275**	P	**P**	**16 20 42.4**	**-0.4**
MMRI				IAmb	IAmb	16 20 44.4	
	comp=Z,41nm,1.1s						
TOLI2	**Tolitoli**	**62.60**	**285**	P	**P**	**16 21 18.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**64.60**	**272**	P	**P**	**16 21 30.6**	**-1.3**
JAGI				IAmb	IAmb	16 22 14.6	
	comp=Z,21nm,1.0s						
UGM	**Wanagama**	**68.14**	**271**	P	**P**	**16 21 53.5**	**-0.5**
KKM	**Kota Kinabalu**	**68.92**	**287**	P	**P**	**16 21 58.6**	**-0.1**
KKM				IAmb	IAmb	16 22 02.4	
	comp=Z,28nm,1.2s						
JOW	**Kunigami**	**70.98**	**312**	P	**P**	**16 22 10.9**	**+0.3**
JOW				IAmb	IAmb	16 22 41.5	
	comp=Z,22nm,1.0s						
INU	**Inuyama**	**71.59**	**324**	P	**P**	**16 22 14.2**	**+0.1**
MJAR	**Matsushiro Arr**	**71.87**	**326**	P	**P**	**16 22 13.8**	**-1.9**
	comp=Z,1.4nm,0.8s,baz=134,slow=7.2,SNR=4.2						
	comp=Z,1.4nm,0.8s						
MAJO	**Matsushiro**	**71.87**	**326**	P	**P**	**16 22 15.6**	**-0.1**
JSU	**Suzuyama**	**72.66**	**317**	P	**P**	**16 22 20.4**	**+0.1**
JSU				IAmb	IAmb	16 22 21.9	
	comp=Z,22nm,1.1s						
YHNB	**Yeheng**	**74.55**	**306**	P	**P**	**16 22 31.3**	**-0.1**
YHNB				IAmb	IAmb	16 22 32.3	
	comp=Z,52nm,1.5s						
KSRS	**Korea Array**	**78.22**	**320**	P	**P**	**16 22 51.9**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=133,slow=6.5,SNR=4.3						
	comp=Z,0.8nm,0.7s						
IPM	**Ipoh**	**81.79**	**279**	P	**P**	**16 23 10.2**	**-0.4**
IPM				IAmb	IAmb	16 23 20.6	
	comp=Z,18nm,1.3s						
NVAR	**Mina Array Bea**	**84.69**	**44**	P	**P**	**16 23 25.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=221,slow=11,SNR=4.1						
	comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**89.54**	**290**	P	**P**	**16 23 49.0**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=131,slow=3.4,SNR=10						
	comp=Z,1.1nm,0.8s						
TMUT	**Trail Mountain**	**89.78**	**46**	P	**P**	**16 23 48.7**	**-0.2**
TMUT				IAmb	IAmb	16 23 50.3	
	comp=Z,3.6nm,0.7s						
HVU	**Hansel Valley**	**90.07**	**44**	P	**P**	**16 23 50.2**	**+0.2**
TXAR	**Lajitas Array**	**90.37**	**58**	P	**P**	**16 23 51.9**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=203,slow=7.5,SNR=10						
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**90.37**	**58**	P	**P**	**16 23 51.3**	**-0.3**
BSUT	**Blindstream Ca**	**90.71**	**45**		**P**	**16 23 52.6**	**-0.7**
BSUT				IAmb	IAmb	16 23 54.3	
	comp=Z,3.5nm,0.7s						
PDAR	**Pinedale Array**	**92.62**	**44**	P	**P**	**16 24 00.9**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=207,slow=3.2,SNR=5.1						
	comp=Z,0.4nm,0.6s						
BVAR	**Bonoyoye Array**	**120.42**	**319**	PKP	**PKPdf**	**16 29 36.3**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=113,slow=1.9,SNR=4.2						
FINES	**FINESS Array B**	**138.40**	**341**	PKP	**PKPdf**	**16 30 10.1**	**-1.3**
	comp=Z,3.6nm,0.9s,baz=198,slow=5.4,SNR=4.5						
FINES				SKPbc	**SKPbc**	**16 32 56.0**	**-2.5**
	comp=Z,2.3nm,0.8s,baz=46,slow=8.2,SNR=4.6						
FINES	**FINESS Array B**	**138.40**	**341**		**PKPdf**	**16 30 11.1**	**-0.3**
HFS	**Hagfors**	**142.50**	**349**	PKhKP	PKPpre	16 30 14.4	
	comp=Z,4.6nm,1.0s,baz=83,slow=3.7,SNR=8.3						
AKASG	**Malin Array Be**	**144.94**	**327**	PKP	**PKPdf**	**16 30 22.6**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=46,slow=3.8,SNR=6.7						
AKASG				SKPbc	**SKPbc**	**16 33 13.2**	**-2.2**
	comp=Z,2.0nm,0.8s,baz=50,slow=2.4,SNR=4.8						
BRTR	**Keskin Array B**	**147.57**	**307**	PKPbc	**PKPbc**	**16 30 30.7**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=146,slow=5.5,SNR=4.7						
MMAI	**Mount Meron Ar**	**147.71**	**294**	PKPbc	**PKPbc**	**16 30 32.3**	**0.0**
	comp=Z,3.4nm,0.5s,baz=59,slow=9.8,SNR=10.0						

*RSNC **11** 16:17:18.8±0.0, 11.°N±2.°×7.°3W±.°, h27km±5km, M2.1, ML2.1*
*FUNV **11** 16:17:20.4, 10.°95N×72.°70W, h2km, MW2.8, Presumed earthquake*

ISC 11 16:17:16.8±1.8,**11.°00N**±0.°05×**72.°97W**±0.°04,**h17**km±14km, **n9**,σ1°**36**/16,**Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**1.04**	**155**	*e*P	**Pn**	**16 17 37.4**	**+0.8**
MCQV				*e*S	**Sn**	**16 17 51.0**	**+0.3**
URIC	**Uribia, Colomb**	**1.19**	**54**	P	**Pn**	**16 17 40.1**	**+1.4**
URIC				S	**Sn**	**16 17 55.4**	**+1.0**
URIC	**Uribia, Colomb**	**1.19**	**54**	*e*P	**Pn**	**16 17 40.0**	**+1.4**
URIC				*e*S	**Sn**	**16 17 54.3**	**-0.2**
SMRC	**Santa Marta, M**	**1.24**	**278**	P	**Pn**	**16 17 38.7**	**-0.7**
SMRC				S	**Sb**	**16 17 53.6**	**-1.9**
SJCC	**San Jacinto, C**	**2.43**	**243**	P	**Pn**	**16 17 57.5**	**+1.6**
SJCC				S	**Sn**	**16 18 27.0**	**+1.7**
SJCC	**San Jacinto, C**	**2.43**	**243**	*e*P	**Pg**	**16 18 03.9**	**+0.4**
SJCC				*e*S	**Sg**	**16 18 35.3**	**+0.2**
OCAC	**Ocana**	**2.77**	**187**	P	**Pb**	**16 18 05.0**	**-0.9**
SDV	**Santo Domingo**	**3.12**	**132**	*e*P	**Pn**	**16 18 07.1**	**+1.7**
SDV				*e*S	**Sn**	**16 18 41.4**	**-1.0**
BENV	**Beln**	**5.39**	**101**	*e*P	**Pn**	**16 18 35.1**	**-1.4**

*IDC **11** 16:21:49.7±2.4, 10.°54S×165.°97E,h0km,mb4.0/5, mbtmp4.0/5,Error ellipse: s-maj=112.2km s-min=27.2km az=135.0*

*NEIC **11** 16:21:59.2±1.1, 10.°6S±0.°1×166.°0E±0.°1,h71km±5km, mb4.7/21,Error ellipse: s-maj=17.7km s-min=15.7km az=119.0*

ISC 11 16:22:07.2±0.7,**10.°7S**±0.°1×**165.°9E**±0.°1,**h155**km,**n33**, σ1°**08**/29,**mb4.3**/14,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.32**	**177**	Pn	**Pn**	**16 24 45.0**	**+0.4**
ONTNC	**Ouen Toro**	**11.55**	**177**	Pn	**Pn**	**16 24 44.1**	**-3.5**
PMG	**Port Moresby**	**18.47**	**272**	Pn	**P**	**16 26 11.1**	**-0.3**
PMG				IAmb	IAmb	16 26 50.9	
	comp=Z,36nm,1.4s						
CTA	**Charters Tower**	**21.07**	**241**	P	**P**	**16 26 38.6**	**-0.8**
	comp=Z,3.9nm,0.6s,baz=70,slow=11,SNR=8.4						
	comp=Z,3.9nm,0.6s						
CTAO	**Charters Tower**	**21.07**	**241**	P	**P**	**16 26 38.9**	**-0.6**
COEN	**Coen**	**22.41**	**259**	P	**P**	**16 26 52.9**	**-0.3**
COEN				IAmb	IAmb	16 27 05.7	
	comp=Z,19nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**29.02**	**2**	T	T	16 58 39.6	
	baz=181,slow=76,SNR=9.2						
H11S3	**WAKE ISLAND Hy**	**29.02**	**2**	T	T	16 58 41.5	
	baz=181,slow=76,SNR=1.0						
H11S1	**WAKE ISLAND Hy**	**29.04**	**2**	T	T	16 58 38.8	
	baz=181,slow=76,SNR=1.9						
STKA	**Stephens Creek**	**30.78**	**223**	P	**P**	**16 28 09.4**	**+1.2**
	comp=Z,2.9nm,0.9s,baz=45,slow=13,SNR=3.0						
	comp=Z,2.9nm,0.9s						
STKA	**Stephens Creek**	**30.78**	**223**	IAmb	IAmb	16 28 15.5	
	comp=Z,32nm,1.2s						
MRZ	**Mangatainoka R**	**31.05**	**166**	P	**P**	**16 28 11.1**	**+0.6**
MRZ				IAmb	IAmb	16 28 53.0	
	comp=Z,49nm,1.4s						
BFZ	**Birch Farm**	**31.24**	**165**	P	**P**	**16 28 12.5**	**+0.4**
WR8	**Warramunga Arr**	**31.58**	**249**	P	**P**	**16 28 14.8**	**-0.6**
WB0	**Warramunga Arr**	**31.64**	**250**	P	**P**	**16 28 15.7**	**-0.2**
WB0				IAmb	IAmb	16 28 16.5	
	comp=Z,4.9nm,0.7s						
WRA	**Warramunga Arr**	**31.72**	**249**	P	**P**	**16 28 16.6**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=81,slow=8.8,SNR=20						
	comp=Z,3.1nm,0.8s						
WRA	**Warramunga Arr**	**31.72**	**249**	P	**P**	**16 28 16.0**	**-0.7**
AS31	**Alice Springs**	**33.06**	**243**	P	**P**	**16 28 27.6**	**-0.7**
ASAR	**Alice Springs**	**33.06**	**243**	P	**P**	**16 28 27.8**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=66,slow=10,SNR=15						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**33.06**	**243**	P	**P**	**16 28 27.6**	**-0.7**
WHZ	**Wether Hill Ro**	**35.11**	**177**	P	**P**	**16 28 45.9**	**+0.3**
BBOO	**Buckleboo**	**35.16**	**227**	P	**P**	**16 28 47.1**	**+0.8**
BBOO				IAmb	IAmb	16 28 49.1	
	comp=Z,15nm,1.1s						
KNRA	**Kununurra**	**36.44**	**258**	P	**P**	**16 28 57.2**	**-0.1**
MIDW	**Midway**	**41.95**	**22**	P	**P**	**16 29 41.0**	**-1.9**
CASY	**Casey**	**66.74**	**201**	P	**P**	**16 32 42.5**	**+1.0**
CASY				IAmb	IAmb	16 33 07.7	
	comp=Z,18nm,1.2s						
SBA	**Scott Base**	**67.14**	**180**	P	**P**	**16 32 44.6**	**+0.9**
J14K	**Nanvaranak Lak**	**76.95**	**14**	P	**P**	**16 33 42.8**	**+0.6**
J14K				IAmb	IAmb	16 33 53.8	
	comp=Z,10.0nm,1.5s						
K17K	**Iditarod**	**78.26**	**16**	P	**P**	**16 33 50.3**	**+0.8**
K17K				IAmb	IAmb	16 34 10.8	
	comp=Z,7.6nm,1.3s						
E19K	**Redstone River**	**82.37**	**14**	P	**P**	**16 34 13.2**	**+1.8**
E19K				IAmb	IAmb	16 34 13.7	
	comp=Z,5.4nm,1.4s						
G21K	**Allakaket**	**82.53**	**15**	P	**P**	**16 34 13.3**	**+1.1**
MNRC	**McLaughlin Min**	**82.78**	**48**	P	**P**	**16 34 14.1**	**-0.1**
MNRC				IAmb	IAmb	16 34 46.4	
	comp=Z,18nm,0.8s						
ILAR	**Eielson Array**	**83.15**	**18**	P	**P**	**16 34 16.4**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=231,slow=5.3,SNR=8.4						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**83.15**	**18**	P	**P**	**16 34 15.8**	**+0.3**

*IPEC **11** 16:42:49.9±0.2,51.°63N×16.°08E,h1km,ML3.3/7,Error ellipse: s-maj=1.7km s-min=1.3km az=57.0*

*VIE **11** 16:42:49.4±0.4,51.°62N×16.°11E,h0km,mb3.2/14, ml3.5/11,ms4.2/1,Error ellipse: s-maj=3.7km s-min=3.5km az=7.0 86 km NW of Wroclaw Suspected Mining induced.*

*MCSM **11** 16:42:49.6±0.6,52.°N±5.°×1.°6E±.°,h9km,mb4.0,MLv3.4*

*BGR **11** 16:42:50.8±0.4,51.°61N×16.°04E,h1km,ML3.5/17,Error ellipse: s-maj=3.3km s-min=2.2km az=15.0*

*DNK **11** 16:42:51.0±2.2,51.°73N×15.°47E,h0km,ML3.2,Suspected explosion*

*PRU **11** 16:42:51.6,51.°58N×15.°97E,h0km*

*IDC **11** 16:42:53.4±1.4,51.°55N×15.°86E,h25km±13km,mb2.9/2, mbtmp3.4/10,ML2.9/7,MS3.7/2,Error ellipse: s-maj=11.1km s-min=8.2km az=90.0*

ISC 11 16:42:48.3±0.6,**51.°70N**±0.°03×**16.°06E**±0.°02,**h0**km,**n97**, σ1°**27**/160,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.87**	**170**	*e*Pg	**Pg**	**16 43 05.4**	**+0.5**
KSP				*e*Sg	**Sg**	**16 43 15.8**	**-0.5**
KSP	**Ksiaz**	**0.87**	**170**	P	**Pg**	**16 43 05.3**	**+0.3**
KSP	**Ksiaz**	**0.87**	**170**	*e*Pg	**Pg**	**16 43 05.4**	**+0.5**
KSP				*e*Sg	**Sg**	**16 43 15.8**	**-0.5**
CHVC	**Chvalec**	**1.11**	**180**	*e*PG	**Pb**	**16 43 10.1**	**-0.3**
CHVC				*e*SG	**Sg**	**16 43 23.2**	**-0.8**
	comp=Z,296nm,0.4s						
OSTC	**Ostas**	**1.15**	**175**	*e*PG	**Pb**	**16 43 10.9**	**-0.1**
OSTC				*e*SG	**Sg**	**16 43 24.9**	**-0.3**
	comp=Z,238nm,0.5s						
UPC	**Upice**	**1.20**	**181**	*e*PG	**Pg**	**16 43 11.1**	**0.0**
UPC	

WERD	**Werda**	**2.68**	**243**	*e*Pn		**Pn**	**16 43 32.9**	**+0.3**
OJC	**Ojcow**	**2.79**	**121**	*e*Pn		**Pn**	**16 43 33.6**	**-0.6**
OJC				*e*Pg		**Pg**	**16 43 43.0**	**+1.2**
OJC				*e*Sg		**Sg**	**16 44 18.8**	**+0.8**
OJC	**Ojcow**	**2.79**	**121**	P		**Pn**	**16 43 34.9**	**+0.7**
OJC	**Ojcow**	**2.79**	**121**	*e*Pn		**Pn**	**16 43 34.8**	**+0.7**
OJC				*e*Sg		**Sg**	**16 44 19.5**	**+1.6**
MOX	**Moxa**	**2.99**	**251**	*e*Pn		**Pn**	**16 43 37.3**	**+0.4**
MOX				*e*Sg		**Sg**	**16 44 24.5**	**+0.3**
JAVC	**Velka Javorina** baz=340	**3.03**	**159**	*e*Pn		**Pn**	**16 43 37.9**	**+0.4**
JAVC	comp=Z,125nm,1.2s,baz=340			*e*Sg		**Sb**	**16 44 22.2**	**+1.6**
MANZ	**Manzenberg**	**3.03**	**237**	*e*Pn		**Pn**	**16 43 37.8**	**+0.3**
MANZ				*e*Sg		**Sg**	**16 44 26.9**	**+1.2**
CKRC	**Cesky Krumlov**	**3.10**	**202**	*e*PN		**Pn**	**16 43 39.0**	**+0.6**
CKRC				*e*PG		**Pb**	**16 43 45.4**	**+1.2**
CKRC	comp=Z,106nm,0.5s			*e*SG		**Sg**	**16 44 25.6**	**-2.0**
ROTZ	**Rotzenmuhle**	**3.12**	**233**	*e*Pn		**Pn**	**16 43 39.1**	**+0.4**
ROTZ				*e*Sg		**Sg**	**16 44 26.7**	**-1.7**
GEC2	**GERESS Array S**	**3.23**	**209**	*e*Pn		**Pn**	**16 43 40.5**	**+0.2**
GEC2				*e*Sg		**Sg**	**16 44 30.3**	**-1.8**
GERES	**GERESS Array B** comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=39	**3.23**	**209**	Pn		**Pn**	**16 43 40.1**	**-0.2**
GERES	comp=Z,1.9nm,0.3s,baz=31,slow=18,SNR=35			Pg		**Pg**	**16 43 49.3**	**-0.9**
GERES				Lg		Lg	16 44 28.1	
	comp=Z,1.2nm,0.3s,baz=39,slow=26,SNR=4.7 comp=Z,7.4nm,0.4s							
WET	**Wettzell**	**3.27**	**220**	*e*Pn		**Pn**	**16 43 41.1**	**+0.3**
WET				*e*Sg		**Sg**	**16 44 32.5**	**-0.7**
LANS	**Liptovska Anna**	**3.36**	**138**	*e*PN		**Pn**	**16 43 43.2**	**+1.2**
LANS				*e*PG		**Pg**	**16 43 52.9**	**+0.3**
LANS				*e*SG		**Sg**	**16 44 34.7**	**-1.4**
MODS	**Modra-Piesok**	**3.42**	**166**	*e*PN		**Pn**	**16 43 43.5**	**+0.6**
MODS				*e*PG		**Pg**	**16 43 53.9**	**+0.1**
MODS				*e*SG		**Sg**	**16 44 35.7**	**-2.5**
BSD	**Bornholm Skovb**	**3.49**	**349**	*i* P		**Pn**	**16 43 45.6**	**+1.9**
BSD				*i* S		**Sn**	**16 44 25.4**	**-0.2**
BSD	comp=Z,31nm,1.1s			IAML			16 45 05.1	
CLZ	**Clausthal**	**3.53**	**274**	*e*Pn		**Pn**	**16 43 46.2**	**+1.8**
CLZ				*e*Sg		**Sg**	**16 44 43.0**	**+1.3**
NIE	**Niedzica**	**3.54**	**129**	*e*Pg		**Pg**	**16 43 56.5**	**+0.4**
NIE				*e*Sg		**Sg**	**16 44 41.8**	**-0.2**
ZST	**Bratislava**	**3.57**	**169**	*e*PN		**Pn**	**16 43 45.5**	**+0.6**
ZST				*e*SG		**Sg**	**16 44 40.2**	**-2.8**
GRF	**Grafenberg Arr**	**3.67**	**239**	*e*Pn		**Pn**	**16 43 47.0**	**+0.7**
GRF				*e*Sg		**Sg**	**16 44 46.6**	**+0.4**
CONA	**Conrad Observa** comp=Z,2.2nm,0.2s,SNR=9.2	**3.78**	**182**	*i* Pn		**Pn**	**16 43 48.8**	**+0.9**
RONA	**Rosalia, Austr** comp=Z,1.4nm,0.2s	**4.01**	**178**	*e*Pn		**Pn**	**16 43 51.5**	**+0.6**
MOA	**Molln** comp=Z,11nm,0.3s,SNR=30	**4.03**	**197**	*i* Pn		**Pn**	**16 43 51.6**	**+0.5**
KECS	**Kecovo**	**4.30**	**137**	*e*PN		**Pn**	**16 43 55.6**	**+0.7**
KECS				*e*PG		**Pg**	**16 44 10.3**	**-0.4**
KECS				*e*SG		**Sg**	**16 45 03.8**	**-2.6**
BIOA	**Bad Ischl, Aus** comp=Z,5.4nm,0.2s	**4.31**	**202**	*e*Pn		**Pn**	**16 43 55.2**	**+0.2**
ARSA	**Arzberg** comp=Z,1.4nm,0.3s	**4.47**	**185**	*e*Pn		**Pn**	**16 43 57.8**	**+0.5**
MPLH	**Magyarpolny**	**4.64**	**167**	P		**Pn**	**16 44 00.0**	**+0.5**
BJUU	**Bjuv**	**4.73**	**339**	*i* P		**Pn**	**16 44 01.3**	**+0.5**
BJUU				*i* S		**Sn**	**16 44 54.2**	**-2.1**
LESA	**Schwarzleotal** comp=Z,0.8nm,0.2s	**4.81**	**208**	*e*Pn		**Pn**	**16 44 01.9**	**-0.1**
DEL	**Delary**	**4.95**	**346**	*i* P		**Pn**	**16 44 04.9**	**+1.1**
DEL				*i* S		**Sn**	**16 45 01.1**	**-0.5**
KBA	**Koelnbreinsper** comp=Z,6.1nm,0.3s,SNR=5.8	**4.95**	**202**	Pn		**Pn**	**16 44 04.8**	**+0.8**
HOLU	**Holmets**	**5.16**	**126**	P		**Pn**	**16 44 08.2**	**+1.5**
WATA	**Walderalm** comp=Z,8.5nm,0.5s,SNR=4.8	**5.25**	**215**	*e*Pn		**Pn**	**16 44 08.8**	**+0.7**
WTTA	**Wattenberg** comp=Z,3.6nm,0.4s	**5.29**	**215**	*i* Pn		**Pn**	**16 44 09.7**	**+1.0**
MORH	**Mrgy, Hungar** comp=Z,0.1nmcomp=Z,2.9nm,2.3s	**5.75**	**162**	P		**Pn**	**16 44 15.3**	**+0.5**
DAVA	**Damuels** comp=Z,2.9nm,0.2s,SNR=6.6	**5.97**	**225**	*e*Pn		**Pn**	**16 44 17.9**	**-0.1**
BORU	**Boraas**	**6.24**	**344**	*i* P		**Pn**	**16 44 24.2**	**+2.7**
BORU				*i* S		**Sn**	**16 45 26.4**	**-7.1**
DAVOX	**Davos/Dischmat** comp=Z,0.6nm,0.3s,baz=27,slow=14,SNR=6.5	**6.37**	**222**	Pn		**Pn**	**16 44 22.2**	**-1.3**
DAVOX	comp=Z,1.0nm,0.3s,baz=209,slow=19,SNR=2.8 comp=Z,1.7nm,0.4s			Lg		Lg	16 46 05.1	
NACGM	**Naroch** comp=Z,20nm,0.8s,baz=248	**7.18**	**59**	*e*P		**Pn**	**16 44 32.4**	**-2.0**
MI29	**MI29, Kamyanyy** comp=Z,1.6nmcomp=Z,116nm,1.0s	**7.54**	**95**	P		**Pn**	**16 44 40.5**	**+1.1**
AK20	**Malin Array Si**	**8.19**	**92**	P		**Pn**	**16 44 49.2**	**+0.9**
AK19	**Malin Array Si**	**8.20**	**92**	P		**Pn**	**16 44 48.9**	**+0.6**
AK21	**Malin Array Si**	**8.21**	**91**	P		**Pn**	**16 44 48.9**	**+0.4**
AK22	**Malin Array Si**	**8.23**	**91**	P		**Pn**	**16 44 48.8**	**+0.1**
AK18	**Malin Array Si**	**8.23**	**92**	P		**Pn**	**16 44 49.3**	**+0.5**
AK17	**Malin Array Si**	**8.23**	**92**	P		**Pn**	**16 44 49.3**	**+0.5**
AK13	**Malin Array Si**	**8.25**	**92**	P		**Pn**	**16 44 49.2**	**+0.1**
AK23	**Malin Array Si**	**8.26**	**91**	P		**Pn**	**16 44 50.2**	**+1.0**
AK16	**Malin Array Si**	**8.27**	**92**	P		**Pn**	**16 44 50.0**	**+0.7**
KIEV	**Kiev**	**8.33**	**92**	P		**Pn**	**16 44 51.5**	**+1.4**
AKASG	**Malin Array Be** comp=Z,1.3nm,0.5s,baz=280,slow=12,SNR=8.5	**8.33**	**92**	Pn		**Pn**	**16 44 50.8**	**+0.5**
AKASG	comp=Z,1.3nm,0.3s,baz=276,slow=23,SNR=3.0			Sn		**Sn**	**16 46 19.5**	**-5.4**
AKBB	**Malin Array Si**	**8.33**	**92**	P		**Pn**	**16 44 51.3**	**+1.1**
AK05	**Malin Array Si**	**8.34**	**92**	P		**Pn**	**16 44 51.0**	**+0.7**
HFS	**Hagfors** comp=Z,0.3nm,0.3s,baz=175,slow=14,SNR=9.9	**8.55**	**352**	Pn		**Pn**	**16 44 53.9**	**+0.7**
HFS	comp=Z,0.3nm,0.3s,baz=169,slow=24,SNR=1.5 comp=Z,2.5nm,0.8s			Sn		**Sn**	**16 46 29.0**	**-1.3**
SORM	**Soroca**	**8.70**	**109**	P		**Pn**	**16 44 57.1**	**+1.9**
MLR	**Muntele Rosu** comp=Z,363nm,20.3s,baz=22,slow=46	**9.03**	**130**	LR		LR	16 49 44.5	
NOA	**NORSAR Array B** baz=148,slow=11,SNR=4.4 comp=Z,0.7nm,0.8s	**9.73**	**346**	Pn		**Pn**	**16 45 10.2**	**+0.7**
FINES	**FINESS Array B** comp=Z,0.4nm,0.3s,baz=215,slow=11,SNR=23	**11.20**	**25**	Pn		**Pn**	**16 45 29.9**	**+0.5**
FINES	comp=Z,0.5nm,0.3s,baz=217,slow=21,SNR=5.4 comp=Z,0.9nm,0.3s			Sn		**Sn**	**16 47 30.5**	**-4.7**
EKA	**Eskdalemuir Ar** baz=103,slow=15	**11.99**	**295**	Pn		**Pn**	**16 45 37.2**	**-3.1**
ARCES	**ARCESS Array B** comp=Z,0.1nm,0.3s,baz=191,slow=13,SNR=1.6 comp=Z,3.1nm,1.0s	**18.44**	**11**	Pn		**Pn**	**16 47 03.6**	**-1.3**
AKTO	**Aktyubinsk** comp=Z,183nm,19.9s,baz=286,slow=39	**26.14**	**76**	LR		LR	16 59 55.0	
MKAR	**Makanchi Array** comp=Z,0.1nm,0.6s,baz=306,slow=6.7,SNR=2.2 comp=Z,0.1nm,0.6s	**42.18**	**69**	P		**P**	**16 50 45.3**	**+2.9**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.8s,baz=32,slow=7.5,SNR=4.8 comp=Z,0.2nm,0.8s	**59.67**	**336**	P		**P**	**16 52 56.1**	**+2.4**

*NEIC **11** 17:17:05.3±1.1,21°.06S±0°.04×68°.89W±0°.09, h122km±5km, mb4.1/6, ML3.9(GUC), Error ellipse: s-maj=11.8km s-min=5.8km az=98.0*
*GUC **11** 17:17:05.5±0.8,21°.05S×68°.85W, h125km±3km, ML4.0*
ISC 11 17:17:04.7±0.8,**21°.09S**±0°.04×**68°.85W**±0°.07,**h125**km±8km, **n49**,σ1°**14**/65,**9C**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.60**	**274**				**Pn**	**17 17 23.6**	**-0.3**
PB01						Sn	**Sn**	**17 17 38.1**	**-0.4**
PB01	**IPOC Station P**	**0.60**	**274**	⇑*i*	*i*P		**Pn**	**17 17 23.9**	**0.0**
PB01					*e*S		**Sn**	**17 17 38.0**	**-0.5**
PB01	comp=N,2μm,0.3s				IAML			17 17 40.5	
PB09	**IPOC Station P**	**0.80**	**207**				**Pn**	**17 17 25.8**	**+0.2**
PB09						Sn	**Sn**	**17 17 41.8**	**+0.5**
PB09	**IPOC Station P**	**0.80**	**207**	⇑*i*	*i*P		**Pn**	**17 17 26.1**	**+0.5**
PB09					*e*S		**Sn**	**17 17 42.2**	**+0.8**
PB08	**IPOC Station P**	**0.98**	**343**				**Pn**	**17 17 27.2**	**-0.2**
PB08						Sn	**Sn**	**17 17 43.4**	**-1.2**
PX03	**IPOC Station P**	**1.00**	**313**	*e*P			**Pn**	**17 17 26.4**	**-0.8**
PX03	comp=N,2μm,0.3s				IAML			17 17 46.6	
PB02	**IPOC Station P**	**1.00**	**256**				**Pn**	**17 17 27.5**	**+0.2**
PB02						Sn	**Sn**	**17 17 44.7**	**+0.2**
PB02	**IPOC Station P**	**1.00**	**256**	⇑*i*	*i*P		**Pn**	**17 17 27.8**	**+0.5**
PB02					*e*S		**Sn**	**17 17 44.7**	**+0.2**
PB02	comp=E,9μm,0.2s				IAML			17 17 46.1	
PB07	**IPOC Station P**	**1.16**	**236**				**Pn**	**17 17 29.1**	**+0.1**
PB07						Sn	**Sn**	**17 17 46.6**	**-0.7**
PB07	**IPOC Station P**	**1.16**	**236**	⇑*i*	*i*P		**Pn**	**17 17 29.4**	**+0.4**
PB07					*e*S		**Sn**	**17 17 47.6**	**+0.3**
PB07	comp=E,2μm,0.3s				IAML			17 17 49.5	
HMBC	**Humberstone**	**1.26**	**309**				**Pn**	**17 17 29.4**	**-0.6**
HMBC						Sn	**Sn**	**17 17 48.5**	**-0.6**
HMBC	**Humberstone**	**1.26**	**309**	⇑*i*	*i*P		**Pn**	**17 17 29.9**	**-0.1**
HMBC					*e*S		**Sn**	**17 17 48.6**	**-0.6**
HMBC	comp=N,3μm,0.2s				IAML			17 17 49.0	
PB03	**IPOC Station P**	**1.27**	**221**	Pn			**Pn**	**17 17 30.6**	**+0.4**
PB03						Sn	**Sn**	**17 17 49.5**	**0.0**
GO01	**Chusmiza**	**1.45**	**347**				**Pn**	**17 17 32.4**	**0.0**
GO01						Sn	**Sn**	**17 17 53.0**	**-0.4**
GO01	**Chusmiza**	**1.45**	**347**	⇑*i*	*i*P		**Pn**	**17 17 32.4**	**0.0**
GO01	comp=N,3μm,0.1s				IAML			17 17 55.9	
TA02	**Huaiquique**	**1.45**	**304**	*e*P			**Pn**	**17 17 31.7**	**-0.2**
PB11	**IPOC Station P**	**1.52**	**330**				**Pn**	**17 17 32.6**	**-0.3**
PB11						Sn	**Sn**	**17 17 53.5**	**-0.8**
PB11	**IPOC Station P**	**1.52**	**330**	⇑*i*	*i*P		**Pn**	**17 17 32.6**	**-0.3**
PB11					*e*S		**Sn**	**17 17 53.9**	**-0.4**
PB11	comp=E,3μm,0.2s				IAML			17 17 55.4	
PB06	**IPOC Station P**	**1.75**	**202**				**Pn**	**17 17 36.0**	**+0.5**
PB06						Sn	**Sn**	**17 17 59.3**	**+0.2**
PB06	**IPOC Station P**	**1.75**	**202**	⇑*i*	*i*P		**Pn**	**17 17 36.2**	**+0.7**
PB06					*e*S		**Sn**	**17 17 59.5**	**+0.5**
PB06	comp=E,2μm,0.1s				IAML			17 18 04.2	
AF01	**San Pedro de A**	**1.96**	**162**				**Pn**	**17 17 38.7**	**+0.5**
AF01	**San Pedro de A**	**1.96**	**162**	*e*P			**Pn**	**17 17 35.3**	**-2.9**
PB05	**IPOC Station P**	**2.16**	**215**				**Pn**	**17 17 40.6**	**+0.1**
PB05	**IPOC Station P**	**2.16**	**215**	*e*P			**Pn**	**17 17 40.8**	**+0.3**
PB05	comp=E,607nm,0.3s				IAML			17 18 08.0	
PB16	**IPOC Station P**	**2.81**	**347**				**Pn**	**17 17 49.6**	**+0.4**
PB16	**IPOC Station P**	**2.81**	**347**	*e*P			**Pn**	**17 17 49.6**	**+0.4**
PB12	**IPOC Station P**	**2.83**	**330**				**Pn**	**17 17 47.8**	**-1.2**
PB12	**IPOC Station P**	**2.83**	**330**	⇑*i*	*i*P		**Pn**	**17 17 47.8**	**-1.2**
PB12	comp=N,272nm,0.2s				IAML			17 18 29.5	
PB10	**IPOC Station P**	**2.88**	**213**				**Pn**	**17 17 48.5**	**-1.2**
PB10	**IPOC Station P**	**2.88**	**213**	*e*P			**Pn**	**17 17 49.6**	**-0.1**
PB10	comp=E,247nm,0.4s				IAML			17 18 24.9	
AP01	**Chacalluta**	**3.04**	**332**	Pn			**Pn**	**17 17 51.2**	**-0.6**
PB18	**Visviri**	**3.53**	**350**	Pn			**Pn**	**17 18 01.9**	**+3.2**
PB18	**Visviri**	**3.53**	**350**	*e*P			Pn	17 18 03.5	+4.8
PB14	**IPOC Station P**	**3.80**	**202**				**Pn**	**17 18 01.2**	**-0.8**
LPAZ	**La Paz**	**4.82**	**8**				**Pn**	**17 18 16.7**	**+0.7**
AC01	**Pan de Azucar**	**5.29**	**197**	Pn			**Pn**	**17 18 19.5**	**-2.1**
AC02	**Maricunga**	**5.73**	**182**	Pn			**Pn**	**17 18 27.7**	**-0.3**
GO03	**Copiapo**	**6.60**	**191**	Pn			**Pn**	**17 18 38.2**	**-1.2**
AC05	**El Transito**	**7.82**	**189**	Pn			**Pn**	**17 18 53.6**	**-2.4**
LCO	**Las Campanas**	**8.07**	**192**	Pn			**Pn**	**17 18 56.4**	**-3.0**
CO01	**Juntas del Tor**	**8.93**	**187**	Pn			**Pn**	**17 19 08.8**	**-2.1**
CO02	**Combarbal**	**10.26**	**190**	Pn			**Pn**	**17 19 24.7**	**-4.0**
VILB	**Vilhena**	**11.56**	**47**				**Pn**	**17 19 45.9**	**-0.2**
TRCB	**Terra Rica**	**15.14**	**99**				**P**	**17 20 34.5**	**+0.1**
BI02	**San Fabin de**	**15.66**	**187**	Pn			**Pn**	**17 20 38.7**	**+0.1**
ITAB	**Concordia**	**16.43**	**115**				**P**	**17 20 48.9**	**+0.3**
ITAB	comp=Z,10nm,1.1s				IAmb		IAmb	17 20 57.1	
BDFB	**Brasilia**	**20.50**	**78**	P			**P**	**17 21 34.9**	**+1.7**
BDFB	comp=Z,12nm,1.4s				IAmb		IAmb	17 21 35.4	
BOAV	**Boa Vista**	**24.72**	**20**	P			**P**	**17 22 14.9**	**+0.4**
BOAV	comp=Z,12nm,1.4s				IAmb		IAmb	17 22 51.0	
RCBR	**Riachuelo**	**35.34**	**69**	P			**P**	**17 23 49.7**	**+1.3**

*MEX **11** 17:27:21.0±0.4, 14°.78N×92°.65W, h81km±6km, MD3.7*
*GCG **11** 17:27:22.2±1.2, 14°.50N×92°.58W, h45km±8km, MD3.4, ML3.3, Presumed earthquake*
ISC 11 17:27:16.9±1.9,**14°.5N**±0°.1×**92°.72W**±0°.09,**h69**km±17km, **n15**,σ2°**24**/28,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		**0.63**	**44**	*e*P			**Pn**	**17 27 32.5**	**+1.5**
THIG				*e*S			**Sn**	**17 27 41.5**	**+0.2**
THIG		**0.63**	**44**	*i* P			**Pn**	**17 27 32.3**	**+1.3**
THIG				*i* S			**Sn**	**17 27 41.6**	**+0.2**
THIG	comp=N,1μm,0.3s				IAML			17 27 42.3	
SMCA	**Catarina**	**0.74**	**57**	*i* P			**Pn**	**17 27 34.2**	**+1.9**
SMCA				*i* S			**Sn**	**17 27 43.5**	**-0.1**
SMCA	comp=N,815nm,0.1s				IAML			17 27 45.2	
PATR	**El Naranjo**	**0.81**	**35**	*e*P			**Pn**	**17 27 33.8**	**+0.5**
PATR				*e*S			**Sn**	**17 27 43.9**	**-1.5**
CHUJ	**Union Juarez**	**0.87**	**43**	*e*P			**Pn**	**17 27 34.8**	**+0.8**
CHUJ				*e*S			**Sn**	**17 27 45.6**	**-1.0**
PAVE	**Pavencul**	**0.91**	**35**	*e*P			**Pn**	**17 27 35.1**	**+0.6**
PAVE				*e*S			**Sn**	**17 27 46.0**	**-1.3**
STG2	**El Palmar, Qui**	**1.30**	**91**	*i* P			**Pn**	**17 27 39.7**	**+0.4**
STG2				*e*S			**Sn**	**17 27 52.9**	**-3.4**
STG8	**El Palmar, Qui**	**1.33**	**90**	*i* P			**Pn**	**17 27 39.8**	**+0.1**
STG8				*e*S			**Sn**	**17 27 54.2**	**-2.7**
STG8	comp=E,2μm,0.1s				IAML			17 27 56.3	
STG5	**El Palmar, Qui**	**1.33**	**92**	*e*P			**Pn**	**17 27 40.0**	**+0.3**
STG5				*e*S			**Sn**	**17 27 54.3**	**-2.5**
PCIG		**1.33**	**339**	*e*P			**Pn**	**17 27 39.9**	**+0.2**
PCIG				*e*S			**Sn**	**17 27 54.0**	**-2.7**
CCIG	**Comitan**	**1.90**	**17**	*e*P			**Pn**	**17 27 47.9**	**+0.4**
CCIG				*e*S			**Sn**	**17 28 08.9**	**-1.7**
APG	**El Apazote**	**2.25**	**76**	*e*P			**Pn**	**17 27 56.7**	**+4.6**
TGIG		**2.34**	**351**	*e*S			**Sn**	**17 28 18.1**	**-3.0**
UXUV	**UXUV**	**3.16**	**334**	*e*P			**Pn**	**17 28 06.3**	**+2.0**
UXUV				*e*S			**Sn**	**17 28 42.2**	**+1.2**
CMIG	**Matias Romero**	**3.35**	**322**	*e*P			**Pn**	**17 28 10.2**	**+3.3**
CMIG				*e*S			**Sn**	**17 28 40.6**	**-5.0**

*SJA **11** 17:48:30.4±0.7, 24°.02S×66°.93W, h220km±6km, ML3.5, MW3.7*
*GUC **11** 17:48:31.5±0.7, 24°.07S×66°.97W, h203km±9km, ML4.0*
ISC 11 17:48:32.1±1.2,**24°.03S**±0°.04×**66°.99W**±0°.04,**h200**km,**n39**, σ1°**11**/54,**4C-1D**,**Salta Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALTA		**0.62**	**109**	⇓*i*	*i*P		**Pn**	**17 49 00.7**	**+0.4**
SALTA		**0.62**	**109**	*e*P			**Pn**	**17 49 00.9**	**+0.6**
SALTA				*e*P			**Pn**	**17 49 00.9**	**+0.6**
SALTA				*e*P				17 49 01.0	
SALTA	comp=Z,47nm,0.6s				IAML			17 49 29.4	
SLA	**San Lorenzo**	**1.52**	**117**	*e*P			**Pn**	**17 49 06.3**	**+0.2**
SLA				*e*S			**Sn**	**17 49 32.4**	**-0.2**
SLA	**San Lorenzo**	**1.52**	**117**	*e*P			**Pn**	**17 49 06.7**	**+0.5**
SLA				*i* S			**Sn**	**17 49 32.5**	**0.0**
SLA	comp=Z,15nm,0.6s				IAML			17 49 33.3	
AF01	**San Pedro de A**	**1.53**	**314**	*e*P			**Pn**	**17 49 07.2**	**+0.8**
AF01	comp=N,316nm,0.5s				IAML			17 49 40.7	
AF01	**San Pedro de A**	**1.53**	**314**	*e*P			Pn	17 49 24.3	+18
AF01				*e*S			**Sn**	**17 49 37.9**	**+5.0**
AF01	comp=Z,191nm,0.6s				IAML			17 49 47.6	
AZAP	**Zapla**	**1.77**	**97**	*e*P			**Pn**	**17 49 08.1**	**-0.5**
AZAP				*e*P				17 49 08.2	
AZAP	comp=Z,89nm,0.7s				IAML			17 49 38.7	
FSA	**Cafayete**	**2.27**	**156**	*e*P			**Pn**	**17 49 13.7**	**+0.1**
FSA				*e*S			**Sn**	**17 49 46.1**	**0.0**
YJA	**Yavi**	**2.29**	**37**	*e*P			**Pn**	**17 49 14.5**	**+0.4**
YJA	**Yavi**	**2.29**	**37**	*e*P			**Pn**	**17 49 14.8**	**+0.7**
YJA	comp=Z,1.2nm,0.8s				IAML			17 49 48.6	
PB06	**IPOC Station P**	**2.71**	**298**	⇑*i*	*i*P		**Pn**	**17 49 19.7**	**+1.1**
PB06	comp=N,593nm,0.1s				IAML			17 49 58.0	
PB06	**IPOC Station P**	**2.71**	**298**	*e*P			**Pn**	**17 49 19.0**	**+0.4**
PB06				*e*S			**Sn**	**17 49 55.6**	**+0.8**
PB06	comp=Z,355nm,0.1s				IAML			17 49 58.2	
PB09	**IPOC Station P**	**3.04**	**316**	*i* P			**Pn**	**17 49 23.5**	**+1.2**
PB09	comp=N,207nm,0.4s				IAML			17 50 04.5	
PB09	**IPOC Station P** comp=Z,178nm,0.6s	**3.04**	**316**		IAML			17 50 05.3	
AHML	**Horco Molle**	**3.13**	**152**	*e*P			**Pn**	**17 49 23.7**	**+0.5**
AHML				*e*P				17 49 24.3	
AHML				*e*S			**Sn**	**17 50 02.1**	**-1.3**
AHML	comp=Z,11nm,1.5s				IAML			17 50 04.0	
PB14	**IPOC Station P**	**3.17**	**258**	*e*P			**Pn**	**17 49 24.6**	**+0.6**
PB14	**IPOC Station P**	**3.17**	**258**	*e*P			**Pn**	**17 49 24.7**	**+0.6**
PB14				*e*S			**Sn**	**17 50 04.4**	**-0.3**
PB14	comp=Z,157nm,0.4s				IAML			17 50 06.8	
PB05	**IPOC Station P**	**3.17**	**291**	*e*P			**Pn**	**17 49 24.5**	**+0.5**
PB05	comp=E,175nm,0.3s				IAML			17 50 06.4	
PB05	**IPOC Station P**	**3.17**	**291**	*e*P			**Pn**	**17 49 24.4**	**+0.5**
PB05	comp=Z,124nm,0.1s				IAML			17 50 08.2	
PB10	**IPOC Station P**	**3.31**	**278**	⇑*i*	*i*P		**Pn**	**17 49 26.2**	**+0.8**
PB10	**IPOC Station P**	**3.31**	**278**	*e*P			**Pn**	**17 49 25.6**	**+0.2**
PB10				*e*S			**Sn**	**17 50 08.1**	**+1.0**
PB10	comp=Z,111nm,0.3s				IAML			17 50 08.9	
AC02	**Maricunga**	**3.40**	**214**	*i* P			**Pn**	**17 49 27.9**	**+0.9**
AC02	**Maricunga**	**3.40**	**214**	*e*P			**Pn**	**17 49 27.4**	**+0.4**
AC02				*e*P				17 49 28.3	
AC02				*e*S			**Sn**	**17 50 10.4**	**+0.4**
AC02	comp=Z,19nm,0.6s				IAML			17 50 29.5	
PB07	**IPOC Station P**	**3.52**	**310**	⇑*i*	*i*P		**Pn**	**17 49 28.4**	**+0.3**
PB07	**IPOC Station P**	**3.52**	**310**	*e*P			**Pn**	**17 49 28.3**	**+0.2**
PB07				*e*S			**Sn**	**17 50 11.2**	**-0.8**
PB07	comp=Z,221nm,0.2s				IAML			17 50 12.3	
PB01	**IPOC Station P**	**3.76**	**322**	*e*P			**Pn**	**17 49 30.9**	**-0.1**
PB01	**IPOC Station P**	**3.76**	**322**	*e*P			**Pn**	**17 49 31.1**	**+0.1**
PB01				*e*S			**Sn**	**17 50 17.0**	**-0.2**
PB01	comp=Z,148nm,0.1s				IAML			17 50 17.8	
PB02	**IPOC Station P**	**3.80**	**315**	*e*P			**Pn**	**17 49 31.4**	**-0.2**
PB02	**IPOC Station P**	**3.80**	**315**	*e*P			**Pn**	**17 49 31.5**	**0.0**
PB02				*e*S			**Sn**	**17 50 16.9**	**-1.2**
PB02				*e*S				17 50 17.0	
PB02	comp=Z,275nm,0.5s				IAML			17 50 20.4	
AC01	**Pan de Azucar**	**3.90**	**236**	*i* P			**Pn**	**17 49 32.0**	**-0.5**
AC01	**Pan de Azucar**	**3.90**	**236**	*e*P			**Pn**	**17 49 32.1**	**-0.5**
AC01				*i* S			**Sn**	**17 50 19.2**	**-0.9**
AC01	comp=Z,66nm,0.2s				IAML			17 50 21.4	
TINO	**Tinogasta**	**4.05**	**187**	*e*P			**Pn**	**17 49 36.5**	**+1.9**
HMBC	**Humberstone**	**4.60**	**324**	*e*P			**Pn**	**17 49 39.9**	**-1.6**
HMBC	**Humberstone**	**4.60**	**324**	*e*P			**Pn**	**17 49 40.2**	**-1.3**
HMBC				*e*S			**Sn**	**17 50 33.3**	**-2.8**
HMBC	comp=Z,131nm,0.2s				IAML			17 50 34.5	
GO03	**Copiapo**	**4.60**	**219**	*e*P			**Pn**	**17 49 40.6**	**-0.9**
GO03	**Copiapo**	**4.60**	**219**	*e*P			**Pn**	**17 49 40.9**	**-0.5**
GO03				*e*S			**Sn**	**17 50 34.5**	**-1.7**
GO03	comp=Z,37nm,0.1s				IAML			17 50 36.7	
GO01	**Chusmiza**	**4.79**	**334**	*e*P			**Pn**	**17 49 44.5**	**+0.1**
GO01				*e*S			**Sn**	**17 50 41.7**	**+0.4**
GO01	comp=Z,63nm,0.3s				IAML			17

comp=N,342nm,0.3s
DHUB DHUBRI 9.20 335 *e*P Pn 17 54 55.3 +0.8
DHUB *e*S **Sn** 17 56 33.5 -4.5
DHUB IAML 17 56 36.3
comp=N,431nm,1.0s
DHUB IAML 17 56 38.7
comp=E,517nm,0.3s
ITAN ITANAGAR 9.45 357 *e*P Pn 17 55 00.0 +2.2
ITAN *e*S **Sn** 17 56 39.3 -4.8
ITAN IAML 17 56 46.0
comp=N,94nm,0.2s
ITAN IAML 17 56 48.9
comp=E,71nm,0.2s
ZIRO ZIRO 9.82 358 *e*P Pn 17 55 04.5 +1.4
ZIRO *e*S **Sn** 17 56 48.7 -4.9
ZIRO IAML 17 56 54.8
comp=E,231nm,0.5s
ZIRO IAML 17 56 55.5
comp=N,244nm,0.2s
TAWA Tawang 10.12 348 *e*P Pn 17 55 07.9 +0.5
TAWA *e*S Sn 17 56 53.9 -7.4
TAWA IAML 17 57 02.8
comp=N,78nm,0.4s
TAWA IAML 17 57 02.8
comp=E,45nm,0.3s
KMI2 Kunming 10.87 45 P Pn 17 55 25.7 +8.1
KMI2 pmax pmax
comp=E,4.0nm,1.4s
KMI2 LR LR
comp=E,290nm,12.1s
KMI2 LR LR
comp=E,390nm,13.6s
KMI2 LR LR
comp=E,420nm,14.2s
GTK Tadong 10.93 333 *e*P Pn 17 55 18.4 +0.1
GTK *e*S **Sn** 17 57 13.9 -6.8
GTK IAML 17 57 22.2
comp=N,29nm,0.4s
PZH PanZhiHua 11.21 37 P Pn 17 55 27.1 +5.0
LSA Lhasa 12.31 347 Pn **Pn** 17 55 38.6 +1.1
LSA Lhasa 12.31 347 Sn Sn 17 57 35.4 -20
LSA smax smax
comp=N,7.0nm,1.0s
LSA smax smax
comp=E,5.0nm,0.8s
QIZ Qiongzhong 14.88 82 P **Pn** 17 56 12.1 -0.1
QIZ S **Sn** 17 58 56.3 -0.9
QIZ LR LR
comp=E,310nm,12.0s
QIZ LR LR
comp=E,300nm,12.2s
HYB Hyderabad 14.96 271 *e*P **P** 17 56 20.2 +1.2
CD2 Chengdu 15.77 32 P **P** 17 56 27.6 -0.3
CD2 pmax pmax
comp=E,10.0nm,0.8s
PALK Pallekele 16.76 234 LR LR 18 02 31.4
comp=E,144nm,19.7s,baz=40,slow=35
ENH Enshi 18.72 45 P **Pn** 17 57 01.7 +0.8
LZDM Lanzhou Array 20.05 23 P **P** 17 57 15.8 +0.4
comp=E,2.9nm,0.7s,baz=227,slow=14,SNR=7.4
comp=E,2.9nm,0.7s
LZH Lanzhou 20.23 23 *e*P **P** 17 57 18.4 +1.3
LZH pmax pmax
comp=E,7.0nm,1.4s
GTA2 Gaotai 22.27 11 *e*P **P** 17 57 38.9 -0.1
GTA2 pP sP 17 57 47.4 +4.3
GTA2 pmax pmax
comp=E,2.0nm,1.5s
LYN LuoYang 23.40 41 P **P** 17 57 55.4 +4.6
LYN pmax pmax
comp=E,11nm,0.7s
TGY Tagaytay City 25.91 94 LR LR 18 08 22.4
comp=E,146nm,19.1s,baz=117,slow=36
NJ2 Nanjing 26.45 53 *e*P **P** 17 58 20.4 +1.6
NJ2 pmax pmax
comp=E,2.0nm,0.5s
HNS HongShan 26.65 38 ⇓P **P** 17 58 23.0 +2.4
HNS pmax pmax
comp=E,7.0nm,1.4s
WMQ Urumqi 26.65 349 *e*P **P** 17 58 27.3 +6.6
WMQ pmax pmax
comp=E,15nm,0.9s
BTO2 Baotou 26.66 27 *e*P **P** 17 58 24.2 +3.4
BTO2 PP **PnPn** 17 59 10.2 +8.6
BTO2 S **S** 18 02 55.8 -0.3
BTO2 pmax pmax
comp=E,16nm,0.6s
BTO2 pmax pmax
comp=E,450nm,5.3s
WUS Wushi 26.77 334 P **P** 17 58 21.6 -0.3
WUS IAmb IAmb 17 58 30.2
comp=E,17nm,1.4s
HHC Hu-ho-hao-te 27.50 29 *e*P **P** 17 58 32.9 +4.5
HHC pmax pmax
comp=E,8.0nm,0.9s
HHC pmax pmax
comp=E,120nm,5.0s
TARG Taragay, Kyrgy 27.81 333 **P** 17 58 30.5 -1.0
TARG IAmb IAmb 17 58 38.6
comp=E,7.5nm,1.1s
DRK Karamyk 29.19 323 P **P** 17 58 43.7 0.0
DRK IAmb IAmb 17 58 49.2
comp=E,5.8nm,0.7s
ARSB Arslanbob 29.81 327 P **P** 17 58 50.0 +1.0
BTK Batken 30.14 323 **P** 17 58 53.1 +1.2
BTK IAmb IAmb 17 58 58.1
comp=E,5.9nm,0.7s
MKAR Makanchi Array 30.68 344 P **P** 17 58 57.4 +1.0
comp=E,2.9nm,0.6s,baz=163,slow=8.9,SNR=31
comp=E,2.9nm,0.6s
MKAR Makanchi Array 30.68 344 P **P** 17 58 57.2 +0.8
MAKZ Makanchi 30.78 343 **P** 17 58 58.5 +1.1
SONM Songino Array 31.70 16 P **P** 17 59 06.5 +0.9
comp=Z,1.5nm,0.7s,baz=198,slow=11,SNR=5.1
SONM PcP **PcP** 18 01 57.6 +0.4
comp=Z,0.6nm,0.7s,baz=158,slow=4.3,SNR=4.7
comp=Z,1.5nm,0.7s
SONM Songino Array 31.70 16 P **P** 17 59 05.7 +0.2
ULN Ulaanbaatar 31.90 16 P **P** 17 59 07.6 +0.2
XLT XiLinHaoTe 31.99 31 *e*P P 17 58 56.8 -11
XLT pP pP 17 59 07.7 -3.5
XLT pmax pmax
comp=Z,5.0nm,0.6s
H08S3 Diego Garcia H 33.07 222 T T 18 33 48.4
baz=41,slow=76,SNR=52
H08S2 Diego Garcia H 33.08 222 T T 18 33 48.7
baz=41,slow=76,SNR=16
H08S1 Diego Carcia H 33.09 222 T T 18 33 49.9
baz=41,slow=76,SNR=13
KURBB Kurchatov Arra 35.20 343 P **P** 17 59 36.7 +0.8
comp=Z,3.5nm,0.8s,baz=155,slow=8.4,SNR=8.1
KURBB PcP **PcP** 18 02 07.0 +0.2
comp=Z,0.4nm,0.4s,baz=160,slow=2.6,SNR=6.5
comp=Z,3.5nm,0.8s
KURK Kurchatov 35.26 343 **P** 17 59 36.9 +0.5
KURK IAmb IAmb 17 59 41.2
comp=Z,3.6nm,0.7s
KURK Kurchatov 35.26 343 **PcP** 18 02 07.0 0.0
ZAA0 Zalesovo Array 36.94 351 **P** 17 59 51.1 +0.4
ZAA0 IAmb IAmb 17 59 55.6
comp=Z,6.2nm,0.9s
ZALV Zalesovo Beam 36.94 351 P **P** 17 59 51.6 +0.9
comp=E,5.0nm,0.8s,baz=174,slow=8.3,SNR=18
comp=E,5.0nm,0.8s
ZALV Zalesovo Beam 36.94 351 **P** 17 59 51.0 +0.3
BNX BinXian 39.26 37 ⇓P **P** 18 00 09.4 -1.0
BNX pmax pmax
comp=Z,4.0nm,0.8s
BVAR Borovoye Array 39.91 338 P **P** 18 00 16.4 +0.7
comp=Z,0.9nm,0.6s,baz=129,slow=8.4,SNR=5.9
BVAR PcP **PcP** 18 02 21.9 +0.7
comp=Z,1.3nm,0.7s,baz=180,slow=3.7,SNR=6.9
comp=Z,0.9nm,0.6s
BORK Borovoye 39.95 338 P **P** 18 00 16.3 +0.2
AB31 Akbulak array 41.93 326 P **P** 18 00 33.5 +1.0
ABKAR Akbulak array 41.93 326 P **P** 18 00 33.6 +1.1
HEH HeiHe 41.96 32 *e*P **P** 18 00 33.1 +0.4
MTN Manton Dam 47.39 127 P **P** 18 01 14.9 -1.5
ASAJ Asahikawa 48.27 46 LR LR 18 22 07.0
comp=Z,84nm,18.1s,baz=259,slow=37
GURO Guroymak-BITLI 49.81 306 **P** 18 01 35.5 +0.5
GURO IAmb IAmb 18 01 41.6
comp=Z,9.8nm,0.8s
KIV Kislovodsk 50.45 313 P **P** 18 01 40.4 +0.6
KIV Kislovodsk 50.45 313 P **P** 18 01 41.0 +1.3
comp=Z,13nm,1.0s
YAK Yakutsk 50.79 21 P **P** 18 01 41.1 -0.7
comp=Z,4.1nm,0.5s,baz=259,slow=5.2,SNR=4.8
comp=Z,4.1nm,0.5s
YAK Yakutsk 50.79 21 P **P** 18 01 40.9 -0.9
YAK IAmb IAmb 18 01 46.1
comp=Z,5.6nm,0.8s
WB0 Warramunga Arr 54.20 132 P **P** 18 02 06.8 -1.0
WB0 IAmb IAmb 18 02 07.5
comp=Z,5.4nm,0.8s
WB0 PcP **PcP** 18 03 11.6 -0.7
WRA Warramunga Arr 54.28 132 P **P** 18 02 07.3 -1.0
comp=Z,3.2nm,0.7s,baz=314,slow=7.0,SNR=39
WRA PcP **PcP** 18 03 10.9 -1.6
comp=Z,0.5nm,0.6s,baz=319,slow=3.7,SNR=7.4
comp=Z,3.2nm,0.7s
WRA Warramunga Arr 54.28 132 P **P** 18 02 07.0 -1.3
WRA PcP **PcP** 18 03 10.9 -1.6
BRTR Keskin Array B 56.43 306 P **P** 18 02 24.2 +0.4
AS31 Alice Springs 56.46 135 P **P** 18 02 22.7 -1.3
ASAR Alice Springs 56.46 135 P **P** 18 02 23.1 -0.9
comp=Z,2.9nm,0.6s,baz=315,slow=6.8,SNR=40
comp=Z,2.9nm,0.6s
TIXI Tiksi 57.68 12 P **P** 18 02 31.3 -0.6
comp=Z,5.9nm,0.3s,baz=210,slow=4.3,SNR=16
comp=Z,5.9nm,0.3s
TIXI Tiksi 57.68 12 **P** 18 02 30.7 -1.2
KIBK Kibwezi 58.81 256 P **P** 18 02 41.0 +0.1
KIBK IAmb IAmb 18 02 45.5
comp=Z,3.8nm,1.1s
ELL Elmali 59.24 303 P **P** 18 02 43.5 -0.1
AK09 Malin Array Si 60.68 319 P **P** 18 02 51.7 -1.4
AK10 Malin Array Si 60.70 319 P **P** 18 02 52.3 -0.9
AK08 Malin Array Si 60.70 319 P **P** 18 02 54.5 +1.3
AK07 Malin Array Si 60.73 318 P **P** 18 02 51.9 -1.5
AK06 Malin Array Si 60.73 319 P **P** 18 02 54.8 +1.4
AKASG Malin Array Be 60.73 319 P **P** 18 02 53.0 -0.4
comp=Z,1.1nm,0.6s,baz=81,slow=6.3,SNR=6.1
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 60.73 319 IAmb IAmb 18 02 57.4
comp=Z,4.1nm,1.1s
AKBB Malin Array Si 60.73 319 **P** 18 02 54.0 +0.5
AKBB IAmb IAmb 18 02 57.8
comp=Z,8.4nm,0.9s
AKBB Malin Array Si 60.73 319 P **P** 18 02 54.4 +1.0
AK01 Malin Array Si 60.74 319 P **P** 18 02 55.0 +1.5
AK02 Malin Array Si 60.74 319 P **P** 18 02 55.5 +2.0
AK03 Malin Array Si 60.74 319 P **P** 18 02 54.3 +0.8
KIEV Kiev 60.74 319 **P** 18 02 54.0 +0.5
KIEV IAmb IAmb 18 02 57.8
comp=Z,7.6nm,0.9s
AK18 Malin Array Si 60.84 319 P **P** 18 02 53.1 -1.0
AK22 Malin Array Si 60.84 319 P **P** 18 02 52.7 -1.4
AK21 Malin Array Si 60.86 319 P **P** 18 02 53.5 -0.8
AK19 Malin Array Si 60.87 319 P **P** 18 02 53.8 -0.6
AK20 Malin Array Si 60.87 319 P **P** 18 02 53.9 -0.5
LUBAR Lubar, Ukraine 61.57 318 P **P** 18 03 00.7 +1.6
VRI Vrincioaia 61.93 313 P **P** 18 03 03.5 +1.8
comp=Z,15nm,1.3s
MLR Muntele Rosu 62.46 313 LR LR 18 35 51.8
comp=Z,135nm,18.2s,baz=12,slow=41
MLR Muntele Rosu 62.46 313 P **P** 18 03 07.7 +2.3
LVZ Lovozero 62.49 338 P **P** 18 03 05.9 +0.8
BURAR Bucovina Array 63.06 315 P **P** 18 03 09.2 -0.1
BURAR IAmb IAmb 18 03 14.6
comp=Z,3.1nm,0.9s
BUR08 Bucovina Ar. S 63.07 315 P **P** 18 03 09.9 +0.5
INKA Innaminka 63.77 134 P **P** 18 03 13.5 -0.6
INKA IAmb IAmb 18 03 18.8
comp=Z,6.4nm,1.4s
FIA1 FINESS Array S 64.22 330 P **P** 18 03 16.3 -0.2
FINES FINESS Array B 64.22 330 P **P** 18 03 16.2 -0.3
comp=Z,2.9nm,0.7s,baz=142,slow=6.8,SNR=8.6
comp=Z,2.9nm,0.7s
FINES FINESS Array B 64.22 330 P **P** 18 03 16.1 -0.4
MBAR Mbarara 65.03 261 P **P** 18 03 21.9 -0.9
MBAR IAmb IAmb 18 03 27.7
comp=Z,3.6nm,0.8s
ITM Ithomi 65.62 303 P **P** 18 03 24.6 -1.5
ARCES ARCESS Array B 66.17 339 P **P** 18 03 29.8 +0.7
comp=Z,2.7nm,0.7s,baz=88,slow=2.8,SNR=3.9
comp=Z,2.7nm,0.7s
ARCES ARCESS Array B 66.17 339 **P** 18 03 28.6 -0.5
STKA Stephens Creek 66.98 137 P **P** 18 03 33.1 -1.7
MODS Modra-Piesok 68.39 316 *e*P P 18 03 49.7 +6.1
HFS Hagfors 70.15 328 P **P** 18 03 54.1 -0.1
comp=Z,1.4nm,0.4s,baz=94,slow=6.2,SNR=11
comp=Z,1.4nm,0.4s
GERES GERESS Array B 70.73 316 P **P** 18 03 58.9 +0.7
comp=Z,2.7nm,0.8s,baz=76,slow=5.6,SNR=7.3
comp=Z,2.7nm,0.8s
NB2 NORSAR Subarra 71.35 329 P **P** 18 04 01.3 -0.3
comp=Z,1.6nm,0.6s,baz=88,slow=6.2
NOA NORSAR Array B 71.35 329 P **P** 18 04 01.5 0.0
comp=Z,2.6nm,0.8s,baz=88,slow=6.0,SNR=5.1
comp=Z,2.6nm,0.8s
STAL STALIGIAL 71.66 314 P **P** 18 04 03.8 +0.1
LSZ Lusaka 72.87 247 P **P** 18 04 11.5 -0.1
comp=Z,5.1nm,0.8s,baz=34,slow=5.5,SNR=7.6
comp=Z,5.1nm,0.8s
LSZ Lusaka 72.87 247 P **P** 18 04 11.4 -0.1
LSZ IAmb IAmb 18 04 16.0
comp=Z,7.4nm,0.9s
H04N2 CROZET ISLANDS 74.21 209 T T 19 25 09.9
baz=41,slow=75,SNR=31
H04N1 CROZET ISLANDS 74.22 209 T T 19 25 10.7
baz=41,slow=75,SNR=34
H04N3 CROZET ISLANDS 74.23 209 T T 19 25 07.4
baz=41,slow=75,SNR=29
KSANE Kasane 76.54 246 P **P** 18 04 32.7 -0.1
C16K Lisburne Hills 77.54 22 P **P** 18 04 37.7 +0.3
LBTB Lobatse 79.15 239 LR LR 18 39 23.1
comp=Z,34nm,18.1s,baz=5.5,slow=35
H21K Melozitna Rive 83.09 23 P **P** 18 05 07.2 -0.2
BPAW Bear Paw Mtn. 84.52 24 **P** 18 05 14.8 +0.1
BPAW IAmb IAmb 18 05 20.6
comp=Z,5.7nm,0.9s
NEA2 Nenana 84.99 23 P **P** 18 05 17.2 +0.2
NEA2 IAmb IAmb 18 05 22.3
comp=Z,5.0nm,0.7s
ILAR Eielson Array 85.69 22 P **P** 18 05 19.5 -1.0
comp=Z,1.4nm,0.7s,baz=301,slow=4.5,SNR=10.0
comp=Z,1.4nm,0.7s
PRP Porcupine Dome 85.75 21 **P** 18 05 20.4 -0.6
PRP IAmb IAmb 18 05 26.6
comp=Z,5.8nm,1.0s
SUR Sutherland 86.03 234 LR LR 18 40 43.0
comp=Z,56nm,19.1s,baz=352,slow=34
A36M Sachs Harbour 86.69 11 **P** 18 05 25.7 +0.4
YKA Yellowknife Ar 96.93 13 P **P** 18 06 10.9 -2.1
comp=Z,0.1nm,0.5s,baz=310,slow=2.1,SNR=7.5
comp=Z,0.1nm,0.5s

IDC ***11*** *17:56:58.8±11.0, 3.°08N×95.°50E, h0km, mb3.8/2, mbtmp3.7/3, Error ellipse: s-maj=302.8km s-min=48.0km az=78.0*
DJA ***11*** *17:57:07.6±0.2, 4.°N±2.°×9.°7E±.°, h10km, M4.2/21, mb4.4/1, MLv4.2/21*

ISC 11 17:57:06.3±0.9, 3.°98N±0.°06×96.°93E±0.°06, h10km, n15, σ1°9°09/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	**0.60**	**299**	P	**Pb**	**17 57 18.4**	**-0.5**
KCSI	**Kotacane, Aceh**	**0.95**	**118**	P	**Pn**	**17 57 25.4**	**-0.4**
LHMI	**Lhok Sumawe**	**1.24**	**1**	P	**Pn**	**17 57 28.5**	**-1.3**
SNSI	**Sinabang, Aceh**	**1.67**	**201**	P	**Pg**	**17 57 39.9**	**+1.5**
TSI	**Tuntungan**	**1.70**	**106**	P	**Pb**	**17 57 37.7**	**0.0**
PSI	**Prapat**	**2.31**	**120**	P	**Pb**	**17 57 47.6**	**-0.6**
GSI	**Gunungsitoli**	**2.73**	**166**	P	**Pb**	**17 57 54.1**	**-1.3**
KULM	**Kulim**	**3.93**	**71**	P	**Pn**	**17 58 06.4**	**-0.4**
IPM	**Ipoh**	**4.12**	**83**	P	**Pn**	**17 58 09.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**14.52**	**8**	Pn	**P**	**18 00 40.4**	**+1.6**
	1.0nm,0.7s,baz=197,slow=11,SNR=6.5						
WRA	**Warramunga Arr**	**43.77**	**124**	P	**P**	**18 05 11.7**	**-0.9**
	1.1nm,0.5s,baz=296,slow=9.4,SNR=20						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**45.31**	**129**	P	**P**	**18 05 23.9**	**-1.0**
	0.4nm,0.5s,baz=301,slow=7.6,SNR=12						
	0.4nm,0.5s						
H04N2	**CROZET ISLANDS**	**63.92**	**213**	T	T	19 15 36.1	
	baz=51,slow=75,SNR=3.7						
H04N1	**CROZET ISLANDS**	**63.93**	**213**	T	T	19 15 41.3	
	baz=51,slow=75,SNR=4.9						
H04N3	**CROZET ISLANDS**	**63.94**	**213**	T	T	19 15 41.9	
	baz=51,slow=75,SNR=3.3						

NNC ***11*** *18:01:46.3±4.2, 44.°24N×100.°97E, h0km, mb4.4, Error ellipse: s-maj=60.6km s-min=25.7km az=169.0*
NEIC ***11*** *18:02:21.5±2.1, 44.°77N±0.°05×97.°1E±0.°1, h10km±1km, mb4.5/47, Error ellipse: s-maj=15.0km s-min=6.3km az=243.0*
BJI ***11*** *18:02:22.9, 45.°03N×97.°29E, h10km, mB4.9/7, mb4.4/38, ML5.1/11, Ms4.6/30, Ms7.4.2/30*
IDC ***11*** *18:02:23.0±0.6, 45.°02N×97.°25E, h0km, mb4.2/17, mbtmp4.2/25, ML4.0/6, MS3.8/33, Error ellipse: s-maj=15.7km s-min=11.5km az=34.0*
MOS ***11*** *18:02:23.1±1.2, 45.°00N×97.°33E, h9km, mb4.7/18, MS4.1/4, Error ellipse: s-maj=6.2km s-min=5.9km az=105.4*

ISC 11 18:02:24.4±0.3, 44.°96N±0.°04×97.°34E±0.°03, h10km, n229, σ2s45/199, mb4.5/67, MS3.9/33, 19C-11D, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	**5.65**	**1**	*i* P	**Pn**	**18 03 48.9**	**+0.4**
GTA2	**Gaotai**	**5.76**	**161**	Pn	**Pn**	**18 03 53.0**	**+3.0**
GTA2				Sn	**Sn**	**18 04 58.9**	**+2.7**
GTA2				Sg	**Sg**	**18 05 26.6**	**-2.6**
GTA2				smax	smax		
	comp=N,810nm,0.8s						
GTA2				smax	smax		
	comp=E,2μm,0.9s						
GTA2				LR	LR		
	comp=N,3μm,7.4s						
GTA2				LR	LR		
	comp=E,7μm,6.3s						
GTA2				LR	LR		
	comp=Z,2μm,7.6s						
ZAK	**Zakamensk**	**6.75**	**34**	*e*P	**Pn**	**18 04 04.4**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,124nm,1.3s						
SONM	**Songino Array**	**6.89**	**62**	Pn	**Pn**	**18 04 06.4**	**+0.8**
	comp=Z,5.0nm,0.3s,baz=245,slow=15,SNR=66						
SONM				Pg	**Pb**	**18 04 28.5**	**+4.2**
	comp=Z,23nm,0.3s,baz=247,slow=17,SNR=55						
SONM				Sn	**Sn**	**18 05 22.7**	**-1.4**
	comp=E,8.2nm,0.3s,baz=248,slow=19,SNR=5.5						
SONM				Lg	Lg	18 05 57.2	
	comp=Z,72nm,0.3s,baz=254,slow=31,SNR=20						
SONM				LR	LR	18 06 49.8	
	comp=Z,771nm,18.5s,baz=243,slow=39						
	comp=Z,11nm,0.4s						
SONM	**Songino Array**	**6.89**	**62**		**Pn**	**18 04 05.5**	**-0.1**
WMQ	**Urumqi**	**7.00**	**264**	Pn	**Pn**	**18 04 08.7**	**+1.6**
WMQ				Sn	**Sn**	**18 05 29.8**	**+3.0**
WMQ				smax	smax		
	comp=Z,920nm,0.9s						
WMQ				smax	smax		
	comp=Z,510nm,0.9s						
WMQ				LR	LR		
	comp=Z,2μm,4.1s						
WMQ				LR	LR		
	comp=Z,1μm,4.1s						
WMQ				LR	LR		
	comp=Z,420nm,13.3s						
MOY	**Mondy**	**7.14**	**19**	*e*P	**Pn**	**18 04 09.8**	**+0.8**
ULN	**Ulaanbaatar**	**7.32**	**63**		**Pn**	**18 04 11.8**	**+0.4**
ULN	**Ulaanbaatar**	**7.32**	**63**	*ce*P	**Pn**	**18 04 12.2**	**+0.7**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TLY	**Talaya**	**7.93**	**30**		**Pn**	**18 04 20.2**	**+0.5**
TLY	**Talaya**	**7.93**	**30**	*ce*P	**Pn**	**18 04 20.7**	**+1.0**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.5s						
DGZ	**Jazzator, Alta**	**8.23**	**309**	*i* P	**Pn**	**18 04 24.9**	**+0.9**
IRK	**Irkutsk**	**8.61**	**30**	*e*P	**Pn**	**18 04 29.3**	**+0.2**
IRK				*e*S	**Sn**	**18 06 01.1**	**-5.1**
IRK				pmax	pmax		
	comp=Z,67nm,0.6s						
IRK				smax	smax		
	comp=E,1μm,1.8s						
GOMU	**GeErMu**	**8.96**	**193**	P	**Pn**	**18 04 38.7**	**+4.5**
GOMU				smax	smax		
	comp=E,250nm,1.0s						
GOMU				smax	smax		
	comp=E,470nm,0.9s						
BTO2	**Baotou**	**10.12**	**110**	*e*P	**Pn**	**18 04 51.0**	**+1.1**
BTO2				sP		18 04 57.4	
BTO2				PP	**PnPn**	**18 04 59.5**	**+2.1**
BTO2				S	**Sn**	**18 06 46.0**	**+2.4**
BTO2				pmax	pmax		
	comp=E,58nm,0.8s						
BTO2				pmax	pmax		
	comp=E,310nm,6.6s						
BTO2				LR	LR		
	comp=E,4μm,11.2s						
BTO2				LR	LR		
	comp=E,2μm,8.8s						
BTO2				LR	LR		
	comp=E,920nm,9.6s						
LZH	**Lanzhou**	**10.15**	**149**	P	**Pn**	**18 04 52.5**	**+2.2**
LZH				S	**Sn**	**18 06 46.7**	**+2.5**
LZH				LR	LR		
	comp=E,2μm,8.3s						
LZH				LR	LR		
	comp=E,2μm,9.7s						
LZH				LR	LR		
	comp=E,2μm,9.9s						
LZDM	**Lanzhou Array**	**10.21**	**150**	Pn	**Pn**	**18 04 52.1**	**+0.8**
	baz=324,slow=9.8						
LZDM				Sn	**Sn**	**18 06 42.7**	**-3.3**
	baz=316,slow=12						
	comp=E,4.9nm,0.4s						
MK31	**Makanchi Array**	**10.65**	**285**	⇓Pn	**Pn**	**18 04 56.7**	**-0.4**
	comp=E,3.1nm,0.6s,baz=95,slow=15,SNR=48						
MK31				⇓Sn	Sn	18 07 24.9	+29
	comp=E,71nm,0.7s,baz=96,slow=29,SNR=4.8						
MK31	**Makanchi Array**	**10.65**	**285**	*ce*P	**Pn**	**18 04 58.2**	**+1.1**
MKAR	**Makanchi Array**	**10.65**	**285**	Pn	**Pn**	**18 04 55.8**	**-1.3**
	comp=E,0.5nm,0.3s,baz=94,slow=14,SNR=26						
MKAR				Lg	Lg	18 07 53.4	
	comp=E,2.6nm,0.3s,baz=96,slow=27,SNR=5.6						
	comp=E,2.3nm,0.5s						
MKAR	**Makanchi Array**	**10.65**	**285**		**Pn**	**18 04 53.7**	**-3.4**
MAKZ	**Makanchi**	**10.87**	**285**		**Pn**	**18 04 56.5**	**-3.5**
MAKZ	**Makanchi**	**10.87**	**285**	⇓Pn	**Pn**	**18 04 59.6**	**-0.5**
	comp=E,3.0nm,0.8s						
MAKZ				⇓Sn	Sn	18 07 29.4	+28
	comp=E,143nm,1.1s						
MAKZ	**Makanchi**	**10.87**	**285**	P	**Pn**	**18 04 56.5**	**-3.5**
ZAA0	**Zalesovo Array**	**12.12**	**322**		**Pn**	**18 05 12.5**	**-4.5**
ZAA0	**Zalesovo Array**	**12.12**	**322**	⇑Pn	**Pn**	**18 05 14.4**	**-2.6**
	comp=E,2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**12.12**	**322**	Pn	**Pn**	**18 05 16.1**	**-0.9**
	comp=E,1.7nm,0.7s,baz=129,slow=12,SNR=8.4						
ZALV				Lg	Lg	18 08 39.3	
	comp=E,0.4nm,0.3s,baz=142,slow=24,SNR=5.6						
ZALV				LR	LR	18 10 03.6	
	comp=E,295nm,18.4s,baz=131,slow=38						
ZALV	**Zalesovo Beam**	**12.12**	**322**		Pn	18 05 11.6	-5.4
CIT	**Chita**	**12.85**	**51**	*eP*	**Pn**	**18 05 29.4**	**+2.3**
CIT				*e*		18 08 01.0	
CIT				pmax	pmax		
	comp=Z,53nm,3.5s						
PDGK	**Podgornoye**	**12.93**	**269**	⇓Pn	**Pn**	**18 05 27.9**	**-0.3**
	comp=Z,11nm,0.6s						
PDGK				⇓Sn	Sn	18 08 22.9	+31
	comp=Z,31nm,0.9s						
PDGK	**Podgornoye**	**12.93**	**269**	P	**Pn**	**18 05 27.9**	**-0.3**
XLT	**XiLinHaoTe**	**13.44**	**88**	*e*P	**Pn**	**18 05 33.6**	**-1.6**
XLT				pP	P	18 05 38.2	-6.5
XLT				sP		18 05 40.6	
XLT				PP	**PnPn**	**18 05 45.1**	**+2.2**
XLT				pmax	pmax		
	comp=E,8.0nm,0.6s						
WUS	**Wushi**	**13.77**	**261**		Pn	18 05 30.0	-10
KURK	**Kurchatov**	**13.81**	**301**		Pn	18 05 32.5	-7.7
KURK	**Kurchatov**	**13.81**	**301**	⇑Pn	**Pn**	**18 05 36.1**	**-4.0**
	comp=Z,7.9nm,0.9s						
KURK	**Kurchatov**	**13.81**	**301**	P	**Pn**	**18 05 37.4**	**-2.8**
KURBB	**Kurchatov Arra**	**13.84**	**301**	Pn	**Pn**	**18 05 37.4**	**-3.2**
	comp=Z,3.8nm,0.9s,baz=102,slow=14,SNR=15						
KURBB				Sn	**Sn**	**18 08 21.0**	**+6.9**
	comp=Z,0.1nm,0.3s,baz=101,slow=29,SNR=4.4						
KURBB				Lg	Lg	18 09 35.2	
	comp=Z,0.2nm,0.3s,baz=102,slow=33,SNR=5.2						

KURBB LR LR 18 11 02.9
comp=Z,523nm,21.6s,baz=169,slow=38
KURBB Kurchatov Arra 13.84 301 ⇓Pn **Pn 18 05 37.0 -3.6**
comp=Z,12nm,0.7s
KURBB Kurchatov Arra 13.84 301 P **Pn 18 05 36.9 -3.6**
PRZ Przheval'sk 13.92 266 Pn 18 05 32.0 -10
PRZ Przheval'sk 13.92 266 P **Pn 18 05 40.8 -1.0**
TARG Taragay, Kyrgy 14.57 264 Pn 18 05 42.9 -8.1
TARG Taragay, Kyrgy 14.57 264 P Pn 18 05 42.9 -8.1
BJT Baijiatuau 14.74 103 Pn 18 05 47.1 -5.8
BJT Baijiatuau 14.74 103 P Pn 18 05 47.1 -5.7
BJI2 Beijing 14.74 103 P **Pn 18 05 53.7 +0.8**
BJI2 pmax pmax
comp=Z,5.0nm,0.7s
BJI2 LR LR
comp=Z,340nm,7.6s
BJI2 LR LR
comp=Z,210nm,7.0s
BJI2 LR LR
comp=Z,380nm,8.7s
KDJ Kajisay 14.89 266 Pn 18 05 45.5 -10
KDJ Kajisay 14.89 266 P Pn 18 05 45.5 -10
CD2 Chengdu 14.90 158 P **Pn 18 05 55.8 +0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 LR LR
comp=Z,910nm,10.8s
CD2 LR LR
comp=Z,4μm,11.4s
CD2 LR LR
comp=Z,750nm,8.3s
HNS HongShan 15.09 114 ⇓P **Pn 18 06 00.2 +2.7**
HNS S **Sn 18 08 46.0 +1.4**
HNS LR LR
comp=Z,890nm,14.3s
HNS LR LR
comp=Z,540nm,13.5s
HNS LR LR
comp=Z,390nm,15.1s
LYN LuoYang 15.58 127 P **Pn 18 06 03.9 -0.1**
LYN sP pP 18 06 10.8 -1.0
LYN pmax pmax
comp=Z,19nm,0.9s
LYN LR LR
comp=Z,1μm,12.5s
LYN LR LR
comp=Z,540nm,8.4s
LYN LR LR
comp=Z,960nm,11.6s
BOOM Boomskoye usch 15.66 268 Pn 18 05 56.0 -9.3
BOOM IAmb IAmb 18 06 13.3
comp=Z,14nm,0.8s
BOOM Boomskoye usch 15.66 268 P Pn 18 05 56.0 -9.3
BOOM pmax pmax
comp=Z,14nm,0.8s
HILR Hailar Array B 15.88 65 Pn **Pn 18 06 08.0 +0.1**
baz=234,slow=9.9
HILR Lg Lg 18 10 42.1
baz=251,slow=22
comp=Z,0.4nm,0.3s
NRN Naryn 15.95 265 Pn 18 06 00.3 -8.8
NRN Naryn 15.95 265 P Pn 18 06 00.3 -8.8
NRN pmax pmax
comp=Z,8.0nm,1.0s
LSA Lhasa 16.00 200 Pn 18 06 01.0 -8.9
LSA Lhasa 16.00 200 P **P 18 06 13.3 -0.2**
LSA pmax pmax
comp=Z,5.0nm,0.7s
LSA Lhasa 16.00 200 P **P 18 06 14.9 +1.4**
FRU1 Bishkek 16.50 271 Pn 18 06 06.2 -10
FRU1 IAmb IAmb 18 06 23.5
comp=Z,33nm,0.9s
FRU1 Bishkek 16.50 271 P **Pn 18 06 16.6 +0.6**
AAK Ala-Archa 16.65 270 Pn **Pn 18 06 17.3 -0.6**
comp=Z,0.3nm,0.3s,baz=92,slow=12,SNR=8.4
comp=Z,4.4nm,1.0s
AAK Ala-Archa 16.65 270 Pn 18 06 08.1 -10
AAK Ala-Archa 16.65 270 ⇑Pn **Pn 18 06 12.6 -5.3**
comp=Z,57nm,1.0s
AAK ⇓Sn S 18 09 51.8 +18
comp=Z,63nm,1.3s
AAK Ala-Archa 16.65 270*ce*P **Pn 18 06 18.1 +0.2**
AAK pmax pmax
comp=Z,9.0nm,1.3s
ARLS Aral 17.00 268 P **Pn 18 06 23.2 +0.9**
KSH2 Kashi 17.16 258 P **P 18 06 28.8 +2.7**
KSH2 pmax pmax
comp=Z,15nm,0.8s
ENH Enshi 17.51 143 Pn 18 06 19.3 -9.4
ENH IAmb IAmb 18 06 33.1
comp=Z,27nm,0.7s
ARSB Arslanbob 18.12 267 **Pn 18 06 30.1 -6.1**
ARSB Arslanbob 18.12 267 P **Pn 18 06 30.2 -6.1**
ARSB pmax pmax
comp=Z,8.0nm,0.9s
OHH Osh 18.55 265 P **Pn 18 06 42.2 +0.8**
ARK Arkit 18.69 269 P **Pn 18 06 43.4 +0.2**
BVAR Borovoye Array 19.35 304 P **P 18 06 49.6 -0.3**
comp=Z,0.2nm,0.3s,baz=98,slow=11,SNR=27
BVAR LR LR 18 14 26.7
comp=Z,538nm,18.1s,baz=101,slow=38
comp=Z,12nm,0.8s
KK31 Karatay Array 19.35 274 P 18 06 40.5 -9.4
KK31 Karatay Array 19.35 274 P P 18 06 40.5 -9.5
KK31 pmax pmax
comp=Z,9.0nm,1.0s
KKAR Karatay Array 19.35 274 P 18 06 41.5 -8.5
KKAR Karatay Array 19.35 274 P P 18 06 41.5 -8.5
TRKS Terek-Say 19.36 269 P **Pn 18 06 51.6 +0.2**
BORK Borovoye 19.39 304 **P 18 06 44.9 -5.4**
BORK IAmb IAmb 18 06 53.5
comp=Z,30nm,1.1s
BORK Borovoye 19.39 304*ce*P **P 18 06 50.1 -0.3**
BORK pmax pmax
comp=Z,49nm,1.3s
WHN Wuhan 19.64 131 P **Pn 18 06 55.3 +0.7**
WHN pmax pmax
comp=Z,42nm,0.7s
DRK Karamyk 19.65 263 P **P 18 06 47.5 -6.1**
DRK IAmb IAmb 18 07 00.7
comp=Z,20nm,0.8s
DRK Karamyk 19.65 263 P **P 18 06 54.3 +0.7**
SHL Shillong 19.85 195 **P 18 06 49.3 -6.3**
SHL Shillong 19.85 195 P **Pn 18 06 57.7 +0.5**
GYA Guiyang 19.93 155 ⇑P **Pn 18 06 58.3 +0.2**
GYA pmax pmax
comp=Z,43nm,1.1s
GYA LR LR
comp=Z,480nm,12.8s
BTK Batken 20.11 265 **P 18 06 52.3 -6.2**
BTK Batken 20.11 265 P **P 18 06 59.2 +0.8**
HEH HeiHe 20.87 65 *e*P Pn 18 07 09.1 +0.2
BNX BinXian 21.09 77 ⇑P **P 18 07 09.8 +0.9**
BNX S **S 18 11 02.8 -0.6**
BNX pmax pmax
comp=Z,16nm,1.2s
BNX pmax pmax
comp=Z,220nm,7.2s
BNX LR LR
comp=Z,740nm,8.0s
BNX LR LR
comp=Z,550nm,8.0s
BNX LR LR
comp=Z,670nm,8.0s
ZEA Zeya 21.24 55 *e*P **P 18 07 12.6 +2.2**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
NIL Nilore 21.71 247 **P 18 07 09.4 -6.2**
NIL IAmb IAmb 18 07 21.7
comp=Z,36nm,1.1s
NIL Nilore 21.71 247 P **P 18 07 18.0 +2.4**
KLR Kul'dur 23.68 67 LR LR 18 17 37.7
comp=Z,58nm,20.4s,baz=278,slow=39
KLR Kul'dur 23.68 67*ce*P **P 18 07 38.0 +1.9**
KLR pmax pmax
comp=Z,5.0nm,2.5s
KBL Kabul 24.00 254 P P 18 07 31.5 -8.0
KBL IAmb IAmb 18 07 49.6
comp=Z,16nm,1.0s
KBL Kabul 24.00 254 P P 18 07 31.5 -8.0
KBL pmax pmax
comp=Z,16nm,1.0s
KS19 Wonju Array Si 24.04 97 P **P 18 07 37.5 -2.1**
KS19 IAmb IAmb 18 08 05.9
comp=Z,24nm,1.5s
KSAR Wonju Array Be 24.08 97 **P 18 07 35.8 -4.1**
KSAR Wonju Array Be 24.08 97 P **P 18 07 35.8 -4.1**
KSRS Korea Array 24.10 97 P **P 18 07 41.2 +1.1**
comp=Z,4.9nm,0.7s,baz=292,slow=9.8,SNR=20
KSRS LR LR 18 18 14.9
comp=Z,81nm,20.3s,baz=260,slow=39
comp=Z,4.9nm,0.7s
USRK Ussuriysk Ar. 24.59 79 P **P 18 07 45.8 +1.3**
comp=Z,7.5nm,0.8s,baz=282,slow=12,SNR=10
comp=Z,7.5nm,0.8s
NRIK Noril'sk 24.95 352 P **P 18 07 47.7 +0.2**
comp=Z,25nm,1.0s,baz=157,slow=9.0,SNR=26
comp=Z,25nm,1.0s
NRIK Noril'sk 24.95 352 **P 18 07 46.4 -1.1**
NRIK Noril'sk 24.95 352 *i* P **P 18 07 48.4 +0.9**
NRIK pmax pmax
comp=Z,31nm,1.0s
YAK Yakutsk 25.33 36 P **P 18 07 50.9 -0.1**
comp=Z,4.8nm,0.5s,baz=71,slow=12,SNR=5.2
YAK LR LR 18 18 14.1
comp=Z,95nm,18.2s,baz=281,slow=38
comp=Z,4.8nm,0.5s
YAK Yakutsk 25.33 36 **P 18 07 48.9 -2.2**
YAK IAmb IAmb 18 07 58.7
comp=Z,8.0nm,0.8s
YAK Yakutsk 25.33 36 *e*P **P 18 07 50.7 -0.3**
YAK *e*S **S 18 12 17.4 +0.5**
YAK *e*SS **SnSn 18 13 09.5 +1.5**
YAK pmax pmax
comp=Z,12nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,5.0nm,1.5s
YAK smax smax
comp=N,185nm,5.4s
YAK smax smax
comp=E,140nm,4.4s
YAK MLR MLR
comp=Z,53nm,14.0s
YAK MLR MLR
comp=N,74nm,15.0s
YAK MLR MLR
comp=E,51nm,14.0s
AB31 Akbulak array 25.63 293 **P 18 07 50.5 -3.5**
AB31 IAmb IAmb 18 08 09.2
comp=Z,12nm,0.9s
ABKAR Akbulak array 25.63 293 **P 18 07 52.3 -1.6**
SVE Sverdlovsk 25.68 311 *e*P **P 18 07 55.9 +1.6**
SVE pmax pmax
comp=E,66nm,1.1s
CMAR Chiang Mai Arr 26.46 177 P **P 18 08 03.3 +1.7**
comp=E,1.8nm,0.7s,baz=354,slow=9.1,SNR=18
CMAR LR LR 18 19 20.6
comp=E,58nm,19.2s,baz=345,slow=38
comp=E,1.8nm,0.7s
CMAR Chiang Mai Arr 26.46 177 P **P 18 07 57.0 -4.6**
CMAR Chiang Mai Arr 26.46 177*ce*P **P 18 08 04.0 +2.4**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
GRNR Gornyy 26.62 63⇑ *i*P **P 18 08 04.1 +1.2**
GRNR pmax pmax
comp=Z,4.0nm,1.0s
AKTO Aktyubinsk 26.79 296 LR LR 18 19 19.3
comp=Z,262nm,21.1s,baz=230,slow=38
ARTI Arti 26.83 309 LR LR 18 19 17.1
comp=Z,353nm,19.5s,baz=120,slow=38
ARTI Arti 26.83 309 **P 18 08 02.4 -2.3**
ARTI Arti 26.83 309*di* P **P 18 08 05.9 +1.2**
ARTI S **S 18 12 40.6 -0.2**
ARTI pmax pmax
comp=Z,71nm,1.0s
JNU Nakatsue 28.41 103 LR LR 18 19 09.2
comp=Z,89nm,19.9s,baz=318,slow=35
JOW Kunigami 30.65 116 LR LR 18 22 26.2
comp=Z,218nm,19.3s,baz=142,slow=39
TIXI Tiksi 30.72 19 P **P 18 08 38.3 -0.8**
comp=Z,6.1nm,0.3s,baz=173,slow=2.0,SNR=4.5
comp=Z,6.1nm,0.3s
TIXI Tiksi 30.72 19 IAmb IAmb 18 09 06.2
comp=Z,6.6nm,1.5s
TIXI Tiksi 30.72 19 P **P 18 08 38.3 -0.8**
TIXI pmax pmax
comp=Z,7.0nm,1.5s
YSS Yuzhno-Sakhali 31.30 70 *e*P **P 18 08 45.5 +1.0**
YSS *e* 18 19 10.9
YSS MLR MLR
comp=Z,500nm,15.0s
MJB9 Matsu-Tunnel 31.80 91 P **P 18 08 47.0 -2.1**
MAJO Matsushiro 31.80 91 **P 18 08 46.5 -2.6**
MJAR Matsushiro Arr 31.80 91 P **P 18 08 46.4 -2.7**
KIRV Kirov 31.89 313 LR LR 18 22 20.0
comp=Z,369nm,18.9s,baz=94,slow=38
KIRV Kirov 31.89 313*ce*P **P 18 08 51.3 +1.8**
BELG Belogornoye 33.09 301 *i* P **P 18 09 01.9 +1.8**
BELG pmax pmax
comp=Z,5.0nm,1.0s
MA2 Magadan 34.77 46 LR LR 18 24 20.0
comp=Z,150nm,20.5s,baz=274,slow=38
MAK Makhachkala 35.47 285 *e*P **P 18 09 20.0 -0.9**
MAK *e*S **S 18 14 54.5 -1.4**
MAK pmax pmax
comp=Z,352nm,1.4s
MAK MLR MLR
comp=Z,356nm,17.0s
SEY Seymchan 35.68 40 P **P 18 09 23.2 +0.8**
comp=Z,0.9nm,0.5s,baz=268,slow=10,SNR=5.4
SEY LR LR 18 24 52.8
comp=Z,256nm,20.1s,baz=248,slow=38
comp=Z,0.9nm,0.5s
VRH Novokhopyorsk 36.90 300 *e*P **P 18 09 33.5 +0.5**
VRH pmax pmax
comp=Z,50nm,1.8s
KLMR Klimovskoe 36.95 316 *e*P **P 18 09 33.4 +0.1**
KLMR *e* 18 10 57.4
KLMR pmax pmax
comp=Z,26nm,0.9s
LPSR Galich'ya Gora 38.29 303 *e*P **P 18 09 45.4 +0.7**
LPSR pmax pmax
comp=Z,40nm,1.0s
VORR Voronezh 38.33 301 *e*P **P 18 09 45.9 +0.8**
VORR pmax pmax
comp=Z,50nm,0.4s
KBZ Khabaz 38.34 288 LR LR 18 26 57.3
comp=Z,200nm,18.0s,baz=348,slow=38
KBZ Khabaz 38.34 288 *i* P **P 18 09 45.7 +0.5**
KBZ pmax pmax
comp=Z,4.0nm,1.2s
KIV Kislovodsk 38.40 288 *e*P **P 18 09 47.9 +2.0**
KIV pmax pmax
comp=Z,6.0nm,1.1s
MOS Moscow 38.44 308 *e*P **P 18 09 46.5 +0.6**
MOS *e* 18 11 18.2
MOS pmax pmax
comp=Z,32nm,0.7s
VORD Divnogorie 38.45 300 *e*P **P 18 09 46.3 +0.2**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 38.47 301 *e*P **P 18 09 46.9 +0.7**
VSR pmax pmax
comp=Z,50nm,1.6s
SHA1 Shidzhatmaz 38.49 288 *i* P **P 18 09 47.9 +1.0**
OBN Obninsk 39.14 307⇓ *e*P **P 18 09 53.9 +2.1**
OBN *e* 18 11 20.8
OBN *e*SS SS 18 19 15.3 +32
OBN pmax pmax
comp=Z,56nm,1.3s
OBN MLR MLR
comp=Z,195nm,18.0s
PETK Petropavlovsk- 39.33 56 LR LR 18 27 03.1
comp=Z,146nm,18.5s,baz=286,slow=38
PALK Pallekele 40.23 206 LR LR 18 27 28.2
comp=Z,88nm,20.3s,baz=0.5,slow=37
BILL Bilibino 41.54 32 *i* P **P 18 10 13.0 +1.4**
BILL pmax pmax
comp=Z,1.0nm,0.9s
ARCES ARCESS Array B 42.52 330 P **P 18 10 20.4 +0.9**
comp=Z,1.7nm,0.6s,baz=79,slow=8.8,SNR=3.9
comp=Z,1.7nm,0.6s
ARCES ARCESS Array B 42.52 330 P **P 18 10 18.8 -0.7**
ARCES IAmb IAmb 18 10 30.7
comp=Z,7.5nm,1.4s
FINES FINESS Array B 43.35 318 P **P 18 10 25.1 -1.2**
comp=Z,5.0nm,0.9s,baz=65,slow=5.4,SNR=5.8
comp=Z,5.0nm,0.9s
FINES FINESS Array B 43.35 318 P **P 18 10 25.3 -1.0**
GSI Gunungsitoli 43.47 180 P P 18 10 23.0 -4.8
MNK Minsk 44.16 308 *i* P **P 18 10 36.3 +3.3**
comp=E,26nm,1.0s
MNK *i* P **P 18 10 36.3 +3.3**
comp=N,27nm,0.8s
MNK *i* P **P 18 10 36.3 +3.3**
comp=Z,16nm,0.8s,baz=73
MNK *i* PP **PcP 18 12 19.6 +1.9**
MNK *i* PPP PPP 18 12 55.2
MNK *i* S **S 18 17 10.8 +5.0**
MNK *i* SS **ScS 18 20 30.4 -0.9**
MNK *i* SSS SSS 18 21 10.7
MNK *i* LQ LQ 18 25 36.3
MNK *i* LR LR 18 28 45.7
MNK *i* LRM MLR 18 29 56.6
comp=E,288nm,16.0s
MNK *i* LRM MLR 18 30 17.5
comp=Z,206nm,11.2s
MNK *i* LRM MLR 18 30 30.1
comp=N,170nm,10.9s
MNK Minsk 44.16 308 *i* P **P 18 10 36.3 +3.3**
MNK *i* 18 12 19.5
MNK *i* PPP PPP 18 12 55.2
MNK *i* S **S 18 17 10.7 +5.0**
MNK *i* SS **ScS 18 20 30.3 -0.9**
MNK *i* SSS SSS 18 21 10.7
MNK pmax pmax
comp=Z,16nm,0.8s
MNK pmax pmax
comp=E,26nm,1.0s
MNK pmax pmax
comp=N,27nm,0.8s
MNK MLR MLR
comp=E,288nm,16.0s
MNK MLR MLR
comp=Z,206nm,11.2s
MNK MLR MLR
comp=N,170nm,11.0s
AKASG Malin Array Be 44.62 303 P **P 18 10 36.8 +0.1**
comp=N,3.9nm,0.9s,baz=60,slow=8.1,SNR=14
comp=N,3.9nm,0.9s
AKASG Malin Array Be 44.62 303*ce*P **P 18 10 38.4 +1.7**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 44.62 303 P **P 18 10 33.2 -3.4**
AKBB Malin Array Si 44.62 303*ce*P **P 18 10 38.1 +1.4**
AKBB pmax pmax
comp=Z,14nm,1.3s
KIEV Kiev 44.63 303 P **P 18 10 33.6 -3.2**
KIEV Kiev 44.63 303 P **P 18 10 33.6 -3.2**
KIEV pmax pmax
comp=Z,24nm,1.4s
BR131 Keskin Array S 46.30 287 P **P 18 10 47.0 -3.3**
BR131 IAmb IAmb 18 10 54.5
comp=Z,8.6nm,1.2s
BR131 Keskin Array S 46.30 287 P **P 18 10 47.0 -3.3**
BR131 pmax pmax
comp=Z,9.0nm,1.2s
BRTR Keskin Array B 46.30 287 P **P 18 10 53.5 +3.2**
comp=Z,4.7nm,1.1s,baz=60,slow=4.9,SNR=9.5
BRTR Keskin Array B 46.30 287 P **P 18 10 46.5 -3.8**
BRTR Keskin Array B 46.30 287*ce*P **P 18 10 53.9 +3.5**
BRTR pmax pmax
comp=Z,5.0nm,1.1s
RAYN Ar Rayn 46.99 261 P P 18 10 51.2 -4.6
RAYN IAmb IAmb 18 11 01.5
comp=Z,10nm,1.4s
RAYN Ar Rayn 46.99 261 P P 18 10 51.2 -4.6
RAYN pmax pmax
comp=Z,11nm,1.4s
ASF Jabal al Asfar 47.92 276 LR LR 18 33 21.8
comp=Z,80nm,19.5s,baz=28,slow=39
BUR08 Bucovina Ar. S 48.24 300 P P 18 11 00.1 -5.2
BURAR Bucovina Array 48.24 300 P P 18 11 00.5 -4.8
BURAR IAmb IAmb 18 11 08.7
comp=Z,6.0nm,1.2s
MMAI Mount Meron Ar 48.51 278 LR LR 18 35 35.8
comp=Z,71nm,18.8s,baz=48,slow=41
HFS Hagfors 49.53 319 P **P 18 11 13.8 -1.1**
comp=Z,11nm,0.9s,baz=108,slow=3.8,SNR=8.1
HFS LR LR 18 32 24.5
comp=Z,511nm,21.8s,baz=345,slow=36
comp=Z,11nm,0.9s
NB201 NORSAR Array S 50.28 321 P P 18 11 15.6 -5.0
NB2 NORSAR Subarra 50.32 321 P **P 18 11 19.9 -1.0**
comp=Z,0.5nm,0.4s,baz=59,slow=7.9
NOA NORSAR Array B 50.32 321 P **P 18 11 20.1 -0.8**
comp=Z,1.7nm,0.8s,baz=72,slow=9.1,SNR=5.9
NOA LR LR 18 32 30.1
comp=Z,148nm,18.6s,baz=265,slow=36
comp=Z,1.7nm,0.8s
OJC Ojcow 50.35 305 P **P 18 11 16.8 -4.5**
OJC Ojcow 50.35 305 P **P 18 11 16.8 -4.5**
NC204 NORSAR Array S 50.42 321 P **P 18 11 17.1 -4.6**
EIL Elat 50.71 275 LR LR 18 36 43.3
comp=Z,87nm,18.1s,baz=28,slow=41
MORC Moravsky Berou 51.85 306 *e*P **P 18 11 35.0 +2.4**
VRAC Vranov 52.62 306 *e*P **P 18 11 38.3 0.0**
MODS Modra-Piesok 52.66 304 *e*P **P 18 11 40.3 +1.6**
MODS Modra-Piesok 52.66 304 *e*P **P 18 11 40.2 +1.6**
KRUC Moravsky 52.85 305 *e*P **P 18 11 39.5 -0.5**
RONA Rosalia, Austr 53.56 304 *ep*P **P 18 11 46.3 +1.0**
comp=Z,0.8nm,0.4s
CLL Collm 53.69 309 P **P 18 11 42.0 -4.1**
CLL Collm 53.69 309 P **P 18 11 42.0 -4.1**
CLL pmax pmax
comp=Z,14nm,1.2s
CONA Conrad Observa 53.70 304 *e*P **P 18 11 46.8 +0.4**
comp=Z,0.3nm,0.2s
D20K Etivluk River 54.27 26 P **P 18 11 49.0 -1.2**
D20K IAmb IAmb 18 11 52.7
comp=Z,4.2nm,1.1s
GEC2 GERESS Array S 54.50 306 P **P 18 11 47.5 -4.7**
GEC2 IAmb IAmb 18 12 12.1
comp=Z,6.6nm,1.3s
SOKA Soboth 54.82 303 *e*P **P 18 11 54.3 -0.2**
comp=Z,1.2nm,0.5s
OBKA Obir 55.19 303 *e*P **P 18 11 56.5 -0.7**
comp=Z,0.1nm,0.2s
KBA Koelnbreinsper 55.61 305 *e*P **P 18 11 59.9 -0.5**
comp=Z,2.7nm,0.6s
LESA Schwarzleotal 55.82 305 *e*P **P 18 12 01.5 -0.3**
comp=Z,0.9nm,0.4s
L14K Kuka Creek 56.10 35 P **P 18 12 01.6 -1.8**
L14K IAmb IAmb 18 12 34.7
comp=Z,14nm,1.5s
ABTA Abfaltersbach 56.27 305 *e*P **P 18 12 04.2 -0.7**
comp=Z,3.8nm,1.0s
WTTA Wattenberg 56.50 305 *e*P **P 18 12 06.0 -0.8**
comp=Z,14nm,1.4s
MOTA Moosalm 56.77 306 *e*P **P 18 12 08.2 -0.4**
comp=Z,8.7nm,1.0s
SQTA Sankt Quirin 56.77 306 *e*P **P 18 12 08.4 -0.2**
comp=Z,9.9nm,1.0s
K17K Iditarod 57.05 32 P **P 18 12 07.9 -2.3**
K17K IAmb IAmb 18 12 37.3
comp=Z,7.1nm,1.2s
FETA Feichten 57.16 306 *e*P **P 18 12 11.1 -0.3**
comp=Z,6.5nm,1.2s
BMAR Burnt Mountain 58.63 24 P **P 18 12 20.1 -1.1**
EKA Eskdalemuir Ar 59.73 319 LR LR 18 41 39.4
comp=Z,602nm,18.1s,baz=4.0,slow=40
ILAR Eielson Array 59.74 27 P **P 18 12 27.6 -1.3**
comp=Z,0.9nm,1.1s,baz=306,slow=6.0,SNR=5.8
comp=Z,0.9nm,1.1s
DHY Denali Highway 60.73 28 P **P 18 12 34.6 -1.3**
DHY IAmb IAmb 18 13 04.1
comp=Z,12nm,1.4s
RIDG Independent Ri 61.10 27 P **P 18 12 36.8 -1.5**
RIDG IAmb IAmb 18 12 49.5
comp=Z,5.5nm,1.2s
DOT Dot Lake 61.41 27 P **P 18 12 39.2 -1.1**
DOT IAmb IAmb 18 12 58.3
comp=Z,3.8nm,1.3s
FURI Furi 61.77 253 LR LR 18 41 31.8
comp=Z,86nm,18.5s,baz=25,slow=38
KDAK Kodiak Island 62.35 35 LR LR 18 40 45.2
comp=Z,120nm,18.2s,baz=338,slow=37
YKA Yellowknife Ar 69.88 15 P **P 18 13 34.3 -0.7**
comp=Z,0.8nm,0.8s,baz=333,slow=7.1,SNR=11
comp=Z,0.8nm,0.8s
YKA Yellowknife Ar 69.88 15*ce*P **P 18 13 36.2 +1.2**
YKA pmax pmax
comp=Z,1.0nm,1.0s
ESDC Sonseca Array 70.10 306 P **P 18 13 37.0 +0.2**
comp=Z,2.3nm,1.1s,baz=45,slow=6.6,SNR=5.5

comp=Z,2.3nm,1.1s
WRAB **Tennant Creek** **72.86 144** *i* P **P** **18 13 54.3 +0.8**
WRAB pmax pmax
comp=Z,4.0nm,1.1s
WRA **Warramunga Arr** **72.86 144** P **P** **18 13 53.4 -0.1**
comp=Z,2.0nm,0.8s,baz=341,slow=6.3,SNR=13
comp=Z,2.0nm,0.8s
WRA **Warramunga Arr** **72.86 144** P **P** **18 13 50.4 -3.1**
WRA **Warramunga Arr** **72.86 144***ce*P **P** **18 13 54.0 +0.5**
WRA pmax pmax
comp=Z,2.0nm,0.8s
WR8 **Warramunga Arr** **72.94 144** **P** **18 13 51.6 -2.4**
WR8 IAmb IAmb 18 13 58.1
comp=Z,8.7nm,1.2s
WR0 **Warramunga Arr** **72.96 143** P **P** **18 13 52.1 -2.0**
WR0 IAmb IAmb 18 14 10.2
comp=Z,10nm,1.3s
MBAR **Mbarara** **74.06 253** LR LR 18 50 42.9
comp=Z,65nm,18.8s,baz=27,slow=39
ASAR **Alice Springs** **76.01 146** P **P** **18 14 12.2 +0.4**
comp=Z,1.3nm,0.7s,baz=344,slow=6.5,SNR=21
comp=Z,1.3nm,0.7s
ASAR **Alice Springs** **76.01 146** P **P** **18 14 09.7 -2.0**
CTA **Charters Tower** **78.58 134** LR LR 18 50 14.4
comp=Z,38nm,21.1s,baz=26,slow=36
SCHQ **Schefferville** **79.68 351** LR LR 18 52 27.6
comp=Z,84nm,18.2s,baz=65,slow=38
PDAR **Pinedale Array** **89.42 19** LR LR 19 01 12.6
comp=Z,31nm,18.8s,baz=14,slow=40
DBIC **Dimbokro** **93.88 283** LR LR 19 08 03.0
comp=Z,36nm,19.4s,baz=14,slow=42
PFO **Pinyon Flats O** **95.99 28** LR LR 19 03 09.5
comp=Z,56nm,21.7s,baz=60,slow=38
TKL **Tuckaleechee C** **99.75 1** LR LR 19 04 05.5
comp=Z,99nm,18.4s,baz=3.0,slow=37

*IDC **11** 18:03:15.5±5.0,23°.34S×179°.66W,h531km±55km, mb3.4/12, mbtmp4.2/12, Error ellipse: s-maj=30.8km s-min=25.3km az=172.0*
*NEIC **11** 18:03:16.8±1.6,23°.4S±0°.1×179°.6W±0°.2, h544km±5km, mb4.6/22, Error ellipse: s-maj=21.2km s-min=15.5km az=118.0*
ISC 11 18:03:15.9±0.5,**23°.51S**±0°.08×**179°.63W**±0°.09,**h536**km, **n113,**σ1§**47**/111,**mb4.2**/21,**5C,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res ISC
MSVF	**Nonsavu**	**6.15**	**339**			**P**	**18 04 57.0**	**+1.6**
NIUE	**Niue**	**10.06**	**66**	P		P	**18 05 34.2**	**-0.1**
NIUE	**Niue**	**10.06**	**66**	P		P	18 05 40.6	+6.3
NIUE				S		**S**	**18 07 32.0**	**+3.9**
AFI	**Afiamalu**	**12.10**	**39**	P		**P**	**18 05 54.5**	**-1.2**
AFI	**Afiamalu**	**12.10**	**39**	P		P	**18 05 54.9**	**-0.7**
OUZ	**Omahuta**	**13.07**	**205**	P		**P**	**18 06 08.9**	**+3.5**
WCZ	**Waipu Caves**	**13.44**	**202**	P		**P**	**18 06 12.9**	**+3.7**
KUZ	**Kuaotunu**	**13.79**	**196**	P		**P**	**18 06 15.3**	**+2.5**
MBAZ	**Motutapu North**	**14.03**	**198**	P		**P**	**18 06 18.2**	**+2.9**
MXZ	**Matakaoa Point**	**14.12**	**187**	P		**P**	**18 06 18.0**	**+1.7**
MKAZ	**Moumakai**	**14.27**	**197**	P		**P**	**18 06 20.1**	**+2.3**
WTAZ	**Waiatarua**	**14.28**	**199**	P		**P**	**18 06 20.8**	**+2.8**
WMGZ	**Waiomatatini S**	**14.36**	**186**	P		**P**	**18 06 20.8**	**+2.0**
HAZ	**Te Kaha**	**14.37**	**188**	P		**P**	**18 06 19.6**	**+0.8**
AWAZ	**Awhitu Peninsu**	**14.38**	**199**	P		**P**	**18 06 21.5**	**+2.6**
RUGZ	**Raukumara Rang**	**14.59**	**188**	P		**P**	**18 06 21.9**	**+0.6**
TWGZ	**Tauwhareparae**	**14.76**	**187**	P		**P**	**18 06 24.8**	**+1.8**
TOZ	**Tahuroa Road**	**14.78**	**195**			**P**	**18 06 25.1**	**+2.0**
TOZ	**Tahuroa Road**	**14.78**	**195**	P		**P**	**18 06 25.3**	**+2.3**
URZ	**Urewera**	**14.96**	**190**	P		**P**	**18 06 22.3**	**-2.7**
	8.2nm,0.3s,baz=264,slow=2.8,SNR=23							
URZ				S		**S**	**18 08 56.1**	**-4.8**
	6.2nm,0.9s,baz=49,slow=20,SNR=1.8							
URZ	**Urewera**	**14.96**	**190**	P		**P**	**18 06 24.0**	**-1.1**
MWZ	**Matawai**	**14.98**	**189**	P		**P**	**18 06 25.8**	**+0.6**
CNGZ	**Carnagh Station**	**15.04**	**187**	P		**P**	**18 06 27.7**	**+1.9**
RIGZ	**Rimuhau**	**15.31**	**188**	P		**P**	**18 06 28.6**	**-0.1**
RTZ	**Ruatahuna**	**15.33**	**190**	P		**P**	**18 06 28.2**	**-0.8**
MTHZ	**Maungataniwha**	**15.59**	**190**	P		**P**	**18 06 31.8**	**+0.2**
MRHZ	**Matea Rd**	**15.64**	**192**	P		**P**	**18 06 31.4**	**-0.7**
HIZ	**Hauiti**	**15.68**	**196**	P		**P**	**18 06 35.9**	**+3.5**
NMHZ	**Naumai**	**15.83**	**190**	P		**P**	**18 06 34.2**	**+0.1**
BKZ	**Black Stump Fm**	**15.95**	**191**	P		**P**	**18 06 33.5**	**-1.7**
TMVZ	**Te Maari**	**16.06**	**193**	P		**P**	**18 06 36.3**	**0.0**
OTVZ	**Oturere**	**16.11**	**193**	P		**P**	**18 06 36.3**	**-0.6**
NGZ	**Ngauruhoe**	**16.14**	**193**	P		**P**	**18 06 37.4**	**+0.3**
SNVZ	**South Ngauruho**	**16.14**	**193**	P		**P**	**18 06 37.1**	**-0.1**
TUVZ	**Tukino**	**16.21**	**193**	P		**P**	**18 06 37.5**	**-0.4**
VRZ	**Vera Road**	**16.28**	**196**	P		**P**	**18 06 40.2**	**+1.8**
TSZ	**Takapari Road**	**16.92**	**192**	P		**P**	**18 06 43.4**	**-0.9**
BFZ	**Birch Farm**	**17.47**	**191**	P		**P**	**18 06 48.0**	**-1.4**
MRZ	**Mangatainoka R**	**17.57**	**192**	P		**P**	**18 06 49.0**	**-1.3**
MRZ	**Mangatainoka R**	**17.57**	**192**	P		**P**	**18 06 49.2**	**-1.2**
TCW	**Tory Channel**	**18.38**	**195**	P		**P**	**18 06 56.9**	**-0.8**
QRZ	**Quartz Range**	**18.48**	**199**			**P**	**18 07 00.3**	**+1.7**
QRZ	**Quartz Range**	**18.48**	**199**	P		**P**	**18 07 00.7**	**+2.0**
TKNZ	**Takaka Hill**	**18.55**	**198**	P		**P**	**18 06 59.7**	**+0.4**
NNZ	**Nelson**	**18.61**	**197**	P		**P**	**18 06 59.9**	**+0.2**
NNZ				IAmb		IAmb	18 07 03.1	
	comp=Z,22nm,0.9s							
NNZ	**Nelson**	**18.61**	**197**	P		**P**	**18 07 00.4**	**+0.6**
TUWZ	**Tuamarina**	**18.66**	**195**	P		**P**	**18 07 00.5**	**+0.2**
MRNZ	**Matariki Terra**	**18.95**	**198**	P		**P**	**18 07 04.1**	**+1.2**
THZ	**Tophouse**	**19.24**	**197**			**P**	**18 07 06.8**	**+1.2**
THZ	**Tophouse**	**19.24**	**197**	P		**P**	**18 07 07.0**	**+1.3**
DSZ	**Denniston Nort**	**19.54**	**199**	P		**P**	**18 07 09.8**	**+1.4**
DSZ	**Denniston Nort**	**19.54**	**199**	P		**P**	**18 07 09.8**	**+1.4**
KHZ	**Kahutara**	**19.69**	**195**	P		**P**	**18 07 10.0**	**+0.3**
GVZ	**Greta Valley S**	**20.34**	**196**	P		**P**	**18 07 15.6**	**+0.1**
LTZ	**Lake Taylor**	**20.36**	**197**			**P**	**18 07 15.8**	**+0.1**
LTZ	**Lake Taylor**	**20.36**	**197**	P		**P**	**18 07 16.0**	**+0.2**
INZ	**Inchbonnie**	**20.55**	**199**			**P**	**18 07 17.5**	**+0.1**
INZ	**Inchbonnie**	**20.55**	**199**	P		**P**	**18 07 17.8**	**+0.4**
OXZ	**Oxford**	**20.93**	**197**	P		**P**	**18 07 20.8**	**-0.1**
OXZ	**Oxford**	**20.93**	**197**	P		**P**	**18 07 21.3**	**+0.4**
WVZ	**Waitaha Valley**	**21.08**	**200**	P		**P**	**18 07 23.1**	**+0.9**
RPZ	**Rata Peaks**	**21.57**	**199**	P		**P**	**18 07 27.5**	**+0.9**
	comp=Z,19nm,0.5s,baz=182,slow=2.0,SNR=3.2							
	comp=Z,19nm,0.5s							
RPZ	**Rata Peaks**	**21.57**	**199**			**P**	**18 07 27.2**	**+0.6**
FOZ	**Fox Glacier**	**21.79**	**201**	P		**P**	**18 07 29.4**	**+0.8**
DCZ	**Deep Cove**	**24.40**	**203**	P		**P**	**18 07 53.0**	**+1.2**
DCZ				IAmb		IAmb	18 08 16.5	
	comp=Z,26nm,1.3s							
CAN	**Canberra**	**29.63**	**239**	P		**P**	**18 08 39.3**	**+1.3**
CAN				IAmb		IAmb	18 08 43.1	
	comp=Z,14nm,1.2s							
TOO	**Toolangi**	**32.95**	**237**	P		**P**	**18 09 07.2**	**+0.9**
TAU	**Tasmania Unive**	**33.45**	**227**	P		**P**	**18 09 11.8**	**+1.4**
TAU				IAmb		IAmb	18 09 20.0	
	comp=Z,33nm,1.4s							
STKA	**Stephens Creek**	**35.19**	**248**	P		**P**	**18 09 25.4**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=84,slow=11,SNR=3.9							
	comp=Z,1.4nm,0.6s							
STKA	**Stephens Creek**	**35.19**	**248**	P		**P**	**18 09 26.0**	**+0.9**
STKA				IAmb		IAmb	18 10 01.2	
	comp=Z,21nm,1.1s							
BBOO	**Buckleboo**	**39.91**	**246**	P		**P**	**18 10 03.5**	**-0.2**
BBOO				IAmb		IAmb	18 10 23.4	
	comp=Z,39nm,1.5s							
ASAR	**Alice Springs**	**42.44**	**260**	P		**P**	**18 10 23.6**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=96,slow=7.5,SNR=16							
	comp=Z,0.5nm,0.4s							
WRA	**Warramunga Arr**	**42.78**	**266**	P		**P**	**18 10 26.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=102,slow=8.0,SNR=9.5							
	comp=Z,0.6nm,0.6s							
KNRA	**Kununurra**	**49.03**	**269**	P		**P**	**18 11 14.2**	**0.0**
KNRA				IAmb		IAmb	18 11 53.5	
	comp=Z,29nm,1.4s							
SIJI	**Sorong**	**52.64**	**288**	P		**P**	**18 11 39.8**	**-0.7**
	comp=Z,5.6nm,0.7s,baz=95,slow=12,SNR=4.3							
	comp=Z,5.6nm,0.7s							
VNDA	**Vanda**	**54.80**	**185**	P		**P**	**18 11 57.1**	**+2.4**
PETK	**Petropavlovsk-**	**78.80**	**346**	P		**P**	**18 14 22.0**	**-0.9**
	comp=Z,7.0nm,1.0s,baz=150,slow=6.2,SNR=5.2							
	comp=Z,7.0nm,1.0s							
NJ2	**Nanjing**	**80.67**	**311**	*e*P		**P**	**18 14 33.4**	**+0.2**
NJ2				pmax		pmax		
	comp=Z,4.0nm,0.6s							
K05A	**Summer Lake**	**85.24**	**39**	P		**P**	**18 14 56.8**	**+0.6**
K05A				IAmb		IAmb	18 14 58.3	
	comp=Z,16nm,1.5s							
O18K	**Koktuh Hills**	**85.44**	**12**	P		**P**	**18 14 55.2**	**-1.3**
MA2	**Magadan**	**86.29**	**345**	P		**P**	**18 14 58.7**	**-1.8**
	comp=Z,1.4nm,0.4s,baz=170,slow=6.1,SNR=2.7							
	comp=Z,1.4nm,0.4s							
MA2	**Magadan**	**86.29**	**345**	IAmb		IAmb	18 15 25.9	
	comp=Z,17nm,1.5s							
SEY	**Seymchan**	**88.96**	**348**	P		**P**	**18 15 12.5**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=217,slow=6.3,SNR=6.0							
	comp=Z,1.0nm,0.4s							
TMUT	**Trail Mountain**	**89.32**	**46**	P		**P**	**18 15 15.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**89.71**	**290**	P		**P**	**18 15 18.6**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=148,slow=3.7,SNR=7.8							
	comp=Z,1.1nm,0.9s							
TXAR	**Lajitas Array**	**89.93**	**58**	P		**P**	**18 15 19.3**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=235,slow=4.7,SNR=6.7							
	comp=Z,1.3nm,0.7s							
BSUT	**Blindstream Ca**	**90.26**	**45**	P		**P**	**18 15 19.9**	**-0.1**
BSUT				IAmb		IAmb	18 15 21.3	
	comp=Z,4.2nm,0.8s							
HHC	**Hu-ho-hao-te**	**90.39**	**315**	*e*P		**P**	**18 15 21.4**	**+1.2**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,220nm,5.5s							
PZH	**PanZhiHua**	**90.80**	**299**	P		**P**	**18 15 22.8**	**+0.3**
ILAR	**Eielson Array**	**91.57**	**13**	P		**P**	**18 15 23.4**	**-1.5**
	comp=Z,0.4nm,0.8s,baz=206,slow=3.7,SNR=2.8							
	comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**92.17**	**44**	P		**P**	**18 15 28.1**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=209,slow=2.7,SNR=3.7							
	comp=Z,0.4nm,0.6s							
MKAR	**Makanchi Array**	**112.14**	**313**	PKiKP		**PKiKP**	**18 20 48.7**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=132,slow=2.1,SNR=4.3							
BVAR	**Borovoye Array**	**120.37**	**319**	PKP		**PKPdf**	**18 21 04.4**	**-1.6**
	comp=Z,0.7nm,0.4s,baz=130,slow=1.8,SNR=8.5							
ARCES	**ARCESS Array B**	**131.58**	**348**	PKP		**PKPdf**	**18 21 25.6**	**-1.4**
	comp=Z,2.7nm,0.9s,baz=6.3,slow=2.4,SNR=6.5							
FINES	**FINESS Array B**	**138.19**	**342**	PKhKP		PKPpre	18 21 32.3	
	comp=Z,2.7nm,0.9s,baz=96,slow=5.7,SNR=4.9							
FINES				PKP		**PKPdf**	**18 21 38.8**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=48,slow=2.1,SNR=1.7							
NOA	**NORSAR Array B**	**141.75**	**351**	PKhKP		PKPpre	18 21 41.1	
	comp=Z,0.4nm,0.5s,baz=32,slow=5.1,SNR=1.4							
HFS	**Hagfors**	**142.23**	**349**	PKhKP		PKPpre	18 21 42.0	
	comp=Z,3.1nm,0.3s,baz=66,slow=3.6,SNR=35							
AKASG	**Malin Array Be**	**144.83**	**328**	PKP		**PKPdf**	**18 21 50.2**	**-1.3**
BRTR	**Keskin Array B**	**147.61**	**308**	PKPbc		**PKPbc**	**18 21 59.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=134,slow=5.0,SNR=5.2							
BRTR	**Keskin Array B**	**147.61**	**308**			**PKPbc**	**18 21 58.6**	**-1.8**
MMAI	**Mount Meron Ar**	**147.85**	**295**	PKPbc		**PKPbc**	**18 22 01.2**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=66,slow=7.0,SNR=11							
EKA	**Eskdalemuir Ar**	**148.11**	**4**	PKPbc		**PKPbc**	**18 21 59.9**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=354,slow=2.6,SNR=7.0							
LANS	**Liptovska Anna**	**150.31**	**334**	*e*PKP		**PKiKP**	**18 22 07.0**	**-0.1**
LANS				*e*			18 22 15.6	
STEB	**Steborice**	**150.32**	**337**	*e*PKP		**PKPbc**	**18 22 06.0**	**-0.5**
UPC	**Upice**	**150.43**	**340**	*e*PKP		**PKPbc**	**18 22 06.4**	**-0.3**
DPC	**Dobruska-Polom**	**150.46**	**339**	*e*PKP		**PKPbc**	**18 22 06.2**	**-0.6**
MORC	**Moravsky Berou**	**150.53**	**337**	*e*PKP		**PKPbc**	**18 22 06.1**	**-0.9**
MORC				*e*			18 22 13.3	
CLL	**Collm**	**150.58**	**344**	*i* PKPbc		**PKPbc**	**18 22 06.6**	**-0.4**
	comp=Z,9.0nm,0.9s							
RICC	**Richard**	**150.97**	**342**	*e*PKP		**PKPdf**	**18 22 03.1**	**+1.5**
KRUC	**Moravsky**	**151.54**	**338**	*e*PKP		**PKPbc**	**18 22 08.5**	**-0.8**
KRUC				*e*			18 22 14.8	
MODS	**Modra-Piesok**	**151.79**	**336**	*e*PKP		**PKPab**	**18 22 22.7**	**+1.3**
CKRC	**Cesky Krumlov**	**152.44**	**340**	*e*PKP		**PKPbc**	**18 22 09.9**	**-1.4**

*IDC **11** 18:06:14.4±1.0, 67°.13N×21°.22E, h0km, mbtmp3.2/4, ML2.0/4, Error ellipse: s-maj=18.4km s-min=7.5km az=113.0*
*UPP **11** 18:06:14.9±0.1, 67°.06N×20°.97E, h0km, ML2.3, Suspected explosion*
*HEL **11** 18:06:14.6±0.4, 67°.03N×20°.92E, h0km, ML2.2, Suspected explosion*
ISC 11 18:06:15.2±0.8,**67°.06N**±0°.02×**20°.97E**±0°.02,**h0**km,**n48,** σ1§**38**/65,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res ISC
DUNU	**Dundret**	**0.17**	**292**	P		**Pg**	**18 06 18.4**	**-0.1**
DUNU				S		**Sg**	**18 06 20.9**	**+0.3**
MASU	**Masugnsbyn**	**0.57**	**44**	P		**Pg**	**18 06 25.8**	**-0.2**
ERTU	**Ertsjaerv**	**0.70**	**136**	P		**Pg**	**18 06 28.1**	**-0.5**
ERTU	**Ertsjaerv**	**0.70**	**136**	PB		**Pg**	**18 06 28.0**	**-0.5**
ERTU				SG		**Sg**	**18 06 33.6**	**-4.0**
PAJU	**Pajala**	**0.84**	**91**	P		**Pg**	**18 06 30.6**	**-0.6**
PAJU	**Pajala**	**0.84**	**91**	PG		**Pg**	**18 06 30.5**	**-0.8**
PAJU				SG		**Sg**	**18 06 39.2**	**-3.0**
HARU	**Harads**	**0.90**	**180**	P		**Pg**	**18 06 31.8**	**-0.6**
KUA	**Kurravaara**	**0.93**	**345**	P		**Pg**	**18 06 31.8**	**-1.2**
	baz=177							
RATU	**Laukkuluspa**	**0.94**	**326**	P		**Pg**	**18 06 32.1**	**-1.0**
SALU	**Saltoluokta**	**1.01**	**290**	P		**Pg**	**18 06 33.7**	**-0.8**
LANU	**Lannavaara**	**1.07**	**21**	P		**Pg**	**18 06 34.5**	**-1.2**
LANU	**Lannavaara**	**1.07**	**21**	PG		**Pg**	**18 06 34.4**	**-1.2**
LANU				SG		**Sg**	**18 06 47.7**	**-1.8**
NIKU	**Nikkaluokta**	**1.10**	**318**	P		**Pg**	**18 06 35.1**	**-1.2**
KLF	**Kolari**	**1.18**	**80**	PG		**Pg**	**18 06 36.8**	**-1.0**
	baz=261							
KLF				smax		smax	18 06 51.2	
	comp=Z,20nm,0.2s							
KLF				SG		**Sg**	**18 06 53.0**	**-0.1**
KOVU	**Salmi**	**1.21**	**346**	P		**Pg**	**18 06 37.2**	**-1.2**
KALU	**Kalix**	**1.54**	**140**	P		**Pn**	**18 06 43.0**	**-0.8**
SJUU	**Sjulsmark**	**1.58**	**170**	P		**Pn**	**18 06 43.8**	**-0.5**
TOF	**Tornio**	**1.66**	**125**	PG		**Pn**	**18 06 45.4**	**-0.1**
TOF				smax		smax	18 07 04.4	
	comp=Z,14nm,0.2s							
TOF				SN		**Sn**	**18 07 08.5**	**+1.0**
HEF	**Hetta**	**1.70**	**36**	PG		**Pn**	**18 06 45.6**	**-0.5**
	baz=221							
HEF				smax		smax	18 07 06.4	
	comp=Z,15nm,0.2s							
HEF				SN		**Sg**	**18 07 10.4**	**+0.6**
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*P		**Pb**	**18 06 50.8**	**-0.8**
KIF	**Kilpisjarvi**	**1.96**	**358**	PG		**Pb**	**18 06 50.6**	**-1.0**
KIF				smax		smax	18 07 14.7	
	comp=Z,39nm,0.2s							
KIF				SG		**Sg**	**18 07 18.2**	**+0.2**
RNF	**Rovaniemi**	**2.04**	**100**	PG		**Pn**	**18 06 51.4**	**+0.7**
RNF				SG		**Sb**	**18 07 20.0**	**+1.0**
KTK1	**Kautokeino**	**2.14**	**22**	*e*P		**Pn**	**18 06 53.1**	**+1.0**
KTK1	**Kautokeino**	**2.14**	**22**	PG		**Pn**	**18 06 53.0**	**+0.9**
KTK1				SG		**Sb**	**18 07 22.2**	**+0.4**
I37NO	**I37NO**	**2.21**	**337**	I		I	18 20 30.0	
	baz=150,slow=326,SNR=3.7							
BURU	**Burvik**	**2.49**	**176**	PG		**Pn**	**18 06 57.8**	**+0.9**
	baz=360							
RANF	**Ranua**	**2.55**	**112**	PB		**Pn**	**18 06 58.1**	**+0.3**
RANF				SG		**Sn**	**18 07 31.9**	**+2.4**
TRO	**Tromso**	**2.70**	**345**	PG		**Pb**	**18 07 04.4**	**+0.2**
TRO				SG		**Sb**	**18 07 36.6**	**-1.2**
OUL	**Oulu**	**2.82**	**132**	PB		**Pn**	**18 07 02.9**	**+1.5**
ARA0	**ARCESS Array S**	**3.01**	**32**	PN		**Pn**	**18 07 04.2**	**+0.2**
ARA0				SB		**Sn**	**18 07 42.9**	**+2.2**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn		**Pn**	**18 07 04.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=218,slow=13,SNR=19							
ARCES				Lg		Lg	18 07 42.5	
	comp=Z,0.7nm,0.3s,baz=217,slow=24,SNR=16							
	comp=Z,1.5nm,0.2s							
OUF	**Merijarvi**	**3.12**	**148**	PB		**Pn**	**18 07 06.8**	**+1.3**
OUF				smax		smax	18 07 45.8	
	comp=Z,4.3nm,0.2s							
RAJF	**Raja-Jooseppi**	**3.13**	**60**	PN		**Pn**	**18 07 05.6**	**-0.1**
RAJF				SG		**Sb**	**18 07 52.5**	**+2.2**
UMAU	**Umeaa**	**3.19**	**182**	PB		**Pn**	**18 07 07.2**	**+0.7**
UMAU				SB		**Sn**	**18 07 47.1**	**+1.9**
KU2	**Taivalkoski**	**3.22**	**111**	PB		**Pn**	**18 07 07.6**	**+0.7**
KU2				SG		**Sb**	**18 07 55.6**	**+2.8**
VRF	**Varrio**	**3.41**	**74**	PN		**Pn**	**18 07 10.1**	**+0.6**
OLKF	**Oulanka, Finla**	**3.43**	**99**	PN		**Pn**	**18 07 10.7**	**+0.8**
OLKF				SN		**Sn**	**18 07 52.4**	**+1.2**
MSF	**Maaselka**	**3.43**	**106**	PN		**Pn**	**18 07 11.0**	**+1.1**
	baz=290							
KEV	**Kevo**	**3.51**	**37**	PN		**Pn**	**18 07 11.4**	**+0.5**
KEV				SG		**Sb**	**18 08 01.6**	**+0.4**
KU6	**Riekki**	**3.71**	**102**	PN		**Pn**	**18 07 14.6**	**+0.9**
	baz=286							
KU1	**Kurvinen**	**3.78**	**109**	PN		**Pn**	**18 07 15.4**	**+0.8**
HUSU	**Husum**	**3.80**	**192**	PB		**Pn**	**18 07 16.0**	**+1.1**
VAF	**Ylistaro**	**4.10**	**169**	PG		**Pb**	**18 07 26.7**	**-1.3**
VAF				SB		**Sn**	**18 08 11.8**	**+4.3**
HEMU	**Hemsoen**	**4.57**	**197**	PB		**Pb**	**18 07 31.3**	**-4.9**
	baz=12							
RMF	**Romuvaara**	**4.68**	**123**	PB		**Pn**	**18 07 32.3**	**+5.4**
FINES	**FINESS Array B**	**6.06**	**156**	Pn		**Pn**	**18 07 46.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=346,slow=12,SNR=8.4							
FINES				Sn		**Sn**	**18 08 54.1**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=341,slow=22,SNR=6.9							
	comp=Z,4.1nm,1.1s							
NOA	**NORSAR Array B**	**7.39**	**220**	Pn		**Pn**	**18 08 02.1**	**-2.1**
	baz=39,slow=17,SNR=4.6							
	comp=Z,1.4nm,1.1s							
HFS	**Hagfors**	**7.66**	**208**	Pn		**Pn**	**18 08 06.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=7.0							
	comp=Z,2.8nm,0.9s							

*MOS **11** 18:06:24.5±1.1, 43°.91N×147°.25E, h67km, mb4.6/12, Error ellipse: s-maj=8.5km s-min=6.8km az=76.7*
MOS Felt (II) at Yuzhno-Kuril'sk, Malokuril'skoye.
*NIED **11** 18:06:26.6±0.2, 43°.85N×147°.17E, h52km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}4.21; $M_{\theta\theta}$4.09; $M_{\phi\phi}$-8.29; $M_{r\theta}$-5.31; $M_{\theta\phi}$-2.63; $M_{\phi r}$-3.48; Fault plane solution: $M_0$9.91000×10¹⁴ NP1: ϕ_s335.00000°, δ43.00000°, λ25.00000°. NP2: ϕ_s226.00000°, δ73.00000°, λ130.00000°.*
*JMA **11** 18:06:26.6±0.2, 43°.9N±0°.7×147°.7E±°, h52km, MD4.4/33, MV4.7/33, E OFF HOKKAIDO*
JMA Felt I J1 at E OFF HOKKAIDO .
*IDC **11** 18:06:27.0±0.8, 43°.97N×147°.13E, h70km±7km, mb3.5/12, mbtmp3.9/17, Error ellipse: s-maj=19.7km s-min=13.9km az=137.0*
*NEIC **11** 18:06:27.1±2.3, 44°.05N±0°.06×147°.14E±0°.09, h65km±7km, mb4.5/41, Error ellipse: s-maj=12.0km s-min=2.7km az=46.0*
*SKHL **11** 18:06:27.4±0.1, 44°.00N×147°.20E, h75km±4km, mb5.6/4*
ISC 11 18:06:26.3±0.6,**43°.93N**±0°.05×**147°.22E**±0°.05,**h65**km±5km, **n148,**σ1§**51**/160,**mb4.4**/37,**3C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.99**	**277**	*c i* PN		**Pn**	**18 06 43.4**	**-1.0**
YUK				*i* S		**Sn**	**18 06 55.6**	**-2.1**
YUK				pmax		pmax		
	comp=N,611nm,0.2s							
YUK				pmax		pmax		
	comp=Z,2μm,0.2s							
YUK				pmax		pmax		
	comp=E,728nm,0.1s							
YUK				smax		smax		
	comp=N,13μm,0.2s							
YUK				smax		smax		
	comp=E,8μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**0.99**	**277**	*i* P		**Pn**	**18 06 43.6**	**-0.8**
YUK				AMB		AMB	18 06 45.4	
	comp=E,2μm,0.2s							
YUK				*i* S		**Sn**	**18 06 55.8**	**-1.9**
YUK				A		A	18 06 57.5	
	comp=E,10μm,0.2s							
YUK				A		A	18 06 57.5	
	comp=E,8μm,0.2s							
NEM2	**Nemuro 2**	**1.21**	**243**	P		**Pn**	**18 06 46.5**	**-0.7**
NEM2				S		**Sn**	**18 07 01.0**	**-1.9**
NMR	**Nemuro--Hokkai**	**1.22**	**243**	*i* PN		**Pn**	**18 06 46.5**	**-0.9**
NMR				*i* S		**Sn**	**18 07 00.8**	**-2.3**
NMR	**Nemuro--Hokkai**	**1.22**	**243**	*i* P		**Pn**	**18 06 46.9**	**-0.5**
NMR				*i* S		**Sn**	**18 07 01.4**	**-1.7**
GLVR	**Golovnino**	**1.25**	**262**	*i* PN		**Pn**	**18 06 47.4**	**-0.3**
GLVR				*i* S		**Sn**	**18 07 02.9**	**-0.8**
GLVR				pmax		pmax		
	comp=E,41n

comp=Z,2.5nm,0.7s,baz=214,slow=12,SNR=4.3
PETK Petropavlovsk- 11.50 33 Pn Pn 18 09 06.5 -1.1
INU Inuyama 11.62 226 Pn Pn 18 09 08.7 -0.6
PET Petropavlovsk 11.83 36 *e*P **Pn 18 09 09.3 -2.7**
KLR Kul'dur 11.89 302 *i* PN **Pn 18 09 09.5 -3.3**
KLR pmax pmax
comp=Z,3.0nm,0.9s
KLR Kul'dur 11.89 302 *e*P **Pn 18 09 12.0 -0.8**
MDJ Mudanjiang 12.66 279 Pn Pn **18 09 22.8 -0.6**
BNX BinXian 14.18 284 ⇓P **Pn 18 09 43.9 +0.2**
BNX pmax pmax
comp=Z,6.0nm,1.2s
MA2 Magadan 15.82 7 P **Pn 18 10 04.1 -0.6**
comp=Z,1.1nm,0.3s,baz=177,slow=14,SNR=4.2
KSRS Korea Array 15.99 253 P **Pn 18 10 06.2 -0.8**
comp=Z,1.8nm,0.9s,baz=65,slow=14,SNR=4.0
KSRS Korea Array 15.99 253 *e*P **P 18 10 09.0 -0.4**
KSRS pmax pmax
comp=Z,1.0nm,0.6s
HIA Hailar 19.57 295 *i* P **P 18 10 48.9 +0.2**
HIA pmax pmax
comp=Z,55nm,1.1s
YAK Yakutsk 20.85 336 P 18 10 59.9 -2.6
YAK IAmb IAmb 18 11 23.1
comp=Z,8.5nm,0.7s
H11N2 WAKE ISLAND Hy 29.20 139 T T 18 43 05.8
baz=330,slow=75,SNR=745
H11N1 WAKE ISLAND Hy 29.21 139 T T 18 43 11.7
baz=330,slow=75,SNR=898
H11N3 WAKE ISLAND Hy 29.22 139 T T 18 43 12.1
baz=330,slow=75,SNR=687
SPIA Saint Paul Isl 29.57 48 P **P 18 12 24.5 -0.1**
H11S1 WAKE ISLAND Hy 30.17 141 T T 18 44 18.6
baz=332,slow=76,SNR=2252
H11S3 WAKE ISLAND Hy 30.18 141 T T 18 44 18.9
baz=332,slow=76,SNR=1526
H11S2 WAKE ISLAND Hy 30.19 141 T T 18 44 19.8
baz=332,slow=76,SNR=1015
G16K Koyuk River 34.86 34 P **P 18 13 11.5 +0.7**
N15K Kwethluk River 35.14 44 P **P 18 13 14.7 +1.3**
L16K Owhat River 35.56 41 P **P 18 13 16.5 -0.3**
L16K IAmb IAmb 18 13 51.7
comp=Z,7.4nm,1.5s
C18K Utukok River 36.13 29 P **P 18 13 20.0 -1.7**
C18K IAmb IAmb 18 13 51.8
comp=Z,6.6nm,1.4s
G18K Tagagawik 36.46 34 P **P 18 13 24.1 -0.4**
G18K IAmb IAmb 18 13 43.7
comp=Z,9.9nm,1.4s
M17K Holitna River 36.51 42 P **P 18 13 25.4 +0.4**
M17K IAmb IAmb 18 13 55.4
comp=Z,4.0nm,0.9s
F19K Shaleruckik Mo 36.98 33 P **P 18 13 27.9 -1.0**
D20K Etivluk River 37.77 30 P **P 18 13 33.9 -1.7**
D20K IAmb IAmb 18 13 48.4
comp=Z,6.5nm,1.2s
G21K Allakaket 38.62 34 P **P 18 13 43.2 +0.5**
G21K IAmb IAmb 18 13 58.4
comp=Z,5.7nm,1.4s
OHAK Old Harbor 38.77 48 P **P 18 13 43.4 -0.7**
KDAK Kodiak Island 39.09 47 P **P 18 13 46.0 -0.8**
KDAK Kodiak Island 39.09 47 P **P 18 13 46.0 -0.8**
KDAK pmax pmax
comp=Z,16nm,1.2s
NRIK Noril'sk 39.12 331 *i* P **P 18 13 45.8 -1.1**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
ILAR Eielson Array 41.31 36 P **P 18 14 05.0 -0.1**
comp=Z,0.6nm,0.8s,baz=290,slow=9.3,SNR=5.5
comp=Z,0.6nm,0.8s
ILAR Eielson Array 41.31 36 *e*P **P 18 14 06.3 +1.2**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
D25K Kavik River 41.50 29 P **P 18 14 05.9 -0.7**
C27K Jago River 42.44 29 P **P 18 14 13.2 -1.0**
I28M Miner Creek 44.18 35 P **P 18 14 28.9 +0.5**
MK31 Makanchi Array 44.55 297 *i* P **P 18 14 30.4 -1.1**
MKAR Makanchi Array 44.55 297 P **P 18 14 30.5 -1.0**
comp=Z,0.5nm,0.6s,baz=85,slow=8.3,SNR=6.1
comp=Z,0.5nm,0.6s
MAKZ Makanchi 44.74 298 P **P 18 14 30.9 -2.2**
MAKZ IAmb IAmb 18 15 01.9
comp=Z,8.5nm,1.4s
MAKZ Makanchi 44.74 298 P **P 18 14 30.9 -2.2**
MAKZ pmax pmax
comp=Z,9.0nm,1.4s
KURK Kurchatov 45.47 304 P **P 18 14 37.4 -1.3**
KURK Kurchatov 45.47 304 IAmb IAmb 18 14 39.5
comp=Z,7.1nm,1.0s
KURK Kurchatov 45.47 304 *i* P **P 18 14 38.6 -0.1**
KURK pmax pmax
comp=Z,7.0nm,1.1s
KURK Kurchatov 45.47 304 *e*P **P 18 14 38.7 0.0**
KURBB Kurchatov Arra 45.56 304 P **P 18 14 37.4 -2.0**
comp=Z,0.8nm,0.3s,baz=76,slow=8.6,SNR=3.2
comp=Z,0.8nm,0.3s
CMAR Chiang Mai Arr 47.62 254 P **P 18 14 57.1 +1.2**
comp=Z,0.6nm,0.7s,baz=42,slow=6.1,SNR=6.0
comp=Z,0.6nm,0.7s
WUS Wushi 48.86 292 P **P 18 15 05.2 -0.2**
WUS IAmb IAmb 18 15 07.9
comp=Z,4.8nm,0.6s
BORK Borovoye 49.46 309 P **P 18 15 10.2 +0.6**
BORK IAmb IAmb 18 15 19.4
comp=Z,10nm,1.2s
BORK Borovoye 49.46 309 *i* P **P 18 15 10.3 +0.6**
BORK pmax pmax
comp=Z,5.0nm,1.0s
KDJ Kajisay 49.80 294 P **P 18 15 12.2 -0.4**
KDJ IAmb IAmb 18 15 16.1
comp=Z,6.9nm,1.0s
KDJ Kajisay 49.80 294 P **P 18 15 12.2 -0.4**
KDJ pmax pmax
comp=Z,7.0nm,1.0s
BOOM Boomskoye usch 50.45 295 P **P 18 15 17.9 +0.4**
BOOM Boomskoye usch 50.45 295 P **P 18 15 17.9 +0.4**
BOOM pmax pmax
comp=Z,13nm,1.4s
T35M Bob Quinn 50.95 44 P **P 18 15 22.9 +2.0**
T35M IAmb IAmb 18 15 43.2
comp=Z,5.8nm,1.1s
ARSB Arslanbob 52.94 295 P **P 18 15 37.1 +1.0**
ARSB Arslanbob 52.94 295 P **P 18 15 37.1 +1.0**
ARSB pmax pmax
comp=Z,16nm,1.3s
KK31 Karatay Array 53.67 298 P **P 18 15 41.5 +0.3**
KK31 IAmb IAmb 18 16 06.3
comp=Z,6.7nm,1.2s
KK31 Karatay Array 53.67 298 P **P 18 15 41.5 +0.3**
KK31 pmax pmax
comp=Z,7.0nm,1.3s
KKAR Karatay Array 53.67 298 P **P 18 15 41.1 -0.1**
ARTI Arti 54.36 317 P **P 18 15 45.6 -0.4**
ARTI Arti 54.36 317 P **P 18 15 45.6 -0.4**
ARTI pmax pmax
comp=Z,10.0nm,1.2s
RES Resolute Bay 54.78 17 P **P 18 15 48.0 -0.7**
RES Resolute Bay 54.78 17 P **P 18 15 48.0 -0.7**
RES pmax pmax
comp=Z,1.0nm,0.9s
BTK Batken 55.00 294 P **P 18 15 51.1 +0.1**
BTK IAmb IAmb 18 16 20.0
comp=Z,10nm,1.4s
BTK Batken 55.00 294 P **P 18 15 51.1 +0.1**
BTK pmax pmax
comp=Z,10.0nm,1.4s
YKA Yellowknife Ar 55.62 34 P **P 18 15 55.5 +0.5**
comp=Z,0.2nm,0.5s,baz=302,slow=7.8,SNR=3.5
YKA pP **pP 18 16 12.9 +1.1**
comp=Z,1.6nm,0.9s,baz=304,slow=7.8,SNR=8.5
comp=Z,0.2nm,0.5s
AB31 Akbulak array 56.99 309 P **P 18 16 03.3 -1.7**
ABKAR Akbulak array 56.99 309 P **P 18 16 03.5 -1.4**
MTN Manton Dam 58.37 199 P **P 18 16 14.9 0.0**
WB0 Warramunga Arr 64.47 193 P **P 18 16 55.7 -0.2**
WB0 IAmb IAmb 18 17 02.7
comp=Z,7.8nm,1.2s
WR0 Warramunga Arr 64.63 193 P **P 18 16 57.0 0.0**
WR0 IAmb IAmb 18 16 57.6
comp=Z,8.3nm,1.4s
WRA Warramunga Arr 64.65 193 P **P 18 16 56.4 -0.8**
comp=Z,1.4nm,0.9s,baz=10,slow=6.8,SNR=8.9
comp=Z,1.4nm,0.9s
WRA Warramunga Arr 64.65 193 IAmb IAmb 18 16 58.7
comp=Z,0.1nm,0.9s
WRA Warramunga Arr 64.65 193 *e*P **P 18 16 57.2 +0.1**
WRA pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 64.74 333 P **P 18 16 55.5 -1.8**
comp=Z,0.9nm,0.5s,baz=45,slow=8.4,SNR=6.8
comp=Z,0.9nm,0.5s
FINES FINESS Array B 64.74 333 *e*P **P 18 16 56.3 -1.0**
FINES pmax pmax
comp=Z,2.0nm,0.9s
OBN Obninsk 65.20 324 *i* P **P 18 16 59.4 -0.9**
OBN *e* 18 19 20.1
OBN *e*S **PnS 18 26 11.9 +6.7**
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,167nm,12.0s
OBN Obninsk 65.20 324 *e*P **P 18 16 59.4 -0.9**
ASAR Alice Springs 68.36 193 P **P 18 17 21.6 +0.7**
comp=Z,1.0nm,0.7s,baz=9.5,slow=5.2,SNR=7.6
comp=Z,1.0nm,0.7s
NC405 NORSAR Array S 69.26 339 P **P 18 17 26.4 +0.4**
KIV Kislovodsk 69.68 312 P **P 18 17 27.9 -1.1**
KBZ Khabaz 69.72 312 P **P 18 17 29.6 +0.6**
comp=Z,2.0nm,0.8s,baz=11,slow=7.8,SNR=4.0
comp=Z,2.0nm,0.8s
KBZ Khabaz 69.72 312 *i* P **P 18 17 29.4 +0.4**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 69.72 312 *e*P **P 18 17 29.5 +0.4**
PDAR Pinedale Array 69.75 50 P **P 18 17 30.4 +0.7**
comp=Z,0.6nm,0.6s,baz=255,slow=2.2,SNR=4.9
PDAR pP **pP 18 17 48.3 +1.2**
comp=Z,0.7nm,0.6s,baz=345,slow=0.8,SNR=5.1
comp=Z,0.6nm,0.6s
PDAR Pinedale Array 69.75 50 P **P 18 17 30.2 +0.6**
MTPU Mount Pierson 71.38 55 P **P 18 17 40.4 +0.7**
AKASG Malin Array Be 71.47 324 P **P 18 17 39.6 0.0**
comp=Z,1.0nm,0.6s,baz=41,slow=6.1,SNR=4.7
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 71.47 324 IAmb IAmb 18 18 02.3
comp=Z,6.3nm,1.4s
AKASG Malin Array Be 71.47 324 P **P 18 17 39.6 0.0**
AKASG pmax pmax
comp=Z,6.0nm,1.4s
PV18 Skein Mesa, Pa 73.15 53 P **P 18 17 50.5 +0.3**
PV18 IAmb IAmb 18 18 10.5
comp=Z,4.7nm,0.8s
UOSS Minazif 73.84 289 P **P 18 17 54.5 +0.4**
BUR08 Bucovina Ar. S 75.51 324 P **P 18 18 03.1 -0.5**
BURAR Bucovina Array 75.52 324 P **P 18 18 03.0 -0.6**
BR131 Keskin Array S 77.46 314 P **P 18 18 15.3 +0.5**
BR131 IAmb IAmb 18 18 25.2
comp=Z,5.7nm,1.4s
BR131 Keskin Array S 77.46 314 P **P 18 18 15.3 +0.5**
BR131 pmax pmax
comp=Z,6.0nm,1.4s
BRTR Keskin Array B 77.46 314 P **P 18 18 15.6 +0.8**
BRTR Keskin Array B 77.46 314 P **P 18 18 15.6 +0.8**
TXAR Lajitas Array 82.51 56 P **P 18 18 42.7 +0.6**
comp=Z,0.9nm,0.6s,baz=299,slow=3.1,SNR=6.0
TXAR pP **pP 18 19 01.8 +1.8**
comp=Z,1.4nm,0.7s,baz=282,slow=3.4,SNR=5.6
comp=Z,0.9nm,0.6s
H03N2 Juan Fernandez 142.91 90 T T 21 05 08.5
baz=304,slow=77,SNR=5.5
H03N3 Juan Fernandez 142.93 90 T T 21 05 11.1
baz=304,slow=77,SNR=6.4
H03N1 Juan Fernandez 142.93 90 T T 21 05 11.6
baz=304,slow=77,SNR=6.2

*NEIC **11** 18:10:09.0±1.3, 47°.57N±0°.04×92°.58W±0°.02, h0km±2km, ML3.2/30, Error ellipse: s-maj=7.0km s-min=3.1km az=169.0*
*IDC **11** 18:10:10.1±3.3, 47°.87N×92°.16W, h0km, mbtmp2.7/2, ML1.3/1, Error ellipse: s-maj=41.0km s-min=19.7km az=71.0*
ISC 11 18:10:08.7±1.0, **47°.56N**±0°.04×**92°.55W**±0°.05, **h0**km, **n23,** σ1**9**33/21, **Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.81**	**61**			**Pg**		**18 10 24.1**	**-0.1**
EYMN				IAML				18 10 39.8	
	550nm,0.8s								
E38A	**The Farm, Brul**	**1.17**	**144**			**Pg**		**18 10 31.0**	**-0.1**
EPLO	**Experimental L**	**2.26**	**340**			**Pn**		**18 10 46.7**	**-0.6**
SPMN	**Marine on St.**	**2.34**	**184**			**Pn**		**18 10 48.5**	**+0.1**
AGMN	**Agassiz Nation**	**2.35**	**290**			**Pn**		**18 10 47.4**	**-1.2**
AGMN				IAML				18 11 20.8	
	172nm,0.7s								
AGMN				IAML				18 11 29.7	
	123nm,1.3s								
TBO	**Thunder Bay**	**2.37**	**61**			**Pn**		**18 10 48.0**	**-0.8**
TBO				IAML				18 11 29.2	
	comp=N,117nm,1.0s								
TBO				IAML				18 11 37.0	
	comp=E,130nm,1.3s								
G40A	**Rib Lake**	**2.81**	**144**			**Pn**		**18 10 54.9**	**+0.1**
G40A				IAML				18 11 43.2	
	comp=E,50nm,0.4s								
F33A	**5 Mile Ranch,**	**3.10**	**238**			**Pn**		**18 10 58.6**	**-0.3**
F33A				IAML				18 11 48.8	
	comp=E,88nm,1.2s								
ULM	**Lac du Bonnet**	**3.48**	**322**	Pn		**Pn**		**18 11 04.0**	**0.0**
	comp=E,0.4nm,0.3s,baz=135,slow=12,SNR=12								
ULM				Pg		**Pb**		**18 11 10.5**	**-0.6**
	comp=E,0.5nm,0.3s,baz=138,slow=13,SNR=9.3								
ULM				Lg		Lg		18 11 55.5	
	comp=E,3.5nm,0.3s,baz=233,slow=20,SNR=15								
	comp=E,0.9nm,0.5s								
ULM	**Lac du Bonnet**	**3.48**	**322**			**Pn**		**18 11 03.0**	**-1.1**
ULM	**Lac du Bonnet**	**3.48**	**322**	IAML				18 11 58.2	
	comp=N,27nm,0.9s								
I10CA	**LAC DU BONNET**	**3.50**	**320**	I		I		18 31 59.5	
	comp=N,0.1nm,1.7s,baz=128,slow=351,SNR=3.0								
F42A	**Maple Grove Fa**	**3.53**	**119**	Pn		**Pn**		**18 11 04.5**	**-0.3**
F42A				IAML				18 12 00.6	
	comp=N,59nm,0.7s								
F42A				IAML				18 12 06.2	
	comp=N,52nm,0.6s								
I37A	**Lemond, Waseca**	**3.59**	**190**			**Pn**		**18 11 04.5**	**-1.2**
I40A	**Norwalk**	**3.91**	**159**			**Pn**		**18 11 09.9**	**-0.1**
I40A				IAML				18 11 55.1	
	comp=N,36nm,0.7s								
I40A				IAML				18 12 20.0	
	comp=N,32nm,0.5s								
I42A	**Draeger Farm,**	**4.46**	**144**	Pn		**Pn**		**18 11 16.4**	**-1.2**
I42A				IAML				18 12 28.4	
	comp=N,25nm,1.4s								
I42A				IAML				18 12 30.0	
	comp=N,20nm,0.9s								
ECSD	**EROS Data Cent**	**4.77**	**218**			**Pn**		**18 11 19.2**	**-2.7**
ECSD	**EROS Data Cent**	**4.77**	**218**	IAML				18 12 34.7	
	comp=N,19nm,1.1s								
JFWS	**Jewell Farm**	**4.92**	**160**			**Pn**		**18 11 22.6**	**-1.3**
JFWS				IAML				18 12 45.8	
	comp=N,24nm,0.8s								
L40A	**Anamosa**	**5.57**	**170**	Pn		**Pn**		**18 11 32.5**	**-0.3**
L42A	**Oliver, Polo**	**5.92**	**159**	Pn		**Pn**		**18 11 34.7**	**-2.9**
L34A	**Svendsen Farm,**	**6.22**	**207**	Pn		**Pn**		**18 11 40.8**	**-0.9**
PDAR	**Pinedale Array**	**12.92**	**254**	Pn		**Pn**		**18 13 16.3**	**+2.6**
	comp=N,0.1nm,0.5s,baz=62,slow=11,SNR=1.6								
PDAR				Lg		Lg		18 16 48.6	
	baz=68,slow=28,SNR=3.1								

*IDC **11** 18:14:55.2±1.2, 2°.98S×129°.83E, h0km, mb3.9/4, mbtmp3.8/7, ML3.7/3, MS3.4/1, Error ellipse: s-maj=38.8km s-min=21.3km az=80.0*
*DJA **11** 18:15:00.3±0.7, 3°.5S±4°×13°.0E±°, h20km±8km, M3.6/16, MLv3.6/16*
ISC 11 18:14:58.7±0.8, **2°.92S**±0°.06×**129°.94E**±0°.05, **h25**km, **n19,** σ1**9**69/20, **mb3.6/3, Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.10**	**247**	P		**Pb**		**18 15 21.2**	**+2.1**
BNDI	**Bandanaira**	**1.60**	**181**	P		**Pb**		**18 15 28.4**	**+0.8**
KRAI	**Karang Ratu**	**1.60**	**255**	P		**Pb**		**18 15 28.6**	**+1.0**
AAI	**Ambon**	**1.91**	**246**	P		**Pb**		**18 15 32.7**	**-0.1**
FAKI	**Fak Fak**	**2.30**	**90**	P		**Pn**		**18 15 37.3**	**+2.2**
SIJI	**Sorong**	**2.43**	**33**	Pn		**Pn**		**18 15 37.3**	**+0.4**
	5.6nm,0.3s,baz=57,slow=13,SNR=96								
SIJI				Sn		**Sn**		**18 16 03.7**	**-2.0**
	7.8nm,0.3s,baz=65,slow=23,SNR=14								
	14nm,0.3s								
SIJI	**Sorong**	**2.43**	**33**	P		**Pn**		**18 15 37.4**	**+0.6**
SWI	**Sorong**	**2.43**	**33**	P		**Pn**		**18 15 37.9**	**+1.1**
NLAI	**Namlea**	**2.86**	**263**	P		**Pn**		**18 15 45.0**	**+2.3**
SANI	**Sanana**	**4.04**	**282**	P		**Pn**		**18 15 58.7**	**-0.4**
RKPI	**Ransiki, Papua**	**4.46**	**72**	P		**Pn**		**18 16 05.8**	**+1.0**
MWPI	**Manokwari, Pap**	**4.55**	**64**	P		**Pn**		**18 16 08.6**	**+2.6**
FITZ	**Fitzroy Crossi**	**15.67**	**195**	Pn		**Pn**		**18 18 36.8**	**-1.2**
	0.3nm,0.3s,baz=14,slow=11,SNR=7.2								
	2.4nm,0.8s								
WRA	**Warramunga Arr**	**17.46**	**166**	P		**Pn**		**18 18 58.4**	**-2.3**
	0.3nm,0.3s,baz=344,slow=13,SNR=14								
WRA				S		Sn		18 22 00.8	-14
	0.6nm,1.0s,baz=341,slow=28,SNR=1.8								
	1.5nm,0.8s								
ASAR	**Alice Springs**	**20.98**	**170**	P		**P**		**18 19 40.5**	**+0.1**
	11nm,0.8s,baz=349,slow=9.9,SNR=62								
ASAR				S		**S**		**18 23 29.7**	**-3.3**
	0.5nm,0.8s,baz=351,slow=23,SNR=4.3								
	11nm,0.8s								
NWAO	**Narrogin (SRO)**	**32.14**	**200**	LR		LR		18 34 06.9	
	comp=Z,68nm,18.5s,baz=74,slow=36								
CMAR	**Chiang Mai Arr**	**37.19**	**306**	P		**P**		**18 22 08.0**	**-0.2**
	0.3nm,0.3s,baz=119,slow=6.0,SNR=4.5								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**64.82**	**326**	P		**P**		**18 25 35.6**	**+0.1**
	0.2nm,0.4s,baz=115,slow=7.9,SNR=6.5								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**69.03**	**328**	P		**P**		**18 26 03.1**	**+0.9**
	0.5nm,0.2s,baz=124,slow=5.7,SNR=6.1								
	0.5nm,0.2s								

*CATAC **11** 18:17:16.1±0.3, 11°.N±2°×8°.8W±°, h24km, M3.7/31, MLv3.7/31, Error ellipse: s-maj=3.9km s-min=2.2km az=33.0, confirmed*
*SNET **11** 18:17:18.6±2.4, 11°.51N×88°.18W, h4km, ML3.7, Presumed earthquake*
ISC 11 18:17:16.9±6.4, **11°.21N**±0°.05×**87°.98W**±0°.04, **h34**km±12km, **n56,** σ0**9**74/91, **10C-7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ALEN	**Leon**	**1.65**	**41**	P		**Pn**		**18 17 43.2**	**-0.3**
ALEN				S		**Sn**		**18 18 03.5**	**0.0**
COPN	**Copaltepe**	**1.67**	**55**	⇑P		**Pn**		**18 17 43.4**	**-0.4**
PACN	**Al O del Volca**	**1.73**	**42**	⇓P		**Pn**		**18 17 44.3**	**-0.3**
PACN				S		**Sn**		**18 18 06.0**	**+0.4**
CRIN	**San Cristobal**	**1.74**	**32**	P		**Pn**		**18 17 44.6**	**-0.2**
CRIN				S		**Sn**		**18 18 07.2**	**+1.3**
TEL3	**Telica 3**	**1.75**	**39**	⇓P		**Pn**		**18 17 44.4**	**-0.5**
HOYN	**Al Sur del Vol**	**1.78**	**39**	⇑P		**Pn**		**18 17 44.7**	**-0.7**
HOYN				S		**Sn**		**18 18 07.2**	**+0.3**
LEVN	**Ruinas Leon Vi**	**1.78**	**48**	⇑P		**Pn**		**18 17 44.7**	**-0.7**
LEVN				S		**Sn**		**18 18 07.4**	**+0.5**
MACN	**El Madrono**	**1.79**	**46**	⇑P		**Pn**		**18 17 44.8**	**-0.7**
MACN				S		**Sn**		**18 18 07.2**	**+0.2**
CNGA	**Al SSO del Vol**	**1.79**	**44**	P		**Pn**		**18 17 45.0**	**-0.4**
CNGA				S		**Sn**		**18 18 07.3**	**+0.3**
HERN	**Volcan Telica**	**1.79**	**39**	P		**Pn**		**18 17 44.7**	**-0.8**
HERN				S		**Sn**		**18 18 07.2**	**+0.2**
CNGN	**Cerro Negro**	**1.79**	**44**	⇑P		**Pn**		**18 17 44.8**	**-0.8**
CNGN				S		**Sn**		**18 18 07.8**	**+0.7**
CSGN	**Cosiguina Volc**	**1.80**	**13**	⇑P		**Pn**		**18 17 45.1**	**-0.6**
CSGN				S		**Sn**		**18 18 07.7**	**+0.3**
SAPS	**Ciudad Sandino**	**1.81**	**58**	S		**Sn**		**18 18 07.9**	**+0.2**
POLN	**Al Sur del Vol**	**1.83**	**39**	P		**Pn**		**18 17 45.8**	**-0.3**
POLN				S		**Sn**		**18 18 08.2**	**+0.1**
APYN	**Apoyeque**	**1.89**	**57**	S		**Sn**		**18 18 09.7**	**+0.1**
APQ2	**Apoyeque**	**1.90**	**59**	P		**Pn**		**18 17 46.1**	**-0.8**
APQ2				S		**Sn**		**18 18 09.2**	**-0.4**
UNAN	**Cigeo UNAN**	**1.90**	**62**	P		**Pn**		**18 17 46.7**	**-0.3**
UNAN				S		**Sn**		**18 18 09.9**	**+0.1**
MOM2	**El Cardon**	**1.91**	**50**	⇑P		**Pn**		**18 17 46.3**	**-0.7**
MOM2				S		**Sn**		**18 18 10.4**	**+0.5**
TISN	**Laguna Tiscapa**	**1.92**	**61**	P		**Pn**		**18 17 46.6**	**-0.6**
ALLN	**Telcor Managua**	**1.92**	**61**	P		**Pn**		**18 17 46.6**	**-0.6**
ALLN				S		**Sn**		**18 18 11.1**	**+0.9**
MGAN	**Managua**	**1.94**	**61**	P		**Pn**		**18 17 46.8**	**-0.6**
MGAN				S		**Sn**		**18 18 10.9**	**+0.2**
MAS3	**Al N del Volca**	**1.94**	**65**	⇑P		**Pn**		**18 17 47.4**	**-0.2**
MAS3				S		**Sn**		**18 18 11.3**	**+0.4**
MASN	**Masaya**	**1.95**	**67**	S		**Sn**		**18 18 11.1**	**0.0**
AERN	**Aeropuerto Man**	**2.00**	**62**	S		**Sn**		**18 18 12.6**	**+0.3**
CNCH	**Conchagua**	**2.05**	**4**	⇓P		**Pn**		**18 17 49.2**	**-0.1**
CNCH	**Conchagua**	**2.05**	**4**	*e*P		**Pn**		**18 17 49.1**	**-0.1**
CNCH				*e*S		**Sn**		**18 18 14.1**	**+0.4**
LCND	**La Caada**	**2.08**	**2**	⇓P		**Pn**		**18 17 49.3**	**-0.2**
LCND				S		**Sn**		**18 18 14.0**	**+0.3**
LCND	**La Caada**	**2.08**	**2**	*e*P		**Pn**		**18 17 49.2**	**-0.3**
RANC	**El Ranchito**	**2.23**	**352**	P		**Pn**		**18 17 51.8**	**+0.2**
RANC				S		**Sn**		**18 18 18.1**	**+0.1**
CNRM	**Centro Naciona**	**2.25**	**355**	S		**Sn**		**18 18 18.9**	**+0.5**
PACA	**Pacayal**	**2.27**	**352**	P		**Pn**		**18 17 52.0**	**-0.1**
PACA				S		**Sn**		**18 18 19.2**	**+0.3**
CARN	**Rivas**	**2.42**	**90**	P		**Pn**		**18 17 53.6**	**-0.4**
CARN				S		**Sn**		**18 18 22.5**	**+0.1**
LIMN	**Finca el Limon**	**2.42**	**41**	⇓P		**Pn**		**18 17 53.7**	**-0.6**
LIMN				S		**Sn**		**18 18 22.9**	**+0.1**
TECO	**Alcaldia de Te**	**2.44**	**341**	S		**Sn**		**18 18 22.6**	**-0.4**
ELI1	**Hacienda Flor**	**2.45**	**103**	S		**Sn**		**18 18 25.6**	**+2.2**
COEG	**Centro de Oper**	**2.55**	**340**	S		**Sn**		**18 18 26.8**	**+0.9**
SCLA	**Alcaldia de Sa**	**2.58**	**344**	P		**Pn**		**18 17 56.9**	**+0.5**
SCLA				S		**Sn**		**18 18 25.7**	**-0.9**
BOAB	**BOACO BROADBAN**	**2.58**	**61**	P		**Pn**		**18 17 55.7**	**-0.6**
BOAB				S		**Sn**		**18 18 26.6**	**+0.1**
MATN	**Matagalpa**	**2.64**	**50**	S		**Sn**		**18 18 27.5**	**-0.6**
PAVA	**Las Pavas**	**2.65**	**340**	S		**Sn**		**18 18 29.1**	**+0.6**
PANCS	**Alcalda de**	**2.65**	**334**	S		**Sn**		**18 18 28.5**	**0.0**
CMARA	**Lajas Hojancha**	**2.78**	**115**	P		**Pn**		**18 18 01.1**	**+1.9**
CMARA				S		**Sn**		**18 18 29.8**	**-1.8**
INDI	**Punta indio, G**	**2.78**	**119**	⇓P		**Pn**		**18 17 60.0**	**+0.8**
INDI				S		**Sn**		**18 18 29.5**	**-2.1**
PMON	**Piamonte**	**2.80**	**332**	S		**Sn**		**18 18 30.6**	**-1.6**
JAYA	**Jayaque - finc**	**2.82**	**330**	⇓P		**Pn**		**18 18 00.0**	**+0.3**
JAYA				S		**Sn**		**18 18 30.5**	**-2.1**
JAYA	**Jayaque - finc**	**2.82**	**330**	*e*P		**Pn**		**18 17 59.8**	**+0.1**
JAYA				*e*S		**Sn**		**18 18 31.6**	**-1.0**
OCON	**Estacion meteo**	**2.82**	**31**	S		**Sn**		**18 18 33.2**	**+0.8**
RCON	**San Juan de Ri**	**2.88**	**38**	P		**Pn**		**18 18 00.5**	**-0.1**
RCON				S		**Sn**		**18 18 34.5**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.91**	**14**	P		**Pn**		**18 18 01.2**	**+0.2**
TGUH				S		**Sn**		**18 18 34.8**	**-0.1**
RCUN	**Varilla2**	**2.93**	**36**	S		**Sn**		**18 18 35.9**	**+0.4**
YUSH	**Yuscaran**	**2.94**	**22**	⇑P		**Pn**		**18 18 01.4**	**0.0**
YUSH				S		**Sn**		**18 18 36.4**	**+0.8**
RCPN	**Sur Rio San Ju**	**2.95**	**39**	⇑P		**Pn**		**18 18 01.6**	**+0.1**
CEVE	**Cerro Verde**	**3.05**	**328**	*e*P		**Pn**		**18 18 03.5**	**+0.4**
CEVE				*e*S		**Sn**		**18 18 40.7**	**+2.2**
LLGN	**La Laguna**	**3.08**	**342**	S		**Sn**		**18 18 39.2**	**+0.2**
JTS	**Las Juntas de**	**3.12**	**107**	P		**Pn**		**18 18 03.3**	**-0.4**
JTS				S		**Sn**		**18 18 40.0**	**+0.1**
FAME	**Alcaldia de Sa**	**3.28**	**323**	P		**Pn**		**18 18 05.7**	**-0.3**
FAME				S		**Sn**		**18 18 43.8**	**-0.1**

*IDC **11** 18:18:07.9±8.3, 20°.64S×177°.67W, h518km±98km, mb3.4/11, mbtmp4.2/12, Error ellipse: s-maj=40.6km s-min=35.2km az=178.0*
*NEIC **11** 18:18:07.7±1.2,

WMGZ	**Waiomatatini S**	**17.71**	**190**	P	**P**	**18 21 48.5**	**+3.6**
WMGZ				S	S	18 24 54.6	+12
HAZ	**Te Kaha**	**17.76**	**192**	P	**P**	**18 21 44.8**	**-0.6**
HAZ				S	S	18 24 58.4	+15
PKGZ	**Pakihiroa**	**17.81**	**191**	P	**P**	**18 21 48.9**	**+2.9**
PKGZ				S	S	18 24 57.4	+13
RUGZ	**Raukumara Rang**	**17.98**	**192**	P	**P**	**18 21 49.4**	**+1.8**
RUGZ				S	S	18 25 01.5	+14
MWZ	**Matawai**	**18.37**	**192**	P	**P**	**18 21 55.9**	**+4.9**
URZ	**Urewera**	**18.38**	**193**	P	**P**	**18 21 48.1**	**-3.0**
	3.1nm,0.4s,baz=270,slow=3.0,SNR=1.6						
URZ				S	**S**	**18 24 56.5**	**+3.1**
	8.8nm,1.0s,baz=276,slow=10,SNR=1.9						
URZ	**Urewera**	**18.38**	**193**	P	**P**	**18 21 55.2**	**+4.1**
CNGZ	**Carnagh Statio**	**18.39**	**190**	P	**P**	**18 21 57.6**	**+6.4**
RTZ	**Ruatahuna**	**18.75**	**193**	P	P	18 22 01.8	+7.2
MTHZ	**Maungataniwha**	**19.00**	**193**	P	P	18 22 05.5	+8.6
NMHZ	**Naumai**	**19.25**	**193**	P	P	18 22 07.1	+8.0
KAHZ	**Kahuranaki**	**19.91**	**192**	P	P	18 22 13.0	+7.9
MRZ	**Mangatainoka R**	**21.01**	**194**	P	**P**	**18 22 12.3**	**-2.8**
TUWZ	**Tuamarina**	**22.15**	**197**	P	**P**	**18 22 23.6**	**-1.6**
WHZ	**Wether Hill Ro**	**28.04**	**201**	P	**P**	**18 23 16.2**	**-1.3**
ARMA	**Armidale**	**29.31**	**244**	P	**P**	**18 23 29.4**	**+0.5**
ARMA				IAmb	IAmb	18 24 13.1	
	comp=Z,12nm,1.2s						
CTAO	**Charters Tower**	**33.70**	**264**	P	**P**	**18 24 06.4**	**-0.3**
CTAO				IAmb	IAmb	18 24 43.7	
	comp=Z,13nm,1.4s						
COEN	**Coen**	**37.77**	**273**	P	**P**	**18 24 40.3**	**-0.3**
COEN				IAmb	IAmb	18 25 10.9	
	comp=Z,19nm,1.4s						
STKA	**Stephens Creek**	**38.03**	**244**	P	**P**	**18 24 42.4**	**0.0**
	comp=Z,2.1nm,0.7s,baz=75,slow=12,SNR=2.1						
	comp=Z,2.1nm,0.7s						
STKA	**Stephens Creek**	**38.03**	**244**	P	**P**	**18 24 42.0**	**-0.4**
STKA				IAmb	IAmb	18 24 49.6	
	comp=Z,30nm,1.3s						
WR8	**Warramunga Arr**	**44.67**	**262**	P	**P**	**18 25 34.2**	**-1.1**
WR8				IAmb	IAmb	18 25 51.5	
	comp=Z,8.0nm,1.2s						
AS31	**Alice Springs**	**44.74**	**257**	P	**P**	**18 25 35.5**	**-0.5**
ASAR	**Alice Springs**	**44.75**	**257**	P	**P**	**18 25 35.7**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=89,slow=8.6,SNR=22						
	comp=Z,1.4nm,0.5s						
WB0	**Warramunga Arr**	**44.80**	**262**	P	**P**	**18 25 35.8**	**-0.5**
WB0				IAmb	IAmb	18 25 41.2	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**44.82**	**262**	P	**P**	**18 25 35.7**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=96,slow=7.3,SNR=57						
	comp=Z,0.9nm,0.3s						
MTN	**Manton Dam**	**49.36**	**270**	P	**P**	**18 26 10.2**	**-0.6**
MTN				IAmb	IAmb	18 26 41.7	
	comp=Z,39nm,1.4s						
KNRA	**Kununurra**	**50.87**	**266**	P	**P**	**18 26 21.6**	**-0.3**
KNRA				IAmb	IAmb	18 26 22.1	
	comp=Z,25nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.24**	**262**	P	**P**	**18 26 36.8**	**-2.3**
	comp=Z,1.2nm,0.5s,baz=76,slow=6.0,SNR=1.5						
	comp=Z,1.2nm,0.5s						
SIJI	**Sorong**	**53.40**	**285**	P	**P**	**18 26 40.3**	**+0.1**
	comp=Z,14nm,0.9s,baz=118,slow=0.6,SNR=5.1						
	comp=Z,14nm,0.9s						
MJAR	**Matsushiro Arr**	**70.22**	**324**	P	**P**	**18 28 29.5**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=159,slow=6.5,SNR=6.8						
	comp=Z,2.1nm,0.7s						
MJAR	**Matsushiro Arr**	**70.22**	**324**	IAmb	IAmb	18 28 30.9	
	comp=Z,1.7nm,0.7s						
JMN	**Monobe**	**70.81**	**319**	P	**P**	**18 28 33.0**	**-0.2**
JMN				IAmb	IAmb	18 28 43.5	
	comp=Z,14nm,1.1s						
JKA	**Kamikawa-asahi**	**73.70**	**331**	P	**P**	**18 28 51.0**	**+1.3**
SSLB	**Suanglung**	**74.06**	**303**	P	**P**	**18 28 51.3**	**-1.0**
SSLB				IAmb	IAmb	18 29 32.8	
	comp=Z,27nm,1.4s						
TPUB	**Ta-pu**	**74.07**	**303**	P	**P**	**18 28 51.6**	**-0.7**
TPUB				IAmb	IAmb	18 28 52.8	
	comp=Z,27nm,1.2s						
PETK	**Petropavlovsk-**	**76.19**	**345**	P	**P**	**18 29 04.5**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=163,slow=6.1,SNR=1.6						
	comp=Z,3.0nm,0.7s						
KSRS	**Korea Array**	**76.92**	**318**	P	**P**	**18 29 08.2**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=131,slow=6.1,SNR=6.1						
	comp=Z,0.9nm,0.6s						
MCCM	**Marconi Confer**	**77.72**	**41**	P	**P**	**18 29 08.0**	**-4.2**
USRK	**Ussuriysk Ar.**	**78.96**	**326**	P	**P**	**18 29 19.6**	**+0.8**
	comp=Z,3.8nm,0.7s,baz=187,slow=3.9,SNR=4.9						
	comp=Z,3.8nm,0.7s						
M16K	**Timber Creek**	**82.51**	**9**	P	**P**	**18 29 37.8**	**+1.0**
ILAR	**Eielson Array**	**88.13**	**13**	P	**P**	**18 30 04.0**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=213,slow=5.0,SNR=5.6						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**90.26**	**289**	P	**P**	**18 30 16.1**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=137,slow=2.9,SNR=7.5						
	comp=Z,0.7nm,0.3s						
AKASG	**Malin Array Be**	**142.99**	**331**	PKP	PKPdf	18 36 40.5	
	comp=Z,2.0nm,0.6s,baz=44,slow=4.3,SNR=7.8						

*IDC **11** 18:22:47.1±1.1, 1.73N×126.69E, h0km, mb3.7/4, mbtmp3.8/6, ML3.4/2, Error ellipse: s-maj=57.5km s-min=18.4km az=64.0*
*DJA **11** 18:22:53.9±0.6, 2.7N±2.2×12.72E±.1, h21km±6km, M3.9/17, mB5.1/2, mb4.1/6, MLv3.9/17, Mw(mB)4.5/2*
*NEIC **11** 18:22:54.9±1.3, 1.87N±0.08×127.02E±0.07, h72km±8km, mb4.2/12, Error ellipse: s-maj=12.2km s-min=9.5km az=218.0*

ISC 11 18:22:53.6±0.7, 1.90N±0.07×127.02E±0.06, h63km, n31, σ1s57/35, mb4.0/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**			**1.18**	**163**		**Pn**	**18 23 15.3**	**+1.2**
TNTI						Sn	**Sn**	**18 23 29.8**	**+0.4**
TNTI	**Ternate**			**1.18**	**163**	P	**Pn**	**18 23 14.9**	**+0.8**
TNTI						S	**Sn**	**18 23 31.2**	**+1.8**
MNI	**Manado**			**2.22**	**258**	P	**Pn**	**18 23 30.9**	**+2.7**
SANI	**Sanana**			**4.06**	**195**	P	**Pn**	**18 23 55.1**	**+1.9**
SWI	**Sorong**			**5.05**	**123**	P	**Pn**	**18 24 08.6**	**+1.7**
	0.1nm12nm,1.4s								
SIJI	**Sorong**			**5.06**	**123**	Pn	**Pn**	**18 24 07.8**	**+0.8**
	1.0nm,0.3s,baz=294,slow=23,SNR=7.8								
	2.9nm,0.3s								
SIJI	**Sorong**			**5.06**	**123**	P	**Pn**	**18 24 08.5**	**+1.5**
NLAI	**Namlea**			**5.11**	**179**	P	**Pn**	**18 24 10.2**	**+2.6**
	0.2nm28nm,0.8s								
LUWI	**Luwuk**			**5.16**	**235**	Pn	**Pn**	**18 24 10.2**	**+2.0**
LUWI						Sn	**Sn**	**18 25 06.5**	**+0.1**
LUWI	**Luwuk**			**5.16**	**235**	P	**Pn**	**18 24 10.9**	**+2.7**
	0.2nm2μm27nm,0.8s								
KRAI	**Karang Ratu**			**5.37**	**165**	P	**Pn**	**18 24 14.4**	**+3.2**
	0.1nm9.4nm,0.6s								
TOLI2	**Tolitoli**			**6.28**	**263**	Pn	**Pn**	**18 24 23.8**	**+0.1**
TOLI2						Sn	**Sn**	**18 25 31.8**	**-2.4**
KNRA	**Kununurra**			**17.55**	**174**	P	**Pn**	**18 26 54.1**	**0.0**
KNRA						IAmb	IAmb	18 27 26.4	
	comp=Z,18nm,1.2s								
FITZ	**Fitzroy Crossi**			**19.92**	**184**	P	**P**	**18 27 20.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=12,slow=12,SNR=2.2								
	comp=Z,2.5nm,0.8s								
WB0	**Warramunga Arr**			**22.72**	**162**	P	**P**	**18 27 50.0**	**-0.5**
WB0						IAmb	IAmb	18 27 50.8	
	comp=Z,9.4nm,1.2s								
WRA	**Warramunga Arr**			**22.87**	**162**	P	**P**	**18 27 51.0**	**-1.0**
	comp=Z,2.8nm,0.5s,baz=340,slow=10,SNR=19								
	comp=Z,2.8nm,0.5s								
WR8	**Warramunga Arr**			**22.93**	**162**	P	**P**	**18 27 51.9**	**-0.7**
ASAR	**Alice Springs**			**26.29**	**166**	P	**P**	**18 28 23.2**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=350,slow=7.4,SNR=9.8								
	comp=Z,0.6nm,0.6s								
ASAR	**Alice Springs**			**26.29**	**166**	P	**P**	**18 28 22.1**	**-1.3**
MORW	**Morawa**			**32.54**	**198**	P	**P**	**18 29 18.5**	**-0.2**
MORW						IAmb	IAmb	18 29 46.5	
	comp=Z,16nm,1.4s								
KS19	**Wonju Array Si**			**35.43**	**1**	P	**P**	**18 29 42.9**	**-0.9**
BBOO	**Buckleboo**			**35.57**	**167**	P	**P**	**18 29 44.3**	**-0.7**
EIDS	**Eidsvold**			**35.75**	**141**	P	**P**	**18 29 44.2**	**-2.5**
STKA	**Stephens Creek**			**36.33**	**159**	P	**P**	**18 29 50.7**	**-0.8**
MKAR	**Makanchi Array**			**59.21**	**326**	P	**P**	**18 32 49.6**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=115,slow=7.4,SNR=10								
	comp=Z,0.3nm,0.4s								
MKAR	**Makanchi Array**			**59.21**	**326**	P	**P**	**18 32 48.1**	**-0.2**
MAKZ	**Makanchi**			**59.40**	**326**	P	**P**	**18 32 49.6**	**0.0**
LBZ	**Lake Benmore**			**60.02**	**146**	P	**P**	**18 32 52.9**	**-1.1**
KURBB	**Kurchatov Arra**			**63.42**	**328**	P	**P**	**18 33 18.7**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=130,slow=6.0,SNR=7.4								
	comp=Z,0.5nm,0.5s								
KURK	**Kurchatov**			**63.43**	**328**	P	**P**	**18 33 16.7**	**0.0**
KURK						IAmb	IAmb	18 33 45.6	
	comp=Z,3.0nm,1.1s								
C19K	**Lookout Ridge**			**82.34**	**20**	P	**P**	**18 35 10.2**	**+1.9**
C19K						IAmb	IAmb	18 35 11.5	
	comp=Z,4.1nm,1.5s								

IDC 11 18:23:56.9±3.2, 17.06S×173.52W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=173.0km s-min=28.7km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.37**	**258**	P		P	P	18 32 48.2	-0.3
	0.6nm,1.0s,baz=98,slow=7.9,SNR=7.2								
	0.6nm,1.0s								
ASAR	**Alice Springs**	**49.50**	**253**	P		P	P	18 32 49.8	+0.2
	2.2nm,0.6s,baz=88,slow=8.3,SNR=33								
	2.2nm,0.6s								
PDAR	**Pinedale Array**	**83.58**	**42**	P		P	P	18 36 27.6	+0.3
	0.5nm,0.8s,baz=267,slow=5.8,SNR=4.6								
	0.5nm,0.8s								
ILAR	**Eielson Array**	**84.09**	**11**	P		P	P	18 36 28.8	-0.3
	0.3nm,0.7s,baz=213,slow=6.5,SNR=3.0								
	0.3nm,0.7s								

*IDC **11** 18:31:56.5±2.1, 7.21S×129.51E, h150km±22km, mb3.3/5, mbtmp3.9/10, Error ellipse: s-maj=29.2km s-min=16.4km az=78.0*
*DJA **11** 18:31:57.6±0.3, 7.7S±3.3×12.9E±.1, h179km±8km, M4.3/22, mB4.7/5, mb4.3/12, MLv4.5/22, Mw(mB)4.0/5*

ISC 11 18:31:57.0±0.6, 7.10S±0.05×129.35E±0.05, h150km, n34, σ1s97/36, mb3.5/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**			**2.12**	**114**	P	**Pn**	**18 33 33.7**	**+0.1**
SAUI	**Saumlaki**			**2.12**	**114**	P	**Pn**	**18 32 35.1**	**+1.5**
SAUI						S	**Sn**	**18 33 02.8**	**+1.1**
BNDI	**Bandanaira**			**2.62**	**12**	P	**Pn**	**18 32 41.3**	**+1.6**
AAI	**Ambon**			**3.58**	**341**	P	**Pn**	**18 32 55.1**	**+3.2**
NLAI	**Namlea**			**4.45**	**330**	P	**Pn**	**18 33 06.2**	**+3.0**
FAKI	**Fak Fak**			**5.06**	**35**	P	**Pn**	**18 33 10.5**	**-0.8**
FAKI	**Fak Fak**			**5.06**	**35**	P	**Pn**	**18 33 10.6**	**-0.8**
	0.4nm60nm,0.7s								
DRS	**Darwin Rock St**			**5.51**	**164**	P	**Pn**	**18 33 17.1**	**-0.2**
KMPI	**Kaimana, Papua**			**5.52**	**52**	P	**Pn**	**18 33 17.1**	**-0.3**
SOEI	**Soe**			**5.68**	**242**	P	**Pn**	**18 33 21.4**	**+1.8**
SOEI	**Soe**			**5.68**	**242**	S	**Sn**	**18 34 25.0**	**+0.9**
SOEI	**Soe**			**5.68**	**242**	P	**Pn**	**18 33 21.2**	**+1.6**
BATI	**Baumata**			**6.41**	**241**	P	**Pn**	**18 33 30.6**	**+1.2**
	66nm,0.4s,baz=103,slow=4.9,SNR=30								
BATI						S	**Sn**	**18 34 36.6**	**-4.9**
	92nm,0.4s,baz=218,slow=18,SNR=9.9								
BATI	**Baumata**			**6.41**	**241**	P	**Pn**	**18 33 30.5**	**+1.2**
	0.4nm73nm,0.5s								
SIJI	**Sorong**			**6.48**	**17**	P	**Pn**	**18 33 30.4**	**+0.1**
	2.9nm,0.2s,baz=214,slow=21,SNR=16								
SIJI						S	**Sn**	**18 34 37.9**	**-5.4**
	17nm,0.4s,baz=272,slow=23,SNR=19								
SIJI	**Sorong**			**6.48**	**17**	P	**Pn**	**18 33 30.1**	**-0.2**
SWI	**Sorong**			**6.49**	**17**	P	**Pn**	**18 33 31.6**	**+1.3**
	0.2nm14nm,1.0s								
RKPI	**Ransiki, Papua**			**7.35**	**41**	P	**Pn**	**18 33 40.4**	**-1.5**
	53nm,0.5s								
MWPI	**Manokwari, Pap**			**7.71**	**38**	P	**Pn**	**18 33 47.9**	**+1.2**
	82nm,1.6s								
EDFI	**Ende, Flores**			**7.76**	**257**	P	**Pn**	**18 33 51.0**	**+3.6**
FITZ	**Fitzroy Crossi**			**11.51**	**198**	P	**Pn**	**18 34 35.1**	**-1.9**
	1.0nm,0.3s,baz=24,slow=11,SNR=17								
FITZ						S	Sn	18 36 31.9	-12
	8.1nm,0.3s,baz=215,slow=21,SNR=10								
PLAI	**Plampang**			**11.59**	**261**	P	**Pn**	**18 34 37.3**	**-0.8**
TOLI2	**Tolitoli**			**11.82**	**313**	P	**Pn**	**18 34 42.8**	**+1.7**
WRA	**Warramunga Arr**			**13.65**	**160**	P	Pn	18 35 00.6	-4.0
	1.6nm,0.3s,baz=336,slow=14,SNR=37								
WRA						S	Sn	18 37 20.6	-15
	5.4nm,0.8s,baz=333,slow=23,SNR=6.9								
COEN	**Coen**			**15.20**	**118**	P	**Pn**	**18 35 24.9**	**+0.8**
QIS	**Mount Isa**			**16.66**	**144**	P	**P**	**18 35 42.6**	**+0.9**
ASAR	**Alice Springs**			**17.04**	**166**	P	**P**	**18 35 45.1**	**-0.8**
	1.1nm,0.4s,baz=339,slow=9.7,SNR=18								
ASAR						S	S	18 38 38.4	-18
	0.4nm,0.5s,baz=332,slow=17,SNR=3.2								
SBUM	**Sibu**			**19.55**	**298**	P	**P**	**18 36 15.0**	**+1.6**
QLP	**Quilpie**			**24.00**	**146**	P	**P**	**18 36 59.3**	**+1.3**
STKA	**Stephens Creek**			**27.17**	**157**	P	**P**	**18 37 24.8**	**-1.7**
	1.2nm,0.6s,baz=310,slow=8.9,SNR=3.2								
	1.2nm,0.6s								
CMAR	**Chiang Mai Arr**			**39.31**	**311**	P	**P**	**18 39 12.4**	**+0.8**
	0.6nm,0.6s,baz=138,slow=7.9,SNR=6.8								
	0.6nm,0.6s								
SONM	**Songino Array**			**58.34**	**342**	P	**P**	**18 41 38.0**	**+1.5**
	0.2nm,0.4s,baz=152,slow=6.5,SNR=2.1								
	0.2nm,0.4s								
MKAR	**Makanchi Array**			**67.96**	**327**	P	**P**	**18 42 40.5**	**+0.7**
	1.1nm,0.5s,baz=115,slow=8.3,SNR=31								
	1.1nm,0.5s								
BVAR	**Borovoye Array**			**77.81**	**328**	P	**P**	**18 43 37.2**	**-0.5**
	0.3nm,0.4s,baz=144,slow=10,SNR=4.2								
	0.3nm,0.4s								

*MOS **11** 19:14:32.2±1.0, 37.94N×140.14E, h111km, mb4.5/30, Error ellipse: s-maj=7.8km s-min=5.6km az=97.6*
*NEIC **11** 19:14:32.4±2.2, 37.87N±0.06×140.25E±0.09, h99km±6km, mb4.5/122, Error ellipse: s-maj=10.3km s-min=7.8km az=108.0*
*IDC **11** 19:14:34.0±1.4, 37.85N×140.00E, h113km±13km, mb4.0/26, mbtmp4.4/29, MS2.7/2, Error ellipse: s-maj=12.4km s-min=11.6km az=95.0*
*NIED **11** 19:14:34.6, 37.81N×140.13E, h120km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.50; Mθθ-2.34; Mφφ0.84; Mrθ-0.19; Mrφ-1.56; Mθφ-2.25; Fault plane solution: Mo3.42000×10¹⁵ NP1: φs102.00000°, δ47.00000°, λ153.00000°. NP2: φs211.00000°, δ71.00000°, λ47.00000°.*
*JMA **11** 19:14:34.6±0.1, 37.8N±0.4×140.1E±0.6, h120km, MD4.0/39, MV4.1/39, SOUTHERN YAMAGATA PREF*
JMA Felt I J1 at SOUTHERN YAMAGATA PREF .

ISC 11 19:14:32.8±0.4, 37.85N±0.04×140.19E±0.04, h111km±3km, h110km:pP-P, n301, σ1s87/302, mb4.5/107, 16C-11D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYAR	**Yonezawaarcadi**			**0.07**	**328**	P	**Pn**	**19 14 50.9**	**+2.8**
JYAR						A	A	19 14 50.9	
	comp=N,20nm,0.9s,comp=E,46nm,1.3s								
JYAR						S	**Sn**	**19 15 03.5**	**+4.0**
JOTO	**OTAMA OYAMA**			**0.31**	**159**	*i* P	**Pn**	**19 14 51.4**	**+2.6**
JOTO						A	A	19 14 51.4	
	comp=N,22nm,1.7s,comp=E,26nm,2.0s								
JOTO						S	**Sn**	**19 15 04.5**	**+3.8**
JYS	**Shirataka**			**0.38**	**345**	*i* P	**Pn**	**19 14 52.2**	**+3.2**
JYS						A	A	19 14 52.2	
	comp=N,19nm,3.2s,comp=E,15nm,1.2s								
JYS						S	**Sn**	**19 15 05.7**	**+4.4**
JMM	**Marumori**			**0.47**	**88**	⇓*i* P	**Pn**	**19 14 52.6**	**+3.1**
JMM						⇓*e* S	**Sn**	**19 15 06.3**	**+4.2**
JMST	**Minamisoumatoc**			**0.56**	**103**	A	A	19 14 53.4	
	comp=N,13nm,0.6s,comp=E,13nm,0.5s								
JFY	**Yanaizu**			**0.59**	**221**	*i* P	**Pn**	**19 14 52.8**	**+2.3**
JFY						A	A	19 14 52.8	
	comp=N,11nm,2.9s,comp=E,9.0nm,3.4s								
JFY						S	**Sn**	**19 15 06.4**	**+2.8**
JOU	**Okura**			**0.63**	**36**	⇓*i* P	**Pn**	**19 14 54.3**	**+3.5**
JOU						A	A	19 14 54.3	
	comp=N,4.0nm,1.8s,comp=E,4.0nm,2.2s								
JNS	**Sasagawa**			**0.69**	**268**	*i* P	**Pn**	**19 14 53.3**	**+2.2**
JNS						S	**Sn**	**19 15 07.8**	**+2.8**
JFK	**Kawauchi**			**0.72**	**132**	⇓*i* P	**Pn**	**19 14 53.9**	**+2.4**
JFK						A	A	19 14 53.9	
	comp=N,6.0nm,2.3s,comp=E,8.0nm,1.8s								
JFK						⇓S	**Sn**	**19 15 08.8**	**+3.2**
JFFD	**Fukushimafurud**			**0.81**	**159**	A	A	19 14 54.9	
	comp=N,8.0nm,0.6s,comp=E,11nm,0.6s								
JYA	**Atsumi**			**0.83**	**333**	*i* P	**Pn**	**19 14 55.4**	**+3.0**
JYA						A	A	19 14 55.4	
	comp=N,19nm,2.1s,comp=E,12nm,0.8s								
JYA						S	**Sn**	**19 15 11.0**	**+3.8**
ONAJ	**Iwakimizuishiy**			**0.89**	**147**	A	A	19 14 55.6	
	comp=N,15nm,0.2s,comp=E,20nm,0.3s								
JSB	**Shiboa**			**0.91**	**194**	A	A	19 14 55.4	
	comp=N,16nm,1.5s,comp=E,18nm,1.1s								
JOFO	**Osakifurukawao**			**0.94**	**37**	A	A	19 14 56.8	
	comp=N,10.0nm,3.1s,comp=E,10.0nm,3.8s								
JAW	**Awa shima**			**0.96**	**309**	*i* P	**Pn**	**19 14 56.1**	**+2.4**
JAW						S	**Sn**	**19 15 11.8**	**+2.4**
JYK	**Kaneyama**			**1.07**	**7**	⇓*i* P	**Pn**	**19 14 58.2**	**+3.3**
JYK						⇓S	**Sn**	**19 15 15.9**	**+4.4**
JIO	**Ouri**			**1.09**	**56**	*i* P	**Pn**	**19 14 58.0**	**+3.0**
JIO						*e* S	**Sn**	**19 15 15.9**	**+4.1**
JUON	**Uonuma**			**1.11**	**235**	*i* P	**Pn**	**19 14 57.0**	**+1.8**
JUON						A	A	19 14 57.0	
	comp=N,4.0nm,2.3s,comp=E,4.0nm,0.8s								
JUON						S	**Sn**	**19 15 13.8**	**+1.7**
JYYZ	**Yamagatayuza**			**1.18**	**350**	A	A	19 14 59.0	
	comp=N,15nm,1.6s,comp=E,9.0nm,2.9s								
JIZZ	**Izumozaki**			**1.22**	**255**	*i* P	**Pn**	**19 14 58.9**	**+2.5**
JMK	**Ichinoseki**			**1.36**	**36**	*i* P	**Pn**	**19 15 01.4**	**+3.4**
JHYU	**Hitachinakayam**			**1.54**	**168**	A	A	19 15 02.4	
	comp=N,14nm,0.4s,comp=E,9.0nm,0.7s								
JAG	**Ashikaga**			**1.54**	**203**	⇓*i* P	**Pn**	**19 15 02.2**	**+2.0**
JAG						A	A	19 15 02.2	
	comp=N,4.0nm,2.4s,comp=E,8.0nm,1.8s								
JRG	**Rokugo**			**1.58**	**12**	A	A	19 15 03.9	
	comp=N,9.0nm,1.0s,comp=E,6.0nm,0.8s								
JJN	**Nakama**			**1.78**	**246**	A	A	19 15 04.9	
	comp=N,6.0nm,2.2s,comp=E,6.0nm,2.0s								
JOM	**Ohasama**			**1.83**	**28**	*i* P	**Pn**	**19 15 07.2**	**+3.5**
JOM						A	A	19 15 07.2	
	comp=N,5.0nm,1.1s,comp=E,4.0nm,2.7s								
JOM						S	**Sn**	**19 15 31.5**	**+4.2**
JSZI	**Iwateshizukuis**			**1.98**	**17**	A	A	19 15 08.9	
	comp=N,7.0nm,3.6s,comp=E,8.0nm,2.7s								
MAJO	**Matsushiro**			**2.05**	**231**		**Pn**	**19 15 08.4**	**+1.8**
MAJO						Sn	**Sn**	**19 15 29.8**	**-2.5**
MAJO	**Matsushiro**			**2.05**	**231**	P	**Pn**	**19 15 08.4**	**+1.8**
MAJO	**Matsushiro**			**2.05**	**231**	*c* P	**Pn**	**19 15 08.1**	**+1.5**
MAT	**Matsushiro**			**2.05**	**231**	*i* P	**Pn**	**19 15 08.4**	**+1.8**
MJAR	**Matsushiro Arr**			**2.05**	**231**	P	**Pn**	**19 15 08.1**	**+1.5**
	comp=E,433nm,0.7s,baz=31,slow=13,SNR=874								
MJAR						S	**Sn**	**19 15 34.9**	**+2.6**
	comp=E,80nm,0.7s,baz=69,slow=26,SNR=9.7								
MJB9	**Matsu-Tunnel**			**2.05**	**231**		**Pn**	**19 15 09.3**	**+2.7**
MJB9						Sn	**Sn**	**19 15 30.6**	**-1.8**
JGF	**Kuroka**			**3.20**	**226**		**Pn**	**19 15 23.6**	**+2.1**
JGF						Sn	**Sn**	**19 16 01.6**	**+2.6**
JGF	**Kuroka**			**3.20**	**226**	P	**Pn**	**19 15 24.0**	**+2.5**
JSG	**Sagara**			**3.56**	**208**		**Pn**	**19 15 27.6**	**+1.3**
JSG						Sn	**Sn**	**19 16 09.3**	**+1.6**
JSG	**Sagara**			**3.56**	**208**	P	**Pn**	**19 15 28.2**	**+1.9**
INU	**Inuyama**			**3.57**	**227**		**Pn**	**19 15 27.9**	**+1.4**
INU	**Inuyama**			**3.57**	**227**	P	**Pn**	**19 15 28.5**	**+2.0**
JHJ	**Hachijo jima 2**			**4.73**	**184**	P	**Pn**	**19 15 41.4**	**-0.7**
	comp=E,380nm,0.3s,baz=336,slow=23,SNR=48								
JHJ						S	**Sn**	**19 16 33.0**	**-2.8**
	comp=E,502nm,0.2s,baz=76,slow=23,SNR=13								
JHJ2	**Mitsune**			**4.74**	**184**		**Pn**	**19 15 41.2**	**-0.9**
JHJ2	**Mitsune**			**4.74**	**184**	P	**Pn**	**19 15 41.1**	**-1.0**
JEM	**Erimo**			**4.74**	**28**	P	**Pn**	**19 15 42.9**	**+0.8**
ASAJ	**Asahikawa**			**6.52**	**15**	P	**Pn**	**19 16 06.3**	**+0.2**
	comp=E,7.0nm,0.3s,baz=234,slow=13,S

comp=Z,33nm,0.7s
HNS HongShan 20.18 277 ⇓P **P** **19 18 56.6 -1.9**
HNS pmax pmax
comp=Z,54nm,0.7s
NACB Ninganchiao 20.92 235 P **P** **19 19 05.1 -1.5**
NACB lAmb lAmb 19 19 12.1
comp=Z,17nm,1.0s
SSLB Suanglung 21.61 235 P **P** **19 19 12.9 -1.1**
YULB Yu-li 21.67 234 P **P** **19 19 14.3 -0.4**
TPUB Ta-pu 22.16 235 P **P** **19 19 18.4 -1.4**
HHC Hu-ho-hao-te 22.30 287 *e*P **P** **19 19 19.9 -1.3**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,180nm,6.3s
LYN LuoYang 22.58 270 P **P** **19 19 22.8 -1.2**
LYN PP **PnPn** **19 19 51.8 -2.0**
LYN pmax pmax
comp=Z,22nm,0.6s
MA2 Magadan 22.78 14 **P** **19 19 25.0 -0.7**
MA2 Magadan 22.78 14 P **P** **19 19 25.0 -0.7**
MA2 pmax pmax
comp=Z,9.0nm,1.2s
MA2 Magadan 22.78 14 P **P** **19 19 26.2 +0.5**
comp=Z,7.8nm,0.7s
BTO2 Baotou 23.58 287 *e*P **P** **19 19 32.1 -1.5**
BTO2 pP **pP** **19 19 55.5 -0.6**
BTO2 sP **sP** **19 20 09.1 -0.7**
BTO2 pmax pmax
comp=Z,15nm,1.3s
BTO2 pmax pmax
comp=Z,470nm,7.5s
GUMO Guam 24.52 169 P **P** **19 19 45.0 +3.0**
GUMO Guam 24.52 169 P **P** **19 19 45.0 +3.0**
GUMO pmax pmax
comp=Z,337nm,1.1s
YAK Yakutsk 25.07 348 **P** **19 19 45.9 -0.7**
YAK lAmb lAmb 19 19 49.2
comp=Z,20nm,0.8s
YAK Yakutsk 25.07 348 *e*P **P** **19 19 46.5 -0.1**
YAK *e**PP **pP** **19 20 09.6 -1.1**
YAK *e*S **S** **19 24 02.7 +0.1**
YAK *e**SS **sS** **19 24 42.6 -2.2**
YAK *e* 19 30 36.9
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK smax smax
comp=N,154nm,4.4s
YAK smax smax
comp=E,121nm,4.8s
ULN Ulaanbaatar 26.09 303 **P** **19 19 55.4 -0.9**
ULN Ulaanbaatar 26.09 303*ce*P **P** **19 19 56.7 +0.4**
ULN pmax pmax
comp=Z,8.0nm,1.3s
SEY Seymchan 26.19 13*ce*P **P** **19 19 57.5 +0.7**
SEY pmax pmax
comp=Z,3.0nm,0.7s
ENH Enshi 26.45 263 **P** **19 19 58.4 -1.1**
ENH lAmb lAmb 19 20 01.9
comp=Z,15nm,0.6s
ENH Enshi 26.45 263 P **P** **19 19 58.8 -0.7**
SONM Songino Array 26.53 303 P **P** **19 19 59.9 -0.3**
comp=Z,7.6nm,0.7s,baz=108,slow=10,SNR=42
SONM ScP **ScP** **19 26 51.5 -0.1**
comp=Z,0.5nm,0.9s,baz=132,slow=2.1,SNR=3.5
comp=Z,7.6nm,0.7s
SONM Songino Array 26.53 303 **P** **19 19 58.9 -1.2**
SONM lAmb lAmb 19 20 02.8
comp=Z,7.2nm,0.7s
LZH Lanzhou 28.98 278 *e*P **P** **19 20 22.5 +0.3**
LZH pP pP 19 20 46.8 +0.3
LZH pmax pmax
comp=Z,10.0nm,1.3s
LZDM Lanzhou Array 29.13 278 P **P** **19 20 22.8 -0.9**
comp=Z,3.0nm,0.5s,baz=107,slow=5.0,SNR=14
comp=Z,3.0nm,0.5s
GYA Guiyang 30.42 258 P **P** **19 20 34.9 0.0**
GYA pmax pmax
comp=Z,6.0nm,0.7s
CD2 Chengdu 30.72 268 P **P** **19 20 37.5 +0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GTA2 Gaotai 31.43 286 *e*P **P** **19 20 42.3 -1.4**
GTA2 ScP **ScP** **19 27 07.6 +0.3**
GTA2 pmax pmax
comp=Z,3.0nm,1.0s
PZH PanZhiHua 34.23 262 P **P** **19 21 10.3 +2.1**
TIXI Tiksi 34.37 354 **P** **19 21 08.9 +0.2**
TIXI lAmb lAmb 19 21 09.6
comp=Z,7.4nm,0.7s
TIXI Tiksi 34.37 354*ce*P **P** **19 21 09.0 +0.3**
TIXI pmax pmax
comp=Z,7.0nm,0.7s
GOMU GeErMu 36.00 282 P **P** **19 21 22.6 -1.0**
GOMU pmax pmax
comp=Z,4.0nm,0.6s
WMQ Urumqi 39.61 296 *e*P **P** **19 21 56.2 +2.7**
AKUT Akutan 39.86 48 P **P** **19 21 53.5 -1.7**
CHTO Chiang Mai 40.57 254 P **P** **19 22 00.8 -0.8**
CHTO Chiang Mai 40.57 254 P **P** **19 22 00.8 -0.8**
CHTO pmax pmax
comp=Z,3.0nm,0.6s
ZAA0 Zalesovo Array 40.65 312 **P** **19 22 00.8 -1.0**
ZAA0 lAmb lAmb 19 22 02.5
comp=Z,4.4nm,0.7s
ZALV Zalesovo Beam 40.65 312 P **P** **19 22 01.8 0.0**
comp=Z,3.5nm,0.5s,baz=90,slow=7.4,SNR=23
ZALV PcP **PcP** **19 24 01.9 +0.5**
comp=Z,1.0nm,0.6s,baz=109,slow=5.1,SNR=3.2
comp=Z,3.5nm,0.5s
ZALV Zalesovo Beam 40.65 312 **P** **19 22 01.4 -0.4**
ZALV Zalesovo Beam 40.65 312 *i* P **P** **19 22 02.0 +0.2**
ZALV pmax pmax
comp=Z,4.0nm,0.4s
CM31 Chiang Mai Arr 40.78 253 P **P** **19 22 02.9 -0.4**
CMAR Chiang Mai Arr 40.78 253 P **P** **19 22 03.5 +0.2**
comp=Z,0.4nm,0.6s,baz=44,slow=8.2,SNR=4.8
comp=Z,0.4nm,0.6s
LSA Lhasa 41.18 274 P **P** **19 22 07.4 +0.4**
LSA Lhasa 41.18 274 P **P** **19 22 07.4 +0.4**
LSA pmax pmax
comp=Z,7.0nm,1.5s
F15K North Star Dit 41.98 31 P **P** **19 22 12.3 -0.3**
F15K lAmb lAmb 19 22 16.2
comp=Z,4.9nm,0.8s
NRIK Noril'sk 42.12 335 P **P** **19 22 13.3 -0.3**
comp=Z,3.4nm,0.5s,baz=118,slow=6.4,SNR=7.7
comp=Z,3.4nm,0.5s
NRIK Noril'sk 42.12 335 **P** **19 22 13.5 -0.1**
NRIK lAmb lAmb 19 22 16.4
comp=Z,4.1nm,0.6s
NRIK Noril'sk 42.12 335 P **P** **19 22 13.5 -0.1**
NRIK pmax pmax
comp=Z,4.0nm,0.6s
N14K Kuskokwak Cree 42.40 39 P **P** **19 22 15.6 -0.4**
C16K Lisburne Hills 42.41 27 P **P** **19 22 15.5 -0.4**
C16K lAmb lAmb 19 22 18.8
comp=Z,8.0nm,1.2s
SHL Shillong 42.46 268 P **P** **19 22 17.8 +0.7**
SHL Shillong 42.46 268 P **P** **19 22 17.8 +0.7**
SHL pmax pmax
comp=Z,10.0nm,0.5s
MK31 Makanchi Array 42.87 301*ce*P **P** **19 22 20.1 +0.1**
MKAR Makanchi Array 42.87 301 P **P** **19 22 20.0 0.0**
comp=Z,2.5nm,0.8s,baz=88,slow=9.9,SNR=29
comp=Z,2.5nm,0.8s
MKAR Makanchi Array 42.87 301 **P** **19 22 19.7 -0.3**
MAKZ Makanchi 43.07 301 **P** **19 22 21.6 -0.1**
MAKZ Makanchi 43.07 301 P **P** **19 22 21.6 -0.1**
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
O15K Ungalikthiuk R 43.30 41 P **P** **19 22 24.3 +1.0**
F17K Baldwin Pennin 43.49 30 lAmb lAmb 19 22 28.6
comp=Z,6.9nm,0.8s
M16K Timber Creek 43.82 38 P **P** **19 22 28.7 +1.3**
M16K lAmb lAmb 19 22 44.9
comp=Z,12nm,1.4s
E18K Tukpahlearik C 43.93 29 lAmb lAmb 19 22 32.2
comp=Z,5.9nm,0.8s
C18K Utukok River 43.98 27 lAmb lAmb 19 22 31.7
comp=Z,11nm,1.1s
G18K Tagagawik 44.44 31 lAmb lAmb 19 22 35.4
comp=Z,3.7nm,0.7s

C19K Lookout Ridge 44.65 26 P **P** **19 22 36.5 +2.5**
C19K lAmb lAmb 19 22 37.7
comp=Z,6.4nm,0.9s
KURK Kurchatov 44.67 307 **P** **19 22 33.8 -0.4**
KURK Kurchatov 44.67 307*ce*P **P** **19 22 34.4 +0.1**
KURK pmax pmax
comp=Z,20nm,0.7s
KURBB Kurchatov Arra 44.73 307 P **P** **19 22 35.1 +0.3**
comp=Z,15nm,0.6s,baz=83,slow=8.2,SNR=93
comp=Z,15nm,0.6s
E19K Redstone River 45.22 29 lAmb lAmb 19 22 42.1
comp=Z,11nm,1.1s
J19K Poorman 45.54 34 P **P** **19 22 42.0 +1.0**
D20K Etivluk River 45.64 27 lAmb lAmb 19 22 45.4
comp=Z,8.3nm,1.0s
WUS Wushi 46.31 294 **P** **19 22 49.0 +1.4**
WUS lAmb lAmb 19 22 49.5
comp=Z,9.4nm,0.8s
PRZ Przheval'sk 46.53 296 lAmb lAmb 19 22 54.5
comp=Z,8.8nm,0.8s
G21K Allakaket 46.58 30 **P** **19 22 51.4 +2.2**
OHAK Old Harbor 46.82 43 P **P** **19 22 50.4 -0.7**
D22K Ayikyak River 47.08 27 lAmb lAmb 19 22 56.4
comp=Z,5.4nm,0.6s
TARG Taragay, Kyrgy 47.17 295 lAmb lAmb 19 22 56.6
comp=Z,8.5nm,0.8s
KDJ Kajisay 47.50 296 **P** **19 22 57.3 +0.4**
KDJ lAmb lAmb 19 22 58.5
comp=Z,5.7nm,0.6s
KDJ Kajisay 47.50 296 P **P** **19 22 57.3 +0.4**
KDJ pmax pmax
comp=Z,6.0nm,0.6s
SUA Susitna One 47.79 37 P **P** **19 22 59.7 +0.9**
SUA lAmb lAmb 19 23 03.0
comp=Z,8.0nm,0.9s
BRLK Bradley Lake 47.85 40 P **P** **19 22 59.9 +0.8**
E23K Chandalar 48.16 28 lAmb lAmb 19 23 05.8
comp=Z,12nm,1.1s
BOOM Boomskoye usch 48.27 297 **P** **19 23 04.1 +1.2**
BOOM lAmb lAmb 19 23 04.7
comp=Z,8.7nm,1.1s
BOOM Boomskoye usch 48.27 297 P **P** **19 23 04.1 +1.2**
BOOM pmax pmax
comp=Z,9.0nm,1.1s
NRN Naryn 48.55 295 **P** **19 23 05.9 +0.8**
NRN Naryn 48.55 295 P **P** **19 23 05.9 +0.8**
NRN pmax pmax
comp=Z,3.0nm,1.1s
RND Reindeer 48.55 35 P **P** **19 23 06.5 +1.9**
RND lAmb lAmb 19 23 07.2
comp=Z,14nm,1.4s
RND Reindeer 48.55 35 P **P** **19 23 06.5 +1.9**
RND pmax pmax
comp=Z,14nm,1.4s
E24K Your Creek 48.58 28 lAmb lAmb 19 23 08.7
comp=Z,8.9nm,1.2s
IPM Ipoh 48.76 237 P **P** **19 23 05.5 -1.1**
POKR Poker Plat Res 49.08 32 P **P** **19 23 10.0 +1.6**
POKR lAmb lAmb 19 23 12.2
comp=Z,10.0nm,1.0s
AAK Ala-Archa 49.25 297 **P** **19 23 11.1 +0.8**
AAK Ala-Archa 49.25 297 P **P** **19 23 11.1 +0.8**
AAK pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 49.30 312 P **P** **19 23 10.8 +0.5**
comp=Z,7.2nm,0.5s,baz=73,slow=6.8,SNR=79
comp=Z,7.2nm,0.5s
ILAR Eielson Array 49.33 33 P **P** **19 23 12.2 +1.9**
comp=Z,2.3nm,0.7s,baz=267,slow=5.8,SNR=29
comp=Z,2.3nm,0.7s
ILAR Eielson Array 49.33 33 P **P** **19 23 11.9 +1.6**
BORK Borovoye 49.34 312 **P** **19 23 11.0 +0.4**
BORK Borovoye 49.34 312*ce*P **P** **19 23 10.8 +0.2**
BORK pmax pmax
comp=Z,5.0nm,0.6s
D25K Kavik River 49.35 27 lAmb lAmb 19 23 13.9
comp=Z,7.7nm,1.2s
KSH2 Kashi 49.61 293 P **P** **19 23 14.3 +1.2**
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
G26K Porcupine Rive 50.44 30 P **P** **19 23 21.1 +2.5**
G26K lAmb lAmb 19 23 22.9
comp=Z,9.5nm,1.2s
SCRK Sand Creek 50.66 34 P **P** **19 23 21.6 +1.0**
SCRK lAmb lAmb 19 23 23.4
comp=Z,8.2nm,1.3s
ARSB Arslanbob 50.74 296 P **P** **19 23 22.7 +1.2**
ARSB Arslanbob 50.74 296 P **P** **19 23 22.7 +1.2**
ARSB pmax pmax
comp=Z,8.0nm,0.6s
L26K Log Cabin Wild 51.07 35 lAmb lAmb 19 23 27.3
comp=Z,6.4nm,0.9s
COEN Coen 51.61 176 P **P** **19 23 29.3 +1.3**
E28M Babbage River 51.87 27 lAmb lAmb 19 23 33.5
comp=Z,4.8nm,1.1s
KK31 Karatay Array 51.88 299 **P** **19 23 30.1 +0.2**
KK31 lAmb lAmb 19 23 31.0
comp=Z,6.8nm,1.1s
KK31 Karatay Array 51.88 299 P **P** **19 23 30.1 +0.2**
KK31 pmax pmax
comp=Z,7.0nm,1.1s
KKAR Karatay Array 51.88 299 **P** **19 23 29.8 0.0**
KKAR Karatay Array 51.88 299 P **P** **19 23 29.8 0.0**
DRK Karamyk 52.23 294 P **P** **19 23 33.4 +0.6**
DRK Karamyk 52.23 294 P **P** **19 23 33.4 +0.6**
DRK pmax pmax
comp=Z,7.0nm,0.6s
E29M Blow River 52.49 28 P **P** **19 23 36.4 +2.4**
E29M lAmb lAmb 19 23 38.0
comp=Z,8.1nm,1.1s
G29M Pine Creek 52.69 29 lAmb lAmb 19 23 40.2
comp=Z,6.2nm,0.9s
BTK Batken 52.72 295 lAmb lAmb 19 23 40.6
comp=Z,3.7nm,0.9s
I29M Ogilvie Camp, 52.86 31 lAmb lAmb 19 23 40.9
comp=Z,8.2nm,1.1s
NIL Nilore 53.44 287 **P** **19 23 42.3 +0.8**
NIL Nilore 53.44 287 P **P** **19 23 42.3 +0.8**
NIL pmax pmax
comp=Z,13nm,0.6s
K29M Barlow Dome 53.50 33 lAmb lAmb 19 23 45.4
comp=Z,6.2nm,1.1s
INK Inuvik 54.10 27 **P** **19 23 47.7 +2.0**
INK lAmb lAmb 19 23 48.7
comp=Z,9.5nm,1.2s
INK Inuvik 54.10 27 P **P** **19 23 47.7 +2.0**
INK pmax pmax
comp=Z,9.0nm,1.2s
F31M Tsiigehtchic 54.22 28 P **P** **19 23 48.3 +1.8**
ARTI Arti 55.21 318 **P** **19 23 54.1 +0.2**
ARTI Arti 55.21 318*c i*P **P** **19 23 54.4 +0.5**
ARTI S **S** **19 31 29.8 +1.2**
ARTI SS **SS** **19 35 09.7 -3.9**
ARTI pmax pmax
comp=Z,6.0nm,0.5s
KBL Kabul 56.22 290 P **P** **19 24 02.1 +0.4**
KBL lAmb lAmb 19 24 06.6
comp=Z,2.1nm,0.5s
KBL Kabul 56.22 290 P **P** **19 24 02.1 +0.4**
KBL pmax pmax
comp=Z,2.0nm,0.5s
AB31 Akbulak array 56.67 309 **P** **19 24 04.1 -0.3**
ABKAR Akbulak array 56.67 309 **P** **19 24 04.7 +0.3**
WB0 Warramunga Arr 57.57 186 P **P** **19 24 11.1 +0.2**
WB0 lAmb lAmb 19 24 12.2
comp=Z,6.1nm,0.9s
WRAB Tennant Creek 57.74 187 P **P** **19 24 11.9 -0.2**
WRAB Tennant Creek 57.74 187 *i* P **P** **19 24 12.3 +0.1**
WRAB pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 57.75 187 P **P** **19 24 12.3 0.0**
comp=Z,4.2nm,0.5s,baz=2.6,slow=7.3,SNR=93
comp=Z,4.2nm,0.5s
WRA Warramunga Arr 57.75 187 **P** **19 24 11.4 -0.8**
CRAG Craig 58.10 42 P **P** **19 24 13.8 -0.6**
KIRV Kirov 59.01 322*ce*P **P** **19 24 21.3 +0.7**
SPITS Spitsbergen Ar 59.53 349 P **P** **19 24 23.9 0.0**
comp=Z,6.5nm,0.9s,baz=76,slow=8.0,SNR=1.3
comp=Z,6.5nm,0.9s
AS31 Alice Springs 61.47 187 P **P** **19 24 38.1 +0.3**
ASAR Alice Springs 61.47 187 P **P** **19 24 38.2 +0.5**
comp=Z,1.6nm,0.6s,baz=353,slow=4.4,SNR=39
comp=Z,1.6nm,0.6s
ASAR Alice Springs 61.47 187 P **P** **19 24 38.3 +0.5**
ASAR PcP **PcP** **19 25 19.8 +1.1**

ASAR Alice Springs 61.47 187 P **P** **19 24 38.3 +0.5**
ASAR 19 25 19.8
RES Resolute Bay 62.05 14 **P** **19 24 42.0 +1.0**
RES lAmb lAmb 19 24 43.5
comp=Z,3.6nm,1.1s
RES Resolute Bay 62.05 14 P **P** **19 24 42.0 +1.0**
RES pmax pmax
comp=Z,4.0nm,1.2s
ARCES ARCESS Array B 62.89 339 P **P** **19 24 47.8 +1.1**
comp=Z,4.1nm,1.1s,baz=51,slow=7.9,SNR=5.9
comp=Z,4.1nm,1.1s
ARCES ARCESS Array B 62.89 339 P **P** **19 24 47.1 +0.5**
YKAW3 Yellowknife Wh 63.55 30 P **P** **19 24 51.9 +0.8**
YKA Yellowknife Ar 63.59 30 P **P** **19 24 52.9 +1.5**
comp=Z,1.2nm,0.8s,baz=306,slow=7.4,SNR=16
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 63.59 30 P **P** **19 24 51.8 +0.4**
YKA Yellowknife Ar 63.59 30*ce*P **P** **19 24 53.4 +2.0**
YKA pmax pmax
comp=Z,1.0nm,0.8s
EIDS Eidsvold 63.71 169 P **P** **19 24 53.1 +0.5**
EIDS lAmb lAmb 19 25 07.4
comp=Z,10nm,1.3s
TULEG Thule 64.42 7 P **P** **19 24 56.4 -0.2**
TULEG lAmb lAmb 19 25 17.5
comp=Z,6.6nm,1.2s
INKA Innaminka 65.25 179 P **P** **19 25 03.3 +0.9**
MSVF Nonsavu 65.75 140 P **P** **19 25 05.6 -0.4**
LLLB Lillooet 66.33 44 P **P** **19 25 11.3 +1.8**
LLLB lAmb lAmb 19 25 22.0
comp=Z,8.8nm,1.3s
POIN Pond Inlet 66.62 12 P **P** **19 25 11.5 +0.7**
OBN Obninsk 66.86 323⇑ *e*P **P** **19 25 14.2 +1.6**
OBN *e**PP **PcP** **19 25 39.8 -0.7**
OBN *e* 19 27 36.8
OBN *e*S **PnS** **19 34 19.7 -14**
OBN pmax pmax
comp=Z,3.0nm,0.9s
FIA1 FINESS Array S 67.64 332 P **P** **19 25 17.5 +0.1**
FINES FINESS Array B 67.64 332 P **P** **19 25 17.8 +0.3**
comp=Z,1.5nm,0.3s,baz=51,slow=7.4,SNR=20
comp=Z,1.5nm,0.3s
FINES FINESS Array B 67.64 332 P **P** **19 25 17.4 0.0**
AFI Afiamalu 68.40 129 P **P** **19 25 20.3 -2.6**
B08A Colville Reser 68.94 45 lAmb lAmb 19 25 30.0
comp=Z,4.8nm,0.5s
BLKN Baker Lake 69.02 23 P **P** **19 25 26.5 +0.6**
BLKN lAmb lAmb 19 25 27.8
comp=Z,4.8nm,0.8s
KBZ Khabaz 69.64 310 P **P** **19 25 31.2 +1.1**
comp=Z,2.2nm,0.8s,baz=69,slow=2.5,SNR=5.5
comp=Z,2.2nm,0.8s
KBZ Khabaz 69.64 310 *i* P **P** **19 25 30.7 +0.6**
KBZ pmax pmax
comp=Z,4.0nm,1.1s
KIV Kislovodsk 69.64 310 *e*P **P** **19 25 30.4 +0.1**
KIV pmax pmax
comp=Z,8.0nm,1.0s
C09A Chrisman Ranch 69.84 45 lAmb lAmb 19 25 35.1
comp=Z,6.0nm,0.7s
NEW Newport 70.22 44 P **P** **19 25 35.6 +1.9**
comp=Z,1.9nm,0.5s,baz=296,slow=9.4,SNR=5.7
comp=Z,1.9nm,0.5s
NEW Newport 70.22 44 **P** **19 25 35.3 +1.6**
NEW lAmb lAmb 19 25 36.7
comp=Z,5.6nm,0.9s
PINE Pine Mountain 70.55 49 **P** **19 25 38.0 +2.0**
K05A Summer Lake 71.17 50 P **P** **19 25 42.2 +2.5**
K05A lAmb lAmb 19 25 43.8
comp=Z,11nm,1.1s
HFS Hagfors 72.94 335 P **P** **19 25 50.1 +0.3**
comp=Z,6.4nm,1.0s,baz=84,slow=6.1,SNR=11
comp=Z,6.4nm,1.0s
AK03 Malin Array Si 73.04 322 P **P** **19 25 50.3 -0.2**
AKASG Malin Array Be 73.06 322 P **P** **19 25 50.7 +0.1**
comp=Z,1.3nm,0.3s,baz=48,slow=6.2,SNR=13
comp=Z,1.3nm,0.3s
AKASG Malin Array Be 73.06 322 lAmb lAmb 19 25 52.3
comp=Z,3.5nm,1.1s
AKASG Malin Array Be 73.06 322*ce*P **P** **19 25 50.5 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
NB2 NORSAR Subarra 73.06 337 P **P** **19 25 50.9 +0.4**
comp=Z,4.7nm,0.8s,baz=42,slow=6.2
NOA NORSAR Array B 73.06 337 P **P** **19 25 50.0 -0.5**
comp=Z,1.0nm,0.6s,baz=39,slow=5.8,SNR=6.5
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 73.06 337 P **P** **19 25 50.0 -0.5**
AK01 Malin Array Si 73.07 322 P **P** **19 25 50.5 -0.1**
AK04 Malin Array Si 73.07 322 P **P** **19 25 50.5 -0.2**
AK09 Malin Array Si 73.08 322 P **P** **19 25 50.5 -0.2**
AK08 Malin Array Si 73.08 322 P **P** **19 25 50.4 -0.3**
AK02 Malin Array Si 73.09 322 P **P** **19 25 50.4 -0.4**
AK22 Malin Array Si 73.09 322 P **P** **19 25 50.4 -0.4**
AK11 Malin Array Si 73.10 322 P **P** **19 25 50.4 -0.4**
AK21 Malin Array Si 73.10 322 P **P** **19 25 50.4 -0.4**
AK10 Malin Array Si 73.11 322 P **P** **19 25 50.4 -0.5**
AK05 Malin Array Si 73.12 322 P **P** **19 25 50.4 -0.5**
AK12 Malin Array Si 73.13 322 P **P** **19 25 50.6 -0.4**
AK20 Malin Array Si 73.14 322 P **P** **19 25 50.7 -0.3**
AK06 Malin Array Si 73.14 322 P **P** **19 25 50.7 -0.4**
AK19 Malin Array Si 73.15 322 P **P** **19 25 50.7 -0.4**
AK17 Malin Array Si 73.15 322 P **P** **19 25 50.8 -0.3**
AK14 Malin Array Si 73.16 322 P **P** **19 25 50.9 -0.3**
AK07 Malin Array Si 73.16 322 P **P** **19 25 50.9 -0.3**
FFC Flin Flon 73.54 32 **P** **19 25 53.7 +0.3**
FFC Flin Flon 73.54 32 P **P** **19 25 53.7 +0.3**
FFC pmax pmax
comp=Z,4.0nm,0.9s
FCC Fort Churchill 73.70 26 lAmb lAmb 19 25 56.2
comp=Z,8.2nm,1.1s
LUBAR Lubar, Ukraine 74.28 322 P **P** **19 25 57.6 -0.1**
DLMT Dillon 74.44 44 **P** **19 25 59.5 +0.5**
DLMT lAmb lAmb 19 26 02.1
comp=Z,9.4nm,1.0s
HLID Hailey 74.52 47 P **P** **19 26 00.1 +0.6**
ELK Elko 75.76 49 P **P** **19 26 09.1 +2.4**
comp=Z,1.1nm,0.4s,baz=346,slow=1.1,SNR=5.4
comp=Z,1.1nm,0.4s
HWUT Hardware Ranch 77.39 47 P **P** **19 26 17.1 +1.3**
DUG Dugway, Tooele 77.55 49 **P** **19 26 18.4 +1.7**
DUG lAmb lAmb 19 26 20.2
comp=Z,7.9nm,1.2s
DUG Dugway, Tooele 77.55 49 P **P** **19 26 18.4 +1.7**
DUG pmax pmax
comp=Z,8.0nm,1.2s
BRTR Keskin Array B 77.58 311 P **P** **19 26 17.2 +0.3**
comp=Z,0.5nm,0.5s,baz=99,slow=3.7,SNR=3.0
comp=Z,0.5nm,0.5s
PDAR Pinedale Array 77.78 45 P **P** **19 26 20.0 +1.9**
comp=Z,1.2nm,0.5s,baz=6.3,slow=0.3,SNR=24
comp=Z,1.2nm,0.5s
PDAR Pinedale Array 77.78 45 P **P** **19 26 19.5 +1.4**
ULM Lac du Bonnet 79.35 33 P **P** **19 26 26.9 +0.7**
comp=Z,2.5nm,0.5s,baz=326,slow=7.1,SNR=6.3
comp=Z,2.5nm,0.5s
ULM Lac du Bonnet 79.35 33 lAmb lAmb 19 26 28.7
comp=Z,9.6nm,1.3s
CLL Collm 79.90 329 *e*P **P** **19 26 29.0 -0.2**
CLL pmax pmax
comp=Z,11nm,1.1s
CLL Collm 79.90 329 *e*P **P** **19 26 29.0 -0.2**
comp=Z,11nm,1.1s
ZST Bratislava 80.51 325 *e*P **P** **19 26 34.1 +1.6**
ZST Bratislava 80.51 325 *e*P **P** **19 26 34.1 +1.6**
PV05 Paradox Valley 81.12 48 P **P** **19 26 36.5 +0.3**
PV05 lAmb lAmb 19 26 39.6
comp=Z,6.3nm,0.9s
GERES GERESS Array B 81.50 328 P **P** **19 26 38.2 +0.3**
comp=Z,1.1nm,0.5s,baz=32,slow=5.9,SNR=3.9
comp=Z,1.1nm,0.5s
ANMO Albuquerque 84.80 49*ce*P **P** **19 26 54.1 -1.1**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
IDI Anoyia 85.72 312 P **P** **19 26 58.5 -1.1**
comp=Z,9.0nm,0.7s,baz=24,slow=4.2,SNR=7.7
comp=Z,9.0nm,0.7s
LPAZ La Paz 147.09 57 PKPbc **PKPbc** **19 34 05.0 +1.0**
comp=Z,2.5nm,0.4s,baz=326,slow=4.5,SNR=8.2
LPAZ La Paz 147.09 57 **PKPab** **19 34 05.5 -0.4**

*IDC **11** 19:27:43.0≈4.3, 10.84S×113.15E, h0km, mb3.4/4, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=228.4km s-min=21.6km az=45.0*

*DJA **11** 19:27:45.7±0.4,11°S±4'×11°3E±', h10km,M4.4/36, mb4.3/7,MLv4.5/36*

ISC 11 19:27:41.8±0.8,11°01S±0.07×112°62E±0.06,h10km,n36, σ1s76/39,mb3.5/4,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**2.84**	**17**	P	**Pn**	**19 28 26.6**	**-0.5**
GMJI				S	**Sn**	**19 28 57.4**	**-4.0**
JAGI	**Jajag, Banyuwa**	**2.94**	**31**	P	**Pn**	**19 28 28.5**	**-0.1**
JAGI	**Jajag, Banyuwa**	**2.94**	**31**	P	**Pn**	**19 28 29.1**	**+0.5**
PCJI	**Pacitan**	**3.14**	**333**	P	**Pn**	**19 28 29.9**	**-1.4**
IGBI	**Denpasar**	**3.31**	**49**	P	**Pn**	**19 28 34.1**	**+0.5**
SNJI	**Sawahan-Nganju**	**3.32**	**345**	P	**Pn**	**19 28 34.4**	**-0.5**
SNJI				S	**Sn**	**19 29 10.5**	**-3.0**
SJI	**Sawahan**	**3.36**	**345**	P	**Pn**	**19 28 33.4**	**-1.0**
SJI				S	**Sn**	**19 29 11.2**	**-3.3**
BLJI	**Banyuglugur**	**3.38**	**17**	P	**Pn**	**19 28 35.6**	**+0.9**
BLJI				S	**Sn**	**19 29 12.5**	**-2.4**
RTBI	**Rangdo, Negare**	**3.41**	**42**	P	**Pn**	**19 28 34.0**	**-1.1**
DNP	**Denpasar**	**3.45**	**48**	P	**Pn**	**19 28 37.4**	**+1.9**
ABJI	**Asem Bagus**	**3.57**	**27**	P	**Pn**	**19 28 37.9**	**+0.7**
UGM	**Wanagama**	**3.71**	**326**	P	**Pn**	**19 28 39.1**	**-0.1**
UGM	**Wanagama**	**3.71**	**326**	P	**Pn**	**19 28 39.5**	**+0.3**
NGJI	**Ngawi**	**3.79**	**342**	P	**Pn**	**19 28 41.1**	**+0.8**
KHKI	**Kahang-Kahang**	**3.95**	**49**	P	**Pn**	**19 28 44.4**	**+2.0**
KMMI	**Kalianget**	**4.15**	**19**	P	**Pn**	**19 28 45.6**	**+0.3**
SMRI	**Semarang**	**4.49**	**331**	P	**Pn**	**19 28 49.9**	**0.0**
KPJI	**Karang Pucung**	**5.16**	**315**	P	**Pn**	**19 29 00.4**	**+1.3**
CTJI	**Waduk Cacaban**	**5.23**	**319**	P	**Pn**	**19 29 00.7**	**+0.6**
PLAI	**Plampang**	**5.52**	**67**	P	**Pn**	**19 29 03.6**	**-0.5**
PLAI	**Plampang** 20nm,0.7s	**5.52**	**67**	P	Pn	19 29 08.3	+4.2
BBJI	**Bungbulang**	**6.04**	**305**	P	**Pn**	**19 29 11.5**	**+0.2**
BBJI	**Bungbulang** 0.2nm12nm,1.0s	**6.04**	**305**	P	**Pn**	**19 29 11.9**	**+0.6**
DBNI	**Kabupaten Domp**	**6.14**	**67**	P	**Pn**	**19 29 15.5**	**+2.9**
XMI	**Christmas Isla**	**6.83**	**274**	P	**Pn**	**19 29 22.4**	**+0.2**
MNAI	**Manna**	**11.63**	**304**	P	**Pn**	**19 30 28.3**	**+0.3**
MBWA	**Marble Bar**	**12.18**	**147**	P	**Pn**	**19 30 33.4**	**-2.1**
PSA00	**Pilbara Seismi**	**12.58**	**147**	P	**Pn**	**19 30 38.9**	**-2.1**
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=293,slow=12,SNR=6.9	**14.43**	**121**	Pn	**Pn**	**19 31 04.3**	**-2.0**
FITZ	0.9nm,0.3s,baz=359,slow=23,SNR=12 1.8nm,0.7s			Sn	Sn	19 33 30.8	-16
MEEK	**Meekatharra**	**16.54**	**161**	P	**Pn**	**19 31 32.3**	**-1.7**
MORW	**Morawa**	**18.25**	**170**	P	**Pn**	**19 31 54.5**	**-0.8**
BLDU	**Balliduu**	**19.88**	**170**	P	**Pn**	**19 32 14.7**	**-0.2**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=289,slow=8.9,SNR=10.0 0.5nm,0.3s	**22.71**	**116**	P	**P**	**19 32 43.3**	**-0.7**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=305,slow=9.8,SNR=5.1 0.4nm,0.6s	**23.86**	**125**	P	**P**	**19 32 54.0**	**-1.6**
CMAR	**Chiang Mai Arr** 0.5nm,0.7s,baz=150,slow=8.9,SNR=5.2 0.5nm,0.7s	**32.24**	**335**	P	**P**	**19 34 12.7**	**+2.1**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=152,slow=7.7,SNR=1.8 0.2nm,0.3s	**63.62**	**337**	P	**P**	**19 38 17.3**	**+4.4**

*IDC **11** 19:40:43.9±1.4,3°41S×135°56E,h0km,mb3.6/4, mbtmp3.8/7,ML4.0/3,Error ellipse: s-maj=47.0km s-min=23.5km az=85.0*

*DJA **11** 19:40:51.0±0.3,3°S±2'×13°5E±', h29km±3km,M4.2/18, mb4.2/5,MLv4.3/18*

ISC 11 19:40:47.7±0.8,3°30S±0.06×135°39E±0.05,h22km,n19, σ2s00/21,mb3.6/4,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.66**	**31**	P	**Pb**	**19 41 17.3**	**-0.2**
SRPI				S	**Sb**	**19 41 37.3**	**-0.7**
KMPI	**Kaimana, Papua**	**1.72**	**258**	P	**Pb**	**19 41 19.4**	**+0.7**
RKPI	**Ransiki, Papua**	**2.15**	**326**	P	**Pb**	**19 41 25.1**	**-0.9**
BAKI	**Biak**	**2.21**	**19**	P	**Pb**	**19 41 26.9**	**-0.2**
MWPI	**Manokwari, Pap**	**2.71**	**330**	P	**Pb**	**19 41 33.8**	**-1.8**
FAKI	**Fak Fak**	**3.16**	**277**	P	**Pn**	**19 41 37.7**	**+1.5**
SIJI	**Sorong** 7.6nm,0.3s,baz=357,slow=11,SNR=182	**4.78**	**300**	Pn	**Pn**	**19 42 00.6**	**+2.1**
SIJI	7.6nm,0.3s,baz=308,slow=22,SNR=12 19nm,0.3s			Sn	**Sn**	**19 42 51.5**	**-1.6**
SIJI	**Sorong**	**4.78**	**300**	P	**Pn**	**19 42 00.7**	**+2.3**
SWI	**Sorong**	**4.78**	**300**	P	**Pn**	**19 42 00.7**	**+2.2**
GENI	**Genyem**	**4.82**	**82**	P	**Pn**	**19 42 01.7**	**+2.6**
JAY	**Jayapura** 2.0nm,0.3s,baz=257,slow=14,SNR=9.2	**5.37**	**82**	Pn	**Pn**	**19 42 08.8**	**+2.3**
JAY	0.6nm,0.3s,baz=108,slow=19,SNR=1.6			Sn	**Sn**	**19 43 07.3**	**-0.5**
JAY	**Jayapura** 17nm,1.1s	**5.37**	**82**	P	**Pn**	**19 42 08.6**	**+2.0**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=359,slow=13,SNR=21	**16.57**	**183**	Pn	**Pn**	**19 44 34.4**	**-4.5**
WRA	0.1nm,0.3s,baz=3.4,slow=22,SNR=3.3 1.9nm,0.6s			Sn	Sn	19 47 25.6	-17
FITZ	**Fitzroy Crossi** 0.5nm,0.3s,baz=31,slow=10,SNR=13	**17.54**	**212**	P	**Pn**	**19 44 48.4**	**-2.6**
FITZ	4.0nm,0.9s,baz=199,slow=14,SNR=3.7 1.9nm,0.4s			S	Sn	19 47 50.4	-15
ASAR	**Alice Springs** 3.6nm,0.5s,baz=10,slow=13,SNR=35 3.6nm,0.5s	**20.30**	**184**	P	**P**	**19 45 22.3**	**0.0**
XLT	**XiLinHaoTe**	**50.09**	**342**	*e*P	P	19 49 46.0	+4.8
XLT				pP	sP	19 49 53.7	+3.1
XLT	comp=Z,3.0nm,0.8s			pmax	pmax		
SONM	**Songino Array** comp=Z,0.3nm,0.5s,baz=153,slow=7.4,SNR=3.0 comp=Z,0.3nm,0.5s	**56.90**	**337**	P	**P**	**19 50 32.5**	**+1.3**
MKAR	**Makanchi Array** comp=Z,0.1nm,0.5s,baz=111,slow=7.6,SNR=5.1 comp=Z,0.1nm,0.5s	**68.27**	**324**	P	**P**	**19 51 48.0**	**+1.0**
ILAR	**Eielson Array** comp=Z,0.2nm,0.5s,baz=272,slow=4.4,SNR=4.0 comp=Z,0.2nm,0.5s	**87.75**	**25**	P	**P**	**19 53 33.4**	**-1.3**

*SOME **11** 19:49:40.6,42°.10N×77°.40E,h11km*

*KRNET **11** 19:49:40.4±0.1,42°.12N×77°.39E,h19km,mb2.6*

*NNC **11** 19:50:02.3±1.3,42°.62N×78°.15E,h5km±8km,mpv2.3, Error ellipse: s-maj=14.4km s-min=9.0km az=127.0*

ISC 11 19:49:40.8±1.0,42°.11N±0°.04×77°.33E±0°.03,h16km±7km, n14,σ1s74/25,6C-4D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.11**	**279**	⇑*i*P	**Pg**	**19 49 44.8**	**+0.3**
KDJ				⇑*i*S	**Sg**	**19 49 47.6**	**+0.6**
TARG	**Taragay, Kyrgy**	**0.53**	**137**	⇑*i*P	**Pg**	**19 49 50.2**	**-1.2**
TARG				⇑*i*S	**Sg**	**19 49 57.0**	**-1.5**
ANVS	**Anan'yevo**	**0.71**	**21**	⇓*i*P	**Pg**	**19 49 53.8**	**-1.0**
ANVS				⇓*i*S	**Sg**	**19 50 03.3**	**-1.0**
ULHL	**Ulahol**	**0.82**	**280**	⇓*i*P	**Pb**	**19 49 56.7**	**0.0**
ULHL				⇓*i*S	**Sb**	**19 50 08.5**	**+1.0**
TNSS	**Tian-Shan** 0.5nm,0.3s	**0.96**	**343**	*e*P	**Pg**	**19 49 58.7**	**-0.9**
TNSS	1.1nm,0.1s			*e*S	**Sb**	**19 50 11.6**	**-0.4**
IZV	**Izvestkoviy** 1.3nm,0.1s	**1.06**	**330**	*e*P	**Pb**	**19 50 00.8**	**0.0**
IZV	6.7nm,0.2s			*e*S	**Sb**	**19 50 15.3**	**+0.8**
BOOM	**Boomskoye usch**	**1.09**	**291**	⇑*i*P	**Pb**	**19 50 01.5**	**+0.1**
BOOM				⇑*i*S	**Sn**	**19 50 16.8**	**+0.3**
KOTS	**Kotyrbulak** 5.5nm,0.2s	**1.13**	**352**	*e*P	**Pn**	**19 50 02.0**	**-0.1**
KOTS	9.5nm,0.2s			*e*S	**Sn**	**19 50 17.3**	**-0.1**
SATY	**Saty** 0.8nm,0.1s	**1.24**	**40**	P	Pg	19 50 12.1	+7.4
SATY	7.3nm,0.1s			S	**Sg**	**19 50 19.3**	**-1.5**
KST	**Kastek** 0.2nm,0.2s	**1.37**	**313**	*e*P	**Pg**	**19 50 06.7**	**-0.5**
KST	5.7nm,0.6s			*e*S	**Sg**	**19 50 25.4**	**+0.3**
KPKS	**Kokpek** 0.8nm,0.1s	**1.68**	**36**	P	Pg	19 50 19.9	+6.8
KPKS	8.9nm,0.3s			S	**Sg**	**19 50 32.8**	**-2.2**
KPKS	**Kokpek** 0.3nm,0.5s	**1.68**	**36**	*e*P	**Pb**	**19 50 10.8**	**-0.5**
KPKS	9.0nm,0.5s			*e*S	**Sg**	**19 50 32.8**	**-2.2**
SHLS	**Shalkode** 0.3nm,0.1s	**1.89**	**56**	P	Pg	19 50 28.1	+11
SHLS	4.2nm,0.4s			S	**Sg**	**19 50 46.7**	**+5.1**
SHLS	**Shalkode** 1.0nm,0.5s	**1.89**	**56**	*e*P	**Pg**	**19 50 18.2**	**+1.2**
SHLS	3.2nm,0.7s			*e*S	**Sg**	**19 50 45.6**	**+4.0**

DJA 11 19:55:59.3±0.2,3°S±1°×11°9E±', h10km,M3.9/26,mb3.9/2, MLv3.9/26,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.47**	**107**	P	Pg	19 56 06.9	-1.6
TTSI				S	Sg	19 56 13.9	-0.8
MMSI	**Mamuju**	**0.51**	**295**	P	Pg	19 56 08.3	-0.9
MMSI				S	Sg	19 56 15.8	-0.2
PMSI	**Majene**	**0.74**	**218**	P	Pg	19 56 13.5	-0.2
PMSI				S	Sn	19 56 26.8	-0.5
SPSI	**Sidrap Palu**	**1.12**	**159**	P	Pb	19 56 19.2	-1.6
SPSI				S	Sb	19 56 34.6	-0.9
PCI	**Palu**	**2.04**	**13**	P	Pb	19 56 35.5	-1.1
KAPI	**Kappang**	**2.12**	**170**	P	Pn	19 56 36.0	+1.1
KAPI				S	Sn	19 57 02.6	+1.2
MKS	**Makassar**	**2.29**	**178**	P	Pb	19 56 39.2	-1.6
KKSI	**Kolaka, Sulawe**	**2.60**	**119**	P	Pb	19 56 44.7	-1.3
APSI	**Ampana**	**3.02**	**49**	P	Pn	19 56 49.0	+1.8
MPSI	**Mapaga**	**3.27**	**9**	P	Pn	19 56 50.3	-0.3
BSSI	**Bau Bau, Buton**	**3.40**	**161**	P	Pn	19 56 53.8	+1.3
LUWI	**Luwuk**	**3.87**	**61**	P	Pn	19 56 59.9	+0.9
MRSI	**Marisa**	**4.23**	**37**	P	Pn	19 57 02.0	-1.9
DBNI	**Kabupaten Domp**	**5.65**	**191**	P	Pn	19 57 22.5	-1.0

*IDC **11** 20:02:33.0±1.1,34°.95N×27°.79E,h0km,mb3.9/16, mbtmp3.9/21,ML3.5/5,MS3.0/3,Error ellipse: s-maj=22.7km s-min=15.4km az=9.0*

*ATH **11** 20:02:35.2,34°.86N×28°.02E,h15km±7km,ML3.3/5, Manual Solution by A.Papageorgiou First location: 2020/02/11 20:04:02, This location: 2021/11/15 11:18:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*GII **11** 20:02:36.5±0.0,34°.709N±0°.002×27°.970E±0°.001,h0km, Mws3.7,confirmed*

*AFAD **11** 20:02:37.9,34°.92N×28°.06E,h11km±6km,ML3.1*

*NIC **11** 20:02:38.0,34°.79N×28°.02E,h33km±24km,Ml3.6/16*

*MCSM **11** 20:02:37.1±0.7,35°N±6°×2°8E±',h13km,mb3.6,mB4.1, MLv3.8,Mw(mB)3.1*

*ISK **11** 20:02:39.8,35°.13N×27°.80E,h82km,ML3.4/27*

*HLW **11** 20:02:43.0,34°.43N×27°.97E,h26km±9km,Ml4.0*

*THE **11** 20:02:42.2,35°N±6°×2°8E±',h51km±12km,M3.2/14, MLh3.2/14*

ISC 11 20:02:36.0±1.2,34°.86N±0°.03×28°.03E±0°.02,h23km±9km, n164,σ1s58/228,mb3.8/16,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.99**	**314**	Pg	**Pn**	**20 02 56.1**	**+1.5**
KARP				Sg	**Sb**	**20 03 07.3**	**0.0**
KARP	**Karpathos**	**0.99**	**314**	P	**Pn**	**20 02 55.6**	**+1.1**
KARP	**Karpathos**	**0.99**	**314**	P	**Pn**	**20 02 55.7**	**+1.1**
KARP	**Karpathos**	**0.99**	**314**	P	**Pn**	**20 02 55.9**	**+1.3**
KARP				S	**Sn**	**20 03 10.1**	**+2.2**
KARP	6.2nm,0.7s			AML	AML	20 03 16.6	
KARP	5.8nm,0.7s			AML	AML	20 03 21.6	
KARP	**Karpathos**	**0.99**	**314**	P	**Pb**	**20 02 54.1**	**-0.5**
KARP				S	**Sb**	**20 03 07.3**	**0.0**
ARG	**Arkhangelos**	**1.36**	**3**	Pn	**Pb**	**20 03 01.6**	**+0.8**
ARG	**Arkhangelos**	**1.36**	**3**	P	**Pb**	**20 03 01.5**	**+0.6**
ARG				S	**Sn**	**20 03 16.1**	**-0.8**
ARG	**Arkhangelos**	**1.36**	**3**	P	**Pb**	**20 03 01.4**	**+0.6**
ARG				S	**Sb**	**20 03 20.9**	**+3.1**
ARG	2.3nm,0.5s			AML	AML	20 03 40.4	
ARG	2.1nm,0.7s			AML	AML	20 03 46.4	
ARG	**Arkhangelos**	**1.36**	**3**	P	**Pn**	**20 02 59.5**	**-0.1**
ARG				S	**Sb**	**20 03 17.5**	**-0.2**
ZKR	**Zakros**	**1.51**	**280**	Pn	**Pb**	**20 03 03.8**	**+0.4**
ZKR				Sn	**Sn**	**20 03 20.7**	**0.0**
ZKR	**Zakros**	**1.51**	**280**	P	**Pn**	**20 03 02.9**	**+1.2**
ZKR	**Zakros**	**1.51**	**280**	P	**Pn**	**20 03 02.7**	**+1.0**
ZKR				S	**Sb**	**20 03 22.2**	**0.0**
ZKR	0.7nm,0.7s			AML	AML	20 03 41.4	
ZKR	1.4nm,0.6s			AML	AML	20 03 47.4	
ZKR	**Zakros**	**1.51**	**280**	P	**Pn**	**20 03 01.9**	**+0.2**
ZKR				S	**Sn**	**20 03 21.1**	**+0.4**
RDI1	**Rhodes Town Ha**	**1.60**	**5**	P	**Pn**	**20 03 03.0**	**+0.1**
SIT2	**Siteia**	**1.62**	**283**	P	**Pn**	**20 03 02.9**	**-0.2**
KSL	**Kastellorizon**	**1.81**	**44**	P	**Pn**	**20 03 07.3**	**+1.6**
KSL				S	**Sb**	**20 03 31.1**	**+0.5**
KSL	0.5nm,1.7s			AML	AML	20 04 14.7	
KSL	1.0nm,1.4s			AML	AML	20 04 19.4	
KSL	**Kastellorizon**	**1.81**	**44**	P	**Pn**	**20 03 06.4**	**+0.6**
IZZE	**Mula-Seydike**	**1.85**	**31**	P	**Pn**	**20 03 07.8**	**+1.5**
IZZE				S	**Sn**	**20 03 30.0**	**+0.9**
IZZE	comp=E,404nm,0.4s			IAML		20 03 31.0	
IZZE	comp=N,614nm,0.4s			IAML		20 03 38.0	
AKAS	**Kas**	**1.88**	**43**	P	**Pb**	**20 03 08.8**	**-0.9**
AKAS				S	**Sb**	**20 03 31.9**	**-0.9**
AKAS	comp=E,213nm,0.5s			IAML		20 03 34.0	
AKAS	comp=N,244nm,0.4s			IAML		20 03 46.0	
DAT	**Datca**	**1.91**	**349**	Pn	**Pn**	**20 03 07.5**	**+0.3**
DAT	**Datca**	**1.91**	**349**	P	**Pn**	**20 03 08.0**	**+0.8**
DAT				S	**Sn**	**20 03 28.4**	**-2.1**
DATC	**Datca-Mugla**	**1.92**	**351**	Pn	**Pn**	**20 03 07.7**	**+0.4**
FETY	**Fethiye**	**1.97**	**25**	P	Pn	20 03 00.8	-7.2
DALY	**Dalyan (Mula)**	**2.02**	**14**	Pn	**Pn**	**20 03 10.1**	**+1.4**
NPS	**Neapolis**	**2.03**	**282**	P	**Pn**	**20 03 10.8**	**+2.0**
NPS				S	**Sn**	**20 03 32.7**	**-0.7**
NPS	**Neapolis**	**2.03**	**282**	P	**Pn**	**20 03 09.1**	**+0.3**
DEMR	**Demre-Antalya**	**2.06**	**47**	Pn	**Pb**	**20 03 13.1**	**+0.4**
SABU	**Mula-Dalaman**	**2.10**	**21**	P	**Pn**	**20 03 11.4**	**+1.6**
SABU				S	**Sn**	**20 03 36.0**	**+0.7**
SABU	comp=N,124nm,1.0s			IAML		20 04 14.0	
SABU	comp=E,106nm,0.8s			IAML		20 04 14.0	
BODT	**Bodrum**	**2.28**	**345**	Pn	**Pn**	**20 03 12.6**	**+0.4**
BODT	**Bodrum**	**2.28**	**345**	P	**Pn**	**20 03 13.3**	**+1.0**
YER	**Yerkesik**	**2.28**	**5**	Pn	**Pn**	**20 03 13.8**	**+1.5**
YER	**Yerkesik**	**2.28**	**5**	P	**Pn**	**20 03 14.3**	**+2.0**
CAME	**Cameli-Denizli**	**2.32**	**26**	Pn	**Pn**	**20 03 15.2**	**+2.2**
YKAV	**Yalikavak-Bodr**	**2.34**	**345**	Pn	**Pn**	**20 03 13.4**	**+0.3**
KNIK	**Mula-Seydike**	**2.35**	**32**	P	**Pn**	**20 03 15.4**	**+2.2**
KNIK	comp=E,72nm,0.5s			IAML		20 03 44.0	
KNIK	comp=N,53nm,0.3s			S	**Sb**	**20 03 44.2**	**-2.1**
KNIK				IAML		20 03 45.0	
AKUM	**Antalya-Kumluc**	**2.38**	**51**	P	**Pn**	**20 03 15.8**	**+2.2**
AKUM				S	**Sn**	**20 03 44.1**	**+1.9**
AKUM	comp=E,156nm,0.4s			IAML		20 03 45.0	
AKUM	comp=N,77nm,0.4s			IAML		20 03 55.0	
ELL	**Elmali**	**2.43**	**38**	Pn	**Pb**	**20 03 17.3**	**-1.8**
ELL	**Elmali**	**2.43**	**38**	P	**Pb**	**20 03 17.1**	**-1.9**
ELL				S	**Sb**	**20 03 46.4**	**-2.2**
ELL	1.1nm,0.5s			AML	AML	20 03 48.3	
ELL	0.7nm,0.7s			AML	AML	20 03 58.6	
MLSB	**Milas**	**2.44**	**355**	Pn	**Pn**	**20 03 13.6**	**-0.9**
CAEL	**Denizli, Camel**	**2.49**	**24**	P	**Pn**	**20 03 17.7**	**+2.4**
CAEL				S	**Sb**	**20 03 48.0**	**-2.5**
CAEL	comp=E,309nm,0.6s			IAML		20 04 09.0	
CAEL	comp=N,258nm,0.9s			IAML		20 04 29.0	
THERA	**Ancient Thera,**	**2.57**	**307**	P	**Pn**	**20 03 16.5**	**+0.2**
THERA				S	**Sn**	**20 03 44.3**	**-2.6**
THERA	**Ancient Thera,**	**2.57**	**307**	P	**Pn**	**20 03 16.6**	**+0.4**
IDI	**Anoyia** 27nm,0.3s,baz=285,slow=5.6,SNR=114	**2.62**	**280**	Pn	**Pn**	**20 03 18.9**	**+1.9**
IDI	14nm,0.3s,baz=338,slow=22,SNR=6.1			Sn	**Sn**	**20 03 48.4**	**+0.4**
IDI	comp=Z,167nm,19.8s,baz=126,slow=50			LR	LR	20 04 34.1	
IDI	**Anoyia**	**2.62**	**280**	Pn	**Pn**	**20 03 18.7**	**+1.8**
IDI	**Anoyia**	**2.62**	**280**	P	**Pn**	**20 03 18.8**	**+1.9**
IDI	**Anoyia**	**2.62**	**280**	P	**Pn**	**20 03 17.2**	**+0.3**
SNT5	**Nea Kammeni, S**	**2.65**	**306**	P	**Pn**	**20 03 18.1**	**+0.8**
GOLH	**Golhisar**	**2.68**	**27**	P	**Pn**	**20 03 20.8**	**+3.0**
GOLH				S	**Sb**	**20 03 53.2**	**-2.6**
GOLH	comp=E,137nm,0.6s			IAML		20 04 01.0	
GOLH	comp=N,141nm,2.0s			IAML		20 04 41.0	
SAP3	**Santorini-Thir**	**2.70**	**307**	P	**Pn**	**20 03 19.3**	**+1.3**
APMY	**Acipayam-Deniz**	**2.81**	**21**	Pn	**Pn**	**20 03 21.6**	**+2.1**
KORT	**Korkueli**	**2.85**	**41**	P	**Pn**	**20 03 23.3**	**+3.2**
KORT				S	**Sb**	**20 03 59.9**	**-0.9**
KORT	comp=N,108nm,0.6s			IAML		20 04 00.0	
KORT	comp=E,120nm,0.6s			IAML		20 04 01.0	
ANTB	**Antalya**	**2.95**	**45**	Pn	**Pb**	**20 03 25.6**	**-2.2**
APE	**Apeiranthos**	**3.00**	**318**	Pn	**Pn**	**20 03 22.5**	**+0.3**
APE	**Apeiranthos**	**3.00**	**318**	P	**Pn**	**20 03 22.4**	**+0.3**
APE	**Apeiranthos**	**3.00**	**318**	P	**Pn**	**20 03 22.8**	**+0.6**
APE				S	**Sn**	**20 03 57.0**	**-0.5**
APE	**Apeiranthos**	**3.00**	**318**	P	**Pn**	**20 03 22.5**	**+0.3**
SMG	**Samos**	**3.01**	**342**	P	**Pn**	**20 03 23.5**	**+1.2**
SMG	**Samos**	**3.01**	**342**	P	**Pn**	**20 03 22.4**	**+0.2**
OSC1	**CSNet OBS 1**	**3.01**	**116**	P	**Pn**	**20 03 23.6**	**+1.3**
OSC1				S	**Sn**	**20 03 59.0**	**+1.4**
OSC1	0.3nm,0.4s			AML	AML	20 04 03.8	
OSC1	0.3nm,0.4s			AML	AML	20 04 06.1	
AYDB	**Zeytinkoy-Aydi**	**3.09**	**358**	Pn	**Pn**	**20 03 24.1**	**+0.6**
NAZL	**Nazilli-Aydin**	**3.11**	**4**	Pn	**Pn**	**20 03 25.0**	**+1.3**
BUCA	**Burdur, Bucak-**	**3.21**	**39**	P	**Pn**	**20 03 27.6**	**+2.6**
BUCA				S	**Sb**	**20 04 06.9**	**-4.0**
BUCA	comp=E,63nm,0.5s			IAML		20 04 09.0	
BUCA	comp=N,50nm,0.4s			IAML		20 04 21.0	
GVD	**Gavdhos**	**3.25**	**271**	Pn	**Pn**	**20 03 26.9**	**+1.4**
GVD	**Gavdhos**	**3.25**	**271**	P	**Pn**	**20 03 27.1**	**+1.6**
BRDR	**BURDUR-Merkez**	**3.27**	**29**	P	**Pn**	**20 03 28.7**	**+2.7**
BRDR				S	**Sn**	**20 04 06.5**	**+2.3**
BRDR	comp=N,51nm,0.4s			IAML		20 04 07.0	
BRDR	comp=E,40nm,1.3s			IAML		20 05 12.0	
BCK	**Bucak**	**3.32**	**38**	Pn	**Pn**	**20 03 30.2**	**+3.6**
IMMV	**Iera Moni Meta**	**3.38**	**281**	Pn	**Pn**	**20 03 28.8**	**+1.5**
ODEM	**Odemis-Izmir**	**3.41**	**1**	Pn	**Pn**	**20 03 28.7**	**+0.8**
BASM	**Basmaki-Afyon**	**3.46**	**27**	Pn	**Pn**	**20 03 31.2**	**+2.6**
MHLO	**Agia Marina, M**	**3.48**	**303**	P	**Pn**	**20 03 30.6**	**+2.0**
AKMS	**Akamas**	**3.54**	**86**	P	**Pn**	**20 03 31.2**	**+1.6**
AKMS				S	**Sn**	**20 04 12.5**	**+1.9**
AKMS	0.5nm,0.4s			AML	AML	20 04 12.6	
AKMS	0.8nm,0.4s			AML	AML	20 04 14.2	
MATC	**Matruh**	**3.56**	**191**	P	**Pn**	**20 03 31.9**	**+2.0**
ISP	**Isparta**	**3.58**	**33**	Pn	**Pn**	**20 03 33.4**	**+3.2**
ISP	**Isparta**	**3.58**	**33**	P	**Pn**	**20 03 32.0**	**+1.8**
ISP				S	**Sn**	**20 04 15.3**	**+3.5**
BLCB	**Balcova**	**3.61**	**348**	Pn	**Pn**	**20 03 31.4**	**+0.9**
KNDR	**Palaiochora Ch**	**3.64**	**277**	Pn	**Pn**	**20 03 32.3**	**+1.4**
KULA	**Kula-Manisa**	**3.69**	**8**	Pn	**Pn**	**20 03 32.5**	**+0.8**
NATA	**Nata**	**3.73**	**90**	P	**Pn**	**20 03 33.9**	**+1.7**
NATA				S	**Sn**	**20 04 17.9**	**+2.5**
NATA	1.0nm,0.4s			AML	AML	20 04 22.7	
NATA	1.8nm,0.4s			AML	AML	20 04 23.1	
ALFC	**Alefka**	**3.76**	**84**	P	**Pn**	**20 03 34.2**	**+1.6**
ALFC				S	**Sn**	**20 04 17.9**	**+1.8**
ALFC	0.6nm,0.5s			AML	AML	20 04 18.6	
ALFC	0.6nm,0.4s			AML	AML	20 04 22.3	
CHOS	**Chios island**	**3.87**	**336**	Pn	**Pn**	**20 03 34.4**	**+0.3**
OSC2	**CSNet OBS 4**	**3.94**	**116**	P	**Pn**	**20 03 36.8**	**+1.8**
OSC2				S	**Sn**	**20 04 21.5**	**+1.0**
OSC2	0.4nm,0.5s			AML	AML	20 04 32.8	
OSC2	0.5nm,0.6s			AML	AML	20 04 34.0	
TROD	**Troodos**	**3.97**	**87**	P	**Pn**	**20 03 37.7**	**+2.0**
TROD	0.6nm,0.5s			AML	AML	20 04 30.3	
TROD	0.4nm,0.5s			AML	AML	20 04 31.0	
APOL	**The Sanctuary**	**3.98**	**91**	P	**Pn**	**20 03 37.6**	**+2.0**
APOL				S	**Sn**	**20 04 24.4**	**+2.9**
APOL	0.5nm,0.4s			AML	AML	20 04 27.1	
APOL	0.5nm,0.3s			AML	AML	20 04 28.0	
ANKY	**Antikythira Is**	**4.00**	**286**	P	**Pn**	**20 03 38.6**	**+2.7**
GORD	**Gordes-Manisa**	**4.05**	**2**	Pn	**Pn**	**20 03 37.4**	**+0.8**
SLUM	**Salum**	**4.11**	**216**	P	**Pn**	**20 03 38.7**	**+1.3**
XYLS	**Xyliatos**	**4.12**	**86**	P	**Pn**	**20 03 39.4**	**+1.8**
XYLS				S	**Sn**	**20 04 27.3**	**+2.1**
XYLS	0.4nm,0.4s			AML	AML	20 04 30.9	
XYLS	0.4nm,0.4s			AML	AML	20 04 31.3	
ASGA	**Asgata**	**4.29**	**89**	P	**Pn**	**20 03 42.1**	**+2.2**
ASGA				S	**Sn**	**20 04 31.7**	**+2.5**
ASGA	0.6nm,0.3s			AML	AML	20 04 36.0	
ASGA	0.6nm,0.6s			AML	AML	20 04 38.0	
KARY	**Karystos**	**4.30**	**319**	P	**Pn**	**20

SLTI	**Sal'it**	**6.40**	**112**	P		**Pn**	20 04 08.4	-0.5
SLTI				S		**Sn**	20 05 20.6	-0.7
QRWL	**Qaraoun**	**6.47**	**99**	*eP*		**Pn**	20 04 10.8	+0.9
GEM	**Giv'at Ha'Em**	**6.54**	**102**	P		**Pn**	20 04 10.9	+0.1
GEM				S		**Sn**	20 05 24.4	-0.4
ZAHL	**Zahle**	**6.57**	**96**	*eP*		**Pn**	20 04 12.7	+1.4
BR105	**Keskin Array S**	**6.58**	**41**	P		**Pn**	20 04 13.3	+1.8
	0.0nm3.3nm,0.7s							
NATI	**Neve Ativ**	**6.59**	**102**	P		**Pn**	20 04 11.8	+0.4
NATI				S		**Sn**	20 05 25.8	0.0
BR104	**Keskin Array S**	**6.59**	**41**	P		**Pn**	20 04 13.3	+1.7
	0.0nm3.5nm,0.9s							
BR106	**Keskin Array S**	**6.60**	**41**	P		**Pn**	20 04 13.5	+1.8
	0.0nm2.9nm,0.9s							
BRTR	**Keskin Array B**	**6.60**	**41**	Pn		**Pn**	20 04 13.6	+1.8
	0.5nm,0.3s,baz=232,slow=12,SNR=14							
BRTR				Sn		**Sn**	20 05 26.5	+0.1
	0.7nm,0.3s,baz=211,slow=28,SNR=8.7 1.4nm,0.5s							
RCY	**Rachaya**	**6.61**	**100**	*eP*		**Pn**	20 04 12.8	+1.0
MMLI	**Mount Malkishu**	**6.62**	**109**	P		**Pn**	20 04 11.4	-0.5
MMLI				S		**Sn**	20 05 25.7	-0.8
KZIT	**Kziot**	**6.64**	**125**	P		**Pn**	20 04 11.4	-0.9
KZIT				S		**Sn**	20 05 25.6	-1.6
AMAZ	**Amatzia**	**6.65**	**118**	P		**Pn**	20 04 11.8	-0.6
AMAZ				S		**Sn**	20 05 26.2	-1.2
BEIL	**Beino**	**6.72**	**90**	*eP*		**Pn**	20 04 14.8	+1.5
KSHT	**Keshet**	**6.73**	**104**	P		**Pn**	20 04 13.2	-0.2
KSHT				S		**Sn**	20 05 29.1	-0.3
HMDT	**Nahal Hemdat**	**6.77**	**110**	P		**Pn**	20 04 13.6	-0.4
HMDT				S		**Sn**	20 05 29.4	-1.0
UJAP	**Al Uja**	**6.85**	**113**	P		**Pn**	20 04 14.5	-0.6
UJAP				S		**Sn**	20 05 31.0	-1.3
YTIR	**Yattir**	**6.89**	**118**	P		**Pn**	20 04 15.0	-0.6
YTIR				S		**Sn**	20 05 32.1	-1.2
DSI	**Dead Sea**	**6.97**	**116**	P		**Pn**	20 04 17.7	+1.0
DSI				S		**Sn**	20 05 34.1	-1.2
MSBI	**Mazada**	**7.09**	**118**	P		**Pn**	20 04 17.8	-0.4
MSBI				S		**Sn**	20 05 36.7	-1.4
GHAJ	**Ghor Haditha**	**7.25**	**117**	P		**Pn**	20 04 19.7	-0.7
GHAJ				S		**Sn**	20 05 40.6	-1.4
IDAN	**Idan**	**7.29**	**121**	P		**Pn**	20 04 20.5	-0.6
IDAN				S		**Sn**	20 05 41.0	-2.1
KRMI	**Paran Flat**	**7.37**	**128**	P		**Pn**	20 04 20.8	-1.4
KRMI				S		**Sn**	20 05 42.0	-3.0
ZFRI	**Zfri**	**7.39**	**123**	P		**Pn**	20 04 21.4	-1.1
ZFRI				S		**Sn**	20 05 43.3	-2.3
PRNI	**Paran**	**7.40**	**125**	P		**Pn**	20 04 21.5	-1.1
PRNI				S		**Sn**	20 05 43.8	-2.0
HRFI	**Mount Harif**	**7.62**	**127**	P		**Pn**	20 04 24.7	-1.0
HRFI				S		**Sn**	20 05 49.0	-2.4
HFRF	**Wahat Farafira**	**7.69**	**178**	P		**Pn**	20 04 27.4	+0.8
MBRI	**Mt Berech**	**7.70**	**129**	P		**Pn**	20 04 26.6	-0.3
MBRI				S		**Sn**	20 05 51.5	-1.9
EIL	**Elat**	**7.81**	**130**	Pn		**Pn**	20 04 29.6	+1.4
	1.5nm,0.3s,baz=334,slow=5.8,SNR=15							
EIL				Sn		**Sn**	20 05 51.3	-4.6
	7.7nm,0.3s,baz=328,slow=14,SNR=10 3.6nm,0.3s							
EIL	**Elat**	**7.81**	**130**	P		**Pn**	20 04 27.1	-1.2
KBZ	**Khabaz**	**14.51**	**48**	Pn		**P**	20 06 09.6	+3.3
	0.1nm,0.3s,baz=243,slow=6.9,SNR=11							
LUBAR	**Lubar, Ukraine**	**15.06**	**359**	P		**P**	20 06 10.7	-1.6
KEST	**Kesra**	**15.29**	**279**	Pn		**P**	20 06 14.2	-0.9
	0.3nm,0.3s,baz=28,slow=4.4,SNR=6.7							
AK13	**Malin Array Si**	**15.77**	**2**	P		**P**	20 06 19.9	-0.3
AK09	**Malin Array Si**	**15.78**	**3**	P		**P**	20 06 19.4	-0.9
AK14	**Malin Array Si**	**15.79**	**3**	P		**P**	20 06 20.0	-0.4
AK12	**Malin Array Si**	**15.80**	**3**	P		**P**	20 06 19.8	-0.8
AK17	**Malin Array Si**	**15.84**	**2**	P		**P**	20 06 20.4	-0.6
AKASG	**Malin Array Be**	**15.86**	**3**	Pn		**Pn**	20 06 19.2	+1.6
	1.5nm,0.3s,baz=192,slow=11,SNR=4.2							
AKBB	**Malin Array Si**	**15.86**	**3**	P		**P**	20 06 22.1	+0.9
MI28	**Mi28,Pidlybu**	**16.07**	**359**	P		**Pn**	20 06 21.3	+1.0
GERES	**GERESS Array B**	**17.55**	**327**	P		**Pn**	20 06 37.8	-1.2
	baz=135,slow=11,SNR=1.2							
GERES				S		**S**	20 09 58.2	-3.1
	1.2nm,0.7s,baz=139,slow=22,SNR=1.5 0.6nm,0.5s							
DAVOX	**Davos/Dischmat**	**18.14**	**317**	P		**Pn**	20 06 45.8	-0.7
	0.2nm,0.3s,baz=162,slow=9.6,SNR=2.5 1.1nm,0.3s							
CLL	**Collm**	**19.71**	**331**	*eP*		**Pn**	20 07 05.0	-0.1
	comp=Z,4.0nm,0.7s							
ESDC	**Sonseca Array**	**25.84**	**290**	P		**P**	20 08 05.0	-0.6
	comp=Z,1.1nm,0.7s,baz=88,slow=9.5,SNR=9.0 comp=Z,1.1nm,0.7s							
FINES	**FINESS Array B**	**26.64**	**358**	P		**P**	20 08 11.6	-0.9
	comp=Z,1.2nm,0.3s,baz=168,slow=11,SNR=19 comp=Z,1.2nm,0.3s							
AKTO	**Aktyubinsk**	**26.76**	**45**	P		**P**	20 08 16.8	+3.0
	comp=Z,1.8nm,0.5s,baz=255,slow=9.4,SNR=7.4 comp=Z,1.8nm,0.5s							
HFS	**Hagfors**	**26.96**	**344**	P		**P**	20 08 14.0	-1.6
	comp=Z,3.1nm,0.4s,baz=144,slow=10,SNR=29 comp=Z,3.1nm,0.4s							
NOA	**NORSAR Array B**	**28.34**	**343**	P		**P**	20 08 27.1	-0.8
	comp=Z,0.3nm,0.4s,baz=156,slow=10,SNR=4.6 comp=Z,0.3nm,0.4s							
EKA	**Eskdalemuir Ar**	**29.67**	**323**	P		**P**	20 08 37.5	-2.3
	comp=Z,0.3nm,0.3s,baz=124,slow=11,SNR=3.5 comp=Z,0.3nm,0.3s							
ARCES	**ARCESS Array B**	**34.76**	**358**	P		**P**	20 09 22.9	-1.3
	comp=Z,1.0nm,0.3s,baz=174,slow=6.4,SNR=12 comp=Z,1.0nm,0.3s							
KURBB	**Kurchatov Arra**	**39.48**	**51**	P		**P**	20 10 05.9	+1.4
	comp=Z,0.5nm,0.4s,baz=274,slow=8.9,SNR=3.2 comp=Z,0.5nm,0.4s							
DBIC	**Dimbokro**	**41.27**	**235**	P		**P**	20 10 19.4	-0.2
	comp=Z,1.3nm,0.7s,baz=63,slow=9.0,SNR=1.8 comp=Z,1.3nm,0.7s							
MKAR	**Makanchi Array**	**41.97**	**56**	P		**P**	20 10 27.1	+1.9
	comp=Z,0.7nm,0.4s,baz=272,slow=7.8,SNR=24 comp=Z,0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**43.52**	**46**	P		**P**	20 10 38.2	+0.7
	comp=Z,0.5nm,0.4s,baz=275,slow=7.3,SNR=3.6 comp=Z,0.5nm,0.4s							
SPITS	**Spitsbergen Ar**	**43.72**	**357**	P		**P**	20 10 38.5	-0.4
	comp=Z,9.4nm,0.8s,baz=148,slow=13,SNR=15 comp=Z,9.4nm,0.8s							
LSZ	**Lusaka**	**49.85**	**180**	LR		LR	20 31 32.5	
	comp=Z,61nm,21.6s,baz=332,slow=35							
SONM	**Songino Array**	**57.85**	**51**	P		**P**	20 12 27.7	+1.8
	comp=Z,0.5nm,0.5s,baz=283,slow=7.3,SNR=6.8 comp=Z,0.5nm,0.5s							
SCHQ	**Schefferville**	**64.93**	**320**	P		**P**	20 13 12.5	-1.0
	comp=Z,1.5nm,0.3s,baz=63,slow=5.6,SNR=6.4 comp=Z,1.5nm,0.3s							
YKA	**Yellowknife Ar**	**78.44**	**343**	P		**P**	20 14 33.8	-0.8
	comp=Z,0.2nm,0.6s,baz=26,slow=5.7,SNR=3.0 comp=Z,0.2nm,0.6s							
ILAR	**Eielson Array**	**80.62**	**358**	P		**P**	20 14 46.0	-0.4
	comp=Z,0.3nm,0.6s,baz=336,slow=3.5,SNR=4.4 comp=Z,0.3nm,0.6s							

KRSC 11 20:16:35.8±0.7, 55°44N×162°72E, h25km±25km, MI3.8,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.77**	**4**	*eP*	Pb	20 16 50.5	0.0
KBTR				*eS*	Sn	20 17 02.5	+0.6
KBG	**Krutoberegovo**	**0.81**	**359**	*eP*	Pb	20 16 51.2	-0.1
SMKR	**Semkarok**	**1.34**	**329**	*eP*	Pn	20 16 58.9	-0.1
TUMD	**Tumrok D**	**1.35**	**261**	*eP*	Pb	20 17 00.1	-0.3
TUMD				*eS*	Sb	20 17 17.6	+0.3
BZWR	**Bezymyannyi-We**	**1.36**	**293**	*eS*	Sb	20 17 19.4	+1.6
KIRR	**Kirishev**	**1.44**	**292**	*eS*	Sb	20 17 20.3	+0.3
KMNR	**Kamenistaya**	**1.44**	**284**	*eP*	Pb	20 17 02.0	-0.1
KMNR				*eS*	Sb	20 17 20.9	+0.8
KLY	**Klyuchi**	**1.46**	**308**	*eP*	Pn	20 16 59.6	-0.9
TUMR	**Tumrok**	**1.48**	**265**	*eP*	Pb	20 17 02.4	-0.3
KOZ	**Kozyrevsk**	**1.72**	**292**	*eP*	Pb	20 17 06.2	-0.6
BKI	**Bering**	**1.87**	**96**	*eS*	Sb	20 17 31.7	-0.5
SRDR	**Sredinnyy**	**1.91**	**299**	*eP*	Pb	20 17 08.8	-1.1
SRDR				*eS*	Sb	20 17 32.5	-0.8
ESO	**Esso**	**2.33**	**284**	*eP*	Pn	20 17 14.1	+1.6
KII	**Karymskiy**	**2.36**	**235**	*eP*	Pn	20 17 14.8	+1.6
SPN	**Mys Shipunski**	**2.83**	**215**	*eP*	Pn	20 17 21.4	+1.9
SPN				*eS*	Sn	20 17 54.8	+2.0
SDLR	**Sedlovina**	**3.12**	**228**	*eP*	Pn	20 17 26.2	+2.6
KRER	**Koryakskii**	**3.16**	**229**	*eP*	Pb	20 17 28.2	-3.1
KRX	**Arik**	**3.17**	**230**	*eP*	Pb	20 17 28.6	-2.9
SMAR	**Somma**	**3.17**	**228**	*eP*	Pn	20 17 26.7	+2.4
AVH	**Avacha**	**3.19**	**229**	*eP*	Pb	20 17 28.4	-3.4
UGLR	**Uglovaya**	**3.20**	**227**	*eP*	Pn	20 17 27.1	+2.6
KOK	**Koryaka**	**3.22**	**230**	*eP*	Pb	20 17 29.1	-3.2
GNL	**Ganaly**	**3.29**	**240**	*eP*	Pn	20 17 28.8	+2.9
KRMR	**Karymshinskiy**	**3.76**	**228**	*eP*	Pn	20 17 35.7	+3.4
GRL	**Gorelyy**	**3.99**	**225**	*eP*	Pn	20 17 39.6	+4.1
MTVR	**Mutnovka**	**4.00**	**224**	*eP*	Pn	20 17 39.3	+3.7
ASAK	**Asacha**	**4.19**	**225**	*eP*	Pb	20 17 44.1	-4.6

KRSC 11 20:23:15.9±0.7, 55°49N×162°77E, h42km±16km, MI3.9,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.72**	**2**	*eP*	Pn	20 23 30.4	+0.7
KBTR				*eS*	Sn	20 23 41.4	+1.8
KBG	**Krutoberegovo**	**0.77**	**357**	*eP*	Pn	20 23 30.9	+0.6
SMKR	**Semkarok**	**1.32**	**327**	*eP*	Pn	20 23 39.2	+1.3
SMKR				*eS*	Sn	20 23 55.9	+1.6
BZWR	**Bezymyannyi-We**	**1.37**	**291**	*eP*	Pn	20 23 40.2	+1.5
TUMD	**Tumrok D**	**1.38**	**259**	*eP*	Pn	20 23 40.6	+1.9
TUMD				*eS*	Sn	20 23 57.9	+2.1
KIRR	**Kirishev**	**1.45**	**290**	*eP*	Pn	20 23 41.0	+1.2
KLY	**Klyuchi**	**1.45**	**306**	*eP*	Pn	20 23 39.4	-0.2
KMNR	**Kamenistaya**	**1.46**	**282**	*eP*	Pn	20 23 42.4	+2.5
KOZ	**Kozyrevsk**	**1.73**	**290**	*eP*	Pn	20 23 46.2	+2.7
BKI	**Bering**	**1.85**	**98**	*eP*	Pn	20 23 48.0	+2.9
SRDR	**Sredinnyy**	**1.91**	**297**	*eP*	Pn	20 23 47.9	+2.0
SRDR				*eS*	Sn	20 24 11.6	+2.8
ESO	**Esso**	**2.34**	**282**	*eP*	Pn	20 23 54.3	+2.4
KII	**Karymskiy**	**2.41**	**234**	*eP*	Pn	20 23 55.9	+3.0
SPN	**Mys Shipunski**	**2.88**	**215**	*eP*	Pn	20 24 02.1	+2.8
SPN				*eS*	Sn	20 24 35.4	+2.6
SDLR	**Sedlovina**	**3.17**	**227**	*eP*	Pn	20 24 06.5	+3.1
KRER	**Koryakskii**	**3.21**	**229**	*eP*	Pn	20 24 07.7	+3.7
KRX	**Arik**	**3.22**	**230**	*eP*	Pn	20 24 06.8	+2.8
SMAR	**Somma**	**3.22**	**228**	*eP*	Pn	20 24 06.6	+2.5
AVH	**Avacha**	**3.24**	**228**	*eP*	Pn	20 24 08.5	+4.2
UGLR	**Uglovaya**	**3.25**	**227**	*eP*	Pn	20 24 07.1	+2.7
KOK	**Koryaka**	**3.27**	**229**	*eP*	Pn	20 24 08.2	+3.6
GNL	**Ganaly**	**3.33**	**239**	*eP*	Pn	20 24 09.2	+3.6
DALK	**Dalny**	**3.41**	**225**	*eP*	Pn	20 24 10.7	+4.3
OSSR	**Ossora**	**3.78**	**2**	*eP*	Pn	20 24 14.2	+2.7
KRMR	**Karymshinskiy**	**3.81**	**228**	*eP*	Pn	20 24 17.7	+5.7
PALN	**Palana**	**3.92**	**338**	*eP*	Pn	20 24 18.7	+5.2
GRL	**Gorelyy**	**4.04**	**225**	*eP*	Pn	20 24 19.0	+3.7
MTVR	**Mutnovka**	**4.05**	**224**	*eP*	Pn	20 24 18.6	+3.2
ASAK	**Asacha**	**4.24**	**225**	*eP*	Pn	20 24 23.1	+5.1

*NEIC **11** 20:33:40.5±0.9, 43°61N±0°05×105°38W±0°07, h0km±1km, ML3.0/36, Error ellipse: s-maj=11.2km s-min=4.7km az=318.0*
*IDC **11** 20:33:40.9±2.6, 43°23N×105°41W, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=53.7km s-min=11.0km az=154.0*

ISC 11 20:33:39.2±1.1, 43°41N±0°06×105°35W±0°05, h0km, n22, σ1s85/21, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K22A	**Casper**	**1.14**	**229**		**Pn**	**20 34 04.9**	**+2.3**
K22A				IAML		20 34 27.2	
	172nm,0.3s						
RSSD	**Black Hills**	**1.19**	**53**		**Pn**	**20 34 04.4**	**+1.0**
BW06	**Boulder Array**	**3.15**	**260**		**Pn**	**20 34 33.0**	**+2.8**
BW06				IAML		20 35 25.5	
	23nm,0.8s						
PD31	**Pinedale Array**	**3.15**	**260**		**Pb**	**20 34 34.2**	**-2.0**
PDAR	**Pinedale Array**	**3.15**	**260**	Pn	**Pb**	**20 34 34.1**	**-2.0**
	0.6nm,0.3s,baz=76,slow=17,SNR=30						
PDAR				Lg	Lg	20 35 17.3	
	3.6nm,0.3s,baz=82,slow=31,SNR=3.0 0.8nm,0.3s						
PDAR	**Pinedale Array**	**3.15**	**260**		**Pb**	**20 34 34.3**	**-1.8**
RLMT	**Red Lodge**	**3.29**	**303**		**Pn**	**20 34 33.7**	**+1.4**
RLMT				IAML		20 35 33.9	
	25nm,1.2s						
OGNE	**Ogallala**	**3.48**	**134**		**Pb**	**20 34 39.7**	**-2.1**
OGNE				IAML		20 35 59.8	
	57nm,0.9s						
ISCO	**Idaho Springs**	**3.61**	**183**		**Pb**	**20 34 42.1**	**-1.9**
YNE	**Yellowstone No**	**3.71**	**297**		**Pn**	**20 34 38.9**	**+0.9**
YNE				IAML		20 35 43.0	
	comp=N,36nm,0.6s						
YNE				IAML		20 35 48.9	
	comp=E,29nm,0.8s						
LOHW	**Long Hollow**	**3.83**	**275**		**Pn**	**20 34 42.1**	**+2.5**
LOHW				IAML		20 35 53.6	
	comp=E,13nm,3.6s						
LOHW				IAML		20 35 54.1	
	comp=E,14nm,1.0s						
FLWY	**Flagg Ranch**	**3.93**	**282**		**Pn**	**20 34 42.0**	**+1.0**
FLWY				IAML		20 35 54.5	
	comp=E,26nm,2.0s						
FLWY				IAML		20 36 01.1	
	comp=E,31nm,2.6s						
MOOW	**Moose Ponds**	**3.93**	**277**		**Pn**	**20 34 42.1**	**+1.0**
YHH	**Holmes Hill**	**4.20**	**291**		**Pn**	**20 34 44.8**	**+0.1**
RDMU	**Red Mountain**	**4.23**	**229**		**Pn**	**20 34 46.9**	**+1.8**
RDMU				IAML		20 36 07.4	
	comp=E,16nm,1.2s						
RDMU				IAML		20 36 25.5	
	comp=N,18nm,1.9s						
K30B	**Basset**	**4.27**	**98**	Pn	**Pn**	**20 34 46.4**	**+0.8**
YHL	**Hebgen Lake**	**4.44**	**291**	Pn	**Pn**	**20 34 47.6**	**-0.5**
YHL				IAML		20 36 16.4	
	comp=N,22nm,1.8s						
YHL				IAML		20 36 20.0	
	comp=E,25nm,1.2s						
TCUT	**Toone Canyon**	**5.04**	**245**		**Pn**	**20 34 58.4**	**+2.1**
DGMT	**Dagmar**	**5.13**	**9**	Pn	**Pn**	**20 34 59.1**	**+1.8**
EGMT	**Eagleton**	**5.55**	**328**	Pn	**Pn**	**20 35 04.3**	**+1.2**
I10CA	**LAC DU BONNET**	**9.33**	**40**	I	I	21 32 50.0	
	baz=223,slow=252,SNR=1.3						
ULM	**Lac du Bonnet**	**9.43**	**40**	Pn	**Pn**	**20 35 58.3**	**+2.1**
	comp=E,0.2nm,0.3s,baz=232,slow=10,SNR=1.7						
ULM				Lg	Lg	20 38 34.6	
	comp=E,0.1nm,0.3s,baz=311,slow=21,SNR=4.8 comp=E,1.1nm,0.5s						

*IDC **11** 20:40:50.0±1.4, 35°19N×27°94E, h0km, mb3.6/4, mbtmp3.4/8, ML3.2/3, Error ellipse: s-maj=33.1km s-min=19.5km az=2.0*
*AFAD **11** 20:40:52.1, 35°03N×28°21E, h8km±5km, ML2.7*
*ISK **11** 20:40:52.5, 35°23N×27°83E, h11km, ML2.9/18*
*THE **11** 20:40:53.9, 35°N±15°×2°8E±1°6, h4km±19km, M2.7/5, MLh2.7/5*
*ATH **11** 20:40:53.2, 35°19N×27°74E, h7km±2km, ML2.9/6, Manual Solution by F.Xalaris First location: 2020/02/11 20:42:19, This location: 2021/11/18 11:04:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 11 20:40:50.5±1.7, 35°10N±0°05×27°87E±0°03, h5km±11km, n50, σ1s55/68, mb3.3/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.73**	**308**	Pg	**Pg**	**20 41 04.7**	**+0.2**
KARP				Sg	**Sb**	**20 41 14.7**	**-1.4**
KARP	**Karpathos**	**0.73**	**308**	P	**Pg**	**20 41 04.0**	**-0.4**
KARP				S	**Sg**	**20 41 13.4**	**-0.5**
KARP	**Karpathos**	**0.73**	**308**	P	**Pg**	**20 41 04.7**	**+0.2**
KARP				S	**Sg**	**20 41 12.6**	**-1.4**
ARG	**Arkhangelos**	**1.14**	**11**	Pg	**Pg**	**20 41 12.8**	**+0.5**
ARG				Sg	**Sb**	**20 41 26.7**	**-1.0**
ARG	**Arkhangelos**	**1.14**	**11**	P	**Pg**	**20 41 12.6**	**+0.3**
ARG	**Arkhangelos**	**1.14**	**11**	P	**Pn**	**20 41 13.7**	**+0.6**
ARG				S	**Sn**	**20 41 27.9**	**-1.2**
ZKR	**Zakros**	**1.35**	**271**	Pn	**Pn**	**20 41 17.5**	**+1.4**
ZKR				Sn	**Sn**	**20 41 35.7**	**+1.3**
ZKR	**Zakros**	**1.35**	**271**	P	**Pn**	**20 41 17.3**	**+1.3**
ZKR	**Zakros**	**1.35**	**271**	P	**Pn**	**20 41 17.1**	**+1.0**
ZKR				S	**Sb**	**20 41 33.8**	**-0.1**
DAT	**Datca**	**1.65**	**352**	Pn	**Pn**	**20 41 20.5**	**+0.3**
DATC	**Datca-Mugla**	**1.67**	**354**	Pn	**Pn**	**20 41 20.5**	**+0.1**
DALY	**Dalyan (Mula)**	**1.83**	**20**	Pn	**Pn**	**20 41 22.9**	**+0.3**
NPS	**Neapolis**	**1.85**	**276**	P	**Pn**	**20 41 24.8**	**+1.8**
NPS				S	**Sn**	**20 41 47.8**	**+1.0**
NPS	**Neapolis**	**1.85**	**276**	P	**Pn**	**20 41 24.4**	**+1.4**
NPS				S	**Sn**	**20 41 46.5**	**-0.3**
BODT	**Bodrum**	**2.01**	**347**	Pn	**Pn**	**20 41 25.6**	**+0.4**
YER	**Yerkesik**	**2.06**	**9**	Pn	**Pn**	**20 41 26.5**	**+0.6**
YER	**Yerkesik**	**2.06**	**9**	P	**Pn**	**20 41 26.9**	**+1.1**
YER				S	**Sn**	**20 41 51.8**	**-0.2**
CAME	**Cameli-Denizli**	**2.18**	**32**	Pn	**Pn**	**20 41 28.5**	**+0.9**
THERA	**Ancient Thera,**	**2.32**	**304**	P	**Pn**	**20 41 30.0**	**+0.7**
THERA	**Ancient Thera,**	**2.32**	**304**	P	**Pn**	**20 41 30.1**	**+0.7**
ELL	**Elmali**	**2.34**	**45**	Pn	**Pn**	**20 41 31.2**	**+1.5**
AKUM	**Antalya-Kumluc**	**2.36**	**58**	P	**Pn**	**20 41 32.1**	**+2.3**
AKUM				S	**Sn**	**20 42 00.0**	**+0.8**
AKUM				IAML		20 42 15.0	
	comp=E,34nm,1.3s						
AKUM				IAML		20 42 26.0	
	comp=N,58nm,2.5s						
IDI	**Anoyia**	**2.44**	**275**	Pn	**Pn**	**20 41 34.1**	**+2.9**
	9.1nm,0.3s,baz=96,slow=13,SNR=19						
IDI	**Anoyia**	**2.44**	**275**	Pn	**Pn**	**20 41 33.0**	**+1.9**
IDI	**Anoyia**	**2.44**	**275**	P	**Pn**	**20 41 32.1**	**+0.9**
APMY	**Acipayam-Deniz**	**2.64**	**26**	Pn	**Pn**	**20 41 34.5**	**+0.7**
APE	**Apeiranthos**	**2.73**	**317**	Pn	**Pn**	**20 41 35.8**	**+0.7**
APE	**Apeiranthos**	**2.73**	**317**	P	**Pn**	**20 41 35.8**	**+0.7**
SMG	**Samos**	**2.73**	**343**	P	**Pn**	**20 41 36.1**	**+1.0**
KORT	**Korkueli**	**2.77**	**46**	P	**Pn**	**20 41 38.0**	**+2.4**
KORT				S	**Sb**	**20 42 17.0**	**+2.1**
KORT				IAML		20 42 17.0	
	comp=E,36nm,0.5s						
KORT				IAML		20 42 29.0	
	comp=N,25nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**2.84**	**0**	Pn	**Pn**	**20 41 37.5**	**+0.8**
NAZL	**Nazilli-Aydin**	**2.88**	**7**	Pn	**Pn**	**20 41 37.9**	**+0.8**
ODEM	**Odemis-Izmir**	**3.18**	**3**	Pn	**Pn**	**20 41 41.9**	**+0.7**
IMMV	**Iera Moni Meta**	**3.20**	**278**	Pn	**Pn**	**20 41 44.2**	**+2.7**
KULA	**Kula-Manisa**	**3.47**	**10**	Pn	**Pn**	**20 41 45.9**	**+0.6**
GAZI	**Gazipasa**	**3.80**	**71**	P	**Pn**	**20 41 49.5**	**-0.3**
GAZI				S	**Sn**	**20 42 33.4**	**-1.4**
GAZI				IAML		20 42 35.0	
	comp=E,36nm,0.5s						
GAZI				IAML		20 43 10.0	
	comp=N,24nm,1.3s						
SEDI	**Konya, Seydise**	**3.92**	**52**	P	**Pn**	**20 41 54.0**	**+2.5**
SEDI				S	**Sn**	**20 42 42.4**	**+4.3**
SEDI				IAML		20 42 45.0	
	comp=N,22nm,0.8s						
SEDI				IAML		20 42 45.0	
	comp=E,21nm,0.6s						
YVAC	**Isparta, Yalva**	**4.17**	**40**	P	**Pn**	**20 41 56.9**	**+2.0**
YVAC				IAML		20 43 37.0	
	comp=E,12nm,3.1s						
YVAC				IAML		20 43 39.0	
	comp=N,9.3nm,2.4s						
DOGA	**KONYA_Doganhis**	**4.29**	**44**	P	**Pn**	**20 41 58.3**	**+1.8**
DOGA				S	**Sn**	**20 42 50.0**	**+2.9**
DOGA				IAML		20 42 56.0	
	comp=E,12nm,1.1s						
DOGA				IAML		20 42 58.0	
	comp=N,11nm,0.8s						
UCKU	**Afyonkarahisar**	**4.54**	**38**	P	**Pn**	**20 42 01.5**	**+1.5**
UCKU				IAML		20 43 24.0	
	comp=N,9.1nm,2.3s						
UCKU				IAML		20 44 01.0	
	comp=E,7.7nm,3.4s						
KKBE	**Karaman, Kazim**	**4.62**	**61**	P	**Pn**	**20 42 03.2**	**+2.1**
KKBE				S	**Sn**	**20 42 56.2**	**+1.0**
KKBE				IAML		20 42 59.0	
	comp=E,19nm,0.8s						
KKBE				IAML		20 43 16.0	
	comp=N,15nm,2.6s						
PYL	**PYLOS**	**5.28**	**292**	P	**Pn**	**20 42 10.7**	**+0.7**
KERG	**Konya-Eregli**	**5.56**	**64**	P	**Pn**	**20 42 15.4**	**+1.4**
KERG				S	**Sn**	**20 43 15.6**	**-2.9**
KERG				IAML		20 43 32.0	
	comp=E,4.6nm,0.5s						
KERG				IAML		20 44 32.0	
	comp=N,9.4nm,4.0s						
BRTR	**Keskin Array B**	**6.51**	**43**	Pn	**Pn**	**20 42 27.3**	**+0.1**
	0.1nm,0.3s,baz=158,slow=16,SNR=

BEO ***11*** *21:02:35.0±0.8, 40.°46N×20.°80E, h0km, ML2.7/8*
SKO ***11*** *21:02:35.2, 40.°36N×20.°78E, h0km, ML3.1*
ISC 11 21:02:34.1±1.0, **40.°43N**±0.°02×**20.°74E**±0.°02, **h6**km±8km, **n57**, **σ1s10**/94, **5C-4D**, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.20**	**11**	Pg		**Pg**	**21 02 38.0**	**-0.1**
KBN				Sg		**Sg**	**21 02 41.3**	**+0.4**
KBN				AML		AML	21 02 42.2	
	39nm,0.4s							
KBN				AMd			21 03 01.9	
KBN	**Korca**	**0.20**	**11**	P		**Pg**	**21 02 38.3**	**+0.1**
KBN				S		**Sg**	**21 02 41.3**	**+0.4**
NEST	**Nestorio**	**0.24**	**93**	Pg		**Pg**	**21 02 38.8**	**0.0**
NEST				Sg		**Sg**	**21 02 42.4**	**+0.3**
NEST				AML		AML	21 02 43.6	
	12nm,0.3s							
NEST				AML		AML	21 02 44.0	
	13nm,0.4s							
NEST				AMd			21 03 08.2	
NEST	**Nestorio**	**0.24**	**93**	P		**Pg**	**21 02 39.2**	**+0.4**
NEST				S		**Sg**	**21 02 43.2**	**+1.1**
PENT	**Pentalofos**	**0.39**	**127**	P		**Pg**	**21 02 41.5**	**-0.1**
PENT				S		**Sg**	**21 02 47.8**	**+1.2**
KPRO	**Kipourio**	**0.67**	**134**	P		**Pg**	**21 02 46.5**	**-0.5**
KPRO				S		**Sg**	**21 02 56.9**	**+1.1**
KPRO	**Kipourio**	**0.67**	**134**	P		**Pg**	**21 02 46.5**	**-0.5**
KPRO				S		**Sg**	**21 02 57.1**	**+1.3**
OHR	**Ohrid**	**0.69**	**4**	*i* Pg		**Pb**	**21 02 48.1**	**-0.4**
OHR				*i* Sg		**Sb**	**21 02 57.9**	**-0.4**
OHR				*e*Lg		Lg	21 02 58.5	
	comp=N,453nm,0.6s							
OHR				*e*Lg		Lg	21 02 59.4	
	comp=E,1μm,0.8s							
JAN	**Janina**	**0.77**	**173**	P		**Pg**	**21 02 48.7**	**-0.2**
JAN				S		**Sg**	**21 02 59.5**	**+0.5**
JAN	**Janina**	**0.77**	**173**	P		**Pg**	**21 02 48.5**	**-0.4**
JAN				S		**Sg**	**21 02 59.5**	**+0.5**
KZN	**Kozani**	**0.80**	**98**	P		**Pg**	**21 02 49.6**	**+0.1**
KZN				S		**Sb**	**21 03 01.0**	**-0.6**
KZN	**Kozani**	**0.80**	**98**	P		**Pg**	**21 02 49.5**	**+0.1**
KZN				S		**Sb**	**21 03 00.7**	**-0.8**
PRMD	**Pramanda**	**0.94**	**163**	P		**Pg**	**21 02 51.6**	**-0.5**
PRMD				S		**Sg**	**21 03 06.1**	**+1.8**
PRMD	**Pramanda**	**0.94**	**163**	P		**Pg**	**21 02 51.7**	**-0.4**
PRMD				S		**Sg**	**21 03 04.6**	**+0.4**
KEK	**Kerkira**	**1.01**	**226**	P		**Pg**	**21 02 53.2**	**-0.3**
KEK				S		**Sg**	**21 03 07.1**	**+0.5**
KEK	**Kerkira**	**1.01**	**226**	P		**Pg**	**21 02 51.7**	**-1.8**
TIR	**Tirane**	**1.13**	**325**	Pn		**Pg**	**21 02 55.5**	**-0.3**
TIR				Sn		**Sb**	**21 03 12.0**	**+1.0**
TIR				AML		AML	21 03 17.2	
	comp=E,0.4nm,0.7s							
TIR				AMd			21 03 41.9	
TETR	**Tetrakomo, Epi**	**1.16**	**159**	P		**Pg**	**21 02 55.3**	**-1.0**
TETR	**Tetrakomo, Epi**	**1.16**	**159**	P		**Pg**	**21 02 55.4**	**-1.0**
TETR				S		**Sg**	**21 03 11.5**	**+0.2**
PHP	**Peshkopia**	**1.28**	**350**	Pn		**Pg**	**21 02 57.6**	**-1.0**
PHP				Sn		**Sb**	**21 03 15.5**	**+0.2**
PHP				AML		AML	21 03 22.4	
	comp=E,1.2nm,0.9s							
PHP				AMd			21 03 52.9	
PHP	**Peshkopia**	**1.28**	**350**	P		**Pg**	**21 02 57.8**	**-0.8**
PHP				S		**Sn**	**21 03 16.1**	**+0.1**
THL	**Klokotos Trika**	**1.31**	**131**	P		**Pg**	**21 02 57.8**	**-1.3**
THL				S		**Sn**	**21 03 17.8**	**+1.2**
THL	**Klokotos Trika**	**1.31**	**131**	P		**Pg**	**21 02 57.5**	**-1.7**
THL				S		**Sg**	**21 03 15.3**	**-0.8**
GRG	**Griva**	**1.37**	**67**	P		**Pg**	**21 02 59.0**	**-1.5**
GRG				S		**Sn**	**21 03 20.3**	**+2.0**
LIT	**Litokhoron**	**1.38**	**103**	P		**Pn**	**21 02 59.8**	**-0.1**
LIT				S		**Sn**	**21 03 19.9**	**+1.4**
AMPL	**Ampelaki**	**1.55**	**166**	P		**Pn**	**21 03 02.5**	**+0.3**
SKO	**Skopje**	**1.63**	**19**	*i* Pg		**Pg**	**21 03 05.0**	**-0.4**
SKO				*i* Sg		**Sg**	**21 03 27.9**	**+1.3**
LKD2	**Lefkada island**	**1.64**	**182**	Sn		**Sg**	**21 03 28.2**	**+1.6**
LKD2				AML		AML	21 03 37.9	
	comp=E,0.6nm,0.6s							
VAY	**Valandovo**	**1.65**	**57**	*i* Pg		**Pn**	**21 03 04.2**	**+0.5**
VAY				*i* Sg		**Sg**	**21 03 28.3**	**+1.0**
VAY				*e*Lg		Lg	21 03 29.4	
	comp=N,92nm,0.7s							
VAY				*e*Lg		Lg	21 03 31.1	
	comp=E,99nm,0.8s							
EVR	**Evrytania**	**1.72**	**151**	P		**Pn**	**21 03 04.4**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.77**	**142**	P		**Pn**	**21 03 05.8**	**+0.5**
HORT	**Hortiatis**	**1.81**	**84**	P		**Pn**	**21 03 05.6**	**-0.3**
ULC	**Ulcinj**	**1.90**	**324**	⇓*i* Pn		**Pb**	**21 03 08.8**	**-0.4**
ULC				*i* Sn		**Sg**	**21 03 38.0**	**+2.7**
PVY	**Plav**	**2.24**	**345**	⇓*i* Pn		**Pb**	**21 03 14.4**	**-0.7**
PVY				*i* Sn		**Sg**	**21 03 45.5**	**-0.7**
SRS	**Serrai**	**2.28**	**71**	*e*Pn		**Pb**	**21 03 14.1**	**-1.5**
PDG	**Podgorica**	**2.29**	**331**	*e*Pn		**Pn**	**21 03 14.3**	**+1.9**
PDG				*i* Sn		**Sg**	**21 03 46.9**	**-0.8**
PDG	**Podgorica**	**2.29**	**331**	*e*Pn		**Pb**	**21 03 14.5**	**-1.3**
BUM	**Brajici-Budva**	**2.33**	**324**	⇑*i* Pn		**Pn**	**21 03 14.3**	**+1.3**
BUM				*i* Sn		**Sg**	**21 03 47.9**	**-1.1**
BOSS	**Bosilegrad**	**2.45**	**32**	*e*Pn		**Pn**	**21 03 15.0**	**+0.4**
CEME	**Cevo**	**2.52**	**328**	⇑*i* Pn		**Pn**	**21 03 16.8**	**+1.2**
CEME				*i* Sn		**Sb**	**21 03 51.9**	**+0.8**
BARS	**Barje**	**2.52**	**18**	*e*Pn		**Pn**	**21 03 16.0**	**+0.4**
IVA	**Berane**	**2.52**	**346**	⇓*i* Pn		**Pb**	**21 03 19.4**	**-0.5**
IVA				*i* Sn		**Sg**	**21 03 52.6**	**-2.6**
KOME	**Kolasin**	**2.59**	**340**	⇓*i* Pn		**Pb**	**21 03 19.6**	**-1.4**
KOME				*i* Sn		**Sb**	**21 03 53.8**	**+0.7**
NKME	**Niksic**	**2.69**	**331**	⇑*i* Pn		**Pn**	**21 03 20.2**	**+2.2**
NKME				*i* Sn		**Sb**	**21 03 56.8**	**+0.8**
SELS	**Selova**	**2.81**	**6**	*e*Pn		**Pn**	**21 03 19.8**	**+0.3**
VTS	**Vitosha**	**2.88**	**40**	*e*Pn		**Pn**	**21 03 20.9**	**+0.2**
SJES	**Sjenica**	**2.89**	**349**	*e*Pg		**Pb**	**21 03 25.1**	**-1.0**
SJES				*e*Sg		**Sg**	**21 04 06.8**	**-0.1**
TREB	**Trebinje**	**2.91**	**323**	*e*Pn		**Pn**	**21 03 21.5**	**+0.6**
BRY	**Bratogost**	**2.97**	**327**	*e*Pn		**Pb**	**21 03 25.9**	**-1.6**
BRY				*i* Sn		**Sb**	**21 04 03.1**	**-1.0**
PLE	**Pljevlja**	**3.07**	**341**	⇑*i* Pn		**Pn**	**21 03 25.7**	**+2.5**
PLE				*i* Sn		**Sb**	**21 04 05.1**	**-1.9**
UPM	**Unac-Piva**	**3.09**	**334**	⇑*i* Pn		**Pn**	**21 03 26.3**	**+2.7**
UPM				*i* Sn		**Sb**	**21 04 06.0**	**-1.7**
IVAS	**Ivanjica**	**3.18**	**352**	*e*Pn		**Pn**	**21 03 24.3**	**-0.4**
ZAPS	**Zavoj**	**3.18**	**26**	*e*Pn		**Pn**	**21 03 25.6**	**+0.9**
BOVS	**Bovan**	**3.29**	**12**	*e*Pn		**Pn**	**21 03 26.3**	**+0.2**
GRUS	**Gruza**	**3.46**	**360**	*e*Pn		**Pn**	**21 03 30.7**	**+2.2**
ZAGS	**Zajecar**	**3.56**	**18**	*e*Pn		**Pn**	**21 03 30.1**	**+0.2**
FRGS	**Fruska Gora**	**4.78**	**352**	*e*Pn		**Pn**	**21 03 47.1**	**+0.5**

IDC ***11*** *21:04:13.5±0.5, 4.°52N×83.°39E, h0km, mb4.3/27, mbtmp4.3/27, MS3.7/28, Error ellipse: s-maj=16.4km s-min=14.7km az=46.0*
NEIC ***11*** *21:04:16.4±2.0, 4.°51N±0.°08×83.°46E±0.°07, h10km±1km, mb4.7/51, Error ellipse: s-maj=14.2km s-min=11.7km az=182.0*
ISC 11 21:04:15.9±0.7, **4.°55N**±0.°06×**83.°47E**±0.°05, **h13**km±3km, **n208**, **σ1s22**/193, **mb4.7**/62, **MS3.8**/27, **9C-13D, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**3.86**	**315**	Pn		**Pn**	**21 05 16.7**	**+1.6**
	689nm,0.3s,baz=130,slow=12,SNR=2448							
PALK				Sn		**Sn**	**21 05 56.1**	**-4.2**
	614nm,0.3s,baz=210,slow=18,SNR=18							
PALK				LR		LR	21 06 01.1	
	comp=Z,183nm,19.9s,baz=174,slow=28							
PALK	**Pallekele**	**3.86**	**315**			**Pn**	**21 05 17.4**	**+2.4**
PALK	**Pallekele**	**3.86**	**315**	P		**Pn**	**21 05 17.3**	**+2.2**
PALK				S		**Sn**	**21 05 57.9**	**-2.5**
TRD	**Trivandrum**	**7.57**	**302**	*e*P		**Pn**	**21 06 05.8**	**-0.2**
TRD				*e*S		Sn	21 07 23.4	-8.5
TRD				IAML			21 07 28.9	
	comp=N,389nm,0.2s							
TRD				IAML			21 07 28.9	
	comp=E,409nm,0.3s							
MDRS	**Chennai**	**9.04**	**340**	*e*P		**Pn**	**21 06 25.1**	**-1.1**
MDRS				*e*S		Sn	21 07 58.3	-10
MDRS				IAML			21 08 02.9	
	comp=E,451nm,0.2s							
MDRS				IAML			21 08 03.2	
	comp=N,379nm,0.2s							
HMDM	**Hanimaadhoo**	**10.48**	**283**	Pn		**Pn**	**21 06 45.9**	**0.0**
HMDM	**Hanimaadhoo**	**10.48**	**283**	P		**Pn**	**21 06 47.3**	**+1.4**
	comp=N,207nm,1.4s							
CMBY	**CAMPBELL BAY**	**10.68**	**76**	*e*P		**Pn**	**21 06 49.4**	**+0.7**
CMBY				*e*S		**Sn**	**21 08 42.2**	**-6.1**
CMBY				IAML			21 12 14.1	
	comp=E,349nm,1.8s							
CMBY				IAML			21 12 15.9	
	comp=N,500nm,1.4s							
KAAM	**Kaadhehdhoo**	**11.22**	**249**	Pn		**Pn**	**21 06 56.5**	**+0.5**
KAAM	**Kaadhehdhoo**	**11.22**	**249**	P		**Pn**	**21 06 59.5**	**+3.5**
	comp=N,160nm,1.2s							
PBA	**Port Blair**	**11.57**	**52**	Pn		**Pn**	**21 07 02.5**	**+1.6**
PBA	**Port Blair**	**11.57**	**52**	*e*P		**Pn**	**21 07 01.2**	**+0.3**
PBA				*e*S		Sn	21 09 01.4	-8.7
PBA				IAML			21 09 10.8	
	comp=N,170nm,0.5s							
PBA				IAML			21 09 11.8	
	comp=E,114nm,0.4s							
DGPR	**DIGLIPUR**	**12.67**	**47**	*e*P		**Pn**	**21 07 16.8**	**+0.8**
DGPR				*e*S		Sn	21 09 27.9	-9.1
DGPR				IAML			21 09 30.9	
	comp=N,73nm,0.6s							
DGPR				IAML			21 09 32.2	
	comp=E,53nm,0.4s							
VIS	**Vishakhapatnam**	**13.09**	**359**	*e*P		**Pn**	**21 07 20.6**	**-1.0**
VIS				*e*S		Sn	21 09 34.8	-12
VIS				IAML			21 09 36.4	
	comp=N,68nm,0.2s							
VIS				IAML			21 09 38.0	
	comp=E,79nm,0.0s							
HYB	**Hyderabad**	**13.66**	**340**	*e*P		Pn	21 07 25.1	-4.5
HYB				*e*S		**Sn**	**21 10 03.8**	**+2.4**
GOA	**Goa**	**14.43**	**320**	*e*P		**Pn**	**21 07 40.8**	**+0.8**
GOA				*e*S		**Sn**	**21 10 22.6**	**+2.6**
GOA				IAML			21 10 53.9	
	comp=N,243nm,0.2s							
GOA				IAML			21 10 55.1	
	comp=E,165nm,0.7s							
GSI	**Gunungsitoli**	**14.45**	**102**	Pn		**Pn**	**21 07 42.1**	**+1.8**
PSI	**Prapat**	**15.52**	**96**	P		**Pn**	**21 08 00.9**	**+1.8**
RPSI	**Rantau Prapat**	**15.53**	**96**	P		**P**	**21 07 58.2**	**-0.8**
RPSI				IAmb		IAmb	21 08 01.1	
	comp=Z,12nm,0.4s							
DGAR	**Diego Garcia**	**16.19**	**223**			**Pn**	**21 08 04.7**	**+1.4**
H08S3	**Diego Garcia H**	**16.33**	**222**	Pn		**Pn**	**21 08 05.5**	**+0.7**
H08S3				Sn		Sn	21 10 49.6	-16
H08S3				T		T	21 25 16.3	
	baz=33,slow=75,SNR=64							
H08S2	**Diego Garcia H**	**16.34**	**222**	T		T	21 25 12.6	
	baz=33,slow=75,SNR=8.8							
H08S1	**Diego Garcia H**	**16.35**	**222**	T		T	21 25 18.5	
	baz=33,slow=75,SNR=5.0							
KULM	**Kulim**	**17.13**	**87**			**P**	**21 08 19.1**	**+2.2**
IPM	**Ipoh**	**17.50**	**90**			**Pn**	**21 08 20.8**	**+0.9**
BRDH	**Bariadhala**	**19.68**	**23**	LR		LR	21 16 23.7	
	comp=Z,193nm,21.6s,baz=202,slow=37							
CM31	**Chiang Mai Arr**	**20.48**	**46**	P		**P**		**21 08 55.6**	**+1.9**
CMAR	**Chiang Mai Arr**	**20.48**	**46**	P		**P**		**21 08 55.8**	**+2.1**
	comp=Z,3.5nm,0.8s,baz=226,slow=10,SNR=21							
CMAR				PcP		**PcP**	**21 13 05.5**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=218,slow=1.9,SNR=5.9							
CMAR				LR		LR	21 16 34.3	
	comp=Z,69nm,21.1s,baz=235,slow=36							
	comp=Z,3.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**20.48**	**46**	P		**P**	**21 08 55.0**	**+1.3**
CHTO	**Chiang Mai**	**20.72**	**46**	P		**P**	**21 08 57.1**	**+0.9**
SHL	**Shillong**	**22.40**	**20**	P		**P**	**21 09 14.8**	**+0.4**
SHL				IAmb		IAmb	21 09 28.0	
	comp=Z,33nm,1.0s							
TNCH	**TengChong**	**24.97**	**34**	*e*P		P	21 09 50.1	+11
TNCH				pP		pwP	21 09 55.4	+7.6
TNCH				pmax		pmax		
	comp=Z,12nm,2.7s							
LSA	**Lhasa**	**26.05**	**15**	P		**P**	**21 09 50.9**	**+1.3**
LSA				IAmb		IAmb	21 10 18.6	
	comp=Z,9.8nm,0.8s							
LSA	**Lhasa**	**26.05**	**15**	P		**P**	**21 09 47.8**	**-1.8**
LSA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
LEM	**Lembang**	**26.62**	**115**	LR		LR	21 20 01.4	
	comp=Z,74nm,18.9s,baz=315,slow=36							
KMI2	**Kunming**	**27.61**	**40**	P		**P**	**21 10 05.1**	**+1.7**
KMI2				pmax		pmax		
	comp=Z,4.0nm,1.0s							
PZH	**PanZhiHua**	**27.96**	**37**	P		**P**	**21 10 09.8**	**+3.3**
CD2	**Chengdu**	**32.44**	**34**	P		**P**	**21 10 46.9**	**+0.9**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.9s							
KSH2	**Kashi**	**35.18**	**349**	P		**P**	**21 11 11.4**	**+1.6**
KSH2				pP		pwP	21 11 16.3	-1.8
KSH2				sP		sP	21 11 21.8	+8.1
KSH2				pmax		pmax		
	comp=Z,1.0nm,0.9s							
ENH	**Enshi**	**35.45**	**41**	P		**P**	**21 11 11.1**	**-1.0**
ENH				IAmb		IAmb	21 11 27.4	
	comp=Z,8.5nm,0.9s							
LZDM	**Lanzhou Array**	**36.39**	**28**	P		**P**	**21 11 20.6**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=236,slow=4.7,SNR=5.2							
	comp=Z,1.0nm,0.4s							
LZH	**Lanzhou**	**36.56**	**28**	*e*P		**P**	**21 11 23.4**	**+1.7**
LZH				pP		pwP	21 11 29.6	-0.4
LZH				PcP		**PcP**	**21 13 46.0**	**+0.8**
LZH				pmax		pmax		
	comp=Z,15nm,1.2s							
LZH				LR		LR		
	comp=Z,240nm,12.7s							
LZH				LR		LR		
	comp=Z,180nm,13.1s							
LZH				LR		LR		
	comp=Z,190nm,13.4s							
TARG	**Taragay, Kyrgy**	**37.36**	**353**	P		**P**	**21 11 27.6**	**-1.2**
TARG				IAmb		IAmb	21 11 53.1	
	comp=Z,17nm,1.3s							
TOLI2	**Tolitoli**	**37.41**	**94**	P		**P**	**21 11 29.1**	**+0.1**
TOLI2				IAmb		IAmb	21 11 47.1	
	comp=Z,10nm,0.8s							
KAPI	**Kappang**	**37.46**	**104**	LR		LR	21 26 13.0	
	comp=Z,65nm,20.4s,baz=266,slow=35							
GTA2	**Gaotai**	**37.77**	**21**	*e*P		**P**	**21 11 32.4**	**+0.4**
GTA2				sP		pwP	21 11 46.2	+5.9
GTA2				PcP		**PcP**	**21 13 49.8**	**+1.1**
GTA2				pmax		pmax		
	comp=Z,5.0nm,1.4s							
AAK	**Ala-Archa**	**38.76**	**349**	LR		LR	21 27 31.9	
	comp=Z,114nm,21.8s,baz=236,slow=36							
WMQ	**Urumqi**	**39.29**	**5**	*e*P		**P**	**21 11 47.5**	**+3.0**
KK31	**Karatay Array**	**40.08**	**345**	P		**P**	**21 11 51.7**	**+0.7**
KKAR	**Karatay Array**	**40.08**	**345**	P		**P**	**21 11 51.6**	**+0.6**
LYN	**LuoYang**	**40.16**	**38**	*e*P		**P**	**21 11 49.9**	**-2.0**
LYN				pP		pwP	21 12 00.1	-0.1
RAYN	**Ar Rayn**	**41.18**	**301**	P		**P**	**21 12 01.2**	**+0.7**
RAYN				IAmb		IAmb	21 12 01.7	
	comp=Z,6.9nm,0.5s							
MKAR	**Makanchi Array**	**42.09**	**359**	P		**P**	**21 12 07.8**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=190,slow=8.5,SNR=6.8							
MKAR				PP		**PP**	**21 13 46.3**	**+1.1**
	comp=Z,1.7nm,1.0s,baz=178,slow=10,SNR=3.5							
	comp=Z,0.8nm,0.9s							
MKAR	**Makanchi Array**	**42.09**	**359**	P		**P**	**21 12 08.3**	**+0.7**
MAKZ	**Makanchi**	**42.12**	**358**	P		**P**	**21 12 08.7**	**+0.9**
BATI	**Baumata**	**42.63**	**110**	LR		LR	21 31 25.7	
	comp=Z,112nm,18.6s,baz=260,slow=38							
NJ2	**Nanjing**	**42.96**	**46**	*e*P		**P**	**21 12 16.6**	**+1.7**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.6s							
BTO2	**Baotou**	**43.14**	**30**	*e*P		**P**	**21 12 17.3**	**+0.9**
BTO2				pP		**sP**	**21 12 22.0**	**+1.6**
BTO2				sP		**pwP**	**21 12 24.3**	**-0.4**
BTO2				pmax		pmax		
	comp=Z,14nm,0.7s							
BTO2				pmax		pmax		
	comp=Z,180nm,4.0s							
HNS	**HongShan**	**43.41**	**37**	⇓P		**P**	**21 12 19.4**	**+1.0**
HNS				pmax		pmax		
	comp=Z,8.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**44.07**	**31**	*e*P		**P**	**21 12 24.4**	**+0.6**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,110nm,6.6s							
FURI	**Furi**	**44.67**	**278**	LR		LR	21 28 10.4	
	comp=Z,52nm,19.4s,baz=80,slow=32							
KIBK	**Kibwezi**	**45.91**	**262**	P		**P**	**21 12 40.1**	**+1.3**
KIBK				IAmb		IAmb	21 12 41.2	
	comp=Z,8.5nm,1.2s							
BJT	**Baijiatuau**	**45.99**	**35**	P		**P**	**21 12 40.0**	**+1.0**
BJI2	**Beijing**	**45.99**	**35**	P		**P**	**21 12 40.2**	**+1.2**
BJI2				pmax		pmax		
	comp=Z,3.0nm,0.8s							
KURBB	**Kurchatov Arra**	**46.10**	**356**	P		**P**	**21 12 39.0**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=176,slow=7.3,SNR=7.9							
KURBB				PcP		**PcP**	**21 14 14.3**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=194,slow=2.9,SNR=2.4							
	comp=Z,0.7nm,0.4s							
KURK	**Kurchatov**	**46.19**	**356**	P		**P**	**21 12 39.8**	**-0.5**
SONM	**Songino Array**	**47.40**	**21**	P		**P**	**21 12 51.3**	**+1.2**
	comp=Z,6.3nm,0.7s,baz=203,slow=8.4,SNR=38							
	comp=Z,6.3nm,0.7s							
SONM	**Songino Array**	**47.40**	**21**	P		**P**	**21 12 50.8**	**+0.8**
SONM				IAmb		IAmb	21 13 14.1	
	comp=Z,6.3nm,0.9s							
ULN	**Ulaanbaatar**	**47.66**	**21**	P		**P**	**21 12 52.1**	**-0.1**
ULN				IAmb		IAmb	21 13 10.3	
	comp=Z,3.8nm,0.9s							
LODK	**Lodwar**	**48.00**	**271**	P		**P**	**21 12 55.9**	**+0.7**
LODK				IAmb		IAmb	21 12 58.3	
	comp=Z,6.6nm,0.9s							
XLT	**XiLinHaoTe**	**48.58**	**31**	*e*P		**P**	**21 12 59.4**	**+0.1**
XLT				pP		pwP	21 13 11.4	+3.8
XLT				pmax		pmax		
	comp=Z,7.0nm,1.1s							
AB31	**Akbulak array**	**48.82**	**340**	P		**P**	**21 13 00.6**	**-0.2**
ABKAR	**Akbulak array**	**48.82**	**340**	P		**P**	**21 13 01.0**	**+0.1**
ZAA0	**Zalesovo Array**	**49.26**	**1**	P		**P**	**21 13 03.9**	**-0.2**
ZAA0				IAmb		IAmb	21 13 22.0	
	comp=Z,4.8nm,0.5s							
ZALV	**Zalesovo Beam**	**49.26**	**1**	P		**P**	**21 13 03.9**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=191,slow=6.9,SNR=15							
	comp=Z,2.5nm,0.6s							
ZALV	**Zalesovo Beam**	**49.26**	**1**	P		**P**	**21 13 04.4**	**+0.3**
BVAR	**Borovoye Array**	**49.51**	**350**	P		**P**	**21 13 04.6**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=161,slow=7.3,SNR=3.6							
BVAR				LR		LR	21 37 08.9	
	comp=Z,130nm,18.1s,baz=286,slow=40							
	comp=Z,0.6nm,0.6s							
MARD	**Mardin**	**50.82**	**316**	P		**P**	**21 13 17.5**	**+1.0**
ASF	**Jabal al Asfar**	**51.47**	**308**	LR		LR	21 36 25.8	
	comp=Z,84nm,18.2s,baz=41,slow=38							
KSRS	**Korea Array**	**52.12**	**45**	LR		LR	21 36 13.5	
	comp=Z,59nm,20.5s,baz=220,slow=37							
EIL	**Elat**	**52.16**	**304**	LR		LR	21 36 10.1	
	comp=Z,84nm,18.0s,baz=115,slow=37							
JNU	**Nakatsue**	**52.48**	**51**	LR		LR	21 35 20.0	
	comp=Z,84nm,20.0s,baz=356,slow=36							
KBZ	**Khabaz**	**52.90**	**324**	P		**P**	**21 13 32.2**	**+0.5**
	comp=Z,5.7nm,0.9s,baz=131,slow=4.1,SNR=7.7							
	comp=Z,5.7nm,0.9s							
MBAR	**Mbarara**	**52.93**	**266**	LR		LR	21 32 50.0	
	comp=Z,67nm,20.6s,baz=44,slow=32							
MMAI	**Mount Meron Ar**	**52.96**	**308**	P		**P**	**21 13 33.2**	**+0.8**
	comp=Z,3.6nm,0.9s,baz=110,slow=7.8,SNR=1.4							
MMAI				LR		LR	21 35 23.8	
	comp=Z,79nm,19.6s,baz=109,slow=35							
	comp=Z,3.6nm,0.9s							
KIV	**Kislovodsk**	**53.16**	**324**	P		**P**	**21 13 34.8**	**+1.0**
KIV	**Kislovodsk**	**53.16**	**324**	P		**P**	**21 13 33.9**	**+0.2**
	comp=Z,18nm,1.4s							
HILR	**Hailar Array B**	**54.33**	**28**	P		**P**	**21 13 42.5**	**+0.4**
	comp=Z,6.9nm,0.8s,baz=188,slow=9.0,SNR=6.8							
	comp=Z,6.9nm,0.8s							
ARTI	**Arti**	**55.42**	**343**	P		**P**	**21 13 49.2**	**-0.6**
ARTI				IAmb		IAmb	21 13 50.5	
	comp=Z,7.4nm,0.6s							
WB0	**Warramunga Arr**	**55.57**	**118**	P		**P**	**21 13 51.5**	**-0.1**
WRA	**Warramunga Arr**	**55.58**	**118**	P		**P**	**21 13 52.1**	**+0.4**
	comp=Z,10.0nm,0.8s,baz=293,slow=7.9,SNR=64							
	comp=Z,10.0nm,0.8s							
WRA	**Warramunga Arr**	**55.58**	**118**	P		**P**	**21 13 51.9**	**+0.2**
WRAB	**Tennant Creek**	**55.59**	**118**	P		**P**	**21 13 52.3**	**+0.6**
WR8	**Warramunga Arr**	**55.73**	**118**	P		**P**	**21 13 53.8**	**+1.1**
BNX	**BinXian**	**56.01**	**36**	⇓P		**P**	**21 13 54.5**	**+0.2**
BNX				pmax		pmax		
	comp=Z,14nm,0.8s							
ASAR	**Alice Springs**	**56.58**	**122**	P		**P**	**21 13 59.1**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=295,slow=7.3,SNR=25						

comp=Z,6.1nm,0.7s,baz=53,slow=7.5,SNR=9.5
comp=Z,6.1nm,0.7s
BOSA Boshof 64.91 236 P **P** **21 14 55.4 -0.2**
BOSA IAmb IAmb 21 14 57.3
comp=Z,8.4nm,1.0s
DOPR Dopca 64.91 319 ⇑P **P** **21 14 55.2 +0.1**
VOIR 64.94 319 ⇑P **P** **21 14 55.1 -0.4**
LUBAR Lubar, Ukraine 64.97 324 P **P** **21 14 54.2 -1.2**
MI30 MI30,Zelenitsa 65.07 325 P **P** **21 14 54.7 -1.3**
comp=Z,22nm,0.8s
KMPD K-Podol'skiy 65.20 322 P **P** **21 14 55.8 -1.1**
KMPD P **pP** **21 14 56.3 -3.6**
MI28 Mi28,Pidlybu 65.44 325 P **P** **21 14 56.8 -1.7**
BURAR Bucovina Array 65.61 321 P **P** **21 14 59.9 +0.1**
BURAR IAmb IAmb 21 15 01.5
comp=Z,3.9nm,0.8s
BURAR Bucovina Array 65.61 321 ⇑P **P** **21 15 00.1 +0.3**
MDB Medias 65.63 319 ⇓P **P** **21 15 00.7 +0.9**
BUR08 Bucovina Ar. S 65.64 321 P **P** **21 15 00.0 +0.1**
BUR08 IAmb IAmb 21 15 34.0
comp=Z,7.2nm,1.3s
STKA Stephens Creek 66.02 128 LR LR 21 42 49.8
comp=Z,37nm,19.6s,baz=238,slow=35
HERR Herculane 66.52 317 ⇓P **P** **21 15 05.9 +0.3**
RNPP5 Staryi Chortor 66.59 325 P **P** **21 15 05.9 0.0**
MARR Marisel-Cluj 66.63 319 ⇑P **P** **21 15 06.6 +0.2**
BOVS Bovan 66.64 316 ⇑P **P** **21 15 04.9 -1.4**
RNPP8 Varash 66.65 325 P **P** **21 15 05.6 -0.7**
YAK Yakutsk 66.75 22 P **P** **21 15 05.8 -0.8**
BZS Buzias 67.28 318 ⇓P **P** **21 15 10.6 +0.2**
KECS Kecovo 68.89 321 *e*P **P** **21 15 20.6 +0.1**
TSUM Tsumeb 68.96 248 LR LR 21 42 14.2
comp=Z,47nm,18.9s,baz=330,slow=33
MORH Mrgy, Hungar 69.44 318 ⇑P **P** **21 15 23.1 -0.8**
SUR Sutherland 69.80 233 LR LR 21 41 20.1
comp=Z,50nm,20.3s,baz=7.5,slow=32
OJC Ojcow 69.86 322 P **P** **21 15 26.3 -0.1**
FINES FINESS Array B 70.90 335 P **P** **21 15 32.2 -0.3**
comp=Z,5.5nm,0.9s,baz=111,slow=7.6,SNR=14
comp=Z,5.5nm,0.9s
FINES FINESS Array B 70.90 335 P **P** **21 15 31.7 -0.8**
MODS Modra-Piesok 70.91 320 *e*P **P** **21 15 33.4 +0.5**
TIXI Tiksi 72.75 14 LR LR 21 48 58.1
comp=Z,47nm,18.2s,baz=2.5,slow=37
TIXI Tiksi 72.75 14 P **P** **21 15 42.2 -1.2**
EDA Edea 73.10 273 P **P** **21 15 45.1 -1.6**
GERES GERESS Array B 73.33 320 P **P** **21 15 46.7 -0.8**
comp=Z,0.6nm,0.7s,baz=83,slow=8.0,SNR=1.9
comp=Z,0.6nm,0.7s
KEST Kesra 74.48 306 LR LR 21 50 45.6
comp=Z,79nm,18.0s,baz=320,slow=38
MA2 Magadan 74.71 29 LR LR 21 53 40.4
comp=Z,48nm,18.6s,baz=204,slow=40
ARCES ARCESS Array B 74.94 342 P **P** **21 15 56.5 +0.1**
comp=Z,5.0nm,0.7s,baz=122,slow=6.6,SNR=6.6
comp=Z,5.0nm,0.7s
ARCES ARCESS Array B 74.94 342 P **P** **21 15 56.5 +0.1**
ARCES IAmb IAmb 21 16 33.1
comp=Z,14nm,1.4s
HFS Hagfors 76.07 331 P **P** **21 16 02.2 -0.8**
comp=Z,5.9nm,0.8s,baz=112,slow=6.6,SNR=4.7
comp=Z,5.9nm,0.8s
TAM Tamanrasset 77.15 292 **P** **21 16 10.6 +0.5**
NOA NORSAR Array B 77.48 332 P **P** **21 16 09.9 -1.1**
comp=Z,1.9nm,0.8s,baz=101,slow=6.3,SNR=3.2
NOA LR LR 21 55 10.9
comp=Z,87nm,18.0s,baz=5.0,slow=40
comp=Z,1.9nm,0.8s
SPITS Spitsbergen Ar 80.96 349 P **P** **21 16 30.0 +0.3**
comp=Z,8.0nm,0.9s,baz=101,slow=2.9,SNR=6.0
comp=Z,8.0nm,0.9s
EKA Eskdalemuir Ar 84.37 325 P **P** **21 16 47.3 -0.5**
comp=Z,2.1nm,0.6s,baz=106,slow=6.6,SNR=6.2
comp=Z,2.1nm,0.6s
ESDC Sonseca Array 85.15 309 P **P** **21 16 52.3 0.0**
comp=Z,2.2nm,0.9s,baz=58,slow=3.4,SNR=11
comp=Z,2.2nm,0.9s
ESDC Sonseca Array 85.15 309 P **P** **21 16 51.3 -1.0**
ESDC IAmb IAmb 21 16 53.1
comp=Z,4.4nm,1.1s
MD01 Mideit array s 86.08 303 P **P** **21 16 57.2 +0.1**
DBIC Dimbokro 87.83 276 P **P** **21 17 05.3 -0.4**
comp=Z,2.6nm,0.7s,baz=114,slow=6.1,SNR=3.1
comp=Z,2.6nm,0.7s
DBIC Dimbokro 87.83 276 P **P** **21 17 05.1 -0.6**
DBIC IAmb IAmb 21 17 25.8
comp=Z,5.5nm,1.0s
ANM Nome 94.83 24 P **P** **21 17 38.0 +0.7**
ANM IAmb IAmb 21 17 57.4
comp=Z,4.5nm,0.8s
ILAR Eielson Array 101.62 20 P **Pdif** **21 18 08.6 +0.8**
comp=Z,0.3nm,0.7s,baz=278,slow=6.4,SNR=2.1
ULM Lac du Bonnet 125.42 359 PKP **PKPdf** **21 23 14.9 -1.9**
comp=Z,1.9nm,0.6s,baz=297,slow=2.3,SNR=3.1
TBI Tubuai 125.68 115 *e*LR LR 22 02 17.1
comp=Z,872nm,32.2s
PPT2 Papeete2 126.53 108 *e*LR LR 22 02 49.5
comp=Z,137nm,28.2s
PPT2 *e*LR LR 22 02 59.2
comp=Z,96nm,37.0s
BDFB Brasilia 131.10 253 PKP **PKPdf** **21 23 28.4 -0.3**
comp=Z,3.5nm,0.9s,baz=69,slow=6.0,SNR=3.6
PDAR Pinedale Array 131.44 13 PKP **PKPdf** **21 23 28.1 -0.8**
comp=Z,0.6nm,0.6s,baz=58,slow=3.5,SNR=7.4
PDAR Pinedale Array 131.44 13 PKPdf **PKPdf** **21 23 28.2 -0.7**
PSUT Pine Spring 134.22 19 PKPdf **PKPdf** **21 23 34.6 +0.4**
TAOE Nuku Hiva Isla 136.49 98 *e*LR LR 22 07 29.8
comp=Z,274nm,29.4s
U15A North Rim 136.65 19 PKPdf **PKPdf** **21 23 38.7 -0.2**
CPUP Villa Florida 136.73 236 PKP **PKPdf** **21 23 38.0 -0.9**
comp=Z,1.0nm,0.3s,baz=127,slow=3.2,SNR=3.2
PLCA Paso Flores 137.08 209 PKP **PKPdf** **21 23 36.8 -2.5**
comp=Z,0.8nm,0.4s,baz=212,slow=9.5,SNR=3.4
TPB05 Hovey Rd 144.13 10 PKPdf **PKPab** **21 23 50.1 +0.3**
BRDY Brady 144.29 4 PKPdf **PKPab** **21 23 50.1 -0.2**
ALPN Alpine 144.61 11 PKPdf **PKPab** **21 23 51.4 -0.2**
TX31 Lajitas Ar. Si 145.62 11 PKPdf **PKPdf** **21 23 54.2 -0.7**
TXAR Lajitas Array 145.62 11 PKPbc **PKPdf** **21 23 54.4 -0.6**
comp=Z,2.2nm,0.7s,baz=48,slow=1.9,SNR=19
TXAR Lajitas Array 145.62 11 PKPdf **PKPdf** **21 23 53.8 -1.2**
LPAZ La Paz 149.79 245 PKP **PKPdf** **21 24 01.1 -1.7**
comp=Z,2.3nm,0.7s,baz=135,slow=5.7,SNR=5.8
LPAZ PKPbc **sPKPdf** **21 24 06.5 -0.5**
comp=Z,3.1nm,0.6s,baz=46,slow=3.8,SNR=8.4

*NNC **11** 21:13:07.1±4.6,40.98N×82.72E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=33.4km s-min=18.0km az=171.0*
SOME 11 21:13:03.9,39.83N×80.35E,h15km,6C-1D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**3.39**	**349**	*e*P	Pb	21 14 03.6	-0.1
	4.9nm,0.5s						
SHLS				*e*S	Sb	21 14 46.5	+1.7
	27nm,0.7s						
UZB	**Uzynbulak**	**3.46**	**344**	*e*P	Pb	21 14 07.2	+2.3
	2.1nm,0.4s						
UZB				*e*S	Sg	21 14 52.9	-2.1
	2.3nm,0.2s						
PDGK	**Podgornoye**	**3.55**	**350**	⇑Pg	Pb	21 14 07.2	+0.7
	2.1nm,0.5s						
PDGK				⇑Sn	Sn	21 14 43.2	+2.8
	3.1nm,0.6s						
PDGK				⇓Lg	Lg	21 14 53.8	
	6.6nm,0.5s						
MAKZ	**Makanchi**	**7.07**	**9**	⇑Pn	Pn	21 14 34.9	-12
	0.2nm,0.4s						
MAKZ				⇑Sn	Sn	21 15 43.2	-24
	0.8nm,0.5s						
MK31	**Makanchi Array**	**7.10**	**11**	⇑Pn	Pn	21 14 35.8	-11
	0.3nm,0.6s,baz=172,slow=12,SNR=3.9						
MK31				⇑Sn	Sn	21 15 43.8	-24
	0.4nm,0.5s,baz=180,slow=20,SNR=2.7						

*SDD **11** 21:31:12.9±2.5, 17.90N×66.83W, h12km±69km, MD3.3, ML3.8, MW3.8, Presumed earthquake*
*PTWC **11** 21:31:13, 17.90N×66.90W, Ml4.1/13, PUERTO RICO REGION*
*OSPL **11** 21:31:14.3±0.4, 17.87N×66.96W, h10km±4km, ML3.4, Presumed earthquake*
*NEIC **11** 21:31:14, 17.93N×66.95W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.77; $M_{\theta\theta}$0.33; $M_{\phi\phi}$0.44; $M_{r\theta}$0.75; $M_{r\phi}$2.54; $M_{\theta\phi}$-1.11; Fault plane solution: M_o2.95000×10^{14} NP1:ϕ₁4.00000°, δ72.00000°, λ-154.00000°. NP2:ϕ₂265.00000°, δ65.00000°, λ-20.00000°. Principal axes: T 2.9487, Plg5.0000°, Azm133.0000°; N -0.0001, Plg58.0000°, Azm36.0000°; P -2.9486, Plg31.0000°, Azm226.0000°;*
*RSPR **11** 21:31:14.6, 17.93N×66.95W, h11km, MD3.3/7*
*NEIC **11** 21:31:14.1±1.1, 17.92N±0.03×66.92W±0.01, h10km±1km, ML4.1/33, ML3.6/7(RSPR), Mwr3.6/12(SLM), Error ellipse: s-maj=4.4km s-min=2.9km az=13.0*
ISC 11 21:31:13.9±0.8, 17.92N±0.04×66.93W±0.02, h16km±5km, n68, σ0.97/101, 8C-10D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.07**	**40**		**Pg**	**21 31 17.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.07**	**40**	⇑*i*P	**Pg**	**21 31 17.4**	**+0.2**
MLPR	**Magueyes Islan**	**0.12**	**295**		**Pg**	**21 31 17.4**	**-0.1**
MLPR				Sg	**Sg**	**21 31 19.5**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.19**	**297**		**Pg**	**21 31 18.4**	**-0.1**
CRPR				Sg	**Sg**	**21 31 21.0**	**-0.6**
CRPR				IAML		21 31 21.3	
	78μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.19**	**297**	P	**Pg**	**21 31 17.0**	**-1.5**
CRPR	**Cabo Rojo, PR**	**0.19**	**297**	⇑*e*Pg	**Pg**	**21 31 18.4**	**-0.1**
CRPR				⇓*e*Sg	**Sg**	**21 31 21.1**	**-0.6**
CRPR				IAML		21 31 21.4	
	comp=N,70μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.19**	**297**	⇑*i*P	**Pg**	**21 31 18.5**	**-0.1**
CRPR				*e*S	**Sg**	**21 31 21.1**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.19**	**297**	*i*P	**Pg**	**21 31 18.4**	**-0.1**
CRPR				*e*S	**Sg**	**21 31 21.1**	**-0.6**
CRPR				IAML		21 31 21.3	
	comp=Z,106μm,0.2s						
LSP	**Las Mesas**	**0.30**	**330**		**Pg**	**21 31 20.0**	**-0.2**
LSP	**Las Mesas**	**0.30**	**330**	⇓*i*P	**Pg**	**21 31 20.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.33**	**68**		**Pb**	**21 31 21.2**	**-0.2**
OBIP				Sg	**Sb**	**21 31 26.3**	**-0.1**
OBIP	**Obispado Ponce**	**0.33**	**68**	P	**Pb**	**21 31 21.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.33**	**68**	⇓*i*P	**Pb**	**21 31 21.3**	**-0.1**
OBIP				*e*S	**Sb**	**21 31 26.5**	**0.0**
OBIP	**Obispado Ponce**	**0.33**	**68**	*i*P	**Pb**	**21 31 21.3**	**-0.1**
OBIP				*e*S	**Sb**	**21 31 26.4**	**-0.1**
OBIP				IAML		21 31 27.1	
	comp=Z,3μm,0.2s						
PRSN	**Puerto Rico Se**	**0.36**	**326**		**Sg**	**21 31 26.9**	**+0.5**
PRSN	**Puerto Rico Se**	**0.36**	**326**		**Pg**	**21 31 21.0**	**-0.3**
PRSN				IAML		21 31 28.7	
	comp=Z,26μm,0.3s						
PRSN				IAML		21 31 29.3	
	comp=Z,35μm,0.3s						
PRSN	**Puerto Rico Se**	**0.36**	**326**	P	**Pg**	**21 31 21.1**	**-0.3**
PRSN	**Puerto Rico Se**	**0.36**	**326**	⇑*e*Pg	**Pg**	**21 31 21.1**	**-0.3**
PRSN				⇑*e*Sg	**Sb**	**21 31 27.7**	**+0.4**
PRSN				IAML		21 31 29.2	
	comp=N,23μm,0.3s						
PRSN	**Puerto Rico Se**	**0.36**	**326**	⇑*i*P	**Pg**	**21 31 21.1**	**-0.3**
PRSN				*e*S	**Sg**	**21 31 26.9**	**+0.5**
CELP	**Cerrillos**	**0.37**	**65**		**Pb**	**21 31 21.9**	**-0.2**
CELP				Sg	**Sb**	**21 31 27.5**	**0.0**
UUPR	**Utuado, UPR, P**	**0.39**	**31**		**Pg**	**21 31 21.6**	**-0.3**
UUPR				Sg	**Sg**	**21 31 26.6**	**-0.7**
AGPR	**Aguadilla, PR**	**0.57**	**343**		**Pg**	**21 31 24.7**	**-0.5**
AGPR				Sg	**Sg**	**21 31 31.8**	**-1.2**
AGPR				IAML		21 31 32.4	
	comp=N,10μm,0.4s						
AGPR				IAML		21 31 33.2	
	comp=N,4μm,0.4s						
AGPR	**Aguadilla, PR**	**0.57**	**343**	P	**Pg**	**21 31 24.7**	**-0.5**
AGPR	**Aguadilla, PR**	**0.57**	**343**	⇑*e*Pg	**Pg**	**21 31 24.7**	**-0.5**
AGPR				⇓*e*Sg	**Sg**	**21 31 32.2**	**-0.7**
AGPR				IAML		21 31 32.4	
	comp=N,6μm,0.3s						
AGPR	**Aguadilla, PR**	**0.57**	**343**	⇑*i*P	**Pg**	**21 31 24.8**	**-0.5**
AGPR				*e*S	**Sg**	**21 31 32.3**	**-0.7**
ECPR	**Experimental S**	**0.67**	**53**		**Pg**	**21 31 26.6**	**-0.4**
ECPR					**Sg**	**21 31 35.4**	**-0.6**
ECPR				IAML		21 31 37.1	
	comp=N,10μm,0.2s						
ECPR				IAML		21 31 37.5	
	comp=N,11μm,0.2s						
ECPR	**Experimental S**	**0.67**	**53**	⇓*e*P	**Pg**	**21 31 26.7**	**-0.4**
ECPR				*e*S	**Sg**	**21 31 35.9**	**-0.1**
EMPR	**Esperanza - Ma**	**0.67**	**34**		**Pg**	**21 31 27.1**	**0.0**
EMPR					**Sb**	**21 31 36.5**	**+0.1**
EMPR	**Esperanza - Ma**	**0.67**	**34**	P	**Pg**	**21 31 27.2**	**0.0**
EMPR	**Esperanza - Ma**	**0.67**	**34**	⇓*i*P	**Pg**	**21 31 27.1**	**0.0**
EMPR				*e*S	**Sb**	**21 31 36.5**	**+0.1**
IDE	**Isla Desecheo**	**0.70**	**312**		**Pg**	**21 31 26.8**	**-0.7**
IDE					**Sg**	**21 31 36.1**	**-0.7**
IDE	**Isla Desecheo**	**0.70**	**312**	⇑*e*P	**Pg**	**21 31 26.8**	**-0.7**
IDE				*e*S	**Sg**	**21 31 36.1**	**-0.7**
SJG	**San Juan**	**0.77**	**75**		**Pb**	**21 31 28.5**	**-0.3**
SJG				IAML		21 31 40.0	
	comp=N,4μm,0.4s						
SJG	**San Juan**	**0.77**	**75**	*e*P	**Pb**	**21 31 28.5**	**-0.3**
SJG	**San Juan**	**0.77**	**75**	⇓*e*P	**Pb**	**21 31 28.6**	**-0.3**
SJG				*e*S	**Sb**	**21 31 38.4**	**-0.6**
SJG	**San Juan**	**0.77**	**75**	*i*P	**Pb**	**21 31 28.5**	**-0.3**
SJG				*e*S	**Sg**	**21 31 39.5**	**+0.5**
SJG				IAML		21 31 41.7	
	comp=Z,1μm,0.9s						
PDPR	**Patillas Dam,**	**0.87**	**83**		**Pb**	**21 31 30.4**	**-0.2**
GCPR	**Guaynabo City**	**0.89**	**64**		**Pb**	**21 31 30.3**	**-0.7**
GCPR					**Sb**	**21 31 41.7**	**-1.0**
GCPR	**Guaynabo City**	**0.89**	**64**	P	**Pb**	**21 31 30.6**	**-0.4**
GCPR	**Guaynabo City**	**0.89**	**64**	⇑*e*P	**Pb**	**21 31 30.6**	**-0.4**
GCPR				*e*S	**Sb**	**21 31 41.6**	**-1.1**
HUMP	**Col San Antoni**	**1.05**	**78**		**Pb**	**21 31 32.7**	**-0.9**
HUMP				IAML		21 31 51.4	
	comp=Z,3μm,0.3s						
HUMP				IAML		21 31 51.6	
	comp=Z,2μm,0.4s						
HUMP	**Col San Antoni**	**1.05**	**78**		**Sn**	**21 31 48.2**	**0.0**
HUMP	**Col San Antoni**	**1.05**	**78**	P	**Pb**	**21 31 33.2**	**-0.5**
HUMP	**Col San Antoni**	**1.05**	**78**	⇑*e*P	**Pb**	**21 31 33.2**	**-0.5**
HUMP				*e*S	**Sn**	**21 31 48.2**	**0.0**
PCDR	**Punta Cana, DR**	**1.50**	**293**	⇓*e*Pg	**Pn**	**21 31 40.4**	**+0.3**
PCDR				⇓*e*Sg	**Sg**	**21 32 01.9**	**-0.4**
PCDR				IAML		21 32 14.8	
	comp=N,946nm,0.7s						
CUPR	**Culebra, Puert**	**1.61**	**76**		**Pn**	**21 31 42.2**	**+0.6**
HIDR	**Higuey Centro**	**1.83**	**292**	⇓*e*Pg	**Pb**	**21 31 47.3**	**+0.4**
HIDR				IAML		21 32 19.5	
	comp=N,632nm,0.2s						
MIDR	**Miches**	**2.27**	**298**	⇓*e*Pg	**Pn**	**21 31 51.6**	**+0.9**
MIDR				IAML		21 32 29.9	
	comp=N,190nm,0.4s						
DR12	**Loma Pena Alta**	**2.48**	**291**		**Pn**	**21 31 54.9**	**+1.2**
BANI	**BANI**	**3.29**	**279**	Pn	**Pn**	**21 32 05.5**	**+0.6**
SMRT	**St. Maarten**	**3.67**	**87**		**Pn**	**21 32 10.8**	**+0.8**
SC01	**Santiago de lo**	**3.90**	**293**	Pn	**Pn**	**21 32 14.0**	**+0.9**
SKI	**Saint Kitts**	**4.04**	**98**	*e*P	**Pn**	**21 32 16.1**	**+1.1**
SKI				*e*S	**Sn**	**21 33 04.9**	**+2.9**
SDDR	**Presa de Saban**	**4.27**	**285**		**Pn**	**21 32 20.6**	**+2.3**
MBWH	**Windy Hill**	**4.67**	**104**	*e*P	**Pn**	**21 32 24.9**	**+1.1**
MBWH				*e*S	**Sn**	**21 33 17.5**	**-0.3**
MLYT	**Lee's Yard**	**4.68**	**104**	*e*P	**Pn**	**21 32 25.3**	**+1.4**
ANWB	**Willy Bob**	**4.91**	**92**	*e*P	**Pn**	**21 32 28.4**	**+1.5**
ANWB				*e*S	**Sn**	**21 33 24.5**	**+1.1**
DHSZ	**Broadband at M**	**5.20**	**108**	*e*P	**Pn**	**21 32 32.8**	**+1.8**
DHSZ				*e*S	**Sn**	**21 33 29.4**	**-1.3**
GDHS	**Morne Mazeau,**	**5.20**	**108**	Pn	**Pn**	**21 32 31.5**	**+0.4**
GDHS				IAML		21 33 35.9	
	comp=E,221nm,0.4s						
GDHS				IAML		21 33 36.1	
	comp=N,159nm,0.5s						
ATGZ	**Broadband at L**	**5.30**	**109**	*e*P	**Pn**	**21 32 31.3**	**-1.1**
ATGZ				*e*S	**Sn**	**21 33 28.1**	**-4.9**
ABD	**La Joyeuse, An**	**5.39**	**105**	Pn	**Pn**	**21 32 33.5**	**-0.2**
CBE	**Ff, Capester**	**5.41**	**109**	Pn	**Pn**	**21 32 34.7**	**+0.7**
TBG	**Guadaloupe-3**	**5.46**	**111**	*e*P	**Pn**	**21 32 33.1**	**-1.5**
DSLB	**Salisbury**	**5.83**	**114**	*e*P	**Pn**	**21 32 40.5**	**+0.8**
DSLB				*e*S	**Sn**	**21 33 45.0**	**-1.2**
DSDZ	**La Diserade, G**	**5.83**	**105**	*e*P	Pn	21 32 34.4	-5.3
BIM	**Bigot**	**6.56**	**120**	Pn	**Pn**	**21 32 48.6**	**-1.2**
BIM	**Bigot**	**6.56**	**120**	*e*P	**Pn**	**21 32 48.7**	**-1.2**
BIM				*e*S	**Sn**	**21 34 01.9**	**-2.5**
SDV	**Santo Domingo**	**9.67**	**202**	Pn	**Pn**	**21 33 34.2**	**+1.6**

*IDC **11** 21:36:01.9±0.8, 0.11S×130.55E, h0km, mb3.9/9, mbtmp3.9/10, ML3.8/1, MS3.0/1, Error ellipse: s-maj=35.4km s-min=12.3km az=60.0*
*DJA **11** 21:36:03.8±0.3, 0.1N±3×13.1E±, h10km, M4.0/19, mb4.0/1, ML4.1/19*
*NEIC **11** 21:36:04.6±1.5, 0.12S±0.09×130.6E±0.1, h10km±1km, mb4.1/12, Error ellipse: s-maj=23.5km s-min=5.3km az=231.0*
ISC 11 21:36:07.1±0.6, 0.06S±0.06×130.66E±0.05, h35km, n48, σ1.31/46, mb4.0/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.00**	**143**	P	**Pn**	**21 36 23.8**	**-0.9**
SWI				S	**Sn**	**21 36 38.4**	**+0.9**
SIJI	**Sorong**	**1.01**	**143**	Pn	**Pn**	**21 36 24.0**	**-0.8**
	109nm,0.3s,baz=323,slow=15,SNR=192						
SIJI				Sn	**Sn**	**21 36 38.1**	**+0.3**
	83nm,0.3s,baz=287,slow=19,SNR=44						
SIJI	**Sorong**	**1.01**	**143**	P	**Pn**	**21 36 24.0**	**-0.8**
SIJI				S	**Sn**	**21 36 38.7**	**+0.9**
FAKI	**Fak Fak**	**3.25**	**151**		**Pn**	**21 36 56.0**	**+0.2**
FAKI	**Fak Fak**	**3.25**	**151**	P	**Pn**	**21 36 57.3**	**+1.6**
TNTI	**Ternate**	**3.40**	**284**	Pn	**Pn**	**21 36 57.0**	**-0.6**
TNTI	**Ternate**	**3.40**	**284**	P	**Pn**	**21 36 55.8**	**-1.9**
MWPI	**Manokwari, Pap**	**3.49**	**104**	P	**Pn**	**21 36 58.3**	**-0.7**
MSAI	**Masohi**	**3.69**	**208**	P	**Pn**	**21 37 04.2**	**+2.4**
RKPI	**Ransiki, Papua**	**3.80**	**112**	P	**Pn**	**21 37 03.4**	**+0.1**
KRAI	**Karang Ratu**	**3.95**	**215**	P	**Pn**	**21 37 06.5**	**+1.2**
AAI	**Ambon**	**4.36**	**214**	P	**Pn**	**21 37 11.8**	**+0.8**
BNDI	**Bandanaira**	**4.50**	**190**	P	**Pn**	**21 37 13.3**	**+0.5**
SANI	**Sanana**	**5.07**	**247**	P	**Pn**	**21 37 20.3**	**-0.4**
MTN	**Manton Dam**	**12.71**	**178**	Pn	**Pn**	**21 39 02.1**	**-3.4**
KNRA	**Kununurra**	**15.63**	**187**	Pn	**Pn**	**21 39 43.3**	**-1.6**
KNRA				IAmb	IAmb	21 39 50.4	
	comp=Z,13nm,0.7s						
FITZ	**Fitzroy Crossi**	**18.59**	**195**	P	**P**	**21 40 18.6**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=9.1,SNR=1.3						
	comp=Z,1.2nm,0.5s						
WB0	**Warramunga Arr**	**19.92**	**170**	P	**Pn**	**21 40 36.8**	**-1.1**
WB0				IAmb	IAmb	21 40 43.0	
	comp=Z,9.7nm,1.2s						
WRA	**Warramunga Arr**	**20.09**	**170**	P	**P**	**21 40 37.7**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=352,slow=12,SNR=15						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**20.09**	**170**	P	**P**	**21 40 37.5**	**-0.4**
WR8	**Warramunga Arr**	**20.13**	**169**	P	**P**	**21 40 37.8**	**-0.5**
WR8				IAmb	IAmb	21 41 11.6	
	comp=Z,14nm,1.5s						
AS31	**Alice Springs**	**23.68**	**173**	P	**P**	**21 41 16.2**	**+0.4**
ASAR	**Alice Springs**	**23.68**	**173**	P	**P**	**21 41 16.3**	**+0.6**
	comp=Z,4.3nm,0.9s,baz=356,slow=8.8,SNR=20						
	comp=Z,4.3nm,0.9s						
ASAR	**Alice Springs**	**23.68**	**173**	P	**P**	**21 41 15.7**	**0.0**
JNU	**Nakatsue**	**33.01**	**0**	LR	LR	21 56 26.2	
	comp=Z,25nm,19.1s,baz=358,slow=37						
STKA	**Stephens Creek**	**33.29**	**163**	P	**P**	**21 42 40.1**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=333,slow=14,SNR=3.9						
	comp=Z,2.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**36.19**	**302**	P	**P**	**21 43 04.5**	**-2.2**
	comp=Z,0.8nm,0.4s,baz=100,slow=9.0,SNR=8.6						
	comp=Z,0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**36.19**	**302**	P	**P**	**21 43 08.6**	**+1.8**
CHTO	**Chiang Mai**	**36.35**	**303**	P	**P**	**21 43 08.2**	**+0.1**
CHTO				IAmb	IAmb	21 43 10.6	
	comp=Z,2.6nm,0.9s						
MJAR	**Matsushiro Arr**	**37.09**	**10**	P	**P**	**21 43 13.8**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=158,slow=10,SNR=2.0						
	comp=Z,0.3nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**40.57**	**59**	T	T	22 26 29.5	
	baz=249						
H11N2	**WAKE ISLAND Hy**	**40.58**	**59**	T	T	22 26 45.1	
	baz=249						
H11N3	**WAKE ISLAND Hy**	**40.59**	**59**	T	T	22 26 45.7	
	baz=249						
GTA2	**Gaotai**	**48.44**	**328**	*e*P	**P**	**21 44 47.4**	**+1.0**
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MKAR	**Makanchi Array**	**62.89**	**325**	P	**P**	**21 46 30.2**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=121,slow=8.6,SNR=11						
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**62.89**	**325**	P	**P**	**21 46 30.9**	**+1.0**
ZALV	**Zalesovo Beam**	**65.73**	**332**	P	**P**	**21 46 48.7**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=119,slow=12,SNR=2.5						
	comp=Z,0.5nm,0.5s						
KURK	**Kurchatov**	**67.03**	**327**	P	**P**	**21 46 57.5**	**+0.8**
KURBB	**Kurchatov Arra**	**67.03**	**327**	P	**P**	**21 46 57.3**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=123,slow=6.0,SNR=30						
	comp=Z,3.9nm,0.8s						
KK31	**Karatay Array**	**68.66**	**317**	P	**P**	**21 47 07.4**	**+0.3**
KK31				IAmb	IAmb	21 47 08.7	
	comp=Z,2.3nm,0.9s						
KKAR	**Karatay Array**	**68.66**	**317**	P	**P**	**21 47 07.7**	**+0.5**
BVAR	**Borovoye Array**	**72.62**	**327**	P	**P**	**21 47 31.4**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=128,slow=9.5,SNR=4.8						
	comp=Z,1.8nm,0.9s						
AB31	**Akbulak array**	**77.55**	**321**	P	**P**	**21 47 58.6**	**-0.9**
ABKAR	**Akbulak array**	**77.55**	**321**	P	**P**	**21 47 59.7**	**+0.2**
F19K	**Shaleruckik Mo**	**82.87**	**22**	P	**P**	**21 48 28.8**	**+1.1**
F19K				IAm

WRAB	**Tennant Creek**	**39.33**	**322**	P	**P**		**21 47 06.6**	**0.0**
WRAB				IAmb	IAmb		21 47 33.5	
	comp=Z,7.8nm,0.7s							
WB0	**Warramunga Arr**	**39.47**	**322**	P	**P**		**21 47 08.4**	**+0.6**
WB0				IAmb	IAmb		21 47 08.9	
	comp=Z,6.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**44.44**	**312**	P	**P**		**21 47 49.1**	**+0.8**
	comp=Z,3.5nm,0.9s,baz=160,slow=10,SNR=2.1							
	comp=Z,3.5nm,0.9s							
KNRA	**Kununurra**	**45.32**	**317**	P	**P**		**21 47 57.1**	**+1.7**
MTN	**Manton Dam**	**47.02**	**322**	P	**P**		**21 48 10.2**	**+1.5**
SNAA	**Sanae**	**53.33**	**187**	P	**P**		**21 48 56.8**	**+0.8**
	comp=Z,3.4nm,0.9s,baz=194,slow=8.3,SNR=3.6							
	comp=Z,3.4nm,0.9s							
PPT	**Papeete**	**53.94**	**68**	LR	LR		22 08 05.0	
	comp=Z,55nm,18.2s,baz=188,slow=32							
H04S2	**CROZET ISLANDS**	**61.61**	**228**	T	T		22 57 39.4	
	baz=140,slow=75,SNR=102							
H04S1	**CROZET ISLANDS**	**61.61**	**228**	T	T		22 57 40.3	
	baz=140,slow=75,SNR=96							
H04S3	**CROZET ISLANDS**	**61.63**	**228**	T	T		22 57 45.2	
	baz=140,slow=75,SNR=95							
LEM	**Lembang**	**62.76**	**299**	LR	LR		22 16 39.1	
	comp=Z,34nm,18.5s,baz=102,slow=35							
H03S2	**Juan Fernandez**	**78.88**	**134**	T	T		23 19 09.7	
	baz=208,slow=74							
H03S1	**Juan Fernandez**	**78.89**	**134**	T	T		23 19 06.8	
	baz=208,slow=74							
H03S3	**Juan Fernandez**	**78.90**	**134**	T	T		23 19 06.1	
	baz=208,slow=74							
H03N3	**Juan Fernandez**	**79.21**	**134**	T	T		23 19 20.7	
	baz=213							
H03N2	**Juan Fernandez**	**79.22**	**134**	T	T		23 19 22.5	
	baz=213							
H03N1	**Juan Fernandez**	**79.23**	**134**	T	T		23 19 20.9	
	baz=213							
H08S2	**Diego Garcia H**	**81.70**	**269**	T	T		23 21 52.1	
	baz=144,slow=76,SNR=204							
H08S1	**Diego Carcia H**	**81.72**	**269**	T	T		23 21 54.4	
	baz=144,slow=76,SNR=95							
H08S3	**Diego Garcia H**	**81.72**	**269**	T	T		23 21 53.0	
	baz=144,slow=76,SNR=806							
SUR	**Sutherland**	**86.11**	**215**	LR	LR		22 26 56.2	
	comp=Z,44nm,19.4s,baz=309,slow=33							
BOSA	**Boshof**	**87.98**	**220**	P	**P**		**21 52 28.5**	**+1.0**
	comp=Z,4.8nm,1.1s,baz=197,slow=3.8,SNR=6.2							
	comp=Z,4.8nm,1.1s							
BOSA	**Boshof**	**87.98**	**220**	P	**P**		**21 52 27.8**	**+0.2**
CM31	**Chiang Mai Arr**	**88.81**	**305**	P	**P**		**21 52 32.3**	**+1.1**
CM31				IAmb	IAmb		21 52 39.1	
	comp=Z,5.4nm,1.0s							
CMAR	**Chiang Mai Arr**	**88.81**	**305**	P	**P**		**21 52 31.4**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=155,slow=4.4,SNR=8.9							
CMAR				LR	LR		22 33 16.9	
	comp=Z,11nm,18.5s,baz=135,slow=36							
	comp=Z,0.9nm,0.6s							
CMAR	**Chiang Mai Arr**	**88.81**	**305**	P	**P**		**21 52 32.2**	**+1.0**
PALK	**Pallekele**	**89.07**	**284**	LR	LR		22 26 03.5	
	comp=Z,30nm,19.8s,baz=340,slow=31							
MJAR	**Matsushiro Arr**	**92.53**	**344**	P	**P**		**21 52 49.2**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=164,slow=6.1,SNR=4.9							
	comp=Z,1.4nm,0.8s							
MJAR	**Matsushiro Arr**	**92.53**	**344**	P	**P**		**21 52 48.6**	**+0.5**
MJAR				IAmb	IAmb		21 52 58.9	
	comp=Z,4.7nm,1.3s							
MKAR	**Makanchi Array**	**119.88**	**310**	PKP	**PKPdf**		**21 58 25.2**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=76,slow=6.1,SNR=5.0							
KURBB	**Kurchatov Arra**	**124.39**	**310**	PKP	**PKPdf**		**21 58 34.3**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=147,slow=1.5,SNR=4.7							
ILAR	**Eielson Array**	**126.13**	**26**	PKP	**PKiKP**		**21 58 38.5**	**-0.1**
	comp=Z,1.5nm,1.1s,baz=286,slow=3.4,SNR=7.1							
BVAR	**Borovoye Array**	**129.71**	**308**	PKP	**PKiKP**		**21 58 46.1**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=116,slow=6.6,SNR=2.8							
DBIC	**Dimbokro**	**130.41**	**201**	PKP	**PKiKP**		**21 58 48.7**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=210,slow=2.7,SNR=4.1							
YKA	**Yellowknife Ar**	**134.78**	**41**	PKP	**PKPdf**		**21 58 54.1**	**-0.6**
	comp=Z,0.1nm,0.6s,baz=248,slow=3.0,SNR=2.0							
AKASG	**Malin Array Be**	**149.73**	**284**	PKPbc	**PKPbc**		**21 59 26.0**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=88,slow=2.3,SNR=8.8							
AKASG	**Malin Array Be**	**149.73**	**284**		**PKiKP**		**21 59 27.0**	**-0.1**
KEST	**Kesra**	**151.71**	**241**	PKP	**PKPdf**		**21 59 23.6**	**-1.5**
	comp=Z,2.8nm,1.0s,baz=69,slow=8.6,SNR=2.1							
KEST				PKPbc	**pPKPdf**		**21 59 32.7**	**+0.9**
	comp=Z,5.0nm,0.9s,baz=173,slow=5.4,SNR=4.9							
KEST	**Kesra**	**151.71**	**241**	PKPbc	**PKiKP**		**21 59 31.6**	**-0.2**
FINES	**FINESS Array B**	**154.58**	**305**	PKPbc	**PKPbc**		**21 59 34.8**	**-2.0**
	comp=Z,3.4nm,0.9s,baz=66,slow=8.0,SNR=2.2							

*IDC **11** 21:39:54.5±2.2,6.6˚64S×129.98E,h131km±25km,mb3.4/1, mbtmp4.1/6,Error ellipse: s-maj=29.3km s-min=19.1km az=107.0*

ISC 11 21:39:52.9±1.0,**6.75S**±0.08×**130.2E**±0.1,**h100**km,**n6, σ2s60/9,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**5.95**	**11**	P		**Pn**	**21 41 19.1**	**+0.4**
	14nm,0.2s,baz=193,slow=18,SNR=23							
BATI	**Baumata**	**7.29**	**241**	P		**Pn**	**21 41 38.7**	**+1.8**
	13nm,0.3s,baz=68,slow=22,SNR=1.6							
BATI				S		**Sn**	**21 42 57.5**	**-0.7**
	14nm,0.5s,baz=72,slow=19,SNR=1.7							
FITZ	**Fitzroy Crossi**	**12.11**	**201**	P		**Pn**	**21 42 41.8**	**-0.3**
	2.2nm,0.2s,baz=36,slow=13,SNR=22							
FITZ				S		Sn	21 44 48.4	-6.9
	2.3nm,0.3s,baz=74,slow=21,SNR=1.9							
WRA	**Warramunga Ar**	**13.72**	**163**	P		**Pn**	**21 43 05.2**	**+1.8**
	1.1nm,0.3s,baz=330,slow=14,SNR=26							
WRA				S		**Sn**	**21 45 31.9**	**-2.6**
	1.0nm,0.4s,baz=339,slow=22,SNR=7.8							
ASAR	**Alice Springs**	**17.20**	**168**	P		**P**	**21 43 49.9**	**+2.8**
	0.7nm,0.4s,baz=342,slow=9.3,SNR=13							
ASAR				S		**Sn**	**21 46 55.5**	**-2.9**
	0.4nm,0.4s,baz=343,slow=25,SNR=4.1							
MKAR	**Makanchi Array**	**68.11**	**327**	P		**P**	**21 50 39.0**	**-3.2**
	0.6nm,0.6s,baz=115,slow=8.1,SNR=7.7							
	0.6nm,0.6s							

*SJA **11** 21:42:42.9±0.6,21˚.09S×70˚.55W,h8km±4km,ML4.4, MW4.4*

*NEIC **11** 21:42:42.7,20˚.93S×70˚.80W,h5km*

*IDC **11** 21:42:42.3±0.6,21˚.01S×71˚.08W,h0km,mb3.9/10, mbtmp3.9/14,ML4.3/4,MS3.9/10,Error ellipse: s-maj=25.0km s-min=16.7km az=72.0*

*NEIC **11** 21:42:43.7±2.4,20˚.97S±0˚.04×70˚.80W±0˚.04,h10km±1km, mb4.5/26,Mwr4.6/47,Mwr4.8(GUC),Error ellipse: s-maj=7.1km s-min=6.3km az=240.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.70; Mθθ=0.83; Mφφ=-0.14; Mrθ=3.01; Mrφ=-1.16; Mθφ=-8.41; Fault plane solution: Mφφ=9.04000×10¹⁵ NP1:φ=86.48000°, δ=7.96000°,λ=-163.40000°. NP2:φ=340.03000°,δ=87.73000°, λ=-82.37000°. Principal axes: T 9.0504, Plg42.0000°, Azm63.0000°; N -0.0240, Plg8.0000°, Azm160.0000°; P -9.0264, Plg47.0000°, Azm258.0000°;*

*VAO **11** 21:42:44.4±0.4,20˚.72S×70˚.81W,h10km,mb4.3, Presumed earthquake*

*GUC **11** 21:42:45.5±0.7,20˚.88S×70˚.85W,h25km±5km,ML4.5*

ISC 11 21:42:42.6±1.3,**20˚.89S**±0˚.03×**70˚.81W**±0˚.04,**h8**km±8km, **n164,σ1s56/170,mb4.4/20,MS3.9/8,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TA02	**Huaiquique**	**0.89**	**46**	*i* P		**Pg**	**21 43 00.9**	**+1.3**
TA02				*e*S		**Sg**	**21 43 12.7**	**+1.6**
TA02				IAML			21 43 14.8	
	comp=N,17μm,0.1s							
TA02	**Huaiquique**	**0.89**	**46**	*e*P		**Pg**	**21 43 00.5**	**+0.9**
TA02				IAML			21 43 14.8	
	comp=Z,13μm,1.4s							
PB02	**IPOC Station P**	**0.95**	**117**	Pg		**Pn**	**21 43 02.1**	**-0.3**
PB02				Sg		**Sn**	**21 43 14.2**	**-2.1**
PB02	**IPOC Station P**	**0.95**	**117**	*i* P		**Pn**	**21 43 02.0**	**-0.3**
PB02				*e*S		**Sn**	**21 43 15.4**	**-0.9**
PB02				IAML			21 43 17.3	
	comp=E,42μm,0.3s							
PB02	**IPOC Station P**	**0.95**	**117**	*e*P		Pg	21 42 56.2	-4.6
PB02				IAML			21 43 17.0	
	comp=Z,29μm,0.4s							
HMBC	**Humberstone**	**1.06**	**55**			**Pb**	**21 43 02.7**	**-0.5**
HMBC				Sg		**Sg**	**21 43 16.6**	**-0.1**
HMBC	**Humberstone**	**1.06**	**55**	*e*P		Pb	21 42 57.7	-5.6
PB07	**IPOC Station P**	**1.19**	**134**			**Pn**	**21 43 05.0**	**-0.8**
PB07				Sg		**Sb**	**21 43 19.6**	**-1.8**
PB07	**IPOC Station P**	**1.19**	**134**	*i* P		**Pn**	**21 43 06.1**	**+0.3**
PB07				IAML			21 43 25.6	
	comp=E,12μm,0.7s							
PB07	**IPOC Station P**	**1.19**	**134**	*e*P		**Pn**	**21 43 05.6**	**-0.2**
PB07				IAML			21 43 25.5	
	comp=Z,9μm,0.5s							
PB01	**IPOC Station P**	**1.24**	**97**			**Pg**	**21 43 06.5**	**0.0**
PB01				Sg		**Sb**	**21 43 21.9**	**-0.7**
PB01	**IPOC Station P**	**1.24**	**97**	*i* P		**Pg**	**21 43 06.8**	**+0.3**
PB01				*e*S		**Sn**	**21 43 23.1**	**-0.3**
PB01				IAML			21 43 25.2	
	comp=N,31μm,0.4s							
PB01	**IPOC Station P**	**1.24**	**97**	*e*P		**Pb**	**21 43 06.2**	**-0.2**
PB01				IAML			21 43 24.7	
	comp=Z,13μm,0.9s							
PB11	**IPOC Station P**	**1.56**	**44**	Pn		**Pn**	**21 43 11.9**	**+1.0**
PB11	**IPOC Station P**	**1.56**	**44**	*i* P		**Pn**	**21 43 11.1**	**+0.3**
PB11				*e*S		**Sn**	**21 43 32.7**	**+1.3**
PB11				IAML			21 43 35.5	
	comp=E,8μm,0.6s							
PB11	**IPOC Station P**	**1.56**	**44**	*e*P		**Pn**	**21 43 11.5**	**+0.7**
PB11				*e*S		**Sn**	**21 43 28.7**	**-2.7**
PB11				IAML			21 43 36.0	
	comp=Z,8μm,1.2s							
PB09	**IPOC Station P**	**1.71**	**122**	Pn		**Pb**	**21 43 14.2**	**-0.2**
PB09	**IPOC Station P**	**1.71**	**122**	*i* P		**Pg**	**21 43 14.9**	**-0.6**
PB09				IAML			21 43 43.1	
	comp=E,11μm,0.9s							
PB09	**IPOC Station P**	**1.71**	**122**	*e*P		**Pn**	**21 43 09.5**	**-3.4**
PB09				IAML			21 43 40.5	
	comp=Z,6μm,0.5s							
PB08	**IPOC Station P**	**1.72**	**65**	Pn		**Pn**	**21 43 13.9**	**+0.7**
PB08	**IPOC Station P**	**1.72**	**65**	*i* P		**Pn**	**21 43 14.2**	**+1.0**
PB08				IAML			21 43 40.3	
	comp=E,4μm,0.5s							
PB08	**IPOC Station P**	**1.72**	**65**	*e*P		**Pn**	**21 43 13.9**	**+0.7**
PB08				IAML			21 43 42.6	
	comp=Z,4μm,1.4s							
GO01	**Chusmiza**	**1.94**	**51**	Pn		**Pn**	**21 43 17.1**	**+0.7**
GO01	**Chusmiza**	**1.94**	**51**	*e*S		**Sb**	**21 43 43.3**	**+0.1**
GO01				IAML			21 43 46.4	
	comp=N,4μm,0.3s							
GO01	**Chusmiza**	**1.94**	**51**	*e*P		**Pn**	**21 43 17.9**	**+1.5**
GO01				*e*S		**Sb**	**21 43 44.5**	**+1.3**
GO01				IAML			21 43 51.4	
	comp=Z,2μm,0.3s							
PB05	**IPOC Station P**	**2.03**	**164**	Pn		**Pn**	**21 43 16.3**	**-1.0**
PB05	**IPOC Station P**	**2.03**	**164**	*i* P		**Pn**	**21 43 17.0**	**-0.3**
PB05				IAML			21 44 00.4	
PB05	**IPOC Station P**	**2.03**	**164**	*e*P		**Pn**	**21 43 16.3**	**-1.0**
PB05				IAML			21 44 00.8	
	comp=Z,2μm,0.7s							
PB06	**IPOC Station P**	**2.14**	**148**	Pn		**Pn**	**21 43 18.5**	**-0.3**
PB06	**IPOC Station P**	**2.14**	**148**	IAML			21 43 55.3	
	comp=N,3μm,0.5s							
PB06	**IPOC Station P**	**2.14**	**148**	*e*P		**Pn**	**21 43 18.6**	**-0.2**
PB06				IAML			21 43 58.3	
	comp=Z,4μm,0.5s							
PB12	**IPOC Station P**	**2.31**	**11**	Pn		**Pn**	**21 43 21.4**	**+0.3**
PB12	**IPOC Station P**	**2.31**	**11**	*i* P		**Pn**	**21 43 21.6**	**+0.5**
PB12				*e*S		**Sb**	**21 43 55.6**	**+2.1**
PB12	**IPOC Station P**	**2.31**	**11**	*e*P		**Pn**	**21 43 21.0**	**-0.1**
PB12				IAML			21 44 04.5	
	comp=Z,852nm,0.9s							
AP01	**Chacalluta**	**2.55**	**10**	Pn		**Pn**	**21 43 24.6**	**+0.3**
AP01	**Chacalluta**	**2.55**	**10**	*e*P		**Pb**	**21 43 30.3**	**+1.7**
AP01				*e*S		**Sb**	**21 44 03.6**	**+3.4**
AP01				IAML			21 44 12.3	
	comp=Z,3μm,1.4s							
PB10	**IPOC Station P**	**2.62**	**175**	Pn		**Pn**	**21 43 24.3**	**-1.0**
PB16	**IPOC Station P**	**2.83**	**26**	Pn		**Pn**	**21 43 29.3**	**+0.7**
PB16	**IPOC Station P**	**2.83**	**26**	*i* P		**Pb**	**21 43 32.4**	**-1.3**
PB16				*e*S		**Sb**	**21 44 08.6**	**-0.1**
PB16				IAML			21 44 21.4	
	comp=N,950nm,0.6s							
PB16	**IPOC Station P**	**2.83**	**26**	*e*P		**Pn**	**21 43 30.1**	**+1.5**
PB16				IAML			21 44 16.4	
	comp=Z,2μm,1.5s							
AF01	**San Pedro de A**	**3.19**	**130**	Pn		**Pn**	**21 43 34.4**	**+1.1**
AF01	**San Pedro de A**	**3.19**	**130**	*e*P		**Pg**	**21 43 42.1**	**-1.6**
AF01				*e*S		**Sb**	**21 44 18.6**	**-0.2**
PB18	**Visviri**	**3.52**	**21**	Pn		**Pn**	**21 43 37.9**	**-0.2**
PB18	**Visviri**	**3.52**	**21**	IAML			21 44 53.6	
	comp=E,1μm,0.8s							
PB14	**IPOC Station P**	**3.73**	**174**	Pn		**Pn**	**21 43 39.4**	**-1.5**
PB14	**IPOC Station P**	**3.73**	**174**	*e*P		**Pn**	**21 43 39.2**	**-1.6**
PB14				*e*S		**Sg**	**21 44 40.7**	**-1.9**
PB14				IAML			21 44 56.6	
	comp=Z,671nm,0.9s							
AC01	**Pan de Azucar**	**5.23**	**178**	Pn		**Pn**	**21 43 59.4**	**-1.9**
AC01	**Pan de Azucar**	**5.23**	**178**	*e*P		**Pn**	**21 43 59.6**	**-1.7**
AC01				IAML			21 45 59.6	
	comp=Z,274nm,0.8s							
LPAZ	**La Paz**	**5.24**	**29**	Pn		Pn	21 44 07.2	+5.3
LPAZ	comp=Z,2.1nm,0.3s,baz=192,slow=5.6,SNR=22			Sn		**Sb**	**21 45 12.7**	**-5.5**
	comp=Z,2.0nm,0.3s,baz=195,slow=11,SNR=3.5							
	comp=Z,11nm,0.6s							
LPAZ	**La Paz**	**5.24**	**29**	*e*P		**Pn**	**21 44 00.5**	**-1.3**
AC02	**Maricunga**	**6.11**	**166**	Pn		**Pn**	**21 44 14.4**	**+0.7**
GO03	**Copiapo**	**6.69**	**176**	Pn		**Pn**	**21 44 19.9**	**-1.4**
AC04	**Llanos de Chal**	**7.28**	**182**	Pn		**Pn**	**21 44 27.5**	**-1.9**
AC05	**El Transito**	**7.92**	**177**	Pn		**Pn**	**21 44 36.5**	**-1.8**
LCO	**Las Campanas**	**8.08**	**179**	Pn		**Pn**	**21 44 38.6**	**-2.0**
CO01	**Juntas del Tor**	**9.07**	**176**	Pn		**Pn**	**21 44 53.1**	**-1.0**
CO03	**El Pedregal**	**9.90**	**179**	Pn		**Pn**	**21 45 03.1**	**-2.3**
SIV	**San Ignacio**	**10.44**	**64**	Pn		**Pn**	**21 45 14.4**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=258,slow=8.4,SNR=77							
NNA	**Nana**	**10.58**	**326**	Pn		**Pn**	**21 45 15.1**	**+0.5**
	comp=Z,2.0nm,0.3s,baz=168,slow=9.3,SNR=1.7							
NNA				Sn		**Sn**	**21 47 07.9**	**-5.6**
	comp=Z,1.0nm,0.3s,baz=196,slow=15,SNR=3.6							
	comp=Z,5.8nm,0.3s							
CO04	**Los Peladeros**	**11.11**	**181**	Pn		**Pn**	**21 45 19.3**	**-2.7**
MT02	**Curacav**	**12.32**	**181**	Pn		**Pn**	**21 45 39.2**	**+0.8**
MURT	**Porto Murtinho**	**12.33**	**96**	*e*P		**Pn**	**21 45 39.7**	**+1.2**
PTLB	**Pontes e Lacer**	**12.34**	**66**	*e*P		**Pn**	**21 45 40.5**	**+1.8**
MT08	**Bom Sossma Ro**	**12.52**	**177**	Pn		**Pn**	**21 45 42.9**	**+1.5**
VILB	**Vilhena**	**12.85**	**54**	Pn		**Pn**	**21 45 46.9**	**+1.1**
VILB	**Vilhena**	**12.85**	**54**	*e*P		**Pn**	**21 45 46.8**	**+0.9**
BDQN	**Bodoquena, MS**	**13.17**	**91**	*e*P		**Pn**	**21 45 51.1**	**+1.0**
CPUP	**Villa Florida**	**13.48**	**116**	Pn		**Pn**	**21 45 57.4**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=313,slow=13,SNR=4.1							
CPUP				LR		LR	21 51 41.1	
	comp=Z,335nm,20.2s,baz=287,slow=39							
	comp=Z,0.8nm,0.4s							
AQDB	**Aquidauana**	**14.15**	**91**	Pn		**Pn**	**21 46 04.2**	**+0.7**
H03N1	**Juan Fernandez**	**14.42**	**208**	Pn		**Pn**	**21 46 05.4**	**-1.5**
	baz=112,slow=13							
H03N1				T		T	22 01 23.7	
	baz=34,slow=72,SNR=835							
H03N2	**Juan Fernandez**	**14.43**	**208**	Pn		**Pn**	**21 46 05.3**	**-1.7**
	baz=112,slow=13							
H03N2				T		T	22 01 21.2	
	baz=34,slow=72,SNR=232							
H03N3	**Juan Fernandez**	**14.44**	**208**	Pn		**Pn**	**21 46 05.3**	**-1.9**
	baz=112,slow=13							
H03N3				T		T	22 01 03.5	
	baz=34,slow=72,SNR=319							
H03S3	**Juan Fernandez**	**14.75**	**207**	Pn		**Pn**	**21 46 09.2**	**-2.1**
	baz=27,slow=20							
H03S1	**Juan Fernandez**	**14.76**	**207**	Pn		**Pn**	**21 46 09.2**	**-2.3**
	baz=27,slow=20							
H03S2	**Juan Fernandez**	**14.76**	**207**	Pn		**Pn**	**21 46 08.6**	**-3.0**
	baz=27,slow=20							
ML02	**Panimavida**	**14.82**	**182**	Pn		**Pn**	**21 46 12.0**	**-0.7**
SALV	**Santo Antonio**	**15.18**	**73**	*e*P		**Pn**	**21 46 18.9**	**+1.4**
PP1B	**Ponte de Pedra**	**15.39**	**80**	*e*P		**Pn**	**21 46 21.2**	**+0.8**
BI02	**San Fabin de**	**15.72**	**181**	Pn		**Pn**	**21 46 23.6**	**-0.9**
PDRB	**Porto dos Gac**	**16.35**	**58**	*e*P		**Pn**	**21 46 32.4**	**-0.4**
TRCB	**Terra Rica**	**16.98**	**100**	Pn		**Pn**	**21 46 39.2**	**-1.4**
TRCB				IAmb		IAmb	21 46 45.0	
	comp=Z,29nm,1.0s							
TRCB	**Terra Rica**	**16.98**	**100**	*e*P		**P**	**21 46 42.0**	**-0.7**
CLDB	**Colider**	**17.53**	**58**	*e*P		**Pn**	**21 46 47.9**	**+0.3**
PTGB	**Pitanga**	**17.69**	**106**	*e*P		**P**	**21 46 51.7**	**+1.2**
ITAB	**Concordia**	**18.18**	**114**	*e*P		**P**	**21 46 58.9**	**+3.1**
CPSB	**Cacapava Do Su**	**18.28**	**125**	*e*P		**P**	**21 46 59.5**	**+2.6**
TEFE	**Tefe**	**18.30**	**20**	*e*P		**Pn**	**21 46 55.9**	**-1.1**
LDASE	**Londrina, Braz**	**18.41**	**101**	*e*P		**P**	**21 46 59.1**	**+0.7**
GO06	**Curarrehue**	**18.64**	**182**			**P**	**21 46 59.5**	**-1.4**
TRQA	**Tornquist**	**18.73**	**158**	P		**Pn**	**21 47 01.5**	**-0.7**
TRQA	**Tornquist**	**18.73**	**158**	*e*P		**Pn**	**21 47 05.0**	**+2.7**
ARAG	**Araguaiana, MT**	**18.75**	**77**	*e*P		**Pn**	**21 47 04.4**	**+1.8**
PLTB	**Pedras Altas**	**18.81**	**129**	*e*P		**Pn**	**21 47 05.5**	**+2.2**
ITRB	**Iturama**	**19.22**	**90**	*e*P		**Pn**	**21 47 08.1**	**-0.1**
LR05	**Currie**	**19.30**	**183**	P		**P**	**21 47 07.5**	**-0.6**
LR05				IAmb		IAmb	21 47 16.3	
	comp=Z,20nm,0.8s							
PLCA	**Paso Flores**	**19.78**	**179**	P		**Pn**	**21 47 14.8**	**0.0**
	comp=Z,0.6nm,0.3s,baz=356,slow=11,SNR=14							
PLCA				LR		LR	21 54 27.1	
	comp=Z,150nm,19.8s,baz=350,slow=36							
	comp=Z,6.4nm,0.6s							
PLCA	**Paso Flores**	**19.78**	**179**	P		**Pn**	**21 47 14.3**	**-0.6**
PLCA				IAmb		IAmb	21 47 17.1	
	comp=Z,42nm,1.5s							
PLCA	**Paso Flores**	**19.78**	**179**	*e*P		**Pn**	**21 47 15.0**	**+0.2**
CNLB	**Canela**	**19.90**	**119**	*e*P		**Pn**	**21 47 17.5**	**+1.2**
MACA	**Manacapuru-AM**	**20.20**	**31**	P		**P**	**21 47 17.8**	**-0.1**
MACA				IAmb		IAmb	21 47 32.5	
	comp=Z,22nm,0.9s							
NPGB	**Novo Progresso**	**20.32**	**50**	*e*P		**P**	**21 47 19.2**	**-0.2**
SNDB	**Serra Nova Dou**	**20.69**	**68**	*e*P		**P**	**21 47 22.3**	**-1.1**
IPMB	**Ipameri, GO**	**21.50**	**86**	*e*P		**P**	**21 47 33.1**	**+0.9**
RCLB	**Rio Claro- Sao**	**21.68**	**98**	*e*P		**P**	**21 47 36.0**	**+1.9**
SPB	**Sao Paulo**	**21.80**	**101**	*e*P		**P**	**21 47 38.4**	**+3.1**
PET01	**Itanhaem-SP**	**21.98**	**103**	*e*P		**P**	**21 47 40.2**	**+2.9**
ITTB	**Itaituba**	**22.01**	**44**	*e*P		**P**	**21 47 35.5**	**-2.1**
VAO	**Valinhos**	**22.21**	**100**	*e*P		**P**	**21 47 42.6**	**+2.8**
BDFB	**Brasilia**	**22.26**	**80**	P		**P**	**21 47 42.9**	**+2.5**
	comp=Z,2.7nm,0.7s,baz=245,slow=14,SNR=4.2							
BDFB				LR		LR	21 58 05.1	
	comp=Z,891nm,18.4s,baz=288,slow=41							
	comp=Z,2.7nm,0.7s							
OTAV	**Otavalo**	**22.29**	**339**	*e*P		**P**	**21 47 41.2**	**+0.1**
AY01	**Puyuhuapi**	**23.51**	**183**	P		**P**	**21 47 53.3**	**+0.3**
AY01				IAmb		IAmb	21 47 54.5	
	comp=Z,8.5nm,0.8s							
BOAV	**Boa Vista**	**25.24**	**25**	P		**P**	**21 48 10.1**	**+0.8**
BOAV				IAmb		IAmb	21 48 26.4	
	comp=Z,18nm,1.3s							
BOAV	**Boa Vista**	**25.24**	**25**	*e*P		**P**	**21 48 10.1**	**+0.8**
SMTB	**Santa Maria do**	**25.39**	**65**	*e*P		**P**	**21 48 12.8**	**+2.2**
JANB	**Januaria**	**25.84**	**81**	*e*P		**P**	**21 48 15.8**	**+0.9**
SDV	**Santo Domingo**	**29.59**	**0**	LR		LR	22 01 42.0	
	comp=Z,252nm,18.9s,baz=239,slow=38							
MDP	**Montagnes des**	**31.39**	**37**	LR		LR	22 01 05.4	
	comp=Z,95nm,20.8s,baz=176,slow=35							
MG03	**Isla Dawson**	**32.90**	**180**	P		**P**	**21 49 18.5**	**+1.4**
JTS	**Las Juntas de**	**33.97**	**335**	LR		LR	22 01 57.5	
	comp=Z,67nm,19.5s,baz=224,slow=34							
RPN	**Rapa Nui**	**35.64**	**252**	LR		LR	22 00 13.2	
	comp=Z,246nm,21.4s,baz=100,slow=30							
RCBR	**Riachuelo**	**37.00**	**71**	LR		LR	22 06 31.8	
	comp=Z,157nm,19.1s,baz=248,slow=38							
RCBR	**Riachuelo**	**37.00**	**71**	P		**P**	**21 49 51.7**	**-1.3**
APG	**El Apazote**	**40.56**	**330**	P		**P**	**21 50 24.1**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=163,slow=12,SNR=2.0				

KK31				⇑S		Sn	21 54 00.0	+3.0	
	4.0nm,0.3s,baz=184,slow=16,SNR=9.8								
AAK	**Ala-Archa**	**6.22**	**26**	P		Pn	21 52 49.1	-1.4	
	SNR=16								
AAK	**Ala-Archa**	**6.22**	**26**	⇓P		Pn	21 52 49.0	-1.5	
	3.4nm,0.6s								
AAK				⇓S		Sn	21 54 02.8	+0.9	
	3.6nm,0.4s								
KBK	**Karagaybulak**	**6.40**	**28**	P		Pn	21 52 53.4	+0.6	
	SNR=8.6								
CHMS	**Chumysh**	**6.62**	**26**	P		Pn	21 52 54.7	-0.9	
	SNR=11								
USP	**Ospenovka**	**6.78**	**23**	P		Pn	21 52 57.2	-0.5	
	SNR=14								
TKM2	**Tokmak 2**	**6.88**	**31**	P		Pn	21 52 57.8	-1.3	
	SNR=20								
MKAR	**Makanchi Array**	**12.90**	**38**	Pn		Pn	21 54 16.6	+0.2	
	0.1nm,0.3s,baz=221,slow=14,SNR=13								
	1.3nm,0.8s								
AB31	**Akbulak array**	**14.52**	**330**	⇑P		Pn	21 54 37.1	+0.6	
	1.5nm,0.4s,baz=167,slow=12,SNR=79								
AB31				⇓S		S	21 57 15.7	-1.9	
	3.3nm,0.7s,baz=151,slow=21,SNR=9.6								
KURBB	**Kurchatov Arra**	**14.61**	**20**	Pn		Pn	21 54 37.1	-0.5	
	0.1nm,0.3s,baz=207,slow=11,SNR=22								
	2.6nm,0.8s								
BVAR	**Borovoye Array**	**15.95**	**359**	P		Pn	21 54 55.9	+2.1	
	0.1nm,0.3s,baz=168,slow=10,SNR=5.2								
	1.5nm,0.6s								
AKTO	**Aktyubinsk**	**16.22**	**329**	⇓P		Pn	21 54 59.4	+2.3	
	1.4nm,0.7s								
AKTO				⇑S		Sn	21 57 57.4	-1.8	
	2.0nm,0.8s								
ZALV	**Zalesovo Beam**	**19.44**	**25**	P		Pn	21 55 33.6	-1.4	
	7.5nm,0.5s,baz=221,slow=10,SNR=49								
	7.5nm,0.5s								
SONM	**Songino Array**	**28.11**	**56**	P		P	21 56 53.6	+0.1	
	0.4nm,0.4s,baz=232,slow=8.2,SNR=2.3								
	0.4nm,0.4s								
FINES	**FINESS Array B**	**36.93**	**326**	P		P	21 58 10.3	+0.6	
	3.8nm,1.0s,baz=101,slow=9.5,SNR=2.1								
	3.8nm,1.0s								

*ROM **11** 22:01:17.7±0.2,38°.830N±0°.008×16°.89E±0°.01, h31km±1km, ML3.4/98, Error ellipse: s-maj=1.3km s-min=0.6km az=289.0*
*PDG **11** 22:01:19.5±0.4,38°.84N×16°.83E, h12km±2km, ML3.5/12, Error ellipse: s-maj=0.7km s-min=1.9km az=0.0*
ISC 11 22:01:18.2±1.0,38°.88N±0°.03×16°.84E±0°.04,h32km±8km, n61,σ1°00/80,6C-11D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.20**	**322**	⇑P			**Pn**	**22 01 24.8**	**-0.3**
SERS				S			**Sb**	**22 01 29.6**	**+0.4**
SERS				AML			AML		
	comp=N,26050μm,0.7s								
SERS				AML			AML		
	comp=N,20650μm,0.3s								
SERS				AML			AML		
	comp=E,25200μm,0.7s								
SERS				AML			AML		
	comp=E,18500μm,0.3s								
TIP	**Timpagrande**	**0.30**	**347**	⇓P			**Pn**	**22 01 26.4**	**-0.1**
TIP				S			**Sn**	**22 01 32.6**	**+0.7**
TIP				AML			AML		
	comp=E,6255μm,1.6s								
TIP				AML			AML		
	comp=E,6260μm,1.6s								
TIP				AML			AML		
	comp=E,6300μm,1.6s								
TIP				AML			AML		
	comp=N,12125μm,0.4s								
TIP				AML			AML		
	comp=N,12205μm,0.4s								
TIP				AML			AML		
	comp=E,6300μm,0.4s								
TIP				AML			AML		
	comp=E,6260μm,0.4s								
GRI	**Girifalco**	**0.34**	**260**	P			**Pb**	**22 01 25.8**	**-0.6**
GRI				S			**Sn**	**22 01 32.4**	**-0.3**
GRI				AML			AML		
	comp=E,9895μm,0.6s								
GRI				AML			AML		
	comp=N,8500μm,0.3s								
GRI				AML			AML		
	comp=E,9895μm,1.4s								
GRI				AML			AML		
	comp=N,8495μm,0.3s								
LADO	**San Nicola del**	**0.41**	**15**	P			**Pn**	**22 01 28.6**	**+0.5**
LADO				AML			AML		
	comp=E,433μm,1.1s								
LADO				AML			AML		
	comp=E,433μm,0.9s								
LADO				AML			AML		
	comp=N,332μm,0.8s								
PLAC	**Placanica**	**0.54**	**216**	⇓P			**Pb**	**22 01 29.1**	**-0.2**
PLAC				AML			AML		
	comp=E,10405μm,0.5s								
PLAC				AML			AML		
	comp=N,10215μm,0.6s								
PLAC				AML			AML		
	comp=E,7260μm,0.5s								
PLAC				AML			AML		
	comp=N,7170μm,0.5s								
PLAC				AML			AML		
	comp=N,10215μm,1.4s								
PLAC				AML			AML		
	comp=E,10405μm,1.5s								
SPS2	**Spezzano della**	**0.57**	**316**	⇓P			**Pn**	**22 01 29.8**	**-0.3**
SPS2				S			**Sn**	**22 01 40.1**	**+1.6**
SPS2				AML			AML		
	comp=E,1805μm,0.9s								
SPS2				AML			AML		
	comp=E,1805μm,1.1s								
SPS2				AML			AML		
	comp=N,1615μm,0.3s								
CELI	**Celico**	**0.58**	**333**	⇓P			**Pn**	**22 01 30.5**	**+0.1**
CELI				S			**Sn**	**22 01 40.7**	**+1.8**
CELI				AML			AML		
	comp=E,2560μm,0.6s								
CELI				AML			AML		
	comp=N,2605μm,1.1s								
CELI				AML			AML		
	comp=N,2635μm,1.1s								
CELI				AML			AML		
	comp=E,2590μm,0.6s								
CELI				AML			AML		
	comp=N,2630μm,1.1s								
PIPA	**Pietrapaola**	**0.60**	**358**	P			**Pn**	**22 01 31.1**	**+0.5**
PIPA				AML			AML		
	comp=E,2905μm,0.6s								
PIPA				AML			AML		
	comp=N,2555μm,0.6s								
PIPA				AML			AML		
	comp=E,2780μm,0.6s								
PIPA				AML			AML		
	comp=N,2555μm,0.7s								
CAR1	**CAROLEI**	**0.62**	**307**	P			**Pn**	**22 01 30.4**	**-0.4**
CAR1				S			**Sn**	**22 01 41.2**	**+1.6**
CAR1				AML			AML		
	comp=E,10145μm,0.6s								
CAR1				AML			AML		
	comp=N,8605μm,1.0s								
CAR1				AML			AML		
	comp=N,9950μm,0.4s								
CAR1				AML			AML		
	comp=N,8600μm,1.0s								
CAR1				AML			AML		
	comp=E,10450μm,0.4s								
CAR1				AML			AML		
	comp=N,8605μm,1.0s								
CAR1				AML			AML		
	comp=E,10145μm,0.5s								
FERC	**Galatro**	**0.71**	**233**	P			**Pn**	**22 01 32.0**	**0.0**
JOPP	**Joppolo**	**0.80**	**250**	P			**Pb**	**22 01 33.1**	**-0.6**
JOPP				S			**Sn**	**22 01 45.0**	**+0.9**
JOPP				AML			AML		
	comp=N,2480μm,0.4s								
JOPP				AML			AML		
	comp=E,2865μm,0.4s								
TDS	**Terranova Siba**	**0.87**	**333**	P			**Pn**	**22 01 35.6**	**+1.4**
TDS				AML			AML		
	comp=N,1300μm,0.6s								
TDS				AML			AML		
	comp=E,1710μm,1.5s								
TDS				AML			AML		
	comp=N,1300μm,1.4s								
CET2	**Cetraro**	**0.94**	**313**	P			**Pb**	**22 01 36.2**	**0.0**
CET2				S			**Sn**	**22 01 50.6**	**+2.9**
CET2				AML			AML		
	comp=N,9715μm,0.7s								
CET2				AML			AML		
	comp=E,4880μm,0.7s								
CEL	**Celeste**	**0.97**	**230**	P			**Pn**	**22 01 35.8**	**+0.1**
CEL				S			**Sn**	**22 01 49.8**	**+1.4**
CEL				AML			AML		
	comp=E,1785μm,1.0s								
CEL				AML			AML		
	comp=E,1785μm,1.0s								
CEL				AML			AML		
	comp=N,1850μm,0.6s								
CEL				AML			AML		
	comp=E,1790μm,0.8s								
CEL				AML			AML		
	comp=N,1850μm,0.6s								
SOI	**Samo**	**1.02**	**218**	P			**Pb**	**22 01 37.0**	**-0.4**
SOI				AML			AML		
	comp=E,1054μm,1.3s								
SOI				AML			AML		
	comp=N,1670μm,0.7s								
SOI				AML			AML		
	comp=N,1670μm,1.3s								
SALB	**San Lorenzo Be**	**1.06**	**339**	P			**Pb**	**22 01 38.3**	**+0.1**
SALB				AML			AML		
	comp=E,888μm,1.6s								
SALB				AML			AML		
	comp=N,746μm,0.7s								
SALB				AML			AML		
	comp=E,888μm,0.4s								
GMB	**Gambarie**	**1.07**	**228**	P			**Pb**	**22 01 37.6**	**-0.7**
GMB				AML			AML		
	comp=N,8225μm,0.6s								
GMB				AML			AML		
	comp=E,6545μm,0.4s								
GMB				AML			AML		
	comp=N,8225μm,1.4s								
SICLA	**Scilla**	**1.08**	**235**	P			**Pb**	**22 01 38.0**	**-0.4**
SICLA				AML			AML		
	comp=E,2650μm,0.7s								
SICLA				AML			AML		
	comp=N,2710μm,1.0s								
SICLA				AML			AML		
	comp=N,2710μm,1.0s								
GRIS	**Grisolia**	**1.15**	**318**	P			**Pb**	**22 01 39.4**	**-0.2**
RCU	**Reggio Calabri**	**1.20**	**231**	P			**Pb**	**22 01 40.1**	**-0.2**
MMN	**Mormanno**	**1.20**	**327**	P			**Pb**	**22 01 40.6**	**+0.1**
MMN				AML			AML		
	comp=E,1046μm,0.5s								
MMN				AML			AML		
	comp=N,1635μm,0.7s								
MMN				AML			AML		
	comp=N,1635μm,1.3s								
MSRU	**Castanea**	**1.22**	**240**	P			**Pn**	**22 01 38.6**	**-0.4**
MSRU				AML			AML		
	comp=N,2025μm,0.9s								
MSRU				AML			AML		
	comp=E,2655μm,0.6s								
MSRU				AML			AML		
	comp=E,2655μm,1.4s								
MSRU				AML			AML		
	comp=N,2025μm,1.1s								
ORI	**Oriolo Calabro**	**1.22**	**346**	P			**Pb**	**22 01 40.6**	**-0.1**
MTTG	**Motta San Giov**	**1.26**	**226**	P			**Pb**	**22 01 41.1**	**-0.4**
IST3	**Stromboli F**	**1.26**	**267**	P			**Pn**	**22 01 39.3**	**-0.3**
IST3				AML			AML		
	comp=E,3675μm,0.6s								
IST3				AML			AML		
	comp=N,5325μm,0.8s								
CUC	**Castrocucco**	**1.36**	**325**	P			**Pb**	**22 01 42.7**	**-0.5**
MPNC	**Port Mandanici**	**1.38**	**238**	P			**Pn**	**22 01 40.7**	**-0.6**
MPNC				AML			AML		
	comp=E,2290μm,0.7s								
MPNC				AML			AML		
	comp=N,2425μm,0.5s								
SIRI	**Monte Sirino -**	**1.50**	**330**	P			**Pb**	**22 01 44.5**	**-1.0**
SIRI				AML			AML		
	comp=E,766μm,1.1s								
SIRI				AML			AML		
	comp=E,784μm,1.1s								
SIRI				AML			AML		
	comp=N,678μm,0.7s								
SIRI				AML			AML		
	comp=N,674μm,0.7s								
SIRI				AML			AML		
	comp=N,674μm,1.3s								
SIRI				AML			AML		
	comp=N,678μm,1.3s								
SIRI				AML			AML		
	comp=E,784μm,0.9s								
SIRI				AML			AML		
	comp=E,766μm,0.9s								
AIO	**Antillo**	**1.56**	**235**	P			**Pn**	**22 01 44.3**	**+0.5**
AIO				AML			AML		
	comp=E,553μm,0.8s								
AIO				AML			AML		
	comp=N,570μm,0.7s								
MGR	**Morigerati**	**1.60**	**322**	P			**Pn**	**22 01 45.1**	**+0.8**
MGR				AML			AML		
	comp=N,490μm,0.5s								
MGR				AML			AML		
	comp=N,490μm,0.5s								
MGR				AML			AML		
	comp=E,537μm,0.5s								
MGR				AML			AML		
	comp=E,559μm,0.5s								
MGR				AML			AML		
	comp=N,490μm,1.5s								
MGR				AML			AML		
	comp=N,502μm,0.7s								
BULG	**Bulgheria - Ca**	**1.65**	**317**	P			**Pn**	**22 01 45.9**	**+0.9**
BULG				AML			AML		
	comp=E,564μm,1.3s								
BULG				AML			AML		
	comp=N,1220μm,0.4s								
BULG				AML			AML		
	comp=E,592μm,1.3s								
BULG				AML			AML		
	comp=E,592μm,0.7s								
BULG				AML			AML		
	comp=E,564μm,0.7s								
BULG				AML			AML		
	comp=N,1205μm,0.4s								
MCEL	**Monticello**	**1.65**	**331**	P			**Pb**	**22 01 47.3**	**-0.8**
TAR1	**Taranto**	**1.68**	**12**	P			**Pn**	**22 01 45.4**	**+0.1**
TAR1				AML			AML		
	comp=E,360μm,0.5s								
TAR1				AML			AML		
	comp=N,422μm,0.7s								
TAR1				AML			AML		
	comp=E,360μm,1.5s								
MIGL	**Miglionico**	**1.75**	**350**	P			**Pn**	**22 01 47.0**	**+0.7**
MIGL				AML			AML		
	comp=N,1595μm,1.5s								
MIGL				AML			AML		
	comp=E,1435μm,0.7s								
MIGL				AML			AML		
	comp=N,1595μm,0.5s								
IFIL	**Filicudi I Eol**	**1.81**	**261**	P			**Pn**	**22 01 46.5**	**-0.7**
IFIL				AML			AML		
	comp=N,1155μm,0.5s								
IFIL				AML			AML		
	comp=E,3000μm,0.7s								
CMPR	**Campora**	**1.86**	**321**	AML			AML		
CMPR	comp=E,324μm,1.4s			AML			AML		
	comp=E,324μm,0.6s								
CMPR				AML			AML		
	comp=N,313μm,0.4s								
MESG	**Mesagne**	**1.87**	**24**	P			**Pn**	**22 01 48.5**	**+0.5**
NOCI	**Noci**	**1.91**	**5**	P			**Pn**	**22 01 48.4**	**-0.2**
NOCI				AML			AML		
	comp=N,476μm,1.6s								
NOCI				AML			AML		
	comp=N,476μm,0.4s								
NOCI				AML			AML		
	comp=E,303μm,0.8s								
MSFR	**San Fratello**	**1.96**	**245**	P			**Pn**	**22 01 49.0**	**-0.3**
MSFR				AML			AML		
	comp=E,216μm,1.1s								
MSFR				AML			AML		
	comp=N,233μm,0.9s								
AMUR	**Altamura**	**2.03**	**355**	P			**Pn**	**22 01 50.4**	**+0.2**
AMUR				AML			AML		
	comp=N,183μm,0.9s								
AMUR				AML			AML		
	comp=E,242μm,0.5s								
HAGA	**Augusta**	**2.08**	**220**	AML			AML		
	comp=E,232μm,0.8s								
HAGA				AML			AML		
	comp=N,327μm,0.6s								
MRLC	**Muro Lucano**	**2.14**	**331**	P			**Pb**	**22 01 54.1**	**-2.3**
MRLC				AML			AML		
	comp=E,130μm,0.9s								
MRLC				AML			AML		
	comp=N,150μm,0.7s								
MRLC				AML			AML		
	comp=E,254μm,0.9s								
MRLC				AML			AML		
	comp=N,295μm,0.6s								
HLNI	**Lentini**	**2.18**	**226**	P			**Pn**	**22 01 50.9**	**-1.4**
HLNI				AML			AML		
	comp=N,199μm,0.8s								
HLNI				AML			AML		
	comp=E,200μm,0.8s								
SSY	**Sortino**	**2.22**	**220**	P			**Pn**	**22 01 51.0**	**-1.8**
SSY				AML			AML		
	comp=E,606μm,1.0s								
SSY				AML			AML		
	comp=N,1465μm,0.5s								
SSY				AML			AML		
	comp=E,606μm,1.0s								
KEK	**Kerkira**	**2.44**	**69**	P			**Pn**	**22 01 56.8**	**+1.1**
HPAC	**Pachino**	**2.58**	**213**	P			**Pn**	**22 01 56.9**	**-0.8**
HPAC				AML			AML		
	comp=N,474μm,1.4s								
HPAC				AML			AML		
	comp=N,474μm,0.6s								
HPAC				AML			AML		
	comp=E,462μm,0.3s								
VLS	**Valsamata**	**3.02**	**102**	P			**Pn**	**22 02 05.1**	**+1.2**
VLS				AML			AML		
	comp=E,192μm,0.8s								
VLS				AML			AML		
	comp=E,192μm,1.2s								
VLS				AML			AML		
	comp=N,146μm,1.2s								
ULC	**Ulcinj**	**3.58**	**30**	⇓*i*Pn			**Pn**	**22 02 10.7**	**-0.8**
ULC				*i* Sn			**Sn**	**22 02 51.9**	**-0.8**
BUM	**Brajici-Budva**	**3.75**	**24**	⇑*i*Pn			**Pn**	**22 02 13.7**	**-0.2**
BUM				*i* Sn			**Sn**	**22 02 56.6**	**-0.4**
HCY	**Herceg Novi**	**3.77**	**19**	⇑*i*Pn			**Pn**	**22 02 13.9**	**-0.3**
HCY				*e*Sn			**Sn**	**22 02 56.2**	**-1.3**
CEME	**Cevo**	**3.98**	**23**	⇓*i*Pn			**Pn**	**22 02 16.5**	**-0.6**
CEME				*e*Sn			**Sn**	**22 03 01.2**	**-1.5**
PDG	**Podgorica**	**3.99**	**27**	⇑*i*Pn			**Pn**	**22 02 17.1**	**0.0**
PDG				*i* Sn			**Sn**	**22 03 01.7**	**-1.0**
THL	**Klokotos Trika**	**4.07**	**79**	P			**Pn**	**22 02 20.7**	**+2.4**
NKME	**Niksic**	**4.20**	**22**	⇓*i*Pn			**Pn**	**22 02 19.7**	**-0.3**
NKME				*e*Sn			**Sn**	**22 03 06.5**	**-1.4**
BRY	**Bratogost**	**4.21**	**17**	⇑*i*Pn			**Pn**	**22 02 20.1**	**-0.2**
BRY				*i* Sn			**Sn**	**22 03 07.3**	**-1.2**
PVY	**Plav**	**4.40**	**32**	⇑*i*Pn			**Pn**	**22 02 23.4**	**+0.6**
PVY				*i* Sn			**Sn**	**22 03 11.8**	**-1.2**
KOME	**Kolasin**	**4.45**	**26**	⇓*i*Pn			**Pn**	**22 02 23.9**	**+0.4**
KOME				*i* Sn			**Sn**	**22 03 14.4**	**+0.1**
UPM	**Unac-Piva**	**4.59**	**19**	⇓*i*Pn			**Pn**	**22 02 26.4**	**+0.9**
UPM				*i* Sn			**Sn**	**22 03 16.5**	**-1.3**
IVA	**Berane**	**4.61**	**29**	⇓*i*Pn			**Pn**	**22 02 27.3**	**+1.6**
IVA				*e*Sn			**Sn**	**22 03 18.1**	**0.0**
PLE	**Pljevlja**	**4.84**	**23**	⇓*i*Pn			**Pn**	**22 02 29.3**	**+0.4**
PLE				*i* Sn			**Sn**	**22 03 21.9**	**-2.0**
MODS	**Modra-Piesok**	**9.49**	**2**	*e*PN			**Pn**	**22 03 34.7**	**+2.1**

*OSPL **11** 22:09:08.2±0.5,17°.86N×66°.96W,h9km±4km,ML2.8, Presumed earthquake*
*NEIC **11** 22:09:08,17°.95N×66°.95W,h14km,Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-0.72; $M_{\theta\theta}$2.24; $M_{\phi\phi}$-1.53; $M_{r\theta}$3.98; $M_{\theta\phi}$8.63; $M_{r\phi}$-1.12; Fault plane solution: $M_0$9.77000×10^{13} NP1:ϕ_s275.00000°, δ85.00000°,λ-25.00000°. NP2:ϕ_s7.00000°,δ65.00000°, λ-174.00000°. Principal axes: T 9.7735, Plg14.0000°, Azm324.0000°; N -0.0013, Plg65.0000°, Azm84.0000°; P -9.7722, Plg21.0000°, Azm228.0000°;*
*NEIC **11** 22:09:08.7±1.2,17°.98N±0°.02×66°.92W±0°.01,h10km±1km, ML3.3/29,Md3.4/7(RSPR),Mwr3.3/8(SLM) Error ellipse: s-maj=3.6km s-min=2.2km az=187.0*
*RSPR **11** 22:09:08.6,17°.95N×66°.95W,h12km,MD3.4/7*
*SDD **11** 22:09:09.4±1.5,18°.03N×66°.94W,h13km±14km,MD3.7, ML3.1,MW3.1,Presumed earthquake*
ISC 11 22:09:08.1±0.9,17°.96N±0°.04×66°.94W±0°.02,h16km±5km, n44,σ0°61/76,16C-6D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.06**	**73**				**Pg**	**22 09 11.2**	**+0.1**
GBPR							**Sg**	**22 09 13.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.06**	**73**	⇑*e*P			**Pg**	**22 09 11.2**	**+0.1**
GBPR				*e*S			**Sg**	**22 09 13.4**	**+0.2**
MLPR	**Magueyes Islan**	**0.10**	**277**				**Pg**	**22 09 11.3**	**-0.2**
MLPR				Sg			**Sg**	**22 09 13.4**	**-0.4**
MLPR				IAML				22 09 13.8	
	18μm,0.4s								
MLPR				IAML				22 09 13.8	
	11μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.17**	**287**	Pg			**Pg**	**22 09 12.3**	**0.0**
CRPR				IAML				22 09 15.5	
	9μm,0.2s								
CRPR				Sg			**Sg**	**22 09 15.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.17**	**287**	⇑*e*Pg			**Pg**	**22 09 12.3**	**0.0**
CRPR				⇑*e*Sg			**Sg**	**22 09 15.1**	**-0.2**
CRPR				IAML				22 09 15.2	
	comp=N,11μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.17**	**287**	⇑*e*P			**Pg**	**22 09 12.4**	**0.0**
CRPR				*e*S			**Sg**	**22 09 15.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.17**	**287**	*i* P			**Pg**	**22 09 12.4**	**0.0**
CRPR				*e*S			**Sg**	**22 09 15.0**	**-0.2**
CRPR				IAML				22 09 15.3	
	comp=Z,12μm,0.2s								
LSP	**Las Mesas**	**0.26**	**327**				**Pg**	**22 09 14.0**	**+0.2**
LSP	**Las Mesas**	**0.26**	**327**	⇓*e*P			**Pg**	**22 09 14.0**	**+0.2**
PRSN	**Puerto Rico Se**	**0.32**	**323**	Pg			**Pg**	**22 09 14.8**	**-0.1**
PRSN				Sg			**Sb**	**22 09 20.1**	**-0.3**
PRSN	**Puerto Rico Se**	**0.32**	**323**	*e*Pg			**Pg**	**22 09 15.0**	**+0.1**
PRSN				⇑*e*Sg			**Sg**	**22 09 18.5**	**-1.0**
PRSN				IAML				22 09 23.0	
	comp=N,7μm,0.3s								
PRSN	**Puerto Rico Se**	**0.32**	**323**	⇑*e*P			**Pg**	**22 09 15.1**	**+0.1**
PRSN				*e*S			**Sb**	**22 09 20.2**	**-0.3**
OBIP	**Obispado Ponce**	**0.33**	**75**	Pg			**Pg**	**22 09 15.1**	**+0.1**
OBIP				Sg			**Sb**	**22 09 20.1**	**-0.4**
OBIP	**Obispado Ponce**	**0.33**	**75**	⇓*e*P			**Pb**	**22 09 15.2**	**-0.3**
OBIP				*e*S			**Sb**	**22 09 20.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.33**	**75**	*i* P			**Pb**	**22 09 15.2**	**-0.3**
OBIP				*e*S			**Sb**	**22 09 20.3**	**-0.3**
OBIP				IAML				22 09 20.7	
	comp=Z,1μm,0.4s								
UUPR	**Utuado, UPR, P**	**0.36**	**35**	Pg			**Pg**	**22 09 15.5**	**-0.1**
UUPR				Sg			**Sg**	**22 09 20.5**	**-0.1**
CELP	**Cerrillos**	**0.36**	**71**	Pg			**Pb**	**22 09 15.7**	**-0.4**
CELP				Sg			**Sb**	**22 09 21.1**	**-0.5**
CELP				IAML				22 09 21.9	
	comp=Z,3μm,0.4s								
CELP				IAML				22 09 22.0	
	comp=Z,2μm,0.3s								
AGPR	**Aguadilla, PR**	**0.53**	**342**	Pg			**Pg**	**22 09 18.6**	**0.0**
AGPR				Sg			**Sg**	**22 09 25.8**	**0.0**
AGPR				IAML				22 09 26.4	
	comp=Z,4μm,0.4s								
AGPR				IAML				22 09 26.4	
	comp=Z,2μm,0.3s								
AGPR	**Aguadilla, PR**	**0.53**	**342**	⇑*e*Pg			**Pg**	**22 09 18.7**	**0.0**
AGPR				*e*Sg			**Sg**	**22 09 23.8**	**-2.0**
AGPR				IAML				22 09 26.3	
	comp=N,3μm,0.2s								
AGPR	**Aguadilla, PR**	**0.53**	**342**	⇑*e*P			**Pg**	**22 09 18.7**	**0.0**
AGPR				*e*S			**Sb**	**22 09 26.2**	**-0.3**
EMPR	**Esperanza - Ma**	**0.65**	**37**				**Pb**	**22 09 21.1**	**+0.1**
EMPR							**Sb**	**22 09 30.2**	**+0.5**
EMPR	**Esperanza - Ma**	**0.65**	**37**	⇓*e*P			**Pb**	**22 09 21.1**	**+0.1**
EMPR				*e*S			**Sb**	**22 09 30.2**	**+0.5**
ECPR	**Experimental S**	**0.66**	**57**	Pg			**Pg**	**22 09 20.6**	**-0.4**
ECPR				Sg			**Sb**	**22 09 29.8**	**-0.2**

ECPR					IAML			22 09 30.4	
	comp=N,3μm,0.2s								
ECPR	**Experimental S**	**0.66**	**57**	⇓	*eP*		**Pg**	**22 09 20.6**	**-0.4**
ECPR					*eS*		**Sb**	**22 09 30.0**	**0.0**
IDE	**Isla Desecheo**	**0.66**	**310**				**Pg**	**22 09 20.9**	**-0.2**
IDE							**Sg**	**22 09 30.1**	**+0.1**
IDE	**Isla Desecheo**	**0.66**	**310**	⇑	*eP*		**Pg**	**22 09 20.9**	**-0.2**
IDE					*eS*		**Sg**	**22 09 30.1**	**+0.1**
SJG	**San Juan**	**0.77**	**78**		Pg		**Pb**	**22 09 22.3**	**-0.6**
SJG					Sg		**Sg**	**22 09 33.0**	**-0.2**
SJG					IAML			22 09 34.9	
	comp=N,969nm,0.2s								
SJG	**San Juan**	**0.77**	**78**	⇑	*eP*	g	**Pb**	**22 09 22.1**	**-0.9**
SJG				⇑	*eS*	g	**Sg**	**22 09 33.4**	**+0.3**
SJG	**San Juan**	**0.77**	**78**	⇓	*eP*		**Pb**	**22 09 22.4**	**-0.6**
SJG					*eS*		**Sg**	**22 09 33.5**	**+0.3**
SJG	**San Juan**	**0.77**	**78**	*i*	P		**Pb**	**22 09 22.4**	**-0.6**
SJG					*eS*		**Sg**	**22 09 33.5**	**+0.3**
SJG					IAML			22 09 36.8	
	comp=Z,330nm,0.5s								
PDPR	**Patillas Dam,**	**0.88**	**86**		Pg		**Pb**	**22 09 24.1**	**-0.7**
PDPR					Sg		**Sb**	**22 09 35.6**	**-0.6**
GCPR	**Guaynabo City**	**0.89**	**67**		Pg		**Pb**	**22 09 24.4**	**-0.6**
GCPR					Sg		**Sb**	**22 09 35.9**	**-0.7**
GCPR	**Guaynabo City**	**0.89**	**67**	⇓	*eP*		**Pb**	**22 09 24.5**	**-0.5**
GCPR					*eS*		**Sb**	**22 09 36.0**	**-0.6**
HUMP	**Col San Antoni**	**1.05**	**80**				**Sg**	**22 09 42.0**	**-0.2**
HUMP	**Col San Antoni**	**1.05**	**80**				**Pb**	**22 09 27.3**	**-0.6**
HUMP					IAML			22 09 45.2	
	comp=Z,972nm,0.3s								
HUMP					IAML			22 09 45.7	
	comp=Z,536nm,0.3s								
HUMP	**Col San Antoni**	**1.05**	**80**	⇑	*eP*		**Pb**	**22 09 27.0**	**-0.9**
HUMP					*eS*		**Sg**	**22 09 42.0**	**-0.2**
PCDR	**Punta Cana, DR**	**1.48**	**292**	⇑	*eP*	g	**Pb**	**22 09 34.9**	**-0.3**
PCDR					IAML			22 10 06.0	
	comp=N,260nm,0.5s								
CUPR	**Culebra, Puert**	**1.61**	**77**		Pn		**Pb**	**22 09 36.5**	**-0.9**
HIDR	**Higuey Centro**	**1.80**	**291**	⇑	*eP*	g	**Pb**	**22 09 40.9**	**+0.2**
HIDR					IAML			22 10 05.4	
	comp=N,188nm,0.3s								
MIDR	**Miches**	**2.25**	**297**	⇑	*eP*	g	**Pb**	**22 09 46.9**	**-1.4**
MIDR					IAML			22 10 23.5	
	comp=N,51nm,0.5s								
DR12	**Loma Pena Alta**	**2.46**	**290**				**Pn**	**22 09 48.7**	**+1.1**
HATOM	**Hato Mayor del**	**2.46**	**290**	⇑	*eP*	g	**Pb**	**22 09 50.8**	**-1.2**
HATOM					IAML			22 10 36.5	
	comp=N,48nm,1.2s								
BANI	**BANI**	**3.28**	**278**		Pn		**Pn**	**22 09 58.9**	**0.0**
SDDR	**Presa de Saban**	**4.25**	**285**		Pn		**Pn**	**22 10 14.9**	**+2.7**

*IDC **11** 22:15:00.3±0.9, 15°.13S×76°.03W, h0km, mb3.8/6, mbtmp3.8/8, ML4.2/2, MS3.6/10, Error ellipse: s-maj=34.5km s-min=16.0km az=65.0*

*NEIC **11** 22:15:04.2±2.8, 15°.14S±0°.08×75°.7W±0°.1, h21km±6km, mb4.2/7, Error ellipse: s-maj=18.8km s-min=9.0km az=64.0*

ISC 11 22:15:04.7±0.6, 15°.18S±0°.06×75°.86W±0°.10, h29km, n65, σ1$ 60/48, mb3.9/9, MS3.6/8, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.31**	**343**	Pn		**Pn**	**Pn**	**22 15 52.5**	**-2.2**
	18nm,0.3s,baz=166,slow=14,SNR=13								
NNA				Sn		**Sn**	**Sn**	**22 16 33.6**	**+0.5**
	94nm,0.3s,baz=214,slow=20,SNR=8.1								
NNA				Lg		Lg	Lg	22 16 41.3	
	121nm,0.3s,baz=213,slow=21,SNR=7.2								
	32nm,0.3s								
NNA	**Nana**	**3.31**	**343**	Pn		**Pn**	**Pn**	**22 15 51.8**	**-2.9**
PB12	**IPOC Station P**	**6.30**	**124**	Pn		**Pn**	**Pn**	**22 16 33.1**	**-2.8**
PB18	**Visviri**	**6.58**	**112**	Pn		**Pn**	**Pn**	**22 16 39.3**	**-0.8**
PB16	**IPOC Station P**	**6.85**	**118**	Pn		**Pn**	**Pn**	**22 16 42.5**	**-1.4**
PB11	**IPOC Station P**	**7.47**	**128**	Pn		**Pn**	**Pn**	**22 16 51.1**	**-0.9**
LPAZ	**La Paz**	**7.53**	**99**	Pn		**Pn**	**Pn**	**22 16 55.5**	**+2.3**
	3.2nm,0.3s,baz=277,slow=8.9,SNR=31								
LPAZ				LR		LR	LR	22 20 16.0	
	comp=Z,286nm,18.9s,baz=290,slow=41								
	7.4nm,0.3s								
LPAZ	**La Paz**	**7.53**	**99**	Pn		**Pn**	**Pn**	**22 16 55.0**	**+1.8**
HMBC	**Humberstone**	**7.62**	**133**	Pn		**Pn**	**Pn**	**22 16 53.1**	**-1.0**
GO01	**Chusmiza**	**7.78**	**126**	Pn		**Pn**	**Pn**	**22 16 55.3**	**-1.2**
CZSB	**Cruzeiro do Su**	**8.02**	**23**	Pn		**Pn**	**Pn**	**22 16 58.8**	**-0.7**
PB08	**IPOC Station P**	**8.08**	**129**	Pn		**Pn**	**Pn**	**22 16 59.3**	**-1.2**
PB02	**IPOC Station P**	**8.33**	**138**	Pn		**Pn**	**Pn**	**22 17 03.1**	**-0.7**
ATAH	**Atahualpa**	**8.37**	**342**	Pn		**Pn**	**Pn**	**22 17 07.0**	**+2.4**
	1.8nm,0.3s,baz=84,slow=4.2,SNR=5.2								
ATAH				Sn		**Sn**	**Sn**	**22 18 41.5**	**+3.2**
	0.9nm,0.3s,baz=113,slow=20,SNR=1.1								
PB01	**IPOC Station P**	**8.41**	**135**	Pn		**Pn**	**Pn**	**22 17 03.4**	**-1.5**
PB07	**IPOC Station P**	**8.64**	**140**	Pn		**Pn**	**Pn**	**22 17 06.1**	**-1.9**
PB03	**IPOC Station P**	**8.96**	**141**	Pn		**Pn**	**Pn**	**22 17 11.5**	**-0.9**
PB09	**IPOC Station P**	**9.10**	**137**	Pn		**Pn**	**Pn**	**22 17 14.3**	**-0.1**
PB05	**IPOC Station P**	**9.32**	**146**	Pn		**Pn**	**Pn**	**22 17 15.2**	**-2.2**
PB06	**IPOC Station P**	**9.56**	**142**	Pn		**Pn**	**Pn**	**22 17 18.9**	**-1.8**
PB10	**IPOC Station P**	**9.69**	**150**	Pn		**Pn**	**Pn**	**22 17 19.8**	**-2.5**
PB14	**IPOC Station P**	**10.71**	**152**	Pn		**Pn**	**Pn**	**22 17 34.2**	**-2.3**
SIV	**San Ignacio**	**14.27**	**95**	Pn		Pn	Pn	22 18 19.9	-5.2
	baz=279,slow=13,SNR=16								
SIV				LR		LR	LR	22 24 28.4	
	comp=Z,338nm,22.0s,baz=300,slow=39								
LCO	**Las Campanas**	**14.57**	**162**	P		**P**	**P**	**22 18 37.6**	**+2.1**
PTLB	**Pontes e Lacer**	**16.14**	**93**	Pn		**Pn**	**Pn**	**22 18 48.0**	**-1.6**
H03N1	**Juan Fernandez**	**18.39**	**188**	T		T	T	22 38 26.0	
	baz=9.6,slow=74,SNR=3612								
H03N2	**Juan Fernandez**	**18.40**	**188**	T		T	T	22 38 20.9	
	baz=9.6,slow=74,SNR=2622								
H03N3	**Juan Fernandez**	**18.41**	**188**	T		T	T	22 38 20.3	
	baz=9.6,slow=74,SNR=2521								
H03S3	**Juan Fernandez**	**18.77**	**188**	T		T	T	22 38 47.2	
	baz=5.0,slow=25,SNR=14								
H03S2	**Juan Fernandez**	**18.79**	**188**	T		T	T	22 38 45.8	
	baz=5.0,slow=25,SNR=9.3								
H03S1	**Juan Fernandez**	**18.79**	**188**	T		T	T	22 38 45.8	
	baz=5.0,slow=25,SNR=11								
MT09	**Talagante**	**19.04**	**167**	P		**Pn**	**Pn**	**22 19 27.0**	**+1.4**
MT09				IAmb		IAmb	IAmb	22 19 47.9	
	comp=Z,22nm,1.4s								
BO02	**Sierra Bellavi**	**20.06**	**168**	P		**P**	**P**	**22 19 37.5**	**+1.6**
BO02				IAmb		IAmb	IAmb	22 19 52.2	
	comp=Z,7.5nm,1.0s								
BOAV	**Boa Vista**	**23.14**	**42**	P		**P**	**P**	**22 20 06.2**	**-2.7**
BOAV				IAmb		IAmb	IAmb	22 20 09.5	
	comp=Z,6.1nm,0.7s								
SDV	**Santo Domingo**	**24.46**	**13**	LR		LR	LR	22 30 54.4	
	comp=Z,156nm,18.2s,baz=236,slow=39								
SDV	**Santo Domingo**	**24.46**	**13**	P		**P**	**P**	**22 20 20.0**	**-1.6**
SDV				IAmb		IAmb	IAmb	22 20 45.7	
	comp=Z,9.2nm,0.9s								
PLCA	**Paso Flores**	**25.88**	**171**	P		**P**	**P**	**22 20 34.0**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=333,slow=9.0,SNR=3.1								
	comp=Z,1.7nm,0.9s								
BDFB	**Brasilia**	**26.84**	**95**	P		**P**	**P**	**22 20 45.0**	**+1.8**
	comp=Z,1.8nm,0.4s,baz=261,slow=10,SNR=3.3								
BDFB				LR		LR	LR	22 32 21.0	
	comp=Z,154nm,20.0s,baz=324,slow=38								
	comp=Z,1.8nm,0.4s								
MDP	**Montagnes des**	**30.58**	**51**	LR		LR	LR	22 34 09.2	
	comp=Z,91nm,21.4s,baz=314,slow=37								
RPN	**Rapa Nui**	**33.30**	**244**	LR		LR	LR	22 30 45.0	
	comp=Z,85nm,18.8s,baz=120,slow=28								
TXAR	**Lajitas Array**	**51.76**	**329**	P		**P**	**P**	**22 24 09.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=141,slow=8.1,SNR=5.2								
	comp=Z,0.2nm,0.3s								
TXAR	**Lajitas Array**	**51.76**	**329**	P		**P**	**P**	**22 24 09.1**	**-0.8**
TX31	**Lajitas Ar. Si**	**51.76**	**329**	P		**P**	**P**	**22 24 09.4**	**-0.6**
TX31				IAmb		IAmb	IAmb	22 24 26.5	
	comp=Z,5.4nm,1.3s								
SADO	**Sadowa**	**59.73**	**357**	LR		LR	LR	22 53 53.7	
	comp=Z,41nm,18.1s,baz=323,slow=39								
PDAR	**Pinedale Array**	**65.44**	**333**	P		**P**	**P**	**22 25 45.3**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=159,slow=7.1,SNR=2.3								
PDAR				LR		LR	LR	22 53 37.8	
	comp=Z,61nm,18.1s,baz=356,slow=36								
	comp=Z,0.3nm,0.7s								
SNAA	**Sanae**	**70.37**	**161**	P		**P**	**P**	**22 26 16.7**	**+1.1**
DBIC	**Dimbokro**	**73.61**	**78**	LR		LR	LR	22 57 04.0	
	comp=Z,100nm,18.6s,baz=353,slow=34								
YKA	**Yellowknife Ar**	**83.15**	**343**	P			**P**	**22 27 27.0**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=142,slow=4.9,SNR=8.1								
	comp=Z,0.5nm,0.7s								
ESDC	**Sonseca Array**	**86.21**	**47**	P		**P**	**P**	**22 27 42.8**	**-0.9**
	comp=Z,0.8nm,1.0s,baz=253,slow=3.9,SNR=3.3								
	comp=Z,0.8nm,1.0s								

BOSA	**Boshof**	**92.28**	**120**	LR		LR		23 09 04.2	
	comp=Z,24nm,19.6s,baz=354,slow=35								
H11N3	**WAKE ISLAND Hyd**	**20.23**	**284**	T		T		00 45 31.1	
	baz=96,slow=74,SNR=47								
H11N2	**WAKE ISLAND Hyd**	**20.24**	**284**	T		T		00 45 32.3	
	baz=96,slow=74,SNR=68								
H11N1	**WAKE ISLAND Hyd**	**20.25**	**284**	T		T		00 45 29.7	
	baz=96,slow=74,SNR=12								
H11S2	**WAKE ISLAND Hyd**	**20.28**	**283**	T		T		00 45 38.5	
	baz=98,slow=75,SNR=13								
H11S1	**WAKE ISLAND Hyd**	**20.28**	**283**	T		T		00 45 33.6	
	baz=98,slow=75,SNR=15								
H11S3	**WAKE ISLAND Hyd**	**20.29**	**283**	T		T		00 45 39.1	
	baz=98,slow=75,SNR=14								
ASAR	**Alice Springs**	**131.66**	**218**	PKP		**PKPdf**		**22 34 15.2**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=108,slow=1.4,SNR=6.2								
ASAR	**Alice Springs**	**131.66**	**218**	PKPdf		**PKPdf**		**22 34 15.6**	**-0.2**
WRA	**Warramunga Arr**	**134.18**	**221**	PKP		**PKPdf**		**22 34 20.9**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=131,slow=2.1,SNR=9.5								
WRA	**Warramunga Arr**	**134.18**	**221**	PKPdf		**PKPdf**		**22 34 20.7**	**+0.2**
ZALV	**Zalesovo Beam**	**138.46**	**17**	PKP		**PKPdf**		**22 34 27.0**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=336,slow=3.2,SNR=4.3								
ZALV	**Zalesovo Beam**	**138.46**	**17**	PKPdf		**PKPdf**		**22 34 27.4**	**0.0**
KURBB	**Kurchatov Arra**	**139.04**	**25**	PKP		**PKPdf**		**22 34 28.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=306,slow=2.6,SNR=4.5								
MKAR	**Makanchi Array**	**143.59**	**26**	PKP		**PKPdf**		**22 34 36.7**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=240,slow=1.2,SNR=6.0								
SONM	**Songino Array**	**147.38**	**357**	PKPbc		**PKPdf**		**22 34 45.8**	**+2.2**
	comp=Z,1.4nm,0.5s,baz=356,slow=1.8,SNR=5.0								

*SJA **11** 22:29:56.2±0.7, 20°.90S×70°.96W, h17km±2km, ML4.2, MW4.2*

*IDC **11** 22:29:56.5±1.0, 21°.31S×70°.74W, h0km, mb3.7/2, mbtmp3.9/6, ML4.3/4, MS3.0/4, Error ellipse: s-maj=32.6km s-min=28.6km az=134.0*

*NEIC **11** 22:29:59.3±1.9, 20°.94S±0°.03×70°.74W±0°.05, h10km±1km, mb3.8/4, Mwr4.0/41, Mwr4.4(GUC), Error ellipse: s-maj=8.1km s-min=4.5km az=282.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.67; $M_{\theta\theta}$=0.21; $M_{\phi\phi}$=0.46; $M_{r\theta}$=0.33; $M_{\theta\phi}$=0.01; $M_{\phi r}$=0.95; Fault plane solution: M_0=1.17000×10^{15} NP1:ϕ_s343.54000°, δ75.50000°, λ-94.04000°. NP2:ϕ_s179.28000°, δ15.04000°, λ-74.78000°. Principal axes: T 1.0297, Plg30.0000°, Azm77.0000°; N 0.2394, Plg4.0000°, Azm345.0000°; P -1.2690, Plg59.0000°, Azm248.0000°;*

*NEIC **11** 22:30:00.7, 20°.95S×70°.72W, h18km*

*GUC **11** 22:30:01.2±0.8, 20°.88S×70°.82W, h26km±4km, ML4.1*

ISC 11 22:29:57.5±1.3, 20°.91S±0°.02×70°.82W±0°.04, h9km±8km, n92, σ1$ 61/107, 3C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.91**	**46**	*eP*		**Pg**	**Pg**	**22 30 15.9**	**+0.9**
TA02				*eS*		**Sn**	**Sn**	**22 30 27.8**	**-1.9**
TA02				IAML				22 30 30.1	
	comp=N,19μm,0.2s								
TA02	**Huaiquique**	**0.91**	**46**	*eP*		**Pn**	**Pn**	**22 30 16.2**	**-0.3**
TA02				IAML				22 30 32.1	
	comp=Z,5μm,0.5s								
PB02	**IPOC Station P**	**0.96**	**115**				**Pn**	**22 30 17.4**	**+0.2**
PB02				Sn			**Sn**	**22 30 29.6**	**-1.4**
PB02	**IPOC Station P**	**0.96**	**115**	⇓	*iP*		**Pn**	**22 30 17.9**	**+0.6**
PB02				*eS*			**Sn**	**22 30 30.5**	**-0.5**
PB02				IAML				22 30 32.0	
	comp=E,13μm,0.5s								
PB02	**IPOC Station P**	**0.96**	**115**	*eP*		**Pb**	**Pb**	**22 30 12.2**	**-4.1**
PB02				IAML				22 30 33.0	
	comp=Z,11μm,0.3s								
HMBC	**Humberstone**	**1.08**	**54**				**Pn**	**22 30 18.7**	**-0.2**
HMBC							**Sb**	**22 30 31.5**	**-1.2**
HMBC	**Humberstone**	**1.08**	**54**	⇑	*iP*		**Pg**	**22 30 19.0**	**+0.7**
HMBC				*eS*			**Sg**	**22 30 32.4**	**+0.1**
HMBC				IAML				22 30 34.6	
	comp=N,15μm,0.4s								
HMBC	**Humberstone**	**1.08**	**54**	*eP*		**Pb**	**Pb**	**22 30 18.3**	**-0.1**
HMBC				IAML				22 30 40.3	
	comp=Z,7μm,0.3s								
PB07	**IPOC Station P**	**1.19**	**133**	Pn		**Pg**	**Pg**	**22 30 21.2**	**+0.8**
PB07				Sn			**Sn**	**22 30 36.3**	**-0.7**
PB07	**IPOC Station P**	**1.19**	**133**	⇓	*iP*		**Pg**	**22 30 21.8**	**+1.3**
PB07				*eS*			**Sg**	**22 30 36.7**	**+0.7**
PB07				IAML				22 30 41.3	
	comp=E,4μm,0.4s								
PB07	**IPOC Station P**	**1.19**	**133**	*eP*		**Pb**	**Pb**	**22 30 21.1**	**+0.7**
PB07				*eS*			**Sg**	**22 30 39.3**	**+3.3**
PB07				IAML				22 30 43.4	
	comp=Z,2μm,0.4s								
PB01	**IPOC Station P**	**1.26**	**96**	Pn		**Pg**	**Pg**	**22 30 22.5**	**+0.8**
PB01				Sn			**Sg**	**22 30 38.5**	**+0.5**
PB01	**IPOC Station P**	**1.26**	**96**	⇑	*iP*		**Pg**	**22 30 22.2**	**+0.6**
PB01				*i*	S		**Sg**	**22 30 38.6**	**+0.6**
PB01				IAML				22 30 40.7	
	comp=N,14μm,0.3s								
PB01	**IPOC Station P**	**1.26**	**96**	*eP*		**Pb**	**Pb**	**22 30 21.7**	**+0.2**
PB01				IAML				22 30 42.1	
	comp=Z,5μm,0.8s								
PB11	**IPOC Station P**	**1.58**	**44**	Pn		**Pb**	**Pb**	**22 30 27.4**	**+0.4**
PB11	**IPOC Station P**	**1.58**	**44**	*eP*		**Pb**	**Pb**	**22 30 26.8**	**-0.3**
PB11				*eS*			**Sg**	**22 30 47.4**	**-1.1**
PB11				IAML				22 30 51.0	
	comp=E,6μm,0.2s								
PB11	**IPOC Station P**	**1.58**	**44**	*eP*		**Pb**	**Pb**	**22 30 26.6**	**-0.5**
PB11				IAML				22 30 53.0	
	comp=Z,5μm,0.4s								
PB09	**IPOC Station P**	**1.72**	**121**	Pn		**Pb**	**Pb**	**22 30 30.2**	**+0.8**
PB09	**IPOC Station P**	**1.72**	**121**	⇓	*iP*		**Pg**	**22 30 30.4**	**-0.1**
PB09				*eS*			**Sg**	**22 30 52.5**	**-0.3**
PB09				IAML				22 30 59.0	
	comp=N,2μm,0.8s								
PB09	**IPOC Station P**	**1.72**	**121**	*eP*		**Pb**	**Pb**	**22 30 30.0**	**+0.6**
PB09				*eS*			**Sg**	**22 30 53.3**	**+0.5**
PB09				IAML				22 30 57.2	
	comp=Z,2μm,0.4s								
PB08	**IPOC Station P**	**1.74**	**64**	Pn		**Pb**	**Pb**	**22 30 29.8**	**-0.1**
PB08	**IPOC Station P**	**1.74**	**64**	⇑	*iP*		**Pb**	**22 30 29.9**	**-0.1**
PB08				*eS*			**Sg**	**22 30 52.5**	**-1.1**
PB08				IAML				22 30 59.3	
	comp=N,2μm,0.6s								
PB08	**IPOC Station P**	**1.74**	**64**	*eP*		**Pb**	**Pb**	**22 30 29.4**	**-0.5**
PB08				*eS*			**Sg**	**22 30 53.0**	**-0.6**
PB08				IAML				22 31 03.8	
	comp=Z,1μm,1.2s								
GO01	**Chusmiza**	**1.97**	**51**	Pn		**Pb**	**Pb**	**22 30 33.4**	**-0.4**
GO01	**Chusmiza**	**1.97**	**51**	*eP*		**Pb**	**Pb**	**22 30 32.8**	**-1.0**
GO01				*eS*			**Sb**	**22 30 58.5**	**-0.1**
GO01				IAML				22 31 01.9	
	comp=N,5μm,0.4s								
GO01	**Chusmiza**	**1.97**	**51**	*eP*		**Pb**	**Pb**	**22 30 32.9**	**-0.9**
GO01				*eS*			**Sg**	**22 31 00.1**	**-0.7**
GO01				IAML				22 31 05.5	
	comp=Z,1μm,0.3s								
PB05	**IPOC Station P**	**2.02**	**163**	Pn		**Pn**	**Pn**	**22 30 32.3**	**+0.5**
PB05	**IPOC Station P**	**2.02**	**163**	⇓	*iP*		**Pn**	**22 30 32.6**	**+0.7**
PB05				*eS*			**Sb**	**22 30 59.7**	**0.0**
PB05				IAML				22 31 16.1	
PB05	**IPOC Station P**	**2.02**	**163**	*eP*		**Pn**	**Pn**	**22 30 31.9**	**+0.1**
PB05				IAML				22 31 18.7	
	comp=Z,620nm,0.9s								
PB06	**IPOC Station P**	**2.13**	**147**	Pn		**Pn**	**Pn**	**22 30 33.6**	**+0.2**
PB06	**IPOC Station P**	**2.13**	**147**	⇓	*iP*		**Pn**	**22 30 34.8**	**+1.4**
PB06				IAML				22 31 17.7	
	comp=N,1μm,0.5s								
PB06	**IPOC Station P**	**2.13**	**147**	*eP*		**Pn**	**Pn**	**22 30 34.9**	**+1.4**
PB06				*eS*			**Sg**	**22 31 06.6**	**+0.5**
PB06				IAML				22 31 14.0	
	comp=Z,1μm,0.5s								
PB12	**IPOC Station P**	**2.33**	**12**	Pn		**Pb**	**Pb**	**22 30 39.7**	**-0.1**
PB12	**IPOC Station P**	**2.33**	**12**	⇓	*eP*		**Pn**	**22 30 36.4**	**+0.3**
PB12				IAML				22 31 20.3	
	comp=N,2μm,0.5s								
PB12	**IPOC Station P**	**2.33**	**12**	*eP*		**Pn**	**Pn**	**22 30 36.7**	**+0.5**
PB12				*eS*			**Sb**	**22 31 09.9**	**+1.2**
PB12				IAML				22 31 15.8	
	comp=Z,1μm,0.8s								
AP01	**Chacalluta**	**2.57**	**10**	Pn		**Pb**	**Pb**	**22 30 42.6**	**-1.1**
AP01	**Chacalluta**	**2.57**	**10**	*eP*		**Pb**	**Pb**	**22 30 43.1**	**-0.7**
AP01	**Chacalluta**	**2.57**	**10**	*eP*		**Pb**	**Pb**	**22 30 43.4**	**-0.4**
AP01				IAML				22 31 27.9	
	comp=Z,2μm,1.0s								
PB10	**IPOC Station P**	**2.60**	**175**	Pn		**Pn**	**Pn**	**22 30 39.9**	**+0.1**
PB10	**IPOC Station P**	**2.60**	**175**	⇓	*eP*		**Pn**	**22 30 40.1**	**+0.3**
PB10	**IPOC Station P**	**2.60**	**175**	*eP*			**Pn**	**22 30 40.4**	**+0.4**
PB10				*eS*			**Sn**	**22 31 13.3**	**+1.8**
PB10				IAML				22 31 38.8	
	comp=Z,290nm,0.6s								
PB16	**IPOC Station P**	**2.85**	**26**	Pn			**Pb**	**22 30 47.0**	**-1.9**
PB16	**IPOC Station P**	**2.85**	**26**	*eP*			**Pn**	**22 30 45.6**	**+1.9**
PB16	**IPOC Station P**	**2.85**	**26**	*eP*			**Pn**	**22 30 46.3**	**+2.6**
PB16				*eS*			**Sb**	**22 31 21.1**	**-3.0**
PB16				IAML				22 31 30.1	
	comp=Z,585nm,0.5s								
AF01	**San Pedro de A**	**3.19**	**130**	*eP*			**Pb**	**22 30 54.5**	**0.0**
AF01	**San Pedro de A**	**3.19**	**130**	*eP*			**Pg**	**22 31 01.3**	**+2.7**
AF01				*eS*			**Sb**	**22 31 30.3**	**-3.3**
AF01				IAML				22 31 53.1	
	comp=Z,2μm,1.1s								
PB18	**Visviri**	**3.54**	**21**	Pn			**Pb**	**22 30 58.1**	**-2.5**
PB18	**Visviri**	**3.54**	**21**	*eP*			**Pb**	**22 30 58.4**	**-2.3**
PB14	**IPOC Station P**	**3.72**	**174**	Pn			**Pn**	**22 30 54.6**	**-0.8**
PB14	**IPOC Station P**	**3.72**	**174**	*eP*			**Pn**	**22 30 55.4**	**-0.1**
PB14				*eS*			**Sg**	**22 31 55.8**	**-1.2**
PB14				IAML				22 32 12.2	
	comp=Z,221nm,0.7s								
YJA	**Yavi**	**5.10**	**105**	*eP*			**Pb**	**22 31 24.0**	**-3.2**
AC01	**Pan de Azucar**	**5.22**	**178**	Pn			**Pn**	**22 31 14.6**	**-1.1**
AC01	**Pan de Azucar**	**5.22**	**178**	*eP*			**Pn**	**22 31 15.3**	**-0.5**
AC01				IAML				22 33 15.4	
	comp=Z,65nm,0.7s								
LPAZ	**La Paz**	**5.26**	**29**	Pn			Pn	22 31 23.0	+6.1
	comp=Z,3.5nm,0.3s,baz=202,slow=9.1,SNR=28								
LPAZ				Sn			**Sn**	**22 32 24.0**	**+6.0**
	comp=Z,1.2nm,0.3s,baz=175,slow=11,SNR=1.2								
LPAZ				LR			LR	22 33 29.2	
	comp=Z,162nm,21.7s,baz=217,slow=38								
	comp=Z,3.7nm,0.4s								
LPAZ	**La Paz**	**5.26**	**29**	Pn			Pn	22 31 22.2	+5.3
SALTA		**5.29**	**129**	*eP*			Pn	22 31 23.7	+6.5
AC02	**Maricunga**	**6.10**	**166**	Pn			**Pn**	**22 31 28.9**	**+0.6**
SLA	**San Lorenzo**	**6.20**	**129**	*eP*			Pn	22 31 37.6	+8.2
GO03	**Copiapo**	**6.67**	**175**	Pn			**Pn**	**22 31 36.2**	**+0.4**
AC05	**El Transito**	**7.91**	**176**	Pn			**Pn**	**22 31 53.0**	**+0.2**
LCO	**Las Campanas**	**8.07**	**179**	Pn			**Pn**	**22 31 54.0**	**-1.2**
CO01	**Juntas del Tor**	**9.05**	**176**	Pn			**Pn**	**22 32 10.0**	**+1.4**
CO03	**El Pedregal**	**9.89**	**

HIZ			S	Sn	23 06 54.7	-0.4
MTHZ	**Maungataniwha**	**0.82 110**	P	Pn	23 06 36.4	+1.4
MTHZ			S	Sn	23 06 53.6	-2.1
MOVZ	**Moawhango**	**0.83 185**	P	Pn	23 06 36.5	+1.3
MOVZ			S	Sn	23 06 53.3	-2.7
RTZ	**Ruatahuna**	**0.88 93**	P	Pn	23 06 36.6	+1.1
TOZ	**Tahuroa Road**	**0.89 342**	P	Pn	23 06 37.0	+1.6
NMHZ	**Naumai**	**0.91 125**	P	Pn	23 06 38.0	+2.4
KWHZ	**Kaweka Forest**	**0.95 152**	P	Pn	23 06 37.7	+1.8
RAHZ	**Arahi**	**1.02 110**	P	Pn	23 06 38.3	+1.9
URZ	**Urewera**	**1.04 73**	P	Pn	23 06 37.4	+1.0
ARHZ	**Aropaoanui**	**1.12 128**	P	Pn	23 06 39.4	+2.3
KRHZ	**Kereru**	**1.14 159**	P	Pn	23 06 39.3	+2.0
MWZ	**Matawai**	**1.34 80**	P	Pn	23 06 40.3	+1.3
PNHZ	**Pukenui**	**1.36 169**	P	Pn	23 06 41.2	+2.0
KAHZ	**Kahuranaki**	**1.45 147**	P	Pn	23 06 42.5	+2.5
TSZ	**Takapari Road**	**1.48 177**	P	Pn	23 06 42.3	+2.0
RUGZ	**Raukumara Rang**	**1.56 67**	P	Pn	23 06 41.8	+0.6
MKAZ	**Moumakai**	**1.57 339**	P	Pn	23 06 43.2	+2.1
PKE	**Pukeiti**	**1.58 247**	P	Pn	23 06 43.9	+2.7
KHEZ	**Kahui Hut**	**1.60 243**	P	Pn	23 06 44.2	+2.7
KHEZ	**Kahui Hut**	**1.60 243**	P	Pn	23 06 44.3	+2.8
PXZ	**Pawanui**	**1.65 152**	P	Pn	23 06 44.6	+2.8
TWGZ	**Tauwhareparae**	**1.72 77**	P	Pn	23 06 44.8	+2.1
HAZ	**Te Kaha**	**1.73 62**	P	Pn	23 06 43.6	+0.9
DVHZ	**Dannevirke**	**1.74 172**	P	Pn	23 06 44.5	+1.8
PRHZ	**Porangahau**	**1.79 160**	P	Pn	23 06 45.6	+2.3
PKGZ	**Pakihiroa**	**1.89 69**	P	Pn	23 06 44.7	+0.3
ANWZ	**Angora Road**	**1.94 166**	P	Pn	23 06 47.0	+2.2
PUZ	**Puketiti**	**1.96 76**	P	Pn	23 06 46.4	+1.3
PRWZ	**Pori Road**	**1.98 177**	P	Pn	23 06 47.4	+2.2
MRZ	**Mangatainoka R**	**2.09 186**	P	Pn	23 06 48.1	+1.7
BFZ	**Birch Farm**	**2.12 172**	P	Pn	23 06 48.8	+2.0
BFZ	**Birch Farm**	**2.12 172**	P	Pn	23 06 48.7	+2.0
WMGZ	**Waiomatatini S**	**2.16 70**	P	Pn	23 06 48.8	+1.6
TIWZ	**Tintock**	**2.19 179**	P	Pn	23 06 49.5	+1.9
OGWZ	**Otaki Gorge**	**2.30 193**	P	Pn	23 06 50.5	+1.8
HOWZ	**Holdsworth Sta**	**2.33 186**	P	Pn	23 06 50.7	+1.5
KIW	**Kapiti Island**	**2.39 197**	P	Pn	23 06 51.3	+1.5
TMWZ	**Te Maipa**	**2.53 179**	P	Pn	23 06 53.0	+1.6
MTW	**Mount Morrison**	**2.59 186**	P	Pn	23 06 53.4	+1.3
CAW	**Cannon Point**	**2.60 193**	P	Pn	23 06 53.7	+1.5
DUWZ	**D'Urville Isla**	**2.67 213**	P	Pn	23 06 54.5	+1.4
PAWZ	**Paruwai Farm**	**2.82 187**	P	Pn	23 06 56.0	+1.1
TRWZ	**Traveller**	**2.82 183**	P	Pn	23 06 56.4	+1.5
MSWZ	**Moikau Station**	**2.87 189**	P	Pn	23 06 56.6	+1.2
TCW	**Tory Channel**	**2.90 204**	P	Pn	23 06 57.2	+1.5
TUWZ	**Tuamarina**	**3.20 207**	P	Pn	23 07 00.9	+1.5
TKNZ	**Takaka Hill**	**3.31 221**	P	Pn	23 06 59.8	-1.1
QRZ	**Quartz Range**	**3.41 228**	P	Pn	23 07 02.2	+0.2
QRZ	**Quartz Range**	**3.41 228**	P	Pn	23 07 03.0	+1.1
BSWZ	**Blackbirch Sta**	**3.48 205**	P	Pn	23 07 04.3	+1.4
THZ	**Tophouse**	**3.90 214**	P	Pn	23 07 09.5	+1.2
KHZ	**Kahutara**	**4.22 204**	P	Pn	23 07 13.4	+1.3
KHZ	**Kahutara**	**4.22 204**	P	Pn	23 07 13.4	+1.3
DSZ	**Denniston Nort**	**4.43 223**	P	Pn	23 07 15.1	+0.2
GVZ	**Greta Valley S**	**4.88 205**	P	Pn	23 07 21.2	+0.5
LTZ	**Lake Taylor**	**5.00 212**	P	Pn	23 07 21.9	-0.4
OKCZ	**Okains Bay**	**5.56 201**	P	Pn	23 07 29.9	+0.5
MHCZ	**Mount Hutt**	**5.91 212**	P	Pn	23 07 34.7	+0.6

*BGSI **11** 23:37:47.2±1.5,26°.39S×27°.60E,h0km±34km, ML2.6*
ISC 11 23:37:46.5±1.9,**26°.28S**±0°.06×**27°.50E**±0°.10,**h5km,n8,**
σ1§56/15,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.13**	**306**	*i* P	**Pn**	**23 38 24.5**	**+1.6**
LBTB				*i* S	**Sg**	**23 38 54.0**	**-0.9**
MAKGR	**Makgori**	**2.47**	**280**	*i* P	**Pn**	**23 38 28.7**	**+1.2**
MAKGR				*i* S	**Sn**	**23 38 60.0**	**+1.8**
MAKGR				IAML		23 39 04.3	
	comp=N,102nm,0.4s						
BOSA	**Boshof**	**3.06**	**220**	*i* P	**Pn**	**23 38 34.7**	**-1.0**
BOSA				*i* S	**Sn**	**23 39 14.1**	**+1.3**
LPHEP	**Lephephe**	**3.26**	**333**	*i* P	**Pn**	**23 38 40.2**	**+1.7**
LPHEP				*i* S	**Sn**	**23 39 18.8**	**+1.0**
LPHEP				IAML		23 39 35.4	
	comp=E,17nm,0.4s						
KHWEE	**KHWEE**	**4.70**	**336**	*i* P	**Pn**	**23 38 59.8**	**+1.5**
KHWEE				*i* S	**Sn**	**23 39 52.5**	**-0.9**
KHWEE				IAML		23 40 20.4	
	comp=E,47nm,0.3s						
BROLN	**Tlhalogang**	**5.16**	**358**	*i* P	**Pn**	**23 39 05.2**	**+0.6**
BROLN				*i* S	**Sn**	**23 40 03.0**	**-1.6**
BROLN				IAML		23 40 32.3	
	comp=E,5.3nm,0.5s						
KGCAE	**Kacgae**	**5.90**	**304**	*i* P	**Pn**	**23 39 14.6**	**-0.2**
KGCAE				*i* S	**Sn**	**23 40 20.1**	**-2.7**
KGCAE				IAML		23 40 57.4	
	comp=E,18nm,0.4s						
GRTLG	**Ghanzi**	**7.55**	**309**	*i* P	**Pn**	**23 39 36.6**	**-0.9**

*CNRM **11** 23:43:08.9,32°.87N×5°.31W,h8km, ML3.0*
*MDD **11** 23:43:09.5±0.6,32°.97N×5°.34W,h12km±1km,Mb4.1/12, M_mb3.5/12,Error ellipse: s-maj=5.4km s-min=3.5km az=117.0*
*SFS **11** 23:43:10.4,32°.96N×5°.24W,h23km, mb3.8/4, ML4.1/9, ML3.5/14, MLv3.1/14*
*IGIL **11** 23:43:11.6,33°.05N×5°.33W,h18km*
*INMG **11** 23:43:11.0±1.4,33°.05N×5°.32W,h19km±5km, ML2.4, Error ellipse: s-maj=4.8km s-min=2.9km az=106.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Fez (Marr)*
ISC 11 23:43:07.9±1.0,**32°.99N**±0°.02×**5°.33W**±0°.02,**h10**km±9km,
n101,σ1§82/161,10C,Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MD31	**MD31**	**0.50**	**104**	P	**Pg**	**23 43 17.5**	**-0.2**
MD31				S	**Sg**	**23 43 23.8**	**-0.5**
IFR	**Ifrane**	**0.55**	**18**	Pg	**Pb**	**23 43 20.4**	**+0.6**
IFR				Sg	**Sb**	**23 43 28.6**	**+0.8**
MDT	**Midelt**	**0.64**	**106**	P	**Pg**	**23 43 19.6**	**-0.8**
MDT				S	**Sg**	**23 43 28.0**	**-0.7**
MDT	**Midelt**	**0.64**	**106**	P	**Pg**	**23 43 19.6**	**-0.8**
MDT	**Midelt**	**0.64**	**106**	P	**Pg**	**23 43 19.6**	**-0.8**
MDT	**Midelt**	**0.64**	**106**	P	**Pg**	**23 43 19.6**	**-0.8**
MDT	**Midelt**	**0.64**	**106**	P	**Pg**	**23 43 19.6**	**-0.8**
LCRM	**LCR**	**0.80**	**30**	P	**Pn**	**23 43 25.2**	**-0.2**
LCRM				S	**Sb**	**23 43 35.9**	**+1.0**
LCRM	**LCR**	**0.80**	**30**	P	**Pn**	**23 43 26.0**	**+0.6**
LCRM				S	**Sn**	**23 43 39.1**	**+1.7

SHEM	**Shemya Is, Ala**	1.42	79	Pn		Pn	00 43 45.0	-0.4	
	2µm,0.3s,baz=294,slow=4.5,SNR=989								
SHEM				Sn		Sn	00 44 02.2	-0.8	
	4µm,0.3s,baz=294,slow=23,SNR=55								
SHEM	**Shemya Is, Ala**	1.42	79			Pn	00 43 44.6	-0.9	
SHEM				IAML			00 44 03.8		
	comp=N,8µm,0.4s								
SHEM				IAML			00 44 04.0		
	comp=E,15µm,0.5s								
SMY	**Shemya**	1.42	79	Pn		Pn	00 43 45.1	-0.4	
SMY				IAML			00 44 04.1		
	comp=N,21µm,0.4s								
SMY	**Shemya**	1.42	79	P		Pn	00 43 45.0	-0.4	
SMY				S		Sn	00 44 02.4	-0.6	
BKI	**Bering**	4.40	311	P		Pn	00 44 24.9	-1.5	
BKI				S		Sn	00 45 11.3	-5.3	
BKI	**Bering**	4.40	311	*e*P		Pn	00 44 24.9	-1.5	
BKI				*e*S		Sn	00 45 11.3	-5.3	
AMKA	**Amchitka**	4.76	101	Pn		Pn	00 44 30.8	-0.7	
AMKA				IAML			00 45 25.4		
	comp=N,153nm,0.9s								
KBTR	**Krutoberegovo**	6.45	309	P		Pn	00 44 52.4	-2.1	
KBTR	**Krutoberegovo**	6.45	309	*e*P		Pn	00 44 52.5	-2.1	
KBG	**Krutoberegovo**	6.52	309	*e*S		Sn	00 46 04.7	-4.2	
KIWB	**Kanaga Island**	6.82	91	Pn		Pn	00 44 59.9	+0.2	
ADK	**Adak**	7.10	90	Pn		Pn	00 45 03.4	-0.1	
ADK	**Adak**	7.10	90	P		Pn	00 45 03.4	-0.1	
SPN	**Mys Shipunski**	7.18	280	P		Pn	00 45 02.9	-1.6	
SPN	**Mys Shipunski**	7.18	280	*e*P		Pn	00 45 03.0	-1.6	
TUMD	**Tumrok D**	7.28	296	P		Pn	00 45 05.6	-0.4	
TUMD				S		Sn	00 46 22.5	-5.0	
TUMD	**Tumrok D**	7.28	296	*e*P		Pn	00 45 05.6	-0.4	
TUMD				*e*S		Sn	00 46 22.5	-5.0	
SMKR	**Semkarok**	7.28	308	P		Pn	00 45 06.1	0.0	
SMKR				S		Sn	00 46 22.3	-5.4	
SMKR	**Semkarok**	7.28	308	*e*P		Pn	00 45 06.1	0.0	
SMKR				*e*S		Sn	00 46 22.3	-5.4	
GSTR	**Great Sitkin T**	7.45	88	Pn		Pn	00 45 07.3	-1.0	
KMNR	**Kamenistaya**	7.55	300	P		Pn	00 45 09.4	-0.4	
KMNR	**Kamenistaya**	7.55	300	*e*P		Pn	00 45 09.4	-0.4	
KLY	**Klyuchi**	7.56	305	P		Pn	00 45 08.1	-1.6	
KLY	**Klyuchi**	7.56	305	*e*P		Pn	00 45 08.1	-1.6	
KIRR	**Kirishev**	7.57	302	P		Pn	00 45 08.9	-1.1	
KIRR	**Kirishev**	7.57	302	*e*P		Pn	00 45 09.0	-1.1	
KII	**Karymskiy**	7.58	287	P		Pn	00 45 08.7	-1.4	
KII	**Karymskiy**	7.58	287	*e*P		Pn	00 45 08.8	-1.4	
NLC	**Nalytchevo**	7.59	280	P		Pn	00 45 08.8	-1.4	
NLC	**Nalytchevo**	7.59	280	*e*P		Pn	00 45 08.9	-1.4	
KOZ	**Kozyrevsk**	7.85	302	P		Pn	00 45 13.4	-0.4	
KOZ	**Kozyrevsk**	7.85	302	*e*P		Pn	00 45 13.4	-0.4	
SDLR	**Sedlovina**	7.87	281	P		Pn	00 45 13.1	-1.0	
SDLR	**Sedlovina**	7.87	281	*e*P		Pn	00 45 13.1	-1.0	
UGLR	**Uglovaya**	7.90	280	P		Pn	00 45 13.8	-0.8	
UGLR	**Uglovaya**	7.90	280	*e*P		Pn	00 45 13.8	-0.8	
SMAR	**Somma**	7.92	281	P		Pn	00 45 13.6	-1.3	
SMAR	**Somma**	7.92	281	*e*P		Pn	00 45 13.7	-1.3	
DALK	**Dalny**	7.95	279	P		Pn	00 45 13.6	-1.4	
DALK	**Dalny**	7.95	279	*e*P		Pn	00 45 13.7	-1.4	
KRER	**Koryakskii**	7.95	281	P		Pn	00 45 14.4	-0.9	
KRER	**Koryakskii**	7.95	281	*e*P		Pn	00 45 14.5	-0.9	
AVH	**Avacha**	7.95	281	P		Pn	00 45 14.6	-0.7	
AVH	**Avacha**	7.95	281	*e*P		Pn	00 45 14.7	-0.7	
PET	**Petropavlovsk**	8.01	279	Pn		Pn	00 45 14.5	-1.4	
PET	**Petropavlovsk**	8.01	279	*e*P		Pn	00 45 15.5	-0.4	
PET				*e*S		Sn	00 46 35.6	-10	
PET				pmax		pmax			
	comp=Z,89nm,0.6s								
PET				smax		smax			
	comp=N,231nm,0.8s								
PET				smax		smax			
	comp=E,277nm,0.7s								
PET	**Petropavlovsk**	8.01	279	*e*P		Pn	00 45 15.4	-0.5	
KRX	**Arik**	8.01	281	P		Pn	00 45 14.8	-1.3	
KRX	**Arik**	8.01	281	*e*P		Pn	00 45 14.9	-1.3	
KOK	**Koryaka**	8.01	281	P		Pn	00 45 14.8	-1.3	
KOK	**Koryaka**	8.01	281	*e*P		Pn	00 45 14.9	-1.3	
SRDR	**Sredinnyy**	8.03	303	P		Pn	00 45 15.5	-0.8	
SRDR	**Sredinnyy**	8.03	303	*e*P		Pn	00 45 15.6	-0.8	
RUS	**Russkaya**	8.13	275	P		Pn	00 45 16.7	-0.9	
RUS	**Russkaya**	8.13	275	*e*P		Pn	00 45 16.8	-0.9	
MTVR	**Mutnovka**	8.32	275	P		Pn	00 45 19.6	-0.8	
MTVR	**Mutnovka**	8.32	275	*e*P		Pn	00 45 19.7	-0.8	
KRMR	**Karymshinskiy**	8.33	278	P		Pn	00 45 18.7	-1.7	
KRMR				S		Sn	00 46 47.2	-6.1	
KRMR	**Karymshinskiy**	8.33	278	*e*P		Pn	00 45 18.7	-1.7	
KRMR				*e*S		Sn	00 46 47.3	-6.1	
OSSR	**Ossora**	8.37	328	P		Pn	00 45 19.9	-1.0	
OSSR	**Ossora**	8.37	328	*e*P		Pn	00 45 19.9	-1.0	
GRL	**Gorelyy**	8.38	276	P		Pn	00 45 20.2	-1.0	
GRL	**Gorelyy**	8.38	276	*e*P		Pn	00 45 20.3	-1.0	
ESO	**Esso**	8.42	299	P		Pn	00 45 20.8	-0.8	
ESO	**Esso**	8.42	299	*e*P		Pn	00 45 20.9	-0.8	
GNL	**Ganaly**	8.44	284	P		Pn	00 45 21.5	-0.5	
GNL	**Ganaly**	8.44	284	*e*P		Pn	00 45 21.5	-0.5	
KDTR	**Khodutka, Kamc**	8.48	271	P		Pn	00 45 21.1	-1.3	
KDTR	**Khodutka, Kamc**	8.48	271	*e*P		Pn	00 45 21.2	-1.3	
ASAK	**Asacha**	8.51	275	P		Pn	00 45 22.4	-0.5	
ASAK	**Asacha**	8.51	275	*e*P		Pn	00 45 22.4	-0.5	
ATKA	**Atka Island**	8.57	86	Pn		Pn	00 45 23.4	-0.4	
PEA0B	**Petropavlovsk-**	8.58	280	Pn		Pn	00 45 23.8	-0.1	
PEA0B	**Petropavlovsk-**	8.58	280	*i* P		Pn	00 45 23.3	-0.5	
PETK	**Petropavlovsk-**	8.58	280	Pn		Pn	00 45 23.9	0.0	
	comp=E,19nm,0.3s,baz=89,slow=19,SNR=182								
PETK				Sn		Sn	00 46 51.6	-7.8	
	comp=E,14nm,0.3s,baz=84,slow=30,SNR=6.1								
PETK				LR		LR	00 48 36.8		
	comp=E,172nm,20.4s,baz=113,slow=36								
PETK	**Petropavlovsk-**	8.58	280	Pn		Pn	00 45 23.0	-0.8	
PETK	**Petropavlovsk-**	8.58	280	P		Pn	00 45 23.0	-0.8	
APC	**Apacha**	8.91	279	P		Pn	00 45 29.0	+0.6	
APC				S		Sn	00 47 01.6	-6.0	
APC	**Apacha**	8.91	279	*e*P		Pn	00 45 29.0	+0.6	
APC				*e*S		Sn	00 47 01.7	-6.0	
PAU	**Pauzhetka**	9.32	270	P		Pn	00 45 33.2	-0.7	
PAU	**Pauzhetka**	9.32	270	*e*P		Pn	00 45 33.2	-0.7	
SKR	**Severo-Kuril's**	9.94	266	*e*P		Pn	00 45 42.9	+0.5	
SKR				*e*S		Sn	00 47 23.5	-9.3	
SKR				pmax		pmax			
	comp=Z,114nm,0.4s								
SKR				pmax		pmax			
	comp=Z,2µm,5.0s								
SKR				smax		smax			
	comp=E,413nm,0.3s								
SKR				smax		smax			
	comp=N,307nm,0.2s								
SKR				MLR		MLR			
	comp=Z,2µm,15.0s								
SKR	**Severo-Kuril's**	9.94	266	*e*P		Pn	00 45 42.1	-0.3	
KMSK	**Kamenskaya**	10.45	345	P		Pn	00 45 49.9	+0.6	
KMSK	**Kamenskaya**	10.45	345	*e*P		Pn	00 45 50.0	+0.6	
SPIA	**Saint Paul Isl**	11.35	58	P		Pn	00 46 00.3	-1.3	
	baz=254								
P08K	**Saint George I**	11.57	62	Pn		Pn	00 46 05.4	+0.7	
P08K	**Saint George I**	11.57	62	P		Pn	00 46 03.4	-1.3	
	baz=257								
NIKH	**Nikolski High**	11.73	80	Pn		Pn	00 46 08.8	+1.9	
NIKH	**Nikolski High**	11.73	80	P		Pn	00 46 07.7	+0.8	
	baz=276								
UNV	**Unalaska Valle**	13.07	75	Pn		Pn	00 46 25.9	+0.7	
UNV	**Unalaska Valle**	13.07	75	P		Pn	00 46 25.2	0.0	
	baz=273								
LVA	**Lava Point**	13.34	74	Pn		Pn	00 46 29.4	+0.6	
AKUT	**Akutan**	13.49	74	Pn		Pn	00 46 31.2	+0.3	
MA2	**Magadan**	13.70	309	Pn		Pn	00 46 34.2	+0.5	
	comp=Z,2.9nm,0.3s,baz=161,slow=18,SNR=0.9								
MA2				LR		LR	00 51 42.0		
	comp=Z,217nm,20.0s,baz=109,slow=36								
MA2	**Magadan**	13.70	309	*i* P		Pn	00 46 33.2	-0.5	
MA2				pmax		pmax			
	comp=Z,4.0nm,1.0s								
GAMB	**Gambell**	14.22	31	Pn		Pn	00 46 40.4	-0.3	
GAMB	**Gambell**	14.22	31	P		Pn	00 46 41.0	+0.3	
	baz=225								
M11K	**Mekoryuk**	14.45	48	Pn		Pn	00 46 44.0	+0.1	
M11K	**Mekoryuk**	14.45	48	P		Pn	00 46 44.4	+0.5	
	baz=247								
SEY	**Seymchan**	14.67	323	Pn		Pn	00 46 47.1	+0.2	
	comp=Z,0.3nm,0.3s,baz=128,slow=12,SNR=7.1								
	comp=Z,1.3nm,0.2s								
SEY	**Seymchan**	14.67	323	*ce*P		Pn	00 46 46.1	-0.8	
SEY				pmax		pmax			
	comp=Z,9.0nm,0.8s								
FALS	**False Pass**	14.85	71	P		Pn	00 46 50.3	+0.9	
	baz=271								
M13K	**Dall Lake**	15.78	50	P		Pn	00 47 02.7	+1.2	
M13K	**Dall Lake**	15.78	50	P		Pn	00 47 02.0	+0.5	
	baz=251								
K13K	**Kusilvak Mount**	15.78	44	Pn		Pn	00 47 00.4	-1.1	
K13K	**Kusilvak Mount**	15.78	44	P		Pn	00 47 02.2	+0.7	
	baz=244,SNR=7.1								
BILL	**Bilibino**	15.83	352			Pn	00 47 03.4	+1.2	
BILL	**Bilibino**	15.83	352	*i* P		Pn	00 47 00.7	-1.5	
BILL				pmax		pmax			
	comp=Z,15nm,1.3s								
L14K	**Kuka Creek**	16.40	47	P		Pn	00 47 09.9	+0.4	
L14K	**Kuka Creek**	16.40	47	P		Pn	00 47 10.6	+1.1	
	baz=249								
N14K	**Kuskokwak Cree**	16.43	53	P		Pn	00 47 10.8	+1.0	
N14K	**Kuskokwak Cree**	16.43	53	P		Pn	00 47 10.8	+1.0	
	baz=255								
O14K	**Tigyukauivet M**	16.47	55	Pn		Pn	00 47 09.3	-1.1	
O14K	**Tigyukauivet M**	16.47	55	P		Pn	00 47 10.7	+0.3	
	baz=258								
SDPT	**Sand Point**	16.53	69	P		Pn	00 47 11.5	+0.5	
	baz=272								
M14K	**Bethel**	16.54	50	Pn		Pn	00 47 10.8	-0.4	
M14K	**Bethel**	16.54	50	P		Pn	00 47 11.8	+0.7	
	baz=252,SNR=6.9								
J14K	**Nanvaranak Lak**	16.61	42	P		Pn	00 47 12.7	+0.7	
	baz=243								
TNA	**Tin City**	16.63	30	P		Pn	00 47 12.7	+0.4	
TNA	**Tin City**	16.63	30	P		P	00 47 13.5	-1.0	
	baz=226								
ANM	**Nome**	16.85	35			Pn	00 47 15.3	+0.2	
ANM	**Nome**	16.85	35	P		Pn	00 47 15.3	+0.2	
ANM				pmax		pmax			
	comp=Z,14nm,1.3s								
ANM	**Nome**	16.85	35	P		P	00 47 16.4	-0.6	
	baz=235								
CHNA	**Chernabura Isl**	17.06	71	P		Pn	00 47 18.1	+0.3	
	baz=274								
L15K	**Ungalak Mounta**	17.06	47	P		P	00 47 18.8	-0.5	
	baz=250								
F14K	**Arctic Creek**	17.08	32	P		P	00 47 18.6	-0.8	
	baz=231								
M15K	**Kasigluk River**	17.11	51	P		P	00 47 19.1	-0.8	
	baz=254								
O15K	**Ungalikthiuk R**	17.18	56	IAmb		IAmb	00 47 20.9		
	comp=Z,136nm,1.9s								
O15K	**Ungalikthiuk R**	17.18	56	P		Pn	00 47 19.8	+0.5	
	baz=260,SNR=6.0								
N15K	**Kwethluk River**	17.26	53	P		P	00 47 21.1	-0.5	
N15K	**Kwethluk River**	17.26	53	P		Pn	00 47 20.7	+0.4	
	baz=256,SNR=7.2								
K15K	**Wolf Creek Mou**	17.27	45	P		P	00 47 21.3	-0.3	
	baz=248								
OKH	**Okha**	17.36	285	*de*P		Pn	00 47 15.1	-6.4	
OKH				*e*S		Sn	00 50 22.6	-11	
OKH				MLR		MLR			
	comp=N,200nm,14.0s								
OKH				MLR		MLR			
	comp=E,200nm,5.0s								
OKH				MLR		MLR			
	comp=Z,200nm,20.0s								
G15K	**Niukluk**	17.56	35	P		P	00 47 25.3	+0.5	
	baz=236								
F15K	**North Star Dit**	17.77	33	P		P	00 47 27.8	+0.6	
F15K	**North Star Dit**	17.77	33	P		P	00 47 26.9	-0.2	
	baz=233,SNR=8.5								
N16K	**Nishlik Lake**	17.98	52	P		P	00 47 29.8	+0.4	
	baz=257								
L16K	**Owhat River**	17.98	48			P	00 47 29.4	0.0	
L16K	**Owhat River**	17.98	48	P		P	00 47 29.9	+0.5	
	baz=252								
M16K	**Timber Creek**	18.02	50			P	00 47 29.9	0.0	
M16K	**Timber Creek**	18.02	50	P		P	00 47 30.6	+0.6	
	baz=255								
H16K	**Elim**	18.03	38	P		P	00 47 30.5	+0.6	
	baz=240,SNR=5.2								
J16K	**Anvik River**	18.05	42	P		P	00 47 30.2	-0.1	
	baz=246,SNR=11								
P16K	**Nushagak River**	18.09	57	P		Pn	00 47 29.6	-1.0	
P16K	**Nushagak River**	18.09	57	P		Pn	00 47 30.2	-0.4	
	baz=262								
TYV	**Tymovskoe**	18.11	276	*e*P		P	00 47 32.8	+1.9	
TYV				*e*S		S	00 50 54.6	-2.0	
TYV				pmax		pmax			
	comp=Z,8.0nm,1.3s								
TYV				pmax		pmax			
	comp=Z,400nm,4.6s								
TYV				smax		smax			
	comp=N,600nm,6.5s								
TYV				smax		smax			
	comp=E,500nm,6.5s								
O16K	**Kokwok River B**	18.13	55	P		P	00 47 31.2	0.0	
	baz=260								
R16K	**Pilot Point**	18.17	62	P		P	00 47 32.0	+0.4	
	baz=267								
I17K	**Unalakleet**	18.27	41	P		Pn	00 47 33.5	+0.8	
	baz=244								
G16K	**Koyuk River**	18.38	35	P		Pn	00 47 34.5	+0.6	
G16K	**Koyuk River**	18.38	35	P		P	00 47 33.7	-0.1	
	baz=238								
L17K	**Donlin**	18.64	47	P		Pn	00 47 36.8	-0.3	
	baz=253								
O17K	**Koliganek Bris**	18.66	55	P		Pn	00 47 37.5	0.0	
	baz=261								
J17K	**VABM Dome**	18.73	43	P		Pn	00 47 39.2	+0.9	
	baz=248								
Q16K	**King Salmon**	18.74	58	P		P	00 47 37.8	0.0	
	baz=265,SNR=18								
N17K	**Nushagak Hills**	18.75	52	P		Pn	00 47 38.1	-0.4	
	baz=259								
K17K	**Iditarod**	18.82	45	P		Pn	00 47 39.3	-0.1	
	baz=251,SNR=6.2								
R17L	**Mt. Peulik Vol**	18.83	62	P		Pn	00 47 39.5	-0.1	
	baz=268								
M17K	**Holitna River**	18.83	50	P		Pn	00 47 39.7	+0.2	
	baz=256								
P17K	**Kvichak River**	18.91	57	IAmb		IAmb	00 47 49.2		
	comp=Z,103nm,0.9s								
P17K	**Kvichak River**	18.91	57	P		Pn	00 47 40.5	+0.1	
	baz=263								
G17K	**Kiwalik Mounta**	19.04	36	P		Pn	00 47 41.5	-0.5	
	baz=240,SNR=11								
H17K	**Granite Mounta**	19.05	38	P		P	00 47 41.0	-0.1	
	baz=243								
Q17K	**Contact Creek**	19.11	60	P		P	00 47 42.1	+0.1	
	baz=267,SNR=20								
C16K	**Lisburne Hills**	19.24	26	P		Pn	00 47 44.0	-0.3	
	baz=274								
CHIR	**Chirikof Islan**	19.26	67	P		P	00 47 42.3	-1.2	
CHIR				IAmb		IAmb	00 47 43.5		
	comp=Z,69nm,0.8s								
CHIR	**Chirikof Islan**	19.26	67	P		P	00 47 43.2	-0.3	
	baz=274								
F17K	**Baldwin Pennin**	19.33	33	P		P	00 47 44.6	+0.4	
	baz=237								
ACHA	**Angle Creek He**	19.41	60	P		P	00 47 45.1	-0.1	
ACHA				IAmb		IAmb	00 47 51.0		
	comp=Z,42nm,0.9s								
N18K	**Kilae Creek**	19.41	52	P		Pn	00 47 45.8	-0.7	
	baz=260								
D17K	**Noatak River**	19.49	29	P		Pn	00 47 46.6	-0.8	
	baz=231,SNR=5.8								
E17K	**Hotham Inlet**	19.50	31	P		P	00 47 46.4	+0.3	
	baz=234								
YSS	**Yuzhno-Sakhali**	19.51	265	*e*P		Pn	00 47 51.5	+3.8	
YSS				pmax		pmax			
	comp=Z,10.0nm,1.0s								
YSS				MLR		MLR			
	comp=Z,300nm,13.0s								
P18K	**Big Mountain,**	19.55	56	P		P	00 47 46.8	+0.1	
P18K				IAmb		IAmb	00 47 49.7		
	comp=Z,31nm,0.8s								
P18K	**Big Mountain,**	19.55	56	P		P	00 47 47.0	+0.2	
	baz=264								
M18K	**Stony River**	19.60	50	P		Pn	00 47 47.9	-0.8	
	baz=258								
O18K	**Koktuh Hills**	19.61	55	P		P	00 47 47.9	+0.5	
O18K				IAmb		IAmb	00 47 57.6		
	comp=Z,100nm,1.4s								
O18K	**Koktuh Hills**	19.61	55	P		Pn	00 47 48.3	-0.6	
	baz=263								
H18K	**Honhosa River**	19.73	38	P		P	00 47 49.3	+0.6	
	baz=244								
J18K	**Innoko River**	19.75	44	P		Pn	00 47 49.7	-0.8	
	baz=251,SNR=14								
RDOG	**Red Dog Mine**	19.77	28	P		P	00 47 49.7	+0.7	
	baz=231								
F18K	**Selawik**	19.96	34	P		Pn	00 47 52.2	-0.6	
	baz=239								
G18K	**Tagagawik**	19.96	36	P		P	00 47 51.7	+0.6	
	baz=242								
C17K	**DeLong Mountai**	19.97	27	P		Pn	00 47 52.4	-0.7	
	baz=229,SNR=12								
SII	**Sitkinak Islan**	20.02	65	P		P	00 47 51.0	-0.8	
SII	**Sitkinak Islan**	20.02	65	P		P	00 47 52.6	+0.7	
	baz=273								
E18K	**Tukpahlearik C**	20.09	31	P		Pn	00 47 53.5	-1.0	
	baz=236								
O19K	**Port Alsworth**	20.10	54	P		Pn	00 47 53.5	-1.1	
	baz=263								
N19K	**Bonanza Creek**	20.11	52	IAmb		IAmb	00 48 06.9		
	comp=Z,30nm,0.9s								
N19K	**Bonanza Creek**	20.11	52	P		P	00 47 53.7	+0.8	
	baz=261								
GCSA	**Galena City Sc**	20.14	40	P		Pn	00 47 54.1	-0.9	
	baz=248								
L19K	**White Mountain**	20.21	48	P		Pn	00 47 54.9	-1.0	
	baz=257								
Q19K	**Cape Douglas,**	20.32	58	P		P	00 47 55.4	+0.2	
	baz=267								
M19K	**Big River Lodg**	20.36	49	P		Pn	00 47 56.5	-1.2	
	baz=258								
J19K	**Poorman**	20.38	43	P		P	00 47 56.1	+0.4	
	baz=251								
OHAK	**Old Harbor**	20.49	63	P		P	00 47 55.6	-1.3	
OHAK	**Old Harbor**	20.49	63	P		P	00 47 55.9	-0.9	
	baz=272,SNR=18								
P19K	**Oil Pt**	20.59	56	P		P	00 47 58.1	+0.1	
	baz=265								
C18K	**Utukok River**	20.64	28	P		P	00 47 58.1	-0.4	
	baz=232								
G19K	**Purcell Mounta**	20.64	37	P		P	00 47 59.1	+0.6	
	baz=244								
ILSW	**Iliamna Southw**	20.66	55	P		P	00 47 58.6	-0.3	
F19K	**Shaleruckik Mo**	20.72	34	P		P	00 47 59.5	+0.2	
	baz=241								
K20K	**Telida**	20.85	45	P		P	00 48 00.8	-0.1	
	baz=255								
KDAK	**Kodiak Island**	20.86	61	P		P	00 47 59.1	-1.8	
	comp=Z,37nm,0.3s,baz=241,slow=1.5,SNR=171								
KDAK				S		S	00 51 44.8	-6.8	
	comp=Z,6.4nm,0.9s,baz=342,slow=16,SNR=1.4								
KDAK				LR		LR	00 56 00.1		
	comp=Z,292nm,21.6s,baz=251,slow=36								
	comp=Z,37nm,0.3s								
KDAK	**Kodiak Island**	20.86	61	P		P	00 47 58.9	-2.0	
KDAK				IAmb		IAmb	00 48 02.8		
	comp=Z,80nm,0.9s								
KDAK	**Kodiak Island**	20.86	61	*i* P		P	00 47 59.7	-1.2	
KDAK				pmax		pmax			
	comp=Z,60nm,0.9s								
KDAK	**Kodiak Island**	20.86	61	P		P	00 48 00.1	-0.7	
	baz=271								
RED	**Redoubt Volcan**	20.89	54	IAmb		IAmb	00 48 11.2		
	comp=Z,28nm,0.8s								
M20K	**Styx River**	20.94	50	P		P	00 48 01.6	-0.3	
	baz=260								
Q20K	**Shuyak Island**	20.96	59	P		P	00 48 01.5	-0.5	
	baz=269								
JKA	**Kamikawa-asahi**	21.04	258	P		P	00 48 03.9	+0.9	
JKA				IAmb		IAmb	00 48 05.3		
	comp=Z,84nm,1.8s								
ASAJ	**Asahikawa**	21.05	258	P		P	00 48 05.0	+2.0	
	comp=Z,4.5nm,0.7s,baz=96,slow=10,SNR=1.8								
ASAJ				LR		LR	00 56 50.2		
	comp=Z,133nm,18.6s,baz=43,slow=38								
	comp=Z,4.5nm,0.7s								
ASAJ	**Asahikawa**	21.05	258	P		P	00 48 03.9	+0.9	
ASAJ				pmax		pmax			
	comp=Z,84nm,1.8s								
J20K	**Nowinta River**	21.05	43	P		P	00 48 02.5	-0.4	
	baz=252,SNR=12								
I20K	**Naaghedeneel**	21.12	41	P		P	00 48 03.5	-0.1	
	baz=250								
H20K	**Anotleneega Mo**	21.20	39	P		P	00 48 04.5	-0.1	
	baz=248								
E19K	**Redstone River**	21.21	33	P		P	00 48 04.9	+0.2	
	baz=240								
SPCR	**Spurr Chakacha**	21.27	52	P		P	00 48 05.7	+0.4	
	baz=262,SNR=6.4								
C19K	**Lookout Ridge**	21.38	28	P		P	00 48 06.7	+0.2	
C19K	**Lookout Ridge**	21.38	28	P		P	00 48 07.0	+0.5	
	baz=234,SNR=9.5								
F20K	**Avaraart Lake**	21.54	35	P		P	00 48 09.0	+0.9	
	baz=244								
PPLA	**Purkeypile**	21.57	47	IAmb		IAmb	00 48 24.5		
	comp=Z,76nm,1.7s								
PPLA	**Purkeypile**	21.57	47	P		P	00 48 09.3

I23K	Minto, Yukon-K	23.30	42	P		P		00 48 26.3	-0.4
	baz=256								
D22K	Ayikyak River	23.39	32	IAmb		IAmb		00 48 36.6	
	comp=Z,22nm,0.9s								
D22K	Ayikyak River	23.39	32	P		P		00 48 27.4	-0.2
	baz=244,SNR=9.5								
H23K	Yukon River	23.41	40	P		P		00 48 27.1	-0.6
	baz=254								
M23K	Glacier View	23.47	51	P		P		00 48 27.6	-0.9
	baz=265								
G23K	Bananza Creek	23.48	38	P		P		00 48 28.1	-0.5
	baz=252,SNR=8.1								
A21K	Barrow	23.52	25	P		P		00 48 27.8	-1.0
	baz=233,SNR=21								
WAT6	Susitna Watana	23.54	49	P		P		00 48 28.5	-0.8
	baz=264,SNR=6.8								
P23K	Montague Islan	23.54	55	P		P		00 48 27.9	-1.2
	baz=270								
COLD	Coldfoot	23.59	37	P		P		00 48 28.9	-0.6
	baz=250								
SCM	Sheep Creek Mo	23.66	51	IAmb		IAmb		00 48 41.4	
	comp=Z,37nm,0.7s								
SCM	Sheep Creek Mo	23.66	51	P		P		00 48 29.6	-0.7
	baz=266,SNR=7.7								
GLI	Glacier Island	23.72	53	P		P		00 48 30.1	-0.7
	baz=268								
DHY	Denali Highway	23.77	48	IAmb		IAmb		00 48 47.1	
	comp=Z,17nm,0.6s								
DHY	Denali Highway	23.77	48	P		P		00 48 30.1	-1.3
	baz=263								
B22K	Teshekpuk Lake	23.86	28	IAmb		IAmb		00 48 40.2	
	comp=Z,14nm,0.7s								
B22K	Teshekpuk Lake	23.86	28	P		P		00 48 31.5	-0.5
	baz=240								
COLA	College	23.86	43	P		P		00 48 31.0	-1.1
COLA				IAmb		IAmb		00 48 45.7	
	comp=Z,19nm,0.8s								
COLA	College	23.86	43	*i* P		P		00 48 31.9	-0.2
COLA				pmax		pmax			
	comp=Z,15nm,0.9s								
H24K	Noodor Dome	24.07	41	P		P		00 48 34.2	+0.1
	baz=256								
D23K	Nanushuk River	24.08	33	IAmb		IAmb		00 48 43.4	
	comp=Z,20nm,0.8s								
D23K	Nanushuk River	24.08	33	P		P		00 48 34.0	-0.1
	baz=246								
POKR	Poker Plat Res	24.09	43	P		P		00 48 34.5	+0.2
	baz=258								
E23K	Chandalar	24.09	35	P		P		00 48 33.5	-0.8
	baz=249								
HDA	Harding Lake	24.16	44	IAmb		IAmb		00 48 57.6	
	comp=Z,12nm,0.6s								
HDA	Harding Lake	24.16	44	P		P		00 48 34.0	-0.8
	baz=260,SNR=10.0								
M24K	Tolsona, Glenn	24.22	50	IAmb		IAmb		00 48 55.5	
	comp=Z,43nm,1.1s								
M24K	Tolsona, Glenn	24.22	50	P		P		00 48 34.7	-0.9
	baz=266								
ILAR	Eielson Array	24.25	44	P		P		00 48 33.9	-1.8
	comp=Z,6.6nm,0.6s,baz=247,slow=7.5,SNR=152								
ILAR				PcP		PcP		00 52 13.3	-1.6
	comp=Z,0.3nm,0.5s,baz=270,slow=2.5,SNR=2.3								
	comp=Z,6.6nm,0.6s								
ILAR	Eielson Array	24.25	44	P		P		00 48 33.6	-2.0
ILAR	Eielson Array	24.25	44	P		P		00 48 33.7	-2.0
YAK	Yakutsk	24.27	310	P		P		00 48 35.8	-0.1
	comp=Z,7.2nm,0.3s,baz=96,slow=1.2,SNR=5.1								
	comp=Z,7.2nm,0.3s								
YAK	Yakutsk	24.27	310	P		P		00 48 35.0	-0.9
YAK				IAmb		IAmb		00 48 46.7	
	comp=Z,24nm,0.8s								
YAK	Yakutsk	24.27	310	*e*P		P		00 48 41.1	+5.2
YAK				*e**PP		pwP		00 48 53.9	+4.3
YAK				*e*				00 49 13.5	
YAK				*e*PPP		PPP		00 49 23.6	
YAK				*e*				00 52 19.9	
YAK				*e*SS				00 53 54.7	
YAK				pmax		pmax			
	comp=Z,19nm,0.8s								
YAK				pmax		pmax			
	comp=E,13nm,1.3s								
YAK				pmax		pmax			
	comp=Z,50nm,2.0s								
YAK				pmax		pmax			
	comp=E,85nm,2.7s								
YAK				pmax		pmax			
	comp=N,36nm,2.3s								
KLU	Klutina	24.31	52	IAmb		IAmb		00 48 47.2	
	comp=Z,17nm,0.6s								
KLU	Klutina	24.31	52	P		P		00 48 35.4	-1.0
	baz=268,SNR=11								
DIV	Divide	24.37	53	IAmb		IAmb		00 48 51.4	
	comp=Z,90nm,2.0s								
EYAK	Cordova Ski Ar	24.37	54	P		P		00 48 35.4	-1.5
	baz=270								
G24K	Hadweenzic Riv	24.45	39	P		P		00 48 37.2	-0.3
	baz=255								
C23K	Itkillik River	24.47	31	IAmb		IAmb		00 48 47.1	
	comp=Z,36nm,0.8s								
C23K	Itkillik River	24.47	31	P		P		00 48 37.1	-0.5
	baz=244,SNR=11								
E24K	Your Creek	24.49	35	P		P		00 48 37.4	-0.6
	baz=250								
K24K	Donnelly Dome	24.57	46	IAmb		IAmb		00 48 48.5	
	comp=Z,27nm,0.9s								
K24K	Donnelly Dome	24.57	46	P		P		00 48 37.4	-1.3
	baz=263,SNR=8.7								
PAX	Paxson	24.62	48	IAmb		IAmb		00 48 54.9	
	comp=Z,25nm,1.2s								
PAX	Paxson	24.62	48	P		P		00 48 37.5	-1.7
	baz=265								
HARP	HAARP	24.72	49	P		P		00 48 38.5	-1.5
	baz=266								
D24K	Happy Valley	24.76	33	IAmb		IAmb		00 48 48.7	
	comp=Z,14nm,0.8s								
D24K	Happy Valley	24.76	33	P		P		00 48 39.5	-0.8
	baz=248								
J25K	Salcha River,	24.86	44	IAmb		IAmb		00 49 01.1	
	comp=Z,10nm,0.6s								
J25K	Salcha River,	24.86	44	P		P		00 48 39.8	-1.6
	baz=261,SNR=9.1								
BMRM	Bremner River	24.93	53	P		P		00 48 41.0	-1.0
BMRM				IAmb		IAmb		00 49 01.3	
	comp=Z,68nm,1.6s								
BMRM	Bremner River	24.93	53	P		P		00 48 40.6	-1.4
	baz=270								
N25K	Chitina, Valde	24.95	51	IAmb		IAmb		00 48 54.4	
	comp=Z,14nm,0.6s								
N25K	Chitina, Valde	24.95	51	P		P		00 48 41.3	-0.8
	baz=269								
PRP	Porcupine Dome	24.95	42	P		P		00 48 40.9	-1.3
	baz=259								
RIDG	Independent Ri	24.98	46	IAmb		IAmb		00 49 00.8	
	comp=Z,12nm,0.6s								
RIDG	Independent Ri	24.98	46	P		P		00 48 41.1	-1.3
	baz=264,SNR=7.0								
C24K	Franklin Bluff	25.02	32	IAmb		IAmb		00 48 50.4	
	comp=Z,22nm,0.7s								
C24K	Franklin Bluff	25.02	32	P		P		00 48 41.9	-0.8
	baz=247,SNR=13								
KAIM	Kayak Island	25.05	55	P		P		00 48 42.3	-0.7
	baz=272								
KLR	Kul'dur	25.27	279	LR		LR		00 58 35.7	
	comp=Z,24nm,19.3s,baz=97,slow=36								
KLR	Kul'dur	25.27	279	*i* P		P		00 48 45.3	+0.2
KLR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
FYU	Fort Yukon	25.29	40	IAmb		IAmb		00 49 03.4	
	comp=Z,22nm,0.9s								
DOT	Dot Lake	25.32	47	IAmb		IAmb		00 49 03.9	
	comp=Z,16nm,0.6s								
GLB	Gilahina Butte	25.32	52	IAmb		IAmb		00 48 58.7	
	comp=Z,63nm,1.5s								
F25K	Christian Rive	25.38	37	P		P		00 48 46.1	+0.1
	baz=255,SNR=9.6								
SCRK	Sand Creek	25.38	46	P		P		00 48 44.6	-1.5
SCRK				IAmb		IAmb		00 49 06.5	
	comp=Z,23nm,0.5s								
SCRK	Sand Creek	25.38	46	P		P		00 48 45.3	-0.9
	baz=264,SNR=19								
VRDI	Verde Repeater	25.49	52	IAmb		IAmb		00 49 02.4	
	comp=Z,16nm,0.8s								
E25K	Arctic Village	25.55	36	P		P		00 48 48.2	+0.7
	baz=254,SNR=9.4								
L26K	Log Cabin Wild	25.59	48	IAmb		IAmb		00 49 05.5	
	comp=Z,13nm,0.8s								
L26K	Log Cabin Wild	25.59	48	P		P		00 48 47.7	-0.2
	baz=267								
J26L	Joseph Creek	25.62	45	IAmb		IAmb		00 49 11.6	
	comp=Z,20nm,0.6s								
J26L	Joseph Creek	25.62	45	P		P		00 48 47.2	-1.1
	baz=264,SNR=16								
D25K	Kavik River	25.64	33	IAmb		IAmb		00 49 04.7	
	comp=Z,32nm,1.4s								
D25K	Kavik River	25.64	33	P		P		00 48 48.0	-0.3
	baz=250,SNR=14								
CRQM	Cirque	25.65	53	P		P		00 48 48.2	-0.5
CRQM				IAmb		IAmb		00 49 03.8	
	comp=Z,32nm,1.0s								
CRQE	Cirque	25.68	53	P		P		00 48 48.6	-0.3
	baz=272								
MCARA	McCarthy VSAT	25.70	52	IAmb		IAmb		00 49 01.2	
	comp=Z,35nm,0.8s								
MCARA	McCarthy VSAT	25.70	52	P		P		00 48 49.0	+0.1
	baz=271,SNR=5.8								
M26K	Nabesna, AK	25.72	50	IAmb		IAmb		00 49 04.3	
	comp=Z,11nm,0.5s								
M26K	Nabesna, AK	25.72	50	P		P		00 48 49.0	-0.2
	baz=268								
BMAR	Burnt Mountain	25.73	38	P		P		00 48 48.5	-0.7
TGL	Tana Glacier	25.81	53	IAmb		IAmb		00 49 01.8	
	comp=Z,37nm,1.2s								
G26K	Porcupine Rive	25.93	39	IAmb		IAmb		00 49 02.9	
	comp=Z,16nm,0.8s								
G26K	Porcupine Rive	25.93	39	P		P		00 48 51.5	+0.6
	baz=258,SNR=14								
F26K	Sheenjek River	25.96	37	P		P		00 48 51.6	+0.4
	baz=256								
M27K	Edge Creek, AK	26.24	50	IAmb		IAmb		00 49 09.3	
	comp=Z,24nm,0.6s								
M27K	Edge Creek, AK	26.24	50	P		P		00 48 54.0	0.0
	baz=270								
MESA	MESA	26.27	55	P		P		00 48 54.2	-0.1
	baz=274								
L27K	Beaver Creek,	26.28	48	IAmb		IAmb		00 49 13.2	
	comp=Z,14nm,0.8s								
L27K	Beaver Creek,	26.28	48	P		P		00 48 54.1	-0.1
	baz=268								
BCAR	Beaver Creek A	26.30	48	P		P		00 48 53.9	-0.5
C26K	Camden Bay	26.32	32	P		P		00 48 54.8	+0.4
	baz=251								
GRNC	Granite Creek	26.34	53	IAmb		IAmb		00 48 57.0	
	comp=Z,23nm,0.8s								
BARN	Barnard Glacie	26.37	53	IAmb		IAmb		00 49 11.2	
	comp=Z,25nm,0.7s								
ZEA	Zeya	26.45	291	*e*P		P		00 48 58.2	+2.4
ZEA				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CTG	Chitna Glacier	26.53	53	P		P		00 48 56.3	-0.2
	baz=273								
CTGM	Chitina Glacie	26.53	53	IAmb		IAmb		00 49 09.2	
	comp=Z,24nm,0.9s								
I27K	Kandik River	26.57	42	P		P		00 48 56.7	-0.1
	baz=262								
C27K	Jago River	26.63	33	P		P		00 48 56.9	-0.4
	baz=253								
H27K	Steamboat Moun	26.69	41	P		P		00 48 57.4	-0.5
	baz=262								
LOGN	Logan Glacier	26.70	53	IAmb		IAmb		00 49 10.5	
	comp=Z,22nm,0.8s								
BVCY	Beaver Creek	26.72	50	P		P		00 48 57.4	-0.7
	baz=270								
G27K	Doyon Strip	26.73	40	P		P		00 48 58.2	0.0
	baz=261								
TIXI	Tiksi	26.84	331	P		P		00 48 58.4	-0.7
	comp=Z,6.3nm,0.3s,baz=121,slow=9.8,SNR=14								
TIXI				LR		LR		00 59 21.8	
	comp=Z,63nm,19.2s,baz=198,slow=36								
	comp=Z,6.3nm,0.3s								
TIXI	Tiksi	26.84	331	P		P		00 48 58.1	-0.9
TIXI	Tiksi	26.84	331	*c**eP*		P		00 48 58.4	-0.7
TIXI				pmax		pmax			
	comp=Z,28nm,2.5s								
YUK3	Moose Creek	26.92	51	P		P		00 48 59.6	-0.5
	baz=272								
E27K	Coleen River	27.01	37	P		P		00 49 00.2	-0.5
	baz=258								
O28M	Mount Upton	27.10	53	IAmb		IAmb		00 49 14.2	
	comp=Z,21nm,0.7s								
O28M	Mount Upton	27.10	53	P		P		00 49 00.7	-1.1
	baz=274								
PINM	Pinnacle	27.12	55	P		P		00 49 01.3	-0.6
	baz=275								
I28M	Miner Creek	27.25	43	P		P		00 49 02.9	-0.1
	baz=265								
YUK8	Steele Glacier	27.27	52	P		P		00 49 02.6	-0.8
	baz=274								
D27M	Malcolm River	27.46	35	P		P		00 49 04.7	-0.1
	baz=257								
HEH	HeiHe	27.48	283	*e*P		P		00 49 07.5	+2.4
HEH				pmax		pmax			
	comp=Z,6.0nm,1.0s								
F28M	Old Crow	27.54	38	P		P		00 49 05.2	-0.3
F28M	Old Crow	27.54	38	P		P		00 49 05.4	0.0
	baz=261								
YUK4	Talbot Arm	27.81	52	P		P		00 49 08.2	0.0
	baz=274								
M29M	Somme Creek	27.83	49	IAmb		IAmb		00 49 24.9	
	comp=Z,18nm,0.6s								
M29M	Somme Creek	27.83	49	P		P		00 49 07.8	-0.4
	baz=272								
E28M	Babbage River	27.84	36	P		P		00 49 07.7	-0.4
	baz=260								
I29M	Ogilvie Camp,	27.93	43	P		P		00 49 08.4	-0.5
	baz=267								
J29N	Klondike Camp	27.93	45	IAmb		IAmb		00 49 15.9	
	comp=Z,9.8nm,0.7s								
J29N	Klondike Camp	27.93	45	P		P		00 49 08.6	-0.4
	baz=269								
O29M	Mount Kennedy	27.94	54	P		P		00 49 08.2	-1.0
	baz=276								
L29M	L29M	27.97	48	P		P		00 49 09.1	-0.3
	baz=271								
YUK6	Outpost Mounta	27.98	53	P		P		00 49 08.2	-1.5
	baz=275								
G29M	Pine Creek	28.16	40	IAmb		IAmb		00 49 20.2	
	comp=Z,15nm,0.8s								
G29M	Pine Creek	28.16	40	P		P		00 49 11.0	0.0
	baz=264								
K29M	Barlow Dome	28.23	46	IAmb		IAmb		00 49 33.0	
	comp=Z,23nm,0.8s								
K29M	Barlow Dome	28.23	46	P		P		00 49 11.1	-0.6
	baz=270,SNR=9.6								
E29M	Blow River	28.40	37	P		P		00 49 12.2	-0.8
	baz=262								
HYT	Haines Junctio	28.41	53	P		P		00 49 12.7	-0.7
HYT				IAmb		IAmb		00 49 26.4	
	comp=Z,14nm,0.8s								
HYT	Haines Junctio	28.41	53	P		P		00 49 12.5	-0.9
	baz=276								
MJAR	Matsushiro Arr	28.45	249	P		P		00 49 14.8	+0.9
	comp=Z,3.5nm,0.9s,baz=52,slow=7.6,SNR=8.1								
MJAR				LR		LR		00 59 46.9	
	comp=Z,87nm,21.5s,baz=41,slow=34								
	comp=Z,3.5nm,0.9s								
MJAR	Matsushiro Arr	28.45	249	P		P		00 49 13.1	-0.7
MJAR	Matsushiro Arr	28.45	249	P		P		00 49 13.1	-0.7
MJAR				pmax		pmax			
	comp=Z,14nm,1.8s								
MJB9	Matsu-Tunnel	28.45	249	P		P		00 49 15.4	+1.5
MJB9				IAmb		IAmb		00 49 17.0	
	comp=Z,8.6nm,0.7s								
MAJO	Matsushiro	28.45	249	P		P		00 49 15.1	+1.3
MAJO				IAmb		IAmb		00 49 16.0	
	comp=Z,8.7nm,0.7s								
MAJO	Matsushiro	28.45	249	P		P		00 49 15.1	+1.3
MAJO				pmax		pmax			
	comp=Z,9.0nm,0.7s								
M30M	Minto, Yukon	28.60	49	P		P		00 49 14.1	-0.8
	baz=274								
EPYK	Eagle Plains	28.64	41	IAmb		IAmb		00 49 47.0	
	comp=Z,16nm,1.2s								
EPYK	Eagle Plains	28.64	41	P		P		00 49 14.4	-0.8
	baz=267								
I30M	Mount Dempster	28.73	44	IAmb		IAmb		00 49 43.1	
	comp=Z,9.1nm,0.6s								
I30M	Mount Dempster	28.73	44	P		P		00 49 15.4	-0.9
	baz=269								
J30M	Hart River	28.75	45	P		P		00 49 15.9	-0.4
	baz=270								
P30M	Million Dollar	28.76	54	P		P		00 49 15.4	-1.0
	baz=278								
G30M	tAoh Zraii Nji	28.88	40	P		P		00 49 17.1	-0.3
	baz=266								
F30M	Barrier River	29.10	39	P		P		00 49 19.0	-0.3
	baz=265								
O30N	Mendenhall	29.10	53	P		P		00 49 19.4	0.0
	baz=277								
N31M	Braeburn, Yuko	29.17	51	P		P		00 49 19.8	-0.2
	baz=276								
BNX	BinXian	29.46	275	⇑P		P		00 49 21.1	-1.6
BNX				pmax		pmax			
	comp=Z,4.0nm,1.2s								
S31K	Pelican	29.50	58	P		P		00 49 22.1	-0.8
	baz=282								
H31M	Peel River	29.59	42	P		P		00 49 22.6	-1.1
	baz=270								
JGF	Kuroka	29.60	249	P		P		00 49 25.2	+1.1
JGF				IAmb		IAmb		00 49 26.4	
	comp=Z,14nm,0.9s								
G31M	Satah River	29.64	40	IAmb		IAmb		00 49 37.4	
	comp=Z,29nm,1.4s								
G31M	Satah River	29.64	40	P		P		00 49 23.2	-0.9
	baz=268								
SKAG	Skagway	29.68	55	P		P		00 49 24.5	+0.1
	baz=280								
WHY	Whitehorse	29.71	53	P		P		00 49 23.8	-1.0
	baz=278								
M31M	Drury Creek, Y	29.75	50	IAmb		IAmb		00 49 42.3	
	comp=Z,9.8nm,0.6s								
M31M	Drury Creek, Y	29.75	50	P		P		00 49 24.7	-0.4
	baz=276								
F31M	Tsiigehtchic	29.87	39	IAmb		IAmb		00 49 49.8	
	comp=Z,16nm,1.4s								
F31M	Tsiigehtchic	29.87	39	P		P		00 49 24.7	-1.4
	baz=268								
INK	Inuvik	30.00	37	LR		LR		01 02 06.1	
	comp=Z,99nm,19.6s,baz=270,slow=38								
INK	Inuvik	30.00	37	IAmb		IAmb		00 49 57.5	
	comp=Z,17nm,1.5s								
INK	Inuvik	30.00	37	P		P		00 49 26.2	-1.0
	baz=266								
SIT	Sitka	30.18	60	P		P		00 49 28.9	-0.1
	baz=284								
R32K	Eaglecrest	30.32	57	P		P		00 49 30.6	+0.4
	baz=283								
P32M	Atlin	30.46	55	P		P		00 49 31.5	0.0
	baz=281								
S32K	Killisnoo	30.48	59	P		P		00 49 31.1	-0.5
	baz=284								
N32M	Quiet Lake	30.50	52	P		P		00 49 30.6	-1.2
	baz=279								
P33M	Teslin, Yukon	30.79	53	P		P		00 49 34.7	+0.3
P33M				IAmb		IAmb		00 49 35.8	
	comp=Z,11nm,0.9s								
P33M	Teslin, Yukon	30.79	53	P		P		00 49 34.0	-0.4
	baz=281,SNR=6.1								
MMPY	Sheldon Lake,	31.14	49	IAmb		IAmb		00 49 39.1	
	comp=Z,8.5nm,0.7s								
MMPY	Sheldon Lake,	31.14	49	P		P		00 49 37.0	-0.4
	baz=278,SNR=6.0								
Q32M	Nakina River	31.32	56	P		P		00 49 39.2	-0.1
	baz=283								
U33K	Whale Pass	31.61	61	P		P		00 49 41.0	-0.6
	baz=287								
CN2	Changchun	31.65	273	P		P		00 49 44.0	+2.0
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
CRAG	Craig	31.81	62	P		P		00 49 42.9	-0.4
	baz=288								
R33M	Jennings River	31.87	55	IAmb		IAmb		00 49 46.0	
	comp=Z,13nm,0.8s								
R33M	Jennings River	31.87	55	P		P		00 49 43.5	-0.5
	baz=283								
WRAK	Wrangell Islan	31.94	60	P		P		00 49 44.2	-0.2
	baz=287								
S34M	Telegraph Cree	32.16	57	P		P		00 49 46.2	-0.1
	baz=286								
HILR	Hailar Array B	32.30	286	P		P		00 49 48.6	+0.9
	comp=Z,0.8nm,0.5s,baz=69,slow=7.9,SNR=1.8								
	comp=Z,0.8nm,0.5s								
HIA	Hailar	32.43	286	*i* P		P		00 49 49.2	+0.3
HIA				pmax		pmax			
	comp=Z,11nm,1.6s								
DLBC	Dease Lake	32.58	56	LR		LR		01 03 00.4	
	comp=Z,151nm,21.7s,baz=262,slow=36								
DLBC	Dease Lake	32.58	56	P		P		00 49 49.9	-0.3
	baz=285								
V35K	Ketchikan	32.67	62	P		P		00 49 51.5	+0.7
	baz=289								
WTLY	Watson Lake, Y	32.78	53	P		P		00 49 52.2	+0.5
	baz=284								
T35M	Bob Quinn	32.88	59	P		P		00 49 52.3	-0.4
	baz=288								
H11N2	WAKE ISLAND Hy	32.92	189	T		T		01 25 30.2	
	baz=5.5,slow=76,SNR=82								
H11N3	WAKE ISLAND Hy	32.93	189	T		T		01 25 31.2	
	baz=5.5,slow=76,SNR=161								
H11N1	WAKELAND Hy	32.93	189	T		T		01 25 31.6	
	baz=5.5,slow=76,SNR=140								
A36M	Sachs Harbour	33.02	31	P		P		00 49 53.1	-0.6
	baz=268								
C36M	Paulatuk	33.44	35	IAmb		IAmb		00 50 06.3	
	comp=Z,11nm,1.1s								
C36M	Paulatuk	33.44	35	P		P		00 49 57.3	-0.1
	baz=273,SNR=6.5								
KSRS	Korea Array	33.92	261	P		P		00 50 02.8	+0.9
	comp=Z,0.4nm,0.3s,baz=30,slow=7.6,SNR=4.0								
	comp=Z,0.4nm,0.3s								
HG4B	Hotspring	34.00	67	P		P		00 50 03.2	+0.7
H11S1	WAKE ISLAND Hy	34.14	189	T		T		01 27 02.3	
	baz=5.4,slow=76,SNR=671								
H11S3	WAKE ISLAND Hy	34.16	189	T		T		01 27 03.4	
	baz=5.4,slow=76,SNR=650								
H11S2	WAKE ISLAND Hy	34.16	189	T		T		01 27 03.6	
	baz=5.4,slow=76,SNR=741								
WRGLY	Wrigley	34.55	46	P		P		00 50 07.4	+0.3
	baz=283								
TOAD	Toad River Com	34.87	54	P		P		00 50 10.8	+0.9
	baz=288,SNR=12								
KOTAN	Kotaneelee Air	35.06	52	P		P		00 50 12.5	+0.9
	baz=287,SNR=9.5								
JNU	Nakatsue	35.12	253	LR		LR		01 03 41.2	
	comp=Z,91nm,21.2s,baz=50,slow=35								
BBB	Bella Bella	35.77	66	LR		LR		01 03 02.9	
	comp=Z,111nm,18.8s,baz=288,slow=33								
XLT	XiLinHaoTe	37.29	280	*e*P		P		00 50 32.9	+2.0
XLT				PcP		PcP		00 52 52.5	+2.7
XLT				pmax		pmax			
	comp=Z,4.0nm,1.0s								
XLT				pmax		pmax			
	comp=Z,180nm,10.1s								
YKA	Yellowknife Ar	38.65	45	P		P		00 50 41.5	-0.4
	comp=Z,4.3nm,0.7s,baz=294,slow=8.6,SNR=55								
YKA				PcP		PcP		00 52 52.8	-0.7
	comp=Z,0.3nm,0.5s,baz=291,slow=3.8,SNR=1.0								
	comp=Z,4.3nm,0.7s

comp=Z,20nm,0.9s
E07A Sunnyside 43.24 69 P P 00 51 19.2 -0.8
E07A IAmb IAmb 00 51 21.0
comp=Z,23nm,1.3s
WAH2 Wahluke Slope 43.30 69 IAmb IAmb 00 51 21.0
comp=Z,18nm,0.7s
I04A Tendick Farm, 43.33 74 IAmb IAmb 00 51 29.4
comp=Z,34nm,1.5s
C09A Chrisman Ranch 43.45 67 IAmb IAmb 00 51 22.1
comp=Z,12nm,0.8s
HAWA Hanford 43.52 69 IAmb IAmb 00 51 22.9
comp=Z,20nm,0.8s
WIFE Three Sisters- 43.53 74 IAmb IAmb 00 51 23.8
comp=Z,24nm,0.7s
KSXB Camp Six Broad 43.63 77 P P 00 51 23.7 +0.3
KSXB IAmb IAmb 00 51 24.7
comp=Z,20nm,1.0s
BBOR Butler Butte 43.71 75 IAmb IAmb 00 51 26.3
comp=Z,55nm,1.8s
J04A Umpqua Nationa 43.84 75 P P 00 51 24.6 -0.5
J04A IAmb IAmb 00 51 26.4
comp=Z,23nm,0.8s
NEW Newport 43.84 66 LR LR 01 08 30.5
comp=Z,90nm,20.6s,baz=302,slow=34
NEW Newport 43.84 66 P P 00 51 23.2 -1.7
NEW Newport 43.84 66 P P 00 51 23.2 -1.7
NEW pmax pmax
comp=Z,9.0nm,0.9s
E09A Wood Farm, Sta 44.24 68 IAmb IAmb 00 51 28.5
comp=Z,19nm,1.2s
J05D Fort Rock, OR 44.33 74 P P 00 51 29.4 +0.4
J05D IAmb IAmb 00 51 30.5
comp=Z,16nm,0.8s
L04D Klamath Falls 44.33 76 IAmb IAmb 00 51 30.2
comp=Z,20nm,0.8s
YBH Yreka Blue Hor 44.38 77 LR LR 01 07 47.3
comp=Z,8.3nm,18.1s,baz=292,slow=33
YBH Yreka Blue Hor 44.38 77 P P 00 51 30.2 +0.8
YBH IAmb IAmb 00 51 31.0
comp=Z,12nm,0.8s
YBH Yreka Blue Hor 44.38 77 P P 00 51 30.2 +0.8
YBH pmax pmax
comp=Z,12nm,0.8s
M02C Callahan 44.50 77 IAmb IAmb 00 51 32.2
comp=Z,16nm,1.2s
N02D Trinity Center 44.85 78 IAmb IAmb 00 51 34.3
comp=Z,11nm,0.7s
K05A Summer Lake 44.86 75 P P 00 51 33.5 +0.2
M03C McCloud 45.01 77 IAmb IAmb 00 51 36.2
comp=Z,21nm,1.1s
BLKN Baker Lake 45.41 38 P P 00 51 36.5 -0.6
BLKN IAmb IAmb 00 51 37.2
comp=Z,8.5nm,0.8s
HATC Hat Creek Radi 45.69 77 IAmb IAmb 00 51 41.0
comp=Z,17nm,0.8s
O03E Paynes Creek 45.81 78 P P 00 51 39.7 -1.0
POIN Pond Inlet 46.23 23 P P 00 51 42.4 -1.1
POIN IAmb IAmb 00 52 19.2
comp=Z,13nm,1.6s
WVOR Wild Horse Val 46.36 73 IAmb IAmb 00 51 45.9
comp=Z,7.2nm,0.9s
MSO Missoula 46.43 66 IAmb IAmb 00 51 45.3
comp=Z,7.0nm,0.8s
ORV Oroville 46.45 78 IAmb IAmb 00 51 45.9
comp=Z,8.2nm,0.9s
BEKR Beckworth 46.94 77 P P 00 51 49.6 -0.1
MFID Camas Ranch 47.40 71 IAmb IAmb 00 51 53.6
comp=Z,7.2nm,0.9s
PAHR Pah Rah Range 47.62 77 P P 00 51 55.0 0.0
PAHR IAmb IAmb 00 51 55.8
comp=Z,14nm,1.1s
NEEM North Greenlan 47.62 12 *i* P **P 00 51 54.0 -0.7**
NEEM IAmb IAmb 00 51 54.8
comp=Z,9.0nm,0.7s
EGMT Eagleton 48.03 62 P P 00 51 57.1 -0.9
EGMT IAmb IAmb 00 52 45.9
comp=Z,16nm,1.0s
FFC Flin Flon 48.09 51 P P 00 51 57.4 -0.8
FFC IAmb IAmb 00 51 58.5
comp=Z,5.7nm,0.9s
FFC Flin Flon 48.09 51 P P 00 51 57.4 -0.8
FFC pmax pmax
comp=Z,6.0nm,1.0s
CMB Columbia Colle 48.09 79 IAmb IAmb 00 51 59.6
comp=Z,8.6nm,1.1s
HLID Hailey 48.12 70 IAmb IAmb 00 51 59.4
comp=Z,10nm,1.1s
BCYI Bear Canyon 48.24 68 IAmb IAmb 00 52 00.0
comp=Z,9.6nm,0.7s
BOZ Bozeman (W) 48.45 66 IAmb IAmb 00 52 01.7
comp=Z,12nm,0.8s
BBGB Big Mountain B 48.65 81 P P 00 52 03.5 +0.6
SPITS Spitsbergen Ar 48.74 353 P P 00 52 02.0 -0.9
comp=Z,2.0nm,0.3s,baz=47,slow=7.3,SNR=37
comp=Z,2.0nm,0.3s
SPITS Spitsbergen Ar 48.74 353 P P 00 52 02.0 -0.9
ZALV Zalesovo Beam 48.92 308 P P 00 52 04.7 +0.1
comp=Z,0.2nm,0.3s,baz=47,slow=4.9,SNR=2.0
comp=Z,0.2nm,0.3s
ZALV Zalesovo Beam 48.92 308 P P 00 52 04.5 -0.1
ZALV Zalesovo Beam 48.92 308 P P 00 52 04.5 -0.1
PMPB Monarch Peak 49.03 81 P P 00 52 06.1 +0.3
KULLO Kullorsuaq 49.07 16 *i* P **P 00 52 05.0 -0.5**
LHV Little Huntoon 49.08 78 IAmb IAmb 00 52 07.7
comp=Z,15nm,1.1s
NVAR Mina Array Bea 49.08 77 P P 00 52 06.2 -0.2
comp=Z,5.8nm,0.7s,baz=293,slow=7.6,SNR=31
NVAR PcP **PcP 00 53 29.5 -0.1**
comp=Z,0.8nm,0.6s,baz=300,slow=3.6,SNR=3.5
NVAR LR LR 01 12 17.4
comp=Z,84nm,18.1s,baz=310,slow=35
comp=Z,5.8nm,0.7s
MDPB Devils Postpil 49.14 79 IAmb IAmb 00 52 08.1
comp=Z,11nm,0.8s
FCC Fort Churchill 49.27 43 IAmb IAmb 00 52 07.5
comp=Z,12nm,0.7s
PKD Bear Valley Ra 49.37 81 IAmb IAmb 00 52 09.2
comp=Z,20nm,1.2s
ELK Elko 49.41 73 LR LR 01 11 40.2
comp=Z,74nm,19.0s,baz=319,slow=34
ELK Elko 49.41 73 P P 00 52 08.1 -0.7
ELK Elko 49.41 73 P P 00 52 08.1 -0.7
ELK pmax pmax
comp=Z,5.0nm,0.8s
LZH Lanzhou 49.47 279 *e*P P 00 52 16.9 +7.6
LZH pP pwP 00 52 21.6 -1.4
LZH pmax pmax
comp=Z,7.0nm,1.2s
LZH LR LR
comp=N,220nm,14.1s
LZH LR LR
comp=E,260nm,13.7s
LZH LR LR
comp=Z,220nm,13.4s
YNR Norris Junctio 49.52 66 IAmb IAmb 00 52 10.8
comp=Z,9.6nm,1.0s
LZDM Lanzhou Array 49.65 279 P P 00 52 12.0 +1.2
comp=Z,0.7nm,0.3s,baz=39,slow=2.8,SNR=1.8
comp=Z,0.7nm,0.3s
GTA2 Gaotai 49.69 285 *e*P **P 00 52 12.8 +1.9**
GTA2 sP pP 00 52 19.0 +0.5
GTA2 pmax pmax
comp=Z,4.0nm,1.2s
YNE Yellowstone No 49.72 66 IAmb IAmb 00 52 11.6
comp=Z,10nm,0.9s
H17A Grant Village 49.78 66 IAmb IAmb 00 52 13.6
comp=Z,15nm,1.0s
FLWY Flagg Ranch 49.91 67 IAmb IAmb 00 52 13.7
comp=Z,14nm,0.7s
DSP Deep Springs 49.98 78 IAmb IAmb 00 52 14.4
comp=Z,8.1nm,1.0s
RLMT Red Lodge 50.06 65 P P 00 52 12.8 -0.9
RLMT IAmb IAmb 00 52 14.8
comp=Z,19nm,1.1s
DGZ Jazzator, Alta 50.16 303 *i* P **P 00 52 15.4 +1.1**
DGZ pmax pmax
comp=Z,15nm,3.4s
HVU Hansel Valley 50.18 70 IAmb IAmb 00 52 15.3
comp=Z,9.3nm,0.8s
AHID Auburn Hatcher 50.51 68 IAmb IAmb 00 52 18.3
comp=Z,10.0nm,1.1s
CWC Cottonwood Cre 50.53 79 P P 00 52 17.2 -0.1
CWC IAmb IAmb 00 52 18.2
comp=Z,16nm,1.3s
LAO LASA Array 50.75 62 IAmb IAmb 00 52 19.8
comp=Z,24nm,1.1s
ISA Isabella, Lake 50.81 80 IAmb IAmb 00 52 19.8
comp=Z,6.8nm,0.8s
S11A Rachel 51.12 76 IAmb IAmb 00 52 22.8
comp=Z,15nm,1.0s
WCT Wildcat Mounta 51.16 78 IAmb IAmb 00 52 22.8
comp=Z,15nm,1.4s
DUG Dugway, Tooele 51.18 72 IAmb IAmb 00 52 23.2
comp=Z,15nm,0.9s
TPNV Topopah Spring 51.28 77 P P 00 52 22.6 -0.3
TPNV IAmb IAmb 00 52 23.9
comp=Z,17nm,0.8s
TPNV Topopah Spring 51.28 77 P P 00 52 22.6 -0.3
TPNV pmax pmax
comp=Z,17nm,0.9s
BW06 Boulder Array 51.38 68 IAmb IAmb 00 52 24.3
comp=Z,13nm,0.9s
PD31 Pinedale Array 51.38 68 IAmb IAmb 00 52 24.3
comp=Z,13nm,0.9s
PDAR Pinedale Array 51.38 68 P P 00 52 23.2 -0.5
comp=Z,9.8nm,0.8s,baz=304,slow=3.9,SNR=84
PDAR LR LR 01 12 38.1
comp=Z,75nm,19.7s,baz=344,slow=34
comp=Z,9.8nm,0.8s
PDAR Pinedale Array 51.38 68 P P 00 52 22.9 -0.9
LRMC Laurel Mtn Rad 51.41 80 IAmb IAmb 00 52 24.4
comp=Z,9.2nm,1.1s
TPO Tropico Hills 51.48 81 IAmb IAmb 00 52 25.1
comp=Z,8.4nm,0.6s
GWY Greenwater Val 51.54 78 P P 00 52 24.7 -0.2
GWY IAmb IAmb 00 52 25.6
comp=Z,12nm,0.8s
QSM Queen of Sheba 51.57 79 IAmb IAmb 00 52 25.9
comp=Z,15nm,1.1s
PSUT Pine Spring 51.65 74 IAmb IAmb 00 52 26.6
comp=Z,7.6nm,0.7s
PRN Pahroc Range 51.69 76 IAmb IAmb 00 52 27.2
comp=Z,20nm,1.1s
SHOC Shoshone, Teco 51.97 78 P P 00 52 27.6 -0.4
MWC Mount Wilson 52.03 81 IAmb IAmb 00 52 30.5
comp=Z,29nm,1.2s
GSC Goldstone, Bar 52.06 79 IAmb IAmb 00 52 29.5
comp=Z,21nm,0.9s
BSUT Blindstream Ca 52.14 70 P P 00 52 29.2 -0.3
BFSC Mount Baldy Ra 52.26 81 IAmb IAmb 00 52 31.0
comp=Z,27nm,1.4s
CCUT Cedar City 52.60 75 P P 00 52 32.3 -0.5
TMUT Trail Mountain 52.70 72 IAmb IAmb 00 52 34.8
comp=Z,19nm,0.8s
SZCU Shuntz Canyon 52.73 75 IAmb IAmb 00 52 34.7
comp=Z,16nm,1.6s
RDMU Red Mountain 52.80 70 IAmb IAmb 00 52 35.4
comp=Z,20nm,0.8s
P17A Butcher Ranch, 52.85 71 IAmb IAmb 00 52 35.8
comp=Z,6.4nm,0.7s
MTPU Mount Pierson 52.96 74 P P 00 52 36.3 +0.6
Q16A Castle Valley 52.97 72 IAmb IAmb 00 52 36.7
comp=Z,9.3nm,0.8s
LCMT Little Creek M 53.03 75 IAmb IAmb 00 52 37.3
comp=Z,16nm,1.2s
SAATT Saattut 53.14 17 *i* P P 00 52 30.1 -5.9
SAATT IAmb IAmb 00 52 34.8
comp=Z,12nm,0.9s
K22A Casper 53.16 66 IAmb IAmb 00 52 37.7
comp=Z,9.4nm,1.0s
SRU San Rafael Swe 53.22 72 IAmb IAmb 00 52 38.9
comp=Z,17nm,0.8s
KNB Kanab 53.27 75 IAmb IAmb 00 52 39.2
comp=Z,26nm,1.5s
PKCU Pink Cliffs 53.29 74 IAmb IAmb 00 52 39.6
comp=Z,9.0nm,0.8s
PFO Pinyon Flats O 53.42 81 LR LR 01 11 22.3
comp=Z,80nm,21.5s,baz=316,slow=32
PMD Palm Desert 53.44 81 P P 00 52 38.1 -0.7
PMD IAmb IAmb 00 52 39.1
comp=Z,10.0nm,1.1s
SUMG Summit 53.46 11 P P 00 52 38.2 -0.7
SUMG IAmb IAmb 00 52 50.1
comp=Z,12nm,1.1s
SUMG Summit 53.46 11 P P 00 52 38.2 -0.7
SUMG pmax pmax
comp=Z,12nm,1.1s
SUMG Summit 53.46 11 *i* P **P 00 52 38.0 -0.9**
RSSD Black Hills 53.57 63 P P 00 52 39.2 -0.7
RSSD IAmb IAmb 00 52 39.8
comp=Z,7.3nm,0.8s
RSSD Black Hills 53.57 63 P P 00 52 39.2 -0.7
RSSD pmax pmax
comp=Z,7.0nm,0.8s
BORC Borrego Spring 53.68 81 P P 00 52 40.5 0.0
BORC IAmb IAmb 00 52 40.9
comp=Z,6.8nm,0.9s
WMQ Urumqi 53.75 297 *e*P **P 00 52 44.3 +3.3**
ULM Lac du Bonnet 53.78 53 P P 00 52 40.0 -1.1
comp=Z,9.1nm,0.7s,baz=303,slow=6.9,SNR=16
ULM LR LR 01 15 37.8
comp=Z,176nm,19.1s,baz=344,slow=36
comp=Z,9.1nm,0.7s
ULM Lac du Bonnet 53.78 53 IAmb IAmb 00 52 41.3
comp=Z,11nm,0.8s
ULM Lac du Bonnet 53.78 53 *i* P **P 00 52 40.6 -0.5**
IRM Iron Mountain 53.83 79 IAmb IAmb 00 52 42.5
comp=Z,19nm,1.2s
O20A White River Ci 53.85 69 IAmb IAmb 00 52 42.6
comp=Z,13nm,0.9s
KURK Kurchatov 53.91 308 P P 00 52 43.4 +1.5
KURK IAmb IAmb 00 53 57.7
comp=Z,7.4nm,0.8s
KURK Kurchatov 53.91 308 *i* P **P 00 52 41.8 -0.1**
KURK pmax pmax
comp=Z,8.0nm,0.9s
W13A Hualapai Mount 53.94 78 IAmb IAmb 00 52 43.5
comp=Z,9.2nm,0.9s
U15A North Rim 53.98 75 IAmb IAmb 00 52 44.4
comp=Z,19nm,1.3s
BC3 Big Chuckawall 53.99 80 IAmb IAmb 00 52 43.2
comp=Z,7.9nm,1.0s
KURBB Kurchatov Arra 54.01 308 P P 00 52 42.0 -0.7
comp=Z,0.8nm,0.5s,baz=52,slow=7.3,SNR=4.6
comp=Z,0.8nm,0.5s
CBX Cerro Bola 54.20 82 P P 00 52 44.3 -0.2
PV21 Cone Mtn., Par 54.48 71 IAmb IAmb 00 52 47.5
comp=Z,10nm,1.1s
BLYC Blythe 54.49 79 IAmb IAmb 00 52 47.4
comp=Z,9.9nm,0.9s
PV14 Lion Creek, Pa 54.58 71 IAmb IAmb 00 52 48.0
comp=Z,9.0nm,0.8s
PV22 Blue Mesa, Par 54.61 71 P P 00 52 47.6 +0.1
PV22 IAmb IAmb 00 52 48.4
comp=Z,13nm,0.8s
MK31 Makanchi Array 54.66 303 *i* P **P 00 52 47.4 -0.2**
MKAR Makanchi Array 54.66 303 P P 00 52 46.9 -0.7
comp=Z,0.3nm,0.4s,baz=54,slow=6.7,SNR=12
MKAR LR LR 01 17 14.8
comp=Z,156nm,18.8s,baz=12,slow=37
comp=Z,0.3nm,0.4s
MKAR Makanchi Array 54.66 303 P P 00 52 46.7 -0.9
MKAR Makanchi Array 54.66 303 P P 00 52 46.7 -0.9
PV05 Paradox Valley 54.74 72 IAmb IAmb 00 52 49.5
comp=Z,18nm,1.0s
PV07 Paradox Valley 54.76 71 IAmb IAmb 00 52 49.4
comp=Z,9.6nm,0.9s
PV03 Paradox Valley 54.77 71 IAmb IAmb 00 52 49.5
comp=Z,16nm,0.8s
GOMU GeErMu 54.79 285 P P 00 52 46.9 -2.2
GOMU pmax pmax
comp=Z,5.0nm,0.8s
ESJX Sierra Juarez 54.84 82 P P 00 52 49.0 -0.3
ESJX IAmb IAmb 00 52 49.7
comp=Z,8.2nm,0.8s
PV15 Paradox Valley 54.92 71 IAmb IAmb 00 52 51.2
comp=Z,9.4nm,0.8s
FRB Frobisher Bay 54.96 28 LR LR 01 19 05.6
comp=Z,70nm,18.6s,baz=274,slow=39
AGMN Agassiz Nation 55.08 54 IAmb IAmb 00 52 50.8
comp=Z,16nm,0.8s
WUAZ Wupatki 55.15 75 IAmb IAmb 00 52 52.9
comp=Z,20nm,1.4s
ISCO Idaho Springs 55.57 68 IAmb IAmb 00 52 56.3
comp=Z,12nm,1.0s
113A Mohawk Valley, 55.63 80 IAmb IAmb 00 52 55.3
comp=Z,9.7nm,1.2s
MVCO Mesa Verde 55.68 72 IAmb IAmb 00 52 56.4
comp=Z,7.8nm,0.8s
ARCES ARCESS Array B 55.82 346 P P 00 52 54.4 -1.2
comp=Z,6.3nm,0.9s,baz=32,slow=7.1,SNR=9.9
comp=Z,6.3nm,0.9s
ARCES ARCESS Array B 55.82 346 P P 00 52 53.9 -1.7
ARCES ARCESS Array B 55.82 346 P P 00 52 53.9 -1.7
ARCES pmax pmax
comp=Z,81nm,1.9s
X16A Lo Mia Camp, P 55.87 76 IAmb IAmb 00 52 58.4
comp=Z,12nm,1.1s
BVAR Borovoye Array 56.12 315 P P 00 52 58.0 0.0
comp=Z,0.8nm,0.4s,baz=53,slow=6.8,SNR=9.1
BVAR LR LR 01 19 56.0
comp=Z,133nm,19.0s,baz=48,slow=39
comp=Z,0.8nm,0.4s
BVAR Borovoye Array 56.12 315 P P 00 52 58.0 0.0
BORK Borovoye 56.14 315 P P 00 52 58.5 +0.5
BORK Borovoye 56.14 315 *i* P **P 00 52 57.8 -0.3**
BORK pmax pmax
comp=Z,6.0nm,0.9s
S22A 4UR Ranch, Cre 56.28 70 IAmb IAmb 00 53 01.5
comp=Z,13nm,0.9s
W18A Petrified Fore 56.39 75 IAmb IAmb 00 53 01.9
comp=Z,12nm,1.2s
Q24A Divide 56.41 68 IAmb IAmb 00 53 01.9
comp=Z,6.9nm,0.9s
X18A Snowflake 56.67 75 IAmb IAmb 00 53 04.0
comp=Z,13nm,1.1s
214A Organ Pipe Nat 56.77 80 IAmb IAmb 00 53 04.0
comp=Z,18nm,1.1s
PZH PanZhiHua 57.45 272 P P 00 53 09.8 +1.9
EYMN Ely 57.46 52 IAmb IAmb 00 53 08.1
comp=Z,16nm,0.8s
TUC Tucson 57.73 78 P P 00 53 09.5 -0.3
TUC IAmb IAmb 00 53 11.2
comp=Z,14nm,0.9s
TUC Tucson 57.73 78 P P 00 53 09.5 -0.3
TUC pmax pmax
comp=Z,14nm,1.0s
T25A Trinidad 58.09 69 IAmb IAmb 00 53 13.8
comp=Z,27nm,1.3s
ANMO Albuquerque 58.44 73 LR LR 01 17 57.3
comp=Z,66nm,19.1s,baz=317,slow=36
ANMO Albuquerque 58.44 73 P P 00 53 14.9 +0.1
ANMO IAmb IAmb 00 53 16.1
comp=Z,8.9nm,1.1s
ANMO Albuquerque 58.44 73 P P 00 53 14.9 +0.1
ANMO pmax pmax
comp=Z,9.0nm,1.1s
ARTI Arti 58.51 323 P P 00 53 14.6 -0.1
comp=Z,1.4nm,0.5s,baz=72,slow=5.3,SNR=4.2
comp=Z,1.4nm,0.5s
ARTI Arti 58.51 323 P P 00 53 14.6 -0.1
ARTI Arti 58.51 323 *d* P **P 00 53 15.0 +0.3**
ARTI 00 54 03.8
ARTI 00 55 21.9
ARTI S **S 01 01 19.7 +3.8**
ARTI SS **SS 01 05 09.6 +1.9**
ARTI pmax pmax
comp=Z,23nm,4.7s
121A Cookes Peak, D 59.36 75 IAmb IAmb 00 53 23.0
comp=Z,13nm,1.1s
RTBA Rita Blanca 59.53 69 IAmb IAmb 00 53 23.1
comp=Z,10.0nm,0.8s
KIRV Kirov 59.84 329 P P 00 53 24.7 +0.8
comp=Z,2.4nm,0.5s,baz=14,slow=4.2,SNR=2.1
comp=Z,2.4nm,0.5s
KIRV Kirov 59.84 329 *i* P **P 00 53 24.5 +0.7**
PH02 Texas Public H 60.73 69 P P 00 53 30.5 +0.1
PH02 IAmb IAmb 00 53 31.4
comp=Z,18nm,0.8s
KLMR Klimovskoe 60.76 335 *e*P **P 00 53 29.1 -1.0**
KLMR pmax pmax
comp=Z,24nm,1.5s
AMTX Amarillo 61.24 69 P P 00 53 34.0 0.0
AMTX IAmb IAmb 00 53 34.9
comp=Z,7.7nm,0.8s
GDL2 Guadalupe Moun 61.62 73 P P 00 53 36.0 -0.5
CLNB Carlsbad 61.85 73 P P 00 53 36.6 -1.5
SMWD Samnorwood 61.90 68 IAmb IAmb 00 53 39.2
comp=Z,8.4nm,0.8s
128A Castleberry Fa 62.41 72 IAmb IAmb 00 53 42.6
comp=Z,11nm,0.8s
PECS Pecos 62.51 74 P P 00 53 41.5 -1.0
PECS IAmb IAmb 00 53 43.9
comp=Z,17nm,1.5s
SCHQ Schefferville 62.53 34 P P 00 53 41.4 -0.8
comp=Z,18nm,0.7s,baz=330,slow=6.1,SNR=46
SCHQ LR LR 01 21 43.3
comp=Z,102nm,19.4s,baz=42,slow=37
comp=Z,18nm,0.7s
DKNS Dickens 62.55 70 IAmb IAmb 00 53 43.5
comp=Z,11nm,0.9s
TPB06 Permian Basin 62.69 73 IAmb IAmb 00 53 44.3
comp=Z,17nm,0.7s
ODSA Odessa 62.73 72 P P 00 53 43.4 -0.6
129A Stewart Farms, 62.76 71 IAmb IAmb 00 53 44.6
comp=Z,6.2nm,1.2s
TPB01 Permian Basin 62.87 74 IAmb IAmb 00 53 48.2
comp=Z,9.0nm,0.7s
WMOK Wichita Mounta 63.00 68 IAmb IAmb 00 53 46.3
comp=Z,8.7nm,0.8s
TPB05 Hovey Rd 63.15 74 IAmb IAmb 00 53 47.6
comp=Z,11nm,0.8s
FINES FINESS Array B 63.19 342 P P 00 53 45.8 -0.6
comp=Z,3.2nm,0.7s,baz=24,slow=7.1,SNR=13
comp=Z,3.2nm,0.7s
ALPN Alpine 63.37 74 IAmb IAmb 00 53 48.9
comp=Z,6.4nm,0.7s
W35A Tecumseh 63.77 66 IAmb IAmb 00 53 51.2
comp=Z,9.4nm,0.8s
TUL3 Leonard 63.81 65 IAmb IAmb 00 53 51.8
comp=Z,6.7nm,0.9s
LPIG La Paz 63.98 84 LR LR 01 19 10.5
comp=Z,47nm,18.1s,baz=317,slow=34
R40A Maddies Statio 63.98 61 IAmb IAmb 00 53 51.2
comp=Z,8.3nm,0.8s
TXAR Lajitas Array 64.11 75 P P 00 53 53.2 +0.1
comp=Z,21nm,0.4s,baz=306,slow=5.4,SNR=496
TXAR Lajitas Array 64.11 75 P P 00 53 52.5 -0.6
TXAR Lajitas Array 64.11 75 P P 00 53 52.5 -0.6
SAND Sanderson 64.56 73 IAmb IAmb 00 53 56.9
comp=Z,8.2nm,0.8s
CMAR Chiang Mai Arr 65.17 268 P P 00 54 01.1 +1.1
comp=Z,0.6nm,0.3s,baz=32,slow=7.1,SNR=1.3
CMAR LR LR 01 25 23.6
comp=Z,31nm,18.4s,baz=70,slow=39
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 65.17 268 P P 00 53 59.8 -0.2
CMAR Chiang Mai Arr 65.17 268 P P 00 53 59.8 -0.2
BELG Belogornoye 65.50 326 P P 00 54 02.3 +0.6
comp=Z,6.1nm,0.8s,baz=86,slow=19,SNR=4.7
comp=Z,6.1nm,0.8s
NC405 NORSAR Array S 65.64 350 P P 00 54 02.2 -0.3
NB2 NORSAR Subarra 65.77 350 P P 00 54 02.7 -0.7
comp=Z,1.5nm,0.5s,baz=12,slow=6.5
NOA NORSAR Array B 65.77 350 P P 00 54 02.6 -0.7
comp=Z,2.7nm,0.6s,baz=1.6,slow=5.7,SNR=11
NOA LR LR 01 25 40.6
comp=Z,94nm,18.2s,baz=270,slow=39
comp=Z,2.7nm,0.6s
DRIO Del Rio 65.83 73 IAmb IAmb 00 54 04.5
comp=Z,13nm,1.2s
MIAR Mount Ida 66.04 64 IAmb IAmb 00 54 05.7
comp=Z,6.0nm,0.7s
HFS Hagfors 66.36 348 P P 00 54 06.6 -0.5
comp=Z,3.6nm,0.5s,baz=46,slow=4.3,SNR=17
comp=Z,3.6nm,0.5s
BRDH Bariadhala 66.44 277 LR LR 01 25 13.1
comp=Z,75nm,19.7s,baz=10,slow=38
WCI Wyandotte Cave 67.15 57 P P 00 54 11.2 -1.3
WCI Wyandotte Cave 67.15 57 P P 00 54 11.2 -1.3
WCI pmax pmax
comp=Z,21nm,1.2s
T47A Sharon Grove 67.67 58 IAmb IAmb 00 54 15.8
comp=Z,13nm,0.9s
WVT Waverly 67.95 59 P P 00 54 16.2 -1.4
WVT Waverly 67.95 59 P P 00 54 16.2 -1.4
WVT pmax pmax
comp=Z,11nm,0.7s
U49A Red Boiling Sp 68.72 58 IAmb IAmb 00 54 22.2
comp=Z,7.6nm,0.7s
MNK Minsk 69.24 338 *i* P **P 00 54 26.7 +1.3**
comp=E,11nm,0.9s
MNK *i* P **P 00 54 26.7 +1.3**
comp=N,13nm,0.9s
MNK *i* P **P 00 54 26.7 +1.3**
comp=Z,9.0nm,0.8s,baz=22
MNK *i* PcP **PcP 00 54 50.2 +1.3**
MNK *i* PP **PP 00 56 59.3 +1.6**
MNK *i* PPP PPP 00 58 39.6
MNK *i* S **S 01 03 33.3 +4.3**
MNK *i* SS **SS 01 08 00.7 +6.1**

MNK				*i* SSS	SSS	01 11 17.8		
MNK	**Minsk**	**69.24**	**338**	*i* P	**P**	**00 54 26.6**	**+1.3**	
MNK				*i*		00 54 50.2		
MNK				*i*		00 56 59.3		
MNK				*i* PPP	PPP	00 58 39.6		
MNK				*i* S	**S**	**01 03 33.3**	**+4.3**	
MNK				*i* SS	**SS**	**01 08 00.7**	**+6.1**	
MNK				pmax	pmax			
	comp=Z,9.0nm,0.8s							
MNK				pmax	pmax			
	comp=N,13nm,0.9s							
MNK				pmax	pmax			
	comp=E,11nm,0.9s							
SSPA	**Standing Stone**	**69.40**	**50**	P	**P**	**00 54 25.3**	**-1.3**	
ZAIG	**Zacatecas**	**69.66**	**79**	IAmb	IAmb	00 54 30.1		
	comp=Z,12nm,1.0s							
N58A	**Sunbury**	**69.78**	**49**	IAmb	IAmb	00 54 34.0		
	comp=Z,17nm,1.1s							
CPCT	**Cooper Cave**	**70.19**	**57**	P	**P**	**00 54 30.1**	**-1.4**	
CPCT				IAmb	IAmb	00 54 31.5		
	comp=Z,19nm,1.2s							
FPAL	**Fort Paine**	**70.33**	**59**	IAmb	IAmb	00 54 32.2		
	comp=Z,9.9nm,0.8s							
TKL	**Tuckaleechee C**	**70.41**	**57**	LR	LR	01 25 36.8		
	comp=Z,111nm,19.8s,baz=333,slow=36							
LRAL	**Lakeview Retre**	**70.75**	**61**	IAmb	IAmb	00 54 34.2		
	comp=Z,7.5nm,0.8s							
M65A	**Busby, Falmout**	**71.89**	**44**	P	**P**	**00 54 42.5**	**+0.8**	
	baz=325							
AKASG	**Malin Array Be**	**72.44**	**336**	P	**P**	**00 54 45.1**	**+0.3**	
	comp=Z,1.1nm,0.5s,baz=25,slow=6.2,SNR=4.6							
	comp=Z,1.1nm,0.5s							
AKASG	**Malin Array Be**	**72.44**	**336**	P	**P**	**00 54 44.1**	**-0.7**	
AKASG	**Malin Array Be**	**72.44**	**336**	*ce*P	**P**	**00 54 47.2**	**+2.4**	
EKA	**Eskdalemuir Ar**	**72.47**	**357**	P	**P**	**00 54 45.5**	**+0.6**	
	comp=Z,0.7nm,0.5s,baz=6.2,slow=5.5,SNR=3.7							
	comp=Z,0.7nm,0.5s							
T59A	**Double "B" Far**	**72.47**	**52**	P	**P**	**00 54 44.5**	**-0.7**	
T59A				IAmb	IAmb	00 54 45.9		
	comp=Z,19nm,1.2s							
KIV	**Kislovodsk**	**74.42**	**324**	*e*P	**P**	**00 54 55.2**	**-1.5**	
KIV				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KBZ	**Khabaz**	**74.54**	**324**	*i* P	**P**	**00 54 55.3**	**-2.0**	
KBZ				pmax	pmax			
	comp=Z,4.0nm,1.2s							
LANS	**Liptovska Anna**	**76.05**	**342**	*e*P	**P**	**00 55 08.7**	**+2.8**	
LANS	**Liptovska Anna**	**76.05**	**342**	*e*P	**P**	**00 55 08.7**	**+2.8**	
BUR08	**Bucovina Ar. S**	**76.25**	**337**	P	**P**	**00 55 08.0**	**+0.8**	
BUR08				IAmb	IAmb	00 55 22.9		
	comp=Z,14nm,1.3s							
VRAC	**Vranov**	**76.42**	**344**	P	**P**	**00 55 08.5**	**+0.5**	
	comp=Z,1.0nm,0.3s,baz=5.6,slow=6.6,SNR=3.6							
	comp=Z,1.0nm,0.3s							
GNI	**Garni**	**76.96**	**321**	LR	LR	01 31 49.7		
	comp=Z,72nm,19.1s,baz=19,slow=38							
GERES	**GERESS Array B**	**77.34**	**345**	P	**P**	**00 55 13.3**	**0.0**	
	comp=Z,0.9nm,0.4s,baz=36,slow=9.9,SNR=2.8							
	comp=Z,0.9nm,0.4s							
CONA	**Conrad Observa**	**77.88**	**344**	*ep*P	**P**	**00 55 17.0**	**+0.7**	
	comp=Z,0.3nm,0.6s							
RONA	**Rosalia, Austr**	**78.02**	**343**	*ep*P	**P**	**00 55 17.6**	**+0.5**	
	comp=Z,3.6nm,0.7s							
MOA	**Molln**	**78.22**	**345**	*ep*P	**P**	**00 55 19.8**	**+1.7**	
	comp=Z,1.7nm,0.9s							
ARSA	**Arzberg**	**78.59**	**344**	*ep*P	**P**	**00 55 22.0**	**+1.8**	
	comp=Z,2.2nm,0.8s							
LESA	**Schwarzleotal**	**78.88**	**346**	*e*P	**P**	**00 55 21.8**	**-0.1**	
	comp=Z,1.1nm,0.6s							
KBA	**Koelnbreinsper**	**79.12**	**345**	*ep*P	**P**	**00 55 24.0**	**+0.7**	
	comp=Z,7.6nm,0.8s							
WRA	**Warramunga Arr**	**79.15**	**216**	P	**P**	**00 55 23.5**	**+0.1**	
	comp=Z,2.1nm,0.8s,baz=29,slow=6.0,SNR=6.9							
	comp=Z,2.1nm,0.8s							
WRA	**Warramunga Arr**	**79.15**	**216**	P	**P**	**00 55 22.8**	**-0.6**	
WRA	**Warramunga Arr**	**79.15**	**216**	P	**P**	**00 55 22.8**	**-0.6**	
SOKA	**Soboth**	**79.23**	**344**	*ep*P	**P**	**00 55 24.2**	**+0.4**	
	comp=Z,9.5nm,1.7s							
OBKA	**Obir**	**79.48**	**344**	*e*P	**P**	**00 55 24.5**	**-0.6**	
	comp=Z,12nm,1.1s							
FETA	**Feichten**	**79.56**	**347**	*ep*P	**P**	**00 55 26.1**	**+0.5**	
	comp=Z,2.7nm,0.7s							
ABTA	**Abfaltersbach**	**79.57**	**346**	*ep*P	**P**	**00 55 25.7**	**0.0**	
	comp=Z,0.2nm,0.4s							
DAVOX	**Davos/Dischmat**	**79.91**	**347**	P	**P**	**00 55 27.9**	**+0.3**	
	comp=Z,1.6nm,0.6s,baz=327,slow=16,SNR=2.0							
	comp=Z,1.6nm,0.6s							
BRTR	**Keskin Array B**	**81.24**	**329**	P	**P**	**00 55 35.7**	**+0.9**	
	comp=Z,0.6nm,0.6s,baz=23,slow=2.1,SNR=3.0							
	comp=Z,0.6nm,0.6s							
BRTR	**Keskin Array B**	**81.24**	**329**	P	**P**	**00 55 35.1**	**+0.3**	
BRTR	**Keskin Array B**	**81.24**	**329**	P	**P**	**00 55 35.1**	**+0.3**	
ASAR	**Alice Springs**	**82.73**	**215**	P	**P**	**00 55 43.0**	**+0.5**	
	comp=Z,1.4nm,0.8s,baz=16,slow=6.1,SNR=6.5							
	comp=Z,1.4nm,0.8s							
ASAR	**Alice Springs**	**82.73**	**215**	P	**P**	**00 55 42.3**	**-0.1**	
ASAR	**Alice Springs**	**82.73**	**215**	P	**P**	**00 55 42.3**	**-0.1**	
STKA	**Stephens Creek**	**88.07**	**205**	P	**P**	**00 56 09.7**	**+0.9**	
	comp=Z,1.2nm,0.6s,baz=0.0,slow=1.0,SNR=2.9							
	comp=Z,1.2nm,0.6s							
STKA	**Stephens Creek**	**88.07**	**205**	P	**P**	**00 56 10.1**	**+1.3**	
ESDC	**Sonseca Array**	**88.14**	**357**	P	**P**	**00 56 08.8**	**-0.7**	
	comp=Z,1.1nm,0.9s,baz=351,slow=4.3,SNR=5.1							
	comp=Z,1.1nm,0.9s							
SJG	**San Juan**	**93.67**	**54**	LR	LR	01 39 52.0		
	comp=Z,39nm,20.4s,baz=1.0,slow=36							
SDV	**Santo Domingo**	**99.10**	**63**	LR	LR	01 43 51.0		
	comp=Z,31nm,19.1s,baz=264,slow=37							
PLCA	**Paso Flores**	**136.88**	**100**	PKP	**PKiKP**	**01 02 42.4**	**-0.2**	
	comp=Z,1.2nm,0.6s,baz=227,slow=8.1,SNR=3.2							

IDC ***12*** *00:45:45.8±1.1, 14.°06N×120.°24E, h80km±10km, mb3.8/17, mbtmp4.1/17, MS3.2/7, Error ellipse: s-maj=24.5km s-min=13.9km az=71.0*

NEIC ***12*** *00:45:46.4±1.6, 14.°1N±0.°1×120.°22E±0.°08, h82km±3km, mb4.4/15, Error ellipse: s-maj=15.4km s-min=10.4km az=154.0*

ISC 12 00:45:42.9±0.5, 13°91N±0.°08×119°96E±0.°08, h57km, n53, σ1§06/45, mb4.3/27, MS3.3/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.97**	**79**	P	**Pn**	**00 46 00.9**	**+0.4**
	4µm,0.4s,baz=272,slow=2.7,SNR=65						
TGY				S	**Sn**	**00 46 14.8**	**+1.2**
	12µm,0.5s,baz=348,slow=20,SNR=11						
DAV	**Davao City (W)**	**8.76**	**140**	LR	LR	00 52 04.9	
	comp=Z,223nm,19.5s,baz=301,slow=44						
MYLDM	**Lahad Datu**	**8.79**	**190**	Pn	Pn	00 47 53.5	+6.1
QIZ	**Qiongzhong**	**10.95**	**299**	Pn	**Pn**	**00 48 17.0**	**0.0**
SBUM	**Sibu**	**13.71**	**215**	Pn	**P**	**00 49 00.2**	**-1.4**
KAPI	**Kappang**	**18.80**	**181**	LR	LR	00 57 52.6	
	comp=Z,34nm,20.9s,baz=348,slow=38						
CMAR	**Chiang Mai Arr**	**20.68**	**285**	P	Pn	00 50 23.1	+1.9
	1.8nm,0.7s,baz=94,slow=9.3,SNR=11						
	1.8nm,0.7s						
LYN	**LuoYang**	**21.64**	**343**	P	**P**	**00 50 30.1**	**+1.6**
LYN				pP	pwP	00 50 42.8	-1.0
LYN				pmax	pmax		
	comp=Z,18nm,0.8s						
CD2	**Chengdu**	**22.54**	**321**	P	**P**	**00 50 41.5**	**+3.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HNS	**HongShan**	**23.86**	**350**	⇑P	**P**	**00 50 51.8**	**+0.8**
HNS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SOEI	**Soe**	**23.90**	**169**	P	**P**	**00 50 53.3**	**+1.6**
LEM	**Lembang**	**23.97**	**211**	LR	LR	01 02 28.6	
	comp=Z,50nm,18.5s,baz=17,slow=41						
KSAR	**Wonju Array Be**	**24.48**	**15**	P	**P**	**00 50 57.8**	**+1.1**
KSRS	**Korea Array**	**24.50**	**15**	P	**P**	**00 50 55.2**	**-1.6**
	comp=Z,2.6nm,0.6s,baz=200,slow=11,SNR=11						
	comp=Z,2.6nm,0.6s						
BTO2	**Baotou**	**28.15**	**344**	*e*P	P	00 51 24.2	-5.7
BTO2				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BTO2				pmax	pmax		
	comp=Z,180nm,6.8s						
USRK	**Ussuriysk Ar.**	**31.89**	**16**	P	**P**	**00 52 01.5**	**-1.3**
	comp=Z,3.9nm,0.8s,baz=228,slow=11,SNR=3.9						
	comp=Z,3.9nm,0.8s						
ULN	**Ulaanbaatar**	**35.52**	**345**	P	**P**	**00 52 34.8**	**+0.4**
ULN				IAmb	IAmb	00 52 51.9	
	comp=Z,2.2nm,0.8s						

HILR	**Hailar Array B**	**35.55**	**360**	P	**P**	**00 52 33.2**	**-1.4**	
	comp=Z,1.5nm,0.4s,baz=152,slow=9.5,SNR=6.4							
	comp=Z,1.5nm,0.4s							
SONM	**Songino Array**	**35.66**	**344**	P	**P**	**00 52 35.8**	**+0.2**	
	comp=Z,2.0nm,0.6s,baz=168,slow=10,SNR=6.5							
	comp=Z,2.0nm,0.6s							
SONM	**Songino Array**	**35.66**	**344**	P	**P**	**00 52 36.6**	**+1.0**	
SONM				IAmb	IAmb	00 52 37.5		
	comp=Z,1.7nm,0.6s							
WB0	**Warramunga Arr**	**36.36**	**157**	P	**P**	**00 52 41.7**	**0.0**	
WB0				IAmb	IAmb	00 53 24.7		
	comp=Z,10nm,1.4s							
WRA	**Warramunga Arr**	**36.50**	**157**	P	**P**	**00 52 43.0**	**+0.1**	
	comp=Z,1.4nm,0.7s,baz=336,slow=9.4,SNR=16							
	comp=Z,1.4nm,0.7s							
WRA	**Warramunga Arr**	**36.50**	**157**	P	**P**	**00 52 42.4**	**-0.5**	
KLR	**Kul'dur**	**36.53**	**13**	LR	LR	01 07 45.9		
	comp=Z,16nm,20.7s,baz=338,slow=36							
ASAR	**Alice Springs**	**39.76**	**160**	P	**P**	**00 53 11.3**	**+0.9**	
	comp=Z,1.0nm,0.6s,baz=337,slow=8.1,SNR=8.8							
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**45.44**	**324**	P	**P**	**00 53 57.3**	**+1.1**	
	comp=Z,2.9nm,0.9s,baz=160,slow=4.6,SNR=5.7							
MKAR				PcP	**PcP**	**00 55 35.6**	**+1.1**	
	comp=Z,1.7nm,0.9s,baz=122,slow=4.1,SNR=2.1							
	comp=Z,2.9nm,0.9s							
MAKZ	**Makanchi**	**45.62**	**324**	P	**P**	**00 53 59.4**	**+1.7**	
MAKZ				IAmb	IAmb	00 54 00.4		
	comp=Z,6.4nm,0.8s							
ZALV	**Zalesovo Beam**	**48.54**	**333**	P	**P**	**00 54 20.4**	**+0.2**	
	comp=Z,1.1nm,0.5s,baz=126,slow=5.6,SNR=4.7							
	comp=Z,1.1nm,0.5s							
ZALV	**Zalesovo Beam**	**48.54**	**333**	P	**P**	**00 54 19.9**	**-0.3**	
YAK	**Yakutsk**	**48.55**	**6**	LR	LR	01 16 50.3		
	comp=Z,51nm,18.8s,baz=299,slow=38							
BBOO	**Buckleboo**	**48.94**	**162**	P	**P**	**00 54 23.4**	**-0.2**	
KURBB	**Kurchatov Arra**	**49.61**	**326**	P	**P**	**00 54 28.9**	**+0.4**	
	comp=Z,2.3nm,0.8s,baz=124,slow=8.2,SNR=5.1							
	comp=Z,2.3nm,0.8s							
MA2	**Magadan**	**50.94**	**20**	LR	LR	01 16 34.7		
	comp=Z,31nm,19.2s,baz=291,slow=36							
SEY	**Seymchan**	**54.03**	**18**	LR	LR	01 18 14.4		
	comp=Z,28nm,18.4s,baz=295,slow=36							
TIXI	**Tiksi**	**57.96**	**3**	P	**P**	**00 55 27.0**	**-2.1**	
	comp=Z,5.2nm,0.3s,baz=163,slow=2.8,SNR=3.6							
	comp=Z,5.2nm,0.3s							
NRIK	**Noril'sk**	**59.05**	**347**	P	**P**	**00 55 35.9**	**-0.9**	
	comp=Z,2.5nm,0.7s,baz=143,slow=5.4,SNR=6.2							
	comp=Z,2.5nm,0.7s							
NRIK	**Noril'sk**	**59.05**	**347**	P	**P**	**00 55 36.3**	**-0.5**	
NRIK				IAmb	IAmb	00 55 37.5		
	comp=Z,3.7nm,0.9s							
K17K	**Iditarod**	**73.96**	**28**	P	**P**	**00 57 11.8**	**-0.2**	
K17K				IAmb	IAmb	00 57 38.7		
	comp=Z,17nm,1.5s							
B20K	**Meade River**	**74.59**	**21**	P	**P**	**00 57 14.5**	**-1.1**	
B20K				IAmb	IAmb	00 57 39.1		
	comp=Z,3.4nm,1.4s							
O18K	**Koktuh Hills**	**75.50**	**31**	P	**P**	**00 57 20.1**	**-0.9**	
O18K				IAmb	IAmb	00 57 33.1		
	comp=Z,17nm,1.4s							
G21K	**Allakaket**	**75.97**	**24**	P	**P**	**00 57 22.8**	**-0.8**	
M20K	**Styx River**	**76.40**	**29**	P	**P**	**00 57 25.0**	**-1.2**	
M20K				IAmb	IAmb	00 57 42.3		
	comp=Z,10.0nm,1.4s							
H22K	**Ishtalitna Cre**	**76.87**	**25**	P	**P**	**00 57 28.6**	**-0.2**	
ARCES	**ARCESS Array B**	**78.63**	**339**	P	**P**	**00 57 38.6**	**+0.2**	
	comp=Z,2.6nm,0.8s,baz=79,slow=6.3,SNR=5.8							
	comp=Z,2.6nm,0.8s							
ARCES	**ARCESS Array B**	**78.63**	**339**	P	**P**	**00 57 38.5**	**0.0**	
ILAR	**Eielson Array**	**78.88**	**26**	P	**P**	**00 57 39.5**	**-0.3**	
	comp=Z,0.2nm,0.7s,baz=325,slow=5.9,SNR=2.2							
	comp=Z,0.2nm,0.7s							
SPITS	**Spitsbergen Ar**	**79.24**	**348**	P	**P**	**00 57 42.1**	**+0.4**	
	comp=Z,5.9nm,0.8s,baz=96,slow=7.6,SNR=8.2							
	comp=Z,5.9nm,0.8s							
FINES	**FINESS Array B**	**79.75**	**331**	P	**P**	**00 57 43.4**	**-1.2**	
	comp=Z,6.5nm,1.1s,baz=72,slow=6.2,SNR=5.5							
	comp=Z,6.5nm,1.1s							
FINES	**FINESS Array B**	**79.75**	**331**	P	**P**	**00 57 43.8**	**-0.9**	
YKA	**Yellowknife Ar**	**92.86**	**22**	P	**P**	**00 58 48.8**	**-0.5**	
	comp=Z,0.2nm,0.5s,baz=309,slow=4.8,SNR=4.2							
	comp=Z,0.2nm,0.5s							
TXAR	**Lajitas Array**	**119.83**	**44**	PKP	**PKiKP**	**01 04 28.3**	**+0.6**	
	comp=Z,0.4nm,0.9s,baz=340,slow=1.8,SNR=2.6							
DBIC	**Dimbokro**	**121.54**	**287**	PKP	**PKiKP**	**01 04 31.9**	**+0.6**	
	comp=Z,1.7nm,0.6s,baz=45,slow=1.4,SNR=3.0							
DBIC	**Dimbokro**	**121.54**	**287**		**PKiKP**	**01 04 31.4**	**+0.1**	

IDC ***12*** *00:50:05.8±0.8, 36.°23N×68.°66E, h0km, mb4.0/18, mbtmp4.1/22, ML3.7/4, MS3.6/11, Error ellipse: s-maj=15.5km s-min=14.6km az=173.0*

NEIC ***12*** *00:50:09.0±1.6, 36.°40N±0.°06×68.°65E±0.°09, h10km±1km, mb4.3/27, Error ellipse: s-maj=12.1km s-min=9.9km az=270.0*

NNC ***12*** *00:50:11.1±3.5, 36.°78N×68.°59E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=28.4km s-min=20.6km az=7.0*

ISC 12 00:50:11.1±0.5, 36°51N±0.°05×68°53E±0.°05, h24km, n103, σ2§04/110, mb4.2/29, MS3.6/9, 5C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.01**	**168**	Pn	**Pn**	**00 50 41.3**	**-2.4**
NIL	**Nilore**	**4.81**	**125**	Pn	**Pn**	**00 51 20.5**	**-1.6**
HRA	**Herat**	**5.55**	**249**	Pn	**Pn**	**00 51 33.1**	**+0.7**
KSH2	**Kashi**	**6.16**	**63**	Pn	**Pn**	**00 51 42.4**	**+1.7**
KSH2				Sn	**Sn**	**00 52 56.6**	**+6.2**
KSH2				smax	smax		
	comp=N,140nm,1.1s						
KSH2				smax	smax		
	comp=E,97nm,1.0s						
JMU	**Jammu**	**6.39**	**124**	*e*P	**Pn**	**00 51 47.6**	**+3.9**
JMU				*e*S	**Sn**	**00 52 55.5**	**-0.5**
JMU				IAML		00 53 41.1	
	comp=N,2µm,1.2s						
JMU				IAML		00 53 49.5	
	comp=E,2µm,0.1s						
KK31	**Karatay Array**	**6.76**	**12**	Pn	**Pn**	**00 51 49.2**	**+0.5**
KK31	**Karatay Array**	**6.76**	**12**	⇑Pn	**Pn**	**00 51 49.5**	**+0.8**
	comp=E,6.1nm,0.6s,baz=197,slow=12,SNR=43						
KK31				⇑Pg	**Pb**	**00 52 09.7**	**+1.9**
	comp=E,11nm,0.6s,baz=192,slow=21,SNR=5.3						
KK31				⇓Sn	**Sn**	**00 53 04.1**	**-0.8**
	comp=E,12nm,0.6s						
KK31				⇑Lg	Lg	00 53 38.8	
	comp=E,36nm,0.7s,baz=192,slow=28						
KKAR	**Karatay Array**	**6.76**	**12**	Pn	**Pn**	**00 51 48.7**	**0.0**
TSSA	**Tissa**	**7.27**	**118**	*e*P	**Pn**	**00 51 59.4**	**+3.4**
TSSA				*e*S	**Sn**	**00 53 15.8**	**-2.1**
TSSA				IAML		00 53 51.2	
	comp=E,159nm,0.5s						
TSSA				IAML		00 53 55.5	
	comp=N,173nm,0.7s						
UCH	**Uchtor**	**7.35**	**37**	P	**Pn**	**00 51 58.0**	**+0.7**
	SNR=78						
EKS2	**Erkin-Say**	**7.36**	**32**	P	**Pn**	**00 51 58.2**	**+1.1**
	SNR=8.9						
ALCI	**Alchi Leh**	**7.43**	**105**	*e*P	**Pn**	**00 52 01.0**	**+2.6**
ALCI				*e*S	**Sn**	**00 53 20.5**	**-1.7**
ALCI				IAML		00 53 28.8	
	comp=N,204nm,0.1s						
ALCI				IAML		00 53 29.9	
	comp=E,298nm,0.1s						
NRN	**Naryn**	**7.62**	**48**	Pn	**Pn**	**00 51 59.5**	**-1.3**
AAK	**Ala-Archa**	**7.66**	**35**	Pn	**Pn**	**00 52 02.2**	**+1.0**
	comp=E,6.6nm,0.3s,baz=218,slow=11,SNR=164						
AAK				Sn	**Sn**	**00 53 31.3**	**+4.1**
	comp=E,0.5nm,0.3s,baz=186,slow=18,SNR=1.1						
	comp=E,41nm,0.5s						
AAK	**Ala-Archa**	**7.66**	**35**	P	**Pn**	**00 52 02.2**	**+1.0**
	SNR=85						
AAK	**Ala-Archa**	**7.66**	**35**	Pn	**Pn**	**00 52 01.4**	**+0.2**
AAK	**Ala-Archa**	**7.66**	**35**	⇑Pn	**Pn**	**00 52 01.8**	**+0.6**
	comp=E,12nm,0.5s						
AAK				⇑Sn	**Sn**	**00 53 25.2**	**-2.1**
	comp=E,27nm,1.0s						
DHRM	**DHARAMSHALA**	**7.70**	**121**	*e*P	**Pn**	**00 52 05.5**	**+3.5**
DHRM				*e*S	**Sn**	**00 53 26.3**	**-2.3**
DHRM				IAML		00 53 40.3	
	comp=E,123nm,0.7s						
DHRM				IAML		00 54 07.6	
	comp=N,217nm,1.7s						
FRU1	**Bishkek**	**7.85**	**35**	Pn	**Pn**	**00 52 03.4**	**-0.4**
KBK	**Karagaybulak**	**7.88**	**37**	P	**Pn**	**00 52 05.9**	**+1.5**
	SNR=77						

CHMS	**Chumysh**	**8.06**	**35**	P	**Pn**	**00 52 07.5**	**+0.9**	
	SNR=52							
USP	**Ospenovka**	**8.16**	**32**	P	**Pn**	**00 52 08.7**	**+0.7**	
	SNR=9.7							
ULHL	**Ulahol**	**8.27**	**44**	P	**Pn**	**00 52 10.5**	**+0.7**	
	SNR=9.2							
BHK	**Bhakra**	**8.28**	**126**	*e*P	Pn	00 52 18.5	+8.8	
BHK				*e*S	**Sn**	**00 53 47.5**	**+4.9**	
BHK				IAML		00 54 36.7		
	comp=N,158nm,1.8s							
BHK				IAML		00 54 46.5		
	comp=E,135nm,2.6s							
TKM2	**Tokmak 2**	**8.40**	**38**	P	**Pn**	**00 52 11.4**	**-0.1**	
	SNR=28							
KDJ	**Kajisay**	**8.74**	**47**	Pn	**Pn**	**00 52 16.1**	**0.0**	
TARG	**Taragay, Kyrgy**	**8.89**	**51**	Pn	**Pn**	**00 52 17.7**	**-0.7**	
SMLA	**Simla**	**8.97**	**124**	*e*P	**Pn**	**00 52 22.1**	**+3.0**	
SMLA				*e*S	**Sn**	**00 53 57.4**	**-1.9**	
SMLA				IAML		00 54 46.6		
	comp=N,386nm,1.2s							
SMLA				IAML		00 54 58.2		
	comp=E,259nm,1.2s							
WUS	**Wushi**	**9.56**	**57**	Pn	**Pn**	**00 52 27.2**	**-0.1**	
PDGK	**Podgornoye**	**10.82**	**48**	⇓Pn	**Pn**	**00 52 42.9**	**-1.7**	
	comp=E,7.5nm,0.7s							
JOSI	**Joshimath**	**10.95**	**120**	*e*P	**Pn**	**00 52 49.4**	**+2.9**	
JOSI				*e*S	Sn	00 54 39.2	-9.1	
JOSI				IAML		00 54 53.7		
	comp=N,33nm,1.0s							
JOSI				IAML		00 54 54.6		
	comp=E,47nm,1.5s							
PTH	**Pithoragarh**	**11.98**	**122**	*e*P	**Pn**	**00 53 02.4**	**+1.8**	
PTH				*e*S	**Sn**	**00 55 07.8**	**-5.7**	
PTH				IAML		00 55 18.7		
	comp=E,12nm,0.6s							
PTH				IAML		00 55 19.3		
	comp=N,15nm,0.8s							
AB31	**Akbulak array**	**14.19**	**336**	Pn	**Pn**	**00 53 28.7**	**-1.8**	
AB31	**Akbulak array**	**14.19**	**336**	Pn	**Pn**	**00 53 28.1**	**-2.4**	
	comp=N,4.1nm,0.6s,baz=150,slow=12,SNR=56							
AB31				⇓Sn	**Sn**	**00 56 06.8**	**-0.2**	
	comp=N,4.8nm,0.8s							
ABKAR	**Akbulak array**	**14.19**	**336**	Pn	**Pn**	**00 53 27.6**	**-2.8**	
MAKZ	**Makanchi**	**14.36**	**40**		**Pn**	**00 53 30.3**	**-2.5**	
MKAR	**Makanchi Array**	**14.52**	**41**	Pn	**Pn**	**00 53 33.3**	**-1.6**	
	comp=N,0.3nm,0.3s,baz=231,slow=14,SNR=33							
MKAR				LR	LR	00 59 33.2		
	comp=N,156nm,18.1s,baz=248,slow=39							
	comp=N,5.5nm,0.8s							
MKAR	**Makanchi Array**	**14.52**	**41**	Pn	**Pn**	**00 53 33.1**	**-1.8**	
KURBB	**Kurchatov Arra**	**15.84**	**24**	Pn	**Pn**	**00 53 48.9**	**-3.4**	
	comp=N,0.2nm,0.3s,baz=214,slow=10,SNR=35							
	comp=N,0.7nm,0.4s							
AKTO	**Aktyubinsk**	**15.85**	**335**	Pn	**Pn**	**00 53 47.5**	**-5.0**	
	comp=N,0.4nm,0.3s,baz=51,slow=6.1,SNR=11							
AKTO				Sn	**Sn**	**00 56 44.2**	**-3.1**	
	comp=N,0.2nm,0.3s,baz=171,slow=20,SNR=1.2							
AKTO	**Aktyubinsk**	**15.85**	**335**	⇓Pn	**Pn**	**00 53 51.8**	**-0.7**	
	comp=N,8.5nm,0.9s							
AKTO				⇓Sn	**Sn**	**00 56 44.4**	**-2.9**	
	comp=N,4.6nm,1.1s							
KURK	**Kurchatov**	**15.94**	**24**	Pn	**Pn**	**00 53 54.2**	**+0.5**	
WMQ	**Urumqi**	**16.35**	**58**	*e*P	**Pn**	**00 53 59.6**	**+0.6**	
WMQ				LR	LR			
	comp=Z,160nm,16.1s							
BVAR	**Borovoye Array**	**16.56**	**4**	Pn	**Pn**	**00 53 58.3**	**-3.3**	
	comp=Z,0.1nm,0.3s,baz=177,slow=8.9,SNR=9.3							
BVAR				Sn	**Sn**	**00 56 58.8**	**-5.8**	
	baz=161,slow=28,SNR=1.4							
BVAR				LR	LR	01 01 07.5		
	comp=Z,148nm,18.6s,baz=284,slow=39							
	comp=Z,1.5nm,0.4s							
BORK	**Borovoye**	**16.58**	**4**	Pn	**Pn**	**00 53 59.6**	**-2.2**	
ZAA0	**Zalesovo Array**	**20.78**	**28**	P	**P**	**00 54 48.7**	**-1.5**	
ZAA0				IAmb	IAmb	00 55 10.7		
	comp=Z,7.7nm,0.8s							
ZALV	**Zalesovo Beam**	**20.78**	**28**	P	**P**	**00 54 48.8**	**-1.5**	
	comp=Z,5.4nm,0.

C18K					IAmb	IAmb	01 01 36.6	
	comp=Z,4.1nm,1.2s							
C27K	**Jago River**	**71.56**	**11**	P		**P**	**01 01 30.0**	**+0.3**
H18K	**Honhosa River**	**72.28**	**19**	P		**P**	**01 01 35.1**	**+1.0**
H18K					IAmb	IAmb	01 01 41.3	
	comp=Z,1.9nm,1.1s							
J14K	**Nanvaranak Lak**	**72.66**	**22**	P		**P**	**01 01 36.8**	**+0.5**
J16K	**Anvik River**	**73.13**	**21**	P		**P**	**01 01 40.6**	**+1.5**
J16K					IAmb	IAmb	01 01 49.1	
	comp=Z,5.6nm,1.3s							
TSUM	**Tsumeb**	**73.38**	**230**	LR		LR	01 37 44.5	
	comp=Z,57nm,18.1s,baz=350,slow=39							
BMAR	**Burnt Mountain**	**73.38**	**13**	P		**P**	**01 01 42.1**	**+1.5**
J20K	**Nowinta River**	**74.15**	**18**	P		**P**	**01 01 46.9**	**+1.8**
J20K					IAmb	IAmb	01 02 28.4	
	comp=Z,7.3nm,1.5s							
INK	**Inuvik**	**74.20**	**8**	P		**P**	**01 01 45.9**	**+0.7**
INK					IAmb	IAmb	01 02 06.8	
	comp=Z,6.2nm,1.4s							
L16K	**Owhat River**	**74.69**	**22**	P		**P**	**01 01 49.3**	**+1.0**
ILAR	**Eielson Array**	**75.29**	**15**	P		**P**	**01 01 52.0**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=323,slow=5.1,SNR=3.2							
	comp=Z,0.4nm,0.8s							
G31M	**Satah River**	**75.42**	**9**	P		**P**	**01 01 52.2**	**-0.1**
I28M	**Miner Creek**	**75.98**	**12**	P		**P**	**01 01 57.7**	**+1.9**
I28M					IAmb	IAmb	01 02 26.3	
	comp=Z,1.9nm,1.1s							
H31M	**Peel River**	**76.48**	**9**	P		**P**	**01 01 58.5**	**0.0**
H31M					IAmb	IAmb	01 02 31.0	
	comp=Z,5.6nm,1.2s							
I30M	**Mount Dempster**	**76.74**	**11**	P		**P**	**01 02 01.0**	**+0.9**
I30M					IAmb	IAmb	01 02 37.4	
	comp=Z,5.6nm,1.4s							
K29M	**Barlow Dome**	**77.86**	**11**	P		**P**	**01 02 08.1**	**+1.6**
K29M					IAmb	IAmb	01 02 09.2	
	comp=Z,1.9nm,0.9s							
YKA	**Yellowknife Ar**	**81.30**	**1**	P		**P**	**01 02 25.4**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=350,slow=5.8,SNR=4.3							
	comp=Z,0.2nm,0.6s							
WRA	**Warramunga Ar**	**83.70**	**120**	P		P	01 02 34.2	-3.9
	comp=Z,0.7nm,0.7s,baz=321,slow=4.8,SNR=7.1							
	comp=Z,0.7nm,0.7s							
WRA	**Warramunga Ar**	**83.70**	**120**	P		**P**	**01 02 35.4**	**-2.7**
ASAR	**Alice Springs**	**85.91**	**123**	P		**P**	**01 02 45.5**	**-3.7**
	comp=Z,0.7nm,0.6s,baz=303,slow=4.6,SNR=6.7							
	comp=Z,0.7nm,0.6s							
ASAR	**Alice Springs**	**85.91**	**123**	P		**P**	**01 02 47.5**	**-1.7**
PLCA	**Paso Flores**	**147.96**	**250**	PKPbc		**PKPdf**	**01 09 53.4**	**+2.2**
	comp=Z,1.6nm,0.8s,baz=353,slow=16,SNR=3.5							

*SJA **12** 00:53:48.2±0.7, 32°.08S×72°.01W, h38km±5km, ML3.3, MW3.5*
*GUC **12** 00:53:50.7±0.8, 32°.09S×71°.67W, h33km±6km, ML3.3*
ISC 12 00:53:49.1±1.3, 32°.08S±0°.02×71°.78W±0°.04, h13km±9km, n43, σ1s41/74, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.63**	**140**	⇓*iP*		**Pg**	**00 54 02.0**	**+0.6**
VA06				*eS*		**Sg**	**00 54 09.5**	**-0.2**
VA06				IAML			00 54 11.2	
	comp=E,3μm,0.4s							
CO04	**Los Peladeros**	**0.68**	**87**	⇓*iP*		**Pg**	**00 54 02.7**	**+0.2**
CO04				*eS*		**Sg**	**00 54 11.2**	**-0.3**
CO04				IAML			00 54 11.9	
	comp=N,5μm,0.2s							
VA01	**Torpederas**	**0.95**	**173**	*eP*		**Pb**	**00 54 08.0**	**+0.5**
VA01	**Torpederas**	**0.95**	**173**	*eP*		**Pb**	**00 54 07.1**	**-0.4**
VA01				*eS*		**Sg**	**00 54 20.7**	**+0.9**
CO02	**Combarbal**	**1.09**	**37**	⇓*iP*		**Pb**	**00 54 09.7**	**-0.3**
CO02				*eS*		**Sb**	**00 54 23.7**	**-0.5**
CO02				IAML			00 54 27.2	
	comp=N,3μm,0.2s							
CO02	**Combarbal**	**1.09**	**37**	*eP*		**Pb**	**00 54 09.4**	**-0.6**
CO02				IAML			00 54 26.5	
	comp=Z,950nm,0.3s							
ROCH	**El Roble**	**1.10**	**144**	⇓*iP*		**Pb**	**00 54 09.1**	**-1.1**
ROCH				*i* P		**Pb**	**00 54 09.1**	**-1.1**
ROCH				*eS*		**Sb**	**00 54 24.1**	**-0.5**
ROCH				IAML			00 54 27.6	
	comp=N,626nm,0.4s							
VA03	**San Esteban**	**1.24**	**124**	*i* P		**Pn**	**00 54 11.0**	**-1.3**
VA03				*eS*		**Sb**	**00 54 26.4**	**-2.0**
VA03				IAML			00 54 29.4	
	comp=E,1μm,0.5s							
VA03	**San Esteban**	**1.24**	**124**	*eP*		**Pn**	**00 54 11.1**	**-1.2**
VA03				IAML			00 54 28.8	
	comp=Z,536nm,0.2s							
MT02	**Curacav**	**1.30**	**156**	*eP*		**Pn**	**00 54 12.2**	**-0.7**
MT02				*eS*		**Sb**	**00 54 30.4**	**+0.5**
CO06	**Fray Jorge**	**1.40**	**5**	*i* P		**Pn**	**00 54 14.4**	**0.0**
CO06				*eS*		**Sb**	**00 54 32.9**	**-0.1**
CO06				IAML			00 54 37.2	
	comp=N,483nm,0.5s							
PEL	**Peldehue**	**1.41**	**139**	*eP*		**Pn**	**00 54 13.8**	**-0.7**
PEL				*eS*		**Sn**	**00 54 31.7**	**-1.4**
PEL				IAML			00 54 33.7	
	comp=E,732nm,0.3s							
PEL	**Peldehue**	**1.41**	**139**	*eP*		**Pn**	**00 54 13.8**	**-0.7**
PEL				*eS*		**Sn**	**00 54 32.5**	**-0.5**
PEL				IAML			00 54 33.2	
	comp=Z,398nm,0.2s							
CO03	**El Pedregal**	**1.54**	**37**	*eP*		**Pn**	**00 54 16.8**	**+0.4**
CO03				*eS*		**Sn**	**00 54 36.3**	**-0.2**
CO03				IAML			00 54 39.3	
	comp=E,759nm,0.3s							
CO03	**El Pedregal**	**1.54**	**37**	*eP*		**Pn**	**00 54 16.9**	**+0.4**
CO03				IAML			00 54 40.3	
	comp=Z,313nm,0.6s							
MT05	**Renca**	**1.58**	**147**	*eP*		**Pn**	**00 54 16.9**	**0.0**
MT05				*eS*		**Sb**	**00 54 38.8**	**+0.7**
MT05				IAML			00 54 40.4	
	comp=Z,214nm,0.5s							
MT10	**Hacienda Santa**	**1.59**	**139**	⇓*iP*		**Pn**	**00 54 16.7**	**-0.4**
MT10				*eS*		**Sn**	**00 54 37.1**	**-0.4**
MT10				IAML			00 54 40.6	
	comp=E,1μm,0.5s							
MT03	**Universidad Ad**	**1.77**	**143**	*eP*		**Pn**	**00 54 19.8**	**+0.2**
MT03				*eS*		**Sb**	**00 54 43.5**	**-0.2**
MT03				IAML			00 54 45.0	
	comp=Z,516nm,0.2s							
MT01	**Popeta**	**1.84**	**166**	*eP*		**Pn**	**00 54 20.3**	**-0.1**
MT01				*eS*		**Sg**	**00 54 47.6**	**-0.6**
MT01				IAML			00 54 50.3	
	comp=Z,231nm,0.4s							
MT04	**Ro Olivares**	**1.91**	**134**	*eP*		**Pn**	**00 54 22.2**	**+0.5**
MT04				*eS*		**Sn**	**00 54 46.6**	**+0.8**
MT04				IAML			00 54 49.1	
	comp=Z,131nm,0.4s							
MT08	**Bocatoma Ro**	**2.02**	**133**	*eP*		**Pn**	**00 54 23.9**	**+0.9**
MT08				*eS*		**Sb**	**00 54 50.4**	**-0.5**
MT08				IAML			00 54 50.4	
	comp=Z,94nm,0.3s							
GO04	**Tololo Observa**	**2.08**	**24**	*eP*		**Pb**	**00 54 25.6**	**-1.2**
GO04				*eS*		**Sb**	**00 54 52.8**	**+0.2**
GO04	**Tololo Observa**	**2.08**	**24**	*eP*		**Pb**	**00 54 25.8**	**-1.0**
GO04				*eS*		**Sb**	**00 54 53.4**	**+0.8**
GO04				IAML			00 55 01.0	
	comp=Z,560nm,0.5s							
MT13	**San Alfonso**	**2.08**	**143**	*eP*		**Pn**	**00 54 24.3**	**+0.4**
MT13				*eS*		**Sn**	**00 54 50.2**	**+0.4**
MT13				IAML			00 54 52.6	
	comp=Z,182nm,0.6s							
RTLS	**Leoncito**	**2.13**	**83**	*eP*		**Pb**	**00 54 27.1**	**-0.5**
RTLS				*eS*		**Sg**	**00 54 56.0**	**-1.6**
RTLS				IAML			00 54 57.4	
	comp=Z,221nm,0.2s							
BO04	**La Punta**	**2.14**	**153**	*eP*		**Pn**	**00 54 25.4**	**+0.7**
BO01	**Tunca**	**2.38**	**166**	*eP*		**Pn**	**00 54 27.9**	**0.0**
BO01	**Tunca**	**2.38**	**166**	*eP*		**Pn**	**00 54 27.8**	**0.0**
BO01				*eS*		**Sn**	**00 54 57.5**	**+0.6**
BO01				IAML			00 55 04.0	
	comp=Z,94nm,0.4s							
ASAL	**Salagasta**	**2.54**	**102**	*eP*		**Pb**	**00 54 34.4**	**-0.3**
ASAL				*eS*		**Sg**	**00 55 15.7**	**+4.9**
CO01	**Juntas del Tor**	**2.54**	**35**	*eP*		**Pn**	**00 54 32.1**	**+1.8**
CO01				*eS*		**Sn**	**00 55 03.0**	**+1.7**
CO01				IAML			00 55 08.3	
	comp=Z,150nm,0.5s							
ZON	**Zonda**	**2.69**	**79**	*eP*		**Pb**	**00 54 36.1**	**-1.1**
ZON				*eS*		**Sg**	**00 55 14.2**	**-1.4**
ZON				IAML			00 55 20.0	
	comp=Z,113nm,0.9s							

AROD	**Rodeo**	**2.74**	**47**	*eP*		**Pb**	**00 54 36.2**	**-2.0**
AROD				*eS*		**Sn**	**00 55 07.9**	**+1.5**
ACCO	**Cerro Coronel**	**2.75**	**58**	*eP*		**Pb**	**00 54 36.8**	**-1.6**
ACCO				*eS*		**Sb**	**00 55 09.6**	**-2.7**
SJA	**San Juan**	**2.79**	**80**	*eP*		**Pg**	00 54 49.7	+7.1
SJA				IAML			00 55 38.7	
	comp=Z,58nm,0.3s							
BO02	**Sierra Bellavi**	**2.83**	**163**	*eP*		**Pn**	**00 54 34.6**	**+0.4**
BO02	**Sierra Bellavi**	**2.83**	**163**	*eP*		**Pn**	**00 54 34.3**	**+0.2**
BO02				*eS*		**Sn**	**00 55 08.5**	**+0.3**
BO02				IAML			00 55 24.0	
	comp=Z,106nm,0.3s							
RTLL	**Cerro Villicun**	**2.91**	**76**	*eP*		**Pb**	**00 54 39.5**	**-1.4**
RTLL				*eS*		**Sb**	**00 55 13.6**	**-2.9**
GO05	**Hualane**	**2.93**	**182**	*eP*		**Pn**	**00 54 34.6**	**-0.8**
GO05				*eS*		**Sb**	**00 55 16.5**	**-0.4**
GO05				IAML			00 55 30.8	
	comp=Z,56nm,0.6s							
LCO	**Las Campanas**	**3.19**	**17**	*eP*		**Pn**	**00 54 39.8**	**+0.5**
LCO				*eS*		**Sn**	**00 55 13.5**	**-3.9**
AC05	**El Transito**	**3.48**	**22**	*eS*		**Sn**	**00 55 24.5**	**+0.2**
RFA	**San Rafael**	**3.86**	**135**	*eP*		**Pn**	**00 54 50.1**	**+1.9**
ACLC	**CERRO LA CRUZ**	**4.92**	**59**	*eP*		**Pn**	**00 55 05.9**	**+2.9**
ACLC				*eS*		**Sn**	**00 56 05.0**	**+5.0**
MRA	**San Martin**	**5.14**	**95**	IAML			00 56 12.9	
	comp=Z,26nm,0.5s							
MRA				IAML			00 56 12.9	
	comp=Z,26nm,0.5s							
MRA				IAML			00 56 12.9	
	comp=Z,26nm,0.5s							

*RSNC **12** 01:12:46.7±0.0, 10°.N±1°×7°.3W±°, h0km±2km, M2.0, ML2.0, MLv2.6*
*FUNV **12** 01:12:47.2, 9°.93N×72°.93W, h26km, MW3.1, Presumed earthquake*
ISC 12 01:12:47.7±1.7, 9°.83N±0°.04×72°.73W±0°.04, h23km±18km, n10, σ1s25/20, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MCQV	**Machiques**	**0.29**	**41**	*eP*		**Pn**	**01 12 55.4**	**-1.1**
MCQV				*eS*		**Sn**	**01 13 02.3**	**+0.1**
ARGC	**Ariguani, Magd**	**1.50**	**271**	P		**Pn**	**01 13 12.5**	**-0.7**
ARGC				S		**Sn**	**01 13 31.9**	**-0.1**
OCAC	**Ocana**	**1.69**	**200**	P		**Pn**	**01 13 14.5**	**-1.4**
OCAC				S		**Sn**	**01 13 35.6**	**-1.4**
URIC	**Uribia, Colomb**	**1.99**	**21**	P		**Pb**	**01 13 22.4**	**-0.9**
URIC				S		**Sb**	**01 13 50.3**	**+2.6**
CAPV	**Capacho**	**2.00**	**168**	*eP*		**Pn**	**01 13 20.5**	**+0.3**
CAPV				*eS*		**Sn**	**01 13 46.3**	**+1.7**
SDV	**Santo Domingo**	**2.27**	**114**	P		**Pn**	**01 13 24.6**	**+0.6**
SDV				S		**Sb**	**01 13 55.1**	**-0.7**
SJCC	**San Jacinto, C**	**2.42**	**272**	P		**Pn**	**01 13 26.5**	**+0.6**
SJCC				S		**Sn**	**01 13 55.4**	**+0.5**
PAMC	**Pamplona, Colo**	**2.48**	**179**	P		**Pn**	**01 13 27.5**	**+0.4**
PAMC				S		**Sn**	**01 13 58.2**	**+1.3**
MAPV	**Macapo**	**4.21**	**90**	*eP*		**Pn**	**01 13 51.1**	**+0.6**
MAPV				*eS*		**Sn**	**01 14 37.5**	**-1.5**
BENV	**Beln**	**5.05**	**88**	*eP*		**Pn**	**01 14 03.4**	**+1.2**
BENV				*eS*		**Sn**	**01 14 58.9**	**-1.1**

*IDC **12** 01:14:20.5±26.0, 11°.78N×142°.02E, h259km±267km, mb3.2/7, mbtmp3.8/7, Error ellipse: s-maj=54.3km s-min=39.0km az=39.0*
ISC 12 01:13:58.5±1.3, 12°.0N±0°.2×142°.1E±0°.4, h50km, n7, σ1s12/7, mb3.8/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.67**	**194**	P		**P**	**01 20 26.0**	**-0.2**
	1.1nm,0.7s,baz=13,slow=9.1,SNR=13							
	1.1nm,0.7s							
ASAR	**Alice Springs**	**36.37**	**193**	P		**P**	**01 20 58.5**	**+0.3**
	0.6nm,0.6s,baz=17,slow=13,SNR=8.3							
	0.6nm,0.6s							
MKAR	**Makanchi Array**	**60.77**	**317**	P		**P**	**01 24 06.9**	**+1.5**
	0.5nm,0.9s,baz=93,slow=8.4,SNR=4.0							
	0.5nm,0.9s							
KURBB	**Kurchatov Arra**	**64.09**	**321**	P		**P**	**01 24 27.5**	**+0.1**
	1.3nm,0.9s,baz=105,slow=6.6,SNR=5.8							
	1.3nm,0.9s							
BVAR	**Borovoye Array**	**69.49**	**322**	P		**P**	**01 25 01.9**	**+0.1**
	0.6nm,0.4s,baz=107,slow=7.1,SNR=8.1							
	0.6nm,0.4s							
ILAR	**Eielson Array**	**71.13**	**25**	P		**P**	**01 25 12.1**	**+0.5**
	0.2nm,0.6s,baz=255,slow=6.5,SNR=4.9							
	0.2nm,0.6s							
FINES	**FINESS Array B**	**91.42**	**334**	P		**P**	**01 26 57.6**	**-1.5**
	1.8nm,0.9s,baz=59,slow=4.9,SNR=5.4							
	1.8nm,0.9s							

*CATAC **12** 01:17:36.8±0.6, 13°.N±4°.×9°.0W±°, h25km±4km, M3.6/19, MLv3.6/19, Error ellipse: s-maj=8.1km s-min=4.8km az=12.0, confirmed*
*SNET **12** 01:17:37.0±0.8, 13°.10N×89°.62W, h41km±13km, ML3.4, Presumed earthquake*
*GCG **12** 01:17:38.5±1.5, 13°.20N×89°.66W, h36km±136km, MD3.8, Presumed earthquake*
ISC 12 01:17:37.3±5.3, 13°.09N±0°.07×89°.64W±0°.05, h38km±7km, n62, σ0s35/78, 6D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.50**	**38**	*eP*		**Pn**	**01 17 47.9**	**-0.1**
LALI				*eS*		**Sn**	**01 17 55.2**	**-0.3**
LALI	**Alcalda de L**	**0.50**	**38**	*i* P		**Pn**	**01 17 47.9**	**-0.1**
JAYA	**Jayaque - finc**	**0.59**	**18**	P		**Pn**	**01 17 49.1**	**-0.4**
JAYA				S		**Sn**	**01 17 58.5**	**+0.6**
JAYA	**Jayaque - finc**	**0.59**	**18**	⇓*iP*		**Pn**	**01 17 49.0**	**-0.4**
JAYA				*eS*		**Sn**	**01 17 57.9**	**-0.1**
JAYA				IAML			01 17 59.1	
	comp=Z,1μm,0.2s							
JAYA	**Jayaque - finc**	**0.59**	**18**	*i* P		**Pn**	**01 17 49.1**	**-0.4**
PANCS	**Alcalda de**	**0.69**	**41**	P		**Pn**	**01 17 50.0**	**-0.6**
PANCS				S		**Sn**	**01 17 59.8**	**-0.3**
PMON	**Piamonte**	**0.69**	**27**	P		**Pn**	**01 17 50.3**	**-0.5**
PMON	**Piamonte**	**0.69**	**27**	*eP*		**Pn**	**01 17 50.4**	**-0.5**
LOMA	**Loma Larga**	**0.72**	**39**	*eP*		**Pn**	**01 17 50.7**	**-0.3**
LOMA				IAML			01 18 03.6	
	comp=Z,2μm,0.2s							
BOQS	**Boqueron**	**0.73**	**28**	*eP*		**Pn**	**01 17 51.2**	**-0.2**
CEVE	**Cerro Verde**	**0.73**	**1**	P		**Pn**	**01 17 51.4**	**-0.1**
CEVE	**Cerro Verde**	**0.73**	**1**	*eP*		**Pn**	**01 17 51.4**	**-0.1**
UEES	**Universidad Ev**	**0.73**	**32**	P		**Pn**	**01 17 50.9**	**-0.4**
UEES				S		**Sn**	**01 18 01.5**	**+0.2**
UEES	**Universidad Ev**	**0.73**	**32**	*eP*		**Pn**	**01 17 50.9**	**-0.4**
UEES				IAML			01 18 02.6	
	comp=Z,2μm,0.2s							
UTEC	**Universidad Te**	**0.74**	**35**	P		**Pn**	**01 17 51.1**	**-0.2**
UTEC				S		**Sn**	**01 18 01.6**	**+0.2**
SBLS	**San Blas**	**0.75**	**1**	⇓*eP*		**Pn**	**01 17 51.4**	**-0.2**
CEDA	**San Andres**	**0.75**	**18**	P		**Pn**	**01 17 51.3**	**-0.1**
CEDA				S		**Sn**	**01 18 02.0**	**+0.4**
CEDA	**San Andres**	**0.75**	**18**	*eP*		**Pn**	**01 17 51.2**	**-0.3**
PIC2	**El Picacho**	**0.75**	**30**	*eP*		**Pn**	**01 17 51.4**	**-0.2**
IGN	**Direccin Gen**	**0.77**	**36**	P		**Pn**	**01 17 51.6**	**-0.2**
IGN				S		**Sn**	**01 18 02.5**	**+0.3**
SNJE	**San Jose**	**0.78**	**2**	⇓*iP*		**Pn**	**01 17 51.8**	**-0.2**
RTR	**El Retiro**	**0.80**	**360**	*eP*		**Pn**	**01 17 52.3**	**0.0**
NUBE	**Las Nubes**	**0.82**	**350**	P		**Pn**	**01 17 52.3**	**-0.2**
NUBE	**Las Nubes**	**0.82**	**350**	⇓*iP*		**Pn**	**01 17 52.3**	**-0.2**
NUBE				*eS*		**Sn**	**01 18 03.3**	**-0.3**
NUBE	**Las Nubes**	**0.82**	**350**	*i* P		**Pn**	**01 17 52.4**	**-0.2**
NUBE				*i* S		**Sn**	**01 18 03.2**	**-0.4**
QUEZ	**Alcaldia de Qu**	**0.82**	**26**	*eP*		**Pn**	**01 17 52.5**	**0.0**
LFU	**La Fuente**	**0.83**	**38**	*eP*		**Pn**	**01 17 52.5**	**-0.1**
FAME	**Alcaldia de Sa**	**0.83**	**334**	P		**Pn**	**01 17 52.3**	**-0.3**
FAME				S		**Sn**	**01 18 03.2**	**-0.5**
LBRS	**Las Brisas**	**0.87**	**42**	*eP*		**Pn**	**01 17 53.2**	**+0.1**
UNIC	**Universidad Ca**	**0.89**	**6**	P		**Pn**	**01 17 53.5**	**0.0**
COEG	**Centro de Oper**	**0.91**	**54**	⇓*iP*		**Pn**	**01 17 53.4**	**-0.3**
COEG				IAML			01 18 07.6	
	comp=Z,1μm,0.5s							
LOAL	**Lomas de Alarc**	**0.91**	**351**	P		**Pn**	**01 17 54.0**	**+0.2**
PAVA	**Las Pavas**	**0.92**	**48**	P		**Pn**	**01 17 54.1**	**+0.2**
PAVA	**Las Pavas**	**0.92**	**48**	⇓*iP*		**Pn**	**01 17 54.1**	**+0.2**
PAVA				*eS*		**Sn**	**01 18 06.5**	**+0.5**
SLOZ	**Alcaldia de Sa**	**0.94**	**351**	P		**Pn**	**01 17 54.3**	**+0.2**
TECO	**Alcaldia de Te**	**0.95**	**62**	P		**Pn**	**01 17 53.7**	**-0.5**
TECO				S		**Sn**	**01 18 06.2**	**-0.2**
RBDL	**Robledal**	**1.02**	**357**	*eP*		**Pn**	**01 17 55.4**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.07**	**55**	P		**Pn**	**01 17 56.0**	**+0.1**
SCLA				S		**Sn**	**01 18 10.2**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.07**	**55**	*eP*		**Pn**	**01 17 55.9**	**+0.1**
TECA	**Tecapa**	**1.18**	**70**	*eP*		**Pn**	**01 17 57.0**	**-0.5**
LLGN	**La Laguna**	**1.26**	**32**	P		**Pn**	**01 17 58.6**	**+0.1**
MTO3	**Montecristo**	**1.33**	**12**	P		**Pn**	**01 17 59.8**	**+0.2**
MTO3	**Montecristo**	**1.33**	**12**	*eP*		**Pn**	**01 17 59.7**	**+0.2**
MTO3	**Montecristo**	**1.33**	**12**	*i* P		**Pn**	**01 17 59.8**	**+0.2**
PACA	**Pacayal**	**1.33**	**73**	P		**Pn**	**01 17 59.8**	**+0.2**
PACA				S		**Sn**	**01 18 16.0**	**-0.1**
PACA	**Pacayal**	**1.33**	**73**	*eP*		**Pn**	**01 17 59.8**	**+0.2**
LCY	**Lacayo**	**1.35**	**76**	*eP*		**Pn**	**01 18 00.0**	**+0.3**
RANC	**El Ranchito**	**1.36**	**75**	P		**Pn**	**01 18 00.2**	**+0.3**
RANC	**El Ranchito**	**1.36**	**75**	*eP*		**Pn**	**01 17 59.9**	**0.0**
BLLM	**Bellamira**	**1.41**	**75**	*eP*		**Pn**	**01 18 00.8**	**+0.3**
LCND	**La Caada**	**1.72**	**82**	*eP*		**Pn**	**01 18 05.2**	**+0.6**
ESSG	**Sabana Grande**	**1.73**	**318**	*i* P		**Pn**	**01 18 05.2**	**+0.3**
CNCH	**Conchagua**	**1.77**	**84**	*eP*		**Pn**	**01 18 05.5**	**0.0**
SARH	**Santa Rosa de**	**1.88**	**27**	P		**Pn**	**01 18 08.0**	**+0.9**
SARH	**Santa Rosa de**	**1.88**	**27**	*i* P		**Pn**	**01 18 07.9**	**+0.9**
MARCA	**Marcala la Paz**	**1.89**	**56**	P		**Pn**	**01 18 07.3**	**+0.2**
MARCA	**Marcala la Paz**	**1.89**	**56**	*i* P		**Pn**	**01 18 07.1**	**0.0**
CSGN	**Cosiguina Volc**	**2.03**	**93**	P		**Pn**	**01 18 09.6**	**+0.6**
CSGN				S		**Sn**	**01 18 33.5**	**+0.3**
APG	**El Apazote**	**2.07**	**337**	*i* P		**Pn**	**01 18 10.5**	**+0.8**
HERN	**Volcan Telica**	**2.78**	**100**	P		**Pn**	**01 18 18.8**	**-0.6**
LIMN	**Finca el Limon**	**3.19**	**90**	P		**Pn**	**01 18 25.1**	**+0.1**
RCVN	**Varillal2**	**3.39**	**81**	P		**Pn**	**01 18 27.7**	**-0.2**

IDC 12 01:26:16.4±2.4, 5.76S×152.20E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=109.1km s-min=29.9km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.36**	**229**	P		P	01 31 16.4	0.0
	0.8nm,0.6s,baz=53,slow=9.7,SNR=7.8							
	0.8nm,0.6s							
ASAR	**Alice Springs**	**25.04**	**223**	P		P	01 31 42.5	-0.1
	0.4nm,0.5s,baz=58,slow=8.3,SNR=5.4							
	0.4nm,0.5s							
ILAR	**Eielson Array**	**83.27**	**22**	P		P	01 38 44.7	0.0
	0.4nm,0.7s,baz=230,slow=5.6,SNR=2.3							
	0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**84.18**	**322**	P		P	01 38 49.8	+0.2
	0.3nm,0.3s,baz=91,slow=5.5,SNR=1.7							
	0.3nm,0.3s							

*IDC **12** 01:28:11.8±0.7, 20°.37S×172°.59E, h0km, mb4.4/13, mbtmp4.4/14, ML4.9/2, MS3.6/26, Error ellipse: s-maj=24.1km s-min=17.1km az=153.0*
*NEIC **12** 01:28:14.2±1.8, 20°.6S±0°.1×172°.58E±0°.09, h10km±1km, mb4.9/21, Error ellipse: s-maj=21.2km s-min=12.1km az=149.0*
*BGR **12** 01:28:20.7, 19°.84S×171°.09E, h33km*
ISC 12 01:28:13.9±0.4, 20°.39S±0°.09×172°.49E±0°.08, h10km, n124, σ1s87/94, mb4.8/23, MS3.7/24, 3C-1D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.31**	**255**	Pn		**Pn**	**01 29 19.9**	**+0.5**
PINNC	**Pines Island,**	**5.19**	**244**			**Pn**	**01 29 32.2**	**+0.6**
DZM	**Mont Dzumac**	**5.88**	**252**	*e*LR		LR	01 31 08.0	
	1μm,25.3s							
DZM	**Mont Dzumac**	**5.88**	**252**	Pn		**Pn**	**01 29 43.5**	**+2.2**
	3.7nm,0.3s,baz=64,slow=19,SNR=11							
DZM				LR		LR	01 30 52.0	
	comp=Z,177nm,20.3s,baz=3.5,slow=27							
	14nm,0.4s							
DZM	**Mont Dzumac**	**5.88**	**252**	Pn		**Pn**	**01 29 42.7**	**+1.4**
MSVF	**Nonsavu**	**5.88**	**64**			**Pn**	**01 29 42.2**	**+0.9**
ONTNC	**Quen Toro**	**5.94**	**250**	Pn		**Pn**	**01 29 43.5**	**+1.5**
RAO	**Raoul Island**	**12.40**	**137**	Pn

comp=Z,18nm,18.9s,baz=335,slow=34
PETK Petropavlovsk- 74.30 351 P **P** **01 39 49.8 -1.4**
comp=Z,8.5nm,0.9s,baz=152,slow=9.4,SNR=4.7
comp=Z,8.5nm,0.9s
KLR Kul'dur 78.20 334 LR LR 02 10 45.5
comp=Z,8.3nm,21.7s,baz=4.0,slow=33
BELA Belgrano 2 80.68 174 P **P** **01 40 25.5 -1.2**
BELA IAmb IAmb 01 42 59.3
comp=Z,31nm,1.5s
MA2 Magadan 81.64 349 LR LR 02 10 46.5
comp=Z,48nm,20.6s,baz=169,slow=31
CMAR Chiang Mai Arr 81.76 293 P **P** **01 40 34.5 +1.1**
comp=Z,1.7nm,0.3s,baz=128,slow=4.4,SNR=14
CMAR LR LR 02 16 45.6
comp=Z,15nm,19.6s,baz=315,slow=36
comp=Z,1.7nm,0.3s
CMAR Chiang Mai Arr 81.76 293 P **P** **01 40 33.6 +0.1**
CHTO Chiang Mai 81.91 293 P **P** **01 40 34.2 0.0**
CHTO IAmb IAmb 01 40 36.0
comp=Z,5.2nm,0.8s
GAMB Gambell 84.79 7 P **P** **01 40 48.3 +0.4**
GAMB IAmb IAmb 01 40 49.8
comp=Z,13nm,1.1s
K15K Wolf Creek Mou 84.95 12 P **P** **01 40 49.2 +0.4**
ORV Oroville 85.69 45 **P** **01 40 53.2 +0.1**
ORV IAmb IAmb 01 40 54.6
comp=Z,8.5nm,1.2s
ISA Isabella, Lake 85.85 50 **P** **01 40 53.9 -0.2**
ISA IAmb IAmb 01 40 55.8
comp=Z,11nm,1.1s
CLC China Lake 86.56 50 P **P** **01 40 57.6 +0.1**
CLC IAmb IAmb 01 40 59.1
comp=Z,8.4nm,1.0s
LPIG La Paz 87.18 63 LR LR 02 09 55.0
comp=Z,58nm,20.4s,baz=0.0,slow=29
NVAR Mina Array Bea 87.30 47 P **P** **01 41 02.0 +0.7**
comp=Z,1.7nm,1.0s,baz=222,slow=8.3,SNR=8.4
comp=Z,1.7nm,1.0s
G16K Koyuk River 87.65 10 P **P** **01 41 02.1 +0.1**
SNAA Sanae 88.13 181 ⇑P **P** **01 41 03.6 -1.0**
comp=Z,152nm,1.0s
SNAA Sanae 88.13 181 P **P** **01 41 03.5 -1.0**
comp=Z,6.1nm,0.8s,baz=146,slow=3.7,SNR=6.8
comp=Z,6.1nm,0.8s
SNAA Sanae 88.13 181 P **P** **01 41 03.2 -1.4**
SNAA IAmb IAmb 01 41 04.3
comp=Z,7.7nm,0.9s
VNA3 Neumayer Olymp 88.60 179 ⇓P **P** **01 41 06.1 -0.7**
comp=Z,12nm,0.7s
VNA2 Neumayer--Watz 88.93 180 ⇑P **P** **01 41 07.4 -1.0**
comp=Z,12nm,0.8s,baz=167,slow=3.7
VNA1 Neumayer--Stat 89.21 180 ⇑P **P** **01 41 08.9 -0.7**
comp=Z,16nm,0.9s
SONM Songino Array 89.98 322 P **P** **01 41 12.5 -1.2**
comp=Z,0.7nm,0.7s,baz=142,slow=5.4,SNR=1.9
comp=Z,0.7nm,0.7s
M27K Edge Creek, AK 90.02 19 P **P** **01 41 13.1 -0.4**
ILAR Eielson Array 90.44 16 P P 01 41 13.6 -1.6
comp=Z,1.4nm,0.7s,baz=232,slow=4.9,SNR=18
comp=Z,1.4nm,0.7s
ILAR Eielson Array 90.44 16 P P 01 41 13.7 -1.5
BCAR Beaver Creek A 90.58 19 P **P** **01 41 15.2 -0.7**
PALK Pallekele 94.16 276 LR LR 02 26 28.0
comp=Z,35nm,18.3s,baz=106,slow=37
TXAR Lajitas Array 94.64 61 P **P** **01 41 35.6 -0.1**
comp=Z,0.5nm,0.7s,baz=218,slow=5.4,SNR=7.9
comp=Z,0.5nm,0.7s
TXAR Lajitas Array 94.64 61 P **P** **01 41 35.1 -0.5**
G30M tAoh Zraii Nji 95.03 18 P **P** **01 41 35.5 -0.9**
G30M IAmb IAmb 01 41 36.5
comp=Z,5.2nm,0.8s
PDAR Pinedale Array 95.17 46 P **P** **01 41 37.0 -0.9**
comp=Z,0.1nm,0.3s,baz=267,slow=5.9,SNR=6.1
comp=Z,0.1nm,0.3s
PLCA Paso Flores 95.63 137 LR LR 02 15 08.8
comp=Z,44nm,21.4s,baz=262,slow=30
BRTR Keskin Array B 139.93 308 PKP **PKPdf** **01 47 41.4 -1.5**
comp=Z,0.5nm,0.8s,baz=79,slow=6.4,SNR=3.7
OSTC Ostas 144.54 334 *e*PKP **PKPab** **01 47 51.9 +2.9**
MORC Moravsky Berou 144.55 332 *e*PKP **PKPab** **01 47 48.3 -0.8**
CHVC Chvalec 144.58 334 *e*PKP **PKPab** **01 47 50.6 +1.5**
DPC Dobruska-Polom 144.65 333 *e*PKP **PKPab** **01 47 49.8 +0.4**
DPC *ex* x 01 47 56.3
UPC Upice 144.66 334 *e*PKP **PKPab** **01 47 50.0 +0.6**
FLTG Flechtingen 144.94 340 *e*PKPbc **PKPab** **01 47 50.3 0.0**
baz=36,slow=3.0
EKA Eskdalemuir Ar 144.95 356 PKP **PKPab** **01 47 48.8 -1.5**
comp=Z,6.9nm,0.7s,baz=357,slow=2.6,SNR=11
CLL Collm 145.19 337 PKPbc **PKPbc** **01 47 50.9 -0.4**
CLL Collm 145.19 337 *i* P **PKPbc** **01 47 50.8 -0.4**
comp=Z,28nm,1.0s
CLL *i* x x 01 47 57.5
comp=Z,10.0nm,0.8s
CLL Collm 145.19 337 *e*PKPbc **PKPbc** **01 47 51.0 -0.2**
baz=36,slow=3.0
BRG Berggiesshubel 145.20 336 *e*PKPbc **PKPbc** **01 47 51.1 -0.1**
baz=36,slow=3.0
BRG Berggiesshubel 145.20 336 *e*P **PKPbc** **01 47 51.5 +0.3**
BRG Amp 01 47 52.3
comp=Z,23nm,0.8s
BRG Berggiesshubel 145.20 336 P **PKiKP** **01 47 58.0 +2.5**
BRG Amp 01 47 59.5
comp=Z,8.2nm,0.8s
PVCC Panska Ves 145.23 335 *e*PKP **PKPbc** **01 47 51.9 +0.5**
CLZ Clausthal 145.64 340 *e*PKPbc **PKPdf** **01 47 52.7 +0.3**
baz=36,slow=3.0
PRU Pruhonice 145.66 335 *e*PKP **PKPdf** **01 47 52.3 -0.2**
PRU *ex* x 01 47 58.5
TANN Tannenbergstha 146.12 337 *e*PKPbc **PKPdf** **01 47 54.2 +0.8**
baz=36,slow=3.0
PLN Plauen 146.18 337 *e*PKPbc **PKPdf** **01 47 54.5 +1.1**
baz=36,slow=3.0
ZVC Zvikov 146.23 334 *e*PKP **PKPdf** **01 47 54.5 +1.0**
RONA Rosalia, Austr 146.63 330 *e*PKP **PKPdf** **01 47 55.9 +1.6**
comp=Z,12nm,1.0s
CONA Conrad Observa 146.66 331 *e*PKP **PKPdf** **01 47 56.4 +2.0**
comp=Z,13nm,0.9s,SNR=8.6
CKRC Cesky Krumlov 146.67 333 *e*PKP **PKPdf** **01 47 56.0 +1.7**
CKRC *ex* x 01 48 02.4
ROTZ Rotzenmuhle 146.75 336 *e*PKPbc **PKPdf** **01 47 55.5 +1.1**
baz=36,slow=3.0
GEC2 GERESS Array S 146.90 334 PKPdf **PKPdf** **01 47 54.4 -0.3**
GEC2 GERESS Array S 146.90 334 *e*PKPbc **PKPdf** **01 47 56.1 +1.3**
baz=36,slow=3.0
GERES GERESS Array B 146.90 334 PKPbc **PKPdf** **01 47 56.0 +1.3**
comp=Z,4.4nm,0.7s,baz=31,slow=3.1,SNR=8.1
ARSA Arzberg 147.31 330 *e*PKP **PKPdf** **01 47 57.3 +1.9**
comp=Z,1.5nm,0.6s
MOA Molln 147.43 332 *e*PKP **PKPdf** **01 47 58.9 +3.3**
comp=Z,6.0nm,1.1s
BIOA Bad Ischl, Aus 147.82 333 *e*PKP **PKPdf** **01 47 58.6 +2.4**
comp=Z,6.9nm,1.5s
SOKA Soboth 147.96 330 *e*PKP **PKPdf** **01 47 59.1 +2.6**
comp=Z,7.8nm,1.1s
OBKA Obir 148.31 330 *e*PKP **PKPdf** **01 47 59.7 +2.5**
comp=Z,12nm,1.6s
KBA Koelnbreinsper 148.42 332 *e*PKP **PKPdf** **01 47 59.6 +2.2**
comp=Z,7.0nm,1.2s
LESA Schwarzleotal 148.44 333 *e*PKP **PKPdf** **01 48 00.5 +3.1**
comp=Z,8.1nm,0.8s
MYKA Terra Mystica 148.63 331 *e*PKP **PKPdf** **01 48 00.5 +2.8**
comp=Z,1.2nm,0.4s
WATA Walderalm 148.96 334 *e*PKP **PKPdf** **01 48 01.4 +3.1**
comp=Z,12nm,1.8s
WTTA Wattenberg 149.00 334 *e*PKP **PKPdf** **01 48 02.2 +3.8**
comp=Z,8.7nm,0.8s
ABTA Abfaltersbach 149.04 333 *e*PKP **PKPdf** **01 48 01.4 +3.0**
comp=Z,4.9nm,0.8s
MOTA Moosalm 149.15 335 *i* PKP **PKPdf** **01 48 02.2 +3.6**
comp=Z,5.5nm,0.7s,SNR=5.5
RETA Reutte 149.16 335 *e*PKP **PKPdf** **01 48 02.1 +3.6**
comp=Z,2.4nm,0.5s
SQTA Sankt Quirin 149.21 335 *i* PKP **PKPdf** **01 48 02.1 +3.5**
comp=Z,7.6nm,0.7s,SNR=6.7
FETA Feichten 149.56 335 *e*PKP **PKPdf** **01 48 03.8 +4.6**
comp=Z,1.1nm,1.0s
DAVA Damuels 149.67 336 *e*PKP **PKPdf** **01 48 03.9 +4.5**
comp=Z,6.7nm,0.9s
FUORN Ofenpass-Fuorn 150.07 335 PKPbc **PKPdf** **01 48 04.5 +4.3**
TUE Stuetta 150.55 336 PKPbc **PKPdf** **01 48 05.7 +4.8**
ESDC Sonseca Array 160.53 352 PKPab **PKPab** **01 48 55.0 -0.4**
comp=Z,0.8nm,0.9s,baz=350,slow=2.2,SNR=5.2

*BGSI **12** 02:16:04.8±1.4, 17°.54S×26°.74E, h0km±53km, ML2.5*
ISC 12 02:16:00.2±1.0, 17°.54S±0°.05×26°.93E±0°.06, h10km, n6, σ1§62/10, Zambia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSANE	**Kasane**	**1.71**	**261**	*i* P	**Pb**	**02 16 31.5**	**-0.3**
KSANE				*i* S	**Sn**	**02 16 51.7**	**-0.5**
KSANE				IAML		02 16 55.0	
	comp=N,326nm,0.3s						
LSZ	**Lusaka**	**2.55**	**28**	*i* P	**Pn**	**02 16 41.8**	**+0.1**
LSZ				*i* S	**Sb**	**02 17 17.4**	**-0.1**
BLWY	**Bulawayo**	**3.04**	**149**	*i* P	**Pn**	**02 16 49.5**	**+1.0**
BLWY				*i* S	**Sn**	**02 17 26.2**	**+1.1**
BROLN	**Tlhalogang**	**3.57**	**174**	*i* P	**Pb**	**02 17 00.6**	**-2.9**
BROLN				*i* S	**Sn**	**02 17 40.5**	**+2.5**
BROLN				IAML		02 17 48.7	
	comp=E,14nm,0.4s						
GRTLG	**Ghanzi**	**6.60**	**234**	*i* P	**Pn**	**02 17 37.6**	**+0.2**
GRTLG				IAML		02 19 35.6	
	comp=N,6.5nm,0.3s						
KGCAE	**Kacgae**	**6.91**	**219**	*i* P	**Pn**	**02 17 42.6**	**+1.0**

MEX 12 02:33:39.1±0.8, 16°.63N×94°.68W, h11km±41km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.50**	**337**	*i* P		02 33 46.7	-2.1
CMIG				*i* S		02 33 52.8	-2.6
UXUV	**UXUV**	**0.85**	**37**	*e*P		02 33 54.4	-1.2
UXUV				*e*S		02 34 06.2	-0.6
NEUV	**Arroyo Zacate**	**1.52**	**315**	*e*P		02 34 04.6	-1.7
NEUV				*e*S		02 34 23.9	-2.1
HUIG	**Huatulco**	**1.62**	**238**	*e*P		02 34 03.0	-4.7
HUIG				*e*S		02 34 26.5	-2.0

*SJA **12** 02:40:13.4±0.7, 29°.81S×71°.77W, h15km±2km, ML3.4, MW3.5*
*GUC **12** 02:40:16.8±0.8, 29°.81S×71°.63W, h35km±3km, ML3.4*
ISC 12 02:40:12.9±1.4, 29°.80S±0°.02×71°.70W±0°.05, h4km±10km, n34, σ1§73/60, 6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.42**	**107**	⇓*i* P	**Pn**	**02 40 25.0**	**-0.8**
CO05				*e*S	**Sb**	**02 40 30.7**	**+1.0**
GO04	**Tololo Observa**	**0.87**	**116**	⇓*i* P	**Pn**	**02 40 32.1**	**0.0**
GO04				*i* S	**Sb**	**02 40 42.7**	**-0.2**
GO04				IAML		02 40 47.1	
	comp=E,6μm,0.3s						
GO04	**Tololo Observa**	**0.87**	**116**	*e*P	**Pn**	**02 40 31.5**	**-0.7**
GO04				IAML		02 40 47.0	
	comp=Z,3μm,0.3s						
CO06	**Fray Jorge**	**0.88**	**176**	⇓*i* P	**Pn**	**02 40 32.3**	**+0.2**
CO06				*i* S	**Sn**	**02 40 44.0**	**-1.3**
CO06				IAML		02 40 46.4	
	comp=E,1μm,0.3s						
LCO	**Las Campanas**	**1.17**	**48**	⇓*i* P	**Pn**	**02 40 37.0**	**+0.7**
LCO				*i* S	**Sn**	**02 40 52.2**	**-0.8**
LCO	**Las Campanas**	**1.17**	**48**	*e*P	**Pg**	**02 40 31.5**	**-3.9**
LCO				*e*P	**Pn**	**02 40 37.0**	**+0.7**
LCO				*e*S	**Sn**	**02 40 54.5**	**+1.6**
LCO				IAML		02 40 55.3	
	comp=Z,3μm,0.5s						
CO03	**El Pedregal**	**1.36**	**140**	⇓*i* P	**Pg**	**02 40 39.5**	**+0.5**
CO03				*i* S	**Sb**	**02 40 56.4**	**-0.4**
CO03				IAML		02 40 59.6	
	comp=N,648nm,0.4s						
CO03	**El Pedregal**	**1.36**	**140**	*e*P	**Pg**	**02 40 39.5**	**+0.5**
CO03				*e*S	**Sg**	**02 40 56.9**	**+0.3**
CO03				IAML		02 41 02.0	
	comp=Z,333nm,0.5s						
CO01	**Juntas del Tor**	**1.41**	**98**	*e*P	**Pg**	**02 40 40.9**	**+1.0**
CO01				*e*S	**Sn**	**02 40 58.3**	**-0.5**
CO01				IAML		02 40 59.5	
	comp=N,875nm,0.7s						
CO01	**Juntas del Tor**	**1.41**	**98**	*e*P	**Pg**	**02 40 41.0**	**+1.0**
CO01				*e*S	**Sg**	**02 40 59.4**	**+1.2**
CO01				IAML		02 41 01.9	
	comp=Z,521nm,0.7s						
CO02	**Combarbal**	**1.53**	**157**	⇓*i* P	**Pg**	**02 40 42.6**	**+0.4**
CO02				*i* S	**Sg**	**02 41 02.0**	**-0.1**
CO02				IAML		02 41 05.3	
	comp=N,2μm,0.5s						
CO02	**Combarbal**	**1.53**	**157**	*e*P	**Pb**	**02 40 41.9**	**0.0**
CO02				IAML		02 41 05.2	
	comp=Z,646nm,0.4s						
AC05	**El Transito**	**1.57**	**53**	*e*P	**Pg**	**02 40 43.6**	**+0.6**
AC05				*e*S	**Sg**	**02 41 03.5**	**+0.1**
AC05				IAML		02 41 06.4	
	comp=E,611nm,0.4s						
AC05	**El Transito**	**1.57**	**53**	*e*P	**Pg**	**02 40 43.8**	**+0.8**
AC05				*e*S	**Sg**	**02 41 05.1**	**+1.8**
AC05				IAML		02 41 06.8	
	comp=Z,342nm,0.6s						
AC04	**Llanos de Chal**	**1.68**	**19**	*e*P	**Pb**	**02 40 44.1**	**-0.2**
AC04				*i* S	**Sn**	**02 41 04.8**	**-0.2**
AC04	**Llanos de Chal**	**1.68**	**19**	*e*P	**Pn**	**02 40 43.4**	**+0.3**
AC04				*e*S	**Sg**	**02 41 08.1**	**+1.3**
AC04				IAML		02 41 12.8	
	comp=Z,268nm,0.5s						
AROD	**Rodeo**	**1.97**	**101**	*e*P	**Pg**	**02 40 51.0**	**+0.4**
AROD				*e*S	**Sg**	**02 41 17.0**	**+0.8**
CO04	**Los Peladeros**	**2.33**	**165**	*e*P	**Pb**	**02 40 54.7**	**-0.9**
CO04				*e*S	**Sb**	**02 41 22.9**	**-1.9**
CO04				IAML		02 41 30.0	
	comp=N,416nm,0.4s						
ACCO	**Cerro Coronel**	**2.42**	**110**	*e*P	**Pg**	**02 40 58.3**	**-0.9**
ACCO				*e*S	**Sg**	**02 41 32.3**	**+1.8**
GO03	**Copiapo**	**2.54**	**31**	*e*P	**Pb**	**02 40 57.1**	**-2.0**
GO03				IAML		02 41 40.5	
	comp=N,168nm,0.4s						
GO03	**Copiapo**	**2.54**	**31**	*e*P	**Pb**	**02 40 57.2**	**-2.0**
GO03				*e*S	**Sb**	**02 41 30.1**	**-0.8**
GO03				IAML		02 41 47.2	
	comp=Z,135nm,0.7s						
RTLS	**Leoncito**	**2.88**	**135**	*e*P	**Pb**	**02 41 04.7**	**-0.3**
RTLS				*e*S	**Sb**	**02 41 39.2**	**-1.5**
RTLS				IAML		02 41 48.8	
	comp=Z,268nm,1.1s						
VA03	**San Esteban**	**3.12**	**162**	*e*P	**Pb**	**02 41 06.5**	**-2.6**
VA03				*e*S	**Sb**	**02 41 44.1**	**-3.3**
VA03				IAML		02 41 53.9	
	comp=Z,157nm,0.7s						
ZON	**Zonda**	**3.14**	**125**	*e*P	**Pb**	**02 41 06.2**	**-3.0**
ZON				*e*S	**Sb**	**02 41 49.7**	**+1.8**
ZON				IAML		02 41 57.6	
	comp=Z,54nm,0.7s						
RTLL	**Cerro Villicun**	**3.18**	**120**	*e*P	**Pn**	**02 41 05.1**	**+1.4**
RTLL				*e*S	**Sb**	**02 41 46.6**	**-2.5**
RTLL				IAML		02 41 58.6	
	comp=Z,77nm,0.4s						
VCA	**Vinchina**	**3.23**	**72**	*e*P	**Pn**	**02 41 06.3**	**+1.7**
VCA				*e*S	**Sn**	**02 41 46.8**	**+3.2**
VCA				IAML		02 42 02.8	
	comp=Z,194nm,0.6s						
PEL	**Peldehue**	**3.45**	**166**	*e*P	**Pb**	**02 41 15.3**	**+0.7**
PEL				*e*S	**Sb**	**02 41 56.5**	**-0.5**
PEL				IAML		02 42 04.6	
	comp=Z,82nm,0.5s						
MT02	**Curacav**	**3.49**	**172**	*e*P	**Pn**	**02 41 10.3**	**+2.3**
MT02				IAML		02 42 08.8	
	comp=Z,62nm,0.5s						
AC02	**Maricunga**	**3.72**	**38**	*e*P	**Pn**	**02 41 14.5**	**+2.9**
AC02				*e*S	**Sb**	**02 42 06.5**	**+1.3**
AC02				IAML		02 42 15.7	
	comp=Z,95nm,0.9s						
TINO	**Tinogasta**	**4.01**	**66**	*e*P	**Pb**	**02 41 19.9**	**-4.3**
MT01	**Popeta**	**4.08**	**175**	*e*P	**Pn**	**02 41 17.1**	**+1.1**
MT01				IAML		02 42 26.5	
	comp=Z,50nm,0.4s						
ACLC	**CERRO LA CRUZ**	**4.15**	**86**	*e*P	**Pn**	**02 41 21.1**	**+3.8**
ACLC				*e*S	**Sb**	**02 42 14.3**	**-3.1**
ACLC				IAML		02 42 29.0	
	comp=Z,35nm,0.4s						
BO01	**Tunca**	**4.61**	**174**	*e*P	**Pn**	**02 41 25.0**	**+1.6**
BO01				IAML		02 42 41.1	
	comp=Z,21nm,0.5s						
BO02	**Sierra Bellavi**	**5.04**	**171**	*e*P	Pn	02 41 34.6	+5.1
BO02				IAML		02 42 47.0	
	comp=Z,32nm,0.5s						

*ISK **12** 02:40:19.3, 34°.53N×27°.64E, h15km, ML3.4/19*
*AFAD **12** 02:40:24.5, 34°.98N×28°.03E, h7km, ML2.5*
*ATH **12** 02:40:32.5±0.7, 35°.45N×27°.62E, h10km, ML2.4/2, Manual Solution by A.Fokaefs First location: 2020/02/12 02:42:07, This location: 2020/02/12 06:41:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 6 km; Longitude uncertainty: 4 km*
ISC 12 02:40:27.5±1.2, 35°.10N±0°.06×27°.90E±0°.04, h10km, n37, σ1§59/43, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.75**	**307**	P	**Pg**	**02 40 40.7**	**-1.4**
KARP				S	**Sg**	**02 40 46.5**	**-5.4**
ARG	**Arkhangelos**	**1.13**	**9**	Pn	**Pn**	**02 40 49.7**	**+0.3**
ARG				Sn	**Sn**	**02 41 11.2**	**+6.2**
ARG	**Arkhangelos**	**1.13**	**9**	P	**Pb**	**02 40 48.5**	**-0.6**
ZKR	**Zakros**	**1.38**	**271**	P	**Pg**	**02 40 53.9**	**-0.1**
SIT2	**Siteia**	**1.47**	**275**	P	**Pg**	**02 40 56.0**	**+0.2**
DAT	**Datca**	**1.65**	**351**	Pn	**Pn**	**02 40 56.3**	**-0.3**
TURN	**Turunc**	**1.70**	**9**	Pn	**Pb**	**02 40 57.9**	**-0.9**
IZZE	**Mula-Seydike**	**1.72**	**38**	P	**Pn**	**02 40 57.5**	**+0.1**
IZZE				IAML		02 41 22.0	
	comp=E,37nm,0.6s						
IZZE				IAML		02 41 31.0	
	comp=N,50nm,0.5s						
AKAS	**Kas**	**1.79**	**50**	Pn	**Pn**	**02 40 58.5**	**-0.1**
DALY	**Dalyan (Mula)**	**1.82**	**19**	Pn	**Pb**	**02 40 59.8**	**-1.1**
NPS	**Neapolis**	**1.88**	**276**	P	**Pb**	**02 41 01.1**	**-0.8**
SABU	**Mula-Dalaman**	**1.93**	**26**	P	**Pn**	**02 41 01.1**	**+0.7**
SABU				IAML		02 41 46.0	
	comp=N,51nm,1.4s						
SABU				IAML		02 41 52.0	
	comp=E,41nm,1.4s						
BODT	**Bodrum**	**2.02**	**346**	Pn	**Pn**	**02 41 01.4**	**-0.2**
YER	**Yerkesik**	**2.06**	**9**	Pn	**Pn**	**02 41 03.0**	**+0.8**
MLSB	**Milas**	**2.19**	**357**	Pn	**Pn**	**02 41 04.4**	**+0.4**
MLSB				Sn	**Sg**	**02 41 37.4**	**-0.6**
ELL	**Elmali**	**2.32**	**44**	Pn	**Pn**	**02 41 06.3**	**+0.5**
CAEL	**Denizli, Camel**	**2.32**	**29**	P	**Pn**	**02 41 06.9**	**+1.0**
CAEL				S	**Sb**	**02 41 38.4**	**0.0**
CAEL				IAML		02 41 43.0	
	comp=N,66nm,1.1s						
CAEL				IAML		02 42 19.0	
	comp=E,82nm,1.1s						
THERA	**Ancient Thera,**	**2.34**	**303**	P	**Pn**	**02 41 06.6**	**+0.6**
DNZT	**Denizli-Tavas-**	**2.36**	**22**	P	**Pn**	**02 41 07.5**	**+1.2**
DNZT				S	**Sb**	**02 41 40.7**	**+1.3**
DNZT				IAML		02 41 57.0	
	comp=N,14nm,1.0s						
DNZT				IAML		02 42 09.0	
	comp=E,31nm,3.2s						
IDI	**Anoyia**	**2.47**	**275**	P	**Pn**	**02 41 09.7**	**+1.8**
TAVA	**DENIZLI_Tavas**	**2.50**	**19**	P	**Pn**	**02 41 09.2**	**+0.9**
TAVA				IAML		02 42 01.0	
	comp=N,30nm,2.8s						
TAVA				IAML		02 42 04.0	
	comp=E,22nm,0.7s						
GOLH	**Golhisar**	**2.52**	**32**	P	**Pn**	**02 41 10.4**	**+1.8**
GOLH				S	**Sb**	**02 41 43.3**	**-0.7**
GOLH				IAML		02 41 54.0	
	comp=N,40nm,0.9s						
GOLH				IAML		02 42 15.0	
	comp=E,29nm,1.3s						
APMY	**Acipayam-Deniz**	**2.62**	**25**	Pn	**Pn**	**02 41 11.0**	**+1.0**
DNIZ	**Denizli-Tavas-**	**2.68**	**20**	P	**Pn**	**02 41 12.0**	**+1.2**
DNIZ				IAML		02 42 19.0	
	comp=N,49nm,0.7s						
DNIZ				IAML		02 42 34.0	
	comp=E,32nm,1.3s						
SMG	**Samos**	**2.74**	**342**	P	**Pn**	**02 41 11.6**	**+0.1**
KORT	**Korkueli**	**2.75**	**46**	Pn	**Pn**	**02 41 12.1**	**+0.4**
APE	**Apeiranthos**	**2.75**	**316**	P	**Pn**	**02 41 11.8**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**2.84**	**360**	Pn	**Pn**	**02 41 13.8**	**+0.8**
VAM	**Vamos**	**3.04**	**277**	P	**Pn**	**02 41 17.6**	**+1.9**
IMMV	**Iera Moni Meta**	**3.23**	**278**	P	**Pn**	**02 41 19.9**	**+1.7**
URLA	**Izmir**	**3.42**	**343**	Pn	**Pn**	**02 41 20.7**	**-0.2**
GOMA	**Golmarmara-Man**	**3.60**	**0**	Pn	**Pn**	**02 41 24.6**	**+1.2**
SEYD	**Seydisehir-KON**	**3.93**	**53**	Pn	**Pn**	**02 41 28.7**	**+0.8**
HDMB	**Hadim**	**4.16**	**62**	Pn	**Pn**	**02 41 31.1**	**-0.1**
TEVE	**Tevekalti-Mers**	**4.70**	**72**	Pn	**Pn**	**02 41 37.8**	**-0.7**
IKL	**Isikli**	**4.84**	**75**	Pn	**Pn**	**02 41 39.5**	**-0.9**
KEBE	**Keben-Mersin**	**4.91**	**72**	Pn	**Pn**	**02 41 40.8**	**-0.6**

IDC 12 02:44:58.0±1.9, 3°.84N×127°.00E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=162.8km s-min=23.3km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.71**	**163**	P	P	02 50 20.3	-0.8
	1.1nm,0.4s,baz=343,slow=10,SNR=13						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**28.15**	**166**	P	P	02 50 53.1	+1.0
	0.2nm,0.4s,baz=340,slow=10,SNR=4.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**57.62**	**325**	P	P	02 54 48.9	-1.1
	0.2nm,0.5s,baz=119,slow=7.8,SNR=4.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**61.79**	**327**	P	P	02 55 19.7	+1.1
	0.2nm,0.5s,baz=133,slow=6.1,SNR=2.7						
	0.2nm,0.5s						

*ISK **12** 03:56:36.5, 34°.94N×27°.88E, h5km, ML2.7/14*
*AFAD **12** 03:56:36.2, 35°.08N×27°.77E, h5km±1km, ML2.5*
*ATH **12** 03:56:43.8, 35°.17N×27°.88E, h30km±5km, ML2.8/5, Manual Solution by I.Dede First location: 2020/02/12 03:58:16, This location: 2020/02/12 06:01:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 16 km; Longitude uncertainty: 8 km*
ISC 12 03:56:39.0±2.4, 35°.06N±0°.09×27°.92E±0°.06, h3km±14km, n27, σ1§12/35, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.79**	**308**	P	**Pg**	**03 56 53.8**	**-0.3**
ARG	**Arkhangelos**	**1.16**	**8**	Pn	**Pn**	**03 57 02.3**	**+0.1**
ARG	**Arkhangelos**	**1.16**	**8**	P	**Pn**	**03 57 02.5**	**+0.2**
ARG				S	**Sg**	**03 57 16.7**	**+0.3**
ZKR	**Zakros**	**1.40**	**273**	Pn	**Pn**	**03 57 03.9**	**-1.6**
ZKR	**Zakros**	**1.40**	**273**	P	**Pb**	**03 57 06.7**	**+0.9**
ZKR				S	**Sn**	**03 57 23.9**	**-0.6**
DAT	**Datca**	**1.69**	**351**	Pn	**Pn**	**03 57 09.9**	**+0.4**
DAT				Sn	**Sg**	**03 57 34.5**	**+1.3**
IZZE	**Mula-Seydike**	**1.73**	**37**	P	**Pn**	**03 57 09.5**	**-0.6**
IZZE				IAML		03 58 02.0	
	comp=N,59nm,1.4s						
IZZE				IAML		03 58 08.0	
	comp=E,36nm,1.2s						
DALY	**Dalyan (Mula)**	**1.85**	**19**	Pn	**Pn**	**03 57 12.6**	**+1.0**
NPS	**Neapolis**	**1.90**	**277**	P	**Pb**	**03 57 14.2**	**-0.2**
NPS				S	**Sn**	**03 57 35.2**	**-1.7**
SABU	**Mula-Dalaman**	**1.95**	**25**	P	**Pn**	**03 57 13.1**	**0.0**
SABU				IAML		03 57 56.0	
	comp=N,43nm,1.7s						
SABU				IAML		03 57 56.0	
	comp=E,50nm,3.0s						
BODT	**Bod

GOLH IAML 03 58 42.0
comp=N,54nm,2.3s
APMY Acipayam-Deniz 2.65 24 Pn **Pn** 03 57 23.8 +1.0
KORT Korkueli 2.76 45 P **Pn** 03 57 26.5 +2.2
KORT S **Sb** 03 58 03.0 -0.3
APE Apeiranthos 2.79 317 Pn **Pn** 03 57 25.2 +0.6
AYDB Zeytinkoy-Aydi 2.88 360 Pn **Pn** 03 57 27.0 +1.1
NAZL Nazilli-Aydin 2.91 6 Pn **Pn** 03 57 27.5 +1.2
SULTU Buldan 3.06 13 P **Pb** 03 57 32.3 -1.9
VAM Vamos 3.07 278 P **Pn** 03 57 30.1 +1.7

*TAP **12** 04:46:27.9,24˚.28N×122˚.14E,h40km,ML3.6,C*
*JMA **12** 04:46:28.1±0.2,24˚.2N±0˚.9×122˚.1E±0˚.5,h46km±2km, MV2.7/12,TAIWAN REGION*
ISC 12 04:46:29.1±0.9,**24˚27N**±0˚.02×**122˚12E**±0˚.02,**h29**km±5km, **n98**,σ0**s85**/153,**8C-3D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.18**	**35**	⇑*i*P			**Pb**	**04 46 34.4**	**-0.5**
EOS2				*i*S			**Sb**	**04 46 39.3**	**+0.5**
EOS3	**EOS3**	**0.19**	**84**	⇑*i*P			**Pb**	**04 46 34.5**	**-0.3**
EOS3				*i*S			**Sb**	**04 46 39.6**	**+0.7**
EOS4	**EOS4**	**0.24**	**128**	⇑*i*P			**Pb**	**04 46 34.7**	**-0.6**
EOS4				*e*S			**Sb**	**04 46 40.3**	**+0.8**
EAHA	**Aohua**	**0.35**	**280**	*e*P			**Pb**	**04 46 35.8**	**-1.3**
EWUT	**Wuta**	**0.35**	**300**	⇓P			**Pb**	**04 46 35.7**	**-1.5**
TWC	**Suao**	**0.42**	**324**	P			**Pb**	**04 46 36.6**	**-1.6**
ETL	**Fush Village**	**0.46**	**256**	*i*P			**Pb**	**04 46 38.5**	**-0.4**
ETL				*e*S			**Sb**	**04 46 46.0**	**+0.4**
NACB	**Ninganchiao**	**0.48**	**259**	P			**Pb**	**04 46 38.7**	**-0.5**
NACB	**Ninganchiao**	**0.48**	**259**	S			**Sb**	**04 46 47.1**	**+1.0**
NACB	**Ninganchiao**	**0.48**	**259**	⇑P			**Pb**	**04 46 38.4**	**-0.8**
NACB				S			**Sb**	**04 46 47.1**	**+1.0**
TWD	**Chiawan**	**0.51**	**248**	⇑P			**Pb**	**04 46 39.1**	**-0.5**
TWD				*e*S			**Sn**	**04 46 47.9**	**-0.2**
NDS	**Dongshan**	**0.51**	**315**	⇑P			**Pb**	**04 46 38.4**	**-1.3**
NDS				S			**Sb**	**04 46 46.2**	**-0.8**
HWA	**Hwalien**	**0.55**	**238**	*e*P			**Pb**	**04 46 40.8**	**+0.5**
HWA				S			**Sn**	**04 46 50.0**	**+0.9**
ETLH	**Xiulin Townshi**	**0.58**	**264**	P			**Pb**	**04 46 40.2**	**-0.7**
ETLH				*e*S			**Sb**	**04 46 49.6**	**+0.7**
EGS		**0.60**	**344**	⇓P			**Pb**	**04 46 40.0**	**-1.1**
EGS				*e*S			**Sb**	**04 46 47.9**	**-1.3**
LATG	**Datong**	**0.60**	**296**	P			**Pb**	**04 46 40.0**	**-1.1**
LATG				*e*S			**Sb**	**04 46 48.8**	**-0.6**
TWE	**Neicheng**	**0.61**	**318**	P			**Pb**	**04 46 40.0**	**-1.3**
TWE				S			**Sn**	**04 46 50.5**	**-0.1**
TEYL	**Yanliau Villag**	**0.62**	**230**	*e*P			**Pb**	**04 46 41.4**	**-0.1**
TEYL				*e*S			**Sb**	**04 46 50.7**	**+0.8**
ENTT	**Nioudou**	**0.62**	**307**	*i*P			**Pb**	**04 46 40.4**	**-1.2**
ENTT				*i*S			**Sb**	**04 46 48.9**	**-1.1**
ETM	**Tongmen**	**0.64**	**242**	*e*P			**Pb**	**04 46 41.7**	**-0.2**
ETM				*e*S			**Sb**	**04 46 51.0**	**+0.5**
FUSB	**Fushanzhiwuyua**	**0.69**	**316**	*e*P			**Pb**	**04 46 41.6**	**-1.0**
FUSB				*e*S			**Sb**	**04 46 52.1**	**+0.3**
LXIB	**Xiulin Townshi**	**0.69**	**249**	*i*P			**Pb**	**04 46 41.9**	**-0.8**
LXIB				S			**Sb**	**04 46 51.9**	**0.0**
NNSB	**Datong**	**0.69**	**284**	*i*P			**Pb**	**04 46 41.9**	**-0.7**
NNSB				*i*S			**Sn**	**04 46 52.8**	**+0.1**
SHUL	**Shoufeng**	**0.70**	**227**	*e*P			**Pb**	**04 46 42.1**	**-0.6**
NNS	**Nan Shan**	**0.70**	**284**	*i*P			**Pb**	**04 46 42.1**	**-0.8**
NNS				*i*S			**Sn**	**04 46 53.2**	**+0.2**
TWB1	**Santiao Chiao**	**0.74**	**351**	*i*P			**Pb**	**04 46 42.6**	**-1.0**
TWB1				*e*S			**Sb**	**04 46 52.4**	**-1.0**
TIPB	**Shuangxi**	**0.75**	**339**	*i*P			**Pb**	**04 46 42.6**	**-1.0**
TIPB				S			**Sb**	**04 46 52.4**	**-1.1**
NWLT	**Wulai**	**0.75**	**312**	*i*P			**Pb**	**04 46 43.0**	**-0.8**
NWLT				*e*S			**Sb**	**04 46 53.5**	**-0.2**
ESL	**Shilin**	**0.77**	**234**	P			**Pb**	**04 46 42.7**	**-1.3**
ESL				*e*S			**Sn**	**04 46 55.4**	**+0.7**
JYNG	**Yonagunijimaku**	**0.78**	**76**	*e*P			**Pb**	**04 46 43.6**	**-0.5**
JYNG				S			**Sb**	**04 46 54.2**	**-0.1**
YHNB	**Yeheng**	**0.78**	**301**	P			**Pb**	**04 46 43.7**	**-0.5**
YHNB	**Yeheng**	**0.78**	**301**	S			**Sn**	**04 46 55.9**	**+0.9**
YHNB	**Yeheng**	**0.78**	**301**	⇑P			**Pb**	**04 46 43.5**	**-0.8**
YHNB				*i*S			**Sn**	**04 46 55.6**	**+0.6**
WHF	**Hehuan Shan**	**0.79**	**261**	P			**Pb**	**04 46 43.4**	**-1.1**
WHF				S			**Sb**	**04 46 54.9**	**-0.1**
FUSS	**Fushou**	**0.80**	**269**	*e*P			**Pb**	**04 46 44.1**	**-0.5**
FUSS				*i*S			**Sb**	**04 46 55.4**	**+0.3**
NSK	**Sanguang**	**0.80**	**301**	*i*P			**Pb**	**04 46 43.8**	**-0.7**
NSK				S			**Sb**	**04 46 55.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.84**	**77**	P			**Pb**	**04 46 44.9**	**-0.2**
YOJ	**Yonaguni jima**	**0.84**	**77**	S			**Sb**	**04 46 56.3**	**+0.2**
YOJ	**Yonaguni jima**	**0.84**	**77**	P			**Pb**	**04 46 44.6**	**-0.6**
YOJ				*e*S			**Sb**	**04 46 56.3**	**+0.2**
YOJ	**Yonaguni jima**	**0.84**	**77**	*i*P			**Pb**	**04 46 44.7**	**-0.4**
YOJ				S			**Sb**	**04 46 56.3**	**+0.2**
SXI1	**Grass Mountain**	**0.85**	**345**	⇓P			**Pb**	**04 46 44.6**	**-0.8**
SXI1				S			**Sb**	**04 46 56.6**	**+0.1**
NWF	**Wu-fen Shan**	**0.85**	**339**	*i*P			**Pb**	**04 46 44.9**	**-0.6**
NWF				*i*S			**Sb**	**04 46 56.6**	**0.0**
WFSB	**Wu-fen Shan**	**0.85**	**339**	⇑P			**Pb**	**04 46 45.0**	**-0.4**
WFSB				*e*S			**Sn**	**04 46 57.2**	**+0.5**
TWT	**Tachien**	**0.86**	**269**	*i*P			**Pb**	**04 46 45.1**	**-0.1**
TWT				*i*S			**Sn**	**04 46 58.6**	**+1.6**
TWA	**Mucha**	**0.86**	**326**	*e*P			**Pb**	**04 46 45.4**	**-0.1**
TWA				*e*S			**Sn**	**04 46 57.4**	**+0.6**
WARBT	**Fenglin Townsh**	**0.86**	**231**	*e*P			**Pb**	**04 46 43.9**	**-1.6**
WARBT				*e*S			**Sb**	**04 46 57.1**	**+0.3**
EGFH	**Guangfu**	**0.87**	**227**	*e*P			**Pb**	**04 46 44.3**	**-1.3**
TDCB	**Techi**	**0.87**	**269**	*e*P			**Pb**	**04 46 45.2**	**-0.6**
TDCB				S			**Sn**	**04 46 57.7**	**+0.3**
TATO	**Taipei**	**0.91**	**321**	P			**Pb**	**04 46 46.3**	**+0.1**
OWD	**Renai**	**0.91**	**250**	P			**Pb**	**04 46 45.2**	**-1.2**
OWD				*e*S			**Sb**	**04 46 57.4**	**-1.0**
NHY	**Taipei**	**0.91**	**327**	*e*P			**Pb**	**04 46 46.0**	**-0.4**
TNOU	**National Taiwa**	**0.93**	**341**	*e*P			**Pb**	**04 46 45.8**	**-0.9**
TNOU				*e*S			**Sb**	**04 46 58.1**	**-0.5**
TAP	**Taipei**	**0.95**	**324**	*e*P			**Pn**	**04 46 47.3**	**+0.9**
TAP				*i*S			**Sn**	**04 47 00.8**	**+1.8**
WUSB	**Renai**	**0.95**	**253**	*i*P			**Pb**	**04 46 46.2**	**-0.9**
WUSB				S			**Sb**	**04 46 59.2**	**-0.2**
NFF	**Wufeng Townshi**	**0.98**	**292**	*i*P			**Pb**	**04 46 46.9**	**-0.6**
NFF				*e*S			**Sb**	**04 47 00.2**	**+0.2**
KSHI	**Guanxi Townshi**	**0.99**	**301**	P			**Pb**	**04 46 47.7**	**0.0**
KSHI				*e*S			**Sn**	**04 47 01.0**	**+0.9**
HGSD	**Ruisui**	**1.00**	**219**	*e*P			**Pn**	**04 46 46.9**	**-0.2**
YM01	**YM01**	**1.00**	**331**	*e*P			**Pn**	**04 46 47.9**	**+0.6**
VWDT	**VWDT**	**1.03**	**240**	*e*P			**Pn**	**04 46 47.3**	**-0.2**
ZUZH	**Zhuzihu**	**1.03**	**330**	*e*P			**Pn**	**04 46 47.8**	**+0.2**
YM08	**YM08**	**1.03**	**333**	*e*P			**Pn**	**04 46 47.8**	**+0.2**
YM08				*e*S			**Sb**	**04 47 01.1**	**-0.5**
TWS1	**Kuangyinshan**	**1.04**	**323**	*i*P			**Pn**	**04 46 48.1**	**+0.4**
TWS1				*e*S			**Sn**	**04 47 02.2**	**+0.8**
WHP	**Taichung City**	**1.07**	**271**	*i*P			**Pn**	**04 46 48.5**	**+0.4**
WHP				*i*S			**Sb**	**04 47 01.9**	**-0.7**
LIOB	**Emei**	**1.07**	**291**	*e*P			**Pn**	**04 46 48.7**	**+0.6**
NTST	**Danshui**	**1.08**	**326**	*e*P			**Pb**	**04 46 49.2**	**+0.1**
NCU	**National Centr**	**1.10**	**310**	*e*S			**Sn**	**04 47 03.8**	**+1.1**
NCUH	**Zhongli**	**1.10**	**310**	*e*P			**Pn**	**04 46 48.8**	**+0.3**
TWY	**Chenhua**	**1.11**	**335**	*e*P			**Pb**	**04 46 49.6**	**0.0**
WCS	**Beigang Elemen**	**1.12**	**259**	*e*P			**Pn**	**04 46 49.1**	**+0.3**
YULB	**Yu-li**	**1.15**	**221**	P			Pn	04 46 47.0	-2.2
SBCB	**Hsinchu**	**1.15**	**297**	*e*P			**Pb**	**04 46 50.2**	**-0.2**
SSLB	**Suanglung**	**1.17**	**246**	P			**Pn**	**04 46 49.7**	**+0.3**
SSLB	**Suanglung**	**1.17**	**246**	*e*P			**Pn**	**04 46 49.6**	**+0.2**
SMLT	**Sun Moon Lake**	**1.18**	**251**	*e*P			**Pn**	**04 46 49.4**	**-0.3**
TWF1	**Yuli**	**1.18**	**220**	*e*P			**Pn**	**04 46 48.0**	**-1.7**
TWF1				*e*S			**Sn**	**04 47 03.0**	**-1.7**
TWQ1	**Liyutan**	**1.23**	**274**	*e*P			**Pn**	**04 46 51.1**	**+0.8**
NMLH	**Miaoli**	**1.24**	**283**	P			**Pb**	**04 46 51.5**	**-0.4**
NMLH				*e*S			**Sb**	**04 47 08.7**	**+1.3**
CHKH	**Chenggong**	**1.26**	**212**	*e*P			**Pn**	**04 46 49.2**	**-1.4**
CHKH				*e*S			**Sn**	**04 47 03.8**	**-2.8**
WHYT	**Xinyi Township**	**1.29**	**244**	*e*P			**Pn**	**04 46 51.6**	**+0.4**
WHYT				*e*S			**Sn**	**04 47 08.0**	**+0.6**
YUS	**Yu-Shan**	**1.32**	**234**	*e*P			**Pn**	**04 46 51.8**	**-0.1**
PCYT	**Pengchaiyu**	**1.35**	**358**	*e*P			**Pn**	**04 46 51.6**	**-0.5**
WCHH	**Zhanghua**	**1.43**	**263**	*e*S			**Sb**	**04 47 13.9**	**+0.9**
CHN5	**Tsauling**	**1.48**	**243**	*e*P			**Pb**	**04 46 55.7**	**-0.3**
CHN5				*e*S			**Sb**	**04 47 14.0**	**-0.3**
IRIF	**Iriomote-Funau**	**1.48**	**87**	P			**Pn**	**04 46 53.5**	**-0.1**
IRIF				S			**Sn**	**04 47 11.9**	**0.0**
WCKO	**Fanlu**	**1.61**	**239**	*e*P			**Pn**	**04 46 56.2**	**+0.7**
WCKO				*e*S			**Sn**	**04 47 15.8**	**+0.5**
TPUB	**Ta-pu**	**1.67**	**235**	P			**Pn**	**04 46 57.8**	**+1.5**
TPUB	**Ta-pu**	**1.67**	**235**	*e*P			**Pn**	**04 46 57.9**	**+1.5**
WTP	**Ta-pu**	**1.71**	**234**	*e*P			**Pb**	**04 46 59.4**	**-0.5**
CHY	**Chiayi**	**1.73**	**244**	*e*S			**Sb**	**04 47 21.2**	**-0.3**
JKRS	**Kuro-shima**	**1.73**	**91**	*e*P			**Pn**	**04 46 57.6**	**+0.4**
JKRS				*e*S			**Sn**	**04 47 19.5**	**+1.2**
TWGBT	**Beinan**	**1.73**	**214**	*e*S			**Sn**	**04 47 17.8**	**-0.5**
TWG	**Pinlang**	**1.73**	**214**	*e*S			**Sn**	**04 47 16.8**	**-1.6**
SGST	**Jiashian**	**1.83**	**230**	*e*S			**Sb**	**04 47 24.1**	**-0.5**
WSF	**Szhu**	**1.84**	**250**	*e*S			**Sb**	**04 47 23.9**	**-0.8**
JIJ	**Ishigaki jima**	**1.85**	**87**	*e*S			**Sn**	**04 47 21.3**	**0.0**
WSL	**Shuilin Townsh**	**1.88**	**247**	*e*S			**Sb**	**04 47 26.1**	**+0.2**
JISG	**Ishigakijimahi**	**2.03**	**81**	*e*P			**Pn**	**04 47 01.2**	**0.0**
JISG				*e*S			**Sn**	**04 47 25.5**	**-0.1**
MASBT	**Mashibuluo**	**2.14**	**220**	*e*P			**Pn**	**04 47 04.9**	**+2.1**
MASBT				S			**Sn**	**04 47 31.1**	**+2.7**

*IDC **12** 04:48:37.9±0.9,17˚.95N×66˚.89W,h0km,mb3.8/9, mbtmp3.9/11,ML2.9/2,MS2.3/1,Error ellipse: s-maj=20.8km s-min=8.9km az=174.0*
*NEIC **12** 04:48:39.9±1.4,17˚.96N±0˚.03×66˚.834W±0˚.009, h10km±1km,mb4.5/4,ML3.9/33,ML3.7/7(RSPR), Mwr3.7/14(SLM),Error ellipse: s-maj=4.5km s-min=1.5km az=186.0*
*OSPL **12** 04:48:40.2±0.5,18˚.11N×66˚.88W,h16km±999km,ML3.6, Presumed earthquake*
*NEIC **12** 04:48:40,18˚.02N×66˚.86W,h15km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=3.00; Mθθ=3.00; Mϕϕ=0.00; Mrθ=-2.52; Mθϕ=2.49; Mϕr=1.16; Fault plane solution: M₀4.79000×10¹⁴ NP1:φ₁=90.00000°, δ65.00000°,λ-55.00000°. NP2:φ₂=211.00000°,δ42.00000°, λ-141.00000°. Principal axes: T 4.7851, Plg13.0000°, Azm155.0000°; N -0.0003, Plg31.0000°, Azm254.0000°; P -4.7849, Plg55.0000°, Azm46.0000°;*
*RSPR **12** 04:48:40.8,18˚.02N×66˚.86W,h10km,MD2.9/7*
*SDD **12** 04:48:40.4±2.3,17˚.98N×66˚.85W,h18km±16km,MD3.0, ML3.6,Presumed earthquake*
ISC 12 04:48:39.9±0.7,**17˚96N**±0˚.03×**66˚85W**±0˚.02,**h17**km±4km, **n76**,σ1**s18**/113,**mb4.0**/9,**12C-12D**,**Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.03**	**290**				**Pg**	**04 48 43.0**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.03**	**290**	⇑*i*P			**Pg**	**04 48 43.0**	**+0.1**
MLPR	**Magueyes Islan**	**0.19**	**272**	Pg			**Pg**	**04 48 44.3**	**-0.2**
MLPR				Sg			**Sg**	**04 48 47.2**	**-0.5**
MLPR				IAML				04 48 47.6	
	36μm,0.6s								
MLPR				IAML				04 48 47.8	
	28μm,0.6s								
OBIP	**Obispado Ponce**	**0.24**	**71**				**Pb**	**04 48 45.6**	**-0.2**
OBIP				Sg			**Sg**	**04 48 49.1**	**0.0**
OBIP	**Obispado Ponce**	**0.24**	**71**	⇓*i*P			**Pb**	**04 48 45.8**	**0.0**
OBIP				*e*S			**Sb**	**04 48 49.8**	**-0.1**
OBIP	**Obispado Ponce**	**0.24**	**71**	*i*P			**Pb**	**04 48 45.7**	**-0.2**
OBIP				*e*S			**Sb**	**04 48 49.7**	**-0.1**
OBIP				IAML				04 48 50.0	
	comp=Z,9μm,0.3s								
CRPR	**Cabo Rojo, PR**	**0.25**	**280**				**Pg**	**04 48 45.2**	**-0.3**
CRPR				Sg			**Sg**	**04 48 48.8**	**-0.6**
CRPR				IAML				04 48 49.1	
	comp=Z,30μm,0.6s								
CRPR				IAML				04 48 49.3	
	comp=Z,18μm,0.4s								
CRPR	**Cabo Rojo, PR**	**0.25**	**280**	⇑*e*Pg			**Pg**	**04 48 45.5**	**0.0**
CRPR				⇓*e*Sg			**Sg**	**04 48 48.9**	**-0.6**
CRPR				IAML				04 48 49.3	
	comp=N,18μm,0.1s								
CRPR	**Cabo Rojo, PR**	**0.25**	**280**	⇑*i*P			**Pg**	**04 48 45.5**	**0.0**
CRPR				*e*S			**Sg**	**04 48 48.8**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.25**	**280**	*i*P			**Pg**	**04 48 45.3**	**-0.2**
CRPR				*e*S			**Sg**	**04 48 48.8**	**-0.6**
CRPR				IAML				04 48 49.2	
	comp=Z,14μm,0.8s								
CELP	**Cerrillos**	**0.28**	**66**				**Pb**	**04 48 46.3**	**-0.2**
CELP				Sg			**Sg**	**04 48 50.4**	**+0.3**
CELP				IAML				04 48 51.2	
	comp=Z,16μm,0.2s								
CELP				IAML				04 48 51.2	
	comp=Z,17μm,0.4s								
LSP	**Las Mesas**	**0.31**	**313**				**Pg**	**04 48 46.1**	**-0.4**
LSP	**Las Mesas**	**0.31**	**313**	⇓*i*P			**Pg**	**04 48 46.1**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.31**	**23**	Pg			**Pg**	**04 48 46.2**	**-0.4**
UUPR				Sg			**Sg**	**04 48 50.3**	**-0.8**
PRSN	**Puerto Rico Se**	**0.38**	**312**				**Pg**	**04 48 47.1**	**-0.6**
PRSN				Sg			**Sg**	**04 48 51.9**	**-1.1**
PRSN				IAML				04 48 52.5	
	comp=Z,21μm,0.3s								
PRSN	**Puerto Rico Se**	**0.38**	**312**	⇑*e*Pg			**Pg**	**04 48 47.2**	**-0.5**
PRSN				⇓*e*Sg			**Sg**	**04 48 52.3**	**-0.7**
PRSN				IAML				04 48 53.0	
	comp=N,12μm,0.2s								
PRSN	**Puerto Rico Se**	**0.38**	**312**	⇓*i*P			**Pg**	**04 48 47.3**	**-0.4**
PRSN				*e*S			**Sg**	**04 48 52.5**	**-0.6**
AGPR	**Aguadilla, PR**	**0.56**	**333**				**Pg**	**04 48 50.0**	**-1.1**
AGPR				Sg			**Sg**	**04 48 57.3**	**-1.3**
AGPR				IAML				04 48 58.0	
	comp=N,5μm,0.7s								
AGPR	**Aguadilla, PR**	**0.56**	**333**	⇑*e*Pg			**Pg**	**04 48 50.2**	**-0.8**
AGPR				⇑*e*Sg			**Sg**	**04 48 56.9**	**-1.6**
AGPR				IAML				04 49 04.5	
	comp=N,4μm,0.7s								
AGPR	**Aguadilla, PR**	**0.56**	**333**	⇑*i*P			**Pg**	**04 48 50.2**	**-0.8**
AGPR				*e*S			**Sg**	**04 48 57.9**	**-0.7**
ECPR	**Experimental S**	**0.58**	**52**				**Pg**	**04 48 50.7**	**-0.7**
ECPR				Sg			**Sg**	**04 48 58.4**	**-0.7**
ECPR				IAML				04 49 00.5	
	comp=N,10μm,0.2s								
ECPR	**Experimental S**	**0.58**	**52**	⇓*e*P			**Pg**	**04 48 51.4**	**0.0**
ECPR				*e*S			**Sg**	**04 48 59.3**	**+0.1**
EMPR	**Esperanza - Ma**	**0.59**	**30**				**Pb**	**04 48 51.7**	**-0.1**
EMPR							**Sg**	**04 48 59.7**	**+0.1**
EMPR	**Esperanza - Ma**	**0.59**	**30**	⇓*e*P			**Pb**	**04 48 51.7**	**-0.1**
EMPR				*e*S			**Sg**	**04 48 59.7**	**+0.1**
SJG	**San Juan**	**0.68**	**77**	Pg			**Pg**	**04 48 52.7**	**-0.5**
	comp=N,118nm,0.3s,baz=269,slow=14,SNR=254								
SJG				Lg			Lg	04 49 01.6	
	comp=N,740nm,0.3s,baz=346,slow=18,SNR=40								
SJG	**San Juan**	**0.68**	**77**				**Pg**	**04 48 52.5**	**-0.7**
SJG				Sg			**Sg**	**04 49 01.8**	**-0.5**
SJG				IAML				04 49 03.0	
	comp=N,4μm,0.4s								
SJG	**San Juan**	**0.68**	**77**	*e*P			**Pg**	**04 48 52.4**	**-0.9**
SJG	**San Juan**	**0.68**	**77**	⇓*e*Pg			**Pg**	**04 48 52.7**	**-0.5**
SJG				⇑*e*Sg			**Sb**	**04 49 02.3**	**-0.1**
SJG	**San Juan**	**0.68**	**77**	⇑*i*P			**Pg**	**04 48 53.0**	**-0.3**
SJG				*e*S			**Sb**	**04 49 02.7**	**+0.2**
SJG	**San Juan**	**0.68**	**77**	*i*P			**Pg**	**04 48 52.8**	**-0.5**
SJG				*e*S			**Sg**	**04 49 01.6**	**-0.7**
SJG				IAML				04 49 03.5	
	comp=Z,2μm,0.2s								
IDE	**Isla Desecheo**	**0.73**	**305**				**Pg**	**04 48 53.4**	**-0.8**
IDE							**Sg**	**04 49 03.1**	**-0.8**
IDE	**Isla Desecheo**	**0.73**	**305**	⇓*i*P			**Pg**	**04 48 53.4**	**-0.8**
IDE				*e*S			**Sg**	**04 49 03.1**	**-0.8**
PDPR	**Patillas Dam,**	**0.79**	**86**				**Pb**	**04 48 54.5**	**-0.6**
PDPR				Sg			**Sb**	**04 49 05.4**	**-0.2**
PDPR				IAML				04 49 06.6	
	comp=Z,4μm,0.5s								
GCPR	**Guaynabo City**	**0.80**	**65**				**Pb**	**04 48 54.6**	**-0.9**
GCPR							**Sb**	**04 49 04.8**	**-1.3**
GCPR	**Guaynabo City**	**0.80**	**65**	⇓*i*P			**Pb**	**04 48 54.9**	**-0.6**
GCPR				*e*S			**Sb**	**04 49 05.1**	**-0.9**
HUMP	**Col San Antoni**	**0.96**	**79**				**Sb**	**04 49 09.6**	**-1.1**
HUMP	**Col San Antoni**	**0.96**	**79**				**Pb**	**04 48 57.2**	**-1.0**
HUMP	**Col San Antoni**	**0.96**	**79**	⇓*i*P			**Pb**	**04 48 57.4**	**-0.8**
HUMP				*e*S			**Sb**	**04 49 09.6**	**-1.1**
CUPR	**Culebra, Puert**	**1.53**	**77**				**Pn**	**04 49 06.9**	**+0.5**
HIDR	**Higuey Centro**	**1.88**	**290**	⇑*e*Pg			**Pn**	**04 49 11.5**	**+0.1**
HIDR				⇑*e*Sg			**Sb**	**04 49 37.5**	**+0.3**
HIDR				IAML				04 49 41.9	
	comp=N,430nm,0.7s								
HIDR	**Higuey Centro**	**1.88**	**290**	⇑*e*P			**Pn**	**04 49 11.8**	**+0.4**
HIDR				*e*S			**Sn**	**04 49 35.3**	**+0.5**
MIDR	**Miches**	**2.32**	**296**	⇑*e*Pg			**Pb**	**04 49 20.1**	**-1.3**
MIDR				⇓*e*Sg			**Sb**	**04 49 51.2**	**+1.4**
MIDR				IAML				04 49 54.8	
	comp=N,284nm,1.4s								
DR12	**Loma Pena Alta**	**2.54**	**289**				**Pn**	**04 49 21.4**	**+0.9**
HATOM	**Hato Mayor del**	**2.54**	**289**	⇑*e*Pg			**Pn**	**04 49 22.3**	**+1.8**
HATOM				⇑*e*Sg			**Sb**	**04 49 55.5**	**-0.7**
HATOM				IAML				04 50 40.1	
	comp=N,192nm,0.7s								
SMDR	**Samana, DR**	**2.58**	**301**				**Pn**	**04 49 19.0**	**-2.0**
SMDR	**Samana, DR**	**2.58**	**301**	⇑*e*P			**Pn**	**04 49 19.0**	**-2.0**
SDD	**Santo Domingo**	**2.96**	**280**	Pn			**Pn**	**04 49 27.1**	**+1.0**
SMRT	**St. Maarten**	**3.59**	**88**				**Pn**	**04 49 35.1**	**+0.3**
SDDR	**Presa de Saban**	**4.33**	**284**				**Pn**	**04 49 49.4**	**+4.2**
SDDR	**Presa de Saban**	**4.33**	**284**	*e*P			**Pb**	**04 49 52.4**	**-3.3**
MBFL	**Flemmings, Mon**	**4.59**	**105**	*e*P			**Pn**	**04 49 49.1**	**+0.5**
MLYT	**Lee's Yard**	**4.62**	**105**	*e*P			**Pn**	**04 49 50.0**	**+1.0**
MLYT				x			**Sn**	**04 50 38.9**	**-3.4**
ANWB	**Willy Bob**	**4.83**	**93**	*e*P			**Pn**	**04 49 54.3**	**+2.4**
ATGZ	**Broadband at L**	**5.24**	**110**	*e*P			**Pn**	**04 49 58.6**	**+1.1**
ATGZ				x			**Sn**	**04 50 53.5**	**-4.1**
MMLZ	**Guadeloupe Bro**	**5.31**	**110**	*e*P			**Pn**	**04 49 59.0**	**+0.5**
MMLZ				x			**Sn**	**04 50 55.7**	**-3.6**
DSLB	**Salisbury**	**5.77**	**115**	*e*P			**Pn**	**04 50 05.5**	**+0.5**
DSLB				x			**Sn**	**04 51 07.1**	**-3.7**
SDV	**Santo Domingo**	**9.74**	**203**	Pn			**Pn**	**04 50 59.3**	**-0.3**
	comp=N,2.1nm,0.3s,baz=28,slow=7.2,SNR=8.8								
	comp=N,5.2nm,0.4s								
SDV	**Santo Domingo**	**9.74**	**203**				**Pn**	**04 51 00.1**	**+0.5**
ROSC	**El Rosal**	**14.95**	**210**	Pn			**Pn**	**04 52 10.9**	**-0.1**
	comp=N,0.7nm,0.3s,baz=108,slow=22,SNR=1.6								
	comp=N,2.4nm,0.3s								
APG	**El Apazote**	**22.83**	**266**	LR			LR	05 02 52.2	
	comp=N,7.7nm,21.9s,baz=48,slow=38								
TXAR	**Lajitas Array**	**35.44**	**296**	P			**P**	**04 55 36.1**	**+0.5**
	comp=N,0.6nm,0.6s,baz=100,slow=8.7,SNR=8.4								
	comp=N,0.6nm,0.6s								
TXAR	**Lajitas Array**	**35.44**	**296**	P			**P**	**04 55 35.3**	**-0.2**
TX31	**Lajitas Ar. Si**	**35.44**	**296**	P			**P**	**04 55 35.1**	**-0.5**
SCHQ	**Schefferville**	**36.80**	**0**	P			**P**	**04 55 47.9**	**+1.1**
	comp=N,1.3nm,0.5s,ba

AGPR				Sg		Sb	04 49 59.7	-1.6
AGPR	**Aguadilla, PR**	**0.58**	**335**	P		Pb	**04 49 52.6**	**-1.0**
AGPR	**Aguadilla, PR**	**0.58**	**335**⇑	*e*Pg		Pb	**04 49 52.4**	**-1.2**
AGPR				⇑*e*Sg		Sb	**04 50 00.8**	**-0.5**
AGPR				IAML			04 50 08.5	
	comp=N,6µm,0.8s							
AGPR	**Aguadilla, PR**	**0.58**	**335**⇑	*i*P		Pb	**04 49 52.3**	**-1.2**
AGPR				*e*S		Sb	**04 50 00.8**	**-0.5**
ECPR	**Experimental S**	**0.60**	**51**	Pg		Pb	**04 49 53.0**	**-0.9**
ECPR				IAML			04 50 02.6	
	comp=N,16µm,0.3s							
ECPR				IAML			04 50 04.7	
	comp=N,21µm,0.2s							
ECPR	**Experimental S**	**0.60**	**51**⇑	*i*P		Pb	**04 49 53.3**	**-0.6**
ECPR				*e*S		Sb	**04 50 01.1**	**-0.8**
EMPR	**Esperanza - Ma**	**0.61**	**30**			Pb	**04 49 54.0**	**-0.2**
EMPR						Sg	**04 50 02.6**	**0.0**
EMPR	**Esperanza - Ma**	**0.61**	**30**⇑	*i*P		Pb	**04 49 54.0**	**-0.2**
EMPR				*e*S		Sg	**04 50 02.6**	**0.0**
SJG	**San Juan**	**0.69**	**76**	Pg		Pb	**04 49 54.9**	**-0.6**
	comp=N,353nm,0.3s,baz=115,slow=20,SNR=10							
SJG				Lg		Lg	04 50 04.9	
	comp=N,982nm,0.3s,baz=323,slow=12,SNR=14							
SJG	**San Juan**	**0.69**	**76**	Sg		Sb	**04 50 03.8**	**-0.8**
SJG				IAML			04 50 06.3	
	comp=N,6µm,0.3s							
SJG				IAML			04 50 08.1	
	comp=N,5µm,0.5s							
SJG	**San Juan**	**0.69**	**76**	P		Pb	**04 49 55.1**	**-0.5**
SJG	**San Juan**	**0.69**	**76**⇓	*e*P		Pb	**04 49 55.0**	**-0.5**
SJG				*e*S		Sb	**04 50 04.3**	**-0.3**
SJG	**San Juan**	**0.69**	**76**	*i* P		Pb	**04 49 55.1**	**-0.5**
SJG				*e*S		Sb	**04 50 04.3**	**-0.3**
SJG				IAML			04 50 06.8	
	comp=Z,3µm,0.2s							
IDE	**Isla Desecheo**	**0.74**	**307**			Pb	**04 49 55.2**	**-1.1**
IDE						Sb	**04 50 05.5**	**-0.6**
IDE	**Isla Desecheo**	**0.74**	**307**⇑	*i*P		Pb	**04 49 55.2**	**-1.1**
IDE				*e*S		Sb	**04 50 05.5**	**-0.6**
PDPR	**Patillas Dam,**	**0.79**	**85**	Pg		Pb	**04 49 56.8**	**-0.5**
PDPR				Sg		Sb	**04 50 07.4**	**-0.3**
PDPR				IAML			04 50 09.0	
	comp=Z,6µm,0.5s							
GCPR	**Guaynabo City**	**0.82**	**63**	Pg		Pb	**04 49 56.9**	**-0.8**
GCPR				Sg		Sb	**04 50 06.8**	**-1.6**
GCPR	**Guaynabo City**	**0.82**	**63**	P		Pb	**04 49 57.3**	**-0.4**
GCPR	**Guaynabo City**	**0.82**	**63**⇑	*i*P		Pb	**04 49 56.7**	**-1.0**
GCPR				*e*S		Sb	**04 50 07.6**	**-0.7**
HUMP	**Col San Antoni**	**0.97**	**78**			Pb	**04 49 59.4**	**-1.0**
HUMP				Sg		Sb	**04 50 12.9**	**0.0**
HUMP	**Col San Antoni**	**0.97**	**78**	P		Pb	**04 49 59.3**	**-1.0**
HUMP	**Col San Antoni**	**0.97**	**78**⇓	*i*P		Pb	**04 49 59.5**	**-1.0**
HUMP				*e*S		Sb	**04 50 12.8**	**-0.1**
CUPR	**Culebra, Puert**	**1.54**	**76**	Pn		Pb	**04 50 09.7**	**-0.3**
CUPR				Sn		Sb	**04 50 29.3**	**+0.2**
HIDR	**Higuey Centro**	**1.89**	**290**⇑	*e*Pg		Pg	**04 50 17.3**	**-1.1**
HIDR				⇓*e*Sg		Sb	**04 50 38.8**	**-0.3**
HIDR				IAML			04 50 51.5	
	comp=N,612nm,0.6s							
HIDR	**Higuey Centro**	**1.89**	**290**⇑	*e*P		Pn	**04 50 14.3**	**+0.9**
MIDR	**Miches**	**2.33**	**297**⇓	*e*Pg		Pb	**04 50 24.1**	**+0.6**
MIDR				⇑*e*Sg		Sb	**04 50 50.8**	**-1.1**
MIDR				IAML			04 51 04.5	
	comp=N,280nm,0.5s							
HATOM	**Hato Mayor del**	**2.54**	**290**⇓	*e*Pg		Pb	**04 50 27.2**	**-0.1**
HATOM				⇑*e*Sg		Sb	**04 50 56.3**	**-1.9**
HATOM				IAML			04 51 10.0	
	comp=N,322nm,1.0s							
SMDR	**Samana, DR**	**2.59**	**302**			Pb	**04 50 29.9**	**+1.9**
SMDR						Sb	**04 50 59.1**	**-0.3**
SABA	**Saba**	**3.45**	**95**			Pn	**04 50 36.3**	**+1.4**
SMRT	**St. Maarten**	**3.60**	**88**	Pn		Pn	**04 50 37.2**	**+0.3**
SC01	**Santiago de lo**	**3.96**	**292**	Pn		Pn	**04 50 41.6**	**-0.3**
SDDR	**Presa de Saban**	**4.33**	**284**	Pn		Pn	**04 50 51.0**	**+3.9**
DHSZ	**Broadband at M**	**5.14**	**108**	x		Pn	04 50 52.8	-5.3
GDHS	**Morne Mazeau,**	**5.14**	**108**	Pn		Pn	04 50 51.9	-6.3
ABD	**La Joyeuse, An**	**5.33**	**105**	Pn		Pn	**04 50 58.7**	**-2.0**
ABD				IAML			04 51 59.5	
	comp=N,283nm,2.2s							
ABD				IAML			04 52 05.9	
	comp=E,289nm,2.5s							
CBE	**Ff, Capester**	**5.35**	**110**	Pn		Pn	**04 51 02.3**	**+1.2**
TBG	**Guadaloupe-3**	**5.40**	**112**	x		Pn	**04 51 03.1**	**+1.4**
MAGL	**Barre de l'ile**	**5.69**	**110**	Pn		Pn	**04 51 06.7**	**+1.0**
DSDZ	**La Diserade, G**	**5.76**	**105**	x		Pn	**04 51 06.2**	**-0.5**
GDSD	**La Dsirade Is**	**5.76**	**105**	Pn		Pn	**04 51 07.2**	**+0.5**
H05N1	**Guadeloupe/Mar**	**5.77**	**105**	Pn		Pn	**04 51 06.6**	**-0.3**
H05N1				Sn		Sn	**04 52 07.5**	**-5.1**
BIM	**Bigot**	**6.51**	**121**	Pn		Pn	**04 51 17.1**	**+0.1**
H05S1	**Guadeloupe/Mar**	**6.75**	**120**	Pn		Pn	**04 51 21.2**	**+0.9**
H05S1				Sn		Sn	**04 52 31.4**	**-5.4**
SLBI	**Saint Lucia, B**	**6.87**	**124**	x		Pn	**04 51 24.8**	**+2.9**
SDV	**Santo Domingo**	**9.72**	**203**	Pn		Pn	**04 52 02.5**	**+1.2**
	comp=E,2.4nm,0.3s,baz=48,slow=10.0,SNR=5.1							
SDV				Sn		Sn	**04 53 42.5**	**-7.7**
	comp=E,0.9nm,0.3s,baz=34,slow=10,SNR=2.1							
	comp=E,6.8nm,0.4s							
SDV	**Santo Domingo**	**9.72**	**203**	Pn		Pn	**04 52 02.3**	**+1.0**
ROSC	**El Rosal**	**14.93**	**210**	Pn		Pn	**04 53 14.3**	**+1.6**
	comp=E,1.4nm,0.3s,baz=32,slow=19,SNR=2.0							
	comp=E,4.2nm,0.4s							
ROSC	**El Rosal**	**14.93**	**210**			Pn	**04 53 14.0**	**+1.3**
MDP	**Montagnes des**	**18.87**	**131**	LR		LR	05 02 02.9	
	comp=E,46nm,18.7s,baz=295,slow=39							
TKL	**Tuckaleechee C**	**23.16**	**323**	LR		LR	05 03 31.1	
	comp=E,60nm,21.2s,baz=66,slow=36							
TXAR	**Lajitas Array**	**35.44**	**296**	P		P	**04 56 39.0**	**+1.5**
	comp=E,1.0nm,0.7s,baz=110,slow=9.8,SNR=8.6							
	comp=E,1.0nm,0.7s							
TXAR	**Lajitas Array**	**35.44**	**296**	P		P	**04 56 37.1**	**-0.4**
SCHQ	**Schefferville**	**36.82**	**0**	P		P	**04 56 49.3**	**+0.5**
	comp=E,2.5nm,0.7s,baz=173,slow=7.1,SNR=6.7							
	comp=E,2.5nm,0.7s							
ULM	**Lac du Bonnet**	**39.72**	**331**	P		P	**04 57 14.2**	**+0.9**
	comp=E,2.5nm,0.8s,baz=76,slow=8.3,SNR=2.9							
	comp=E,2.5nm,0.8s							
ULM	**Lac du Bonnet**	**39.72**	**331**	P		P	**04 57 14.0**	**+0.7**
PDAR	**Pinedale Array**	**43.75**	**314**	P		P	**04 57 48.7**	**+2.0**
	comp=E,0.6nm,0.8s,baz=142,slow=7.2,SNR=4.6							
PDAR				PcP		PcP	**04 59 33.6**	**+0.2**
	comp=E,0.4nm,0.5s,baz=107,slow=3.2,SNR=6.1							
	comp=E,0.6nm,0.8s							
PDAR	**Pinedale Array**	**43.75**	**314**	P		P	**04 57 47.7**	**+0.9**
PDAR						PcP	**04 59 33.2**	**-0.2**
CPUP	**Villa Florida**	**44.97**	**168**	P		P	**04 57 56.0**	**-0.3**
	comp=E,3.2nm,0.8s,baz=345,slow=9.0,SNR=7.0							
	comp=E,3.2nm,0.8s							
CPUP	**Villa Florida**	**44.97**	**168**			P	**04 57 56.0**	**-0.3**
CPUP				IAmb		IAmb	04 58 00.4	
	comp=Z,3.8nm,0.8s							
NVAR	**Mina Array Bea**	**49.04**	**306**	P		P	**04 58 29.4**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=103,slow=6.4,SNR=3.8							
	comp=Z,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**55.36**	**335**	P		P	**04 59 15.0**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=111,slow=6.6,SNR=9.0							
	comp=Z,1.1nm,0.8s							
YKA	**Yellowknife Ar**	**55.36**	**335**	P		P	**04 59 14.6**	**0.0**
ESDC	**Sonseca Array**	**58.03**	**54**	P		P	**04 59 34.7**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=258,slow=5.7,SNR=5.0							
	comp=Z,1.8nm,0.8s							
DBIC	**Dimbokro**	**61.36**	**92**	P		P	**04 59 58.0**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=307,slow=5.8,SNR=2.7							
	comp=Z,1.9nm,0.6s							
DBIC	**Dimbokro**	**61.36**	**92**	P		P	**04 59 58.2**	**+0.9**
DBIC				IAmb		IAmb	05 00 10.3	
	comp=Z,4.3nm,1.1s							
L29M	**L29M**	**65.69**	**332**	P		P	**05 00 25.6**	**+0.4**
L29M				IAmb		IAmb	05 00 37.5	
	comp=Z,2.6nm,1.2s							
ILAR	**Eielson Array**	**69.68**	**333**	P		P	**05 00 50.9**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=99,slow=4.2,SNR=4.3							
	comp=Z,0.3nm,0.5s							
BRTR	**Keskin Array B**	**86.49**	**49**	P		P	**05 02 26.2**	**+2.1**
	comp=Z,2.7nm,1.2s,baz=350,slow=5.9,SNR=3.7							
	comp=Z,2.7nm,1.2s							
BRTR	**Keskin Array B**	**86.49**	**49**	P		P	**05 02 25.8**	**+1.6**
GNI	**Garni**	**94.12**	**46**	LR		LR	05 49 03.1	
	comp=Z,20nm,18.2s,baz=315,slow=38							
SUR	**Sutherland**	**97.49**	**121**	P		P	**05 03 14.5**	**-1.0**

KRSC 12 04:54:02.1±0.6, 55°42N×162°71E, h31km±18km, MI3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.79**	**4**	*e*P		Pn	04 54 16.9	-0.3
KBTR				*e*S		Sn	04 54 28.7	+0.7
KBG	**Krutoberegovo**	**0.84**	**360**	*e*P		Pb	04 54 18.2	0.0
KBG				*e*S		Sb	04 54 30.7	+1.6
MKZ	**Mys Kozlova**	**1.03**	**214**	*e*P		Pn	04 54 20.7	+0.3
TUMD	**Tumrok D**	**1.34**	**262**	*e*P		Pb	04 54 26.7	+0.1
TUMD				*e*S		Sb	04 54 43.4	0.0
SMKR	**Semkarok**	**1.36**	**330**	*e*P		Pn	04 54 25.2	+0.2
SMKR				*e*S		Sn	04 54 42.6	+0.6
KMNR	**Kamenistaya**	**1.44**	**285**	*e*P		Pb	04 54 28.8	+0.3
KMNR				*e*S		Sb	04 54 46.5	0.0
KOZ	**Kozyrevsk**	**1.73**	**293**	*e*P		Pb	04 54 32.5	-0.7
BKI	**Bering**	**1.88**	**95**	*e*P		Pb	04 54 34.2	-1.5
BKI				*e*S		Sb	04 54 57.6	-1.1
SRDR	**Sredinnyy**	**1.91**	**299**	*e*P		Pb	04 54 34.9	-1.5
SRDR				*e*S		Sb	04 54 58.2	-1.6
ESO	**Esso**	**2.33**	**284**	*e*P		Pn	04 54 40.6	+2.3
KII	**Karymskiy**	**2.34**	**235**	*e*P		Pb	04 54 41.9	-1.9
SPN	**Mys Shipunski**	**2.81**	**215**	*e*P		Pn	04 54 46.4	+1.5
SPN				*e*S		Sn	04 55 20.3	+2.6
SDLR	**Sedlovina**	**3.10**	**228**	*e*P		Pn	04 54 52.4	+3.4
KRER	**Koryakskii**	**3.14**	**229**	*e*P		Pn	04 54 53.4	+3.8
KRX	**Arik**	**3.15**	**231**	*e*P		Pn	04 54 53.1	+3.5
SMAR	**Somma**	**3.15**	**228**	*e*P		Pn	04 54 52.5	+2.8
AVH	**Avacha**	**3.17**	**229**	*e*P		Pn	04 54 53.6	+3.7
UGLR	**Uglovaya**	**3.18**	**227**	*e*P		Pn	04 54 53.7	+3.7
KOK	**Koryaka**	**3.20**	**230**	*e*P		Pn	04 54 53.4	+3.1
GNL	**Ganaly**	**3.27**	**240**	*e*P		Pn	04 54 55.0	+3.7
DALK	**Dalny**	**3.33**	**226**	*e*P		Pn	04 54 55.3	+3.2
PET	**Petropavlovsk**	**3.38**	**226**	*e*P		Pb	04 54 57.0	-4.3
KRMR	**Karymshinskiy**	**3.74**	**228**	*e*P		Pn	04 55 01.7	+4.0
GRL	**Gorelyy**	**3.97**	**226**	*e*P		Pb	04 55 06.8	-4.6
MTVR	**Mutnovka**	**3.98**	**224**	*e*P		Pn	04 55 05.5	+4.4
ASAK	**Asacha**	**4.16**	**225**	*e*P		Pn	04 55 08.6	+5.0

IDC 12 04:53:49.9±1.5, 6°94S×128°80E, h0km, mb3.7/4, mbtmp3.9/8, ML4.2/4, Error ellipse: s-maj=51.9km s-min=23.4km az=83.0
DJA 12 04:54:09.6±0.7, 8°S±5°×12°8E±°, h84km±44km, M4.4/8, mB4.7/1, mb4.5/1, MLv4.3/8, Mw(mB)4.0/1
ISC 12 04:54:05.8±1.2, 7°81S±0°09×128°51E±0°10, h150km, n10, σ2s27/14, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SOEI	**Soe**	**4.62**	**245**	P		Pn	**04 55 15.3**	**+1.0**
BATI	**Baumata**	**5.35**	**243**	Pn		Pn	04 55 18.9	-5.0
	6.2nm,0.3s,baz=107,slow=21,SNR=2.0							
BATI				Sn		Sn	**04 56 24.8**	**-0.1**
	12nm,0.3s,baz=43,slow=21,SNR=8.0							
	50nm,1.0s							
BATI	**Baumata**	**5.35**	**243**	P		Pn	**04 55 24.3**	**+0.4**
	0.3nm74nm,1.1s							
BATI				S		Sn	**04 56 23.8**	**-1.1**
	0.3nm74nm,1.1s							
FITZ	**Fitzroy Crossi**	**10.60**	**195**	Pn		Pn	**04 56 34.6**	**+0.9**
	1.0nm,0.3s,baz=15,slow=9.8,SNR=22							
FITZ				Sn		Sn	**04 58 28.0**	**-3.1**
	2.4nm,0.3s,baz=262,slow=22,SNR=6.9							
	2.5nm,0.3s							
WRA	**Warramunga Arr**	**13.32**	**156**	Pn		Pn	**04 57 10.7**	**+1.6**
	1.3nm,0.3s,baz=346,slow=12,SNR=34							
WRA				Sn		Sn	**04 59 32.7**	**-3.9**
	0.9nm,0.3s,baz=341,slow=22,SNR=9.0							
	0.9nm,0.3s							
ASAR	**Alice Springs**	**16.59**	**162**	P		Pn	**04 57 54.3**	**+4.4**
	0.6nm,0.3s,baz=342,slow=11,SNR=34							
ASAR				S		Sn	**05 00 56.1**	**+0.8**
	0.7nm,0.5s,baz=355,slow=31,SNR=6.0							
	3.3nm,0.6s							
MKAR	**Makanchi Array**	**68.11**	**328**	P		P	**05 04 48.7**	**-0.8**
	0.3nm,0.7s,baz=110,slow=8.3,SNR=3.6							
	0.3nm,0.7s							
ZALV	**Zalesovo Beam**	**71.66**	**335**	P		P	**05 05 09.3**	**-1.7**
	0.5nm,0.4s,baz=105,slow=5.1,SNR=1.6							
	0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**72.44**	**329**	P		P	**05 05 14.4**	**-1.3**
	0.6nm,0.6s,baz=136,slow=5.2,SNR=6.8							
	0.6nm,0.6s							
BVAR	**Borovoye Array**	**77.97**	**328**	P		P	**05 05 46.7**	**-0.6**
	0.6nm,0.6s,baz=134,slow=6.2,SNR=2.4							
	0.6nm,0.6s							

MDD 12 04:58:46.8±0.4, 36°55N×2°70W, h6km±3km, mb_Lg2.3/17, Error ellipse: s-maj=3.1km s-min=2.5km az=128.0
SFS 12 04:58:46.8, 36°58N×2°70W, h4km, ML2.6/7, ML2.0/10, MLv1.8/10
CNRM 12 04:58:55.5, 35°69N×2°64W, h10km, ML1.6
ISC 12 04:58:44.3±1.0, 36°56N±0°02×2°59W±0°03, h16km±8km, n29, σ1s59/54, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
EXEJI	**El Ejido**	**0.28**	**319**	Pg		Pb	**04 58 51.6**	**+0.7**
EXEJI				Sg		Sg	**04 58 54.7**	**+0.3**
ENIJ	**Nijar**	**0.51**	**37**	Pg		Pn	**04 58 57.7**	**+0.8**
ENIJ				Sg		Sb	**04 59 04.2**	**+2.1**
ENIJ	**Nijar**	**0.51**	**37**	Pg		Pn	**04 58 57.6**	**+0.7**
ENIJ				Sg		Sb	**04 59 05.1**	**+3.0**
ENIJ				*i* lVmb_Lg			04 59 06.9	
EALB	**Alboran**	**0.72**	**210**	Pg		Pb	**04 58 59.3**	**+0.9**
EALB				Sg		Sb	**04 59 09.2**	**+1.2**
EALB	**Alboran**	**0.72**	**210**	Pg		Pb	**04 58 59.1**	**+0.7**
EALB				Pg		Pb	**04 58 59.2**	**+0.7**
EALB				Sg		Sg	**04 59 07.8**	**0.0**
EALB				Sg		Sb	**04 59 08.5**	**+0.4**
EALB				*i* lVmb_Lg			04 59 09.0	
ELGU	**Los Guajares,**	**0.89**	**290**	Pg		Pb	**04 59 01.3**	**0.0**
ELGU				Sg		Sg	**04 59 10.9**	**-2.3**
ELGU	**Los Guajares,**	**0.89**	**290**	Pg		Pb	**04 59 01.5**	**+0.1**
ELGU				Sg		Sb	**04 59 12.7**	**-0.3**
ELGU				*i* lVmb_Lg			04 59 16.6	
EQUE	**Quentar**	**0.94**	**313**	Pg		Pn	**04 59 02.9**	**0.0**
EQUE				Sg		Sb	**04 59 14.7**	**+0.2**
EQUE				*i* lVmb_Lg			04 59 21.4	
EQTA	**Presa de Quent**	**0.94**	**313**	Pg		Pn	**04 59 03.1**	**+0.2**
EQTA				Sg		Sg	**04 59 13.5**	**-1.4**
EQES	**Quesada**	**1.30**	**343**	Pg		Pg	**04 59 10.7**	**+1.4**
EQES				Sg		Sn	**04 59 27.6**	**+2.7**
EQES				*i* lVmb_Lg			04 59 33.6	
EGOR	**Sierra Gorda,**	**1.34**	**295**	Pg		Pg	**04 59 09.7**	**-0.3**
EGOR				Sg		Sg	**04 59 27.0**	**-0.5**
EGOR	**Sierra Gorda,**	**1.34**	**295**	Pg		Pg	**04 59 09.5**	**-0.6**
EGOR				Sg		Sg	**04 59 26.6**	**-0.9**
EGOR				*i* lVmb_Lg			04 59 31.1	
EMAL	**Malaga-Limoner**	**1.50**	**278**	Sn		Sn	**04 59 28.4**	**-1.2**
CART	**Cartagena**	**1.63**	**51**	Pn		Pg	**04 59 14.4**	**-1.2**
CART				Sn		Sg	**04 59 36.4**	**-1.4**
EMUR	**La Murta**	**1.67**	**40**	Pn		Pg	**04 59 16.3**	**-0.1**
EMUR				Sn		Sg	**04 59 37.6**	**-0.5**
EMUR				*i* lVmb_Lg			04 59 50.4	
PALE	**Palemas**	**1.73**	**220**	P		Pb	**04 59 16.7**	**+0.9**
PALE				S		Sn	**04 59 35.1**	**-0.6**
EMIJ	**Mijas**	**1.76**	**271**	Sn		Sn	**04 59 32.9**	**-3.3**
EMIJ				*i* lVmb_Lg			04 59 38.1	
JBK	**JBK**	**2.22**	**180**	P		Pn	**04 59 21.9**	**+1.2**
JBK				S		Sn	**04 59 42.1**	**-5.8**
ETOB	**Tobarra**	**2.24**	**21**	Pn		Pg	**04 59 25.5**	**-1.7**
ETOB				Sn		Sb	**04 59 51.6**	**-0.3**
ETOB	**Tobarra**	**2.24**	**21**	Pn		Pb	**04 59 23.9**	**-0.4**
ETOB				Sn		Sb	**04 59 51.8**	**0.0**
ETOB				*i* lVmb_Lg			05 00 00.1	
EADA	**Adamuz**	**2.25**	**316**	Pg		Pg	**04 59 27.2**	**-0.3**
EADA				Sn		Sb	**04 59 51.0**	**-1.3**
EADA	**Adamuz**	**2.25**	**316**	Pg		Pg	**04 59 26.5**	**-1.0**
EADA				Sg		Sg	**04 59 57.4**	**+0.6**
EADA				*i* lVmb_Lg			05 00 06.9	
AKLM	**AKL**	**2.30**	**207**	P		Pn	**04 59 23.7**	**+2.2**
AKLM				S		Sn	**04 59 46.0**	**-3.6**
CEU	**Ceuta**	**2.35**	**254**	Pn		Pb	**04 59 24.8**	**-1.4**
CEU				Sn		Sn	**04 59 52.3**	**+1.6**
SMIR	**Smir Dam**	**2.43**	**250**	P		Pg	**04 59 32.3**	**+1.5**
PSIM	**Granatula de C**	**2.44**	**338**	Pg		Pg	**04 59 30.9**	**-0.1**
PSIM				Sg		Sg	**05 00 03.9**	**+1.3**
ECAB	**El Cabril**	**2.72**	**305**	Sn		Sn	**05 00 00.1**	**+0.3**
ECAB				*i* lVmb_Lg			05 00 08.4	
MDT	**Midelt**	**4.09**	**205**	P		Pn	**04 59 47.5**	**+1.2**
MDT				S		Sn	05 00 24.0	-10

MD31	**MD31**	**4.10**	**207**	P		Pn	**04 59 48.1**	**+1.8**

NEIC 12 05:05:46.3±1.7, 58°31N±0°06×148°46W±0°07, h10km±2km, ML3.5/124, ML3.4(AEIC), Error ellipse: s-maj=9.8km s-min=6.3km az=171.0
AEIC 12 05:05:51.0±1.3, 58°33N±0°06×148°47W±0°08, h10km±7km, Error ellipse: s-maj=9.6km s-min=5.4km az=201.0
ISC 12 05:05:44.4±1.2, 58°30N±0°05×148°52W±0°04, h10km, n134, σ1s72/119, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MID	**Middleton Isla**	**1.60**	**44**	Pn		Pn	**05 06 13.2**	**+0.5**
MID				IAML			05 06 32.0	
	comp=N,453nm,0.5s							
MID				IAML			05 06 32.7	
	comp=E,512nm,0.8s							
P23K	**Montague Islan**	**1.80**	**18**			Pn	**05 06 16.7**	**+1.2**
P23K				IAML			05 06 37.6	
	comp=E,626nm,0.7s							
P23K				IAML			05 06 40.1	
	comp=N,666nm,0.4s							
P23K	**Montague Islan**	**1.80**	**18**			Sn	**05 06 37.3**	**-1.1**
BRSE	**Bradley Lake S**	**1.85**	**323**			Pn	**05 06 17.6**	**+1.4**
BRSE						Sn	**05 06 39.5**	**-0.2**
CNPM	**China Poot**	**1.87**	**312**	Pn		Pg	**05 06 20.1**	**-0.2**
CNPM				IAML			05 07 10.1	
	comp=N,553nm,1.0s							
CNPM				IAML			05 07 10.3	
	comp=E,456nm,1.0s							
CNPM	**China Poot**	**1.87**	**312**			Sn	**05 06 37.8**	**-2.5**
CNPM						Sb	**05 06 40.5**	**-1.6**
SEW	**Seward**	**1.88**	**346**			Pn	**05 06 17.6**	**+1.1**
SEW	**Seward**	**1.88**	**346**			Sn	**05 06 38.4**	**-1.8**
SYI	**Shuyak Island**	**2.06**	**280**			Pb	**05 06 21.6**	**-0.3**
SYI						Sn	**05 06 44.7**	**-0.1**
KDAK	**Kodiak Island**	**2.22**	**258**			Pn	**05 06 23.1**	**+1.8**
O22K	**Cooper Landing**	**2.28**	**345**			Pn	**05 06 23.4**	**+1.3**
HIN	**Hinchinbrook I**	**2.35**	**25**			Sn	**05 06 50.1**	**-1.8**
HIN	**Hinchinbrook I**	**2.35**	**25**			Pn	**05 06 23.9**	**+0.8**
HIN				IAML			05 06 52.8	
	comp=E,347nm,0.6s							
SLKM	**Skilak Lake**	**2.38**	**339**			Pn	**05 06 25.1**	**+1.6**
SLKM				IAML			05 06 53.4	
	comp=N,287nm,0.2s							
SLKM				IAML			05 06 57.0	
	comp=E,190nm,0.4s							
SLKM	**Skilak Lake**	**2.38**	**339**			Sn	**05 06 51.8**	**-1.0**
EYAK	**Cordova Ski Ar**	**2.67**	**31**			Sn	**05 06 57.6**	**-2.1**
EYAK	**Cordova Ski Ar**	**2.67**	**31**			Pn	**05 06 28.5**	**+1.1**
EYAK				IAML			05 06 59.4	
	comp=N,262nm,0.8s							
EYAK				IAML			05 06 59.9	
	comp=E,243nm,0.5s							
EYAK	**Cordova Ski Ar**	**2.67**	**31**	P		Pn	**05 06 28.4**	**+1.1**
EYAK	**Cordova Ski Ar**	**2.67**	**31**	S		Sn	**05 06 58.7**	**-1.0**
KAIM	**Kayak Island**	**2.67**	**51**			Pn	**05 06 28.8**	**+1.3**
GLI	**Glacier Island**	**2.69**	**15**			Pn	**05 06 28.6**	**+0.9**
GLI	**Glacier Island**	**2.69**	**15**	IAML			05 07 00.4	
	comp=N,181nm,0.9s							
OHAK	**Old Harbor**	**2.77**	**249**			Pn	**05 06 29.9**	**+1.1**
OHAK						Pb	05 06 30.1	-4.0
OHAK						Sn	**05 07 01.0**	**-1.3**
OHAK	**Old Harbor**	**2.77**	**249**	P		Pn	**05 06 29.9**	**+1.1**
OHAK	**Old Harbor**	**2.77**	**249**	S		Sn	**05 07 01.8**	**-0.5**
RC01	**Rabbit Creek A**	**2.87**	**348**			Pn	**05 06 32.1**	**+1.9**
RC01				IAML			05 07 05.4	
	comp=N,152nm,0.6s							
IVE	**Iliamna Volcan**	**2.89**	**309**			Pn	**05 06 32.7**	**+2.1

BARN	**Barnard Glacie**	**4.45**	**49**		IAML			05 07 42.5	
	comp=N,69nm,0.6s								
N18K	**Kilae Creek**	**4.45**	**306**				**Pn**	**05 06 53.8**	**+1.8**
N18K	**Kilae Creek**	**4.45**	**306**		IAML			05 08 30.4	
	comp=N,31nm,1.5s								
CTGM	**Chitina Glacie**	**4.52**	**51**				**Pn**	**05 06 54.4**	**+1.3**
CTGM					IAML			05 07 45.5	
	comp=N,42nm,0.5s								
CTGM					IAML			05 07 49.8	
	comp=E,36nm,0.9s								
LOGN	**Logan Glacier**	**4.59**	**53**				**Pn**	**05 06 55.0**	**+1.0**
PCA	**Pinnacle**	**4.62**	**63**				**Pn**	**05 06 55.7**	**+1.4**
M19K	**Big River Lodg**	**4.66**	**323**				**Pn**	**05 06 56.5**	**+1.7**
DHY	**Denali Highway**	**4.83**	**6**				**Pn**	**05 06 59.4**	**+2.1**
DHY	**Denali Highway**	**4.83**	**6**		IAML			05 07 57.0	
	comp=E,55nm,0.6s								
DHY					IAML			05 07 57.0	
	comp=N,36nm,1.3s								
BCPM	**Bancas Point**	**4.87**	**66**				**Pn**	**05 06 58.6**	**+0.9**
BCPM	**Bancas Point**	**4.87**	**66**		IAML			05 07 52.8	
	comp=N,35nm,1.4s								
BCPM					IAML			05 08 04.7	
	comp=E,29nm,1.5s								
M18K	**Stony River**	**4.88**	**314**				**Pn**	**05 06 59.3**	**+1.6**
O28M	**Mount Upton**	**4.91**	**56**				**Pn**	**05 06 59.7**	**+1.1**
O28M	**Mount Upton**	**4.91**	**56**		IAML			05 07 55.6	
	comp=E,37nm,0.8s								
PAX	**Paxson**	**4.92**	**16**				**Pn**	**05 07 00.9**	**+2.4**
PAX	**Paxson**	**4.92**	**16**		IAML			05 07 56.6	
	comp=E,25nm,0.5s								
M26K	**Nabesna, AK**	**4.95**	**31**				**Pn**	**05 06 59.7**	**+0.9**
M26K	**Nabesna, AK**	**4.95**	**31**		IAML			05 08 05.1	
	comp=N,30nm,0.6s								
PPLA	**Purkeypile**	**4.96**	**340**		Pn		**Pn**	**05 07 02.0**	**+3.1**
PPLA					IAML			05 08 51.1	
	comp=N,23nm,1.2s								
N17K	**Nushagak Hills**	**4.96**	**300**				**Pn**	**05 07 01.6**	**+2.7**
N17K	**Nushagak Hills**	**4.96**	**300**		IAML			05 08 50.5	
	comp=N,36nm,1.4s								
L19K	**White Mountain**	**5.01**	**324**				**Pn**	**05 07 01.6**	**+1.9**
L19K	**White Mountain**	**5.01**	**324**		IAML			05 08 49.3	
	comp=N,21nm,1.2s								
RND	**Reindeer**	**5.13**	**358**				**Pn**	**05 07 03.5**	**+2.2**
RND					IAML			05 08 02.2	
	comp=E,42nm,0.7s								
RND					IAML			05 08 02.4	
	comp=N,34nm,0.7s								
YUK2	**White River**	**5.20**	**44**				**Pn**	**05 07 04.5**	**+2.2**
M27K	**Edge Creek, AK**	**5.24**	**36**				**Pn**	**05 07 05.0**	**+2.1**
M27K	**Edge Creek, AK**	**5.24**	**36**		IAML			05 08 05.7	
	comp=E,22nm,0.8s								
M27K					IAML			05 08 10.7	
	comp=N,23nm,0.7s								
TRF	**Thorofare Moun**	**5.24**	**351**				**Pn**	**05 07 05.3**	**+2.3**
L26K	**Log Cabin Wild**	**5.38**	**26**		IAML			05 08 08.9	
	comp=N,21nm,0.4s								
L26K					IAML			05 08 09.8	
	comp=E,23nm,0.4s								
KTH	**Kantishna Hill**	**5.40**	**349**				**Pn**	**05 07 07.3**	**+2.3**
MCK	**McKinley**	**5.46**	**358**				**Pn**	**05 07 08.1**	**+2.3**
O29M	**Mount Kennedy**	**5.48**	**64**				**Pn**	**05 07 07.6**	**+1.5**
BVCY	**Beaver Creek**	**5.61**	**39**				**Pn**	**05 07 10.1**	**+2.2**
RIDG	**Independent Ri**	**5.75**	**17**				**Pn**	**05 07 12.0**	**+2.3**
YUK7	**Dusty Glacier**	**5.75**	**63**				**Pn**	**05 07 11.8**	**+1.8**
BC01	**Beaver Creek A**	**5.80**	**32**				**Pn**	**05 07 12.0**	**+1.5**
L27K	**Beaver Creek,**	**5.80**	**32**				**Pn**	**05 07 12.2**	**+1.7**
BCAR	**Beaver Creek A**	**5.81**	**32**		Pn		**Pn**	**05 07 11.8**	**+1.1**
CHUM	**Lake Minchumin**	**5.90**	**343**				**Pn**	**05 07 14.0**	**+2.2**
SCRK	**Sand Creek**	**6.11**	**19**				**Pn**	**05 07 17.2**	**+2.5**
HYT	**Haines Junctio**	**6.15**	**61**				**Pn**	**05 07 17.4**	**+2.1**
L17K	**Donlin**	**6.21**	**312**				**Pn**	**05 07 17.7**	**+1.7**
P30M	**Million Dollar**	**6.21**	**68**				**Pn**	**05 07 17.8**	**+1.6**
CCB	**Clear Creek Bu**	**6.38**	**3**				**Pn**	**05 07 20.1**	**+1.7**
M29M	**Somme Creek**	**6.49**	**46**				**Pn**	**05 07 21.4**	**+1.4**
J25K	**Salcha River,**	**6.51**	**12**				**Pn**	**05 07 22.6**	**+2.3**
S31K	**Pelican**	**6.52**	**88**				**Pn**	**05 07 19.9**	**-0.4**
K17K	**Iditarod**	**6.55**	**317**				**Pn**	**05 07 23.3**	**+2.5**
COLA	**College**	**6.61**	**2**	P			**Pn**	**05 07 22.9**	**+1.4**
COLA	**College**	**6.61**	**2**	S			**Sn**	**05 08 36.5**	**-0.2**
J26L	**Joseph Creek**	**6.66**	**19**				**Pn**	**05 07 23.6**	**+1.2**
SKAG	**Skagway**	**6.94**	**75**				**Pn**	**05 07 28.0**	**+2.0**
SKAG	**Skagway**	**6.94**	**75**	P			**Pn**	**05 07 28.2**	**+2.2**
L29M	**L29M**	**7.02**	**42**				**Pn**	**05 07 28.5**	**+1.4**
N31M	**Braeburn, Yuko**	**7.16**	**58**				**Pn**	**05 07 31.1**	**+1.9**
BESE	**Bessie Mountai**	**7.18**	**82**				**Pn**	**05 07 30.3**	**+0.9**
SIT	**Sitka**	**7.19**	**94**	P			**Pn**	**05 07 29.1**	**-0.3**
JIS	**Juneau Island**	**7.45**	**84**				**Pn**	**05 07 33.8**	**+0.7**
JIS	**Juneau Island**	**7.45**	**84**	P			**Pn**	**05 07 34.1**	**+1.0**
S32K	**Killisnoo**	**7.48**	**90**				**Pn**	**05 07 34.2**	**+0.8**
H24K	**Noodor Dome**	**7.58**	**2**				**Pn**	**05 07 38.6**	**+3.8**
P32M	**Atlin**	**7.77**	**74**				**Pn**	**05 07 38.3**	**+0.8**
IM02	**Indian Mountai**	**8.11**	**345**				**Pn**	**05 07 43.8**	**+1.6**
CRAG	**Craig**	**8.89**	**102**	P			**Pn**	**05 07 52.2**	**-0.6**
COLD	**Coldfoot**	**9.00**	**356**				**Pn**	**05 07 56.4**	**+2.2**

NEIC ***12*** *05:55:09.8±1.2, 0.80N±0.05×98.94E±0.06, h84km±6km, mb4.5/31, Error ellipse: s-maj=9.4km s-min=6.2km az=48.0*
IDC ***12*** *05:55:10.2±5.5, 0.78N×99.11E, h97km±50km, mb4.0/23, mbtmp4.3/25, MS3.5/4, Error ellipse: s-maj=23.5km s-min=10.7km az=54.0*
DJA ***12*** *05:55:10.6±0.2, 1.1N±2.2×9.9E±1.2, h58km±6km, M4.7/40, mB5.3/3, mb4.8/5, MLv4.7/40, Mw(mB)4.7/3*
ISC 12 05:55:09.5±0.4, 0.78N±0.04×98.94E±0.04, h86km, n124, σ1°22/120, mb4.4/45, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MNSI	**Mandailing Nat**	**0.64**	**88**	P		**Pn**	**05 55 25.2**	**+0.2**
SBSI	**Sibolga**	**0.77**	**356**	S		**Sn**	**05 55 37.8**	**-1.2**
PBSI	**Pulau Batu**	**1.06**	**219**	P		**Pn**	**05 55 30.1**	**+0.5**
GSI	**Gunungsitoli**	**1.46**	**291**			**Pn**	**05 55 35.0**	**+0.3**
GSI	**Gunungsitoli**	**1.46**	**291**	P		**Pn**	**05 55 35.0**	**+0.3**
GSI	**Gunungsitoli**	**1.46**	**291**	S		**Sn**	**05 55 53.9**	**+0.3**
GSI	**Gunungsitoli**	**1.46**	**291**	P		**Pn**	**05 55 34.9**	**+0.3**
PPI	**Padang Panjang**	**1.90**	**130**	P		**Pn**	**05 55 41.9**	**+1.6**
RPSI	**Rantau Prapat**	**1.91**	**359**			**Pn**	**05 55 40.6**	**+0.2**
PSI	**Prapat**	**2.01**	**359**	P		**Pn**	**05 55 40.3**	**-1.6**
PSI	**Prapat**	**2.01**	**359**	P		**Pn**	**05 55 40.5**	**-1.4**
SISI	**Saibi**	**2.09**	**176**	P		**Pn**	**05 55 43.0**	**+0.2**
BKNI	**Bangkinang**	**2.14**	**102**			**Pn**	**05 55 43.9**	**+0.5**
BKNI	**Bangkinang**	**2.14**	**102**	P		**Pn**	**05 55 44.1**	**+0.6**
BKNI	**Bangkinang**	**2.14**	**102**	S		**Sn**	**05 56 10.4**	**+0.9**
BKNI	**Bangkinang**	**2.14**	**102**	P		**Pn**	**05 55 44.0**	**+0.5**
PDSI	**Padang**	**2.26**	**138**	P		**Pn**	**05 55 46.6**	**+1.5**
TSI	**Tuntungan**	**2.73**	**352**	P		**Pn**	**05 55 52.0**	**+0.6**
KCSI	**Kotacane, Aceh**	**2.97**	**337**	P		**Pn**	**05 55 53.8**	**-0.8**
SNSI	**Sinabang, Aceh**	**3.08**	**302**	P		**Pn**	**05 55 56.0**	**0.0**
PPSI	**Pulau Pagai**	**3.67**	**163**	P		**Pn**	**05 56 05.6**	**+1.5**
KRJI	**Kerinci**	**3.80**	**138**	P		**Pn**	**05 56 08.2**	**+2.3**
IPM	**Ipoh**	**4.23**	**29**			**Pn**	**05 56 13.2**	**+1.6**
IPM	**Ipoh**	**4.23**	**29**	P		**Pn**	**05 56 13.4**	**+1.7**
IPM	**Ipoh**	**4.23**	**29**	P		**Pn**	**05 56 12.8**	**+1.1**
MLSI	**Meulaboh, Aceh**	**4.30**	**324**	P		**Pn**	**05 56 12.6**	**0.0**
KULM	**Kulim**	**4.80**	**21**			**Pn**	**05 56 19.9**	**+0.4**
KULM	**Kulim**	**4.80**	**21**	P		**Pn**	**05 56 20.2**	**+0.8**
KULM	**Kulim**	**4.80**	**21**	P		**Pn**	**05 56 19.8**	**+0.4**
LHMI	**Lhok Sumawe**	**4.85**	**336**	Pn		**Pn**	**05 56 19.6**	**-0.5**
LHMI	**Lhok Sumawe**	**4.85**	**336**	P		**Pn**	**05 56 20.2**	**+0.1**
MYKOM	**Kota Tinggi**	**5.01**	**78**			**Pn**	**05 56 22.0**	**-0.2**
MYKOM	**Kota Tinggi**	**5.01**	**78**	P		**Pn**	**05 56 23.8**	**+1.6**
MYKOM	**Kota Tinggi** 0.3nm40nm,0.6s	**5.01**	**78**	P		**Pn**	**05 56 22.1**	**-0.2**
MASI	**Maura Aman, Be** 1.0nm2µm177nm,0.9s	**5.10**	**140**	P		**Pn**	**05 56 25.2**	**+1.7**
DSRI	**Dabo**	**5.77**	**102**	P		**Pn**	**05 56 34.2**	**+1.5**
MNAI	**Manna**	**6.49**	**142**	Pn		**Pn**	**05 56 43.3**	**+0.8**
MNAI	**Manna**	**6.49**	**142**	P		**Pn**	**05 56 43.9**	**+1.4**
MNAI	**Manna**	**6.49**	**142**	P		**Pn**	**05 56 45.0**	**+2.5**
CMBY	**CAMPBELL BAY**	**7.96**	**321**	*eP*		**Pn**	**05 57 06.0**	**+3.5**
CMBY				*eS*		**Sn**	**05 58 28.3**	**-2.7**
CMBY					IAML		05 58 29.9	
	comp=N,158nm,0.6s							
CMBY					IAML		05 58 31.0	
	comp=E,187nm,0.5s							
LEM	**Lembang**	**11.49**	**131**	LR	LR		06 02 32.0	
	comp=E,48nm,18.5s,baz=338,slow=39							
BBJI	**Bungbulang**	**11.93**	**133**	Pn		**Pn**	**05 57 57.0**	**+0.4**
BBJI	**Bungbulang**	**11.93**	**133**	P		**Pn**	**05 57 57.5**	**+0.8**
PBA	**Port Blair**	**12.44**	**331**	*eP*		**Pn**	**05 58 03.2**	**-0.2**
PBA				*eS*		Sn	06 00 10.1	-10
PBA					IAML		06 00 14.8	
	comp=N,56nm,1.5s							
PBA					IAML		06 00 49.0	
	comp=E,120nm,0.5s							
DGPR	**DIGLIPUR**	**13.69**	**334**	*eP*		**Pn**	**05 58 19.8**	**-0.2**
DGPR					IAML		06 00 48.3	
	comp=E,149nm,0.6s							
DGPR				*eS*		**Sn**	**06 00 53.2**	**+2.6**
DGPR					IAML		06 01 31.3	
	comp=N,132nm,1.2s							
CMAR	**Chiang Mai Arr**	**17.57**	**0**	P		**P**	**05 59 08.9**	**+0.1**
	comp=N,2.3nm,0.3s,baz=191,slow=11,SNR=24							
PALK	**Pallekele**	**19.30**	**290**	P		**Pn**	**05 59 29.6**	**-0.1**
	comp=N,4.4nm,0.6s,baz=85,slow=12,SNR=1.4							
PALK	**Pallekele**	**19.30**	**290**	IAmb	IAmb		06 00 08.8	
	comp=Z,22nm,1.1s							
KAPI	**Kappang**	**21.57**	**106**	LR	LR		06 09 16.8	
	comp=Z,54nm,18.8s,baz=318,slow=40							
TOLI2	**Tolitoli**	**21.84**	**89**	P		**P**	**05 59 55.4**	**+0.2**
TOLI2				IAmb	IAmb		05 59 56.3	
	comp=Z,11nm,0.7s							
TOLI2	**Tolitoli**	**21.84**	**89**	P		**P**	**05 59 55.5**	**+0.3**
AGT	**Agartala**	**24.16**	**343**	*eP*		**P**	**06 00 18.4**	**+0.7**
AGT				IAmb	IAmb		06 00 23.8	
	comp=Z,11nm,0.7s							
AGT				*eS*		**S**	**06 04 33.6**	**+3.8**
IMP	**Imphal**	**24.40**	**349**	*eP*		**P**	**06 00 20.0**	**0.0**
IMP				IAmb	IAmb		06 00 21.2	
	comp=Z,6.8nm,0.4s							
IMP				*eS*		**S**	**06 04 36.5**	**+2.7**
KOHI	**KOHIMA**	**25.24**	**350**	*eP*		**P**	**06 00 29.0**	**+1.3**
KOHI				IAmb	IAmb		06 00 33.4	
	comp=Z,4.7nm,0.2s							
KOHI				*eS*		**S**	**06 04 49.4**	**+2.1**
SHL	**Shillong**	**25.57**	**345**	*eP*		**P**	**06 00 29.9**	**-0.9**
SHL				IAmb	IAmb		06 00 30.3	
	comp=Z,5.6nm,0.4s							
SHL				*eS*		**S**	**06 04 54.0**	**+1.3**
PZH	**PanZhiHua**	**25.72**	**6**	P		**P**	**06 00 34.6**	**+2.5**
LSA	**Lhasa**	**29.71**	**346**			**P**	**06 01 07.6**	**-0.5**
LSA				IAmb	IAmb		06 01 09.7	
	comp=Z,6.5nm,0.5s							
NACB	**Ninganchiao**	**31.98**	**42**	P		**P**	**06 01 26.6**	**-1.0**
FITZ	**Fitzroy Crossi**	**32.27**	**127**	P		**P**	**06 01 27.8**	**-2.4**
	comp=Z,1.2nm,0.6s,baz=284,slow=12,SNR=1.4							
	comp=Z,1.2nm,0.6s							
LZDM	**Lanzhou Array**	**35.28**	**7**	P		**P**	**06 01 55.8**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=180,slow=10,SNR=5.3							
	comp=Z,0.8nm,0.4s							
NJ2	**Nanjing**	**36.35**	**29**	*eP*		**P**	**06 02 06.8**	**+1.5**
NJ2				pmax	pmax			
	comp=Z,4.0nm,1.0s							
GTA2	**Gaotai**	**38.54**	**1**	*eP*		**P**	**06 02 24.2**	**+0.3**
GTA2				sP	pP		06 02 49.0	+4.8
GTA2				pmax	pmax			
	comp=Z,3.0nm,1.0s							
HNS	**HongShan**	**39.24**	**20**	⇑P		**P**	**06 02 30.2**	**+0.6**
HNS				pmax	pmax			
	comp=Z,4.0nm,1.0s							
WB0	**Warramunga Arr**	**40.30**	**122**	P		**P**	**06 02 36.8**	**-2.0**
WRA	**Warramunga Arr**	**40.34**	**123**	P		**P**	**06 02 37.1**	**-1.9**
	comp=Z,2.2nm,0.7s,baz=301,slow=8.9,SNR=16							
	comp=Z,2.2nm,0.7s							
WRA	**Warramunga Arr**	**40.34**	**123**	P		**P**	**06 02 37.4**	**-1.6**
WRAB	**Tennant Creek**	**40.34**	**123**	P		**P**	**06 02 37.7**	**-1.3**
WB2	**Warramunga Arr**	**40.35**	**123**	P		**P**	**06 02 37.4**	**-1.7**
WR8	**Warramunga Arr**	**40.48**	**123**	P		**P**	**06 02 38.5**	**-1.7**
WR8				IAmb	IAmb		06 02 43.8	
	comp=Z,4.7nm,0.6s							
WR0	**Warramunga Arr**	**40.51**	**123**	P		**P**	**06 02 38.7**	**-1.8**
WR0				IAmb	IAmb		06 02 44.4	
	comp=Z,5.0nm,0.8s							
NIL	**Nilore**	**40.62**	**326**			**P**	**06 02 40.9**	**-0.3**
HHC	**Hu-ho-hao-te**	**41.50**	**14**	*eP*		**P**	**06 02 50.4**	**+2.0**
HHC				pmax	pmax			
	comp=Z,5.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,120nm,5.8s							
ASAR	**Alice Springs**	**41.76**	**128**	P		**P**	**06 02 48.9**	**-1.7**
	comp=Z,1.9nm,0.8s,baz=308,slow=8.1,SNR=16							
	comp=Z,1.9nm,0.8s							
FORT	**Forrest**	**41.84**	**141**	P		**P**	**06 02 51.2**	**0.0**
FORT				IAmb	IAmb		06 03 29.4	
	comp=Z,9.4nm,0.9s							
KSH2	**Kashi**	**43.77**	**334**	P		**P**	**06 03 07.0**	**+0.2**
KSH2				pP	pP		06 03 32.7	+5.3
KSH2				pmax	pmax			
	comp=Z,4.0nm,0.6s							
WMQ	**Urumqi**	**44.02**	**348**	*eP*		**P**	**06 03 10.9**	**+2.3**
WUS	**Wushi**	**44.02**	**339**			**P**	**06 03 08.3**	**-0.5**
WUS				IAmb	IAmb		06 03 09.8	
	comp=Z,3.6nm,0.6s							
TARG	**Taragay, Kyrgy**	**45.01**	**338**			**P**	**06 03 16.0**	**-1.0**
TARG				IAmb	IAmb		06 03 19.6	
	comp=Z,10nm,1.4s							
KSRS	**Korea Array**	**45.23**	**33**	P		**P**	**06 03 16.5**	**-1.8**
	comp=Z,1.0nm,0.6s,baz=212,slow=7.3,SNR=2.4							
	comp=Z,1.0nm,0.6s							
NRN	**Naryn**	**45.47**	**336**	P		**P**	**06 03 20.1**	**-0.5**
NRN				IAmb	IAmb		06 03 22.0	
	comp=Z,6.7nm,0.7s							
KDJ	**Kajisay**	**45.59**	**337**			**P**	**06 03 21.1**	**-0.2**
KDJ				IAmb	IAmb		06 03 23.4	
	comp=Z,6.8nm,1.0s							
AAK	**Ala-Archa**	**47.10**	**335**	P		**P**	**06 03 33.8**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=120,slow=7.4,SNR=5.7							
	comp=Z,1.5nm,0.5s							
AAK	**Ala-Archa**	**47.10**	**335**	P		**P**	**06 03 33.3**	**+0.2**
SONM	**Songino Array**	**47.32**	**7**	P		**P**	**06 03 34.9**	**+0.2**
	comp=Z,4.9nm,0.6s,baz=189,slow=8.8,SNR=9.3							
	comp=Z,4.9nm,0.6s							
SONM	**Songino Array**	**47.32**	**7**	IAmb	IAmb		06 03 36.7	
	comp=Z,4.5nm,0.9s							
ULN	**Ulaanbaatar**	**47.43**	**7**			**P**	**06 03 35.5**	**0.0**
ULN				IAmb	IAmb		06 03 37.0	
	comp=Z,4.3nm,0.6s							
MK31	**Makanchi Array**	**48.09**	**345**	P		**P**	**06 03 40.9**	**+0.3**
MKAR	**Makanchi Array**	**48.09**	**345**	P		**P**	**06 03 40.8**	**+0.3**
	comp=Z,3.9nm,0.5s,baz=151,slow=8.7,SNR=18							
	comp=Z,3.9nm,0.5s							
MAKZ	**Makanchi**	**48.19**	**344**	P		**P**	**06 03 41.0**	**-0.3**
MAKZ				IAmb	IAmb		06 03 42.1	
	comp=Z,4.5nm,0.7s							
KKAR	**Karatay Array**	**49.22**	**333**	P		**P**	**06 03 47.9**	**-1.3**
CTA	**Charters Tower**	**50.76**	**117**	P		**P**	**06 04 00.2**	**-1.0**
	comp=Z,3.6nm,0.9s,baz=302,slow=9.5,SNR=4.4							
	comp=Z,3.6nm,0.9s							
STKA	**Stephens Creek**	**51.79**	**133**	P		**P**	**06 04 07.5**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=323,slow=12,SNR=5.1							
	comp=Z,2.3nm,0.6s							
KURBB	**Kurchatov Arra**	**52.61**	**344**	P		**P**	**06 04 14.5**	**0.0**
	comp=Z,0.7nm,0.3s,baz=157,slow=7.3,SNR=5.4							
	comp=Z,0.7nm,0.3s							
KURK	**Kurchatov**	**52.67**	**344**	P		**P**	**06 04 14.5**	**-0.4**
KURK	**Kurchatov**	**52.67**	**344**	IAmb	IAmb		06 04 22.9	
	comp=Z,2.8nm,0.8s							
ZAA0	**Zalesovo Array**	**54.27**	**350**	P		**P**	**06 04 26.4**	**-0.1**
ZAA0				IAmb	IAmb		06 04 55.6	
	comp=Z,4.1nm,0.9s							
ZALV	**Zalesovo Beam**	**54.27**	**350**	P		**P**	**06 04 26.4**	**-0.1**
	comp=Z,3.6nm,0.4s,baz=169,slow=7.2,SNR=12							
	comp=Z,3.6nm,0.4s							
EIDS	**Eidsvold**	**56.67**	**121**	P		**P**	**06 04 44.0**	**-0.3**
BVAR	**Borovoye Array**	**57.23**	**340**	P		**P**	**06 04 47.3**	**-0.5**
	comp=Z,2.2nm,0.5s,baz=141,slow=9.5,SNR=9.7							
	comp=Z,2.2nm,0.5s							
BORK	**Borovoye**	**57.27**	**340**	P		**P**	**06 04 47.6**	**-0.4**
BORK				IAmb	IAmb		06 04 48.1	
	comp=Z,2.9nm,0.6s							
AB31	**Akbulak array**	**58.72**	**331**			**P**	**06 04 58.0**	**-0.2**
ABKAR	**Akbulak array**	**58.72**	**331**			**P**	**06 04 57.8**	**-0.4**
AKTO	**Aktyubinsk**	**60.43**	**331**	P		**P**	**06 05 09.3**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=182,slow=4.6,SNR=4.6							
	comp=Z,1.5nm,0.5s							
ARTI	**Arti**	**64.30**	**336**	P		**P**	**06 05 35.1**	**-0.6**
	comp=Z,2.7nm,0.4s,baz=106,slow=2.8,SNR=5.5							
	comp=Z,2.7nm,0.4s							
ARTI	**Arti**	**64.30**	**336**	IAmb	IAmb		06 05 35.6	
	comp=Z,7.2nm,0.8s							
KBZ	**Khabaz**	**65.54**	**319**	P		**P**	**06 05 43.8**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=103,slow=12,SNR=4.2							
	comp=Z,2.7nm,0.8s							
BR131	**Keskin Array S**	**70.69**	**312**	P		**P**	**06 06 15.7**	**-0.8**
BR131				IAmb	IAmb		06 06 16.7	
	comp=Z,4.7nm,0.7s							
BRTR	**Keskin Array B**	**70.69**	**312**	P		**P**	**06 06 16.0**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=127,slow=7.2,SNR=15							
	comp=Z,2.7nm,0.6s							
BRTR	**Keskin Array B**	**70.69**	**312**	P		**P**	**06 06 16.2**	**-0.3**
BOSA	**Boshof**	**76.08**	**240**	P		**P**	**06 06 49.4**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=67,slow=3.5,SNR=5.1							
	comp=Z,3.1nm,0.8s							
BOSA	**Boshof**	**76.08**	**240**	P		**P**	**06 06 49.5**	**+1.0**
BOSA				IAmb	IAmb		06 07 24.7	
	comp=Z,5.0nm,1.0s							
IDI	**Anoyia**	**76.56**	**306**	LR	LR		06 46 35.4	
	comp=Z,64nm,18.3s,baz=292,slow=40							
AKASG	**Malin Array Be**	**76.66**	**322**	P		**P**	**06 06 49.8**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=90,slow=4.5,SNR=2.6							
	comp=Z,0.6nm,0.5s							
BURAR	**Bucovina Array**	**78.49**	**318**	P		**P**	**06 07 02.0**	**+0.6**
FINES	**FINESS Array B**	**81.18**	**332**	P		**P**	**06 07 15.3**	**-0.2**
	comp=Z,4.1nm,1.0s,baz=104,slow=6.1,SNR=9.3							
	comp=Z,4.1nm,1.0s							
FINES	**FINESS Array B**	**81.18**	**332**	P		**P**	**06 07 15.5**	**0.0**
ARCES	**ARCESS Array B**	**83.52**	**340**	P		**P**	**06 07 27.6**	**0.0**
	comp=Z,5.5nm,0.9s,baz=89,slow=5.3,SNR=5.4							
	comp=Z,5.5nm,0.9s							
ARCES	**ARCESS Array B**	**83.52**	**340**	IAmb	IAmb		06 07 31.9	
	comp=Z,37nm,1.5s							
HFS	**Hagfors**	**86.96**	**330**	P		**P**	**06 07 44.5**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=114,slow=7.2,SNR=5.3							
	comp=Z,2.4nm,0.9s							
SPITS	**Spitsbergen Ar**	**87.72**	**348**	P		**P**	**06 07 47.6**	**-0.7**
	comp=Z,19nm,1.2s,baz=113,slow=5.5,SNR=4.9							
	comp=Z,19nm,1.2s							
DAVOX	**Davos/Dischmat**	**88.80**	**317**	LR	LR		06 57 03.2	
	comp=Z,122nm,18.3s,baz=256,slow=42							
TXAR	**Lajitas Array**	**143.08**	**34**	PKP	PKPab		06 14 30.9	+1.1
	comp=Z,0.2nm,0.4s,baz=192,slow=0.3,SNR=5.6							
BDFB	**Brasilia**	**144.21**	**244**	PKP	**PKPab**		**06 14 35.6**	**+1.0**
	comp=Z,1.7nm,0.4s,baz=110,slow=4.9,SNR=5.5							
CPUP	**Villa Florida**	**145.83**	**220**	PKPbc	**PKPdf**		**06 14 40.3**	**+1.3**
	comp=Z,2.2nm,0.9s,baz=69,slow=6.3,SNR=5.3							

NNC ***12*** *05:55:59.2±0.9, 42.29N×70.84E, h0km, mb3.2, mpv3.1, Error ellipse: s-maj=6.6km s-min=4.5km az=40.0*
SOME ***12*** *05:55:59.7, 42.27N×70.87E, h10km*
KRNET ***12*** *05:56:00.2±0.1, 42.16N×70.96E, h7km, mb2.8*
ISC 12 05:55:57.9±1.2, 42.29N±0.04×70.87E±0.03, h16km±10km, n18, σ1°36/33, 11C-7D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DZA	**Taraz** 62nm,0.1s	**0.69**	**30**	*eP*		**Pn**	**05 56 13.3**	**+0.3**
DZA				*eS*		**Sn**	**05 56 23.5**	**+0.1**
	232nm,0.3s							
TRKS	**Terek-Say**	**0.79**	**165**	⇓*eP*		**Pn**	**05 56 13.9**	**-0.6**
TRKS				⇓*eS*		**Sn**	**05 56 24.2**	**-1.9**
**KK31

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAT1	**Susitna Watana**	**0.22**	**241**		**Pn**	**06 35 13.9**	**-0.3**
WAT1					**Sn**	**06 35 21.0**	**-0.3**
WAT7	**Susitna Watana**	**0.35**	**253**		**Pn**	**06 35 14.7**	**-0.4**
WAT7					**Sn**	**06 35 22.8**	**-0.2**
DHY	**Denali Highway**	**0.37**	**68**		**Pn**	**06 35 15.3**	**-0.1**
DHY	**Denali Highway**	**0.37**	**68**		**Sn**	**06 35 23.5**	**+0.1**
WAT6	**Susitna Watana**	**0.40**	**154**		**Pn**	**06 35 14.8**	**-0.8**
WAT6					**Sn**	**06 35 22.6**	**-1.2**
RND	**Reindeer**	**0.57**	**325**		**Pn**	**06 35 17.6**	**+0.3**
RND				IAML		06 35 27.6	
	comp=N,2μm,0.4s						
RND	**Reindeer**	**0.57**	**325**		**Sn**	**06 35 27.1**	**+0.4**
MCK	**McKinley**	**0.88**	**336**		**Pn**	**06 35 21.5**	**+0.7**
MCK				IAML		06 35 34.9	
	comp=E,852nm,0.8s						
MCK				IAML		06 35 35.0	
	comp=N,840nm,1.0s						
MCK	**McKinley**	**0.88**	**336**		**Sn**	**06 35 34.0**	**+1.0**
TRF	**Thorofare Moun**	**1.11**	**299**		**Pn**	**06 35 24.3**	**+0.4**
TRF				IAML		06 35 40.2	
	comp=N,699nm,0.5s						
TRF				IAML		06 35 40.2	
	comp=E,926nm,0.7s						
TRF	**Thorofare Moun**	**1.11**	**299**		**Sn**	**06 35 39.4**	**+0.9**
CUT	**Chulitna**	**1.12**	**243**		**Pn**	**06 35 23.9**	**-0.1**
CUT	**Chulitna**	**1.12**	**243**		**Sn**	**06 35 39.0**	**+0.4**
SML	**Sawmill**	**1.14**	**185**		**Sn**	**06 35 38.3**	**-0.8**
SML	**Sawmill**	**1.14**	**185**		**Pn**	**06 35 23.7**	**-0.5**
SML				IAML		06 35 39.5	
	comp=N,505nm,0.5s						
SML				IAML		06 35 39.9	
	comp=E,657nm,0.6s						
M23K	**Glacier View**	**1.17**	**171**		**Sn**	**06 35 39.9**	**+0.2**
SCM	**Sheep Creek Mo**	**1.17**	**161**		**Pn**	**06 35 24.1**	**-0.6**
SCM				IAML		06 35 41.4	
	comp=E,898nm,0.7s						
SCM	**Sheep Creek Mo**	**1.17**	**161**		**Sn**	**06 35 40.9**	**+1.0**
PAX	**Paxson**	**1.21**	**87**		**Pn**	**06 35 25.5**	**+0.2**
PAX				IAML		06 35 43.2	
	comp=N,411nm,0.7s						
GHO	**Glory Hole Cre**	**1.23**	**198**		**Pn**	**06 35 25.1**	**-0.3**
GHO				IAML		06 35 41.7	
	comp=E,599nm,0.7s						
GHO				IAML		06 35 45.9	
	comp=N,455nm,0.8s						
M24K	**Tolsona, Glenn**	**1.23**	**132**		**Pn**	**06 35 25.7**	**+0.2**
M24K	**Tolsona, Glenn**	**1.23**	**132**		**Sn**	**06 35 42.9**	**+1.6**
K24K	**Donnelly Dome**	**1.37**	**50**		**Pn**	**06 35 29.4**	**+2.1**
K24K				IAML		06 35 51.1	
	comp=N,678nm,0.6s						
KTH	**Kantishna Hill**	**1.41**	**297**		**Pn**	**06 35 28.7**	**+0.9**
KTH				IAML		06 35 47.6	
	comp=N,775nm,0.7s						
KTH				IAML		06 35 47.9	
	comp=E,686nm,0.5s						
KTH	**Kantishna Hill**	**1.41**	**297**		**Sn**	**06 35 46.8**	**+1.3**
PMR	**Palmer**	**1.43**	**200**		**Pn**	**06 35 28.1**	**+0.1**
PMR				IAML		06 35 46.7	
	comp=N,278nm,0.3s						
PMR				IAML		06 35 48.9	
	comp=E,400nm,0.6s						
PMR	**Palmer**	**1.43**	**200**		**Sn**	**06 35 45.8**	**-0.1**
HARP	**HAARP**	**1.47**	**110**		**Pn**	**06 35 29.6**	**+1.0**
M22K	**Willow**	**1.51**	**219**		**Pn**	**06 35 30.1**	**+1.0**
M22K				IAML		06 35 57.9	
	comp=E,692nm,0.7s						
M22K	**Willow**	**1.51**	**219**		**Sn**	**06 35 48.9**	**+1.2**
KNK	**Knik Glacier**	**1.54**	**186**		**Pn**	**06 35 30.4**	**+0.9**
WRH	**Wood River Hil**	**1.54**	**1**		**Pn**	**06 35 29.9**	**+0.4**
HDA	**Harding Lake**	**1.57**	**19**		**Pn**	**06 35 30.6**	**+0.8**
HDA				IAML		06 35 50.8	
	comp=N,219nm,0.5s						
HDA	**Harding Lake**	**1.57**	**19**		**Sn**	**06 35 49.2**	**0.0**
RIDG	**Independent Ri**	**1.68**	**60**		**Pn**	**06 35 33.1**	**+1.6**
RIDG				IAML		06 35 55.5	
	comp=E,336nm,0.9s						
NEA2	**Nenana**	**1.71**	**346**		**Pn**	**06 35 31.8**	**0.0**
CCB	**Clear Creek Bu**	**1.72**	**5**		**Pn**	**06 35 32.3**	**+0.4**
CCB	**Clear Creek Bu**	**1.72**	**5**		**Sn**	**06 35 52.2**	**-0.7**
BPAW	**Bear Paw Mtn.**	**1.73**	**314**		**Pn**	**06 35 32.4**	**+0.2**
KLU	**Klutina**	**1.78**	**144**		**Pn**	**06 35 33.4**	**+0.5**
SKT	**Skwentna**	**1.85**	**240**		**Pn**	**06 35 34.2**	**+0.4**
PPLA	**Purkeypile**	**1.86**	**271**		**Pn**	**06 35 34.3**	**+0.4**
PPLA				IAML		06 35 58.9	
	comp=N,205nm,0.7s						
PPLA				IAML		06 36 03.7	
	comp=E,221nm,0.5s						
ILAR	**Eielson Array**	**1.92**	**16**	P	**Pn**	**06 35 34.8**	**+0.1**
	comp=E,16nm,0.3s,baz=198,slow=14,SNR=368						
ILAR				S	**Sn**	**06 35 56.5**	**-1.2**
	comp=E,62nm,0.6s,baz=198,slow=23,SNR=46						
ILAR	**Eielson Array**	**1.92**	**16**		**Pn**	**06 35 35.2**	**+0.6**
SUA	**Susitna One**	**1.92**	**221**		**Pn**	**06 35 35.6**	**+0.8**
SUA				IAML		06 36 04.6	
	comp=E,409nm,0.5s						
SUA				IAML		06 36 05.3	
	comp=N,257nm,0.7s						
COLA	**College**	**1.95**	**3**		**Pn**	**06 35 35.5**	**+0.5**
COLA				IAML		06 35 58.7	
	comp=N,392nm,0.5s						
COLA	**College**	**1.95**	**3**		**Sn**	**06 35 57.5**	**-0.9**
DOT	**Dot Lake**	**1.97**	**67**		**Pn**	**06 35 36.1**	**+0.8**
RC01	**Rabbit Creek A**	**2.00**	**203**		**Pn**	**06 35 37.6**	**+1.7**
WACK	**Wrangell Chich**	**2.01**	**117**		**Pn**	**06 35 36.5**	**+0.5**
MENT	**Mentasta**	**2.02**	**88**		**Pn**	**06 35 37.2**	**+1.2**
MENT				IAML		06 36 03.2	
	comp=N,353nm,0.8s						
MENT				IAML		06 36 04.8	
	comp=E,291nm,0.8s						
J25K	**Salcha River,**	**2.08**	**35**	IAML		06 36 04.5	
	comp=E,202nm,0.7s						
J25K				IAML		06 36 05.9	
	comp=N,135nm,0.5s						
CHUM	**Lake Minchumin**	**2.11**	**299**		**Pn**	**06 35 37.5**	**+0.3**
GLI	**Glacier Island**	**2.12**	**166**		**Pn**	**06 35 38.6**	**+1.2**
N25K	**Chitina, Valde**	**2.12**	**127**		**Pn**	**06 35 37.9**	**+0.4**
N25K	**Chitina, Valde**	**2.12**	**127**	IAML		06 36 05.2	
	comp=N,180nm,0.8s						
N25K				IAML		06 36 07.7	
	comp=E,220nm,0.6s						
DIV	**Divide**	**2.13**	**148**		**Sn**	**06 36 02.9**	**0.0**
DIV	**Divide**	**2.13**	**148**	IAML		06 36 08.7	
	comp=E,358nm,0.6s						
DIV				IAML		06 36 10.4	
	comp=N,512nm,0.4s						
SCRK	**Sand Creek**	**2.13**	**59**		**Pn**	**06 35 38.4**	**+0.7**
SCRK				IAML		06 36 04.4	
	comp=E,161nm,0.6s						
SCRK				IAML		06 36 04.4	
	comp=N,146nm,0.7s						
L26K	**Log Cabin Wild**	**2.18**	**86**		**Pn**	**06 35 39.5**	**+1.3**
L26K				IAML		06 36 08.4	
	comp=N,184nm,0.4s						
L26K				IAML		06 36 08.5	
	comp=E,214nm,0.4s						
I23K	**Minto, Yukon-K**	**2.28**	**347**		**Pn**	**06 35 40.1**	**+0.5**
I23K				IAML		06 36 22.3	
	comp=N,105nm,0.7s						
MLY	**Manley**	**2.40**	**332**		**Pn**	**06 35 41.7**	**+0.5**
MLY				IAML		06 36 09.9	
	comp=N,115nm,0.7s						
M26K	**Nabesna, AK**	**2.43**	**101**		**Pn**	**06 35 41.8**	**+0.2**
M26K	**Nabesna, AK**	**2.43**	**101**	IAML		06 36 22.4	
	comp=N,154nm,0.5s						
M26K				IAML		06 36 23.3	
	comp=E,156nm,0.5s						
GLB	**Gilahina Butte**	**2.52**	**125**		**Pn**	**06 35 43.5**	**+0.6**
GLB				IAML		06 36 21.2	
	comp=E,117nm,0.8s						
GLB				IAML		06 36 26.7	
	comp=N,133nm,0.8s						
SPU	**Mount Spurr**	**2.56**	**228**		**Pn**	**06 35 45.9**	**+2.5**
M20K	**Styx River**	**2.56**	**248**		**Pn**	**06 35 43.7**	**+0.3**
M20K	**Styx River**	**2.56**	**248**	IAML		06 36 17.8	
	comp=E,206nm,0.3s						
M20K				IAML		06 36 18.7	
	comp=N,225nm,0.5s						
J26L	**Joseph Creek**	**2.56**	**50**	IAML		06 36 15.3	
	comp=N,80nm,0.9s						
J26L				IAML		06 36 15.3	
	comp=E,109nm,0.8s						
SPCN	**Chakachatna No**	**2.57**	**230**		**Pn**	**06 35 45.3**	**+1.8**
BMRM	**Bremner River**	**2.58**	**138**		**Pn**	**06 35 44.7**	**+0.9**
SLKM	**Skilak Lake**	**2.64**	**203**		**Pn**	**06 35 45.9**	**+1.5**
EYAK	**Cordova Ski Ar**	**2.65**	**154**		**Pn**	**06 35 45.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**2.65**	**154**	IAML		06 36 26.0	
	comp=E,172nm,0.4s						
SPNN	**North Nagishla**	**2.66**	**236**		**Pn**	**06 35 46.0**	**+1.1**
HIN	**Hinchinbrook I**	**2.67**	**162**		**Pn**	**06 35 45.2**	**+0.4**
SPWE	**Spurr West**	**2.67**	**233**		**Pn**	**06 35 46.7**	**+1.8**
K20K	**Telida**	**2.73**	**281**		**Pn**	**06 35 45.6**	**0.0**
K20K	**Telida**	**2.73**	**281**	IAML		06 36 17.5	
	comp=E,88nm,0.4s						
VRDI	**Verde Repeater**	**2.79**	**126**		**Pn**	**06 35 46.9**	**+0.3**
VRDI	**Verde Repeater**	**2.79**	**126**	IAML		06 36 30.2	
	comp=N,87nm,0.6s						
PRP	**Porcupine Dome**	**2.83**	**23**		**Pn**	**06 35 48.1**	**+1.0**
PRP				IAML		06 36 22.2	
	comp=E,99nm,0.7s						
PRP				IAML		06 36 23.2	
	comp=N,80nm,0.5s						
MCARA	**McCarthy VSAT**	**2.86**	**121**		**Pn**	**06 35 48.8**	**+1.4**
MCARA				IAML		06 36 36.2	
	comp=E,144nm,0.8s						
MCARA				IAML		06 36 46.1	
	comp=N,163nm,0.8s						
GOAT	**Goat Mountain**	**2.87**	**144**		**Pn**	**06 35 47.3**	**-0.3**
BCAR	**Beaver Creek A**	**2.90**	**85**		**Pn**	**06 35 48.4**	**+0.4**
H24K	**Noodor Dome**	**2.91**	**2**		**Pn**	**06 35 48.9**	**+0.7**
SEW	**Seward**	**2.92**	**193**		**Pn**	**06 35 50.0**	**+1.9**
SEW				IAML		06 36 33.8	
	comp=N,132nm,0.7s						
M27K	**Edge Creek, AK**	**2.94**	**99**		**Pn**	**06 35 49.9**	**+1.2**
M27K				IAML		06 36 41.3	
	comp=N,73nm,1.0s						
J20K	**Nowinta River**	**2.97**	**297**		**Pn**	**06 35 49.2**	**+0.3**
J20K	**Nowinta River**	**2.97**	**297**	IAML		06 36 28.8	
	comp=N,96nm,0.6s						
J20K				IAML		06 36 29.2	
	comp=E,82nm,0.8s						
M19K	**Big River Lodg**	**3.09**	**253**		**Pn**	**06 35 50.6**	**-0.1**
M19K	**Big River Lodg**	**3.09**	**253**	IAML		06 36 34.7	
	comp=N,106nm,0.3s						
M19K				IAML		06 36 35.1	
	comp=E,84nm,0.5s						
RDT	**Redoubt**	**3.13**	**223**		**Pn**	**06 35 52.5**	**+1.3**
PTPK	**Patty Peak**	**3.19**	**121**		**Pn**	**06 35 53.0**	**+0.9**
DFR	**Drift River**	**3.20**	**225**		**Pn**	**06 35 53.6**	**+1.5**
L19K	**White Mountain**	**3.21**	**259**		**Pn**	**06 35 52.4**	**+0.2**
L19K				IAML		06 36 32.6	
	comp=N,85nm,0.9s						
CRQM	**Cirque**	**3.22**	**131**		**Pn**	**06 35 52.8**	**+0.2**
H22K	**Ishtalitna Cre**	**3.29**	**336**		**Pn**	**06 35 54.1**	**+0.9**
NCT	**North Crescent**	**3.30**	**226**		**Pn**	**06 35 55.2**	**+1.6**
BALM	**Baldy**	**3.33**	**122**		**Pn**	**06 35 54.2**	**+0.3**
RDWB	**Redoubt West**	**3.33**	**224**		**Pn**	**06 35 55.8**	**+1.9**
I20K	**Naaghedeneel**	**3.37**	**306**		**Pn**	**06 35 55.0**	**+0.7**
I20K	**Naaghedeneel**	**3.37**	**306**	IAML		06 36 57.0	
	comp=N,126nm,0.8s						
KIAG	**Kiagna River**	**3.39**	**124**		**Pn**	**06 35 54.5**	**-0.3**
H21K	**Meliozitna Rive**	**3.41**	**325**	IAML		06 36 38.1	
	comp=E,40nm,0.8s						
BRSE	**Bradley Lake S**	**3.45**	**203**		**Pn**	**06 35 56.4**	**+0.9**
J19K	**Poorman**	**3.53**	**291**		**Pn**	**06 35 57.0**	**+0.4**
J19K	**Poorman**	**3.53**	**291**	IAML		06 36 37.8	
	comp=N,83nm,0.4s						
WAX	**Waxell Ridge**	**3.54**	**132**		**Pn**	**06 35 57.1**	**+0.3**
BARN	**Barnard Glacie**	**3.58**	**119**		**Pn**	**06 35 58.7**	**+1.2**
BARN				IAML		06 36 52.1	
	comp=N,63nm,0.8s						
BARN				IAML		06 36 54.7	
	comp=E,48nm,0.6s						
ISLE	**Juniper Island**	**3.61**	**128**		**Pn**	**06 35 58.1**	**+0.3**
N19K	**Bonanza Creek**	**3.69**	**238**		**Pn**	**06 35 59.6**	**+0.7**
N19K	**Bonanza Creek**	**3.69**	**238**	IAML		06 37 01.4	
	comp=N,50nm,1.5s						
N19K				IAML		06 37 02.2	
	comp=E,34nm,0.8s						
BARK	**Barkley Ridge**	**3.70**	**131**		**Pn**	**06 35 59.1**	**+0.1**
CNPM	**China Poot**	**3.74**	**205**		**Pn**	**06 36 00.4**	**+0.9**
CNPM	**China Poot**	**3.74**	**205**	IAML		06 36 54.9	
	comp=N,86nm,0.8s						
GRNC	**Granite Creek**	**3.75**	**123**		**Pn**	**06 35 59.4**	**-0.3**
GRNC				IAML		06 37 00.1	
	comp=N,49nm,1.0s						
GRNC				IAML		06 37 07.0	
	comp=E,37nm,0.7s						
SNH	**Sunshine Point**	**3.75**	**135**		**Pn**	**06 36 00.3**	**+0.7**
SNH	**Sunshine Point**	**3.75**	**135**	IAML		06 37 01.4	
	comp=E,91nm,1.2s						
IVE	**Iliamna Volcan**	**3.75**	**221**		**Pn**	**06 36 01.6**	**+1.9**
YUK3	**Moose Creek**	**3.76**	**105**		**Pn**	**06 36 00.8**	**+0.9**
BAGL	**Bagley Icefiel**	**3.78**	**128**		**Pn**	**06 35 59.5**	**-0.4**
G24K	**Hadweenzic Riv**	**3.79**	**4**		**Pn**	**06 36 00.7**	**+0.6**
ILSW	**Iliamna Southw**	**3.82**	**221**		**Pn**	**06 36 03.0**	**+2.4**
ILSW	**Iliamna Southw**	**3.82**	**221**	IAML		06 37 00.8	
	comp=E,45nm,1.5s						
ILSW				IAML		06 37 09.4	
	comp=N,38nm,0.8s						
FYU	**Fort Yukon**	**3.85**	**18**		**Pn**	**06 36 01.9**	**+1.0**
FYU				IAML		06 36 47.8	
	comp=E,36nm,1.4s						
FYU				IAML		06 37 08.4	
	comp=N,31nm,1.3s						
G23K	**Bananza Creek**	**3.87**	**349**		**Pn**	**06 36 01.9**	**+0.6**
M18K	**Stony River**	**3.89**	**251**		**Pn**	**06 36 01.5**	**+0.1**
I27K	**Kandik River**	**3.90**	**44**		**Pn**	**06 36 02.6**	**+1.0**
I27K	**Kandik River**	**3.90**	**44**	IAML		06 37 05.7	
	comp=E,40nm,0.8s						
I27K				IAML		06 37 07.9	
	comp=N,27nm,1.1s						
H20K	**Anotleneega Mo**	**3.91**	**314**		**Pn**	**06 36 02.4**	**+0.7**
J18K	**Innoko River**	**3.93**	**282**		**Pn**	**06 36 02.2**	**+0.2**
J18K	**Innoko River**	**3.93**	**282**	IAML		06 36 51.9	
	comp=E,58nm,0.8s						
J18K				IAML		06 36 52.5	
	comp=N,36nm,0.7s						
IM02	**Indian Mountai**	**3.93**	**324**		**Pn**	**06 36 02.7**	**+0.6**
LOGN	**Logan Glacier**	**3.98**	**119**		**Pn**	**06 36 05.0**	**+2.0**
LOGN				IAML		06 37 07.2	
	comp=N,38nm,0.6s						
LOGN				IAML		06 37 09.2	
	comp=E,39nm,1.4s						
L18K	**Granite Mounta**	**4.03**	**263**		**Pn**	**06 36 03.2**	**-0.2**
L18K	**Granite Mounta**	**4.03**	**263**	IAML		06 36 53.5	
	comp=E,24nm,1.1s						
O19K	**Port Alsworth**	**4.04**	**230**		**Pn**	**06 36 05.2**	**+1.6**
MESA	**MESA**	**4.05**	**130**		**Pn**	**06 36 03.5**	**-0.3**
TABL	**Table Mountain**	**4.16**	**124**		**Pn**	**06 36 05.2**	**-0.2**
TABL	**Table Mountain**	**4.16**	**124**	IAML		06 37 09.5	
	comp=E,42nm,1.2s						
TABL				IAML		06 37 19.4	
	comp=N,48nm,1.1s						
YUK8	**Steele Glacier**	**4.26**	**109**		**Pn**	**06 36 08.4**	**+1.6**
G21K	**Allakaket**	**4.27**	**330**		**Pn**	**06 36 07.2**	**+0.6**
GCSA	**Galena City Sc**	**4.28**	**299**		**Pn**	**06 36 08.9**	**+2.1**
N18K	**Kilae Creek**	**4.32**	**242**		**Pn**	**06 36 07.3**	**-0.2**
N18K				IAML		06 37 19.8	
	comp=N,24nm,1.5s						
N18K				IAML		06 37 31.2	
	comp=E,27nm,0.8s						
H27K	**Steamboat Moun**	**4.36**	**38**		**Pn**	**06 36 08.6**	**+0.6**
H27K	**Steamboat Moun**	**4.36**	**38**	IAML		06 37 00.5	
	comp=N,28nm,0.6s						
I28M	**Miner Creek**	**4.38**	**51**		**Pn**	**06 36 09.4**	**+1.2**
I28M	**Miner Creek**	**4.38**	**51**	IAML		06 37 28.6	
	comp=E,27nm,0.8s						
I28M				IAML		06 37 33.5	
	comp=N,19nm,1.0s						
COLD	**Coldfoot**	**4.40**	**349**		**Pn**	**06 36 09.6**	**+1.2**
G26K	**Porcupine Rive**	**4.43**	**23**		**Pn**	**06 36 09.3**	**+0.5**
G26K	**Porcupine Rive**	**4.43**	**23**	IAML		06 37 15.4	
	comp=N,27nm,1.3s						
G26K				IAML		06 37 20.5	
	comp=E,18nm,0.9s						
M29M	**Somme Creek**	**4.48**	**92**		**Pn**	**06 36 10.1**	**+0.4**
L29M	**L29M**	**4.56**	**83**		**Pn**	**06 36 11.0**	**+0.3**
L29M	**L29M**	**4.56**	**83**	IAML		06 37 32.2	
	comp=E,26nm,1.0s						
L29M				IAML		06 37 46.6	
	comp=N,27nm,0.7s						
M17K	**Holitna River**	**4.63**	**255**		**Pn**	**06 36 11.3**	**-0.3**
M17K	**Holitna River**	**4.63**	**255**	IAML		06 37 08.7	
	comp=E,43nm,1.1s						
M17K				IAML		06 37 37.6	
	comp=N,43nm,1.0s						
J29N	**Klondike Camp**	**4.66**	**67**		**Pn**	**06 36 12.8**	**+0.7**
K17K	**Iditarod**	**4.67**	**272**		**Pn**	**06 36 12.2**	**+0.1**
K17K	**Iditarod**	**4.67**	**272**	IAML		06 37 13.5	
	comp=N,30nm,0.8s						
PCA	**Pinnacle**	**4.72**	**124**	Pn	**Pn**	**06 36 13.9**	**+1.0**
BMAR	**Burnt Mountain**	**4.75**	**17**		**Pn**	**06 36 14.3**	**+1.0**
L17K	**Donlin**	**4.78**	**265**		**Pn**	**06 36 13.6**	**0.0**
F25K	**Christian Rive**	**4.79**	**11**		**Pn**	**06 36 14.6**	**+0.8**
K29M	**Barlow Dome**	**4.86**	**75**		**Pn**	**06 36 15.2**	**+0.4**
K29M	**Barlow Dome**	**4.86**	**75**	IAML		06 37 39.8	
	comp=N,16nm,0.9s						
I29M	**Ogilvie Camp,**	**4.94**	**56**		**Pn**	**06 36 16.6**	**+0.7**
I29M				IAML		06 37 13.6	
	comp=N,15nm,0.5s						
I29M				IAML		06 37 14.0	
	comp=E,17nm,0.5s						
N17K	**Nushagak Hills**	**4.94**	**245**		**Pn**	**06 36 16.0**	**+0.2**
N17K	**Nushagak Hills**	**4.94**	**245**	IAML		06 37 40.7	
	comp=E,16nm,1.2s						
N17K				IAML		06 37 50.9	
	comp=N,21nm,1.4s						
J17K	**VABM Dome**	**4.99**	**280**		**Pn**	**06 36 16.5**	**+0.1**
J17K	**VABM Dome**	**4.99**	**280**	IAML		06 37 16.3	
	comp=E,16nm,1.0s						
J17K				IAML		06 37 29.6	
	comp=N,27nm,0.8s						
H18K	**Honhosa River**	**5.02**	**301**		**Pn**	**06 36 17.6**	**+0.7**
H18K	**Honhosa River**	**5.02**	**301**	IAML		06 37 18.1	
	comp=E,12nm,0.9s						
BCPM	**Bancas Point**	**5.05**	**123**		**Pn**	**06 36 17.5**	**+0.1**
F26K	**Sheenjek River**	**5.06**	**17**		**Pn**	**06 36 18.3**	**+0.8**
E24K	**Your Creek**	**5.16**	**358**		**Pn**	**06 36 19.9**	**+1.0**
M30M	**Minto, Yukon**	**5.22**	**89**	IAML		06 37 54.1	
	comp=N,15nm,1.3s						
F20K	**Avaraart Lake**	**5.23**	**325**		**Pn**	**06 36 21.3**	**+1.5**
F20K	**Avaraart Lake**	**5.23**	**325**	IAML		06 37 20.8	
	comp=E,12nm,0.8s						
O17K	**Koliganek Bris**	**5.36**	**238**		**Pn**	**06 36 22.1**	**+0.6**
L16K	**Owhat River**	**5.43**	**262**		**Pn**	**06 36 22.6**	**+0.1**
G18K	**Tagagawik**	**5.44**	**308**		**Pn**	**06 36 23.8**	**+1.2**
HYT	**Haines Junctio**	**5.45**	**108**	Pn	**Pn**	**06 36 24.0**	**+1.0**
M16K	**Timber Creek**	**5.46**	**254**		**Pn**	**06 36 22.6**	**-0.3**
H17K	**Granite Mounta**	**5.57**	**296**		**Pn**	**06 36 25.4**	**+1.0**
KDAK	**Kodiak Island**	**5.62**	**205**	P	**Pn**	**06 36 24.4**	**-0.8**
	comp=E,0.3nm,0.3s,baz=56,slow=3.3,SNR=16						
KDAK				S	**Sn**	**06 37 25.1**	**-3.3**
	comp=E,15nm,0.8s,baz=236,slow=11,SNR=6.1						
	comp=E,17nm,1.0s						
N16K	**Nishlik Lake**	**5.63**	**249**		**Pn**	**06 36 25.5**	**+0.1**
I30M	**Mount Dempster**	**5.64**	**61**		**Pn**	**06 36 26.2**	**+0.7**
F19K	**Shaleruckik Mo**	**5.67**	**318**		**Pn**	**06 36 26.6**	**+0.8**
J16K	**Anvik River**	**5.67**	**279**		**Pn**	**06 36 25.9**	**0.0**
I17K	**Unalakleet**	**5.73**	**285**		**Pn**	**06 36 27.7**	**+1.1**
F28M	**Old Crow**	**5.83**	**33**		**Pn**	**06 36 29.2**	**+1.2**
E19K	**Redstone River**	**5.93**	**324**		**Pn**	**06 36 31.1**	**+1.7**
N31M	**Braeburn, Yuko**	**5.96**	**99**		**Pn**	**06 36 30.5**	**+0.7**
G17K	**Kiwalik Mounta**	**6.04**	**301**		**Pn**	**06 36 31.5**	**+0.7**
P30M	**Million Dollar**	**6.04**	**113**		**Pn**	**06 36 32.0**	**+1.1**
O30N	**Mendenhall**	**6.10**	**105**		**Pn**	**06 36 31.9**	**+0.2**
F18K	**Selawik**	**6.14**	**312**		**Pn**	**06 36 33.3**	**+1.1**
N15K	**Kwethluk River**	**6.36**	**249**		**Pn**	**06 36 35.4**	**+0.2**
H16K	**Elim**	**6.48**	**291**		**Pn**	**06 36 38.0**	**+1.1**
WHY	**Whitehorse**	**6.68**	**104**	Pn	**Pn**	**06 36 41.1**	**+1.4**
G16K	**Koyuk River**	**6.69**	**298**		**Pn**	**06 36 40.5**	**+0.8**
E29M	**Blow River**	**6.91**	**33**		**Pn**	**06 36 43.6**	**+1.0**
C27K	**Jago River**	**6.95**	**13**		**Pn**	**06 36 45.4**	**+2.1**
L14K	**Kuka Creek**	**7.01**	**263**		**Pn**	**06 36 45.2**	**+1.1**
J14K	**Nanvaranak Lak**	**7.07**	**275**		**Pn**	**06 36 45.2**	**+0.3**
E17K	**Hotham Inlet**	**7.13**	**312**		**Pn**	**06 36 47.4**	**+1.6**
N32M	**Quiet Lake**	**7.29**	**97**		**Pn**	**06 36 48.8**	**+0.7**
G15K	**Niukluk**	**7.30**	**293**		**Pn**	**06 36 48.9**	**+0.9**
O14K	**Tigyukauivet M**	**7.36**	**246**		**Pn**	**06 36 49.5**	**+0.7**
F15K	**North Star Dit**	**7.69**	**298**		**Pn**	**06 36 54.2**	**+0.8**
P33M	**Teslin, Yukon**	**7.80**	**104**	Pn	**Pn**	**06 36 55.1**	**+0.1**
ANM	**Nome**	**7.81**	**290**		**Pn**	**06 36 56.3**	**+1.2**
INK	**Inuvik**	**8.07**	**42**	P	**Pn**	**06 36 59.2**	**+0.6**
	comp=E,0.2nm,0.3s,baz=239,slow=14,SNR=9.3						
INK				S	**Sn**	**06 38 25.3**	**-3.0**
	comp=E,2.2nm,0.6s,baz=300,slow=16,SNR=7.0						
	comp=E,0.4nm,0.4s						
INK	**Inuvik**	**8.07**	**42**	Pn	**Pn**	**06 37 00.6**	**+2.0**
SIT	**Sitka**	**8.70**	**127**	Pn	**Pn**	**06 37 07.3**	**0.0**
TNA	**Tin City**	**9.00**	**296**	Pn	**Pn**	**06 37 13.1**	**+1.9**
YKA	**Yellowknife Ar**	**15.28**	**77**	P	**Pn**	**06 38 36.1**	**+0.3**
	comp=E,0.2nm,0.3s,baz=290,slow=11,SNR=16						
	comp=E,0.3nm,0.6s						
MA2	**Magadan**	**28.60**	**291**	LR	LR	06 52 11.6	
	comp=E,45nm,20.6s,baz=237,slow=36						

J05D	**Fort Rock, OR**	**78.26**	**39**	P	**P**	**06 48 43.1**	**+2.4**
STLK	**Strandline Lak**	**79.34**	**13**	P	**P**	**06 48 47.7**	**+1.8**
STLK				IAmb	IAmb	06 49 09.8	
	comp=Z,7.1nm,1.5s						
J16K	**Anvik River**	**79.48**	**8**	P	P	06 48 50.6	+4.1
J16K				IAmb	IAmb	06 49 31.8	
	comp=Z,9.1nm,1.5s						
WAX	**Waxell Ridge**	**80.65**	**17**	P	P	06 48 55.5	+2.6
N25K	**Chitina, Valde**	**81.14**	**16**	P	P	06 48 58.0	+2.6
N25K				IAmb	IAmb	06 49 36.2	
	comp=Z,15nm,1.4s						
TRF	**Thorofare Moun**	**81.41**	**12**	P	**P**	**06 48 58.8**	**+2.0**
TRF				IAmb	IAmb	06 49 19.4	
	comp=Z,13nm,1.4s						
CCB	**Clear Creek Bu**	**82.99**	**13**	P	P	06 49 07.3	+2.7
CCB				IAmb	IAmb	06 49 07.7	
	comp=Z,3.4nm,0.7s						
ILAR	**Eielson Array**	**83.29**	**13**	P	P	06 49 08.7	+2.5
	comp=Z,1.1nm,0.5s,baz=231,slow=5.5,SNR=32						
	comp=Z,1.1nm,0.5s						
TXAR	**Lajitas Array**	**84.60**	**58**	P	P	06 49 18.0	+4.3
	comp=Z,0.5nm,0.7s,baz=224,slow=6.0,SNR=5.3						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**84.60**	**58**	P	P	06 49 16.8	+3.1
PDAR	**Pinedale Array**	**85.44**	**44**	P	P	06 49 21.1	+3.4
	comp=Z,0.7nm,0.6s,baz=214,slow=3.2,SNR=9.5						
	comp=Z,0.7nm,0.6s						
BVAR	**Borovoye Array**	**114.73**	**322**	PKiKP	**PKiKP**	**06 55 16.9**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=27,slow=3.5,SNR=2.6						
BRTR	**Keskin Array B**	**142.83**	**317**	PKP	**PKiKP**	**06 56 10.3**	**-3.1**
	comp=Z,0.9nm,0.8s,baz=169,slow=1.3,SNR=4.4						
MMAI	**Mount Meron Ar**	**144.59**	**306**	PKP	**PKiKP**	**06 56 16.9**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=37,slow=5.7,SNR=5.0						
GERES	**GERESS Array B**	**145.01**	**346**	PKP	**PKiKP**	**06 56 16.6**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=48,slow=1.5,SNR=3.4						

RSNC 12 07:16:42.1±0.0, 2°N±3°×8°0W±°, h4km±3km, M2.9, mb3.7, ML2.4, MLv3.3, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GR1C	**Gorgona, Isla**	**1.47**	**68**	P	Pn	07 17 06.2	-3.2
GR1C				S	Sn	07 17 29.3	+0.2
CMBC	**Cumbal**	**2.26**	**131**	P	Pn	07 17 19.1	-1.6
PAC1	**Pacto, Paraso**	**2.28**	**161**	P	Pn	07 17 18.6	-2.1
PAC1				S	Sn	07 17 49.0	-0.4
BBAC	**Balboa, Cauca**	**2.32**	**100**	P	Pn	07 17 19.2	-2.1
BBAC				S	Sn	07 17 48.5	-1.9
CUSE	**Cuicocha Este**	**2.40**	**152**	P	Pn	07 17 21.0	-1.6
OTAV	**Otavalo**	**2.44**	**154**	P	Pn	07 17 22.3	-0.9
OTAV				S	Sn	07 17 52.9	-0.8
GCUF	**Volcan Galeras**	**2.50**	**119**	P	Pn	07 17 22.6	-1.4
CRUC	**La Cruz**	**2.72**	**109**	P	Pn	07 17 26.0	-0.9
CRUC				S	Sn	07 17 59.9	-0.6
POPC	**Popayan, Colom**	**2.85**	**88**	P	Pn	07 17 27.0	-1.7
POPC				S	Sn	07 18 01.6	-2.0
JAMC	**Jamundi, Valle**	**2.96**	**75**	P	Pn	07 17 27.3	-2.8
YOTC	**Yotoco, Valle**	**3.53**	**64**	P	Pn	07 17 34.8	-3.1
FLOC	**Florencia**	**3.97**	**102**	P	Pn	07 17 43.7	-0.1
GARC	**Garzon, Huila**	**4.04**	**93**	P	Pn	07 17 46.0	+1.0
ORTC	**Ortega, Tolima**	**4.52**	**71**	P	Pn	07 17 51.4	0.0
PRAC	**Prado**	**4.81**	**75**	P	Pn	07 17 54.0	-1.4
CBOC	**Ciudad Bolivar**	**4.89**	**46**	P	Pn	07 17 50.9	-5.7
URMC	**La Uribe, Meta**	**5.21**	**81**	P	Pn	07 18 00.9	0.0
	0.0nm3.8nm,0.4s						
MACC	**Macarena, Meta**	**5.69**	**93**	P	Pn	07 18 07.9	+0.5
CVER	**Cruz Verde, Cu**	**5.83**	**69**	P	Pn	07 18 09.6	-0.2
VILC	**Villavicencio,**	**6.06**	**74**	P	Pn	07 18 14.0	+1.3
CHIC	**Chingaza**	**6.18**	**69**	P	Pn	07 18 14.4	-0.2
	26nm,0.6s						
SPBC	**San Pablo de B**	**6.31**	**59**	P	Pn	07 18 15.1	-1.0
	3.4nm,0.7s						
PTBC	**PUERTO BERRIO,**	**6.49**	**51**	P	Pn	07 18 16.1	-2.4
	4.5nm,1.5s						
RUSC	**La Rusia**	**7.29**	**62**	P	Pn	07 18 29.4	-0.5

*ASRS **12** 07:26:53.0±0.9, 53°.78N×91°.08E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 12 07:27:03.4±5.3, 53°.46N×90°.32E, h0km, mbtmp2.6/3, ML2.1/3, Error ellipse: s-maj=55.9km s-min=28.2km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.30**	**281**	I	I	07 48 30.0	
	baz=94,slow=345,SNR=8.0						
ZALV	**Zalesovo Beam**	**3.30**	**281**	Pn	Pn	07 27 57.8	+1.5
	0.3nm,0.3s,baz=101,slow=13,SNR=5.3						
ZALV				Lg	Lg	07 28 48.3	
	0.3nm,0.3s,baz=101,slow=22,SNR=3.5						
	1.1nm,0.4s						
KURBB	**Kurchatov Arra**	**7.80**	**253**	Pn	Pn	07 28 57.4	-0.7
	baz=64,slow=15,SNR=2.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.43**	**221**	Pn	Pn	07 29 07.8	+1.1
	0.1nm,0.3s,baz=42,slow=14,SNR=2.4						
	0.1nm,0.4s						

*IDC **12** 07:27:05.3±1.2, 34°.23N×136°.70E, h374km±9km, mb3.1/7, mbtmp3.9/12, Error ellipse: s-maj=22.2km s-min=17.6km az=142.0*
*JMA **12** 07:27:06.1±0.2, 34°.N±1°×13°.7E±°, h375km±1km, MV3.1/38, SE OFF KII PENINSULA*
ISC 12 07:27:05.8±0.8, 34°.30N±0°.09×136°.58E±0°.09, h377km±7km, n24, σ0°.85/26, mb3.7/7, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIE	**Ise**	**0.14**	**48**	P	**Pn**	**07 27 53.0**	**+0.5**
JKN2	**Miekihoku**	**0.26**	**258**	P	**Pn**	**07 27 53.0**	**+0.2**
TTO1	**TONANKAI O.B.S**	**0.69**	**166**	*eP*	**Pn**	**07 27 53.8**	**+0.6**
JWY	**Kouya**	**0.82**	**265**	P	**Pn**	**07 27 54.3**	**+0.3**
JEG	**Eigenji**	**0.85**	**350**	*eP*	**Pn**	**07 27 54.5**	**+0.6**
JTNC	**Tanabenakahech**	**0.94**	**240**	P	**Pn**	**07 27 54.4**	**0.0**
HMMJ	**Hamamatsu 2**	**1.09**	**59**	P	**Pn**	**07 27 55.2**	**+0.4**
JAO	**Obara**	**1.12**	**30**	P	**Pn**	**07 27 55.5**	**+0.6**
JYTA	**Yamagatataniai**	**1.30**	**6**	*eP*	**Pn**	**07 27 56.3**	**+0.7**
JWT	**Wachi**	**1.38**	**316**	P	**Pn**	**07 27 56.5**	**+0.5**
JWT				S	**S**	**07 28 35.4**	**-1.2**
JNY	**Yasuok**	**1.50**	**44**	P	**Pn**	**07 27 57.0**	**+0.3**
MJAR	**Matsushiro Arr**	**2.61**	**30**	P	**Pn**	**07 28 04.4**	**+0.4**
	4.0nm,0.5s,baz=198,slow=7.6,SNR=10						
MJAR				S	**S**	**07 28 49.9**	**-1.0**
	1.9nm,0.5s,baz=290,slow=5.9,SNR=2.4						
JHJ	**Hachijo jima 2**	**2.92**	**113**	S	**S**	**07 28 56.5**	**+0.9**
	77nm,0.7s,baz=4.4,slow=13,SNR=1.5						
JNU	**Nakatsue**	**4.89**	**258**	P	**Pn**	**07 28 26.1**	**+0.4**
	19nm,0.6s,baz=88,slow=1.0,SNR=15						
KSRS	**Korea Array**	**7.70**	**297**	P	**P**	**07 28 58.5**	**+0.8**
	10nm,0.6s,baz=112,slow=12,SNR=38						
USRK	**Ussuriysk Ar.**	**10.51**	**342**	P	**Pn**	**07 29 29.3**	**-0.3**
	3.2nm,0.7s,baz=152,slow=13,SNR=5.3						
HILR	**Hailar Array B**	**19.66**	**326**	P	**P**	**07 31 09.5**	**+1.0**
	2.4nm,0.6s,baz=135,slow=11,SNR=2.1						
TIXI	**Tiksi**	**37.64**	**356**	P	**P**	**07 33 43.7**	**-1.9**
	1.3nm,0.3s,baz=138,slow=16,SNR=4.3						
	1.3nm,0.3s						
MKAR	**Makanchi Array**	**42.31**	**304**	P	**P**	**07 34 24.9**	**+0.9**
	0.3nm,0.4s,baz=89,slow=10,SNR=6.1						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**44.65**	**310**	P	**P**	**07 34 42.8**	**+0.4**
	1.0nm,0.2s,baz=82,slow=8.5,SNR=2.5						
	1.0nm,0.2s						
ILAR	**Eielson Array**	**53.89**	**31**	P	**P**	**07 35 52.1**	**+0.9**
	0.4nm,0.7s,baz=257,slow=4.8,SNR=6.9						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**53.98**	**183**	P	**P**	**07 35 50.9**	**-1.5**
	0.2nm,0.5s,baz=1.4,slow=7.3,SNR=1.7						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**69.36**	**331**	P	**P**	**07 37 34.0**	**+0.6**
	2.1nm,0.9s,baz=15,slow=3.0,SNR=4.4						
	2.1nm,0.9s						
HFS	**Hagfors**	**74.89**	**334**	P	**P**	**07 38 05.5**	**-0.3**
	2.2nm,0.8s,baz=69,slow=7.9,SNR=1.6						
	2.2nm,0.8s						

*ASRS **12** 07:29:51.0±0.7, 53°.70N×88°.11E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 12 07:29:53.3±3.8, 53°.66N×88°.06E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=35.3km s-min=19.3km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.95**	**280**	I	I	07 41 35.0	
	0.1nm,1.0s,baz=96,slow=344,SNR=14						
ZALV	**Zalesovo Beam**	**1.95**	**280**	Pg	Pn	07 30 27.6	0.0
	0.5nm,0.3s,baz=99,slow=12,SNR=8.5						
ZALV				Lg	Lg	07 30 56.0	
	1.0nm,0.3s,baz=102,slow=25,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.61**	**246**	Pn	Pn	07 31 31.8	+0.2
	baz=58,slow=12,SNR=2.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.80**	**211**	Pn	Pn	07 31 49.7	+1.6
	baz=30,slow=13,SNR=2.1						
	0.1nm,0.4s						

*IDC **12** 07:41:07.6±0.6, 18°.59N×101°.52W, h53km±4km, mb4.0/18, mbtmp4.3/19, MS3.6/14, Error ellipse: s-maj=24.5km s-min=11.6km az=64.0*
*NEIC **12** 07:41:08.9±2.7, 18°.37N±0°.04×101°.82W±0°.04, h58km±6km, mb4.2/183, Md4.7/170(MEX), Error ellipse: s-maj=7.3km s-min=3.4km az=225.0*
*MEX **12** 07:41:09.2±0.7, 18°.34N×101°.84W, h67km±4km, MD4.7*
ISC 12 07:41:07.0±0.4, 18°.34N±0°.03×101°.81W±0°.03, h54km±4km, n520, σ1s70/570, mb4.2/46, MS3.6/13, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UON	**La Union**	**0.37**	**181**	*eP*	**Pn**	**07 41 18.9**	**+1.7**
UON				*eS*	**Sn**	**07 41 27.0**	**+2.6**
ZIIG	**Zihuatanejo**	**0.80**	**156**		**Pn**	**07 41 23.6**	**+1.4**
ZIIG					**Sn**	**07 41 35.5**	**+2.1**
ZIIG	**Zihuatanejo**	**0.80**	**156**	*i* P	**Pn**	**07 41 23.6**	**+1.4**
ZIIG				*eS*	**Sn**	**07 41 35.5**	**+2.1**
PET2	**Petatlan**	**0.96**	**147**		**Pn**	**07 41 25.6**	**+1.3**
PET2					**Sn**	**07 41 38.7**	**+1.6**
PET2	**Petatlan**	**0.96**	**147**	*i* P	**Pn**	**07 41 25.6**	**+1.3**
PET2				*eS*	**Sn**	**07 41 38.7**	**+1.6**
URUA	**Uruapan**	**1.10**	**347**		**Pn**	**07 41 27.0**	**+0.6**
URUA					**Sn**	**07 41 41.3**	**+0.6**
URUA	**Uruapan**	**1.10**	**347**	*i* P	**Pn**	**07 41 27.0**	**+0.6**
URUA				*eS*	**Sn**	**07 41 41.3**	**+0.6**
ARIG	**Puente Sto Nin**	**1.39**	**92**		**Pn**	**07 41 31.4**	**+1.2**
ARIG					**Sn**	**07 41 48.6**	**+1.1**
ARIG	**Puente Sto Nin**	**1.39**	**92**	*eP*	**Pn**	**07 41 31.4**	**+1.2**
ARIG				*eS*	**Sn**	**07 41 48.6**	**+1.1**
MOIG	**Morelia**	**1.45**	**24**		**Pn**	**07 41 31.8**	**+0.6**
MOIG				Sn	**Sn**	**07 41 48.8**	**-0.5**
MOIG	**Morelia**	**1.45**	**24**	*eP*	**Pn**	**07 41 31.8**	**+0.6**
MOIG				*eS*	**Sn**	**07 41 49.1**	**-0.1**
MMIG	**Aquila**	**1.46**	**268**		**Pn**	**07 41 31.5**	**+0.5**
MMIG	**Aquila**	**1.46**	**268**	*eP*	**Pn**	**07 41 31.5**	**+0.5**
MMIG				*eS*	**Sn**	**07 41 45.8**	**-3.2**
ATYC	**Atoyac**	**1.73**	**130**		**Pn**	**07 41 36.4**	**+1.7**
ATYC	**Atoyac**	**1.73**	**130**	*eP*	**Pn**	**07 41 36.4**	**+1.7**
CAIG	**El Cayaco**	**1.96**	**131**		**Pn**	**07 41 39.3**	**+1.5**
CAIG					**Sn**	**07 42 01.2**	**0.0**
CAIG	**El Cayaco**	**1.96**	**131**	*eP*	**Pn**	**07 41 39.3**	**+1.5**
CAIG				*eS*	**Sn**	**07 42 01.2**	**0.0**
ACAM	**Acambaro**	**1.98**	**31**		**Pn**	**07 41 38.1**	**-0.3**
ACAM	**Acambaro**	**1.98**	**31**	*eP*	**Pn**	**07 41 38.1**	**-0.3**
INCO	**Volcan de Coli**	**2.06**	**305**	*eP*	**Pn**	**07 41 41.6**	**+1.9**
INCO				*eS*	**Sn**	**07 42 07.4**	**+3.0**
SOMAC	**Volcano de Col**	**2.08**	**305**	*eP*	**Pn**	**07 41 41.5**	**+1.7**
SOMAC				*eS*	**Sn**	**07 42 08.8**	**+3.9**
COMA	**Comala**	**2.09**	**298**		**Pn**	**07 41 40.4**	**+0.7**
COMA	**Comala**	**2.09**	**298**	*eP*	**Pn**	**07 41 40.4**	**+0.7**
MEIG	**Mezcala**	**2.12**	**101**		**Pn**	**07 41 42.1**	**+1.9**
MEIG					**Sn**	**07 42 06.1**	**+0.6**
MEIG	**Mezcala**	**2.12**	**101**	*eP*	**Pn**	**07 41 42.1**	**+1.9**
MEIG				*eS*	**Sn**	**07 42 06.1**	**+0.6**
CDAR	**Ciudad de Arme**	**2.17**	**286**	*eP*	**Pn**	**07 41 41.3**	**+0.6**
CDAR				*eS*	**Sn**	**07 42 06.4**	**0.0**
PLIG	**Platanillo**	**2.19**	**88**		**Pn**	**07 41 43.1**	**+2.0**
PLIG	**Platanillo**	**2.19**	**88**	*eP*	**Pn**	**07 41 43.1**	**+2.0**
CEGR	**Campo Tres**	**2.20**	**299**	*eP*	**Pn**	**07 41 42.5**	**+1.2**
CEGR				*eS*	**Sn**	**07 42 08.7**	**+1.3**
TOVM	**TOLUCA**	**2.23**	**65**		**Pn**	**07 41 42.9**	**+1.1**
TOVM					**Sn**	**07 42 10.0**	**+1.7**
TOVM	**TOLUCA**	**2.23**	**65**	*eP*	**Pn**	**07 41 42.9**	**+1.1**
TOVM				*eS*	**Sn**	**07 42 10.0**	**+1.7**
MAVM	**Malinalco, Edo**	**2.28**	**74**		**Pn**	**07 41 44.0**	**+1.6**
MAVM					**Sn**	**07 42 12.4**	**+2.9**
MAVM	**Malinalco, Edo**	**2.28**	**74**	*eP*	**Pn**	**07 41 44.0**	**+1.6**
MAVM				*eS*	**Sn**	**07 42 12.4**	**+2.9**
ACP2	**Acapulco**	**2.35**	**128**		**Pn**	**07 41 42.7**	**-0.4**
ACP2					**Sn**	**07 42 11.3**	**+0.5**
ACP2	**Acapulco**	**2.35**	**128**	*eP*	**Pn**	**07 41 42.7**	**-0.4**
ACP2				*eS*	**Sn**	**07 42 11.3**	**+0.5**
IGIG	**Irapuato, Guan**	**2.44**	**11**		**Pn**	**07 41 45.2**	**+0.6**
IGIG	**Irapuato, Guan**	**2.44**	**11**	*eP*	**Pn**	**07 41 45.2**	**+0.6**
DAIG	**Los Arroyos**	**2.44**	**122**		**Pn**	**07 41 46.1**	**+1.6**
DAIG					**Sn**	**07 42 13.9**	**+0.7**
DAIG	**Los Arroyos**	**2.44**	**122**	*eP*	**Pn**	**07 41 46.1**	**+1.6**
DAIG				*eS*	**Sn**	**07 42 13.9**	**+0.7**
ACIG	**Acambay**	**2.44**	**48**		**Pn**	**07 41 44.4**	**-0.3**
ACIG					**Sn**	**07 42 17.1**	**+3.6**
ACIG	**Acambay**	**2.44**	**48**	*eP*	**Pn**	**07 41 44.4**	**-0.3**
ACIG				*eS*	**Sn**	**07 42 17.1**	**+3.6**
INVM	**La Marquesa**	**2.49**	**67**		**Pn**	**07 41 46.6**	**+1.2**
INVM					**Sn**	**07 42 18.6**	**+3.9**
INVM	**La Marquesa**	**2.49**	**67**	*eP*	**Pn**	**07 41 46.6**	**+1.2**
INVM				*eS*	**Sn**	**07 42 18.6**	**+3.9**
AOVM	**Tlapan**	**2.53**	**68**		**Pn**	**07 41 46.6**	**+0.5**
AOVM					**Sn**	**07 42 18.6**	**+2.6**
AOVM	**Tlapan**	**2.53**	**68**	*eP*	**Pn**	**07 41 46.6**	**+0.5**
AOVM				*eS*	**Sn**	**07 42 18.6**	**+2.6**
MZVM		**2.59**	**71**		**Pn**	**07 41 49.3**	**+2.9**
MZVM					**Sn**	**07 42 19.5**	**+2.8**
MZVM		**2.59**	**71**	*eP*	**Pn**	**07 41 49.3**	**+2.9**
MZVM				*eS*	**Sn**	**07 42 19.5**	**+2.8**
MCRU	**Las Cruces**	**2.61**	**68**	*eP*	**Pn**	**07 41 46.0**	**-1.1**
MCRU				*eS*	**Sn**	**07 42 19.6**	**+1.9**
TON2	**Tonala**	**2.64**	**330**		**Pn**	**07 41 46.9**	**-0.4**
TON2					**Sn**	**07 42 18.2**	**0.0**
TON2	**Tonala**	**2.64**	**330**	*eP*	**Pn**	**07 41 46.9**	**-0.4**
TON2				*eS*	**Sn**	**07 42 18.2**	**0.0**
YAIG	**Yautepec**	**2.65**	**78**		**Pn**	**07 41 49.7**	**+2.2**
YAIG					**Sn**	**07 42 20.2**	**+1.7**
YAIG	**Yautepec**	**2.65**	**78**	*eP*	**Pn**	**07 41 49.7**	**+2.2**
YAIG				*eS*	**Sn**	**07 42 20.2**	**+1.7**
TLVM	**San Miguel Top**	**2.66**	**71**		**Pn**	**07 41 49.9**	**+2.2**
TLVM					**Sn**	**07 42 18.6**	**-0.4**
TLVM	**San Miguel Top**	**2.66**	**71**	*eP*	**Pn**	**07 41 49.9**	**+2.2**
TLVM				*eS*	**Sn**	**07 42 18.6**	**-0.4**
JRQG	**Juriquilla Cam**	**2.68**	**29**		**Pn**	**07 41 49.0**	**+1.1**
JRQG	**Juriquilla Cam**	**2.68**	**29**	*i* P	**Pn**	**07 41 48.9**	**+1.0**
JRQG				*eS*	**Sn**	**07 42 24.4**	**+5.2**
UNM	**Universidad Na**	**2.68**	**68**		**Pn**	**07 41 51.8**	**+3.8**
UNM				Sn	**Sn**	**07 42 18.3**	**-1.1**
MHVM	**Bosque de Chap**	**2.68**	**66**		**Pn**	**07 41 49.1**	**+1.1**
MHVM					**Sn**	**07 42 20.2**	**+0.7**
MHVM	**Bosque de Chap**	**2.68**	**66**	*eP*	**Pn**	**07 41 49.1**	**+1.1**
MHVM				*eS*	**Sn**	**07 42 20.2**	**+0.7**
AZVM	**Cuida Lopez Ma**	**2.69**	**62**		**Pn**	**07 41 49.9**	**+1.8**
AZVM					**Sn**	**07 42 22.8**	**+3.1**
AZVM	**Cuida Lopez Ma**	**2.69**	**62**	*eP*	**Pn**	**07 41 49.9**	**+1.8**
AZVM				*eS*	**Sn**	**07 42 22.8**	**+3.1**
BJVM	**Benito Juarez**	**2.70**	**67**		**Pn**	**07 41 49.0**	**+0.7**
BJVM					**Sn**	**07 42 19.8**	**-0.2**
BJVM	**Benito Juarez**	**2.70**	**67**	*eP*	**Pn**	**07 41 49.0**	**+0.7**
BJVM				*eS*	**Sn**	**07 42 19.8**	**-0.2**
XCVM	**Xochimilco**	**2.71**	**70**		**Pn**	**07 41 50.6**	**+2.3**
XCVM					**Sn**	**07 42 22.6**	**+2.5**
XCVM	**Xochimilco**	**2.71**	**70**	*eP*	**Pn**	**07 41 50.6**	**+2.3**
XCVM				*eS*	**Sn**	**07 42 22.6**	**+2.5**
APVM	**Azcapotzalco**	**2.71**	**65**		**Pn**	**07 41 50.5**	**+2.1**
APVM					**Sn**	**07 42 22.0**	**+1.8**
APVM	**Azcapotzalco**	**2.71**	**65**	*eP*	**Pn**	**07 41 50.5**	**+2.1**
APVM				*eS*	**Sn**	**07 42 22.0**	**+1.8**
VRVM	**Mexico City**	**2.77**	**67**		**Sn**	**07 42 24.7**	**+3.1**
VRVM	**Mexico City**	**2.77**	**67**	*eS*	**Sn**	**07 42 24.7**	**+3.1**
MPVM	**San Francisco**	**2.79**	**72**		**Pn**	**07 41 49.1**	**-0.3**
MPVM					**Sn**	**07 42 23.4**	**+1.5**
MPVM	**San Francisco**	**2.79**	**72**	*eP*	**Pn**	**07 41 49.1**	**-0.3**
MPVM				*eS*	**Sn**	**07 42 23.4**	**+1.5**
PBVM	**Pinon**	**2.80**	**67**		**Pn**	**07 41 52.6**	**+3.3**
PBVM					**Sn**	**07 42 23.4**	**+1.4**
PBVM	**Pinon**	**2.80**	**67**	*eP*	**Pn**	**07 41 52.6**	**+3.3**
PBVM				*eS*	**Sn**	**07 42 23.4**	**+1.4**
PTVM	**Pico Tres Padr**	**2.84**	**64**		**Pn**	**07 41 51.7**	**+1.5**
PTVM	**Pico Tres Padr**	**2.84**	**64**	*eP*	**Pn**	**07 41 51.7**	**+1.5**
PTVM				*eS*	**Sn**	**07 42 28.5**	**+5.2**
THVM	**De Xico**	**2.85**	**70**		**Pn**	**07 41 51.9**	**+1.5**
THVM					**Sn**	**07 42 24.7**	**+1.0**
THVM	**De Xico**	**2.85**	**70**	*eP*	**Pn**	**07 41 51.9**	**+1.5**
THVM				*eS*	**Sn**	**07 42 24.7**	**+1.0**
TXVM	**Universitario**	**2.95**	**68**		**Pn**	**07 41 52.0**	**+0.4**
TXVM					**Sn**	**07 42 28.2**	**+2.3**
TXVM	**Universitario**	**2.95**	**68**	*eP*	**Pn**	**07 41 52.0**	**+0.4**
TXVM				*eS*	**Sn**	**07 42 28.2**	**+2.3**
AMVM	**AMECAMECA**	**2.97**	**74**		**Pn**	**07 41 52.5**	**+0.5**
AMVM					**Sn**	**07 42 29.3**	**+2.7**
AMVM	**AMECAMECA**	**2.97**	**74**	*eP*	**Pn**	**07 41 52.5**	**+0.5**
AMVM				*eS*	**Sn**	**07 42 29.3**	**+2.7**
ZUVM	**ZUMPANGO**	**2.98**	**60**		**Pn**	**07 41 50.5**	**-1.5**
ZUVM					**Sn**	**07 42 30.5**	**+3.8**
ZUVM	**ZUMPANGO**	**2.98**	**60**	*eP*	**Pn**	**07 41 50.5**	**-1.5**
ZUVM				*eS*	**Sn**	**07 42 30.5**	**+3.8**
CRIG	**Cruz Grande**	**3.02**	**122**		**Pn**	**07 41 54.1**	**+1.8**
CRIG					**Sn**	**07 42 28.4**	**+1.2**
CRIG	**Cruz Grande**	**3.02**	**122**	*eP*	**Pn**	**07 41 54.1**	**+1.8**
CRIG				*eS*	**Sn**	**07 42 28.4**	**+1.2**
PBXN	**Popocatepetl**	**3.06**	**77**	*eP*	**Pn**	**07 41 55.5**	**+2.1**
PBXN				*eP*		07 41 56.2	
PBXN				*eS*	**Sn**	**07 42 30.9**	**+1.8**
PBXN				*eS*		07 42 31.6	
PPIG	**Popocatepetl**	**3.10**	**76**		**Pn**	**07 41 54.8**	**+0.8**
PPIG					**Sn**	**07 42 34.8**	**+4.7**
PPM	**Popocatepetl**	**3.10**	**76**	*eP*	**Pn**	**07 41 54.8**	**+0.8**
PPM				*eS*	**Sn**	**07 42 34.8**	**+4.7**
HMTT	**Tlapaneco**	**3.14**	**99**		**Pn**	**07 41 56.5**	**+2.3**
HMTT					**Sn**	**07 42 30.2**	**-0.2**
HMTT	**Tlapaneco**	**3.14**	**99**	*eP*	**Pn**	**07 41 56.5**	**+2.3**
HMTT				*eS*	**Sn**	**07 42 30.2**	**-0.2**
TLIG	**Tlapa**	**3.19**	**104**		**Pn**	**07 41 57.6**	**+2.9**
TLIG	**Tlapa**	**3.19**	**104**		**Sn**	**07 42 31.1**	**-0.5**
TLIG	**Tlapa**	**3.19**	**104**	*eP*	**Pn**	**07 41 57.1**	**+2.4**
TLIG				*eS*	**Sn**	**07 42 31.1**	**-0.5**
VTVM	**Tizayuca**	**3.20**	**63**		**Pn**	**07 41 56.5**	**+1.4**
VTVM					**Sn**	**07 42 37.0**	**+4.8**
VTVM	**Tizayuca**	**3.20**	**63**	*eP*	**Pn**	**07 41 56.5**	**+1.4**
VTVM				*eS*	**Sn**	**07 42 37.0**	**+4.8**
PPSX	**Xalitzintla**	**3.21**	**76**	*eP*	**Pn**	**07 41 57.8**	**+2.5**
PPSX				*eS*	**Sn**	**07 42 37.0**	**+4.4**
MGIG	**Malinaltepec**	**3.22**	**110**		**Pn**	**07 41 57.8**	**+2.5**
MGIG					**Sn**	**07 42 32.2**	**-0.4**
MGIG	**Malinaltepec**	**3.22**	**110**	*eP*	**Pn**	**07 41 57.8**	**+2.5**
MGIG				*eS*	**Sn**	**07 42 32.2**	**-0.4**
DEIG	**Demacu**	**3.27**	**53**	*eP*	**Pn**	**07 41 55.6**	**-0.3**
DHIG	**Demacu**	**3.27**	**53**		**Pn**	**07 41 55.6**	**-0.3**
CJM	**Chamela**	**3.27**	**291**	*eP*	**Pn**	**07 41 56.3**	**+0.6**
CJM				*eS*	**Sn**	**07 42 33.1**	**-0.3**
FTIG	**Fresnillo de T**	**3.52**	**96**		**Pn**	**07 42 02.0**	**+2.6**
FTIG	**Fresnillo de T**	**3.52**	**96**	*eP*	**Pn**	**07 42 02.0**	**+2.6**
FTIG				*eS*	**Sn**	**07 42 38.4**	**-1.6**

CHUJ **Union Juarez** 9.84 108 eP Pn 07 43 30.3 +4.2
CHUJ eS Sn 07 45 12.4 -2.9
833A **Chaparral WMA,** 10.18 12 Pn 07 43 33.0 +2.5
TX31 **Lajitas Ar. Si** 11.07 352 Pn 07 43 45.0 +2.3
TXAR **Lajitas Array** 11.07 352 P Pn 07 43 45.4 +2.6
5.5nm,0.8s,baz=168,slow=15,SNR=34
TXAR LR LR 07 48 27.4
comp=Z,397nm,18.9s,baz=124,slow=40
TXAR **Lajitas Array** 11.07 352 Pn 07 43 45.7 +3.0
DRIO **Del Rio** 11.08 5 Pn 07 43 44.6 +1.8
APG **El Apazote** 11.37 105 P Pn 07 43 51.9 +4.9
0.2nm,0.2s,baz=230,slow=22,SNR=5.6
APG S Sn 07 45 51.4 -1.3
0.5nm,0.7s,baz=211,slow=19,SNR=2.0
APG LR LR 07 48 25.9
comp=Z,5.1nm,20.6s,baz=250,slow=39
HNDO **Hondo** 11.37 11 Pn 07 43 49.1 +2.4
SAND **Sanderson** 11.56 359 Pn 07 43 51.6 +2.2
ALPN **Alpine** 12.09 352 Pn 07 43 59.0 +2.2
OZNA **Ozona** 12.54 3 Pn 07 44 05.6 +2.9
TPB05 **Hovey Rd** 12.60 354 Pn 07 44 04.7 +1.1
TPB01 **Permian Basin** 12.67 352 Pn 07 44 07.4 +2.8
VHRN **Van Horn** 12.72 348 Pn 07 44 07.1 +1.8
TEIG **Tepich** 12.92 79 Pn Pn 07 44 09.4 +1.5
MNHN **Monahans** 12.97 356 Pn 07 44 11.2 +2.6
BRDY **Brady** 13.13 11 Pn 07 44 12.9 +2.1
SGCY **Sterling City** 13.53 2 Pn 07 44 18.2 +2.0
229A **Bryant Ranch,** 13.56 0 Pn 07 44 19.7 +3.0
TPB11 **China Draw** 13.68 352 Pn 07 44 21.0 +2.6
MNTX **Cornudas Mount** 13.68 347 Pn 07 44 20.8 +2.5
ODSA **Odessa** 13.73 357 Pn 07 44 20.6 +1.6
GDL2 **Guadalupe Moun** 13.99 351 Pn 07 44 24.5 +1.9
EPT **El Paso** 14.03 343 Pn Pn 07 44 25.3 +2.3
129A **Stewart Farms,** 14.23 360 Pn 07 44 26.6 +0.9
128A **Castleberry Fa** 14.23 358 Pn 07 44 26.5 +0.7
ABTX **Abilene, Hawle** 14.35 7 Pn 07 44 28.1 +0.8
319A **Douglas** 14.63 334 Pn Pn 07 44 32.1 +1.0
POST **Post** 14.66 1 Pn 07 44 32.6 +1.3
SN07 **Snyder 07** 14.71 3 Pn 07 44 33.5 +1.6
PLPT **Palo Pinto** 14.75 12 Pn Pn 07 44 32.9 +0.5
NATX **Nacogdoches** 14.84 24 Pn Pn 07 44 34.8 +1.2
APMT **Aspermont** 15.00 5 Pn Pn 07 44 36.8 +1.2
121A **Cookes Peak, D** 15.12 340 Pn 07 44 40.1 +2.7
121A IAmb IAmb 07 44 44.7
comp=Z,12nm,0.8s
MSTX **Muleshoe** 15.59 357 IAmb IAmb 07 44 50.8
comp=Z,17nm,0.8s
WTFS **Witchita Falls** 15.65 10 IAmb IAmb 07 44 50.8
comp=Z,18nm,0.9s
TUC **Tucson** 16.09 332 P P 07 44 54.4 +2.2
Y22A **Socorro** 16.20 344 IAmb IAmb 07 44 57.7
comp=Z,18nm,1.0s
X34A **Smith Ranch, M** 16.57 12 IAmb IAmb 07 45 15.9
comp=Z,44nm,1.5s
Z41A **Richland Creek** 16.91 27 IAmb IAmb 07 45 25.0
comp=Z,19nm,0.7s
PH02 **Texas Public H** 16.98 360 IAmb IAmb 07 45 02.9
comp=Z,16nm,0.9s
ANMO **Albuquerque** 17.05 347 P Pn 07 45 02.0 +0.2
comp=Z,5.0nm,1.1s,baz=144,slow=12,SNR=13
ANMO LR LR 07 52 02.0
comp=Z,269nm,18.1s,baz=154,slow=39
ANMO **Albuquerque** 17.05 347 P 07 45 04.4 +1.4
W35A **Tecumseh** 17.31 14 IAmb IAmb 07 45 20.0
comp=Z,16nm,0.7s
X18A **Snowflake** 17.68 337 IAmb IAmb 07 45 20.8
comp=Z,9.4nm,0.7s
ELIS **Ellis County** 17.78 6 IAmb IAmb 07 45 27.8
comp=Z,20nm,1.0s
RTBA **Rita Blanca** 18.04 358 IAmb IAmb 07 45 16.9
comp=Z,22nm,0.8s
DEOK **Depew** 18.05 14 IAmb IAmb 07 45 28.2
comp=Z,14nm,1.0s
TUL3 **Leonard** 18.29 16 IAmb IAmb 07 45 30.8
comp=Z,16nm,0.7s
CROK **Carrier** 18.40 10 IAmb IAmb 07 45 34.2
comp=Z,20nm,1.1s
OK048 **Pawnee Station** 18.51 12 IAmb IAmb 07 45 19.4
comp=Z,27nm,1.2s
RLO **Rose Lookout** 18.74 17 IAmb IAmb 07 45 22.1
comp=Z,31nm,1.5s
KAN01 **Argonia South** 19.07 10 IAmb IAmb 07 45 24.9
comp=Z,14nm,0.7s
T35A **Sooner Cattle** 19.08 13 IAmb IAmb 07 45 26.1
comp=Z,17nm,0.7s
WUAZ **Wupatki** 19.09 336 IAmb IAmb 07 45 45.0
comp=Z,11nm,1.0s
HHAR **Hobbs** 19.17 20 IAmb IAmb 07 45 26.6
comp=Z,21nm,1.5s
FCAR **Ozark Folk Cen** 19.47 24 IAmb IAmb 07 45 29.2
comp=Z,12nm,0.8s
BAR **Barrett** 19.55 320 Pn 07 45 32.7 +0.7
BAR IAmb IAmb 07 45 37.1
comp=Z,8.2nm,0.7s
MVCO **Mesa Verde** 19.69 344 IAmb IAmb 07 46 08.0
comp=Z,12nm,1.0s
LRAL **Lakeview Retre** 19.77 39 IAmb IAmb 07 45 32.4
comp=Z,8.2nm,0.6s
BORC **Borrego Spring** 19.81 321 P P 07 45 34.5 +1.4
S22A **4UR Ranch, Cre** 19.82 348 IAmb IAmb 07 45 52.9
comp=Z,14nm,1.4s
LCAR **Lake Charles** 20.01 26 IAmb IAmb 07 45 50.3
comp=Z,17nm,1.3s
PMD **Palm Desert** 20.06 322 IAmb IAmb 07 45 41.8
comp=Z,8.7nm,0.9s
PFO **Pinyon Flats O** 20.08 322 P P 07 45 35.6 -0.5
comp=Z,2.7nm,0.7s,baz=96,slow=4.9,SNR=5.9
comp=Z,2.7nm,0.7s
PFO **Pinyon Flats O** 20.08 322 P P 07 45 36.4 +0.2
R32A **Long Quarter,** 20.19 7 IAmb IAmb 07 45 37.9
comp=Z,10nm,0.7s
U15A **North Rim** 20.25 335 IAmb IAmb 07 45 44.1
comp=Z,13nm,1.2s
MGMO **Mountain Grove** 20.53 22 P 07 45 40.1 -0.9
MGMO IAmb IAmb 07 46 08.2
comp=Z,16nm,1.3s
S39A **Bolivar** 20.66 19 IAmb IAmb 07 45 45.2
comp=Z,10nm,0.7s
PV13 **Radium Mtn., P** 20.67 344 IAmb IAmb 07 45 45.7
comp=Z,18nm,1.5s
ELS **Elsinore Mount** 20.68 321 P P 07 45 44.0 +1.4
Y49A **Blount Mountai** 20.69 39 IAmb IAmb 07 45 46.0
comp=Z,14nm,0.8s
PV02 **Paradox Valley** 20.70 344 IAmb IAmb 07 46 19.7
comp=Z,19nm,1.3s
X48A **Hartselle** 20.75 36 IAmb IAmb 07 45 56.7
comp=Z,9.1nm,0.8s
PV15 **Paradox Valley** 20.76 345 IAmb IAmb 07 45 45.5
comp=Z,11nm,0.8s
PV18 **Skein Mesa, Pa** 20.78 344 IAmb IAmb 07 45 46.3
comp=Z,9.2nm,0.9s
V12A **Nelson** 20.81 329 IAmb IAmb 07 45 50.8
comp=Z,14nm,1.3s
PV12 **Saucer Basin,** 20.82 344 IAmb IAmb 07 45 45.7
comp=Z,8.7nm,0.9s
PV16 **Nyswonger Mesa** 20.84 344 IAmb IAmb 07 46 08.9
comp=Z,13nm,1.2s
PV19 **Morning Glory** 20.86 344 IAmb IAmb 07 46 08.1
comp=Z,19nm,1.3s
PV20 **West Nyswonger** 20.88 344 IAmb IAmb 07 46 20.1
comp=Z,11nm,1.0s
PV04 **Paradox Valley** 20.91 344 IAmb IAmb 07 45 56.6
comp=Z,17nm,1.4s
PBMO **Poplar Bluff** 20.92 26 IAmb IAmb 07 46 03.0
comp=Z,8.6nm,0.8s
PV10 **Paradox Valley** 20.93 344 IAmb IAmb 07 46 06.7
comp=Z,18nm,1.0s
KNB **Kanab** 20.97 335 P 07 45 47.0 +1.2
KNB IAmb IAmb 07 46 09.4
comp=Z,16nm,1.2s
PV23 **Carpenter Ridg** 21.00 344 IAmb IAmb 07 46 10.6
comp=Z,11nm,0.9s
HMU **Henry Mountain** 21.03 340 P 07 45 47.9 +1.4
GSC **Goldstone, Bar** 21.50 325 IAmb IAmb 07 46 07.3
comp=Z,9.2nm,0.9s
R40A **Maddies Statio** 21.55 21 IAmb IAmb 07 45 55.9
comp=Z,6.7nm,0.6s
MTPU **Mount Pierson** 21.62 337 IAmb IAmb 07 46 19.2
comp=Z,8.6nm,0.9s
ISCO **Idaho Springs** 21.63 352 IAmb IAmb 07 45 55.9
comp=Z,10nm,0.7s
SHOC **Shoshone, Teco** 21.67 327 IAmb IAmb 07 46 39.4
comp=Z,9.7nm,1.1s
CCCA **Chr Cany lake** 21.97 324 P P 07 45 55.4 -1.1
CCCA IAmb IAmb 07 46 00.3
comp=Z,16nm,1.1s

QSM **Queen of Sheba** 22.03 326 IAmb IAmb 07 46 00.5
comp=Z,21nm,1.4s
Q16A **Castle Valley** 22.06 340 IAmb IAmb 07 46 18.0
comp=Z,6.8nm,0.9s
GWY **Greenwater Val** 22.09 327 IAmb IAmb 07 46 00.8
comp=Z,5.3nm,0.7s
LRMC **Laurel Mtn Rad** 22.12 324 IAmb IAmb 07 46 01.4
comp=Z,8.9nm,0.9s
PRN **Pahroc Range** 22.26 331 IAmb IAmb 07 46 02.8
comp=Z,7.2nm,1.0s
CLC **China Lake** 22.32 324 IAmb IAmb 07 46 03.1
comp=Z,6.7nm,0.9s
O20A **White River Ci** 22.41 347 IAmb IAmb 07 46 03.1
comp=Z,8.4nm,0.9s
TPNV **Topopah Spring** 22.47 328 IAmb IAmb 07 46 05.3
comp=Z,9.1nm,1.0s
ISA **Isabella, Lake** 22.70 323 IAmb IAmb 07 46 07.2
comp=Z,12nm,1.1s
VES **Vestal, Richgr** 23.18 322 IAmb IAmb 07 46 25.6
comp=Z,13nm,0.9s
TKL **Tuckaleechee C** 23.50 39 LR LR 07 57 11.3
comp=Z,47nm,18.1s,baz=200,slow=42
WCI **Wyandotte Cave** 24.00 31 P P 07 46 15.4 -1.3
TCUT **Toone Canyon** 24.15 342 IAmb IAmb 07 46 55.0
comp=Z,13nm,1.5s
MDPB **Devils Postpil** 24.45 325 IAmb IAmb 07 46 23.7
comp=Z,9.7nm,1.0s
LHV **Little Huntoon** 24.61 327 IAmb IAmb 07 46 25.3
comp=Z,7.0nm,1.0s
NVAR **Mina Array Bea** 24.64 328 P P 07 46 24.0 +1.2
comp=Z,10nm,0.9s,baz=150,slow=9.5,SNR=41
comp=Z,10nm,0.9s
ELK **Elko** 25.13 335 LR LR 07 56 20.7
comp=Z,121nm,22.0s,baz=142,slow=36
BW06 **Boulder Array** 25.22 347 IAmb IAmb 07 46 29.9
comp=Z,6.1nm,0.8s
PD31 **Pinedale Array** 25.22 347 IAmb IAmb 07 46 29.9
comp=Z,6.1nm,0.8s
PDAR **Pinedale Array** 25.22 347 P P 07 46 27.4 -0.6
comp=Z,4.9nm,0.8s,baz=148,slow=11,SNR=37
PDAR pP pP 07 46 41.0 -0.6
comp=Z,1.5nm,0.6s,baz=160,slow=9.3,SNR=5.9
PDAR PcP PcP 07 50 00.9 +0.5
comp=Z,0.6nm,0.8s,baz=142,slow=3.7,SNR=3.7
PDAR pPcP 07 50 16.9
comp=Z,0.7nm,0.7s,baz=146,slow=2.5,SNR=5.2
PDAR LR LR 07 55 32.6
comp=Z,62nm,21.7s,baz=148,slow=34
comp=Z,4.9nm,0.8s
PDAR **Pinedale Array** 25.22 347 P 07 46 27.6 -0.4
ECSD **EROS Data Cent** 25.69 9 P 07 46 30.5 -1.4
PNTR **Pine Nut** 25.80 327 IAmb IAmb 07 46 35.7
comp=Z,8.8nm,0.9s
SNOW **Snow King Moun** 26.16 345 IAmb IAmb 07 46 39.7
comp=Z,9.1nm,0.8s
LOHW **Long Hollow** 26.26 345 IAmb IAmb 07 46 40.6
comp=Z,5.9nm,0.7s
DLMT **Dillon** 28.40 344 IAmb IAmb 07 46 57.8
comp=Z,8.2nm,0.9s
J08A **Circle Bar Ran** 28.64 334 IAmb IAmb 07 47 00.5
comp=Z,6.2nm,1.0s
YBH **Yreka Blue Hor** 29.36 327 LR LR 07 58 01.9
comp=Z,5.0nm,18.1s,baz=130,slow=35
AGMN **Agassiz Nation** 30.27 8 P 07 47 11.2 -1.6
F10A **Beach Ranch, E** 30.37 338 IAmb IAmb 07 47 14.2
comp=Z,3.2nm,0.6s
ULM **Lac du Bonnet** 32.18 7 P P 07 47 27.2 -2.4
comp=Z,2.4nm,0.3s,baz=183,slow=9.6,SNR=8.5
ULM pP pP 07 47 40.8 -2.6
comp=Z,3.2nm,0.7s,baz=194,slow=10,SNR=2.8
ULM LR LR 08 01 13.9
comp=Z,151nm,19.2s,baz=192,slow=38
comp=Z,2.4nm,0.3s
ULM **Lac du Bonnet** 32.18 7 IAmb IAmb 07 47 58.1
comp=Z,5.0nm,1.0s
NEW **Newport** 32.34 341 LR LR 08 00 16.6
comp=Z,85nm,18.7s,baz=161,slow=36
ATAH **Atahualpa** 34.28 136 LR LR 07 59 25.9
comp=Z,56nm,19.9s,baz=311,slow=32
BBB **Bella Bella** 39.58 335 LR LR 08 04 51.5
comp=Z,104nm,20.8s,baz=144,slow=36
U35K **Hyder** 43.13 337 P P 07 49 02.6 +0.7
baz=138
V35K **Ketchikan** 43.31 336 P P 07 49 04.0 +0.7
baz=136
TOAD **Toad River Com** 43.92 343 P P 07 49 08.0 -0.3
baz=147
T35M **Bob Quinn** 44.02 338 P P 07 49 10.1 +1.0
baz=139
KOTAN **Kotaneelee Air** 44.69 344 P P 07 49 14.4 0.0
baz=149
YKAW1 **Yellowknife Wh** 44.97 352 P 07 49 15.3 -1.2
YKAW1 IAmb IAmb 07 49 16.5
comp=Z,7.0nm,1.1s
YKA **Yellowknife Ar** 45.00 352 P P 07 49 15.2 -1.6
comp=Z,1.2nm,0.8s,baz=168,slow=7.2,SNR=23
YKA pP pP 07 49 29.8 -1.3
comp=Z,1.8nm,0.8s,baz=166,slow=6.9,SNR=12
comp=Z,1.2nm,0.8s
S34M **Telegraph Cree** 45.04 338 P P 07 49 18.3 +1.1
baz=138
YKAW3 **Yellowknife Wh** 45.07 352 P P 07 49 16.0 -1.3
YKAW3 IAmb IAmb 07 49 31.2
comp=Z,2.8nm,0.8s
DLBC **Dease Lake** 45.07 339 LR LR 08 09 37.2
comp=Z,101nm,18.8s,baz=112,slow=38
DLBC **Dease Lake** 45.07 339 P P 07 49 18.1 +0.6
baz=140
SCHQ **Schefferville** 45.14 28 P P 07 49 14.9 -3.2
comp=Z,1.5nm,0.7s,baz=262,slow=1.7,SNR=5.6
SCHQ pP pP 07 49 31.0 -1.3
comp=Z,1.0nm,0.5s,baz=204,slow=9.8,SNR=1.7
SCHQ LR LR 08 09 44.2
comp=Z,76nm,18.8s,baz=64,slow=38
comp=Z,1.5nm,0.7s
S32K **Killisnoo** 45.99 336 P P 07 49 25.5 +0.8
baz=134
SIT **Sitka** 46.00 335 P P 07 49 25.4 +0.6
baz=133
WTLY **Watson Lake, Y** 46.00 342 P P 07 49 25.4 +0.6
baz=143
R33M **Jennings River** 46.12 340 P P 07 49 26.8 +0.9
baz=140
P32M **Atlin** 47.19 339 P P 07 49 34.5 +0.3
baz=136
WRGLY **Wrigley** 47.26 347 P P 07 49 34.5 -0.1
baz=151
P33M **Teslin, Yukon** 47.35 340 P P 07 49 35.3 -0.1
baz=138
SKAG **Skagway** 47.67 338 P P 07 49 38.6 +0.8
baz=134
LPAZ **La Paz** 47.79 134 P P 07 49 40.1 +0.1
comp=Z,1.6nm,0.6s,baz=332,slow=5.9,SNR=5.3
comp=Z,1.6nm,0.6s
LPAZ **La Paz** 47.79 134 IAmb IAmb 07 49 46.8
comp=Z,2.9nm,1.1s
N32M **Quiet Lake** 48.14 340 P P 07 49 42.3 +0.8
baz=138
PB16 **IPOC Station P** 48.34 137 P P 07 49 46.3 +2.2
WHY **Whitehorse** 48.37 339 P P 07 49 43.6 +0.2
baz=136
P30M **Million Dollar** 48.73 337 P P 07 49 46.4 +0.4
baz=133
O30N **Mendenhall** 48.87 338 P P 07 49 48.0 +0.9
baz=134
N31M **Braeburn, Yuko** 49.27 339 P P 07 49 50.8 +0.6
baz=135
M31M **Drury Creek, Y** 49.34 341 P P 07 49 51.8 +1.1
baz=137
HYT **Haines Junctio** 49.41 338 P P 07 49 52.2 +0.9
baz=133
O29M **Mount Kennedy** 49.45 337 P P 07 49 52.4 +0.8
baz=131
YUK6 **Outpost Mounta** 49.80 338 P P 07 49 55.0 +0.6
baz=132
PINM **Pinnacle** 49.95 336 P P 07 49 55.7 +0.3
baz=129
YUK4 **Talbot Arm** 50.17 338 P P 07 49 57.8 +0.6
baz=132
O28M **Mount Upton** 50.36 337 P P 07 49 59.6 +0.9
baz=130
M30M **Minto, Yukon** 50.39 340 P P 07 49 58.6 -0.1
baz=135
YUK8 **Steele Glacier** 50.53 337 P P 07 50 00.8 +0.7
baz=130
M29M **Somme Creek** 50.85 339 P P 07 50 03.3 +1.1
baz=133
CTG **Chitna Glacier** 50.92 336 P P 07 50 03.0 +0.3
baz=128
YUK3 **Moose Creek** 51.11 338 P P 07 50 04.5 +0.3
baz=130
L29M **L29M** 51.20 340 P P 07 50 05.5 +0.8
baz=133
CRQE **Cirque** 51.46 336 P P 07 50 07.5 +0.7
baz=126
KAIM **Kayak Island** 51.51 334 P P 07 50 07.7 +0.6
baz=124
K29M **Barlow Dome** 51.52 341 P P 07 50 08.1 +0.9
K29M **Barlow Dome** 51.52 341 P P 07 50 07.6 +0.4
baz=134,SNR=5.4
BVCY **Beaver Creek** 51.67 338 P P 07 50 09.2 +1.0
baz=130
J30M **Hart River** 51.68 342 IAmb IAmb 07 50 09.5
comp=Z,2.2nm,0.7s
J30M **Hart River** 51.68 342 P P 07 50 08.8 +0.4
baz=136
MCARA **McCarthy VSAT** 51.82 336 P P 07 50 09.7 +0.4
baz=127
M27K **Edge Creek, AK** 51.99 338 P P 07 50 11.4 +0.6
baz=129
H31M **Peel River** 52.04 344 P P 07 50 11.5 +0.5
baz=139
Q23K **Middleton Isla** 52.05 333 P P 07 50 12.3 +1.3
baz=122
J29N **Klondike Camp** 52.17 341 P P 07 50 12.4 +0.4
baz=134
I30M **Mount Dempster** 52.17 342 P P 07 50 12.0 -0.1
baz=137
EYAK **Cordova Ski Ar** 52.41 334 P P 07 50 14.0 +0.3
baz=123
L27K **Beaver Creek,** 52.42 338 P P 07 50 14.7 +0.8
baz=129
M26K **Nabesna, AK** 52.43 337 P P 07 50 14.7 +0.8
baz=128
N25K **Chitina, Valde** 52.56 336 P P 07 50 15.5 +0.6
baz=125
I29M **Ogilvie Camp,** 52.84 342 P P 07 50 16.7 -0.1
baz=134
G31M **Satah River** 52.88 345 P P 07 50 17.2 +0.1
baz=140
L26K **Log Cabin Wild** 52.94 338 P P 07 50 18.1 +0.5
baz=128
KLU **Klutina** 53.01 335 P P 07 50 18.9 +0.6
baz=124
GLI **Glacier Island** 53.15 334 P P 07 50 19.9 +0.7
baz=122
F31M **Tsiigehtchic** 53.16 345 P P 07 50 18.6 -0.4
baz=141
HARP **HAARP** 53.23 336 P P 07 50 20.3 +0.4
baz=125
I28M **Miner Creek** 53.39 341 P P 07 50 20.7 -0.3
baz=133
G30M **tAoh Zraii Nji** 53.43 344 P P 07 50 20.6 -0.7
baz=138
M24K **Tolsona, Glenn** 53.46 336 P P 07 50 21.9 +0.4
baz=124
PAX **Paxson** 53.69 337 P P 07 50 23.9 +0.7
baz=125
SEW **Seward** 53.75 333 P P 07 50 23.9 +0.4
baz=119
SCRK **Sand Creek** 53.75 338 P P 07 50 24.5 +0.8
baz=127
SCM **Sheep Creek Mo** 53.76 335 P P 07 50 24.8 +1.0
baz=122
INK **Inuvik** 53.79 346 LR LR 08 16 37.5
comp=Z,106nm,18.2s,baz=272,slow=40
INK **Inuvik** 53.79 346 P P 07 50 23.4 -0.3
baz=141,SNR=6.7
F30M **Barrier River** 53.79 345 P P 07 50 23.4 -0.4
baz=138
G29M **Pine Creek** 53.86 343 P P 07 50 23.9 -0.5
baz=136
M23K **Glacier View** 53.90 335 P P 07 50 25.5 +0.9
baz=122
RIDG **Independent Ri** 53.91 338 P P 07 50 25.2 +0.4
baz=126,SNR=6.0
J26L **Joseph Creek** 53.93 339 P P 07 50 25.3 +0.3
baz=128
KNK **Knik Glacier** 53.99 334 P P 07 50 26.0 +0.6
baz=121
I27K **Kandik River** 54.01 341 P P 07 50 25.2 -0.3
baz=131
O22K **Cooper Landing** 54.05 333 P P 07 50 27.2 +1.5
baz=119
KDAK **Kodiak Island** 54.13 329 P P 07 50 27.7 +1.3
baz=114
BRSE **Bradley Lake S** 54.14 332 P P 07 50 27.6 +1.1
baz=118
SML **Sawmill** 54.15 335 P P 07 50 27.1 +0.6
baz=121
K24K **Donnelly Dome** 54.29 338 P P 07 50 28.1 +0.6
baz=125
WAT6 **Susitna Watana** 54.33 336 P P 07 50 28.6 +0.6
baz=122
RC01 **Rabbit Creek A** 54.36 334 P P 07 50 28.2 +0.2
baz=119
PMR **Palmer** 54.36 334 P P 07 50 28.7 +0.7
baz=120
H27K **Steamboat Moun** 54.40 341 P P 07 50 28.0 -0.3
baz=131
SII **Sitkinak Islan** 54.44 327 P P 07 50 30.1 +1.4
baz=112
J25K **Salcha River,** 54.62 339 P P 07 50 29.7 -0.2
baz=126
WAT1 **Susitna Watana** 54.78 336 P P 07 50 31.3 +0.3
baz=122
CAPN **Captain Cook N** 54.81 333 P P 07 50 31.5 +0.3
baz=118
G27K **Doyon Strip** 54.83 342 P P 07 50 31.1 -0.2
baz=132
F28M **Old Crow** 54.87 343 P P 07 50 31.3 -0.4
baz=134,SNR=6.1
E29M **Blow River** 54.91 345 P P 07 50 31.7 -0.1
baz=136
CHIR **Chirikof Islan** 54.92 326 P P 07 50 33.7 +1.6
baz=110
SUA **Susitna One** 54.97 334 P P 07 50 33.3 +0.7
baz=119
HDA **Harding Lake** 55.06 338 P P 07 50 33.2 +0.2
baz=124
Q19K **Cape Douglas,** 55.12 330 P P 07 50 34.6 +1.0
baz=114
PRP **Porcupine Dome** 55.22 339 P P 07 50 33.9 -0.4
baz=127,SNR=5.8
P19K **Oil Pt** 55.23 331 P P 07 50 34.6 +0.2
baz=115
ILAR **Eielson Array** 55.24 338 P P 07 50 33.8 -0.5
comp=Z,3.4nm,0.8s,baz=144,slow=5.9,SNR=40
ILAR pP pP 07 50 48.5 -0.5
comp=Z,3.3nm,0.9s,baz=141,slow=5.7,SNR=13
ILAR PcP PcP 07 51 35.5 +0.9
comp=Z,0.4nm,0.6s,baz=142,slow=3.5,SNR=4.4
ILAR pPcP 07 51 50.1
comp=Z,0.9nm,0.6s,baz=161,slow=2.5,SNR=8.5
comp=Z,3.4nm,0.8s
A36M **Sachs Harbour** 55.36 351 P P 07 50 33.8 -1.2
baz=152,SNR=7.3
MCK **McKinley** 55.41 337 P P 07 50 36.4 +0.8
baz=122
E28M **Babbage River** 55.48 344 P P 07 50 36.0 0.0
baz=135
SKT **Skwentna** 55.55 334 P P 07 50 37.3 +0.7
baz=118
G26K **Porcupine Rive** 55.56 341 P P 07 50 37.3 +0.8
baz=129
POKR **Poker Plat Res** 55.63 339 P P 07 50 38.3 +1.2
baz=124
COLA **College** 55.64 338 P P 07 50 37.2 0.0
baz=124
E27K **Coleen River** 55.74 343 P P 07 50 38.2 +0.2
baz=132
TRF **Thorofare Moun** 55.78 336 P P 07 50 39.0 +0.6
baz=120,SNR=7.9
Q17K **Contact Creek** 55.94 329 P P 07 50 40.2 +0.7
baz=111
R17L **Mt. Peulik Vol** 55.94 328 P P 07 50 40.7 +1.3
baz=110
O19K **Port Alsworth** 55.96 331 P P 07 50 40.0 +0.5
baz=114
P18K **Big Mountain,** 56.05 330 P P 07 50 41.4 +1.1
baz=113
F26K **Sheenjek River** 56.14 342 P P 07 50 40.9 +0.1
baz=129
M20K **Styx River** 56.17 334 P P 07 50 41.9 +0.7
baz=116
H24K **Noodor Dome** 56.20 339 P P 07 50 41.4 +0.2
baz=124

O18K Koktuh Hills 56.23 331 P P 07 50 42.4 +0.8
baz=113
PPLA Purkeypile 56.25 335 P P 07 50 42.4 +0.6
baz=118
N19K Bonanza Creek 56.29 332 P P 07 50 42.3 +0.2
baz=114
D27M Malcolm River 56.30 344 P P 07 50 41.5 -0.4
baz=134
I23K Minto, Yukon-K 56.33 338 P P 07 50 42.1 +0.1
baz=122
BPAW Bear Paw Mtn. 56.38 336 P P 07 50 42.5 0.0
baz=120
F25K Christian Rive 56.52 341 P P 07 50 44.1 +0.6
baz=128,SNR=5.1
R16K Pilot Point 56.53 328 P P 07 50 45.3 +1.7
baz=109
G24K Hadweenzic Riv 56.56 340 P P 07 50 44.1 +0.4
baz=125,SNR=9.3
CHNA Chernabura Isl 56.76 324 P P 07 50 47.2 +1.9
baz=106
MLY Manley 56.76 338 P P 07 50 45.5 +0.2
baz=121
E25K Arctic Village 56.83 342 P P 07 50 45.6 -0.1
baz=128
N18K Kilae Creek 56.87 332 P P 07 50 46.5 +0.4
baz=113
L19K White Mountain 57.03 333 P P 07 50 47.8 +0.6
baz=115
O17K Koliganek Bris 57.08 330 P P 07 50 48.3 +0.8
baz=111
M18K Stony River 57.16 332 P P 07 50 48.2 +0.1
baz=114
K20K Telida 57.23 335 P P 07 50 48.4 -0.1
baz=116
P16K Nushagak River 57.24 329 P P 07 50 49.3 +0.7
baz=110
C27K Jago River 57.28 344 P P 07 50 48.5 -0.3
baz=131
SDPT Sand Point 57.39 325 P P 07 50 51.0 +1.2
baz=105
N17K Nushagak Hills 57.40 331 P P 07 50 50.4 +0.7
baz=112
G23K Bananza Creek 57.41 339 P P 07 50 50.1 +0.3
baz=122
H22K Ishtalitna Cre 57.44 338 P P 07 50 50.2 +0.2
baz=121,SNR=6.1
O16K Kokwok River B 57.48 330 P P 07 50 50.7 +0.4
baz=110
J20K Nowinta River 57.63 336 P P 07 50 51.1 -0.2
baz=117
E24K Your Creek 57.68 341 P P 07 50 51.7 0.0
baz=125
COLD Coldfoot 57.74 340 P P 07 50 52.3 +0.2
baz=122
C26K Camden Bay 57.78 344 P P 07 50 51.9 -0.3
baz=130
D25K Kavik River 57.81 343 P P 07 50 52.2 -0.4
baz=128
H21K Melozitna Rive 57.83 338 P P 07 50 52.7 0.0
baz=119
L18K Granite Mounta 57.83 333 P P 07 50 52.8 0.0
baz=113
M17K Holitna River 57.84 332 P P 07 50 53.4 +0.5
baz=112
E23K Chandalar 58.02 341 P P 07 50 54.8 +0.7
baz=124,SNR=5.2
I20K Naaghedeneel 58.04 336 P P 07 50 54.7 +0.6
baz=117
N16K Nishlik Lake 58.11 331 P P 07 50 55.2 +0.4
baz=110
J19K Poorman 58.13 335 P P 07 50 54.5 -0.4
baz=115,SNR=5.7
O15K Ungalikthiuk R 58.18 329 P P 07 50 55.4 +0.1
baz=108
J18K Innoko River 58.35 334 P P 07 50 55.9 -0.5
baz=114
M16K Timber Creek 58.39 331 P P 07 50 57.5 +0.7
baz=110
D24K Happy Valley 58.41 342 P P 07 50 56.0 -0.7
baz=125
G21K Alkakaket 58.50 338 P P 07 50 57.2 -0.2
baz=119
L17K Donlin 58.50 333 P P 07 50 57.8 +0.4
baz=111
H20K Anotleneega Mo 58.51 337 P P 07 50 57.1 -0.3
baz=117
K17K Iditarod 58.72 333 P P 07 50 59.4 +0.4
baz=112
F21K Alatna River 58.84 339 P P 07 50 59.9 +0.2
baz=119
D23K Nanuskuk River 58.85 341 P P 07 50 60.0 +0.2
baz=123
L16K Owhat River 58.86 332 P P 07 51 00.2 +0.3
baz=110
GCSA Galena City Sc 58.94 336 P P 07 51 00.2 -0.2
baz=114
M15K Kasigluk River 59.08 331 P P 07 51 02.0 +0.5
baz=108
J17K VABM Dome 59.30 334 P P 07 51 01.9 -1.1
baz=111
N14K Kuskokwak Cree 59.31 330 P P 07 51 02.6 -0.4
baz=107
D22K Ayikyak River 59.42 341 P P 07 51 04.3 +0.6
baz=121
F20K Avaraart Lake 59.52 338 P P 07 51 04.6 +0.2
baz=117
E21K Killik River 59.60 340 P P 07 51 04.5 -0.5
baz=119
G19K Purcell Mounta 59.61 337 P P 07 51 04.8 -0.3
baz=115
H18K Honhosa River 59.69 336 P P 07 51 05.0 -0.6
baz=113
M14K Bethel 59.69 330 P P 07 51 06.0 +0.3
baz=107
L15K Ungalak Mounta 59.76 332 P P 07 51 06.1 -0.1
baz=108
J16K Anvik River 59.90 333 P P 07 51 07.6 +0.5
baz=110
K15K Wolf Creek Mou 59.97 332 P P 07 51 08.5 +0.8
baz=108
I17K Unalakleet 60.15 334 P P 07 51 09.0 +0.2
baz=110
F19K Shaleruckik Mo 60.16 338 P P 07 51 08.5 -0.2
baz=114
L14K Kuka Creek 60.20 331 P P 07 51 09.9 +0.7
baz=107
H17K Granite Mounta 60.21 335 P P 07 51 09.3 +0.1
baz=111
E19K Redstone River 60.23 339 P P 07 51 09.4 0.0
baz=115,SNR=7.9
E20K Nigu River 60.24 340 P P 07 51 09.2 -0.2
baz=117
M13K Dall Lake 60.25 330 P P 07 51 09.7 +0.2
baz=106
D20K Etivluk River 60.59 340 P P 07 51 11.6 -0.1
baz=117
G17K Kiwalik Mounta 60.71 336 P P 07 51 12.8 +0.3
baz=111
F18K Selawik 60.74 337 P P 07 51 12.4 -0.4
baz=112
J14K Nanvaranak Lak 61.01 332 P P 07 51 15.1 +0.5
baz=107
H16K Elim 61.04 335 P P 07 51 15.5 +0.6
baz=109
F17K Baldwin Pennin 61.28 337 P P 07 51 16.5 +0.1
baz=111
G16K Koyuk River 61.34 335 P P 07 51 17.5 +0.6
baz=109
E18K Tukpahlearik C 61.41 338 P P 07 51 17.7 +0.4
baz=112
E17K Hotham Inlet 61.72 337 P P 07 51 19.7 +0.3
baz=110,SNR=8.0
C19K Lookout Ridge 61.73 340 P P 07 51 19.9 +0.4
baz=114
NIKH Nikolski High 61.76 321 P P 07 51 21.6 +1.7
baz=96
A21K Barrow 61.80 343 P P 07 51 19.4 -0.4
baz=118
G15K Niukluk 61.88 335 P P 07 51 20.7 +0.2
baz=107
CPUP Villa Florida 61.96 135 P P 07 51 21.5 -0.1
comp=Z,1.9nm,0.7s,baz=327,slow=9.2,SNR=6.3
CPUP pP **pP** 07 51 37.1 +0.5
comp=Z,1.7nm,0.8s,baz=329,slow=12,SNR=3.0
comp=Z,1.9nm,0.7s
C18K Utukok River 62.08 339 P P 07 51 21.3 -0.5
baz=112
ANM Nome 62.30 334 P P 07 51 23.4 0.0
baz=106
F15K North Star Dit 62.34 335 P P 07 51 24.1 +0.5
baz=107
D17K Noatak River 62.39 338 P P 07 51 24.0 +0.1
baz=110,SNR=7.4
RDOG Red Dog Mine 62.45 338 P P 07 51 24.0 -0.3
baz=110
P08K Saint George I 62.64 325 P P 07 51 26.8 +1.2
baz=98
C17K DeLong Mountai 62.70 339 P P 07 51 26.2 +0.3
baz=110
BDFB Brasilia 62.83 119 P P 07 51 28.2 +0.5
comp=Z,2.3nm,0.6s,baz=282,slow=7.3,SNR=5.9
comp=Z,2.3nm,0.6s
F14K Arctic Creek 62.95 335 P P 07 51 27.5 -0.1
baz=105
C16K Lisburne Hills 63.39 338 P P 07 51 30.5 0.0
baz=108
TNA Tin City 63.61 335 P P 07 51 32.6 +0.7
baz=104,SNR=6.0
PLCA Paso Flores 65.56 154 P P 07 51 46.6 +1.5
comp=Z,1.6nm,0.6s,baz=328,slow=7.9,SNR=8.9
comp=Z,1.6nm,0.6s
BORG Borgarnes 69.52 27 LR LR 08 22 03.7
comp=Z,97nm,18.2s,baz=81,slow=36
SPITS Spitsbergen Ar 77.67 11 P P 07 52 56.4 -1.0
comp=Z,15nm,1.1s,baz=321,slow=1.2,SNR=7.7
comp=Z,15nm,1.1s
EKA Eskdalemuir Ar 79.92 35 P P 07 53 07.9 -2.2
comp=Z,2.4nm,0.9s,baz=306,slow=5.2,SNR=1.6
comp=Z,2.4nm,0.9s
PETK Petropavlovsk- 81.64 323 P P 07 53 20.4 +1.1
comp=Z,3.2nm,0.5s,baz=84,slow=11,SNR=20
PETK pP **pP** 07 53 35.3 +0.4
comp=Z,7.2nm,0.8s,baz=77,slow=10,SNR=4.8
comp=Z,3.2nm,0.5s
ESDC Sonseca Array 84.33 50 P P 07 53 33.1 -0.5
comp=Z,0.7nm,0.6s,baz=303,slow=5.1,SNR=7.2
comp=Z,0.7nm,0.6s
NOA NORSAR Array B 84.69 27 P P 07 53 35.0 0.0
comp=Z,1.0nm,0.8s,baz=296,slow=4.7,SNR=2.1
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 84.82 16 P P 07 53 34.8 -0.6
comp=Z,6.8nm,1.1s,baz=323,slow=5.8,SNR=4.1
ARCES pP **pP** 07 53 48.7 -2.3
comp=Z,3.4nm,0.8s,baz=323,slow=5.9,SNR=2.3
comp=Z,6.8nm,1.1s
YAK Yakutsk 90.17 338 LR LR 08 38 59.1
comp=Z,46nm,19.1s,baz=125,slow=39
FINES FINESS Array B 90.34 22 P P 07 54 00.9 -1.2
comp=Z,3.6nm,1.0s,baz=311,slow=7.0,SNR=1.9
comp=Z,3.6nm,1.0s
HHC Hu-ho-hao-te 113.45 333 *e*P **PKiKP** 07 59 37.9 -1.5
WRA Warramunga Arr 127.14 259 PKP **PKPdf** 08 00 06.8 +0.7
comp=Z,1.0nm,0.6s,baz=77,slow=2.5,SNR=13
WRA pPKP **pPKPdf** 08 00 22.8 +0.5
comp=Z,0.5nm,0.5s,baz=86,slow=2.4,SNR=3.3
ASAR Alice Springs 127.98 254 PKP **PKPdf** 08 00 07.2 -0.5
comp=Z,0.7nm,0.8s,baz=117,slow=2.5,SNR=6.2
ASAR pPKP **pPKPdf** 08 00 24.1 +0.3
comp=Z,0.5nm,0.6s,baz=63,slow=2.6,SNR=3.8
PZH PanZhiHua 129.89 332 PKP **PKPdf** 08 00 11.7 +0.3
CMAR Chiang Mai Arr 138.13 330 PKP **PKPdf** 08 00 26.2 -0.7
comp=Z,0.7nm,0.2s,baz=60,slow=1.8,SNR=2.1
CMAR pPKP **pPKPdf** 08 00 40.6 -2.5
comp=Z,1.3nm,0.3s,baz=64,slow=3.7,SNR=2.3

IDC ***12*** *08:01:42.4±0.7, 19°.14N×67°.48W, h0km, mb3.7/10, mbtmp3.8/13, ML3.3/3, MS3.2/5, Error ellipse: s-maj=20.2km s-min=14.0km az=59.0*
NEIC ***12*** *08:01:45.0±2.0, 19°.01N±0°.03×67°.52W±0°.05, h10km±1km, mb4.3/10, ML4.5/41, ML4.3/4(RSPR), Mwr4.3/17(SLM), Error ellipse: s-maj=9.0km s-min=4.5km az=58.0*
SDD ***12*** *08:01:46.0±2.6, 19°.04N×67°.63W, h0km±13km, MD3.3, ML4.3, MW3.9, Presumed earthquake*
OSPL ***12*** *08:01:46.8±2.1, 19°.23N×67°.37W, h27km±26km, ML4.3, Presumed earthquake*
NEIC ***12*** *08:01:49, 18°.81N×67°.60W, h15km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.99; Mθθ-1.05; Mφφ0.05; Mrθ2.90; Mrφ0.26; Mθφ-1.76; Fault plane solution: M₀3.55000×10¹⁵ NP1:φ₁120.00000°, δ82.00000°, λ96.00000°. NP2:φ₂265.00000°, δ10.00000°, λ55.00000°. Principal axes: T 3.5525, Plg53.0000°, Azm37.0000°; N 0.0007, Plg6.0000°, Azm300.0000°; P -3.5532, Plg37.0000°, Azm205.0000°;*
RSPR ***12*** *08:01:49.5, 18°.81N×67°.60W, h22km±29km, MD3.6/4*
ISC 12 08:01:42.5±1.3, 19°.08N±0°.04×67°.57W±0°.02, h4km±8km, n100, σ1§71/111, mb3.9/14, MS3.2/4, 13C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.70**	**172**			**Pb**	**08 01 57.0**	**-0.2**
IDE	**Isla Desecheo**	**0.70**	**172**	||*i*P	**Pb**	**08 01 57.0**	**-0.2**
AGPR	**Aguadilla, PR**	**0.75**	**144**			**Pn**	**08 01 58.8**	**-1.0**
AGPR				IAML			08 02 10.4	
	11μm,0.3s							
AGPR	**Aguadilla, PR**	**0.75**	**144**	||*i*P	**Pn**	**08 01 58.9**	**-1.0**
AGPR				||*i*S	**Sb**	**08 02 09.6**	**+0.8**
AGPR				IAML			08 02 10.4	
	comp=N,8μm,0.2s							
AGPR	**Aguadilla, PR**	**0.75**	**144**	||*i*P	**Pn**	**08 01 58.9**	**-1.0**
AGPR				*e*S		**Sb**	**08 02 09.6**	**+0.8**
PRSN	**Puerto Rico Se**	**0.95**	**155**			**Pb**	**08 02 01.7**	**+0.2**
PRSN				IAML			08 02 20.6	
	comp=N,15μm,0.3s							
PRSN				IAML			08 02 24.2	
	comp=N,12μm,0.2s							
PRSN	**Puerto Rico Se**	**0.95**	**155**	||*i*P	**Pn**	**08 02 01.9**	**-0.7**
PRSN				||*i*S	**Sn**	**08 02 15.3**	**-1.4**
PRSN				IAML			08 02 37.0	
	comp=N,9μm,0.2s							
PRSN	**Puerto Rico Se**	**0.95**	**155**	||*i*P	**Pn**	**08 02 02.0**	**-0.7**
LSP	**Las Mesas**	**1.01**	**153**			**Pn**	**08 02 03.1**	**-0.4**
LSP	**Las Mesas**	**1.01**	**153**	||*i*P	**Pn**	**08 02 03.1**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.16**	**135**			**Pn**	**08 02 05.4**	**-0.1**
UUPR				IAML			08 02 33.0	
	comp=N,18μm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.16**	**158**			**Pb**	**08 02 04.9**	**-0.1**
CRPR				IAML			08 02 28.2	
	comp=N,16μm,0.5s							
CRPR				IAML			08 02 28.5	
	comp=N,12μm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.16**	**158**	||*i*P	**Pn**	**08 02 07.0**	**+1.5**
CRPR				||*i*S	**Sn**	**08 02 22.8**	**+1.1**
CRPR				IAML			08 02 28.4	
	comp=N,17μm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.16**	**158**	*i*P		**Pn**	**08 02 06.2**	**+0.8**
CRPR				*e*S		**Sn**	**08 02 23.0**	**+1.3**
CRPR				IAML			08 02 28.3	
	comp=Z,15μm,0.2s							
HIDR	**Higuey Centro**	**1.19**	**246**	||*i*P	**Pg**	**08 02 04.6**	**-0.7**
HIDR				||*i*S	**Sg**	**08 02 19.7**	**-0.9**
HIDR				IAML			08 02 23.3	
	comp=N,9μm,0.3s							
MLPR	**Magueyes Islan**	**1.22**	**155**			**Pn**	**08 02 05.9**	**-0.4**
MLPR				IAML			08 02 26.7	
	comp=N,11μm,0.4s							
MLPR				IAML			08 02 28.3	
	comp=N,10μm,0.5s							
CELP	**Cerrillos**	**1.38**	**137**			**Pg**	**08 02 08.7**	**-0.1**
CELP				IAML			08 02 31.3	
	comp=N,5μm,0.6s							
ECPR	**Experimental S**	**1.38**	**123**			**Pg**	**08 02 08.8**	**0.0**
ECPR				IAML			08 02 29.0	
	comp=N,6μm,0.2s							
ECPR				IAML			08 02 32.6	
	comp=N,7μm,0.2s							
ECPR	**Experimental S**	**1.38**	**123**	||*i*P	**Pg**	**08 02 09.1**	**+0.3**
ECPR				*e*S		**Sn**	**08 02 27.5**	**+0.3**
OBIP	**Obispado Ponce**	**1.38**	**138**			**Pg**	**08 02 08.8**	**-0.1**
OBIP	**Obispado Ponce**	**1.38**	**138**			**Sb**	**08 02 24.2**	**-2.8**
OBIP	**Obispado Ponce**	**1.38**	**138**	||*i*P	**Pg**	**08 02 08.9**	**-0.1**
OBIP				*e*S		**Sb**	**08 02 24.2**	**-2.8**
OBIP	**Obispado Ponce**	**1.38**	**138**	*i*P		**Pg**	**08 02 08.8**	**-0.2**
OBIP				*e*S		**Sb**	**08 02 23.8**	**-3.1**
OBIP				IAML			08 02 28.7	
	comp=Z,4μm,0.7s							
MIDR	**Miches**	**1.40**	**266**	||*i*P	**Pn**	**08 02 08.8**	**0.0**
MIDR				||*i*S	**Sg**	**08 02 29.0**	**+1.6**
MIDR				IAML			08 02 30.0	
	comp=N,5μm,0.5s							
GCPR	**Guaynabo City**	**1.61**	**118**			**Pb**	**08 02 12.4**	**-0.3**
GCPR	**Guaynabo City**	**1.61**	**118**	||*e*P	**Pg**	**08 02 13.6**	**+0.3**
SJG	**San Juan**	**1.66**	**125**	Pn		**Pn**	**08 02 12.3**	**-0.1**
	comp=N,78nm,0.3s,baz=305,slow=10,SNR=48							
SJG				Sn		**Sb**	**08 02 34.9**	**0.0**
	comp=N,304nm,0.3s,baz=285,slow=12,SNR=10							
SJG				LR		LR	08 02 52.7	
	comp=N,580nm,18.7s,baz=182,slow=43							
SJG	**San Juan**	**1.66**	**125**			**Pb**	**08 02 13.0**	**-0.6**
SJG				IAML			08 02 46.1	
	comp=N,3μm,0.4s							
SJG	**San Juan**	**1.66**	**125**	*e*P		**Pb**	**08 02 13.2**	**-0.4**
SJG	**San Juan**	**1.66**	**125**	||*i*P	**Pg**	**08 02 15.1**	**+0.8**
SJG				*i*S		**Sg**	**08 02 35.4**	**-0.4**
SJG	**San Juan**	**1.66**	**125**	||*i*P	**Pb**	**08 02 13.4**	**-0.3**
SJG	**San Juan**	**1.66**	**125**	*i*P		**Pb**	**08 02 13.2**	**-0.4**
SJG				IAML			08 02 45.8	
	comp=Z,2μm,0.7s							
DR12	**Loma Pena Alta**	**1.73**	**261**			**Pn**	**08 02 14.2**	**+0.7**
HATOM	**Hato Mayor del**	**1.73**	**261**	||*i*P	**Pb**	**08 02 14.6**	**-0.4**
HATOM				*i*S		**Sb**	**08 02 37.3**	**+0.1**
HATOM				IAML			08 02 38.4	
	comp=N,2μm,1.2s							
PDPR	**Patillas Dam,**	**1.81**	**125**			**Pb**	**08 02 15.3**	**-1.0**
PDPR				IAML			08 02 48.4	
	comp=N,3μm,0.9s							
HUMP	**Col San Antoni**	**1.88**	**119**			**Pb**	**08 02 16.7**	**-0.8**
HUMP				IAML			08 02 53.6	
	comp=N,2μm,1.0s							
HUMP	**Col San Antoni**	**1.88**	**119**			**Sn**	**08 02 37.7**	**-2.0**
HUMP	**Col San Antoni**	**1.88**	**119**	||*i*P	**Pb**	**08 02 17.0**	**-0.4**
HUMP				*e*S		**Sn**	**08 02 37.7**	**-2.0**
SDD	**Santo Domingo**	**2.30**	**255**			**Pb**	**08 02 23.5**	**-1.1**
SDD				IAML			08 02 55.8	
	comp=N,3μm,1.1s							
SDD				IAML			08 03 07.2	
	comp=E,3μm,1.0s							
SDD	**Santo Domingo**	**2.30**	**255**	*i*P		**Pb**	**08 02 24.4**	**-0.2**
SDD				*e*S		**Sb**	**08 02 52.5**	**-1.0**
CUPR	**Culebra, Puert**	**2.31**	**109**			**Pb**	**08 02 23.6**	**-1.0**
BANI	**BANI**	**2.73**	**256**			**Pb**	**08 02 30.0**	**-1.9**
SC01	**Santiago de lo**	**3.00**	**277**			**Pn**	**08 02 33.9**	**+3.1**
LOPP1	**Punta Rusia, P**	**3.50**	**283**	*i*P		**Pn**	**08 02 39.5**	**+1.7**
SDDR	**Presa de Saban**	**3.52**	**269**			**Pn**	**08 02 41.2**	**+3.2**
SDDR				IAML			08 03 39.0	
	comp=E,1μm,0.7s							
SDDR	**Presa de Saban**	**3.52**	**269**	*e*P		**Pn**	**08 02 41.0**	**+3.0**
SDDR				*e*S		**Sb**	**08 03 27.6**	**-0.8**
SDDR	**Presa de Saban**	**3.52**	**269**	*e*P		**Pn**	**08 02 40.6**	**+2.6**
SDDR				x		x	08 03 24.2	
SDDR	**Presa de Saban**	**3.52**	**269**	||*i*P	**Pn**	**08 02 41.2**	**+3.2**
SDDR	**Presa de Saban**	**3.52**	**269**	*i*P		**Pn**	**08 02 41.2**	**+3.2**
SDDR				IAML			08 03 38.6	
	comp=Z,651nm,0.8s							
LODU1	**El Espartillar**	**3.77**	**260**	*i*P		**Pn**	**08 02 45.5**	**+4.1**
LOBH	**Bahia de las A**	**4.04**	**253**	*i*P		**Pn**	**08 02 48.7**	**+3.5**
GRTK	**Grand Turk**	**4.12**	**306**	*e*P		**Pn**	**08 02 45.4**	**-0.9**
GRTK				*e*S		**Sn**	**08 03 32.8**	**-2.2**
GRTK	**Grand Turk**	**4.12**	**306**	*i*P		**Pn**	**08 02 47.1**	**+0.8**
GRTK				*e*S		**Sn**	**08 03 32.9**	**-2.1**
GRTK				IAML			08 03 45.5	
	comp=Z,145nm,1.8s							
SKI	**Saint Kitts**	**4.91**	**110**	*e*P		**Pn**	**08 02 60.0**	**+2.8**
SKI				x		x	08 04 01.8	
ANWB	**Willy Bob**	**5.67**	**103**	*e*P		**Pn**	**08 03 04.9**	**-2.7**
DHSZ	**Broadband at M**	**6.20**	**116**	*e*P		Pn	08 03 07.2	-7.7
ATGZ	**Broadband at L**	**6.32**	**117**	*e*P		**Pn**	**08 03 16.4**	**-0.1**
MASC	**Masc**	**6.37**	**281**	*e*P		**Pn**	**08 03 13.5**	**-3.6**
TBG	**Guadaloupe-3**	**6.50**	**119**	*e*P		Pn	08 03 25.0	+5.9
DSDZ	**La Diserade, G**	**6.79**	**113**	*e*P		Pn	08 03 12.2	-11
DSLB	**Salisbury**	**6.91**	**121**	*e*P		**Pn**	**08 03 26.3**	**+1.7**
QMBU	**Quimbuelo**	**6.91**	**280**	*e*P		**Pn**	**08 03 23.0**	**-1.7**
NMDO	**Nuevo Mundo**	**7.13**	**283**	*e*P		**Pn**	**08 03 24.5**	**-3.1**
GTBY	**Guantanamo Bay**	**7.16**	**278**	*e*P		**Pn**	**08 03 26.0**	**-2.0**
BIM	**Bigot**	**7.71**	**125**	Pn		**Pn**	**08 03 35.9**	**+0.2**
PINC	**Pinares de May**	**7.86**	**282**	*e*P		**Pn**	**08 03 34.3**	**-3.4**
HLGC	**Holguin**	**8.18**	**284**	*e*P		**Pn**	**08 03 41.6**	**-0.5**
LMGC	**Las Mercedes**	**8.95**	**278**	*e*P		**Pn**	**08 03 50.9**	**-1.7**
CCCC	**Cccc**	**9.80**	**284**	*e*P		Pn	08 03 56.7	-7.7
SDV	**Santo Domingo**	**10.56**	**197**	Pn		**Pn**	**08 04 16.5**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=25,slow=10,SNR=6.0							
SDV				Sn		**Sn**	**08 06 06.7**	**-7.2**
	baz=319,slow=19							
SDV				LR		LR	08 08 17.3	
	comp=Z,68nm,21.1s,baz=62,slow=37							
	comp=Z,3.2nm,0.4s							
SDV	**Santo Domingo**	**10.56**	**197**	Pn		**Pn**	**08 04 14.1**	**-0.8**
ROSC	**El Rosal**	**15.61**	**206**	Pn		**P**	**08 05 26.3**	**-1.9**
	comp=Z,1.5nm,0.3s,baz=62,slow=17,SNR=14							
	comp=Z,4.7nm,0.4s							
ROSC	**El Rosal**	**15.61**	**206**	Pn		**Pn**	**08 05 24.5**	**+0.6**
JTS	**Las Juntas de**	**18.93**	**245**	P		**Pn**	**08 06 06.4**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=27,slow=5.5,SNR=5.5							
	comp=Z,12nm,0.9s							
JTS	**Las Juntas de**	**18.93**	**245**	P		**Pn**	**08 06 05.4**	**+0.2**
JTS				IAmb		IAmb	08 06 10.9	
	comp=Z,19nm,1.1s							
OTAV	**Otavalo**	**21.55**	**211**	P		**P**	**08 06 31.8**	**-1.8**
TKL	**Tuckaleechee C**	**21.85**	**322**	LR		LR	08 15 29.5	
	comp=Z,38nm,18.4s,baz=28,slow=38							
APG	**El Apazote**	**22.25**	**263**	P		**P**	**08 06 43.0**	**+2.1**
	comp=Z,0.4nm,0.8s,baz=86,slow=13,SNR=3.8							
CCIG	**Comitan**	**23.56**	**267**	P		**P**	**08 06 55.0**	**+0.5**
CCIG				IAmb		IAmb	08 06 57.1	
	comp=Z,12nm,1.0s							
SADO	**Sadowa**	**27.37**	**342**	LR		LR	08 19 18.2	
	comp=Z,53nm,18.8s,baz=152,slow=39							
TXAR	**Lajitas Array**	**34.34**	**294**	P		**P**	**08 08 32.4**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=106,slow=9.3,SNR=5.9							
TXAR				PcP		**PcP**	**08 11 07.1**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=110,slow=4.3,SNR=2.6							
	comp=Z,0.5nm,0.7s							
LPAZ	**La Paz**	**35.15**	**181**	P		**P**	**08 08 39.1**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=321,slow=6.5,SNR=2.3							
	comp=Z,0.9nm,0.6s							
LPAZ	**La Paz**	**35.15**	**181**	IAmb		IAmb	08 08 40.6	
	comp=Z,2.3nm,1.1s							
SCHQ	**Schefferville**	**35.69**	**1**	P		**P**	**08 08 41.7**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=209,slow=7.1,SNR=4.9							
	comp=Z,1.2nm,0.7s							
VHRN	**Van Horn**	**35.71**	**296**	P		**P**	**08 08 44.4**	**+1.8**
VHRN				IAmb		IAmb	08 08 55.1	
	comp=Z,3.4nm,1.0s							
MNTX	**Cornudas Mount**	**36.21**	**298**	P		**P**	**08 08 48.6**	**+2.0**
MNTX				IAmb		IAmb	08 08 55.2	
	comp=Z,3.8nm,1.2s							
ANMO	**Albuquerque**	**37.81**	**303**	LR		LR	08 28 34.1	
	comp=Z,48nm,18.6s,baz=78,slow=43							
PDAR	**Pinedale Array**	**42.48**	**313**	P		**P**	**08 09 39.7**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=56,slow=6.0,SNR=1.9							
	comp=Z,0.1nm,0.5s							
CPUP	**Villa Florida**	**46.22**	**167**	P		**P**	**08 10 09.2**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=18,slow=10,SNR=3.4							
CPUP				LR		LR	08 29 21.8	
	comp=Z,36nm,20.3s,baz=42,slow=36							
	comp=Z,1.1nm,0.6s							
CPUP	**Villa Florida**	**46.22**	**167**	IAmb		IAmb	08 10 31.2	
	comp=Z,3.7nm,1.1s							
NVAR	**Mina Array Bea**	**47.83**	**305**	P		**P**	**08 10 21.6**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=93,slow=7.4,SNR=4.9							
	comp=Z,0.8nm,0.9s							
YKA	**Yellowknife Ar**	**54.05**	**335**	P		**P**	**08 11 09.1**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=114,slow=6.3,SNR=6.5							
	comp=Z,0.4nm,0.7s							
ESDC	**Sonseca Array**	**57.92**	**55**	P		**P**	**08 11 36.2**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=266,slow=7.0,SNR=3.5							
	comp=Z,0.9nm,0.9s							
ESDC	**Sonseca Array**	**57.92**	**55**	IAmb		IAmb	08 11 52.8	
	comp=Z,4.2nm,1.5s							
PLCA	**Paso Flores**	**59.57**	**183**	P		**P**	**08 11 49.1**	**+1.7**
	comp=Z,2.5nm,1.0s,baz=5.0,slow=7.7,SNR=2.5							
	comp=Z,2.5nm,1.0s							
ILAR	**Eielson Array**	**68.36**	**333**	P		**P**	**08 12 44.8**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=99,slow=4.8,SNR=9.4							
	comp=Z,0.9nm,0.9s							
HHC	**Hu-ho-hao-te**	**120.37**	**1**	*e*P		**PKiKP**	**08 20 36.2**	**+0.5**
PZH	**PanZhiHua**	**133.51**	**13**	PKP		**PKiKP**	**08 21 04.2**	**+1.8**
WRA	**Warramunga Arr**	**159.33**	**264**	PKPab		**PKPab**	**08 22 20.9**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=90,slow=4.0,SNR=5.5							
ASAR	**Alice Springs**	**159.49**	**253**	PKP		**PKPdf**	**08 21 42.9**	**-0.4**
	comp=Z,1.3nm,1.1s,baz=186,slow=1.1,SNR=5.8							
ASAR				PKPab		**PKPab**	**08 22 20.3**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=112,slow=4.1,SNR=5.9							

IDC ***12*** *08:15

mbtmp4.1/3, Error ellipse: s-maj=182.9km s-min=42.5km az=147.0

ISC 12 08:15:58.9±3.7, 23°.1S±0°.8×179°.0W±0°.6, H426km, n7, σ0s96/7, mb3.6/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.87**	**247**	P	**P**	**08 22 20.6**	**-0.5**
	1.5nm,0.7s,baz=90,slow=7.1,SNR=2.2						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**43.07**	**260**	P	**P**	**08 23 20.6**	**+0.8**
	2.2nm,0.7s,baz=94,slow=7.3,SNR=12						
	2.2nm,0.7s						
WRA	**Warramunga Arr**	**43.37**	**265**	P	**P**	**08 23 22.6**	**+0.4**
	3.1nm,0.7s,baz=94,slow=8.1,SNR=16						
	3.1nm,0.7s						
HFS	**Hagfors**	**141.91**	**350**	PKP	**PKPdf**	**08 34 41.1**	**+0.5**
	3.4nm,0.9s,baz=29,slow=3.3,SNR=6.3						
AKASG	**Malin Array Be**	**144.75**	**329**	PKPbc	**PKPab**	**08 34 46.9**	**+0.6**
	0.7nm,0.5s,baz=62,slow=2.2,SNR=1.4						
BRTR	**Keskin Array B**	**147.79**	**309**	PKPbc	**PKPab**	**08 34 58.0**	**-0.9**
	0.5nm,0.5s,baz=41,slow=2.7,SNR=1.7						
MMAI	**Mount Meron Ar**	**148.17**	**296**	PKPbc	**PKPab**	**08 34 59.5**	**-1.1**
	1.9nm,0.5s,baz=86,slow=8.8,SNR=2.0						

*NEIC **12** 08:17:14.6±1.1, 19°.03N±0°.03×67°.56W±0°.05, h11km±8km, ML3.1/37, Md3.3/4(RSPR), Error ellipse: s-maj=7.9km s-min=1.9km az=58.0*
*SDD **12** 08:17:16.8±2.3, 18°.95N×67°.66W, h0km±15km, MD3.1, ML2.8, MW3.2, Presumed earthquake*
*RSPR **12** 08:17:18.3, 19°.12N×67°.53W, h29km±29km, MD3.3/4*
*OSPL **12** 08:17:24.7±0.3, 18°.70N×67°.06W, h5km, ML2.4, Presumed earthquake*

ISC 12 08:17:13.6±1.5, 19°.06N±0°.06×67°.60W±0°.03, h5km±10km, n40, σ0s80/63, 16C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.68**	**170**		**Pg**	**08 17 26.8**	**+0.1**
IDE					**Sg**	**08 17 35.8**	**+0.3**
AGPR	**Aguadilla, PR**	**0.75**	**141**		**Pg**	**08 17 28.7**	**+0.7**
AGPR				IAML		08 17 40.0	
	682nm,0.5s						
AGPR				IAML		08 17 44.2	
	532nm,0.3s						
AGPR	**Aguadilla, PR**	**0.75**	**141**	↑*i*P	**Pb**	**08 17 29.1**	**-0.1**
AGPR				*i*S	**Sg**	**08 17 38.3**	**+0.6**
AGPR				IAML		08 17 43.7	
	comp=N,566nm,0.3s						
AGPR	**Aguadilla, PR**	**0.75**	**141**	↑*e*P	**Pg**	**08 17 28.6**	**+0.6**
AGPR				*e*S	**Sg**	**08 17 38.9**	**+1.2**
PCDR	**Punta Cana, DR**	**0.91**	**234**	↑*i*P	**Pg**	**08 17 31.7**	**+0.5**
PCDR				↑*i*S	**Sg**	**08 17 42.2**	**-0.8**
PCDR				IAML		08 17 50.0	
	comp=N,450nm,0.6s						
PCDR				IAML		08 17 50.1	
	comp=N,450nm,0.6s						
PRSN	**Puerto Rico Se**	**0.94**	**152**		**Pg**	**08 17 32.2**	**+0.5**
PRSN					**Sb**	**08 17 46.2**	**+0.9**
PRSN	**Puerto Rico Se**	**0.94**	**152**	↑*e*P	**Pg**	**08 17 32.2**	**+0.5**
PRSN				*e*S	**Sb**	**08 17 46.2**	**+0.9**
LSP	**Las Mesas**	**1.00**	**151**		**Pg**	**08 17 32.9**	**0.0**
LSP					**Sb**	**08 17 47.5**	**+0.4**
LSP	**Las Mesas**	**1.00**	**151**	↑*e*P	**Pg**	**08 17 32.9**	**0.0**
LSP				*e*S	**Sb**	**08 17 47.5**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.14**	**156**		**Pn**	**08 17 36.8**	**+0.4**
CRPR					**Sn**	**08 17 52.4**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.14**	**156**		**Pg**	**08 17 35.5**	**-0.1**
CRPR				IAML		08 17 53.5	
	comp=N,425nm,0.5s						
CRPR				IAML		08 17 54.3	
	comp=N,358nm,0.8s						
CRPR	**Cabo Rojo, PR**	**1.14**	**156**	↑*i*P	**Pn**	**08 17 36.5**	**+0.2**
CRPR				↑*i*S	**Sb**	**08 17 51.6**	**+0.5**
CRPR				IAML		08 17 54.5	
	comp=N,482nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.14**	**156**	↑*e*P	**Pn**	**08 17 36.8**	**+0.4**
CRPR				*e*S	**Sn**	**08 17 52.4**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.14**	**156**	*i*P	**Pn**	**08 17 37.0**	**+0.7**
CRPR				IAML		08 17 54.5	
	comp=Z,452nm,0.5s						
HIDR	**Higuey Centro**	**1.15**	**247**	↑*i*P	**Pg**	**08 17 34.0**	**-1.7**
HIDR				↑*i*S	**Sg**	**08 17 48.9**	**-1.8**
HIDR				IAML		08 17 51.0	
	comp=N,210nm,0.8s						
UUPR	**Utuado, UPR, P**	**1.16**	**134**		**Pg**	**08 17 35.2**	**-0.7**
MLPR	**Magueyes Islan**	**1.20**	**154**	Pn	**Pg**	**08 17 36.5**	**-0.2**
MLPR				IAML		08 17 54.7	
	comp=N,348nm,0.5s						
MLPR				IAML		08 17 55.6	
	comp=N,468nm,0.6s						
MIDR	**Miches**	**1.37**	**267**	*i*P	**Pb**	**08 17 40.1**	**+0.3**
MIDR				↑*i*S	**Sg**	**08 17 59.4**	**+1.6**
MIDR				IAML		08 18 00.8	
	comp=N,115nm,0.6s						
MIDR				IAML		08 18 02.2	
	comp=N,94nm,0.4s						
CELP	**Cerrillos**	**1.38**	**135**		**Pn**	**08 17 38.7**	**-0.9**
CELP				IAML		08 18 01.7	
	comp=N,274nm,0.3s						
CELP				IAML		08 18 04.0	
	comp=N,208nm,0.3s						
OBIP	**Obispado Ponce**	**1.38**	**137**		**Pn**	**08 17 38.7**	**-0.9**
OBIP					**Sb**	**08 17 57.2**	**-0.8**
OBIP	**Obispado Ponce**	**1.38**	**137**	↓*e*P	**Pn**	**08 17 38.7**	**-0.9**
OBIP				*e*S	**Sb**	**08 17 57.2**	**-0.8**
OBIP	**Obispado Ponce**	**1.38**	**137**	*i*P	**Pn**	**08 17 38.7**	**-1.0**
OBIP				IAML		08 18 02.6	
	comp=Z,87nm,0.7s						
ECPR	**Experimental S**	**1.39**	**122**		**Pn**	**08 17 38.9**	**-0.8**
ECPR	**Experimental S**	**1.39**	**122**	↓*e*P	**Pn**	**08 17 38.8**	**-0.9**
ECPR				*e*S	**Sb**	**08 17 56.4**	**-1.6**
SMDR	**Samana, DR**	**1.52**	**279**		**Pn**	**08 17 41.8**	**+0.3**
SMDR					**Sn**	**08 18 01.8**	**+0.2**
SMDR	**Samana, DR**	**1.52**	**279**	↓*e*P	**Pn**	**08 17 41.8**	**+0.3**
SMDR				*e*S	**Sn**	**08 18 01.8**	**+0.2**
GCPR	**Guaynabo City**	**1.62**	**117**		**Pn**	**08 17 43.4**	**+0.5**
GCPR					**Sn**	**08 18 04.0**	**-0.2**
GCPR	**Guaynabo City**	**1.62**	**117**	↑*e*P	**Pn**	**08 17 43.4**	**+0.5**
GCPR				*e*S	**Sn**	**08 18 04.0**	**-0.2**
SJG	**San Juan**	**1.67**	**124**		**Pn**	**08 17 44.1**	**+0.5**
SJG	**San Juan**	**1.67**	**124**	IAML		08 18 08.6	
	comp=Z,167nm,0.5s						
SJG				IAML		08 18 12.0	
	comp=Z,161nm,0.3s						
SJG	**San Juan**	**1.67**	**124**	↑*e*P	**Pn**	**08 17 44.1**	**+0.5**
SJG				*e*S	**Sn**	**08 18 05.3**	**-0.1**
SJG	**San Juan**	**1.67**	**124**	*i*P	**Pn**	**08 17 43.3**	**-0.3**
SJG				IAML		08 18 08.5	
	comp=Z,102nm,0.3s						
DR12	**Loma Pena Alta**	**1.71**	**261**		**Pn**	**08 17 44.7**	**+0.6**
HATOM	**Hato Mayor del**	**1.71**	**261**	↑*i*P	**Pn**	**08 17 45.1**	**+1.0**
HATOM				*i*S	**Sn**	**08 18 06.2**	**-0.2**
HATOM				IAML		08 18 08.2	
	comp=N,89nm,0.6s						
PDPR	**Patillas Dam,**	**1.82**	**124**		**Pn**	**08 17 45.4**	**-0.3**
HUMP	**Col San Antoni**	**1.89**	**118**		**Pn**	**08 17 46.9**	**+0.2**
HUMP					**Sb**	**08 18 12.3**	**-0.4**
HUMP	**Col San Antoni**	**1.89**	**118**	↑*e*P	**Pn**	**08 17 46.9**	**+0.2**
HUMP				*e*S	**Sb**	**08 18 12.3**	**-0.4**
CUPR	**Culebra, Puert**	**2.32**	**108**	Pn	**Pn**	**08 17 53.9**	**+1.3**
BANI	**BANI**	**2.69**	**256**	Pn	**Pb**	**08 18 01.0**	**-1.5**
SDDR	**Presa de Saban**	**3.49**	**269**	Pn	**Pn**	**08 18 11.0**	**+2.3**
SDDR				IAML		08 19 11.1	
	comp=N,48nm,0.8s						

*SDD **12** 08:18:38.7±2.3, 19°.16N×67°.53W, h20km±85km, MD3.6, ML3.2, MW3.5, Presumed earthquake*
*NEIC **12** 08:18:45.1±1.0, 18°.6N±0°.1×67°.52W±0°.05, h34km±17km, ML3.0/37, Error ellipse: s-maj=15.3km s-min=5.8km az=189.0*

ISC 12 08:18:38.8±1.3, 19°.10N±0°.10×67°.58W±0°.04, H27km, n24, σ0s97/28, 4C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.77**	**145**	Pn	**Pb**	**08 18 53.2**	**-0.4**
AGPR				IAML		08 19 04.5	
	996nm,0.3s						
AGPR	**Aguadilla, PR**	**0.77**	**145**	↑*e*Pg	**Pb**	**08 18 53.2**	**-0.4**
AGPR				↑*e*Sg	**Sb**	**08 19 03.8**	**+0.2**
AGPR				IAML		08 19 04.7	
	comp=N,863nm,0.2s						
AGPR				IAML		08 19 06.2	
	comp=E,728nm,0.1s						
PRSN	**Puerto Rico Se**	**0.97**	**155**	Pn	**Pn**	**08 18 56.7**	**0.0**
PRSN				IAML		08 19 14.9	
	comp=E,1μm,0.2s						
PRSN				IAML		08 19 15.7	
	comp=E,1μm,0.4s						
UUPR	**Utuado, UPR, P**	**1.17**	**136**		**Pb**	**08 19 00.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.17**	**158**		**Pb**	**08 19 00.3**	**-0.1**
CRPR				IAML		08 19 21.5	
	comp=E,536nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.17**	**158**	*e*Pg	**Pn**	**08 18 59.4**	**-0.1**
CRPR				IAML		08 19 21.4	
	comp=N,486nm,0.6s						
HIDR	**Higuey Centro**	**1.19**	**245**	*e*Pg	**Pn**	**08 18 58.5**	**-1.3**
HIDR				IAML		08 19 35.1	
	comp=N,536nm,0.2s						
MLPR	**Magueyes Islan**	**1.23**	**156**		**Pn**	**08 19 00.2**	**-0.1**
MLPR				IAML		08 19 20.4	
	comp=N,517nm,0.4s						
MLPR				IAML		08 19 21.1	
	comp=N,367nm,0.3s						
ECPR	**Experimental S**	**1.39**	**124**		**Pb**	**08 19 03.1**	**-1.0**
CELP	**Cerrillos**	**1.39**	**137**		**Pb**	**08 19 03.8**	**-0.3**
CELP				IAML		08 19 28.4	
	comp=N,491nm,0.2s						
CELP				IAML		08 19 29.1	
	comp=N,484nm,0.3s						
OBIP	**Obispado Ponce**	**1.40**	**139**		**Pn**	**08 19 03.4**	**+0.9**
MIDR	**Miches**	**1.40**	**266**	*e*Pg	**Pn**	**08 19 03.2**	**+0.6**
MIDR				↑*e*Sg	**Sb**	**08 19 23.5**	**+1.7**
MIDR				IAML		08 19 24.3	
	comp=N,355nm,0.5s						
MIDR				IAML		08 19 24.3	
	comp=N,355nm,0.5s						
MIDR				IAML		08 19 25.2	
	comp=E,208nm,0.3s						
SMDR	**Samana, DR**	**1.54**	**277**	↓*e*Pg	**Pb**	**08 19 05.9**	**-0.7**
SMDR				↑*e*Sg	**Sb**	**08 19 27.2**	**+1.5**
SMDR				IAML		08 19 48.6	
	comp=N,344nm,0.5s						
GCPR	**Guaynabo City**	**1.62**	**119**		**Pb**	**08 19 07.9**	**-0.1**
SJG	**San Juan**	**1.67**	**126**		**Pn**	**08 19 07.4**	**+1.1**
SJG				IAML		08 19 36.6	
	comp=N,198nm,0.2s						
SJG				IAML		08 19 52.1	
	comp=N,195nm,0.5s						
SJG	**San Juan**	**1.67**	**126**	*e*Pg	**Pb**	**08 19 07.8**	**-1.1**
DR12	**Loma Pena Alta**	**1.74**	**260**	Pn	**Pb**	**08 19 09.6**	**-0.5**
HATOM	**Hato Mayor del**	**1.74**	**260**	*e*Pg	**Pb**	**08 19 09.5**	**-0.6**
HATOM				*e*Sg	**Sb**	**08 19 32.3**	**+0.8**
HATOM				IAML		08 19 51.4	
	comp=N,144nm,0.8s						
PDPR	**Patillas Dam,**	**1.82**	**126**		**Pb**	**08 19 10.1**	**-1.5**
HUMP	**Col San Antoni**	**1.89**	**120**		**Pb**	**08 19 11.4**	**-1.3**
HUMP				IAML		08 19 42.7	
	comp=N,137nm,0.2s						
CUPR	**Culebra, Puert**	**2.31**	**110**	Pn	**Pb**	**08 19 18.6**	**-1.2**
BANI	**BANI**	**2.73**	**256**	Pn	**Pb**	**08 19 26.1**	**-1.0**
SC01	**Santiago de lo**	**3.00**	**277**	Pn	**Pb**	**08 19 31.3**	**-0.2**
SDDR	**Presa de Saban**	**3.51**	**269**	Pn	**Pb**	**08 19 38.5**	**-1.9**

IDC 12 08:24:06.5±3.5, 55°.91N×86°.27E, h0km, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=32.2km s-min=24.6km az=77.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.13**	**204**	I	I	08 37 10.0	
	baz=22,slow=347,SNR=6.0						
ZALV	**Zalesovo Beam**	**2.14**	**204**	Pn	Pn	08 24 43.0	-0.4
	1.2nm,0.3s,baz=19,slow=16,SNR=34						
ZALV				Lg	Lg	08 25 15.2	
	2.8nm,0.3s,baz=26,slow=25,SNR=15						
	9.0nm,0.6s						
KURBB	**Kurchatov Arra**	**7.04**	**224**	Pn	Pn	08 25 50.5	-0.2
	baz=41,slow=14,SNR=6.4						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**9.46**	**197**	Pn	Pn	08 26 24.1	+0.2
	baz=18,slow=11,SNR=1.9						
MKAR				Sn	Sn	08 28 07.8	-3.1
	0.2nm,0.3s,baz=12,slow=21,SNR=6.5						
MKAR				Lg	Lg	08 29 07.5	
	0.1nm,0.3s,baz=18,slow=14,SNR=1.5						
	0.1nm,0.3s						

*KRNET **12** 08:38:16.4±0.1, 41°.15N×80°.29E, mb2.9*
*NNC **12** 08:38:20.2±3.0, 41°.86N×79°.93E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=19.3km s-min=16.6km az=122.0*

SOME 12 08:38:20.0, 41°.92N×80°.05E, h15km, 8C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.31**	**341**	P	Pn	08 38 43.7	-0.2
	4.1nm,0.2s						
SHLS				S	Sb	08 39 00.7	-0.5
	13nm,0.3s						
SHLS	**Shalkode**	**1.31**	**341**	*e*P	Pn	08 38 43.7	-0.2
	4.1nm,0.2s						
SHLS				*e*S	Sb	08 39 00.7	-0.5
	13nm,0.3s						
PRZ	**Przheval'sk**	**1.35**	**295**	↑*e*P	Pg	08 38 52.7	+6.7
PRZ				↑*e*S	Sg	08 39 18.9	+15
UZB	**Uzynbulak**	**1.45**	**329**	P	Pg	08 38 47.4	-0.5
	5.4nm,0.3s						
UZB				S	Sg	08 39 06.8	+0.2
	7.7nm,0.3s						
UZB	**Uzynbulak**	**1.45**	**329**	*e*P	Pg	08 38 47.4	-0.5
	5.4nm,0.3s						
UZB				*e*S	Sg	08 39 06.8	+0.2
	7.7nm,0.3s						
PDGK	**Podgornoye**	**1.47**	**344**	↓P	Pg	08 38 48.6	+0.3
	1.2nm,0.3s						
PDGK				↑S	Sg	08 39 10.6	+3.1
	6.9nm,0.5s						
TARG	**Taragay, Kyrgy**	**1.69**	**264**	↑*i*P	Pg	08 38 52.7	+0.2
TARG				↑*i*S	Sg	08 39 19.2	+4.7
KPKS	**Kokpek**	**1.85**	**327**	*e*P	Pg	08 38 55.8	+0.4
	0.3nm,0.2s						
KPKS				*e*S	Sg	08 39 21.5	+2.1
	26nm,0.4s						
KDJ	**Kajisay**	**2.15**	**277**	↓*e*P	Pg	08 39 00.0	-1.2
KDJ				↓*i*S	Sg	08 39 32.3	+3.2
DJR	**Jarkent**	**2.42**	**356**	Pg	Pb	08 39 03.1	-0.2
	1.7nm,0.3s						
DJR				Lg	Lg	08 39 34.2	
	11nm,0.3s						
DJR	**Jarkent**	**2.42**	**356**	*e*P	Pb	08 39 03.1	-0.2
	1.7nm,0.3s						
DJR				*e*S	Sb	08 39 34.2	+1.2
	11nm,0.3s						
IZV	**Izvestkoviy**	**2.78**	**295**	Pg	Pb	08 39 10.5	+1.1
	2.1nm,0.1s						
IZV				Lg	Lg	08 39 46.7	
	9.3nm,0.4s						
IZV	**Izvestkoviy**	**2.78**	**295**	*e*P	Pg	08 39 11.5	-1.8
	0.9nm,0.1s						
IZV				*e*S	Sg	08 39 48.2	-1.1
	9.3nm,0.4s						
ARXS	**Arharly**	**2.81**	**325**	*e*P	Pb	08 39 10.4	+0.4
	1.6nm,0.3s						
ARXS				*e*S	Sb	08 39 46.6	+2.3
	4.2nm,0.4s						
ULHL	**Ulahol**	**2.85**	**278**	↑*e*P	Pb	08 39 10.0	-0.8
ULHL				↑*i*S	Sg	08 39 49.0	-2.7
KTBS	**Karatobe**	**3.06**	**307**	Pg	Pb	08 39 14.5	+0.4
	1.4nm,0.5s						
KTBS				Lg	Lg	08 39 53.5	
	0.5nm,0.4s						
KTBS	**Karatobe**	**3.06**	**307**	*e*P	Pb	08 39 14.5	+0.4
	1.4nm,0.5s						
KTBS				*e*S	Sb	08 39 53.5	+2.2
	0.5nm,0.4s						
BOOM	**Boomskoye usch**	**3.11**	**282**	↓*e*P	Pb	08 39 14.1	-0.9
BOOM				↓*e*S	Sb	08 39 56.1	+3.3
KST	**Kastek**	**3.23**	**292**	Pg	Pg	08 39 20.2	-1.6
	2.6nm,0.3s						
KST				Lg	Lg	08 40 03.0	
	11nm,0.9s						
KST	**Kastek**	**3.23**	**292**	*e*P	Pg	08 39 20.2	-1.6
	2.6nm,0.3s						
KST				*e*S	Sg	08 40 03.0	-0.6
	11nm,0.9s						
MK31	**Makanchi Array**	**5.13**	**17**	↑Pn	Pn	08 39 39.3	+2.9
	0.1nm,0.2s,baz=197,slow=13,SNR=14						
MK31				↓Sn	Sn	08 40 41.1	+5.8
	0.3nm,0.3s,baz=208,slow=29,SNR=4.2						
MK31				↓Lg	Lg	08 41 06.0	
	0.8nm,0.6s,baz=194,slow=27,SNR=3.7						

*IDC **12** 08:41:19.1±2.7, 0°.84N×124°.71E, h114km±29km, mb3.6/8, mbtmp4.0/11, Error ellipse: s-maj=21.8km s-min=16.1km az=87.0*
*NEIC **12** 08:41:20.3±2.2, 0°.85N±0°.10×124°.84E±0°.07, h119km±11km, mb4.0/9, Error ellipse: s-maj=13.9km s-min=10.2km az=172.0*
*DJA **12** 08:41:21.1±0.3, 1°.N±3°×12°.5E±°, h93km±9km, M4.7/31, mB5.3/5, mb4.8/12, MLv4.6/31, Mw(mB)4.7/5*

ISC 12 08:41:18.6±0.6, 0°.81N±0°.06×124°.89E±0°.07, h100km, n44, σ1s94/39, mb4.0/13, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**0.63**	**356**	P	**Pn**	**08 41 38.6**	**+3.1**
TNTI	**Ternate**	**2.48**	**91**		**Pn**	**08 41 59.4**	**+1.9**
TNTI	**Ternate**	**2.48**	**91**	P	**Pn**	**08 41 59.7**	**+2.2**
LUWI	**Luwuk**	**2.80**	**229**		**Pn**	**08 42 04.9**	**+3.2**
LUWI	**Luwuk**	**2.80**	**229**	P	**Pn**	**08 42 05.0**	**+3.2**
MRSI	**Marisa**	**2.96**	**264**	P	**Pn**	**08 42 05.4**	**+1.5**
SANI	**Sanana**	**3.05**	**159**	P	**Pn**	**08 42 05.0**	**0.0**
APSI	**Ampana**	**3.66**	**242**	P	**Pn**	**08 42 16.1**	**+2.9**
TOLI2	**Tolitoli**	**4.11**	**274**		**Pn**	**08 42 19.9**	**+0.5**
NLAI	**Namlea**	**4.59**	**151**	P	**Pn**	**08 42 26.7**	**+0.9**
MPSI	**Mapaga**	**5.01**	**265**	P	**Pn**	**08 42 33.7**	**+2.2**
	0.3nm73nm,0.8s						
KRAI	**Karang Ratu**	**5.40**	**139**	P	**Pn**	**08 42 39.7**	**+3.0**
	121nm,0.5s						
MSAI	**Masohi**	**5.78**	**136**	P	**Pn**	**08 42 44.9**	**+3.0**
TTSI	**Tana Toraja**	**6.35**	**233**	P	**Pn**	**08 42 51.4**	**+1.7**
	0.3nm90nm,0.7s						
SWI	**Sorong**	**6.59**	**105**	P	**Pn**	**08 42 55.4**	**+2.5**
	0.2nm49nm,0.7s						
SIJI	**Sorong**	**6.59**	**105**	P	**Pn**	**08 42 55.6**	**+2.6**
	21nm,0.7s,baz=296,slow=7.2,SNR=4.5						
SIJI	**Sorong**	**6.59**	**105**	P	**Pn**	**08 42 55.4**	**+2.4**
	0.1nm42nm,1.2s						
SPSI	**Sidrap Palu**	**6.97**	**227**	P	Pn	08 43 12.8	+15
MYLDM	**Lahad Datu**	**7.71**	**304**		**Pn**	**08 43 09.2**	**+1.0**
MYLDM	**Lahad Datu**	**7.71**	**304**	P	Pn	08 43 21.4	+13
KAPI	**Kappang**	**7.73**	**222**	P	**Pn**	**08 43 07.8**	**-0.6**
	3.7nm,0.3s,baz=80,slow=11,SNR=1.8						
KAPI				S	**Sn**	**08 44 33.7**	**-0.8**
	14nm,0.4s,baz=53,slow=22,SNR=7.0						
FAKI	**Fak Fak**	**8.24**	**117**	Pn	**Pn**	**08 43 17.0**	**+1.6**
SBUM	**Sibu**	**12.76**	**277**	P	**P**	**08 44 26.9**	**+3.3**
KNRA	**Kununurra**	**16.82**	**167**		**Pn**	**08 45 07.1**	**-1.1**
FITZ	**Fitzroy Crossi**	**18.80**	**178**	P	**P**	**08 45 30.2**	**-0.2**
	3.3nm,0.7s,baz=351,slow=7.4,SNR=5.6						
WB0	**Warramunga Arr**	**22.48**	**156**	P	**P**	**08 46 09.8**	**0.0**
WB0				IAmb	IAmb	08 46 13.4	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**22.61**	**156**	P	**P**	**08 46 10.5**	**-0.7**
	comp=Z,2.1nm,0.5s,baz=335,slow=9.9,SNR=30						
	comp=Z,2.1nm,0.5s						
WRA	**Warramunga Arr**	**22.61**	**156**	IAmb	IAmb	08 46 14.4	
	comp=Z,0.1nm,0.7s						
WR8	**Warramunga Arr**	**22.69**	**156**	P	**P**	**08 46 12.1**	**+0.1**
WR8				IAmb	IAmb	08 46 16.4	
	comp=Z,7.0nm,1.1s						
COEN	**Coen**	**23.31**	**130**	P	**P**	**08 46 18.2**	**+0.1**
AS31	**Alice Springs**	**25.86**	**161**	P	**P**	**08 46 41.9**	**+0.8**
ASAR	**Alice Springs**	**25.86**	**161**	P	**P**	**08 46 42.1**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=339,slow=9.3,SNR=11						
	comp=Z,0.8nm,0.6s						
KSRS	**Korea Array**	**36.57**	**4**	P	**P**	**08 48 15.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=178,slow=9.3,SNR=2.1						
	comp=Z,0.6nm,0.6s						
MJAR	**Matsushiro Arr**	**37.64**	**18**	P	**P**	**08 48 22.7**	**-1.2**
	comp=Z,3.5nm,0.8s,baz=189,slow=9.1,SNR=7.2						
	comp=Z,3.5nm,0.8s						
MJAR	**Matsushiro Arr**	**37.64**	**18**	IAmb	IAmb	08 48 38.5	
	comp=Z,1.5nm,1.4s						
MDJ	**Mudanjiang**	**43.82**	**5**	P	**P**	**08 49 14.7**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,18nm,1.4s						
HEH	**HeiHe**	**49.31**	**2**	*e*P	**P**	**08 49 56.3**	**-1.0**
HEH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PETK	**Petropavlovsk-**	**58.81**	**22**	P	**P**	**08 51 06.1**	**-0.3**
	comp=Z,10nm,1.1s,baz=214,slow=6.3,SNR=3.6						
	comp=Z,10nm,1.1s						
MKAR	**Makanchi Array**	**58.94**	**327**	P	**P**	**08 51 05.3**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=123,slow=7.4,SNR=6.2						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.23**	**329**	P	**P**	**08 51 34.0**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=128,slow=7.1,SNR=2.6						
	comp=Z,0.3nm,0.3s						
KURK	**Kurchatov**	**63.24**	**329**	P	**P**	**08 51 34.0**	**-2.4**
KURK	**Kurchatov**	**63.24**	**329**	IAmb	IAmb	08 51 34.8	
	comp=Z,1.3nm,0.7s						
NRIK	**Noril'sk**	**72.82**	**347**	P	**P**	**08 52 34.4**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=145,slow=6.4,SNR=5.3						
	comp=Z,1.2nm,0.5s						
NRIK	**Noril'sk**	**72.82**	**347**	IAmb	IAmb	08 52 35.2	
	comp=Z,1.9nm,0.8s						

*IDC **12** 08:43:20.1±1.4, 13°.54S×167°.50E, h0km, mb3.7/5, mbtmp3.8/6, ML4.3/1, MS3.5/4, Error ellipse: s-maj=52.6km s-min=25.6km az=134.0*

**ISC 12 08:43:25.3±1.1, 13°.7S±0°.1×167°.6E±0°.2, H35km, n15, σ0s97/7, mb3.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**264**	I	I	08 53 40.0	
	baz=82,slow=342,SNR=3.3						
ZALV	**Zalesovo Beam**	**1.35**	**264**	Pg	Pg	08 46 00.5	-0.6
	1.0nm,0.3s,baz=82,slow=11,SNR=4.4						
ZALV				Lg	Lg	08 46 19.2	
	3.8nm,0.3s,baz=80,slow=25,SNR=12						
KURBB	**Kurchatov Arra**	**6.30**	**240**	Pn	Pn	08 47 09.9	+0.7
	0.1nm,0.3s,baz=54,slow=14,SNR=4.5						
KURBB				Sn	Sn	08 48 19.4	-2.4
	0.1nm,0.3s,baz=57,slow=22,SNR=6.5						
KURBB				Lg	Lg	08 48 56.9	
	0.1nm,0.3s,baz=59,slow=31,SNR=5.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.94**	**205**	Pn	Pn	08 47 33.1	+1.4
	0.1nm,0.3s,baz=27,slow=13,SNR=4.3						
MKAR				Sn	Sn	08 49 01.8	-0.3
	baz=27,slow=23,SNR=1.7						
MKAR				Lg	Lg	08 49 47.8	
	baz=25,slow=29,SNR=1.4						
	0.1nm,0.3s						

MOS ***12*** *08:59:22.2±0.9, 24.°04S×176.°75W, h50km, mb5.2/23, Error ellipse: s-maj=10.6km s-min=10.0km az=4.9*

IDC ***12*** *08:59:24.5±2.2, 24.°09S×176.°73W, h61km±18km, mb4.6/20, mbtmp4.9/21, MS3.6/26, Error ellipse: s-maj=14.5km s-min=13.5km az=49.0*

BJI ***12*** *08:59:25.1, 24.°01S×175.°92W, h95km, mB5.2/8, mb4.9/32*

NOU ***12*** *08:59:29.6, 24.°10S×176.°12W, h146km, mb5.2/41, South of Fiji Islands*

GCMT ***12*** *08:59:31.3±0.3, 24.°13S±0.°02×176.°31W±0.°02, h92km±4km, MW5.0/91, Moment Tensor Solution. s23,c24; s91,c114; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.65±.14; Mθθ -3.56±.13; Mφφ 1.91±.13; Mrθ -0.34±.10; Mrφ -0.60±.13; Mθφ 1.38±.07; Best double couple: Mw 3.43 300×10^16 NP1: φs 300.00000°, δ 60.00000°, λ 31.00000°. NP2: φs 300.00000°, δ 64.00000°, λ 146.00000°. Principal axes: T 3.2330, Plg42.0000°, Azm262.0000°; N 0.3990, Plg48.0000°, Azm87.0000°; P -3.6330, Plg2.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***12*** *08:59:34.3±1.6, 24.°56S±0.°10×177.°4W±0.°2, h102km±10km, mb5.0/35 Error ellipse: s-maj=24.7km s-min=12.9km az=77.0*

ISC 12 08:59:28.4±0.5, 24.°39S±0.°03×176.°79W±0.°06, h93km±3km, h94km: pP-P, n309, σ1°82/285, mb5.0/97, 19C-8D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.94**	**192**	P	**Pn**	**09 00 36.7**	**-3.6**
RIZ				S	**Sn**	**09 01 35.3**	**-0.8**
RAO	**Raoul Island**	**4.95**	**191**	P	**Pn**	**09 00 41.7**	**+1.5**
	737nm,0.2s,baz=66,slow=9.9,SNR=11						
RAO				S	**Sn**	**09 01 39.8**	**+3.6**
	1μm,0.5s,baz=54,slow=19,SNR=10						
RAO				LR	LR	09 02 29.7	
	comp=Z,428nm,20.1s,baz=34,slow=35						
RAO	**Raoul Island**	**4.95**	**191**		**Pn**	**09 00 42.2**	**+1.9**
RAO	**Raoul Island**	**4.95**	**191**	P	Pn	09 00 47.6	+7.3
	2μm,0.7s						
GLKZ	**Green Lake**	**4.96**	**191**	P	**Pn**	**09 00 42.2**	**+1.8**
GLKZ				S	**Sn**	**09 01 40.1**	**+3.7**
LKBA	**Tubou, Lakemba**	**6.41**	**343**	P	**Pn**	**09 01 00.4**	**+0.1**
	21nm,1.1s						
TAVE	**Taveuni**	**8.18**	**339**	P	**Pn**	**09 01 26.1**	**+1.7**
	233nm,1.0s						
MSVF	**Nonsavu**	**8.19**	**323**		**Pn**	**09 01 27.2**	**+2.6**
MSVF	**Nonsavu**	**8.19**	**323**	P	**Pn**	**09 01 27.1**	**+2.5**
	294nm,0.7s						
MSVF	**Nonsavu**	**8.19**	**323**	*i*P	**Pn**	**09 01 26.1**	**+1.5**
NIUE	**Niue**	**8.29**	**52**	P	Pn	09 01 16.0	-10
	comp=Z,1μm,0.8s						
NIUE	**Niue**	**8.29**	**52**	P	Pn	09 01 17.2	-8.6
NIUE				S	Sn	09 02 38.0	-20
DGTI	**Dogotuki**	**8.68**	**337**	P	**Pn**	**09 01 32.8**	**+1.6**
	comp=Z,210nm,0.9s						
OUZ	**Omahuta**	**13.63**	**215**	P	**P**	**09 02 44.7**	**+1.4**
MXZ	**Matakaoa Point**	**13.78**	**197**	P	Pn	09 02 34.6	-5.1
MXZ				S	Sn	09 05 00.6	-11
WCZ	**Waipu Caves**	**13.82**	**212**	P	**P**	**09 02 46.9**	**+1.5**
KUZ	**Kuaotunu**	**13.89**	**206**	P	**P**	**09 02 44.8**	**-1.4**
WMGZ	**Waiomatatini S**	**14.00**	**196**	P	Pn	09 02 36.0	-6.5
WMGZ				S	Sn	09 05 05.7	-11
HAZ	**Te Kaha**	**14.11**	**198**	P	Pn	09 02 35.6	-8.2
HAZ				S	Sn	09 05 09.3	-10
PKGZ	**Pakihiroa**	**14.13**	**197**	P	Pn	09 02 36.9	-7.3
PKGZ				S	Sn	09 05 10.5	-9.2
PUZ	**Puketiti**	**14.28**	**196**	P	Pn	09 02 37.3	-8.8
PUZ				S	Sn	09 05 13.2	-10
RUGZ	**Raukumara Rang**	**14.33**	**198**	P	Pn	09 02 39.6	-7.3
RUGZ				S	**Sn**	**09 05 18.1**	**-6.6**
TWGZ	**Tauwhareparae**	**14.45**	**197**	P	Pn	09 02 42.7	-5.6
TWGZ				S	**Sn**	**09 05 19.2**	**-8.3**
PINNC	**Pines Island,**	**14.57**	**274**		**Pn**	**09 02 47.6**	**-2.3**
CNGZ	**Carnagh Statio**	**14.68**	**196**	P	Pn	09 02 43.3	-7.9
MWZ	**Matawai**	**14.72**	**198**	P	Pn	09 02 42.5	-9.3
MWZ				S	Sn	09 05 24.0	-10
TKGZ	**Te Karaka**	**14.73**	**197**	P	Pn	09 02 45.4	-6.4
URZ	**Urewera**	**14.77**	**199**	P	Pn	09 02 44.9	-7.5
	comp=Z,2.8nm,0.2s,baz=76,slow=19,SNR=12						
URZ				S	Sn	09 05 24.4	-11
	comp=Z,36nm,0.6s,baz=80,slow=23,SNR=10						
URZ	**Urewera**	**14.77**	**199**	P	Pn	09 02 45.9	-6.5
URZ				S	**Sn**	**09 05 26.4**	**-8.7**
RIGZ	**Rimuhau**	**15.00**	**197**	P	Pn	09 02 50.0	-5.4
ONTNC	**Ouen Toro**	**15.53**	**274**	Pn	**Pn**	**09 02 58.5**	**-3.6**
DZM	**Mont Dzumac**	**15.58**	**275**	P	**P**	**09 03 06.6**	**+1.4**
	comp=Z,100nm,0.9s,baz=90,slow=17,SNR=15						
DZM				LR	LR	09 08 05.9	
	comp=Z,180nm,19.9s,baz=290,slow=33						
DZM	**Mont Dzumac**	**15.58**	**275**	Pn	**Pn**	**09 02 59.0**	**-3.9**
HIZ	**Hauiti**	**15.77**	**205**	P	**P**	**09 03 09.7**	**+2.7**
	comp=Z,48nm,1.2s						
RAR	**Rarotonga**	**16.01**	**82**	P	**Pn**	**09 03 03.4**	**-4.7**
	comp=Z,193nm,0.7s,baz=272,slow=8.0,SNR=28						
RAR				S	Sn	09 05 43.0	-22
	comp=Z,36nm,0.3s,baz=298,slow=22,SNR=3.9						
RAR				LR	LR	09 07 54.4	
	comp=Z,211nm,22.0s,baz=273,slow=32						
LTZ	**Lake Taylor**	**20.45**	**204**	P	**P**	**09 03 58.7**	**+0.4**
RPZ	**Rata Peaks**	**21.70**	**204**	LR	LR	09 13 11.9	
	comp=Z,145nm,18.2s,baz=80,slow=38						
FOZ	**Fox Glacier**	**22.04**	**207**	P	**P**	**09 04 16.2**	**+1.0**
ODZ	**Otahua Downs**	**22.99**	**203**	P	**P**	**09 04 26.9**	**+1.8**
PPT	**Papeete**	**26.27**	**80**	LR	LR	09 12 47.7	
	comp=Z,114nm,20.2s,baz=276,slow=31						
TW1H	**Toowoomba 1 Ha**	**28.22**	**257**	P	**P**	**09 05 15.9**	**+3.3**
	comp=Z,66nm,0.9s						
ARMA	**Armidale**	**28.61**	**251**	P	**P**	**09 05 19.9**	**+3.7**
	comp=Z,66nm,0.8s						
ARMA	**Armidale**	**28.61**	**251**		**P**	**09 05 19.6**	**+3.5**
ARMA				IAmb	IAmb	09 05 20.3	
	comp=Z,47nm,0.7s						
ARMA	**Armidale**	**28.61**	**251**	P	**P**	**09 05 19.2**	**+3.1**
	comp=Z,66nm,0.8s						
EIDS	**Eidsvold**	**29.12**	**261**	P	**P**	**09 05 22.1**	**+1.5**
	comp=Z,32nm,1.3s						
EIDS	**Eidsvold**	**29.12**	**261**	P	**P**	**09 05 22.6**	**+1.9**
EIDS				IAmb	IAmb	09 05 23.1	
	comp=Z,22nm,0.9s						
EIDS	**Eidsvold**	**29.12**	**261**	P	**P**	**09 05 22.4**	**+1.8**
	comp=Z,32nm,1.3s						
AUPHS	**Peel High Scho**	**29.30**	**250**	P	**P**	**09 05 25.2**	**+3.1**
	comp=Z,32nm,0.9s						
AUDCS	**Dubbo College**	**31.33**	**248**	P	**P**	**09 05 42.2**	**+2.2**
	comp=Z,30nm,1.0s						
CAN	**Canberra**	**31.46**	**242**	P	**P**	**09 05 44.4**	**+3.2**
CAN	**Canberra**	**31.46**	**242**	P	**P**	**09 05 44.4**	**+3.2**
CAN				pmax	pmax		
	comp=Z,18nm,1.3s						
AULRC	**Lightning Ridg**	**31.73**	**253**	P	**P**	**09 05 46.4**	**+2.8**
	comp=Z,215nm,1.2s						
YNG	**Young**	**31.78**	**244**	P	**P**	**09 05 46.8**	**+2.8**
	comp=Z,33nm,1.1s						
CMSA	**Cobar Meteorol**	**33.77**	**249**	P	**P**	**09 06 03.2**	**+1.9**
	comp=Z,75nm,0.8s						
CMSA	**Cobar Meteorol**	**33.77**	**249**	P	**P**	**09 06 03.0**	**+1.7**
	comp=Z,75nm,0.8s						
CTA	**Charters Tower**	**34.41**	**270**	P	**P**	**09 06 08.0**	**+1.1**
	comp=Z,3.1nm,0.9s						
CTA	**Charters Tower**	**34.41**	**270**	P	**P**	**09 06 07.9**	**+0.9**
	comp=Z,53nm,0.6s,baz=95,slow=10,SNR=72						
CTA				LR	LR	09 17 55.0	
	comp=Z,71nm,19.6s,baz=58,slow=32						
	comp=Z,53nm,0.6s						
CTA	**Charters Tower**	**34.41**	**270**	P	**P**	**09 06 08.0**	**+1.1**
	comp=Z,3.1nm,0.9s						
CTAO	**Charters Tower**	**34.41**	**270**	P	**P**	**09 06 07.1**	**+0.2**
CTAO	**Charters Tower**	**34.41**	**270**	P	**P**	**09 06 08.0**	**+1.1**
	comp=Z,39nm,0.8s						
CTAO	**Charters Tower**	**34.41**	**270**	P	**P**	**09 06 07.1**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,74nm,0.9s						
CTAO	**Charters Tower**	**34.41**	**270**	P	**P**	**09 06 07.9**	**+0.9**
CORO	**Coronation Par**	**34.42**	**232**	P	**P**	**09 06 09.1**	**+2.3**
TOO	**Toolangi**	**34.67**	**239**	P	**P**	**09 06 08.8**	**-0.3**
TOO	**Toolangi**	**34.67**	**239**	P	**P**	**09 06 08.8**	**-0.3**
TOO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MOO	**Moorlands**	**34.71**	**230**	P	**P**	**09 06 11.7**	**+2.4**
QLP	**Quilpie**	**35.16**	**258**	P	**P**	**09 06 14.3**	**+0.9**
	comp=Z,71nm,0.9s						
QLP	**Quilpie**	**35.16**	**258**	P	**P**	**09 06 14.4**	**+1.0**
	comp=Z,71nm,0.9s						
MTSU	**Mount Surprise**	**36.69**	**272**	P	**P**	**09 06 27.5**	**+1.0**
	comp=Z,85nm,0.9s						
MTSU	**Mount Surprise**	**36.69**	**272**	P	**P**	**09 06 27.4**	**+0.9**
	comp=Z,85nm,0.9s						
STKA	**Stephens Creek**	**37.27**	**249**	P	**P**	**09 06 33.2**	**+1.9**
	comp=Z,226nm,1.1s						
STKA	**Stephens Creek**	**37.27**	**249**	P	**P**	**09 06 32.0**	**+0.7**
	comp=Z,20nm,0.7s,baz=90,slow=9.1,SNR=38						
	comp=Z,20nm,0.7s						
STKA	**Stephens Creek**	**37.27**	**249**		**P**	**09 06 31.4**	**0.0**
STKA	**Stephens Creek**	**37.27**	**249**	P	**P**	**09 06 33.0**	**+1.7**
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**37.27**	**249**	*d* iP	**P**	**09 06 32.8**	**+1.5**
ARPS	**Mount Arapiles**	**37.42**	**241**	P	**P**	**09 06 34.6**	**+2.1**
	comp=Z,17nm,1.6s						
PMG	**Port Moresby**	**37.43**	**287**	P	**P**	**09 06 32.0**	**-0.8**
	comp=Z,84nm,0.9s,baz=113,slow=3.9,SNR=14						
	comp=Z,84nm,0.9s						
PMG	**Port Moresby**	**37.43**	**287**	P	**P**	**09 06 32.8**	**0.0**
PMG	**Port Moresby**	**37.43**	**287**	P	**P**	**09 06 33.2**	**+0.4**
	comp=Z,118nm,1.0s						
PMG	**Port Moresby**	**37.43**	**287**	*c* iP	**P**	**09 06 32.4**	**-0.4**
PMG				pmax	pmax		
	comp=Z,90nm,0.9s						
PMG	**Port Moresby**	**37.43**	**287**	P	**P**	**09 06 33.2**	**+0.4**
	comp=Z,118nm,1.0s						
PMG	**Port Moresby**	**37.43**	**287**	P	**P**	**09 06 32.3**	**-0.4**
PMG				pP	**pP**	**09 06 53.9**	**+0.1**
INKA	**Innaminka**	**38.15**	**256**		**P**	**09 06 41.2**	**+2.5**
INKA				IAmb	IAmb	09 06 42.2	
	comp=Z,21nm,0.9s						
COEN	**Coen**	**39.08**	**278**	P	**P**	**09 06 46.9**	**+0.2**
	comp=Z,34nm,1.0s						
COEN	**Coen**	**39.08**	**278**		**P**	**09 06 48.0**	**+1.2**
COEN				IAmb	IAmb	09 06 48.8	
	comp=Z,43nm,1.1s						
COEN	**Coen**	**39.08**	**278**	P	**P**	**09 06 48.1**	**+1.4**
	comp=Z,34nm,1.0s						
AUMBR	**Murray Bridge**	**39.33**	**244**	P	**P**	**09 06 50.0**	**+1.5**
	comp=Z,59nm,1.0s						
HTT	**Hallett**	**39.55**	**246**	P	**P**	**09 06 51.6**	**+1.1**
	comp=Z,85nm,0.9s						
HTT	**Hallett**	**39.55**	**246**	P	**P**	**09 06 51.9**	**+1.4**
	comp=Z,34nm,1.0s						
HTT	**Hallett**	**39.55**	**246**	P	**P**	**09 06 51.8**	**+1.3**
	comp=Z,84nm,0.9s						
AUJCS	**Jamestown Cent**	**39.81**	**247**	P	**P**	**09 06 54.0**	**+1.4**
	comp=Z,42nm,1.1s						
QIS	**Mount Isa**	**40.35**	**266**	P	**P**	**09 06 57.6**	**+0.5**
	comp=Z,15nm,1.5s						
QIS	**Mount Isa**	**40.35**	**266**	P	**P**	**09 06 57.7**	**+0.5**
	comp=Z,15nm,1.5s						
BBOO	**Buckleboo**	**41.95**	**247**	P	**P**	**09 07 10.8**	**+0.6**
	comp=Z,58nm,1.0s						
BBOO	**Buckleboo**	**41.95**	**247**		**P**	**09 07 10.6**	**+0.4**
BBOO				IAmb	IAmb	09 07 11.3	
	comp=Z,41nm,0.8s						
BBOO	**Buckleboo**	**41.95**	**247**	P	**P**	**09 07 10.6**	**+0.4**
	comp=Z,58nm,1.0s						
AS31	**Alice Springs**	**44.84**	**260**	P	**P**	**09 07 33.9**	**+0.3**
ASAR	**Alice Springs**	**44.84**	**260**	P	**P**	**09 07 33.2**	**-0.3**
	comp=Z,28nm,0.9s,baz=94,slow=7.1,SNR=93						
ASAR				PcP	**PcP**	**09 09 14.0**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=98,slow=4.9,SNR=2.8						
ASAR				ScP	**ScP**	**09 13 01.0**	**+3.1**
	comp=Z,1.0nm,0.8s,baz=96,slow=4.2,SNR=4.2						
ASAR				S	**S**	**09 14 03.9**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=96,slow=16,SNR=4.5						
ASAR				LR	LR	09 24 40.9	
	comp=Z,61nm,19.0s,baz=104,slow=34						
	comp=Z,28nm,0.9s						
ASAR	**Alice Springs**	**44.84**	**260**	P	**P**	**09 07 33.6**	**0.0**
ASAR	**Alice Springs**	**44.84**	**260**	P	**P**	**09 07 33.6**	**0.0**
AUALC	**St Philip's Co**	**44.86**	**260**	P	**P**	**09 07 34.7**	**+1.0**
	comp=Z,27nm,0.9s						
WR8	**Warramunga Arr**	**45.14**	**266**	P	**P**	**09 07 35.4**	**-0.6**
WR8				IAmb	IAmb	09 07 38.5	
	comp=Z,11nm,0.6s						
WRAB	**Tennant Creek**	**45.28**	**266**	P	**P**	**09 07 36.4**	**-0.7**
WRAB				IAmb	IAmb	09 07 39.9	
	comp=Z,19nm,0.8s						
WRAB	**Tennant Creek**	**45.28**	**266**	P	**P**	**09 07 36.9**	**-0.2**
	comp=Z,16nm,0.9s						
WRAB	**Tennant Creek**	**45.28**	**266**	*i*P	**P**	**09 07 37.8**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,19nm,0.8s						
WRAB	**Tennant Creek**	**45.28**	**266**	P	**P**	**09 07 36.2**	**-0.9**
WB0	**Warramunga Arr**	**45.29**	**266**	P	**P**	**09 07 36.6**	**-0.5**
WB0				IAmb	IAmb	09 07 39.6	
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**45.29**	**266**	P	**P**	**09 07 36.3**	**-0.9**
	comp=Z,10nm,0.5s,baz=98,slow=8.0,SNR=46						
WRA				PcP	**PcP**	**09 09 15.5**	**0.0**
	comp=Z,6.0nm,1.0s,baz=109,slow=3.8,SNR=6.4						
WRA				ScP	**ScP**	**09 13 02.8**	**+3.0**
	comp=Z,0.9nm,1.0s,baz=106,slow=3.9,SNR=2.5						
	comp=Z,10nm,0.5s						
WRA	**Warramunga Arr**	**45.29**	**266**	P	**P**	**09 07 36.4**	**-0.7**
WRA	**Warramunga Arr**	**45.29**	**266**	P	**P**	**09 07 36.4**	**-0.7**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**45.56**	**338**	T	T	09 57 30.3	
	baz=162,slow=75,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**45.57**	**338**	T	T	09 57 30.3	
	baz=162,slow=75,SNR=6.9						
H11S1	**WAKE ISLAND Hy**	**45.57**	**338**	T	T	09 57 30.4	
	baz=162,slow=75,SNR=12						
JAY	**Jayapura**	**46.41**	**291**	P	**P**	**09 07 43.6**	**-2.3**
	comp=Z,26nm,0.7s,baz=208,slow=5.4,SNR=7.0						
JAY				LR	LR	09 26 02.7	
	comp=Z,85nm,20.2s,baz=320,slow=34						
	comp=Z,26nm,0.7s						
GENI	**Genyem**	**46.83**	**291**	P	**P**	**09 07 48.7**	**-0.5**
FORT	**Forrest**	**48.89**	**250**	P	**P**	**09 08 05.1**	**+0.2**
	comp=Z,49nm,0.8s						
FORT	**Forrest**	**48.89**	**250**	P	**P**	**09 08 04.5**	**-0.4**
WRKA	**Warakurna**	**49.59**	**257**	P	**P**	**09 08 09.8**	**-0.6**
	comp=Z,34nm,0.9s						
DRV	**Dumont d'Urvil**	**50.10**	**201**	P	**P**	**09 08 15.5**	**+2.0**
DRV				pP	**pP**	**09 08 38.2**	**+2.5**
MTN	**Manton Dam**	**50.41**	**273**	P	**P**	**09 08 15.9**	**-0.8**
MTN				IAmb	IAmb	09 08 20.2	
	comp=Z,32nm,1.4s						
KNRA	**Kununurra**	**51.61**	**269**	P	**P**	**09 08 25.6**	**0.0**
	comp=Z,35nm,0.7s						
KNRA	**Kununurra**	**51.61**	**269**		**P**	**09 08 25.5**	**-0.1**
KNRA				IAmb	IAmb	09 08 27.9	
	comp=Z,21nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.71**	**265**	P	**P**	**09 08 41.2**	**+0.1**
	comp=Z,23nm,0.9s,baz=103,slow=7.0,SNR=18						
	comp=Z,23nm,0.9s						
KMBL	**Kambalda**	**54.06**	**248**	P	**P**	**09 08 43.3**	**-0.3**
	comp=Z,12nm,1.4s						
SBA	**Scott Base**	**54.09**	**184**	P	P	09 08 47.7	+4.8
SBA	**Scott Base**	**54.09**	**184**	P	P	09 08 47.7	+4.8
SBA				pmax	pmax		
	comp=Z,71nm,1.2s						
VNDA	**Vanda**	**54.16**	**186**	P	**P**	**09 08 46.8**	**+3.3**
VNDA				IAmb	IAmb	09 09 11.3	
	comp=Z,19nm,1.2s						
VNDA	**Vanda**	**54.16**	**186**	P	**P**	**09 08 46.8**	**+3.3**
VNDA				pmax	pmax		
	comp=Z,19nm,1.3s						
SIJI	**Sorong**	**55.37**	**287**	P	**P**	**09 08 51.8**	**-1.4**
	comp=Z,102nm,0.8s,baz=78,slow=6.4,SNR=18						
SIJI				LR	LR	09 31 35.7	
	comp=Z,72nm,19.8s,baz=203,slow=35						
SIJI	**Sorong**	**55.37**	**287**	P	**P**	**09 08 52.3**	**-0.9**
	comp=Z,95nm,0.8s						
SWI	**Sorong**	**55.38**	**287**	P	**P**	**09 08 52.5**	**-0.7**
	comp=Z,129nm,0.8s						
KLBR	**Kellerberrin**	**57.50**	**247**	P	**P**	**09 09 08.0**	**-0.1**
	comp=Z,240nm,0.7s						
KLBR	**Kellerberrin**	**57.50**	**247**	P	**P**	**09 09 07.6**	**-0.5**
	comp=Z,240nm,0.7s						
NWAO	**Narrogin (SRO)**	**57.70**	**245**	P	**P**	**09 09 10.2**	**+0.7**
NWAO				IAmb	IAmb	09 09 14.2	
	comp=Z,26nm,1.2s						
NWAO	**Narrogin (SRO)**	**57.70**	**245**	P	**P**	**09 09 10.2**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,26nm,1.3s						
MEEK	**Meekatharra**	**57.77**	**253**	P	**P**	**09 09 09.3**	**-0.8**
	comp=Z,20nm,1.3s						
MEEK	**Meekatharra**	**57.77**	**253**	P	**P**	**09 09 10.1**	**0.0**
	comp=Z,20nm,1.3s						
SOEI	**Soe**	**57.80**	**274**	P	**P**	**09 09 11.8**	**+1.2**
SOEI	**Soe**	**57.80**	**274**	P	**P**	**09 09 10.5**	**-0.1**
SOEI	**Soe**	**57.80**	**274**	P	**P**	**09 09 11.0**	**+0.4**
	comp=Z,52nm,0.8s						
PSA00	**Pilbara Seismi**	**57.95**	**259**	P	**P**	**09 09 10.1**	**-1.3**
	comp=Z,23nm,1.1s						
PSA00	**Pilbara Seismi**	**57.95**	**259**		**P**	**09 09 11.0**	**-0.4**
MBWA	**Marble Bar**	**58.17**	**259**	P	**P**	**09 09 12.1**	**-0.8**
MBWA				IAmb	IAmb	09 09 14.7	
	comp=Z,14nm,0.8s						
BATI	**Baumata**	**58.18**	**273**	LR	LR	09 34 07.8	
	comp=Z,78nm,18.3s,baz=122,slow=36						
BLDU	**Ballidu**	**58.56**	**248**	P	**P**	**09 09 15.2**	**-0.4**
	comp=Z,55nm,0.8s						
BLDU	**Ballidu**	**58.56**	**248**	P	**P**	**09 09 15.5**	**-0.1**
	comp=Z,55nm,0.8s						
MUN	**Mundaring**	**58.72**	**246**	P	**P**	**09 09 16.5**	**-0.1**
	comp=Z,46nm,1.1s						
MUN	**Mundaring**	**58.72**	**246**	P	**P**	**09 09 17.0**	**+0.4**
	comp=Z,46nm,1.1s						
CCD	**Concordia, Ant**	**59.01**	**195**	P	**P**	**09 09 21.0**	**+2.6**
MORW	**Morawa**	**59.45**	**250**	P	**P**	**09 09 21.6**	**-0.1**
	comp=Z,42nm,0.8s						
MORW	**Morawa**	**59.45**	**250**	P	**P**	**09 09 21.2**	**-0.5**
MORW	**Morawa**	**59.45**	**250**	P	**P**	**09 09 21.4**	**-0.3**
	comp=Z,42nm,0.8s						
EDFI	**Ende, Flores**	**60.53**	**274**	P	**P**	**09 09 28.6**	**-0.8**
	comp=Z,26nm,0.8s						
DBNI	**Kabupaten Domp**	**63.71**	**272**	P	**P**	**09 09 50.0**	**-0.5**
	comp=Z,23nm,0.7s						
KAPI	**Kappang**	**63.79**	**277**	P	**P**	**09 09 51.8**	**+0.7**
	comp=Z,5.8nm,0.2s,baz=91,slow=15,SNR=4.1						
KAPI				LR	LR	09 37 48.4	
	comp=Z,26nm,18.8s,baz=97,slow=36						
	comp=Z,5.8nm,0.2s						
KAPI	**Kappang**	**63.79**	**277**	P	**P**	**09 09 52.4**	**+1.3**
KAPI	**Kappang**	**63.79**	**277**	*i*P	**P**	**09 09 52.5**	**+1.4**
KAPI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PLAI	**Plampang**	**64.07**	**272**	P	**P**	**09 09 52.0**	**-0.9**
	comp=Z,64nm,0.8s						
PLAI	**Plampang**	**64.07**	**272**	P	**P**	**09 09 53.7**	**+0.8**
	comp=Z,65nm,0.8s						
TOLI2	**Tolitoli**	**65.54**	**283**	P	**P**	**09 10 00.7**	**-1.7**
TOLI2				IAmb	IAmb	09 10 03.4	
	comp=Z,27nm,0.7s						
QSPA	**South Pole Qui**	**65.70**	**180**	P	**P**	**09 10 05.1**	**+2.3**
	comp=Z,11nm,0.9s,baz=33,slow=3.2,SNR=12						
QSPA				LR	LR	09 34 18.5	
	comp=Z,43nm,21.1s,baz=34,slow=32						
	comp=Z,11nm,0.9s						
QSPA	**South Pole Qui**	**65.70**	**180**	P	**P**	**09 10 05.6**	**+2.8**
QSPA				IAmb	IAmb	09 10 06.3	
	comp=Z,21nm,1.1s						
QSPA	**South Pole Qui**	**65.70**	**180**	P	**P**	**09 10 05.0**	**+2.3**
MPSI	**Mapaga**	**65.97**	**282**	P	**P**	**09 10 04.1**	**-1.1**
	comp=Z,24nm,0.8s						
SNJI	**Sawahan-Nganju**	**69.96**	**270**	P	**P**	**09 10 30.0**	**-0.4**
	comp=Z,27nm,1.0s						
UGM	**Wanagama**	**71.03**	**270**	P	**P**	**09 10 36.7**	**-0.1**
BBJI	**Bungbulang**	**73.83**	**269**	P	**P**	**09 10 52.9**	**-0.6**
BBJI				IAmb	IAmb	09 10 54.9	
	comp=Z,13nm,0.8s						
MJAR	**Matsushiro Arr**	**73.99**	**324**	P	**P**	**09 10 52.0**	**-1.8**
	comp=Z,2.7nm,0.8s,baz=167,slow=6.0,SNR=6.6						
MJAR				LR	LR	09 37 27.7	
	comp=Z,34nm,21.5s,baz=148,slow=31						
	comp=Z,2.7nm,0.8s						
MAJO	**Matsushiro**	**73.99**	**324**	*i*P

	comp=Z,26nm,1.0s							
NVL	**N'lazarevskaya**	**84.91**	**183**	*e*P		**P**	09 11 51.1	**-1.4**
NVL				*e*			09 15 09.3	
NVL				*e*S		**SKSac**	**09 22 06.4**	**-1.8**
NVL				*e*SS		**SS**	**09 27 50.4**	**+4.0**
NVL				*e*SSS		SSS	09 31 21.8	
NVL				pmax		pmax		
	comp=Z,12nm,0.9s							
NVL				MLR		MLR		
	comp=Z,433nm,19.0s							
PLCA	**Paso Flores**	**85.81**	**133**	P		**P**	**09 11 57.8**	**+0.1**
	comp=Z,3.2nm,1.0s,baz=252,slow=8.0,SNR=3.3							
	comp=Z,3.2nm,1.0s							
CN2	**Changchun**	**86.05**	**322**	P		**P**	**09 11 59.0**	**+0.5**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.1s							
BNX	**BinXian**	**86.23**	**325**	⇑P		**P**	**09 11 57.9**	**-1.4**
BNX				pmax		pmax		
	comp=Z,6.0nm,1.1s							
KLR	**Kul'dur**	**86.43**	**329**	*e*P		**P**	**09 11 58.6**	**-1.6**
KLR				pmax		pmax		
	comp=Z,8.0nm,1.8s							
TIA	**Tai'an**	**86.71**	**312**	P		**P**	**09 12 01.8**	**-0.1**
TIA				pmax		pmax		
	comp=Z,12nm,1.0s							
MA2	**Magadan**	**87.81**	**344**	⇓*e*P		**P**	**09 12 05.7**	**-1.0**
MA2				pmax		pmax		
	comp=Z,9.0nm,1.0s							
TXAR	**Lajitas Array**	**88.23**	**57**	P		**P**	**09 12 08.3**	**-1.2**
	comp=Z,0.5nm,1.0s,baz=257,slow=4.0,SNR=4.7							
ANMO	**Albuquerque**	**88.97**	**51**	LR		LR	09 46 15.9	
	comp=Z,56nm,18.5s,baz=254,slow=32							
HNS	**HongShan**	**88.98**	**312**	⇑P		**P**	**09 12 13.3**	**+0.6**
HNS				pmax		pmax		
	comp=Z,5.0nm,1.0s							
HEH	**HeiHe**	**89.19**	**328**	*e*P		**P**	**09 12 13.4**	**0.0**
HEH				pmax		pmax		
	comp=Z,13nm,1.3s							
CMIG	**Matias Romero**	**89.84**	**71**	LR		LR	09 44 37.7	
	comp=Z,31nm,19.0s,baz=252,slow=30							
NEW	**Newport**	**89.88**	**35**	LR		LR	09 45 20.0	
	comp=Z,59nm,18.3s,baz=228,slow=31							
SEY	**Seymchan**	**90.40**	**346**	⇑*i*P		**P**	**09 12 17.8**	**-0.9**
SEY				pmax		pmax		
	comp=Z,11nm,1.6s							
TIY	**Taiyuan**	**90.69**	**312**	P		**P**	**09 12 21.5**	**+0.7**
TIY				sP		**sP**	**09 12 57.4**	**+2.7**
TIY				pmax		pmax		
	comp=Z,14nm,1.0s							
PDAR	**Pinedale Array**	**91.03**	**43**	P		**P**	**09 12 21.3**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=259,slow=1.5,SNR=4.0							
ZEA	**Zeya**	**91.55**	**330**	*e*P		**P**	**09 12 23.9**	**-0.4**
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.2s							
COLA	**College**	**91.76**	**12**	*e*P		**P**	**09 12 23.4**	**-1.5**
COLA				*i* *PP		**pP**	**09 12 46.7**	**-2.7**
COLA				pmax		pmax		
	comp=Z,14nm,2.2s							
ILAR	**Eielson Array**	**91.85**	**12**	P		**P**	**09 12 24.1**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=236,slow=5.6,SNR=5.3							
	comp=Z,0.6nm,0.8s							
KMI2	**Kunming**	**92.10**	**297**	P		**P**	**09 12 28.8**	**+1.0**
KMI2				pmax		pmax		
	comp=Z,6.0nm,1.2s							
CMAR	**Chiang Mai Arr**	**92.45**	**289**	P		**P**	**09 12 29.1**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=134,slow=3.2,SNR=18							
	comp=Z,2.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**92.45**	**289**	*i* P		**P**	**09 12 31.1**	**+1.8**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.4s							
CHTO	**Chiang Mai**	**92.60**	**289**	P		**P**	**09 12 30.1**	**+0.1**
CHTO				IAmb		IAmb	09 12 32.0	
	comp=Z,10nm,1.1s							
CHTO	**Chiang Mai**	**92.60**	**289**	P		**P**	**09 12 30.1**	**+0.1**
CHTO				pmax		pmax		
	comp=Z,10.0nm,1.1s							
CHTO	**Chiang Mai**	**92.60**	**289**	P		**P**	**09 12 28.5**	**-1.5**
HILR	**Hailar Array B**	**92.65**	**324**	P		**P**	**09 12 28.5**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=132,slow=8.0,SNR=4.2							
	comp=Z,2.8nm,0.7s							
HHC	**Hu-ho-hao-te**	**92.85**	**314**	*e*P		**P**	**09 12 29.2**	**-1.6**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,87nm,4.9s							
BILL	**Bilibino**	**93.00**	**354**	⇑*i*P		**P**	**09 12 29.9**	**-0.8**
BILL				pmax		pmax		
	comp=Z,24nm,4.0s							
PZH	**PanZhiHua**	**93.50**	**297**	P		**P**	**09 12 33.6**	**-0.5**
BTO2	**Baotou**	**93.91**	**313**	*e*P		**P**	**09 12 37.0**	**+1.3**
BTO2				pP		**pwP**	**09 13 03.0**	**+0.6**
BTO2				sP		**sP**	**09 13 13.4**	**+3.7**
BTO2				pmax		pmax		
	comp=Z,16nm,0.8s							
BTO2				pmax		pmax		
	comp=Z,210nm,5.0s							
ATAH	**Atahualpa**	**94.67**	**100**	LR		LR	09 51 30.4	
	comp=Z,18nm,18.1s,baz=253,slow=33							
LZH	**Lanzhou**	**96.00**	**307**	*e*P		**P**	**09 12 46.0**	**+0.6**
LZH				pP		pwP	09 13 11.1	-1.0
LZH				pmax		pmax		
	comp=Z,9.0nm,1.3s							
LZDM	**Lanzhou Array**	**96.05**	**307**	P		**P**	**09 12 45.5**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=50,slow=4.6,SNR=3.8							
	comp=Z,0.4nm,0.3s							
YAK	**Yakutsk**	**96.12**	**338**	LR		LR	09 53 30.5	
	comp=Z,26nm,19.9s,baz=114,slow=34							
YAK	**Yakutsk**	**96.12**	**338**	⇑*i*P		**P**	**09 12 43.8**	**-1.2**
YAK				pmax		pmax		
	comp=Z,12nm,0.7s							
ULN	**Ulaanbaatar**	**99.01**	**319**	⇑*i*P		**Pdif**	**09 12 58.4**	**-0.3**
ULN				pmax		pmax		
	comp=Z,12nm,4.6s							
SONM	**Songino Array**	**99.40**	**318**	P		**Pdif**	**09 12 59.0**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=140,slow=5.6,SNR=1.9							
	comp=Z,0.9nm,0.5s							
LPAZ	**La Paz**	**99.54**	**113**	LR		LR	09 52 31.3	
	comp=Z,17nm,18.3s,baz=356,slow=32							
WMQ	**Urumqi**	**110.29**	**310**	*e*PKP		**PKiKP**	**09 17 46.5**	**-3.0**
DGZ	**Jazzator, Alta**	**111.83**	**316**	⇑*i*PKIKP		**PKiKP**	**09 17 50.2**	**-2.2**
MK31	**Makanchi Array**	**114.65**	**312**	⇑*i*PKIKP		PKPdf	09 17 55.7	-2.0
MKAR	**Makanchi Array**	**114.65**	**312**	PKIKP		PKPdf	09 17 56.2	-1.5
	comp=Z,1.5nm,0.9s,baz=81,slow=3.2,SNR=12							
KURK	**Kurchatov**	**117.58**	**316**	⇑*i*PKIKP		**PKPdf**	**09 18 02.3**	**-0.8**
KURBB	**Kurchatov Arra**	**117.63**	**316**	PKP		**PKPdf**	**09 18 01.6**	**-1.6**
	comp=Z,1.3nm,0.6s,baz=98,slow=2.0,SNR=11							
AAK	**Ala-Archa**	**119.54**	**307**	⇑*i*PKIKP		**PKPdf**	**09 18 07.3**	**-0.1**
BVAR	**Borovoye Array**	**122.74**	**319**	PKP		**PKPdf**	**09 18 12.2**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=70,slow=1.7,SNR=6.6							
BORK	**Borovoye**	**122.78**	**319**	⇑*i*PKIKP		**PKPdf**	**09 18 11.9**	**-1.2**
BOSA	**Boshof**	**123.19**	**203**	PKP		**PKPdf**	**09 18 15.1**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=129,slow=17,SNR=2.0							
SPITS	**Spitsbergen Ar**	**125.80**	**357**	PKP		**PKPdf**	**09 18 17.7**	**-0.5**
	comp=Z,4.5nm,0.8s,baz=39,slow=7.4,SNR=1.4							
ARTI	**Arti**	**129.11**	**324**	*i* PKIKP		**PKPdf**	**09 18 25.1**	**0.0**
ARTI							09 20 36.2	
ARTI							09 25 26.4	
ARTI				SS		SS	09 37 50.9	+4.0
KIRV	**Kirov**	**132.87**	**329**	⇑*i*PKIKP		**PKPdf**	**09 18 30.6**	**-1.5**
ARCES	**ARCESS Array B**	**132.93**	**349**	PKP		**PKPdf**	**09 18 30.7**	**-1.2**
	comp=Z,2.3nm,0.7s,baz=15,slow=1.5,SNR=4.0							
BELG	**Belogornoye**	**136.35**	**322**	⇑*i*PKIKP		**PKPdf**	**09 18 39.4**	**+0.6**
FINES	**FINESS Array B**	**139.80**	**343**	PKhKP		PKPpre	09 18 37.5	
	comp=Z,1.7nm,0.8s,baz=64,slow=4.4,SNR=5.9							
FINES				PKP		**PKPdf**	**09 18 44.5**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=0.0,slow=1.9,SNR=5.8							
KIV	**Kislovodsk**	**142.40**	**311**	*e*PKIKP		**PKPdf**	**09 18 52.3**	**+2.0**
KIV				pmax		pmax		
	comp=Z,11nm,1.1s							
ERBR	**Yeremizino-Bor**	**143.26**	**315**	*i* PKIKP		PKPbc	09 18 49.4	+0.5
ERBR				pmax		pmax		
	comp=Z,15nm,0.7s							
LABN	**Labinsk**	**143.50**	**313**	*i* PKIKP		**PKiKP**	**09 18 56.5**	**+1.0**
LABN				pmax		pmax		
	comp=Z,74nm,1.3s							
HFS	**Hagfors**	**143.54**	**351**	PKhKP		PKPpre	09 18 46.9	
	comp=Z,2.0nm,0.3s,baz=51,slow=5.9,SNR=18							
MNK	**Minsk**	**144.77**	**335**	*i* PKP		**PKPab**	**09 18 52.3**	**-0.7**
	comp=E,21nm,1.0s							
MNK				*i* PKP		**PKPab**	**09 18 52.3**	**-0.7**
	comp=N,9.0nm,0.8s							
MNK				*i* PKP		**PKPab**	**09 18 52.3**	**-0.7**
	comp=Z,17nm,0.8s,baz=41							
MNK				*i* pPKP		**PKPdf**	**09 18 55.8**	**+1.8**
MNK				*i* sPKP			09 18 57.0	
MNK				*i* PP		**PP**	**09 22 10.2**	**-1.5**
MNK				*i* SKP		**SKPbc**	**09 22 32.2**	**+7.3**
MNK				*i* PKS		PKSdf	09 22 38.0	+8.8
MNK				*i* PPP		PPP	09 25 22.2	
MNK				*i* SKS		SKSdf	09 25 43.3	-11
MNK				*i* SS		**SS**	**09 41 00.1**	**+8.0**
MNK				*i* SSS		SSS	09 46 25.7	
MNK	**Minsk**	**144.77**	**335**	*i* PKIKP		**PKPab**	**09 18 52.4**	**-0.7**
MNK				*i*			09 22 18.6	
MNK				*i*			09 25 52.4	
MNK				*i* SS		SS	09 40 53.0	+0.9
MNK				pmax		pmax		
	comp=Z,19nm,0.8s							
MNK				pmax		pmax		
	comp=E,20nm,0.8s							
MNK				pmax		pmax		
	comp=N,11nm,0.8s							
ANN	**Anapa**	**145.60**	**315**	*i* PKIKP		**PKPdf**	**09 18 56.0**	**+0.3**
ANN				pmax		pmax		
	comp=Z,115nm,1.0s							
AK03	**Malin Array Si**	**146.91**	**329**	PKP		**PKPdf**	**09 18 58.5**	**+0.8**
AKASG	**Malin Array Be**	**146.93**	**329**	PKPbc		**PKPdf**	**09 18 58.6**	**+0.9**
	comp=Z,4.0nm,0.3s,baz=43,slow=4.0,SNR=28							
AKBB	**Malin Array Si**	**146.93**	**329**	PKP		**PKPdf**	**09 18 58.5**	**+0.8**
AK23	**Malin Array Si**	**146.93**	**329**	PKP		**PKPdf**	**09 18 58.3**	**+0.6**
AK01	**Malin Array Si**	**146.94**	**329**	PKP		**PKPdf**	**09 18 58.4**	**+0.6**
AK04	**Malin Array Si**	**146.94**	**329**	PKP		**PKPdf**	**09 18 58.4**	**+0.6**
KIEV	**Kiev**	**146.94**	**329**	PKP		**PKPdf**	**09 18 58.5**	**+0.7**
AK09	**Malin Array Si**	**146.96**	**329**	PKP		**PKPdf**	**09 18 58.4**	**+0.6**
AK22	**Malin Array Si**	**146.96**	**329**	PKP		**PKPdf**	**09 18 58.6**	**+0.8**
AK08	**Malin Array Si**	**146.96**	**329**	PKP		**PKPdf**	**09 18 58.6**	**+0.8**
AK21	**Malin Array Si**	**146.96**	**330**	PKP		**PKPdf**	**09 18 57.9**	**+0.1**
AK02	**Malin Array Si**	**146.97**	**329**	PKP		**PKPdf**	**09 18 58.6**	**+0.8**
AK11	**Malin Array Si**	**146.97**	**329**	PKP		**PKPdf**	**09 18 58.5**	**+0.7**
AK10	**Malin Array Si**	**146.99**	**329**	PKP		**PKPdf**	**09 18 58.9**	**+1.1**
AK05	**Malin Array Si**	**146.99**	**329**	PKP		**PKPdf**	**09 18 58.8**	**+0.9**
AK20	**Malin Array Si**	**147.00**	**329**	PKP		**PKPdf**	**09 18 58.2**	**+0.3**
MI28	**Mi28,Pidlybu**	**147.48**	**331**	PKP		**PKPdf**	**09 18 59.1**	**+0.4**
RNPP5	**Staryi Chortor**	**148.03**	**333**	PKP		**PKPdf**	**09 19 01.7**	**+2.1**
LUBAR	**Lubar, Ukraine**	**148.15**	**329**	PKP		**PKPdf**	**09 19 01.6**	**+1.8**
GAZ	**Gaziantep**	**148.30**	**302**			**PKPbc**	**09 19 02.9**	**-1.2**
EKA	**Eskdalemuir Ar**	**148.74**	**7**	PKPbc		**PKPdf**	**09 19 03.1**	**+2.5**
	comp=Z,3.3nm,0.9s,baz=289,slow=5.2,SNR=4.0							
BNN	**Bunyan**	**148.88**	**305**			**PKPbc**	**09 19 05.8**	**+0.2**
BR131	**Keskin Array S**	**150.19**	**308**	PKPdf		**PKPbc**	**09 19 09.0**	**+0.2**
BR131	**Keskin Array S**	**150.19**	**308**	PKIKP		**PKPbc**	**09 19 09.0**	**+0.2**
BRTR	**Keskin Array B**	**150.19**	**308**	PKPbc		**PKPbc**	**09 19 08.3**	**-0.5**
	comp=Z,7.4nm,0.7s,baz=136,slow=3.9,SNR=30							
BRTR				PKPab		**PKPab**	**09 19 14.9**	**-0.2**
	comp=Z,6.2nm,0.8s,baz=120,slow=2.6,SNR=13							
BRTR	**Keskin Array B**	**150.19**	**308**			**PKPbc**	**09 19 08.7**	**-0.1**
MMAI	**Mount Meron Ar**	**150.57**	**294**	PKPbc		**PKPbc**	**09 19 10.5**	**+0.6**
	comp=Z,19nm,0.6s,baz=37,slow=8.5,SNR=26							
MMAI				PKPab		**PKPab**	**09 19 16.7**	**-0.2**
	comp=Z,3.1nm,0.4s,baz=59,slow=8.2,SNR=6.4							
BUR08	**Bucovina Ar. S**	**150.95**	**329**			**PKiKP**	**09 19 12.2**	**+1.4**
BURAR	**Bucovina Array**	**150.97**	**329**			**PKiKP**	**09 19 12.0**	**+1.1**
MDUB	**Mudurnu**	**151.61**	**311**			**PKPbc**	**09 19 12.7**	**+0.6**
CSS	**Mathiatis**	**151.88**	**299**			**PKPbc**	**09 19 12.8**	**+0.1**
CLL	**Collm**	**152.09**	**347**	*i* PKIKP		**PKPbc**	**09 19 12.3**	**-0.3**
CLL				*i*			09 19 21.2	
CLL				pmax		pmax		
	comp=Z,12nm,0.8s							
CLL				pmax		pmax		
	comp=Z,12nm,0.8s							
CLL	**Collm**	**152.09**	**347**	*i* pPKPab		pPKPab	09 19 46.4	-0.6
	comp=Z,8.0nm,0.9s							
CLL	**Collm**	**152.09**	**347**	*i* PKPdf		**PKPdf**	**09 19 09.1**	**+3.2**
	comp=Z,4.0nm,0.9s							
CLL	**Collm**	**152.09**	**347**	*i* PKPbc		**PKPbc**	**09 19 12.3**	**-0.3**
	comp=Z,12nm,0.8s							
CLL	**Collm**	**152.09**	**347**	*i* x		x	09 19 15.6	
	comp=Z,11nm,0.7s							
CLL	**Collm**	**152.09**	**347**	*i* PKPab		**PKPab**	**09 19 21.2**	**-1.2**
	comp=Z,12nm,0.8s							
CLL	**Collm**	**152.09**	**347**	*i* pPKPbc		pPKPbc	09 19 39.0	+1.1
	comp=Z,25nm,1.1s							
BRG	**Berggiesshubel**	**152.29**	**345**	Amp			09 19 13.8	
	comp=Z,6.8nm,0.8s							
BRG	**Berggiesshubel**	**152.29**	**345**	Amp			09 19 16.2	
	comp=Z,6.5nm,0.7s							
BRG	**Berggiesshubel**	**152.29**	**345**	P		**PKPab**	**09 19 24.1**	**+0.9**
BRG				Amp			09 19 25.2	
	comp=Z,8.9nm,1.2s							
BRG				pPKP		**pPKPbc**	**09 19 38.7**	**+0.2**
BRG				Amp			09 19 41.0	
	comp=Z,14nm,0.9s							
BRG	**Berggiesshubel**	**152.29**	**345**	*e*PKP		**PKPbc**	**09 19 13.1**	**0.0**
BRG	**Berggiesshubel**	**152.29**	**345**	P		**PKiKP**	**09 19 15.8**	**+2.5**
MORC	**Moravsky Berou**	**152.30**	**340**	*e*PKP		**PKPbc**	**09 19 12.7**	**-0.5**
BORA	**Eskisehir**	**152.38**	**311**			**PKPbc**	**09 19 14.2**	**+0.4**
KRUC	**Moravsky**	**153.28**	**341**	*e*PKP		**PKPbc**	**09 19 15.0**	**-0.3**
MODS	**Modra-Piesok**	**153.60**	**339**	*e*PKIKP		**PKPbc**	**09 19 15.2**	**-0.9**
MODS				*e*			09 19 26.9	
MODS	**Modra-Piesok**	**153.60**	**339**	*e*PKP		**PKPbc**	**09 19 15.2**	**-0.9**
MODS				*e*			09 19 26.9	
TORD	**Torodi Ar. Bea**	**168.73**	**172**	PKPab		**PKPab**	**09 20 36.3**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=209,slow=5.9,SNR=8.3							

IDC 12 09:00:01.4±2.3, 4°18S×136°93E, h0km, mb3.5/1, mbtmp3.6/5, ML3.6/4, Error ellipse: s-maj=69.6km s-min=29.9km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.87**	**189**		Pn	Pn	09 03 44.5	-1.8
	0.1nm,0.3s,baz=13,slow=13,SNR=7.5							
WRA					Sn	Sn	09 06 29.4	-14
	0.1nm,0.3s,baz=9.8,slow=23,SNR=1.7							
	0.4nm,0.4s							
FITZ	**Fitzroy Crossi**	**17.71**	**218**	P		Pn	09 04 09.8	+0.3
	0.1nm,0.3s,baz=36,slow=10,SNR=1.2							
	1.2nm,0.7s							
CTA	**Charters Tower**	**18.24**	**151**	P		Pn	09 04 16.2	+0.1
	0.2nm,0.3s,baz=315,slow=14,SNR=2.0							
	1.6nm,0.5s							
ASAR	**Alice Springs**	**19.59**	**188**	P		P	09 04 31.9	+0.6
	0.3nm,0.3s,baz=6.5,slow=13,SNR=26							
	0.8nm,0.5s							
MKAR	**Makanchi Array**	**69.88**	**323**	P		P	09 11 14.2	-0.1
	0.3nm,0.6s,baz=109,slow=6.6,SNR=2.6							
	0.3nm,0.6s							

IDC 12 09:00:16.2±3.5, 53°54N×87°80E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=34.7km s-min=17.4km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.82**	**284**	I	I	I	09 10 30.0	
	baz=100,slow=344,SNR=7.1							
ZALV	**Zalesovo Beam**	**1.82**	**284**	Pg	Pg	Pn	09 00 49.1	+0.3
	0.8nm,0.3s,baz=106,slow=15,SNR=7.2							
ZALV				Lg	Lg	Lg	09 01 14.7	
	1.0nm,0.3s,baz=106,slow=30,SNR=5.9							
KURBB	**Kurchatov Arra**	**6.41**	**247**	Pn	Pn	Pn	09 01 51.5	-0.4
	0.1nm,0.3s,baz=65,slow=14,SNR=2.9							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**7.62**	**210**	Pn	Pn	Pn	09 02 10.1	+1.7
	0.1nm,0.3s,baz=28,slow=13,SNR=5.6							
	0.2nm,0.3s							

IDC 12 09:02:53.7±1.2, 51°21N×37°80E, h0km, mbtmp3.5/5, ML3.1/4, Error ellipse: s-maj=16.4km s-min=12.3km az=24.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**5.45**	**268**		Pn	Pn	09 04 14.8	-1.2
	1.4nm,0.3s,baz=81,slow=12,SNR=4.1							
AKASG					Sn	Sn	09 05 16.0	-3.3
	3.2nm,0.3s,baz=78,slow=27,SNR=5.6							
	0.9nm,0.4s							
BELG	**Belogornoye**	**6.21**	**75**	Pn		Pn	09 04 26.5	+0.1
	6.1nm,0.7s,baz=252,slow=20,SNR=2.0							
BELG					Sn	Sn	09 05 40.3	+2.2
	0.6nm,0.3s,baz=292,slow=19,SNR=1.2							
BELG					Lg	Lg	09 06 11.6	
	0.5nm,0.3s,baz=156,slow=20,SNR=1.4							
KBZ	**Khabaz**	**8.24**	**153**	Pn	Pn	Pn	09 04 51.9	-2.4
	0.1nm,0.3s,baz=0.0,slow=4.0,SNR=1.3							
	0.7nm,0.4s							
FINES	**FINESS Array B**	**12.12**	**332**	Pn		Pn	09 05 42.6	-4.9
	0.4nm,0.3s,baz=146,slow=13,SNR=9.5							
FINES					Sn	Sn	09 07 51.0	-12
	0.1nm,0.3s,baz=153,slow=22,SNR=1.6							
	2.3nm,0.7s							
HFS	**Hagfors**	**16.18**	**313**		Pn	Pn	09 06 32.5	-10
	0.1nm,0.3s,baz=119,slow=15,SNR=1.2							
	1.1nm,0.7s							

IDC ***12*** *09:13:18.7±1.1, 12°57N×87°25W, h0km, mb3.7/7, mbtmp3.7/9, ML3.2/2, MS3.2/3, Error ellipse: s-maj=46.1km s-min=12.5km az=46.0*

CATAC ***12*** *09:13:21.4±0.3, 12°N±2°×8°8W±°, h12km±1km, M4.5/47, mb5.0/4, mB5.7/2, MLv4.2/47, Mw(mB)5.2/2, Error ellipse: s-maj=3.6km s-min=2.0km az=33.4, confirmed*

NEIC ***12*** *09:13:24.0±1.1, 12°12N±0°07×87°67W±0°06, h35km±2km, mb4.3/33, Error ellipse: s-maj=12.5km s-min=9.0km az=215.0*

ISC 12 09:13:18.0±1.3, 12°05N±0°04×87°86W±0°03, h4km±8km, n108, σ1°37/121, mb4.2/23, 7C-10D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.97**	**18**		P	**Pn**	**09 13 39.5**	**+1.1**
CSGN					S	**Sb**	**09 13 51.3**	**+0.7**
CRIN	**San Cristobal**	**1.03**	**51**			**Pn**	**09 13 39.9**	**+0.7**
CRIN	**San Cristobal**	**1.03**	**51**		P	**Pn**	**09 13 40.2**	**+1.0**
TEL3	**Telica 3**	**1.12**	**62**		P	**Pn**	**09 13 40.9**	**+0.4**
HERN	**Volcan Telica**	**1.15**	**61**			**Pb**	**09 13 40.8**	**+0.3**
HERN	**Volcan Telica**	**1.15**	**61**		⇓P	**Pb**	**09 13 40.8**	**+0.3**
HERN					S	**Sg**	**09 13 55.4**	**+0.3**
POLN	**Al Sur del Vol**	**1.19**	**60**		⇓P	**Pb**	**09 13 41.3**	**+0.2**
POLN					S	**Sg**	**09 13 56.2**	**0.0**
CNGA	**Al SSO del Vol**	**1.22**	**69**		S	**Sb**	**09 13 58.0**	**+0.2**
CNCH	**Conchagua**	**1.22**	**1**		⇓P	**Pn**	**09 13 43.1**	**+1.1**
CNCH					S	**Sn**	**09 13 59.2**	**+0.3**
CNGN	**Cerro Negro**	**1.22**	**68**			**Pb**	**09 13 41.9**	**+0.2**
CNGN	**Cerro Negro**	**1.22**	**68**		S	**Sg**	**09 13 57.2**	**-0.2**
MACN	**El Madrono**	**1.23**	**70**		⇓P	**Pb**	**09 13 42.2**	**+0.3**
MACN					S	**Sg**	**09 13 57.3**	**-0.4**
COPN	**Copaltepe**	**1.25**	**84**		P	**Pb**	**09 13 42.5**	**+0.3**
LCND	**La Caada**	**1.25**	**359**		⇓P	**Pn**	**09 13 43.5**	**+1.3**
LEVN	**Ruinas Leon Vi**	**1.27**	**74**		⇓P	**Pg**	**09 13 42.4**	**0.0**
MOMN	**Momotombo**	**1.34**	**74**		⇓P	**Pg**	**09 13 43.6**	**-0.1**
MOM2	**El Cardon**	**1.40**	**74**		⇓P	**Pn**	**09 13 44.5**	**+0.2**
MOM2					S	**Sg**	**09 14 02.9**	**-0.2**
AMTN	**Mateare**	**1.41**	**82**		P	**Pb**	**09 13 45.2**	**+0.3**
AMTN					S	**Sg**	**09 14 03.6**	**+0.1**
SAPS	**Ciudad Sandino**	**1.43**	**85**		P	**Pg**	**09 13 45.5**	**0.0**
SAPS					S	**Sg**	**09 14 03.5**	**-0.5**
PACA	**Pacayal**	**1.48**	**342**		⇑P	**Pb**	**09 13 47.4**	**+0.9**
PACA					S	**Sn**	**09 14 07.5**	**+2.1**
APYN	**Apoyeque**	**1.49**	**83**		P	**Pg**	**09 13 47.0**	**+0.4**
APYN					S	**Sb**	**09 14 04.7**	**-0.8**
APQ2	**Apoyeque**	**1.51**	**84**		P	**Pn**	**09 13 46.3**	**+0.5**
APQ2					S	**Sn**	**09 14 05.5**	**-0.4**
ABCN	**Banco Central**	**1.52**	**87**		P	**Pb**	**09 13 46.7**	**-0.1**
ALLN	**Telcor Managua**	**1.56**	**86**		P	**Pn**	**09 13 46.8**	**+0.4**
ALLN					S	**Sn**	**09 14 07.8**	**+0.8**
UNAN	**Cigeo UNAN**	**1.56**	**88**		⇓P	**Pn**	**09 13 46.5**	**0.0**
UNAN					S	**Sn**	**09 14 07.7**	**+0.5**
TISN	**Laguna Tiscapa**	**1.56**	**86**		⇑P	**Pn**	**09 13 47.2**	**+0.7**
MGAN	**Managua**	**1.58**	**86**			**Pn**	**09 13 47.0**	**+0.2**
MGAN	**Managua**	**1.58**	**86**		P	**Pb**	**09 13 47.8**	**0.0**
MGAN					S	**Sn**	**09 14 07.7**	**0.0**
MAS3	**Al N del Volca**	**1.65**	**91**		⇑P	**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,9.5nm,1.1s						
POST	Post	24.37	331		P	09 18 36.3	-1.0
128A	Castleberry Fa	24.48	329	IAmb	IAmb	09 18 40.8	
	comp=Z,5.1nm,1.0s						
DKNS	Dickens	24.61	333	IAmb	IAmb	09 18 43.7	
	comp=Z,4.6nm,0.7s						
SMWD	Samnorwood	25.55	336	IAmb	IAmb	09 18 49.8	
	comp=Z,9.7nm,0.7s						
MDP	Montagnes des	35.48	98	LR	LR	09 34 56.4	
	comp=Z,51nm,18.4s,baz=284,slow=37						
PDAR	Pinedale Array	35.94	332	P	P	09 20 20.2	+0.4
	comp=Z,0.8nm,0.8s,baz=126,slow=10,SNR=8.0						
	comp=Z,0.8nm,0.8s						
HWUT	Hardware Ranch	36.01	329	IAmb	IAmb	09 20 22.2	
	comp=Z,3.4nm,1.0s						
AHID	Auburn Hatcher	36.65	331	P	P	09 20 26.7	+0.8
AHID				IAmb	IAmb	09 20 28.9	
	comp=Z,3.9nm,0.8s						
MOOW	Moose Ponds	37.24	332	IAmb	IAmb	09 20 34.5	
	comp=Z,2.9nm,0.9s						
NVAR	Mina Array Bea	37.74	319	P	P	09 20 36.4	+1.1
	comp=Z,0.2nm,0.6s,baz=87,slow=10,SNR=3.4						
	comp=Z,0.2nm,0.6s						
YNE	Yellowstone No	37.91	334	IAmb	IAmb	09 20 49.3	
	comp=Z,2.1nm,0.9s						
YMR	Madison River	38.06	333	IAmb	IAmb	09 20 40.6	
	comp=Z,5.6nm,1.0s						
YHL	Hebgen Lake	38.30	333	IAmb	IAmb	09 20 47.1	
	comp=Z,2.6nm,0.7s						
ULM	Lac du Bonnet	38.66	352	P	P	09 20 39.7	-2.8
	comp=Z,2.4nm,0.7s,baz=180,slow=9.2,SNR=4.2						
	comp=Z,2.4nm,0.7s						
MCMT	McKenzie Canyo	39.04	331	P	P	09 20 46.8	+0.6
BOZ	Bozeman (W)	39.08	333	P	P	09 20 46.7	+0.4
SCHQ	Schefferville	45.78	17	P	P	09 21 37.8	-2.8
	comp=Z,0.7nm,0.4s,baz=224,slow=6.1,SNR=5.5						
	comp=Z,0.7nm,0.4s						
H03N2	Juan Fernandez	46.03	170	T	T	10 11 20.3	
	baz=345						
H03N1	Juan Fernandez	46.03	170	T	T	10 11 11.5	
	baz=345						
H03N3	Juan Fernandez	46.04	170	T	T	10 11 20.9	
	baz=345						
YKA	Yellowknife Ar	53.89	345	P	P	09 22 40.2	-1.9
	comp=Z,0.6nm,0.9s,baz=137,slow=7.3,SNR=9.9						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	66.22	336	P	P	09 24 05.2	-1.6
	comp=Z,0.4nm,0.8s,baz=120,slow=7.2,SNR=4.3						
	comp=Z,0.4nm,0.8s						
HHC	Hu-ho-hao-te	124.38	342	eP	PKPdf	09 32 19.0	+0.1
WRA	Warramunga Arr	138.77	254	PKP	PKPdf	09 32 47.1	+0.8
	comp=Z,0.3nm,0.7s,baz=91,slow=2.4,SNR=2.0						
PZH	PanZhiHua	140.56	346	PKP	PKPdf	09 32 49.7	0.0
CMAR	Chiang Mai Arr	148.95	347	PKPbc	PKPbc	09 33 07.6	-0.5
	comp=Z,0.5nm,0.3s,baz=344,slow=3.1,SNR=5.2						

MEX 12 09:16:15.7±0.3, 19.°46N×102.°31W, h18km±5km, Michoacan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.22	99	eP	Pg	09 16 20.0	-1.1
INCO	Volcan de Coli	1.23	273	eP	Pg	09 16 39.6	+0.1
INCO				eS	Sg	09 16 56.4	+0.7
SOMAC	Volcano de Col	1.25	273	eP	Pg	09 16 41.5	+1.5
SOMAC				eS	Sg	09 16 58.2	+1.8
CEGR	Campo Tres	1.47	268	eP	Pb	09 16 42.7	+0.1
CEGR				eS	Sg	09 17 03.2	+0.1
MMIG	Aquila	1.52	220	eP	Pn	09 16 41.8	-0.3
MMIG				eS	Sg	09 17 04.5	-0.4
CDAR	Ciudad de Arme	1.69	253	eP	Pn	09 16 44.1	-0.3
CDAR				eS	Sb	09 17 07.7	+0.4

VIE 12 09:17:47.2±0.2, 46.°68N×13.°77E, h0km, mb1.4/1, ml0.9/3, Error ellipse: s-maj=1.7km s-min=1.2km az=30.0 6 km SSW of Afritz Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MYKA	Terra Mystica	0.10	242	i Pg	Pg	09 17 49.2	+0.1
	0.6nm,0.0s						
MYKA				i Sg	Sg	09 17 50.7	+0.3
	6.5nm,0.1s						
KBA	Koelnbreinsper	0.50	324	i Pg	Pg	09 17 56.8	+0.1
	0.3nm,0.1s						
KBA				i Sg	Sg	09 18 04.0	+0.9
	1.0nm,0.1s						
OBKA	Obir	0.56	107	ePg	Pg	09 17 57.3	-0.6
	0.5nm,0.1s						
OBKA				i Sg	Sg	09 18 06.4	+1.2
	1.0nm,0.1s						

IDC 12 09:20:03.5±2.7, 53.°94N×86.°35E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=21.1km s-min=12.8km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.91	271	I	I	09 26 10.0	
	baz=88,slow=344,SNR=4.9						
ZALV	Zalesovo Beam	0.91	271	Pg	Pg	09 20 19.5	-1.3
	0.7nm,0.3s,baz=90,slow=19,SNR=7.3						
ZALV				Lg	Lg	09 20 33.8	
	0.8nm,0.3s,baz=94,slow=28,SNR=6.1						
KURBB	Kurchatov Arra	5.84	238	Pn	Pn	09 21 32.9	+1.7
	0.1nm,0.3s,baz=56,slow=13,SNR=4.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	7.61	202	Pn	Pn	09 21 56.1	+0.6
	baz=16,slow=12,SNR=1.6						
	0.1nm,0.3s						

RSPR 12 09:22:56.8, 17.°91N×66.°92W, h13km
SDD 12 09:22:59.2±2.2, 18.°64N×67.°41W, h46km±45km, MD3.2, ML2.7, MW3.0, Presumed earthquake
ISC 12 09:22:53.9±1.6, 17.°80N±0.°08×67.°01W±0.°05, h33km, n19, σ1.s16/20, 6C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.21	35	⇑eP	Pb	09 22 59.6	-1.0
GBPR				eS	Sb	09 23 01.6	-3.7
CRPR	Cabo Rojo, PR	0.23	335	⇑eP	Pb	09 23 01.3	+0.5
CRPR				eS	Sn	09 23 04.5	+0.4
LSP	Las Mesas	0.38	349	⇑iP	Pn	09 23 03.0	-0.2
LSP				eS	Sb	09 23 08.0	-0.9
PRSN	Puerto Rico Se	0.43	343	IAML		09 23 11.7	
	comp=E,384nm,0.2s						
PRSN	Puerto Rico Se	0.43	343	⇓iP	Pb	09 23 04.1	+0.5
PRSN				eS	Sb	09 23 09.6	-0.6
OBIP	Obispado Ponce	0.45	58	⇓iP	Pb	09 23 03.4	-0.4
OBIP				eS	Sb	09 23 08.5	-2.1
AGPR	Aguadilla, PR	0.67	352	ePg	Pb	09 23 07.6	+0.3
AGPR				IAML		09 23 24.0	
	comp=N,242nm,0.2s						
AGPR				IAML		09 23 25.3	
	comp=E,251nm,0.2s						
AGPR	Aguadilla, PR	0.67	352	⇑eP	Pb	09 23 07.6	+0.3
AGPR				eS	Sb	09 23 15.7	-0.7
IDE	Isla Desecheo	0.73	323	⇑eP	Pn	09 23 09.8	+1.8
IDE				eS	Sn	09 23 19.4	+1.4
ECPR	Experimental S	0.80	50	⇓eP	Pn	09 23 08.9	0.0
ECPR				eS	Sn	09 23 18.0	-1.8
SJG	San Juan	0.87	69	⇓eP	Pn	09 23 10.4	+0.5
SJG				eS	Sn	09 23 20.4	-1.1
GCPR	Guaynabo City	1.01	60	⇑eP	Pn	09 23 12.3	+0.4
GCPR				eS	Sn	09 23 24.2	-0.8
HUMP	Col San Antoni	1.15	73	⇓eP	Pn	09 23 15.5	+1.8
HUMP				eS	Sn	09 23 29.0	+0.5
PCDR	Punta Cana, DR	1.49	299	ePg	Pn	09 23 14.7	-3.7
PCDR				⇓eSg	Sn	09 23 27.1	-10
PCDR				IAML		09 23 27.7	
	comp=N,331nm,1.9s						
PCDR				IAML		09 23 29.1	
	comp=N,221nm,0.6s						
PCDR				IAML		09 23 34.2	
	comp=E,186nm,1.4s						
HIDR	Higuey Centro	1.81	296	ePg	Pn	09 23 17.9	-4.8
HIDR				⇓eSg	Sn	09 23 32.8	-12
HIDR				IAML		09 23 35.4	
	comp=N,137nm,0.3s						
HIDR				IAML		09 23 37.9	
	comp=E,97nm,0.3s						
MIDR	Miches	2.27	302	ePg	Pn	09 23 23.8	-5.3
MIDR				eSg	Sn	09 23 43.0	-13
MIDR				IAML		09 23 43.9	
	comp=N,126nm,0.5s						
MIDR				IAML		09 23 43.9	
	comp=N,126nm,0.5s						
MIDR				IAML		09 23 44.9	
	comp=E,93nm,0.3s						
HATOM	Hato Mayor del	2.46	294	ePg	Pn	09 23 29.3	-2.5
HATOM				IAML		09 23 53.8	
	comp=E,32nm,1.1s						
HATOM				IAML		09 24 24.6	
	comp=N,43nm,2.5s						
SMDR	Samana, DR	2.54	306	⇑ePg	Pn	09 23 25.8	-7.1
SMDR				eSg	Sn	09 23 46.8	-16
SMDR				IAML		09 23 47.3	
	comp=E,143nm,0.3s						
SMDR				IAML		09 23 49.5	
	comp=N,117nm,0.9s						
REDR	Restauracion	4.38	289	ePg	Pn	09 23 58.8	+0.7
REDR				IAML		09 25 18.5	
	comp=N,17nm,2.9s						

IDC 12 09:35:16.0±1.0, 38.°64N×39.°35E, h0km, mb3.6/3, mbtmp3.5/9, ML3.2/5, MS2.6/6, Error ellipse: s-maj=17.8km s-min=10.4km az=167.0
ISK 12 09:35:16.3, 38.°47N×39.°25E, h5km, ML3.7/14
AFAD 12 09:35:16.8, 38.°45N×39.°25E, h13km±1km, MW3.8
ISC 12 09:35:16.7±0.9, 38.°46N±0.°02×39.°32E±0.°02, h7km±6km, n47, σ1.s05/65, mb3.5/3, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.09	188	Pg	Pg	09 35 19.0	+0.1
SVRC				Sg	Sg	09 35 20.6	+0.1
ELZ	Elazig	0.24	338	P	Pg	09 35 22.1	+0.5
ELZ				S	Sg	09 35 26.2	+1.4
CNGT	ngs	0.25	184	P	Pg	09 35 21.6	0.0
CNGT				S	Sg	09 35 25.6	+0.6
ELZG	Elazig	0.27	278	P	Pg	09 35 21.8	-0.2
ELZG				S	Sg	09 35 25.2	-0.4
MDNT	Maden	0.29	104	P	Pb	09 35 23.3	-1.0
MDNT				S	Sb	09 35 28.9	-0.5
KOVA	Elazig, Kovanc	0.46	58	P	Pb	09 35 26.6	-0.5
KOVA				S	Sb	09 35 34.5	+0.4
TNCL	Tunceli-Merkez	0.67	15	P	Pg	09 35 29.6	0.0
TNCL				S	Sb	09 35 40.0	-0.4
MCKZ	Bingol	0.71	338	P	Pg	09 35 29.6	-0.8
MCKZ				S	Sg	09 35 39.5	-0.1
MAYA	Malatya/Merkez	0.72	259	P	Pg	09 35 29.4	-1.1
MAYA				S	Sg	09 35 39.3	-0.5
NARI	Adyaman-Kaht	0.73	218	P	Pg	09 35 30.4	-0.2
NARI				S	Sg	09 35 40.3	+0.1
DYBB	Diyarbakir	0.82	128	Pg	Pb	09 35 33.4	+0.1
DIYA	Diyarbakir	0.83	130	P	Pn	09 35 34.2	-0.6
MAYK		0.86	71	P	Pb	09 35 33.8	-0.2
KAHTU	Kahta	0.86	221	P	Pg	09 35 33.2	0.0
KAHTU				S	Sg	09 35 44.6	+0.1
HANM	anlurfa/Hi	0.95	202	P	Pg	09 35 34.8	-0.1
HANM				S	Sb	09 35 49.0	+0.9
ARPR	Arapgir-MALATY	0.99	310	Pg	Pg	09 35 35.1	-0.7
ARPR				Sg	Sg	09 35 48.6	-0.1
AZEY	Adyaman-Merk	1.07	233	P	Pg	09 35 36.8	-0.4
AZEY				S	Sb	09 35 52.7	+1.1
URFA	Urfa	1.09	201	Pn	Pg	09 35 34.6	-3.1
AKCD	Akcadag	1.11	262	P	Pg	09 35 36.2	-1.8
AKCD				S	Sg	09 35 52.7	+0.2
HEKM	Malatya_Hekimh	1.14	292	P	Pg	09 35 37.3	-1.3
HEKM				S	Sb	09 35 53.9	-0.1
ILIC	ilic-Erzincan	1.15	329	Pn	Pg	09 35 37.9	-0.8
ILIC				Sn	Sb	09 35 53.8	-0.3
ERZN	Erzincan	1.16	15	Pn	Pb	09 35 38.6	-0.6
BNGB	Bingl	1.19	63	Pn	Pn	09 35 40.2	+0.4
ATAB	Bozova	1.28	220	P	Pb	09 35 41.2	+0.1
MDIV		1.31	311	P	Pg	09 35 40.6	-1.3
SANL	SANLIURFA_Merk	1.32	192	P	Pn	09 35 41.2	-0.3
YEDI	Yedisu-Bingol	1.36	44	Pn	Pb	09 35 43.1	+0.5
AKCA	Adyaman/G¶l	1.45	243	P	Pn	09 35 42.9	-0.5
SVAN	Silvan-Diyarba	1.51	101	Pn	Pg	09 35 44.9	-0.7
KARO	Karliova-Bingo	1.59	57	Pn	Pg	09 35 46.9	-0.3
VRTB	Varto-Mus	1.81	67	Pn	Pb	09 35 49.7	-0.4
KHMN	Narli-Kahraman	2.02	239	Pn	Pn	09 35 51.3	+0.2
BAYT	Aydıntepe-Bayb	2.03	18	Pn	Pb	09 35 52.7	-1.3
GAZ	Gaziantep	2.11	233	Pn	Pn	09 35 52.6	+0.2
GURO	Guroymak-BITLI	2.13	87	Pn	Pb	09 35 54.7	-0.9
KMRS	Kahramanmaras	2.14	244	Pn	Pn	09 35 52.9	+0.1
GNI	Garni	4.53	66	Pn	Pn	09 36 25.6	-0.1
	1.2nm,0.3s,baz=157,slow=15,SNR=1.7						
GNI				LR	LR	09 37 59.6	
	comp=Z,17nm,21.6s,baz=234,slow=37						
	5.3nm,0.5s						
BRTR	Keskin Array B	4.60	288	Pn	Pn	09 36 28.2	+1.6
	0.8nm,0.3s,baz=102,slow=17,SNR=26						
BRTR				Sn	Sn	09 37 21.7	+1.3
	0.2nm,0.3s,baz=97,slow=26,SNR=4.2						
BRTR				Lg	Lg	09 37 40.3	
	baz=105,slow=23						
BRTR				LR	LR	09 38 30.8	
	comp=Z,85nm,18.9s,baz=160,slow=43						
	5.2nm,0.7s						
KBZ	Khabaz	5.91	26	Pn	Pn	09 36 44.4	-0.2
	1.9nm,0.9s,baz=204,slow=12,SNR=1.2						
MMAI	Mount Meron Ar	6.30	212	Pn	Pn	09 36 51.6	+1.6
	1.1nm,0.3s,baz=21,slow=17,SNR=2.1						
MMAI				Lg	Lg	09 38 41.2	
	2.1nm,0.3s,baz=10,slow=36,SNR=3.0						
MMAI				LR	LR	09 39 28.9	
	comp=Z,51nm,19.9s,baz=36,slow=39						
	0.4nm,0.3s						
ASF	Jabal al Asfar	6.58	198	Pn	Pn	09 36 56.0	+2.0
	0.2nm,0.3s,baz=26,slow=9.2,SNR=2.6						
ASF				Pg	Pg	09 37 19.7	-3.0
	0.7nm,0.3s,baz=330,slow=20,SNR=3.5						
ASF				Sn	Sn	09 38 12.9	+3.7
	0.6nm,0.3s,baz=358,slow=14,SNR=1.3						
ASF				Lg	Lg	09 38 47.7	
	0.6nm,0.3s,baz=98,slow=23,SNR=1.9						
ASF				LR	LR	09 39 26.2	
	comp=Z,54nm,20.2s,baz=206,slow=37						
	1.5nm,0.5s						
EIL	Elat	9.49	204	LR	LR	09 41 05.8	
	comp=Z,34nm,18.8s,baz=346,slow=36						
AKTO	Aktyubinsk	17.87	42	P	Pn	09 39 25.2	-0.4
	0.1nm,0.3s,baz=241,slow=19,SNR=1.3						
	0.6nm,0.3s						
FINES	FINESS Array B	24.43	345	P	P	09 40 34.3	-1.4
	2.2nm,0.8s,baz=138,slow=13,SNR=1.9						
	2.2nm,0.8s						
NOA	NORSAR Array B	28.58	331	LR	LR	09 53 30.9	
	comp=Z,54nm,22.0s,baz=260,slow=38						
KURBB	Kurchatov Arra	30.12	53	P	P	09 41 26.7	-0.1
	0.3nm,0.4s,baz=266,slow=9.0,SNR=5.9						
	0.3nm,0.4s						
MKAR	Makanchi Array	32.35	61	P	P	09 41 47.3	+0.8
	0.6nm,1.0s,baz=275,slow=7.8,SNR=4.4						
	0.6nm,1.0s						

TAP 12 09:39:22.8, 24.°88N×122.°27E, h14km, ML2.6, C
JMA 12 09:39:23.1±0.2, 25°N±2°×122.°3E±0.°6, h48km, MV2.3/7, TAIWAN REGION
ISC 12 09:39:21.5±1.3, 24.°87N±0.°03×122.°37E±0.°05, h12km±11km, n35, σ0.s46/55, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.38	292	P	Pg	09 39 29.1	+0.1
TWB1				S	Sg	09 39 33.4	-0.7
EGS		0.40	267	eS	Sg	09 39 35.2	+0.3
EOS2	EOS2	0.46	196	P	Pb	09 39 32.6	+1.0
EOS2				S	Sb	09 39 39.9	+1.6
SXI1	Grass Mountain	0.51	297	P	Pg	09 39 31.9	+0.4
SXI1				eS	Sg	09 39 37.9	-0.3
TIPB	Shuangxi	0.51	282	eP	Pg	09 39 31.9	+0.4
TIPB				eS	Sg	09 39 38.0	-0.3
TWC	Suao	0.54	242	eP	Pg	09 39 32.2	+0.1
TWC				eS	Sg	09 39 39.3	0.0
NWF	Wu-fen Shan	0.57	291	eP	Pb	09 39 33.4	-0.2
NWF				eS	Sg	09 39 40.7	+0.3
WFSB	Wu-fen Shan	0.57	291	P	Pb	09 39 33.4	-0.2
WFSB				eS	Sg	09 39 40.8	+0.4
EOS3	EOS3	0.58	185	eP	Pn	09 39 34.8	-0.6
TNOU	National Taiwa	0.61	298	eP	Pb	09 39 33.8	-0.4
NDS	Dongshan	0.64	249	eP	Pg	09 39 33.8	-0.2
TWE	Neicheng	0.66	257	eP	Pg	09 39 34.1	-0.2
TWE				eS	Sg	09 39 43.6	+0.7
JYNG	Yonagunijimaku	0.67	128	eP	Pn	09 39 37.1	+0.3
JYNG				eS	Sn	09 39 46.5	-0.7
EWUT	Wuta	0.68	232	eP	Pb	09 39 35.7	+0.3
EWUT				eS	Sg	09 39 43.3	-0.5
YOJ	Yonaguni jima	0.71	125	eP	Pn	09 39 37.4	0.0
YOJ				eS	Sn	09 39 47.8	-0.4
YOJ	Yonaguni jima	0.71	125	P	Pn	09 39 37.0	-0.4
YOJ				S	Sn	09 39 47.5	-0.7
FUSB	Fushanzhiwuyua	0.72	262	eP	Pb	09 39 36.0	-0.1
EOS4	EOS4	0.74	184	eP	Pn	09 39 37.9	+0.4
ENTT	Nioudou	0.77	253	eP	Pb	09 39 37.0	+0.1
YM01	YM01	0.78	291	eP	Pb	09 39 37.0	-0.1
YM01				eS	Sg	09 39 47.0	+0.1
YM08	YM08	0.78	294	eP	Pg	09 39 36.7	+0.1
YM08				eS	Sg	09 39 46.3	-0.5
NWLT	Wulai	0.80	264	eP	Pb	09 39 37.5	+0.1
ZUZH	Zhuzihu	0.81	292	eP	Pb	09 39 37.5	0.0
ZUZH				eS	Sg	09 39 47.4	-0.3
PCYT	Pengchaiyu	0.81	340	eP	Pb	09 39 38.2	+0.6
LATG	Datong	0.84	247	P	Pb	09 39 38.0	-0.1
YHNB	Yeheng	0.93	258	eP	Pg	09 39 39.2	-0.3
NSK	Sanguang	0.94	259	eP	Pg	09 39 39.5	-0.2
NACB	Ninganchiao	0.99	226	P	Pb	09 39 40.5	-0.1
NACB				S	Sg	09 39 52.6	-0.9
NNSB	Datong	1.00	244	eP	Pb	09 39 41.0	+0.1
NNSB				eS	Sb	09 39 54.3	+0.2
ETLH	Xiulin Townshi	1.04	231	eP	Pb	09 39 41.6	0.0
ETLH				eS	Sg	09 39 54.4	-0.9
LXIB	Xiulin Townshi	1.21	226	eP	Pb	09 39 44.4	-0.2
LXIB				eS	Sg	09 40 00.7	0.0
WHF	Hehuan Shan	1.24	235	eP	Pg	09 39 45.4	0.0
WUSB	Renai	1.44	233	eP	Pg	09 39 49.0	-0.1
WUSB				eS	Sn	09 40 06.9	+0.4
WARBT	Fenglin Townsh	1.46	218	eP	Pb	09 39 48.4	-0.2
JISG	Ishigakijimahi	1.79	99	eP	Pn	09 39 51.8	-0.4

IDC 12 09:42:23.3±5.3, 33.°19N×47.°10E, h0km, mb3.9/9, mbtmp3.9/10, ML3.6/1, Error ellipse: s-maj=104.5km s-min=25.0km az=5.0
TEH 12 09:42:24.7, 32.°93N×47.°13E, h19km±27km, ML3.7, Presumed earthquake
ISC 12 09:42:25.0±1.1, 32.°91N±0.°09×47.°08E±0.°07, h22km, n22, σ1.s14/23, mb4.0/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDOB	Doab	1.27	46	Pg	Pb	09 42 47.9	-0.5
KCHF	Cheshme Sefid,	1.36	359	Pg	Pb	09 42 50.1	+0.1
KCHF				Sg	Sb	09 43 09.3	+2.3
IGHG	Ghaleghazi	1.48	343	Pg	Pb	09 42 52.6	+0.6
GLG1	Gilan-e-Gharb	1.55	321	Pg	Pb	09 42 53.5	+0.5
IBZA	Bozab	1.69	22	Pg	Pb	09 42 55.4	-0.1
JHBN	Jahan bin	3.10	102	Pn	Pn	09 43 14.1	+1.2
IPIR	Pirpir	3.22	93	Pn	Pn	09 43 16.2	+1.7
QAMS	Qamsar	3.71	76	Pn	Pn	09 43 22.5	+1.3
IKLH	Kolahrood	3.80	83	Pn	Pn	09 43 23.9	+1.5
IQOM	Qom	3.84	59	Pn	Pn	09 43 23.7	+0.7
KLNJ	Kolanjah	4.28	115	Pn	Pn	09 43 30.8	+1.7
ISFB	Sefidab	4.54	70	Pn	Pn	09 43 33.4	+1.0
AKTO	Aktyubinsk	19.29	22	P	P	09 46 45.9	-2.3
	0.2nm,0.3s,baz=204,slow=10,SNR=3.7						
	0.9nm,0.3s						
AKASG	Malin Array Be	22.11	329	P	P	09 47 17.8	-0.9
	0.5nm,0.5s,baz=135,slow=11,SNR=2.1						
	0.5nm,0.5s						
BVAR	Borovoye Array	26.16	33	P	P	09 47 57.3	-0.2
	1.7nm,0.5s,baz=228,slow=7.4,SNR=8.4						
	1.7nm,0.5s						
KURBB	Kurchatov Arra	29.08	43	P	P	09 48 23.9	+0.3
	0.3nm,0.6s,baz=246,slow=9.9,SNR=1.7						
	0.3nm,0.6s						
MKAR	Makanchi Array	30.11	52	P	P	09 48 32.5	-0.3
	0.8nm,0.6s,baz=250,slow=9.0,SNR=9.5						
	0.8nm,0.6s						
FINES	FINESS Array B	31.62	341	P	P	09 48 46.0	0.0
	2.2nm,0.9s,baz=141,slow=9.2,SNR=1.4						
	2.2nm,0.9s						
ZALV	Zalesovo Beam	33.97	40	P	P	09 49 06.3	-0.3
	0.9nm,0.5s,baz=240,slow=9.4,SNR=2.4						
	0.9nm,0.5s						
HFS	Hagfors	34.95	331	P	P	09 49 14.9	-0.1
	2.1nm,0.5s,baz=130,slow=8.5,SNR=9.6						
	2.1nm,0.5s						
EKA	Eskdalemuir Ar	41.31	318	P	P	09 50 07.8	-0.8
	0.5nm,0.3s,baz=96,slow=8.3,SNR=5.2						
	0.5nm,0.3s						
SPITS	Spitsbergen Ar	47.29	352	P	P	09 50 55.9	-0.4
	9.4nm,0.8s,baz=139,slow=9.6,SNR=12						
	9.4nm,0.8s						

ASRS 12 09:44:10.0±0.8, 54.°28N×86.°86E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
IDC 12 09:44:11.4±2.8, 54.°32N×86.°97E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=23.5km s-min=16.6km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.32	255	I	I	09 51 30.0	
	0.2nm,1.0s,baz=75,slow=343,SNR=12						
ZALV	Zalesovo Beam	1.32	255	Pg	Pg	09 44 34.8	-1.8
	3.4nm,0.3s,baz=69,slow=17,SNR=23						
ZALV				Lg	Lg	09 44 54.5	
	2.6nm,0.3s,baz=70,slow=29,SNR=6.9						
KURBB	Kurchatov Arra	6.34	238	Pn	Pn	09 45 47.3	+1.2
	0.1nm,0.3s,baz=52,slow=14,SNR=7.7						
KURBB				Sn	Sn	09 46 57.0	-2.1
	baz=56,slow=25,SNR=1.5						
KURBB				Lg	Lg	09 47 34.6	
	baz=45,slow=32,SNR=2.1						
	0.9nm,0.5s						
MKAR	Makanchi Array	8.10	203	Pn	Pn	09 46 11.5	+1.3
	0.2nm,0.3s,baz=26,slow=14,SNR=7.3						
MKAR				Sn	Sn	09 47 41.5	-0.9
	0.1nm,0.3s,baz=23,slow=30,SNR=3.1						
	0.2nm,0.3s						

SSNC 12 09:47:58.1±1.5, 19.°17N×79.°63W, h20km±15km, MD3.2, Presumed earthquake
JSN 12 09:47:59.7±1.6, 19.°37N×79.°13W, h0km±963km, MD3.6, MW4.3, Presumed earthquake
ISC 12 09:47:54.7±1.5, 19.°06N±0.°09×79.°63W±0.°08, h10km, n15, σ1.s47/18, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBCY	The Bluff, Cay	0.68	350	eP	Pg	09 48 08.2	+0.3
CBCY				eS	Sg	09 48 15.4	-1.5
LCCY	Blossom Villag	0.74	325	eP	Pg	09 48 09.8	+0.9
LCCY				eS	Sg	09 48 17.7	-0.9
MTDJ	Mount Denham	2.15	112	eP	Pn	09 48 31.5	+0.7
MTDJ				eS	Sn	09 48 55.7	-1.9
LMGC	Las Mercedes	2.67	68	eP	Pn	09 48 37.6	-0.1
CCCC	Cccc	2.75	39	eP	Pn	09 48 42.1	+3.2
STH	Stony Hill	2.85	110	⇑iP	Pn	09 48 41.3	+0.9
MGV	Manicaragua	3.05	354	eP	Pn	09 48 41.2	-1.8
CHIV	Chivirico	3.16	73	eP	Pn	09 48 44.3	-0.3
MARVS	Santiago de Cu	3.64	75	eP	Pn	09 48 50.5	-0.6
HLGC	Holguin	3.82	61	eP	Pn	09 48 55.0	+1.4
PINC	Pinares de May	3.88	68	eP	Pn	09 48 55.0	+0.6
CAMR	Camarioca	4.29	338	eP	Pn	09 49 02.4	+2.2
QMBU	Quimbuelo	4.68	75	eP	Pn	09 49 06.2	+0.7
SOR	Soroa	4.87	320	eP	Pn	09 49 08.1	0.0
MASC	Masc	5.21	77	eP	Pn	09 49 14.0	+1.4

MEX 12 09:57:11.5±0.8, 19.°52N×102.°43W, h12km±5km
IDC 12 09:57:13.8±4.7, 19.°47N×102.°64W, h0km, mb3.2/2, mbtmp3.1/3, ML2.9/1, Error ellipse: s-maj=121.0km s-min=42.8km az=94.0
ISC 12 09:57:10.5±0.9, 19.°50N±0.°02×102.°28W±0.°02, h10km±6km, n56, σ2.s08/96, Michoacan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URUA	Uruapan	0.21	113	eP	Pg	09 57 17.5	+2.4

URUA					eS		Sg	09 57 22.1	+4.1
MOIG	**Morelia**	**1.04**	**80**	*eP*			**Pn**	**09 57 32.3**	**+0.9**
MOIG					eS		Sn	09 57 46.8	+0.7
INCO	**Volcan de Coli**	**1.25**	**271**	*eP*			**Pn**	**09 57 33.6**	**-0.9**
INCO				*i*	S		Sn	09 57 53.3	+1.8
SOMAC	**Volcano de Col**	**1.28**	**271**	*eP*			**Pn**	**09 57 33.7**	**-1.1**
SOMAC					eS		Sb	09 57 50.9	-0.5
COMA	**Comala**	**1.41**	**263**	*eP*			**Pn**	**09 57 35.5**	**-0.8**
COMA					eS		Sg	09 57 54.7	-1.3
CEGR	**Campo Tres**	**1.50**	**266**	*eP*			**Pb**	**09 57 37.1**	**-1.4**
CEGR					eS		Sn	09 57 56.2	-1.0
IGIG	**Irapuato, Guan**	**1.53**	**35**	*eP*			**Pg**	**09 57 40.2**	**+0.2**
IGIG					eS		Sg	09 58 01.1	+1.3
MMIG	**Aquila**	**1.58**	**220**	*eP*			**Pb**	**09 57 38.5**	**-1.3**
MMIG					eS		Sn	09 57 57.0	-1.9
UON	**La Union**	**1.59**	**164**	*eP*			**Pg**	**09 57 40.4**	**-0.6**
UON					eS		Sg	**09 58 01.6**	**0.0**
CDAR	**Ciudad de Arme**	**1.73**	**251**	*eP*			**Pb**	**09 57 40.8**	**-1.6**
CDAR					eS		Sb	**09 58 02.9**	**-1.3**
ZIIG	**Zihuatanejo**	**2.04**	**158**	*eP*			**Pg**	09 57 47.5	-2.2
ZIIG					eS		Sb	**09 58 11.2**	**-1.9**
JRQG	**Juriquilla Cam**	**2.09**	**55**	*eP*			**Pb**	09 57 46.7	-2.1
JRQG					eS		Sg	**09 58 17.1**	**-0.8**
PET2	**Petatlan**	**2.18**	**154**	*eP*			**Pb**	09 57 49.3	-0.8
PET2					eS		Sb	**09 58 17.2**	**0.0**
ARIG	**Puente Sto Nin**	**2.19**	**123**	*eP*			**Pg**	09 57 51.1	-1.5
ARIG					eS		Sg	**09 58 20.5**	**-0.7**
ACIG	**Acambay**	**2.31**	**78**	*eP*			**Pn**	09 57 45.9	-2.8
ACIG					eS		Sn	**09 58 16.0**	**-1.3**
AAIG	**Aguscalientes**	**2.46**	**358**	*eP*			**Pb**	09 57 52.8	-2.1
AAIG				*i*	S		Sg	**09 58 28.4**	**-1.1**
TOVM	**TOLUCA**	**2.46**	**95**	*eP*			**Pb**	**09 57 55.5**	**-3.3**
TOVM					eS		Sn	**09 58 40.3**	**-1.1**
CJM	**Chamela**	**2.61**	**270**	*eP*			**Pb**	**09 57 55.5**	**-1.9**
CJM				*i*	S		Sb	**09 58 28.4**	**-1.2**
ANIG	**Ahuacatlan**	**2.61**	**307**	*eP*			**Pn**	**09 57 53.5**	**+0.6**
ANIG					eS		Sn	**09 58 24.6**	**-0.1**
MAVM	**Malinalco, Edo**	**2.69**	**101**	*eP*			**Pb**	**09 57 56.5**	**-2.4**
MAVM					eS		Sn	**09 58 22.5**	**-4.2**
INVM	**La Marquesa**	**2.74**	**94**	*eP*			**Pb**	**09 57 57.8**	**-2.1**
INVM					eS		Sn	**09 58 27.8**	**-0.4**
AOVM	**Tlapan**	**2.80**	**94**	*eP*			**Pb**	**09 57 58.9**	**-2.0**
AOVM					eS		Sb	**09 58 33.2**	**-2.3**
AZVM	**Cuida Lopez Ma**	**2.83**	**88**	*eP*			**Pb**	**09 58 00.4**	**-0.8**
AZVM					eS		Sn	**09 58 28.8**	**-1.5**
PLIG	**Platanillo**	**2.85**	**112**	*eP*			**Pb**	**09 58 01.0**	**-0.5**
PLIG					eS		Sb	**09 58 34.4**	**-2.1**
MCRU	**Las Cruces**	**2.86**	**93**	*eP*			**Pb**	**09 57 59.0**	**-2.8**
MCRU					eS		Sn	**09 58 30.4**	**-0.7**
MZVM		**2.90**	**96**	*eP*			**Pn**	**09 57 55.8**	**-0.8**
MZVM					eS		Sn	**09 58 33.1**	**+1.6**
TLVM	**San Miguel Top**	**2.96**	**95**	*eP*			**Pn**	**09 57 58.6**	**+0.7**
TLVM					eS		Sn	**09 58 34.9**	**+1.2**
MEIG	**Mezcala**	**2.97**	**121**	*eP*			**Pb**	**09 58 02.6**	**-1.0**
MEIG					eS		Sn	**09 58 33.4**	**-0.1**
PTVM	**Pico Tres Padr**	**2.98**	**88**	*eP*			**Pn**	09 57 59.3	+1.2
PTVM					eS		Sb	**09 58 36.7**	**-3.9**
ZUVM	**ZUMPANGO**	**3.03**	**83**	*eS*			**Sb**	09 58 39.5	-2.5
MPVM	**San Francisco**	**3.10**	**95**	*eS*			**Sb**	**09 58 41.9**	**-1.9**
CAIG	**El Cayaco**	**3.10**	**142**	*eP*			**Pb**	**09 58 03.0**	**-2.8**
CAIG					eS		Sb	**09 58 39.3**	**-4.3**
YAIG	**Yautepec**	**3.10**	**101**	*eP*			**Pb**	**09 58 02.9**	**-3.0**
YAIG					eS		Sn	**09 58 36.6**	**-0.2**
DEIG	**Demacu**	**3.15**	**75**	*eP*			**Pb**	**09 58 05.6**	**-1.2**
VTVM	**Tizayuca**	**3.31**	**85**	*eP*			**Pb**	**09 58 08.0**	**-1.5**
VTVM					eS		Sn	**09 58 43.5**	**+1.2**
PBXN	**Popocatepetl**	**3.46**	**98**	*eP*			**Pn**	**09 58 01.6**	**-3.2**
PBXN					eP		Pb	09 58 06.9	-6.3
PBXN					eS		**Sn**	**09 58 47.8**	**+1.7**
PBXN					eS		**Sb**	**09 58 51.8**	**-2.6**
PPM	**Popocatepetl**	**3.48**	**97**	*eP*			**Pb**	**09 58 09.9**	**-2.5**
DAIG	**Los Arroyos**	**3.51**	**134**	*eP*			**Pb**	**09 58 11.0**	**-1.8**
DAIG					eS		Sn	**09 58 44.7**	**-2.1**
PPSX	**Xalitzintla**	**3.58**	**96**	*eP*			**Pn**	**09 58 05.4**	**-1.0**
PPSX					eS		Sn	**09 58 51.9**	**+2.9**
TLIG	**Tlapa**	**4.01**	**118**	*eP*			Pb	09 58 15.8	-5.6
TLIG					eS		**Sn**	**09 58 57.4**	**-2.0**
CRIG	**Cruz Grande**	**4.07**	**132**	*eP*			Pb	09 58 17.0	-5.3
CRIG					eS		**Sn**	**09 58 58.1**	**-2.3**
MGIG	**Malinaltepec**	**4.13**	**123**	*eP*			**Pn**	**09 58 15.6**	**+1.8**
MGIG					eS		**Sn**	**09 59 03.9**	**+1.5**
FTIG	**Fresnillo de T**	**4.24**	**111**	*eP*			Pb	09 58 20.2	-5.0
FTIG					eS		**Sn**	**09 59 05.5**	**+0.6**
HLIG	**Huajuapan de L**	**4.56**	**111**	*eP*			Pb	09 58 24.8	-6.0
HLIG					eS		**Sn**	**09 59 13.8**	**+0.6**
TPIG	**Tehuac#an**	**4.78**	**102**	*eP*			**Sn**	**09 58 22.4**	**-0.3**
TPIG					eS		**Sn**	**09 59 15.5**	**-2.7**
TXIG	**Tlaxiaco**	**4.83**	**117**	*eP*			Pn	09 58 27.7	+4.1
TXIG					eS		**Sn**	**09 59 18.1**	**-1.7**
PNIG	**Pinotepa**	**5.02**	**127**	*eP*			**Pn**	**09 58 27.6**	**+1.7**
PNIG					eS		**Sn**	**09 59 22.6**	**-1.4**
TOIG	**Toxpalan**	**5.13**	**105**	*eP*			Pb	09 58 33.0	-7.4
TOIG					eS		**Sn**	**09 59 27.6**	**+0.6**
YOIG	**Yosondua**	**5.21**	**120**	*eP*			Pb	09 58 34.4	-7.6
YOIG					eS		**Sn**	**09 59 28.2**	**-0.9**
VHO	**Vista Hermosa**	**5.79**	**114**	*eP*			**Pn**	**09 58 37.4**	**+0.6**
VHO					eS		**Sn**	**09 59 40.1**	**-3.4**
PEIG	**Puerto Escondi**	**6.00**	**125**	*eS*			**Sn**	**09 59 45.0**	**-3.3**
NEUV	**Arroyo Zacate**	**6.39**	**105**	*eP*			Pn	09 58 49.9	+5.1
NEUV					eS		**Sn**	**10 00 00.8**	**+2.9**
CMIG	**Matias Romero**	**7.42**	**108**	*eP*			**Pn**	**09 59 02.1**	**+3.2**
CMIG					eS		**Sn**	**10 00 28.6**	**+5.3**
TXAR	**Lajitas Array**	**9.87**	**353**			Pn	Pn	09 59 38.5	+5.9
	baz=174,slow=13,SNR=2.4								
TXAR					Pg			10 00 13.2	
	baz=177,slow=13,SNR=1.3								
TXAR					Lg		Lg	10 02 24.1	
	0.1nm,0.3s,baz=176,slow=28,SNR=7.4								
	0.2nm,0.7s								
NVAR	**Mina Array Bea**	**23.43**	**327**	P			**P**	**10 02 24.6**	**+4.4**
	0.6nm,0.7s,baz=140,slow=9.8,SNR=5.0								
	0.6nm,0.7s								
ILAR	**Eielson Array**	**54.01**	**338**	P			**P**	**10 06 37.9**	**+3.3**
	0.3nm,0.8s,baz=137,slow=7.8,SNR=5.2								
	0.3nm,0.8s								

*IDC **12** 09:58:34.8±1.8, 19°.68N×38°.74E, h0km, mb3.8/10, mbtmp3.8/10, MS3.2/5, Error ellipse: s-maj=46.9km s-min=22.9km az=166.0*

ISC 12 09:58:37.6±1.6, 19°.7N±0°.3×38°.7E±0°.2, h17km, n15, σ0s98/10, mb3.8/8, MS3.3/3, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIL	**Elat**	**10.48**	**342**	LR	LR	10 04 26.0	
	comp=Z,59nm,18.4s,baz=182,slow=33						
ASF	**Jabal al Asfar**	**12.51**	**353**	LR	LR	10 06 09.6	
	comp=Z,88nm,20.1s,baz=220,slow=36						
BRTR	**Keskin Array B**	**20.41**	**349**	P	**P**	**10 03 13.8**	**-0.2**
	1.7nm,1.0s,baz=168,slow=14,SNR=6.3						
	1.7nm,1.0s						
MBAR	**Mbarara**	**21.66**	**202**	LR	LR	10 11 07.9	
	comp=Z,42nm,20.4s,baz=100,slow=35						
VRAC	**Vranov**	**34.43**	**334**	LR	LR	10 21 07.3	
	comp=Z,128nm,18.1s,baz=358,slow=39						
TORD	**Torodi Ar. Bea**	**36.05**	**265**	P	**P**	**10 05 38.8**	**+0.3**
	1.4nm,0.9s,baz=60,slow=5.7,SNR=6.5						
	1.4nm,0.9s						
AAK	**Ala-Archa**	**37.78**	**45**	LR	LR	10 21 27.1	
	comp=Z,49nm,18.9s,baz=298,slow=36						
ESDC	**Sonseca Array**	**41.60**	**308**	P	**P**	**10 06 24.8**	**0.0**
	0.9nm,1.0s,baz=95,slow=6.8,SNR=4.1						
	0.9nm,1.0s						
KURBB	**Kurchatov Arra**	**43.99**	**36**	P	**P**	**10 06 43.7**	**-0.2**
	1.6nm,1.1s,baz=242,slow=8.1,SNR=4.3						
	1.6nm,1.1s						
MKAR	**Makanchi Array**	**44.55**	**42**	P	**P**	**10 06 48.4**	**-0.2**
	0.5nm,0.7s,baz=242,slow=6.1,SNR=5.6						
	0.5nm,0.7s						
NOA	**NORSAR Array B**	**45.60**	**342**	P	**P**	**10 06 55.5**	**-1.2**
	0.6nm,0.8s,baz=138,slow=10,SNR=2.3						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**48.95**	**34**	P	**P**	**10 07 23.4**	**+0.6**
	0.7nm,0.6s,baz=234,slow=12,SNR=5.0						
	0.7nm,0.6s						
NRIK	**Noril'sk**	**57.75**	**18**	P	**P**	**10 08 29.1**	**+1.8**
	1.2nm,0.6s,baz=218,slow=4.4,SNR=3.6						
	1.2nm,0.6s						
LZDM	**Lanzhou Array**	**58.71**	**59**	P	**P**	**10 08 35.1**	**+0.1**
	0.6nm,0.3s,baz=289,slow=4.4,SNR=2.5						
	0.6nm,0.3s						
MJAR	**Matsushiro Arr**	**85.77**	**53**	P	**P**	**10 11 15.1**	**-1.2**
	2.3nm,1.0s,baz=276,slow=8.0,SNR=4.3						
	2.3nm,1.0s						

*IDC **12** 10:04:22.3±0.8, 1°.86S×122°.58E, h0km, mb3.9/11, mbtmp4.0/15, ML4.3/4, MS3.0/5, Error ellipse: s-maj=25.3km s-min=14.0km az=66.0*
*DJA **12** 10:04:25.5±0.1, 2°.5±2°×12°.3E±°, h10km, M4.9/44, mB5.4/8, mb5.2/14, MLv4.7/44, Mw(mB)4.8/8*
*NEIC **12** 10:04:26.7±1.8, 1°.94S±0°.05×122°.58E±0°.03, h35km±2km, mb4.3/14, Error ellipse: s-maj=8.2km s-min=5.1km az=171.0*

ISC 12 10:04:26.5±0.5, 1°.94S±0°.04×122°.54E±0°.05, h35km, n79, σ1s60/77, mb4.2/20, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.92**	**15**		**Pn**	**10 04 43.0**	**+0.1**
LUWI				Sn	**Sn**	**10 04 55.4**	**+0.5**
LUWI	**Luwuk**	**0.92**	**15**	P	**Pn**	**10 04 43.1**	**+0.1**
LUWI	**Luwuk**	**0.92**	**15**	P	**Pn**	**10 04 43.0**	**+0.1**
APSI	**Ampana**	**1.35**	**319**	P	**Pn**	**10 04 49.4**	**+0.5**
KDI	**Kendari**	**2.01**	**178**	P	**Pn**	**10 05 00.3**	**+2.4**
KKSI	**Kolaka, Sulawe**	**2.39**	**202**	P	**Pn**	**10 05 05.2**	**+2.0**
MRSI	**Marisa**	**2.47**	**346**	P	**Pn**	**10 05 04.8**	**+0.5**
PCI	**Palu**	**2.89**	**291**	P	Pn	10 05 18.1	+8.1
TTSI	**Tana Toraja**	**2.93**	**248**	P	**Pn**	**10 05 11.6**	**+1.0**
SPSI	**Sidrap Palu**	**3.42**	**234**	P	**Pn**	**10 05 19.5**	**+2.1**
SANI	**Sanana**	**3.45**	**92**	P	**Pn**	**10 05 17.4**	**-0.3**
SANI	**Sanana**	**3.45**	**92**	P	**Pn**	**10 05 17.1**	**-0.6**
MPSI	**Mapaga**	**3.48**	**311**	P	**Pn**	**10 05 19.3**	**+1.2**
TOLI2	**Tolitoli**	**3.50**	**330**		**Pn**	**10 05 20.1**	**+1.7**
TOLI2	**Tolitoli**	**3.50**	**330**	P	**Pn**	**10 05 21.1**	**+2.6**
MMSI	**Mamuju**	**3.70**	**258**	P	**Pn**	**10 05 22.8**	**+1.6**
PMSI	**Majene**	**3.94**	**247**	P	**Pn**	**10 05 27.2**	**+2.7**
MNI	**Manado**	**4.07**	**34**	P	**Pn**	**10 05 28.0**	**+1.7**
KAPI	**Kappang**	**4.13**	**222**	Pn	**Pn**	**10 05 29.0**	**+1.9**
	26nm,0.3s,baz=344,slow=4.0,SNR=47						
KAPI				Sn	**Sn**	**10 06 15.4**	**+1.1**
	13nm,0.3s,baz=307,slow=9.0,SNR=3.8						
	123nm,0.5s						
KAPI	**Kappang**	**4.13**	**222**		**Pn**	**10 05 27.9**	**+0.7**
KAPI	**Kappang**	**4.13**	**222**	P	**Pn**	**10 05 29.8**	**+2.6**
KAPI	**Kappang**	**4.13**	**222**	P	**Pn**	**10 05 29.5**	**+2.3**
MKS	**Makassar**	**4.47**	**223**	P	**Pn**	**10 05 33.7**	**+1.9**
BSSI	**Bau Bau, Buton**	**4.65**	**206**	P	**Pn**	**10 05 36.3**	**+2.0**
NLAI	**Namlea**	**4.74**	**106**	P	**Pn**	**10 05 37.7**	**+2.3**
TNTI	**Ternate**	**5.53**	**61**		**Pn**	**10 05 45.0**	**-1.3**
TNTI	**Ternate**	**5.53**	**61**	P	**Pn**	**10 05 48.0**	**+1.7**
TNTI	**Ternate**	**5.53**	**61**	P	**Pn**	**10 05 47.5**	**+1.2**
	0.4nm2µm80nm,0.4s						
BKB	**Balikpapan**	**5.68**	**277**	Pn	**Pn**	**10 05 48.4**	**-0.1**
KRAI	**Karang Ratu**	**6.01**	**103**	P	**Pn**	**10 05 54.7**	**+1.8**
MMRI	**Maumere**	**6.66**	**183**		**Pn**	**10 06 02.8**	**+0.8**
MMRI	**Maumere**	**6.66**	**183**	P	**Pn**	**10 06 03.4**	**+1.5**
	0.4nm120nm,0.5s						
EDFI	**Ende, Flores**	**6.82**	**187**	P	**Pn**	**10 06 05.3**	**+1.1**
	0.3nm70nm,0.6s						
SOEI	**Soe**	**7.96**	**168**		**Pn**	**10 06 20.6**	**+0.8**
SOEI	**Soe**	**7.96**	**168**	P	**Pn**	**10 06 22.6**	**+2.8**
MYLDM	**Lahad Datu**	**8.14**	**330**		**Pn**	**10 06 21.5**	**-0.8**
MYLDM	**Lahad Datu**	**8.14**	**330**	P	Pn	10 06 39.8	+18
BATI	**Baumata**	**8.29**	**172**	Pn	**Pn**	**10 06 25.2**	**+0.9**
	5.4nm,0.3s,baz=228,slow=5.2,SNR=4.5						
BATI				LR	LR	10 10 07.8	
	comp=Z,90nm,20.7s,baz=2.0,slow=41						
	10.0nm,0.3s						
SIJI	**Sorong**	**8.79**	**83**	Pn	**Pn**	**10 06 31.6**	**+0.5**
	6.4nm,0.3s,baz=248,slow=10,SNR=9.4						
SIJI				Sn	**Sn**	**10 08 12.1**	**+3.1**
	1.0nm,0.3s,baz=42,slow=23,SNR=1.6						
	13nm,0.3s						
DAV	**Davao City (W)**	**9.45**	**19**	LR	LR	10 10 56.8	
	comp=Z,77nm,20.2s,baz=20,slow=42						
FAKI	**Fak Fak**	**9.75**	**96**	Pn	**Pn**	**10 06 43.9**	**-0.4**
UGM	**Wanagama**	**13.36**	**243**	Pn	**Pn**	**10 07 30.4**	**-3.4**
MTN	**Manton Dam**	**13.78**	**142**	Pn	**Pn**	**10 07 38.2**	**-1.2**
KNRA	**Kununurra**	**14.97**	**156**	Pn	**Pn**	**10 07 54.9**	**-0.7**
LEM	**Lembang**	**15.65**	**251**	LR	LR	10 15 15.2	
	comp=Z,67nm,19.3s,baz=110,slow=42						
BBJI	**Bungbulang**	**15.82**	**249**	Pn	**Pn**	**10 08 02.4**	**-4.4**
FITZ	**Fitzroy Crossi**	**16.35**	**169**	Pn	**Pn**	**10 08 13.2**	**-0.2**
	0.3nm,0.3s,baz=34,slow=5.9,SNR=8.5						
	5.6nm,0.9s						
PMBI	**Palembang**	**17.78**	**266**	Pn	**Pn**	**10 08 30.5**	**-0.9**
MDSI	**Maura Dua**	**18.50**	**262**	P	Pn	10 08 49.3	+9.0
MBWA	**Marble Bar**	**19.30**	**188**	P	**P**	**10 08 48.5**	**-0.1**
MBWA				IAmb	IAmb	10 08 53.9	
	comp=Z,14nm,1.1s						
PSA00	**Pilbara Seismi**	**19.69**	**187**	P	**P**	**10 08 52.3**	**-0.6**
WB0	**Warramunga Arr**	**21.18**	**148**	P	**P**	**10 09 08.8**	**-0.2**
WB0				IAmb	IAmb	10 09 14.7	
	comp=Z,10.0nm,0.9s						
WRAB	**Tennant Creek**	**21.29**	**148**	P	**P**	**10 09 10.1**	**-0.1**
WRAB				IAmb	IAmb	10 09 32.2	
	comp=Z,8.7nm,1.1s						
WRAB	**Tennant Creek**	**21.29**	**148**	P	**P**	**10 09 11.0**	**+0.8**
WRA	**Warramunga Arr**	**21.29**	**148**	P	**P**	**10 09 10.9**	**+0.7**
	comp=Z,6.6nm,1.1s,baz=335,slow=9.4,SNR=24						
	comp=Z,6.6nm,1.1s						
WR8	**Warramunga Arr**	**21.39**	**148**		**P**	**10 09 10.5**	**-0.8**
WR8				IAmb	IAmb	10 09 22.4	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**23.64**	**121**	P	**P**	**10 09 33.3**	**-1.5**
COEN				IAmb	IAmb	10 09 41.8	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**24.24**	**154**	P	**P**	**10 09 39.6**	**-0.8**
ASAR	**Alice Springs**	**24.25**	**154**	P	**P**	**10 09 41.9**	**+1.5**
	comp=Z,4.4nm,0.6s,baz=330,slow=8.7,SNR=65						
ASAR				LR	LR	10 20 04.6	
	comp=Z,54nm,18.8s,baz=314,slow=39						
	comp=Z,4.4nm,0.6s						
ASAR	**Alice Springs**	**24.25**	**154**	P	**P**	**10 09 39.6**	**-0.8**
QIZ	**Qiongzhong**	**24.29**	**330**	P	**P**	**10 09 40.5**	**-0.2**
QIZ				IAmb	IAmb	10 09 55.0	
	comp=Z,15nm,1.2s						
PMG	**Port Moresby**	**25.58**	**108**	P	**P**	**10 09 49.5**	**-3.1**
CMAR	**Chiang Mai Arr**	**30.82**	**312**	P	**P**	**10 10 40.3**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=131,slow=6.8,SNR=4.3						
CMAR				LR	LR	10 23 53.4	
	comp=Z,20nm,19.9s,baz=260,slow=38						
	comp=Z,0.5nm,0.3s						
BBOO	**Buckleboo**	**33.23**	**159**		**P**	**10 10 59.4**	**-1.0**
PZH	**PanZhiHua**	**34.68**	**326**	P	**P**	**10 11 14.2**	**+1.0**
STKA	**Stephens Creek**	**34.78**	**151**	P	**P**	**10 11 14.4**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=315,slow=13,SNR=3.0						
	comp=Z,1.8nm,0.6s						
MJAR	**Matsushiro Arr**	**40.97**	**19**	P	**P**	**10 12 05.2**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=198,slow=9.6,SNR=5.6						
	comp=Z,0.7nm,0.5s						
CAN	**Canberra**	**41.32**	**147**	P	**P**	**10 12 07.2**	**-1.7**
CAN				IAmb	IAmb	10 12 20.5	
	comp=Z,11nm,1.0s						
LZDM	**Lanzhou Array**	**41.60**	**337**	P	**P**	**10 12 13.6**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=167,slow=8.7,SNR=1.9						
	comp=Z,0.4nm,0.3s						
HHC	**Hu-ho-hao-te**	**43.74**	**348**	*eP*	**P**	**10 12 29.6**	**+1.0**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,99nm,5.3s						
GTA2	**Gaotai**	**46.22**	**335**	*eP*	**P**	**10 12 51.1**	**+2.7**
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HILR	**Hailar Array B**	**51.35**	**358**	P	**P**	**10 13 28.8**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=170,slow=8.8,SNR=1.8						
	comp=Z,0.9nm,0.5s						
WMQ	**Urumqi**	**55.21**	**330**	*eP*	**P**	**10 13 55.8**	**-0.2**
MKAR	**Makanchi Array**	**60.02**	**329**	P	**P**	**10 14 30.2**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=111,slow=6.6,SNR=6.0						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**60.02**	**329**	P	**P**	**10 14 28.3**	**-1.5**
MAKZ	**Makanchi**	**60.19**	**329**	P	**P**	**10 14 28.0**	**-3.0**
MAKZ				IAmb	IAmb	10 14 28.2	
	comp=Z,2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**63.88**	**336**	P	**P**	**10 14 56.1**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=111,slow=7.9,SNR=5.3						
	comp=Z,1.1nm,0.3s						
KURBB	**Kurchatov Arra**	**64.41**	**331**	P	**P**	**10 14 58.9**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=228,slow=30,SNR=4.5						
	comp=Z,0.5nm,0.9s						
BVAR	**Borovoye Array**	**69.90**	**329**	P	**P**	**10 15 34.7**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=145,slow=5.3,SNR=1.1						
	comp=Z,0.2nm,0.4s						

*IDC **12** 10:07:25.8±12.0, 20°.81S×177°.53W, h453km±112km, mb3.4/8, mbtmp4.2/8, Error ellipse: s-maj=97.1km s-min=34.9km az=125.0*

ISC 12 10:07:25.4±1.7, 20°.8S±0°.4×177°.5W±0°.3, h450km, n15, σ0s56/16, mb3.7/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.88**	**265**	P	**P**	**10 13 29.1**	**-0.3**
	0.7nm,0.3s,baz=98,slow=7.1,SNR=1.5						
	0.7nm,0.3s						
JAY	**Jayapura**	**44.55**	**289**	P	**P**	**10 14 55.7**	**-0.4**
	9.0nm,0.5s,baz=189,slow=18,SNR=5.7						
	9.0nm,0.5s						
ASAR	**Alice Springs**	**44.86**	**257**	P	**P**	**10 14 59.0**	**+0.6**
	1.6nm,0.6s,baz=95,slow=7.8,SNR=22						
ASAR				PcP	**PcP**	**10 16 30.9**	**-0.2**
	0.4nm,0.6s,baz=106,slow=3.8,SNR=5.6						
	1.6nm,0.6s						
WRA	**Warramunga Arr**	**44.98**	**262**	P	**P**	**10 14 59.2**	**-0.2**
	0.9nm,0.3s,baz=97,slow=8.2,SNR=43						
WRA				PcP	**PcP**	**10 16 31.8**	**+0.3**
	0.3nm,0.8s,baz=92,slow=3.6,SNR=1.3						
	0.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**53.41**	**262**	P	**P**	**10 16 02.5**	**+0.4**
	1.5nm,0.6s,baz=106,slow=7.4,SNR=2.0						
	1.5nm,0.6s						
SEY	**Seymchan**	**86.79**	**347**	P	**P**	**10 19 20.2**	**-0.1**
	1.7nm,0.7s,baz=108,slow=23,SNR=4.1						
	1.7nm,0.7s						
ILAR	**Eielson Array**	**88.54**	**13**	P	**P**	**10 19 29.1**	**+0.6**
	0.2nm,0.4s,baz=206,slow=4.0,SNR=4.5						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**90.63**	**289**	P	**P**	**10 19 39.9**	**+0.6**
	0.6nm,0.3s,baz=110,slow=5.8,SNR=4.9						
	0.6nm,0.3s						
TIXI	**Tiksi**	**99.17**	**345**	P	**Pdif**	**10 20 17.7**	**+0.9**
	9.8nm,0.3s,baz=70,slow=1.2,SNR=4.1						
MKAR	**Makanchi Array**	**111.73**	**313**	PKiKP	**PKiKP**	**10 25 07.3**	**-0.8**
	0.3nm,0.6s,baz=133,slow=0.7,SNR=2.8						
BVAR	**Borovoye Array**	**119.60**	**320**	PKP	**PKPdf**	**10 25 22.4**	**-0.5**
	0.6nm,0.3s,baz=79,slow=2.5,SNR=3.3						
AKASG	**Malin Array Be**	**143.50**	**331**	PKP	PKPab	10 26 05.0	-0.8
	1.5nm,0.5s,baz=45,slow=3.8,SNR=7.2						
EKA	**Eskdalemuir Ar**	**145.29**	**6**	PKPbc	**PKPdf**	**10 26 10.3**	**-0.4**
	0.5nm,0.4s,baz=334,slow=2.4,SNR=2.1						
BRTR	**Keskin Array B**	**147.38**	**312**	PKPbc	**PKPbc**	**10 26 17.3**	**-0.7**
	1.0nm,0.9s,baz=5.7,slow=5.8,SNR=2.1						
MMAI	**Mount Meron Ar**	**148.35**	**299**	PKPbc	**PKPbc**	**10 26 20.9**	**+0.2**
	0.6nm,0.3s,baz=88,slow=5.0,SNR=1.9						

*SDD **12** 10:08:14.7±1.6, 17°.86N×66°.75W, h22km±35km, MD3.5, ML3.1, MW3.5, Presumed earthquake*
*NEIC **12** 10:08:16.8±1.6, 18°.03N±0°.04×66°.793W±0°.005, h10km±1km, ML3.3/33, Md3.2/4(RSPR), Error ellipse: s-maj=6.0km s-min=2.5km az=183.0*
*RSPR **12** 10:08:

KBG				*e*S	Sg	10 22 10.3	+0.6
SMKR	**Semkarok**	**1.37**	**289**	*e*P	Pb	10 22 13.9	-0.1
BKI	**Bering**	**1.55**	**127**	*e*P	Pb	10 22 17.7	+0.7
BKI				*e*S	Sg	10 22 38.0	-1.1
KLY	**Klyuchi**	**1.77**	**277**	*e*P	Pn	10 22 18.8	+0.4
MKZ	**Mys Kozlova**	**1.99**	**217**	*e*P	Pb	10 22 23.2	-1.2
MKZ				*e*S	Sb	10 22 47.7	-1.1
KMNR	**Kamenistaya**	**2.05**	**260**	*e*P	Pb	10 22 25.1	-0.4
TUMD	**Tumrok D**	**2.15**	**245**	*e*P	Pb	10 22 25.8	-1.4
KOZ	**Kozyrevsk**	**2.21**	**269**	*e*P	Pb	10 22 28.1	-0.1
SRDR	**Sredinnyy**	**2.29**	**276**	*e*P	Pb	10 22 28.5	-1.2
SRDR				*e*S	Sb	10 22 58.1	+0.6
ESO	**Esso**	**2.87**	**268**	*e*P	Pb	10 22 37.5	-2.1
OSSR	**Ossora**	**3.13**	**353**	*e*P	Pn	10 22 38.1	+1.0
SDLR	**Sedlovina**	**4.05**	**227**	*e*P	Pn	10 22 53.2	+3.3
KRX	**Arik**	**4.09**	**229**	*e*P	Pb	10 22 55.7	-4.7
SMAR	**Somma**	**4.10**	**227**	*e*P	Pn	10 22 54.1	+3.4
AVH	**Avacha**	**4.12**	**228**	*e*P	Pn	10 22 55.3	+4.4
UGLR	**Uglovaya**	**4.13**	**227**	*e*P	Pn	10 22 54.8	+3.8
KOK	**Koryaka**	**4.15**	**228**	*e*P	Pn	10 22 54.8	+3.6
GNL	**Ganaly**	**4.18**	**236**	*e*P	Pn	10 22 55.4	+3.6
DALK	**Dalny**	**4.29**	**225**	*e*P	Pn	10 22 55.8	+2.8
RUS	**Russkaya**	**4.85**	**222**	*e*P	Pn	10 23 03.9	+3.2
GRL	**Gorelyy**	**4.92**	**225**	*e*P	Pn	10 23 05.7	+3.9
MTVR	**Mutnovka**	**4.93**	**224**	*e*P	Pn	10 23 06.3	+4.2
ASAK	**Asacha**	**5.12**	**225**	*e*P	Pn	10 23 08.8	+4.2

IDC ***12*** *10:24:49.9±1.4, 33°.17N×47°.18E, h0km, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=33.0km s-min=21.4km az=2.0*
TEH ***12*** *10:24:51.3, 32°.88N×47°.13E, h27km±18km, ML3.6, Presumed earthquake*

ISC 12 10:24:52.3±0.8, 32°.94N±0°.07×47°.14E±0°.06, h22km, n30, σ1§29/29, mb3.8/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDOB	**Doab**	**1.22**	**45**	Pg	**Pb**	**10 25 14.6**	**-0.2**
KCHF	**Cheshme Sefid,**	**1.34**	**357**	Pg	**Pb**	**10 25 16.4**	**-0.4**
IGHG	**Ghaleghazi**	**1.47**	**341**	Pg	**Pb**	**10 25 19.5**	**+0.4**
GLG1	**Gilan-e-Gharb**	**1.56**	**319**	Pg	**Pb**	**10 25 20.4**	**-0.1**
IBZA	**Bozab**	**1.65**	**21**	Pg	**Pb**	**10 25 22.0**	**-0.1**
IDHR	**Dehrash**	**1.87**	**341**	Pn	**Pb**	**10 25 24.8**	**-1.1**
SNQR	**Sonqor, Kerman**	**1.96**	**12**	Pn	**Pb**	**10 25 26.6**	**-1.0**
AMIS	**Naft Sefid**	**2.22**	**124**	Pn	**Pn**	**10 25 28.7**	**+0.8**
HAGD	**Aghdareh**	**2.51**	**41**	Pn	**Pn**	**10 25 33.2**	**+1.1**
JHBN	**Jahan bin**	**3.06**	**102**	Pn	**Pn**	**10 25 40.7**	**+0.9**
IPIR	**Pirpir**	**3.17**	**94**	Pn	**Pn**	**10 25 42.8**	**+1.5**
IBRJ	**Brojen**	**3.63**	**105**	Pn	**Pn**	**10 25 48.0**	**+0.5**
IKLH	**Kolahrood**	**3.75**	**83**	Pn	**Pn**	**10 25 50.9**	**+1.8**
IQOM	**Qom**	**3.79**	**59**	Pn	**Pn**	**10 25 50.9**	**+1.3**
ZNJK	**Zanjan**	**3.94**	**18**	Pn	**Pn**	**10 25 53.7**	**+2.0**
KLNJ	**Kolanjah**	**4.25**	**116**	Pn	**Pn**	**10 25 56.7**	**+0.6**
KRSH	**Karshahi**	**4.30**	**75**	Pn	**Pn**	**10 25 58.0**	**+1.4**
ISFB	**Sefidab**	**4.49**	**70**	Pn	**Pn**	**10 26 00.2**	**+1.1**
MZPU	**Pul - Mazandar**	**5.05**	**45**	Pn	**Pn**	**10 26 09.0**	**+2.0**
ASF	**Jabal al Asfar**	**8.68**	**268**	Lg	Lg	10 29 24.8	
	0.2nm,0.3s,baz=273,slow=23,SNR=1.6						
BVAR	**Borovoye Array**	**26.11**	**33**	P	**P**	**10 30 24.3**	**-0.2**
	1.3nm,0.6s,baz=225,slow=8.6,SNR=7.8 1.3nm,0.6s						
MKAR	**Makanchi Array**	**30.05**	**52**	P	**P**	**10 30 59.9**	**+0.1**
	0.5nm,0.6s,baz=253,slow=9.4,SNR=7.3 0.5nm,0.6s						
FINES	**FINESS Array B**	**31.61**	**341**	P	**P**	**10 31 12.0**	**-1.2**
	2.3nm,0.9s,baz=139,slow=13,SNR=4.6 2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**33.91**	**40**	P	**P**	**10 31 33.8**	**+0.3**
	0.5nm,0.4s,baz=255,slow=10,SNR=1.6 0.5nm,0.4s						
HFS	**Hagfors**	**34.95**	**331**	P	**P**	**10 31 40.8**	**-1.6**
	1.4nm,0.5s,baz=120,slow=8.8,SNR=6.2 1.4nm,0.5s						
NOA	**NORSAR Array B**	**36.47**	**331**	P	**P**	**10 31 54.3**	**-1.2**
	1.1nm,0.9s,baz=124,slow=8.5,SNR=2.0 1.1nm,0.9s						
EKA	**Eskdalemuir Ar**	**41.32**	**318**	P	**P**	**10 32 34.5**	**-1.6**
	0.4nm,0.4s,baz=103,slow=8.1,SNR=3.7 0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**45.81**	**255**	P	**P**	**10 33 15.9**	**+3.1**
	0.8nm,0.7s,baz=65,slow=8.7,SNR=5.0 0.8nm,0.7s						
SPITS	**Spitsbergen Ar**	**47.27**	**352**	P	**P**	**10 33 23.0**	**-0.5**
	12nm,0.9s,baz=135,slow=11,SNR=5.9 12nm,0.9s						
CMAR	**Chiang Mai Arr**	**48.41**	**94**	P	**P**	**10 33 32.1**	**-0.9**
	1.0nm,0.5s,baz=291,slow=7.8,SNR=6.3 1.0nm,0.5s						

AFAD ***12*** *10:26:36.0, 37°.44N×45°.24E, h10km±1km, ML2.9*
TEH ***12*** *10:26:38.1, 37°.18N×45°.12E, h8km±89km, ML3.1, Presumed earthquake*

ISC 12 10:26:37.0±1.5, 37°.22N±0°.05×45°.13E±0°.03, h1km±12km, n17, σ1§34/22, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.65**	**134**	Pg	**Pg**	**10 26 49.9**	**+0.5**
YOVA	**Hakkari_Yksek**	**0.76**	**299**	P	**Pg**	**10 26 51.1**	**-0.5**
YOVA				S	**Sg**	**10 27 02.0**	**+0.6**
YOVA				IAML		10 27 05.0	
	comp=E,395nm,0.4s						
YOVA				IAML		10 27 06.0	
	comp=N,482nm,0.8s						
IAZR	**Azarshahr**	**0.82**	**56**	Pg	**Pn**	**10 26 54.9**	**-1.0**
HAKT	**HAKKARI**	**1.18**	**287**	P	**Pb**	**10 26 56.5**	**-3.7**
HAKT				S	**Sn**	**10 27 17.0**	**-0.6**
CUKT	**Cukurca**	**1.21**	**272**	P	**Pn**	**10 27 00.6**	**-0.5**
CUKT				S	**Sn**	**10 27 20.2**	**+2.0**
CUKT				IAML		10 27 26.0	
	comp=N,568nm,0.5s						
ITBZ	**Tabriz**	**1.30**	**38**	Pg	**Pn**	**10 27 02.3**	**0.0**
ITBZ				Sg	**Sn**	**10 27 21.3**	**+0.9**
IMRD	**Marand**	**1.56**	**17**	Pg	**Pg**	**10 27 07.5**	**+0.6**
OZAP	**Van, Ozalp-Mer**	**1.69**	**328**	P	**Pg**	**10 27 11.2**	**+1.8**
IHRS	**Heris**	**1.87**	**54**	Pn	**Pg**	**10 27 13.4**	**+0.5**
TVAN	**Van**	**1.89**	**314**	P	**Pg**	**10 27 13.7**	**+0.6**
GEVA	**Gevas**	**1.97**	**304**	P	**Pb**	**10 27 12.9**	**-0.8**
GEVA				S	**Sb**	**10 27 38.2**	**-0.5**
MAKU	**Maku**	**2.16**	**351**	Pn	**Pg**	**10 27 17.3**	**-1.1**
PERV	**Siirt/Pervari-**	**2.18**	**290**	P	**Pn**	**10 27 15.3**	**+0.9**
PERV				IAML		10 27 52.0	
	comp=E,133nm,0.7s						
SIRN	**Sirnak**	**2.18**	**278**	P	**Pb**	**10 27 16.1**	**-1.1**
SIRN				IAML		10 27 48.0	
	comp=E,96nm,0.6s						
SIRN				IAML		10 27 49.0	
	comp=N,144nm,0.6s						
SRTM	**Siirt_Merkez**	**2.66**	**288**	P	**Pb**	**10 27 24.7**	**-0.7**
SRTM				IAML		10 28 11.0	
	comp=E,34nm,0.8s						
SRTM				IAML		10 28 17.0	
	comp=N,72nm,0.6s						
BTMN	**Batman**	**3.14**	**284**	P	**Pb**	**10 27 34.9**	**+1.4**
BTMN				IAML		10 28 33.0	
	comp=E,71nm,0.9s						
BTMN				IAML		10 28 35.0	
	comp=N,32nm,0.9s						
MUSM	**Mu-Merkez**	**3.23**	**299**	P	**Pb**	**10 27 35.8**	**+0.7**

SKHL ***12*** *10:36:35.0±0.1, 42°.60N×142°.00E, h64km±4km, mb5.0/4*
JMA ***12*** *10:36:35.0±0.1, 42°.7N±0°.4×142°.0E±0°.5, h41km±1km, MD4.2/39, MV4.3/39, ISHIKARI DEPRESSION*
JMA Felt III J1 at ISHIKARI DEPRESSION .
IDC ***12*** *10:36:35.9±0.9, 42°.86N×141°.98E, h40km±6km, mb3.8/18, mbtmp4.1/22, ML4.8/2, Error ellipse: s-maj=22.4km s-min=13.4km az=162.0*
NIED ***12*** *10:36:35.0, 42°.70N×141°.98E, h41km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.30; Mθθ-0.44; Mφφ-2.86; Mrθ0.00; Mrφ0.51; Mθφ-0.23; Fault plane solution: Mo3.14000×10¹⁵ NP1: φs348.00000°, δ43.00000°, λ89.00000°. NP2: φs169.00000°, δ47.00000°, λ91.00000°.*
MOS ***12*** *10:36:36.5±0.9, 42°.83N×141°.95E, h65km, mb4.6/8 Error ellipse: s-maj=11.6km s-min=7.6km az=67.6*
NEIC ***12*** *10:36:37.0±0.8, 42°.8N±0°.1×142°.0E±0°.2, h54km±9km, mb4.3/20, Error ellipse: s-maj=24.8km s-min=16.1km az=118.0*

ISC 12 10:36:35.3±0.5, 42°.67N±0°.03×141°.98E±0°.03, h41km±4km, n105, σ1§21/123, mb4.2/32, 1C-18D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIAM	**Iburiatsuma**	**0.06**	**223**	*i* P	**Pn**	**10 36 41.5**	**-0.3**
JIAM				A	A	10 36 41.5	
	comp=N,384nm,0.5s,comp=E,486nm,0.6s						
JIAM				S	**Sn**	**10 36 46.6**	**+0.3**
JBT2	**Biratori 2**	**0.30**	**69**	⇓*i* P	**Pn**	**10 36 42.9**	**-0.7**
JBT2				A	A	10 36 42.9	
	comp=N,54nm,0.9s,comp=E,115nm,0.9s						
JBT2				⇓S	**Sn**	**10 36 48.8**	**-0.6**
JEW	**Eniwo**	**0.42**	**294**	⇓*i* P	**Pn**	**10 36 44.8**	**-0.3**
JEW				A	A	10 36 44.8	
	comp=N,59nm,1.0s,comp=E,93nm,1.0s						
JEW				⇓*e*S	**Sn**	**10 36 51.4**	**-0.5**
JSHD	**Hidakashinhida**	**0.44**	**125**	⇓*i* P	**Pn**	**10 36 45.9**	**+0.6**
JSHD				A	A	10 36 45.9	
	comp=N,55nm,0.7s,comp=E,51nm,1.3s						
JSHD				⇓S	**Sn**	**10 36 54.8**	**+2.5**
JFR	**Furan**	**0.67**	**42**	⇓*i* P	**Pn**	**10 36 47.4**	**-1.0**
JFR				A	A	10 36 47.4	
	comp=N,12nm,1.1s,comp=E,10.0nm,1.7s						
JNBK	**Urakawa-nobuka**	**0.69**	**124**	*i* P	**Pn**	**10 36 48.5**	**-0.1**
JNBK				A	A	10 36 48.5	
	comp=N,15nm,1.1s,comp=E,16nm,1.6s						
JNB	**Noboribetsu**	**0.72**	**254**	⇓*i* P	**Pn**	**10 36 48.4**	**-0.6**
JNB				⇓S	**Sn**	**10 36 58.4**	**-0.5**
JISS	**Ishikarishitsu**	**0.73**	**326**	⇓*i* P	**Pn**	**10 36 49.0**	**-0.2**
JISS				A	A	10 36 49.0	
	comp=N,46nm,0.6s,comp=E,57nm,0.9s						
JISS				⇓S	**Sn**	**10 36 59.6**	**+0.5**
JAB	**Ashibetsu**	**0.85**	**12**	⇓*i* P	**Pn**	**10 36 51.4**	**+0.5**
JAB				A	A	10 36 51.4	
	comp=N,19nm,0.8s,comp=E,24nm,1.5s						
JAB				⇓S	**Sn**	**10 37 03.9**	**+1.8**
JCH	**Churui**	**1.02**	**93**	*i* P	**Pn**	**10 36 52.7**	**-0.4**
JCH				A	A	10 36 52.7	
	comp=N,11nm,0.3s,comp=E,10.0nm,2.2s						
JCH				S	**Sn**	**10 37 06.2**	**0.0**
JTHR	**Tokachihiroo**	**1.05**	**111**	A	A	10 36 53.8	
	comp=N,10.0nm,0.7s,comp=E,17nm,0.8s						
JKB	**Kayabe**	**1.05**	**222**	⇓*i* P	**Pn**	**10 36 53.4**	**-0.1**
JKB				⇓S	**Sn**	**10 37 07.1**	**+0.3**
JHR	**Hokuryu**	**1.09**	**350**	*i* P	**Pn**	**10 36 54.4**	**+0.3**
JHR				A	A	10 36 54.4	
	comp=N,8.0nm,0.3s,comp=E,9.0nm,0.2s						
JHR				S	**Sn**	**10 37 09.9**	**+2.0**
JEM	**Erimo**	**1.09**	**126**	P	**Pn**	**10 36 54.5**	**+0.5**
JYM2	**Yakumo 2**	**1.31**	**246**	A	A	10 36 57.6	
	comp=N,6.0nm,4.2s,comp=E,4.0nm,1.3s						
JKK2	**Kamakawa 2**	**1.33**	**25**	⇓*i* P	**Pn**	**10 36 57.3**	**0.0**
JKK2				⇓S	**Sn**	**10 37 14.1**	**+0.2**
JAR	**Ashorobuto**	**1.46**	**64**	A	A	10 36 59.3	
	comp=N,4.0nm,1.9s,comp=E,6.0nm,0.7s						
JAHD	**Aomorihigashid**	**1.48**	**199**	A	A	10 37 00.3	
	comp=N,9.0nm,0.8s,comp=E,12nm,0.5s						
ASAJ	**Asahikawa**	**1.52**	**17**	Pn	**Pn**	**10 37 00.9**	**+1.0**
	comp=E,106nm,0.3s,baz=223,slow=11,SNR=342						
ASAJ				Sn	**Sn**	**10 37 15.2**	**-3.3**
	comp=E,135nm,0.3s,baz=213,slow=19,SNR=12						
ASAJ	**Asahikawa**	**1.52**	**17**	PN	**Pn**	**10 37 00.5**	**+0.6**
JKA	**Kamikawa-asahi**	**1.52**	**17**		**Pn**	**10 37 00.5**	**+0.6**
JKA	**Kamikawa-asahi**	**1.52**	**17**	*e*P	**Pn**	**10 37 00.5**	**+0.6**
JAK	**Akkeshi**	**2.03**	**80**	A	A	10 37 07.7	
	comp=N,3.0nm,0.8s,comp=E,3.0nm,2.2s						
AKK	**Akkeshi**	**2.14**	**80**	*e*P	**Pn**	**10 37 07.3**	**-1.1**
AKK				*e*S	**Sn**	**10 37 31.8**	**-1.9**
JKEN	**Kujiedanarisaw**	**2.47**	**185**	A	A	10 37 14.5	
	comp=N,10.0nm,0.9s,comp=E,7.0nm,1.0s						
RUSJ	**Misakicho**	**2.78**	**58**	*e*PN	**Pn**	**10 37 20.0**	**+2.7**
GLVR	**Golovnino**	**2.80**	**66**	*e*PN	**Pn**	**10 37 18.1**	**+0.6**
GLVR				*i* S	**Sn**	**10 37 51.3**	**+1.2**
GLVR				pmax	pmax		
	comp=Z,145nm,0.2s						
GLVR				smax	smax		
	comp=N,2μm,0.5s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR	**Golovnino**	**2.80**	**66**	*e*P	**Pn**	**10 37 18.1**	**+0.6**
GLVR				AMB	AMB	10 37 22.2	
	comp=E,150nm,0.2s						
GLVR				*e*S	**Sn**	**10 37 51.3**	**+1.2**
GLVR				A	A	10 37 53.5	
	comp=E,2μm,0.4s						
GLVR				A	A	10 37 53.5	
	comp=E,2μm,0.4s						
NMR	**Nemuro--Hokkai**	**2.84**	**74**	⇓*i* PN	**Pn**	**10 37 17.0**	**-1.0**
NMR				*i* S	**Sn**	**10 37 48.7**	**-2.3**
NMR	**Nemuro--Hokkai**	**2.84**	**74**	*e*P	**Pn**	**10 37 17.0**	**-1.0**
NMR				*e*S	**Sn**	**10 37 48.7**	**-2.3**
YUK	**Yuzh-Kuril'sk**	**3.15**	**63**	*e*PN	**Pn**	**10 37 22.7**	**+0.5**
YUK				*i* S	**Sn**	**10 38 02.1**	**+3.6**
YUK				pmax	pmax		
	comp=Z,408nm,0.3s						
YUK				pmax	pmax		
	comp=N,59nm,0.2s						
YUK				smax	smax		
	comp=N,801nm,0.2s						
YUK				smax	smax		
	comp=E,594nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.15**	**63**	*e*P	**Pn**	**10 37 22.7**	**+0.5**
YUK				AMB	AMB	10 37 29.7	
	comp=E,410nm,0.8s						
YUK				*e*S	**Sn**	**10 37 59.1**	**+0.6**
YUK				A	A	10 38 06.1	
	comp=E,800nm,0.6s						
YUK				A	A	10 38 06.1	
	comp=E,590nm,0.6s						
YSS	**Yuzhno-Sakhali**	**4.32**	**7**	Pn	**Pn**	**10 37 39.2**	**+0.8**
YSS	**Yuzhno-Sakhali**	**4.32**	**7**	*e*PN	**Pn**	**10 37 39.2**	**+0.8**
YSS				*e*S	**Sn**	**10 38 26.9**	**-0.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				smax	smax		
	comp=N,30nm,0.8s						
YSS				smax	smax		
	comp=E,20nm,0.7s						
YSS	**Yuzhno-Sakhali**	**4.32**	**7**	*e*P	**Pn**	**10 37 40.2**	**+1.8**
YSS				*e*S	**Sn**	**10 38 29.4**	**+1.9**
KUR	**Kuril'sk**	**4.96**	**57**	*e*PN	Pn	10 37 52.2	+5.0
KUR				*e*S	**Sn**	**10 38 49.7**	**+6.4**
KUR				pmax	pmax		
	comp=Z,98nm,0.8s						
KUR				smax	smax		
	comp=N,135nm,0.2s						
KUR				smax	smax		
	comp=E,94nm,0.5s						
KUR	**Kuril'sk**	**4.96**	**57**	*e*P	**Pn**	**10 37 47.5**	**+0.3**
KUR				AMB	AMB	10 38 04.6	
	comp=E,100nm,0.5s						
KUR				*e*S	**Sn**	**10 38 42.6**	**-0.7**
KUR				A	A	10 38 52.6	
	comp=E,140nm,0.3s						
KUR				A	A	10 38 52.6	
	comp=E,90nm,0.3s						
USRK	**Ussuriysk Ar.**	**7.43**	**285**	Pn	**Pn**	**10 38 20.7**	**-0.4**
	comp=E,1.2nm,0.6s,baz=87,slow=14,SNR=5.1						
KSRS	**Korea Array**	**11.96**	**249**	Pn	**Pn**	**10 39 25.9**	**+2.9**
	comp=E,1.2nm,0.5s,baz=57,slow=14,SNR=5.7						
KSRS	**Korea Array**	**11.96**	**249**	PN	**Pn**	**10 39 26.0**	**+2.9**
PEA0B	**Petropavlovsk-**	**14.81**	**40**	Pn	**Pn**	**10 40 02.1**	**+0.4**
PEA0B	**Petropavlovsk-**	**14.81**	**40**	P	**Pn**	**10 40 02.1**	**+0.4**
MA2	**Magadan**	**17.78**	**15**	P	**Pn**	**10 40 39.3**	**-0.1**
	comp=E,0.5nm,0.3s,baz=176,slow=14,SNR=4.3 comp=E,2.2nm,0.3s						
JOW	**Kunigami**	**19.36**	**220**	P	**Pn**	**10 41 00.6**	**+1.9**
	comp=E,2.3nm,0.3s,baz=29,slow=9.5,SNR=4.6 comp=E,36nm,0.9s						
YAK	**Yakutsk**	**20.73**	**344**	P	Pn	10 41 14.9	+0.4
	comp=E,9.9nm,0.3s,baz=323,slow=19,SNR=7.6						
YAK	**Yakutsk**	**20.73**	**344**	*e*P	Pn	10 41 15.3	+0.8
YAK				pmax	pmax		
	comp=Z,20nm,1.0s						
YAK				pmax	pmax		
	comp=N,16nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
SEY	**Seymchan**	**21.20**	**13**	P	**P**	**10 41 15.9**	**-1.1**
	comp=E,4.4nm,0.8s,baz=211,slow=9.2,SNR=18 comp=E,4.4nm,0.8s						
SEY	**Seymchan**	**21.20**	**13**	*e*P	**P**	**10 41 13.6**	**-3.4**
SEY				pmax	pmax		
	comp=Z,16nm,1.1s						
SONM	**Songino Array**	**25.43**	**294**	P	**P**	**10 42 00.1**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=90,slow=10,SNR=4.6 comp=Z,0.8nm,0.4s						
NRIK	**Noril'sk**	**38.41**	**332**	P	**P**	**10 43 52.2**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=179,slow=5.2,SNR=2.3 comp=Z,1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**38.64**	**307**	P	**P**	**10 43 54.3**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=93,slow=9.7,SNR=5.5 comp=Z,0.8nm,0.4s						
E19K	**Redstone River**	**40.37**	**31**	P	**P**	**10 44 08.2**	**-0.5**
E19K				IAmb	IAmb	10 44 20.4	
	comp=Z,6.3nm,1.2s						
D20K	**Etivluk River**	**40.75**	**29**	P	**P**	**10 44 10.6**	**-1.2**
MKAR	**Makanchi Array**	**41.72**	**297**	P	**P**	**10 44 19.8**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=79,slow=9.5,SNR=13 comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**41.72**	**297**	P	**P**	**10 44 19.5**	**-0.6**
MKAR	**Makanchi Array**	**41.72**	**297**	P	**P**	**10 44 19.5**	**-0.6**
MKAR	**Makanchi Array**	**41.72**	**297**	*e*P	**P**	**10 44 19.5**	**-0.6**
MAKZ	**Makanchi**	**41.92**	**297**		**P**	**10 44 21.4**	**-0.2**
MAKZ				IAmb	IAmb	10 44 24.1	
	comp=Z,6.0nm,1.2s						
MAKZ	**Makanchi**	**41.92**	**297**	P	**P**	**10 44 21.5**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURK	**Kurchatov**	**42.98**	**304**		**P**	**10 44 29.9**	**-0.3**
KURK				IAmb	IAmb	10 44 32.0	
	comp=Z,3.8nm,0.8s						
KURK	**Kurchatov**	**42.98**	**304**	P	**P**	**10 44 29.9**	**-0.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**42.98**	**304**	*e*P	**P**	**10 44 29.9**	**-0.3**
KURBB	**Kurchatov Arra**	**43.06**	**303**	P	**P**	**10 44 30.5**	**-0.4**
	comp=Z,4.3nm,0.7s,baz=75,slow=8.7,SNR=17 comp=Z,4.3nm,0.7s						
COLD	**Coldfoot**	**43.08**	**32**	P	**P**	**10 44 30.1**	**-0.7**
D24K	**Happy Valley**	**43.59**	**29**	P	**P**	**10 44 34.1**	**-0.8**
D24K				IAmb	IAmb	10 44 35.2	
	comp=Z,10nm,1.4s						
CMAR	**Chiang Mai Arr**	**43.59**	**250**	P	**P**	**10 44 36.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=49,slow=9.0,SNR=4.8 comp=Z,0.4nm,0.3s						
D25K	**Kavik River**	**44.46**	**29**	P	**P**	**10 44 41.1**	**-0.9**
IL31		**44.58**	**35**	P	**P**	**10 44 42.1**	**-0.7**
ILAR	**Eielson Array**	**44.58**	**35**	P	**P**	**10 44 42.3**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=277,slow=7.4,SNR=11 comp=Z,1.3nm,0.8s						
PRP	**Porcupine Dome**	**45.07**	**34**	P	**P**	**10 44 46.2**	**-0.7**
PRP				IAmb	IAmb	10 44 58.9	
	comp=Z,5.4nm,0.8s						
C27K	**Jago River**	**45.38**	**28**	P	**P**	**10 44 48.9**	**-0.3**
SCRK	**Sand Creek**	**45.93**	**36**	P	**P**	**10 44 53.1**	**-0.7**
SCRK				IAmb	IAmb	10 45 05.2	
	comp=Z,4.3nm,0.8s						
BVAR	**Borovoye Array**	**47.24**	**309**	P	**P**	**10 45 03.9**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=74,slow=9.5,SNR=12 comp=Z,1.6nm,0.3s						
BOOM	**Boomskoye usch**	**47.47**	**293**	P	**P**	**10 45 05.8**	**-0.3**
BOOM	**Boomskoye usch**	**47.47**	**293**	P	**P**	**10 45 05.8**	**-0.3**
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
I30M	**Mount Dempster**	**48.89**	**34**	P	**P**	**10 45 17.0**	**+0.3**
INK	**Inuvik**	**49.22**	**29**	P	**P**	**10 45 18.5**	**-0.5**
INK				IAmb	IAmb	10 45 18.7	
	comp=Z,1.8nm,0.6s						
INK	**Inuvik**	**49.22**	**29**	P	**P**	**10 45 18.5**	**-0.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARSB	**Arslanbob**	**49.96**	**293**	P	**P**	**10 45 25.7**	**+0.4**
ARSB	**Arslanbob**	**49.96**	**293**	P	**P**	**10 45 25.7**	**+0.4**
ARSB				pmax	pmax		
	comp=Z,14nm,1.4s						
SPSI	**Sidrap Palu**	**50.59**	**209**	P	**P**	**10 45 29.7**	**-0.3**
	comp=Z,1μmcomp=Z,30nm,1.3s						
KKAR	**Karatay Array**	**50.84**	**296**	P	**P**	**10 45 31.6**	**-0.1**
KKAR	**Karatay Array**	**50.84**	**296**	P	**P**	**10 45 31.6**	**-0.1**
A36M	**Sachs Harbour**	**50.90**	**24**	P	**P**	**10 45 32.2**	**+0.5**
C36M	**Paulatuk**	**52.17**	**27**	P	**P**	**10 45 40.9**	**-0.3**
C36M				IAmb	IAmb	10 45 52.6	
	comp=Z,2.8nm,0.7s						
AB31	**Akbulak array**	**54.75**	**307**		**P**	**10 46 00.5**	**0.0**
AB31				IAmb	IAmb	10 46 01.5	
	comp=Z,5.0nm,1.2s						
ABKAR	**Akbulak array**	**54.75**	**307**		**P**	**10 46 00.4**	**-0.1**
RES	**Resolute Bay**	**57.05**	**15**	P	**P**	**10 46 15.6**	**-0.9**
RES	**Resolute Bay**	**57.05**	**15**	P	**P**	**10 46 15.6**	**-0.9**
RES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YKAW3	**Yellowknife Wh**	**58.72**	**32**	P	**P**	**10 46 28.6**	**+0.2**
YKAW3				IAmb	IAmb	10 46 28.6	
	comp=Z,2.6nm,1.1s						
YKA	**Yellowknife Ar**	**58.76**	**32**	P	**P**	**10 46 28.3**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=308,slow=7.1,SNR=16						
YKA				pP	**pP**	**10 46 39.8**	**-

s147,c254; Duration: 1ᵗ1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.09±.01; $M_{\theta\theta}$0.51±.02; $M_{\phi\phi}$0.58±.02; $M_{r\theta}$-0.03±.01; $M_{r\phi}$0.57±.01; $M_{\theta\phi}$0.14±.01; Best double couple: $M_0$1.11600×10^{17} NP1:ϕ_s50.00000°,δ43.00000°, λ-81.00000°. NP2:ϕ_s217.00000°,δ48.00000°, λ-99.00000°. Principal axes: T 1.1240, Plg2.0000°, Azm313.0000°; N -0.0150, Plg6.0000°, Azm223.0000°; P -1.1070, Plg83.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

IDC ***12*** *10:37:19.6±0.5,37°.28N×141°.23E, h90km±4km, mb4.7/34, mbtmp5.0/41,MS4.1/41 Error ellipse: s-maj=9.7km s-min=8.4km az=87.0*

GFZ ***12*** *10:37:19.7,37°.26N×141°.30E, h74km, MW5.3, Moment Tensor Solution. s50 Moment tensor: M_{rr}-9.87; $M_{\theta\theta}$5.14; $M_{\phi\phi}$4.73; $M_{r\theta}$0.78; $M_{\phi\phi}$4.79; $M_{\theta r}$1.50; Fault plane solution: NP1:ϕ_s49.00000°,δ40.00000°,λ-84.00000°. NP2:ϕ_s223.00000°,δ50.00000°,λ-93.00000°. Principal axes: T 9.8600, Plg5.0000°, Azm316.0000°; N 0.1800, Plg3.0000°, Azm226.0000°; P -10.0300, Plg84.0000°, Azm103.0000°;*

NEIC ***12*** *10:37:19.2,37°.29N×141°.28E, h80km*

BGR ***12*** *10:37:27.8,38°.92N×141°.97E, h82km±3km, mb5.2*

ISC 12 10:37:18.6±0.3, 37°.30N±0'.03×141°.36E±0'.03, h83km±2km, h83km:pP-P,n1205,σ1s81/981,mb5.3/434,44C-44D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	Phase ID ISC		Time h m s	Res ISC
JFK	**Kawauchi**	**0.39**	**280**	*i* P	**Pn**		**10 37 32.5**	**+0.6**
JFK				A	A		10 37 32.5	
	comp=N,257nm,0.9s,comp=E,371nm,1.4s							
JFK				⇓S	**Sn**		**10 37 42.3**	**+0.6**
ONAJ	**Iwakimizuishiy**	**0.49**	**246**	⇓*i* P	**Pn**		**10 37 33.3**	**+0.6**
ONAJ				A	A		10 37 33.3	
	comp=N,366nm,0.3s,comp=E,570nm,1.6s							
ONAJ				⇓S	**Sn**		**10 37 43.6**	**+0.5**
JMST	**Minamisoumatoc**	**0.57**	**318**	⇓*i* P	**Pn**		**10 37 33.9**	**+0.7**
JMST				A	A		10 37 33.9	
	comp=N,1μm,0.4s,comp=E,673nm,0.3s							
JMST				⇓S	**Sn**		**10 37 44.8**	**+0.8**
JFFD	**Fukushimafurud**	**0.67**	**252**	⇓*i* P	**Pn**		**10 37 35.0**	**+0.7**
JFFD				A	A		10 37 35.0	
	comp=N,206nm,0.5s,comp=E,418nm,3.9s							
JFFD				⇓S	**Sn**		**10 37 46.4**	**+0.5**
JMM	**Marumori**	**0.72**	**321**	⇓*i* P	**Pn**		**10 37 35.6**	**+0.9**
JMM				A	A		10 37 35.6	
	comp=N,993nm,1.8s,comp=E,1μm,0.6s							
JMM				⇓S	**Sn**		**10 37 47.6**	**+0.9**
JOTO	**OTAMA OYAMA**	**0.86**	**288**	*i* P	**Pn**		**10 37 37.0**	**+0.8**
JOTO				A	A		10 37 37.0	
	comp=N,808nm,0.8s,comp=E,767nm,0.4s							
JOTO				S	**Sn**		**10 37 50.2**	**+0.8**
JHO	**Hitachi**	**0.94**	**223**	A	A		10 37 37.8	
	comp=N,370nm,1.6s,comp=E,191nm,0.7s							
JIKH	**Ishinomakikobu**	**1.01**	**5**	A	A		10 37 38.5	
	comp=N,386nm,1.3s,comp=E,192nm,1.2s							
JHYU	**Hitachinakayam**	**1.14**	**213**	A	A		10 37 40.3	
	comp=N,104nm,0.8s,comp=E,213nm,1.3s							
JYAR	**Yonezawaarcadi**	**1.14**	**303**	A	A		10 37 40.1	
	comp=N,752nm,0.9s,comp=E,686nm,1.8s							
JIO	**Ouri**	**1.15**	**360**	P	**Pn**		**10 37 38.9**	**-0.7**
JIO				A	A		10 37 38.9	
	comp=N,234nm,1.6s,comp=E,193nm,0.5s							
JIO				S	**Sn**		**10 37 55.5**	**+0.1**
JOU	**Okura**	**1.20**	**333**	*i* P	**Pn**		**10 37 40.6**	**+0.3**
JOU				A	A		10 37 40.6	
	comp=N,311nm,3.1s,comp=E,203nm,1.7s							
JOU				S	**Sn**		**10 37 56.7**	**+0.2**
JSB	**Shiboa**	**1.20**	**254**	A	A		10 37 40.9	
	comp=N,223nm,2.3s,comp=E,320nm,6.0s							
JFY	**Yanaizu**	**1.32**	**275**	*i* P	**Pn**		**10 37 42.3**	**+0.5**
JFY				A	A		10 37 42.3	
	comp=N,71nm,0.8s,comp=E,229nm,3.1s							
JFY				S	**Sn**		**10 38 00.1**	**+0.8**
JOFO	**Osakifurukawao**	**1.35**	**345**	A	A		10 37 42.6	
	comp=N,476nm,2.9s,comp=E,436nm,2.5s							
JYS	**Shirataka**	**1.38**	**312**	*i* P	**Pn**		**10 37 43.2**	**+0.7**
JYS				A	A		10 37 43.2	
	comp=N,450nm,2.2s,comp=E,362nm,2.0s							
JYS				S	**Sn**		**10 38 02.1**	**+1.7**
JYT	**Yasato**	**1.42**	**222**	A	A		10 37 43.8	
	comp=N,228nm,0.4s,comp=E,227nm,0.5s							
JIHU	**Itakohorinouch**	**1.49**	**207**	A	A		10 37 44.7	
	comp=N,364nm,1.9s,comp=E,455nm,1.9s							
JKMT	**Kesennumamotoy**	**1.51**	**3**	A	A		10 37 44.7	
	comp=N,112nm,0.4s,comp=E,114nm,3.7s							
JMK	**Ichinoseki**	**1.65**	**356**	*i* P	**Pn**		**10 37 46.5**	**+0.5**
JMK				A	A		10 37 46.5	
	comp=N,105nm,0.7s,comp=E,131nm,2.2s							
JMK				S	**Sn**		**10 38 06.7**	**0.0**
JNS	**Sasagawa**	**1.70**	**288**	*i* P	**Pn**		**10 37 46.9**	**+0.3**
JNS				A	A		10 37 46.9	
	comp=N,54nm,3.3s,comp=E,104nm,7.2s							
JAG	**Ashikaga**	**1.76**	**241**	*i* P	**Pn**		**10 37 48.0**	**+0.6**
JAG				A	A		10 37 48.0	
	comp=N,64nm,1.2s,comp=E,43nm,2.6s							
JAG				S	**Sn**		**10 38 09.3**	**0.0**
JKT	**Katashina**	**1.77**	**253**	⇓*i* P	**Pn**		**10 37 48.8**	**+1.2**
JKT				A	A		10 37 48.8	
	comp=N,51nm,1.0s,comp=E,63nm,1.8s							
OFUJ	**Ofunato**	**1.79**	**8**	A	A		10 37 48.5	
	comp=N,82nm,0.9s,comp=E,128nm,1.5s							
JYK	**Kaneyama**	**1.80**	**334**	*i* P	**Pn**		**10 37 48.7**	**+0.8**
JYK				A	A		10 37 48.7	
	comp=N,147nm,4.4s,comp=E,65nm,2.6s							
JYK				eS	**Sn**		**10 38 10.7**	**+0.6**
JSMT	**Sammumatsuo**	**1.81**	**204**	A	A		10 37 49.0	
	comp=N,122nm,2.9s,comp=E,134nm,2.0s							
JYA	**Atsumi**	**1.83**	**315**	A	A		10 37 49.1	
	comp=N,129nm,0.7s,comp=E,108nm,1.0s							
JUON	**Uonuma**	**1.84**	**268**	A	A		10 37 49.2	
	comp=N,38nm,6.4s,comp=E,82nm,3.6s							
JAW	**Awa shima**	**2.03**	**305**	A	A		10 37 51.8	
	comp=N,43nm,2.8s,comp=E,74nm,2.1s							
JYYZ	**Yamagatayuza**	**2.05**	**327**	A	A		10 37 51.9	
	comp=N,226nm,4.6s,comp=E,202nm,2.4s							
TOK	**Tokyo**	**2.06**	**219**	A	A		10 37 52.4	
	comp=N,138nm,0.9s,comp=E,142nm,1.8s							
JCCN	**Chibachonan**	**2.12**	**206**	A	A		10 37 53.1	
	comp=N,121nm,2.9s,comp=E,105nm,2.3s							
JIZZ	**Izumozaki**	**2.12**	**277**	A	A		10 37 53.1	
	comp=N,121nm,2.0s,comp=E,182nm,2.9s							
JOM	**Ohasama**	**2.17**	**359**	A	A		10 37 53.6	
	comp=N,45nm,0.3s,comp=E,86nm,1.9s							
JRG	**Rokugo**	**2.17**	**345**	A	A		10 37 53.6	
	comp=N,83nm,1.6s,comp=E,140nm,2.0s							
MIYJ	**Miyakonagasawa**	**2.30**	**9**	A	A		10 37 55.3	
	comp=N,32nm,2.9s,comp=E,47nm,2.8s							
JGK	**Kuni**	**2.30**	**252**	A	A		10 37 55.5	
	comp=N,49nm,1.7s,comp=E,52nm,2.0s							
JKUC	**kamogawauchiur**	**2.33**	**204**	A	A		10 37 56.1	
	comp=N,41nm,5.2s,comp=E,54nm,4.5s							
JRY	**Ryogami san**	**2.36**	**238**	A	A		10 37 56.3	
	comp=N,25nm,0.7s,comp=E,20nm,2.0s							
JTB	**Tobi-shima**	**2.36**	**324**	A	A		10 37 56.3	
	comp=N,43nm,3.4s,comp=E,41nm,2.4s							
JYW	**Yuwa**	**2.41**	**338**	A	A		10 37 56.9	
	comp=N,168nm,2.1s,comp=E,121nm,2.0s							
JSGW	**Sagamiharawaka**	**2.43**	**226**	A	A		10 37 57.3	
	comp=N,18nm,1.1s,comp=E,18nm,3.7s							
JSZI	**Iwateshizukuis**	**2.46**	**353**	A	A		10 37 57.5	
	comp=N,130nm,2.4s,comp=E,108nm,3.9s							
JYO	**Yokosk**	**2.49**	**214**	A	A		10 37 58.1	
	comp=N,48nm,2.5s,comp=E,60nm,2.0s							
TATJ	**Tateyama 2**	**2.56**	**208**	A	A		10 37 59.1	
	comp=N,68nm,2.5s,comp=E,65nm,2.5s							
JJN	**Nakama**	**2.56**	**267**	A	A		10 37 59.1	
	comp=N,39nm,3.5s,comp=E,49nm,2.0s							
JSD	**Sado**	**2.57**	**288**	A	A		10 37 59.1	
	comp=N,27nm,2.9s,comp=E,24nm,2.7s							
MJAR	**Matsushiro Arr**	**2.64**	**254**	P	**Pn**		**10 37 59.6**	**+0.6**
	comp=E,598nm,0.5s,baz=79,slow=14,SNR=1001							
MJAR				S	**Sn**		**10 38 34.4**	**+4.2**
	comp=E,2μm,0.5s,baz=74,slow=14,SNR=13							
MJAR				LR	LR		10 39 05.4	
	comp=E,8μm,19.5s,baz=111,slow=42							
MAJO	**Matsushiro**	**2.64**	**254**		**Pn**		**10 38 00.8**	**+1.7**
MAJO	**Matsushiro**	**2.64**	**254***c*	*i* P	**Pn**		**10 38 00.4**	**+1.3**
MJB9	**Matsu-Tunnel**	**2.64**	**254**		**Pn**		**10 38 01.6**	**+2.5**
JTH	**Tanohata**	**2.66**	**8**	A	A		10 38 00.4	
	comp=N,41nm,1.8s,comp=E,47nm,2.6s							
JKZ	**Kuzumaki**	**2.68**	**359**	A	A		10 38 00.6	
	comp=N,38nm,2.3s,comp=E,41nm,1.5s							
JOD2	**Odawara 2**	**2.74**	**223**	A	A		10 38 01.6	
	comp=N,28nm,3.8s,comp=E,30nm,2.4s							
JNG	**Nsakai**	**2.76**	**252**	A	A		10 38 01.9	
	comp=N,19nm,3.7s,comp=E,20nm,3.9s							
JYN	**Shimob**	**2.90**	**232**	A	A		10 38 03.8	
	comp=N,22nm,2.5s,comp=E,24nm,4.2s							
JKEN	**Kujiedanarisaw**	**2.91**	**5**	A	A		10 38 03.8	
	comp=N,140nm,1.2s,comp=E,120nm,1.3s							
JAH	**Hinai**	**2.94**	**349**	A	A		10 38 04.2	
	comp=N,30nm,1.3s,comp=E,45nm,1.9s							
JNT	**Takato**	**2.96**	**242**	A	A		10 38 04.6	
	comp=N,15nm,3.2s,comp=E,12nm,4.6s							
JHTM	**Izuhatsuma**	**3.02**	**220**	A	A		10 38 05.4	
	comp=N,45nm,1.6s,comp=E,41nm,1.4s							
JIM2	**Oshima 3**	**3.02**	**212**	A	A		10 38 05.4	
	comp=N,29nm,3.2s,comp=E,33nm,4.1s							
JFNN	**Fujinakano**	**3.02**	**227**	A	A		10 38 05.4	
	comp=N,43nm,3.7s,comp=E,32nm,2.2s							
JANG	**Nango**	**3.07**	**2**	A	A		10 38 06.0	
	comp=N,48nm,1.7s,comp=E,45nm,2.4s							
JNTW	**Noshirotokiwa**	**3.11**	**343**	A	A		10 38 06.5	
	comp=N,151nm,2.8s,comp=E,106nm,2.1s							
JOG3	**Oga3**	**3.17**	**326**	A	A		10 38 03.4	
	comp=N,47nm,4.5s,comp=E,41nm,1.9s							
JSZ	**Suzu**	**3.19**	**274**	A	A		10 38 07.7	
	comp=N,22nm,3.7s,comp=E,21nm,2.2s							
JTHY	**Toshimahigashi**	**3.24**	**212**	A	A		10 38 08.6	
	comp=N,26nm,1.7s,comp=E,30nm,5.3s							
JIZS	**Izushimoda**	**3.27**	**219**	A	A		10 38 08.9	
	comp=N,14nm,2.4s,comp=E,13nm,1.2s							
JTT	**Ttatey**	**3.30**	**259**	A	A		10 38 09.3	
	comp=N,29nm,2.0s,comp=E,18nm,4.0s							
SHZ3	**Shizuoka 3**	**3.39**	**230**	A	A		10 38 10.5	
	comp=N,19nm,1.9s,comp=E,20nm,2.4s							
JGN	**Niukawa**	**3.42**	**253**	A	A		10 38 11.0	
	comp=N,8.0nm,10.3s,comp=E,11nm,3.7s							
JNY	**Yasuok**	**3.43**	**237**	A	A		10 38 11.1	
	comp=N,25nm,2.7s,comp=E,25nm,2.4s							
JHHS	**Hirosakihyakuz**	**3.44**	**347**	A	A		10 38 11.0	
	comp=N,79nm,4.9s,comp=E,64nm,5.2s							
JSKK	**Shikinejimakit**	**3.44**	**211**	A	A		10 38 11.3	
	comp=N,15nm,5.1s,comp=E,21nm,3.0s							
JIW	**Iwasaki**	**3.45**	**343**	A	A		10 38 11.3	
	comp=N,19nm,2.7s,comp=E,26nm,1.0s							
JTM	**Tenmabayashi**	**3.49**	**356**	A	A		10 38 11.8	
	comp=N,19nm,1.3s,comp=E,29nm,3.9s							
JMYK	**Miyake Tsubota**	**3.56**	**205**	A	A		10 38 12.9	
	comp=N,23nm,6.1s,comp=E,20nm,1.4s							
JHG	**Hegura jima**	**3.57**	**280**	A	A		10 38 13.0	
	comp=N,23nm,3.3s,comp=E,13nm,2.2s							
JGF	**Kuroka**	**3.65**	**243**		**Pn**		**10 38 13.9**	**+1.2**
JGF	**Kuroka**	**3.65**	**243**	A	A		10 38 14.1	
	comp=N,8.0nm,4.5s,comp=E,11nm,2.5s							
JSG	**Sagara**	**3.67**	**225**		**Pn**		**10 38 14.2**	**+1.1**
JSG	**Sagara**	**3.67**	**225**	A	A		10 38 14.5	
	comp=N,27nm,3.0s,comp=E,31nm,2.7s							
JJH	**Hakui**	**3.68**	**266**	A	A		10 38 14.5	
	comp=N,15nm,3.7s,comp=E,11nm,2.8s							
JARK	**Aomorirokkasho**	**3.70**	**0**	A	A		10 38 14.7	
	comp=N,28nm,2.3s,comp=E,34nm,4.5s							
JSI2	**Shiura 2**	**3.82**	**349**	A	A		10 38 16.4	
	comp=N,19nm,1.9s,comp=E,26nm,1.4s							
HMMJ	**Hamamatsu 2**	**3.83**	**231**	A	A		10 38 16.6	
	comp=N,7.0nm,4.1s,comp=E,5.0nm,2.3s							
JAO	**Obara**	**3.89**	**240**	A	A		10 38 17.5	
	comp=N,13nm,9.9s,comp=E,11nm,6.3s							
JAHD	**Aomorihigashid**	**3.96**	**360**	A	A		10 38 18.2	
	comp=N,47nm,1.0s,comp=E,66nm,1.5s							
INU	**Inuyama**	**4.01**	**242**		**Pn**		**10 38 18.2**	**+0.5**
JOT	**Ohata**	**4.08**	**357**	A	A		10 38 20.0	
	comp=N,21nm,2.1s,comp=E,19nm,1.7s							
JICN	**Ichinomiyachia**	**4.16**	**243**	A	A		10 38 21.2	
	comp=N,15nm,1.7s,comp=E,16nm,1.5s							
JSR	**Shiriuchi**	**4.29**	**350**	A	A		10 38 22.8	
	comp=N,16nm,2.8s,comp=E,15nm,1.7s							
JAA	**Atsumi**	**4.34**	**233**	A	A		10 38 23.7	
	comp=N,6.0nm,2.7s,comp=E,6.0nm,8.0s							
JHJ	**Hachijo jima 2**	**4.37**	**198**	P	**Pn**		**10 38 21.9**	**-0.7**
	comp=E,1μm,0.3s,baz=347,slow=3.7,SNR=131							
JHJ				S	**Sn**		**10 39 08.6**	**-3.6**
	comp=E,4μm,0.3s,baz=185,slow=23,SNR=18							
JHJ				LR	LR		10 39 34.4	
	comp=E,1μm,20.2s,baz=33,slow=31							
JHJ2	**Mitsune**	**4.37**	**197**		**Pn**		**10 38 21.4**	**-1.1**
JHJ2	**Mitsune**	**4.37**	**197**	A	A		10 38 24.1	
	comp=N,20nm,2.1s,comp=E,34nm,2.5s							
JHCJ	**Hachijojimakas**	**4.41**	**197**	A	A		10 38 24.8	
	comp=N,13nm,3.9s,comp=E,17nm,2.6s							
JEG	**Eigenji**	**4.56**	**243**	A	A		10 38 26.8	
	comp=N,6.0nm,2.8s,comp=E,4.0nm,5.1s							
JFM	**Mihama**	**4.68**	**249**	A	A		10 38 28.5	
	comp=N,5.0nm,6.1s,comp=E,6.0nm,5.6s							
JIE	**Ise**	**4.77**	**234**	A	A		10 38 29.6	
	comp=N,5.0nm,3.8s,comp=E,5.0nm,4.5s							
JYM2	**Yakumo 2**	**4.87**	**351**	A	A		10 38 30.9	
	comp=N,13nm,1.9s,comp=E,9.0nm,2.1s							
JAOM	**Aogashimamukai**	**5.00**	**196**	A	A		10 38 33.0	
	comp=N,20nm,0.8s,comp=E,24nm,2.6s							
JNBK	**Urakawa-nobuka**	**5.09**	**12**	A	A		10 38 33.9	
	comp=N,20nm,3.4s,comp=E,20nm,1.4s							
JSHD	**Hidakashinhida**	**5.17**	**9**	A	A		10 38 35.1	
	comp=N,21nm,2.6s,comp=E,22nm,2.2s							
JTHR	**Tokachihiroo**	**5.20**	**16**	A	A		10 38 35.5	
	comp=N,19nm,3.3s,comp=E,19nm,1.3s							
JKY	**Yasaka**	**5.31**	**254**	A	A		10 38 37.2	
	comp=N,4.0nm,4.5s,comp=E,4.0nm,2.6s							
JSH	**Shimam**	**5.43**	**350**	A	A		10 38 38.7	
	comp=N,6.0nm,3.9s,comp=E,5.0nm,2.7s							
JBT2	**Biratori 2**	**5.52**	**8**	A	A		10 38 40.0	
	comp=N,6.0nm,3.8s,comp=E,8.0nm,2.7s							
JCH	**Churui**	**5.52**	**16**	A	A		10 38 40.0	
	comp=N,10.0nm,3.0s,comp=E,12nm,1.9s							
JAB	**Ashibetsu**	**6.23**	**6**	A	A		10 38 49.7	
	comp=N,19nm,1.7s,comp=E,9.0nm,2.1s							
JAK	**Akkeshi**	**6.24**	**23**	A	A		10 38 49.8	
	comp=N,11nm,1.5s,comp=E,15nm,1.3s							
JAR	**Ashorobuto**	**6.26**	**16**	A	A		10 38 50.2	
	comp=N,12nm,0.9s,comp=E,15nm,1.0s							
ASAJ	**Asahikawa**	**6.87**	**7**	P	**Pn**		**10 38 55.6**	**-1.0**
	comp=E,238nm,0.4s,baz=207,slow=7.7,SNR=5.6							
ASAJ				S	**Sn**		**10 40 09.9**	**-3.3**
	comp=E,249nm,0.6s,baz=133,slow=30,SNR=2.1							
ASAJ				LR	LR		10 42 19.1	
	comp=E,1μm,18.8s,baz=148,slow=43							
ASAJ	**Asahikawa**	**6.87**	**7**	P	**Pn**		**10 38 55.2**	**-1.4**
JKA	**Kamikawa-asahi**	**6.87**	**7**	Pn	**Pn**		**10 38 55.1**	**-1.4**
NMR	**Nemuro--Hokkai**	**6.92**	**27**	⇑*i* P	**Pn**		**10 38 54.5**	**-2.7**
NMR				*i* S	**Sn**		**10 40 06.2**	**-8.1**
JMN	**Monobe**	**7.07**	**242**		**Pn**		**10 38 59.3**	**0.0**
GLVR	**Golovnino**	**7.17**	**25**	*e*P	**Pn**		**10 38 58.8**	**-1.8**
GLVR				*i* S	**Sn**		**10 40 13.6**	**-6.8**
GLVR				pmax	pmax			
	comp=Z,395nm,0.4s							
GLVR				pmax	pmax			
	comp=N,179nm,0.3s							
RUSJ	**Misakicho**	**7.41**	**22**	*e*P	**Pn**		**10 39 02.7**	**-1.2**
RUSJ				*e*S	**Sn**		**10 40 21.4**	**-4.9**
YUK	**Yuzh-Kuril'sk**	**7.54**	**26**	*e*P	**Pn**		**10 39 02.9**	**-2.8**
YUK				*i* S	**Sn**		**10 40 22.3**	**-7.3**
YUK				pmax	pmax			
	comp=Z,745nm,0.4s							
YUK				pmax	pmax			
	comp=N,223nm,0.3s							
YUK				pmax	pmax			
	comp=E,409nm,0.2s							
TEY	**Ternei**	**8.52**	**337**	⇑*e*P	**Pn**		**10 39 18.5**	**-0.5**
TEY				pmax	pmax			
	comp=N,230nm,0.8s							
TEY				pmax	pmax			
	comp=E,70nm,0.8s							
TEY				pmax	pmax			
	comp=Z,270nm,0.8s							
VLA	**Vladivostok**	**9.29**	**312**	*d* *i* P	**Pn**		**10 39 30.2**	**+0.7**
VLA				pmax	pmax			
	comp=Z,274nm,1.0s							
KUR	**Kuril'sk**	**9.31**	**30**	*e*P	**Pn**		**10 39 28.3**	**-1.5**
KUR				*e*S	**Sn**		**10 41 05.4**	**-7.4**
KUR				pmax	pmax			
	comp=Z,221nm,0.7s							
KUR				pmax	pmax			
	comp=N,84nm,0.3s							
KUR				smax	smax			
	comp=E,1μm,0.4s							
KUR				smax	smax			
	comp=N,689nm,0.3s							
JNU	**Nakatsue**	**9.54**	**247**	P	**Pn**		**10 39 31.6**	**-1.4**
	comp=N,18nm,0.6s,baz=41,slow=3.7,SNR=13							
JNU				LR	LR		10 43 37.6	
	comp=N,2μm,19.5s,baz=70,slow=40							
YSS	**Yuzhno-Sakhali**	**9.70**	**6**	Pn	**Pn**		**10 39 33.4**	**-1.7**
YSS	**Yuzhno-Sakhali**	**9.70**	**6***ce*	P	**Pn**		**10 39 33.1**	**-2.0**
YSS				*e*S	**Sn**		**10 41 16.8**	**-5.4**
YSS				pmax	pmax			
	comp=Z,1μm,2.1s							
YSS				pmax	pmax			
	comp=N,900nm,2.2s							
YSS				pmax	pmax			
	comp=Z,570nm,0.8s							
YSS				smax	smax			
	comp=N,200nm,1.1s							
YSS				smax	smax			
	comp=E,120nm,1.0s							
YSS				MLR	MLR			
	comp=Z,2μm,14.0s							
YSS				MLR	MLR			
	comp=N,800nm,13.0s							
YSS				MLR	MLR			
	comp=E,900nm,13.0s							
PSTR	**Posyet**	**9.70**	**307**	*ce*P	**Pn**		**10 39 35.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**9.90**	**317**	P	**Pn**		**10 39 38.1**	**+0.3**
	comp=E,230nm,0.8s,baz=124,slow=14,SNR=81							
JCJ	**Chichijima**	**10.20**	**176**	P	Pn		10 39 25.9	-16
	comp=E,425nm,0.3s,baz=96,slow=23,SNR=84							
JCJ				S	Sn		10 41 12.5	-22
	comp=E,415nm,0.3s,baz=289,slow=22,SNR=5.6							
JCJ	**Chichijima**	**10.20**	**176**		**Pn**		**10 39 38.9**	**-3.2**
KSRS	**Korea Array**	**10.70**	**275**	P	**Pn**		**10 39 48.9**	**+0.1**
	comp=E,89nm,0.7s,baz=86,slow=13,SNR=32							
KSAR	**Wonju Array Be**	**10.73**	**275**		**Pn**		**10 39 50.7**	**+1.5**
KSAR	**Wonju Array Be**	**10.73**	**275**	P	**Pn**		**10 39 50.7**	**+1.5**
KS19	**Wonju Array Si**	**10.74**	**275**		**Pn**		**10 39 50.8**	**+1.4**
TJN	**Taejon**	**11.26**	**270**		**Pn**		**10 39 58.3**	**+1.9**
TJN	**Taejon**	**11.26**	**270**	P	**Pn**		**10 39 58.3**	**+1.9**
MDJ	**Mudanjiang**	**11.51**	**313**		**Pn**		**10 39 59.1**	**-0.7**
MDJ	**Mudanjiang**	**11.51**	**313**	P	**Pn**		**10 39 59.6**	**-0.1**
MDJ				sP			10 40 22.7	
MDJ				S	**Sn**		**10 42 07.1**	**+0.8**
MDJ				pmax	pmax			
	comp=E,210nm,0.8s							
MDJ				pmax	pmax			
	comp=E,2μm,11.7s							
MDJ				LR	LR			
	comp=E,3μm,17.2s							
MDJ				LR	LR			
	comp=E,2μm,22.0s							
MDJ				LR	LR			
	comp=E,5μm,23.4s							
INCN	**Inchon**	**11.72**	**275**		**Pn**		**10 40 02.3**	**-0.4**
INCN	**Inchon**	**11.72**	**275**	P	**Pn**		**10 40 02.3**	**-0.4**
UGL	**Uglegorsk**	**11.78**	**2**	⇓*i* P	**Pn**		**10 40 00.8**	**-2.6**
UGL				S	Sn		10 41 59.4	-13
UGL				pmax	pmax			
	comp=Z,175nm,0.5s							
UGL				MLR	MLR			
	comp=E,2μm,12.0s							
UGL				MLR	MLR			
	comp=N,1μm,16.0s							
UGL				MLR	MLR			
	comp=E,700nm,8.0s							
BNX	**BinXian**	**13.42**	**313**	⇑P	**Pn**		**10 40 22.7**	**-2.6**
BNX				pmax	pmax			
	comp=Z,61nm,1.0s							
BNX	**BinXian**	**13.42**	**313**	⇑P	**Pn**		**10 40 22.8**	**-2.6**
BNX				S	**Sn**		**10 42 51.6**	**-1.1**
BNX				pmax	pmax			
	comp=Z,61nm,1.1s							
BNX				pmax	pmax			
	comp=Z,1μm,5.2s							
BNX				LR	LR			
	comp=Z,1μm,12.5s							
BNX				LR	LR			
	comp=Z,2μm,14.0s							
BNX				LR	LR			
	comp=Z,3μm,25.3s							
TYV	**Tymovskoe**	**13.59**	**3**	*e*P	**Pn**		**10 40 24.8**	**-2.8**
TYV				pmax	pmax			
	comp=Z,800nm,2.3s							
TYV				pmax	pmax			
	comp=Z,244nm,0.8s							
CN2	**Changchun**	**13.72**	**303**	P	**Pn**		**10 40 27.5**	**-1.9**
CN2				S	**Sn**		**10 42 57.7**	**-2.4**
CN2				pmax	pmax			
	comp=Z,30nm,0.8s							
CN2				pmax	pmax			
	comp=Z,2μm,6.0s							
CN2				LR	LR			
	comp=Z,1μm,15.0s							
CN

comp=E,1μm,12.3s
SKR Severo-Kuril's 17.03 34 *e*P **P 10 41 18.2 +6.4**
SKR *e*S **Sn 10 44 20.0 0.0**
SKR pmax pmax
comp=Z,335nm,1.2s
SKR pmax pmax
comp=Z,2μm,4.7s
SKR MLR MLR
comp=Z,1μm,12.0s
ZEA Zeya 19.12 334 *e*P **P 10 41 32.8 -1.9**
ZEA pmax pmax
comp=E,90nm,0.6s
ZEA pmax pmax
comp=N,90nm,0.8s
ZEA pmax pmax
comp=Z,220nm,0.7s
ZEA pmax pmax
comp=N,100nm,1.0s
ZEA pmax pmax
comp=Z,400nm,1.9s
ZEA MLR MLR
comp=N,400nm,12.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
NJ2 Nanjing 19.22 261 *e*P **P 10 41 34.2 -1.8**
NJ2 pP **pP 10 41 49.2 -3.3**
NJ2 PP sP 10 41 54.6 -8.4
NJ2 S **Sn 10 45 13.4 +0.4**
NJ2 pmax pmax
comp=Z,19nm,0.9s
NJ2 pmax pmax
comp=Z,280nm,4.3s
TIA Tai'an 19.44 274 P **P 10 41 36.4 -2.0**
TIA sP **sP 10 42 06.2 +0.7**
TIA S **S 10 45 06.3 -7.5**
TIA SS **SnSn 10 45 42.4 +8.5**
TIA pmax pmax
comp=Z,53nm,0.9s
TIA pmax pmax
comp=Z,230nm,4.5s
TIA LR LR
comp=Z,580nm,14.3s
TIA LR LR
comp=Z,1μm,16.0s
TIA LR LR
comp=Z,2μm,15.6s
PEA0B Petropavlovsk- 19.48 31 P 10 41 39.4 +0.8
PEA0B Petropavlovsk- 19.48 31 P **P 10 41 39.4 +0.8**
PETK Petropavlovsk- 19.48 31 P **Pn 10 41 40.2 -0.4**
comp=Z,19nm,0.8s,baz=202,slow=7.9,SNR=13
PETK LR LR 10 48 46.8
comp=Z,553nm,21.5s,baz=201,slow=35
PETK Petropavlovsk- 19.48 31 Pn 10 41 39.8 -0.8
HIA Hailar 19.69 314 P **P 10 41 37.9 -3.1**
HIA Hailar 19.69 314 P **P 10 41 37.9 -3.1**
PET Petropavlovsk 19.81 32 P **P 10 41 43.1 +1.0**
PET Petropavlovsk 19.81 32 *e*P **Pn 10 41 43.6 -0.9**
PET *e*S **S 10 45 12.6 -8.1**
PET pmax pmax
comp=Z,117nm,1.4s
PET MLR MLR
comp=Z,700nm,10.0s
PET MLR MLR
comp=Z,500nm,14.0s
PET Petropavlovsk 19.81 32 P **Pn 10 41 43.5 -0.9**
comp=Z,99nm,1.3s
HILR Hailar Array B 19.82 315 P **P 10 41 39.8 -2.7**
comp=Z,59nm,0.5s,baz=113,slow=11,SNR=102
HILR LR LR 10 49 11.5
comp=Z,2μm,19.8s,baz=100,slow=36
BJI2 Beijing 19.84 286 P **P 10 41 40.3 -2.4**
BJI2 S **S 10 45 19.9 -1.6**
BJI2 pmax pmax
comp=Z,30nm,1.2s
BJI2 pmax pmax
comp=Z,420nm,5.1s
BJT Baijiatuau 19.84 286 P **P 10 41 41.3 -1.4**
BJT Baijiatuau 19.84 286 P **P 10 41 41.3 -1.4**
YOJ Yonaguni jima 20.25 236 P 10 41 47.3 +0.1
YOJ Yonaguni jima 20.25 236 P **P 10 41 47.3 +0.1**
XLT XiLinHaoTe 20.25 297 *e*P **P 10 41 44.6 -2.6**
XLT pP pP 10 42 03.9 +0.1
XLT S **S 10 45 20.8 -8.9**
XLT SS **SnSn 10 45 58.8 +5.1**
XLT pmax pmax
comp=Z,210nm,0.8s
XLT pmax pmax
comp=Z,270nm,3.8s
XLT LR LR
comp=Z,2μm,17.0s
XLT LR LR
comp=Z,2μm,17.8s
HNS HongShan 21.17 278 ⇑P **P 10 41 53.4 -3.6**
HNS pP **pP 10 42 11.7 -2.0**
HNS sP **sP 10 42 19.9 -4.3**
HNS S **S 10 45 37.5 -10**
HNS SS **SnSn 10 46 21.1 +5.0**
HNS pmax pmax
comp=Z,91nm,0.7s
HNS LR LR
comp=Z,1μm,15.9s
HNS LR LR
comp=Z,2μm,15.9s
HNS LR LR
comp=Z,2μm,15.9s
YHNB Yeheng 21.21 239 P P 10 41 56.5 -1.1
NACB Ninganchiao 21.39 238 P P 10 41 57.9 -1.6
SSLB Suanglung 22.08 238 P P 10 42 04.4 -2.4
YULB Yu-li 22.12 237 P P 10 42 04.8 -2.4
TPUB Ta-pu 22.63 238 P 10 42 11.3 -1.4
TIY Taiyuan 22.92 280 P **P 10 42 12.5 -3.1**
TIY sP **sP 10 42 42.0 -1.1**
TIY S **S 10 46 18.3 -0.8**
TIY pmax pmax
comp=Z,18nm,0.8s
TIY pmax pmax
comp=Z,270nm,6.9s
TIY LR LR
comp=Z,870nm,16.5s
TIY LR LR
comp=Z,2μm,16.5s
TIY LR LR
comp=Z,2μm,17.9s
QZH2 Quanzhou 22.98 244 P **P 10 42 14.5 -1.8**
QZH2 S **S 10 46 18.5 -1.6**
QZH2 LR LR
comp=Z,700nm,18.6s
QZH2 LR LR
comp=Z,520nm,12.6s
QZH2 LR LR
comp=Z,810nm,18.6s
MA2 Magadan 23.10 12 P **P 10 42 17.0 -0.1**
comp=Z,64nm,0.8s,baz=200,slow=9.3,SNR=53
MA2 LR LR 10 51 14.7
comp=Z,294nm,20.8s,baz=158,slow=36
comp=Z,64nm,0.8s
MA2 Magadan 23.10 12 P **P 10 42 17.3 +0.2**
MA2 Magadan 23.10 12 *c e*P **P 10 42 16.5 -0.6**
MA2 pmax pmax
comp=Z,61nm,0.8s
MA2 Magadan 23.10 12 P **P 10 42 17.1 0.0**
comp=Z,1μmcomp=Z,144nm,0.9s
MA2 pP **pP 10 42 34.6 +0.4**
comp=Z,1μmcomp=Z,144nm,0.9s
HHC Hu-ho-hao-te 23.35 288 *e*P **P 10 42 15.1 -4.6**
HHC pP pP 10 42 32.1 -5.3
HHC sP sP 10 42 40.2 -7.5
HHC PP **PnPn 10 42 48.1 -1.9**
HHC S **S 10 46 18.6 -7.4**
HHC pmax pmax
comp=Z,9.0nm,0.5s
HHC pmax pmax
comp=Z,130nm,4.9s
HHC LR LR
comp=Z,810nm,14.9s
HHC LR LR
comp=Z,690nm,14.5s
HHC LR LR
comp=Z,690nm,14.2s
WHN Wuhan 23.36 261 P **P 10 42 17.9 -1.8**
WHN pP **pP 10 42 37.9 +0.5**
WHN PP **PnPn 10 42 50.2 +0.1**
WHN S **S 10 46 21.4 -4.7**
WHN pmax pmax
comp=Z,160nm,0.8s
WHN LR LR
comp=Z,2μm,15.8s
WHN LR LR
comp=Z,3μm,15.6s
WHN LR LR
comp=Z,3μm,15.5s
KNMB Chin-men Tao 23.43 243 P **P 10 42 19.4 -1.0**
LYN LuoYang 23.52 272 P **P 10 42 20.2 -1.0**
LYN S **S 10 46 25.8 -2.9**
LYN SS Sn 10 47 15.0 +19
LYN pmax pmax
comp=Z,200nm,0.7s
LYN pmax pmax
comp=Z,290nm,4.6s
LYN LR LR
comp=Z,950nm,13.4s
LYN LR LR
comp=Z,2μm,17.0s
LYN LR LR
comp=Z,2μm,17.0s
GUMO Guam 23.82 172 LR LR 10 53 33.4
comp=Z,123nm,19.7s,baz=356,slow=41
CIT Chita 24.46 316 *e*P **P 10 42 29.2 -0.3**
CIT *e* 10 42 42.6
CIT *e* 10 43 07.8
CIT *e* 10 46 36.4
CIT *e* 10 47 49.8
CIT pmax pmax
comp=Z,492nm,2.4s
BTO2 Baotou 24.63 288 *e*P **P 10 42 30.1 -1.2**
BTO2 PP **PnPn 10 43 10.6 +3.1**
BTO2 S **S 10 46 43.6 -3.1**
BTO2 pmax pmax
comp=Z,29nm,0.9s
BTO2 pmax pmax
comp=Z,560nm,5.7s
BTO2 LR LR
comp=Z,3μm,12.1s
BTO2 LR LR
comp=Z,1μm,14.7s
BTO2 LR LR
comp=Z,2μm,18.2s
CNSH ChangSha 25.51 257 P **P 10 42 39.0 -0.2**
CNSH S **S 10 46 58.1 -2.4**
CNSH pmax pmax
comp=Z,13nm,1.0s
CNSH LR LR
comp=Z,270nm,4.4s
CNSH LR LR
comp=Z,170nm,3.3s
CNSH LR LR
comp=Z,560nm,15.9s
YAK Yakutsk 25.80 347 P **P 10 42 41.4 -0.1**
comp=Z,357nm,0.7s,baz=283,slow=1.3,SNR=4.7
YAK LR LR 10 52 53.6
comp=Z,705nm,20.1s,baz=118,slow=36
YAK Yakutsk 25.80 347 P **P 10 42 41.1 -0.4**
YAK Yakutsk 25.80 347 *e*P **P 10 42 40.4 -1.1**
YAK *e**PP **pP 10 43 02.5 +2.0**
YAK *e* 10 43 23.5
YAK *e*S **S 10 47 03.3 -1.2**
YAK *e**SS **sS 10 47 35.1 -2.3**
YAK pmax pmax
comp=Z,270nm,0.8s
YAK pmax pmax
comp=N,46nm,0.9s
YAK pmax pmax
comp=E,17nm,0.8s
YAK pmax pmax
comp=Z,247nm,1.4s
YAK pmax pmax
comp=N,411nm,2.5s
YAK smax smax
comp=N,3μm,4.3s
YAK smax smax
comp=E,963nm,2.8s
XAN Xi'an 26.48 273 ⇓P **P 10 42 47.4 -0.7**
XAN S **S 10 47 14.7 -1.3**
XAN pmax pmax
comp=E,100nm,0.6s
XAN pmax pmax
comp=E,230nm,3.7s
XAN LR LR
comp=E,530nm,15.8s
XAN LR LR
comp=E,580nm,16.5s
XAN LR LR
comp=E,1μm,19.2s
SEY Seymchan 26.54 11 P **P 10 42 49.4 +1.3**
comp=E,27nm,0.8s,baz=194,slow=7.6,SNR=20
SEY LR LR 10 54 29.5
comp=E,346nm,19.8s,baz=210,slow=39
comp=E,27nm,0.8s
SEY Seymchan 26.54 11 ⇓*e*P **P 10 42 49.1 +1.0**
SEY pmax pmax
comp=Z,22nm,0.7s
ULN Ulaanbaatar 27.17 304 P **P 10 42 53.8 -0.4**
ULN Ulaanbaatar 27.17 304 *c i*P **P 10 42 53.4 -0.8**
ULN pmax pmax
comp=Z,39nm,1.0s
ULN Ulaanbaatar 27.17 304 P **P 10 42 54.0 -0.2**
ULN S **S 10 47 26.4 -0.4**
ULN Ulaanbaatar 27.17 304 P **P 10 42 52.9 -1.3**
ENH Enshi 27.32 265 P **P 10 42 55.1 -0.4**
ENH IAmb IAmb 10 42 57.7
comp=Z,99nm,0.7s
SHEM Shemya Is, Ala 27.51 45 LR LR 10 53 36.1
comp=Z,59nm,18.9s,baz=332,slow=35
SONM Songino Array 27.60 304 P **P 10 42 57.6 -0.4**
comp=Z,63nm,0.8s,baz=102,slow=8.6,SNR=113
comp=Z,63nm,0.8s
SONM Songino Array 27.60 304 P 10 42 57.7 -0.4
SONM IAmb IAmb 10 42 59.3
comp=Z,67nm,0.8s
SONM Songino Array 27.60 304 P **P 10 42 57.7 -0.3**
SONM pmax pmax
comp=Z,67nm,0.8s
H11N2 WAKE ISLAND Hy 28.32 121 T T 11 13 33.4
baz=315,slow=75,SNR=109
H11N1 WAKE ISLAND Hy 28.33 121 T T 11 13 40.8
baz=315,slow=75,SNR=140
H11N3 WAKE ISLAND Hy 28.34 121 T T 11 13 26.0
baz=315,slow=75,SNR=167
GULI GuiLin 28.93 254 P **P 10 43 08.6 -1.3**
GULI pP **pP 10 43 26.0 -3.3**
GULI S **S 10 47 48.5 -6.1**
GULI pmax pmax
comp=Z,74nm,0.7s
GULI LR LR
comp=Z,680nm,15.8s
GULI LR LR
comp=Z,370nm,19.0s
GULI LR LR
comp=Z,600nm,22.8s
H11S1 WAKE ISLAND Hy 29.04 123 T T 11 14 20.5
baz=316,slow=76,SNR=243
H11S3 WAKE ISLAND Hy 29.04 123 T T 11 14 16.6
baz=316,slow=76,SNR=218
H11S2 WAKE ISLAND Hy 29.06 123 T T 11 14 20.0
baz=316,slow=76,SNR=125
IRK Irkutsk 29.89 312 *e*P **P 10 43 17.2 -0.9**
IRK pmax pmax
comp=Z,60nm,2.9s
LZH Lanzhou 29.98 279 *e*P **P 10 43 18.0 -1.3**
LZH S **S 10 48 05.9 -5.3**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,140nm,4.8s
LZH LR LR
comp=Z,730nm,14.1s
LZH LR LR
comp=Z,2μm,13.4s
LZH LR LR
comp=Z,2μm,14.8s
ZAK Zakamensk 30.07 308 *e*P **P 10 43 19.0 -0.9**
ZAK pmax pmax
comp=Z,53nm,1.2s
TLY Talaya 30.12 311 P 10 43 20.6 +0.4
TLY Talaya 30.12 311 *c i*P **P 10 43 19.8 -0.4**
TLY pmax pmax
comp=Z,44nm,1.0s
TLY Talaya 30.12 311 P **P 10 43 20.9 +0.6**
TLY S **S 10 48 14.4 +1.5**
TLY Talaya 30.12 311 P **P 10 43 20.2 -0.1**
LZDM Lanzhou Array 30.13 279 P **P 10 43 19.7 -1.1**
comp=Z,11nm,0.6s,baz=123,slow=5.5,SNR=20
comp=Z,11nm,0.6s
GYA Guiyang 31.23 260 ⇓P **P 10 43 29.9 -0.4**
GYA pP pP 10 43 47.6 -2.1
GYA sP sP 10 43 59.3 -0.2
GYA S **S 10 48 26.9 -3.9**
GYA pmax pmax
comp=Z,56nm,1.0s
GYA LR LR
comp=Z,340nm,13.1s
GYA LR LR
comp=Z,360nm,15.5s
GYA LR LR
comp=Z,940nm,25.5s
CD2 Chengdu 31.63 270 P **P 10 43 32.6 -1.2**
CD2 S **S 10 48 33.7 -3.2**
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 LR LR
comp=Z,1μm,14.6s
CD2 LR LR
comp=Z,870nm,12.1s
CD2 LR LR
comp=Z,1μm,14.6s
MOY Mondy 31.73 310 *e*P **P 10 43 34.2 -0.3**
MOY pmax pmax
comp=Z,46nm,1.2s
GTA2 Gaotai 32.47 287 *e*P **P 10 43 40.3 -0.9**
GTA2 sP sP 10 44 06.5 -3.9
GTA2 S **S 10 48 50.5 +0.5**
GTA2 sS sS 10 49 22.2 -1.1
GTA2 pmax pmax
comp=Z,11nm,1.0s
GTA2 LR LR
comp=Z,800nm,12.7s
GTA2 LR LR
comp=Z,510nm,10.5s
GTA2 LR LR
comp=Z,610nm,16.7s
ADK Adak 32.74 50 P **P 10 43 44.1 +0.9**
ADK IAmb IAmb 10 43 44.4
comp=Z,73nm,1.1s
ADK Adak 32.74 50 P **P 10 43 44.1 +0.9**
ADK pmax pmax
comp=Z,73nm,1.1s
QIZ Qiongzhong 33.00 245 P **P 10 43 44.9 -0.9**
QIZ Qiongzhong 33.00 245 P **P 10 43 46.7 +0.9**
QIZ pP **pP 10 44 04.6 -0.7**
QIZ S **S 10 48 59.7 +1.4**
QIZ pmax pmax
comp=Z,11nm,1.1s
QIZ LR LR
comp=Z,610nm,13.7s
QIZ LR LR
comp=Z,290nm,14.7s
QIZ LR LR
comp=Z,370nm,14.7s
GSTR Great Sitkin T 33.16 50 P **P 10 43 46.5 -0.3**
DAV Davao City (W) 33.34 209 LR LR 10 58 08.1
comp=Z,256nm,18.6s,baz=57,slow=38
KNGR Kungurtug, Tuv 33.74 307 *d i*P **P 10 43 52.5 +0.4**
KNGR pmax pmax
comp=Z,32nm,1.1s
BILL Bilibino 33.78 17 **P 10 43 52.6 +0.6**
BILL Bilibino 33.78 17 ⇑*e*P **P 10 43 52.6 +0.6**
BILL pmax pmax
comp=Z,11nm,1.2s
ATKA Atka Island 34.31 50 P **P 10 43 57.7 +1.0**
KMI2 Kunming 34.94 261 ⇓P **P 10 44 03.1 +0.3**
KMI2 pP pP 10 44 20.9 -1.6
KMI2 S **S 10 49 24.9 -3.7**
KMI2 SS **SnSn 10 51 47.5 -4.1**
KMI2 pmax pmax
comp=Z,46nm,0.9s
KMI2 LR LR
comp=Z,470nm,13.5s
KMI2 LR LR
comp=Z,740nm,17.0s
KMI2 LR LR
comp=Z,770nm,16.8s
TIXI Tiksi 35.02 353 P **P 10 44 02.1 -0.5**
comp=Z,9.8nm,0.5s,baz=161,slow=5.6,SNR=29
TIXI LR LR 10 59 13.1
comp=Z,433nm,18.3s,baz=188,slow=38
comp=Z,9.8nm,0.5s
TIXI Tiksi 35.02 353 P **P 10 44 02.2 -0.5**
TIXI Tiksi 35.02 353 ⇑*e*P **P 10 44 02.3 -0.3**
TIXI pmax pmax
comp=Z,18nm,0.8s
TIXI Tiksi 35.02 353 P **P 10 44 02.1 -0.5**
PZH PanZhiHua 35.09 264 P **P 10 44 03.5 -0.4**
PZH S **S 10 49 26.7 -3.9**
PZH pmax pmax
comp=Z,50nm,0.8s
PZH pmax pmax
comp=Z,170nm,5.4s
PZH LR LR
comp=Z,430nm,18.4s
PZH LR LR
comp=Z,630nm,15.4s
PZH LR LR
comp=Z,760nm,14.3s
GOMU GeErMu 37.02 283 P **P 10 44 18.9 -1.7**
GOMU S **S 10 49 59.0 -1.5**
GOMU pmax pmax
comp=Z,63nm,0.7s
GOMU LR LR
comp=Z,420nm,11.5s
GOMU LR LR
comp=Z,500nm,13.4s
SPIA Saint Paul Isl 37.39 42 P **P 10 44 25.3 +2.3**
baz=259
NIKH Nikolski High 37.63 49 P **P 10 44 29.0 +3.9**
baz=266
P08K Saint George I 37.67 43 P **P 10 44 27.9 +2.5**
baz=260
TNCH TengChong 38.34 264 P **P 10 44 32.4 +0.7**
TNCH pP pP 10 44 50.9 -0.6
TNCH PcP **PcP 10 46 45.5 +1.6**
TNCH S **S 10 50 19.7 -0.6**
TNCH pmax pmax
comp=Z,33nm,0.6s
TNCH pmax pmax
comp=Z,140nm,3.9s
TNCH LR LR
comp=Z,630nm,18.4s
TNCH LR LR
comp=Z,460nm,17.3s
TNCH LR LR
comp=Z,380nm,13.8s
GAMB Gambell 38.51 31 P **P 10 44 34.0 +1.6**
GAMB Gambell 38.51 31 P **P 10 44 33.9 +1.6**
baz=249
UNV Unalaska Valle 39.09 48 P **P 10 44 40.2 +2.9**
baz=267
SIJI Sorong 39.12 196 LR LR 10 58 01.5
comp=Z,284nm,20.9s,baz=54,slow=32
LKP Lekhapani 39.40 269 *e*P P 10 44 45.2 +4.9
LKP IAmb IAmb 10 44 54.6
comp=Z,94nm,0.1s
LKP *e*S **S 10 50 39.5 +3.6**
JAY Jayapura 39.62 181 LR LR 11 00 48.7
comp=Z,154nm,18.4s,baz=358,slow=36
M11K Mekoryuk 40.08 38 P **P 10 44 46.0 +0.6**
M11K IAmb IAmb 10 44 48.1
comp=Z,42nm,1.1s
M11K Mekoryuk 40.08 38 P **P 10 44 47.3 +1.9**
baz=259,SNR=5.5
DGZ Jazzator, Alta 40.20 306 *c i*P **P 10 44 47.9 +1.1**
DGZ pmax pmax
comp=Z,63nm,0.8s
TNA Tin City 40.64 30 P **P 10 44 51.9 +1.8**
baz=251,SNR=14
WMQ Urumqi 40.68 297 *e*P **P 10 44 52.8 +2.0**
WMQ pP pP 10 45 07.9 -2.9
WMQ pmax pmax
comp=Z,56nm,0.9s
WMQ pmax pmax
comp=Z,190nm,3.7s
WMQ LR LR
comp=Z,890nm,19.3s
WMQ LR LR
comp=Z,790nm,22.9s
WMQ Urumqi 40.68 297 P **P 10 44 51.8 +1.0**
FAKI Fak Fak 40.90 194 P **P 10 44 52.8 +0.1**
FAKI IAmb IAmb 10 45 29.7

comp=Z,43nm,0.8s
ZIRO ZIRO 40.91 270 *e*P **P** **10 44 54.8 +1.9**
ZIRO IAmb IAmb 10 44 57.7
comp=Z,86nm,0.2s
ZIRO *e*S **S** **10 51 00.1 +1.4**
MOKO MOKOCHONG 40.92 268 *e*P **P** **10 44 53.4 +0.4**
MOKO IAmb IAmb 10 44 55.5
comp=Z,26nm,0.3s
MOKO *e*S **S** **10 51 02.0 +3.2**
JORH JORHAT 40.94 269 *e*P **P** **10 44 56.0 +3.0**
JORH IAmb IAmb 10 45 00.1
comp=Z,38nm,0.3s
JORH *e*S **S** **10 51 04.0 +5.2**
FALS False Pass 40.95 46 P **P** **10 44 55.8 +3.2**
baz=268
K13K Kusilvak Mount 41.11 36 P **P** **10 44 56.0 +2.1**
baz=259,SNR=10.0
ITAN ITANAGAR 41.18 270 *e*P **P** **10 44 58.0 +3.1**
ITAN IAmb IAmb 10 45 16.2
comp=Z,88nm,1.2s
ITAN *e*S **S** **10 51 05.2 +2.8**
F14K Arctic Creek 41.25 30 P **P** **10 44 56.9 +1.9**
baz=253,SNR=20
CHTO Chiang Mai 41.32 255 P **P** **10 44 56.2 0.0**
CHTO Chiang Mai 41.32 255 P **P** **10 44 56.2 0.0**
CHTO pmax pmax
comp=Z,35nm,1.6s
CHTO Chiang Mai 41.32 255 P **P** **10 44 56.5 +0.4**
CHTO S **S** **10 51 03.6 -1.0**
CHTO Chiang Mai 41.32 255 P **P** **10 44 55.6 -0.6**
ANM Nome 41.39 32 P **P** **10 44 58.1 +1.9**
ANM Nome 41.39 32 P **P** **10 44 58.1 +1.9**
ANM pmax pmax
comp=Z,41nm,1.2s
ANM Nome 41.39 32 P **P** **10 44 57.8 +1.6**
baz=255,SNR=22
M13K Dall Lake 41.48 38 **P** **10 44 58.4 +1.5**
M13K IAmb IAmb 10 45 00.1
comp=Z,39nm,0.8s
M13K Dall Lake 41.48 38 P **P** **10 44 59.0 +2.1**
baz=262,SNR=5.3
KOHI KOHIMA 41.52 268 *e*P **P** **10 45 01.1 +3.2**
KOHI IAmb IAmb 10 45 09.6
comp=Z,46nm,0.5s
KOHI *e*S **S** **10 51 10.3 +2.5**
CM31 Chiang Mai Arr 41.52 255 P **P** **10 44 57.9 +0.1**
CMAR Chiang Mai Arr 41.52 255 P **P** **10 44 57.4 -0.4**
comp=Z,2.8nm,0.6s,baz=49,slow=6.9,SNR=17
CMAR pP **pP** **10 45 18.1 +0.1**
comp=Z,3.9nm,0.6s,baz=46,slow=7.1,SNR=4.6
CMAR PcP **PcP** **10 46 54.6 +0.7**
comp=Z,3.9nm,0.8s,baz=13,slow=2.4,SNR=4.8
comp=Z,2.8nm,0.6s
CMAR Chiang Mai Arr 41.52 255 *i*P **P** **10 44 59.5 +1.6**
CMAR pmax pmax
comp=Z,4.0nm,0.7s
SANI Sanana 41.67 203 P **P** **10 44 58.5 -0.5**
comp=Z,1µmcomp=Z,89nm,0.7s
ZAA0 Zalesovo Array 41.70 312 P **P** **10 44 58.8 -0.1**
ZAA0 IAmb IAmb 10 45 02.0
comp=Z,63nm,0.9s
ZALV Zalesovo Beam 41.70 312 P **P** **10 44 59.0 +0.1**
comp=Z,64nm,0.8s,baz=96,slow=7.2,SNR=69
ZALV P3KP 11 16 01.1
comp=Z,0.3nm,0.3s,baz=287,slow=2.7,SNR=3.8
comp=Z,64nm,0.8s
J14K Nanvaranak Lak 41.77 35 P **P** **10 45 01.2 +1.9**
J14K Nanvaranak Lak 41.77 35 P **P** **10 45 00.7 +1.4**
baz=259,SNR=8.9
L14K Kuka Creek 41.94 37 P **P** **10 45 02.8 +2.1**
L14K IAmb IAmb 10 45 25.0
comp=Z,123nm,1.9s
L14K Kuka Creek 41.94 37 P **P** **10 45 02.4 +1.8**
baz=261,SNR=7.2
F15K North Star Dit 41.98 30 P **P** **10 45 03.7 +2.6**
F15K North Star Dit 41.98 30 P **P** **10 45 03.1 +2.1**
baz=255
G15K Niukluk 42.05 31 P **P** **10 45 03.3 +1.7**
baz=256,SNR=22
IMP Imphal 42.07 267 *e*P **P** **10 45 04.2 +1.8**
IMP IAmb IAmb 10 45 13.2
comp=Z,29nm,0.9s
IMP *e*S **S** **10 51 18.4 +2.7**
ZSN Zaisan 42.10 302 *e*P **P** **10 45 01.9 -0.4**
ZSN pmax pmax
comp=Z,19nm,0.5s
ZSN Zaisan 42.10 302 *e*P **P** **10 45 01.1 -1.2**
comp=Z,19nm,0.5s
LSA Lhasa 42.14 275 P **P** **10 45 00.5 -2.9**
LSA pmax pmax
comp=Z,14nm,1.1s
LSA LR LR
comp=Z,180nm,19.8s
LSA LR LR
comp=Z,320nm,21.6s
LSA LR LR
comp=Z,690nm,32.3s
LSA Lhasa 42.14 275 P **P** **10 45 04.9 +1.6**
TEZP TEZPUR 42.15 270 *e*P **P** **10 45 04.2 +1.3**
TEZP IAmb IAmb 10 45 07.2
comp=Z,20nm,0.9s
TEZP *e*S **S** **10 51 19.5 +2.8**
KRAI Karang Ratu 42.17 199 P **P** **10 45 03.8 +0.7**
M14K Bethel 42.20 38 P **P** **10 45 05.2 +2.4**
M14K IAmb IAmb 10 45 06.1
comp=Z,54nm,0.8s
M14K Bethel 42.20 38 P **P** **10 45 04.7 +1.9**
baz=263,SNR=8.3
N14K Kuskokwak Cree 42.24 39 IAmb IAmb 10 46 24.2
comp=Z,57nm,1.1s
N14K Kuskokwak Cree 42.24 39 P **P** **10 45 04.0 +0.9**
baz=264
O14K Tigyukauivet M 42.39 40 P **P** **10 45 05.3 +1.0**
baz=265
C16K Lisburne Hills 42.48 26 P **P** **10 45 06.2 +1.3**
baz=251
L15K Ungalak Mounta 42.55 36 P **P** **10 45 07.0 +1.3**
baz=262
K15K Wolf Creek Mou 42.62 35 P **P** **10 45 08.0 +1.7**
baz=262,SNR=10
SDPT Sand Point 42.64 46 P **P** **10 45 08.7 +2.2**
baz=270
H16K Elim 42.72 32 P **P** **10 45 08.4 +1.4**
baz=258,SNR=16
M15K Kasigluk River 42.82 38 P **P** **10 45 09.7 +1.9**
baz=264,SNR=8.8
G16K Koyuk River 42.83 31 P **P** **10 45 09.6 +1.7**
baz=257,SNR=5.7
NRIK Noril'sk 43.01 335 P **P** **10 45 09.0 -0.2**
comp=Z,12nm,0.5s,baz=109,slow=8.8,SNR=32
NRIK LR LR 11 04 07.4
comp=Z,283nm,18.1s,baz=102,slow=37
comp=Z,12nm,0.5s
NRIK Noril'sk 43.01 335 P **P** **10 45 09.4 +0.2**
NRIK IAmb IAmb 10 45 29.9
comp=Z,79nm,1.4s
NRIK Noril'sk 43.01 335*c i*P **P** **10 45 08.8 -0.5**
NRIK pmax pmax
comp=Z,16nm,0.9s
SILR SILCHAR 43.01 267 *e*P **P** **10 45 11.3 +1.5**
SILR IAmb IAmb 10 45 15.8
comp=Z,35nm,0.7s
SILR *e*S **S** **10 51 32.8 +3.6**
N15K Kwethluk River 43.06 39 IAmb IAmb 10 45 12.5
comp=Z,38nm,0.8s
N15K Kwethluk River 43.06 39 P **P** **10 45 11.5 +1.7**
baz=265
O15K Ungalikthiuk R 43.12 40 P **P** **10 45 12.0 +1.7**
O15K IAmb IAmb 10 45 13.3
comp=Z,80nm,1.2s
O15K Ungalikthiuk R 43.12 40 P **P** **10 45 11.7 +1.4**
baz=266
D17K Noatak River 43.12 27 P **P** **10 45 11.9 +1.7**
baz=254,SNR=56
CHNA Chernabura Isl 43.16 47 P **P** **10 45 13.2 +2.6**
baz=271
J16K Anvik River 43.19 34 P **P** **10 45 12.5 +1.7**
baz=261,SNR=9.3
GUWA GUWAHATI 43.23 270 *e*P **P** **10 45 14.7 +3.0**
GUWA IAmb IAmb 10 45 16.1
comp=Z,14nm,0.4s
GUWA *e*S **S** **10 51 35.8 +3.3**
I17K Unalakleet 43.24 33 P **P** **10 45 13.0 +1.8**
baz=261,SNR=14
RDOG Red Dog Mine 43.28 27 **P** **10 45 12.4 +0.8**
RDOG Red Dog Mine 43.28 27 P **P** **10 45 13.0 +1.5**
baz=254
C17K DeLong Mountai 43.31 26 P **P** **10 45 13.2 +1.5**
baz=253
SHL Shillong 43.37 269 **P** **10 45 12.6 -0.4**
SHL IAmb IAmb 10 45 32.2
comp=Z,31nm,0.7s
SHL Shillong 43.37 269 P **P** **10 45 12.6 -0.4**
SHL pmax pmax
comp=Z,31nm,0.7s
SHL Shillong 43.37 269 P **P** **10 45 13.1 +0.2**
E17K Hotham Inlet 43.43 28 P **P** **10 45 14.3 +1.6**
baz=256,SNR=32
F17K Baldwin Pennin 43.51 29 P **P** **10 45 15.2 +1.9**
baz=257
L16K Owhat River 43.51 36 P **P** **10 45 15.3 +1.9**
baz=264,SNR=13
G17K Kiwalik Mounta 43.55 31 P **P** **10 45 15.5 +1.8**
baz=259,SNR=15
M16K Timber Creek 43.69 37 P **P** **10 45 16.6 +1.7**
baz=265
N16K Nishlik Lake 43.74 38 P **P** **10 45 17.4 +2.0**
baz=266,SNR=16
H17K Granite Mounta 43.76 32 P **P** **10 45 17.1 +1.8**
baz=260,SNR=7.7
SBUM Sibu 43.82 225 P **P** **10 45 16.8 +0.3**
SBUM Sibu 43.82 225 P **P** **10 45 17.3 +0.9**
MK31 Makanchi Array 43.94 302*c i*P **P** **10 45 16.8 -0.3**
MKAR Makanchi Array 43.94 302 P **P** **10 45 17.1 0.0**
comp=Z,40nm,0.7s,baz=87,slow=10.0,SNR=132
comp=Z,40nm,0.7s
MKAR Makanchi Array 43.94 302 P **P** **10 45 17.5 +0.4**
MKAR Makanchi Array 43.94 302 P **P** **10 45 17.5 +0.4**
E18K Tukpahlearik C 43.98 28 P **P** **10 45 19.1 +2.0**
baz=257
SAIH SAIHA 44.00 264 *e*S **S** **10 51 47.1 +3.1**
O16K Kokwok River B 44.03 40 P **P** **10 45 19.5 +1.9**
baz=268,SNR=6.7
C18K Utukok River 44.06 26 IAmb IAmb 10 45 21.2
comp=Z,57nm,0.6s
C18K Utukok River 44.06 26 P **P** **10 45 19.1 +1.3**
baz=255
P16K Nushagak River 44.06 40 P **P** **10 45 19.8 +1.9**
baz=268
L17K Donlin 44.10 36 P **P** **10 45 20.6 +2.4**
baz=265,SNR=16
MAKZ Makanchi 44.15 302 **P** **10 45 19.0 +0.2**
MAKZ IAmb IAmb 10 45 20.1
comp=Z,43nm,0.9s
MAKZ Makanchi 44.15 302 P **P** **10 45 19.2 +0.4**
K17K Iditarod 44.16 35 IAmb IAmb 10 45 22.0
comp=Z,60nm,0.8s
K17K Iditarod 44.16 35 P **P** **10 45 21.1 +2.5**
baz=264,SNR=23
F18K Selawik 44.17 29 P **P** **10 45 20.3 +1.7**
baz=259,SNR=20
R16K Pilot Point 44.26 43 P **P** **10 45 22.7 +3.3**
baz=270
G18K Tagagawik 44.44 31 IAmb IAmb 10 45 48.3
comp=Z,32nm,0.7s
G18K Tagagawik 44.44 31 P **P** **10 45 22.2 +1.4**
baz=260,SNR=30
H18K Honhosa River 44.44 32 P **P** **10 45 22.3 +1.4**
baz=262,SNR=19
M17K Holitna River 44.45 37 IAmb IAmb 10 45 24.4
comp=Z,56nm,0.8s
M17K Holitna River 44.45 37 P **P** **10 45 22.9 +1.9**
baz=266,SNR=15
N17K Nugak Hills 44.53 38 IAmb IAmb 10 45 24.4
comp=Z,62nm,1.2s
N17K Nushagak Hills 44.53 38 P **P** **10 45 23.4 +1.9**
baz=267,SNR=8.1
O17K Koliganek Bris 44.54 39 P **P** **10 45 23.6 +2.0**
baz=268,SNR=6.0
C19K Lookout Ridge 44.73 26 IAmb IAmb 10 45 26.4
comp=Z,67nm,1.0s
C19K Lookout Ridge 44.73 26 P **P** **10 45 25.0 +1.9**
baz=256
Q16K King Salmon 44.75 41 P **P** **10 45 25.2 +1.9**
baz=270,SNR=5.4
L18K Granite Mounta 44.86 36 P **P** **10 45 26.3 +2.1**
baz=266
P17K Kvichak River 44.86 40 P **P** **10 45 25.6 +1.3**
baz=269
R17L Mt. Peulik Vol 44.91 42 P **P** **10 45 26.3 +1.6**
baz=271
F19K Shaleruckik Mo 44.94 29 P **P** **10 45 25.6 +0.8**
baz=260
J18K Innoko River 44.95 34 P **P** **10 45 26.4 +1.5**
baz=265
GCSA Galena City Sc 45.01 32 P **P** **10 45 26.5 +1.2**
baz=263,SNR=10.0
G19K Purcell Mounta 45.11 30 P **P** **10 45 27.4 +1.2**
baz=262
Q17K Contact Creek 45.15 42 P **P** **10 45 27.9 +1.2**
baz=271
N18K Kilae Creek 45.17 38 P **P** **10 45 28.4 +1.7**
baz=268,SNR=8.4
M18K Stony River 45.23 37 P **P** **10 45 29.3 +2.1**
baz=268,SNR=10
E19K Redstone River 45.26 28 IAmb IAmb 10 46 00.2
comp=Z,56nm,0.9s
E19K Redstone River 45.26 28 P **P** **10 45 29.1 +1.8**
baz=260
CHIR Chirikof Islan 45.38 45 P **P** **10 45 31.1 +2.7**
baz=273
J19K Poorman 45.48 33 IAmb IAmb 10 45 31.7
comp=Z,46nm,1.0s
J19K Poorman 45.48 33 P **P** **10 45 30.9 +1.8**
baz=265,SNR=27
P18K Big Mountain, 45.48 40 P **P** **10 45 30.2 +1.0**
P18K IAmb IAmb 10 45 54.1
comp=Z,137nm,1.6s
P18K Big Mountain, 45.48 40 P **P** **10 45 30.8 +1.6**
baz=270,SNR=5.1
O18K Koktuh Hills 45.50 39 P **P** **10 45 31.4 +2.1**
O18K Koktuh Hills 45.50 39 P **P** **10 45 31.2 +1.9**
baz=270
D20K Etivluk River 45.70 27 IAmb IAmb 10 46 04.2
comp=Z,58nm,0.9s
D20K Etivluk River 45.70 27 P **P** **10 45 32.4 +1.6**
baz=260
L19K White Mountain 45.72 36 P **P** **10 45 33.2 +2.2**
baz=268,SNR=7.0
KURK Kurtatov 45.73 308 **P** **10 45 31.2 0.0**
KURK Kurchatov 45.73 308*c i*P **P** **10 45 30.9 -0.3**
KURK pmax pmax
comp=Z,130nm,0.8s
KURK Kurchatov 45.73 308 P **P** **10 45 31.3 0.0**
KURK S **S** **10 52 07.3 -0.9**
F20K Avaraart Lake 45.77 29 P **P** **10 45 33.0 +1.7**
baz=262,SNR=13
E20K Nigu River 45.78 27 P **P** **10 45 33.0 +1.5**
baz=261
KURBB Kurchatov Arra 45.80 308 P **P** **10 45 31.6 -0.2**
comp=Z,56nm,0.4s,baz=81,slow=7.8,SNR=166
KURBB pP **pP** **10 45 52.7 +0.6**
comp=Z,56nm,0.5s,baz=83,slow=8.5,SNR=5.8
comp=Z,56nm,0.4s
N19K Bonanza Creek 45.86 38 P **P** **10 45 33.8 +1.6**
baz=270
H20K Anotleneega Mo 45.93 31 P **P** **10 45 34.2 +1.6**
baz=265
O19K Port Alsworth 45.94 39 IAmb IAmb 10 45 36.1
comp=Z,84nm,1.5s
O19K Port Alsworth 45.94 39 P **P** **10 45 34.5 +1.8**
baz=270,SNR=5.1
I20K Naaghedeneel 46.04 32 IAmb IAmb 10 46 08.6
comp=Z,103nm,1.2s
I20K Naaghedeneel 46.04 32 P **P** **10 45 35.1 +1.7**
baz=266
K20K Telida 46.13 34 IAmb IAmb 10 45 37.3
comp=Z,42nm,0.8s
K20K Telida 46.13 34 P **P** **10 45 36.3 +2.1**
baz=267,SNR=8.7
J20K Nowinta River 46.14 33 IAmb IAmb 10 45 37.4
comp=Z,37nm,0.9s
J20K Nowinta River 46.14 33 P **P** **10 45 36.3 +2.0**
baz=266,SNR=23
A21K Barrow 46.23 23 P **P** **10 45 36.4 +1.5**
baz=257,SNR=31
Q19K Cape Douglas, 46.31 41 P **P** **10 45 37.6 +1.9**
baz=272
P19K Oil Pt 46.50 40 P **P** **10 45 39.1 +2.0**
baz=272
M20K Styx River 46.52 36 P **P** **10 45 39.6 +2.2**
baz=270,SNR=6.1
OHAK Old Harbor 46.59 43 P **P** **10 45 39.2 +1.4**
baz=274
G21K Allakaket 46.59 30 IAmb IAmb 10 46 06.0
comp=Z,28nm,0.7s
G21K Allakaket 46.59 30 P **P** **10 45 39.6 +1.9**
baz=265,SNR=20
E21K Killik River 46.62 27 IAmb IAmb 10 46 03.7
comp=Z,48nm,1.1s
E21K Killik River 46.62 27 P **P** **10 45 39.6 +1.6**
baz=263
F21K Alatna River 46.66 29 P **P** **10 45 39.9 +1.5**
baz=264,SNR=12
KAPI Kappang 46.67 210 LR LR 11 05 50.9
comp=Z,155nm,19.1s,baz=39,slow=37
KAPI Kappang 46.67 210 P **P** **10 45 38.4 -0.5**
KAPI Kappang 46.67 210 pmax pmax
comp=Z,31nm,1.0s
KAPI Kappang 46.67 210 P **P** **10 45 38.6 -0.3**
comp=Z,843nmcomp=Z,54nm,1.5s
KAPI Kappang 46.67 210*d i*P **P** **10 45 39.1 +0.2**
SHLS Shalkode 46.68 297 *e*P **P** **10 45 36.3 -2.6**
SHLS Shalkode 46.68 297 *e*P **P** **10 45 36.3 -2.6**
RED Redoubt Volcan 46.71 38 IAmb IAmb 10 45 40.7
comp=Z,36nm,0.7s
H21K Melozitna Rive 46.81 31 P **P** **10 45 41.0 +1.6**
baz=266
KDAK Kodiak Island 46.93 42 LR LR 11 04 49.6
comp=Z,202nm,22.0s,baz=242,slow=35
KDAK Kodiak Island 46.93 42 P **P** **10 45 42.0 +1.5**
baz=274
CHUM Lake Minchumin 46.93 34 P **P** **10 45 42.5 +2.0**
baz=268,SNR=11
TDK Taldyqorghan 46.96 300 *e*P **P** **10 45 40.9 -0.1**
TDK pmax pmax
comp=Z,17nm,0.5s
TDK Taldyqorghan 46.96 300 *e*P **P** **10 45 40.9 -0.1**
comp=Z,17nm,0.5s
PPLA Purkeypile 46.97 35 IAmb IAmb 10 46 15.0
comp=Z,94nm,1.5s
PPLA Purkeypile 46.97 35 P **P** **10 45 42.9 +2.0**
baz=270,SNR=6.4
Q20K Shuyak Island 46.98 41 P **P** **10 45 42.2 +1.4**
baz=273
UZB Uzynbulak 46.99 298 *e*P **P** **10 45 40.9 -0.5**
UZB Uzynbulak 46.99 298 *e*P **P** **10 45 41.0 -0.5**
I21K Tanana 47.12 32 IAmb IAmb 10 46 15.9
comp=Z,54nm,1.3s
I21K Tanana 47.12 32 P **P** **10 45 43.6 +1.7**
baz=268
D22K Ayikyak River 47.14 27 IAmb IAmb 10 46 06.6
comp=Z,63nm,1.0s
D22K Ayikyak River 47.14 27 P **P** **10 45 43.7 +1.6**
baz=264
SKT Skwentna 47.28 36 P **P** **10 45 44.5 +1.3**
baz=271,SNR=7.0
HOM Homer 47.30 39 P **P** **10 45 45.7 +2.4**
baz=273
WUS Wushi 47.38 295 P **P** **10 45 45.1 +0.7**
WUS x x 10 46 04.6
WUS x x 10 46 12.1
H22K Ishtalitna Cre 47.41 31 IAmb IAmb 10 46 18.2
comp=Z,78nm,1.6s
H22K Ishtalitna Cre 47.41 31 P **P** **10 45 46.3 +2.1**
baz=268,SNR=21
CAPN Captain Cook N 47.50 38 P **P** **10 45 46.5 +1.6**
baz=272
BPAW Bear Paw Mtn. 47.52 33 P **P** **10 45 46.6 +1.5**
baz=270
KTH Kantishna Hill 47.55 34 IAmb IAmb 10 45 47.8
comp=Z,43nm,1.0s
PRZ Przheval'sk 47.61 297 IAmb IAmb 10 46 17.6
comp=Z,57nm,1.1s
L22K Petersville 47.63 36 IAmb IAmb 10 45 47.6
comp=Z,40nm,0.6s
SUA Susitna One 47.67 37 IAmb IAmb 10 46 11.6
comp=Z,50nm,1.1s
SUA Susitna One 47.67 37 P **P** **10 45 47.2 +0.8**
baz=272,SNR=7.1
BRLK Bradley Lake 47.68 39 IAmb IAmb 10 46 09.6
comp=Z,138nm,1.7s
BRSE Bradley Lake S 47.76 39 P **P** **10 45 49.2 +2.3**
baz=274
TRF Thorofare Moun 47.83 34 P **P** **10 45 49.3 +1.7**
baz=271,SNR=11
D23K Nanushuk River 47.87 27 IAmb IAmb 10 46 14.2
comp=Z,48nm,1.0s
D23K Nanushuk River 47.87 27 P **P** **10 45 49.7 +2.0**
baz=265
COLD Coldfoot 47.94 29 P **P** **10 45 49.9 +1.7**
baz=267,SNR=7.3
M22K Willow 47.96 37 IAmb IAmb 10 46 33.2
comp=Z,40nm,1.0s
M22K Willow 47.96 37 P **P** **10 45 49.7 +1.3**
baz=272
G23K Bananza Creek 47.99 30 P **P** **10 45 50.4 +1.8**
baz=268,SNR=10
RC01 Rabbit Creek A 48.17 37 IAmb IAmb 10 45 52.1
comp=Z,61nm,1.1s
RC01 Rabbit Creek A 48.17 37 P **P** **10 45 50.9 +0.8**
baz=273,SNR=8.4
E23K Chandalar 48.20 28 P **P** **10 45 52.0 +1.7**
baz=267,SNR=46
O22K Cooper Landing 48.22 38 IAmb IAmb 10 46 37.5
comp=Z,63nm,0.8s
O22K Cooper Landing 48.22 38 P **P** **10 45 51.3 +0.9**
baz=274
I23K Minto, Yukon-K 48.23 32 P **P** **10 45 52.3 +1.9**
baz=270,SNR=8.6
TARG Taragay, Kyrgy 48.24 296 IAmb IAmb 10 45 57.6
comp=Z,35nm,0.6s
NEA2 Nenana 48.36 33 IAmb IAmb 10 46 22.1
comp=Z,29nm,0.6s
NEA2 Nenana 48.36 33 P **P** **10 45 52.8 +1.3**
baz=271,SNR=19
MDOK Medeo 48.38 298 *e*P **P** **10 45 51.8 -0.3**
MDOK Medeo 48.38 298 *e*P **P** **10 45 51.8 -0.3**
SEW Seward 48.38 39 IAmb IAmb 10 46 30.5
comp=Z,80nm,1.2s
SEW Seward 48.38 39 P **P** **10 45 52.2 +0.6**
baz=274
MCK McKinley 48.43 34 P **P** **10 45 53.3 +1.2**
baz=272,SNR=10
PMR Palmer 48.44 37 P **P** **10 45 52.5 +0.4**
baz=273,SNR=11
AAA Alma-Ata 48.46 298 *e*P **P** **10 45 52.3 -0.3**
AAA pmax pmax
comp=Z,18nm,0.6s
AAA Alma-Ata 48.46 298 *e*P **P** **10 45 52.3 -0.3**
comp=Z,18nm,0.6s
RND Reindeer 48.48 34 IAmb IAmb 10 45 54.0
comp=Z,26nm,0.8s
TNSS Tian-Shan 48.48 298 *e*P **P** **10 45 52.5 -0.8**
TNSS Tian-Shan 48.48 298 *e*P **P** **10 45 52.5 -0.8**
GHO Glory Hole Cre 48.52 37 IAmb IAmb 10 45 56.1
comp=Z,51nm,0.8s
D24K Happy Valley 48.55 27 P **P** **10 45 54.4 +1.5**
baz=267
KDJ Kajisay 48.58 297 IAmb IAmb 10 46 15.4
comp=Z,27nm,0.7s
WAT1 Susitna Watana 48.64 35 P **P** **10 45 54.2 +0.5**
baz=273
KNK Knik Glacier 48.77 37 IAmb IAmb 10 46 37.8
comp=Z,29nm,0.9s
KNK Knik Glacier 48.77 37 P **P** **10 45 56.0 +1.3**
baz=274,SNR=6.6
SML Sawmill 48.80 36 IAmb IAmb 10 46 22.3
comp=Z,45nm,0.9s
SML Sawmill 48.80 36 P **P** **10 45 56.0 +1.0**
baz=274,SNR=11
H24K Noodor Dome 48.84 31 P **P** **10 45 57.2 +2.0**
baz=271,SNR=23
COLA College 48.88 32 P **P** **10 45 57.0 +1.6**
COLA IAmb IAmb 10 46 26.0
comp=Z,25nm,0.6s
COLA College 48.88 32 P **P** **10 45 57.0 +1.6**
COLA pmax pmax
comp=Z,25nm,0.6s
COLA College 48.88 32 P **P** **10 45 56.9 +1.5**
baz=272
COLA College 48.88 32 P **P** **10 45 56.9 +1.5**
COLA pP **pP** **10 46 18.6 +2.9**
CCB Clear Creek Bu 48.90 33 IAmb IAmb 10 46 26.1
comp=Z,62nm,1.8s
G24K Hadweenzic Riv 49.00 30 IAmb IAmb 10 46 30.7
comp=Z,63nm,1.2s
G24K Hadweenzic Riv 49.00 30 P **P** **10 45 58.8 +2.4**
baz=270,SNR=11
WAT6 Susitna Watana 49.03 35 P **P** **10 45 57.9 +1.0**
baz=274,SNR=8.4

POKR	Poker Plat Res	49.05	32	P	P	10 45 58.9	+2.1		
	baz=272,SNR=28								
M23K	Glacier View	49.09	36	P	P	10 45 58.0	+0.9		
	baz=274,SNR=9.2								
DHY	Denali Highway	49.16	35	IAmb	IAmb	10 46 29.9			
	comp=Z,28nm,0.8s								
DHY	Denali Highway	49.16	35	P	P	10 45 58.8	+1.0		
	baz=274,SNR=5.3								
ULHL	Ulahol	49.21	297	P	P	10 45 58.9	+0.3		
	SNR=9.9								
SCM	Sheep Creek Mo	49.28	36	IAmb	IAmb	10 46 42.4			
	comp=Z,44nm,0.9s								
SCM	Sheep Creek Mo	49.28	36	P	P	10 46 00.1	+1.4		
	baz=275,SNR=6.6								
HDA	Harding Lake	49.28	33	IAmb	IAmb	10 46 00.4			
	comp=Z,42nm,1.0s								
HDA	Harding Lake	49.28	33	P	P	10 45 59.0	+0.5		
	baz=273,SNR=17								
ILAR	Eielson Array	49.29	32	P	P	10 45 59.2	+0.6		
	comp=Z,26nm,0.8s,baz=266,slow=5.2,SNR=78								
	comp=Z,26nm,0.8s								
BOOM	Boomskoye usch	49.35	298	P	P	10 46 00.1	+0.5		
BOOM	Boomskoye usch	49.35	298	P	P	10 46 00.1	+0.5		
BOOM				pmax	pmax				
	comp=Z,126nm,1.7s								
P23K	Montague Islan	49.41	39	P	P	10 46 00.8	+1.2		
	baz=276								
D25K	Kavik River	49.43	26	IAmb	IAmb	10 46 30.7			
	comp=Z,35nm,0.9s								
D25K	Kavik River	49.43	26	P	P	10 46 00.9	+1.2		
	baz=269								
TKM2	Tokmak 2	49.47	298	P	P	10 46 01.3	+0.8		
	SNR=29								
GLI	Glacier Island	49.47	38	P	P	10 46 01.2	+1.2		
	baz=276								
HNR	Honiara	49.65	156	LR	LR	11 03 55.4			
	comp=Z,16nm,21.0s,baz=48,slow=32								
F25K	Christian Rive	49.70	29	IAmb	IAmb	10 46 36.2			
	comp=Z,30nm,0.9s								
F25K	Christian Rive	49.70	29	P	P	10 46 03.9	+2.1		
	baz=271,SNR=18								
E25K	Arctic Village	49.72	28	P	P	10 46 04.1	+2.2		
	baz=271,SNR=27								
M24K	Tolsona, Glenn	49.79	36	P	P	10 46 04.4	+1.9		
	baz=275								
PRP	Porcupine Dome	49.83	31	IAmb	IAmb	10 46 33.4			
	comp=Z,34nm,0.6s								
PRP	Porcupine Dome	49.83	31	P	P	10 46 04.5	+1.7		
	baz=273,SNR=18								
K24K	Donnelly Dome	49.83	34	IAmb	IAmb	10 47 25.0			
	comp=Z,50nm,1.1s								
K24K	Donnelly Dome	49.83	34	P	P	10 46 03.7	+0.9		
	baz=274,SNR=8.6								
C26K	Camden Bay	49.95	26	P	P	10 46 05.5	+2.0		
	baz=270								
J25K	Salcha River,	49.95	33	P	P	10 46 04.0	+0.3		
	baz=274								
KLU	Klutina	49.98	37	IAmb	IAmb	10 46 43.8			
	comp=Z,48nm,1.2s								
KLU	Klutina	49.98	37	P	P	10 46 05.8	+1.8		
	baz=276,SNR=6.7								
SGDS	Sogindy	49.99	299	eP	P	10 46 04.0	-0.3		
KBK	Karagaybulak	50.00	298	P	P	10 46 05.2	+0.6		
	SNR=37								
CHMS	Chumysh	50.04	299	P	P	10 46 04.9	+0.2		
	SNR=5.0								
PAX	Paxson	50.04	35	P	P	10 46 05.8	+1.3		
	baz=275,SNR=6.7								
DIV	Divide	50.09	37	IAmb	IAmb	10 46 07.1			
	comp=Z,33nm,0.9s								
BATI	Baumata	50.09	203	LR	LR	11 10 15.7			
	comp=Z,53nm,19.0s,baz=59,slow=40								
BMAR	Burnt Mountain	50.12	29		P	10 46 06.5	+1.6		
USP	Ospenovka	50.13	299	P	P	10 46 05.6	+0.2		
	SNR=14								
EYAK	Cordova Ski Ar	50.17	38	P	P	10 46 06.6	+1.3		
	baz=277								
HARP	HAARP	50.24	36	P	P	10 46 07.4	+1.6		
	baz=276,SNR=5.4								
RIDG	Independent Ri	50.25	34	P	P	10 46 06.9	+1.0		
	baz=275								
F26K	Sheenjek River	50.27	29	P	P	10 46 08.1	+2.1		
	baz=272								
AAK	Ala-Archa	50.33	298	P	P	10 46 07.2	+0.2		
	SNR=14								
AAK	Ala-Archa	50.33	298	P	P	10 46 07.0	0.0		
AAK	Ala-Archa	50.33	298	P	P	10 46 07.0	0.0		
AAK				pmax	pmax				
	comp=Z,21nm,1.0s								
AAK	Ala-Archa	50.33	298	P	P	10 46 07.3	+0.3		
BVAR	Borovoye Array	50.36	312	P	P	10 46 06.8	-0.1		
	comp=Z,15nm,0.5s,baz=69,slow=7.7,SNR=28								
	comp=Z,15nm,0.5s								
C27K	Jago River	50.37	26	IAmb	IAmb	10 46 40.9			
	comp=Z,30nm,0.8s								
C27K	Jago River	50.37	26	P	P	10 46 08.5	+1.8		
	baz=271								
BORK	Borovoye	50.40	312	P	P	10 46 07.1	0.0		
BORK	Borovoye	50.40	312	ceP	P	10 46 07.0	-0.2		
BORK				pmax	pmax				
	comp=Z,39nm,1.3s								
KDU	Kakadu	50.42	191	P	P	10 46 08.2	+0.6		
	comp=Z,62nm,1.1s								
UCH	Uchtor	50.44	298	P	P	10 46 09.1	+1.0		
	SNR=10								
G26K	Porcupine Rive	50.45	30	IAmb	IAmb	10 46 42.5			
	comp=Z,35nm,0.9s								
G26K	Porcupine Rive	50.45	30	P	P	10 46 09.8	+2.5		
	baz=274,SNR=14								
N25K	Chitina, Valde	50.59	36	P	P	10 46 10.0	+1.4		
	baz=277								
SCRK	Sand Creek	50.61	33	IAmb	IAmb	10 46 42.4			
	comp=Z,57nm,1.2s								
SCRK	Sand Creek	50.61	33	P	P	10 46 09.7	+1.0		
	baz=276,SNR=26								
BMRM	Bremner River	50.67	37	IAmb	IAmb	10 46 46.6			
	comp=Z,36nm,0.9s								
BMRM	Bremner River	50.67	37	P	P	10 46 10.7	+1.5		
	baz=278								
TPI	Tanjungpandan	50.67	226	P	P	10 46 09.2	-0.4		
	comp=Z,554nmcomp=Z,35nm,0.7s								
KSH2	Kashi	50.68	294	P	P	10 46 10.6	+0.9		
KSH2				pP	pP	10 46 32.1	+1.8		
KSH2				S	S	10 53 18.5	-0.1		
KSH2				pmax	pmax				
	comp=Z,13nm,0.8s								
KSH2				pmax	pmax				
	comp=Z,190nm,5.9s								
KSH2				LR	LR				
	comp=Z,660nm,16.5s								
KSH2				LR	LR				
	comp=Z,560nm,15.8s								
KSH2				LR	LR				
	comp=Z,1µm,15.8s								
J26L	Joseph Creek	50.74	33	P	P	10 46 10.3	+0.6		
	baz=276,SNR=9.1								
MTN	Manton Dam	50.80	193	P	P	10 46 10.1	-0.4		
	comp=Z,97nm,1.3s								
MTN	Manton Dam	50.80	193	P	P	10 46 09.9	-0.5		
EKS2	Erkin-Say	50.82	298	P	P	10 46 10.8	+0.2		
	SNR=12								
MENT	Mentasta	50.84	35	IAmb	IAmb	10 46 52.5			
	comp=Z,27nm,0.8s								
KAIM	Kayak Island	50.91	39	P	P	10 46 12.8	+1.9		
	baz=279								
GLB	Gilahina Butte	50.99	37	IAmb	IAmb	10 46 14.8			
	comp=Z,89nm,1.8s								
L26K	Log Cabin Wild	51.00	35	IAmb	IAmb	10 46 14.2			
	comp=Z,31nm,0.8s								
L26K	Log Cabin Wild	51.00	35	P	P	10 46 13.1	+1.5		
	baz=277,SNR=7.5								
COEN	Coen	51.01	178	P	P	10 46 13.2	+1.0		
	comp=Z,69nm,0.9s								
COEN	Coen	51.01	178		P	10 46 13.1	+1.0		
M26K	Nabesna, AK	51.24	35	P	P	10 46 15.2	+1.8		
	baz=278								
G27K	Doyon Strip	51.30	30	P	P	10 46 15.6	+1.8		
	baz=276								
D27M	Malcolm River	51.36	26	IAmb	IAmb	10 46 42.5			
	comp=Z,59nm,1.4s								
D27M	Malcolm River	51.36	26	P	P	10 46 15.8	+1.6		
	baz=274								
MCARA	McCarthy VSAT	51.37	37	IAmb	IAmb	10 46 38.9			
	comp=Z,35nm,0.9s								
MCARA	McCarthy VSAT	51.37	37	P	P	10 46 16.4	+2.1		
	baz=279,SNR=5.3								
H27K	Steamboat Moun	51.41	30	IAmb	IAmb	10 46 40.7			
	comp=Z,98nm,1.6s								
H27K	Steamboat Moun	51.41	30	P	P	10 46 16.8	+2.1		
	baz=276								
CRQM	Cirque	51.41	37	IAmb	IAmb	10 46 19.1			
	comp=Z,67nm,1.2s								
CRQE	Cirque	51.44	37	P	P	10 46 16.3	+1.4		
	baz=279,SNR=5.0								
I27K	Kandik River	51.44	31	P	P	10 46 16.5	+1.6		
	baz=278,SNR=9.2								
TGL	Tana Glacier	51.56	37	IAmb	IAmb	10 46 55.5			
	comp=Z,71nm,1.4s								
WAX	Waxell Ridge	51.60	38	IAmb	IAmb	10 47 04.9			
	comp=Z,70nm,1.3s								
L27K	Beaver Creek,	51.68	34	IAmb	IAmb	10 46 47.5			
	comp=Z,33nm,1.0s								
L27K	Beaver Creek,	51.68	34	P	P	10 46 18.5	+1.9		
	baz=278								
BCAR	Beaver Creek A	51.70	34		P	10 46 17.7	+0.9		
M27K	Edge Creek, AK	51.76	35	IAmb	IAmb	10 46 52.2			
	comp=Z,31nm,1.0s								
M27K	Edge Creek, AK	51.76	35	P	P	10 46 19.1	+1.7		
	baz=279,SNR=11								
PSI	Prapat	51.90	239	P	P	10 46 18.7	-0.3		
PSI				pmax	pmax				
	comp=Z,17nm,0.8s								
PSI	Prapat	51.90	239	P	P	10 46 18.7	-0.3		
	comp=Z,25nm,0.9s								
F28M	Old Crow	51.91	29	P	P	10 46 20.2	+1.9		
	baz=276,SNR=12								
E28M	Babbage River	51.93	27	P	P	10 46 19.9	+1.5		
	baz=276,SNR=12								
RPSI	Rantau Prapat	51.97	239		P	10 46 18.6	-0.7		
BARN	Barnard Glacie	52.07	37	IAmb	IAmb	10 46 60.0			
	comp=Z,48nm,1.3s								
GRNC	Granite Creek	52.09	37	IAmb	IAmb	10 46 48.2			
	comp=Z,29nm,1.0s								
MESA	MESA	52.09	38	P	P	10 46 21.5	+1.5		
	baz=280								
I28M	Miner Creek	52.16	31	P	P	10 46 21.9	+1.6		
	baz=278								
BVCY	Beaver Creek	52.22	35	P	P	10 46 22.3	+1.6		
	baz=280,SNR=12								
CTG	Chitna Glacier	52.24	37	P	P	10 46 22.4	+1.4		
	baz=280								
DZA	Taraz	52.46	299	eP	P	10 46 22.4	-0.3		
DZA				pmax	pmax				
	comp=Z,17nm,0.9s								
DZA	Taraz	52.46	299	eP	P	10 46 22.5	-0.3		
	comp=Z,17nm,0.9s								
YUK3	Moose Creek	52.52	36	P	P	10 46 24.7	+1.6		
	baz=280,SNR=12								
E29M	Blow River	52.55	27	IAmb	IAmb	10 46 57.5			
	comp=Z,68nm,1.4s								
E29M	Blow River	52.55	27	P	P	10 46 25.1	+2.1		
	baz=278,SNR=17								
SJI	Sawahan	52.66	218	P	P	10 46 23.6	-0.9		
	comp=Z,54nm,1.6s								
SNJI	Sawahan-Nganju	52.71	218	P	P	10 46 24.7	-0.3		
	comp=Z,28nm,2.1s								
G29M	Pine Creek	52.71	29	P	P	10 46 26.6	+2.4		
	baz=279								
O28M	Mount Upton	52.83	37	P	P	10 46 26.8	+1.3		
	baz=281								
I29M	Ogilvie Camp,	52.84	31	IAmb	IAmb	10 46 28.1			
	comp=Z,48nm,1.0s								
I29M	Ogilvie Camp,	52.84	31	P	P	10 46 27.0	+1.8		
	baz=280,SNR=29								
YUK8	Steele Glacier	52.94	36	P	P	10 46 27.5	+1.2		
	baz=281								
PINM	Pinnacle	52.94	38	P	P	10 46 28.2	+2.1		
	baz=282								
KK31	Karatay Array	52.95	300		P	10 46 26.3	-0.1		
KK31				IAmb	IAmb	10 46 31.0			
	comp=Z,22nm,0.8s								
KK31	Karatay Array	52.95	300	P	P	10 46 26.3	-0.1		
KK31				pmax	pmax				
	comp=Z,21nm,0.8s								
KKAR	Karatay Array	52.95	300	P	P	10 46 26.5	+0.1		
KKAR	Karatay Array	52.95	300	P	P	10 46 26.5	+0.1		
J29N	Klondike Camp	53.04	32	P	P	10 46 28.7	+2.0		
	baz=280,SNR=9.5								
DRK	Karamyk	53.30	295	IAmb	IAmb	10 46 53.8			
	comp=Z,35nm,0.7s								
M29M	Somme Creek	53.31	35	IAmb	IAmb	10 46 32.3			
	comp=Z,25nm,0.8s								
M29M	Somme Creek	53.31	35	P	P	10 46 30.8	+2.0		
	baz=282,SNR=19								
L29M	L29M	53.33	34	IAmb	IAmb	10 46 32.7			
	comp=Z,58nm,0.9s								
L29M	L29M	53.33	34	P	P	10 46 31.5	+2.6		
	baz=281								
G30M	tAoh Zraii Nji	53.40	29	P	P	10 46 31.1	+1.7		
	baz=280								
UGM	Wanagama	53.44	219	P	P	10 46 29.4	-0.7		
BRLS	Borolday	53.45	300	eP	P	10 46 31.1	+1.1		
BRLS				pmax	pmax				
	comp=Z,9.0nm,0.7s								
BRLS	Borolday	53.45	300	eP	P	10 46 31.1	+1.1		
	comp=Z,8.7nm,0.7s								
K29M	Barlow Dome	53.45	33	IAmb	IAmb	10 47 05.3			
	comp=Z,28nm,0.8s								
K29M	Barlow Dome	53.45	33	P	P	10 46 31.8	+1.9		
	baz=281,SNR=19								
YUK4	Talbot Arm	53.45	36	P	P	10 46 31.9	+2.0		
	baz=282,SNR=11								
F30M	Barrier River	53.46	28	P	P	10 46 31.7	+2.0		
	baz=280,SNR=17								
I30M	Mount Dempster	53.67	31	P	P	10 46 33.4	+2.0		
	baz=281,SNR=85								
YUK6	Outpost Mounta	53.67	37	P	P	10 46 33.6	+1.9		
	baz=283								
O29M	Mount Kennedy	53.71	37	IAmb	IAmb	10 46 35.6			
	comp=Z,44nm,1.1s								
O29M	Mount Kennedy	53.71	37	P	P	10 46 34.0	+2.2		
	baz=283								
KPJI	Karang Pucung	53.76	221	P	P	10 46 32.1	-0.4		
	comp=Z,50nm,0.9s								
J30M	Hart River	53.81	32	P	P	10 46 34.4	+1.9		
	baz=282,SNR=14								
CHM	Chimkent	53.85	299	eP	P	10 46 32.7	-0.2		
CHM				pmax	pmax				
	comp=Z,8.0nm,0.5s								
CHM	Chimkent	53.85	299	eP	P	10 46 32.8	-0.2		
	comp=Z,8.3nm,0.5s								
GSI	Gunungsitoli	53.90	239	P	P	10 46 34.1	+0.5		
KLSI		53.93	227	P	P	10 46 33.5	-0.2		
	comp=Z,1µmcomp=Z,51nm,1.6s								
KNRA	Kununurra	54.01	195	P	P	10 46 34.5	+0.3		
	comp=Z,121nm,1.1s								
KNRA	Kununurra	54.01	195	P	P	10 46 33.6	-0.6		
M30M	Minto, Yukon	54.04	34	P	P	10 46 36.4	+2.4		
	baz=283,SNR=17								
MDSI	Maura Dua	54.09	228	P	P	10 46 34.5	-0.4		
	comp=Z,800nmcomp=Z,37nm,1.0s								
HYT	Haines Junctio	54.11	37	P	P	10 46 37.3	+2.6		
HYT	Haines Junctio	54.11	37	P	P	10 46 37.4	+2.7		
	baz=284,SNR=10								
INK	Inuvik	54.17	27	LR	LR	11 10 48.5			
	comp=Z,180nm,21.2s,baz=292,slow=37								
INK	Inuvik	54.17	27	IAmb	IAmb	10 47 03.1			
	comp=Z,21nm,0.7s								
INK	Inuvik	54.17	27	P	P	10 46 36.1	+1.4		
	baz=282,SNR=22								
G31M	Satah River	54.17	29	IAmb	IAmb	10 47 08.4			
	comp=Z,68nm,1.4s								
G31M	Satah River	54.17	29	P	P	10 46 36.0	+1.2		
	baz=282								
MAYO	Mayo, Yukon	54.21	33	P	P	10 46 37.2	+2.0		
	baz=283,SNR=8.4								
F31M	Tsiigehtchic	54.26	28	P	P	10 46 36.8	+1.3		
	baz=282,SNR=14								
H31M	Peel River	54.38	30	P	P	10 46 37.9	+1.5		
	baz=283,SNR=37								
NIL	Nilore	54.49	288	P	P	10 46 37.0	-0.7		
NIL	Nilore	54.49	288	P	P	10 46 37.1	-0.7		
NIL				pmax	pmax				
	comp=Z,37nm,0.6s								
NIL	Nilore	54.49	288	P	P	10 46 38.2	+0.5		
P30M	Million Dollar	54.54	37	P	P	10 46 40.1	+2.3		
	baz=284								
N31M	Braeburn, Yuko	54.76	36	IAmb	IAmb	10 47 12.9			
	comp=Z,60nm,1.1s								
N31M	Braeburn, Yuko	54.76	36	P	P	10 46 41.9	+2.6		
	baz=284,SNR=7.1								
O30N	Mendenhall	54.79	37	P	P	10 46 41.4	+1.8		
	baz=285								
SVE	Sverdlovsk	54.92	318	eP	P	10 46 42.7	+2.3		
MTSU	Mount Surprise	55.21	177	P	P	10 46 44.0	+1.1		
	comp=Z,19nm,0.9s								
M31M	Drury Creek, Y	55.22	35	P	P	10 46 44.3	+1.8		
	baz=285,SNR=9.5								
WHY	Whitehorse	55.40	36		P	10 46 44.8	+0.9		
WHY	Whitehorse	55.40	36	P	P	10 46 46.3	+2.4		
	baz=286,SNR=9.5								
S31K	Pelican	55.48	40	P	P	10 46 47.5	+3.2		
	baz=286								
SKAG	Skagway	55.51	38	P	P	10 46 47.1	+2.5		
	baz=286,SNR=5.3								
BESE	Bessie Mountai	56.00	39	IAmb	IAmb	10 46 51.1			
	comp=Z,28nm,1.0s								
A36M	Sachs Harbour	56.03	22	P	P	10 46 50.3	+2.2		
	baz=286,SNR=36								
N32M	Quiet Lake	56.10	36	P	P	10 46 50.8	+1.9		
	baz=287								
SIT	Sitka	56.21	41	P	P	10 46 52.1	+2.4		
	baz=288								
ARTI	Arti	56.24	318	LR	LR	11 12 52.1			
	comp=Z,613nm,19.2s,baz=70,slow=38								
ARTI	Arti	56.24	318		P	10 46 49.9	-0.1		
ARTI	Arti	56.24	318	c iP	P	10 46 49.8	-0.1		
ARTI				*PP	pP	10 47 10.4	-0.3		
ARTI						10 47 44.1			
ARTI						10 48 51.0			
ARTI				S	S	10 54 32.9	-0.1		
ARTI				SS	SS	10 58 18.1	-2.1		
ARTI				pmax	pmax				
	comp=Z,43nm,0.8s								
ARTI	Arti	56.24	318	P	P	10 46 49.8	-0.1		
R32K	Eaglecrest	56.26	39	IAmb	IAmb	10 47 34.9			
	comp=Z,30nm,0.8s								
R32K	Eaglecrest	56.26	39	P	P	10 46 52.2	+2.2		
	baz=288,SNR=5.3								
P32M	Atlin	56.26	38	P	P	10 46 52.1	+2.0		
	baz=287,SNR=5.1								
S32K	Killisnoo	56.47	40	P	P	10 46 53.6	+2.1		
	baz=288								
P33M	Teslin, Yukon	56.51	37	IAmb	IAmb	10 47 17.0			
	comp=Z,66nm,1.3s								
P33M	Teslin, Yukon	56.51	37	P	P	10 46 53.7	+1.8		
	baz=288,SNR=13								
Q32M	Nakina River	57.16	38	IAmb	IAmb	10 47 23.4			
	comp=Z,87nm,1.7s								
Q32M	Nakina River	57.16	38	P	P	10 46 58.2	+1.5		
	baz=289								
C36M	Paulatuk	57.20	25	IAmb	IAmb	10 47 28.6			
	comp=Z,32nm,0.9s								
C36M	Paulatuk	57.20	25	P	P	10 46 57.9	+1.5		
	baz=289,SNR=33								
CTAO	Charters Tower	57.27	175	P	P	10 46 56.9	-0.6		
CTAO				IAmb	IAmb	10 47 22.1			
	comp=Z,89nm,1.9s								
CTAO	Charters Tower	57.27	175	pmax	pmax				
	comp=Z,89nm,1.9s								
CTAO	Charters Tower	57.27	175	P	P	10 46 56.9	-0.6		
KBL	Kabul	57.28	291	P	P	10 46 57.8	-0.1		
KBL				IAmb	IAmb	10 47 51.9			
	comp=Z,26nm,0.9s								
KBL	Kabul	57.28	291	P	P	10 46 57.8	-0.1		
KBL				pmax	pmax				
	comp=Z,26nm,0.9s								
KBL	Kabul	57.28	291	P	P	10 46 58.1	+0.2		
WRAB	Tennant Creek	57.31	188	P	P	10 46 57.2	-0.6		
WRAB	Tennant Creek	57.31	188	pmax	pmax				
	comp=Z,242nm,1.6s								
WRAB	Tennant Creek	57.31	188	P	P	10 46 57.0	-0.8		
WRAB				x	x	10 47 16.9			
WRAB				pP	pP	10 47 19.7	+1.0		
WRAB				x	x	10 47 31.4			
WRAB	Tennant Creek	57.31	188	P	P	10 46 57.2	-0.6		
WRA	Warramunga Arr	57.32	188	P	P	10 46 57.3	-0.6		
	comp=Z,42nm,0.5s,baz=7.7,slow=7.8,SNR=298								
WRA				pP	pP	10 47 20.1	+1.4		
	comp=Z,57nm,0.7s,baz=5.4,slow=7.2,SNR=18								
	comp=Z,42nm,0.5s								
WRA	Warramunga Arr	57.32	188	P	P	10 46 57.3	-0.6		
WRA	Warramunga Arr	57.32	188	pmax	pmax				
	comp=Z,5.0nm,0.7s								
WRA	Warramunga Arr	57.32	188	P	P	10 46 57.3	-0.6		
T33K	Petersburg	57.52	41	P	P	10 47 01.2	+2.3		
	baz=290								
QIS	Mount Isa	57.57	182	P	P	10 46 59.7	0.0		
	comp=Z,58nm,1.1s								
R33M	Jennings River	57.65	37	P	P	10 47 02.0	+2.0		
	baz=290,SNR=6.6								
U33K	Whale Pass	57.67	41	P	P	10 47 02.7	+2.7		
	baz=290								
AB31	Akbulak array	57.73	310		P	10 47 00.7	+0.1		
AB31				IAmb	IAmb	10 47 02.1			
	comp=Z,31nm,0.7s								
ABKAR	Akbulak array	57.73	310		P	10 47 00.8	+0.2		
CRAG	Craig	57.89	42	P	P	10 47 04.6	+3.1		
	baz=290								
WRAK	Wrangell Islan	57.97	41	P	P	10 47 04.8	+2.8		
	baz=290								
S34M	Telegraph Cree	58.08	39	IAmb	IAmb	10 47 28.5			
	comp=Z,41nm,1.1s								
S34M	Telegraph Cree	58.08	39	P	P	10 47 05.2	+2.4		
	baz=290,SNR=8.9								
HYB	Hyderabad	58.17	268	eP	P	10 47 04.3	+0.2		
HYB				e		10 47 23.6			
WTLY	Watson Lake, Y	58.44	36	IAmb	IAmb	10 47 30.5			
	comp=Z,36nm,1.3s								
WTLY	Watson Lake, Y	58.44	36	P	P	10 47 07.8	+2.4		
	baz=291,SNR=6.7								
DLBC	Dease Lake	58.44	38	P	P	10 47 08.5	+3.0		
	baz=291,SNR=12								
V35K	Ketchikan	58.74	42	P	P	10 47 09.8	+2.4		
	baz=291								
T35M	Bob Quinn	58.85	40	P	P	10 47 10.9	+2.7		
	baz=291,SNR=17								
U35K	Hyder	59.36	41	P	P	10 47 15.1	+3.4		
	baz=292								
WRGLY	Wrigley	59.64	32	IAmb	IAmb	10 47 38.5			
	comp=Z,49nm,1.1s								
WRGLY	Wrigley	59.64	32	P	P	10 47 15.1	+1.6		
	baz=293,SNR=15								
KIRV	Kirov	60.01	323	LR	LR	11 14 24.2			
	comp=Z,302nm,21.3s,baz=66,slow=37								
KIRV	Kirov	60.01	323	c iP	P	10 47 16.1	0.0		
SPITS	Spitsbergen Ar	60.25	349	P	P	10 47 18.6	+1.1		
	comp=

APA *i* 10 57 12.3
APA *i* SS **SS** **10 59 50.5 -6.1**
APA pmax pmax
comp=Z,17nm,0.9s
APA MLR MLR
comp=Z,2µm,6.4s
KLMR Klimovskoe 63.51 328 *e*P **P** **10 47 39.0 -0.6**
KLMR pmax pmax
comp=Z,20nm,0.6s
YKAW3 Yellowknife Wh 63.56 30 P 10 47 40.6 +0.7
BELG Belogornoye 63.58 317 *d* iP **P** **10 47 40.2 +0.1**
BELG pmax pmax
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 63.60 30 P **P** **10 47 40.8 +0.6**
comp=Z,5.4nm,0.8s,baz=305,slow=7.5,SNR=38
YKA PKPPKP P'P'bc 11 16 35.0 -10
comp=Z,0.8nm,1.1s,baz=114,slow=2.1,SNR=5.1
comp=Z,5.4nm,0.8s
YKA Yellowknife Ar 63.60 30 P **P** **10 47 40.9 +0.8**
YKA Yellowknife Ar 63.60 30 P **P** **10 47 40.9 +0.8**
DZM Mont Dzumac 63.61 154 P **P** **10 47 42.0 +1.3**
comp=Z,36nm,0.9s,baz=25,slow=11,SNR=8.4
comp=Z,36nm,0.9s
YKAW1 Yellowknife Wh 63.65 30 P 10 47 41.0 +0.5
ARA0 ARCESS Array S 63.73 339 *e*P **P** **10 47 42.0 +1.1**
ARCES ARCESS Array B 63.73 339 P **P** **10 47 40.9 0.0**
comp=Z,5.0nm,0.5s,baz=59,slow=7.5,SNR=17
ARCES PP **PP** **10 50 04.9 +3.4**
comp=Z,8.5nm,1.0s,baz=60,slow=8.5,SNR=3.7
comp=Z,5.0nm,0.5s
ARCES ARCESS Array B 63.73 339 P **P** **10 47 41.3 +0.3**
ARCES ARCESS Array B 63.73 339 P **P** **10 47 41.3 +0.3**
ARCES pmax pmax
comp=Z,168nm,1.9s
TULEG Thule 64.84 7 *i* P **P** **10 47 48.5 +0.5**
TULEG IAmb IAmb 10 47 49.9
comp=Z,15nm,1.0s
NEEM North Greenlan 65.26 3 *i* P **P** **10 47 51.1 -0.1**
NEEM IAmb IAmb 10 47 53.6
comp=Z,21nm,1.1s
MOS Moscow 67.01 323 *e*P **P** **10 48 01.1 -1.2**
MOS *e**PP **pP** **10 48 21.9 -1.8**
MOS *e* 10 48 30.0
MOS *e* 10 50 28.1
MOS pmax pmax
comp=Z,35nm,1.0s
GNW Green Mountain 67.09 47 IAmb IAmb 10 48 28.8
comp=Z,64nm,1.4s
VRH Novokhopyorsk 67.35 318 *e*P **P** **10 48 03.8 -0.7**
VRH pmax pmax
comp=Z,23nm,0.6s
KULLO Kullorsuaq 67.72 5 *e*P **P** **10 48 04.4 -2.0**
KULLO IAmb IAmb 10 48 07.1
comp=Z,8.2nm,0.8s
LPSR Galich'ya Gora 68.07 320 *e*P **P** **10 48 08.9 -0.1**
LPSR pmax pmax
comp=Z,30nm,0.7s
MAK Makhachkala 68.26 308 *c* iP **P** **10 48 09.7 -0.7**
MAK *e**PP **pP** **10 48 31.6 -0.3**
MAK *e**SP **sP** **10 48 39.9 -1.1**
MAK *e* 10 50 42.2
MAK *e*PPP PPP 10 52 19.9
MAK *e*S **S** **10 57 02.9 -1.5**
MAK *e**SS **sS** **10 57 40.0 -1.4**
MAK *e*SS **SS** **11 01 29.5 +1.3**
MAK pmax pmax
comp=Z,170nm,1.3s
MAK MLR MLR
comp=Z,413nm,21.0s
COR Corvallis 68.34 50 P **P** **10 48 13.4 +2.6**
COR Corvallis 68.34 50 P **P** **10 48 13.4 +2.6**
COR pmax pmax
comp=Z,124nm,1.2s
COR Corvallis 68.34 50 P **P** **10 48 13.0 +2.2**
COR pP **PcP** **10 48 35.7 -0.1**
VORR Voronezh 68.43 319 *e*P **P** **10 48 10.9 -0.4**
VORR pmax pmax
comp=Z,40nm,0.3s
LTY Liberty 68.50 46 IAmb IAmb 10 48 37.0
comp=Z,50nm,1.3s
FIA1 FINESS Array S 68.56 332 P **P** **10 48 12.0 +0.1**
FINES FINESS Array B 68.56 332 P **P** **10 48 11.9 0.0**
comp=Z,13nm,0.7s,baz=38,slow=7.6,SNR=18
comp=Z,13nm,0.7s
FINES FINESS Array B 68.56 332 P **P** **10 48 12.4 +0.5**
FINES FINESS Array B 68.56 332 P **P** **10 48 12.4 +0.5**
B08A Colville Reser 68.68 45 P **P** **10 48 13.6 +0.6**
B08A IAmb IAmb 10 48 38.0
comp=Z,53nm,1.3s
VSR Storozhevoye 68.70 319 *e*P **P** **10 48 12.6 -0.4**
VSR pmax pmax
comp=Z,20nm,0.6s
VORD Divnogorie 68.77 318 *e*P **P** **10 48 12.0 -1.4**
VORD pmax pmax
comp=Z,10.0nm,0.4s
STKA Stephens Creek 68.82 180 P **P** **10 48 13.8 0.0**
comp=Z,16nm,0.7s,baz=343,slow=6.4,SNR=25
STKA LR LR 11 19 10.7
comp=Z,75nm,19.2s,baz=12,slow=36
comp=Z,16nm,0.7s
FORT Forrest 68.86 192 **P** **10 48 14.6 +0.6**
AKT Akhty 68.89 307 *e*P **P** **10 48 14.7 +0.2**
AKT *e**PP **pP** **10 48 35.2 -0.8**
AKT *e* 10 48 39.1
AKT *e* 10 50 49.6
AKT pmax pmax
comp=Z,20nm,0.5s
AKT MLR MLR
comp=Z,1µm,22.0s
H04A Detroit Lake 68.96 49 **P** **10 48 15.9 +1.0**
EPH Ephrata 69.07 46 IAmb IAmb 10 48 40.2
comp=Z,96nm,1.7s
MXC Moxie City 69.08 47 IAmb IAmb 10 48 41.0
comp=Z,67nm,1.4s
K02D Willamette Mer 69.10 52 IAmb IAmb 10 48 41.4
comp=Z,62nm,1.3s
BLKN Baker Lake 69.16 23 IAmb IAmb 10 48 17.0
comp=Z,34nm,0.9s
G05A Wamic 69.19 49 IAmb IAmb 10 48 47.0
comp=Z,79nm,1.3s
I04A Tendick Farm, 69.30 50 IAmb IAmb 10 48 42.3
comp=Z,90nm,1.2s
E07A Sunnyside 69.35 47 IAmb IAmb 10 48 43.5
comp=Z,110nm,1.7s
WIFE Three Sisters- 69.52 50 IAmb IAmb 10 48 44.2
comp=Z,77nm,1.1s
C09A Chrisman Ranch 69.58 45 IAmb IAmb 10 48 43.6
comp=Z,89nm,1.4s
G06A Carlson Farm, 69.60 48 IAmb IAmb 10 48 44.3
comp=Z,94nm,1.5s
BBOR Butler Butte 69.61 51 IAmb IAmb 10 48 44.7
comp=Z,47nm,1.3s
I05D Terrebonne, OR 69.66 49 IAmb IAmb 10 48 44.7
comp=Z,84nm,1.5s
F07A Phinny Hill Vi 69.66 47 IAmb IAmb 10 48 21.8
comp=Z,33nm,0.8s
NEW Newport 69.97 44 LR LR 11 16 46.4
comp=Z,42nm,21.8s,baz=314,slow=34
NEW Newport 69.97 44 IAmb IAmb 10 48 46.0
comp=Z,62nm,1.4s
L04D Klamath Falls 70.21 52 **P** **10 48 23.8 +1.1**
YBH Yreka Blue Hor 70.21 52 **P** **10 48 24.0 +1.4**
YBH IAmb IAmb 10 48 48.5
comp=Z,64nm,1.3s
YBH Yreka Blue Hor 70.21 52 P **P** **10 48 24.0 +1.4**
YBH pmax pmax
comp=Z,64nm,1.3s
J05D Fort Rock, OR 70.29 50 IAmb IAmb 10 48 49.1
comp=Z,94nm,1.2s
M02C Callahan 70.31 53 IAmb IAmb 10 48 49.3
comp=Z,51nm,1.2s
SUMG Summit 70.42 360 P **P** **10 48 24.0 +0.3**
SUMG IAmb IAmb 10 48 36.2
comp=Z,35nm,0.9s
SUMG Summit 70.42 360 P **P** **10 48 24.0 +0.3**
SUMG pmax pmax
comp=Z,35nm,0.9s
SUMG Summit 70.42 360 *i* P **P** **10 48 24.0 +0.3**
SUMG IAmb IAmb 10 48 27.0
comp=Z,28nm,1.2s
N02D Trinity Center 70.62 53 IAmb IAmb 10 48 51.1
comp=Z,63nm,1.2s
LNOR Lincton Mounta 70.64 47 IAmb IAmb 10 48 50.7
comp=Z,94nm,1.8s
KBZ Khabaz 70.70 311 P **P** **10 48 25.9 +0.5**
comp=Z,9.9nm,0.8s,baz=32,slow=4.4,SNR=11
comp=Z,9.9nm,0.8s
KBZ Khabaz 70.70 311 *c* *i* P **P** **10 48 26.2 +0.8**
KBZ pmax pmax
comp=Z,14nm,0.8s
KIV Kislovodsk 70.70 311 P **P** **10 48 25.2 -0.3**
KIV IAmb IAmb 10 49 19.5
comp=Z,72nm,0.9s
KIV Kislovodsk 70.70 311 ⇓P **P** **10 48 26.5 +1.0**
KIV Kislovodsk 70.70 311 *e*P **P** **10 48 26.9 +1.4**
KIV pmax pmax
comp=Z,35nm,1.0s
KIV MLR MLR
comp=Z,200nm,17.0s
WBK Wadi Bani Khal 70.84 284 P **P** **10 48 26.8 +0.2**
NUUG Nuugaatsiaq 70.97 5 *i* P **P** **10 48 24.5 -2.0**
NUUG IAmb IAmb 10 48 30.9
comp=Z,5.9nm,0.8s
O02D Mt. Diablo Mer 71.00 54 IAmb IAmb 10 48 53.4
comp=Z,49nm,1.1s
BANOM Banah 71.08 288 P **P** **10 48 29.4 +1.3**
SHME Shamm 71.14 289 P **P** **10 48 29.5 +1.2**
SNR=5.4
SMDO Samad 71.30 285 P **P** **10 48 29.9 +0.4**
MASF Masafi 71.49 288 P **P** **10 48 31.0 +0.4**
HATC Hat Creek Radi 71.50 53 IAmb IAmb 10 48 56.1
comp=Z,95nm,1.2s
GNI Garni 71.51 307 P **P** **10 48 30.7 +0.1**
HOQ Hoqain 71.58 286 P **P** **10 48 31.8 +0.7**
JMDO Jabal Madar 71.64 284 P **P** **10 48 31.7 +0.2**
UOSS Minazif 71.69 288 P **P** **10 48 31.4 -0.3**
UOSS IAmb IAmb 10 48 33.2
comp=Z,26nm,0.6s
UOSS Minazif 71.69 288 P **P** **10 48 32.5 +0.9**
BMO Blue Mountains 71.78 47 IAmb IAmb 10 48 57.4
comp=Z,53nm,1.3s
HATD Hatta, Dubai 71.81 288 P **P** **10 48 33.6 +1.1**
SNR=5.9
SOHO SOHO 71.88 287 P **P** **10 48 33.0 +0.2**
J08A Circle Bar Ran 71.93 49 IAmb IAmb 10 48 58.8
comp=Z,80nm,1.2s
MNRC McLaughlin Min 71.94 55 IAmb IAmb 10 48 59.1
comp=Z,86nm,1.1s
ASHO Ashiyiah 71.94 288 P **P** **10 48 33.4 +0.1**
BSY Bisya 72.13 285 P **P** **10 48 35.4 +1.0**
SUTB Sutter Butte 72.17 54 IAmb IAmb 10 48 59.3
comp=Z,79nm,1.5s
ORV Oroville 72.17 54 IAmb IAmb 10 48 59.2
comp=Z,63nm,1.3s
MNK Minsk 72.25 326 *i* P **P** **10 48 36.0 +1.5**
comp=E,20nm,0.9s
MNK *i* P **P** **10 48 36.0 +1.5**
comp=N,10.0nm,0.8s
MNK *i* P **P** **10 48 36.0 +1.5**
comp=Z,14nm,0.9s,baz=50
MNK *i* pP **pP** **10 48 56.4 +0.1**
MNK *i* sP **sP** **10 49 04.7 -0.6**
MNK *i* PP **PP** **10 51 16.7 +1.3**
MNK *i* PPP PPP 10 53 00.9
MNK *i* S **S** **10 57 52.5 +1.9**
MNK *i* sS **SKSac** **10 58 29.7 -1.5**
MNK *i* SS **SS** **11 02 36.3 +7.4**
MNK *i* SSS SSS 11 06 18.6
MNK *i* LQ LQ 11 15 30.0
MNK *i* LR LR 11 19 31.9
MNK *i* LRM MLR 11 21 22.0
comp=E,239nm,16.8s
MNK *i* LRM MLR 11 21 37.2
comp=N,159nm,17.0s
MNK *i* LRM MLR 11 22 11.1
comp=Z,214nm,16.6s
MNK Minsk 72.25 326 *i* P **P** **10 48 36.0 +1.5**
MNK *i* 10 48 53.8
MNK *i* *PP **pP** **10 48 56.3 +0.1**
MNK *i* *SP **sP** **10 49 04.7 -0.6**
MNK *i* 10 51 16.7
MNK *i* PPP PPP 10 53 00.8
MNK *i* S **S** **10 57 52.4 +1.9**
MNK *i* *SS **SKSac** **10 58 29.7 -1.5**
MNK *i* SS **SS** **11 02 36.2 +7.4**
MNK pmax pmax
comp=N,10.0nm,0.8s
MNK pmax pmax
comp=Z,14nm,0.9s
MNK pmax pmax
comp=E,20nm,0.9s
MNK MLR MLR
comp=E,239nm,17.0s
MNK MLR MLR
comp=N,159nm,17.0s
MNK MLR MLR
comp=Z,214nm,17.0s
WVOR Wild Horse Val 72.35 50 IAmb IAmb 10 49 01.2
comp=Z,44nm,1.2s
PLID Pearl Lake 72.40 46 IAmb IAmb 10 49 00.8
comp=Z,58nm,1.5s
MHTO MHTO 72.51 283 P **P** **10 48 36.7 +0.1**
ALNE Al Ain 72.52 287 P **P** **10 48 37.2 +0.5**
ASUD Al Ashush, Dub 72.53 288 P **P** **10 48 37.0 +0.3**
MSO Missoula 72.56 44 IAmb IAmb 10 49 01.5
comp=Z,50nm,1.4s
SAQQ Saqqaq 72.56 5 *i* P **P** **10 48 37.1 +1.1**
SAQQ IAmb IAmb 10 48 40.1
comp=Z,60nm,1.6s
GDH Godhavn 73.19 5 *i* P **P** **10 48 39.6 -0.2**
GDH IAmb IAmb 10 48 40.9
comp=Z,7.5nm,0.7s
ANN Anapa 73.31 314 *e*P **P** **10 48 43.4 +2.4**
ANN *e**PP **pP** **10 49 03.4 +0.7**
ANN pmax pmax
comp=Z,160nm,1.2s
MHC Mount Hamilton 73.32 56 IAmb IAmb 10 49 06.8
comp=Z,54nm,1.3s
NWAO Narrogin (SRO) 73.41 201 LR LR 11 21 50.2
comp=Z,41nm,20.5s,baz=292,slow=36
NWAO Narrogin (SRO) 73.41 201 P **P** **10 48 41.2 -0.2**
NWAO IAmb IAmb 10 49 06.6
comp=Z,114nm,1.7s
NWAO Narrogin (SRO) 73.41 201 P **P** **10 48 41.3 -0.2**
NWAO pmax pmax
comp=Z,115nm,1.7s
PAHR Pah Rah Range 73.44 53 IAmb IAmb 10 49 07.5
comp=Z,57nm,1.1s
MFID Camas Ranch 73.48 48 IAmb IAmb 10 49 07.7
comp=Z,57nm,1.2s
FFC Flin Flon 73.50 33 P **P** **10 48 42.4 +0.4**
FFC IAmb IAmb 10 49 06.4
comp=Z,54nm,1.4s
FFC Flin Flon 73.50 33 P **P** **10 48 42.4 +0.4**
FFC pmax pmax
comp=Z,54nm,1.4s
FFC Flin Flon 73.50 33 P **P** **10 48 42.5 +0.5**
FFC PcP **PcP** **10 48 57.9 +0.2**
FFC x x 10 49 02.1
FFC pP **pP** **10 49 05.2 +1.6**
PNTR Pine Nut 73.65 53 IAmb IAmb 10 49 09.2
comp=Z,86nm,1.5s
NC405 NORSAR Array S 73.71 337 IAmb IAmb 10 49 47.5
comp=Z,44nm,1.1s
CMB Columbia Colle 73.75 54 IAmb IAmb 10 49 09.2
comp=Z,85nm,1.3s
FCC Fort Churchill 73.78 27 IAmb IAmb 10 48 45.0
comp=Z,42nm,1.1s
HFS Hagfors 73.83 336 P **P** **10 48 44.2 +0.5**
comp=Z,5.6nm,0.5s,baz=57,slow=5.5,SNR=14
HFS LR LR 11 23 30.5
comp=Z,535nm,19.1s,baz=40,slow=38
comp=Z,5.6nm,0.5s
NC204 NORSAR Array S 73.88 338 IAmb IAmb 10 49 30.8
comp=Z,84nm,1.4s
NB2 NORSAR Subarra 73.92 337 P **P** **10 48 44.4 +0.1**
comp=Z,16nm,0.7s,baz=39,slow=6.2
NB2 NORSAR Subarra 73.92 337 P **P** **10 48 44.4 +0.1**
NB2 AMP 10 48 44.4
comp=Z,16nm,0.7s
NOA NORSAR Array B 73.92 337 P **P** **10 48 44.6 +0.3**
comp=Z,5.9nm,0.6s,baz=38,slow=5.9,SNR=23
NOA LR LR 11 25 10.5
comp=Z,200nm,19.0s,baz=40,slow=39
comp=Z,5.9nm,0.6s
AK03 Malin Array Si 74.05 322 P **P** **10 48 44.3 -0.9**
AKASG Malin Array Be 74.06 322 P **P** **10 48 45.0 -0.2**
comp=Z,14nm,0.5s,baz=49,slow=5.9,SNR=46
comp=Z,14nm,0.5s
AKBB Malin Array Si 74.06 322 P **P** **10 48 45.2 -0.1**
AKBB IAmb IAmb 10 48 55.5
comp=Z,26nm,0.7s
AKBB Malin Array Si 74.06 322 *c* *e*P **P** **10 48 45.6 +0.4**
AKBB Malin Array Si 74.06 322 P **P** **10 48 45.0 -0.2**
AK23 Malin Array Si 74.07 322 P **P** **10 48 44.3 -1.0**
AK01 Malin Array Si 74.07 322 P **P** **10 48 44.7 -0.6**
KIEV Kiev 74.07 322 P **P** **10 48 45.1 -0.2**
KIEV Kiev 74.07 322 ⇑P **P** **10 48 45.7 +0.4**
KIEV Kiev 74.07 322 P **P** **10 48 45.7 +0.4**
KIEV Kiev 74.07 322 P **P** **10 48 45.0 -0.3**
comp=Z,146nm,0.8s
AK04 Malin Array Si 74.08 322 P **P** **10 48 44.3 -1.0**
AK09 Malin Array Si 74.09 322 P **P** **10 48 45.1 -0.3**
AK08 Malin Array Si 74.09 322 P **P** **10 48 45.1 -0.3**
AK22 Malin Array Si 74.10 322 P **P** **10 48 45.0 -0.5**
AK02 Malin Array Si 74.10 322 P **P** **10 48 45.0 -0.5**
EGMT Eagleton 74.10 41 IAmb IAmb 10 49 10.8
comp=Z,67nm,1.1s
AK21 Malin Array Si 74.10 322 P **P** **10 48 45.0 -0.5**
AK11 Malin Array Si 74.10 322 P **P** **10 48 45.1 -0.4**
AK10 Malin Array Si 74.11 322 P **P** **10 48 45.1 -0.5**
AK15 Malin Array Si 74.11 322 P **P** **10 48 44.8 -0.8**
AK05 Malin Array Si 74.12 322 P **P** **10 48 44.9 -0.7**
AK18 Malin Array Si 74.12 322 P **P** **10 48 44.9 -0.7**
AK12 Malin Array Si 74.13 322 P **P** **10 48 44.9 -0.8**
AK16 Malin Array Si 74.14 322 P **P** **10 48 45.0 -0.7**
AK20 Malin Array Si 74.14 322 P **P** **10 48 45.0 -0.7**
AK06 Malin Array Si 74.15 322 P **P** **10 48 45.0 -0.8**
BBGB Big Mountain B 74.15 56 IAmb IAmb 10 49 12.0
comp=Z,81nm,1.2s
AK19 Malin Array Si 74.15 322 P **P** **10 48 45.0 -0.8**
AK17 Malin Array Si 74.15 322 P **P** **10 48 45.6 -0.2**
AK14 Malin Array Si 74.16 322 P **P** **10 48 45.1 -0.7**
AK07 Malin Array Si 74.17 322 P **P** **10 48 45.0 -0.9**
AK13 Malin Array Si 74.20 322 P **P** **10 48 45.2 -0.8**
BOZ Bozeman (W) 74.58 44 IAmb IAmb 10 49 13.9
comp=Z,60nm,1.1s
MI28 Mi28,Pidlybu 74.66 323 P **P** **10 48 47.6 -1.1**
PKD Bear Valley Ra 74.84 56 IAmb IAmb 10 49 15.6
comp=Z,92nm,1.4s
NVAR Mina Array Bea 74.86 53 P **P** **10 48 52.1 +1.6**
comp=Z,15nm,0.7s,baz=285,slow=5.7,SNR=83
NVAR pP **pP** **10 49 14.9 +2.8**
comp=Z,26nm,1.0s,baz=286,slow=6.0,SNR=10.0
comp=Z,15nm,0.7s
RNPP9 Sopachiv 75.19 324 P **P** **10 48 51.9 +0.2**
RNPP8 Varash 75.25 324 P **P** **10 48 52.3 +0.2**
LUBAR Lubar, Ukraine 75.28 322 P **P** **10 48 52.5 +0.2**
YHL Hebgen Lake 75.29 45 IAmb IAmb 10 49 18.5
comp=Z,59nm,1.3s
RNPP5 Staryi Chortor 75.31 324 P **P** **10 48 52.6 +0.1**
YHB Horse Butte 75.34 45 IAmb IAmb 10 49 18.8
comp=Z,68nm,1.3s
YMR Madison River 75.52 45 IAmb IAmb 10 49 20.0
comp=Z,77nm,1.4s
SFJD Kangerlussuaq 75.62 5 LR LR 11 26 52.7
comp=Z,75nm,18.4s,baz=352,slow=39
SFJD Kangerlussuaq 75.62 5 *i* P **P** **10 48 54.4 +0.4**
SFJD IAmb IAmb 10 48 56.8
comp=Z,12nm,0.9s
YNR Norris Junctio 75.65 44 IAmb IAmb 10 49 22.0
comp=Z,62nm,1.4s
DSP Deep Springs 75.69 54 IAmb IAmb 10 49 21.0
comp=Z,71nm,1.2s
YPP Pitchstone Pla 75.86 45 IAmb IAmb 10 49 22.9
comp=Z,55nm,1.5s
YMP Mirror Lake Pl 75.93 44 IAmb IAmb 10 49 22.6
comp=Z,73nm,1.3s
SHAO Shalim 76.00 282 P **P** **10 48 57.7 +0.8**
FLWY Flagg Ranch 76.03 45 IAmb IAmb 10 49 23.7
comp=Z,107nm,1.4s
SORM Soroca 76.16 321 ⇓P **P** **10 48 57.9 +0.5**
SORM Soroca 76.16 321 P **P** **10 48 57.8 +0.5**
SORM Soroca 76.16 321 P **P** **10 48 57.8 +0.5**
ARPR Arapgir-MALATY 76.17 309 IAmb IAmb 10 49 10.7
comp=Z,34nm,0.7s
RLMT Red Lodge 76.18 43 IAmb IAmb 10 49 23.6
comp=Z,89nm,1.5s
MOOW Moose Ponds 76.22 45 IAmb IAmb 10 49 24.2
comp=Z,76nm,1.4s
SNOW Snow King Moun 76.39 45 IAmb IAmb 10 49 25.2
comp=Z,51nm,1.2s
FRB Frobisher Bay 76.52 13 LR LR 11 26 56.9
comp=Z,123nm,19.0s,baz=349,slow=39
AHID Auburn Hatcher 76.63 46 IAmb IAmb 10 49 25.9
comp=Z,54nm,1.4s
DGMT Dagmar 76.66 39 IAmb IAmb 10 49 25.1
comp=Z,87nm,1.1s
DMTO DMTO 76.70 282 P **P** **10 49 00.7 -0.3**
DOK Doka 76.82 283 P **P** **10 49 01.0 -0.6**
SNR=7.0
CLC China Lake 76.85 55 IAmb IAmb 10 49 27.1
comp=Z,64nm,1.3s
S11A Rachel 76.95 53 IAmb IAmb 10 49 28.1
comp=Z,92nm,1.2s
LRMC Laurel Mtn Rad 77.00 55 IAmb IAmb 10 49 27.9
comp=Z,47nm,1.2s
TPNV Topopah Spring 77.05 53 IAmb IAmb 10 49 28.5
comp=Z,85nm,1.3s
HWUT Hardware Ranch 77.08 47 IAmb IAmb 10 49 28.9
comp=Z,99nm,1.2s
CCCA Chr Cany lake 77.18 55 IAmb IAmb 10 49 29.1
comp=Z,108nm,1.4s
DUG Dugway, Tooele 77.21 49 IAmb IAmb 10 49 29.6
comp=Z,96nm,1.4s
GWY Greenwater Val 77.24 54 IAmb IAmb 10 49 29.3
comp=Z,110nm,1.4s
BORG Borgarnes 77.38 352 LR LR 11 24 52.7
comp=Z,124nm,18.8s,baz=37,slow=37
PDAR Pinedale Array 77.51 45 P **P** **10 49 06.2 +0.8**
comp=Z,9.8nm,0.7s,baz=272,slow=2.1,SNR=57
PDAR LR LR 11 25 55.5
comp=Z,12nm,18.1s,baz=324,slow=38
comp=Z,9.8nm,0.7s
PDAR Pinedale Array 77.51 45 P **P** **10 49 05.8 +0.4**
PRN Pahroc Range 77.54 52 IAmb IAmb 10 49 31.4
comp=Z,54nm,1.2s
CTU Camp Tracy 77.54 48 IAmb IAmb 10 49 31.1
comp=Z,55nm,1.4s
GSC Goldstone, Bar 77.68 55 IAmb IAmb 10 49 31.7
comp=Z,46nm,1.2s
BFSC Mount Baldy Ra 77.75 56 IAmb IAmb 10 49 32.0
comp=Z,54nm,1.3s
KWP Kalwaria Pacla 77.89 324 *e*P **P** **10 49 07.9 +0.8**
MPU Maple Canyon 78.03 49 IAmb IAmb 10 49 34.1
comp=Z,86nm,1.4s
BURAR Bucovina Array 78.08 322 P **P** **10 49 08.7 +0.5**
BURAR Bucovina Array 78.08 322 ⇓P **P** **10 49 09.1 +0.8**
BURAR Bucovina Array 78.08 322 P **P** **10 49 09.0 +0.8**
TESR Tescani 78.10 320 ⇑P **P** **10 49 09.4 +1.1**
ABTO Aybut 78.19 283 P **P** **10 49 08.5 -0.9**
CFR Carcaliu 78.22 318 ⇓P **P** **10 49 09.9 +0.9**
CFR Carcaliu 78.22 318 P **P** **10 49 09.8 +0.9**
BSUT Blindstream Ca 78.22 48 IAmb IAmb 10 49 35.4
comp=Z,64nm,1.7s
ELS Elsinore Mount 78.26 57 IAmb IAmb 10 49 35.8
comp=Z,82nm,1.5s
TPGR Topolog 78.28 318 ⇑P **P** **10 49 09.9 +0.6**
MTPC Mountain Pass 78.38 54 IAmb IAmb 10 49 35.9
comp=Z,81nm,1.4s
VRI Vrincioaia 78.50 320 ⇓P **P** **10 49 12.1 +1.5**
VRI Vrincioaia 78.50 320 P **P** **10 49 12.0 +1.5**
CCUT Cedar City 78.51 51 IAmb IAmb 10 49 37.0
comp=Z,52nm,1.2s
PLOR Plostina 78.55 320 ⇑P **P** **10 49 11.4 +0.5**
PLOR Plostina 78.55 320 P **P** **10 49 11.3 +0.5**
BR131 Keskin Array S 78.64 311 *ce*P **P** **10 49 12.3 +0.7**
BRTR Keskin Array B 78.64 311 P **P** **10 49 11.9 +0.3**
comp=Z,3.0nm,0.7s,baz=78,slow=4.4,SNR=10
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 78.64 311 P **P** **10 49 11.6 0.0**
BRTR Keskin Array B 78.64 311 *i* P **P** **10 49 14.0 +2.4**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
V12A Nelson 78.69 54 IAmb IAmb 10 49 37.7
comp=Z,81nm,1.5s
OJC Ojcow 78.79 326 *e*P **P** **10 49 13.1 +1.0**
OZUR 78.82 320 ⇓P **P** **10 49 14.2 +1.8**
DNR Dunn Ranch,Anz 78.84 56 IAmb IAmb 10 49 38.3
comp=Z,47nm,1.1s
BOSR Bodos 78.90 320 ⇓P **P** **10 49 14.4 +1.6**
LCMT Little Creek M 78.92 52 IAmb IAmb 10 49 39.2
comp=Z,69nm,1.3s
PFO Pinyon Flats O 78.92 56 P **P** **10 49 13.9 +0.6**
PFO IAmb IAmb 10 49 38.7
comp=Z,69nm,1.4s
PFO Pinyon Flats O 78.92 56 *de*P **P** **10 49 14.2 +1.0**

PFO pmax pmax
comp=Z,64nm,2.1s
PFO Pinyon Flats O 78.92 56 P P 10 49 13.9 +0.6
PFO PcP **PcP 10 49 21.4 -0.3**
PFO pP **pP 10 49 36.3 +1.2**
CPE Camp Elliot 78.93 57 lAmb lAmb 10 49 38.6
comp=Z,75nm,1.4s
MTPU Mount Pierson 78.93 50 lAmb lAmb 10 49 39.9
comp=Z,58nm,1.3s
PMD Palm Desert 78.96 56 lAmb lAmb 10 49 38.5
comp=Z,54nm,1.3s
DPP Dos Picos Cty 78.97 57 lAmb lAmb 10 49 38.7
comp=Z,56nm,1.3s
DANC Danby, Needles 79.01 55 lAmb lAmb 10 49 39.5
comp=Z,83nm,1.2s
P18A Preston Nutter 79.11 48 lAmb lAmb 10 49 40.2
comp=Z,92nm,1.4s
DOPR Dopca 79.11 320 ⇑P **P 10 49 15.5 +1.6**
NIE Niedzica 79.15 325 *e*P **P 10 49 15.9 +1.9**
MLR Muntele Rosu 79.15 320 ⇑P **P 10 49 15.6 +1.4**
MLR Muntele Rosu 79.15 320 P **P 10 49 15.6 +1.4**
BORC Borrego Spring 79.16 56 lAmb lAmb 10 49 39.8
comp=Z,51nm,1.4s
SRU San Rafael Swe 79.27 49 lAmb lAmb 10 49 40.6
comp=Z,82nm,1.2s
ULM Lac du Bonnet 79.30 33 P **P 10 49 14.9 +0.1**
comp=Z,16nm,0.9s,baz=305,slow=5.6,SNR=17
ULM LR LR 11 27 07.2
comp=Z,31nm,19.5s,baz=10.0,slow=38
comp=Z,16nm,0.9s
ULM Lac du Bonnet 79.30 33 *d* P **P 10 49 14.8 0.0**
BAR Barrett 79.35 57 lAmb lAmb 10 49 40.9
comp=Z,74nm,1.4s
IRM Iron Mountain 79.46 55 lAmb lAmb 10 49 41.7
comp=Z,52nm,1.2s
BC3 Big Chuckawall 79.56 56 lAmb lAmb 10 49 42.2
comp=Z,67nm,1.4s
VOIR 79.65 320 ⇓P **P 10 49 18.6 +1.7**
VOIR 79.65 320 P **P 10 49 18.6 +1.7**
RSSD Black Hills 79.66 42 P **P 10 49 17.3 +0.2**
RSSD lAmb lAmb 10 49 43.0
comp=Z,95nm,1.7s
RSSD Black Hills 79.66 42 P **P 10 49 17.3 +0.2**
RSSD pmax pmax
comp=Z,95nm,1.7s
MARR Marisel-Cluj 79.76 322 ⇓P **P 10 49 19.0 +1.5**
CCX Cicese 79.85 58 lAmb lAmb 10 49 43.4
comp=Z,80nm,1.1s
KSP Ksiaz 79.85 328 *e*P **P 10 49 18.9 +1.1**
YUH Yuha Desert 79.87 57 lAmb lAmb 10 49 43.8
comp=Z,63nm,1.3s
U15A North Rim 79.88 52 lAmb lAmb 10 49 44.8
comp=Z,99nm,1.3s
STEB Steborice 79.89 327 *e*P **P 10 49 18.6 +0.6**
STEB *e*PCP **PcP 10 49 27.4 +2.0**
ARR Arges 79.91 320 ⇑P **P 10 49 20.0 +1.7**
O20A White River Ci 79.96 47 lAmb lAmb 10 49 44.1
comp=Z,66nm,1.3s
MORC Moravsky Berou 80.11 327 ⇓P **P 10 49 20.5 +1.3**
MORC Moravsky Berou 80.11 327 P **P 10 49 20.5 +1.3**
MORC Moravsky Berou 80.11 327 *e*P **P 10 49 20.2 +0.9**
MORC *e* 10 49 51.8
BLYC Blythe 80.11 55 lAmb lAmb 10 49 45.3
comp=Z,65nm,1.2s
CHVC Chvalec 80.14 328 *e*P **P 10 49 20.8 +1.4**
CHVC Chvalec 80.14 328 *e*P **P 10 49 20.8 +1.4**
DPC Dobruska-Polom 80.21 328 *e*P **P 10 49 21.2 +1.4**
DPC *e*PCP **PcP 10 49 27.7 +0.9**
DPC Dobruska-Polom 80.21 328 *e*P **P 10 49 21.2 +1.4**
DPC *e* 10 49 27.7
HAYD Hayden 80.27 46 lAmb lAmb 10 49 47.3
comp=Z,91nm,1.6s
PSZ Piszkesteto 80.42 324 lAmb lAmb 10 49 54.7
comp=Z,53nm,1.3s
PSZ Piszkesteto 80.42 324 ⇑P **P 10 49 21.6 +0.7**
PSZ Piszkesteto 80.42 324 P **P 10 49 21.6 +0.7**
RAYN Ar Rayn 80.52 292 P **P 10 49 21.3 -0.6**
RAYN Ar Rayn 80.52 292 P **P 10 49 21.9 0.0**
RAYN Ar Rayn 80.52 292 P **P 10 49 21.8 -0.1**
PV21 Cone Mtn., Par 80.55 48 lAmb lAmb 10 49 47.8
comp=Z,75nm,1.2s
EPLO Experimental L 80.66 33 lAmb lAmb 10 49 23.2
comp=Z,33nm,0.8s
PV22 Blue Mesa, Par 80.68 48 lAmb lAmb 10 49 48.4
comp=Z,72nm,1.2s
FLTG Flechtingen 80.73 332 *e*P **P 10 49 22.7 +0.3**
comp=Z,31nm,1.3s,baz=36,slow=5.3
FLTG *es*P **sP 10 49 54.3 +0.8**
baz=38,slow=5.2
VTX Valle De La Tr 80.73 58 lAmb lAmb 10 49 48.8
comp=Z,73nm,1.3s
JAVC Velka Javorina 80.73 326 *e*P **P 10 49 24.4 +1.8**
JAVC *e* 10 49 56.3
AGMN Agassiz Nation 80.74 35 lAmb lAmb 10 49 46.7
comp=Z,50nm,1.4s
BRG Berggiesshubel 80.80 329 *e*P **P 10 49 24.1 +1.3**
comp=Z,177nm,2.6s,baz=36,slow=5.3
BRG Berggiesshubel 80.80 329 *e*P **P 10 49 24.2 +1.3**
BRG Amp 10 49 25.6
comp=Z,9.7nm,0.9s
BRG Berggiesshubel 80.80 329 P P 10 49 33.4 +11
BRG Amp 10 49 34.1
comp=Z,10nm,0.8s
BRG pP pP 10 49 48.5 +3.6
BRG Amp 10 49 49.3
comp=Z,12nm,1.0s
PVCC Panska Ves 80.81 329 *e*P **P 10 49 24.9 +2.0**
PVCC Panska Ves 80.81 329 *e*P **P 10 49 24.9 +2.0**
PV07 Paradox Valley 80.82 48 lAmb lAmb 10 49 49.2
comp=Z,61nm,1.3s
GZR Gura Zlata 80.83 321 ⇑P **P 10 49 24.3 +1.1**
GZR Gura Zlata 80.83 321 P **P 10 49 24.3 +1.1**
CLL Collm 80.84 330 *i* P **P 10 49 23.8 +0.7**
CLL *i* *SP **sP 10 49 54.9 +0.8**
CLL pmax pmax
comp=Z,41nm,1.1s
CLL Collm 80.84 330 *i* P **P 10 49 23.8 +0.7**
comp=Z,41nm,1.1s
CLL *e*pP **pP 10 49 45.0 -0.1**
CLL *i* sP **sP 10 49 54.9 +0.8**
comp=Z,41nm,1.1s
CLL Collm 80.84 330 *e*P **P 10 49 23.6 +0.6**
comp=Z,22nm,0.9s,baz=36,slow=5.3
VRAC Vranov 80.87 327 ⇓P **P 10 49 24.2 +0.9**
VRAC Vranov 80.87 327 P **P 10 49 24.2 +0.9**
VRAC Vranov 80.87 327 *e*P **P 10 49 24.4 +1.1**
VRAC *e* 10 49 56.0
PV15 Paradox Valley 80.98 48 lAmb lAmb 10 49 50.1
comp=Z,76nm,1.4s
Y14A Wickenburg 80.99 54 lAmb lAmb 10 49 50.0
comp=Z,83nm,1.4s
PV01 Paradox Valley 81.07 49 lAmb lAmb 10 49 50.6
comp=Z,96nm,1.4s
SMOL Smolenice 81.10 326 *e*P **P 10 49 26.8 +2.3**
SMOL pmax pmax
comp=Z,6.0nm,0.7s
ASSE Asse, Remlinge 81.10 332 *e*pP pP 10 49 45.6 -0.8
baz=34,slow=5.3
KRUC Moravsky 81.14 327 *e*P **P 10 49 25.1 +0.4**
KRUC *e* 10 49 57.3
113A Mohawk Valley, 81.22 55 lAmb lAmb 10 49 51.0
comp=Z,61nm,1.4s
PRU Pruhonice 81.23 328 *e*P **P 10 49 26.7 +1.5**
PRU *e*PCP **PcP 10 49 34.5 +3.3**
PRU Pruhonice 81.23 328 *e*P **P 10 49 26.7 +1.5**
BZS Buzias 81.25 322 ⇓P **P 10 49 26.5 +1.1**
BZS Buzias 81.25 322 P **P 10 49 26.4 +1.1**
MODS Modra-Piesok 81.27 326 *e*P **P 10 49 27.8 +2.4**
MODS *e* 10 49 58.5
MODS pmax pmax
comp=Z,84nm,1.6s
MODS Modra-Piesok 81.27 326 *e*P **P 10 49 27.8 +2.4**
MODS *e* 10 49 58.5
PLVB Pleven 81.29 319 ⇑P **P 10 49 27.3 +1.8**
HERR Herculane 81.37 321 ⇓P **P 10 49 26.9 +0.9**
CLZ Clausthal 81.44 332 *es*P sP 10 49 58.8 +1.4
baz=38,slow=5.2
BAND Balkesir-Ban 81.46 315 ⇑P **P 10 49 27.9 +1.3**
X16A Lo Mia Camp, P 81.69 53 lAmb lAmb 10 49 54.3
comp=Z,60nm,1.3s
ISCO Idaho Springs 81.69 46 lAmb lAmb 10 49 54.2
comp=Z,63nm,1.6s
MMAI Mount Meron Ar 81.78 305 P **P 10 49 28.9 +0.4**
comp=Z,4.8nm,0.6s,baz=40,slow=14,SNR=6.4
comp=Z,4.8nm,0.6s

MDVR Moldovita 81.80 321 ⇑P **P 10 49 28.4 +0.1**
ZVC Zvikov 81.80 328 *e*P **P 10 49 29.7 +1.5**
MOX Moxa 81.91 330 *e*P **P 10 49 30.1 +1.3**
comp=Z,27nm,1.4s,baz=36,slow=5.3
IBBN Ibbenburen 82.03 333 *e*P **P 10 49 30.7 +1.4**
comp=Z,77nm,1.5s,baz=36,slow=5.3
SUSD Miller 82.06 39 lAmb lAmb 10 49 54.3
comp=Z,94nm,1.2s
PIX Pinacate 82.18 56 lAmb lAmb 10 49 56.9
comp=Z,106nm,1.6s
RONA Rosalia, Austr 82.21 326 *i* P **P 10 49 31.6 +1.1**
comp=Z,35nm,1.9s
CKRC Cesky Krumlov 82.22 328 *e*P **P 10 49 31.5 +1.0**
CKRC *ex* x 10 49 53.1
CKRC Cesky Krumlov 82.22 328 *e*P **P 10 49 31.5 +1.0**
CKRC *e* 10 49 53.1
MANZ Manzenberg 82.23 330 *e*P **P 10 49 32.0 +1.5**
comp=Z,3.1nm,0.9s,baz=36,slow=5.3
CONA Conrad Observa 82.23 326 *i* P **P 10 49 31.6 +1.0**
comp=Z,21nm,1.5s
KHC Kasperske Hory 82.29 328 *e*P **P 10 49 31.0 +0.2**
KHC *e*pP **pP 10 49 53.0 +0.1**
KHC Kasperske Hory 82.29 328 *e*P **P 10 49 31.0 +0.2**
KHC *e* 10 49 53.0
F33A 5 Mile Ranch, 82.34 37 lAmb lAmb 10 49 55.8
comp=Z,79nm,1.3s
214A Organ Pipe Nat 82.36 56 lAmb lAmb 10 49 58.3
comp=Z,130nm,1.9s
ROTZ Rotzenmuhle 82.36 330 *e*P **P 10 49 32.8 +1.6**
baz=36,slow=5.3
UBBA Unterbreizbach 82.40 331 *e*P **P 10 49 31.7 +0.6**
comp=Z,65nm,1.8s,baz=36,slow=5.3
GEC2 GERESS Array S 82.46 328 *e*P **P 10 49 32.5 +0.7**
comp=Z,34nm,1.3s,baz=36,slow=5.3
GEC2 *e*pP **pP 10 49 54.1 +0.2**
baz=34,slow=5.3
GEC2 *es*P **sP 10 50 03.9 +1.0**
baz=38,slow=5.2
GERES GERESS Array B 82.46 328 P **P 10 49 32.0 +0.2**
comp=Z,3.7nm,0.5s,baz=38,slow=7.4,SNR=12
comp=Z,3.7nm,0.5s
X18A Snowflake 82.56 52 lAmb lAmb 10 49 59.5
comp=Z,88nm,1.6s
WET Wettzell 82.57 329 *e*P **P 10 49 32.7 +0.4**
comp=Z,30nm,1.3s,baz=36,slow=5.3
WET *es*P **sP 10 50 04.9 +1.5**
baz=38,slow=5.2
BOVS Bovan 82.62 320 ⇓P **P 10 49 32.9 +0.3**
GRF Grafenberg Arr 82.82 330 *e*P **P 10 49 35.3 +1.8**
comp=Z,41nm,1.1s,baz=36,slow=5.3
EKA Eskdalemuir Ar 82.87 340 P **P 10 49 34.3 +0.7**
comp=Z,7.0nm,0.7s,baz=31,slow=4.4,SNR=11
EKA LR LR 11 29 18.9
comp=Z,198nm,19.1s,baz=6.0,slow=38
comp=Z,7.0nm,0.7s
ARSA Arzberg 82.89 326 *e*P **P 10 49 35.0 +1.0**
comp=Z,9.8nm,1.3s
EYMN Ely 82.94 33 lAmb lAmb 10 49 59.2
comp=Z,60nm,1.4s
MOA Molln 82.99 327 *e*P **P 10 49 35.0 +0.6**
comp=Z,14nm,1.2s
MOA Molln 82.99 327 *e*P **P 10 49 36.2 +1.7**
comp=Z,18nm,1.2s,baz=36,slow=5.3
BIOA Bad Ischl, Aus 83.38 327 *i* P **P 10 49 37.1 +0.6**
comp=Z,12nm,0.7s
DSZ Denniston Nort 83.44 158 P **P 10 49 37.5 +0.9**
DSZ lAmb lAmb 10 49 39.1
comp=Z,27nm,0.7s
TUC Tucson 83.46 54 P **P 10 49 37.8 +0.6**
TUC lAmb lAmb 10 50 04.0
comp=Z,87nm,1.6s
TUC Tucson 83.46 54 P **P 10 49 37.8 +0.6**
TUC Tucson 83.46 54 P **P 10 49 38.2 +1.0**
TUC pP **pP 10 50 01.1 +1.8**
GROS Grobnik 83.50 326 *i* P **P 10 49 37.7 +0.5**
PERS Pernice 83.54 326 *e*P **P 10 49 37.3 -0.1**
SOKA Soboth 83.55 326 *e*P **P 10 49 37.8 +0.4**
comp=Z,25nm,1.1s
ECSD EROS Data Cent 83.73 38 lAmb lAmb 10 50 03.0
comp=Z,51nm,1.2s
OBKA Obir 83.89 326 *e*PcP **P 10 49 40.7 +1.6**
comp=Z,9.7nm,1.3s
OBKA Obir 83.89 326 *e*P **P 10 49 40.9 +1.8**
comp=Z,6.6nm,0.9s,baz=36,slow=5.3
E38A The Farm, Brul 83.94 34 lAmb lAmb 10 50 04.0
comp=Z,41nm,0.8s
KBA Koelnbreinsper 83.98 327 *e*PcP **P 10 49 40.9 +1.1**
comp=Z,8.6nm,0.8s
KBA Koelnbreinsper 83.98 327 *e*P **P 10 49 41.7 +2.0**
comp=Z,17nm,0.9s,baz=36,slow=5.3
KBA *e*pP **pP 10 50 02.6 +0.7**
baz=34,slow=5.3
LESA Schwarzleotal 84.00 328 *i* P **P 10 49 40.0 +0.3**
comp=Z,13nm,1.4s
FUR Furstenfeldbru 84.00 329 *e*P **P 10 49 41.2 +1.5**
comp=Z,37nm,0.8s,baz=36,slow=5.3
CRES Cresnjevec Ost 84.01 325 *e*P **P 10 49 40.2 +0.5**
MEM Membach 84.05 333 *d*P **P 10 49 41.0 +1.3**
T25A Trinidad 84.19 47 lAmb lAmb 10 50 06.8
comp=Z,75nm,1.2s
MYKA Terra Mystica 84.20 327 *i* P **P 10 49 40.8 +0.1**
comp=Z,19nm,1.6s
INZ Inchbonnie 84.23 158 lAmb lAmb 10 50 09.6
comp=Z,34nm,1.2s
ANMO Albuquerque 84.45 50 P **P 10 49 43.2 +0.8**
ANMO lAmb lAmb 10 50 09.2
comp=Z,69nm,1.3s
ANMO Albuquerque 84.45 50 *d* *i* P **P 10 49 43.5 +1.1**
ANMO pmax pmax
comp=Z,15nm,0.9s
ANMO Albuquerque 84.45 50 P **P 10 49 43.7 +1.3**
UCC Uccle 84.48 334 *d*P **P 10 49 41.0 -0.9**
FOZ Fox Glacier 84.51 160 lAmb lAmb 10 50 08.3
comp=Z,75nm,1.4s
WATA Walderalm 84.53 328 *e*P **P 10 49 41.0 -1.5**
comp=Z,5.4nm,0.6s
WTTA Wattenberg 84.56 328 *i* P **P 10 49 41.6 -1.1**
comp=Z,9.7nm,1.4s
ABTA Abfaltersbach 84.60 327 *e*P **P 10 49 41.7 -1.1**
comp=Z,8.4nm,1.0s
RCHB Rochefort 84.71 333 *d*P **P 10 49 42.3 -0.8**
MOTA Moosalm 84.72 329 *i* P **P 10 49 43.7 +0.2**
comp=Z,13nm,1.0s
MOTA Moosalm 84.72 329 *e*P **P 10 49 44.3 +0.9**
comp=Z,72nm,2.0s,baz=36,slow=5.3
LIT Litokhoron 84.73 318 lAmb lAmb 10 49 53.9
comp=Z,37nm,0.9s
BMRD Maredsous 84.75 334 *d*P **P 10 49 44.1 +0.8**
RETA Reutte 84.75 329 *e*P **P 10 49 43.1 -0.4**
comp=Z,24nm,1.4s
RETA Reutte 84.75 329 *e*P **P 10 49 44.8 +1.3**
comp=Z,20nm,1.1s,baz=36,slow=5.3
RETA *e*pP **pP 10 50 06.1 +0.4**
baz=34,slow=5.3
SQTA Sankt Quirin 84.78 328 *i* P **P 10 49 43.8 +0.1**
comp=Z,5.4nm,0.9s
Y22A Socorro 84.81 51 lAmb lAmb 10 50 10.2
comp=Z,66nm,1.4s
DOU Dourbes 84.98 334 *d*P **P 10 49 45.4 +0.9**
comp=Z,11nm,1.6s
RPZ Rata Peaks 85.02 159 LR LR 11 21 15.9
comp=Z,247nm,21.6s,baz=40,slow=31
BFO Black Forest 85.05 331 P **P 10 49 45.0 +0.1**
BFO lAmb lAmb 10 50 23.9
comp=Z,43nm,1.2s
BFO Black Forest 85.05 331 P **P 10 49 45.0 +0.1**
BFO pmax pmax
comp=Z,43nm,1.2s
BFO Black Forest 85.05 331 *e*P **P 10 49 46.2 +1.3**
comp=Z,23nm,1.1s,baz=36,slow=5.3
SCHQ Schefferville 85.09 16 P **P 10 49 45.4 +0.4**
comp=Z,14nm,0.8s,baz=358,slow=6.1,SNR=20
SCHQ LR LR 11 29 22.0
comp=Z,72nm,21.6s,baz=326,slow=37
comp=Z,14nm,0.8s
FETA Feichten 85.13 329 *i* P **P 10 49 44.7 -0.8**
comp=Z,13nm,1.2s
DAVA Damuels 85.27 329 *i* P **P 10 49 46.3 +0.1**
comp=Z,16nm,1.1s
DAVA Damuels 85.27 329 *e*P **P 10 49 47.1 +0.9**
comp=Z,15nm,0.9s,baz=36,slow=5.3
G40A Rib Lake 85.57 34 lAmb lAmb 10 50 12.2
comp=Z,59nm,1.4s
FUORN Ofenpass-Fuorn 85.65 329 lAmb lAmb 10 50 11.4
comp=Z,21nm,0.7s
CBKS Cedar Bluff 85.66 43 lAmb lAmb 10 50 13.3
comp=Z,86nm,1.4s

DAVOX Davos/Dischmat 85.68 329 LR LR 11 31 02.2
comp=Z,371nm,20.5s,baz=76,slow=38
I40A Norwalk 86.46 35 lAmb lAmb 10 50 16.6
comp=Z,29nm,1.1s
IDI Anoyia 86.78 313 LR LR 11 33 00.4
comp=Z,138nm,18.4s,baz=270,slow=38
PH02 Texas Public H 86.83 47 lAmb lAmb 10 50 19.8
comp=Z,81nm,1.3s
ITM Ithomi 87.13 316 lAmb lAmb 10 50 43.7
comp=Z,33nm,0.9s
I42A Draeger Farm, 87.22 34 lAmb lAmb 10 50 20.5
comp=Z,60nm,1.4s
FDMO Fiordimonte 87.24 325 lAmb lAmb 10 50 06.9
comp=Z,19nm,0.8s
MNTX Cornudas Mount 87.30 52 lAmb lAmb 10 50 21.8
comp=Z,32nm,1.4s
MSTX Muleshoe 87.33 48 lAmb lAmb 10 50 21.7
comp=Z,27nm,1.2s
AMTX Amarillo 87.34 47 lAmb lAmb 10 50 22.2
comp=Z,45nm,1.1s
NRCA Norcia 87.38 325 lAmb lAmb 10 50 07.8
comp=Z,68nm,1.6s
L40A Anamosa 87.59 36 lAmb lAmb 10 50 22.0
comp=Z,58nm,1.4s
SMWD Samnorwood 88.02 46 lAmb lAmb 10 50 25.4
comp=Z,62nm,1.2s
VHRN Van Horn 88.17 52 lAmb lAmb 10 50 26.2
comp=Z,30nm,1.2s
VLDQ Val d'Or 88.19 25 lAmb lAmb 10 50 02.1
comp=Z,33nm,1.1s
P38A Dawn 88.33 39 lAmb lAmb 10 50 26.1
comp=Z,40nm,1.1s
DKNS Dickens 88.64 48 lAmb lAmb 10 50 05.3
comp=Z,30nm,0.8s
TPB06 Permian Basin 88.67 50 lAmb lAmb 10 50 28.4
comp=Z,33nm,1.2s
POST Post 88.72 48 lAmb lAmb 10 50 28.4
comp=Z,30nm,1.4s
TPB01 Permian Basin 88.81 51 lAmb lAmb 10 50 42.6
comp=Z,3.7nm,0.7s
OK048 Pawnee Station 88.93 43 lAmb lAmb 10 50 29.2
comp=Z,32nm,1.2s
SN07 Snyder 07 89.07 48 lAmb lAmb 10 50 29.9
comp=Z,22nm,1.1s
LPIG La Paz 89.09 60 LR LR 11 31 38.7
comp=Z,37nm,18.4s,baz=302,slow=36
TPB05 Hovey Rd 89.11 51 lAmb lAmb 10 50 07.6
comp=Z,13nm,0.9s
WMOK Wichita Mounta 89.12 46 lAmb lAmb 10 50 30.2
comp=Z,46nm,1.4s
229A Bryant Ranch, 89.31 49 lAmb lAmb 10 50 31.2
comp=Z,23nm,1.3s
S39A Bolivar 89.90 40 lAmb lAmb 10 50 32.8
comp=Z,42nm,1.4s
TUL3 Leonard 89.93 43 lAmb lAmb 10 50 09.7
comp=Z,15nm,0.6s
TX31 Lajitas Ar. Si 89.99 52 lAmb lAmb 10 50 34.7
comp=Z,57nm,1.6s
TXAR Lajitas Array 89.99 52 P **P 10 50 10.0 +0.9**
comp=Z,15nm,0.8s,baz=297,slow=3.1,SNR=66
TXAR PKKPbc **PKKPbc 11 07 40.2 +1.7**
comp=Z,0.1nm,0.5s,baz=141,slow=6.5,SNR=4.3
comp=Z,15nm,0.8s
TXAR Lajitas Array 89.99 52 P **P 10 50 09.7 +0.6**
TXAR Lajitas Array 89.99 52 P **P 10 50 10.0 +0.9**
U38A Gravette 90.29 42 lAmb lAmb 10 50 35.1
comp=Z,27nm,1.2s
HPIG 90.34 55 lAmb lAmb 10 50 13.8
comp=Z,17nm,0.9s
HHAR Hobbs 90.64 42 lAmb lAmb 10 50 13.7
comp=Z,11nm,0.7s
MGMO Mountain Grove 90.85 40 lAmb lAmb 10 50 39.3
comp=Z,34nm,1.4s
FW06 Azle 91.10 46 lAmb lAmb 10 50 16.6
comp=Z,19nm,0.6s
T42A Van Buren 91.55 39 lAmb lAmb 10 50 41.0
comp=Z,38nm,1.3s
FCAR Ozark Folk Cen 91.90 41 lAmb lAmb 10 50 42.2
comp=Z,26nm,1.2s
X40A Basin Creek Fa 92.59 42 lAmb lAmb 10 50 46.2
comp=Z,31nm,1.4s
Q51A Peebles 93.61 33 lAmb lAmb 10 50 51.1
comp=Z,16nm,0.9s
KEST Kesra 94.78 323 LR LR 11 36 55.4
comp=Z,158nm,20.6s,baz=338,slow=38
M65A Busby, Falmout 96.23 24 P P 10 50 43.5 +6.0
baz=335
ESDC Sonseca Array 97.03 334 P **P 10 50 40.9 -0.3**
comp=Z,0.7nm,0.7s,baz=22,slow=5.5,SNR=2.3
comp=Z,0.7nm,0.7s
VNDA Vanda 115.25 175 PKP **PKiKP 10 55 49.0 0.0**
comp=Z,3.4nm,0.9s,baz=164,slow=8.0,SNR=1.8
TORD Torodi Ar. Bea 117.11 315 PKP **PKPdf 10 55 53.4 -1.1**
comp=Z,1.4nm,0.6s,baz=246,slow=1.0,SNR=9.7
TORD PP **PP 10 57 04.6 0.0**
comp=Z,2.2nm,0.8s,baz=16,slow=4.6,SNR=5.5
TORD PKKPbc **PKKPbc 11 06 18.5 +0.6**
comp=Z,1.0nm,0.8s,baz=208,slow=6.0,SNR=5.1
TORD PKKP **PKKPdf 11 06 43.2 -1.0**
comp=Z,0.6nm,0.8s,baz=235,slow=6.2,SNR=4.0
PIRO Carate, Puerto 118.24 52 PKiKP 10 55 57.0 +0.3
LBTB Lobatse 124.63 263 PKiKP 10 56 09.3 +0.3
LBTB Lobatse 124.63 263 PKIKP **PKiKP 10 56 09.3 +0.3**
SDV Santo Domingo 125.15 40 PKiKP 10 56 10.5 -0.1
DBIC Dimbokro 126.07 317 PKP **PKPdf 10 56 11.0 -0.7**
comp=Z,4.1nm,0.6s,baz=121,slow=1.2,SNR=8.6
DBIC Dimbokro 126.07 317 PKPdf 10 56 11.3 -0.4
DBIC Dimbokro 126.07 317 PKIKP **PKPdf 10 56 11.3 -0.4**
ROSC El Rosal 126.50 46 PKP **PKPdf 10 56 12.5 -0.6**
comp=Z,6.9nm,0.3s,baz=86,slow=23,SNR=4.1
BOSA Boshof 126.58 259 PKP **PKPdf 10 56 12.2 -0.1**
comp=Z,6.0nm,0.9s,baz=73,slow=6.9,SNR=6.7
QSPA South Pole Qui 127.04 180 PKP **PKPdf 10 56 11.7 -0.3**
comp=Z,23nm,1.1s,baz=332,slow=1.1,SNR=12
QSPA South Pole Qui 127.04 180 PKPdf 10 56 12.2 +0.2
NVL N'lazarevskaya 137.52 202 *e*PKIKP **PKiKP 10 56 32.5 -0.9**
NVL *e* 10 59 18.6
NVL *e* 11 03 34.0
NVL *e*SS SS 11 17 21.0 +1.1
NVL *e*SSS SSS 11 22 28.5
NVL pmax pmax
comp=Z,22nm,1.5s
VNA2 Neumayer--Watz 142.56 196 ⇑PKPdf **PKPdf 10 56 37.2 -3.5**
comp=Z,14nm,0.7s,baz=133,slow=2.6
VNA3 Neumayer Olymp 142.81 195 ⇑PKPdf **PKPdf 10 56 37.6 -3.5**
comp=Z,14nm,0.7s
VNA1 Neumayer--Stat 142.96 196 ⇑PKPdf **PKPdf 10 56 38.6 -2.7**
comp=Z,16nm,0.9s
LPAZ La Paz 146.59 59 PKPbc **PKPbc 10 56 52.2 +0.5**
comp=Z,46nm,0.7s,baz=339,slow=2.8,SNR=49
LPAZ La Paz 146.59 59 *e*P **PKPdf 10 56 50.1 0.0**
H03N2 Juan Fernandez 147.09 96 T T 13 42 02.0
baz=291,slow=76,SNR=200
H03N3 Juan Fernandez 147.10 96 T T 13 41 55.4
baz=291,slow=76,SNR=195
H03N1 Juan Fernandez 147.11 96 T T 13 41 56.1
baz=291,slow=76,SNR=193
PRPB Paraupebas 147.38 21 *e*P **PKPbc 10 56 52.6 -0.6**
VILB Vilhena 149.02 44 PKPbc 10 56 55.5 -2.0
LCO Las Campanas 152.01 82 PKiKP 10 57 05.6 +0.7
AC02 Maricunga 152.24 77 PKiKP 10 57 06.9 +1.2
GO09 Cerro Castillo 152.41 131 PKPdf 10 56 57.8 +0.3
PLCA Paso Flores 155.04 108 PKP **PKPdf 10 57 00.5 -1.2**
comp=Z,1.8nm,1.0s,baz=187,slow=6.9,SNR=3.2
PLCA PKPab **PKPab 10 57 26.5 -0.1**
comp=Z,7.1nm,0.8s,baz=277,slow=3.2,SNR=9.9
BDFB Brasilia 156.88 24 PKP **PKPdf 10 57 04.7 -0.1**
comp=Z,1.1nm,0.4s,baz=75,slow=11,SNR=1.5
CPUP Villa Florida 160.75 61 PKP **PKPdf 10 57 08.5 -0.5**
comp=Z,0.7nm,0.4s,baz=294,slow=5.4,SNR=3.5
CPUP PKPab **PKPab 10 57 51.6 +0.1**
comp=Z,4.0nm,0.8s,baz=293,slow=5.0,SNR=7.0
TRQA Tornquist 161.51 99 PKPab 10 57 56.0 +1.3
TRQA Tornquist 161.51 99 PKP2 **PKPab 10 57 56.0 +1.3**

KRNET ***12*** *10:40:49.2±0.1, 43°.93N×69°.12E, mb3.2*
NNC ***12*** *10:40:51.6±1.4, 43°.61N×69°.68E, h0km, mb4.0, mpv3.4,*
Error ellipse: s-maj=13.1km s-min=6.3km az=54.0,
Suspected Mining explosion.
SOME ***12*** *10:40:52.2, 43°.65N×69°.77E*

ISC 12 10:40:46.4±2.8, 43°.77N±0°.08×69°.6E±0°.1, h0km, n9,
σ1s 41/14, 5C-6D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.95**	**134**	P	**Pn**	**10 41 07.1**	**+0.1**

5.8nm,0.4s,baz=323,slow=18,SNR=42
KK31 ⇓S Sg 10 41 18.1 +1.2
57nm,0.6s,baz=295,slow=28,SNR=66
MNAS Manas 2.49 120 ⇓*i*P Pg 10 41 35.2 +1.0
MNAS ⇓*i*S Sg 10 42 08.5 +2.0
TRKS Terek-Say 2.52 152 ⇓*i*P Pg 10 41 35.4 +0.8
TRKS ⇓*i*S Sg 10 42 09.3 +2.1
ARK Arkit 2.64 138 ⇑*i*P Pg 10 41 36.8 -0.1
ARK ⇑*i*S Sg 10 42 11.5 +0.4
MRKS Merke 2.85 110 Pg Pg 10 41 42.3 +1.3
8.1nm,0.3s
MRKS Lg Lg 10 42 19.0
15nm,0.5s
BTLS Baital 3.44 67 Pg Pg 10 41 53.5 +1.2
30nm,0.4s
BTLS Lg Lg 10 42 38.8
16nm,0.6s
AAK Ala-Archa 3.76 106 ⇓Pg Pg 10 41 57.8 -0.7
3.2nm,0.5s
AAK ⇑Lg Lg 10 42 49.7
4.2nm,0.6s
ARLS Aral 3.97 117 ⇑*i*P Pb 10 41 55.7 -1.7
ARLS ⇑*i*S Sb 10 42 44.2 -1.9
KST Kastek 4.70 97 Pg Pg 10 42 16.9 +0.4
3.6nm,0.4s
KST Lg Lg 10 43 18.7
16nm,0.9s

GCG ***12*** *10:43:31.3±1.7, 15°.49N×87°.87W, h0km±22km, MD4.0, Presumed earthquake*
CATAC ***12*** *10:43:33.8±0.6, 16°.N±3°×8°.8W±°, h6km±4km, M3.4/13, MLv3.4/13, Error ellipse: s-maj=6.5km s-min=4.4km az=21.4, confirmed*

ISC 12 10:43:30.4±1.9, 15°.60N±0°.05×87°.90W±0°.04, h8km±16km, n20, σ0°.78/30, Honduras

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IZABA	**Izabal, Puerto**	**0.67**	**281**	P			**Pn**	**10 43 46.5**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.65**	**158**	P			**Pn**	**10 44 00.1**	**+0.3**
ZAFR2	**Estanzuela, Za**	**1.73**	**234**	*i* P			**Pb**	**10 44 01.8**	**-0.7**
ZAFR2				*i* S			**Sg**	**10 44 27.5**	**+1.4**
ESQI	**Esquipulas**	**1.73**	**234**	P			**Pg**	**10 44 03.2**	**-0.5**
ESQI				S			**Sg**	**10 44 26.9**	**+0.7**
LLGN	**La Laguna**	**1.75**	**215**	P			**Pb**	**10 44 02.4**	**-0.5**
LLGN				S			**Sb**	**10 44 25.3**	**+0.3**
MTO3	**Montecristo**	**1.85**	**230**	P			**Pb**	**10 44 04.6**	**0.0**
MTO3	**Montecristo**	**1.85**	**230**	*i* P			**Pb**	**10 44 04.6**	**0.0**
SCLA	**Alcaldia de Sa**	**2.05**	**203**	P			**Pb**	**10 44 07.0**	**-0.9**
COEG	**Centro de Oper**	**2.18**	**206**	P			**Pb**	**10 44 09.1**	**-1.2**
COEG				S			**Sb**	**10 44 38.0**	**+0.5**
LCND	**La Caada**	**2.27**	**180**	P			**Pb**	**10 44 10.4**	**-1.3**
LCND				S			**Sb**	**10 44 40.3**	**+0.2**
PETF	**Flores**	**2.30**	**305**	P			**Pb**	**10 44 11.9**	**-0.3**
PETF				S			**Sb**	**10 44 40.3**	**-0.5**
PETF	**Flores**	**2.30**	**305**	*i* P			**Pb**	**10 44 11.6**	**-0.5**
SLOZ	**Alcaldia de Sa**	**2.40**	**230**	P			**Pb**	**10 44 13.7**	**-0.3**
JAYA	**Jayaque - finc**	**2.45**	**218**	P			**Pb**	**10 44 14.7**	**-0.1**
JAYA				S			**Sb**	**10 44 44.7**	**-0.4**
NUBE	**Las Nubes**	**2.48**	**227**	P			**Pb**	**10 44 15.0**	**-0.3**
APG	**El Apazote**	**2.54**	**257**	*i* P			**Pn**	**10 44 13.2**	**+1.0**
RCVN	**Varillal2**	**2.59**	**140**	P			**Pb**	**10 44 17.4**	**+0.1**
RCVN				S			**Sb**	**10 44 48.9**	**-0.5**
FAME	**Alcaldia de Sa**	**2.69**	**230**	P			**Pb**	**10 44 17.3**	**-1.6**
FAME				S			**Sb**	**10 44 51.2**	**-0.8**
RCON	**San Juan de Ri**	**2.69**	**141**	P			**Pb**	**10 44 17.8**	**-1.2**
RCON				S			**Sb**	**10 44 53.1**	**+0.8**
RCPN	**Sur Rio San Ju**	**2.70**	**139**	P			**Pb**	**10 44 19.2**	**+0.1**

NEIC ***12*** *10:47:10.6±1.1, 35°.8S±0°.1×179°.7W±0°.2, h10km±2km, mb4.5/16, Error ellipse: s-maj=25.4km s-min=20.1km az=152.0*
WEL ***12*** *10:47:15.9±0.8, 36°.S±6°×18°.0W±°, h138km±21km, M4.2/20, MLv4.2/20, Error ellipse: s-maj=9.3km s-min=7.6km az=64.9*
IDC ***12*** *10:47:19.6±5.9, 36°.08S×179°.84E, h71km±46km, mb4.2/7, mbtmp4.5/8, ML4.0/1, Error ellipse: s-maj=42.0km s-min=23.4km az=51.0*

ISC 12 10:47:10.6±0.8, 36°.05S±0°.06×179°.74W±0°.07, h10km, n139, σ2°.07/150, mb4.5/15, East of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.17**	**226**				**Pn**	**10 47 48.9**	**+2.1**
MXZ	**Matakaoa Point**	**2.17**	**226**	P			**Pn**	**10 47 49.1**	**+2.2**
WMGZ	**Waiomatatini S**	**2.30**	**219**	P			**Pb**	**10 47 52.0**	**-0.1**
PKGZ	**Pakihiroa**	**2.52**	**223**	P			**Pb**	**10 47 54.8**	**-1.0**
PKGZ				S			**Sb**	**10 48 25.8**	**-1.0**
PUZ	**Puketiti**	**2.57**	**218**	P			**Pn**	**10 47 55.3**	**+2.9**
HAZ	**Te Kaha**	**2.61**	**229**	P			**Pn**	**10 47 55.5**	**+2.7**
TWGZ	**Tauwhareparae**	**2.80**	**220**	P			**Pn**	**10 47 58.5**	**+3.1**
RUGZ	**Raukumara Rang**	**2.81**	**226**	P			**Pn**	**10 47 58.9**	**+3.1**
RUGZ				S			**Sb**	**10 48 33.3**	**-2.2**
WIZ	**White Island**	**2.87**	**238**	P			**Pn**	**10 47 59.0**	**+2.6**
CNGZ	**Carnagh Statio**	**2.93**	**213**	P			**Pn**	**10 48 00.2**	**+3.1**
TKGZ	**Te Karaka**	**3.06**	**218**	P			**Pn**	**10 48 01.8**	**+2.8**
TKGZ				S			**Sn**	**10 48 38.7**	**+3.0**
MWZ	**Matawai**	**3.15**	**223**	P			**Pn**	**10 48 02.8**	**+2.5**
MWZ				S			**Sn**	**10 48 40.0**	**+1.9**
WHRZ	**Whale Island**	**3.19**	**235**	P			**Pn**	**10 48 04.4**	**+3.6**
RIGZ	**Rimuhau**	**3.31**	**216**	P			**Pn**	**10 48 04.7**	**+2.2**
RAGZ	**Rawiri**	**3.33**	**222**	P			**Pn**	**10 48 05.6**	**+2.8**
URZ	**Urewera**	**3.34**	**228**	P			**Pn**	**10 48 05.1**	**+2.2**
18nm,0.3s,baz=265,slow=3.0,SNR=204									
URZ				S			**Sn**	**10 48 42.1**	**-0.5**
158nm,0.5s,baz=101,slow=20,SNR=12									
75nm,0.3s									
URZ	**Urewera**	**3.34**	**228**	P			**Pn**	**10 48 05.2**	**+2.3**
URZ				S			**Sn**	**10 48 43.6**	**+0.9**
PRGZ	**Paritu Road**	**3.43**	**213**	P			**Pn**	**10 48 06.8**	**+2.7**
MYRZ	**Mayor Island**	**3.46**	**248**	P			**Pn**	**10 48 06.2**	**+1.7**
MARZ	**Manawahe**	**3.46**	**235**	P			**Pn**	**10 48 06.5**	**+2.0**
OPRZ	**Ohinepanea**	**3.46**	**238**	P			**Pn**	**10 48 06.5**	**+1.9**
SNGZ	**Shannon Statio**	**3.58**	**220**	P			**Pn**	**10 48 08.6**	**+2.4**
SNGZ				S			**Sn**	**10 48 50.8**	**+2.2**
MHGZ	**Mahia Peninsul**	**3.62**	**210**	P			**Pn**	**10 48 09.0**	**+2.3**
TGRZ	**Tauranga**	**3.62**	**241**	P			**Pn**	**10 48 08.5**	**+1.9**
RTZ	**Ruatahuna**	**3.66**	**225**				**Pn**	**10 48 10.1**	**+2.8**
RTZ	**Ruatahuna**	**3.66**	**225**	P			**Pn**	**10 48 10.2**	**+2.9**
MKRZ	**Makatiti**	**3.68**	**234**	P			**Pn**	**10 48 12.1**	**+4.5**
MUGZ	**Murupara**	**3.69**	**228**	P			**Pn**	**10 48 10.2**	**+2.5**
TARZ	**Mount Tarawera**	**3.71**	**233**	P			**Pn**	**10 48 11.5**	**+3.5**
KUZ	**Kuaotunu**	**3.73**	**258**	P			**Pn**	**10 48 09.8**	**+1.7**
RRRZ	**Republican Roa**	**3.76**	**232**	P			**Pn**	**10 48 11.0**	**+2.3**
KARZ	**Kaharoa**	**3.77**	**237**	P			**Pn**	**10 48 10.9**	**+2.1**
RAHZ	**Arahi**	**3.81**	**220**	P			**Pn**	**10 48 12.5**	**+3.1**
HLRZ	**Highlands Stat**	**3.82**	**234**	P			**Pn**	**10 48 12.1**	**+2.6**
NGRZ	**Ngongotaha**	**3.84**	**237**	P			**Pn**	**10 48 12.8**	**+3.0**
WHHZ	**Waihua**	**3.86**	**218**	P			**Pn**	**10 48 13.0**	**+3.0**
UTU	**Utuhina**	**3.88**	**236**	P			**Pn**	**10 48 13.6**	**+3.3**
GRZ	**Great Barrier**	**3.89**	**266**	P			**Pn**	**10 48 12.3**	**+1.9**
KMRZ	**Kaimai**	**3.89**	**241**	P			**Pn**	**10 48 12.6**	**+2.1**
MTHZ	**Maungataniwha**	**3.90**	**223**	P			**Pn**	**10 48 13.4**	**+2.8**
HSRZ	**Hossack Road**	**3.92**	**234**	P			**Pn**	**10 48 13.8**	**+3.0**
PRRZ	**Plateau Road**	**3.93**	**230**	P			**Pn**	**10 48 13.1**	**+2.0**
HRRZ	**Handcock Road**	**3.94**	**232**	P			**Pn**	**10 48 13.7**	**+2.6**
ALRZ	**Allen Road**	**4.00**	**230**	P			**Pn**	**10 48 14.4**	**+2.4**
NMHZ	**Naumai**	**4.09**	**221**	P			**Pn**	**10 48 16.6**	**+3.3**
ARHZ	**Aropaoanui**	**4.12**	**218**	P			**Pn**	**10 48 15.7**	**+2.1**
ARHZ				S			**Sn**	**10 49 01.8**	**0.0**
MRHZ	**Matea Rd**	**4.13**	**227**	P			**Pn**	**10 48 16.1**	**+2.3**
TOZ	**Tahuroa Road**	**4.17**	**245**				**Pn**	**10 48 15.7**	**+1.6**
TOZ	**Tahuroa Road**	**4.17**	**245**	P			**Pn**	**10 48 16.2**	**+2.0**
TOZ				S			**Sn**	**10 49 02.1**	**-0.9**
WIAZ	**Waiheke Island**	**4.20**	**258**	P			**Pn**	**10 48 16.9**	**+2.2**
MKAZ	**Moumakai**	**4.24**	**254**	P			**Pn**	**10 48 17.2**	**+2.1**
KUTZ	**Kaahu Road**	**4.29**	**234**	P			**Pn**	**10 48 18.7**	**+2.7**
BKZ	**Black Stump Fm**	**4.31**	**223**				**Pn**	**10 48 18.0**	**+1.7**
BKZ	**Black Stump Fm**	**4.31**	**223**	P			**Pn**	**10 48 18.1**	**+1.8**
BKZ				S			**Sn**	**10 49 06.3**	**-0.3**
MBAZ	**Motutapu North**	**4.38**	**259**	P			**Pn**	**10 48 19.5**	**+2.4**
ETAZ	**East Tamaki Re**	**4.39**	**257**	P			**Pn**	**10 48 19.9**	**+2.6**
CKHZ	**Cape Kidnapper**	**4.39**	**214**	P			**Pn**	**10 48 19.0**	**+1.6**
CKHZ				S			**Sn**	**10 49 08.6**	**0.0**
MCHZ	**McNeill Hill**	**4.41**	**219**	P			**Pn**	**10 48 19.6**	**+2.0**
MCHZ				S			**Sn**	**10 49 08.2**	**-0.7**
ABAZ	**Army Bay**	**4.42**	**261**	P			**Pn**	**10 48 20.4**	**+2.8**
WATZ	**Wairara**	**4.47**	**232**	P			**Pn**	**10 48 20.9**	**+2.4**
KWHZ	**Kaweka Forest**	**4.54**	**221**	P			**Pn**	**10 48 21.3**	**+1.9**
KWHZ				S			**Sn**	**10 49 13.5**	**+1.4**
RATZ	**Rangitukua**	**4.54**	**230**	P			**Pn**	**10 48 22.0**	**+2.5**
RITZ	**Rihia Road**	**4.56**	**229**	P			**Pn**	**10 48 22.2**	**+2.6**
KAHZ	**Kahuranaki**	**4.59**	**215**	P			**Pn**	**10 48 20.8**	**+0.7**
KAHZ				S			**Sn**	**10 49 12.3**	**-1.3**
AWAZ	**Awhitu Peninsu**	**4.63**	**256**	P			**Pn**	**10 48 23.7**	**+3.1**
AWAZ				S			**Sn**	**10 49 16.0**	**+1.5**
RVAZ	**Riverhead Bore**	**4.64**	**259**	P			**Pn**	**10 48 24.1**	**+3.4**
KATZ	**Kakaramea**	**4.66**	**230**	P			**Pn**	**10 48 24.1**	**+3.1**
WTAZ	**Waiatarua**	**4.66**	**257**	P			**Pn**	**10 48 24.3**	**+3.3**
KRHZ	**Kereru**	**4.72**	**219**	P			**Pn**	**10 48 23.2**	**+1.2**
TMVZ	**Te Maari**	**4.74**	**228**	P			**Pn**	**10 48 24.1**	**+1.9**
NTVZ	**North Tongarir**	**4.74**	**229**	P			**Pn**	**10 48 24.7**	**+2.4**
ETVZ	**East Tongariro**	**4.75**	**228**	P			**Pn**	**10 48 24.2**	**+1.9**
KRVZ	**Karewarewa**	**4.76**	**229**	P			**Pn**	**10 48 25.4**	**+2.9**
OTVZ	**Oturere**	**4.79**	**228**	P			**Pn**	**10 48 25.2**	**+2.2**
PXZ	**Pawanui**	**4.79**	**213**	P			**Pn**	**10 48 23.2**	**+0.4**
WCZ	**Waipu Caves**	**4.80**	**270**	P			**Pn**	**10 48 25.0**	**+2.1**
NNVZ	**North Ngauruho**	**4.80**	**229**	P			**Pn**	**10 48 25.4**	**+2.3**
WTVZ	**West Tongariro**	**4.81**	**229**	P			**Pn**	**10 48 25.4**	**+2.3**
SNVZ	**South Ngauruho**	**4.82**	**228**	P			**Pn**	**10 48 25.2**	**+1.8**
NGZ	**Ngauruhoe**	**4.84**	**228**	P			**Pn**	**10 48 25.7**	**+2.1**
TWVZ	**Taurewa**	**4.87**	**230**	P			**Pn**	**10 48 26.2**	**+2.1**
COVZ	**Chateau Observ**	**4.89**	**229**	P			**Pn**	**10 48 26.3**	**+2.1**
MOVZ	**Moawhango**	**4.90**	**225**	P			**Pn**	**10 48 25.7**	**+1.3**
FWVZ	**Far West T-bar**	**4.92**	**228**	P			**Pn**	**10 48 27.6**	**+2.9**
MAVZ	**Matarangi**	**4.92**	**228**	P			**Pn**	**10 48 27.2**	**+2.3**
WNVZ	**Wahianoa**	**4.94**	**227**	P			**Pn**	**10 48 26.5**	**+1.6**
TRVZ	**Turoa**	**4.95**	**228**	P			**Pn**	**10 48 26.7**	**+1.6**
HIZ	**Hauiti**	**4.96**	**239**				**Pn**	**10 48 27.7**	**+2.6**
HIZ	**Hauiti**	**4.96**	**239**	P			**Pn**	**10 48 27.8**	**+2.6**
WPHZ	**Waipukurau**	**5.01**	**116**	P			**Pn**	**10 48 26.6**	**+0.8**
PNHZ	**Pukenui**	**5.01**	**219**	P			**Pn**	**10 48 26.1**	**+0.2**
MTVZ	**Mangateitei**	**5.05**	**227**	P			**Pn**	**10 48 27.8**	**+1.4**
PKVZ	**Pokaka**	**5.06**	**229**	P			**Pn**	**10 48 28.8**	**+2.2**
PRHZ	**Porangahau**	**5.08**	**213**	P			**Pn**	**10 48 27.8**	**+1.0**
TSZ	**Takapari Road**	**5.24**	**219**	P			**Pn**	**10 48 29.7**	**+0.7**
DVHZ	**Dannevirke**	**5.33**	**216**	P			**Pn**	**10 48 30.5**	**+0.4**
VRZ	**Vera Road**	**5.34**	**233**	P			**Pn**	**10 48 32.6**	**+2.3**
OUZ	**Omahuta**	**5.49**	**277**	P			**Pn**	**10 48 33.9**	**+1.5**
WAZ	**Wanganui**	**5.57**	**227**	P			**Pn**	**10 48 34.9**	**+1.3**
BFZ	**Birch Farm**	**5.59**	**213**	P			**Pn**	**10 48 33.4**	**-0.5**
PRWZ	**Pori Road**	**5.62**	**216**	P			**Pn**	**10 48 34.6**	**+0.4**
CTZ	**Chatham Island**	**8.04**	**164**	P			**Pn**	**10 49 10.8**	**+3.4**
RPZ	**Rata Peaks**	**10.41**	**220**	P			**Pn**	**10 49 38.0**	**-1.9**
6.0nm,0.9s,baz=5.1,slow=22,SNR=1.7									
RPZ				S			Sn	10 51 27.0	-10
6.1nm,0.4s,baz=2.6,slow=1.7,SNR=5.4									
ARMA	**Armidale**	**24.55**	**275**	P			**P**	**10 52 30.2**	**-0.4**
ARMA						IAmb	IAmb	10 52 33.2	
comp=Z,11nm,1.1s									
STKA	**Stephens Creek**	**32.19**	**266**	P			**P**	**10 53 38.2**	**-0.6**
comp=Z,1.9nm,0.8s,baz=112,slow=17,SNR=1.9									
comp=Z,1.9nm,0.8s									
CTA	**Charters Tower**	**33.75**	**289**	P			**P**	**10 53 52.6**	**+0.1**
comp=Z,7.6nm,0.7s,baz=123,slow=8.1,SNR=8.6									
comp=Z,7.6nm,0.7s									
CTAO	**Charters Tower**	**33.75**	**289**	P			**P**	**10 53 52.3**	**-0.2**
INKA	**Innaminka**	**34.37**	**273**	P			**P**	**10 53 58.5**	**+0.8**
INKA						IAmb	IAmb	10 53 59.0	
comp=Z,5.2nm,0.6s									
BBOO	**Buckleboo**	**36.37**	**262**	P			**P**	**10 54 14.1**	**-0.8**
BBOO						IAmb	IAmb	10 54 35.0	
comp=Z,8.6nm,1.1s									
COEN	**Coen**	**39.82**	**294**	P			**P**	**10 54 43.8**	**-0.4**
AS31	**Alice Springs**	**41.69**	**274**	P			**P**	**10 54 59.0**	**-0.7**
ASAR	**Alice Springs**	**41.70**	**274**	P			**P**	**10 54 58.8**	**-0.9**
comp=Z,2.3nm,0.5s,baz=118,slow=7.9,SNR=24									
comp=Z,2.3nm,0.5s									
ASAR	**Alice Springs**	**41.70**	**274**	P			**P**	**10 54 58.5**	**-1.2**
WR8	**Warramunga Arr**	**43.06**	**279**	P			**P**	**10 55 09.8**	**-1.1**
WRAB	**Tennant Creek**	**43.19**	**279**	P			**P**	**10 55 10.6**	**-1.3**
WRAB						IAmb	IAmb	10 55 11.1	
comp=Z,4.3nm,0.6s									
WRA	**Warramunga Arr**	**43.20**	**279**	P			**P**	**10 55 10.3**	**-1.6**
comp=Z,4.1nm,0.6s,baz=119,slow=7.8,SNR=57									
comp=Z,4.1nm,0.6s									
WRA	**Warramunga Arr**	**43.20**	**279**	P			**P**	**10 55 10.5**	**-1.5**
WB0	**Warramunga Arr**	**43.24**	**279**	P			**P**	**10 55 11.2**	**-1.1**
WB0						IAmb	IAmb	10 55 11.3	
comp=Z,4.5nm,0.6s									
FORT	**Forrest**	**43.46**	**261**	P			**P**	**10 55 13.6**	**-0.4**
FORT						IAmb	IAmb	10 55 19.9	
comp=Z,18nm,1.1s									
MTN	**Manton Dam**	**49.71**	**285**	P			**P**	**10 56 01.9**	**-1.2**
KNRA	**Kununurra**	**49.96**	**280**	P			**P**	**10 56 03.0**	**-2.0**
KNRA						IAmb	IAmb	10 56 20.1	
comp=Z,5.0nm,0.9s									
FITZ	**Fitzroy Crossi**	**51.16**	**275**	P			**P**	**10 56 13.0**	**-1.0**
comp=Z,4.5nm,1.0s,baz=140,slow=7.9,SNR=2.9									
comp=Z,4.5nm,1.0s									
NWAO	**Narrogin (SRO)**	**51.23**	**254**	P			**P**	**10 56 13.8**	**-0.7**
NWAO						IAmb	IAmb	10 56 23.7	
comp=Z,6.8nm,0.8s									
QSPA	**South Pole Qui**	**54.07**	**180**	P			**P**	**10 56 36.7**	**+1.6**
comp=Z,11nm,1.1s,baz=320,slow=1.3,SNR=3.4									
comp=Z,11nm,1.1s									
QSPA	**South Pole Qui**	**54.07**	**180**			IAmb	IAmb	10 56 37.1	
comp=Z,12nm,1.1s									
MBWA	**Marble Bar**	**54.38**	**268**	P			**P**	**10 56 37.2**	**-0.6**
H03N3	**Juan Fernandez**	**78.79**	**123**	T			T	12 26 09.4	
baz=238,slow=72,SNR=5.6									
H03N2	**Juan Fernandez**	**78.80**	**123**	T			T	12 26 06.3	
baz=238,slow=72,SNR=5.6									
H03N1	**Juan Fernandez**	**78.81**	**123**	T			T	12 26 08.6	
baz=238,slow=72,SNR=5.8									
PETK	**Petropavlovsk-**	**90.93**	**347**	P			**P**	**11 00 15.8**	**+1.7**
comp=Z,3.2nm,0.7s,baz=148,slow=8.5,SNR=6.4									
comp=Z,3.2nm,0.7s									
MKAR	**Makanchi Array**	**120.19**	**308**		PKP		**PKPdf**	**11 06 00.9**	**-0.6**
comp=Z,0.3nm,0.7s,baz=117,slow=1.9,SNR=2.5									
KURBB	**Kurchatov Arra**	**123.82**	**311**		PKP		**PKPdf**	**11 06 07.2**	**-1.0**
comp=Z,0.4nm,0.4s,baz=115,slow=1.7,SNR=1.8									
BVAR	**Borovoye Array**	**129.30**	**313**		PKP		**PKPdf**	**11 06 18.6**	**0.0**
comp=Z,0.4nm,0.6s,baz=17,slow=1.5,SNR=2.1									
GNI	**Gani**	**145.03**	**290**		PKP		**PKPbc**	**11 06 47.0**	**-0.6**
comp=Z,6.8nm,0.5s,baz=224,slow=7.4,SNR=3.3									
FINES	**FINESS Array B**	**149.81**	**335**		PKPbc		**PKPbc**	**11 06 59.5**	**-0.4**
comp=Z,4.2nm,0.7s,baz=32,slow=4.8,SNR=18									
DBIC	**Dimbokro**	**150.38**	**170**		PKPbc		**PKPbc**	**11 07 03.5**	**+0.7**
comp=Z,1.8nm,0.6s,baz=192,slow=1.4,SNR=4.7									
MMAI	**Mount Meron Ar**	**150.98**	**274**		PKPbc		**PKPbc**	**11 07 03.5**	**-0.3**
comp=Z,1.0nm,0.3s,baz=129,slow=5.7,SNR=2.1									
BRTR	**Keskin Array B**	**153.49**	**288**		PKPbc		**PKPbc**	**11 07 08.7**	**-0.7**
comp=Z,0.6nm,0.5s,baz=81,slow=3.9,SNR=3.8									
TORD	**Torodi Ar. Bea**	**157.16**	**184**		PKPab		**PKPab**	**11 07 38.3**	**+0.7**
comp=Z,0.3nm,0.5s,baz=184,slow=4.5,SNR=1.9									

MOS ***12*** *10:53:44.3±1.0, 37°.03N×49°.54E, h12km, mb4.3/15, Error ellipse: s-maj=7.6km s-min=4.0km az=100.1*
NEIC ***12*** *10:53:45.9±1.5, 37°.08N±0°.08×49°.6E±0°.1, h10km±1km, mb4.3/20, Error ellipse: s-maj=15.6km s-min=13.8km az=264.0*
IDC ***12*** *10:53:45.8±0.9, 37°.20N×49°.41E, h0km, mb4.1/19, mb4.1/27, ML3.1/6, MS3.3/2, Error ellipse: s-maj=19.1km s-min=10.5km az=7.0*
THR ***12*** *10:53:46.4±0.0, 37°.13N×49°.42E, h13km±5km, ML4.4, Presumed earthquake*
TEH ***12*** *10:53:46.4, 37°.07N×49°.40E, h9km±22km, ML4.5, Presumed earthquake*
DRS ***12*** *10:53:48.1, 37°.21N×49°.68E, h13km*
NNC ***12*** *10:54:04.5±5.6, 37°.73N×51°.93E, h0km, mb4.3, Error ellipse: s-maj=84.7km s-min=49.3km az=86.0*

ISC 12 10:53:48.1±0.4, 37°.06N±0°.03×49°.48E±0°.03, h24km, n214, σ1§49/246, mb4.2/33, 23C-8D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GIDE	**GILAN DEYLAMAN**	**0.37**	**112**	Pg			**Pb**	**10 53 55.6**	**-0.8**
GIDE	**GILAN DEYLAMAN**	**0.37**	**112**	*e*Pg			**Pb**	**10 53 55.9**	**-0.4**
GIDE				*i* S			**Sb**	**10 54 03.0**	**+1.1**
GIDE						IAML		10 54 08.6	
comp=Z,24μm,1.0s									
JIR1	**Jirandeh**	**0.44**	**144**	Pg			**Pb**	**10 53 56.4**	**-1.0**
CSN1	**Caspian**	**0.58**	**329**	Pg			**Pb**	**10 53 58.1**	**-1.6**
ZNJK	**Zanjan**	**0.75**	**239**	Pg			**Pb**	**10 53 58.8**	**-2.7**
ZNJK	**Zanjan**	**0.75**	**239**	*e*Pg			**Pb**	**10 53 59.9**	**-2.7**
ZNJK						IAML		10 54 53.5	
comp=Z,3.0nm,1.0s									
IGZV	**Ghazvin**	**0.90**	**138**	Pg			**Pb**	**10 54 04.8**	**-0.4**
IGZV						Sg	**Sn**	**10 54 18.4**	**+0.6**
QABG	**Abgarm-Qazvin**	**1.35**	**176**	Pg			**Pn**	**10 54 12.1**	**+0.4**
GAS1	**Astara - Iran**	**1.41**	**339**	Pg			**Pn**	**10 54 11.5**	**-0.8**
THKV	**Tehran--Karaj**	**1.61**	**135**	*e*Pn			**Pb**	**10 54 18.0**	**+0.8**
THKV						IAML		10 54 42.7	
comp=Z,4μm,1.0s									
HGHA	**Hamedan- Ghaye**	**1.65**	**198**	Pg			**Pb**	**10 54 17.2**	**-0.7**
LKRN	**Lenkeran, Azer**	**1.73**	**342**	P			**Pn**	**10 54 15.8**	**-0.9**
CHTH	**Charan**	**1.76**	**130**	*e*Pn			**Pb**	**10 54 20.1**	**+0.3**
CHTH						IAML		10 54 45.8	
comp=Z,5μm,1.0s									
GRMI	**Germi**	**2.15**	**325**	*e*Pn			**Pn**	**10 54 22.9**	**+0.4**
GRMI						IAML		10 54 54.8	
comp=Z,2μm,1.0s									
HAGD	**Aghdareh**	**2.25**	**187**	Pn			**Pn**	**10 54 25.5**	**+1.4**
IHRS	**Heris**	**2.30**	**304**	Pn			**Pn**	**10 54 25.6**	**+0.9**
IPRN	**Peran**	**2.44**	**109**	Pn			**Pb**	**10 54 29.4**	**-2.0**
DAMV	**Damavand**	**2.47**	**125**	*e*Pn			**Pb**	**10 54 31.0**	**-0.9**
DAMV						IAML		10 55 25.3	
comp=Z,5.1nm,1.0s									
ASAO	**Ashtian**	**2.55**	**170**	*e*Pn			**Pb**	**10 54 30.9**	**-2.4**
ASAO						IAML		10 55 12.1	
comp=Z,990nm,1.0s									
IQOM	**Qom**	**2.56**	**149**	Pn			**Pb**	**10 54 31.1**	**-2.4**
SNQR	**Sonqor, Kerman**	**2.66**	**215**	Pn			**Pn**	**10 54 31.6**	**+1.8**
IAZR	**Azarshahr**	**2.85**	**283**	Pn			**Pn**	**10 54 33.4**	**+1.0**
GHVR	**GHOM**	**2.97**	**150**	*e*Pn			**Pn**	**10 54 36.5**	**+2.7**
GHVR						IAML		10 55 29.7	
comp=Z,1μm,1.0s									
MAHB	**Mahabad**	**3.04**	**266**	Pn			**Pn**	**10 54 35.9**	**+1.1**
IMRD	**Marand**	**3.41**	**300**	Pn			**Pn**	**10 54 41.3**	**+1.3**
IDOB	**Doab**	**3.44**	**198**	Pn			**Pn**	**10 54 42.3**	**+2.0**
IDHR	**Dehrash**	**3.44**	**228**	Pn			**Pn**	**10 54 42.5**	**+2.0**
NAX	**Nakhchivan**	**3.78**	**305**	P			**Pn**	**10 54 46.9**	**+1.9**
GANJ	**Ganja**	**4.34**	**326**	P			**Pn**	**10 54 53.0**	**+0.4**
AKT	**Akhty**	**4.61**	**343**	*e*Pn			**Pn**	**10 54 56.5**	**0.0**
comp=Z,56nm,0.5s									
AKT				*e*Sn			**Sn**	**10 55 50.2**	**+0.9**
comp=Z,256nm,0.4s									
AKT	**Akhty**	**4.61**	**343**	⇑*i*P			**Pn**

comp=Z,56nm,0.5s
DVE eSn Sn 10 56 33.0 -0.8
comp=Z,106nm,0.4s
DVE Vedeno 6.42 337 eP Pn **10 55 20.6 -0.6**
DVE eS Sn **10 56 33.0 -0.8**
DVE pmax pmax
comp=Z,56nm,0.5s
SHTL Shatili 6.50 331 P Pn **10 55 23.2 +0.8**
MARD Mardin 6.95 275 Pn Pn **10 55 29.9 +1.4**
TABS Tabas 7.11 116 ePn Pn **10 55 34.9 +4.2**
TABS IAML 10 56 51.4
comp=Z,2.2nm,1.0s
NCK Nalchik 7.84 327⇑eP Pn **10 55 41.0 +0.4**
KBZ Khabaz 8.34 325 Pn Pn **10 55 49.2 +1.9**
comp=Z,0.1nm,0.3s,baz=108,slow=17,SNR=1.6
comp=Z,2.7nm,1.0s
KBZ Khabaz 8.34 325⇓eP Pn **10 55 44.5 -2.9**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
ASF Jabal al Asfar 11.45 248 Pn Pn **10 56 31.6 +1.4**
comp=Z,0.2nm,0.3s,baz=113,slow=15,SNR=1.4
ASF Lg Lg 10 59 39.3
comp=Z,0.3nm,0.3s,baz=302,slow=24,SNR=1.5
comp=Z,0.9nm,0.4s
BRTR Keskin Array B 12.71 287 Pn Pn **10 56 49.8 +2.4**
comp=Z,0.1nm,0.3s,baz=106,slow=14,SNR=4.5
comp=Z,1.9nm,0.9s
UOSS Minazif 13.38 153 Pn Pn **10 56 55.2 -1.3**
RAYN Ar Rayn 13.92 195 Pn **10 57 02.8 -1.2**
RAYN Ar Rayn 13.92 195 P Pn **10 57 02.8 -1.2**
EIL Elat 14.19 243 LR LR 11 02 17.7
comp=Z,46nm,19.3s,baz=76,slow=36
AB31 Akbulak array 14.36 29 Pn 10 57 04.5 -5.2
AB31 Akbulak array 14.36 29 P Pn **10 57 05.8 -4.0**
comp=Z,1.3nm,0.4s,baz=205,slow=12,SNR=73
AB31 ⇓S Sn 10 59 36.8 -11
comp=Z,1.8nm,0.3s,baz=204,slow=28,SNR=5.4
AB31 Akbulak array 14.36 29 P Pn **10 57 05.8 -4.0**
ABKAR Akbulak array 14.36 29 Pn 10 57 04.5 -5.2
AKTO Aktyubinsk 14.71 22 Pn Pn 10 57 09.6 -4.9
comp=Z,6.6nm,0.3s,baz=205,slow=11,SNR=43
AKTO Sn Sn 10 59 45.0 -12
comp=Z,1.6nm,0.3s,baz=216,slow=23,SNR=5.6
AKTO Aktyubinsk 14.71 22⇑P Pn **10 57 14.9 +0.4**
comp=Z,6.6nm,0.5s
AKTO ⇑S Sn 10 59 46.2 -10
comp=Z,4.8nm,0.7s
VRH Novokhopyorsk 15.18 341 eP P **10 57 24.2 -1.4**
VRH pmax pmax
comp=Z,30nm,0.6s
BELG Belogornoye 15.38 356 Pn Pn **10 57 19.3 -4.1**
comp=Z,9.7nm,0.3s,baz=358,slow=5.8,SNR=34
BELG Sn Sn 10 59 56.2 -17
comp=Z,3.6nm,0.3s,baz=112,slow=22,SNR=11
VORD Divnogorie 15.69 336 eP Pn **10 57 23.1 -4.3**
VORD pmax pmax
comp=Z,6.0nm,0.8s
VSR Storozhevoye 15.94 336 eP Pn **10 57 26.8 -3.9**
VSR pmax pmax
comp=Z,6.0nm,0.5s
VORR Voronezh 16.32 337 eP Pn **10 57 30.7 -4.8**
VORR pmax pmax
comp=Z,30nm,0.3s
KK31 Karatay Array 17.17 63 Pn **10 57 45.5 -0.8**
KK31 Karatay Array 17.17 63⇑P Pn **10 57 42.2 -4.2**
comp=Z,5.1nm,0.7s,baz=263,slow=12,SNR=42
KK31 ⇓S Sn 11 00 31.8 -25
comp=Z,1.2nm,0.5s
KK31 Karatay Array 17.17 63 P Pn **10 57 45.5 -0.8**
KK31 pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 17.17 63 Pn **10 57 46.5 +0.1**
KKAR Karatay Array 17.17 63 P Pn **10 57 46.5 +0.1**
LPSR Galich'ya Gora 17.21 338 eP Pn **10 57 44.6 -2.1**
LPSR pmax pmax
comp=Z,30nm,0.6s
SORM Soroca 19.02 312⇑P P **10 58 07.3 -0.8**
NIL Nilore 19.68 93 P P **10 58 14.0 -1.4**
NIL IAmb IAmb 10 58 20.9
comp=Z,8.9nm,0.7s
NIL Nilore 19.68 93 P P **10 58 14.0 -1.4**
NIL pmax pmax
comp=Z,9.0nm,0.7s
AK09 Malin Array Si 19.80 320 P P **10 58 15.8 -0.8**
AK07 Malin Array Si 19.81 319 P P **10 58 16.3 -0.4**
AK10 Malin Array Si 19.81 319 P P **10 58 16.0 -0.7**
AK08 Malin Array Si 19.83 320 P P **10 58 16.8 -0.1**
AK06 Malin Array Si 19.83 319 P P **10 58 15.8 -1.1**
AK05 Malin Array Si 19.85 319 P P **10 58 16.1 -1.0**
AK02 Malin Array Si 19.87 320 P P **10 58 16.3 -1.1**
AKASG Malin Array Be 19.89 320 P P **10 58 16.2 -1.3**
comp=Z,2.0nm,0.6s,baz=126,slow=12,SNR=6.4
AKASG Malin Array Be 19.89 320 P P **10 58 16.9 -0.7**
AKASG Malin Array Be 19.89 320 *i* P Pn **10 58 18.7 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 19.89 320⇑*i*P P **10 58 17.1 -0.4**
AKBB Malin Array Si 19.89 320 P P **10 58 16.8 -0.7**
AK12 Malin Array Si 19.89 319 P P **10 58 16.8 -0.8**
AK12 pP Pn **10 58 19.9 +0.6**
KIEV Kiev 19.89 320⇓P P **10 58 15.7 -1.9**
AK03 Malin Array Si 19.90 320 P P **10 58 17.0 -0.7**
AK11 Malin Array Si 19.90 320 P P **10 58 17.0 -0.7**
AK14 Malin Array Si 19.91 319 P P **10 58 17.0 -0.7**
IDI Anoyia 19.92 272 P P **10 58 18.5 +0.4**
comp=Z,0.3nm,0.3s,baz=279,slow=14,SNR=1.9
comp=Z,7.2nm,0.8s
AK13 Malin Array Si 19.92 319 P P **10 58 17.2 -0.7**
AK04 Malin Array Si 19.93 320 P P **10 58 17.3 -0.7**
AK16 Malin Array Si 19.93 319 P P **10 58 17.3 -0.7**
AK15 Malin Array Si 19.93 320 P P **10 58 17.3 -0.8**
AK17 Malin Array Si 19.96 319 P P **10 58 17.9 -0.5**
AAK Ala-Archa 19.96 66 P Pn **10 58 20.0 -0.4**
comp=Z,0.3nm,0.3s,baz=253,slow=7.2,SNR=8.9
comp=Z,3.0nm,0.6s
AAK Ala-Archa 19.96 66⇑eP P **10 58 16.3 -2.3**
AAK Ala-Archa 19.96 66⇑eP P **10 58 15.7 -3.0**
AAK pmax pmax
comp=Z,3.0nm,0.9s
DOPR Dopca 20.05 304⇑P Pn 10 58 20.8 -0.4
OBN Obninsk 20.09 338 P P **10 58 19.3 -0.4**
comp=Z,17nm,0.3s,baz=209,slow=23,SNR=3.2
OBN Obninsk 20.09 338 P P **10 58 19.2 -0.5**
OBN Obninsk 20.09 338 P P **10 58 19.0 -0.7**
comp=Z,32nm,0.5s
VOIR 20.12 302⇓P Pn 10 58 22.0 -0.3
VOIR 20.12 302 P P **10 58 19.9 -0.4**
comp=Z,13nm,1.0s
ARTI Arti 20.24 14 P P **10 58 21.3 -0.1**
comp=Z,10nm,0.4s,baz=206,slow=8.6,SNR=16
comp=Z,10nm,0.4s
ARTI Arti 20.24 14 P P **10 58 21.3 -0.1**
ARTI Arti 20.24 14*d* *i*P P **10 58 21.1 -0.2**
ARTI S Sn 11 02 10.6 +0.2
ARTI SS **SnSn** **11 02 27.6 +2.6**
ARTI pmax pmax
comp=Z,13nm,0.7s
LUBAR Lubar, Ukraine 20.24 316 P P **10 58 21.0 -0.4**
MOS Moscow 20.34 340 eP P **10 58 22.6 +0.2**
MOS *e* 10 58 39.6
MOS pmax pmax
comp=Z,49nm,0.6s
KMPD K-Podol'skiy 20.34 312 P Pn 10 58 22.6 -2.0
KMPD P P **10 58 22.5 0.0**
MI30 MI30,Zelenitsa 20.45 319 P P **10 58 23.8 +0.1**
comp=Z,20nm,1.8s
MI29 MI29, Kamyanyy 20.45 318 P P **10 58 23.7 0.0**
KSH2 Kashi 20.61 76 P Pn 10 58 28.0 -0.1
KSH2 sP pP 10 58 33.3 +0.9
KSH2 pmax pmax
comp=Z,3.0nm,0.7s
BURAR Bucovina Array 20.72 308 P P **10 58 26.3 -0.4**
BURAR Bucovina Array 20.72 308⇓P P **10 58 26.8 0.0**
BUR08 Bucovina Ar. S 20.74 308 P P **10 58 26.8 -0.2**
BUR08 IAmb IAmb 10 58 47.4
comp=Z,11nm,1.1s
MI28 MI28,Pidlybu 20.83 319 P P **10 58 27.8 0.0**
NRN Naryn 20.96 70 P P **10 58 28.0 -1.7**
NRN IAmb IAmb 10 58 36.5
comp=Z,7.1nm,0.9s
NRN Naryn 20.96 70 P P **10 58 28.0 -1.7**
NRN pmax pmax
comp=Z,7.0nm,0.9s
BOOM Boomskoye usch 21.01 67 P P **10 58 28.5 -1.5**
BOOM IAmb IAmb 10 58 35.8
comp=Z,9.2nm,0.6s
BOOM Boomskoye usch 21.01 67 P P **10 58 28.5 -1.5**
BOOM pmax pmax
comp=Z,9.0nm,0.6s
KSV Kosov 21.08 310 P P **10 58 30.7 +0.2**
KIRV Kirov 21.54 360 P P **10 58 34.6 -0.6**
comp=Z,55nm,0.7s,baz=171,slow=2.9,SNR=18
KIRV Kirov 21.54 360*ce* P **10 58 36.0 +0.8**
STNU Starunia 21.58 311 P P **10 58 36.0 +0.1**
BORK Borovoye 21.61 36 P **10 58 34.7 -1.4**
BORK IAmb IAmb 10 58 37.5
comp=Z,16nm,0.6s
BORK Borovoye 21.61 36*c* *i*P P **10 58 36.7 +0.6**
BORK pmax pmax
comp=Z,17nm,0.9s
BVAR Borovoye Array 21.62 36 P P **10 58 37.0 +0.7**
comp=Z,28nm,0.7s,baz=240,slow=9.6,SNR=121
comp=Z,28nm,0.7s
BVAR Borovoye Array 21.62 36 P P **10 58 37.0 +0.7**
GZR Gura Zlata 21.66 301⇓P P **10 58 38.6 +1.7**
RNPP5 Staryi Chortor 21.94 318 P P **10 58 40.2 +0.5**
MNK Minsk 22.89 326 *i* P P **10 58 52.7 +3.0**
comp=E,19nm,0.9s
MNK *i* P P **10 58 52.7 +3.0**
comp=N,14nm,0.8s
MNK *i* P P **10 58 52.7 +3.0**
comp=Z,13nm,0.8s,baz=129
MNK *i* PP PnPn **10 59 15.7 +1.3**
MNK *i* S S **11 02 60.0 +2.0**
MNK *i* SS SnSn **11 03 29.5 -0.4**
MNK *i* LQ LQ 11 06 11.0
MNK *i* LR LR 11 07 28.5
MNK *i* LRM MLR 11 09 40.9
comp=N,183nm,12.8s
MNK *i* LRM MLR 11 09 41.8
comp=E,146nm,11.3s
MNK *i* LRM MLR 11 10 02.8
comp=Z,125nm,10.8s
MNK Minsk 22.89 326 *i* P P **10 58 52.7 +3.0**
MNK *i* 10 59 15.6
MNK *i* S S **11 02 59.9 +2.0**
MNK pmax pmax
comp=E,19nm,0.9s
MNK pmax pmax
comp=Z,13nm,0.8s
MNK pmax pmax
comp=N,14nm,0.8s
MNK MLR MLR
comp=N,183nm,13.0s
MNK MLR MLR
comp=E,146nm,11.0s
MNK MLR MLR
comp=Z,125nm,11.0s
KLMR Klimovskoe 24.64 348 eP P **10 59 07.9 +1.5**
KLMR *e* 11 02 44.4
KLMR pmax pmax
comp=Z,20nm,0.7s
KURBB Kurchatov Arra 24.77 48 P P **10 59 09.5 +1.8**
comp=Z,6.4nm,0.7s,baz=252,slow=9.4,SNR=23
comp=Z,6.4nm,0.7s
KURBB Kurchatov Arra 24.77 48⇓P P **10 59 09.2 +1.5**
comp=Z,6.4nm,0.7s
KURBB Kurchatov Arra 24.77 48 P P **10 59 09.2 +1.5**
KURK Kurchatov 24.85 47 P P **10 59 09.2 +0.7**
KURK IAmb IAmb 10 59 11.5
comp=Z,9.6nm,0.8s
KURK Kurchatov 24.85 47⇑P P **10 59 10.0 +1.5**
comp=Z,4.0nm,0.8s
KURK Kurchatov 24.85 47*ce* eP P **10 59 08.9 +0.4**
KURK pmax pmax
comp=Z,11nm,0.9s
TIP Timpagrande 25.75 285 P P **10 59 16.8 -0.1**
MAKZ Makanchi 25.90 58 P P **10 59 16.8 -1.3**
MAKZ Makanchi 25.90 58 P P **10 59 20.1 +2.0**
comp=Z,16nm,1.1s
MAKZ Makanchi 25.90 58 P P **10 59 16.8 -1.3**
MAKZ pmax pmax
comp=Z,14nm,1.0s
MODS Modra-Piesok 26.03 306 eP P 10 59 28.8 +10
MODS Modra-Piesok 26.03 306 eP P 10 59 28.8 +10
MK31 Makanchi Array 26.11 58 P P **10 59 17.3 -2.8**
MK31 IAmb IAmb 10 59 24.9
comp=Z,7.7nm,0.8s
MK31 Makanchi Array 26.11 58 P P **10 59 21.9 +1.9**
comp=Z,7.9nm,0.7s,baz=250,slow=6.8,SNR=42
MK31 Makanchi Array 26.11 58⇑eP P **10 59 19.0 -1.0**
MKAR Makanchi Array 26.11 58 P P **10 59 21.9 +1.9**
comp=Z,7.2nm,0.8s,baz=185,slow=25,SNR=18
comp=Z,7.2nm,0.8s
MKAR Makanchi Array 26.11 58 P P **10 59 17.9 -2.1**
MKAR Makanchi Array 26.11 58 P P **10 59 17.9 -2.1**
GERES GERESS Array B 28.45 306 P P **10 59 42.6 +1.5**
comp=Z,0.4nm,0.5s,baz=122,slow=9.3,SNR=1.9
comp=Z,0.4nm,0.5s
FIA1 FINESS Array S 28.47 336 P P **10 59 41.1 +0.2**
FINES FINESS Array B 28.47 336 P P **10 59 40.8 -0.2**
comp=Z,1.2nm,0.7s,baz=129,slow=9.0,SNR=3.4
comp=Z,1.2nm,0.7s
FINES FINESS Array B 28.47 336 P P **10 59 40.1 -0.9**
ZAA0 Zalesovo Array 29.57 44 P P **10 59 50.0 -0.8**
ZAA0 IAmb IAmb 10 59 52.8
comp=Z,2.7nm,0.8s
ZALV Zalesovo Beam 29.57 44 P P **10 59 52.0 +1.2**
comp=Z,1.0nm,0.6s,baz=258,slow=7.4,SNR=7.2
comp=Z,1.0nm,0.6s
WMQ Urumqi 29.66 65 eP P **10 59 53.4 +1.6**
DGZ Jazzator, Alta 30.01 53⇑eP P **10 59 52.8 -2.2**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
HFS Hagfors 32.40 327 P P **11 00 15.6 -0.1**
comp=Z,2.1nm,0.5s,baz=117,slow=8.7,SNR=7.8
comp=Z,2.1nm,0.5s
ARCES ARCESS Array B 35.03 346 P P **11 00 38.4 -0.1**
comp=Z,1.4nm,0.7s,baz=149,slow=8.3,SNR=1.2
comp=Z,1.4nm,0.7s
ARCES ARCESS Array B 35.03 346 P P **11 00 38.0 -0.5**
ARCES IAmb IAmb 11 01 18.7
comp=Z,4.4nm,1.1s
KNGR Kungurtug, Tuv 36.55 53⇑eP P **11 00 49.9 -2.0**
KNGR pmax pmax
comp=Z,1.0nm,0.7s
NRIK Noril'sk 38.32 21 P P **11 01 06.7 +0.3**
comp=Z,2.2nm,0.7s,baz=267,slow=4.6,SNR=4.8
comp=Z,2.2nm,0.7s
NRIK Noril'sk 38.32 21 P P **11 01 05.6 -0.8**
NRIK IAmb IAmb 11 01 09.0
comp=Z,5.0nm,1.1s
NRIK Noril'sk 38.32 21⇑eP P **11 01 07.3 +0.8**
NRIK pmax pmax
comp=Z,4.0nm,1.0s
EKA Eskdalemuir Ar 39.66 315 P P **11 01 17.2 -0.6**
comp=Z,0.9nm,0.6s,baz=96,slow=8.3,SNR=1.7
comp=Z,0.9nm,0.6s
SONM Songino Array 42.47 57 P P **11 01 41.9 +0.7**
comp=Z,0.4nm,0.3s,baz=267,slow=5.3,SNR=2.1
SONM LR LR 11 20 55.3
comp=Z,111nm,18.8s,baz=13,slow=38
comp=Z,0.4nm,0.3s
SONM Songino Array 42.47 57 P P **11 01 39.9 -1.3**
ULN Ulaanbaatar 42.91 57⇑eP P **11 01 45.4 +0.6**
ULN pmax pmax
comp=Z,3.0nm,1.0s
SPITS Spitsbergen Ar 43.50 351 P P **11 01 49.5 +0.4**
comp=Z,6.7nm,0.9s,baz=129,slow=11,SNR=7.9
comp=Z,6.7nm,0.9s
CMAR Chiang Mai Arr 46.98 99 P P **11 02 19.8 +2.5**
comp=Z,0.3nm,0.3s,baz=306,slow=8.6,SNR=4.3
comp=Z,0.3nm,0.3s
HHC Hu-ho-hao-te 47.54 65 eP P **11 02 20.4 -1.2**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,190nm,5.2s
TORD Torodi Ar. Bea 48.76 254 P P **11 02 33.0 +1.8**
comp=Z,2.4nm,1.1s,baz=32,slow=4.6,SNR=5.2
comp=Z,2.4nm,1.1s
TIXI Tiksi 51.98 23⇑eP P **11 02 53.8 -1.0**
TIXI pmax pmax
comp=Z,2.0nm,1.1s
ZEA Zeya 54.31 46 eP P **11 03 12.6 +0.4**
KSRS Korea Array 60.60 64 P P **11 03 57.5 +0.7**
comp=Z,2.4nm,0.6s,baz=287,slow=6.7,SNR=10
comp=Z,2.4nm,0.6s
SEY Seymchan 63.13 30⇑eP P **11 04 14.9 +1.5**
SEY pmax pmax
comp=Z,5.0nm,2.5s
MA2 Magadan 64.09 34⇑eP P **11 04 20.2 +0.4**
MA2 pmax pmax
comp=Z,2.0nm,1.0s
SCHQ Schefferville 73.48 327 P P **11 05 18.2 -0.1**
comp=Z,1.4nm,0.7s,baz=231,slow=16,SNR=2.2
comp=Z,1.4nm,0.7s
ILAR Eielson Array 77.69 7 P P **11 05 42.7 +0.4**
comp=Z,0.6nm,0.9s,baz=348,slow=6.8,SNR=5.7
comp=Z,0.6nm,0.9s
ILAR Eielson Array 77.69 7 P P **11 05 42.0 -0.3**
YKA Yellowknife Ar 79.96 353 P P **11 05 54.0 -0.7**
comp=Z,0.3nm,0.6s,baz=359,slow=6.6,SNR=7.3
comp=Z,0.3nm,0.6s
YKA Yellowknife Ar 79.96 353 *i* P P **11 05 56.0 +1.2**
RAO Raoul Island 139.90 93 PKP **PKiKP** **11 13 15.8 -0.9**
comp=Z,284nm,0.3s,baz=105,slow=22,SNR=2.4

DNK 12 10:56:52.8±1.0, 55.70N×13.34E, h0km, ML2.4, ML1.4(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUNU	**Lund**	**0.09**	**137**	P	Pg	10 56 54.2	-0.3
LUNU				*i* P		10 56 54.3	
LUNU				S	Sg	10 56 55.7	+0.1
LUNU				*i* S		10 56 55.9	
BJUU	**Bjuv**	**0.42**	**335**	P	Pg	10 57 00.3	-0.4
BJUU				*i* P	Pb	10 57 00.4	-2.6
BJUU				*i* S	Sg	10 57 06.6	+0.4
DEL	**Delary**	**0.83**	**21**	P	Pg	10 57 07.5	-1.1
DEL				*e*P	Pb	10 57 07.9	-2.2
DEL				*e*S	Sg	10 57 19.7	+0.2
BSD	**Bornholm Skovb**	**1.07**	**122**	*i* P	Pg	10 57 12.8	-0.5
BSD				*i* S	Sg	10 57 27.1	-0.1
BSD				IAML		10 57 30.2	
	comp=Z,33nm,0.7s						
FABU	**Falkenberg**	**1.35**	**345**	*i* S	Sg	10 57 34.4	-1.8
VXJU	**Vaexsjoe**	**1.52**	**35**	P	Pn	10 57 20.0	-1.1
BLEU	**Blekinge**	**1.52**	**65**	P	Pn	10 57 19.4	-1.8
BLEU				*i* P	Pb	10 57 19.9	-1.8
BLEU				*i* S	Sg	10 57 40.3	-1.2
GNOU	**Gnosjoe**	**1.61**	**8**	P	Pn	10 57 22.1	-0.4
ONAU	**Onsala**	**1.88**	**336**	*i* S	Sn	10 57 50.7	+0.3
BORU	**Boraas**	**1.97**	**351**	*i* S	Sn	10 57 53.4	+0.7

*SDD **12** 11:39:44.8±2.3, 17°.90N×66°.68W, h14km±857km, MD3.5, ML3.1, MW3.3, Presumed earthquake*
*NEIC **12** 11:39:46.0±1.1, 17°.95N±0°.08×66°.737W±0°.009, h10km±1km, ML3.4/33, Md3.1/6(RSPR), Error ellipse: s-maj=13.2km s-min=2.6km az=2.0*
*RSPR **12** 11:39:46.2, 17°.96N×66°.75W, h13km, MD3.1/6*
ISC 12 11:39:46.0±1.0, 17°.96N±0°.05×66°.73W±0°.02, h15km±6km, n35, σ0°74/55, 15C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.14**	**277**		**Pg**	**11 39 49.5**	**-0.3**
GBPR					**Sg**	**11 39 52.0**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.14**	**277**	⇓*i*P	**Pg**	**11 39 49.5**	**-0.3**
GBPR				*e*S	**Sg**	**11 39 52.0**	**-0.3**
OBIP	**Obispado Ponce**	**0.15**	**55**		**Pg**	**11 39 49.9**	**0.0**
OBIP				Sg	**Sg**	**11 39 52.7**	**+0.2**
OBIP	**Obispado Ponce**	**0.15**	**55**	⇑*i*P	**Pb**	**11 39 50.1**	**-0.4**
OBIP				*e*S	**Sb**	**11 39 52.9**	**-0.6**
CELP	**Cerrillos**	**0.19**	**51**		**Pb**	**11 39 50.8**	**-0.3**
CELP				Sg	**Sg**	**11 39 53.9**	**+0.4**
CELP				IAML		11 39 54.5	
	7μm,0.2s						
CELP				IAML		11 39 54.6	
	11μm,0.3s						
UUPR	**Utuado, UPR, P**	**0.29**	**3**		**Pg**	**11 39 51.9**	**-0.3**
MLPR	**Magueyes Islan**	**0.29**	**272**		**Pg**	**11 39 51.8**	**-0.4**
MLPR				IAML		11 39 56.9	
	4μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.36**	**278**		**Pg**	**11 39 52.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.36**	**278**		**Sg**	**11 39 58.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.36**	**278**	⇑*e*Pg	**Pg**	**11 39 52.9**	**-0.5**
CRPR				⇑*e*Sg	**Sg**	**11 39 56.5**	**-1.9**
CRPR				IAML		11 39 59.6	
	comp=N,2μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.36**	**278**	⇑*i*P	**Pg**	**11 39 52.9**	**-0.5**
CRPR				*e*S	**Sg**	**11 39 58.3**	**-0.1**
LSP	**Las Mesas**	**0.40**	**303**		**Pg**	**11 39 53.8**	**-0.3**
LSP					**Sg**	**11 39 59.9**	**+0.2**
LSP	**Las Mesas**	**0.40**	**303**	⇑*e*P	**Pg**	**11 39 53.8**	**-0.3**
LSP				*e*S	**Sg**	**11 39 59.9**	**+0.2**
PRSN	**Puerto Rico Se**	**0.47**	**304**		**Pg**	**11 39 54.6**	**-0.7**
PRSN	**Puerto Rico Se**	**0.47**	**304**		**Sg**	**11 40 01.1**	**-0.6**
PRSN	**Puerto Rico Se**	**0.47**	**304**	⇓*e*Pg	**Pg**	**11 39 54.8**	**-0.6**
PRSN				⇑*e*Sg	**Sg**	**11 40 01.0**	**-0.6**
PRSN				IAML		11 40 04.6	
	comp=N,4μm,0.3s						
PRSN	**Puerto Rico Se**	**0.47**	**304**	⇑*e*P	**Pg**	**11 39 54.6**	**-0.7**
PRSN				*e*S	**Sg**	**11 40 01.1**	**-0.6**
ECPR	**Experimental S**	**0.50**	**44**		**Pg**	**11 39 55.9**	**-0.1**
ECPR	**Experimental S**	**0.50**	**44**	⇓*i*P	**Pg**	**11 39 55.9**	**-0.1**
ECPR				*e*S	**Sg**	**11 40 02.9**	**+0.1**
SJG	**San Juan**	**0.58**	**74**		**Pg**	**11 39 57.3**	**-0.1**
SJG				IAML		11 40 06.2	
	comp=N,3μm,0.4s						
SJG				IAML		11 40 06.8	
	comp=N,2μm,0.2s						
SJG	**San Juan**	**0.58**	**74**	Sg	**Sg**	**11 40 05.1**	**0.0**
SJG	**San Juan**	**0.58**	**74**	⇑*e*P	**Pg**	**11 39 57.3**	**-0.1**
SJG				*e*S	**Sg**	**11 40 05.1**	**0.0**
AGPR	**Aguadilla, PR**	**0.62**	**325**		**Pg**	**11 39 57.5**	**-0.7**
AGPR				IAML		11 40 11.9	
	comp=N,1μm,0.4s						
AGPR	**Aguadilla, PR**	**0.62**	**325**	⇑*e*Pg	**Pg**	**11 39 57.6**	**-0.6**
AGPR				⇑*e*Sg	**Sg**	**11 40 05.9**	**-0.6**
AGPR				IAML		11 40 09.3	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.62**	**325**	⇑*e*P	**Pg**	**11 39 57.5**	**-0.7**
AGPR				*e*S	**Sg**	**11 40 05.9**	**-0.6**
PDPR	**Patillas Dam,**	**0.68**	**85**		**Pg**	**11 39 59.0**	**-0.2**
GCPR	**Guaynabo City**	**0.71**	**60**		**Pg**	**11 39 59.4**	**-0.4**
GCPR					**Sg**	**11 40 08.7**	**-0.6**
GCPR				IAML		11 40 09.8	
	comp=N,1μm,0.3s						
GCPR	**Guaynabo City**	**0.71**	**60**	⇑*e*P	**Pg**	**11 39 59.4**	**-0.4**
GCPR				*e*S	**Sg**	**11 40 08.7**	**-0.6**
HUMP	**Col San Antoni**	**0.86**	**78**		**Pg**	**11 40 02.1**	**-0.6**
HUMP				IAML		11 40 14.4	
	comp=N,1μm,0.2s						
HUMP				IAML		11 40 14.8	
	comp=N,881nm,0.2s						
HUMP	**Col San Antoni**	**0.86**	**78**		**Sg**	**11 40 12.4**	**-1.6**
HUMP	**Col San Antoni**	**0.86**	**78**	⇑*e*P	**Pg**	**11 40 01.9**	**-0.8**
HUMP				*e*S	**Sg**	**11 40 12.4**	**-1.6**
CUPR	**Culebra, Puert**	**1.42**	**76**		**Pb**	**11 40 11.8**	**-0.4**
MIDR	**Miches**	**2.42**	**295**	⇑*e*Pg	**Pb**	**11 40 27.9**	**-1.4**
MIDR				⇑*e*Sg	**Sb**	**11 41 00.0**	**+1.1**
MIDR				IAML		11 41 10.3	
	comp=N,72nm,2.5s						
DR12	**Loma Pena Alta**	**2.65**	**289**	Pn	**Pn**	**11 40 29.2**	**+1.1**
HATOM	**Hato Mayor del**	**2.65**	**289**	⇑*e*Pg	**Pn**	**11 40 30.0**	**+1.9**
HATOM				⇑*e*Sg	**Sb**	**11 41 06.8**	**+1.4**
HATOM				IAML		11 41 07.5	
	comp=N,39nm,0.9s						

*SJA **12** 11:47:01.3±0.7, 23°.93S×66°.57W, h241km±5km, ML3.5, MW3.6*
*IDC **12** 11:47:05.8±1.9, 23°.63S×66°.24W, h226km±18km, mb3.1/3, mbtmp3.7/8, Error ellipse: s-maj=23.1km s-min=17.2km az=75.0*
ISC 12 11:47:02.5±0.7, 23°.89S±0°.04×66°.59W±0°.05, h195km, n31, σ2°25/50, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.40**	**146**	*e*P	**Pn**	**11 47 33.2**	**+3.8**
SALTA				*e*P		11 47 33.2	
SLA	**San Lorenzo**	**1.29**	**130**	*e*P	**Pn**	**11 47 37.6**	**+3.4**
SLA				*e*S	**Sn**	**11 48 04.2**	**+5.4**
AF01	**San Pedro de A**	**1.73**	**302**	*e*P	**Pn**	**11 47 40.8**	**+2.5**
AF01				IAML		11 48 17.7	
	comp=Z,135nm,0.6s						
FSA	**Cafayete**	**2.28**	**166**	*e*P	**Pn**	**11 47 45.7**	**+1.9**
FSA				*e*S	**Sn**	**11 48 12.0**	**-4.2**
PB06	**IPOC Station P**	**2.98**	**293**	*e*P	**Pn**	**11 47 54.3**	**+2.4**

PB06				*e*S	**Sn**	**11 48 33.3**	**+2.9**	
PB06				IAML		11 48 35.2		
	comp=Z,103nm,0.1s							
AHML	**Horco Molle**	**3.10**	**159**	*e*P	**Pn**	**11 47 54.5**	**+1.3**	
AHML				*e*S	**Sn**	**11 48 33.7**	**+0.9**	
PB09	**IPOC Station P**	**3.21**	**310**	*e*P	**Pn**	**11 47 57.6**	**+2.9**	
PB09				*e*S	**Sn**	**11 48 38.7**	**+3.3**	
PB09				IAML		11 48 40.9		
	comp=Z,57nm,0.5s							
PB05	**IPOC Station P**	**3.48**	**287**	*e*P	**Pn**	**11 47 59.5**	**+1.7**	
PB05				*e*S	**Sn**	**11 48 42.9**	**+1.9**	
PB05				IAML		11 48 47.3		
	comp=Z,58nm,0.3s							
PB14	**IPOC Station P**	**3.56**	**257**	*e*P	**Pn**	**11 48 00.1**	**+1.1**	
PB14				*e*S	**Sn**	**11 48 43.5**	**+0.4**	
PB14				IAML		11 48 50.3		
	comp=Z,81nm,0.3s							
PB10	**IPOC Station P**	**3.65**	**275**	*e*P	**Pn**	**11 48 01.4**	**+1.5**	
PB10				*e*S	**Sn**	**11 48 46.1**	**+1.4**	
PB10				IAML		11 48 48.5		
	comp=Z,65nm,0.5s							
AC02	**Maricunga**	**3.73**	**218**	*e*P	**Pn**	**11 48 02.8**	**+1.5**	
AC02				*e*S	**Sn**	**11 48 47.2**	**0.0**	
PB07	**IPOC Station P**	**3.73**	**305**	*e*P	**Pn**	**11 48 02.6**	**+1.7**	
PB07				*e*S	**Sn**	**11 48 47.8**	**+1.1**	
PB07				IAML		11 48 48.6		
	comp=Z,123nm,0.3s							
PB01	**IPOC Station P**	**3.90**	**316**	*e*P	**Pn**	**11 48 04.8**	**+1.7**	
PB01				*e*S	**Sn**	**11 48 53.2**	**+2.8**	
PB01				IAML		11 48 55.0		
	comp=Z,47nm,0.2s							
PB02	**IPOC Station P**	**3.98**	**309**	*e*P	**Pn**	**11 48 05.5**	**+1.4**	
PB02				*e*S	**Sn**	**11 48 53.1**	**+0.8**	
TINO	**Tinogasta**	**4.25**	**192**	*e*P	**Pn**	**11 48 08.7**	**+1.3**	
TINO				*e*S	**Sn**	**11 49 01.7**	**+3.3**	
AC01	**Pan de Azucar**	**4.28**	**237**	*e*P	**Pn**	**11 48 07.4**	**-0.2**	
AC01				*e*S	**Sn**	**11 48 57.2**	**-1.6**	
AC01				IAML		11 49 03.9		
	comp=Z,25nm,0.3s							
PB08	**IPOC Station P**	**4.42**	**327**	*e*P	**Pn**	**11 48 12.2**	**+2.3**	
PB08				*e*S	**Sn**	**11 49 05.6**	**+2.8**	
PB08				IAML		11 49 07.8		
	comp=Z,33nm,0.5s							
GO01	**Chusmiza**	**4.85**	**330**	*e*P	**Pn**	**11 48 17.6**	**+2.2**	
GO01				*e*S	**Sn**	**11 49 15.4**	**+2.7**	
GO01				IAML		11 49 18.7		
	comp=Z,21nm,0.5s							
GO03	**Copiapo**	**4.94**	**221**	*e*P	**Pn**	**11 48 15.8**	**-0.3**	
GO03				*e*S	**Sn**	**11 49 12.2**	**-1.9**	
GO03				IAML		11 49 12.9		
	comp=Z,17nm,0.3s							
PB11	**IPOC Station P**	**5.00**	**325**	*e*P	**Pn**	**11 48 17.6**	**+0.6**	
PB11				*e*S	**Sn**	**11 49 15.9**	**+0.2**	
PB11				IAML		11 49 19.9		
	comp=Z,44nm,0.5s							
LPAZ	**La Paz**	**7.70**	**349**	P	**Pn**	**11 48 54.0**	**+1.4**	
	comp=Z,5.4nm,0.5s,baz=155,slow=9.0,SNR=17							
LPAZ				S	**Sn**	**11 50 19.9**	**+0.1**	
	comp=Z,0.8nm,0.5s,baz=269,slow=24,SNR=1.5							
CPUP	**Villa Florida**	**8.74**	**108**	P	**Pn**	**11 49 04.9**	**-0.5**	
	comp=Z,1.5nm,0.7s,baz=271,slow=15,SNR=3.5							
SIV	**San Ignacio**	**9.41**	**34**	P	**Pn**	**11 49 11.4**	**-3.0**	
	comp=Z,1.1nm,0.7s,baz=208,slow=7.0,SNR=6.1							
PLCA	**Paso Flores**	**17.12**	**190**	P	**Pn**	**11 50 54.2**	**+3.8**	
	comp=Z,1.1nm,0.5s,baz=3.4,slow=10,SNR=9.8							
BDFB	**Brasilia**	**19.30**	**68**	P	**P**	**11 51 10.4**	**-2.6**	
	comp=Z,4.8nm,0.8s,baz=220,slow=9.3,SNR=6.1							
TORD	**Torodi Ar. Bea**	**76.18**	**69**	P	**P**	**11 58 27.5**	**-2.2**	
	comp=Z,0.4nm,0.5s,baz=254,slow=6.8,SNR=6.0							
	comp=Z,0.4nm,0.5s							
PDAR	**Pinedale Array**	**77.25**	**329**	P	**P**	**11 58 35.0**	**-0.3**	
	comp=Z,0.2nm,0.6s,baz=142,slow=7.0,SNR=2.7							
	comp=Z,0.2nm,0.6s							
YKA	**Yellowknife Ar**	**94.15**	**340**	P	**P**	**11 59 57.2**	**-1.2**	
	comp=Z,0.1nm,0.6s,baz=138,slow=5.2,SNR=4.0							
	comp=Z,0.1nm,0.6s							
ASAR	**Alice Springs**	**128.71**	**204**	PKP	**PKPdf**	**12 05 45.8**	**-1.6**	
	comp=Z,0.3nm,0.7s,baz=135,slow=1.7,SNR=4.7							
WRA	**Warramunga Arr**	**131.89**	**207**	PKP	**PKPdf**	**12 05 51.8**	**-1.6**	
	comp=Z,0.2nm,0.5s,baz=170,slow=1.5,SNR=8.9							
MKAR	**Makanchi Array**	**146.20**	**40**	PKPbc	**PKPdf**	**12 06 18.0**	**-0.5**	
	comp=Z,0.4nm,0.5s,baz=306,slow=4.0,SNR=5.4							

LVSN ***12*** *12:13:21.0±4.8, 57°.38N×25°.97E, h0km±591km, ML1.7, Presumed earthquake*

HEL 12 12:13:27.6±0.3, 61°.00N×29°.21E, h0km, ML1.8, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.44**	**344**	PG	Pg	12 13 35.7	-0.4
RUF				SG	Sg	12 13 41.8	0.0
VJF	**Virojoki**	**0.94**	**241**	PG	Pg	12 13 44.6	-0.9
	baz=57						
VJF				smax	smax	12 13 56.4	
	comp=Z,34nm,0.2s						
VJF				SB	Sg	12 13 57.8	+0.1
FIA0	**FINESS Array S**	**1.58**	**288**	PG	Pn	12 13 55.9	-0.9
	baz=107						
FIA0				smax	smax	12 14 15.0	
	comp=Z,8.3nm,0.2s						
FIA0				SN	Sn	12 14 17.0	-0.9
PVF	**Pernaja**	**1.71**	**256**	PG	Pn	12 13 57.8	-0.7
PVF				smax	smax	12 14 18.7	
	comp=Z,6.6nm,0.2s						
PVF				SN	Sg	12 14 22.2	-0.1
JOF	**Joensuu**	**2.16**	**26**	PB	Pn	12 14 05.4	+0.6
	baz=205						
JOF				SN	Sn	12 14 32.3	0.0
SUF	**Sumiainen**	**2.25**	**321**	PG	Pb	12 14 07.8	-1.3
SUF				smax	smax	12 14 34.2	
	comp=Z,2.2nm,0.2s						
SUF				SG	Sb	12 14 38.3	+0.8
NUR	**Nurmijarvi**	**2.29**	**260**	PG	Pb	12 14 08.5	-1.3
	baz=76						
NUR				smax	smax	12 14 35.5	
	comp=Z,3.4nm,0.2s						
KEF	**Keuruu**	**2.38**	**301**	PG	Pn	12 14 09.3	+1.5
KEF				smax	smax	12 14 38.1	
	comp=Z,2.0nm,0.2s						
KEF				SG	Sb	12 14 40.4	-0.8
NIF	**Nilsia**	**2.48**	**345**	PG	Pn	12 14 10.8	+1.6
	baz=160						
NIF				smax	smax	12 14 40.9	
	comp=Z,2.5nm,0.2s						
NIF				SG	Sb	12 14 43.3	-0.9
MEF	**Metsahovi**	**2.50**	**254**	*e*P	Pn	12 14 10.1	+0.7
MEF				*e*S	Sn	12 14 42.1	+1.5
MEF				AML	AML	12 14 47.4	
	comp=E,6.7nm,0.4s						
MEF				AML	AML	12 14 52.7	
	comp=N,7.2nm,0.7s						
MEF				AML	AML	12 15 01.4	
	comp=Z,6.6nm,1.0s						
MEF	**Metsahovi**	**2.50**	**254**	PG	Pb	12 14 11.9	-1.4
MEF				smax	smax	12 14 41.5	
	comp=Z,3.2nm,0.2s						
RAF	**Rauma**	**3.63**	**274**	*e*P	Pn	12 14 25.6	+0.7
RAF				AML	AML	12 15 29.8	
	comp=N,3.4nm,0.5s						
RAF				AML	AML	12 15 44.6	
	comp=Z,3.8nm,0.8s						
RAF				AML	AML	12 15 55.0	
	comp=E,3.6nm,0.6s						

NOU ***12*** *12:32:06.2, 19°.70S×175°.38W, h230km, mb4.5/41, Tonga Islands*
NEIC ***12*** *12:32:07.5±1.2, 19°.5S±0°.1×175°.43W±0°.09, h243km±16km, mb4.3/21, Error ellipse: s-maj=21.8km s-min=5.9km az=146.0*
IDC ***12*** *12:32:14.7±3.8, 20°.24S×175°.92W, h291km±38km, mb3.5/7, mbtmp4.4/10, Error ellipse: s-maj=20.3km s-min=12.6km az=127.0*

ISC 12 12:32:05.8±0.6, 19°.60S±0°.09×175°.42W±0°.06, h223km, n114, σ1°.43/112, mb4.4/31, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.49**	**292**	P	**Pn**	**12 33 03.0**	**+0.6**
TAVE	**Taveuni**	**5.15**	**303**	P	**Pn**	**12 33 24.2**	**+1.5**
	222nm,0.8s						
NIUE	**Niue**	**5.21**	**85**		**Pn**	**12 33 26.0**	**+2.5**
NIUE				Sn	**S**	**12 34 23.4**	**-1.4**
NIUE	**Niue**	**5.21**	**85**	P	**Pn**	**12 33 25.0**	**+1.6**
NIUE	**Niue**	**5.21**	**85**	P	**Pn**	**12 33 25.4**	**+2.0**
NIUE				S	**S**	**12 34 23.8**	**-1.0**
DGTI	**Dogotuki**	**5.66**	**305**	P	**Pn**	**12 33 30.4**	**+1.2**
	83nm,0.9s						
MSVF	**Nonsavu**	**6.47**	**286**		**Pn**	**12 33 40.5**	**+0.9**
MSVF	**Nonsavu**	**6.47**	**286**	P	**Pn**	**12 33 40.9**	**+1.4**
	57nm,1.3s						
AFI	**Afiamalu**	**6.65**	**32**	Pn	**Pn**	**12 33 42.3**	**+0.4**
AFI	**Afiamalu**	**6.65**	**32**	P	**Pn**	**12 33 42.3**	**+0.4**
	32nm,1.0s						
AFI	**Afiamalu**	**6.65**	**32**	P	**Pn**	**12 33 42.4**	**+0.6**
AFI				S	**S**	**12 34 53.1**	**-5.2**
GLKZ	**Green Lake**	**9.88**	**193**	S	S	12 36 00.2	-14
RAR	**Rarotonga**	**14.75**	**99**	P	P	12 35 35.2	+11
	12nm,0.8s,baz=236,slow=15,SNR=1.5						
MARNC	**Mare, Loyalty**	**15.62**	**260**	P	**P**	**12 35 33.9**	**-0.2**
MARNC	**Mare, Loyalty**	**15.62**	**260**	P	**Pn**	**12 35 34.4**	**-0.2**
	255nm,1.7s						
DVP	**Devils Point**	**15.65**	**274**	P	**Pn**	**12 35 35.6**	**+0.6**
	1um,2.2s						
PINNC	**Pines Island,**	**16.27**	**256**	P	**Pn**	**12 35 41.6**	**-0.8**
YATNC	**Mamie plateau,**	**16.72**	**259**	P	**Pn**	**12 35 48.1**	**+0.3**
	51nm,2.4s						
DZM	**Mont Dzumac**	**17.14**	**259**	P	**P**	**12 35 51.2**	**+0.2**
	70nm,0.7s,baz=84,slow=19						
DZM	**Mont Dzumac**	**17.14**	**259**	P	**Pn**	**12 35 51.6**	**-1.1**
DZM	**Mont Dzumac**	**17.14**	**259**	P	**Pn**	**12 35 52.0**	**-0.7**
	144nm,0.8s						
ONTNC	**Ouen Toro**	**17.15**	**258**	P	**Pn**	**12 35 52.2**	**-0.6**
OUZ	**Omahuta**	**18.34**	**210**	P	**P**	**12 36 02.3**	**-1.5**
	12nm,2.8s						
OUZ	**Omahuta**	**18.34**	**210**	P	**P**	**12 36 02.2**	**-1.5**
MXZ	**Matakaoa Point**	**18.72**	**196**	P	**P**	**12 36 07.3**	**-0.5**
	57nm,1.1s						
MXZ	**Matakaoa Point**	**18.72**	**196**		**P**	**12 36 07.0**	**-0.8**
KUZ	**Kuaotunu**	**18.77**	**203**	P	**P**	**12 36 07.3**	**-1.0**
	37nm,0.9s						
KUZ	**Kuaotunu**	**18.77**	**203**	P	**P**	**12 36 07.1**	**-1.2**
WMGZ	**Waiomatatini S**	**18.93**	**195**	P	**P**	**12 36 10.2**	**+0.1**
WMGZ				S	S	12 39 16.6	-17
WIAZ	**Waiheke Island**	**19.02**	**204**	P	**P**	**12 36 10.5**	**-0.7**
HAZ	**Te Kaha**	**19.04**	**197**	P	**P**	**12 36 09.7**	**-1.6**
PKGZ	**Pakihiroa**	**19.06**	**196**	P	**P**	**12 36 11.2**	**-0.3**
MBAZ	**Motuhou North**	**19.09**	**204**	P	**P**	**12 36 12.4**	**+0.5**
PUZ	**Puketiti**	**19.21**	**195**	P	**P**	**12 36 11.4**	**-1.7**
MKAZ	**Moumakai**	**19.29**	**203**	P	**P**	**12 36 13.0**	**-1.0**
WTAZ	**Waiatarua**	**19.36**	**205**	P	**P**	**12 36 14.1**	**-0.7**
TWGZ	**Tauwhareparae**	**19.38**	**196**	P	**P**	**12 36 15.2**	**+0.2**
AWAZ	**Awhitu Peninsu**	**19.45**	**205**	P	**P**	**12 36 14.3**	**-1.4**
URZ	**Urewera**	**19.69**	**198**	P	**P**	**12 36 13.9**	**-4.3**
	18nm,0.3s,baz=10,slow=19,SNR=47						
URZ				S	S	12 39 35.4	-13
	3.5nm,0.4s,baz=48,slow=23,SNR=8.8						
URZ	**Urewera**	**19.69**	**198**	P	**P**	**12 36 14.8**	**-3.5**
	32nm,0.7s						
URZ	**Urewera**	**19.69**	**198**	P	**P**	**12 36 15.1**	**-3.2**
TOZ	**Tahuroa Road**	**19.72**	**202**	P	**P**	**12 36 17.5**	**-1.1**
OMRZ	**Omania**	**19.77**	**199**	P	**P**	**12 36 19.1**	**-0.1**
HRRZ	**Handcock Road**	**20.06**	**199**	P	**P**	**12 36 22.0**	**-0.3**
HIZ	**Hauiti**	**20.65**	**202**	P	**P**	**12 36 27.7**	**-0.8**
	28nm,0.8s						
HIZ	**Hauiti**	**20.65**	**202**	P	**P**	**12 36 27.7**	**-0.8**
VRZ	**Vera Road**	**21.23**	**202**	P	**P**	**12 36 34.5**	**0.0**
BFZ	**Birch Farm**	**22.19**	**197**	P	**P**	**12 36 43.2**	**-0.6**
	35nm,1.1s						
QRZ	**Quartz Range**	**23.53**	**203**	P	**P**	**12 36 54.6**	**-1.3**
	30nm,0.7s						
QRZ	**Quartz Range**	**23.53**	**203**	P	**P**	**12 36 54.7**	**-1.2**
NNZ	**Nelson**	**23.57**	**202**	P	**P**	**12 36 55.4**	**-0.9**
THZ	**Tophouse**	**24.22**	**202**	P	**P**	**12 37 00.7**	**-1.5**
KHZ	**Kahutara**	**24.59**	**200**	P	**P**	**12 37 04.3**	**-1.2**
	41nm,2.9s						
KHZ	**Kahutara**	**24.59**	**200**	P	**P**	**12 37 04.1**	**-1.4**
DSZ	**Denniston Nort**	**24.60**	**203**	P	**P**	**12 37 05.4**	**-0.3**
GVZ	**Greta Valley S**	**25.25**	**200**	P	**P**	**12 37 10.9**	**-0.6**
LTZ	**Lake Taylor**	**25.34**	**202**	P	**P**	**12 37 12.9**	**+0.6**
INZ	**Inchbonnie**	**25.58**	**203**	P	**P**	**12 37 13.1**	**-1.3**
OXZ	**Oxford**	**25.90**	**201**	P	**P**	**12 37 18.4**	**+1.1**
WVZ	**Waitaha Valley**	**26.15**	**203**	P	**P**	**12 37 19.7**	**+0.2**
TATA	**Tatamba Isabel**	**26.46**	**291**	P	**P**	**12 37 24.0**	**+1.4**
	67nm,2.6s						
RPZ	**Rata Peaks**	**26.59**	**202**	P	**P**	**12 37 22.8**	**-0.7**
	17nm,0.8s						
RPZ	**Rata Peaks**	**26.59**	**202**	P	**P**	**12 37 25.5**	**+2.1**
FOZ	**Fox Glacier**	**26.89**	**204**	P	**P**	**12 37 25.9**	**-0.2**
TMZ	**Timaru**	**27.18**	**202**	P	**P**	**12 37 31.0**	**+2.3**
JCZ	**Jackson Bay**	**27.75**	**205**	P	**P**	**12 37 32.9**	**-1.0**
	15nm,2.2s						
JCZ	**Jackson Bay**	**27.75**	**205**	P	**P**	**12 37 32.8**	**-1.1**
ODZ	**Otahua Downs**	**27.89**	**201**	P	**P**	**12 37 34.6**	**-0.4**
	25nm,2.2s						
WKZ	**Wanaka**	**28.29**	**204**	P	**P**	**12 37 39.7**	**+1.1**
MLZ	**Mavora Lakes**	**29.09**	**204**	P	**P**	**12 37 47.3**	**+1.7**
WHZ	**Wether Hill Ro**	**29.59**	**204**	P	**P**	**12 37 50.5**	**+0.4**
EIDS	**Eidsvold**	**31.43**	**253**	P	**P**	**12 38 05.4**	**-1.0**
EIDS	**Eidsvold**	**31.43**	**253**	P	**P**	**12 38 05.6**	**-0.9**
	24nm,0.6s						
ARMA	**Armidale**	**31.64**	**244**	P	**P**	**12 38 08.0**	**-0.4**
ARMA				IAmb	IAmb	12 38 34.5	
	comp=Z,11nm,1.1s						
ARMA	**Armidale**	**31.64**	**244**	P	**P**	**12 38 08.3**	**-0.1**
CNB	**Canberra Magne**	**34.74**	**236**	P	**P**	**12 38 34.1**	**-1.0**
	comp=Z,14nm,0.6s						
CAN	**Canberra**	**35.02**	**236**	P	**P**	**12 38 36.9**	**-0.6**
CAN				IAmb	IAmb	12 38 56.0	
	comp=Z,9.1nm,1.1s						
CAN	**Canberra**	**35.02**	**236**	P	**P**	**12 38 37.1**	**-0.4**
	comp=Z,21nm,1.6s						
CTAO	**Charters Tower**	**36.01**	**263**		**P**	**12 38 45.2**	**-0.8**
CTAO				IAmb	IAmb	12 38 46.6	
	comp=Z,17nm,1.0s						
CTAO	**Charters Tower**	**36.01**	**263**	P	**P**	**12 38 45.2**	**-0.8**
	comp=Z,6.9nm,0.9s						
CMSA	**Cobar Meteorol**	**36.86**	**243**	P	**P**	**12 38 51.9**	**-1.1**
	comp=Z,14nm,2.8s						
QLP	**Quilpie**	**37.65**	**252**	P	**P**	**12 38 58.6**	**-1.1**
	comp=Z,29nm,0.6s						
MTSU	**Mount Surprise**	**38.07**	**265**	P	**P**	**12 39 02.9**	**-0.5**
	comp=Z,14nm,0.6s						
TOO	**Toolangi**	**38.38**	**234**	P	**P**	**12 39 05.0**	**-0.7**
COEN	**Coen**	**39.97**	**272**	P	**P**	**12 39 19.0**	**-0.1**
COEN				IAmb	IAmb	12 39 19.5	
	comp=Z,10nm,0.6s						
COEN	**Coen**	**39.97**	**272**	P	**P**	**12 39 18.8**	**-0.3**
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**40.36**	**244**	P	**P**	**12 39 18.2**	**-3.9**
	comp=Z,1.8nm,0.4s,baz=85,slow=14,SNR=8.7						
	comp=Z,1.8nm,0.4s						
STKA	**Stephens Creek**	**40.36**	**244**	P	**P**	**12 39 21.8**	**-0.3**
STKA				IAmb	IAmb	12 39 34.9	
	comp=Z,9.7nm,0.8s						
STKA	**Stephens Creek**	**40.36**	**244**	P	**P**	**12 39 22.1**	**0.0**
	comp=Z,0.9nm,1.1s						
INKA	**Innaminka**	**40.79**	**250**	P	**P**	**12 39 25.2**	**-0.4**
QIS	**Mount Isa**	**42.16**	**261**	P	**P**	**12 39 35.7**	**-1.2**
BBOO	**Buckleboo**	**45.12**	**243**	P	**P**	**12 39 58.5**	**-1.8**
BBOO				IAmb	IAmb	12 40 03.4	
	comp=Z,9.1nm,1.1s						
BBOO	**Buckleboo**	**45.12**	**243**	P	**P**	**12 40 00.1**	**-0.2**
	comp=Z,16nm,1.7s						
GENI	**Genyem**	**46.55**	**286**	P	**P**	**12 40 12.1**	**+0.4**
WR8	**Warramunga Arr**	**46.99**	**261**		**P**	**12 40 13.4**	**-1.6**
WR8				IAmb	IAmb	12 40 14.6	
	comp=Z,4.1nm,0.5s						
AS31	**Alice Springs**	**47.09**	**256**		**P**	**12 40 14.7**	**-1.1**
ASAR	**Alice Springs**	**47.09**	**256**	P	**P**	**12 40 14.2**	**-1.6**
	comp=Z,14nm,0.6s,baz=98,slow=8.0,SNR=330						
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**47.09**	**256**		**P**	**12 40 14.7**	**-1.1**
WB0	**Warramunga Arr**	**47.11**	**261**		**P**	**12 40 14.3**	**-1.7**
WB0				IAmb	IAmb	12 40 15.3	
	comp=Z,9.5nm,0.6s						
WB1	**Warramunga Ar.**	**47.13**	**261**	P	**P**	**12 40 14.6**	**-1.5**
	comp=Z,13nm,1.3s						
WRAB	**Tennant Creek**	**47.13**	**261**	P	**P**	**12 40 14.5**	**-1.6**
WRAB	**Tennant Creek**	**47.13**	**261**	P	**P**	**12 40 14.8**	**-1.3**
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**47.14**	**261**	P	**P**	**12 40 14.0**	**-2.2**
	comp=Z,5.0nm,0.6s,baz=99,slow=8.4,SNR=147						
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**47.14**	**261**	P	**P**	**12 40 13.8**	**-2.4**
MTN	**Manton Dam**	**51.60**	**269**	P	**P**	**12 40 48.9**	**-0.9**
MTN				IAmb	IAmb	12 40 52.5	
	comp=Z,10.0nm,0.9s						
FORT	**Forrest**	**51.88**	**246**	P	**P**	**12 40 51.7**	**0.0**
FORT				IAmb	IAmb	12 41 01.7	
	comp=Z,12nm,1.0s						
KNRA	**Kununurra**	**53.15**	**265**	P	**P**	**12 41 00.6**	**-0.7**
KNRA				IAmb	IAmb	12 41 02.1	
	comp=Z,5.8nm,0.6s						
FAKI	**Fak Fak**	**53.69**	**281**	P	**P**	**12 41 05.2**	**0.0**
SOEI	**Soe**	**58.91**	**270**	P	**P**	**12 41 44.0**	**+1.8**
NVAR	**Mina Array Bea**	**78.72**	**42**	P	**P**	**12 43 49.2**	**+5.4**
	comp=Z,0.7nm,0.6s,baz=239,slow=7.4,SNR=8.7						
	comp=Z,0.7nm,0.6s						
TXAR	**Lajitas Array**	**84.53**	**56**	P	**P**	**12 44 20.6**	**+6.3**
	comp=Z,0.8nm,0.7s,baz=241,slow=6.1,SNR=10						
	comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**86.66**	**42**	P	**P**	**12 44 29.7**	**+5.1**
	comp=Z,0.2nm,0.5s,baz=227,slow=4.4,SNR=2.1						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**86.92**	**12**	P	**P**	**12 44 28.9**	**+3.9**
	comp=Z,0.2nm,0.5s,baz=208,slow=4.6,SNR=7.3						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**147.98**	**315**	PKPbc	**PKiKP**	**12 51 26.5**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=84,slow=4.2,SNR=1.3						

IDC ***12*** *12:52:22.9±1.1, 12°.52N×59°.61W, h0km, mb3.8/10, mbtmp3.9/13, ML4.6/2, MS3.9/1, Error ellipse: s-maj=32.0km s-min=18.9km az=25.0*
NEIC ***12*** *12:52:28.3±1.7, 12°.59N±0°.07×59°.5W±0°.1, h49km±12km, mb4.4/3, Error ellipse: s-maj=15.2km s-min=9.2km az=79.0*
TRN ***12*** *12:52:28.2, 12°.74N×59°.59W, h29km, MD4.3, South of Barbados. Felt in Barbados MMI IV and V.*
FUNV ***12*** *12:52:32.3, 12°.79N×59°.73W, h38km, MW4.5, Presumed earthquake*

ISC 12 12:52:30.3±1.0, 12°.72N±0°.03×59°.68W±0°.05, h49km±9km, n80, σ1°.77/107, mb4.0/10, 2C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**0.43**	**15**		**Pn**	**12 52 41.3**	**+0.6**
BBGH	**Gun Hill**	**0.43**	**15**	*e*P	**Pn**	**12 52 41.5**	**+0.8**
BBGH				*e*S	**Sn**	**12 52 48.0**	**-0.2**
MCLT	**Moule a Chique**	**1.57**	**309**	*e*P	**Pn**	**12 52 55.9**	**+0.1**
MCLT				*e*S	**Sn**	**12 53 16.3**	**+1.2**
SVB	**Belmont**	**1.63**	**290**	*e*P	**Pn**	**12 52 55.6**	**-1.0**
SVB				*e*S	**Sn**	**12 53 15.5**	**-1.0**
SVB	**Belmont**	**1.63**	**290**	*e*P	**Pn**	**12 52 56.7**	**+0.2**
SVB				*e*S	**Sn**	**12 53 18.0**	**+1.6**
SLAC	**Saint Lucia, A**	**1.67**	**315**	↑*i*P	**Pn**	**12 52 57.2**	**+0.2**
SLAC				*e*S	**Sn**	**12 53 17.1**	**-0.2**
SLBI	**Saint Lucia, B**	**1.81**	**316**	*e*P	**Pn**	**12 52 58.6**	**-0.3**
SLBI				*e*S	**Sn**	**12 53 21.1**	**+0.3**
SLCP	**Castries, St.**	**1.81**	**315**	*e*P	**Pn**	**12 52 58.9**	**-0.1**
SLCP				*e*S	**Sn**	**12 53 21.3**	**+0.5**
GRSS	**Sisters**	**1.94**	**258**	*e*P	**Pn**	**12 53 01.3**	**+0.5**
GRSS				*e*S	**Sn**	**12 53 27.5**	**+3.6**
GRW	**Mount Saint Ca**	**2.02**	**254**	↑*i*P	**Pn**	**12 53 03.7**	**+1.7**
GRGR	**Grenville**	**2.02**	**253**		**Pn**	**12 53 02.6**	**+0.7**
GRGR	**Grenville**	**2.02**	**253**	*e*P	**Pn**	**12 53 02.7**	**+0.8**
GRGR	**Grenville**	**2.02**	**253**	*e*P	**Pn**	**12 53 02.4**	**+0.5**
GRGR				*e*S	**Sn**	**12 53 30.0**	**+4.0**
H05S1	**Guadeloupe/Mar**	**2.03**	**326**	Pn	**Pn**	**12 53 01.8**	**-0.3**
H05S1				Sn	**Sn**	**12 53 25.4**	**-0.9**
MPOM	**Morne Pois Mar**	**2.06**	**326**		**Pn**	**12 53 02.5**	**0.0**
MPOM				Sn	**Sn**	**12 53 26.2**	**-0.8**
GRFF	**Grenada Fort F**	**2.12**	**252**	*e*P	**Pn**	**12 53 04.1**	**+0.8**
GRFF				*e*S	**Sn**	**12 53 30.8**	**+2.2**
BIM	**Bigot**	**2.24**	**323**		**Pn**	**12 53 05.2**	**+0.2**
BIM				Sn	**Sn**	**12 53 31.3**	**-0.1**
BIM	**Bigot**	**2.24**	**323**	*e*P	**Pn**	**12 53 05.3**	**+0.3**
BIM				*e*S	**Sn**	**12 53 32.1**	**+0.7**
CXM	**Morne La Croix**	**2.53**	**325**		**Pn**	**12 53 09.6**	**+0.5**
SVN	**Savane Anatole**	**2.56**	**326**		**Pn**	**12 53 09.6**	**+0.3**
SVN	**Savane Anatole**	**2.56**	**326**	*e*P	**Pn**	**12 53 09.3**	**0.0**
SVN				*e*S	**Sn**	**12 53 39.6**	**+0.4**
TRN	**Trinidad (W)**	**2.67**	**220**	*e*P	**Pn**	**12 53 12.1**	**+1.3**
TRN				*e*S	**Sn**	**12 53 41.2**	**-0.7**
TRN	**Trinidad (W)**	**2.67**	**220**	*e*P	**Pn**	**12

TXAR	**Lajitas Array**	**43.98**	**299**	P		**P**		**13 00 32.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=107,slow=7.2,SNR=1.5								
TXAR				PcP		**PcP**		**13 02 20.0**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=99,slow=3.2,SNR=1.4								
	comp=Z,1.1nm,0.3s								
ULM	**Lac du Bonnet**	**47.68**	**329**	P		**P**		**13 01 02.1**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=126,slow=7.0,SNR=2.4								
	comp=Z,1.5nm,0.5s								
H10N3	**ASCENSION HYDR**	**49.32**	**112**	T		T		13 54 18.7	
	baz=294,slow=75,SNR=25								
H10N2	**ASCENSION HYDR**	**49.33**	**112**	T		T		13 54 19.2	
	baz=294,slow=75,SNR=29								
H10N1	**ASCENSION HYDR**	**49.34**	**112**	T		T		13 54 20.3	
	baz=294,slow=75,SNR=28								
H10S3	**ASCENSION HYDR**	**49.63**	**113**	T		T		13 54 39.7	
	baz=293,slow=74,SNR=27								
H10S2	**ASCENSION HYDR**	**49.65**	**113**	T		T		13 54 40.5	
	baz=287,slow=74,SNR=26								
PDAR	**Pinedale Array**	**52.33**	**315**	P		**P**		**13 01 38.5**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=108,slow=7.0,SNR=11								
	comp=Z,0.8nm,0.5s								
ESDC	**Sonseca Array**	**55.71**	**51**	P		**P**		**13 02 01.1**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=256,slow=7.7,SNR=4.3								
	comp=Z,0.5nm,0.6s								
NVAR	**Mina Array Bea**	**57.70**	**307**	P		**P**		**13 02 18.3**	**+1.9**
	comp=Z,1.0nm,0.5s,baz=74,slow=6.5,SNR=2.0								
	comp=Z,0.1nm,0.5s								
TORD	**Torodi Ar. Bea**	**59.68**	**82**	P		**P**		**13 02 30.6**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=271,slow=8.6,SNR=4.3								
	comp=Z,0.8nm,0.7s								
YKA	**Yellowknife Ar**	**62.99**	**335**	P		**P**		**13 02 51.6**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=114,slow=6.4,SNR=17								
	comp=Z,0.7nm,0.7s								
FINES	**FINESS Array B**	**76.90**	**29**	P		**P**		**13 04 17.8**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=269,slow=9.5,SNR=1.9								
	comp=Z,2.9nm,0.9s								
ILAR	**Eielson Array**	**77.41**	**334**	P		**P**		**13 04 21.0**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=84,slow=6.4,SNR=11								
	comp=Z,0.6nm,0.6s								

*IDC **12** 13:05:28.1±1.7,35˚.89N×140˚.10E,h76km±15km,mb3.3/6, mbtmp3.7/9,MS2.4/1,Error ellipse: s-maj=22.8km s-min=8.0km az=65.0*

*JMA **12** 13:05:28.8±0.1,36˚.0N±0˚.3×140˚.1E±0˚.4,h62km,MV3.3/37, SOUTHERN IBARAKI PREF*

JMA Felt I J1 at SOUTHERN IBARAKI PREF .

ISC 12 13:05:28.0±0.9,**35˚.94N**±0˚.05×**140˚.08E**±0˚.05,**h72**km±7km, **n19**,σ0**81**/**27**,**mb3.7**/6,**9D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.30**	**18** *i*	P	**Pn**	**13 05 39.0**	**-0.4**
JYT				S	**Sn**	**13 05 46.6**	**-1.2**
JIHU	**Itakohorinouch**	**0.36**	**86** *i*	P	**Pn**	**13 05 40.2**	**+0.4**
JIHU				S	**Sn**	**13 05 49.9**	**+1.4**
JAG	**Ashikaga**	**0.70**	**314** ⇓ *i*	P	**Pn**	**13 05 43.0**	**-0.1**
JAG				⇓S	**Sn**	**13 05 53.5**	**-0.7**
JRY	**Ryogami san**	**0.96**	**275** ⇓ *i*	P	**Pn**	**13 05 46.4**	**+0.3**
JRY				⇓S	**Sn**	**13 05 59.6**	**0.0**
JOD2	**Odawara 2**	**1.05**	**230** ⇓ *i*	P	**Pn**	**13 05 47.4**	**+0.1**
JOD2				⇓S	**Sn**	**13 06 00.9**	**-0.7**
JKT	**Katashina**	**1.06**	**321** ⇓ *i*	P	**Pn**	**13 05 47.4**	**-0.1**
JYN	**Shimob**	**1.32**	**251** ⇓ *i*	P	**Pn**	**13 05 51.5**	**+0.7**
JYN				⇓S	**Sn**	**13 06 08.2**	**+0.3**
JFY	**Yanaizu**	**1.50**	**349** *i*	P	**Pn**	**13 05 53.5**	**+0.5**
JUON	**Uonuma**	**1.51**	**327**	P	**Pn**	**13 05 53.5**	**+0.3**
MJAR	**Matsushiro Arr**	**1.62**	**292**	P	**Pn**	**13 05 54.6**	**-0.1**
	103nm,0.4s,baz=98,slow=8.4,SNR=464						
MJAR				S	**Sn**	**13 06 15.6**	**+0.7**
	34nm,0.4s,baz=89,slow=17,SNR=5.4						
JHJ	**Hachijo jima 2**	**2.82**	**185**	P	**Pn**	**13 06 11.2**	**+0.4**
	89nm,0.3s,baz=28,slow=16,SNR=11						
JHJ				S	**Sn**	**13 06 43.1**	**-0.7**
	136nm,0.3s,baz=24,slow=19,SNR=9.4						
ASAJ	**Asahikawa**	**8.39**	**13**	P	**Pn**	**13 07 25.9**	**-0.9**
	1.9nm,0.3s,baz=209,slow=19,SNR=8.5						
KSRS	**Korea Array**	**9.88**	**282**	P	**Pn**	**13 07 48.9**	**+1.9**
	1.0nm,0.5s,baz=94,slow=14,SNR=5.0						
KSRS				LR	LR	13 11 05.6	
	comp=Z,22nm,21.4s,baz=350,slow=34						
ZALV	**Zalesovo Beam**	**41.87**	**313**	P	**P**	**13 13 11.0**	**+0.2**
	0.7nm,0.4s,baz=100,slow=7.9,SNR=1.7						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**43.80**	**303**	P	**P**	**13 13 24.9**	**-1.6**
	0.8nm,0.8s,baz=90,slow=9.4,SNR=6.9						
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**45.83**	**309**	P	**P**	**13 13 42.3**	**-0.3**
	1.0nm,0.6s,baz=83,slow=7.8,SNR=13						
	1.0nm,0.6s						
ILAR	**Eielson Array**	**50.99**	**32**	P	**P**	**13 14 22.7**	**+0.7**
	0.5nm,1.1s,baz=278,slow=7.5,SNR=4.2						
	0.5nm,1.1s						
WRA	**Warramunga Arr**	**55.84**	**187**	P	**P**	**13 14 57.2**	**-0.8**
	0.8nm,0.7s,baz=2.8,slow=7.3,SNR=13						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**59.57**	**187**	P	**P**	**13 15 24.3**	**+0.2**
	0.2nm,0.5s,baz=17,slow=11,SNR=5.1						
	0.2nm,0.5s						

*IDC **12** 13:05:38.5±0.7,11˚.57N×86˚.47W,h0km,mb4.0/12, mbtmp4.0/14,ML3.1/3,MS3.7/7,Error ellipse: s-maj=33.6km s-min=10.5km az=46.0*

*SNET **12** 13:05:40.8±4.5,11˚.17N×86˚.90W,h18km,ML4.3, Presumed earthquake*

*CATAC **12** 13:05:41.9±0.5,11˚N±3˚×8˚7W±˚,h27km±6km,M4.5/37, MLv4.5/37,Error ellipse: s-maj=7.2km s-min=3.7km az=32.0,confirmed*

*NEIC **12** 13:05:43.1±1.0,11˚.14N±0˚.07×86˚.86W±0˚.08,h31km±4km, mb4.5/36,Error ellipse: s-maj=13.8km s-min=7.0km az=54.0*

*UCR **12** 13:05:43.5±1.5,11˚.18N×86˚.83W,h42km±146km,MW4.8, Presumed earthquake*

ISC 12 13:05:40.3±1.0,**11˚.12N**±0˚.03×**86˚.92W**±0˚.04,**h18**km±4km, **n162**,σ1**05**/**178**,**mb4.4**/28,**MS3.8**/6,**25C-9D**,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**1.07**	**54** ⇑P		**Pg**	**13 06 01.2**	**+0.1**
NADN	**Granada**	**1.07**	**54** ⇑ *i* P		**Pg**	**13 06 01.2**	**+0.1**
COPN	**Copaltepe**	**1.10**	**17** ⇑P		**Pg**	**13 06 01.9**	**+0.2**
COPN	**Copaltepe**	**1.10**	**17** ⇑ *i* P		**Pg**	**13 06 01.9**	**+0.2**
MAS3	**Al N del Volca**	**1.15**	**39**	P	**Pn**	**13 06 02.1**	**+0.5**
SAPS	**Ciudad Sandino**	**1.16**	**26** ⇑P		**Pb**	**13 06 02.6**	**+0.8**
ABCN	**Banco Central**	**1.16**	**31**	P	**Pg**	**13 06 02.6**	**-0.2**
UNAN	**Cigeo UNAN**	**1.17**	**33** ⇑P		**Pg**	**13 06 02.9**	**-0.1**
TISN	**Laguna Tiscapa**	**1.20**	**32** ⇑P		**Pb**	**13 06 03.1**	**+0.6**
ALLN	**Telcor Managua**	**1.20**	**32**	P	**Pg**	**13 06 03.6**	**-0.1**
ALLN				S	**Sg**	**13 06 19.7**	**+0.2**
AMTN	**Mateare**	**1.21**	**23**	P	**Pg**	**13 06 03.7**	**0.0**
AMTN				S	**Sg**	**13 06 20.4**	**+0.9**
MGAN	**Managua**	**1.21**	**33**		**Pb**	**13 06 03.1**	**+0.4**
MGAN	**Managua**	**1.21**	**33**	P	**Pg**	**13 06 03.6**	**-0.3**
MGAN				S	**Sg**	**13 06 19.2**	**-0.5**
MGAN	**Managua**	**1.21**	**33** ⇑ *i* P		**Pg**	**13 06 03.5**	**-0.3**
MGAN				*e*S	**Sb**	**13 06 15.9**	**-2.2**
APQ2	**Apoyeque**	**1.22**	**28**	P	**Pb**	**13 06 03.3**	**+0.5**
APYN	**Apoyeque**	**1.24**	**27**	P	**Pb**	**13 06 04.1**	**+0.9**
APYN				S	**Sg**	**13 06 21.2**	**+0.7**
LCRUZ	**La Cruz**	**1.27**	**92** ⇑ *i* P		**Pb**	**13 06 03.6**	**0.0**
LEVN	**Ruinas Leon Vi**	**1.30**	**13** ⇑P		**Pb**	**13 06 04.7**	**+0.3**
MOMN	**Momotombo**	**1.33**	**16** ⇓P		**Pn**	**13 06 04.9**	**+0.8**
MACN	**El Madrono**	**1.36**	**10** ⇑P		**Pn**	**13 06 05.3**	**+0.9**
MACN				S	**Sg**	**13 06 23.8**	**-0.5**
CARN	**Rivas**	**1.37**	**87**	P	**Pb**	**13 06 05.7**	**+0.2**
CARN				S	**Sg**	**13 06 24.4**	**-0.4**
CARN	**Rivas**	**1.37**	**87** *e*	P	**Pb**	**13 06 04.8**	**+0.2**
MOM2	**El Cardon**	**1.37**	**18**	P	**Pn**	**13 06 05.6**	**+0.9**
MOM2				S	**Sg**	**13 06 23.8**	**-1.0**
CNGA	**Al SSO del Vol**	**1.38**	**9** ⇓P		**Pn**	**13 06 05.7**	**+1.0**
CNGN	**Cerro Negro**	**1.39**	**9**		**Pn**	**13 06 05.3**	**+0.4**
CNGN	**Cerro Negro**	**1.39**	**9** ⇑P		**Pn**	**13 06 05.6**	**+0.8**
CNGN				S	**Sb**	**13 06 24.1**	**+0.9**
CNGN	**Cerro Negro**	**1.39**	**9** ⇑ *e* P		**Pn**	**13 06 05.5**	**+0.7**
ELI1	**Hacienda Flor**	**1.42**	**109** ⇑ *e* P		**Pb**	**13 06 06.5**	**+0.2**
TEL3	**Telica 3**	**1.44**	**3** ⇓P		**Pn**	**13 06 06.6**	**+1.1**
ALIBA	**Liberia Airpor**	**1.45**	**111** ⇑ *e* P		**Pb**	**13 06 06.7**	**0.0**
QUEN	**Al S del Volca**	**1.46**	**3** ⇓P		**Pn**	**13 06 07.0**	**+1.1**
QUEN				S	**Sn**	**13 06 24.5**	**-0.1**
HOYN	**Al Sur del Vol**	**1.47**	**3** ⇑P		**Pn**	**13 06 06.8**	**+0.8**
HOYN				S	**Sb**	**13 06 26.2**	**+0.6**
HERN	**Volcan Telica**	**1.48**	**3**		**Pn**	**13 06 06.9**	**+0.7**
HERN	**Volcan Telica**	**1.48**	**3** ⇑P		**Pn**	**13 06 06.8**	**+0.7**
DELF	**Filadelfia**	**1.50**	**116** *e* P		**Pn**	**13 06 07.1**	**+0.8**
LAPC	**Finca la Perla**	**1.50**	**103** ⇑ *e* P		**Pn**	**13 06 07.0**	**+0.6**
POLN	**Al Sur del Vol**	**1.52**	**4** ⇓P		**Pn**	**13 06 07.6**	**+0.9**
POLN				S	**Sb**	**13 06 27.6**	**+0.6**
VRLE	**La Escondida,**	**1.56**	**102** *e* P		**Pn**	**13 06 08.2**	**+0.9**
CRIN	**San Cristobal**	**1.57**	**355**		**Pn**	**13 06 08.2**	**+0.8**
CRIN	**San Cristobal**	**1.57**	**355**	P	**Pn**	**13 06 08.5**	**+1.1**
CRIN				S	**Sb**	**13 06 28.9**	**+0.4**
CRIN	**San Cristobal**	**1.57**	**355** ⇑ *i* P		**Pn**	**13 06 08.3**	**+0.8**
VORI	**VORI**	**1.57**	**101** *e* P		**Pn**	**13 06 08.5**	**+1.0**
BUAI	**Buenos Aires**	**1.58**	**99** ⇑P		**Pb**	**13 06 08.8**	**-0.2**
JUD3	**Juan Diaz 3**	**1.66**	**125**		**Pn**	**13 06 09.0**	**+0.4**
JUD3	**Juan Diaz 3**	**1.66**	**125** *e* P		**Pn**	**13 06 08.6**	**0.0**
ELVJ	**El Viejo (Barb**	**1.70**	**113** *e* P		**Pn**	**13 06 08.0**	**-1.1**
PLVR	**Palo Verde**	**1.72**	**116** *e* P		**Pn**	**13 06 09.8**	**+0.2**
BAGA	**Bagaces**	**1.73**	**110** *e* P		**Pn**	**13 06 10.7**	**+1.1**
MESS	**Mesas**	**1.73**	**102** *e* P		**Pn**	**13 06 10.7**	**+1.1**
NICO	**Nicoya**	**1.75**	**124** *e* P		**Pn**	**13 06 10.3**	**+0.5**
VMAR	**Armenia, Volca**	**1.80**	**100** ⇑ *e* P		**Pn**	**13 06 11.8**	**+1.3**
BOAB	**BOACO BROADBAN**	**1.80**	**43**		**Pn**	**13 06 11.1**	**+0.6**
BOAB	**BOACO BROADBAN**	**1.80**	**43** ⇑P		**Pn**	**13 06 11.2**	**+0.8**
TIMP	**Tierras Morena**	**1.94**	**106** *e* P		**Pn**	**13 06 13.4**	**+0.9**
CSGN	**Cosiguina Volc**	**1.95**	**341**	P	**Pn**	**13 06 13.2**	**+0.6**
CSGN				S	**Sn**	**13 06 37.9**	**+1.3**
CSGN	**Cosiguina Volc**	**1.95**	**341** *e* P		**Pn**	**13 06 13.1**	**+0.5**
TENO	**El Achiote**	**1.95**	**102** *e* P		**Pn**	**13 06 13.5**	**+0.8**
NYURE	**Nandayure**	**1.98**	**124** *e* P		**Pn**	**13 06 12.9**	**-0.1**
LIMN	**Finca el Limon**	**2.00**	**16** ⇓P		**Pn**	**13 06 14.2**	**+0.9**
LIMN				S	**Sn**	**13 06 39.1**	**+1.1**
MATN	**Matagalpa**	**2.04**	**28** ⇑P		**Pn**	**13 06 13.8**	**-0.1**
MATN				S	**Sb**	**13 06 40.5**	**-1.6**
QUEB	**Quebradon, Cot**	**2.05**	**104** *e* P		**Pn**	**13 06 15.1**	**+1.1**
JTS	**Las Juntas de**	**2.10**	**113**	Pg	**Pn**	**13 06 15.5**	**+0.8**
	34nm,0.3s,baz=311,slow=19,SNR=57						
JTS				Lg	Lg	13 06 40.4	
	76nm,0.3s,baz=324,slow=19,SNR=4.7						
JTS				LR	LR	13 06 46.9	
	comp=Z,283nm,18.7s,baz=299,slow=35						
JTS	**Las Juntas de**	**2.10**	**113**		**Pn**	**13 06 15.8**	**+1.1**
JTS	**Las Juntas de**	**2.10**	**113** *e* P		**Pn**	**13 06 15.3**	**+0.6**
LCHIL	**Los Chiles**	**2.16**	**92** *e* P		**Pn**	**13 06 16.0**	**+0.5**
TABAC	**Tabacon**	**2.20**	**106** *e* P		**Pn**	**13 06 17.4**	**+1.3**
VARE2	**V. Arenal**	**2.26**	**107** *e* P		**Pn**	**13 06 18.1**	**+1.2**
CEDE	**Laguna Cedeo**	**2.27**	**106** *e* P		**Pn**	**13 06 17.9**	**+1.0**
VACR	**Volcan Arenal**	**2.29**	**106** *e* P		**Pn**	**13 06 18.7**	**+1.4**
CNCH	**Conchagua**	**2.32**	**337** ⇑P		**Pn**	**13 06 18.4**	**+0.6**
CNCH				S	**Sn**	**13 06 46.2**	**+0.3**
CNCH	**Conchagua**	**2.32**	**337** *e* P		**Pn**	**13 06 18.4**	**+0.6**
LCND	**La Caada**	**2.37**	**336** ⇓P		**Pn**	**13 06 19.1**	**+0.7**
LCND	**La Caada**	**2.37**	**336** *e* P		**Pn**	**13 06 19.1**	**+0.7**
LCND				*e*P	**Pb**	**13 06 19.4**	**-3.2**
RCON	**San Juan de Ri**	**2.46**	**18** ⇓P		**Pn**	**13 06 21.3**	**+1.5**
COVE	**Coope Vega, Sa**	**2.50**	**99** P		**Pn**	**13 06 22.2**	**+2.0**
RCPN	**Sur Rio San Ju**	**2.52**	**19** P		**Pn**	**13 06 22.1**	**+1.6**
RCVN	**Varillal2**	**2.55**	**16** ⇓P		**Pn**	**13 06 22.3**	**+1.4**
RCVN				S	**Sn**	**13 06 53.0**	**+1.5**
RANC	**El Ranchito**	**2.66**	**330** *e* P		**Pn**	**13 06 22.9**	**+0.4**
PACA	**Pacayal**	**2.71**	**330**	P	**Pn**	**13 06 24.0**	**+1.0**
PACA				S	**Sn**	**13 06 56.2**	**+0.8**
PACA	**Pacayal**	**2.71**	**330** *e* P		**Pn**	**13 06 23.8**	**+0.8**
YUSH	**Yuscaran**	**2.81**	**1** ⇑P		**Pn**	**13 06 26.2**	**+1.6**
TECA	**Tecapa**	**2.82**	**327** *e* P		**Pn**	**13 06 25.0**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.94**	**353**	Pn	**Pn**	**13 06 28.1**	**+1.8**
PQSS	**Presa 15 de Se**	**2.96**	**327** *e* P		Pn	13 06 19.6	-6.8
HDC	**Heredia**	**2.97**	**112**	Pn	**Pn**	**13 06 27.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**3.11**	**326** *e* P		**Pn**	**13 06 29.4**	**+0.8**
COEG	**Centro de Oper**	**3.14**	**323** *e* P		**Pn**	**13 06 30.6**	**+1.6**
SIUN	**Universidad Ur**	**3.32**	**39**		**Pn**	**13 06 32.9**	**+1.5**
LOMA	**Loma Larga**	**3.34**	**319** *e* P		**Pn**	**13 06 33.0**	**+1.3**
JAYA	**Jayaque - finc**	**3.53**	**316** *e* P		**Pn**	**13 06 34.9**	**+0.5**
SBLS	**San Blas**	**3.78**	**316** *e* P		**Pn**	**13 06 39.6**	**+1.7**
MTO3	**Montecristo**	**4.04**	**324**		**Pn**	**13 06 43.0**	**+1.6**
ESQI	**Esquipulas**	**4.15**	**326**	Pn	**Pn**	**13 06 45.4**	**+2.4**
PIRO	**Carate, Puerto**	**4.45**	**127**		**Pn**	**13 06 48.9**	**+2.0**
BRU2	**Volcan**	**4.76**	**119**		**Pn**	**13 06 51.9**	**+0.5**
APG	**El Apazote**	**5.18**	**319**	Pn	**Pn**	**13 06 59.5**	**+2.3**
	0.1nm,0.3s,baz=125,slow=12,SNR=5.1						
TEIG	**Tepich**	**9.14**	**352**	Pn	**Pn**	**13 07 52.6**	**+1.2**
CMIG	**Matias Romero**	**9.74**	**308**	Pn	**Pn**	**13 08 01.0**	**+1.4**
	1.6nm,0.3s,baz=122,slow=12,SNR=15						
	5.8nm,0.6s						
TLIG	**Tlapa**	**12.97**	**301**		**Pn**	**13 08 45.4**	**+1.4**
ROSC	**El Rosal**	**13.95**	**116**	LR	LR	13 13 56.7	
	comp=Z,116nm,18.9s,baz=242,slow=36						
SDV	**Santo Domingo**	**16.19**	**96**	Pn	**Pn**	**13 09 25.0**	**-2.3**
	0.4nm,0.3s,baz=291,slow=4.9,SNR=6.9						
	1.1nm,0.5s						
SDV	**Santo Domingo**	**16.19**	**96**		**Pn**	**13 09 27.1**	**-0.2**
HBVL	**Hebbronville**	**19.34**	**327**	P	**P**	**13 10 06.0**	**+1.2**
HKT	**Hockley**	**20.49**	**337**	P	**P**	**13 10 18.4**	**+1.1**
HKT				IAmb	IAmb	13 10 23.7	
	comp=Z,21nm,1.2s						
833A	**Chaparral WMA,**	**20.72**	**327**	P	**P**	**13 10 20.5**	**+0.6**
152A	**Waverly Hall**	**21.54**	**5**	P	**P**	**13 10 29.1**	**+0.4**
152A				IAmb	IAmb	13 10 33.2	
	comp=Z,21nm,0.8s						
NATX	**Nacogdoches**	**21.75**	**342**	P	**P**	**13 10 31.8**	**+0.9**
NATX				IAmb	IAmb	13 10 34.4	
	comp=Z,24nm,1.0s						
LRAL	**Lakeview Retre**	**21.81**	**360**		**P**	**13 10 32.0**	**+0.4**
LRAL				IAmb	IAmb	13 10 34.9	
	comp=Z,9.9nm,0.6s						
DRIO	**Del Rio**	**22.25**	**327**		**P**	**13 10 37.6**	**+1.3**
GOGA	**Godfrey**	**22.41**	**8**	P	**P**	**13 10 38.2**	**+0.2**
GOGA				IAmb	IAmb	13 10 40.9	
	comp=Z,16nm,0.8s						
Y49A	**Blount Mountai**	**22.63**	**1**	P	**P**	**13 10 40.8**	**+0.4**
Y49A				IAmb	IAmb	13 10 42.4	
	comp=Z,10nm,0.7s						
Y52A	**Lilburn**	**22.79**	**6**	P	**P**	**13 10 42.7**	**+0.7**
BRDY	**Brady**	**22.97**	**333**	P	**P**	**13 10 44.2**	**+0.2**
BRDY				IAmb	IAmb	13 10 47.5	
	comp=Z,9.0nm,0.9s						
HODGE	**Hodges**	**23.39**	**10**	P	**P**	**13 10 48.1**	**-0.1**
OXF	**Oxford**	**23.39**	**355**	P	**P**	**13 10 47.2**	**-1.0**
X51A	**Calhoun**	**23.41**	**4**	P	**P**	**13 10 49.1**	**+0.7**
JSC	**Jenkinsville**	**23.62**	**12**	P	**P**	**13 10 51.7**	**+1.3**
JSC				IAmb	IAmb	13 11 25.5	
	comp=Z,22nm,1.2s						
FW06	**Azle**	**23.84**	**337**	P	**P**	**13 10 53.3**	**+0.7**
TXAR	**Lajitas Array**	**23.93**	**322**	P	**P**	**13 10 53.8**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=133,slow=9.7,SNR=56						
TXAR				PcP	**PcP**	**13 14 37.9**	**+1.9**
	comp=Z,1.6nm,0.8s,baz=134,slow=1.9,SNR=11						
	comp=Z,4.4nm,0.7s						
TX31	**Lajitas Ar. Si**	**23.93**	**322**	P	**P**	**13 10 54.2**	**+0.7**
PLPT	**Palo Pinto**	**24.00**	**336**	P	**P**	**13 10 54.6**	**+0.6**
PLPT				IAmb	IAmb	13 11 07.0	
	comp=Z,14nm,0.9s						
W50A	**Signal Mountai**	**24.01**	**3**	P	**P**	**13 10 54.1**	**-0.1**
W50A				IAmb	IAmb	13 10 55.8	
	comp=Z,13nm,0.8s						
W52A	**Murphy**	**24.02**	**6**	P	**P**	**13 10 54.9**	**+0.7**
W52A				IAmb	IAmb	13 10 55.4	
	comp=Z,11nm,0.6s						
MIAR	**Mount Ida**	**24.09**	**346**	P	**P**	**13 10 55.1**	**+0.1**
MIAR				IAmb	IAmb	13 10 57.5	
	comp=Z,12nm,0.8s						
CPCT	**Cooper Cave**	**24.32**	**5**	P	**P**	**13 10 57.2**	**+0.3**
V48A	**Smith Brothers**	**24.51**	**0**	P	**P**	**13 10 58.5**	**-0.2**
V48A				IAmb	IAmb	13 11 00.5	
	comp=Z,10nm,0.8s						
WTFS	**Witchita Falls**	**24.89**	**337**		**P**	**13 11 02.1**	**-0.2**
WTFS				IAmb	IAmb	13 11 04.8	
	comp=Z,14nm,0.8s						
APMT	**Aspermont**	**25.20**	**333**		**P**	**13 11 06.0**	**+0.9**
POST	**Post**	**25.62**	**331**	P	**P**	**13 11 09.4**	**+0.5**
DKNS	**Dickens**	**25.85**	**332**	P	**P**	**13 11 11.3**	**+0.4**
DKNS				IAmb	IAmb	13 11 12.8	
	comp=Z,7.1nm,0.8s						
WMOK	**Wichita Mounta**	**25.88**	**337**	P	**P**	**13 11 12.0**	**+0.9**
WMOK				IAmb	IAmb	13 11 14.0	
	comp=Z,8.4nm,0.9s						
X16A	**Lo Mia Camp, P**	**32.22**	**320**	P	**P**	**13 12 08.7**	**+0.9**
L59A	**Walton**	**32.65**	**16**	P	**P**	**13 12 11.3**	**0.0**
LPAZ	**La Paz**	**32.97**	**145**	LR	LR	13 26 24.6	
	comp=Z,52nm,18.6s,baz=352,slow=38						
PFO	**Pinyon Flats O**	**35.10**	**314**	LR	LR	13 26 54.8	
	comp=Z,34nm,18.9s,baz=207,slow=36						
PDAR	**Pinedale Array**	**37.18**	**332**	P	**P**	**13 12 49.9**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=138,slow=8.4,SNR=17						
PDAR				PcP	**PcP**	**13 15 10.3**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=149,slow=2.5,SNR=5.9						
	comp=Z,1.1nm,0.6s						
PTLB	**Pontes e Lacer**	**38.13**	**133**	P	**P**	**13 12 58.5**	**-0.2**
PTLB				IAmb	IAmb	13 13 01.0	
	comp=Z,4.9nm,1.0s						
NVAR	**Mina Array Bea**	**39.04**	**320**	P	**P**	**13 13 07.8**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=129,slow=6.7,SNR=7.8						
NVAR				PcP	**PcP**	**13 15 18.0**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=119,slow=2.9,SNR=15						
	comp=Z,1.1nm,0.8s						
LMN	**Caledonia Moun**	**39.41**	**24**	P	**P**	**13 13 09.1**	**0.0**
ULM	**Lac du Bonnet**	**39.70**	**351**	P	**P**	**13 13 09.5**	**-2.0**
	comp=Z,6.6nm,0.8s,baz=166,slow=12,SNR=12						
	comp=Z,6.6nm,0.8s						
SCHQ	**Schefferville**	**46.40**	**16**	P	**P**	**13 14 03.3**	**-2.3**
	comp=Z,3.0nm,0.6s,baz=212,slow=8.9,SNR=6.4						
	comp=Z,3.0nm,0.6s						
BDFB	**Brasilia**	**46.80**	**124**	P	**P**	**13 14 10.0**	**+0.6**
	comp=Z,3.6nm,0.6s,baz=283,slow=14,SNR=5.3						
	comp=Z,3.6nm,0.6s						
PLCA	**Paso Flores**	**53.77**	**165**	P	**P**	**13 15 03.8**	**+2.1**
	comp=Z,1.8nm,0.9s,baz=342,slow=9.6,SNR=3.3						
	comp=Z,1.8nm,0.9s						
FRB	**Frobisher Bay**	**54.13**	**10**	LR	LR	13 40 13.7	
	comp=Z,99nm,18.2s,baz=308,slow=39						
YKA	**Yellowknife Ar**	**55.02**	**345**	P	**P**	**13 15 07.5**	**-3.0**
	comp=Z,0.4nm,0.6s,baz=143,slow=6.3,SNR=9.7						
YKA				PcP	**PcP**	**13 16 11.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=142,slow=3.3,SNR=10						
	comp=Z,0.4nm,0.6s						
DLBC	**Dease Lake**	**57.32**	**335**	P	**P**	**13 15 28.2**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=126,slow=5.7,SNR=7.0						
	comp=Z,1.9nm,0.7s						
SFJD	**Kangerlussuaq**	**60.85**	**15**	LR	LR	13 41 13.3	
	comp=Z,57nm,18.1s,baz=168,slow=35						
INK	**Inuvik**	**64.62**	**343**	P	**P**	**13 16 14.7**	**-1.7**
	comp=Z,1.4nm,0.9s,baz=127,slow=5.1,SNR=4.2						
	comp=Z,1.4nm,0.9s						
F28M	**Old Crow**	**66.20**	**340**	P	**P**	**13 16 26.5**	**-0.2**
ILAR	**Eielson Array**	**67.44**	**336**	P	**P**	**13 16 33.6**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=115,slow

MJAR	**Matsushiro Arr**	**2.57**	**321**	Pn		**Pn**	**13 47 09.5**	**-0.5**
	0.6nm,0.3s,baz=158,slow=13,SNR=31							
MJAR				Sn		**Sn**	**13 47 41.4**	**+1.3**
	0.5nm,0.3s,baz=160,slow=22,SNR=11							
	5.2nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**27.85**	**115**	T		T	14 21 59.8	
	baz=305							
H11N1	**WAKE ISLAND Hy**	**27.86**	**115**	T		T	14 21 25.4	
	baz=305							
H11N3	**WAKE ISLAND Hy**	**27.87**	**115**	T		T	14 21 33.4	
	baz=305							
MKAR	**Makanchi Array**	**44.65**	**304**	P		**P**	**13 54 37.4**	**-0.9**
	0.2nm,0.7s,baz=86,slow=9.5,SNR=2.4							
	0.2nm,0.7s							
BVAR	**Borovoye Array**	**51.54**	**314**	P		**P**	**13 55 34.3**	**+3.0**
	0.5nm,0.4s,baz=75,slow=11,SNR=2.4							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**54.48**	**187**	P		**P**	**13 55 51.9**	**-1.3**
	0.7nm,0.7s,baz=6.1,slow=7.4,SNR=9.3							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**58.21**	**187**	P		**P**	**13 56 18.6**	**-1.1**
	0.6nm,1.0s,baz=356,slow=5.4,SNR=2.1							
	0.6nm,1.0s							

CATAC ***12*** *14:00:25.6±0.4, 15°N±3°×8°8W±°, h1km, M3.1/7, MLv3.1/7, Error ellipse: s-maj=6.7km s-min=2.9km az=16.3, confirmed*

GCG ***12*** *14:00:27.9±0.9, 15°.26N×87°.99W, h0km±61km, MD3.7, Presumed earthquake*

ISC 12 14:00:25.2±2.0, 15°.41N±0°.06×87°.86W±0°.06, h3km±17km, n19, σ1§07/29, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZABA	**Izabal, Puerto**	**0.76**	**295**	P	**Pg**	**14 00 39.2**	**-0.6**
IZABA				S	**Sg**	**14 00 50.5**	**+0.7**
SARH	**Santa Rosa de**	**1.07**	**234**	P	**Pg**	**14 00 45.7**	**-0.1**
SARH	**Santa Rosa de**	**1.07**	**234**	*i* P	**Pg**	**14 00 45.7**	**-0.1**
SARH				*i* S	**Sg**	**14 00 59.7**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.46**	**157**	P	**Pn**	**14 00 52.3**	**-0.3**
TGUH				S	**Sb**	**14 01 12.8**	**+0.5**
ESQI	**Esquipulas**	**1.66**	**240**	P	**Pb**	**14 00 56.1**	**-0.5**
ESQI				S	**Sg**	**14 01 19.2**	**+0.5**
YUSH	**Yuscaran**	**1.75**	**146**	P	**Pn**	**14 00 57.1**	**+0.5**
YUSH				S	**Sb**	**14 01 21.1**	**+0.5**
MTO3	**Montecristo**	**1.76**	**235**	P	**Pn**	**14 00 57.2**	**+0.4**
MTO3				S	**Sg**	**14 01 21.3**	**-0.7**
MTO3	**Montecristo**	**1.76**	**235**	*i* P	**Pn**	**14 00 57.3**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.90**	**206**	P	**Pb**	**14 00 59.8**	**-0.8**
SCLA				S	**Sg**	**14 01 26.5**	**+0.3**
PACA	**Pacayal**	**1.98**	**193**	S	**Sg**	**14 01 31.0**	**+2.0**
CNCH	**Conchagua**	**2.12**	**179**	S	**Sg**	**14 01 34.4**	**+0.9**
NUBE	**Las Nubes**	**2.39**	**231**	P	**Pb**	**14 01 08.7**	**-0.2**
NUBE				S	**Sg**	**14 01 41.4**	**-0.6**
NUBE	**Las Nubes**	**2.39**	**231**	*e*P	**Pb**	**14 01 09.2**	**+0.2**
RCVN	**Varillal2**	**2.43**	**138**	S	**Sb**	**14 01 39.5**	**-0.7**
RCON	**San Juan de Ri**	**2.53**	**139**	P	**Pn**	**14 01 08.5**	**+1.1**
RCON				S	**Sb**	**14 01 42.1**	**-1.0**
RCPN	**Sur Rio San Ju**	**2.54**	**137**	S	**Sb**	**14 01 42.9**	**-0.4**
APG	**El Apazote**	**2.54**	**261**	*i* P	**Pn**	**14 01 09.3**	**+1.6**
LIMN	**Finca el Limon**	**2.75**	**148**	P	**Pn**	**14 01 12.2**	**+1.9**
LIMN				S	**Sb**	**14 01 47.6**	**-1.7**
MATN	**Matagalpa**	**3.10**	**142**	S	**Sb**	**14 01 56.6**	**-2.8**

CATAC ***12*** *14:03:45.1±0.5, 11°N±3°×8°7W±°, h12km, M3.3/13, MLv3.3/13, Error ellipse: s-maj=8.2km s-min=3.5km az=41.8, confirmed*

UCR ***12*** *14:03:48.8±2.2, 11°.22N×86°.86W, h30km±999km, MW4.0, Presumed earthquake*

ISC 12 14:03:46.6±1.8, 11°.10N±0°.06×86°.95W±0°.08, h28km±15km, n35, σ1§09/44, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.12**	**18**	P	**Pb**	**14 04 06.9**	**-0.5**
COPN	**Copaltepe**	**1.12**	**18**	*i* P	**Pb**	**14 04 07.0**	**-0.4**
SAPS	**Ciudad Sandino**	**1.18**	**27**	P	**Pb**	**14 04 07.8**	**-0.6**
LCRUZ	**La Cruz**	**1.29**	**91**	*e*P	**Pn**	**14 04 09.0**	**+0.2**
LEVN	**Ruinas Leon Vi**	**1.33**	**14**	P	**Pn**	**14 04 09.8**	**+0.5**
LEVN				S	**Sb**	**14 04 27.3**	**-0.2**
MACN	**El Madrono**	**1.38**	**11**	P	**Pn**	**14 04 10.3**	**+0.3**
MACN				S	**Sb**	**14 04 28.8**	**-0.2**
CARN	**Rivas**	**1.40**	**86**	P	**Pb**	**14 04 12.1**	**0.0**
CARN				S	**Sb**	**14 04 30.9**	**+1.3**
CARN	**Rivas**	**1.40**	**86**	*e*P	**Pn**	**14 04 11.2**	**+0.9**
MOM2	**El Cardon**	**1.40**	**19**	P	**Pn**	**14 04 10.5**	**+0.2**
MOM2				S	**Sb**	**14 04 28.8**	**-0.7**
CNGA	**Al SSO del Vol**	**1.40**	**10**	P	**Pn**	**14 04 10.3**	**-0.1**
CNGN	**Cerro Negro**	**1.41**	**10**	P	**Pb**	**14 04 12.6**	**+0.4**
CNGN	**Cerro Negro**	**1.41**	**10**	*e*P	**Pn**	**14 04 11.1**	**+0.7**
ELI1	**Hacienda Flor**	**1.44**	**108**	P	**Pn**	**14 04 11.7**	**+0.8**
ELI1				S	**Sn**	**14 04 29.3**	**+0.6**
ALIBA	**Liberia Airpor**	**1.47**	**110**	*e*P	**Pn**	**14 04 11.9**	**+0.7**
HOYN	**Al Sur del Vol**	**1.49**	**4**	P	**Pb**	**14 04 12.6**	**-1.1**
LAPC	**Finca la Perla**	**1.52**	**103**	*e*P	**Pn**	**14 04 12.2**	**+0.2**
CRIN	**San Cristobal**	**1.59**	**356**	*e*P	**Pn**	**14 04 13.5**	**+0.5**
PEJA	**Penjamo Buenos**	**1.62**	**97**	*e*P	**Pn**	**14 04 09.6**	**-3.7**
ELVJ	**El Viejo (Barb**	**1.72**	**112**	*e*P	**Pn**	**14 04 13.6**	**-1.1**
PLVR	**Palo Verde**	**1.74**	**115**	*e*P	**Pb**	**14 04 17.7**	**-0.2**
CLARA	**Aguas Claras**	**1.77**	**100**	*e*P	**Pn**	**14 04 16.0**	**+0.6**
VMAR	**Armenia, Volca**	**1.82**	**99**	*e*P	**Pn**	**14 04 17.0**	**+0.8**
BOAB	**BOACO BROADBAN**	**1.83**	**43**	P	**Pn**	**14 04 16.1**	**-0.2**
CMARA	**Lajas Hojancha**	**1.84**	**126**	S	**Sn**	**14 04 36.9**	**-2.0**
INDI	**Punta indio, G**	**1.88**	**131**	P	**Pn**	**14 04 16.0**	**-0.9**
INDI				S	**Sn**	**14 04 37.2**	**-2.5**
CSGN	**Cosiguina Volc**	**1.96**	**342**	P	**Pn**	**14 04 18.7**	**+0.6**
CSGN				S	**Sn**	**14 04 41.7**	**0.0**
CSGN	**Cosiguina Volc**	**1.96**	**342**	*e*P	**Pn**	**14 04 18.3**	**+0.3**
LIMN	**Finca el Limon**	**2.03**	**16**	P	**Pn**	**14 04 19.4**	**+0.4**
LIMN				S	**Sn**	**14 04 43.8**	**+0.3**
QUEB	**Quebradon, Cot**	**2.07**	**103**	*e*P	**Pb**	**14 04 22.6**	**-1.0**
JTS	**Las Juntas de**	**2.12**	**112**	*e*P	**Pb**	**14 04 24.9**	**+0.5**
TABAC	**Tabacon**	**2.22**	**106**	*e*P	**Pb**	**14 04 27.1**	**+1.0**
VARE2	**V. Arenal**	**2.28**	**106**	*e*P	**Pb**	**14 04 27.9**	**+0.8**
CNCH	**Conchagua**	**2.33**	**338**	P	**Pn**	**14 04 23.4**	**+0.2**
CNCH				S	**Sn**	**14 04 51.6**	**+0.7**
PICV	**PH. Pirrs**	**3.08**	**118**	*e*P	**Pn**	**14 04 36.2**	**+2.7**
BUS1	**Rivas**	**3.50**	**116**	*e*P	**Pn**	**14 04 40.8**	**+1.1**

MOS ***12*** *14:16:01.5±0.8, 58°.93N×154°.51W, h124km, mb4.6/20, Error ellipse: s-maj=10.7km s-min=6.7km az=93.0*

NEIC ***12*** *14:16:03.3±1.1, 58°.83N±0°.04×154°.49W±0°.06, h123km±4km, mb4.7/27, ML4.5/148, ML4.5(AEIC), Mwr4.5/17(SLM), Error ellipse: s-maj=5.4km s-min=4.7km az=154.0*

ANF ***12*** *14:16:03.6±0.2, 58°.88N×154°.42W, h115km±3km, Error ellipse: s-maj=2.1km s-min=1.6km az=5.0*

AEIC ***12*** *14:16:04.6±1.2, 58°.82N±0°.04×154°.49W±0°.06, h118km±3km, Error ellipse: s-maj=5.4km s-min=4.7km az=148.0*

IDC ***12*** *14:16:04.6±0.7, 59°.07N×154°.60W, h131km±6km, mb3.9/27, mbtmp4.4/33, MS3.3/5, Error ellipse: s-maj=13.1km s-min=8.2km az=180.0*

NEIC ***12*** *14:16:04, 58°.81N×154°.51W, h134km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=1.27; Mθθ=6.10; Mφφ=4.83; Mrθ=-0.62; Mrφ=1.32; Mθφ=2.74; Fault plane solution: M0=6.38000×10^15 NP1:φs=319.00000°, δ=76.00000°, λ=154.00000°. NP2:φs=55.00000°, δ=65.00000°, λ=15.00000°. Principal axes: T 6.3780, Plg28.0000°, Azm275.0000°; N 0.0059, Plg61.0000°, Azm113.0000°; P -6.3839, Plg8.0000°, Azm9.0000°;*

ISC 12 14:16:03.6±0.4, 58°.86N±0°.03×154°.47W±0°.02, h130km±3km, h129km:pP-P, n621, σ1§32/698, mb4.5/64, 9C-10D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAHG	**Katmai Hook Gl**	**0.37**	**186**		**Pn**	**14 16 20.7**	**-1.3**
KAHG					**Sn**	**14 16 33.8**	**-2.2**
KARR	**Katmai Rainbow**	**0.38**	**199**		**Pn**	**14 16 20.8**	**-1.3**
KARR					**Sn**	**14 16 34.8**	**-1.2**
Q19K	**Cape Douglas,**	**0.43**	**80**		**Sn**	**14 16 35.1**	**-1.3**
Q19K	**Cape Douglas,**	**0.43**	**80**		**Pn**	**14 16 21.2**	**-1.1**
Q19K				IAML		14 16 40.6	
	comp=N,16μm,0.9s						
Q19K	**Cape Douglas,**	**0.43**	**80**	P	**Pn**	**14 16 21.4**	**-0.9**
	baz=256,SNR=253						
Q19K				S	**Sn**	**14 16 34.6**	**-1.9**
	baz=256						
KAWH	**Katmai**	**0.51**	**200**		**Pn**	**14 16 21.2**	**-1.6**
KAWH					**Sn**	**14 16 34.5**	**-2.6**
KAKN	**Katmai Knife C**	**0.64**	**209**		**Pn**	**14 16 22.2**	**-1.4**
KAKN					**Sn**	**14 16 36.0**	**-2.8**
P18K	**Big Mountain,**	**0.66**	**324**		**Sn**	**14 16 36.6**	**-2.4**
P18K	**Big Mountain,**	**0.66**	**324**		**Pn**	**14 16 22.3**	**-1.4**
P18K				IAML		14 16 37.4	
	comp=N,5μm,0.9s						
P18K	**Big Mountain,**	**0.66**	**324**	P	**Pn**	**14 16 22.3**	**-1.4**
	baz=148,SNR=97						
P18K				S	**Sn**	**14 16 36.4**	**-2.5**
	baz=148						
AUI	**Augustine Isla**	**0.72**	**48**		**Pn**	**14 16 23.6**	**-0.4**
AUI					**Sn**	**14 16 38.4**	**-1.1**
AUW	**Augustine West**	**0.73**	**45**		**Pn**	**14 16 23.9**	**-0.2**
KABU	**Katmai Buttres**	**0.73**	**216**		**Pn**	**14 16 22.9**	**-1.3**
AUCH	**Augustine Cone**	**0.73**	**46**		**Pn**	**14 16 23.9**	**-0.3**
AUCH					**Sn**	**14 16 38.8**	**-1.1**
AUJK	**Augustine Jueg**	**0.74**	**47**		**Pn**	**14 16 23.8**	**-0.3**
AUF	**Augustine Flow**	**0.74**	**44**		**Pn**	**14 16 24.1**	**-0.1**
AUF					**Sn**	**14 16 39.6**	**-0.3**
AUL	**Augustine Lava**	**0.75**	**45**		**Pn**	**14 16 24.1**	**-0.1**
AU22	**Augustine Moun**	**0.77**	**48**		**Pn**	**14 16 24.2**	**-0.2**
ACHA	**Angle Creek He**	**0.79**	**215**		**Pn**	**14 16 23.2**	**-1.5**
ANCK	**Angle Creek**	**0.85**	**220**		**Pn**	**14 16 24.0**	**-1.2**
CNTC	**Contact Creek**	**0.95**	**232**		**Pn**	**14 16 24.8**	**-1.4**
CNTC					**Sn**	**14 16 40.9**	**-2.3**
Q17K	**Contact Creek**	**0.95**	**232**	P	**Pn**	**14 16 24.8**	**-1.3**
	baz=52,SNR=497						
Q17K				S	**Sn**	**14 16 40.8**	**-2.4**
	baz=52						
P19K	**Oil Pt**	**1.02**	**38**	P	**Pn**	**14 16 26.6**	**0.0**
	baz=219,SNR=40						
P19K				S	**Sn**	**14 16 43.5**	**-0.7**
	baz=219						
O18K	**Koktuh Hills**	**1.07**	**340**		**Pn**	**14 16 26.1**	**-0.9**
O18K				IAML		14 16 44.5	
	comp=N,4μm,1.0s						
O18K	**Koktuh Hills**	**1.07**	**340**	P	**Pn**	**14 16 26.2**	**-0.9**
	baz=161,SNR=115						
O18K				S	**Sn**	**14 16 43.1**	**-1.9**
	baz=161						
P17K	**Kvichak River**	**1.07**	**289**		**Sn**	**14 16 43.6**	**-1.4**
P17K	**Kvichak River**	**1.07**	**289**		**Pn**	**14 16 26.1**	**-0.9**
P17K				IAML		14 16 44.4	
	comp=N,9μm,0.8s						
P17K				IAML		14 16 44.8	
	comp=E,8μm,0.9s						
P17K	**Kvichak River**	**1.07**	**289**	P	**Pn**	**14 16 26.1**	**-0.9**
	baz=110,SNR=68						
P17K				S	**Sn**	**14 16 43.2**	**-1.7**
	baz=110						
Q20K	**Shuyak Island**	**1.11**	**102**	P	**Pn**	**14 16 26.5**	**-0.9**
	baz=281,SNR=86						
Q20K				S	**Sn**	**14 16 44.0**	**-1.6**
	baz=281						
SYI	**Shuyak Island**	**1.11**	**102**		**Sn**	**14 16 44.1**	**-1.5**
SYI	**Shuyak Island**	**1.11**	**102**		**Pn**	**14 16 26.4**	**-1.1**
SYI				IAML		14 16 44.9	
	comp=N,5μm,0.8s						
SYI				IAML		14 16 45.7	
	comp=E,8μm,0.7s						
Q16K	**King Salmon**	**1.15**	**262**		**Pn**	**14 16 27.1**	**-0.8**
Q16K					**Sn**	**14 16 44.6**	**-1.7**
Q16K	**King Salmon**	**1.15**	**262**	P	**Pn**	**14 16 27.1**	**-0.8**
	baz=82,SNR=165						
Q16K				S	**Sn**	**14 16 45.0**	**-1.4**
	baz=82						
ILS	**Iliamna Low So**	**1.31**	**32**		**Pn**	**14 16 29.5**	**-0.1**
ILSW	**Iliamna Southw**	**1.32**	**30**		**Pn**	**14 16 29.4**	**-0.3**
ILSW				IAML		14 16 50.0	
	comp=E,10μm,1.0s						
ILSW				IAML		14 16 50.8	
	comp=N,6μm,1.1s						
ILSW	**Iliamna Southw**	**1.32**	**30**		**Sn**	**14 16 48.8**	**-0.9**
O19K	**Port Alsworth**	**1.34**	**3**		**Pn**	**14 16 29.2**	**-0.6**
O19K				IAML		14 16 50.1	
	comp=E,4μm,0.8s						
O19K	**Port Alsworth**	**1.34**	**3**	P	**Pn**	**14 16 29.2**	**-0.6**
	baz=184,SNR=254						
O19K				S	**Sn**	**14 16 48.4**	**-1.5**
	baz=184						
IVE	**Iliamna Volcan**	**1.38**	**32**		**Pn**	**14 16 30.2**	**-0.1**
IVE					**Sn**	**14 16 50.3**	**-0.5**
KDAK	**Kodiak Island**	**1.47**	**137**	P	**Pn**	**14 16 29.7**	**-1.5**
	comp=E,1μm,0.4s,baz=331,slow=7.9,SNR=3813						
KDAK				S	**Sn**	**14 16 49.7**	**-2.6**
	comp=E,602nm,0.5s,baz=323,slow=20,SNR=8.9						
KDAK	**Kodiak Island**	**1.47**	**137**		**Pn**	**14 16 29.6**	**-1.6**
KDAK				IAML		14 16 53.4	
	comp=E,8μm,0.8s						
KDAK				IAML		14 16 58.1	
	comp=E,7μm,0.8s						
KDAK	**Kodiak Island**	**1.47**	**137**	P	**Pn**	**14 16 29.7**	**-1.5**
	baz=316						
KDAK				S	**Sn**	**14 16 49.5**	**-2.8**
	baz=316						
PLK5	**Peulik 5**	**1.53**	**237**		**Pn**	**14 16 31.3**	**-0.6**
PLK1	**Peulik 1**	**1.55**	**228**		**Pn**	**14 16 31.3**	**-0.9**
PLK4	**Peulik 4**	**1.58**	**220**		**Pn**	**14 16 31.7**	**-1.0**
PLK4	**Peulik 4**	**1.58**	**220**	IAML		14 16 54.4	
	comp=E,2μm,1.1s						
PLK4				IAML		14 16 56.2	
	comp=N,2μm,1.1s						
R17L	**Mt. Peulik Vol**	**1.59**	**220**	P	**Pn**	**14 16 31.7**	**-0.9**
	baz=38						
O17K	**Koliganek Bris**	**1.63**	**305**		**Pn**	**14 16 32.2**	**-0.8**
O17K					**Sn**	**14 16 54.0**	**-1.5**
O17K	**Koliganek Bris**	**1.63**	**305**	P	**Pn**	**14 16 32.3**	**-0.8**
	baz=125,SNR=86						
O17K				S	**Sn**	**14 16 54.1**	**-1.5**
	baz=125						
HOM	**Homer**	**1.66**	**60**		**Pn**	**14 16 32.9**	**-0.4**
HOM	**Homer**	**1.66**	**60**	P	**Pn**	**14 16 33.5**	**+0.1**
	baz=241,SNR=13						
HOM				S	**Sn**	**14 16 55.7**	**-0.4**
	baz=241						
PLBL	**Peulik Blue Cr**	**1.70**	**228**		**Pn**	**14 16 33.1**	**-0.8**
OHAK	**Old Harbor**	**1.76**	**159**		**Pn**	**14 16 32.7**	**-1.9**
OHAK				IAML		14 16 55.7	
	comp=N,5μm,0.9s						
OHAK				IAML		14 16 56.1	
	comp=E,5μm,0.7s						
OHAK	**Old Harbor**	**1.76**	**159**	P	**Pn**	**14 16 32.9**	**-1.6**
OHAK	**Old Harbor**	**1.76**	**159**	S	**Sn**	**14 16 55.4**	**-2.8**
OHAK	**Old Harbor**	**1.76**	**159**	P	**Pn**	**14 16 32.8**	**-1.8**
	baz=338,SNR=21						
OHAK				S	**Sn**	**14 16 54.7**	**-3.5**
	baz=338						
RED	**Redoubt Volcan**	**1.79**	**28**		**Pn**	**14 16 34.9**	**-0.1**
RED				IAML		14 17 01.7	
	comp=N,3μm,1.0s						
RED				IAML		14 17 03.2	
	comp=E,2μm,0.9s						
CNPM	**China Poot**	**1.79**	**67**		**Pn**	**14 16 34.3**	**-0.7**
CNPM	**China Poot**	**1.79**	**67**		**Sn**	**14 16 57.6**	**-1.5**
RDSO	**Redoubt South**	**1.82**	**28**		**Pn**	**14 16 35.5**	**0.0**
RDWB	**Redoubt West**	**1.83**	**26**		**Pn**	**14 16 35.4**	**-0.1**
RDWB					**Sn**	**14 16 59.6**	**-0.4**
P16K	**Nushagak River**	**1.83**	**277**		**Pn**	**14 16 34.7**	**-0.7**
P16K				IAML		14 16 59.8	
	comp=N,4μm,0.9s						
P16K				IAML		14 17 00.2	
	comp=E,2μm,0.6s						
P16K	**Nushagak River**	**1.83**	**277**	P	**Pn**	**14 16 34.9**	**-0.5**
	baz=96,SNR=154						
P16K				S	**Sn**	**14 16 58.9**	**-0.9**
	baz=96						
RDJH	**Redoubt Jeurge**	**1.93**	**25**		**Pn**	**14 16 36.7**	**-0.1**
N19K	**Bonanza Creek**	**1.96**	**360**		**Pn**	**14 16 37.1**	**0.0**
N19K	**Bonanza Creek**	**1.96**	**360**	P	**Pn**	**14 16 37.1**	**0.0**
	baz=181,SNR=579						
N19K				S	**Sn**	**14 17 02.0**	**-0.8**
	baz=181						
N18K	**Kilae Creek**	**1.96**	**339**		**Sn**	**14 17 01.7**	**-1.0**
N18K	**Kilae Creek**	**1.96**	**339**		**Pn**	**14 16 36.6**	**-0.4**
N18K				IAML		14 17 03.1	
	comp=N,2μm,1.0s						
N18K	**Kilae Creek**	**1.96**	**339**	P	**Pn**	**14 16 36.9**	**-0.2**
	baz=159,SNR=268						
N18K				S	**Sn**	**14 17 01.5**	**-1.3**
	baz=159						
O16K	**Kokwok River B**	**2.00**	**293**		**Pn**	**14 16 36.9**	**-0.6**
O16K				IAML		14 17 03.5	
	comp=N,1μm,0.9s						
O16K				IAML		14 17 03.7	
	comp=E,1μm,0.8s						
O16K	**Kokwok River B**	**2.00**	**293**	P	**Pn**	**14 16 36.9**	**-0.6**
	baz=112,SNR=155						
O16K				S	**Sn**	**14 17 01.7**	**-1.7**
	baz=112						
RDT	**Redoubt**	**2.01**	**30**		**Pn**	**14 16 37.5**	**-0.2**
RDT					**Sn**	**14 17 03.0**	**-0.9**
BRLK	**Bradley Lake**	**2.05**	**62**		**Pn**	**14 16 37.3**	**-0.8**
BRLK				IAML		14 17 05.6	
	comp=N,5μm,0.7s						
BRLK				IAML		14 17 07.2	
	comp=E,4μm,0.6s						
R16K	**Pilot Point**	**2.09**	**233**		**Pn**	**14 16 37.6**	**-0.9**
R16K				IAML		14 17 05.8	
	comp=E,3μm,0.9s						
R16K	**Pilot Point**	**2.09**	**233**	P	**Pn**	**14 16 37.8**	**-0.8**
	baz=51,SNR=48						
R16K				S	**Sn**	**14 17 03.9**	**-1.5**
	baz=51						
BRSE	**Bradley Lake S**	**2.11**	**64**		**Pn**	**14 16 38.0**	**-0.7**
BRSE	**Bradley Lake S**	**2.11**	**64**	P	**Pn**	**14 16 37.9**	**-0.8**
	baz=246,SNR=12						
BRSE				S	**Sn**	**14 17 03.3**	**-2.5**
	baz=246						
N17K	**Nushagak Hills**	**2.17**	**322**		**Pn**	**14 16 39.3**	**-0.2**
N17K	**Nushagak Hills**	**2.17**	**322**	IAML		14 17 07.1	
	comp=N,1μm,0.8s						
N17K				IAML		14 17 07.4	
	comp=E,2μm,1.0s						
N17K	**Nushagak Hills**	**2.17**	**322**	P	**Pn**	**14 16 39.3**	**-0.2**
	baz=141,SNR=75						
N17K				S	**Sn**	**14 17 05.3**	**-1.9**
	baz=141						
SII	**Sitkinak Islan**	**2.31**	**176**		**Pn**	**14 16 39.5**	**-1.8**
SII	**Sitkinak Islan**	**2.31**	**176**	P	**Pn**	**14 16 39.7**	**-1.6**
SII	**Sitkinak Islan**	**2.31**	**176**	S	**Sn**	**14 17 07.3**	**-3.0**
SII	**Sitkinak Islan**	**2.31**	**176**	P	**Pn**	**14 16 39.6**	**-1.8**
	baz=356,SNR=39						
SII				S	**Sn**	**14 17 06.6**	**-3.8**
	baz=356						
CAPN	**Captain Cook N**	**2.54**	**40**		**Pn**	**14 16 45.4**	**+1.2**
CAPN	**Captain Cook N**	**2.54**	**40**	P	**Pn**	**14 16 45.3**	**+1.1**
	baz=222						
CKL	**Chakachamna La**	**2.58**	**24**		**Pn**	**14 16 44.9**	**+0.1**
SPWE	**Spurr West**	**2.61**	**21**		**Pn**	**14 16 45.5**	**+0.4**
SPU	**Mount Spurr**	**2.63**	**26**		**Pn**	**14 16 45.1**	**-0.2**
SPCN	**Chakachatna No**	**2.64**	**25**		**Pn**	**14 16 45.7**	**+0.2**
SPNN	**North Nagishla**	**2.67**	**19**		**Pn**	**14 16 46.2**	**+0.2**
SLKM	**Skilak Lake**	**2.72**	**51**		**Pn**	**14 16 46.7**	**+0.3**
SLKM				IAML		14 17 20.9	
	comp=N,3μm,0.3s						
SLKM				IAML		14 17 21.6	
	comp=E,3μm,0.3s						
N16K	**Nishlik Lake**	**2.72**	**308**		**Pn**	**14 16 46.5**	**0.0**
N16K	**Nishlik Lake**	**2.72**	**308**	P	**Pn**	**14 16 46.4**	**0.0**
	baz=126						
N16K				S	**Sn**	**14 17 18.8**	**-0.8**
	baz=126						
M18K	**Stony River**	**2.73**	**346**		**Pn**	**14 16 46.7**	**+0.2**
M18K	**Stony River**	**2.73**	**346**	P	**Pn**	**14 16 46.7**	**+0.2**
	baz=166						
M18K				S	**Sn**	**14 17 19.2**	**-0.5**
	baz=166						
SPCG	**Spurr Capps Gl**	**2.73**	**26**		**Pn**	**14 16 46.8**	**0.0**
ANNE	**Aniakchak Nort**	**2.74**	**226**		**Pn**	**14 16 45.5**	**-1.3**
ANNW	**Aniakchak Nort**	**2.76**	**228**		**Pn**	**14 16 46.6**	**-0.4**
O15K	**Ungalikthiuk R**	**2.79**	**279**		**Pn**	**14 16 47.1**	**-0.3**
O15K	**Ungalikthiuk R**	**2.79**	**279**	P	**Pn**	**14 16 47.0**	**-0.3**
	baz=95						
O15K				S	**Sn**	**14 17 19.4**	**-1.7**
	baz=95						
AZAC	**Aniakchak**	**2.81**	**227**		**Pn**	**14 16 47.0**	**-0.8**
SEW	**Seward**	**2.85**	**62**		**Pn**	**14 16 48.0**	**-0.1**
SEW				IAML		14 17 21.2	
	comp=E,3μm,0.9s						
SEW				IAML		14 17 27.3	
	comp=N,1μm,0.7s						
SEW	**Seward**	**2.85**	**62**	P	**Pn**	**14 16 48.2**	**+0.2**
	baz=246,SNR=15						
SEW				S	**Sn**	**14 17 18.9**	**-3.5**
	baz=246						
ANPB	**Aniakchak Plen**	**2.90**	**226**		**Pn**	**14 16 47.8**	**-1.1**
O22K	**Cooper Landing**	**2.91**	**54**		**Pn**	**14 16 48.8**	**0.0**
O22K	**Cooper Landing**	**2.91**	**54**	P	**Pn**	**14 16 48.9**	**+0.1**
	baz=238,SNR=39						
O22K				S	**Sn**	**14 17 22.0**	**-1.8**
	baz=238						
M17K	**Holitna River**	**2.95**	**331**		**Pn**	**14 16 49.7**	**+0.3**
M17K	**Holitna River**	**2.95**	**331**	IAML		14 17 25.7	
	comp=N,2μm,1.2s						
M17K				IAML		14 17 27.1	
	comp=E,2μm,1.0s						
M17K	**Holitna River**	**2.95**	**331**	P	**Pn**	**14 16 49.7**	**+0.3**
	baz=150,SNR=177						
M17K				S	**Sn**	**14 17 24.5**	**-0.3**
	baz=150						
STLK	**Strandline Lak**	**2.96**	**25**		**Pn**	**14 16 49.2**	**-0.4**
M19K	**Big River Lodg**	**3.06**	**1**		**Pn**	**14 16 51.1**	**+0.3**
M19K	**Big River Lodg**	**3.06**	**1**	P	**Pn**	**14

M15K	Kasigluk River	3.65	303		P		Pn	14 16 58.5	0.0
	baz=119,SNR=73								
M15K					S		Sn	14 17 39.8	-1.2
	baz=119								
VNHG	Veniaminof 1	3.66	226				Pn	14 16 58.5	-0.3
VNFG	Fog Glacier, M	3.76	229				Pn	14 16 59.9	-0.3
VNSS	Veniaminof 8	3.77	228				Pn	14 16 58.8	-1.5
P23K	Montague Islan	3.79	69				Pn	14 16 60.0	-0.4
P23K	Montague Islan	3.79	69		P		Pn	14 16 60.0	-0.4
	baz=255,SNR=6.3								
P23K					S		Sn	14 17 41.7	-2.7
	baz=255								
L17K	Donlin	3.79	332				Pn	14 17 00.5	0.0
L17K	Donlin	3.79	332		P		Pn	14 17 00.4	-0.1
	baz=149,SNR=54								
L17K					S		Sn	14 17 43.4	-1.2
	baz=149								
L16K	Owhat River	3.79	321				Pn	14 17 00.4	0.0
L16K					IAML			14 17 58.1	
	comp=E,583nm,1.1s								
L16K	Owhat River	3.79	321		P		Pn	14 17 00.5	0.0
	baz=138,SNR=45								
L16K					S		Sn	14 17 43.3	-1.3
	baz=138								
PMR	Palmer	3.82	42				Pn	14 16 59.2	-1.6
PMR					IAML			14 17 44.1	
	comp=E,950nm,0.7s								
PMR					IAML			14 17 44.4	
	comp=N,943nm,0.7s								
PMR	Palmer	3.82	42		P		Pn	14 16 59.8	-1.0
PMR	Palmer	3.82	42		P		Pn	14 16 59.2	-1.6
PMR	Palmer	3.82	42		P		Pn	14 16 59.4	-1.4
	baz=226,SNR=99								
PMR					S		Sn	14 17 41.6	-3.6
	baz=226								
N14K	Kuskokwak Cree	3.84	289				Pn	14 17 01.3	+0.2
N14K	Kuskokwak Cree	3.84	289		IAML			14 18 02.7	
	comp=N,288nm,1.1s								
N14K	Kuskokwak Cree	3.84	289		P		Pn	14 17 01.2	+0.1
	baz=104,SNR=64								
VNKR	Veniaminof 5	3.88	225				Pn	14 17 01.0	-0.7
KNK	Knik Glacier	3.95	47				Pn	14 17 01.3	-1.3
KNK	Knik Glacier	3.95	47		P		Pn	14 17 01.4	-1.2
	baz=232,SNR=37								
KNK					S		Sn	14 17 44.5	-3.8
	baz=232								
GHO	Glory Hole Cre	4.02	41				Pn	14 17 02.1	-1.4
L22K	Petersville	4.10	25				Pn	14 17 04.0	-0.6
L22K	Petersville	4.10	25		IAML			14 17 55.3	
	comp=N,456nm,0.7s								
L22K					IAML			14 17 55.4	
	comp=E,359nm,0.3s								
CUT	Chulitna	4.12	28				Pn	14 17 03.9	-0.8
CUT	Chulitna	4.12	28		IAML			14 17 55.6	
	comp=N,911nm,0.3s								
CUT	Chulitna	4.12	28		P		Pn	14 17 04.1	-0.6
	baz=212,SNR=97								
CUT					S		Sn	14 17 50.0	-2.1
	baz=212								
PPLA	Purkeypile	4.20	14				Pn	14 17 06.2	+0.2
PPLA					IAML			14 18 38.6	
	comp=E,211nm,1.1s								
PPLA					IAML			14 18 57.0	
	comp=N,252nm,1.1s								
PPLA	Purkeypile	4.20	14		P		Pn	14 17 06.5	+0.5
	baz=197,SNR=187								
Q23K	Middleton Isla	4.22	79		P		Pn	14 17 05.5	-0.6
	baz=265								
GLI	Glacier Island	4.23	58				Pn	14 17 04.6	-1.7
GLI	Glacier Island	4.23	58		P		Pn	14 17 05.0	-1.3
	baz=244								
GLI					S		Sn	14 17 51.1	-3.9
	baz=244								
M14K	Bethel	4.23	300				Pn	14 17 06.5	+0.3
M14K	Bethel	4.23	300		P		Pn	14 17 06.7	+0.4
	baz=114,SNR=52								
SML	Sawmill	4.25	43				Pn	14 17 04.7	-1.9
SML					IAML			14 17 53.9	
	comp=N,1μm,1.0s								
SML					IAML			14 18 03.2	
	comp=E,1μm,0.9s								
SML	Sawmill	4.25	43		P		Pn	14 17 05.1	-1.4
	baz=228,SNR=42								
SML					S		Sn	14 17 52.4	-3.1
	baz=228								
K17K	Iditarod	4.30	336				Pn	14 17 07.4	+0.2
K17K					IAML			14 18 13.1	
	comp=E,275nm,1.1s								
K17K					IAML			14 18 14.6	
	comp=N,275nm,1.0s								
K17K	Iditarod	4.30	336		P		Pn	14 17 07.7	+0.5
	baz=153,SNR=96								
K17K					S		Sn	14 17 55.5	-1.2
	baz=153								
HIN	Hinchinbrook I	4.33	66				Pn	14 17 07.3	-0.3
M23K	Glacier View	4.46	46				Pn	14 17 08.2	-1.0
M23K	Glacier View	4.46	46		P		Pn	14 17 08.3	-1.0
	baz=232,SNR=81								
M23K					S		Sn	14 17 56.5	-4.0
	baz=232								
L15K	Ungalak Mounta	4.50	312				Pn	14 17 09.9	+0.1
L15K	Ungalak Mounta	4.50	312		P		Pn	14 17 09.6	-0.1
	baz=127								
L15K					S		Sn	14 18 00.2	-1.0
	baz=127								
K20K	Telida	4.52	2				Pn	14 17 09.8	-0.3
K20K	Telida	4.52	2		P		Pn	14 17 09.9	-0.3
	baz=183,SNR=58								
K20K					S		Sn	14 18 01.1	-0.8
	baz=183								
SCM	Sheep Creek Mo	4.63	47				Pn	14 17 10.8	-0.9
SCM	Sheep Creek Mo	4.63	47		P		Pn	14 17 10.8	-0.9
SCM	Sheep Creek Mo	4.63	47		P		Pn	14 17 10.6	-1.0
	baz=233,SNR=44								
SCM					S		Sn	14 18 01.2	-3.5
	baz=233								
EYAK	Cordova Ski Ar	4.73	65				Pn	14 17 11.9	-1.0
EYAK	Cordova Ski Ar	4.73	65		IAML			14 18 06.5	
	comp=E,516nm,0.4s								
EYAK					IAML			14 18 07.6	
	comp=N,500nm,0.6s								
EYAK	Cordova Ski Ar	4.73	65		P		Pn	14 17 12.3	-0.6
EYAK	Cordova Ski Ar	4.73	65		P		Pn	14 17 12.1	-0.8
	baz=252,SNR=6.5								
EYAK					S		Sn	14 18 02.7	-4.1
	baz=252								
J18K	Innoko River	4.75	348				Pn	14 17 13.0	-0.2
J18K	Innoko River	4.75	348		P		Pn	14 17 13.6	+0.4
	baz=166,SNR=454								
J18K					S		Sn	14 18 07.8	+0.4
	baz=166								
M13K	Dall Lake	4.77	293				Pn	14 17 14.1	+0.7
M13K	Dall Lake	4.77	293		IAML			14 18 25.1	
	comp=E,136nm,1.2s								
M13K	Dall Lake	4.77	293		P		Pn	14 17 14.1	+0.7
	baz=106,SNR=74								
L14K	Kuka Creek	4.81	305				Pn	14 17 14.5	+0.6
L14K	Kuka Creek	4.81	305		IAML			14 18 10.4	
	comp=E,244nm,1.1s								
L14K					IAML			14 18 22.8	
	comp=N,284nm,1.1s								
L14K	Kuka Creek	4.81	305		P		Pn	14 17 14.7	+0.8
	baz=118,SNR=226								
L14K					S		Sn	14 18 07.7	-1.0
	baz=118								
SDPT	Sand Point	4.81	226				Pn	14 17 12.3	-1.6
SDPT					IAML			14 18 17.3	
	comp=E,445nm,0.9s								
SDPT					IAML			14 18 19.3	
	comp=N,412nm,0.9s								
SDPT	Sand Point	4.81	226		P		Pn	14 17 12.3	-1.6
SDPT	Sand Point	4.81	226		P		Pn	14 17 12.3	-1.6
	baz=41								
WAT7	Susitna Watana	4.84	32				Pn	14 17 13.1	-1.4
K15K	Wolf Creek Mou	4.90	318				Pn	14 17 15.9	+0.8
K15K	Wolf Creek Mou	4.90	318		P		Pn	14 17 15.9	+0.8
	baz=132,SNR=19								
CHNA	Chernabura Isl	4.92	217		P		Pn	14 17 13.3	-2.1
CHNA	Chernabura Isl	4.92	217		P		Pn	14 17 13.1	-2.3
	baz=33,SNR=6.4								
WAT1	Susitna Watana	4.92	33				Pn	14 17 14.2	-1.3
WAT1	Susitna Watana	4.92	33		P		Pn	14 17 14.3	-1.3
	baz=219								
WAT1					S		Sn	14 18 08.8	-2.7
	baz=219								
DIV	Divide	4.92	59				Pn	14 17 15.0	-0.6
DIV					IAML			14 18 11.8	
	comp=E,673nm,0.9s								
CNBA	Chernabura Isl	4.93	217				Pn	14 17 13.0	-2.5
CNBA					IAML			14 18 11.3	
	comp=E,432nm,0.8s								
CNBA					IAML			14 18 14.1	
	comp=N,453nm,0.6s								
WAT6	Susitna Watana	4.98	39				Pn	14 17 14.9	-1.5
WAT6	Susitna Watana	4.98	39		P		Pn	14 17 15.0	-1.4
	baz=224,SNR=75								
WAT6					S		Sn	14 18 09.3	-3.9
	baz=224								
KTH	Kantishna Hill	5.01	18		IAML			14 18 54.6	
	comp=N,229nm,1.0s								
KTH					IAML			14 19 03.9	
	comp=E,194nm,1.1s								
KLU	Klutina	5.02	55		P		Pn	14 17 16.0	-0.8
	baz=242,SNR=95								
KLU					S		Sn	14 18 10.7	-3.2
	baz=242								
TRF	Thorofare Moun	5.03	22		IAML			14 18 48.2	
	comp=E,183nm,0.9s								
TRF					IAML			14 18 50.7	
	comp=N,306nm,1.0s								
TRF	Thorofare Moun	5.03	22		P		Pn	14 17 16.1	-1.0
	baz=206,SNR=65								
TRF					S		Sn	14 18 10.9	-3.4
	baz=206								
J17K	VABM Dome	5.07	336				Pn	14 17 17.7	+0.3
J17K	VABM Dome	5.07	336		IAML			14 18 43.1	
	comp=E,130nm,1.2s								
J17K	VABM Dome	5.07	336		P		Pn	14 17 17.7	+0.3
	baz=152								
CHUM	Lake Minchumin	5.15	11				Pn	14 17 18.4	0.0
CHUM	Lake Minchumin	5.15	11		P		Pn	14 17 18.1	-0.4
	baz=193,SNR=144								
J19K	Poorman	5.18	354				Pn	14 17 18.9	-0.1
J19K	Poorman	5.18	354		P		Pn	14 17 18.9	-0.1
	baz=174,SNR=197								
GOAT	Goat Mountain	5.22	67				Pn	14 17 19.4	-0.2
M24K	Tolsona, Glenn	5.24	48		P		Pn	14 17 19.0	-0.7
	baz=235,SNR=42								
M24K					S		Sn	14 18 16.7	-2.3
	baz=235								
KAIM	Kayak Island	5.25	74				Pn	14 17 20.0	+0.2
KAIM	Kayak Island	5.25	74		P		Pn	14 17 20.2	+0.4
	baz=262								
KAIM					S		Sn	14 18 16.8	-2.5
	baz=262								
RND	Reindeer	5.31	28		IAML			14 18 19.7	
	comp=N,233nm,0.8s								
RND					IAML			14 18 19.7	
	comp=E,215nm,0.8s								
J20K	Nowinta River	5.34	2		IAML			14 19 14.5	
	comp=N,100nm,1.0s								
J20K	Nowinta River	5.34	2		P		Pn	14 17 20.5	-0.5
	baz=182,SNR=122								
J16K	Anvik River	5.34	329				Pn	14 17 21.3	+0.3
J16K	Anvik River	5.34	329		P		Pn	14 17 21.4	+0.3
	baz=144,SNR=44								
PN7A	Pavlof North-7	5.35	233				Pn	14 17 20.3	-0.9
HAG	Hague Volcano	5.39	232				Pn	14 17 20.9	-0.9
HAG	Hague Volcano	5.39	232		P		Pn	14 17 20.9	-0.9
BMRM	Bremner River	5.39	63		P		Pn	14 17 21.3	-0.5
	baz=251,SNR=18								
BMRM					S		Sn	14 18 20.1	-2.8
	baz=251								
DHY	Denali Highway	5.46	36				Pn	14 17 21.6	-1.2
DHY	Denali Highway	5.46	36		P		Pn	14 17 21.3	-1.5
	baz=222,SNR=33								
DHY					S		Sn	14 18 21.9	-2.7
	baz=222								
BPAW	Bear Paw Mtn.	5.52	16		P		Pn	14 17 22.1	-1.3
	baz=199,SNR=46								
MCK	McKinley	5.57	26		P		Pn	14 17 23.0	-1.2
	baz=211,SNR=73								
MCK					S		Sn	14 18 23.9	-3.1
	baz=211								
N25K	Chitina, Valde	5.64	57		P		Pn	14 17 24.6	-0.5
	baz=245,SNR=93								
N25K					S		Sn	14 18 25.7	-3.0
	baz=245								
DTNA	Dutton South F	5.65	232				Pn	14 17 24.7	-0.5
DT1	Dutton Round H	5.69	232				Pn	14 17 25.1	-0.7
HARP	HAARP	5.79	48		P		Pn	14 17 26.6	-0.6
	baz=236,SNR=68								
HARP					S		Sn	14 18 30.1	-2.3
	baz=236								
BGLC	Bering Glacier	5.84	73		P		Pn	14 17 28.4	+0.7
	baz=262								
BGLC					S		Sn	14 18 31.9	-1.5
	baz=262								
I17K	Unalakleet	5.86	332				Pn	14 17 28.3	+0.3
I17K	Unalakleet	5.86	332		P		Pn	14 17 28.8	+0.8
	baz=147,SNR=42								
J14K	Nanvaranak Lak	5.92	315				Pn	14 17 29.3	+0.6
J14K	Nanvaranak Lak	5.92	315		P		Pn	14 17 29.4	+0.7
	baz=128,SNR=44								
K13K	Kusilvak Mount	5.92	306				Pn	14 17 29.0	+0.2
K13K	Kusilvak Mount	5.92	306		P		Pn	14 17 28.7	-0.1
	baz=118,SNR=34								
I20K	Naaghedeneel	5.96	360				Pn	14 17 29.0	-0.3
I20K	Naaghedeneel	5.96	360		P		Pn	14 17 29.3	-0.1
	baz=180								
VRDI	Verde Repeater	6.01	62				Pn	14 17 29.4	-0.8
GCSA	Galena City Sc	6.02	350		P		Pn	14 17 30.1	0.0
	baz=168,SNR=139								
PAX	Paxson	6.02	43				Pn	14 17 28.7	-1.5
PAX	Paxson	6.02	43		P		Pn	14 17 28.7	-1.5
PAX	Paxson	6.02	43		P		Pn	14 17 29.5	-0.7
	baz=231,SNR=305								
PAX					S		Sn	14 18 35.1	-2.8
	baz=231								
CRQM	Cirque	6.03	67				Pn	14 17 29.9	-0.5
CRQE	Cirque	6.05	67		P		Pn	14 17 30.3	-0.4
	baz=256,SNR=13								
CRQE					S		Sn	14 18 34.9	-3.7
	baz=256								
SNH	Sunshine Point	6.07	72				Pn	14 17 30.7	-0.1
M11K	Mekoryuk	6.15	289				Pn	14 17 31.6	-0.3
M11K	Mekoryuk	6.15	289		P		Pn	14 17 31.6	-0.3
	baz=100,SNR=23								
TGL	Tana Glacier	6.17	67				Pn	14 17 31.9	-0.4
MCARA	McCarthy VSAT	6.25	61				Pn	14 17 33.0	-0.3
MCARA	McCarthy VSAT	6.25	61		P		Pn	14 17 33.2	-0.1
	baz=251,SNR=18								
MCARA					S		Sn	14 18 40.5	-2.9
	baz=251								
NEA2	Nenana	6.30	22				Pn	14 17 32.1	-1.7
NEA2	Nenana	6.30	22		P		Pn	14 17 32.2	-1.7
	baz=206,SNR=173								
FALS	False Pass	6.34	235				Pn	14 17 33.4	-1.1
FALS	False Pass	6.34	235		P		Pn	14 17 33.7	-0.7
	baz=47								
ISLE	Juniper Island	6.38	69				Pn	14 17 34.7	-0.4
WRH	Wood River Hil	6.40	26				Pn	14 17 33.4	-1.8
PTPK	Patty Peak	6.45	64				Pn	14 17 36.3	+0.1
BAGL	Bagley Icefiel	6.48	70				Pn	14 17 36.8	+0.4
K24K	Donnelly Dome	6.48	36				Pn	14 17 36.5	+0.1
K24K	Donnelly Dome	6.48	36		P		Pn	14 17 36.2	-0.2
	baz=224,SNR=95								
K24K					S		Sn	14 18 45.9	-3.2
	baz=224								
ISNN	Isanotski Nort	6.51	236				Pn	14 17 36.4	-0.4
MESA	MESA	6.51	73				Pn	14 17 36.9	0.0
MESA	MESA	6.51	73		P		Pn	14 17 35.9	-1.0
	baz=263,SNR=9.5								
MESA					S		Sn	14 18 46.7	-3.1
	baz=263								
H18K	Honhosa River	6.58	345				Pn	14 17 37.6	-0.1
H18K	Honhosa River	6.58	345		P		Pn	14 17 37.6	-0.1
	baz=162,SNR=86								
CCB	Clear Creek Bu	6.61	26				Pn	14 17 36.1	-2.0
H17K	Granite Mounta	6.62	339				Pn	14 17 38.1	-0.1
H17K	Granite Mounta	6.62	339		P		Pn	14 17 38.2	+0.1
	baz=155,SNR=77								
HDA	Harding Lake	6.62	30				Pn	14 17 36.4	-1.8
HDA	Harding Lake	6.62	30		P		Pn	14 17 36.4	-1.8
	baz=216,SNR=102								
MENT	Mentasta	6.65	47		P		Pn	14 17 38.4	-0.2
H20K	Anotleneega Mo	6.66	359				Pn	14 17 38.5	-0.2
H20K	Anotleneega Mo	6.66	359		P		Pn	14 17 38.6	-0.2
	baz=178,SNR=68								
M26K	Nabesna, AK	6.67	53				Pn	14 17 38.6	-0.3
SSBA	Shishaldin	6.70	236				Pn	14 17 38.3	-1.1
RIDG	Independent Ri	6.74	39				Pn	14 17 38.9	-0.9
RIDG	Independent Ri	6.74	39		P		Pn	14 17 38.8	-1.1
	baz=228,SNR=45								
I23K	Minto, Yukon-K	6.75	19				Pn	14 17 38.1	-1.8
I23K	Minto, Yukon-K	6.75	19		P		Pn	14 17 38.6	-1.3
	baz=203,SNR=178								
COLA	College	6.80	25				Pn	14 17 38.3	-2.2
COLA	College	6.80	25		P		Pn	14 17 39.3	-1.2
COLA	College	6.80	25		P		Pn	14 17 38.3	-2.2
COLA	College	6.80	25		P		Pn	14 17 38.7	-1.9
	baz=210								
BARN	Barnard Glacie	6.80	66				Pn	14 17 40.5	-0.3
L26K	Log Cabin Wild	6.84	48		P		Pn	14 17 41.0	-0.2
	baz=237,SNR=72								
H21K	Melozitna Rive	6.87	6		P		Pn	14 17 41.5	0.0
	baz=187,SNR=428								
H16K	Elim	6.87	331		P		Pn	14 17 42.5	+0.9
	baz=144,SNR=86								
CTG	Chitna Glacier	6.93	67		P		Pn	14 17 42.2	-0.3
	baz=258,SNR=30								
ILAR	Eielson Array	6.93	28		P		Pn	14 17 40.3	-2.1
	comp=N,145nm,0.7s,baz=214,slow=13,SNR=799								
ILAR					S		Sn	14 18 56.5	-3.3
	comp=N,17nm,0.7s,baz=199,slow=18,SNR=4.6								
ILAR					ScP		ScP	14 27 38.6	+0.4
	comp=N,0.3nm,0.6s,baz=290,slow=2.3,SNR=4.5								
ILAR	Eielson Array	6.93	28				Pn	14 17 40.1	-2.3
DOT	Dot Lake	6.94	42				Pn	14 17 41.1	-1.5
LOGN	Logan Glacier	7.07	68				Pn	14 17 44.4	0.0
POKR	Poker Plat Res	7.10	25		P		Pn	14 17 42.6	-2.0
	baz=211,SNR=69								
POKR					S		Sn	14 19 00.4	-3.3
	baz=211								
M27K	Edge Creek, AK	7.12	55				Pn	14 17 45.2	+0.2
M27K	Edge Creek, AK	7.12	55		P		Pn	14 17 45.1	0.0
	baz=246,SNR=40								
IM02	Indian Mountai	7.18	2				Pn	14 17 45.4	-0.3
SCRK	Sand Creek	7.18	40				Pn	14 17 44.0	-1.9
SCRK	Sand Creek	7.18	40		P		Pn	14 17 44.1	-1.7
	baz=229,SNR=36								
J25K	Salcha River,	7.21	33				Pn	14 17 44.7	-1.5
J25K	Salcha River,	7.21	33		P		Pn	14 17 44.5	-1.6
	baz=221,SNR=140								
H22K	Ishtalitna Cre	7.21	10				Pn	14 17 44.9	-1.2
H22K	Ishtalitna Cre	7.21	10		P		Pn	14 17 45.1	-1.0
	baz=193,SNR=115								
G17K	Kiwalik Mounta	7.26	339				Pn	14 17 46.6	-0.3
G17K	Kiwalik Mounta	7.26	339		P		Pn	14 17 46.7	-0.1
	baz=154,SNR=79								
G18K	Tagagawik	7.32	346				Pn	14 17 47.2	-0.5
G18K	Tagagawik	7.32	346		P		Pn	14 17 47.2	-0.5
	baz=163,SNR=89								
PCA	Pinnacle	7.34	74				Pn	14 17 48.5	+0.5
PINM	Pinnacle	7.35	74		P		Pn	14 17 48.3	+0.2
	baz=266								
G19K	Purcell Mounta	7.41	352				Pn	14 17 48.0	-0.8
G19K	Purcell Mounta	7.41	352		P		Pn	14 17 48.0	-0.8
	baz=170,SNR=56								
O28M	Mount Upton	7.45	69				Pn	14 17 50.1	+0.4
O28M	Mount Upton	7.45	69		P		Pn	14 17 50.3	+0.7
	baz=261								
L27K	Beaver Creek,	7.45	50				Pn	14 17 48.7	-0.8
L27K	Beaver Creek,	7.45	50		P		Pn	14 17 49.5	+0.1
	baz=241,SNR=106								
BCAR	Beaver Creek A	7.47	50				Pn	14 17 50.2	+0.5
G16K	Koyuk River	7.52	334				Pn	14 17 51.1	+0.8
G16K	Koyuk River	7.52	334		P		Pn	14 17 51.1	+0.8
	baz=147,SNR=72								
YUK3	Moose Creek	7.54	61		P		Pn	14 17 51.2	+0.3
	baz=253,SNR=51								
BVCY	Beaver Creek	7.58	56		P		Pn	14 17 51.3	+0.1
	baz=248,SNR=53								
G15K	Niukluk	7.63	328				Pn	14 17 53.1	+1.4
G15K	Niukluk	7.63	328		P		Pn	14 17 52.7	+0.9
	baz=140								
H24K	Noodor Dome	7.64	21				Pn	14 17 50.5	-1.5
H24K	Noodor Dome	7.64	21		P		Pn	14 17 49.8	-2.2
	baz=207,SNR=183								
BCPM	Bancas Point	7.65	75				Pn	14 17 52.2	+0.1
J26L	Joseph Creek	7.67	38				Pn	14 17 51.7	-0.7
J26L	Joseph Creek	7.67	38		P		Pn	14 17 50.8	-1.6
	baz=227								
G21K	Allakaket	7.70	3				Pn	14 17 52.7	0.0
G21K	Allakaket	7.70	3		P		Pn	14 17 52.7	0.0
	baz=184								
ANM	Nome	7.71	322				Pn	14 17 53.5	+0.6
ANM	Nome	7.71	322		P		Pn	14 17 53.5	+0.6
ANM	Nome	7.71	322		P		Pn	14 17 53.7	+0.8
	baz=133,SNR=20								
YUK8	Steele Glacier	7.75	65		P		Pn	14 17 53.0	-0.7
	baz=258,SNR=27								
AKUT	Akutan	7.84	238				Pn	14 17 54.1	-0.6
PRP	Porcupine Dome	7.88	28				Pn	14 17 53.7	-1.5
PRP	Porcupine Dome	7.88	28		P		Pn	14 17 54.0	-1.2
	baz=216,SNR=116								
ZRO	Akutan Zero	7.96	238				Pn	14 17 55.6	-0.8
F18K	Selawik	8.12	345		P		Pn	14 17 58.1	-0.3
	baz=161,SNR=24								
G23K	Bananza Creek	8.14	13				Pn	14 17 57.3	-1.4
G23K	Bananza Creek	8.14	13		P		Pn	14 17 56.6	-2.1
	baz=197,SNR=66								
F19K	Shaleruckik Mo	8.15	351				Pn	14 17 58.3	-0.4
F19K	Shaleruckik Mo	8.15	351		P		Pn	14 17 58.4	-0.3
	baz=168,SNR=60								
O29M	Mount Kennedy	8.20	73				Pn	14 18 00.1	+0.5
O29M	Mount Kennedy	8.20	73		P		Pn	14 18 00.3	+0.8
	baz=266								
F17K	Baldwin Pennin	8.22	341				Pn	14 17 59.6	-0.1
F17K	Baldwin Pennin	8.22	341		P		Pn	14 17 59.5	-0.2
	baz=155								
F20K	Avaraart Lake	8.24	357				Pn	14 18 00.4	+0.4
F20K	Avaraart Lake	8.24	357		P		Pn	14 18 00.5	+0.5
	baz=176								
YUK4	Talbot Arm	8.29

M30M **Minto, Yukon** 9.42 59 P Pn 14 18 15.1 -0.8
baz=254,SNR=10
O30N **Mendenhall** 9.45 70 Pn 14 18 15.8 -0.6
O30N **Mendenhall** 9.45 70 P Pn 14 18 15.8 -0.6
baz=266
G26K **Porcupine Rive** 9.45 26 Pn 14 18 13.4 -2.9
G26K **Porcupine Rive** 9.45 26 P Pn 14 18 12.5 -3.7
baz=216,SNR=44
I28M **Miner Creek** 9.46 40 Pn 14 18 14.8 -1.7
I28M **Miner Creek** 9.46 40 P Pn 14 18 15.4 -1.1
baz=232,SNR=22
E20K **Nigu River** 9.47 356 Pn 14 18 17.3 +0.8
E20K **Nigu River** 9.47 356 P Pn 14 18 17.5 +0.9
baz=175
E23K **Chandalar** 9.48 11 Pn 14 18 14.9 -1.8
E23K **Chandalar** 9.48 11 P Pn 14 18 15.0 -1.8
baz=196
H27K **Steamboat Moun** 9.49 33 Pn 14 18 14.8 -2.0
H27K **Steamboat Moun** 9.49 33 P Pn 14 18 15.1 -1.7
baz=225
J29N **Klondike Camp** 9.53 47 Pn 14 18 17.5 +0.1
J29N **Klondike Camp** 9.53 47 P Pn 14 18 17.6 +0.1
baz=241,SNR=56
K29M **Barlow Dome** 9.53 51 Pn 14 18 17.5 0.0
K29M **Barlow Dome** 9.53 51 P Pn 14 18 17.5 0.0
baz=246,SNR=54
S31K **Pelican** 9.61 88 Pn 14 18 17.7 -0.7
S31K **Pelican** 9.61 88 P Pn 14 18 17.9 -0.5
baz=283
F25K **Christian Rive** 9.62 21 Pn 14 18 15.6 -2.9
F25K **Christian Rive** 9.62 21 P Pn 14 18 15.3 -3.2
baz=209,SNR=76
E21K **Killik River** 9.62 1 Pn 14 18 18.1 -0.5
E21K **Killik River** 9.62 1 P Pn 14 18 18.0 -0.6
baz=182
GAMB **Gambell** 9.62 308 Pn 14 18 18.4 -0.1
GAMB **Gambell** 9.62 308 P Pn 14 18 18.7 +0.1
baz=113,SNR=6.7
N31M **Braeburn, Yuko** 9.67 66 Pn 14 18 19.0 -0.3
N31M **Braeburn, Yuko** 9.67 66 P Pn 14 18 18.7 -0.6
baz=262,SNR=18
D17K **Noatak River** 9.67 340 Pn 14 18 19.1 -0.1
D17K **Noatak River** 9.67 340 P Pn 14 18 18.3 -0.9
baz=153
SKAG **Skagway** 9.84 78 Pn 14 18 21.6 0.0
SKAG **Skagway** 9.84 78 P Pn 14 18 22.7 +1.1
SKAG **Skagway** 9.84 78 P Pn 14 18 21.7 +0.1
baz=274,SNR=17
G27K **Doyon Strip** 9.87 31 Pn 14 18 20.5 -1.4
G27K **Doyon Strip** 9.87 31 P Pn 14 18 19.9 -2.1
baz=222
D20K **Etivluk River** 9.94 355 Pn 14 18 22.7 -0.1
D20K **Etivluk River** 9.94 355 P Pn 14 18 23.1 +0.3
baz=174
RDOG **Red Dog Mine** 9.96 341 Pn 14 18 23.0 -0.1
RDOG **Red Dog Mine** 9.96 341 P Pn 14 18 22.9 -0.1
baz=154,SNR=5.0
I29M **Ogilvie Camp,** 9.97 42 Pn 14 18 22.1 -1.1
I29M **Ogilvie Camp,** 9.97 42 P Pn 14 18 23.0 -0.2
baz=237,SNR=8.2
F26K **Sheenjek River** 9.99 23 Pn 14 18 20.2 -3.3
F26K **Sheenjek River** 9.99 23 P Pn 14 18 20.3 -3.3
baz=212
WHY **Whitehorse** 10.04 71 Pn 14 18 24.5 +0.2
WHY **Whitehorse** 10.04 71 P Pn 14 18 24.2 -0.1
baz=268,SNR=13
D22K **Ayikyak River** 10.09 4 Pn 14 18 23.8 -1.1
D22K **Ayikyak River** 10.09 4 P Pn 14 18 24.6 -0.3
baz=186
E25K **Arctic Village** 10.10 19 Pn 14 18 22.3 -2.6
E25K **Arctic Village** 10.10 19 P Pn 14 18 21.8 -3.1
baz=207,SNR=116
MAYO **Mayo, Yukon** 10.12 54 Pn 14 18 25.7 +0.5
MAYO **Mayo, Yukon** 10.12 54 P Pn 14 18 25.5 +0.2
baz=250,SNR=10
C18K **Utukok River** 10.26 346 Pn 14 18 27.0 -0.1
C18K **Utukok River** 10.26 346 P Pn 14 18 27.1 -0.1
baz=160,SNR=43
D23K **Nanushuk River** 10.28 8 P Pn 14 18 26.7 -0.7
baz=191
J30M **Hart River** 10.31 49 Pn 14 18 28.8 +0.8
J30M **Hart River** 10.31 49 P Pn 14 18 28.8 +0.8
baz=244,SNR=209
SIT **Sitka** 10.33 92 Pn 14 18 26.9 -1.0
SIT **Sitka** 10.33 92 P Pn 14 18 27.0 -1.0
SIT **Sitka** 10.33 92 P Pn 14 18 27.7 -0.4
baz=288
C17K **DeLong Mountai** 10.38 342 P Pn 14 18 28.8 0.0
baz=154
M31M **Drury Creek, Y** 10.43 63 Pn 14 18 29.3 -0.1
M31M **Drury Creek, Y** 10.43 63 P Pn 14 18 29.5 +0.1
baz=260,SNR=6.4
R32K **Eaglecrest** 10.43 85 P Pn 14 18 29.9 +0.4
baz=282
JIS **Juneau Island** 10.50 85 P Pn 14 18 31.6 +1.3
C19K **Lookout Ridge** 10.53 350 P Pn 14 18 31.2 +0.5
baz=166
I30M **Mount Dempster** 10.59 45 Pn 14 18 31.7 +0.1
I30M **Mount Dempster** 10.59 45 P Pn 14 18 31.6 -0.1
baz=241
S32K **Killisnoo** 10.60 89 Pn 14 18 32.0 +0.4
S32K **Killisnoo** 10.60 89 P Pn 14 18 31.7 +0.1
baz=286,SNR=7.1
C16K **Lisburne Hills** 10.60 338 Pn 14 18 32.4 +0.8
C16K **Lisburne Hills** 10.60 338 P Pn 14 18 32.0 +0.5
baz=148
D24K **Happy Valley** 10.62 11 P Pn 14 18 29.9 -2.0
baz=196,SNR=20
P32M **Atlin** 10.65 77 Pn 14 18 32.1 -0.3
P32M **Atlin** 10.65 77 P Pn 14 18 32.8 +0.3
baz=275
N32M **Quiet Lake** 10.94 69 P Pn 14 18 35.3 -0.9
baz=267
F28M **Old Crow** 10.94 31 P Pn 14 18 34.8 -1.3
baz=224,SNR=28
G29M **Pine Creek** 10.98 36 P Pn 14 18 34.7 -2.1
baz=230
P33M **Teslin, Yukon** 11.06 74 Pn 14 18 37.8 -0.2
P33M **Teslin, Yukon** 11.06 74 P Pn 14 18 36.7 -1.3
baz=272
D25K **Kavik River** 11.07 15 P Pn 14 18 35.2 -2.7
baz=202
Q32M **Nakina River** 11.47 80 P Pn 14 18 43.6 +0.2
baz=279
G30M **tAoh Zraii Nji** 11.59 38 P Pn 14 18 42.9 -1.9
baz=234,SNR=23
H31M **Peel River** 11.61 45 P Pn 14 18 44.5 -0.6
baz=243,SNR=40
C27K **Jago River** 11.75 19 P Pn 14 18 44.7 -2.1
baz=208
E28M **Babbage River** 11.76 28 P Pn 14 18 44.6 -2.4
baz=221
U33K **Whale Pass** 11.80 94 P Pn 14 18 47.1 -0.5
baz=292,SNR=8.7
C26K **Camden Bay** 11.82 16 P Pn 14 18 47.0 -0.8
baz=205
D27M **Malcolm River** 11.94 24 P Pn 14 18 46.9 -2.5
baz=216
E29M **Blow River** 12.02 30 P Pn 14 18 48.7 -1.6
baz=225,SNR=28
CRAG **Craig** 12.06 97 P Pn 14 18 51.2 +0.3
baz=295
R33M **Jennings River** 12.07 77 P Pn 14 18 50.3 -1.0
baz=277
WRAK **Wrangell Islan** 12.09 92 P Pn 14 18 52.3 +1.0
baz=291,SNR=6.2
F30M **Barrier River** 12.10 36 P Pn 14 18 50.4 -1.1
baz=232
G31M **Satah River** 12.19 40 P Pn 14 18 51.5 -1.1
baz=238
S34M **Telegraph Cree** 12.27 84 P Pn 14 18 52.5 -1.1
baz=284,SNR=14
F31M **Tsiigehtchic** 12.65 39 P Pn 14 18 56.6 -1.9
baz=237,SNR=26
DLBC **Dease Lake** 12.71 81 P Pn 14 19 00.4 +0.8
comp=N,20nm,0.3s,baz=274,slow=9.5,SNR=149
DLBC S Sn 14 21 17.9 -1.7
comp=N,7.1nm,0.7s,baz=341,slow=26,SNR=3.3
DLBC LR LR 14 24 19.5
comp=N,57nm,18.5s,baz=289,slow=39
DLBC **Dease Lake** 12.71 81 P Pn 14 18 59.5 0.0
baz=282,SNR=20
V35K **Ketchikan** 12.89 96 Pn Pn 14 19 01.1 -0.7
V35K **Ketchikan** 12.89 96 P Pn 14 19 02.3 +0.5
baz=295
T35M **Bob Quinn** 12.99 88 P Pn 14 19 03.9 +0.9
baz=288,SNR=9.1
WTLY **Watson Lake, Y** 13.08 74 P Pn 14 19 05.5 +1.3
baz=276
INK **Inuvik** 13.21 36 P Pn 14 19 04.4 -1.3
comp=N,28nm,0.6s,baz=235,slow=16,SNR=114
INK S S 14 21 43.6 -2.6
comp=N,14nm,0.9s,baz=282,slow=20,SNR=9.8
INK ScP ScP 14 27 46.3 +0.4
comp=N,2.0nm,0.9s,baz=135,slow=2.9,SNR=4.5
INK **Inuvik** 13.21 36 Pn 14 19 04.7 -1.0
INK **Inuvik** 13.21 36 P Pn 14 19 04.7 -1.0
INK **Inuvik** 13.21 36 P Pn 14 19 04.5 -1.2
baz=234,SNR=48
ADK **Adak** 14.38 251 Pn Pn 14 19 20.6 -0.3
ADK **Adak** 14.38 251 P Pn 14 19 20.6 -0.3
HG4B **Hotspring** 14.66 107 P Pn 14 19 23.6 -0.8
KOTAN **Kotaneelee Air** 15.43 72 P P 14 19 34.9 -0.7
baz=278,SNR=23
WRGLY **Wrigley** 15.54 61 P Pn 14 19 36.0 +0.8
WRGLY IAmb IAmb 14 19 38.8
comp=Z,43nm,0.9s
WRGLY **Wrigley** 15.54 61 P P 14 19 36.3 -0.5
baz=268
BBB **Bella Bella** 16.27 103 P P 14 19 48.6 +3.7
comp=Z,9.0nm,0.9s,baz=310,slow=8.3,SNR=7.2
BBB S S 14 22 46.6 -0.4
comp=Z,7.1nm,0.9s,baz=353,slow=16,SNR=1.7
AMKA **Amchitka** 16.68 255 Pn 14 19 47.9 -1.5
AMKA IAmb IAmb 14 19 51.1
comp=Z,35nm,0.8s
C36M **Paulatuk** 16.70 39 P Pn 14 19 47.3 -2.2
baz=246,SNR=66
A36M **Sachs Harbour** 17.62 30 P 14 19 58.0 -1.6
A36M IAmb IAmb 14 20 03.3
comp=Z,45nm,0.8s
A36M **Sachs Harbour** 17.62 30 P P 14 19 58.6 -1.0
baz=237,SNR=77
SHEM **Shemya Is, Ala** 18.58 264 P P 14 20 10.0 -0.2
comp=Z,64nm,0.7s,baz=69,slow=17,SNR=4.4
SHEM **Shemya Is, Ala** 18.58 264 P P 14 20 10.2 0.0
SMY **Shemya** 18.58 264 P P 14 20 09.8 -0.4
SMY **Shemya** 18.58 264 P P 14 20 09.8 -0.4
SMY pmax pmax
comp=Z,166nm,1.0s
BILL **Bilibino** 19.45 314 P P 14 20 19.6 +0.1
BILL **Bilibino** 19.45 314 *ce*P P 14 20 19.6 +0.1
BILL pmax pmax
comp=Z,24nm,1.3s
YKA **Yellowknife Ar** 19.63 62 P P 14 20 22.4 +0.9
comp=Z,9.4nm,0.5s,baz=282,slow=10,SNR=163
YKA S S 14 23 57.5 +1.9
comp=Z,0.2nm,0.5s,baz=280,slow=22,SNR=1.5
YKA ScP ScP 14 27 59.6 +0.9
comp=Z,1.3nm,0.8s,baz=293,slow=2.9,SNR=13
BBOR **Butler Butte** 25.31 115 P P 14 21 19.0 +1.0
SEY **Seymchan** 25.54 302 ⇓ *e*P P 14 21 19.3 -0.4
SEY pmax pmax
comp=Z,16nm,1.2s
PET **Petropavlovsk** 26.43 278 *e*P P 14 21 25.5 -2.3
PET pmax pmax
comp=Z,46nm,1.2s
PEA0B **Petropavlovsk-** 26.88 279 P P 14 21 31.7 -0.1
PEA0B **Petropavlovsk-** 26.88 279 P P 14 21 31.7 -0.1
PEA0B pmax pmax
comp=Z,80nm,1.5s
PETK **Petropavlovsk-** 26.88 279 P P 14 21 31.6 -0.2
comp=Z,11nm,0.7s,baz=67,slow=12,SNR=33
comp=Z,11nm,0.7s
MA2 **Magadan** 27.37 295 LR LR 14 32 51.1
comp=Z,65nm,18.7s,baz=79,slow=37
MA2 **Magadan** 27.37 295 P P 14 21 36.7 +0.5
MA2 IAmb IAmb 14 21 37.7
comp=Z,20nm,0.9s
MA2 **Magadan** 27.37 295 *c i*P P 14 21 36.5 +0.3
MA2 pmax pmax
comp=Z,23nm,0.9s
BLKN **Baker Lake** 27.45 54 P P 14 21 37.8 +1.1
BLKN IAmb IAmb 14 21 39.0
comp=Z,21nm,1.5s
LYMT **Lyon Mountain** 27.59 97 P P 14 21 39.5 +1.1
FCC **Fort Churchill** 30.34 64 P P 14 22 03.6 +1.2
FCC IAmb IAmb 14 22 04.6
comp=Z,8.1nm,0.9s
FCC **Fort Churchill** 30.34 64 P P 14 22 03.6 +1.2
FCC pmax pmax
comp=Z,8.0nm,0.9s
NVAR **Mina Array Bea** 30.87 115 P P 14 22 09.8 +2.3
comp=Z,0.5nm,0.8s,baz=303,slow=8.7,SNR=4.2
NVAR pP pP 14 22 37.6 +2.1
comp=Z,3.5nm,0.8s,baz=308,slow=8.0,SNR=15
NVAR sP sP 14 22 54.1 +3.7
comp=Z,0.8nm,0.8s,baz=308,slow=7.3,SNR=2.7
NVAR ScP ScP 14 28 33.1 +1.8
comp=Z,0.4nm,0.5s,baz=7.8,slow=12,SNR=5.8
comp=Z,0.5nm,0.8s
ILON **Igloolik, Nuna** 31.37 41 P P 14 22 11.9 +0.6
PDAR **Pinedale Array** 31.89 100 P P 14 22 18.4 +1.9
comp=Z,0.4nm,0.6s,baz=302,slow=5.8,SNR=5.2
PDAR pP pP 14 22 47.0 +2.4
comp=Z,2.8nm,0.8s,baz=312,slow=5.2,SNR=14
comp=Z,0.4nm,0.6s
TIXI **Tiksi** 31.97 324 P P 14 22 16.3 -0.2
TIXI **Tiksi** 31.97 324 ⇑ *e*P P 14 22 16.1 -0.5
TIXI pmax pmax
comp=Z,24nm,3.7s
ULM **Lac du Bonnet** 34.01 78 P P 14 22 35.0 +0.4
comp=Z,2.4nm,0.6s,baz=300,slow=7.7,SNR=4.8
ULM pP pP 14 23 03.7 +1.0
comp=Z,2.4nm,0.7s,baz=296,slow=9.1,SNR=2.7
comp=Z,2.4nm,0.6s
ULM **Lac du Bonnet** 34.01 78 ⇑ *e*P P 14 22 36.0 +1.4
YAK **Yakutsk** 35.58 308 P P 14 22 47.7 -0.1
YAK **Yakutsk** 35.58 308 *e*P P 14 22 47.0 -0.8
YAK *e**PP pP 14 23 13.9 -2.3
YAK *e*S S 14 28 09.8 -3.8
YAK *e**SS sS 14 28 58.9 -4.6
YAK *e*SS SnSn 14 30 45.4 -3.3
YAK pmax pmax
comp=Z,34nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,208nm,4.7s
YAK pmax pmax
comp=E,88nm,3.9s
YAK pmax pmax
comp=N,69nm,4.1s
YAK smax smax
comp=E,12nm,1.7s
YAK smax smax
comp=N,55nm,3.3s
TYV **Tymovskoe** 35.80 285 *e*P P 14 22 50.2 +0.3
TYV pmax pmax
comp=Z,46nm,0.7s
TYV pmax pmax
comp=Z,200nm,4.8s
YSS **Yuzhno-Sakhali** 38.26 280 *e*P P 14 23 12.2 +1.6
YSS pmax pmax
comp=Z,20nm,0.7s
GRNR **Gornyy** 38.95 289 *e*P P 14 23 16.0 -0.5
ZEA **Zeya** 41.41 298 *e*P P 14 23 35.9 -0.8
ZEA pmax pmax
comp=Z,10.0nm,1.1s
L40A **Anamosa** 41.89 85 P P 14 23 41.6 +0.9
L40A IAmb IAmb 14 23 42.9
comp=Z,12nm,0.8s
KUQ **Kuujjuuaa** 42.01 52 P P 14 23 41.7 +0.3
KUQ IAmb IAmb 14 23 42.6
comp=Z,15nm,0.9s
KLR **Kul'dur** 42.24 291 LR LR 14 44 07.8
comp=Z,6.1nm,19.9s,baz=28,slow=40
KLR **Kul'dur** 42.24 291 *c i*P P 14 23 43.1 -0.3
KLR pmax pmax
comp=Z,38nm,0.8s
SPITS **Spitsbergen Ar** 43.10 3 P P 14 23 49.8 -0.2
comp=Z,14nm,1.0s,baz=335,slow=9.7,SNR=2.6
comp=Z,14nm,1.0s
HEH **HeiHe** 43.63 294 *e*P P 14 23 53.2 -1.4
HEH pmax pmax
comp=Z,34nm,0.8s
NRIK **Noril'sk** 44.59 333 P P 14 24 01.2 -0.8
comp=N,3.4nm,0.5s,baz=40,slow=7.6,SNR=9.9
comp=Z,3.4nm,0.5s
NRIK **Noril'sk** 44.59 333 *de*P P 14 24 01.5 -0.5
NRIK pmax pmax
comp=Z,6.0nm,0.9s
SCHQ **Schefferville** 44.83 55 P P 14 24 04.5 +0.4
comp=Z,6.2nm,0.6s,baz=309,slow=7.0,SNR=9.6
comp=Z,6.2nm,0.6s
TXAR **Lajitas Array** 45.31 108 P P 14 24 09.2 +0.8
comp=Z,0.5nm,0.7s,baz=314,slow=7.6,SNR=5.2
TXAR pP pP 14 24 40.7 +2.9
comp=Z,1.0nm,0.9s,baz=332,slow=7.8,SNR=4.0
comp=Z,0.5nm,0.7s
USRK **Ussuriysk Ar.** 45.62 285 P P 14 24 09.6 -0.8
comp=Z,4.0nm,0.7s,baz=53,slow=8.7,SNR=4.3
comp=Z,4.0nm,0.7s
BNX **BinXian** 46.79 290 ⇑ P P 14 24 19.2 -0.3
BNX pmax pmax
comp=Z,26nm,1.0s
PSTR **Posyet** 47.33 285 *de*P P 14 24 22.2 -1.6
HILR **Hailar Array B** 47.68 299 P P 14 24 26.1 -0.4
comp=Z,2.6nm,0.3s,baz=68,slow=8.2,SNR=13
comp=Z,2.6nm,0.3s
MJB9 **Matsu-Tunnel** 48.10 273 P P 14 24 30.4 +0.5
MJB9 IAmb IAmb 14 24 32.4
comp=Z,14nm,0.8s
MAJO **Matsushiro** 48.10 273 P P 14 24 30.4 +0.5
MAJO IAmb IAmb 14 24 31.5
comp=Z,14nm,0.8s
MAJO **Matsushiro** 48.10 273 *de*P P 14 24 30.5 +0.7
MAJO pmax pmax
comp=Z,15nm,0.9s
MJAR **Matsushiro Arr** 48.10 273 P P 14 24 30.0 +0.1
comp=Z,3.5nm,0.7s,baz=24,slow=7.4,SNR=9.1
comp=Z,3.5nm,0.7s
MJAR **Matsushiro Arr** 48.10 273 P P 14 24 30.0 +0.1
OXF **Oxford** 48.48 90 P P 14 24 33.4 +0.6
OXF **Oxford** 48.48 90 P P 14 24 33.4 +0.6
OXF pmax pmax
comp=Z,33nm,1.1s
CN2 **Changchun** 49.15 289 P P 14 24 37.1 -0.6
CN2 pmax pmax
comp=Z,30nm,0.7s
ARCES **ARCESS Array B** 51.90 0 P P 14 24 58.6 +0.6
comp=Z,5.1nm,1.0s,baz=23,slow=4.9,SNR=1.7
comp=Z,5.1nm,1.0s
KSRS **Korea Array** 52.69 282 P P 14 25 05.3 +1.1
comp=Z,6.0nm,0.6s,baz=39,slow=7.2,SNR=27
comp=Z,6.0nm,0.6s
KSAR **Wonju Array Be** 52.72 282 P P 14 25 04.8 +0.3
KSAR **Wonju Array Be** 52.72 282 P P 14 25 04.8 +0.3
TLY **Talaya** 52.99 310 *de*P P 14 25 06.5 +0.1
TLY pmax pmax
comp=Z,7.0nm,1.1s
XLT **XiLinHaoTe** 53.56 296 *e*P P 14 25 11.0 +0.3
XLT pmax pmax
comp=Z,10.0nm,0.8s
XLT pmax pmax
comp=Z,160nm,6.5s
APA **Apatity** 53.75 356 ⇓ *e*P P 14 25 05.5 -6.1
APA *e**PP pP 14 25 31.6 -10
APA pmax pmax
comp=Z,7.0nm,1.0s
ULN **Ulaanbaatar** 54.55 305 *c i*P P 14 25 17.9 0.0
ULN pmax pmax
comp=Z,9.0nm,0.8s
SONM **Songino Array** 54.85 306 P P 14 25 21.1 +1.0
comp=Z,16nm,0.8s,baz=47,slow=7.3,SNR=42
comp=Z,16nm,0.8s
SONM **Songino Array** 54.85 306 P P 14 25 20.4 +0.4
SONM IAmb IAmb 14 25 21.7
comp=Z,14nm,0.8s
KNGR **Kungurtug, Tuv** 56.22 313 ⇓ *e*P P 14 25 30.6 +0.8
KNGR pmax pmax
comp=Z,5.0nm,0.9s
BJT **Baijiatuau** 56.52 293 P P 14 25 32.2 +0.3
BJT IAmb IAmb 14 25 32.8
comp=Z,9.0nm,0.7s
BJT **Baijiatuau** 56.52 293 P P 14 25 32.2 +0.3
BJT pmax pmax
comp=Z,9.0nm,0.7s
ZALV **Zalesovo Beam** 57.84 323 P P 14 25 40.7 -0.3
comp=Z,2.9nm,0.7s,baz=35,slow=7.4,SNR=14
comp=Z,2.9nm,0.7s
ZALV **Zalesovo Beam** 57.84 323 P P 14 25 41.0 +0.1
ZALV **Zalesovo Beam** 57.84 323 P P 14 25 41.1 +0.1
HHC **Hu-ho-hao-te** 58.04 297 *e*P P 14 25 43.3 +0.6
HHC pmax pmax
comp=Z,16nm,0.7s
HHC pmax pmax
comp=Z,130nm,4.5s
FINES **FINESS Array B** 60.03 360 P P 14 25 55.0 -0.9
comp=Z,2.5nm,0.8s,baz=357,slow=6.6,SNR=4.1
comp=Z,2.5nm,0.8s
FINES **FINESS Array B** 60.03 360 P P 14 25 55.0 -0.9
DGZ **Jazzator, Alta** 60.61 319 ⇓ *i*P P 14 26 00.9 +0.7
DGZ pmax pmax
comp=Z,6.0nm,1.6s
HFS **Hagfors** 60.98 7 P P 14 26 00.9 -1.5
comp=Z,5.5nm,1.1s,baz=344,slow=5.5,SNR=1.7
comp=Z,5.5nm,1.1s
KURK **Kurchatov** 62.54 325 ⇑ *e*P P 14 26 11.2 -1.8
KURK pmax pmax
comp=Z,3.0nm,0.9s
LYN **LuoYang** 62.65 292 P P 14 26 14.6 +0.6
LYN pmax pmax
comp=Z,42nm,0.7s
KURBB **Kurchatov Arra** 62.65 325 P P 14 26 13.1 -0.6
comp=Z,0.9nm,0.3s,baz=24,slow=6.4,SNR=7.8
comp=Z,0.9nm,0.3s
BORK **Borovoye** 62.72 331 ⇑ *e*P P 14 26 13.5 -0.6
BORK pmax pmax
comp=Z,6.0nm,1.3s
BVAR **Borovoye Array** 62.72 331 P P 14 26 13.4 -0.8
comp=Z,1.4nm,0.6s,baz=50,slow=10,SNR=6.3
comp=Z,1.4nm,0.6s
EKA **Eskdalemuir Ar** 63.85 18 P P 14 26 21.5 0.0
comp=Z,1.9nm,0.7s,baz=338,slow=6.3,SNR=3.5
comp=Z,1.9nm,0.7s
GTA2 **Gaotai** 64.42 304 P P 14 26 25.6 -0.1
GTA2 pP PcP 14 26 59.0 0.0
GTA2 pmax pmax
comp=Z,6.0nm,1.4s
MK31 **Makanchi Array** 64.85 321 *de*P P 14 26 27.3 -0.9
MKAR **Makanchi Array** 64.85 321 P P 14 26 27.2 -1.0
comp=Z,1.5nm,0.8s,baz=45,slow=6.3,SNR=15
comp=Z,1.5nm,0.8s
WHN **Wuhan** 64.99 288 P P 14 26 29.7 +0.4
WHN pmax pmax
comp=Z,26nm,0.7s
LZH **Lanzhou** 65.44 299 *e*P P 14 26 32.7 +0.4
LZH sP sP 14 27 16.9 -1.1
LZH pmax pmax
comp=Z,11nm,1.3s
WMQ **Urumqi** 65.56 315 *e*P P 14 26 37.2 +4.3
LZDM **Lanzhou Array** 65.61 299 P P 14 26 33.6 -0.1
comp=Z,0.6nm,0.3s,baz=319,slow=5.7,SNR=4.3
comp=Z,0.6nm,0.3s
CLL **Collm** 69.72 8 *i*P P 14 27 04.6 +5.9
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL **Collm** 69.72 8 *i*P P 14 27 04.6 +5.9
comp=Z,5.0nm,0.9s
CD2 **Chengdu** 69.78 296 P P 14 26 59.8 +0.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s
KDJ **Kajisay** 70.66 322 P P 14 27 05.2 +0.3
KDJ **Kajisay** 70.66 322 P P 14 27 05.2 +0.3
KDJ pmax pmax
comp=Z,5.0nm,0.9s
AKASG **Malin Array Be** 70.76 358 P P 14 27 03.9 -1.1
comp=Z,0.2nm,0.3s,baz=5.6,slow=5.7,SNR=2.0
comp=Z,0.2nm,0.3s
AAK **Ala-Archa** 71.05 324 P P 14 27 07.3 +0.1
AAK **Ala-Archa** 71.05 324 ⇓ *e*P P 14 27 06.5 -0.7
AAK pmax pmax
comp=Z,3.0nm,0.9s
KSH2 **Kashi** 73.89 322 P P 14 27 24.1 0.0
KSH2 pmax pmax
comp=Z,4.0nm,0.8s
PZH **PanZhiHua** 74.44 295 P P 14 27 29.7 +2.3
ESDC **Sonseca Array** 78.81 23 P P 14 27 52.2 +0.5
comp=Z,1.4nm,0.8s,baz=348,slow=5.7,SNR=7.3
comp=Z,1.4nm,0.8s
BRTR **Keskin Array B** 81.55 354 P P 14 28 05.6 -0.9
comp=Z,0.7nm,0.8s,baz=26,slow=4.9,SNR=1.4
comp=Z,0.7nm,0.8s
CMAR **Chiang Mai Arr** 82.64 293 P P 14 28 11.9 -0.4
comp=Z,2.3nm,0.7s,baz=16,slow=5.5,SNR=19

comp=Z,2.3nm,0.7s
CMAR Chiang Mai Arr 82.64 293 P **P** **14 28 12.0 -0.4**
MDP Montagnes des 91.75 77 LR LR 15 14 08.8
comp=Z,24nm,18.0s,baz=158,slow=38
WRA Warramunga Arr 97.59 244 P Pdif 14 29 23.3 +0.4
comp=Z,0.6nm,0.9s,baz=71,slow=9.0,SNR=2.8
comp=Z,0.6nm,0.9s
URZ Urewera 99.61 202 LR LR 15 07 57.4
comp=Z,78nm,20.0s,baz=168,slow=31
QSPA South Pole Qui 148.65 180 PKPbc **PKiKP** **14 35 34.7 -0.4**
comp=Z,1.8nm,0.4s,baz=100,slow=0.4,SNR=4.0
BOSA Boshof 149.76 0 PKPbc **PKPbc** **14 35 37.7 -0.1**
comp=Z,2.1nm,0.6s,baz=348,slow=2.7,SNR=7.9

ROM 12 14:24:40.4±0.1, 43°.475N±0°.003×12°.485E±0°.005, h10km, ML0.8/4, Error ellipse: s-maj=0.4km s-min=0.3km az=283.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPC	**Poggio Castell**	**0.02**	**286**	P	Pg	14 24 42.5	+0.2
ATPC				S	Sg	14 24 44.3	+0.7
ATBU	**Serra di Buran**	**0.05**	**89**	P	Pg	14 24 42.9	+0.4
ATBU				S	Sg	14 24 44.6	+0.6
ATPI	**Pietralunga -**	**0.07**	**248**	P	Pg	14 24 42.9	+0.3
ATPI				S	Sg	14 24 44.5	+0.3
ATPI				AML	AML		
	comp=E,95μm,1.5s						
ATPI				AML	AML		
	comp=N,84μm,0.4s						
ATPI				AML	AML		
	comp=E,95μm,0.5s						
TB03	**Pietralunga**	**0.09**	**216**	P	Pg	14 24 43.3	+0.4
TB03				S	Sg	14 24 45.3	+0.6
APEC	**Apecchio**	**0.10**	**331**	P	Pg	14 24 43.3	+0.4
APEC				S	Sg	14 24 45.3	+0.5
TB01	**Gubbio**	**0.10**	**201**	P	Pg	14 24 43.5	+0.5
TB01				S	Sg	14 24 45.5	+0.6
ATVO	**AVT- Monte Val**	**0.11**	**212**	P	Pg	14 24 43.5	+0.4
ATVO				S	Sg	14 24 45.6	+0.5
TB02	**Pietralunga**	**0.12**	**208**	P	Pg	14 24 43.8	+0.6
NARO	**Abbazia di Nar**	**0.15**	**27**	P	Pg	14 24 44.1	+0.3
NARO				S	Sg	14 24 46.9	+0.7
NARO				AML	AML		
	comp=E,61μm,0.3s						
NARO				AML	AML		
	comp=N,41μm,0.1s						
ATLO	**AVT- Montelove**	**0.17**	**199**	P	Pg	14 24 44.6	+0.5
ATLO				S	Sg	14 24 47.5	+0.9
BADI	**Badiali**	**0.18**	**281**	P	Pg	14 24 44.7	+0.5
BADI				S	Sg	14 24 48.0	+1.1
MURB	**Monte Urbino**	**0.21**	**172**	P	Pg	14 24 45.6	+0.7
PARC	**Parchiule**	**0.25**	**314**	P	Pb	14 24 46.7	-0.3
MPAG	**Monte Paganucc**	**0.25**	**52**	P	Pg	14 24 46.0	+0.4
MPAG				S	Sb	14 24 50.5	-1.1

*IDC **12** 14:29:03.0±3.4, 5°.37N×124°.44E, h65km±34km, mb3.6/8, mbtmp4.0/10, ML4.2/2, MS3.1/3, Error ellipse: s-maj=38.2km s-min=12.1km az=82.0*
*NEIC **12** 14:29:04.1±1.0, 5°.42N±0°.07×124°.60E±0°.10, h74km±9km, mb4.2/12, Error ellipse: s-maj=14.5km s-min=10.3km az=106.0*
ISC 12 14:29:02.0±0.7, 5°.38N±0°.06×124°.57E±0°.09, h50km, n32, σ1s62/32, mb4.1/14, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.96**	**31**	P	**Pn**	**14 29 34.5**	**+1.7**
	74nm,0.3s,baz=219,slow=14,SNR=4.0						
DAV				S	**Sn**	**14 30 00.3**	**+4.0**
	382nm,0.5s,baz=248,slow=19,SNR=4.8						
DAV				LR	LR	14 30 42.1	
	comp=Z,180nm,21.7s,baz=268,slow=49						
	173nm,0.3s						
TNTI	**Ternate**	**5.36**	**148**	Pn	**Pn**	**14 30 21.0**	**+1.5**
TOLI2	**Tolitoli**	**5.67**	**222**		**Pn**	**14 30 23.5**	**-0.3**
MYLDM	**Lahad Datu**	**6.04**	**268**		**Pn**	**14 30 31.5**	**+2.7**
LUWI	**Luwuk**	**6.62**	**196**	Pn	**Pn**	**14 30 41.0**	**+4.3**
KKM	**Kota Kinabalu**	**8.34**	**275**	Pn	**Pn**	**14 31 02.1**	**+1.7**
SIJI	**Sorong**	**9.12**	**133**	P	**Pn**	**14 31 11.3**	**+0.2**
	2.6nm,0.3s,baz=305,slow=13,SNR=8.6						
	6.3nm,0.3s						
BATI	**Baumata**	**15.51**	**183**	LR	LR	14 39 11.0	
	comp=Z,70nm,19.1s,baz=196,slow=39						
MTN	**Manton Dam**	**19.24**	**160**	P	**P**	**14 33 21.5**	**-0.8**
KNRA	**Kununurra**	**21.33**	**169**	P	**P**	**14 33 44.9**	**0.0**
KNRA				IAmb	IAmb	14 34 22.9	
	comp=Z,13nm,1.2s						
FITZ	**Fitzroy Crossi**	**23.35**	**177**	P	**P**	**14 34 07.1**	**+1.0**
	comp=Z,6.3nm,0.9s,baz=5.5,slow=7.5,SNR=12						
	comp=Z,6.3nm,0.9s						
WB0	**Warramunga Arr**	**26.79**	**159**	P	**P**	**14 34 36.9**	**-0.6**
WRA	**Warramunga Arr**	**26.93**	**159**	P	**P**	**14 34 38.4**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=332,slow=11,SNR=13						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**26.93**	**159**	P	**P**	**14 34 37.1**	**-1.7**
AS31	**Alice Springs**	**30.27**	**163**	P	**P**	**14 35 07.8**	**-0.7**
ASAR	**Alice Springs**	**30.27**	**163**	P	**P**	**14 35 08.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=342,slow=6.9,SNR=19						
ASAR				PcP	**PcP**	**14 38 07.4**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=343,slow=2.7,SNR=2.1						
	comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs**	**30.27**	**163**	P	**P**	**14 35 07.9**	**-0.6**
NWAO	**Narrogin (SRO)**	**38.72**	**190**	LR	LR	14 54 17.5	
	comp=Z,46nm,18.1s,baz=162,slow=39						
PEA0B	**Petropavlovsk-**	**54.77**	**24**	P	**P**	**14 38 25.6**	**-0.9**
PETK	**Petropavlovsk-**	**54.77**	**24**	P	**P**	**14 38 25.4**	**-1.1**
	comp=Z,3.3nm,0.8s,baz=196,slow=2.6,SNR=7.5						
	comp=Z,3.3nm,0.8s						
PETK	**Petropavlovsk-**	**54.77**	**24**	P	**P**	**14 38 25.6**	**-0.9**
MKAR	**Makanchi Array**	**54.99**	**326**	P	**P**	**14 38 27.8**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=121,slow=7.0,SNR=9.6						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**54.99**	**326**	P	**P**	**14 38 27.4**	**-0.8**
MAKZ	**Makanchi**	**55.17**	**326**	P	**P**	**14 38 28.7**	**-0.9**
MAKZ				IAmb	IAmb	14 38 30.3	
	comp=Z,1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**58.16**	**334**	P	**P**	**14 38 49.3**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=122,slow=5.2,SNR=1.7						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**59.20**	**328**	P	**P**	**14 38 56.9**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=124,slow=6.9,SNR=7.4						
	comp=Z,1.1nm,0.6s						
BVAR	**Borovoye Array**	**64.78**	**327**	P	**P**	**14 39 33.9**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=118,slow=7.8,SNR=3.6						
	comp=Z,0.8nm,0.6s						
M16K	**Timber Creek**	**78.77**	**29**	P	**P**	**14 40 58.2**	**-1.0**
C18K	**Utukok River**	**79.30**	**21**	P	**P**	**14 41 00.3**	**-1.7**
C18K				IAmb	IAmb	14 41 19.5	
	comp=Z,4.3nm,1.4s						
H18K	**Honhosa River**	**79.72**	**25**	P	**P**	**14 41 02.7**	**-1.6**
H18K				IAmb	IAmb	14 41 45.5	
	comp=Z,5.0nm,1.4s						
C19K	**Lookout Ridge**	**79.97**	**21**	P	**P**	**14 41 04.4**	**-1.2**
C19K				IAmb	IAmb	14 41 45.8	
	comp=Z,3.3nm,1.4s						
G19K	**Purcell Mounta**	**80.40**	**24**	P	**P**	**14 41 06.2**	**-1.7**
G19K				IAmb	IAmb	14 41 12.2	
	comp=Z,5.6nm,1.4s						

*BJI **12** 14:57:49.9, 17°.34S×178°.30W, h540km, mB4.9/20, mb5.1/62*
*IDC **12** 14:57:50.8±0.6, 17°.74S×178°.72W, h537km±6km, mb4.3/32, mbtmp5.2/35, Error ellipse: s-maj=8.9km s-min=7.4km az=132.0*
*NEIC **12** 14:57:51.6±1.9, 17°.8S±0°.1×178°.6W±0°.1, h552km±8km, mb5.1/96, Error ellipse: s-maj=16.4km s-min=13.9km az=135.0*
*NOU **12** 14:57:51.6, 17°.72S×178°.56W, h548km, mb5.2/121, Fiji Islands Region*
*MOS **12** 14:57:53.1±1.3, 17°.51S×178°.88W, h562km, mb5.0/27, Error ellipse: s-maj=11.2km s-min=9.5km az=128.9*
*GCMT **12** 14:57:53.6±0.3, 17°.58S±0°.03×178°.69W±0°.04, h557km±2km, MW5.3/69, Moment Tensor Solution. s69,c98; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr~0.65±.04; Mθθ 1.05±.05; Mϕϕ~0.39±.07; Mrθ 0.04±.06; Mθϕ~0.43±.06; Mϕr~0.19±.07; Best double couple: M≤0.97300×10^17 NP1:ϕs75.00000°, δ52.00000°, λ-136.00000°. NP2:ϕs314.00000°, δ57.00000°, λ-48.00000°. Principal axes: T 1.1750, Plg3.0000°, Azm16.0000°; N -0.4030, Plg34.0000°, Azm108.0000°; P -0.7710, Plg56.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
*BGR **12** 14:57:57.5, 16°.42S×178°.05W, h562km*
ISC 12 14:57:51.3±0.3, 17°.72S±0°.04×178°.57W±0°.04, h552km±3km, h553km:pP-P, n1101, σ0s99/1160, mb5.2/231, 71C-99D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.56**	**205**	P	**P**	**14 58 57.3**	**+0.4**
LKBA	**Tubou, Lakemba**	**0.56**	**205**	S	**S**	**14 59 51.2**	**+0.9**
TAVE	**Taveuni**	**1.63**	**308**	P	**P**	**14 59 00.2**	**+0.5**
TAVE	**Taveuni**	**1.63**	**308**	S	**S**	**14 59 56.2**	**+1.0**
DGTI	**Dogotuki**	**2.15**	**311**	P	**P**	**14 59 01.7**	**-0.2**
DGTI	**Dogotuki**	**2.15**	**311**	S	**S**	**15 00 00.3**	**+1.1**
MSVF	**Nonsavu**	**3.22**	**269**		**P**	**14 59 09.0**	**+1.0**
MSVF	**Nonsavu**	**3.22**	**269**	P	**P**	**14 59 09.2**	**+1.2**
MSVF	**Nonsavu**	**3.22**	**269**	*d* iP	**P**	**14 59 09.1**	**+1.1**
AFI	**Afiamalu**	**7.56**	**61**	P	**P**	**14 59 42.4**	**-2.5**
AFI	**Afiamalu**	**7.56**	**61**	P	**P**	**14 59 42.9**	**-2.0**
	86nm,0.8s						
AFI	**Afiamalu**	**7.56**	**61**	P	**P**	**14 59 42.4**	**-2.5**
AFI	**Afiamalu**	**7.56**	**61**	P	**P**	**14 59 42.7**	**-2.2**
AFI				S	**S**	**15 01 11.5**	**-6.4**
NIUE	**Niue**	**8.31**	**101**	P	**P**	**14 59 52.7**	**+0.4**
	comp=Z,3μm,0.8s						
NIUE	**Niue**	**8.31**	**101**		**P**	**14 59 51.4**	**-0.8**
NIUE	**Niue**	**8.31**	**101**	P	**P**	**14 59 52.5**	**+0.3**
	comp=Z,3μm,0.8s						
NIUE	**Niue**	**8.31**	**101**	P	**P**	**14 59 53.0**	**+0.8**
FUNA	**Funafuti**	**9.40**	**346**	P	**P**	**15 00 01.1**	**-2.2**
FUNA	**Funafuti**	**9.40**	**346**	P	**P**	**15 00 01.3**	**-1.9**
	comp=Z,347nm,0.9s						
RAO	**Raoul Island**	**11.49**	**177**	P	**P**	**15 00 22.4**	**-2.0**
	comp=Z,349nm,0.4s,baz=16,slow=18,SNR=2.6						
RAO				S	**S**	**15 02 28.9**	**-1.6**
	comp=Z,256nm,0.3s,baz=37,slow=20,SNR=1.8						
RAO	**Raoul Island**	**11.49**	**177**	P	**P**	**15 00 22.9**	**-1.6**
RAO	**Raoul Island**	**11.49**	**177**	P	**P**	**15 00 22.9**	**-1.6**
GLKZ	**Green Lake**	**11.50**	**177**	P	**P**	**15 00 23.3**	**-1.3**
GLKZ				S	**S**	**15 02 29.8**	**-0.8**
DVP	**Devils Point**	**12.62**	**268**	P	**P**	**15 00 36.6**	**+0.3**
	comp=Z,1μm,1.0s						
MARNC	**Mare, Loyalty**	**13.17**	**251**	P	**P**	**15 00 39.9**	**-2.1**
PINNC	**Pines Island,**	**14.00**	**247**	P	**P**	**15 00 49.5**	**-1.0**
DZM	**Mont Dzumac**	**14.74**	**250**	*e*P	**P**	**15 00 58.1**	**-0.2**
	comp=Z,244nm,1.4s						
DZM				*e*S	**S**	**15 03 26.1**	**-6.1**
	comp=Z,1μm,24.6s						
DZM	**Mont Dzumac**	**14.74**	**250**	P	**P**	**15 00 56.9**	**-1.4**
	comp=Z,38nm,0.8s,baz=61,slow=17						
DZM				S	**S**	**15 03 30.0**	**-2.2**
	comp=Z,36nm,1.1s,baz=90,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**14.74**	**250**		**P**	**15 00 57.2**	**-1.0**
DZM	**Mont Dzumac**	**14.74**	**250**	P	**P**	**15 00 58.3**	**0.0**
	comp=Z,81nm,1.8s						
ONTNC	**Ouen Toro**	**14.79**	**250**	P	**P**	**15 00 57.3**	**-1.4**
KOUNC	**Koumac, New Ca**	**16.44**	**257**	P	**P**	**15 01 15.2**	**+0.2**
	comp=Z,268nm,1.2s						
NFK	**Norfolk Island**	**16.73**	**225**	P	**P**	**15 01 20.1**	**+2.6**
RAR	**Rarotonga**	**18.06**	**104**	P	**P**	**15 01 30.7**	**+1.0**
	comp=Z,46nm,0.9s,baz=268,slow=7.0,SNR=6.0						
RAR	**Rarotonga**	**18.06**	**104**	P	**P**	**15 01 30.4**	**+0.7**
	comp=Z,52nm,1.4s						
OUZ	**Omahuta**	**18.77**	**200**	P	**P**	**15 01 38.7**	**+2.7**
GRZ	**Great Barrier**	**19.20**	**195**	P	**P**	**15 01 41.8**	**+1.9**
WCZ	**Waipu Caves**	**19.20**	**198**	P	**P**	**15 01 43.0**	**+3.1**
KUZ	**Kuaotunu**	**19.61**	**194**	P	**P**	**15 01 45.4**	**+1.9**
	comp=Z,473nm,0.9s						
KUZ	**Kuaotunu**	**19.61**	**194**	P	**P**	**15 01 45.5**	**+1.9**
ABAZ	**Army Bay**	**19.69**	**196**	P	**P**	**15 01 46.8**	**+2.4**
WIAZ	**Waiheke Island**	**19.79**	**195**	P	**P**	**15 01 47.5**	**+2.2**
MBAZ	**Motutapu North**	**19.83**	**196**	P	**P**	**15 01 48.0**	**+2.4**
RVAZ	**Riverhead Bore**	**19.91**	**196**	P	**P**	**15 01 48.2**	**+1.8**
HBAZ	**Herne Bay Bore**	**19.95**	**196**	P	**P**	**15 01 49.4**	**+2.8**
MXZ	**Matakaoa Point**	**19.95**	**187**		**P**	**15 01 45.3**	**-1.5**
MXZ	**Matakaoa Point**	**19.95**	**187**	P	**P**	**15 01 47.9**	**+1.2**
	comp=Z,162nm,0.8s						
MXZ	**Matakaoa Point**	**19.95**	**187**	P	**P**	**15 01 45.7**	**-1.1**
EPAZ	**Eden Park BICE**	**19.97**	**196**	P	**P**	**15 01 49.4**	**+2.6**
ETAZ	**East Tamaki Re**	**20.00**	**195**	P	**P**	**15 01 49.3**	**+2.2**
MYRZ	**Mayor Island**	**20.01**	**192**	P	**P**	**15 01 49.0**	**+1.7**
WTAZ	**Waiatarua**	**20.07**	**196**	P	**P**	**15 01 50.0**	**+2.2**
MKAZ	**Moumakai**	**20.08**	**195**	P	**P**	**15 01 49.8**	**+1.9**
AWAZ	**Awhitu Peninsu**	**20.17**	**196**	P	**P**	**15 01 50.6**	**+1.9**
WMGZ	**Wainamatini S**	**20.20**	**187**	P	**P**	**15 01 48.5**	**-0.4**
HAZ	**Te Kaha**	**20.21**	**188**	P	**P**	**15 01 48.6**	**-0.5**
PKGZ	**Pakihiroa**	**20.28**	**188**	P	**P**	**15 01 49.1**	**-0.7**
WHRZ	**Whale Island**	**20.43**	**190**	P	**P**	**15 01 51.1**	**-0.1**
TGRZ	**Tauranga**	**20.44**	**192**	P	**P**	**15 01 52.6**	**+1.4**
PUZ	**Puketiti**	**20.46**	**187**	P	**P**	**15 01 50.7**	**-0.7**
OPRZ	**Ohinepanea**	**20.50**	**191**	P	**P**	**15 01 51.9**	**+0.3**
TWGZ	**Tauwhareparae**	**20.60**	**188**	P	**P**	**15 01 51.3**	**-1.4**
TOZ	**Tahuroa Road**	**20.60**	**193**	P	**P**	**15 01 54.1**	**+1.5**
KMRZ	**Kaimai**	**20.62**	**192**	P	**P**	**15 01 54.2**	**+1.4**
OMRZ	**Omania**	**20.79**	**191**	P	**P**	**15 01 54.1**	**-0.2**
URZ	**Urewera**	**20.81**	**190**	P	**P**	**15 01 52.5**	**-1.9**
	comp=Z,94nm,0.6s,baz=14,slow=5.0,SNR=68						
URZ				S	**S**	**15 05 04.0**	**-7.1**
	comp=Z,17nm,0.8s,baz=30,slow=20,SNR=3.6						
	comp=Z,94nm,0.6s						
URZ	**Urewera**	**20.81**	**190**	P	**P**	**15 01 53.5**	**-0.9**
	comp=Z,159nm,0.9s						
URZ	**Urewera**	**20.81**	**190**	P	**P**	**15 01 52.3**	**-2.1**
NGRZ	**Ngongotaha**	**20.82**	**192**	P	**P**	**15 01 55.6**	**+1.0**
MWZ	**Matawai**	**20.82**	**189**	P	**P**	**15 01 53.0**	**-1.6**
CNGZ	**Carnagh Statio**	**20.88**	**187**	P	**P**	**15 01 54.7**	**-0.3**
TKGZ	**Te Karaka**	**20.88**	**188**	P	**P**	**15 01 54.0**	**-1.0**
TARZ	**Mount Tarawera**	**20.89**	**191**	P	**P**	**15 01 55.6**	**+0.3**
RRRZ	**Republican Roa**	**20.98**	**191**	P	**P**	**15 01 55.7**	**-0.4**
RIGZ	**Rimuhau**	**21.15**	**188**	P	**P**	**15 01 56.4**	**-1.2**
TLZ	**Tolley Road**	**21.17**	**193**	P	**P**	**15 01 59.6**	**+1.9**
RTZ	**Ruatahuna**	**21.18**	**190**		**P**	**15 01 55.5**	**-2.4**
RTZ	**Ruatahuna**	**21.18**	**190**	P	**P**	**15 01 56.9**	**-1.0**
SNGZ	**Shannon Statio**	**21.28**	**189**	P	**P**	**15 01 57.1**	**-1.6**
RAHZ	**Arahi**	**21.45**	**189**	P	**P**	**15 02 00.3**	**0.0**
MRHZ	**Matea Rd**	**21.48**	**191**	P	**P**	**15 01 59.4**	**-1.2**
HIZ	**Hauiti**	**21.50**	**194**	P	**P**	**15 02 03.8**	**+3.1**
NGOA	**Tingoa Renbel**	**21.55**	**284**	P	**P**	**15 02 02.0**	**+0.5**
	comp=Z,275nm,0.9s						
BKZ	**Black Stump Fm**	**21.79**	**190**		**P**	**15 02 01.1**	**-2.3**
BKZ	**Black Stump Fm**	**21.79**	**190**	P	**P**	**15 02 03.5**	**+0.1**
	comp=Z,48nm,0.6s						
BKZ	**Black Stump Fm**	**21.79**	**190**	P	**P**	**15 02 01.3**	**-2.1**
NGZ	**Ngauruhoe**	**21.97**	**192**	P	**P**	**15 02 05.7**	**+0.7**
VRZ	**Vera Road**	**22.10**	**194**	P	**P**	**15 02 08.1**	**+2.0**
PXZ	**Pawanui**	**22.58**	**189**	P	**P**	**15 02 09.0**	**-1.4**
WAZ	**Wanganui**	**22.65**	**193**	P	**P**	**15 02 11.5**	**+0.5**
TSZ	**Takapari Road**	**22.75**	**191**	P	**P**	**15 02 12.5**	**+0.5**
TATA	**Tatamba Isabel**	**23.00**	**291**	P	**P**	**15 02 15.2**	**+0.8**
	comp=Z,189nm,0.8s						
BFZ	**Birch Farm**	**23.31**	**190**	P	**P**	**15 02 16.5**	**-0.3**
MRZ	**Mangatainoka R**	**23.41**	**191**	P	**P**	**15 02 17.5**	**-0.2**
QRZ	**Quartz Range**	**24.27**	**197**	P	**P**	**15 02 25.8**	**+0.5**
	comp=Z,87nm,0.9s						
QRZ	**Quartz Range**	**24.27**	**197**	P	**P**	**15 02 25.8**	**+0.5**
NNZ	**Nelson**	**24.42**	**195**	P	**P**	**15 02 26.0**	**-0.6**
THZ	**Tophouse**	**25.05**	**195**	P	**P**	**15 02 31.3**	**-1.0**
DSZ	**Denniston Nort**	**25.32**	**197**	P	**P**	**15 02 34.7**	**0.0**
KHZ	**Kahutara**	**25.52**	**194**	P	**P**	**15 02 35.3**	**-1.0**
	comp=Z,93nm,0.9s						
KHZ	**Kahutara**	**25.52**	**194**	P	**P**	**15 02 35.1**	**-1.2**
CTZ	**Chatham Island**	**25.98**	**177**	P	**P**	**15 02 42.4**	**+2.0**
	comp=Z,125nm,0.9s						
CTZ	**Chatham Island**	**25.98**	**177**	P	**P**	**15 02 44.2**	**+3.8**
GVZ	**Greta Valley S**	**26.16**	**194**	P	**P**	**15 02 40.6**	**-1.4**
LTZ	**Lake Taylor**	**26.16**	**195**	P	**P**	**15 02 40.8**	**-1.4**
INZ	**Inchbonnie**	**26.33**	**197**	P	**P**	**15 02 42.8**	**-0.7**
OXZ	**Oxford**	**26.73**	**195**	P	**P**	**15 02 46.2**	**-0.9**
WVZ	**Waitaha Valley**	**26.85**	**198**	P	**P**	**15 02 47.4**	**-0.7**
MQZ	**McQueen's Vall**	**26.94**	**194**	P	**P**	**15 02 47.9**	**-0.9**
RPZ	**Rata Peaks**	**27.36**	**197**	P	**P**	**15 02 51.1**	**-1.4**
FOZ	**Fox Glacier**	**27.54**	**198**	P	**P**	**15 02 53.4**	**-0.7**
PAE	**Paea**	**27.61**	**94**	*e*P	**P**	**15 02 55.9**	**+0.8**
	comp=Z,19nm,1.1s						
PPT2	**Papeete2**	**27.62**	**94**	*e*S	sS	15 09 44.1	-2.3
	comp=Z,264nm,27.0s						
PPT	**Papeete**	**27.62**	**94**	P	**P**	**15 02 56.1**	**+0.9**
	comp=Z,36nm,0.6s,baz=311,slow=9.3,SNR=5.3						
	comp=Z,36nm,0.6s						
TBI	**Tubuai**	**27.80**	**107**	*e*P	**P**	**15 02 58.9**	**+2.2**
	comp=Z,92nm,0.7s						
TBI				*e*S	**sS**	**15 09 51.0**	**+1.9**
	comp=Z,559nm,36.5s						
AUWSH	**Wavell State H**	**27.87**	**245**	P	**P**	**15 02 57.8**	**+0.5**
	comp=Z,112nm,1.0s						
TMZ	**Timaru**	**27.99**	**196**	P	**P**	**15 02 57.0**	**-1.0**
LBZ	**Lake Benmore**	**28.21**	**197**	P	**P**	**15 02 58.7**	**-1.4**
JCZ	**Jackson Bay**	**28.35**	**199**	P	**P**	**15 03 01.1**	**-0.2**
	comp=Z,231nm,0.5s						
JCZ	**Jackson Bay**	**28.35**	**199**	P	**P**	**15 03 01.1**	**-0.2**
ODZ	**Otahua Downs**	**28.70**	**196**	P	**P**	**15 03 03.3**	**-0.9**
TW1H	**Toowoomba 1 Ha**	**28.83**	**245**	P	**P**	**15 03 06.5**	**+0.8**
	comp=Z,307nm,0.8s						
GD1S	**Gladstone Soft**	**28.90**	**253**	P	**P**	**15 03 06.8**	**+0.5**
WKZ	**Wanaka**	**28.96**	**198**	P	**P**	**15 03 05.6**	**-0.9**
MSZ	**Milford Sound**	**29.16**	**200**	P	**P**	**15 03 09.4**	**+1.2**
EIDS	**Eidsvold**	**29.19**	**250**	P	**P**	**15 03 08.3**	**-0.5**
	comp=Z,85nm,0.9s						
EIDS	**Eidsvold**	**29.19**	**250**		**P**	**15 03 08.1**	**-0.7**
EIDS				IAmb	IAmb	15 03 09.3	
	comp=Z,63nm,0.8s						
EIDS	**Eidsvold**	**29.19**	**250**	P	**P**	**15 03 08.5**	**-0.3**
	comp=Z,86nm,0.9s						
EAZ	**Earnscleugh**	**29.24**	**198**	P	**P**	**15 03 08.5**	**-0.4**
AUNRC	**North Rockhamp**	**29.44**	**254**	P	**P**	**15 03 10.8**	**-0.1**
	comp=Z,72nm,1.8s						
MLZ	**Mavora Lakes**	**29.72**	**199**	P	**P**	**15 03 13.6**	**+0.5**
TUZ	**Tuapeka**	**29.81**	**197**	P	**P**	**15 03 14.2**	**+0.4**
ARMA	**Armidale**	**29.90**	**239**	P	**P**	**15 03 15.9**	**+0.9**
	comp=Z,48nm,0.8s						
ARMA	**Armidale**	**29.90**	**239**		**P**	**15 03 15.7**	**+0.7**
ARMA				IAmb	IAmb	15 03 16.7	
	comp=Z,32nm,0.8s						
ARMA	**Armidale**	**29.90**	**239**	P	**P**	**15 03 16.3**	**+1.3**
	comp=Z,48nm,0.8s						
DCZ	**Deep Cove**	**30.12**	**200**	P	**P**	**15 03 16.7**	**+0.2**
WHZ	**Wether Hill Ro**	**30.25**	**199**	P	**P**	**15 03 18.1**	**+0.5**
SYZ	**Scrubby Hill**	**30.48**	**197**	P	**P**	**15 03 20.2**	**+0.6**
AUPHS	**Peel High Scho**	**30.72**	**239**	P	**P**	**15 03 23.4**	**+1.5**
	comp=Z,80nm,1.0s						
PYZ	**Puysegur Point**	**30.89**	**200**	P	**P**	**15 03 24.2**	**+1.1**
APZ	**The Paps**	**31.08**	**198**	P	**P**	**15 03 25.4**	**+0.7**
MGCD	**Mangrove Creek**	**31.27**	**235**	P	**P**	**15 03 27.5**	**+0.9**
	comp=Z,54nm,1.2s						
RABL	**Rabaul**	**31.66**	**292**	P	**P**	**15 03 27.6**	**-2.5**
AUAYR	**Ayr State High**	**32.26**	**261**	P	**P**	**15 03 35.1**	**0.0**
AULRC	**Lightning Ridg**	**32.68**	**243**	P	**P**	**15 03 38.8**	**+0.2**
	comp=Z,84nm,1.4s						
BULU	**Kimbe**	**32.73**	**288**	P	**P**	**15 03 40.7**	**+1.5**
	comp=Z,23μm,1.1s						
AUDCS	**Dubbo College**	**32.90**	**238**	P	**P**	**15 03 41.3**	**+0.8**
	comp=Z,48nm,1.4s						
CTA	**Charters Tower**	**33.33**	**260**	PcP	**PcP**	**15 06 10.8**	**+0.9**
	comp=Z,14nm,0.7s,baz=62,slow=4.4,SNR=4.4						
CTA	**Charters Tower**	**33.33**	**260**	P	**P**	**15 03 44.5**	**+0.3**
	comp=Z,3.3nm,0.9s						
CTAO	**Charters Tower**	**33.33**	**260**		**P**	**15 03 43.6**	**-0.6**
CTAO				IAmb	IAmb	15 03 44.8	
	comp=Z,79nm,0.8s						
CTAO	**Charters Tower**	**33.33**	**260**	P	**P**	**15 03 43.8**	**-0.4**
	comp=Z,41nm,0.9s						
CTAO	**Charters Tower**	**33.33**	**260**	P	**P**	**15 03 43.6**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,79nm,0.9s						
CTAO	**Charters Tower**	**33.33**	**260**	P	**P**	**15 03 43.4**	**-0.8**
CTAO				pP	**pP**	**15 05 15.8**	**0.0**
CTAO				PcP	**PcP**	**15 06 10.7**	**+0.7**
CNB	**Canberra Magne**	**33.42**	**232**	P	**P**	**15 03 45.8**	**+0.9**
	comp=Z,26nm,1.1s						
YNG	**Young**	**33.77**	**234**	P	**P**	**15 03 48.9**	**+1.1**
	comp=Z,17nm,0.6s						
PMG	**Port Moresby**	**34.28**	**279**	P	**P

KIP Kipapa 43.81 28⇑ *e*P P 15 05 08.9 0.0
KIP pmax pmax
comp=Z,95nm,1.0s
WR8 Warramunga Arr 44.36 259 Pg **P 15 05 13.1 -0.3**
WRAB Tennant Creek 44.51 259 P **P 15 05 12.9 -1.5**
WRAB IAmb IAmb 15 05 14.4
comp=Z,52nm,0.8s
WRAB Tennant Creek 44.51 259 P **P 15 05 13.9 -0.5**
comp=Z,50nm,1.0s
WRAB Tennant Creek 44.51 259 *d*P **P 15 05 13.2 -1.2**
WRAB pmax pmax
comp=Z,48nm,0.9s
WRAB Tennant Creek 44.51 259 P **P 15 05 12.9 -1.5**
WRAB PcP **PcP 15 06 45.6 -0.2**
WRAB pP **pwP 15 06 55.0 -0.9**
WRA Warramunga Arr 44.52 259 P **P 15 05 12.9 -1.7**
comp=Z,44nm,0.8s,baz=94,slow=6.9,SNR=430
WRA PcP **PcP 15 06 46.2 +0.4**
comp=Z,22nm,0.8s,baz=89,slow=3.4,SNR=12
WRA S **S 15 11 05.3 -5.0**
comp=Z,3.7nm,0.9s,baz=92,slow=13,SNR=6.8
comp=Z,44nm,0.8s
WRA Warramunga Arr 44.52 259 P **P 15 05 12.8 -1.7**
WRA Warramunga Arr 44.52 259 P **P 15 05 12.8 -1.7**
WRA pmax pmax
comp=Z,5.0nm,0.8s
AS31 Alice Springs 44.69 254 P **P 15 05 15.6 -0.3**
ASAR Alice Springs 44.69 254 P **P 15 05 15.6 -0.3**
comp=Z,375nm,0.7s,baz=88,slow=8.0,SNR=6526
ASAR PcP **PcP 15 06 46.8 +0.3**
comp=Z,22nm,0.6s,baz=104,slow=4.0,SNR=11
ASAR S **S 15 11 10.3 -2.5**
comp=Z,17nm,1.0s,baz=94,slow=14,SNR=37
ASAR PKiKP **PKiKP 15 13 42.8 -1.0**
comp=Z,1.3nm,0.9s,baz=101,slow=1.3,SNR=5.6
AUALC St Philip's Co 44.71 254 P **P 15 05 16.1 +0.1**
comp=Z,337nm,0.9s
SRPI Serui, Papua 47.07 284 P **P 15 05 34.2 +0.2**
comp=Z,173nm,0.8s
KDU Kakadu 47.41 269 P **P 15 05 35.8 -0.7**
comp=Z,75nm,0.9s,comp=Z,753nm
BAKI Biak 47.45 285 P **P 15 05 38.7 +1.9**
comp=Z,334nm,1.1s
GUMO Guam 47.64 308 P **P 15 05 37.9 -0.3**
GUMO Guam 47.64 308 P **P 15 05 37.9 -0.3**
GUMO pmax pmax
comp=Z,486nm,0.8s
MTN Manton Dam 48.65 268 P **P 15 05 45.0 -0.8**
comp=Z,109nm,0.9s,comp=Z,825nm
MTN Manton Dam 48.65 268 P **P 15 05 44.9 -0.9**
MTN IAmb IAmb 15 05 45.9
comp=Z,84nm,0.8s
DRS Darwin Rock St 48.96 269 P **P 15 05 48.2 +0.1**
comp=Z,62nm,1.0s
RKPI Ransiki, Papua 49.11 284 P **P 15 05 49.7 +0.5**
comp=Z,7μmcomp=Z,187nm,0.9s
MWPI Manokwari, Pap 49.45 284 P **P 15 05 52.7 +1.0**
comp=Z,299nm,1.1s
WRKA Warakurna 49.76 252 Pg **P 15 05 53.7 -0.1**
comp=Z,154nm,1.3s,comp=Z,1μm
FORT Forrest 49.95 244 P **P 15 05 54.6 -0.5**
comp=Z,112nm,0.7s,comp=Z,817nm
FORT Forrest 49.95 244 P **P 15 05 54.1 -1.0**
FORT IAmb IAmb 15 05 55.5
comp=Z,72nm,0.7s
KNRA Kununurra 50.36 264 P **P 15 05 57.6 -0.7**
comp=Z,199nm,0.9s,comp=Z,1μm
KNRA Kununurra 50.36 264 P **P 15 05 57.2 -1.1**
FAKI Fak Fak 50.39 281 P **P 15 05 58.3 -0.4**
FAKI IAmb IAmb 15 05 59.4
comp=Z,203nm,1.7s
FAKI Fak Fak 50.39 281 P **P 15 05 59.1 +0.5**
comp=Z,63nm,1.3s
FAKI Fak Fak 50.39 281 P **P 15 05 58.1 -0.5**
SIJI Sorong 52.05 283 P **P 15 06 10.4 -0.2**
SWI Sorong 52.05 283 P **P 15 06 10.6 0.0**
MSAI Masohi 53.36 279 P **P 15 06 19.7 -0.3**
comp=Z,2μmcomp=Z,132nm,0.7s
KRAI Karang Ratu 53.87 279 P **P 15 06 23.4 -0.2**
comp=Z,138nm,0.7s
AAI Ambon 53.94 279 P **P 15 06 24.1 0.0**
comp=Z,2μmcomp=Z,155nm,0.8s
NLAI Namlea 55.12 279 P **P 15 06 32.5 +0.2**
comp=Z,2μmcomp=Z,233nm,1.1s
KMBL Kambalda 55.26 244 P **P 15 06 32.5 -0.5**
comp=Z,29nm,1.0s
SOEI Soe 55.92 270 P **P 15 06 38.7 +0.6**
SOEI Soe 55.92 270 P **P 15 06 39.1 +1.1**
comp=Z,476nm,1.1s
SOEI Soe 55.92 270 P **P 15 06 39.1 +1.1**
comp=Z,4μmcomp=Z,473nm,1.1s
TNTI Ternate 56.27 283 P **P 15 06 39.9 -0.4**
TNTI IAmb IAmb 15 06 41.5
comp=Z,156nm,0.8s
TNTI Ternate 56.27 283 P **P 15 06 40.7 +0.4**
comp=Z,234nm,0.9s
TNTI Ternate 56.27 283 P **P 15 06 40.5 +0.2**
comp=Z,2μmcomp=Z,230nm,0.9s
BATI Baumata 56.38 269 P **P 15 06 42.2 +1.1**
comp=Z,152nm,0.9s
SANI Sanana 56.56 279 P **P 15 06 42.2 -0.1**
comp=Z,228nm,0.9s
SANI Sanana 56.56 279 P **P 15 06 41.6 -0.7**
comp=Z,2μmcomp=Z,225nm,0.9s
PSAC2 Pilbara Seismi 57.76 255 P **P 15 06 49.9 -0.5**
comp=Z,183nm,1.0s
PSA00 Pilbara Seismi 57.81 255 P **P 15 06 50.3 -0.4**
comp=Z,186nm,0.9s
PSA00 Pilbara Seismi 57.81 255 P **P 15 06 50.0 -0.7**
PSA00 IAmb IAmb 15 06 51.2
comp=Z,79nm,0.9s
PSA00 Pilbara Seismi 57.81 255 P **P 15 06 50.5 -0.2**
comp=Z,186nm,0.9s
MBWA Marble Bar 57.97 256 P **P 15 06 51.4 -0.5**
comp=Z,103nm,1.2s
MBWA Marble Bar 57.97 256 P **P 15 06 51.1 -0.7**
MBWA IAmb IAmb 15 06 51.8
comp=Z,63nm,0.8s
MBWA Marble Bar 57.97 256 P **P 15 06 51.5 -0.3**
comp=Z,59nm,1.2s
MBWA Marble Bar 57.97 256 P **P 15 06 50.9 -0.9**
MBWA PcP **PcP 15 07 36.7 +0.2**
MMRI Maumere 58.14 271 P **P 15 06 51.9 -1.1**
MMRI IAmb IAmb 15 06 53.4
comp=Z,105nm,0.7s
MMRI Maumere 58.14 271 P **P 15 06 53.0 -0.1**
comp=Z,178nm,0.8s
MMRI Maumere 58.14 271 P **P 15 06 52.6 -0.5**
comp=Z,2μmcomp=Z,177nm,0.8s
MEEK Meekatharra 58.35 249 P **P 15 06 53.7 -0.7**
comp=Z,79nm,0.9s
MEEK Meekatharra 58.35 249 P **P 15 06 53.9 -0.5**
comp=Z,79nm,0.9s
EDFI Ende, Flores 58.63 270 P **P 15 06 55.5 -1.0**
comp=Z,1μmcomp=Z,149nm,0.9s
KLBR Kellerberrin 58.77 243 P **P 15 06 56.4 -0.6**
comp=Z,325nm,0.8s
KLBR Kellerberrin 58.77 243 P **P 15 06 57.5 +0.4**
comp=Z,325nm,0.8s
MNI Manado 58.87 283 P **P 15 06 57.2 -0.8**
comp=Z,136nm,0.5s
NWAO Narrogin (SRO) 59.16 242 P **P 15 06 59.6 -0.1**
comp=Z,49nm,1.4s
NWAO Narrogin (SRO) 59.16 242 P **P 15 06 59.2 -0.4**
NWAO IAmb IAmb 15 07 00.5
comp=Z,80nm,1.4s
NWAO Narrogin (SRO) 59.16 242 P **P 15 06 59.8 +0.1**
comp=Z,27nm,1.3s
NWAO Narrogin (SRO) 59.16 242 P **P 15 06 59.2 -0.4**
NWAO pmax pmax
comp=Z,80nm,1.4s
BLDU Ballidu 59.72 245 P **P 15 07 02.9 -0.5**
comp=Z,66nm,1.1s
BLDU Ballidu 59.72 245 P **P 15 07 03.2 -0.2**
comp=Z,66nm,1.1s
WSI Waingapu 59.72 269 P **P 15 07 03.9 +0.2**
comp=Z,3μmcomp=Z,296nm,1.2s
LUWI Luwuk 59.93 279 P **P 15 07 04.9 -0.1**
LUWI Luwuk 59.93 279 P **P 15 07 06.1 +1.1**
comp=Z,173nm,0.9s
LUWI Luwuk 59.93 279 P **P 15 07 05.7 +0.7**
comp=Z,3μmcomp=Z,171nm,0.9s
KKSI Kolaka, Sulawe 59.98 276 P **P 15 07 05.1 -0.3**
MUN Mundaring 60.07 243 P **P 15 07 05.5 -0.2**
comp=Z,46nm,0.8s
MUN Mundaring 60.07 243 P **P 15 07 06.0 +0.3**
comp=Z,46nm,0.8s

MORW Morawa 60.41 246 P **P 15 07 07.6 -0.4**
comp=Z,69nm,1.6s
MORW Morawa 60.41 246 P **P 15 07 07.5 -0.6**
MORW IAmb IAmb 15 07 08.0
comp=Z,33nm,0.7s
MORW Morawa 60.41 246 P **P 15 07 08.2 +0.1**
comp=Z,69nm,1.6s
BSSI Bau Bau, Buton 60.50 273 P **P 15 07 08.6 -0.2**
WBSI Waikabubak, Su 60.59 269 P **P 15 07 09.4 -0.1**
comp=Z,93nm,1.1s
VNDA Vanda 60.62 185 P **P 15 07 10.5 +2.0**
comp=Z,1.8nm,0.4s,baz=4.8,slow=6.2,SNR=10
comp=Z,1.8nm,0.4s
APSI Ampana 61.03 279 P **P 15 07 13.1 +0.8**
comp=Z,3μmcomp=Z,269nm,1.1s
MRSI Marisa 61.23 281 P **P 15 07 12.5 -1.1**
comp=Z,109nm,0.9s
KAPI Kappang 61.53 274 P **P 15 07 14.7 -0.9**
KAPI IAmb IAmb 15 07 16.5
comp=Z,103nm,1.4s
KAPI Kappang 61.53 274 P **P 15 07 16.0 +0.4**
comp=Z,34nm,1.1s
KAPI Kappang 61.53 274 *d*P **P 15 07 15.2 -0.4**
KAPI pmax pmax
comp=Z,49nm,1.1s
KAPI Kappang 61.53 274 P **P 15 07 15.2 -0.4**
KAPI Kappang 61.53 274 P **P 15 07 14.9 -0.6**
KAPI PcP **PcP 15 07 51.5 +0.5**
SPSI Sidrap Palu 61.83 275 P **P 15 07 16.3 -1.2**
DBNI Kabupaten Domp 61.92 270 P **P 15 07 16.9 -1.2**
TTSI Tana Toraja 62.06 276 P **P 15 07 19.2 +0.1**
PLAI Plampang 62.34 269 P **P 15 07 21.2 +0.3**
comp=Z,208nm,0.8s
PLAI Plampang 62.34 269 P **P 15 07 20.2 -0.7**
TOLI2 Tolitoli 62.53 281 P **P 15 07 21.7 -0.4**
TOLI2 IAmb IAmb 15 07 25.8
comp=Z,50nm,0.8s
TOLI2 Tolitoli 62.53 281 P **P 15 07 22.8 +0.7**
comp=Z,65nm,0.8s
PCI Palu 62.73 278 P **P 15 07 24.8 +1.4**
comp=Z,3μmcomp=Z,319nm,1.0s
PMSI Majene 62.78 275 P **P 15 07 24.2 +0.5**
comp=Z,3μmcomp=Z,339nm,0.9s
GIRL Giralia 62.80 253 P **P 15 07 24.2 +0.5**
comp=Z,160nm,1.3s
GIRL Giralia 62.80 253 P **P 15 07 24.1 +0.4**
GIRL IAmb IAmb 15 07 25.6
comp=Z,133nm,1.1s
MMSI Mamuju 63.04 276 P **P 15 07 25.5 +0.1**
comp=Z,47nm,0.7s
MPSI Mapaga 63.09 280 P **P 15 07 25.4 -0.3**
comp=Z,1μmcomp=Z,161nm,1.0s
TWSI Taliwang, Sumb 63.22 269 P **P 15 07 25.5 -1.0**
comp=Z,3μmcomp=Z,331nm,0.8s
KLNI Mataram 64.05 269 P **P 15 07 30.1 -1.7**
comp=Z,107nm,0.7s
JHJ Hachijo jima 2 64.33 322 P **P 15 07 32.9 -0.3**
comp=Z,112nm,0.4s,baz=151,slow=10,SNR=6.4
KHKI Kahang-Kahang 64.53 269 P **P 15 07 34.3 -0.6**
comp=Z,139nm,0.9s
IGBI Denpasar 64.85 268 P **P 15 07 36.3 -0.6**
CCD Concordia, Ant 65.01 194 P **P 15 07 38.4 +1.1**
CCD PcP **PcP 15 08 04.7 0.0**
CCD pP **pwP 15 09 29.2 -0.7**
RTBI Rangdo, Negare 65.14 269 P **P 15 07 37.9 -0.8**
comp=Z,210nm,1.0s
JAGI Jajag, Banyuwa 65.89 269 P **P 15 07 41.9 -1.5**
JAGI Jajag, Banyuwa 65.89 269 P **P 15 07 42.6 -0.8**
comp=Z,246nm,0.8s
JAGI Jajag, Banyuwa 65.89 269 P **P 15 07 41.7 -1.7**
comp=Z,2μmcomp=Z,250nm,0.8s
ABJI Asem Bagus 66.00 269 P **P 15 07 43.9 -0.1**
comp=Z,152nm,1.1s
MYLDM Lahad Datu 66.12 284 P **P 15 07 45.7 +1.0**
MYLDM IAmb IAmb 15 07 48.6
comp=Z,133nm,1.2s
MYLDM Lahad Datu 66.12 284 P **P 15 07 46.3 +1.5**
comp=Z,96nm,1.3s
MYLDM Lahad Datu 66.12 284 P **P 15 07 46.2 +1.5**
comp=Z,96nm,1.3s
KMMI Kalianget 66.46 270 P **P 15 07 46.5 -0.4**
comp=Z,139nm,0.9s
BLJI Banyuglugur 66.62 269 P **P 15 07 47.1 -0.8**
comp=Z,2μmcomp=Z,239nm,0.8s
BBKI Banjar Baru 66.66 274 P **P 15 07 48.8 +0.6**
comp=Z,3μmcomp=Z,160nm,0.8s
MTKI Muara Teweh, K 67.39 277 P **P 15 07 52.7 0.0**
JGF Kuroka 67.50 322 P **P 15 07 52.7 -0.2**
JGF IAmb IAmb 15 07 53.6
comp=Z,34nm,0.7s
JGF Kuroka 67.50 322 P **P 15 07 53.1 +0.2**
comp=Z,49nm,1.3s
INU Inuyama 67.53 322 P **P 15 07 52.8 -0.2**
INU IAmb IAmb 15 07 54.0
comp=Z,40nm,1.1s
INU Inuyama 67.53 322 P **P 15 07 54.1 +1.1**
comp=Z,38nm,1.2s
TGY Tagaytay City 67.53 294 P **P 15 07 53.8 +0.3**
comp=Z,93nm,0.4s,baz=42,slow=13,SNR=3.4
comp=Z,93nm,0.4s
MJAR Matsushiro Arr 67.67 323 P **P 15 07 53.4 -0.5**
comp=Z,42nm,0.8s,baz=158,slow=6.1,SNR=96
MJAR PcP **PcP 15 08 16.5 +0.6**
comp=Z,10.0nm,0.8s,baz=157,slow=5.1,SNR=5.2
comp=Z,42nm,0.8s
MJAR Matsushiro Arr 67.67 323 P **P 15 07 53.6 -0.3**
MJAR IAmb IAmb 15 07 54.5
comp=Z,39nm,0.8s
MJAR Matsushiro Arr 67.67 323 P **P 15 07 53.6 -0.3**
MJAR pmax pmax
comp=Z,39nm,0.8s
MAJO Matsushiro 67.67 323 P **P 15 07 53.5 -0.4**
MAJO IAmb IAmb 15 07 54.5
comp=Z,50nm,0.8s
MAJO Matsushiro 67.67 323 P **P 15 07 53.9 0.0**
comp=Z,70nm,0.8s
MAJO Matsushiro 67.67 323 *d*P **P 15 07 53.6 -0.3**
MAJO pmax pmax
comp=Z,41nm,0.9s
MAJO Matsushiro 67.67 323 P **P 15 07 53.4 -0.5**
MAJO PcP **PcP 15 08 14.7 -1.3**
MJB9 Matsu-Tunnel 67.67 323 P **P 15 07 53.9 0.0**
MJB9 IAmb IAmb 15 07 55.5
comp=Z,48nm,0.8s
JOW Kunigami 67.99 310 P **P 15 07 56.5 +0.5**
comp=Z,37nm,0.9s,baz=142,slow=7.5,SNR=4.3
comp=Z,37nm,0.9s
JMN Monobe 68.35 319 P **P 15 07 58.3 +0.2**
JMN IAmb IAmb 15 08 00.5
comp=Z,80nm,1.0s
JMN Monobe 68.35 319 P **P 15 07 59.2 +1.1**
comp=Z,87nm,1.1s
SNJI Sawahan-Nganju 68.36 269 P **P 15 07 59.5 +0.7**
comp=Z,170nm,1.6s
SJI Sawahan 68.36 269 P **P 15 07 58.5 -0.2**
KKM Kota Kinabalu 68.55 284 P **P 15 07 59.5 -0.3**
KKM IAmb IAmb 15 08 00.5
comp=Z,74nm,0.6s
KKM Kota Kinabalu 68.55 284 P **P 15 08 00.3 +0.5**
comp=Z,128nm,0.8s
KKM Kota Kinabalu 68.55 284 P **P 15 07 59.8 0.0**
comp=Z,1μmcomp=Z,127nm,0.8s
NGJI Ngawi 68.76 269 P **P 15 08 02.2 +1.3**
comp=Z,85nm,1.0s
PCJI Pacitan 68.80 268 P **P 15 08 01.1 -0.1**
UGM Wanagama 69.50 268 P **P 15 08 05.2 -0.3**
UGM Wanagama 69.50 268 P **P 15 08 05.3 -0.2**
comp=Z,243nm,0.8s
UGM Wanagama 69.50 268 P **P 15 08 05.3 -0.2**
comp=Z,247nm,0.8s
SMRI Semarang 69.82 269 P **P 15 08 08.0 +0.7**
comp=Z,196nm,0.9s
SMRI Semarang 69.82 269 P **P 15 08 08.0 +0.7**
comp=Z,195nm,0.9s
JNU Nakatsue 69.90 316 P **P 15 08 07.4 -0.1**
comp=Z,21nm,0.8s,baz=85,slow=1.4,SNR=8.9
comp=Z,21nm,0.8s
YOJ Yonaguni jima 70.72 305 P **P 15 08 12.0 -0.4**
YOJ Yonaguni jima 70.72 305 P **P 15 08 12.0 -0.4**
YOJ pmax pmax
comp=Z,163nm,0.7s
CTJI Waduk Cacaban 71.03 269 P **P 15 08 14.6 +0.1**
comp=Z,5μmcomp=Z,187nm,1.0s
SBUM Sibu 71.03 279 P **P 15 08 15.0 +0.5**
SBUM Sibu 71.03 279 P **P 15 08 15.8 +1.3**
comp=Z,27nm,0.9s
SBUM Sibu 71.03 279 P **P 15 08 14.9 +0.5**

JKA Kamikawa-asahi 71.04 331 P **P 15 08 14.5 +0.7**
JKA IAmb IAmb 15 08 15.8
comp=Z,34nm,0.7s
ASAJ Asahikawa 71.04 331 P **P 15 08 15.9 +2.0**
comp=Z,31nm,0.6s,baz=227,slow=4.9,SNR=42
comp=Z,31nm,0.6s
ASAJ Asahikawa 71.04 331 P **P 15 08 14.5 +0.6**
ASAJ pmax pmax
comp=Z,34nm,0.7s
KPJI Karang Pucung 71.18 268 P **P 15 08 15.2 -0.1**
comp=Z,165nm,0.8s
TWG Pinlang 71.44 302 P **P 15 08 14.9 -1.7**
TWG IAmb IAmb 15 08 15.9
comp=Z,38nm,0.6s
YULB Yu-li 71.54 303 P **P 15 08 16.0 -1.3**
YULB IAmb IAmb 15 08 19.8
comp=Z,32nm,0.7s
YULB Yu-li 71.54 303 P **P 15 08 17.6 +0.3**
comp=Z,56nm,0.8s
NACB Ninganchiao 71.69 304 P **P 15 08 17.1 -1.0**
NACB Ninganchiao 71.69 304 P **P 15 08 18.7 +0.6**
comp=Z,132nm,1.2s
SSLB Suanglung 72.01 303 P **P 15 08 19.1 -0.9**
SSLB IAmb IAmb 15 08 19.9
comp=Z,59nm,0.6s
SSLB Suanglung 72.01 303 P **P 15 08 19.9 -0.1**
comp=Z,82nm,0.9s
UNV Unalaska Valle 72.03 7 P **P 15 08 19.6 +0.3**
baz=192
TPUB Ta-pu 72.03 302 P **P 15 08 19.1 -1.0**
TPUB Ta-pu 72.03 302 P **P 15 08 19.6 -0.5**
comp=Z,230nm,0.9s
YHNB Yeheng 72.11 304 P **P 15 08 19.5 -1.1**
YHNB IAmb IAmb 15 08 21.4
comp=Z,63nm,0.9s
YHNB Yeheng 72.11 304 P **P 15 08 21.4 +0.8**
comp=Z,82nm,1.1s
TATO Taipei 72.17 304 P **P 15 08 20.3 -0.5**
TATO Taipei 72.17 304 P **P 15 08 21.8 +1.0**
comp=Z,167nm,1.5s
QSPA South Pole Qui 72.33 180 P **P 15 08 22.9 +1.6**
comp=Z,22nm,0.6s,baz=44,slow=1.5,SNR=26
comp=Z,22nm,0.6s
QSPA South Pole Qui 72.33 180 P **P 15 08 22.6 +1.4**
QSPA PcP **PcP 15 08 37.1 +1.6**
BBJI Bungbulang 72.36 268 P **P 15 08 21.3 -1.0**
BBJI IAmb IAmb 15 08 22.7
comp=Z,106nm,0.8s
BBJI Bungbulang 72.36 268 P **P 15 08 21.9 -0.4**
comp=Z,147nm,0.8s
BBJI Bungbulang 72.36 268 P **P 15 08 21.0 -1.3**
comp=Z,1μmcomp=Z,150nm,0.8s
YSS Yuzhno-Sakhali 73.18 333 P **P 15 08 26.7 +0.6**
YSS IAmb IAmb 15 08 27.5
comp=Z,32nm,1.0s
YSS Yuzhno-Sakhali 73.18 333 P **P 15 08 27.1 +0.9**
comp=Z,44nm,1.1s
YSS Yuzhno-Sakhali 73.18 333 *e*P **P 15 08 26.9 +0.7**
YSS *e*S **S 15 17 11.2 +1.2**
YSS pmax pmax
comp=Z,300nm,4.6s
YSS pmax pmax
comp=Z,20μm,0.6s
PEA0B Petropavlovsk- 73.46 345 *ce*P **P 15 08 28.0 +0.4**
PETK Petropavlovsk- 73.46 345 P **P 15 08 27.6 -0.1**
comp=Z,17nm,0.8s,baz=120,slow=4.9,SNR=18
comp=Z,17nm,0.8s
DBJI Dramaga 73.47 268 P **P 15 08 28.3 -0.3**
comp=Z,323nm,0.8s
TPI Tanjunpandan 73.72 272 P **P 15 08 30.4 +0.4**
CHNA Chernabura Isl 74.06 11 P **P 15 08 31.0 +0.1**
baz=199
SBJI Serang 74.19 269 P **P 15 08 32.1 -0.5**
comp=Z,362nm,1.1s
KNMB Chin-men Tao 74.39 303 P **P 15 08 33.5 0.0**
KNMB IAmb IAmb 15 08 35.0
comp=Z,51nm,0.8s
SDPT Sand Point 74.39 11 P **P 15 08 32.7 -0.1**
baz=198
P08K Saint George I 74.42 5 P **P 15 08 33.9 +1.0**
baz=189
KSRS Korea Array 74.46 318 P **P 15 08 34.5 +0.9**
comp=Z,13nm,0.7s,baz=127,slow=6.3,SNR=58
comp=Z,13nm,0.7s
KSAR Wonju Array Be 74.48 318 P **P 15 08 34.8 +1.1**
KSAR Wonju Array Be 74.48 318 P **P 15 08 34.8 +1.1**
KS19 Wonju Array Si 74.53 318 P **P 15 08 34.5 +0.4**
KS19 IAmb IAmb 15 08 46.8
comp=Z,54nm,1.2s
SPIA Saint Paul Isl 74.94 5 P **P 15 08 35.9 0.0**
baz=188
PPBI Pangkal Pinang 75.34 272 P **P 15 08 40.0 +0.9**
VLA Vladivostok 75.72 325⇑ *e*P **P 15 08 40.5 0.0**
VLA pmax pmax
comp=Z,32nm,1.0s
CHIR Chirikof Islan 75.79 13 P **P 15 08 41.1 +0.5**
baz=202
KASI Kota Agung 75.91 269 P **P 15 08 40.6 -1.7**
KLSI 75.93 270 P **P 15 08 41.0 -1.4**
PSTR Posyet 76.01 324 *d*P **P 15 08 43.2 +1.1**
TYV Tymovskoe 76.30 336 *e*P **P 15 08 44.0 +0.5**
TYV *e*S **S 15 17 36.7 -6.9**
TYV pmax pmax
comp=Z,54nm,0.9s
TYV pmax pmax
comp=Z,200nm,5.4s
TYV smax smax
comp=N,600nm,7.3s
TYV smax smax
comp=E,300nm,7.3s
USRK Ussuriysk Ar. 76.38 326 P **P 15 08 45.4 +1.3**
comp=E,15nm,0.7s,baz=117,slow=2.6,SNR=16
comp=E,15nm,0.7s
LWLI Liwa 76.47 269 P **P 15 08 44.7 -0.8**
MDSI Maura Dua 76.52 270 P **P 15 08 43.8 -1.8**
comp=E,1μmcomp=E,89nm,0.8s
SII Sitkinak Islan 76.78 14 P **P 15 08 46.7 +0.7**
baz=204
HKPS Hong Kong Po S 76.89 299 P **P 15 08 48.6 +1.1**
comp=E,108nm,1.0s
R16K Pilot Point 77.02 11 P **P 15 08 47.6 +0.3**
baz=200
R17L Mt. Peulik Vol 77.31 12 P **P 15 08 49.4 +0.4**
baz=202
DSRI Dabo 77.33 274 P **P 15 08 51.3 +1.2**
comp=E,70nm,1.3s
OHAK Old Harbor 77.59 14 P **P 15 08 50.6 +0.2**
baz=205
NJ2 Nanjing 77.70 310⇓ *i*P **P 15 08 52.6 +1.0**
NJ2 pmax pmax
comp=E,41nm,0.9s
MDJ Mudanjiang 77.95 325 P **P 15 08 54.1 +1.4**
MDJ IAmb IAmb 15 08 54.9
comp=Z,84nm,0.9s
MDJ Mudanjiang 77.95 325 P **P 15 08 53.9 +1.2**
comp=Z,104nm,0.9s
MDJ Mudanjiang 77.95 325 P **P 15 08 53.8 +1.1**
MDJ S **S 15 18 03.7 +2.4**
MDJ pmax pmax
comp=Z,120nm,0.9s
MDJ Mudanjiang 77.95 325 P **P 15 08 53.7 +1.1**
MDJ PcP **PcP 15 09 04.8 +4.9**
Q17K Contact Creek 78.00 12 P **P 15 08 52.8 0.0**
baz=202
O14K Tigyukauivet M 78.00 9 P **P 15 08 52.9 +0.4**
baz=197
BORC Borrego Spring 78.01 49 P **P 15 08 54.1 +0.8**
O15K Ungalikthiuk R 78.15 10 P **P 15 08 53.5 +0.1**
baz=198
PFO Pinyon Flats O 78.15 49⇓ *e*P **P 15 08 54.3 +0.1**
PFO pmax pmax
comp=Z,8.0nm,1.0s
KDAK Kodiak Island 78.26 14 P **P 15 08 54.4 +0.4**
comp=Z,8.8nm,0.7s,baz=152,slow=3.3,SNR=5.1
comp=Z,8.8nm,0.7s
KDAK Kodiak Island 78.26 14 P **P 15 08 54.3 +0.3**
baz=205
KSI Kapahiang 78.27 270 P **P 15 08 53.9 -1.3**
comp=Z,121nm,0.8s
P16K Nushagak River 78.32 11 P **P 15 08 54.6 +0.3**
baz=200
MDPB Devils Postpil 78.45 44 P **P 15 08 57.1 +1.3**
M11K Mekoryuk 78.47 6 P **P 15 08 55.4 +0.4**
baz=192
YBH Yreka Blue Hor 78.48 39 P **P 15 08 57.4 +1.6**
comp=Z,0.3nm,0.6s,baz=180,slow=4.0,SNR=13
YBH Yreka Blue Hor 78.48 39 P **P 15 08 56.4 +0.7**

YBH	Yreka Blue Hor	78.48	39	P	P	15 08 56.4	+0.7
YBH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CWC	Cottonwood Cre	78.48	46	P	P	15 08 56.9	+0.9
CLC	China Lake	78.48	46	P	P	15 08 56.8	+0.9
CLC	China Lake	78.48	46	P	P	15 08 56.8	+0.9
CLC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
N14K	Kuskokwak Cree	78.58	9	P	P	15 08 56.1	+0.5
	baz=196						
BTDF	Bukit Timah Da	78.67	275	P	P	15 08 58.1	+0.9
	comp=Z,72nm,0.9s						
BTDF	Bukit Timah Da	78.67	275	P	P	15 08 57.3	+0.1
	comp=Z,72nm,0.9s						
MYKOM	Kota Tinggi	78.73	276	P	P	15 08 57.4	-0.1
MYKOM				IAmb	IAmb	15 08 59.2	
	comp=Z,122nm,1.4s						
MYKOM	Kota Tinggi	78.73	276	P	P	15 08 58.5	+1.0
	comp=Z,74nm,1.2s						
MYKOM	Kota Tinggi	78.73	276	P	P	15 08 58.3	+0.8
	comp=Z,74nm,1.2s						
MPK	Martis Peak	78.75	42	P	P	15 08 59.0	+1.5
P17K	Kvichak River	78.76	11	P	P	15 08 56.9	+0.3
	baz=201						
MASI	Maura Aman, Be	78.76	270	P	P	15 08 57.7	-0.1
	comp=Z,167nm,1.3s						
GRNR	Gornyy	78.81	333	⇓*i*P	P	15 08 58.1	+1.0
GRNR				pmax	pmax		
	comp=E,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.0s						
M13K	Dall Lake	78.83	8	P	P	15 08 57.2	+0.2
	baz=195						
O16K	Kokwok River B	78.83	10	P	P	15 08 57.2	+0.2
	baz=200						
PNTP	Pine Nut	78.91	43	P	P	15 08 59.0	+0.7
N15K	Kwethluk River	79.05	9	P	P	15 08 58.6	+0.3
	baz=198						
Q20K	Shuyak Island	79.05	14	P	P	15 08 58.5	+0.3
	baz=205						
Q19K	Cape Douglas,	79.07	13	P	P	15 08 58.4	0.0
	baz=204						
P18K	Big Mountain,	79.17	12	P	P	15 08 59.0	+0.1
	baz=203						
O17K	Koliganek Bris	79.18	11	P	P	15 08 59.2	+0.3
	baz=201						
M14K	Bethel	79.34	8	P	P	15 09 00.1	+0.4
	baz=196						
NVAR	Mina Array Bea	79.40	44	P	P	15 09 02.1	+1.3
	comp=Z,5.3nm,0.7s,baz=224,slow=9.1,SNR=39						
NVAR				pP	pP	15 10 57.1	-0.4
	comp=Z,2.2nm,1.0s,baz=222,slow=9.5,SNR=3.1						
	comp=Z,5.3nm,0.7s						
M15K	Kasigluk River	79.47	9	P	P	15 09 00.6	+0.3
	baz=197						
N16K	Nishlik Lake	79.55	10	P	P	15 09 01.2	+0.3
	baz=199						
O18K	Koktuh Hills	79.61	12	P	P	15 09 01.5	+0.4
	baz=202						
CN2	Changchun	79.78	322	P	P	15 09 02.7	+0.3
CN2				pmax	pmax		
	comp=Z,70nm,1.1s						
L14K	Kuka Creek	79.81	8	P	P	15 09 02.8	+0.7
	baz=195						
P19K	Oil Pt	79.82	13	P	P	15 09 02.5	+0.2
	baz=204						
BNX	BinXian	79.86	325	⇓P	P	15 09 03.0	+0.2
BNX				pmax	pmax		
	comp=Z,100nm,0.8s						
N17K	Nushagak Hills	79.87	11	P	P	15 09 03.0	+0.5
	baz=201						
KLR	Kul'dur	79.88	329	*d i*P	P	15 09 03.4	+0.6
KLR				pmax	pmax		
	comp=Z,18nm,1.1s						
M16K	Timber Creek	80.04	10	P	P	15 09 03.8	+0.4
	baz=199						
O19K	Port Alsworth	80.09	12	P	P	15 09 03.6	0.0
	baz=203						
K13K	Kusilvak Mount	80.16	7	P	P	15 09 04.4	+0.5
	baz=193						
HOM	Homer	80.17	13	P	P	15 09 04.1	0.0
	baz=206						
N18K	Kilae Creek	80.24	11	P	P	15 09 04.9	+0.4
	baz=202						
L15K	Ungalak Mounta	80.30	8	P	P	15 09 05.3	+0.6
	baz=196						
WHN	Wuhan	80.37	306	P	P	15 09 06.5	+0.7
WHN				pmax	pmax		
	comp=Z,96nm,0.9s						
BRSE	Bradley Lake S	80.45	14	P	P	15 09 05.7	+0.1
	baz=207						
H04A	Detroit Lake	80.54	37	P	P	15 09 07.0	+0.6
L16K	Owhat River	80.62	9	P	P	15 09 06.9	+0.6
	baz=198						
N19K	Bonanza Creek	80.63	12	P	P	15 09 07.2	+0.6
	baz=203						
M17K	Holitna River	80.65	10	P	P	15 09 07.2	+0.6
	baz=200						
I05D	Terrebonne, OR	80.83	38	P	P	15 09 08.5	+0.6
K15K	Wolf Creek Mou	80.88	8	P	P	15 09 08.3	+0.5
	baz=196						
BKNI	Bangkinang	80.95	273	P	P	15 09 10.4	+1.2
	comp=Z,250nm,1.0s						
BKNI	Bangkinang	80.95	273	P	P	15 09 10.4	+1.2
	comp=Z,µmcomp=Z,248nm,0.8s						
MA2	Magadan	80.98	345	P	P	15 09 08.3	0.0
	comp=Z,31nm,1.0s						
MA2	Magadan	80.98	345	*d i*P	P	15 09 07.6	-0.7
MA2				pmax	pmax		
	comp=Z,38nm,1.7s						
MA2	Magadan	80.98	345	P	P	15 09 07.6	-0.7
	comp=Z,30nm,1.0s						
M18K	Stony River	81.01	11	P	P	15 09 08.9	+0.5
	baz=202						
TIA	Tai'an	81.01	312	P	P	15 09 09.3	+0.3
TIA				pmax	pmax		
	comp=Z,28nm,1.0s						
SEW	Seward	81.07	14	P	P	15 09 09.7	+1.0
	baz=208						
J14K	Nanvaranak Lak	81.08	7	P	P	15 09 09.2	+0.6
	baz=194						
PDSI	Padang	81.12	272	P	P	15 09 09.2	-0.9
L17K	Donlin	81.20	9	P	P	15 09 10.1	+0.7
	baz=200						
PPI	Padang Panjang	81.32	272	P	P	15 09 10.5	-0.6
O22K	Cooper Landing	81.34	14	P	P	15 09 10.6	+0.5
	baz=208						
GAMB	Gambell	81.41	3	P	P	15 09 11.0	+0.7
	baz=187,SNR=5.8						
P23K	Montague Islan	81.47	15	P	P	15 09 11.7	+0.9
	baz=210						
M19K	Big River Lodg	81.66	11	P	P	15 09 11.9	+0.2
	baz=203						
UBPT	Khong Chiam	81.73	289	P	P	15 09 14.4	+1.3
	comp=Z,58nm,1.4s						
K17K	Iditarod	81.75	9	P	P	15 09 12.9	+0.7
	baz=199						
L19K	White Mountain	81.83	11	P	P	15 09 13.1	+0.5
	baz=203						
M20K	Styx River	81.88	12	P	P	15 09 13.2	+0.2
	baz=204						
RC01	Rabbit Creek A	81.88	14	P	P	15 09 13.2	+0.4
	baz=208						
J16K	Anvik River	81.96	8	P	P	15 09 13.8	+0.6
J16K	Anvik River	81.96	8	P	P	15 09 14.1	+0.9
	baz=197						
SUA	Susitna One	81.99	13	P	P	15 09 13.8	+0.2
	baz=207						
KAIM	Kayak Island	82.19	17	P	P	15 09 14.5	+0.1
	baz=213						
BBB	Bella Bella	82.23	29	P	P	15 09 15.7	+0.9
	comp=Z,15nm,1.0s,baz=244,slow=5.2,SNR=6.2						
	comp=Z,15nm,1.0s						
IPM	Ipoh	82.25	277	P	P	15 09 16.9	+1.0
	comp=Z,149nm,0.9s						
IPM	Ipoh	82.25	277	P	P	15 09 16.2	+0.3
	comp=Z,1µmcomp=Z,149nm,0.9s						
J17K	VABM Dome	82.28	9	P	P	15 09 15.5	+0.7
J17K	VABM Dome	82.28	9	P	P	15 09 15.2	+0.4
	baz=199						
SKT	Skwentna	82.29	13	P	P	15 09 15.3	+0.3
	baz=206						
GLI	Glacier Island	82.31	15	P	P	15 09 15.3	+0.2
	baz=210						
BELA	Belgrano 2	82.36	173	P	P	15 09 15.5	+0.2
BELA				IAmb	IAmb	15 09 16.8	
	comp=Z,54nm,0.9s						
EYAK	Cordova Ski Ar	82.37	16	P	P	15 09 15.6	+0.2
	baz=211						
M22K	Willow	82.38	13	P	P	15 09 15.8	+0.5
	baz=207						
CRAG	Craig	82.41	24	P	P	15 09 15.2	-0.5
	baz=223						
PMR	Palmer	82.46	14	P	P	15 09 15.9	+0.2
	baz=208						
MNSI	Mandailing Nat	82.48	273	P	P	15 09 15.9	-1.1
	comp=Z,41nm,0.8s						
I17K	Unalakleet	82.53	8	P	P	15 09 16.0	0.0
	baz=197						
ELK	Elko	82.63	43	P	P	15 09 18.7	+1.2
	comp=Z,4.6nm,0.7s,baz=269,slow=6.0,SNR=27						
ELK				pP	pP	15 11 14.9	-0.4
	comp=Z,1.1nm,0.9s,baz=276,slow=7.6,SNR=2.1						
	comp=Z,4.6nm,0.7s						
ELK	Elko	82.63	43	P	P	15 09 17.7	+0.2
ELK	Elko	82.63	43	P	P	15 09 17.7	+0.2
ELK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANM	Nome	82.66	6	P	P	15 09 17.4	+0.7
	baz=193						
HEH	HeiHe	82.68	328	⇓P	P	15 09 17.5	+0.4
HEH				pmax	pmax		
	comp=Z,29nm,1.1s						
J18K	Innoko River	82.70	10	P	P	15 09 18.1	+1.1
	baz=201						
SIT	Sitka	82.77	22	P	P	15 09 18.1	+0.7
	baz=221						
SML	Sawmill	82.83	14	P	P	15 09 18.0	+0.3
	baz=209						
KULM	Kulim	82.86	278	P	P	15 09 20.0	+1.1
	comp=Z,66nm,1.1s						
KULM	Kulim	82.86	278	P	P	15 09 19.6	+0.7
	comp=Z,66nm,1.1s						
U33K	Whale Pass	82.88	24	P	P	15 09 18.8	+0.8
	baz=223						
V35K	Ketchikan	82.91	25	P	P	15 09 18.7	+0.5
	baz=224						
CUT	Chulitna	82.93	13	P	P	15 09 18.0	-0.1
	baz=207						
M23K	Glacier View	82.96	14	P	P	15 09 18.3	-0.1
	baz=209						
PPLA	Purkeypile	82.98	12	P	P	15 09 18.6	+0.1
	baz=205						
BMRM	Bremner River	83.02	16	P	P	15 09 18.8	0.0
	baz=212						
H16K	Elim	83.06	7	P	P	15 09 19.0	+0.3
	baz=196,SNR=17						
SCM	Sheep Creek Mo	83.09	14	P	P	15 09 19.0	0.0
	baz=210						
MESA	MESA	83.09	17	P	P	15 09 19.7	+0.5
	baz=215						
KLU	Klutina	83.13	15	P	P	15 09 19.1	-0.2
	baz=211						
G15K	Niukluk	83.21	6	P	P	15 09 20.0	+0.5
	baz=194						
CRQE	Cirque	83.25	17	P	P	15 09 20.0	+0.1
	baz=214						
HNS	HongShan	83.28	313	⇓P	P	15 09 21.1	+0.6
HNS				pmax	pmax		
	comp=Z,37nm,1.3s						
S32K	Killisnoo	83.34	22	P	P	15 09 20.8	+0.5
	baz=222						
J19K	Poorman	83.38	10	P	P	15 09 20.9	+0.5
	baz=202						
WRAK	Wrangell Islan	83.40	24	P	P	15 09 21.2	+0.6
	baz=224						
TNA	Tin City	83.42	4	P	P	15 09 21.0	+0.6
	baz=190,SNR=12						
F14K	Arctic Creek	83.46	5	P	P	15 09 21.2	+0.5
	baz=192						
PINM	Pinnacle	83.52	18	P	P	15 09 21.2	0.0
	baz=216						
BJI2	Beijing	83.54	315	P	P	15 09 22.1	+0.4
BJI2				pmax	pmax		
	comp=Z,20nm,0.9s						
BJT	Baijiatuau	83.54	315	P	P	15 09 23.3	+1.6
	comp=Z,53nm,1.1s						
SEY	Seymchan	83.56	347	⇓*e*P	P	15 09 21.0	-0.3
SEY				pmax	pmax		
	comp=Z,43nm,0.7s						
N25K	Chitina, Valde	83.56	16	P	P	15 09 21.7	+0.2
	baz=212						
LYN	LuoYang	83.59	309	P	P	15 09 23.2	+1.1
LYN				pmax	pmax		
	comp=Z,110nm,0.8s						
M24K	Tolsona, Glenn	83.60	15	P	P	15 09 21.7	+0.2
	baz=211						
H17K	Granite Mounta	83.63	8	P	P	15 09 21.9	+0.3
	baz=198						
WAT6	Susitna Watana	83.64	14	P	P	15 09 21.9	0.0
	baz=209						
WAT1	Susitna Watana	83.68	13	P	P	15 09 21.9	0.0
	baz=209						
PSI	Prapat	83.72	275	P	P	15 09 23.3	0.0
	comp=Z,110nm,0.9s						
PSI	Prapat	83.72	275	P	P	15 09 22.4	-0.9
	comp=Z,899nmcomp=Z,101nm,0.9s						
G16K	Koyuk River	83.78	7	P	P	15 09 22.7	+0.4
	baz=196						
MCARA	McCarthy VSAT	83.79	16	P	P	15 09 23.2	+0.7
	baz=214						
J20K	Nowinta River	83.80	10	P	P	15 09 22.7	+0.3
	baz=203						
F15K	North Star Dit	83.84	6	P	P	15 09 22.7	+0.1
	baz=193						
CHUM	Lake Minchumin	83.86	11	P	P	15 09 22.7	0.0
	baz=205,SNR=5.4						
TRF	Thorofare Moun	83.86	12	P	P	15 09 22.4	-0.6
	baz=207,SNR=8.7						
GCSA	Galena City Sc	83.88	9	P	P	15 09 23.0	+0.2
	baz=201						
CTG	Chitna Glacier	83.91	17	P	P	15 09 23.2	0.0
	baz=215						
R32K	Eaglecrest	83.97	22	P	P	15 09 23.9	+0.5
	baz=222						
MAW	Mawson	83.98	200	P	P	15 09 24.1	+0.7
	comp=Z,22nm,0.7s,baz=210,slow=9.7,SNR=2.6						
	comp=Z,22nm,0.7s						
ENH	Enshi	84.04	304	P	P	15 09 25.7	+1.2
	comp=Z,182nm,1.2s						
ENH	Enshi	84.04	304	P	P	15 09 25.0	+0.5
H18K	Honhosa River	84.05	8	P	P	15 09 24.0	+0.4
	baz=199						
G17K	Kiwalik Mounta	84.08	7	P	P	15 09 24.3	+0.5
	baz=197						
O28M	Mount Upton	84.08	18	P	P	15 09 24.3	0.0
	baz=216						
HARP	HAARP	84.10	15	P	P	15 09 24.5	+0.5
	baz=212						
DHY	Denali Highway	84.16	14	P	P	15 09 24.5	+0.1
	baz=210						
O29M	Mount Kennedy	84.19	19	P	P	15 09 24.4	-0.2
	baz=218						
TSI	Tuntungan	84.27	275	P	P	15 09 25.9	0.0
I20K	Naaghedeneel	84.31	10	P	P	15 09 25.4	+0.5
	baz=203						
MCK	McKinley	84.40	13	P	P	15 09 25.3	-0.1
	baz=208						
PAX	Paxson	84.51	15	P	P	15 09 25.1	-1.0
PAX	Paxson	84.51	15	P	P	15 09 25.1	-1.0
PAX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PAX	Paxson	84.51	15	P	P	15 09 26.0	-0.1
	baz=212						
GSI	Gunungsitoli	84.54	273	P	P	15 09 27.3	+0.1
GSI	Gunungsitoli	84.54	273	P	P	15 09 29.4	+2.1
	comp=Z,205nm,0.9s						
GSI	Gunungsitoli	84.54	273	P	P	15 09 27.8	+0.5
	comp=Z,2µmcomp=Z,203nm,0.9s						
P30M	Million Dollar	84.56	20	P	P	15 09 27.1	+0.8
	baz=219						
SKAG	Skagway	84.58	21	P	P	15 09 26.7	+0.4
	baz=221						
T35M	Bob Quinn	84.62	24	P	P	15 09 27.2	+0.5
	baz=226						
YUK8	Steele Glacier	84.62	18	P	P	15 09 27.3	+0.5
	baz=217						
M26K	Nabesna, AK	84.65	16	P	P	15 09 27.6	+0.8
	baz=214						
G18K	Tagagawik	84.71	8	P	P	15 09 26.9	0.0
	baz=199						
YUK6	Outpost Mounta	84.76	18	P	P	15 09 27.9	+0.3
	baz=218						
GYA	Guiyang	84.81	300	⇓P	P	15 09 28.9	+0.5
GYA				pmax	pmax		
	comp=Z,46nm,1.0s						
YUK3	Moose Creek	84.82	17	P	P	15 09 28.2	+0.5
	baz=216						
H20K	Anotleneega Mo	84.89	10	P	P	15 09 28.4	+0.6
	baz=203						
M27K	Edge Creek, AK	84.91	16	P	P	15 09 28.7	+0.6
	baz=215						
F17K	Baldwin Pennin	84.91	7	P	P	15 09 28.0	+0.2
	baz=196						
HYT	Haines Junctio	84.93	19	P	P	15 09 28.8	+0.6
	baz=219						
S34M	Telegraph Cree	84.94	23	P	P	15 09 29.1	+0.9
	baz=225						
ZEA	Zeya	84.95	331	*e*P	P	15 09 28.9	+0.6
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.9s						
YUK4	Talbot Arm	85.00	18	P	P	15 09 29.3	+0.7
	baz=218						
KCSI	Kotacane, Aceh	85.03	275	P	P	15 09 29.3	-0.4
	comp=Z,43nm,0.9s						
L26K	Log Cabin Wild	85.08	15	P	P	15 09 29.3	+0.6
	baz=213						
NEA2	Nenana	85.13	12	P	P	15 09 29.5	+0.6
	baz=208						
K24K	Donnelly Dome	85.15	14	P	P	15 09 29.6	+0.4
	baz=211						
G19K	Purcell Mounta	85.16	9	P	P	15 09 29.4	+0.3
	baz=200,SNR=5.5						
BVCY	Beaver Creek	85.22	17	P	P	15 09 29.7	+0.2
	baz=216,SNR=5.5						
WRH	Wood River Hil	85.22	13	P	P	15 09 28.8	-0.5
P32M	Atlin	85.23	21	P	P	15 09 30.0	+0.4
	baz=222						
F18K	Selawik	85.25	7	P	P	15 09 29.6	+0.2
	baz=198						
Q32M	Nakina River	85.27	22	P	P	15 09 30.6	+0.6
	baz=224						
RIDG	Independent Ri	85.32	14	P	P	15 09 30.4	+0.4
	baz=212						
O30N	Mendenhall	85.33	19	P	P	15 09 30.6	+0.5
	baz=220						
H21K	Melozitna Rive	85.39	10	P	P	15 09 30.5	+0.3
	baz=204						
HDA	Harding Lake	85.42	13	P	P	15 09 30.2	-0.1
	baz=210,SNR=7.4						
NEW	Newport	85.45	36	P	P	15 09 31.5	+0.6
	comp=Z,3.2nm,0.6s,baz=157,slow=5.4,SNR=5.0						
	comp=Z,3.2nm,0.6s						
E17K	Hotham Inlet	85.47	6	P	P	15 09 30.7	+0.2
	baz=196,SNR=8.4						
L27K	Beaver Creek,	85.50	16	P	P	15 09 31.1	+0.3
	baz=215						
XLT	XiLinHaoTe	85.51	319	*e*P	P	15 09 31.6	+0.2
XLT				pmax	pmax		
	comp=Z,43nm,1.0s						
XLT				pmax	pmax		
	comp=Z,170nm,4.5s						
I23K	Minto, Yukon-K	85.56	12	P	P	15 09 31.0	+0.1
	baz=208						
COLA	College	85.63	13	P	P	15 09 30.8	-0.5
	comp=Z,10nm,1.1s						
COLA	College	85.63	13	*ce*P	P	15 09 30.8	-0.5
COLA				pmax	pmax		
	comp=Z,14nm,1.1s						
COLA	College	85.63	13	P	P	15 09 32.1	+0.8
	baz=209						
WHY	Whitehorse	85.64	20	P	P	15 09 31.8	+0.2
	baz=221						
F19K	Shaleruckik Mo	85.72	8	P	P	15 09 31.5	-0.2
	baz=200						
SCRK	Sand Creek	85.72	15	P	P	15 09 32.1	+0.1
	baz=213						
DLBC	Dease Lake	85.72	23	P	P	15 09 32.5	+0.4
	comp=Z,4.4nm,1.0s,baz=217,slow=15,SNR=4.7						
	comp=Z,4.4nm,1.0s						
DLBC	Dease Lake	85.72	23	P	P	15 09 31.6	-0.4
	baz=226						
ILAR	Eielson Array	85.74	13	P	P	15 09 31.3	-0.6
	comp=Z,5.7nm,0.8s,baz=225,slow=5.1,SNR=61						
ILAR				pP	pP	15 11 30.8	-0.2
	comp=Z,4.7nm,1.1s,baz=230,slow=5.4,SNR=5.3						
ILAR				PP	PP	15 12 58.1	-3.6
	comp=Z,2.1nm,0.9s,baz=223,slow=6.8,SNR=4.3						
ILAR				PKiKP	PKiKP	15 14 36.5	-0.2
	comp=Z,0.4nm,0.6s,baz=256,slow=3.0,SNR=4.1						
ILAR				PKKPbc	PKKPbc	15 27 29.6	-3.4
	comp=Z,0.6nm,0.6s,baz=327,slow=2.0,SNR=9.5						
	comp=Z,5.7nm,0.8s						
ILAR	Eielson Array	85.74	13	P	P	15 09 31.6	-0.3
ILAR	Eielson Array	85.74	13	P	P	15 09 31.6	-0.3
H22K	Ishtalitna Cre	85.85	11	P	P	15 09 32.7	+0.3
	baz=206						
M29M	Somme Creek	85.92	17	P	P	15 09 32.9	0.0
	baz=218						
POKR	Poker Flat Res	85.93	13	P	P	15 09 32.2	-0.6
	baz=210						
E18K	Tukpahlearik C	85.93	7	P	P	15 09 32.7	0.0
	baz=197						
D17K	Noatak River	85.94	6	P	P	15 09 32.5	-0.2
	baz=195,SNR=5.3						
J25K	Salcha River,	85.94	14	P	P	15 09 32.8	-0.1
	baz=212,SNR=5.9						
P33M	Teslin, Yukon	85.99	21	P	P	15 09 33.9	+0.6
	baz=223						
TXAR	Lajitas Array	86.03	58	P	P	15 09 36.6	+2.4
	comp=Z,13nm,0.7s,baz=216,slow=6.1,SNR=171						
TXAR				pP	pP	15 11 32.8	-0.2
	comp=Z,0.4nm,0.8s,baz=264,slow=3.8,SNR=1.1						
	comp=Z,13nm,0.7s						
XAN	Xi'an	86.03	307	⇓P	P	15 09 35.0	+1.0
XAN				pmax	pmax		
	comp=Z,150nm,1.2s						
XAN	Xi'an	86.03	307	P	P	15 09 34.7	+0.7
R33M	Jennings River	86.05	22	P	P	15 09 34.4	+0.8
	baz=225						
G21K	Allakaket	86.06	10	P	P	15 09 33.4	0.0
G21K				IAmb	IAmb	15 09 36.3	
	comp=Z,47nm,2.0s						
G21K	Allakaket	86.06	10	P	P	15 09 33.3	-0.1
	baz=204						
SNSI	Sinabang, Aceh	86.06	274	P	P	15 09 37.0	+2.4
	comp=Z,140nm,1.2s						
ANMO	Albuquerque	86.10	52	⇓*e*P	P	15 09 35.4	+0.8
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HIA	Hailar	86.13	325	P	P	15 09 35.0	+0.9
	comp=Z,23nm,1.2s						
F20K	Avaraart Lake	86.21	9	P	P	15 09 34.1	+0.1
	baz=202						
BILL	Bilibino	86.23	354	⇑*e*P	P	15 09 34.4	+0.3
BILL				pmax	pmax		
	comp=Z,18nm,1.3s						
BILL	Bilibino	86.23	354	P	P	15 09 34.5	+0.3
J26L	Joseph Creek	86.26	14	P	P	15 09 34.6	+0.2
J26L	Joseph Creek	86.26	14	P	P	15 09 35.1	+0.6
	baz=213,SNR=11						
HILR	Hailar Array B	86.28	325	P	P	15 09 35.8	+1.0
	comp=Z,10.0nm,0.7s,baz=130,slow=8.0,SNR=19						
	comp=Z,10.0nm,0.7s						
C16K	Lisburne Wells	86.30	5	P	P	15 09 34.3	-0.1
	baz=193						
RDOG	Red Dog Mine	86.30	6	P	P	15 09 34.5	0.0
	baz=195						
E19K	Redstone River	86.38	8	P	P	15 09 35.0	+0.1
	baz=200						
H24K	Noodor Dome	86.47	12	P	P	15 09 35.5	+0.1
	baz=209						
M30M	Minto, Yukon	86.51	18	P	P	15 09 36.0	+0.4
	baz=219,SNR=5.2						
L29M	L29M	86.54	17	P	P	15 09 36.8	+1.1
	baz=218						
MLSI	Meulaboh, Aceh	86.56	276	P	P	15 09 36.8	-0.1
N32M	Quiet Lake	86.59	20	P	P	15 09 37.4	+1.3
	baz=223						
C17K	DeLong Mountai	86.68	6	P	P	15 09 36.6	+0.3
	baz=195						
PRP	Porcupine Dome	86.68	13	P	P	15 09 36.4	-0.1
	baz=211						
F21K	Alatna River	86.71	10	P	P	15 09 36.4	0.0
	baz=204						
G23K	Bananza Creek	86.83	11	P	P	15 09 37.6	+0.6
	baz=207						

M31M Drury Creek, Y 86.95 19 P **P** 15 09 38.1 +0.4
baz=222
HHC Hu-ho-hao-te 87.03 315 *e*P **P** 15 09 39.6 +0.9
HHC pmax pmax
comp=Z,33nm,1.1s
HHC pmax pmax
comp=Z,160nm,5.5s
C18K Utukok River 87.04 6 P **P** 15 09 38.1 +0.1
baz=196
COLD Coldfoot 87.26 11 P **P** 15 09 39.6 +0.6
baz=207,SNR=10
E20K Nigu River 87.27 8 P **P** 15 09 39.6 +0.5
baz=201
K29M Barlow Dome 87.29 17 P **P** 15 09 39.9 +0.5
baz=219
G24K Hadweenzic Riv 87.30 12 P **P** 15 09 39.4 +0.2
baz=210
PDAR Pinedale Array 87.32 43 P **P** 15 09 40.9 +0.7
comp=Z,4.1nm,0.6s,baz=212,slow=3.5,SNR=21
PDAR pP **pP** 15 11 38.8 -1.0
comp=Z,1.7nm,0.9s,baz=195,slow=4.6,SNR=4.4
PDAR PP **PP** 15 13 13.2 -1.8
comp=Z,1.8nm,0.9s,baz=236,slow=6.9,SNR=7.0
PDAR PKKPbc **PKKPbc** 15 27 27.9 -0.6
comp=Z,0.7nm,0.7s,baz=83,slow=5.1,SNR=5.6
PDAR PKPPKP 15 35 35.1
comp=Z,0.4nm,0.8s,baz=353,slow=2.8,SNR=3.5
comp=Z,4.1nm,0.6s
PDAR Pinedale Array 87.32 43 P **P** 15 09 40.0 -0.2
WTLY Watson Lake, Y 87.34 23 P **P** 15 09 40.3 +0.8
baz=227
MAYO Mayo, Yukon 87.56 18 P **P** 15 09 41.2 +0.8
baz=220
J29N Klondike Camp 87.58 16 P **P** 15 09 40.9 +0.3
baz=218,SNR=6.6
KMI2 Kunming 87.61 297 ⇓P **P** 15 09 43.2 +1.3
KMI2 pmax pmax
comp=Z,56nm,0.9s
D20K Etivluk River 87.64 8 P **P** 15 09 41.1 +0.4
baz=201
I27K Kandik River 87.64 14 P **P** 15 09 41.4 +0.5
baz=215
C19K Lookout Ridge 87.66 7 P **P** 15 09 40.9 +0.1
baz=198
E21K Killik River 87.76 9 P **P** 15 09 41.2 -0.1
baz=203
TOAD Toad River Com 87.86 25 P **P** 15 09 42.5 +0.4
baz=230
I28M Miner Creek 87.93 15 P **P** 15 09 42.3 +0.1
baz=216
E23K Chandalar 88.11 10 P **P** 15 09 43.3 +0.3
baz=207
BTO2 Baotou 88.14 314 *e*P **P** 15 09 45.2 +1.3
BTO2 pmax pmax
comp=Z,28nm,1.4s
BTO2 pmax pmax
comp=Z,380nm,6.0s
H27K Steamboat Moun 88.18 14 P **P** 15 09 43.8 +0.4
baz=215
J30M Hart River 88.18 17 P **P** 15 09 44.4 +0.9
J30M IAmb IAmb 15 11 44.4
comp=Z,30nm,2.0s
J30M Hart River 88.18 17 P **P** 15 09 44.1 +0.6
baz=220
I29M Ogilvie Camp, 88.27 16 P **P** 15 09 44.1 +0.3
baz=218
G26K Porcupine Rive 88.27 13 P **P** 15 09 44.4 +0.7
baz=213
D22K Ayikyak River 88.35 9 P **P** 15 09 44.5 +0.5
baz=205
F25K Christian Rive 88.44 12 P **P** 15 09 44.8 +0.2
baz=211
BMAR Burnt Mountain 88.51 12 P **P** 15 09 45.4 +0.5
G27K Doyon Strip 88.63 14 P **P** 15 09 45.8 +0.3
baz=215
I30M Mount Dempster 88.67 16 P **P** 15 09 46.3 +0.5
baz=220
CMAR Chiang Mai Arr 88.68 290 P **P** 15 09 48.0 +1.3
comp=Z,27nm,0.9s,baz=109,slow=3.0,SNR=142
CMAR PP **PP** 15 13 25.6 -0.2
comp=Z,1.8nm,1.0s,baz=116,slow=6.2,SNR=5.3
CMAR PKKPbc **PKKPbc** 15 27 24.5 +0.6
comp=Z,1.6nm,0.7s,baz=281,slow=4.4,SNR=9.8
comp=Z,27nm,0.9s
D23K Nanushuk River 88.74 10 P **P** 15 09 45.8 -0.1
D23K IAmb IAmb 15 09 47.2
comp=Z,14nm,1.0s
D23K Nanushuk River 88.74 10 P **P** 15 09 46.1 +0.3
baz=206
CHTO Chiang Mai 88.79 290 P **P** 15 09 47.8 +0.5
CHTO IAmb IAmb 15 09 49.3
comp=Z,40nm,1.0s
CHTO Chiang Mai 88.79 290 P **P** 15 09 48.2 +0.9
comp=Z,27nm,0.9s
CHTO Chiang Mai 88.79 290 P **P** 15 09 47.8 +0.5
CHTO pmax pmax
comp=Z,40nm,1.0s
CHTO Chiang Mai 88.79 290 P **P** 15 09 47.9 +0.6
comp=Z,46nm,0.9s
CHTO Chiang Mai 88.79 290 P **P** 15 09 47.8 +0.5
CHTO sP **sP** 15 12 43.9 +1.1
F26K Sheenjek River 88.83 12 P **P** 15 09 46.9 +0.6
baz=213
CD2 Chengdu 88.84 303 P **P** 15 09 48.3 +1.0
CD2 pmax pmax
comp=Z,30nm,1.0s
E25K Arctic Village 88.91 12 P **P** 15 09 47.2 +0.5
baz=211
PZH PanZhiHua 88.94 298 P **P** 15 09 48.9 +1.0
KOTAN Kotaneelee Air 89.14 24 P **P** 15 09 48.9 +1.0
baz=231
D24K Happy Valley 89.22 10 P **P** 15 09 48.1 +0.1
D24K Happy Valley 89.22 10 P **P** 15 09 48.7 +0.6
baz=208
ELIB Princess Elisa 89.32 187 *d*P **P** 15 09 49.2 +0.3
comp=Z,40nm,0.8s
YAK Yakutsk 89.35 338 P **P** 15 09 47.8 -1.0
YAK IAmb IAmb 15 09 49.9
comp=Z,17nm,0.7s
YAK Yakutsk 89.35 338 *e*P **P** 15 09 47.8 -1.0
YAK *e*S **SKSac** 15 19 25.8 -0.1
YAK *e* 15 19 46.3
YAK *e*SS **SS** 15 26 06.3 +2.1
YAK pmax pmax
comp=Z,13nm,0.8s
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK pmax pmax
comp=Z,215nm,5.3s
YAK pmax pmax
comp=E,94nm,4.6s
YAK pmax pmax
comp=N,155nm,5.8s
YAK smax smax
comp=N,47nm,1.9s
YAK smax smax
comp=E,59nm,3.5s
G29M Pine Creek 89.57 15 P **P** 15 09 50.1 +0.4
baz=218
H31M Peel River 89.67 17 P **P** 15 09 50.7 +0.4
baz=222
F28M Old Crow 89.69 14 P **P** 15 09 50.6 +0.3
baz=216
D25K Kavik River 89.79 11 P **P** 15 09 50.5 -0.3
baz=210
G30M tAoh Zraii Nji 90.07 15 P **P** 15 09 52.0 -0.1
baz=220
A21K Barrow 90.09 7 P **P** 15 09 52.2 +0.1
baz=201
G31M Satah River 90.53 16 P **P** 15 09 54.7 +0.6
baz=222
C27K Jago River 90.55 12 P **P** 15 09 54.6 +0.3
baz=213
E28M Babbage River 90.56 13 P **P** 15 09 54.4 0.0
E28M IAmb IAmb 15 09 55.0
comp=Z,23nm,1.7s
E28M Babbage River 90.56 13 P **P** 15 09 54.8 +0.5
baz=217
C26K Camden Bay 90.57 11 P **P** 15 09 55.3 +1.1
baz=212
LZH Lanzhou 90.66 308 *e*P **P** 15 09 57.1 +1.4
LZH pP pP 15 12 00.1 +3.3
LZH PP **PP** 15 13 41.2 -0.1
LZH pmax pmax
comp=Z,83nm,1.4s
F30M Barrier River 90.66 15 P **P** 15 09 55.2 +0.4
baz=220

LZDM Lanzhou Array 90.72 308 P **P** 15 09 57.5 +1.3
comp=Z,36nm,1.0s,baz=114,slow=3.6,SNR=28
comp=Z,36nm,1.0s
E29M Blow River 90.76 14 P **P** 15 09 55.3 +0.1
baz=218
D27M Malcolm River 90.77 13 P **P** 15 09 55.4 0.0
baz=216
SNAA Sanae 90.78 179 ⇓P **P** 15 09 55.9 +0.3
comp=Z,270nm,0.5s
SNAA Sanae 90.78 179 P **P** 15 09 56.1 +0.5
comp=Z,10nm,0.6s,baz=205,slow=8.8,SNR=25
comp=Z,10nm,0.6s
SNAA Sanae 90.78 179 P **P** 15 09 56.1 +0.5
SNAA IAmb IAmb 15 09 56.7
comp=Z,39nm,1.3s
SNAA Sanae 90.78 179 *ce*P **P** 15 09 56.0 +0.4
SNAA pmax pmax
comp=Z,16nm,1.1s
CIT Chita 90.92 325 *e*P **P** 15 09 56.4 0.0
CIT pmax pmax
comp=Z,74nm,1.3s
VNA3 Neumayer Olymp 90.93 176 ⇓P **P** 15 09 57.3 +1.1
comp=Z,51nm,0.6s
F31M Tsiigehtchic 91.05 16 P **P** 15 09 56.6 +0.1
baz=222
WRGLY Wrigley 91.31 22 P **P** 15 09 58.1 +0.3
baz=231
VNA2 Neumayer--Watz 91.37 177 ⇓P **P** 15 09 58.9 +0.7
comp=Z,21nm,0.9s,baz=181,slow=4.5
NVL N'lazarevskaya 91.44 183 *e*P **P** 15 09 54.3 -4.2
NVL pmax pmax
comp=Z,14nm,0.8s
PLCA Paso Flores 91.57 134 P **P** 15 10 00.9 +1.0
comp=Z,6.8nm,0.9s,baz=204,slow=2.4,SNR=7.2
comp=Z,6.8nm,0.9s
PLCA Paso Flores 91.57 134 P **P** 15 10 00.4 +0.6
PLCA IAmb IAmb 15 10 02.9
comp=Z,18nm,1.2s
PLCA Paso Flores 91.57 134 P **P** 15 10 00.4 +0.6
PLCA pmax pmax
comp=Z,18nm,1.3s
VNA1 Neumayer--Stat 91.60 177 ⇓P **P** 15 10 00.6 +1.4
comp=Z,53nm,1.0s
INK Inuvik 91.75 15 P **P** 15 09 59.7 0.0
comp=Z,5.3nm,0.7s,baz=244,slow=3.9,SNR=20
comp=Z,5.3nm,0.7s
INK Inuvik 91.75 15 P **P** 15 09 59.9 +0.2
baz=222
ULN Ulaanbaatar 92.92 320 *d*↓P **P** 15 10 05.6 -0.2
ULN pmax pmax
comp=Z,18nm,0.9s
ULN Ulaanbaatar 92.92 320 P **P** 15 10 05.7 -0.1
SONM Songino Array 93.31 319 P **P** 15 10 07.2 -0.4
comp=Z,4.7nm,0.8s,baz=132,slow=4.4,SNR=19
SONM PKKPbc **PKKPdf** 15 27 12.0 +0.1
comp=Z,1.0nm,0.7s,baz=129,slow=2.1,SNR=3.8
comp=Z,4.7nm,0.8s
SONM Songino Array 93.31 319 P **P** 15 10 06.9 -0.7
SONM IAmb IAmb 15 10 08.6
comp=Z,11nm,1.1s
SONM Songino Array 93.31 319 P **P** 15 10 06.9 -0.7
SONM pmax pmax
comp=Z,11nm,1.1s
YKA Yellowknife Ar 94.23 25 P **P** 15 10 11.3 +0.1
comp=Z,1.6nm,0.7s,baz=256,slow=4.7,SNR=36
YKA pP **pP** 15 12 10.1 -1.7
comp=Z,0.1nm,0.4s,baz=249,slow=5.5,SNR=1.8
YKA PP **PP** 15 14 03.8 -4.2
comp=Z,1.1nm,1.0s,baz=251,slow=7.8,SNR=4.1
YKA PKKPbc **PKKPdf** 15 27 09.1 -1.3
comp=Z,0.3nm,0.5s,baz=26,slow=2.7,SNR=7.7
YKA PKPPKP **P'P'df** 15 35 22.0 +2.8
comp=Z,0.3nm,0.8s,baz=38,slow=2.5,SNR=4.1
comp=Z,1.6nm,0.7s
GTA2 Gaotai 94.86 310 P **P** 15 10 15.2 +0.3
GTA2 pmax pmax
comp=Z,16nm,1.2s
C36M Paulatuk 94.96 17 P **P** 15 10 14.4 +0.1
baz=231
TIXI Tiksi 95.94 345 P **P** 15 10 18.0 -0.7
TIXI IAmb IAmb 15 10 18.7
comp=Z,6.7nm,0.8s
TIXI Tiksi 95.94 345 ⇓*e*P **P** 15 10 17.6 -1.2
TIXI pmax pmax
comp=Z,6.0nm,0.9s
ZAK Zakamensk 96.15 321 *e*P **P** 15 10 19.7 -0.7
ZAK pmax pmax
comp=Z,6.0nm,1.3s
A36M Sachs Harbour 96.34 15 P **P** 15 10 20.5 0.0
baz=230
TLY Talaya 96.39 322 P **P** 15 10 20.5 -0.8
TLY Talaya 96.39 322 *ce*P **P** 15 10 21.0 -0.3
TLY pmax pmax
comp=Z,4.0nm,0.9s
KNGR Kungurtug, Tuv 99.72 320 ⇓*e*P **Pdif** 15 10 36.6 +0.3
KNGR pmax pmax
comp=Z,3.0nm,1.2s
LPAZ La Paz 103.61 112 Pdiff **Pdif** 15 10 58.4 +3.4
comp=Z,1.0nm,0.3s,baz=248,slow=3.0,SNR=6.1
LPAZ PKKPbc **PKKPbc** 15 26 44.6 -0.3
comp=Z,1.0nm,0.8s,baz=290,slow=2.5,SNR=4.8
NRIK Noril'sk 107.80 338 PKiKP **PKiKP** 15 15 15.6 0.0
comp=Z,2.1nm,0.5s,baz=85,slow=4.1,SNR=6.2
ZALV Zalesovo Beam 108.00 322 Pdiff **Pdif** 15 11 13.6 +0.7
comp=Z,0.6nm,0.6s,baz=116,slow=9.1,SNR=3.6
ZALV PKiKP **PKiKP** 15 15 15.6 -0.7
comp=Z,6.0nm,0.6s,baz=142,slow=0.5,SNR=30
MKAR Makanchi Array 108.90 314 Pdiff **Pdif** 15 11 17.7 +0.6
comp=Z,0.6nm,0.6s,baz=93,slow=5.3,SNR=7.0
MKAR PKiKP **PKiKP** 15 15 17.5 -0.8
comp=Z,6.1nm,0.5s,baz=72,slow=3.0,SNR=40
MKAR PKKPbc **PKKPbc** 15 26 28.6 -0.1
comp=Z,1.6nm,0.9s,baz=255,slow=3.4,SNR=11
KURK Kurchatov 111.59 318 *d*↓PKiKP **PKiKP** 15 15 22.2 -1.0
KURK pmax pmax
comp=Z,14nm,1.0s
KURBB Kurchatov Arra 111.64 318 PKiKP **PKiKP** 15 15 22.5 -0.8
comp=Z,9.0nm,0.7s,baz=92,slow=1.8,SNR=84
KURBB PKKPbc **PKKPbc** 15 26 20.1 +0.1
comp=Z,2.3nm,0.9s,baz=271,slow=4.2,SNR=11
TULEG Thule 111.69 14 *i*P **PKiKP** 15 15 22.6 -0.1
KSH2 Kashi 113.13 306 PKP **PKiKP** 15 15 27.2 +0.5
TKM2 Tokmak 2 113.35 310 P **PKiKP** 15 15 26.5 -0.6
SNR=15
KBK Karagaybulak 113.81 309 P **PKiKP** 15 15 27.8 -0.1
SNR=8.5
CHMS Chumysh 113.97 310 P **PKiKP** 15 15 27.7 -0.3
SNR=6.7
UCH Uchtor 114.12 309 P **PKiKP** 15 15 29.4 +0.5
SNR=11
AAK Ala-Archa 114.15 309 P PKPdf 15 15 28.1 -0.5
SNR=6.5
AAK Ala-Archa 114.15 309 *c*↓PKiKP PKPdf 15 15 28.2 -0.4
AAK pmax pmax
comp=Z,7.0nm,1.3s
USP Ospenovka 114.17 310 P PKPdf 15 15 28.1 -0.3
SNR=14
EKS2 Erkin-Say 114.68 309 P PKPdf 15 15 29.5 0.0
SNR=8.5
NEEM North Greenlan 114.97 11 *i*P PKPdf 15 15 29.2 -0.2
KULLO Kullorsuaq 115.10 15 *i*P **PKPdf** 15 15 28.9 -0.4
UPNV Upernavik 116.17 16 *i*P **PKPdf** 15 15 31.3 -0.1
BVAR Borovoye Array 116.61 321 PKiKP **PKPdf** 15 15 32.3 -0.5
comp=Z,15nm,0.4s,baz=116,slow=1.5,SNR=91
BORK Borovoye 116.65 321 *d*↓PKiKP **PKPdf** 15 15 32.2 -0.6
BORK pmax pmax
comp=Z,36nm,1.7s
NUUG Nuugaatsiaq 117.55 17 *i*P **PKPdf** 15 15 33.8 -0.2
SPITS Spitsbergen Ar 119.08 357 PKP **PKPdf** 15 15 36.6 -0.3
comp=Z,11nm,0.6s,baz=75,slow=4.4,SNR=28
ILULI Ilulissat 119.31 19 *i*P **PKPdf** 15 15 37.0 -0.4
DAG Danmarks Havn 120.04 5 *i*P **PKPdf** 15 15 37.6 -1.1
SFJD Kangerlussuaq 120.57 21 *i*P **PKPdf** 15 15 39.5 -0.4
SUMG Summit 120.59 13 *i*P **PKiKP** 15 15 40.6 +0.1
BDFB Brasilia 121.06 121 PKP **PKPdf** 15 15 42.5 -0.1
comp=Z,6.0nm,1.0s,baz=179,slow=1.4,SNR=4.5
BDFB PKKPbc **PKKPbc** 15 25 46.7 -0.6
comp=Z,6.3nm,0.8s,baz=83,slow=3.2,SNR=7.3
DBG Daneborg 122.16 7 *i*P **PKPdf** 15 15 42.5 -0.3
OPO Ambohidratompo 122.34 234 PKP **PKiKP** 15 15 45.8 +0.5
comp=Z,4.4nm,0.9s,baz=186,slow=7.6,SNR=5.1
ARTI Arti 122.72 326 *i*PKiKP **PKPdf** 15 15 44.2 -0.2
ARTI 15 17 32.0
ARTI 15 22 03.5
ARTI SS SS 15 33 36.0 +4.3
SCO Scoresbysund 125.38 9 *i*P **PKiKP** 15 15 49.5 -0.1
NRS Narsarsuaq 125.50 26 *i*P **PKPdf** 15 15 49.3 -0.3

ARCES ARCESS Array B 126.11 350 PKP **PKPdf** 15 15 50.3 -0.2
comp=Z,18nm,0.8s,baz=25,slow=1.4,SNR=24
BOSA Boshof 128.49 207 PKP **PKiKP** 15 15 57.5 +0.2
comp=Z,8.8nm,0.8s,baz=146,slow=1.5,SNR=11
KLMR Klimovskoe 129.13 337 *e*PKiKP **PKPdf** 15 15 55.3 -1.2
KLMR *e* 15 18 05.5
KLMR pmax pmax
comp=Z,51nm,1.5s
FINES FINESS Array B 132.97 344 PKhKP PKPpre 15 15 55.2
comp=Z,1.9nm,0.5s,baz=1.9,slow=0.3,SNR=10
FINES PKP **PKPdf** 15 16 04.2 +0.4
comp=Z,9.4nm,0.8s,baz=84,slow=1.7,SNR=7.2
FINES SKPbc **SKPab** 15 18 42.7 +0.1
comp=Z,2.4nm,0.7s,baz=105,slow=2.2,SNR=4.2
MOS Moscow 133.20 333 *i* PKiKP **PKPdf** 15 15 59.8 -4.5
MOS *e* 15 18 37.9
VRH Novokhopyorsk 133.84 326 *e*PKiKP **PKPdf** 15 16 05.7 0.0
VRH pmax pmax
comp=Z,30nm,0.6s
AKT Akhty 133.98 311 *e*PKiKP **PKPdf** 15 16 05.5 -1.0
AKT pmax pmax
comp=Z,23nm,1.0s
LPSR Galich'ya Gora 134.51 329 *e*PKiKP **PKPdf** 15 16 06.6 -0.3
LPSR pmax pmax
comp=Z,23nm,1.0s
VORR Voronezh 134.90 327 *e*PKiKP **PKPdf** 15 16 06.9 -0.8
VORR pmax pmax
comp=Z,60nm,0.4s
VSR Storozhevoye 135.18 327 *e*PKiKP **PKPdf** 15 16 07.8 -0.4
VSR pmax pmax
comp=Z,30nm,1.2s
NB2 NORSAR Subarra 136.18 353 PKP PKPpre 15 15 59.7
comp=Z,7.5nm,0.7s,baz=15,slow=4.0
NOA NORSAR Array B 136.18 353 PKhKP PKPpre 15 15 59.5
comp=Z,1.7nm,0.6s,baz=5.5,slow=2.5,SNR=6.0
NOA PKP **PKPdf** 15 16 10.0 +0.1
comp=Z,5.2nm,0.7s,baz=14,slow=4.0,SNR=11
KBZ Khabaz 136.57 316 PKhKP PKPpre 15 16 04.0
comp=Z,2.5nm,0.9s,baz=360,slow=17,SNR=2.4
KBZ PKP **PKiKP** 15 16 12.0 -0.9
comp=Z,6.0nm,0.8s,baz=339,slow=0.5,SNR=6.5
KIV Kislovodsk 136.62 316 *e*PKiKP **PKPdf** 15 16 11.0 -0.3
KIV pmax pmax
comp=Z,12nm,1.1s
HFS Hagfors 136.73 351 PKhKP PKPpre 15 15 58.2
comp=Z,4.6nm,0.7s,baz=56,slow=0.5,SNR=11
HFS PKP **PKiKP** 15 16 12.3 -0.4
comp=Z,14nm,0.8s,baz=107,slow=1.5,SNR=6.8
MNK Minsk 138.03 337 *i* PKiKP **PKiKP** 15 16 14.8 -0.7
comp=E,21nm,0.7s
MNK *i* PKiKP **PKiKP** 15 16 14.8 -0.7
comp=N,32nm,1.0s
MNK *i* PKiKP **PKiKP** 15 16 14.8 -0.7
comp=Z,24nm,0.9s,baz=39
MNK *i* pPKiKP **pPKPdf** 15 18 23.0 +0.6
MNK *i* PP **PP** 15 19 09.0 +0.1
MNK *i* SKP 15 19 28.8
MNK *i* PKS PKSdf 15 19 59.3 +10
MNK *i* PPP PPP 15 21 45.6
MNK *i* SKS **SKSdf** 15 22 30.5 -1.2
MNK *i* SS **SS** 15 36 38.6 +2.6
MNK *i* SSS SSS 15 41 57.8
MNK Minsk 138.03 337 *i* PKiKP **PKiKP** 15 16 14.8 -0.7
MNK *i* 15 18 23.0
MNK *i* 15 19 09.0
MNK *i* 15 22 30.4
MNK *i* SS SS 15 36 38.5 +2.5
MNK *i* SSS SSS 15 41 57.8
MNK pmax pmax
comp=Z,24nm,0.9s
MNK pmax pmax
comp=E,21nm,0.7s
MNK pmax pmax
comp=N,32nm,1.0s
RAYN Ar Rayn 138.47 286 ⇓PKiKP **PKPdf** 15 16 15.3 +0.1
BORU Boraas 139.27 351 *i* P PKPpre 15 16 06.9
ONAU Onsala 139.62 351 *i* P PKPpre 15 16 08.3
FABU Falkenberg 139.88 350 *i* P PKPpre 15 16 09.7
BLEU Blekinge 139.98 348 *i* P PKPpre 15 16 10.4
DEL Delary 140.19 349 *i* P PKPpre 15 16 10.6
AKASG Malin Array Be 140.33 332 PKhKP PKPpre 15 16 10.7
comp=N,4.9nm,0.5s,baz=43,slow=4.1,SNR=23
AKASG PKP **PKiKP** 15 16 19.9 -0.5
comp=N,11nm,0.5s,baz=41,slow=2.9,SNR=14
AK01 Malin Array Si 140.34 332 PKP PKPpre 15 16 10.2
KIEV Kiev 140.34 332 ⇑P PKPpre 15 16 09.8
KIEV Kiev 140.34 332 ⇑PKHKP PKPpre 15 16 09.8
AK22 Malin Array Si 140.35 332 PKP PKPpre 15 16 10.4
AK21 Malin Array Si 140.35 333 PKP PKPpre 15 16 10.4
LUNU Lund 141.07 349 *i* P PKPpre 15 16 12.6
RNPP9 Sopachiv 141.19 336 PKP PKPpre 15 16 14.0
IDGL Inch Island, C 142.09 8 PKPdf **PKPdf** 15 16 18.0 -2.7
EKA Eskdalemuir Ar 142.30 4 PKhKP PKPpre 15 16 16.7
comp=N,8.4nm,0.8s,baz=347,slow=2.7,SNR=12
SORM Soroca 142.56 330 ⇑P **PKPdf** 15 16 18.9 -2.8
SORM Soroca 142.56 330 ⇑PKHKP PKPpre 15 16 18.9
EDMD Edmundbyers 142.87 3 *e*P **PKPdf** 15 16 19.4 -2.7
PURM Purcari 142.89 327 ⇑P **PKPdf** 15 16 21.1 -1.3
BZK Bozkurt 143.19 318 ⇑P **PKPdf** 15 16 22.5 -0.5
BSEG Bad Segeberg 143.21 351 *e*PKPbc PKPbc 15 16 21.3 +0.4
baz=16,slow=2.9
ILTH Belurgan, Co L 143.27 8 PKPdf PKPab 15 16 20.8 0.0
ILTH Belurgan, Co L 143.27 8 *e*P PKPab 15 16 20.7 -0.1
IGLA Glengowla, Co 143.39 11 PKPdf PKPab 15 16 21.4 +0.1
VASR Vaslui 143.87 329 ⇑P **PKPdf** 15 16 24.2 +0.1
GORT1 Trebel 143.97 350 *e*PKPbc **PKPdf** 15 16 24.0 +0.1
baz=16,slow=2.9
RUE Ruedersdorf 143.98 347 *e*PKPbc **PKPdf** 15 16 23.9 -0.1
baz=16,slow=2.9
DSB Dublin 144.03 8 PKPdf **PKPab** 15 16 23.7 -0.1
PRAR RASCA 144.11 331 ⇑P **PKPdf** 15 16 24.6 +0.1
BIR Birlad 144.22 328 ⇑P **PKPab** 15 16 26.0 +1.3
BIR Birlad 144.22 328 ⇑PKiKP **PKPab** 15 16 26.0 +1.3
WLF1 Llynfaes 144.22 6 *e*P PKPbc 15 16 23.3 -0.8
GIRR Girov 144.28 330 ⇑P **PKPab** 15 16 25.2 +0.3
VLDR Vladesti 144.28 328 ⇓P **PKPab** 15 16 25.6 +0.6
LBWR Ladybower, Pea 144.31 3 *e*P PKPbc 15 16 24.1 -0.3
TLCR 144.34 326 ⇓P **PKPab** 15 16 25.2 0.0
TLCR 144.34 326 ⇓PKiKP **PKPab** 15 16 25.2 0.0
VARL Varlezi 144.36 328 ⇓P **PKPab** 15 16 25.8 +0.6
BURAR Bucovina Array 144.38 332 ⇓P **PKPab** 15 16 25.6 +0.1
BURAR Bucovina Array 144.38 332 ⇓PKiKP **PKPab** 15 16 25.6 +0.1
SCTR Scanteiesti 144.44 327 ⇑P **PKPab** 15 16 26.1 +0.5
TATR Tatarca 144.46 327 ⇓P **PKPab** 15 16 26.7 +1.0
GHRR 144.47 328 ⇑P **PKPab** 15 16 27.0 +1.4
RETH Rethem/Aller, 144.51 352 *e*PKPbc **PKPab** 15 16 25.4 -0.1
baz=16,slow=2.9
TESR Tescani 144.52 330 ⇓P **PKPab** 15 16 25.8 -0.1
BR131 Keskin Array S 144.54 315 *d*↓PKiKP **PKPdf** 15 16 24.8 -0.9
BRTR Keskin Array B 144.54 315 PKP PKPbc 15 16 26.1 +0.2
comp=N,58nm,0.8s,baz=140,slow=4.3,SNR=192
STHS Stebnicka Huta 144.56 338 *e*PKiKP PKPbc 15 16 25.6 +0.2
STHS Stebnicka Huta 144.56 338 *e*PKP PKPbc 15 16 25.6 +0.2
JURR Jurilovca 144.58 325 ⇑P **PKPab** 15 16 26.4 +0.3
NEGRR Negrea 144.59 327 ⇓P **PKPab** 15 16 26.6 +0.4
STNC Stoke 144.59 4 *e*P **PKPab** 15 16 26.1 +0.2
FLTG Flechtingen 144.61 350 *e*PKPbc PKPbc 15 16 25.3 -0.1
baz=16,slow=2.9
VAL Valentia 144.63 12 PKPdf **PKPab** 15 16 25.9 -0.1
KIRS Kirsehir-Merke 144.64 314 ⇓P **PKPab** 15 16 26.4 -0.3
IZVR Izvoarele 144.64 327 ⇑P **PKPab** 15 16 27.0 +0.7
TUDR 144.66 328 ⇑P **PKiKP** 15 16 28.3 -1.1
SCHLR Schela 144.66 327 ⇑P **PKPab** 15 16 26.8 +0.4
CFR Carcaliu 144.70 327 ⇓P **PKPab** 15 16 26.3 -0.2
CFR Carcaliu 144.70 327 ⇓PKiKP **PKPab** 15 16 26.3 -0.2
FOEL Foel Wylfa 144.72 5 *e*P **PKPdf** 15 16 25.0 -0.4
PANC Paniu 144.73 328 ⇓P **PKPab** 15 16 25.9 0.0
TPGR Topolog 144.76 326 ⇑P **PKPab** 15 16 27.0 +0.1
ONER Baraj Valea Uz 144.77 330 ⇓P **PKPab** 15 16 27.2 +0.4
IWEX Carrickbyrne, 144.82 9 PKPdf PKPbc 15 16 26.0 0.0
IWEX Carrickbyrne, 144.82 9 *e*P **PKPdf** 15 16 25.7 +0.2
ODBI Odobesti 144.85 328 ⇑P **PKPab** 15 16 28.3 +1.2
ASSE Asse, Remlinge 144.90 350 *e*PKPbc PKPbc 15 16 26.6 +0.4
baz=16,slow=2.9
JOSR Joseni 144.92 331 ⇑P **PKPab** 15 16 27.6 +0.1
VRI Vrincioaia 144.94 329 ⇑P **PKPbc** 15 16 26.9 +0.3
VRI Vrincioaia 144.94 329 ⇑PKiKP **PKPbc** 15 16 26.9 +0.2
PLOR Plostina 144.99 329 ⇑P **PKPab** 15 16 27.5 -0.3
PLOR Plostina 144.99 329 ⇑PKiKP **PKPab** 15 16 27.5 -0.3
TIRR Tirgusor 145.03 325 ⇑P **PKPdf** 15 16 25.7 -0.4
TIRR Tirgusor 145.03 325 ⇑PKiKP **PKPdf** 15 16 25.7 -0.4
BMR Baia Mare 145.08 334 ⇓P **PKPab** 15 16 27.6 -0.4
BMR Baia Mare 145.08 334 ⇓PKiKP **PKPab** 15 16 27.6 -0.4

HLM1	Long Mynd	145.12	5	eP	PKPbc	15 16 26.6	-0.4	
IBBN	Ibbenburen	145.13	353	ePKPbc	PKPab	15 16 27.5	-0.5	
	baz=16,slow=2.9							
EFOR	EFORIE	145.16	325	⇑P	PKPab	15 16 28.6	+0.2	
TURR	Turia	145.16	330	⇓P	PKiKP	15 16 30.4	-0.1	
TLBR	Topalu	145.17	326	⇓P	PKPab	15 16 28.2	-0.2	
OSTC	Ostas	145.17	343	⇑ePKP	PKPab	15 16 28.6	+0.3	
OSTC	Ostas	145.17	343	ePKIKP	PKPab	15 16 28.6	+0.3	
CHVC	Chvalec	145.19	344	⇑ePKP	PKPab	15 16 29.3	+1.0	
CHVC	Chvalec	145.19	344	ePKIKP	PKPab	15 16 29.3	+1.0	
MFTR	Murfatlar	145.21	325	⇑P	PKPab	15 16 28.5	-0.1	
COVR	Voineasa-Covas	145.22	329	⇑P	PKPbc	15 16 27.9	+0.4	
CLZ	Clausthal	145.23	350	ePKPbc	PKPbc	15 16 27.7	+0.3	
	baz=16,slow=2.9							
OZUR		145.24	330	⇑P	PKPbc	15 16 27.9	+0.3	
OKC	Ostrava-Krasne	145.25	341	⇑ePKP	PKPab	15 16 28.2	-0.3	
OKC	Ostrava-Krasne	145.25	341	ePKIKP	PKPab	15 16 28.2	-0.3	
CLL	Collm	145.25	347	⇓iPKIKP	PKPbc	15 16 27.7	+0.3	
CLL				pmax	pmax			
	comp=Z,143nm,0.7s							
CLL	Collm	145.25	347	⇓iPKPbc	PKPbc	15 16 27.7	+0.3	
	comp=Z,143nm,0.7s							
CLL	Collm	145.25	347	ePKPbc	PKPbc	15 16 27.7	+0.3	
	baz=16,slow=2.9							
ZAHL	Zahle	145.27	304	eP	PKPbc	15 16 28.5	+0.4	
UPC	Upice	145.27	344	⇑ePKP	PKPab	15 16 28.3	-0.3	
UPC	Upice	145.27	344	ePKIKP	PKPab	15 16 28.3	-0.3	
STEB	Steborice	145.28	341	⇑ePKP	PKPab	15 16 28.1	-0.6	
DPC	Dobruska-Polom	145.33	343	⇑ePKP	PKPab	15 16 28.6	-0.3	
DPC	Dobruska-Polom	145.33	343	ePKP2	PKPab	15 16 28.6	-0.3	
MANR	Mangalia	145.35	324	⇓P	PKPab	15 16 28.5	-0.6	
RCY	Rachaya	145.42	304	eP	PKPbc	15 16 29.2	+0.6	
BHL	Bhannes	145.43	304	eP	PKPbc	15 16 29.0	+0.4	
BRG	Berggiesshubel	145.45	346	ePKPbc	PKPbc	15 16 28.6	+0.6	
	baz=16,slow=2.9							
BRG	Berggiesshubel	145.45	346	ePKP	PKPbc	15 16 27.5	-0.5	
BRG				Amp		15 16 29.6		
	comp=Z,60nm,0.8s							
NEHR	Nehoiu	145.47	329	⇓P	PKPab	15 16 29.2	-0.4	
MORC	Moravsky Berou	145.49	341	⇑P	PKPbc	15 16 27.8	-0.4	
MORC	Moravsky Berou	145.49	341	⇑PKIKP	PKPbc	15 16 27.8	-0.4	
MORC	Moravsky Berou	145.49	341	ePKP	PKPdf	15 16 27.5	+0.7	
AMRR	Amara	145.50	327	⇑P	PKPab	15 16 29.3	-0.4	
AMRR	Amara	145.50	327	⇑PKP2	PKPab	15 16 29.3	-0.4	
DOPR	Dopca	145.52	330	⇓P	PKPab	15 16 29.6	-0.2	
QRWL	Qaraoun	145.53	304	eP	PKPbc	15 16 29.5	+0.7	
ISR	Istrita	145.56	328	⇑P	PKPbc	15 16 28.3	-0.2	
ISR	Istrita	145.56	328	⇑PKIKP	PKPbc	15 16 28.3	-0.2	
DQRL	Deir Qamar	145.56	304	eP	PKPbc	15 16 29.6	+0.6	
GTTG	Gottingen	145.58	351	ePKPbc	PKPbc	15 16 28.9	+0.6	
	baz=16,slow=2.9							
ICOR	Ion Corvin	145.59	326	⇑P	PKPab	15 16 29.4	-0.6	
NEUB	Neuenburg	145.59	348	ePKPbc	PKPbc	15 16 28.8	+0.5	
	baz=16,slow=2.9							
MLR	Muntele Rosu	145.60	329	⇓P	PKPbc	15 16 29.2	+0.4	
MLR	Muntele Rosu	145.60	329	PKP2	PKPbc	15 16 29.2	+0.4	
KECS	Kecovo	145.62	337	ePKP2	PKPab	15 16 29.4	-0.7	
KECS	Kecovo	145.62	337	ePKP	PKPab	15 16 29.4	-0.7	
MCH1	Michaelchurch	145.62	5	eP	PKPbc	15 16 28.3	-0.1	
PVCC	Panska Ves	145.62	345	⇑ePKP	PKPab	15 16 29.5	-0.5	
PVCC	Panska Ves	145.62	345	ePKP2	PKPab	15 16 29.5	-0.5	
RICC	Richard	145.72	346	⇑ePKP	PKPbc	15 16 29.5	+0.8	
MESR	Meseseni	145.72	334	⇑P	PKPab	15 16 30.9	+0.4	
MAUC	Maruska	145.76	341	⇑ePKP	PKPab	15 16 30.0	-0.6	
CJR	Cluj-Napoca	145.78	333	⇓P	PKPbc	15 16 30.0	+0.9	
CJR	Cluj-Napoca	145.78	333	⇓PKP2	PKPbc	15 16 30.0	+0.9	
MONM	Monmouth	145.79	5	eP	PKPbc	15 16 28.6	-0.3	
HSKC	Hora Svate Kat	145.82	346	⇓ePKP	PKPbc	15 16 30.5	+0.4	
MDB	Medias	145.87	331	⇑P	PKPab	15 16 30.7	-0.4	
MDB	Medias	145.87	331	⇑PKP2	PKPab	15 16 30.7	-0.4	
STRD	Stroud	145.90	4	eP	PKPbc	15 16 29.0	-0.2	
MMAI	Mount Meron Ar	145.91	303	PKPbc	PKPbc	15 16 30.8	+0.8	
	comp=Z,73nm,0.6s,baz=41,slow=7.7,SNR=92							
LTVH	Ltavrtes, Hu	145.97	335	⇑P	PKPab	15 16 30.7	-0.8	
MARR	Marisel-Cluj	146.02	333	⇓P	PKPbc	15 16 30.3	+0.4	
BUG	Bochum--Univer	146.04	353	ePKPbc	PKPbc	15 16 30.6	+1.0	
	baz=16,slow=2.9							
VOIR		146.07	330	⇓P	PKPbc	15 16 30.1	+0.1	
VOIR		146.07	330	⇓PKIKP	PKPbc	15 16 30.1	+0.1	
DRGR		146.11	333	⇓P	PKPbc	15 16 30.5	+0.5	
DRGR		146.11	333	⇓PKP2	PKPbc	15 16 30.5	+0.5	
PRU	Pruhonice	146.13	345	⇑ePKP	PKPbc	15 16 30.7	+0.8	
PRU	Pruhonice	146.13	345	ePKP2	PKPbc	15 16 30.7	+0.8	
KASTN	Kahler Asten	146.14	352	ePKPdf	PKPbc	15 16 29.0	-1.0	
	baz=20,slow=1.6							
KASTN				ePKPbc	PKPab	15 16 30.4	-1.6	
	baz=16,slow=2.9							
MOX	Moxa	146.16	348	ePKPdf	PKPdf	15 16 28.8	+0.9	
	baz=20,slow=1.6							
MOX				ePKPbc	PKPbc	15 16 30.6	+0.6	
	baz=16,slow=2.9							
VRAC	Vranov	146.19	342	⇓P	PKPbc	15 16 30.2	+0.1	
VRAC	Vranov	146.19	342	⇓PKIKP	PKPbc	15 16 30.2	+0.1	
VRAC	Vranov	146.19	342	ePKP	PKPdf	15 16 28.4	+0.4	
PLN	Plauen	146.20	348	ePKPdf	PKPbc	15 16 29.2	-0.9	
	baz=20,slow=1.6							
PLN				ePKPbc	PKPab	15 16 30.8	-1.5	
	baz=16,slow=2.9							
TANN	Tannenbergstha	146.21	347	ePKPbc	PKPbc	15 16 30.6	+0.4	
	baz=16,slow=2.9							
JAVC	Velka Javorina	146.26	341	ePKP	PKPbc	15 16 29.9	-0.5	
UBBA	Unterbreizbach	146.28	350	ePKPbc	PKPbc	15 16 30.6	+0.5	
	baz=16,slow=2.9							
TNR	Turnu Rosu	146.28	331	⇑P	PKPbc	15 16 30.8	+0.3	
TNR	Turnu Rosu	146.28	331	⇑PKP2	PKPbc	15 16 30.8	+0.3	
PSZ	Piszkesteto	146.31	337	⇓P	PKPbc	15 16 31.1	+0.5	
PSZ	Piszkesteto	146.31	337	⇓PKP2	PKPbc	15 16 31.1	+0.5	
SILT	Sile	146.37	320	⇓P	PKPbc	15 16 31.1	+0.2	
WOL	Wolverton	146.42	3	eP	PKPbc	15 16 30.0	-0.7	
PRD	Provadia	146.43	325	P	PKPbc	15 16 31.8	+0.9	
NEF	NEVSHA	146.43	325	P	PKPbc	15 16 31.8	+0.8	
KRUC	Moravsky	146.47	342	ePKP	PKPdf	15 16 28.8	+0.4	
SMOL	Smolenice	146.64	341	ePKP2	PKiKP	15 16 32.9	-0.5	
RAZG	Razgrad	146.65	326	⇑P	PKPbc	15 16 32.5	+0.9	
ELSH	Elham, Standar	146.65	0	eP	PKPbc	15 16 31.0	-0.3	
LOT	Lotru	146.67	331	⇑P	PKPbc	15 16 31.8	0.0	
MANZ	Manzenberg	146.69	347	ePKPdf	PKPdf	15 16 29.6	+0.7	
	baz=20,slow=1.6							
MANZ				ePKPbc	PKPbc	15 16 32.2	+0.7	
	baz=16,slow=2.9							
ZVC	Zvikov	146.72	345	⇑ePKP	PKPbc	15 16 32.2	+0.6	
LOZB	Loznitsa	146.74	326	⇑P	PKPbc	15 16 32.5	+0.7	
HUMR	Humele	146.76	329	⇑P	PKPbc	15 16 31.8	0.0	
MODS	Modra-Piesok	146.81	341	ePKP2	PKiKP	15 16 33.0	-0.8	
MODS	Modra-Piesok	146.81	341	ePKP	PKiKP	15 16 33.0	-0.8	
BEBN	Eben Emael	146.83	355	dPKP	PKPbc	15 16 32.4	+0.6	
SBD	Saint Breward	146.87	7	eP	PKPbc	15 16 31.1	-0.8	
ROTZ	Rotzenmuhle	146.88	347	ePKPbc	PKPbc	15 16 32.7	+0.7	
	baz=16,slow=2.9							
UCC	Uccle	146.92	357	dPKP	PKPbc	15 16 32.1	+0.1	
SRO	Srobarova	146.96	339	ePKP2	PKPbc	15 16 33.0	+0.8	
SRO	Srobarova	146.96	339	ePKP	PKPbc	15 16 33.0	+0.8	
SRO						15 16 36.6		
MEM	Membach	146.99	355	dPKP	PKPbc	15 16 32.1	-0.1	
BTNL	Ternell	147.00	354	dPKPdf	PKPdf	15 16 29.5	+0.2	
BTNL				dPKP	PKPbc	15 16 32.2	-0.1	
ZST	Bratislava	147.02	341	ePKP2	PKPab	15 16 38.0	+2.4	
ZST	Bratislava	147.02	341	ePKP	PKPab	15 16 38.0	+2.4	
BSTI	Sart Tilman	147.05	355	dPKP	PKPbc	15 16 32.9	+0.5	
TNS	Taunus Mts	147.09	352	ePKPbc	PKPbc	15 16 33.2	+0.6	
	baz=16,slow=2.9							
SZH	Strazhitsa	147.14	326	P	PKPbc	15 16 33.2	+0.3	
GRF	Grafenberg Arr	147.15	348	ePKPbc	PKiKP	15 16 33.7	-0.8	
	baz=16,slow=2.9							
GRF				epPKPbc	pPKPab	15 18 42.3	+2.7	
KHC	Kasperske Hory	147.16	345	ePKPDF	PKPdf	15 16 29.5	-0.1	
KHC				⇑ePKP	PKPbc	15 16 32.5	-0.3	
KHC	Kasperske Hory	147.16	345	ePKIKP	PKPdf	15 16 29.5	-0.1	
GZR	Gura Zlata	147.16	332	⇓P	PKPbc	15 16 33.1	+0.1	
GZR	Gura Zlata	147.16	332	⇓PKP2	PKPbc	15 16 33.1	+0.1	
ZIMR		147.19	327	⇓P	PKPbc	15 16 33.4	+0.5	
ZIMR		147.19	327	⇓PKP2	PKPbc	15 16 33.4	+0.5	
BCLA	Clavier	147.23	355	dPKP	PKPbc	15 16 32.8	-0.1	
BHOU	Houvegnez	147.24	355	dPKPdf	PKPdf	15 16 30.5	+0.8	
BHOU				dPKP	PKPbc	15 16 33.6	+0.7	
CKRC	Cesky Krumlov	147.26	344	ePKPDF	PKPdf	15 16 30.7	+0.9	
CKRC				⇑ePKP	PKPbc	15 16 33.9	+0.9	
CKRC	Cesky Krumlov	147.26	344	ePKIKP	PKPdf	15 16 30.7	+0.9	
CKRC				e		15 16 33.9		
BGES	Gesves	147.28	356	dPKP	PKPbc	15 16 33.1	+0.1	
WET	Wettzell	147.31	346	ePKPdf	PKPdf	15 16 30.5	+0.6	
	baz=20,slow=1.6							
WET				ePKPbc	PKPbc	15 16 33.8	+0.6	
	baz=16,slow=2.9							
JMB	Yambol	147.36	324	P	PKPbc	15 16 34.0	+0.6	
BMRD	Maredsous	147.39	356	dPKP	PKPbc	15 16 33.3	0.0	
GEC2	GERESS Array S	147.40	345	ePKPbc	PKPbc	15 16 34.3	+0.8	
	baz=16,slow=2.9							
GERES	GERESS Array B	147.40	345	PKPbc	PKPbc	15 16 34.0	+0.5	
	comp=Z,37nm,0.5s,baz=22,slow=3.9,SNR=133							
ELND	Elena	147.42	326	⇑P	PKPbc	15 16 33.9	+0.3	
VLAD	Vladila	147.43	328	⇓P	PKPbc	15 16 34.3	+0.7	
BZS	Buzias	147.50	333	⇓P	PKPbc	15 16 33.9	+0.2	
BZS	Buzias	147.50	333	⇓PKP2	PKPbc	15 16 33.9	+0.2	
RCHB	Rochefort	147.50	355	dPKP	PKPbc	15 16 33.8	+0.2	
DOU	Dourbes	147.61	356	dPKP	PKPbc	15 16 34.1	+0.3	
CONA	Conrad Observa	147.64	342	iPKiKP	PKiKP	15 16 35.0	-0.6	
	comp=Z,44nm,0.5s,SNR=33							
RONA	Rosalia, Austr	147.71	341	iPKiKP	PKiKP	15 16 35.1	-0.6	
	comp=Z,54nm,0.7s,SNR=21							
PLVB	Pleven	147.76	327	⇓P	PKPbc	15 16 35.0	+0.6	
BAND	Balkesir-Ban	147.78	320	⇓P	PKPbc	15 16 34.7	0.0	
BANR	Banloc	147.89	333	⇓P	PKiKP	15 16 35.9	-0.2	
WLF	Walferdange	147.91	354	dPKP	PKiKP	15 16 35.7	-0.4	
WLF	Walferdange	147.91	354	ePKPbc	PKiKP	15 16 35.9	-0.2	
	baz=16,slow=2.9							
MDVR	Moldovita	148.12	332	⇓P	PKPbc	15 16 35.6	+0.3	
MOA	Molln	148.17	344	iPKiKP	PKPbc	15 16 35.9	+0.5	
	comp=Z,13nm,0.5s,SNR=10							
MORH	Mrgy, Hungar	148.20	337	⇓P	PKPbc	15 16 35.6	+0.2	
MPEP	Malo Peshtene	148.23	328	P	PKPbc	15 16 36.2	+0.5	
ARSA	Arzberg	148.35	342	iPKP	PKPbc	15 16 36.0	+0.1	
	comp=Z,5.8nm,0.5s,SNR=7.0							
STU	Stuttgart	148.39	350	ePKPdf	PKPdf	15 16 32.7	+1.1	
	baz=20,slow=1.6							
STU				ePKPbc	PKiKP	15 16 36.9	-0.2	
	baz=16,slow=2.9							
BIOA	Bad Ischl, Aus	148.48	344	iPKP	PKPbc	15 16 36.3	+0.2	
	comp=Z,9.7nm,0.4s,SNR=11							
JSA	Saint Aubin	148.48	5	eP	PKPbc	15 16 36.4	+0.3	
FUR	Furstenfeldbru	148.59	347	ePKPbc	PKiKP	15 16 37.2	-0.3	
	baz=16,slow=2.9							
PGB	Panagyurishte	148.61	327	P	PKPbc	15 16 37.1	+0.4	
CAVK	Edirne/Enez-Ca	148.73	322	⇓P	PKPbc	15 16 36.6	-0.3	
KOGS	Kog	148.84	340	iPKPbc	PKPbc	15 16 37.0	-0.1	
KOGS				iPKPab	PKPab	15 16 43.2	+0.1	
RZN	Rozhen	148.88	325	P	PKPbc	15 16 37.6	0.0	
BFO	Black Forest	148.96	351	ePKPbc	PKiKP	15 16 37.9	-0.4	
	baz=16,slow=2.9							
LESA	Schwarzleotal	148.97	345	iPKiKP	PKPbc	15 16 37.5	+0.1	
	comp=Z,36nm,0.3s,SNR=21							
BOVS	Bovan	149.00	331	⇓P	PKPbc	15 16 37.7	+0.1	
SOKA	Soboth	149.01	342	iPKiKP	PKPbc	15 16 37.6	0.0	
	comp=Z,18nm,0.5s,SNR=15							
VTS	Vitosha	149.02	328	P	PKiKP	15 16 38.3	-0.4	
KBA	Koelnbreinsper	149.12	344	iPKP	PKPbc	15 16 37.7	-0.3	
	comp=Z,16nm,0.4s,SNR=24							
UBR	Ueberruh	149.29	348	ePKPbc	PKiKP	15 16 39.0	0.0	
	baz=16,slow=2.9							
OBKA	Obir	149.31	342	iPKP	PKPbc	15 16 38.1	-0.2	
	comp=Z,7.8nm,0.6s,SNR=6.6							
WATA	Walderalm	149.31	346	iPKiKP	PKPbc	15 16 38.5	+0.1	
	comp=Z,32nm,0.4s,SNR=12							
RETA	Reutte	149.34	348	iPKiKP	PKPbc	15 16 38.7	+0.3	
	comp=Z,26nm,0.5s,SNR=12							
WTTA	Wattenberg	149.37	346	iPKiKP	PKPbc	15 16 38.9	+0.3	
	comp=Z,26nm,0.4s,SNR=20							
MOTA	Moosalm	149.41	347	iPKiKP	PKPbc	15 16 38.7	+0.1	
	comp=Z,13nm,0.5s,SNR=12							
MYKA	Terra Mystica	149.46	343	iPKP	PKPbc	15 16 38.2	-0.4	
	comp=Z,33nm,0.4s,SNR=18							
SQTA	Sankt Quirin	149.50	347	iPKiKP	PKiKP	15 16 39.2	-0.4	
	comp=Z,55nm,0.5s,SNR=14							
MMB	Musomishta	149.51	326	P	PKPbc	15 16 39.0	+0.1	
KKB	Krupnik	149.63	327	P	PKiKP	15 16 39.6	-0.3	
ABTA	Abfaltersbach	149.64	345	iPKiKP	PKPbc	15 16 39.0	0.0	
	comp=Z,41nm,0.4s							
DAVA	Damuels	149.71	349	iPKiKP	PKiKP	15 16 40.2	+0.2	
	comp=Z,48nm,0.8s,SNR=15							
LJU	Ljubljana	149.74	342	iPKPbc	PKPbc	15 16 39.5	+0.2	
CRNS	Crni Vrh	149.78	342	iPKPbc	PKPbc	15 16 39.2	-0.2	
FETA	Feichten	149.79	347	iPKiKP	PKiKP	15 16 40.0	-0.3	
	comp=Z,24nm,0.6s,SNR=17							
GBAS	Gorenja Brezov	149.86	342	iPKPbc	PKPbc	15 16 39.5	0.0	
BLY	Banja Luka	149.99	337	⇓P	PKiKP	15 16 40.3	-0.1	
VAY	Valandovo	150.30	327	iP	PKPbc	15 16 38.9	-1.8	
PDG	Podgorica	151.07	332	⇓P	PKPbc	15 16 42.2	-0.2	
OHR	Ohrid	151.36	328	iP	PKiKP	15 16 43.5	0.0	
PGAV	Gavieira, Arco	154.45	17	ePKPdf	PKPdf	15 16 40.2	-0.9	
PGAV				ePKPbc	PKPbc	15 16 50.5	+0.6	
PGAV				ePKPab	PKPab	15 17 07.3	+0.2	
PCAB	Cabril	154.76	17	ePKPbc	PKPbc	15 16 51.3	+0.8	
PCAB				ePKPab	PKPab	15 17 09.0	+0.6	
TIP	Timpagrande	154.80	331	⇓P	PKiKP	15 16 50.6	-0.1	
PBRG	Braganca	155.00	15	ePKPdf	PKPdf	15 16 39.8	-1.9	
PBRG				ePKPbc	PKiKP	15 16 51.0	0.0	
PBRG				ePKPab	PKPab	15 17 09.2	-0.2	
POLO	Lamas de Olo	155.13	17	ePKPdf	PKPdf	15 16 42.6	+0.7	
POLO				ePKPbc	PKPbc	15 16 51.7		
POLO				ePKPab	PKPab	15 17 10.7	+0.6	
PVRL	Vila Real	155.25	17	ePKPab	PKPab	15 17 11.2	+0.8	
MVO	Moncorvo	155.53	16	ePKPdf	PKPdf	15 16 42.3	-0.2	
MVO				ePKPbc	PKPbc	15 16 53.0		
MVO				ePKPab	PKPab	15 17 12.6	+0.9	
PVIS	Viseu	155.72	17	ePKPdf	PKPdf	15 16 43.3	+0.6	
PVIS				ePKPab	PKPab	15 17 13.1	+0.6	
MTE	Manteigas	156.11	17	ePKPdf	PKPdf	15 16 44.0	+0.8	
MTE				ePKPab	PKPab	15 17 14.3	+0.1	
PCAS	Casmilo, Conde	156.15	19	ePKPab	PKPab	15 17 14.8	+0.5	
PCBR	Castelo Branco	156.65	18	ePKPdf	PKPdf	15 16 44.8	+0.9	
PSARD	Sardoal	156.66	19	ePKPdf	PKPdf	15 16 43.2	-0.7	
PSARD				ePKPab	PKPab	15 17 16.9	+0.3	
PMAFR	Mafra	156.88	22	ePKPdf	PKPdf	15 16 39.9	-4.3	
PMRV	Marv??o	157.05	18	ePKPdf	PKPdf	15 16 44.1	-0.3	
PMRV				ePKPab	PKPab	15 17 18.0	-0.3	
PMTG	Montargil	157.13	20	ePKPdf	PKPdf	15 16 45.3	+0.8	
PARRA	Arraiolos	157.42	20	ePKPdf	PKPdf	15 16 45.6	+0.7	
PARRA				ePKPab	PKPab	15 17 20.1	+0.2	
PESTR	Estremoz	157.51	19	ePKPab	PKPab	15 17 20.5	+0.2	
MOE	Montemor	157.58	20	ePKPdf	PKPdf	15 16 46.4	+1.3	
MOE				ePKPab	PKPab	15 17 18.3	-2.2	
ESDC	Sonseca Array	157.63	11	PKP	PKPdf	15 16 45.7	+0.6	
	comp=Z,2.1nm,0.8s,baz=344,slow=2.9,SNR=15							
ESDC				PKPab	PKPab	15 17 21.2	+0.4	
	comp=Z,2.7nm,0.8s,baz=349,slow=3.7,SNR=7.5							
EVO	Evora	157.69	20	ePKPdf	PKPdf	15 16 46.2	+1.0	
PBEJ	Beja	158.19	20	ePKPdf	PKPdf	15 16 47.4	+1.6	
MESJ	Messejana	158.24	21	ePKPdf	PKPdf	15 16 47.2	+1.3	
MESJ				ePKPab	PKPab	15 17 23.8	+0.4	
PBAR	Barrancos	158.32	18	ePKPdf	PKPdf	15 16 46.7	+0.8	
PBAR				ePKPab	PKPab	15 17 24.5	+0.7	
MORF	Marmelete	158.57	22	ePKPdf	PKPdf	15 16 47.7	+1.4	
MORF				ePKPbc	PKPbc	15 16 58.0		
PVAQ	Vaqueiros	158.81	21	ePKPdf	PKPdf	15 16 47.2	+0.6	
PVAQ				ePKPab	PKPab	15 17 26.6	+0.7	
KEST	Kesra	160.74	340	PKP	PKPdf	15 16 49.4	+0.5	
	comp=Z,5.4nm,0.9s,baz=17,slow=4.8,SNR=3.0							
KEST				PKPab	PKPab	15 17 34.9	+0.4	
	comp=Z,10nm,0.7s,baz=7.5,slow=3.2,SNR=6.3							
MDT	Midelt	164.02	19	PKP	PKPdf	15 16 53.1	+0.9	
	comp=Z,11nm,0.8s,baz=42,slow=1.0,SNR=20							
MDT				PKPab	PKPab	15 17 49.9	+0.9	
	comp=Z,7.1nm,0.8s,baz=349,slow=4.3,SNR=8.3							
DBIC	Dimbokro	167.42	150	PKP	PKPdf	15 16 55.1	-0.1	
	comp=Z,9.3nm,0.7s,baz=228,slow=0.7,SNR=15							
DBIC	Dimbokro	167.42	150	⇑PKIKP	PKPdf	15 16 54.2	-1.1	
TORD	Torodi Ar. Bea	175.44	183	PKP	PKPdf	15 16 58.6	-0.5	
	comp=Z,13nm,0.9s,baz=240,slow=1.8,SNR=64							
TORD				PKPab	PKPab	15 18 40.9	+1.1	
	comp=Z,2.4nm,0.6s,baz=195,slow=4.9,SNR=7.9							
TORD				PP	PP	15 22 32.6	+1.2	
	comp=Z,1.4nm,0.8s,baz=178,slow=7.2,SNR=4.8							

*IDC **12** 15:04:14.5±3.6, 19°.23N×122°.48E, h0km, mb3.7/7, mbtmp3.7/7, MS2.6/1, Error ellipse: s-maj=86.1km s-min=35.5km az=173.0*

ISC 12 15:04:19.7±3.3, 19°2N±0°.6×122°.4E±0°.2, h35km, n13, σ0°68/7, mb3.9/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	22.24	272	P	P	15 09 13.1	-0.5
	0.6nm,0.3s,baz=79,slow=10,SNR=1.5						
CMAR				LR	LR	15 17 29.2	
	comp=Z,16nm,18.4s,baz=265,slow=36						
	0.6nm,0.3s						
H11S3	WAKE ISLAND Hy	41.81	83	T	T	15 57 03.1	
	baz=278,slow=75,SNR=142						
H11S1	WAKE ISLAND Hy	41.82	83	T	T	15 57 02.8	
	baz=278,slow=75,SNR=140						
H11S2	WAKE ISLAND Hy	41.82	83	T	T	15 57 03.4	
	baz=278,slow=75,SNR=108						
H11N1	WAKE ISLAND Hy	41.84	82	T	T	15 57 03.9	
	baz=277,slow=75,SNR=117						
H11N2	WAKE ISLAND Hy	41.84	82	T	T	15 57 04.1	
	baz=277,slow=75,SNR=123						
H11N3	WAKE ISLAND Hy	41.85	82	T	T	15 57 05.2	
	baz=277,slow=75,SNR=111						
MKAR	Makanchi Array	42.79	319	P	P	15 12 14.3	+0.3
	2.0nm,0.8s,baz=114,slow=9.9,SNR=8.3						
	2.0nm,0.8s						
ZALV	Zalesovo Beam	45.08	329	P	P	15 12 31.2	-0.9
	1.0nm,0.6s,baz=114,slow=7.0,SNR=3.7						
	1.0nm,0.6s						
KURBB	Kurchatov Arra	46.71	323	P	P	15 12 45.2	+0.1
	1.0nm,0.7s,baz=124,slow=6.9,SNR=6.4						
	1.0nm,0.7s						
BVAR	Borovoye Array	52.30	323	P	P	15 13 27.9	+0.2
	1.0nm,0.6s,baz=106,slow=7.2,SNR=3.5						
	1.0nm,0.6s						
ILAR	Eielson Array	73.12	27	P	P	15 15 45.8	-0.5
	0.2nm,0.6s,baz=274,slow=5.1,SNR=1.4						
	0.2nm,0.6s						
YKA	Yellowknife Ar	87.09	23	P	P	15 17 02.1	+0.5
	0.3nm,0.6s,baz=312,slow=5.3,SNR=5.2						
	0.3nm,0.6s						

*MEX **12** 15:19:49.8±0.3, 14°.19N×92°.14W, h10km, MD3.5*
*GCG **12** 15:19:51.1±0.9, 14°.32N×91°.90W, h46km±9km, MD3.7, ML3.4, Presumed earthquake*

**ISC 12 15:19

comp=N,936µm,1.2s
SALB San Lorenzo Be 0.76 310 P **Pb** 16 20 02.4 -1.1
SALB AML AML
comp=E,885µm,0.2s
SALB AML AML
comp=N,569µm,0.7s
GRI Girifalco 0.77 223 P **Pb** 16 20 03.7 0.0
ORI Oriolo Calabro 0.84 324 P **Pn** 16 20 05.7 0.0
ORI AML AML
comp=E,2480µm,0.8s
ORI AML AML
comp=N,2255µm,0.3s
ORI AML AML
comp=N,2255µm,1.7s
CET2 Cetraro 0.90 279 P **Pb** 16 20 05.3 -0.5
PLAC Placanica 1.07 209 P **Pg** 16 20 09.4 -0.1
CRAC Craco 1.10 333 P **Pg** 16 20 10.5 +0.3
TAR1 Taranto 1.15 7 P **Pn** 16 20 09.5 -0.4
TAR1 AML AML
comp=N,1269µm,0.5s
TAR1 AML AML
comp=E,783µm,0.5s
LTRZ Laterza 1.23 350 P **Pn** 16 20 11.0 -0.1
SIRI Monte Sirino - 1.24 310 P **Pb** 16 20 11.6 -0.1
SIRI AML AML
comp=E,368µm,0.6s
SIRI AML AML
comp=N,334µm,0.7s
SIRI AML AML
comp=E,375µm,0.6s
SIRI AML AML
comp=N,322µm,0.7s
SIRI AML AML
comp=N,334µm,1.3s
SIRI AML AML
comp=N,322µm,1.3s
SIRI AML AML
comp=E,368µm,1.4s
SIRI AML AML
comp=E,375µm,1.4s
MATE Matera 1.30 347 P **Pb** 16 20 12.4 -0.2
MATE AML AML
comp=N,362µm,0.5s
MATE AML AML
comp=E,400µm,0.4s
MIGL Miglionico 1.32 338 P **Pb** 16 20 13.3 +0.4
MESG Mesagne 1.33 25 P **Pn** 16 20 12.1 -0.3
NOCI Noci 1.40 359 P **Pn** 16 20 13.2 -0.2
NOCI AML AML
comp=E,427µm,0.3s
NOCI AML AML
comp=N,531µm,0.5s
SOI Samo 1.54 212 P **Pb** 16 20 17.1 +0.2
AMUR Altamura 1.56 346 P **Pn** 16 20 16.0 +0.4
AMUR AML AML
comp=E,391µm,0.7s
AMUR AML AML
comp=N,321µm,0.5s
AMUR AML AML
comp=E,391µm,1.3s
ACER Acerenza 1.66 328 P **Pn** 16 20 17.8 +0.9
MCRV Calabrutti - M 2.03 314 AML AML
comp=E,109µm,1.2s
MCRV AML AML
comp=N,96µm,0.5s
KEK Kerkira 2.11 80 P **Pn** 16 20 22.8 -0.3
KEK Kerkira 2.11 80 P **Pn** 16 20 22.8 -0.3
HLNI Lentini 2.68 221 P **Pn** 16 20 30.5 -0.5
LKD2 Lefkada island 2.83 101 P **Pn** 16 20 33.1 0.0
LKD2 S **Sn** 16 21 05.5 -1.2
NYDR Nydri-Lefkada 2.88 102 P **Pn** 16 20 33.7 0.0
NYDR S **Sn** 16 21 06.4 -1.4
PRMD Pramanda 3.10 86 P **Pn** 16 20 38.0 +1.2
AMPL Ampelaki 3.23 97 P **Pn** 16 20 39.0 +0.5
AMPL S **Sn** 16 21 14.0 -2.5
TETR Tetrakomo, Epi 3.24 89 P **Pn** 16 20 39.1 +0.4
THL Klokotos Trika 3.81 86 P **Pn** 16 20 48.4 +2.0
ANX Ano Chora 3.84 100 P **Pn** 16 20 49.1 +2.1
MAKR Makrakomi, Fth 3.93 94 P **Pn** 16 20 50.6 +2.4

*NOU **12** 16:26:52.7, 13˚09S×173˚65E, h388km, mb4.6/10, Fiji Islands Region*
*NEIC **12** 16:27:12.2±1.3, 14˚7S±0˚2×172˚4E±0˚1, h599km±20km, mb4.3/9, Error ellipse: s-maj=34.5km s-min=8.4km az=207.0*
*IDC **12** 16:27:17.6±13.0, 14˚75S×171˚69E, h603km±48km, mb3.4/6, mbtmp4.5/7, Error ellipse: s-maj=186.4km s-min=52.8km az=56.0*
ISC 12 16:27:12.2±1.7, 14˚8S±0˚2×172˚4E±0˚1, h600km, n43, σ0s94/43, mb4.2/11, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**4.88**	**231**	P	P	16 28 34.5	-10
DVP	**Devils Point**	**5.02**	**233**	P	P	16 28 35.2	-10
MSVF	**Nonsavu**	**6.18**	**119**	P	P	**16 28 55.1**	**+0.1**
MARNC	**Mare, Loyalty**	**7.88**	**211**	P	P	**16 29 08.9**	**-1.5**
MARNC	**Mare, Loyalty**	**7.88**	**211**	P	P	**16 29 09.2**	**-1.2**
PINNC	**Pines Island,**	**9.12**	**210**	P	P	**16 29 22.1**	**-0.2**
PINNC	**Pines Island,**	**9.12**	**210**	P	P	**16 29 23.3**	**+1.0**
DZM	**Mont Dzumac**	**9.22**	**217**	P	P	**16 29 24.7**	**+1.2**
	12nm,0.5s,baz=42,slow=13,SNR=24						
DZM	**Mont Dzumac**	**9.22**	**217**	P	**P**	**16 29 24.2**	**+0.8**
DZM	**Mont Dzumac**	**9.22**	**217**	P	**P**	**16 29 24.6**	**+1.2**
OUENC	**Ouen Island, N**	**9.27**	**214**	P	**P**	**16 29 25.0**	**+1.2**
ONTNC	**Ouen Toro**	**9.40**	**216**	P	**P**	**16 29 25.8**	**+0.7**
ONTNC	**Ouen Toro**	**9.40**	**216**	P	**P**	**16 29 26.2**	**+1.2**
EIDS	**Eidsvold**	**22.61**	**239**	P	**P**	**16 31 28.9**	**-0.5**
TOZ	**Tahuroa Road**	**23.05**	**174**	P	**P**	**16 31 33.7**	**+0.6**
BKZ	**Black Stump Fm**	**24.59**	**172**	P	**P**	**16 31 45.0**	**-1.7**
CTA	**Charters Tower**	**25.50**	**254**	P	**P**	**16 31 54.8**	**-0.2**
	2.2nm,0.6s,baz=90,slow=9.1,SNR=3.1 2.2nm,0.6s						
CTAO	**Charters Tower**	**25.50**	**254**	P	**P**	**16 31 54.6**	**-0.4**
QRZ	**Quartz Range**	**25.98**	**180**	P	**P**	**16 32 00.1**	**+1.2**
NNZ	**Nelson**	**26.38**	**178**	P	**P**	**16 32 02.2**	**-0.2**
THZ	**Tophouse**	**26.92**	**179**	P	**P**	**16 32 06.6**	**-0.6**
LTZ	**Lake Taylor**	**27.93**	**180**	P	**P**	**16 32 15.6**	**-0.4**
CAN	**Canberra**	**29.35**	**222**	P	**P**	**16 32 28.5**	**+0.1**
INKA	**Innaminka**	**32.11**	**241**	P	**P**	**16 32 52.0**	**0.0**
STKA	**Stephens Creek**	**32.87**	**233**	P	**P**	**16 32 59.2**	**+0.8**
	3.9nm,0.4s,baz=66,slow=10,SNR=18 3.9nm,0.4s						
STKA	**Stephens Creek**	**32.87**	**233**	P	**P**	**16 32 58.6**	**+0.2**
TOO	**Toolangi**	**32.96**	**221**	P	**P**	**16 32 59.7**	**+0.6**
TOO				IAmb	IAmb	16 32 59.7	
	comp=Z,7.5nm,1.4s						
WB0	**Warramunga Arr**	**36.59**	**257**	P	**P**	**16 33 28.7**	**-0.8**
WB0				IAmb	IAmb	16 33 29.3	
	comp=Z,7.1nm,0.6s						
WRAB	**Tennant Creek**	**36.64**	**256**	P	**P**	**16 33 28.7**	**-1.1**
WRA	**Warramunga Arr**	**36.65**	**256**	P	**P**	**16 33 28.8**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=86,slow=8.7,SNR=59						
WRA				ScP	**ScP**	**16 38 28.2**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=88,slow=3.9,SNR=6.7 comp=Z,3.1nm,0.5s						
WRA	**Warramunga Arr**	**36.65**	**256**	P	**P**	**16 33 27.7**	**-2.2**
AS31	**Alice Springs**	**37.33**	**250**	P	**P**	**16 33 34.9**	**-0.5**
AS31				IAmb	IAmb	16 33 35.6	
	comp=Z,4.7nm,0.3s						
ASAR	**Alice Springs**	**37.33**	**250**	P	**P**	**16 33 35.1**	**-0.4**
	comp=Z,4.9nm,0.5s,baz=77,slow=9.5,SNR=295						
ASAR				ScP	**ScP**	**16 38 31.1**	**+1.9**
	comp=Z,1.3nm,0.8s,baz=94,slow=4.0,SNR=14 comp=Z,4.9nm,0.5s						
ASAR	**Alice Springs**	**37.33**	**250**	P	**P**	**16 33 34.6**	**-0.9**
BBOO	**Buckleboo**	**37.57**	**235**	P	**P**	**16 33 37.3**	**+0.1**
MTN	**Manton Dam**	**40.09**	**267**	P	**P**	**16 33 57.5**	**-0.2**
MTN				IAmb	IAmb	16 33 58.3	
	comp=Z,4.5nm,0.6s						
KNRA	**Kununurra**	**42.07**	**263**	P	**P**	**16 34 13.0**	**-0.3**
FORT	**Forrest**	**43.59**	**241**	P	**P**	**16 34 24.7**	**-0.3**
FORT				IAmb	IAmb	16 34 25.1	
	comp=Z,6.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**44.89**	**259**	P	**P**	**16 34 35.8**	**+0.7**
	comp=Z,4.2nm,0.5s,baz=114,slow=8.3,SNR=18 comp=Z,4.2nm,0.5s						
MBWA	**Marble Bar**	**50.34**	**255**	P	**P**	**16 35 15.8**	**+0.1**
NWAO	**Narrogin (SRO)**	**53.02**	**240**	P	**P**	**16 35 34.2**	**-0.4**
	comp=Z,8.0nm,0.8s,baz=81,slow=7.9,SNR=2.3 comp=Z,8.0nm,0.8s						
NWAO	**Narrogin (SRO)**	**53.02**	**240**	P	**P**	**16 35 34.0**	**-0.7**
MORW	**Morawa**	**53.74**	**245**	P	**P**	**16 35 38.7**	**-1.2**

*ISK **12** 16:56:29.5, 37˚28N×26˚61E, h7km, ML2.6/26*
*AFAD **12** 16:56:29.5, 37˚26N×26˚63E, h7km±2km, ML2.7*
*ATH **12** 16:56:29.4, 37˚27N×26˚66E, h19km±3km, ML2.7/3, Manual Solution by A.Agalos First location: 2020/02/12 16:58:00, This location: 2020/02/12 17:06:01 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **12** 16:56:30.2, 37˚N±1˚×26˚7E±˚, h15km±3km, M2.6/9, ML2.6/9*
ISC 12 16:56:29.5±1.0, 37˚27N±0˚02×26˚62E±0˚02, h15km±8km, n52, σ0s72/72, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNA	**Kalymnos**	**0.42**	**138**	P	**Pg**	**16 56 37.8**	**-0.2**
KLNA				S	**Sg**	**16 56 44.0**	**+0.1**
SMG	**Samos**	**0.47**	**22**	P	**Pg**	**16 56 38.8**	**-0.1**
SMG				S	**Sg**	**16 56 45.3**	**0.0**
SMG	**Samos**	**0.47**	**22**	P	**Pg**	**16 56 38.8**	**-0.1**
SMG				S	**Sg**	**16 56 45.2**	**0.0**
KRL1	**Karlovasi Samo**	**0.53**	**8**	P	**Pg**	**16 56 39.8**	**-0.1**
KRL1				S	**Sb**	**16 56 47.6**	**-0.2**
DDIM	**Aydin, Didim**	**0.53**	**70**	P	**Pg**	**16 56 39.6**	**-0.4**
DDIM				S	**Sg**	**16 56 47.1**	**0.0**
YKAV	**Yalikavak-Bodr**	**0.55**	**106**	Pg	**Pb**	**16 56 40.7**	**-0.1**
BODT	**Bodrum**	**0.59**	**111**	Pg	**Pb**	**16 56 41.7**	**+0.2**
BODT	**Bodrum**	**0.59**	**111**	P	**Pb**	**16 56 41.7**	**+0.2**
BODT				S	**Sn**	**16 56 51.2**	**-1.5**
GCAM	**G?zelcaml?**	**0.65**	**49**	Pg	**Pg**	**16 56 41.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.65**	**49**	P	**Pb**	**16 56 42.4**	**-0.1**
GCAM				S	**Sb**	**16 56 52.2**	**+0.8**
DGB	**zmir**	**0.81**	**15**	P	**Pb**	**16 56 45.3**	**+0.1**
DGB				S	**Sn**	**16 56 57.0**	**-0.9**
DGB				IAML		16 56 58.0	
	comp=E,223nm,0.7s						
GMLD	**Gumuldur**	**0.84**	**16**	Pg	**Pb**	**16 56 45.7**	**0.0**
APE	**Apeiranthos**	**0.89**	**257**	Pg	**Pg**	**16 56 47.0**	**+0.2**
APE	**Apeiranthos**	**0.89**	**257**	P	**Pg**	**16 56 47.2**	**+0.3**
APE				S	**Sn**	**16 57 00.5**	**+0.3**
APE	**Apeiranthos**	**0.89**	**257**	P	**Pg**	**16 56 47.1**	**+0.2**
APE				S	**Sn**	**16 56 59.9**	**-0.2**
DAT	**Datca**	**0.94**	**125**	Pg	**Pn**	**16 56 48.3**	**0.0**
DAT				Sg	**Sn**	**16 57 01.9**	**+0.4**
DAT	**Datca**	**0.94**	**125**	P	**Pn**	**16 56 48.2**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**0.97**	**355**	P	**Pg**	**16 56 48.3**	**0.0**
ZEYE				S	**Sn**	**16 57 01.8**	**-0.2**
ZEYE				IAML		16 57 03.0	
	comp=N,438nm,0.3s						
ZEYE				IAML		16 57 03.0	
	comp=E,351nm,0.4s						
URLA	**Izmir**	**1.08**	**359**	Pg	**Pg**	**16 56 50.5**	**0.0**
URLA				Sg	**Sn**	**16 57 05.9**	**+1.0**
URLA	**Izmir**	**1.08**	**359**	P	**Pg**	**16 56 50.5**	**0.0**
URLA				S	**Sn**	**16 57 04.8**	**-0.1**
URLA				IAML		16 57 07.0	
	comp=N,377nm,0.7s						
URLA				IAML		16 57 10.0	
	comp=E,197nm,0.6s						
DUVT	**Torbali**	**1.15**	**35**	P	**Pg**	**16 56 51.7**	**0.0**
DUVT				S	**Sb**	**16 57 05.5**	**-0.4**
BLCB	**Balcova**	**1.16**	**17**	Pn	**Pg**	**16 56 52.0**	**+0.1**
BLCB				Sn	**Sg**	**16 57 08.5**	**+1.4**
BLCB	**Balcova**	**1.16**	**17**	P	**Pn**	**16 56 50.5**	**-0.6**
CHOS	**Chios island**	**1.20**	**338**	Pn	**Pg**	**16 56 52.7**	**+0.1**
CHOS	**Chios island**	**1.20**	**338**	P	**Pn**	**16 56 51.5**	**-0.2**
CHOS	**Chios island**	**1.20**	**338**	P	**Pb**	**16 56 52.1**	**+0.2**
CHOS				S	**Sn**	**16 57 07.8**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.21**	**56**	Pn	**Pg**	**16 56 53.1**	**+0.1**
THERA	**Ancient Thera,**	**1.29**	**226**	P	**Pn**	**16 56 53.3**	**+0.4**
THERA				S	**Sg**	**16 57 11.3**	**+0.2**
THERA	**Ancient Thera,**	**1.29**	**226**	P	**Pn**	**16 56 53.0**	**+0.1**
KRBN	**Karaburun**	**1.32**	**358**	Pn	**Pg**	**16 56 54.8**	**-0.1**
YER	**Yerkesik**	**1.34**	**95**	Pn	**Pg**	**16 56 55.2**	**-0.1**
KARB	**zmir-Karabur**	**1.40**	**353**	P	**Pg**	**16 56 56.0**	**-0.4**
KARB				S	**Sg**	**16 57 14.7**	**+0.1**
KARB				IAML		16 57 16.0	
	comp=E,86nm,0.5s						
NAZL	**Nazilli-Aydin**	**1.50**	**62**	Pn	**Pb**	**16 56 57.4**	**+0.4**
ODEM	**Odemis-Izmir**	**1.53**	**49**	Pn	**Pg**	**16 56 58.1**	**-0.8**
CAMT	**Merkez**	**1.57**	**20**	P	**Pg**	**16 57 00.6**	**+0.8**
CAMT				S	**Sg**	**16 57 22.7**	**+2.5**
CAMT				IAML		16 57 27.0	
	comp=N,129nm,0.5s						
CAMT				IAML		16 57 27.0	
	comp=E,89nm,0.3s						
ARG	**Arkhangelos**	**1.61**	**131**	Pn	**Pb**	**16 56 59.3**	**+0.5**
DALY	**Dalyan (Mula)**	**1.69**	**105**	Pn	**Pb**	**16 57 00.3**	**0.0**
KARP	**Karpathos**	**1.78**	**166**	Pn	**Pb**	**16 57 01.5**	**-0.3**
KARP	**Karpathos**	**1.78**	**166**	P	**Pn**	**16 56 59.5**	**-0.2**
KARP	**Karpathos**	**1.78**	**166**	P	**Pn**	**16 56 59.4**	**-0.3**
DKL	**Dikili**	**1.81**	**7**	Pn	**Pb**	**16 57 01.8**	**-0.5**
KARY	**Karystos**	**1.89**	**294**	P	**Pn**	**16 57 01.1**	**-0.1**
KARY	**Karystos**	**1.89**	**294**	P	**Pn**	**16 57 00.9**	**-0.3**
SOMA	**Soma-Manisa**	**2.01**	**21**	Pn	**Pb**	**16 57 04.8**	**-1.0**
SIGR	**SIGRI**	**2.02**	**343**	Pn	**Pb**	**16 57 04.9**	**-1.1**
KULA	**Kula-Manisa**	**2.04**	**52**	Pn	**Pb**	**16 57 05.2**	**-1.0**
GORD	**Gordes-Manisa**	**2.04**	**37**	Pn	**Pb**	**16 57 05.3**	**-1.0**
CAME	**Cameli-Denizli**	**2.17**	**98**	Pn	**Pb**	**16 57 07.1**	**-1.5**
ZKR	**Zakros**	**2.18**	**189**	Pn	**Pb**	**16 57 07.1**	**-1.5**
DION	**Dionisos Attik**	**2.28**	**291**	P	**Pn**	**16 57 07.5**	**+1.0**
YAYO	**Edremit-Balk**	**2.36**	**9**	Pn	**Pb**	**16 57 09.8**	**-1.9**
AKAS	**Kas**	**2.62**	**113**	Pn	**Pn**	**16 57 13.4**	**+2.1**

IDC 12 17:24:09.5±2.8, 22˚45N×12˚39W, h0km, mb3.4/1, mbtmp3.3/2, ML3.4/1, Error ellipse: s-maj=94.4km s-min=64.7km az=71.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.28**	**122**	Pn	Pn	17 28 00.4	+0.6
	0.2nm,0.3s,baz=304,slow=12,SNR=3.6 0.3nm,0.4s						
I48TN	**KESRA INFRASON**	**23.11**	**50**	I	I	19 43 27.6	
	baz=240,slow=310,SNR=1.7						
MKAR	**Makanchi Array**	**77.06**	**45**	P	P	17 36 05.1	+0.4
	0.1nm,0.4s,baz=286,slow=4.9,SNR=4.7 0.1nm,0.4s						
WRA	**Warramunga Arr**	**148.91**	**92**	PKPbc	PKPbc	17 43 59.3	-0.9
	0.2nm,0.7s,baz=282,slow=3.0,SNR=1.5						
ASAR	**Alice Springs**	**149.00**	**99**	PKPbc	PKPbc	17 43 59.4	-0.9
	0.2nm,0.8s,baz=277,slow=2.9,SNR=4.2						

*AEIC **12** 17:39:00.2±2.8, 51˚1N±0˚05×179˚93W±0˚07, h13km±4km, Error ellipse: s-maj=7.4km s-min=6.6km az=180.0*
*NEIC **12** 17:39:00.9±1.9, 51˚09N±0˚04×179˚92W±0˚07, h35km±2km, mb4.0/40, ML3.7/14, ML3.4(AEIC), Error ellipse: s-maj=7.4km s-min=6.7km az=128.0*
*IDC **12** 17:39:03.1±3.4, 51˚28N×179˚80W, h57km±25km, mb3.5/15, mbtmp3.9/18, ML4.1/2, MS2.5/1, Error ellipse: s-maj=39.8km s-min=13.6km az=179.0*
ISC 12 17:39:01.5±1.4, 51˚1N±0˚1×179˚91W±0˚03, h45km±11km, n95, σ1s03/94, mb3.9/20, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.56**	**299**		**Pn**	**17 39 10.8**	**-2.5**
GAKI	**Gareloi-Kavalg**	**0.82**	**57**		**Pn**	**17 39 15.6**	**-1.1**
GAKI					**Sn**	**17 39 26.4**	**-1.3**
CESW	**Semis' Southwe**	**0.86**	**338**		**Pn**	**17 39 16.7**	**-0.5**
CERB	**Semis' Cerberu**	**0.87**	**341**		**Pn**	**17 39 17.1**	**-0.3**
CERB					**Sn**	**17 39 29.5**	**+0.5**
CEPE	**Semis' Perret**	**0.90**	**342**		**Pn**	**17 39 17.4**	**-0.4**
GASW	**Gareloi Southw**	**0.94**	**44**		**Pn**	**17 39 17.6**	**-0.7**
GASW					**Sn**	**17 39 30.7**	**+0.1**
GALAA	**Gareloi Lava P**	**0.97**	**47**		**Pn**	**17 39 18.4**	**-0.2**
GALAA					**Sn**	**17 39 32.1**	**+0.8**
GANO	**Gareloi North**	**0.99**	**44**		**Pn**	**17 39 19.1**	**+0.1**
GANE	**Gareloi Northe**	**1.00**	**44**		**Pn**	**17 39 18.7**	**-0.5**
GANE					**Sn**	**17 39 33.0**	**+0.9**
LSSE	**Little Sitkin**	**1.26**	**312**		**Pn**	**17 39 22.5**	**-0.1**
LSPA	**Little Sitkin**	**1.27**	**312**		**Pn**	**17 39 22.7**	**-0.1**
TAFP	**Tanaga Falls P**	**1.44**	**56**		**Pn**	**17 39 25.5**	**+0.4**
TAPA	**Tanaga Point A**	**1.49**	**61**		**Pn**	**17 39 26.1**	**+0.2**
KIMD	**Kanaga Island**	**1.80**	**68**		**Sn**	**17 39 53.7**	**+2.1**
KIWB	**Kanaga Island**	**1.88**	**66**		**Pn**	**17 39 31.8**	**+0.7**
KIWB				IAML		17 40 02.0	
	comp=E,627nm,0.5s						
KIWB				IAML		17 40 08.5	
	comp=N,452nm,0.9s						
ADK	**Adak**	**2.16**	**68**	Pn	**Pn**	**17 39 34.0**	**-0.9**
ADK				IAML		17 40 09.5	
	comp=N,581nm,0.3s						
ADK				IAML		17 40 09.7	
	comp=N,492nm,0.4s						
ETKA	**Kagalaska Isla**	**2.32**	**70**		**Pn**	**17 39 38.3**	**+1.2**
GSMY	**Great Sitkin M**	**2.58**	**67**		**Pn**	**17 39 41.9**	**+1.2**
GSTR	**Great Sitkin T**	**2.60**	**66**	Pn	**Pn**	**17 39 40.3**	**-0.7**
ATKA	**Atka Island**	**3.72**	**71**	Pn	**Pn**	**17 39 55.9**	**-0.5**
ATKA				IAML		17 40 55.4	
	comp=E,96nm,0.9s						
ATKA				IAML		17 41 02.5	
	comp=N,96nm,0.8s						
SHEM	**Shemya Is, Ala**	**4.05**	**296**	P	**Pn**	**17 40 03.0**	**+2.2**
	comp=N,24nm,0.3s,baz=81,slow=5.5,SNR=12						
SHEM				S	**Sn**	**17 40 48.3**	**+1.4**
	comp=N,101nm,0.9s,baz=286,slow=21,SNR=2.5						
SHEM				LR	LR	17 41 22.1	
	comp=N,53nm,19.3s,baz=72,slow=34 comp=N,48nm,0.3s						
SHEM	**Shemya Is, Ala**	**4.05**	**296**		**Pn**	**17 39 59.0**	**-1.9**
SHEM				IAML		17 40 60.0	
	comp=E,82nm,1.0s						
SMY	**Shemya**	**4.05**	**296**	Pn	**Pn**	**17 40 00.6**	**-0.2**
SMY				IAML		17 41 00.1	
	comp=N,124nm,1.0s						
UNV	**Unalaska Valle**	**8.63**	**66**	Pn	**Pn**	**17 41 02.9**	**-0.7**
GAMB	**Gambell**	**13.43**	**16**	Pn	**Pn**	**17 42 09.8**	**+0.6**
N14K	**Kuskokwak Cree**	**13.54**	**42**	Pn	**P**	**17 42 14.9**	**-3.8**
PETK	**Petropavlovsk-**	**13.90**	**287**	P	**Pn**	**17 42 18.2**	**+2.7**
	comp=N,2.1nm,0.9s,baz=85,slow=16,SNR=4.2						
L14K	**Kuka Creek**	**13.98**	**36**	Pn	**Pn**	**17 42 15.4**	**-1.2**
O15K	**Ungalikthiuk R**	**14.00**	**47**	P	**P**	**17 42 22.4**	**-1.3**
N15K	**Kwethluk River**	**14.35**	**43**	P	**P**	**17 42 26.1**	**-1.5**
M16K	**Timber Creek**	**15.27**	**41**	P	**P**	**17 42 38.3**	**+0.4**
M16K				IAmb	IAmb	17 42 39.5	
	comp=Z,19nm,1.4s						
L16K	**Owhat River**	**15.43**	**39**	P	**P**	**17 42 40.0**	**+0.3**
N17K	**Nushagak Hills**	**15.79**	**45**	P	**P**	**17 42 44.4**	**+0.7**
ACHA	**Angle Creek He**	**15.84**	**54**	Pn	**Pn**	**17 42 40.6**	**-0.6**
ACHA				IAmb	IAmb	17 43 17.5	
	comp=Z,28nm,1.4s						
O18K	**Koktuh Hills**	**16.42**	**48**	P	**P**	**17 42 51.3**	**+0.6**
O18K				IAmb	IAmb	17 42 54.0	
	comp=Z,22nm,1.4s						
K17K	**Iditarod**	**16.46**	**37**	P	**P**	**17 42 51.1**	**+0.1**
K17K				IAmb	IAmb	17 43 33.7	
	comp=Z,16nm,1.4s						
OHAK	**Old Harbor**	**16.68**	**58**	Pn	**Pn**	**17 42 50.4**	**-1.3**
OHAK				IAmb	IAmb	17 43 22.3	
	comp=Z,20nm,1.2s						
L18K	**Granite Mounta**	**16.82**	**40**	Pn	**Pn**	**17 42 53.5**	**+0.1**
L18K				IAmb	IAmb	17 42 53.8	
	comp=Z,12nm,1.4s						
N19K	**Bonanza Creek**	**17.12**	**46**	Pn	**Pn**	**17 42 55.7**	**-1.6**
N19K				IAmb	IAmb	17 43 02.1	
	comp=Z,28nm,1.5s						
KDAK	**Kodiak Island**	**17.16**	**56**	P	**Pn**	**17 42 56.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=252,slow=19,SNR=13 comp=Z,15nm,1.0s						
KDAK	**Kodiak Island**	**17.16**	**56**	P	**Pn**	**17 42 55.7**	**-1.9**
M19K	**Big River Lodg**	**17.62**	**42**	Pn	**Pn**	**17 43 02.5**	**-0.8**
H18K	**Honhosa River**	**17.95**	**30**		**Pn**	**17 43 07.2**	**-0.2**
G18K	**Tagagawik**	**18.36**	**28**	P	**Pn**	**17 43 12.4**	**0.0**
STLK	**Strandline Lak**	**18.57**	**45**	P	**Pn**	**17 43 15.6**	**+0.6**
STLK				IAmb	IAmb	17 43 31.2	
	comp=Z,6.6nm,1.2s						
C16K	**Lisburne Hills**	**18.63**	**17**	Pn	**Pn**	**17 43 16.5**	**+1.0**
J20K	**Nowinta River**	**18.82**	**36**	P	**Pn**	**17 43 18.2**	**+0.2**
SKT	**Skwentna**	**18.88**	**44**	P	**Pn**	**17 43 18.9**	**+0.2**
SKT				IAmb	IAmb	17 43 38.8	
	comp=Z,14nm,1.2s						
PPLA	**Purkeypile**	**18.98**	**41**	P	**Pn**	**17 43 19.7**	**-0.2**
SLKM	**Skilak Lake**	**18.99**	**49**	P	**Pn**	**17 43 20.2**	**+0.2**
G19K	**Purcell Mounta**	**19.01**	**29**	P	**P**	**17 43 19.2**	**+0.2**
F19K	**Shaleruckik Mo**	**19.27**	**27**	P	**P**	**17 43 21.8**	**-0.1**
L22K	**Petersville**	**19.42**	**43**	P	**Pn**	**17 43 24.5**	**-0.7**
L22K				IAmb	IAmb	17 43 57.8	
	comp=Z,20nm,1.4s						
C18K	**Utukok River**	**19.78**	**20**		**Pn**	**17 43 29.0**	**-0.3**
C18K				IAmb	IAmb	17 43 30.5	
	comp=Z,2.8nm,0.6s						
E19K	**Redstone River**	**19.86**	**26**	P	**P**	**17 43 28.7**	**+0.3**
TRF	**Thorofare Moun**	**19.99**	**41**	P	**P**	**17 43 30.2**	**+0.2**
TRF				IAmb	IAmb	17 43 49.8	
	comp=Z,14nm,1.3s						
C19K	**Lookout Ridge**	**20.50**	**21**	P	**P**	**17 43 36.1**	**+0.8**
C19K				IAmb	IAmb	17 43 52.2	
	comp=Z,5.1nm,1.4s						
SCM	**Sheep Creek Mo**	**20.71**	**46**	P	**P**	**17 43 36.6**	**-1.1**
D20K	**Etivluk River**	**20.92**	**24**	P	**P**	**17 43 41.0**	**+1.2**
D20K				IAmb	IAmb	17 43 44.2	
	comp=Z,4.8nm,0.6s						
ILAR	**Eielson Array**	**21.89**	**39**	P	**P**	**17 43 49.5**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=240,slow=8.4,SNR=6.0 comp=Z,0.3nm,0.5s						
N25K	**Chitina, Valde**	**21.91**	**48**	P	**P**	**17 43 50.8**	**+0.2**
D22K	**Ayikyak River**	**22.08**	**26**	P	**P**	**17 43 53.0**	**+0.7**
D22K				IAmb	IAmb	17 43 56.0	
	comp=Z,5.0nm,0.7s						
GLB	**Gilahina Butte**	**22.25**	**48**	P	**P**	**17 43 53.9**	**-0.3**
D23K	**Nanushuk River**	**22.70**	**27**	P	**P**	**17 43 59.1**	**+0.3**
D23K				IAmb	IAmb	17 44 03.3	
	comp=Z,4.3nm,1.2s						
SCRK	**Sand Creek**	**22.80**	**42**	P	**P**	**17 43 59.3**	**-0.8**
SCRK				IAmb	IAmb	17 44 17.7	
	comp=Z,8.2nm,1.5s						
J26L	**Joseph Creek**	**23.14**	**41**	P	**P**	**17 44 02.0**	**-1.4**
J26L				IAmb	IAmb	17 44 42.3	
	comp=Z,6.4nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**33.00**	**203**	T	T	18 21 01.7	
	baz=17,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**33.01**	**203**	T	T	18 21 04.4	
	baz=17,slow=76,SNR=7.2						
**H11N

FINES	**FINESS Array B**	**65.89**	**347**	P	**P**	**17 49 40.3**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=26,slow=4.9,SNR=4.9						
	comp=Z,0.9nm,0.6s						
HFS	**Hagfors**	**68.57**	**353**	P	**P**	**17 49 58.0**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=29,slow=3.3,SNR=5.0						
	comp=Z,2.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**70.34**	**275**	P	**P**	**17 50 10.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=47,slow=4.1,SNR=1.6						
	comp=Z,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**73.89**	**2**	P	**P**	**17 50 31.1**	**0.0**
	comp=Z,0.3nm,0.4s,baz=9.9,slow=5.3,SNR=4.0						
	comp=Z,0.3nm,0.4s						

IDC ***12*** *17:43:17.9±1.3, 14°.29S×167°.82E, h0km, mb4.0/9, mbtmp4.0/10, ML4.2/1, MS3.3/3, Error ellipse: s-maj=42.3km s-min=21.5km az=133.0*
NEIC ***12*** *17:43:21.4±2.1, 14°.52S±0°.08×168°.2E±0°.1, h35km±1km, mb4.6/15, Error ellipse: s-maj=21.4km s-min=10.9km az=115.0*
NOU ***12*** *17:44:00.4, 17°.50S×167°.82E, h0km, MLv4.2/9, Vanuatu Islands*

ISC 12 17:43:20.7±0.7, 14°.50S±0°.08×168°.08E±0°.09, h30km, n37, σ1s75/35, mb4.2/14, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.21**	**178**	P	**Pn**	**17 44 10.3**	**+1.2**
RTV	**Rentapao**	**3.29**	**174**	P	**Pn**	**17 44 12.3**	**+2.1**
MARNC	**Mare, Loyalty**	**6.94**	**180**	Pn	**Pn**	**17 45 01.1**	**+0.6**
YATNC	**Mamie plateau,**	**7.60**	**188**	P	**Pn**	**17 45 12.2**	**+2.7**
DZM	**Mont Dzumac**	**7.69**	**191**	Pn	**Pn**	**17 45 13.0**	**+2.2**
	3.7nm,0.3s,baz=177,slow=14,SNR=23						
DZM				Sn	**Sn**	**17 46 36.7**	**-0.3**
	0.4nm,0.3s,baz=115,slow=23,SNR=1.3						
DZM				LR	LR	17 47 56.2	
	comp=Z,152nm,18.2s,baz=354,slow=35						
	6.0nm,0.3s						
DZM	**Mont Dzumac**	**7.69**	**191**	P	**Pn**	**17 45 13.4**	**+2.6**
ONTNC	**Ouen Toro**	**7.92**	**191**	Pn	**Pn**	**17 45 14.2**	**+0.3**
ONTNC	**Ouen Toro**	**7.92**	**191**	P	**Pn**	**17 45 16.4**	**+2.5**
PINNC	**Pines Island,**	**8.09**	**184**	Pn	**Pn**	**17 45 19.9**	**+3.7**
MSVF	**Nonsavu**	**10.10**	**110**	Pn	**Pn**	**17 45 43.0**	**-0.9**
EIDS	**Eidsvold**	**19.27**	**233**	P	**Pn**	**17 47 44.2**	**0.0**
EIDS				IAmb	IAmb	17 47 48.8	
	comp=Z,28nm,1.5s						
CTA	**Charters Tower**	**21.56**	**252**	P	**P**	**17 48 09.2**	**+1.2**
	comp=Z,5.3nm,0.9s,baz=72,slow=10,SNR=3.9						
CTA				LR	LR	17 55 36.5	
	comp=Z,82nm,18.8s,baz=28,slow=34						
	comp=Z,5.3nm,0.9s						
CTAO	**Charters Tower**	**21.56**	**252**	P	**P**	**17 48 09.8**	**+1.8**
CTAO				IAmb	IAmb	17 48 11.8	
	comp=Z,14nm,1.2s						
QRZ	**Quartz Range**	**26.51**	**172**	P	**P**	**17 48 51.7**	**-3.9**
QRZ				IAmb	IAmb	17 48 54.4	
	comp=Z,46nm,1.5s						
CAN	**Canberra**	**26.91**	**216**	P	**P**	**17 48 57.6**	**-1.8**
CAN				IAmb	IAmb	17 48 59.7	
	comp=Z,31nm,1.5s						
INKA	**Innaminka**	**28.62**	**238**	P	**P**	**17 49 14.2**	**-0.5**
STKA	**Stephens Creek**	**29.74**	**230**	P	**P**	**17 49 26.2**	**+1.7**
	comp=Z,3.5nm,0.5s,baz=46,slow=8.6,SNR=8.1						
	comp=Z,3.5nm,0.5s						
STKA	**Stephens Creek**	**29.74**	**230**	P	**P**	**17 49 24.3**	**-0.3**
WB0	**Warramunga Arr**	**32.58**	**256**	P	**P**	**17 49 47.9**	**-1.9**
WB0				IAmb	IAmb	17 49 56.9	
	comp=Z,8.4nm,1.1s						
WRAB	**Tennant Creek**	**32.63**	**256**	P	**P**	**17 49 48.8**	**-1.4**
WRAB				IAmb	IAmb	17 50 15.5	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**32.65**	**256**	P	**P**	**17 49 49.2**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=85,slow=8.4,SNR=6.0						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**32.65**	**256**	IAmb	IAmb	17 49 52.8	
	comp=Z,0.5nm,1.4s						
AS31	**Alice Springs**	**33.49**	**249**	P	**P**	**17 49 56.5**	**-1.2**
ASAR	**Alice Springs**	**33.49**	**249**	P	**P**	**17 49 56.9**	**-0.8**
	comp=Z,2.6nm,1.0s,baz=77,slow=8.9,SNR=13						
ASAR				LR	LR	18 02 10.6	
	comp=Z,63nm,20.9s,baz=114,slow=34						
	comp=Z,2.6nm,1.0s						
BBOO	**Buckleboo**	**34.34**	**232**	P	**P**	**17 50 04.6**	**-0.3**
KNRA	**Kununurra**	**37.95**	**263**	P	**P**	**17 50 35.0**	**-1.0**
MBWA	**Marble Bar**	**46.37**	**255**	P	**P**	**17 51 45.6**	**+1.0**
MBWA				IAmb	IAmb	17 52 03.4	
	comp=Z,19nm,1.4s						
CMAR	**Chiang Mai Arr**	**75.58**	**294**	P	**P**	**17 55 04.3**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=107,slow=5.2,SNR=5.2						
	comp=Z,0.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**75.58**	**294**	P	**P**	**17 55 01.8**	**-1.4**
SONM	**Songino Array**	**82.78**	**323**	P	**P**	**17 55 41.9**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=126,slow=2.0,SNR=2.2						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**82.78**	**323**	IAmb	IAmb	17 55 48.4	
	comp=Z,4.1nm,1.5s						
ILAR	**Eielson Array**	**86.07**	**18**	P	**P**	**17 55 58.6**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=243,slow=4.9,SNR=7.3						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**86.07**	**18**	P	**P**	**17 55 58.3**	**+0.1**
NVAR	**Mina Array Bea**	**86.53**	**49**	P	**P**	**17 56 04.6**	**+3.2**
	comp=Z,0.2nm,0.4s,baz=289,slow=1.8,SNR=4.7						
	comp=Z,0.2nm,0.4s						
TIXI	**Tiksi**	**89.91**	**348**	P	**P**	**17 56 15.6**	**-0.8**
TIXI				IAmb	IAmb	17 56 21.1	
	comp=Z,4.9nm,1.1s						
MKAR	**Makanchi Array**	**97.58**	**316**	P	Pdif	17 56 52.8	+0.4
	comp=Z,1.1nm,0.6s,baz=93,slow=6.3,SNR=14						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**97.58**	**316**	P	**P**	**17 56 51.7**	**-0.6**

DJA 12 18:12:25.0±0.8, 10°S±3°×118°E±°, h18km±7km, M4.0/24, mB5.0/2, mb4.1/6, MLv3.9/24, Mw(mB)4.4/2, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.72**	**345**	P	Pb	18 12 38.6	-0.5
PLAI				S	Sg	18 12 49.0	+0.1
DBNI	**Kabupaten Domp**	**1.08**	**18**	P	Pn	18 12 45.2	0.0
DBNI				S	Sb	18 12 58.5	-0.4
TWSI	**Taliwang, Sumb**	**1.33**	**306**	P	Pn	18 12 48.1	-0.6
TWSI				S	Sn	18 13 03.8	-2.2
WBSI	**Waikabubak, Su**	**1.41**	**95**	P	Pn	18 12 47.5	-2.3
WSI	**Waingapu**	**2.30**	**94**	P	Pn	18 13 00.3	-1.7
KHKI	**Kahang-Kahang**	**2.60**	**296**	P	Pn	18 13 07.7	+1.5
KHKI				S	Sn	18 13 39.6	+2.2
DNP	**Denpasar**	**2.85**	**287**	P	Pn	18 13 09.2	-0.5
IGBI	**Denpasar**	**2.88**	**284**	P	Pn	18 13 10.2	+0.2
RTBI	**Rangdo, Negare**	**3.17**	**289**	P	Pn	18 13 15.6	+1.5
EDFI	**Ende, Flores**	**3.75**	**78**	P	Pn	18 13 23.0	+0.8
JAGI	**Jajag, Banyuwa**	**3.92**	**285**	P	Pn	18 13 23.6	-0.7
JAGI				S	Sn	18 14 07.7	-2.1
BSSI	**Bau Bau, Buton**	**4.19**	**37**	P	Pn	18 13 27.8	-0.3
MMRI	**Maumere**	**4.31**	**78**	P	Pn	18 13 31.2	+1.5
KMMI	**Kalianget**	**4.67**	**302**	P	Pn	18 13 37.2	+2.6
KAPI	**Kappang**	**4.82**	**22**	P	Pn	18 13 38.5	+1.7
BATI	**Baumata**	**5.65**	**97**	P	Pn	18 13 48.5	+0.3
	0.1nm26nm,1.1s						
SOEI	**Soe**	**6.21**	**93**	P	Pn	18 13 57.7	+1.7
	0.1nm21nm,1.2s						

ASRS 12 18:23:23.1±0.5, 47°N±3°×94°E±°, h9km, MLh3.6/8, 2C-1D, Error ellipse: s-maj=5.9km s-min=3.2km az=168.3, confirmed, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	**4.21**	**36**	Pg	Pg	18 24 45.3	+1.6
KNGR				Sg	Sg	18 25 46.2	+8.0
TEL	**Teeli**	**4.41**	**330**	Pn	Pn	18 24 34.5	+4.2
TEL				Pg	Pg	18 24 46.7	-0.8
TEL				Sg	Sg	18 25 51.0	+6.3
KZLR	**Kyzyl**	**4.49**	**6**	Sg	Sg	18 25 54.0	+6.8
CUR	**Chagan-Uzun**	**4.54**	**311**	Pn	Pb	18 24 38.6	-4.3
CUR				Pg	Pg	18 24 48.2	-1.7
CUR				Sg	Sg	18 25 54.7	+6.0
DGZ	**Jazzator, Alta**	**4.82**	**303**	Pg	Pg	18 24 53.7	-1.7
DGZ				Sg	Sg	18 26 01.7	+3.8
AKAR	**Aktash**	**5.04**	**310**	Pn	Pn	18 24 44.7	+5.7
AKAR				Pg	Pg	18 24 56.3	-3.4
AKAR				Sg	Sg	18 26 07.8	+2.8
ULGR	**Ulagan, Altay**	**5.06**	**314**	Pg	Pg	18 24 58.2	-1.7
ULGR				Sg	Sg	18 26 10.0	+4.6
CHBI	**Chibit, Altay**	**5.10**	**309**	Pn	Pn	18 24 43.7	+3.9
CHBI				Pg	Pg	18 24 58.4	-2.4
CHBI				Sg	Sg	18 26 10.3	+3.5
ARDR	**Aradan**	**5.34**	**358**	Sg	Sg	18 26 17.9	+3.4
TDJR	**Todzha**	**5.39**	**16**	Pg	Pg	18 25 04.2	-2.1
TDJR				Sg	Sg	18 26 22.5	+6.4
TUNR	**Tungur**	**5.67**	**304**	Pg	Pg	18 25 08.5	-3.0
TUNR				Sg	Sg	18 26 29.1	+4.2
DJO	**Djoy, Khakassi**	**5.76**	**345**	Sg	Sg	18 26 34.0	+6.0
CERR	**Cheremushki**	**5.80**	**346**	Sg	Sg	18 26 36.7	+7.6
MOY	**Mondy**	**6.50**	**44**	Pg	Pg	18 25 22.4	-5.3
MOY				Sg	Sg	18 26 54.1	+2.3
MK31	**Makanchi Array**	**7.79**	**271**	⇑Pn	⇑Pn	18 25 37.2	-1.1
	0.4nm,0.5s,baz=88,slow=17,SNR=3.1						
MK31				⇑Lg	Lg	18 27 23.6	
	3.9nm,0.8s,baz=83,slow=28,SNR=5.3						
MAKZ	**Makanchi**	**8.01**	**271**	⇓Lg	Lg	18 27 26.5	
	4.5nm,0.8s						

IDC ***12*** *18:36:06.6±2.9, 47°.57N×92°.44W, h0km, mb2.9/1, mbtmp3.1/3, ML2.2/2, Error ellipse: s-maj=42.7km s-min=14.9km az=76.0*
NEIC ***12*** *18:36:07.4±2.7, 47°.54N±0°.05×92°.63W±0°.04, h0km±2km, mb_Lg3.1/26, Error ellipse: s-maj=8.0km s-min=4.7km az=169.0*

ISC 12 18:36:05.6±0.9, 47°.53N±0°.04×92°.60W±0°.05, h0km, n28, σ1s37/21, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.85**	**60**		**Pb**	**18 36 23.1**	**-0.1**
E38A	**The Farm, Brul**	**1.17**	**142**		**Pn**	**18 36 29.6**	**+0.4**
EPLO	**Experimental L**	**2.27**	**341**		**Pb**	**18 36 47.0**	**-0.5**
SPMN	**Marine on St.**	**2.31**	**184**	Pn	**Pb**	**18 36 47.1**	**-1.0**
AGMN	**Agassiz Nation**	**2.33**	**290**		**Pn**	**18 36 46.1**	**+0.9**
AGMN				IAmb_Lg		18 37 18.8	
	comp=Z,72nm,0.9s						
TBO	**Thunder Bay**	**2.41**	**61**	Pn	**Pn**	**18 36 46.4**	**+0.1**
GAB	**Rib Lake**	**2.81**	**143**		**Pb**	**18 36 55.1**	**-1.4**
F33A	**5 Mile Ranch,**	**3.06**	**238**	Pn	**Pn**	**18 36 55.3**	**+0.1**
F33A				IAmb_Lg		18 37 42.3	
	comp=Z,49nm,1.0s						
ULM	**Lac du Bonnet**	**3.48**	**323**	Pn	**Pn**	**18 37 01.7**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=140,slow=16,SNR=9.5						
ULM				Pg	**Pb**	**18 37 10.0**	**+2.0**
	comp=Z,0.7nm,0.3s,baz=142,slow=16,SNR=6.5						
ULM				Sn	**Sn**	**18 37 40.8**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=142,slow=17,SNR=5.1						
ULM				Lg	Lg	18 37 54.3	
	comp=Z,1.5nm,0.3s,baz=106,slow=21,SNR=3.8						
ULM	**Lac du Bonnet**	**3.48**	**323**	IAmb_Lg		18 37 57.3	
	comp=Z,67nm,0.9s						
I37A	**Lemond, Waseca**	**3.56**	**189**		**Pn**	**18 37 04.5**	**+2.4**
I40A	**Norwalk**	**3.90**	**158**	Pn	**Pn**	**18 37 06.3**	**-0.4**
I40A				IAmb_Lg		18 38 21.4	
	comp=Z,35nm,1.0s						
I42A	**Draeger Farm,**	**4.46**	**143**	Pn	**Pn**	**18 37 15.0**	**+0.5**
H43A	**Windswept, Lux**	**4.55**	**131**	IAmb_Lg		18 38 29.4	
	comp=Z,53nm,0.8s						
ECSD	**EROS Data Cent**	**4.73**	**218**	Pn	**Pn**	**18 37 18.2**	**0.0**
MDND	**Maddock**	**4.74**	**276**	Pn	**Pn**	**18 37 17.6**	**-0.7**
MDND				IAmb_Lg		18 38 46.1	
	comp=Z,26nm,0.7s						
JFWS	**Jewell Farm**	**4.91**	**159**	Pn	Pn	18 37 26.0	+5.4
JFWS				IAmb_Lg		18 38 48.2	
	comp=Z,38nm,1.0s						
SUSD	**Miller**	**5.40**	**237**	IAmb_Lg		18 39 07.0	
	comp=Z,37nm,0.8s						
L40A	**Anamosa**	**5.55**	**169**	Pn	**Pn**	**18 37 29.3**	**-0.2**
E28A	**Huff**	**5.62**	**263**	IAmb_Lg		18 39 06.3	
	comp=Z,29nm,0.8s						
SCIA	**State Center**	**5.64**	**185**	IAmb_Lg		18 39 21.5	
	comp=Z,34nm,1.1s						
L42A	**Oliver, Polo**	**5.91**	**158**	IAmb_Lg		18 39 20.2	
	comp=Z,36nm,1.1s						
N38A	**Joes South For**	**6.75**	**184**	Pg	**Pb**	**18 38 07.5**	**+3.7**
N38A				IAmb_Lg		18 39 58.7	
	comp=Z,19nm,0.8s						
BGNE	**Belgrade**	**7.30**	**215**	IAmb_Lg		18 40 09.2	
	comp=Z,28nm,0.8s						
HDIL	**Hopedale**	**7.37**	**160**	IAmb_Lg		18 40 03.6	
	comp=Z,20nm,0.8s						
PDAR	**Pinedale Array**	**12.88**	**255**	Pn	**Pn**	**18 39 10.6**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=73,slow=13,SNR=4.3						
YKA	**Yellowknife Ar**	**19.44**	**328**	P	**P**	**18 40 32.8**	**-0.5**
	baz=133,slow=11,SNR=5.9						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**20.10**	**209**	P	**P**	**18 40 41.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=7.5,slow=10,SNR=1.8						
	comp=Z,0.5nm,0.7s						

SOF ***12*** *18:38:25.9, 41°.43N±0°.02×22°.60E±0°.03, h7km±5km, MD2.5/5*
SKO ***12*** *18:38:26.3, 41°.38N×22°.63E, h21km, ML2.0*
BEO ***12*** *18:38:27.6±0.7, 41°.42N×22°.63E, h2km±4km, ML1.8/8*

ISC 12 18:38:26.8±1.0, 41°.43N±0°.04×22°.63E±0°.04, h13km±9km, n15, σ0s62/29, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**202**	*i* Pg	**Pg**	**18 38 30.1**	**+0.1**
VAY				*e*Lg	Lg	18 38 32.1	
	comp=E,904nm,0.2s						
VAY				*i* Sg	**Sg**	**18 38 32.2**	**0.0**
VAY				*e*Lg	Lg	18 38 32.2	
	comp=N,889nm,0.2s						
KKB	**Krupnik**	**0.56**	**42**	*i* Pg	**Pg**	**18 38 37.8**	**0.0**
KKB				Sg	**Sg**	**18 38 45.0**	**-0.3**
SRS	**Serrai**	**0.79**	**113**	*e*Pg	**Pg**	**18 38 41.8**	**-0.3**
SRS				*e*Sg	**Sb**	**18 38 52.6**	**-0.4**
MMB	**Musomishta**	**0.85**	**82**	*i* Pg	**Pb**	**18 38 43.2**	**-0.3**
MMB				Sg	**Sb**	**18 38 54.8**	**-0.1**
BOSS	**Bosilegrad**	**1.07**	**354**	*e*Pg	**Pb**	**18 38 47.5**	**+0.2**
BOSS				*e*Sg	**Sg**	**18 39 01.4**	**-0.1**
PLNA	**Plana**	**1.21**	**29**	*i* Pg	**Pb**	**18 39 49.7**	**+0.1**
PLNA				Sg	**Sb**	**18 39 05.5**	**+0.4**
VTS	**Vitosha**	**1.27**	**21**	*i* Pg	**Pg**	**18 38 51.3**	**0.0**
VTS				Sg	**Sb**	**18 39 07.6**	**+0.5**
VTS	**Vitosha**	**1.27**	**21**	*e*Pg	**Pg**	**18 38 51.3**	**0.0**
VTS				*e*Sg	**Sg**	**18 39 06.8**	**-1.1**
BARS	**Barje**	**1.51**	**337**	*e*Pn	**Pn**	**18 38 54.2**	**+0.6**
BARS				*e*Sn	**Sb**	**18 39 14.7**	**+0.8**
RZN	**Rozhen**	**1.61**	**80**	*e*P	**Pg**	**18 38 57.0**	**-0.7**
RZN				S	**Sg**	**18 39 20.3**	**+1.7**
ZAPS	**Zavoj**	**1.85**	**0**	*e*Pn	**Pb**	**18 38 59.7**	**-0.7**
ZAPS				*e*Sn	**Sb**	**18 39 23.9**	**+0.5**
MPEP	**Malo Peshtene**	**2.10**	**23**	*e*P	**Pg**	**18 39 07.2**	**+0.2**
SELS	**Selova**	**2.11**	**329**	*e*Pn	**Pb**	**18 39 04.5**	**-0.4**
SELS				*e*Sn	**Sb**	**18 39 30.8**	**-0.3**
BOVS	**Bovan**	**2.31**	**343**	*e*Pn	**Pb**	**18 39 07.8**	**-0.5**
BOVS				*e*Sn	**Sb**	**18 39 36.4**	**-0.3**
ZAGS	**Zajecar**	**2.40**	**353**	*e*Pn	**Pb**	**18 39 08.6**	**-1.3**
ZAGS				*e*Sn	**Sb**	**18 39 39.5**	**+0.1**

ISK ***12*** *18:46:09.3, 38°.20N×38°.73E, h5km, ML2.3/13*
AFAD ***12*** *18:46:10.6, 38°.20N×38°.73E, h7km±3km, ML2.8*

ISC 12 18:46:10.3±1.0, 38°.19N±0°.03×38°.71E±0°.03, h13km±8km, n20, σ0s74/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAYA	**Malatya/Merkez**	**0.26**	**300**	P	**Pg**	**18 46 16.2**	**+0.4**
MAYA				S	**Sg**	**18 46 20.5**	**+0.9**
MAYA				IAML		18 46 21.0	
	comp=N,2μm,0.2s						
MAYA				IAML		18 46 21.0	
	comp=E,2μm,0.2s						
NARI	**Adyaman-Kaht**	**0.31**	**173**	P	**Pb**	**18 46 17.4**	**-0.4**
NARI				S	**Sb**	**18 46 22.0**	**-0.8**
ELZG	**Elazig**	**0.37**	**35**	P	**Pb**	**18 46 18.1**	**-0.8**
ELZG				S	**Sg**	**18 46 22.8**	**-0.2**
ELZG				IAML		18 46 24.0	
	comp=N,770nm,0.2s						
ELZG				IAML		18 46 24.0	
	comp=E,1μm,0.3s						
CNGT	**ngs**	**0.46**	**87**	P	**Pg**	**18 46 19.4**	**-0.1**
CNGT				S	**Sg**	**18 46 25.7**	**-0.1**
CNGT				IAML		18 46 29.0	
	comp=N,395nm,0.6s						
SVRC	**Sivrice-ELAZID**	**0.50**	**68**	Pg	**Pg**	**18 46 19.9**	**-0.4**
SVRC				Sg	**Sb**	**18 46 27.8**	**-0.7**
ELZ	**Elazig**	**0.63**	**38**	P	**Pb**	**18 46 23.0**	**-0.2**
ELZ				S	**Sb**	**18 46 32.1**	**0.0**
MDNT	**Maden**	**0.79**	**75**	P	**Pb**	**18 46 26.2**	**+0.2**
MDNT				S	**Sb**	**18 46 36.0**	**-0.6**
ARPR	**Arapgir-MALATY**	**0.94**	**342**	Pg	**Pg**	**18 46 28.2**	**-0.4**
ARPR				Sg	**Sn**	**18 46 42.9**	**0.0**
MCKZ	**Bingol**	**0.95**	**13**	P	**Pg**	**18 46 27.7**	**-0.9**
MCKZ				S	**Sb**	**18 46 41.8**	**+0.6**
DYBB	**Diyarbakir**	**1.15**	**102**	Pn	**Pn**	**18 46 32.4**	**+0.2**
DYBB				Sn	**Sn**	**18 46 48.9**	**+1.0**
ILIC	**ilic-Erzincan**	**1.26**	**355**	Pn	**Pg**	**18 46 33.9**	**-0.7**
GAZ	**Gaziantep**	**1.57**	**230**	Pn	**Pg**	**18 46 40.0**	**-0.4**
KMRS	**Kahramanmaras**	**1.59**	**245**	Pn	**Pb**	**18 46 39.8**	**+0.2**
ERZN	**Erzincan**	**1.60**	**29**	Pn	**Pb**	**18 46 39.7**	**-0.1**
BNGB	**Bingl**	**1.74**	**62**	Pn	**Pb**	**18 46 41.7**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.82**	**277**	Pn	**Pb**	**18 46 43.2**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.96**	**90**	Pn	**Pb**	**18 46 44.9**	**-1.0**
SVSK	**Karacayir**	**2.18**	**323**	Pn	**Pb**	**18 46 48.4**	**-1.1**
KOZT	**Kozan**	**2.39**	**254**	Pn	**Pb**	**18 46 51.8**	**-1.4**
GURO	**Guroymak-BITLI**	**2.63**	**81**	Pn	**Pn**	**18 46 54.4**	**+1.8**

JMA ***12*** *19:05:08.7±0.2, 44°.8N±0°.9×147°.2E±°, h261km±2km, MV3.0/35, NW OFF HOKKAIDO*
SKHL ***12*** *19:05:09.6±0.4, 44°.90N×141°.10E, h215km±7km, mb4.3/3, msha4.6/3*

ISC 12 19:05:07.1±2.1, 44°.77N±0°.07×141°.34E±0°.07, h264km±13km, n21, σ2s46/32, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSS	**Shosan**	**0.52**	**135**	*e*P	**Pn**	**19 05 43.3**	**+1.7**
JSS				*e*S	**S**	**19 06 09.7**	**+0.8**
JWK2	**Keihoku**	**0.67**	**36**	*e*P	**Pn**	**19 05 43.0**	**+1.0**
JWK2				*e*S	**S**	**19 06 09.2**	**-0.5**
JRBN	**Rebuntou**	**0.68**	**343**	*e*P	**Pn**	**19 05 43.4**	**+1.3**
JSE	**Soyaes**	**0.90**	**78**	P	**Pn**	**19 05 43.5**	**+0.5**
JHR	**Hokuryu**	**1.06**	**165**	*e*P	**Pn**	**19 05 46.1**	**+2.0**
ASAJ	**Asahikawa**	**1.11**	**126**	P	**Pn**	**19 05 44.9**	**+0.7**
ASAJ				*e*S	**S**	**19 06 12.4**	**-1.1**
JKK2	**Kamakawa 2**	**1.35**	**131**	P	**Pn**	**19 05 46.5**	**+0.8**
JKK2				*e*S	**S**	**19 06 16.1**	**-0.2**
JMP	**Maruseppu**	**1.64**	**117**	P	**Pn**	**19 05 48.5**	**+0.7**
JMP				*e*S	**S**	**19 06 18.8**	**-1.1**
JEW	**Eniwo**	**1.93**	**178**	P	**Pn**	**19 05 52.5**	**+2.3**
JTKR	**Abashiri--Toko**	**2.01**	**113**	*e*P	**Pn**	**19 05 51.4**	**+0.6**
JTKR				*e*S	**S**	**19 06 24.1**	**-1.2**
JAR	**Ashorobuto**	**2.29**	**129**	P	**Pn**	**19 05 54.3**	**+0.9**
JAR				*e*S	**S**	**19 06 28.6**	**-1.4**
YSS	**Yuzhno-Sakhali**	**2.39**	**24**	*e*P	**Pn**	**19 05 54.6**	**+0.4**
YSS				AMB	AMB	19 05 55.5	
	20nm,0.2s						
YSS				*e*S	**S**	**19 06 29.4**	**-2.2**
YSS				A	A	19 06 31.8	
	30nm,0.3s						
YSS				A	A	19 06 31.8	
	20nm,0.3s						
JCH	**Churui**	**2.61**	**145**	*e*P	**Pn**	**19 05 55.7**	**-0.7**
JCH				*e*S	**S**	**19 06 31.2**	**-4.3**
JNBK	**Urakawa-nobuka**	**2.69**	**157**	*e*P	**Pn**	**19 05 58.5**	**+1.2**
JAK	**Akkeshi**	**3.00**	**125**	*e*S	**S**	**19 06 38.2**	**-4.6**
JOSM	**Okushiri--Mats**	**3.01**	**207**	*e*P	**Pn**	**19 06 03.2**	**+2.6**
AKK	**Akkeshi**	**3.08**	**124**	*e*P	**Pn**	**19 06 04.2**	**+3.0**
YUK	**Yuzh-Kuril'sk**	**3.32**	**101**	*e*P	**Pn**	**19 06 07.8**	**+4.0**
YUK				AMB	AMB	19 06 14.8	
	50nm,0.6s						
YUK				*e*S	**S**	**19 06 53.7**	**+4.8**
YUK				A	A	19 06 57.7	
	50nm,0.8s						
YUK				A	A	19 06 57.7	
	50nm,0.8s						
TEY	**Ternei**	**3.38**	**276**	*e*P	**Pn**	**19 06 04.0**	**-0.4**
NMR	**Nemuro--Hokkai**	**3.46**	**112**	*e*P	**Pn**	**19 06 08.1**	**+2.8**
NEM2	**Nemuro 2**	**3.47**	**112**	*e*P	**Pn**	**19 06 04.3**	**-1.2**
NEM2				*e*S	**S**	**19 06 46.0**	**-5.9**

BER ***12*** *19:09:13.9±1.7, 82°.44N×5°.42W, h10km, Mw3.6, ML2.6(DNK), Confirmed Earthquake*
DNK ***12*** *19:09:13.8±2.6, 82°.47N×4°.71W, h29km±26km, ML1.7, Presumed earthquake*

ISC 12 19:09:10.0±2.0, 82°.4N±0°.2×5°.72W±0°.05, h10km, n13, σ2s63/20, North of Svalbard

| Code | Station Name | Δ

RPSI	**Rantau Prapat**	**9.14**	**147**			**Pn**	**19 20 06.0**	**-0.1**
CM31	**Chiang Mai Arr**	**9.35**	**31**	Pn		**Pn**	**19 20 07.1**	**-2.0**
CMAR	**Chiang Mai Arr**	**9.35**	**31**	Pn		Pn	19 20 14.4	+5.3
	comp=E,0.1nm,0.3s,baz=203,slow=12,SNR=8.2							
CMAR				LR		LR	19 23 35.7	
	comp=E,35nm,20.9s,baz=215,slow=35							
	comp=E,0.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**9.35**	**31**	Pn		**Pn**	**19 20 07.1**	**-1.9**
CHTO	**Chiang Mai**	**9.65**	**30**	Pn		**Pn**	**19 20 12.1**	**-1.2**
BRDH	**Bariadhala**	**12.38**	**350**	LR		LR	19 26 30.0	
	comp=E,121nm,19.9s,baz=211,slow=41							
PALK	**Pallekele**	**13.43**	**258**	Sn		Sn	19 23 17.7	-16
	comp=E,1.8nm,0.3s,baz=159,slow=22,SNR=7.6							
PALK				LR		LR	19 25 54.6	
	comp=E,56nm,18.9s,baz=86,slow=37							
AGT	**Agartala**	**13.64**	**350**	*eP*		**Pn**	**19 21 05.3**	**-2.4**
AGT				*eS*		**Sn**	**19 23 36.1**	**-2.6**
AGT				IAML			19 23 39.3	
	comp=E,71nm,0.2s							
AGT				IAML			19 23 40.6	
	comp=N,64nm,0.6s							
IMP	**Imphal**	**14.34**	**0**	*eP*		**Pn**	**19 21 14.4**	**-2.9**
IMP				*eS*		**Sn**	**19 23 52.1**	**-3.8**
IMP				IAML			19 24 59.9	
	comp=N,23nm,0.3s							
IMP				IAML			19 24 59.9	
	comp=E,18nm,0.2s							
SHL	**Shillong**	**15.19**	**353**			**Pn**	**19 21 27.0**	**-2.0**
SHL				IAmb		IAmb	19 21 42.8	
	comp=Z,10nm,0.8s							
KOHI	**KOHIMA**	**15.22**	**1**	*eP*		**Pn**	**19 21 28.5**	**-0.8**
KOHI				*eS*		**Sn**	**19 24 13.4**	**-4.2**
KOHI				IAML			19 24 35.5	
	comp=N,19nm,0.8s							
KOHI				IAML			19 24 42.2	
	comp=E,20nm,1.7s							
LSA	**Lhasa**	**19.36**	**353**			**Pn**	**19 22 20.8**	**-0.6**
LSA	**Lhasa**	**19.36**	**353**	P		**P**	**19 22 16.8**	**-3.5**
LSA				pmax		pmax		
	comp=Z,3.0nm,0.7s							
LEM	**Lembang**	**21.89**	**141**	P		**P**	**19 22 46.0**	**-1.5**
	comp=Z,6.3nm,0.4s,baz=319,slow=19,SNR=1.3							
LEM				LR		LR	19 31 32.2	
	comp=Z,71nm,19.3s,baz=305,slow=37							
	comp=Z,6.3nm,0.4s							
ENH	**Enshi**	**24.50**	**34**			**P**	**19 23 16.2**	**+2.7**
ENH				IAmb		IAmb	19 23 24.3	
	comp=Z,8.7nm,1.0s							
GOMU	**GeErMu**	**25.68**	**2**	P		**P**	**19 23 24.8**	**+0.3**
GOMU				pmax		pmax		
	comp=Z,7.0nm,1.0s							
LYN	**LuoYang**	**29.40**	**32**	P		**P**	**19 24 01.4**	**+4.0**
LYN				sP		pwP	19 24 08.0	+1.5
LYN				pmax		pmax		
	comp=Z,8.0nm,0.9s							
GTA2	**Gaotai**	**29.41**	**9**	*eP*		**P**	**19 24 00.5**	**+2.9**
GTA2				pmax		pmax		
	comp=Z,2.0nm,1.3s							
KAPI	**Kappang**	**29.94**	**120**	LR		LR	19 35 50.9	
	comp=Z,37nm,21.1s,baz=282,slow=36							
KSH2	**Kashi**	**32.97**	**333**	P		**P**	**19 24 29.7**	**+0.7**
KSH2				sP		sP	19 24 37.2	+1.3
KSH2				pmax		pmax		
	comp=Z,3.0nm,0.7s							
WMQ	**Urumqi**	**33.72**	**352**	*eP*		**P**	**19 24 37.7**	**+2.3**
HHC	**Hu-ho-hao-te**	**34.08**	**24**	*eP*		**P**	**19 24 40.8**	**+2.1**
HHC				pmax		pmax		
	comp=Z,2.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,100nm,4.8s							
TARG	**Taragay, Kyrgy**	**34.26**	**338**	P		**P**	**19 24 38.9**	**-1.6**
TARG				IAmb		IAmb	19 24 52.5	
	comp=Z,3.5nm,0.9s							
NRN	**Naryn**	**34.69**	**336**	P		**P**	**19 24 42.6**	**-1.6**
PRZ	**Przheval'sk**	**34.71**	**340**	P		**P**	**19 24 44.0**	**-0.2**
PRZ				IAmb		IAmb	19 24 49.5	
	comp=Z,5.8nm,1.0s							
KDJ	**Kajisay**	**34.84**	**338**	P		**P**	**19 24 44.6**	**-0.6**
KDJ				IAmb		IAmb	19 24 57.2	
	comp=Z,4.4nm,1.0s							
DRK	**Karamyk**	**35.01**	**329**	P		**P**	**19 24 46.5**	**-0.4**
ARSB	**Arslanbob**	**35.89**	**333**	P		**P**	**19 24 55.5**	**+1.2**
ARSB				IAmb		IAmb	19 25 05.9	
	comp=Z,7.7nm,1.0s							
BTK	**Batken**	**35.94**	**329**			**P**	**19 24 55.6**	**+0.9**
BTK				IAmb		IAmb	19 25 06.8	
	comp=Z,6.4nm,0.9s							
AAK	**Ala-Archa**	**36.31**	**336**	LR		LR	19 41 10.5	
	comp=Z,65nm,21.7s,baz=169,slow=38							
AAK	**Ala-Archa**	**36.31**	**336**			**P**	**19 24 58.6**	**+0.7**
AAK				IAmb		IAmb	19 25 02.8	
	comp=Z,5.0nm,1.1s							
MK31	**Makanchi Array**	**37.58**	**347**	P		**P**	**19 25 08.6**	**+0.2**
MKAR	**Makanchi Array**	**37.58**	**347**	P		**P**	**19 25 09.2**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=163,slow=8.7,SNR=14							
	comp=Z,1.6nm,0.8s							
MKAR	**Makanchi Array**	**37.58**	**347**	P		**P**	**19 25 08.6**	**+0.1**
MAKZ	**Makanchi**	**37.66**	**347**	P		**P**	**19 25 06.9**	**-2.2**
KKAR	**Karatay Array**	**38.42**	**332**	P		**P**	**19 25 15.1**	**-0.5**
KSRS	**Korea Array**	**40.73**	**43**	P		**P**	**19 25 37.7**	**+2.9**
	comp=Z,0.8nm,0.6s,baz=238,slow=7.8,SNR=2.7							
	comp=Z,0.8nm,0.6s							
KURBB	**Kurchatov Arra**	**42.05**	**345**	P		**P**	**19 25 46.1**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=154,slow=7.2,SNR=9.4							
KURBB				LR		LR	19 45 27.3	
	comp=Z,46nm,20.4s,baz=176,slow=39							
	comp=Z,1.3nm,0.8s							
KURK	**Kurchatov**	**42.11**	**346**	P		**P**	**19 25 46.1**	**+0.1**
KURK	**Kurchatov**	**42.11**	**346**	IAmb		IAmb	19 25 57.7	
	comp=Z,8.1nm,1.5s							
ZAA0	**Zalesovo Array**	**44.02**	**352**			**P**	**19 26 02.6**	**+1.1**
ZAA0				IAmb		IAmb	19 26 04.0	
	comp=Z,3.9nm,0.9s							
ZALV	**Zalesovo Beam**	**44.02**	**352**	P		**P**	**19 26 02.9**	**+1.4**
	comp=Z,4.8nm,0.8s,baz=176,slow=9.5,SNR=19							
	comp=Z,4.8nm,0.8s							
ZALV	**Zalesovo Beam**	**44.02**	**352**			**P**	**19 26 02.1**	**+0.7**
BVAR	**Borovoye Array**	**46.53**	**341**	P		**P**	**19 26 22.0**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=140,slow=7.4,SNR=8.5							
BVAR				PcP		**PcP**	**19 27 55.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=114,slow=3.6,SNR=3.0							
	comp=Z,1.2nm,0.8s							
BORK	**Borovoye**	**46.57**	**341**			**P**	**19 26 22.1**	**+0.4**
BORK				IAmb		IAmb	19 26 31.1	
	comp=Z,2.4nm,0.9s							
AB31	**Akbulak array**	**47.92**	**330**			**P**	**19 26 33.0**	**+0.7**
AB31				IAmb		IAmb	19 26 33.9	
	comp=Z,2.5nm,0.8s							
ABKAR	**Akbulak array**	**47.92**	**330**	P		**P**	**19 26 33.0**	**+0.7**
WB0	**Warramunga Arr**	**49.88**	**127**	P		**P**	**19 26 48.2**	**+0.5**
WB0				IAmb		IAmb	19 27 22.8	
	comp=Z,5.0nm,1.1s							
WRA	**Warramunga Arr**	**49.93**	**127**	P		**P**	**19 26 49.1**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=305,slow=8.2,SNR=16							
	comp=Z,0.7nm,0.6s							
WRAB	**Tennant Creek**	**49.94**	**127**	P		**P**	**19 26 49.7**	**+1.5**
WR8	**Warramunga Arr**	**50.06**	**127**	P		**P**	**19 26 50.7**	**+1.5**
ASAR	**Alice Springs**	**51.72**	**131**	P		**P**	**19 27 02.5**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=305,slow=6.8,SNR=21							
ASAR				LR		LR	19 50 48.3	
	comp=Z,32nm,18.3s,baz=309,slow=38							
	comp=Z,2.4nm,0.9s							
ASAR	**Alice Springs**	**51.72**	**131**	P		**P**	**19 27 01.9**	**+0.3**
AS31	**Alice Springs**	**51.73**	**131**	P		**P**	**19 27 02.1**	**+0.4**
ARTI	**Arti**	**53.52**	**336**	LR		LR	19 51 32.3	
	comp=Z,84nm,18.1s,baz=170,slow=38							
FURI	**Furi**	**54.43**	**274**	LR		LR	19 48 57.6	
	comp=Z,33nm,18.8s,baz=142,slow=34							
BRTR	**Keskin Array B**	**60.63**	**310**	P		**P**	**19 28 03.5**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=116,slow=6.8,SNR=6.1							
	comp=Z,1.3nm,0.7s							
STKA	**Stephens Creek**	**62.02**	**135**	P		**P**	**19 28 15.1**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=351,slow=6.1,SNR=4.7							
	comp=Z,2.4nm,0.7s							
STKA	**Stephens Creek**	**62.02**	**135**	P		**P**	**19 28 15.6**	**+1.1**
ARCES	**ARCESS Array B**	**72.82**	**340**	P		**P**	**19 29 22.7**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=12,slow=6.2,SNR=1.4							
	comp=Z,3.4nm,0.9s							
BOSA	**Boshof**	**76.76**	**237**	P		P	19 29 42.4	-3.6
	comp=Z,1.8nm,0.8s,baz=79,slow=5.2,SNR=1.9							
	comp=Z,1.8nm,0.8s							
KEST	**Kesra**	**79.63**	**305**	P		**P**	**19 30 00.9**	**-0.9**
	comp=Z,4.7nm,1.0s,baz=117,slow=4.5,SNR=4.6							
	comp=Z,4.7nm,1.0s							
KEST	**Kesra**	**79.63**	**305**	IAmb		IAmb	19 30 02.4	
	comp=Z,5.8nm,1.0s							
PDAR	**Pinedale Array**	**122.88**	**20**	PKP		**PKPdf**	**19 36 49.5**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=338,slow=1.6,SNR=2.3							
PLCA	**Paso Flores**	**146.83**	**202**	PKPbc		**PKPdf**	**19 37 36.0**	**+1.2**
	comp=Z,2.9nm,0.8s,baz=136,slow=3.1,SNR=4.9							

SOF **12** *19:41:11.1,41.2°E0.1°×23.7°E,h20km±3km, MD2.5/4*
ATH **12** *19:41:11.6,41.2°N×23.7°E,h1km±1km, ML2.1/6, Manual Solution by A.Agalos First location: 2020/02/12 19:41:34, This location: 2020/02/12 19:45:17 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
SKO **12** *19:41:12.6,41.2°N×23.7°E,h0km, ML2.1*
BEO **12** *19:41:12.3±0.5,41.3°N×23.5°E,h0km, ML2.2/8*
ISC 12 19:41:11.8±0.9,**41.25N**±0.02×**23.42E**±0.02,**h12**km±7km,
n32,σ0.85/54,**Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SRS	**Serrai**	**0.19**	**135**	P		**Pg**		**19 41 16.1**	**+0.1**
SRS				S		**Sg**		**19 41 19.1**	**+0.2**
SRS	**Serrai**	**0.19**	**135**	*e*Pg		**Pg**		**19 41 16.1**	**+0.1**
SRS				*e*Sg		**Sg**		**19 41 18.8**	**-0.1**
NVR	**Nevrokopi**	**0.35**	**73**	P		**Pg**		**19 41 18.7**	**-0.2**
NVR				S		**Sg**		**19 41 23.1**	**-0.5**
MMB	**Musomishta**	**0.39**	**40**	*i* Pg		**Pg**		**19 41 19.3**	**-0.3**
MMB				Sg		**Sg**		**19 41 25.0**	**+0.2**
KNT	**Kendrikon**	**0.40**	**257**	P		**Pg**		**19 41 20.1**	**+0.3**
KNT				S		**Sg**		**19 41 25.8**	**+0.7**
KKB	**Krupnik**	**0.63**	**340**	*i* Pg		**Pg**		**19 41 24.0**	**0.0**
KKB				Sg		**Sg**		**19 41 32.6**	**+0.3**
VAY	**Valandovo**	**0.64**	**277**	*i* Pg		**Pg**		**19 41 24.3**	**+0.1**
VAY				*i* Sg		**Sg**		**19 41 33.4**	**+0.8**
VAY				*e*Lg		Lg		19 41 36.3	
	comp=N,76nm,0.2s								
VAY				*e*Lg		Lg		19 41 37.0	
	comp=E,36nm,0.3s								
HORT	**Hortiatis**	**0.69**	**200**	P		**Pg**		**19 41 25.7**	**+0.4**
HORT				S		**Sb**		**19 41 35.4**	**0.0**
THE	**Thessaloniki**	**0.70**	**209**	P		**Pg**		**19 41 25.4**	**0.0**
THE				S		**Sb**		**19 41 35.8**	**+0.2**
GRG	**Griva**	**0.82**	**249**	P		**Pg**		**19 41 27.8**	**+0.2**
GRG				S		**Sb**		**19 41 39.7**	**+0.7**
KAVA	**Kavala**	**0.87**	**107**	P		**Pb**		**19 41 28.1**	**-0.6**
KAVA				S		**Sg**		**19 41 40.5**	**+0.7**
PLG	**Polygyros**	**0.88**	**178**	P		**Pb**		**19 41 28.6**	**-0.3**
OUR	**Ouranopolis**	**1.01**	**155**	P		**Pn**		**19 41 31.6**	**-0.1**
OUR				S		**Sn**		**19 41 45.2**	**-0.7**
RZN	**Rozhen**	**1.09**	**66**	*e*Pg		**Pn**		**19 41 32.6**	**-0.4**
RZN				Sg		**Sg**		**19 41 46.8**	**-0.2**
THAS	**Thassos island**	**1.18**	**123**	P		**Pb**		**19 41 33.8**	**-0.2**
THAS				S		**Sn**		**19 41 49.6**	**-0.4**
PLD	**Plovdiv**	**1.34**	**48**	*e*Pg		**Pg**		**19 41 38.0**	**+0.5**
PLD				Sg		**Sg**		**19 41 55.3**	**+0.3**
PLD	**Plovdiv**	**1.34**	**48**	*e*Pg		**Pg**		**19 41 38.0**	**+0.5**
PLD				*e*Sg		**Sg**		**19 41 57.9**	**+2.9**
LIT	**Litokhoron**	**1.35**	**212**	P		**Pn**		**19 41 36.4**	**0.0**
VTS	**Vitosha**	**1.37**	**354**	*i* Pg		**Pg**		**19 41 38.1**	**-0.1**
VTS				Sg		**Sg**		**19 41 55.7**	**-0.3**
VTS	**Vitosha**	**1.37**	**354**	*e*Pg		**Pg**		**19 41 38.0**	**-0.1**
VTS				*e*Sg		**Sg**		**19 41 56.0**	**0.0**
BOSS	**Bosilegrad**	**1.43**	**331**	*e*Pg		**Pg**		**19 41 39.1**	**-0.1**
BOSS				*e*Sg		**Sg**		**19 41 58.8**	**+1.1**
RDO	**Rodhopi**	**1.60**	**93**	P		**Pn**		**19 41 40.0**	**0.0**
BLSH	**Balsha**	**1.61**	**356**	*i* Pg		**Pg**		**19 41 42.9**	**+0.2**
BLSH				Sg		**Sg**		**19 42 04.8**	**+1.2**
SMTH	**Samothraki Isl**	**1.78**	**115**	P		**Pn**		**19 41 42.3**	**-0.1**
LIA	**Limnos Island**	**1.91**	**135**	P		**Pn**		**19 41 44.0**	**0.0**
BARS	**Barje**	**1.97**	**323**	*e*Pg		**Pg**		**19 41 48.7**	**-0.8**
BARS				*e*Sg		**Sg**		**19 42 14.8**	**-0.2**
ALN	**Alexandroupoli**	**2.02**	**99**	P		**Pn**		**19 41 46.1**	**+0.5**
ZAPS	**Zavoj**	**2.10**	**344**	*e*Pn		**Pb**		**19 41 48.5**	**-1.4**
BLKB	**Belogradchik**	**2.43**	**347**	*e*Pn		**Pb**		**19 41 54.0**	**-1.5**
BLKB				*e*Sn		**Sb**		**19 42 27.2**	**+1.8**
SELS	**Selova**	**2.60**	**320**	*e*Pn		**Pb**		**19 41 56.0**	**-2.4**
BOVS	**Bovan**	**2.70**	**333**	*e*Pn		**Pb**		**19 41 58.9**	**-1.1**
ZAGS	**Zajecar**	**2.71**	**342**	*e*Pn		**Pn**		**19 41 57.3**	**+2.2**

IDC **12** *19:41:12.4±1.5,27.0°N×55.8°E,h0km,mb3.8/13, mbtmp3.9/17,ML3.8/4,Error ellipse: s-maj=25.9km s-min=17.7km az=1.0*
NEIC **12** *19:41:13.6±2.3,27.0°N±0.0°×55.9°E±0.1°,h10km±1km, mb4.1/17,Error ellipse: s-maj=17.4km s-min=12.1km az=63.0*
TEH **12** *19:41:14.6,27.0°N×55.8°E,h16km±23km,ML3.8, Presumed earthquake*
OMAN **12** *19:41:15.3±0.3,27.0°N×56.4°E,h10km,ml3.5/19,Error ellipse: s-maj=6.0km s-min=4.1km az=285.0*
DSN **12** *19:41:16.2±1.1,27.01°N×55.9°E,h15km,ML3.0/12,Error ellipse: s-maj=18.2km s-min=7.9km az=60.0*
ISC 12 19:41:14.4±1.2,**27.06N**±0.02×**55.91E**±0.04,**h17**km±8km,
n98,σ1.48/112,**mb4.0**/24,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.41**	**34**	Pg		**Pg**		**19 41 23.8**	**+0.3**
IBND	**Bandar-abas**	**0.68**	**55**	Pg		**Pn**		**19 41 29.4**	**+0.1**
SHME	**Shamm**	**1.02**	**168**	*e*P		**Pn**		**19 41 34.8**	**+0.7**
	SNR=52								
SHME				S		**Sn**		**19 41 48.7**	**+0.6**
SHME	**Shamm**	**1.02**	**168**	P		**Pn**		**19 41 34.8**	**+0.7**
	SNR=52								
SHME				S		**Sn**		**19 41 49.5**	**+1.4**
BANOM	**Banah**	**1.18**	**163**	*e*P		**Pg**		**19 41 37.6**	**+0.3**
	SNR=44								
BANOM	**Banah**	**1.18**	**163**	P		**Pg**		**19 41 37.6**	**+0.3**
BANOM				S		**Sn**		**19 41 53.7**	**+1.7**
LAR1	**LAR**	**1.49**	**294**	Pg		**Pg**		**19 41 42.7**	**-0.5**
UMQ	**Umm Al-Quwin**	**1.54**	**188**	P		**Pg**		**19 41 44.5**	**+0.3**
UMQ				S		**Sg**		**19 42 08.4**	**+4.2**
MASF	**Masafi**	**1.69**	**172**	P		**Pb**		**19 41 45.6**	**+0.3**
	SNR=41								
MASF				S		**Sg**		**19 42 08.8**	**-0.3**
MSFE	**Esma-Masafi**	**1.71**	**172**	*e*P		**Pb**		**19 41 45.3**	**-0.1**
	SNR=40								
MDH	**Madha**	**1.79**	**169**	*e*P		**Pb**		**19 41 45.9**	**-0.9**
	SNR=8.0								
MDH	**Madha**	**1.79**	**169**	P		**Pb**		**19 41 45.9**	**-0.9**
	SNR=8.4								
MDH				S		**Sb**		**19 42 09.5**	**+0.6**
KHNJ	**Kahnooj**	**1.82**	**61**	Pn		**Pb**		**19 41 47.4**	**-0.1**
NAZ	**Nazwa, Dubai**	**2.07**	**186**	P		**Pb**		**19 41 51.1**	**-0.5**
	SNR=6.1								
NAZ				S		**Sg**		**19 42 19.9**	**-1.3**
UOSS	**Minazif**	**2.12**	**173**			**Pn**		**19 41 50.5**	**+1.4**
UOSS	**Minazif**	**2.12**	**173**	*e*P		**Pb**		**19 41 50.9**	**-1.6**
	SNR=12								
UOSS	**Minazif**	**2.12**	**173**	P		**Pb**		**19 41 51.0**	**-1.4**
UOSS				S		**Sb**		**19 42 17.7**	**-0.8**
UOSS	**Minazif**	**2.12**	**173**	Pn		**Pn**		**19 41 50.3**	**+1.2**
HATD	**Hatta, Dubai**	**2.23**	**175**	*e*P		**Pb**		**19 41 52.6**	**-1.8**
	SNR=16								
HATD	**Hatta, Dubai**	**2.23**	**175**	P		**Pb**		**19 41 53.0**	**-1.3**
	SNR=16								
HATD				S		**Sg**		**19 42 24.8**	**-1.5**
FAQ	**Al Faqa, Dubai**	**2.32**	**187**	P		**Pb**		**19 41 54.4**	**-1.4**
ASHO	**Ashiyiah**	**2.37**	**177**	*e*P		**Pn**		**19 41 54.7**	**+2.1**
	SNR=28								
ASHO	**Ashiyiah**	**2.37**	**177**	P		**Pb**		**19 41 55.0**	**-1.7**
	SNR=28								
ASUD	**Al Ashush, Dub**	**2.48**	**192**	*e*P		**Pb**		**19 41 56.7**	**-1.9**
	SNR=13								
ASUD	**Al Ashush, Dub**	**2.48**	**192**	P		**Pb**		**19 41 57.0**	**-1.5**
	SNR=13								
JHRM	**Jahrom**	**2.52**	**305**	Pn		**Pb**		**19 41 57.1**	**-2.2**
AJN	**Ajban**	**2.62**	**199**	P		**Pb**		**19 42 01.1**	**+0.1**
AJN				S		**Sg**		**19 42 36.4**	**-2.3**
NGRK	**Negar Kerman**	**2.68**	**16**	Pn		**Pb**		**19 41 59.6**	**-2.5**
SOHO	**SOHO**	**2.96**	**169**	P		**Pn**		**19 42 01.0**	**+0.2**
SOHO	**SOHO**	**2.96**	**169**	P		**Pn**		**19 42 01.0**	**+0.2**
ALNE	**Al Ain**	**2.99**	**183**	P		**Pn**		**19 42 03.2**	**+2.0**
ALNE	**Al Ain**	**2.99**	**183**	P		**Pn**		**19 42 03.0**	**+1.8**
KBAM	**BAM**	**3.06**	**47**	Pn		**Pb**		**19 42 05.6**	**-2.9**
KHGB	**Koh Gabri**	**3.34**	**8**	Pn		**Pn**		**19 42 09.5**	**+3.3**
HOQ	**Hoqain**	**3.69**	**160**	P		**Pn**		**19 42 11.0**	**+0.3**
	SNR=5.3								
MZWR	**Madinat Zayed**	**3.76**	**210**	P		**Pn**		**19 42 14.9**	**+3.2**
BIDO	**Bidbid**	**4.05**	**150**	P		**Pn**		**19 42 15.6**	**-0.1**
DSBU	**Dashti - Bushe**	**4.32**	**289**	Pn		**Pn**		**19 42 21.6**	**+2.2**
UMZA	**Um Al Zommool**	**4.38**	**189**	P		**Pn**		**19 42 21.8**	**+1.6**
SMDO	**Samad**	**4.43**	**154**	P		**Pn**		**19 42 21.9**	**+0.9**
SMDO				S		**Sn**		**19 43 11.6**	**-0.7**
BSY	**Bisya**	**4.45**	**164**	P		**Pn**		**19 42 23.0**	**+1.7**
IMEH	**Mehriz**	**4.46**	**346**	Pn		**Pn**		**19 42 24.6**	**+3.0**
IBAF	**Bafgh**	**4.53**	**356**	Pn		**Pn**		**19 42 25.2**	**+2.8**
WSAR	**Wadi Sarin**	**4.53**	**146**	P		**Pn**		**19 42 23.2**	**+0.8**
	SNR=12								
TAFT	**Taft - Yazd**	**4.89**	**342**	Pn		**Pn**		**19 42 30.1**	**+2.7**
JMDO	**Jabal Madar**	**5.08**	**156**	P		**Pn**		**19 42 31.5**	**+1.6**
	SNR=7.0								
SMRA	**Abu-Samra**	**5.13**	**244**	P		**Pn**		**19 42 34.8**	**+4.4**
WBK	**Wadi Bani Khal**	**5.23**	**147**	P		**Pn**		**19 42 32.2**	**+0.3**
	SNR=16								
WBK				S		**Sn**		**19 43 29.7**	**-2.1**
WBK	**Wadi Bani Khal**	**5.23**	**147**	Pn		**Pn**		**19 42 33.2**	**+1.3**
IRAM	**Ramesheh**	**5.65**	**328**	Pn		**Pn**		**19 42 40.3**	**+2.5**
SRVN	**Saravan**	**5.79**	**85**	Pn		**Pn**		**19 42 42.9**	**+3.2**
JLN	**Jalan Bani Buh**	**5.83**	**146**	P		**Pn**		**19 42 41.0**	**+0.8**
	SNR=10								
JLN				S		**Sn**		**19 43 43.9**	**-2.8**
MHTO	**MHTO**	**6.33**	**162**	P		**Pn**		**19 42 48.2**	**+1.1**
MHTO				S		**Sn**		**19 43 56.9**	**-2.1**
DMTO	**DMTO**	**9.34**	**186**	P		**Pn**		**19 43 27.8**	**-0.6**
RAYN	**Ar Rayn**	**10.05**	**252**	Pn		**Pn**		**19 43 36.2**	**-2.0**
ASF	**Jabal al Asfar**	**17.29**	**292**	P		**Pn**		**19 45 16.0**	**+0.7**
	0.3nm,0.3s,baz=116,slow=9.8,SNR=4.3								
	2.4nm,0.4s								
DRK	**Karamyk**	**18.13**	**43**	P		**P**		**19 45 26.8**	**+0.8**
DRK				IAmb		IAmb		19 45 28.8	
	comp=Z,6.7nm,0.6s								
MMAI	**Mount Meron Ar**	**18.71**	**293**	P		**P**		**19 45 32.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=99,slow=11,SNR=1.6								
	comp=Z,2.1nm,0.8s								
KBZ	**Khabaz**	**19.69**	**331**	P		**Pn**		**19 45 44.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=138,slow=9.6,SNR=12								
	comp=Z,9.7nm,0.8s								
KVAR	**Kislovodsk Arr**	**19.95**	**331**	P		**Pn**		**19 45 47.2**	**-0.4**
	baz=98,slow=22								
KVAR				S		**Sn**		**19 49 31.5**	**0.0**
	comp=Z,2.1nm,0.7s,baz=144,slow=22,SNR=1.1								
	comp=Z,4.0nm,0.8s								
KIV	**Kislovodsk**	**19.96**	**331**			**Pn**		**19 45 47.1**	**-0.4**
KIV				IAmb		IAmb		19 45 49.6	
	comp=Z,17nm,0.8s								
ARSB	**Arslanbob**	**20.00**	**40**	P		**P**		**19 45 45.7**	**-0.6**
AAK	**Ala-Archa**	**21.70**	**39**	P		**P**		**19 46 05.4**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=226,slow=1.5,SNR=5.5								
	comp=Z,1.0nm,0.8s								
AAK	**Ala-Archa**	**21.70**	**39**			**P**		**19 46 05.6**	**+0.8**
NRN	**Naryn**	**21.87**	**44**			**P**		**19 46 07.9**	**+1.2**
NRN				IAmb		IAmb		19 46 09.2	
	comp=Z,4.6nm,1.0s								
AB31	**Akbulak array**	**22.38**	**7**			**P**		**19 46 12.0**	**+0.2**
AB31				IAmb		IAmb		19 46 15.0	
	comp=Z,4.3nm,1.2s								
ABKAR	**Akbulak array**	**22.38**	**7**	P		**P**		**19 46 12.2**	**+0.5**
BRTR	**Keskin Array B**	**22.41**	**310**	P		**P**		**19 46 13.6**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=130,slow=12,SNR=9.2								
	comp=Z,2.7nm,0.7s								
BRTR	**Keskin Array B**	**22.41**	**310**	P		**P**		**19 46 12.9**	**+0.5**
BOOM	**Boomskoye usch**	**22.45**	**42**	P		**P**		**19 46 10.4**

VMAR	**Armenia, Volca**	**1.85**	**95**	*eP*		**Pn**	**20 11 11.6**	**+1.3**
BOAB	**BOACO BROADBAN**	**.94**	**42**	P		**Pn**	**20 11 11.2**	**-0.3**
CSGN	**Cosiguina Volc**	**2.05**	**344**	P		**Pn**	**20 11 14.2**	**+1.1**
CSGN				S		**Sn**	**20 11 36.8**	**-1.0**
CSGN	**Cosiguina Volc**			*eP*		**Pn**	**20 11 14.3**	**+1.2**
LIMN	**Finca el Limon**	**2.14**	**16**	P		**Pn**	**20 11 14.6**	**+0.3**
LIMN				S		**Sn**	**20 11 38.5**	**-1.7**
MATN	**Matagalpa**	**2.19**	**28**	P		**Pn**	**20 11 14.2**	**-0.8**
CNCH	**Conchagua**	**2.41**	**340**	P		**Pn**	**20 11 18.6**	**+0.5**
CNCH				S		**Sn**	**20 11 47.2**	**+0.2**
RCON	**San Juan de Ri**	**2.60**	**18**	P		**Pn**	**20 11 21.6**	**+0.9**
RCON				S		**Sb**	**20 11 55.5**	**-2.4**
PICV	**PH. Pirrs**	**3.07**	**116**	*eP*		**Pb**	**20 11 31.5**	**-2.5**

CATAC ***12*** *20:15:36.4±0.4, 13°N±2°×8°9W±°, h27km±2km, M3.5/24, MLv3.5/24, Error ellipse: s-maj=5.5km s-min=2.9km az=27.7, confirmed*
SNET ***12*** *20:15:36.9±1.9, 13°03N×89°47W, h28km, ML3.5, Presumed earthquake*
GCG ***12*** *20:15:38.1±0.7, 13°11N×89°52W, h46km±12km, MD3.7, Presumed earthquake*

ISC 12 20:15:36.8±1.5, 13°02N±0°06×89°44W±0°04, h26km±12km, n50, σ0ˢ50/79, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.48**	**14**			P	**Pn**	**20 15 47.9**	**0.0**
LALI	**Alcalda de L**	**0.48**	**14**	*eP*			**Pn**	**20 15 48.0**	**0.0**
LALI				*eS*			**Sn**	**20 15 55.6**	**+0.1**
LALI	**Alcalda de L**	**0.48**	**14**	*i*	P		**Pn**	**20 15 47.8**	**0.0**
JAYA	**Jayaque - finc**	**0.63**	**360**		P		**Pb**	**20 15 49.5**	**+0.1**
JAYA	**Jayaque - finc**	**0.63**	**360**	*eP*			**Pb**	**20 15 49.6**	**+0.3**
JAYA				*eS*			**Sn**	**20 15 59.1**	**-0.4**
JAYA	**Jayaque - finc**	**0.63**	**360**	*i*	P		**Pb**	**20 15 49.6**	**+0.3**
JAYA				*i*	S		**Sn**	**20 15 59.1**	**-0.4**
PANCS	**Alcalda de**	**0.64**	**24**		P		**Pb**	**20 15 49.7**	**+0.2**
PANCS					S		**Sn**	**20 15 59.3**	**-0.3**
LOMA	**Loma Larga**	**0.67**	**23**	*eP*			**Pb**	**20 15 50.4**	**+0.3**
PMON	**Piamonte**	**0.70**	**10**		P		**Pb**	**20 15 50.5**	**0.0**
LFRS	**El Faro**	**0.70**	**32**	*eP*			**Pb**	**20 15 50.8**	**+0.3**
SEMO	**Seminario San**	**0.71**	**17**		P		**Pb**	**20 15 50.2**	**-0.5**
SEMO					S		**Sn**	**20 16 01.3**	**-0.1**
UTEC	**Universidad Te**	**0.72**	**19**		P		**Pb**	**20 15 50.7**	**0.0**
UTEC					S		**Sn**	**20 16 01.6**	**+0.1**
UEES	**Universidad Ev**	**0.72**	**16**		P		**Pb**	**20 15 50.7**	**-0.1**
UEES					S		**Sn**	**20 16 01.3**	**-0.3**
BOQS	**Boqueron**	**0.73**	**13**	*eP*			**Pb**	**20 15 51.3**	**+0.3**
IGN	**Direccin Gen**	**0.74**	**21**		S		**Sn**	**20 16 02.2**	**+0.1**
UDBS	**Universidad Do**	**0.74**	**22**		S		**Sn**	**20 16 02.0**	**-0.2**
CEDA	**San Andres**	**0.78**	**3**		P		**Pb**	**20 15 51.5**	**-0.3**
CEDA					S		**Sn**	**20 16 03.0**	**0.0**
LFU	**La Fuente**	**0.79**	**24**	*eP*			**Pn**	**20 15 52.4**	**+0.1**
COEG	**Centro de Oper**	**0.81**	**43**		P		**Pb**	**20 15 51.9**	**-0.4**
COEG					S		**Sb**	**20 16 03.3**	**+0.4**
CEVE	**Cerro Verde**	**0.82**	**348**		P		**Pb**	**20 15 52.5**	**-0.1**
CEVE					S		**Sn**	**20 16 04.3**	**0.0**
CEVE	**Cerro Verde**	**0.82**	**348**	*eP*			**Pb**	**20 15 52.5**	**-0.1**
TECO	**Alcaldia de Te**	**0.82**	**51**		P		**Pn**	**20 15 51.9**	**-0.8**
TECO					S		**Sb**	**20 16 03.6**	**+0.3**
SBLS	**San Blas**	**0.83**	**348**	*eP*			**Pb**	**20 15 52.5**	**-0.3**
SBLS				*eS*			**Sn**	**20 16 05.1**	**+0.5**
PAVA	**Las Pavas**	**0.85**	**36**		P		**Pn**	**20 15 52.8**	**-0.3**
PAVA					S		**Sn**	**20 16 04.9**	**+0.1**
PAVA	**Las Pavas**	**0.85**	**36**	*eP*			**Pn**	**20 15 52.9**	**-0.3**
PAVA				*eS*			**Sn**	**20 16 05.3**	**+0.5**
NUBE	**Las Nubes**	**0.94**	**340**		P		**Pn**	**20 15 53.5**	**-0.9**
NUBE	**Las Nubes**	**0.94**	**340**	*eP*			**Pn**	**20 15 53.6**	**-0.8**
NUBE				*eS*			**Sb**	**20 16 06.2**	**-0.3**
NUBE	**Las Nubes**	**0.94**	**340**	*i*	P		**Pn**	**20 15 53.6**	**-0.8**
NUBE				*i*	S		**Sb**	**20 16 06.1**	**-0.5**
UNIC	**Universidad Ca**	**0.96**	**354**		P		**Pn**	**20 15 54.5**	**-0.2**
UNIC					S		**Sn**	**20 16 07.6**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.97**	**46**		P		**Pn**	**20 15 54.5**	**-0.3**
SCLA					S		**Sn**	**20 16 07.3**	**-0.5**
FAME	**Alcaldia de Sa**	**0.99**	**326**		P		**Pn**	**20 15 54.0**	**-1.0**
FAME					S		**Sb**	**20 16 06.9**	**-1.1**
LOAL	**Lomas de Alarc**	**1.02**	**341**		P		**Pn**	**20 15 55.2**	**-0.4**
LOAL					S		**Sb**	**20 16 09.8**	**+0.8**
SLOZ	**Alcaldia de Sa**	**1.05**	**342**		P		**Pn**	**20 15 55.7**	**-0.2**
RBDL	**Robledal**	**1.11**	**348**	*eP*			**Pn**	**20 15 56.6**	**-0.2**
RBDL				*eS*			**Sb**	**20 16 12.5**	**+0.9**
PACA	**Pacayal**	**1.18**	**68**		P		**Pn**	**20 15 57.7**	**0.0**
PACA					S		**Sn**	**20 16 13.1**	**+0.1**
RANC	**El Ranchito**	**1.20**	**70**		P		**Pn**	**20 15 58.2**	**+0.2**
RANC					S		**Sn**	**20 16 13.5**	**+0.1**
LLGN	**La Laguna**	**1.23**	**23**		P		**Pn**	**20 15 58.0**	**-0.4**
LLGN					S		**Sn**	**20 16 14.2**	**-0.1**
BLLM	**Bellamira**	**1.25**	**70**	*eP*			**Pn**	**20 15 58.9**	**+0.3**
MTO3	**Montecristo**	**1.37**	**3**		P		**Pn**	**20 16 00.1**	**-0.3**
MTO3					S		**Sn**	**20 16 17.9**	**0.0**
MTO3	**Montecristo**	**1.37**	**3**	*i*	P		**Pn**	**20 16 00.2**	**-0.3**
ESQI	**Esquipulas**	**1.53**	**4**		P		**Pn**	**20 16 02.4**	**-0.2**
ESQI					S		**Sn**	**20 16 22.1**	**+0.3**
LCND	**La Caada**	**1.54**	**79**		P		**Pn**	**20 16 02.4**	**-0.2**
CNCH	**Conchagua**	**1.59**	**81**		P		**Pn**	**20 16 03.6**	**+0.2**
CNCH					S		**Sn**	**20 16 23.5**	**+0.4**
FG16	**Alotenango, Sa**	**1.62**	**320**	*i*	P		**Pb**	**20 16 08.5**	**+2.4**
CSGN	**Cosiguina Volc**	**1.84**	**91**		P		**Pn**	**20 16 06.7**	**0.0**
CSGN					S		**Sn**	**20 16 29.5**	**+0.3**
ESSG	**Sabana Grande**	**1.91**	**315**	*i*	P		**Pn**	**20 16 07.0**	**-0.7**
APG	**El Apazote**	**2.21**	**333**	*i*	P		**Pn**	**20 16 12.0**	**+0.1**
STG8	**El Palmar, Qui**	**2.33**	**308**	*i*	P		**Pb**	**20 16 18.5**	**+0.2**
COPN	**Copaltepe**	**2.91**	**106**		P		**Pn**	**20 16 20.5**	**-0.9**
LIMN	**Finca el Limon**	**3.00**	**89**		P		**Pn**	**20 16 21.9**	**-0.8**
LIMN					S		**Sn**	**20 16 57.8**	**-0.2**

IDC ***12*** *20:24:48.3±0.8, 53°52N×34°71W, h0km, mb3.6/9, mbtmp3.6/9, MS3.3/4, Error ellipse: s-maj=30.3km s-min=20.5km az=16.0*

ISC 12 20:24:49.6±0.8, 53°5N±0°2×34°8W±0°1, h10km, n16, σ1ˢ14/12, mb3.8/8, MS3.3/4, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.73**	**287**			P	**P**	**20 29 06.2**	**-1.9**
	1.5nm,0.8s,baz=86,slow=14,SNR=1.6								
ESDC	**Sonseca Array**	**25.06**	**111**			P	**P**	**20 30 14.2**	**+0.3**
	0.8nm,0.9s,baz=311,slow=10,SNR=4.1								
	0.8nm,0.9s								
SADO	**Sadowa**	**29.88**	**271**			LR	LR	20 41 42.1	
	comp=Z,46nm,19.9s,baz=184,slow=34								
ULM	**Lac du Bonnet**	**36.84**	**290**			P	**P**	**20 31 57.6**	**+0.1**
	1.1nm,0.6s,baz=98,slow=7.1,SNR=1.9								
	1.1nm,0.6s								
TKL	**Tuckaleechee C**	**38.31**	**262**			LR	LR	20 45 40.7	
	comp=Z,36nm,19.9s,baz=30,slow=33								
BRTR	**Keskin Array B**	**47.16**	**78**			P	**P**	**20 33 22.1**	**0.0**
	0.7nm,0.9s,baz=338,slow=6.5,SNR=3.2								
	0.7nm,0.9s								
PDAR	**Pinedale Array**	**48.84**	**289**			P	**P**	**20 33 35.3**	**+0.1**
	0.8nm,0.8s,baz=63,slow=7.2,SNR=5.9								
	0.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**49.52**	**130**			P	**P**	**20 33 39.2**	**-1.2**
	0.5nm,0.9s,baz=314,slow=7.1,SNR=2.7								
	0.5nm,0.9s								
ILAR	**Eielson Array**	**51.07**	**329**			P	**P**	**20 33 52.5**	**+1.0**
	0.4nm,0.8s,baz=48,slow=7.1,SNR=4.5								
	0.4nm,0.8s								
DBIC	**Dimbokro**	**52.65**	**141**			LR	LR	20 52 19.3	
	comp=Z,52nm,20.1s,baz=357,slow=31								
ZALV	**Zalesovo Beam**	**61.80**	**36**			P	**P**	**20 35 08.4**	**+0.3**
	0.3nm,0.4s,baz=311,slow=6.6,SNR=2.2								
	0.3nm,0.4s								
MKAR	**Makanchi Array**	**66.67**	**42**			P	**P**	**20 35 40.9**	**+0.7**
	0.3nm,0.6s,baz=325,slow=6.1,SNR=4.5								
	0.3nm,0.6s								
FURI	**Furi**	**73.07**	**98**			LR	LR	21 09 25.5	
	comp=Z,22nm,19.0s,baz=4.0,slow=37								
LPAZ	**La Paz**	**75.19**	**213**			P	**P**	**20 36 34.6**	**+1.8**
	0.7nm,0.5s,baz=0.0,slow=6.1,SNR=3.9								
	0.7nm,0.5s								
WRA	**Warramunga Arr**	**145.46**	**18**	PKPbc			**PKPdf**	**20 44 27.1**	**-0.7**
	0.2nm,0.4s,baz=349,slow=3.5,SNR=5.7								
ASAR	**Alice Springs**	**149.00**	**20**	PKPbc			**PKPbc**	**20 44 36.5**	**-1.2**
	0.8nm,0.5s,baz=343,slow=2.6,SNR=14								

SOME ***12*** *21:19:04.1, 39°95N×76°98E, h10km*
NNC ***12*** *21:19:04.7±2.8, 39°97N×77°02E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=18.4km s-min=16.5km az=18.0
KRNET ***12*** *21:19:05.0±0.1, 39°91N×77°04E, h13km, mb3.0*

ISC 12 21:19:07.9±2.7, 40°1N±0°1×76°99E±0°04, h2km±16km, n29, σ1ˢ50/47, 11C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.42**	**313**	*i*	P		**Pn**	**21 19 34.2**	**-0.8**
JNKS				⇓	*i*		**Sg**	**21 19 55.2**	**+1.7**
NRN	**Naryn**	**1.54**	**331**	⇓	*i*		**Pb**	**21 19 36.7**	**-0.7**
NRN				⇑	*i*		**Sg**	**21 20 00.2**	**+2.7**
TARG	**Taragay, Kyrgy**	**1.75**	**20**	⇓	*i*		**Pb**	**21 19 40.2**	**-0.9**
TARG				⇓	*i*		**Sg**	**21 20 06.1**	**+1.9**
KDJ	**Kajisay**	**2.05**	**4**	⇓	*i*		**Pb**	**21 19 44.9**	**-1.0**
KDJ				⇓	*i*		**Sg**	**21 20 14.2**	**+0.5**
ULHL	**Ulahol**	**2.23**	**346**	⇓	*eP*		**Pb**	**21 19 47.6**	**-1.5**
ULHL				⇑	*i*		**Sb**	**21 20 18.5**	**+1.3**
BOOM	**Boomskoye usch**	**2.53**	**342**	⇓	*i*		**Pb**	**21 19 51.6**	**-2.5**
BOOM				⇑	*i*		**Sb**	**21 20 25.8**	**0.0**
PRZ	**Przheval'sk**	**2.62**	**23**	⇓	*eP*		**Pn**	**21 19 52.3**	**+0.8**
PRZ				⇑	*eS*		**Sb**	**21 20 27.2**	**-1.2**
ANVS	**Anan'yevo**	**2.74**	**10**	⇓	*eP*		**Pb**	**21 19 54.8**	**-3.0**
ANVS				⇓	*eS*		**Sb**	**21 20 30.0**	**-1.9**
TNSS	**Tian-Shan**	**2.95**	**359**		Pg		**Pb**	**21 20 01.6**	**+0.2**
	2.2nm,0.3s								
TNSS					Lg		Lg	21 20 43.1	
	2.9nm,0.5s								
TNSS	**Tian-Shan**	**2.95**	**359**	*eP*			**Pb**	**21 20 01.6**	**+0.2**
	2.2nm,0.3s								
TNSS				*eS*			**Sg**	**21 20 43.1**	**+0.4**
	2.9nm,0.5s								
MTBS	**Maitube**	**3.07**	**352**	*eP*			**Pb**	**21 20 04.4**	**+1.1**
	3.3nm,0.2s								
MTBS				*eS*			**Sg**	**21 20 47.7**	**+1.2**
	6.4nm,0.3s								
MDOK	**Medeo**	**3.07**	**1**		Pg		**Pb**	**21 20 03.2**	**-0.2**
	5.1nm,0.5s								
MDOK					Lg		Lg	21 20 46.0	
	19nm,0.9s								
KNDC	**Almaty**	**3.13**	**360**	⇑	Pg		**Pn**	**21 19 59.8**	**+1.4**
	6.7nm,0.5s								
KNDC				⇓	Lg		Lg	21 20 47.8	
	53nm,0.6s								
KOTS	**Kotyrbulak**	**3.15**	**2**		Pg		**Pb**	**21 20 05.8**	**+1.1**
	7.0nm,0.2s								
KOTS					Lg		Lg	21 20 50.2	
	26nm,0.7s								
KOTS	**Kotyrbulak**	**3.15**	**2**	*eP*			**Pb**	**21 20 05.7**	**+1.1**
	7.0nm,0.2s								
KOTS				*eS*			**Sg**	**21 20 50.2**	**+1.2**
	26nm,0.7s								
SATY	**Saty**	**3.15**	**19**		Pg		**Pb**	**21 20 05.0**	**+0.2**
	4.8nm,0.3s								
SATY					Lg		Lg	21 20 49.0	
	8.9nm,0.3s								
DGS	**Degeres**	**3.28**	**344**		Pg		**Pb**	**21 20 08.5**	**+1.5**
	4.0nm,0.5s								
DGS					Lg		Lg	21 20 54.7	
	5.9nm,0.6s								
DGS	**Degeres**	**3.28**	**344**	*eP*			**Pb**	**21 20 08.4**	**+1.5**
	4.0nm,0.5s								
DGS				*eS*			**Sg**	**21 20 54.7**	**+1.4**
	5.9nm,0.6s								
UZB	**Uzynbulak**	**3.42**	**26**		Pg		**Pb**	**21 20 10.2**	**+0.9**
	3.9nm,0.2s								
UZB					Lg		Lg	21 20 57.7	
	5.4nm,0.4s								
UZB	**Uzynbulak**	**3.42**	**26**	*eP*			**Pb**	**21 20 10.2**	**+0.9**
	3.9nm,0.2s								
UZB				*eS*			**Sg**	**21 20 57.7**	**+0.1**
	5.4nm,0.4s								
SHLS	**Shalkode**	**3.58**	**30**		Pg		**Pg**	**21 20 15.4**	**-1.2**
	4.9nm,0.3s								
SHLS					Lg		Lg	21 21 06.8	
	12nm,0.4s								
SHLS	**Shalkode**	**3.58**	**30**	*eP*			**Pg**	**21 20 15.4**	**-1.2**
	4.9nm,0.3s								
SHLS				*eS*			**Sg**	**21 21 06.8**	**+3.8**
	12nm,0.4s								
KTBS	**Karatobe**	**3.63**	**356**		Pg		**Pb**	**21 20 13.3**	**+0.4**
	2.4nm,0.3s								
KTBS					Lg		Lg	21 21 03.0	
	0.3nm,0.2s								
KTBS	**Karatobe**	**3.63**	**356**	*eP*			**Pb**	**21 20 13.2**	**+0.4**
	2.4nm,0.3s								
KTBS				*eS*			**Sg**	**21 21 03.0**	**-1.5**
	0.3nm,0.2s								
KRBS	**Karabastau**	**3.74**	**345**		Pg		**Pb**	**21 20 14.6**	**-0.1**
	1.7nm,0.5s								
KRBS					Lg		Lg	21 21 05.4	
	8.9nm,0.7s								
KRBS	**Karabastau**	**3.74**	**345**	*eP*			**Pb**	**21 20 14.6**	**-0.1**
	1.7nm,0.5s								
KRBS				*eS*			**Sg**	**21 21 05.4**	**-2.6**
	8.9nm,0.7s								
PDGK	**Podgornoye**	**3.74**	**29**	⇑	Pg		**Pb**	**21 20 13.3**	**-1.5**
	2.0nm,0.5s								
PDGK				⇑	Lg		Lg	21 21 04.3	
	10nm,0.8s								
MRKS	**Merke**	**3.88**	**314**	*eP*			**Pb**	**21 20 18.5**	**+1.4**
	0.9nm,0.2s								
MRKS				*eS*			**Sg**	**21 21 11.9**	**-0.7**
	6.0nm,0.8s								
ARXS	**Arharly**	**4.17**	**8**	*eP*			**Pb**	**21 20 24.5**	**+2.4**
	2.3nm,0.4s								
ARXS				*eS*			**Sg**	**21 21 21.6**	**-0.2**
	2.7nm,0.2s								

IDC 12 21:34:03.1±6.6, 9°96N×93°21E, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/1, Error ellipse: s-maj=337.1km s-min=22.7km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**36.44**	**337**			LR	LR	21 57 10.1	
	comp=Z,50nm,18.0s,baz=264,slow=38								
MKAR	**Makanchi Array**	**37.87**	**348**			P	P	21 41 21.7	0.0
	0.5nm,0.8s,baz=166,slow=7.2,SNR=5.9								
	0.5nm,0.8s								
ZALV	**Zalesovo Beam**	**44.38**	**353**			P	P	21 42 15.1	-0.2
	1.0nm,0.6s,baz=171,slow=9.8,SNR=6.6								
	1.0nm,0.6s								
WRA	**Warramunga Arr**	**50.22**	**126**			P	P	21 43 00.9	-0.4
	0.4nm,0.5s,baz=306,slow=8.2,SNR=12								
	0.4nm,0.5s								
ASAR	**Alice Springs**	**51.95**	**131**			P	P	21 43 14.4	+0.2
	0.8nm,0.7s,baz=308,slow=7.1,SNR=10								
	0.8nm,0.7s								

TAP ***12*** *22:26:07.9, 24°83N×122°86E, h139km, ML3.3, D*
JMA ***12*** *22:26:08.7±0.3, 25°N±3°×122°8E±0°7, h133km±2km, MV2.4/13, NW OFF ISHIGAKIJIMA IS*

ISC 12 22:26:09.2±1.8, 24°79N±0°06×122°84E±0°03, h130km±10km, n67, σ0ˢ85/127, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.35**	**163**			P	**Pn**	**22 26 27.6**	**0.0**
JYNG				*eS*			**Sn**	**22 26 42.0**	**+0.5**
YOJ	**Yonaguni jima**	**0.36**	**154**	*eP*			**Pn**	**22 26 27.7**	**0.0**
YOJ	**Yonaguni jima**	**0.36**	**154**	*i*	P		**Pn**	**22 26 27.7**	**0.0**
YOJ				*i*	S		**Sn**	**22 26 42.5**	**+0.9**
EOS2	**EOS2**	**0.66**	**237**	*eP*			**Pn**	**22 26 29.9**	**+0.7**
EOS2				*eS*			**Sn**	**22 26 44.5**	**+0.2**
EOS3	**EOS3**	**0.69**	**224**	*eP*			**Pn**	**22 26 29.9**	**+0.5**
EOS3				*eS*			**Sn**	**22 26 46.1**	**+1.5**
TWB1	**Santiao Chiao**	**0.80**	**286**	*eP*			**Pn**	**22 26 30.0**	**-0.4**
TWB1				*eS*			**Sn**	**22 26 46.5**	**0.0**
EOS4	**EOS4**	**0.81**	**216**	*eP*			**Pn**	**22 26 29.7**	**-0.4**
EOS4				*eS*			**Sn**	**22 26 46.7**	**+0.8**
TWC	**Suao**	**0.92**	**259**			S	**Sn**	**22 26 47.2**	**-0.9**
SXI1	**Grass Mountain**	**0.93**	**290**			P	**Pn**	**22 26 30.8**	**-0.7**
SXI1				*eS*			**Sn**	**22 26 47.8**	**-0.7**
IRIF	**Iriomote-Funau**	**0.93**	**119**			P	**Pn**	**22 26 31.4**	**-0.1**
IRIF				*eS*			**Sn**	**22 26 48.9**	**+0.5**
TIPB	**Shuangxi**	**0.94**	**282**	*i*	P		**Pn**	**22 26 31.6**	**0.0**
TIPB					S		**Sn**	**22 26 47.8**	**-0.7**
EWUT	**Wuta**	**1.02**	**251**			P	**Pn**	**22 26 32.6**	**+0.3**
EWUT					S		**Sn**	**22 26 49.7**	**-0.2**
NDS	**Dongshan**	**1.03**	**262**			P	**Pn**	**22 26 31.8**	**-0.6**
NDS				*eS*			**Sn**	**22 26 48.5**	**-1.5**
TWE	**Neicheng**	**1.06**	**267**	*i*	P		**Pn**	**22 26 32.9**	**+0.1**
FUSB	**Fushanzhiwuyua**	**1.14**	**269**	*i*	P		**Pn**	**22 26 33.4**	**-0.1**
FUSB					S		**Sn**	**22 26 51.0**	**-1.0**
HATJ	**Hateruma jima**	**1.14**	**129**	*eP*			**Pn**	**22 26 34.3**	**+0.7**
HATJ				*eS*			**Sn**	**22 26 52.9**	**+0.9**
ENTT	**Nioudou**	**1.16**	**263**		P		**Pn**	**22 26 34.1**	**+0.4**
ENTT				*eS*			**Sn**	**22 26 53.2**	**+0.8**
NHY	**Taipei**	**1.18**	**283**	*eP*			**Pn**	**22 26 35.5**	**+1.6**
NHY				*eS*			**Sn**	**22 26 52.4**	**-0.2**
JKRS	**Kuro-shima**	**1.20**	**117**		P		**Pn**	**22 26 34.6**	**+0.5**
JKRS				*eS*			**Sn**	**22 26 53.6**	**+0.6**
YM01	**YM01**	**1.20**	**288**	*i*	P		**Pn**	**22 26 34.2**	**0.0**
YM01					S		**Sn**	**22 26 53.1**	**0.0**
NWLT	**Wulai**	**1.21**	**270**		P		**Pn**	**22 26 33.9**	**-0.3**
NWLT					S		**Sn**	**22 26 53.7**	**+0.5**
LATG	**Datong**	**1.22**	**258**		P		**Pn**	**22 26 34.7**	**+0.3**
LATG					S		**Sn**	**22 26 54.0**	**+0.4**
ZUZH	**Zhuzihu**	**1.23**	**288**		P		**Pn**	**22 26 34.3**	**-0.1**
ZUZH					S		**Sn**	**22 26 53.5**	**-0.1**
JIJ	**Ishigaki jima**	**1.26**	**109**		P		**Pn**	**22 26 34.7**	**0.0**
JIJ					S		**Sn**	**22 26 53.2**	**-1.0**
ETL	**Fush Village**	**1.27**	**241**	*eP*			**Pn**	**22 26 34.5**	**-0.4**
ETL				*eS*			**Sn**	**22 26 54.2**	**-0.2**
NACB	**Ninganchiao**	**1.28**	**242**	*i*	P		**Pn**	**22 26 34.3**	**-0.7**
NACB					S		**Sn**	**22 26 53.8**	**-0.8**
TWD	**Chiawan**	**1.33**	**238**	*eP*			**Pn**	**22 26 35.2**	**-0.3**
TWD					S		**Sn**	**22 26 54.5**	**-0.9**
YHNB	**Yeheng**	**1.33**	**265**	*i*	P		**Pn**	**22 26 35.7**	**+0.1**
YHNB					S		**Sn**	**22 26 55.5**	**-0.1**
NSK	**Sanguang**	**1.35**	**266**	*i*	P		**Pn**	**22 26 35.8**	**+0.1**
NSK				*i*	S		**Sn**	**22 26 55.6**	**-0.3**
JISG	**Ishigakijimahi**	**1.36**	**98**		P		**Pn**	**22 26 35.5**	**-0.2**
JISG					S		**Sn**	**22 26 54.9**	**-1.0**
ETLH	**Xiulin Townshi**	**1.36**	**245**	*i*	P		**Pn**	**22 26 35.6**	**-0.3**
ETLH					S		**Sn**	**22 26 55.2**	**-1.0**
NNSB	**Datong**	**1.37**	**255**	*i*	P		**Pn**	**22 26 36.1**	**+0.1**
NNSB					S		**Sn**	**22 26 55.9**	**-0.5**
NNS	**Nan Shan**	**1.38**	**256**		P		**Pn**	**22 26 36.2**	**+0.1**
NNS					S		**Sn**	**22 26 56.1**	**-0.4**
HWA	**Hwalien**	**1.38**	**235**	*eS*			**Sn**	**22 26 56.7**	**+0.3**
TEYL	**Yanliau Villag**	**1.45**	**231**	*i*	P		**Pn**	**22 26 36.3**	**-0.5**
TEYL					S		**Sn**	**22 26 57.2**	**-0.6**
ETM	**Tongmen**	**1.47**	**237**		P		**Pn**	**22 26 36.6**	**-0.4**
ETM					S		**Sn**	**22 26 57.3**	**-0.9**
LXIB	**Xiulin Townshi**	**1.50**	**240**	*i*	P		**Pn**	**22 26 37.0**	**-0.5**
LXIB				*eS*			**Sn**	**22 26 57.7**	**-1.4**
KSHI	**Guanxi Townshi**	**1.51**	**270**		P		**Pn**	**22 26 37.8**	**+0.4**
KSHI					S		**Sn**	**22 26 58.9**	**0.0**
FUSS	**Fushou**	**1.55**	**250**		P		**Pn**	**22 26 38.5**	**+0.4**
FUSS				*eS*			**Sn**	**22 26 59.7**	**-0.4**
WHF	**Hehuan Shan**	**1.57**	**246**		P		**Pn**	**22 26 38.6**	**0.0**
WHF				*eS*			**Sn**	**22 27 00.1**	**-0.7**
NFF	**Wufeng Townshi**	**1.57**	**265**	*i*	P		**Pn**	**22 26 38.0**	**-0.2**
NFF					S		**Sn**	**22 26 59.3**	**-0.9**
TWT	**Tachien**	**1.60**	**251**		P		**Pn**	**22 26 39.5**	**+0.8**
TWT					S		**Sn**	**22 27 01.3**	**+0.2**
TDCB	**Techi**	**1.62**	**251**	*i*	P		**Pn**	**22 26 39.5**	**+0.7**
TDCB					S		**Sn**	**22 27 01.0**	**-0.4**
LIOB	**Emei**	**1.66**	**266**		P		**Pn**	**22 26 39.2**	**0.0**
LIOB					S		**Sn**	**22 27 01.4**	**-0.6**
NSTT	**Nanjuang**	**1.68**

YKA	Yellowknife Ar	138.02	316	PKP	PKPdf	22 46 08.4	+0.2	
	comp=Z,0.3nm,0.4s,baz=132,slow=1.4,SNR=7.6							
A36M	Sachs Harbour	146.18	327	PKPdf	PKPbc	22 46 23.5	-0.2	
L29M	L29M	147.65	308	PKPbc	PKPbc	22 46 27.9	-0.2	
I30M	Mount Dempster	147.72	312	PKPbc	PKPbc	22 46 28.0	-0.4	
E29M	Blow River	149.26	318	PKPbc	PKPbc	22 46 31.9	-0.2	
SONM	Songino Array	150.19	89	PKPbc	PKPbc	22 46 35.7	+0.6	
	comp=Z,0.7nm,0.4s,baz=217,slow=3.3,SNR=6.0							
SONM	Songino Array	150.19	89	PKPbc	PKPbc	22 46 34.9	-0.3	

SDD ***12*** *22:37:26.9±2.3, 19°.60N×71°.13W, h31km±19km, MD3.0, ML2.3, MW3.0, Presumed earthquake*
OSPL ***12*** *22:37:27.5±1.7, 19°.58N×71°.14W, h10km±14km, ML2.3, Presumed earthquake*

ISC 12 22:37:26.4±0.9,**19°.59N**±0°.03×**71°.14W**±0°.04,**h17**km±8km, **n11**,σ0**89**/21,**9C-3D**,**Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LOPP1	Punta Rusia, P	0.27	348	*i* P		Pb	22 37 32.0	-0.9
LOPP1				*e*S		Sg	22 37 37.6	+1.1
LOPP1				IAML			22 37 38.3	
	comp=Z,237nm,0.1s							
LUDR	Luperon	0.35	30	⇑*e*Pg		Pg	22 37 33.1	-0.7
LUDR				⇑*e*Sg		Sb	22 37 40.4	+0.8
SC01	Santiago de lo	0.42	112	⇑*e*Pg		Pg	22 37 34.6	-0.5
SC01				⇑*e*Sg		Sb	22 37 42.3	+0.8
SC01				IAML			22 37 42.6	
	comp=N,162nm,0.6s							
SC01	Santiago de lo	0.42	112	*i* P		Pg	22 37 34.1	-0.9
SC01				*e*S		Sb	22 37 41.7	+0.2
REDR	Restauracion	0.48	210	⇑*e*Pg		Pn	22 37 38.2	-0.4
REDR				⇓*e*Sg		Sn	22 37 47.3	+0.7
REDR				IAML			22 37 48.6	
	comp=N,266nm,0.1s							
LODA1	ITESIL, Dajabo	0.53	266	*i* P		Pb	22 37 37.1	-0.2
LODA1				*e*S		Sb	22 37 44.6	-0.1
LODA1				IAML			22 37 45.2	
	comp=Z,880nm,1.2s							
MCDR	Montecristi	0.57	302	⇑*e*Pg		Pb	22 37 36.6	-1.4
MCDR				⇑*e*Sg		Sg	22 37 47.4	+1.9
MCDR				IAML			22 37 49.2	
	comp=N,226nm,0.9s							
SDDR	Presa de Saban	0.62	193	⇑*e*Pg		Pb	22 37 38.3	-0.5
SDDR				⇑*e*Sg		Sg	22 37 47.7	+0.8
SDDR				IAML			22 37 48.0	
	comp=N,85nm,0.7s							
SDDR	Presa de Saban	0.62	193	*i* P		Pb	22 37 38.0	-0.8
SDDR				*e*S		Sb	22 37 47.0	-0.2
SDDR				IAML			22 37 47.9	
	comp=Z,48nm,0.6s							
LODU1	El Espartillar	1.27	194	*i* P		Pn	22 37 49.8	+0.4
LODU1				IAML			22 38 08.5	
	comp=Z,94nm,0.6s							
HATOM	Hato Mayor del	1.84	115	⇓*e*Pg		Pn	22 37 57.3	-0.1
HATOM				⇑*e*Sg		Sn	22 38 21.0	+0.7
HATOM				IAML			22 38 23.4	
	comp=N,28nm,1.1s							

ATH ***12*** *22:41:51.9, 37°.26N×26°.63E, h12km±4km, ML2.9/3, Manual Solution by K.Orfanogiannaki First location: 2020/02/12 22:43:19, This location: 2020/02/12 23:06:53 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 5 km*
THE ***12*** *22:41:52.2, 37°.N±1°×2°.7E±°, h12km±2km, M2.7/11, MLh2.7/11*
ISK ***12*** *22:41:52.6, 37°.27N×26°.72E, h5km, ML2.6/29*
AFAD ***12*** *22:41:52.2, 37°.28N×26°.64E, h7km±3km, ML2.8*

ISC 12 22:41:51.9±1.1,**37°.27N**±0°.02×**26°.61E**±0°.03,**h11**km±9km, **n58**,σ0**80**/78,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KLNA	Kalymnos	0.43	137	P		Pg	22 41 59.9	-0.5
KLNA				S		Sg	22 42 05.7	-0.4
SMG	Samos	0.47	23	P		Pg	22 42 01.1	-0.1
SMG				S		Sg	22 42 07.8	+0.4
SMG	Samos	0.47	23	P		Pg	22 42 01.0	-0.1
SMG				S		Sg	22 42 07.8	+0.4
KRL1	Karlovasi Samo	0.53	8	P		Pg	22 42 02.4	+0.2
KRL1				S		Sg	22 42 09.8	+0.6
DDIM	Aydin, Didim	0.54	70	P		Pg	22 42 02.2	-0.2
DDIM				S		Sg	22 42 09.5	+0.1
YKAV	Yalikavak-Bodr	0.56	105	Pg		Pg	22 42 02.9	+0.2
BODT	Bodrum	0.60	110	Pg		Pg	22 42 03.8	+0.3
BODT	Bodrum	0.60	110	P		Pb	22 42 04.0	-0.4
BODT				S		Sb	22 42 13.2	+0.3
GCAM	G?zelcaml?	0.66	49	Pg		Pg	22 42 04.4	-0.2
GCAM				Sg		Sb	22 42 14.4	-0.1
GCAM	G?zelcaml?	0.66	49	P		Pg	22 42 04.2	-0.4
GCAM				S		Sb	22 42 14.3	-0.2
GCAM				IAML			22 42 17.0	
	comp=N,326nm,0.2s							
KUSD	Kusadasi-Aydin	0.80	42	Pg		Pb	22 42 08.2	+0.4
DGB	zmir	0.81	16	P		Pb	22 42 08.2	+0.3
DGB				S		Sb	22 42 19.1	+0.3
DGB				IAML			22 42 21.0	
	comp=E,273nm,0.7s							
GMLD	Gumuldur	0.84	17	Pg		Pn	22 42 09.7	+0.1
DAT	Datca	0.95	125	Pg		Pg	22 42 10.0	-0.1
DAT				Sg		Sb	22 42 23.7	+0.7
DAT	Datca	0.95	125	P		Pb	22 42 10.3	0.0
DAT				S		Sn	22 42 24.6	-0.2
ZEYE	Izmir, Urla-Ze	0.97	355	P		Pg	22 42 10.6	0.0
ZEYE				S		Sb	22 42 24.1	+0.6
ZEYE				IAML			22 42 25.0	
	comp=N,496nm,0.3s							
ZEYE				IAML			22 42 25.0	
	comp=E,348nm,0.4s							
DATC	Datca-Mugla	0.99	121	Pg		Pb	22 42 11.2	+0.2
URLA	Izmir	1.09	359	Pn		Pn	22 42 14.5	+1.4
URLA	Izmir	1.09	359	P		Pb	22 42 12.9	+0.2
URLA				S		Sg	22 42 27.4	+0.5
URLA				IAML			22 42 29.0	
	comp=N,392nm,0.7s							
URLA				IAML			22 42 31.0	
	comp=E,249nm,0.6s							
DUVT	Torbali	1.16	35	P		Pb	22 42 13.9	0.0
DUVT				S		Sb	22 42 27.9	-1.1
BLCB	Balcova	1.16	17	Pn		Pg	22 42 15.3	+1.0
BLCB	Balcova	1.16	17	P		Pb	22 42 13.2	-0.8
BLCB				S		Sn	22 42 29.8	-0.1
CHOS	Chios island	1.20	339	P		Pn	22 42 14.0	-0.7
CHOS				S		Sg	22 42 30.7	+0.3
CHOS	Chios island	1.20	339	P		Pn	22 42 14.5	-0.2
CHOS				S		Sn	22 42 31.1	+0.2
AYDB	Zeytinkoy-Aydi	1.22	56	Pn		Pg	22 42 15.7	+0.3
THERA	Ancient Thera,	1.28	226	Pn		Pg	22 42 17.7	-0.6
YER	Yerkesik	1.34	95	Pn		Pg	22 42 17.7	0.0
YER	Yerkesik	1.34	95	P		Pg	22 42 16.3	-0.4
BAGT	Foa	1.39	8	P		Pg	22 42 19.3	+0.6
BAGT				S		Sg	22 42 37.2	+0.5
BAGT				IAML			22 42 43.0	
	comp=E,139nm,0.7s							
BAGT				IAML			22 43 19.0	
	comp=N,118nm,1.7s							
KARB	zmir-Karabur	1.40	354	P		Pn	22 42 17.3	0.0
KARB				S		Sg	22 42 36.7	-0.2
NAZL	Nazilli-Aydin	1.50	62	Pn		Pg	22 42 20.6	-0.2
ODEM	Odemis-Izmir	1.53	49	Pn		Pg	22 42 21.2	-0.1
CAMT	Merkez	1.57	20	P		Pb	22 42 21.6	+0.5
CAMT				S		Sg	22 42 43.8	+1.3
CAMT				IAML			22 42 46.0	
	comp=E,146nm,0.3s							
CAMT				IAML			22 42 49.0	
	comp=N,146nm,0.4s							
ARG	Arkhangelos	1.61	130	Pn		Pb	22 42 22.3	+0.7
ARG	Arkhangelos	1.61	130	P		Pn	22 42 20.1	-0.2
DALY	Dalyan (Mula)	1.70	105	Pn		Pb	22 42 23.4	+0.3
KARP	Karpathos	1.78	165	P		Pn	22 42 21.9	-0.7
DKL	Dikili	1.81	7	Pn		Pg	22 42 26.2	-0.4
KARY	Karystos	1.88	294	P		Pn	22 42 24.8	+0.8
PRK	Paraskevi	1.99	352	P		Pn	22 42 25.3	-0.1
SOMA	Soma-Manisa	2.02	21	Pn		Pb	22 42 28.5	-0.1
SIGR	SIGRI	2.02	343	Pn		Pb	22 42 29.5	+0.8
SIGR	SIGRI	2.02	343	P		Pb	22 42 25.2	-0.7
KULA	Kula-Manisa	2.04	52	Pn		Pb	22 42 28.4	-0.7
GORD	Gordes-Manisa	2.05	37	Pn		Pb	22 42 28.9	-0.3
APMY	Acipayam-Deniz	2.15	84	Pn		Pb	22 42 29.9	-1.1
CAME	Cameli-Denizli	2.18	98	Pn		Pb	22 42 29.9	-1.5
DION	Dionisos Attik	2.27	292	P		Pn	22 42 29.8	+0.4
YAYO	Edremit-Balk	2.36	9	Pn		Pb	22 42 33.9	-0.6
EZN	Ezine	2.56	355	Pn		Pb	22 42 36.8	-1.0
AKAS	Kas	2.62	112	Pn		Pn	22 42 36.4	+2.1
ELL	Elmali	2.69	100	Pn		Pn	22 42 37.5	+2.3
CANM	Can-anakkale	2.76	7	Pn		Pb	22 42 39.7	-1.5
LIA	Limnos Island	2.85	337	P		Pn	22 42 37.0	-0.3
SUSR	Susurluk-Balik	2.92	23	Pn		Pb	22 42 41.9	-2.1
GADA	Gvkgeada	2.97	349	P		Pn	22 42 38.5	-0.4
TVSB	Tavsanli	3.12	45	Pn		Pb	22 42 44.3	-3.2
THAS	Thassos island	3.64	337	P		Pn	22 42 48.0	-0.1

IDC ***12*** *22:52:13.5±3.9, 35°.55N×142°.32E, h0km, mb3.4/2, mbtmp3.3/3, ML2.1/1, MS2.7/1, Error ellipse: s-maj=108.4km s-min=34.3km az=56.0*
JMA ***12*** *22:52:20.3±0.3, 35°.2N±0°.4×14°.1E±°, h22km±4km, MV2.6/22, E OFF BOSO PENINSULA*

ISC 12 22:52:19.0±1.9,**35°.0N**±0°.1×**141°.4E**±0°.1,**h10**km,**n11**, σ0**56**/8,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.51	224	*e*P		Pn	22 52 32.0	+0.1
BSO1				*e*X			22 52 39.4	
BSO3	Boso 3	0.77	253	*e*P		Pn	22 52 35.4	-0.3
BSO4	Boso 4	0.88	268	*e*P		Pb	22 52 36.8	+0.5
JKUC	kamogawauchiur	1.00	278	*e*P		Pg	22 52 37.9	-0.4
MJAR	Matsushiro Arr	3.01	301	Pn		Pn	22 53 07.2	+0.4
	0.2nm,0.3s,baz=102,slow=14,SNR=6.6							
MJAR				Sn		Sg	22 53 55.9	+0.2
	baz=112,slow=20							
	2.1nm,0.5s							
KSRS	Korea Array	11.16	286	LR		LR	22 59 17.9	
	comp=Z,31nm,18.0s,baz=20,slow=36							
H11S1	WAKE ISLAND Hy	27.82	120	T		T	23 27 31.8	
	baz=312,slow=75,SNR=6.6							
H11S3	WAKE ISLAND Hy	27.82	120	T		T	23 27 32.4	
	baz=312,slow=75,SNR=6.8							
H11S2	WAKE ISLAND Hy	27.84	120	T		T	23 27 30.8	
	baz=312,slow=75,SNR=4.7							
MKAR	Makanchi Array	45.20	304	P		P	23 00 35.4	-0.8
	0.3nm,0.7s,baz=92,slow=8.4,SNR=4.1							
	0.3nm,0.7s							
WRA	Warramunga Arr	55.08	188	P		P	23 01 51.6	+0.4
	0.4nm,0.6s,baz=15,slow=6.8,SNR=4.8							
	0.4nm,0.6s							

OSPL ***12*** *23:27:07.6±0.3, 17°.83N×66°.91W, h10km±3km, ML3.3, Presumed earthquake*
NEIC ***12*** *23:27:07.2±1.1, 17°.85N±0°.03×66°.90W±0°.01, h10km±2km, ML3.5/33, Md3.1/6(RSPR), Error ellipse: s-maj=5.9km s-min=3.0km az=4.0*
SDD ***12*** *23:27:07.4±1.1, 17°.89N×66°.90W, h20km±8km, MD3.7, ML3.2, MW3.7, Presumed earthquake*
RSPR ***12*** *23:27:08.1, 17°.92N×66°.91W, h9km, MD3.1/6*

ISC 12 23:27:07.0±0.9,**17°.89N**±0°.05×**66°.91W**±0°.02,**h18**km±5km, **n47**,σ0**55**/72,**11C-6D**,**Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.09	19			Pg	23 27 10.4	-0.1
GBPR	Guanica, Bosqu	0.09	19	⇑*i*P		Pg	23 27 10.4	-0.1
MLPR	Magueyes Islan	0.15	300			Pg	23 27 11.4	+0.2
MLPR				Sg		Sg	23 27 14.0	0.0
MLPR				IAML			23 27 14.3	
	8µm,0.4s							
CRPR	Cabo Rojo, PR	0.22	300			Pb	23 27 12.5	-0.1
CRPR				Sg		Sg	23 27 15.9	+0.1
CRPR				IAML			23 27 16.4	
	7µm,0.8s							
CRPR	Cabo Rojo, PR	0.22	300	⇑*e*Pg		Pb	23 27 12.5	-0.1
CRPR				⇑*e*Sg		Sg	23 27 15.8	0.0
CRPR				IAML			23 27 16.6	
	comp=N,5µm,0.6s							
CRPR	Cabo Rojo, PR	0.22	300	⇑*i*P		Pb	23 27 12.5	-0.1
CRPR				*e*S		Sg	23 27 15.8	0.0
CRPR	Cabo Rojo, PR	0.22	300	*i* P		Pb	23 27 12.5	-0.1
CRPR				*e*S		Sg	23 27 15.9	+0.1
CRPR				IAML			23 27 16.3	
	comp=Z,6µm,0.8s							
OBIP	Obispado Ponce	0.32	63			Pg	23 27 14.1	+0.2
OBIP				Sg		Sb	23 27 19.1	-0.2
OBIP	Obispado Ponce	0.32	63	⇓*i*P		Pg	23 27 14.2	+0.2
OBIP				*e*S		Sb	23 27 19.0	-0.2
OBIP	Obispado Ponce	0.32	63	*i* P		Pb	23 27 14.2	-0.2
OBIP				*e*S		Sb	23 27 19.2	-0.1
OBIP				IAML			23 27 19.3	
	comp=Z,2µm,0.5s							
LSP	Las Mesas	0.33	329			Pg	23 27 14.2	+0.1
LSP				Sg		Sb	23 27 19.2	-0.2
LSP	Las Mesas	0.33	329	⇓*i*P		Pg	23 27 14.2	+0.1
LSP				*e*S		Sb	23 27 19.2	-0.2
CELP	Cerrillos	0.36	60			Pg	23 27 14.8	+0.2
CELP				Sg		Sb	23 27 20.2	-0.1
CELP				IAML			23 27 20.8	
	comp=Z,4µm,0.2s							
CELP				IAML			23 27 21.1	
	comp=Z,6µm,0.2s							
PRSN	Puerto Rico Se	0.39	325			Pg	23 27 15.1	-0.1
PRSN				IAML			23 27 28.4	
	comp=Z,6µm,0.3s							
PRSN				IAML			23 27 30.6	
	comp=Z,5µm,0.4s							
PRSN	Puerto Rico Se	0.39	325			Sg	23 27 20.8	+0.2
PRSN	Puerto Rico Se	0.39	325	⇑*e*Pg		Pg	23 27 14.0	-1.2
PRSN				⇑*e*Sg		Sb	23 27 22.4	+1.2
PRSN				IAML			23 27 22.7	
	comp=N,4µm,0.2s							
PRSN	Puerto Rico Se	0.39	325	⇑*i*P		Pg	23 27 15.3	+0.1
PRSN				*e*S		Sg	23 27 20.8	+0.2
UUPR	Utuado, UPR, P	0.40	27			Pg	23 27 15.1	-0.2
AGPR	Aguadilla, PR	0.60	341			Pg	23 27 18.7	-0.3
AGPR				IAML			23 27 27.4	
	comp=N,4µm,0.5s							
AGPR	Aguadilla, PR	0.60	341	⇑*e*Pg		Pg	23 27 18.7	-0.3
AGPR				⇑*e*Sg		Sg	23 27 26.9	-0.2
AGPR				IAML			23 27 28.0	
	comp=N,2µm,0.2s							
AGPR	Aguadilla, PR	0.60	341	⇑*i*P		Pg	23 27 18.8	-0.3
AGPR				*e*S		Sg	23 27 26.8	-0.2
ECPR	Experimental S	0.67	51			Pb	23 27 19.8	-0.4
ECPR				IAML			23 27 31.9	
	comp=N,3µm,0.2s							
ECPR	Experimental S	0.67	51	⇓*i*P		Pb	23 27 19.8	-0.4
ECPR				*e*S		Sb	23 27 28.4	-0.9
EMPR	Esperanza - Ma	0.68	32			Pg	23 27 20.5	0.0
EMPR						Sg	23 27 29.9	+0.3
EMPR	Esperanza - Ma	0.68	32	⇓*i*P		Pg	23 27 20.5	0.0
EMPR				*e*S		Sg	23 27 29.9	+0.3
IDE	Isla Desecheo	0.73	312			Pb	23 27 21.1	-0.2
IDE						Sb	23 27 30.9	0.0
IDE	Isla Desecheo	0.73	312	⇑*i*P		Pb	23 27 21.1	-0.2
IDE				*e*S		Sb	23 27 30.9	0.0
SJG	San Juan	0.75	73			Pb	23 27 21.4	-0.2
SJG				IAML			23 27 32.7	
	comp=N,3µm,0.6s							
SJG	San Juan	0.75	73			Sb	23 27 31.4	-0.2
SJG	San Juan	0.75	73	*e*P		Pb	23 27 21.5	-0.2
SJG	San Juan	0.75	73	⇓*e*Pg		Pb	23 27 21.4	-0.2
SJG				⇓*e*Sg		Sb	23 27 30.2	-1.4
SJG	San Juan	0.75	73	⇓*i*P		Pb	23 27 21.5	-0.2
SJG				*e*S		Sg	23 27 31.8	0.0
SJG	San Juan	0.75	73	*i* P		Pb	23 27 21.5	-0.2
SJG				*e*S		Sg	23 27 31.9	0.0
SJG				IAML			23 27 32.3	
	comp=Z,1µm,0.5s							
PDPR	Patillas Dam,	0.85	82			Pb	23 27 23.3	-0.1
PDPR				IAML			23 27 35.9	
	comp=Z,2µm,0.6s							
GCPR	Guaynabo City	0.89	62			Pb	23 27 23.6	-0.4
GCPR	Guaynabo City	0.89	62			Sb	23 27 34.7	-0.8
GCPR	Guaynabo City	0.89	62	⇑*e*P		Pb	23 27 23.5	-0.4
GCPR				*e*S		Sb	23 27 34.7	-0.8
HUMP	Col San Antoni	1.04	76			Pb	23 27 26.2	-0.4
HUMP				IAML			23 27 40.9	
	comp=Z,1µm,0.3s							
HUMP				IAML			23 27 43.6	
	comp=Z,908nm,0.3s							
HUMP	Col San Antoni	1.04	76			Sb	23 27 39.8	0.0
HUMP	Col San Antoni	1.04	76	⇑*e*P		Pb	23 27 26.1	-0.4
HUMP				*e*S		Sb	23 27 39.8	0.0
CUPR	Culebra, Puert	1.60	75			Pb	23 27 35.7	-0.4
MIDR	Miches	2.30	298	⇑*e*Pg		Pb	23 27 46.4	-1.7
MIDR				IAML			23 28 23.2	
	comp=N,97nm,2.2s							
DR12	Loma Pena Alta	2.51	291			Pn	23 27 48.5	+1.4
HATOM	Hato Mayor del	2.51	291	⇑*e*Pg		Pb	23 27 50.6	-1.1
HATOM				IAML			23 28 45.9	
	comp=N,63nm,1.4s							
BANI	BANI	3.32	279	Pn		Pn	23 27 59.9	+1.6
SDDR	Presa de Saban	4.30	285	*e*P		Pb	23 28 20.6	-1.6
BIM	Bigot	6.54	120	Pn		Pn	23 28 42.0	-0.5

NEIC ***12*** *23:32:25.9±2.3, 26°.75S±0°.08×178°.4W±0°.1, h320km±8km, mb4.2/10, Error ellipse: s-maj=19.7km s-min=11.0km az=105.0*
IDC ***12*** *23:32:26.3±1.1, 27°.07S×178°.55W, h342km±14km, mb3.5/9, mbtmp4.2/10, Error ellipse: s-maj=29.2km s-min=17.6km az=159.0*

ISC 12 23:32:25.4±0.5,**27°.24S**±0°.05×**178°.23W**±0°.09,**h350**km, **n117**,σ1**979**/**125**,**mb4.0**/15,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RIZ	Raoul Island	2.02	172	P		Pn	23 33 13.9	-2.9
RIZ				S		S	23 33 57.0	-1.0
RAO	Raoul Island	2.02	172	P		Pn	23 33 19.2	+2.4
	3µm,0.2s,baz=91,slow=2.3,SNR=32							
RAO				S		S	23 34 00.7	+2.5
	2µm,0.3s,baz=65,slow=19,SNR=4.6							
RAO	Raoul Island	2.02	172			Pn	23 33 19.1	+2.3
RAO				Sn		S	23 34 00.9	+2.8
RAO	Raoul Island	2.02	172	P		Pn	23 33 18.9	+2.0
GLKZ	Green Lake	2.03	172	P		Pn	23 33 19.1	+2.3
GLKZ				S		S	23 34 01.4	+3.2
MSVF	Nonsavu	10.06	339			Pn	23 34 42.1	-2.2
OUZ	Omahuta	10.59	219	P		P	23 34 54.1	+2.9
MXZ	Matakaoa Point	10.70	195	Pn		Pn	23 34 51.6	0.0
MXZ	Matakaoa Point	10.70	195	P		P	23 34 52.7	+0.3
MXZ				S		S	23 36 46.1	-5.6
WCZ	Waipu Caves	10.73	214	P		P	23 34 56.1	+3.2
WMGZ	Waiomatatini S	10.92	194	P		Pn	23 34 52.3	-1.9
WMGZ				S		S	23 36 51.3	-5.2
HAZ	Te Kaha	11.01	197	P		Pn	23 34 53.6	-1.6
HAZ				S		S	23 36 56.0	-2.6
PKGZ	Pakihiroa	11.04	195	P		Pn	23 34 54.2	-1.5
PKGZ				S		S	23 36 54.7	-4.6
NIUE	Niue	11.15	45	Pn		Pn	23 34 54.4	-2.8
PUZ	Puketiti	11.20	194	P		Pn	23 34 57.0	-0.6
PUZ				S		S	23 36 57.5	-5.3
RUGZ	Raukumara Rang	11.23	197	P		Pn	23 34 57.0	-1.1
MKAZ	Moumakai	11.31	208	P		P	23 35 02.7	+3.4
TWGZ	Tauwhareparae	11.36	195	P		P	23 35 02.4	+2.5
WTAZ	Waiatarua	11.42	210	P		P	23 35 06.0	+5.5
CNGZ	Carnagh Statio	11.60	194	P		P	23 35 02.5	0.0
MWZ	Matawai	11.62	197	P		P	23 35 03.3	+0.5
URZ	Urewera	11.66	198	P		P	23 35 03.0	-0.2
	22nm,0.4s,baz=271,slow=5.0,SNR=32							
URZ				S		S	23 37 09.1	-3.9
	59nm,0.4s,baz=51,slow=23,SNR=15							
URZ	Urewera	11.66	198	P		Pn	23 35 02.4	-0.6
RAGZ	Rawiri	11.80	197	P		Pn	23 35 06.9	+2.1
RIGZ	Rimuhau	11.92	195	P		Pn	23 35 07.6	+1.5
MUGZ	Murupara	11.96	199	P		Pn	23 35 07.1	+0.5
RTZ	Ruatahuna	12.03	198	P		Pn	23 35 07.7	+0.2
SNGZ	Shannon Statio	12.09	197	P		Pn	23 35 08.7	+0.5
TLZ	Tolley Road	12.23	204	P		Pn	23 35 13.4	+3.6
RAHZ	Arahi	12.29	197	P		Pn	23 35 10.9	+0.5
MTHZ	Maungataniwha	12.29	198	P		Pn	23 35 11.2	+0.6
MHGZ	Mahia Peninsul	12.31	194	P		Pn	23 35 11.3	+0.6
MRHZ	Matea Rd	12.40	200	P		Pn	23 35 12.0	+0.2
NMHZ	Naumai	12.53	198	P		Pn	23 35 13.9	+0.5
ARHZ	Aropaoanui	12.63	197	P		Pn	23 35 14.2	-0.3
HIZ	Hauiti	12.65	206	P		Pn	23 35 18.6	+3.9
BKZ	Black Stump Fm	12.68	199	P		P	23 35 14.1	-0.4
TMVZ	Te Maari	12.88	202	P		Pn	23 35 19.0	+1.4
KRVZ	Karewarewa	12.88	202	P		Pn	23 35 17.7	+0.1
MCHZ	McNeill Hill	12.88	198	P		Pn	23 35 18.4	+0.9
ETVZ	East Tongariro	12.90	202	P		Pn	23 35 18.1	+0.4
WTVZ	West Tongariro	12.92	202	P		Pn	23 35 18.7	+0.7
NNVZ	North Ngauruho	12.93	202	P		Pn	23 35 18.9	+0.7
TWVZ	Taurewa	12.93	203	P		Pn	23 35 19.4	+1.3
OTVZ	Oturere	12.94	202	P		Pn	23 35 17.7	-0.6
KWHZ	Kaweka Forest	12.94	199	P		Pn	23 35 17.9	-0.4
SNVZ	South Ngauruho	12.97	202	P		Pn	23 35 19.4	+0.8
NGZ	Ngauruhoe	12.97	202	P		Pn	23 35 19.7	+1.0
CKHZ	Cape Kidnapper	12.99	196	P		Pn	23 35 19.7	+1.0
TUVZ	Tukino	13.04	201	P		Pn	23 35 19.4	0.0
FWVZ	Far West T-bar	13.06	202	P		Pn	23 35 19.4	-0.4
MAVZ	Matarangi	13.07	202	P		Pn	23 35 19.6	-0.2
TRVZ	Turoa	13.10	202	P		Pn	23 35 19.8	-0.4
W

comp=Z,1.3nm,0.7s
PETK Petropavlovsk- 82.71 346 P **P** **23 44 10.8 +0.5**
comp=Z,2.8nm,0.7s,baz=126,slow=7.5,SNR=4.1
comp=Z,2.8nm,0.7s
NVAR Mina Array Bea 86.07 43 P **P** **23 44 29.9 +2.3**
comp=Z,0.5nm,0.6s,baz=237,slow=8.3,SNR=2.9
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 93.99 43 P **P** **23 45 07.0 +2.5**
comp=Z,0.2nm,0.7s,baz=151,slow=4.5,SNR=2.2
comp=Z,0.2nm,0.7s
ILAR Eielson Array 94.90 13 P **P** **23 45 09.0 +1.2**
comp=Z,0.3nm,0.6s,baz=213,slow=7.8,SNR=2.3
comp=Z,0.3nm,0.6s
MKAR Makanchi Array 115.56 311 PKP **PKiKP** **23 50 25.8 -0.3**
comp=Z,0.3nm,0.9s,baz=43,slow=2.3,SNR=4.0
MKAR Makanchi Array 115.56 311 PKPdf **PKiKP** **23 50 26.9 +0.8**
KURBB Kurchatov Arra 118.74 315 PKP **PKiKP** **23 50 31.4 -0.6**
comp=Z,0.6nm,0.7s,baz=96,slow=1.8,SNR=6.0
BVAR Borovoye Array 123.98 317 PKP **PKiKP** **23 50 41.4 -1.0**
comp=Z,0.8nm,0.7s,baz=110,slow=2.2,SNR=5.4
FINES FINESS Array B 142.11 341 PKhKP PKPpre 23 51 11.8
comp=Z,1.4nm,0.8s,baz=49,slow=2.5,SNR=8.3
NB2 NORSAR Subarra145.60 352 PKP **PKiKP** **23 51 24.3 -1.7**
comp=Z,1.3nm,0.7s,baz=17,slow=4.3
NOA NORSAR Array B 145.60 352 PKPbc **PKiKP** **23 51 23.6 -2.4**
comp=Z,1.7nm,0.7s,baz=16,slow=2.8,SNR=6.7
NAO01 NORSAR Array S 145.84 352 PKPdf **PKiKP** **23 51 25.3 -1.1**
HFS Hagfors 146.11 349 PKPbc **PKiKP** **23 51 25.1 -1.9**
comp=Z,5.3nm,0.9s,baz=72,slow=4.8,SNR=7.0
AKASG Malin Array Be 148.62 326 PKPbc **PKPbc** **23 51 29.9 -1.3**
comp=Z,2.9nm,0.6s,baz=41,slow=3.4,SNR=14
MMAI Mount Meron Ar 150.42 289 PKPbc **PKiKP** **23 51 38.3 +1.4**
comp=Z,5.6nm,0.8s,baz=47,slow=8.6,SNR=8.9
BRTR Keskin Array B 150.80 303 PKPbc **PKiKP** **23 51 38.5 +1.0**
comp=Z,1.4nm,0.8s,baz=130,slow=5.4,SNR=4.2
EKA Eskdalemuir Ar 151.70 6 PKPbc **PKiKP** **23 51 39.7 +1.1**
comp=Z,0.5nm,0.5s,baz=306,slow=1.9,SNR=3.8
BURAR Bucovina Array 152.61 324 PKPbc **PKiKP** **23 51 41.6 +0.7**
TORD Torodi Ar. Bea 165.98 180 PKPab **PKPab** **23 52 55.0 +3.5**
comp=Z,0.2nm,0.5s,baz=200,slow=5.4,SNR=1.4

IDC ***12*** *23:39:05.0±1.8,26.80N×55.96E,h0km,mb3.7/11, mbtmp3.8/13,ML3.8/2,Error ellipse: s-maj=38.3km s-min=22.6km az=164.0*
NEIC ***12*** *23:39:07.9±1.9,27.07N±0.08×55.7E±0.1,h10km±1km, mb4.2/13,Error ellipse: s-maj=20.1km s-min=12.7km az=67.0*
TEH ***12*** *23:39:07.9,26.98N×55.87E,h12km±20km,ML3.6, Presumed earthquake*
DSN ***12*** *23:39:10.9±1.1,26.99N×55.92E,h15km,ML3.2/15,Error ellipse: s-maj=15.6km s-min=7.1km az=53.0*
OMAN ***12*** *23:39:10.3±1.1,26.96N×55.77E,h10km,ml3.4/20,Error ellipse: s-maj=10.3km s-min=5.9km az=15.0*

ISC 12 23:39:09.3±1.1,27.08N±0.03×55.88E±0.03,h24km±9km, n97,σ1s48/121,mb4.0/19,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.41**	**39**	Pg	**Pb**	**23 39 17.7**	**-0.5**
GENO				Sg	**Sb**	**23 39 25.0**	**+0.8**
IBND	**Bandar-abas**	**0.69**	**57**	Pg	**Pn**	**23 39 23.4**	**-0.3**
SHME	**Shamm**	**1.05**	**167**	*e*P	**Pb**	**23 39 28.8**	**+0.1**
	SNR=129						
SHME				S	**Sb**	**23 39 42.5**	**+0.4**
SHME	**Shamm**	**1.05**	**167**	P	**Pb**	**23 39 28.9**	**+0.1**
	SNR=128						
SHME				S	**Sn**	**23 39 43.2**	**+0.7**
BANOM	**Banah**	**1.21**	**162**	*e*P	**Pb**	**23 39 31.5**	**0.0**
	SNR=77						
BANOM	**Banah**	**1.21**	**162**	S	**Sb**	**23 39 47.2**	**+0.4**
LAR1	**LAR**	**1.47**	**294**	Pg	**Pb**	**23 39 36.5**	**+0.5**
UMQ	**Umm Al-Quwin**	**1.56**	**187**	P	**Pb**	**23 39 38.1**	**+0.6**
	SNR=5.7						
UMQ				S	**Sb**	**23 39 58.9**	**+2.1**
MASF	**Masafi**	**1.72**	**172**	P	**Pb**	**23 39 39.6**	**-0.6**
	SNR=85						
MASF				S	**Sn**	**23 39 59.4**	**+0.4**
MSFE	**Esma-Masafi**	**1.73**	**172**	*e*P	**Pb**	**23 39 39.6**	**-0.8**
	SNR=86						
MDH	**Madha**	**1.81**	**168**	*e*P	**Pn**	**23 39 40.1**	**+1.0**
	SNR=9.3						
MDH	**Madha**	**1.81**	**168**	P	**Pn**	**23 39 40.1**	**+1.0**
	SNR=9.4						
MDH				S	**Sn**	**23 40 02.3**	**+1.0**
KHNJ	**Kahnooj**	**1.84**	**61**	Pn	**Pb**	**23 39 41.7**	**-0.6**
NAZ	**Nazwa, Dubai**	**2.09**	**185**	P	**Pb**	**23 39 45.2**	**-1.3**
NAZ	**Nazwa, Dubai**	**2.09**	**185**	P	**Pb**	**23 39 45.3**	**-1.3**
NAZ				S	**Sn**	**23 40 10.1**	**+1.9**
UOSS	**Minazif**	**2.14**	**172**		**Pn**	**23 39 44.7**	**+1.1**
UOSS	**Minazif**	**2.14**	**172**	*e*P	**Pn**	**23 39 45.2**	**+1.6**
	SNR=13						
UOSS	**Minazif**	**2.14**	**172**	P	**Pn**	**23 39 44.9**	**+1.3**
UOSS				S	**Sb**	**23 40 12.9**	**-0.7**
UOSS	**Minazif**	**2.14**	**172**	Pn	**Pn**	**23 39 45.2**	**+0.5**
HATD	**Hatta, Dubai**	**2.25**	**174**	P	**Pn**	**23 39 46.8**	**+1.6**
HATD	**Hatta, Dubai**	**2.25**	**174**	P	**Pn**	**23 39 47.2**	**+2.1**
	SNR=19						
HATD				S	**Sb**	**23 40 16.7**	**0.0**
FAQ	**Al Faqa, Dubai**	**2.33**	**186**	P	**Pn**	**23 39 48.5**	**+2.2**
FAQ	**Al Faqa, Dubai**	**2.33**	**186**	P	**Pn**	**23 39 48.2**	**+1.9**
	SNR=5.2						
FAQ				S	**Sb**	**23 40 17.2**	**-1.9**
ASHO	**Ashiyiah**	**2.39**	**176**	*e*P	**Pn**	**23 39 49.0**	**+1.9**
	SNR=55						
ASHO	**Ashiyiah**	**2.39**	**176**	P	**Pn**	**23 39 48.9**	**+1.9**
	SNR=55						
ASHO				S	**Sn**	**23 40 17.5**	**+1.9**
JHRM	**Jahrom**	**2.49**	**305**	Pn	**Pn**	**23 39 50.7**	**+2.2**
ASUD	**Al Ashush, Dub**	**2.49**	**192**	*e*P	**Pn**	**23 39 50.9**	**+2.4**
	SNR=12						
ASUD	**Al Ashush, Dub**	**2.49**	**192**	P	**Pb**	**23 39 51.0**	**-2.4**
	SNR=12						
AJN	**Ajban**	**2.63**	**198**	P	**Pn**	**23 39 51.9**	**+1.5**
AJN				S	**Sn**	**23 40 23.0**	**+1.5**
NGRK	**Negar Kerman**	**2.67**	**16**	Pn	**Pb**	**23 39 54.2**	**-2.4**
QIR1	**Qir**	**2.88**	**300**	Pn	**Pn**	**23 39 55.8**	**+2.1**
SOHO	**SOHO**	**2.99**	**168**	*e*P	**Pn**	**23 39 55.0**	**-0.3**
	SNR=8.8						
SOHO	**SOHO**	**2.99**	**168**	P	**Pn**	**23 39 55.0**	**-0.3**
ALNE	**Al Ain**	**3.01**	**182**	*e*P	**Pn**	**23 39 57.1**	**+1.6**
	SNR=13						
ALNE	**Al Ain**	**3.01**	**182**	P	**Pn**	**23 39 57.1**	**+1.6**
	SNR=13						
KHGB	**Koh Gabri**	**3.33**	**9**	Pn	**Pn**	**23 40 03.9**	**+3.7**
HOQ	**Hoqain**	**3.71**	**159**	P	**Pn**	**23 40 05.0**	**-0.3**
	SNR=12						
MZWR	**Madinat Zayed**	**3.76**	**209**	P	**Pn**	**23 40 06.9**	**+1.0**
MZWR				S	**Sn**	**23 40 48.8**	**-0.7**
BIDO	**Bidbid**	**4.08**	**150**	P	**Pn**	**23 40 10.5**	**+0.2**
BIDO				S	**Sn**	**23 40 58.0**	**+0.6**
GHWR	**Ruwais**	**4.12**	**222**	P	**Pn**	**23 40 10.6**	**-0.2**
GHWR				S	**Sn**	**23 40 57.5**	**-0.8**
DSBU	**Dashti - Bushe**	**4.29**	**288**	Pn	**Pn**	**23 40 15.7**	**+2.4**
CHBR	**Chabahar**	**4.38**	**109**	Pn	**Pn**	**23 40 16.2**	**+1.8**
UMZA	**Um Al Zommool**	**4.39**	**189**	P	**Pn**	**23 40 15.7**	**+1.1**
IMEH	**Mehriz**	**4.44**	**346**	Pn	**Pn**	**23 40 18.6**	**+3.2**
SMDO	**Samad**	**4.46**	**153**	P	**Pn**	**23 40 16.8**	**+1.2**
	SNR=12						
SMDO				S	**Sn**	**23 41 08.8**	**+2.0**
BSY	**Bisya**	**4.47**	**164**	P	**Pn**	**23 40 17.9**	**+2.2**
BSY				S	**Sn**	**23 41 09.0**	**+1.9**
WSAR	**Wadi Sarin**	**4.56**	**146**	P	**Pn**	**23 40 18.1**	**+1.1**
	SNR=18						
WSAR				S	**Sn**	**23 41 08.3**	**-0.9**
SHMA	**Al-Shehemyia**	**4.57**	**256**	P	**Pn**	**23 40 19.4**	**+2.3**
SHMA				S	**Sn**	**23 41 10.9**	**+1.5**
MZR	**Muzera**	**4.60**	**209**	P	**Pn**	**23 40 17.1**	**-0.4**
MZR				S	**Sn**	**23 41 09.3**	**-0.9**
TRNA	**Turayna**	**4.81**	**242**	P	**Pn**	**23 40 23.4**	**+3.2**
TRNA				S	**Sn**	**23 41 14.9**	**-0.4**
	SNR=6.1						
TAFT	**Taft - Yazd**	**4.87**	**343**	Pn	**Pn**	**23 40 24.6**	**+3.3**
NGCH	**Negor - Chabah**	**5.02**	**109**	P	**Pn**	**23 40 25.5**	**+2.3**
	SNR=7.0						
NGCH				S	**Sn**	**23 41 20.8**	**+0.4**
JMDO	**Jabal Madar**	**5.10**	**156**	P	**Pn**	**23 40 25.6**	**+1.3**
JMDO				S	**Sn**	**23 41 24.7**	**+2.2**
WBK	**Wadi Bani Khal**	**5.26**	**147**	P	**Pn**	**23 40 27.0**	**+0.5**
	SNR=35						
WBK	**Wadi Bani Khal**	**5.26**	**147**	Pn	**Pn**	**23 40 27.2**	**+0.7**
IRAM	**Rameshеh**	**5.62**	**328**	Pn	**Pn**	**23 40 34.3**	**+2.7**
JLN	**Jalan Bani Buh**	**5.86**	**146**	P	**Pn**	**23 40 34.7**	**-0.1**
	SNR=8.3						
MHTO	**MHTO**	**6.36**	**162**	P	**Pn**	**23 40 42.4**	**+0.9**
DOK	**Doka**	**8.57**	**191**	P	**Pn**	**23 41 11.3**	**-0.7**
SHAO	**Shalim**	**9.01**	**182**	P	**Pn**	**23 41 19.6**	**+1.5**
	SNR=5.5						
DMTO	**DMTO**	**9.36**	**185**	P	**Pn**	**23 41 22.6**	**-0.2**
ABTO	**Aybut**	**9.97**	**194**	P	**Pn**	**23 41 30.2**	**-1.0**
RAYN	**Ar Rayn**	**10.03**	**252**	Pn	**Pn**	**23 41 28.4**	**-3.7**
GNI	**Garni**	**15.98**	**327**	Pn	**P**	**23 42 58.8**	**+2.6**
	0.6nm,0.3s,baz=322,slow=20,SNR=2.3						
	17nm,1.1s						
GNI	**Garni**	**15.98**	**327**		**Pn**	**23 42 52.3**	**-0.5**
GNI				IAmb	IAmb	23 43 00.9	
	comp=Z,45nm,1.4s						
MARD	**Mardin**	**16.34**	**312**	Pn	**Pn**	**23 42 55.1**	**-2.2**
KBZ	**Khabaz**	**19.66**	**331**	P	**Pn**	**23 43 39.5**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=151,slow=8.5,SNR=8.1						
	comp=Z,5.4nm,0.9s						
KVAR	**Kislovodsk Arr**	**19.93**	**331**	P	**Pn**	**23 43 42.7**	**+1.4**
	comp=Z,2.4nm,0.7s,baz=90,slow=20,SNR=1.2						
	comp=Z,2.4nm,0.7s						
AB31	**Akbulak array**	**22.37**	**7**	P	**P**	**23 44 04.6**	**-1.1**
ABKAR	**Akbulak array**	**22.37**	**7**	P	**P**	**23 44 04.6**	**-1.1**
BR131	**Keskin Array S**	**22.38**	**310**	P	**P**	**23 44 05.8**	**-0.2**
BRTR	**Keskin Array B**	**22.38**	**310**	P	**P**	**23 44 07.8**	**+1.8**
	comp=Z,2.0nm,0.7s,baz=122,slow=12,SNR=6.8						
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**22.38**	**310**	P	**P**	**23 44 05.5**	**-0.6**
BORK	**Borovoye**	**28.09**	**19**	P	**P**	**23 44 58.9**	**-0.1**
BORK				IAmb	IAmb	23 45 02.8	
	comp=Z,4.3nm,1.4s						
BVAR	**Borovoye Array**	**28.09**	**19**	P	**P**	**23 45 00.0**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=205,slow=6.6,SNR=4.8						
BVAR				PcP	**PcP**	**23 48 13.6**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=210,slow=2.7,SNR=4.3						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**28.64**	**40**	P	**P**	**23 45 05.7**	**+1.7**
	comp=Z,0.2nm,0.4s,baz=226,slow=7.8,SNR=8.1						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**28.64**	**40**	P	**P**	**23 45 04.8**	**+0.7**
BURAR	**Bucovina Array**	**31.54**	**319**	P	**P**	**23 45 29.1**	**-0.7**
BURAR				IAmb	IAmb	23 46 04.0	
	comp=Z,2.1nm,1.4s						
BUR08	**Bucovina Ar. S**	**31.56**	**319**	P	**P**	**23 45 29.4**	**-0.6**
BUR08				IAmb	IAmb	23 45 39.2	
	comp=Z,6.6nm,1.4s						
ZALV	**Zalesovo Beam**	**34.27**	**31**	P	**P**	**23 45 54.0**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=236,slow=8.9,SNR=6.7						
	comp=Z,0.9nm,0.4s						
NRCA	**Norcia**	**37.98**	**306**	P	**P**	**23 46 24.0**	**-1.4**
NRCA				IAmb	IAmb	23 46 54.8	
	comp=Z,8.8nm,1.3s						
FIA1	**FINESS Array S**	**39.75**	**338**	P	**P**	**23 46 39.3**	**-0.5**
FINES	**FINESS Array B**	**39.75**	**338**	P	**P**	**23 46 40.5**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=138,slow=8.4,SNR=11						
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**39.75**	**338**	P	**P**	**23 46 39.7**	**-0.2**
WTTA	**Wattenberg**	**39.96**	**312**	*e*P	**P**	**23 46 41.9**	**-0.2**
	comp=Z,1.1nm,0.4s						
SQTA	**Sankt Quirin**	**40.23**	**312**	*i* P	**P**	**23 46 43.8**	**-0.4**
	comp=Z,1.8nm,0.4s						
FETA	**Feichten**	**40.50**	**312**	*e*P	**P**	**23 46 46.6**	**+0.1**
	comp=Z,1.7nm,0.5s						
FUORN	**Ofenpass-Fuorn**	**40.72**	**311**	P	**P**	**23 46 47.3**	**-1.2**
FUORN				IAmb	IAmb	23 47 03.1	
	comp=Z,4.8nm,1.4s						
DAVA	**Damuels**	**41.12**	**312**	*i* P	**P**	**23 46 51.4**	**-0.3**
	comp=Z,5.3nm,0.4s						
SENIN	**Lac Senin/Sane**	**42.68**	**310**	P	**P**	**23 47 03.7**	**-0.8**
SENIN				IAmb	IAmb	23 47 27.4	
	comp=Z,7.5nm,1.2s						
HFS	**Hagfors**	**43.73**	**331**	P	**P**	**23 47 12.5**	**0.0**
	comp=Z,2.7nm,0.9s,baz=160,slow=4.6,SNR=5.2						
	comp=Z,2.7nm,0.9s						
NOA	**NORSAR Array B**	**45.24**	**331**	P	**P**	**23 47 26.1**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=147,slow=6.4,SNR=1.7						
	comp=Z,0.5nm,0.7s						
ESDC	**Sonseca Array**	**50.69**	**300**	P	**P**	**23 48 07.4**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=75,slow=7.2,SNR=7.2						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**52.37**	**266**	P	**P**	**23 48 19.9**	**0.0**
	comp=Z,0.4nm,0.7s,baz=82,slow=4.4,SNR=8.7						
	comp=Z,0.4nm,0.7s						
TIXI	**Tiksi**	**59.20**	**21**	P	**P**	**23 49 07.5**	**-0.5**
DBIC	**Dimbokro**	**60.88**	**262**	P	**P**	**23 49 18.4**	**-2.7**
ILAR	**Eielson Array**	**86.75**	**10**	P	**P**	**23 51 51.2**	**0.0**
	comp=Z,0.3nm,0.8s,baz=319,slow=4.0,SNR=1.9						
	comp=Z,0.3nm,0.8s						

SCB 12 23:41:53.7±0.9,21.58S×66.82W,h213km±9km,MB5.7, ML2.8/2,Error ellipse: s-maj=5.5km s-min=5.0km az=1.0,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.15**	**74**	Pg	Pn	23 42 26.9	+0.5
MOCB				Sg	S	23 42 51.5	-0.1
MOCB				IAML		23 42 53.2	
	97nm,0.5s						
PB09	**IPOC Station P**	**2.26**	**264**	Pg	Pn	23 42 36.7	+0.7
PB01	**IPOC Station P**	**2.54**	**282**	Pg	Pn	23 42 39.6	+0.6
PB08	**IPOC Station P**	**2.61**	**303**	Pg	Pn	23 42 40.7	+0.7
PB02	**IPOC Station P**	**2.87**	**275**	Pg	Pn	23 42 43.1	+0.4
GO01	**Chusmiza**	**2.92**	**310**	Pg	Pn	23 42 44.2	+0.5
SOEO	**Opoqueri**	**3.16**	**341**	Pg	Pn	23 42 47.4	+0.9
PB11	**IPOC Station P**	**3.21**	**304**	Pg	Pn	23 42 46.8	+0.1
SOET	**ToroToro**	**3.58**	**16**	Pg	Pn	23 42 51.2	0.0
SOET				Sg	S	23 43 35.1	-0.9
SOET				IAML		23 43 37.4	
	6.4nm,0.8s						
PB16	**IPOC Station P**	**4.10**	**322**	Pg	Pn	23 42 58.3	+0.5
GO02	**Mina Guanaco**	**4.38**	**215**	Pg	Pn	23 43 01.8	+0.9
PB14	**IPOC Station P**	**4.48**	**227**	Pg	Pn	23 43 02.5	+0.3
BBOJ	**La Paz, Jacaqu**	**4.76**	**344**	Pg	Pn	23 43 07.3	+1.3
SOEJ	**Jacaque**	**4.76**	**344**	Pg	Pn	23 43 06.6	+0.6
BBOE	**La Paz, Chanca**	**4.87**	**347**	Pg	Pn	23 43 08.4	+1.0
LPAZ	**La Paz**	**5.41**	**347**	Pg	Pn	23 43 14.4	+0.1

GUC 12 23:42:35.9±0.9,20.71S×69.57W,h97km±4km,ML2.7, 2C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.34**	**167**	*i* P	Pn	23 42 50.2	-0.3
PB01				*e*S	Sn	23 43 00.8	-0.6
PB01				IAML		23 43 01.3	
	comp=N,933nm,0.3s						
HMBC	**Humberstone**	**0.52**	**325**	*i* P	Pn	23 42 50.8	-0.8
HMBC				*e*S	Sn	23 43 02.5	-1.0
HMBC				IAML		23 43 04.8	
	comp=N,260nm,0.2s						
PB02	**IPOC Station P**	**0.68**	**207**	*i* P	Pn	23 42 52.7	-0.3
PB02				*e*S	Sn	23 43 05.6	-0.1
PB02				IAML		23 43 07.4	
	comp=E,236nm,0.2s						
TA02	**Huaiquique**	**0.68**	**310**	*e*P	Pn	23 42 52.3	-0.6
PB08	**IPOC Station P**	**0.69**	**35**	*i* P	Pn	23 42 53.5	+0.1
PB08				*e*S	Sn	23 43 06.4	0.0
PB08				IAML		23 43 07.1	
	comp=N,377nm,0.2s						
PB11	**IPOC Station P**	**0.95**	**355**	*e*P	Pn	23 42 55.3	-0.4
PB11				*e*S	Sn	23 43 10.3	-0.2
PB11				IAML		23 43 10.9	
	comp=E,367nm,0.1s						
PB07	**IPOC Station P**	**1.06**	**196**	*e*P	Pn	23 42 56.3	-0.6
PB07				*e*S	Sn	23 43 11.3	-1.3
PB07				IAML		23 43 13.3	
	comp=N,149nm,0.2s						
GO01	**Chusmiza**	**1.09**	**19**	*e*P	Pn	23 42 57.7	+0.1
PB09	**IPOC Station P**	**1.12**	**164**	*e*P	Pn	23 42 57.9	+0.2
PB09				*e*S	Sn	23 43 14.1	+0.1
PB09				IAML		23 43 15.2	
	comp=E,339nm,0.3s						
PB03	**IPOC Station P**	**1.34**	**187**	*e*P	Pn	23 42 59.8	-0.5
PB03				*e*S	Sn	23 43 17.3	-1.4
PB03				IAML		23 43 17.7	
	comp=E,106nm,0.2s						
PB06	**IPOC Station P**	**1.99**	**180**	*e*P	Pn	23 43 07.5	-0.9
PB06				IAML		23 43 33.3	
	comp=E,70nm,0.2s						
PB12	**IPOC Station P**	**2.20**	**341**	*e*P	Pn	23 43 10.3	-0.9
PB12				IAML		23 43 37.9	
	comp=E,38nm,0.2s						
PB16	**IPOC Station P**	**2.36**	**1**	*e*P	Pn	23 43 14.9	+1.3

TEH ***12*** *23:46:19.8,33.37N×57.32E,h6km±30km,ML4.5, Presumed earthquake*
IDC ***12*** *23:46:20.3±0.9,33.17N×57.32E,h0km,mb3.9/18, mbtmp4.0/22,ML3.7/3,MS3.3/12,Error ellipse: s-maj=24.0km s-min=13.6km az=174.0*
MOS ***12*** *23:46:20.4±1.6,33.23N×57.16E,h10km,mb4.4/16,Error ellipse: s-maj=6.6km s-min=5.6km az=94.3*
NEIC ***12*** *23:46:21.7±1.4,33.2N±0.1×57.23E±0.08,h10km±2km, mb4.1/22,Error ellipse: s-maj=19.5km s-min=11.7km az=174.0*
THR ***12*** *23:46:21.0±0.0,33.34N×57.31E,h10km±4km,ML4.5, Presumed earthquake*

ISC 12 23:46:23.1±0.4,33.37N±0.03×57.28E±0.03,h10km,n169, σ1s43/167,mb4.1/41,MS3.1/5,10C-5D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKDS	**Koohdasht(Taba**	**0.28**	**332**	Pg	**Pg**	**23 46 26.6**	**-2.2**
TABS	**Tabas**	**0.31**	**335**	*e*Pg	**Pg**	**23 46 27.4**	**-2.0**
TABS				IAML		23 46 52.6	
	comp=Z,2.2nm,1.0s						
TPRV	**Parvadeh(Tabas**	**0.60**	**236**	Pg	**Pg**	**23 46 33.2**	**-1.6**
TPRV				Sg	**Sg**	**23 46 42.8**	**+0.1**
TNSJ	**Nastanj**	**0.81**	**317**	Pg	**Pg**	**23 46 37.8**	**-1.5**
TNSJ				Sg	**Sg**	**23 46 49.1**	**-0.4**
ITEG	**Tejag**	**1.32**	**110**	Pg	**Pn**	**23 46 46.1**	**-1.7**
AFRZ	**Afriz**	**1.46**	**87**	Pg	**Pn**	**23 46 48.3**	**-1.3**
TAPT	**Tabas- Tapeh t**	**1.52**	**356**	Pg	**Pn**	**23 46 49.3**	**-1.2**
IKOO	**Kooshah**	**1.73**	**122**	Pg	**Pn**	**23 46 52.3**	**-1.2**
BSRN	**Basiran**	**2.09**	**131**	*e*Pn	**Pn**	**23 46 57.7**	**-0.7**
BSRN				IAML		23 47 30.7	
	comp=Z,1μm,1.0s						
IBAF	**Bafgh**	**2.29**	**220**	Pn	**Pn**	**23 47 01.6**	**+0.5**
YZKH	**Yazd**	**2.46**	**247**	*e*Pn	**Pn**	**23 47 03.6**	**+0.2**
YZKH				IAML		23 47 44.2	
	comp=Z,2μm,1.0s						
ZRDN	**Zarand Kerman**	**2.47**	**195**	Pn	**Pn**	**23 47 04.0**	**+0.3**
SHRT	**Shahrakht**	**2.53**	**83**	Pn	**Pn**	**23 47 03.8**	**-0.6**
SHRT	**Shahrakht**	**2.53**	**83**	*e*Pn	**Pn**	**23 47 03.6**	**-0.8**
SHRT				IAML		23 47 49.5	
	comp=Z,520nm,1.0s						
TBHD	**Torbat heydari**	**2.61**	**38**	Pn	**Pn**	**23 47 05.1**	**-0.4**
ICHK	**Chekchek**	**2.66**	**246**	Pn	**Pn**	**23 47 06.7**	**+0.4**
DOBD	**Dorbid, Yazd**	**2.71**	**240**	Pn	**Pn**	**23 47 07.2**	**+0.4**
SHRO	**Shahrood**	**2.82**	**339**	*e*Pn	**Pn**	**23 47 08.1**	**-0.2**
SHRO				IAML		23 48 15.4	
	comp=Z,2.5nm,1.0s						
KRM1	**Kerman Provinc**	**2.85**	**180**	Pn	**Pn**	**23 47 09.0**	**+0.1**
ANAR	**Anarak**	**2.98**	**268**	Pn	**Pn**	**23 47 10.6**	**0.0**
IMEH	**Mehriz**	**2.99**	**230**	Pn	**Pn**	**23 47 11.3**	**+0.5**
KHGB	**Koh Gabri**	**3.06**	**193**	Pn	**Pn**	**23 47 12.1**	**+0.4**
TAFT	**Taft - Yazd**	**3.09**	**239**	Pn	**Pn**	**23 47 12.7**	**+0.5**
TBJM	**Torbat-e-JAM**	**3.16**	**52**	Pn	**Pn**	**23 47 12.5**	**-0.6**
IAKL	**Akhelmad**	**3.45**	**20**	Pn	**Pn**	**23 47 17.4**	**+0.3**
IANJ	**Anjilo**	**3.48**	**308**	Pn	**Pn**	**23 47 18.2**	**+0.6**
CHMN	**Cheshme madani**	**3.50**	**176**	Pn	**Pn**	**23 47 18.1**	**+0.2**
ISFR	**Sfrayin**	**3.73**	**9**	Pn	**Pn**	**23 47 21.1**	**+0.2**
NGRK	**Negar Kerman**	**3.74**	**187**	Pn	**Pn**	**23 47 21.8**	**+0.5**
IMYA	**Miami**	**3.77**	**37**	Pn	**Pn**	**23 47 21.5**	**0.0**
NASN	**Na'in**	**3.79**	**263**	*e*Pn	**Pn**	**23 47 21.7**	**-0.3**
ILAS	**Lasjerd**	**4.10**	**301**	Pn	**Pn**	**23 47 26.4**	**+0.4**
IMND	**Minoodasht**	**4.17**	**339**	Pn	**Pn**	**23 47 27.3**	**+0.5**
IZEF	**Zefreh**	**4.18**	**265**	Pn	**Pn**	**23 47 27.2**	**0.0**
HRA	**Herat**	**4.25**	**75**		**Pn**	**23 47 27.2**	**-0.9**
KRSH	**Karshahi**	**4.33**	**279**	Pn	**Pn**	**23 47 29.6**	**+0.4**
KBAM	**BAM**	**4.34**	**166**	Pn	**Pn**	**23 47 28.5**	**-0.7**
IFIR	**Firoozkooh**	**4.37**	**303**	Pn	**Pn**	**23 47 29.9**	**+0.1**
MRVT	**Maraveh tapeh**	**4.39**	**348**	Pn	**Pn**	**23 47 30.4**	**+0.5**
MRVT	**Maraveh tapeh**	**4.39**	**348**	*e*Pn	**Pn**	**23 47 30.6**	**+0.7**
MRVT				IAML		23 47 57.6	
	comp=Z,95nm,1.0s						
IKLH	**Kolahrood**	**4.77**	**271**	Pn	**Pn**	**23 47 35.9**	**+0.6**
IDMV	**Damavand**	**4.86**	**298**	Pn	**Pn**	**23 47 37.5**	**+0.9**
IVRN	**Varamin**	**4.88**	**291**	Pn	**Pn**	**23 47 36.9**	**+0.3**
DAMV	**Damavand**	**4.93**	**299**	*e*Pn	**Pn

AKTO Aktyubinsk 17.06 2 P Pn 23 50 22.2 +0.6
comp=Z,0.3nm,0.3s,baz=191,slow=9.7,SNR=7.5
AKTO LR LR 23 58 06.2
comp=Z,176nm,21.5s,baz=254,slow=41
comp=Z,1.8nm,0.5s
SOC Sochi 17.09 312 *eP* **Pn 23 50 20.7 -1.3**
SOC *eS* **Sn 23 53 31.3 -0.7**
SOC MLR MLR
comp=Z,104nm,13.0s
ASF Jabal al Asfar 17.18 272 LR LR 23 58 14.3
comp=Z,79nm,20.5s,baz=30,slow=42
BOOM Boomskoye usch 17.28 53 P 23 50 25.6 -0.5
BOOM Boomskoye usch 17.28 53 P **P 23 50 25.7 -0.5**
BOOM pmax pmax
comp=Z,7.0nm,1.1s
ERBR Yeremizino-Bor 17.84 319 *eP* **Pn 23 50 29.8 -1.6**
ERBR pmax pmax
comp=Z,12nm,0.9s
TARG Taragay, Kyrgy 18.26 57 Pn 23 50 36.4 -0.6
TARG Taragay, Kyrgy 18.26 57 P **Pn 23 50 36.4 -0.6**
TARG pmax pmax
comp=Z,5.0nm,0.9s
MMAI Mount Meron Ar 18.31 275 P **P 23 50 37.7 +0.3**
comp=Z,5.8nm,0.9s,baz=91,slow=7.8,SNR=5.7
MMAI LR LR 23 58 59.5
comp=Z,113nm,18.8s,baz=56,slow=41
WUS Wushi 19.10 60 P Pn 23 50 47.7 +0.8
ANN Anapa 19.12 312 *eP* **P 23 50 46.4 +0.3**
ANN pmax pmax
comp=Z,78nm,0.8s
EIL Elat 19.38 265 P **P 23 50 49.1 0.0**
comp=Z,0.2nm,0.3s,baz=39,slow=2.9,SNR=6.2
EIL LR LR 23 59 54.4
comp=Z,120nm,19.6s,baz=76,slow=42
comp=Z,11nm,0.9s
BR131 Keskin Array S 20.00 295 P **P 23 50 53.8 -2.2**
BR131 IAmb IAmb 23 50 57.7
comp=Z,7.4nm,1.2s
BR131 Keskin Array S 20.00 295↓ *eP* **P 23 50 55.1 -0.8**
BRTR Keskin Array B 20.00 295 P **P 23 50 56.2 +0.3**
comp=Z,2.4nm,1.0s,baz=108,slow=10,SNR=8.4
BRTR LR LR 23 59 42.3
comp=Z,89nm,18.0s,baz=96,slow=40
comp=Z,2.4nm,1.0s
BRTR Keskin Array B 20.00 295 P **P 23 50 54.3 -1.7**
BRTR Keskin Array B 20.00 295 *eP* **P 23 50 55.7 -0.2**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
VRH Novokhopyorsk 21.14 332 *eP* **P 23 51 12.4 +4.4**
VRH pmax pmax
comp=Z,7.0nm,0.6s
BORK Borovoye 21.78 22 P 23 51 14.2 -0.7
BORK IAmb IAmb 23 51 24.3
comp=Z,4.0nm,0.8s
BORK Borovoye 21.78 22↑ *eP* **P 23 51 17.7 +2.8**
BORK pmax pmax
comp=Z,4.0nm,0.7s
BVAR Borovoye Array 21.78 22 P **P 23 51 14.9 -0.1**
comp=Z,3.5nm,0.5s,baz=203,slow=11,SNR=26
BVAR LR LR 00 00 52.2
comp=Z,68nm,21.8s,baz=232,slow=40
comp=Z,3.5nm,0.5s
VSR Storozhevoye 22.20 329 *eP* **P 23 51 19.3 -0.2**
VSR pmax pmax
comp=Z,30nm,2.1s
BORA Eskisehir 22.44 295 P **P 23 51 21.0 -1.3**
BORA IAmb IAmb 23 51 30.9
comp=Z,7.7nm,1.2s
VORR Voronezh 22.52 330 *eP* **P 23 51 21.1 -1.7**
VORR pmax pmax
comp=Z,10.0nm,0.4s
ELL Elmali 22.63 286 P **P 23 51 21.8 -2.5**
ELL Elmali 22.63 286 P **P 23 51 21.8 -2.5**
ELL pmax pmax
comp=Z,27nm,1.4s
ARTI Arti 23.03 2 P 23 51 29.2 +1.0
ARTI IAmb IAmb 23 51 34.6
comp=Z,8.5nm,1.1s
ARTI Arti 23.03 2 *c i* **P 23 51 31.1 +2.9**
ARTI 23 51 53.8
ARTI S **S 23 55 44.8 +6.0**
ARTI SS **SnSn 23 56 16.1 +5.1**
ARTI pmax pmax
comp=Z,17nm,1.8s
MAKZ Makanchi 23.06 47 P 23 51 28.6 -0.1
MAKZ IAmb IAmb 23 51 32.1
comp=Z,16nm,1.4s
MAKZ Makanchi 23.06 47 P **P 23 51 28.6 -0.1**
MAKZ pmax pmax
comp=Z,17nm,1.4s
MK31 Makanchi Array 23.25 47↑ *eP* **P 23 51 32.1 +1.5**
MKAR Makanchi Array 23.25 47 P **P 23 51 30.9 +0.3**
comp=Z,3.4nm,1.0s,baz=235,slow=10,SNR=18
comp=Z,3.4nm,1.0s
MKAR Makanchi Array 23.25 47 P **P 23 51 30.0 -0.6**
MKAR Makanchi Array 23.25 47 *eP* **P 23 51 33.6 +3.0**
MKAR pmax pmax
comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra 23.25 36 P **P 23 51 31.5 +1.0**
comp=Z,5.2nm,1.1s,baz=235,slow=9.6,SNR=11
KURBB LR LR 00 02 03.3
comp=Z,67nm,19.0s,baz=172,slow=40
comp=Z,5.2nm,1.1s
LPSR Galich'ya Gora 23.32 331 *eP* **P 23 51 29.2 -2.0**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
KURK Kurchatov 23.35 36 P 23 51 31.8 +0.3
KURK IAmb IAmb 23 51 37.5
comp=Z,3.3nm,0.9s
KURK Kurchatov 23.35 36↓ *eP* **P 23 51 35.2 +3.7**
KURK pmax pmax
comp=Z,6.0nm,1.2s
KIRV Kirov 25.77 351↓ *eP* **P 23 51 53.7 -0.1**
AKASG Malin Array Be 26.86 319 P **P 23 52 03.1 -0.7**
comp=Z,4.4nm,0.8s,baz=123,slow=8.8,SNR=8.2
comp=Z,4.4nm,0.8s
AKASG Malin Array Be 26.86 319 *ceP* **P 23 52 05.6 +1.9**
AKASG pmax pmax
comp=Z,6.0nm,0.9s
AKBB Malin Array Si 26.86 319 P **P 23 52 03.8 0.0**
AKBB Malin Array Si 26.86 319↓ *eP* **P 23 52 03.4 -0.3**
KIEV Kiev 26.86 319 P 23 52 03.7 -0.1
KIEV Kiev 26.86 319 P **P 23 52 03.7 -0.1**
KIEV pmax pmax
comp=Z,10.0nm,0.9s
ZALV Zalesovo Beam 28.34 35 P **P 23 52 16.1 -0.8**
comp=Z,0.7nm,0.4s,baz=257,slow=8.4,SNR=4.9
comp=Z,0.7nm,0.4s
ZALV Zalesovo Beam 28.34 35 P 23 52 15.9 -1.1
ZALV Zalesovo Beam 28.34 35 *eP* **P 23 52 19.3 +2.3**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
KLMR Klimovskoe 29.83 343 *eP* **P 23 52 28.1 -2.0**
KLMR *e* 23 53 27.8
KLMR pmax pmax
comp=Z,23nm,1.5s
PALK Pallekele 33.84 135 LR LR 00 09 15.4
comp=Z,38nm,18.0s,baz=8.5,slow=41
KNGR Kungurtug, Tuv 34.01 47↑ *eP* **P 23 53 09.1 +2.0**
KNGR pmax pmax
comp=Z,4.0nm,1.0s
GTA2 Gaotai 34.48 67 *eP* **P 23 53 12.3 +0.9**
GTA2 pmax pmax
comp=Z,3.0nm,1.2s
VAE Valguarnera 34.95 289 LR LR 00 10 41.2
comp=Z,110nm,18.8s,baz=172,slow=42
GERES GERESS Array B 35.76 309 P 23 53 22.5 +0.2
comp=Z,1.0nm,0.8s,baz=99,slow=8.5,SNR=5.1
comp=Z,1.0nm,0.8s
WTTA Wattenberg 36.94 306 *eP* **P 23 53 29.8 -2.6**
comp=Z,8.8nm,1.5s
SQTA Sankt Quirin 37.22 306 *ep* P **P 23 53 33.5 -1.3**
comp=Z,3.7nm,1.1s
MOTA Moosalm 37.30 306 *ep* P **P 23 53 34.2 -1.3**
comp=Z,5.3nm,1.3s
FETA Feichten 37.53 305 *ep* P **P 23 53 35.8 -1.6**
comp=Z,8.6nm,1.4s
TUE Stuetta 38.45 304 P 23 53 43.7 -1.5
TUE IAmb IAmb 23 53 46.9
comp=Z,3.4nm,0.8s
HFS Hagfors 38.98 327 P P 23 53 48.7 -0.6
comp=Z,1.7nm,0.7s,baz=125,slow=12,SNR=1.6
comp=Z,1.7nm,0.7s
ULN Ulaanbaatar 39.77 53↓ *eP* **P 23 53 59.5 +3.3**
ULN pmax pmax
comp=Z,2.0nm,1.0s

CHTO Chiang Mai 39.86 101 P P 23 53 55.9 -1.2
CHTO IAmb IAmb 23 53 57.6
comp=Z,6.2nm,1.1s
CHTO Chiang Mai 39.86 101 P **P 23 53 55.9 -1.2**
CHTO pmax pmax
comp=Z,6.0nm,1.1s
SENIN Lac Senin/Sane 39.86 304 P P 23 53 55.7 -1.4
SENIN IAmb IAmb 23 54 35.4
comp=Z,5.4nm,1.2s
CMAR Chiang Mai Arr 40.03 101 P P 23 53 57.5 -1.0
comp=Z,1.2nm,0.3s,baz=298,slow=9.3,SNR=9.9
CMAR LR LR 00 14 58.4
comp=Z,17nm,18.6s,baz=350,slow=43
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 40.03 101 P P 23 53 56.7 -1.9
NOA NORSAR Array B 40.46 327 P **P 23 54 03.2 +1.6**
comp=Z,1.9nm,0.9s,baz=115,slow=7.7,SNR=3.9
comp=Z,1.9nm,0.8s
EKA Eskdalemuir Ar 46.75 317 P P 23 54 53.7 +1.4
comp=Z,2.3nm,0.9s,baz=104,slow=5.9,SNR=3.5
comp=Z,2.3nm,0.9s
ESDC Sonseca Array 48.79 296 P **P 23 55 07.0 -1.4**
comp=Z,1.3nm,0.9s,baz=59,slow=8.3,SNR=8.3
comp=Z,1.3nm,0.9s
TIXI Tiksi 52.92 22↑ *eP* **P 23 55 40.0 +1.1**
TIXI pmax pmax
comp=Z,6.0nm,1.8s
TORD Torodi Ar. Bea 54.23 262 P P 23 55 47.6 -1.8
comp=Z,2.1nm,0.7s,baz=67,slow=4.5,SNR=15
comp=Z,2.1nm,0.7s
KSRS Korea Array 56.48 64 P **P 23 56 04.5 -0.8**
comp=Z,1.4nm,0.8s,baz=285,slow=7.2,SNR=5.3
comp=Z,1.4nm,0.8s
KSRS Korea Array 56.48 64 *eP* **P 23 56 07.4 +2.1**
KSRS pmax pmax
comp=Z,1.0nm,0.7s
SEY Seymchan 63.08 31↑ *eP* **P 23 56 53.1 +2.8**
SEY pmax pmax
comp=Z,10.0nm,2.7s
INK Inuvik 78.31 4 P **P 23 58 23.0 0.0**
comp=Z,0.8nm,0.6s,baz=16,slow=5.3,SNR=4.0
comp=Z,0.8nm,0.6s
INK Inuvik 78.31 4 P P 23 58 22.3 -0.6
INK Inuvik 78.31 4 P P 23 58 23.0 0.0
F30M Barrier River 78.85 5 P P 23 58 25.6 -0.4
G31M Satah River 79.64 5 P P 23 58 29.2 -1.1
G31M IAmb IAmb 23 58 30.7
comp=Z,5.0nm,1.1s
ILAR Eielson Array 80.36 10 P **P 23 58 34.1 -0.1**
comp=Z,0.4nm,0.9s,baz=328,slow=3.2,SNR=2.6
comp=Z,0.4nm,0.9s
YKA Yellowknife Ar 84.25 356 P **P 23 58 53.6 -0.9**
comp=Z,0.3nm,0.7s,baz=352,slow=5.9,SNR=5.9
comp=Z,0.3nm,0.7s
YKA Yellowknife Ar 84.25 356 *eP* **P 23 58 56.8 +2.2**
YKA pmax pmax
comp=Z,1.0nm,1.0s
ASAR Alice Springs 92.35 117 P **P 23 59 30.8 -3.3**
comp=Z,0.5nm,0.8s,baz=308,slow=4.5,SNR=1.5
comp=Z,0.5nm,0.8s

IDC 12 23:52:20.6±4.8, 24.16S×178.44W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=179.6km s-min=65.5km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.95**	**249**	P	P	23 59 22.2	-0.9
	0.9nm,0.4s,baz=113,slow=14,SNR=3.4						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**43.40**	**261**	P	P	00 00 25.1	-0.1
	1.5nm,0.4s,baz=91,slow=7.6,SNR=35						
	1.5nm,0.4s						
WRA	**Warramunga Arr**	**43.81**	**266**	P	P	00 00 28.9	+0.3
	1.2nm,0.4s,baz=104,slow=7.7,SNR=28						
	1.2nm,0.4s						
BRTR	**Keskin Array B**	**148.87**	**308**	PKPbc	PKPbc	00 12 10.1	-0.5
	0.3nm,0.6s,baz=85,slow=3.7,SNR=1.9						

*IDC **12** 23:54:23.4±1.1, 35.18N×27.95E, h0km, mb3.6/6, mbtmp3.5/10, ML1.9/2, Error ellipse: s-maj=26.4km s-min=18.1km az=173.0*
*ISK **12** 23:54:24.9, 35.17N×27.96E, h7km, ML3.1/21*
*AFAD **12** 23:54:25.5, 35.12N×27.90E, h12km±3km, ML2.9*
*GII **12** 23:54:26.3±0.0, 35.087N±0.001×28.183E±0.001, h0km, Mws3.3, confirmed*
*THE **12** 23:54:28.3, 35°N±9.2×2.8E±1.1, h4km±11km, M2.9/10, MLh2.9/10*
*ATH **12** 23:54:31.0, 35.43N×27.81E, h35km±10km, ML2.9/7, Manual Solution by D.Venizelos First location: 2020/02/12 23:55:54, This location: 2021/10/27 12:37:24 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 5 km*

ISC 12 23:54:23.8±1.4, 35.10N±0.04×28.00E±0.03, h5km±10km, n93, σ1.47/128, mb3.5/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.81**	**304**	Pg	**Pg**	**23 54 38.9**	**-0.6**
KARP	**Karpathos**	**0.81**	**304**	P	**Pg**	**23 54 38.6**	**-0.9**
KARP				S	**Sg**	**23 54 47.1**	**-3.0**
KARP	**Karpathos**	**0.81**	**304**	P	**Pg**	**23 54 38.4**	**-1.1**
KARP				S	**Sg**	**23 54 47.0**	**-3.1**
KSS1	**Kassos Island**	**0.94**	**290**	P	**Pn**	**23 54 46.9**	**+3.3**
KSS1				S	**Sn**	**23 54 59.1**	**+1.7**
ARG	**Arkhangelos**	**1.12**	**5**	Pg	**Pg**	**23 54 45.6**	**+0.3**
ARG	**Arkhangelos**	**1.12**	**5**	P	**Pg**	**23 54 44.9**	**-0.4**
ARG				S	**Sg**	**23 54 57.8**	**-2.1**
ARG	**Arkhangelos**	**1.12**	**5**	P	**Pg**	**23 54 45.9**	**+0.6**
ARG				S	**Sg**	**23 54 57.3**	**-2.6**
RDI1	**Rhodes Town Ha**	**1.36**	**8**	P	**Pn**	**23 54 49.7**	**+0.2**
RDI1				S	**Sb**	**23 55 03.6**	**-3.9**
ZKR	**Zakros**	**1.46**	**271**	Pn	**Pn**	**23 54 52.1**	**+1.3**
ZKR	**Zakros**	**1.46**	**271**	P	**Pn**	**23 54 52.6**	**+1.7**
ZKR	**Zakros**	**1.46**	**271**	P	**Pn**	**23 54 51.9**	**+1.0**
ZKR				S	**Sb**	**23 55 09.5**	**-0.7**
SIT2	**Siteia**	**1.55**	**274**	P	**Pb**	**23 54 54.5**	**+1.5**
YAZI	**Mula-Dat§a-**	**1.64**	**345**	P	**Pn**	**23 54 52.5**	**-0.8**
YAZI				S	**Sg**	**23 55 16.4**	**-0.1**
YAZI				IAML		23 55 17.0	
	comp=E,178nm,0.7s						
DAT	**Datca**	**1.66**	**348**	Pn	**Pn**	**23 54 54.1**	**+0.4**
DAT				Sn	**Sn**	**23 55 15.5**	**0.0**
DAT	**Datca**	**1.66**	**348**	P	**Pn**	**23 54 53.5**	**-0.2**
DAT				S	**Sn**	**23 55 13.1**	**-2.4**
KSL	**Kastellorizon**	**1.67**	**51**	P	**Pn**	**23 54 54.3**	**+0.7**
KSL	**Kastellorizon**	**1.67**	**51**	P	**Pn**	**23 54 54.9**	**+1.3**
IZZE	**Mula-Seydike**	**1.67**	**37**	P	**Pn**	**23 54 53.7**	**0.0**
IZZE				IAML		23 55 35.0	
	comp=E,104nm,0.4s						
IZZE				IAML		23 55 44.0	
	comp=N,141nm,0.6s						
DATC	**Datca-Mugla**	**1.68**	**351**	Pn	**Pn**	**23 54 54.3**	**+0.5**
AKAS	**Kas**	**1.73**	**49**	Pn	**Pn**	**23 54 55.9**	**+1.2**
AKAS	**Kas**	**1.73**	**49**	P	**Pn**	**23 54 54.0**	**-0.7**
AKAS				S	**Sn**	**23 55 19.2**	**+1.9**
AKAS				IAML		23 55 52.0	
	comp=N,122nm,1.0s						
FETY	**Fethiye**	**1.77**	**30**	P	Pn	23 54 47.8	-7.3
DALY	**Dalyan (Mula)**	**1.80**	**17**	Pn	**Pn**	**23 54 56.2**	**+0.8**
SABU	**Mula-Dalaman**	**1.89**	**24**	P	**Pn**	**23 54 57.3**	**+0.5**
SABU				S	**Sg**	**23 55 32.2**	**+7.5**
SABU				IAML		23 55 53.0	
	comp=N,84nm,1.0s						
NPS	**Neapolis**	**1.96**	**275**	P	**Pn**	**23 54 59.6**	**+1.8**
NPS	**Neapolis**	**1.96**	**275**	P	**Pn**	**23 54 59.8**	**+2.1**
BDRM	**Kayabasi**	**2.01**	**347**	P	**Pn**	**23 54 58.8**	**+0.3**
BDRM				S	**Sn**	**23 55 23.2**	**-0.8**
BDRM				IAML		23 55 34.0	
	comp=E,124nm,0.7s						
BODT	**Bodrum**	**2.04**	**344**	Pn	**Pn**	**23 54 59.4**	**+0.6**
BODT	**Bodrum**	**2.04**	**344**	P	**Pn**	**23 54 58.3**	**-0.5**
YER	**Yerkesik**	**2.04**	**6**	Pn	**Pn**	**23 54 59.7**	**+0.7**
YER	**Yerkesik**	**2.04**	**6**	P	**Pn**	**23 54 60.0**	**+1.0**
YKAV	**Yalikavak-Bodr**	**2.10**	**344**	Pn	**Pn**	**23 55 00.4**	**+0.7**
CAME	**Cameli-Denizli**	**2.12**	**30**	Pn	**Pn**	**23 55 00.9**	**+0.8**
KNIK	**Mula-Seydike**	**2.16**	**36**	P	**Pn**	**23 55 01.3**	**+0.7**
MULA	**Mugla, Merkez-**	**2.17**	**7**	P	**Pn**	**23 55 02.5**	**+1.8**
MULA				S	**Sg**	**23 55 35.5**	**+1.9**
MULA				IAML		23 55 47.0	
	comp=E,102nm,0.8s						
ELL	**Elmali**	**2.26**	**43**	Pn	**Pn**	**23 55 03.3**	**+1.3**
CAEL	**Denizli, Camel**	**2.29**	**28**	P	**Pn**	**23 55 03.6**	**+1.3**
CAEL				IAML		23 55 55.0	
	comp=N,106nm,0.9s						
CAEL				IAML		23 56 11.0	
	comp=E,140nm,0.8s						
DNZT	**Denizli-Tavas-**	**2.33**	**21**	P	**Pn**	**23 55 04.1**	**+1.2**
THERA	**Ancient Thera,**	**2.41**	**302**	P	**Pn**	**23 55 03.9**	**0.0**
TAVA	**DENIZLI_Tavas**	**2.48**	**17**	P	**Pn**	**23 55 05.6**	**+0.7**
TAVA				IAML		23 55 55.0	
	comp=N,59nm,0.7s						
TAVA				IAML		23 55 55.0	
	comp=E,60nm,0.5s						
GOLH	**Golhisar**	**2.48**	**30**	P	**Pn**	**23 55 06.7**	**+1.7**
GOLH				IAML		23 55 42.0	
	comp=E,48nm,0.5s						
GOLH				IAML		23 56 14.0	
	comp=N,63nm,1.3s						
SNT5	**Nea Kammeni, S**	**2.48**	**302**	P	**Pn**	**23 55 05.0**	**+0.1**
IDI	**Anoyia**	**2.55**	**275**	Pn	**Pn**	**23 55 06.7**	**+0.8**
	3.0nm,0.3s,baz=116,slow=15,SNR=15						
IDI				Sn	**Sb**	**23 55 41.2**	**-0.6**
	3.5nm,0.3s,baz=98,slow=21,SNR=4.0						
	19nm,0.7s						
IDI	**Anoyia**	**2.55**	**275**	Pn	**Pn**	**23 55 07.2**	**+1.3**
IDI	**Anoyia**	**2.55**	**275**	P	**Pn**	**23 55 07.6**	**+1.7**
IDI	**Anoyia**	**2.55**	**275**	P	**Pn**	**23 55 07.6**	**+1.7**
AYDN	**Tasoluk**	**2.56**	**358**	P	**Pn**	**23 55 06.4**	**+0.4**
AYDN				S	**Sn**	**23 55 37.1**	**-0.5**
AYDN				IAML		23 55 44.0	
	comp=E,87nm,0.6s						
APMY	**Acipayam-Deniz**	**2.59**	**24**	Pn	**Pn**	**23 55 07.7**	**+1.2**
GCAM	**G?zelcaml?**	**2.67**	**347**	Pn	**Pn**	**23 55 08.3**	**+0.9**
KORT	**Korkueli**	**2.69**	**44**	Pn	**Pn**	**23 55 09.3**	**+1.4**
KORT	**Korkueli**	**2.69**	**44**	P	**Pn**	**23 55 10.3**	**+2.4**
KORT				IAML		23 55 48.0	
	comp=E,44nm,0.5s						
ESEN	**Aydn-Nazilli**	**2.71**	**6**	P	**Pn**	**23 55 09.1**	**+1.1**
SMG	**Samos**	**2.77**	**341**	P	**Pn**	**23 55 08.0**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**2.84**	**358**	Pn	**Pn**	**23 55 10.9**	**+0.9**
NAZL	**Nazilli-Aydin**	**2.87**	**5**	Pn	**Pn**	**23 55 11.1**	**+0.8**
INCE	**Denizli-Bozkur**	**2.90**	**26**	P	**Pn**	**23 55 12.1**	**+1.4**
INCE				IAML		23 56 20.0	
	comp=N,39nm,0.8s						
SULTU	**Buldan**	**3.01**	**12**	P	**Pn**	**23 55 14.7**	**+2.4**
SULTU				IAML		23 56 14.0	
	comp=E,58nm,0.6s						
SULTU				IAML		23 56 29.0	
	comp=N,39nm,1.5s						
KIRA	**zmir-Kiraz**	**3.11**	**6**	P	**Pn**	**23 55 14.5**	**+0.9**
VAM	**Vamos**	**3.12**	**277**	P	**Pn**	**23 55 15.3**	**+1.6**
VAM	**Vamos**	**3.12**	**277**	P	**Pn**	**23 55 15.6**	**+1.9**
ODEM	**Odemis-Izmir**	**3.17**	**1**	Pn	**Pn**	**23 55 15.3**	**+0.8**
IMMV	**Iera Moni Meta**	**3.30**	**277**	P	**Pn**	**23 55 17.8**	**+1.6**
IMMV	**Iera Moni Meta**	**3.30**	**277**	P	**Pn**	**23 55 18.0**	**+1.8**
BLCB	**Balcova**	**3.37**	**347**	Pn	**Pn**	**23 55 18.0**	**+0.9**
KULA	**Kula-Manisa**	**3.45**	**9**	Pn	**Pn**	**23 55 19.2**	**+0.9**
CHOS	**Chios island**	**3.63**	**335**	P	**Pn**	**23 55 21.2**	**+0.4**
CSS	**Mathiatis**	**4.38**	**90**	P	**Pn**	**23 55 31.0**	**-0.1**
CSS				S	**Sn**	**23 56 20.3**	**-2.1**
ITM	**Ithomi**	**5.33**	**295**	P	**Pn**	**23 55 45.4**	**+1.3**
BRTR	**Keskin Array B**	**6.44**	**43**	Pn	**Pn**	**23 56 00.1**	**+0.6**
	0.1nm,0.3s,baz=219,slow=17,SNR=3.5						
BRTR				Sn	**Sn**	**23 57 14.8**	**+1.4**
	0.1nm,0.3s,baz=211,slow=25,SNR=3.1						
	0.4nm,0.5s						
MMAI	**Mount Meron Ar**	**6.49**	**107**	Pn	**Pn**	**23 56 00.2**	**+0.2**
	0.8nm,0.3s,baz=299,slow=14,SNR=18						
MMAI				Sn	**Sn**	**23 57 15.8**	**+1.2**
	2.6nm,0.3s,baz=272,slow=29,SNR=6.9						
GEM	**Giv'at Ha'Em**	**6.63**	**104**	P	**Pn**	**23 56 01.8**	**-0.1**
GEM				S	**Sn**	**23 57 16.0**	**-1.9**
MMLI	**Mount Malkishu**	**6.73**	**111**	P	**Pn**	**23 56 03.2**	**-0.1**
MMLI				S	**Sn**	**23 57 18.5**	**-1.9**
AMAZ	**Amatzia**	**6.80**	**120**	P	**Pn**	**23 56 04.5**	**+0.3**
AMAZ				S	**Sn**	**23 57 20.2**	**-1.8**
KZIT	**Kziot**	**6.81**	**126**	P	**Pn**	**23 56 04.7**	**+0.3**
KZIT				S	**Sn**	**23 57 21.0**	**-1.3**
KSHT	**Keshet**	**6.82**	**106**	P	**Pn**	**23 56 04.8**	**+0.1**
KSHT				S	**Sn**	**23 57 20.9**	**-1.8**
HMDT	**Nahal Hemdat**	**6.89**	**112**	P	**Pn**	**23 56 05.5**	**0.0**
HMDT				S	**Sn**	**23 57 22.5**	**-1.8**
YTIR	**Yattir**	**7.03**	**120**	P	**Pn**	**23 56 07.7**	**+0.2**
YTIR				S	**Sn**	**23 57 26.6**	**-1.3**
DSI	**Dead Sea**	**7.11**	**118**	P	**Pn**	**23 56 08.6**	**+0.1**
DSI				S	**Sn**	**23 57 28.1**	**-1.6**
MSBI	**Mazada**	**7.23**	**119**	P	**Pn**	**23 56 10.3**	**+0.1**
MSBI				S	**Sn**	**23 57 31.0**	**-1.6**
RMNI	**Mount Ramon**	**7.25**	**126**	P	**Pn**	**23 56 10.9**	**+0.4**
RMNI				S	**Sn**	**23 57 32.0**	**-1.3**
GHAJ	**Ghor Haditha**	**7.39**	**119**	P	**Pn**	**23 56 12.4**	**+0.1**
GHAJ				S	**Sn**	**23 57 34.8**	**-1.7**
KRMI	**Paran Flat**	**7.54**	**129**	P	**Pn**	**23 56 15.1**	**+0.6**
KRMI				S	**Sn**	**23 57 39.3**	**-1.1**
PRNI	**Paran**	**7.57**	**127**	P	**Pn**	**23 56 15.2**	**+0.4**
PRNI				S	**Sn**	**23 57 39.9**	**-1.1**
HRFI	**Mount Harif**	**7.80**	**128**	P	**Pn**	**23 56 18.2**	**+0.2**
HRFI				S	**Sn**	**23 57 45.4**	**-1.2**
MBRI	**Mt Berech**	**7.88**	**130**	P	**Pn**	**23 56 19.7**	**+0.5**
MBRI				S	**Sn**	**23 57 47.8**	**-1.0**
EIL	**Elat**	**7.99**	**131**	Pn	**Pn**	**23 56 21.2**	**+0.6**
	3.9nm,0.6s,baz=232,slow=2.6,SNR=7.0						
EIL				Sn	**Sn**	**23 57 50.7**	**-0.7**
	0.7nm,0.3s,baz=9.0,slow=15,SNR=5.8						
EIL	**Elat**	**7.99**	**131**	P	**Pn**	**23 56 21.0**	**+0.4**
EIL				S	**Sn**	**23 57 50.2**	**-1.2**
ESDC	**Sonseca Array**	**25.72**	**290**	P	**P**	**23 59 54.6**	**-0.5**
	0.9nm,0.8s,baz=77,slow=9.5,SNR=6.9						
	0.9nm,0.8s						
FINES	**FINESS Array B**	**26.39**	**358**	P	**P**	**23 59 59.6**	**-1.3**
	5.1nm,1.1s,baz=216,slow=14,SNR=2.1						
	5.1nm,1.1s						
NOA	**NORSAR Array B**	**28.10**	**343**	P	**P**	**00 00 15.2**	**-1.1**
	1.0nm,1.0s,baz=160,slow=8.3,SNR=2.2						
	1.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**32.28**	**234**	P	**P**	**00 00 53.7**	**+0.1**
	0.6nm,0.8s,baz=37,slow=5.4,SNR=4.1						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**39.35**	**51**	P	**P**	**00 01 54.9**	**+0.9**
	0.3nm,0.6s,baz=271,slow=8.7,SNR=2.9						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**41.87**	**57**	P	**P**	**00 02 16.3**	**+1.5**
	0.2nm,0.5s,baz=284,slow=8.8,SNR=2.6						
	0.2nm,0.5s						

IDC 12 23:54:58.7±3.4, 23.77S×177.47W, h0km, mb4.3/2, mbtmp4.3/2, Error ellipse: s-maj=185.1km s-min=45.7km az=154.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.34**	**260**	P	P	00 03 10.8	-0.1
	1.6nm,0.4s,baz=99,slow=7.6,SNR=29						
	1.6nm,0.4s						
WRA	**Warramunga Arr**	**44.73**	**265**	P	P	00 03 14.1	0.0
	2.4nm,0.3s,baz=103,slow=7.8,SNR=55						
WRA				PcP	PcP	00 04 55.2	-1.3
	1.2nm,0.9s,baz=100,slow=3.4,SNR=4.9						
	2.4nm,0.3s						
AKASG	**Malin Array Be**	**146.08**	**329**	PKPbc	PKPbc	00 14 40.2	-0.3
	0.9nm,0.5s,baz=42,slow=3.3,SNR=4.8						
BRTR	**Keskin Array B**	**149.32**	**309**	PKPbc	PKPbc	00 14 49.0	-0.8
	0.9nm,0.7s,baz=50,slow=2.5,SNR=5.0						
MMAI	**Mount Meron Ar**	**149.75**	**295**	PKPbc	PKPbc	00 14 51.0	0.0
	1.0nm,0.6s,baz=90,slow=4.3,SNR=5.7						

NOU 12 23:56:39.8, 15.77S×168.29E, h144km, mb4.1/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.95**	**183**	P	Pn	23 57 14.8	+0.9
DVP	**Devils Point**	**1.95**	**183**	P	Sn	23 57 40.6	+0.4
YATNC	**Mamie plateau,**	**6.39**	**192**	P	Pn	23 58 11.6	-0.1
DZM	**Mont Dzumac**	**6.51**	**

Error ellipse: s-maj=12.8km s-min=11.9km az=74.0
ISC 13 00:01:09.4±1.3, 38°3N±0°1×70°17E±0°09, h10km, n17, σ2s17/20, mb3.8/6, 3C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.79**	**3**	⇑Pn	**Pn**	**00 02 23.4**	**+1.8**
	2.7nm,0.3s,baz=194,slow=15,SNR=94						
KK31				⇓Sn	**Sn**	**00 03 20.0**	**+2.9**
	2.9nm,0.3s,baz=183,slow=23,SNR=7.1						
KK31				⇓Lg	Lg	00 03 41.3	
	29nm,0.5s						
AAK	**Ala-Archa**	**5.43**	**36**	Pn	**Pn**	**00 02 33.1**	**+2.6**
	1.2nm,0.3s,baz=202,slow=6.2,SNR=16						
AAK				Sn	**Sn**	**00 03 38.3**	**+5.2**
	0.8nm,0.3s,baz=267,slow=19,SNR=1.8						
	2.2nm,0.3s						
AAK	**Ala-Archa**	**5.43**	**36**	⇓Pn	Pn	00 02 34.9	+4.4
	3.7nm,0.8s						
AAK				⇓Pg	**Pg**	**00 02 50.6**	**-2.8**
	5.4nm,0.6s						
AAK				⇑Lg	Lg	00 04 05.0	
	52nm,1.3s						
AB31	**Akbulak array**	**13.18**	**329**	P	**Pn**	**00 04 15.1**	**-1.4**
	1.2nm,0.4s,baz=270,slow=38,SNR=72						
AB31				⇓S	**Sn**	**00 06 43.1**	**0.0**
	0.4nm,0.3s,baz=151,slow=25,SNR=4.0						
KURBB	**Kurchatov Arra**	**13.66**	**23**	Pn	**Pn**	**00 04 21.4**	**-1.7**
	baz=216,slow=11,SNR=3.1						
KURBB				Lg	Lg	00 08 09.1	
	baz=201,slow=26,SNR=3.0						
	0.5nm,0.9s						
BVAR	**Borovoye Array**	**14.71**	**1**	Pn	**Pn**	**00 04 33.5**	**-3.9**
	baz=161,slow=11,SNR=6.5						
	0.9nm,0.6s						
AKTO	**Aktyubinsk**	**14.88**	**328**	Pn	**Pn**	**00 04 39.5**	**-0.3**
	0.3nm,0.3s,baz=138,slow=14,SNR=3.9						
AKTO				Sn	Sn	00 07 15.3	-9.3
	0.1nm,0.3s,baz=36,slow=19,SNR=1.1						
	1.0nm,0.3s						
AKTO	**Aktyubinsk**	**14.88**	**328**	⇑P	**Pn**	**00 04 40.2**	**+0.4**
	4.2nm,0.9s						
ZALV	**Zalesovo Beam**	**18.58**	**28**	P	**P**	**00 05 24.4**	**-1.9**
	0.2nm,0.3s,baz=218,slow=11,SNR=6.7						
	1.9nm,0.8s						
ARTI	**Arti**	**19.71**	**340**	P	**Pn**	**00 05 39.3**	**-0.9**
	0.2nm,0.3s,baz=138,slow=12,SNR=3.0						
	1.1nm,0.6s						
KVAR	**Kislovodsk Arr**	**21.39**	**294**	P	**P**	**00 05 57.3**	**+0.1**
	7.5nm,1.1s,baz=135,slow=14,SNR=3.1						
	7.5nm,1.1s						
FINES	**FINESS Array B**	**35.62**	**325**	P	**P**	**00 08 05.8**	**-1.1**
	1.4nm,0.8s,baz=95,slow=13,SNR=2.3						
	1.4nm,0.8s						
HFS	**Hagfors**	**41.24**	**321**	P	**P**	**00 08 54.4**	**+0.2**
	2.3nm,0.4s,baz=97,slow=12,SNR=16						
	2.3nm,0.4s						
NOA	**NORSAR Array B**	**42.54**	**322**	P	**P**	**00 09 04.8**	**-0.1**
	0.8nm,0.7s,baz=101,slow=8.5,SNR=1.6						
	0.8nm,0.7s						
ESDC	**Sonseca Array**	**56.04**	**296**	P	**P**	**00 10 49.5**	**+1.0**
	0.2nm,0.6s,baz=61,slow=6.8,SNR=4.6						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.12**	**267**	P	**P**	**00 11 51.1**	**+0.4**
	0.3nm,0.4s,baz=48,slow=6.9,SNR=6.1						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**73.21**	**16**	P	**P**	**00 12 40.3**	**+0.2**
	0.6nm,0.9s,baz=310,slow=4.4,SNR=5.0						
	0.6nm,0.9s						

SOME 13 00:01:11.0, 42°.18N×84°.18E, h5km
NNC 13 00:01:15.4±3.5, 41°.26N×83°.36E, h10km±17km, mb3.6, mpv3.3, Error ellipse: s-maj=24.4km s-min=22.4km az=32.0
ISC 13 00:01:18.7±2.5, 41°.5N±0°.1×83°.26E±0°.08, h10km, n22, σ2s47/28, 3C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.94**	**314**	Pg	**Pb**	**00 02 08.7**	**-2.5**
	2.3nm,0.3s						
KTMS				Lg	Lg	00 02 50.5	
	8.5nm,0.3s						
KTMS	**Ketmen**	**2.94**	**314**	*eP*	**Pb**	**00 02 08.7**	**-2.5**
	2.3nm,0.3s						
KTMS				*eS*	**Sb**	**00 02 50.5**	**+3.3**
	8.5nm,0.3s						
SHLS	**Shalkode**	**3.29**	**303**	Pg	**Pb**	**00 02 13.4**	**-3.9**
	6.4nm,0.4s						
SHLS				Lg	Lg	00 02 58.5	
	72nm,0.5s						
SHLS	**Shalkode**	**3.29**	**303**	*eP*	**Pb**	**00 02 13.4**	**-3.9**
	6.4nm,0.4s						
SHLS				*eS*	**Sb**	**00 02 58.5**	**+1.0**
	72nm,0.5s						
PDGK	**Podgornoye**	**3.37**	**305**	⇓Pn	**Pn**	**00 02 09.6**	**-1.9**
	3.1nm,0.9s						
PDGK				⇑Pg	**Pg**	**00 02 21.7**	**-1.5**
	4.4nm,0.5s						
PDGK				⇑Lg	Lg	00 03 09.2	
	19nm,0.6s						
UZB	**Uzynbulak**	**3.57**	**300**	Pg	**Pb**	**00 02 23.5**	**+1.5**
	5.3nm,0.4s						
UZB				Lg	Lg	00 03 15.9	
	16nm,0.5s						
UZB	**Uzynbulak**	**3.57**	**300**	*eP*	**Pb**	**00 02 23.6**	**+1.5**
	5.3nm,0.4s						
UZB				*eS*	**Sg**	**00 03 15.9**	**+2.5**
	16nm,0.5s						
DJR	**Jarkent**	**3.85**	**320**	Pg	**Pb**	**00 02 22.2**	**-4.5**
	2.1nm,0.4s						
DJR				Lg	Lg	00 03 13.4	
	4.2nm,0.6s						
DJR	**Jarkent**	**3.85**	**320**	*eP*	**Pb**	**00 02 22.2**	**-4.5**
	2.1nm,0.4s						
DJR				*eS*	**Sb**	**00 03 13.4**	**0.0**
	4.2nm,0.6s						
KPKS	**Kokpek**	**3.94**	**302**	Pg	**Pb**	**00 02 29.5**	**+1.2**
	0.5nm,0.2s						
KPKS				Lg	Lg	00 03 26.1	
	24nm,0.4s						
KPKS	**Kokpek**	**3.94**	**302**	*eP*	**Pb**	**00 02 29.5**	**+1.2**
	0.5nm,0.2s						
KPKS				*eS*	**Sg**	**00 03 26.1**	**+0.9**
	24nm,0.4s						
SATY	**Saty**	**3.95**	**296**	Pg	**Pg**	**00 02 31.9**	**-2.3**
	4.3nm,0.3s						
SATY				Lg	Lg	00 03 30.1	
	14nm,0.5s						
KNOS	**Konyrlen**	**4.18**	**316**	Pg	**Pb**	**00 02 29.9**	**-2.5**
	1.4nm,0.1s						
KNOS				Lg	Lg	00 03 26.6	
	6.1nm,0.4s						
ARXS	**Arharly**	**4.86**	**306**	Pg	**Pb**	**00 02 45.1**	**+1.2**
	1.6nm,0.5s						
ARXS				Lg	Lg	00 03 52.6	
	7.1nm,0.5s						
ARXS	**Arharly**	**4.86**	**306**	*eP*	**Pb**	**00 02 45.1**	**+1.2**
	1.6nm,0.5s						
ARXS				*eS*	**Sg**	**00 03 52.6**	**-2.0**
	7.1nm,0.5s						
MTBS	**Maitube**	**5.34**	**291**	Pg	**Pb**	**00 02 52.9**	**+0.8**
	4.3nm,0.7s						
MTBS				Lg	Lg	00 04 29.2	
	5.7nm,0.7s						
MK31	**Makanchi Array**	**5.39**	**353**	⇑Pn	**Pn**	**00 02 41.3**	**+2.1**
	0.3nm,0.5s,baz=166,slow=12,SNR=4.3						
MK31				⇓Sn	**Sn**	**00 03 43.1**	**+1.8**
	1.2nm,0.5s,baz=173,slow=21,SNR=4.7						
MK31				⇓Lg	Lg	00 04 15.0	
	3.2nm,0.6s,baz=173,slow=31,SNR=4.4						
MAKZ	**Makanchi**	**5.44**	**351**	⇓Sn	**Sn**	**00 03 45.2**	**+2.7**
	2.2nm,0.6s						
MAKZ				⇓Lg	Lg	00 04 17.0	
	2.8nm,0.7s						
KST	**Kastek**	**5.65**	**289**	Pg	Pn	00 02 48.6	+5.8
	4.1nm,1.0s						
KST				Lg	Lg	00 04 21.7	
	13nm,0.9s						
DGS	**Degeres**	**5.83**	**290**	Pg	Pn	00 02 50.1	+4.8
	2.0nm,0.7s						
DGS				Lg	Lg	00 04 24.3	
	13nm,1.0s						
KRBS	**Karabastau**	**6.03**	**294**	Pg	Pn	00 02 53.8	+5.8
	1.9nm,0.4s						
KRBS				Lg	Lg	00 04 31.2	
	8.0nm,0.8s						
ZSN	**Zaisan**	**6.11**	**10**	*eP*	**Pn**	**00 02 49.6**	**+0.6**
	1.7nm,0.4s						
ZSN				*eS*	**Sn**	**00 04 00.6**	**+1.6**
	3.3nm,0.3s						

IDC 13 00:13:15.0±1.3, 18°.05N×66°.89W, h0km, mb3.6/6, mbtmp3.7/7, ML3.2/1, MS2.6/1, Error ellipse: s-maj=35.8km s-min=9.4km az=2.0
NEIC 13 00:13:16.6, 17°.93N×66°.86W, h10km
NEIC 13 00:13:16.6±1.6, 17°.93N±0°.02×66°.860W±0°.009, h10km±1km, mb4.1/10, ML4.1/37, Mwr3.7/14, Md3.6/5(RSPR), Mwr3.6/14(SLM), Error ellipse: s-maj=4.2km s-min=2.6km az=5.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=3.78; Mθθ=3.75; Mϕϕ=0.03; Mrθ=-1.31; Mrϕ=1.81; Mθϕ=1.05; Fault plane solution: M0=4.50000×10^14 NP1:ϕs=87.87000°, δ=54.35000°, λ=-63.67000°. NP2:ϕs=227.53000°, δ=43.25000°, λ=-121.73000°. Principal axes: T 4.5717, Plg6.0000°, Azm159.0000°; N -0.1436, Plg21.0000°, Azm252.0000°; P -4.4281, Plg68.0000°, Azm55.0000°;
PTWC 13 00:13:16, 18°.00N×66°.90W, Ml4.0/15
SDD 13 00:13:17.3±1.8, 17°.96N×66°.86W, h20km±13km, MD3.8, ML4.0, MW4.0, Presumed earthquake
NEIC 13 00:13:17, 17°.97N×66°.88W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=1.75; Mθθ=2.29; Mϕϕ=0.54; Mrθ=-0.82; Mrϕ=1.34; Mθϕ=1.17; Fault plane solution: M0=2.85000×10^14 NP1:ϕs=100.00000°, δ=60.00000°, λ=-45.00000°. NP2:ϕs=217.00000°, δ=52.00000°, λ=-141.00000°. Principal axes: T 2.8507, Plg5.0000°, Azm160.0000°; N 0.0030, Plg38.0000°, Azm253.0000°; P -2.8537, Plg52.0000°, Azm64.0000°;
OSPL 13 00:13:17.4±0.3, 17°.99N×66°.87W, h16km±6km, ML3.5, Presumed earthquake
RSPR 13 00:13:17.5, 17°.97N×66°.88W, h14km, MD3.6/5
ISC 13 00:13:16.5±0.8, 17°.94N±0°.04×66°.87W±0°.01, h18km±3km, n94, σ1s27/132, mb4.0/11, 17C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.04**	**348**		**Pg**	**00 13 20.0**	**+0.3**
GBPR	**Guanica, Bosqu**	**0.04**	**348**	⇑*iP*	**Pg**	**00 13 20.0**	**+0.3**
MLPR	**Magueyes Islan**	**0.17**	**282**		**Pg**	**00 13 21.3**	**+0.4**
MLPR				Sg	**Sg**	**00 13 24.3**	**+0.4**
MLPR				IAML		00 13 24.8	
	49μm,0.3s						
MLPR				IAML		00 13 24.9	
	24μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.24**	**287**		**Pb**	**00 13 22.2**	**0.0**
CRPR				Sg	**Sb**	**00 13 25.8**	**-0.3**
CRPR				IAML		00 13 26.0	
	62μm,0.4s						
CRPR				IAML		00 13 26.1	
	30μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.24**	**287**	P	**Pb**	**00 13 21.9**	**-0.3**
CRPR				S	**Sb**	**00 13 25.1**	**-1.0**
CRPR	**Cabo Rojo, PR**	**0.24**	**287**	⇓*e*Pg	**Pb**	**00 13 22.2**	**0.0**
CRPR				⇑*e*Sg	**Sb**	**00 13 25.8**	**-0.3**
CRPR				IAML		00 13 26.0	
	comp=N,60μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.24**	**287**	⇓*eP*	**Pb**	**00 13 22.3**	**0.0**
CRPR				*eS*	**Sb**	**00 13 25.8**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.24**	**287**	*i P*	**Pb**	**00 13 22.2**	**0.0**
CRPR				*eS*	**Sb**	**00 13 25.8**	**-0.3**
CRPR				IAML		00 13 26.0	
	comp=Z,30μm,0.2s						
OBIP	**Obispado Ponce**	**0.27**	**67**		**Pb**	**00 13 22.7**	**-0.1**
OBIP				Sg	**Sb**	**00 13 26.3**	**-0.8**
OBIP	**Obispado Ponce**	**0.27**	**67**	P	**Pb**	**00 13 22.3**	**-0.6**
OBIP				S	**Sb**	**00 13 26.4**	**-0.8**
OBIP	**Obispado Ponce**	**0.27**	**67**	⇑*eP*	**Pb**	**00 13 22.8**	**-0.1**
OBIP				*eS*	**Sg**	**00 13 26.9**	**+0.2**
OBIP	**Obispado Ponce**	**0.27**	**67**	*i P*	**Pb**	**00 13 22.8**	**-0.1**
OBIP				*eS*	**Sb**	**00 13 26.5**	**-0.7**
OBIP				IAML		00 13 27.0	
	comp=Z,7μm,0.5s						
CELP	**Cerrillos**	**0.31**	**63**		**Pg**	**00 13 23.3**	**+0.1**
CELP				Sg	**Sb**	**00 13 27.6**	**-0.7**
CELP				IAML		00 13 28.2	
	comp=Z,16μm,0.4s						
LSP	**Las Mesas**	**0.32**	**319**		**Pg**	**00 13 23.2**	**-0.1**
LSP	**Las Mesas**	**0.32**	**319**	⇓*eP*	**Pg**	**00 13 23.2**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.35**	**24**		**Pg**	**00 13 23.3**	**-0.5**
UUPR				Sg	**Sg**	**00 13 27.4**	**-1.4**
PRSN	**Puerto Rico Se**	**0.38**	**317**		**Pg**	**00 13 24.1**	**-0.3**
PRSN				Sg	**Sg**	**00 13 29.1**	**-0.7**
PRSN	**Puerto Rico Se**	**0.38**	**317**	P	**Pg**	**00 13 23.7**	**-0.7**
PRSN				S	**Sg**	**00 13 29.3**	**-0.5**
PRSN	**Puerto Rico Se**	**0.38**	**317**	⇑*e*Pg	**Pg**	**00 13 24.1**	**-0.3**
PRSN				⇑*e*Sg	**Sg**	**00 13 29.4**	**-0.4**
PRSN				IAML		00 13 32.1	
	comp=N,38μm,0.2s						
PRSN	**Puerto Rico Se**	**0.38**	**317**	⇑*eP*	**Pg**	**00 13 24.2**	**-0.3**
PRSN				*eS*	**Sg**	**00 13 29.4**	**-0.4**
AGPR	**Aguadilla, PR**	**0.58**	**337**		**Pb**	**00 13 27.2**	**-0.8**
AGPR				Sg	**Sb**	**00 13 34.6**	**-1.3**
AGPR				IAML		00 13 36.6	
	comp=N,9μm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**337**	P	**Pb**	**00 13 26.9**	**-1.2**
AGPR				S	**Sb**	**00 13 34.7**	**-1.2**
AGPR	**Aguadilla, PR**	**0.58**	**337**	⇑*iP*	**Pb**	**00 13 27.2**	**-0.8**
AGPR				*e*Sg	**Sb**	**00 13 34.9**	**-1.0**
AGPR				IAML		00 13 36.5	
	comp=N,8μm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**337**	⇑*eP*	**Pb**	**00 13 27.3**	**-0.8**
AGPR				*eS*	**Sb**	**00 13 35.0**	**-1.0**
ECPR	**Experimental S**	**0.61**	**52**		**Pb**	**00 13 28.0**	**-0.8**
ECPR				Sg	**Sb**	**00 13 35.9**	**-1.1**
ECPR				IAML		00 13 36.8	
	comp=N,21μm,0.2s						
ECPR				IAML		00 13 37.5	
	comp=N,16μm,0.2s						
ECPR	**Experimental S**	**0.61**	**52**	⇓*eP*	**Pb**	**00 13 28.1**	**-0.6**
ECPR				*eS*	**Sb**	**00 13 36.5**	**-0.5**
EMPR	**Esperanza - Ma**	**0.63**	**31**		**Pb**	**00 13 28.7**	**-0.2**
EMPR					**Sb**	**00 13 37.0**	**-0.4**
EMPR	**Esperanza - Ma**	**0.63**	**31**	P	**Pb**	**00 13 28.5**	**-0.4**
EMPR				S	**Sg**	**00 13 38.2**	**+0.9**
EMPR	**Esperanza - Ma**	**0.63**	**31**	⇓*eP*	**Pb**	**00 13 28.7**	**-0.2**
EMPR				*eS*	**Sb**	**00 13 37.0**	**-0.4**
SJG	**San Juan**	**0.71**	**76**	Pg	**Pb**	**00 13 29.7**	**-0.5**
	comp=N,147nm,0.3s,baz=270,slow=13,SNR=206						
SJG				LR	LR	00 13 35.9	
	comp=N,24nm,20.7s,baz=217,slow=30						
SJG				Lg	Lg	00 13 37.8	
	comp=N,783nm,0.3s,baz=357,slow=19,SNR=36						
SJG	**San Juan**	**0.71**	**76**		**Pb**	**00 13 29.7**	**-0.5**
SJG	**San Juan**	**0.71**	**76**	P	**Pb**	**00 13 29.8**	**-0.5**
SJG	**San Juan**	**0.71**	**76**	*eP*	**Pb**	**00 13 29.8**	**-0.5**
SJG	**San Juan**	**0.71**	**76**	⇓*e*Pg	**Pb**	**00 13 29.8**	**-0.5**
SJG				⇓*e*Sg	**Sb**	**00 13 38.5**	**-1.2**
SJG	**San Juan**	**0.71**	**76**	⇓*eP*	**Pb**	**00 13 29.8**	**-0.5**
SJG				*eS*	**Sb**	**00 13 39.3**	**-0.5**
SJG	**San Juan**	**0.71**	**76**	*i P*	**Pb**	**00 13 29.8**	**-0.5**
SJG				*eS*	**Sb**	**00 13 39.2**	**-0.5**
SJG				IAML		00 13 40.3	
	comp=Z,2μm,0.3s						
IDE	**Isla Desecheo**	**0.73**	**308**		**Pb**	**00 13 30.2**	**-0.5**
IDE					**Sb**	**00 13 39.8**	**-0.5**
IDE	**Isla Desecheo**	**0.73**	**308**	⇑*eP*	**Pb**	**00 13 30.2**	**-0.5**
IDE				*eS*	**Sb**	**00 13 39.8**	**-0.5**
PDPR	**Patillas Dam,**	**0.81**	**84**		**Pb**	**00 13 31.7**	**-0.4**
GCPR	**Guaynabo City**	**0.84**	**63**		**Pb**	**00 13 31.7**	**-0.8**
GCPR	**Guaynabo City**	**0.84**	**63**		**Sb**	**00 13 42.4**	**-1.0**
GCPR	**Guaynabo City**	**0.84**	**63**	P	**Pb**	**00 13 31.7**	**-0.8**
GCPR	**Guaynabo City**	**0.84**	**63**	⇓*eP*	**Pb**	**00 13 32.0**	**-0.5**
GCPR				*eS*	**Sb**	**00 13 42.4**	**-1.0**
HUMP	**Col San Antoni**	**0.99**	**78**		**Pb**	**00 13 34.1**	**-1.0**
HUMP				IAML		00 13 52.0	
	comp=Z,4μm,0.2s						
HUMP				IAML		00 13 52.2	
	comp=Z,3μm,0.2s						
HUMP	**Col San Antoni**	**0.99**	**78**		**Sn**	**00 13 48.6**	**-0.5**
HUMP	**Col San Antoni**	**0.99**	**78**	P	**Pb**	**00 13 34.2**	**-1.0**
HUMP				S	**Sb**	**00 13 48.1**	**+0.2**
HUMP	**Col San Antoni**	**0.99**	**78**	⇑*eP*	**Pb**	**00 13 34.2**	**-1.0**
HUMP				*eS*	**Sn**	**00 13 48.6**	**-0.5**
PCDR	**Punta Cana, DR**	**1.55**	**292**	⇑*e*Pg	**Pn**	**00 13 43.6**	**+0.5**
PCDR				IAML		00 14 11.1	
	comp=N,897nm,0.5s						
CUPR	**Culebra, Puert**	**1.56**	**76**		**Pn**	**00 13 44.0**	**+0.7**
MIDR	**Miches**	**2.32**	**297**	P	**Pn**	**00 13 54.9**	**+1.1**
MIDR	**Miches**	**2.32**	**297**	⇑*e*Pg	**Pb**	**00 13 56.7**	**-1.0**
MIDR				IAML		00 14 32.2	
	comp=N,202nm,0.5s						
DR12	**Loma Pena Alta**	**2.53**	**290**		**Pn**	**00 13 58.3**	**+1.5**
HATOM	**Hato Mayor del**	**2.53**	**290**	⇑*e*Pg	**Pn**	**00 13 58.6**	**+1.8**
HATOM				IAML		00 14 42.7	
	comp=N,164nm,0.5s						
SMDR	**Samana, DR**	**2.58**	**302**		**Pb**	**00 14 01.1**	**-1.1**
SMDR	**Samana, DR**	**2.58**	**302**	⇑*e*Pg	**Pb**	**00 14 02.0**	**-0.2**
SMDR				IAML		00 14 46.7	
	comp=N,318nm,0.8s						
SMDR	**Samana, DR**	**2.58**	**302**	⇑*eP*	**Pb**	**00 14 01.1**	**-1.1**
DR08	**Loma La Naviza**	**3.16**	**289**	⇑*e*Pg	**Pb**	**00 14 09.8**	**-2.4**
DR08				IAML		00 14 57.8	
	comp=N,3μm,0.3s						
NADR	**Nagua**	**3.16**	**297**	⇑*e*Pg	**Pb**	**00 14 09.8**	**-2.4**
NADR				IAML		00 15 00.5	
	comp=N,1μm,0.3s						
BANI	**BANI**	**3.35**	**278**		**Pn**	**00 14 08.8**	**+0.8**
SABA	**Saba**	**3.47**	**95**	Pn	**Pn**	**00 14 10.8**	**+1.1**
SMRT	**St. Maarten**	**3.61**	**88**	Pn	**Pn**	**00 14 12.4**	**+0.7**
SC01	**Santiago de lo**	**3.95**	**293**		**Pn**	**00 14 17.8**	**+1.6**
SKI	**Saint Kitts**	**3.98**	**98**	x	**Pn**	**00 14 18.9**	**+2.1**
SDDR	**Presa de Saban**	**4.32**	**285**		**Pn**	**00 14 23.7**	**+2.3**
SDDR	**Presa de Saban**	**4.32**	**285**	*eP*	**Pb**	**00 14 28.4**	**-3.5**
MBWH	**Windy Hill**	**4.62**	**104**	*eP*	**Pn**	**00 14 25.8**	**+0.2**
MBWH				*eS*	**Sn**	**00 15 18.0**	**-0.9**
DHSZ	**Broadband at M**	**5.15**	**108**	*eP*	**Pn**	**00 14 36.1**	**+3.3**
DHSZ				*eS*	**Sn**	**00 15 29.6**	**-2.2**
GDHS	**Morne Mazeau,**	**5.16**	**108**	Pn	**Pn**	**00 14 34.0**	**+1.1**
ATGZ	**Broadband at L**	**5.25**	**110**	*eP*	**Pn**	**00 14 37.0**	**+2.9**
ATGZ				*eS*	**Sn**	**00 15 32.0**	**-2.2**
MMLZ	**Guadeloupe Bro**	**5.32**	**110**	*eS*	**Sn**	**00 15 33.6**	**-2.4**
CBE	**Ff, Capester**	**5.37**	**109**	Pn	**Pn**	**00 14 36.8**	**+1.0**
DSLB	**Salisbury**	**5.78**	**115**	*eP*	**Pn**	**00 14 42.3**	**+0.9**
DSLB				*eS*	**Sn**	**00 15 44.4**	**-3.0**
BIM	**Bigot**	**6.53**	**121**	Pn	**Pn**	**00 14 51.5**	**-0.2**
BIM	**Bigot**	**6.53**	**121**	*eP*	**Pn**	**00 14 50.6**	**-1.1**
BIM				*eS*	**Sn**	**00 16 02.1**	**-3.7**
SLBI	**Saint Lucia, B**	**6.88**	**124**	*eS*	**Sn**	**00 16 07.7**	**-6.6**
SDV	**Santo Domingo**	**9.71**	**203**	Pn	**Pn**	**00 15 36.7**	**+1.1**
	comp=N,2.2nm,0.3s,baz=20,slow=7.5,SNR=8.2						
SDV				LR	LR	00 19 54.1	
	comp=N,38nm,19.6s,baz=84,slow=41						
	comp=N,5.5nm,0.4s						
SDV	**Santo Domingo**	**9.71**	**203**		**Pn**	**00 15 36.1**	**+0.5**
KMSC	**Kings Mountain**	**21.43**	**326**	P	**P**	**00 18 04.3**	**+0.7**
KMSC				IAmb	IAmb	00 18 26.8	
	comp=Z,13nm,1.2s						
V55A	**Taylorsville**	**21.91**	**327**		**P**	**00 18 09.5**	**+0.7**
V55A				IAmb	IAmb	00 18 15.6	
	comp=Z,7.5nm,1.2s						
R58B	**Mineral**	**22.16**	**336**	P	**P**	**00 18 11.6**	**+0.1**
R58B				IAmb	IAmb	00 18 18.5	
	comp=Z,7.7nm,1.0s						
V53A	**Saluda**	**22.63**	**324**	P	**P**	**00 18 18.3**	**+1.8**
Q56A	**Snyder Ridge,**	**23.61**	**335**	P	**P**	**00 18 26.9**	**+0.5**
Q56A				IAmb	IAmb	00 18 53.6	
	comp=Z,3.2nm,0.7s						
M63A	**Gales Ferry**	**23.81**	**350**	P	**P**	**00 18 27.6**	**-0.7**
SSPA	**Standing Stone**	**24.54**	**339**	P	**P**	**00 18 37.1**	**+2.0**
SSPA				IAmb	IAmb	00 18 59.4	
	comp=Z,7.9nm,1.1s						
TXAR	**Lajitas Array**	**35.43**	**296**	P	**P**	**00 20 13.7**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=112,slow=10,SNR=6.0						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**35.43**	**296**	P	**P**	**00 20 11.1**	**-0.8**
GO01	**Chusmiza**	**37.44**	**184**	P	**P**	**00 20 29.5**	**0.0**
PB07	**IPOC Station P**	**39.53**	**184**	P	**P**	**00 20 46.8**	**+0.1**
PB07				IAmb	IAmb	00 20 52.9	
	comp=Z,2.8nm,0.8s						
PDAR	**Pinedale Array**	**43.75**	**314**	PcP	**PcP**	**00 23 08.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=109,slow=2.6,SNR=3.8						
YKA	**Yellowknife Ar**	**55.36**	**335**	P	**P**	**00 22 49.3**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=114,slow=6.3,SNR=5.1						
	comp=Z,0.2nm,0.7s						
ESDC	**Sonseca Array**	**58.05**	**54**	P	**P**	**00 23 10.1**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=265,slow=7.6,SNR=7.1						
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.92**	**83**	P	**P**	**00 24 02.7**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=284,slow=5.8,SNR=2.3						
	comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**69.68**	**333**	P	**P**	**00 24 24.9**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=92,slow=3.8,SNR=4.1						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**75.82**	**30**	P	**P**	**00 25 01.8**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=286,slow=5.2,SNR=3.4						
	comp=Z,2.7nm,0.9s						

NSSP 13 00:18:11.7, 38°.27N×44°.08E, h10km, Ms3.5
AFAD 13 00:18:14.7, 38°.38N×44°.09E, h7km±4km, MW3.6
TEH 13 00:18:14.7, 38°.39N×44°.13E, h6km±57km, ML3.5, Presumed earthquake
ISK 13 00:18:15.7, 38°.35N×43°.94E, h5km, ML3.5/15
**ISC 13

AMBZ	**Amberd**	**1.99**	**3**	*eP*		**Pn**	**00 18 51.1**	**+1.2**
AMBZ				*eS*		**Sg**	**00 19 19.8**	**+0.3**
GRS	**Goris**	**2.06**	**57**	⇑*iP*		Pn	00 18 45.0	-5.7
GRS				⇓*iS*		**Sn**	**00 19 14.0**	**-2.8**
MAHB	**Mahabad**	**2.07**	**141**		Pn	**Pn**	**00 18 52.1**	**+1.3**
EGVZ	**Egvard**	**2.08**	**66**	*eP*		**Pn**	**00 18 52.3**	**+1.3**
EGVZ				*eS*		**Sg**	**00 19 22.0**	**-0.3**
AYRK	**Ayrk**	**2.16**	**37**	*eP*		**Pb**	**00 18 54.3**	**-0.8**
AYRK				*eS*		**Sg**	**00 19 25.5**	**+0.7**
VRTB	**Varto-Mus**	**2.20**	**291**		Pn	**Pn**	**00 18 53.8**	**+1.1**
SVAN	**Silvan-Diyarba**	**2.30**	**265**		Pn	**Pn**	**00 18 54.5**	**+0.6**
IHRS	**Heris**	**2.31**	**91**		Pn	**Pn**	**00 18 55.1**	**+0.8**
KARS	**Kars**	**2.36**	**341**		Pn	**Pb**	**00 18 57.1**	**-1.4**
SENK	**Senkaya-Erzuru**	**2.55**	**328**		Pn	**Pb**	**00 18 59.8**	**-2.0**
KARO	**Karliova-Bingo**	**2.55**	**292**		Pn	**Pn**	**00 18 58.6**	**+1.0**
LSVT	**Lusahovit**	**2.65**	**18**	*eP*		**Pn**	**00 19 00.6**	**+1.7**
LSVT				*eS*		**Sb**	**00 19 36.2**	**0.0**
SRTK	**Saratovka**	**2.67**	**4**	*eP*		**Pb**	**00 19 03.6**	**-0.1**
SRTK				*eS*		**Sg**	**00 19 41.6**	**+0.4**
IHSH	**Hashtrud**	**2.73**	**113**		Pn	**Pn**	**00 19 00.9**	**+0.8**
BNGB	**Bingl**	**2.74**	**284**		Pn	**Pn**	**00 19 00.8**	**+0.7**
ISRB	**Sarab**	**2.87**	**100**		Pn	**Pn**	**00 19 03.1**	**+1.2**
YEDI	**Yedisu-Bingol**	**2.96**	**292**		Pn	**Pn**	**00 19 04.3**	**+1.1**
DYBB	**Diyarbakir**	**3.15**	**263**		Pn	**Pn**	**00 19 06.8**	**+1.1**
IDHR	**Dehrash**	**4.12**	**153**		Pn	**Pn**	**00 19 21.3**	**+2.1**
IGHG	**Ghaleghazi**	**4.52**	**153**		Pn	**Pn**	**00 19 26.4**	**+1.7**
SNQR	**Sonqor, Kerman**	**4.53**	**140**		Pn	**Pn**	**00 19 26.5**	**+1.7**
JIR1	**Jirandeh**	**4.83**	**109**		Pn	**Pn**	**00 19 30.1**	**+1.2**

IDC ***13*** *00:49:15.1±1.0, 17°.66N×66°.81W, h0km, mb3.7/6, mbtmp3.8/7, ML2.8/1, MS3.1/3, Error ellipse: s-maj=23.5km s-min=9.9km az=149.0*

NEIC ***13*** *00:49:16.0±1.0, 17°.84N±0°.03×66°.86W±0°.01, h10km±1km, mb4.2/6, ML3.6/35, Mwr3.9/20, Md3.5/6(RSPR), Error ellipse: s-maj=5.1km s-min=2.8km az=13.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.47; $M_{\theta\theta}$=-3.37; $M_{\phi\phi}$=2.89; $M_{r\theta}$=2.94; $M_{\theta\phi}$=5.72; $M_{r\phi}$=-2.80; Fault plane solution: M_0=7.69000×10^{14} NP1: ϕ_s=346.70000°, δ=81.09000°, λ=-154.94000°. NP2: ϕ_s=252.55000°, δ=65.26000°, λ=-9.82000°. Principal axes: T 6.4516, Plg11.0000°, Azm117.0000°; N 2.0587, Plg63.0000°, Azm5.0000°; P -8.5103, Plg24.0000°, Azm212.0000°;*

NEIC ***13*** *00:49:16, 17°.84N×66°.86W, h10km*

OSPL ***13*** *00:49:16.3±0.3, 17°.81N×66°.88W, h8km±134km, ML3.3, Presumed earthquake*

SDD ***13*** *00:49:16.0±1.0, 17°.80N×66°.90W, h20km±10km, MD3.9, ML4.0, MW4.3, Presumed earthquake*

RSPR ***13*** *00:49:16.1, 17°.86N×66°.87W, h5km, MD3.5/6*

ISC 13 00:49:15.1±1.2, 17°.80N±0°.05×66°.86W±0°.02, h4km±8km, n63, σ1°04/86, mb4.1/9, 11C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
GBPR	**Guanica, Bosqu**	**0.18**	**354**			**Pg**	**00 49 18.7**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.18**	**354**	⇑*iP*		**Pg**	**00 49 18.7**	**+0.1**
MLPR	**Magueyes Islan**	**0.24**	**314**			**Pg**	**00 49 20.4**	**+0.6**
MLPR					Sg	**Sg**	**00 49 23.4**	**+0.4**
MLPR					IAML		00 49 23.8	
	12μm,0.6s							
MLPR					IAML		00 49 26.9	
	7μm,0.4s							
CRPR	**Cabo Rojo, PR**	**0.32**	**311**			**Pg**	**00 49 21.7**	**+0.5**
CRPR					IAML		00 49 27.5	
	7μm,0.6s							
CRPR					IAML		00 49 27.6	
	10μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.32**	**311**			**Sg**	**00 49 26.9**	**+1.6**
CRPR	**Cabo Rojo, PR**	**0.32**	**311**	⇑*ePg*		**Pg**	**00 49 21.7**	**+0.5**
CRPR				*eSg*		**Sg**	**00 49 26.0**	**+0.7**
CRPR					IAML		00 49 29.2	
	comp=N,7μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.32**	**311**	⇑*iP*		**Pg**	**00 49 21.8**	**+0.6**
CRPR				*eS*		**Sg**	**00 49 26.9**	**+1.6**
CRPR	**Cabo Rojo, PR**	**0.32**	**311**	*i P*		**Pg**	**00 49 21.8**	**+0.6**
CRPR				*eS*		**Sg**	**00 49 25.9**	**+0.5**
CRPR					IAML		00 49 27.3	
	comp=Z,8μm,0.3s							
OBIP	**Obispado Ponce**	**0.34**	**45**			**Pg**	**00 49 22.3**	**+0.6**
OBIP					Sg	**Sg**	**00 49 26.7**	**+0.4**
OBIP	**Obispado Ponce**	**0.34**	**45**	⇓*iP*		**Pg**	**00 49 22.5**	**+0.8**
OBIP				*eS*		**Sg**	**00 49 27.4**	**+1.2**
OBIP	**Obispado Ponce**	**0.34**	**45**	*i P*		**Pg**	**00 49 22.6**	**+0.8**
OBIP				*eS*		**Sg**	**00 49 27.4**	**+1.2**
OBIP					IAML		00 49 27.6	
	comp=Z,3μm,0.8s							
CELP	**Cerrillos**	**0.38**	**44**			**Pg**	**00 49 23.1**	**+0.6**
CELP					Sg	**Sg**	**00 49 28.4**	**+0.9**
CELP					IAML		00 49 29.4	
	comp=Z,5μm,0.9s							
LSP	**Las Mesas**	**0.43**	**330**			**Pg**	**00 49 23.7**	**+0.3**
LSP						**Sg**	**00 49 30.2**	**+1.1**
LSP	**Las Mesas**	**0.43**	**330**	⇓*iP*		**Pg**	**00 49 23.7**	**+0.3**
LSP				*eS*		**Sg**	**00 49 30.2**	**+1.1**
UUPR	**Utuado, UPR, P**	**0.47**	**16**			**Pg**	**00 49 24.1**	**0.0**
PRSN	**Puerto Rico Se**	**0.50**	**327**			**Pg**	**00 49 24.7**	**+0.1**
PRSN	**Puerto Rico Se**	**0.50**	**327**	⇑*ePg*		**Pg**	**00 49 28.4**	**+0.1**
PRSN				⇑*eSg*		**Sg**	**00 49 29.6**	**-1.5**
PRSN					IAML		00 49 36.3	
	comp=N,4μm,0.3s							
ECPR	**Experimental S**	**0.70**	**42**			**Pg**	**00 49 28.5**	**-0.1**
ECPR					IAML		00 49 32.8	
	comp=N,2μm,0.2s							
ECPR					Sg	**Sg**	**00 49 37.8**	**+0.1**
ECPR					IAML		00 49 42.8	
	comp=N,3μm,0.7s							
ECPR	**Experimental S**	**0.70**	**42**	⇓*iP*		**Pg**	**00 49 28.6**	**0.0**
ECPR				*eS*		**Sg**	**00 49 37.8**	**+0.1**
AGPR	**Aguadilla, PR**	**0.71**	**340**			**Pg**	**00 49 28.3**	**-0.3**
AGPR					Sg	**Sg**	**00 49 37.4**	**-0.5**
AGPR					IAML		00 49 44.8	
	comp=N,4μm,1.0s							
AGPR					IAML		00 49 47.4	
	comp=N,4μm,1.2s							
AGPR	**Aguadilla, PR**	**0.71**	**340**	⇑*ePg*		**Pg**	**00 49 28.4**	**-0.3**
AGPR				⇑*eSg*		**Sg**	**00 49 37.7**	**-0.2**
AGPR					IAML		00 49 44.6	
	comp=N,4μm,1.0s							
AGPR	**Aguadilla, PR**	**0.71**	**340**	⇑*iP*		**Pg**	**00 49 28.4**	**-0.3**
AGPR				*eS*		**Sg**	**00 49 37.6**	**-0.3**
EMPR	**Esperanza - Ma**	**0.74**	**25**			**Pg**	**00 49 29.6**	**+0.2**
EMPR						**Sb**	**00 49 39.7**	**-1.5**
EMPR	**Esperanza - Ma**	**0.74**	**25**	⇓*iP*		**Pg**	**00 49 29.6**	**+0.2**
EMPR				*eS*		**Sb**	**00 49 39.7**	**-1.5**
SJG	**San Juan**	**0.74**	**65**	Pg		**Pg**	**00 49 29.9**	**+0.5**
	comp=N,76nm,0.3s,baz=258,slow=14,SNR=76							
SJG				Lg		Lg	00 49 40.7	
	comp=N,205nm,0.3s,baz=331,slow=19,SNR=19							
SJG				LR		LR	00 49 50.8	
	comp=N,268nm,19.0s,baz=188,slow=46							
SJG	**San Juan**	**0.74**	**65**			**Pg**	**00 49 29.8**	**+0.5**
SJG					Sg	**Sb**	**00 49 40.2**	**-0.9**
SJG	**San Juan**	**0.74**	**65**	*eP*		**Pg**	**00 49 30.1**	**+0.9**
SJG	**San Juan**	**0.74**	**65**	⇑*ePg*		**Pg**	**00 49 29.7**	**+0.3**
SJG				*eSg*		**Sb**	**00 49 40.5**	**-0.6**
SJG	**San Juan**	**0.74**	**65**	⇓*eP*		**Pg**	**00 49 29.9**	**+0.5**
SJG				*eS*		**Sb**	**00 49 40.3**	**-0.9**
SJG	**San Juan**	**0.74**	**65**	*i P*		**Pg**	**00 49 30.0**	**+0.6**
SJG				*eS*		**Sg**	**00 49 39.9**	**+0.9**
SJG					IAML		00 49 44.8	
	comp=Z,1μm,1.1s							
PDPR	**Patillas Dam,**	**0.83**	**75**			**Pg**	**00 49 31.5**	**+0.5**
GCPR	**Guaynabo City**	**0.90**	**55**			**Pg**	**00 49 32.2**	**-0.1**
GCPR					Sg	**Sg**	**00 49 44.0**	**+0.1**
GCPR					IAML		00 49 51.1	
	comp=N,1μm,0.9s							
GCPR	**Guaynabo City**	**0.90**	**55**	⇑*eP*		**Pg**	**00 49 32.3**	**-0.1**
GCPR				*eS*		**Sg**	**00 49 43.7**	**-0.2**
HUMP	**Col San Antoni**	**1.02**	**70**			**Pg**	**00 49 34.6**	**-0.1**
HUMP					IAML		00 49 53.6	
	comp=N,1μm,0.7s							
HUMP	**Col San Antoni**	**1.02**	**70**			**Sb**	**00 49 48.8**	**-0.3**
HUMP	**Col San Antoni**	**1.02**	**70**	⇑*eP*		**Pg**	**00 49 34.7**	**-0.1**
HUMP				*eS*		**Sb**	**00 49 48.8**	**-0.3**
CUPR	**Culebra, Puert**	**1.58**	**71**			**Pn**	**00 49 44.0**	**+0.1**
DR12	**Loma Pena Alta**	**2.59**	**293**			**Pn**	**00 49 58.2**	**+0.4**
HATOM	**Hato Mayor del**	**2.59**	**293**	⇑*ePg*		**Pn**	**00 49 59.9**	**+2.1**
HATOM					IAML		00 50 43.8	
	comp=N,367nm,0.7s							
DR08	**Loma La Naviza**	**3.22**	**292**	⇑*ePg*		**Pn**	**00 50 09.8**	**+3.3**
DR08					IAML		00 51 05.3	
	comp=N,2μm,0.2s							
NADR	**Nagua**	**3.24**	**299**	⇑*ePg*		**Pb**	**00 50 11.5**	**-1.6**
NADR					IAML		00 51 02.9	
	comp=N,1μm,0.8s							
BANI	**BANI**	**3.38**	**281**			**Pn**	**00 50 09.3**	**+0.6**
SABA	**Saba**	**3.45**	**92**	Pn		**Pn**	**00 50 10.0**	**+0.3**
SDDR	**Presa de Saban**	**4.37**	**286**	*eP*		**Pb**	**00 50 28.0**	**-4.4**
CBE	**Ff, Capester**	**5.31**	**108**	Pn		**Pn**	**00 50 36.0**	**+0.7**
SDV	**Santo Domingo**	**9.59**	**203**	Pn		**Pn**	**00 51 32.9**	**-1.2**
	comp=N,0.9nm,0.3s,baz=36,slow=5.7,SNR=7.8							
SDV					Sn	Sn	00 53 06.1	-16
	comp=N,0.2nm,0.3s,baz=337,slow=16,SNR=1.2							
SDV					LR	LR	00 55 40.4	
	comp=N,88nm,19.9s,baz=63,slow=41							
	comp=N,2.6nm,0.4s							
SDV	**Santo Domingo**	**9.59**	**203**			**Pn**	**00 51 34.2**	**0.0**
ROSC	**El Rosal**	**14.80**	**210**	LR		LR	00 58 41.0	
	comp=N,75nm,20.1s,baz=32,slow=38							
T59A	**Double "B" Far**	**21.30**	**336**	P		**P**	**00 54 03.6**	**+0.9**
T59A				IAmb		IAmb	00 54 13.8	
	comp=Z,16nm,1.2s							
R58B	**Mineral**	**22.29**	**337**	P		**P**	**00 54 13.6**	**+0.2**
S57A	**Dark Hollow, R**	**22.54**	**334**	P		**P**	**00 54 16.8**	**+0.7**
S57A				IAmb		IAmb	00 54 42.9	
	comp=Z,7.7nm,1.0s							
V53A	**Saluda**	**22.74**	**325**	P		**P**	**00 54 18.5**	**+0.2**
ATAH	**Atahualpa**	**27.27**	**206**	LR		LR	01 07 44.7	
	comp=Z,51nm,18.5s,baz=89,slow=41							
TXAR	**Lajitas Array**	**35.50**	**296**	P		**P**	**00 56 14.9**	**+1.7**
	comp=Z,8.8nm,0.6s,baz=105,slow=9.2,SNR=11							
	comp=Z,0.8nm,0.6s							
TXAR	**Lajitas Array**	**35.50**	**296**	P		**P**	**00 56 13.2**	**0.0**
PB16	**IPOC Station P**	**36.00**	**184**	P		**P**	**00 56 16.5**	**-1.5**
PB16				IAmb		IAmb	00 56 44.2	
	comp=Z,6.2nm,1.4s							
ECSD	**EROS Data Cent**	**36.02**	**322**	P		**P**	**00 56 16.1**	**-1.3**
ECSD				IAmb		IAmb	00 56 31.0	
	comp=Z,3.0nm,1.1s							
CPUP	**Villa Florida**	**44.83**	**168**	P		**P**	**00 57 29.2**	**-1.1**
	comp=Z,1.3nm,0.4s,baz=327,slow=4.9,SNR=5.0							
	comp=Z,1.3nm,0.4s							
YKA	**Yellowknife Ar**	**55.49**	**335**	P		**P**	**00 58 51.7**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=113,slow=6.9,SNR=12							
	comp=Z,0.6nm,0.7s							
YKA	**Yellowknife Ar**	**55.49**	**335**	P		**P**	**00 58 50.3**	**-0.5**
ESDC	**Sonseca Array**	**58.12**	**54**	P		**P**	**00 59 12.2**	**+2.2**
	comp=Z,1.0nm,0.9s,baz=248,slow=7.1,SNR=3.6							
	comp=Z,1.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**65.92**	**83**	P		**P**	**01 00 03.7**	**+0.9**
	comp=Z,0.8nm,1.0s,baz=268,slow=3.5,SNR=2.5							
	comp=Z,0.8nm,1.0s							
ILAR	**Eielson Array**	**69.81**	**333**	P		**P**	**01 00 28.4**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=102,slow=4.3,SNR=6.8							
	comp=Z,0.2nm,0.5s							

MOS ***13*** *00:59:56.7±0.8, 43°.73N×143°.44E, h178km, mb3.9/1, Error ellipse: s-maj=18.4km s-min=16.5km az=71.5*

SKHL ***13*** *00:59:56.2±0.3, 43°.70N×143°.30E, h156km±6km, mb4.7/5, msha4.7/4*

JMA ***13*** *00:59:57.8±0.2, 43°.7N±0°.7×143°.5E±0°.9, h169km±1km, MV2.8/37, ABASHIRI REGION*

IDC ***13*** *00:59:58.3±1.3, 43°.86N×143°.32E, h165km±4km, mb3.2/7, mbtmp3.7/9, Error ellipse: s-maj=30.5km s-min=17.7km az=155.0*

ISC 13 00:59:57.5±0.8, 43°.64N±0°.06×143°.38E±0°.04, h170km±6km, n38, σ1°49/55, mb3.5/7, 3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
JMP	**Maruseppu**	**0.37**	**358**		P	**Pn**	**01 00 20.5**	**-0.2**
JMP					*eS*	**Sn**	**01 00 37.6**	**-1.0**
JAR	**Ashorobuto**	**0.44**	**140**		P	**Pn**	**01 00 21.4**	**+0.4**
JAR					S	**Sn**	**01 00 39.2**	**+0.3**
JTKR	**Abashiri--Toko**	**0.51**	**49**	*i* P		**Pn**	**01 00 21.0**	**-0.2**
JTKR					S	**Sn**	**01 00 38.4**	**-1.0**
JKK2	**Kamakawa 2**	**0.51**	**298**	*i* P		**Pn**	**01 00 21.6**	**+0.4**
JKK2					S	**Sn**	**01 00 39.6**	**+0.2**
JKA	**Kamikawa-asahi**	**0.74**	**311**	*eP*		**Pn**	**01 00 23.3**	**+0.9**
JKA				*eS*		**Sn**	**01 00 40.4**	**-1.2**
JFR	**Furan**	**0.74**	**231**	P		**Pn**	**01 00 23.5**	**+1.1**
ASAJ	**Asahikawa**	**0.74**	**311**	P		**Pn**	**01 00 23.3**	**+0.9**
	42nm,0.4s,baz=213,slow=3.6,SNR=53							
ASAJ					S	**Sn**	**01 00 40.4**	**-1.2**
	18nm,0.7s,baz=195,slow=32,SNR=10							
ASAJ	**Asahikawa**	**0.74**	**311**	P		**Pn**	**01 00 22.8**	**+0.4**
JOB	**Onbets**	**0.81**	**155**	*i* P		**Pn**	**01 00 23.6**	**+0.8**
JOB				*eS*		**Sn**	**01 00 43.4**	**+1.2**
JCH	**Churui**	**1.02**	**181**	*i* P		**Pn**	**01 00 24.8**	**+0.4**
JCH					S	**Sn**	**01 00 44.9**	**-0.2**
JAK	**Akkeshi**	**1.16**	**123**	P		**Pn**	**01 00 25.2**	**-0.2**
JAK					S	**Sn**	**01 00 46.1**	**-0.8**
JHR	**Hokuryu**	**1.20**	**276**	*eP*		**Pn**	**01 00 26.6**	**+0.8**
AKK	**Akkeshi**	**1.24**	**119**	*eP*		**Pn**	**01 00 25.8**	**-0.4**
AKK				*eS*		**Sn**	**01 00 47.1**	**-1.1**
JRA	**Rausu**	**1.30**	**76**	P		**Pn**	**01 00 26.8**	**+0.1**
JSS	**Shosan**	**1.34**	**305**	*eP*		**Pn**	**01 00 28.1**	**+1.1**
JNBK	**Urakawa-nobuka**	**1.43**	**199**	*i* P		**Pn**	**01 00 28.6**	**+0.7**
RUSJ	**Misakicho**	**1.43**	**70**	*ePN*		**Pn**	**01 00 28.2**	**+0.3**
RUSJ					S	**Sn**	**01 00 55.7**	**+4.2**
GLVR	**Golovnino**	**1.56**	**85**	⇓*iPN*		**Pn**	**01 00 29.6**	**+0.4**
GLVR				*eS*		**Sn**	**01 00 55.9**	**+2.3**
GLVR					pmax	pmax		
	comp=N,24nm,0.2s							
GLVR					pmax	pmax		
	comp=Z,628nm,0.2s							
GLVR					smax	smax		
	comp=N,131nm,0.3s							
GLVR					smax	smax		
	comp=E,188nm,0.4s							
GLVR	**Golovnino**	**1.56**	**85**	*i* P		**Pn**	**01 00 29.6**	**+0.4**
GLVR					AMB	AMB	01 00 29.9	
	comp=E,630nm,0.3s							
GLVR				*eS*		**Sn**	**01 00 55.9**	**+2.3**
GLVR					A	A	01 00 57.1	
	comp=E,130nm,0.3s							
GLVR					A	A	01 00 57.1	
	comp=E,190nm,0.3s							
JEW	**Eniwo**	**1.62**	**241**	P		**Pn**	**01 00 31.3**	**+1.5**
NMR	**Nemuro--Hokkai**	**1.73**	**98**	⇓*iPN*		**Pn**	**01 00 29.9**	**-1.0**
NMR				*iS*		**Sn**	**01 00 54.6**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.73**	**98**	*i* P		**Pn**	**01 00 30.1**	**-0.8**
NMR				*iS*		**Sn**	**01 00 55.0**	**-1.8**
NEM2	**Nemuro 2**	**1.74**	**98**	P		**Pn**	**01 00 30.1**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**1.84**	**77**	*d iPN*		**Pn**	**01 00 32.1**	**0.0**
YUK					S	**Sn**	**01 00 59.6**	**+0.7**
YUK					pmax	pmax		
	comp=Z,597nm,0.3s							
YUK					pmax	pmax		
	comp=N,44nm,0.2s							
YUK					pmax	pmax		
	comp=E,64nm,0.2s							
YUK					smax	smax		
	comp=E,71nm,0.3s							
YUK					smax	smax		
	comp=N,95nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**1.84**	**77**	*i* P		**Pn**	**01 00 32.3**	**+0.2**
YUK					AMB	AMB	01 00 32.7	
	comp=N,400nm,0.3s							
YUK				*eS*		**Sn**	**01 01 00.0**	**+1.1**
YUK					A	A	01 01 00.9	
	comp=N,170nm,0.6s							
YUK					A	A	01 01 00.9	
	comp=N,60nm,0.6s							
SHO	**Shikotan**	**2.52**	**83**	*eP*		Pn	01 00 48.8	+9.1
SHO					AMB	AMB	01 00 49.7	
	comp=N,30nm,0.5s							
SHO				*eS*		**Sn**	**01 01 19.4**	**+6.9**
SHO					A	A	01 01 20.4	
	comp=N,80nm,0.4s							
SHO					A	A	01 01 20.4	
	comp=N,90nm,0.4s							
KUR	**Kuril'sk**	**3.59**	**62**	*eP*		**Pn**	**01 00 53.1**	**+0.1**
KUR					AMB	AMB	01 00 54.4	
	comp=N,50nm,0.7s							
MJAR	**Matsushiro Arr**	**8.11**	**211**	P		**Pn**	**01 01 53.8**	**+1.4**
	comp=N,2.4nm,0.7s,baz=20,slow=15,SNR=6.7							
SEY	**Seymchan**	**20.03**	**12**	P		**P**	**01 04 15.3**	**-1.6**
	comp=N,2.3nm,0.5s,baz=203,slow=8.8,SNR=9.4							
SONM	**Songino Array**	**25.98**	**292**	P		**P**	**01 05 15.4**	**+1.0**
	comp=N,1.7nm,0.6s,baz=93,slow=9.2,SNR=6.4							
	comp=N,1.7nm,0.6s							
MKAR	**Makanchi Array**	**42.20**	**296**	P		**P**	**01 07 33.7**	**+0.3**
	comp=N,0.8nm,0.6s,baz=79,slow=10,SNR=11							
	comp=N,0.8nm,0.6s							
ILAR	**Eielson Array**	**43.19**	**36**	P		**P**	**01 07 40.8**	**-0.3**
	comp=N,0.7nm,0.8s,baz=263,slow=5.9,SNR=9.3							
	comp=N,0.7nm,0.8s							
KURK	**Kurchatov**	**43.31**	**303**	P		**P**	**01 07 42.2**	**0.0**
KURK	**Kurchatov**	**43.31**	**303**	*eP*		**P**	**01 07 42.2**	**0.0**
KURBB	**Kurchatov Arra**	**43.39**	**303**	P		**P**	**01 07 42.2**	**-0.6**
	comp=N,0.4nm,0.6s,baz=66,slow=9.2,SNR=4.9							
	comp=N,0.4nm,0.6s							
BVAR	**Borovoye Array**	**47.44**	**308**	P		**P**	**01 08 15.1**	**+0.5**
	comp=N,0.6nm,0.4s,baz=74,slow=9.7,SNR=7.1							
	comp=N,0.6nm,0.4s							
YKA	**Yellowknife Ar**	**57.40**	**33**	P		**P**	**01 09 28.1**	**+0.4**
	comp=N,0.2nm,0.6s,baz=307,slow=7.2,SNR=4.8							
	comp=N,0.2nm,0.6s							
FINES	**FINESS Array B**	**63.70**	**332**	P		**P**	**01 10 09.1**	**-1.2**
	comp=N,1.3nm,0.9s,baz=90,slow=3.8,SNR=4.8							
	comp=N,1.3nm,0.9s							

KRNET ***13*** *01:11:59.7±0.1, 41°.91N×72°.28E, h20km, mb2.3*

SOME ***13*** *01:12:00.0, 41°.85N×72°.33E, h10km*

NNC ***13*** *01:12:02.4±1.6, 42°.03N×72°.31E, h0km, mb2.7, mpv2.5, Error ellipse: s-maj=16.9km s-min=5.9km az=0.0*

ISU ***13*** *01:12:03, 41°.88N×72°.27E, h7km*

ISC 13 01:12:00.3±1.1, 41°.90N±0°.04×72°.27E±0°.03, h6km±11km, n22, σ1°39/39, 16C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
ARK	**Arkit**	**0.26**	**245**	⇑*iP*		**Pg**	**01 12 05.2**	**-0.1**
ARK				⇑*iS*		**Sg**	**01 12 09.4**	**+0.7**
MNAS	**Manas**	**0.61**	**16**	⇑*iP*		**Pg**	**01 12 11.4**	**-0.6**
MNAS				⇑*iS*		**Sg**	**01 12 19.7**	**-0.2**
TRKS	**Terek-Say**	**0.93**	**247**	⇑*iP*		**Pg**	**01 12 17.3**	**-0.8**
TRKS				⇑*iS*		**Sg**	**01 12 29.9**	**-0.2**
MRKS	**Merke**	**1.10**	**40**	P		**Pb**	**01 12 20.1**	**-1.7**
	3.3nm,0.3s							
MRKS				S		**Sb**	**01 12 33.9**	**-2.5**
	9.4nm,0.3s							
MRKS	**Merke**	**1.10**	**40**	*eP*		**Pb**	**01 12 20.1**	**-1.7**
	3.3nm,0.3s							
MRKS				*eS*		**Sb**	**01 12 33.9**	**-2.5**
	9.4nm,0.3s							
CHDK	**Chadak**	**1.48**	**231**	P		**Pn**	**01 12 26.5**	**-1.0**
CHDK					S	**Sb**	**01 12 47.0**	**-0.2**
SALK	**Salom-Alik**	**1.55**	**131**	⇑*eP*		**Pn**	**01 12 28.1**	**-0.5**
SALK				⇑*iS*		**Sb**	**01 12 48.7**	**-0.7**
UCH	**Uchtor**	**1.70**	**78**	⇑*eP*		**Pn**	**01 12 30.6**	**-0.4**
UCH				⇑*iS*		**Sn**	**01 12 53.1**	**-0.2**
CHMG	**Chimgan**	**1.73**	**259**	S		**Sg**	**01 12 57.1**	**+1.2**
KK31	**Karatay Array**	**1.77**	**313**	⇑Pn		**Pn**	**01 12 32.5**	**+0.9**
	0.5nm,0.2s,baz=130,slow=15,SNR=27							
KK31				⇓Sn		**Sg**	**01 12 57.5**	**+0.3**
	0.8nm,0.2s,baz=130,slow=26,SNR=9.6							
AAK	**Ala-Archa**	**1.80**	**65**	⇑Pn		**Pb**	**01 12 34.0**	**+0.1**
	0.2nm,0.3s							
AAK				⇓Sn		**Sg**	**01 13 01.1**	**+2.8**
	0.4nm,0.4s							
AAK	**Ala-Archa**	**1.80**	**65**	⇑*eP*		**Pn**	**01 12 32.3**	**+0.2**
AAK				⇑*eS*		**Sn**	**01 12 55.9**	**+0.5**
TVKS	**Tavaksay**	**1.99**	**261**	P		**Pb**	**01 12 37.3**	**+0.4**
TVKS				S		**Sg**	**01 13 04.1**	**-0.1**
BRLS	**Borolday**	**2.13**	**303**	Pg		**Pb**	**01 12 40.2**	**+0.9**
	1.7nm,0.4s							
BRLS				Lg		Lg	01 13 08.5	
	6.8nm,0.1s							
BRLS	**Borolday**	**2.13**	**303**	*eP*		**Pb**	**01 12 40.2**	**+0.9**
	1.7nm,0.4s							
BRLS				*eS*		**Sg**	**01 13 08.5**	**-0.1**
	6.8nm,0.1s							
**BTK

UUPR	**Utuado, UPR, P**	**0.44**	**18**			**Pg**	**01 16 51.2**	**-0.3**
UUPR				Sg		**Sg**	**01 16 56.8**	**-0.5**
UUPR				IAML			01 17 01.2	
	comp=Z,23µm,0.3s							
PRSN	**Puerto Rico Se**	**0.47**	**325**			**Pg**	**01 16 51.7**	**-0.4**
PRSN				Sg		**Sg**	**01 16 58.5**	**+0.3**
PRSN	**Puerto Rico Se**	**0.47**	**325**	P		**Pg**	**01 16 52.1**	**0.0**
PRSN	**Puerto Rico Se**	**0.47**	**325**	⇑*e*Pg		**Pg**	**01 16 52.0**	**0.0**
PRSN				⇑*e*Sg		**Sb**	**01 16 59.4**	**-0.9**
PRSN				IAML			01 17 05.7	
	comp=N,21µm,0.2s							
PRSN	**Puerto Rico Se**	**0.47**	**325**	⇑*i*P		**Pg**	**01 16 52.0**	**0.0**
PRSN				*e*S		**Sb**	**01 16 59.4**	**-0.9**
AOPR	**Arecibo Observ**	**0.52**	**11**	Pg		**Pg**	**01 16 52.8**	**-0.3**
AOPR				IAML			01 17 02.6	
	comp=N,9µm,0.9s							
AOPR				IAML			01 17 03.9	
	comp=N,12µm,1.1s							
AGPR	**Aguadilla, PR**	**0.67**	**339**			**Pg**	**01 16 55.5**	**-0.4**
AGPR				IAML			01 17 07.4	
	comp=N,7µm,0.6s							
AGPR				IAML			01 17 08.9	
	comp=N,6µm,0.7s							
AGPR	**Aguadilla, PR**	**0.67**	**339**	P		**Pg**	**01 16 55.7**	**-0.3**
AGPR	**Aguadilla, PR**	**0.67**	**339**	⇑*e*Pg		**Pg**	**01 16 55.6**	**-0.4**
AGPR				⇑*e*Sg		**Sg**	**01 17 03.4**	**-1.4**
AGPR				IAML			01 17 08.7	
	comp=N,7µm,0.7s							
AGPR	**Aguadilla, PR**	**0.67**	**339**	⇑*i*P		**Pg**	**01 16 55.6**	**-0.3**
AGPR				*e*S		**Sg**	**01 17 05.0**	**+0.3**
ECPR	**Experimental S**	**0.68**	**45**			**Pg**	**01 16 55.5**	**-0.5**
ECPR				IAML			01 17 12.7	
	comp=N,3µm,0.3s							
ECPR				IAML			01 17 15.3	
	comp=N,3µm,0.2s							
ECPR	**Experimental S**	**0.68**	**45**	⇓*i*P		**Pg**	**01 16 55.7**	**-0.4**
ECPR				*e*S		**Sb**	**01 17 05.9**	**-0.5**
EMPR	**Esperanza - Ma**	**0.71**	**26**			**Pg**	**01 16 56.7**	**0.0**
EMPR						**Sb**	**01 17 07.0**	**-0.4**
EMPR	**Esperanza - Ma**	**0.71**	**26**	P		**Pg**	**01 16 56.8**	**0.0**
EMPR	**Esperanza - Ma**	**0.71**	**26**	⇓*e*P		**Pg**	**01 16 56.7**	**0.0**
EMPR				*e*S		**Sb**	**01 17 07.0**	**-0.4**
SJG	**San Juan**	**0.73**	**68**	Pg		**Pg**	**01 16 56.8**	**-0.3**
	comp=N,74nm,0.3s,baz=296,slow=14,SNR=49							
SJG				Lg		Lg	01 17 06.3	
	comp=N,218nm,0.3s,baz=198,slow=19,SNR=20							
SJG	**San Juan**	**0.73**	**68**			**Pg**	**01 16 56.6**	**-0.5**
SJG	**San Juan**	**0.73**	**68**	P		**Pg**	**01 16 57.1**	**0.0**
SJG	**San Juan**	**0.73**	**68**	*e*P		**Pg**	**01 16 56.7**	**-0.4**
SJG				*e*S		**Sg**	**01 17 06.9**	**+0.2**
SJG	**San Juan**	**0.73**	**68**	⇑*e*Pg		**Pg**	**01 16 57.2**	**+0.1**
SJG				⇑*e*Sg		**Sb**	**01 17 07.6**	**-0.3**
SJG	**San Juan**	**0.73**	**68**	⇓*i*P		**Pg**	**01 16 56.7**	**-0.4**
SJG				*e*S		**Sb**	**01 17 08.0**	**0.0**
SJG	**San Juan**	**0.73**	**68**	*i* P		**Pg**	**01 16 57.2**	**+0.1**
SJG				*e*S		**Sg**	**01 17 07.1**	**+0.5**
SJG				IAML			01 17 13.2	
	comp=Z,1µm,0.8s							
IDE	**Isla Desecheo**	**0.80**	**313**			**Pg**	**01 16 58.2**	**-0.2**
IDE						**Sg**	**01 17 09.1**	**+0.2**
IDE	**Isla Desecheo**	**0.80**	**313**	⇑*i*P		**Pg**	**01 16 58.2**	**-0.2**
IDE				*e*S		**Sg**	**01 17 09.1**	**+0.2**
PDPR	**Patillas Dam,**	**0.82**	**77**			**Pg**	**01 16 58.4**	**-0.4**
GCPR	**Guaynabo City**	**0.88**	**57**			**Pg**	**01 16 59.2**	**-0.7**
GCPR	**Guaynabo City**	**0.88**	**57**			**Sg**	**01 17 11.6**	**+0.2**
GCPR	**Guaynabo City**	**0.88**	**57**	P		**Pg**	**01 16 59.2**	**-0.7**
GCPR	**Guaynabo City**	**0.88**	**57**	⇑*i*P		**Pg**	**01 16 59.2**	**-0.7**
GCPR				*e*S		**Sg**	**01 17 11.6**	**+0.2**
HUMP	**Col San Antoni**	**1.01**	**72**			**Pg**	**01 17 01.4**	**-1.0**
HUMP				IAML			01 17 20.4	
	comp=Z,2µm,0.8s							
HUMP	**Col San Antoni**	**1.01**	**72**			**Sg**	**01 17 15.2**	**-0.4**
HUMP	**Col San Antoni**	**1.01**	**72**	P		**Pg**	**01 17 01.6**	**-0.8**
HUMP	**Col San Antoni**	**1.01**	**72**	⇓*e*P		**Pg**	**01 17 01.4**	**-1.0**
HUMP				*e*S		**Sg**	**01 17 15.2**	**-0.4**
CUPR	**Culebra, Puert**	**1.57**	**72**			**Pn**	**01 17 11.2**	**+0.2**
PCDR	**Punta Cana, DR**	**1.59**	**295**	⇑*e*Pg		**Pb**	**01 17 12.2**	**-0.3**
PCDR				IAML			01 17 39.3	
	comp=N,2µm,0.7s							
MIDR	**Miches**	**2.37**	**299**	P		**Pn**	**01 17 22.0**	**0.0**
MIDR	**Miches**	**2.37**	**299**	⇑*e*Pg		**Pn**	**01 17 23.5**	**+1.5**
MIDR				IAML			01 18 07.5	
	comp=N,440nm,0.5s							
DR12	**Loma Pena Alta**	**2.57**	**292**			**Pn**	**01 17 26.0**	**+1.1**
HATOM	**Hato Mayor del**	**2.57**	**292**	⇑*e*Pg		**Pn**	**01 17 26.8**	**+1.9**
HATOM				IAML			01 18 07.4	
	comp=N,709nm,0.7s							
SMDR	**Samana, DR**	**2.64**	**304**	⇑*e*Pg		**Pb**	**01 17 30.5**	**+0.2**
SMDR				IAML			01 18 14.2	
	comp=N,747nm,0.7s							
SDD	**Santo Domingo**	**2.97**	**283**	Pn		**Pn**	**01 17 30.1**	**0.0**
SDD				IAML			01 18 19.8	
	comp=E,914nm,0.9s							
SDD				IAML			01 18 38.4	
	comp=N,657nm,1.5s							
DR08	**Loma La Naviza**	**3.20**	**291**	⇑*e*Pg		**Pb**	**01 17 37.6**	**-2.5**
DR08				IAML			01 18 25.4	
	comp=N,4µm,0.2s							
NADR	**Nagua**	**3.22**	**298**	⇑*e*Pg		**Pb**	**01 17 39.0**	**-1.2**
NADR				IAML			01 18 29.4	
	comp=N,2µm,0.6s							
BANI	**BANI**	**3.37**	**280**			**Pn**	**01 17 37.6**	**+1.7**
SABA	**Saba**	**3.46**	**93**	Pn		**Pn**	**01 17 38.0**	**+1.0**
SMRT	**St. Maarten**	**3.61**	**86**	Pn		**Pn**	**01 17 39.2**	**+0.1**
SKI	**Saint Kitts**	**3.96**	**97**	*e*P		**Pn**	**01 17 45.7**	**+1.7**
SC01	**Santiago de lo**	**3.99**	**294**	Pn		**Pn**	**01 17 44.0**	**-0.4**
SDDR	**Presa de Saban**	**4.35**	**286**	Pn		**Pn**	**01 17 48.7**	**-0.6**
SDDR	**Presa de Saban**	**4.35**	**286**	*e*P		**Pb**	**01 17 55.2**	**-4.5**
SDDR				*e*S		**Sb**	**01 18 49.9**	**-2.5**
MBFL	**Flemmings, Mon**	**4.57**	**103**	*e*P		**Pn**	**01 17 53.6**	**+1.4**
MBWH	**Windy Hill**	**4.59**	**103**	*e*P		**Pn**	**01 17 55.0**	**+2.4**
MBWH				*e*S		Sn	01 18 34.0	-12
MLYT	**Lee's Yard**	**4.60**	**103**	*e*P		**Pn**	**01 17 55.3**	**+2.6**
ANWB	**Willy Bob**	**4.84**	**91**	*e*P		**Pn**	**01 17 51.4**	**-4.6**
TBG	**Guadaloupe-3**	**5.37**	**111**	*e*P		**Pn**	**01 18 04.5**	**+1.2**
DSLB	**Salisbury**	**5.74**	**114**	x		**Pn**	**01 18 08.6**	**+0.3**
SDV	**Santo Domingo**	**9.62**	**203**	Pn		**Pn**	**01 19 04.0**	**+2.2**
	comp=N,1.0nm,0.3s,baz=90,slow=2.9,SNR=7.8							
SDV				Sn		**Sn**	**01 20 46.8**	**-3.5**
	comp=N,0.2nm,0.3s,baz=311,slow=19,SNR=2.0							
SDV				LR		LR	01 22 34.5	
	comp=N,94nm,21.8s,baz=69,slow=37							
	comp=N,3.8nm,0.5s							
SDV	**Santo Domingo**	**9.62**	**203**			**Pn**	**01 19 01.6**	**-0.3**
BBSR	**BB Station**	**14.61**	**7**	Pn		**Pn**	**01 20 08.7**	**-1.1**
MDP	**Montagnes des**	**18.80**	**131**	LR		LR	01 30 07.9	
	comp=N,38nm,18.7s,baz=338,slow=43							
GOGA	**Godfrey**	**21.51**	**319**	P		**P**	**01 21 31.7**	**-0.5**
GOGA				IAmb		IAmb	01 21 38.8	
	comp=Z,14nm,1.1s							
R55A	**Marlinton**	**23.44**	**333**	P		**P**	**01 21 53.8**	**+1.2**
TXAR	**Lajitas Array**	**35.48**	**296**	P		**P**	**01 23 42.3**	**+2.2**
	comp=Z,1.7nm,0.8s,baz=96,slow=8.9,SNR=18							
	comp=Z,1.7nm,0.8s							
TXAR	**Lajitas Array**	**35.48**	**296**	P		**P**	**01 23 40.4**	**+0.3**
ANMO	**Albuquerque**	**39.05**	**304**	LR		LR	01 41 55.2	
	comp=Z,48nm,18.5s,baz=94,slow=39							
PDAR	**Pinedale Array**	**43.82**	**314**	P		**P**	**01 24 51.3**	**+1.7**
	comp=Z,0.7nm,1.0s,baz=120,slow=9.3,SNR=3.9							
	comp=Z,0.7nm,1.0s							
PDAR	**Pinedale Array**	**43.82**	**314**	P		**P**	**01 24 48.8**	**-0.8**
CPUP	**Villa Florida**	**44.87**	**168**	P		**P**	**01 24 57.4**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=328,slow=4.7,SNR=3.9							
	comp=Z,1.2nm,0.6s							
CPUP	**Villa Florida**	**44.87**	**168**	IAmb		IAmb	01 25 03.3	
	comp=Z,5.9nm,1.4s							
ELK	**Elko**	**47.26**	**309**	LR		LR	01 48 12.3	
	comp=Z,27nm,18.5s,baz=177,slow=40							
YKA	**Yellowknife Ar**	**55.46**	**335**	P		**P**	**01 26 18.6**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=111,slow=6.7,SNR=12							
	comp=Z,0.6nm,0.7s							
YKA	**Yellowknife Ar**	**55.46**	**335**	P		**P**	**01 26 18.8**	**+1.1**
ESDC	**Sonseca Array**	**58.10**	**54**	P		**P**	**01 26 39.0**	**+2.1**
	comp=Z,1.0nm,0.9s,baz=267,slow=6.5,SNR=6.6							
	comp=Z,1.0nm,0.9s							
ESDC	**Sonseca Array**	**58.10**	**54**	P		**P**	**01 26 36.9**	**0.0**
TORD	**Torodi Ar. Bea**	**65.92**	**83**	P		**P**	**01 27 29.0**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=264,slow=7.6,SNR=2.9							
	comp=Z,0.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**65.92**	**83**	P		**P**	**01 27 28.6**	**-1.2**
TORD				IAmb		IAmb	01 27 40.7	
	comp=Z,0.9nm,1.2s							
ILAR	**Eielson Array**	**69.77**	**333**	P		**P**	**01 27 54.6**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=88,slow=5.4,SNR=3.8							
	comp=Z,0.3nm,0.8s							
ILAR	**Eielson Array**	**69.77**	**333**	P		**P**	**01 27 53.8**	**+0.5**

CATAC ***13*** *01:26:14.8±0.4, 11°N±2°×8°7W±°, h14km±2km, M3.5/31, MLv3.5/31, Error ellipse: s-maj=4.2km s-min=3.0km az=44.5, confirmed*
UCR ***13*** *01:26:14.8±0.4, 11°.03N×86°.97W, h18km±8km, MW3.7, Presumed earthquake*
ISC 13 01:26:14.9±2.1, 11°.06N±0°.04×86°.97W±0°.05, h16km±14km, n51, σ⊕50/72, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**1.14**	**53**	P		**Pn**		**01 26 35.7**	**-0.6**
NADN				S		**Sg**		**01 26 52.6**	**+0.7**
COPN	**Copaltepe**	**1.17**	**18**	P		**Pn**		**01 26 36.1**	**-0.6**
COPN	**Copaltepe**	**1.17**	**18**	*e*P		**Pn**		**01 26 36.3**	**-0.4**
MAS3	**Al N del Volca**	**1.23**	**39**	P		**Pn**		**01 26 37.0**	**-0.5**
MAS3				S		**Sn**		**01 26 54.4**	**+0.5**
SAPS	**Ciudad Sandino**	**1.23**	**26**	P		**Pn**		**01 26 37.5**	**-0.1**
SAPS				S		**Sb**		**01 26 53.2**	**-0.4**
UNAN	**Cigeo UNAN**	**1.25**	**33**	P		**Pn**		**01 26 37.4**	**-0.4**
UNAN				S		**Sn**		**01 26 54.8**	**+0.6**
TISN	**Laguna Tiscapa**	**1.27**	**32**	P		**Pn**		**01 26 37.8**	**-0.3**
ALLN	**Telcor Managua**	**1.28**	**32**	S		**Sb**		**01 26 55.3**	**+0.3**
MGAN	**Managua**	**1.29**	**33**	P		**Pn**		**01 26 38.0**	**-0.3**
MGAN				S		**Sn**		**01 26 56.2**	**+0.9**
MGAN	**Managua**	**1.29**	**33**	*e*P		**Pn**		**01 26 37.9**	**-0.4**
APYN	**Apoyeque**	**1.31**	**27**	P		**Pn**		**01 26 37.3**	**-1.4**
APYN				S		**Sn**		**01 26 56.0**	**+0.1**
AERN	**Aeropuerto Man**	**1.33**	**36**	P		**Pn**		**01 26 38.5**	**-0.4**
AERN				S		**Sg**		**01 26 57.8**	**-0.2**
MOMN	**Momotombo**	**1.40**	**17**	P		**Pn**		**01 26 39.8**	**-0.1**
MOMN				S		**Sn**		**01 26 58.6**	**+0.4**
CARN	**Rivas**	**1.42**	**85**	P		**Pn**		**01 26 40.2**	**0.0**
CARN	**Rivas**	**1.42**	**85**	*e*P		**Pn**		**01 26 40.1**	**0.0**
MACN	**El Madrono**	**1.43**	**11**	S		**Sn**		**01 26 58.9**	**+0.2**
ELI1	**Hacienda Flor**	**1.45**	**106**	P		**Pb**		**01 26 41.1**	**-0.4**
ELI1				S		**Sb**		**01 27 00.2**	**+0.5**
ELI1	**Hacienda Flor**	**1.45**	**106**	*e*P		**Pn**		**01 26 40.9**	**+0.5**
MOM2	**El Cardon**	**1.45**	**19**	P		**Pn**		**01 26 40.2**	**-0.3**
MOM2				S		**Sn**		**01 26 58.7**	**-0.5**
CNGN	**Cerro Negro**	**1.46**	**10**	P		**Pn**		**01 26 41.2**	**+0.6**
CNGN				S		**Sn**		**01 26 59.4**	**0.0**
ALIBA	**Liberia Airpor**	**1.47**	**108**	*e*P		**Pn**		**01 26 41.0**	**+0.2**
ILCN	**San Idelfonso**	**1.53**	**10**	P		**Pn**		**01 26 41.4**	**-0.2**
ILCN				S		**Sn**		**01 27 01.2**	**0.0**
LAPC	**Finca la Perla**	**1.53**	**101**	*e*P		**Pn**		**01 26 41.5**	**-0.1**
HERN	**Volcan Telica**	**1.55**	**5**	P		**Pn**		**01 26 41.5**	**-0.4**
HERN				S		**Sn**		**01 27 01.4**	**-0.3**
CRIN	**San Cristobal**	**1.63**	**357**	P		**Pn**		**01 26 42.8**	**-0.3**
CRIN				S		**Sn**		**01 27 03.9**	**+0.1**
JUD3	**Juan Diaz 3**	**1.66**	**122**	*e*P		**Pn**		**01 26 42.9**	**-0.5**
ELVJ	**El Viejo (Barb**	**1.72**	**110**	*e*P		**Pn**		**01 26 42.8**	**-1.5**
PLVR	**Palo Verde**	**1.74**	**114**	*e*P		**Pb**		**01 26 46.3**	**-0.3**
CUI	**Cuipilapa**	**1.81**	**103**	*e*P		**Pn**		**01 26 46.1**	**+0.6**
CMARA	**Lajas Hojancha**	**1.83**	**124**	P		**Pn**		**01 26 45.4**	**-0.5**
CMARA	**Lajas Hojancha**	**1.83**	**124**	*e*P		**Pn**		**01 26 45.2**	**-0.6**
VMAR	**Armenia, Volca**	**1.83**	**98**	*e*P		**Pn**		**01 26 46.3**	**+0.5**
INDI	**Punta indio, G**	**1.86**	**129**	P		**Pn**		**01 26 46.0**	**-0.2**
BOAB	**BOACO BROADBAN**	**1.88**	**43**	P		**Pn**		**01 26 45.8**	**-0.6**
BOAB				S		**Sb**		**01 27 11.5**	**-0.7**
UPAL	**Upala**	**1.92**	**95**	P		**Pn**		**01 26 47.5**	**+0.5**
CSGN	**Cosiguina Volc**	**1.99**	**343**	P		**Pn**		**01 26 48.5**	**+0.5**
CSGN				S		**Sn**		**01 27 12.7**	**-0.1**
CSGN	**Cosiguina Volc**	**1.99**	**343**	*e*P		**Pn**		**01 26 47.7**	**-0.4**
LIMN	**Finca el Limon**	**2.08**	**16**	P		**Pn**		**01 26 48.8**	**-0.4**
LIMN				S		**Sn**		**01 27 14.8**	**0.0**
MATN	**Matagalpa**	**2.12**	**29**	S		**Sn**		**01 27 16.8**	**+0.9**
JTS	**Las Juntas de**	**2.12**	**111**	P		**Pn**		**01 26 50.2**	**+0.4**
JTS	**Las Juntas de**	**2.12**	**111**	*e*P		**Pn**		**01 26 49.9**	**+0.1**
JCR1	**Jicaral**	**2.18**	**123**	*e*P		**Pn**		**01 26 50.5**	**-0.2**
CNCH	**Conchagua**	**2.36**	**339**	P		**Pn**		**01 26 53.2**	**0.0**
CNCH				S		**Sn**		**01 27 23.0**	**+1.0**
LCND	**La Caada**	**2.41**	**338**	P		**Pn**		**01 26 53.8**	**+0.1**
RCON	**San Juan de Ri**	**2.54**	**18**	P		**Pn**		**01 26 55.8**	**+0.2**
RCPN	**Sur Rio San Ju**	**2.59**	**19**	P		**Pn**		**01 26 56.9**	**+0.5**
RCVN	**Varillal2**	**2.62**	**17**	P		**Pn**		**01 26 57.1**	**+0.3**
RANC	**El Ranchito**	**2.69**	**331**	P		**Pn**		**01 26 58.1**	**+0.4**
RANC				S		**Sn**		**01 27 29.8**	**-0.3**
PACA	**Pacayal**	**2.74**	**331**	P		**Pn**		**01 26 58.8**	**+0.4**
PACA				S		**Sn**		**01 27 31.0**	**-0.3**
YUSH	**Yuscaran**	**2.88**	**2**	P		**Pn**		**01 27 08.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.99**	**354**	P		**Pn**		**01 27 02.4**	**+0.6**
TGUH				S		**Sn**		**01 27 37.2**	**-0.4**

IDC ***13*** *01:46:20.1±1.2, 37°.11S×52°.21E, h0km, mb4.1/6, mbtmp4.1/6, MS3.5/11, Error ellipse: s-maj=66.2km s-min=20.4km az=19.0*
NEIC ***13*** *01:46:23.4±1.1, 36°.75S±0°.10×52°.3E±0°.2, h10km±1km, mb4.6/15, Error ellipse: s-maj=24.8km s-min=10.6km az=236.0*
ISC 13 01:46:22.8±0.6, 36°.8S±0°.1×52°.3E±0°.1, h10km, n39, σ⊕95/25, mb4.5/12, MS3.4/11, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H04N1	**CROZET ISLANDS**	**9.40**	**182**	T		T		01 58 11.5	
	baz=3.5,slow=76,SNR=743								
H04N2	**CROZET ISLANDS**	**9.40**	**182**	T		T		01 58 10.2	
	baz=3.5,slow=76,SNR=1193								
H04N3	**CROZET ISLANDS**	**9.42**	**182**	T		T		01 58 10.6	
	baz=3.5,slow=76,SNR=1014								
FOMA	**Nahampoana Res**	**12.59**	**337**	Pn		**Pn**		**01 49 22.6**	**+0.6**
VOI	**Vohitsoka**	**15.55**	**341**	Pn		**Pn**		**01 50 02.2**	**0.0**
VOI				IAmb		IAmb		01 50 12.3	
	comp=Z,49nm,1.5s								
ABPO	**Ambohimpanom**	**18.22**	**345**			**P**		**01 50 36.5**	**+0.2**
BOSA	**Boshof**	**24.09**	**282**	P		**P**		**01 51 35.8**	**-2.9**
	comp=Z,4.5nm,0.8s,baz=125,slow=12,SNR=4.4								
BOSA				LR		LR		01 59 47.2	
	comp=Z,56nm,18.0s,baz=137,slow=34								
	comp=Z,4.5nm,0.8s								
BOSA	**Boshof**	**24.09**	**282**	P		**P**		**01 51 38.6**	**0.0**
BOSA				IAmb		IAmb		01 51 40.3	
	comp=Z,5.1nm,0.8s								
LBTB	**Lobatse**	**25.62**	**290**	LR		LR		02 00 41.2	
	comp=Z,54nm,19.9s,baz=134,slow=34								
SUR	**Sutherland**	**26.20**	**270**	LR		LR		02 00 27.3	
	comp=Z,64nm,19.4s,baz=120,slow=32								
SUR	**Sutherland**	**26.20**	**270**	P		**P**		**01 51 57.7**	**-0.2**
SUR				IAmb		IAmb		01 52 10.0	
	comp=Z,36nm,1.4s								
LSZ	**Lusaka**	**30.27**	**309**	P		**P**		**01 52 35.1**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=134,slow=9.8,SNR=5.9								
LSZ				LR		LR		02 02 52.2	
	comp=Z,58nm,20.4s,baz=146,slow=33								
	comp=Z,1.7nm,0.7s								
LSZ	**Lusaka**	**30.27**	**309**	P		**P**		**01 52 34.6**	**+0.3**
MAW	**Mawson**	**31.48**	**172**	LR		LR		02 01 18.6	
	comp=Z,95nm,21.8s,baz=77,slow=29								
MSEY	**Mahe Island**	**32.07**	**6**	P		**P**		**01 52 49.1**	**-0.8**
TSUM	**Tsumeb**	**35.03**	**290**	LR		LR		02 05 57.5	
	comp=Z,65nm,20.0s,baz=146,slow=34								
KMBO	**Kilima Mbogo**	**38.08**	**335**	LR		LR		02 08 12.5	
	comp=Z,94nm,19.8s,baz=144,slow=34								
CASY	**Casey**	**44.29**	**150**	P		**P**		**01 54 32.3**	**0.0**
CASY				IAmb		IAmb		01 54 45.8	
	comp=Z,23nm,1.3s								
H01W2	**Cape Leeuwin H**	**49.41**	**107**	T		T		02 48 12.2	
	baz=248,slow=75,SNR=28								
H01W3	**Cape Leeuwin H**	**49.42**	**107**	T		T		02 48 12.7	
	baz=248,slow=75,SNR=30								
H01W1	**Cape Leeuwin H**	**49.43**	**107**	T		T		02 48 14.6	
	baz=248,slow=75,SNR=33								
NWAO	**Narrogin (SRO)**	**52.54**	**106**	P		**P**		**01 55 36.9**	**+0.5**
NWAO				IAmb		IAmb		01 55 48.6	
	comp=Z,22nm,1.2s								
VNDA	**Vanda**	**58.46**	**166**	LR		LR		02 18 31.6	
	comp=Z,70nm,18.4s,baz=206,slow=33								
PSA00	**Pilbara Seismi**	**59.80**	**95**	P		**P**		**01 56 29.6**	**+1.1**
PMSA	**Palmer Station**	**67.31**	**205**	P		**P**		**01 57 17.6**	**+0.3**
DBIC	**Dimbokro**	**68.64**	**296**	LR		LR		02 24 14.4	
	comp=Z,50nm,20.1s,baz=102,slow=33								
DBIC	**Dimbokro**	**68.64**	**296**	P		**P**		**01 57 26.4**	**-0.1**
DBIC				IAmb		IAmb		01 57 38.1	
	comp=Z,5.6nm,1.1s								
TORD	**Torodi Ar. Bea**	**68.77**	**306**	P		**P**		**01 57 27.5**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=148,slow=6.0,SNR=7.8								
	comp=Z,1.1nm,0.8s								
TORD	**Torodi Ar. Bea**	**68.77**	**306**	P		**P**		**01 57 27.1**	**-0.1**
TORD				IAmb		IAmb		01 57 55.2	
	comp=Z,2.9nm,1.5s								
ASAR	**Alice Springs**	**69.82**	**105**	P		**P**		**01 57 32.5**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=234,slow=5.8,SNR=13								
	comp=Z,1.2nm,0.7s								
CMAR	**Chiang Mai Arr**	**70.39**	**47**	P		**P**		**01 57 36.6**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=220,slow=6.3,SNR=5.6								
CMAR				LR		LR		02 25 16.9	
	comp=Z,24nm,19.1s,baz=180,slow=33								
	comp=Z,1.2nm,0.3s								
WRA	**Warramunga Arr**	**72.17**	**102**	P		**P**		**01 57 46.7**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=232,slow=5.1,SNR=7.0								
	comp=Z,0.7nm,0.7s								
WRA	**Warramunga Arr**	**72.17**	**102**	P		**P**		**01 57 48.5**	**+0.4**
WR8	**Warramunga Arr**	**72.28**	**102**	P		**P**		**01 57 47.6**	**-1.2**
WR8				IAmb		IAmb		01 58 19.3	
	comp=Z,5.2nm,1.2s								
WB0	**Warramunga Arr**	**72.30**	**102**	P		**P**		**01 57 48.0**	**-0.9**
WB0				IAmb		IAmb		01 58 21.2	
	comp=Z,6.0nm,1.2s								
RPZ	**Rata Peaks**	**82.53**	**140**	LR		LR		02 26 25.5	
	comp=Z,68nm,20.2s,baz=274,slow=29								
ILAR	**Eielson Array**	**149.71**	**16**	PKPbc		**PKPbc**		**02 06 11.9**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=324,slow=2.7,SNR=7.9								
ILAR	**Eielson Array**	**149.71**	**16**	PKPdf		**PKPdf**		**02 06 07.0**	**-0.2**
YKA	**Yellowknife Ar**	**152.98**	**347**	PKPbc		**PKiKP**		**02 06 20.9**	**+1.3**
	comp=Z,0.3nm,0.9s,baz=2.9,slow=2.6,SNR=4.5								

NIED ***13*** *02:09:21.4, 37°.18N×142°.39E, h3km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.43; Mθθ-0.00; Mϕϕ1.43; Mrθ1.24; Mrϕ-0.32; Mθϕ-0.11; Fault plane solution: M₀1.86000×10¹⁴ NP1: ϕs191.00000°, δ43.00000°, λ-46.00000°. NP2: ϕs318.00000°, δ60.00000°, λ-123.00000°.*
JMA ***13*** *02:09:21.4±0.3, 37°.2N±0°.9×14°.2E±°, h3km, MV3.7/18, E OFF FUKUSHIMA PREF*
IDC ***13*** *02:09:22.9±2.1, 36°.77N×142°.63E, h0km, mb3.5/3, mbtmp3.4/4, ML2.2/1, Error ellipse: s-maj=50.0km s-min=29.9km az=55.0*
ISC 13 02:09:23.0±1.6, 37°.23N±0°.08×142°.4E±0°.1, h9km, n16, σ1⊕56/11, mb3.6/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.21**	**277**	*e*S		**Sb**		**02 10 01.3**	**-0.7**
JIKH	**Ishinomakikobu**	**1.31**	**326**	*e*P		**Pn**		**02 09 46.5**	**-0.9**
JIKH				*e*S		**Sb

EMPR				eS		Sb	02 18 28.4	+0.2
SJG	San Juan	0.68	79			Pg	02 18 21.1	-0.6
SJG				IAML			02 18 31.9	
	comp=N,1μm,0.6s							
SJG	San Juan	0.68	79	⇓eP		Pg	02 18 21.3	-0.5
SJG				⇑eSg		Sg	02 18 30.6	-0.2
SJG	San Juan	0.68	79	⇓eP		Pg	02 18 21.2	-0.6
SJG				eS		Sg	02 18 29.7	-1.1
SJG	San Juan	0.68	79	i P		Pg	02 18 21.2	-0.6
SJG				eS		Sg	02 18 30.4	-0.4
SJG				IAML			02 18 31.8	
	comp=Z,479nm,0.4s							
IDE	Isla Desecheo	0.72	304			Pg	02 18 21.6	-1.0
IDE						Sg	02 18 31.4	-0.6
IDE	Isla Desecheo	0.72	304	⇑eP		Pg	02 18 21.6	-1.0
IDE				eS		Sg	02 18 31.4	-0.6
PDPR	Patillas Dam,	0.79	88			Pb	02 18 23.1	-0.7
GCPR	Guaynabo City	0.80	66			Pb	02 18 23.1	-0.9
GCPR	Guaynabo City	0.80	66			Sb	02 18 33.4	-1.1
GCPR	Guaynabo City	0.80	66	⇓eP		Pb	02 18 23.2	-0.8
GCPR				eS		Sb	02 18 33.4	-1.1
HUMP	Col San Antoni	0.96	81			Pb	02 18 25.7	-1.1
HUMP				IAML			02 18 43.3	
	comp=Z,935nm,0.2s							
HUMP				IAML			02 18 43.4	
	comp=Z,623nm,0.3s							
HUMP	Col San Antoni	0.96	81			Sb	02 18 39.4	+0.1
HUMP	Col San Antoni	0.96	81	⇑eP		Pb	02 18 25.7	-1.1
HUMP				eS		Sb	02 18 39.4	+0.1
CUPR	Culebra, Puert	1.52	78			Pn	02 18 35.4	+0.3
MIDR	Miches	2.31	296	⇓ePg		Pn	02 18 46.4	+0.4
MIDR				IAML			02 19 22.9	
	comp=N,52nm,0.4s							
DR12	Loma Pena Alta	2.53	289	Pn		Pn	02 18 49.9	+0.8
HATOM	Hato Mayor del	2.53	289	ePg		Pn	02 18 50.8	+1.8
HATOM				⇑eSg		Sb	02 19 23.2	-1.4
HATOM				IAML			02 19 30.3	
	comp=N,46nm,0.3s							
SMDR	Samana, DR	2.57	301	⇑ePg		Pn	02 18 51.3	+1.8
SMDR				⇑eSg		Sn	02 19 22.9	+2.5
SMDR				IAML			02 19 32.6	
	comp=N,117nm,0.9s							

IDC ***13*** *03:33:39.6±1.8,36°.35N×121°.57W,h0km,mb3.4/1, mbtmp3.3/5,ML3.1/3,MS2.9/3,Error ellipse: s-maj=21.9km s-min=16.7km az=55.0*

NEIC ***13*** *03:33:41.9±1.6,36°.664N±0°.004×121°.32W±0°.01, h5km±1km,ML3.6/114,Mwr3.6/5(NCEDC),Error ellipse: s-maj=2.1km s-min=1.4km az=237.0*

NEIC ***13*** *03:33:42,36°.69N×121°.28W,h9km*

NEIC ***13*** *03:33:42,36°.69N×121°.28W,h8km,Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr0.22; Mθθ-2.72; Mϕϕ2.50; Mrθ-0.94; Mrϕ0.38; Mθϕ-1.42; Fault plane solution: M0 3.14000×10^14 NP1:ϕ1136.44000°, δ58.79000°,λ172.04000°. NP2:ϕ2230.59000°,δ83.20000°, λ31.46000°. Principal axes: T 3.2776, Plg27.0000°, Azm98.0000°; N -0.2857, Plg58.0000°, Azm242.0000°; P -2.9918, Plg16.0000°, Azm360.0000°;*

NCEDC ***13*** *03:33:42.0±1.7,36°.689N±0°.007×121°.28W±0°.01, h9km±5km Error ellipse: s-maj=1.5km s-min=1.0km az=77.0*

ISC 13 03:33:42.3±0.8,36°.69N±0°.02×121°.30W±0°.02,h11km±5km, n186,σ1§11/176,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJOM	Mount Johnson	0.06	193		Pg	03 33 43.9	-0.7
BJOM					Sg	03 33 45.2	-1.0
SCZ	Santa Cruz	0.13	224		Pg	03 33 44.6	-0.8
SCZ					Sg	03 33 46.6	-1.0
BVL	Bear Valley	0.14	143		Pg	03 33 45.4	-0.3
SAO	San Andreas Ge	0.14	301		Pg	03 33 45.2	-0.5
SAO				Sg	Sg	03 33 47.0	-1.1
BJCM	Johnson Can.	0.16	209		Pg	03 33 45.3	-0.6
FRP	Fremont Peak	0.17	292		Pg	03 33 45.6	-0.5
FRP	Fremont Peak	0.17	292		Pg	03 33 45.4	-0.7
FRP					Sg	03 33 48.1	-0.7
BSRM	Salinas Radio	0.18	263		Pg	03 33 45.8	-0.5
LTR	Lone Tree Road	0.20	357		Pg	03 33 47.3	+0.8
LTR					Sg	03 33 51.7	+2.3
HSFM	Saint Francis	0.20	307		Pg	03 33 46.8	+0.2
HSFM					Sg	03 33 52.5	+2.8
BBGB	Big Mountain B	0.23	118		Pg	03 33 47.5	+0.3
HJGM	San Juan Grade	0.25	296		Pg	03 33 47.3	-0.2
HJGM					Sg	03 33 51.1	+0.2
BSGM	Shirttail Gulc	0.28	173		Pg	03 33 47.3	-0.7
BSGM					Sg	03 33 51.3	-0.5
BPCNC	Pine Canyon	0.29	247		Pg	03 33 48.1	-0.1
BPCNC					Sg	03 33 52.6	+0.4
HFEM	San Felipe	0.30	344		Pb	03 33 48.9	-0.8
BSMM	Soledad Missio	0.32	199		Pg	03 33 48.6	-0.2
LRV	Little Rabbit	0.35	140		Pb	03 33 49.4	-1.1
HERM	Elkhorn Road	0.35	288		Pb	03 33 49.4	-1.1
CSR	Chase Ranch	0.35	319		Pb	03 33 49.7	-0.9
CDC	Canada Road	0.37	336		Pb	03 33 50.1	-0.7
HCAM	Canada Road	0.37	336		Pb	03 33 49.9	-0.9
HPCM	Pacheco Lake	0.37	2		Pb	03 33 50.1	-0.8
HCBM	Chamberlain	0.38	310		Pb	03 33 50.3	-0.7
HCBM					Sb	03 33 58.3	+1.4
FORD	Fort Ord Natur	0.39	270		Pg	03 33 49.8	-0.2
BMSM	Mercy Hot Spri	0.40	94		Pb	03 33 50.8	-0.6
HLPM	Lions Peak	0.44	323		Pb	03 33 51.2	-0.9
BPRM	Ponciano Ridge	0.45	231		Pg	03 33 50.9	-0.3
JELB	Ellicott, Sant	0.49	299		Pb	03 33 52.1	-0.8
HMOM	Monterey	0.51	260		Pg	03 33 52.0	-0.2
SCKWR	San Luis Creek	0.53	20		Pb	03 33 53.4	-0.1
CADM	Anderson Res.	0.54	331		Pb	03 33 53.1	-0.7
JLAB	Laurel Hill	0.58	323		Pb	03 33 53.8	-0.7
BPOM	Post Ranch	0.60	220		Pg	03 33 53.4	-0.5
PCCM	Crazy Canyon	0.61	170		Pg	03 33 53.9	-0.2
PMPB	Monarch Peak	0.62	140		Pg	03 33 53.9	-0.4
PMPB				IAML		03 34 10.3	
	comp=E,6μm,0.8s						
PMPB				IAML		03 34 11.3	
	comp=N,5μm,0.8s						
CCOB	Coe Ranch Numb	0.64	332		Pb	03 33 55.5	0.0
HULI	Fort Hunter Li	0.67	176		Pg	03 33 54.6	-0.7
HULI				IAML		03 34 08.6	
	comp=N,4μm,0.7s						
HULI				IAML		03 34 08.9	
	comp=E,3μm,0.6s						
JUCM	University of	0.68	297		Pg	03 33 55.0	-0.5
ARN	Arnold Ranch	0.69	344		Pb	03 33 56.0	-0.3
C072	Blauer Lane Sa	0.70	328		Pb	03 33 55.7	-0.7
MHC	Mount Hamilton	0.71	337		Pb	03 33 55.9	-0.8
MHC				IAML		03 34 10.3	
	comp=E,4μm,0.7s						
MHC				IAML		03 34 10.7	
	comp=N,4μm,0.7s						
PSAM	San Ardo	0.74	153		Pg	03 33 56.1	-0.5
PPTM	Peach Tree Val	0.74	141		Pg	03 33 56.1	-0.5
LT15	Bear Creek Roa	0.75	309		Pb	03 33 56.9	-0.4
SCCB	Santa Clara Co	0.75	323		Pb	03 33 56.5	-0.9
MHR	Mount Hamilton	0.76	331		Pn	03 33 57.8	-1.2
CMMM	Mount Mocho	0.78	348		Pb	03 33 57.8	-0.2
C041	El Campo Drive	0.81	328		Pn	03 33 58.7	-0.8
JBNB	Ben Lomond Mou	0.81	302		Pg	03 33 57.3	-0.7
MTOS	Mt Oso, Westle	0.81	358		Pn	03 33 58.7	-1.0
CMLM	Mount Lewis	0.84	340		Pb	03 33 58.8	-0.1
PSMM	Smith Mountain	0.84	137		Pb	03 33 58.3	-0.5
CALM	Calaveras Res.	0.86	332		Pb	03 33 59.0	-0.2
PHPM	Hope Ranch	0.90	142		Pg	03 33 58.9	-0.7
JSJM	St Joseph	0.91	316		Pb	03 33 59.5	-0.4
JBMM	Black Mountain	0.93	313		Pb	03 33 59.5	-0.9
JPC	Peters Creek,	0.94	309		Pb	03 33 59.8	-0.7
PKD	Bear Valley Ra	0.96	140		Pg	03 33 59.6	-1.2
PKD				IAML		03 34 20.5	
	comp=E,2μm,0.8s						
CSTL	Corral Hollow	0.96	350		Pn	03 34 01.3	-0.4
CSTL	Corral Hollow	0.96	350		Pn	03 34 01.5	-0.2
JFP	Foothills Park	0.98	313		Pg	03 34 00.2	-0.9
PVCM	Vineyard Canyo	0.98	141		Pg	03 34 00.4	-0.7
JPSM		0.98	301		Pg	03 34 00.4	-0.9
PPO	Portuguese Can	0.99	146		Pb	03 34 00.9	-0.5
PSTM	Stockdale Moun	0.99	140		Pg	03 34 00.5	-0.9
WENL	Wente Vineyard	1.00	339		Pn	03 34 01.4	-0.8
JSFB	Stanford Teles	1.00	316		Pb	03 34 00.7	-0.9
WSRE	Westside REC,	1.01	110		Pn	03 34 01.8	-0.5
JCNB	Joaquin Canyon	1.02	137		Pb	03 34 01.8	-0.2
CVLM	Vallecito	1.03	335		Pn	03 34 01.8	-0.8
JRSC	Jasper Ridge	1.04	314		Pb	03 34 01.5	-0.7
JRSC				IAML		03 34 17.7	
	comp=N,2μm,0.6s						
JRSC				IAML		03 34 17.9	
	comp=E,2μm,0.5s						
PHGM	Hog Canyon	1.04	141		Pb	03 34 02.1	-0.2
AVNL	Avenal, CA USA	1.05	129		Pb	03 34 02.2	-0.2
CBZL	Buffer Zone	1.05	342		Pn	03 34 02.7	-0.3
CBZL	Buffer Zone	1.05	342		Pn	03 34 02.6	-0.3
LEGD	La Grand CA	1.06	60		Pn	03 34 01.9	-1.0
CNIC	Niles Canyon	1.06	330		Pb	03 34 02.2	-0.4
CTM	Castle Mountai	1.08	134		Pn	03 34 03.6	+0.2
PHFM	Heflinger Ranc	1.08	138		Pg	03 34 02.4	-0.7
RAMR	Ramage Ranch	1.11	162		Pg	03 34 02.6	-1.0
GHIB	Gold Hill	1.15	138		Pg	03 34 03.1	-1.3
GHIB	Gold Hill	1.15	138		Pg	03 34 03.1	-1.3
CBSNC	Byron Hot Spri	1.16	346		Pn	03 34 03.9	-0.5
PCBM	Cambria	1.18	171		Pg	03 34 03.4	-1.7
JCHM	Cahill Ridge	1.20	314		Pg	03 34 03.3	-2.0
PKLM	Kerr Lake	1.20	140		Pg	03 34 04.0	-1.2
MHDM	Hidden Dam	1.20	69		Pg	03 34 03.8	-1.6
JCPM	Coyote Point	1.22	318		Pg	03 34 03.6	-2.0
TCAS	Cass Winery, P	1.23	151		Pg	03 34 04.9	-1.0
TCHL	Shandon	1.23	144		Pg	03 34 05.1	-0.8
PMRM	Maxey Ranch	1.24	136		Pg	03 34 05.3	-0.9
SAC	San Andreas	1.26	315		Pg	03 34 04.5	-2.0
PAGB	Antelope Grade	1.28	138		Pg	03 34 05.3	-1.5
BGC	Bolinger Road	1.28	332		Pg	03 34 05.1	-1.8
CRHM	Round Hill Res	1.29	335		Pg	03 34 05.6	-1.5
CMCM	Mills College	1.30	327		Pg	03 34 05.3	-1.9
FRI	Friant	1.31	76		Pg	03 34 05.6	-1.8
JSBM	San Bruno Moun	1.32	319		Pn	03 34 04.8	-1.9
JMGM	Milagra Ridge	1.33	315		Pn	03 34 04.8	-2.0
BUCR	Buckhorn Ranch	1.34	43		Pb	03 34 06.4	-1.1
BDM	Black Diamond	1.34	340		Pn	03 34 06.0	-0.9
TSCN	Private Proper	1.38	146		Pn	03 34 06.7	-0.7
PTAM	Tassajara Cree	1.38	160		Pn	03 34 06.6	-0.8
BKS	Berkeley--Byer	1.40	328		Pn	03 34 06.8	-1.0
BRIB	Briones	1.41	331		Pn	03 34 06.7	-1.1
VAK	Adit at Lawren	1.41	328		Pn	03 34 07.1	-0.7
BRK	Berkeley--Havi	1.41	327		Pn	03 34 06.9	-0.9
MMIM	Miami Mountain	1.44	59		Pg	03 34 08.2	-1.7
KARE	Kearney REC, C	1.44	93		Pn	03 34 07.6	-0.7
JPRM	Presidio of Sa	1.45	320		Pn	03 34 06.5	-1.9
TRAY	Twisselman Ran	1.48	140		Pn	03 34 07.9	-0.9
AGC	Angel Island	1.48	323		Pn	03 34 07.0	-1.8
PBPM	Bitterwater Pu	1.48	138		Pn	03 34 08.5	-0.3
CPIM	Pinole Ridge	1.49	331		Pn	03 34 08.3	-0.6
CSPM	San Pablo Ridg	1.50	328		Pn	03 34 08.4	-0.7
CMB	Columbia Colle	1.53	28		Pb	03 34 09.3	-1.2
CMB				IAML		03 34 35.0	
	comp=E,461nm,0.9s						
CPMM	Point Molate	1.54	325		Pn	03 34 08.5	-1.1
PINL	Point Pinole R	1.57	327		Pn	03 34 07.1	-3.0
VOG	Valley Oaks Go	1.58	103		Pn	03 34 09.7	-0.6
PABC	Pismo Preserve	1.62	161		Pn	03 34 10.2	-0.4
YEG	Yeguas Mountai	1.65	139		Pn	03 34 10.7	-0.6
SVIN	Saint Vincent'	1.66	324		Pn	03 34 09.6	-1.7
KCC	Kaiser Creek	1.70	68		Pb	03 34 12.9	-0.7
SMMC	Simmler	1.73	142		Pn	03 34 12.0	-0.3
WELL	Weller Preserv	1.80	14		Pn	03 34 13.4	+0.1
WELL	Weller Preserv	1.80	14	IAML		03 34 53.5	
	comp=E,304nm,0.8s						
CARC	Carrizo Plain	1.81	139		Pn	03 34 13.5	+0.1
LOC	Lincoln School	1.85	323		Pn	03 34 13.6	-0.2
CVS	Carmenet Viney	1.89	331		Pn	03 34 13.4	-1.1
CVS				IAML		03 35 02.8	
	comp=E,339nm,1.3s						
MCCM	Marconi Confer	1.92	320		Pn	03 34 13.4	-1.5
MCCM				IAML		03 34 55.0	
	comp=E,394nm,1.4s						
MCCM				IAML		03 34 58.2	
	comp=N,437nm,1.0s						
CRGC	Crocker Grade	1.93	138		Pn	03 34 15.5	+0.4
VES	Vestal, Richgr	1.98	115		Pn	03 34 15.0	-0.6
VES				IAML		03 34 45.8	
	comp=N,527nm,1.0s						
VES				IAML		03 34 57.5	
	comp=E,402nm,0.6s						
MDPB	Devils Postpil	2.00	61		Pb	03 34 17.1	-1.8
MDPB				IAML		03 34 46.9	
	comp=E,600nm,0.5s						
MDPB				IAML		03 34 50.5	
	comp=N,580nm,1.1s						
MINS	Minaret Summit	2.03	61		Pb	03 34 17.6	-1.7
MDYM	Dry Creek	2.06	61		Pb	03 34 18.5	-1.5
MDCM	Deadman Creek	2.07	60		Pb	03 34 18.2	-1.8
SPG2	Springville 2	2.10	103		Pn	03 34 17.9	+0.6
MEMM	East Mammoth H	2.12	62		Pb	03 34 19.4	-1.5
MCBM	Casa Benchmark	2.14	63		Pb	03 34 20.1	-1.1
PKM	Mcpherson Peak	2.16	146		Pn	03 34 18.1	-0.3
MLAC	Mammoth, Mammo	2.18	64		Pb	03 34 21.2	-0.6
AFDM	Forest Hills D	2.27	6		Pn	03 34 19.6	-0.1
BCW	Bitter Crk WRg	2.32	138		Pn	03 34 21.9	+1.5
MNRC	McLaughlin Min	2.37	338		Pn	03 34 20.6	-0.5
GDXM	Geysers	2.43	331		Pn	03 34 21.2	-0.7
MRCM	Red Rock Canyo	2.43	65		Pb	03 34 25.6	-0.6
MCDM	Chidago Canyon	2.44	69		Pb	03 34 25.6	-0.8
TIN	Tinemaha, Big	2.48	81	Pn	Pn	03 34 23.2	+0.4
ISA	Isabella, Lake	2.50	113		Pn	03 34 23.1	+0.1
ISA				IAML		03 35 18.3	
	comp=N,250nm,1.0s						
ISA				IAML		03 35 18.8	
	comp=E,177nm,0.9s						
SUTB	Sutter Butte	2.56	351		Pn	03 34 22.9	-0.8
SUTB				IAML		03 35 20.2	
	comp=N,260nm,0.6s						
SUTB				IAML		03 35 22.9	
	comp=E,224nm,0.6s						
CWC	Cottonwood Cre	2.60	95		Pn	03 34 24.9	+0.5
CWC				IAML		03 35 17.3	
	comp=N,159nm,0.9s						
LOK	Lockwood Valle	2.66	137		Pn	03 34 25.1	0.0
HOPS	Hopland Field	2.70	329	Pn	Pn	03 34 24.8	-0.7
LHV	Little Huntoon	2.71	54		Pb	03 34 27.5	-3.3
DSP	Deep Springs	2.75	75		Pn	03 34 26.5	+0.3
DSP				IAML		03 35 17.2	
	comp=N,158nm,1.9s						
DSP				IAML		03 35 23.4	
	comp=E,188nm,1.3s						
PNTR	Pine Nut	2.75	29		Pn	03 34 26.6	+0.1
MPK	Martis Peak	2.79	21		Pn	03 34 27.3	+0.2
ORV	Oroville	2.87	357		Pn	03 34 27.6	-0.2
NVAR	Mina Array Bea	2.94	53	Pn	Pb	03 34 34.1	-0.8
	comp=E,34nm,0.6s,baz=236,slow=19,SNR=76						
NVAR				Sn	Sg	03 35 15.0	-1.9
	comp=E,19nm,0.3s,baz=261,slow=22,SNR=5.1						
OSI	Osito Audit: C	2.94	134		Pn	03 34 30.2	+1.2
OSI				IAML		03 35 36.6	
	comp=N,165nm,1.0s						
OSI				IAML		03 35 43.9	
	comp=E,170nm,0.8s						
TPO	Tropico Hills	3.08	125	IAML		03 35 27.0	
	comp=E,206nm,0.8s						
TPO				IAML		03 35 36.9	
	comp=N,116nm,1.1s						
LRMC	Laurel Mtn Rad	3.17	111	IAML		03 35 34.7	
	comp=N,136nm,1.0s						
PAHR	Pah Rah Range	3.37	26	IAML		03 35 39.0	
	comp=E,76nm,1.6s						
PAHR				IAML		03 35 44.0	
	comp=N,106nm,1.2s						
FURC	Furnace Creek,	3.57	92	IAML		03 36 16.0	
	comp=N,159nm,1.3s						
MWC	Mount Wilson	3.61	132	IAML		03 35 43.5	
	comp=E,72nm,1.0s						
O03E	Paynes Creek	3.62	354	IAML		03 35 49.3	
	comp=E,178nm,1.0s						
O03E				IAML		03 36 03.7	
	comp=N,81nm,1.1s						
WCT	Wildcat Mounta	3.75	87	IAML		03 35 47.9	
	comp=N,66nm,1.3s						
GWY	Greenwater Val	3.76	96	IAML		03 35 55.2	
	comp=N,73nm,1.0s						
GWY				IAML		03 36 00.9	
	comp=E,63nm,1.2s						
GSC	Goldstone, Bar	3.90	109	IAML		03 35 53.6	
	comp=N,86nm,1.1s						
GSC				IAML		03 35 55.4	
	comp=E,90nm,1.3s						
PFO	Pinyon Flats O	5.01	126	Pn	Pn	03 34 57.2	-0.3
	comp=E,0.1nm,0.3s,baz=302,slow=13,SNR=1.8						
	comp=E,4.9nm,0.6s						
YBH	Yreka Blue Hor	5.15	348	Pn	Pn	03 35 03.2	+3.8
	baz=169,slow=5.2,SNR=1.2						
YBH	Yreka Blue Hor	5.15	348	IAML		03 36 52.7	
	comp=N,24nm,3.5s						
V12A	Nelson	5.30	99	IAML		03 36 58.8	
	comp=N,22nm,1.6s						
ELK	Elko	6.23	48	Pn	Pn	03 35 18.0	+3.7
	comp=N,0.3nm,0.3s,baz=239,slow=11,SNR=5.6						
ELK				Lg	Lg	03 36 57.6	
	comp=N,0.8nm,0.3s,baz=100,slow=1.7,SNR=10						
	comp=N,0.6nm,0.3s						
NEW	Newport	11.97	14	LR	LR	03 42 10.4	
	comp=N,43nm,18.8s,baz=186,slow=41						
ANMO	Albuquerque	12.17	94	LR	LR	03 41 06.2	
	comp=N,47nm,21.4s,baz=350,slow=36						
TXAR	Lajitas Array	16.49	111	Pn	Pn	03 37 33.8	+0.2
	baz=291,slow=6.1,SNR=1.1						
	comp=N,0.2nm,0.6s						
TXAR	Lajitas Array	16.49	111		Pn	03 37 32.8	-0.9
CMIG	Matias Romero	30.43	123	LR	LR	03 53 14.1	
	comp=N,40nm,21.1s,baz=164,slow=39						
ILAR	Eielson Array	31.98	340	P	P	03 40 10.9	+2.9
	comp=N,0.5nm,0.9s,baz=158,slow=9.7,SNR=5.4						
	comp=N,0.5nm,0.9s						
H11N3	WAKE ISLAND Hy	64.14	276	T	T	04 53 44.4	
	baz=58,slow=75,SNR=43						
H11N2	WAKE ISLAND Hy	64.15	276	T	T	04 53 41.2	
	baz=58,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	64.16	276	T	T	04 53 41.5	
	baz=58,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	64.95	275	T	T	04 54 40.7	
	baz=57,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	64.96	275	T	T	04 54 41.2	
	baz=57,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	64.97	275	T	T	04 54 40.9	
	baz=57,slow=75,SNR=17						

IDC 13 03:36:34.8±2.0,0°.57N×124°.74E,h0km,mb3.4/3, mbtmp3.4/3,MS2.3/1,Error ellipse: s-maj=190.0km s-min=28.1km az=63.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.46	156	P	P	03 41 34.9	-0.9
	0.9nm,0.3s,baz=334,slow=11,SNR=18						
	0.9nm,0.3s						
ASAR	Alice Springs	25.69	160	P	P	03 42 07.7	+0.8
	0.2nm,0.3s,baz=340,slow=8.2,SNR=4.3						
	0.2nm,0.3s						
CMAR	Chiang Mai Arr	30.94	307	LR	LR	03 56 06.0	
	comp=Z,5.4nm,19.1s,baz=345,slow=38						
MKAR	Makanchi Array	59.06	327	P	P	03 46 36.8	-0.1
	0.1nm,0.6s,baz=115,slow=9.7,SNR=1.7						
	0.1nm,0.6s						

TEH ***13*** *03:43:53.3,28°.88N×52°.86E,h11km±26km,ML3.2, Presumed earthquake*

OMAN ***13*** *03:43:56.6±1.1,28°.60N×52°.97E,h10km,ml3.3/3,Error ellipse: s-maj=9.6km s-min=5.7km az=3.0*

ISC 13 03:43:54.0±1.0,28°.83N±0°.05×52°.89E±0°.04,h16km,n41, σ1§27/55,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIR1	Qir	0.38	159	Pg	Pg	03 44 01.7	-0.1
JHRM	Jahrom	0.69	118	Pg	Pg	03 44 07.4	-0.1
SHI	Shiraz	0.87	338	Pg	Pb	03 44 09.2	-1.8
KHL1	Khalili_Fars	1.24	163	Pg	Pg	03 44 18.6	+0.6
KAZ2	Kazeron-Fars-I	1.33	306	Pg	Pn	03 44 18.0	0.0
LMD1	Lamerd	1.50	171	Pg	Pg	03 44 23.5	+0.5
DSBU	Dashti - Bushe	1.51	252	Pg	Pn	03 44 21.8	+1.4
LAR1	LAR	1.75	131	Pn	Pg	03 44 27.8	+0.2
KLNJ	Kolanjah	2.45	333	Pn	Pn	03 44 33.9	+0.3
IMEH	Mehriz	2.96	30	Pn	Pn	03 44 42.3	+1.7
IRAM	Ramesheh	3.00	352	Pn	Pn	03 44 42.4	+1.2
TAFT	Taft - Yazd	3.09	21	Pn	Pn	03 44 43.9	+1.5
SHMA	Al-Shehemyia	3.42	210	P	Pn	03 44 48.0	+1.3
SHMA				S	Sn	03 45 28.7	+1.8
NGRK	Negar Kerman	3.45	75	Pn	Pn	03 44 49.7	+2.2
KHGB	Koh Gabri	3.48	63	Pn	Pn	03 44 49.9	+2.1
IBAF	Bafgh	3.60	39	Pn	Pn	03 44 50.9	+1.6
ZRDN	Zarand Kerman	3.82	55	Pn	Pn	03 44 53.2	+0.8
BANOM	Banah	4.19	133	P	Pn	03 44 58.9	+1.5
BANOM				S	Sn	03 45 47.1	+1.0
AMIS	Naft Sefid	4.21	313	Pn	Pn	03 44 58.8	+1.2
ANAR	Anarak	4.41	9	Pn	Pn	03 45 01.8	+1.4
SMRA	Abu-Samra	4.47	205	P	Pn	03 45 02.9	+1.9
SMRA				S	Sn	03 45 53.7	+1.0
MASF	Masafi	4.51	139	P	Pn	03 45 03.4	+1.7
MASF				S	Sn	03 45 54.7	+0.8
NAZ	Nazwa, Dubai	4.56	146	P	Pn	03 45 03.8	+1.5
NAZ				S	Sn	03 45 55.9	+0.9
MDH	Madha	4.65	138	P	Pn	03 45 05.2	+1.6
MDH				S	Sn	03 45 57.7	+0.5
ASUD	Al Ashush, Dub	4.72	152	P	Pn	03 45 05.9	+1.3
ASUD				S	Sn	03 45 59.0	-0.1
ASHO	Ashiyiah	5.01	145	P	Pn	03 45 09.5

PSA00	**Pilbara Seismi**	**15.44**	**199**	P	**P**	**03 47 58.0**	**-1.3**
PSA00	**Pilbara Seismi**	**15.44**	**199**	P	**P**	**03 47 58.8**	**-0.5**
PSA00				IAmb	IAmb	03 48 00.0	
	comp=Z,2.8nm,0.8s						
WB0	**Warramunga Arr**	**15.59**	**146**	P	**P**	**03 48 00.8**	**-0.1**
WB0				IAmb	IAmb	03 48 02.7	
	comp=Z,7.2nm,1.1s						
WRAB	**Tennant Creek**	**15.70**	**146**	P	**P**	**03 48 02.2**	**+0.2**
WRAB				IAmb	IAmb	03 48 02.8	
	comp=Z,4.5nm,0.7s						
WRA	**Warramunga Arr**	**15.70**	**146**	P	**P**	**03 48 01.7**	**-0.4**
	comp=Z,2.9nm,0.6s,baz=319,slow=9.1,SNR=42						
WRA	**Warramunga Arr**	**15.70**	**146**		**P**	**03 48 01.3**	**-0.7**
WR8	**Warramunga Arr**	**15.80**	**146**		**P**	**03 48 03.1**	**+0.1**
WR8				IAmb	IAmb	03 48 04.9	
	comp=Z,9.6nm,0.6s						
AS31	**Alice Springs**	**18.64**	**154**		**P**	**03 48 30.2**	**+0.9**
ASAR	**Alice Springs**	**18.64**	**154**	P	**P**	**03 48 30.4**	**+1.2**
	comp=Z,3.4nm,0.4s,baz=344,slow=14,SNR=66						
ASAR	**Alice Springs**	**18.64**	**154**	P	**P**	**03 48 30.0**	**+0.7**
MORW	**Morawa**	**23.64**	**200**	P	**P**	**03 49 13.2**	**-1.1**
MORW				IAmb	IAmb	03 49 35.6	
	comp=Z,15nm,1.4s						
FORT	**Forrest**	**23.88**	**174**	P	**P**	**03 49 16.4**	**0.0**
FORT				IAmb	IAmb	03 49 17.5	
	comp=Z,5.6nm,0.8s						
NWAO	**Narrogin (SRO)**	**26.90**	**195**	P	**P**	**03 49 42.5**	**-0.5**
NWAO				IAmb	IAmb	03 50 08.6	
	comp=Z,12nm,0.9s						
BBOO	**Buckleboo**	**27.67**	**160**	P	**P**	**03 49 50.0**	**+0.3**
BBOO				IAmb	IAmb	03 49 54.7	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**29.17**	**150**	P	**P**	**03 50 04.0**	**+1.1**
	comp=Z,2.7nm,0.5s,baz=333,slow=10,SNR=9.5						
	comp=Z,2.7nm,0.5s						
STKA	**Stephens Creek**	**29.17**	**150**	P	**P**	**03 50 03.7**	**+0.9**
JCJ	**Chichijima**	**37.63**	**25**	P	**P**	**03 51 12.5**	**-1.7**
DZM	**Mont Dzumac**	**42.54**	**115**	P	**P**	**03 51 53.1**	**-0.5**
DZM				IAmb	IAmb	03 52 01.3	
	comp=Z,20nm,1.4s						
CASY	**Casey**	**60.12**	**187**	P	**P**	**03 54 02.1**	**+2.2**
CASY				IAmb	IAmb	03 54 21.3	
	comp=Z,27nm,1.5s						
MKAR	**Makanchi Array**	**65.62**	**329**	P	**P**	**03 54 35.7**	**0.0**
	comp=Z,0.7nm,0.6s,baz=121,slow=7.6,SNR=4.1						
	comp=Z,0.7nm,0.6s						
PETK	**Petropavlovsk-**	**65.86**	**21**	P	**P**	**03 54 37.4**	**+0.4**
AAK	**Ala-Archa**	**67.46**	**322**	P	**P**	**03 54 46.3**	**-1.0**
ZALV	**Zalesovo Beam**	**69.48**	**336**	P	**P**	**03 54 58.5**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=150,slow=6.3,SNR=4.3						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**69.48**	**336**	P	**P**	**03 54 58.2**	**-0.9**
KURBB	**Kurchatov Arra**	**70.01**	**330**	P	**P**	**03 55 02.5**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=145,slow=5.4,SNR=2.6						
	comp=Z,0.5nm,0.5s						
KURK	**Kurchatov**	**70.03**	**331**	P	**P**	**03 55 02.1**	**-0.3**
ABKAR	**Akbulak array**	**79.51**	**323**	P	**P**	**03 55 54.5**	**-1.2**

*SOME **13** 03:49:39.9, 43.02N×80.57E, h20km*
*KRNET **13** 03:49:40.4±0.1, 43.02N×80.62E, h25km, mb3.6*

ISC 13 03:49:40.4±1.5, **43.04N**±0.05×**80.56E**±0.06, **h10**km, **n23, σ2.9 08**/45, **10C-5D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**0.44**	**340**	*e*P	**Pb**	**03 49 49.9**	**-0.4**
KTMS	68nm,0.1s			*e*S	**Sb**	**03 49 57.0**	**0.0**
	56nm,0.2s						
SHLS	**Shalkode**	**0.81**	**279**	*e*P	**Pg**	**03 49 51.3**	**-4.7**
SHLS	79nm,0.1s			*e*S	**Sg**	**03 49 59.5**	**-7.2**
	318nm,0.2s						
UZB	**Uzynbulak**	**1.13**	**276**	*e*P	**Pb**	**03 50 01.4**	**-0.7**
UZB	24nm,0.1s			*e*S	**Sb**	**03 50 16.7**	**-0.2**
	174nm,0.3s						
DJR	**Jarkent**	**1.41**	**337**	*e*P	**Pg**	**03 50 06.5**	**-1.0**
DJR	21nm,0.3s			*e*S	**Sg**	**03 50 25.5**	**-0.3**
	28nm,0.2s						
KPKS	**Kokpek**	**1.44**	**288**	*e*P	**Pg**	**03 50 07.2**	**-0.8**
KPKS	31nm,0.1s			*e*S	**Sg**	**03 50 26.7**	**+0.1**
	206nm,0.2s						
PRZ	**Przheval'sk**	**1.68**	**252**	⇑*i*P	**Pb**	**03 50 11.1**	**-0.5**
PRZ				⇑*i*S	**Sb**	**03 50 33.5**	**+0.6**
ANVS	**Anan'yevo**	**2.14**	**264**	⇓*e*P	**Pb**	**03 50 18.2**	**-1.1**
ANVS				⇓*e*S	**Sb**	**03 50 45.5**	**-0.5**
ARXS	**Arharly**	**2.31**	**302**	*e*P	**Pb**	**03 50 21.8**	**-0.3**
ARXS	4.9nm,0.2s			*e*S	**Sb**	**03 50 51.7**	**+1.0**
	46nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.42**	**238**	⇑*i*P	**Pn**	**03 50 21.7**	**+1.3**
TARG				⇑*i*S	**Sn**	**03 50 52.0**	**+1.7**
TDK	**Taldyqorghan**	**2.50**	**322**	*e*P	**Pb**	**03 50 25.3**	**-0.2**
TDK	49nm,0.2s			*e*S	**Sg**	**03 50 57.9**	**-2.9**
	89nm,0.2s						
KOTS	**Kotyrbulak**	**2.53**	**276**	*e*P	**Pb**	**03 50 25.6**	**-0.3**
KOTS	13nm,0.2s			*e*S	**Sb**	**03 50 58.4**	**+1.2**
	64nm,0.4s						
TNSS	**Tian-Shan**	**2.65**	**271**	*e*P	**Pb**	**03 50 27.7**	**-0.4**
TNSS	1.7nm,0.2s			*e*S	**Sb**	**03 51 02.1**	**+1.3**
	5.1nm,0.2s						
KDJ	**Kajisay**	**2.65**	**251**	⇓*i*P	**Pn**	**03 50 24.8**	**+1.4**
KDJ				⇓*i*S	**Sn**	**03 50 57.3**	**+1.6**
IZV	**Izvestkoviy**	**2.89**	**271**	*e*P	**Pb**	**03 50 32.2**	**0.0**
IZV	5.3nm,0.2s			*e*S	**Sb**	**03 51 09.5**	**+1.9**
	24nm,0.3s						
KTBS	**Karatobe**	**2.91**	**285**	*e*P	**Pb**	**03 50 32.5**	**+0.2**
KTBS	3.6nm,0.1s			*e*S	**Sb**	**03 51 10.1**	**+2.1**
	0.6nm,0.3s						
MTBS	**Maitube**	**3.03**	**273**	*e*P	**Pb**	**03 50 34.6**	**+0.2**
MTBS	3.7nm,0.1s			*e*S	**Sb**	**03 51 13.7**	**+2.3**
	20nm,0.4s						
KUU	**Kurty**	**3.19**	**287**	*e*P	**Pb**	**03 50 37.7**	**+0.6**
KUU	6.4nm,0.1s			*e*S	**Sb**	**03 51 19.0**	**+2.9**
	19nm,0.3s						
KST	**Kastek**	**3.37**	**272**	*e*P	**Pb**	**03 50 40.5**	**+0.2**
KST	4.0nm,0.2s			*e*S	**Sb**	**03 51 23.8**	**+2.4**
	9.2nm,0.4s						
BOOM	**Boomskoye usch**	**3.44**	**262**	⇑*e*P	**Pn**	**03 50 36.0**	**+1.7**
BOOM				⇑*i*S	**Sn**	**03 51 16.7**	**+1.5**
DGS	**Degeres**	**3.51**	**275**	*e*P	**Pb**	**03 50 43.2**	**+0.6**
DGS	4.4nm,0.4s			*e*S	**Sb**	**03 51 28.5**	**+3.1**
	11nm,0.5s						
KRBS	**Karabastau**	**3.62**	**282**	*e*P	**Pb**	**03 50 45.3**	**+0.8**
KRBS	4.3nm,0.4s			*e*S	**Sb**	**03 51 32.1**	**+3.6**
	2.8nm,0.5s						
MK31	**Makanchi Array**	**3.95**	**18**	⇑Pn	**Pn**	**03 50 43.9**	**+2.8**
	0.2nm,0.4s,baz=200,slow=13,SNR=10						
MK31				⇓Pg	**Pg**	**03 50 52.4**	**-3.7**
	0.1nm,0.2s,baz=196,slow=15,SNR=8.8						
MK31				⇑Lg	Lg	03 51 48.5	
	4.7nm,0.7s,baz=197,slow=28,SNR=9.1						
AAK	**Ala-Archa**	**4.48**	**267**	⇑Pg	**Pb**	**03 51 00.8**	**+1.7**
AAK	1.9nm,0.8s			⇑Lg	Lg	03 52 02.9	
	1.7nm,0.6s						

*IDC **13** 03:50:08.8±1.4, 26.37S×71.79E, h0km, mb4.0/10, mbtmp4.0/10, MS3.8/27, Error ellipse: s-maj=44.0km s-min=22.3km az=18.0*
*NEIC **13** 03:50:11.3±1.4, 26.19S±0.07×71.9E±0.1, h10km±1km, mb4.7/19, Error ellipse: s-maj=20.0km s-min=6.4km az=234.0*

ISC 13 03:50:10.8±0.5, **26.2S**±0.1×**71.84E**±0.09, **h10**km, **n70, σ0.57**/36, **mb4.5**/20, **MS3.8**/27, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCAM	**Rodrigues Isla**	**10.09**	**308**	Pn	**Pn**	**03 52 35.7**	**0.0**
H08S1	**Diego Carcia H**	**18.44**	**2**	T	T	04 13 32.4	
	baz=183,slow=76,SNR=13						
H08S2	**Diego Garcia H**	**18.44**	**2**	T	T	04 13 32.3	
	baz=183,slow=76,SNR=15						
H08S3	**Diego Garcia H**	**18.46**	**2**	T	T	04 13 33.0	
	baz=183,slow=76,SNR=58						
H04N2	**CROZET ISLANDS**	**25.55**	**214**	T	T	04 22 03.1	
	baz=47,slow=74,SNR=533						
H04N1	**CROZET ISLANDS**	**25.56**	**214**	T	T	04 22 10.6	
	baz=47,slow=74,SNR=452						
H04N3	**CROZET ISLANDS**	**25.57**	**214**	T	T	04 22 05.3	
	baz=47,slow=74,SNR=545						
PALK	**Pallekele**	**34.34**	**16**	LR	LR	04 08 09.5	
	comp=Z,230nm,19.0s,baz=204,slow=31						
H01W2	**Cape Leeuwin H**	**37.23**	**114**	T	T	04 36 43.8	
	baz=272,slow=74,SNR=4.3						
H01W3	**Cape Leeuwin H**	**37.23**	**114**	T	T	04 36 50.3	
	baz=272						
H01W1	**Cape Leeuwin H**	**37.24**	**114**	T	T	04 36 48.7	
	baz=272,slow=74,SNR=4.9						
LEM	**Lembang**	**39.13**	**67**	LR	LR	04 09 43.8	
	comp=Z,131nm,19.7s,baz=205,slow=30						
PMBI	**Palembang**	**39.15**	**59**	P	**P**	**03 57 38.7**	**-0.3**
BOSA	**Boshof**	**41.23**	**256**	LR	LR	04 11 41.5	
	comp=Z,174nm,18.9s,baz=101,slow=31						
LBTB	**Lobatse**	**41.55**	**261**	LR	LR	04 11 59.4	
	comp=Z,183nm,20.1s,baz=108,slow=32						
KMBO	**Kilima Mbogo**	**41.56**	**301**	P	**P**	**03 57 59.2**	**-0.1**
	16nm,0.4s,baz=210,slow=16,SNR=6.8						
MAW	**Mawson**	**41.81**	**185**	LR	LR	04 12 51.8	
	comp=Z,191nm,19.2s,baz=12,slow=33						
KULM	**Kulim**	**41.94**	**46**	P	**P**	**03 58 02.7**	**+0.7**
KULM				IAmb	IAmb	03 58 10.7	
	comp=Z,11nm,0.9s						
LSZ	**Lusaka**	**42.07**	**276**	LR	LR	04 14 36.7	
	comp=Z,103nm,18.1s,baz=127,slow=35						
MBWA	**Marble Bar**	**43.95**	**94**	P	**P**	**03 58 18.9**	**+0.5**
MBWA				IAmb	IAmb	03 58 19.8	
	comp=Z,21nm,1.2s						
SUR	**Sutherland**	**44.60**	**250**	LR	LR	04 13 22.2	
	comp=Z,202nm,20.0s,baz=110,slow=31						
SUR	**Sutherland**	**44.60**	**250**	P	**P**	**03 58 23.8**	**+0.1**
SUR				IAmb	IAmb	03 58 36.4	
	comp=Z,30nm,1.5s						
CASY	**Casey**	**46.77**	**160**	P	**P**	**03 58 40.8**	**+0.8**
ATD	**Arta Tunnel**	**46.91**	**319**	P	**P**	**03 58 41.6**	**-0.2**
MBAR	**Mbarara**	**47.03**	**296**	LR	LR	04 14 12.4	
	comp=Z,43nm,20.9s,baz=130,slow=31						
FURI	**Furi**	**47.48**	**313**	LR	LR	04 17 18.9	
	comp=Z,36nm,18.5s,baz=58,slow=34						
TSUM	**Tsumeb**	**50.24**	**266**	LR	LR	04 18 02.3	
	comp=Z,73nm,20.6s,baz=152,slow=33						
KAPI	**Kappang**	**50.34**	**74**	P	**P**	**03 59 07.8**	**-0.5**
KAPI				IAmb	IAmb	03 59 10.9	
	comp=Z,10nm,1.1s						
CMAR	**Chiang Mai Arr**	**51.59**	**33**	P	**P**	**03 59 18.9**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=220,slow=7.6,SNR=13						
CMAR				LR	LR	04 18 58.4	
	comp=Z,66nm,18.2s,baz=225,slow=33						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**51.59**	**33**	P	**P**	**03 59 18.0**	**+0.4**
ASAR	**Alice Springs**	**55.87**	**102**	P	**P**	**03 59 48.5**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=250,slow=7.2,SNR=5.8						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**55.87**	**102**	P	**P**	**03 59 48.0**	**-1.0**
AS31	**Alice Springs**	**55.87**	**102**	P	**P**	**03 59 48.9**	**-0.1**
WRA	**Warramunga Arr**	**57.37**	**98**	P	**P**	**03 59 59.3**	**-0.5**
	comp=Z,1.2nm,1.0s,baz=257,slow=9.7,SNR=5.0						
	comp=Z,1.2nm,1.0s						
WR8	**Warramunga Arr**	**57.51**	**98**	P	**P**	**03 59 59.9**	**-0.9**
LSA	**Lhasa**	**58.56**	**20**	P	**P**	**04 00 07.4**	**-0.9**
LSA				IAmb	IAmb	04 00 18.1	
	comp=Z,6.8nm,1.3s						
STKA	**Stephens Creek**	**60.32**	**113**	LR	LR	04 23 43.6	
	comp=Z,86nm,18.0s,baz=209,slow=33						
STKA	**Stephens Creek**	**60.32**	**113**	P	**P**	**04 00 19.6**	**-0.4**
KBL	**Kabul**	**60.44**	**357**	P	**P**	**04 00 20.2**	**-0.7**
KBL				IAmb	IAmb	04 00 23.5	
	comp=Z,3.7nm,0.8s						
SNAA	**Sanae**	**60.57**	**201**	LR	LR	04 22 21.5	
	comp=Z,58nm,19.1s,baz=282,slow=32						
DAV	**Davao City (W)**	**61.71**	**65**	LR	LR	04 27 07.2	
	comp=Z,47nm,19.7s,baz=228,slow=36						
TOO	**Toolangi**	**62.13**	**120**	P	**P**	**04 00 32.3**	**0.0**
TOO				IAmb	IAmb	04 00 48.9	
	comp=Z,12nm,1.2s						
SIJI	**Sorong**	**62.38**	**76**	LR	LR	04 25 41.0	
	comp=Z,44nm,20.5s,baz=230,slow=34						
QSPA	**South Pole Qui**	**63.95**	**180**	LR	LR	04 24 54.1	
	comp=Z,47nm,20.3s,baz=298,slow=33						
QSPA	**South Pole Qui**	**63.95**	**180**	P	**P**	**04 00 43.5**	**-0.6**
QSPA				IAmb	IAmb	04 00 44.7	
	comp=Z,3.1nm,1.0s						
VNDA	**Vanda**	**64.65**	**166**	P	**P**	**04 00 48.4**	**+0.2**
VNDA				IAmb	IAmb	04 01 06.2	
	comp=Z,7.6nm,1.2s						
EIL	**Elat**	**65.83**	**325**	LR	LR	04 24 46.1	
	comp=Z,39nm,21.7s,baz=102,slow=32						
EDA	**Edea**	**66.64**	**287**	P	**P**	**04 01 02.1**	**0.0**
EDA				IAmb	IAmb	04 01 08.2	
	comp=Z,8.2nm,1.4s						
CTA	**Charters Tower**	**67.87**	**102**	LR	LR	04 27 10.2	
	comp=Z,56nm,21.0s,baz=224,slow=33						
AAK	**Ala-Archa**	**68.51**	**2**	LR	LR	04 27 32.1	
	comp=Z,118nm,21.2s,baz=196,slow=33						
MKAR	**Makanchi Array**	**73.24**	**7**	P	**P**	**04 01 42.8**	**+0.9**
	comp=Z,2.7nm,1.0s,baz=189,slow=6.1,SNR=13						
	comp=Z,2.7nm,1.0s						
MKAR	**Makanchi Array**	**73.24**	**7**	P	**P**	**04 01 41.4**	**-0.6**
BRTR	**Keskin Array B**	**74.61**	**330**	P	**P**	**04 01 50.6**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=168,slow=7.2,SNR=4.5						
	comp=Z,0.8nm,0.9s						
BRTR	**Keskin Array B**	**74.61**	**330**	P	**P**	**04 01 50.3**	**0.0**
KURBB	**Kurchatov Arra**	**76.69**	**4**	P	**P**	**04 02 02.1**	**+0.4**
	comp=Z,1.7nm,1.0s,baz=196,slow=6.2,SNR=7.5						
	comp=Z,1.7nm,1.0s						
KURK	**Kurchatov**	**76.79**	**4**	P	**P**	**04 02 03.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**78.57**	**291**	P	**P**	**04 02 13.2**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=173,slow=6.1,SNR=4.7						
	comp=Z,0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.57**	**291**	P	**P**	**04 02 12.9**	**-0.2**
ZALV	**Zalesovo Beam**	**80.58**	**8**	P	**P**	**04 02 23.4**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=228,slow=1.8,SNR=4.7						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**80.58**	**8**	P	**P**	**04 02 22.9**	**-0.1**
BELG	**Belogornoye**	**81.05**	**345**	LR	LR	04 36 43.7	
	comp=Z,128nm,18.9s,baz=285,slow=34						
DBIC	**Dinokro**	**81.10**	**282**	LR	LR	04 36 33.3	
	comp=Z,75nm,18.2s,baz=150,slow=34						
JNU	**Nakatsue**	**81.41**	**47**	LR	LR	04 37 40.4	
	comp=Z,60nm,18.9s,baz=212,slow=35						
KSRS	**Korea Array**	**82.33**	**42**	P	**P**	**04 02 33.0**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=235,slow=4.4,SNR=5.5						
KSRS				LR	LR	04 36 36.4	
	comp=Z,52nm,21.1s,baz=215,slow=34						
	comp=Z,1.6nm,0.8s						
AKASG	**Malin Array Be**	**85.30**	**334**	P	**P**	**04 02 48.2**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=133,slow=4.5,SNR=2.2						
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**85.30**	**334**	P	**P**	**04 02 47.7**	**0.0**
AKASG				IAmb	IAmb	04 02 58.5	
	comp=Z,4.1nm,1.4s						
MJAR	**Matsushiro Arr**	**88.28**	**48**	LR	LR	04 42 39.0	
	comp=Z,33nm,18.1s,baz=182,slow=36						
KLR	**Kul'dur**	**92.06**	**35**	LR	LR	04 44 50.9	
	comp=Z,10nm,18.9s,baz=252,slow=36						
ASAJ	**Asahikawa**	**95.22**	**43**	LR	LR	04 45 08.2	
	comp=Z,34nm,18.4s,baz=88,slow=35						
YAK	**Yakutsk**	**99.29**	**24**	LR	LR	04 48 32.9	
	comp=Z,33nm,20.9s,baz=312,slow=35						

*IDC **13** 03:55:45.5±0.7, 27.47N×129.18E, h0km, mb4.2/19, mbtmp4.2/21, ML3.8/2, MS3.5/11, Error ellipse: s-maj=20.1km s-min=13.5km az=85.0*
*NIED **13** 03:55:48.3, 27.58N×129.15E, h29km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr=2.05; Mθθ2.60; Mφφ-0.55; Mrθ0.71; Mθφ-1.61; Mφr1.60; Fault plane solution: M03.35000×10^15^ NP1: φ=145.00000°, δ56.00000°, λ-41.00000°. NP2: φ=261.00000°, δ57.00000°, λ-138.00000°.*
*JMA **13** 03:55:48.3±0.2, 28.1N×129.9E, h29km±3km, MD4.1/11, MV4.0/11, NEAR AMAMI-OSHIMA ISLAND*
JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.
*NEIC **13** 03:55:48.2±1.8, 27.34N±0.07×129.27E±0.05, h10km±1km, mb4.7/26, Error ellipse: s-maj=11.6km s-min=7.2km az=163.0*

*BGR **13** 03:56:01.0, 28.12N×128.79E, h33km, mb5.0*

ISC 13 03:55:47.3±0.9, **27.44N**±0.03×**129.30E**±0.04, **h6**km±5km, **n160, σ2.9 09**/148, **mb4.7**/56, **MS3.9**/13, **8C-9D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.46**	**319**	*i*P	**Pg**	**03 55 55.2**	**-1.1**
JTK				A	A	03 55 55.2	
	comp=N,64nm,0.6s,comp=E,36nm,0.4s						
JTK				*e*S	**Sg**	**03 56 00.2**	**-2.1**
JOKE	**Okinoerabujima**	**0.65**	**263**	*i*P	**Pg**	**03 55 59.2**	**-0.5**
JOKE				A	A	03 55 59.2	
	comp=N,23nm,1.1s,comp=E,19nm,0.5s						
JOKE				S	**Sg**	**03 56 06.8**	**-1.5**
JAMN	**Amaminishikomi**	**0.81**	**352**	*i*P	**Pg**	**03 56 00.9**	**-1.9**
JAMN				*e*S	**Sg**	**03 56 10.1**	**-3.3**
JYRO	**Yoronjima**	**0.86**	**242**	*i*P	**Pg**	**03 56 03.6**	**-0.2**
JYRO				A	A	03 56 03.6	
	comp=N,10.0nm,2.2s,comp=E,10.0nm,9.3s						
JYRO				*e*S	**Sg**	**03 56 15.2**	**+0.3**
JAM	**Amami Oshima**	**1.01**	**16**	*e*P	**Pg**	**03 56 05.2**	**-1.5**
JAM				A	A	03 56 05.2	
	comp=N,6.0nm,3.5s,comp=E,8.0nm,4.6s						
JAM				*e*S	**Sg**	**03 56 17.7**	**-2.0**
JZK	**Kikaishima**	**1.06**	**34**	P	**Pg**	**03 56 08.1**	**+0.5**
JZK				A	A	03 56 08.1	
	comp=N,33nm,1.9s,comp=E,31nm,2.2s						
JOW	**Kunigami**	**1.09**	**237**	Pn	**Pg**	**03 56 07.7**	**-0.5**
	comp=E,1μm,0.3s,baz=118,slow=27,SNR=2156						
JOW				Sn	**Sg**	**03 56 19.7**	**-2.7**
	comp=E,768nm,0.3s,baz=120,slow=20,SNR=6.6						
JOW	**Kunigami**	**1.09**	**237**		**Pg**	**03 56 07.8**	**-0.5**
JOW					**Sg**	**03 56 20.3**	**-2.1**
JOW	**Kunigami**	**1.09**	**237**	P	**Pg**	**03 56 07.9**	**-0.3**
JOW	**Kunigami**	**1.09**	**237**	*i*P	**Pg**	**03 56 07.8**	**-0.5**
JOW				A	A	03 56 07.8	
	comp=N,9.0nm,1.1s,comp=E,9.0nm,0.9s						
JOW				*e*S	**Sg**	**03 56 22.0**	**-0.4**
JIH	**Iheya**	**1.25**	**252**	*e*P	**Pn**	**03 56 09.9**	**-1.4**
JIH				A	A	03 56 09.9	
	comp=N,12nm,1.2s,comp=E,8.0nm,1.0s						
JIH				*e*S	**Sb**	**03 56 25.1**	**-2.5**
JNTH	**Nagotoyohara**	**1.46**	**231**	P	**Pn**	**03 56 14.2**	**-0.1**
JMZ	**Minamidaito 2**	**2.36**	**133**		**Pn**	**03 56 25.2**	**-1.4**
JMZ	**Minamidaito 2**	**2.36**	**133**	P	**Pn**	**03 56 25.3**	**-1.4**
JSU	**Suzuyama**	**4.18**	**14**		**Pn**	**03 56 51.5**	**-0.2**
JSU	**Suzuyama**	**4.18**	**14**	P	**Pn**	**03 56 51.4**	**-0.3**
JNU	**Nakatsue**	**5.83**	**13**	Pn	**Pn**	**03 57 14.9**	**+0.5**
	comp=E,4.3nm,0.3s,baz=300,slow=4.5,SNR=18						
JNU				LR	LR	03 59 43.6	
	comp=E,243nm,21.6s,baz=192,slow=41						
	comp=E,51nm,0.7s						
JMN	**Monobe**	**7.41**	**31**	P	**Pn**	**03 57 36.3**	**+0.2**
YHNB	**Yeheng**	**7.64**	**251**		**Pn**	**03 57 39.2**	**-0.1**
YHNB	**Yeheng**	**7.64**	**251**	P	**Pn**	**03 57 40.3**	**+1.0**
NACB	**Ninganchiao**	**7.66**	**247**	P	**Pn**	**03 57 39.9**	**+0.4**
YULB	**Yu-li**	**8.28**	**243**	P	**Pn**	**03 57 48.3**	**+0.3**
SSLB	**Suanglung**	**8.36**	**246**		**Pn**	**03 57 49.0**	**-0.2**
SSLB	**Suanglung**	**8.36**	**246**	P	**Pn**	**03 57 49.3**	**+0.1**
KSRS	**Korea Array**	**10.05**	**354**	Pn	**Pn**	**03 58 13.3**	**+1.0**
	comp=E,0.3nm,0.3s,baz=178,slow=14,SNR=7.0						
KSRS				LR	LR	04 02 19.8	
	comp=E,400nm,18.6s,baz=175,slow=39						
NJ2	**Nanjing**	**10.17**	**299**	*e*P	**Pn**	**03 58 15.6**	**+1.7**
NJ2				pP		03 58 20.3	
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=N,450nm,12.2s						
NJ2				LR	LR		
	comp=E,540nm,12.9s						
NJ2				LR	LR		
	comp=Z,620nm,14.5s						
HNS	**HongShan**	**15.81**	**313**	⇓P	**P**	**03 59 36.0**	**+1.6**
HNS				S	**S**	**04 02 37.3**	**-3.5**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HNS				LR	LR		
	comp=N,480nm,14.3s						
HNS				LR	LR		
	comp=E,230nm,14.3s						
HNS				LR	LR		
	comp=E,410nm,13.5s						
BJI2	**Beijing**	**16.61**	**322**	P	**P**	**03 59 45.6**	**+2.3**
BJI2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BJT	**Baijiatuau**	**16.61**	**322**	Pn	**Pn**	**03 59 41.0**	**+0.1**
CN2	**Changchun**	**16.62**	**350**	P	**P**	**03 59 45.1**	**+1.6**
CN2				S	**S**	**04 02 53.3**	**-4.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,400nm,14.0s						
CN2				LR	LR		
	comp=E,500nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
BNX	**BinXian**	**18.33**	**356**	⇑P	**P**	**04 00 02.1**	**-0.2**
BNX				pmax	pmax		
	comp=Z,4.0nm,2.1s						
XAN	**Xi'an**	**18.69**	**296**	⇑P	**Pn**	**04 00 06.3**	**-0.5**
XAN				pP	sP	04

CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 LR LR
comp=N,450nm,11.4s
CD2 LR LR
comp=E,430nm,11.4s
CD2 LR LR
comp=Z,320nm,13.3s
LZH Lanzhou 23.24 298 *e*P **P 04 00 59.5 +3.8**
LZH sP sP 04 01 06.3 +8.7
LZH pmax pmax
comp=Z,7.0nm,1.2s
LZH LR LR
comp=N,280nm,13.4s
LZH LR LR
comp=E,300nm,13.7s
LZH LR LR
comp=Z,460nm,13.4s
LZDM Lanzhou Array 23.33 298 P **P 04 00 54.2 -2.5**
comp=Z,0.7nm,0.3s,baz=147,slow=8.5,SNR=8.9
comp=Z,0.7nm,0.3s
KMI2 Kunming 23.90 271 P **P 04 01 03.0 +0.7**
KMI2 pmax pmax
comp=Z,7.0nm,0.9s
PZH PanZhiHua 24.56 274 P **P 04 01 09.3 +1.0**
SONM Songino Array 27.09 325 P **P 04 01 30.3 -0.7**
SONM LR LR 04 12 15.1
comp=Z,1.1nm,0.8s,baz=133,slow=12,SNR=5.0
comp=Z,63nm,20.5s,baz=220,slow=37
comp=Z,1.1nm,0.8s
SONM Songino Array 27.09 325 P **P 04 01 29.9 -1.0**
GTA2 Gaotai 27.29 304 *e*P **P 04 01 30.3 -2.6**
GTA2 pP pP 04 01 35.3 +1.0
GTA2 pmax pmax
comp=Z,3.0nm,1.2s
GTA2 LR LR
comp=N,220nm,14.9s
GTA2 LR LR
comp=E,120nm,13.8s
GTA2 LR LR
comp=Z,280nm,13.1s
CMAR Chiang Mai Arr 29.28 259 P **P 04 01 48.0 -2.7**
comp=Z,1.3nm,0.3s,baz=66,slow=8.1,SNR=1.7
comp=Z,1.3nm,0.3s
CMAR Chiang Mai Arr 29.28 259 P **P 04 01 49.6 -1.0**
GOMU GeErMu 30.45 295 P **P 04 02 00.5 -0.8**
GOMU pP sP 04 02 04.3 +1.0
GOMU pmax pmax
comp=Z,6.0nm,0.8s
YAK Yakutsk 34.59 0 LR LR 04 16 50.4
comp=Z,61nm,18.1s,baz=122,slow=37
H11N2 WAKE ISLAND Hy 35.20 94 T T 04 40 03.8
baz=290,slow=74,SNR=161
H11N1 WAKE ISLAND Hy 35.20 94 T T 04 40 03.1
baz=290,slow=74,SNR=141
H11N3 WAKE ISLAND Hy 35.22 94 T T 04 40 01.3
baz=290,slow=74,SNR=183
H11S3 WAKE ISLAND Hy 35.45 96 T T 04 40 24.4
baz=291,slow=75,SNR=27
H11S1 WAKE ISLAND Hy 35.46 96 T T 04 40 24.2
baz=291,slow=75,SNR=16
H11S2 WAKE ISLAND Hy 35.47 96 T T 04 40 24.7
baz=291,slow=75,SNR=14
WMQ Urumqi 37.12 307 *e*P **P 04 03 02.8 +3.9**
MKAR Makanchi Array 41.46 311 P **P 04 03 32.6 -2.4**
comp=Z,1.5nm,0.7s,baz=97,slow=9.9,SNR=8.1
MKAR PcP **PcP 04 05 31.2 -1.6**
comp=Z,0.9nm,0.7s,baz=74,slow=4.3,SNR=4.9
comp=Z,1.5nm,0.7s
MKAR Makanchi Array 41.46 311 P **P 04 03 32.9 -2.0**
MKAR **PcP 04 05 32.6 -0.1**
ZALV Zalesovo Beam 41.88 322 P **P 04 03 35.4 -2.9**
comp=Z,1.0nm,0.4s,baz=104,slow=9.9,SNR=8.8
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 41.88 322 P **P 04 03 36.8 -1.5**
TARG Taragay, Kyrgy 44.10 303 **P 04 03 56.9 0.0**
TARG IAmb IAmb 04 04 02.7
comp=Z,6.8nm,1.0s
TIXI Tiksi 44.25 360 LR LR 04 23 07.9
comp=Z,69nm,19.1s,baz=194,slow=37
KURK Kurchatov 44.61 316 **P 04 04 01.7 +1.3**
KURBB Kurchatov Arra 44.65 315 P **P 04 03 58.1 -2.6**
comp=Z,1.3nm,0.7s,baz=102,slow=8.6,SNR=15
comp=Z,1.3nm,0.7s
NRN Naryn 45.45 302 P **P 04 04 09.2 +1.6**
KSH2 Kashi 45.81 299 P **P 04 04 13.0 +2.7**
KSH2 pmax pmax
comp=Z,4.0nm,0.6s
WRA Warramunga Arr 47.35 174 P **P 04 04 21.4 -0.9**
comp=Z,1.9nm,0.8s,baz=355,slow=7.9,SNR=9.6
comp=Z,1.9nm,0.8s
WRA Warramunga Arr 47.35 174 P **P 04 04 20.3 -2.0**
NRIK Noril'sk 48.40 342 LR LR 04 26 39.1
comp=Z,122nm,18.6s,baz=136,slow=38
KK31 Karatay Array 49.50 305 **P 04 04 40.1 +1.4**
KK31 IAmb IAmb 04 04 43.0
comp=Z,3.4nm,0.6s
KKAR Karatay Array 49.50 305 **P 04 04 37.8 -0.9**
CTA Charters Tower 50.02 159 P **P 04 04 41.9 -0.9**
comp=Z,4.7nm,0.8s,baz=30,slow=5.4,SNR=5.7
comp=Z,4.7nm,0.8s
BVAR Borovoye Array 50.02 318 P **P 04 04 41.4 -1.2**
comp=Z,4.9nm,0.7s,baz=98,slow=9.1,SNR=16
BVAR PcP **PcP 04 06 02.3 -0.1**
comp=Z,1.5nm,0.6s,baz=106,slow=3.2,SNR=4.0
comp=Z,4.9nm,0.7s
BORK Borovoye 50.06 318 **P 04 04 42.8 -0.1**
BORK IAmb IAmb 04 04 47.2
comp=Z,7.6nm,0.7s
ASAR Alice Springs 51.00 175 P **P 04 04 49.5 -0.7**
comp=Z,1.5nm,0.8s,baz=5.7,slow=7.6,SNR=12
comp=Z,1.5nm,0.8s
ASAR Alice Springs 51.00 175 P **P 04 04 48.4 -1.8**
C16K Lisburne Hills 55.71 24 **P 04 05 24.4 +0.1**
C16K IAmb IAmb 04 05 26.1
comp=Z,13nm,1.4s
AB31 Akbulak array 56.52 313 **P 04 05 30.9 +0.5**
AB31 IAmb IAmb 04 05 34.1
comp=Z,7.2nm,0.7s
ABKAR Akbulak array 56.52 313 **P 04 05 29.9 -0.5**
ARTI Arti 57.14 321 P **P 04 05 35.2 +0.5**
ARTI IAmb IAmb 04 05 39.3
comp=Z,9.1nm,0.4s
UOSS Minazif 64.73 286 **P 04 06 27.0 +0.2**
SPITS Spitsbergen Ar 67.84 348 P **P 04 06 44.0 -1.9**
comp=Z,16nm,1.1s,baz=92,slow=7.5,SNR=8.5
comp=Z,16nm,1.1s
KBZ Khabaz 69.13 309 P **P 04 06 54.4 -0.2**
comp=Z,14nm,0.8s,baz=71,slow=3.0,SNR=10
KIV Kislovodsk 69.21 310 P **P 04 06 56.1 +1.0**
ARCES ARCESS Array B 69.23 339 P **P 04 06 54.5 -0.3**
comp=Z,3.9nm,0.7s,baz=84,slow=4.8,SNR=6.9
comp=Z,3.9nm,0.7s
ARCES ARCESS Array B 69.23 339 P **P 04 06 55.6 +0.8**
FINES FINESS Array B 72.28 331 P **P 04 07 11.3 -2.1**
comp=Z,15nm,0.9s,baz=100,slow=2.3,SNR=12
comp=Z,15nm,0.9s
FINES FINESS Array B 72.28 331 P **P 04 07 14.8 +1.4**
RES Resolute Bay 74.19 11 P **P 04 07 25.2 +0.7**
RES IAmb IAmb 04 07 30.6
comp=Z,2.9nm,0.7s
AK03 Malin Array Si 75.22 320 P **P 04 07 30.8 -0.1**
AKASG Malin Array Be 75.23 320 P **P 04 07 28.2 -2.7**
comp=Z,0.3nm,0.3s,baz=60,slow=6.5,SNR=9.3
AKASG LR LR 04 43 06.7
comp=Z,97nm,20.5s,baz=34,slow=38
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 75.23 320 P **P 04 07 30.0 -1.0**
AKBB Malin Array Si 75.23 320 P **P 04 07 31.3 +0.4**
AK09 Malin Array Si 75.23 320 P **P 04 07 32.2 +1.3**
AK08 Malin Array Si 75.24 320 P **P 04 07 30.8 -0.2**
AK08 pP **pP 04 07 33.4 +0.9**
KIEV Kiev 75.24 320 P **P 04 07 31.3 +0.3**
LUBAR Lubar, Ukraine 76.42 319 P **P 04 07 38.0 +0.3**
LUBAR pP **pP 04 07 40.2 +0.9**
SORM Soroca 76.86 318 ⇓P **P 04 07 43.4 +3.1**
YKA Yellowknife Ar 77.03 25 P **P 04 07 40.4 -0.6**
comp=Z,0.6nm,0.8s,baz=290,slow=9.4,SNR=6.6
comp=Z,0.6nm,0.8s
BR131 Keskin Array S 77.04 308 P **P 04 07 41.6 -0.1**
BR131 IAmb IAmb 04 07 46.7
comp=Z,5.4nm,0.9s
BRTR Keskin Array B 77.04 308 P **P 04 07 41.2 -0.5**
comp=Z,2.7nm,0.9s,baz=97,slow=4.7,SNR=11
comp=Z,2.7nm,0.9s
TLCR 77.89 315 ⇓P **P 04 07 49.1 +3.0**
VLDR Vladesti 78.06 316 ⇓P **P 04 07 51.1 +4.1**
HFS Hagfors 78.19 333 P **P 04 07 46.0 -1.5**
comp=Z,6.3nm,0.9s,baz=91,slow=5.9,SNR=11
comp=Z,6.3nm,0.9s
TPGR Topolog 78.29 314 ⇑P **P 04 07 52.2 +3.8**
CFR Carcaliu 78.33 315 ⇑P **P 04 07 51.1 +2.6**
POIN Pond Inlet 78.41 8 P **P 04 07 48.9 +0.5**
POIN IAmb IAmb 04 08 02.5
comp=Z,5.6nm,1.3s
NC405 NORSAR Array S 78.41 334 P **P 04 07 49.1 +0.4**
NC405 IAmb IAmb 04 07 52.8
comp=Z,9.4nm,0.8s
NB201 NORSAR Array S 78.61 334 P **P 04 07 50.8 +0.9**
PANC Panciu 78.62 316 ⇓P **P 04 07 54.5 +4.4**
TESR Tescani 78.63 317 ⇑P **P 04 07 53.8 +3.6**
NB2 NORSAR Subarra 78.65 334 P **P 04 07 48.2 -1.9**
comp=Z,4.4nm,0.7s,baz=53,slow=5.9
NOA NORSAR Array B 78.65 334 P **P 04 07 48.7 -1.4**
comp=Z,2.9nm,0.7s,baz=52,slow=5.6,SNR=11
NOA LR LR 04 45 36.1
comp=Z,37nm,18.8s,baz=350,slow=38
comp=Z,2.9nm,0.7s
VRI Vrincioaia 78.89 316 ⇑P **P 04 07 54.6 +3.0**
BUR08 Bucovina Ar. S 78.97 318 **P 04 07 52.0 -0.2**
BUR08 IAmb IAmb 04 07 57.1
comp=Z,11nm,1.3s
BURAR Bucovina Array 78.97 318 ⇓P **P 04 07 55.2 +3.0**
TURR Turia 79.23 316 ⇓P **P 04 07 57.0 +3.5**
OZUR 79.36 316 ⇑P **P 04 07 57.6 +3.3**
MLR Muntele Rosu 79.55 316 LR LR 04 48 23.0
comp=Z,118nm,18.6s,baz=257,slow=40
MLR Muntele Rosu 79.55 316 ⇑P **P 04 07 58.0 +2.6**
DOPR Dopca 79.66 317 ⇓P P 04 08 00.4 +4.6
SUMG Summit 79.90 356 P **P 04 07 58.0 +0.9**
SUMG IAmb IAmb 04 08 03.5
comp=Z,16nm,1.3s
OJC Ojcow 80.75 322 P **P 04 08 02.9 +1.3**
ILON Igloolik, Nuna 80.85 11 **P 04 08 01.9 +0.2**
ILON IAmb IAmb 04 08 06.9
comp=Z,5.7nm,0.7s
MORC Moravsky Berou 82.22 323 ⇓P **P 04 08 12.0 +2.5**
MORC Moravsky Berou 82.22 323 *e*P **P 04 08 12.7 +3.2**
JAVC Velka Javorina 82.65 322 *e*P P 04 08 16.9 +5.1
VRAC Vranov 82.99 323 *e*P **P 04 08 17.9 +4.4**
MODS Modra-Piesok 83.14 321 *e*P P 04 08 20.9 +6.6
KRUC Moravsky 83.24 322 *e*P **P 04 08 18.8 +4.1**
CLL Collm 83.70 326 *i* P **P 04 08 20.1 +3.0**
comp=Z,6.0nm,0.7s
RONA Rosalia, Austr 84.06 321 *i* PcP **PcP 04 08 24.8 +1.9**
comp=Z,2.9nm,0.9s
CONA Conrad Observa 84.17 322 *e*PcP **PcP 04 08 25.1 +1.6**
comp=Z,8.4nm,0.8s
PLN Plauen 84.63 325 *e*P P 04 08 27.4 +5.6
comp=Z,7.5nm,1.4s,baz=58,slow=4.6
CLZ Clausthal 84.67 327 *e*P P 04 08 27.4 +5.3
comp=Z,58nm,1.0s,baz=58,slow=4.6
GEC2 GERESS Array B 84.81 323 *e*P P 04 08 27.8 +4.9
comp=Z,6.2nm,1.1s,baz=58,slow=4.6
GERES GERESS Array B 84.81 323 P **P 04 08 22.5 -0.4**
comp=Z,1.1nm,0.9s,baz=64,slow=3.1,SNR=8.8
comp=Z,1.1nm,0.9s
ROTZ Rotzenmuhle 85.04 325 *e*P P 04 08 28.9 +5.0
comp=Z,3.9nm,1.1s,baz=58,slow=4.6
MOA Molln 85.09 322 *i* pP pP 04 08 30.2 +4.4
comp=Z,9.8nm,1.1s
BIOA Bad Ischl, Aus 85.53 322 *i* pP pP 04 08 32.0 +4.0
comp=Z,10nm,1.1s
GRF Grafenberg Arr 85.59 325 *e*P **P 04 08 31.1 +4.4**
comp=Z,49nm,1.6s,baz=58,slow=4.6
OBKA Obir 85.73 321 *i* pP pP 04 08 32.2 +3.1
comp=Z,4.3nm,0.8s
KBA Koelnbreinsper 86.06 322 *i* pP pP 04 08 34.1 +3.3
comp=Z,5.0nm,0.9s
LESA Schwarzleotal 86.21 323 *i* pP pP 04 08 34.5 +3.1
comp=Z,8.2nm,0.7s
ITM Ithomi 86.34 310 P **P 04 08 32.1 +1.5**
ABTA Abfaltersbach 86.71 322 *i* pP pP 04 08 36.2 +2.2
comp=Z,11nm,0.9s
WATA Walderalm 86.86 323 *i* pP pP 04 08 38.1 +3.4
comp=Z,4.1nm,0.6s
WTTA Wattenberg 86.87 323 *i* pP pP 04 08 37.7 +2.8
comp=Z,5.1nm,0.7s
MOTA Moosalm 87.11 323 *i* pP pP 04 08 38.6 +2.7
comp=Z,14nm,1.1s
SQTA Sankt Quirin 87.13 323 *i* pP pP 04 08 38.3 +2.3
comp=Z,5.7nm,0.8s
RETA Reutte 87.20 323 *i* pP pP 04 08 39.1 +2.8
comp=Z,4.7nm,0.9s
FETA Feichten 87.51 323 *e*pP pP 04 08 40.5 +2.6
comp=Z,4.5nm,0.7s,SNR=6.1
DAVA Damuels 87.79 324 *i* PcP **PcP 04 08 40.1 +0.6**
comp=Z,7.2nm,0.7s
FUORN Ofenpass-Fuorn 88.01 323 **P 04 08 38.8 0.0**
EKA Eskdalemuir Ar 88.09 335 P **P 04 08 41.3 +2.6**
comp=Z,1.4nm,0.6s,baz=26,slow=5.5,SNR=4.0
ESK Eskdalemuir 88.12 335 P **P 04 08 37.5 -1.4**
TUE Stuetta 88.59 323 P **P 04 08 42.7 +1.1**

IDC ***13*** *03:59:49.5±2.1, 13.75S×71.45W, h80km±34km, mb3.8/1, mbtmp3.7/4, Error ellipse: s-maj=82.6km s-min=11.3km az=26.0*
NEIC ***13*** *03:59:52.2±1.2, 15.06S±0.06×72.0W±0.1, h125km±6km, mb4.3/15, Error ellipse: s-maj=17.1km s-min=8.1km az=81.0*

ISC 13 03:59:50.8±0.6, 15.04S±0.08×72.07W±0.08, h124km, n43, σ1961/44, mb4.3/4, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**3.55**	**136**	Pn	**Pn**	**04 00 47.7**	**+2.7**
AP01	**Chacalluta**	**3.70**	**154**		**Pn**	**04 00 47.0**	**+0.5**
PB12	**IPOC Station P**	**3.92**	**155**	Pn	**Pn**	**04 00 49.1**	**-0.5**
LPAZ	**La Paz**	**3.99**	**109**	P	**Pn**	**04 00 51.3**	**+0.4**
LPAZ	1.9nm,0.3s,baz=306,slow=8.3,SNR=12			S	**Sn**	**04 01 37.3**	**-0.1**
	5.1nm,0.6s,baz=83,slow=24,SNR=3.9						
LPAZ	**La Paz**	**3.99**	**109**	Pn	**Pn**	**04 00 50.4**	**-0.5**
PB16	**IPOC Station P**	**4.09**	**144**	Pn	**Pn**	**04 00 53.2**	**+1.0**
PB11	**IPOC Station P**	**5.23**	**154**	Pn	**Pn**	**04 01 05.5**	**-1.6**
GO01	**Chusmiza**	**5.36**	**150**	Pn	**Pn**	**04 01 09.4**	**+0.3**
NNA	**Nana**	**5.55**	**303**	P	**Pn**	**04 01 10.5**	**-0.8**
NNA	4.2nm,0.3s,baz=149,slow=12,SNR=5.8			S	**Sn**	**04 02 11.6**	**-2.4**
	33nm,0.6s,baz=26,slow=14,SNR=11						
NNA	**Nana**	**5.55**	**303**		**Pn**	**04 01 10.2**	**-1.1**
PB08	**IPOC Station P**	**5.78**	**152**	Pn	**Pn**	**04 01 13.9**	**-0.9**
PB01	**IPOC Station P**	**6.46**	**158**		**Pn**	**04 01 21.0**	**-2.6**
PB02	**IPOC Station P**	**6.58**	**162**		**Pn**	**04 01 23.3**	**-1.9**
PB07	**IPOC Station P**	**6.96**	**163**		**Pn**	**04 01 28.6**	**-1.9**
PB09	**IPOC Station P**	**7.24**	**159**		**Pn**	**04 01 32.8**	**-1.3**
PB03	**IPOC Station P**	**7.31**	**163**		**Pn**	**04 01 33.1**	**-2.0**
PB05	**IPOC Station P**	**7.97**	**167**		**Pn**	**04 01 40.9**	**-3.1**
PB06	**IPOC Station P**	**7.98**	**163**	Pn	**Pn**	**04 01 41.3**	**-2.9**
PB10	**IPOC Station P**	**8.55**	**171**	Pn	**Pn**	**04 01 49.6**	**-2.2**
GO02	**Mina Guanaco**	**10.34**	**167**	Pn	**Pn**	**04 02 15.3**	**-0.8**
SIV	**San Ignacio**	**10.64**	**97**	P	**Pn**	**04 02 14.9**	**-5.1**
	0.8nm,0.5s,baz=284,slow=14,SNR=4.9						
AC02	**Maricunga**	**12.05**	**167**	Pn	**Pn**	**04 02 38.7**	**-0.4**
AC05	**El Transito**	**13.83**	**173**	Pn	**Pn**	**04 03 02.0**	**+0.2**
LCO	**Las Campanas**	**13.96**	**175**	Pn	**Pn**	**04 03 02.9**	**-0.7**
CO03	**El Pedregal**	**15.78**	**176**	Pn	**Pn**	**04 03 26.7**	**+0.5**
CO03				IAmb	IAmb	04 03 30.6	
	comp=Z,23nm,1.3s						
CO04	**Los Peladeros**	**16.95**	**177**	P	**P**	**04 03 41.4**	**+0.6**
CO04				IAmb	IAmb	04 03 43.4	
	comp=Z,15nm,0.9s						
MT02	**Curacav**	**18.16**	**177**		**P**	**04 03 54.3**	**+0.6**
MT02				IAmb	IAmb	04 04 29.6	
	comp=Z,22nm,1.2s						
MT09	**Talagante**	**18.68**	**177**	P	**P**	**04 03 59.9**	**+0.4**
MT09				IAmb	IAmb	04 04 27.6	
	comp=Z,25nm,1.4s						
MT01	**Popeta**	**18.76**	**178**	P	**P**	**04 04 00.7**	**+0.5**
MT01				IAmb	IAmb	04 04 24.4	
	comp=Z,32nm,1.4s						
BO01	**Tunca**	**19.29**	**178**	P	**P**	**04 04 05.4**	**-0.6**
BO02	**Sierra Bellavi**	**19.70**	**177**	P	**P**	**04 04 12.1**	**+1.5**
BO02				IAmb	IAmb	04 04 20.0	
	comp=Z,13nm,1.1s						
BOAV	**Boa Vista**	**20.75**	**34**	P	**P**	**04 04 19.8**	**-2.2**
ITAB	**Concordia**	**22.16**	**126**	P	**P**	**04 04 37.1**	**+0.3**
ITAB				IAmb	IAmb	04 05 09.7	
	comp=Z,13nm,1.1s						
PAYG	**Puerto Ayora**	**22.97**	**307**	P	**P**	**04 04 45.6**	**+0.7**
PAYG				IAmb	IAmb	04 04 46.8	
	comp=Z,46nm,1.2s						
BDFB	**Brasilia**	**23.20**	**95**	P	**P**	**04 04 44.1**	**-3.1**
	comp=Z,2.4nm,0.4s,baz=265,slow=11,SNR=9.8						
	comp=Z,2.4nm,0.4s						
BDFB	**Brasilia**	**23.20**	**95**	P	**P**	**04 04 44.6**	**-2.6**
GO06	**Curarrehue**	**24.46**	**179**	P	**P**	**04 04 59.6**	**+1.3**
GO06				IAmb	IAmb	04 05 23.3	
	comp=Z,16nm,1.5s						
ABD	**La Joyeuse, An**	**33.01**	**19**	P	**P**	**04 06 15.0**	**+0.7**
COR	**Corvallis**	**75.41**	**325**	P	**P**	**04 11 22.5**	**+1.5**
IVI	**Ivigtut**	**78.34**	**12**	P	**P**	**04 11 38.5**	**+1.5**
ZALV	**Zalesovo Beam**	**137.16**	**20**	PKP	**PKPdf**	**04 19 00.1**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=308,slow=3.5,SNR=2.5						
SONM	**Songino Array**	**147.28**	**2**	PKPbc	**PKPdf**	**04 19 20.3**	**+2.8**
	comp=Z,0.9nm,0.6s,baz=358,slow=2.6,SNR=4.1						
SONM	**Songino Array**	**147.28**	**2**		**PKPdf**	**04 19 18.9**	**+1.4**

IDC ***13*** *04:03:13.6±1.8, 61.32N×152.44W, h78km±20km, mb3.5/8, mbtmp3.7/12, Error ellipse: s-maj=20.0km s-min=14.1km az=89.0*
NEIC ***13*** *04:03:15.5±1.1, 61.25N±0.03×151.98W±0.07, h107km±5km, mb3.9/4, ML3.8/228, ML3.5(AEIC), Error ellipse: s-maj=5.1km s-min=4.4km az=155.0*
AEIC ***13*** *04:03:16.8±1.0, 61.24N±0.02×151.95W±0.07, h101km±4km, Error ellipse: s-maj=5.3km s-min=2.0km az=119.0*

ISC 13 04:03:15.7±0.7, 61.27N±0.03×151.97W±0.04, h104km±5km, n264, σ873/239, mb3.9/9, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPCG	**Spurr Capps Gl**	**0.03**	**313**		**Pn**	**04 03 30.1**	**-0.1**
SPCG					**Sn**	**04 03 40.6**	**-0.4**
SPU	**Mount Spurr**	**0.10**	**204**		**Pn**	**04 03 29.9**	**-0.3**
SPCN	**Chakachatna No**	**0.11**	**246**		**Pn**	**04 03 30.3**	**+0.2**
CKL	**Chakachamna La**	**0.19**	**247**		**Pn**	**04 03 30.5**	**0.0**
STLK	**Strandline Lak**	**0.24**	**16**		**Pn**	**04 03 30.4**	**-0.1**
STLK				IAML		04 03 41.5	
	comp=E,2μm,0.7s						
SPNN	**North Nagishla**	**0.36**	**286**		**Pn**	**04 03 31.5**	**+0.2**
SUA	**Susitna One**	**0.62**	**71**	Pn	**Pn**	**04 03 33.5**	**+0.6**
SUA				Sn	**Sn**	**04 03 45.9**	**0.0**
SUA				IAML		04 03 46.8	
	comp=N,2μm,0.6s						
SUA				IAML		04 03 47.1	
	comp=E,3μm,0.8s						
CAPN	**Captain Cook N**	**0.64**	**141**		**Pn**	**04 03 34.7**	**+1.8**
RDT	**Redoubt**	**0.73**	**197**		**Pn**	**04 03 33.6**	**-0.2**
RDT					**Sn**	**04 03 47.0**	**-0.4**
SKT	**Skwentna**	**0.74**	**16**		**Pn**	**04 03 34.2**	**+0.3**
SKT				Sn	**Sn**	**04 03 47.3**	**-0.2**
SKT				IAML		04 03 48.5	
	comp=E,3μm,0.5s						
DFR	**Drift River**	**0.77**	**207**		**Pn**	**04 03 34.2**	**0.0**
DFR					**Sn**	**04 03 47.6**	**-0.3**
RDJH	**Redoubt Jeurge**	**0.79**	**211**		**Pn**	**04 03 34.5**	**0.0**
RDJH					**Sn**	**04 03 48.3**	**-0.2**
M20K	**Styx River**	**0.83**	**318**		**Pn**	**04 03 35.0**	**+0.2**
M20K					**Sn**	**04 03 49.1**	**+0.1**
RED	**Redoubt Volcan**	**0.94**	**205**		**Pn**	**04 03 35.6**	**-0.3**
RED				Sn	**Sn**	**04 03 50.4**	**-0.6**
M22K	**Willow**	**1.01**	**61**		**Pn**	**04 03 37.1**	**+0.7**
M22K				Sn	**Sn**	**04 03 52.7**	**+0.6**
RC01	**Rabbit Creek A**	**1.10**	**99**		**Pn**	**04 03 37.7**	**+0.3**
RC01				IAML		04 03 55.9	
	comp=N,2μm,0.2s						
RC01				IAML		04 03 55.9	
	comp=E,3μm,0.2s						
SLKM	**Skilak Lake**	**1.15**	**131**		**Pn**	**04 03 38.0**	**-0.1**
SLKM				IAML		04 03 56.7	
	comp=E,2μm,0.4s						
SLKM	**Skilak Lake**	**1.15**	**131**		**Sn**	**04 03 54.8**	**-0.1**
N19K	**Bonanza Creek**	**1.30**	**250**		**Pn**	**04 03 40.0**	**+0.1**
N19K					**Sn**	**04 03 57.9**	**-0.3**
O22K	**Cooper Landing**	**1.36**	**125**		**Pn**	**04 03 40.7**	**+0.4**
O22K	**Cooper Landing**	**1.36**	**125**		**Sn**	**04 03 58.8**	**-0.3**
L22K	**Petersville**	**1.38**	**24**		**Pn**	**04 03 41.1**	**+0.3**
L22K					**Sn**	**04 03 59.5**	**-0.2**
L22K	**Petersville**	**1.38**	**24**	IAML		04 04 01.9	
	comp=N,909nm,0.4s						
L22K				IAML		04 04 04.5	
	comp=E,1μm,0.3s						
CUT	**Chulitna**	**1.40**	**35**		**Pn**	**04 03 41.6**	**+0.8**
CUT	**Chulitna**	**1.40**	**35**		**Sn**	**04 04 00.9**	**+1.0**
PMR	**Palmer**	**1.40**	**75**		**Pn**	**04 03 40.6**	**-0.3**
PMR				IAML		04 04 01.3	
	comp=E,674nm,0.3s						
PMR				IAML		04 04 01.3	
	comp=N,970nm,0.3s						
PMR	**Palmer**	**1.40**	**75**		**Sn**	**04 03 59.5**	**-0.6**
ILSW	**Iliamna Southw**	**1.42**	**205**		**Pn**	**04 03 41.3**	**+0.1**
GHO	**Glory Hole Cre**	**1.55**	**70**		**Pn**	**04 03 42.9**	**+0.1**
GHO				IAML		04 04 07.5	
	comp=N,870nm,0.8s						
GHO				IAML		04 04 10.1	
	comp=E,1μm,0.3s						
O19K	**Port Alsworth**	**1.58**	**228**		**Pn**	**04 03 43.0**	**-0.1**
O19K				IAML		04 04 11.3	
	comp=E,452nm,0.5s						
O19K				IAML		04 04 11.8	
	comp=N,526nm,0.4s						
BRLK	**Bradley Lake**	**1.60**	**160**		**Pn**	**04 03 42.9**	**-0.5**
BRLK				IAML		04 04 07.3	
	comp=E,603nm,0.4s						
BRLK				IAML		04 04 08.1	
	comp=N,632nm,0.3s						
HOM	**Homer**	**1.63**	**174**		**Pn**	**04 03 44.0**	**+0.4**
HOM				IAML		04 04 07.5	
	comp=E,2μm,0.8s						
PPLA	**Purkeypile**	**1.64**	**357**		**Pn**	**04 03 44.3**	**+0.4**
PPLA				IAML		04 04 05.9	
	comp=E,393nm,1.2s						
PPLA				IAML		04 04 08.0	
	comp=N,336nm,0.9s						
L19K	**White Mountain**	**1.65**	**305**		**Pn**	**04 03 44.4**	**+0.5**
L19K					**Sn**	**04 04 05.6**	**+0.1**
L19K	**White Mountain**	**1.65**	**305**	IAML		04 04 06.1	
	comp=N,331nm,0.9s						
L19K				IAML		04 04 06.4	
	comp=E,440nm,0.6s						
KNK	**Knik Glacier**	**1.70**	**84**		**Pn**	**04 03 44.3**	**-0.3**
SEW	**Seward**	**1.71**	**132**		**Pn**	**04 03 44.6**	**0.0**
SEW				IAML		04 04 07.1	
	comp=N,1μm,0.3s						
SEW				IAML		04 04 08.6	
	comp=E,980nm,0.5s						
P19K	**Oil Pt**	**1.74**	**202**		**Pn**	**04 03 45.5**	**+0.3**
P19K				IAML		04 04 09.8	
	comp=E,736nm,0.6s						
P19K				IAML		04 04 11.3	
	comp=N,567nm,0.6s						
CNPM	**China Poot**	**1.79**	**168**		**Pn**	**04 03 45.4**	**-0.4**
CNPM				IAML		04 04 09.1	
	comp=N,745nm,0.3s						
CNPM				IAML		04 04 10.6	
	comp=E,898nm,0.4s						
CNPM	**China Poot**	**1.79**	**168**		**Sn**	**04 04 07.6**	**-1.0**
SML	**Sawmill**	**1.82**	**71**		**Pn**	**04 03 45.7**	**-0.5**
SML				IAML		04 04 11.4	
	comp=N,772nm,0.6s						
SML				IAML		04 04 12.5	
	comp=E,611nm,0.4s						
M18K	**Stony River**	**1.87**	**278**		**Pn**	**04 03 46.4**	**-0.2**
M18K					**Sn**	**04 04 09.6**	**-0.7**
N18K	**Kilae Creek**	**2.00**	**254**		**Pn**	**04 03 48.2**	**-0.2**
AU22	**Augustine Moun**	**2.03**	**200**		**Pn**	**04 03 48.7**	**0.0**
AUCH	**Augustine Cone**	**2.05**	**202**		**Pn**	**04 03 49.3**	**+0.2**
AUJK	**Augustine Jueg**	**2.06**	**201**		**Pn**	**04 03 49.0**	**0.0**
SCM	**Sheep Creek Mo**	**2.29**	**74**		**Pn**	**04 03 51.8**	**-0.4**
SCM				IAML		04 04 30.7	
	comp=N,829nm,0.6s						
K20K	**Telida**	**2.31**	**336**		**Pn**	**04 03 52.4**	**-0.1**
TRF	**Thorofare Moun**	**2.32**	**19**	IAML		04 04 24.0	
	comp=E,779nm,0.5s						
KTH	**Kantishna Hill**	**2.34**	**12**		**Pn**	**04 03 53.0**	**+0.1**
KTH				IAML		04 04 26.1	
	comp=E,310nm,0.6s						
KTH				IAML		04 04 26.1	
	comp=N,481nm,0.6s						
GLI	**Glacier Island**	**2.40**	**97**		**Pn**	**04 03 52.0**	**-1.5**
P18K	**Big Mountain,**	**2.48**	**222**		**Pn**	**04 03 54.9**	**+0.2**

Q19K	Cape Douglas,	2.49	200			Pn	04 03 54.9	0.0	
Q19K	Cape Douglas,	2.49	200	IAML			04 04 34.9		
	comp=N,290nm,1.0s								
Q19K				IAML			04 04 48.5		
	comp=E,339nm,1.1s								
P23K	Montague Islan	2.59	118			Pn	04 03 55.4	-0.6	
RND	Reindeer	2.59	33			Pn	04 03 56.4	+0.3	
RND				IAML			04 04 29.8		
	comp=E,332nm,0.3s								
RND				IAML			04 04 32.3		
	comp=N,276nm,0.5s								
CHUM	Lake Minchumin	2.63	357			Pn	04 03 56.5	0.0	
M17K	Holitna River	2.64	275			Pn	04 03 56.9	+0.2	
M17K	Holitna River	2.64	275	IAML			04 04 28.9		
	comp=N,196nm,1.0s								
M17K				IAML			04 04 29.7		
	comp=E,174nm,1.1s								
N17K	Nushagak Hills	2.66	256			Pn	04 03 57.0	+0.2	
SYI	Shuyak Island	2.68	185			Pn	04 03 57.0	-0.2	
SYI	Shuyak Island	2.68	185	IAML			04 04 34.4		
	comp=E,197nm,0.8s								
SYI				IAML			04 04 35.8		
	comp=N,292nm,0.7s								
DHY	Denali Highway	2.82	48			Pn	04 03 59.4	+0.2	
HIN	Hinchinbrook I	2.82	106			Pn	04 03 57.6	-1.5	
MCK	McKinley	2.84	28			Pn	04 03 59.5	0.0	
MCK				IAML			04 04 33.7		
	comp=E,257nm,0.5s								
MCK				IAML			04 04 34.0		
	comp=N,384nm,0.4s								
BPAW	Bear Paw Mtn.	2.88	9	IAML			04 04 32.1		
	comp=N,258nm,0.4s								
BPAW				IAML			04 04 33.1		
	comp=E,202nm,0.4s								
M24K	Tolsona, Glenn	2.89	71	IAML			04 04 46.1		
	comp=N,507nm,0.9s								
KLU	Klutina	2.92	83			Pn	04 03 59.8	-0.7	
KLU				IAML			04 04 36.7		
	comp=E,404nm,0.4s								
DIV	Divide	3.00	90	IAML			04 04 38.2		
	comp=E,462nm,0.2s								
P17K	Kvichak River	3.05	229			Pn	04 04 02.7	+0.6	
P17K				IAML			04 04 40.3		
	comp=N,345nm,0.9s								
P17K				IAML			04 04 49.2		
	comp=E,410nm,1.2s								
KAHG	Katmai Hook Gl	3.07	206			Pn	04 04 02.7	+0.2	
J20K	Nowinta River	3.08	342			Pn	04 04 02.3	-0.2	
KARR	Katmai Rainbow	3.10	208			Pn	04 04 03.2	+0.4	
J18K	Innoko River	3.12	317			Pn	04 04 03.1	+0.1	
EYAK	Cordova Ski Ar	3.12	101	IAML			04 04 41.0		
	comp=N,392nm,0.4s								
EYAK				IAML			04 04 47.8		
	comp=E,189nm,0.8s								
L17K	Donlin	3.13	289			Pn	04 04 03.3	+0.1	
K17K	Iditarod	3.32	299			Pn	04 04 06.2	+0.5	
K17K	Iditarod	3.32	299	IAML			04 04 43.9		
	comp=N,90nm,0.9s								
K17K				IAML			04 04 44.6		
	comp=E,86nm,1.0s								
M16K	Timber Creek	3.40	269			Pn	04 04 07.1	+0.4	
N16K	Nishlik Lake	3.42	259			Pn	04 04 07.4	+0.4	
KABU	Katmai Buttres	3.44	211			Pn	04 04 08.1	+0.6	
O16K	Kokwok River B	3.47	244			Pn	04 04 07.9	+0.2	
PAX	Paxson	3.50	58	IAML			04 04 49.8		
	comp=N,285nm,0.3s								
PAX				IAML			04 04 53.0		
	comp=E,204nm,0.4s								
KDAK	Kodiak Island	3.51	185	P		Pn	04 04 06.8	-1.5	
	comp=E,23nm,0.5s,baz=39,slow=5.2,SNR=124								
KDAK				S		Sn	04 04 47.0	-2.0	
	comp=E,19nm,0.4s,baz=12,slow=12,SNR=3.6								
KDAK	Kodiak Island	3.51	185			Pn	04 04 07.0	-1.3	
KDAK				IAML			04 04 58.4		
	comp=E,81nm,1.0s								
KDAK				IAML			04 05 01.9		
	comp=E,83nm,0.5s								
N25K	Chitina, Valde	3.56	81	IAML			04 04 51.2		
	comp=N,200nm,0.4s								
N25K				IAML			04 04 53.0		
	comp=E,162nm,0.5s								
BMRM	Bremner River	3.59	92	IAML			04 04 53.4		
	comp=N,228nm,0.4s								
BMRM				IAML			04 04 54.4		
	comp=E,201nm,0.6s								
NEA2	Nenana	3.59	20			Pn	04 04 08.6	-0.7	
NEA2	Nenana	3.59	20	IAML			04 04 50.6		
	comp=E,79nm,0.3s								
NEA2				IAML			04 04 51.9		
	comp=N,85nm,0.5s								
CNTC	Contact Creek	3.61	215			Pn	04 04 09.8	+0.1	
L16K	Owhat River	3.62	280			Pn	04 04 09.5	-0.2	
WRH	Wood River Hil	3.67	27	IAML			04 04 50.2		
	comp=E,87nm,0.4s								
WRH				IAML			04 04 58.0		
	comp=N,95nm,0.5s								
I20K	Naaghedeneel	3.72	343			Pn	04 04 11.1	+0.1	
I20K	Naaghedeneel	3.72	343	IAML			04 04 56.4		
	comp=E,190nm,0.8s								
I20K				IAML			04 05 26.8		
	comp=N,242nm,0.8s								
WACK	Wrangell Chich	3.72	76			Pn	04 04 11.1	-0.2	
P16K	Nushagak River	3.75	236			Pn	04 04 12.2	+0.7	
P16K	Nushagak River	3.75	236	IAML			04 05 22.5		
	comp=E,105nm,1.0s								
P16K				IAML			04 06 01.8		
	comp=N,89nm,1.0s								
WASW	Wrangell South	3.79	77			Pn	04 04 11.7	-0.4	
K24K	Donnelly Dome	3.83	46			Pn	04 04 14.4	+1.8	
CCB	Clear Creek Bu	3.89	28	IAML			04 05 10.6		
	comp=E,70nm,0.6s								
CCB				IAML			04 05 10.9		
	comp=N,70nm,0.4s								
GLB	Gilahina Butte	3.94	84	IAML			04 05 01.4		
	comp=N,100nm,0.4s								
GLB				IAML			04 05 03.0		
	comp=E,98nm,0.6s								
J17K	VABM Dome	3.94	306			Pn	04 04 13.7	-0.3	
KAIM	Kayak Island	3.96	107			Pn	04 04 13.8	-0.5	
KAIM	Kayak Island	3.96	107	IAML			04 05 02.1		
	comp=N,214nm,1.0s								
KAIM				IAML			04 05 16.9		
	comp=E,157nm,0.7s								
I23K	Minto, Yukon-K	4.07	16			Pn	04 04 15.2	-0.5	
I23K	Minto, Yukon-K	4.07	16	IAML			04 05 18.2		
	comp=E,47nm,0.9s								
I23K				IAML			04 05 19.9		
	comp=N,50nm,0.9s								
COLA	College	4.07	26			Pn	04 04 15.6	-0.1	
OHAK	Old Harbor	4.12	190			Pn	04 04 14.6	-1.8	
OHAK				IAML			04 05 16.9		
	comp=E,43nm,1.0s								
VRDI	Verde Repeater	4.12	87			Pn	04 04 15.4	-1.2	
VRDI				IAML			04 05 05.3		
	comp=E,48nm,0.6s								
VRDI				IAML			04 05 05.6		
	comp=N,72nm,0.3s								
N15K	Kwethluk River	4.14	258			Pn	04 04 17.0	+0.3	
BERG	Berg Lake	4.14	99			Pn	04 04 16.8	0.0	
ILAR	Eielson Array	4.21	31	P		Pn	04 04 17.2	-0.4	
	comp=N,28nm,0.6s,baz=210,slow=14,SNR=238								
ILAR				S		Sn	04 05 02.6	-3.1	
	comp=N,21nm,0.4s,baz=213,slow=22,SNR=11								
ILAR	Eielson Array	4.21	31			Pn	04 04 17.6	-0.1	
MENT	Mentasta	4.22	63			Pn	04 04 17.8	-0.1	
PLK4	Peulik 4	4.28	213			Pn	04 04 18.4	-0.4	
PLK4	Peulik 4	4.28	213	IAML			04 05 10.9		
	comp=E,51nm,1.0s								
PLK4				IAML			04 05 46.9		
	comp=N,50nm,1.1s								
M15K	Kasigluk River	4.29	266			Pn	04 04 18.9	+0.2	
MCARA	McCarthy VSAT	4.31	85			Pn	04 04 18.4	-0.7	
MCARA	McCarthy VSAT	4.31	85	IAML			04 05 11.1		
	comp=N,152nm,0.3s								
CRQM	Cirque	4.33	93			Pn	04 04 18.4	-1.1	
CRQM	Cirque	4.33	93	IAML			04 05 10.5		
	comp=N,170nm,0.5s								
KHIT	Khitrov Hills	4.35	97			Pn	04 04 18.1	-1.5	
GRIN	Grindle Hills	4.36	99			Pn	04 04 17.8	-1.9	
DOT	Dot Lake	4.38	54			Pn	04 04 20.1	+0.2	
M26K	Nabesna, AK	4.40	71			Pn	04 04 20.2	-0.1	
M26K	Nabesna, AK	4.40	71	IAML			04 05 37.4		
	comp=N,96nm,0.5s								
M26K				IAML			04 05 41.6		
	comp=E,77nm,0.7s								
L26K	Log Cabin Wild	4.41	63			Pn	04 04 20.9	+0.5	
H21K	Melozitna Rive	4.42	356			Pn	04 04 20.3	-0.2	
O15K	Ungalikthiuk R	4.44	245			Pn	04 04 21.2	+0.4	
TGL	Tana Glacier	4.48	93			Pn	04 04 20.4	-1.0	
TGL	Tana Glacier	4.48	93	IAML			04 05 15.7		
	comp=E,125nm,0.4s								
J16K	Anvik River	4.51	300			Pn	04 04 21.6	0.0	
J25K	Salcha River,	4.51	39			Pn	04 04 21.6	-0.2	
J25K	Salcha River,	4.51	39	IAML			04 05 15.4		
	comp=E,152nm,0.4s								
J25K				IAML			04 05 19.5		
	comp=N,115nm,0.7s								
WAX	Waxell Ridge	4.54	96			Pn	04 04 20.8	-1.4	
SCRK	Sand Creek	4.58	50	IAML			04 05 13.4		
	comp=E,107nm,0.5s								
SCRK				IAML			04 05 25.4		
	comp=N,126nm,0.6s								
L15K	Ungalak Mounta	4.58	279			Pn	04 04 22.8	+0.1	
SNH	Sunshine Point	4.62	100			Pn	04 04 21.6	-1.7	
H22K	Ishtalitna Cre	4.65	3			Pn	04 04 23.5	-0.1	
KIAG	Kiagna River	4.68	90			Pn	04 04 23.2	-1.0	
BARK	Barkley Ridge	4.72	96			Pn	04 04 23.6	-1.0	
ISLE	Juniper Island	4.75	94			Pn	04 04 24.0	-1.0	
ISLE	Juniper Island	4.75	94	IAML			04 05 19.4		
	comp=N,125nm,0.4s								
ISLE				IAML			04 05 21.1		
	comp=E,127nm,0.4s								
I17K	Unalakleet	4.81	307			Pn	04 04 25.6	-0.1	
H18K	Honhosa River	4.85	326			Pn	04 04 26.6	+0.3	
M14K	Bethel	4.89	268			Pn	04 04 27.0	+0.2	
BAGL	Bagley Icefiel	4.89	95			Pn	04 04 26.5	-0.3	
M27K	Edge Creek, AK	4.91	73			Pn	04 04 27.8	+0.6	
M27K	Edge Creek, AK	4.91	73	IAML			04 05 25.4		
	comp=E,41nm,0.6s								
M27K				IAML			04 06 15.6		
	comp=N,43nm,1.1s								
H24K	Noodor Dome	4.94	20			Pn	04 04 27.7	+0.2	
H24K	Noodor Dome	4.94	20	IAML			04 05 22.8		
	comp=E,25nm,0.5s								
H24K				IAML			04 05 27.6		
	comp=N,24nm,0.7s								
N14K	Kuskokwak Cree	4.97	259			Pn	04 04 28.6	+0.6	
N14K	Kuskokwak Cree	4.97	259	IAML			04 06 00.4		
	comp=N,34nm,1.1s								
N14K				IAML			04 06 17.6		
	comp=E,25nm,1.2s								
BARN	Barnard Glacie	5.00	88			Pn	04 04 28.0	-0.5	
BARN	Barnard Glacie	5.00	88	IAML			04 05 26.2		
	comp=N,57nm,0.5s								
BARN				IAML			04 05 27.6		
	comp=E,87nm,0.3s								
GRNC	Granite Creek	5.00	92	IAML			04 05 28.6		
	comp=E,59nm,0.9s								
MESA	MESA	5.04	98			Pn	04 04 28.6	-0.5	
L27K	Beaver Creek,	5.08	65			Pn	04 04 29.6	+0.1	
L27K	Beaver Creek,	5.08	65	IAML			04 05 56.0		
	comp=N,36nm,1.1s								
L27K				IAML			04 05 57.3		
	comp=E,28nm,1.2s								
BCAR	Beaver Creek A	5.10	65			Pn	04 04 29.6	-0.1	
H17K	Granite Mounta	5.15	319			Pn	04 04 30.6	+0.3	
PRP	Porcupine Dome	5.15	31			Pn	04 04 30.4	-0.1	
PRP	Porcupine Dome	5.15	31	IAML			04 05 29.8		
	comp=E,87nm,0.5s								
L14K	Kuka Creek	5.16	275			Pn	04 04 31.5	+1.0	
CTGM	Chitina Glacie	5.17	89			Pn	04 04 30.3	-0.5	
CTGM	Chitina Glacie	5.17	89	IAML			04 05 30.8		
	comp=E,56nm,0.4s								
CTGM				IAML			04 05 31.9		
	comp=N,57nm,0.5s								
RKAV	Rock Avalanche	5.30	96			Pn	04 04 31.9	-0.6	
G21K	Allakaket	5.31	353			Pn	04 04 32.5	0.0	
G21K	Allakaket	5.31	353	IAML			04 05 34.4		
	comp=E,21nm,0.9s								
LOGN	Logan Glacier	5.35	90			Pn	04 04 33.0	-0.3	
LOGN	Logan Glacier	5.35	90	IAML			04 05 34.3		
	comp=N,55nm,1.0s								
LOGN				IAML			04 05 35.2		
	comp=E,65nm,0.6s								
YUK2	White River	5.35	80			Pn	04 04 32.6	-0.6	
TABL	Table Mountain	5.36	94			Pn	04 04 32.2	-1.2	
TABL	Table Mountain	5.36	94	IAML			04 05 36.8		
	comp=N,64nm,1.0s								
TABL				IAML			04 05 36.8		
	comp=E,58nm,0.7s								
BVCY	Beaver Creek	5.39	73			Pn	04 04 34.1	+0.5	
G19K	Purcell Mounta	5.39	337			Pn	04 04 33.2	-0.4	
G18K	Tagagawik	5.51	330			Pn	04 04 35.2	0.0	
G23K	Bananza Creek	5.53	8			Pn	04 04 35.2	-0.3	
YUK3	Moose Creek	5.53	80			Pn	04 04 35.4	-0.4	
M19K	Dall Lake	5.63	266			Pn	04 04 36.9	+0.1	
O28M	Mount Kennedy	5.75	90			Pn	04 04 38.5	-0.3	
G17K	Kiwalik Mounta	5.76	321			Pn	04 04 38.7	+0.1	
H16K	Elim	5.77	310			Pn	04 04 38.9	+0.2	
G24K	Hadweenzic Riv	5.80	18			Pn	04 04 39.3	+0.2	
PCA	Pinnacle	5.88	96			Pn	04 04 39.5	-0.8	
YUK8	Steele Glacier	5.89	85			Pn	04 04 40.2	-0.4	
F20K	Avaraart Lake	6.03	346			Pn	04 04 42.3	+0.1	
COLD	Coldfoot	6.03	7			Pn	04 04 42.9	+0.6	
K13K	Kusilvak Mount	6.09	282			Pn	04 04 42.9	-0.1	
F19K	Shaleruckik Mo	6.13	338			Pn	04 04 43.5	-0.1	
BCPM	Bancas Point	6.22	97			Pn	04 04 44.7	-0.1	
G16K	Koyuk River	6.24	316			Pn	04 04 45.0	0.0	
F18K	Selawik	6.33	331			Pn	04 04 46.8	+0.6	
I27K	Kandik River	6.36	42			Pn	04 04 46.9	+0.1	
M29M	Somme Creek	6.50	74			Pn	04 04 48.7	-0.1	
YUK6	Outpost Mounta	6.61	87			Pn	04 04 50.0	-0.3	
F17K	Baldwin Pennin	6.61	326			Pn	04 04 50.0	0.0	
E19K	Redstone River	6.61	342			Pn	04 04 50.0	-0.2	
G15K	Niukluk	6.62	310			Pn	04 04 50.6	+0.4	
O29M	Mount Kennedy	6.63	93			Pn	04 04 49.8	-0.8	
G26K	Porcupine Rive	6.73	29			Pn	04 04 50.9	-0.8	
L29M	L29M	6.74	68			Pn	04 04 52.2	+0.3	
YUK7	Dusty Glacier	6.79	90			Pn	04 04 52.4	-0.4	
H27K	Steamboat Moun	6.79	38			Pn	04 04 52.3	-0.3	
YUK5	Granite Creek	6.82	85			Pn	04 04 52.4	-0.7	
I28M	Miner Creek	6.84	47			Pn	04 04 53.3	-0.1	
E23K	Chandalar	6.89	7			Pn	04 04 54.5	+0.5	
E22K	Anaktuvuk Pass	6.89	1			Pn	04 04 54.0	0.0	
ANM	Nome	6.95	304			Pn	04 04 55.4	+0.7	
BMAR	Burnt Mountain	6.96	24			Pn	04 04 54.4	-0.5	
E24K	Your Creek	6.99	11			Pn	04 04 55.5	+0.2	
HYT	Haines Junctio	7.04	87			Pn	04 04 56.0	-0.1	
K29M	Barlow Dome	7.16	63			Pn	04 04 57.8	+0.2	
G27K	Doyon Strip	7.16	35			Pn	04 04 57.2	-0.4	
F15K	North Star Dit	7.20	314			Pn	04 04 57.8	-0.3	
E18K	Tukpahlearik C	7.21	333			Pn	04 04 59.0	+0.7	
E17K	Hotham Inlet	7.24	328			Pn	04 04 58.7	+0.1	
E21K	Killik River	7.25	354			Pn	04 04 58.6	-0.2	
F26K	Sheenjek River	7.28	24			Pn	04 04 58.5	-0.7	
M30M	Minto, Yukon	7.28	73			Pn	04 04 58.6	-0.7	
P30M	Million Dollar	7.46	92			Pn	04 05 00.9	-0.8	
D22K	Ayikyak River	7.65	358			Pn	04 05 04.2	+0.1	
F14K	Arctic Creek	7.70	309			Pn	04 05 05.0	+0.2	
D20K	Etivluk River	7.72	347			Pn	04 05 04.7	-0.6	
O30N	Mendenhall	7.73	87			Pn	04 05 04.7	-0.7	
D23K	Nanushuk River	7.75	3			Pn	04 05 06.5	+1.0	
N31M	Braeburn, Yuko	7.78	81			Pn	04 05 05.1	-1.0	
J30M	Hart River	7.86	58			Pn	04 05 07.0	-0.3	
D24K	Happy Valley	8.03	8			Pn	04 05 09.7	+0.4	
E27K	Coleen River	8.23	28			Pn	04 05 10.9	-1.2	
WHY	Whitehorse	8.34	87			Pn	04 05 13.1	-0.6	
D25K	Kavik River	8.41	14			Pn	04 05 14.7	+0.1	
C19K	Lookout Ridge	8.48	341			Pn	04 05 15.0	-0.5	
G30M	tAoh tZraii Nji	9.94	43			Pn	04 05 21.2	-0.5	
E28M	Babbage River	9.04	30			Pn	04 05 22.5	-0.5	
N32M	Quiet Lake	9.11	82			Pn	04 05 23.3	-0.9	
P32M	Atlin	9.18	93			Pn	04 05 24.1	-1.0	
D27M	Malcolm River	9.22	25			Pn	04 05 25.2	-0.4	
E29M	Blow River	9.30	34			Pn	04 05 26.1	-0.5	
F30M	Barrier River	9.43	41			Pn	04 05 27.9	-0.4	
Q32M	Nakina River	10.09	95			Pn	04 05 37.2	-0.4	
INK	Inuvik	10.53	40	P		Pn	04 05 42.2	-1.0	
	comp=E,3.5nm,0.6s,baz=240,slow=8.3,SNR=34								
INK				S		Sn	04 07 35.8	-3.1	
	comp=E,1.6nm,0.6s,baz=279,slow=11,SNR=4.4								
INK	Inuvik	10.53	40			Pn	04 05 43.2	0.0	
A36M	Sachs Harbour	14.91	33			Pn	04 06 39.0	-1.7	
YKA	Yellowknife Ar	17.50	70	P		Pn	04 07 14.2	+1.5	
	comp=E,0.2nm,0.7s,baz=281,slow=12,SNR=4.5								
YKA	Yellowknife Ar	17.50	70	P		Pn	04 07 13.3	+0.6	
NVAR	Mina Array Bea	30.93	122	P		P	04 09 25.7	+3.0	
	comp=E,0.7nm,0.7s,baz=316,slow=8.2,SNR=5.8								
	comp=E,0.7nm,0.7s								
PDAR	Pinedale Array	31.24	107	P		P	04 09 27.4	+2.0	
	comp=E,0.2nm,0.5s,baz=345,slow=3.7,SNR=4.2								
	comp=E,0.2nm,0.5s								
PDAR	Pinedale Array	31.24	107	P		P	04 09 25.3	-0.1	
TXAR	Lajitas Array	44.98	113	P		P	04 11 22.9	+2.4	
	comp=E,0.3nm,0.7s,baz=329,slow=8.7,SNR=2.8								
	comp=E,0.3nm,0.7s								
TXAR	Lajitas Array	44.98	113	P		P	04 11 21.1	+0.6	
SONM	Songino Array	54.45	306	P		P	04 12 32.7	+0.7	
	comp=E,0.9nm,0.7s,baz=28,slow=6.7,SNR=3.6								
	comp=E,0.9nm,0.7s								
SONM	Songino Array	54.45	306	P		P	04 12 31.8	-0.2	
SONM				IAmb		IAmb	04 12 46.3		
	comp=Z,1.9nm,1.3s								
ZALV	Zalesovo Beam	56.65	324	P		P	04 12 46.4	-1.1	
	comp=Z,0.5nm,0.4s,baz=14,slow=7.4,SNR=2.9								
	comp=Z,0.5nm,0.4s								
ZALV	Zalesovo Beam	56.65	324	P		P	04 12 46.7	-0.8	
FINES	FINESS Array B	57.60	1	P		P	04 12 53.3	-0.7	
	comp=Z,13nm,1.3s,baz=5.6,slow=9.8,SNR=6.5								
	comp=Z,13nm,1.3s								
FINES	FINESS Array B	57.60	1	P		P	04 12 53.5	-0.6	
HFS	Hagfors	58.42	8	P		P	04 12 59.3	-0.5	
	comp=Z,1.8nm,0.9s,baz=17,slow=6.0,SNR=1.2								
	comp=Z,1.8nm,0.9s								
KURK	Kurchatov	61.26	326	P		P	04 13 19.4	+0.1	
KURBB	Kurchatov Arra	61.37	326	P		P	04 13 19.1	-0.9	
	comp=Z,0.5nm,0.5s,baz=29,slow=6.8,SNR=6.4								
	comp=Z,0.5nm,0.5s								
MKAR	Makanchi Array	63.75	322	P		P	04 13 36.1	+0.1	
OBN	Obninsk	63.76	355	P		P	04 13 35.9	+0.1	
AB31	Akbulak array	66.88	338	P		P	04 13 55.1	-1.0	
AB31				IAmb		IAmb	04 13 57.5		
	comp=Z,2.3nm,1.2s								
ABKAR	Akbulak array	66.88	338	P		P	04 13 55.6	-0.5	

CATAC ***13*** *04:10:42.2±0.5, 14°N±3°×9°1W±°, h29km±4km, M3.7/24, MLv3.7/24, Error ellipse: s-maj=8.3km s-min=3.3km az=30.2, confirmed*
SNET ***13*** *04:10:42.0±1.1, 13°.91N×91°.39W, h55km, ML3.7, Presumed earthquake*
GCG ***13*** *04:10:42.8±2.0, 13°.94N×91°.36W, h47km±34km, MD4.2, ML4.0, Presumed earthquake*

ISC 13 04:10:42.5±2.0, 13°.75N±0°.09×91°.42W±0°.08, h59km±19km, n43, σ1°.42/71, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.65	6	*i* P		Pn		04 10 57.7	+1.5
STG5				*i* S		Sn		04 11 07.6	+1.4
STG2	El Palmar, Qui	0.68	3	*i* P		Pn		04 10 58.4	+1.7
STG2				*i* S		Sn		04 11 10.4	+3.5
STG8	El Palmar, Qui	0.70	5	*i* P		Pn		04 10 58.7	+1.7
STG8				*i* S		Sn		04 11 10.4	+3.0
STG8				IAML				04 11 11.4	
	comp=E,4µm,0.2s								
RTAL	Retalhuleu	0.81	341	P		Pn		04 10 56.4	-1.7
RTAL				S		Sn		04 11 07.7	-1.9
ESSG	Sabana Grande	0.85	42	*i* P		Pn		04 10 56.3	-2.3
ESSJ	San Jos, E	0.91	102	*i* P		Pn		04 10 55.1	-4.2
FG16	Alotenango, Sa	1.02	59	*i* P		Pn		04 10 57.5	-3.5
FG16				IAML				04 11 13.4	
	comp=E,7µm,0.2s								
SOKI	Kika Raxquin	1.06	1	*i* P		Pn		04 11 00.1	-1.6
SOKI				*i* S		Sn		04 11 13.6	-2.3
PCG5	San Vicente Pa	1.11	65	*i* P		Pn		04 10 58.7	-3.4
SMCA	Catarina	1.27	330	*i* P		Pn		04 11 02.6	-1.5
FAME	Alcaldia de Sa	1.37	86	P		Pn		04 11 04.3	-1.1
APG	El Apazote	1.55	36	*i* P		Pn		04 11 07.7	-0.4
APG				*i* S		Sn		04 11 26.4	-0.8
NUBE	Las Nubes	1.60	84	P		Pn		04 11 07.9	-0.7
NUBE				S		Sn		04 11 27.6	-0.8
NUBE	Las Nubes	1.60	84	*i* P		Sn		04 11 07.8	-0.9
NUBE				*i* S		Sn		04 11 25.6	-2.7
LOAL	Lomas de Alarc	1.61	81	P		Pn		04 11 08.5	-0.2
LOAL				S		Sn		04 11 28.3	-0.2
SLOZ	Alcaldia de Sa	1.61	80	P		Pn		04 11 08.2	-0.5
SLOZ				S		Sn		04 11 29.0	+0.5
CEVE	Cerro Verde	1.74	87	P		Pn		04 11 10.7	0.0
CEVE				S		Sn		04 11 31.9	-0.1
CEVE	Cerro Verde	1.74	87	*e*P		Pn		04 11 10.7	0.0
CEVE				*e*S		Sn		04 11 33.2	+1.2
UNIC	Universidad Ca	1.83	83	P	

SUR	**Sutherland**	**43.84**	**250**	P		**P**	**04 22 43.0**	**-0.3**
JAGI	**Jajag, Banyuwa**	**44.56**	**74**	P		**P**	**04 22 48.6**	**-0.5**
JAGI				IAmb		IAmb	04 23 05.8	
	comp=Z,22nm,1.0s							
PSA00	**Pilbara Seismi**	**44.56**	**94**	P		**P**	**04 22 49.5**	**+0.5**
CASY	**Casey**	**46.60**	**159**	P		**P**	**04 23 04.5**	**+0.1**
ATD	**Arta Tunnel**	**46.81**	**320**	P		**P**	**04 23 06.1**	**-0.8**
ATD				IAmb		IAmb	04 23 13.8	
	comp=Z,15nm,1.1s							
FORT	**Forrest**	**49.68**	**109**	P		**P**	**04 23 28.6**	**-0.3**
FORT				IAmb		IAmb	04 23 31.3	
	comp=Z,6.5nm,0.9s							
BATI	**Baumata**	**52.10**	**82**	LR		LR	04 42 33.5	
	comp=Z,121nm,20.6s,baz=287,slow=32							
CMAR	**Chiang Mai Arr**	**52.31**	**34**	P		**P**	**04 23 49.5**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=220,slow=6.9,SNR=5.6							
CMAR				LR		LR	04 43 56.2	
	comp=Z,27nm,18.2s,baz=220,slow=34							
	comp=Z,0.8nm,0.3s							
CMAR	**Chiang Mai Arr**	**52.31**	**34**	P		**P**	**04 23 48.4**	**-0.3**
KNRA	**Kununurra**	**54.47**	**91**	P		**P**	**04 24 04.3**	**-0.5**
KNRA				IAmb		IAmb	04 24 06.5	
	comp=Z,41nm,1.8s							
MYLDM	**Lahad Datu**	**55.68**	**63**	P		**P**	**04 24 12.3**	**-1.2**
MYLDM				IAmb		IAmb	04 24 15.0	
	comp=Z,28nm,1.3s							
ASAR	**Alice Springs**	**56.42**	**102**	P		**P**	**04 24 18.2**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=253,slow=6.7,SNR=4.7							
	comp=Z,0.8nm,0.9s							
ASAR	**Alice Springs**	**56.42**	**102**	P		**P**	**04 24 17.6**	**-1.2**
MTN	**Manton Dam**	**57.67**	**89**	P		**P**	**04 24 28.1**	**+0.4**
MTN				IAmb		IAmb	04 24 30.7	
	comp=Z,22nm,1.3s							
WRA	**Warramunga Arr**	**57.96**	**98**	P		**P**	**04 24 28.6**	**-1.1**
	comp=Z,1.0nm,1.0s,baz=256,slow=8.9,SNR=4.5							
	comp=Z,1.0nm,1.0s							
WRA	**Warramunga Arr**	**57.96**	**98**	P		**P**	**04 24 30.5**	**+0.8**
HRA	**Herat**	**61.24**	**352**	P		**P**	**04 24 52.2**	**+0.1**
HRA				IAmb		IAmb	04 24 59.6	
	comp=Z,2.3nm,0.6s							
SBA	**Scott Base**	**65.38**	**167**	P		**P**	**04 25 19.5**	**+0.7**
CTA	**Charters Tower**	**68.42**	**102**	LR		LR	04 51 39.8	
	comp=Z,48nm,21.3s,baz=185,slow=33							
MKAR	**Makanchi Array**	**73.75**	**8**	P		**P**	**04 26 12.5**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=180,slow=5.9,SNR=8.0							
	comp=Z,0.6nm,0.7s							
MKAR	**Makanchi Array**	**73.75**	**8**	P		**P**	**04 26 12.3**	**+1.6**
KURBB	**Kurchatov Arra**	**77.17**	**5**	P		**P**	**04 26 32.0**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=203,slow=5.6,SNR=4.0							
	comp=Z,0.5nm,0.7s							
KURK	**Kurchatov**	**77.26**	**5**	P		**P**	**04 26 31.5**	**+0.8**
KSRS	**Korea Array**	**83.09**	**42**	LR		LR	05 03 22.2	
	comp=Z,21nm,18.6s,baz=50,slow=35							
HILR	**Hailar Array B**	**87.29**	**29**	LR		LR	05 06 50.7	
	comp=Z,83nm,20.4s,baz=290,slow=36							

IDC ***13*** *04:20:55.8±1.5,3°N×83°22W, h0km, mb3.6/3, mbtmp4.0/6, ML2.6/2, MS3.5/6, Error ellipse: s-maj=43.8km s-min=21.7km az=53.0*
NEIC ***13*** *04:20:56.0±1.7,3°49N±0°08×83°1W±0°1, h10km±2km, mb4.5/9, Error ellipse: s-maj=19.8km s-min=11.1km az=246.0*
RSNC ***13*** *04:21:01.1±0.5,3°N±3°×8°3W±°, h0km, M4.1, mB5.1, mb4.5, ML3.4, Mw(mB)4.4*
UPA ***13*** *04:21:45.3±1.6,6°82N×81°70W, h10km±999km, Presumed earthquake*

ISC 13 04:20:57.5±0.7,3°48N±0°06×83°00W±0°07,h24km,n72,
σ2°16/80,mb4.3/7,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GR1C	**Gorgona, Isla**	**4.84**	**95**	P	**Pn**	**04 22 09.2**	**+0.3**
GR1C				S	**Sn**	**04 22 58.3**	**-6.0**
PIRO	**Carate, Puerto**	**4.90**	**356**		**Pn**	**04 22 07.8**	**-1.9**
PIRO					**Sn**	**04 23 02.7**	**-3.0**
PAC1	**Pacto, Paraso**	**5.28**	**127**	P	**Pn**	**04 22 15.2**	**+0.2**
PAC1				S	**Sn**	**04 23 12.3**	**-2.9**
BRU2	**Volcan**	**5.29**	**3**		**Pn**	**04 22 13.6**	**-1.5**
PPLP	**Puerto Lpez**	**5.46**	**156**	P	**Pn**	**04 22 16.9**	**-0.6**
PPLP				S	**Sn**	**04 23 19.4**	**-0.3**
OTAV	**Otavalo**	**5.57**	**125**		**Pn**	**04 22 19.2**	**-0.1**
OTAV	**Otavalo**	**5.57**	**125**	P	**Pn**	**04 22 19.4**	**+0.1**
	16nm,1.2s						
OTAV				S	**Sn**	**04 23 19.1**	**-3.7**
	16nm,1.2s						
CUSE	**Cuicocha Este**	**5.57**	**124**	P	**Pn**	**04 22 19.7**	**+0.4**
	1µm45nm,0.5s						
CUSE				S	**Sn**	**04 23 20.9**	**-2.0**
	1µm45nm,0.5s						
PIZC	**Pizarro, Choco**	**5.81**	**75**	P	**Pn**	**04 22 22.1**	**-0.1**
	128nm,1.1s						
PIZC				S	**Sn**	**04 23 27.1**	**-1.1**
	128nm,1.1s						
BBAC	**Balboa, Cauca**	**5.92**	**104**	P	**Pn**	**04 22 25.0**	**+1.0**
	844nm26nm,0.7s						
BBAC				S	**Sn**	**04 23 26.6**	**-4.6**
	844nm26nm,0.7s						
GCUF	**Volcan Galeras**	**6.08**	**112**	P	**Pn**	**04 22 28.0**	**+1.7**
	37nm,0.7s						
SLOR	**San Lorenzo -**	**6.14**	**133**	Pn	**Pn**	**04 22 29.9**	**+2.7**
BONI	**La Bonita**	**6.24**	**119**	P	**Pn**	**04 22 30.1**	**+1.8**
	590nm33nm,1.0s						
BONI				S	**Sn**	**04 23 38.4**	**-0.6**
	590nm33nm,1.0s						
ZANG	**Zanguenga, Cho**	**6.26**	**30**	*eP*	**Pn**	**04 22 30.2**	**+1.7**
JAMC	**Jamundi, Valle**	**6.32**	**92**	P	**Pn**	**04 22 28.9**	**-0.5**
	24nm,0.8s						
JAMC				S	**Sn**	**04 23 35.8**	**-5.2**
	24nm,0.8s						
CRUC	**La Cruz**	**6.33**	**107**	P	**Pn**	**04 22 31.0**	**+1.3**
CRUC				S	**Sn**	**04 23 39.7**	**-1.8**
POPC	**Popayan, Colom**	**6.38**	**98**	P	**Pn**	**04 22 30.6**	**+0.3**
POPC				S	**Sn**	**04 23 41.0**	**-1.6**
FLAM	**Flamenco Islan**	**6.40**	**32**	*eP*	**Pn**	**04 22 31.6**	**+1.3**
BCIP	**Isla Barro Col**	**6.46**	**29**		**Pn**	**04 22 32.7**	**+1.5**
BCIP	**Isla Barro Col**	**6.46**	**29**	P	**Pn**	**04 22 32.6**	**+1.5**
RAFA	**San Farael, Vo**	**6.49**	**353**	Pn	**Pn**	**04 22 31.2**	**-0.6**
CASC	**Dorado de Casc**	**6.56**	**120**	P	**Pn**	**04 22 36.4**	**+3.8**
	43nm,1.1s						
CASC				S	**Sn**	**04 23 48.0**	**+1.2**
	43nm,1.1s						
FRIJ	**El Hiral**	**6.56**	**30**	*eP*	**Pn**	**04 22 33.3**	**+0.7**
HDC	**Heredia**	**6.57**	**350**		**Pn**	**04 22 32.4**	**-0.4**
YOTC	**Yotoco, Valle**	**6.66**	**85**	P	**Pn**	**04 22 34.5**	**+0.5**
	15nm,1.0s						
YOTC				S	**Sn**	**04 23 45.4**	**-3.8**
	15nm,1.0s						
COHC	**Cochancay**	**6.99**	**148**	Pn	**Pn**	**04 22 39.3**	**+0.9**
JTS	**Las Juntas de**	**7.04**	**344**	Pn	**Pn**	**04 22 38.1**	**-1.0**
	31nm,0.3s,baz=157,slow=7.7,SNR=35						
JTS				Sn	**Sn**	**04 23 56.1**	**-2.3**
	2.1nm,0.3s,baz=255,slow=23,SNR=6.6						
JTS	**Las Juntas de**	**7.04**	**344**		**Pn**	**04 22 38.3**	**-0.8**
JTS					**Sn**	**04 23 58.0**	**-0.5**
JUD3	**Juan Diaz 3**	**7.10**	**339**		**Pn**	**04 22 39.2**	**-0.9**
FLOC	**Florencia**	**7.58**	**104**	P	**Pn**	**04 22 47.5**	**+1.0**
	12nm,1.2s						
FLOC				S	**Sn**	**04 24 11.6**	**-0.1**
	12nm,1.2s						
GARC	**Garzon, Huila**	**7.60**	**100**	P	**Pn**	**04 22 49.6**	**+2.5**
	760nm15nm,0.7s						
DBBC	**Dabeiba**	**7.62**	**62**	P	**Pn**	**04 22 49.0**	**+1.9**
ANIL	**Santa Ana**	**7.64**	**82**	P	**Pn**	**04 22 51.1**	**+3.5**
ORTC	**Ortega, Tolima**	**7.75**	**87**	P	**Pn**	**04 22 52.0**	**+3.1**
	524nm33nm,0.8s						
ORTC				S	**Sn**	**04 24 16.9**	**+1.0**
	524nm33nm,0.8s						
PRAC	**Prado**	**8.10**	**88**	P	**Pn**	**04 22 55.8**	**+2.1**
	26nm,1.0s						
PRAC				S	**Sn**	**04 24 25.2**	**+0.6**
	26nm,1.0s						
URMC	**La Uribe, Meta**	**8.61**	**91**	P	Pn	04 23 05.7	+5.0
ROSC	**El Rosal**	**8.76**	**81**	Pn	**Pn**	**04 23 06.8**	**+3.8**
	2.1nm,0.3s,baz=130,slow=22,SNR=6.4						
ROSC				LR	LR	04 26 19.8	
	comp=Z,161nm,20.3s,baz=294,slow=36						
	8.8nm,0.5s						
ROSC	**El Rosal**	**8.76**	**81**		**Pn**	**04 23 05.5**	**+2.4**
PTLC	**Puerto Leguiza**	**8.83**	**112**	P	**Pn**	**04 23 07.6**	**+3.9**
	13nm,1.2s						
PTBC	**PUERTO BERRIO,**	**9.03**	**70**	P	**Pn**	**04 23 09.8**	**+3.3**
	35nm,0.8s						
SPBC	**San Pablo de B**	**9.15**	**76**	P	**Pn**	**04 23 09.6**	**+1.4**
	14nm,1.0s						
MACC	**Macarena, Meta**	**9.23**	**98**	P	**Pn**	**04 23 11.2**	**+1.9**
	35nm,0.8s						
VILC	**Villavicencio,**	**9.30**	**86**	P	Pn	04 23 15.4	+5.1
CHIC	**Chingaza**	**9.31**	**83**	P	Pn	04 23 15.6	+4.9
CRIN	**San Cristobal**	**10.00**	**337**	Pn	**Pn**	**04 23 22.7**	**+2.9**
RUSC	**La Rusia**	**10.17**	**76**	P	**Pn**	**04 23 22.0**	**-0.5**
	9.9nm,1.0s						
BARC	**Barichara**	**10.25**	**72**	P	**Pn**	**04 23 23.1**	**-0.3**
SIUN	**Universidad Ur**	**10.32**	**350**	Pn	**Pn**	**04 23 25.4**	**+1.3**
TGUH	**Tegucigalpa,Un**	**11.32**	**338**	Pn	**Pn**	**04 23 42.2**	**+4.2**
ATAH	**Atahualpa**	**11.50**	**156**	LR	LR	04 28 00.3	
	comp=Z,514nm,19.8s,baz=333,slow=36						
MTO3	**Montecristo**	**12.53**	**330**	Pn	Pn	04 23 59.7	+5.1
SDV	**Santo Domingo**	**13.41**	**66**	Pn	**Pn**	**04 24 08.2**	**+1.7**
	0.2nm,0.3s,baz=236,slow=4.9,SNR=4.9						
SDV				LR	LR	04 28 56.4	
	comp=Z,270nm,21.2s,baz=252,slow=36						
	3.9nm,0.8s						
SDV	**Santo Domingo**	**13.41**	**66**	Pn	**Pn**	**04 24 09.0**	**+2.4**
CMIG	**Matias Romero**	**17.86**	**320**	LR	LR	04 30 41.4	
	comp=Z,151nm,19.8s,baz=176,slow=33						
SJG	**San Juan**	**21.99**	**47**	LR	LR	04 34 14.8	
	comp=Z,61nm,21.3s,baz=240,slow=36						
LPAZ	**La Paz**	**24.53**	**144**	P	**P**	**04 26 20.4**	**+4.3**
	6.8nm,1.1s,baz=339,slow=6.2,SNR=9.5						
	6.8nm,1.1s						
LPAZ	**La Paz**	**24.53**	**144**	P	**P**	**04 26 16.0**	**-0.1**
LPAZ				IAmb	IAmb	04 26 22.9	
	comp=Z,18nm,1.4s						
PB16	**IPOC Station P**	**25.43**	**149**	P	**P**	**04 26 24.1**	**0.0**
PB16				IAmb	IAmb	04 26 37.0	
	comp=Z,18nm,1.4s						
154A	**Montrose**	**28.98**	**360**	P	**P**	**04 26 55.0**	**-0.3**
X48A	**Hartselle**	**31.04**	**354**	P	**P**	**04 27 13.2**	**-0.3**
X48A				IAmb	IAmb	04 27 47.3	
	comp=Z,3.8nm,0.7s						
WLAR	**White Oak Lake**	**31.50**	**344**	P	**P**	**04 27 17.1**	**-0.4**
TXAR	**Lajitas Array**	**32.34**	**325**	P	**P**	**04 27 23.0**	**-2.1**
T35A	**Sooner Cattle**	**35.52**	**341**	P	**P**	**04 27 51.6**	**-1.0**
T35A				IAmb	IAmb	04 28 06.8	
	comp=Z,13nm,1.3s						
SDMD	**Soldier's Deli**	**36.20**	**8**	P	**P**	**04 27 58.9**	**+0.6**
SDMD				IAmb	IAmb	04 28 39.9	
	comp=Z,14nm,1.4s						
PSUB	**Penn St. - Bra**	**36.92**	**10**	P	**P**	**04 28 04.5**	**+0.1**
H03N2	**Juan Fernandez**	**36.92**	**174**	T	T	05 07 23.9	
	baz=354,slow=76,SNR=8.5						
H03N1	**Juan Fernandez**	**36.92**	**174**	T	T	05 07 24.8	
	baz=354,slow=76,SNR=10						
H03N3	**Juan Fernandez**	**36.94**	**174**	T	T	05 07 23.8	
	baz=354,slow=76,SNR=12						
PFO	**Pinyon Flats O**	**43.27**	**318**	LR	LR	04 45 45.0	
	comp=Z,72nm,18.2s,baz=170,slow=35						
NVAR	**Mina Array Bea**	**47.38**	**322**	P	**P**	**04 29 28.2**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=92,slow=9.0,SNR=1.9						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**63.38**	**344**	P	**P**	**04 31 26.4**	**+1.8**
	comp=Z,0.7nm,0.9s,baz=144,slow=5.8,SNR=10						
	comp=Z,0.7nm,0.9s						
YKA	**Yellowknife Ar**	**63.38**	**344**	P	**P**	**04 31 25.1**	**+0.5**

IDC ***13*** *04:26:47.2±5.8,26°71S×71°28E, h0km, mb3.8/3, mbtmp3.8/3, MS3.5/7, Error ellipse: s-maj=160.1km s-min=45.7km az=55.0*
NEIC ***13*** *04:26:48.8±0.9,26°67S±0°07×71°1E±0°1, h10km±1km, mb4.7/13, Error ellipse: s-maj=22.4km s-min=8.4km az=246.0*

ISC 13 04:26:48.0±0.7,26°7S±0°1×71°1E±0°1,h10km,n27,
σ0°67/18,mb4.6/9,MS3.4/7,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**24.75**	**213**	T	T	04 58 45.3	
	baz=47,slow=74,SNR=149						
H04N1	**CROZET ISLANDS**	**24.76**	**213**	T	T	04 58 46.0	
	baz=47,slow=74,SNR=144						
H04N3	**CROZET ISLANDS**	**24.77**	**213**	T	T	04 58 44.7	
	baz=47,slow=74,SNR=162						
PALK	**Pallekele**	**35.05**	**17**	LR	LR	04 44 33.9	
	comp=Z,58nm,19.0s,baz=197,slow=30						
GRHM	**Grahamstown, E**	**39.08**	**249**	P	**P**	**04 34 14.9**	**-0.6**
GRHM				IAmb	IAmb	04 34 16.2	
	comp=Z,35nm,1.2s						
GIRL	**Giralia**	**39.23**	**94**	P	**P**	**04 34 17.1**	**+0.3**
GIRL				IAmb	IAmb	04 34 21.5	
	comp=Z,58nm,1.2s						
LEM	**Lembang**	**39.92**	**67**	LR	LR	04 49 35.1	
	comp=Z,54nm,18.9s,baz=306,slow=34						
BOSA	**Boshof**	**40.49**	**256**	LR	LR	04 49 04.1	
	comp=Z,51nm,19.5s,baz=59,slow=33						
LBTB	**Lobatse**	**40.85**	**262**	LR	LR	04 48 07.5	
	comp=Z,68nm,19.6s,baz=92,slow=31						
MAW	**Mawson**	**41.21**	**185**	LR	LR	04 46 54.6	
	comp=Z,86nm,20.9s,baz=58,slow=29						
SUR	**Sutherland**	**42.82**	**250**	LR	LR	04 50 12.3	
	comp=Z,89nm,19.5s,baz=124,slow=32						
CMAR	**Chiang Mai Arr**	**52.40**	**34**	P	**P**	**04 36 00.8**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=212,slow=6.5,SNR=4.7						
CMAR				LR	LR	04 54 21.4	
	comp=Z,23nm,18.1s,baz=165,slow=32						
	comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	**56.37**	**102**	P	**P**	**04 36 29.7**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=258,slow=7.0,SNR=6.1						
	comp=Z,0.7nm,0.9s						
ASAR	**Alice Springs**	**56.37**	**102**	P	**P**	**04 36 30.3**	**+0.5**
WB0	**Warramunga Arr**	**58.03**	**98**	P	**P**	**04 36 40.9**	**-0.7**
WB0				IAmb	IAmb	04 36 51.8	
	comp=Z,10nm,1.4s						
WR8	**Warramunga Arr**	**58.06**	**98**	P	**P**	**04 36 42.0**	**+0.2**
WR8				IAmb	IAmb	04 36 43.6	
	comp=Z,7.1nm,1.3s						
LSA	**Lhasa**	**59.29**	**20**	P	**P**	**04 36 50.3**	**-0.3**
LSA				IAmb	IAmb	04 36 57.3	
	comp=Z,3.1nm,0.6s						
SNAA	**Sanae**	**59.84**	**201**	P	**P**	**04 36 54.7**	**+1.3**
SNAA				IAmb	IAmb	04 37 12.2	
	comp=Z,11nm,1.4s						
KBL	**Kabul**	**60.97**	**358**	P	**P**	**04 37 01.6**	**-0.1**
SBA	**Scott Base**	**65.25**	**167**	P	**P**	**04 37 28.2**	**-1.1**
PMG	**Port Moresby**	**73.39**	**92**	P	**P**	**04 38 20.9**	**+0.1**
MAKZ	**Makanchi**	**73.84**	**8**	P	**P**	**04 38 21.8**	**-0.9**
MKAR	**Makanchi Array**	**73.87**	**8**	P	**P**	**04 38 23.5**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=193,slow=5.9,SNR=5.8						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**73.87**	**8**	P	**P**	**04 38 22.0**	**-0.8**
ARG	**Arkhangelos**	**74.59**	**325**	P	**P**	**04 38 27.6**	**+0.3**
AB31	**Akbulak array**	**76.30**	**352**	P	**P**	**04 38 37.1**	**+0.4**
ABKAR	**Akbulak array**	**76.30**	**352**	P	**P**	**04 38 37.2**	**+0.5**

IDC ***13*** *04:31:47.3±0.6,15°98S×74°51W, h0km, mb4.3/16, mbtmp4.4/19, ML4.2/3, MS4.4/48, Error ellipse: s-maj=23.5km s-min=12.9km az=55.0*
MOS ***13*** *04:31:50.8±1.4,16°01S×74°60W, h36km, mb5.3/13, Error ellipse: s-maj=14.1km s-min=7.1km az=114.2*
VAO ***13*** *04:31:51.8±0.4,15°97S×74°17W, h10km, mb5.2, Presumed earthquake*
NEIC ***13*** *04:31:52,15°98S×74°77W, h24km, Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^16Nm; Mrr1.33; Mθθ-0.55; Mϕϕ-0.78; Mrθ0.11; Mθϕ2.38; Mϕr-4.06; Fault plane solution: Mo4.85000×10^16 NP1: ϕs279.53000°, δ29.81000°, λ18.58000°. NP2: ϕs173.27000°, δ80.89000°, λ118.50000°. Principal axes: T 4.8506, Plg47.0000°, Azm113.0000°; N -0.0036, Plg28.0000°, Azm348.0000°; P -4.8470, Plg30.0000°, Azm240.0000°;*
NEIC ***13*** *04:31:52,15°98S×74°67W, h24km*
NEIC ***13*** *04:31:52.0±1.3,15°98S±0°07×74°67W±0°10, h35km±1km, mb5.0/132, Mww5.1/34, Error ellipse: s-maj=17.1km s-min=10.3km az=239.0*
RSNC ***13*** *04:31:58.0±1.3,16°S±13°×7°4W±°, h59km±10km, M4.5, mb4.8, mB5.1, ML4.3, Mw(mB)4.5, MwMwp4.8, Mwp5.1*
GCMT ***13*** *04:31:58.0±0.2,16°31S±0°01×74°65W±0°02, h48km±2km, MW5.1/107, Moment Tensor Solution. s63,c80; s107,c141; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.14±.19; Mθθ-0.65±.17; Mϕϕ-0.49±.19; Mrθ0.03±.12; Mθϕ4.24±.12; Mϕr-3.29±.16; Best double couple: Mo5.44200×10^16 NP1:ϕs272.00000°,δ51.00000°, λ10.00000°. NP2:ϕs175.00000°,δ82.00000°,λ140.00000°.*

Principal axes: T 5.2030, Plg33.0000°, Azm126.0000°; N 0.4750, Plg50.0000°, Azm346.0000°; P -5.6810, Plg20.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 13 04:31:52.0±0.3,15°96S±0°05×74°54W±0°06,h35km,n368,
σ1°65/288,mb4.9/90,MS4.4/46,13C-5D,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.54**	**330**	Pn	**Pn**	**04 32 56.7**	**-1.6**
	30nm,0.3s,baz=156,slow=12,SNR=28						
NNA				Sn	**Sn**	**04 33 48.5**	**-1.4**
	87nm,0.3s,baz=82,slow=8.6,SNR=5.2						
	56nm,0.3s						
NNA	**Nana**	**4.54**	**330**		**Pn**	**04 32 56.4**	**-1.9**
NNA					**Sn**	**04 33 48.1**	**-1.8**
NNA	**Nana**	**4.54**	**330**	⇑ *iP*	**Pn**	**04 32 56.6**	**-1.7**
NNA	**Nana**	**4.54**	**330**	P	**Pn**	**04 32 56.5**	**-1.7**
AP01	**Chacalluta**	**4.67**	**122**		**Pn**	**04 33 00.6**	**+0.5**
PB12	**IPOC Station P**	**4.81**	**124**		**Pn**	**04 33 01.6**	**-0.5**
PB18	**Visviri**	**5.11**	**109**		**Pn**	**04 33 08.6**	**+2.0**
PB16	**IPOC Station P**	**5.36**	**117**		**Pn**	**04 33 10.7**	**+0.7**
PB11	**IPOC Station P**	**5.99**	**130**		**Pn**	**04 33 17.6**	**-0.8**
LPAZ	**La Paz**	**6.17**	**94**	Pn	**Pn**	**04 33 25.2**	**+4.1**
	15nm,0.3s,baz=268,slow=11,SNR=108						
LPAZ				LR	LR	04 36 23.7	
	comp=Z,7µm,19.5s,baz=274,slow=45						
LPAZ	**La Paz**	**6.17**	**94**		**Pn**	**04 33 24.6**	**+3.4**
LPAZ	**La Paz**	**6.17**	**94**	P	**Pn**	**04 33 24.6**	**+3.4**
LPAZ	**La Paz**	**6.17**	**94**	P	**Pn**	**04 33 25.4**	**+4.2**
	4µm5µm400nm,0.9s						
ATAH	**Atahualpa**	**9.55**	**336**	Pn	Pn	04 34 13.2	+5.7
	3.1nm,0.3s,baz=124,slow=6.0,SNR=13						
ATAH				Sn	Sn	04 36 04.3	+11
	1.6nm,0.3s,baz=117,slow=14,SNR=2.2						
ATAH				LR	LR	04 37 16.6	
	comp=Z,852nm,18.7s,baz=211,slow=34						
AC01	**Pan de Azucar**	**10.78**	**161**		**Pn**	**04 34 22.2**	**-1.8**
AC02	**Maricunga**	**11.94**	**156**		**Pn**	**04 34 40.6**	**+0.5**
GO03	**Copiapo**	**12.25**	**162**		**Pn**	**04 34 43.5**	**-0.6**
MCRA	**Macar, Loja**	**12.69**	**335**	P	**Pn**	**04 34 50.2**	**+0.1**
SIV	**San Ignacio**	**12.95**	**92**	Pn	**Pn**	**04 34 52.3**	**-1.3**
	0.1nm,0.3s,baz=278,slow=9.6,SNR=35						
SIV				LR	LR	04 40 24.9	
	comp=Z,5µm,20.1s,baz=284,slow=40						
	21nm,0.7s						
AC05	**El Transito**	**13.41**	**164**		**Pn**	**04 35 00.5**	**+0.6**
LCO	**Las Campanas**	**13.46**	**165**		**Pn**	**04 35 00.2**	**-0.7**
LCO	**Las Campanas**	**13.46**	**165**	P	**Pn**	**04 35 00.2**	**-0.7**
COHC	**Cochancay**	**14.19**	**340**	P	**P**	**04 35 15.9**	**-1.6**
	25nm0.8nm,0.9s						
VILB	**Vilhena**	**14.20**	**80**		**Pn**	**04 35 08.4**	**-2.4**
VILB	**Vilhena**	**14.20**	**80**	*eP*	**Pn**	**04 35 08.4**	**-2.4**
CO01	**Juntas del Tor**	**14.54**	**164**		**Pn**	**04 35 16.2**	**+0.7**
GO04	**Tololo Observa**	**14.56**	**167**		**Pn**	**04 35 16.8**	**+1.1**
PTLB	**Pontes e Lacer**	**14.84**	**90**		**Pn**	**04 35 19.5**	**+0.2**
PTLB	**Pontes e Lacer**	**14.84**	**90**	*eP*	**Pn**	**04 35 17.4**	**-2.0**
CO03	**El Pedregal**	**15.23**	**167**		**Pn**	**04 35 23.8**	**-0.7**
CO03				IAmb	IAmb	04 35 32.4	
	comp=Z,70nm,1.0s						
CO02	**Combarbal**	**15.52**	**169**	Pn	**Pn**	**04 35 28.9**	**+0.5**
CO02				IAmb	IAmb	04 35 35.2	
	comp=Z,51nm,0.8s						
PPLP	**Puerto Lpez**	**15.59**	**336**	P	**P**	**04 35 35.0**	**+1.9**
	comp=Z,49nm,0.8s						
SLOR	**San Lorenzo -**	**15.63**	**345**	P	**P**	**04 35 32.4**	**-1.6**
TEFE	**Tefe**	**15.74**	**39**	*eP*	**Pn**	**04 35 33.0**	**+1.7**
PTLC	**Puerto Leguiza**	**16.03**	**359**	P	**Pn**	**04 35 32.0**	**-2.9**
CASC	**Dorado de Casc**	**16.23**	**350**	P	**P**	**04 35 41.4**	**+1.0**
	comp=Z,1µmcomp=Z,116nm,1.5s						
CO04	**Los Peladeros**	**16.34**	**169**		**Pn**	**04 35 38.4**	**-0.7**
ZON	**Zonda**	**16.41**	**162**		**Pn**	**04 35 39.2**	**-0.5**
ZON	**Zonda**	**16.41**	**162**	P	**Pn**	**04 35 39.2**	**-0.5**
ZON				pmax	pmax		
	comp=Z,38nm,1.0s						
OTAV	**Otavalo**	**16.55**	**346**		**P**	**04 35 43.8**	**-0.5**
OTAV	**Otavalo**	**16.55**	**346**	P	**P**	**04 35 43.8**	**-0.5**
OTAV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
OTAV	**Otavalo**	**16.55**	**346**	*eP*	**P**	**04 35 46.7**	**+2.5**
OTAV	**Otavalo**	**16.55**	**346**	P	P	04 35 51.5	+7.2
BONI	**La Bonita**	**16.57**	**349**	P	**P**	**04 35 51.0**	**+6.7**
	comp=Z,580nmcomp=Z,40nm,1.1s						
PAC1	**Pacto, Paraso**	**16.66**	**345**	P	P	04 35 52.8	+7.6
	comp=Z,738nmcomp=Z,47nm,1.3s						
VA06	**Catapilco**	**16.79**	**170**	Pn	**Pn**	**04 35 43.7**

PSAL **Palomas, Salto** 21.58 137 *e*P P 04 36 40.2 +1.5
CBOC **Ciudad Bolivar** 21.73 356 P P 04 36 47.6 +7.0
comp=Z,69nm,1.1s
TRCB **Terra Rica** 21.74 112 P P 04 36 39.5 -1.0
TRCB **Terra Rica** 21.74 112 *e*P P 04 36 40.7 +0.1
RUSC **La Rusia** 21.76 4 P P 04 36 41.9 +0.7
ITTB **Itaituba** 21.77 60 *e*P P 04 36 40.2 -0.7
ARAG **Araguaiana, MT** 21.86 92 *e*P P 04 36 41.0 -0.9
PTBC **PUERTO BERRIO,** 22.35 0 P P 04 36 50.4 +3.3
comp=Z,703nmcomp=Z,58nm,1.1s
BARC **Barichara** 22.45 4 P P 04 36 53.3 +4.9
comp=Z,18nm,0.7s
PTGB **Pitanga** 22.78 116 *e*P P 04 36 51.2 -0.5
BRJC **Barrancabermej** 22.80 2 P P 04 36 59.2 +7.4
comp=Z,1µmcomp=Z,73nm,1.2s
DBBC **Dabeiba** 22.89 356 P P 04 37 02.7 +10
SNDB **Serra Nova Dou** 22.89 83 *e*P P 04 36 51.8 -1.1
BOAV **Boa Vista** 22.90 38 P P 04 36 52.1 -0.9
BOAV **Boa Vista** 22.90 38 *e*P P 04 36 53.0 0.0
BOAV **Boa Vista** 22.90 38 P P 04 36 51.9 -1.1
PAMC **Pamplona, Colo** 23.22 5 P P 04 37 00.3 +3.7
comp=Z,303nmcomp=Z,36nm,0.8s
LDASE **Londrina, Braz** 23.24 112 *e*P P 04 36 55.5 -0.9
ITRB **Iturama** 23.31 103 *e*P P 04 36 56.7 -0.4
UREC **San Jos de Ur** 23.58 358 P P 04 37 02.6 +3.0
comp=Z,19nm,0.9s
ITAB **Concordia** 23.62 122 P 04 36 58.7 -1.3
ITAB **Concordia** 23.62 122 *e*P P 04 36 60.0 -0.1
GO06 **Curarrehue** 23.69 174 P P 04 36 57.9 -2.8
GO06 IAmb IAmb 04 37 15.4
comp=Z,25nm,0.8s
APAC **Apartado, Choc** 23.79 355 P P 04 37 08.6 +7.0
comp=Z,53nm,1.1s
OCAC **Ocana** 24.07 3 P P 04 37 07.3 +2.9
comp=Z,892nmcomp=Z,67nm,0.7s
CPSB **Cacapava Do Su** 24.08 130 *e*P P 04 37 04.6 +0.3
LR05 **Currie** 24.29 175 P P 04 37 04.1 -1.9
FRTB **Fartura** 24.61 111 *e*P P 04 37 09.7 +0.4
TRQA **Tornquist** 24.64 156 P 04 37 09.0 -0.4
TRQA IAmb IAmb 04 37 39.3
comp=Z,45nm,1.2s
TRQA **Tornquist** 24.64 156 P P 04 37 09.0 -0.4
TRQA pmax pmax
comp=Z,45nm,1.2s
PLTB **Pedras Altas** 24.71 133 P P 04 37 10.2 +0.2
PLTB IAmb IAmb 04 37 42.0
comp=Z,24nm,0.9s
PLTB **Pedras Altas** 24.71 133 *e*P P 04 37 10.4 +0.4
PLCA **Paso Flores** 24.93 173 P P 04 37 12.4 +0.4
comp=Z,14nm,0.7s,baz=342,slow=11,SNR=28
comp=Z,14nm,0.7s
PLCA **Paso Flores** 24.93 173 P 04 37 11.3 -0.7
PLCA IAmb IAmb 04 37 26.2
comp=Z,48nm,1.1s
PLCA **Paso Flores** 24.93 173 P P 04 37 11.3 -0.7
PLCA pmax pmax
comp=Z,48nm,1.1s
PLCA **Paso Flores** 24.93 173 *e*P P 04 37 13.4 +1.4
SDV **Santo Domingo** 24.98 9 P P 04 37 13.4 +0.7
comp=Z,5.2nm,0.7s,baz=236,slow=14,SNR=7.6
comp=Z,5.2nm,0.7s
SDV **Santo Domingo** 24.98 9 P 04 37 12.1 -0.7
SDV IAmb IAmb 04 37 26.2
comp=Z,55nm,1.0s
SDV **Santo Domingo** 24.98 9 *e*P P 04 37 13.2 +0.4
SDV **Santo Domingo** 24.98 9 P P 04 37 13.5 +0.7
BB19B **Bebedouro** 25.17 106 *e*P P 04 37 14.7 +0.3
IPMB **Ipameri, GO** 25.25 98 *e*P P 04 37 15.1 0.0
BDFB **Brasilia** 25.52 93 P P 04 37 17.6 0.0
comp=Z,29nm,1.0s,baz=265,slow=11,SNR=27
BDFB LR LR 04 48 56.3
comp=Z,1µm,18.0s,baz=275,slow=40
comp=Z,29nm,1.0s
BDFB **Brasilia** 25.52 93 P 04 37 17.6 0.0
BDFB **Brasilia** 25.52 93 P P 04 37 17.6 0.0
BDFB pmax pmax
comp=Z,134nm,1.3s
CNLB **Canela** 25.52 125 *e*P P 04 37 18.1 +0.6
SJCC **San Jacinto, C** 25.70 359 P P 04 37 24.7 +5.6
BRU2 **Volcan** 25.88 341 P P 04 37 20.0 -0.9
BRU2 IAmb IAmb 04 37 38.7
comp=Z,74nm,1.3s
PRPB **Paraiapebas** 26.11 71 *e*P P 04 37 22.0 -0.9
RCLB **Rio Claro- Sao** 26.28 108 *e*P P 04 37 24.9 +0.5
SPB **Sao Paulo** 26.58 111 *e*P P 04 37 28.7 +1.7
VAO **Valinhos** 26.89 109 P 04 37 30.3 +0.3
VAO IAmb IAmb 04 37 41.6
comp=Z,36nm,0.9s
VAO **Valinhos** 26.89 109 *e*P P 04 37 29.2 -0.8
PMNB **Patos De Minas** 26.95 100 *e*P P 04 37 29.7 -0.8
SMTB **Santa Maria do** 27.23 78 *e*P P 04 37 32.8 -0.2
JTS **Las Juntas de** 28.04 338 LR LR 04 48 22.8
comp=Z,2µm,20.5s,baz=157,slow=36
PARB **Paraibuna** 28.17 110 *e*P P 04 37 40.5 -0.9
BSCB **Bom Sucesso** 28.64 105 *e*P P 04 37 46.0 +0.3
SDBA **SAO DESIDERIO** 28.93 87 *e*P P 04 37 48.1 -0.2
JANB **Januaria** 29.13 92 *e*P P 04 37 50.4 +0.4
DIAM **Diamantina, MG** 29.57 99 *e*P P 04 37 54.5 +0.6
MDP **Montagnes des** 30.12 48 LR LR 04 51 19.9
comp=Z,771nm,20.7s,baz=231,slow=39
AY03 **Cochrane** 31.25 177 P P 04 38 06.7 -1.5
AY03 IAmb IAmb 04 38 26.7
comp=Z,24nm,1.1s
SJMB **Sao Joao De Ma** 31.93 100 *e*P P 04 38 14.7 0.0
BSFB **Barra de Sao F** 32.25 100 *e*P P 04 38 17.6 +0.1
TGUH **Tegucigalpa,Un** 32.37 336 P P 04 38 17.7 -0.9
TGUH IAmb IAmb 04 39 29.0
comp=Z,31nm,1.2s
RIB01 **Linhares ES** 32.68 101 *e*P P 04 38 21.3 +0.1
GUA01 **Guaratinga, BA** 33.32 96 *e*P P 04 38 27.6 +0.7
CMC01 **Camacan, BA** 33.70 94 *e*P P 04 38 30.5 +0.3
NBIT **Itapeh - BA** 33.83 93 *e*P P 04 38 31.4 +0.2
RPN **Rapa Nui** 34.11 245 LR LR 04 48 46.5
comp=Z,2µm,19.5s,baz=88,slow=30
NBPS **Pedro II - PI** 34.47 74 *e*P P 04 38 36.4 -0.6
APG **El Apazote** 34.55 332 P P 04 38 39.3 +1.5
comp=Z,0.2nm,0.4s,baz=180,slow=14,SNR=2.0
APG LR LR 04 51 55.6
comp=Z,111nm,19.2s,baz=239,slow=35
TEIG **Tepich** 38.41 339 P P 04 39 09.2 -1.1
TEIG IAmb IAmb 04 39 20.6
comp=Z,36nm,1.1s
CMIG **Matias Romero** 38.48 328 P P 04 39 11.7 +0.8
comp=Z,2.5nm,0.8s,baz=163,slow=9.4,SNR=4.1
CMIG LR LR 04 53 24.3
comp=Z,653nm,20.5s,baz=164,slow=34
comp=Z,2.5nm,0.8s
RCBR **Riachuelo** 39.18 79 LR LR 04 56 39.0
comp=Z,1µm,19.0s,baz=252,slow=38
RCBR **Riachuelo** 39.18 79 P 04 39 16.9 -0.2
RCBR IAmb IAmb 04 39 30.1
comp=Z,51nm,1.4s
RCBR **Riachuelo** 39.18 79 P P 04 39 16.9 -0.2
RCBR pmax pmax
comp=Z,51nm,1.4s
JRQG **Juriquilla Cam** 44.44 324 P P 04 39 58.5 -1.5
152A **Waverly Hall** 49.32 349 P P 04 40 38.3 +0.5
HKT **Hockley** 50.05 336 ⇓*i*P P 04 40 44.6 +1.3
HKT pmax pmax
comp=Z,25nm,1.5s
LRAL **Lakeview Retre** 50.15 346 P P 04 40 43.7 -0.4
833A **Chaparral WMA,** 50.17 331 P P 04 40 42.6 -1.7
833A IAmb IAmb 04 40 56.0
comp=Z,12nm,0.9s
Z47A **Carrollton** 50.56 345 P P 04 40 47.8 +0.7
HNDO **Hondo** 51.14 332 P P 04 40 51.0 -0.6
NATX **Nacogdoches** 51.22 338 P P 04 40 51.7 -0.5
NATX IAmb IAmb 04 41 04.4
comp=Z,15nm,0.8s
DRIO **Del Rio** 51.67 331 P P 04 40 54.7 -0.9
DRIO IAmb IAmb 04 41 06.1
comp=Z,18nm,1.3s
237A **Washetta, Mont** 51.86 337 P P 04 40 56.7 -0.3
TKL **Tuckaleechee C** 52.07 350 P P 04 41 00.7 +2.2
comp=Z,4.6nm,0.9s,baz=102,slow=11,SNR=4.2
TKL LR LR 05 02 44.4
comp=Z,412nm,21.4s,baz=158,slow=36
comp=Z,4.6nm,0.9s
TKL **Tuckaleechee C** 52.07 350 IAmb IAmb 04 41 38.9
comp=Z,28nm,1.4s
SAND **Sanderson** 52.83 330 IAmb IAmb 04 41 15.3
comp=Z,18nm,1.2s
LPIG **La Paz** 52.97 318 LR LR 04 59 03.8
comp=Z,229nm,19.2s,baz=126,slow=31

TXAR **Lajitas Array** 53.09 328 P P 04 41 06.2 -0.1
comp=Z,0.8nm,0.7s,baz=154,slow=7.8,SNR=8.0
TXAR LR LR 05 01 51.0
comp=Z,438nm,19.4s,baz=132,slow=34
comp=Z,0.8nm,0.7s
TXAR **Lajitas Array** 53.09 328 P P 04 41 05.8 -0.5
TXAR **Lajitas Array** 53.09 328 P P 04 41 05.8 -0.5
TX31 **Lajitas Ar. Si** 53.09 328 P 04 41 05.8 -0.5
TX31 IAmb IAmb 04 41 17.3
comp=Z,14nm,1.2s
MIAR **Mount Ida** 53.39 340 P 04 41 07.8 -0.4
MIAR IAmb IAmb 04 41 21.0
comp=Z,29nm,1.5s
MIAR **Mount Ida** 53.39 340 P P 04 41 07.8 -0.4
MIAR pmax pmax
comp=Z,29nm,1.5s
WHAR **Wooly Hollow** 53.68 342 P P 04 41 11.0 +0.7
WHAR IAmb IAmb 04 41 23.1
comp=Z,22nm,1.2s
ABTX **Abilene, Hawle** 53.95 334 IAmb IAmb 04 41 23.2
comp=Z,21nm,1.0s
LCAR **Lake Charles** 54.08 343 P 04 41 12.1 -1.2
MNHN **Monahans** 54.28 330 P P 04 41 14.3 -0.6
MNHN IAmb IAmb 04 41 26.3
comp=Z,11nm,0.9s
APMT **Aspermont** 54.76 334 P 04 41 17.4 -0.9
VHRN **Van Horn** 54.93 328 P 04 41 19.1 -0.6
VHRN IAmb IAmb 04 41 27.4
comp=Z,32nm,1.7s
WCI **Wyandotte Cave** 55.02 349 P P 04 41 19.9 -0.1
WCI **Wyandotte Cave** 55.02 349 P P 04 41 19.9 -0.1
WCI pmax pmax
comp=Z,22nm,0.8s
POST **Post** 55.14 332 P P 04 41 20.4 -0.7
TUL3 **Leonard** 55.37 339 P P 04 41 21.8 -0.9
MGMO **Mountain Grove** 55.41 343 P 04 41 22.1 -0.8
MGMO IAmb IAmb 04 41 35.1
comp=Z,23nm,1.2s
MNTX **Cornudas Mount** 55.87 328 P P 04 41 25.0 -1.3
R40A **Maddies Statio** 56.47 343 IAmb IAmb 04 41 54.7
comp=Z,12nm,1.0s
MSTX **Muleshoe** 56.47 332 IAmb IAmb 04 41 41.6
comp=Z,18nm,1.3s
ANMO **Albuquerque** 59.01 330 LR LR 05 06 05.8
comp=Z,304nm,18.7s,baz=136,slow=35
ANMO **Albuquerque** 59.01 330 P P 04 41 47.2 -1.4
ANMO **Albuquerque** 59.01 330 ⇑*i*P P 04 41 48.8 +0.2
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO **Albuquerque** 59.01 330 P P 04 41 48.4 -0.2
ANMO x x 04 41 55.2
ANMO pP **pP** 04 41 58.8 0.0
ANMO x x 04 42 02.3
T25A **Trinidad** 59.85 333 IAmb IAmb 04 42 06.1
comp=Z,6.7nm,0.9s
214A **Organ Pipe Nat** 60.13 323 IAmb IAmb 04 42 23.6
comp=Z,11nm,1.1s
SADO **Sadowa** 60.58 356 LR LR 05 10 21.4
comp=Z,180nm,20.0s,baz=194,slow=38
SDCO **Great Sand Dun** 60.84 332 P P 04 42 00.2 -1.0
SDCO IAmb IAmb 04 42 13.0
comp=Z,10nm,0.8s
X16A **Lo Mia Camp, P** 61.17 325 IAmb IAmb 04 42 19.8
comp=Z,14nm,1.3s
WUAZ **Wupatki** 61.96 326 P P 04 42 07.7 -1.0
WUAZ IAmb IAmb 04 42 16.8
comp=Z,11nm,1.1s
PV01 **Paradox Valley** 62.57 330 P P 04 42 12.2 -0.7
PV02 **Paradox Valley** 62.71 330 IAmb IAmb 04 42 22.4
comp=Z,24nm,1.4s
PV13 **Radium Mtn., P** 62.71 330 IAmb IAmb 04 43 39.9
comp=Z,24nm,1.6s
BC3 **Big Chuckawall** 62.90 322 IAmb IAmb 04 42 23.0
comp=Z,12nm,1.3s
U15A **North Rim** 63.14 326 IAmb IAmb 04 43 10.6
comp=Z,25nm,1.9s
BORC **Borrego Spring** 63.20 321 IAmb IAmb 04 42 54.9
comp=Z,20nm,1.4s
PFO **Pinyon Flats O** 63.46 321 LR LR 05 08 26.9
comp=Z,237nm,18.5s,baz=142,slow=35
PFO **Pinyon Flats O** 63.46 321 ⇑*i*P P 04 42 19.7 +1.0
PFO pmax pmax
comp=Z,5.0nm,1.1s
HMU **Henry Mountain** 63.48 329 IAmb IAmb 04 42 34.7
comp=Z,14nm,1.4s
KNB **Kanab** 63.86 326 IAmb IAmb 04 42 37.5
comp=Z,28nm,1.6s
O20A **White River Ci** 64.02 332 IAmb IAmb 04 42 44.2
comp=Z,7.1nm,0.8s
P18A **Preston Nutter** 64.55 330 IAmb IAmb 04 42 34.6
comp=Z,31nm,1.8s
FURC **Furnace Creek,** 65.69 323 IAmb IAmb 04 42 50.5
comp=Z,16nm,1.2s
WCT **Wildcat Mounta** 65.79 324 IAmb IAmb 04 42 51.5
comp=Z,11nm,1.1s
DUG **Dugway, Tooele** 66.25 329 IAmb IAmb 04 42 44.9
comp=Z,12nm,1.1s
TCUT **Toone Canyon** 66.27 330 IAmb IAmb 04 42 50.5
comp=Z,15nm,1.1s
PDAR **Pinedale Array** 66.72 333 P P 04 42 40.4 +0.6
comp=Z,0.2nm,0.6s,baz=163,slow=6.0,SNR=10
PDAR LR LR 05 13 47.0
comp=Z,135nm,18.4s,baz=132,slow=38
comp=Z,0.2nm,0.6s
PDAR **Pinedale Array** 66.72 333 P P 04 42 38.9 -1.0
HWUT **Hardware Ranch** 66.72 331 IAmb IAmb 04 43 23.9
comp=Z,11nm,0.9s
DSP **Deep Springs** 66.96 323 IAmb IAmb 04 43 00.1
comp=Z,23nm,1.9s
VNA3 **Neumayer Olymp** 67.00 161 ⇑P P 04 42 42.4 +1.4
comp=Z,16nm,0.9s
VNA1 **Neumayer--Stat** 67.26 161 ⇑P P 04 42 45.0 +2.4
comp=Z,26nm,0.9s
HVU **Hansel Valley** 67.43 330 IAmb IAmb 04 43 06.8
comp=Z,8.5nm,0.9s
VNA2 **Neumayer--Watz** 67.61 161 ⇑P P 04 42 45.5 +0.6
comp=Z,10nm,0.7s,baz=296,slow=6.3
NVAR **Mina Array Bea** 67.88 324 P P 04 42 47.4 +0.1
comp=Z,0.1nm,0.3s,baz=135,slow=5.2,SNR=4.2
NVAR LR LR 05 12 09.6
comp=Z,238nm,18.3s,baz=154,slow=36
comp=Z,0.1nm,0.3s
ULM **Lac du Bonnet** 68.55 345 P P 04 42 53.1 +2.2
comp=Z,1.8nm,0.5s,baz=175,slow=7.2,SNR=5.2
ULM LR LR 05 15 32.6
comp=Z,185nm,20.1s,baz=148,slow=38
comp=Z,1.8nm,0.5s
ULM **Lac du Bonnet** 68.55 345 IAmb IAmb 04 43 04.9
comp=Z,18nm,1.2s
ULM **Lac du Bonnet** 68.55 345 ⇑*i*P P 04 42 54.6 +3.7
YHB **Horse Butte** 69.01 333 IAmb IAmb 04 43 10.3
comp=Z,20nm,1.3s
YHL **Hebgen Lake** 69.09 333 P 04 42 54.1 -0.7
YHL IAmb IAmb 04 43 09.6
comp=Z,27nm,1.3s
SNAA **Sanae** 69.22 161 ⇑P P 04 42 56.4 +1.4
comp=Z,533nm,0.7s
SNAA **Sanae** 69.22 161 P P 04 42 56.4 +1.4
comp=Z,15nm,0.6s,baz=275,slow=7.9,SNR=24
comp=Z,15nm,0.6s
SNAA **Sanae** 69.22 161 P 04 42 55.5 +0.5
PAHR **Pah Rah Range** 69.37 324 IAmb IAmb 04 43 09.6
comp=Z,13nm,1.0s
BCYI **Bear Canyon** 69.67 331 IAmb IAmb 04 43 15.1
comp=Z,12nm,1.2s
AFDM **Forest Hills D** 69.76 323 P P 04 42 57.9 -0.9
AFDM IAmb IAmb 04 43 13.2
comp=Z,12nm,1.4s
MCMT **McKenzie Canyo** 69.81 332 P P 04 42 59.4 +0.2
MFID **Camas Ranch** 70.15 329 P P 04 42 59.8 -1.3
MFID IAmb IAmb 04 43 13.9
comp=Z,12nm,0.9s
ORV **Oroville** 70.47 323 P 04 43 03.3 +0.3
ORV IAmb IAmb 04 43 18.1
comp=Z,25nm,1.3s
ORV **Oroville** 70.47 323 P P 04 43 03.3 +0.3
ORV pmax pmax
comp=Z,25nm,1.3s
SCHQ **Schefferville** 70.81 5 P P 04 43 07.0 +2.2
comp=Z,3.2nm,0.8s,baz=216,slow=14,SNR=5.1
SCHQ LR LR 05 14 19.9
comp=Z,186nm,21.7s,baz=213,slow=36
comp=Z,3.2nm,0.8s
SCHQ **Schefferville** 70.81 5 P P 04 43 04.9 +0.1
SCHQ IAmb IAmb 04 43 19.0
comp=Z,20nm,1.1s
PPT **Papeete** 71.41 256 LR LR 05 06 24.9

comp=Z,387nm,21.1s,baz=90,slow=29
PLID **Pearl Lake** 71.47 330 P 04 43 08.0 -1.3
PLID IAmb IAmb 04 43 36.3
comp=Z,12nm,1.4s
BMO **Blue Mountains** 71.93 329 P 04 43 11.0 -0.9
BMO **Blue Mountains** 71.93 329 P P 04 43 11.0 -0.9
BMO pmax pmax
comp=Z,3.0nm,0.9s
I07A **Izee** 72.48 328 P P 04 43 13.6 -1.6
I07A IAmb IAmb 04 43 28.8
comp=Z,12nm,1.3s
DBIC **Dimbokro** 72.53 78 P P 04 43 15.4 -0.5
comp=Z,3.9nm,0.8s,baz=305,slow=3.4,SNR=3.7
DBIC LR LR 05 14 07.1
comp=Z,1µm,19.2s,baz=258,slow=35
comp=Z,3.9nm,0.8s
DBIC **Dimbokro** 72.53 78 P 04 43 16.0 +0.1
DBIC IAmb IAmb 04 43 31.9
comp=Z,13nm,1.0s
DBIC **Dimbokro** 72.53 78 P P 04 43 16.0 +0.1
DBIC pmax pmax
comp=Z,13nm,1.0s
YBH **Yreka Blue Hor** 72.61 324 LR LR 05 14 47.6
comp=Z,17nm,19.8s,baz=120,slow=36
NVL **N'lazarevskaya** 73.86 160 *e*P P 04 43 24.1 +1.3
NVL pmax pmax
comp=Z,18nm,1.2s
QSPA **South Pole Qui** 74.20 180 P P 04 43 23.0 -2.1
comp=Z,9nm,0.3s,baz=188,slow=6.1,SNR=3.2
QSPA **South Pole Qui** 74.20 180 P P 04 43 25.0 -0.1
QSPA IAmb IAmb 04 44 02.5
comp=Z,17nm,1.2s
QSPA **South Pole Qui** 74.20 180 P P 04 43 26.3 +1.2
NEW **Newport** 74.34 332 LR LR 05 17 37.7
comp=Z,170nm,18.4s,baz=136,slow=37
ELIB **Princess Elisa** 77.38 162 *d*P P 04 43 43.9 +0.7
ELIB *d*PcP **pP** 04 43 54.2 +0.6
FRB **Frobisher Bay** 79.59 3 LR LR 05 18 59.5
comp=Z,182nm,21.5s,baz=212,slow=36
RAR **Rarotonga** 80.05 251 LR LR 05 11 00.2
comp=Z,387nm,18.3s,baz=88,slow=25
TORD **Torodi Ar. Bea** 80.72 73 P P 04 44 02.4 +0.1
comp=Z,13nm,1.0s,baz=248,slow=6.7,SNR=47
TORD LR LR 05 18 53.8
comp=Z,934nm,19.6s,baz=244,slow=35
comp=Z,13nm,1.0s
TORD **Torodi Ar. Bea** 80.72 73 P P 04 44 01.5 -0.8
TORD IAmb IAmb 04 44 13.2
comp=Z,8.8nm,0.8s
VNDA **Vanda** 81.32 191 LR LR 05 14 35.7
comp=Z,186nm,18.1s,baz=131,slow=32
YKA **Yellowknife Ar** 84.27 343 P P 04 44 19.1 -0.6
comp=Z,0.5nm,0.9s,baz=141,slow=4.6,SNR=15
YKA LR LR 05 23 23.5
comp=Z,144nm,20.9s,baz=100,slow=37
comp=Z,0.5nm,0.9s
SFJD **Kangerlussuaq** 84.58 9 LR LR 05 23 58.2
comp=Z,163nm,19.9s,baz=198,slow=37
WIN **Windhoek** 85.48 112 P P 04 44 26.3 -0.8
WIN IAmb IAmb 04 44 38.8
comp=Z,11nm,0.9s
WIN **Windhoek** 85.48 112 P P 04 44 26.3 -0.8
WIN pmax pmax
comp=Z,11nm,0.9s
ESDC **Sonseca Array** 85.80 47 P P 04 44 29.2 +1.2
comp=Z,3.1nm,1.1s,baz=248,slow=5.4,SNR=7.0
comp=Z,3.1nm,1.1s
ESDC **Sonseca Array** 85.80 47 P P 04 44 28.0 0.0
ESDC IAmb IAmb 04 44 45.5
comp=Z,22nm,1.6s
SUR **Sutherland** 86.00 122 LR LR 05 20 31.8
comp=Z,290nm,19.1s,baz=255,slow=34
TSUM **Tsumeb** 86.81 109 LR LR 05 22 34.0
comp=Z,348nm,18.1s,baz=258,slow=35
TSUM **Tsumeb** 86.81 109 P 04 44 33.2 -0.4
TSUM IAmb IAmb 04 44 45.7
comp=Z,12nm,0.9s
DLBC **Dease Lake** 86.89 334 LR LR 05 27 09.4
comp=Z,131nm,18.2s,baz=98,slow=38
TAM **Tamanrasset** 87.25 66 P P 04 44 35.3 -0.4
TAM **Tamanrasset** 87.25 66 P P 04 44 35.3 -0.4
TAM pmax pmax
comp=Z,16nm,0.9s
TAM **Tamanrasset** 87.25 66 P P 04 44 38.0 +2.4
KOOLE **Kule** 88.11 113 P P 04 44 40.1 +0.3
CCD **Concordia, Ant** 88.45 185 P P 04 44 42.1 +1.4
CCD x x 04 44 48.8
KGCAE **Kacgae** 89.92 114 P P 04 44 49.3 +0.9
QNGWA **Qangwa** 89.97 110 P P 04 44 48.0 -0.6
BORG **Borgarnes** 89.98 20 LR LR 05 22 53.0
comp=Z,82nm,21.2s,baz=233,slow=34
BOSA **Boshof** 90.78 120 P P 04 44 51.8 -0.5
comp=Z,4.2nm,1.0s,baz=194,slow=4.2,SNR=3.3
BOSA LR LR 05 22 41.8
comp=Z,352nm,20.1s,baz=244,slow=34
comp=Z,4.2nm,1.0s
BOSA **Boshof** 90.78 120 P P 04 44 51.5 -0.8
BOSA **Boshof** 90.78 120 P P 04 44 51.5 -0.8
BOSA pmax pmax
comp=Z,14nm,1.3s
MAW **Mawson** 91.09 165 LR LR 05 25 37.0
comp=Z,106nm,18.9s,baz=220,slow=36
RES **Resolute Bay** 91.36 355 LR LR 05 31 05.9
comp=Z,114nm,18.6s,baz=178,slow=39
SUMG **Summit** 91.51 10 P P 04 44 54.2 -0.6
SUMG **Summit** 91.51 10 P P 04 44 54.3 -0.6
SUMG pmax pmax
comp=Z,33nm,1.3s
LBTB **Lobatse** 92.22 117 LR LR 05 22 22.5
comp=Z,204nm,21.6s,baz=250,slow=33
EKA **Eskdalemuir Ar** 92.79 33 LR LR 05 23 36.8
comp=Z,95nm,18.5s,baz=192,slow=34
INK **Inuvik** 93.98 341 LR LR 05 30 23.1
comp=Z,151nm,20.7s,baz=336,slow=37
URZ **Urewera** 94.01 229 LR LR 05 19 26.2
comp=Z,275nm,19.4s,baz=104,slow=30
KEST **Kesra** 94.33 54 LR LR 05 27 47.1
comp=Z,316nm,20.5s,baz=258,slow=36
RPZ **Rata Peaks** 95.75 222 LR LR 05 17 20.8
comp=Z,68nm,18.7s,baz=278,slow=28
ILAR **Eielson Array** 97.00 336 LR LR 05 32 22.3
comp=Z,88nm,20.4s,baz=108,slow=38
LSZ **Lusaka** 97.64 108 LR LR 05 26 51.9
comp=Z,419nm,21.6s,baz=274,slow=34
DAVOX **Davos/Dischmat** 97.71 44 LR LR 05 28 00.5
comp=Z,249nm,19.5s,baz=245,slow=34
VAE **Valguarnera** 98.71 54 LR LR 05 31 20.8
comp=Z,296nm,18.1s,baz=284,slow=36
CLL **Collm** 100.76 40 *e*PP PP 04 49 38.0 -6.9
CLL L L 05 31 00.0
comp=Z,200nm,18.0s
H11N3 **WAKE ISLAND Hyl** 21.65 284 T T 07 03 54.8
baz=97,slow=74,SNR=43
H11N2 **WAKE ISLAND Hyl** 21.67 284 T T 07 03 55.8
baz=97,slow=74,SNR=61
H11N1 **WAKE ISLAND Hyl** 21.67 284 T T 07 03 54.9
baz=97,slow=74,SNR=36
H11S2 **WAKE ISLAND Hyl** 21.69 282 T T 07 03 59.5
baz=98,slow=75,SNR=58
H11S1 **WAKE ISLAND Hyl** 21.70 282 T T 07 04 02.3
baz=98,slow=75,SNR=52
H11S3 **WAKE ISLAND Hyl** 21.71 282 T T 07 03 57.4
baz=98,slow=75,SNR=83
ARTI **Arti** 126.26 30 ⇑*i*PKIKP PKiKP 04 50 51.9 +0.8
YAK **Yakutsk** 130.89 345 ⇑*i*PKIKP PKPdf 04 50 59.6 +0.3
ASAR **Alice Springs** 131.80 216 PKP PKPdf 04 51 02.3 -0.1
comp=Z,1.4nm,0.9s,baz=192,slow=3.6,SNR=7.6
ASAR **Alice Springs** 131.80 216 PKiKP 04 51 02.9 -0.5
ASAR **Alice Springs** 131.80 216 PKiKP PKiKP 04 51 02.9 -0.5
WRA **Warramunga Arr** 134.41 219 PKP PKPdf 04 51 07.7 +0.4
comp=Z,1.4nm,0.7s,baz=138,slow=2.0,SNR=13
WRA **Warramunga Arr** 134.41 219 PKiKP 04 51 07.9 -0.8
WRA **Warramunga Arr** 134.41 219 PKIKP PKiKP 04 51 07.9 -0.8
ZALV **Zalesovo Beam** 138.81 18 PKP PKPdf 04 51 15.1 +0.8
comp=Z,3.2nm,0.7s,baz=318,slow=2.0,SNR=13
ZALV **Zalesovo Beam** 138.81 18 PKPdf 04 51 14.3 0.0
ZALV **Zalesovo Beam** 138.81 18 PKIKP PKPdf 04 51 14.3 0.0
KURK **Kurchatov** 139.16 26 PKPdf 04 51 14.2 -0.9
KURK **Kurchatov** 139.16 26 ⇓*i*PKIKP PKiKP 04 51 16.7 -0.7
KURBB **Kurchatov Arra** 139.19 26 PKP PKPdf 04 51 14.5 -0.7
comp=Z,1.1nm,1.0s,baz=308,slow=2.7,SNR=5.1
AAK **Ala-Archa** 142.47 39 ⇓*e*PKIKP PKPdf 04 51 20.3 -1.3
DGZ **Jazzator, Alta** 143.29 20 ⇑*i*PKIKP PKPdf 04 51 22.0 -0.8
MK31 **Makanchi Array** 143.72 27 ⇑*i*PKIKP PKPdf 04 51 23.4 -0.1
MKAR **Makanchi Array** 143.72 27 PKP PKPbc 04 51 22.3 +1.3
comp=Z,1.4nm,1.1s,baz=5.7,slow=1.2,SNR=4.9

MKAR	**Makanchi Array**	**143.72**	**27**	PKPdf	**PKPdf**	04 51 22.6	**-0.9**
MKAR	**Makanchi Array**	**143.72**	**27**	PKIKP	**PKPdf**	04 51 22.6	**-0.9**
USRK	**Ussuriysk Ar.**	**143.99**	**327**	PKP	PKPbc	04 51 22.8	+0.9
	comp=Z,3.0nm,0.9s,baz=58,slow=5.6,SNR=1.5						
MJAR	**Matsushiro Arr**	**144.44**	**311**	PKP	PKPbc	04 51 23.7	+0.2
	comp=Z,5.1nm,0.8s,baz=137,slow=1.7,SNR=6.8						
MJAR	**Matsushiro Arr**	**144.44**	**311**		**PKPab**	04 51 22.6	**-0.7**
MJAR	**Matsushiro Arr**	**144.44**	**311**	PKIKP	**PKPab**	04 51 22.6	**-0.7**
MDJ	**Mudanjiang**	**144.91**	**329**		**PKPab**	04 51 23.7	**-1.0**
MDJ	**Mudanjiang**	**144.91**	**329**	PKP	**PKPdf**	04 51 25.5	**-0.1**
BNX	**BinXian**	**145.08**	**333**	PKPbc	**PKPbc**	04 51 24.9	**-0.3**
KSH2	**Kashi**	**145.11**	**43**	PKPbc	**PKPdf**	04 51 27.3	**+1.0**
KSH2				pPKP	pPKPdf	04 51 37.8	+0.5
KSH2				sPKP	sPKPdf	04 51 41.3	+0.2
ZAK	**Zakamensk**	**145.62**	**2**	*e*PKP2	**PKPbc**	04 51 27.1	**+0.1**
ZAK				pmax	pmax		
	comp=Z,21nm,1.4s						
CN2	**Changchun**	**147.46**	**333**	PKPbc	**PKPdf**	04 51 30.5	**+0.6**
ULN	**Ulaanbaatar**	**148.16**	**358**		**PKPdf**	04 51 29.4	**-1.7**
ULN	**Ulaanbaatar**	**148.16**	**358**	*i*PKIKP	**PKPdf**	04 51 32.7	**+1.5**
SONM	**Songino Array**	**148.20**	**359**	PKPbc	**PKPbc**	04 51 35.1	**+0.6**
	comp=Z,3.1nm,0.8s,baz=336,slow=2.0,SNR=10						
SONM	**Songino Array**	**148.20**	**359**		**PKPdf**	04 51 31.0	**-0.2**
SONM	**Songino Array**	**148.20**	**359**	PKIKP	**PKPdf**	04 51 31.0	**-0.2**
WMQ	**Urumqi**	**148.38**	**25**	*e*PKPbc	**PKPdf**	04 51 31.1	**+0.5**
WMQ				PKPab	**PKiKP**	04 51 37.7	**+0.5**
WMQ				sPKP	sPKPdf	04 51 45.1	-1.3
XLT	**XiLinHaoTe**	**150.72**	**344**	*e*PKPbc	**PKiKP**	04 51 42.1	**+0.6**
XLT				pPKP	pPKPbc	04 51 51.3	-0.5
XLT				sPKP	sPKPbc	04 51 56.1	+0.5
KSRS	**Korea Array**	**150.80**	**321**	PKP	**PKPdf**	04 51 38.1	**+2.7**
	comp=Z,1.4nm,0.8s,baz=45,slow=1.9,SNR=3.1						
KSRS				PKPbc	**PKiKP**	04 51 42.2	**+0.5**
	comp=Z,7.5nm,1.0s,baz=35,slow=1.1,SNR=18						
HHC	**Hu-ho-hao-te**	**154.64**	**349**	*e*PKPbc	**PKPdf**	04 51 40.6	**-0.6**
GTA2	**Gaotai**	**156.03**	**11**	*e*PKP	PKPab	04 51 57.8	-13
GTA2				pPKP	sPKPdf	04 52 05.9	+7.9
GTA2				PP		04 56 14.1	+28
NJ2	**Nanjing**	**159.88**	**325**	*e*PKP	**PKPdf**	04 51 46.8	**-1.1**
PZH	**PanZhiHua**	**168.95**	**18**	PKP	**PKPdf**	04 51 54.8	**-1.5**
KMI2	**Kunming**	**170.51**	**15**	PKP	**PKPdf**	04 51 56.8	**-0.5**
CMAR	**Chiang Mai Arr**	**173.29**	**67**	PKPab	**PKPab**	04 53 27.6	**+0.9**
	comp=Z,0.9nm,0.4s,baz=313,slow=2.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**173.29**	**67**		**PKPab**	04 53 25.9	**-0.9**
CMAR	**Chiang Mai Arr**	**173.29**	**67**	PKP2	**PKPab**	04 53 25.9	**-0.9**

*IDC **13** 04:56:42.3±4.7, 1.°86S×96.°74E, h0km, mb3.5/4, mbtmp3.5/4, MS3.7/4, Error ellipse: s-maj=188.0km s-min=26.1km az=57.0*
*DJA **13** 04:57:04.9±0.7, 0.°5±6.°×9.°9E±.°, h10km, M3.0/7, MLv3.0/7*
ISC 13 04:56:45.1±1.8, 2.°2S±0.°2×96.°3E±0.°2, h35km, n20, σ0.°62/7, mb3.3/4, MS3.9/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**3.67**	**21**	P	**Pn**	**04 57 39.4**	**-0.1**
PPI	**Padang Panjang**	**4.47**	**68**	P	**Pn**	**04 57 50.6**	**+0.2**
H08S2	**Diego Garcia H**	**24.29**	**256**	T	T	05 29 26.8	
	baz=76,slow=76,SNR=5.8						
H08S3	**Diego Garcia H**	**24.30**	**256**	T	T	05 29 37.9	
	baz=76,slow=76,SNR=18						
H08S1	**Diego Garcia H**	**24.31**	**256**	T	T	05 29 33.3	
	baz=76,slow=76,SNR=6.0						
NWAO	**Narrogin (SRO)**	**36.40**	**150**	LR	LR	05 19 33.4	
	comp=Z,25nm,18.3s,baz=59,slow=38						
H01W3	**Cape Leeuwin H**	**36.58**	**155**	T	T	05 43 07.3	
	baz=334,slow=76,SNR=7.9						
H01W2	**Cape Leeuwin H**	**36.59**	**155**	T	T	05 43 08.3	
	baz=334,slow=76,SNR=7.7						
H01W1	**Cape Leeuwin H**	**36.59**	**155**	T	T	05 43 09.2	
	baz=334,slow=76,SNR=7.5						
WRA	**Warramunga Arr**	**41.18**	**118**	P	**P**	**05 04 25.7**	**-1.0**
	0.5nm,0.9s,baz=292,slow=9.0,SNR=5.0						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**42.24**	**124**	P	**P**	**05 04 36.0**	**+0.6**
	0.2nm,0.5s,baz=296,slow=7.7,SNR=3.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**50.27**	**348**	P	**P**	**05 05 38.2**	**+0.2**
	0.2nm,0.5s,baz=143,slow=9.0,SNR=3.9						
	0.2nm,0.5s						
SONM	**Songino Array**	**50.56**	**9**	P	**P**	**05 05 40.3**	**0.0**
	1.2nm,0.5s,baz=185,slow=8.6,SNR=3.7						
	1.2nm,0.5s						
H04N2	**CROZET ISLANDS**	**58.50**	**215**	T	T	06 12 36.2	
	baz=55,slow=75,SNR=11						
H04N1	**CROZET ISLANDS**	**58.51**	**215**	T	T	06 12 33.5	
	baz=55,slow=75,SNR=8.8						
H04N3	**CROZET ISLANDS**	**58.52**	**215**	T	T	06 12 31.6	
	baz=55,slow=75,SNR=12						
MMAI	**Mount Meron Ar**	**67.12**	**307**	LR	LR	05 39 31.1	
	comp=Z,54nm,21.0s,baz=238,slow=38						
NRIK	**Noril'sk**	**71.59**	**357**	LR	LR	05 44 27.9	
	comp=Z,93nm,19.6s,baz=345,slow=40						
TIXI	**Tiksi**	**76.62**	**10**	LR	LR	05 46 05.1	
	comp=Z,113nm,18.1s,baz=12,slow=39						
TXAR	**Lajitas Array**	**146.98**	**33**	PKPbc	**PKPab**	**05 16 26.4**	**0.0**
	0.3nm,0.6s,baz=330,slow=0.9,SNR=3.9						

IDC 13 05:23:08.9±7.3, 19.°16S×177.°21W, h0km, mb4.0/2, mbtmp4.0/2, Error ellipse: s-maj=296.6km s-min=117.4km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.53**	**261**	P	P	05 31 30.9	+0.2
	0.6nm,0.3s,baz=96,slow=7.4,SNR=30						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**45.56**	**255**	P	P	05 31 30.4	-0.5
	1.9nm,0.8s,baz=94,slow=7.9,SNR=14						
	1.9nm,0.8s						
AKASG	**Malin Array Be**	**142.19**	**332**	PKP	PKPdf	05 42 42.5	-0.6
	0.6nm,0.3s,baz=44,slow=4.5,SNR=4.1						

*UCR **13** 05:23:30.4±0.7, 10.°71N×86.°59W, h8km±24km, MW3.9, Presumed earthquake*
*CATAC **13** 05:23:31.5±0.5, 11.°N±2.°×8.°7W±.°, h15km±3km, M3.1/23, MLv3.1/23, Error ellipse: s-maj=5.5km s-min=2.8km az=45.1, confirmed*
ISC 13 05:23:30.5±2.0, 10.°71N±0.°06×86.°59W±0.°07, h12km±12km, n40, σ0.°61/55, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRUZ	**La Cruz**	**1.01**	**69**	*e*P	**Pg**	**05 23 49.8**	**-0.2**
ELI1	**Hacienda Flor**	**1.02**	**94**	P	**Pg**	**05 23 50.8**	**+0.6**
ELI1				S	**Sn**	**05 24 05.0**	**0.0**
ELI1	**Hacienda Flor**	**1.02**	**94**	*e*P	**Pb**	**05 23 50.6**	**+0.4**
ALIBA	**Liberia Airpor**	**1.03**	**96**	*e*P	**Pb**	**05 23 50.5**	**+0.1**
LAPC	**Finca la Perla**	**1.14**	**87**	*e*P	**Pb**	**05 23 51.4**	**-0.7**
CARN	**Rivas**	**1.15**	**66**	P	**Pb**	**05 23 52.6**	**+0.3**
CARN				S	**Sn**	**05 24 08.8**	**+0.7**
CARN	**Rivas**	**1.15**	**66**	*e*P	**Pb**	**05 23 52.3**	**-0.1**
NADN	**Granada**	**1.17**	**28**	P	**Pb**	**05 23 52.0**	**-0.7**
NADN				S	**Sb**	**05 24 07.7**	**-0.1**
ELVJ	**El Viejo (Barb**	**1.27**	**102**	*e*P	**Pn**	**05 23 51.6**	**-2.5**
BAGA	**Bagaces**	**1.32**	**98**	*e*P	**Pn**	**05 23 54.5**	**-0.3**
INDI	**Punta indio, G**	**1.36**	**128**	P	**Pn**	**05 23 54.9**	**-0.4**
MAS3	**Al N del Volca**	**1.37**	**17**	P	**Pb**	**05 23 56.2**	**+0.1**
MAS3				S	**Sb**	**05 24 12.6**	**-1.0**
MESS	**Mesas**	**1.37**	**89**	*e*P	**Pn**	**05 23 54.9**	**-0.7**
UNAN	**Cigeo UNAN**	**1.43**	**13**	P	**Pn**	**05 23 56.4**	**0.0**
UNAN				S	**Sb**	**05 24 15.3**	**0.0**
VMAR	**Armenia, Volca**	**1.45**	**86**	*e*P	**Pn**	**05 23 57.1**	**+0.4**
TISN	**Laguna Tiscapa**	**1.46**	**12**	P	**Pn**	**05 23 56.6**	**-0.2**
COPN	**Copaltepe**	**1.46**	**360**	P	**Pn**	**05 23 56.6**	**-0.2**
COPN	**Copaltepe**	**1.46**	**360**	*e*P	**Pn**	**05 23 56.4**	**-0.4**
SAPS	**Ciudad Sandino**	**1.46**	**7**	P	**Pn**	**05 23 56.7**	**-0.1**
SAPS				S	**Sn**	**05 24 16.0**	**+0.1**
MGAN	**Managua**	**1.47**	**13**	P	**Pn**	**05 23 56.6**	**-0.3**
MGAN				S	**Sn**	**05 24 15.9**	**-0.1**
ALLN	**Telcor Managua**	**1.47**	**12**	S	**Sn**	**05 24 15.6**	**-0.4**
APQ2	**Apoyeque**	**1.50**	**10**	P	**Pn**	**05 23 57.6**	**+0.2**
APQ2				S	**Sn**	**05 24 16.0**	**-0.8**
UPAL	**Upala**	**1.56**	**83**	P	**Pn**	**05 23 57.6**	**-0.6**
UPAL				S	**Sn**	**05 24 18.9**	**+0.6**
JTS	**Las Juntas de**	**1.66**	**104**	P	**Pn**	**05 23 59.1**	**-0.5**
JTS				S	**Sb**	**05 24 22.2**	**+0.1**
MOM2	**El Cardon**	**1.72**	**3**	S	**Sn**	**05 24 22.3**	**0.0**
MACN	**El Madrono**	**1.75**	**357**	P	**Pn**	**05 24 00.8**	**0.0**
MACN				S	**Sn**	**05 24 22.8**	**-0.2**
HERN	**Volcan Telica**	**1.90**	**353**	P	**Pn**	**05 24 02.9**	**0.0**
HERN				S	**Sn**	**05 24 27.2**	**+0.3**
POLN	**Al Sur del Vol**	**1.94**	**354**	P	**Pn**	**05 24 03.8**	**+0.4**
BOAB	**BOACO BROADBAN**	**1.95**	**28**	P	**Pn**	**05 24 03.6**	**0.0**
CRIN	**San Cristobal**	**2.03**	**347**	P	**Pn**	**05 24 04.0**	**-0.7**
MATN	**Matagalpa**	**2.30**	**16**	P	**Pn**	**05 24 09.4**	**+1.0**
LIMN	**Finca el Limon**	**2.35**	**5**	P	**Pn**	**05 24 09.2**	**+0.1**
LIMN				S	**Sn**	**05 24 38.5**	**+0.6**
CSGN	**Cosiguina Volc**	**2.44**	**337**	P	**Pn**	**05 24 10.7**	**+0.3**
CSGN				S	**Sn**	**05 24 40.8**	**+0.5**
LCR2	**La Lucha 2**	**2.72**	**111**	S	**Sn**	**05 24 48.5**	**+1.2**
RCON	**San Juan de Ri**	**2.79**	**9**	P	**Pn**	**05 24 16.0**	**+0.8**
RCON				S	**Sn**	**05 24 48.5**	**-0.4**
TRT2	**Tortugero**	**2.81**	**93**	S	**Sn**	**05 24 50.1**	**+0.9**
CNCH	**Conchagua**	**2.83**	**335**	P	**Pn**	**05 24 15.4**	**-0.3**
LCND	**La Caada**	**2.88**	**334**	P	**Pn**	**05 24 16.6**	**+0.3**
RCVN	**Varillal2**	**2.88**	**8**	P	**Pn**	**05 24 17.1**	**+0.7**
BUS1	**Rivas**	**3.02**	**112**	*e*P	**Pn**	**05 24 18.5**	**-0.2**

*IDC **13** 05:40:39.8±3.4, 24.°13N×124.°03E, h0km, mb3.9/2, mbtmp4.1/4, ML3.6/2, Error ellipse: s-maj=104.4km s-min=29.0km az=108.0*
*TAP **13** 05:40:45.7, 24.°61N×122.°85E, h104km, ML4.3, B*
*JMA **13** 05:40:46.0±0.2, 25.°1N±2.°×122.°8E±0.°5, h103km±1km, MV3.5/19, NW OFF ISHIGAKIJIMA IS*
ISC 13 05:40:46.5±0.9, 24.°55N±0.°03×122.°84E±0.°02, h102km±5km, n175, σ0.°84/306, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.14**	**135**	P	**Pn**	**05 41 00.5**	**-0.2**
JYNG				S	**Sn**	**05 41 11.2**	**-0.1**
YOJ	**Yonaguni jima**	**0.18**	**119**	S	**Sn**	**05 41 11.1**	**-0.4**
YOJ	**Yonaguni jima**	**0.18**	**119**	P	**Pn**	**05 41 00.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.18**	**119**	S	**Sn**	**05 41 11.3**	**-0.2**
YOJ	**Yonaguni jima**	**0.18**	**119**	P	**Pn**	**05 41 00.7**	**-0.1**
YOJ				S	**Sn**	**05 41 11.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.18**	**119**	*i*P	**Pn**	**05 41 00.7**	**-0.1**
YOJ				*i*S	**Sn**	**05 41 11.6**	**+0.1**
EOS3	**EOS3**	**0.54**	**241**	*i*P	**Pn**	**05 41 03.0**	**+0.5**
EOS3				*i*S	**Sn**	**05 41 16.0**	**+1.4**
EOS2	**EOS2**	**0.57**	**257**	*i*P	**Pn**	**05 41 03.0**	**+0.3**
EOS2				*i*S	**Sn**	**05 41 15.8**	**+0.9**
EOS4	**EOS4**	**0.64**	**228**	*i*P	**Pn**	**05 41 03.2**	**+0.2**
EOS4				*i*S	**Sn**	**05 41 16.2**	**+0.7**
IRIF	**Iriomote-Funau**	**0.84**	**105**	*i*P	**Pn**	**05 41 05.3**	**-0.1**
IRIF				S	**Sn**	**05 41 19.2**	**-0.4**
EGS		**0.87**	**290**	*i*P	**Pn**	**05 41 05.6**	**0.0**
EGS				S	**Sn**	**05 41 19.7**	**-0.4**
TWB1	**Santiao Chiao**	**0.90**	**301**	*i*P	**Pn**	**05 41 05.4**	**-0.4**
TWB1				*i*S	**Sn**	**05 41 19.5**	**-1.0**
TWC	**Suao**	**0.90**	**274**	*i*P	**Pn**	**05 41 05.3**	**-0.6**
TWC				*i*S	**Sn**	**05 41 19.3**	**-1.3**
ESAO	**Su ao**	**0.90**	**272**	P	**Pn**	**05 41 06.0**	**0.0**
ESAO				S	**Sn**	**05 41 20.0**	**-0.6**
EWUT	**Wuta**	**0.97**	**264**	P	**Pn**	**05 41 06.5**	**-0.1**
EWUT				S	**Sn**	**05 41 21.4**	**-0.5**
ENA	**Nanau**	**1.01**	**263**	P	**Pn**	**05 41 07.2**	**+0.1**
ENA				S	**Sn**	**05 41 22.7**	**+0.2**
TIPB	**Shuangxi**	**1.01**	**295**	*i*P	**Pn**	**05 41 06.9**	**-0.3**
TIPB				*i*S	**Sn**	**05 41 21.4**	**-1.3**
HATJ	**Hateruma jima**	**1.01**	**119**	*e*P	**Pn**	**05 41 07.4**	**+0.3**
HATJ				*e*S	**Sn**	**05 41 22.8**	**+0.2**
NDS	**Dongshan**	**1.02**	**275**	P	**Pn**	**05 41 07.3**	**0.0**
NDS				*e*S	**Sn**	**05 41 22.3**	**-0.6**
EAHA	**Aohua**	**1.02**	**258**	P	**Pn**	**05 41 07.2**	**0.0**
EAHA				*e*S	**Sn**	**05 41 22.5**	**-0.4**
EHP	**Heping Village**	**1.03**	**257**	*e*S	**Sn**	**05 41 22.4**	**+0.5**
SXI1	**Grass Mountain**	**1.03**	**302**	P	**Pn**	**05 41 07.2**	**-0.2**
SXI1				S	**Sn**	**05 41 22.6**	**-0.5**
TWE	**Neicheng**	**1.08**	**279**	*i*P	**Pn**	**05 41 07.6**	**-0.2**
TWE				*i*S	**Sn**	**05 41 23.2**	**-0.7**
NWF	**Wu-fen Shan**	**1.09**	**299**	P	**Pn**	**05 41 08.1**	**0.0**
NWF				S	**Sn**	**05 41 23.8**	**-0.5**
WFSB	**Wu-fen Shan**	**1.09**	**299**	P	**Pn**	**05 41 07.9**	**-0.1**
WFSB				S	**Sn**	**05 41 23.8**	**-0.5**
JKRS	**Kuro-shima**	**1.11**	**106**	*e*P	**Pn**	**05 41 08.5**	**+0.3**
JKRS				S	**Sn**	**05 41 24.7**	**+0.1**
TNOU	**National Taiwa**	**1.14**	**302**	*i*P	**Pn**	**05 41 08.1**	**-0.4**
TNOU				S	**Sn**	**05 41 24.5**	**-0.6**
FUSB	**Fushanzhiwuyua**	**1.16**	**281**	*i*P	**Pn**	**05 41 08.8**	**0.0**
FUSB				S	**Sn**	**05 41 25.0**	**-0.6**
ENTT	**Nioudou**	**1.16**	**275**	*i*P	**Pn**	**05 41 08.9**	**+0.1**
ENTT				S	**Sn**	**05 41 25.3**	**-0.3**
ETL	**Fush Village**	**1.17**	**251**	*e*P	**Pn**	**05 41 08.4**	**-0.5**
LATG	**Datong**	**1.19**	**269**	*i*P	**Pn**	**05 41 09.0**	**+0.3**
LATG				*i*S	**Sn**	**05 41 26.4**	**-0.1**
NACB	**Ninganchiao**	**1.19**	**252**	P	**Pn**	**05 41 09.2**	**+0.1**
NACB	**Ninganchiao**	**1.19**	**252**	P	**Pn**	**05 41 08.6**	**-0.5**
NACB	**Ninganchiao**	**1.19**	**252**	P	**Pn**	**05 41 25.6**	**-0.7**
NACB	**Ninganchiao**	**1.19**	**252**	*i*P	**Pn**	**05 41 08.5**	**-0.7**
NACB				S	**Sn**	**05 41 25.6**	**-0.7**
JIJ	**Ishigaki jima**	**1.21**	**99**	*i*P	**Pn**	**05 41 09.1**	**-0.2**
JIJ				S	**Sn**	**05 41 25.4**	**-1.1**
TWA	**Mucha**	**1.22**	**291**	*i*P	**Pn**	**05 41 09.3**	**-0.1**
TWA				*i*S	**Sn**	**05 41 25.9**	**-0.9**
TWD	**Chiawan**	**1.23**	**248**	*i*P	**Pn**	**05 41 09.0**	**-0.5**
TWD				*i*S	**Sn**	**05 41 26.0**	**-1.0**
NWLT	**Wulai**	**1.23**	**281**	*e*P	**Pn**	**05 41 09.6**	**0.0**
NWLT				*e*S	**Sn**	**05 41 26.3**	**-0.9**
HWA	**Hwalien**	**1.26**	**243**	*i*P	**Pn**	**05 41 09.7**	**-0.2**
HWA				S	**Sn**	**05 41 27.6**	**-0.1**
PCYT	**Pengchaiyu**	**1.28**	**327**	*i*P	**Pn**	**05 41 10.2**	**+0.1**
PCYT				*i*S	**Sn**	**05 41 27.7**	**-0.6**
ETLH	**Xiulin Townshi**	**1.28**	**255**	P	**Pn**	**05 41 10.1**	**-0.1**
ETLH				S	**Sn**	**05 41 28.0**	**-0.3**
YM01	**YM01**	**1.29**	**297**	P	**Pn**	**05 41 10.2**	**-0.1**
YM01				S	**Sn**	**05 41 27.7**	**-0.7**
TATO	**Taipei**	**1.30**	**289**	P	**Pn**	**05 41 10.6**	**+0.3**
TATO	**Taipei**	**1.30**	**289**	S	**Sn**	**05 41 27.5**	**-0.9**
TATO	**Taipei**	**1.30**	**289**	P	**Pn**	**05 41 10.3**	**0.0**
TATO				S	**Sn**	**05 41 28.2**	**-0.2**
YM08	**YM08**	**1.30**	**299**	P	**Pn**	**05 41 10.1**	**-0.3**
YM08				S	**Sn**	**05 41 28.1**	**-0.3**
TAP	**Taipei**	**1.30**	**292**	*e*S	**Sn**	**05 41 28.0**	**-0.6**
TEYL	**Yanliau Villag**	**1.32**	**239**	*e*P	**Pn**	**05 41 10.4**	**-0.3**
TEYL				*e*S	**Sn**	**05 41 28.6**	**-0.3**
ZUZH	**Zhuzihu**	**1.32**	**298**	P	**Pn**	**05 41 10.5**	**-0.2**
ZUZH				*i*S	**Sn**	**05 41 28.1**	**-1.0**
NNSB	**Datong**	**1.33**	**265**	P	**Pn**	**05 41 10.5**	**-0.3**
NNSB				S	**Sn**	**05 41 28.7**	**-0.6**
NNSH	**Datong**	**1.33**	**265**	*e*P	**Pn**	**05 41 10.9**	**+0.1**
NNSH				*e*S	**Sn**	**05 41 29.0**	**-0.3**
TWY	**Chenhua**	**1.33**	**303**	*e*P	**Pn**	**05 41 10.8**	**0.0**
TWY				*e*S	**Sn**	**05 41 29.0**	**-0.2**
YHNB	**Yeheng**	**1.33**	**275**	P	**Pn**	**05 41 12.0**	**+1.1**
YHNB	**Yeheng**	**1.33**	**275**	P	**Pn**	**05 41 28.6**	**-0.8**
YHNB	**Yeheng**	**1.33**	**275**	P	**Pn**	**05 41 11.6**	**+0.7**
YHNB	**Yeheng**	**1.33**	**275**	S	**Sn**	**05 41 29.1**	**-0.3**
YHNB	**Yeheng**	**1.33**	**275**	*e*P	**Pn**	**05 41 11.0**	**+0.1**
YHNB				*e*S	**Sn**	**05 41 28.8**	**-0.5**
NNS	**Nan Shan**	**1.34**	**266**	P	**Pn**	**05 41 10.9**	**-0.1**
NNS				S	**Sn**	**05 41 28.8**	**-0.7**
JISG	**Ishigakijimahi**	**1.34**	**88**	P	**Pn**	**05 41 10.6**	**-0.3**
JISG				S	**Sn**	**05 41 28.2**	**-1.1**
NSK	**Sanguang**	**1.35**	**276**	*i*P	**Pn**	**05 41 11.2**	**+0.2**
NSK				*i*S	**Sn**	**05 41 29.2**	**-0.5**
ETM	**Tongmen**	**1.36**	**245**	P	**Pn**	**05 41 10.4**	**-0.6**
ETM				S	**Sn**	**05 41 28.7**	**-1.1**
SHUL	**Shoufeng**	**1.39**	**237**	*i*P	**Pn**	**05 41 11.1**	**-0.3**
SHUL				*i*S	**Sn**	**05 41 30.0**	**-0.4**
NTST	**Danshui**	**1.40**	**296**	*e*P	**Pn**	**05 41 11.6**	**0.0**
NTST				*e*S	**Sn**	**05 41 30.5**	**-0.1**
TWS1	**Kuangyinshan**	**1.40**	**293**	P	**Pn**	**05 41 11.6**	**0.0**
TWS1				S	**Sn**	**05 41 30.2**	**-0.4**
LXIB	**Xiulin Townshi**	**1.40**	**248**	*i*P	**Pn**	**05 41 11.1**	**-0.7**
LXIB				S	**Sn**	**05 41 30.0**	**-0.9**
TEGC	**Jichi Village**	**1.45**	**235**	P	**Pn**	**05 41 11.9**	**-0.3**
TEGC				*e*S	**Sn**	**05 41 31.6**	**-0.1**
ESL	**Shilin**	**1.48**	**240**	P	**Pn**	**05 41 11.9**	**-0.6**
ESL				S	**Sn**	**05 41 31.3**	**-1.0**
FUSS	**Fushou**	**1.48**	**259**	*i*P	**Pn**	**05 41 12.9**	**0.0**
FUSS				S	**Sn**	**05 41 32.3**	**-0.5**
WHF	**Hehuan Shan**	**1.49**	**255**	*i*P	**Pn**	**05 41 12.8**	**-0.3**
WHF				*i*S	**Sn**	**05 41 32.5**	**-0.7**
KSHI	**Guanxi Townshi**	**1.53**	**279**	P	**Pn**	**05 41 13.4**	**+0.3**
KSHI				S	**Sn**	**05 41 33.6**	**+0.3**
TWT	**Tachien**	**1.54**	**259**	P	**Pn**	**05 41 14.1**	**+0.6**
TWT				S	**Sn**	**05 41 33.8**	**-0.2**
NCUH	**Zhongli**	**1.56**	**286**	*e*P	**Pn**	**05 41 14.4**	**+0.9**
NCUH				*e*S	**Sn**	**05 41 34.8**	**+0.8**
EGFH	**Guangfu**	**1.56**	**236**	*e*P	**Pn**	**05 41 13.2**	**-0.3**
EGFH				*e*S	**Sn**	**05 41 33.8**	**-0.2**
TDCB	**Techi**	**1.56**	**259**	P	**Pn**	**05 41 13.8**	**+0.2**
TDCB				S	**Sn**	**05 41 33.4**	**-0.9**
WARBT	**Fenglin Townsh**	**1.56**	**238**	*i*P	**Pn**	**05 41 12.9**	**-0.7**
WARBT				S	**Sn**	**05 41 33.0**	**-1.2**
NFF	**Wufeng Townshi**	**1.57**	**273**	*e*P	**Pn**	**05 41 14.3**	**+0.7**
NFF				*e*S	**Sn**	**05 41 34.0**	**-0.3**
OWD	**Renai**	**1.63**	**249**	P	**Pn**	**05 41 14.2**	**-0.3**
OWD				S	**Sn**	**05 41 34.4**	**-1.5**
LIOB	**Emei**	**1.66**	**274**	P	**Pn**	**05 41 14.9**	**+0.2**
LIOB				S	**Sn**	**05 41 36.1**	**-0.2**
WUSB	**Renai**	**1.67**	**251**	P	**Pn**	**05 41 15.1**	**+0.1**
WUSB				S	**Sn**	**05 41 36.0**	**-0.6**
HGSD	**Ruisui**	**1.67**	**231**	*i*P	**Pn**	**05 41 14.3**	**-0.5**
HGSD				S	**Sn**	**05 41 36.1**	**-0.3**
HSN1	**Hsinchu**	**1.67**	**278**	*e*S	**Sn**	**05 41 36.6**	**+0.1**
NSTT	**Nanjuang**	**1.67**	**273**	P	**Pn**	**05 41 15.2**	**+0.3**
NSTT				*e*S	**Sn**	**05 41 36.2**	**-0.4**
JTJ	**Tarama**	**1.70**	**87**	*e*P	**Pn**	**05 41 15.2**	**-0.1**
JTJ				S	**Sn**	**05 41 36.7**	**-0.5**
SBCB	**Hsinchu**	**1.70**	**278**	*e*P	**Pn**	**05 41 15.7**	**+0.4**
SBCB				*e*S	**Sn**	**05 41 37.1**	**-0.1**
HSN	**Hsinchu**	**1.72**	**279**	*e*P	**Pn**	**05 41 14.6**	**-0.9**
HSN				*e*S	**Sn**	**05 41 36.3**	**-1.2**
EHYH	**Wanrong**	**1.72**	**233**	P	**Pn**	**05 41 15.1**	**-0.5**
EHYH				S	**Sn**	**05 41 36.9**	**-0.8**
EHY	**Hungye**	**1.73**	**233**	*e*P	**Pn**	**05 41 15.0**	**-0.7**
EHY				*e*S	**Sn**	**05 41 36.8**	**-1.3**
VWDT	**VWDT**	**1.74**	**243**	P	**Pn**	**05 41 15.9**	**+0.1**
VWDT				*e*S	**Sn**	**05 41 37.1**	**-1.0**
WHP	**Taichung City**	**1.75**	**261**	P	**Pn**	**05 41 16.9**	**+0.9**
WHP				S	**Sn**	**05 41 38.4**	**0.0**
ECBN	**Changbin**	**1.77**	**226**	P	**Pn**	**05 41 15.6**	**-0.5**
ECBN				*e*S	**Sn**	**05 41 37.7**	**-1.0**
WPL	**Puli Township**	**1.80**	**253**	*e*P	**Pn**	**05 41 16.9**	**+0.4**
WPL				*e*S	**Sn**	**05 41 39.9**	**+0.5**
DPDB	**Guoxing**	**1.82**	**254**	P	**Pn**	**05 41 17.4**	**+0.6**
DPDB				*e*S	**Sn**	**05 41 40.2**	**+0.2**
YULB	**Yu-li**	**1.82**	**231**	P	**Pn**	**05 41 16.6**	**-0.2**
YULB	**Yu-li**	**1.82**	**231**	S	**Sn**	**05 41 38.1**	**-1.9**
YULB	**Yu-li**

SMST				eS		Sn	05 42 10.6	+0.2
PHUB	**P'eng-hu**	**3.16**	**252**	*eP*		**Pn**	**05 41 33.6**	**-0.8**
PHUB				S		**Sn**	**05 42 09.0**	**-2.3**
WDGT	**Dungji**	**3.18**	**247**	P		**Pn**	**05 41 34.4**	**-0.2**
WDGT				eS		**Sn**	**05 42 11.0**	**-0.8**
VCHM	**Qimei**	**3.39**	**247**	*eP*		**Pn**	**05 41 37.5**	**0.0**
VCHM				eS		**Sn**	**05 42 16.1**	**-0.8**
LYJJ	**Jianjiangzhen**	**3.42**	**306**	*eP*		**Pn**	**05 41 37.1**	**-0.7**
LYJJ				eS		**Sn**	**05 42 16.8**	**-0.7**
KNM	**Kinmen**	**4.01**	**269**	*eP*		**Pn**	**05 41 48.1**	**+2.3**
KNM				eS		**Sn**	**05 42 32.8**	**+0.9**
AXDP	**Jialang**	**4.44**	**275**	P		**Pn**	**05 41 51.6**	**0.0**
AXDP				eS		**Sn**	**05 42 40.1**	**-2.1**
ZPLA	**Ao Xicun**	**4.68**	**263**	*eP*		**Pn**	**05 41 54.3**	**-0.6**
DSXP	**Dongshan**	**5.01**	**261**	*eP*		**Pn**	**05 41 58.6**	**-0.8**
DSXP				eS		**Sn**	**05 42 53.4**	**-2.7**
JOW	**Kunigami**	**5.41**	**64**	Pn		Pn	05 41 51.5	-13
	3.6nm,0.3s,baz=122,slow=25,SNR=8.4 13nm,0.3s							
KSRS	**Korea Array**	**13.58**	**17**	Pn		**Pn**	**05 43 55.5**	**+0.8**
	0.7nm,0.3s,baz=198,slow=12,SNR=22 5.5nm,0.7s							
WRA	**Warramunga Arr**	**45.62**	**165**	P		**P**	**05 48 56.5**	**-0.3**
	1.8nm,0.7s,baz=347,slow=8.4,SNR=13 1.8nm,0.7s							
ASAR	**Alice Springs**	**49.12**	**167**	P		**P**	**05 49 24.3**	**+0.4**
	0.3nm,0.3s,baz=345,slow=8.3,SNR=6.4 0.3nm,0.3s							

SJA ***13*** *05:50:35.1±0.6,20.˚92S×70.˚95W,h17km±2km,ML5.2, MW5.3*

IDC ***13*** *05:50:36.9±0.5,20.˚89S×70.˚61W,h0km,mb4.3/16, mbtmp4.4/19,ML4.4/3,MS4.5/39,Error ellipse: s-maj=21.6km s-min=15.2km az=51.0*

MOS ***13*** *05:50:37.4±1.6,20.˚94S×70.˚75W,h14km,mb5.2/15,Error ellipse: s-maj=13.9km s-min=7.9km az=107.8*

NEIC ***13*** *05:50:38.2,20.˚94S×70.˚83W,h14km*

VAO ***13*** *05:50:38.6±0.4,20.˚73S×70.˚71W,h10km,mb4.9, Presumed earthquake*

NEIC ***13*** *05:50:38.2±1.3,20.˚94S±0.˚04×70.˚83W±0.˚05,h10km±1km, mb5.1/157,Mww5.0/18,Mww5.1(GUC),Error ellipse: s-maj=7.5km s-min=6.2km az=244.0*

NEIC ***13*** *05:50:38.2,21.˚04S×70.˚62W,h14km,Moment Tensor Solution. Duration:1s7 Moment tensor: Scale 10^{16}Nm; M_{rr}0.17; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-0.49; $M_{r\theta}$1.58; $M_{\theta\phi}$-0.26; $M_{r\phi}$-3.48; Fault plane solution: $M_0$3.85000×10^{16} NP1:ϕ_s55.98000°, δ7.22000°,λ170.07000°. NP2:ϕ_s155.83000°,δ88.76000°, λ82.89000°. Principal axes: T 3.8586, Plg46.0000°, Azm59.0000°; N -0.0144, Plg7.0000°, Azm156.0000°; P -3.8441, Plg43.0000°, Azm253.0000°;*

GUC ***13*** *05:50:39.4±0.8,20.˚93S×70.˚85W,h35km±3km,ML5.2*

BJI ***13*** *05:50:39.0,21.˚00S×70.˚80W,h10km,mB5.5/6,Ms5.6/5, Ms7 5.3/6*

GCMT ***13*** *05:50:43.2±0.3,20.˚92S±0.˚02×70.˚83W±0.˚03,h15km, MW5.2/75,Moment Tensor Solution. s22,c27; s75,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.60±.11; $M_{\theta\theta}$0.64±.07; $M_{\phi\phi}$-1.06±.10; $M_{r\theta}$2.77±.39; $M_{\theta\phi}$-0.29±.06; $M_{r\phi}$-6.22±.60; Best double couple: $M_0$6.87700×10^{16} NP1:ϕ_s45.00000°,δ7.00000°,λ158.00000°. NP2: ϕ_s156.00000°,δ87.00000°,λ84.00000°. Principal axes: T 6.8760, Plg47.0000°, Azm60.0000°; N -0.0010, Plg6.0000°, Azm157.0000°; P -6.8780, Plg42.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 05:50:39.3±1.0,20.˚92S±0.˚02×70.˚82W±0.˚04,h19km±4km, n382,σ1ş42/312,mb5.0/104,MS4.6/38,13C-15D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.91**	**45**	⇑*iP*		**Pb**	**05 50 55.2**	**-1.2**
TA02				*i* S		**Sb**	**05 51 07.5**	**-0.6**
TA02	**Huaiquique**	**0.91**	**45**	*eP*		**Pb**	**05 50 55.5**	**-0.9**
TA02				eS		**Sb**	**05 51 08.1**	**+0.1**
TA02				IAML			05 51 09.4	
	comp=Z,51μm,0.7s							
PB02	**IPOC Station P**	**0.95**	**115**			**Pb**	**05 50 57.0**	**-0.1**
PB02	**IPOC Station P**	**0.95**	**115**	⇓*iP*		**Pb**	**05 50 56.4**	**-0.7**
PB02				eS		**Sb**	**05 51 08.8**	**-0.6**
PB02				IAML			05 51 13.8	
	comp=E,147μm,0.5s							
PB02	**IPOC Station P**	**0.95**	**115**	*eP*		**Pb**	**05 50 56.3**	**-0.9**
PB02				IAML			05 51 14.0	
	comp=Z,88μm,0.4s							
PB07	**IPOC Station P**	**1.19**	**133**			**Pn**	**05 51 00.3**	**-0.7**
PB07				Sn		**Sb**	**05 51 16.0**	**-0.3**
PB07	**IPOC Station P**	**1.19**	**133**	⇓*iP*		**Pn**	**05 51 00.2**	**-0.7**
PB07				IAML			05 51 22.2	
	comp=E,71μm,0.5s							
PB07	**IPOC Station P**	**1.19**	**133**	*eP*		**Pn**	**05 50 59.6**	**-1.3**
PB07				IAML			05 51 26.1	
	comp=Z,38μm,0.7s							
PB01	**IPOC Station P**	**1.25**	**96**			**Pn**	**05 51 01.4**	**-0.4**
PB01				Sn		**Sb**	**05 51 17.2**	**-0.8**
PB01	**IPOC Station P**	**1.25**	**96**	⇑*iP*		**Pn**	**05 51 00.9**	**-0.8**
PB01				eS		**Sb**	**05 51 17.3**	**-0.8**
PB01				IAML			05 51 20.6	
	comp=N,141μm,0.6s							
PB01	**IPOC Station P**	**1.25**	**96**	*eP*		**Pn**	**05 51 01.0**	**-0.8**
PB01				eS		**Sb**	**05 51 17.9**	**-0.1**
PB01				IAML			05 51 19.9	
	comp=Z,48μm,0.7s							
PB03	**IPOC Station P**	**1.50**	**139**			**Pn**	**05 51 04.9**	**-0.4**
PB03	**IPOC Station P**	**1.50**	**139**	⇓*iP*		**Pn**	**05 51 04.8**	**-0.4**
PB03	**IPOC Station P**	**1.50**	**139**	*eP*		**Pn**	**05 51 04.5**	**-0.7**
PB03				IAML			05 51 29.5	
	comp=Z,24μm,0.6s							
PB11	**IPOC Station P**	**1.58**	**44**			**Pn**	**05 51 06.0**	**-0.4**
PB11	**IPOC Station P**	**1.58**	**44**	*eP*		**Pn**	**05 51 05.4**	**-1.0**
PB11				*i* S		**Sn**	**05 51 26.0**	**-0.4**
PB11				IAML			05 51 31.4	
	comp=N,36μm,0.4s							
PB11	**IPOC Station P**	**1.58**	**44**	*eP*		**Pn**	**05 51 05.5**	**-0.9**
PB11				eS		**Sb**	**05 51 28.4**	**+0.7**
PB11				IAML			05 51 34.5	
	comp=Z,27μm,0.6s							
PB09	**IPOC Station P**	**1.71**	**121**			**Pn**	**05 51 09.2**	**+1.0**
PB09	**IPOC Station P**	**1.71**	**121**	⇓*iP*		**Pn**	**05 51 08.8**	**+0.7**
PB09				IAML			05 51 38.1	
	comp=E,35μm,0.7s							
PB09	**IPOC Station P**	**1.71**	**121**	*eP*		**Pn**	**05 51 08.9**	**+0.7**
PB09				eS		**Sb**	**05 51 32.3**	**+0.9**
PB09				IAML			05 51 37.7	
	comp=Z,34μm,0.6s							
PB08	**IPOC Station P**	**1.74**	**64**			**Pn**	**05 51 08.9**	**0.0**
PB08	**IPOC Station P**	**1.74**	**64**	⇑*iP*		**Pn**	**05 51 08.5**	**-0.2**
PB08				eS		**Sn**	**05 51 31.5**	**+0.9**
PB08	**IPOC Station P**	**1.74**	**64**	*eP*		**Pn**	**05 51 08.8**	**0.0**
PB08				eS		**Sb**	**05 51 32.5**	**+0.1**
PB08				IAML			05 51 34.8	
	comp=Z,14μm,0.9s							
GO01	**Chusmiza**	**1.97**	**51**			**Pn**	**05 51 11.8**	**-0.1**
GO01	**Chusmiza**	**1.97**	**51**	⇑*iP*		**Pn**	**05 51 11.8**	**-0.1**
GO01				*i* S		**Sn**	**05 51 37.7**	**+1.4**
GO01	**Chusmiza**	**1.97**	**51**	*eP*		**Pn**	**05 51 11.7**	**-0.3**
GO01				eS		**Sb**	**05 51 39.2**	**+0.2**
PB05	**IPOC Station P**	**2.01**	**164**			**Pn**	**05 51 11.1**	**-1.2**
PB05	**IPOC Station P**	**2.01**	**164**	⇓*iP*		**Pn**	**05 51 11.0**	**-1.2**
PB05				*i* S		**Sn**	**05 51 35.8**	**-1.1**
PB05	**IPOC Station P**	**2.01**	**164**	*eP*		**Pn**	**05 51 11.0**	**-1.2**
PB05				eS		**Sb**	**05 51 43.2**	**+3.2**
PB05				IAML			05 51 50.5	
	comp=Z,11μm,0.6s							
PX02	**IPOC Station P**	**2.03**	**17**	*eP*		**Pn**	**05 51 11.7**	**-0.8**
PX02				*i* S		**Sn**	**05 51 36.0**	**-1.3**
PB06	**IPOC Station P**	**2.12**	**147**			**Pn**	**05 51 13.3**	**-0.6**
PB06	**IPOC Station P**	**2.12**	**147**	⇓*iP*		**Pn**	**05 51 13.3**	**-0.6**
PB06				*i* S		**Sn**	**05 51 39.4**	**-0.4**
PB06				IAML			05 51 51.8	
	comp=N,16μm,0.6s							
PB06	**IPOC Station P**	**2.12**	**147**	*eP*		**Pn**	**05 51 13.2**	**-0.7**
PB06				eS		**Sb**	**05 51 45.8**	**+2.5**
PB06				IAML			05 51 48.1	
	comp=Z,20μm,1.1s							
PB12	**IPOC Station P**	**2.34**	**11**			**Pn**	**05 51 16.5**	**-0.2**
PB12	**IPOC Station P**	**2.34**	**11**	⇓*iP*		**Pn**	**05 51 15.4**	**-1.3**
PB12				*i* S		**Sb**	**05 51 47.6**	**-1.7**
PB12	**IPOC Station P**	**2.34**	**11**	*eP*		**Pn**	**05 51 16.0**	**-0.7**
PB12				eS		**Sb**	**05 51 54.3**	**+5.0**
PB12				IAML			05 51 57.0	
	comp=Z,7μm,0.6s							
AP01	**Chacalluta**	**2.57**	**10**	*eP*		**Pn**	**05 51 19.6**	**-0.3**
AP01				eS		**Sn**	**05 51 50.6**	**0.0**
AP01				IAML			05 52 04.8	
	comp=N,10μm,0.4s							
AP01	**Chacalluta**	**2.57**	**10**	eS		Sb	05 52 06.6	+11
AP01				IAML			05 52 10.0	
	comp=Z,10μm,0.9s							
PB10	**IPOC Station P**	**2.60**	**175**			**Pn**	**05 51 18.8**	**-1.5**
PB10	**IPOC Station P**	**2.60**	**175**	⇓*iP*		**Pn**	**05 51 18.6**	**-1.5**
PB10	**IPOC Station P**	**2.60**	**175**	*eP*		**Pn**	**05 51 18.7**	**-1.5**
PB10				eS		Sb	05 52 08.8	+12
PB10				IAML			05 52 16.9	
	comp=Z,4μm,1.5s							
PB16	**IPOC Station P**	**2.85**	**26**			**Pn**	**05 51 24.8**	**+0.6**
PB16	**IPOC Station P**	**2.85**	**26**	⇑*iP*		**Pn**	**05 51 24.1**	**-0.1**
PB16				*i* S		**Sn**	**05 51 59.1**	**+0.8**
PB16	**IPOC Station P**	**2.85**	**26**	*eP*		**Pn**	**05 51 24.6**	**+0.4**
PB16				eS		**Sb**	**05 52 04.8**	**+0.2**
PB16				IAML			05 52 09.9	
	comp=Z,7μm,1.6s							
AF01	**San Pedro de A**	**3.18**	**130**			**Pn**	**05 51 30.6**	**+2.1**
AF01	**San Pedro de A**	**3.18**	**130**	*eP*		**Pn**	**05 51 30.4**	**+1.9**
AF01	**San Pedro de A**	**3.18**	**130**	*eP*		**Pn**	**05 51 31.1**	**+2.6**
AF01				eS		Sb	05 52 23.7	+10
PB18	**Visviri**	**3.54**	**21**	*eP*		**Pn**	**05 51 36.6**	**+2.9**
PB14	**IPOC Station P**	**3.71**	**174**			**Pn**	**05 51 33.8**	**-2.0**
PB14	**IPOC Station P**	**3.71**	**174**	⇓*eP*		**Pn**	**05 51 33.7**	**-2.0**
PB14	**IPOC Station P**	**3.71**	**174**	*eP*		**Pn**	**05 51 33.9**	**-2.0**
PB14				IAML			05 52 51.6	
	comp=Z,2μm,1.1s							
GO02	**Mina Guanaco**	**4.38**	**165**			**Pn**	**05 51 44.5**	**-0.5**
GO02	**Mina Guanaco**	**4.38**	**165**	*eP*		**Pn**	**05 51 44.2**	**-0.7**
GO02				IAML			05 53 10.9	
	comp=Z,4μm,1.1s							
AC01	**Pan de Azucar**	**5.21**	**178**			**Pn**	**05 51 54.3**	**-1.9**
AC01	**Pan de Azucar**	**5.21**	**178**	*eP*		**Pn**	**05 51 53.4**	**-2.8**
AC01				IAML			05 53 29.2	
	comp=Z,2μm,0.8s							
LPAZ	**La Paz**	**5.26**	**29**	Pn		**Pn**	**05 52 01.3**	**+3.9**
	comp=Z,3.3nm,0.3s,baz=265,slow=1.3,SNR=59							
LPAZ				LR		LR	05 54 00.3	
	comp=Z,2μm,21.8s,baz=220,slow=40							
LPAZ	**La Paz**	**5.26**	**29**			**Pn**	**05 51 58.1**	**+0.7**
LPAZ	**La Paz**	**5.26**	**29**	P		**Pn**	**05 51 58.1**	**+0.7**
LPAZ	**La Paz**	**5.26**	**29**	*eP*		**Pn**	**05 51 54.4**	**-3.0**
LPAZ	**La Paz**	**5.26**	**29**	P		**Pn**	**05 52 00.8**	**+3.4**
SALTA		**5.29**	**129**	*eP*		Pb	05 52 04.8	-6.6
AC02	**Maricunga**	**6.09**	**166**			**Pn**	**05 52 08.7**	**0.0**
SLA	**San Lorenzo**	**6.19**	**129**	*eP*		Pn	05 52 16.8	+6.9
GO03	**Copiapo**	**6.67**	**176**			**Pn**	**05 52 14.7**	**-1.5**
AC04	**Llanos de Chal**	**7.26**	**182**	Pn		**Pn**	**05 52 20.3**	**-4.0**
AC05	**El Transito**	**7.90**	**177**			**Pn**	**05 52 31.8**	**-1.5**
LCO	**Las Campanas**	**8.06**	**179**			**Pn**	**05 52 33.5**	**-2.1**
LCO	**Las Campanas**	**8.06**	**179**	P		**Pn**	**05 52 33.5**	**-2.1**
CO05	**La Serena**	**8.97**	**182**	Pn		**Pn**	**05 52 47.5**	**-0.3**
CO01	**Juntas del Tor**	**9.05**	**176**	Pn		**Pn**	**05 52 48.1**	**-0.9**
CO03	**El Pedregal**	**9.88**	**179**	Pn		**Pn**	**05 52 58.0**	**-2.4**
SIV	**San Ignacio**	**10.46**	**64**	Pn		**Pn**	**05 53 06.9**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=253,slow=11,SNR=142							
SIV				LR		LR	05 57 17.8	
	comp=Z,924nm,19.2s,baz=263,slow=39 comp=Z,78nm,0.8s							
NNA	**Nana**	**10.59**	**326**	Pn		**Pn**	**05 53 10.1**	**0.0**
	comp=Z,2.2nm,0.3s,baz=191,slow=5.2,SNR=2.5							
NNA				Sn		**Sn**	**05 55 01.8**	**-6.5**
	comp=Z,1.7nm,0.3s,baz=221,slow=9.3,SNR=1.6 comp=Z,4.5nm,0.3s							
NNA	**Nana**	**10.59**	**326**			**Pn**	**05 53 10.0**	**-0.1**
NNA	**Nana**	**10.59**	**326**	⇑*iP*		**Pn**	**05 53 10.8**	**+0.7**
NNA	**Nana**	**10.59**	**326**	P		**Pn**	**05 53 10.0**	**-0.1**
MURT	**Porto Murtinho**	**12.34**	**96**	*eP*		**Pn**	**05 53 31.0**	**-2.9**
PTLB	**Pontes e Lacer**	**12.36**	**66**			**Pn**	**05 53 34.1**	**-0.1**
PTLB	**Pontes e Lacer**	**12.36**	**66**	*eP*		**Pn**	**05 53 33.5**	**-0.7**
VILB	**Vilhena**	**12.88**	**54**			**Pn**	**05 53 42.0**	**+0.6**
VILB	**Vilhena**	**12.88**	**54**	*eP*		**Pn**	**05 53 39.9**	**-1.4**
BO04	**La Punta**	**13.02**	**179**	Pn		**Pn**	**05 53 42.4**	**-1.0**
BDQN	**Bodoquena, MS**	**13.18**	**90**	*eP*		**Pn**	**05 53 43.2**	**-2.2**
BO01	**Tunca**	**13.43**	**181**			**Pn**	**05 53 48.4**	**-0.4**
CPUP	**Villa Florida**	**13.48**	**116**	Pn		**Pn**	**05 53 51.8**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=301,slow=14,SNR=7.4							
CPUP				LR		LR	05 59 35.5	
	comp=Z,2μm,19.7s,baz=290,slow=40							
CPUP	**Villa Florida**	**13.48**	**116**			**Pn**	**05 53 49.9**	**+0.3**
CPUP	**Villa Florida**	**13.48**	**116**	P		**Pn**	**05 53 49.9**	**+0.3**
CPUP	**Villa Florida**	**13.48**	**116**	*eP*		**Pn**	**05 53 50.1**	**+0.5**
BO02	**Sierra Bellavi**	**13.82**	**180**	Pn		**Pn**	**05 53 53.8**	**-0.4**
AQDB	**Aquidauana**	**14.16**	**91**			**Pn**	**05 53 58.4**	**-0.4**
AQDB	**Aquidauana**	**14.16**	**91**	*eP*		**Pn**	**05 53 58.5**	**-0.3**
H03N1	**Juan Fernandez**	**14.40**	**208**	T		T	06 08 58.4	
	baz=34,slow=72,SNR=1881							
H03N2	**Juan Fernandez**	**14.40**	**208**	T		T	06 08 59.5	
	baz=34,slow=72,SNR=1377							
H03N3	**Juan Fernandez**	**14.41**	**208**	T		T	06 08 54.1	
	baz=34,slow=72,SNR=994							
AMBA	**Amambai (Brazi**	**14.82**	**101**	*eP*		**Pn**	**05 54 09.1**	**+1.2**
SALV	**Santo Antonio**	**15.19**	**73**	*eP*		**Pn**	**05 54 11.4**	**-1.5**
PP1B	**Ponte de Pedra**	**15.41**	**80**	*eP*		**Pn**	**05 54 14.3**	**-1.3**
ATAH	**Atahualpa**	**15.54**	**331**	Pn		**P**	**05 54 26.6**	**+4.5**
	comp=Z,0.3nm,0.3s,baz=150,slow=9.3,SNR=4.7							
PSAL	**Palomas, Salto**	**15.59**	**133**	*eP*		**Pn**	**05 54 20.1**	**+2.1**
BI02	**San Fabin de**	**15.70**	**181**			**Pn**	**05 54 18.4**	**-1.0**
PDRB	**Porto dos Gac**	**16.37**	**58**	*eP*		**Pn**	**05 54 25.7**	**-2.5**
TRCB	**Terra Rica**	**16.98**	**100**	Pn		**Pn**	**05 54 35.4**	**-0.5**
TRCB				IAmb		IAmb	05 54 42.8	
	comp=Z,159nm,1.2s							
TRCB	**Terra Rica**	**16.98**	**100**	*eP*		**Pn**	**05 54 35.4**	**-0.5**
C2SB	**Chapadao do Su**	**17.05**	**86**	*eP*		**P**	**05 54 39.1**	**+0.8**
CLDB	**Colider**	**17.55**	**58**	*eP*		**Pn**	**05 54 42.1**	**-0.8**
PTGB	**Pitanga**	**17.70**	**106**	*eP*		**P**	**05 54 45.5**	**-0.1**
ITAB	**Concordia**	**18.18**	**114**	P		**Pn**	**05 54 50.7**	**+0.1**
ITAB	**Concordia**	**18.18**	**114**	*eP*		**P**	**05 54 50.9**	**+0.1**
CPSB	**Cacapava Do Su**	**18.27**	**125**	*eP*		**Pn**	**05 54 51.5**	**-0.3**
TEFE	**Tefe**	**18.32**	**20**	*eP*		**Pn**	**05 54 51.1**	**-1.3**
LDASE	**Londrina, Braz**	**18.41**	**101**	*eP*		**Pn**	**05 54 54.1**	**+0.5**
GO06	**Curarrehue**	**18.61**	**182**	P		**P**	**05 54 54.8**	**-0.9**
MCRA	**Macar, Loja**	**18.69**	**330**	P		**Pn**	**05 54 57.7**	**+0.7**
	comp=Z,19nm,1.0s							
TRQA	**Tornquist**	**18.71**	**158**	P		**P**	**05 54 55.8**	**-0.9**
TRQA	**Tornquist**	**18.71**	**158**	P		**P**	**05 54 55.8**	**-0.9**
TRQA				pmax		pmax		
	comp=Z,17nm,0.8s							
ARAG	**Araguaiana, MT**	**18.77**	**77**	*eP*		**P**	**05 54 56.1**	**-1.3**
PLTB	**Pedras Altas**	**18.81**	**129**	*eP*		**Pn**	**05 55 00.7**	**+2.4**
ITRB	**Iturama**	**19.23**	**90**	*eP*		**P**	**05 55 02.4**	**0.0**
PLCA	**Paso Flores**	**19.76**	**179**	P		**Pn**	**05 55 09.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=355,slow=11,SNR=16							
PLCA				LR		LR	06 03 14.4	
	comp=Z,833nm,18.7s,baz=354,slow=38 comp=Z,39nm,1.2s							
PLCA	**Paso Flores**	**19.76**	**179**	P		**P**	**05 55 07.9**	**-0.1**
PLCA				IAmb		IAmb	05 55 15.4	
	comp=Z,90nm,1.4s							
PLCA	**Paso Flores**	**19.76**	**179**	*eP*		**Pn**	**05 55 09.7**	**0.0**
FRTB	**Fartura**	**19.84**	**101**	*eP*		**P**	**05 55 08.6**	**-0.5**
CNLB	**Canela**	**19.90**	**119**	*eP*		**Pn**	**05 55 10.8**	**-0.6**
COHC	**Cochancay**	**20.10**	**335**	P		Pn	05 55 17.9	+4.1
LL03	**Petrohue**	**20.20**	**183**	P		**P**	**05 55 12.7**	**-0.2**
MACA	**Manacapuru-AM**	**20.22**	**31**	P		**P**	**05 55 12.9**	**-0.3**
MACA				IAmb		IAmb	05 55 14.9	
	comp=Z,64nm,0.8s							
MACA	**Manacapuru-AM**	**20.22**	**31**	*eP*		**P**	**05 55 12.0**	**-1.2**
SNDB	**Serra Nova Dou**	**20.71**	**68**	*eP*		**P**	**05 55 16.6**	**-2.0**
BB19B	**Bebedouro**	**20.81**	**94**	*eP*		**P**	**05 55 19.3**	**-0.4**
SGC2	**Sao Gabriel da**	**20.98**	**11**	P		**P**	**05 55 20.7**	**-0.7**
	comp=Z,1μmcomp=Z,56nm,1.5s							
PTLC	**Puerto Leguiza**	**21.32**	**349**	P		**P**	**05 55 23.0**	**-2.1**
SLOR	**San Lorenzo -**	**21.42**	**339**	P		**P**	**05 55 26.4**	**-0.3**
IPMB	**Ipameri, GO**	**21.51**	**86**	*eP*		**P**	**05 55 27.0**	**-0.3**
RCLB	**Rio Claro- Sao**	**21.69**	**98**	*eP*		**P**	**05 55 28.3**	**-0.9**
SPB	**Sao Paulo**	**21.80**	**101**	P		**P**	**05 55 29.9**	**-0.4**
SPB				IAmb		IAmb	05 55 40.8	
	comp=Z,67nm,1.2s							
CASC	**Dorado de Casc**	**21.87**	**342**	P		**P**	**05 55 33.1**	**+1.9**
	comp=Z,2μmcomp=Z,108nm,1.3s							
PET01	**Itanhaem-SP**	**21.99**	**103**	*eP*		**P**	**05 55 32.2**	**-0.1**
ITTB	**Itaituba**	**22.04**	**44**	*eP*		**P**	**05 55 30.8**	**-2.1**
VAO	**Valinhos**	**22.21**	**100**			**P**	**05 55 33.7**	**-1.1**
VAO				IAmb		IAmb	05 55 45.0	
	comp=Z,53nm,1.1s							
VAO	**Valinhos**	**22.21**	**100**	*eP*		**P**	**05 55 34.5**	**-0.3**
BONI	**La Bonita**	**22.23**	**342**	P		**P**	**05 55 37.2**	**+2.0**
	comp=Z,1μmcomp=Z,70nm,1.1s							
BDFB	**Brasilia**	**22.27**	**80**	P		**P**	**05 55 33.1**	**-2.4**
	comp=Z,5.3nm,0.7s,baz=239,slow=14,SNR=8.7							
BDFB				LR		LR	06 05 59.9	
	comp=Z,5μm,18.5s,baz=262,slow=42 comp=Z,5.3nm,0.7s							
BDFB	**Brasilia**	**22.27**	**80**			**P**	**05 55 33.1**	**-2.4**
BDFB				IAmb		IAmb	05 55 46.9	
	comp=Z,60nm,1.3s							
BDFB	**Brasilia**	**22.27**	**80**	P		**P**	**05 55 33.1**	**-2.4**
BDFB				pmax		pmax		
	comp=Z,60nm,1.3s							
OTAV	**Otavalo**	**22.31**	**340**			**P**	**05 55 35.7**	**-0.6**
OTAV	**Otavalo**	**22.31**	**340**	P		**P**	**05 55 35.7**	**-0.6**
OTAV				pmax		pmax		
	comp=Z,60nm,1.7s							
OTAV	**Otavalo**	**22.31**	**340**	*eP*		**P**	**05 55 35.2**	**-1.0**
OTAV	**Otavalo**	**22.31**	**340**	P		**P**	**05 55 39.2**	**+3.0**
	comp=Z,727nmcomp=Z,24nm,1.6s							
CUSE	**Cuicocha Este**	**22.36**	**340**	P		**P**	**05 55 39.7**	**+3.0**
PAC1	**Pacto, Paraso**	**22.45**	**339**	P		**P**	**05 55 40.5**	**+3.1**
	comp=Z,839nmcomp=Z,32nm,1.3s							
TULM	**Tulcn-Chalpat**	**22.55**	**342**	P		**P**	**05 55 43.9**	**+5.0**
FLOC	**Florencia**	**22.86**	**347**	P		**P**	**05 55 43.2**	**+1.6**
	comp=Z,2μmcomp=Z,121nm,1.7s							
GCUF	**Volcan Galeras**	**22.91**	**343**	P		**P**	**05 55 46.1**	**+3.4**
	comp=Z,2μmcomp=Z,105nm,1.5s							
PMNB	**Patos De Minas**	**23.07**	**88**	*eP*		**P**	**05 55 43.3**	**-0.5**
CRUC	**La Cruz**	**23.14**	**344**	P		**P**	**05 55 49.0**	**+4.1**
GARC	**Garzon, Huila**	**23.41**	**348**	P		**P**	**05 55 49.1**	**+1.6**
	comp=Z,876nmcomp=Z,30nm,1.1s							
PARB	**Paraibuna**	**23.46**	**101**	*eP*		**P**	**05 55 46.7**	**-1.0**
BBAC	**Balboa, Cauca**	**23.65**	**344**	P		**P**	**05 55 51.8**	**+2.0**
	comp=Z,1μmcomp=Z,65nm,1.7s							
POPC	**Popayan, Colom**	**24.01**	**345**	P		**P**	**05 55 55.1**	**+1.9**
	comp=Z,897nmcomp=Z,48nm,1.5s							
URMC	**La Uribe, Meta**	**24.27**	**351**	P		**P**	**05 55 56.6**	**+1.2**
	comp=Z,671nmcomp=Z,40nm,1.0s							
BSCB	**Bom Sucesso**	**24.32**	**95**	*eP*		**P**	**05 55 55.5**	**-0.4**
JAMC	**Jamundi, Valle**	**24.66**	**346**	P		**P**	**05 56 00.7**	**+1.5**
	comp=Z,36nm,1.1s							
PRAC	**Prado**	**24.80**	**350**	P		**P**	**05 56 01.9**	**+1.7**
	comp=Z,1μmcomp=Z,69nm,1.4s							
VILC	**Villavicencio,**	**25.03**	**353**	P		**P**	**05 56 03.6**	**+1.2**
	comp=Z,584nmcomp=Z,60nm,0.8s							
ORTC	**Ortega, Tolima**	**25.05**	**350**	P		**P**	**05 56 04.8**	**+2.3**
	comp=Z,1μmcomp=Z,140nm,1.2s							
PRPB	**Parauapebas**	**25.08**	**57**	*eP*		**P**	**05 56 00.7**	**-2.2**
BOAV	**Boa Vista**	**25.27**	**25**			**P**	**05 56 04.6**	**+0.1**
BOAV				IAmb

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,121nm,20.3s,baz=126,slow=36						
	comp=Z,0.6nm,0.5s						
ANMO	Albuquerque	65.05	328		P	06 01 20.0	+1.4
ANMO				IAmb	IAmb	06 01 38.2	
	comp=Z,33nm,1.9s						
ANMO	Albuquerque	65.05	328⇑	iP	P	06 01 19.6	+1.0
ANMO				pmax	pmax		
	comp=Z,11nm,1.6s						
TUC	Tucson	65.30	323	P	P	06 01 20.6	+0.5
TUC	Tucson	65.30	323	P	P	06 01 20.6	+0.5
TUC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SADO	Sadowa	65.81	354	LR	LR	06 30 37.2	
	comp=Z,200nm,21.8s,baz=176,slow=36						
214A	Organ Pipe Nat	66.19	322	IAmb	IAmb	06 01 29.2	
	comp=Z,17nm,1.4s						
SDCO	Great Sand Dun	66.85	331	IAmb	IAmb	06 01 49.6	
	comp=Z,23nm,1.6s						
W18A	Petrified Fore	66.86	326	IAmb	IAmb	06 01 50.2	
	comp=Z,22nm,1.5s						
NVL	N'lazarevskaya	68.01	159	eP	P	06 01 35.6	-1.2
NVL				e		06 02 01.7	
NVL				e		06 04 05.2	
NVL				ePPP	PPP	06 05 43.0	
NVL				eS	S	06 10 35.2	+0.5
NVL				eSS	SS	06 14 58.2	+1.8
NVL				pmax	pmax		
	comp=Z,26nm,1.1s						
NVL				MLR	MLR		
	comp=Z,743nm,22.0s						
WUAZ	Wupatki	68.03	325	IAmb	IAmb	06 01 40.9	
	comp=Z,11nm,1.1s						
BLYC	Blythe	68.48	322	IAmb	IAmb	06 01 43.1	
	comp=Z,29nm,1.8s						
YUH	Yuha Desert	68.52	320	P	P	06 01 40.6	+0.1
YUH				IAmb	IAmb	06 01 52.4	
	comp=Z,19nm,1.6s						
PV01	Paradox Valley	68.61	329	IAmb	IAmb	06 02 00.4	
	comp=Z,20nm,1.6s						
PV02	Paradox Valley	68.75	329	IAmb	IAmb	06 02 14.0	
	comp=Z,24nm,1.4s						
PV13	Radium Mtn., P	68.75	329	IAmb	IAmb	06 02 01.8	
	comp=Z,13nm,1.4s						
BAR	Barrett	69.00	320	P	P	06 01 44.4	+0.9
BAR				IAmb	IAmb	06 01 57.4	
	comp=Z,10nm,1.1s						
W13A	Hualapai Mount	69.09	323	IAmb	IAmb	06 02 06.9	
	comp=Z,20nm,1.8s						
IRM	Iron Mountain	69.13	322	IAmb	IAmb	06 01 55.9	
	comp=Z,11nm,1.2s						
BORC	Borrego Spring	69.25	320	IAmb	IAmb	06 02 07.0	
	comp=Z,27nm,1.5s						
QSPA	South Pole Qui	69.27	180	P	P	06 01 46.9	+1.9
	comp=Z,3.9nm,0.7s,baz=114,slow=5.6,SNR=3.5						
	comp=Z,3.9nm,0.7s						
QSPA	South Pole Qui	69.27	180	P	P	06 01 44.9	0.0
PFO	Pinyon Flats O	69.52	320	P	P	06 01 48.8	+1.9
	comp=Z,2.0nm,0.8s,baz=128,slow=7.5,SNR=4.7						
	comp=Z,2.0nm,0.8s						
PFO	Pinyon Flats O	69.52	320⇑	iP	P	06 01 49.2	+2.3
PFO				pmax	pmax		
	comp=Z,20nm,2.0s						
HMU	Henry Mountain	69.54	327		P	06 01 48.1	+1.0
HMU				IAmb	IAmb	06 02 02.0	
	comp=Z,32nm,1.6s						
DANC	Danby, Needles	69.61	322	IAmb	IAmb	06 01 59.0	
	comp=Z,15nm,1.0s						
O20A	White River Ci	70.04	330	IAmb	IAmb	06 02 09.6	
	comp=Z,24nm,1.4s						
V12A	Nelson	70.09	323	IAmb	IAmb	06 01 53.6	
	comp=Z,26nm,1.6s						
DBIC	Dimbokro	70.28	75	P	P	06 01 51.5	-0.4
	comp=Z,10nm,0.8s,baz=270,slow=5.4,SNR=9.6						
DBIC				LR	LR	06 32 47.4	
	comp=Z,1μm,18.1s,baz=272,slow=36						
	comp=Z,10nm,0.8s						
DBIC	Dimbokro	70.28	75	P	P	06 01 50.9	-0.9
SRU	San Rafael Swe	70.33	328	IAmb	IAmb	06 02 15.2	
	comp=Z,20nm,1.4s						
MTPU	Mount Pierson	70.36	326	IAmb	IAmb	06 02 06.8	
	comp=Z,28nm,1.8s						
SZCU	Shurtz Canyon	70.49	325	IAmb	IAmb	06 02 18.1	
	comp=Z,27nm,1.8s						
Q16A	Castle Valley	70.50	328	IAmb	IAmb	06 02 12.3	
	comp=Z,16nm,1.3s						
P18A	Preston Nutter	70.59	329	IAmb	IAmb	06 02 17.3	
	comp=Z,15nm,1.2s						
BFSC	Mount Baldy Ra	70.67	320	IAmb	IAmb	06 02 18.8	
	comp=Z,13nm,1.3s						
GSC	Goldstone, Bar	70.91	322	IAmb	IAmb	06 01 59.0	
	comp=Z,30nm,1.9s						
CCCA	Chr Cany lake	71.39	321	IAmb	IAmb	06 02 21.0	
	comp=Z,22nm,1.1s						
QSM	Queen of Sheba	71.41	322	IAmb	IAmb	06 02 09.6	
	comp=Z,18nm,1.5s						
LRMC	Laurel Mtn Rad	71.54	321	IAmb	IAmb	06 02 02.7	
	comp=Z,33nm,2.0s						
BSUT	Blindstream Ca	71.55	329	IAmb	IAmb	06 02 09.9	
	comp=Z,12nm,1.2s						
MPU	Maple Canyon	71.57	328	IAmb	IAmb	06 02 23.1	
	comp=Z,12nm,1.1s						
ELIB	Princess Elisa	71.58	161	dP	P	06 02 00.1	+1.2
TPNV	Topopah Spring	71.75	323	IAmb	IAmb	06 02 12.5	
	comp=Z,17nm,1.4s						
FURC	Furnace Creek,	71.76	322	IAmb	IAmb	06 02 03.9	
	comp=Z,19nm,1.2s						
WCT	Wildcat Mounta	71.85	323	IAmb	IAmb	06 02 21.0	
	comp=Z,38nm,2.0s						
DUG	Dugway, Tooele	72.30	327	IAmb	IAmb	06 02 23.1	
	comp=Z,29nm,1.4s						
CWC	Cottonwood Cre	72.44	322	IAmb	IAmb	06 02 08.2	
	comp=Z,20nm,1.6s						
PDAR	Pinedale Array	72.73	331	P	P	06 02 07.0	+0.8
	comp=Z,0.6nm,0.6s,baz=147,slow=7.8,SNR=7.2						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	72.73	331	P	P	06 02 06.7	+0.4
HWUT	Hardware Ranch	72.76	329	P	P	06 02 07.0	+0.5
DSP	Deep Springs	73.02	322	IAmb	IAmb	06 02 33.0	
	comp=Z,27nm,1.8s						
ELK	Elko	73.94	326	P	P	06 02 14.3	+0.8
	comp=Z,1.2nm,0.8s,baz=68,slow=2.4,SNR=4.1						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	73.95	323	P	P	06 02 15.5	+1.9
	comp=Z,1.0nm,0.7s,baz=154,slow=6.8,SNR=8.5						
	comp=Z,1.0nm,0.7s						
ULM	Lac du Bonnet	74.24	344	P	P	06 02 14.9	+0.2
	comp=Z,2.1nm,0.6s,baz=174,slow=7.0,SNR=3.7						
	comp=Z,2.1nm,0.6s						
ULM	Lac du Bonnet	74.24	344	IAmb	IAmb	06 02 50.1	
	comp=Z,47nm,2.0s						
ULM	Lac du Bonnet	74.24	344⇑	iP	P	06 02 14.4	-0.3
FLWY	Flagg Ranch	74.28	331	IAmb	IAmb	06 02 44.5	
	comp=Z,26nm,1.2s						
RLMT	Red Lodge	74.47	333	IAmb	IAmb	06 02 40.6	
	comp=Z,27nm,1.5s						
LAO	LASA Array	74.51	336	IAmb	IAmb	06 02 40.0	
	comp=Z,40nm,1.6s						
YNE	Yellowstone No	74.70	332	IAmb	IAmb	06 02 36.3	
	comp=Z,14nm,1.0s						
YHL	Hebgen Lake	75.09	332	IAmb	IAmb	06 02 39.5	
	comp=Z,54nm,2.0s						
PAHR	Pah Rah Range	75.44	323	IAmb	IAmb	06 02 25.6	
	comp=Z,14nm,1.2s						
SCHQ	Schefferville	75.52	2	LR	LR	06 37 48.1	
	comp=Z,130nm,19.4s,baz=204,slow=38						
HLID	Hailey	75.61	329		P	06 02 24.0	+1.0
BCYI	Bear Canyon	75.70	330	IAmb	IAmb	06 02 54.6	
	comp=Z,18nm,1.6s						
BOZ	Bozeman (W)	75.87	332	IAmb	IAmb	06 02 47.7	
	comp=Z,30nm,1.8s						
DLMT	Dillon	76.12	331	IAmb	IAmb	06 02 56.4	
	comp=Z,20nm,1.4s						
ORV	Oroville	76.53	322	IAmb	IAmb	06 02 39.6	
	comp=Z,22nm,1.4s						
BMO	Blue Mountains	77.97	328	IAmb	IAmb	06 02 57.5	
	comp=Z,26nm,1.9s						
YBH	Yreka Blue Hor	78.67	323	LR	LR	06 36 04.1	
	comp=Z,7.9nm,18.8s,baz=111,slow=35						
F10A	Beach Ranch, E	78.74	329	IAmb	IAmb	06 03 31.0	
	comp=Z,21nm,1.5s						
TORD	Torodi Ar. Bea	78.85	71	P	P	06 02 40.8	-0.8
	comp=Z,10nm,0.7s,baz=243,slow=7.6,SNR=66						
	comp=Z,10nm,0.7s						
TORD	Torodi Ar. Bea	78.85	71	P	P	06 02 40.6	-1.0
TORD				IAmb	IAmb	06 02 49.5	
	comp=Z,19nm,1.1s						
PINE	Pine Mountain	79.09	326	IAmb	IAmb	06 02 46.0	
	comp=Z,28nm,1.5s						
I05D	Terrebonne, OR	79.67	326	IAmb	IAmb	06 03 08.1	
	comp=Z,17nm,1.1s						
HAWA	Hanford	80.17	328	IAmb	IAmb	06 02 51.0	
	comp=Z,22nm,1.4s						
NEW	Newport	80.36	331	LR	LR	06 42 19.0	
	comp=Z,184nm,18.8s,baz=117,slow=39						
SUR	Sutherland	80.41	121	LR	LR	06 35 00.6	
	comp=Z,289nm,20.1s,baz=247,slow=33						
EPH	Ephrata	80.87	329	IAmb	IAmb	06 02 54.9	
	comp=Z,45nm,1.9s						
LTY	Liberty	81.33	328	IAmb	IAmb	06 03 16.3	
	comp=Z,28nm,1.5s						
RAR	Rarotonga	81.75	251	LR	LR	06 31 34.3	
	comp=Z,178nm,20.4s,baz=126,slow=30						
TSUM	Tsumeb	81.91	107	LR	LR	06 38 10.1	
	comp=Z,323nm,18.8s,baz=258,slow=35						
TSUM	Tsumeb	81.91	107	P	P	06 02 57.6	-0.7
MD01	Midelt array s	82.67	51		P	06 03 02.0	+0.2
MDT	Midelt	82.75	51	LR	LR	06 40 48.0	
	comp=Z,347nm,18.0s,baz=256,slow=36						
FRB	Frobisher Bay	84.40	1	LR	LR	06 44 40.9	
	comp=Z,139nm,18.3s,baz=203,slow=38						
KGCAE	Kacgae	84.75	112		P	06 03 12.0	-0.8
BOSA	Boshof	85.29	119	P	P	06 03 17.0	+1.6
	comp=Z,2.5nm,0.9s,baz=292,slow=5.4,SNR=1.9						
BOSA				LR	LR	06 37 39.6	
	comp=Z,304nm,20.8s,baz=226,slow=33						
	comp=Z,2.5nm,0.9s						
BOSA	Boshof	85.29	119	P	P	06 03 14.6	-0.8
BOSA				IAmb	IAmb	06 03 24.6	
	comp=Z,17nm,1.2s						
BOSA	Boshof	85.29	119	P	P	06 03 14.6	-0.8
BOSA				pmax	pmax		
	comp=Z,17nm,1.3s						
MAW	Mawson	85.39	164	LR	LR	06 42 04.1	
	comp=Z,362nm,18.2s,baz=234,slow=36						
TAM	Tamanrasset	86.16	64		P	06 03 19.4	-0.4
TAM	Tamanrasset	86.16	64	P	P	06 03 19.4	-0.4
TAM				pmax	pmax		
	comp=Z,28nm,0.3s						
ESDC	Sonseca Array	86.68	45	P	P	06 03 23.1	+1.2
	comp=Z,1.2nm,1.1s,baz=272,slow=5.3,SNR=4.3						
ESDC				LR	LR	06 37 53.5	
	comp=Z,407nm,21.6s,baz=237,slow=33						
	comp=Z,1.2nm,1.1s						
ESDC	Sonseca Array	86.68	45	P	P	06 03 22.2	+0.4
LBTB	Lobatse	86.88	115	LR	LR	06 38 17.7	
	comp=Z,354nm,20.2s,baz=237,slow=33						
LBTB	Lobatse	86.88	115	P	P	06 03 23.0	-0.3
LBTB	Lobatse	86.88	115	P	P	06 03 23.0	-0.3
LBTB				pmax	pmax		
	comp=Z,50nm,1.9s						
SFJD	Kangerlussuaq	88.94	8	LR	LR	06 44 37.9	
	comp=Z,121nm,18.9s,baz=186,slow=36						
YKAW1	Yellowknife Wh	90.01	341	IAmb	IAmb	06 03 38.5	
	comp=Z,21nm,1.4s						
YKA	Yellowknife Ar	90.06	341	P	P	06 03 37.5	+0.3
	comp=Z,2.8nm,1.0s,baz=142,slow=3.9,SNR=25						
	comp=Z,2.8nm,1.0s						
YKAW3	Yellowknife Wh	90.11	341		P	06 03 37.7	+0.2
ILON	Igloolik, Nuna	90.38	356		P	06 03 39.2	+0.6
ILON				IAmb	IAmb	06 03 48.1	
	comp=Z,8.3nm,1.0s						
LSZ	Lusaka	92.77	107	LR	LR	06 42 54.4	
	comp=Z,357nm,20.3s,baz=243,slow=34						
URZ	Urewera	93.31	227	LR	LR	06 37 57.7	
	comp=Z,669nm,18.3s,baz=136,slow=30						
BORG	Borgarnes	93.45	19	LR	LR	06 42 50.9	
	comp=Z,84nm,20.1s,baz=237,slow=34						
RPZ	Rata Peaks	94.31	220	LR	LR	06 37 12.3	
	comp=Z,205nm,19.0s,baz=127,slow=30						
KEST	Kesra	94.38	54	LR	LR	06 46 43.6	
	comp=Z,355nm,20.2s,baz=232,slow=36						
EKA	Eskdalemuir Ar	95.06	32	LR	LR	06 42 56.1	
	comp=Z,168nm,20.6s,baz=208,slow=33						
VAE	Valguarnera	98.81	53	LR	LR	06 51 23.2	
	comp=Z,515nm,18.1s,baz=292,slow=37						
DAVOX	Davos/Dischmat	98.86	43	LR	LR	06 49 43.5	
	comp=Z,186nm,18.1s,baz=252,slow=36						
KIV	Kislovodsk	120.98	51	i PKIKP	PKiKP	06 09 31.5	+0.8
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	121.14	51⇑	iPKIKP	PKiKP	06 09 31.4	+0.6
H11S2	WAKE ISLAND Hy	126.04	278	T	T	08 28 51.4	
	baz=103,slow=74,SNR=190						
H11S1	WAKE ISLAND Hy	126.04	278	T	T	08 28 52.1	
	baz=103,slow=74,SNR=158						
H11S3	WAKE ISLAND Hy	126.05	278	T	T	08 28 52.8	
	baz=103,slow=74,SNR=159						
H11N3	WAKE ISLAND Hy	126.11	280	T	T	08 29 03.7	
	baz=102,slow=74,SNR=127						
H11N2	WAKE ISLAND Hy	126.12	280	T	T	08 29 04.2	
	baz=102,slow=74,SNR=128						
H11N1	WAKE ISLAND Hy	126.12	280	T	T	08 28 58.4	
	baz=102,slow=74,SNR=92						
SEY	Seymchan	128.86	336⇓	iPKIKP	PKiKP	06 09 47.2	+1.6
ASAR	Alice Springs	129.57	210	PKP	PKiKP	06 09 48.5	0.0
	comp=Z,0.7nm,0.7s,baz=117,slow=1.6,SNR=5.2						
MA2	Magadan	131.41	333⇑	iPKIKP	PKiKP	06 09 51.1	+0.2
WRA	Warramunga Arr	132.51	213	PKP	PKPdf	06 09 53.9	+0.6
	comp=Z,0.8nm,0.9s,baz=152,slow=1.7,SNR=6.6						
YAK	Yakutsk	136.54	346	ePKIKP	PKiKP	06 10 02.7	+1.5
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
KURK	Kurchatov	141.79	32	PKIKP	PKPdf	06 10 07.3	-2.1
KURBB	Kurchatov Arra	141.80	32	PKP	PKPdf	06 10 07.2	-2.2
	comp=E,1.1nm,0.7s,baz=298,slow=2.8,SNR=5.1						
ZALV	Zalesovo Beam	142.16	23	PKhKP	PKPpre	06 10 07.2	
	comp=E,1.5nm,0.6s,baz=294,slow=2.9,SNR=7.5						
ZALV				PKP	PKPdf	06 10 10.9	+1.0
	comp=E,3.3nm,0.9s,baz=276,slow=0.3,SNR=6.8						
ZALV	Zalesovo Beam	142.16	23	PKIKP	PKPdf	06 10 11.0	+1.0
AAK	Ala-Archa	143.78	45	PKP	PKPbc	06 10 11.6	+0.5
	comp=E,1.3nm,0.5s,baz=214,slow=1.2,SNR=5.5						
AAK	Ala-Archa	143.78	45		PKPdf	06 10 13.4	-0.1
AAK	Ala-Archa	143.78	45⇓	iPKIKP	PKPdf	06 10 13.5	+0.1
KSH2	Kashi	145.95	50	PKPbc	PKPab	06 10 18.4	-0.1
MK31	Makanchi Array	146.18	34c	iPKP2	PKPab	06 10 18.9	0.0
MKAR	Makanchi Array	146.18	34	PKPbc	PKPbc	06 10 18.4	+0.1
	comp=E,7.6nm,0.7s,baz=320,slow=3.3,SNR=69						
MKAR	Makanchi Array	146.18	34		PKPbc	06 10 18.6	+0.3
DGZ	Jazzator, Alta	146.49	26⇓	iPKP2	PKPab	06 10 20.0	-0.2
KLR	Kul'dur	146.51	333⇓	iPKP2	PKPbc	06 10 19.5	+0.4
HEH	HeiHe	147.37	338	ePKPbc	PKPbc	06 10 22.3	+0.8
MOY	Mondy	148.65	10	ePKP2	PKiKP	06 10 26.2	-0.3
MOY				pmax	pmax		
	comp=Z,31nm,1.7s						
USRK	Ussuriysk Ar.	150.05	326	PKPbc	PKiKP	06 10 30.2	+0.8
	comp=Z,6.9nm,1.1s,baz=332,slow=2.8,SNR=5.5						
HILR	Hailar Array B	150.21	346	PKPbc	PKiKP	06 10 29.6	-0.1
	comp=Z,5.9nm,0.5s,baz=101,slow=3.0,SNR=12						
ZAK	Zakamensk	150.23	8	ePKIKP	PKPdf	06 10 24.9	+1.0
ZAK				pmax	pmax		
	comp=Z,26nm,1.7s						
MJAR	Matsushiro Arr	150.31	308	PKPbc	PKiKP	06 10 30.4	+0.1
	comp=Z,2.3nm,0.5s,baz=54,slow=2.2,SNR=5.3						
HYB	Hyderabad	150.88	92	ePKiKP	PKPbc	06 10 31.4	0.0
MDJ	Mudanjiang	150.95	329	PKPbc	PKPdf	06 10 26.0	+1.0
WMQ	Urumqi	150.99	33	ePKPbc	PKPdf	06 10 25.3	+0.1
WMQ				PKPab	sPKPbc	06 10 39.8	+1.2
BNX	BinXian	151.07	333	PKPbc	PKPdf	06 10 26.0	+0.8
SONM	Songino Array	153.05	4	PKP	PKPdf	06 10 28.5	+0.2
	comp=Z,0.5nm,0.5s,baz=90,slow=2.0,SNR=4.3						
SONM				PKPbc	PKPbc	06 10 35.3	-0.3
	comp=Z,1.2nm,0.6s,baz=270,slow=1.5,SNR=5.0						
CN2	Changchun	153.46	333	PKPbc	PKPdf	06 10 24.5	-4.3
GTA2	Gaotai	159.80	22	ePKP	PKPdf	06 10 38.5	+1.2
HHC	Hu-ho-hao-te	160.03	355	ePKP	PKPdf	06 10 33.4	-4.1
LZH	Lanzhou	164.18	16	ePKP	PKPdf	06 10 39.3	-2.6
NJ2	Nanjing	165.94	324	ePKP	PKPdf	06 10 43.4	+0.1
PZH	PanZhiHua	171.20	49	PKP	PKPdf	06 10 46.4	-0.7

*ASRS **13** 06:00:00.0±2.0, 54°.15N×86°.38E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 13 06:00:04.0±2.9**, 54°.15N×86°.53E, h0km, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=21.8km s-min=13.1km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.03	260	I	I	06 05 40.0	
	baz=80,slow=334,SNR=16						
ZALV	Zalesovo Beam	1.03	260	Pg	Pg	06 00 22.4	-1.3
	0.9nm,0.3s,baz=76,slow=18,SNR=10						
ZALV				Lg	Lg	06 00 38.2	
	2.5nm,0.3s,baz=77,slow=26,SNR=18						
KURBB	Kurchatov Arra	6.04	237	Pn	Pn	06 01 34.9	+0.4
	0.1nm,0.3s,baz=56,slow=15,SNR=4.5						
KURBB				Sn	Sn	06 02 44.8	+0.7
	baz=53,slow=24,SNR=2.0						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.84	202	Pn	Pn	06 02 00.7	+1.4
	0.2nm,0.3s,baz=23,slow=14,SNR=6.0						
MKAR				Sn	Sn	06 03 27.7	-1.0
	baz=14,slow=24,SNR=1.3						
MKAR				Lg	Lg	06 04 13.9	
	0.1nm,0.3s,baz=26,slow=31,SNR=2.2						
	0.3nm,0.3s						

UCR 13 06:17:04.3±0.7**, 8°.61N×84°.35W, h2km**±13km**, MW3.5, Presumed earthquake, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDPE	Pejibaye, P	0.94	55	eP	Pg	06 17 22.3	-0.1
PICV	PH. Pirrs	1.02	9	eP	Pg	06 17 23.4	-0.6
PIEC	Cerro El Cedra	1.08	21	eP	Pg	06 17 24.9	-0.1
BUS1	Rivas	1.11	32	eP	Pg	06 17 25.3	-0.4
EDP2	Potrero Grande	1.23	71	eP	Pg	06 17 26.7	-1.2
DRK0	Durika	1.27	59	eP	Pg	06 17 25.9	-2.8
NELY	Ciudad Neily	1.39	88	eP	Pb	06 17 32.2	+1.2
NELY				eS	Sg	06 17 49.0	0.0
VICA	Volcano Irazu	1.46	20	eP	Pn	06 17 30.7	-1.3
VERB	Verbena	1.48	26	eP	Pn	06 17 31.0	-1.1
CVTQ	Turrialba Volc	1.50	23	eP	Pn	06 17 32.2	-0.4
CVTV	Tajo	1.51	23	eP	Pn	06 17 31.7	-1.0
CVTR	Volcan Turrial	1.52	23	eP	Pn	06 17 32.5	-0.4
ABRB	Las Abras (San	1.52	24	eP	Pn	06 17 33.0	+0.2
ALCO	Alturas Coton,	1.54	77	eP	Pn	06 17 31.8	-1.1
RESJ	San Isidro (Tu	1.57	26	eP	Pn	06 17 32.6	-0.8
BRU2	Volcan	1.65	83	eP	Pb	06 17 35.3	-0.3
CLLRA	Cordillera,	1.72	85	eP	Pg	06 17 38.9	+1.6
CLLRA				eS	Sg	06 18 03.5	+3.7
JTS	Las Juntas de	1.77	340	eP	Pn	06 17 35.8	-0.3
JEFFS	S de V. Baru	1.80	88	eP	Pn	06 17 35.3	-1.1
DAP26	falda E V. Bar	1.92	85	eP	Pn	06 17 35.8	-2.3
PBNVO	Pueblo Nuevo,	2.15	82	eP	Pn	06 17 38.8	-2.5

*GUC **13** 06:18:37.6±0.7, 24°.07S×66°.97W, h226km±6km, ML3.6*
*SJA **13** 06:18:37.6±0.6, 23°.93S×66°.88W, h210km±6km, ML3.6, MW3.4*

ISC 13 06:18:36.7±2.1**, 24°.00S**±0°.05×**66°.92W**±0°.06**, h221km**±16km**, n30, σ1s66**/45**, 4C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.58	113⇓	iP	Pn	06 19 07.2	0.0
SALTA		0.58	113	eP	Pn	06 19 07.2	0.0
SALTA				eP	Pn	06 19 07.2	0.0
SALTA				eP	Pn	06 19 07.2	0.0
SALTA				eP	Pn	06 19 07.2	0.0
SLA	San Lorenzo	1.48	119	eP	Pn	06 19 13.1	+0.8
SLA	San Lorenzo	1.48	119	eP	Pn	06 18 59.2	-13
AF01	San Pedro de A	1.56	312	eP	Pn	06 19 14.4	+1.3
AF01				eS	S	06 19 42.4	+1.0
AF01	San Pedro de A	1.56	312	eP	Pn	06 19 14.5	+1.3
AF01				eS	S	06 19 23.6	-18
FSA	Cafayete	2.27	158	eP	Pn	06 19 20.9	+1.3
FSA				eS	S	06 19 51.9	-1.3
GO02	Mina Guanaco	2.69	244	eP	Pn	06 19 25.8	+1.5
GO02				eS	S	06 20 01.4	0.0
GO02	Mina Guanaco	2.69	244	eP	Pn	06 19 25.9	+1.6
GO02				eS	S	06 20 01.9	+0.5
GO02				IAML		06 20 04.8	
	comp=Z,159nm,0.2s						
PB06	IPOC Station P	2.76	297⇑	iP	Pn	06 19 26.0	+1.1
PB06				IAML		06 20 02.5	
	comp=N,175nm,0.1s						
PB06	IPOC Station P	2.76	297	eP	Pn	06 19 25.8	+0.9
PB06				eS	S	06 20 01.1	-1.3
PB06				IAML		06 20 03.2	
	comp=Z,105nm,0.3s						
PB09	IPOC Station P	3.06	315	eP	Pn	06 19 29.9	+1.4
PB09				IAML		06 20 11.3	
	comp=E,30nm,0.2s						
PB09	IPOC Station P	3.06	315	eP	Pn	06 19 29.7	+1.2
PB09				eS	S	06 20 09.8	+1.1
AHML	Horco Molle	3.12	153	eP	Pn	06 19 19.7	-9.2
AHML				eP		06 19 30.5	
AHML				eS	S	06 20 09.2	-0.6
PB05	IPOC Station P	3.22	290	eP	Pn	06 19 31.1	+0.9
PB05	IPOC Station P	3.22	290	eP	Pn	06 19 31.1	+0.9
PB05				eS	S	06 20 10.9	-0.9
PB14	IPOC Station P	3.24	258	eP	Pn	06 19 31.6	+1.1
PB14	IPOC Station P	3.24	258	eP	Pn	06 19 31.9	+1.4
PB14				eS	S	06 20 12.1	-0.4
PB14				IAML		06 20 13.2	
	comp=Z,80nm,0.2s						
PB03	IPOC Station P	3.25	306⇑	iP	Pn	06 19 31.3	+0.7
PB03	IPOC Station P	3.25	306	eP	Pn	06 19 31.3	+0.7
PB03				eS	S	06 20 10.9	-1.7
PB03				IAML		06 20 14.4	
	comp=Z,122nm,0.4s						
PB10	IPOC Station P	3.36	278⇑	iP	Pn	06 19 32.9	+1.3
PB10	IPOC Station P	3.36	278	eP	Pn	06 19 32.9	+1.3
PB10				eS	S	06 20 13.8	-0.8
PB10				IAML		06 20 18.0	
	comp=Z,81nm,0.6s						
AC02	Maricunga	3.46	215	eP	Pn	06 19 35.4	+2.2
AC02				eS	S	06 20 18.2	+0.7
PB07	IPOC Station P	3.55	309⇑	iP	Pn	06 19 34.6	+0.5
PB07	IPOC Station P	3.55	309	eP	Pn	06 19 34.7	+0.6
PB07				eS	S	06 20 17.2	-1.7
PB07				IAML		06 20 18.6	
	comp=Z,52nm,0.2s						
PB01	IPOC Station P	3.78	321	eP	Pn	06 19 37.2	+0.4
PB02	IPOC Station P	3.83	314	eP	Pn	06 19 37.6	+0.2
PB02	IPOC Station P	3.83	314	eS	S	06 20 22.7	-2.2
PB02				IAML		06 20 24.1	
	comp=Z,69nm,0.3s						
AC01	Pan de Azucar	3.96	237	eP	Pn	06 19 39.5	+0.7
AC01				eS	S	06 20 19.7	-7.9
PB08	IPOC Station P	4.36	331	eP	Pn	06 19 45.1	+1.0

*CATAC **13** 06:24:42.6, 7°N±13°×8°0W±1°3, h10km±17km, M4.1/8, MLv4.1/8, confirmed*
*UPA **13** 06:24:44.4±3.1, 7°.41N×80°.60W, h0km±7km, MW4.1, Presumed earthquake*
*RSNC **13** 06:24:49.2±0.7, 7°N±4°×8°0W±°, h0km, M3.2, mb4.0, mB4.9, ML2.8, Mw(mB)4.2*

ISC 13 06:24:41.4±0.8**, 7°.29N**±0°.03×**80°.56W**±0°.02**, h8km, n89, σ1s80**/122**, 7C-6D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOSI3	Tonosi	0.17	45⇑	eP	Pg	06 24 48.9	+3.9
TOSI3				eS	Sg	06 24 52.0	+4.6
CACAO	El Cacao, Vera	0.30	281	eP	Pb	06 24 49.7	+0.6
CACAO				eS	Sb	06 24 53.4	-0.8
ACHO3	Achotines, Los	0.41	72⇑	eP	Pn	06 24 52.8	-0.8
ACHO3				eS	Sb	06 24 59.3	+2.1
MARI3	Mariato, Verag	0.56	310⇑	eP	Pb	06 24 53.7	+0.3
MARI3				eS	Sb	06 25 02.5	+1.0
PCRI3	Pocri, Los San	0.57	50⇓	eP	Pn	06 24 55.3	-0.6
PCRI3				eS	Sn	06 25 03.8	-1.8
AZU	Azuero	0.58	30⇓	iP	Pn	06 24 54.9	-1.1
AZU				eS	Sb	06 25 02.6	+0.4
PEDA3	Pedasi	0.58	66⇓	eP	Pn	06 24 55.5	-0.5
PEDA3				eS	Sn	06 25 03.7	-2.0
PESE3	Pese, Herrera	0.62	355	eP	Pn	06 24 55.1	-1.4
PESE3				eS	Sb	06 25 03.1	-0.2
CHIT3	Chitre	0.68	12⇓	eP	Pn	06 24 56.3	-1.0
CHIT3				eS	Sb	06 25 05.0	-0.1
GMAL	Guarumal, Vera	0.81	305⇑	eP	Pn	06 24 58.3	-0.9
GMAL				eS	Sn	06 25 12.8	+1.3
STIA3	Santiago, Vera	0.90	333⇑	eP	Pb	06 24 59.3	0.0
STIA3				eS	Sg	06 25 10.7	+0.2
RSUS3	Rio de Jesus,	0.91	319⇑	eP	Pb	06 24 59.3	-0.2
CRIS3	El Cristo, Coc	0.96	357⇓	eP	Pn	06 25 00.7	-0.5
CRIS3				eS	Sb	06 25 12.7	-0.5

MESA3	La Mesa, Verag	1.05	324	*e*P		Pb	06 25 01.6	-0.3
MESA3				*e*S		Sn	06 25 16.6	-0.7
CALO3	Calobre, Verag	1.06	345⇑	*e*P		Pn	06 25 02.4	-0.3
CALO3				*e*S		Sb	06 25 15.9	-0.3
PNME	Penonome	1.21	11	*e*P		Pg	06 25 05.1	+0.3
PNME				*e*S		Sg	06 25 20.6	+0.1
PVID3	Puerto Vidal,	1.28	306	*e*P		Pb	06 25 05.3	-0.5
SAFE3	Santa Fe, Vera	1.32	337	*e*P		Pb	06 25 06.2	-0.4
SAFE3				*e*S		Sg	06 25 23.9	-0.1
NANC3	Nancito, Chiri	1.50	309	*e*P		Pb	06 25 09.1	-0.4
NANC3				*e*S		Sg	06 25 29.6	0.0
RMDIO	Remedios, Chir	1.56	307	*e*P		Pb	06 25 09.9	-0.8
RMDIO				*e*S		Sg	06 25 31.0	-0.8
REME3	Remedios, Chir	1.57	307	*e*P		Pg	06 25 10.6	-0.8
REME3				*e*S		Sg	06 25 34.0	+2.2
CHOR3	La Chorrera	1.78	26	*e*P		Pg	06 25 15.8	+0.2
CHOR3				*e*S		Sg	06 25 40.5	+1.7
ZANG	Zanguenga, Cho	1.79	23	*e*P		Pg	06 25 14.9	-1.0
ZANG				*e*P		Pb	06 25 15.0	+0.5
ZANG				*e*S		Sg	06 25 39.2	+0.1
ZANG				*e*S		Sb	06 25 39.7	+2.4
TABO3	Taboga, Panama	1.80	34	*e*P		Pb	06 25 14.8	+0.2
TABO3				*e*S		Sg	06 25 39.6	+0.3
FLAM	Flamenco Islan	1.91	32	*e*P		Pb	06 25 16.7	+0.2
FLAM				*e*P		Pg	06 25 16.8	-1.2
FLAM				*e*S		Sg	06 25 41.5	-1.3
FLAM				*e*S		Sb	06 25 41.7	+1.2
BCIP	Isla Barro Col	2.00	21	P		Pb	06 25 18.3	+0.2
BCIP				S		Sg	06 25 44.8	-1.0
BCIP	Isla Barro Col	2.00	21	P		Pb	06 25 18.2	+0.2
BCIP				S		Sb	06 25 43.2	+0.1
BCIP	Isla Barro Col	2.00	21⇓	*e*P		Pb	06 25 43.9	+0.2
BCIP				*e*S		Sg	06 25 44.7	-1.0
GAMB1	Gamboa	2.01	25	*e*P		Pb	06 25 17.9	-0.2
CHIR3	Chiriqui UPA,	2.07	302	*e*P		Pb	06 25 18.8	-0.4
FRIJ	El Hiral	2.09	23	*e*P		Pb	06 25 19.4	-0.2
FRIJ				*e*P		Pg	06 25 19.7	-1.8
FRIJ				*e*S		Sg	06 25 48.1	-0.6
LOMA3	Las Lomas, Chi	2.14	302	*e*P		Pb	06 25 20.1	-0.4
PEDE3	Pedregal, Chir	2.14	301	*e*P		Pb	06 25 20.7	+0.3
LOCO3	Loma Colorada,	2.15	301	*e*P		Pb	06 25 20.3	-0.3
LOCO3				*e*S		Sg	06 26 00.6	+10
DVD	David	2.19	301	*e*P		Pb	06 25 20.9	-0.4
DVD				*e*S		Sg	06 25 54.8	+2.9
PSOM3	Paja de Sombre	2.23	309	*e*P		Pb	06 25 20.7	-1.3
PSOM3				*e*S		Sb	06 25 49.1	-0.7
RBALA	Bur	2.23	315	*e*P		Pb	06 25 21.1	-0.9
RBALA				*e*S		Sb	06 25 49.7	-0.1
CHGR2	Aguacate	2.27	316	*e*P		Pn	06 25 18.6	-0.6
BAGA3	Bagala, Chiriq	2.27	301	*e*P		Pb	06 25 22.5	-0.2
BQSF3	Alto Boquete,	2.35	308	*e*P		Pb	06 25 23.3	-0.9
CHPO	Chepo, Panama	2.36	37	*e*P		Pb	06 25 22.9	-1.2
CHPO				*e*S		Sb	06 25 54.7	+1.3
DAP26	falda E V. Bar	2.37	309	*e*P		Pb	06 25 23.1	-1.4
PTAR3	Potrerillos Ar	2.37	306	*e*P		Pb	06 25 23.7	-0.7
BQTLY	Boquete Panama	2.38	308	*e*P		Pb	06 25 23.2	-1.5
LNBQ3	Los Naranjos,	2.38	309	*e*P		Pb	06 25 23.7	-1.1
JEFFS	S de V. Baru	2.39	305	*e*P		Pb	06 25 24.2	-0.6
PTPM	Petroterminale	2.47	292	*e*P		Pb	06 25 25.6	-0.5
LESP3	La Esperanza,	2.47	297	*e*P		Pb	06 25 25.2	-0.9
CLLRA	Cordillera,	2.49	306	*e*P		Pb	06 25 25.5	-1.1
CNTA3	Canitas, Panam	2.54	41	*e*P		Pb	06 25 25.8	-1.4
BRU2	Volcan	2.58	306	P		Pb	06 25 26.7	-1.4
BRU2				S		Sb	06 26 01.6	+1.5
BRU2	Volcan	2.58	306	*e*P		Pb	06 25 27.8	-0.4
BRU2				*i* S		Sg	06 26 04.0	-0.6
CDTO	Canoas	2.62	299	P		Pb	06 25 27.6	-1.7
MLIR3	Monte Lirio, C	2.69	304	*e*P		Pb	06 25 30.2	+0.2
PTAC	Punta Ardita,	2.74	93	P		Pn	06 25 26.4	+0.7
PTAC				S		Sn	06 25 55.0	-4.0
TOTI	Torti	2.76	54	*e*P		Pb	06 25 29.9	-1.2
UPD2	Meteti	2.82	63	*e*P		Pb	06 25 29.9	-2.1
DRK0	Durika	3.30	307	*e*P		Pn	06 25 34.8	+1.2
SOLC	Bahia Solano	3.31	108	P		Pn	06 25 34.1	+0.6
SOLC				S		Sn	06 26 09.9	-3.1
CAPC	Capurgana	3.45	67	P		Pb	06 25 43.1	+0.3
OCHAL	Ojochal	3.54	301	P		Pb	06 25 40.2	-4.2
PIZC	Pizarro, Choco	3.93	126	P		Pn	06 25 43.4	+1.3
PIZC				S		Sn	06 26 28.5	0.0
APAC	Apartado, Choc	4.00	81	P		Pb	06 25 48.1	-4.0
APAC				S		Sb	06 26 35.4	-5.2
DBBC	Dabeiba	4.33	93	P		Pn	06 25 50.5	+2.9
DBBC				S		Sn	06 26 39.0	+0.6
CBOC	Ciudad Bolivar	4.74	107	P		Pn	06 25 55.3	+1.9
CBOC				S		Sn	06 26 43.7	-4.9
UREC	San Jos de Ur	5.01	84	P		Pn	06 26 00.7	+3.8
UREC	San Jos de Ur	5.01	84	*e*P		Pn	06 26 00.8	+3.8
YOTC	Yotoco, Valle	5.33	128	P		Pn	06 26 02.8	+1.4
YOTC				S		Sn	06 27 01.6	-1.5
JAMC	Jamundi, Valle	5.60	136	P		Pn	06 26 07.1	+1.8
	5.5nm,0.5s							
ANIL	Santa Ana	5.84	118	P		Pn	06 26 12.9	+4.3
SJCC	San Jacinto, C	5.92	64	P		Pn	06 26 13.9	+4.4
	23nm,1.6s							
PRVC	Isla de Provid	6.10	353	P		Pn	06 26 14.3	+2.4
POPC	Popayan, Colom	6.10	140	P		Pn	06 26 14.0	+1.8
	5.9nm,0.4s							
PTBC	PUERTO BERRIO,	6.11	97	P		Pn	06 26 15.6	+3.5
	6.7nm,0.8s							
ORTC	Ortega, Tolima	6.27	122	P		Pn	06 26 18.5	+4.2
	14nm,0.8s							
PRAC	Prado	6.67	122	P		Pn	06 26 24.1	+4.2
	9.6nm,0.9s							
GARC	Garzon, Huila	7.16	135	P		Pn	06 26 31.4	+4.7
OCAC	Ocana	7.24	82	P		Pn	06 26 33.4	+5.7
CHIC	Chingaza	7.29	111	P		Pn	06 26 34.6	+5.9
URMC	La Uribe, Meta	7.35	123	P		Pn	06 26 33.0	+3.8
	8.6nm,1.0s							
BARC	Barichara	7.36	95	P		Pn	06 26 33.6	+4.1
	16nm,1.0s							
BONI	La Bonita	7.43	156	P		Pn	06 26 37.1	+6.6
FLOC	Florencia	7.49	139	P		Pn	06 26 35.9	+4.8
	8.4nm,0.8s							
VILC	Villavicencio,	7.53	114	P		Pn	06 26 38.6	+6.9
RUSC	La Rusia	7.56	100	P		Pn	06 26 37.1	+4.7
PAMC	Pamplona, Colo	7.80	89	P		Pn	06 26 39.7	+4.0
	312nm5.6nm,0.8s							
MACC	Macarena, Meta	8.42	127	P		Pn	06 26 47.6	+3.8
	9.7nm,0.6s							
URIC	Uribia, Colomb	9.52	62	P		Pn	06 27 02.4	+3.5
SDV	Santo Domingo	9.96	80	P		Pn	06 27 12.0	+6.9

IDC ***13*** *06:36:29.1±0.6,20°.94S×70°.77W,h0km,mb4.1/9, mbtmp4.2/12,ML4.2/3,MS3.8/10,Error ellipse: s-maj=22.9km s-min=18.2km az=66.0*

NEIC ***13*** *06:36:29.1,20°.95S×70°.91W,h10km*

NEIC ***13*** *06:36:29.1±1.5,20°.94S±0°.03×70°.90W±0°.05,h10km±1km, mb4.4/13,Mwr4.4/45,Mwr4.5(GUC),Error ellipse: s-maj=7.2km s-min=5.2km az=283.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; M_{rr}2.20; $M_{\theta\theta}$0.28; $M_{\phi\phi}$-2.48; $M_{r\theta}$1.42; $M_{\theta\phi}$0.54; $M_{\phi r}$-4.23; Fault plane solution: M_o5.07000×10¹⁵ NP1:ϕ_s162.13000°, δ76.04000°,λ85.80000°. NP2:ϕ_s359.06000°,δ14.57000°, λ106.41000°. Principal axes: T 4.8951, Plg59.0000°, Azm66.0000°; N 0.3390, Plg4.0000°, Azm163.0000°; P -5.2342, Plg31.0000°, Azm256.0000°;*

GUC ***13*** *06:36:32.4±0.8,20°.90S×70°.82W,h30km±3km,ML4.6*

VAO ***13*** *06:36:32.5±2.2,20°.84S×70°.79W,h19km±14km,mb4.4, Presumed earthquake*

ISC 13 06:36:29.1±1.4,20°.96S±0°.03×70°.89W±0°.04,h9km±9km, n126,σ1§25/127,mb4.3/10,MS3.8/8,3C-6D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TA02	Huaiquique	0.99	46	*e*P		Pb	06 36 47.8	-0.6
TA02				*e*S		Sg	06 36 59.6	-1.3
TA02				IAML			06 37 03.2	
	comp=N,22μm,0.5s							
PB02	IPOC Station P	1.00	111			Pn	06 36 48.8	-0.6
PB02				Sg		Sn	06 37 01.9	-1.8
PB02	IPOC Station P	1.00	111	*i*P		Pn	06 36 49.0	-0.4
PB02				*i* S		Sb	06 37 01.4	-0.5
PB02				IAML			06 37 04.3	
	comp=E,49μm,0.4s							
PB07	IPOC Station P	1.21	129			Pg	06 36 53.0	+0.6
PB07						Sn	06 37 08.0	-1.1
PB07	IPOC Station P	1.21	129	⇓*i*P		Pg	06 36 52.9	+0.5
PB07				*i* S		Sn	06 37 08.2	-0.8
PB01	IPOC Station P	1.31	94			Pn	06 36 53.6	-0.2
PB01				Sn		Sb	06 37 09.8	-1.2
PB01	IPOC Station P	1.31	94	*e*P		Pn	06 36 53.6	-0.2
PB01				*i* S		Sb	06 37 09.1	-2.0
PB01				IAML			06 37 12.2	
	comp=N,28μm,0.5s							
PB03	IPOC Station P	1.52	136	Pn		Pb	06 36 57.2	-0.3
PB03	IPOC Station P	1.52	136	⇓*i*P		Pb	06 36 57.4	-0.2
PB03				*i* S		Sg	06 37 17.2	-0.7
PB11	IPOC Station P	1.66	44	Pn		Pn	06 36 58.4	-0.2
PB11	IPOC Station P	1.66	44	⇑*i*P		Pn	06 36 58.3	-0.3
PB11				*e*S		Sn	06 37 18.1	-2.1
PB11				IAML			06 37 23.8	
	comp=N,14μm,0.4s							
PB09	IPOC Station P	1.75	119			Pb	06 37 01.8	+0.2
PB09	IPOC Station P	1.75	119	⇓*i*P		Pb	06 37 01.7	+0.2
PB09				*i* S		Sb	06 37 23.4	-0.3
PB08	IPOC Station P	1.82	64			Pn	06 37 01.2	+0.3
PB08	IPOC Station P	1.82	64	⇑*i*P		Pn	06 37 01.3	+0.3
PB08				*e*S		Sn	06 37 23.9	-0.5
PB05	IPOC Station P	1.99	161			Pn	06 37 03.8	+0.6
PB05	IPOC Station P	1.99	161	⇓*i*P		Pn	06 37 03.7	+0.6
PB05				*i* S		Sb	06 37 30.1	-0.6
GO01	Chusmiza	2.04	51			Pn	06 37 04.4	+0.2
GO01	Chusmiza	2.04	51	⇑*i*P		Pn	06 37 04.4	+0.2
GO01				*e*S		Sn	06 37 29.6	-0.5
GO01				IAML			06 37 33.2	
	comp=N,7μm,0.3s							
PB06	IPOC Station P	2.13	145			Pn	06 37 05.3	+0.2
PB06	IPOC Station P	2.13	145	⇓*i*P		Pn	06 37 05.9	+0.8
PB06				*i* S		Sb	06 37 33.0	-1.7
PB06				IAML			06 37 42.8	
	comp=N,3μm,0.4s							
PB12	IPOC Station P	2.39	13			Pn	06 37 08.6	0.0
PB12	IPOC Station P	2.39	13	*e*P		Pn	06 37 08.4	-0.2
PB12				*i* S		Sn	06 37 36.4	-1.7
PB10	IPOC Station P	2.56	173			Pn	06 37 11.5	+0.6
AP01	Chacalluta	2.62	11	Pn		Pn	06 37 11.6	-0.2
PB14	IPOC Station P	3.68	173			Pn	06 37 26.3	-0.3
GO02	Mina Guanaco	4.35	164			Pn	06 37 36.4	+0.6
AC01	Pan de Azucar	5.17	177			Pn	06 37 45.5	-1.3
LPAZ	La Paz	5.33	30	Pn		Pn	06 37 54.5	+5.0
	comp=N,2.2nm,0.3s,baz=199,slow=3.1,SNR=36							
LPAZ				Sn		Sn	06 38 53.0	+1.6
	comp=N,2.0nm,0.3s,baz=193,slow=14,SNR=3.7							
LPAZ	La Paz	5.33	30	Pn		Pn	06 37 54.8	+5.2
LPAZ	La Paz	5.33	30	*e*P		Pn	06 37 49.9	+0.3
AC02	Maricunga	6.07	165			Pn	06 38 01.2	+1.6
GO03	Copiapo	6.63	175	Pn		Pn	06 38 06.9	0.0
AC05	El Transito	7.87	176	Pn		Pn	06 38 23.3	-0.6
LCO	Las Campanas	8.02	179	Pn		Pn	06 38 25.4	-0.7
CO01	Juntas del Tor	9.01	176	Pn		Pn	06 38 39.1	-0.6
CO03	El Pedregal	9.84	179	Pn		Pn	06 38 50.1	-0.9
CO02	Combarbal	10.21	181	Pn		Pn	06 38 54.9	-1.1
SIV	San Ignacio	10.54	64	Pn		Pn	06 39 01.4	+0.8
	comp=N,0.3nm,0.3s,baz=250,slow=9.2,SNR=67							
SIV				Sn		Sn	06 40 59.4	+0.5
	baz=290,slow=20,SNR=1.4							
	comp=N,13nm,0.4s							
NNA	Nana	10.59	326	Pn		Pn	06 39 03.5	+2.3
	comp=N,2.6nm,0.3s,baz=183,slow=17,SNR=3.0							
NNA				Sn		Sn	06 40 57.5	-2.5
	comp=N,1.2nm,0.3s,baz=200,slow=10,SNR=2.3							
	comp=N,4.7nm,0.3s							
NNA	Nana	10.59	326			Pn	06 39 00.0	-1.2
CO04	Los Peladeros	11.04	180	Pn		Pn	06 39 06.3	-1.3
VA03	San Esteban	11.76	179	Pn		Pn	06 39 15.9	-1.4
MURT	Porto Murtinho	12.40	96	*e*P		Pn	06 39 28.5	+2.5
VILB	Vilhena	12.95	54	Pn		Pn	06 39 33.6	0.0
VILB	Vilhena	12.95	54	*e*P		Pn	06 39 33.5	0.0
BDQN	Bodoquena, MS	13.24	90	*e*P		Pn	06 39 39.2	+1.7
CPUP	Villa Florida	13.53	116	Pn		Pn	06 39 45.4	+4.0
	comp=N,0.1nm,0.3s,baz=311,slow=13,SNR=5.6							
CPUP				LR		LR	06 45 28.1	
	comp=N,252nm,19.3s,baz=289,slow=40							
CPUP	Villa Florida	13.53	116	Pn		Pn	06 39 42.0	+0.7
BO02	Sierra Bellavi	13.78	180	Pn		Pn	06 39 44.2	-0.7
AQDB	Aquidauana	14.22	91	Pn		Pn	06 39 49.8	-1.0
AQDB	Aquidauana	14.22	91	*e*P		Pn	06 39 49.1	-1.8
H03N1	Juan Fernandez	14.33	208	Pn		Pn	06 39 51.7	-0.3
	baz=109,slow=14							
H03N1				T		T	06 54 55.4	
	baz=34,slow=72,SNR=344							
H03N2	Juan Fernandez	14.34	208	Pn		Pn	06 39 51.6	-0.5
	baz=109,slow=14							
H03N2				T		T	06 54 57.2	
	baz=34,slow=72,SNR=260							
H03N3	Juan Fernandez	14.35	208	Pn		Pn	06 39 51.5	-0.8
	baz=109,slow=14							
H03N3				T		T	06 54 58.4	
	baz=34,slow=72,SNR=315							
H03S3	Juan Fernandez	14.65	207	Pn		Pn	06 39 55.6	-0.8
	baz=208,slow=71							
H03S1	Juan Fernandez	14.67	207	Pn		Pn	06 39 55.5	-1.1
	baz=208,slow=71							
H03S2	Juan Fernandez	14.67	207	Pn		Pn	06 39 55.7	-0.9
	baz=208,slow=71							
SALV	Santo Antonio	15.27	73	*e*P		Pn	06 40 04.8	-0.3
PP1B	Ponte de Pedra	15.48	80	*e*P		Pn	06 40 08.7	+0.8
ATAH	Atahualpa	15.54	331	LR		LR	06 46 17.5	
	comp=N,62nm,20.7s,baz=170,slow=38							
BI02	San Fabin de	15.65	181			Pn	06 40 10.7	+0.6
TRCB	Terra Rica	17.05	100	P		P	06 40 31.2	+1.5
TRCB	Terra Rica	17.05	100	*e*P		P	06 40 29.3	-0.4
CLDB	Colider	17.63	58	*e*P		Pn	06 40 35.4	+0.2
PTGB	Pitanga	17.75	106	*e*P		P	06 40 38.6	+1.0
ITAB	Concordia	18.22	114			Pn	06 40 41.0	-1.4
ITAB				IAmb		IAmb	06 41 16.4	
	comp=Z,28nm,1.3s							
PCMB	Pacaembu	18.31	96	*e*P		P	06 40 43.9	+0.3
TEFE	Tefe	18.38	20	*e*P		P	06 40 44.7	+0.2
LDASE	Londrina, Braz	18.47	101	*e*P		Pn	06 40 46.6	+1.0
GO06	Curarrehue	18.57	181	P		P	06 40 45.4	-1.2
GO06				IAmb		IAmb	06 40 50.5	
	comp=Z,16nm,0.8s							
TRQA	Tornquist	18.70	158	P		Pn	06 40 48.1	-0.2
TRQA				IAmb		IAmb	06 40 59.2	
	comp=Z,14nm,0.9s							
PLCA	Paso Flores	19.72	179	P		Pn	06 41 00.7	+0.2
	comp=Z,0.2nm,0.3s,baz=1.1,slow=11,SNR=10							
	comp=Z,11nm,1.1s							
PLCA	Paso Flores	19.72	179	P		P	06 40 58.0	-1.0
PLCA				IAmb		IAmb	06 41 04.5	
	comp=Z,31nm,1.4s							
PLCA	Paso Flores	19.72	179	*e*P		Pn	06 41 02.1	+1.6
FRTB	Fartura	19.90	101	*e*P		Pn	06 41 02.4	-0.3
MACA	Manacapuru-AM	20.29	31	P		P	06 41 04.7	-0.7
MACA				IAmb		IAmb	06 41 19.8	
	comp=Z,24nm,0.9s							
BB19B	Bebedouro	20.88	94	*e*P		Pn	06 41 14.5	+0.2
RCLB	Rio Claro- Sao	21.75	98	*e*P		P	06 41 21.5	+0.2
OTAV	Otavalo	22.32	340	P		P	06 41 25.8	-2.0
BDFB	Brasilia	22.34	80	P		P	06 41 27.7	0.0
	comp=Z,1.8nm,0.6s,baz=263,slow=12,SNR=4.5							
BDFB				LR		LR	06 51 53.1	
	comp=Z,446nm,20.2s,baz=265,slow=42							
	comp=Z,1.8nm,0.6s							
BDFB	Brasilia	22.34	80	P		P	06 41 26.1	-1.5
COYC	Coyhaique	24.57	182	P		P	06 41 48.3	-1.1
PRPB	Parauapebas	25.16	57	*e*P		P	06 41 56.3	+1.3
BOAV	Boa Vista	25.33	25	P		P	06 41 54.9	-1.6
BOAV				IAmb		IAmb	06 41 59.2	
	comp=Z,7.5nm,0.8s							
BOAV	Boa Vista	25.33	25	*e*P		P	06 41 57.3	+0.8
SMTB	Santa Maria do	25.48	65	*e*P		P	06 41 58.5	+0.5
DIAM	Diamantina, MG	25.76	89	*e*P		P	06 42 01.9	+1.2
ROSC	El Rosal	25.86	352	P		P	06 42 04.6	+2.9
	comp=Z,4.4nm,0.4s,baz=108,slow=19,SNR=1.3							
	comp=Z,4.4nm,0.4s							
JANB	Januaria	25.93	81	*e*P		P	06 42 01.6	-0.5
SDV	Santo Domingo	29.66	1	LR		LR	06 53 52.4	
	comp=Z,94nm,19.2s,baz=246,slow=35							
MDP	Montagnes des	31.49	37	LR		LR	06 55 19.2	
	comp=Z,90nm,18.5s,baz=211,slow=36							
RPN	Rapa Nui	35.54	252	LR		LR	06 54 54.4	
	comp=Z,207nm,18.1s,baz=97,slow=31							
SJG	San Juan	39.10	7	LR		LR	07 01 17.5	
	comp=Z,75nm,18.1s,baz=184,slow=38							
TXAR	Lajitas Array	59.15	327	P		P	06 46 30.3	-0.2
	comp=Z,0.8nm,0.9s,baz=146,slow=7.6,SNR=5.5							
	comp=Z,0.8nm,0.9s							
MNTX	Cornudas Mount	61.92	327	P		P	06 46 50.6	+1.3
MNTX				IAmb		IAmb	06 46 52.1	
	comp=Z,5.2nm,1.4s							
SNAA	Sanae	63.40	161	P		P	06 46 59.2	+0.5
	comp=Z,2.8nm,0.9s,baz=302,slow=15,SNR=2.6							
	comp=Z,2.8nm,0.9s							
SNAA	Sanae	63.40	161	P		P	06 46 57.0	-1.7
QSPA	South Pole Qui	69.23	180	P		P	06 47 38.3	+2.0
	comp=Z,4.2nm,0.8s,baz=162,slow=1.1,SNR=5.0							
	comp=Z,4.2nm,0.8s							
DBIC	Dimbokro	70.36	75	LR		LR	07 17 32.2	
	comp=Z,119nm,19.2s,baz=284,slow=35							
PDAR	Pinedale Array	72.73	331	P		P	06 48 00.2	+2.3
	comp=Z,0.3nm,0.7s,baz=133,slow=6.7,SNR=2.7							
	comp=Z,0.3nm,0.7s							
PDAR	Pinedale Array	72.73	331	P		P	06 47 57.8	-0.2
NVAR	Mina Array Bea	73.94	323	P		P	06 48 06.7	+1.6
	comp=Z,1.1nm,0.8s,baz=155,slow=7.0,SNR=6.4							
	comp=Z,1.1nm,0.8s							
TORD	Torodi Ar. Bea	78.92	71	P		P	06 48 33.7	+0.1
	comp=Z,1.9nm,0.7s,baz=244,slow=9.6,SNR=12							
	comp=Z,1.9nm,0.7s							
FRB	Frobisher Bay	84.44	1	LR		LR	07 29 04.2	
	comp=Z,222nm,19.0s,baz=293,slow=37							
LBTB	Lobatse	86.92	115	LR		LR	07 24 10.9	
	comp=Z,37nm,20.9s,baz=246,slow=33							
YKA	Yellowknife Ar	90.07	341	P		P	06 49 29.8	+0.9
	comp=Z,1.2nm,0.9s,baz=142,slow=3.8,SNR=14							
	comp=Z,1.2nm,0.9s							
YKA	Yellowknife Ar	90.07	341	P		P	06 49 29.0	+0.1
H11S2	WAKE ISLAND Hyl	25.97	278	T		T	09 14 51.6	
	baz=103,slow=75,SNR=244							
H11S1	WAKE ISLAND Hyl	25.98	278	T		T	09 14 52.4	
	baz=103,slow=75,SNR=96							
H11S3	WAKE ISLAND Hyl	25.99	278	T		T	09 14 28.2	
	baz=103,slow=75,SNR=6.4							
H11N3	WAKE ISLAND Hyl	26.05	280	T		T	09 14 48.3	
	baz=102,slow=74,SNR=92							
H11N2	WAKE ISLAND Hyl	26.06	280	T		T	09 14 56.4	
	baz=102,slow=74,SNR=86							
H11N1	WAKE ISLAND Hyl	26.06	280	T		T	09 14 50.7	
	baz=102,slow=74,SNR=62							
SEY	Seymchan	128.87	336	PKP		PKiKP	06 55 38.5	+1.1
	comp=Z,0.8nm,0.3s,baz=100,slow=3.9,SNR=5.6							
ASAR	Alice Springs	129.50	210	PKP		PKiKP	06 55 40.7	+0.7
	comp=Z,0.8nm,0.8s,baz=135,slow=1.6,SNR=7.3							
WRA	Warramunga Arr	132.44	213	PKP		PKiKP	06 55 46.8	+0.9
	comp=Z,0.2nm,0.7s,baz=186,slow=1.8,SNR=3.6							
KURBB	Kurchatov Arra	141.87	32	PKP		PKPdf	06 56 01.4	+0.2
	comp=Z,0.4nm,0.4s,baz=308,slow=2.6,SNR=1.2							
ZALV	Zalesovo Beam	142.22	23	PKP		PKPdf	06 56 02.8	+1.0
	comp=Z,0.4nm,0.4s,baz=353,slow=3.6,SNR=2.9							
KSH2	Kashi	146.03	50	PKPbc		PKiKP	06 56 12.8	-0.5
MKAR	Makanchi Array	146.25	34	PKPbc		PKPab	06 56 10.9	+0.1
	comp=Z,1.6nm,0.7s,baz=316,slow=3.2,SNR=22							
USRK	Ussuriysk Ar.	150.04	326	PKPbc		PKiKP	06 56 22.4	+1.2
	comp=Z,1.3nm,0.5s,baz=94,slow=7.5,SNR=2.4							
HILR	Hailar Array B	150.23	346	PKPbc		PKiKP	06 56 22.0	+0.5
	comp=Z,3.6nm,0.6s,baz=75,slow=1.6,SNR=6.2							
MJAR	Matsushiro Arr	150.28	308	PKPbc		PKiKP	06 56 22.6	+0.7
	comp=Z,1.3nm,0.6s,baz=84,slow=2.0,SNR=4.3							
HHC	Hu-ho-hao-te	160.06	355	*e*P		PKPdf	06 56 23.4	-5.8
PZH	PanZhiHua	171.28	49	PKP		PKPdf	06 56 36.4	-2.4

MTDJ	**Mount Denham**	**2.46**	**111**	⇓*i*P	**Pn**	**06 51 18.9 +1.1**
CCCC	**Cccc**	**2.89**	**45**	*e*P	Pn	06 51 28.9 +5.2
LMGC	**Las Mercedes**	**2.91**	**71**	*e*P	**Pn**	**06 51 25.1 +1.1**
MGV	**Manicaragua**	**2.95**	**359**	*e*P	**Pn**	**06 51 24.4 -0.1**
STH	**Stony Hill**	**3.15**	**109**	⇑*i*P	**Pn**	**06 51 28.7 +1.3**

IDC **13** *06:50:42.3±1.8, 19°.13S×169°.04E, h96km±13km, mb4.4/16, mbtmp4.8/18, MS3.6/9, Error ellipse: s-maj=15.7km s-min=10.5km az=70.0*

MOS **13** *06:50:43.9±1.5, 19°.31S×168°.90E, h109km, mb5.0/11, Error ellipse: s-maj=12.0km s-min=8.7km az=0.1*

NEIC **13** *06:50:44.8±1.4, 19°.20S±0°.09×169°.0E±0°.1, h110km±7km, mb5.1/25, Error ellipse: s-maj=17.6km s-min=12.8km az=100.0*

NOU **13** *06:50:44.5, 19°.14S×168°.82E, h90km, mb5.1/79, Vanuatu Islands*

GCMT **13** *06:50:45.8±0.3, 19°.09S±0°.02×168°.76E±0°.02, h115km±4km, MW4.9/79, Moment Tensor Solution. s12,c13; s79,c98; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.49±.12; Mθθ1.03±.17; Mϕϕ-1.51±.15; Mrθ-0.79±.09; Mθϕ2.19±.11; Mϕr-1.31±.08; Best double couple: M☐2.98600×10¹⁶ NP1:ϕs192.00000°,δ80.00000°,λ149.00000°. NP2: ϕs288.00000°,δ60.00000°,λ12.00000°. Principal axes: T 3.0220, Plg29.0000°, Azm146.0000°; N -0.0650, Plg58.0000°, Azm356.0000°; P -2.9500, Plg13.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI **13** *06:50:45.8, 19°.71S×169°.00E, h139km, mB4.8/5, mb4.6/19*

ISC 13 06:50:44.2±0.3**, 19°.17S**±0°.03×**168°.89E**±0°.05**, h100**km**, n223,** σ1**§42/226, mb5.0**/54**, 4C-4D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
INH	**Isangel**	**0.52**	**136**	P		**Pn**		**06 51 00.1**	**-0.1**
INH	**Isangel**	**0.52**	**136**	S		**Sn**		**06 51 14.0**	**+1.9**
RTV	**Rentapao**	**1.44**	**342**	P		**Pn**		**06 51 09.0**	**-0.8**
RTV	**Rentapao**	**1.44**	**342**	P		**Sn**		**06 51 28.6**	**-0.5**
DVP	**Devils Point**	**1.59**	**335**	P		**Pn**		**06 51 10.6**	**-1.0**
DVP	**Devils Point**	**1.59**	**335**	P		**Sn**		**06 51 31.6**	**-0.7**
MARNC	**Mare, Loyalty**	**2.43**	**199**			**Pn**		**06 51 22.1**	**-0.3**
MARNC				Sn		**Sn**		**06 51 50.3**	**-1.5**
MARNC	**Mare, Loyalty**	**2.43**	**199**	P		**Pn**		**06 51 21.8**	**-0.7**
MARNC	**Mare, Loyalty**	**2.43**	**199**	S		**Sn**		**06 51 50.3**	**-1.5**
YATNC	**Mamie plateau,**	**3.43**	**213**	P		**Pn**		**06 51 34.6**	**-1.1**
YATNC	**Mamie plateau,**	**3.43**	**213**	S		**Sn**		**06 52 13.6**	**-1.9**
PINNC	**Pines Island,**	**3.68**	**201**			**Pn**		**06 51 39.6**	**+0.6**
PINNC	**Pines Island,**	**3.68**	**201**	P		**Pn**		**06 51 40.2**	**+1.1**
PINNC	**Pines Island,**	**3.68**	**201**	S		**Sn**		**06 52 22.6**	**+1.1**
DZM	**Mont Dzumac** 2μm,1.1s	**3.68**	**218**	*e*Pn		**Pn**		**06 51 39.7**	**+0.5**
DZM				*e*Sn		**Sn**		**06 52 20.7**	**-1.1**
DZM	**Mont Dzumac** 4μm,1.2s	**3.68**	**218**	P		**Pn**		**06 51 39.7**	**+0.5**
DZM	417nm,0.6s,baz=7.9,slow=7.0,SNR=814			S		**Sn**		**06 52 21.9**	**+0.2**
DZM	953nm,0.4s,baz=315,slow=19,SNR=24 **Mont Dzumac**	**3.68**	**218**			**Pn**		**06 51 39.7**	**+0.5**
DZM				Sn		**Sn**		**06 52 22.3**	**+0.6**
DZM	**Mont Dzumac**	**3.68**	**218**	P		**Pn**		**06 51 40.1**	**+0.9**
DZM	**Mont Dzumac**	**3.68**	**218**	S		**Sn**		**06 52 22.2**	**+0.4**
OUENC	**Ouen Island, N**	**3.75**	**210**	P		**Pn**		**06 51 41.4**	**+1.3**
OUENC	**Ouen Island, N**	**3.75**	**210**	S		**Sn**		**06 52 23.7**	**+0.3**
ONTNC	**Ouen Toro**	**3.86**	**216**			**Pn**		**06 51 42.6**	**+1.0**
ONTNC	**Ouen Toro**	**3.86**	**216**	P		**Pn**		**06 51 42.8**	**+1.2**
ONTNC	**Ouen Toro**	**3.86**	**216**	S		**Sn**		**06 52 26.0**	**0.0**
KOUNC	**Koumac, New Ca**	**4.54**	**252**	P		**Pn**		**06 51 51.6**	**+0.8**
KOUNC	**Koumac, New Ca**	**4.54**	**252**	S		**Sn**		**06 52 41.1**	**-1.4**
MSVF	**Nonsavu**	**8.81**	**82**			Pn		06 52 53.2	+4.4
MSVF	**Nonsavu**	**8.81**	**82**	P		**Pn**		**06 52 51.0**	**+2.1**
MSVF	**Nonsavu**	**8.81**	**82**	*i* P		**Pn**		**06 52 51.8**	**+2.9**
HURO	**Huro Makira**	**10.98**	**321**	P		**Pn**		**06 53 18.1**	**-0.2**
HNR	**Honiara** 35nm,1.0s,baz=218,slow=19,SNR=6.0	**12.99**	**317**	P		**Pn**		**06 53 45.6**	**+0.6**
HNR	7.7nm,0.8s,baz=221,slow=9.3,SNR=1.5			S		Sn		06 56 01.4	-6.5
HNR	comp=Z,7.6nm,18.8s,baz=226,slow=33			LR		LR		06 57 53.6	
HNR	**Honiara**	**12.99**	**317**			**Pn**		**06 53 47.2**	**+2.2**
HNR	**Honiara**	**12.99**	**317**	P		**Pn**		**06 53 46.7**	**+1.7**
SAVO	**Savo Central**	**13.29**	**317**	P		**Pn**		**06 53 50.0**	**+1.0**
TATA	**Tatamba Isabel**	**13.88**	**319**	P		**Pn**		**06 53 56.2**	**-0.5**
AUWSH	**Wavell State H**	**16.69**	**238**	P		**Pn**		**06 54 33.1**	**+1.0**
GD1S	**Gladstone Soft**	**17.13**	**251**	P		**Pn**		**06 54 38.8**	**+1.4**
EIDS	**Eidsvold**	**17.59**	**246**			**Pn**		**06 54 45.4**	**+2.4**
EIDS	**Eidsvold**	**17.59**	**246**	P		**Pn**		**06 54 44.7**	**+1.7**
TW1H	**Toowoomba 1 Ha**	**17.81**	**239**	P		**Pn**		**06 54 46.8**	**+1.6**
KUZ	**Kuaotunu**	**18.51**	**162**	P		**Pn**		**06 54 55.5**	**+1.6**
ARMA	**Armidale**	**19.23**	**231**			**P**		**06 55 00.8**	**+0.1**
ARMA	**Armidale**	**19.23**	**231**	P		**P**		**06 55 01.9**	**+1.2**
TOZ	**Tahuroa Road**	**19.37**	**164**			**Pn**		**06 55 04.2**	**+0.1**
MXZ	**Matakaoa Point**	**20.09**	**158**	P		Pn		06 55 11.2	-1.2
AUPHS	**Peel High Scho**	**20.13**	**230**	P		**P**		**06 55 11.4**	**+1.0**
URZ	**Urewera** 61nm,0.8s,baz=301,slow=7.3,SNR=24	**20.32**	**161**	P		**P**		**06 55 12.1**	**-0.1**
URZ	3.1nm,0.6s,baz=266,slow=8.7,SNR=8.6			S		**S**		**06 58 52.9**	**-1.6**
URZ	comp=Z,155nm,19.1s,baz=23,slow=33 61nm,0.8s			LR		LR		07 01 51.1	
BKZ	**Black Stump Fm**	**20.98**	**163**	P		**P**		**06 55 20.2**	**+0.7**
CTA	**Charters Tower** 20nm,0.5s,baz=90,slow=11,SNR=55	**21.34**	**264**	P		**P**		**06 55 24.5**	**+1.0**
CTA	comp=Z,98nm,18.2s,baz=66,slow=34 20nm,0.5s			LR		LR		07 02 48.8	
CTA	**Charters Tower**	**21.34**	**264**	P		**P**		**06 55 24.3**	**+0.9**
CTAO	**Charters Tower**	**21.34**	**264**			**P**		**06 55 24.8**	**+1.3**
CTAO	**Charters Tower**	**21.34**	**264**	P		**P**		**06 55 24.3**	**+0.9**
CTAO	**Charters Tower**	**21.34**	**264**	P		**P**		**06 55 24.8**	**+1.3**
AULRC	**Lightning Ridg**	**21.59**	**238**	P		**P**		**06 55 27.2**	**+1.2**
SYDH	**Sydney Hard Ro**	**21.75**	**224**	P		**P**		**06 55 29.8**	**+2.2**
QRZ	**Quartz Range**	**21.81**	**173**	P		**P**		**06 55 31.3**	**+3.1**
BFZ	**Birch Farm**	**22.35**	**165**	P		**P**		**06 55 33.6**	**-0.3**
AUDCS	**Dubbo College**	**22.36**	**230**	P		**P**		**06 55 35.5**	**+1.4**
BHW	**Baring Head**	**22.74**	**168**			**P**		**06 55 38.0**	**+0.1**
AUUHS	**Ulladulla High**	**22.92**	**222**	P		**P**		**06 55 41.6**	**+1.9**
PMG	**Port Moresby** 22nm,0.6s,baz=123,slow=5.3,SNR=4.9	**23.16**	**292**	P		**P**		**06 55 42.3**	**+0.1**
PMG	comp=Z,185nm,18.9s,baz=90,slow=34 22nm,0.6s			LR		LR		07 03 54.0	
PMG	**Port Moresby**	**23.16**	**292**			**P**		**06 55 42.2**	**-0.1**
PMG	**Port Moresby**	**23.16**	**292**	*i* P		**P**		**06 55 41.6**	**-0.6**
PMG	comp=Z,23nm,0.7s			pmax		pmax			
PMG	**Port Moresby** comp=Z,54nm,1.2s	**23.16**	**292**	P		**P**		**06 55 40.5**	**-1.7**
MTSU	**Mount Surprise**	**23.30**	**269**	P		**P**		**06 55 43.2**	**-0.4**
CNB	**Canberra Magne**	**23.59**	**223**	P		**P**		**06 55 47.3**	**+1.2**
AUDAR	**Daramalan Coll**	**23.70**	**223**	P		**P**		**06 55 48.1**	**+1.1**
AUMHS	**Melrose High S**	**23.80**	**223**	P		**P**		**06 55 49.5**	**+1.6**
AUMTS	**Mt Stromlo**	**23.83**	**224**	P		**P**		**06 55 49.8**	**+1.6**
CAN	**Canberra**	**23.83**	**224**			**P**		**06 55 49.1**	**+1.0**
CAN	**Canberra**	**23.83**	**224**	P		**P**		**06 55 49.8**	**+1.6**
CAN	**Canberra**	**23.83**	**224**	P		**P**		**06 55 49.2**	**+1.0**
QLP	**Quilpie**	**23.86**	**247**	P		**P**		**06 55 48.8**	**+0.3**
CMSA	**Cobar Meteorol**	**24.25**	**235**	P		**P**		**06 55 52.0**	**0.0**
RPZ	**Rata Peaks** comp=Z,72nm,19.3s,baz=332,slow=32	**24.54**	**176**	LR		LR		07 03 35.0	
JCZ	**Jackson Bay**	**24.83**	**180**	P		**P**		**06 55 59.3**	**+2.1**
COEN	**Coen**	**25.17**	**278**			**P**		**06 55 59.8**	**-0.8**
COEN	**Coen**	**25.17**	**278**	P		**P**		**06 56 01.0**	**+0.5**
INKA	**Innaminka**	**27.14**	**246**			**P**		**06 56 18.2**	**+0.1**
TOO	**Toolangi**	**27.44**	**223**	P		**P**		**06 56 21.2**	**+0.4**
TOO	**Toolangi**	**27.44**	**223**	P		**P**		**06 56 21.2**	**+0.4**
TOO	comp=Z,9.0nm,1.3s			pmax		pmax			
QIS	**Mount Isa**	**27.56**	**262**	P		**P**		**06 56 21.6**	**-0.4**
STKA	**Stephens Creek** comp=Z,26nm,0.6s,baz=72,slow=9.5,SNR=79	**27.60**	**237**	P		**P**		**06 56 22.9**	**+0.7**
STKA	comp=Z,66nm,20.0s,baz=13,slow=33 comp=Z,26nm,0.6s			LR		LR		07 05 58.4	
STKA	**Stephens Creek**	**27.60**	**237**	P		**P**		**06 56 22.4**	**+0.2**
RAR	**Rarotonga** comp=Z,108nm,20.7s,baz=226,slow=31	**29.46**	**99**	LR		LR		07 05 41.8	
HTT	**Hallett**	**30.26**	**236**	P		**P**		**06 56 46.1**	**+0.3**
AUJCS	**Jamestown Cent**	**30.42**	**237**	P		**P**		**06 56 48.0**	**+0.7**
AUMBR	**Murray Bridge**	**30.61**	**233**	P		**P**		**06 56 49.4**	**+0.5**
AUMAR	**Marden Senior**	**31.01**	**234**	P		**P**		**06 56 53.0**	**+0.7**
BBOO	**Buckleboo**	**32.34**	**239**			**P**		**06 57 04.1**	**0.0**
BBOO	comp=Z,94nm,1.6s			IAmb		IAmb		06 57 05.1	
BBOO	**Buckleboo**	**32.34**	**239**	P		**P**		**06 57 04.0**	**0.0**
WR8	**Warramunga Ar**	**32.38**	**263**			**P**		**06 57 03.1**	**-1.5**
WR8	comp=Z,44nm,1.7s			IAmb		IAmb		06 57 04.2	
WB0	**Warramunga Ar**	**32.50**	**263**			**P**		**06 57 04.3**	**-1.4**
WB0	comp=Z,14nm,0.8s			IAmb		IAmb		06 57 07.3	
WRAB	**Tennant Creek**	**32.52**	**263**	P		**P**		**06 57 04.6**	**-1.2**
WRAB	**Tennant Creek**	**32.52**	**263**	*i* P		**P**		**06 57 07.3**	**+1.5**
WRAB	comp=Z,13nm,0.4s			pmax		pmax			
WRA	**Warramunga Arr** comp=Z,7.3nm,0.6s,baz=93,slow=8.3,SNR=74	**32.53**	**263**	P		**P**		**06 57 04.1**	**-1.9**
WRA	comp=Z,4.6nm,0.8s,baz=92,slow=11,SNR=6.4			PP		**PnPn**		**06 58 18.2**	**+1.1**
WRA	comp=Z,1.3nm,0.9s,baz=88,slow=6.3,SNR=5.9			ScP		**ScP**		**07 03 24.9**	**-0.5**
WRA	comp=Z,7.3nm,0.6s **Warramunga Arr**	**32.53**	**263**			**P**		**06 57 03.0**	**-2.9**
WRA	**Warramunga Arr**	**32.53**	**263**	*e*P		**P**		**06 57 04.3**	**-1.6**
WRA	comp=Z,5.0nm,0.4s			pmax		pmax			
AS31	**Alice Springs**	**32.82**	**256**			**P**		**06 57 08.1**	**-0.4**
ASAR	**Alice Springs** comp=Z,83nm,0.4s,baz=84,slow=8.8,SNR=1471	**32.82**	**256**	P		**P**		**06 57 07.7**	**-0.8**
ASAR	comp=Z,0.8nm,0.9s,baz=70,slow=19,SNR=4.2			S		**S**		**07 02 15.2**	**-3.4**
ASAR	comp=Z,0.8nm,0.8s,baz=101,slow=3.8,SNR=4.2			ScP		**ScP**		**07 03 26.2**	**-0.2**
ASAR	comp=Z,120nm,18.3s,baz=94,slow=34			LR		LR		07 09 36.9	
ASAR	**Alice Springs**	**32.82**	**256**			**P**		**06 57 08.0**	**-0.5**
ASAR	**Alice Springs**	**32.82**	**256**	P		**P**		**06 57 08.0**	**-0.5**
AUALC	**St Philip's Co**	**32.84**	**256**	P		**P**		**06 57 07.5**	**-1.1**
MTN	**Manton Dam**	**36.78**	**274**			**P**		**06 57 42.7**	**+0.2**
DRS	**Darwin Rock St**	**37.11**	**275**	P		**P**		**06 57 45.1**	**-0.2**
KNRA	**Kununurra**	**38.39**	**269**			**P**		**06 57 55.5**	**-0.6**
FORT	**Forrest**	**38.58**	**244**			**P**		**06 57 57.3**	**-0.2**
FORT	comp=Z,25nm,0.8s			IAmb		IAmb		06 57 58.1	
PPT2	**Papeete2** comp=Z,210nm,30.5s	**39.38**	**95**	*e*LR		LR		07 08 58.0	
PPT2	comp=Z,235nm,30.5s			*e*LR		LR		07 08 58.9	
SIJI	**Sorong** comp=Z,21nm,0.7s	**41.11**	**292**	P		**P**		**06 58 17.0**	**-1.7**
SWI	**Sorong** comp=Z,59nm,0.8s	**41.12**	**292**	P		**P**		**06 58 19.8**	**+1.1**
SOEI	**Soe** comp=Z,33nm,0.6s	**44.10**	**276**	P		**P**		**06 58 41.6**	**-1.4**
SANI	**Sanana** comp=Z,33nm,0.7s	**45.29**	**287**	P		**P**		**06 58 51.8**	**-0.5**
PSA00	**Pilbara Seismi**	**45.89**	**258**	P		**P**		**06 58 57.0**	**-0.1**
PSA00	**Pilbara Seismi**	**45.89**	**258**	P		**P**		**06 58 57.2**	**+0.2**
PSA00	comp=Z,28nm,0.8s			IAmb		IAmb		06 58 57.8	
PSA00	**Pilbara Seismi**	**45.89**	**258**	P		**P**		**06 58 56.8**	**-0.2**
MBWA	**Marble Bar**	**46.04**	**259**			**P**		**06 58 58.2**	**0.0**
MBWA	comp=Z,66nm,1.0s			IAmb		IAmb		06 58 58.9	
MBWA	**Marble Bar**	**46.04**	**259**	P		**P**		**06 58 57.9**	**-0.3**
MBWA	**Marble Bar**	**46.04**	**259**	P		**P**		**06 58 57.7**	**-0.5**
MEEK	**Meekatharra**	**46.66**	**251**	P		**P**		**06 59 02.6**	**-0.5**
EDFI	**Ende, Flores** comp=Z,17nm,1.1s	**46.83**	**276**	P		**P**		**06 59 03.0**	**-1.6**
KLBR	**Kellerberrin**	**47.44**	**244**	P		**P**		**06 59 07.9**	**-1.1**
NWAO	**Narrogin (SRO)**	**47.95**	**243**			**P**		**06 59 12.1**	**-0.8**
NWAO	comp=Z,23nm,0.8s			IAmb		IAmb		06 59 13.2	
NWAO	**Narrogin (SRO)**	**47.95**	**243**	P		**P**		**06 59 12.6**	**-0.3**
NWAO	**Narrogin (SRO)**	**47.95**	**243**	P		**P**		**06 59 12.1**	**-0.8**
NWAO	comp=Z,23nm,0.9s			pmax		pmax			
MORW	**Morawa**	**48.89**	**248**	P		**P**		**06 59 19.3**	**-0.9**
MORW	comp=Z,57nm,1.9s			IAmb		IAmb		06 59 21.5	
KAPI	**Kappang** comp=Z,15nm,0.7s,baz=138,slow=6.2,SNR=11	**49.88**	**280**	P		**P**		**06 59 27.3**	**-0.6**
KAPI	**Kappang** comp=Z,15nm,0.7s	**49.88**	**280**	P		**P**		**06 59 27.5**	**-0.4**
KAPI	comp=Z,15nm,0.8s			IAmb		IAmb		06 59 28.6	
KAPI	**Kappang**	**49.88**	**280**	P		**P**		**06 59 27.8**	**-0.1**
KAPI	**Kappang**	**49.88**	**280**	*i* P		**P**		**06 59 28.1**	**+0.2**
KAPI	comp=Z,13nm,0.8s			pmax		pmax			
KAPI	**Kappang** comp=Z,15nm,1.0s	**49.88**	**280**	P		**P**		**06 59 27.7**	**-0.1**
KAPI	**Kappang**	**49.88**	**280**	P		**P**		**06 59 27.5**	**-0.4**
DBNI	**Kabupaten Domp** comp=Z,38nm,0.7s	**50.08**	**275**	P		**P**		**06 59 28.0**	**-1.4**
SPSI	**Sidrap Palu** comp=Z,20nm,0.7s	**50.24**	**281**	P		**P**		**06 59 28.1**	**-2.5**
GIRL	**Giralia**	**50.94**	**256**	P		**P**		**06 59 36.7**	**+0.9**
TOLI2	**Tolitoli**	**51.34**	**288**	P		**P**		**06 59 37.3**	**-1.5**
TOLI2	comp=Z,14nm,0.9s			IAmb		IAmb		06 59 38.4	
TWSI	**Taliwang, Sumb** comp=Z,43nm,1.4s	**51.36**	**274**	P		**P**		**06 59 37.6**	**-1.4**
SNJI	**Sawahan-Nganju** comp=Z,25nm,1.1s	**56.48**	**273**	P		**P**		**07 00 15.4**	**-1.1**
VNDA	**Vanda** comp=Z,3.0nm,0.6s,baz=357,slow=8.5,SNR=9.3	**58.49**	**182**	P		**P**		**07 00 29.3**	**-0.1**
VNDA	comp=Z,3.0nm,0.6s **Vanda**	**58.49**	**182**	P		**P**		**07 00 29.5**	**+0.1**
VNDA	**Vanda**	**58.49**	**182**	P		**P**		**07 00 29.5**	**+0.1**
VNDA	comp=Z,10.0nm,1.2s			pmax		pmax			
SBA	**Scott Base**	**58.73**	**181**	P		**P**		**07 00 31.7**	**+0.7**
SBA	comp=Z,29nm,0.9s			IAmb		IAmb		07 00 34.5	
SBA	**Scott Base**	**58.73**	**181**	P		**P**		**07 00 31.7**	**+0.7**
SBA	comp=Z,29nm,1.0s			pmax		pmax			
BBJI	**Bungbulang**	**60.45**	**272**	P		**P**		**07 00 43.0**	**-1.1**
BBJI	comp=Z,10nm,0.7s			IAmb		IAmb		07 00 43.8	
LEM	**Lembang** comp=Z,50nm,0.7s,baz=131,slow=20,SNR=7.7 comp=Z,50nm,0.7s	**60.68**	**273**	P		**P**		**07 00 45.2**	**-0.5**
CCD	**Concordia, Ant**	**60.89**	**192**	P		**P**		**07 00 45.7**	**-0.7**
MAJO	**Matsushiro**	**62.54**	**332**	*i* P		**P**		**07 01 00.8**	**+3.3**
MAJO	comp=Z,10.0nm,1.0s			pmax		pmax			
ASAJ	**Asahikawa** comp=Z,76nm,19.1s,baz=338,slow=34	**67.42**	**340**	LR		LR		07 28 45.5	
TJN	**Taejon**	**67.77**	**325**	P		**P**		**07 01 32.0**	**+0.7**
QIZ	**Qiongzhong**	**69.26**	**300**	P		**P**		**07 01 42.6**	**+1.7**
QIZ				S		**S**		**07 10 41.8**	**+2.1**
QIZ	comp=Z,170nm,13.5s			LR		LR			
QIZ	comp=Z,190nm,16.6s			LR		LR			
QIZ	comp=Z,180nm,18.9s			LR		LR			
YSS	**Yuzhno-Sakhali**	**69.91**	**341**	*e*P		**P**		**07 01 48.4**	**+4.1**
YSS	comp=Z,10.0nm,1.0s			pmax		pmax			
NJ2	**Nanjing**	**69.93**	**316**	*e*P		**P**		**07 01 48.0**	**+3.2**
NJ2	comp=Z,6.0nm,0.5s			pmax		pmax			
QSPA	**South Pole Qui** comp=Z,47nm,0.9s,baz=37,slow=1.3,SNR=50	**70.88**	**180**	P		**P**		**07 01 49.3**	**-1.0**
QSPA	comp=Z,47nm,0.9s **South Pole Qui**	**70.88**	**180**			**P**		**07 01 50.0**	**-0.3**
QSPA	**South Pole Qui**	**70.88**	**180**	P		**P**		**07 01 50.0**	**-0.3**
PETK	**Petropavlovsk-** comp=Z,2.5nm,0.8s,baz=180,slow=6.5,SNR=2.6	**72.63**	**353**	P		**P**		**07 01 58.8**	**-1.8**
PETK	comp=Z,2.5nm,0.8s **Petropavlovsk-**	**72.63**	**353**	P		**P**		**07 01 59.9**	**-0.7**
PETK	**Petropavlovsk-**	**72.63**	**353**	P		**P**		**07 01 59.9**	**-0.7**
DL2	**Dalian**	**72.76**	**323**	P		**P**		**07 02 05.8**	**+4.1**
DL2	comp=Z,50nm,1.3s			pmax		pmax			
BNX	**BinXian**	**74.76**	**331**	⇓*i*P		**P**		**07 02 12.4**	**-0.8**
BNX	comp=Z,6.0nm,1.0s			pmax		pmax			
KLR	**Kul'dur**	**75.67**	**336**	*i* P		**P**		**07 02 22.4**	**+4.0**
KLR	comp=Z,2.0nm,0.9s			pmax		pmax			
LYN	**LuoYang**	**75.69**	**315**	P		**P**		**07 02 22.1**	**+3.3**
LYN	comp=Z,10.0nm,0.8s			pmax		pmax			
KMI2	**Kunming**	**77.96**	**302**	P		**P**		**07 02 32.8**	**+0.7**
KMI2	comp=Z,10.0nm,1.1s			pmax		pmax			
CMAR	**Chiang Mai Arr** comp=Z,2.3nm,0.6s,baz=130,slow=4.2,SNR=14	**78.18**	**294**	P		**P**		**07 02 32.5**	**-0.6**
CMAR	comp=Z,2.3nm,0.6s **Chiang Mai Arr**	**78.18**	**294**			**P**		**07 02 31.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**78.18**	**294**	*e*P		**P**		**07 02 33.3**	**+0.2**
CMAR	comp=Z,3.0nm,0.6s			pmax		pmax			
CHTO	**Chiang Mai**	**78.32**	**295**	P		**P**		**07 02 34.0**	**+0.1**
PZH	**PanZhiHua**	**79.39**	**303**	P		**P**		**07 02 42.6**	**+2.8**
ZEA	**Zeya**	**80.97**	**336**	*e*P		P		07 02 41.5	-5.9
HILR	**Hailar Array B** comp=Z,1.4nm,0.5s,baz=120,slow=2.8,SNR=1.7	**81.08**	**330**	P		**P**		**07 02 47.6**	**-0.6**
BELA	comp=Z,1.4nm,0.5s **Belgrano 2**	**82.19**	**175**			**P**		**07 02 52.5**	**-1.2**
BELA	comp=Z,26nm,0.6s			IAmb		IAmb		07 02 53.0	
SEY	**Seymchan**	**82.86**	**352**	*i* P		**P**		**07 03 00.9**	**+3.8**
SEY	comp=Z,1.0nm,0.4s			pmax		pmax			
ELIB	**Princess Elisa** comp=Z,5.3nm,1.0s	**86.15**	**190**	*d*P		**P**		**07 03 12.6**	**-1.4**
ULN	**Ulaanbaatar**	**86.61**	**324**	*i* P		**P**		**07 03 19.2**	**+2.6**
ULN	comp=Z,2.0nm,0.4s			pmax		pmax			
YAK	**Yakutsk**	**86.71**	**343**	*i* P		**P**		**07 03 20.1**	**+3.7**
YAK	comp=Z,16nm,0.5s			pmax		pmax			
SONM	**Songino Array** comp=Z,2.4nm,0.8s,baz=102,slow=4.9,SNR=3.8	**86.97**	**323**	P		**P**		**07 03 17.2**	**-1.1**
NVAR	comp=Z,2.4nm,0.8s **Mina Array Bea**	**89.00**	**49**	P		**P**		**07 03 26.4**	**-1.9**
SNAA	comp=Z,1.1nm,0.7s,baz=225,slow=7.8,SNR=4.4 comp=Z,1.1nm,0.7s **Sanae**	**89.21**	**183**	⇑P		**P**		**07 03 27.7**	**-0.8**
SNAA	comp=Z,117nm,0.7s **Sanae**	**89.21**	**183**	P		**P**		**07 03 26.8**	**-1.7**
SNAA	comp=Z,4.6nm,0.8s,baz=206,slow=5.3,SNR=5.0 comp=Z,4.6nm,0.8s **Sanae**	**89.21**	**183**	P		**P**		**07 03 27.6**	**-1.0**
SNAA	**Sanae**	**89.21**	**183**	P		**P**		**07 03 27.6**	**-1.0**
SNAA	comp=Z,8.0nm,0.9s			pmax		pmax			
LPIG	**La Paz** comp=Z,54nm,18.2s,baz=316,slow=32	**89.69**	**64**	LR		LR		07 37 47.0	
VNA3	**Neumayer Olymp** comp=Z,23nm,0.8s	**89.81**	**180**	⇑P		**P**		**07 03 30.2**	**-1.1**
VNA2	**Neumayer--Watz** comp=Z,14nm,0.6s,baz=167,slow=4.3	**90.10**	**181**	⇑P		**P**		**07 03 31.1**	**-1.6**
ILAR	**Eielson Array** comp=Z,0.8nm,0.7s,baz=240,slow=4.8,SNR=6.4	**90.27**	**17**	P		**P**		**07 03 30.1**	**-3.2**
VNA1	comp=Z,0.8nm,0.7s **Neumayer--Stat** comp=Z,23nm,1.2s	**90.39**	**181**	⇑P		**P**		**07 03 31.8**	**-2.2**
WVOR	**Wild Horse Val**	**90.50**	**45**	P		**P**		**07 03 34.3**	**-0.7**
TUC	**Tucson**	**92.24**	**57**	P		**P**		**07 03 42.7**	**-0.6**
WMQ	**Urumqi**	**96.92**	**314**	*e*P		**P**		**07 04 06.8**	**+2.4**
SPITS	**Spitsbergen Ar** comp=Z,1.4nm,0.6s,baz=103,slow=6.2,SNR=7.0	**119.50**	**354**	PKP		**PKPdf**		**07 09 18.7**	**-2.6**
BOSA	**Boshof** comp=Z,2.0nm,0.6s,baz=109,slow=3.3,SNR=5.4	**120.91**	**217**	PKP		**PKPdf**		**07 09 24.4**	**-1.3**
BOSA	**Boshof**	**120.91**	**217**			**PKPdf**		**07 09 23.2**	**-2.5**
ARCES	**ARCESS Array B** comp=Z,3.5nm,0.8s,baz=79,slow=2.5,SNR=9.6	**124.92**	**345**	PKP		**PKPdf**		**07 09 29.9**	**-1.9**
ARCES	**ARCESS Array B**	**124.92**	**345**			**PKPdf**		**07 09 30.1**	**-1.8**
ARCES	**ARCESS Array B**	**124.92**	**345**	PKIKP		**PKPdf**		**07 09 30.0**	**-1.9**
BDFB	**Brasilia** comp=Z,1.9nm,0.6s,baz=191,slow=5.2,SNR=4.8	**129.85**	**131**	PKP		**PKPdf**		**07 09 40.5**	**-2.5**
FINES	**FINESS Array B** comp=Z,3.0nm,0.9s,baz=96,slow=3.8,SNR=4.2	**130.40**	**338**	PKP		**PKPdf**		**07 09 40.3**	**-2.2**
FINES	comp=Z,1.6nm,0.8s,baz=29,slow=4.4,SNR=3.9			SKPbc		**SKPab**		**07 12 54.3**	**-2.5**
AKASG	**Malin Array Be** comp=Z,0.5nm,0.4s,baz=48,slow=4.1,SNR=1.8	**135.25**	**324**	PKP		**PKPdf**		**07 09 49.9**	**-2.1**
HFS	**Hagfors** comp=Z,1.9nm,0.8s,baz=95,slow=7.2,SNR=1.2	**135.40**	**343**	PKP		**PKPdf**		**07

GSCK **Great Sitkin C** 1.00 316 Pb 06 53 50.2 +0.3
GSCK Sn 06 54 03.2 +0.7
GSCK Sb 06 54 04.7 +1.9
GSTR **Great Sitkin T** 1.02 322 Pb 06 53 50.6 +0.3
GSTR IAML 06 54 08.5
comp=E,34µm,1.0s
ETKA **Kagalaska Isla** 1.02 304 Pb 06 53 50.0 -0.3
ETKA Sn 06 54 05.1 +2.1
GSTD **Great Sitkin T** 1.02 318 Pb 06 53 50.5 +0.1
GSTD Sn 06 54 04.6 +1.4
GSTD Sb 06 54 05.4 +1.9
ATKA **Atka Island** 1.05 30 Pb 06 53 50.5 -0.2
ATKA Sn 06 54 05.4 +1.8
GSSP **Great Sitkin S** 1.06 319 Pb 06 53 51.2 +0.2
GSSP Sn 06 54 07.2 +3.1
KOKL **Mount Kliuchef** 1.15 27 Sn 06 54 09.1 +2.7
KOWE **Korovin West** 1.18 24 Sb 06 54 10.1 +2.3
ADK **Adak** 1.18 300 Pb 06 53 52.3 -0.7
ADK IAML 06 54 09.7
comp=E,12µm,0.8s
ADK IAML 06 54 13.8
comp=E,11µm,0.8s
ADK Adak 1.18 300 P Pb 06 53 52.3 -0.7
ADK 06 54 08.6
KOKV **Korovin Volcan** 1.20 27 Pb 06 53 53.5 +0.3
KOSE **Korovin Southe** 1.22 30 Sb 06 54 11.3 +2.4
KONW **Korovin Northw** 1.22 25 Pb 06 53 53.8 +0.2
KIRH **Kanaga Island** 1.42 296 Pb 06 53 56.1 -0.8
KIWB **Kanaga Island** 1.43 294 Pb 06 53 56.3 -0.9
KIWB IAML 06 54 28.9
comp=N,12µm,1.0s
TAFL **Tanaga Flats** 1.84 286 Pn 06 54 02.0 +1.1
TANO **Tanaga North** 2.02 289 Pb 06 54 05.2 -2.0
GANE **Gareloi Northe** 2.39 284 Pn 06 54 10.3 +1.9
GASW **Gareloi Southw** 2.43 283 Pn 06 54 11.0 +2.0
CESW **Semis' Southwe** 3.42 282 Pn 06 54 24.1 +1.5
CLES **Cleveland East** 3.52 62 Pn Pn 06 54 26.0 +2.0
CLES IAML 06 55 46.4
comp=N,1µm,0.9s
AMKA Amchitka 3.55 273 Pn Pn 06 54 24.6 +0.2
AMKA IAML 06 55 25.0
comp=E,1µm,0.7s
UNV **Unalaska Valle** 5.79 61 Pn 06 54 55.9 +0.7
UNV Unalaska Valle 5.79 61 P Pn 06 54 54.4 -0.8
baz=248
LVA **Lava Point** 6.18 59 Pn Pn 06 55 01.3 +0.8
P08K **Saint George I** 6.22 29 Pn Pn 06 55 02.0 +1.0
P08K Saint George I 6.22 29 P Pn 06 55 00.1 -0.9
baz=214
AKUT **Akutan** 6.31 60 Pn Pn 06 55 03.9 +1.7
SPIA **Saint Paul Isl** 6.52 24 Pn Pn 06 55 06.5 +1.3
SPIA Saint Paul Isl 6.52 24 P Pn 06 55 04.2 -0.9
baz=208
SHEM Shemya Is, Ala 6.86 286 LR LR 06 58 09.4
comp=E,2µm,18.7s,baz=102,slow=41
FALS **False Pass** 7.85 58 Pn Pn 06 55 25.1 +1.8
FALS False Pass 7.85 58 P Pn 06 55 22.9 -0.4
baz=248
DT1 **Dutton Round H** 8.55 59 Pn 06 55 34.5 +1.5
DTNA **Dutton South F** 8.59 58 Pn 06 55 35.0 +1.6
DOL **Dolgoi Island** 8.79 59 Pn 06 55 37.6 +1.3
HAG **Hague Volcano** 8.83 58 Pn 06 55 39.9 +3.0
HAG Hague Volcano 8.83 58 P Pn 06 55 39.9 +3.0
PS4A **Pavlof South-4** 8.87 58 Pn 06 55 39.9 +2.6
SDPT **Sand Point** 9.61 59 Pn Pn 06 55 48.6 +1.1
SDPT Sand Point 9.61 59 P Pn 06 55 47.3 -0.2
baz=251
CHNA Chernabura Isl 9.95 63 P Pn 06 55 51.3 -0.8
baz=256
M11K **Mekoryuk** 10.36 25 Pn 06 56 01.9 +4.1
M11K Mekoryuk 10.36 25 P Pn 06 55 57.6 -0.1
baz=213,SNR=18
O14K Tigyukauivet M 11.17 39 P Pn 06 56 08.0 -0.8
baz=231
M13K Dall Lake 11.23 31 P Pn 06 56 08.9 -0.7
baz=221
N14K **Kuskokwak Cree** 11.45 36 Pn 06 56 16.9 +4.3
N14K Kuskokwak Cree 11.45 36 P Pn 06 56 12.2 -0.4
baz=227,SNR=16
O15K Ungalikthiuk R 11.71 42 P Pn 06 56 15.0 -1.1
baz=234
R16K Pilot Point 11.93 51 P Pn 06 56 18.8 -0.4
baz=246
M14K Bethel 11.94 32 P Pn 06 56 19.2 -0.1
baz=224
K13K Kusilvak Mount 12.08 24 P Pn 06 56 20.7 -0.4
baz=213
L14K Kuka Creek 12.15 29 P Pn 06 56 22.2 0.0
baz=220
N15K **Kwethluk River** 12.21 38 Pn 06 56 27.1 +4.0
N15K Kwethluk River 12.21 38 P Pn 06 56 23.1 +0.1
baz=230,SNR=11
M15K Kasigluk River 12.35 35 P Pn 06 56 24.7 -0.2
baz=227,SNR=15
CHIR Chirikof Islan 12.39 61 P Pn 06 56 24.3 -1.1
baz=257
P16K Nushagak River 12.42 45 Pn 06 56 26.7 +0.8
P16K Nushagak River 12.42 45 P Pn 06 56 24.5 -1.4
baz=239
R17L Mt. Peulik Vol 12.56 52 P Pn 06 56 26.7 -1.1
baz=248
PLK4 **Peulik 4** 12.56 52 Pn Pn 06 56 26.6 -1.3
GAMB Gambell 12.64 7 P Pn 06 56 28.0 -0.8
baz=190,SNR=11
O16K Kokwok River B 12.68 42 Pn 06 56 29.9 +0.5
O16K Kokwok River B 12.68 42 P Pn 06 56 28.9 -0.5
baz=237,SNR=7.2
L15K Ungalak Mounta 12.78 30 P Pn 06 56 30.7 -0.1
baz=222,SNR=5.3
Q16K King Salmon 12.85 48 P Pn 06 56 30.6 -1.1
baz=243
N16K Nishlik Lake 12.92 38 P Pn 06 56 31.7 -1.0
baz=232
Q17K Contact Creek 13.04 50 P Pn 06 56 34.5 +0.1
baz=246
J14K Nanvaranak Lak 13.04 24 P Pn 06 56 34.1 -0.2
baz=214,SNR=6.2
M16K Timber Creek 13.20 36 P Pn 06 56 36.2 -0.2
baz=230
P17K Kvichak River 13.20 46 P Pn 06 56 36.3 -0.1
baz=241
O17K Koliganek Bris 13.20 43 P Pn 06 56 35.4 -1.1
baz=238
K15K Wolf Creek Mou 13.24 28 P Pn 06 56 36.4 -0.6
baz=220,SNR=8.8
ACHA Angle Creek He 13.29 51 Pn Pn 06 56 38.1 +0.3
SII Sitkinak Islan 13.35 59 P Pn 06 56 38.4 -0.2
baz=256
L16K Owhat River 13.47 33 P Pn 06 56 40.4 +0.1
baz=226,SNR=6.0
N17K Nushagak Hills 13.58 40 P Pn 06 56 41.3 -0.4
baz=235,SNR=7.2
P18K Big Mountain, 13.84 46 Pn Pn 06 56 46.6 +1.4
P18K Big Mountain, 13.84 46 P Pn 06 56 45.1 -0.1
baz=243
OHAK Old Harbor 13.99 56 Pn Pn 06 56 44.7 -2.7
OHAK Old Harbor 13.99 56 P Pn 06 56 47.1 -0.3
baz=254
M17K Holitna River 14.01 37 Pn 06 56 49.3 +1.8
M17K Holitna River 14.01 37 P Pn 06 56 47.7 +0.2
baz=232,SNR=5.8
O18K Koktuh Hills 14.06 45 P Pn 06 56 48.1 -0.2
baz=241
L17K Donlin 14.17 34 P Pn 06 56 49.7 0.0
baz=228
N18K **Kilae Creek** 14.20 41 Pn 06 56 51.6 +1.4
N18K Kilae Creek 14.20 41 P Pn 06 56 49.9 -0.3
baz=237
ANM **Nome** 14.23 17 Pn 06 56 53.0 +2.4
ANM Nome 14.23 17 P Pn 06 56 53.0 +2.4
ANM Nome 14.23 17 P Pn 06 56 51.0 +0.4
baz=206,SNR=12
J16K Anvik River 14.28 27 P Pn 06 56 51.3 +0.2
baz=220
Q19K **Cape Douglas,** 14.38 50 Pn Pn 06 56 52.2 -0.4
Q19K Cape Douglas, 14.38 50 P Pn 06 56 53.2 +0.5
baz=247
KDAK Kodiak Island 14.52 55 Pn Pn 06 56 51.8 -2.7
comp=E,0.6nm,0.3s,baz=260,slow=9.2,SNR=16
comp=E,3.7nm,0.4s
KDAK **Kodiak Island** 14.52 55 Pn Pn 06 56 52.5 -2.0
KDAK **Kodiak Island** 14.52 55 *i* P Pn 06 56 53.3 -1.2
KDAK Kodiak Island 14.52 55 P Pn 06 56 55.6 +1.2
baz=253
K17K Iditarod 14.57 32 P Pn 06 56 56.4 +1.2
baz=226
O19K Port Alsworth 14.62 44 P Pn 06 56 56.3 +0.5
baz=242
M18K Stony River 14.68 39 P Pn 06 56 57.9 +1.2
baz=235
I17K Unalakleet 14.72 26 P Pn 06 56 57.7 +0.5
baz=218
TNA **Tin City** 14.76 12 Pn 06 56 58.9 +1.1
TNA Tin City 14.76 12 P Pn 06 56 58.4 +0.6
baz=196,SNR=10.0
L18K Granite Mounta 14.80 35 P Pn 06 56 59.0 +0.8
baz=231
J17K VABM Dome 14.81 29 P Pn 06 56 59.2 +0.7
baz=223
N19K **Bonanza Creek** 14.85 42 Pn 06 57 01.2 +2.1
N19K Bonanza Creek 14.85 42 P Pn 06 56 59.7 +0.6
baz=239
P19K Oil Pt 14.87 47 P Pn 06 56 59.8 +0.5
baz=246
Q20K Shuyak Island 14.87 52 P Pn 06 56 59.7 +0.4
baz=250
G15K Niukluk 14.87 18 P Pn 06 57 00.5 +1.3
baz=208
F14K Arctic Creek 14.91 14 P Pn 06 57 00.4 +0.7
baz=202
H16K Elim 14.95 22 P Pn 06 57 01.1 +0.8
baz=213
ILSW **Iliamna Southw** 15.05 46 Pn Pn 06 57 01.3 -0.4
ILSW IAmb IAmb 06 57 13.4
comp=Z,19nm,1.1s
F15K North Star Dit 15.40 16 IAmb IAmb 06 57 26.6
comp=Z,37nm,1.1s
F15K North Star Dit 15.40 16 P Pn 06 57 06.8 +0.5
baz=205,SNR=25
L19K White Mountain 15.46 37 IAmb IAmb 06 57 20.9
comp=Z,36nm,1.1s
L19K WM Mountain 15.46 37 P Pn 06 57 07.6 +0.6
baz=234,SNR=10
M19K Big River Lodg 15.48 39 P Pn 06 57 08.0 +0.7
baz=236
G16K Koyuk River 15.57 20 P Pn 06 57 09.0 +0.6
baz=211,SNR=16
HOM Homer 15.61 49 P Pn 06 57 09.6 +0.6
baz=248
J18K Innoko River 15.61 32 P 06 57 14.0 +1.1
J18K IAmb IAmb 06 57 22.3
comp=Z,33nm,1.1s
J18K Innoko River 15.61 32 P Pn 06 57 09.0 0.0
baz=227,SNR=7.1
CNPM **China Poot** 15.75 49 Pn Pn 06 57 09.9 -1.0
CNPM IAmb IAmb 06 57 23.0
comp=Z,45nm,1.1s
H17K Granite Mounta 15.77 24 IAmb IAmb 06 57 34.6
comp=Z,29nm,1.1s
H17K Granite Mounta 15.77 24 P Pn 06 57 11.9 +0.9
baz=217,SNR=8.7
M20K Styx River 15.97 40 P Pn 06 57 14.7 +1.0
baz=238
BRLK Bradley Lake 16.00 49 Pn Pn 06 57 13.2 -0.9
G17K Kiwalik Mounta 16.05 22 P P 06 57 15.8 -1.9
baz=214
BRSE Bradley Lake S 16.07 49 P P 06 57 16.5 -1.5
baz=249
PET Petropavlovsk 16.21 286 Pn Pn 06 57 17.7 +1.0
PET IAmb IAmb 06 57 23.3
comp=Z,38nm,0.9s
PET Petropavlovsk 16.21 286 *i* P Pn 06 57 14.4 -2.2
CAPN Captain Cook N 16.28 45 P P 06 57 19.0 -1.3
baz=245
J19K Poorman 16.33 31 IAmb IAmb 06 57 30.3
comp=Z,31nm,1.1s
J19K Poorman 16.33 31 P P 06 57 19.3 -1.5
baz=228,SNR=7.3
H18K Honhosa River 16.35 26 IAmb IAmb 06 57 29.4
comp=Z,30nm,1.1s
H18K Honhosa River 16.35 26 P P 06 57 19.8 -1.3
baz=220
K20K Telida 16.45 35 P P 06 57 20.9 -1.3
baz=233,SNR=8.5
GCSA Galena City Sc 16.46 28 P Pn 06 57 20.1 +0.3
baz=224
SKT **Skwentna** 16.67 41 P 06 57 24.7 0.0
SKT Skwentna 16.67 41 P P 06 57 23.4 -1.3
baz=241
F17K Baldwin Pennin 16.71 19 P P 06 57 23.8 -1.1
baz=212,SNR=20
SUA Susitna One 16.76 43 Pn P 06 57 24.5 -1.3
SUA Susitna One 16.76 43 P Pn 06 57 24.3 +0.5
baz=244
PEA0B Petropavlovsk- 16.77 287 P 06 57 25.3 -0.6
PEA0B IAmb IAmb 06 57 29.5
comp=Z,47nm,0.9s
PEA0B Petropavlovsk- 16.77 287 *i* P Pn 06 57 24.7 +0.8
PETK Petropavlovsk- 16.77 287 Pn Pn 06 57 24.3 +0.4
comp=Z,1.0nm,0.3s,baz=90,slow=17,SNR=27
PETK LR LR 07 03 25.1
comp=Z,623nm,21.7s,baz=100,slow=36
comp=Z,24nm,0.8s
PETK Petropavlovsk- 16.77 287 Pn 06 57 23.8 0.0
PETK Petropavlovsk- 16.77 287 P Pn 06 57 23.8 0.0
SEW Seward 16.80 48 Pn 06 57 22.7 -1.4
SEW Seward 16.80 48 P P 06 57 24.9 -1.1
baz=250
O22K Cooper Landing 16.81 47 IAmb IAmb 06 57 40.7
comp=Z,83nm,1.1s
O22K Cooper Landing 16.81 47 P Pn 06 57 24.8 +0.6
baz=248
G18K Tagagawik 16.85 24 P P 06 57 25.6 -1.1
baz=218
PPLA Purkeypile 16.88 38 P 06 57 26.7 -0.4
PPLA IAmb IAmb 06 57 43.0
comp=Z,25nm,0.9s
PPLA Purkeypile 16.88 38 P Pn 06 57 25.8 +0.5
baz=237
J20K Nowinta River 16.94 32 P P 06 57 26.8 -0.8
baz=230
RC01 Rabbit Creek A 17.04 45 P P 06 57 28.5 -0.2
RC01 Rabbit Creek A 17.04 45 P P 06 57 28.4 -0.4
baz=246
E17K Hotham Inlet 17.15 18 P P 06 57 29.2 -0.7
baz=209,SNR=22
M22K Willow 17.16 43 P P 06 57 30.3 +0.4
M22K IAmb IAmb 06 57 45.2
comp=Z,36nm,1.0s
M22K Willow 17.16 43 P P 06 57 29.5 -0.5
baz=244
F18K Selawik 17.19 21 P P 06 57 29.7 -0.5
baz=214,SNR=12
I20K Naaghedeneel 17.24 30 P P 06 57 29.9 -0.9
baz=228
CHUM Lake Minchumin 17.39 35 P P 06 57 32.0 -0.6
baz=234
CUT Chulitna 17.39 41 P P 06 57 32.1 -0.5
baz=242
G19K Purcell Mounta 17.45 25 P P 06 57 33.0 -0.2
baz=220
D17K Noatak River 17.47 15 P P 06 57 33.0 -0.4
baz=206,SNR=26
PMR Palmer 17.51 44 P Pn 06 57 32.5 -0.4
PMR Palmer 17.51 44 P Pn 06 57 32.6 -0.4
PMR pmax pmax
comp=Z,11nm,1.0s
PMR Palmer 17.51 44 P P 06 57 33.3 -0.6
baz=246
H20K Anotleneega Mo 17.59 28 P P 06 57 34.0 -0.8
baz=226,SNR=7.1
C16K Lisburne Hills 17.67 12 P P 06 57 35.0 -0.6
baz=200
E18K Tukpahlearik C 17.68 18 P P 06 57 35.5 -0.3
baz=211,SNR=5.6
KTH Kantishna Hill 17.72 37 P P 06 57 36.5 +0.2
KTH IAmb IAmb 06 57 46.8
comp=Z,57nm,1.1s
KNK Knik Glacier 17.74 45 P Pn 06 57 34.6 -1.2
KNK Knik Glacier 17.74 45 P P 06 57 36.4 0.0
baz=247
P23K Montague Islan 17.74 50 P P 06 57 36.1 -0.3
baz=253
F19K Shaleruckik Mo 17.82 23 P P 06 57 36.8 -0.4
baz=218,SNR=14
RDOG Red Dog Mine 17.82 15 P P 06 57 37.0 -0.4
baz=206
TRF Thorofare Moun 17.91 38 P P 06 57 38.0 -0.5
baz=239
SML Sawmill 17.95 44 P Pn 06 57 37.9 -0.6
baz=246
BPAW Bear Paw Mtn. 18.00 35 P P 06 57 39.3 -0.1
baz=236
Q23K Middleton Isla 18.10 52 P P 06 57 40.5 +0.1
baz=256
GLI Glacier Island 18.16 47 P Pn 06 57 40.5 -0.5
baz=251
C17K DeLong Mountai 18.17 14 P Pn 06 57 40.1 -0.9
baz=205
M23K Glacier View 18.21 44 P P 06 57 42.0 +0.3
baz=247
WAT1 Susitna Watana 18.30 41 P Pn 06 57 42.3 -0.3
baz=243
H21K Melozitna Rive 18.34 30 IAmb IAmb 06 57 52.1
comp=Z,37nm,1.2s
H21K Melozitna Rive 18.34 30 P P 06 57 43.0 0.0
baz=229,SNR=12
SCM Sheep Creek Mo 18.40 44 P P 06 57 43.4 -0.4
SCM Sheep Creek Mo 18.40 44 P P 06 57 43.4 -0.4
SCM pmax pmax
comp=Z,22nm,1.0s
SCM Sheep Creek Mo 18.40 44 P Pn 06 57 44.2 +0.2
baz=248
E19K Redstone River 18.44 22 P Pn 06 57 44.2 -0.1
baz=218
F20K Avaraart Lake 18.49 24 P Pn 06 57 45.0 +0.1
baz=221,SNR=19
WAT6 Susitna Watana 18.52 42 P Pn 06 57 45.2 -0.3
baz=245
MCK McKinley 18.57 38 P Pn 06 57 45.7 -0.3
baz=240
C18K Utukok River 18.64 16 P Pn 06 57 46.4 -0.5
baz=208
EYAK Cordova Ski Ar 18.69 49 P Pn 06 57 47.3 -0.1
baz=254
G21K Allakaket 18.71 27 IAmb IAmb 06 57 57.1
comp=Z,31nm,1.1s
G21K Allakaket 18.71 27 P Pn 06 57 47.6 0.0
baz=226
DHY Denali Highway 18.89 41 P P 06 57 49.1 -0.2
baz=244
KLU Klutina 18.90 46 P P 06 57 48.9 -0.4
baz=251
H22K Ishtalitna Cre 18.94 31 IAmb IAmb 06 58 13.9
comp=Z,22nm,1.1s
H22K Ishtalitna Cre 18.94 31 P Pn 06 57 50.0 -0.5
baz=231,SNR=8.9
NEA2 Nenana 18.97 36 P Pn 06 57 50.3 -0.5
baz=238
M24K Tolsona, Glenn 19.01 44 P Pn 06 57 51.4 +0.1
baz=249
BILL Bilibino 19.11 338 Pn 06 57 51.9 -0.6
BILL IAmb IAmb 06 57 54.9
comp=Z,57nm,1.1s
BILL Bilibino 19.11 338 *ce* P Pn 06 57 51.7 -0.7
BILL pmax pmax
comp=Z,67nm,1.3s
I23K Minto, Yukon-K 19.17 34 P Pn 06 57 53.6 +0.5
I23K IAmb IAmb 06 58 01.3
comp=Z,39nm,1.2s
I23K Minto, Yukon-K 19.17 34 P Pn 06 57 53.4 +0.2
baz=236,SNR=11
KAIM Kayak Island 19.17 51 P Pn 06 57 53.1 -0.1
baz=257
F21K Alatna River 19.21 26 IAmb IAmb 06 58 02.2
comp=Z,25nm,1.1s
F21K Alatna River 19.21 26 P Pn 06 57 53.6 -0.1
baz=225
WRH Wood River Hil 19.27 37 P 06 57 53.0 -0.2
C19K Lookout Ridge 19.33 17 P Pn 06 57 55.0 -0.1
baz=210
BMRM Bremner River 19.35 48 P Pn 06 57 56.4 +1.0
baz=254
N25K Chitina, Valde 19.54 46 P P 06 57 56.7 +0.4
baz=252
HARP HAARP 19.56 44 P Pn 06 57 58.2 +0.4
baz=249
COLA College 19.56 36 P Pn 06 57 58.1 +0.3
COLA College 19.56 36 *i* P P 06 57 56.1 -0.3
COLA College 19.56 36 P Pn 06 57 57.1 -0.8
baz=239
D20K Etivluk River 19.59 20 P Pn 06 57 57.5 -0.8
baz=216
PAX Paxson 19.64 42 P Pn 06 57 58.5 -0.4
baz=247
HDA Harding Lake 19.67 37 IAmb IAmb 06 57 60.0
comp=Z,20nm,0.6s
HDA Harding Lake 19.67 37 P Pn 06 57 58.6 -0.5
baz=242,SNR=17
BGLC Bering Glacier 19.77 51 P Pn 06 57 59.8 -0.6
baz=258
K24K Donnelly Dome 19.85 40 IAmb IAmb 06 58 24.2
comp=Z,47nm,1.0s
K24K Donnelly Dome 19.85 40 P Pn 06 58 00.4 -1.0
baz=245
ILAR Eielson Array 19.87 37 P P 06 57 57.9 -1.9
comp=Z,0.8nm,0.3s,baz=243,slow=9.9,SNR=72
ILAR S S 07 01 39.0 -2.6
comp=Z,0.4nm,0.6s,baz=240,slow=16,SNR=1.4
comp=Z,3.7nm,0.6s
G23K Bananza Creek 19.88 30 P Pn 06 58 01.0 -0.7
baz=231
CRQE Cirque 20.01 49 P Pn 06 58 02.5 -0.8
baz=256
H24K Noodor Dome 20.07 33 IAmb IAmb 06 58 11.0
comp=Z,48nm,1.2s
H24K Noodor Dome 20.07 33 P Pn 06 58 03.5 -0.4
baz=237,SNR=17
COLD Coldfoot 20.16 28 IAmb IAmb 06 58 13.1
comp=Z,31nm,1.1s
COLD Coldfoot 20.16 28 P Pn 06 58 04.3 -0.6
baz=230,SNR=12
MCARA McCarthy VSAT 20.20 48 P Pn 06 58 04.3 -1.1
baz=255
RIDG Independent Ri 20.20 40 P 06 58 03.6 +0.1
RIDG IAmb IAmb 06 58 10.5
comp=Z,31nm,1.2s
RIDG Independent Ri 20.20 40 P P 06 58 03.9 +0.5
baz=246
E22K Anaktuvuk Pass 20.31 25 P Pn 06 58 05.4 -1.3
baz=226
J25K Salcha River, 20.37 38 P P 06 58 04.7 -0.6
J25K IAmb IAmb 06 58 09.6
comp=Z,24nm,0.6s
J25K Salcha River, 20.37 38 P P 06 58 05.7 +0.5
baz=243
MESA MESA 20.43 51 P Pn 06 58 07.4 -1.0
baz=259
L26K Log Cabin Wild 20.56 43 P P 06 58 07.4 +0.1
L26K Log Cabin Wild 20.56 43 P P 06 58 08.1 +0.8
baz=250
D22K Ayikyak River 20.63 23 P Pn 06 58 09.1 -1.4
baz=223
SCRK Sand Creek 20.64 40 P P 06 58 08.2 -0.1
baz=247,SNR=31
G24K Hadweenzic Riv 20.69 31 IAmb IAmb 06 58 32.5
comp=Z,14nm,0.9s
G24K Hadweenzic Riv 20.69 31 P Pn 06 58 09.6 -1.5
baz=235,SNR=13
PRP Porcupine Dome 20.73 35 P Pn 06 58 10.6 -1.2
baz=241
E23K Chandalar 20.87 27 P Pn 06 58 12.4 -0.8
baz=229
MA2 Magadan 20.88 307 P P 06 58 10.2 -0.6
comp=Z,7.9nm,0.9s,baz=103,slow=7.7,SNR=8.0
MA2 LR LR 07 06 11.1
comp=Z,370nm,18.7s,baz=106,slow=37
comp=Z,7.9nm,0.9s
MA2 Magadan 20.88 307 P 06 58 11.4 +0.6
MA2 IAmb IAmb 06 58 22.1
comp=Z,23nm,1.0s
MA2 Magadan 20.88 307 P P 06 58 09.0 -1.8
MA2 pmax pmax
comp=Z,12nm,0.8s
CTG Chitna Glacier 20.89 49 P P 06 58 11.9 +0.8
baz=258
SEY Seymchan 20.91 316 P P 06 58 10.9 -0.1
comp=Z,5.6nm,0.7s,baz=114,slow=10,SNR=13
SEY LR LR 07 06 45.2
comp=Z,1µm,18.3s,baz=112,slow=38
comp=Z,5.6nm,0.7s
M27K Edge Creek, AK 20.99 45 P P 06 58 13.3 +1.2
baz=254
J26L Joseph Creek 21.02 39 P P 06 58 12.5 +0.1
baz=246
D23K Nanushuk River 21.20 24 P P 06 58 14.5 +0.4
baz=226
E24K Your Creek 21.20 28 P P 06 58 15.1 +0.9
baz=231
L27K Beaver Creek, 21.22 44 P P 06 58 13.7 -0.8

baz=252
PINM Pinnacle 21.26 52 P **P 06 58 13.9 -1.0**
baz=261
FYU Fort Yukon 21.37 33 **P**
FYU IAmb IAmb 06 58 35.9
comp=Z,30nm,1.2s
O28M Mount Upton 21.40 50 P **P 06 58 17.6 +0.9**
O28M IAmb IAmb 06 58 40.3
comp=Z,14nm,1.1s
O28M Mount Upton 21.40 50 P **P 06 58 15.4 -1.3**
baz=260
BVCY Beaver Creek 21.46 46 P **P 06 58 16.5 -0.5**
baz=255
YUK3 Moose Creek 21.48 47 P **P 06 58 16.9 -0.6**
baz=257
YUK8 Steele Glacier 21.70 49 P **P 06 58 18.5 -1.4**
baz=259
A21K Barrow 21.76 16 P **P 06 58 19.7 -0.3**
baz=212
F25K Christian Rive 21.79 30 P **P 06 58 19.5 -0.9**
baz=236
D24K Happy Valley 21.81 25 P **P 06 58 19.9 -0.8**
baz=228
BMAR Burnt Mountain 22.04 31 **P 06 58 24.4 +1.2**
G26K Porcupine Rive 22.06 33 P **P 06 58 22.8 -0.5**
baz=240
E25K Arctic Village 22.11 29 **P 06 58 24.8 +0.8**
E25K IAmb IAmb 06 58 44.6
comp=Z,18nm,1.0s
E25K Arctic Village 22.11 29 P **P 06 58 23.3 -0.6**
baz=235,SNR=14
O29M Mount Kennedy 22.12 52 P **P 06 58 23.0 -1.1**
baz=262
C24K Franklin Bluff 22.23 24 P **P 06 58 24.4 -0.7**
baz=228
I27K Kandik River 22.23 37 IAmb IAmb 06 58 35.7
comp=Z,16nm,1.0s
I27K Kandik River 22.23 37 P **P 06 58 24.3 -1.0**
baz=246
YUK4 Talbot Arm 22.25 49 P **P 06 58 25.2 -0.5**
baz=260
YUK6 Outpost Mounta 22.31 50 P **P 06 58 25.6 -0.8**
baz=261
F26K Sheenjek River 22.32 31 P **P 06 58 25.7 -0.5**
baz=238,SNR=7.0
H27K Steamboat Moun 22.52 36 P **P 06 58 27.5 -0.9**
baz=245
M29M Somme Creek 22.55 46 P **P 06 58 27.7 -1.1**
baz=257
D25K Kavik River 22.59 26 P **P 06 58 28.0 -1.1**
baz=232
HYT Haines Junctio 22.71 51 P **P 06 58 29.4 -1.1**
baz=262
G27K Doyon Strip 22.73 34 P **P 06 58 29.7 -0.9**
baz=244
I28M Miner Creek 22.81 38 P **P 06 58 30.9 -0.6**
baz=249
L29M L29M 22.85 45 IAmb IAmb 06 58 45.2
comp=Z,12nm,1.1s
L29M L29M 22.85 45 P **P 06 58 30.9 -1.0**
baz=256
P30M Million Dollar 22.90 53 P **P 06 58 31.6 -0.8**
baz=264
S31K Pelican 23.17 58 P **P 06 58 34.5 -0.6**
baz=270
J29N Klondike Camp 23.18 41 P **P 06 58 34.5 -0.7**
baz=253
K29M Barlow Dome 23.30 43 IAmb IAmb 06 58 44.8
comp=Z,18nm,1.1s
K29M Barlow Dome 23.30 43 P **P 06 58 35.7 -0.8**
baz=255,SNR=8.4
M30M Minto, Yukon 23.34 46 P **P 06 58 35.9 -0.9**
baz=259
C26K Camden Bay 23.36 26 P **P 06 58 35.8 -1.1**
baz=233
E27K Coleen River 23.40 31 IAmb IAmb 06 58 40.1
comp=Z,10nm,1.0s
E27K Coleen River 23.40 31 P **P 06 58 36.8 -0.5**
baz=241
I29M Ogilvie Camp, 23.42 39 IAmb IAmb 06 58 45.2
comp=Z,24nm,1.1s
I29M Ogilvie Camp, 23.42 39 P **P 06 58 37.2 -0.4**
baz=251
C27K Jago River 23.53 27 P **P 06 58 38.1 -0.4**
baz=235
N31M Braeburn, Yuko 23.63 49 P **P 06 58 39.1 -0.6**
baz=262
SKAG Skagway 23.67 54 P **P 06 58 39.4 -0.7**
baz=268
SIT Sitka 23.68 60 P **P 06 58 40.3 +0.2**
baz=273
F28M Old Crow 23.71 33 P **P 06 58 38.6 -1.8**
baz=244
WHY Whitehorse 23.98 51 P **P 06 58 41.4 -1.6**
baz=265
J30M Hart River 24.00 42 P **P 06 58 41.1 -2.1**
baz=255,SNR=9.4
S32K Killisnoo 24.07 59 P **P 06 58 42.2 -1.6**
baz=273
R32K Eaglecrest 24.08 57 P **P 06 58 42.6 -1.3**
baz=271
G29M Pine Creek 24.08 36 P **P 06 58 42.1 -1.8**
baz=248
D27M Malcolm River 24.13 29 P **P 06 58 43.0 -1.4**
baz=239
I30M Mount Dempster 24.15 40 IAmb IAmb 06 59 04.5
comp=Z,11nm,0.8s
I30M Mount Dempster 24.15 40 P **P 06 58 44.0 -0.6**
baz=254,SNR=11
E28M Babbage River 24.27 31 P **P 06 58 44.9 -0.6**
baz=243
M31M Drury Creek, Y 24.38 48 P **P 06 58 46.1 -0.5**
baz=262
P32M Atlin 24.50 54 P **P 06 58 46.6 -1.1**
baz=269
E29M Blow River 24.72 32 P **P 06 58 49.2 -0.4**
baz=245
G30M tAoh Zraii Nji 24.77 36 P **P 06 58 49.7 -0.4**
baz=250
N32M Quiet Lake 24.89 50 P **P 06 58 50.5 -0.8**
baz=266
P33M Teslin, Yukon 24.97 53 P **P 06 58 51.6 -0.5**
baz=268
U33K Whale Pass 24.98 62 P **P 06 58 51.2 -0.8**
baz=277
CRAG Craig 25.06 64 P **P 06 58 52.5 -0.3**
baz=278
H31M Peel River 25.13 39 IAmb IAmb 06 59 05.7
comp=Z,26nm,1.1s
H31M Peel River 25.13 39 P **P 06 58 53.0 -0.4**
baz=255
F30M Barrier River 25.15 35 P **P 06 58 52.8 -0.7**
baz=249
Q32M Nakina River 25.24 56 P **P 06 58 53.5 -1.2**
baz=271
WRAK Wrangell Islan 25.37 62 P **P 06 58 54.6 -1.0**
baz=277
G31M Satah River 25.48 37 P **P 06 58 55.6 -0.8**
baz=252
F31M Tsiigehtchic 25.83 36 IAmb IAmb 06 59 25.1
comp=Z,8.6nm,1.1s
F31M Tsiigehtchic 25.83 36 P **P 06 58 59.0 -0.6**
baz=252,SNR=5.2
S34M Telegraph Cree 25.89 58 IAmb IAmb 06 59 06.2
comp=Z,13nm,1.1s
S34M Telegraph Cree 25.89 58 P **P 06 58 58.9 -1.4**
baz=274
R33M Jennings River 25.90 55 P **P 06 58 59.3 -1.2**
baz=272
V35K Ketchikan 25.93 64 P **P 06 58 59.6 -1.0**
baz=279
INK Inuvik 26.19 34 IAmb IAmb 06 59 26.9
comp=Z,9.8nm,1.1s
INK Inuvik 26.19 34 P **P 06 59 01.6 -1.3**
baz=251
TYV Tymovskoe 26.32 286 *eP* **P 06 59 05.1 +0.9**
TYV *eS* **S 07 03 36.1 +1.0**
TYV pmax pmax
comp=Z,16nm,1.1s
TYV pmax pmax
comp=Z,100nm,2.5s
TYV smax smax
comp=N,200nm,5.4s
TYV smax smax
comp=E,200nm,5.4s
DLBC Dease Lake 26.43 57 LR LR 07 08 21.6
comp=E,214nm,21.6s,baz=268,slow=34
DLBC Dease Lake 26.43 57 P **P 06 59 03.7 -1.7**
baz=274
T35M Bob Quinn 26.45 60 P **P 06 59 04.7 -0.8**
baz=277
WTLY Watson Lake, Y 26.98 53 P **P 06 59 09.2 -0.9**
baz=272
YSS Yuzhno-Sakhali 27.67 278 *eP* **P 06 59 17.7 +1.3**
YSS *eS* **S 07 03 58.4 +1.9**
YSS pmax pmax
comp=Z,16nm,1.0s
YSS MLR MLR
comp=Z,400nm,16.0s
BBB Bella Bella 28.68 70 LR LR 07 09 22.5
comp=Z,212nm,18.7s,baz=246,slow=34
TOAD Toad River Com 28.89 55 P **P 06 59 26.3 -0.9**
baz=277
ASAJ Asahikawa 29.07 273 P **P 06 59 29.9 +1.0**
comp=Z,16nm,0.9s,baz=352,slow=8.2,SNR=9.7
ASAJ LR LR 07 12 21.3
comp=Z,97nm,19.6s,baz=44,slow=39
comp=Z,16nm,0.9s
KOTAN Kotaneelee Air 29.35 53 P **P 06 59 30.7 -0.5**
baz=276
WRGLY Wrigley 29.47 46 P **P 06 59 31.6 -0.6**
baz=271
C36M Paulatuk 29.77 34 P **P 06 59 33.9 -0.9**
baz=259
A36M Sachs Harbour 30.02 28 **P 06 59 37.9 +0.9**
A36M IAmb IAmb 06 59 56.9
comp=Z,5.9nm,0.8s
A36M Sachs Harbour 30.02 28 P **P 06 59 36.1 -1.0**
baz=254,SNR=7.4
YAK Yakutsk 31.24 312 LR LR 07 12 49.2
comp=Z,434nm,19.1s,baz=95,slow=37
YAK Yakutsk 31.24 312 *eP* **P 06 59 46.3 -1.6**
YAK pmax pmax
comp=Z,14nm,0.8s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.3s
TIXI Tiksi 31.87 330 LR LR 07 13 37.2
comp=E,160nm,19.3s,baz=22,slow=38
TIXI Tiksi 31.87 330 *i* P **P 06 59 51.6 -1.8**
KLR Kul'dur 33.46 288 LR LR 07 13 02.5
comp=E,85nm,21.8s,baz=66,slow=35
KLR Kul'dur 33.46 288 *i* P **P 07 00 06.3 -1.2**
KLR pmax pmax
comp=Z,25nm,1.3s
YKA Yellowknife Ar 33.57 47 P **P 07 00 06.8 -1.5**
comp=Z,0.6nm,0.8s,baz=283,slow=10.0,SNR=8.5
YKA PcP **PcP 07 02 49.1 +1.0**
comp=Z,0.6nm,0.7s,baz=288,slow=3.3,SNR=7.5
YKA LR LR 07 15 24.9
comp=Z,568nm,19.1s,baz=274,slow=39
comp=Z,0.6nm,0.8s
ZEA Zeya 34.38 297 *eP* **P 07 00 17.7 +2.3**
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=Z,200nm,16.0s
H11N2 WAKE ISLAND Hy 34.57 211 T T 07 37 16.5
baz=18,slow=76,SNR=58
H11N3 WAKE ISLAND Hy 34.57 211 T T 07 37 16.4
baz=18,slow=76,SNR=72
H11N1 WAKE ISLAND Hy 34.58 211 T T 07 37 17.9
baz=18,slow=76,SNR=63
B08A Colville Reser 35.33 72 IAmb IAmb 07 00 50.2
comp=Z,9.2nm,1.1s
HEH HeiHe 35.60 291 ⇑P **P 07 00 24.9 -1.1**
HEH pmax pmax
comp=Z,31nm,1.0s
HEH LR LR
comp=Z,160nm,18.6s
HEH LR LR
comp=Z,320nm,19.9s
HEH LR LR
comp=Z,440nm,19.8s
USRK Ussuriysk Ar. 35.64 280 P **P 07 00 26.6 +0.2**
comp=Z,8.0nm,0.8s,baz=60,slow=11,SNR=7.9
comp=Z,8.0nm,0.8s
H11S1 WAKE ISLAND Hy 35.77 211 T T 07 39 36.1
baz=313,slow=74,SNR=69
H11S2 WAKE ISLAND Hy 35.79 211 T T 07 39 45.0
baz=17,slow=74,SNR=47
H11S3 WAKE ISLAND Hy 35.79 211 T T 07 38 50.7
SNR=4.0
WAH2 Wahluke Slope 35.92 75 IAmb IAmb 07 00 47.0
comp=Z,7.9nm,1.1s
MAJO Matsushiro 36.11 264 **P 07 00 29.7 -0.8**
MAJO Matsushiro 36.11 264 *i* P **P 07 00 30.9 +0.3**
MAJO pmax pmax
comp=Z,32nm,1.0s
MJAR Matsushiro Arr 36.11 264 P **P 07 00 31.6 +1.1**
comp=Z,8.3nm,0.9s,baz=52,slow=7.9,SNR=14
MJAR LR LR 07 13 22.3
comp=Z,250nm,21.8s,baz=60,slow=33
comp=Z,8.3nm,0.9s
MJAR Matsushiro Arr 36.11 264 **P 07 00 31.5 +0.9**
MJAR IAmb IAmb 07 00 33.0
comp=Z,7.5nm,1.1s
MJB9 Matsu-Tunnel 36.11 264 P **P 07 00 30.4 -0.1**
YBH Yreka Blue Hor 36.55 84 LR LR 07 13 00.2
comp=Z,12nm,20.6s,baz=294,slow=32
NEW Newport 36.69 71 LR LR 07 14 05.9
comp=Z,126nm,18.1s,baz=307,slow=34
NEW Newport 36.69 71 IAmb IAmb 07 01 01.4
comp=Z,9.1nm,1.1s
MDJ Mudanjiang 36.91 282 **P 07 00 37.3 +0.1**
MDJ IAmb IAmb 07 00 38.2
comp=Z,11nm,1.0s
MDJ Mudanjiang 36.91 282 P **P 07 00 36.8 -0.4**
MDJ pmax pmax
comp=Z,14nm,1.2s
PSTR Posyet 37.19 278 *i* P **P 07 00 40.4 +0.8**
BNX BinXian 37.68 285 ⇑P **P 07 00 43.4 -0.3**
BNX pmax pmax
comp=Z,83nm,0.9s
WVOR Wild Horse Val 38.70 80 P **P 07 00 54.0 +1.5**
WVOR IAmb IAmb 07 01 16.7
comp=Z,8.5nm,1.1s
WVOR Wild Horse Val 38.70 80 P **P 07 00 54.0 +1.5**
WVOR pmax pmax
comp=Z,9.0nm,1.1s
RES Resolute Bay 38.84 25 LR LR 07 21 56.2
comp=Z,207nm,18.4s,baz=346,slow=44
RES Resolute Bay 38.84 25 P **P 07 00 53.2 +0.1**
RES Resolute Bay 38.84 25 P **P 07 00 53.2 +0.1**
RES pmax pmax
comp=Z,2.0nm,1.0s
MSO Missoula 39.27 72 IAmb IAmb 07 01 19.0
comp=Z,9.3nm,1.1s
CN2 Changchun 39.87 283 P **P 07 01 02.3 +0.2**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,500nm,19.0s
HILR Hailar Array B 40.35 294 P **P 07 01 05.4 -0.7**
comp=Z,1.1nm,0.4s,baz=33,slow=5.7,SNR=3.5
comp=Z,1.1nm,0.4s
HLID Hailey 40.68 76 P **P 07 01 09.5 +0.4**
EGMT Eagleton 41.14 68 **P 07 01 13.1 +0.4**
EGMT IAmb IAmb 07 01 14.8
comp=Z,10nm,1.0s
NVAR Mina Array Bea 41.21 85 P **P 07 01 13.1 -0.5**
comp=Z,0.9nm,0.9s,baz=302,slow=6.8,SNR=4.3
NVAR ScP **ScP 07 07 01.4 +1.6**
comp=Z,0.1nm,0.3s,baz=267,slow=5.3,SNR=4.0
comp=Z,0.9nm,0.9s
YHL Hebgen Lake 41.94 73 IAmb IAmb 07 01 41.8
comp=Z,9.4nm,1.1s
KSRS Korea Array 42.00 274 P **P 07 01 20.9 +1.3**
comp=Z,13nm,0.9s,baz=59,slow=7.9,SNR=35
KSRS LR LR 07 18 17.1
comp=Z,73nm,20.7s,baz=45,slow=35
comp=Z,13nm,0.9s
KSRS Korea Array 42.00 274 P **P 07 01 21.0 +1.3**
KS19 Wonju Array Si 42.00 274 P **P 07 01 19.9 +0.2**
KS19 IAmb IAmb 07 01 24.3
comp=Z,16nm,1.0s
KSAR Wonju Array Be 42.03 274 P **P 07 01 18.9 -1.1**
KSAR Wonju Array Be 42.03 274 P **P 07 01 18.9 -1.1**
FFC Flin Flon 42.26 56 **P 07 01 22.5 +0.9**
FFC Flin Flon 42.26 56 P **P 07 01 22.5 +0.9**
FFC pmax pmax
comp=Z,3.0nm,0.7s
H17A Grant Village 42.55 73 IAmb IAmb 07 01 43.8
comp=Z,16nm,1.2s
RLMT Red Lodge 42.94 71 IAmb IAmb 07 01 29.9
comp=Z,11nm,1.1s
DUG Dugway, Tooele 43.58 79 IAmb IAmb 07 01 53.1
comp=Z,8.4nm,1.1s
PRN Pahroc Range 43.87 84 IAmb IAmb 07 02 07.2
comp=Z,12nm,1.1s
LAO LASA Array 43.88 68 IAmb IAmb 07 01 45.1
comp=Z,7.1nm,0.9s
BW06 Boulder Array 44.07 74 IAmb IAmb 07 01 54.6
comp=Z,14nm,1.1s
PD31 Pinedale Array 44.07 74 IAmb IAmb 07 01 54.6
comp=Z,14nm,1.1s
PDAR Pinedale Array 44.07 74 P **P 07 01 37.5 +0.7**
comp=Z,1.5nm,0.5s,baz=314,slow=3.5,SNR=41
comp=Z,1.5nm,0.5s
PDAR Pinedale Array 44.07 74 **P 07 01 37.3 +0.5**
TULEG Thule 44.31 19 *i* P **P 07 01 38.2 +0.3**
TULEG IAmb IAmb 07 01 39.3
comp=Z,6.3nm,1.1s
RDMU Red Mountain 45.35 77 IAmb IAmb 07 02 17.9
comp=Z,11nm,1.2s
Q16A Castle Valley 45.36 80 IAmb IAmb 07 02 10.7
comp=Z,8.1nm,1.2s
PFO Pinyon Flats O 45.41 89 *eP* **P 07 01 46.1 -1.3**
PFO pmax pmax
comp=Z,27nm,3.5s
XLT XiLinHaoTe 45.47 289 *eP* **P 07 01 48.5 +0.9**
XLT pP pP 07 01 54.9 +0.1
XLT pmax pmax
comp=Z,13nm,1.3s
XLT pmax pmax
comp=Z,160nm,4.2s
XLT LR LR
comp=Z,310nm,20.5s
SRU San Rafael Swe 45.64 79 IAmb IAmb 07 02 16.7
comp=Z,5.5nm,0.8s
NRIK Noril'sk 45.66 331 P **P 07 01 49.1 +0.5**
comp=Z,1.9nm,0.7s,baz=86,slow=9.0,SNR=4.9
NRIK PcP **PcP 07 03 27.0 +0.7**
comp=Z,0.8nm,0.4s,baz=51,slow=2.7,SNR=3.6
comp=Z,1.9nm,0.7s
NRIK Noril'sk 45.66 331 *i* P **P 07 01 47.3 -1.4**
NRIK pmax pmax
comp=Z,6.0nm,1.2s
HMU Henry Mountain 46.23 81 P **P 07 01 54.6 +0.7**
HMU IAmb IAmb 07 02 16.7
comp=Z,14nm,1.1s
O20A White River Ci 46.42 77 IAmb IAmb 07 02 12.5
comp=Z,11nm,0.9s
NOR Nord 46.84 4 *i* P **P 07 01 57.9 +0.1**
NOR IAmb IAmb 07 01 58.7
comp=Z,16nm,1.3s
NEEM North Greenlan 46.94 14 *i* P **P 07 01 58.9 -0.2**
NEEM IAmb IAmb 07 02 00.1
comp=Z,11nm,0.7s
PV03 Paradox Valley 47.20 79 IAmb IAmb 07 02 13.5
comp=Z,4.4nm,0.9s
PV13 Radium Mtn., P 47.27 79 IAmb IAmb 07 02 24.1
comp=Z,11nm,0.9s
PV01 Paradox Valley 47.45 79 IAmb IAmb 07 02 25.4
comp=Z,6.3nm,0.9s
BJI2 Beijing 47.70 285 P **P 07 02 06.1 +1.0**
BJI2 pP **pP 07 02 13.0 +0.8**
BJI2 pmax pmax
comp=Z,12nm,0.9s
BJI2 LR LR
comp=Z,160nm,19.4s
BJI2 LR LR
comp=Z,78nm,17.9s
BJI2 LR LR
comp=Z,170nm,16.9s
ULM Lac du Bonnet 47.73 58 P **P 07 02 05.0 -0.2**
comp=Z,3.0nm,0.5s,baz=304,slow=7.0,SNR=8.2
comp=Z,3.0nm,0.5s
ULM Lac du Bonnet 47.73 58 IAmb IAmb 07 02 17.7
comp=Z,9.8nm,1.2s
TLY Talaya 48.08 304 **P 07 02 07.2 -0.7**
TLY IAmb IAmb 07 02 09.8
comp=Z,8.4nm,1.0s
TLY Talaya 48.08 304 *ceP* **P 07 02 06.4 -1.5**
TLY pmax pmax
comp=Z,9.0nm,1.0s
ULN Ulaanbaatar 48.39 298 P **P 07 02 10.4 -0.1**
ULN IAmb IAmb 07 02 12.2
comp=Z,11nm,0.9s
ULN Ulaanbaatar 48.39 298 *i* P **P 07 02 10.1 -0.4**
ULN pmax pmax
comp=Z,12nm,1.0s
SONM Songino Array 48.77 299 P **P 07 02 14.1 +0.7**
comp=Z,6.2nm,0.8s,baz=52,slow=9.2,SNR=17
SONM PcP **PcP 07 03 38.9 +1.0**
comp=Z,3.4nm,0.9s,baz=59,slow=4.0,SNR=5.6
SONM LR LR 07 26 12.3
comp=Z,336nm,18.1s,baz=38,slow=40
comp=Z,6.2nm,0.8s
SONM Songino Array 48.77 299 P **P 07 02 13.3 -0.1**
SONM IAmb IAmb 07 02 14.8
comp=Z,8.9nm,1.0s
ZAK Zakamensk 49.00 303 *eP* **P 07 02 14.6 -0.5**
ZAK *e* 07 03 35.9
ZAK pmax pmax
comp=Z,21nm,1.3s
ZAK pmax pmax
comp=Z,8.0nm,1.2s
EPLO Experimental L 49.21 58 IAmb IAmb 07 02 18.3
comp=Z,14nm,1.0s
TIA Tai'an 49.51 280 P **P 07 02 20.1 +1.1**
TIA sP **sP 07 02 28.0 -1.0**
TIA pmax pmax
comp=Z,21nm,1.0s
HHC Hu-ho-hao-te 49.97 288 ⇓*i* P **P 07 02 24.5 +1.9**
HHC pmax pmax
comp=Z,24nm,1.0s
KBS Kingsbay 49.97 358 *i* P **P 07 02 22.4 +0.4**
HNS HongShan 50.23 283 ⇑P **P 07 02 26.0 +1.5**
HNS S **S 07 09 43.3 +8.6**
HNS pmax pmax
comp=Z,37nm,1.4s
HNS LR LR
comp=Z,210nm,19.1s
HNS LR LR
comp=Z,260nm,19.9s
SPITS Spitsbergen Ar 50.60 357 P **P 07 02 26.0 -0.8**
comp=Z,28nm,1.0s,baz=66,slow=8.3,SNR=16
SPITS PcP **PcP 07 03 44.3 +0.3**
comp=Z,12nm,1.0s,baz=80,slow=1.6,SNR=1.8
SPITS LR LR 07 24 09.1
comp=Z,192nm,20.1s,baz=3.5,slow=36
comp=Z,28nm,1.0s
T25A Trinidad 50.63 77 IAmb IAmb 07 02 53.8
comp=Z,13nm,1.2s
ANMO Albuquerque 50.79 81 LR LR 07 24 17.0
comp=Z,129nm,18.0s,baz=298,slow=36
ANMO Albuquerque 50.79 81 *ceP* **P 07 02 29.6 +0.6**
ANMO pmax pmax
comp=Z,6.0nm,2.5s
BTO2 Baotou 51.03 289 *eP* **P 07 02 32.1 +1.4**
BTO2 S **S 07 09 45.8 -0.3**
BTO2 pmax pmax
comp=Z,73nm,1.2s
BTO2 pmax pmax
comp=Z,330nm,8.2s
BTO2 LR LR
comp=Z,1μm,18.1s
BTO2 LR LR
comp=Z,750nm,17.9s
BTO2 LR LR
comp=Z,730nm,14.2s
NJ2 Nanjing 51.17 275 *eP* **P 07 02 34.8 +3.2**
NJ2 pmax pmax
comp=Z,14nm,0.8s
DAG Danmarks Havn 51.32 7 *i* P **P 07 02 31.5 -0.7**
DAG IAmb IAmb 07 02 33.0
comp=Z,13nm,1.2s
TIY Taiyuan 51.42 285 P **P 07 02 35.9 +2.4**
TIY pmax pmax
comp=Z,51nm,1.0s
KNGR Kungurtug, Tuv 51.85 306 *i* P **P 07 02 35.9 -0.7**
KNGR pmax pmax
comp=Z,19nm,1.1s
SUMG Summit 52.79 15 *i* P **P 07 02 43.0 -0.6**
DBG Daneborg 53.53 8 *i* P **P 07 02 47.9 -0.7**
DBG IAmb IAmb 07 02 49.5

comp=Z,12nm,1.1s
MNTX Cornudas Mount 53.63 83 P **P** **07 02 50.1 +0.3**
MNTX lAmb lAmb 07 03 13.4
comp=Z,5.1nm,1.1s
MSTX Muleshoe 53.71 79 lAmb lAmb 07 03 17.5
comp=Z,8.0nm,1.0s
128A Castleberry Fa 54.80 80 lAmb lAmb 07 03 24.7
comp=Z,6.5nm,1.1s
SFJD Kangerlussuaq 54.81 23 P **P** **07 02 58.2 +0.2**
comp=Z,6.1nm,0.7s,baz=297,slow=4.5,SNR=2.8
comp=Z,6.1nm,0.7s
SSLB Suanglung 55.65 266 P **P** **07 03 05.1 +0.4**
ZAA0 Zalesovo Array 55.77 315 P **P** **07 03 05.6 +0.5**
ZALV Zalesovo Beam 55.77 315 P **P** **07 03 04.4 -0.7**
comp=Z,0.6nm,0.5s,baz=28,slow=6.7,SNR=5.3
ZALV PcP **PcP** **07 04 04.0 +0.1**
comp=Z,3.9nm,0.9s,baz=35,slow=3.6,SNR=9.4
ZALV LR LR 07 28 55.5
comp=Z,248nm,18.7s,baz=28,slow=38
comp=Z,0.6nm,0.5s
ZALV Zalesovo Beam 55.77 315 *i* P **P** **07 03 06.9 +1.8**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
LPIG La Paz 55.88 93 LR LR 07 22 23.1
comp=Z,60nm,20.5s,baz=308,slow=31
XAN Xi'an 55.98 284 ⇓P **P** **07 03 07.8 +0.9**
XAN pP pP 07 03 15.1 +0.9
XAN pmax pmax
comp=Z,28nm,1.6s
TXAR Lajitas Array 56.33 84 P **P** **07 03 09.3 -0.2**
comp=Z,0.7nm,0.7s,baz=294,slow=5.1,SNR=7.1
comp=Z,0.7nm,0.7s
R40A Maddies Statio 57.15 68 lAmb lAmb 07 03 16.9
comp=Z,4.0nm,0.5s
DGZ Jazzator, Alta 57.41 310 *i* P **P** **07 03 17.1 +0.1**
DGZ pmax pmax
comp=Z,11nm,0.9s
LZH Lanzhou 57.66 289 *e*P **P** **07 03 20.3 +1.3**
LZH pP sP 07 03 27.5 -1.5
LZH pmax pmax
comp=Z,51nm,1.3s
LZH pmax pmax
comp=Z,140nm,4.4s
LZH LR LR
comp=Z,340nm,14.8s
LZH LR LR
comp=Z,340nm,14.8s
LZH LR LR
comp=Z,470nm,15.1s
GTA2 Gaotai 57.75 294 *e*P **P** **07 03 19.5 0.0**
GTA2 pmax pmax
comp=Z,16nm,1.2s
GTA2 LR LR
comp=Z,310nm,16.4s
GTA2 LR LR
comp=Z,250nm,19.3s
GTA2 LR LR
comp=Z,430nm,20.0s
LZDM Lanzhou Array 57.84 289 P **P** **07 03 20.4 0.0**
comp=Z,13nm,0.9s,baz=73,slow=2.0,SNR=21
comp=Z,13nm,0.9s
VLDQ Val d'Or 58.52 51 **P** **07 03 23.4 -1.2**
ARCES ARCESS Array B 58.54 352 P **P** **07 03 24.2 -0.2**
comp=Z,2.5nm,0.7s,baz=27,slow=8.2,SNR=4.1
ARCES PcP **PcP** **07 04 14.5 0.0**
comp=Z,8.8nm,0.9s,baz=1.7,slow=4.0,SNR=5.2
ARCES LR LR 07 31 38.3
comp=Z,43nm,18.6s,baz=352,slow=39
comp=Z,2.5nm,0.7s
ARCES ARCESS Array B 58.54 352 P **P** **07 03 24.0 -0.5**
SCHQ Schefferville 58.58 40 LR LR 07 31 12.9
comp=Z,258nm,19.0s,baz=283,slow=39
KURK Kurchatov 60.76 316 P **P** **07 03 40.0 0.0**
KURK Kurchatov 60.76 316 *ce*P **P** **07 03 40.6 +0.7**
KURK pmax pmax
comp=Z,17nm,0.8s
KURBB Kurchatov Arra 60.86 316 P **P** **07 03 41.0 +0.4**
comp=Z,13nm,0.7s,baz=40,slow=6.7,SNR=44
KURBB PcP **PcP** **07 04 24.8 +0.7**
comp=Z,5.2nm,0.8s,baz=44,slow=3.9,SNR=9.0
KURBB LR LR 07 31 48.0
comp=Z,248nm,19.2s,baz=164,slow=38
comp=Z,13nm,0.7s
DELO Deloro Mine 60.93 54 P **P** **07 03 42.2 +1.0**
TRQ Mont Tremblant 61.26 51 P **P** **07 03 43.5 -0.1**
WMQ Urumqi 61.34 305 *e*P **P** **07 03 44.8 +0.7**
WMQ pmax pmax
comp=Z,12nm,1.1s
Q51A Peebles 61.73 62 **P** **07 03 47.2 +0.5**
MK31 Makanchi Array 61.91 311 *ce*P **P** **07 03 48.0 +0.2**
MKAR Makanchi Array 61.91 311 P **P** **07 03 47.6 -0.3**
comp=Z,4.7nm,0.5s,baz=51,slow=5.9,SNR=60
MKAR LR LR 07 31 28.8
comp=Z,182nm,18.1s,baz=322,slow=37
comp=Z,4.7nm,0.5s
BVAR Borovoye Array 62.44 322 P **P** **07 03 51.8 +0.5**
comp=Z,6.9nm,0.4s,baz=50,slow=6.5,SNR=57
BVAR PcP **PcP** **07 04 31.5 +1.0**
comp=Z,8.0nm,0.7s,baz=64,slow=3.4,SNR=11
BVAR LR LR 07 33 27.0
comp=Z,414nm,18.9s,baz=41,slow=38
comp=Z,6.9nm,0.4s
BORK Borovoye 62.45 322 P **P** **07 03 51.6 +0.2**
BORK lAmb lAmb 07 03 53.1
comp=Z,9.1nm,1.1s
BORK Borovoye 62.45 322 *ce*P **P** **07 03 52.8 +1.4**
BORK pmax pmax
comp=Z,7.0nm,1.3s
J57A Williamstown 62.54 54 P **P** **07 03 53.2 +1.1**
GYA Guiyang 62.67 279 P **P** **07 03 53.8 +0.4**
GYA pmax pmax
comp=Z,12nm,1.2s
GOMU GeErMu 62.85 295 P **P** **07 03 53.9 -0.8**
GOMU pP pP 07 03 59.1 -3.0
GOMU sP sP 07 04 02.5 -2.3
GOMU pmax pmax
comp=Z,12nm,0.9s
TKL Tuckaleechee C 63.87 65 LR LR 07 30 45.4
comp=Z,152nm,21.1s,baz=331,slow=35
ARTI Arti 63.97 330 LR LR 07 35 24.3
comp=Z,150nm,19.4s,baz=66,slow=39
ARTI Arti 63.97 330 P **P** **07 04 00.9 -0.4**
ARTI Arti 63.97 330 *c i*P **P** **07 04 00.2 -1.2**
ARTI 07 04 35.4
ARTI S **S** **07 12 34.1 -1.0**
ARTI SS **SS** **07 16 37.9 -5.0**
ARTI pmax pmax
comp=Z,47nm,4.6s
KIRV Kirov 64.64 336 LR LR 07 35 28.8
comp=Z,79nm,18.7s,baz=37,slow=39
KIRV Kirov 64.64 336 *ce*P **P** **07 04 05.1 -0.5**
KLMR Klimovskoe 64.81 342 *e*P **P** **07 04 05.0 -1.8**
KLMR *e* 07 04 38.9
KLMR pmax pmax
comp=Z,19nm,1.6s
PZH PanZhiHua 65.67 282 P **P** **07 04 14.0 +0.9**
PZH pmax pmax
comp=Z,7.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.1s
KMI2 Kunming 66.04 281 P **P** **07 04 16.4 +0.8**
KMI2 pmax pmax
comp=Z,11nm,1.0s
KMI2 LR LR
comp=Z,71nm,16.2s
KMI2 LR LR
comp=Z,160nm,17.6s
KMI2 LR LR
comp=Z,230nm,17.5s
FINES FINESS Array B 66.35 349 P **P** **07 04 15.8 -0.9**
comp=Z,2.0nm,0.8s,baz=23,slow=6.4,SNR=3.6
FINES LR LR 07 36 35.0
comp=Z,123nm,18.3s,baz=3.0,slow=39
comp=Z,2.0nm,0.8s
FINES FINESS Array B 66.35 349 P **P** **07 04 16.4 -0.2**
T59A Double "B" Far 66.38 60 P **P** **07 04 18.3 +1.0**
NB2 NORSAR Subarra 67.90 357 P **P** **07 04 26.3 -0.3**
comp=Z,18nm,1.2s,baz=7.3,slow=6.5
NOA NORSAR Array B 67.90 357 P **P** **07 04 25.9 -0.7**
comp=Z,4.5nm,0.9s,baz=1.4,slow=6.1,SNR=7.5
NOA LR LR 07 35 31.1
comp=Z,34nm,18.3s,baz=355,slow=37
comp=Z,4.5nm,0.9s
TKM2 Tokmak 2 67.96 312 P **P** **07 04 28.7 +1.2**
SNR=9.7
USP Ospenovka 68.21 313 P **P** **07 04 30.1 +1.3**
SNR=16
KBK Karagaybulak 68.47 312 P **P** **07 04 32.1 +1.4**
SNR=5.2
AAK Ala-Archa 68.70 312 P **P** **07 04 33.3 +1.2**
SNR=11
AAK Ala-Archa 68.70 312 P **P** **07 04 32.2 +0.2**
AAK Ala-Archa 68.70 312 *i* P **P** **07 04 32.0 -0.1**
AAK pmax pmax
comp=Z,13nm,0.8s
HFS Hagfors 68.70 355 P **P** **07 04 30.6 -1.0**
comp=Z,3.1nm,0.5s,baz=5.7,slow=1.5,SNR=13
HFS LR LR 07 34 11.2
comp=Z,78nm,21.2s,baz=46,slow=36
comp=Z,3.1nm,0.5s
NRN Naryn 68.92 310 lAmb lAmb 07 04 36.0
comp=Z,8.0nm,1.0s
EKS2 Erkin-Say 69.01 313 P **P** **07 04 35.4 +1.4**
SNR=14
AKTO Aktyubinsk 69.08 327 LR LR 07 38 18.3
comp=Z,104nm,18.6s,baz=168,slow=39
AB31 Akbulak array 69.39 325 lAmb lAmb 07 05 01.2
comp=Z,6.5nm,0.9s
ABKAR Akbulak array 69.39 325 P **P** **07 04 36.9 +0.9**
LSA Lhasa 69.67 292 P **P** **07 04 36.8 -1.9**
LSA pmax pmax
comp=Z,39nm,1.0s
KK31 Karatay Array 70.14 315 **P** **07 04 41.5 +0.7**
KK31 Karatay Array 70.14 315 P **P** **07 04 41.5 +0.7**
KK31 pmax pmax
comp=Z,11nm,0.6s
KKAR Karatay Array 70.14 315 P **P** **07 04 41.7 +0.9**
KKAR Karatay Array 70.14 315 P **P** **07 04 41.7 +0.9**
BELG Belogornoye 70.60 334 LR LR 07 40 47.4
comp=Z,128nm,18.1s,baz=355,slow=40
CMIG Matias Romero 70.73 87 LR LR 07 31 09.2
comp=Z,57nm,20.8s,baz=350,slow=32
OBN Obninsk 70.74 341 ⇓*e*P **P** **07 04 43.0 -1.1**
OBN *PP **pP** **07 04 50.0 -1.6**
OBN *SP **sP** **07 04 54.0 -0.4**
OBN 07 05 08.0
OBN *e* 07 14 31.9
OBN *e* 07 14 45.2
OBN *eSS SS 07 18 26.6 -0.8
OBN pmax pmax
comp=Z,7.0nm,0.8s
OBN MLR MLR
comp=Z,119nm,16.0s
KSH2 Kashi 70.90 309 P **P** **07 04 46.8 +1.2**
KSH2 pmax pmax
comp=Z,22nm,1.0s
PPT Papeete 72.11 154 LR LR 07 30 31.0
comp=Z,179nm,20.9s,baz=326,slow=31
LPSR Galich'ya Gora 72.59 339 *e*P **P** **07 04 54.8 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
VRH Novokhopyorsk 73.23 337 *e*P **P** **07 04 58.3 -0.8**
VRH pmax pmax
comp=Z,10.0nm,1.0s
CMAR Chiang Mai Arr 73.36 279 P **P** **07 05 01.6 +1.2**
comp=Z,1.2nm,0.5s,baz=29,slow=6.6,SNR=10.0
CMAR LR LR 07 39 41.5
comp=Z,67nm,19.5s,baz=145,slow=38
comp=Z,1.2nm,0.5s
CMAR Chiang Mai Arr 73.36 279 **P** **07 05 00.5 +0.1**
CMAR Chiang Mai Arr 73.36 279 *i* P **P** **07 05 02.0 +1.5**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
VORR Voronezh 73.39 339 *e*P **P** **07 05 01.7 +1.6**
VORR pmax pmax
comp=Z,30nm,0.3s
RAR Rarotonga 73.43 165 LR LR 07 32 15.2
comp=Z,232nm,21.1s,baz=290,slow=32
EKA Eskdalemuir Ar 73.52 5 P **P** **07 05 00.5 -0.4**
comp=Z,5.2nm,0.9s,baz=335,slow=3.7,SNR=5.0
comp=Z,5.2nm,0.9s
VSR Storozhevoye 73.83 338 *e*P **P** **07 05 02.3 -0.4**
VSR pmax pmax
comp=Z,10.0nm,1.2s
VORD Divnogorie 74.03 338 *e*P **P** **07 05 02.6 -1.2**
VORD pmax pmax
comp=Z,6.0nm,0.4s
DZM Mont Dzumac 74.84 198 LR LR 07 35 27.7
comp=Z,131nm,18.1s,baz=3.0,slow=34
AKASG Malin Array Be 76.31 344 P **P** **07 05 16.2 -0.7**
comp=Z,0.8nm,0.4s,baz=16,slow=5.6,SNR=4.1
AKASG LR LR 07 42 19.4
comp=Z,79nm,20.1s,baz=32,slow=38
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 76.31 344 *i* P **P** **07 05 17.7 +0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 76.31 344 *ce*P **P** **07 05 16.0 -1.0**
AKBB pmax pmax
comp=Z,37nm,3.2s
NIL Nilore 76.37 307 P **P** **07 05 18.5 +0.8**
NIL Nilore 76.37 307 P **P** **07 05 18.5 +0.8**
NIL pmax pmax
comp=Z,32nm,0.9s
CLL Collm 77.54 355 *i* P **P** **07 05 24.3 +0.4**
CLL Collm 77.54 355 *i* P **P** **07 05 24.3 +0.4**
KBL Kabul 77.71 311 P **P** **07 05 25.5 0.0**
KBL Kabul 77.71 311 P **P** **07 05 25.5 0.0**
KBL pmax pmax
comp=Z,25nm,0.9s
MAK Makhachkala 79.11 330 *d i*P **P** **07 05 29.7 -3.0**
MAK *e* 07 08 31.1
MAK *ePPP PPP 07 10 20.5
MAK *eS **S** **07 15 24.8 -5.2**
MAK *eSSS SSS 07 24 00.0
MAK pmax pmax
comp=Z,95nm,1.1s
VRAC Vranov 79.28 352 LR LR 07 42 17.9
comp=Z,40nm,20.5s,baz=355,slow=37
KIV Kislovodsk 79.64 333 *e*P **P** **07 05 38.0 +2.2**
KIV pmax pmax
comp=Z,10.0nm,1.1s
GERES GERESS Array B 79.95 354 P **P** **07 05 35.9 -1.5**
comp=Z,1.2nm,0.8s,baz=32,slow=6.3,SNR=5.1
comp=Z,1.2nm,0.8s
MODS Modra-Piesok 80.15 352 *e*P P 07 05 46.1 +7.8
MODS Modra-Piesok 80.15 352 *e*P P 07 05 46.1 +7.8
AKT Akhty 80.37 329 *e*P **P** **07 05 40.1 +0.3**
AKT *e* 07 05 45.9
AKT *e* 07 08 38.1
AKT pmax pmax
comp=Z,24nm,1.6s
MLR Muntele Rosu 81.90 345 LR LR 07 44 40.6
comp=Z,99nm,21.5s,baz=62,slow=38
GNI Garni 82.53 330 LR LR 07 48 50.4
comp=Z,98nm,18.5s,baz=22,slow=40
WRA Warramunga Arr 83.64 227 P **P** **07 05 56.6 -0.3**
comp=Z,1.4nm,0.9s,baz=27,slow=4.9,SNR=5.1
comp=Z,1.4nm,0.9s
WRA Warramunga Arr 83.64 227 *i* P **P** **07 05 57.4 +0.5**
WRA pmax pmax
comp=Z,1.0nm,1.0s
BR131 Keskin Array S 85.95 338 P **P** **07 06 09.0 +0.4**
BR131 lAmb lAmb 07 06 10.9
comp=Z,6.1nm,1.1s
BR131 Keskin Array S 85.95 338 P **P** **07 06 09.0 +0.4**
BR131 pmax pmax
comp=Z,6.0nm,1.1s
BRTR Keskin Array B 85.95 338 P **P** **07 06 07.2 -1.5**
comp=Z,4.2nm,1.1s,baz=0.0,slow=1.4,SNR=9.9
comp=Z,4.2nm,1.1s
BRTR Keskin Array B 85.95 338 P **P** **07 06 09.2 +0.5**
BRTR Keskin Array B 85.95 338 *i* P **P** **07 06 10.6 +2.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
RDO Rodhopi 86.20 345 lAmb lAmb 07 06 12.6
comp=Z,6.4nm,0.9s
ASAR Alice Springs 87.07 226 P **P** **07 06 13.8 -0.1**
comp=Z,2.7nm,1.1s,baz=30,slow=3.8,SNR=10
ASAR LR LR 07 42 02.2
comp=Z,96nm,19.5s,baz=22,slow=33
comp=Z,2.7nm,1.1s
ASAR Alice Springs 87.07 226 P **P** **07 06 13.3 -0.6**
SJG San Juan 87.30 64 LR LR 07 47 08.3
comp=Z,65nm,19.3s,baz=340,slow=37
INKA Innaminka 87.80 218 **P** **07 06 18.1 +0.8**
INKA lAmb lAmb 07 06 19.5
comp=Z,4.5nm,1.1s
ESDC Sonseca Array 89.07 7 P **P** **07 06 22.4 -1.1**
comp=Z,2.4nm,1.0s,baz=340,slow=5.1,SNR=7.6
comp=Z,2.4nm,1.0s
URZ Urewera 89.45 186 LR LR 07 47 07.0
comp=Z,74nm,18.8s,baz=354,slow=36
STKA Stephens Creek 91.19 216 LR LR 07 43 19.1
comp=Z,90nm,20.1s,baz=24,slow=33
MMAI Mount Meron Ar 91.87 335 LR LR 07 54 30.9
comp=Z,38nm,18.4s,baz=90,slow=40
SDV Santo Domingo 92.00 73 LR LR 07 48 19.3
comp=Z,56nm,21.8s,baz=285,slow=36
ASF Jabal al Asfar 92.26 333 LR LR 07 55 15.7
comp=Z,88nm,18.8s,baz=24,slow=40
RPZ Rata Peaks 95.40 190 LR LR 07 46 36.7
comp=Z,136nm,18.9s,baz=71,slow=33
MD31 MD31 95.76 8 P **P** **07 06 54.5 -0.2**
MD31 lAmb lAmb 07 06 56.1
comp=Z,6.1nm,1.1s
RPN Rapa Nui 97.05 125 LR LR 07 43 19.3
comp=Z,53nm,19.0s,baz=99,slow=31
RAYN Ar Rayn 97.41 323 P **P** **07 07 01.8 -0.4**
RAYN Ar Rayn 97.41 323 P **P** **07 07 01.8 -0.4**
RAYN pmax pmax
comp=Z,7.0nm,1.0s
H03N2 Juan Fernandez 118.87 108 T T 09 22 42.8
baz=317,slow=77,SNR=25
H03N1 Juan Fernandez 118.88 108 T T 09 22 44.2
baz=317,slow=77,SNR=24
H03N3 Juan Fernandez 118.88 108 T T 09 22 44.6
baz=317,slow=77,SNR=30
TSUM Tsumeb 146.46 338 **PKPdf** **07 13 07.9 -0.4**
BOSA Boshof 152.69 318 PKPbc **PKPbc** **07 13 25.1 +0.1**
comp=Z,5.4nm,0.5s,baz=29,slow=2.9,SNR=12
BOSA Boshof 152.69 318 **PKiKP** **07 13 26.2 +0.9**

*IDC **13** 07:13:40.4±2.1,52°.92N×172°.88W,h0km,mb3.6/4, mbtmp3.5/5,ML3.0/1, Error ellipse: s-maj=73.7km s-min=30.1km az=10.0*
*NEIC **13** 07:13:52.0±1.9,52°.48N±0°.07×170°.2W±0°.1,h5km±7km, mb3.9/10,ML3.8/16,ML3.3(AEIC),Error ellipse: s-maj=13.6km s-min=3.9km az=136.0*
*AEIC **13** 07:13:53.5±2.3,52°.57N±0°.08×170°.1W±0°.1,h2km±3km, Error ellipse: s-maj=13.6km s-min=4.2km az=139.0*
ISC 13 07:13:52.9±1.0,52°.6N±0°.1×170°.29W±0°.07,h10km,n46, σ1s06/42,mb3.5/3,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**0.35**	**44**			**Pg**	**07 13 59.2**	**-0.7**
CLES						**Sg**	**07 14 04.0**	**-0.5**
CLCO	**Concord Point,**	**0.41**	**58**			**Pg**	**07 14 00.4**	**-0.6**
CLCO						**Sg**	**07 14 07.0**	**+0.6**
OKSP	**Okmok Steeple**	**1.39**	**60**			**Pn**	**07 14 16.5**	**-1.9**
OKWE	**Okmok W'ng Wal**	**1.53**	**53**			**Pn**	**07 14 19.5**	**-0.9**
OKTU	**Okmok Mt. Tuli**	**1.59**	**58**			**Pn**	**07 14 20.0**	**-0.9**
OKFG	**Magazine Ridge**	**1.67**	**59**			**Pn**	**07 14 21.3**	**-0.9**
ATKA	**Atka Island**	**2.42**	**263**	Pn		**Pn**	**07 14 32.0**	**-0.5**
UNV	**Unalaska Valle**	**2.61**	**59**			**Pn**	**07 14 34.9**	**-0.2**
UNV					IAML		07 15 11.4	
	comp=N,176nm,0.6s							
LVA	**Lava Point**	**3.01**	**56**	Pn		**Pn**	**07 14 40.6**	**0.0**
LVA					IAML		07 15 25.0	
	comp=N,362nm,1.2s							
LVA					IAML		07 15 28.3	
	comp=E,291nm,0.7s							
AKUT	**Akutan**	**3.13**	**58**	Pn		**Pn**	**07 14 42.4**	**+0.2**
AKUT					IAML		07 15 30.0	
	comp=E,98nm,0.8s							
ADK	**Adak**	**3.99**	**263**	Pn		**Pn**	**07 14 54.6**	**+0.5**
ADK					IAML		07 16 20.3	
	comp=E,199nm,0.3s							
ADK					IAML		07 16 20.7	
	comp=E,245nm,0.3s							
SPIA	**Saint Paul Isl**	**4.62**	**0**	Pn		**Pn**	**07 15 03.6**	**+0.9**
SPIA					IAML		07 15 37.8	
	comp=E,122nm,1.1s							
FALS	**False Pass**	**4.68**	**58**	Pn		**Pn**	**07 15 04.3**	**+0.7**
FALS					IAML		07 16 19.1	
	comp=E,143nm,0.7s							
M11K	**Mekoryuk**	**8.15**	**14**	Pn		**Pn**	**07 15 51.8**	**+0.7**
O14K	**Tigyukauivet M**	**8.39**	**34**	Pn		**Pn**	**07 15 54.7**	**+0.2**
N14K	**Kuskokwak Cree**	**8.78**	**30**	Pn		**Pn**	**07 16 00.7**	**+0.9**
O15K	**Ungalikthiuk R**	**8.85**	**37**	Pn		**Pn**	**07 16 01.6**	**+0.9**
M14K	**Bethel**	**9.39**	**26**	Pn		**Pn**	**07 16 07.4**	**-0.6**
N15K	**Kwethluk River**	**9.48**	**33**	Pn		**Pn**	**07 16 09.7**	**+0.3**
O16K	**Kokwok River B**	**9.79**	**39**	Pn		**Pn**	**07 16 15.0**	**+1.5**
N17K	**Nushagak Hills**	**10.75**	**37**	Pn		**Pn**	**07 16 27.8**	**+1.1**
K15K	**Wolf Creek Mou**	**10.82**	**22**	Pn		**Pn**	**07 16 30.0**	**+2.3**
L16K	**Owhat River**	**10.87**	**28**	Pn		**Pn**	**07 16 28.8**	**+0.5**
M17K	**Holitna River**	**11.27**	**33**	Pn		**Pn**	**07 16 34.0**	**+0.2**
M19K	**Big River Lodg**	**12.67**	**36**	Pn		**Pn**	**07 16 53.7**	**+0.6**
C16K	**Lisburne Hills**	**15.93**	**7**	Pn		**Pn**	**07 17 38.3**	**+1.4**
M24K	**Tolsona, Glenn**	**16.04**	**44**	Pn		**Pn**	**07 17 39.0**	**+0.6**
H22K	**Ishtalitna Cre**	**16.39**	**28**	Pn		**Pn**	**07 17 42.3**	**-0.4**
H22K					IAmb	IAmb	07 17 58.6	
	comp=Z,8.0nm,1.4s							
GLB	**Gilahina Butte**	**16.82**	**48**	Pn		**Pn**	**07 17 47.8**	**-0.6**
GLB					IAmb	IAmb	07 18 14.8	
	comp=Z,10nm,1.2s							
VRDI	**Verde Repeater**	**16.92**	**49**	Pn		**Pn**	**07 17 48.2**	**-1.5**
VRDI					IAmb	IAmb	07 17 58.8	
	comp=Z,11nm,1.2s							
ILAR	**Eielson Array**	**17.11**	**35**	P		**Pn**	**07 17 49.0**	**-2.9**
	baz=232,slow=9.9,SNR=4.5							
	comp=Z,0.2nm,0.8s							
H24K	**Noodor Dome**	**17.41**	**32**	P		**P**	**07 17 56.6**	**-0.4**
H24K					IAmb	IAmb	07 18 09.0	
	comp=Z,8.8nm,1.5s							
G24K	**Hadweenzic Riv**	**18.09**	**30**	P		**P**	**07 18 04.9**	**+0.4**
O28M	**Mount Upton**	**18.32**	**52**	P		**Pn**	**07 18 06.5**	**-0.6**
O28M					IAmb	IAmb	07 18 12.9	
	comp=Z,19nm,1.4s							
O29M	**Mount Kennedy**	**19.01**	**53**	P		**Pn**	**07 18 15.8**	**+0.5**
O29M					IAmb	IAmb	07 18 59.3	
	comp=Z,22nm,1.4s							
PEA0B	**Petropavlovsk-**	**19.26**	**284**	P		**P**	**07 18 15.9**	**-1.4**
PETK	**Petropavlovsk-**	**19.26**	**284**	P		**P**	**07 18 15.9**	**-1.4**
H11N2	**WAKE ISLAND Hy**	**37.27**	**217**	T		T	08 00 35.0	
	baz=22,slow=75,SNR=4.7							
H11N3	**WAKE ISLAND Hy**	**37.28**	**217**	T		T	08 00 43.2	
	baz=22,slow=75,SNR=5.3							
H11N1	**WAKE ISLAND Hy**	**37.28**	**217**	T		T	08 00 37.3	
	baz=22,slow=75,SNR=3.4							
NVAR	**Mina Array Bea**	**38.23**	**90**	P		**P**	**07 21 15.0**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=300,slow=6.6,SNR=3.2							
	comp=Z,0.5nm,0.7s							
H11S1	**WAKE ISLAND Hy**	**38.46**	**217**	T		T	08 02 04.2	
	baz=23,slow=76,SNR=58							
H11S2	**WAKE ISLAND Hy**	**38.48**	**217**	T		T	08 02 05.3	
	baz=23,slow=76,SNR=44							
H11S3	**WAKE ISLAND Hy**	**38.48**	**217**	T		T	08 02 05.5	
	baz=23,slow=76,SNR=28							
PDAR	**Pinedale Array**	**40.92**	**79**	P		**P**	**07 21 36.0**	**+0.5**
	comp=Z,6.6nm,0.6s,baz=295,slow=6.3,SNR=7.9							
	comp=Z,0.6nm,0.6s							
TXAR	**Lajitas Array**	**53.31**	**88**	P		**P**	**07 23 12.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=298,slow=5.0,SNR=14							
	comp=Z,1.0nm,0.7s							

*NNC **13** 07:21:28.9±4.0,49°.73N×80°.83E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=91.3km s-min=7.3km az=56.0, Suspected Mining explosion.*
*IDC **13** 07:21:36.7±2.5,49°.65N×81°.98E,h0km,mbtmp2.7/2, ML2.2/2,Error ellipse: s-maj=68.2km s-min=15.3km az=100.0*
ISC 13 07:21:30.1±1.0,49°.2N±0°.1×79°.6E±0°.2,h0km,n17, σ0s40/15,8C-5D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**1.56**	**335**	⇓P		**Pn**	**07 21 58.9**	**-0.3**
KUR14	**Kurchatov Arra**	**1.57**	**337**	⇑P		**Pn**	**07 21 59.1**	**-0.1**
KUR06	**Kurchatov Arra**	**1.58**	**335**	⇑P		**Pn**	**07 21 59.0**	**-0.3**
KUR15	**Kurchatov Arra**	**1.58**	**336**	⇑P		**Pn**	**07 21 59.3**	**-0.1**
KURBB	**Kurchatov Arra**	**1.59**	**336**	Lg		Lg	07 22 43.4	
	1.0nm,0.3s,baz=109,slow=31,SNR=8.3							
KURBB	**Kurchatov Arra**	**1.59**	**336**	⇑P		**Pb**	**07 22 00.2**	**-0.3**
	baz=165,slow=18							
KUR16	**Kurchatov Arra**	**1.61**	**335**	⇓P		**Pn**	**07 21 59.5**	**-0.2**
KUR05	**Kurchatov Arra**	**1.61**	**336**	⇑P		**Pn**	**07 21 59.9**	**+0.2**
KUR17	**Kurchatov Arra**	**1.62**	**335**	⇑P		**Pn**	**07 22 00.1**	**+0.2**
KUR04	**Kurchatov Arra**	**1.63**	**337**	⇓P		**Pb**	**07 22 00.6**	**-0.4**
KURK	**Kurchatov**	**1.66**	**339**	⇑P		**Pg**	**07 22 02.4**	**+0.5**
MAKZ	**Makanchi**	**2.87**	**145**	⇑Pg		**Pg**	**07 22 25.1**	**+0.1**
	1.6nm,0.5s							
MAKZ				⇓Lg		Lg	07 23 04.9	
	8.5nm,0.8s							

MK31	**Makanchi Array**	**3.01**	**141**	Pg		**Pb**	**07 22 25.0**	**+0.5**
	1.6nm,0.5s,baz=355,slow=12,SNR=54							
MK31				⇓Lg		Lg	07 23 05.6	
	6.9nm,0.6s,baz=352,slow=27,SNR=16							
MKAR	**Makanchi Array**	**3.01**	**141**	Pn		**Pb**	**07 22 25.0**	**+0.5**
	1.1nm,0.3s,baz=354,slow=12,SNR=56							
MKAR				Pg		**Pg**	**07 22 26.9**	**-0.8**
	1.1nm,0.3s,baz=357,slow=14,SNR=31							
MKAR				Lg		Lg	07 23 03.5	
	0.7nm,0.3s,baz=351,slow=26,SNR=13							
	1.9nm,0.4s							
ZALV	**Zalesovo Beam**	**5.80**	**32**	Pn		Pn	07 22 48.2	-9.1
	0.2nm,0.3s,baz=207,slow=16,SNR=1.6							
ZALV				Lg		Lg	07 24 04.2	
	0.5nm,0.3s,baz=194,slow=28,SNR=9.5							
	0.5nm,0.3s							
I46RU	**ZALESOVO INFRA**	**5.80**	**32**	I		I	07 48 50.0	
	baz=204,slow=326,SNR=1.7							
BVAR	**Borovoye Array**	**6.94**	**307**	Sn		**Sb**	**07 24 54.9**	**+0.1**
	baz=112,slow=23,SNR=3.8							

IDC ***13*** *07:35:46.2±11.0,4˚.15N×96˚.17E,h89km±97km,mb3.6/8, mbtmp3.9/9,ML4.5/1,Error ellipse: s-maj=94.2km s-min=15.1km az=54.0*
DJA ***13*** *07:35:55.1±0.4,4˚N±4˚×9˚7E±˚,h132km±4km,M4.3/27, mB5.1/4,mb4.8/6,MLv4.1/27,Mw(mB)4.5/4*
ISC 13 07:35:53.7±0.8,4˚43N±0˚.07×96˚.7E±0˚.1,h150km,n22, σ0s76/21,mb3.6/9,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.30**	**238**	P	**Pn**	**07 36 15.2**	**+0.9**
MLSI				S	**Sn**	**07 36 30.2**	**+0.3**
LHMI	**Lhok Sumawe**	**0.84**	**20**	P	**Pn**	**07 36 17.8**	**+0.6**
KCSI	**Kotacane, Aceh**	**1.43**	**129**	P	**Pn**	**07 36 22.2**	**-0.4**
SNSI	**Sinabang, Aceh**	**2.04**	**189**	P	**Pn**	**07 36 30.0**	**+0.7**
PSI	**Prapat**	**2.78**	**126**	P	**Pn**	**07 36 38.8**	**+0.4**
GSI	**Gunungsitoli**	**3.24**	**164**	P	**Pn**	**07 36 44.1**	**0.0**
MNSI	**Mandailing Nat**	**4.64**	**141**	P	**Pn**	**07 37 02.7**	**+0.3**
PBSI	**Pulau Batu**	**4.74**	**160**	P	**Pn**	**07 37 04.6**	**+0.9**
PPI	**Padang Panjang**	**6.12**	**142**	P	**Pn**	**07 37 22.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**14.12**	**9**	P	**Pn**	**07 39 08.0**	**+0.8**
	0.7nm,0.3s,baz=199,slow=12,SNR=11						
	2.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**36.30**	**129**	P	**P**	**07 42 42.3**	**-0.8**
	3.1nm,0.9s,baz=284,slow=13,SNR=2.2						
	3.1nm,0.9s						
XLT	**XiLinHaoTe**	**42.88**	**21**	*e*P	P	07 43 46.8	+9.4
XLT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	**Makanchi Array**	**44.00**	**346**	P	**P**	**07 43 45.3**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=154,slow=9.2,SNR=10						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**44.24**	**124**	P	**P**	**07 43 48.5**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=302,slow=9.2,SNR=13						
WRA				PcP	**PcP**	**07 45 30.9**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=312,slow=2.7,SNR=5.0						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**45.80**	**129**	P	**P**	**07 44 01.3**	**+0.5**
	comp=Z,2.0nm,0.4s,baz=301,slow=7.5,SNR=44						
ASAR				PcP	**PcP**	**07 45 36.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=294,slow=2.2,SNR=1.5						
	comp=Z,2.0nm,0.4s						
KURBB	**Kurchatov Arra**	**48.49**	**345**	P	**P**	**07 44 20.6**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=161,slow=5.9,SNR=1.2						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**50.30**	**351**	P	**P**	**07 44 35.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=160,slow=4.6,SNR=1.9						
	comp=Z,0.3nm,0.3s						
STKA	**Stephens Creek**	**55.93**	**133**	P	**P**	**07 45 17.0**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=310,slow=12,SNR=3.2						
	comp=Z,1.7nm,0.8s						
H04N2	**CROZET ISLANDS**	**64.15**	**213**	T	T	08 54 39.9	
	baz=51,slow=74,SNR=4.1						
H04N1	**CROZET ISLANDS**	**64.16**	**213**	T	T	08 55 09.0	
	baz=51,slow=74,SNR=2.3						
H04N3	**CROZET ISLANDS**	**64.17**	**213**	T	T	08 55 08.1	
	baz=51,slow=74,SNR=3.8						
BRTR	**Keskin Array B**	**66.57**	**311**	P	**P**	**07 46 26.1**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=120,slow=9.5,SNR=3.7						
	comp=Z,0.6nm,0.6s						

IDC ***13*** *07:43:59.3±2.8,23˚.08N×121˚.73E,h0km,mb3.7/6, mbtmp3.7/6,Error ellipse: s-maj=240.8km s-min=19.5km az=62.0*
JMA ***13*** *07:44:06.5±0.1,23˚N±1˚×12˚1E±˚,h43km±2km,MV3.9/14, TAIWAN REGION*
TAP ***13*** *07:44:06.5,22˚.67N×120˚.68E,h33km,ML4.2,B*
ISC 13 07:44:06.8±0.9,22˚65N±0˚.02×120˚66E±0˚.02,h36km±2km, n151,σ1s45/231,mb3.6/6,2C-10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASBT	**Mashibuluo**	**0.05**	**216**	⇓*i*P	**Pn**	**07 44 12.4**	**-0.4**
MASBT				S	**Sn**	**07 44 16.7**	**-0.1**
SSD	**Sandimen**	**0.10**	**343**	P	Pn	07 44 12.5	-0.5
SSD				*i*S	Sn	07 44 16.7	-0.5
SGLT	**Jiouru**	**0.18**	**295**	P	**Pn**	**07 44 14.1**	**-1.5**
SGLT				*e*S	**Sn**	**07 44 20.4**	**-3.0**
ECL	**Taimali**	**0.27**	**101**	⇓*i*P	**Pn**	**07 44 14.2**	**-0.6**
ECL				S	**Sn**	**07 44 19.8**	**-1.6**
SCZT	**Fangliau**	**0.28**	**188**	⇓*i*P	**Pn**	**07 44 14.6**	**-0.3**
SCZT				S	**Sn**	**07 44 20.4**	**-1.0**
TWM1	**Shoushan**	**0.28**	**308**	⇑*i*P	**Pn**	**07 44 15.3**	**+0.4**
TWM1				*e*S	**Sn**	**07 44 23.0**	**+1.5**
EAST	**Anshuo**	**0.32**	**147**	⇓*i*P	**Pn**	**07 44 14.9**	**-0.1**
EAST				S	**Sn**	**07 44 20.9**	**-0.6**
SNJT	**Kaohsiung City**	**0.32**	**289**	*e*P	**Pn**	**07 44 18.9**	**+3.9**
KAU	**Kaohsiung**	**0.34**	**256**	*e*P	**Pn**	**07 44 16.7**	**+1.5**
KAU				S	**Sn**	**07 44 25.1**	**+3.5**
TAW	**Tawu**	**0.36**	**144**	P	**Pn**	**07 44 15.6**	**+0.1**
TAW				*e*S	**Sn**	**07 44 22.2**	**+0.4**
WSSB	**Gushan**	**0.37**	**269**	P	**Pn**	**07 44 16.8**	**+1.2**
WSSB				*e*S	**Sn**	**07 44 25.1**	**+2.9**
WLCH	**Liuqiu**	**0.40**	**221**	*e*S	**Sn**	**07 44 28.1**	**+5.6**
TWG	**Pinlang**	**0.41**	**66**	⇓*i*P	**Pn**	**07 44 16.3**	**+0.1**
TWG				S	**Sn**	**07 44 22.8**	**0.0**
TWP	**Hsiaoliuchiu**	**0.41**	**223**	*e*P	**Pn**	**07 44 17.9**	**+1.7**
TWP				*e*S	**Sn**	**07 44 27.9**	**+5.1**
TWGBT	**Beinan**	**0.42**	**67**	P	**Pn**	**07 44 16.2**	**0.0**
TWGBT	**Beinan**	**0.42**	**67**	S	**Sn**	**07 44 23.0**	**+0.1**
TWGBT	**Beinan**	**0.42**	**67**	⇓*i*P	**Pn**	**07 44 16.2**	**0.0**
TWGBT				S	**Sn**	**07 44 22.9**	**-0.1**
SGST	**Jiashian**	**0.43**	**350**	⇑*i*P	**Pn**	**07 44 15.5**	**-0.9**
SGST				S	**Sn**	**07 44 23.5**	**+0.1**
SLIU	**Shizi**	**0.45**	**164**	*e*P	**Pn**	**07 44 16.9**	**+0.2**
TTN	**Taitung**	**0.46**	**77**	*e*P	**Pn**	**07 44 17.8**	**+1.0**
TTN				*e*S	**Sn**	**07 44 26.3**	**+2.5**
SHHT	**Tainan City**	**0.47**	**322**	P	**Pn**	**07 44 18.1**	**+1.1**
SHHT				*e*S	**Sn**	**07 44 27.8**	**+3.7**
CHN3	**Shinhua**	**0.51**	**327**	*e*P	**Pn**	**07 44 18.4**	**+0.9**
CHN3				S	**Sn**	**07 44 28.2**	**+3.2**
STYH	**Taoyuan**	**0.53**	**11**	P	**Pn**	**07 44 17.9**	**0.0**
STYH				*e*S	**Sn**	**07 44 26.2**	**+0.6**
CHN1	**Nanshi**	**0.55**	**347**	⇓*i*P	**Pn**	**07 44 18.1**	**-0.1**
CHN1				S	**Sn**	**07 44 27.6**	**+1.4**
TAI1	**Yung-k'ang**	**0.56**	**314**	*e*P	**Pn**	**07 44 19.1**	**+0.8**
TAI1				S	**Sn**	**07 44 28.4**	**+2.0**
SNST	**Tainan City**	**0.59**	**345**	*e*P	**Pn**	**07 44 20.6**	**+1.8**
SNST				*e*S	**Sn**	**07 44 29.8**	**+2.6**
SSHA	**Shanhua**	**0.59**	**324**	P	**Pn**	**07 44 19.1**	**+0.3**
SSHA				S	**Sn**	**07 44 29.2**	**+1.9**
WTP	**Ta-pu**	**0.59**	**356**	⇓*i*P	**Pn**	**07 44 18.7**	**-0.3**
WTP				S	**Sn**	**07 44 28.5**	**+1.1**
ELDTW	**Lidau**	**0.63**	**31**	P	**Pn**	**07 44 19.5**	**+0.1**
ELDTW				*e*S	**Sn**	**07 44 28.6**	**+0.3**
TWK	**Hsinying**	**0.63**	**345**	P	**Pn**	**07 44 19.2**	**-0.3**
TWK				*e*S	**Sn**	**07 44 29.5**	**+1.2**
HEN	**Hengchun**	**0.65**	**174**	*e*P	**Pn**	**07 44 20.0**	**+0.4**
HEN				*e*S	**Sn**	**07 44 30.3**	**+1.8**
TPUB	**Ta-pu**	**0.65**	**357**	P	**Pn**	**07 44 19.0**	**-0.6**
TPUB	**Ta-pu**	**0.65**	**357**	S	**Sn**	**07 44 29.2**	**+0.6**
TPUB	**Ta-pu**	**0.65**	**357**	⇓*i*P	**Pn**	**07 44 19.2**	**-0.4**
TPUB				S	**Sn**	**07 44 29.2**	**+0.6**
SMST	**Manzhou Townsh**	**0.65**	**166**	P	**Pn**	**07 44 19.8**	**+0.2**
SMST				*e*S	**Sn**	**07 44 30.3**	**+1.7**
ECS	**Chishang**	**0.68**	**49**	*e*P	**Pn**	**07 44 20.8**	**+0.8**
ECS				*e*S	**Sn**	**07 44 30.3**	**+1.0**
SCLT	**Jiali**	**0.68**	**320**	P	**Pn**	**07 44 19.9**	**-0.1**
SCLT				S	**Sn**	**07 44 30.5**	**+1.2**
TWK1	**Hengchun**	**0.72**	**169**	P	**Pn**	**07 44 20.9**	**+0.5**
TWK1				*e*S	**Sn**	**07 44 32.0**	**+1.8**
TWKBT	**Hengchun**	**0.72**	**169**	P	**Pn**	**07 44 21.0**	**+0.4**
TSCK	**Chigu Township**	**0.73**	**313**	*e*P	**Pn**	**07 44 20.4**	**-0.2**
TSCK				*e*S	**Sn**	**07 44 31.7**	**+1.2**
TSEB	**Hengchuen, Pin**	**0.78**	**164**	*e*P	**Pn**	**07 44 22.5**	**+1.2**
TSEB				*e*S	**Sn**	**07 44 34.8**	**+3.1**
CHKT	**Chengkung**	**0.79**	**55**	*e*P	**Pn**	**07 44 21.8**	**+0.4**
CHKT				*e*S	**Sn**	**07 44 33.3**	**+1.4**
WCKO	**Fanlu**	**0.79**	**356**	P	**Pn**	**07 44 21.4**	**0.0**
WCKO				*e*S	**Sn**	**07 44 33.0**	**+1.0**
FULB	**Fuli**	**0.80**	**47**	P	**Pn**	**07 44 22.3**	**+0.7**
FULB				*e*S	**Sn**	**07 44 35.2**	**+2.9**
CHN8	**Yiju**	**0.81**	**329**	*e*P	**Pn**	**07 44 21.6**	**-0.2**
CHN8				*e*S	**Sn**	**07 44 34.0**	**+1.5**
CHKH	**Chenggong**	**0.86**	**51**	P	**Pn**	**07 44 22.8**	**+0.3**
CHKH				*e*S	**Sn**	**07 44 35.3**	**+1.4**
ALS	**Alishan**	**0.86**	**9**	⇓P	**Pn**	**07 44 22.8**	**0.0**
ALS				*e*S	**Sn**	**07 44 35.5**	**+1.2**
CHY	**Chiayi**	**0.87**	**345**	P	**Pn**	**07 44 22.6**	**0.0**
CHY				*e*S	**Sn**	**07 44 35.1**	**+1.0**
TWF1	**Yuli**	**0.91**	**40**	*e*P	**Pn**	**07 44 23.5**	**+0.4**
TWF1				*e*S	**Sn**	**07 44 35.6**	**+0.6**
YULB	**Yu-li**	**0.94**	**38**	P	**Pn**	**07 44 23.8**	**+0.2**
YULB	**Yu-li**	**0.94**	**38**	S	**Sn**	**07 44 37.7**	**+1.9**
YULB	**Yu-li**	**0.94**	**38**	P	**Pn**	**07 44 24.0**	**+0.5**
YULB				*e*S	**Sn**	**07 44 36.2**	**+0.4**
CHN5	**Tsauling**	**0.94**	**1**	P	**Pn**	**07 44 23.5**	**-0.2**
CHN5				*e*S	**Sn**	**07 44 37.3**	**+1.3**
WSL	**Shuilin Townsh**	**0.96**	**335**	*e*P	**Pn**	**07 44 23.3**	**-0.4**
WSL				*e*S	**Sn**	**07 44 37.0**	**+0.9**
ECBN	**Changbin**	**0.98**	**47**	*e*P	**Pn**	**07 44 25.0**	**+0.9**
ECBN				*e*S	**Sn**	**07 44 39.4**	**+2.6**
LAY	**Lan-yu**	**1.02**	**126**	*e*P	**Pn**	**07 44 24.3**	**-0.4**
LAY				*e*S	**Sn**	**07 44 38.5**	**+0.7**
WGK	**Gukeng**	**1.03**	**355**	*e*P	**Pn**	**07 44 24.9**	**+0.1**
WGK				*e*S	**Sn**	**07 44 39.7**	**+1.6**
WDLH	**Douliu**	**1.04**	**354**	P	**Pn**	**07 44 24.8**	**-0.1**
WDLH				*e*S	**Sn**	**07 44 39.6**	**+1.4**
EHY	**Hungye**	**1.04**	**35**	P	**Pn**	**07 44 25.8**	**+0.8**
EHY				*e*S	**Sn**	**07 44 39.3**	**+1.0**
EHYH	**Wanrong**	**1.05**	**37**	*e*P	**Pn**	**07 44 25.8**	**+0.8**
EHYH				*e*S	**Sn**	**07 44 39.5**	**+1.2**
WHYT	**Xinyi Township**	**1.05**	**9**	*e*P	**Pn**	**07 44 25.2**	**+0.1**
WHYT				*e*S	**Sn**	**07 44 39.4**	**+0.8**
WSF	**Szhu**	**1.06**	**338**	P	**Pn**	**07 44 24.8**	**-0.4**
WSF				*e*S	**Sn**	**07 44 40.1**	**+1.3**
LYUB	**Lan-yu**	**1.07**	**127**	P	**Pn**	**07 44 23.6**	**-1.7**
LYUB				*e*S	**Sn**	**07 44 37.3**	**-1.6**
HGSD	**Ruisui**	**1.09**	**40**	P	**Pn**	**07 44 26.9**	**+1.3**
HGSD				*e*S	**Sn**	**07 44 40.4**	**+3.0**
WDGT	**Dungji**	**1.11**	**303**	*e*P	**Pn**	**07 44 25.0**	**-0.8**
SSLB	**Suanglung**	**1.16**	**13**	P	**Pn**	**07 44 26.6**	**-0.1**
SSLB	**Suanglung**	**1.16**	**13**	S	**Sn**	**07 44 42.5**	**+1.2**
SSLB	**Suanglung**	**1.16**	**13**	*e*P	**Pn**	**07 44 26.5**	**-0.1**
SSLB				*e*S	**Sn**	**07 44 42.1**	**+0.8**
VWDT	**VWDT**	**1.18**	**22**	*e*P	**Pn**	**07 44 27.4**	**+0.6**
WNT	**Mingjian**	**1.22**	**1**	P	**Pn**	**07 44 27.4**	**0.0**
WNT				*e*S	**Sn**	**07 44 43.4**	**+0.7**
EGFH	**Guangfu**	**1.23**	**35**	*e*P	**Pn**	**07 44 28.8**	**+1.2**
SMLT	**Sun Moon Lake**	**1.25**	**10**	P	**Pn**	**07 44 27.8**	**-0.1**
WARBT	**Fenglin Townsh**	**1.25**	**32**	P	**Pn**	**07 44 28.5**	**+0.7**
WARBT				*e*S	**Sn**	**07 44 44.1**	**+0.6**
TYC	**Yuchr**	**1.26**	**8**	P	**Pn**	**07 44 28.1**	**+0.2**
TYC				*e*S	**Sn**	**07 44 44.9**	**+1.3**
VCHM	**Qimei**	**1.27**	**296**	P	**Pn**	**07 44 26.8**	**-1.2**
VCHM				S	**Sn**	**07 44 42.2**	**-1.6**
PHUB	**P'eng-hu**	**1.32**	**311**	P	**Pn**	**07 44 27.4**	**-1.4**
PHUB				S	**Sn**	**07 44 43.4**	**-1.8**
TEGC	**Jichi Village**	**1.33**	**37**	*e*S	**Sn**	**07 44 47.6**	**+2.4**
ESL	**Shilin**	**1.36**	**31**	*e*P	**Pn**	**07 44 30.2**	**+1.0**
ESL				*e*S	**Sn**	**07 44 46.8**	**+0.8**
PNG	**Penghu**	**1.37**	**312**	P	**Pn**	**07 44 28.4**	**-1.1**
PNG				*e*S	**Sn**	**07 44 44.3**	**-2.0**
OWD	**Renai**	**1.38**	**20**	*e*P	**Pn**	**07 44 30.0**	**+0.3**
SHUL	**Shoufeng**	**1.40**	**36**	*e*P	**Pn**	**07 44 30.9**	**+1.1**
SHUL				*e*S	**Sn**	**07 44 49.7**	**+2.6**
WCS	**Beigang Elemen**	**1.42**	**9**	*e*S	**Sn**	**07 44 48.2**	**+0.6**
WCH1	**Changhua City**	**1.42**	**356**	*e*P	**Pn**	**07 44 30.2**	**+0.1**
WCH1				*e*S	**Sn**	**07 44 48.3**	**+0.8**
WCHH	**Zhanghua**	**1.43**	**356**	*e*P	**Pn**	**07 44 30.1**	**-0.1**
WCHH				*e*S	**Sn**	**07 44 48.6**	**+0.9**
TEYL	**Yanliau Villag**	**1.48**	**35**	*e*S	**Sn**	**07 44 53.1**	**+3.9**
TCU	**Taichung**	**1.49**	**0**	*e*P	**Pn**	**07 44 31.2**	**+0.1**
TCU				*e*S	**Sn**	**07 44 50.2**	**+0.9**
ETM	**Tongmen**	**1.51**	**30**	*e*P	**Pn**	**07 44 32.3**	**+0.9**
LXIB	**Xiulin Townshi**	**1.53**	**27**	*e*P	**Pn**	**07 44 32.1**	**+0.4**
LXIB				*e*S	**Sn**	**07 44 51.3**	**+0.9**
WHF	**Hehuan Shan**	**1.59**	**20**	P	**Pn**	**07 44 33.5**	**+0.7**
WHP	**Taichung City**	**1.64**	**9**	*e*P	**Pn**	**07 44 33.5**	**+0.3**
WHP				*e*S	**Sn**	**07 44 54.3**	**+1.2**
TDCB	**Techi**	**1.66**	**16**	*e*P	**Pn**	**07 44 33.4**	**-0.2**
TDCB				*e*S	**Sn**	**07 44 54.9**	**+1.2**
TWD	**Chiawan**	**1.66**	**31**	*e*P	**Pn**	**07 44 34.0**	**+0.5**
TWT	**Tachien**	**1.66**	**16**	*e*P	**Pn**	**07 44 33.2**	**-0.5**
FUSS	**Fushou**	**1.68**	**18**	*e*P	**Pn**	**07 44 34.7**	**+0.8**
TWQ1	**Liyutan**	**1.69**	**3**	P	**Pn**	**07 44 34.6**	**+0.7**
TWQ1				*e*S	**Sn**	**07 44 56.1**	**+1.8**
ETLH	**Xiulin Townshi**	**1.72**	**26**	*e*P	**Pn**	**07 44 35.2**	**+0.9**
NACB	**Ninganchiao**	**1.74**	**29**	P	**Pn**	**07 44 35.4**	**+0.9**
NACB	**Ninganchiao**	**1.74**	**29**	*e*P	**Pn**	**07 44 34.9**	**+0.4**
NSY	**Sanyi**	**1.76**	**3**	*e*P	**Pn**	**07 44 35.3**	**+0.4**
NSY				*e*S	**Sn**	**07 44 58.8**	**+2.8**
NNSB	**Datong**	**1.89**	**20**	P	**Pn**	**07 44 37.2**	**+0.5**
NNSB				*e*S	**Sn**	**07 45 01.0**	**+1.7**
NNS	**Nan Shan**	**1.90**	**20**	P	**Pn**	**07 44 37.8**	**+1.0**
NNS				*e*S	**Sn**	**07 45 01.1**	**+1.6**
NSTT	**Nanjuang**	**2.00**	**9**	*e*P	**Pn**	**07 44 38.2**	**+0.1**
LIOB	**Emei**	**2.01**	**9**	*e*P	**Pn**	**07 44 38.4**	**+0.1**
NFF	**Wufeng Townshi**	**2.02**	**12**	*e*P	**Pn**	**07 44 39.3**	**+0.9**
LATG	**Datong**	**2.04**	**23**	P	**Pn**	**07 44 40.2**	**+1.5**
LATG				*e*S	**Sn**	**07 45 05.8**	**+2.8**
EOS4	**EOS4**	**2.11**	**46**	*e*P	**Pn**	**07 44 40.8**	**+1.5**
EOS4				*e*S	**Sn**	**07 45 04.7**	**+0.7**
YHNB	**Yeheng**	**2.11**	**18**	P	**Pn**	**07 44 41.0**	**+1.3**
YHNB	**Yeheng**	**2.11**	**18**	S	**Sn**	**07 45 08.5**	**+3.7**
YHNB	**Yeheng**	**2.11**	**18**	*e*P	**Pn**	**07 44 40.7**	**+1.0**
YHNB				*e*S	**Sn**	**07 45 07.6**	**+2.8**
NSK	**Sanguang**	**2.11**	**17**	*e*P	**Pn**	**07 44 41.2**	**+1.5**
NSK				*e*S	**Sn**	**07 45 07.0**	**+2.2**
ENT	**Nioudou**	**2.15**	**22**	*e*P	**Pn**	**07 44 41.6**	**+1.5**
ENTT				*e*S	**Sn**	**07 45 08.7**	**+3.1**
NDS	**Dongshan**	**2.20**	**26**	*e*P	**Pn**	**07 44 42.2**	**+1.4**
EOS3	**EOS3**	**2.23**	**43**	*e*P	**Pn**	**07 44 42.6**	**+1.6**
EOS3				*e*S	**Sn**	**07 45 08.6**	**+1.4**
NWLT	**Wulai**	**2.25**	**20**	*e*P	**Pn**	**07 44 42.4**	**+0.8**
FUSB	**Fushanzhiwuyua**	**2.26**	**22**	*e*P	**Pn**	**07 44 43.5**	**+1.7**
EOS2	**EOS2**	**2.27**	**39**	*e*S	**Sn**	**07 45 08.6**	**+0.2**
TATO	**Taipei**	**2.43**	**18**	P	**Pn**	**07 44 46.4**	**+2.3**
TIPB	**Shuangxi**	**2.54**	**24**	*e*P	**Pn**	**07 44 47.0**	**+1.3**
VWUC	**VWUC**	**2.58**	**335**	*e*P	**Pn**	**07 44 44.7**	**-1.4**
SXI1	**Grass Mountain**	**2.67**	**24**	*e*P	**Pn**	**07 44 49.5**	**+2.1**
KNM	**Kinmen**	**2.70**	**311**	*e*P	**Pn**	**07 44 48.3**	**+0.6**
JYNG	**Yonagunijimaku**	**2.75**	**49**	*e*P	**Pn**	**07 44 50.4**	**+1.9**
KNMB	**Chin-men Tao**	**2.76**	**311**	*e*P	**Pn**	**07 44 48.0**	**-0.6**
YOJ	**Yonaguni jima**	**2.81**	**50**	P	**Pn**	**07 44 51.3**	**+2.1**
YOJ	**Yonaguni jima**	**2.81**	**50**	P	**Pn**	**07 44 51.1**	**+1.9**
YOJ				*e*S	**Sn**	**07 45 23.4**	**+1.6**
YOJ	**Yonaguni jima**	**2.81**	**50**	*e*P	**Pn**	**07 44 50.8**	**+1.6**
YOJ				*e*S	**Sn**	**07 45 23.2**	**+1.4**
ZPLA	**Ao Xicun**	**2.97**	**296**	*e*P	**Pn**	**07 44 50.5**	**-0.9**
ZPLA				*e*S	**Sn**	**07 45 24.3**	**-1.4**
DSXP	**Dongshan**	**3.16**	**290**	*e*P	**Pn**	**07 44 53.2**	**-0.8**
HATJ	**Hateruma jima**	**3.21**	**64**	P	**Pn**	**07 44 55.7**	**+1.0**
HATJ				*e*S	**Sn**	**07 45 32.5**	**+0.8**
IRIF	**Iriomote-Funau**	**3.28**	**59**	P	**Pn**	**07 44 57.2**	**+1.6**
IRIF				*e*S	**Sn**	**07 45 35.6**	**+2.2**
AXDP	**Jialang**	**3.33**	**313**	*e*P	**Pn**	**07 44 55.3**	**-1.1**
JKRS	**Kuro-shima**	**3.45**	**62**	*e*P	**Pn**	**07 44 59.4**	**+1.3**
JKRS				*e*S	**Sn**	**07 45 38.1**	**+0.4**
MATB	**Ma-tsu**	**3.55**	**350**	*e*P	**Pn**	**07 44 58.1**	**-1.2**
JIJ	**Ishigaki jima**	**3.62**	**61**	*e*P	**Pn**	**07 45 01.2**	**+0.9**
JIJ				*e*S	**Sn**	**07 45 42.1**	**+0.2**
MHZQ	**Yeshan**	**3.74**	**337**	*e*P	**Pn**	**07 45 01.2**	**-0.9**
JISG	**Ishigakijimahi**	**3.86**	**59**	P	**Pn**	**07 45 04.4**	**+0.8**
JISG				*e*S	**Sn**	**07 45 47.8**	**0.0**
LYJJ	**Jianjiangzhen**	**3.97**	**348**	*e*P	**Pn**	**07 45 04.3**	**-0.9**
JTJ	**Tarama**	**4.20**	**61**	*e*P	**Pn**	**07 45 09.7**	**+1.3**
JTJ				*e*S	**Sn**	**07 45 56.2**	**0.0**
XPSS	**Dashiqiu**	**4.28**	**354**	*e*P	**Pn**	**07 45 08.4**	**-1.1**
MKAR	**Makanchi Array**	**39.12**	**317**	P	**P**	**07 51 31.6**	**+0.8**
	0.5nm,0.6s,baz=110,slow=9.9,SNR=6.1						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**41.28**	**328**	P	**P**	**07 51 46.9**	**-1.7**
	0.5nm,0.4s,baz=116,slow=6.6,SNR=1.9						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**42.98**	**321**	P	**P**	**07 52 02.2**	**-0.3**
	1.3nm,0.9s,baz=121,slow=7.2,SNR=4.2						
	1.3nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**43.07**	**85**	T	T	08 37 37.8	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**43.08**	**85**	T	T	08 37 23.3	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**43.09**	**85**	T	T	08 37 22.6	
	baz=283						
H11S3	**WAKE ISLAND Hy**	**43.16**	**87**	T	T	08 37 45.9	
	baz=287						
H11S1	**WAKE ISLAND Hy**	**43.17**	**87**	T	T	08 37 41.5	
	baz=287						
H11S2	**WAKE ISLAND Hy**	**43.18**	**87**	T	T	08 37 44.2	
	baz=287						
WRA	**Warramunga Arr**	**44.39**	**161**	P	**P**	**07 52 12.2**	**-1.9**
	0.8nm,0.6s,baz=344,slow=8.6,SNR=8.6						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**47.81**	**164**	P	**P**	**07 52 40.1**	**-0.8**
	0.4nm,0.7s,baz=342,slow=6.8,SNR=6.2						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**48.56**	**322**	P	**P**	**07 52 46.8**	**+0.2**
	0.7nm,0.5s,baz=109,slow=6.0,SNR=4.8						
	0.7nm,0.5s						

NNC ***13*** *07:46:14.8±1.6,41˚.71N×73˚.23E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=10.5km s-min=7.0km az=33.0*
SOME ***13*** *07:46:16.8,41˚.82N×73˚.30E,h5km*
KNET ***13*** *07:46:17.3±0.4,41˚.82N×73˚.39E,h6km±1km,ml1.7,Error ellipse: s-maj=3.5km s-min=2.5km az=156.0*
ISC 13 07:46:16.7±3.1,41˚8N±0˚.1×73˚36E±0˚.08,h3km±13km,n18, σ0s86/30,6C-5D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**0.96**	**354**	P	**Pg**	**07 46 35.0**	**0.0**
	2.0nm,0.1s						
MRKS				S

GURO				Sg	Sb	08 09 58.4	-1.0
ADCV	**BITLIS_Adilcev**	**0.68**	**12**	P	Pg	08 09 52.5	-0.4
ADCV				S	Sb	08 10 02.1	-0.4
ADCV				IAML		08 10 04.0	
	comp=N,307nm,0.3s						
ADCV				IAML		08 10 04.0	
	comp=E,349nm,0.3s						
TVAN	**Van**	**0.78**	**60**	P	Pg	08 09 53.1	-0.6
TVAN				S	Sb	08 10 05.3	0.0
TVAN				IAML		08 10 09.0	
	comp=N,121nm,0.4s						
MLAZ	**Malazgirt-MUS**	**1.00**	**0**	Pg	Pg	08 09 57.8	-0.2
SVAN	**Silvan-Diyarba**	**1.06**	**271**	Pg	Pb	08 09 59.5	+0.2
SVAN				Sg	Sn	08 10 14.9	+0.1
VMUR	**Van-Muradiye**	**1.17**	**43**	P	Pg	08 10 01.0	-0.2
VMUR				S	Sn	08 10 18.7	+1.2
VMUR				IAML		08 10 22.0	
	comp=N,55nm,0.3s						
DORK	**Agr/Tutak/Do**	**1.26**	**8**	P	Pn	08 10 03.0	+0.3
DORK				S	Sn	08 10 20.2	+0.5
DORK				IAML		08 10 23.0	
	comp=N,70nm,0.6s						
DORK				IAML		08 10 25.0	
	comp=E,57nm,0.6s						
BNGB	**Bingl**	**1.69**	**301**	Pn	Pb	08 10 09.5	-0.6

IDC ***13*** *08:12:23.7±3.4, 10°.44S×119°.39E, h65km±31km, mb3.8/8, mbtmp4.1/13, ML3.8/5, Error ellipse: s-maj=29.5km s-min=20.2km az=56.0*

DJA ***13*** *08:12:24.8±0.4, 10°.5S×11°.9E±°, h10km, M4.4/18, mB5.3/2, mb4.5/6, MLv4.3/18, Mw(mB)4.7/2*

ISC 13 08:12:17.1±0.8, **10.40S**±0.07×**119.70E**±0.06, **h10**km, **n26, σ1§95/25, mb4.2/8, Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.81**	**338**	P	Pn	08 12 35.8	+1.1
BASI	**Baing, Sumba**	**0.88**	**78**	P	Pn	08 12 47.2	+12
DBNI	**Kabupaten Domp**	**2.33**	**324**	P	Pn	08 12 56.5	+1.0
MMRI	**Maumere**	**3.05**	**55**	P	Pg	08 13 17.8	+2.2
BATI	**Baumata**	**3.90**	**88**	P	Pb	08 13 26.0	0.0
	13nm,0.3s,baz=294,slow=20,SNR=4.1						
BATI				S	Sb	08 14 13.9	+0.5
	35nm,0.4s,baz=287,slow=19,SNR=7.9						
	36nm,0.4s						
BATI	**Baumata**	**3.90**	**88**	P	Pg	08 13 31.0	-0.9
KLNI	**Mataram**	**4.07**	**299**	P	Pn	08 13 19.1	-0.3
BSSI	**Bau Bau, Buton**	**4.30**	**10**	P	Pb	08 13 29.5	-3.3
KHKI	**Kahang-Kahang**	**4.52**	**296**	P	Pn	08 13 26.6	+1.0
SOEI	**Soe**	**4.54**	**82**	P	Pg	08 13 41.4	-2.7
MKS	**Makassar**	**5.15**	**357**	P	Pn	08 13 39.7	+5.4
KAPI	**Kappang**	**5.35**	**1**	P	Pn	08 13 42.5	+5.5
	2.6nm,0.3s,baz=186,slow=9.9,SNR=12						
KAPI				S	Sn	08 14 40.6	+1.8
	17nm,0.5s,baz=93,slow=10,SNR=5.9						
	7.9nm,0.3s						
KAPI	**Kappang**	**5.35**	**1**	P	Pn	08 13 43.1	+6.0
	16nm,0.5s						
ABJI	**Asem Bagus**	**5.99**	**295**	P	Pn	08 13 46.8	+1.0
	0.3nm52nm,0.7s						
SPSI	**Sidrap Palu**	**6.39**	**1**	P	Pn	08 13 57.1	+5.7
	0.1nm23nm,0.8s						
FITZ	**Fitzroy Crossi**	**9.57**	**144**	P	Pn	08 14 39.3	+4.2
	0.7nm,0.3s,baz=326,slow=7.0,SNR=18						
FITZ				S	Sn	08 16 21.6	-1.1
	7.4nm,0.6s,baz=0.0,slow=20,SNR=6.7						
	5.8nm,0.6s						
WRA	**Warramunga Arr**	**17.00**	**126**	P	P	08 16 19.8	+2.7
	0.2nm,0.3s,baz=307,slow=14,SNR=9.1						
WRA				S	Sn	08 19 20.9	-3.5
	0.5nm,0.5s,baz=307,slow=25,SNR=2.9						
	2.1nm,0.8s						
ASAR	**Alice Springs**	**18.91**	**136**	P	Pn	08 16 43.0	+4.4
	0.3nm,0.3s,baz=322,slow=12,SNR=16						
ASAR				S	S	08 20 11.2	-2.0
	0.5nm,0.8s,baz=316,slow=22,SNR=3.2						
	5.8nm,0.9s						
KSRS	**Korea Array**	**48.22**	**9**	P	P	08 20 59.0	+1.1
	1.4nm,0.8s,baz=199,slow=7.6,SNR=5.7						
	1.4nm,0.8s						
LZDM	**Lanzhou Array**	**48.52**	**343**	P	P	08 20 60.0	-0.8
	0.4nm,0.3s,baz=142,slow=17,SNR=0.9						
	0.4nm,0.3s						
MJAR	**Matsushiro Arr**	**49.84**	**20**	P	P	08 21 09.7	-0.8
	0.8nm,0.5s,baz=151,slow=2.8,SNR=1.9						
	0.8nm,0.5s						
USRK	**Ussuriysk Ar.**	**55.47**	**11**	P	P	08 21 52.8	+0.8
	2.2nm,0.6s,baz=218,slow=7.5,SNR=3.1						
	2.2nm,0.6s						
SONM	**Songino Array**	**59.17**	**350**	P	P	08 22 18.1	-0.1
	3.5nm,0.6s,baz=168,slow=8.0,SNR=12						
	3.5nm,0.6s						
HILR	**Hailar Array B**	**59.70**	**0**	P	P	08 22 21.8	0.0
	0.8nm,0.5s,baz=185,slow=8.9,SNR=4.5						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**66.01**	**333**	P	P	08 23 02.6	-1.3
	1.6nm,0.7s,baz=148,slow=8.4,SNR=11						
	1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**70.59**	**339**	P	P	08 23 30.6	-1.7
	0.8nm,0.4s,baz=131,slow=6.9,SNR=3.1						
	0.8nm,0.4s						

ECX ***13*** *08:16:44.4±0.3, 29°.00N×113°.18W, h6km±4km, ML4.6*

MEX ***13*** *08:16:44.7±0.6, 29°.05N×113°.23W, h10km, MD4.5*

IDC ***13*** *08:16:45.0±0.8, 28°.95N×112°.99W, h0km, mb4.1/9, mbtmp4.1/17, ML3.7/7, MS4.4/57, Error ellipse: s-maj=13.8km s-min=7.3km az=47.0*

NEIC ***13*** *08:16:46.8±2.0, 29°.1N±0°.1×113°.13W±0°.08, h10km±2km, mb4.3/19, Error ellipse: s-maj=17.8km s-min=11.3km az=188.0*

GCMT ***13*** *08:16:47.8±0.2, 28°.94N±0°.01×113°.19W±0°.01, h15km, MW5.2/134, Moment Tensor Solution. s71,c93; s134,c232; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.41±.13; Mθθ=4.84±.10; Mϕϕ=6.25±.12; Mrθ=-4.01±.47; Mθϕ=0.67±.09; Mϕr=2.05±.35; Best double couple: M=7.26600×10^16 NP1:ϕs=143.00000°, δ=52.00000°, λ=-167.00000°. NP2:ϕs=45.00000°, δ=80.00000°, λ=-38.00000°. Principal axes: T 7.0200, Plg=18.0000°, Azm=99.0000°; N 0.4910, Plg=51.0000°, Azm=212.0000°; P =-7.5110, Plg=34.0000°, Azm=357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GFZ ***13*** *08:16:48.1, 28°.78N×113°.02W, h16km, MW5.1, Moment Tensor Solution. s26 Moment tensor: Mrr=1.01; Mθθ=-3.86; Mϕϕ=4.87; Mrθ=-1.57; Mrϕ=0.02; Mθϕ=1.03; Fault plane solution: NP1:ϕs=137.00000°, δ=65.00000°, λ=-168.00000°. NP2:ϕs=43.00000°, δ=80.00000°, λ=-24.00000°. Principal axes: T 5.0600, Plg=10.0000°, Azm=92.0000°; N -0.4800, Plg=63.0000°, Azm=203.0000°; P =-4.5700, Plg=24.0000°, Azm=357.0000°;*

ISC 13 08:16:44.4±1.3, **28°.97N**±0°.03×**113°.14W**±0°.03, **h0**km±9km, **n160, σ1§73/131, mb4.5/12, MS4.5/53, 4C-2D, Baja California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
BAHB	**Baha de los**	**0.38**	**267**	P	Pg	08 16 50.6	-0.9
BAHB				eS	Sg	08 16 55.5	-0.9
BAHB				IAML		08 16 57.0	
	comp=E,65μm,0.4s						
BAHB				e		08 16 57.0	
BAHB	**Baha de los**	**0.38**	**267**	eP	Pg	08 16 50.6	-0.9
BAHB				i S	Sg	08 16 55.3	-1.2
BKIRB	**Bahia Kino**	**1.00**	**96**	eP	Pg	08 17 02.5	-1.0
BKIRB				eS	Sg	08 17 16.5	0.0
NE74	**Guerrero Negro**	**1.23**	**219**	eP	Pg	08 17 05.8	-2.1
NE74				eS	Sg	08 17 22.2	-1.6
LAPR	**La Primavera**	**1.68**	**25**	eP	Pn	08 17 13.4	-1.6
SRIG	**Santa Rosalia**	**1.82**	**154**	eP	Pn	08 17 15.6	-1.4
SRIG				eS	Sn	08 17 40.2	-0.4
SRIG	**Santa Rosalia**	**1.82**	**154**	eP	Pn	08 17 13.7	-3.3
SRIG				eS	Sn	08 17 37.6	-3.0
HSIG		**1.92**	**88**	eP	Pn	08 17 15.6	-2.7
HSIG				eS	Sn	08 17 39.2	-3.9
GUYB	**Guaymas**	**2.26**	**118**	eP	Pn	08 17 19.7	-3.2
GUYB				eS	Sn	08 17 49.3	-2.1
GUYB	**Guaymas**	**2.26**	**118**	eP	Pn	08 17 19.8	-3.2
GUYB				eS	Sn	08 17 49.0	-2.5
SFX	**San Felipe**	**2.54**	**325**		Sn	08 17 24.7	-2.2
SFX	**San Felipe**	**2.54**	**325**	eS	Sn	08 17 56.9	-1.6
SFX	**San Felipe**	**2.54**	**325**	eP	Pn	08 17 24.4	-2.5
SFX				eS	Sn	08 17 57.7	-0.8
PIX	**Pinacate**	**2.60**	**354**		Pn	08 17 25.5	-2.2
SQX	**San Quintin**	**2.87**	**305**	eP	Pn	08 17 29.2	-2.2
SPIG	**San Pedro Mart**	**2.90**	**316**	eP	Pn	08 17 30.6	-1.4
SPIG	**San Pedro Mart**	**2.90**	**316**	eP	Pn	08 17 34.1	+2.1
SPIG				eS	Sn	08 18 06.6	-1.1
214A	**Organ Pipe Nat**	**2.99**	**5**		Pn	08 17 31.4	-1.7
CDOB	**Cd. Obregon**	**3.07**	**120**	eS	Sn	08 18 14.2	+2.7
VTX	**Valle De La Tr**	**3.33**	**317**		Pn	08 17 36.1	-1.7
NE77	**Loreto B.C.S**	**3.34**	**151**	eP	Pn	08 17 37.0	-0.7
NZIG	**Nacozari, Sono**	**3.42**	**65**	eP	Pn	08 17 38.1	-1.0
NZIG				eS	Sn	08 18 13.8	-6.5
113A	**Mohawk Valley,**	**3.83**	**352**		Pn	08 17 43.4	-1.1
MBIG	**Mexicali**	**3.86**	**333**	eP	Pn	08 17 47.5	+2.5
ESJX	**Sierra Juarez**	**3.88**	**322**		Pn	08 17 44.2	-1.3
TUC	**Tucson**	**3.90**	**31**		Pn	08 17 45.5	-0.1
TUC	**Tucson**	**3.90**	**31**	eP	Pn	08 17 45.3	-0.3
TUC				eS	Sn	08 18 28.2	-3.9
CPBX	**Cerro Prieto**	**3.92**	**332**		Pn	08 17 47.8	+2.1
319A	**Douglas**	**4.11**	**53**		Pn	08 17 47.7	-0.9
GLA	**Glamis**	**4.32**	**341**		Pn	08 17 50.9	-0.5
YUH	**Yuha Desert**	**4.38**	**328**		Pn	08 17 51.1	-1.1
CBX	**Cerro Bola**	**4.51**	**319**		Pn	08 17 55.2	+1.1
CBX	**Cerro Bola**	**4.51**	**319**	eP	Pn	08 17 54.7	+0.6
CBX				eS	Sn	08 18 45.7	-1.6
EVAR0	**San Evaristo**	**4.58**	**151**	eP	Pn	08 17 54.4	-0.6
CGIG		**4.70**	**71**	eP	Pn	08 17 56.6	-0.1
CGIG				eS	Sn	08 18 51.2	-0.8
CSIG	**Choix**	**4.72**	**116**	eP	Pn	08 17 54.7	-2.2
CSIG				eS	Sn	08 18 49.3	-3.0
BAR	**Barrett**	**4.79**	**321**		Pn	08 17 57.4	-0.4
BLYC	**Blythe**	**4.91**	**346**		Pn	08 17 58.2	-1.3
Y14A	**Wickenburg**	**4.96**	**1**		Pn	08 17 59.4	-0.8
DUN6	**Lazy B Ranch**	**4.99**	**43**		Pn	08 18 00.8	+0.2
BC3	**Big Chuckawall**	**5.08**	**338**		Pn	08 18 01.6	-0.2
BORC	**Borrego Spring**	**5.13**	**328**		Pn	08 18 02.4	0.0
DPP	**Dos Picos Cty**	**5.18**	**322**		Pn	08 18 03.3	+0.1
PMD	**Palm Desert**	**5.43**	**330**		Pn	08 18 07.2	+0.7
PFO	**Pinyon Flats O**	**5.43**	**329**	Pn	Pn	08 18 10.1	+3.4
	comp=E,0.3nm,0.3s,baz=132,slow=7.9,SNR=11						
PFO				Sn	Sn	08 19 11.5	+1.4
	comp=E,2.6nm,0.3s,baz=174,slow=11,SNR=3.9						
PFO				Lg	Lg	08 19 41.9	
	comp=E,3.6nm,0.3s,baz=209,slow=9.9,SNR=10						
	comp=E,3.1nm,0.5s						
IRM	**Iron Mountain**	**5.45**	**342**		Pn	08 18 06.6	-0.3
LPIG	**La Paz**	**5.47**	**152**	Pn	Pn	08 18 08.0	+1.0
	comp=E,10nm,0.3s,baz=322,slow=7.1,SNR=10						
LPIG				Pg	Pb	08 18 24.6	+3.8
	comp=E,16nm,0.3s,baz=335,slow=8.7,SNR=11						
LPIG				Sn	Sn	08 19 11.8	+1.2
	baz=282,slow=10						
LPIG				Lg	Lg	08 19 35.1	
	comp=E,6.4nm,0.3s,baz=292,slow=19,SNR=7.0						
LPIG				LR	LR	08 20 08.3	
	comp=E,5μm,18.5s,baz=338,slow=38						
	comp=E,50nm,0.5s						
DNR	**Dunn Ranch,Anz**	**5.47**	**328**		Pn	08 18 07.5	+0.2
X16A	**Lo Mia Camp, P**	**5.62**	**14**		Pn	08 18 09.7	+0.3
121A	**Cookes Peak, D**	**5.82**	**51**		Pn	08 18 11.8	-0.2
NEE2	**Needles Airpor**	**5.92**	**348**		Pn	08 18 13.1	-0.2
ELS	**Elsinore Mount**	**5.94**	**323**		Pn	08 18 14.8	+1.2
DANC	**Danby, Needles**	**5.97**	**342**		Pn	08 18 14.0	0.0
SLBS	**Sierra La Lagu**	**5.99**	**151**		Pn	08 18 14.4	+0.1
SLBS	**Sierra La Lagu**	**5.99**	**151**	eP	Pn	08 18 13.0	-1.3
X18A	**Snowflake**	**6.17**	**25**		Pn	08 18 18.2	+1.3
EPT	**El Paso**	**6.37**	**62**		Pn	08 18 21.1	+1.5
WUAZ	**Wupatki**	**6.70**	**12**		Pn	08 18 25.3	+1.1
MWC	**Mount Wilson**	**6.71**	**323**		Pn	08 18 25.0	+0.6
SSIG	**Sanalona**	**6.76**	**126**	eP	Pn	08 18 24.5	-0.3
SSIG				eS	Sb	08 20 07.5	+3.4
W18A	**Petrified Fore**	**6.78**	**24**	Pn	Pn	08 18 26.5	+1.3
V12A	**Nelson**	**6.89**	**348**		Pn	08 18 27.0	+0.2
HPIG		**6.91**	**105**		Pn	08 18 26.9	-0.2
BCIG	**La Boquilla**	**6.96**	**100**	eP	Pn	08 18 24.9	-2.7
BCIG				eS	Sn	08 19 43.6	-4.0
GSC	**Goldstone, Bar**	**7.04**	**335**		Pn	08 18 28.7	-0.1
MNTX	**Cornudas Mount**	**7.23**	**66**		Pn	08 18 31.2	-0.2
Y22A	**Socorro**	**7.23**	**45**		Pn	08 18 32.6	+1.1
VHRN	**Van Horn**	**7.30**	**74**		Pn	08 18 33.6	+1.1
ANMO	**Albuquerque**	**8.23**	**42**	Pn	Pn	08 18 46.2	+1.0
	comp=E,0.4nm,0.3s,baz=219,slow=14,SNR=16						
ANMO				Sn	Sn	08 20 18.4	-0.6
	comp=E,0.8nm,0.3s,baz=217,slow=13,SNR=5.4						
ANMO				Lg	Lg	08 21 04.6	
	comp=E,1.5nm,0.3s,baz=311,slow=23,SNR=8.2						
	comp=E,1.4nm,0.4s						
TXAR	**Lajitas Array**	**8.29**	**85**	Pn	Pn	08 18 46.4	+0.4
	comp=E,7.4nm,0.3s,baz=252,slow=13,SNR=260						
TXAR				Sn	Sn	08 20 17.2	-3.1
	baz=272,slow=31						
TXAR				Lg	Lg	08 21 02.1	
	comp=E,1.4nm,0.3s,baz=190,slow=25,SNR=3.8						
MNHN	**Monahans**	**9.29**	**73**		Pn	08 19 01.1	+1.5
PSUT	**Pine Spring**	**9.56**	**357**		Pn	08 19 05.4	+2.0
NVAR	**Mina Array Bea**	**10.37**	**337**	Pn	Pn	08 19 18.8	+4.2
	comp=E,0.2nm,0.3s,baz=161,slow=15,SNR=12						
NVAR				Lg	Lg	08 22 15.3	
	baz=103,slow=34,SNR=1.7						
	comp=E,1.5nm,0.7s						
ELK	**Elko**	**11.88**	**352**	Pn	Pn	08 19 37.4	+2.2
	comp=E,0.2nm,0.3s,baz=187,slow=12,SNR=14						
ELK				Lg	Lg	08 23 01.1	
	comp=E,0.1nm,0.3s,baz=114,slow=12,SNR=1.6						
	comp=E,6.9nm,1.0s						
ABTX	**Abilene, Hawle**	**12.16**	**69**		Pn	08 19 40.7	+1.9
PDAR	**Pinedale Array**	**14.07**	**11**	Pn	Pn	08 20 08.2	+3.0
	comp=E,0.1nm,0.3s,baz=195,slow=12,SNR=8.7						
PDAR				Lg	Lg	08 24 09.2	
	comp=E,0.1nm,0.3s,baz=179,slow=15,SNR=1.9						
PDAR				LR	LR	08 25 51.8	
	comp=E,2μm,19.8s,baz=186,slow=39						
	comp=E,1.3nm,0.9s						
YBH	**Yreka Blue Hor**	**14.93**	**331**	Pn	P	08 20 19.8	-2.8
	baz=132,slow=5.2,SNR=4.7						
YBH				LR	LR	08 26 04.4	
	comp=E,191nm,19.2s,baz=218,slow=37						
TUL3	**Leonard**	**16.18**	**60**	Pn	Pn	08 20 33.6	+0.5
TUL3				lAmb	lAmb	08 20 35.8	
	comp=E,34nm,0.9s						
I05D	**Terrebonne, OR**	**16.68**	**339**	Pn	Pn	08 20 39.6	+0.2
I05D				lAmb	lAmb	08 21 15.5	
	comp=E,18nm,1.1s						
RSSD	**Black Hills**	**16.78**	**23**	Pn	Pn	08 20 40.6	-0.3
HHAR	**Hobbs**	**17.72**	**61**	P	Pn	08 20 52.9	+0.3
F07A	**Phinny Hill Vi**	**17.73**	**344**	P	P	08 20 53.4	0.0
F07A				lAmb	lAmb	08 21 06.7	
	comp=E,16nm,1.0s						
WLAR	**White Oak Lake**	**17.74**	**70**	P	Pn	08 20 53.2	+0.4
WLAR				lAmb	lAmb	08 21 22.7	
	comp=E,23nm,0.9s						
Z41A	**Richland Creek**	**17.92**	**71**	P	P	08 20 55.5	-0.2
Z41A				lAmb	lAmb	08 21 17.1	
	comp=E,24nm,0.9s						
E08A	**Dider Farm, El**	**18.10**	**347**	P	Pn	08 20 57.4	+0.2
MXC	**Moxie City**	**18.45**	**344**	P	P	08 21 01.6	0.0
NEW	**Newport**	**19.51**	**352**	P	Pn	08 21 14.4	+0.1
	comp=E,0.1nm,0.3s,baz=179,slow=10.0,SNR=9.5						
NEW				LR	LR	08 29 49.0	
	comp=E,1μm,20.1s,baz=198,slow=40						
	comp=E,5.0nm,1.0s						
GNW	**Green Mountain**	**20.04**	**341**	P	Pn	08 21 20.1	-0.4
GNW				lAmb	lAmb	08 21 22.4	
	comp=E,9.7nm,1.2s						
NLWA	**Neilton Lookou**	**20.20**	**339**	P	P	08 21 20.6	-0.1
NLWA				lAmb	lAmb	08 21 24.5	
	comp=E,14nm,1.1s						
CMIG	**Matias Romero**	**20.51**	**121**	P	P	08 21 24.5	+0.3
	comp=E,5.0nm,0.8s,baz=303,slow=9.8,SNR=10						
CMIG				LR	LR	08 28 27.2	
	comp=E,2μm,18.2s,baz=290,slow=34						
	comp=E,5.0nm,0.8s						
WVT	**Waverly**	**22.46**	**65**	P	P	08 21 46.0	+1.0
WVT				lAmb	lAmb	08 21 57.2	
	comp=E,23nm,1.1s						
W50A	**Signal Mountai**	**24.33**	**68**	P	P	08 22 04.4	+0.4
ULM	**Lac du Bonnet**	**24.96**	**27**	P	P	08 22 09.6	+0.3
	comp=E,9.1nm,0.9s,baz=205,slow=9.3,SNR=12						
ULM				Lg	Lg	08 29 56.5	
	baz=142,slow=19,SNR=1.8						
ULM				LR	LR	08 31 53.4	
	comp=E,718nm,21.3s,baz=214,slow=36						
	comp=E,9.1nm,0.9s						
ULM	**Lac du Bonnet**	**24.96**	**27**	P	P	08 22 09.3	0.0
ULM				lAmb	lAmb	08 22 11.3	
	comp=E,11nm,1.0s						
APG	**El Apazote**	**25.14**	**119**	LR	LR	08 32 53.0	
	comp=E,98nm,18.9s,baz=286,slow=39						
TKL	**Tuckaleechee C**	**25.64**	**67**	LR	LR	08 32 15.1	
	comp=E,1μm,18.1s,baz=262,slow=36						
BBB	**Bella Bella**	**25.73**	**338**	LR	LR	08 31 56.0	
	comp=E,1μm,21.9s,baz=170,slow=35						
SADO	**Sadowa**	**31.16**	**50**	LR	LR	08 36 13.5	
	comp=Z,694nm,19.1s,baz=275,slow=38						
DLBC	**Dease Lake**	**31.70**	**343**	LR	LR	08 36 56.2	
	comp=Z,1μm,18.5s,baz=144,slow=38						
JTS	**Las Juntas de**	**32.26**	**119**	LR	LR	08 37 35.8	
	comp=Z,464nm,19.0s,baz=313,slow=39						
YKA	**Yellowknife Ar**	**33.55**	**359**	P	P	08 23 25.6	0.0
	comp=Z,0.8nm,0.9s,baz=188,slow=7.9,SNR=14						
YKA				LR	LR	08 38 04.4	
	comp=Z,1μm,19.2s,baz=179,slow=38						
	comp=Z,0.8nm,0.9s						
KDAK	**Kodiak Island**	**39.71**	**328**	LR	LR	08 38 33.3	
	comp=Z,707nm,18.9s,baz=127,slow=33						
INK	**Inuvik**	**41.18**	**349**	LR	LR	08 42 59.9	
	comp=Z,2μm,18.2s,baz=177,slow=38						
ILAR	**Eielson Array**	**41.62**	**339**	P	P	08 24 35.1	+1.3
	comp=Z,5.4nm,1.1s,baz=150,slow=7.3,SNR=20						
ILAR				LR	LR	08 42 47.4	
	comp=Z,722nm,18.1s,baz=126,slow=38						
	comp=Z,5.4nm,1.1s						
SCHQ	**Schefferville**	**41.99**	**39**	LR	LR	08 43 28.6	
	comp=Z,446nm,18.2s,baz=255,slow=38						
OTAV	**Otavalo**	**43.73**	**125**	P	P	08 24 52.8	+0.6
OTAV				lAmb	lAmb	08 25 04.2	
	comp=Z,16nm,1.4s						
ROSC	**El Rosal**	**43.88**	**116**	LR	LR	08 45 38.8	
	comp=Z,660nm,18.9s,baz=320,slow=40						
SJG	**San Juan**	**44.16**	**93**	LR	LR	08 45 34.4	
	comp=Z,291nm,21.6s,baz=302,slow=39						
J18K	**Innoko River**	**44.31**	**334**	P	P	08 24 56.4	+0.7
SDV	**Santo Domingo**	**44.58**	**108**	LR	LR	08 45 32.0	
	comp=Z,460nm,19.7s,baz=292,slow=39						
SDV	**Santo Domingo**	**44.58**	**108**	P	P	08 24 58.4	-0.2
E23K	**Chandalar**	**44.66**	**341**	P	P	08 24 58.8	+0.2
E23K				lAmb	lAmb	08 25 18.3	
	comp=Z,5.5nm,0.8s						
FRB	**Frobisher Bay**	**44.84**	**26**	LR	LR	08 43 47.3	
	comp=Z,981nm,21.6s,baz=246,slow=36						
M14K	**Bethel**	**45.33**	**329**	P	P	08 25 04.3	+0.5
TAOE	**Nuku Hiva Isla**	**45.75**	**219**	eLR	LR	08 37 46.1	
	comp=Z,448nm,24.0s						
RES	**Resolute Bay**	**46.71**	**7**	LR	LR	08 45 57.1	
	comp=Z,460nm,20.2s,baz=202,slow=38						
SFJD	**Kangerlussuaq**	**52.99**	**26**	LR	LR	08 48 31.3	
	comp=Z,954nm,18.4s,baz=256,slow=36						
NNA	**Nana**	**53.73**	**134**	LR	LR	08 45 05.6	
	comp=Z,214nm,18.9s,baz=317,slow=32						
RKT	**Rikitea**	**55.89**	**204**	eLR	LR	08 42 33.6	
	comp=Z,2μm,29.2s						
RPN	**Rapa Nui**	**55.89**	**176**	LR	LR	08 44 32.3	
	comp=Z,178nm,21.9s,baz=297,slow=30						
NEEM	**North Greenlan**	**55.95**	**13**	*i* P	P	08 26 23.8	-0.4
SHEM	**Shemya Is, Ala**	**57.29**	**316**	LR	LR	08 46 04.9	
	comp=Z,110nm,20.4s,baz=14,slow=31						
PPT	**Papeete**	**58.13**	**222**	LR	LR	08 45 46.8	
	comp=Z,163nm,20.1s,baz=50,slow=30						
PPT2	**Papeete2**	**58.15**	**222**	eLQ	LQ	08 41 08.6	
	comp=Z,402nm,23.8s						
PPT2				eLR	LR	08 43 36.5	
	comp=Z,374nm,24.8s						
PPT2				eLR	LR	08 43 36.7	
	comp=Z,285nm,24.8s						
MDP	**Montagnes des**	**61.81**	**100**	LR	LR	08 55 53.3	
	comp=Z,169nm,20.9s,baz=283,slow=38						
LPAZ	**La Paz**	**62.57**	**130**	LR	LR	08 53 11.2	
	comp=Z,214nm,21.5s,baz=324,slow=35						
TBI	**Tubuai**	**62.68**	**218**	eLQ	LQ	08 43 08.2	
	comp=Z,3μm,31.8s						
TBI				eLR	LR	08 45 43.8	
	comp=Z,677nm,26.8s						
PETK	**Petropavlovsk-**	**66.92**	**319**	P	P	08 27 38.2	-0.1
	comp=Z,4.0nm,0.8s,baz=82,slow=13,SNR=4.7						
	comp=Z,4.0nm,0.8s						
RAR	**Rarotonga**	**67.17**	**227**	LR	LR	08 51 28.8	
	comp=Z,227nm,19.9s,baz=73,slow=31						
JMIC	**Jan Mayen**	**67.50**	**20**	LR	LR	08 57 14.4	
	comp=Z,536nm,19.0s,baz=278,slow=36						
SPITS	**Spitsbergen Ar**	**69.11**	**10**	LR	LR	08 59 07.4	
	comp=Z,993nm,19.2s,baz=324,slow=37						
YAK	**Yakutsk**	**76.34**	**334**	LR	LR	09 02 29.3	
	comp=Z,262nm,19.2s,baz=54,slow=36						
CPUP

ZAA0	**Zalesovo Array**	**3.56**	**277**	⇑Pg		Pb	08 19 54.7	+1.9
	4.2nm,0.8s							
ZAA0				⇓Lg		Lg	08 20 42.7	
	28nm,1.1s							
KURK	**Kurchatov**	**8.05**	**253**	⇑Pn		Pn	08 20 47.6	+0.5
	1.0nm,1.1s							
KURK				⇑Sn		Sn	08 22 21.5	+2.7
	1.4nm,0.8s							
KURK				⇑Lg		Lg	08 23 05.4	
	8.1nm,1.0s							
KURBB	**Kurchatov Arra**	**8.14**	**253**	⇑Pn		Pn	08 20 50.3	+2.0
	2.8nm,0.7s							
KURBB				⇑Sn		Sn	08 22 23.1	+2.1
	11nm,0.7s							
KURBB				⇑Lg		Lg	08 23 08.9	
	16nm,0.9s							
MK31	**Makanchi Array**	**8.79**	**222**	⇑Pn		Pn	08 20 58.0	+0.7
	0.6nm,0.7s,baz=44,slow=13,SNR=7.2							
MK31				⇓Lg		Lg	08 23 28.7	
	3.2nm,0.8s,baz=40,slow=13,SNR=3.3							

MEX ***13*** *08:30:53.9±0.4,29.°14N×113.°30W,h18km±90km,MD4.0*
ECX ***13*** *08:30:54.0±0.3,29.°01N×113.°23W,h5km±3km, ML3.7*
ISC 13 08:30:51.8±1.1**,28.°99N**±0.°03×**113.°19W**±0.°03,
h16km±11km**,n16,**σ1**°51**/29**,3C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAHB	**Baha de los**	**0.33**	**262**	*e*P	**Pb**	**08 30 59.4**	**+0.2**
BAHB				*e*S	**Sb**	**08 31 03.7**	**-0.5**
BAHB				IAML		08 31 06.2	
	comp=N,7μm,0.4s						
BAHB				⇓*e*		08 31 06.2	
BAHB				IAML		08 31 06.6	
	comp=E,4μm,0.4s						
BAHB				⇓*e*		08 31 06.6	
BAHB	**Baha de los**	**0.33**	**262**	*i* P	**Pb**	**08 30 59.6**	**+0.4**
BAHB				*i* S	**Sb**	**08 31 03.7**	**-0.5**
BKIRB	**Bahia Kino**	**1.05**	**97**	*e*P	**Pg**	**08 31 12.7**	**+0.5**
BKIRB				*e*S	**Sg**	**08 31 27.6**	**+1.7**
NE74	**Guerrero Negro**	**1.22**	**217**	*e*P	**Pg**	**08 31 14.8**	**-0.5**
NE74				*e*S	**Sg**	**08 31 31.2**	**+0.1**
NE74				*e*		08 31 32.0	
NE74				IAML		08 31 32.0	
	comp=N,2μm,0.7s						
NE74				IAML		08 31 37.4	
	comp=E,3μm,0.9s						
NE74				*e*		08 31 37.4	
LAPR	**La Primavera**	**1.69**	**27**	⇓*e*P	**Pb**	**08 31 22.3**	**-0.1**
LAPR				*e*S	**Sg**	**08 31 44.5**	**-1.6**
LAPR				IAML		08 31 59.4	
	comp=E,2μm,0.5s						
LAPR				⇑*e*		08 31 59.4	
LAPR				IAML		08 32 04.7	
	comp=N,1μm,0.8s						
LAPR				⇑*e*		08 32 04.7	
SRIG	**Santa Rosalia**	**1.86**	**153**	*e*P	**Pb**	**08 31 25.1**	**-0.3**
SRIG				*e*S	**Sb**	**08 31 50.0**	**+1.6**
SRIG				⇑*e*		08 31 51.9	
SRIG				IAML		08 31 51.9	
	comp=E,455nm,0.6s						
SRIG				IAML		08 31 52.0	
	comp=N,280nm,0.3s						
SRIG				*e*		08 31 52.0	
SRIG	**Santa Rosalia**	**1.86**	**153**	*e*P	**Pb**	**08 31 26.3**	**+0.9**
SRIG				*e*S	**Sb**	**08 31 48.1**	**-0.3**
HSIG		**1.96**	**89**	*e*P	**Pn**	**08 31 24.7**	**+0.3**
HSIG				*e*S	**Sb**	**08 31 51.0**	**-0.5**
HSIG		**1.96**	**89**	*e*P	**Pn**	**08 31 24.7**	**+0.3**
HSIG				*e*S	**Sn**	**08 31 48.5**	**-0.2**
GUYB	**Guaymas**	**2.31**	**117**	*e*P	**Pn**	**08 31 28.1**	**-1.0**
GUYB				*e*S	**Sg**	**08 32 04.7**	**-1.5**
GUYB	**Guaymas**	**2.31**	**117**	*e*P	**Pn**	**08 31 28.6**	**-0.6**
GUYB				*e*S	**Sb**	**08 31 59.8**	**-1.7**
SFX	**San Felipe**	**2.50**	**325**	*e*P	**Pb**	**08 31 33.6**	**-2.7**
SFX	**San Felipe**	**2.50**	**325**	*e*P	**Pg**	**08 31 41.4**	**+1.7**
PIX	**Pinacate**	**2.57**	**355**	*e*P	**Pb**	**08 31 34.9**	**-2.7**
NZIG	**Nacozari, Sono**	**3.45**	**66**	*e*P	**Pb**	**08 31 50.4**	**-2.2**
NZIG				*e*S	**Sb**	**08 32 37.3**	**+2.9**
TUC	**Tucson**	**3.91**	**31**	*e*P	**Pn**	**08 31 54.2**	**+3.0**
TUC				*e*S	**Sb**	**08 32 48.1**	**+0.7**

IDC ***13*** *08:31:34.7±2.1,51.°21N×174.°77W,h0km, mb3.6/6, mbtmp3.7/9,ML3.3/3, Error ellipse: s-maj=60.6km s-min=19.9km az=1.0*
NEIC ***13*** *08:31:39.0±1.7,51.°15N±0.°02×175.°03W±0.°05,h23km±8km, mb3.7/12,ML3.6/8,ML3.1(AEIC), Error ellipse: s-maj=5.2km s-min=2.3km az=61.0*
AEIC ***13*** *08:31:40.6±2.0,51.°25N±0.°04×175.°05W±0.°05,h26km±6km, Error ellipse: s-maj=6.5km s-min=4.7km az=178.0*
ISC 13 08:31:38.5±2.0**,51.°14N**±0.°10×**174.°97W**±0.°04,
h25km±13km**,n57,**σ1**°51**/64**,mb3.8/6, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSIG	**Igitkin Island**	**1.04**	**325**		**Pn**	**08 31 57.1**	**-0.5**
GSIG					**Sn**	**08 32 10.2**	**-1.2**
GSMY	**Great Sitkin M**	**1.14**	**324**		**Pb**	**08 31 58.6**	**-0.9**
GSCK	**Great Sitkin C**	**1.15**	**320**		**Pb**	**08 31 58.9**	**-0.8**
GSCK					**Sn**	**08 32 14.0**	**-0.1**
ETKA	**Kagalaska Isla**	**1.16**	**310**		**Pn**	**08 31 58.8**	**-0.3**
ETKA					**Sn**	**08 32 13.5**	**-0.7**
ATKA	**Atka Island**	**1.17**	**24**		**Pn**	**08 31 59.2**	**-0.1**
ATKA				IAML		08 32 15.1	
	comp=N,1μm,0.9s						
ATKA				IAML		08 32 15.2	
	comp=E,1μm,0.5s						
ATKA	**Atka Island**	**1.17**	**24**		**Sn**	**08 32 14.4**	**-0.2**
GSTR	**Great Sitkin T**	**1.18**	**325**	Pn	**Pn**	**08 31 58.2**	**-1.3**
GSTR				IAML		08 32 23.2	
	comp=E,1μm,0.6s						
GSTD	**Great Sitkin T**	**1.18**	**322**		**Pb**	**08 31 59.4**	**-0.9**
GSSP	**Great Sitkin S**	**1.22**	**322**		**Pb**	**08 32 00.1**	**-0.8**
KOFP	**Korovin Flat P**	**1.26**	**25**		**Pb**	**08 32 01.3**	**-0.4**
KOFP					**Sb**	**08 32 17.9**	**+0.3**
KOKL	**Mount Kliuchef**	**1.28**	**22**		**Pb**	**08 32 01.4**	**-0.6**
KOKL					**Sb**	**08 32 18.2**	**+0.1**
ADK	**Adak**	**1.31**	**306**		**Pn**	**08 32 00.7**	**-0.5**
ADK	**Adak**	**1.31**	**306**		**Sb**	**08 32 17.2**	**-1.6**
KOWE	**Korovin West**	**1.31**	**20**		**Pb**	**08 32 02.0**	**-0.5**
KOWE					**Sb**	**08 32 18.9**	**0.0**
ADAG	**Mount Adagdak**	**1.32**	**310**		**Pb**	**08 32 02.1**	**-0.6**
KOSE	**Korovin Southe**	**1.34**	**25**		**Pb**	**08 32 02.5**	**-0.4**
KOSE					**Sb**	**08 32 20.3**	**+0.6**
KONW	**Korovin Northw**	**1.35**	**20**		**Pb**	**08 32 02.6**	**-0.6**
KIWB	**Kanaga Island**	**1.54**	**299**		**Pn**	**08 32 04.5**	**0.0**
KIWB				IAML		08 32 34.1	
	comp=N,825nm,0.4s						
KIWB	**Kanaga Island**	**1.54**	**299**		**Sb**	**08 32 24.6**	**-0.9**
KIMD	**Kanaga Island**	**1.55**	**295**		**Pb**	**08 32 04.9**	**+0.4**
KIKV	**Kanaga Island**	**1.56**	**299**		**Pn**	**08 32 05.2**	**+0.4**
TAFP	**Tanaga Falls P**	**2.03**	**293**		**Pn**	**08 32 12.3**	**+1.1**
TASE	**Tanaga Southea**	**2.04**	**291**		**Pn**	**08 32 12.7**	**+1.3**
UNV	**Unalaska Valle**	**5.84**	**59**	Pn	**Pn**	**08 33 05.7**	**+2.3**
SDPT	**Sand Point**	**9.65**	**58**	Pn	**Pn**	**08 33 55.7**	**0.0**
M11K	**Mekoryuk**	**10.49**	**25**	Pn	**Pn**	**08 34 10.5**	**+3.3**
O14K	**Tigyukauivet M**	**11.27**	**39**	Pn	**Pn**	**08 34 21.1**	**+3.3**
N14K	**Kuskokwak Cree**	**11.56**	**35**	Pn	**Pn**	**08 34 25.2**	**+3.4**
O15K	**Ungalikthiuk R**	**11.80**	**41**	Pn	**Pn**	**08 34 28.9**	**+3.8**
K13K	**Kusilvak Mount**	**12.21**	**24**	Pn	**Pn**	**08 34 34.1**	**+3.5**
N15K	**Kwethluk River**	**12.32**	**37**	Pn	**Pn**	**08 34 35.7**	**+3.5**
P16K	**Nushagak River**	**12.51**	**44**	Pn	**Pn**	**08 34 36.8**	**+2.1**
P17K	**Kvichak River**	**13.28**	**45**	Pn	**Pn**	**08 34 46.5**	**+1.3**
L16K	**Owhat River**	**13.59**	**33**	Pn	**Pn**	**08 34 53.0**	**+3.5**
N18K	**Kilae Creek**	**14.29**	**41**	Pn	**Pn**	**08 34 58.5**	**-0.6**
ANM	**Nome**	**14.37**	**17**	Pn	**Pn**	**08 35 01.9**	**+1.7**
KDAK	**Kodiak Island**	**14.58**	**54**	Pn	**Pn**	**08 35 00.7**	**-2.2**
	comp=N,0.3nm,0.3s,baz=307,slow=19,SNR=9.3						
	comp=N,8.6nm,0.9s						
BRLK	**Bradley Lake**	**16.08**	**48**	Pn	**Pn**	**08 35 23.6**	**+0.9**
BRLK				IAmb	IAmb	08 35 44.7	
	comp=Z,18nm,1.1s						
SLKM	**Skilak Lake**	**16.67**	**46**	Pn	**Pn**	**08 35 29.5**	**-0.8**
SKT	**Skwentna**	**16.76**	**41**	P	**P**	**08 35 33.4**	**-0.1**
SKT				IAmb	IAmb	08 35 51.9	
	comp=Z,6.0nm,1.2s						
PEA0B	**Petropavlovsk-**	**16.86**	**287**	P	**Pn**	**08 35 33.1**	**+0.4**
PETK	**Petropavlovsk-**	**16.86**	**287**	Pn	**Pn**	**08 35 33.6**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=125,slow=20,SNR=4.8						
	comp=Z,1.2nm,0.7s						

F19K	**Shaleruckik Mo**	**17.95**	**22**	P	**P**	**08 35 46.8**	**+0.3**
BPAW	**Bear Paw Mtn.**	**18.11**	**35**	P	**Pn**	**08 35 46.7**	**-1.4**
H21K	**Melozitna Rive**	**18.46**	**30**	P	**Pn**	**08 35 53.2**	**+0.9**
H21K				IAmb	IAmb	08 36 13.3	
	comp=Z,4.6nm,1.4s						
E19K	**Redstone River**	**18.58**	**22**	P	**Pn**	**08 35 54.0**	**+0.2**
F20K	**Avaraart Lake**	**18.62**	**24**	P	**Pn**	**08 35 55.3**	**+1.0**
F20K				IAmb	IAmb	08 36 16.2	
	comp=Z,6.0nm,1.4s						
H22K	**Ishtalitna Cre**	**19.06**	**30**	P	**P**	**08 35 58.8**	**0.0**
H22K				IAmb	IAmb	08 36 25.7	
	comp=Z,7.1nm,1.4s						
ILAR	**Eielson Array**	**19.97**	**36**	P	**P**	**08 36 07.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=230,slow=10,SNR=13						
	comp=Z,0.5nm,0.5s						
J25K	**Salcha River,**	**20.47**	**38**	P	**P**	**08 36 13.5**	**-0.7**
J25K				IAmb	IAmb	08 36 37.5	
	comp=Z,2.7nm,0.8s						
YKA	**Yellowknife Ar**	**33.65**	**47**	P	**P**	**08 38 15.9**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=282,slow=8.8,SNR=2.2						
	comp=Z,0.1nm,0.4s						
MDJ	**Mudanjiang**	**36.98**	**282**	P	**P**	**08 38 48.0**	**+2.3**
PDAR	**Pinedale Array**	**44.07**	**74**	P	**P**	**08 39 43.8**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=304,slow=6.3,SNR=3.7						
	comp=Z,0.7nm,0.9s						
TXAR	**Lajitas Array**	**56.30**	**84**	P	**P**	**08 41 15.7**	**-1.5**
	comp=Z,0.6nm,1.1s,baz=318,slow=10,SNR=2.5						
	comp=Z,0.6nm,1.1s						
KURBB	**Kurchatov Arra**	**61.01**	**316**	P	**P**	**08 41 49.5**	**0.0**
	comp=Z,0.5nm,0.4s,baz=43,slow=6.8,SNR=4.1						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**62.05**	**311**	P	**P**	**08 41 56.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=50,slow=6.5,SNR=11						
	comp=Z,0.4nm,0.3s						
BVAR	**Borovoye Array**	**62.60**	**322**	P	**P**	**08 42 00.6**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=45,slow=7.1,SNR=6.6						
	comp=Z,0.9nm,0.4s						

IDC ***13*** *08:32:18.1±1.1,6.°56S×109.°03E,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=31.3km s-min=17.2km az=18.0*
DJA ***13*** *08:32:24.3±0.3,7.°S±4.°×10.°7E±.°,h144km±3km, M3.6/29, MLv3.6/29*
ISC 13 08:32:20.5±1.6**,8.°1S**±0.°1×**106.°69E**±0.°07**,h35**km**,n22,**
σ1°89/17,mb3.6/5,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	**Sukabumi**	**1.11**	**353**	P	Pn	08 32 46.9	+7.3
BBJI	**Bungbulang**	**1.15**	**56**	P	Pn	08 32 46.2	+6.0
DBJI	**Dramaga**	**1.55**	**2**	P	**Pn**	**08 32 47.8**	**+2.1**
LEM	**Lembang**	**1.57**	**36**	Pn	**Pn**	**08 32 46.5**	**+0.3**
	174nm,0.3s,baz=44,slow=18,SNR=103						
LEM				Sn	**Sn**	**08 33 04.2**	**-1.2**
	72nm,0.3s,baz=354,slow=22,SNR=28						
LEM	**Lembang**	**1.57**	**36**	P	**Pn**	**08 32 46.7**	**+0.5**
CMJI	**Cimerak**	**1.77**	**80**	P	**Pn**	**08 32 52.2**	**+3.5**
CMJI				S	**Sn**	**08 33 13.7**	**+3.6**
JCJI	**Jatiwangi**	**2.25**	**44**	P	Pn	08 32 50.3	-5.0
KPJI	**Karang Pucung**	**2.35**	**71**	P	**Pn**	**08 32 56.5**	**-0.2**
SCJI	**Gunung Srandil**	**2.49**	**80**	P	**Pn**	**08 32 59.7**	**+1.0**
KASI	**Kota Agung**	**3.37**	**320**	P	**Pn**	**08 33 13.5**	**+2.8**
UGM	**Wanagama**	**3.80**	**87**	P	**Pn**	**08 33 17.0**	**+0.3**
KLSI		**3.92**	**330**	P	**Pn**	**08 33 18.0**	**-0.3**
MDSI	**Maura Dua**	**4.38**	**325**	P	**Pn**	**08 33 24.9**	**+0.3**
PCJI	**Pacitan**	**4.44**	**91**	P	**Pn**	**08 33 25.5**	**0.0**
SNJI	**Sawahan-Nganju**	**5.03**	**87**	P	**Pn**	**08 33 32.9**	**-0.8**
SJI	**Sawahan**	**5.04**	**86**	P	**Pn**	**08 33 32.2**	**-1.6**
TPI	**Tanjungpandan**	**5.41**	**10**	P	Pn	08 33 28.5	-10
WRA	**Warramunga Arr**	**29.23**	**117**	P	P	08 38 11.4	-8.0
	0.5nm,0.4s,baz=293,slow=10,SNR=15						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**30.31**	**124**	P	P	08 38 23.2	-5.8
	0.5nm,0.4s,baz=307,slow=8.7,SNR=14						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**40.14**	**131**	P	P	08 39 48.6	-4.7
	0.7nm,0.3s,baz=302,slow=9.5,SNR=3.7						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**58.82**	**341**	P	**P**	**08 42 13.3**	**-2.2**
	0.1nm,0.5s,baz=143,slow=9.9,SNR=1.7						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**63.39**	**340**	P	**P**	**08 42 45.3**	**-1.0**
	0.4nm,0.3s,baz=134,slow=6.7,SNR=2.2						
	0.4nm,0.3s						

ASRS ***13*** *08:34:51.0±0.8,53.°56N×87.°63E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS. 2022.*
IDC 13 08:34:52.5±3.0**,53.°58N×87.°69E,h0**km**,mbtmp2.7/2,**
ML2.6/2,Error ellipse: s-maj=24.2km s-min=14.6km
az=58.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.75**	**283**	I	I	08 44 00.0	
	baz=95,slow=319,SNR=1.5						
ZALV	**Zalesovo Beam**	**1.75**	**283**	Pg	Pb	08 35 24.8	-0.5
	0.9nm,0.3s,baz=100,slow=15,SNR=12						
ZALV				Lg	Lg	08 35 49.0	
	2.5nm,0.3s,baz=102,slow=27,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.37**	**246**	Pn	Pn	08 36 27.1	-0.5
	0.1nm,0.3s,baz=63,slow=14,SNR=2.5						
KURBB				Sn	Sn	08 37 38.7	-2.3
	0.1nm,0.3s,baz=77,slow=24,SNR=3.1						
KURBB				Lg	Lg	08 38 15.6	
	0.1nm,0.3s,baz=61,slow=32,SNR=6.4						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.62**	**209**	Pn	Pn	08 36 46.8	+2.0
	0.1nm,0.3s,baz=25,slow=13,SNR=9.0						
MKAR				Sn	Sn	08 38 11.2	-0.6
	0.1nm,0.3s,baz=30,slow=29,SNR=5.4						
MKAR				Lg	Lg	08 38 53.0	
	0.1nm,0.3s,baz=28,slow=26,SNR=2.4						
	0.2nm,0.3s						

KRNET ***13*** *08:43:27.1±0.1,40.°66N×76.°75E,h17km,mb2.9*
SOME ***13*** *08:43:27.5,40.°60N×76.°82E,h20km*
NNC ***13*** *08:43:31.6±1.5,40.°85N×76.°77E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=10.6km s-min=7.2km az=172.0*
KNET ***13*** *08:43:31.3±0.7,40.°89N×76.°62E,h0km,ml2.5,Error ellipse: s-maj=7.1km s-min=5.0km az=72.0*
ISC 13 08:43:29.5±1.7**,40.°80N**±0.°07×**76.°67E**±0.°03**,h16**km±12km**,**
n48,σ1°59/73**,22C-6D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**0.81**	**322**	⇑*i*P	**Pg**	**08 43 45.5**	**+0.1**
NRN				⇑*i*S	**Sn**	**08 43 58.8**	**+0.3**
JNKS	**Jany-Kuch**	**0.83**	**288**	⇑*i*P	**Pg**	**08 43 44.6**	**-1.1**
JNKS				⇑*i*S	**Sg**	**08 43 57.3**	**+0.6**
TARG	**Taragay, Kyrgy**	**1.27**	**42**	⇓*i*P	**Pn**	**08 43 52.0**	**-0.9**
TARG				⇓*i*S	**Sb**	**08 44 10.1**	**+0.7**
ULHL	**Ulahol**	**1.48**	**348**	⇑P	**Pb**	**08 43 57.4**	**+0.6**
	5.5nm,0.1s,SNR=24						
ULHL				⇑S	**Sg**	**08 44 19.2**	**+1.8**
	21nm,0.2s						
ULHL	**Ulahol**	**1.48**	**348**	⇑*i*P	**Pb**	**08 43 57.2**	**+0.4**
ULHL				⇑*i*S	**Sg**	**08 44 19.4**	**+2.0**
BOOM	**Boomskoye usch**	**1.78**	**342**	⇑*i*P	**Pb**	**08 44 02.6**	**+0.8**
BOOM				⇑*i*S	**Sg**	**08 44 28.4**	**+1.6**
UCH	**Uchtor**	**2.16**	**312**	⇑P	**Pb**	**08 44 09.9**	**+1.4**
	8.1nm,0.3s,SNR=21						
UCH				⇓S	**Sg**	**08 44 40.6**	**+1.5**
	15nm,0.2s						
IZV	**Izvestkoviy**	**2.24**	**359**	Pg	**Pb**	**08 44 11.2**	**+1.6**
	5.2nm,0.3s						
IZV				Lg	Lg	08 44 42.9	
	18nm,0.3s						
IZV	**Izvestkoviy**	**2.24**	**359**	*e*P	**Pb**	**08 44 11.2**	**+1.6**
	5.2nm,0.3s						
IZV				*e*S	**Sg**	**08 44 42.9**	**+1.3**
	18nm,0.3s						
TNSS	**Tian-Shan**	**2.25**	**5**	Pg	**Pb**	**08 44 11.3**	**+1.3**
	3.2nm,0.3s						
TNSS				Lg	Lg	08 44 43.2	
	5.2nm,0.5s						
TNSS	**Tian-Shan**	**2.25**	**5**	*e*P	**Pb**	**08 44 11.3**	**+1.3**
	3.2nm,0.3s						
TNSS				*e*S	**Sg**	**08 44 43.2**	**+1.3**
	5.2nm,0.5s						
KBK	**Karagaybulak**	**2.26**	**326**	⇑P	**Pg**	**08 44 12.3**	**-0.6**
	9.8nm,0.2s,SNR=8.6						

KBK				⇑S		**Sg**	**08 44 43.5**	**+1.2**
	55nm,0.4s							
TKM2	**Tokmak 2**	**2.27**	**340**	⇑P		**Pb**	**08 44 10.8**	**+0.6**
	5.7nm,0.2s,SNR=13							
TKM2				⇓S		**Sg**	**08 44 42.5**	**-0.1**
	9.7nm,0.1s							
KST	**Kastek**	**2.31**	**347**	Pg		**Pg**	**08 44 12.8**	**-1.0**
	5.9nm,0.5s							
KST				Lg		Lg	08 44 45.9	
	14nm,0.3s							
KST	**Kastek**	**2.31**	**347**	*e*P		**Pg**	**08 44 12.8**	**-1.0**
	5.9nm,0.5s							
KST				*e*S		**Sg**	**08 44 45.9**	**+2.2**
	14nm,0.3s							
MTBS	**Maitube**	**2.34**	**356**	Pg		**Pg**	**08 44 13.2**	**-1.2**
	2.8nm,0.2s							
MTBS				Lg		Lg	08 44 46.3	
	19nm,0.3s							
MTBS	**Maitube**	**2.34**	**356**	*e*P		**Pg**	**08 44 13.2**	**-1.2**
	2.8nm,0.2s							
MTBS				*e*S		**Sg**	**08 44 46.3**	**+1.5**
	19nm,0.3s							
MDOK	**Medeo**	**2.38**	**7**	Pg		**Pb**	**08 44 13.1**	**+1.0**
	14nm,0.4s							
MDOK				Lg		Lg	08 44 46.3	
	22nm,0.5s							
AAK	**Ala-Archa**	**2.46**	**319**	⇑P		**Pb**	**08 44 14.3**	**+0.9**
	10nm,0.3s,SNR=12							
AAK				⇓S		**Sg**	**08 44 47.5**	**-1.0**
	28nm,0.5s							
AAK	**Ala-Archa**	**2.46**	**319**	⇓Pn		**Pb**	**08 44 15.3**	**+1.9**
	1.8nm,0.4s							
AAK				⇑Lg		Lg	08 44 50.8	
	8.1nm,0.6s							
KOTS	**Kotyrbulak**	**2.46**	**8**	Pg		**Pb**	**08 44 14.7**	**+1.3**
	12nm,0.2s							
KOTS				Lg		Lg	08 44 49.2	
	34nm,0.3s							
KOTS	**Kotyrbulak**	**2.46**	**8**	*e*P		**Pb**	**08 44 14.7**	**+1.3**
	12nm,0.2s							
KOTS				*e*S		**Sg**	**08 44 49.2**	**+0.6**
	34nm,0.3s							
DGS	**Degeres**	**2.53**	**345**	Pg		**Pg**	**08 44 16.8**	**-1.3**
	6.6nm,0.5s							
DGS				Lg		Lg	08 44 52.7	
	18nm,0.3s							
DGS	**Degeres**	**2.53**	**345**	*e*P		**Pg**	**08 44 16.8**	**-1.3**
	6.6nm,0.5s							
DGS				*e*S		**Sg**	**08 44 52.7**	**+1.8**
	18nm,0.3s							
SATY	**Saty**	**2.61**	**29**	Pg		**Pb**	**08 44 17.2**	**+1.3**
	3.2nm,0.3s							
SATY				Lg		Lg	08 44 53.1	
	14nm,0.3s							
CHMS	**Chumysh**	**2.63**	**328**	⇑P		**Pb**	**08 44 17.1**	**+0.9**
	3.9nm,0.2s							
EKS2	**Erkin-Say**	**2.86**	**312**	⇑P		**Pb**	**08 44 19.9**	**-0.2**
	3.0nm,0.3s,SNR=5.2							
KURS	**Kuram**	**2.91**	**22**	Pg		**Pb**	**08 44 22.5**	**+1.5**
	7.6nm,0.5s							
KURS				Lg		Lg	08 45 02.3	
	6.5nm,0.6s							
KTBS	**Karatobe**	**2.92**	**0**	Pg		**Pb**	**08 44 22.5**	**+1.4**
	2.7nm,0.4s							
KTBS				Lg		Lg	08 45 02.5	
	0.6nm,0.3s							
KTBS	**Karatobe**	**2.92**	**0**	*e*P		**Pb**	**08 44 22.5**	**+1.4**
	2.7nm,0.4s							
KTBS				*e*S		**Sg**	**08 45 02.5**	**-0.7**
	0.6nm,0.3s							
UZB	**Uzynbulak**	**2.93**	**36**	Pg		**Pb**	**08 44 22.2**	**+0.8**
	3.7nm,0.2s							
UZB				Lg		Lg	08 45 01.8	
	7.9nm,0.4s							
UZB	**Uzynbulak**	**2.93**	**36**	*e*P		**Pb**	**08 44 22.2**	**+0.8**
	3.7nm,0.2s							
UZB				*e*S		**Sg**	**08 45 01.8**	**-2.0**
	7.9nm,0.4s							
KRBS	**Karabastau**	**2.99**	**346**	Pg		**Pb**	**08 44 24.6**	**+2.2**
	11nm,0.5s							
KRBS				Lg		Lg	08 45 05.9	
	20nm,0.3s							
KRBS	**Karabastau**	**2.99**	**346**	*e*P		**Pb**	**08 44 24.6**	**+2.2**
	11nm,0.5s							
KRBS				*e*S		**Sg**	**08 45 05.9**	**+0.3**
	20nm,0.3s							
KPKS	**Kokpek**	**3.06**	**29**	Pg		**Pb**	**08 44 24.9**	**+1.3**
	0.2nm,0.1s							
KPKS				Lg		Lg	08 45 06.3	
	17nm,0.5s							
KPKS	**Kokpek**	**3.06**	**29**	*e*P		**Pb**	**08 44 24.9**	**+1.3**
	0.2nm,0.1s							
KPKS				*e*S		**Sg**	**08 45 06.3**	**-1.5**
	17nm,0.5s							
SHLS	**Shalkode**	**3.15**	**41**	Pg		**Pg**	**08 44 30.2**	**+0.4**
	4.0nm,0.3s							
SHLS				Lg		Lg	08 45 15.3	
	12nm,0.4s							
SHLS	**Shalkode**

2.0nm,1.1s,baz=183,slow=7.2,SNR=1.3
2.0nm,1.1s
CMAR Chiang Mai Arr 45.75 282 pP pP 09 52 17.2 +8.1
1.1nm,0.3s,baz=85,slow=5.3,SNR=2.4
MA2 Magadan 45.92 3 LR LR 10 11 56.2
comp=Z,25nm,18.6s,baz=108,slow=37
SONM Songino Array 47.52 324 P **P** **09 52 17.8 +0.9**
0.7nm,0.5s,baz=131,slow=7.9,SNR=2.3
0.7nm,0.5s
MKAR Makanchi Array 62.45 316 P **P** **09 54 05.6 +0.9**
1.0nm,0.3s,baz=92,slow=8.5,SNR=34
MKAR pP **pwP** **09 54 17.9 -1.6**
1.5nm,0.6s,baz=92,slow=8.3,SNR=8.8
1.0nm,0.3s
KURBB Kurchatov Arra 65.51 320 P **P** **09 54 25.1 +0.4**
2.7nm,0.4s,baz=101,slow=7.0,SNR=24
KURBB pP **pwP** **09 54 38.0 -1.5**
7.8nm,0.8s,baz=100,slow=6.6,SNR=18
2.7nm,0.4s
ILAR Eielson Array 67.84 25 P **P** **09 54 38.8 -0.6**
0.3nm,0.5s,baz=248,slow=5.9,SNR=7.3
0.3nm,0.5s
BVAR Borovoye Array 70.77 322 P **P** **09 54 58.4 +0.7**
1.7nm,0.4s,baz=107,slow=7.3,SNR=14
BVAR pP **pwP** **09 55 11.2 -2.4**
3.4nm,0.5s,baz=103,slow=7.7,SNR=12
1.7nm,0.4s
YKA Yellowknife Ar 82.09 28 P **P** **09 56 02.8 +1.1**
0.1nm,0.6s,baz=289,slow=6.0,SNR=4.2
0.1nm,0.6s
NVAR Mina Array Bea 85.69 52 P **P** **09 56 21.3 +0.4**
0.5nm,0.7s,baz=273,slow=5.4,SNR=3.7
NVAR pP **pwP** **09 56 36.1 -0.8**
0.7nm,0.6s,baz=276,slow=4.2,SNR=5.5
0.5nm,0.7s
FINES FINESS Array B 91.70 335 P **P** **09 56 47.6 -0.9**
2.3nm,1.0s,baz=101,slow=6.2,SNR=4.7
FINES pP **pwP** **09 57 01.4 -2.9**
1.1nm,0.5s,baz=90,slow=5.7,SNR=1.8
2.3nm,1.0s
DBIC Dimbokro 145.02 304 PKP **PKPdf** **10 03 20.6 +0.9**
3.3nm,0.7s,baz=92,slow=3.8,SNR=5.4

UCR 13 09:44:02.8±0.7,9°28'N×85°38'W, h25km±2km, MW3.9, 25C-2D, Presumed earthquake, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PAQE	**Paquera**	**0.69**	**40**	↑*iP*		Pb	09 44 16.1	-0.1
PAQE				*eS*		Sn	09 44 26.3	-0.6
NYURE	**Nandayure**	**0.72**	**10**	↑*iP*		Pb	09 44 16.8	+0.1
NYURE				*eS*		Sn	09 44 27.0	-0.6
CMARA	**Lajas Hojancha**	**0.73**	**357**	↑*iP*		Pb	09 44 17.0	-0.1
BITO	**Garabito Jaco**	**0.82**	**66**	↑*iP*		Pb	09 44 18.2	-0.3
BITO				*eS*		Sb	09 44 29.3	+0.2
NICO	**Nicoya**	**0.85**	**356**	*eP*		Pb	09 44 18.9	-0.1
ARZA	**Esparza**	**0.99**	**45**	↑*eP*		Pn	09 44 20.5	-0.7
PLVR	**Palo Verde**	**1.06**	**2**	↑*iP*		Pn	09 44 21.9	-0.4
JUNT	**Juntas**	**1.08**	**23**	*eP*		Pn	09 44 21.7	-0.6
JTS	**Las Juntas de**	**1.09**	**23**	↑*iP*		Pn	09 44 21.9	-0.5
ELVJ	**El Viejo (Barb**	**1.16**	**3**	*eP*		Pn	09 44 22.6	-0.9
PURI	**Puriscal**	**1.20**	**62**	*eP*		Pn	09 44 23.5	-0.5
ATCO	**Atenas**	**1.20**	**55**	↓*iP*		Pn	09 44 24.3	+0.2
ATEO				*eS*		Sn	09 44 39.8	+0.1
RAMO	**San Ramon**	**1.21**	**48**	*eP*		Pn	09 44 23.5	-0.6
RAMO				*eS*		Sb	09 44 40.2	-0.1
PALD	**Palmares**	**1.21**	**50**	*eP*		Pn	09 44 23.8	-0.4
PICV	**PH. Pirrs**	**1.22**	**74**	*eP*		Pn	09 44 24.2	-0.1
BAGA	**Bagaces**	**1.24**	**5**	*eP*		Pb	09 44 25.1	-0.5
SARCI	**Sarchi**	**1.30**	**52**	*eP*		Pb	09 44 26.1	-0.5
ACOS	**Acosta**	**1.30**	**67**	*eP*		Pn	09 44 25.2	-0.4
CASO	**Castillo**	**1.31**	**29**	↑*eP*		Pn	09 44 25.7	+0.2
ALIBA	**Liberia Airpor**	**1.31**	**353**	*eP*		Pb	09 44 26.4	-0.5
ZARE	**Zarcero**	**1.33**	**47**	*eP*		Pb	09 44 26.6	-0.6
TIMP	**Tierras Morena**	**1.34**	**15**	↑*iP*		Pn	09 44 26.1	0.0
VARE2	**V. Arenal**	**1.34**	**29**	↑*iP*		Pn	09 44 26.6	+0.6
SANTA	**Santa Ana**	**1.34**	**61**	*eP*		Pn	09 44 26.4	+0.3
TABAC	**Tabacon**	**1.35**	**27**	↑*eP*		Pb	09 44 26.9	-0.6
BELE	**Belen**	**1.36**	**60**	*eP*		Pn	09 44 26.5	+0.2
ELI1	**Hacienda Flor**	**1.36**	**353**	↑*iP*		Pb	09 44 27.1	-0.6
FORC	**Fortuna**	**1.37**	**31**	*eP*		Pn	09 44 27.4	+0.5
CEDE	**Laguna Cedeo**	**1.37**	**29**	↑*eP*		Pn	09 44 27.2	-0.7
POAS	**San Pedro de P**	**1.37**	**55**	*eP*		Pb	09 44 27.3	-0.6
VACR	**Volcan Arenal**	**1.37**	**30**	↑*iP*		Pn	09 44 26.9	+0.5
CUI	**Cuipilapa**	**1.38**	**9**	*eP*		Pn	09 44 27.0	+0.4
PITB	**Pirrs, San**	**1.39**	**74**	*eP*		Pn	09 44 26.7	-0.1
RAZU	**San Marcos de**	**1.39**	**74**	*eP*		Pn	09 44 26.5	-0.3
QUEU	**Ciudad Quesada**	**1.39**	**42**	*eP*		Pb	09 44 28.1	-0.1
QUEB	**Quebradon, Cot**	**1.42**	**20**	↑*iP*		Pn	09 44 27.4	+0.4
VPS8	**V Poas**	**1.43**	**51**	*eP*		Pn	09 44 27.3	-0.2
HORNC	**Hornillas**	**1.44**	**8**	*eP*		Pn	09 44 27.2	-0.1
AMPA	**Desamparados**	**1.44**	**65**	↑*iP*		Pn	09 44 27.2	-0.2
AMPA				*eS*		Sn	09 44 45.6	+0.1
HDC	**Heredia**	**1.44**	**60**	*eP*		Pn	09 44 27.6	+0.2
LUJA	**Lujan**	**1.44**	**64**	*eP*		Pn	09 44 27.4	0.0
PIEC	**Cerro El Cedra**	**1.45**	**76**	↑*iP*		Pn	09 44 27.7	+0.1
DOMI	**Santo Domingo**	**1.45**	**61**	*eP*		Pn	09 44 27.9	+0.4
MESS	**Mesas**	**1.46**	**7**	↑*iP*		Pn	09 44 28.3	+0.6
MESS				*eS*		Sn	09 44 46.6	+0.5
GPS2	**Hotel Rincn d**	**1.46**	**1**	*eP*		Pn	09 44 28.2	+0.5
GPS3	**Bodega del ICE**	**1.46**	**1**	↑*iP*		Pb	09 44 31.5	+2.1
TENO	**El Achiote**	**1.47**	**16**	↑*iP*		Pn	09 44 27.4	-0.4
LAPC	**Finca la Perla**	**1.48**	**358**	↑*eP*		Pn	09 44 28.3	+0.4
GPS1	**Guardaparques**	**1.48**	**1**	↓*iP*		Pn	09 44 28.8	+0.8
VRLE	**La Escondida,**	**1.50**	**1**	*eP*		Pn	09 44 28.8	+0.6
TRIO	**Tres Rios**	**1.50**	**66**	*eP*		Pn	09 44 27.8	-0.5
CORON	**Coronado**	**1.52**	**63**	*eP*		Pn	09 44 28.4	-0.2
VMAR	**Armenia, Volca**	**1.54**	**10**	*eP*		Pn	09 44 29.6	+0.8
ARTO	**Ro Cuarto**	**1.56**	**47**	*eP*		Pb	09 44 30.3	-0.8
REPA	**Paraso**	**1.59**	**70**	↑*eP*		Pn	09 44 29.5	+0.1
ITAL	**Pital**	**1.59**	**43**	*eP*		Pn	09 44 30.4	+0.9
PEJA	**Penjamo Buenos**	**1.60**	**2**	*eP*		Pn	09 44 30.4	+0.8
BUS1	**Rivas**	**1.64**	**80**	↑*eP*		Pn	09 44 30.5	+0.2
UPAL	**Upala**	**1.65**	**13**	↑*iP*		Pn	09 44 31.0	+0.9
VICA	**Volcano Irazu**	**1.67**	**68**	*eP*		Pn	09 44 30.8	+0.3
PCAYA	**Pacayas**	**1.67**	**68**	*eP*		Pn	09 44 31.3	+0.6
RAFA	**San Farael, Vo**	**1.69**	**66**	*eP*		Pn	09 44 31.2	+0.2
CVTQ	**Turrialba Volc**	**1.75**	**66**	*eP*		Pn	09 44 33.0	+1.2
VTR0	**Volcan Turrial**	**1.76**	**65**	*eP*		Pn	09 44 32.5	+0.4
ABRB	**Las Abras (San**	**1.79**	**66**	*eP*		Pn	09 44 33.2	+0.8
EDPE	**Pejibaye, P**	**1.79**	**94**	*eS*		Sn	09 44 53.6	-0.5
CVTG	**V. Turrialba,**	**1.80**	**61**	*eP*		Pn	09 44 33.3	+0.9
LCRUZ	**La Cruz**	**1.80**	**352**	*eP*		Pn	09 44 32.8	+0.5
PILE	**Guapiles**	**1.82**	**59**	*eP*		Pn	09 44 33.9	+1.3
LCHIL	**Los Chiles**	**1.86**	**21**	*eP*		Pn	09 44 33.9	+0.7
RESJ	**San Isidro (Tu**	**1.87**	**66**	*eP*		Pn	09 44 34.2	+1.0
LCOCO	**El Coco**	**1.97**	**66**	*eP*		Pb	09 44 36.3	-1.6
BURE	**Buenos Aires**	**2.02**	**93**	*eP*		Pn	09 44 36.0	+0.7
FIMO	**Fila Mora**	**2.02**	**98**	*eP*		Pn	09 44 35.0	-0.4
TRT2	**Tortugero**	**2.06**	**52**	*eP*		Pn	09 44 37.2	+1.4
DRK0	**Durika**	**2.11**	**90**	↑*iP*		Pn	09 44 35.7	-1.0
EDP2	**Potrero Grande**	**2.19**	**97**	*eP*		Pn	09 44 38.8	+1.1
FITO	**Golfito**	**2.29**	**106**	*eP*		Pn	09 44 40.8	+1.8
CEUA	**Cerro Uatsi, L**	**2.43**	**82**	*eP*		Pb	09 44 43.6	-2.3
NELY	**Ciudad Neily**	**2.49**	**104**	*eP*		Pn	09 44 43.5	+1.8
ALCO	**Alturas Coton,**	**2.54**	**97**	*eP*		Pn	09 44 43.8	+1.2
CLLRA	**Cordillera,**	**2.79**	**101**	*eP*		Pn	09 44 47.7	+1.8
JEFFS	**S de V. Baru**	**2.88**	**102**	*eP*		Pn	09 44 48.5	+1.3
RBALA	**Bur**	**3.21**	**97**	*eP*		Pn	09 44 52.7	+1.0

*MEX **13** 09:45:21.8±0.5,28°.94N×113°.16W, h10km, MD4.2*
*IDC **13** 09:45:22.2±1.4,28°.97N×112°.98W, h0km, mb3.7/3, mbtmp3.5/11, ML3.4/8, MS3.3/10, Error ellipse: s-maj=23.9km s-min=12.0km az=41.0*
ISC 13 09:45:19.6±1.3,28°.88N±0°.03×113°.06W±0°.03, h5km±10km, n36, σ2i12/46, mb3.5/3, MS3.4/5, 4C-4D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BAHB	**Baha de los**	**0.44**	**278**	*eP*		**Pg**	**09 45 28.4**	**+0.2**
BAHB				*eS*		**Sg**	**09 45 34.1**	**+0.2**
BAHB				↑*e*			09 45 36.5	
BAHB				IAML			09 45 36.5	
	comp=E,37μm,0.5s							
BAHB	**Baha de los**	**0.44**	**278**	*i* P		**Pg**	**09 45 28.4**	**+0.2**
BAHB				*eS*		**Sg**	**09 45 33.9**	**0.0**
BKIRB	**Bahia Kino**	**0.93**	**91**	*eP*		**Pb**	**09 45 38.6**	**+0.3**
BKIRB				*eS*		**Sb**	**09 45 50.9**	**0.0**
NE74	**Guerrero Negro**	**1.21**	**224**	*eP*		**Pb**	**09 45 42.5**	**-0.5**
NE74				*eS*		**Sb**	**09 45 57.1**	**-1.7**
NE74				IAML			09 46 04.7	
	comp=E,5μm,0.8s							
NE74				↑*e*			09 46 04.7	
NE74				IAML			09 46 06.5	
	comp=N,5μm,0.8s							
NE74				↓*e*			09 46 06.5	
SRIG	**Santa Rosalia**	**1.72**	**155**	↓*eP*		**Pn**	**09 45 49.1**	**-1.1**
SRIG				*eS*		**Sn**	**09 46 08.8**	**-3.7**
SRIG	**Santa Rosalia**	**1.72**	**155**	*eP*		**Pn**	**09 45 49.3**	**-0.9**
SRIG				*i* S		**Sn**	**09 46 11.1**	**-1.4**
LAPR	**La Primavera**	**1.74**	**22**	↓*eP*		**Pn**	**09 45 50.7**	**+0.2**
LAPR				*eS*		**Sn**	**09 46 12.0**	**-1.1**
LAPR				↓*e*			09 46 27.9	
LAPR				IAML			09 46 27.9	
	comp=N,3μm,1.0s							
HSIG		**1.86**	**85**	*eP*		**Pn**	**09 45 51.8**	**-0.3**
HSIG				*eS*		**Sn**	**09 46 14.4**	**-1.6**
HSIG				↑*e*			09 46 23.2	
HSIG				IAML			09 46 23.2	
	comp=E,464nm,0.7s							
HSIG				IAML			09 46 27.0	
	comp=N,679nm,0.7s							
HSIG				↑*e*			09 46 27.0	
HSIG		**1.86**	**85**	*eP*		**Pn**	**09 45 51.4**	**-0.7**
HSIG				*eS*		**Sn**	**09 46 14.4**	**-1.6**
GUYB	**Guaymas**	**2.16**	**116**	*eP*		**Pn**	**09 45 56.1**	**-0.2**
GUYB				*eS*		**Sn**	**09 46 21.5**	**-2.0**
GUYB				*e*			09 46 44.4	
GUYB				IAML			09 46 44.4	
	comp=N,341nm,0.8s							
GUYB	**Guaymas**	**2.16**	**116**	*eP*		**Pn**	**09 45 56.0**	**-0.4**
GUYB				*i* S		**Sn**	**09 46 24.1**	**+0.6**
SFX	**San Felipe**	**2.65**	**325**	*eP*		**Pg**	**09 46 09.8**	**-0.7**
SFX				*i* S		**Sb**	**09 46 38.0**	**-2.4**
SQX	**San Quintin**	**2.97**	**305**	*eP*		**Pn**	**09 46 06.5**	**-0.9**
SPIG	**San Pedro Mart**	**3.00**	**317**	*eP*		**Pn**	**09 46 07.6**	**-0.6**
SPIG	**San Pedro Mart**	**3.00**	**317**	*eP*		**Pb**	**09 46 12.4**	**-1.3**
SPIG				*eS*		**Sn**	**09 46 43.1**	**-1.6**
NZIL	**Nacozari, Sono**	**3.40**	**63**	*eP*		**Pb**	**09 46 17.1**	**-3.4**
NZIG				*eS*		**Sn**	**09 46 49.4**	**-4.9**
TUC	**Tucson**	**3.94**	**29**	*eP*		**Pn**	**09 46 22.1**	**+1.2**
TUC				*eS*		**Sn**	**09 47 04.0**	**-3.6**
MBIG	**Mexicali**	**3.97**	**333**	*eP*		**Pn**	**09 46 25.3**	**+4.2**
CBX	**Cerro Bola**	**4.62**	**319**	*eP*		**Pb**	**09 46 41.7**	**+0.4**
CBX				*eS*		**Sn**	**09 47 20.7**	**-3.6**
CGIG		**4.67**	**70**	*eP*		**Pn**	**09 46 31.2**	**+0.3**
CGIG				*eS*		**Sn**	**09 47 25.7**	**+0.1**
LPIG	**La Paz**	**5.36**	**152**	Pn		**Pn**	**09 46 43.2**	**+2.9**
	comp=N,1.5nm,0.3s,baz=258,slow=10,SNR=3.3							
LPIG				Lg		Lg	09 48 17.7	
	comp=N,0.3nm,0.3s,baz=8.9,slow=21,SNR=1.0							
LPIG				LR		LR	09 48 42.8	
	comp=N,231nm,20.2s,baz=338,slow=37							
	comp=N,24nm,0.8s							
PFO	**Pinyon Flats O**	**5.54**	**329**	Pn		**Pn**	**09 46 44.8**	**+1.9**
	comp=N,0.1nm,0.3s,baz=170,slow=7.6,SNR=4.8							
PFO				Lg		Lg	09 48 22.3	
	comp=N,0.8nm,0.3s,baz=236,slow=9.5,SNR=4.1							
	comp=N,0.4nm,0.5s							
TXAR	**Lajitas Array**	**8.23**	**85**	Pn		**Pn**	**09 47 22.5**	**+2.6**
	comp=N,0.6nm,0.3s,baz=258,slow=12,SNR=41							
TXAR				Lg		Lg	09 49 45.8	
	comp=N,0.4nm,0.3s,baz=262,slow=26,SNR=4.5							
TXAR				LR		LR	09 50 38.9	
	comp=N,141nm,21.4s,baz=280,slow=39							
	comp=N,0.9nm,0.4s							
ANMO	**Albuquerque**	**8.25**	**41**	Pn		**Pn**	**09 47 22.8**	**+2.7**
	comp=N,0.3nm,0.3s,baz=218,slow=13,SNR=18							
ANMO				Lg		Lg	09 49 44.7	
	comp=N,0.3nm,0.3s,baz=339,slow=20,SNR=6.2							
ANMO				LR		LR	09 50 05.4	
	comp=N,75nm,20.6s,baz=209,slow=35							
	comp=N,2.3nm,0.6s							
NVAR	**Mina Array Bea**	**10.47**	**337**	Pn		Pn	09 47 55.2	+4.5
	comp=N,0.1nm,0.3s,baz=160,slow=14,SNR=3.0							
	comp=N,0.3nm,0.6s							
ELK	**Elko**	**11.97**	**352**	Pn		Pn	09 48 16.7	+5.6
	baz=180,slow=11,SNR=4.1							
ELK				LR		LR	09 53 12.4	
	comp=N,109nm,20.4s,baz=173,slow=40							
	comp=N,1.3nm,0.9s							
PDAR	**Pinedale Array**	**14.14**	**11**	Pn		**P**	**09 48 45.2**	**-3.4**
	baz=180,slow=11,SNR=4.0							
PDAR				LR		LR	09 54 19.2	
	comp=N,70nm,18.2s,baz=178,slow=38							
	comp=N,0.4nm,0.8s							
YBH	**Yreka Blue Hor**	**15.03**	**331**	LR		LR	09 54 31.7	
	comp=N,6.1nm,19.2s,baz=257,slow=37							
NEW	**Newport**	**19.61**	**352**	P		**Pn**	**09 49 52.9**	**+2.8**
	comp=N,0.1nm,0.3s,baz=147,slow=13,SNR=3.9							
	comp=N,1.5nm,0.6s							
CMIG	**Matias Romero**	**20.41**	**121**	LR		LR	09 58 11.9	
	comp=N,125nm,19.8s,baz=278,slow=38							
ULM	**Lac du Bonnet**	**25.00**	**27**	P		**P**	**09 50 46.6**	**+2.3**
	comp=N,5.2nm,0.9s,baz=208,slow=8.0,SNR=6.5							
ULM				LR		LR	10 01 11.6	
	comp=N,134nm,18.0s,baz=50,slow=38							
	comp=N,5.2nm,0.9s							
DLBC	**Dease Lake**	**31.80**	**343**	LR		LR	10 05 41.8	
	comp=N,79nm,21.6s,baz=104,slow=38							
JTS	**Las Juntas de**	**32.16**	**119**	LR		LR	10 04 56.1	
	comp=N,59nm,20.6s,baz=355,slow=36							
YKA	**Yellowknife Ar**	**33.63**	**359**	P		**P**	**09 52 02.4**	**+1.6**
	comp=N,0.3nm,0.9s,baz=184,slow=6.8,SNR=4.9							
	comp=N,0.3nm,0.9s							
ILAR	**Eielson Array**	**41.72**	**339**	P		**P**	**09 53 12.3**	**+3.1**
	comp=N,0.9nm,0.9s,baz=146,slow=7.5,SNR=8.9							
	comp=N,0.9nm,0.9s							
RES	**Resolute Bay**	**46.79**	**7**	LR		LR	10 13 47.3	
	comp=N,87nm,21.5s,baz=328,slow=36							

*TIR **13** 09:49:48.9, 41°.34N×19°.61E, h28km, Md2.6/2, Ml2.2/3*
*BEO **13** 09:49:51.8±0.7, 41°.40N×19°.71E, h12km±3km, ML2.5/11*
*PDG **13** 09:49:53.3±0.1, 41°.50N×19°.55E, h13km, ML2.6/11, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
ISC 13 09:49:51.5±1.3, 41°.41N±0°.06×19°.65E±0°.04, h15km±8km, n27, σ0i80/53, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.17**	**110**	Pg		**Pg**	**09 49 55.9**	**+0.3**
TIR				Sg		**Sg**	**09 49 58.9**	**+0.5**
TIR				AML		AML	09 49 59.8	
	1.3nm,0.2s							
TIR				AML		AML	09 50 00.0	
	3.5nm,0.2s							
ULC	**Ulcinj**	**0.64**	**332**	*e*Pg		**Pg**	**09 50 03.0**	**-0.9**
ULC				*i* Sg		**Sg**	**09 50 11.3**	**-1.0**
SDA	**Shkodra**	**0.66**	**350**	Pg		**Pg**	**09 50 03.1**	**-1.2**
SDA				Sg		**Sb**	**09 50 13.7**	**+0.1**
SDA				AML		AML	09 50 16.2	
	0.3nm,0.2s							
SDA				AML		AML	09 50 18.0	
	0.4nm,0.3s							
SDA				AMd			09 50 49.4	
PHP	**Peshkopia**	**0.66**	**65**	Pg		**Pg**	**09 50 02.6**	**-1.7**
PHP				Sg		**Sg**	**09 50 12.9**	**-0.1**
PHP				AML		AML	09 50 14.8	
	0.4nm,0.5s							
PHP				AML		AML	09 50 15.7	
	1.4nm,0.5s							
PHP				AMd			09 50 39.9	
BUM	**Brajici-Budva**	**1.06**	**328**	*e*Pg		**Pb**	**09 50 10.7**	**-0.8**
BUM				*i* Sg		**Sb**	**09 50 25.5**	**+0.2**
PDG	**Podgorica**	**1.06**	**344**	*e*Pg		**Pb**	**09 50 11.0**	**-0.6**
PDG				*i* Sg		**Sg**	**09 50 26.1**	**+0.2**
PDG	**Podgorica**	**1.06**	**344**	*e*Pg		**Pb**	**09 50 10.3**	**-1.3**
PDG				*e*Sg		**Sg**	**09 50 26.4**	**+0.5**
PVY	**Plav**	**1.21**	**11**	*e*Pg		**Pn**	**09 50 14.3**	**+0.3**
PVY				*i* Sg		**Sg**	**09 50 32.2**	**+1.6**
CEME	**Cevo**	**1.26**	**335**	*e*Pg		**Pn**	**09 50 14.6**	**-0.1**
CEME				*e*Sg		**Sg**	**09 50 32.6**	**+0.3**
HCY	**Herceg Novi**	**1.35**	**321**	*e*Pg		**Pn**	**09 50 16.1**	**+0.2**
HCY				*i* Sg		**Sg**	**09 50 35.4**	**+0.3**
KOME	**Kolasin**	**1.45**	**356**	*e*Pg		**Pb**	**09 50 18.3**	**+0.1**
KOME				*e*Sg		**Sg**	**09 50 39.1**	**+1.0**
NKME	**Niksic**	**1.46**	**339**	*e*Pg		**Pn**	**09 50 18.1**	**+0.8**
NKME				*e*Sg		**Sg**	**09 50 39.1**	**+0.7**
IVA	**Berane**	**1.48**	**7**	*e*Pg		**Pn**	**09 50 18.1**	**+0.5**
IVA				*i* Sg		**Sg**	**09 50 39.9**	**+0.8**
BRY	**Bratogost**	**1.71**	**331**	*e*Pn		**Pb**	**09 50 22.1**	**-0.6**
BRY				*i* Sn		**Sb**	**09 50 45.1**	**+1.1**
SJES	**Sjenica**	**1.87**	**7**	*e*Pg		**Pb**	**09 50 25.0**	**-0.4**
SJES				*e*Sg		**Sb**	**09 50 49.8**	**+1.1**
UPM	**Unac-Piva**	**1.88**	**343**	*e*Pn		**Pn**	**09 50 24.6**	**+1.3**
UPM				*i* Sn		**Sb**	**09 50 49.3**	**+0.3**
SELS	**Selova**	**2.12**	**31**	*e*Pn		**Pn**	**09 50 26.7**	**+0.3**
SELS				*e*Sn		**Sn**	**09 50 53.7**	**+1.3**
BARS	**Barje**	**2.14**	**48**	*e*Pn		**Pn**	**09 50 27.4**	**+0.7**
BARS				*e*Sn		**Sn**	**09 50 53.8**	**+0.8**
IVAS	**Ivanjica**	**2.20**	**10**	*e*Pn		**Pn**	**09 50 27.7**	**+0.1**
IVAS				*e*Sn		**Sn**	**09 50 56.0**	**+1.4**
GOCS	**Kraljevo Serbi**	**2.34**	**22**	*e*Pn		**Pn**	**09 50 29.6**	**+0.1**
GOCS				*e*Sn		**Sn**	**09 50 56.6**	**-1.4**
BOSS	**Bosilegrad**	**2.38**	**62**	*e*Pn		**Pn**	**09 50 29.9**	**0.0**
BOSS				*e*Sn		**Sn**	**09 50 58.7**	**-0.1**
BBLS	**Lazi&#263i**	**2.46**	**356**	*e*Pn		**Pn**	**09 50 32.4**	**+1.2**
BBLS				*e*Sn		**Sn**	**09 51 02.1**	**+1.0**
GRUS	**Gruza**	**2.60**	**17**	*e*Pn		**Pn**	**09 50 33.0**	**0.0**
GRUS				*e*Sn		**Sn**	**09 51 04.4**	**0.0**
BOVS	**Bovan**	**2.70**	**34**	*e*Pn		**Pn**	**09 50 34.2**	**-0.1**
BOVS				*e*Sn		**Sn**	**09 51 06.5**	**-0.2**
DIVS	**Divibare**	**2.70**	**5**	*e*Sn		**Sn**	**09 51 07.1**	**+0.1**
ZAPS	**Zavoj**	**2.89**	**49**	*e*Pn		**Pn**	**09 50 37.8**	**+0.7**
ZAPS				*e*Sn		**Sn**	**09 51 10.4**	**-1.3**
ZAGS	**Zajecar**	**3.07**	**38**	*e*Pn		**Pn**	**09 50 39.6**	**+0.2**
ZAGS				*e*Sn		**Sn**	**09 51 16.0**	**+0.1**

*IDC **13** 10:07:18.9±2.1, 33°.18N×87°.11E, h0km, mb3.3/4, mbtmp3.6/7, ML3.6/3, MS3.3/7, Error ellipse: s-maj=76.0km s-min=21.1km az=70.0*
ISC 13 10:07:22.3±3.2, 33°.6N±0°.6×8°8E±°, h10km, n12, σ1i81/7, MS3.3/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**4.57**	**147**	P		Pb	10 08 39.8	-3.1
LSA				S		**Sn**	**10 09 23.3**	**-2.1**
LSA				LR		LR		
	comp=N,1μm,8.3s							
LSA				LR		LR		
	comp=E,2μm,9.4s							
LSA				LR		LR		
	comp=Z,410nm,10.8s							
MKAR	**Makanchi Array**	**13.96**	**343**	Pn		**Pn**	**10 10 39.1**	**-1.1**
	baz=147,slow=15,SNR=14							
MKAR				LR		LR	10 16 56.1	
	comp=Z,190nm,18.4s,baz=166,slow=41							
	comp=Z,1.0nm,0.7s							
AAK	**Ala-Archa**	**14.13**	**314**	LR		LR	10 16 58.9	
	comp=Z,75nm,19.7s,baz=306,slow=42							
CMAR	**Chiang Mai Arr**	**17.82**	**145**	P		**P**	**10 11 32.5**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=331,slow=13,SNR=7.0							
CMAR				LR		LR	10 18 52.3	
	comp=Z,49nm,20.6s,baz=275,slow=38							
	comp=Z,0.9nm,0.3s							
KURBB	**Kurchatov Arra**	**18.47**	**340**	P		**Pn**	**10 11 36.8**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=10							
	comp=Z,2.2nm,0.7s							
SONM	**Songino Array**	**19.68**	**38**	P		Pn	10 12 00.3	+7.2
	comp=Z,0.5nm,0.3s,baz=258,slow=7.1,SNR=1.8							
	comp=Z,0.5nm,0.3s							
ZALV	**Zalesovo Beam**	**20.50**	**354**	P		**P**	**10 12 01.4**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=188,slow=9.9,SNR=5.3							
ZALV				LR		LR	10 20 58.5	
	comp=Z,124nm,18.3s,baz=142,slow=39							
	comp=Z,0.6nm,0.6s							
BVAR	**Borovoye Array**	**23.28**	**332**	LR		LR	10 22 29.5	
	comp=Z,87nm,18.9s,baz=123,slow=39							
ARTI	**

comp=Z,256nm,1.9s
BAKI Biak 17.56 284 P P 10 20 25.4 +12
DVP Devils Point 19.02 131 P **Pn** **10 20 32.0 +1.6**
RTV Rentapao 19.24 130 P **P** **10 20 33.0 +1.0**
RKPI Ransiki, Papua 19.36 281 P **Pn** **10 20 37.7 +3.2**
comp=Z,2µmcomp=Z,6µmcomp=Z,95nm,1.0s
EIDS Eidsvold 19.77 186 P **P** **10 20 38.2 +0.4**
EIDS Eidsvold 19.77 186 **P** **10 20 36.8 -1.0**
EIDS Eidsvold 19.77 186 P **P** **10 20 37.7 -0.1**
QIS Mount Isa 19.86 220 P **P** **10 20 39.3 +0.5**
QIS Mount Isa 19.86 220 P **P** **10 20 39.0 +0.2**
GUMO Guam 20.75 337 P Pn 10 20 50.4 -0.4
comp=Z,123nm,0.7s,baz=180,slow=20,SNR=2.3
GUMO LR LR 10 29 56.3
comp=Z,909nm,18.1s,baz=150,slow=40
comp=Z,123nm,0.7s
GUMO Guam 20.75 337 IAmb IAmb 10 20 53.7
comp=Z,295nm,1.1s
GUMO Guam 20.75 337 P Pn 10 20 50.4 -0.4
GUMO pmax pmax
comp=Z,295nm,1.1s
DZM Mont Dzumac 20.84 143 *e*P **P** **10 20 49.5 0.0**
comp=Z,282nm,1.2s
DZM *e*S **S** **10 24 38.2 -3.6**
comp=Z,2µm,23.6s
DZM *e*LR LR 10 25 47.2
comp=Z,3µm,26.6s
DZM Mont Dzumac 20.84 143 LR LR 10 27 58.3
comp=Z,2µm,18.7s,baz=331,slow=34
DZM Mont Dzumac 20.84 143 **P** **10 20 49.4 0.0**
DZM IAmb IAmb 10 20 57.3
comp=Z,183nm,1.2s
DZM Mont Dzumac 20.84 143 P **P** **10 20 50.2 +0.7**
ONTNC Ouen Toro 21.02 144 **P** **10 20 52.4 +1.0**
ONTNC IAmb IAmb 10 20 55.5
comp=Z,112nm,1.0s
ONTNC Ouen Toro 21.02 144 P **P** **10 20 53.6 +2.2**
YATNC Mamie plateau, 21.10 142 P **P** **10 20 53.8 +1.6**
OUENC Ouen Island, N 21.34 143 P **P** **10 20 56.9 +2.1**
MARNC Mare, Loyalty 21.39 139 P **P** **10 20 57.9 +2.5**
MARNC Mare, Loyalty 21.39 139 P **P** **10 20 56.8 +1.4**
KDU Kakadu 21.58 249 P **P** **10 20 57.7 +0.2**
PINNC Pines Island, 21.85 142 P **P** **10 21 03.8 +3.5**
PINNC Pines Island, 21.85 142 P **P** **10 21 02.3 +2.0**
SIJI Sorong 22.34 281 P **P** **10 21 06.2 +0.6**
comp=Z,9.3nm,0.3s,baz=92,slow=9.3,SNR=13
comp=Z,9.3nm,0.3s
SIJI Sorong 22.34 281 P **P** **10 21 08.1 +2.5**
comp=Z,56nm,0.8s
SWI Sorong 22.34 281 P **P** **10 21 08.4 +2.7**
comp=Z,2µmcomp=Z,73nm,0.9s
QLP Quilpie 22.55 201 P **P** **10 21 07.3 -0.4**
QLP Quilpie 22.55 201 P **P** **10 21 07.4 -0.4**
MTN Manton Dam 22.88 250 P **P** **10 21 14.6 +3.2**
comp=Z,129nm,0.8s
MTN Manton Dam 22.88 250 **P** **10 21 11.3 -0.1**
MTN IAmb IAmb 10 21 18.4
comp=Z,92nm,0.8s
DRS Darwin Rock St 22.99 251 P **P** **10 21 13.3 +0.8**
WB0 Warramunga Arr 23.06 231 P **P** **10 21 11.9 -1.3**
WB0 IAmb IAmb 10 21 38.4
comp=Z,70nm,1.2s
WR8 Warramunga Arr 23.08 230 P **P** **10 21 12.6 -0.9**
WR8 IAmb IAmb 10 21 23.9
comp=Z,59nm,1.1s
WRAB Tennant Creek 23.18 230 P **P** **10 21 13.5 -1.0**
WRAB Tennant Creek 23.18 230 P **P** **10 21 13.8 -0.7**
WRAB Tennant Creek 23.18 230⇑ *i*P **P** **10 21 14.0 -0.5**
WRAB pmax pmax
comp=Z,13nm,0.9s
WRA Warramunga Arr 23.20 230 P **P** **10 21 13.5 -1.2**
comp=Z,16nm,0.7s,baz=56,slow=10,SNR=61
WRA PcP **PcP** **10 25 02.8 -0.1**
comp=Z,5.7nm,0.9s,baz=46,slow=1.8,SNR=5.2
comp=Z,16nm,0.7s
WRA Warramunga Arr 23.20 230 **P** **10 21 12.6 -2.1**
WRA Warramunga Arr 23.20 230 *i* P **P** **10 21 13.5 -1.2**
WRA pmax pmax
comp=Z,15nm,0.7s
ARMA Armidale 24.74 183 P **P** **10 21 29.9 +0.6**
ARMA Armidale 24.74 183 P **P** **10 21 28.8 -0.5**
ARMA Armidale 24.74 183 P **P** **10 21 29.6 +0.3**
INKA Innaminka 24.99 207 **P** **10 21 30.4 -1.0**
INKA IAmb IAmb 10 21 32.9
comp=Z,34nm,0.8s
AS31 Alice Springs 25.81 224 **P** **10 21 38.2 -0.8**
ASAR Alice Springs 25.82 224 P **P** **10 21 38.0 -1.0**
comp=Z,13nm,0.8s,baz=57,slow=9.2,SNR=69
ASAR PcP **PcP** **10 25 08.7 +0.1**
comp=Z,5.0nm,1.0s,baz=52,slow=2.3,SNR=5.6
ASAR LR LR 10 31 60.0
comp=Z,1µm,18.1s,baz=56,slow=37
comp=Z,13nm,0.8s
ASAR Alice Springs 25.82 224 P **P** **10 21 38.2 -0.8**
ASAR Alice Springs 25.82 224 P **P** **10 21 38.2 -0.8**
KNRA Kununurra 25.95 245 P **P** **10 21 41.2 +1.0**
KNRA Kununurra 25.95 245 **P** **10 21 40.6 +0.3**
CMSA Cobar Meteorol 26.75 194 P **P** **10 21 46.3 -1.0**
CMSA Cobar Meteorol 26.75 194 P **P** **10 21 45.9 -1.4**
MSVF Nonsavu 27.17 118 P **P** **10 21 52.6 +1.3**
MSVF IAmb IAmb 10 22 30.1
comp=Z,69nm,1.4s
MSVF Nonsavu 27.17 118 P **P** **10 21 52.6 +1.3**
MSVF pmax pmax
comp=Z,69nm,1.5s
SANI Sanana 27.32 276 P **P** **10 21 56.4 +3.7**
comp=Z,43nm,1.0s
H11S3 WAKE ISLAND Hy 27.40 29 T T 10 50 07.3
baz=207,slow=73,SNR=6.8
H11S2 WAKE ISLAND Hy 27.41 29 T T 10 50 07.4
baz=207,slow=73,SNR=10.0
H11S1 WAKE ISLAND Hy 27.42 29 T T 10 50 08.4
baz=207,slow=73,SNR=9.9
MGCD Mangrove Creek 27.55 184 P **P** **10 21 55.0 +0.5**
STKA Stephens Creek 28.30 201 P **P** **10 21 59.6 -1.7**
STKA Stephens Creek 28.30 201 P **P** **10 21 59.4 -1.9**
comp=Z,18nm,1.0s,baz=1.8,slow=9.2,SNR=22
STKA LR LR 10 34 00.7
comp=Z,914nm,18.0s,baz=22,slow=38
comp=Z,18nm,1.0s
STKA Stephens Creek 28.30 201 P **P** **10 21 59.7 -1.5**
STKA Stephens Creek 28.30 201 P **P** **10 21 58.9 -2.4**
STKA Stephens Creek 28.30 201⇓ *i*P **P** **10 21 59.3 -2.0**
BATI Baumata 29.55 259 P **P** **10 22 14.9 +2.3**
comp=Z,63nm,1.1s
FITZ Fitzroy Crossi 29.60 243 P **P** **10 22 12.0 -0.9**
comp=Z,30nm,0.4s,baz=57,slow=8.5,SNR=118
comp=Z,30nm,0.4s
CNB Canberra Magne 29.79 186 P **P** **10 22 14.5 0.0**
CAN Canberra 29.84 187 P **P** **10 22 15.0 +0.1**
CAN IAmb IAmb 10 22 31.1
comp=Z,84nm,1.9s
CAN Canberra 29.84 187 P **P** **10 22 15.0 +0.1**
CAN pmax pmax
comp=Z,84nm,1.9s
WRKA Warakurna 30.69 228 P **P** **10 22 21.5 -1.1**
HTT Hallett 30.70 204 P **P** **10 22 21.4 -1.1**
comp=Z,22nm,1.1s
HTT Hallett 30.70 204 P **P** **10 22 20.6 -2.0**
MMRI Maumere 30.81 263 P **P** **10 22 24.8 +1.1**
comp=Z,3µmcomp=Z,95nm,1.0s
EDFI Ende, Flores 31.36 262 P **P** **10 22 27.4 -1.3**
comp=Z,850nmcomp=Z,47nm,0.7s
BBOO Buckleboo 31.43 208 P P 10 22 25.0 -3.9
BBOO Buckleboo 31.43 208 P **P** **10 22 27.5 -1.4**
BBOO IAmb IAmb 10 22 28.3
comp=Z,33nm,1.1s
BBOO Buckleboo 31.43 208 P **P** **10 22 26.5 -2.4**
BSSI Bau Bau, Buton 32.49 267 P **P** **10 22 40.0 +1.5**
comp=Z,962nmcomp=Z,54nm,1.3s
BASI Baing, Sumba 32.57 260 P **P** **10 22 40.3 +1.1**
ARPS Mount Arapiles 32.72 197 P **P** **10 22 39.8 -0.5**
comp=Z,29nm,1.3s
WSI Waingapu 32.80 261 P **P** **10 22 42.7 +1.5**
KAPI Kappang 33.25 269 P **P** **10 22 45.1 -0.1**
comp=Z,6.1nm,0.6s,baz=254,slow=16,SNR=4.0
comp=Z,6.1nm,0.6s
KAPI Kappang 33.25 269 *e*P **P** **10 22 43.7 -1.5**
KAPI pmax pmax
comp=Z,7.0nm,1.0s
KAPI Kappang 33.25 269 P P 10 23 04.1 +19
WBSI Waikabubak, Su 33.69 261 P **P** **10 22 50.0 +1.0**
comp=Z,2µmcomp=Z,95nm,0.9s
FORT Forrest 34.41 220 P **P** **10 22 54.4 -0.6**
comp=Z,43nm,1.2s
FORT Forrest 34.41 220 IAmb IAmb 10 22 54.9
comp=Z,26nm,0.7s
OUZ Omahuta 35.01 150 P **P** **10 23 01.3 +1.2**
OUZ Omahuta 35.01 150 P **P** **10 23 00.8 +0.7**
PLAI Plampang 35.23 263 P **P** **10 23 00.5 -1.8**
PLAI Plampang 35.23 263 P **P** **10 23 00.7 -1.6**
comp=Z,885nmcomp=Z,56nm,0.6s
PSAC2 Pilbara Seismi 35.89 241 P **P** **10 23 07.1 -0.8**
comp=Z,39nm,1.3s
MBWA Marble Bar 35.89 241 P **P** **10 23 12.5 +4.6**
MBWA Marble Bar 35.89 241 P **P** **10 23 06.8 -1.1**
MBWA IAmb IAmb 10 23 17.4
comp=Z,17nm,0.6s
MBWA Marble Bar 35.89 241 P **P** **10 23 07.0 -0.9**
PSA00 Pilbara Seismi 35.94 241 P **P** **10 23 05.6 -2.7**
comp=Z,29nm,1.0s
PSA00 Pilbara Seismi 35.94 241 P **P** **10 23 07.2 -1.2**
PSA00 IAmb IAmb 10 23 20.6
comp=Z,78nm,1.8s
PSA00 Pilbara Seismi 35.94 241 IAmb IAmb 10 23 21.6
comp=Z,43nm,1.2s
PSA00 Pilbara Seismi 35.94 241 P **P** **10 23 07.5 -0.8**
PSAB3 Pilbara Seismi 35.94 241 P **P** **10 23 07.8 -0.6**
comp=Z,32nm,0.9s
WCZ Waipu Caves 35.95 150 P **P** **10 23 09.3 +1.1**
PSAC1 Pilbara Seismi 35.95 241 P P 10 23 04.5 -4.0
comp=Z,35nm,1.2s
KLNI Mataram 36.87 263 P **P** **10 23 16.7 +0.3**
comp=Z,4µmcomp=Z,48nm,0.9s
MOO Moorlands 37.08 187 P **P** **10 23 18.5 +0.7**
MOO Moorlands 37.08 187 P **P** **10 23 18.4 +0.7**
TAU Tasmania Unive 37.53 187 P **P** **10 23 22.2 +0.7**
TAU IAmb IAmb 10 23 22.2
comp=Z,50nm,1.2s
TAU Tasmania Unive 37.53 187 P **P** **10 23 21.6 +0.1**
TAU Tasmania Unive 37.53 187 P **P** **10 23 22.2 +0.7**
TAU pmax pmax
comp=Z,50nm,1.2s
TOZ Tahuroa Road 37.93 151 IAmb IAmb 10 23 26.7
comp=Z,26nm,0.8s
TOZ Tahuroa Road 37.93 151 P **P** **10 23 25.9 +0.8**
OMRZ Omania 38.65 150 P **P** **10 23 34.3 +3.1**
KMBL Kambalda 38.94 225 P **P** **10 23 32.8 -0.9**
comp=Z,8.2nm,1.1s
MEEK Meekatharra 39.01 234 P **P** **10 23 33.0 -1.4**
comp=Z,52nm,0.4s
MEEK Meekatharra 39.01 234 P **P** **10 23 33.0 -1.4**
HAZ Te Kaha 39.10 148 P **P** **10 23 35.4 +0.5**
URZ Urewera 39.14 150 P **P** **10 23 34.7 -0.5**
URZ Urewera 39.14 150 P **P** **10 23 35.3 +0.1**
SNVZ South Ngauruho 39.15 152 P **P** **10 23 36.9 +1.4**
QRZ Quartz Range 39.15 156 P **P** **10 23 35.9 +0.6**
QRZ Quartz Range 39.15 156 P **P** **10 23 36.0 +0.7**
RUGZ Raukumara Rang 39.20 149 P **P** **10 23 36.4 +0.4**
RTZ Ruatahuna 39.35 150 IAmb IAmb 10 23 43.8
comp=Z,47nm,0.8s
RTZ Ruatahuna 39.35 150 P **P** **10 23 37.4 +0.3**
MWZ Matawai 39.41 149 P **P** **10 23 38.5 +1.0**
RAGZ Rawiri 39.47 150 P **P** **10 23 39.1 +0.9**
TWGZ Tauwhareparae 39.52 149 P **P** **10 23 39.4 +1.0**
BKZ Black Stump Fm 39.54 151 P **P** **10 23 37.6 -1.0**
BKZ Black Stump Fm 39.54 151 P **P** **10 23 38.3 -0.3**
PUZ Puketiti 39.59 148 P **P** **10 23 38.8 -0.2**
SNGZ Shannon Statio 39.66 150 P **P** **10 23 39.8 +0.2**
NNZ Nelson 39.83 156 P **P** **10 23 40.9 0.0**
CNGZ Carnagh Statio 39.87 149 P **P** **10 23 41.5 +0.2**
TSZ Takapari Road 39.99 152 P **P** **10 23 42.0 -0.4**
KNZ Kokohu 40.01 150 P **P** **10 23 42.1 -0.3**
THZ Tophouse 40.10 157 P **P** **10 23 42.8 -0.5**
THZ Tophouse 40.10 157 P **P** **10 23 42.9 -0.4**
TCW Tory Channel 40.19 155 P **P** **10 23 44.0 0.0**
MRZ Mangatainoka R 40.30 153 IAmb IAmb 10 23 56.2
comp=Z,30nm,0.9s
MRZ Mangatainoka R 40.30 153 P **P** **10 23 44.2 -0.7**
INZ Inchbonnie 40.38 159 P **P** **10 23 45.4 -0.1**
PXZ Pawanui 40.39 152 P **P** **10 23 45.3 -0.4**
SNZO South Karori 40.45 155 P **P** **10 23 46.7 +0.6**
BFZ Birch Farm 40.62 153 P **P** **10 23 47.2 -0.3**
BFZ Birch Farm 40.62 153 P **P** **10 23 47.3 -0.3**
JCZ Jackson Bay 40.73 163 P **P** **10 23 49.4 +1.0**
JCZ Jackson Bay 40.73 163 P **P** **10 23 52.4 +4.0**
LTZ Lake Taylor 40.73 158 P **P** **10 23 48.7 +0.2**
LTZ Lake Taylor 40.73 158 P **P** **10 23 48.6 +0.2**
KHZ Kahutara 40.90 157 P **P** **10 23 48.5 -1.3**
MSZ Milford Sound 41.03 164 P **P** **10 23 53.1 +2.4**
OXZ Oxford 41.12 159 P **P** **10 23 51.1 -0.5**
RPZ Rata Peaks 41.12 160 P **P** **10 23 51.5 -0.1**
RPZ Rata Peaks 41.12 160 P **P** **10 23 52.1 +0.5**
SJI Sawahan 41.14 265 P **P** **10 23 52.5 +0.2**
comp=Z,49nm,1.8s
SNJI Sawahan-Nganju 41.15 265 P **P** **10 23 54.1 +1.6**
comp=Z,2µmcomp=Z,70nm,1.4s
GVZ Greta Valley S 41.18 158 P **P** **10 23 51.7 -0.4**
MQZ McQueen's Vall 41.67 159 P **P** **10 23 56.0 -0.1**
PCJI Pacitan 41.73 264 P **P** **10 23 57.4 +0.4**
comp=Z,97nm,1.5s
KLBR Kellerberrin 42.03 228 P **P** **10 23 57.7 -1.6**
comp=Z,56nm,0.5s
KLBR Kellerberrin 42.03 228 P **P** **10 23 57.4 -1.8**
WHZ Wether Hill Ro 42.16 165 P **P** **10 23 59.7 -0.4**
ODZ Otahua Downs 42.17 161 P **P** **10 23 59.8 -0.4**
BLDU Ballidu 42.33 230 P **P** **10 23 59.7 -2.0**
JSU Suzuyama 42.77 331 P **P** **10 24 06.9 +1.6**
SSLB Suanglung 42.88 314 P **P** **10 24 08.0 +1.8**
MUN Mundaring 43.36 228 P **P** **10 24 09.7 -0.4**
JGF Kuroka 43.57 341 P **P** **10 24 10.2 -1.5**
JGF Kuroka 43.57 341 P **P** **10 24 14.6 +2.9**
CTJI Waduk Cacaban 43.71 266 P P 10 24 21.9 +8.8
JNU Nakatsue 43.91 333 P **P** **10 24 14.7 +0.2**
comp=Z,23nm,1.0s,baz=352,slow=6.2,SNR=7.3
comp=Z,23nm,1.0s
KPJI Karang Pucung 43.96 265 P **P** **10 24 16.9 +1.8**
comp=Z,45nm,1.1s
MJAR Matsushiro Arr 44.18 343 P **P** **10 24 14.8 -1.7**
comp=Z,8.2nm,1.2s,baz=100,slow=2.6,SNR=5.4
MJAR PcP **PcP** **10 26 01.8 +0.5**
comp=Z,5.3nm,1.0s,baz=164,slow=3.0,SNR=4.7
comp=Z,8.2nm,1.2s
MJAR Matsushiro Arr 44.18 343 IAmb IAmb 10 24 17.6
comp=Z,18nm,1.5s
MJAR Matsushiro Arr 44.18 343 P **P** **10 24 14.8 -1.7**
MJAR pmax pmax
comp=Z,18nm,1.5s
MAJO Matsushiro 44.18 343 P **P** **10 24 18.4 +1.9**
MAJO Matsushiro 44.18 343⇑ *i*P **P** **10 24 15.1 -1.4**
MAJO pmax pmax
comp=Z,3.0nm,0.4s
BBJI Bungbulang 45.23 265 P **P** **10 24 23.6 -1.7**
BBJI Bungbulang 45.23 265 P **P** **10 24 25.8 +0.5**
BBJI Bungbulang 45.23 265 P **P** **10 24 25.9 +0.6**
comp=Z,618nmcomp=Z,44nm,0.7s
LEM Lembang 45.27 266 P **P** **10 24 25.1 -0.7**
comp=Z,14nm,0.3s,baz=351,slow=20,SNR=4.5
comp=Z,14nm,0.3s
TPI Tanjungpandan 45.45 272 P **P** **10 24 28.3 +1.3**
comp=Z,747nmcomp=Z,52nm,1.0s
CTZ Chatham Island 46.38 150 P **P** **10 24 34.4 +0.5**
KLSI 48.22 269 P P 10 24 56.0 +7.3
JEM Erimo 48.24 350 P **P** **10 24 51.3 +2.9**
KASI Kota Agung 48.41 268 P P 10 24 58.9 +8.7
MDSI Maura Dua 48.78 269 P **P** **10 24 51.1 -1.9**
comp=Z,900nmcomp=Z,40nm,1.1s
KSRS Korea Array 48.85 333 P **P** **10 24 52.8 -0.4**
comp=Z,3.8nm,1.0s,baz=148,slow=9.1,SNR=12
KSRS PcP **PcP** **10 26 19.0 +1.3**
comp=Z,2.3nm,0.7s,baz=170,slow=3.2,SNR=6.7
comp=Z,3.8nm,1.0s
KSAR Wonju Array Be 48.86 333 P **P** **10 24 53.0 -0.2**
KSAR Wonju Array Be 48.86 333 P **P** **10 24 53.0 -0.2**
LWLI Liwa 48.87 268 P P 10 25 07.2 +13
NJ2 Nanjing 49.67 321 *e*P **P** **10 25 00.8 +1.3**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
MNAI Manna 50.00 269 P **P** **10 25 02.8 +0.4**
JKA Kamikawa-asahi 50.38 350 **P** **10 25 04.6 -0.1**
JKA IAmb IAmb 10 25 11.8
comp=Z,30nm,0.9s
ASAJ Asahikawa 50.38 350 P **P** **10 25 05.2 +0.5**
comp=Z,3.9nm,0.4s,baz=224,slow=8.4,SNR=16
comp=Z,3.9nm,0.4s
ASAJ Asahikawa 50.38 350 P **P** **10 25 04.6 -0.1**
ASAJ pmax pmax
comp=Z,30nm,0.9s
VLA Vladivostok 52.17 340⇓ *i*P **P** **10 25 18.3 +0.2**
VLA pmax pmax
comp=Z,23nm,1.6s
PDSI Padang 52.78 273 P **P** **10 25 22.2 -1.1**
comp=Z,9µmcomp=Z,40nm,0.8s
PPI Padang Panjang 52.90 274 P **P** **10 25 23.4 -0.7**
comp=Z,1µmcomp=Z,91nm,1.0s
USRK Ussuriysk Ar. 53.10 341 P **P** **10 25 24.8 -0.2**
comp=Z,2.7nm,0.5s,baz=151,slow=8.3,SNR=14
comp=Z,2.7nm,0.5s
YSS Yuzhno-Sakhali 53.12 351 *e*P **P** **10 25 27.2 +2.1**
YSS pmax pmax
comp=Z,20nm,1.2s
KULM Kulim 53.52 281 P **P** **10 25 28.0 -0.7**
TIA Tai'an 53.55 324 P **P** **10 25 28.8 +0.3**
TIA sP **pwP** **10 25 35.1 -1.2**
TIA PcP **PcP** **10 26 35.6 +0.4**
TIA S **S** **10 33 04.8 +3.4**
TIA pmax pmax
comp=Z,12nm,1.2s
TIA pmax pmax
comp=Z,270nm,6.1s
MNSI Mandailing Nat 53.86 275 P **P** **10 25 31.3 +0.1**
comp=Z,40nm,0.5s
SISI Saibi 54.10 272 P **P** **10 25 32.1 -0.9**
comp=Z,1µmcomp=Z,77nm,1.7s
MDJ Mudanjiang 54.27 339 IAmb IAmb 10 25 35.8
comp=Z,29nm,1.4s
MDJ Mudanjiang 54.27 339 P **P** **10 25 33.8 +0.2**
MDJ pmax pmax
comp=Z,17nm,1.9s
PSI Prapat 54.79 277 P P 10 25 49.0 +11
ENH Enshi 54.94 313 P **P** **10 25 38.4 -0.3**
CN2 Changchun 55.15 336 P **P** **10 25 40.1 +0.1**
CN2 pP sP 10 25 44.8 +0.4
CN2 sP pwP 10 25 47.1 -0.8
CN2 PcP **PcP** **10 26 41.5 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
LYN LuoYang 55.36 319 P **P** **10 25 42.3 +0.6**
LYN pmax pmax
comp=Z,7.0nm,0.7s
HNS HongShan 55.78 323⇓ P **P** **10 25 44.8 +0.2**
HNS S **S** **10 33 37.6 +6.3**
HNS pmax pmax
comp=Z,24nm,1.4s
BNX BinXian 56.02 338⇑ P **P** **10 25 45.8 -0.4**
BNX sP **pwP** **10 25 51.6 -2.5**
BNX S **S** **10 33 32.3 -2.0**
BNX pmax pmax
comp=Z,16nm,1.1s
BNX pmax pmax
comp=Z,310nm,4.9s
KCSI Kotacane, Aceh 56.04 278 P **P** **10 25 45.8 -1.2**
XAN Xi'an 57.42 317⇓ P **P** **10 25 56.4 -0.1**
XAN pP pwP 10 26 03.9 -0.4
XAN pmax pmax
comp=Z,12nm,1.0s
KLR Kul'dur 57.69 344 *d* iP **P** **10 25 57.6 -0.4**
KLR pmax pmax
comp=Z,25nm,1.2s
KMI2 Kunming 57.71 304⇓ P **P** **10 25 59.9 +1.0**
KMI2 S **S** **10 33 57.0 -0.8**
KMI2 pmax pmax
comp=Z,12nm,1.4s
CMAR Chiang Mai Arr 58.52 295 P **P** **10 26 05.8 +1.4**
comp=Z,7.7nm,0.9s,baz=112,slow=5.2,SNR=35
comp=Z,7.7nm,0.9s
CMAR Chiang Mai Arr 58.52 295 **P** **10 26 04.9 +0.4**
PEA0B Petropavlovsk- 58.60 3 P **P** **10 26 04.4 +0.1**
PEA0B Petropavlovsk- 58.60 3⇓ *i*P **P** **10 26 04.2 -0.1**
PETK Petropavlovsk- 58.60 3 P **P** **10 26 04.0 -0.3**
comp=Z,10nm,0.5s,baz=161,slow=6.0,SNR=106
comp=Z,10nm,0.5s
PETK Petropavlovsk- 58.60 3 P **P** **10 26 04.2 -0.1**
PETK Petropavlovsk- 58.60 3 P **P** **10 26 04.2 -0.1**
CHTO Chiang Mai 58.63 296 P **P** **10 26 05.9 +0.7**
CHTO IAmb IAmb 10 26 15.8
comp=Z,28nm,1.3s
CHTO Chiang Mai 58.63 296 P **P** **10 26 05.9 +0.7**
CHTO pmax pmax
comp=Z,28nm,1.3s
CHTO Chiang Mai 58.63 296 P **P** **10 26 06.1 +0.9**
comp=Z,327nmcomp=Z,19nm,1.7s
PZH PanZhiHua 59.10 305 P **P** **10 26 10.3 +1.8**
CD2 Chengdu 59.51 311 P **P** **10 26 12.0 +0.9**
CD2 S **S** **10 34 20.5 -0.2**
CD2 pmax pmax
comp=Z,20nm,1.1s
XLT XiLinHaoTe 59.52 330 *e*P **P** **10 26 11.1 +0.1**
XLT sP pwP 10 26 18.6 -0.2
XLT PcP **PcP** **10 27 00.8 +2.4**
XLT pmax pmax
comp=Z,29nm,1.2s
XLT pmax pmax
comp=Z,160nm,4.0s
HHC Hu-ho-hao-te 59.88 324⇑ *i*P **P** **10 26 14.6 +1.0**
HHC pP pwP 10 26 19.5 -1.9
HHC pmax pmax
comp=Z,18nm,1.1s
HEH HeiHe 59.91 341 *e*P **P** **10 26 12.5 -0.9**
HEH pmax pmax
comp=Z,20nm,0.8s
BTO2 Baotou 60.80 323 *e*P **P** **10 26 20.6 +0.7**
BTO2 pP **sP** **10 26 25.0 +0.6**
BTO2 sP **pwP** **10 26 27.5 -0.3**
BTO2 pmax pmax
comp=Z,29nm,1.3s
BTO2 pmax pmax
comp=Z,410nm,8.8s
HIA Hailar 61.88 336 IAmb IAmb 10 26 34.7
comp=Z,13nm,0.9s
LZH Lanzhou 62.03 316 *e*P **P** **10 26 29.4 +1.0**
LZH sP pwP 10 26 38.0 +1.8
LZH S **S** **10 34 51.3 -1.7**
LZH pmax pmax
comp=Z,13nm,1.2s
LZH pmax pmax
comp=Z,130nm,4.8s
LZDM Lanzhou Array 62.06 316 P **P** **10 26 30.0 +1.2**
comp=Z,3.3nm,0.5s,baz=114,slow=7.2,SNR=10
comp=Z,3.3nm,0.5s
HILR Hailar Array B 62.11 336 P **P** **10 26 28.3 -0.2**
comp=Z,2.1nm,0.4s,baz=128,slow=9.6,SNR=7.1
comp=Z,2.1nm,0.4s
ZEA Zeya 62.99 343 *e*P **P** **10 26 34.5 +0.3**
ZEA pmax pmax
comp=Z,20nm,1.0s
MA2 Magadan 64.98 359 P **P** **10 26 47.1 -0.1**
comp=Z,11nm,0.5s,baz=166,slow=7.3,SNR=26
comp=Z,11nm,0.5s
MA2 Magadan 64.98 359 **P** **10 26 46.7 -0.5**
MA2 Magadan 64.98 359 *d* iP **P** **10 26 46.4 -0.8**
MA2 pmax pmax
comp=Z,45nm,1.3s
MA2 Magadan 64.98 359 P **P** **10 26 46.9 -0.3**
comp=Z,74nm,0.9s
GTA2 Gaotai 66.54 317 P **P** **10 26 58.6 +0.8**
GTA2 pP pwP 10 27 03.3 -2.4
GTA2 S **S** **10 35 50.6 +2.0**
GTA2 pmax pmax
comp=Z,14nm,1.9s
ULN Ulaanbaatar 66.84 328 P **P** **10 26 59.2 -0.4**
ULN Ulaanbaatar 66.84 328 *d* iP **P** **10 27 00.1 +0.5**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 66.84 328 P **P** **10 27 00.4 +0.8**
comp=Z,46nm,0.9s
SHL Shillong 67.00 301 P **P** **10 27 01.2 +0.1**
SHL Shillong 67.00 301 P **P** **10 27 01.2 +0.1**
SHL pmax pmax
comp=Z,74nm,1.4s
SONM Songino Array 67.17 328 P **P** **10 27 02.4 +0.7**
comp=Z,7.0nm,0.5s,baz=146,slow=6.0,SNR=20
comp=Z,7.0nm,0.5s
SONM Songino Array 67.17 328 P **P** **10 27 02.1 +0.4**
SONM Songino Array 67.17 328 P **P** **10 27 02.1 +0.4**
SONM pmax pmax
comp=Z,33nm,1.4s
SEY Seymchan 68.33 360 P **P** **10 27 08.9 +0.4**
comp=Z,3.9nm,0.4s,baz=174,slow=5.9,SNR=32
comp=Z,3.9nm,0.4s
SEY Seymchan 68.33 360⇑ *i*P **P** **10 27 08.4 -0.1**
SEY pmax pmax
comp=Z,18nm,1.4s
GOMU GeErMu 68.54 312 P **P** **10 27 11.1 +0.2**

GOMU pmax pmax
comp=Z,6.0nm,1.2s
LSA Lhasa 68.96 305 IAmb IAmb 10 27 16.0
comp=Z,15nm,1.1s
LSA Lhasa 68.96 305 P **P** **10 27 10.8 -2.9**
LSA pmax pmax
comp=Z,14nm,1.3s
YAK Yakutsk 69.81 348 P **P** **10 27 18.4 +0.7**
comp=Z,23nm,0.6s,baz=242,slow=0.4,SNR=26
comp=Z,23nm,0.6s
YAK Yakutsk 69.81 348 P **P** **10 27 18.1 +0.4**
YAK Yakutsk 69.81 348 *e*P **P** **10 27 17.1 -0.6**
YAK *e* 10 27 37.5
YAK *e* 10 29 50.6
YAK *e*PPP PPP 10 31 37.9
YAK *e*S **S** **10 36 25.1 -1.3**
YAK pmax pmax
comp=Z,66nm,1.2s
YAK pmax pmax
comp=N,25nm,1.4s
YAK pmax pmax
comp=E,13nm,1.5s
YAK pmax pmax
comp=Z,396nm,5.9s
YAK pmax pmax
comp=E,262nm,5.4s
YAK pmax pmax
comp=N,134nm,6.1s
YAK smax smax
comp=N,288nm,5.8s
YAK smax smax
comp=E,173nm,5.5s
ZAK Zakamensk 70.34 329 *e*P **P** **10 27 20.0 -1.3**
ZAK pmax pmax
comp=Z,27nm,1.4s
TLY Talaya 70.93 330 P **P** **10 27 25.7 +0.9**
TLY Talaya 70.93 330 *ce*P **P** **10 27 25.8 +1.0**
TLY pmax pmax
comp=Z,13nm,1.3s
IRK Irkutsk 70.96 331 *e*P **P** **10 27 24.5 -0.5**
IRK pmax pmax
comp=Z,33nm,1.7s
VNDA Vanda 72.04 178 P **P** **10 27 30.9 -0.2**
comp=Z,11nm,0.9s,baz=345,slow=7.1,SNR=19
comp=Z,11nm,0.9s
VNDA Vanda 72.04 178 P **P** **10 27 30.8 -0.3**
VNDA IAmb IAmb 10 27 32.1
comp=Z,17nm,1.1s
VNDA Vanda 72.04 178 P **P** **10 27 30.8 -0.3**
VNDA pmax pmax
comp=Z,17nm,1.1s
MOY Mondy 72.26 329 *e*P **P** **10 27 33.5 +0.5**
MOY pmax pmax
comp=Z,45nm,1.4s
BILL Bilibino 74.04 5⇑ *i*P **P** **10 27 42.1 -0.9**
BILL pmax pmax
comp=Z,8.0nm,1.0s
GAMB Gambell 74.04 15 IAmb IAmb 10 27 50.5
comp=Z,23nm,1.5s
K13K Kusilvak Mount 74.72 19 IAmb IAmb 10 28 34.1
comp=Z,36nm,1.8s
L14K Kuka Creek 74.96 20 IAmb IAmb 10 27 49.6
comp=Z,13nm,0.8s
J14K Nanvaranak Lak 75.66 19 IAmb IAmb 10 27 59.8
comp=Z,23nm,1.2s
K15K Wolf Creek Mou 76.02 20 IAmb IAmb 10 27 55.8
comp=Z,18nm,0.9s
WMQ Urumqi 76.55 317 *e*P **P** **10 27 58.3 +0.2**
WMQ sP pwP 10 28 07.4 +1.4
WMQ S **S** **10 37 47.4 +3.4**
WMQ pmax pmax
comp=Z,27nm,1.7s
J16K Anvik River 77.01 20 IAmb IAmb 10 28 07.1
comp=Z,47nm,1.7s
HYB Hyderabad 77.07 289 *e*P **P** **10 28 01.3 -0.1**
HYB *e*PP **PP** **10 30 54.6 -0.6**
HYB *e*S **S** **10 37 50.8 +0.2**
I17K Unalakleet 77.39 19 IAmb IAmb 10 28 09.2
comp=Z,20nm,1.1s
K17K Iditarod 77.42 21 IAmb IAmb 10 28 02.9
comp=Z,23nm,1.4s
F15K North Star Dit 77.47 17 IAmb IAmb 10 28 09.1
comp=Z,19nm,1.2s
J17K VABM Dome 77.59 20 IAmb IAmb 10 28 42.6
comp=Z,37nm,1.6s
G16K Koyuk River 77.91 17 IAmb IAmb 10 28 05.9
comp=Z,20nm,1.1s
L19K White Mountain 78.34 22 IAmb IAmb 10 28 08.8
comp=Z,17nm,1.0s
TIXI Tiksi 78.72 352 **P** **10 28 09.4 0.0**
TIXI Tiksi 78.72 352 *ce*P **P** **10 28 09.0 -0.4**
TIXI pmax pmax
comp=Z,55nm,1.7s
DGZ Jazzator, Alta 78.91 323⇓ *i*P **P** **10 28 11.4 +0.2**
DGZ pmax pmax
comp=Z,19nm,1.1s
F17K Baldwin Pennin 78.97 17 IAmb IAmb 10 28 11.8
comp=Z,19nm,1.1s
RDOG Red Dog Mine 79.64 15 IAmb IAmb 10 28 16.1
comp=Z,38nm,1.3s
ZSN Zaisan 79.69 320 *e*P **P** **10 28 15.7 +0.4**
ZSN pmax pmax
comp=Z,19nm,1.3s
ZSN Zaisan 79.69 320 *e*P **P** **10 28 15.8 +0.4**
comp=Z,19nm,1.3s
I20K Naaghedeneel 80.05 20 IAmb IAmb 10 28 18.2
comp=Z,23nm,1.1s
E19K Redstone River 80.83 17 IAmb IAmb 10 28 29.6
comp=Z,15nm,0.8s
I21K Tanana 81.14 20 IAmb IAmb 10 28 23.2
comp=Z,23nm,1.2s
MK31 Makanchi Array 81.14 319 *d i*P **P** **10 28 23.4 +0.2**
MKAR Makanchi Array 81.14 319 P **P** **10 28 23.4 +0.2**
comp=Z,3.5nm,0.5s,baz=96,slow=7.1,SNR=64
comp=Z,3.5nm,0.5s
MKAR Makanchi Array 81.14 319 **P** **10 28 23.8 +0.6**
MKAR Makanchi Array 81.14 319 P **P** **10 28 23.8 +0.6**
C19K Lookout Ridge 81.25 15 IAmb IAmb 10 29 07.1
comp=Z,22nm,1.1s
MAKZ Makanchi 81.35 319 **P** **10 28 24.7 +0.4**
MAKZ IAmb IAmb 10 28 25.9
comp=Z,19nm,1.0s
MAKZ Makanchi 81.35 319 P **P** **10 28 24.7 +0.4**
MAKZ pmax pmax
comp=Z,19nm,1.0s
MCK McKinley 81.45 22 P **P** **10 28 23.1 -1.3**
MCK IAmb IAmb 10 28 24.1
comp=Z,23nm,1.0s
MCK McKinley 81.45 22 P **P** **10 28 23.1 -1.3**
MCK pmax pmax
comp=Z,23nm,1.0s
H22K Ishtalitna Cre 81.75 20 IAmb IAmb 10 29 05.7
comp=Z,28nm,1.6s
D20K Etivluk River 81.81 16 IAmb IAmb 10 28 28.0
comp=Z,17nm,1.2s
ZAA0 Zalesovo Array 81.99 326 IAmb IAmb 10 28 30.9
comp=Z,18nm,1.1s
ZALV Zalesovo Beam 81.99 326 P **P** **10 28 26.7 -0.7**
comp=Z,7.0nm,0.5s,baz=112,slow=5.6,SNR=29
comp=Z,7.0nm,0.5s
ZALV Zalesovo Beam 81.99 326 **P** **10 28 27.2 -0.2**
SHLS Shalkode 82.03 315 *e*P **P** **10 28 26.7 -1.3**
SHLS pmax pmax
comp=Z,12nm,1.1s
SHLS Shalkode 82.03 315 *e*P **P** **10 28 26.8 -1.3**
comp=Z,12nm,1.1s
UZB Uzynbulak 82.33 315 *e*P **P** **10 28 29.9 +0.2**
UZB pmax pmax
comp=Z,12nm,1.0s
UZB Uzynbulak 82.33 315 *e*P **P** **10 28 29.9 +0.2**
comp=Z,12nm,1.0s
H23K Yukon River 82.34 20 IAmb IAmb 10 28 29.2
comp=Z,17nm,1.3s
CCB Clear Creek Bu 82.35 22 P **P** **10 28 27.6 -1.5**
IL31 82.75 22 IAmb IAmb 10 28 30.9
comp=Z,26nm,1.7s
ILAR Eielson Array 82.75 22 P **P** **10 28 28.9 -2.3**
comp=Z,4.1nm,0.9s,baz=255,slow=5.2,SNR=26
comp=Z,4.1nm,0.9s
ILAR Eielson Array 82.75 22 P **P** **10 28 29.4 -1.8**
ILAR Eielson Array 82.75 22 P **P** **10 28 29.4 -1.8**
TARG Taragay, Kyrgy 82.85 313 IAmb IAmb 10 28 46.5
comp=Z,33nm,1.6s
RIDG Independent Ri 83.04 23 IAmb IAmb 10 29 11.4
comp=Z,13nm,0.8s
TDK Taldyqorghan 83.24 316 *e*P **P** **10 28 34.5 +0.3**
TDK pmax pmax
comp=Z,8.0nm,0.5s
TDK Taldyqorghan 83.24 316 *e*P **P** **10 28 34.5 +0.3**
comp=Z,8.5nm,0.5s
ARXS Arharly 83.44 316 *e*P **P** **10 28 34.5 -0.9**
SCRK Sand Creek 83.48 23 IAmb IAmb 10 29 14.8
comp=Z,33nm,1.8s
G24K Hadweenzic Riv 83.51 20 IAmb IAmb 10 28 38.6
comp=Z,15nm,1.3s
E23K Chandalar 83.52 19 IAmb IAmb 10 28 41.6
comp=Z,17nm,1.2s
MDOK Medeo 83.74 314 *e*P **P** **10 28 37.1 +0.1**
MDOK Medeo 83.74 314 *e*P **P** **10 28 37.2 +0.1**
TNSS Tian-Shan 83.78 314 *e*P **P** **10 28 37.2 -0.3**
TNSS Tian-Shan 83.78 314 *e*P **P** **10 28 37.3 -0.3**
AAA Alma-Ata 83.84 314 *e*P **P** **10 28 37.6 +0.2**
AAA Alma-Ata 83.84 314 *e*P **P** **10 28 37.7 +0.2**
KSH2 Kashi 83.93 310 P **P** **10 28 39.0 +0.9**
KSH2 sP pwP 10 28 45.8 -0.2
KSH2 S **SKSac** **10 38 58.5 -2.8**
KSH2 pmax pmax
comp=Z,13nm,1.4s
KSH2 pmax pmax
comp=Z,160nm,4.8s
L27K Beaver Creek, 83.95 25 IAmb IAmb 10 28 38.1
comp=Z,14nm,1.2s
BCAR Beaver Creek A 83.97 25 **P** **10 28 36.3 -1.4**
NRN Naryn 84.10 313 IAmb IAmb 10 28 41.2
comp=Z,27nm,1.4s
D24K Happy Valley 84.36 18 IAmb IAmb 10 28 41.4
comp=Z,16nm,1.4s
QSPA South Pole Qui 84.38 180 P **P** **10 28 39.4 -0.4**
comp=Z,49nm,0.9s,baz=358,slow=1.7,SNR=45
comp=Z,49nm,0.9s
QSPA South Pole Qui 84.38 180 **P** **10 28 39.5 -0.2**
KURK Kurchatov 84.59 322 **P** **10 28 41.0 +0.1**
KURK Kurchatov 84.59 322 *d i*P **P** **10 28 40.4 -0.5**
KURK pmax pmax
comp=Z,33nm,1.1s
KURBB Kurchatov Arra 84.62 322 P **P** **10 28 40.7 -0.4**
comp=Z,39nm,1.3s,baz=102,slow=4.0,SNR=50
comp=Z,39nm,1.3s
NIL Nilore 84.70 304 **P** **10 28 42.1 +0.2**
NIL Nilore 84.70 304 P **P** **10 28 42.1 +0.2**
NIL pmax pmax
comp=Z,16nm,0.6s
TKM2 Tokmak 2 84.72 314 P **P** **10 28 42.3 +0.2**
SNR=20
BMAR Burnt Mountain 84.86 20 **P** **10 28 42.2 +0.1**
G26K Porcupine Rive 84.92 21 IAmb IAmb 10 28 43.7
comp=Z,19nm,1.0s
MAW Mawson 84.98 203 P **P** **10 28 41.4 -1.2**
comp=Z,33nm,1.0s,baz=134,slow=4.4,SNR=8.2
comp=Z,33nm,1.0s
I27K Kandik River 85.11 22 IAmb IAmb 10 28 49.3
comp=Z,34nm,1.6s
KBK Karagaybulak 85.13 314 P **P** **10 28 44.8 +0.7**
SNR=9.4
CHMS Chumysh 85.34 314 P **P** **10 28 45.3 +0.3**
SNR=10.0
UCH Ucor 85.36 313 P **P** **10 28 46.4 +0.9**
SNR=23
H27K Steamboat Moun 85.41 22 IAmb IAmb 10 28 46.2
comp=Z,29nm,1.8s
AAK Ala-Archa 85.45 313 P **P** **10 28 46.2 +0.5**
SNR=11
AAK Ala-Archa 85.45 313 **P** **10 28 46.2 +0.5**
AAK Ala-Archa 85.45 313 *d i*P **P** **10 28 46.1 +0.4**
AAK pmax pmax
comp=Z,16nm,1.2s
SGDS Sogindy 85.52 314 *e*P **P** **10 28 46.1 +0.2**
USP Ospenovka 85.58 314 P **P** **10 28 46.5 +0.3**
SNR=20
I28M Miner Creek 85.69 23 IAmb IAmb 10 28 47.3
comp=Z,36nm,1.9s
EKS2 Erkin-Say 85.98 313 P **P** **10 28 49.6 +1.3**
SNR=6.6
K29M Barlow Dome 86.04 25 IAmb IAmb 10 28 55.3
comp=Z,42nm,1.8s
BTLS Baital 86.26 316 *e*P P 10 28 43.7 -5.7
NRIK Noril'sk 86.81 341 P **P** **10 28 51.5 -0.1**
comp=Z,13nm,0.6s,baz=116,slow=5.1,SNR=24
comp=Z,13nm,0.6s
D27M Malcolm River 86.87 19 IAmb IAmb 10 29 09.7
comp=Z,13nm,1.1s
I30M Mount Dempster 86.99 23 IAmb IAmb 10 28 58.6
comp=Z,23nm,1.5s
E28M Babbage River 87.08 20 IAmb IAmb 10 28 55.0
comp=Z,35nm,1.7s
BBB Bella Bella 87.51 37 LR LR 11 01 55.1
comp=Z,7μm,19.3s,baz=290,slow=31
E29M Blow River 87.56 20 IAmb IAmb 10 29 09.2
comp=Z,13nm,1.4s
DZA Taraz 87.79 313 *e*P **P** **10 28 57.0 +0.1**
DZA pmax pmax
comp=Z,5.0nm,0.5s
DZA Taraz 87.79 313 *e*P **P** **10 28 57.0 +0.1**
comp=Z,4.6nm,0.5s
H31M Peel River 87.98 23 IAmb IAmb 10 29 00.1
comp=Z,10nm,0.9s
G31M Satah River 88.36 22 IAmb IAmb 10 28 59.1
comp=Z,14nm,1.1s
KK31 Karatay Array 88.42 313 IAmb IAmb 10 29 09.5
comp=Z,12nm,1.3s
KKAR Karatay Array 88.42 313 **P** **10 28 59.5 -0.4**
KKAR Karatay Array 88.42 313 P **P** **10 28 59.5 -0.4**
IUG luzhnay 88.62 312 *e*P **P** **10 29 00.9 -0.1**
IUG pmax pmax
comp=Z,10.0nm,1.2s
IUG luzhnay 88.62 312 *e*P **P** **10 29 01.0 -0.1**
comp=Z,9.9nm,1.2s
F31M Tsiigehtchic 88.72 22 IAmb IAmb 10 29 09.2
comp=Z,28nm,1.7s
BRLS Boroloday 88.89 313 *e*P **P** **10 29 02.6 +0.4**
BRLS Boroloday 88.89 313 *e*P **P** **10 29 02.6 +0.4**
CHM Chimkent 88.96 313 *e*P **P** **10 29 02.6 +0.1**
CHM Chimkent 88.96 313 *e*P **P** **10 29 02.6 +0.1**
INK Inuvik 89.06 21 IAmb IAmb 10 29 02.5
comp=Z,12nm,1.2s
BVAR Borovoye Array 90.07 323 P **P** **10 29 06.3 -1.1**
comp=Z,6.2nm,0.5s,baz=106,slow=5.4,SNR=34
comp=Z,6.2nm,0.5s
BORK Borovoye 90.12 323 **P** **10 29 07.2 -0.4**
BORK Borovoye 90.12 323⇓ *i*P **P** **10 29 06.4 -1.2**
BORK pmax pmax
comp=Z,13nm,1.0s
J05D Fort Rock, OR 90.60 47 IAmb IAmb 10 29 14.6
comp=Z,12nm,1.3s
I07A Izee 91.94 46 IAmb IAmb 10 29 20.0
comp=Z,13nm,1.6s
LHV Little Huntoon 92.12 52 IAmb IAmb 10 29 21.6
comp=Z,10nm,1.3s
NVAR Mina Array Bea 92.30 52 P **P** **10 29 17.2 -1.2**
comp=Z,2.4nm,1.0s,baz=258,slow=5.7,SNR=12
comp=Z,2.4nm,1.0s
WVOR Wild Horse Val 92.41 48 P **P** **10 29 18.8 +0.1**
WVOR IAmb IAmb 10 29 34.2
comp=Z,12nm,1.6s
WVOR Wild Horse Val 92.41 48 P **P** **10 29 18.8 +0.1**
WVOR pmax pmax
comp=Z,12nm,1.6s
A36M Sachs Harbour 92.68 18 IAmb IAmb 10 29 25.1
comp=Z,7.0nm,0.9s
GWY Greenwater Val 93.41 54 IAmb IAmb 10 29 28.9
comp=Z,13nm,1.8s
WCT Wildcat Mounta 93.49 54 IAmb IAmb 10 29 28.5
comp=Z,17nm,1.9s
BMO Blue Mountains 93.58 45 P **P** **10 29 25.0 +1.0**
BMO IAmb IAmb 10 33 05.3
comp=Z,14nm,1.9s
BMO Blue Mountains 93.58 45 P **P** **10 29 25.0 +1.0**
BMO pmax pmax
comp=Z,14nm,1.9s
NEW Newport 93.95 42 LR LR 11 02 29.4
comp=Z,10μm,20.9s,baz=296,slow=30
SHPR Sheep Range 94.64 54 P **P** **10 29 29.1 0.0**
YKA Yellowknife Ar 95.96 28 P **P** **10 29 33.2 -1.1**
comp=Z,1.4nm,0.9s,baz=276,slow=5.2,SNR=18
YKA PKiKP **PKiKP** **10 34 12.3 -0.9**
comp=Z,0.2nm,0.4s,baz=282,slow=1.3,SNR=7.7
YKA LR LR 11 09 42.9
comp=Z,11μm,19.5s,baz=282,slow=34
comp=Z,1.4nm,0.9s
ELIB Princess Elisa 96.13 194 *d*P **P** **10 29 33.6 -1.6**
comp=Z,8.2nm,1.4s
AB31 Akbulak array 96.28 319 IAmb IAmb 10 29 35.1
comp=Z,9.6nm,1.6s
ARTI Arti 97.25 326 P **P** **10 29 38.2 -2.1**
comp=Z,3.0nm,0.5s,baz=285,slow=1.6,SNR=4.7
comp=Z,3.0nm,0.5s
ARTI Arti 97.25 326 *c i*P **P** **10 29 38.7 -1.7**
ARTI 10 33 34.3
ARTI S **SKSac** **10 40 15.6 -1.6**
ARTI SS **SS** **10 47 40.1 -1.3**
ARTI pmax pmax
comp=Z,19nm,1.8s
PDAR Pinedale Array 99.12 48 P **Pdif** **10 29 47.9 -1.5**
comp=Z,0.7nm,1.0s,baz=248,slow=0.8,SNR=3.9
PDAR LR LR 11 08 45.6
comp=Z,5μm,21.0s,baz=309,slow=32
comp=Z,0.7nm,1.0s
TXAR Lajitas Array 104.20 61 PKiKP **PKiKP** **10 34 29.1 0.0**
comp=Z,0.6nm,1.0s,baz=300,slow=2.7,SNR=3.4
KLMR Klimovskoe 106.23 332 *e*P **Pdif** **10 30 17.4 -2.9**
KLMR pmax pmax
comp=Z,21nm,1.4s
ARCES ARCESS Array B 107.71 343 PKiKP **PKiKP** **10 34 34.0 -0.3**
comp=Z,5.8nm,1.1s,baz=50,slow=1.9,SNR=6.3
FINES FINESS Array B 111.90 336 Pdiff **Pdif** **10 30 44.4 -1.0**
comp=Z,2.0nm,0.8s,baz=116,slow=6.3,SNR=1.5
FINES PKiKP **PKiKP** **10 34 41.4 -1.0**
comp=Z,3.4nm,1.0s,baz=103,slow=3.2,SNR=6.9
AKASG Malin Array Be 115.33 324 PKiKP **PKiKP** **10 34 48.0 -1.3**
comp=Z,0.7nm,0.4s,baz=50,slow=3.0,SNR=6.1
AKASG Malin Array Be 115.33 324 PKiKP **PKiKP** **10 34 48.0 -1.3**
BRTR Keskin Array B 116.08 312 PKP **PKPdf** **10 34 50.4 -0.9**
comp=Z,0.9nm,0.7s,baz=124,slow=1.8,SNR=5.0
HFS Hagfors 117.53 338 PKP **PKPdf** **10 34 52.3 -0.9**
comp=Z,1.4nm,0.6s,baz=25,slow=3.9,SNR=5.7
PLCA Paso Flores 118.95 143 PKP **PKPdf** **10 34 55.9 -0.9**
comp=Z,2.2nm,0.5s,baz=247,slow=2.6,SNR=26
BOSA Boshof 119.43 233 PKP **PKPdf** **10 34 57.4 -0.7**
comp=Z,3.5nm,0.8s,baz=75,slow=1.8,SNR=3.7
SCHQ Schefferville 121.34 26 PKP **PKPdf** **10 34 60.0 -0.8**
comp=Z,0.8nm,0.4s,baz=289,slow=4.4,SNR=6.0
MORC Moravsky Berou 122.32 328 *e*PKiKP **PKPdf** **10 35 03.0 +0.1**
JAVC Velka Javorina 122.77 327 *e*PKiKP **PKPdf** **10 35 03.9 +0.1**
VRAC Vranov 123.09 328 *e*PKiKP **PKPdf** **10 35 03.8 -0.5**
MODS Modra-Piesok 123.25 326 *e*PKiKP **PKPdf** **10 35 04.0 -0.7**
MODS Modra-Piesok 123.25 326 *e*PKP **PKPdf** **10 35 04.0 -0.7**
KRUC Moravsky 123.34 327 *e*PKiKP **PKPdf** **10 35 04.7 -0.1**
GERES GERESS Array B 124.90 328 PKP **PKPdf** **10 35 07.3 -0.6**
comp=Z,3.2nm,1.0s,baz=180,slow=1.2,SNR=7.2
LCO Las Campanas 125.60 132 **PKPdf** **10 35 09.8 -0.2**
LCO Las Campanas 125.60 132 PKiKP **PKPdf** **10 35 09.9 -0.2**
QNGWA Qangwa 126.56 241 **PKPdf** **10 35 11.9 0.0**
EKA Eskdalemuir Ar 126.88 343 PKP **PKPdf** **10 35 11.3 -0.1**
comp=Z,0.6nm,0.4s,baz=14,slow=2.7,SNR=6.0
STAL STALIGIAL 127.01 326 **PKPdf** **10 35 11.1 -0.8**
AC01 Pan de Azucar 127.15 129 **PKPdf** **10 35 12.3 -0.5**
MEM Membach 127.39 334 *d*PKPdf **PKPdf** **10 35 12.5 +0.1**
BCLA Clavier 127.83 334 *d*PKPdf **PKPdf** **10 35 12.7 -0.6**
PB14 IPOC Station P 128.06 127 **PKPdf** **10 35 14.8 -0.2**
DOU Dourbes 128.38 335 *d*PKPdf **PKPdf** **10 35 14.1 -0.3**
TIP Timpagrande 128.38 317 **PKPdf** **10 35 14.2 -0.6**
TUE Stuetta 128.68 328 **PKPdf** **10 35 15.6 +0.2**
LPAZ La Paz 133.74 119 PKP **PKPdf** **10 35 27.1 +0.8**
comp=Z,6.9nm,0.6s,baz=318,slow=1.2,SNR=22
LPAZ La Paz 133.74 119 **PKPdf** **10 35 26.9 +0.6**
KEST Kesra 135.21 317 PKP **PKPdf** **10 35 28.8 +0.9**
comp=Z,1.5nm,0.5s,baz=190,slow=5.2,SNR=3.8
SDV Santo Domingo 136.47 83 **PKPdf** **10 35 29.5 -1.4**
CPUP Villa Florida 136.65 138 PKP **PKPdf** **10 35 30.9 +0.2**
comp=Z,3.8nm,0.8s,baz=278,slow=3.9,SNR=6.2
PTLB Pontes e Lacer 141.80 124 **PKPdf** **10 35 36.3 -4.0**
EDA Edea 143.08 269 PKPab 10 35 38.2 +0.1
TAM Tamanrasset 144.39 302 **PKPab** **10 35 43.5 +0.5**
TAM Tamanrasset 144.39 302 PKiKP **PKPab** **10 35 43.5 +0.5**
MACA Manacapuru-AM 145.11 104 **PKPbc** **10 35 44.1 -1.6**
VAO Valinhos 145.45 146 **PKPbc** **10 35 46.5 -0.1**
MD01 Midelt array s 145.93 326 **PKPdf** **10 35 47.2 -0.1**
BOAV Boa Vista 146.27 94 **PKPdf** **10 35 47.6 -0.7**
BDFB Brasilia 150.27 135 PKP **PKPdf** **10 35 55.0 +0.2**
comp=Z,35nm,1.1s,baz=143,slow=4.1,SNR=5.5
BDFB PKPbc **sPKPdf** **10 35 59.4 +0.4**
comp=Z,56nm,0.8s,baz=216,slow=1.7,SNR=32
TORD Torodi Ar. Bea 150.87 287 PKP **PKPdf** **10 35 55.1 -0.5**
comp=Z,39nm,1.0s,baz=218,slow=2.1,SNR=5.9
TORD PKPbc **sPKPdf** **10 35 60.0 +0.2**
comp=Z,39nm,1.0s,baz=192,slow=1.9,SNR=75

IDC 13 10:31:54.0±3.0, 9.74N×123.45E, h0km, mb3.5/4, mbtmp3.5/4, MS3.3/1, Error ellipse: s-maj=351.5km s-min=22.9km az=64.0, Negros

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**4.98**	**331**	LR	LR		10 35 35.3	
	comp=Z,376nm,21.3s,baz=58,slow=44							
WRA	**Warramunga Arr**	**31.39**	**160**	P	P		10 38 15.7	-1.1
	0.4nm,1.0s,baz=337,slow=8.1,SNR=1.6							
	0.4nm,1.0s							
ASAR	**Alice Springs**	**34.74**	**163**	P	P		10 38 46.8	+0.6
	0.5nm,0.7s,baz=340,slow=7.3,SNR=12							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**50.80**	**324**	P	P		10 40 56.3	+0.1
	0.6nm,0.8s,baz=128,slow=7.6,SNR=4.9							
	0.6nm,0.8s							
KURBB	**Kurchatov Arra**	**54.95**	**327**	P	P		10 41 26.6	-0.3
	0.4nm,0.4s,baz=126,slow=6.9,SNR=4.4							
	0.4nm,0.4s							

BJI ***13*** *10:33:42.4, 45.˚50N×149.˚00E, h150km, mB7.2/67, mb6.5/91*

MOS ***13*** *10:33:43.1±1.0, 45.˚65N×148.˚84E, h145km, mb6.9/73, MS6.4/28, Error ellipse: s-maj=5.6km s-min=4.0km az=108.5*

SKHL ***13*** *10:33:44.3±0.2, 45.˚40N×149.˚00E, h142km±8km, mb7.1/12, mbv7.9/10, ms6.5/6, msh7.9/9, msha8.0/4*

NEIC ***13*** *10:33:44.4±1.7, 45.˚62N±0.˚07×148.˚96E±0.˚08, h143km±1km, mb6.7/842, Mwb7.0/312, Mww7.0/131, Error ellipse: s-maj=12.6km s-min=9.6km az=346.0*

NEIC ***13*** *10:33:44.1, 45.˚63N×148.˚91E, h140km*

NEIC ***13*** *10:33:44.1, 45.˚43N×148.˚62E, h140km, Moment Tensor Solution. Duration: 15≈6 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.30; $M_{\theta\theta}$1.35; $M_{\phi\phi}$-0.04; $M_{r\theta}$2.83; $M_{\theta\phi}$0.55; $M_{\phi r}$1.74; Fault plane solution: M_o3.62000×10^{19} NP1:ϕ_s85.83000°, δ12.60000°, λ-64.01000°. NP2:ϕ_s239.29000°, δ78.69000°, λ-95.59000°. Principal axes: T 3.6986, Plg33.0000°, Azm334.0000°; N -0.1630, Plg5.0000°, Azm240.0000°; P -3.5356, Plg56.0000°, Azm142.0000°;*

PTWC ***13*** *10:33:44, 45.˚50N×149.˚00E, h167km, Mwp6.7/8*

GFZ ***13*** *10:33:45.0, 45.˚64N×148.˚89E, h154km, MW6.9, Moment Tensor Solution. s8 Moment tensor: M_{rr}-0.99; $M_{\theta\theta}$1.13; $M_{\phi\phi}$-0.14; $M_{r\theta}$2.11; $M_{\theta\phi}$0.33; $M_{\phi r}$1.52; Fault plane solution: NP1:ϕ_s99.00000°, δ14.00000°, λ-47.00000°. NP2: ϕ_s236.00000°, δ79.00000°, λ-99.00000°. Principal axes: T 2.8500, Plg34.0000°, Azm334.0000°; N -0.0500, Plg9.0000°, Azm238.0000°; P -2.8100, Plg55.0000°, Azm134.0000°;*

IPGP ***13*** *10:33:45.0, 44.˚70N×148.˚90E, h147km, Mw7.0, Fault plane solution: NP1:ϕ_s108.00000°, δ13.00000°, λ-43.00000°. NP2:ϕ_s241.00000°, δ81.00000°, λ-99.00000°.*

NIED ***13*** *10:33:45.1, 45.˚06N×149.˚16E, h155km, MW6.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.23; $M_{\theta\theta}$1.53; $M_{\phi\phi}$-0.30; $M_{r\theta}$2.24; $M_{\theta\phi}$-0.21; $M_{\phi r}$1.23; Fault plane solution: M_o2.92000×10^{19} NP1: ϕ_s121.00000°, δ21.00000°, λ-37.00000°. NP2: ϕ_s247.00000°, δ78.00000°, λ-107.00000°.*

JMA ***13*** *10:33:45.1±0.5, 45.˚N±2.˚×14.˚9E±.˚, h155km, MD7.2/17, MW6.9/17, SE OFF ETOROFU*

JMA Felt IV J1 at SE OFF ETOROFU .

IDC ***13*** *10:33:45.8±0.6, 45.˚76N×148.˚84E, h156km±5km, mb6.0/37, mbtmp6.5/48, MS6.3/50, Error ellipse: s-maj=7.5km s-min=6.9km az=161.0*

PMR ***13*** *10:33:45.0, 44.70N×148.˚90E, h163km*

GCMT ***13*** *10:33:49.5±0.0, 45.42N×148.˚94E, h151km, MW7.0/174, Moment Tensor Solution. s170,c480; s174,c885; Duration: 7s5 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.24±.01; $M_{\theta\theta}$1.53±.01; $M_{\phi\phi}$-0.29±.01; $M_{r\theta}$2.78±.01; $M_{\theta\phi}$0.44±.01; $M_{\phi r}$1.73±.01; Best double couple: M_o3.58700×10^{19} NP1:ϕ_s100.00000°, δ15.00000°,*

λ-50.00000°. NP2:φ=239.00000°, δ79.00000°, λ-99.00000°. Principal axes: T 3.6920, Plg33.0000°, Azm337.0000°; N -0.2110, Plg9.0000°, Azm241.0000°; P -3.4810, Plg55.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

BGR 13 10:33:55.0,46.87N,147.66E,h147km,mb7.3,mB_BB7.6

ISC 13 10:33:44.9±0.2,45°53N±0.02,148°84E±0.02,h150km±1km, h150km:pP-P,n2464,σ2s11/2932,mb6.7/706,346C-138D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.75**	**247**	*e*P	N	**Pn**	**10 34 07.0**	**-0.7**
KUR				*i* S		**Sn**	**10 34 26.8**	**+1.7**
KUR	**Kuril'sk**	**0.75**	**247**	*e*P		**Pn**	**10 34 08.9**	**+1.2**
KUR				AMB		AMB	10 34 10.7	
	173μm,0.8s							
KUR				AMB		AMB	10 34 11.8	
	4028μm,5.0s							
KUR				*e*S		**Sn**	**10 34 26.7**	**+1.7**
YUK	**Yuzh-Kuril'sk**	**2.59**	**236**	*e*P		**Pn**	**10 34 28.1**	**+0.9**
YUK				*i* S		**Sn**	**10 35 01.1**	**+1.4**
YUK				pmax		pmax		
	comp=Z,113μm,0.5s							
YUK				pmax		pmax		
	comp=N,22μm,0.3s							
YUK				pmax		pmax		
	comp=E,58μm,0.4s							
YUK				pmax		pmax		
	comp=Z,236μm,0.9s							
YUK				smax		smax		
	comp=N,543μm,0.7s							
YUK				smax		smax		
	comp=E,185μm,0.8s							
YUK				smax		smax		
	comp=N,1904μm,3.8s							
YUK				smax		smax		
	comp=E,1025μm,2.3s							
YUK	**Yuzh-Kuril'sk**	**2.59**	**236**	*e*P		**Pn**	**10 34 28.1**	**+0.9**
YUK				AMB		AMB	10 34 32.7	
	comp=E,113μm,0.5s							
YUK				AMB		AMB	10 34 36.0	
	comp=E,236μm,0.9s							
YUK				*i* S		**Sn**	**10 35 01.5**	**+1.8**
YUK				A		A	10 35 04.2	
	comp=E,1904μm,3.0s							
YUK				A		A	10 35 04.2	
	comp=E,1025μm,3.0s							
YUK				A		A	10 35 11.1	
	comp=E,543μm,0.8s							
YUK				A		A	10 35 11.1	
	comp=E,185μm,0.8s							
RUSJ	**Misakicho**	**2.93**	**242**	*e*PN		**Pn**	**10 34 31.7**	**+0.4**
RUSJ				*i* S		**Sn**	**10 35 09.2**	**+2.1**
GLVR	**Golovnino**	**2.97**	**234**	*e*PN		**Pn**	**10 34 32.8**	**+0.9**
GLVR				*i* S		**Sn**	**10 35 09.9**	**+1.8**
GLVR				pmax		pmax		
	comp=Z,51μm,0.7s							
GLVR				pmax		pmax		
	comp=N,6μm,0.4s							
GLVR				pmax		pmax		
	comp=E,6μm,0.6s							
GLVR				pmax		pmax		
	comp=Z,119μm,1.1s							
GLVR				smax		smax		
	comp=E,403μm,0.3s							
GLVR				smax		smax		
	comp=N,475μm,0.5s							
GLVR				smax		smax		
	comp=N,507μm,1.6s							
GLVR				smax		smax		
	comp=E,1419μm,1.6s							
GLVR	**Golovnino**	**2.97**	**234**	*e*P		**Pn**	**10 34 32.8**	**+0.9**
GLVR				AMB		AMB	10 34 36.0	
	comp=E,51μm,0.7s							
GLVR				AMB		AMB	10 34 38.5	
	comp=E,119μm,1.1s							
GLVR				*i* S		**Sn**	**10 35 09.9**	**+1.8**
GLVR				A		A	10 35 15.2	
	comp=E,475μm,0.4s							
GLVR				A		A	10 35 15.2	
	comp=E,403μm,0.4s							
GLVR				A		A	10 35 17.2	
	comp=E,507μm,1.6s							
GLVR				A		A	10 35 17.2	
	comp=E,1419μm,1.6s							
JRA	**Rausu**	**3.09**	**240**	⇓P		**Pn**	**10 34 34.9**	**+1.5**
JRA				A		A	10 34 34.9	
	comp=N,3μm,3.4s,comp=E,2μm,4.3s							
JRA				⇓*e*S		**Sn**	**10 35 12.9**	**+2.1**
NEM2	**Nemuro 2**	**3.10**	**227**	⇓P		**Pn**	**10 34 32.6**	**-0.9**
NEM2				A		A	10 34 32.6	
	comp=N,3μm,4.5s,comp=E,2μm,3.5s							
NEM2				⇓*e*S		**Sn**	**10 35 08.3**	**-2.8**
NMR	**Nemuro--Hokkai**	**3.10**	**227**	*e*PN		**Pn**	**10 34 32.6**	**-0.9**
NMR				*i* S		**Sn**	**10 35 08.5**	**-2.6**
NMR	**Nemuro--Hokkai**	**3.10**	**227**	*e*P		**Pn**	**10 34 32.9**	**-0.6**
JNSB	**Nemuroshibetsu**	**3.25**	**239**	A		A	10 34 36.2	
	comp=N,8μm,4.0s,comp=E,4μm,3.7s							
JNK	**Nakash**	**3.53**	**238**	⇓P		**Pn**	**10 34 40.0**	**+0.9**
JNK				A		A	10 34 40.0	
	comp=N,2μm,4.0s,comp=E,1μm,4.5s							
JNK				⇓*e*S		**Sn**	**10 35 22.7**	**+1.7**
JKHN	**Kushirohamanak**	**3.60**	**229**	⇓P		**Pn**	**10 34 39.2**	**-0.7**
JKHN				A		A	10 34 39.4	
	comp=N,3μm,3.8s,comp=E,2μm,5.1s							
AKK	**Akkeshi**	**3.81**	**230**	*e*P		**Pn**	**10 34 42.1**	**-0.6**
JTKR	**Abashiri--Toko**	**3.84**	**248**	*e*P		**Pn**	**10 34 44.7**	**+1.6**
JTKR				A		A	10 34 44.7	
	comp=N,924nm,4.3s,comp=E,413nm,5.1s							
JAK	**Akkeshi**	**3.91**	**231**	⇓*i*P		**Pn**	**10 34 43.2**	**-0.7**
JAK				A		A	10 34 43.2	
	comp=N,3μm,3.8s,comp=E,1μm,3.0s							
JAK				⇓*e*S		**Sn**	**10 35 27.6**	**-2.1**
JMP	**Maruseppu**	**4.19**	**251**	P		**Pn**	**10 34 49.5**	**+1.8**
JMP				A		A	10 34 49.8	
	comp=N,696nm,4.7s,comp=E,432nm,6.6s							
JAR	**Ashorobuto**	**4.26**	**240**	⇓*e*P		**Pn**	**10 34 49.8**	**+1.2**
JAR				A		A	10 34 49.8	
	comp=N,764nm,4.1s,comp=E,641nm,2.3s							
JAR				⇓*e*S		**Sn**	**10 35 40.0**	**+2.0**
JOB	**Onbets**	**4.45**	**236**	⇓P		**Pn**	**10 34 51.4**	**+0.3**
JOB				A		A	10 34 51.4	
	comp=N,1μm,4.2s,comp=E,933nm,5.0s							
JOB				⇓*e*S		**Sn**	**10 35 42.4**	**-0.1**
JSE	**Soyaes**	**4.46**	**265**	P		**Pn**	**10 34 53.9**	**+2.8**
JSE				A		A	10 34 54.9	
	comp=N,849nm,5.5s,comp=E,448nm,6.8s							
YSS	**Yuzhno-Sakhali**	**4.46**	**291**			**Pn**	**10 34 53.6**	**+2.6**
YSS				Sn		**Sn**	**10 35 46.6**	**+4.1**
YSS	**Yuzhno-Sakhali**	**4.46**	**291**	P		**Pn**	**10 34 50.9**	**-0.2**
YSS	**Yuzhno-Sakhali**	**4.46**	**291**	K *i*	PN	**Pn**	**10 34 53.8**	**+2.7**
YSS				pmax		pmax		
	comp=N,6μm,0.8s							
YSS				pmax		pmax		
	comp=E,17μm,0.8s							
YSS				pmax		pmax		
	comp=Z,24μm,0.8s							
YSS				pmax		pmax		
	comp=Z,155μm,5.9s							
YSS				pmax		pmax		
	comp=N,40μm,6.3s							
YSS				pmax		pmax		
	comp=E,177μm,5.7s							
YSS				MLR		MLR		
	comp=Z,438μm,11.0s							
YSS				MLR		MLR		
	comp=N,408μm,10.0s							
YSS				MLR		MLR		
	comp=E,377μm,12.0s							
YSS	**Yuzhno-Sakhali**	**4.46**	**291**	P		**Pn**	**10 34 53.8**	**+2.7**
YSS	**Yuzhno-Sakhali**	**4.46**	**291**	*i* P		**Pn**	**10 34 53.8**	**+2.7**
YSS				AMB		AMB	10 34 58.0	
	comp=E,24μm,0.8s							
YSS				*i* S		**Sn**	**10 35 47.5**	**+4.9**
YSS				A		A	10 35 56.9	
	comp=E,5μm,0.9s							
YSS				A		A	10 35 56.9	
	comp=E,7μm,0.9s							
YSS				A		A	10 36 03.4	
	comp=E,641μm,8.2s							
YSS				A		A	10 36 03.4	
	comp=E,619μm,8.2s							
YSS				AMS		AMS	10 37 56.0	
	comp=E,438μm,11.0s							
YSS				AMS		AMS	10 37 56.0	
	comp=E,409μm,11.0s							
JKK2	**Kamakawa 2**	**4.65**	**251**	P		**Pn**	**10 34 55.9**	**+2.2**
JKK2				A		A	10 34 55.9	
	comp=N,494nm,3.1s,comp=E,430nm,4.4s							
JKK2				*e*S		**Sn**	**10 35 51.0**	**+3.8**
JKA	**Kamikawa-asahi**	**4.66**	**255**			**Pn**	**10 34 56.4**	**+2.6**
JKA	**Kamikawa-asahi**	**4.66**	**255**	P		**Pn**	**10 34 56.7**	**+2.9**
ASAJ	**Asahikawa**	**4.66**	**255**	P		**Pn**	**10 34 57.1**	**+3.3**
	comp=E,18μm,0.7s,baz=83,slow=15,SNR=1317							
ASAJ				S		**Sn**	**10 35 52.4**	**+5.0**
	comp=E,11μm,0.9s,baz=126,slow=17,SNR=6.0							
ASAJ				P3KPbc			11 12 42.2	
	comp=E,16nm,1.1s,baz=303,slow=15,SNR=4.8							
ASAJ	**Asahikawa**	**4.66**	**255**	P		**Pn**	**10 34 56.5**	**+2.7**
ASAJ				A		A	10 34 56.4	
	comp=N,898nm,6.2s,comp=E,400nm,4.7s							
JWK2	**Keihoku**	**4.89**	**270**	P		**Pn**	**10 35 01.0**	**+4.2**
JWK2				A		A	10 35 01.0	
	comp=N,1μm,5.2s,comp=E,2μm,4.5s							
JCH	**Churui**	**4.91**	**236**	⇓P		**Pn**	**10 34 56.6**	**-0.4**
JCH				A		A	10 34 56.6	
	comp=N,461nm,3.8s,comp=E,501nm,6.3s							
JCH				⇓*e*S		**Sn**	**10 35 51.1**	**-2.2**
JFR	**Furan**	**5.07**	**244**	P		**Pn**	**10 35 00.8**	**+1.7**
JFR				A		A	10 35 00.6	
	comp=N,546nm,4.4s,comp=E,254nm,3.8s							
JSS	**Shosan**	**5.09**	**260**	A		A	10 35 02.6	
	comp=N,1μm,4.3s,comp=E,919nm,5.5s							
JSS				P		**Pn**	**10 35 03.1**	**+3.7**
JAB	**Ashibetsu**	**5.15**	**249**	P		**Pn**	**10 35 03.0**	**+2.7**
JAB				A		A	10 35 03.0	
	comp=N,1μm,4.5s,comp=E,732nm,4.2s							
JTHR	**Tokachihiroo**	**5.15**	**233**	A		A	10 35 00.2	
	comp=N,498nm,3.6s,comp=E,573nm,5.1s							
JRR	**Rishiri**	**5.32**	**268**	P		**Pn**	**10 35 06.7**	**+4.2**
JRR				A		A	10 35 06.8	
	comp=N,2μm,5.6s,comp=E,3μm,5.5s							
JYG	**Yagishiri**	**5.37**	**261**	P		**Pn**	**10 35 06.3**	**+3.1**
JYG				A		A	10 35 06.6	
	comp=N,587nm,7.4s,comp=E,419nm,4.8s							
JHR	**Hokuryu**	**5.38**	**253**	A		A	10 35 05.8	
	comp=N,936nm,5.1s,comp=E,786nm,4.1s							
JHR				P		**Pn**	**10 35 06.0**	**+2.7**
JEM	**Erimo**	**5.41**	**232**	P		**Pn**	**10 35 02.6**	**-1.1**
JEM	**Erimo**	**5.41**	**232**	A		A	10 35 03.5	
	comp=N,641nm,4.9s,comp=E,676nm,5.1s							
JBT2	**Biratori 2**	**5.41**	**242**	⇓P		**Pn**	**10 35 03.9**	**+0.2**
JBT2				A		A	10 35 04.8	
	comp=N,288nm,4.8s,comp=E,268nm,6.6s							
JNBK	**Urakawa-nobuka**	**5.47**	**236**	⇓*e*P		**Pn**	**10 35 03.2**	**-1.3**
JNBK				A		A	10 35 03.2	
	comp=N,357nm,5.4s,comp=E,418nm,6.4s							
JRBN	**Rebuntou**	**5.47**	**272**	*e*P		**Pn**	**10 35 07.5**	**+3.1**
JRBN				A		A	10 35 07.5	
	comp=N,388nm,4.9s,comp=E,467nm,5.5s							
JSHD	**Hidakashinhida**	**5.56**	**238**	A		A	10 35 06.3	
	comp=N,591nm,4.3s,comp=E,511nm,4.4s							
JIAM	**Iburiatsuma**	**5.77**	**242**	A		A	10 35 09.6	
	comp=N,806nm,5.2s,comp=E,763nm,5.0s							
JISS	**Ishikarishitsu**	**5.78**	**250**	A		A	10 35 10.6	
	comp=N,1μm,5.1s,comp=E,1μm,5.8s							
UGL	**Uglegorsk**	**5.82**	**310**	⇓*i*PN		**Pn**	**10 35 12.1**	**+3.1**
UGL				pmax		pmax		
	comp=Z,362μm,6.8s							
UGL				pmax		pmax		
	comp=Z,33μm,0.9s							
UGL	**Uglegorsk**	**5.82**	**310**	*i* P		**Pn**	**10 35 12.1**	**+3.1**
UGL				AMB		AMB	10 35 16.4	
	comp=Z,33μm,0.9s							
UGL				AMB		AMB	10 35 18.0	
	comp=Z,248μm,3.0s							
UGL				*e*S		**Sn**	**10 36 18.7**	**+3.9**
UGL				A		A	10 36 26.6	
	comp=Z,1288μm,6.0s							
UGL				A		A	10 36 26.6	
	comp=Z,1061μm,6.0s							
JEW	**Eniwo**	**5.95**	**246**	P		**Pn**	**10 35 12.4**	**+1.4**
JEW				A		A	10 35 12.5	
	comp=N,2μm,4.7s,comp=E,586nm,5.3s							
JNB	**Noboribetsu**	**6.40**	**244**	P		**Pn**	**10 35 16.6**	**-0.3**
TYV	**Tymovskoe**	**6.75**	**324**	*e*PN		Pn	10 35 26.4	+4.9
TYV				pmax		pmax		
	comp=Z,7μm,1.1s							
TYV				pmax		pmax		
	comp=Z,154μm,2.3s							
TYV	**Tymovskoe**	**6.75**	**324**	*e*P		**Pn**	**10 35 24.5**	**+3.0**
TYV				AMB		AMB	10 35 28.0	
	comp=Z,8μm,0.7s							
TYV				AMB		AMB	10 35 28.8	
	comp=Z,154μm,2.3s							
TYV				*e*S		**Sn**	**10 36 41.1**	**+3.9**
TYV				A		A	10 36 49.7	
	comp=Z,117μm,4.2s							
TYV				A		A	10 36 49.7	
	comp=Z,275μm,4.2s							
TYV				A		A	10 36 49.7	
	comp=Z,3μm,0.8s							
TYV				A		A	10 36 49.7	
	comp=Z,3μm,0.8s							
SKR	**Severo-Kuril's**	**7.09**	**41**	⇑*i*PN		**Pn**	**10 35 24.3**	**-1.7**
SKR				*e*S		**Sn**	**10 36 45.0**	**-0.3**
SKR				pmax		pmax		
	comp=Z,70μm,3.6s							
SKR				pmax		pmax		
	comp=Z,13μm,0.6s							
SKR				smax		smax		
	comp=N,10μm,0.7s							
SKR				smax		smax		
	comp=E,13μm,0.6s							
SKR				smax		smax		
	comp=N,103μm,9.0s							
SKR				smax		smax		
	comp=E,96μm,9.0s							
SKR	**Severo-Kuril's**	**7.09**	**41**	*i* P		**Pn**	**10 35 25.4**	**-0.6**
SKR				AMB		AMB	10 35 32.7	
	comp=E,70μm,3.6s							
SKR				AMB		AMB	10 35 35.5	
	comp=E,13μm,0.6s							
SKR				*e*S		**Sn**	**10 36 45.1**	**-0.3**
SKR				A		A	10 36 56.0	
	comp=E,10μm,0.6s							
SKR				A		A	10 36 56.0	
	comp=E,13μm,0.6s							
SKR				AMS		AMS	10 38 07.3	
	comp=E,173μm,9.0s							
SKR				AMS		AMS	10 38 07.3	
	comp=E,95μm,9.0s							
JANG	**Nango**	**7.44**	**229**	P		**Pn**	**10 35 27.5**	**-3.3**
JTH	**Tanohata**	**7.59**	**225**	*e*P		**Pn**	**10 35 28.8**	**-3.9**
JOSM	**Okushiri--Mats**	**7.60**	**246**	P		**Pn**	**10 35 32.6**	**-0.2**
JAH	**Hinai**	**8.05**	**231**	⇓P		**Pn**	**10 35 36.5**	**-2.4**
TEY	**Ternei**	**8.64**	**271**	⇑*e*PN		**Pn**	**10 35 49.9**	**+3.1**
TEY				*e*S		**Sn**	**10 37 24.1**	**+1.3**
TEY				pmax		pmax		
	comp=N,50nm,0.6s							
TEY				pmax		pmax		
	comp=E,400nm,0.8s							
TEY				pmax		pmax		
	comp=Z,950nm,0.8s							
TEY				pmax		pmax		
	comp=E,20μm,10.0s							
TEY				pmax		pmax		
	comp=Z,52μm,9.0s							
TEY				smax		smax		
	comp=N,285μm,6.3s							
TEY				smax		smax		
	comp=E,29μm,3.9s							
TEY				MLR		MLR		
	comp=N,67μm,13.0s							
TEY				MLR		MLR		
	comp=Z,59μm,12.0s							
TEY	**Ternei**	**8.64**	**271**	*e*P		**Pn**	**10 35 49.9**	**+3.1**
TEY				AMB		AMB	10 35 50.5	
	comp=Z,950nm,0.7s							
TEY				AMB		AMB	10 35 53.2	
	comp=Z,52μm,9.0s							
TEY				*e*S		**Sn**	**10 37 24.1**	**+1.3**
TEY				A		A	10 37 30.2	
	comp=Z,285μm,5.0s							
TEY				A		A	10 37 30.2	
	comp=Z,29μm,5.0s							
TEY				AMS		AMS	10 41 08.0	
	comp=Z,67μm,12.0s							
TEY				AMS		AMS	10 41 08.0	
	comp=Z,59μm,12.0s							
OKH	**Okha**	**8.90**	**337**	*c i*PN		Pn	10 35 44.5	-5.6
OKH				pmax		pmax		
	comp=Z,278μm,11.9s							
OKH				MLR		MLR		
	comp=Z,133μm,16.0s							
OKH				MLR		MLR		
	comp=N,197μm,17.0s							
OKH				MLR		MLR		
	comp=E,167μm,14.0s							
OKH	**Okha**	**8.90**	**337**	*i* P		**Pn**	**10 35 46.5**	**-3.6**
OKH				AMB		AMB	10 35 52.0	
	comp=E,328μm,3.0s							
OKH				*i* S		**Sn**	**10 37 35.4**	**+6.7**
OKH				A		A	10 37 40.0	
	comp=E,116μm,6.0s							
OKH				A		A	10 37 40.0	
	comp=E,139μm,6.0s							
OKH				AMS		AMS	10 40 47.7	
	comp=E,197μm,15.0s							
OKH				AMS		AMS	10 40 47.7	
	comp=E,167μm,15.0s							
NKL	**Nikolayevsk**	**9.30**	**328**	*e*P		**Pn**	**10 35 58.2**	**+2.8**
NKL				AMB		AMB	10 36 07.8	
	comp=E,6μm,0.8s							
PEA0B	**Petropavlovsk-**	**9.53**	**34**			**Pn**	**10 35 56.7**	**-1.9**
PEA0B	**Petropavlovsk-**	**9.53**	**34**	PN		**Pn**	**10 35 56.7**	**-1.9**
PEA0B	**Petropavlovsk-**	**9.53**	**34**	P		**Pn**	**10 35 56.2**	**-2.4**
PETK	**Petropavlovsk-**	**9.53**	**34**	P		**Pn**	**10 35 56.1**	**-2.4**
	comp=E,903nm,0.6s,baz=191,slow=8.8,SNR=390							
PETK				LR		LR	10 39 40.3	
	comp=E,183μm,20.9s,baz=198,slow=38							
PETK				ScP		**ScP**	**10 45 18.3**	**-0.2**
	comp=E,73nm,1.2s,baz=172,slow=2.1,SNR=3.9							
PETK				PKiKP		**PKiKP**	**10 50 00.9**	**+0.9**
	comp=E,11nm,0.7s,baz=96,slow=3.4,SNR=5.4							
PETK				P3KPbc			11 12 44.2	
	comp=E,15nm,1.1s,baz=116,slow=5.0,SNR=4.9							
PETK	**Petropavlovsk-**	**9.53**	**34**	PN		**Pn**	**10 35 56.3**	**-2.3**
I44RU	**PETROPAVLOVSK-**	**9.54**	**34**	P		**Pn**	**10 35 56.8**	**-1.9**
	baz=183,slow=10							
I44RU				I		I	11 33 40.0	
	baz=221,slow=328,SNR=1.9							
GRNR	**Gornyy**	**9.81**	**307**	⇑*i*PN		**Pn**	**10 36 04.9**	**+2.6**
GRNR				pmax		pmax		
	comp=E,610nm,1.3s							
GRNR				pmax		pmax		
	comp=N,270nm,1.0s							
GRNR				pmax		pmax		
	comp=Z,660nm,1.1s							
GRNR				MLR		MLR		
	comp=E,102μm,15.0s							
GRNR				MLR		MLR		
	comp=N,120μm,19.0s							
GRNR				MLR		MLR		
	comp=Z,147μm,16.0s							
GRNR	**Gornyy**	**9.81**	**307**	*e*P		**Pn**	**10 36 04.9**	**+2.6**
GRNR				AMB		AMB	10 36 05.8	
	comp=E,660nm,1.0s							
GRNR				AMS		AMS	10 40 04.0	
	comp=Z,120μm,17.0s							
GRNR				AMS		AMS	10 40 04.0	
	comp=Z,102μm,17.0s							
PET	**Petropavlovsk**	**9.86**	**37**			**Pn**	**10 35 59.0**	**-3.8**
PET	**Petropavlovsk**	**9.86**	**37**	P		**Pn**	**10 35 59.3**	**-3.5**
PET	**Petropavlovsk**	**9.86**	**37**	*e*PN		**Pn**	**10 36 00.1**	**-2.8**
PET				*e*S		**Sn**	**10 37 49.8**	**-2.1**
PET				pmax		pmax		
	comp=E,35μm,8.6s							
PET				pmax		pmax		
	comp=Z,2μm,0.5s							
PET				pmax		pmax		
	comp=Z,42μm,9.1s							
PET				MLR		MLR		
	comp=Z,79μm,12.0s							
PET				MLR		MLR		
	comp=Z,94μm,12.0s							
PET	**Petropavlovsk**	**9.86**	**37**	P		**Pn**	**10 35 59.9**	**-3.0**
PET	**Petropavlovsk**	**9.86**	**37**	*e*P		**Pn**	**10 36 03.0**	**+0.1**
PET				AMB		AMB	10 36 09.9	
	comp=Z,2μm,0.5s							
PET				AMB		AMB	10 36 11.8	
	comp=Z,42μm,9.0s							
PET				*e*S		**Sn**	**10 37 52.0**	**+0.1**
PET				AMS		AMS	10 41 55.7	
	comp=Z,94μm,13.0s							
PET				AMS		AMS	10 41 55.7	
	comp=Z,79μm,13.0s							
PET	**Petropavlovsk**	**9.86**	**37**	⇓P		**Pn**	**10 35 59.4**	**-3.5**
MJB9	**Matsu-Tunnel**	**12.03**	**225**			**Pn**	**10 36 31.1**	**-0.5**
MJB9	**Matsu-Tunnel**	**12.03**	**225**	P		**Pn**	**10 36 29.0**	**-2.6**
MAJO	**Matsushiro**	**12.03**	**225**			**Pn**	**10 36 29.9**	**-1.6**
MAJO	**Matsushiro**	**12.03**	**225**	P		**Pn**	**10 36 30.3**	**-1.3**
MAJO	**Matsushiro**	**12.03**	**225**	*d*PN		**Pn**	**10 36 30.4**	**-1.2**
MAJO	**Matsushiro**	**12.03**	**225**	P		**Pn**	**10 36 30.1**	**-1.5**
MAJO	**Matsushiro**	**12.03**	**225**	⇓P		**Pn**	**10 36 29.8**	**-1.8**
MJAR	**Matsushiro Arr**	**12.03**	**225**	P		**Pn**	**10 36 29.8**	**-1.8**
	comp=Z,491nm,0.6s,baz=23,slow=12,SNR=196							
MJAR				S		**Sn**	**10 38 44.7**	**+0.1**
	comp=Z,816nm,1.1s,baz=319,slow=15,SNR=5.6							
MJAR				LR		LR	10 41 26.9	
	comp=Z,134μm,20.0s,baz=32,slow=38							
MJAR				ScP		**ScP**	**10 45 21.5**	**-0.5**
	comp=Z,44nm,1.0s,baz=65,slow=2.2,SNR=4.5							
MJAR				P3KPbc			11 12 40.4	
	comp=Z,4.2nm,1.1s,baz=325,slow=2.1,SNR=4.4							
MJAR	**Matsushiro Arr**	**12.03**	**225**			**Pn**	**10 36 30.2**	**-1.4**
MJAR	**Matsushiro Arr**	**12.03**	**225**	PN		**Pn**	**10 36 30.2**	**-1.4**
USRK	**Ussuriysk Ar.**	**12.04**	**270**	P		**Pn**	**10 36 31.7**	**+0.2**
	comp=Z,802nm,0.6s,baz=87,slow=13,SNR=879							
USRK				P3KPbc			11 12 36.3	
	comp=Z,3.6nm,0.7s,baz=72,slow=9.1,SNR=4.8							
KLR	**Kul'dur**	**12.16**	**294**	LR		LR	10 41 45.9	
	comp=Z,85μm,19.6s,baz=106,slow=40							
KLR	**Kul'dur**	**12.16**	**294**	*c i*PN		**Pn**	**10 36 35.2**	**+2.1**
KLR				pmax		pmax		
	comp=Z,569nm,1.7s							
KLR	**Kul'dur**	**12.16**	**294**	*e*P		**Pn**	**10 36 35.2**	**+2.1**
VLA	**Vladivostok**	**12.38**	**265**	*d i*PN		**Pn**	**10 36 36.0**	**0.0**
JGF	**Kuroka**	**13.20**	**225**			**Pn**	**10 36 45.8**	**-0.9**
JGF	**Kuroka**	**13.20**	**225**	P		**Pn**	**10 36 45.6**	**-1.0**
JGF	**Kuroka**	**13.20**	**225**	P		**Pn**	**10 36 45.0**	**-1.6**
JGF	**Kuroka**	**13.20**	**225**	⇑P		**Pn**	**10 36 45.6**	**-1.0**
PSTR	**Posyet**	**13.28**	**264**	*c i*PN		**Pn**	**10 36 47.3**	**-0.3**
JSG	**Sagara**	**13.55**	**221**	P		**Pn**	**10 36 52.8**	**+1.7**
JSG	**Sagara**	**13.55**	**221**	P		**Pn**	**10 36 51.4**	**+0.3**
JSG	**Sagara**	**13.55**	**221**	P		**P**	**10 36 54.0**	**-0.9**
JSG	**Sagara**	**13.55**	**221**	⇑P		**Pn**	**10 36 51.6**	**+0.5**
INU	**Inuyama**	**13.57**	**226**			**Pn**	**10 36 50.4**	**-0.9**
INU	**Inuyama**	**13.57**	**226**	P		**Pn**	**10 36 51.2**	**-0.1**
INU	**Inuyama**	**13.57**	**226**	P		**Pn**	**10 36 50.6**	**-0.7**
INU	**Inuyama**	**13.57**	**226**	⇑P		**Pn**	**10 36 50.2**	**-1.1**
MDJ	**Mudanjiang**	**13.64**	**273**			**Pn**	**10 36 52.3**	**+0.2**
MDJ	**Mudanjiang**	**13.64**	**273**	P		**Pn**	**10 36 51.8**	**-0.3**
MDJ				S		**Sn**	**10 39 21.9**	**-1.1**
MDJ				PcP	

comp=Z,249µm,16.5s
BNX LR LR

comp=Z,328µm,15.5s
HEH HeiHe 15.12 296 ⇑P **Pn** **10 37 11.3 +0.8**
HEH S **S** **10 40 01.3 -2.5**
HEH ScS **ScS** **10 49 07.5 +2.7**
HEH pmax pmax
comp=Z,7µm,1.4s
HEH pmax pmax
comp=Z,266µm,9.3s
ZEA Zeya 16.17 308 *e*P **P** **10 37 24.7 +0.9**
ZEA *e*S **S** **10 40 12.5 -11**
ZEA pmax pmax
comp=E,98µm,5.8s
ZEA pmax pmax
comp=N,47µm,5.7s
ZEA pmax pmax
comp=Z,147µm,5.7s
ZEA pmax pmax
comp=E,3µm,1.1s
ZEA pmax pmax
comp=N,3µm,1.8s
ZEA pmax pmax
comp=Z,6µm,1.9s
ZEA smax smax
comp=E,113µm,8.2s
ZEA smax smax
comp=N,144µm,7.8s
ZEA Zeya 16.17 308 *e*P **P** **10 37 24.2 +0.4**
ZEA AMB AMB 10 37 29.2
comp=N,147µm,6.0s
ZEA AMB AMB 10 37 33.7
comp=N,6µm,1.0s
ZEA A A 10 40 29.0
comp=N,144µm,7.0s
ZEA A A 10 40 29.0
comp=N,113µm,7.0s
JMN Monobe 16.45 229 P **Pn** **10 37 27.1 0.0**
JMN Monobe 16.45 229 P **Pn** **10 37 26.8 -0.3**
JMN Monobe 16.45 229 ⇑P **P** **10 37 27.5 +0.4**
CN2 Changchun 16.72 272 ⇑*i*P **P** **10 37 28.8 -1.2**
CN2 S **S** **10 40 28.3 -7.7**
CN2 ScS **ScS** **10 49 10.3 +0.9**
CN2 pmax pmax
comp=N,2µm,0.7s
CN2 pmax pmax
comp=N,6µm,6.0s
SEY Seymchan 17.56 5 P **P** **10 37 37.9 -1.1**
comp=N,2µm,1.1s,baz=183,slow=8.4,SNR=836
SEY P3KPbc 11 12 21.1
comp=N,3.6nm,0.9s,baz=338,slow=1.8,SNR=6.0
SEY Seymchan 17.56 5*c i*P **P** **10 37 37.6 -1.4**
SEY pmax pmax
comp=Z,4µm,1.0s
SEY Seymchan 17.56 5 *e*P **P** **10 37 37.6 -1.4**
KSRS Korea Array 17.59 250 P **Pn** **10 37 40.4 -0.4**
comp=Z,327nm,0.8s,baz=56,slow=11,SNR=220
KSRS S **Sn** **10 40 57.6 -0.2**
comp=Z,62nm,1.0s,baz=63,slow=23,SNR=2.2
KSRS PcP **PcP** **10 42 13.2 +2.1**
comp=Z,76nm,0.7s,baz=4.2,slow=0.5,SNR=5.6
KSRS ScP **ScP** **10 45 31.1 -0.9**
comp=Z,49nm,1.0s,baz=1.2,slow=0.8,SNR=6.6
KSRS PKiKP **PKiKP** **10 50 03.9 +1.1**
comp=Z,4.0nm,0.9s,baz=272,slow=1.1,SNR=4.3
KSRS P3KPbc 11 12 23.4
comp=Z,19nm,1.2s,baz=240,slow=4.5,SNR=17
KS19 Wonju Array Si 17.60 250 P **Pn** **10 37 40.3 -0.5**
KSAR Wonju Array Be 17.62 250 P **P** **10 37 40.3 +0.4**
KSAR Wonju Array Be 17.62 250 P **P** **10 37 40.3 +0.4**
SHEM Shemya Is, Ala 17.97 57 P **P** **10 37 43.1 -0.5**
comp=Z,431nm,0.8s,baz=293,slow=3.9,SNR=12
SHEM S **S** **10 40 57.4 -4.3**
comp=Z,777nm,0.7s,baz=274,slow=21,SNR=12
SMY Shemya 17.97 57 P **P** **10 37 42.4 -1.1**
SMY Shemya 17.97 57 P **P** **10 37 44.0 +0.5**
SMY Shemya 17.97 57 P **P** **10 37 42.4 -1.1**
SMY Shemya 17.97 57 P **P** **10 37 44.3 +0.8**
INCN Inchon 18.43 252 **Pn** **10 37 50.2 -0.5**
INCN Inchon 18.43 252 P **Pn** **10 37 51.2 +0.5**
INCN Inchon 18.43 252 P **Pn** **10 37 50.2 -0.5**
INCN Inchon 18.43 252 P **Pn** **10 37 50.0 -0.7**
INCN P **Pn** **10 37 50.0 -0.7**
INCN S **S** **10 41 12.8 +1.5**
INCN S **S** **10 41 12.8 +1.5**
INCN Inchon 18.43 252 ⇑P **Pn** **10 37 50.4 -0.3**
JTU Tsushima 18.46 240 P **P** **10 37 49.4 +0.4**
JTU Tsushima 18.46 240 ⇑P **P** **10 37 49.8 +0.8**
JNU Nakatsue 18.57 234 P **Pn** **10 37 51.7 -0.6**
comp=Z,1µm,1.1s,baz=11,slow=5.1,SNR=76
JNU S **Sn** **10 41 18.6 -2.6**
comp=Z,446nm,1.1s,baz=232,slow=19,SNR=11
TJN Taejon 18.57 248 P **Pn** **10 37 52.3 0.0**
SNY Shenyang 18.62 268 ⇑P **Pn** **10 37 52.4 -0.4**
SNY S **S** **10 41 11.5 -3.4**
SNY ScS **ScS** **10 49 17.6 +2.4**
SNY pmax pmax
comp=Z,3µm,1.1s
SNY LR LR
comp=Z,97µm,11.4s
SNY LR LR
comp=Z,53µm,9.0s
SNY LR LR
comp=Z,78µm,10.9s
JCJ Chichijima 19.15 198 P P 10 37 44.1 -12
comp=Z,2µm,0.7s,baz=13,slow=5.6,SNR=45
JCJ S S 10 41 12.2 -13
comp=Z,1µm,0.5s,baz=293,slow=22,SNR=8.8
JCJ Chichijima 19.15 198 P **P** **10 37 57.0 +0.4**
JCJ Chichijima 19.15 198 P **P** **10 37 56.4 -0.2**
JCJ Chichijima 19.15 198 ⇓P **P** **10 37 56.9 +0.3**
YAK Yakutsk 19.90 333 P **P** **10 38 02.6 -1.7**
comp=Z,2µm,0.3s,baz=166,slow=0.8,SNR=266
YAK S **S** **10 41 40.4 +0.6**
comp=Z,1µm,0.7s,baz=93,slow=23,SNR=7.6
YAK Yakutsk 19.90 333 P **P** **10 38 03.2 -1.1**
YAK Yakutsk 19.90 333 *e*P **P** **10 38 02.2 -2.2**
YAK *e*S **S** **10 41 36.6 -3.3**
YAK pmax pmax
comp=N,7µm,1.5s
YAK pmax pmax
comp=E,5µm,1.3s
YAK smax smax
comp=N,127µm,5.6s
YAK smax smax
comp=E,45µm,4.0s
YAK Yakutsk 19.90 333 P **P** **10 38 02.7 -1.7**
YAK Yakutsk 19.90 333 ⇑P **P** **10 38 02.4 -2.0**
HILR Hailar Array B 19.98 292 P **P** **10 38 03.3 -2.2**
comp=E,520nm,0.8s,baz=94,slow=11,SNR=168
HILR pP **pP** **10 38 32.8 +1.9**
comp=E,988nm,0.9s,baz=52,slow=19,SNR=2.7
HILR ScP **ScP** **10 45 37.1 0.0**
comp=E,136nm,0.9s,baz=132,slow=2.2,SNR=5.9
HILR P3KPbc 11 12 14.9
comp=E,7.6nm,0.9s,baz=228,slow=3.8,SNR=6.8
JSU Suzuyama 20.01 232 P **P** **10 38 07.4 +1.5**
JSU Suzuyama 20.01 232 P **P** **10 38 06.7 +0.8**
JSU Suzuyama 20.01 232 ⇑P **P** **10 38 07.5 +1.7**
AMKA Amchitka 20.94 63 P **P** **10 38 14.2 -1.4**
DL2 Dalian 21.15 261 ⇑*i*P **P** **10 38 18.3 +0.3**
DL2 pP **pP** **10 38 43.4 -0.3**
DL2 sP **sP** **10 39 02.0 -0.1**
DL2 S **S** **10 42 01.5 -3.0**
DL2 PcP **PcP** **10 42 18.5 +1.1**
DL2 sS **sS** **10 42 51.3 +2.0**
DL2 ScP **ScP** **10 45 41.3 +1.2**
DL2 PcS **PcS** **10 45 53.0 -2.5**
DL2 ScS **ScS** **10 49 21.9 -2.0**
DL2 pmax pmax
comp=E,2µm,1.1s
DL2 pmax pmax
comp=E,48µm,6.9s
KIWB Kanaga Island 23.17 62 P **P** **10 38 36.3 -1.6**
XLT XiLinHaoTe 23.25 278 *e*P **P** **10 38 37.6 -1.3**
XLT pP pP 10 39 06.1 -0.5
XLT PP **PnPn** **10 39 14.9 +0.1**
XLT S **S** **10 42 32.8 -6.8**
XLT SS **SnSn** **10 43 36.9 +4.3**
XLT ScP **ScP** **10 45 49.5 +4.0**
XLT pmax pmax
comp=E,4µm,1.0s
XLT pmax pmax
comp=E,91µm,3.6s
XLT LR LR

comp=E,161µm,10.9s
XLT LR LR

comp=E,186µm,12.4s
ADK Adak 23.46 62 P **P** **10 38 38.8 -1.8**
ADK Adak 23.46 62 P **P** **10 38 39.5 -1.1**
ADK Adak 23.46 62 P **P** **10 38 38.8 -1.8**
ADK pmax pmax
comp=Z,1µm,1.0s
ADK Adak 23.46 62 ⇓P **P** **10 38 39.1 -1.4**
GSTR Great Sitkin T 23.86 61 IAmb IAmb 10 38 53.5
comp=Z,3µm,0.8s
CIT Chita 23.97 299 *e*P **P** **10 38 44.0 -1.3**
CIT *e* 10 39 21.4
CIT *e* 10 39 35.4
CIT *e*S **S** **10 42 54.2 +3.3**
CIT *e* 10 43 51.8
CIT pmax pmax
comp=Z,17µm,1.5s
CIT Chita 23.97 299 *e*P **P** **10 38 44.0 -1.3**
JMZ Minamidaito 2 24.22 222 P **P** **10 38 48.4 +0.7**
JMZ IAmb IAmb 10 39 11.9
comp=Z,3µm,1.2s
JMZ Minamidaito 2 24.22 222 P **P** **10 38 48.8 +1.1**
JMZ Minamidaito 2 24.22 222 ⇓P **P** **10 38 48.6 +0.9**
BILL Bilibino 24.32 16 P **P** **10 38 45.6 -2.5**
BILL Bilibino 24.32 16*d i*P **P** **10 38 44.3 -3.9**
BILL pmax pmax
comp=Z,987nm,2.5s
BILL MLR MLR
comp=Z,46µm,14.0s
BJI2 Beijing 24.50 269 P **P** **10 38 50.8 +0.7**
BJI2 S **S** **10 43 00.8 +1.4**
BJI2 sS **sS** **10 43 54.9 +0.7**
BJI2 SS **SnSn** **10 44 05.3 +2.6**
BJI2 ScS **ScS** **10 49 40.1 +3.4**
BJI2 pmax pmax
comp=Z,1µm,1.0s
BJI2 pmax pmax
comp=Z,31µm,7.5s
BJT Baijiatuan 24.50 269 P **P** **10 38 51.0 +0.9**
BJT Baijiatuan 24.50 269 P **P** **10 38 50.1 0.0**
BJT Baijiatuan 24.50 269 P **P** **10 38 51.0 +0.9**
BJT pmax pmax
comp=Z,12µm,1.9s
JOW Kunigami 24.85 228 P **P** **10 38 53.9 +0.4**
JOW Kunigami 24.85 228 P **P** **10 38 54.1 +0.7**
JOW Kunigami 24.85 228 ⇓P **P** **10 38 54.4 +0.9**
ATKA Atka Island 25.01 61 P **P** **10 38 54.6 +0.1**
ATKA Atka Island 25.01 61 P **P** **10 38 53.9 -0.7**
ATKA Atka Island 25.01 61 ⇓P **P** **10 38 55.4 +0.8**
TIA Tai'an 25.59 260 P **P** **10 39 00.8 +0.8**
TIA S **S** **10 43 16.5 -0.2**
TIA sS **sS** **10 44 13.9 +2.1**
TIA ScS **ScS** **10 49 42.8 +1.4**
TIA pmax pmax
comp=Z,1µm,1.1s
TIA pmax pmax
comp=Z,27µm,6.5s
SSE Sheshan 25.89 246 P **P** **10 39 03.3 +0.6**
SSE S **S** **10 43 21.4 -0.1**
SSE pmax pmax
comp=Z,280nm,1.1s
SSE pmax pmax
comp=Z,4µm,4.3s
SSE LR LR
comp=Z,8µm,9.8s
SSE LR LR
comp=Z,850nm,9.5s
HNS HongShan 26.68 264 ⇑P **P** **10 39 11.1 +1.3**
HNS pP **pP** **10 39 40.8 +0.6**
HNS S **S** **10 43 36.8 +2.9**
HNS ScS **ScS** **10 49 47.1 +1.1**
HNS pmax pmax
comp=Z,1µm,1.8s
HNS pmax pmax
comp=Z,31µm,7.1s
NJ2 Nanjing 26.79 250 ⇑*i*P **P** **10 39 11.8 +1.0**
NJ2 pP **pP** **10 39 42.8 +0.9**
NJ2 S **S** **10 43 35.6 -0.1**
NJ2 pmax pmax
comp=Z,260nm,1.0s
NJ2 pmax pmax
comp=Z,19µm,5.9s
HHC Hu-ho-hao-te 27.41 274 ⇑*i*P **P** **10 39 18.1 +1.7**
HHC pP pP 10 39 46.3 -0.7
HHC sP sP 10 40 06.0 +2.1
HHC S **S** **10 43 44.8 -0.8**
HHC pmax pmax
comp=Z,2µm,1.0s
HHC pmax pmax
comp=Z,67µm,6.7s
HHC LR LR
comp=Z,66µm,11.2s
HHC LR LR
comp=Z,85µm,15.3s
HHC LR LR
comp=Z,88µm,14.8s
SPIA Saint Paul Isl 27.65 50 P **P** **10 39 17.2 -1.0**
baz=261
SPIA S **S** **10 43 50.9 +2.2**
baz=261
TIXI Tiksi 27.89 347 P **P** **10 39 17.5 -2.7**
comp=Z,1µm,0.7s,baz=157,slow=6.0,SNR=1019
TIXI LR LR 10 52 40.6
comp=Z,77µm,18.1s,baz=124,slow=41
comp=Z,1µm,0.7s
TIXI Tiksi 27.89 347 P **P** **10 39 17.5 -2.7**
TIXI Tiksi 27.89 347*c i*P **P** **10 39 17.1 -3.1**
TIXI pmax pmax
comp=Z,2µm,1.3s
TIXI MLR MLR
comp=Z,68µm,16.0s
TIXI Tiksi 27.89 347 ⇓P **P** **10 39 17.5 -2.7**
P08K Saint George I 27.96 52 P **P** **10 39 19.5 -1.5**
baz=263
P08K S **S** **10 43 55.2 +1.5**
baz=263
JMJ Miyako jima 2 28.06 231 P **P** **10 39 24.1 +1.9**
TIY Taiyuan 28.12 267 P **P** **10 39 24.5 +1.7**
TIY pP **pP** **10 39 52.0 -1.5**
TIY S **S** **10 43 55.1 -1.7**
TIY pmax pmax
comp=Z,490nm,1.4s
ULN Ulaanbaatar 28.51 290 P **P** **10 39 25.3 -0.9**
ULN IAmb IAmb 10 39 32.4
comp=Z,2µm,1.1s
ULN Ulaanbaatar 28.51 290*c i*P **P** **10 39 25.6 -0.6**
ULN pmax pmax
comp=Z,2µm,1.7s
ULN MLR MLR
comp=Z,135µm,19.0s
ULN Ulaanbaatar 28.51 290 P **P** **10 39 26.0 -0.2**
ULN P **P** **10 39 26.0 -0.2**
ULN S **S** **10 44 05.6 +2.9**
ULN S **S** **10 44 05.6 +2.9**
ULN Ulaanbaatar 28.51 290 *e*P **P** **10 39 25.6 -0.6**
ULN Ulaanbaatar 28.51 290 ⇑P **P** **10 39 23.9 -2.3**
GAMB Gambell 28.56 36 P **P** **10 39 24.9 -1.3**
GAMB Gambell 28.56 36 P **P** **10 39 25.1 -1.1**
baz=248,SNR=74
GAMB S **S** **10 44 06.4 +3.5**
baz=248
BTO2 Baotou 28.63 274 ⇑*i*P **P** **10 39 28.5 +1.2**
BTO2 pP **pwP** **10 40 02.0 +0.1**
BTO2 sP **sP** **10 40 20.5 +5.6**
BTO2 PP **PnPn** **10 40 27.0 +1.4**
BTO2 S **S** **10 44 09.5 +4.7**
BTO2 SS **SnSn** **10 45 44.6 +1.7**
BTO2 pmax pmax
comp=Z,2µm,1.4s
BTO2 pmax pmax
comp=Z,130µm,7.5s
BTO2 LR LR
comp=Z,531µm,18.6s
BTO2 LR LR
comp=Z,159µm,18.7s
BTO2 LR LR
comp=Z,286µm,14.3s
SONM Songino Array 28.95 290 P **P** **10 39 29.5 -0.6**
comp=Z,474nm,0.7s,baz=76,slow=6.1,SNR=190
SONM pP **pwP** **10 40 03.9 -1.2**
comp=Z,1µm,1.3s,baz=74,slow=6.3,SNR=1.1
SONM ScP **ScP** **10 46 01.7 -0.5**
comp=Z,84nm,1.0s,baz=30,slow=1.8,SNR=4.5
SONM P3KPbc 11 11 39.1

comp=Z,8.4nm,1.1s,baz=254,slow=4.5,SNR=13
SONM P3KP 11 12 43.3
comp=Z,6.5nm,0.9s,baz=203,slow=3.7,SNR=4.0
comp=Z,474nm,0.7s
SONM Songino Array 28.95 290 P **P** **10 39 29.3 -0.7**
SONM IAmb IAmb 10 39 36.4
comp=Z,2µm,1.0s
YOJ Yonaguni jima 29.60 233 P **P** **10 39 35.7 -0.1**
YOJ Yonaguni jima 29.60 233 ⇓P **P** **10 39 35.0 -0.8**
UNV Unalaska Valle 29.63 57 **P** **10 39 32.5 -3.3**
UNV Unalaska Valle 29.63 57 P **P** **10 39 33.0 -2.8**
baz=271
UNV S **S** **10 44 17.2 -2.7**
baz=271
IRK Irkutsk 29.68 299 *e*P **P** **10 39 34.5 -1.8**
IRK *e* 10 40 09.2
IRK pmax pmax
comp=Z,1µm,1.8s
LYN LuoYang 29.69 261 ⇑P **P** **10 39 38.0 +1.4**
LYN pP pwP 10 40 14.3 +3.2
LYN sP sP 10 40 31.3 +7.0
LYN S **S** **10 44 20.9 -0.4**
LYN sS sS 10 45 18.3 +1.5
LYN pmax pmax
comp=Z,740nm,1.2s
LYN pmax pmax
comp=Z,10µm,4.7s
H11N2 WAKE ISLAND Hy 29.74 144 P **P** **10 39 36.5 -0.3**
baz=300,slow=7.1,SNR=18
H11N2 T T 11 10 50.8
baz=334,slow=76,SNR=85
H11N1 WAKE ISLAND Hy 29.75 144 P **P** **10 39 36.5 -0.5**
baz=300,slow=7.1,SNR=23
H11N1 T T 11 10 59.7
baz=334,slow=76,SNR=218
H11N3 WAKE ISLAND Hy 29.76 144 P **P** **10 39 36.6 -0.4**
baz=300,slow=7.1,SNR=20
H11N3 T T 11 10 52.5
baz=334,slow=76,SNR=91
TATO Taipei 30.08 236 P **P** **10 39 41.3 +1.2**
TATO IAmb IAmb 10 40 25.9
comp=Z,1µm,1.1s
TATO Taipei 30.08 236 P **P** **10 39 42.8 +2.7**
TATO Taipei 30.08 236 P **P** **10 39 41.6 +1.5**
TATO P **P** **10 39 41.6 +1.5**
TLY Talaya 30.12 298 P **P** **10 39 39.7 -0.5**
TLY Talaya 30.12 298*c i*P **P** **10 39 38.8 -1.4**
TLY pmax pmax
comp=Z,1µm,1.6s
TLY MLR MLR
comp=Z,96µm,15.0s
TLY Talaya 30.12 298 P **P** **10 39 39.1 -1.1**
TLY P **P** **10 39 39.1 -1.1**
TLY S **S** **10 44 27.7 0.0**
TLY S **S** **10 44 27.7 0.0**
TLY Talaya 30.12 298 *e*P **P** **10 39 38.8 -1.4**
TLY Talaya 30.12 298 ⇑P **P** **10 39 39.0 -1.2**
TLY Talaya 30.12 298 P **P** **10 39 39.2 -1.0**
TLY x x 10 40 07.4
TLY PcP **PcP** **10 42 42.0 +4.3**
M11K Mekoryuk 30.19 44 IAmb IAmb 10 39 48.9
comp=Z,3µm,1.9s
M11K Mekoryuk 30.19 44 P **P** **10 39 40.2 -0.4**
baz=260,SNR=146
M11K S **S** **10 44 32.8 +4.3**
baz=260
YHNB Yeheng 30.38 236 P **P** **10 39 44.1 +1.3**
ZAK Zakamensk 30.52 296 *e*P **P** **10 39 42.0 -1.8**
ZAK *e* 10 40 33.6
ZAK pmax pmax
comp=Z,3µm,1.7s
NACB Ninganchiao 30.64 235 P **P** **10 39 44.8 -0.2**
TNA Tin City 30.70 34 P **P** **10 39 44.8 -0.3**
baz=250,SNR=805
TNA S **S** **10 44 39.7 +3.3**
baz=250
TNA Tin City 30.70 34 ⇑P **P** **10 39 44.7 -0.4**
WHN Wuhan 30.74 253 ⇑*i*P **P** **10 39 46.5 +0.7**
WHN pP **pP** **10 40 17.3 +0.1**
WHN S **S** **10 44 37.6 -0.1**
WHN ScS **ScS** **10 50 06.9 +1.9**
WHN pmax pmax
comp=Z,2µm,0.8s
H11S1 WAKE ISLAND Hy 30.76 145 P **P** **10 39 45.4 -0.5**
baz=292,slow=6.4,SNR=40
H11S1 T T 11 12 12.3
baz=335,slow=76,SNR=1651
H11S3 WAKE ISLAND Hy 30.77 145 P **P** **10 39 45.5 -0.5**
baz=292,slow=6.4,SNR=28
H11S3 T T 11 12 10.7
baz=335,slow=76,SNR=734
H11S2 WAKE ISLAND Hy 30.78 145 P **P** **10 39 45.5 -0.5**
baz=292,slow=6.4,SNR=22
H11S2 T T 11 12 13.5
baz=335,slow=76,SNR=705
K13K Kusilvak Mount 31.18 41 P **P** **10 39 48.6 -0.8**
baz=259
K13K S **S** **10 44 47.6 +3.6**
baz=259
SSLB Suanglung 31.30 236 P **P** **10 39 52.3 +1.4**
F14K Arctic Creek 31.31 34 P **P** **10 39 50.5 0.0**
baz=252
F14K S **S** **10 44 49.7 +3.9**
baz=252
FALS False Pass 31.39 55 P **P** **10 39 51.8 +0.5**
FALS False Pass 31.39 55 P **P** **10 39 49.7 -1.5**
baz=272
FALS S **S** **10 44 45.1 -2.3**
baz=272
YULB Yu-li 31.41 235 P **P** **10 39 53.0 +1.2**
ANM Nome 31.44 36 P **P** **10 39 51.6 0.0**
baz=254,SNR=391
ANM S **S** **10 44 52.4 +4.4**
baz=254
M13K Dall Lake 31.60 45 P **P** **10 39 53.4 +0.4**
baz=263,SNR=204
M13K S **S** **10 44 55.7 +5.3**
baz=263
MOY Mondy 31.76 299 *e*P **P** **10 39 53.3 -1.4**
MOY pmax pmax
comp=Z,1µm,1.6s
MIDW Midway 31.78 111 P **P** **10 39 54.1 -0.8**
MIDW IAmb IAmb 10 40 00.4
comp=Z,2µm,1.8s
QZH2 Quanzhou 31.83 240 ⇑*i*P **P** **10 39 56.8 +1.4**
QZH2 pP **pP** **10 40 29.3 +2.0**
QZH2 S **S** **10 44 57.3 +2.5**
QZH2 pmax pmax
comp=Z,2µm,1.3s
QZH2 pmax pmax
comp=Z,15µm,4.9s
QZH2 LR LR
comp=Z,27µm,16.5s
QZH2 LR LR
comp=Z,71µm,13.5s
QZH2 LR LR
comp=Z,40µm,18.0s
J14K Nanvaranak Lak 31.84 40 P **P** **10 39 54.7 -0.4**
baz=259,SNR=303
J14K S **S** **10 44 57.6 +3.5**
baz=259
TPUB Ta-pu 31.87 235 IAmb IAmb 10 40 01.9
comp=Z,3µm,1.3s
TPUB Ta-pu 31.87 235 P **P** **10 39 56.9 +1.1**
TWGBT Beinan 31.98 234 P **P** **10 39 57.2 +0.4**
TWG Pinlang 31.99 234 IAmb IAmb 10 40 07.3
comp=Z,926nm,1.0s
GUMO Guam 32.01 187 LR LR 10 50 45.8
comp=Z,71µm,20.1s,baz=20,slow=32
GUMO Guam 32.01 187 P **P** **10 39 57.7 +0.6**
L14K Kuka Creek 32.03 43 P **P** **10 39 57.1 +0.4**
baz=262,SNR=356
L14K S **S** **10 45 02.0 +4.9**
baz=262
F15K North Star Dit 32.04 34 IAmb IAmb 10 40 03.6
comp=Z,3µm,1.9s
F15K North Star Dit 32.04 34 P **P** **10 39 56.8 0.0**
baz=253
F15K S **S** **10 45 01.7 +4.4**
baz=253
G15K Niukluk 32.10 36 P **P** **10 39 57.1 -0.3**
baz=255
G15K S **S** **10 45 02.9 +4.7**
baz=255
M14K Bethel 32.31 44 P **P** **10 39 59.3 0.0**
M14K IAmb IAmb 10 40 07.6

	comp=Z,2µm,0.9s								
M14K					ScP	**ScP**	**10 46 12.6**	**-0.2**
M14K	**Bethel**	**32.31**	**44**		P	**P**	**10 39 59.2**	**-0.1**
M14K	baz=263,SNR=612				S	**S**	**10 45 06.2**	**+4.7**
	baz=263								
N14K	**Kuskokwak Cree**	**32.38**	**46**		P	**P**	**10 39 59.5**	**-0.4**
N14K	baz=265,SNR=187				S	**S**	**10 45 06.4**	**+3.8**
	baz=265								
XAN	**Xi'an**	**32.44**	**263**		⇑P	**P**	**10 40 01.5**	**+0.8**
XAN					pP	pP	10 40 30.8	-1.2
XAN					S	**S**	**10 45 02.6**	**-1.6**
XAN	comp=Z,860nm,1.5s				pmax	pmax		
XAN					pmax	pmax		
	comp=Z,23µm,7.2s								
XAN					LR	LR			
	comp=Z,58µm,12.4s								
XAN					LR	LR			
	comp=Z,32µm,14.1s								
XAN					LR	LR			
	comp=Z,52µm,11.7s								
XAN	**Xi'an**	**32.44**	**263**		P	**P**	**10 40 01.2**	**+0.4**
XAN					x	x	10 40 29.9		
O14K	**Tigyukauivet M**	**32.56**	**47**		IAmb	IAmb	10 40 09.6		
	comp=Z,3µm,1.4s								
O14K	**Tigyukauivet M**	**32.56**	**47**		P	**P**	**10 40 01.3**	**-0.1**
O14K	baz=266				S	**S**	**10 45 08.3**	**+2.9**
	baz=266								
C16K	**Lisburne Hills**	**32.59**	**30**		P	**P**	**10 40 01.0**	**-0.6**
C16K	baz=248				S	**S**	**10 45 07.1**	**+1.3**
	baz=248								
L15K	**Ungalak Mounta**	**32.64**	**42**		P	**P**	**10 40 01.8**	**-0.3**
L15K	baz=262,SNR=176				S	**S**	**10 45 09.7**	**+3.1**
	baz=262								
K15K	**Wolf Creek Mou**	**32.69**	**41**		P	**P**	**10 40 02.6**	**+0.1**
K15K	baz=262,SNR=208				S	**S**	**10 45 11.0**	**+3.6**
	baz=262								
H16K	**Elim**	**32.77**	**37**		P	**P**	**10 40 02.8**	**-0.4**
H16K	baz=257,SNR=438				S	**S**	**10 45 12.4**	**+3.8**
	baz=257								
G16K	**Koyuk River**	**32.89**	**35**		IAmb	IAmb	10 40 12.9		
	comp=Z,3µm,1.6s								
G16K	**Koyuk River**	**32.89**	**35**		P	**P**	**10 40 03.7**	**-0.5**
G16K	baz=256,SNR=354				S	**S**	**10 45 14.3**	**+3.9**
	baz=256								
M15K	**Kasigluk River**	**32.93**	**44**		P	**P**	**10 40 04.3**	**-0.3**
M15K	baz=265,SNR=731				S	**S**	**10 45 14.2**	**+3.0**
	baz=265								
SDPT	**Sand Point**	**33.05**	**54**		P	**P**	**10 40 04.2**	**-1.5**
SDPT	**Sand Point**	**33.05**	**54**		P	**P**	**10 40 03.8**	**-1.9**
SDPT	baz=273				S	**S**	**10 45 08.3**	**-4.7**
	baz=273								
N15K	**Kwethluk River**	**33.19**	**45**		P	**P**	**10 40 07.0**	**0.0**
N15K	baz=266,SNR=295				S	**S**	**10 45 18.7**	**+3.4**
	baz=266								
CNSH	**ChangSha**	**33.20**	**251**		P	**P**	**10 40 08.1**	**+0.7**
CNSH					S	**S**	**10 45 16.3**	**+0.3**
CNSH	comp=Z,69µm,18.9s				LR	LR			
CNSH					LR	LR			
	comp=Z,61µm,18.6s								
CNSH					LR	LR			
	comp=Z,54µm,20.6s								
D17K	**Noatak River**	**33.21**	**31**		P	**P**	**10 40 06.5**	**-0.5**
D17K	baz=252,SNR=846				S	**S**	**10 45 18.4**	**+3.1**
	baz=252								
J16K	**Anvik River**	**33.25**	**40**		P	**P**	**10 40 07.5**	**+0.1**
J16K	baz=261,SNR=175				S	**S**	**10 45 21.1**	**+5.0**
	baz=261								
O15K	**Ungalikthiuk R**	**33.30**	**47**		IAmb	IAmb	10 40 16.4		
	comp=Z,2µm,0.9s								
O15K	**Ungalikthiuk R**	**33.30**	**47**		P	**P**	**10 40 07.8**	**-0.1**
O15K	baz=268				S	**S**	**10 45 19.7**	**+2.9**
	baz=268								
I17K	**Unalakleet**	**33.30**	**38**		P	**P**	**10 40 07.7**	**-0.1**
I17K	baz=260,SNR=234				S	**S**	**10 45 20.5**	**+3.8**
	baz=260								
RDOG	**Red Dog Mine**	**33.38**	**31**		P	**P**	**10 40 07.9**	**-0.6**
RDOG	baz=252,SNR=316				S	**S**	**10 45 19.9**	**+1.9**
	baz=252								
C17K	**DeLong Mountai**	**33.42**	**30**		P	**P**	**10 40 08.2**	**-0.6**
C17K	baz=251				S	**S**	**10 45 20.6**	**+2.0**
	baz=251								
E17K	**Hotham Inlet**	**33.51**	**33**		P	**P**	**10 40 09.3**	**-0.3**
E17K	baz=254,SNR=1000				S	**S**	**10 45 23.3**	**+3.4**
	baz=254								
F17K	**Baldwin Pennin**	**33.57**	**34**		IAmb	IAmb	10 40 19.3		
	comp=Z,2µm,0.9s								
F17K	**Baldwin Pennin**	**33.57**	**34**		P	**P**	**10 40 10.0**	**-0.1**
F17K	baz=256				S	**S**	**10 45 24.8**	**+3.9**
	baz=256								
L16K	**Owhat River**	**33.60**	**42**		P	**P**	**10 40 10.0**	**-0.4**
L16K	baz=264,SNR=327				S	**S**	**10 45 24.6**	**+3.2**
	baz=264								
CHNA	**Chernabura Isl**	**33.60**	**55**		P	**P**	**10 40 08.5**	**-2.0**
CHNA	baz=274,SNR=14				S	**S**	**10 45 18.6**	**-3.0**
	baz=274								
G17K	**Kiwalik Mounta**	**33.61**	**36**		P	**P**	**10 40 10.4**	**0.0**
G17K	baz=258,SNR=1000				S	**S**	**10 45 25.8**	**+4.3**
	baz=258								
M16K	**Timber Creek**	**33.80**	**44**		P	**P**	**10 40 11.8**	**-0.4**
M16K	baz=266				S	**S**	**10 45 28.3**	**+3.8**
	baz=266								
H17K	**Granite Mounta**	**33.81**	**37**		P	**P**	**10 40 12.2**	**0.0**
H17K	baz=259,SNR=657				S	**S**	**10 45 28.5**	**+3.8**
	baz=259								
N16K	**Nishlik Lake**	**33.87**	**45**		P	**P**	**10 40 12.8**	**0.0**
N16K	baz=267,SNR=813				S	**S**	**10 45 29.3**	**+3.7**
	baz=267								
J17K	**VABM Dome**	**33.95**	**39**		P	**P**	**10 40 13.8**	**+0.4**
J17K	baz=262				S	**S**	**10 45 31.3**	**+4.5**
	baz=262								
E18K	**Tukpahlearik C**	**34.05**	**32**		IAmb	IAmb	10 40 23.9		
	comp=Z,2µm,1.6s								
E18K	**Tukpahlearik C**	**34.05**	**32**		P	**P**	**10 40 14.3**	**0.0**
E18K	baz=255				S	**S**	**10 45 30.9**	**+2.6**
	baz=255								
KNGR	**Kungurtug, Tuv**	**34.10**	**297**	*c i*	P	**P**	**10 40 14.5**	**-0.6**
KNGR					pmax	pmax			
	comp=Z,3µm,1.6s								
KNGR					MLR	MLR			
	comp=Z,89µm,16.0s								
C18K	**Utukok River**	**34.16**	**30**		IAmb	IAmb	10 40 22.5		
	comp=Z,2µm,1.0s								
C18K	**Utukok River**	**34.16**	**30**		P	**P**	**10 40 14.4**	**-0.9**
C18K	baz=253,SNR=1000				S	**S**	**10 45 31.2**	**+1.0**
	baz=253								
L17K	**Donlin**	**34.18**	**42**		P	**P**	**10 40 15.7**	**+0.3**
L17K	baz=265				S	**S**	**10 45 35.3**	**+4.8**
	baz=265								
O16K	**Kokwok River B**	**34.19**	**46**		IAmb	IAmb	10 40 23.4		
	comp=Z,1µm,1.1s								
O16K	**Kokwok River B**	**34.19**	**46**		P	**P**	**10 40 15.2**	**-0.3**
O16K	baz=269,SNR=196				S	**S**	**10 45 34.1**	**+3.5**
	baz=269								
ENH	**Enshi**	**34.21**	**257**		IAmb	IAmb	10 40 23.8		
	comp=Z,3µm,1.6s								
ENH	**Enshi**	**34.21**	**257**		P	**P**	**10 40 16.1**	**0.0**
K17K	**Iditarod**	**34.23**	**41**		P	**P**	**10 40 16.0**	**+0.1**
K17K	baz=264,SNR=469				S	**S**	**10 45 36.0**	**+4.9**
	baz=264								
F18K	**Selawik**	**34.23**	**34**		P	**P**	**10 40 15.6**	**-0.2**
F18K	baz=257,SNR=716				S	**S**	**10 45 35.5**	**+4.5**
	baz=257								
P16K	**Nushagak River**	**34.24**	**47**		P	**P**	**10 40 16.0**	**0.0**
P16K	baz=270,SNR=198				S	**S**	**10 45 35.0**	**+3.6**
	baz=270								
H18K	**Honhosa River**	**34.49**	**36**		P	**P**	**10 40 18.2**	**+0.1**
H18K	baz=260				S	**S**	**10 45 39.1**	**+4.0**
	baz=260								
G18K	**Tagagawik**	**34.49**	**35**		P	**P**	**10 40 17.8**	**-0.3**
G18K	baz=259				S	**S**	**10 45 38.7**	**+3.5**
	baz=259								
R16K	**Pilot Point**	**34.51**	**50**		P	**P**	**10 40 17.5**	**-0.9**
R16K	baz=272,SNR=28				S	**S**	**10 45 37.3**	**+1.8**
	baz=272								
M17K	**Holitna River**	**34.55**	**43**		P	**P**	**10 40 18.9**	**+0.3**
M17K	baz=267,SNR=618				S	**S**	**10 45 40.1**	**+4.0**
	baz=267								
N17K	**Nushagak Hills**	**34.65**	**45**		IAmb	IAmb	10 40 27.9		
	comp=Z,2µm,1.1s								
N17K	**Nushagak Hills**	**34.65**	**45**		P	**P**	**10 40 19.7**	**+0.2**
N17K	baz=268,SNR=217				S	**S**	**10 45 42.4**	**+4.8**
	baz=268								
O17K	**Koliganek Bris**	**34.69**	**46**		P	**P**	**10 40 19.9**	**+0.1**
O17K	baz=269,SNR=434				S	**S**	**10 45 41.9**	**+3.6**
	baz=269								
C19K	**Lookout Ridge**	**34.85**	**29**		P	**P**	**10 40 20.7**	**-0.5**
C19K	baz=254				S	**S**	**10 45 41.6**	**+0.9**
	baz=254								
L18K	**Granite Mounta**	**34.94**	**42**		P	**P**	**10 40 22.4**	**+0.4**
L18K	baz=266				S	**S**	**10 45 46.5**	**+4.4**
	baz=266								
LZH	**Lanzhou**	**34.94**	**270**		P	**P**	**10 40 24.3**	**+1.8**
LZH					pP	pwP	10 40 56.4	-0.6
LZH					sP	sP	10 41 16.5	+5.6
LZH					PP	**PP**	**10 41 46.3**	**+1.6**
LZH					S	**S**	**10 45 41.0**	**-2.0**
LZH					sS	sS	10 46 44.6	+5.4
LZH	comp=Z,3µm,1.3s				pmax	pmax			
LZH	comp=Z,34µm,4.1s				pmax	pmax			
LZH	comp=Z,128µm,13.1s				LR	LR			
LZH	comp=Z,75µm,12.7s				LR	LR			
LZH	comp=Z,87µm,13.4s				LR	LR			
Q16K	**King Salmon**	**34.95**	**48**		P	**P**	**10 40 21.9**	**-0.1**
Q16K	baz=271,SNR=109				S	**S**	**10 45 45.7**	**+3.6**
	baz=271								
F19K	**Shaleruckik Mo**	**35.01**	**34**		P	**P**	**10 40 22.3**	**-0.2**
F19K	baz=259				S	**S**	**10 45 45.3**	**+2.4**
	baz=259								
J18K	**Innoko River**	**35.01**	**40**		IAmb	IAmb	10 40 28.4		
	comp=Z,967nm,0.9s								
J18K	**Innoko River**	**35.01**	**40**		P	**P**	**10 40 22.3**	**-0.3**
J18K	baz=264,SNR=410				S	**S**	**10 45 47.0**	**+3.9**
	baz=264								
P17K	**Kvichak River**	**35.04**	**47**		P	**P**	**10 40 22.5**	**-0.3**
P17K	baz=271,SNR=91				S	**S**	**10 45 46.6**	**+3.0**
	baz=271								
GCSA	**Galena City Sc**	**35.06**	**37**		P	**P**	**10 40 22.1**	**-0.9**
GCSA	baz=262,SNR=576				S	**S**	**10 45 45.5**	**+1.7**
	baz=262								
LZDM	**Lanzhou Array**	**35.11**	**270**		P	**P**	**10 40 25.3**	**+1.1**
	comp=Z,534nm,0.7s,baz=62,slow=3.8,SNR=841								
LZDM					S	**S**	**10 45 47.3**	**+1.4**
	comp=Z,43nm,0.8s,baz=164,slow=6.0,SNR=2.2								
LZDM					LR	LR	10 54 59.0		
	comp=Z,39µm,18.1s,baz=60,slow=36								
LZDM					P3KPbc		11 11 11.2		
	comp=Z,0.7nm,0.3s,baz=193,slow=6.1,SNR=10 comp=Z,534nm,0.7s								
R17L	**Mt. Peulik Vol**	**35.16**	**50**		P	**P**	**10 40 22.3**	**-1.7**
R17L	baz=273				S	**S**	**10 45 44.4**	**-1.2**
	baz=273								
G19K	**Purcell Mounta**	**35.16**	**35**		IAmb	IAmb	10 40 36.1		
	comp=Z,1µm,0.8s								
G19K	**Purcell Mounta**	**35.16**	**35**		P	**P**	**10 40 22.9**	**-0.9**
G19K	baz=260				S	**S**	**10 45 47.9**	**+2.5**
	baz=260								
N18K	**Kilae Creek**	**35.29**	**44**		P	**P**	**10 40 25.5**	**+0.4**
N18K	baz=269,SNR=284				S	**S**	**10 45 52.7**	**+5.2**
	baz=269								
M18K	**Stony River**	**35.33**	**43**		P	**P**	**10 40 25.6**	**+0.3**
M18K	baz=268,SNR=200				S	**S**	**10 45 52.9**	**+4.9**
	baz=268								
E19K	**Redstone River**	**35.33**	**33**		P	**P**	**10 40 25.1**	**-0.2**
E19K	baz=258,SNR=1000				S	**S**	**10 45 50.8**	**+2.8**
	baz=258								
Q17K	**Contact Creek**	**35.37**	**49**		P	**P**	**10 40 24.6**	**-1.2**
Q17K	baz=272				S	**S**	**10 45 49.8**	**+0.8**
	baz=272								
J19K	**Poorman**	**35.54**	**39**		IAmb	IAmb	10 40 36.2		
	comp=Z,2µm,1.0s								
J19K	**Poorman**	**35.54**	**39**		P	**P**	**10 40 26.6**	**-0.5**
J19K	baz=265,SNR=464				S	**S**	**10 45 53.7**	**+2.5**
	baz=265								
O18K	**Koktuh Hills**	**35.65**	**46**		P	**P**	**10 40 28.0**	**-0.1**
O18K	baz=271,SNR=55				S	**S**	**10 45 58.5**	**+5.6**
	baz=271								
P18K	**Big Mountain,**	**35.65**	**47**		IAmb	IAmb	10 40 35.4		
	comp=Z,2µm,0.9s								
P18K	**Big Mountain,**	**35.65**	**47**		P	**P**	**10 40 27.9**	**-0.2**
P18K	baz=271,SNR=224				S	**S**	**10 45 56.9**	**+3.8**
	baz=271								
CHIR	**Chirikof Islan**	**35.74**	**53**		P	**P**	**10 40 27.0**	**-1.9**
CHIR	**Chirikof Islan**	**35.74**	**53**		P	**P**	**10 40 27.8**	**-1.1**
CHIR	baz=276,SNR=6.8				S	**S**	**10 45 55.5**	**+1.0**
	baz=276								
L19K	**White Mountain**	**35.80**	**42**		P	**P**	**10 40 29.3**	**-0.1**
L19K	baz=268,SNR=178				S	**S**	**10 45 59.1**	**+3.8**
	baz=268								
D20K	**Etivluk River**	**35.80**	**31**		P	**P**	**10 40 28.9**	**-0.5**
D20K	baz=257				S	**S**	**10 45 57.6**	**+2.4**
	baz=257								
F20K	**Avaraart Lake**	**35.84**	**33**		IAmb	IAmb	10 40 34.7		
	comp=Z,3µm,1.6s								
F20K	**Avaraart Lake**	**35.84**	**33**		P	**P**	**10 40 29.1**	**-0.5**
F20K	baz=260,SNR=402				S	**S**	**10 45 58.2**	**+2.6**
	baz=260								
GZH2	**Guangzhou**	**35.85**	**244**	⇑ *i*	P	**P**	**10 40 31.3**	**+1.1**
GZH2					pP	**pP**	**10 41 03.3**	**+0.8**
GZH2					sP	**sP**	**10 41 20.6**	**+1.0**
GZH2					S	**S**	**10 45 58.3**	**+1.6**
GZH2					PcS	**PcS**	**10 46 42.9**	**+1.0**
GZH2	comp=Z,640nm,1.1s				pmax	pmax			
GZH2	comp=Z,7µm,9.7s				pmax	pmax			
N19K	**Bonanza Creek**	**35.98**	**44**		P	**P**	**10 40 31.2**	**+0.2**
N19K	baz=270,SNR=177				S	**S**	**10 46 02.8**	**+4.6**
	baz=270								
H20K	**Anotleneega Mo**	**35.98**	**36**		P	**P**	**10 40 30.6**	**-0.2**
	baz=263,SNR=729								
H20K					S	**S**	**10 46 02.4**	**+4.5**
	baz=263								
O19K	**Port Alsworth**	**36.08**	**45**		P	**P**	**10 40 31.6**	**-0.1**
O19K	baz=271,SNR=125				S	**S**	**10 46 04.4**	**+4.9**
	baz=271								
I20K	**Naaghedeneel**	**36.09**	**37**		P	**P**	**10 40 31.8**	**+0.1**
K20K	**Telida**	**36.19**	**40**		P	**P**	**10 40 32.5**	**-0.2**
K20K	baz=265,SNR=204 baz=267,SNR=233				S	**S**	**10 46 04.7**	**+3.5**
	baz=267								
J20K	**Nowinta River**	**36.20**	**38**		IAmb	IAmb	10 40 39.8		
	comp=Z,1µm,0.8s								
J20K	**Nowinta River**	**36.20**	**38**		P	**P**	**10 40 32.3**	**-0.3**
J20K	baz=266,SNR=696				S	**S**	**10 46 04.6**	**+3.4**
	baz=266								
GTA2	**Gaotai**	**36.22**	**278**		P	**P**	**10 40 34.9**	**+1.6**
GTA2					pP	pwP	10 41 09.8	+1.8
GTA2					PP	**PnPn**	**10 42 02.0**	**+1.9**
GTA2					S	**S**	**10 46 02.8**	**+0.4**
GTA2					sS	sS	10 46 58.8	0.0
GTA2					ScS	**ScS**	**10 50 35.8**	**+2.0**
GTA2	comp=Z,4µm,1.2s				pmax	pmax			
GTA2	comp=Z,53µm,8.2s				pmax	pmax			
GTA2	comp=Z,133µm,18.2s				LR	LR			
GTA2	comp=Z,77µm,18.5s				LR	LR			
GTA2	comp=Z,113µm,14.2s				LR	LR			
A21K	**Barrow**	**36.42**	**26**		P	**P**	**10 40 33.5**	**-1.0**
A21K	baz=254,SNR=1000				S	**S**	**10 46 03.8**	**-0.5**
	baz=254								
SII	**Sitkinak Islan**	**36.45**	**51**		P	**P**	**10 40 35.8**	**+0.9**
SII	**Sitkinak Islan**	**36.45**	**51**		P	**P**	**10 40 33.2**	**-1.7**
SII	baz=276,SNR=8.5				S	**S**	**10 46 05.3**	**+0.1**
	baz=276								
Q19K	**Cape Douglas,**	**36.49**	**47**		P	**P**	**10 40 34.2**	**-1.1**
Q19K	baz=273,SNR=35				S	**S**	**10 46 05.3**	**-0.7**
	baz=273								
HKC	**Hong Kong Obse**	**36.51**	**242**	⇑P	P	**P**	**10 40 38.0**	**+2.3**
HKPS	**Hong Kong Po S**	**36.55**	**242**		P	**P**	**10 40 37.3**	**+1.2**
M20K	**Styx River**	**36.61**	**42**		P	**P**	**10 40 36.8**	**+0.5**
M20K	baz=270,SNR=252				S	**S**	**10 46 12.6**	**+4.8**
	baz=270								
G21K	**Allakaket**	**36.65**	**35**		P	**P**	**10 40 36.4**	**0.0**
G21K	baz=263				S	**S**	**10 46 12.1**	**+4.1**
	baz=263								
P19K	**Oil Pt**	**36.65**	**46**		P	**P**	**10 40 36.3**	**-0.3**
P19K	baz=273,SNR=30				S	**S**	**10 46 10.7**	**+2.4**
	baz=273								
F21K	**Alatna River**	**36.73**	**33**		P	**P**	**10 40 36.9**	**-0.3**
F21K	baz=262				S	**S**	**10 46 12.9**	**+3.6**
	baz=262								
GULI	**GuiLin**	**36.83**	**250**		P	**P**	**10 40 35.9**	**-2.6**
GULI					pP	**pP**	**10 41 07.3**	**-3.4**
GULI					PP	**PP**	**10 42 04.5**	**-1.0**
GULI					S	**S**	**10 46 08.3**	**-3.4**
GULI	comp=Z,700nm,1.2s				pmax	pmax			
GULI	comp=Z,71µm,18.6s				LR	LR			
GULI	comp=Z,71µm,20.8s				LR	LR			
GULI	comp=Z,67µm,22.4s				LR	LR			
OHAK	**Old Harbor**	**36.85**	**50**		IAmb	IAmb	10 40 44.9		
	comp=Z,2µm,1.3s								
OHAK	**Old Harbor**	**36.85**	**50**		P	**P**	**10 40 36.4**	**-1.9**
OHAK	**Old Harbor**	**36.85**	**50**		P	**P**	**10 40 36.8**	**-1.5**
OHAK	baz=276,SNR=51				S	**S**	**10 46 11.0**	**-0.3**
	baz=276								
H21K	**Melozitna Rive**	**36.86**	**36**		P	**P**	**10 40 38.2**	**-0.1**
H21K	baz=265,SNR=617				S	**S**	**10 46 15.7**	**+4.4**
	baz=265								
CHUM	**Lake Minchumin**	**36.99**	**39**		P	**P**	**10 40 39.8**	**+0.4**
CHUM	baz=268,SNR=275				S	**S**	**10 46 18.4**	**+5.2**
	baz=268								
MCO	**Taipa Grande**	**37.02**	**243**		P	**P**	**10 40 41.0**	**+0.9**
PPLA	**Purkeypile**	**37.04**	**41**		P	**P**	**10 40 40.3**	**+0.3**
PPLA	baz=269,SNR=432				S	**S**	**10 46 19.2**	**+4.9**
	baz=269								
KDAK	**Kodiak Island**	**37.16**	**49**		P	**P**	**10 40 39.5**	**-1.4**
KDAK	**Kodiak Island**	**37.16**	**49**	*d i*	P	**P**	**10 40 37.6**	**-3.3**
KDAK	comp=Z,3µm,1.0s				pmax	pmax			
KDAK	**Kodiak Island**	**37.16**	**49**		P	**P**	**10 40 39.3**	**-1.6**
KDAK	baz=276				S	**S**	**10 46 15.2**	**-0.7**
	baz=276								
Q20K	**Shuyak Island**	**37.17**	**48**		P	**P**	**10 40 39.5**	**-1.4**
Q20K	baz=275,SNR=61				S	**S**	**10 46 15.2**	**-0.9**
	baz=275								
I21K	**Tanana**	**37.17**	**37**		P	**P**	**10 40 41.0**	**+0.1**
I21K	baz=267				S	**S**	**10 46 20.9**	**+4.9**
	baz=267								
SYI	**Shuyak Island**	**37.17**	**48**		IAmb	IAmb	10 40 47.6		
	comp=Z,2µm,0.9s								
SKT	**Skwentna**	**37.37**	**42**		IAmb	IAmb	10 40 50.4		
	comp=Z,2µm,1.8s								
SKT	**Skwentna**	**37.37**	**42**		P	**P**	**10 40 41.9**	**-0.8**
SKT	baz=271,SNR=122				S	**S**	**10 46 22.1**	**+3.0**
	baz=271								
HOM	**Homer**	**37.46**	**46**		P	**P**	**10 40 42.3**	**-1.1**
HOM	baz=274,SNR=14				S	**S**	**10 46 21.4**	**+1.0**
	baz=274								
H22K	**Ishtalitna Cre**	**37.46**	**36**		P	**P**	**10 40 43.5**	**+0.2**
H22K	baz=266,SNR=478				S	**S**	**10 46 24.4**	**+4.1**
	baz=266								
E22K	**Anaktuvuk Pass**	**37.47**	**32**		P	**P**	**10 40 43.1**	**-0.3**
E22K	baz=263				S	**S**	**10 46 22.1**	**+1.6**
	baz=263								
BPAW	**Bear Paw Mtn.**	**37.58**	**39**		P	**P**	**10 40 44.5**	**+0.1**
BPAW	baz=269,SNR=493				S	**S**	**10 46 25.7**	**+3.5**
	baz=269								
CAPN	**Captain Cook N**	**37.61**	**44**		P	**P**	**10 40 44.5**	**-0.1**
CAPN	baz=273,SNR=17				S	**S**	**10 46 27.4**	**+4.8**
	baz=273								
CNPM	**China Poot**	**37.68**	**46**		IAmb	IAmb	10 40 54.2		
	comp=Z,1µm,0.9s								
SUA	**Susitna One**	**37.76**	**43**		IAmb	IAmb	10 40 55.0		
	comp=Z,1µm,1.1s								
SUA	**Susitna One**	**37.76**	**43**		P	**P**	**10 40 45.2**	**-0.9**
SUA	baz=272,SNR=122				S	**S**	**10 46 27.2**	**+1.9**
	baz=272								
CD2	**Chengdu**	**37.80**	**263**	⇑P	P	**P**	**10 40 47.5**	**+0.8**
CD2					pP	pP	10 41 18.5	+0.1
CD2					sP	sP	10 41 36.1	+0.6
CD2					PP	**PnPn**	**10 42 20.5**	**+1.5**
CD2					S	**S**	**10 46 27.8**	**+1.5**
CD2					sS	sS	10 47 23.3	+0.3
CD2					ScS	**ScS**	**10 50 43.8**	**+1.0**
CD2	comp=Z,1µm,1.0s				pmax	pmax			
CD2	comp=Z,24µm,6.0s				pmax	pmax			
CD2	comp=Z,75µm,17.8s				LR	LR			
CD2	comp=Z,67µm,18.4s				LR	LR			
CD2	comp=Z,68µm,14.6s				LR	LR			

TRF	**Thorofare Moun**	**37.89**	**40**	P	**P**	**10 40 46.8**	**-0.4**		
	baz=270,SNR=210								
TRF				S	**S**	**10 46 31.7**	**+4.5**		
	baz=270								
BRSE	**Bradley Lake S**	**37.91**	**46**	P	**P**	**10 40 46.3**	**-0.9**		
	baz=275,SNR=46								
BRSE				S	**S**	**10 46 27.3**	**+0.1**		
	baz=275								
CUT	**Chulitna**	**37.94**	**41**	P	**P**	**10 40 46.5**	**-0.9**		
	baz=272,SNR=21								
CUT				S	**S**	**10 46 29.6**	**+2.0**		
	baz=272								
COLD	**Coldfoot**	**38.00**	**34**	P	**P**	**10 40 47.6**	**-0.3**		
	baz=266,SNR=719								
COLD				S	**S**	**10 46 31.0**	**+2.5**		
	baz=266								
G23K	**Bananza Creek**	**38.05**	**34**	IAmb	IAmb	10 41 01.4			
	comp=Z,1µm,1.0s								
G23K	**Bananza Creek**	**38.05**	**34**	P	**P**	**10 40 47.8**	**-0.5**		
	baz=266								
G23K				S	**S**	**10 46 31.8**	**+2.6**		
	baz=266								
M22K	**Willow**	**38.05**	**42**	P	**P**	**10 40 46.8**	**-1.5**		
	baz=273,SNR=32								
M22K				S	**S**	**10 46 30.9**	**+1.8**		
	baz=273								
SLKM	**Skilak Lake**	**38.09**	**45**	IAmb	IAmb	10 40 55.6			
	comp=Z,2µm,1.7s								
H23K	**Yukon River**	**38.21**	**36**	P	**P**	**10 40 50.1**	**+0.4**		
	baz=268								
H23K				S	**S**	**10 46 37.1**	**+5.4**		
	baz=268								
RC01	**Rabbit Creek A**	**38.28**	**44**	P	**P**	**10 40 49.2**	**-1.1**		
	baz=274,SNR=168								
RC01				S	**S**	**10 46 33.3**	**+0.5**		
	baz=274								
I23K	**Minto, Yukon-K**	**38.28**	**37**	P	**P**	**10 40 50.3**	**+0.1**		
	baz=269,SNR=272								
I23K				S	**S**	**10 46 36.2**	**+3.6**		
	baz=269								
E23K	**Chandalar**	**38.28**	**32**	P	**P**	**10 40 50.2**	**-0.1**		
	baz=265,SNR=1000								
E23K				S	**S**	**10 46 34.7**	**+1.9**		
	baz=265								
NRIK	**Noril'sk**	**38.30**	**330**	P	**P**	**10 40 48.2**	**-2.1**		
	comp=Z,4µm,1.3s,baz=103,slow=8.6,SNR=285								
NRIK				S	**S**	**10 46 33.2**	**+0.4**		
	comp=Z,92nm,0.8s,baz=257,slow=1.4,SNR=3.7								
NRIK				P3KPbc		11 10 59.2			
	comp=Z,2.1nm,0.6s,baz=311,slow=3.1,SNR=4.4								
	comp=Z,4µm,1.3s								
NRIK	**Noril'sk**	**38.30**	**330**	*c i* P	**P**	**10 40 48.0**	**-2.3**		
NRIK				pmax	pmax				
	comp=Z,7µm,1.5s								
NRIK				MLR	MLR				
	comp=Z,70µm,26.0s								
O22K	**Cooper Landing**	**38.34**	**45**	P	**P**	**10 40 49.8**	**-1.0**		
	baz=275,SNR=119								
O22K				S	**S**	**10 46 33.4**	**-0.2**		
	baz=275								
NEA2	**Nenana**	**38.41**	**38**	P	**P**	**10 40 51.2**	**-0.1**		
	baz=270,SNR=712								
NEA2				S	**S**	**10 46 37.8**	**+3.1**		
	baz=270								
MCK	**McKinley**	**38.49**	**39**	IAmb	IAmb	10 40 59.6			
	comp=Z,822nm,0.8s								
MCK	**McKinley**	**38.49**	**39**	P	**P**	**10 40 51.3**	**-0.7**		
	baz=271,SNR=244								
MCK				S	**S**	**10 46 37.5**	**+1.6**		
	baz=271								
SEW	**Seward**	**38.51**	**45**	IAmb	IAmb	10 41 04.5			
	comp=Z,3µm,1.4s								
SEW	**Seward**	**38.51**	**45**	P	**P**	**10 40 51.1**	**-1.0**		
	baz=275,SNR=36								
SEW				S	**S**	**10 46 36.2**	**-0.1**		
	baz=275								
PMR	**Palmer**	**38.53**	**43**	P	**P**	**10 40 50.9**	**-1.4**		
PMR	**Palmer**	**38.53**	**43**	P	**P**	**10 40 50.6**	**-1.7**		
	baz=274,SNR=78								
PMR				S	**S**	**10 46 37.5**	**+1.1**		
	baz=274								
GYA	**Guiyang**	**38.54**	**255**	⇑P	**P**	**10 40 53.4**	**+0.4**		
GYA				pP	pP	10 41 25.4	+0.3		
GYA				sP	sP	10 41 42.0	+0.1		
GYA				S	**S**	**10 46 36.1**	**-1.6**		
GYA				ScS	**ScS**	**10 50 49.3**	**+2.0**		
RND	**Reindeer**	**38.54**	**40**	IAmb	IAmb	10 41 00.2			
	comp=Z,1µm,1.0s								
D24K	**Happy Valley**	**38.65**	**31**	P	**P**	**10 40 52.8**	**-0.4**		
	baz=265,SNR=1000								
D24K				S	**S**	**10 46 40.6**	**+2.4**		
	baz=265								
E24K	**Your Creek**	**38.71**	**32**	P	**P**	**10 40 53.5**	**-0.3**		
	baz=266								
E24K				S	**S**	**10 46 42.2**	**+3.1**		
	baz=266								
WAT1	**Susitna Watana**	**38.71**	**41**	P	**P**	**10 40 52.8**	**-1.1**		
	baz=273								
WAT1				S	**S**	**10 46 39.7**	**+0.5**		
	baz=273								
WRH	**Wood River Hil**	**38.84**	**38**	IAmb	IAmb	10 41 08.8			
	comp=Z,1µm,0.8s								
KNK	**Knik Glacier**	**38.87**	**43**	P	**P**	**10 40 54.5**	**-0.7**		
	baz=274,SNR=143								
KNK				S	**S**	**10 46 42.4**	**+0.8**		
	baz=274								
SML	**Sawmill**	**38.89**	**42**	P	**P**	**10 40 54.8**	**-0.6**		
	baz=274,SNR=426								
SML				S	**S**	**10 46 43.8**	**+1.7**		
	baz=274								
H24K	**Noodor Dome**	**38.90**	**36**	P	**P**	**10 40 55.6**	**+0.2**		
	baz=270								
H24K				S	**S**	**10 46 46.2**	**+4.2**		
	baz=270								
COLA	**College**	**38.92**	**37**	P	**P**	**10 40 55.5**	**-0.1**		
COLA	**College**	**38.92**	**37**	P	**P**	**10 40 55.3**	**-0.3**		
COLA	**College**	**38.92**	**37**	*c i* P	**P**	**10 40 55.2**	**-0.3**		
COLA				pmax	pmax				
	comp=Z,3µm,0.9s								
COLA				MLR	MLR				
	comp=Z,33µm,17.0s								
COLA	**College**	**38.92**	**37**	P	**P**	**10 40 55.5**	**-0.1**		
	baz=271								
COLA				S	**S**	**10 46 46.0**	**+3.7**		
	baz=271								
COLA	**College**	**38.92**	**37**	⇑P	**P**	**10 40 55.3**	**-0.3**		
CCB	**Clear Creek Bu**	**38.95**	**38**	IAmb	IAmb	10 41 09.4			
	comp=Z,3µm,1.8s								
G24K	**Hadweenzic Riv**	**39.06**	**34**	P	**P**	**10 40 57.1**	**+0.4**		
	baz=269,SNR=970								
G24K				S	**S**	**10 46 48.4**	**+4.1**		
	baz=269								
WAT6	**Susitna Watana**	**39.10**	**41**	P	**P**	**10 40 56.3**	**-1.0**		
	baz=274,SNR=202								
WAT6				S	**S**	**10 46 46.4**	**+1.0**		
	baz=274								
M23K	**Glacier View**	**39.18**	**42**	P	**P**	**10 40 56.9**	**-0.8**		
	baz=275,SNR=95								
M23K				S	**S**	**10 46 49.1**	**+2.8**		
	baz=275								
DHY	**Denali Highway**	**39.23**	**40**	IAmb	IAmb	10 41 12.1			
	comp=Z,897nm,0.7s								
DHY	**Denali Highway**	**39.23**	**40**	P	**P**	**10 40 57.5**	**-0.8**		
	baz=273,SNR=201								
DHY				S	**S**	**10 46 48.3**	**+1.1**		
	baz=273								
HDA	**Harding Lake**	**39.33**	**38**	IAmb	IAmb	10 41 09.9			
	comp=Z,1µm,0.8s								
HDA	**Harding Lake**	**39.33**	**38**	P	**P**	**10 40 58.3**	**-0.7**		
	baz=272,SNR=418								
HDA				S	**S**	**10 46 50.7**	**+2.2**		
	baz=272								
IL31		**39.34**	**38**	IAmb	IAmb	10 41 12.4			
	comp=Z,1µm,0.8s								
ILAR	**Eielson Array**	**39.34**	**38**	P	**P**	**10 40 58.0**	**-1.1**		
	comp=Z,285nm,0.8s,baz=254,slow=7.5,SNR=789								
ILAR				S	**S**	**10 46 50.7**	**+2.1**		
	comp=Z,51nm,1.1s,baz=264,slow=14,SNR=4.6								
ILAR				LR	LR	10 57 02.5			
	comp=Z,43µm,22.0s,baz=270,slow=36								
ILAR				P3KPbc		11 10 56.5			
	comp=Z,1.7nm,0.8s,baz=104,slow=2.8,SNR=9.3								
ILAR				P3KP		11 12 18.1			
	comp=Z,3.7nm,0.9s,baz=250,slow=3.7,SNR=6.6								
	comp=Z,285nm,0.8s								
ILAR	**Eielson Array**	**39.34**	**38**	P	**P**	**10 40 58.1**	**-0.9**		
ILAR	**Eielson Array**	**39.34**	**38**	P	**P**	**10 40 58.1**	**-0.9**		
SCM	**Sheep Creek Mo**	**39.36**	**42**	IAmb	IAmb	10 41 11.6			
	comp=Z,2µm,1.0s								
SCM	**Sheep Creek Mo**	**39.36**	**42**	P	**P**	**10 40 58.8**	**-0.5**		
	baz=275,SNR=91								
SCM				S	**S**	**10 46 52.5**	**+3.3**		
	baz=275								
D25K	**Kavik River**	**39.54**	**30**	P	**P**	**10 41 00.2**	**-0.5**		
	baz=267								
D25K				S	**S**	**10 46 51.8**	**+0.3**		
	baz=267								
P23K	**Montague Islan**	**39.55**	**45**	P	**P**	**10 41 00.3**	**-0.5**		
	baz=277,SNR=21								
P23K				S	**S**	**10 46 54.5**	**+2.8**		
	baz=277								
KWJN	**Gagan, Kwajale**	**39.58**	**150**	P	**P**	**10 41 01.3**	**-0.2**		
KWJN				sP	**sP**	**10 41 49.5**	**-0.7**		
KWJN				PcP	**PcP**	**10 43 08.7**	**+3.0**		
GLI	**Glacier Island**	**39.58**	**44**	IAmb	IAmb	10 41 16.9			
	comp=Z,737nm,0.6s								
GLI	**Glacier Island**	**39.58**	**44**	P	**P**	**10 41 00.1**	**-0.9**		
	baz=276,SNR=30								
GLI				S	**S**	**10 46 54.1**	**+1.9**		
	baz=276								
F25K	**Christian Rive**	**39.77**	**33**	P	**P**	**10 41 03.2**	**+0.6**		
	baz=270								
F25K				S	**S**	**10 46 59.5**	**+4.4**		
	baz=270								
E25K	**Arctic Village**	**39.80**	**32**	P	**P**	**10 41 03.0**	**+0.1**		
	baz=269,SNR=1000								
E25K				S	**S**	**10 46 59.7**	**+4.3**		
	baz=269								
M24K	**Tolsona, Glenn**	**39.87**	**42**	IAmb	IAmb	10 41 20.5			
	comp=Z,1µm,0.8s								
M24K	**Tolsona, Glenn**	**39.87**	**42**	P	**P**	**10 41 03.7**	**+0.2**		
	baz=276,SNR=104								
M24K				S	**S**	**10 47 00.4**	**+3.7**		
	baz=276								
PRP	**Porcupine Dome**	**39.88**	**36**	IAmb	IAmb	10 41 13.1			
	comp=Z,2µm,0.9s								
PRP	**Porcupine Dome**	**39.88**	**36**	P	**P**	**10 41 03.5**	**-0.2**		
	baz=272,SNR=538								
PRP				S	**S**	**10 46 59.6**	**+2.7**		
	baz=272								
K24K	**Donnelly Dome**	**39.89**	**39**	IAmb	IAmb	10 41 09.0			
	comp=Z,1µm,0.8s								
K24K	**Donnelly Dome**	**39.89**	**39**	P	**P**	**10 41 02.6**	**-1.0**		
	baz=274,SNR=328								
K24K				S	**S**	**10 46 57.5**	**+0.7**		
	baz=274								
HIN	**Hinchinbrook I**	**39.94**	**44**	IAmb	IAmb	10 41 11.7			
	comp=Z,2µm,1.1s								
J25K	**Salcha River,**	**40.00**	**38**	P	**P**	**10 41 02.7**	**-1.9**		
	baz=273,SNR=171								
J25K				S	**S**	**10 46 59.7**	**+1.1**		
	baz=273								
KLU	**Klutina**	**40.07**	**43**	P	**P**	**10 41 04.8**	**-0.4**		
	baz=276,SNR=127								
KLU				S	**S**	**10 47 03.0**	**+3.4**		
	baz=276								
PAX	**Paxson**	**40.10**	**40**	P	**P**	**10 41 04.9**	**-0.6**		
	baz=275,SNR=114								
PAX				S	**S**	**10 47 02.7**	**+2.5**		
	baz=275								
Q23K	**Middleton Isla**	**40.16**	**46**	P	**P**	**10 41 03.6**	**-2.2**		
	baz=279								
Q23K				S	**S**	**10 47 05.9**	**+5.1**		
	baz=279								
MID	**Middleton Isla**	**40.17**	**46**	P	**P**	**10 41 04.4**	**-1.5**		
MID				IAmb	IAmb	10 41 14.0			
	comp=Z,2µm,1.1s								
DIV	**Divide**	**40.19**	**43**	P	**P**	**10 41 05.7**	**-0.5**		
DIV				IAmb	IAmb	10 41 14.0			
	comp=Z,3µm,1.4s								
EYAK	**Cordova Ski Ar**	**40.28**	**44**	P	**P**	**10 41 06.7**	**-0.2**		
EYAK	**Cordova Ski Ar**	**40.28**	**44**	P	**P**	**10 41 06.4**	**-0.4**		
EYAK	**Cordova Ski Ar**	**40.28**	**44**	P	**P**	**10 41 06.8**	**0.0**		
	baz=278,SNR=32								
EYAK				S	**S**	**10 47 06.8**	**+4.1**		
	baz=278								
RIDG	**Independent Ri**	**40.30**	**39**	P	**P**	**10 41 06.1**	**-1.0**		
RIDG				IAmb	IAmb	10 41 20.6			
	comp=Z,1µm,0.9s								
RIDG	**Independent Ri**	**40.30**	**39**	P	**P**	**10 41 06.0**	**-1.1**		
	baz=275,SNR=441								
RIDG				S	**S**	**10 47 05.2**	**+2.1**		
	baz=275								
HARP	**HAARP**	**40.31**	**41**	P	**P**	**10 41 07.3**	**+0.2**		
	baz=276,SNR=182								
HARP				S	**S**	**10 47 07.8**	**+4.6**		
	baz=276								
F26K	**Sheenjek River**	**40.34**	**33**	P	**P**	**10 41 07.9**	**+0.5**		
	baz=271								
F26K				S	**S**	**10 47 08.9**	**+5.4**		
	baz=271								
C27K	**Jago River**	**40.48**	**30**	P	**P**	**10 41 08.3**	**-0.1**		
	baz=269								
C27K				S	**S**	**10 47 07.0**	**+1.6**		
	baz=269								
G26K	**Porcupine Rive**	**40.51**	**34**	P	**P**	**10 41 09.2**	**+0.5**		
	baz=272								
G26K				S	**S**	**10 47 11.6**	**+5.6**		
	baz=272								
DGZ	**Jazzator, Alta**	**40.59**	**299**	*c i* P	**P**	**10 41 09.0**	**-0.8**		
DGZ				pmax	pmax				
	comp=Z,1µm,1.8s								
DGZ				MLR	MLR				
	comp=Z,99µm,22.0s								
SCRK	**Sand Creek**	**40.66**	**39**	P	**P**	**10 41 08.8**	**-1.3**		
SCRK				IAmb	IAmb	10 41 22.8			
	comp=Z,4µm,1.6s								
SCRK	**Sand Creek**	**40.66**	**39**	P	**P**	**10 41 08.9**	**-1.2**		
	baz=275,SNR=539								
SCRK				S	**S**	**10 47 09.5**	**+1.0**		
	baz=275								
DOT	**Dot Lake**	**40.66**	**39**	P	**P**	**10 41 08.6**	**-1.4**		
DOT				IAmb	IAmb	10 41 23.9			
	comp=Z,837nm,0.6s								
N25K	**Chitina, Valde**	**40.68**	**42**	P	**P**	**10 41 10.1**	**-0.1**		
	baz=277,SNR=79								
N25K				S	**S**	**10 47 13.6**	**+4.9**		
	baz=277								
BMRM	**Bremner River**	**40.77**	**43**	P	**P**	**10 41 10.9**	**0.0**		
	baz=278,SNR=91								
BMRM				S	**S**	**10 47 14.0**	**+4.0**		
	baz=278								
MENT	**Mentasta**	**40.90**	**40**	P	**P**	**10 41 12.1**	**+0.1**		
ZAA0	**Zalesovo Array**	**40.91**	**306**	P	**P**	**10 41 11.0**	**-1.1**		
ZAA0				IAmb	IAmb	10 41 15.6			
	comp=Z,4µm,1.8s								
ZALV	**Zalesovo Beam**	**40.91**	**306**	P	**P**	**10 41 10.2**	**-1.9**		
	comp=Z,235nm,0.5s,baz=66,slow=6.9,SNR=274								
ZALV				PcP	**PcP**	**10 43 09.9**	**+0.4**		
	comp=Z,527nm,0.7s,baz=66,slow=2.8,SNR=12								
ZALV				PKiKP	**PKiKP**	**10 50 18.2**	**+0.9**		
	comp=Z,16nm,0.7s,baz=292,slow=1.5,SNR=4.2								
ZALV				P3KPbc		11 10 48.1			
	comp=Z,6.5nm,0.9s,baz=254,slow=5.5,SNR=11								
ZALV				P3KP		11 12 37.4			
	comp=Z,3.9nm,0.8s,baz=242,slow=3.2,SNR=6.5								
ZALV				PKPPKP	P'P'df	11 13 12.2	-15		
	comp=Z,10nm,0.9s,baz=311,slow=1.4,SNR=6.1								
ZALV				P4KPbc		11 19 16.6			
	comp=Z,2.0nm,0.8s,baz=82,slow=4.0,SNR=4.5								
	comp=Z,235nm,0.5s								
KAIM	**Kayak Island**	**41.04**	**45**	P	**P**	**10 41 13.1**	**0.0**		
	baz=280,SNR=11								
KAIM				S	**S**	**10 47 20.9**	**+7.0**		
	baz=280								
L26K	**Log Cabin Wild**	**41.06**	**40**	IAmb	IAmb	10 41 22.1			
	comp=Z,1µm,1.1s								
L26K	**Log Cabin Wild**	**41.06**	**40**	P	**P**	**10 41 13.2**	**0.0**		
	baz=277,SNR=350								
L26K				S	**S**	**10 47 19.0**	**+4.8**		
	baz=277								
GOMU	**GeErMu**	**41.22**	**277**	P	**P**	**10 41 15.3**	**0.0**		
GOMU				S	**S**	**10 47 16.0**	**-1.9**		
GOMU				SS	**SS**	**10 50 25.3**	**-1.4**		
GOMU				pmax	pmax				
	comp=Z,3µm,1.2s								
GOMU				LR	LR				
	comp=Z,148µm,15.9s								
GOMU				LR	LR				
	comp=Z,101µm,16.1s								
M26K	**Nabesna, AK**	**41.31**	**41**	P	**P**	**10 41 15.9**	**+0.6**		
	baz=278								
M26K				S	**S**	**10 47 23.6**	**+5.7**		
	baz=278								
G27K	**Doyon Strip**	**41.36**	**34**	P	**P**	**10 41 16.2**	**+0.6**		
	baz=274								
G27K				S	**S**	**10 47 24.3**	**+5.7**		
	baz=274								
D27M	**Malcolm River**	**41.46**	**30**	IAmb	IAmb	10 41 29.3			
	comp=Z,4µm,1.6s								
D27M	**Malcolm River**	**41.46**	**30**	P	**P**	**10 41 16.6**	**+0.1**		
	baz=272								
D27M				S	**S**	**10 47 22.4**	**+2.3**		
	baz=272								
MCARA	**McCarthy VSAT**	**41.46**	**42**	P	**P**	**10 41 16.8**	**+0.3**		
	baz=279,SNR=96								
MCARA				S	**S**	**10 47 24.7**	**+4.6**		
	baz=279								
H27K	**Steamboat Moun**	**41.47**	**35**	P	**P**	**10 41 17.2**	**+0.7**		
	baz=275,SNR=686								
H27K				S	**S**	**10 47 26.9**	**+6.8**		
	baz=275								
I27K	**Kandik River**	**41.49**	**36**	IAmb	IAmb	10 41 27.4			
	comp=Z,3µm,1.6s								
I27K	**Kandik River**	**41.49**	**36**	P	**P**	**10 41 16.1**	**-0.7**		
	baz=276								
I27K				S	**S**	**10 47 25.2**	**+4.6**		
	baz=276								
CRQE	**Cirque**	**41.54**	**43**	P	**P**	**10 41 17.3**	**0.0**		
	baz=280,SNR=214								
CRQE				S	**S**	**10 47 23.7**	**+2.2**		
	baz=280								
BGLC	**Bering Glacier**	**41.56**	**44**	P	**P**	**10 41 17.7**	**+0.4**		
	baz=280								
BGLC				S	**S**	**10 47 28.4**	**+6.8**		
	baz=280								
QIZ	**Qiongzhong**	**41.64**	**244**	P	**P**	**10 41 19.9**	**+1.5**		
QIZ	**Qiongzhong**	**41.64**	**244**	P	**P**	**10 41 20.3**	**+1.9**		
QIZ				pP	**pP**	**10 41 50.8**	**-0.6**		
QIZ				PP	**PP**	**10 42 59.0**	**+1.3**		
QIZ				ScP	**ScP**	**10 46 50.3**	**+2.0**		
QIZ				S	**S**	**10 47 26.9**	**+3.3**		
QIZ				sS	**sS**	**10 48 20.8**	**-0.2**		
QIZ				ScS	**ScS**	**10 51 00.3**	**-5.4**		
QIZ				pmax	pmax				
	comp=Z,290nm,1.1s								
QIZ				pmax	pmax				
	comp=Z,6µm,5.1s								
L27K	**Beaver Creek,**	**41.74**	**40**	P	**P**	**10 41 19.3**	**+0.5**		
	baz=278,SNR=980								
L27K				S	**S**	**10 47 29.3**	**+5.1**		
	baz=278								
M27K	**Edge Creek, AK**	**41.83**	**41**	P	**P**	**10 41 20.0**	**+0.3**		
	baz=279,SNR=283								
M27K				S	**S**	**10 47 31.0**	**+5.2**		
	baz=279								
PZH	**PanZhiHua**	**41.88**	**259**	P	**P**	**10 41 21.1**	**+0.6**		
PZH				pP	**pP**	**10 41 53.3**	**+0.5**		
PZH				sP	**sP**	**10 42 11.6**	**+2.1**		
PZH				PP	**PP**	**10 43 02.9**	**+2.5**		
PZH				S	**S**	**10 47 27.9**	**+0.5**		
PZH				sS	**sS**	**10 48 26.9**	**+2.1**		
PZH				ScS	**ScS**	**10 51 08.4**	**+1.1**		
PZH				pmax	pmax				
	comp=Z,810nm,0.9s								
PZH				pmax	pmax				
	comp=Z,7µm,7.3s								
F28M	**Old Crow**	**41.98**	**33**	P	**P**	**10 41 21.0**	**+0.3**		
	baz=275,SNR=666								
F28M				S	**S**	**10 47 33.1**	**+5.4**		
	baz=275								
E28M	**Babbage River**	**42.02**	**31**	P	**P**	**10 41 20.9**	**0.0**		
	baz=274,SNR=690								
E28M				S	**S**	**10 47 31.6**	**+3.4**		
	baz=274								
KMI2	**Kunming**	**42.06**	**257**	⇑P	**P**	**10 41 23.0**	**+0.9**		
KMI2				pP	pP	10 41 55.3	+0.5		
KMI2				sP	sP	10 42 13.4	+1.9		
KMI2				ScP	**ScP**	**10 46 52.9**	**+2.6**		
KMI2				S	**S**	**10 47 29.8**	**-0.4**		
KMI2				sS	sS	10 48 27.9	+0.2		
KMI2				pmax	pmax				
	comp=Z,770nm,1.0s								
KMI2				pmax	pmax				
	comp=Z,8µm,6.5s								
KMI2				LR	LR				
	comp=Z,46µm,18.6s								
KMI2				LR	LR				
	comp=Z,25µm,17.6s								
KMI2				LR	LR				
	comp=Z,24µm,14.2s								
MESA	**MESA**	**42.21**	**44**	P	**P**	**10 41 22.5**	**-0.3**		
	baz=281								
MESA				S	**S**	**10 47 35.9**	**+4.5**		
	baz=281								
I28M	**Miner Creek**	**42.21**	**36**	P	**P**	**10 41 22.8**	**+0.2**		
	baz=277								
I28M				S	**S**	**10 47 36.0**	**+4.8**		
	baz=277								
BVCY	**Beaver Creek**	**42.29**	**41**	P	**P**	**10 41 23.5**	**+0.3**		
	baz=280,SNR=267								
BVCY				S	**S**	**10 47 37.1**	**+4.8**		
	baz=280								
CTG	**Chitna Glacier**	**42.34**	**43**	P	**P**	**10 41 24.0**	**+0.2**		
	baz=281,SNR=169								
CTG				S	**S**	**10 47 37.6**	**+4.3**		
	baz=281								
TABL	**Table Mountain**	**42.54**	**44**	IAmb	IAmb	10 41 41.5			
	comp=Z,1µm,1.0s								
WMQ	**Urumqi**	**42.58**	**290**	⇑P	**P**	**10 41 26.8**	**+0.9**		
WMQ				pP	pP	10 41 59.8	+1.8		
WMQ				sP	sP	10 42 19.6	+5.0		
WMQ				ScP	**ScP**	**10 46 54.4**	**+2.5**		
WMQ				S	**S**	**10 47 38.0**	**+0.8**		
WMQ				sS	sS	10 48 40.4	+5.7		
WMQ				ScS	**ScS**	**10 51 10.6**	**-0.4**		
WMQ				pmax	pmax				
	comp=Z,960nm,0.9s								
WMQ				LR	LR				
	comp=Z,91µm,18.5s								
WMQ				LR	LR				
	comp=Z,60µm,17.5s								
WMQ				LR	LR				
	comp=Z,54µm,20.5s								
WMQ	**Urumqi**	**42.58**	**290**	P	**P**	**10 41 26.9**	**+0.9**		
WMQ				x	x	10 41 55.9			
YUK3	**Moose Creek**	**42.59**	**42**	P	**P**	**10 41 25.8**	**-0.2**		
	baz=281,SNR=143								
YUK3				S	**S**	**10 47 41.9**	**+4.7**		
	baz=281								
E29M	**Blow River**	**42.64**	**32**	P	**P**	**10 41 26.2**	**+0.3**		
	baz=276								
E29M				S	**S**	**10 47 41.9**	**+4.7**		
	baz=276								
G29M	**Pine Creek**	**42.78**	**34**	P	**P**	**10 41 27.8**	**+0.7**		
	baz=277								
G29M				S	**S**	**10 47 45.8**	**+6.5**		
	baz=277								
I29M	**Ogilvie Camp,**	**42.90**	**36**	IAmb	IAmb	10 41 37.5			
	comp=Z,3µm,1.1s								
I29M	**Ogilvie Camp,**	**42.90**	**36**	P	**P**	**10 41 28.0**	**-0.1**		
	baz=279,SNR=920								
I29M				S	**S**	**10 47 45.5**	**+4.4**		
	baz=279								
O28M	**Mount Upton**	**42.93**	**43**	P	**P**	**10 41 28.6**	**-0.1**		
	baz=282,SNR=89								
O28M				S	**S**	**10 47 46.6**	**+4.4**		
	baz=282	

DAV S **S** **10 47 49.3 +1.5**
DAV Davao City (W) 43.29 215 P **P** **10 41 33.0 +1.3**
M29M Somme Creek 43.38 40 P **P** **10 41 32.5 +0.5**
baz=281,SNR=254
M29M S **S** **10 47 54.6 +6.3**
baz=281
L29M L29M 43.39 39 P **P** **10 41 33.0 +0.9**
baz=281
L29M S **S** **10 47 54.8 +6.4**
baz=281
BCPM Bancas Point 43.39 44 IAmb IAmb 10 41 39.3
comp=Z,3µm,1.8s
K29M Barlow Dome 43.50 38 P **P** **10 41 33.4 +0.3**
baz=281,SNR=255
K29M S **S** **10 47 55.0 +4.8**
baz=281
F30M Barrier River 43.53 33 P **P** **10 41 33.8 +0.7**
baz=278
F30M S **S** **10 47 55.4 +5.0**
baz=278
YUK4 Talbot Arm 43.53 42 P **P** **10 41 33.6 +0.2**
baz=282,SNR=100
I30M Mount Dempster 43.72 36 P **P** **10 41 34.9 +0.1**
baz=280
I30M S **S** **10 47 57.9 +4.6**
baz=280
YUK6 Outpost Mounta 43.76 42 P **P** **10 41 35.6 +0.2**
baz=283,SNR=49
YUK6 S **S** **10 47 58.9 +4.6**
baz=283
O29M Mount Kennedy 43.82 43 P **P** **10 41 35.9 +0.3**
baz=284,SNR=36
O29M S **S** **10 48 00.3 +5.5**
baz=284
J30M Hart River 43.87 37 IAmb IAmb 10 41 50.1
comp=Z,1µm,0.9s
J30M Hart River 43.87 37 P **P** **10 41 36.1 +0.1**
baz=281,SNR=385
J30M S **S** **10 48 00.1 +4.6**
baz=281
M30M Minto, Yukon 44.10 40 P **P** **10 41 38.4 +0.6**
baz=283,SNR=598
M30M S **S** **10 48 05.5 +6.7**
baz=283
HYT Haines Junctio 44.20 42 P **P** **10 41 39.4 +0.7**
baz=284,SNR=394
HYT S **S** **10 48 06.8 +6.5**
baz=284
G31M Satah River 44.23 33 IAmb IAmb 10 41 46.5
comp=Z,2µm,1.0s
G31M Satah River 44.23 33 P **P** **10 41 38.3 -0.4**
baz=280
G31M S **S** **10 48 04.8 +4.5**
baz=280
INK Inuvik 44.26 31 P **P** **10 41 38.7 -0.2**
baz=280,SNR=648
INK S **S** **10 48 03.8 +3.1**
baz=280
INK Inuvik 44.26 31 ⇑P **P** **10 41 38.5 -0.4**
MAYO Mayo, Yukon 44.27 38 P **P** **10 41 39.7 +0.6**
baz=282,SNR=155
MAYO S **S** **10 48 07.4 +6.4**
baz=282
F31M Tsiigehtchic 44.34 33 IAmb IAmb 10 41 47.7
comp=Z,3µm,0.9s
F31M Tsiigehtchic 44.34 33 P **P** **10 41 39.3 -0.2**
baz=280,SNR=1000
F31M S **S** **10 48 05.4 +3.6**
baz=280
H31M Peel River 44.43 35 P **P** **10 41 40.3 -0.1**
baz=281,SNR=612
H31M S **S** **10 48 07.6 +4.2**
baz=281
P30M Million Dollar 44.64 43 P **P** **10 41 43.2 +1.0**
baz=285
P30M S **S** **10 48 13.8 +7.1**
baz=285
N31M Braeburn, Yuko 44.84 41 P **P** **10 41 44.5 +0.9**
baz=284,SNR=155
N31M S **S** **10 48 16.8 +7.4**
baz=284
MK31 Makanchi Array 44.85 297 *i* P **P** **10 41 43.3 -0.6**
MKAR Makanchi Array 44.85 297 P **P** **10 41 43.4 -0.5**
comp=Z,518nm,0.8s,baz=73,slow=7.8,SNR=500
MKAR ScP **ScP** **10 46 59.9 -1.1**
comp=Z,54nm,0.8s,baz=74,slow=4.1,SNR=4.1
MKAR P3KPbc 11 10 30.9
comp=Z,1.3nm,0.8s,baz=255,slow=3.9,SNR=8.0
MKAR P3KP 11 12 28.4
comp=Z,3.0nm,1.0s,baz=130,slow=1.9,SNR=3.8
MKAR PKPPKP P'P'df 11 13 10.7 -12
comp=Z,6.6nm,1.0s,baz=250,slow=3.5,SNR=4.1
MKAR P4KPbc 11 19 32.9
comp=Z,2.7nm,0.6s,baz=62,slow=4.7,SNR=22
comp=Z,518nm,0.8s
O30N Mendenhall 44.88 42 P **P** **10 41 44.4 +0.4**
baz=285,SNR=133
O30N S **S** **10 48 16.0 +5.9**
baz=285
JOHN Johnston Islan 45.01 116 P **P** **10 41 45.0 -0.4**
JOHN IAmb IAmb 10 41 50.9
comp=Z,5µm,1.9s
JOHN Johnston Islan 45.01 116 P **P** **10 41 46.7 +1.2**
JOHN Johnston Islan 45.01 116 ⇓P **P** **10 41 46.6 +1.2**
MAKZ Makanchi 45.04 297 P **P** **10 41 45.3 -0.1**
MAKZ IAmb IAmb 10 41 51.0
comp=Z,4µm,1.8s
MAKZ Makanchi 45.04 297 P **P** **10 41 44.4 -1.0**
MAKZ Makanchi 45.04 297 ⇑P **P** **10 41 44.6 -0.8**
TNCH TengChong 45.06 261 ⇑P **P** **10 41 47.4 +1.4**
TNCH pP pP 10 42 19.3 +0.5
TNCH sP sP 10 42 36.3 +0.9
TNCH PP **PP** **10 43 35.0 +0.8**
TNCH ScP **ScP** **10 47 04.0 +1.6**
TNCH S **S** **10 48 11.6 -2.1**
TNCH sS sS 10 49 15.1 +3.4
TNCH SS **ScS** **10 51 26.1 -1.3**
TNCH pmax pmax
comp=Z,990nm,1.1s
TNCH pmax pmax
comp=Z,10µm,2.9s
M31M Drury Creek, Y 45.28 40 P **P** **10 41 47.6 +0.5**
baz=285,SNR=305
M31M S **S** **10 48 21.4 +5.7**
baz=285
PASG PASIGHAT 45.39 266 ⇓*eP* **P** **10 41 46.1 -2.3**
PASG IAmb IAmb 10 41 54.5
comp=Z,907nm,0.5s
LKP Lekhapani 45.47 265 *e*S **S** **10 48 16.3 -2.9**
WHY Whitehorse 45.48 42 P **P** **10 41 49.3 +0.5**
baz=286,SNR=154
WHY S **S** **10 48 25.0 +6.1**
baz=286
KURK Kurchatov 45.55 303 P **P** **10 41 48.9 -0.5**
KURK Kurchatov 45.55 303 *ce*P **P** **10 41 48.1 -1.2**
KURK pmax pmax
comp=Z,5µm,1.7s
KURK MLR MLR
comp=Z,31µm,18.0s
KURK Kurchatov 45.55 303 P **P** **10 41 48.3 -1.0**
KURK S **S** **10 48 16.6 -3.2**
KURK Kurchatov 45.55 303 P **P** **10 41 48.4 -0.9**
SKAG Skagway 45.62 44 P **P** **10 41 49.7 0.0**
SKAG Skagway 45.62 44 P **P** **10 41 50.5 +0.8**
baz=287,SNR=24
SKAG S **S** **10 48 27.8 +7.2**
baz=287
SKAG Skagway 45.62 44 ⇑P **P** **10 41 49.3 -0.4**
S31K Pelican 45.64 46 P **P** **10 41 50.0 +0.2**
baz=288,SNR=27
S31K S **S** **10 48 26.9 +6.1**
baz=288
KURBB Kurchatov Arra 45.64 303 P **P** **10 41 48.9 -1.1**
comp=Z,700nm,0.6s,baz=72,slow=8.7,SNR=578
KURBB PcP **PcP** **10 43 25.7 +0.1**
comp=Z,272nm,0.8s,baz=67,slow=4.1,SNR=5.2
KURBB S **S** **10 48 20.2 -0.9**
comp=Z,141nm,1.1s,baz=65,slow=15,SNR=6.4
KURBB P3KPbc 11 10 27.8
comp=Z,4.1nm,1.0s,baz=263,slow=4.3,SNR=7.9
KURBB P3KP 11 12 28.3
comp=Z,3.4nm,1.0s,baz=214,slow=2.8,SNR=4.9
KURBB PKPPKP P'P'df 11 13 10.4 -11
comp=Z,8.3nm,1.1s,baz=294,slow=3.5,SNR=5.4
KURBB PKP2ab **P'P'ab** **11 14 22.9 -1.0**
comp=Z,8.1nm,1.1s,baz=253,slow=4.6,SNR=4.0
KURBB P4KPbc 11 19 36.0
comp=Z,5.4nm,0.9s,baz=74,slow=3.6,SNR=17
comp=Z,700nm,0.6s
KURBB Kurchatov Arra 45.64 303 P **P** **10 41 48.7 -1.3**
N32M Quiet Lake 46.18 41 P **P** **10 41 54.3 +0.1**
baz=287
N32M S **S** **10 48 33.6 +5.0**
baz=287
A36M Sachs Harbour 46.25 25 IAmb IAmb 10 42 02.4
comp=Z,3µm,1.1s
A36M Sachs Harbour 46.25 25 P **P** **10 41 54.0 -0.5**
baz=283,SNR=1000
A36M S **S** **10 48 31.1 +1.9**
baz=283
P32M Atlin 46.37 43 P **P** **10 41 56.0 +0.4**
baz=288,SNR=68
P32M S **S** **10 48 37.6 +6.2**
baz=288
SIT Sitka 46.40 47 P **P** **10 41 57.0 +1.2**
SIT Sitka 46.40 47 P **P** **10 41 56.8 +1.0**
baz=289,SNR=23
SIT S **S** **10 48 39.4 +7.8**
baz=289
R32K Eaglecrest 46.40 45 P **P** **10 41 56.6 +0.8**
baz=288,SNR=85
R32K S **S** **10 48 38.5 +6.8**
baz=288
JIS Juneau Island 46.46 45 P **P** **10 41 57.2 +0.9**
P33M Teslin, Yukon 46.59 42 P **P** **10 41 57.7 +0.2**
baz=288,SNR=372
P33M S **S** **10 48 41.0 +6.4**
baz=288
S32K Killisnoo 46.64 46 P **P** **10 41 58.4 +0.7**
baz=289,SNR=50
S32K S **S** **10 48 42.1 +7.1**
baz=289
ZIRO ZIRO 46.76 267 *eP* P 10 41 54.2 -5.1
ZIRO IAmb IAmb 10 42 03.7
comp=Z,951nm,0.8s
ZIRO *eS* **S** **10 48 34.1 -3.8**
JORH JORHAT 46.95 266 *eP* **P** **10 41 56.3 -4.3**
JORH IAML 10 42 04.2
comp=Z,786nm,0.9s
MOKO MOKOCHONG 47.03 265 *eP* **P** **10 41 57.4 -4.0**
MOKO IAmb IAmb 10 42 11.4
comp=Z,877nm,1.3s
MOKO *eS* **S** **10 48 39.2 -2.5**
ITAN ITANAGAR 47.08 267 *eP* P 10 41 48.2 -13
ITAN IAmb IAmb 10 42 14.6
comp=Z,792nm,0.8s
ITAN *eS* **S** **10 48 39.2 -2.9**
Q32M Nakina River 47.27 44 P **P** **10 42 03.5 +0.6**
baz=289
Q32M S **S** **10 48 52.0 +7.5**
baz=289
C36M Paulatuk 47.34 29 P **P** **10 42 02.4 -0.6**
baz=287,SNR=1000
C36M S **S** **10 48 46.0 +1.3**
baz=287
LSA Lhasa 47.35 271 P **P** **10 42 02.4 -1.8**
LSA S **S** **10 48 41.8 -5.1**
LSA pmax pmax
comp=Z,420nm,1.0s
LSA LR LR
comp=Z,37µm,24.4s
LSA LR LR
comp=Z,44µm,15.1s
LSA LR LR
comp=Z,32µm,12.9s
LSA Lhasa 47.35 271 P **P** **10 42 06.0 +1.8**
LSA Lhasa 47.35 271 P **P** **10 42 05.9 +1.7**
LSA P **P** **10 42 05.9 +1.7**
MANU Manus Island 47.38 182 P **P** **10 42 04.0 +0.1**
MANU IAmb IAmb 10 42 10.1
comp=Z,2µm,1.4s
MANU Manus Island 47.38 182 ⇓P **P** **10 42 04.0 +0.1**
KOHI KOHIMA 47.69 265 ⇓*eP* P 10 42 00.3 -6.2
KOHI IAmb IAmb 10 42 15.8
comp=Z,986nm,0.8s
KOHI *eS* **S** **10 48 47.4 -3.8**
T33K Petersburg 47.70 47 P **P** **10 42 06.7 +0.8**
baz=291,SNR=17
T33K S **S** **10 48 57.5 +7.4**
baz=291
R33M Jennings River 47.75 43 P **P** **10 42 07.3 +0.9**
baz=290,SNR=242
R33M S **S** **10 48 58.7 +7.5**
baz=290
KEKH Kekaha 47.83 102 P **P** **10 42 07.4 0.0**
KEKH IAmb IAmb 10 42 13.2
comp=Z,2µm,1.3s
U33K Whale Pass 47.87 48 P **P** **10 42 08.4 +1.1**
baz=291,SNR=58
U33K S **S** **10 49 00.0 +7.5**
baz=291
TEZP TEZPUR 48.05 267 *eP* **P** **10 42 04.5 -4.6**
TEZP IAmb IAmb 10 42 14.9
comp=Z,1µm,1.6s
TEZP *eS* **S** **10 48 52.4 -3.5**
TDK Taldyqorghan 48.07 296 *eP* **P** **10 42 09.1 +0.1**
TDK *eS* **S** **10 48 56.6 +0.8**
TDK pmax pmax
comp=Z,4µm,1.4s
TDK Taldyqorghan 48.07 296 *eP* **P** **10 42 09.1 +0.1**
comp=Z,4µm,1.4s
TDK *eS* **S** **10 48 56.6 +0.8**
MYLDM Lahad Datu 48.09 223 P **P** **10 42 11.5 +2.1**
MYLDM Lahad Datu 48.09 223 ⇑P **P** **10 42 11.9 +2.5**
TAWA Tawang 48.11 268 *eP* **P** **10 42 05.5 -4.5**
TAWA IAmb IAmb 10 42 19.8
comp=Z,805nm,1.6s
TAWA *eS* **S** **10 48 53.4 -4.0**
CRAG Craig 48.12 48 P **P** **10 42 10.0 +0.9**
CRAG Craig 48.12 48 P **P** **10 42 10.1 +0.9**
baz=292,SNR=22
CRAG S **S** **10 49 02.9 +6.9**
baz=292
CRAG Craig 48.12 48 ⇑P **P** **10 42 09.9 +0.9**
PDGK Podgornoye 48.15 294 P **P** **10 42 09.5 -0.3**
WRAK Wrangell Islan 48.16 47 P **P** **10 42 10.4 +1.0**
baz=291,SNR=36
WRAK S **S** **10 49 04.7 +8.1**
baz=291
WRAK Wrangell Islan 48.16 47 ⇑P **P** **10 42 10.3 +0.8**
S34M Telegraph Cree 48.21 45 P **P** **10 42 10.8 +0.9**
baz=291,SNR=92
S34M S **S** **10 49 04.4 +7.1**
baz=291
SHLS Shalkode 48.25 293 *c* *i*P **P** **10 42 08.5 -2.0**
SHLS *eS* **S** **10 48 55.5 -3.0**
SHLS pmax pmax
comp=Z,2µm,0.9s
SHLS Shalkode 48.25 293 ⇑ *i*P **P** **10 42 08.5 -2.0**
comp=Z,2µm,0.9s
SHLS *eS* **S** **10 48 55.6 -3.0**
IMP Imphal 48.37 264 *eP* **P** **10 42 07.5 -4.1**
IMP IAmb IAmb 10 42 22.6
comp=Z,841nm,1.1s
IMP *eS* **S** **10 48 57.5 -3.0**
JAY Jayapura 48.38 191 LR LR 11 00 54.1
comp=Z,29µm,20.8s,baz=18,slow=34
TNTI Ternate 48.42 209 IAmb IAmb 10 42 22.8
comp=Z,5µm,2.0s
TNTI Ternate 48.42 209 P **P** **10 42 14.8 +2.8**
TNTI Ternate 48.42 209 ⇓P **P** **10 42 11.7 -0.3**
KKM Kota Kinabalu 48.46 226 P **P** **10 42 15.5 +3.1**
KKM Kota Kinabalu 48.46 226 ⇓P **P** **10 42 14.0 +1.6**
MORE Moreh 48.50 263 IAmb IAmb 10 42 18.4
comp=Z,371nm,1.0s
WTLY Watson Lake, Y 48.52 41 P **P** **10 42 12.6 +0.4**
baz=291,SNR=151
WTLY S **S** **10 49 07.5 +5.8**
baz=291
GENI Genyem 48.53 192 ⇓P **P** **10 42 13.6 +0.8**
UZB Uzynbulak 48.54 294 *c* *i*P **P** **10 42 12.9 +0.1**
UZB pmax pmax
comp=Z,3µm,1.4s
UZB Uzynbulak 48.54 294 ⇑ *i*P **P** **10 42 12.9 +0.1**
comp=Z,3µm,1.4s
DLBC Dease Lake 48.55 44 P **P** **10 42 13.5 +0.9**
baz=291,SNR=115
DLBC S **S** **10 49 09.2 +6.9**
baz=291
KPKS Kokpek 48.60 294 *eP* **P** **10 42 13.5 +0.3**
KPKS *eS* **S** **10 49 04.4 +1.0**
KPKS Kokpek 48.60 294 *eP* **P** **10 42 13.6 +0.3**
KPKS *eS* **S** **10 49 04.5 +1.0**
ARXS Arharly 48.80 295 *eP* **P** **10 42 13.8 -0.9**
CHTO Chiang Mai 48.94 254 P **P** **10 42 17.0 +1.1**
CHTO Chiang Mai 48.94 254 P **P** **10 42 17.1 +1.2**
CHTO S **S** **10 49 11.0 +2.5**
CHTO Chiang Mai 48.94 254 ⇑P **P** **10 42 17.1 +1.2**
V35K Ketchikan 48.96 48 P **P** **10 42 16.1 +0.5**
baz=293,SNR=23
V35K S **S** **10 49 16.6 +8.7**
baz=293
SATY Saty 48.98 294 *eP* **P** **10 42 16.2 +0.1**
SATY pmax pmax
comp=Z,4µm,1.7s
SATY Saty 48.98 294 *eP* **P** **10 42 16.3 +0.1**
comp=Z,4µm,1.7s
T35M Bob Quinn 49.01 46 P **P** **10 42 17.5 +1.5**
baz=292,SNR=272
T35M S S 10 49 17.9 +9.3
baz=292
GUWA GUWAHATI 49.09 267 *eP* **P** **10 42 12.6 -4.4**
GUWA IAmb IAmb 10 42 21.4
comp=Z,438nm,0.5s
GUWA *eS* **S** **10 49 07.6 -2.8**
CM31 Chiang Mai Arr 49.19 254 P **P** **10 42 19.4 +1.6**
SNR=218
CM31 P **P** **10 42 19.4 +1.6**
SNR=218
CM31 S **S** **10 49 13.7 +1.8**
CM31 S **S** **10 49 13.7 +1.8**
CMAR Chiang Mai Arr 49.19 254 P **P** **10 42 18.7 +0.9**
comp=Z,106nm,0.6s,baz=37,slow=7.5,SNR=428
CMAR PP PP 10 44 21.4 +8.5
comp=Z,73nm,0.9s,baz=40,slow=5.5,SNR=6.4
CMAR ScP **ScP** **10 47 19.2 -0.4**
comp=Z,47nm,0.9s,baz=9.4,slow=3.4,SNR=6.6
CMAR S **S** **10 49 14.4 +2.5**
comp=Z,15nm,1.2s,baz=41,slow=15,SNR=4.0
CMAR LR LR 11 05 54.1
comp=Z,20µm,19.6s,baz=55,slow=39
CMAR P3KP 11 12 08.0
comp=Z,0.7nm,0.3s,baz=241,slow=2.7,SNR=4.7
CMAR PKPPKP **P'P'df** **11 13 08.9 -6.9**
comp=Z,12nm,1.0s,baz=258,slow=3.6,SNR=5.4
CMAR P4KPbc 11 19 53.0
comp=Z,1.7nm,0.6s,baz=20,slow=4.6,SNR=7.8
comp=Z,106nm,0.6s
CMAR Chiang Mai Arr 49.19 254 *i* P **P** **10 42 19.2 +1.4**
SILR SILCHAR 49.20 265 *eP* P 10 42 12.5 -5.3
SILR IAmb IAmb 10 42 24.5
comp=Z,555nm,0.6s
SILR *eS* **S** **10 49 09.8 -2.2**
BVA0 Borovoye Array 49.32 309 P **P** **10 42 17.2 -1.2**
BVAR Borovoye Array 49.32 309 P **P** **10 42 17.3 -1.1**
comp=Z,462nm,0.5s,baz=58,slow=8.9,SNR=794
BVAR PcP **PcP** **10 43 39.4 +0.7**
comp=Z,397nm,0.8s,baz=73,slow=2.0,SNR=6.0
BVAR S **S** **10 49 12.0 -1.0**
comp=Z,45nm,1.0s,baz=168,slow=15,SNR=3.3
BVAR LR LR 11 04 49.9
comp=Z,40µm,18.1s,baz=45,slow=38
BVAR P3KP 11 12 25.0
comp=Z,2.4nm,0.8s,baz=143,slow=8.7,SNR=4.0
BVAR PKPPKP **P'P'df** **11 13 09.6 -7.4**
comp=Z,12nm,1.0s,baz=151,slow=3.4,SNR=3.6
BVAR P4KPbc 11 19 52.0
comp=Z,5.8nm,0.6s,baz=72,slow=4.8,SNR=13
comp=Z,462nm,0.5s
SHL Shillong 49.35 266 P **P** **10 42 19.5 +0.3**
SHL IAmb IAmb 10 42 24.1
comp=Z,1µm,0.9s
SHL Shillong 49.35 266 *eP* P 10 42 13.7 -5.5
SHL IAmb IAmb 10 42 24.4
comp=Z,968nm,0.8s
SHL *eS* **S** **10 49 10.0 -4.5**
SHL Shillong 49.35 266 P **P** **10 42 19.5 +0.3**
SHL pmax pmax
comp=Z,1µm,0.9s
SHL Shillong 49.35 266 P **P** **10 42 19.6 +0.3**
SNR=548
BORK Borovoye 49.35 309 P **P** **10 42 17.9 -0.7**
BORK Borovoye 49.35 309 *c* *i*P **P** **10 42 17.4 -1.2**
BORK pmax pmax
comp=Z,5µm,1.7s
BORK MLR MLR
comp=Z,49µm,16.0s
BORK Borovoye 49.35 309 ⇑P **P** **10 42 17.4 -1.2**
BORK Borovoye 49.35 309 P **P** **10 42 17.7 -0.9**
H02S2 DAWSON INLET T 49.37 51 P **P** **10 42 19.2 +0.4**
SNR=222
KIP Kipapa 49.37 101 P **P** **10 42 19.0 -0.1**
KIP Kipapa 49.37 101 P **P** **10 42 19.4 +0.2**
KIP Kipapa 49.37 101 *ce*P **P** **10 42 18.7 -0.5**
KIP pmax pmax
comp=Z,2µm,1.0s
RABL Rabaul 49.59 176 P **P** **10 42 21.3 +0.4**
RABL IAmb IAmb 10 42 27.3
comp=Z,2µm,0.9s
RABL Rabaul 49.59 176 ⇓P **P** **10 42 21.2 +0.4**
WRGLY Wrigley 49.69 36 IAmb IAmb 10 42 35.0
comp=Z,1µm,1.0s
WRGLY Wrigley 49.69 36 P **P** **10 42 21.5 +0.5**
baz=292,SNR=231
WRGLY S **S** **10 49 23.7 +5.8**
baz=292
MDOK Medeo 49.80 294 *eP* **P** **10 42 22.4 +0.1**
MDOK *eS* **S** **10 49 20.9 +0.7**
MDOK Medeo 49.80 294 *eP* **P** **10 42 22.4 +0.1**
MDOK *eS* **S** **10 49 20.9 +0.7**
KNDC Almaty 49.82 295 P **P** **10 42 22.9 +0.5**
AAA Alma-Ata 49.86 295 *c* *i*P **P** **10 42 22.9 +0.2**
AAA pmax pmax
comp=Z,2µm,1.1s
AAA Alma-Ata 49.86 295 *eP* **P** **10 42 22.9 +0.2**
AAA Alma-Ata 49.86 295 ⇑ *i*P **P** **10 42 23.0 +0.2**
comp=Z,2µm,1.1s
TNSS Tian-Shan 49.92 294 *eP* **P** **10 42 23.2 -0.4**
TNSS Tian-Shan 49.92 294 *eP* **P** **10 42 23.3 -0.4**
DHUB DHUBRI 50.39 268 *eP* **P** **10 42 22.7 -4.1**
DHUB IAmb IAmb 10 42 31.9
comp=Z,566nm,0.9s
DHUB *eS* **S** **10 49 25.0 -3.5**
FAKI Fak Fak 50.44 202 P **P** **10 42 26.3 -1.0**
FAKI IAmb IAmb 10 42 32.7
comp=Z,1µm,1.1s
FAKI Fak Fak 50.44 202 ⇓P **P** **10 42 26.7 -0.5**
SAIH SAIHA 50.55 262 *eP* **P** **10 42 23.8 -4.5**
SAIH IAmb IAmb 10 42 37.3
comp=Z,822nm,1.0s
SAIH *eS* **S** **10 49 28.0 -3.0**
GTK Tadong 50.57 271 *eP* **P** **10 42 23.8 -4.6**
GTK IAmb IAmb 10 42 42.6
comp=Z,967nm,1.4s
GTK *eS* **S** **10 49 28.1 -3.2**
COBR COOCHBEHAR 50.60 269 ⇓*eP* P 10 42 22.8 -5.5
COBR IAmb IAmb 10 42 36.2
comp=Z,869nm,0.6s
TOLI2 Tolitoli 50.66 217 P **P** **10 42 30.0 +1.1**
TOAD Toad River Com 50.69 42 P **P** **10 42 29.3 +0.6**
baz=294,SNR=269
TOAD S **S** **10 49 37.7 +5.8**
baz=294
KOTAN Kotaneelee Air 50.69 40 P **P** **10 42 28.8 +0.2**
baz=294,SNR=72
KOTAN S **S** **10 49 37.6 +5.7**
baz=294
ULHL Ulahol 50.77 294 P **P** **10 42 30.7 +1.0**
SNR=280
TKM2 Tokmak 2 50.84 295 P **P** **10 42 31.0 +0.7**
SNR=896
AGT Agartala 50.86 265 *eP* **P** **10 42 25.8 -4.5**
AGT IAmb IAmb 10 42 33.9
comp=Z,955nm,1.0s
AGT *eS* **S** **10 49 33.2 -1.7**
JPG JALPAIGURI 50.96 270 *eP* P 10 42 26.1 -5.0
JPG IAmb IAmb 10 42 39.0
comp=Z,990nm,1.2s
JPG *eS* **S** **10 49 34.3 -2.1**
BELO BELONIA 51.13 264 *eP* P 10 42 26.8 -5.6
BELO *eS* **S** **10 49 36.2 -2.5**
SGDS Sogindy 51.19 296 *eP* **P** **10 42 32.9 +0.2**
SGDS *eS* **S** **10 49 40.1 +0.8**
CHMS Chumysh 51.34 295 P **P** **10 42 34.3 +0.5**
SNR=316
USP Ospenovka 51.37 296 P **P** **10 42 34.6 +0.6**
SNR=1303
KBK Karagaybulak 51.39 295 P **P** **10 42 35.1 +0.8**

SNR=1106
SANI Sanana 51.53 210 P P 10 42 34.4 -0.9
SANI Sanana 51.53 210 P P 10 42 34.5 -0.9
SANI Sanana 51.53 210 ⇓P P 10 42 34.1 -1.2
AAK Ala-Archa 51.69 295 P P 10 42 36.9 +0.4
SNR=959
AAK Ala-Archa 51.69 295 P P 10 42 37.0 +0.5
AAK Ala-Archa 51.69 295 *i* P **P 10 42 37.3 +0.7**
SNR=644
AAK Ala-Archa 51.69 295 P P 10 42 37.0 +0.5
AAK pmax pmax
comp=Z,12µm,1.9s
AAK Ala-Archa 51.69 295 P P 10 42 36.9 +0.4
AAK P P 10 42 36.9 +0.4
AAK S S 10 49 48.1 +1.8
AAK S S 10 49 48.1 +1.8
AAK Ala-Archa 51.69 295 *eP* **P 10 42 37.0 +0.5**
AAK Ala-Archa 51.69 295 ⇑P **P 10 42 36.8 +0.4**
AAK Ala-Archa 51.69 295 P P 10 42 37.2 +0.7
LUWI Luwuk 51.79 214 P P 10 42 35.4 -1.9
LUWI Luwuk 51.79 214 IAmb IAmb 10 42 41.1
comp=Z,2µm,1.3s
LUWI Luwuk 51.79 214 P P 10 42 37.1 -0.2
LUWI Luwuk 51.79 214 ⇓P **P 10 42 35.6 -1.7**
UCH Uchtor 51.88 295 P P 10 42 39.0 +0.6
SNR=354
HUH Hualalai 52.05 101 IAmb IAmb 10 43 04.8
comp=Z,2µm,1.3s
KHLU Kahalu`u 52.07 101 IAmb IAmb 10 42 45.4
comp=Z,3µm,1.2s
EKS2 Erkin-Say 52.13 295 P P 10 42 40.5 +0.8
SNR=752
BBB Bella Bella 52.20 51 ⇓P **P 10 42 40.0 +0.1**
POHA Pohakuloa 52.21 100 P P 10 42 40.7 0.0
POHA Pohakuloa 52.21 100 P P 10 42 40.7 0.0
POHA Pohakuloa 52.21 100 ⇑P **P 10 42 40.8 0.0**
OVEH Oceanview Est 52.46 101 IAmb IAmb 10 42 48.8
comp=Z,11µm,1.5s
HIL Hilo 52.54 100 IAmb IAmb 10 42 49.5
comp=Z,4µm,1.3s
SHBG Sahibganj 52.54 269 *eP* P 10 42 37.4 -5.5
SHBG IAmb IAmb 10 42 49.0
comp=Z,913nm,0.8s
SHBG *eS* **S 10 49 55.2 -2.8**
BNDI Bandanaira 52.62 204 P P 10 42 43.7 +0.3
BNDI Bandanaira 52.62 204 ⇓P **P 10 42 43.2 -0.2**
SVE Sverdlovsk 52.68 316 *ceP* **P 10 42 42.8 -0.6**
SVE *i* S **S 10 49 59.6 +0.5**
SVE *e* 10 52 15.2
SVE pmax pmax
comp=E,1µm,0.8s
STCH Steam Cracks 52.74 100 IAmb IAmb 10 42 50.4
comp=Z,2µm,1.1s
KSH2 Kashi 52.81 291 P P 10 42 46.3 +1.5
KSH2 pP pP 10 43 18.3 0.0
KSH2 PcP **PcP 10 43 56.3 +4.1**
KSH2 S **S 10 50 02.3 +0.6**
KSH2 ScS **ScS 10 52 19.8 +0.5**
KSH2 pmax pmax
comp=Z,3µm,1.8s
KSH2 pmax pmax
comp=Z,44µm,6.5s
KSH2 LR LR
comp=Z,84µm,22.5s
KSH2 LR LR
comp=Z,53µm,21.3s
KSH2 LR LR
comp=Z,96µm,23.7s
NOR Nord 52.88 357 *i* P **P 10 42 42.2 -2.4**
NOR IAmb IAmb 10 42 50.6
comp=Z,347nm,0.9s
RES Resolute Bay 52.91 17 LR LR 11 06 31.5
comp=Z,17µm,20.6s,baz=303,slow=37
RES Resolute Bay 52.91 17 ⇑P **P 10 42 43.4 -1.4**
HOPEN Hopen 53.17 346 *eP* **P 10 42 44.5 -2.2**
HOPEN IVmB_BB 10 42 49.0
comp=Z,22µm,2.0s
KBS Kingsbay 53.23 351 *eP* **P 10 42 45.2 -1.9**
KBS IVmB_BB 10 42 51.3
comp=Z,14µm,1.4s
KBS *eS* **S 10 50 07.0 +1.0**
KBS Kingsbay 53.23 351 *i* P **P 10 42 45.4 -1.8**
STMR SITAMARHI 53.26 272 *eP* **P 10 42 43.5 -4.6**
STMR IAmb IAmb 10 42 54.4
comp=Z,1µm,1.0s
STMR *eS* **S 10 50 05.4 -2.2**
SPA0 Spitsbergen Ar 53.27 349 *eP* **P 10 42 45.0 -2.4**
SPA0 IVmB_BB 10 42 49.7
comp=Z,29µm,1.6s
SPB2 Spitsbergen Ar 53.27 349 P P 10 42 45.1 -2.3
SPITS Spitsbergen Ar 53.27 349 P P 10 42 44.7 -2.8
comp=Z,104nm,0.5s,baz=49,slow=8.9,SNR=123
SPITS LR LR 11 07 53.9
comp=Z,22µm,18.3s,baz=22,slow=39
SPITS P4KPbc 11 20 08.0
comp=Z,9.3nm,0.9s,baz=70,slow=8.1,SNR=4.2
comp=Z,104nm,0.5s
DZA Taraz 53.55 297 *eP* **P 10 42 50.1 +0.1**
DZA pmax pmax
comp=Z,5µm,1.7s
DZA Taraz 53.55 297 *eP* **P 10 42 50.2 +0.1**
comp=Z,5µm,1.7s
SBUM Sibu 53.57 228 P P 10 42 53.1 +2.7
SBUM Sibu 53.57 228 ⇓P **P 10 42 51.7 +1.3**
YKA Yellowknife Ar 53.65 35 P P 10 42 49.8 -0.7
comp=Z,172nm,0.8s,baz=302,slow=7.7,SNR=1070
YKA pP **pP 10 43 25.5 +1.4**
comp=Z,108nm,1.0s,baz=303,slow=7.7,SNR=0.9
YKA S **S 10 50 11.9 -0.1**
comp=Z,3.3nm,0.7s,baz=304,slow=14,SNR=1.7
YKA PKPPKP **P'P'df 11 13 06.3 -4.4**
comp=Z,5.3nm,0.9s,baz=157,slow=1.6,SNR=7.6
YKA P4KPbc 11 20 10.2
comp=Z,3.0nm,1.1s,baz=299,slow=5.5,SNR=11
comp=Z,172nm,0.8s
YKA Yellowknife Ar 53.65 35 P P 10 42 50.0 -0.4
YKA Yellowknife Ar 53.65 35 *i* P **P 10 42 49.7 -0.7**
YKA pmax pmax
comp=Z,177nm,0.8s
YKAW1 Yellowknife Wh 53.71 35 IAmb IAmb 10 42 57.6
comp=Z,2µm,1.7s
JMUI Jamui 53.72 270 *eP* **P 10 42 47.7 -3.8**
JMUI IAmb IAmb 10 42 57.1
comp=Z,1µm,1.3s
JMUI *eS* **S 10 50 11.3 -2.7**
CAL Calcutta 53.77 266 ⇓*eP* P 10 42 46.7 -5.2
CAL IAmb IAmb 10 42 53.8
comp=Z,961nm,0.9s
CAL *eS* **S 10 50 12.4 -2.3**
VLK Valmikinagar 53.78 274 *eP* **P 10 42 48.0 -3.9**
VLK IAmb IAmb 10 42 59.7
comp=Z,1µm,2.0s
VLK *eS* **S 10 50 11.4 -3.3**
KK31 Karatay Array 53.96 297 *i* P **P 10 42 53.0 0.0**
KKAR Karatay Array 53.96 297 P P 10 42 53.3 +0.3
KKAR Karatay Array 53.96 297 P P 10 42 53.3 +0.3
ARTI Arti 53.99 317 P P 10 42 51.6 -1.4
comp=Z,2µm,0.8s,baz=64,slow=4.7,SNR=1001
ARTI LR LR 11 09 29.8
comp=Z,32µm,18.2s,baz=56,slow=40
comp=Z,2µm,0.8s
ARTI Arti 53.99 317 *ciP* **P 10 42 51.5 -1.4**
ARTI *PP **pP** 10 43 25.7 -0.8
ARTI 10 43 58.6
ARTI 10 44 51.7
ARTI S **S 10 50 14.7 -2.0**
ARTI *SS **sS** 10 51 09.5 -7.0
ARTI 10 52 25.1
ARTI SS **SS 10 53 55.1 -4.3**
ARTI SSS SSS 10 56 07.2
ARTI pmax pmax
comp=Z,5µm,1.0s
ARTI pmax pmax
comp=Z,12µm,8.1s
ARTI Arti 53.99 317 ⇑P **P 10 42 51.5 -1.4**
HNLY HANLEY 54.05 282 *eP* **P 10 42 49.8 -4.6**
HNLY IAmb IAmb 10 43 01.3
comp=Z,889nm,1.2s
HNLY *eS* **S 10 50 15.4 -4.0**
HSPB Hornsund (broa 54.29 348 *eP* **P 10 42 52.7 -2.2**
BRLS Boroldaу 54.42 298 *ciP* **P 10 42 58.0 +1.7**
BRLS Boroldaу 54.42 298 ⇑*iP* **P 10 42 58.0 +1.7**
ALCI Alchi Leh 54.45 285 *eP* P 10 42 51.9 -5.2
ALCI IAML 10 43 03.6
comp=Z,996nm,0.7s
ALCI *eS* **S 10 50 19.5 -4.9**
BKB Balikpapan 54.49 221 P **P 10 42 58.6 +1.5**
BKB Balikpapan 54.49 221 ⇑P **P 10 42 58.3 +1.2**
GAYA Gaya 54.50 270 *eP* **P 10 42 52.9 -4.2**
GAYA IAmb IAmb 10 43 06.0
comp=Z,925nm,1.2s
GAYA *eS* **S 10 50 21.4 -3.0**
GKPR Gorakhpur 54.55 274 *eP* **P 10 42 53.9 -3.6**
GKPR IAmb IAmb 10 43 06.7
comp=Z,2µm,0.8s
GKPR *eS* **S 10 50 19.5 -5.6**
TATA Tatamba Isabel 54.56 167 P P 10 42 57.6 +0.1
BOK Bokaro 54.68 269 *eP* P 10 42 53.5 -5.0
BOK IAmb IAmb 10 43 04.3
comp=Z,661nm,0.5s
BOK *eS* **S 10 50 24.9 -2.0**
PMG Port Moresby 54.70 182 LR LR 11 02 09.6
comp=Z,24µm,21.9s,baz=334,slow=31
PMG Port Moresby 54.70 182 P P 10 42 58.8 +0.3
PMG Port Moresby 54.70 182 P P 10 42 58.5 0.0
PMG Port Moresby 54.70 182 ⇓*iP* **P 10 42 59.0 +0.5**
PMG pmax pmax
comp=Z,2µm,1.7s
PMG Port Moresby 54.70 182 ⇓P **P 10 42 58.8 +0.3**
IUG luzhnay 54.76 297 *eP* **P 10 42 59.0 +0.1**
IUG *eS* **S 10 50 28.5 +0.7**
IUG pmax pmax
comp=Z,3µm,1.1s
IUG luzhnay 54.76 297 *eP* **P 10 42 59.1 +0.1**
comp=Z,3µm,1.1s
IUG *eS* **S 10 50 28.5 +0.7**
CBB Campbell River 54.77 52 IAmb IAmb 10 43 06.5
comp=Z,2µm,2.0s
CHM Chimkent 54.94 297 *eP* **P 10 43 00.2 +0.1**
CHM pmax pmax
comp=Z,2µm,0.7s
CHM Chimkent 54.94 297 *eP* **P 10 43 00.2 +0.1**
comp=Z,2µm,0.7s
JOSI Joshimath 54.95 280 *eP* **P 10 42 56.0 -4.6**
JOSI IAmb IAmb 10 43 07.4
comp=Z,811nm,0.7s
JOSI *eS* **S 10 50 26.6 -4.2**
PTH Pithoragarh 55.08 278 *eP* **P 10 42 57.3 -4.1**
PTH IAmb IAmb 10 43 08.1
comp=Z,1µm,1.0s
PTH *eS* **S 10 50 28.3 -4.1**
LGTI Lohaghat 55.27 278 *eP* **P 10 42 59.7 -3.1**
LGTI IAmb IAmb 10 43 08.9
comp=Z,1µm,0.8s
LGTI *eS* S 10 50 23.6 -11
KLP Kalpa 55.28 282 *eP* P 10 42 57.8 -5.2
KLP IAmb IAmb 10 43 08.9
comp=Z,1µm,0.9s
KLP *eS* **S 10 50 31.1 -4.2**
SAVO Savo Central 55.31 167 P P 10 43 03.3 +0.4
BRCI Bahraich 55.33 276 *eP* **P 10 43 00.1 -2.9**
BRCI IAmb IAmb 10 43 10.4
comp=Z,1µm,1.4s
BRCI *eS* **S 10 50 31.7 -3.7**
SAUI Saumlaki 55.55 201 ⇓P **P 10 43 05.0 +0.4**
KNTI KHUNTI 55.58 269 *eP* P 10 42 57.8 -7.1
KNTI IAmb IAmb 10 43 12.7
comp=Z,944nm,0.7s
KNTI *eS* **S 10 50 32.3 -6.7**
KNTI *eS* S 10 50 36.3 -2.6
HNR Honiara 55.61 167 LR LR 11 06 08.3
comp=Z,4µm,19.6s,baz=60,slow=35
HNR Honiara 55.61 167 P P 10 43 06.2 +1.2
HNR Honiara 55.61 167 ⇓P **P 10 43 04.9 -0.2**
BJO1 Bjornoya 55.67 346 *eP* **P 10 43 02.7 -2.0**
BJO1 IVmB_BB 10 43 07.0
comp=Z,29µm,2.1s
BJO1 *eS* **S 10 50 37.8 -0.9**
BJO1 *eScS **ScS** **10 52 40.4 +2.3**
VAR Varanasi 55.78 272 *eP* P 10 43 00.7 -5.6
VAR IAmb IAmb 10 43 12.0
comp=Z,1µm,0.5s
VAR *eS* **S 10 50 38.5 -3.0**
TULEG Thule 55.87 10 *i* P **P 10 43 03.8 -2.4**
TULEG IAmb IAmb 10 43 12.2
comp=Z,474nm,1.2s
TULEG Thule 55.87 10 ⇑P **P 10 43 03.8 -2.4**
TSSA Tissa 55.95 284 *eP* P 10 43 02.8 -4.9
TSSA IAML 10 43 13.7
comp=Z,1µm,1.3s
TSSA *eS* **S 10 50 40.5 -3.4**
CLRS Cowichan Lake 56.09 53 IAmb IAmb 10 43 15.8
comp=Z,3µm,1.9s
DDI Dehra Dun 56.13 280 *eP* **P 10 43 04.3 -4.5**
DDI IAmb IAmb 10 43 17.8
comp=Z,1µm,0.4s
DDI *eS* **S 10 50 42.9 -3.2**
SRNI Srinagar 56.16 286 *eP* P 10 43 03.8 -5.2
SRNI IAmb IAmb 10 43 15.6
comp=Z,2µm,1.2s
SRNI *eS* **S 10 50 43.6 -3.1**
DHRM DHARAMSHALA 56.19 283 *eP* P 10 43 04.2 -5.2
DHRM IAmb IAmb 10 43 18.2
comp=Z,2µm,1.1s
DHRM *eS* **S 10 50 42.9 -4.3**
SMLA Simla 56.26 282 *eP* P 10 43 04.2 -5.3
SMLA IAmb IAmb 10 43 13.8
comp=Z,2µm,0.3s
SMLA *eS* **S 10 50 45.0 -2.7**
TKRD Thakurdwara 56.28 279 *eP* P 10 43 04.9 -4.9
TKRD IAmb IAmb 10 43 16.1
comp=Z,2µm,1.1s
TKRD *eS* **S 10 50 44.1 -3.9**
LKN LUCKNOW 56.33 275 *eP* P 10 43 05.2 -4.9
LKN IAmb IAmb 10 43 16.8
comp=Z,1µm,1.1s
LKN *eS* **S 10 50 45.5 -3.1**
LLLB Lillooet 56.37 50 IAmb IAmb 10 43 17.2
comp=Z,1µm,1.2s
THN Thein Dam 56.45 284 *eP* P 10 43 06.1 -4.9
THN IAmb IAmb 10 43 17.0
comp=Z,1µm,1.1s
THN *eS* **S 10 50 46.2 -4.1**
ALBI Allahabad 56.59 273 *eP* P 10 43 07.2 -4.8
ALBI IAmb IAmb 10 43 16.7
comp=Z,1µm,1.5s
TLWR Talawar 56.60 283 *eP* **P 10 43 07.5 -4.6**
TLWR IAmb IAmb 10 43 18.3
comp=Z,1µm,0.8s
TLWR *eS* **S 10 50 48.9 -3.3**
KAPI Kappang 56.62 215 P P 10 43 12.6 +0.4
KAPI Kappang 56.62 215 P P 10 43 12.6 +0.4
KAPI Kappang 56.62 215 *di* P **P 10 43 12.4 +0.2**
KAPI pmax pmax
comp=Z,1µm,2.0s
KAPI Kappang 56.62 215 P P 10 43 13.4 +1.2
KAPI P **P 10 43 13.4 +1.2**
KAPI S **S 10 50 54.6 +2.0**
KAPI S **S 10 50 54.6 +2.0**
KAPI Kappang 56.62 215 ⇓P **P 10 43 12.5 +0.2**
VADS Vadso 56.63 339 *eP* **P 10 43 10.0 -1.6**
VADS IVmB_BB 10 43 14.5
comp=Z,24µm,1.6s
VADS *ePP **PP** **10 45 17.7 -1.0**
VADS *eS* **S 10 50 52.6 +1.1**
BHK Bhakra 56.64 283 *eP* P 10 43 05.3 -7.0
BHK IAmb IAmb 10 43 18.2
comp=Z,1µm,1.1s
BHK *eS* **S 10 50 44.1 -8.7**
NEEM North Greenlan 56.67 5 *i* P **P 10 43 10.5 -1.7**
NEEM IAmb IAmb 10 43 18.9
comp=Z,2µm,0.8s
LVZ Lovozero 56.68 336 *ciP* **P 10 43 09.8 -2.3**
LVZ pmax pmax
comp=Z,2µm,1.3s
LVZ MLR MLR
comp=Z,40µm,24.0s
LVZ Lovozero 56.68 336 P P 10 43 10.1 -2.0
CGRH CHANDIGARH 56.76 282 ⇓*eP* P 10 43 08.2 -5.0
CGRH IAmb IAmb 10 43 18.3
comp=Z,1µm,1.2s
CGRH *eS* **S 10 50 50.2 -4.2**
B04A Port Angeles 56.86 53 IAmb IAmb 10 43 21.3
comp=Z,2µm,1.7s
JMU Jammu 56.88 285 *eP* P 10 43 08.2 -5.8
JMU IAmb IAmb 10 43 19.3
comp=Z,1µm,1.1s
JMU *eS* **S 10 50 52.3 -3.6**
AB31 Akbulak array 56.90 309 *eP* **P 10 43 13.1 -0.7**
KIRV Kirov 56.94 322 P **P 10 43 12.1 -1.9**
comp=Z,1µm,0.6s,baz=62,slow=2.3,SNR=177
KIRV LR LR 11 10 58.0
comp=Z,42µm,19.4s,baz=55,slow=39
comp=Z,1µm,0.6s
KIRV Kirov 56.94 322 *ciP* **P 10 43 12.5 -1.4**
A04D Lummi Island 56.94 52 IAmb IAmb 10 43 21.2
comp=Z,669nm,0.8s
HURO Huro Makira 56.96 165 P P 10 43 14.1 -0.5
DGPR DIGLIPUR 56.98 254 *eP* **P 10 43 11.3 -3.5**
DGPR IAmb IAmb 10 43 28.6
comp=Z,1µm,0.1s
DGPR *eS* **S 10 50 55.1 -2.4**
NLWA Neilton Lookou 57.01 54 IAmb IAmb 10 43 22.1
comp=Z,725nm,0.9s
NLWA Neilton Lookou 57.01 54 ⇑P **P 10 43 14.8 0.0**
BWNR Bhubaneshwar 57.03 266 ⇓*eP* **P 10 43 11.3 -3.8**
BWNR IAmb IAmb 10 43 20.6
comp=Z,257nm,0.7s
BWNR *eS* **S 10 50 56.4 -1.6**
MERT Meerut 57.16 279 *eP* **P 10 43 12.3 -3.8**
MERT IAmb IAmb 10 43 24.0
comp=Z,2µm,2.0s
MERT *eS* **S 10 50 56.0 -3.7**
KKR Kurukshetra 57.20 281 *eP* P 10 43 10.8 -5.4
KKR IAmb IAmb 10 43 22.2
comp=Z,2µm,0.8s
KKR *eS* **S 10 50 57.0 -3.1**
APA Apatity 57.25 336 ⇓*iP* **P 10 43 12.6 -3.5**
APA *iS* **S 10 50 51.5 -8.2**
APA *i* 10 52 49.7
APA *iSS **SS** **10 54 48.0 -2.3**
APA pmax pmax
comp=Z,627nm,1.0s
ASOR Ausora 57.27 279 *eS* **S 10 50 58.5 -2.6**
AKTO Aktyubinsk 57.29 311 P P 10 43 15.1 -1.5
NIL Nilore 57.44 287 P P 10 43 19.3 +1.4
NIL Nilore 57.44 287 P P 10 43 19.3 +1.4
NIL pmax pmax
comp=Z,3µm,1.0s
NIL Nilore 57.44 287 P P 10 43 19.1 +1.2
KEV Kevo 57.47 339 ⇑P **P 10 43 15.8 -1.7**
JHSG JHARSUGUGA 57.48 269 *eP* **P 10 43 14.4 -3.9**
JHSG IAmb IAmb 10 43 23.7
comp=Z,799nm,0.9s
JHSG *eS* **S 10 51 01.6 -2.3**
GNW Green Mountain 57.51 53 IAmb IAmb 10 43 26.2
comp=Z,1µm,1.5s
BISR Bishrakh 57.62 279 *eP* P 10 43 14.4 -4.8
BISR IAmb IAmb 10 43 27.6
comp=Z,3µm,0.8s
BISR *eS* **S 10 51 02.5 -3.0**
HAMF Hammerfest 57.62 341 *eP* **P 10 43 16.4 -2.1**
HAMF IVmB_BB 10 43 21.0
comp=Z,15µm,1.9s
HAMF *eS* **S 10 51 04.8 +0.4**
POIN Pond Inlet 57.68 15 IAmb IAmb 10 43 24.5
comp=Z,2µm,1.4s
NDI New Delhi 57.70 279 *eP* **P 10 43 15.0 -4.8**
NDI IAmb IAmb 10 43 26.2
comp=Z,2µm,0.7s
NDI *eS* **S 10 51 03.3 -3.4**
NGOA Tingoa Renbel 57.71 167 P P 10 43 19.9 +0.1
DAG Danmarks Havn 57.72 357 *i* P **P 10 43 17.2 -2.0**
DAG IAmb IAmb 10 43 23.3
comp=Z,2µm,1.4s
DAG Danmarks Havn 57.72 357 ⇑P **P 10 43 16.7 -2.5**
JMIU JAMIA UNIVERSI 57.72 279 *eP* P 10 43 14.4 -5.5
JMIU IAmb IAmb 10 43 26.1
comp=Z,1µm,1.1s
JMIU *eS* **S 10 51 02.6 -4.3**
JMIU *eS* S 10 51 03.5 -3.4
LDR Lodi Road 57.76 279 *eP* **P 10 43 15.7 -4.5**
LDR IAmb IAmb 10 43 34.4
comp=Z,2µm,0.8s
LDR *eS* **S 10 51 03.9 -3.6**
NPLP NPLP New Delhi 57.76 279 *eP* **P 10 43 15.6 -4.6**
NPLP IAmb IAmb 10 43 26.6
comp=Z,2µm,1.0s
NPLP *eS* **S 10 51 04.0 -3.5**
KULM Kulim 57.87 241 P P 10 43 22.0 +0.9
KULM Kulim 57.87 241 ⇑P **P 10 43 22.2 +1.1**
AYAN Aya Nagar 57.89 279 *eP* **P 10 43 16.4 -4.7**
AYAN IAmb IAmb 10 43 28.0
comp=Z,1µm,0.6s
AYAN *eS* **S 10 51 05.7 -3.5**
BHGR Bahadurgarh 57.89 280 *eP* **P 10 43 16.5 -4.6**
BHGR IAmb IAmb 10 43 25.0
comp=Z,1µm,0.5s
BHGR *eS* **S 10 51 05.6 -3.6**
ARA0 ARCESS Array S 58.00 340 *eP* **P 10 43 19.4 -1.8**
ARA0 IVmB_BB 10 43 24.0
comp=Z,20µm,2.0s
ARA0 *eS* **S 10 51 08.4 -1.1**
ARCES ARCESS Array B 58.00 340 P P 10 43 19.4 -1.9
comp=Z,223nm,0.7s,baz=43,slow=7.4,SNR=138
ARCES LR LR 11 12 32.2
comp=Z,25µm,19.6s,baz=44,slow=40
ARCES PKPPKP **P'P'df 11 12 58.0 -6.1**
comp=Z,14nm,0.9s,baz=347,slow=1.6,SNR=6.6
ARCES P4KPbc 11 20 32.6
comp=Z,4.3nm,1.0s,baz=29,slow=2.8,SNR=3.7
comp=Z,223nm,0.7s
RTK Rohtak 58.04 280 *eP* P 10 43 17.2 -4.9
RTK IAmb IAmb 10 43 28.4
comp=Z,2µm,0.5s
RTK *eS* **S 10 51 08.1 -3.0**
ADZR Andozero 58.06 331 *ciP* **P 10 43 20.3 -1.4**
ADZR 10 45 30.0
ADZR S **S 10 51 06.6 -3.7**
ADZR SS **SS 10 55 11.2 +8.1**
ADZR pmax pmax
comp=Z,12µm,1.5s
ADZR pmax pmax
comp=Z,9µm,1.5s
SONA Sohna 58.08 279 *eP* P 10 43 17.6 -4.8
SONA IAmb IAmb 10 43 28.6
comp=Z,2µm,1.2s
SONA *eS* **S 10 51 08.2 -3.4**
JHJR Jhajjar 58.15 280 *eP* **P 10 43 18.6 -4.3**
JHJR IAML 10 43 27.4
comp=Z,1µm,0.9s
JHJR *eS* **S 10 51 08.7 -3.7**
PBA Port Blair 58.20 253 *eP* **P 10 43 19.2 -4.2**
PBA IAmb IAmb 10 43 34.2
comp=Z,1µm,1.1s
PBA *eS* **S 10 51 11.9 -1.5**
PBA Port Blair 58.20 253 P **P 10 43 24.1 +0.7**
SNR=17
PBA S **S 10 51 10.9 -2.5**
IPM Ipoh 58.28 240 IAmb IAmb 10 44 05.4
comp=Z,2µm,1.9s
IPM Ipoh 58.28 240 P **P 10 43 24.0 +0.1**
IPM Ipoh 58.28 240 ⇑P **P 10 43 24.3 +0.3**
BLSP Bilaspur 58.38 270 *eP* **P 10 43 20.6 -4.0**
BLSP IAML 10 43 31.4
comp=Z,441nm,0.8s
BLSP *eS* **S 10 51 12.8 -2.9**
KUDL Kundal 58.54 279 *eP* P 10 43 19.7 -5.8
KUDL IAmb IAmb 10 43 31.9
comp=Z,1µm,1.1s
KUDL *eS* **S 10 51 14.6 -2.9**
JHNI Jhansi 58.73 276 *eP* **P 10 43 22.7 -4.3**
JHNI IAmb IAmb 10 43 32.9
comp=Z,2µm,1.8s
JHNI *eS* **S 10 51 16.8 -3.3**
MYKOM Kota Tinggi 58.74 236 P **P 10 43 28.4 +1.3**
MYKOM Kota Tinggi 58.74 236 ⇑P **P 10 43 28.5 +1.5**
LTY Liberty 58.89 53 IAmb IAmb 10 43 35.5
comp=Z,1µm,1.6s
COR Corvallis 58.91 56 P P 10 43 28.7 +0.8
COR Corvallis 58.91 56 P P 10 43 28.7 +0.8
COR pmax pmax
comp=Z,2µm,0.9s
COR Corvallis 58.91 56 ⇑P **P 10 43 28.6 +0.8**
COR Corvallis 58.91 56 P P 10 43 28.8 +0.8
COR x x 10 43 55.3
KULLO Kullorsuaq 58.91 8 *i* P **P 10 43 24.9 -2.6**
KULLO IAmb IAmb 10 43 30.0
comp=Z,2µm,1.2s
KULLO Kullorsuaq 58.91 8 ⇑P **P 10 43 25.4 -2.0**
KTK1 Kautokeino 58.93 340 *eP* **P 10 43 26.1 -1.6**
KTK1 IVmB_BB 10 43 30.9
comp=Z,20µm,1.0s

KTK1 eS S **10 51 23.4 +1.9**
MMRI Maumere 58.98 211 P P **10 43 28.8 +0.2**
MMRI Maumere 58.98 211 ⇓P P **10 43 28.1 -0.6**
BTDF Bukit Timah Da 59.13 236 P P **10 43 30.8 +1.0**
JETT Jettan, Norway 59.18 341 eP P **10 43 28.0 -1.5**
JETT IVmB_BB 10 43 32.4
comp=Z,37µm,1.2s
SRGN SRI GANGA NAGA 59.24 283 eP P **10 43 25.8 -4.6**
SRGN IAmb IAmb 10 43 36.2
comp=Z,1µm,0.8s
SRGN eS S **10 51 23.6 -3.0**
SOEI Soe 59.31 208 P P **10 43 30.2 -0.9**
SOEI Soe 59.31 208 P P **10 43 31.1 0.0**
SOEI Soe 59.31 208 ⇓P P **10 43 30.3 -0.7**
BLKN Baker Lake 59.34 27 IAmb IAmb 10 43 36.0
comp=Z,988nm,0.8s
RAGD RAYAGADA 59.36 267 eP P **10 43 27.8 -3.5**
RAGD IAmb IAmb 10 43 37.1
comp=Z,558nm,0.5s
RAGD eS S **10 51 25.5 -2.8**
COEN Coen 59.42 186 IAmb IAmb 10 43 35.9
comp=Z,1µm,0.8s
COEN Coen 59.42 186 P P **10 43 32.2 +0.5**
COEN Coen 59.42 186 ⇓P P **10 43 32.2 +0.5**
TRO Tromso 59.45 342 eP P **10 43 29.4 -1.8**
TRO IVmB_BB 10 43 34.0
comp=Z,36µm,1.6s
TRO eS S **10 51 29.5 +1.5**
MXC Moxie City 59.50 53 IAmb IAmb 10 43 40.0
comp=Z,2µm,1.6s
KLMR Klimovskoe 59.58 328*c iP* P **10 43 30.1 -2.2**
KLMR *e* 10 45 42.1
KLMR S S **10 51 28.9 -1.1**
KLMR SS SS **10 55 29.1 +2.1**
KLMR MLR MLR
comp=Z,27µm,14.0s
KBU Kabul Universi 59.68 290 P P **10 43 33.3 -0.3**
KBL Kabul 59.72 290 P P **10 43 33.8 -0.1**
KBL Kabul 59.72 290 P P **10 43 33.8 -0.1**
KBL pmax pmax
comp=Z,4µm,0.9s
KBL Kabul 59.72 290 P P **10 43 33.8 -0.1**
SNR=1759
KBL P P **10 43 33.8 -0.1**
SNR=1759
E07A Sunnyside 59.75 53 IAmb IAmb 10 43 41.0
comp=Z,1µm,1.1s
DRS Darwin Rock St 59.92 200 P P **10 43 34.9 -0.2**
D08A Wollman Farm, 59.98 52 IAmb IAmb 10 43 42.0
comp=Z,1µm,1.5s
HAWA Hanford 60.03 53 ⇑P P **10 43 35.3 -0.3**
G06A Carlson Farm, 60.08 55 IAmb IAmb 10 43 41.9
comp=Z,2µm,1.6s
GUNA GUNA 60.14 276 eP P 10 43 31.8 -4.9
GUNA IAmb IAmb 10 43 42.8
comp=Z,1µm,1.2s
GUNA eS S **10 51 34.4 -4.0**
DBG Daneborg 60.23 357 *i* P P **10 43 33.9 -2.6**
DBG IAmb IAmb 10 43 39.2
comp=Z,2µm,1.8s
DBG Daneborg 60.23 357 ⇑P P **10 43 34.1 -2.4**
LHMI Lhok Sumawe 60.24 245 P P **10 43 40.3 +2.9**
LHMI Lhok Sumawe 60.24 245 ⇑P P **10 43 39.3 +1.9**
E08A Dider Farm, El 60.24 53 IAmb IAmb 10 43 44.6
comp=Z,2µm,1.7s
NEW Newport 60.26 50 PKPPKP 11 12 54.0
comp=Z,17nm,1.1s,baz=272,slow=3.1,SNR=8.5
NEW Newport 60.26 50 P P **10 43 36.7 -0.5**
NEW IAmb IAmb 10 43 44.7
comp=Z,2µm,1.3s
NEW Newport 60.26 50 P P **10 43 36.7 -0.5**
NEW pmax pmax
comp=Z,2µm,1.3s
NEW Newport 60.26 50 ⇑P P **10 43 36.5 -0.7**
MTN Manton Dam 60.26 200 P P **10 43 37.0 -0.4**
MTN IAmb IAmb 10 43 43.0
comp=Z,1µm,0.9s
BBOR Butler Butte 60.27 58 P P **10 43 37.9 +0.4**
BBOR IAmb IAmb 10 43 45.8
comp=Z,2µm,1.6s
FUNA Funafuti 60.32 145 P P **10 43 38.4 +0.5**
VIS Vishakhapatnam 60.47 265 eP P 10 43 33.5 -5.4
VIS IAmb IAmb 10 43 46.9
comp=Z,414nm,0.9s
VIS eS S **10 51 39.5 -3.0**
YPT Yellepit 60.55 53 IAmb IAmb 10 43 46.3
comp=Z,934nm,1.1s
UPNV Upernavik 60.71 8 *i* P P **10 43 37.5 -2.3**
UPNV IAmb IAmb 10 43 42.7
comp=Z,998nm,0.6s
BKNR BIKANER 60.84 281 eP P 10 43 36.1 -5.2
BKNR IAmb IAmb 10 43 48.1
comp=Z,2µm,0.6s
CMBY CAMPBELL BAY 60.84 248 eP P 10 43 36.4 -5.0
CMBY IAML 10 43 54.1
comp=Z,820nm,1.3s
CMBY eS S **10 51 43.5 -3.7**
PLAI Plampang 60.88 216 P P **10 43 40.9 -0.7**
AJM Ajmer 60.90 279 eP P **10 43 37.1 -4.7**
AJM IAmb IAmb 10 43 48.2
comp=Z,1µm,1.1s
AJM eS S **10 51 44.7 -3.3**
YBH Yreka Blue Hor 60.93 59 PKPPKP 11 12 54.4
comp=Z,0.2nm,0.9s,baz=154,slow=5.2,SNR=4.6
YBH Yreka Blue Hor 60.93 59 IAmb IAmb 10 43 50.3
comp=Z,2µm,1.6s
BHPL Bhopal 60.98 274 eP P **10 43 38.0 -4.4**
BHPL IAmb IAmb 10 43 48.9
comp=Z,892nm,0.9s
BHPL eS S **10 51 45.6 -3.4**
G08A Pilot Rock 61.01 54 IAmb IAmb 10 43 50.3
comp=Z,1µm,1.8s
NGP Nagpur 61.18 272 eP P **10 43 39.4 -4.4**
NGP IAmb IAmb 10 43 48.4
NGP eS S **10 51 49.1 -2.5**
KHBM Hayfork Bally 61.26 60 IAmb IAmb 10 43 52.4
comp=Z,1µm,1.5s
BELG Belogornoye 61.43 317 LR LR 11 12 35.7
comp=Z,30µm,18.3s,baz=52,slow=38
BELG Belogornoye 61.43 317*c iP* P **10 43 44.1 -0.8**
BELG pmax pmax
comp=Z,1µm,0.9s
BELG MLR MLR
comp=Z,5µm,18.0s
NRDN NARMADA NAGAR 61.50 274 eP P **10 43 42.1 -3.8**
NRDN IAmb IAmb 10 43 58.2
comp=Z,622nm,0.8s
M03C McCloud 61.56 59 IAmb IAmb 10 43 53.4
comp=Z,891nm,1.1s
BKNI Bangkinang 61.56 237 P P **10 43 47.0 +0.7**
STEI Steigen 61.62 342 eP P **10 43 44.0 -1.9**
STEI IVmB_BB 10 43 48.8
comp=Z,12µm,1.4s
STEI eS S **10 51 56.9 +1.2**
LOF Lofoten 61.82 343 eP P **10 43 45.4 -1.8**
LOF IVmB_BB 10 43 50.0
comp=Z,20µm,1.7s
LOF *i* 10 47 58.9
LOF eS S **10 51 57.7 -0.5**
FAUS Fauske 62.06 342 eP P **10 43 47.2 -1.7**
FAUS IVmB_BB 10 43 51.6
comp=Z,21µm,1.7s
FAUS eS S **10 52 01.0 -0.2**
SUMG Summit 62.09 2 P P **10 43 48.7 -0.8**
SUMG Summit 62.09 2 *i* P P **10 43 48.1 -1.4**
SUMG IAmb IAmb 10 43 54.0
comp=Z,3µm,1.2s
SUMG Summit 62.09 2 ⇑P P **10 43 47.6 -1.9**
JAGI Jajag, Banyuwa 62.11 220 P P **10 43 49.1 -0.8**
JAGI Jajag, Banyuwa 62.11 220 ⇓P P **10 43 48.8 -1.2**
NUUG Nuugaatsiaq 62.19 8 *i* P P **10 43 48.1 -1.5**
NUUG IAmb IAmb 10 43 52.5
comp=Z,3µm,1.7s
BMO Blue Mountains 62.20 53 IAmb IAmb 10 43 57.6
comp=Z,2µm,1.5s
BMO Blue Mountains 62.20 53 ⇑P P **10 43 50.1 -0.3**
HATC Hat Creek Radi 62.23 59 IAmb IAmb 10 43 57.9
comp=Z,758nm,0.8s
J08A Circle Bar Ran 62.45 55 IAmb IAmb 10 43 59.4
comp=Z,841nm,1.2s
SMRI Semarang 62.61 224 P P **10 43 54.8 +1.6**
SMRI Semarang 62.61 224 ⇓P P **10 43 54.5 +1.2**
JNW Jan Mayen West 62.61 352 eP P **10 43 51.9 -0.6**
JNW IVmB_BB 10 43 56.6
comp=Z,17µm,1.5s
JNW eS S **10 52 08.7 +0.7**
JNE Jan Mayen East 62.63 352 eP P **10 43 51.9 -0.7**
JNE IVmB_BB 10 44 00.7
comp=Z,21µm,3.2s
JNE eS S **10 52 09.6 +1.3**
JMIC Jan Mayen 62.66 352 eP P **10 43 54.7 +1.9**
JMIC IVmB_BB 10 44 00.5
comp=Z,22µm,2.6s
JMI Jan Mayen 62.73 352 eP P **10 43 53.8 +0.5**
JMI IVmB_BB 10 43 59.8
comp=Z,24µm,3.5s
JMI eS S **10 52 11.3 +1.7**
MNRC McLaughlin Min 62.81 61 IAmb IAmb 10 44 02.0
comp=Z,1µm,1.1s
MSO Missoula 62.84 50 ⇑P P **10 43 54.2 -0.4**
NIAQ Niaqornat 62.86 8 *i* P P **10 43 52.6 -1.5**
NIAQ IAmb IAmb 10 43 57.0
comp=Z,3µm,1.4s
WVOR Wild Horse Val 62.92 56 IAmb IAmb 10 44 00.8
comp=Z,1µm,1.4s
WVOR Wild Horse Val 62.92 56 ⇑P P **10 43 55.0 -0.2**
AKL Akola 62.92 273 eP P **10 43 51.4 -4.0**
AKL IAmb IAmb 10 44 01.1
comp=Z,2µm,1.3s
AKL eS S **10 52 10.3 -3.1**
ORV Oroville 62.98 60 IAmb IAmb 10 44 02.6
comp=Z,3µm,1.9s
MCCM Marconi Confer 62.99 62 ⇓P P **10 43 56.6 +1.1**
SUTB Sutter Butte 63.00 61 IAmb IAmb 10 44 01.8
comp=Z,2µm,1.5s
SAATT Saattut 63.03 7 *i* P P **10 43 53.1 -2.1**
SAATT IAmb IAmb 10 43 57.6
comp=Z,6µm,1.3s
VAGH Vaagaholmen 63.05 342 eP P **10 43 53.5 -1.9**
VAGH IVmB_BB 10 43 58.4
comp=Z,10µm,0.8s
VAGH eS S **10 52 14.5 +0.9**
RAUS Rausandaksla 63.12 341 eP P **10 43 54.2 -1.8**
RAUS IVmB_BB 10 43 58.8
comp=Z,16µm,1.3s
RAUS eS S **10 52 15.7 +1.1**
RAUS IVMs_BB IVMs_BB 11 10 31.3
comp=Z,18µm,23.2s
CVS Carmenet Viney 63.13 62 IAmb IAmb 10 44 03.8
comp=Z,2µm,1.4s
JASL Jaisalmer 63.16 282 eP P **10 43 53.5 -3.3**
JASL IAmb IAmb 10 44 03.3
comp=Z,1µm,1.1s
JASL eS S **10 52 12.4 -3.8**
VJD Vijayawada 63.16 266 eP P **10 43 52.5 -4.5**
VJD IAmb IAmb 10 44 09.2
comp=Z,1µm,1.0s
VJD eS S **10 52 14.3 -2.1**
I43RU DUBNA INFRASON 63.22 325 P P **10 43 55.6 -1.2**
baz=56,slow=8.0,SNR=5.6
MOR8 Moi Rana 63.25 341 eP P **10 43 54.0 -2.8**
MOR8 IVmB_BB 10 43 58.9
comp=Z,22µm,0.4s
MOR8 eS S **10 52 14.9 -1.3**
KONS Konsvik 63.27 342 eP P **10 43 55.2 -1.7**
KONS IVmB_BB 10 44 03.6
comp=Z,14µm,2.8s
KONS eS S **10 52 17.9 +1.5**
UGM Wanagama 63.31 223 IAmb IAmb 10 44 00.6
comp=Z,1µm,1.1s
UGM Wanagama 63.31 223 P P **10 43 57.8 -0.1**
STOK Stokkvaagen 63.44 342 eP P **10 43 56.2 -1.8**
STOK IVmB_BB 10 44 00.9
comp=Z,14µm,1.7s
STOK eS S **10 52 19.3 +0.9**
MTSU Mount Surprise 63.49 185 P P **10 43 59.7 +0.8**
FFC Flin Flon 63.55 38 P P **10 43 58.6 -0.4**
FFC IAmb IAmb 10 44 06.4
comp=Z,2µm,1.1s
FFC Flin Flon 63.55 38 P P **10 43 58.6 -0.4**
FFC pmax pmax
comp=Z,2µm,1.1s
FFC Flin Flon 63.55 38 ⇑P P **10 43 58.4 -0.5**
FFC Flin Flon 63.55 38 P P **10 43 58.5 -0.5**
KNRA Kununurra 63.58 202 IAmb IAmb 10 44 05.2
comp=Z,1µm,1.3s
LEIR Leirfjorden 63.60 341 eP P **10 43 57.0 -2.1**
LEIR IVmB_BB 10 44 01.9
comp=Z,18µm,1.9s
LEIR eS S **10 52 21.1 +0.7**
PUL Pulkovo 63.66 330*c iP* P **10 43 58.6 -1.0**
PUL pmax pmax
comp=Z,4µm,1.3s
PUL MLR MLR
comp=Z,21µm,16.0s
MOS Moscow 63.72 324 eP P **10 43 58.4 -1.7**
MOS *e**PP **pP** **10 44 33.8 -0.8**
MOS *e**SP **sP** **10 44 50.8 +0.3**
MOS *e* 10 46 20.4
MOS eS S **10 52 18.4 -3.9**
MOS *e* 10 53 00.8
MOS *e* 10 53 37.4
MOS eSSS SSS 10 59 26.3
MOS pmax pmax
comp=Z,16µm,1.9s
MOS pmax pmax
comp=N,7µm,1.8s
MOS pmax pmax
comp=E,4µm,1.8s
MOS pmax pmax
comp=Z,8µm,1.5s
MOS pmax pmax
comp=N,4µm,1.4s
MOS pmax pmax
comp=E,3µm,1.3s
MOS smax smax
comp=E,11µm,4.5s
MOS smax smax
comp=N,10µm,4.0s
MOS MLR MLR
comp=Z,30µm,17.0s
SAQQ Saqqaq 63.78 8 *i* P P **10 43 58.7 -1.5**
SAQQ IAmb IAmb 10 44 05.0
comp=Z,4µm,1.7s
XMAS Kiritimati 63.83 116 P P **10 44 00.9 -0.4**
XMAS Kiritimati 63.83 116 P P **10 44 01.7 +0.3**
XMAS Kiritimati 63.83 116 ⇑P P **10 44 01.4 +0.1**
FINES FINESS Array B 63.84 333 P P **10 43 59.0 -1.7**
comp=Z,588nm,0.6s,baz=31,slow=7.7,SNR=804
FINES S S **10 52 22.8 -0.7**
comp=Z,22nm,0.7s,baz=40,slow=15,SNR=5.2
FINES PKPPKP **P'P'df** **11 12 51.9 -3.0**
comp=Z,30nm,1.0s,baz=170,slow=3.3,SNR=11
FINES LR LR 11 14 59.9
comp=Z,50µm,19.7s,baz=42,slow=39
FINES P4KPbc 11 20 54.0
comp=Z,9.1nm,0.9s,baz=54,slow=9.7,SNR=9.8
comp=Z,588nm,0.6s
FINES FINESS Array B 63.84 333 *i* P P **10 43 59.0 -1.7**
FINES pmax pmax
comp=Z,592nm,0.6s
JRSC Jasper Ridge 63.85 62 IAmb IAmb 10 44 06.2
comp=Z,2µm,1.5s
FCC Fort Churchill 63.88 31 IAmb IAmb 10 44 07.9
comp=Z,2µm,1.2s
MFID Camas Ranch 63.93 54 IAmb IAmb 10 44 08.8
comp=Z,2µm,1.9s
HYB Hyderabad 64.03 269 eP P **10 44 03.2 +0.6**
HYB IVmB_BB 10 44 06.5
comp=Z,8µm,3.4s
HYB *e*pP **pP** **10 44 37.6 0.0**
HYB *e*PP **PP** **10 46 29.0 +3.8**
HYB IVMs_BB IVMs_BB 10 52 28.6
comp=Z,11µm,14.2s
HYB eS S **10 52 29.3 +2.1**
MPK Martis Peak 64.03 60 IAmb IAmb 10 44 08.2
comp=Z,2µm,1.3s
SCO Scoresbysund 64.11 357 *i* P P **10 44 02.6 +0.3**
SCO IAmb IAmb 10 44 08.8
comp=Z,1µm,1.0s
SCO Scoresbysund 64.11 357 ⇑P P **10 44 01.3 -1.0**
PAHR Pah Rah Range 64.17 59 IAmb IAmb 10 44 08.8
comp=Z,2µm,1.4s
MHC Mount Hamilton 64.26 62 IAmb IAmb 10 44 11.6
comp=Z,1µm,1.6s
MNAI Manna 64.27 233 P P **10 44 06.7 +2.6**
EGMT Eagleton 64.29 47 ⇑P P **10 44 03.6 -0.4**
GDH Godhavn 64.35 9 *i* P P **10 44 02.4 -1.5**
GDH IAmb IAmb 10 44 07.9
comp=Z,1µm,0.9s
BBJI Bungbulang 64.36 226 P P **10 44 04.1 -0.7**
OBN Obninsk 64.59 324 S S **10 52 30.2 -2.7**
comp=Z,21nm,0.4s,baz=109,slow=22,SNR=5.4
OBN LR LR 11 15 26.1
comp=Z,25µm,19.4s,baz=352,slow=39
OBN Obninsk 64.59 324 P P **10 44 04.7 -1.0**
OBN Obninsk 64.59 324 ⇓P P **10 44 05.4 -0.3**
OBN Obninsk 64.59 324*c iP* P **10 44 03.7 -2.0**
OBN *e* 10 44 38.8
OBN *i* *PP **pwP** **10 44 42.9 -2.0**
OBN *i* PPP PPP 10 48 06.5
OBN *i* S S **10 52 28.7 -4.2**
OBN *i* *SS **pS** **10 53 16.3 +3.4**
OBN *i* 10 53 40.5
OBN eSS SS **10 56 47.4 +2.1**
OBN pmax pmax
comp=Z,7µm,1.3s
OBN pmax pmax
comp=Z,15µm,1.6s
OBN MLR MLR
comp=Z,45µm,12.0s
OBN Obninsk 64.59 324 P P **10 44 04.8 -0.9**
comp=Z,72µmcomp=Z,6µm,1.3s
OBN Obninsk 64.59 324 ⇑P P **10 44 04.4 -1.3**
CMB Columbia Colle 64.60 61 IAmb IAmb 10 44 13.0
comp=Z,685nm,1.1s
ILULI Ilulissat 64.63 8 *i* P P **10 44 04.2 -1.5**
ILULI IAmb IAmb 10 44 11.2
comp=Z,2µm,1.1s
ILULI Ilulissat 64.63 8 ⇑P P **10 44 04.2 -1.5**
HLID Hailey 64.64 53 ⇑P P **10 44 06.3 -0.2**
SAO San Andreas Ge 64.74 63 ⇑P P **10 44 06.3 -0.8**
BOZ Bozeman (W) 64.86 50 ⇑P P **10 44 07.7 -0.2**
VRH Novokhopyorsk 65.00 318*c iP* P **10 44 07.0 -1.4**
VRH *e**PP **pP** **10 44 42.0 -1.1**
VRH *e**SP **sP** **10 45 00.1 +1.1**
VRH *e*S S **10 52 33.8 -4.3**
VRH *e**SS **pS** **10 53 19.4 +1.5**
VRH *e* 10 53 46.1
VRH pmax pmax
comp=Z,31µm,4.0s
VRH pmax pmax
comp=Z,6µm,1.2s
BBGB Big Mountain B 65.11 63 IAmb IAmb 10 44 15.1
comp=Z,2µm,1.2s
NSS Namsos 65.20 341 eP P **10 44 07.9 -1.6**
NSS IVmB_BB 10 44 12.5
comp=Z,13µm,1.1s
NSS eS S **10 52 42.0 +1.9**
NSS IVMs_BB IVMs_BB 11 13 00.1
comp=Z,16µm,6.2s
LPSR Galich'ya Gora 65.32 321*c* eP P **10 44 09.3 -1.2**
LPSR *e**PP **pP** **10 44 46.3 +1.1**
LPSR *e**SP **sP** **10 45 03.1 +2.0**
LPSR *e*S S **10 52 35.7 -6.2**
LPSR *e**SS **pS** **10 53 18.5 -3.4**
LPSR *e* 10 53 48.0
LPSR pmax pmax
comp=Z,6µm,0.9s
LPSR pmax pmax
comp=Z,6µm,1.0s
CTA Charters Tower 65.34 183 LR LR 11 08 42.9
comp=Z,21µm,21.6s,baz=7.0,slow=32
CTA Charters Tower 65.34 183 P P **10 44 10.8 -0.2**
CTAO Charters Tower 65.34 183 P P **10 44 11.0 +0.1**
CTAO IAmb IAmb 10 44 14.5
comp=Z,1µm,1.2s
CTAO Charters Tower 65.34 183 P P **10 44 10.7 -0.2**
CTAO Charters Tower 65.34 183 P P **10 44 11.0 +0.1**
CTAO pmax pmax
comp=Z,1µm,1.3s
CTAO Charters Tower 65.34 183 ⇓P P **10 44 10.7 -0.3**
HULI Fort Hunter Li 65.34 63 IAmb IAmb 10 44 17.9
comp=Z,1µm,1.1s
DVP Devils Point 65.36 160 P P **10 44 12.3 +1.3**
RTV Rentapao 65.48 159 P P **10 44 12.0 +0.2**
PMPB Monarch Peak 65.49 63 IAmb IAmb 10 44 25.3
comp=Z,929nm,1.4s
YHL Hebgen Lake 65.59 50 IAmb IAmb 10 44 20.0
comp=Z,1µm,1.2s
LHV Little Huntoon 65.61 60 IAmb IAmb 10 44 20.3
comp=Z,2µm,1.1s
NVAR Mina Array Bea 65.62 59 P P **10 44 12.8 -0.2**
comp=Z,157nm,0.7s,baz=287,slow=6.8,SNR=565
NVAR S S **10 52 47.9 +1.3**
comp=Z,3.1nm,1.0s,baz=241,slow=2.6,SNR=1.0
NVAR PKKP **PKKPdf** **11 04 34.2 +5.4**
comp=Z,1.0nm,0.7s,baz=116,slow=3.2,SNR=3.6
NVAR PKPPKP **P'P'df** **11 12 50.2 -2.2**
comp=Z,4.9nm,0.9s,baz=140,slow=3.7,SNR=7.3
NVAR P4KPbc 11 21 03.1
comp=Z,1.5nm,1.0s,baz=258,slow=3.6,SNR=7.5
comp=Z,157nm,0.7s
YHB Horse Butte 65.65 50 IAmb IAmb 10 44 20.2
comp=Z,689nm,0.8s
MDRS Chennai 65.81 264 eP P **10 44 10.4 -3.7**
MDRS IAmb IAmb 10 44 20.3
comp=Z,573nm,0.6s
MDRS eS S **10 52 47.9 -1.0**
PKD Bear Valley Ra 65.83 63 IAmb IAmb 10 44 19.3
comp=Z,1µm,1.4s
VORR Voronezh 65.83 320 eP P **10 44 13.2 -0.6**
VORR pmax pmax
comp=Z,5µm,1.2s
VSU Vasula 65.88 331*c iP* P **10 44 12.0 -1.9**
VSU pmax pmax
comp=Z,3µm,1.3s
VSU Vasula 65.88 331 ⇑P P **10 44 11.6 -2.3**
ELK Elko 65.96 56 PKPPKP 11 12 51.1
comp=Z,9.4nm,1.0s,baz=256,slow=1.6,SNR=8.4
ELK Elko 65.96 56 ⇑P P **10 44 14.9 -0.2**
YNE Yellowstone No 66.12 50 IAmb IAmb 10 44 23.9
comp=Z,2µm,1.7s
VSR Storozhevoye 66.17 320 *i* P P **10 44 15.1 -0.8**
VSR *i* *PP **pwP** **10 44 53.3 -1.8**
VSR *i* PPP PPP 10 48 20.0
VSR *e*S S **10 52 47.6 -4.7**
VSR *e**SS **sS** **10 53 53.3 +0.7**
VSR pmax pmax
comp=Z,5µm,1.3s
VSR pmax pmax
comp=Z,11µm,2.0s
VORD Divnogorie 66.28 319 eP P **10 44 16.0 -0.6**
VORD pmax pmax
comp=Z,5µm,1.1s
QIS Mount Isa 66.30 189 P P **10 44 16.4 -0.7**
BHUJ Bhuj 66.39 280 eP P **10 44 14.0 -3.8**
BHUJ IAmb IAmb 10 44 25.2
comp=Z,2µm,1.4s
BHUJ eS S **10 52 53.4 -2.3**
RLMT Red Lodge 66.44 49 IAmb IAmb 10 44 26.2
comp=Z,2µm,1.3s
RLMT Red Lodge 66.44 49 ⇑P P **10 44 18.1 0.0**
WR8 Warramunga Arr 66.46 195 IAmb IAmb 10 44 23.3
comp=Z,2µm,1.4s
WRAB Tennant Creek 66.47 195 P P **10 44 17.6 -0.5**
WRAB IAmb IAmb 10 44 20.9
comp=Z,695nm,0.9s
WRAB Tennant Creek 66.47 195 P P **10 44 17.1 -1.0**
WRAB Tennant Creek 66.47 195 P P **10 44 17.6 -0.5**
WRAB pmax pmax
comp=Z,695nm,0.9s
WRAB Tennant Creek 66.47 195 P P **10 44 17.2 -0.9**
WRAB PcP **PcP** **10 44 42.2 -4.3**
WRAB pP **pP** **10 44 50.1 -4.0**
WRAB sP **sP** **10 45 07.2 -3.0**
WRA Warramunga Arr 66.48 195 P P **10 44 18.0 -0.2**
comp=Z,545nm,0.8s,baz=15,slow=6.1,SNR=811
WRA PcP **PcP** **10 44 48.1 +1.5**
comp=Z,263nm,0.8s,baz=11,slow=4.5,SNR=10
WRA ScS **SKiKP** **10 54 04.7 -1.1**
comp=Z,4.6nm,0.9s,baz=343,slow=4.9,SNR=5.1
WRA PKPPKP **P'P'df** **11 12 50.5 +3.9**
comp=Z,32nm,1.1s,baz=186,slow=2.3,SNR=12
WRA P4KPbc 11 21 08.1
comp=Z,7.5nm,0.9s,baz=7.8,slow=4.8,SNR=20
comp=Z,545nm,0.8s
WRA Warramunga Arr 66.48 195 P P **10 44 17.5 -0.7**
WB1 Warramunga Ar. 66.49 195 P P **10 44 17.3 -1.0**
DSP Deep Springs 66.50 60 IAmb IAmb 10 44 25.7
comp=Z,1µm,1.2s
POO Poona 66.58 273 eP P **10 44 15.5 -3.7**
POO IAmb IAmb 10 44 25.0
comp=Z,882nm,0.5s

POO eS S 10 52 54.8 -3.6
SFJD Kangerlussuaq 66.83 8 LR LR 11 12 45.4
comp=Z,26µm,21.9s,baz=356,slow=35
SFJD Kangerlussuaq 66.83 8 P P **10 44 18.6 -1.3**
SFJD IAmb IAmb 10 44 22.7
comp=Z,2µm,1.3s
SFJD Kangerlussuaq 66.83 8 P P **10 44 18.6 -1.3**
SFJD pmax pmax
comp=Z,2µm,1.3s
SFJD Kangerlussuaq 66.83 8 *i* P P **10 44 17.7 -2.2**
SFJD IAmb IAmb 10 44 23.1
comp=Z,3µm,1.4s
SFJD Kangerlussuaq 66.83 8 ⇑P P **10 44 18.5 -1.3**
LAO LASA Array 66.97 46 IAmb IAmb 10 44 28.4
comp=Z,2µm,1.1s
LAO LASA Array 66.97 46 ⇑P P **10 44 21.1 -0.2**
AHID Auburn Hatcher 67.00 52 ⇑P P **10 44 21.3 -0.3**
CWC Cottonwood Cre 67.03 61 IAmb IAmb 10 44 27.9
comp=Z,1µm,1.6s
FRB Frobisher Bay 67.13 17 LR LR 11 18 09.4
comp=Z,18.9s,baz=329,slow=40
FRB Frobisher Bay 67.13 17 ⇑P P **10 44 19.9 -1.9**
KAD Karad 67.17 272 *e*P P 10 44 17.8 -5.1
KAD IAmb IAmb 10 44 30.2
comp=Z,968nm,0.6s
KAD eS S **10 52 59.8 -5.6**
KOUNC **Koumac, New Ca** 67.25 164 P P **10 44 24.5 +1.5**
KOUNC **Koumac, New Ca** 67.25 164 ⇓P P **10 44 24.1 +1.1**
HWUT Hardware Ranch 67.50 53 IAmb IAmb 10 44 32.0
comp=Z,2µm,1.6s
HWUT Hardware Ranch 67.50 53 ⇓P P **10 44 25.2 +0.4**
MAK Makhachkala 67.57 309 *c* *i*P P **10 44 25.9 +1.0**
MAK *e**PP **pP** **10 44 57.4 -2.6**
MAK *e**SP **sP** **10 45 15.2 -0.7**
MAK *e* 10 46 54.1
MAK *e*PPP PPP 10 48 31.9
MAK eS S **10 53 12.3 +2.9**
MAK *e**SS **sS** **10 54 12.2 +2.4**
MAK pmax pmax
comp=Z,28µm,1.9s
MAK pmax pmax
comp=Z,15µm,1.9s
DGTI Dogotuki 67.61 148 P P **10 44 26.5 +1.1**
S11A Rachel 67.67 59 IAmb IAmb 10 44 31.5
comp=Z,2µm,1.3s
DUG Dugway, Tooele 67.72 55 IAmb IAmb 10 44 33.3
comp=Z,941nm,1.1s
DUG Dugway, Tooele 67.72 55 ⇑P P **10 44 26.0 -0.2**
CLC China Lake 67.74 61 IAmb IAmb 10 44 32.9
comp=Z,1µm,1.0s
FURC Furnace Creek, 67.76 60 IAmb IAmb 10 44 33.3
comp=Z,1µm,0.9s
OSI Osito Audit: C 67.82 63 IAmb IAmb 10 44 32.0
comp=Z,1µm,1.4s
TPNV Topopah Spring 67.82 60 IAmb IAmb 10 44 33.8
comp=Z,1µm,1.1s
TPNV Topopah Spring 67.82 60 ⇑P P **10 44 26.4 -0.4**
BW06 Boulder Array 67.85 51 IAmb IAmb 10 44 33.6
comp=Z,838nm,1.1s
BW06 Boulder Array 67.85 51 ⇑P P **10 44 26.4 -0.7**
PD31 Pinedale Array 67.85 51 IAmb IAmb 10 44 33.6
comp=Z,835nm,1.1s
PDAR Pinedale Array 67.85 51 P P **10 44 26.4 -0.6**
comp=Z,187nm,0.7s,baz=279,slow=1.9,SNR=858
PDAR pP **pP** **10 45 04.8 +1.9**
comp=Z,102nm,0.8s,baz=180,slow=1.0,SNR=2.2
PDAR PKPPKP **P'P'df** **11 12 47.7 -1.0**
comp=Z,17nm,1.1s,baz=124,slow=2.7,SNR=10.0
PDAR P4KPbc 11 21 11.6
comp=Z,0.5nm,0.8s,baz=189,slow=2.9,SNR=3.7
comp=Z,187nm,0.7s
PDAR Pinedale Array 67.85 51 P P **10 44 26.7 -0.4**
MOL Molde 67.89 342 *e*P P **10 44 25.3 -1.3**
MOL IVmB_BB 10 44 34.3
comp=Z,24µm,3.9s
MOL *e*PP **PP** **10 46 58.2 +0.7**
MOL eS S **10 53 14.3 +1.7**
XMI Christmas Isla 67.90 227 P P **10 44 27.5 +0.2**
XMI Christmas Isla 67.90 227 ⇑P P **10 44 27.5 +0.2**
TCUT Toone Canyon 67.92 53 IAmb IAmb 10 44 34.5
comp=Z,919nm,0.9s
TPO Tropico Hills 67.96 62 IAmb IAmb 10 44 33.1
comp=Z,3µm,1.4s
CTU Camp Tracy 68.00 54 IAmb IAmb 10 44 34.3
comp=Z,2µm,1.8s
DOMB Dombas 68.02 341 *e*P P **10 44 26.1 -1.4**
DOMB IVmB_BB 10 44 30.7
comp=Z,17µm,1.3s
DOMB eS S **10 53 15.2 +1.0**
SLIT Slitere, Latvi 68.02 332 ⇑P P **10 44 25.8 -1.7**
PRN Pahroc Range 68.24 58 ⇑P P **10 44 29.2 -0.2**
SALM Salem 68.25 264 *e*P P **10 44 24.9 -4.7**
SALM IAmb IAmb 10 44 34.1
comp=Z,297nm,0.4s
SALM eS S **10 53 15.8 -2.5**
MSVF Nonsavu 68.32 150 P P **10 44 31.0 +1.2**
MSVF IAmb IAmb 10 44 36.7
comp=Z,2µm,1.6s
MSVF Nonsavu 68.32 150 P P **10 44 31.3 +1.4**
MSVF Nonsavu 68.32 150 *i* P P **10 44 31.1 +1.2**
MSVF pmax pmax
comp=Z,1µm,1.4s
MSVF Nonsavu 68.32 150 ⇓P P **10 44 31.0 +1.2**
KHAM Kharkiv 68.34 320 P P **10 44 29.7 0.0**
AKN Aaknes 68.36 342 *e*P P **10 44 29.2 -0.4**
AKN IVmB_BB 10 44 36.5
comp=Z,17µm,1.8s
AKN *e*PP **PP** **10 47 01.2 -0.5**
AKN eS S **10 53 18.7 +0.4**
AKN IVMs_BB IVMs_BB 11 12 51.0
comp=Z,18µm,5.4s
NB2 NORSAR Subarra 68.37 339 P P **10 44 28.4 -1.3**
comp=Z,2µm,0.8s,baz=32,slow=6.5
NB2 P'P' **P'P'df** **11 12 44.8 -2.5**
comp=Z,14µm,10.0s,baz=207,slow=3.5
NB2 NORSAR Subarra 68.37 339 AMP P **10 44 28.4 -1.3**
comp=Z,2µm,0.8s
NB2 P P **10 44 28.4 -1.3**
NOA NORSAR Array B 68.37 339 P P **10 44 28.3 -1.3**
comp=Z,602nm,0.7s,baz=30,slow=6.4,SNR=817
NOA LR LR 11 20 04.5
comp=Z,22µm,18.1s,baz=35,slow=41
NOA P4KPbc 11 21 11.8
comp=Z,4.3nm,1.0s,baz=26,slow=3.4,SNR=3.6
comp=Z,602nm,0.7s
AKT Akhty 68.44 308 ⇑ *i*P P **10 44 31.3 +0.7**
AKT *e* 10 44 54.2
AKT *e**PP **pP** **10 45 06.1 +0.3**
AKT *e**SP **sP** **10 45 21.8 +0.3**
AKT *e* 10 47 02.2
AKT *e*PPP PPP 10 48 45.2
AKT eS S **10 53 18.7 -1.3**
AKT *e* 10 54 01.5
AKT *e* 10 54 15.6
AKT eSS **SS** **10 57 47.1 +1.3**
AKT pmax pmax
comp=Z,30µm,1.7s
AKT pmax pmax
comp=N,3µm,0.9s
AKT pmax pmax
comp=E,7µm,1.2s
AKT smax smax
comp=N,30µm,5.0s
AKT smax smax
comp=E,27µm,6.6s
AKT MLR MLR
comp=Z,35µm,14.0s
AKT MLR MLR
comp=E,32µm,17.0s
AKT MLR MLR
comp=N,24µm,12.0s
MNK Minsk 68.48 327 *i* LRM MLR 11 17 18.9
comp=N,27µm,16.7s
MNK Minsk 68.48 327 *i* P P **10 44 29.2 -1.2**
MNK *i* *PP **pP** **10 45 05.4 0.0**
MNK *i* *SP **sP** **10 45 23.3 +2.1**
MNK *i* 10 47 01.7
MNK *i* PPP PPP 10 48 42.8
MNK *i* S S **10 53 19.1 -0.7**
MNK *i* *SS **SKiKP** **10 54 12.1 +4.3**
MNK pmax pmax
comp=N,2µm,1.1s
MNK pmax pmax
comp=Z,5µm,0.9s
MNK pmax pmax
comp=E,4µm,1.1s
MNK MLR MLR
comp=E,35µm,19.0s
MNK MLR MLR
comp=Z,45µm,21.0s
MNK MLR MLR
comp=N,27µm,17.0s
MNK Minsk 68.48 327 *i* P P **10 44 29.3 -1.2**
comp=E,4µm,1.1s
MNK Minsk 68.48 327 *i* P P **10 44 29.3 -1.2**
comp=N,2µm,1.1s
MNK Minsk 68.48 327 *i* P P **10 44 29.3 -1.2**
comp=Z,5µm,0.9s,baz=40
MNK Minsk 68.48 327 *i* pP pP 10 45 05.4 0.0
MNK Minsk 68.48 327 *i* sP sP 10 45 23.3 +2.1
MNK Minsk 68.48 327 *i* PP PP 10 47 01.8 -1.1
MNK Minsk 68.48 327 *i* PPP PPP 10 48 42.9
MNK Minsk 68.48 327 *i* S S **10 53 19.1 -0.7**
MNK Minsk 68.48 327 *i* sS **SKiKP** **10 54 12.2 +4.3**
MNK Minsk 68.48 327 *i* SS SS 10 57 29.7 -16
MNK Minsk 68.48 327 *i* SSS SSS 11 01 13.9
MNK Minsk 68.48 327 *i* LRM MLR 11 16 55.1
comp=E,35µm,18.6s
MNK Minsk 68.48 327 *i* LRM MLR 11 17 08.4
comp=Z,45µm,20.8s
MWC Mount Wilson 68.49 63 IAmb IAmb 10 44 37.5
comp=Z,1µm,1.4s
SHOC Shoshone, Teco 68.49 60 IAmb IAmb 10 44 36.1
comp=Z,1µm,1.5s
HFS Hagfors 68.51 338 P P **10 44 28.4 -2.1**
comp=Z,651nm,0.6s,baz=52,slow=5.8,SNR=785
HFS S S **10 53 20.1 +0.1**
comp=Z,20nm,0.7s,baz=58,slow=14,SNR=4.5
HFS PKPPKP **P'P'df** **11 12 42.7 -4.3**
comp=Z,31nm,0.9s,baz=199,slow=3.1,SNR=12
HFS LR LR 11 17 46.0
comp=Z,22µm,20.4s,baz=32,slow=39
HFS P4KPbc 11 21 11.7
comp=Z,5.9nm,0.9s,baz=163,slow=5.7,SNR=5.2
comp=Z,651nm,0.6s
GOF Gofitskoye 68.53 313 *c* *i*P P **10 44 31.4 +0.5**
GOF eS S **10 53 20.4 -0.3**
NC602 NORSAR Array S 68.55 339 *e*P P **10 44 29.4 -1.4**
NC602 eS S **10 53 21.2 +0.7**
NACGM Naroch 68.58 328 ⇑ *i*P P **10 44 30.1 -1.0**
comp=Z,5µm,0.9s,baz=40
GOA Goa 68.65 271 *e*P P **10 44 28.2 -3.8**
GOA IAmb IAmb 10 44 37.3
comp=Z,412nm,0.7s
GOA eS S **10 53 20.4 -2.5**
BFSC Mount Baldy Ra 68.73 63 IAmb IAmb 10 44 37.4
comp=Z,1µm,1.4s
MALK Mahakanadarawa 68.88 260 P P **10 44 33.3 -0.2**
MALK Mahakanadarawa 68.88 260 ⇑P P **10 44 33.8 +0.3**
MARNC Mare, Loyalty 68.94 161 P P **10 44 34.9 +1.4**
MARNC Mare, Loyalty 68.94 161 ⇓P P **10 44 34.9 +1.4**
AFI Afiamalu 69.04 139 P P **10 44 34.0 -0.4**
AFI Afiamalu 69.04 139 P P **10 44 34.0 -0.4**
AFI pmax pmax
comp=Z,552nm,1.1s
AFI Afiamalu 69.04 139 ⇓P P **10 44 35.4 +1.0**
ANGG Ammassalik, Gr 69.08 3 *i* P P **10 44 31.9 -2.0**
ANGG IAmb IAmb 10 44 36.8
comp=Z,554nm,0.8s
ANGG Ammassalik, Gr 69.08 3 ⇑P P **10 44 32.4 -1.6**
DZM Mont Dzumac 69.16 163 LR LR 11 11 49.9
comp=Z,39µm,20.2s,baz=358,slow=33
DZM Mont Dzumac 69.16 163 IAmb IAmb 10 44 40.6
comp=Z,1µm,0.9s
DZM Mont Dzumac 69.16 163 P P **10 44 36.4 +1.4**
DZM Mont Dzumac 69.16 163 ⇓P P **10 44 36.6 +1.6**
YATNC Mamie plateau, 69.24 162 P P **10 44 36.5 +1.1**
ELS Elsinore Mount 69.26 63 IAmb IAmb 10 44 42.9
comp=Z,2µm,1.6s
FOO Floro 69.30 342 *e*P P **10 44 34.4 -1.0**
FOO eS S **10 53 31.4 +2.1**
FOO IVMs_BB IVMs_BB 11 12 47.6
comp=Z,16µm,8.7s
ULM Lac du Bonnet 69.36 38 P P **10 44 34.6 -1.3**
comp=Z,149nm,0.6s,baz=312,slow=6.4,SNR=216
ULM PKPPKP **P'P'df** **11 12 39.4 -6.4**
comp=Z,29nm,1.0s,baz=133,slow=3.8,SNR=15
comp=Z,149nm,0.6s
ULM Lac du Bonnet 69.36 38 IAmb IAmb 10 44 41.8
comp=Z,2µm,1.6s
ERBR Yeremizino-Bor 69.37 315 *e*P P **10 44 35.6 -0.5**
ERBR *e**PP **pP** **10 45 13.0 +1.5**
ERBR *e* 10 47 11.3
ERBR *e*PPP PPP 10 48 52.9
ERBR eS S **10 53 30.3 -0.3**
ERBR *e* 10 54 15.4
ERBR pmax pmax
comp=E,1µm,1.4s
ERBR pmax pmax
comp=N,4µm,1.6s
ERBR pmax pmax
comp=Z,36µm,1.8s
ERBR pmax pmax
comp=E,6µm,1.8s
ERBR smax smax
comp=N,73µm,5.5s
ERBR smax smax
comp=E,60µm,5.5s
ONTNC Ouen Toro 69.39 163 IAmb IAmb 10 44 41.2
comp=Z,884nm,1.0s
ONTNC Ouen Toro 69.39 163 P P **10 44 37.7 +1.4**
ONTNC Ouen Toro 69.39 163 ⇓P P **10 44 37.8 +1.5**
SKAR Skarslia 69.39 340 *e*P P **10 44 35.2 -0.8**
SKAR IVmB_BB 10 44 44.0
comp=Z,25µm,3.8s
SKAR eS S **10 53 31.8 +1.3**
P17A Butcher Ranch, 69.39 54 IAmb IAmb 10 44 44.2
comp=Z,3µm,1.6s
NUUK Nuuk 69.44 9 *i* P P **10 44 35.6 -0.5**
NUUK IAmb IAmb 10 44 42.7
comp=Z,4µm,1.1s
NUUK Nuuk 69.44 9 ⇑P P **10 44 35.6 -0.5**
HYA Hoyanger 69.44 342 *e*P P **10 44 35.1 -1.1**
HYA IVmB_BB 10 44 39.8
comp=Z,18µm,1.3s
HYA eS S **10 53 33.3 +2.5**
HYA IVMs_BB IVMs_BB 11 12 47.8
comp=Z,19µm,5.7s
OSL Oslo 69.45 339 *e*P P **10 44 35.5 -0.8**
OSL IVmB_BB 10 44 42.1
comp=Z,28µm,2.9s
OSL *e*PP **PP** **10 47 11.9 +0.9**
OSL eS S **10 53 32.2 +1.1**
KVAR Kislovodsk Arr 69.47 312 S S **10 53 34.0 +1.9**
baz=0.9,slow=15,SNR=4.2
KIV Kislovodsk 69.47 312 P P **10 44 37.5 +0.7**
KIV Kislovodsk 69.47 312 *i* P P **10 44 37.6 +0.7**
SNR=1249
KIV Kislovodsk 69.47 312 *e*P P **10 44 35.7 -1.2**
KIV *e**SP **sP** **10 45 28.6 +0.6**
KIV *e* 10 47 10.3
KIV *e*PPP PPP 10 48 49.7
KIV eS S **10 53 31.0 -1.1**
KIV eSS **SS** **10 58 02.1 +0.6**
KIV pmax pmax
comp=Z,6µm,4.2s
KIV MLR MLR
comp=Z,60µm,17.0s
KIV Kislovodsk 69.47 312 P P **10 44 37.7 +0.9**
KIV P P **10 44 37.7 +0.9**
KIV S S **10 53 33.4 +1.3**
KIV S S **10 53 33.4 +1.3**
KIV Kislovodsk 69.47 312 P P **10 44 37.9 +1.0**
comp=Z,125µmcomp=Z,12µm,1.5s
KIV Kislovodsk 69.47 312 *e*P P **10 44 37.8 +0.9**
KIV Kislovodsk 69.47 312 ⇑P P **10 44 37.8 +0.9**
KIV Kislovodsk 69.47 312 P P **10 44 37.9 +1.0**
KIV PcP **PcP** **10 44 58.0 -1.1**
V12A Nelson 69.47 60 IAmb IAmb 10 44 45.0
comp=Z,2µm,1.6s
KBZ Khabaz 69.52 312 P P **10 44 38.0 +0.9**
comp=Z,3µm,0.9s,baz=65,slow=4.2,SNR=1091
KBZ S S **10 53 35.1 +2.8**
comp=Z,23nm,1.1s,baz=60,slow=23,SNR=7.5
KBZ PKPPKP **P'P'df** **11 12 39.9 -5.6**
comp=Z,32nm,1.0s,baz=339,slow=0.7,SNR=7.4
KBZ LR LR 11 19 39.8
comp=Z,45µm,18.4s,baz=40,slow=40
KBZ Khabaz 69.52 312 *c* *i*P P **10 44 37.9 +0.9**
KBZ Khabaz 69.52 312 *e*P P **10 44 37.9 +0.9**
PALK Pallekele 69.57 259 LR LR 11 19 23.3
comp=Z,8µm,18.3s,baz=36,slow=39
PALK Pallekele 69.57 259 *i* P P **10 44 38.0 +0.2**
SNR=47
PALK Pallekele 69.57 259 *c* *i*P P **10 44 37.6 -0.2**
PALK pmax pmax
comp=Z,527nm,1.0s
PALK MLR MLR
comp=Z,10µm,18.0s
PALK Pallekele 69.57 259 P P **10 44 38.1 +0.3**
PALK P P **10 44 38.1 +0.3**
PALK S S **10 53 35.4 +1.6**
PALK S S **10 53 35.4 +1.6**
P18A Preston Nutter 69.57 54 IAmb IAmb 10 44 44.8
comp=Z,1µm,1.3s
OUENC Ouen Island, N 69.58 162 P P **10 44 38.7 +1.2**
LCMT Little Creek M 69.58 58 IAmb IAmb 10 44 43.4
comp=Z,1µm,1.4s
SHA1 Shidzhatmaz 69.64 312 *c* *i*P P **10 44 39.0 +0.9**
MNGI Mangalore 69.70 268 *e*P P **10 44 34.7 -3.9**
MNGI IAmb IAmb 10 44 42.9
comp=Z,234nm,0.9s
MNGI eS S **10 53 32.4 -2.9**
SRU San Rafael Swe 69.76 55 IAmb IAmb 10 44 46.1
comp=Z,987nm,0.9s
BORG Borgarnes 69.80 356 P P **10 44 38.9 +0.6**
BORG Borgarnes 69.80 356 P P **10 44 38.9 +0.6**
BORG pmax pmax
comp=Z,7µm,1.6s
BORG Borgarnes 69.80 356 ⇑P P **10 44 38.9 +0.6**
E28A Huff 69.80 44 IAmb IAmb 10 44 45.2
comp=Z,1µm,0.8s
DNR Dunn Ranch,Anz 69.81 62 IAmb IAmb 10 44 44.3
comp=Z,2µm,1.3s
SUE Sulen 69.85 342 *e*P P **10 44 38.0 -0.7**
SUE IVmB_BB 10 44 46.6
comp=Z,23µm,3.7s
SUE eS S **10 53 37.7 +2.1**
RSSD Black Hills 69.86 47 P P **10 44 38.6 -0.8**
RSSD Black Hills 69.86 47 P P **10 44 38.6 -0.8**
RSSD pmax pmax
comp=Z,4µm,1.8s
PFO Pinyon Flats O 69.89 62 PKPPKP 11 12 43.5
comp=Z,15nm,1.2s,baz=115,slow=3.8,SNR=8.4
PFO Pinyon Flats O 69.89 62 *c* *i*P P **10 44 38.6 -1.1**
PFO pmax pmax
comp=Z,1µm,1.4s
PFO MLR MLR
comp=Z,13µm,18.0s
PINNC Pines Island, 69.90 162 IAmb IAmb 10 44 44.7
comp=Z,934nm,0.9s
PINNC Pines Island, 69.90 162 P P **10 44 40.5 +1.1**
LKBA Tubou, Lakemba 69.92 147 P P **10 44 40.2 +0.5**
NEUR Neytrino 69.94 312 *c* *i*P P **10 44 41.7 +1.8**
NEUR pmax pmax
comp=Z,4µm,1.3s
CPE Camp Elliot 69.97 63 IAmb IAmb 10 44 44.9
comp=Z,1µm,1.4s
KONO Kongsberg 69.98 339 *e*P P **10 44 38.5 -1.1**
KONO IVmB_BB 10 44 45.4
comp=Z,23µm,4.1s
KONO eS S **10 53 38.5 +1.2**
KONO Kongsberg 69.98 339 *c* *i*P P **10 44 38.5 -1.1**
KONO pmax pmax
comp=Z,1µm,1.3s
KONO Kongsberg 69.98 339 ⇑P P **10 44 38.4 -1.2**
LABN Labinsk 70.00 314 *e*P P **10 44 40.9 +0.9**
LABN *e* 10 47 15.6
LABN eS S **10 53 37.9 -0.1**
LABN *e**SS **ScS** **10 54 30.9 +3.0**
LABN pmax pmax
comp=Z,10µm,1.2s
LABN pmax pmax
comp=E,433nm,1.3s
LABN pmax pmax
comp=N,1µm,1.2s
LABN pmax pmax
comp=Z,35µm,1.9s
LABN pmax pmax
comp=E,2µm,1.7s
LABN pmax pmax
comp=N,4µm,1.1s
LABN smax smax
comp=N,111µm,6.1s
LABN smax smax
comp=E,37µm,6.5s
STRU Stroemstad 70.12 338 *i* P P **10 44 39.4 -1.0**
ASAR Alice Springs 70.19 195 P P **10 44 41.6 +0.3**
comp=E,697nm,0.9s,baz=10,slow=5.6,SNR=999
ASAR PKKPbc PKKPdf 11 04 48.0 +21
comp=E,3.0nm,0.9s,baz=206,slow=2.6,SNR=4.7
ASAR PKPPKP **P'P'df** **11 12 40.0 -0.2**
comp=E,13nm,1.1s,baz=184,slow=3.0,SNR=12
ASAR P4KPbc 11 21 22.9
comp=E,5.9nm,0.9s,baz=12,slow=4.0,SNR=25
comp=E,697nm,0.9s
ASAR Alice Springs 70.19 195 P P **10 44 41.7 +0.4**
ASK Askoy 70.27 342 *e*P P **10 44 40.6 -0.7**
ASK IVmB_BB 10 44 45.4
comp=Z,16µm,1.1s
ASK *e*PP **PP** **10 47 17.8 -0.2**
ASK eS S **10 53 41.8 +1.3**
ASK IVMs_BB IVMs_BB 11 12 44.9
comp=Z,16µm,8.4s
BER Bergen 70.33 342 *e*P P **10 44 40.9 -0.8**
BER IVmB_BB 10 44 49.4
comp=Z,29µm,3.2s
BER eS S **10 53 43.4 +2.2**
IRM Iron Mountain 70.34 61 IAmb IAmb 10 44 47.6
comp=Z,1µm,1.3s
O20A White River Ci 70.36 53 IAmb IAmb 10 44 49.0
comp=Z,2µm,1.5s
HALK Hakmana 70.43 258 ⇑P P **10 44 43.4 +0.4**
HMU Henry Mountain 70.43 56 IAmb IAmb 10 44 49.8
comp=Z,894nm,0.7s
ODD1 Odda 70.46 341 *e*P P **10 44 42.4 -0.2**
ODD1 IVmB_BB 10 44 50.7
comp=Z,21µm,4.1s
ODD1 eS S **10 53 44.2 +1.3**
U15A North Rim 70.54 58 IAmb IAmb 10 44 51.8
comp=Z,2µm,1.7s
EIDS Eidsvold 70.58 178 IAmb IAmb 10 44 51.2
comp=Z,2µm,1.4s
EIDS Eidsvold 70.58 178 P P **10 44 44.7 +1.1**
EIDS Eidsvold 70.58 178 ⇓P P **10 44 44.6 +1.1**
SUW Suwalki 70.59 329 ⇑P P **10 44 42.0 -1.4**
CBX Cerro Bola 70.63 63 IAmb IAmb 10 44 49.2
comp=Z,2µm,1.4s
EPLO Experimental L 70.71 38 IAmb IAmb 10 44 50.6
comp=Z,2µm,1.3s
AGMN Agassiz Nation 70.80 40 IAmb IAmb 10 44 51.2
comp=Z,2µm,1.4s
NGCH Negor - Chabah 70.83 287 P P **10 44 47.7 +2.4**
SNR=40
NGCH S S **10 53 51.1 +3.0**
AK03 Malin Array Si 70.83 324 P P **10 44 44.2 -0.7**
AK23 Malin Array Si 70.85 324 P P **10 44 44.8 -0.2**
AKASG Malin Array Be 70.85 324 P P **10 44 44.0 -1.0**
comp=Z,654nm,0.6s,baz=38,slow=6.2,SNR=602
AKASG S S **10 53 43.8 -3.9**
comp=Z,28nm,0.9s,baz=35,slow=12,SNR=4.7
AKASG PKPPKP P'P'df 11 12 34.3 -8.8
comp=Z,18nm,0.9s,baz=229,slow=3.2,SNR=13
AKASG LR LR 11 20 21.8
comp=Z,7µm,19.8s,baz=40,slow=40
AKASG P4KPbc 11 21 25.4
comp=Z,0.3nm,0.4s,baz=37,slow=5.0,SNR=7.0
comp=Z,654nm,0.6s
AKASG Malin Array Be 70.85 324 *i* P P **10 44 44.0 -1.0**
AKASG pmax pmax
comp=Z,680nm,0.6s
AKBB Malin Array Si 70.85 324 *c* *i*P P **10 44 43.8 -1.2**
AKBB pmax pmax
comp=Z,3µm,1.3s
AKBB MLR MLR
comp=Z,47µm,21.0s
AKBB Malin Array Si 70.85 324 P P **10 44 44.5 -0.5**
AK04 Malin Array Si 70.86 324 P P **10 44 44.6 -0.5**
AK01 Malin Array Si 70.86 324 P P **10 44 44.9 -0.2**
KIEV Kiev 70.86 324 ⇓P P **10 44 44.4 -0.7**
KIEV Kiev 70.86 324 *i* P P **10 44 43.8 -1.2**
SNR=140
KIEV Kiev 70.86 324 P P **10 44 44.3 -0.7**
KIEV Kiev 70.86 324 P P **10 44 44.5 -0.6**
comp=Z,195µmcomp=Z,13µm,1.6s
KIEV Kiev 70.86 324 ⇑P P **10 44 43.9 -1.2**

TJOU	**Tjoern**	**70.87**	**338**	*i* P		**P**	**10 44 43.2**	**-1.7**
AK21	**Malin Array Si**	**70.87**	**324**	P		**P**	**10 44 45.0**	**-0.1**
AK22	**Malin Array Si**	**70.87**	**324**	P		**P**	**10 44 44.9**	**-0.2**
AK08	**Malin Array Si**	**70.89**	**324**	P		**P**	**10 44 45.1**	**-0.1**
AK02	**Malin Array Si**	**70.89**	**324**	P		**P**	**10 44 45.1**	**-0.2**
AK09	**Malin Array Si**	**70.89**	**324**	P		**P**	**10 44 45.1**	**-0.2**
AK11	**Malin Array Si**	**70.89**	**324**	P		**P**	**10 44 45.1**	**-0.2**
BORU	**Boraas**	**70.90**	**337**	*i* P		**P**	**10 44 44.1**	**-1.1**
BLS5	**Blasjo**	**70.94**	**341**	*eP*		**P**	**10 44 45.3**	**-0.1**
BLS5				IVmB_BB			10 44 53.5	
	comp=Z,27µm,3.7s							
BLS5				*eS*		**S**	**10 53 50.2**	**+1.7**
AK13	**Malin Array Si**	**70.99**	**324**	P		**P**	**10 44 45.7**	**-0.1**
BLYC	**Blythe**	**71.00**	**61**	IAmb		IAmb	10 44 51.6	
	comp=Z,2µm,1.4s							
GNI	**Garni**	**71.00**	**308**	S		**S**	**10 53 52.8**	**+2.7**
	comp=Z,245nm,1.4s,baz=261,slow=20,SNR=4.3							
GNI				LR		LR	11 19 31.4	
	comp=Z,18µm,18.1s,baz=41,slow=39							
GNI	**Garni**	**71.00**	**308**	P		**P**	**10 44 48.5**	**+2.2**
GNI	**Garni**	**71.00**	**308**	P		**P**	**10 44 48.1**	**+1.8**
GNI	**Garni**	**71.00**	**308**	P		**P**	**10 44 48.5**	**+2.2**
GNI				pmax		pmax		
	comp=Z,15µm,1.4s							
GNI	**Garni**	**71.00**	**308**	P		**P**	**10 44 48.2**	**+1.9**
GNI				S		**S**	**10 53 51.7**	**+1.6**
GNI	**Garni**	**71.00**	**308**	⇑P		**P**	**10 44 48.4**	**+2.0**
PV23	**Carpenter Ridg**	**71.08**	**54**	IAmb		IAmb	10 44 53.7	
	comp=Z,2µm,1.2s							
PV14	**Lion Creek, Pa**	**71.12**	**54**	IAmb		IAmb	10 44 53.8	
	comp=Z,826nm,0.9s							
BLEU	**Blekinge**	**71.14**	**334**	*i* P		**P**	**10 44 44.5**	**-2.1**
PV22	**Blue Mesa, Par**	**71.15**	**54**	IAmb		IAmb	10 44 52.4	
	comp=Z,2µm,1.4s							
VSLR	**Vesyoloye**	**71.19**	**313**	*c i* P		**P**	**10 44 48.0**	**+0.8**
PV17	**East Wray Mesa**	**71.22**	**54**	IAmb		IAmb	10 44 54.5	
	comp=Z,1µm,0.8s							
SOC	**Sochi**	**71.26**	**314**	*c i* P		**P**	**10 44 48.0**	**+0.4**
SOC				*e*			10 45 06.1	
SOC				*e**PP		**pP**	**10 45 23.0**	**-0.1**
SOC				*e*			10 47 27.1	
SOC				*e*PPP		PPP	10 49 10.7	
SOC				*eS*		**S**	**10 53 53.5**	**+0.9**
SOC				*eSS*		**SS**	**10 58 33.2**	**+4.5**
SOC				pmax		pmax		
	comp=Z,3µm,0.8s							
GLA	**Glamis**	**71.28**	**62**	IAmb		IAmb	10 44 53.3	
	comp=Z,2µm,1.5s							
PV05	**Paradox Valley**	**71.28**	**55**	IAmb		IAmb	10 44 55.0	
	comp=Z,1µm,0.9s							
ESJX	**Sierra Juarez**	**71.28**	**63**	IAmb		IAmb	10 44 53.4	
	comp=Z,1µm,1.4s							
TRD	**Trivandrum**	**71.29**	**263**	*eP*		**P**	**10 44 44.3**	**-3.9**
TRD				IAmb		IAmb	10 44 53.5	
	comp=Z,668nm,0.5s							
TRD				*eS*		**S**	**10 53 50.9**	**-2.9**
PV03	**Paradox Valley**	**71.31**	**54**	IAmb		IAmb	10 44 54.9	
	comp=Z,1µm,1.2s							
ONAU	**Onsala**	**71.34**	**337**	*i* P		**P**	**10 44 45.5**	**-2.2**
PV13	**Radium Mtn., P**	**71.39**	**54**	IAmb		IAmb	10 44 55.5	
	comp=Z,1µm,0.8s							
PV02	**Paradox Valley**	**71.40**	**54**	IAmb		IAmb	10 44 55.6	
	comp=Z,2µm,1.3s							
KMY	**Karmoy**	**71.40**	**341**	*eP*		**P**	**10 44 47.8**	**-0.4**
KMY				IVmB_BB			10 44 54.4	
	comp=Z,25µm,3.9s							
KMY				*eS*		**S**	**10 53 55.3**	**+1.6**
CPBX	**Cerro Prieto**	**71.41**	**63**	IAmb		IAmb	10 44 54.0	
	comp=Z,1µm,1.4s							
FABU	**Falkenberg**	**71.46**	**336**	*i* P		**P**	**10 44 46.8**	**-1.7**
MBWA	**Marble Bar**	**71.46**	**209**	P		**P**	**10 44 49.0**	**+0.1**
MBWA	**Marble Bar**	**71.46**	**209**	P		**P**	**10 44 48.2**	**-0.7**
MBWA	**Marble Bar**	**71.46**	**209**	P		**P**	**10 44 49.4**	**+0.5**
MBWA				S		**S**	**10 53 55.7**	**+0.6**
MBWA	**Marble Bar**	**71.46**	**209**	⇑P		**P**	**10 44 48.8**	**-0.1**
HOMB	**Homborsund**	**71.47**	**339**	*eP*		**P**	**10 44 48.1**	**-0.4**
HOMB				IVmB_BB			10 44 56.0	
	comp=Z,18µm,2.1s							
HOMB				*eS*		**S**	**10 53 57.0**	**+2.5**
HOMB	**Homborsund**	**71.47**	**339**	*i* P		**P**	**10 44 47.5**	**-1.1**
ANN	**Anapa**	**71.53**	**316**	*d i* P		**P**	**10 44 49.0**	**-0.1**
ANN				*e**PP		**pwP**	**10 45 27.7**	**-0.5**
ANN				*e*			10 47 31.7	
ANN				*e*PPP		PPP	10 49 12.4	
ANN				*eS*		**S**	**10 53 57.4**	**+1.8**
ANN				*e*			10 54 38.8	
ANN				pmax		pmax		
	comp=Z,7µm,1.6s							
ANN				pmax		pmax		
	comp=Z,18µm,1.8s							
ANN				pmax		pmax		
	comp=E,2µm,1.5s							
ANN				pmax		pmax		
	comp=E,5µm,1.7s							
ANN				pmax		pmax		
	comp=N,668nm,0.7s							
ANN				pmax		pmax		
	comp=N,945nm,0.8s							
ANN				smax		smax		
	comp=N,34µm,5.5s							
ANN				smax		smax		
	comp=E,27µm,5.7s							
ANN	**Anapa**	**71.53**	**316**	*eP*		**P**	**10 44 49.1**	**-0.1**
KARS	**Kars**	**71.58**	**309**	⇑P		**P**	**10 44 51.6**	**+1.8**
DEL	**Delary**	**71.58**	**336**	*i* P		**P**	**10 44 47.9**	**-1.4**
RMQ	**Roma**	**71.67**	**180**	P		**P**	**10 44 52.0**	**+1.9**
RNPP2	**Kostyukhnivka**	**71.70**	**326**	P		**P**	**10 44 50.0**	**-0.1**
WUAZ	**Wupatki**	**71.71**	**58**	⇑P		**P**	**10 44 50.5**	**-0.1**
RNPP8	**Varash**	**71.71**	**326**	P		**P**	**10 44 50.0**	**-0.2**
SNART	**Snartemo**	**71.73**	**340**	*eP*		**P**	**10 44 49.6**	**-0.5**
SNART				IVmB_BB			10 44 54.3	
	comp=Z,24µm,0.7s							
SNART				*eS*		**S**	**10 53 58.1**	**+0.7**
SNART	**Snartemo**	**71.73**	**340**	*i* P		**P**	**10 44 49.6**	**-0.5**
RNPP5	**Staryi Chortor**	**71.78**	**326**	P		**P**	**10 44 49.9**	**-0.7**
PSA00	**Pilbara Seismi**	**71.80**	**208**	P		**P**	**10 44 50.8**	**-0.1**
PSA00	**Pilbara Seismi**	**71.80**	**208**	P		**P**	**10 44 50.8**	**-0.1**
LRW	**Lerwick**	**71.88**	**345**	*eP*		**P**	**10 44 50.0**	**-1.0**
LRW				IAmb		IAmb	10 44 55.0	
	comp=Z,765nm,0.7s							
QLP	**Quilpie**	**71.89**	**184**	P		**P**	**10 44 51.9**	**+0.5**
QLP	**Quilpie**	**71.89**	**184**	⇓P		**P**	**10 44 51.9**	**+0.5**
ISCO	**Idaho Springs**	**72.04**	**51**	IAmb		IAmb	10 45 00.7	
	comp=Z,2µm,1.6s							
ISCO	**Idaho Springs**	**72.04**	**51**	⇑P		**P**	**10 44 52.6**	**-0.2**
LUBAR	**Lubar, Ukraine**	**72.06**	**324**	P		**P**	**10 44 51.4**	**-0.8**
BJUU	**Bjuv**	**72.17**	**336**	*i* P		**P**	**10 44 52.0**	**-0.8**
SUSD	**Miller**	**72.18**	**44**	IAmb		IAmb	10 44 59.1	
	comp=Z,2µm,1.1s							
MVCO	**Mesa Verde**	**72.22**	**55**	⇑P		**P**	**10 44 53.4**	**-0.5**
LUNU	**Lund**	**72.42**	**335**	*i* P		**P**	**10 44 53.4**	**-0.9**
BSD	**Bornholm Skovb**	**72.42**	**334**	*i* P		**P**	**10 44 53.5**	**-0.8**
BSD				IAmb		IAmb	10 44 58.7	
	comp=Z,1µm,0.8s							
BSD	**Bornholm Skovb**	**72.42**	**334**	⇑P		**P**	**10 44 52.9**	**-1.4**
F33A	**5 Mile Ranch,**	**72.43**	**42**	IAmb		IAmb	10 45 00.6	
	comp=Z,1µm,1.1s							
COP	**Copenhagen**	**72.67**	**336**	*i* P		**P**	**10 44 55.5**	**-0.3**
COP				IAmb		IAmb	10 45 00.2	
	comp=Z,2µm,0.8s							
IVI	**Ivigtut**	**72.73**	**9**	IAmb		IAmb	10 45 03.0	
	comp=Z,2µm,1.2s							
IVI	**Ivigtut**	**72.73**	**9**	*i* P		**P**	**10 44 55.7**	**-0.3**
IVI				IAmb		IAmb	10 45 02.7	
	comp=Z,3µm,1.3s							
R9F13	**Warsaw-Wawer**	**72.77**	**329**	*eP*		**P**	**10 44 56.7**	**+0.3**
	comp=Z,35nm,0.8s							
R9F13				*ep*P		**pP**	**10 45 31.7**	**-0.2**
R9F13				*e*			10 46 22.0	
R9F13				*e*			10 47 04.4	
R9F13				*e*PP		**PP**	**10 47 38.6**	**-1.0**
R9F13				*eS*		**SKiKP**	**10 54 13.1**	**-1.1**
R9F13				*e*			10 54 54.4	
R9F13				*e*			10 56 23.2	
R9F13				*eSS*		**SS**	**10 58 49.0**	**-2.1**
MUD	**Monsted U'grnd**	**72.90**	**338**	*i* P		**P**	**10 44 56.6**	**-0.4**
MUD				IAmb		IAmb	10 45 01.7	
	comp=Z,880nm,1.0s							
EYMN	**Ely**	**72.99**	**38**	IAmb		IAmb	10 45 03.7	
	comp=Z,2µm,1.3s							
EYMN	**Ely**	**72.99**	**38**	⇑P		**P**	**10 44 56.5**	**-1.3**
SIM	**Simferopol'**	**73.02**	**318**	*i* P		**P**	**10 44 58.1**	**0.0**
SIM				*e*			10 47 41.9	
SIM				*e*PPP		PPP	10 49 29.4	
SIM				*eS*		**SKiKP**	**10 54 14.9**	**0.0**
SIM				*e*PPS		PPS	10 54 56.0	
SIM				pmax		pmax		
	comp=Z,5µm,1.1s							
SIM				MLR		MLR		
	comp=Z,22µm,16.0s							
NRS	**Narsarsuaq**	**73.04**	**7**	*i* P		**P**	**10 44 56.8**	**-1.1**
NRS				IAmb		IAmb	10 45 00.5	
	comp=Z,1µm,1.2s							
PIX	**Pinacate**	**73.14**	**62**	IAmb		IAmb	10 45 03.9	
	comp=Z,1µm,1.3s							
OGNE	**Ogallala**	**73.15**	**48**	⇑P		**P**	**10 44 58.3**	**-0.7**
GEVA	**Gevas**	**73.22**	**308**	IAmb		IAmb	10 45 06.4	
	comp=Z,2µm,0.9s							
RGN	**Rugen**	**73.39**	**335**	*eP*		**P**	**10 44 59.8**	**-0.2**
	comp=Z,8µm,1.6s,baz=28,slow=5.7							
SDCO	**Great Sand Dun**	**73.55**	**53**	⇑P		**P**	**10 45 01.2**	**-0.5**
GURO	**Guroymak-BITLI**	**73.62**	**309**	⇑P		**P**	**10 45 03.6**	**+1.8**
SSRD	**Sdr. Stenderup**	**73.64**	**337**	*i* P		**P**	**10 45 01.3**	**-0.1**
SSRD				IAmb		IAmb	10 45 06.3	
	comp=Z,2µm,0.9s							
BANOM	**Banah**	**73.67**	**290**	*i* P		**P**	**10 45 02.7**	**+0.4**
	SNR=45							
BANOM	**Banah**	**73.67**	**290**	P		**P**	**10 45 02.8**	**+0.6**
BANOM				S		**S**	**10 54 22.1**	**+1.5**
SHME	**Shamm**	**73.69**	**291**	*i* P		**P**	**10 45 02.6**	**+0.4**
	SNR=113							
SHME	**Shamm**	**73.69**	**291**	P		**P**	**10 45 02.8**	**+0.5**
	SNR=11							
SHME				S		**S**	**10 54 22.6**	**+1.8**
PURM	**Purcari**	**73.77**	**321**	⇑P		**P**	**10 45 01.8**	**-0.6**
ECSD	**EROS Data Cent**	**73.84**	**43**	IAmb		IAmb	10 45 08.9	
	comp=Z,2µm,1.1s							
ECSD	**EROS Data Cent**	**73.84**	**43**	⇑P		**P**	**10 45 01.7**	**-1.2**
KIS	**Kishinev**	**73.87**	**322**	⇓P		**P**	**10 45 03.1**	**+0.1**
KIS	**Kishinev**	**73.87**	**322**	P		**P**	**10 45 03.0**	**+0.1**
BIGH	**Upper Bighouse**	**73.91**	**346**	*eP*		**P**	**10 45 02.0**	**-1.0**
WSAR	**Wadi Sarin**	**73.94**	**287**	LR		LR	11 23 25.4	
	comp=Z,87nm,18.3s,baz=70,slow=40							
WSAR	**Wadi Sarin**	**73.94**	**287**	P		**P**	**10 45 05.0**	**+1.2**
	SNR=36							
WSAR				S		**S**	**10 54 26.7**	**+3.1**
E38A	**The Farm, Brul**	**73.99**	**39**	IAmb		IAmb	10 45 09.2	
	comp=Z,1µm,0.9s							
BIDO	**Bidbid**	**74.08**	**287**	P		**P**	**10 45 05.6**	**+1.0**
	SNR=81							
BIDO				S		**S**	**10 54 28.7**	**+3.4**
MDH	**Madha**	**74.09**	**290**	*i* P		**P**	**10 45 04.3**	**-0.3**
	SNR=78							
MDH	**Madha**	**74.09**	**290**	P		**P**	**10 45 04.4**	**-0.3**
	SNR=72							
MDH				S		**S**	**10 54 23.8**	**-1.5**
COCO	**West Island**	**74.11**	**233**	P		**P**	**10 45 07.7**	**+3.1**
COCO				S		**S**	**10 54 28.7**	**+3.4**
MASF	**Masafi**	**74.14**	**290**	P		**P**	**10 45 05.6**	**+0.7**
	SNR=91							
MASF				S		**S**	**10 54 25.9**	**+0.1**
WBK	**Wadi Bani Khal**	**74.14**	**286**	P		**P**	**10 45 06.6**	**+1.7**
	SNR=18							
WBK				S		**S**	**10 54 29.8**	**+3.8**
MSFE	**Esma-Masafi**	**74.14**	**290**	*i* P		**P**	**10 45 05.5**	**+0.5**
	SNR=70							
JLN	**Jalan Bani Buh**	**74.15**	**285**	P		**P**	**10 45 06.5**	**+1.5**
	SNR=69							
JLN				S		**S**	**10 54 28.7**	**+2.7**
IASR	**Iasi**	**74.27**	**323**	⇑P		**P**	**10 45 05.6**	**+0.4**
TUC	**Tucson**	**74.27**	**60**	P		**P**	**10 45 05.2**	**-0.5**
TUC	**Tucson**	**74.27**	**60**	P		**P**	**10 45 05.2**	**-0.5**
TUC				pmax		pmax		
	comp=Z,781nm,1.4s							
TUC	**Tucson**	**74.27**	**60**	⇑P		**P**	**10 45 05.2**	**-0.5**
UMQ	**Umm Al-Quwin**	**74.36**	**290**	*i* P		**P**	**10 45 07.4**	**+1.2**
	SNR=21							
UMQ	**Umm Al-Quwin**	**74.36**	**290**	P		**P**	**10 45 07.3**	**+1.1**
	SNR=48							
UMQ				S		**S**	**10 54 29.5**	**+1.2**
UOSS	**Minazif**	**74.40**	**290**	P		**P**	**10 45 06.5**	**0.0**
UOSS				IAmb		IAmb	10 45 12.9	
	comp=Z,2µm,1.1s							
UOSS	**Minazif**	**74.40**	**290**	*i* P		**P**	**10 45 06.6**	**+0.2**
	SNR=210							
UOSS	**Minazif**	**74.40**	**290**	P		**P**	**10 45 06.7**	**+0.3**
UOSS				S		**S**	**10 54 27.1**	**-1.6**
UOSS	**Minazif**	**74.40**	**290**	⇑P		**P**	**10 45 06.4**	**0.0**
UOSS	**Minazif**	**74.40**	**290**	P		**P**	**10 45 06.7**	**+0.3**
UOSS				PcP		**PcP**	**10 45 20.1**	**-0.2**
UOSS				pP		**pP**	**10 45 42.0**	**-0.4**
NIUE	**Niue**	**74.40**	**140**	IAmb		IAmb	10 45 11.2	
	comp=Z,2µm,1.0s							
NIUE	**Niue**	**74.40**	**140**	⇓P		**P**	**10 45 08.3**	**+2.0**
SMDO	**Samad**	**74.45**	**287**	P		**P**	**10 45 08.1**	**+1.2**
	SNR=84							
SMDO				S		**S**	**10 54 31.2**	**+1.6**
SPMN	**Marine on St.**	**74.50**	**40**	IAmb		IAmb	10 45 12.5	
	comp=Z,2µm,1.3s							
HATD	**Hatta, Dubai**	**74.53**	**290**	*i* P		**P**	**10 45 07.7**	**+0.6**
	SNR=379							
HATD	**Hatta, Dubai**	**74.53**	**290**	P		**P**	**10 45 07.7**	**+0.6**
	SNR=248							
HATD				S		**S**	**10 54 31.2**	**+1.0**
HOQ	**Hoqain**	**74.59**	**288**	P		**P**	**10 45 08.3**	**+0.8**
	SNR=115							
HOQ				S		**S**	**10 54 33.5**	**+2.5**
T25A	**Trinidad**	**74.59**	**53**	IAmb		IAmb	10 45 13.6	
	comp=Z,2µm,1.7s							
VASR	**Vaslui**	**74.59**	**322**	⇓P		**P**	**10 45 07.6**	**+0.4**
MCD	**Coleburn Disti**	**74.66**	**345**	*eP*		**P**	**10 45 06.0**	**-1.3**
MCD				IAmb		IAmb	10 45 11.3	
	comp=Z,4µm,1.7s							
ASHO	**Ashiyiah**	**74.67**	**290**	*i* P		**P**	**10 45 08.3**	**+0.2**
	SNR=169							
ASHO	**Ashiyiah**	**74.67**	**290**	P		**P**	**10 45 08.5**	**+0.5**
	SNR=301							
ASHO				S		**S**	**10 54 32.8**	**+0.9**
PRAR	**RASCA**	**74.69**	**324**	⇑P		**P**	**10 45 08.2**	**+0.5**
NAZ	**Nazwa, Dubai**	**74.73**	**290**	*i* P		**P**	**10 45 08.5**	**+0.2**
	SNR=110							
NAZ	**Nazwa, Dubai**	**74.73**	**290**	P		**P**	**10 45 08.4**	**+0.1**
	SNR=79							
NAZ				S		**S**	**10 54 32.7**	**+0.4**
SOHO	**SOHO**	**74.73**	**289**	*i* P		**P**	**10 45 08.3**	**0.0**
	SNR=13							
SOHO	**SOHO**	**74.73**	**289**	P		**P**	**10 45 08.6**	**+0.3**
SOHO				S		**S**	**10 54 33.5**	**+1.1**
BSEG	**Bad Segeberg**	**74.80**	**336**	*eP*		**P**	**10 45 08.0**	**-0.2**
	comp=Z,1µm,1.4s,baz=28,slow=5.7							
BGNE	**Belgrade**	**74.81**	**46**	IAmb		IAmb	10 45 15.0	
	comp=Z,2µm,1.2s							
JMDO	**Jabal Madar**	**74.89**	**287**	P		**P**	**10 45 09.7**	**+0.4**
	SNR=46							
JMDO				S		**S**	**10 54 36.7**	**+2.5**
BUR08	**Bucovina Ar. S**	**74.89**	**324**	IAmb		IAmb	10 45 15.2	
	comp=Z,2µm,0.8s							
OJC	**Ojcow**	**74.89**	**329**	⇑P		**P**	**10 45 08.6**	**-0.2**
GIRR	**Girov**	**74.90**	**323**	⇓P		**P**	**10 45 09.4**	**+0.5**
BURAR	**Bucovina Array**	**74.91**	**324**	P		**P**	**10 45 09.2**	**0.0**
BURAR				IAmb		IAmb	10 45 15.6	
	comp=Z,2µm,0.7s							
BURAR	**Bucovina Array**	**74.91**	**324**	⇑P		**P**	**10 45 08.9**	**-0.3**
BURAR	**Bucovina Array**	**74.91**	**324**	P		**P**	**10 45 08.8**	**-0.3**
FAQ	**Al Faqa, Dubai**	**74.94**	**290**	*i* P		**P**	**10 45 09.8**	**+0.2**
	SNR=93							
FAQ	**Al Faqa, Dubai**	**74.94**	**290**	P		**P**	**10 45 09.4**	**-0.1**
	SNR=76							
FAQ				S		**S**	**10 54 34.3**	**-0.4**
BIR	**Birlad**	**74.96**	**322**	⇓P		**P**	**10 45 10.0**	**+0.7**
BIR	**Birlad**	**74.96**	**322**	P		**P**	**10 45 09.9**	**+0.7**
ANMO	**Albuquerque**	**74.99**	**55**	PKKPbc	PKKPbc		11 04 36.0	+6.0
	comp=Z,4.5nm,1.1s,baz=156,slow=3.3,SNR=4.0							
ANMO	**Albuquerque**	**74.99**	**55**	P		**P**	**10 45 09.8**	**-0.2**
ANMO	**Albuquerque**	**74.99**	**55**	*c i* P		**P**	**10 45 09.6**	**-0.3**
ANMO				pmax		pmax		
	comp=Z,501nm,1.7s							
ANMO				MLR		MLR		
	comp=Z,7µm,18.0s							
ANMO	**Albuquerque**	**74.99**	**55**	⇑P		**P**	**10 45 09.7**	**-0.2**
STHS	**Stebnicka Huta**	**75.02**	**328**	*eP*		**P**	**10 45 09.4**	**-0.2**
STHS				*eS*		**S**	**10 54 36.7**	**+1.8**
STHS	**Stebnicka Huta**	**75.02**	**328**	*eP*		**P**	**10 45 09.4**	**-0.2**
STHS				*eS*		**S**	**10 54 36.7**	**+1.8**
RUE	**Ruedersdorf**	**75.03**	**333**	⇑P		**P**	**10 45 09.1**	**-0.4**
RUE	**Ruedersdorf**	**75.03**	**333**	*eP*		**P**	**10 45 09.2**	**-0.3**
	comp=Z,6µm,1.4s,baz=28,slow=5.7							
VLDR	**Vladesti**	**75.09**	**322**	⇑P		**P**	**10 45 10.3**	**+0.3**
DRUM	**Mains of Drumt**	**75.14**	**344**	*eP*		**P**	**10 45 09.2**	**-0.9**
DRUM				IAmb		IAmb	10 45 13.9	
	comp=Z,5µm,1.7s							
VARL	**Varlezi**	**75.15**	**322**	⇑P		**P**	**10 45 11.1**	**+0.8**
HMDM	**Hanimaadhoo**	**75.15**	**265**	P		**P**	**10 45 11.6**	**+0.8**
	SNR=8.4							
HMDM	**Hanimaadhoo**	**75.15**	**265**	⇑P		**P**	**10 45 11.7**	**+0.8**
TESR	**Tescani**	**75.18**	**323**	⇑P		**P**	**10 45 10.6**	**0.0**
ASUD	**Al Ashush, Dub**	**75.19**	**290**	*i* P		**P**	**10 45 11.8**	**+0.8**
	SNR=152							
ASUD	**Al Ashush, Dub**	**75.19**	**290**	P		**P**	**10 45 11.1**	**+0.1**
	SNR=15							
ASUD				S		**S**	**10 54 38.0**	**+0.5**
GHRR		**75.21**	**322**	⇓P		**P**	**10 45 11.6**	**+0.9**
BSY	**Bisya**	**75.24**	**287**	P		**P**	**10 45 11.5**	**+0.2**
	SNR=152							
BSY				S		**S**	**10 54 39.8**	**+1.7**
HLG	**Helgoland**	**75.25**	**337**	⇑P		**P**	**10 45 10.0**	**-0.8**
HLG	**Helgoland**	**75.25**	**337**	*eP*		**P**	**10 45 10.6**	**-0.2**
	comp=Z,4µm,1.6s,baz=28,slow=5.7							
SCTR	**Scanteiesti**	**75.26**	**322**	⇑P		**P**	**10 45 11.4**	**+0.4**
TLCR		**75.28**	**321**	⇓P		**P**	**10 45 11.4**	**+0.2**
TLCR		**75.28**	**321**	P		**P**	**10 45 11.3**	**+0.2**
TATR	**Tataca**	**75.30**	**321**	⇓P		**P**	**10 45 11.7**	**+0.5**
ALNE	**Al Ain**	**75.31**	**289**	*i* P		**P**	**10 45 12.2**	**+0.6**
	SNR=218							
ALNE	**Al Ain**	**75.31**	**289**	P		**P**	**10 45 11.9**	**+0.3**
	SNR=165							
ALNE				S		**S**	**10 54 40.5**	**+1.7**
KPL	**Plockton**	**75.31**	**346**	*eP*		**P**	**10 45 10.3**	**-0.7**
KPL				IAmb		IAmb	10 45 17.4	
	comp=Z,3µm,1.1s							
BZK	**Bozkurt**	**75.31**	**316**	⇓P		**P**	**10 45 12.2**	**+0.8**
GIUM	**Giurgiulesti**	**75.31**	**321**	⇓P		**P**	**10 45 12.2**	**+0.9**
GORT1	**Trebel**	**75.34**	**335**	*eP*		**P**	**10 45 11.3**	**+0.1**
	comp=Z,6µm,1.6s,baz=28,slow=5.7							
COSR	**Cosmesti PH**	**75.42**	**322**	⇑P		**P**	**10 45 12.9**	**+1.1**
NEGRR	**Negrea**	**75.42**	**321**	⇑P		**P**	**10 45 12.4**	**+0.5**
ONER	**Baraj Valea Uz**	**75.43**	**323**	⇓P		**P**	**10 45 12.4**	**+0.3**
AJN	**Ajban**	**75.46**	**290**	*i* P		**P**	**10 45 12.5**	**0.0**
	SNR=61							
AJN	**Ajban**	**75.46**	**290**	P		**P**	**10 45 12.0**	**-0.5**
	SNR=51							
AJN				S		**S**	**10 54 39.9**	**-0.6**
TUDR		**75.47**	**322**	⇓P		**P**	**10 45 12.9**	**+0.7**
SCHL	**Schela**	**75.47**	**321**	⇑P		**P**	**10 45 12.6**	**+0.5**
PANC	**Panciu**	**75.47**	**322**	⇑P		**P**	**10 45 13.3**	**+1.1**
SCHLR	**Schela**	**75.49**	**321**	⇑P		**P**	**10 45 12.6**	**+0.3**
SCHQ	**Schefferville**	**75.54**	**20**	P		**P**	**10 45 11.7**	**-0.7**
	comp=Z,93nm,0.4s,baz=349,slow=5.6,SNR=90							
SCHQ				PKKPbc	**PKKPbc**		**11 04 32.1**	**+3.1**
	comp=Z,5.2nm,0.9s,baz=233,slow=3.0,SNR=5.1							
SCHQ				PKPPKP	**P'P'df**		**11 12 33.4**	**-1.4**
	comp=Z,12nm,0.8s,baz=50,slow=4.7,SNR=5.5							
	comp=Z,93nm,0.4s							
BMR	**Baia Mare**	**75.56**	**325**	⇑P		**P**	**10 45 12.8**	**+0.1**
BMR	**Baia Mare**	**75.56**	**325**	P		**P**	**10 45 12.7**	**+0.1**
JURR	**Jurilovca**	**75.58**	**320**	⇑P		**P**	**10 45 13.4**	**+0.6**
RAC	**Raciborz**	**75.58**	**330**	*eP*		**P**	**10 45 11.6**	**-1.1**
RAC				*e*PP		**pP**	**10 45 48.8**	**+0.3**
RAC				*eS*		**S**	**10 54 43.0**	**+2.0**
RAC				AMS		AMS	11 16 26.0	
	comp=Z,42nm,25.8s							
RAC	**Raciborz**	**75.58**	**330**	*eP*		**P**	**10 45 11.6**	**-1.1**
RAC				*e**PP		**pP**	**10 45 48.8**	**+0.3**
RAC				*eS*		**S**	**10 54 43.0**	**+2.0**
CFR	**Carcaliu**	**75.59**	**321**	⇓P		**P**	**10 45 13.1**	**+0.3**
CFR	**Carcaliu**	**75.59**	**321**	P		**P**	**10 45 13.1**	**+0.3**
ODBI	**Odobesti**	**75.60**	**322**	⇑P		**P**	**10 45 14.5**	**+1.5**
KSP	**Ksiaz**	**75.60**	**331**	⇑P		**P**	**10 45 12.6**

CLL eS S 10 54 47.0 -1.6
CLL pmax pmax
comp=Z,9µm,1.7s
CLL MLR MLR
comp=Z,37µm,20.2s
CLL Collm 76.28 333 *i* P P 10 45 16.1 -0.6
comp=Z,9µm,1.7s
CLL ePlp 10 45 18.0
CLL ePmax 10 45 18.0
CLL epP pP 10 45 52.0 -0.6
CLL ePP PP 10 48 06.0 -3.3
comp=Z,9µm,12.4s
CLL ePPP PPP 10 49 52.0
CLL ex x 10 50 49.0
CLL eS S 10 54 47.0 -1.6
comp=N,32µm,17.0s
CLL eS S 10 54 47.0 -1.6
comp=E,20µm,22.5s
CLL eS S 10 54 47.0 -1.6
comp=Z,20µm,16.5s
CLL ePS PnS 10 55 42.0 -4.5
CLL eSS SS 10 59 48.0 +3.6
CLL AMS AMS 11 19 00.0
comp=Z,37µm,20.2s
CLL Collm 76.28 333 *eP* P 10 45 16.0 -0.7
comp=Z,13µm,1.8s,baz=28,slow=5.7
CVDA Cernavoda 76.29 321 ⇑P P 10 45 17.8 +0.9
CJR Cluj-Napoca 76.29 325 ⇑P P 10 45 17.6 +0.7
CJR Cluj-Napoca 76.29 325 P P 10 45 17.6 +0.7
MLR Muntele Rosu 76.29 323 S S 10 54 51.9 +2.7
comp=Z,48nm,1.1s,baz=196,slow=21,SNR=7.6
MLR LR LR 11 21 19.0
comp=Z,29µm,18.8s,baz=45,slow=38
MLR Muntele Rosu 76.29 323 ⇑P P 10 45 17.3 +0.3
MLR Muntele Rosu 76.29 323 P P 10 45 17.4 +0.3
LAWE Loch Awe, Argy 76.29 346 *eP* P 10 45 15.8 -0.8
LAWE IAmb IAmb 10 45 23.0
comp=Z,2µm,1.0s
MAUC Maruska 76.31 329⇑ *i*P P 10 45 17.1 +0.1
MAUC eS S 10 54 52.1 +3.0
ISR Istrita 76.33 322 ⇑P P 10 45 18.1 +0.9
ISR Istrita 76.33 322 P P 10 45 18.1 +0.9
BRG Berggiesshubel 76.36 332 *eP* P 10 45 16.7 -0.4
comp=Z,1µm,1.1s,baz=28,slow=5.7
BRG Berggiesshubel 76.36 332 *eP* P 10 45 16.6 -0.6
BRG Amp 10 45 18.3
comp=Z,485nm,0.9s
BRG Berggiesshubel 76.36 332 P P 10 45 20.6 +3.5
BRG Amp 10 45 23.2
comp=Z,1µm,1.1s
BRG Berggiesshubel 76.36 332 S S 10 54 51.0 +1.5
BRG Berggiesshubel 76.36 332 Amp 11 12 35.8
comp=Z,10nm,1.1s
BRG Berggiesshubel 76.36 332 SS SS 11 00 02.0 +16
BRG Berggiesshubel 76.36 332 PKPPKP 11 12 30.2
LTVH Ltavrtes, Hu 76.42 326 ⇑P P 10 45 18.5 +0.9
LTVH Ltavrtes, Hu 76.42 326 ⇑P P 10 45 18.2 +0.6
MDB Medias 76.43 324 ⇑P P 10 45 18.7 +1.0
MDB Medias 76.43 324 P P 10 45 18.6 +1.0
PVCC Panska Ves 76.45 332⇑ *i*P P 10 45 17.6 -0.1
PVCC epP pP 10 45 50.5 -3.1
PVCC eS S 10 54 51.6 +1.1
PVCC Panska Ves 76.45 332⇑ *i*P P 10 45 17.6 -0.1
PVCC *e**PP pP 10 45 50.5 -3.1
PVCC eS S 10 54 51.6 +1.1
TSMN Mangalia Port- 76.46 320 ⇓P P 10 45 18.4 +0.6
MARR Marisel-Cluj 76.52 325 ⇑P P 10 45 18.5 +0.2
I40A Norwalk 76.52 40 IAmb IAmb 10 45 23.8
comp=Z,2µm,1.5s
ICOR Ion Corvin 76.57 321 ⇑P P 10 45 19.4 +1.0
DRGR 76.59 325 ⇑P P 10 45 18.7 +0.1
DRGR 76.59 325 P P 10 45 18.7 +0.1
RICC Richard 76.59 332⇑ *i*P P 10 45 18.2 -0.2
RICC ePP PP 10 48 13.7 +1.8
RICC eS S 10 54 53.0 +1.0
JRN Qarnain Island 76.61 292 P P 10 45 18.3 -0.7
SNR=28
JRN S S 10 54 51.9 -1.0
UMZA Um Al Zommool 76.62 289 P P 10 45 19.1 0.0
UMZA S S 10 54 52.8 -0.3
CLZ Clausthal 76.62 335 *eP* P 10 45 18.7 0.0
comp=Z,11µm,1.6s,baz=28,slow=5.7
BORR Bors 76.71 326 ⇑P P 10 45 20.0 +0.8
PLAR PLOIESTI 76.71 322 ⇑P P 10 45 20.0 +0.8
VOIR 76.72 323 ⇑P P 10 45 20.0 +0.6
VOIR 76.72 323 P P 10 45 20.0 +0.6
LEHL Lehliu 76.72 321 ⇓P P 10 45 19.9 +0.6
MZWR Madinat Zayed 76.75 290 P P 10 45 19.2 -0.5
MZWR S S 10 54 53.1 -1.4
HSKC Hora Svate Kat 76.75 333⇑ *i*P P 10 45 19.0 -0.4
HSKC epP pwP 10 45 57.5 -1.6
HSKC ePP PP 10 48 18.7 +5.4
HSKC eS S 10 54 53.7 -0.1
HSKC AMS AMS 11 23 00.0
comp=Z,30µm,16.9s
NEUB Neuenburg 76.75 334 *eP* P 10 45 18.9 -0.5
comp=Z,6µm,1.4s,baz=28,slow=5.7
CMSA Cobar Meteorol 76.75 183 P P 10 45 20.4 +1.0
EKA Eskdalemuir Ar 76.76 344 P P 10 45 18.6 -0.7
comp=Z,105nm,0.4s,baz=22,slow=4.6,SNR=218
EKA PP PP 10 48 14.2 +1.1
comp=Z,264nm,1.2s,baz=13,slow=7.7,SNR=5.2
EKA PKKPbc **PKKPbc 11 04 30.9 +4.5**
comp=Z,4.9nm,1.0s,baz=199,slow=1.8,SNR=3.6
EKA PKPPKP **P'P'df 11 12 32.6 +0.1**
comp=Z,4.9nm,1.0s,baz=330,slow=2.9,SNR=3.9
EKA LR LR 11 22 56.4
comp=Z,14µm,21.2s,baz=50,slow=38
comp=Z,105nm,0.4s
PSZ Piszkesteto 76.76 327 ⇑P P 10 45 19.9 +0.3
PSZ Piszkesteto 76.76 327 P P 10 45 19.9 +0.3
PSZ Piszkesteto 76.76 327 ⇑P P 10 45 19.8 +0.2
ESK Eskdalemuir 76.78 344 *eP* P 10 45 18.8 -0.6
ESK IAmb IAmb 10 45 23.4
comp=Z,6µm,1.8s
PSN Preselentsi 76.79 320 *i* P P 10 45 20.7 +1.0
JAVC Velka Javorina 76.79 329⇑ *i*P P 10 45 20.7 +1.0
JAVC ePP PP 10 48 13.4 -0.3
JAVC eS S 10 54 54.0 -0.4
VRAC Vranov 76.80 330 S S 10 54 57.7 +3.4
comp=Z,2.1nm,0.3s,baz=209,slow=16,SNR=5.0
VRAC LR LR 11 21 47.6
comp=Z,24µm,19.8s,baz=34,slow=38
VRAC Vranov 76.80 330 ⇑P P 10 45 20.1 +0.4
VRAC Vranov 76.80 330 P P 10 45 20.0 +0.4
VRAC Vranov 76.80 330⇑ *i*P P 10 45 20.0 +0.4
VRAC ePP PP 10 48 13.4 -0.3
VRAC eS S 10 54 49.1 -5.3
SULR 76.80 322 ⇑P P 10 45 20.0 +0.3
CICN Ciocanesti 76.85 321 ⇓P P 10 45 20.3 +0.3
SCIA State Center 76.86 43 ⇑P P 10 45 19.4 -0.8
TNR Turnu Rosu 76.87 324 ⇓P P 10 45 20.9 +0.8
TNR Turnu Rosu 76.87 324 P P 10 45 20.9 +0.8
MTUR Matau 76.88 323 ⇑P P 10 45 20.8 +0.5
MTUR Matau 76.88 323 P P 10 45 20.7 +0.5
PRA Prague 76.88 332⇑ eS S 10 54 56.7 +1.5
MEEK Meekatharra 76.91 208 P P 10 45 20.0 -0.4
PRU Pruhonice 76.92 332⇑ *i*P P 10 45 20.2 -0.1
PRU epP pP 10 45 56.9 +0.6
PRU ePP PP 10 48 17.5 +2.9
PRU eS S 10 54 56.2 +0.6
PRU AMS AMS 11 19 40.0
comp=Z,30µm,20.9s
PRU Pruhonice 76.92 332⇑ *i*P P 10 45 20.2 -0.1
PRU *e**PP pP 10 45 56.9 +0.6
PRU *e* 10 48 17.5
PRU eS S 10 54 56.2 +0.6
PRU MLR MLR
comp=Z,30µm,20.9s
DQM DQM 76.94 285 P P 10 45 21.6 +0.7
SNR=20
DQM S S 10 54 58.8 +2.1
ARR Arges 76.95 323 ⇑P P 10 45 21.8 +1.1
IBBN Ibbenburen 76.96 337 *eP* P 10 45 20.2 -0.3
comp=Z,16µm,2.3s,baz=28,slow=5.7
GTTG Gottingen 77.01 335 *eP* P 10 45 20.7 -0.1
comp=Z,6µm,1.5s,baz=28,slow=5.7
KRUC Moravsky 77.08 330⇑ *i*P P 10 45 21.3 +0.1
KRUC ePP PP 10 48 14.5 -1.5
KRUC eS S 10 54 56.2 -1.1
BSZH Besenyszg 77.13 327 ⇑P P 10 45 22.5 +1.0
NEWG New Galloway 77.17 345 *eP* P 10 45 20.8 -0.7
NEWG IAmb IAmb 10 45 27.9
comp=Z,3µm,1.3s
SMOL Smolenice 77.17 329 *eP* P 10 45 22.6 +0.8
SMOL pmax pmax
comp=Z,6µm,1.9s
BR131 Keskin Array S 77.18 314*c i*P P 10 45 22.3 +0.1
BR131 Keskin Array S 77.18 314 P P 10 45 22.7 +0.5
SNR=331
BRTR Keskin Array B 77.18 314 P P 10 45 22.9 +0.7
comp=Z,463nm,0.7s,baz=73,slow=4.1,SNR=343
BRTR LR LR 11 26 24.2
comp=Z,21µm,18.4s,baz=50,slow=41
comp=Z,463nm,0.7s
BRTR Keskin Array B 77.18 314 *i* P P 10 45 22.8 +0.7
BRTR pmax pmax
comp=Z,465nm,0.7s
SHMA Al-Shehemyia 77.19 294 P P 10 45 22.3 +0.1
SNR=39
TREC Trest 77.19 331⇑ *i*P P 10 45 21.8 -0.1
TREC eS S 10 54 59.6 +0.9
TREC Trest 77.19 331⇑ *i*P P 10 45 21.8 -0.1
TREC eS S 10 54 59.6 +0.9
STFAR Stefanesti-Arg 77.21 323 ⇑P P 10 45 22.6 +0.5
E46A Sault Ste Mari 77.22 35 IAmb IAmb 10 45 27.5
comp=Z,2µm,1.5s
PH02 Texas Public H 77.23 52 IAmb IAmb 10 45 29.8
comp=Z,4µm,1.5s
TANN Tannenbergstha 77.23 333 *eP* P 10 45 21.9 -0.2
baz=28,slow=5.7
TANN ePP PP 10 48 15.7 -1.6
baz=27,slow=8.7
LOT Lotru 77.24 324 ⇑P P 10 45 22.2 -0.1
DEV Deva 77.25 325 ⇑P P 10 45 22.4 +0.2
DEV Deva 77.25 325 P P 10 45 22.4 +0.2
PLN Plauen 77.26 333 *eP* P 10 45 22.1 -0.2
comp=Z,1µm,1.4s,baz=28,slow=5.7
GHWR Ruwais 77.27 291 P P 10 45 22.4 -0.3
I42A Draeger Farm, 77.28 39 IAmb IAmb 10 45 28.1
comp=Z,2µm,1.5s
SGRR Singureni 77.29 322 ⇑P P 10 45 22.0 -0.4
MOX Moxa 77.29 334 *eP* P 10 45 22.2 -0.2
comp=Z,4µm,1.5s,baz=28,slow=5.7
MOX ePP PP 10 48 17.1 -0.7
baz=27,slow=8.7
H43A Windswept, Lux 77.32 38 IAmb IAmb 10 45 28.5
comp=Z,2µm,1.2s
KSU1 Kansas State U 77.32 47 IAmb IAmb 10 45 28.7
comp=Z,2µm,1.5s
KSU1 Kansas State U 77.32 47 ⇑P P 10 45 21.0 -1.8
STKA Stephens Creek 77.32 186 P P 10 45 23.2 +0.6
comp=Z,262nm,0.8s,baz=350,slow=6.6,SNR=75
STKA PKKPbc **PKKPbc 11 04 29.9 +2.4**
comp=Z,6.3nm,0.9s,baz=71,slow=2.9,SNR=3.9
STKA PKPPKP **P'P'df 11 12 30.4 +3.0**
comp=Z,2.9nm,0.9s,baz=101,slow=6.6,SNR=2.8
STKA LR LR 11 17 26.5
comp=Z,31µm,22.0s,baz=0.7,slow=34
comp=Z,262nm,0.8s
STKA Stephens Creek 77.32 186 IAmb IAmb 10 45 29.4
comp=Z,2µm,1.0s
STKA Stephens Creek 77.32 186 P P 10 45 22.9 +0.3
STKA Stephens Creek 77.32 186*d i*P P 10 45 22.9 +0.3
MODS Modra-Piesok 77.34 329 *eP* P 10 45 23.4 +0.6
MODS pmax pmax
comp=Z,25µm,1.8s
MODS Modra-Piesok 77.34 329 *eP* P 10 45 23.4 +0.6
MODS *e*PP PP 10 48 20.9 +2.6
MODS eS S 10 55 03.0 +2.7
MODS *e* 11 12 16.5
SAKB Bahrain 77.38 294 P P 10 45 23.2 -0.1
SRO Srobarova 77.44 328 *eP* P 10 45 23.9 +0.7
SRO pmax pmax
comp=Z,12µm,1.8s
SRO Srobarova 77.44 328 *eP* P 10 45 23.9 +0.7
SRO eS S 10 55 07.1 +5.9
KESW Keswick, Cumbr 77.45 344 *eP* P 10 45 22.6 -0.6
KESW IAmb IAmb 10 45 30.5
comp=Z,5µm,1.2s
HUMR Humele 77.47 323 ⇑P P 10 45 23.3 -0.2
NEF NEVSHA 77.47 320 *i* P P 10 45 25.1 +1.6
KIRS Kirsehir-Merke 77.49 314 ⇑P P 10 45 24.8 +1.0
PRD Provadia 77.49 320 *i* P P 10 45 24.8 +1.2
GAL1 Galloway 77.50 345 *eP* P 10 45 22.3 -1.1
GAL1 IAmb IAmb 10 45 29.7
comp=Z,4µm,1.2s
ZVC Zvikov 77.51 332⇑ *i*P P 10 45 23.6 0.0
ZVC eS S 10 55 03.2 +1.2
MZR Muzera 77.54 290 *i* P P 10 45 24.6 +0.4
SNR=186
MZR Muzera 77.54 290 P P 10 45 24.2 0.0
SNR=126
CLGH Cloghs, Cushen 77.54 346 *eP* P 10 45 22.9 -0.8
ZST Bratislava 77.56 329 *eP* P 10 45 24.5 +0.6
ZST pmax pmax
comp=Z,1µm,1.4s
ZST Bratislava 77.56 329 *eP* P 10 45 24.5 +0.6
ZST eS S 10 55 03.5 +1.0
RAZG Razgrad 77.58 321 ⇑P P 10 45 24.1 0.0
UBBA Unterbreizbach 77.64 335 *eP* P 10 45 23.9 -0.2
comp=Z,5µm,1.6s,baz=28,slow=5.7
UBBA ePP PP 10 48 18.7 -1.7
baz=27,slow=8.7
L40A Anamosa 77.67 41 IAmb IAmb 10 45 30.1
comp=Z,1µm,1.2s
COPA Copaceanca 77.69 322 ⇓P P 10 45 24.3 -0.4
LOZB Loznitsa 77.69 321 ⇑P P 10 45 25.5 +0.7
GZR Gura Zlata 77.70 324 ⇓P P 10 45 24.8 0.0
GZR Gura Zlata 77.70 324 P P 10 45 24.8 0.0
N38A Joes South For 77.70 43 IAmb IAmb 10 45 30.7
comp=Z,1µm,1.8s
MANZ Manzenberg 77.71 333 *eP* P 10 45 24.5 -0.3
comp=Z,496nm,1.4s,baz=28,slow=5.7
HPK Haverah Park 77.74 343 *eP* P 10 45 24.6 -0.2
HPK IAmb IAmb 10 45 31.4
comp=Z,5µm,1.1s
AMTX Amarillo 77.75 52 IAmb IAmb 10 45 32.9
comp=Z,4µm,1.9s
AMTX Amarillo 77.75 52 ⇑P P 10 45 24.8 -0.6
KASTN Kahler Asten 77.76 336 *eP* P 10 45 24.8 -0.2
comp=Z,5µm,1.6s,baz=28,slow=5.7
KASTN *e*pP pP 10 46 01.0 -0.1
IDGL Inch Island, C 77.79 346 P P 10 45 24.7 -0.3
IDGL Inch Island, C 77.79 346 *eP* P 10 45 24.3 -0.7
MSTX Muleshoe 77.80 54 IAmb IAmb 10 45 32.6
comp=Z,2µm,1.6s
TRNA Turayna 77.81 293 P P 10 45 26.0 +0.3
SNR=40
ROTZ Rotzenmuhle 77.87 333 *eP* P 10 45 25.7 +0.1
baz=28,slow=5.7
BUG Bochum--Univer 77.88 337 *eP* P 10 45 25.2 -0.4
comp=Z,7µm,1.6s,baz=28,slow=5.7
BUG ePP PP 10 48 20.6 -2.0
baz=27,slow=8.7
MNTX Cornudas Mount 77.94 57 ⇑P P 10 45 25.9 -0.5
BZS Buzias 77.98 325 ⇑P P 10 45 26.2 -0.2
BZS Buzias 77.98 325 P P 10 45 26.1 -0.2
CKRC Cesky Krumlov 78.00 331⇑ *i*P P 10 45 26.2 -0.2
CKRC eS S 10 55 07.1 -0.3
CKRC AMS AMS 11 23 30.0
comp=Z,30µm,21.9s
CKRC Cesky Krumlov 78.00 331⇑ *i*P P 10 45 26.2 -0.2
CKRC eS S 10 55 07.1 -0.3
CKRC MLR MLR
comp=Z,30µm,21.9s
ZIMR 78.00 322 ⇓P P 10 45 26.7 +0.2
ZIMR 78.00 322 P P 10 45 26.6 +0.2
KAN08 Anthony NE Sta 78.02 49 IAmb IAmb 10 45 32.3
comp=Z,805nm,0.8s
SILT Sile 78.03 318 ⇑P P 10 45 27.5 +0.8
IOMK Kirk Michael 78.04 344 *eP* P 10 45 25.9 -0.6
TIM Timisoara 78.05 325 ⇓P P 10 45 27.6 +0.9
TIM Timisoara 78.05 325 P P 10 45 27.5 +0.9
SZH Strazhitsa 78.05 321 P P 10 45 26.9 +0.2
SZH Strazhitsa 78.05 321 *i* P P 10 45 27.7 +1.0
SMRA Abu-Samra 78.06 293 P P 10 45 27.3 +0.3
SNR=71
SRE Strehaia 78.11 324 ⇑P P 10 45 27.4 +0.3
SRE Strehaia 78.11 324 P P 10 45 27.3 +0.3
ELIS Ellis County 78.12 50 IAmb IAmb 10 45 33.9
comp=Z,3µm,1.4s
VLAD Vladila 78.14 323 ⇑P P 10 45 27.1 -0.1
WIM Isle of Man 78.17 344 *eP* P 10 45 26.7 -0.5
GEC2 GERESS Array S 78.18 332 *eP* P 10 45 27.2 -0.3
baz=28,slow=5.7
GEC2 *e*PP PP 10 48 25.7 +0.4
baz=27,slow=8.7
GERES GERESS Array B 78.18 332 P P 10 45 27.1 -0.3
comp=Z,117nm,0.4s,baz=35,slow=4.9,SNR=709
GERES PKKPbc **PKKPbc 11 04 25.0 +1.7**
comp=Z,7.9nm,0.9s,baz=236,slow=1.4,SNR=11
GERES PKPPKP **P'P'df 11 12 27.2 -3.1**
comp=Z,2.7nm,0.9s,baz=151,slow=3.0,SNR=4.2
GERES LR LR 11 24 20.6
comp=Z,32µm,18.5s,baz=36,slow=39
comp=Z,117nm,0.4s
WET Wettzell 78.20 332 *eP* P 10 45 27.7 +0.2
baz=28,slow=5.7
CONA Conrad Observa 78.22 330 *i* P P 10 45 28.4 +0.7
comp=Z,15µm,1.8s,SNR=1719
CONA ePP PP 10 48 31.9 +6.2
comp=Z,3µm,3.4s
CONA eS S 10 55 10.1 +0.1
comp=Z,38µm,8.4s
CONA ePKKP PKKPbc 11 04 25.7 +2.4
comp=Z,11nm,1.2s
GRF Grafenberg Arr 78.25 333 *eP* P 10 45 27.9 +0.2
baz=28,slow=5.7
RONA Rosalia, Austr 78.27 329 *i* P P 10 45 28.7 +0.8
comp=Z,16µm,1.8s,SNR=1645
RONA eS S 10 55 12.1 +1.9
comp=Z,29µm,5.5s
LBWR Ladybower, Pea 78.28 343 *eP* P 10 45 27.6 -0.2
LBWR IAmb IAmb 10 45 35.0
comp=Z,5µm,1.1s
VLDQ Val d'Or 78.32 30 IAmb IAmb 10 45 32.9
comp=Z,3µm,1.3s
GLMI Grayling 78.36 36 IAmb IAmb 10 45 34.4
comp=Z,2µm,1.0s
ELND Elena 78.36 321 ⇑P P 10 45 28.7 +0.2
BANR Banloc 78.37 325 ⇑P P 10 45 28.8 +0.4
SMWD Samnorwood 78.38 51 IAmb IAmb 10 45 35.5
comp=Z,1µm,1.0s
DJES Djerdap 78.39 324 ⇑P P 10 45 28.3 -0.4
MGCD Mangrove Creek 78.40 178 P P 10 45 28.9 +0.4
WACR West Acre 78.40 341 *eP* P 10 45 28.2 -0.2
WACR IAmb IAmb 10 45 35.5
comp=Z,5µm,1.0s
JMB Yambol 78.42 320 P P 10 45 29.2 +0.4
JMB Yambol 78.42 320 *i* P P 10 45 29.2 +0.4
K43A Burlington 78.48 39 IAmb IAmb 10 45 35.1
comp=Z,2µm,1.3s
PVL Pavlikeni 78.52 322 *i* P P 10 45 29.5 +0.2
PUNG Punghina 78.54 324 ⇑P P 10 45 29.2 -0.1
PLVB Pleven 78.54 322 ⇑P P 10 45 29.6 +0.1
CROK Carrier 78.56 49 IAmb IAmb 10 45 35.8
comp=Z,2µm,1.1s
BAIL Bailesti 78.58 323 ⇑P P 10 45 30.1 +0.5
ILTH Belurgan, Co L 78.59 345 P P 10 45 28.7 -0.7
ILTH Belurgan, Co L 78.59 345 *eP* P 10 45 27.9 -1.5
TNS Taunus Mts 78.63 335 *eP* P 10 45 29.6 -0.2
baz=28,slow=5.7
MDVR Moldovita 78.63 325 ⇓P P 10 45 29.6 -0.4
MORH Mrgy, Hungar 78.65 327 ⇑P P 10 45 29.5 -0.5
STNC Stoke 78.68 343 *eP* P 10 45 29.9 -0.1
BLOK Blackwell 78.77 48 IAmb IAmb 10 45 36.9
comp=Z,3µm,1.5s
WME Myndd Eilian 78.81 344 *eP* P 10 45 29.8 -0.9
BBOO Buckleboo 78.83 191 P P 10 45 31.3 +0.4
VHRN Van Horn 78.83 57 IAmb IAmb 10 45 37.4
comp=Z,2µm,1.6s
MOA Molln 78.85 331 *i* P P 10 45 31.2 +0.2
comp=Z,14µm,2.9s,SNR=450
MOA S S 10 55 15.2 -1.2
comp=Z,45µm,10.9s
MOA Molln 78.85 331 *eP* P 10 45 31.3 +0.2
baz=28,slow=5.7
MOA ePP PP 10 48 29.4 -1.4
baz=27,slow=8.7
BEBN Eben Emael 78.89 337 *dP* P 10 45 30.6 -0.5
comp=Z,2µm,1.1s
ELMS Elmsett, Ipswi 78.90 340 *eP* P 10 45 31.1 -0.1
N41A Harden Midland 78.91 42 IAmb IAmb 10 45 37.3
comp=Z,2µm,1.1s
ARSA Arzberg 78.92 330 *i* P P 10 45 31.8 +0.3
comp=Z,10µm,1.8s,SNR=1052
ARSA ePP PP 10 48 35.4 +4.0
comp=Z,2µm,2.7s
ARSA eS S 10 55 18.7 +1.4
comp=Z,33µm,7.4s
ARSA ePKKP PKKPbc 11 04 25.4 +3.8
comp=Z,15nm,1.0s
ARSA *eP*'P' 11 12 18.0
comp=Z,8.5nm,1.2s
ARSA Arzberg 78.92 330 *eP* P 10 45 31.8 +0.3
baz=28,slow=5.7
ARSA ePP PP 10 48 32.2 +0.8
baz=27,slow=8.7
WLF1 Llynfaes 78.93 344 *eP* P 10 45 30.2 -1.1
WLF1 IAmb IAmb 10 45 36.2
comp=Z,10µm,1.6s
SYDH Sydney Hard Ro 78.94 178 P P 10 45 33.1 +1.7
MPEP Malo Peshtene 78.95 323 *i* P P 10 45 29.7 -1.9
PTPS Port Pirie 78.95 189 P P 10 45 33.9 +2.5
128A Castleberry Fa 78.95 55 IAmb IAmb 10 45 37.0
comp=Z,2µm,1.4s
BTNL Ternell 78.96 337 *dP* P 10 45 31.1 -0.6
comp=Z,1µm,1.2s
MEM Membach 78.97 337 *dP* P 10 45 31.1 -0.5
comp=Z,2µm,1.2s
RIV Riverview 79.02 178 P P 10 45 34.6 +2.8
RIV Riverview 79.02 178 ⇑P P 10 45 34.8 +3.0
DKNS Dickens 79.07 53 IAmb IAmb 10 45 37.6
comp=Z,2µm,1.7s
FOEL Foel Wylfa 79.07 343 *eP* P 10 45 32.1 -0.1
FOEL IAmb IAmb 10 45 38.3
comp=Z,9µm,1.4s
L44A Lake County Fo 79.09 39 IAmb IAmb 10 45 38.0
comp=Z,2µm,1.3s
HTT Hallett 79.10 188 P P 10 45 33.1 +0.7
HTT Hallett 79.10 188 ⇓P P 10 45 32.9 +0.5
BSTI Sart Tilman 79.12 337 *dP* P 10 45 32.3 -0.1
comp=Z,368nm,1.4s
BEHE Becsehely 79.14 329 IAmb IAmb 10 45 38.3
comp=Z,3µm,1.5s
OK051 E0350 and S346 79.16 48 IAmb IAmb 10 45 39.1
comp=Z,1µm,1.0s
OK048 Pawnee Station 79.17 49 IAmb IAmb 10 45 39.9
comp=Z,3µm,1.5s
POST Post 79.18 54 IAmb IAmb 10 45 38.2
comp=Z,2µm,1.6s
BIOA Bad Ischl, Aus 79.20 331 *i* P P 10 45 33.2 +0.2
comp=Z,16µm,1.8s,SNR=1430
DIM Dimitrovgrad 79.20 321 P P 10 45 33.7 +0.7
DIM Dimitrovgrad 79.20 321 *i* P P 10 45 33.6 +0.6
BHOU Houvegnez 79.20 337 *dP* P 10 45 32.8 -0.2
comp=Z,1µm,1.5s
TPB06 Permian Basin 79.24 56 IAmb IAmb 10 45 38.8
comp=Z,1µm,1.4s
UCC Ucle 79.25 338 *dP* P 10 45 32.5 -0.6
comp=Z,683nm,1.2s
P40A Paris 79.26 43 IAmb IAmb 10 45 39.5
comp=Z,1µm,1.0s
ODSA Odessa 79.28 55 IAmb IAmb 10 45 38.8
comp=Z,2µm,1.4s
129A Stewart Farms, 79.30 54 IAmb IAmb 10 45 38.6
comp=Z,184nm,0.9s
BCLA Clavier 79.34 337 *dP* P 10 45 33.1 -0.5
comp=Z,1µm,1.2s
BCLA *d*PP PP 10 48 33.8 -0.9
DSB Dublin 79.34 345 P P 10 45 33.3 -0.4
DSB Dublin 79.34 345 P P 10 45 33.2 -0.4
KOGS Kog 79.35 329 *i* P P 10 45 33.3 -0.4
KOGS *e*PP PP 10 48 35.5 +0.6
KOGS *i* S S 10 55 23.3 +1.7
HLM1 Long Mynd 79.36 343 *eP* P 10 45 33.4 -0.3
HLM1 IAmb IAmb 10 45 39.0
comp=Z,8µm,1.5s
BAND Balkesir-Ban 79.39 318 ⇑P P 10 45 34.8 +0.7
TPB01 Permian Basin 79.42 57 IAmb IAmb 10 45 39.4
comp=Z,406nm,1.3s
BGES Gesves 79.43 337 *dP* P 10 45 33.5 -0.6
comp=Z,1µm,1.1s
BGES *d*PP PP 10 48 33.2 -2.3
PGB Panagyurishte 79.44 322 *i* P P 10 45 35.4 +1.0
WMOK Wichita Mounta 79.45 51 IAmb IAmb 10 45 40.1
comp=Z,2µm,1.6s
WMOK Wichita Mounta 79.45 51 ⇑P P 10 45 33.8 -0.8
QUOK Quay 79.48 49 IAmb IAmb 10 45 41.0
comp=Z,3µm,1.5s
PLD Plovdiv 79.49 321 P P 10 45 35.1 +0.5
BLSH Balsha 79.55 323 *i* P P 10 45 35.6 +0.6
SHAO Shalim 79.56 285 *i* P P 10 45 35.9 +0.5

SNR=23
SHAO Shalim 79.56 285 P **P** 10 45 36.1 +0.8
SNR=12
J47A Sunmer 79.57 37 IAmb IAmb 10 45 41.2
comp=Z,2µm,1.0s
OK052 Battle Ridge R 79.57 49 IAmb IAmb 10 45 41.5
comp=Z,3µm,1.4s
FUR Furstenfeldbru 79.57 333 *eP* **P** 10 45 35.0 +0.1
baz=28,slow=5.7
BOVS Bovan 79.58 324 ⇑P **P** 10 45 34.6 -0.4
SOKA Soboth 79.59 330 *i* P **P** 10 45 35.3 +0.2
comp=Z,17µm,1.8s,SNR=1725
SOKA *eS* **S** 10 55 22.8 -1.6
comp=Z,23µm,5.6s
SOKA *i* PKKP **PKKPbc** 11 04 23.1 +2.9
comp=Z,15nm,1.1s,SNR=4.8
SOKA Soboth 79.59 330 *i* P **PKKPbc** 11 04 23.1 +2.9
comp=Z,15nm,1.1s,SNR=4.8
BMRD Maredsous 79.59 338 *d*P **P** 10 45 34.6 -0.4
comp=Z,2µm,1.1s
RCHB Rochefort 79.60 337 *d*P **P** 10 45 34.4 -0.6
comp=Z,1µm,1.2s
KDZ Kurdzhali 79.64 321 P **P** 10 45 34.1 -1.3
M44A Midewin, Midew 79.66 40 IAmb IAmb 10 45 41.2
comp=Z,3µm,1.3s
IGLA Glengowla, Co 79.68 347 P **P** 10 45 34.6 -0.8
IGLA Glengowla, Co 79.68 347 *eP* **P** 10 45 34.4 -1.0
STU Stuttgart 79.69 334 ⇑P **P** 10 45 35.5 -0.1
STU Stuttgart 79.69 334 *eP* **P** 10 45 35.3 -0.3
baz=28,slow=5.7
TPB05 Hovey Rd 79.71 56 IAmb IAmb 10 45 42.8
comp=Z,1µm,1.2s
ELSH Elham, Standar 79.74 340 *eP* **P** 10 45 35.7 -0.1
ELSH IAmb IAmb 10 45 44.3
comp=Z,4µm,1.0s
KAAM Kaadhehdhoo 79.75 260 P **P** 10 45 37.3 +1.0
SNR=6.7
KAAM Kaadhehdhoo 79.75 260 ⇑P **P** 10 45 37.1 +0.8
HDIL Hopedale 79.75 41 IAmb IAmb 10 45 41.9
comp=Z,2µm,1.0s
LESA Schwarzleotal 79.76 331 *i* P **P** 10 45 36.4 +0.4
comp=Z,10µm,1.3s,SNR=900
LESA *eP*P **PP** 10 48 42.8 +4.3
comp=Z,4µm,4.0s
LESA *eS* **S** 10 55 28.3 +2.1
comp=Z,33µm,6.1s
LESA *eP*KKP **PKKPbc** 11 04 21.5 +1.6
comp=Z,5.9nm,0.8s
VTS Vitosha 79.76 322 P **P** 10 45 36.9 +0.6
VTS Vitosha 79.76 322 *i* P **P** 10 45 37.7 +1.4
APMT Aspermont 79.77 53 IAmb IAmb 10 45 40.9
comp=Z,3µm,1.6s
WLF Walferdange 79.79 336 P **P** 10 45 35.7 -0.4
WLF Walferdange 79.79 336 *d*P **P** 10 45 35.7 -0.4
comp=Z,753nm,1.8s
WLF Walferdange 79.79 336 ⇑P **P** 10 45 36.0 -0.1
WLF Walferdange 79.79 336 *eP* **P** 10 45 36.4 +0.3
baz=28,slow=5.7
WLF *eP*P **PP** 10 48 38.5 0.0
baz=27,slow=8.7
PLNA Plana 79.80 322 *i* P **P** 10 45 40.0 +3.6
229A Bryant Ranch, 79.82 55 IAmb IAmb 10 45 43.1
comp=Z,993nm,1.3s
DOU Dourbes 79.82 338 *d*P **P** 10 45 35.6 -0.6
comp=Z,817nm,1.2s
KBA Koelnbreinsper 79.83 331 *i* P **P** 10 45 36.8 +0.2
comp=Z,20µm,1.8s,SNR=1473
KBA *eS* **S** 10 55 28.1 +0.9
comp=Z,15µm,4.8s
KBA *eP*KKP **PKKPbc** 11 04 21.9 +2.1
comp=Z,10nm,1.0s
KBA Koelnbreinsper 79.83 331 *eP* **P** 10 45 37.0 +0.4
baz=28,slow=5.7
KBA *eP*P **PP** 10 48 39.9 +0.8
baz=27,slow=8.7
TRAN Tran 79.83 323 *i* P **P** 10 45 36.7 +0.2
FKH Fakeheh 79.85 309 *eP* **P** 10 45 37.9 +1.0
RZN Rozhen 79.86 321 P **P** 10 45 37.4 +0.6
RZN Rozhen 79.86 321 *i* P **P** 10 45 38.2 +1.4
MCH1 Michaelchurch 79.87 343 *eP* **P** 10 45 35.9 -0.6
MCH1 IAmb IAmb 10 45 42.2
comp=Z,10µm,1.6s
OBKA Obir 79.90 330 *i* P **P** 10 45 36.8 -0.1
comp=Z,11µm,2.4s,SNR=666
OBKA *eP*P **PP** 10 48 44.3 +4.7
comp=Z,42nm,0.7s
OBKA *eS* **S** 10 55 27.5 -0.3
comp=Z,15µm,5.4s
OBKA *i* PKKP **PKKPbc** 11 04 23.4 +3.8
comp=Z,26nm,1.0s,SNR=5.5
OBKA Obir 79.90 330 *eP* **PKKPbc** 11 04 23.4 +3.8
comp=Z,26nm,1.0s,SNR=5.5
OBKA Obir 79.90 330 *eP* **P** 10 45 36.9 0.0
baz=28,slow=5.7
STRD Stroud 79.90 342 *eP* **P** 10 45 36.0 -0.6
ALN Alexandroupoli 79.91 320 P **P** 10 45 37.3 +0.4
L46A Eue Claire 79.93 38 IAmb IAmb 10 45 42.7
comp=Z,1µm,1.0s
RDO Rodhopi 79.94 320 P **P** 10 45 37.7 +0.7
MONM Monmouth 79.98 343 *eP* **P** 10 45 36.9 -0.1
MONM IAmb IAmb 10 45 43.0
comp=Z,10µm,1.4s
ENEZ Enez 79.99 320 P **P** 10 45 37.8 +0.5
MORW Morawa 80.01 209 P **P** 10 45 37.3 0.0
MORW Morawa 80.01 209 ⇓P **P** 10 45 37.4 0.0
CAVK Edirne/Enez-Ca 80.02 319 ⇓P **P** 10 45 37.7 +0.3
BUW Bucklebury Wes 80.04 341 *eP* **P** 10 45 36.9 -0.5
X34A Smith Ranch, M 80.07 50 IAmb IAmb 10 45 45.4
comp=Z,4µm,1.5s
SWN1 Swindon 80.07 342 *eP* **P** 10 45 37.7 +0.2
MYKA Terra Mystica 80.12 330 *i* P **P** 10 45 37.6 -0.4
comp=Z,7µm,1.4s,SNR=580
MYKA *eP*P **PP** 10 48 46.7 +5.3
comp=Z,7µm,5.3s
MYKA *eP*KKP **PKKPbc** 11 04 22.0 +2.9
comp=Z,25nm,1.2s
R40A Maddies Statio 80.12 44 IAmb IAmb 10 45 43.1
comp=Z,3µm,1.6s
WOL Wolverton 80.13 341 *eP* **P** 10 45 37.5 -0.3
DOK Doka 80.16 286 P **P** 10 45 39.1 +0.6
SNR=34
TUL3 Leonard 80.16 48 IAmb IAmb 10 45 43.9
comp=Z,3µm,1.6s
W35A Tecumseh 80.17 49 IAmb IAmb 10 45 44.7
comp=Z,3µm,1.4s
HMNX Herstmonceux 80.19 340 *eP* **P** 10 45 38.8 +0.7
ISP Isparta 80.20 315 IAmb IAmb 10 45 46.1
comp=Z,2µm,0.9s
ISP Isparta 80.20 315*c* *i*P **P** 10 45 38.6 0.0
ISP pmax pmax
comp=Z,1µm,0.8s
WATA Walderalm 80.20 332 *i* P **P** 10 45 38.8 +0.3
comp=Z,18µm,1.8s,SNR=1306
WATA *eP*P **PP** 10 48 46.6 +4.4
comp=Z,517nm,1.5s
WATA *eS* **S** 10 55 33.3 +2.4
comp=Z,121nm,1.2s
WATA *eP*KKP **PKKPbc** 11 04 22.1 +3.1
comp=Z,19nm,1.1s
DMTO DMTO 80.23 285 P **P** 10 45 39.3 +0.4
SNR=10
WTTA Wattenberg 80.24 332 *i* P **P** 10 45 39.2 +0.4
comp=Z,10µm,1.0s,SNR=1547
WTTA *eS* **S** 10 55 32.9 +1.4
comp=Z,24µm,5.7s
WTTA *eP*KKP **PKKPbc** 11 04 21.7 +2.8
comp=Z,62nm,1.4s
WTTA Wattenberg 80.24 332 *eP* **P** 10 45 39.2 +0.4
baz=28,slow=5.7
ICQ Pointe Anglais 80.25 23 IAmb IAmb 10 45 44.6
comp=Z,2µm,1.3s
IWEX Carrickbyrne, 80.25 345 P **P** 10 45 37.9 -0.6
IWEX Carrickbyrne, 80.25 345 *eP* **P** 10 45 38.3 -0.2
SGCY Sterling City 80.25 54 IAmb IAmb 10 45 43.9
comp=Z,2µm,1.6s
RSBS Rosebush, Pemb 80.27 344 *eP* **P** 10 45 38.2 -0.4
RSBS IAmb IAmb 10 45 45.0
comp=Z,3µm,1.2s
LJU Ljubljana 80.31 330 *i* P **P** 10 45 38.3 -0.7
LJU *ep*P **pP** 10 46 16.1 +1.0
LJU *es*P **sP** 10 46 34.4 +3.7
LJU *eP*P **PP** 10 48 43.3 +0.4
LJU *ep*PP 10 49 17.5
LJU *es*PP 10 49 41.1
LJU *e* 10 52 10.5
LJU *i* S **S** 10 55 31.7 -0.1
LJU *e* 11 05 42.9
RETA Reutte 80.33 333 *i* P **P** 10 45 39.3 +0.1
comp=Z,12µm,1.9s,SNR=539
RETA *eP*P **PP** 10 48 47.7 +4.6
comp=Z,5µm,5.9s
RETA *eS* **S** 10 55 31.8 -0.4
comp=Z,18µm,5.4s
RETA *eP*KKP **PKKPbc** 11 04 21.2 +2.6
comp=Z,18nm,0.9s
RETA P'P' **P'P'df** 11 12 21.4 -4.9
comp=Z,9.2nm,1.3s
LPIG La Paz 80.33 66 LR LR 11 18 10.6
comp=Z,3µm,18.6s,baz=325,slow=33
BFO Black Forest 80.35 335 P **P** 10 45 39.0 -0.2
BFO Black Forest 80.35 335 P **P** 10 45 39.0 -0.2
BFO pmax pmax
comp=Z,3µm,1.3s
BFO Black Forest 80.35 335 ⇑P **P** 10 45 38.7 -0.4
BFO Black Forest 80.35 335 *eP* **P** 10 45 38.9 -0.2
baz=28,slow=5.7
BFO *eP*P **PP** 10 48 41.8 -1.4
baz=27,slow=8.7
BFO Black Forest 80.35 335 P **P** 10 45 39.1 -0.1
MOTA Moosalm 80.35 332 *i* P **P** 10 45 39.5 +0.2
comp=Z,22µm,1.9s,SNR=1478
MOTA *eS* **S** 10 55 34.8 +2.3
comp=Z,25µm,5.3s
MOTA *eP*KKP **PKKPbc** 11 04 21.3 +2.6
comp=Z,30nm,1.1s
MOTA *eP*'P' 11 12 15.8
comp=Z,8.9nm,1.0s
RLO Rose Lookout 80.37 47 IAmb IAmb 10 45 45.5
comp=Z,2µm,1.5s
UBR Ueberruh 80.37 333 *eP* **P** 10 45 39.2 -0.1
baz=28,slow=5.7
P43A Skaggs, Pawnee 80.37 42 IAmb IAmb 10 45 45.2
comp=Z,2µm,1.2s
ABTA Abfaltersbach 80.40 331 *i* P **P** 10 45 38.8 -0.7
comp=Z,7µm,1.9s,SNR=415
ABTA *eS* **S** 10 55 29.7 -3.2
comp=Z,7µm,5.5s
ABTA *eP*KKP **PKKPbc** 11 04 21.3 +2.8
comp=Z,8.8nm,0.7s
ABTA P'P' 11 12 16.1
comp=Z,9.7nm,1.1s
MMB Musomishta 80.41 321 P **P** 10 45 40.0 +0.4
MMB Musomishta 80.41 321 *i* P **P** 10 45 40.5 +0.9
PTCC Patocco-Chiusa 80.41 331 ⇑P **P** 10 45 38.5 -1.0
SQTA Sankt Quirin 80.42 332 *i* P **P** 10 45 40.0 +0.3
comp=Z,18µm,1.8s,SNR=1590
SQTA *eP*P **PP** 10 48 45.6 +1.7
comp=Z,2µm,3.1s
SQTA *eS* **S** 10 55 34.4 +1.1
comp=Z,19µm,5.3s
SQTA *eP*KKP **PKKPbc** 11 04 21.9 +3.4
comp=Z,32nm,1.0s
SQTA Sankt Quirin 80.42 332 *eP*P **PP** 10 48 44.1 +0.1
baz=27,slow=8.7
ZAHL Zahle 80.43 309 *eP* **P** 10 45 40.7 +0.7
BLY Banja Luka 80.44 327 ⇓P **P** 10 45 39.2 -0.5
BLY Banja Luka 80.44 327 ⇑P **P** 10 45 39.2 -0.5
KKB Krupnik 80.44 322 P **P** 10 45 40.3 +0.6
KKB Krupnik 80.44 322 *i* P **P** 10 45 40.8 +1.1
CNB Canberra Magne 80.47 180 P **P** 10 45 41.3 +1.6
CAN Canberra 80.47 180 P **P** 10 45 41.0 +1.3
CAN Canberra 80.47 180 ⇑P **P** 10 45 40.8 +1.1
SMTH Samothraki Isl 80.48 320 P **P** 10 45 39.6 -0.4
BOJS Bojanci 80.51 329 *i* P **P** 10 45 39.6 -0.4
BOJS *i* S **S** 10 55 34.5 +0.5
KAVA Kavala 80.52 321 P **P** 10 45 40.3 +0.2
BHL Bhannes 80.52 309 *eP* **P** 10 45 41.1 +0.7
NVR Nevrokopi 80.52 321 P **P** 10 45 40.6 +0.4
GADA Gvkgeada 80.54 319 P **P** 10 45 40.1 -0.2
ABTX Abilene, Hawle 80.56 53 IAmb IAmb 10 45 46.9
comp=Z,2µm,1.4s
EZN Ezine 80.64 319 P **P** 10 45 40.8 0.0
TXAR Lajitas Array 80.67 58 P **P** 10 45 40.7 -0.6
comp=Z,246nm,0.7s,baz=297,slow=4.0,SNR=537
TXAR pP **pP** 10 46 19.7 +1.2
comp=Z,112nm,1.0s,baz=297,slow=4.0,SNR=1.0
TXAR PKKPbc **PKKPbc** 11 04 21.4 +3.9
comp=Z,15nm,0.9s,baz=138,slow=2.0,SNR=18
TXAR PKPPKP **P'P'df** 11 12 22.8 -3.1
comp=Z,3.5nm,1.1s,baz=90,slow=1.3,SNR=4.2
comp=Z,246nm,0.7s
DQRL Deir Qamar 80.72 309 *eP* **P** 10 45 42.4 +0.9
RCY Rachaya 80.73 309 *eP* **P** 10 45 42.4 +0.8
FETA Feichten 80.75 332 *i* P **P** 10 45 41.7 +0.2
comp=Z,8µm,1.6s,SNR=803
FETA *eP*P **PP** 10 48 51.4 +4.6
comp=Z,3µm,3.3s
FETA *i* S **S** 10 55 35.4 -1.3
comp=Z,23µm,6.3s
FETA PKKP **PKKPbc** 11 04 20.8 +3.0
comp=Z,30nm,1.1s,SNR=6.7
FETA P'P' **P'P'df** 11 12 21.7 -3.9
comp=Z,13nm,1.3s
FETA Feichten 80.75 332 P **PKKPbc** 11 04 20.8 +3.0
comp=Z,30nm,1.1s,SNR=6.7
PLE Pljevlja 80.77 325 ⇑P **P** 10 45 41.9 +0.3
QRWL Qaraoun 80.77 309 *eP* **P** 10 45 42.7 +1.0
DAVA Damuels 80.79 333 *i* P **P** 10 45 41.6 -0.1
comp=Z,11µm,1.7s,SNR=658
DAVA *eS* **S** 10 55 38.2 +1.1
comp=Z,19µm,6.3s
DAVA PKKP **PKKPbc** 11 04 21.0 +3.3
comp=Z,67nm,1.0s,SNR=8.8
DAVA P'P' 11 12 15.7
comp=Z,41nm,1.4s
DAVA Damuels 80.79 333 P **PKKPbc** 11 04 21.0 +3.3
comp=Z,67nm,1.0s,SNR=8.8
DAVA Damuels 80.79 333 *eP* **P** 10 45 41.9 +0.2
baz=28,slow=5.7
ECH Echery 80.80 335 IAmb IAmb 10 45 46.9
comp=Z,3µm,1.2s
ECH Echery 80.80 335 ⇑P **P** 10 45 41.1 -0.5
AAM Ann Arbor 80.83 37 IAmb IAmb 10 45 47.9
comp=Z,2µm,1.4s
SRS Serrai 80.83 321 P **P** 10 45 41.8 -0.1
HHAR Hobbs 80.84 47 IAmb IAmb 10 45 47.1
comp=Z,2µm,1.5s
K50A Casco 80.86 36 IAmb IAmb 10 45 47.9
comp=Z,2µm,1.4s
SLBS Sierra La Lagu 80.86 66 P **P** 10 45 42.5 +0.2
SLBS Sierra La Lagu 80.86 66 ⇑P **P** 10 45 42.3 -0.1
LOOK Love County 80.88 50 IAmb IAmb 10 45 48.5
comp=Z,1µm,1.0s
RBK Rabkut 80.89 286 P **P** 10 45 42.6 +0.1
SNR=12
SFIN Lafayette 80.90 40 IAmb IAmb 10 45 48.0
comp=Z,2µm,1.4s
IVA Berane 80.95 325 ⇑*i*P **P** 10 45 42.8 +0.3
TRQ Mont Tremblant 80.95 29 IAmb IAmb 10 45 48.0
comp=Z,3µm,1.5s
MGMO Mountain Grove 81.00 45 IAmb IAmb 10 45 48.4
comp=Z,2µm,1.4s
UPM Unac-Piva 81.07 325 ⇑*i*P **P** 10 45 42.7 -0.6
GAC Glen Almond 81.09 30 ⇓P **P** 10 45 41.4 -1.7
KNT Kendrikon 81.09 322 P **P** 10 45 43.5 +0.3
VAY Valandovo 81.11 322 *i* P **P** 10 45 43.6 +0.3
N47A Urbana 81.12 39 IAmb IAmb 10 45 48.8
comp=Z,1µm,1.0s
KOME Kolasin 81.12 325 ⇑*i*P **P** 10 45 43.2 -0.2
PRK Paraskevi 81.12 319 P **P** 10 45 43.5 +0.1
HTL Hartland 81.13 343 *eP* **P** 10 45 43.2 +0.1
HTL IAmb IAmb 10 45 47.7
comp=Z,12µm,2.0s
ASF Jabal al Asfar 81.14 307 S **S** 10 55 42.0 +1.0
comp=Z,5.3nm,0.8s,baz=251,slow=23,SNR=11
ASF PKKPbc PKKPbc 11 04 21.5 +4.9
comp=Z,23nm,1.1s,baz=218,slow=3.1,SNR=7.9
ASF LR LR 11 25 34.6
comp=Z,21µm,21.8s,baz=25,slow=38
PLPT Palo Pinto 81.15 52 IAmb IAmb 10 45 49.9
comp=Z,2µm,1.5s
PVY Plav 81.15 324 ⇑*i*P **P** 10 45 43.5 -0.2
RAR Rarotonga 81.17 132 LR LR 11 16 19.7
comp=Z,21µm,19.8s,baz=324,slow=31
RAR Rarotonga 81.17 132 P **P** 10 45 45.6 +1.9
RAR Rarotonga 81.17 132 ⇑P **P** 10 45 44.6 +0.9
Q44A Meyer Farm, Va 81.20 42 IAmb IAmb 10 45 50.4
comp=Z,3µm,1.4s
BLDU Ballidu 81.21 208 P **P** 10 45 43.6 -0.1
DAVOX Davos/Dischmat 81.24 333 P **P** 10 45 44.3 +0.2
comp=Z,490nm,0.7s,baz=12,slow=3.2,SNR=432
DAVOX PP **PP** 10 48 53.4 +2.6
comp=Z,303nm,1.2s,baz=13,slow=7.8,SNR=4.4
DAVOX S **S** 10 55 43.1 +1.2
comp=Z,20nm,1.1s,baz=111,slow=23,SNR=11
DAVOX PKKPbc **PKKPbc** 11 04 18.8 +2.0
comp=Z,33nm,0.9s,baz=113,slow=2.8,SNR=22
DAVOX LR LR 11 27 17.9
comp=Z,30µm,18.5s,baz=34,slow=40
comp=Z,490nm,0.7s
VAL Valentia 81.25 347 P **P** 10 45 43.2 -0.6
VAL Valentia 81.25 347 P **P** 10 45 43.7 -0.1
FVM French Village 81.25 43 IAmb IAmb 10 45 49.4
comp=Z,3µm,1.6s
OUR Ouranopolis 81.29 321 P **P** 10 45 44.2 0.0
MMAI Mount Meron Ar 81.33 309 P **P** 10 45 46.0 +1.3
comp=Z,1µm,0.8s,baz=27,slow=13,SNR=267
MMAI PKKPbc **PKKPbc** 11 04 19.5 +3.4
comp=Z,1.9nm,0.5s,baz=345,slow=4.5,SNR=3.7
MMAI LR LR 11 27 39.1
comp=Z,19µm,18.3s,baz=20,slow=40
comp=Z,1µm,0.8s
SIGR SIGRI 81.34 319 P **P** 10 45 44.5 0.0
NKME Niksic 81.42 325 ⇑*i*P **P** 10 45 44.3 -0.6
BLCB Balcova 81.45 318 P **P** 10 45 45.0 -0.1
P46A Rosedale 81.46 40 IAmb IAmb 10 45 51.1
comp=Z,2µm,1.1s
HORT Hortiatis 81.47 321 P **P** 10 45 44.8 -0.5
BRY Bratogost 81.47 325 ⇑*i*P **P** 10 45 44.5 -0.8
GRG Griva 81.48 322 P **P** 10 45 45.4 +0.1
PLG Polygyros 81.50 321 P **P** 10 45 45.2 -0.2
THE Thessaloniki 81.50 321 P **P** 10 45 44.7 -0.7
SBD Saint Breward 81.57 343 *eP* **P** 10 45 45.2 -0.3
PDG Podgorica 81.58 325 ⇑P **P** 10 45 45.4 -0.3
PDG Podgorica 81.58 325 ⇑P **P** 10 45 45.5 -0.3
PDG Podgorica 81.58 325 ⇑P **P** 10 45 45.4 -0.3
ABTO Aybut 81.61 286 P **P** 10 45 46.6 +0.3
SNR=24
CEME Cevo 81.62 325 ⇑*i*P **P** 10 45 45.3 -0.7
T42A Van Buren 81.68 44 IAmb IAmb 10 45 51.5
comp=Z,2µm,1.5s
TUE Stuetta 81.68 333 IAmb IAmb 10 45 52.2
comp=Z,2µm,0.8s
TUE Stuetta 81.68 333 ⇑P **P** 10 45 46.5 0.0
PHP Peshkopia 81.71 324 P **P** 10 45 46.2 -0.4
N49A Columbus Grove 81.74 38 IAmb IAmb 10 45 52.5
comp=Z,2µm,1.4s
KLBR Kellerberrin 81.78 206 P **P** 10 45 46.8 +0.1
BUM Brajici-Budva 81.83 325 ⇑*i*P **P** 10 45 46.6 -0.6
YER Yerkesik 81.84 316 P **P** 10 45 48.1 +0.8
O48B Farmland 81.86 39 IAmb IAmb 10 45 53.5
comp=Z,3µm,1.5s
HCY Herceg Novi 81.87 325 ⇑*i*P **P** 10 45 46.7 -0.6
CHOS Chios island 81.91 318 P **P** 10 45 47.5 -0.1
BRDY Brady 81.92 53 IAmb IAmb 10 45 52.7
comp=Z,2µm,1.8s
KSL Kastellorizon 81.97 315 P **P** 10 45 47.5 -0.3
ULC Ulcinj 81.97 325 ⇑*i*P **P** 10 45 47.3 -0.5
OHR Ohrid 82.04 323 *i* P **P** 10 45 48.2 -0.1
CCA1 Carnmenellis 82.04 344 *eP* **P** 10 45 47.9 -0.1
S44A Carbondale 82.05 43 IAmb IAmb 10 45 54.4
comp=Z,1µm,0.8s
FCAR Ozark Folk Cen 82.06 46 IAmb IAmb 10 45 53.4
comp=Z,4µm,1.6s
JCT Junction City 82.07 54 IAmb IAmb 10 45 55.5
comp=Z,4µm,1.7s
SMG Samos 82.08 317 P **P** 10 45 48.3 -0.2
BLO Bloomington 82.13 40 IAmb IAmb 10 45 54.1
comp=Z,2µm,1.6s
LIT Litokhoron 82.14 321 IAmb IAmb 10 45 54.7
comp=Z,2µm,1.0s
LIT Litokhoron 82.14 321 P **P** 10 45 48.0 -0.7
SALP Salfit 82.16 308 ⇑P **P** 10 45 50.1 +1.1
MEDO Medina 82.19 33 IAmb IAmb 10 45 55.2
comp=Z,1µm,1.1s
MILA Mila 82.21 180 ⇓P **P** 10 45 50.0 +1.2
PBMO Poplar Bluff 82.21 44 IAmb IAmb 10 45 56.1
comp=Z,3µm,1.3s
SKY Skiros Island 82.21 319 P **P** 10 45 49.0 -0.1
WHTX Lake Whitney, 82.25 52 IAmb IAmb 10 45 54.3
comp=Z,3µm,1.6s
AOS Alonnisos 82.28 320 P **P** 10 45 49.5 0.0
KZN Kozani 82.28 322 P **P** 10 45 48.9 -0.7
JDG Jersey Dam (Ga 82.30 341 *eP* **P** 10 45 49.3 0.0
JDC Jersey Dam (Cr 82.31 341 *eP* **P** 10 45 49.2 -0.1
RAYN Ar Rayn 82.33 296 P **P** 10 45 50.4 +0.4
RAYN Ar Rayn 82.33 296 *i* P **P** 10 45 50.8 +0.7
SNR=333
RAYN Ar Rayn 82.33 296 P **P** 10 45 50.7 +0.7
RAYN Ar Rayn 82.33 296 P **P** 10 45 51.0 +1.0
JSA Saint Aubin 82.34 341 *eP* **P** 10 45 49.2 -0.3
JSA IAmb IAmb 10 45 54.9
comp=Z,5µm,1.1s
CLF Chambon-Foret 82.34 338 ⇑P **P** 10 45 50.0 +0.4
LONY Lake Ozonia 82.34 30 ⇑P **P** 10 45 47.9 -1.8
MIAR Mount Ida 82.37 48 IAmb IAmb 10 45 54.9
comp=Z,3µm,1.6s
BODT Bodrum 82.37 317 P **P** 10 45 50.7 +0.7
DRIO Del Rio 82.39 56 IAmb IAmb 10 45 56.5
comp=Z,3µm,1.2s
P48A Milroy 82.39 39 IAmb IAmb 10 45 55.8
comp=Z,2µm,1.3s
M52A Chesterland 82.41 36 IAmb IAmb 10 45 56.3
comp=Z,3µm,1.3s
SENIN Lac Senin/Sane 82.42 334 IAmb IAmb 10 45 55.8
comp=Z,1µm,0.8s
KBN Korca 82.44 323 P **P** 10 45 50.3 -0.1
WHAR Wooly Hollow 82.45 46 IAmb IAmb 10 45 56.4
comp=Z,3µm,1.2s
NEO Neokhori 82.47 320 P **P** 10 45 49.6 -0.8
ERPA Erie 82.48 34 IAmb IAmb 10 45 56.4
comp=Z,1µm,0.8s
ERPA Erie 82.48 34 ⇑P **P** 10 45 49.5 -0.9
NEST Nestorio 82.51 323 P **P** 10 45 50.7 -0.1
N51A Ashland 82.51 37 IAmb IAmb 10 45 56.4
comp=Z,2µm,1.4s
USIN University of 82.58 42 IAmb IAmb 10 45 57.3
comp=Z,3µm,1.4s
LOR Lormes 82.60 337 ⇑P **P** 10 45 50.7 -0.3
KYMI Kymi, Euboea I 82.62 320 P **P** 10 45 51.0 -0.2
MUN Mundaring 82.63 208 P **P** 10 45 52.0 +0.9
MSBI Mazada 82.64 308 ⇑P **P** 10 45 52.5 +1.1
ARG Arkhangelos 82.64 315 P **P** 10 45 51.8 +0.4
ARG Arkhangelos 82.64 315 ⇑P **P** 10 45 51.8 +0.4
ARG ⇓P **PcP** 10 45 55.2 -0.8
PENT Pentalofos 82.65 322 P **P** 10 45 51.0 -0.5
AMAZ Amatzia 82.72 308 ⇑P **P** 10 45 53.0 +1.1
KPRO Kipourio 82.75 322 P **P** 10 45 51.0 -1.0
MMNY Mt. Morris Dam 82.76 33 IAmb IAmb 10 45 57.4
comp=Z,1µm,1.2s
TOO Toolangi 82.78 183 ⇓P **P** 10 45 53.0 +1.2
THL Klokotos Trika 82.79 321 P **P** 10 45 50.3 -1.7
X40A Basin Creek Fa 82.80 47 IAmb IAmb 10 45 58.6
comp=Z,2µm,1.4s
BRAT Ballarat 82.82 184 P **P** 10 45 54.1 +2.2
ACSO Alum Creek Sta 82.82 37 IAmb IAmb 10 45 58.2
comp=Z,2µm,1.4s
DRLN Deer Lake 82.84 17 IAmb IAmb 10 45 59.1
comp=Z,2µm,1.3s
DRLN Deer Lake 82.84 17 ⇑P **P** 10 45 51.6 -0.6
T45A Paducah 82.88 43 IAmb IAmb 10 45 58.9
comp=Z,1µm,0.8s
J57A Williamstown 82.89 31 IAmb IAmb 10 45 58.1
comp=Z,2µm,1.6s
KARY Karystos 82.95 319 P **P** 10 45 52.1 -0.8
WCI Wyandotte Cave 83.00 41 P **P** 10 45 52.5 -0.7
WCI IAmb IAmb 10 45 58.8
comp=Z,2µm,1.3s
WCI Wyandotte Cave 83.00 41 P **P** 10 45 52.5 -0.7
WCI pmax pmax
comp=Z,2µm,1.3s
WCI Wyandotte Cave 83.00 41 ⇑P **P** 10 45 52.3 -0.9
WCI Wyandotte Cave 83.00 41 P **P** 10 45 52.5 -0.7
WCI PcP **PcP** 10 45 56.8 -0.8
ATAL Atalanti 83.06 320 P **P** 10 45 52.6 -0.9
435B Jarrell 83.09 53 IAmb IAmb 10 45 60.0
comp=Z,1µm,1.6s
AGG Agios Georgios 83.10 321 P **P** 10 45 51.7 -2.0
AGG Agios Georgios 83.10 321 ⇑P **P** 10 45 51.9 -1.8
AGG ⇓P **PcP** 10 45 56.3 -1.7
LKR Lokris 83.10 320 P **P** 10 45 52.8 -0.9
PAOC Oil Creek Stat 83.11 35 IAmb IAmb 10 45 59.6
comp=Z,2µm,1.3s
VLO Vlora 83.12 324 P **P** 10 45 53.8 0.0
DION Dionisos Attik 83.14 319 P **P** 10 45 52.7 -1.3
AXAR Agios Charalam 83.16 321 P **P** 10 45 52.9 -1.2

G62A	West of Eustis	83.16	27	IAmb	IAmb	10 46 00.3				
	comp=Z,1µm,1.2s									
NWAO	Narrogin (SRO)	83.18	206	P	P	10 45 54.4	+0.5			
NWAO	Narrogin (SRO)	83.18	206	P	P	10 45 54.0	+0.1			
NWAO	Narrogin (SRO)	83.18	206	P	P	10 45 54.4	+0.5			
NWAO				pmax	pmax					
	comp=Z,504nm,0.9s									
NWAO	Narrogin (SRO)	83.18	206	P	P	10 45 54.7	+0.8			
MAKR	Makrakomi, Fth	83.19	321	P	P	10 45 53.1	-1.1			
PTL	Penteli	83.20	319	P	P	10 45 53.1	-1.2			
PRMD	Pramanda	83.22	322	P	P	10 45 54.9	+0.5			
JAN	Janina	83.22	322	P	P	10 45 54.6	+0.2			
N53A	Lisbon	83.24	36	IAmb	IAmb	10 46 00.4				
	comp=Z,2µm,1.3s									
STFN	Stefani	83.24	320	P	P	10 45 53.4	-1.1			
F64A	Sherman	83.25	25	IAmb	IAmb	10 46 00.2				
	comp=Z,1µm,1.5s									
TAOE	Nuku Hiva Isla	83.27	110	IAmb	IAmb	10 46 00.3				
	comp=Z,711nm,0.8s									
TAOE	Nuku Hiva Isla	83.27	110	P	P	10 45 55.3	+0.4			
TAOE	Nuku Hiva Isla	83.27	110	⇑P	P	10 45 55.0	+0.1			
TETR	Tetrakomo, Epi	83.29	322	P	P	10 45 54.9	+0.1			
ATHU	Athens Univers	83.30	319	P	P	10 45 53.3	-1.4			
ATH	Athens Observa	83.33	319	P	P	10 45 53.6	-1.2			
MAGU	Magoula	83.34	320	P	P	10 45 53.5	-1.4			
VILL	Villia	83.36	320	P	P	10 45 53.9	-1.2			
MONC	Moncucco Torin	83.38	333	⇑P	P	10 45 54.9	-0.1			
VLC	Villacollemand	83.39	331	P	P	10 45 54.8	-0.3			
VLC	Villacollemand	83.39	331	⇑P	P	10 45 54.7	-0.5			
VLY	Voula,Athens	83.39	319	P	P	10 45 53.7	-1.5			
O52A	Adamsville	83.40	37	IAmb	IAmb	10 46 01.1				
	comp=Z,2µm,1.2s									
L56A	Greenwood	83.41	33	IAmb	IAmb	10 46 00.3				
	comp=Z,2µm,1.4s									
P51A	Williamsport	83.41	38	IAmb	IAmb	10 46 00.9				
	comp=Z,862nm,1.1s									
EVR	Evrytania	83.41	321	P	P	10 45 54.6	-0.8			
PAMR	Moraine State	83.43	35	IAmb	IAmb	10 46 01.4				
	comp=Z,2µm,1.3s									
OUZ	Omahuta	83.44	160	P	P	10 45 57.0	+1.9			
OUZ	Omahuta	83.44	160	⇓P	P	10 45 56.0	+0.9			
OUZ	Omahuta	83.44	160	P	P	10 45 57.3	+2.2			
KZIT	Kziot	83.48	308	⇑P	P	10 45 56.6	+0.8			
PKME	Peaks-Kenny Pk	83.51	26	⇑P	P	10 45 54.8	-0.9			
H62A	Milan	83.54	28	IAmb	IAmb	10 46 02.2				
	comp=Z,2µm,1.1s									
IGT	Igoumenitsa	83.55	322	P	P	10 45 55.5	-0.5			
O53A	New Philadelph	83.55	36	IAmb	IAmb	10 46 01.9				
	comp=Z,1µm,1.1s									
LBNH	Lisbon	83.58	28	⇑P	P	10 45 55.3	-0.7			
KEK	Kerkira	83.62	323	P	P	10 45 56.0	-0.4			
KEK	Kerkira	83.62	323	⇑P	P	10 45 55.9	-0.5			
H06N1	SOCORRO T-PHAS	83.63	70	T	T	12 17 49.4				
	SNR=2.2									
ANX	Ano Chora	83.63	321	P	P	10 45 55.8	-0.7			
LTK	Loutraki	83.63	320	P	P	10 45 54.6	-1.9			
KARP	Karpathos	83.65	316	P	P	10 45 56.0	-0.7			
KARP	Karpathos	83.65	316	⇑P	P	10 45 56.0	-0.7			
Q51A	Peebles	83.67	38	IAmb	IAmb	10 46 02.7				
	comp=Z,2µm,1.3s									
AMPL	Ampelaki	83.67	322	P	P	10 45 56.3	-0.3			
KALE	Kalithea	83.70	321	P	P	10 45 55.7	-1.2			
SERG	Sergoula	83.72	321	P	P	10 45 55.9	-1.0			
LFKM	Lefkimmi	83.73	323	P	P	10 45 56.5	-0.4			
H06S1	SOCORRO T	83.74	70	T	T	12 17 47.6				
	SNR=4.7									
Z41A	Richland Creek	83.77	48	IAmb	IAmb	10 46 03.3				
	comp=Z,2µm,1.5s									
EFP	Efpalio	83.77	321	P	P	10 45 56.4	-0.7			
THR8	Santorini-Mono	83.78	317	P	P	10 45 54.7	-2.5			
PVO	Paravola	83.79	321	P	P	10 45 56.7	-0.5			
BNI	Bardonecchia	83.79	334	IAmb	IAmb	10 46 04.3				
	comp=Z,1µm,1.1s									
BNI	Bardonecchia	83.79	334	⇑P	P	10 45 57.6	+0.3			
THERA	Ancient Thera,	83.81	317	P	P	10 45 55.1	-2.3			
SAP3	Santorini-Thir	83.81	317	P	P	10 45 55.0	-2.4			
R50A	Paris	83.85	39	IAmb	IAmb	10 46 03.7				
	comp=Z,1µm,1.3s									
THR6	Thira Island,	83.85	317	P	P	10 45 56.8	-0.7			
THR9	Santorini-Faro	83.87	317	P	P	10 45 58.7	+1.0			
MGAB	Montegabbione	83.89	330	⇑P	P	10 45 56.1	-1.6			
AQU	L'Aquila	83.91	328	P	P	10 45 57.8	0.0			
AQU	L'Aquila	83.91	328	⇑P	P	10 45 57.9	0.0			
833A	Chaparral WMA,	83.92	55	IAmb	IAmb	10 46 03.5				
	comp=Z,2µm,1.6s									
PPT	Papeete	83.93	122	P	P	10 45 59.5	+1.4			
	comp=Z,702nm,1.0s,baz=350,slow=2.7,SNR=34									
PPT				LR	LR	11 16 50.2				
	comp=Z,43µm,21.0s,baz=301,slow=31									
	comp=Z,702nm,1.0s									
NATX	Nacogdoches	83.95	50	⇑P	P	10 45 58.1	-0.1			
PPTF	Pamatai, Papee	83.95	122	IAmb	IAmb	10 46 03.4				
	comp=Z,1µm,1.2s									
PPTF	Pamatai, Papee	83.95	122	⇑P	P	10 45 59.8	+1.5			
O54A	Avella	83.95	36	IAmb	IAmb	10 46 04.2				
	comp=Z,2µm,1.4s									
KLV	Kalavryta, Ach	83.98	320	P	P	10 45 57.3	-1.0			
GUR	Goura	83.98	320	P	P	10 45 57.1	-1.2			
WVT	Waverly	83.98	43	P	P	10 45 57.7	-0.6			
WVT				IAmb	IAmb	10 46 03.9				
	comp=Z,2µm,1.4s									
WVT	Waverly	83.98	43	P	P	10 45 57.7	-0.6			
WVT				pmax	pmax					
	comp=Z,2µm,1.4s									
WVT	Waverly	83.98	43	⇑P	P	10 45 57.5	-0.8			
TSLK	Tsoukalades, L	83.99	322	P	P	10 45 57.6	-0.6			
LKD2	Lefkada island	84.02	322	P	P	10 45 57.8	-0.6			
WVL	Waterville	84.02	27	IAmb	IAmb	10 46 04.4				
	comp=Z,1µm,1.3s									
NYDR	Nydri-Lefkada	84.07	322	P	P	10 45 57.6	-0.9			
I62A	Tamworth	84.10	28	IAmb	IAmb	10 46 05.1				
	comp=Z,1µm,1.5s									
MATE	Matera	84.11	325	⇓P	P	10 45 58.8	0.0			
MATE	Matera	84.11	325	⇑P	P	10 45 58.2	-0.5			
EIL	Elat	84.12	307	LR	LR	11 27 51.8				
	comp=Z,15µm,20.6s,baz=26,slow=39									
P53A	Whipple	84.12	37	IAmb	IAmb	10 46 05.0				
	comp=Z,1µm,1.3s									
DRAG	Dragano-Lefkad	84.15	322	P	P	10 45 58.2	-0.9			
EVGI	Lefkada island	84.16	322	P	P	10 45 58.3	-0.8			
Q52A	Bidwell	84.19	38	IAmb	IAmb	10 46 05.0				
	comp=Z,1µm,1.4s									
AXS	Araxos	84.20	321	P	P	10 45 58.8	-0.4			
SSB	Saint Sauveur	84.22	336	IAmb	IAmb	10 46 05.5				
	comp=Z,2µm,1.3s									
DRO	Drossia	84.25	321	P	P	10 45 59.5	-0.1			
M57A	Sunshine Farm,	84.26	33	IAmb	IAmb	10 46 05.5				
	comp=Z,1µm,1.2s									
RLS	Riolos of Patr	84.27	321	P	P	10 45 59.6	0.0			
LMN	Caledonia Moun	84.28	23	IAmb	IAmb	10 46 05.7				
	comp=Z,1µm,1.3s									
L59A	Walton	84.30	31	IAmb	IAmb	10 46 05.5				
	comp=Z,2µm,1.2s									
WCZ	Waipu Caves	84.30	159	P	P	10 46 01.2	+1.7			
FSK	Fiskardo	84.34	322	P	P	10 45 59.0	-1.0			
VSK1	VASILIKIADES	84.38	322	P	P	10 45 59.2	-1.0			
SNAG	San Augustine	84.40	50	IAmb	IAmb	10 46 05.7				
	comp=Z,2µm,1.5s									
VLX	Vlachokerasia	84.43	320	P	P	10 45 59.4	-1.2			
ZKR	Zakros	84.46	316	P	P	10 46 00.9	+0.2			
OXF	Oxford	84.51	45	⇑P	P	10 46 00.2	-0.7			
VLS	Valsamata	84.56	322	P	P	10 46 00.4	-0.7			
RTZL	Ratzakli, Kefa	84.56	321	P	P	10 46 00.6	-0.5			
SSPA	Standing Stone	84.57	34	⇑P	P	10 46 00.1	-1.0			
AMT	Artemida-Makis	84.60	320	P	P	10 46 00.6	-0.8			
DMLN	Damoulianata-K	84.60	322	P	P	10 46 00.4	-0.9			
NPS	Neapolis	84.63	317	P	P	10 46 00.3	-1.2			
U49A	Red Boiling Sp	84.64	41	IAmb	IAmb	10 46 07.8				
	comp=Z,1µm,1.0s									
T50A	Nancy	84.66	40	IAmb	IAmb	10 46 07.8				
	comp=Z,849nm,0.8s									
HKT	Hockley	84.70	52	*c* *i*P	P	10 46 01.1	-0.8			
HKT				pmax	pmax					
	comp=Z,752nm,1.5s									
HKT				MLR	MLR					
	comp=Z,12µm,18.0s									
HKT	Hockley	84.70	52	⇑P	P	10 46 00.8	-1.1			
S51A	Beattyville	84.70	39	IAmb	IAmb	10 46 07.2				
	comp=Z,1µm,1.4s									
VLI	Veliai	84.71	319	P	P	10 45 59.5	-2.4			
Q54A	Coxs Mills	84.78	37	IAmb	IAmb	10 46 08.6				
	comp=Z,2µm,1.4s									
V48A	Smith Brothers	84.78	42	IAmb	IAmb	10 46 07.7				
	comp=Z,2µm,1.5s									
ORTH	Orthonies,Zaky	84.78	321	P	P	10 46 02.0	-0.3			
ITM	Ithomi	84.79	320	P	P	10 46 01.2	-1.1			
ITM	Ithomi	84.79	320	⇑P	P	10 46 01.2	-1.1			
LTHK	Lithakia	84.84	321	P	P	10 46 01.3	-1.2			
N58A	Sunbury	84.84	33	IAmb	IAmb	10 46 08.4				
	comp=Z,1µm,1.2s									
IACM	Heraklion	84.86	317	P	P	10 46 01.2	-1.4			
GRZ	Great Barrier	84.88	159	P	P	10 46 06.2	+3.9			
IDI	Anoyia	84.96	317	S	SKSac	10 56 12.0	-1.7			
	comp=Z,10nm,0.9s,baz=233,slow=20,SNR=11									
IDI				PKKPbc	PKKPbc	11 04 12.5	+4.6			
	comp=Z,35nm,1.0s,baz=337,slow=3.9,SNR=6.6									
IDI	Anoyia	84.96	317	P	P	10 46 01.7	-1.6			
IDI	Anoyia	84.96	317	P	P	10 46 01.6	-1.6			
CUC	Castrocucco	85.02	326	⇑P	P	10 46 01.9	-1.6			
KTHA	Kythira Island	85.03	319	P	P	10 46 02.0	-1.6			
VAM	Vamos	85.19	318	P	P	10 46 03.0	-1.3			
HRV	Adam Dziewonsk	85.24	29	P	P	10 46 03.9	-0.5			
HRV				IAmb	IAmb	10 46 10.8				
	comp=Z,1µm,1.2s									
HRV	Adam Dziewonsk	85.24	29	P	P	10 46 03.9	-0.5			
HRV				pmax	pmax					
	comp=Z,1µm,1.2s									
HRV	Adam Dziewonsk	85.24	29	⇑P	P	10 46 03.8	-0.6			
IMMV	Iera Moni Meta	85.25	318	P	P	10 46 04.0	-0.6			
PGF	Pioggiola	85.29	331	⇑P	P	10 46 04.2	-0.6			
TIP	Timpagrande	85.33	325	⇑P	P	10 46 04.8	-0.3			
TIP	Timpagrande	85.33	325	⇑P	P	10 46 04.7	-0.3			
PAGS	Pennsylvania G	85.37	33	IAmb	IAmb	10 46 10.9				
	comp=Z,2µm,1.2s									
Q56A	Snyder Ridge,	85.41	36	IAmb	IAmb	10 46 11.6				
	comp=Z,1µm,1.3s									
KUZ	Kuaotunu	85.41	159	P	P	10 46 06.2	+1.1			
KUZ	Kuaotunu	85.41	159	P	P	10 46 06.1	+1.1			
WES	Weston	85.43	29	IAmb	IAmb	10 46 11.6				
	comp=Z,1µm,1.1s									
S54A	Dingess, Beckl	85.57	38	IAmb	IAmb	10 46 11.8				
	comp=Z,1µm,1.5s									
UCCT	U. Connecticut	85.64	30	IAmb	IAmb	10 46 12.6				
	comp=Z,1µm,1.1s									
R55A	Marlinton	85.67	37	IAmb	IAmb	10 46 13.0				
	comp=Z,1µm,1.1s									
GVD	Gavdhos	85.71	317	P	P	10 46 06.1	-0.8			
X48A	Hartselle	85.72	43	IAmb	IAmb	10 46 12.0				
	comp=Z,2µm,1.5s									
PAL	Palisades	85.75	31	IAmb	IAmb	10 46 13.0				
	comp=Z,2µm,1.5s									
VBMS	Vicksburg	85.77	47	⇑P	P	10 46 07.3	+0.1			
DGAR	Diego Garcia	85.82	255	*ce*P	P	10 46 08.0	+0.4			
DGAR				pmax	pmax					
	comp=Z,742nm,1.3s									
DGAR	Diego Garcia	85.82	255	P	P	10 46 08.6	+0.9			
CPNY	Central Park	85.91	31	IAmb	IAmb	10 46 13.9				
	comp=Z,1µm,1.2s									
W50A	Signal Mountai	85.93	42	IAmb	IAmb	10 46 13.5				
	comp=Z,1µm,1.5s									
H01W3	Cape Leeuwin H	85.98	208	P	P	10 46 11.4	+3.8			
	baz=344,slow=73,SNR=16									
H01W1	Cape Leeuwin H	85.98	208	P	P	10 46 10.7	+3.1			
	baz=344,slow=73,SNR=14									
H01W2	Cape Leeuwin H	85.99	208	P	P	10 46 10.8	+3.2			
	baz=344,slow=73,SNR=17									
L64A	Middleborough	85.99	29	IAmb	IAmb	10 46 14.4				
	comp=Z,1µm,1.1s									
CPCT	Cooper Cave	86.09	41	IAmb	IAmb	10 46 14.2				
	comp=Z,2µm,1.5s									
GLAD	Gladstone	86.13	181	P	P	10 46 09.3	+0.8			
TKL	Tuckaleechee C	86.26	40	PKKPbc	PKKPbc	11 04 10.0	+5.3			
	comp=Z,4.7nm,0.6s,baz=143,slow=5.6,SNR=5.8									
TKL	Tuckaleechee C	86.26	40	⇓P	P	10 46 13.6	+4.0			
TOZ	Tahuroa Road	86.29	159	P	P	10 46 10.6	+1.3			
M65A	Busby, Falmout	86.39	29	P	P	10 46 08.7	-1.4			
	baz=333									
BLA	Blacksburg	86.44	37	IAmb	IAmb	10 46 16.8				
	comp=Z,1µm,1.1s									
CEL	Celeste	86.47	325	⇑P	P	10 46 08.6	-2.1			
Y49A	Blount Mountai	86.50	43	IAmb	IAmb	10 46 16.7				
	comp=Z,2µm,1.5s									
S57A	Dark Hollow, R	86.59	36	IAmb	IAmb	10 46 17.0				
	comp=Z,1µm,1.4s									
W52A	Murphy	86.66	41	IAmb	IAmb	10 46 17.3				
	comp=Z,2µm,1.6s									
X51A	Calhoun	86.66	42	IAmb	IAmb	10 46 17.1				
	comp=Z,2µm,1.6s									
V53A	Saluda	86.69	40	IAmb	IAmb	10 46 18.1				
	comp=Z,1µm,1.4s									
CBN	Corbin Frederi	86.86	35	⇑P	P	10 46 11.8	-0.6			
R58B	Mineral	86.86	35	IAmb	IAmb	10 46 18.1				
	comp=Z,1µm,1.4s									
TLZ	Tolley Road	86.87	159	P	P	10 46 13.5	+1.3			
MXZ	Matakaoa Point	86.87	157	P	P	10 46 13.9	+1.8			
MXZ	Matakaoa Point	86.87	157	P	P	10 46 13.7	+1.6			
HIZ	Hauiti	86.87	160	IAmb	IAmb	10 46 19.0				
	comp=Z,1µm,1.1s									
HIZ	Hauiti	86.87	160	P	P	10 46 13.6	+1.5			
HIZ	Hauiti	86.87	160	P	P	10 46 13.6	+1.5			
LRAL	Lakeview Retre	86.89	44	⇑P	P	10 46 11.4	-1.2			
HAZ	Te Kaha	86.91	157	P	P	10 46 14.4	+2.1			
URZ	Urewera	87.20	158	LR	LR	11 21 48.5				
	comp=Z,28µm,19.9s,baz=354,slow=33									
URZ	Urewera	87.20	158	P	P	10 46 11.8	-1.9			
URZ	Urewera	87.20	158	P	P	10 46 12.5	-1.2			
V55A	Taylorsville	87.25	39	IAmb	IAmb	10 46 20.6				
	comp=Z,1µm,1.5s									
PUZ	Puketiti	87.33	157	P	P	10 46 13.6	-0.8			
MWZ	Matawai	87.38	158	P	P	10 46 14.1	-0.5			
KHEZ	Kahui Hut	87.42	161	P	P	10 46 16.9	+2.1			
VRZ	Vera Road	87.43	160	P	P	10 46 15.9	+1.1			
RTZ	Ruatahuna	87.50	158	IAmb	IAmb	10 46 18.6				
	comp=Z,870nm,1.1s									
RTZ	Ruatahuna	87.50	158	P	P	10 46 16.7	+1.4			
MOO	Moorlands	87.60	181	P	P	10 46 16.4	+0.9			
MOO	Moorlands	87.60	181	P	P	10 46 17.6	+2.1			
NGZ	Ngauruhoe	87.68	159	P	P	10 46 16.6	+0.4			
VAE	Valguarnera	87.74	325	P	P	10 46 16.4	-0.3			
	comp=Z,11nm,0.3s,baz=332,slow=6.5,SNR=8.8									
VAE				LR	LR	11 28 52.3				
	comp=Z,21µm,18.5s,baz=92,slow=38									
	comp=Z,11nm,0.3s									
KMSC	Kings Mountain	87.79	39	IAmb	IAmb	10 46 23.1				
	comp=Z,2µm,1.3s									
CSOR	Sort	87.86	337	*e*P	P	10 46 17.5	+0.2			
CSOR				*ep*P	*p*P	10 46 52.9	-1.6			
CSOR				*es*P	*s*P	10 47 13.0	+2.9			
CSOR				*e*PP	PP	10 49 47.2	+2.8			
CSOR				*e*S	SKSac	10 56 36.0	+4.5			
CSOR				*e*ScS	ScS	10 56 57.3	+3.9			
CSOR				*e*PS	PnS	10 58 04.4	-3.6			
CSOR				*e*SS	SS	11 02 46.5	+10			
VSL	Villasalto	87.87	330	⇑P	P	10 46 16.6	-0.7			
BKZ	Black Stump Fm	87.90	159	P	P	10 46 15.6	-1.5			
BKZ	Black Stump Fm	87.90	159	P	P	10 46 16.2	-0.9			
CFON	Fontmartina	88.06	336	*e*P	P	10 46 18.0	-0.2			
CFON				*ep*P	*p*P	10 46 54.0	-1.4			
CFON				*es*P	*s*P	10 47 14.9	+3.9			
CFON				*e*PP	PP	10 49 49.6	+3.6			
CFON				*e*S	SKSac	10 56 35.5	+2.9			
CFON				*e*ScS	ScS	10 56 55.2	+0.2			
CFON				*e*PS	PnS	10 58 03.4	-6.9			
TAU	Tasmania Unive	88.06	181	P	P	10 46 19.4	+1.7			
TAU				IAmb	IAmb	10 46 23.1				
	comp=Z,661nm,0.8s									
TAU	Tasmania Unive	88.06	181	P	P	10 46 19.7	+2.0			
TAU	Tasmania Unive	88.06	181	P	P	10 46 19.4	+1.7			
TAU				pmax	pmax					
	comp=Z,661nm,0.9s									
TAU	Tasmania Unive	88.06	181	P	P	10 46 19.3	+1.7			
KNZ	Kokohu	88.07	158	P	P	10 46 19.8	+2.0			
WAZ	Wanganui	88.08	160	P	P	10 46 18.7	+0.8			
V58A	Windy Hill, Pi	88.20	37	IAmb	IAmb	10 46 24.6				
	comp=Z,1µm,1.3s									
GOGA	Godfrey	88.26	41	IAmb	IAmb	10 46 25.8				
	comp=Z,2µm,1.4s									
152A	Waverly Hall	88.29	43	IAmb	IAmb	10 46 24.7				
	comp=Z,1µm,1.4s									
W57A	Gilead	88.37	38	IAmb	IAmb	10 46 25.9				
	comp=Z,2µm,1.3s									
BRAL	Brewton	88.37	45	⇑P	P	10 46 20.1	+0.3			
JSC	Jenkinsville	88.54	39	IAmb	IAmb	10 46 26.1				
	comp=Z,2µm,1.5s									
QRZ	Quartz Range	88.55	162	IAmb	IAmb	10 46 24.6				
	comp=Z,974nm,1.0s									
QRZ	Quartz Range	88.55	162	P	P	10 46 21.0	+0.9			
QRZ	Quartz Range	88.55	162	P	P	10 46 20.9	+0.9			
BIRD	Birdtown, Kers	88.59	39	IAmb	IAmb	10 46 26.4				
	comp=Z,2µm,1.4s									
TSZ	Takapari Road	88.61	160	P	P	10 46 20.1	-0.3			
CGAR	Garraf	88.64	336	*e*P	P	10 46 22.3	+1.4			
CGAR				*ep*P	pwP	10 46 59.5	-1.3			
CGAR				*es*P	sP	10 47 19.5	+5.8			
CGAR				*e*PP	PP	10 49 54.8	+4.3			
CGAR				*e*S	SKSac	10 56 38.4	+2.4			
CGAR				*e*ScS	ScS	10 57 00.5	+0.8			
CGAR				*e*SP	SP	10 58 02.2	+4.3			
CGAR				*e*PS	PS	10 58 26.0	+8.8			
CGAR				*e*SS	SS	11 03 19.0	+31			
PXZ	Pawanui	88.81	159	P	P	10 46 23.2	+1.9			
MRZ	Mangatainoka R	89.09	160	P	P	10 46 22.5	-0.1			
NNZ	Nelson	89.11	162	P	P	10 46 22.5	-0.2			
WDD	Wied Dalam	89.11	324	⇑P	P	10 46 22.0	-1.2			
MAHO	Mahon	89.22	334	P	P	10 46 23.4	-0.2			
BFZ	Birch Farm	89.27	160	IAmb	IAmb	10 46 27.3				
	comp=Z,550nm,1.0s									
BFZ	Birch Farm	89.27	160	P	P	10 46 23.4	0.0			
BFZ	Birch Farm	89.27	160	P	P	10 46 23.5	+0.1			
DSZ	Denniston Nort	89.28	163	P	P	10 46 23.9	+0.4			
EBR	Ebro Roquetas	89.48	337	*e*P	P	10 46 24.5	-0.3			
EBR				*ep*P	pP	10 47 02.9	+0.9			
EBR				*es*P	sP	10 47 23.4	+5.9			
EBR				*e*PP	PP	10 50 00.5	+3.3			
EBR				*e*S	SKSac	10 56 45.4	+4.6			
EBR				*e*ScS	ScS	10 57 11.6	+5.0			
EBR				*e*SP	SPn	10 58 05.8	-1.3			
EBR				*e*PS	PS	10 58 26.0	-0.4			
EBR				*e*SS	SS	11 03 21.6	+22			
SNZO	South Karori	89.50	161	P	P	10 46 24.4	-0.1			
SNZO	South Karori	89.50	161	P	P	10 46 24.0	-0.4			
SNZO	South Karori	89.50	161	⇓P	P	10 46 24.2	-0.3			
THZ	Tophouse	89.53	162	IAmb	IAmb	10 46 28.0				
	comp=Z,592nm,0.9s									
THZ	Tophouse	89.53	162	P	P	10 46 24.9	+0.2			
Y58A	Scranton	89.57	39	IAmb	IAmb	10 46 31.6				
	comp=Z,1µm,0.9s									
CMAS	Mas de Barbera	89.62	337	*e*P	P	10 46 25.0	-0.5			
CMAS				*ep*P	pP	10 47 02.4	-0.4			
CMAS				*es*P	sP	10 47 23.4	+5.7			
CMAS				*e*PP	PP	10 50 01.6	+3.2			
CMAS				*e*S	SKSac	10 56 45.0	+3.3			
CMAS				*e*ScS	ScS	10 57 11.3	+3.5			
CMAS				*e*SP	SP	10 58 13.3	+4.4			
CMAS				*e*PS	PnS	10 58 29.5	+1.1			
BHW	Baring Head	89.63	161	IAmb	IAmb	10 46 28.8				
	comp=Z,1µm,1.0s									
ETOS	Mallorca	89.78	334	P	P	10 46 26.2	0.0			
INZ	Inchbonnie	90.15	164	IAmb	IAmb	10 46 31.4				
	comp=Z,1µm,1.1s									
INZ	Inchbonnie	90.15	164	P	P	10 46 27.8	+0.3			
ECAL	Calabor	90.22	342	P	P	10 46 25.2	-3.1			
KHZ	Kahutara	90.29	162	P	P	10 46 27.9	-0.2			
KHZ	Kahutara	90.29	162	P	P	10 46 27.6	-0.5			
WVZ	Whitaha Valley	90.35	164	P	P	10 46

ATKB	**Taksebt**	**92.20**	**332**	P	**P**	**10 46 38.4 +0.9**
SET	**Setif**	**92.21**	**331**	P	**P**	**10 46 40.0 +2.3**
ODZ	**Otahua Downs**	**92.23**	**165**	IAmb	IAmb	10 46 42.6
	comp=Z,551nm,1.2s					
ODZ	**Otahua Downs**	**92.23**	**165**	P	**P**	**10 46 38.6 +1.5**
ODZ	**Otahua Downs**	**92.23**	**165**	P	**P**	**10 46 38.9 +1.8**
CTCHA	**Tamokra**	**92.25**	**332**	P	**P**	**10 46 36.9 -0.8**
CJSR	**Ain Djasser**	**92.32**	**331**	P	**P**	**10 46 37.5 -0.7**
PCBR	**Castelo Branco**	**92.40**	**342**	*e*P	**P**	**10 46 36.5 -1.9**
PCBR				*i* IAmb	IAmb	10 46 43.3
	comp=Z,688nm,1.6s					
PCBR				*e*PP	**PP**	**10 50 21.2 +1.0**
PCAS	**Casmilo, Conde**	**92.41**	**343**	*e*P	**P**	**10 46 36.7 -1.7**
PCAS				*i* IAmb	IAmb	10 46 43.5
	comp=Z,1µm,1.5s					
PCAS				*e*PP	**PP**	**10 50 20.3 +0.1**
CTGD	**Timgad**	**92.42**	**330**	P	**P**	**10 46 37.5 -1.2**
WHZ	**Wether Hill Ro**	**92.59**	**167**	P	**P**	**10 46 41.8 +3.1**
PYZ	**Puysegur Point**	**92.66**	**168**	P	**P**	**10 46 39.9 +0.9**
PYZ	**Puysegur Point**	**92.66**	**168**	P	**P**	**10 46 42.9 +3.9**
EMUR	**La Murta**	**92.74**	**337**	P	**P**	**10 46 38.3 -1.8**
PMRV	**Marv??o**	**92.77**	**342**	*e*P	**P**	**10 46 39.7 -0.4**
PMRV				*i* IAmb	IAmb	10 46 45.1
	comp=Z,672nm,1.6s					
PMRV				*e*PP	**PP**	**10 50 21.8 -1.3**
PSARD	**Sardoal**	**92.77**	**342**	*e*P	**P**	**10 46 39.5 -0.6**
PSARD				*i* IAmb	IAmb	10 46 44.2
	comp=Z,583nm,1.6s					
PSARD				*e*PP	**PP**	**10 50 22.6 -0.5**
ATD	**Arta Tunnel**	**92.78**	**289**	LR	LR	11 34 23.5
	comp=Z,1µm,18.1s,baz=36,slow=39					
ATD	**Arta Tunnel**	**92.78**	**289**	P	**P**	**10 46 42.6 +2.0**
	SNR=38					
AKET	**Djebel Ketaf**	**92.85**	**332**	P	**P**	**10 46 40.6 -0.1**
CART	**Cartagena**	**92.92**	**336**	P	**P**	**10 46 39.3 -1.5**
TUZ	**Tuapeka**	**92.93**	**166**	P	**P**	**10 46 44.7 +4.4**
PSBE	**So Bento**	**92.99**	**343**	*e*P	**P**	**10 46 39.6 -1.6**
PSBE				*i* IAmb	IAmb	10 46 46.2
	comp=Z,1µm,1.7s					
PSBE				*e*PP	**PP**	**10 50 18.7 -6.1**
HHSZ	**Highcliff Hill**	**93.03**	**165**	P	P	10 46 46.3 +5.5
TLOR	**Lorca, Murcia**	**93.04**	**337**	P	**P**	**10 46 40.6 -0.8**
PMTG	**Montargil**	**93.30**	**342**	*e*P	**P**	**10 46 41.8 -0.7**
PMTG				*i* IAmb	IAmb	10 46 46.6
	comp=Z,604nm,1.6s					
PMTG				*e*PP	**PP**	**10 50 29.0 +1.8**
ABSD	**Ouled Sidi Bra**	**93.31**	**332**	P	**P**	**10 46 41.5 -1.2**
EADA	**Adamuz**	**93.31**	**339**	P	**P**	**10 46 41.8 -0.8**
EBAD	**Badajoz**	**93.33**	**341**	P	**P**	**10 46 41.1 -1.5**
PESTR	**Estremoz**	**93.35**	**342**	P	**P**	**10 46 42.0 -0.8**
PESTR	**Estremoz**	**93.35**	**342**	*e*P	**P**	**10 46 42.1 -0.8**
PESTR				*i* IAmb	IAmb	10 46 47.7
	comp=Z,613nm,1.5s					
PESTR				*e*PP	**PP**	**10 50 29.0 +1.3**
SYZ	**Scrubby Hill**	**93.41**	**166**	P	**P**	**10 46 45.3 +2.9**
EDDR	**Deurdeur**	**93.43**	**333**	P	**P**	**10 46 42.4 -0.8**
ABRIN	**Birine**	**93.48**	**333**	P	**P**	**10 46 42.1 -1.4**
PARRA	**Arraiolos**	**93.50**	**342**	*e*P	**P**	**10 46 41.3 -2.1**
PARRA				*i* IAmb	IAmb	10 46 48.4
	comp=Z,620nm,1.6s					
PARRA				*e*PP	**PP**	**10 50 27.7 -1.1**
APZ	**The Paps**	**93.51**	**167**	P	**P**	**10 46 46.9 +3.9**
ECAB	**El Cabril**	**93.61**	**340**	P	**P**	**10 46 43.5 -0.5**
EKMS	**Oued Kramis**	**93.62**	**335**	P	**P**	**10 46 43.7 -0.3**
PMAFR	**Mafra**	**93.63**	**343**	P	**P**	**10 46 42.0 -2.1**
PMAFR	**Mafra**	**93.63**	**343**	*e*P	**P**	**10 46 42.3 -1.7**
PMAFR				*i* IAmb	IAmb	10 46 48.9
	comp=Z,892nm,1.8s					
PMAFR				*e*PP	**PP**	**10 50 28.5 -1.2**
DWPF	**Disney Wildern**	**93.64**	**43**	P	**P**	**10 46 43.6 -0.6**
DWPF				IAmb	IAmb	10 46 49.2
	comp=Z,691nm,1.9s					
EVO	**Evora**	**93.77**	**342**	P	**P**	**10 46 43.0 -1.7**
EVO	**Evora**	**93.77**	**342**	*e*P	**P**	**10 46 43.0 -1.7**
EVO				*i* IAmb	IAmb	10 46 49.9
	comp=Z,643nm,1.6s					
EVO				*e*PP	**PP**	**10 50 30.1 -0.7**
ENIJ	**Nijar**	**93.82**	**337**	P	**P**	**10 46 43.1 -1.9**
LIS	**Lisbon**	**93.83**	**343**	*e*P	**P**	**10 46 43.5 -1.4**
LIS				IAmb	IAmb	10 46 48.7
	comp=Z,449nm,1.3s					
LIS				*e*PP	**PP**	**10 50 30.8 -0.5**
LIS				*e*SKSac	**SKSac**	**10 57 04.5 -0.9**
LIS	**Lisbon**	**93.83**	**343**	*e*P	**P**	**10 46 43.8 -1.1**
LIS				*i* IAmb	IAmb	10 46 49.1
	comp=Z,596nm,1.7s					
LIS				*e*PP	**PP**	**10 50 29.8 -1.5**
MOE	**Montemor**	**93.85**	**342**	*e*P	**P**	**10 46 43.3 -1.8**
MOE				*i* IAmb	IAmb	10 46 49.3
	comp=Z,615nm,1.6s					
MOE				*e*PP	**PP**	**10 50 33.0 +1.5**
PBAR	**Barrancos**	**93.89**	**341**	P	**P**	**10 46 43.2 -2.0**
PBAR	**Barrancos**	**93.89**	**341**	*e*P	**P**	**10 46 44.9 -0.4**
PBAR				*i* IAmb	IAmb	10 46 49.5
	comp=Z,410nm,1.8s					
PBAR				*e*PP	**PP**	**10 50 34.1 +2.3**
CTZ	**Chatham Island**	**94.03**	**156**	P	**P**	**10 46 47.9 +2.5**
PBEJ	**Beja**	**94.22**	**342**	*e*P	**P**	**10 46 45.6 -1.1**
PBEJ				*i* IAmb	IAmb	10 46 52.1
	comp=Z,706nm,1.7s					
PBEJ				*e*PP	**PP**	**10 50 31.9 -2.4**
MESJ	**Messejana**	**94.48**	**342**	*e*P	**P**	**10 46 46.4 -1.6**
MESJ				IAmb	IAmb	10 46 51.3
	comp=Z,470nm,1.2s					
MESJ				*e*PP	**PP**	**10 50 35.9 -0.5**
MESJ				*e*PKiKP	**PKiKP**	**10 51 29.2 -0.9**
MESJ				*e*SKSac	**SKSac**	**10 57 07.9 -1.1**
MESJ	**Messejana**	**94.48**	**342**	*e*P	**P**	**10 46 46.5 -1.5**
MESJ				*i* IAmb	IAmb	10 46 52.4
	comp=Z,695nm,1.6s					
MESJ				*e*PP	**PP**	**10 50 36.3 -0.1**
OFRG	**Douar Fergoug**	**94.54**	**335**	P	**P**	**10 46 47.7 -0.6**
EMAL	**Malaga-Limoner**	**94.61**	**339**	P	**P**	**10 46 46.5 -2.0**
PCVE	**Castro Verde**	**94.64**	**342**	*e*P	**P**	**10 46 47.2 -1.5**
PCVE				*i* IAmb	IAmb	10 46 54.1
	comp=Z,739nm,1.6s					
PCVE				*e*PP	**PP**	**10 50 40.8 +3.2**
EADEB	**Ain Deheb**	**94.69**	**334**	P	**P**	**10 46 48.0 -1.1**
ODJA	**Bouhanifia**	**94.77**	**335**	P	**P**	**10 46 48.9 -0.5**
PVAQ	**Vaqueiros**	**94.78**	**341**	IAmb	IAmb	10 46 53.1
	comp=Z,436nm,1.6s					
PVAQ	**Vaqueiros**	**94.78**	**341**	*e*P	**P**	**10 46 49.1 -0.2**
PVAQ				*i* IAmb	IAmb	10 46 53.8
	comp=Z,315nm,2.0s					
PVAQ				*e*PP	**PP**	**10 50 40.1 +1.3**
PTEO	**Sao Teotonio**	**94.87**	**342**	*e*P	**P**	**10 46 48.5 -1.2**
PTEO				*i* IAmb	IAmb	10 46 55.1
	comp=Z,1µm,1.6s					
PTEO				*e*PP	**PP**	**10 50 42.2 +2.8**
PBDV	**Barranco-do-Ve**	**94.98**	**342**	*e*P	**P**	**10 46 50.3 0.0**
PBDV				*i* IAmb	IAmb	10 46 56.0
	comp=Z,474nm,1.6s					
PBDV				*e*PP	**PP**	**10 50 44.0 +3.6**
MORF	**Marmelete**	**95.08**	**342**	*e*P	**P**	**10 46 49.1 -1.7**
MORF				IAmb	IAmb	10 46 54.8
	comp=Z,1µm,1.6s					
MORF				*e*PP	**PP**	**10 50 40.5 -0.7**
MORF				*e*SKSac	**SKSac**	**10 57 11.1 -1.2**
MORF	**Marmelete**	**95.08**	**342**	*e*P	**P**	**10 46 49.2 -1.5**
MORF				*i* IAmb	IAmb	10 46 56.1
	comp=Z,1µm,1.7s					
MORF				*e*PP	**PP**	**10 50 44.3 +3.2**
PFVI	**Vila Bisbo**	**95.29**	**342**	IAmb	IAmb	10 46 58.1
	comp=Z,648nm,1.3s					
PFVI	**Vila Bisbo**	**95.29**	**342**	*e*P	**P**	**10 46 51.5 -0.1**
PFVI				*i* IAmb	IAmb	10 46 56.9
	comp=Z,819nm,1.7s					
PFVI				*e*PP	**PP**	**10 50 45.6 +3.0**
SFS	**San Fernando**	**95.33**	**340**	P	**P**	**10 46 51.5 -0.3**
WMELI	**Melilla**	**95.58**	**337**	P	**P**	**10 46 51.2 -1.8**
MSEY	**Mahe Island**	**95.66**	**269**	P	**P**	**10 46 53.6 0.0**
MSEY	**Mahe Island**	**95.66**	**269**	*i* P	**P**	**10 46 53.5 -0.2**
	SNR=11					
MSEY	**Mahe Island**	**95.66**	**269**	P	**P**	**10 46 53.7 0.0**
MSEY				pmax	pmax	
	comp=Z,82nm,1.0s					
MSEY	**Mahe Island**	**95.66**	**269**	P	**P**	**10 46 54.2 +0.4**
CEU	**Ceuta**	**95.67**	**339**	P	**P**	**10 46 52.0 -1.3**
SRBC	**Serra Branca**	**95.77**	**358**	*e*P	**P**	**10 46 55.9 +2.1**
PGRA	**Graciosa**	**95.78**	**358**	*e*P	**P**	**10 46 54.8 +0.9**
PAGU	**Agualva, Azore**	**96.01**	**357**	*e*P	**P**	**10 46 59.0 +4.0**
PSCM	**Serra do Cume**	**96.07**	**357**	*e*P	**P**	**10 46 57.1 +1.9**
ROSA	**Rosais**	**96.09**	**358**	*e*P	**P**	**10 46 57.4 +2.1**

ADH	**Angra Heroismo**	**96.12**	**357**	*e*P	**P**	**10 46 56.8 +1.4**
PMAN	**Manadas**	**96.17**	**358**	*e*P	**P**	**10 46 58.2 +2.5**
PCED	**Cedros**	**96.19**	**358**	*e*P	**P**	**10 46 59.3 +3.6**
CALA	**Caldeira**	**96.24**	**358**	*e*P	**P**	**10 46 56.1 0.0**
HOR	**Horta**	**96.29**	**358**	*e*P	**P**	**10 46 58.3 +2.1**
PICO	**Pico**	**96.31**	**358**	*e*P	**P**	**10 46 57.3 +0.9**
PPNO	**Prainha do Nor**	**96.34**	**358**	*e*P	P	10 47 01.3 +4.8
PCAN	**Candelaria**	**96.35**	**358**	*e*P	P	10 47 01.6 +5.1
PSET	**Sete Cidades**	**96.88**	**356**	*e*P	**P**	**10 46 58.9 -0.1**
BART	**Pico Bartolome**	**96.90**	**355**	*e*PP	**PP**	**10 50 55.8 +0.7**
PGRON	**Lagoa das Cont**	**96.92**	**355**	*e*P	**P**	**10 47 03.6 +4.5**
CMLA	**Cha da Macela**	**96.93**	**356**	*e*P	**P**	**10 47 00.3 +1.2**
PDA	**Ponta Delgada**	**96.96**	**356**	*e*P	**P**	**10 47 02.3 +3.1**
FURI	**Furi**	**97.48**	**291**	LR	LR	11 37 06.0
	comp=Z,17µm,18.9s,baz=35,slow=39					
PSMN	**Pico do Norte,**	**97.66**	**355**	*e*P	Pdif	10 47 03.9 +1.4
IFR	**Ifrane**	**97.86**	**338**	P	**P**	**10 47 01.7 -1.9**
MD01	**Midelt array s**	**98.38**	**338**	P	**P**	**10 47 04.5 -1.4**
MDT	**Midelt**	**98.39**	**338**	P	**P**	**10 47 04.7 -1.2**
	comp=Z,42nm,1.0s,baz=37,slow=4.5,SNR=36					
	comp=Z,42nm,1.0s					
AVE	**Averroes**	**98.64**	**340**	P	**P**	**10 47 05.5 -1.4**
PMPST	**Porto Santo, M**	**100.61**	**347**	*e*P	**Pdif**	**10 47 15.5 -0.2**
PMPS	**Porto Santo**	**100.64**	**347**	*e*P	**Pdif**	**10 47 16.1 +0.4**
PMPS				*e*PP	**PP**	**10 51 24.4 +0.9**
TIO	**Tiouine**	**100.87**	**339**	P	**Pdif**	**10 47 15.7 -1.3**
PMAR	**Madeira**	**101.05**	**348**	*e*P	**Pdif**	**10 47 18.4 +0.6**
PMAR				*e*PP	**PP**	**10 51 28.0 +1.2**
FUL	**Funchal**	**101.12**	**348**	*e*P	**Pdif**	**10 47 19.0 +1.1**
FUL				*e*PP	**PP**	**10 51 27.8 +0.7**
LODK	**Lodwar**	**103.73**	**290**	P	**Pdif**	**10 47 30.8 +1.0**
	SNR=11					
KMBO	**Kilima Mbogo**	**105.81**	**285**	Pdiff	**Pdif**	**10 47 39.4 +0.1**
	comp=Z,4.6nm,0.4s,baz=355,slow=2.2,SNR=12					
KMBO				PP	**PP**	**10 52 04.2 +0.5**
	comp=Z,31nm,0.9s,baz=33,slow=9.0,SNR=3.7					
KIBK	**Kibwezi**	**106.15**	**283**	P	**Pdif**	**10 47 41.5 +0.9**
TORD	**Torodi Ar. Bea**	**114.49**	**325**	Pdiff	**Pdif**	**10 48 17.7 +0.1**
	comp=Z,7.4nm,1.0s,baz=32,slow=6.1,SNR=19					
TORD				PKP	**PKiKP**	**10 52 06.4 -0.9**
	comp=Z,25nm,0.7s,baz=35,slow=5.1,SNR=29					
TORD				PP	**PP**	**10 53 02.1 -3.0**
	comp=Z,185nm,1.1s,baz=360,slow=5.2,SNR=10					
TORD				PKKPbc	**PKKPbc**	**11 02 46.9 +2.2**
	comp=Z,68nm,1.0s,baz=237,slow=4.8,SNR=24					
TORD				SKKPbc	SKKPbc	11 06 14.2 +1.8
	comp=Z,16nm,1.0s,baz=209,slow=7.2,SNR=4.7					
SDV	**Santo Domingo**	**115.28**	**44**		**PKiKP**	**10 52 07.9 -1.3**
CASY	**Casey**	**115.30**	**196**		**PKiKP**	**10 52 08.8 +1.6**
FOMA	**Nahampoana Res**	**115.45**	**260**		**PKiKP**	**10 52 11.8 +3.0**
ROSC	**El Rosal**	**116.83**	**50**	PKP	**PKPdf**	**10 52 11.9 -0.5**
	comp=Z,86nm,1.1s,baz=136,slow=2.5,SNR=9.6					
BBTS	**Babate**	**118.65**	**344**	PKP	**PKPdf**	**10 52 14.6 -0.7**
	comp=Z,30nm,0.8s,baz=174,slow=3.3,SNR=6.5					
EDA	**Edea**	**118.70**	**311**		**PKPdf**	**10 52 14.6 -0.9**
LSZ	**Lusaka**	**122.15**	**281**	*i* P	**PKiKP**	**10 52 22.7 +0.5**
DBIC	**Dimbokro**	**122.95**	**328**	Pdiff	**Pdif**	**10 48 56.3 +1.1**
	comp=Z,5.4nm,1.0s,baz=20,slow=6.2,SNR=4.9					
DBIC				PKP	**PKPdf**	**10 52 22.8 -0.9**
	comp=Z,175nm,0.9s,baz=68,slow=1.8,SNR=32					
DBIC				PP	**PP**	**10 54 00.0 -3.3**
	comp=Z,240nm,1.0s,baz=45,slow=8.1,SNR=7.9					
DBIC				PKKPbc	**PKKPab**	**11 02 17.1 -1.2**
	comp=Z,49nm,0.8s,baz=219,slow=4.4,SNR=29					
DBIC				SKKPbc	SKKPbc	11 05 47.8 +1.9
	comp=Z,12nm,1.0s,baz=198,slow=7.5,SNR=3.4					
VNDA	**Vanda**	**123.04**	**177**	PKP	**PKPdf**	**10 52 21.7 -0.1**
	comp=Z,108nm,0.9s,baz=311,slow=4.6,SNR=49					
VNDA				PP	**PP**	**10 54 08.0 +3.8**
	comp=Z,13nm,0.8s,baz=350,slow=7.7,SNR=3.5					
VNDA				PKKPbc	**PKKPbc**	**11 02 16.7 +1.9**
	comp=Z,57nm,1.1s,baz=196,slow=3.2,SNR=7.5					
VNDA				SKKPbc	SKKPbc	11 05 49.7 -2.8
	comp=Z,28nm,1.2s,baz=280,slow=6.3,SNR=3.4					
ATAH	**Atahualpa**	**124.15**	**62**	PKP	**PKPdf**	**10 52 26.1 -0.3**
	comp=Z,99nm,0.8s,baz=352,slow=3.0,SNR=28					
ATAH				PKKPbc	**PKKPab**	**11 02 13.8 +1.4**
	comp=Z,11nm,0.9s,baz=26,slow=5.0,SNR=4.2					
BLWY	**Bulawayo**	**125.17**	**277**	*i* P	**PKPdf**	**10 52 27.7 -0.1**
BOAV	**Boa Vista**	**125.63**	**37**	*e*P	**PKPdf**	**10 52 26.0 -2.8**
MUSN	**Musina, Limpop**	**125.71**	**274**	*i* P	**PKPdf**	**10 52 28.5 -0.1**
KSANE	**Kasane**	**125.98**	**282**	*i* P	**PKPdf**	**10 52 27.9 -1.4**
BROLN	**Tlhalogang**	**126.70**	**277**	*i* P	**PKPdf**	**10 52 30.2 -0.5**
KHWEE	**KHWEE**	**128.57**	**278**	*i* P	**PKPdf**	**10 52 33.8 -0.5**
NNA	**Nana**	**128.85**	**64**	PKP	**PKPdf**	**10 52 34.9 0.0**
	comp=Z,168nm,0.7s,baz=337,slow=7.1,SNR=5.0					
NNA				SKPbc	SKPbc	10 55 42.8
	comp=Z,51nm,1.0s,baz=201,slow=5.3,SNR=6.8					
TEFE	**Tefe**	**128.94**	**45**	*e*P	**PKPdf**	**10 52 31.5 -3.6**
XAUDM	**Khaudum**	**129.11**	**284**	*i* P	**PKPdf**	**10 52 32.5 -2.9**
LPHEP	**Lephephe**	**129.21**	**276**	*i* P	**PKPdf**	**10 52 34.6 -0.8**
MAW	**Mawson**	**129.64**	**210**	PKP	**PKiKP**	**10 52 35.5 +0.1**
	comp=Z,118nm,0.8s,baz=72,slow=2.4,SNR=16					
MAW				SKPbc	SKPbc	10 55 45.1 +2.3
	comp=Z,94nm,1.0s,baz=25,slow=2.6,SNR=5.4					
LBTB	**Lobatse**	**130.44**	**274**	*i* P	PKPpre	10 52 31.4
MACA	**Manacapuru-AM**	**130.52**	**40**	*e*P	**PKPdf**	**10 52 34.7 -3.3**
GRTLG	**Ghanzi**	**131.12**	**281**	*i* P	**PKPdf**	**10 52 37.4 -1.7**
KGCAE	**Kacgae**	**131.42**	**279**	*i* P	**PKPdf**	**10 52 38.3 -1.4**
MAKGR	**Makgori**	**131.50**	**274**	*i* P	**PKiKP**	**10 52 40.9 +0.2**
TSUM	**Tsumeb**	**132.11**	**287**	*i* P	PKPpre	10 52 27.9
BOSA	**Boshof**	**132.90**	**271**	PKhKP	PKPpre	10 52 30.9
	comp=Z,5.3nm,0.6s,baz=63,slow=1.1,SNR=8.1					
BOSA				PKP	**PKPdf**	**10 52 41.4 -0.8**
	comp=Z,32nm,0.9s,baz=34,slow=1.1,SNR=18					
BOSA				SKPbc	**SKPab**	**10 55 57.0 -0.6**
	comp=Z,194nm,1.0s,baz=57,slow=3.1,SNR=13					
BOSA				SKKPbc	**SKKPbc**	**11 05 15.0 +0.8**
	comp=Z,13nm,1.1s,baz=220,slow=4.9,SNR=3.0					
BOSA	**Boshof**	**132.90**	**271**	*i* P	PKPdf	10 52 32.8 -9.5
KOOLE	**Kule**	**132.90**	**281**	*i* P	**PKPdf**	**10 52 40.0 -2.5**
QSPA	**South Pole Qui**	**135.26**	**180**	PKhKP	PKPpre	10 52 32.9
	comp=Z,37nm,0.9s,baz=350,slow=2.8,SNR=16					
QSPA				PKP	**PKiKP**	**10 52 46.8 -0.2**
	comp=Z,532nm,1.1s,baz=5.5,slow=1.3,SNR=33					
QSPA				PP	**PP**	**10 55 27.0 +3.1**
	comp=Z,36nm,0.8s,baz=345,slow=4.0,SNR=14					
QSPA				SKPbc	**SKPbc**	**10 56 02.4 +0.3**
	comp=Z,131nm,1.0s,baz=210,slow=0.3,SNR=7.9					
QSPA				SKKPbc	**SKKPbc**	**11 05 09.9 +0.5**
	comp=Z,75nm,1.0s,baz=204,slow=2.1,SNR=6.2					
LPAZ	**La Paz**	**137.53**	**59**	PKhKP	PKPpre	10 52 22.2
	comp=Z,13nm,0.6s,baz=274,slow=8.1,SNR=19					
LPAZ				PKP	**PKiKP**	**10 52 53.4 -0.4**
	comp=Z,87nm,0.8s,baz=34,slow=2.4,SNR=17					
CLDB	**Colider**	**139.55**	**39**	*e*P	PKPpre	10 52 51.2
PDRB	**Porto dos Gac**	**139.78**	**41**	*e*P	**PKPdf**	**10 52 52.0 -3.3**
PB08	**IPOC Station P**	**139.81**	**64**	PKP	PKPpre	10 52 49.7
NBPA	**Parau_RN**	**140.04**	**9**	*e*P	**PKPdf**	**10 52 52.3 -3.5**
RCBR	**Riachuelo**	**140.24**	**7**	PKhKP	PKPpre	10 52 48.8
	comp=Z,5.7nm,0.9s,baz=190,slow=14,SNR=2.6					
RCBR				PP	**PP**	**10 55 54.0 -0.2**
	comp=Z,25nm,1.1s,baz=350,slow=16,SNR=3.8					
RCBR	**Riachuelo**	**140.24**	**7**	*e*P	**PKPdf**	**10 52 53.9 -2.3**
SMTB	**Santa Maria do**	**140.82**	**26**	*e*P	**PKPdf**	**10 52 53.6 -3.6**
NBPV	**Pedro Velho**	**140.88**	**7**	*e*P	**PKPdf**	**10 52 53.6 -3.7**
SIV	**San Ignacio**	**141.33**	**50**	PKhKP	PKPpre	10 52 49.7
	comp=Z,20nm,0.8s,baz=294,slow=2.6,SNR=34					
PB10	**IPOC Station P**	**141.34**	**69**		**PKPdf**	**10 52 56.2 -1.6**
H03N2	**Juan Fernandez**	**141.73**	**89**	PKP	**PKPdf**	**10 52 58.4 +0.5**
	baz=161,slow=16,SNR=15					
H03N2				T	T	13 31 05.9
	baz=305,slow=77,SNR=95					
H03N3	**Juan Fernandez**	**141.75**	**89**	PKP	**PKPdf**	**10 52 58.7 +0.7**
	baz=161,slow=16,SNR=7.4					
H03N3				T	T	13 31 10.4
	baz=305,slow=77,SNR=109					
H03N1	**Juan Fernandez**	**141.75**	**89**	PKP	**PKPdf**	**10 52 58.3 +0.5**
	baz=161,slow=16,SNR=6.2					
H03N1				T	T	13 31 05.6
	baz=305,slow=77,SNR=198					
PTLB	**Pontes e Lacer**	**141.90**	**47**	*e*P	**PKPdf**	**10 52 56.0 -3.0**
H03S2	**Juan Fernandez**	**141.95**	**89**	T	T	13 31 24.2
	baz=288,slow=75,SNR=14					
H03S3	**Juan Fernandez**	**141.96**	**89**	T	T	13 31 08.0
	baz=288,slow=75,SNR=9.8					
H03S1	**Juan Fernandez**	**141.97**	**89**	T	T	13 31 24.6
	baz=288,slow=75,SNR=11					
PB14	**IPOC Station P**	**142.20**	**70**	PKP	**PKPdf**	**10 52 52.3 -7.5**
SNDB	**Serra Nova Dou**	**142.41**	**34**	*e*P	**PKPdf**	**10 52 57.9 -2.1**
ELIB	**Princess Elisa**	**143.42**	**205**	*d*PKPdf	PKPbc	10 52 58.1 +0.1
SHEL	**Horse Pasture**	**143.62**	**316**		PKPbc	10 53 00.3 +0.3
SHEL	**Horse Pasture**	**143.62**	**316**	PKIKP	PKPbc	10 53 00.3 +0.4
SALV	**Santo Antonio**	**144.00**	**43**	*e*P	PKPab	10 52 59.0 -1.4
LCO	**Las Campanas**	**144.88**	**76**		PKPbc	10 53 03.6 -0.2

LCO	**Las Campanas**	**144.88**	**76**	PKIKP	PKPbc	10 53 03.6 -0.2
SDBA	**SAO DESIDERIO**	**144.98**	**24**	*e*P	PKPbc	10 53 01.5 -2.6
ARAG	**Araguaiana, MT**	**145.57**	**37**	*e*P	**PKPdf**	**10 53 01.9 -3.6**
PP1B	**Ponte de Pedra**	**145.85**	**43**	*e*P	**PKPdf**	**10 53 02.5 -3.4**
BDFB	**Brasilia**	**147.01**	**31**	PKPbc	**PKPbc**	**10 53 09.7 -0.5**
	comp=Z,154nm,0.9s,baz=224,slow=0.4,SNR=79					
BDFB	**Brasilia**	**147.01**	**31**		**PKPdf**	**10 53 08.3 +0.3**
NVL	**N'lazarevskaya**	**147.29**	**205**	*e*PKIKP	**PKPdf**	**10 53 07.4 +0.7**
NVL				*e*		10 56 38.0
NVL				*e*PPP	PPP	10 59 55.9
NVL				*e*		11 00 01.8
NVL				*e*SS	SS	11 15 29.8 +3.8
NVL				*e*SSS	SSS	11 21 04.7
NVL				pmax	pmax	
	comp=Z,2µm,1.0s					
BDQN	**Bodoquena, MS**	**147.30**	**49**	*e*P	**PKPdf**	**10 53 06.2 -2.1**
JANB	**Januaria**	**147.66**	**24**	*e*P	**PKPdf**	**10 53 06.1 -2.9**
C2SB	**Chapadao do Su**	**147.82**	**41**	*e*P	**PKPdf**	**10 53 06.0 -3.1**
MURT	**Porto Murtinho**	**147.83**	**51**	*e*P	**PKPdf**	**10 53 06.0 -3.1**
CFA	**Coronel Fontan**	**148.15**	**77**	PKPbc	**PKPbc**	**10 53 12.2 -0.7**
	comp=Z,287nm,0.6s,baz=288,slow=2.4,SNR=97					
NBIT	**Itapeh - BA**	**148.71**	**16**	*e*P	**PKPdf**	**10 53 07.0 -3.7**
CMC01	**Camacan, BA**	**149.11**	**16**	*e*P	**PKPdf**	**10 53 07.8 -3.6**
ITRB	**Iturama**	**149.75**	**38**	*e*P	**PKPdf**	**10 53 09.0 -3.3**
GUA01	**Guaratinga, BA**	**150.25**	**17**	*e*P	**PKPdf**	**10 53 11.7 -1.4**
AMBA	**Amambai (Brazi**	**150.26**	**49**	*e*P	**PKPdf**	**10 53 11.5 -1.5**
SNAA	**Sanae**	**150.51**	**198**	⇑P	**PKPdf**	**10 53 14.3 +2.4**
	comp=Z,24µm,0.9s					
SNAA	**Sanae**	**150.51**	**198**	PKP	**PKPdf**	**10 53 12.1 +0.1**
	comp=Z,121nm,0.9s,baz=91,slow=1.5,SNR=31					
SNAA				PKPbc	**PKPbc**	**10 53 17.8 +0.3**
	comp=Z,1µm,1.0s,baz=116,slow=1.3,SNR=109					
SNAA	**Sanae**	**150.51**	**198**		**PKPdf**	**10 53 11.9 -0.1**
SNAA				PKPbc	**PKPbc**	**10 53 17.3 -0.2**
SNAA	**Sanae**	**150.51**	**198**	PKIKP	**PKPdf**	**10 53 11.9 -0.1**
DIAM	**Diamantina, MG**	**150.92**	**25**	*e*P	**PKPdf**	**10 53 12.8 -1.5**
PCMB	**Pacaembu**	**151.01**	**41**	*e*P	**PKPdf**	**10 53 11.3 -2.9**
PLCA	**Paso Flores**	**151.06**	**95**	PKP	**PKPdf**	**10 53 14.1 +0.4**
	comp=Z,142nm,1.1s,baz=243,slow=1.6,SNR=26					
PLCA				PKPbc	**PKPbc**	**10 53 19.9 +0.2**
	comp=Z,787nm,0.9s,baz=250,slow=2.6,SNR=78					
PLCA	**Paso Flores**	**151.06**	**95**	*e*P	**PKPdf**	**10 53 11.1 -2.7**

CEVE	**Cerro Verde**	**2.55**	**90**	*e*P		**Pn**	**10 39 33.2**	**+0.6**
CEVE				IAML			10 40 06.5	
	comp=Z,781nm,0.2s							
JAYA	**Jayaque - finc**	**2.72**	**94**	P		**Pn**	**10 39 35.9**	**+0.9**
JAYA	**Jayaque - finc**	**2.72**	**94**	*e*P		**Pn**	**10 39 35.5**	**+0.5**
JAYA	**Jayaque - finc**	**2.72**	**94**	*i* P		**Pn**	**10 39 34.9**	**-0.1**
MTO3	**Montecristo**	**2.85**	**79**	P		**Pn**	**10 39 37.2**	**+0.5**
MTO3				S		**Sn**	**10 40 12.4**	**+1.2**
MTO3	**Montecristo**	**2.85**	**79**	*i* P		**Pn**	**10 39 37.3**	**+0.5**
PMON	**Piamonte**	**2.85**	**92**	P		**Pn**	**10 39 38.2**	**+1.5**
PMON				S		**Sn**	**10 40 12.3**	**+1.3**
CARR	**Arriaga**	**2.88**	**326**	*e*P		**Pn**	**10 39 39.2**	**+2.3**
CARR				*e*S		**Sn**	**10 40 09.8**	**-1.8**
BOQS	**Boqueron**	**2.88**	**92**	*e*P		**Pn**	**10 39 38.5**	**+1.3**
ZAFR2	**Estanzuela, Za**	**2.90**	**75**	*i* P		**Pn**	**10 39 39.4**	**+2.1**
ESQI	**Esquipulas**	**2.90**	**76**	P		**Pn**	**10 39 38.7**	**+1.3**
ESQI				S		**Sn**	**10 40 14.5**	**+2.1**
ESQI	**Esquipulas**	**2.90**	**76**	*e*P		**Pn**	**10 39 38.6**	**+1.2**
UEES	**Universidad Ev**	**2.92**	**92**	P		**Pn**	**10 39 39.1**	**+1.5**
TGIG		**3.03**	**344**	*e*P		**Pn**	**10 39 40.5**	**+1.4**
TGIG				*e*S		**Sn**	**10 40 12.7**	**-2.7**
PAVA	**Las Pavas**	**3.22**	**92**	P		**Pn**	**10 39 42.9**	**+1.2**
PAVA				S		**Sn**	**10 40 22.5**	**+2.4**
SCLA	**Alcaldia de Sa**	**3.42**	**92**	P		**Pn**	**10 39 45.2**	**+0.8**
SARH	**Santa Rosa de**	**3.50**	**74**	P		**Pn**	**10 39 46.7**	**+1.2**
SARH	**Santa Rosa de**	**3.50**	**74**	*i* P		**Pn**	**10 39 46.9**	**+1.3**
PETF	**Flores**	**3.81**	**37**	*e*P		**Pn**	**10 39 51.8**	**+2.0**
CMIG	**Matias Romero**	**4.10**	**322**	*e*P		**Pn**	**10 39 55.1**	**+1.3**
CMIG				*e*S		**Sn**	**10 40 41.9**	**0.0**
HUIG	**Huatulco**	**4.19**	**298**	*e*P		**Pn**	**10 39 57.3**	**+2.2**
HUIG				*e*S		**Sn**	**10 40 39.8**	**-4.3**
NEUV	**Arroyo Zacate**	**5.14**	**319**	*e*P		**Pn**	**10 40 10.3**	**+2.2**
NEUV				*e*S		**Sn**	**10 41 07.3**	**-0.2**
PEIG	**Puerto Escondi**	**5.20**	**295**	*e*P		**Pn**	**10 40 11.3**	**+2.4**
PEIG				*e*S		**Sn**	**10 41 03.2**	**-5.7**
PMUV	**Sontecomapan**	**5.42**	**330**	*e*P		**Pn**	**10 40 12.2**	**+0.1**
YOIG	**Yosondua**	**5.92**	**301**	*e*P		**Pn**	**10 40 22.9**	**+3.8**
YOIG				*e*S		**Sn**	**10 41 30.7**	**+3.6**
PNIG	**Pinotepa**	**6.22**	**295**	*e*P		**Pn**	**10 40 26.2**	**+3.3**
PNIG				*e*S		**Sn**	**10 41 27.1**	**-6.9**
TXIG	**Tlaxiaco**	**6.31**	**303**	*e*P		**Pn**	**10 40 28.1**	**+3.8**
TXIG				*e*S		**Sn**	**10 41 39.7**	**+3.1**
HLIG	**Huajuapan de L**	**6.65**	**307**	*e*P		Pn	10 40 35.2	+6.1
FTIG	**Fresnillo de T**	**6.95**	**306**	*e*P		Pn	10 40 38.8	+5.7
FTIG				*e*S		**Sn**	**10 41 54.2**	**+1.9**
JAUV	**Jalcomulco**	**7.01**	**322**	*e*P		**Pn**	**10 40 34.4**	**+0.6**
JAUV				*e*S		**Sn**	**10 41 51.9**	**-1.7**
MGIG	**Malinaltepec**	**7.01**	**299**	*e*P		**Pn**	**10 40 38.5**	**+4.5**
MGIG				*e*S		**Sn**	**10 41 52.8**	**-1.1**

*ISK **13** 10:43:01.3,38.97N×27.87E,h5km,ML3.8/20*
*AFAD **13** 10:43:01.8,38.97N×27.89E,h10km±1km,MW3.7*
*THE **13** 10:43:02.8,39.0°N±3.2°×2.8E±.°,h5km±15km,M3.5/9,*
MLh3.5/9

ISC 13 10:43:01.9±0.8,38.97N±0.01×27.88E±0.01,h12km±6km, n73,σ0s59/115,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKHS	**Akhisar**	**0.10**	**209**	P		**Pg**	**10 43 04.8**	**+0.1**
AKHS				IAML			10 43 07.0	
	comp=E,2μm,0.6s							
AKHS				S		**Sg**	**10 43 07.1**	**+0.3**
AKS	**Akhisar**	**0.10**	**209**	Pg		**Pg**	**10 43 04.0**	**-0.7**
GORD	**Gordes-Manisa**	**0.24**	**104**	Pg		**Pg**	**10 43 06.9**	**-0.1**
GORD				Sg		**Sg**	**10 43 10.7**	**+0.3**
GOMA	**Golmarmara-Man**	**0.26**	**173**	Pg		**Pg**	**10 43 07.5**	**+0.2**
KTTT	**Salihli**	**0.33**	**148**	P		**Pg**	**10 43 08.9**	**+0.4**
KTTT				S		**Sg**	**10 43 13.4**	**+0.5**
KTTT				IAML			10 43 14.0	
	comp=N,9μm,0.7s							
SOMA	**Soma-Manisa**	**0.33**	**306**	Pg		**Pg**	**10 43 08.2**	**-0.3**
STEP	**BALIKESIR_Sava**	**0.43**	**343**	P		**Pb**	**10 43 11.4**	**0.0**
STEP				S		**Sg**	**10 43 16.7**	**+0.6**
STEP				IAML			10 43 17.0	
	comp=E,1μm,0.6s							
CAMT	**Merkez**	**0.49**	**244**	P		**Pb**	**10 43 12.3**	**-0.2**
CAMT				S		**Sb**	**10 43 20.4**	**+0.7**
CAMT				IAML			10 43 22.0	
	comp=N,8μm,0.5s							
ZEDA	**zmir-Bergama**	**0.62**	**270**	P		**Pb**	**10 43 14.7**	**-0.1**
ZEDA				S		**Sb**	**10 43 23.5**	**+0.1**
ZEDA				IAML			10 43 24.0	
	comp=N,3μm,0.3s							
DEMI	**Demirci**	**0.66**	**83**	P		**Pb**	**10 43 15.2**	**-0.2**
DEMI				S		**Sg**	**10 43 23.7**	**+0.3**
DEMI				IAML			10 43 25.0	
	comp=E,4μm,0.3s							
BALB	**Balikesir**	**0.67**	**0**	Pg		**Pg**	**10 43 15.1**	**+0.1**
ODEM	**Odemis-Izmir**	**0.71**	**167**	Pg		**Pg**	**10 43 15.5**	**-0.1**
MANT	**Manisa**	**0.71**	**131**	P		**Pg**	**10 43 15.7**	**0.0**
MANT				S		**Sg**	**10 43 24.8**	**-0.4**
MANT				IAML			10 43 29.0	
	comp=N,2μm,0.6s							
KULA	**Kula-Manisa**	**0.76**	**126**	Pg		**Pg**	**10 43 16.5**	**-0.1**
DKL	**Dikili**	**0.76**	**278**	Pg		**Pg**	**10 43 16.5**	**-0.1**
BKES	**Balkesir-Mer**	**0.77**	**3**	P		**Pg**	**10 43 16.5**	**-0.2**
BKES				S		**Sg**	**10 43 26.9**	**+0.1**
BKES				IAML			10 43 32.0	
	comp=E,1μm,0.3s							
DURS	**Dursunbey**	**0.79**	**36**	P		**Pg**	**10 43 16.6**	**-0.5**
DURS				S		**Sg**	**10 43 27.4**	**0.0**
DURS				IAML			10 43 32.0	
	comp=N,2μm,0.4s							
BALY	**Balya**	**0.80**	**346**	P		**Pg**	**10 43 17.3**	**0.0**
BALY				S		**Sg**	**10 43 28.0**	**+0.2**
BALY				IAML			10 43 29.0	
	comp=N,3μm,0.3s							
DUVT	**Torbali**	**0.82**	**204**	P		**Pg**	**10 43 17.9**	**+0.2**
DUVT				S		**Sg**	**10 43 28.4**	**+0.1**
DUVT				IAML			10 43 32.0	
	comp=E,2μm,0.3s							
IZMR	**zmir-demi**	**0.83**	**176**	P		**Pb**	**10 43 18.5**	**+0.3**
IZMR				S		**Sg**	**10 43 28.9**	**+0.2**
IZMR				IAML			10 43 32.0	
	comp=N,1μm,0.7s							
DST	**Dursunbey**	**0.86**	**42**	Pg		**Pg**	**10 43 18.4**	**-0.1**
SIMA	**Simav-Kutahya**	**0.87**	**82**	Pg		**Pg**	**10 43 18.5**	**-0.2**
SMAA	**Simav-Kutahya**	**0.87**	**81**	Pg		**Pg**	**10 43 18.5**	**-0.2**
KIRA	**zmir-Kiraz**	**0.87**	**152**	P		**Pg**	**10 43 19.0**	**+0.2**
KIRA				S		**Sg**	**10 43 29.8**	**-0.3**
KIRA				IAML			10 43 35.0	
	comp=N,2μm,0.5s							
BLCB	**Balcova**	**0.87**	**229**	Pg		**Pg**	**10 43 18.6**	**-0.1**
BLCB	**Balcova**	**0.87**	**229**	P		**Pg**	**10 43 18.3**	**-0.5**
BLCB				S		**Sg**	**10 43 29.8**	**-0.4**
YAYO	**Edremit-Balk**	**0.90**	**316**	Pg		**Pg**	**10 43 18.9**	**-0.3**
USAK	**Uak-Merkez**	**0.93**	**105**	P		**Pg**	**10 43 19.7**	**0.0**
USAK				S		**Sg**	**10 43 29.9**	**-2.0**
USAK				IAML			10 43 35.0	
	comp=E,617nm,0.3s							
FOCM	**Foa**	**0.93**	**255**	Pg		**Pg**	**10 43 19.7**	**-0.1**
SUSR	**Susurluk-Balik**	**1.01**	**9**	Pg		**Pg**	**10 43 21.1**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.02**	**179**	Pg		**Pg**	**10 43 21.1**	**-0.4**
CMHT	**Manyas**	**1.05**	**4**	P		**Pb**	**10 43 21.4**	**-0.5**
CMHT				S		**Sg**	**10 43 32.9**	**-2.8**
CMHT				IAML			10 43 38.0	
	comp=E,2μm,0.4s							
SHAP	**Saphane-Kutahy**	**1.05**	**87**	Pg		**Pg**	**10 43 21.8**	**-0.3**
NAZL	**Nazilli-Aydin**	**1.05**	**162**	Pg		**Pb**	**10 43 21.9**	**-0.2**
YENI	**Yenice-Canakka**	**1.09**	**333**	Pn		**Pb**	**10 43 22.4**	**-0.2**
GONE	**Gonen-Balikesi**	**1.09**	**352**	Pn		**Pb**	**10 43 22.7**	**0.0**
KRBN	**Karaburun**	**1.10**	**251**	Pn		**Pb**	**10 43 22.7**	**-0.1**
SULTU	**Buldan**	**1.15**	**142**	P		**Pb**	**10 43 23.8**	**+0.1**
SULTU				S		**Sb**	**10 43 37.7**	**-1.0**
SULTU				IAML			10 43 46.0	
	comp=N,895nm,0.6s							
GMLD	**Gumuldur**	**1.17**	**221**	Pn		**Pg**	**10 43 24.5**	**+0.2**
URLA	**Izmir**	**1.17**	**239**	Pn		**Pb**	**10 43 23.8**	**-0.3**
EMET	**Ktahya-Emet**	**1.20**	**70**	P		**Pb**	**10 43 24.4**	**-0.1**
EMET				S		**Sb**	**10 43 39.4**	**-0.6**
EMET				IAML			10 43 47.0	
	comp=E,2μm,0.6s							
KUSD	**Kusadasi-Aydin**	**1.20**	**203**	Pn		**Pg**	**10 43 24.8**	**-0.1**
GEDZ	**Gediz**	**1.20**	**86**	Pn		**Pn**	**10 43 24.6**	**0.0**
CANM	**Can-anakkale**	**1.22**	**329**	Pn		**Pb**	**10 43 25.1**	**+0.1**
ESEN	**Aydn-Nazilli**	**1.22**	**162**	P		**Pb**	**10 43 25.2**	**+0.2**
ESEN				S		**Sb**	**10 43 40.2**	**-0.5**
ESEN				IAML			10 43 43.0	
	comp=N,405nm,0.4s							

GDZ	**Gediz**	**1.26**	**84**	P		**Pg**	**10 43 26.1**	**0.0**
GDZ				S		**Sb**	**10 43 41.0**	**-0.8**
GDZ				IAML			10 43 45.0	
	comp=E,1μm,0.6s							
PRK	**Paraskevi**	**1.28**	**283**	P		**Pb**	**10 43 26.1**	**+0.2**
PRK				S		**Sg**	**10 43 43.8**	**+0.8**
AYDN	**Tasoluk**	**1.30**	**180**	P		**Pn**	**10 43 25.7**	**-0.3**
AYDN				S		**Sb**	**10 43 42.8**	**-0.3**
AYDN				IAML			10 43 49.0	
	comp=N,1μm,0.8s							
ORLT	**Orhaneli**	**1.34**	**36**	P		**Pb**	**10 43 26.8**	**-0.1**
ORLT				S		**Sg**	**10 43 45.4**	**+0.4**
ORLT				IAML			10 43 49.0	
	comp=N,4μm,0.4s							
GCAM	**G?zelcaml?**	**1.36**	**202**	Pn		**Pb**	**10 43 27.5**	**+0.2**
CESE	**eme**	**1.39**	**243**	Pn		**Pb**	**10 43 28.0**	**+0.2**
PASA	**Karahalli, USA**	**1.41**	**116**	P		**Pb**	**10 43 27.9**	**-0.2**
PASA				S		**Sn**	**10 43 45.2**	**-0.7**
PASA				IAML			10 43 51.0	
	comp=E,246nm,0.4s							
EZN	**Ezine**	**1.48**	**306**	P		**Pn**	**10 43 28.6**	**+0.3**
EZN				S		**Sg**	**10 43 49.8**	**+0.4**
SMG	**Samos**	**1.50**	**213**	P		**Pn**	**10 43 27.9**	**-0.8**
ULDT	**Uludag**	**1.53**	**39**	P		**Pb**	**10 43 30.6**	**+0.3**
ULDT				S		**Sn**	**10 43 49.5**	**+0.4**
ULDT				IAML			10 43 56.0	
	comp=E,1μm,0.4s							
CHOS	**Chios island**	**1.54**	**248**	P		**Pn**	**10 43 29.4**	**+0.2**
CHOS				S		**Sg**	**10 43 51.8**	**+0.4**
BNAZ	**Uak-Banaz**	**1.59**	**100**	P		**Pb**	**10 43 30.9**	**-0.4**
BNAZ				S		**Sn**	**10 43 50.8**	**+0.2**
BNAZ				IAML			10 44 02.0	
	comp=E,1μm,0.6s							
SIGR	**SIGRI**	**1.59**	**279**	P		**Pn**	**10 43 30.2**	**+0.4**
SIGR				S		**Sb**	**10 43 51.5**	**+0.3**
DNIZ	**Denizli-Tavas-**	**1.62**	**145**	P		**Pn**	**10 43 30.8**	**+0.4**
DNIZ				S		**Sg**	**10 43 55.3**	**+1.3**
DNIZ				IAML			10 44 00.0	
	comp=E,538nm,0.5s							
DOMA	**Ktahya-Doman**	**1.63**	**59**	P		**Pb**	**10 43 32.6**	**+0.6**
DOMA				S		**Sb**	**10 43 53.3**	**+0.8**
DOMA				IAML			10 43 59.0	
	comp=N,2μm,0.5s							
IGD	**Bursa**	**1.65**	**38**	P		**Pn**	**10 43 31.5**	**+0.8**
IGD				S		**Sb**	**10 43 54.1**	**+1.0**
IGD				IAML			10 43 56.0	
	comp=E,676nm,0.4s							
ANDZ	**Kutahya, Merke**	**1.66**	**70**	P		**Pb**	**10 43 33.0**	**+0.5**
ANDZ				S		**Sg**	**10 43 55.7**	**+0.3**
ANDZ				IAML			10 43 57.0	
	comp=E,1μm,0.4s							
TAVA	**DENIZLI_Tavas**	**1.71**	**151**	P		**Pn**	**10 43 31.8**	**+0.2**
TAVA				S		**Sn**	**10 43 51.5**	**-1.8**
TAVA				IAML			10 44 05.0	
	comp=E,165nm,1.0s							
KUTH	**Kutahya**	**1.72**	**75**	P		**Pg**	**10 43 34.8**	**-0.1**
KUTH				S		**Sg**	**10 43 57.9**	**+0.6**
KUTH				IAML			10 43 59.0	
	comp=E,2μm,0.7s							
MULA	**Mugla, Merkez-**	**1.74**	**168**	P		**Pn**	**10 43 32.4**	**+0.3**
MULA				S		**Sg**	**10 43 57.8**	**-0.1**
MULA				IAML			10 44 00.0	
	comp=E,694nm,0.8s							
INCE	**Denizli-Bozkur**	**1.83**	**133**	P		**Pn**	**10 43 33.7**	**+0.4**
INCE				S		**Sg**	**10 44 02.4**	**+1.6**
INCE				IAML			10 44 15.0	
	comp=N,119nm,1.3s							
YER	**Yerkesik**	**1.86**	**170**	P		**Pn**	**10 43 33.9**	**+0.3**
AFYO	**Afyonkarahisar**	**1.90**	**95**	P		**Pn**	**10 43 35.0**	**+0.8**
AFYO				S		**Sg**	**10 44 02.7**	**-0.3**
AFYO				IAML			10 44 11.0	
	comp=E,815nm,0.7s							
BODT	**Bodrum**	**1.95**	**193**	P		**Pn**	**10 43 35.6**	**+0.7**
GADA	**Gvkgeada**	**1.96**	**309**	P		**Pn**	**10 43 35.5**	**+0.5**
GADA				S		**Sb**	**10 44 02.0**	**+0.2**
BRDR	**BURDUR-Merkez**	**2.14**	**126**	P		**Pn**	**10 43 38.0**	**+0.5**
BRDR				S		**Sg**	**10 44 11.6**	**+1.1**
BRDR				IAML			10 44 19.0	
	comp=E,121nm,0.6s							
SMTH	**Samothraki Isl**	**2.35**	**310**	P		**Pn**	**10 43 40.8**	**+0.4**
ALN	**Alexandroupoli**	**2.39**	**324**	P		**Pn**	**10 43 41.3**	**+0.5**
ALN				S		**Sb**	**10 44 13.1**	**-1.1**

Gll 13 10:44:24.9±0.0,29.715N±0.004×36.521E±0.001,h0km, confirmed,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HRFI	**Mount Harif**	**1.33**	**284**	P		Pn	10 44 50.9	+0.2
HRFI				S		Sn	10 45 09.3	+0.1
EIL	**Elat**	**1.37**	**269**	P		Pb	10 44 51.3	0.0
EIL				S		Sn	10 45 10.6	+0.5
MBRI	**Mt Berech**	**1.40**	**274**	P		Pg	10 44 51.7	0.0
MBRI				S		Sn	10 45 11.6	+0.6
PRNI	**Paran**	**1.46**	**296**	P		Pn	10 44 51.5	-1.0
PRNI				S		Sn	10 45 12.4	0.0
KRMI	**Paran Flat**	**1.61**	**285**	P		Pn	10 44 54.1	-0.5
KRMI				S		Sg	10 45 17.2	+0.5
GHAJ	**Ghor Haditha**	**1.79**	**333**	P		Pn	10 44 57.0	+0.1
GHAJ				S		Sn	10 45 20.8	+0.5
YTIR	**Yattir**	**2.04**	**324**	P		Pn	10 45 01.2	+0.6
YTIR				S		Sn	10 45 27.4	+0.6

AUST 13 10:52:53.6±0.7,22.5°S±5.5°×117.5E±.°,h10km,ML3.4/6, MwMwp6.0/1,Mwp6.1/1,Error ellipse: s-maj=13.3km s-min=4.8km az=143.7,Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GIRL	**Giralia**	**1.29**	**209**	P		Pn	10 53 16.3	-1.5
GIRL				S		Sb	10 53 33.8	-0.9
CVQOZ	**Cooralya Stati**	**3.02**	**195**	P		Pn	10 53 41.2	-0.3
CVQOZ				S		Sn	10 54 14.8	-3.0
MBWA	**Marble Bar**	**4.50**	**86**	P		Pn	10 54 03.2	+1.4
MBWA				S		Sn	10 54 53.4	-0.8
PSAC1	**Pilbara Seismi**	**4.55**	**91**	P		Pn	10 54 04.2	+1.6
PSAC1				S		Sn	10 54 55.3	-0.2
MEEK	**Meekatharra**	**6.12**	**147**	P		Pn	10 54 26.3	+2.1
MEEK				S		Sn	10 55 36.2	+2.0
CAAN	**Eighty Mile Be**	**6.57**	**71**	P		Pn	10 54 30.8	+0.5
CAAN				S		Sn	10 55 42.8	-2.6
MORW	**Morawa**	**7.59**	**173**	P		Pn	10 54 44.5	+0.1
MORW				S		Sn	10 56 06.9	-3.6
BLDU	**Ballidu**	**9.21**	**170**	P		Pn	10 55 06.6	+0.1
KLBR	**Kellerberrin**	**10.35**	**166**	P		Pn	10 55 22.3	+0.1
MUN	**Mundaring**	**10.49**	**174**	P		Pn	10 55 24.2	+0.2
KMBL	**Kambalda**	**11.62**	**149**	P		Pn	10 55 39.6	0.0
WRKA	**Warakurna**	**12.78**	**108**	P		Pn	10 55 54.8	-0.7
RKGY	**Rocky Gully**	**13.18**	**173**	P		Pn	10 56 00.9	+0.1
FORT	**Forrest**	**14.97**	**131**	P		Pn	10 56 23.3	-2.0

STR 13 10:58:31.6±0.5,46.7N±3.7°×±.°,h0km,MLv1.6/7,LOCSAT earthModelID auvergne_taup-2.11 preliminary,France

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AGO	**Saint Agoulin**	**0.15**	**90**	Pg		Pg	10 58 34.3	-0.3
AGO				Sg		Sg	10 58 36.7	+0.2
VERF	**Verneugheol**	**0.42**	**225**	Pg		Pg	10 58 39.6	-0.1
VERF				Sg		Sg	10 58 45.1	-0.1
FRNF	**Fournols**	**0.71**	**200**	Pg		Pg	10 58 44.8	-0.4
FRNF	**Fournols**	**0.71**	**200**	Pg		Pg	10 58 44.4	-0.7
FRNF				Sg		Sg	10 58 54.7	+0.4
COLF	**Collangettes**	**0.77**	**134**	Pg		Pg	10 58 46.5	+0.2
COLF				Sg		Sg	10 58 57.2	+1.0
COLF	**Collangettes**	**0.77**	**134**	Pg		Pg	10 58 46.5	+0.2
COLF				Sg		Sg	10 58 57.1	+0.9
LOR	**Lormes**	**1.38**	**28**	Pg		Pg	10 58 57.5	-0.6
LOR				Sg		Sg	10 59 16.1	+0.2
SSB	**Saint Sauveur**	**1.38**	**123**	Pg		Pg	10 58 57.7	-0.4
SSB				Sg		Sg	10 59 15.9	0.0
PLYF	**Puligny Montra**	**1.56**	**54**	Sg		Sn	10 59 21.3	-0.2

STR 13 10:58:38.4±0.9,44.7N±4.7°×±.°,h0km,MLv1.9/7,LOCSAT earthModelID haslach_taup-2.11 preliminary,Near south coast of France

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CLAF	**Gruissan**	**0.54**	**222**	Pg		Pg	10 58 48.2	-0.4
CLAF				Sg		Sg	10 58 56.9	+1.3
TRBF	**Trabuc cave**	**0.63**	**26**	Pg		Pg	10 58 48.6	-1.9
TRBF				Sg		Sg	10 58 59.5	+0.8
MTLF	**Montolieu**	**1.01**	**259**	Pg		Pg	10 58 55.1	-2.7
MTLF				Sg		Sg	10 59 11.6	+0.8
SLVF	**La Salvetat-Pe**	**1.22**	**303**	Pg		Pg	10 59 00.5	-1.1
SLVF				Sg		Sb	10 59 18.0	-0.4
RUSF	**Rustrel**	**1.44**	**73**	Pg		Pn	10 59 02.3	-3.5
RUSF				Sg		Sg	10 59 14.2	-10

*SDD **13** 11:05:30.8±1.6,17.81N×66.89W,h18km±17km,MD3.2, ML3.3,MW3.3,Presumed earthquake*
*NEIC **13** 11:05:31.4±0.6,17.93N±0.09×66.872W±0.009, h20km±3km,ML3.5/33,Md3.2/4(RSPR),Error ellipse: s-maj=12.5km s-min=1.0km az=182.0*
*RSPR **13** 11:05:32.4,17.97N×66.87W,h15km,MD3.2/4*

ISC 13 11:05:31.7±1.0,17.96N±0.05×66.86W±0.02,h19km±3km, n41,σ0s79/60,10C-8D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.03**	**311**			**Pg**	**11 05 35.0**	**-0.1**
GBPR						**Sg**	**11 05 36.9**	**-0.6**
GBPR	**Guanica, Bosqu**	**0.03**	**311**	⇑*i*P		**Pg**	**11 05 35.0**	**-0.1**
GBPR				*e*S		**Sg**	**11 05 36.9**	**-0.6**
MLPR	**Magueyes Islan**	**0.18**	**275**			**Pg**	**11 05 36.3**	**-0.2**
MLPR				IAML			11 05 39.6	
	8μm,0.3s							
MLPR				IAML			11 05 39.9	
	10μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.25**	**282**	Pg		**Pg**	**11 05 37.4**	**-0.2**
CRPR				IAML			11 05 41.2	
	9μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.25**	**282**			**Sg**	**11 05 40.8**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.25**	**282**	⇑*e*Pg		**Pg**	**11 05 37.5**	**0.0**
CRPR				⇓*e*Sg		**Sg**	**11 05 41.0**	**-0.5**
CRPR				IAML			11 05 41.1	
	comp=N,16μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.25**	**282**	⇑*e*P		**Pg**	**11 05 37.3**	**-0.2**
CRPR				*e*S		**Sg**	**11 05 40.8**	**-0.7**
OBIP	**Obispado Ponce**	**0.25**	**70**			**Pg**	**11 05 37.9**	**+0.3**
OBIP						**Sg**	**11 05 42.0**	**+0.4**
OBIP	**Obispado Ponce**	**0.25**	**70**	IAML			11 05 42.3	
	comp=N,1μm,0.3s							
OBIP	**Obispado Ponce**	**0.25**	**70**	⇓*e*P		**Pg**	**11 05 37.9**	**+0.3**
OBIP				*e*S		**Sg**	**11 05 42.0**	**+0.4**
CELP	**Cerrillos**	**0.29**	**66**			**Pg**	**11 05 38.5**	**+0.3**
CELP				IAML			11 05 43.4	
	comp=N,5μm,0.3s							
CELP				IAML			11 05 43.5	
	comp=N,4μm,0.2s							
LSP	**Las Mesas**	**0.31**	**315**			**Pg**	**11 05 38.4**	**-0.2**
LSP						**Sg**	**11 05 43.1**	**-0.2**
LSP	**Las Mesas**	**0.31**	**315**	⇓*i*P		**Pg**	**11 05 38.4**	**-0.2**
LSP				*e*S		**Sg**	**11 05 43.1**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.32**	**23**			**Pg**	**11 05 38.6**	**-0.2**
PRSN	**Puerto Rico Se**	**0.38**	**313**			**Pg**	**11 05 39.4**	**-0.3**
PRSN						**Sg**	**11 05 44.5**	**-0.7**
PRSN	**Puerto Rico Se**	**0.38**	**313**	IAML			11 05 45.5	
	comp=N,9μm,0.2s							
PRSN				IAML			11 05 46.0	
	comp=N,10μm,0.3s							
PRSN	**Puerto Rico Se**	**0.38**	**313**	⇑*e*Pg		**Pg**	**11 05 39.5**	**-0.3**
PRSN				IAML			11 05 46.0	
	comp=N,5μm,0.2s							
PRSN				⇓*e*Sg		**Sb**	**11 05 46.1**	**+0.8**
PRSN	**Puerto Rico Se**	**0.38**	**313**	⇑*i*P		**Pg**	**11 05 39.4**	**-0.3**
PRSN				*e*S		**Sg**	**11 05 44.5**	**-0.7**
AOPR	**Arecibo Observ**	**0.40**	**14**	Pg		**Pg**	**11 05 39.8**	**-0.3**
AOPR				IAML			11 05 46.5	
	comp=N,3μm,0.3s							
AGPR	**Aguadilla, PR**	**0.56**	**334**			**Pg**	**11 05 42.6**	**-0.5**
AGPR	**Aguadilla, PR**	**0.56**	**334**	⇑*e*Pg		**Pg**	**11 05 42.6**	**-0.5**
AGPR				⇑*e*Sg		**Sb**	**11 05 51.9**	**+1.4**
AGPR				IAML			11 05 52.8	
	comp=N,1μm,0.2s							
AGPR	**Aguadilla, PR**	**0.56**	**334**	⇑*e*P		**Pg

OBF8	**Ulkokalla**	**1.73**	**72**	PG	**Pn**	**11 21 19.4**	**+0.5**
OBF8				smax	smax	11 21 40.4	
	comp=Z,4.1nm,0.2s						
OBF8				SN	**Sg**	**11 21 43.2**	**+0.2**
SJUU	**Sjulsmark**	**1.87**	**25**	P	**Pn**	**11 21 21.2**	**+0.5**
SJUU	**Sjulsmark**	**1.87**	**25**	P	**Pn**	**11 21 21.2**	**+0.5**
OBF0	**Syolatti, Pyha**	**2.10**	**70**	smax	smax	11 21 51.0	
	comp=Z,5.3nm,0.2s						
OBF0				SG	**Sb**	**11 21 53.5**	**+0.4**
NOD	**Norderasen**	**2.19**	**262**	P	**Pn**	**11 21 26.0**	**+0.8**
NOD	**Norderasen**	**2.19**	**262**	P	**Pn**	**11 21 26.0**	**+0.8**
OUF	**Merijarvi**	**2.28**	**74**	PN	**Pn**	**11 21 27.0**	**+0.6**
OUF				smax	smax	11 21 56.2	
	comp=Z,4.0nm,0.2s						
OUF				SB	**Sn**	**11 21 56.5**	**+1.4**
KPF	**Kankaanpaa**	**2.29**	**150**	PG	**Pb**	**11 21 30.3**	**+0.5**
KPF				smax	smax	11 21 58.0	
	comp=Z,4.6nm,0.2s						
KPF				SG	**Sg**	**11 22 00.7**	**-0.5**
KALU	**Kalix**	**2.56**	**36**	PB	**Pn**	**11 21 31.8**	**+1.4**
	baz=225						
KEF	**Keuruu**	**2.90**	**123**	PB	**Pb**	**11 21 39.1**	**-1.0**
KEF				smax	smax	11 22 15.3	
	comp=Z,1.9nm,0.2s						
KEF				SB	**Sb**	**11 22 17.3**	**+1.1**
ERTU	**Ertsjaerv**	**2.92**	**20**	PN	**Pn**	**11 21 35.7**	**+0.4**
RAF	**Rauma**	**2.99**	**160**	PB	**Pb**	**11 21 39.6**	**-2.1**
RAF				smax	smax	11 22 18.2	
	comp=Z,3.5nm,0.2s						
RAF				SB	**Sb**	**11 22 19.1**	**+0.5**
TOF	**Tornio**	**2.99**	**39**	smax	smax	11 22 15.9	
	comp=Z,1.0nm,0.2s						
TOF				SG	**Sb**	**11 22 18.4**	**-0.3**
PAJU	**Pajala**	**3.50**	**23**	PN	**Pn**	**11 21 43.1**	**-0.2**
RANF	**Ranua**	**3.73**	**51**	PN	**Pn**	**11 21 46.7**	**+0.3**
RANF				SN	**Sn**	**11 22 30.1**	**-0.8**
KLF	**Kolari**	**3.85**	**26**	PN	**Pn**	**11 21 49.2**	**+1.2**
RNF	**Rovaniemi**	**3.85**	**41**	PN	**Pn**	**11 21 48.7**	**+0.7**
	baz=226						
LANU	**Lannavaara**	**4.33**	**12**	PN	**Pn**	**11 21 54.9**	**+0.3**
LANU				SN	**Sn**	**11 22 45.4**	**-0.4**
MSF	**Maaselka**	**4.50**	**58**	SN	**Sn**	**11 22 48.6**	**-1.2**
KU1	**Kurvinen**	**4.58**	**63**	SN	**Sn**	**11 22 51.0**	**-0.8**

VAO ***13*** *11:24:27.2±1.9, 21°.38S×68°.91W, h98km±8km, mb4.2, Presumed earthquake*
SJA ***13*** *11:24:27.6±0.7, 21°.21S×69°.10W, h108km±3km, ML3.9, MW3.9*
NEIC ***13*** *11:24:29.6±1.8, 21°.24S±0°.05×69°.15W±0°.08, h97km±8km, mb4.1/11, ML3.8(GUC), Error ellipse: s-maj=11.4km s-min=6.6km az=94.0*
GUC ***13*** *11:24:29.9±0.8, 21°.23S×69°.06W, h96km±3km, ML3.8*
IDC ***13*** *11:24:31.9±3.0, 21°.20S×68°.52W, h105km±28km, mb3.8/3, mbtmp4.1/6, Error ellipse: s-maj=44.2km s-min=25.7km az=110.0*

ISC 13 11:24:28.2±0.6**, 21°.21S**±0°.03×**69°.04W**±0°.06**, h97**km±6km**, n86**, σ1°.46/106**, 8C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.45**	**291**		**Pn**	**11 24 43.9**	**+0.5**
PB01	**IPOC Station P**	**0.45**	**291**	⇑*iP*	**Pn**	**11 24 44.0**	**+0.5**
PB01				*i* S	**Sn**	**11 24 55.4**	**+0.4**
PB01				IAML		11 24 56.0	
	comp=N,25μm,0.2s						
PB01	**IPOC Station P**	**0.45**	**291**	*eP*	Pn	11 24 29.1	-14
PB01				*eS*	**Sn**	**11 24 55.7**	**+0.8**
PB01				IAML		11 24 56.3	
	comp=Z,12μm,0.2s						
PB09	**IPOC Station P**	**0.61**	**198**		**Pn**	**11 24 45.5**	**+0.6**
PB09	**IPOC Station P**	**0.61**	**198**	⇑*iP*	**Pn**	**11 24 45.6**	**+0.8**
PB09				*i* S	**Sn**	**11 24 58.2**	**+0.9**
PB09				IAML		11 25 00.8	
	comp=E,3μm,0.4s						
PB09	**IPOC Station P**	**0.61**	**198**	*eP*	**Pn**	**11 24 45.7**	**+0.8**
PB09				*eS*	**Sn**	**11 24 59.5**	**+2.2**
PB09				IAML		11 25 00.8	
	comp=Z,3μm,0.6s						
PB02	**IPOC Station P**	**0.81**	**262**		**Pn**	**11 24 46.4**	**-0.1**
PB02	**IPOC Station P**	**0.81**	**262**	⇑*iP*	**Pn**	**11 24 47.3**	**+0.8**
PB02				*i* S	**Sn**	**11 25 01.2**	**+0.9**
PB02				IAML		11 25 02.5	
	comp=E,8μm,0.2s						
PB02	**IPOC Station P**	**0.81**	**262**	*eP*	**Pn**	**11 24 46.6**	**0.0**
PB02				*eS*	**Sn**	**11 25 01.5**	**+1.2**
PB02				IAML		11 25 02.0	
	comp=Z,7μm,0.5s						
PB07	**IPOC Station P**	**0.94**	**237**		**Pn**	**11 24 48.4**	**+0.4**
PB07	**IPOC Station P**	**0.94**	**237**	⇑*iP*	**Pn**	**11 24 48.7**	**+0.6**
PB07				*i* S	**Sn**	**11 25 03.9**	**+1.0**
PB07				IAML		11 25 04.6	
	comp=N,3μm,0.2s						
PB07	**IPOC Station P**	**0.94**	**237**	*eP*	**Pn**	**11 24 48.6**	**+0.6**
PB07				*eS*	**Sn**	**11 25 04.5**	**+1.5**
PB07				IAML		11 25 05.8	
	comp=Z,1μm,0.2s						
PB03	**IPOC Station P**	**1.07**	**219**		**Pn**	**11 24 50.1**	**+0.7**
PB03	**IPOC Station P**	**1.07**	**219**	⇑*iP*	**Pn**	**11 24 50.1**	**+0.7**
PB03				*i* S	**Sn**	**11 25 06.0**	**+0.7**
PB03				IAML		11 25 09.1	
	comp=N,3μm,0.2s						
PB03	**IPOC Station P**	**1.07**	**219**	*eP*	**Pn**	**11 24 50.1**	**+0.7**
PB03				*eS*	**Sn**	**11 25 06.7**	**+1.4**
PB03				IAML		11 25 09.2	
	comp=Z,2μm,0.1s						
PB08	**IPOC Station P**	**1.07**	**354**		**Pn**	**11 24 50.8**	**+1.1**
PB08	**IPOC Station P**	**1.07**	**354**	⇓*iP*	**Pn**	**11 24 50.7**	**+1.1**
PB08				*i* S	**Sn**	**11 25 07.0**	**+1.3**
PB08				IAML		11 25 08.5	
	comp=E,3μm,0.2s						
PB08	**IPOC Station P**	**1.07**	**354**	*eP*	**Pn**	**11 24 50.6**	**+0.9**
PB08				*eS*	**Sn**	**11 25 07.5**	**+1.8**
PB08				IAML		11 25 08.3	
	comp=Z,1μm,0.3s						
TA02	**Huaiquique**	**1.39**	**312**	*eP*	**Pn**	**11 24 53.8**	**+0.9**
TA02				*eS*	**Sn**	**11 25 12.3**	**+0.6**
TA02				IAML		11 25 15.7	
	comp=N,4μm,0.1s						
TA02	**Huaiquique**	**1.39**	**312**	*eP*	**Pn**	**11 24 53.3**	**+0.3**
TA02				IAML		11 25 15.9	
	comp=Z,1μm,0.3s						
GO01	**Chusmiza**	**1.54**	**354**		**Pn**	**11 24 56.8**	**+1.4**
GO01	**Chusmiza**	**1.54**	**354**	⇑*iP*	**Pn**	**11 24 56.8**	**+1.4**
GO01				*i* S	**Sn**	**11 25 17.8**	**+2.0**
GO01				IAML		11 25 19.2	
	comp=N,2μm,0.2s						
GO01	**Chusmiza**	**1.54**	**354**	*eP*	**Pn**	**11 24 56.2**	**+0.8**
GO01				*eS*	**Sn**	**11 25 18.9**	**+3.1**
GO01				IAML		11 25 19.6	
	comp=Z,908nm,0.8s						
PB11	**IPOC Station P**	**1.55**	**338**		**Pn**	**11 24 55.9**	**+0.7**
PB11	**IPOC Station P**	**1.55**	**338**	⇑*iP*	**Pn**	**11 24 56.0**	**+0.8**
PB11				*eS*	**Sn**	**11 25 16.5**	**+0.9**
PB11				IAML		11 25 19.4	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**1.55**	**338**	*eP*	**Pn**	**11 24 56.0**	**+0.8**
PB11				*eS*	**Sn**	**11 25 17.2**	**+1.6**
PB11				IAML		11 25 18.7	
	comp=Z,928nm,0.4s						
PB06	**IPOC Station P**	**1.57**	**198**		**Pn**	**11 24 56.2**	**+0.8**
PB06	**IPOC Station P**	**1.57**	**198**	⇑*iP*	**Pn**	**11 24 56.2**	**+0.8**
PB06				*eS*	**Sn**	**11 25 17.2**	**+1.2**
PB06				IAML		11 25 21.9	
	comp=E,2μm,0.4s						
PB06	**IPOC Station P**	**1.57**	**198**	*eP*	**Pn**	**11 24 56.2**	**+0.8**
PB06				*eS*	**Sn**	**11 25 17.9**	**+1.9**
PB06				IAML		11 25 18.7	
	comp=Z,2μm,0.3s						
AF01	**San Pedro de A**	**1.91**	**156**		**Pn**	**11 25 03.0**	**+3.2**
AF01	**San Pedro de A**	**1.91**	**156**	*eP*	**Pn**	**11 25 01.3**	**+1.5**
AF01				*eS*	Sn	11 25 07.7	-16
AF01				IAML		11 25 51.0	
	comp=Z,736nm,0.5s						
PB05	**IPOC Station P**	**1.96**	**213**		**Pn**	**11 25 00.7**	**+0.3**
PB05	**IPOC Station P**	**1.96**	**213**	*eP*	**Pn**	**11 25 00.6**	**+0.3**
PB05				*eS*	**Sn**	**11 25 21.2**	**-3.5**
PB05				IAML		11 25 33.4	
	comp=E,614nm,0.4s						
PB05	**IPOC Station P**	**1.96**	**213**	*eP*	**Pn**	**11 25 00.6**	**+0.3**
PB05				*eS*	**Sn**	**11 25 29.7**	**+5.0**
PB05				IAML		11 25 36.0	
	comp=Z,427nm,0.3s						
PX02	**IPOC Station P**	**2.49**	**334**	*eP*	**Pn**	**11 25 06.9**	**-0.3**
PB10	**IPOC Station P**	**2.69**	**211**		**Pn**	**11 25 11.7**	**+1.9**
PB10	**IPOC Station P**	**2.69**	**211**	*eP*	**Pn**	**11 25 10.8**	**+1.0**
PB10				*eS*	**Sn**	**11 25 42.3**	**+0.6**
PB10				IAML		11 25 56.9	
	comp=N,218nm,0.5s						
PB10	**IPOC Station P**	**2.69**	**211**	*eP*	**Pn**	**11 25 10.1**	**+0.3**
PB12	**IPOC Station P**	**2.85**	**335**		**Pn**	**11 25 11.5**	**-0.6**
PB12	**IPOC Station P**	**2.85**	**335**	*eP*	**Pn**	**11 25 11.9**	**-0.2**
PB12				*eS*	Sn	11 25 33.0	-13
PB12				IAML		11 26 05.6	
	comp=Z,275nm,0.4s						
PB16	**IPOC Station P**	**2.89**	**351**		**Pn**	**11 25 14.5**	**+1.5**
PB16	**IPOC Station P**	**2.89**	**351**	*eP*	**Pn**	**11 25 15.0**	**+1.9**
PB16				*eS*	**Sn**	**11 25 48.4**	**+0.9**
PB16				IAML		11 25 56.9	
	comp=Z,158nm,0.6s						
AP01	**Chacalluta**	**3.08**	**336**	*eP*	**Pn**	**11 25 17.8**	**+2.8**
AP01				IAML		11 26 14.8	
	comp=Z,553nm,0.3s						
PB14	**IPOC Station P**	**3.63**	**200**		**Pn**	**11 25 23.8**	**+1.2**
PB14	**IPOC Station P**	**3.63**	**200**	*eP*	**Pn**	**11 25 22.3**	**-0.3**
PB14				IAML		11 26 18.2	
	comp=Z,190nm,0.5s						
PB18	**Visviri**	**3.63**	**353**		Pn	11 25 28.5	+5.6
SALTA		**3.90**	**141**	*eP*	Pn	11 25 16.7	-10
SALTA				*eP*		11 25 21.3	
GO02	**Mina Guanaco**	**3.97**	**187**		**Pn**	**11 25 28.0**	**+0.8**
LPAZ	**La Paz**	**4.97**	**10**	P	**Pn**	**11 25 43.7**	**+2.6**
	comp=Z,15nm,0.3s,baz=202,slow=6.7,SNR=64						
LPAZ	**La Paz**	**4.97**	**10**	*eP*	**Pn**	**11 25 43.8**	**+2.6**
LPAZ				*eS*	Sn	11 26 22.6	-15
LPAZ	**La Paz**	**4.97**	**10**	*eP*	**Pn**	**11 25 43.0**	**+1.8**
AC02	**Maricunga**	**5.60**	**181**		**Pn**	**11 25 49.9**	**+0.3**
SIV	**San Ignacio**	**9.16**	**57**	P	**Pn**	**11 26 35.1**	**-2.5**
	comp=Z,8.4nm,0.7s,baz=254,slow=8.3,SNR=22						
MURT	**Porto Murtinho**	**10.65**	**94**	*eP*	**Pn**	**11 26 54.7**	**-3.2**
PTLB	**Pontes e Lacer**	**11.01**	**60**	*eP*	**Pn**	**11 27 00.5**	**-2.2**
BDQN	**Bodoquena, MS**	**11.52**	**88**	*eP*	**Pn**	**11 27 07.0**	**-2.6**
VILB	**Vilhena**	**11.78**	**47**		**Pn**	**11 27 13.6**	**+0.5**
VILB	**Vilhena**	**11.78**	**47**	*eP*	**Pn**	**11 27 13.5**	**+0.5**
PDRB	**Porto dos Gac**	**15.17**	**53**	*eP*	**Pn**	**11 27 57.0**	**-0.4**
TRCB	**Terra Rica**	**15.29**	**99**	Pn	**P**	**11 28 00.4**	**-1.2**
BI02	**San Fabin de**	**15.52**	**187**	Pn	**Pn**	**11 28 01.8**	**+0.1**
BI02				IAmb	IAmb	11 28 07.0	
	comp=Z,15nm,1.5s						
CLDB	**Colider**	**16.34**	**53**	*eP*	**Pn**	**11 28 11.5**	**-0.5**
PLTB	**Pedras Altas**	**17.34**	**130**	P	**P**	**11 28 25.9**	**+1.9**
PLTB				IAmb	IAmb	11 28 52.9	
	comp=Z,9.2nm,1.1s						
TRQA	**Tornquist**	**17.86**	**162**	P	**Pn**	**11 28 30.8**	**+0.4**
TRQA				IAmb	IAmb	11 28 54.2	
	comp=Z,12nm,1.2s						
GO06	**Curarrehue**	**18.43**	**186**	P	**Pn**	**11 28 37.4**	**+0.1**
SNDB	**Serra Nova Dou**	**19.31**	**64**	*eP*	**P**	**11 28 44.3**	**-1.5**
NPGB	**Novo Progresso**	**19.32**	**45**	*eP*	**P**	**11 28 45.4**	**-0.5**
PLCA	**Paso Flores**	**19.50**	**183**	P	**Pn**	**11 28 52.4**	**+2.4**
	comp=Z,3.2nm,0.9s,baz=4.8,slow=12,SNR=2.8						
PLCA	**Paso Flores**	**19.50**	**183**	P	**P**	**11 28 48.8**	**+1.0**
PLCA				IAmb	IAmb	11 28 54.4	
	comp=Z,3.3nm,0.9s						
MACA	**Manacapuru-AM**	**19.70**	**25**	P	**P**	**11 28 50.3**	**+0.4**
MACA	**Manacapuru-AM**	**19.70**	**25**	*eP*	**P**	**11 28 48.6**	**-1.4**
IPMB	**Ipameri, GO**	**19.88**	**84**	*eP*	**P**	**11 28 49.5**	**-2.5**
VAO	**Valinhos**	**20.53**	**99**	P	**P**	**11 28 58.0**	**-0.9**
VAO				IAmb	IAmb	11 29 14.5	
	comp=Z,29nm,1.3s						
BDFB	**Brasilia**	**20.69**	**78**	P	**P**	**11 28 59.5**	**-1.3**
	comp=Z,4.0nm,0.5s,baz=240,slow=13,SNR=6.4						
	comp=Z,4.0nm,0.5s						
BDFB	**Brasilia**	**20.69**	**78**	P	**P**	**11 29 00.8**	**0.0**
BDFB				IAmb	IAmb	11 29 39.4	
	comp=Z,9.0nm,1.3s						
ITTB	**Itaituba**	**21.15**	**39**	*eP*	**P**	**11 29 03.8**	**-1.8**
PARB	**Paraibuna**	**21.77**	**100**	*eP*	**P**	**11 29 10.0**	**-2.3**
SMTB	**Santa Maria do**	**24.04**	**63**	*eP*	**P**	**11 29 34.0**	**-0.5**
JANB	**Januaria**	**24.26**	**80**	*eP*	**P**	**11 29 35.1**	**-1.4**
SDBA	**SAO DESIDERIO**	**24.68**	**73**	*eP*	**P**	**11 29 39.4**	**-0.9**
BOAV	**Boa Vista**	**24.90**	**21**	P	**P**	**11 29 42.6**	**+0.4**
BOAV				IAmb	IAmb	11 29 44.5	
	comp=Z,7.5nm,1.0s						
BOAV	**Boa Vista**	**24.90**	**21**	*eP*	**P**	**11 29 42.4**	**+0.2**
SNAA	**Sanae**	**62.59**	**161**	P	**P**	**11 34 42.4**	**+0.7**
	comp=Z,3.3nm,0.9s,baz=271,slow=10,SNR=2.8						
	comp=Z,3.3nm,0.9s						
SNAA	**Sanae**	**62.59**	**161**	IAmb	IAmb	11 34 48.4	
	comp=Z,12nm,1.5s						
TORD	**Torodi Ar. Bea**	**77.37**	**70**	P	**P**	**11 36 12.9**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=256,slow=6.9,SNR=6.5						
TORD				pP	**pP**	**11 36 39.1**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=241,slow=9.2,SNR=12						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**145.47**	**36**	PKPbc	**PKPab**	**11 43 56.6**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=318,slow=3.4,SNR=6.5						
MKAR				pPKPbc	pPKPbc	11 44 23.5	+0.4
	comp=Z,1.4nm,0.9s,baz=320,slow=4.4,SNR=9.5						

IDC ***13*** *11:30:45.9±4.7, 18°.55N×104°.43W, h0km, mb3.3/3, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=114.9km s-min=44.0km az=106.0*
MEX ***13*** *11:30:48.6±0.3, 18°.39N×103°.20W, h50km±4km, MD4.3*

ISC 13 11:30:47.8±1.0**, 18°.42N**±0°.04×**103°.20W**±0°.03**, h43**km±10km**, n45, σ2°.04/81, mb3.3/3, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.20**	**227**	*eP*	**Pn**	**11 30 55.1**	**-0.2**
MMIG				*i* S	**Sn**	**11 31 00.9**	**+0.3**
CDAR	**Ciudad de Arme**	**0.93**	**304**	*eP*	**Pn**	**11 31 03.9**	**-0.5**
CDAR				*eS*	**Sn**	**11 31 15.8**	**-0.8**
COMA	**Comala**	**1.05**	**329**	*eP*	**Pn**	**11 31 05.8**	**-0.3**
COMA				*eS*	**Sn**	**11 31 18.7**	**-0.8**
CEGR	**Campo Tres**	**1.15**	**327**	*eP*	**Pn**	**11 31 07.0**	**-0.6**
CEGR				*i* S	**Sn**	**11 31 21.6**	**-0.7**
INCO	**Volcan de Coli**	**1.16**	**341**	*eP*	**Pn**	**11 31 07.8**	**-0.2**
INCO				*eS*	**Sn**	**11 31 22.6**	**-0.3**
SOMAC	**Volcano de Col**	**1.17**	**339**	*eP*	**Pn**	**11 31 07.8**	**-0.3**
SOMAC				*eS*	**Sn**	**11 31 22.6**	**-0.5**
UON	**La Union**	**1.39**	**109**	*eP*	**Pn**	**11 31 11.1**	**+0.4**
UON				*eS*	**Sn**	**11 31 28.8**	**+1.0**
URUA	**Uruapan**	**1.45**	**47**	*eP*	**Pn**	**11 31 11.4**	**-0.4**
URUA				*i* S	**Sn**	**11 31 28.8**	**-1.0**
ZIIG	**Zihuatanejo**	**1.83**	**116**	*eP*	**Pn**	**11 31 16.9**	**+0.1**
ZIIG				*eS*	**Sn**	**11 31 38.5**	**-0.3**
PET2	**Petatlan**	**2.04**	**115**	*eP*	**Pn**	**11 31 19.8**	**+0.2**
PET2				*eS*	**Sn**	**11 31 42.1**	**-1.7**
CJM	**Chamela**	**2.05**	**302**	*eP*	**Pn**	**11 31 19.6**	**-0.2**
CJM				*eS*	**Sn**	**11 31 47.0**	**+2.8**
TON2	**Tonala**	**2.19**	**359**	*eP*	**Pn**	**11 31 19.4**	**-2.5**
TON2				*eS*	**Sn**	**11 31 46.6**	**-1.3**
MOIG	**Morelia**	**2.27**	**56**	*eP*	**Pn**	**11 31 23.7**	**+0.6**
MOIG				*eS*	**Sn**	**11 31 51.5**	**+1.5**
CAIG	**El Cayaco**	**3.11**	**116**	*eP*	**Pn**	**11 31 33.5**	**-0.8**
CAIG				*eS*	**Sn**	**11 32 10.2**	**0.0**
MEIG	**Mezcala**	**3.44**	**98**	*eP*	**Pn**	**11 31 38.5**	**-0.4**
MEIG				*eS*	**Sn**	**11 32 20.1**	**+1.7**
TOVM	**TOLUCA**	**3.44**	**75**	*eP*	**Pn**	**11 31 38.2**	**-1.0**
TOVM				*eS*	Sn	11 32 08.0	-11
JRQG	**Juriquilla Cam**	**3.44**	**48**	*eP*	**Pn**	**11 31 41.0**	**+1.8**
JRQG				*i* S	**Sn**	**11 32 18.6**	**-0.3**
ACIG	**Acambay**	**3.50**	**63**	*eP*	Pn	11 31 28.3	-11
ACIG				*eS*	Sn	11 32 06.5	-14
PLIG	**Platanillo**	**3.51**	**90**	*eP*	**Pn**	**11 31 42.0**	**+2.1**
PLIG				*eS*	**Sn**	**11 32 19.6**	**-0.6**
MAVM	**Malinalco, Edo**	**3.55**	**81**	*eP*	**Pn**	**11 31 44.6**	**+4.1**
MAVM				*eS*	**Sn**	**11 32 16.7**	**-4.7**
AAIG	**Aguscalientes**	**3.61**	**12**	*eP*	**Pn**	**11 31 41.9**	**+0.5**
AAIG				*eS*	**Sn**	**11 32 27.7**	**+4.8**
DAIG	**Los Arroyos**	**3.65**	**112**	*eP*	**Pn**	**11 31 39.6**	**-2.3**
DAIG				*eS*	**Sn**	**11 32 24.8**	**+1.0**
INVM	**La Marquesa**	**3.71**	**76**	*eP*	**Pn**	**11 31 43.6**	**+0.6**
INVM				*eS*	**Sn**	**11 32 22.1**	**-3.6**
AOVM	**Tlapan**	**3.76**	**76**	*eP*	**Pn**	**11 31 46.3**	**+2.6**
AOVM				*eS*	**Sn**	**11 32 25.5**	**-1.5**
MZVM		**3.83**	**78**	*eP*	Pn	11 31 49.3	+5.0
MZVM				*eS*	**Sn**	**11 32 26.1**	**-2.0**
AZVM	**Cuida Lopez Ma**	**3.88**	**72**	*eP*	**Pn**	**11 31 42.6**	**-2.6**
AZVM				*eS*	**Sn**	**11 32 29.0**	**-0.7**
YAIG	**Yautepec**	**3.94**	**83**	*eP*	**Pn**	**11 31 46.9**	**+1.0**
YAIG				*eS*	**Sn**	**11 32 28.1**	**-2.8**
MPVM	**San Francisco**	**4.04**	**78**	*eS*	**Sn**	**11 32 35.6**	**+2.1**
CRIG	**Cruz Grande**	**4.22**	**113**	*eP*	**Pn**	**11 31 50.6**	**+0.9**
CRIG				*eS*	**Sn**	**11 32 35.9**	**-1.9**
PBXN	**Popocatepetl**	**4.34**	**82**	*eP*	**Pn**	**11 31 53.8**	**+2.1**
PBXN				*eP*		11 31 54.0	
PBXN				*eS*	**Sn**	**11 32 36.3**	**-5.0**
PBXN				*eS*		11 32 42.1	
DEIG	**Demacu**	**4.35**	**64**	*eP*	**Pn**	**11 31 52.5**	**+0.9**
DEIG				*eS*	**Sn**	**11 32 35.9**	**-5.3**
ZAIG	**Zacatecas**	**4.37**	**8**	*eP*	**Pn**	**11 31 51.1**	**-0.7**
ZAIG				*eS*	**Sn**	**11 32 42.3**	**+0.7**
PPM	**Popocatepetl**	**4.38**	**81**	*eP*	**Pn**	**11 31 54.0**	**+1.8**
PPM				*eS*	**Sn**	**11 32 38.2**	**-4.0**
PBCV	**Popocatepetl**	**4.43**	**82**	*eP*	**Pn**	**11 31 57.4**	**+4.6**
PBCV				*eS*	**Sn**	**11 32 46.0**	**+2.7**
TLIG	**Tlapa**	**4.49**	**100**	*eP*	**Pn**	**11 31 54.6**	**+1.2**
TLIG				*eS*	**Sn**	**11 32 44.3**	**-0.1**
PPSX	**Xalitzintla**	**4.49**	**81**	*eP*	**Pn**	**11 31 53.4**	**-0.2**
PPSX				*eS*	**Sn**	**11 32 43.0**	**-1.7**
MGIG	**Malinaltepec**	**4.50**	**105**	*eP*	**Pn**	**11 31 55.5**	**+1.9**
MGIG				*eS*	**Sn**	**11 32 47.2**	**+2.3**
FTIG	**Fresnillo de T**	**4.84**	**95**	*eP*	**Pn**	**11 31 57.4**	**-0.9**
FTIG				*eS*	**Sn**	**11 32 52.1**	**-1.0**
HLIG	**Huajuapan de L**	**5.16**	**96**	*eP*	**Pn**	**11 32 04.5**	**+1.7**
HLIG				*eS*	**Sn**	**11 33 01.2**	**+0.1**
PNIG	**Pinotepa**	**5.24**	**112**	*eP*	**Pn**	**11 32 05.3**	**+1.6**
PNIG				*eS*	**Sn**	**11 33 00.1**	**-2.8**
TXIG	**Tlaxiaco**	**5.30**	**102**	*eP*	**Pn**	**11 32 07.2**	**+2.5**
TXIG				*eS*	**Sn**	**11 33 06.2**	**+1.5**
TXAR	**Lajitas Array**	**10.87**	**358**	Pn	**Pn**	**11 33 24.6**	**+3.7**
	0.1nm,0.3s,baz=178,slow=14,SNR=35						
TXAR				Lg	Lg	11 36 25.1	
	0.1nm,0.3s,baz=184,slow=26,SNR=5.9						
	6.6nm,0.9s						
NVAR	**Mina Array Bea**	**23.89**	**330**	P	**P**	**11 35 55.3**	**-2.4**
	0.3nm,0.6s,baz=164,slow=5.8,SNR=1.8						
	0.3nm,0.6s						
PDAR	**Pinedale Array**	**24.86**	**349**	P	**P**	**11 36 06.1**	**-0.5**
	0.7nm,0.8s,baz=156,slow=7.8,SNR=7.0						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**54.69**	**339**	P	**P**	**11 40 12.8**	**+0.6**
	0.7nm,0.9s,baz=141,slow=8.8,SNR=8.6						
	0.7nm,0.9s						

KOLA ***13*** *11:33:43.0, 67°.63N×33°.87E, h0km, ML1.3, Error ellipse: s-maj=3.9km s-min=2.0km az=150.0, Khibiny, mines Rasvumchorr, Central*

HEL 13 11:33:42.2±0.4**, 67°.62N**×**34°.08E, h0**km**, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.26**	**260**	S	Sg	11 33 49.1	-1.5
LVZ	**Lovozero**	**0.36**	**37**	P	Pg	11 33 49.6	+0.6
LVZ				S	Sb	11 33 55.9	-1.7
APA0	**Apatity Array**	**0.42**	**269**	P	Pg	11 33 49.0	-1.2
APA0				S	Sg	11 33 53.5	-2.0
KVDA	**Kovda**	**1.04**	**208**	P	Pg	11 34 01.8	-0.3
KVDA				S	Sg	11 34 14.3	-1.3
VRF	**Varrio**	**1.71**	**276**	PG	Pn	11 34 12.9	-0.4
VRF				SG	Sn	11 34 33.0	-2.8
VRF				smax	smax	11 34 33.3	
	comp=Z,3.0nm,0.2s						
OLKF	**Oulanka, Finla**	**2.25**	**237**	PG	Pb	11 34 22.8	-0.9
	baz=49						
OLKF				smax	smax	11 34 49.1	
	comp=Z,1.6nm,0.2s						
OLKF				SG	Sb	11 34 51.5	-0.6
KU6	**Riekki**	**2.30**	**228**	PG	Pb	11 34 23.3	-1.3
	baz=45						
KU6				smax	smax	11 34 50.4	
	comp=Z,1.4nm,0.2s						
KU6				SG	Sb	11 34 52.4	-1.1
RAJF	**Raja-Jooseppi**	**2.33**	**294

WRA	**Warramunga Arr**	**14.86**	**158**	Pn	Pn	12 21 54.4	+0.7
	0.3nm,0.3s,baz=337,slow=13,SNR=13						
WRA				Sn	Sn	12 24 25.5	-14
	0.4nm,0.3s,baz=339,slow=22,SNR=4.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**18.21**	**164**	P	Pn	12 22 36.1	-0.4
	0.7nm,0.3s,baz=340,slow=9.8,SNR=54						
ASAR				S	Sn	12 25 46.2	-14
	0.3nm,0.5s,baz=352,slow=21,SNR=2.8						
	3.6nm,0.6s						
MKAR	**Makanchi Array**	**66.70**	**327**	P	P	12 29 15.1	0.0
	0.2nm,0.3s,baz=111,slow=8.3,SNR=11						
	0.2nm,0.3s						

IDC ***13*** *12:42:11.2±2.2,5°.53S×135°.73E, h0km, mb4.0/3, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=96.8km s-min=29.3km az=82.0*

DJA ***13*** *12:42:18.0±0.4,6°.5±3°.3×13°.4E±°, h10km, M4.6/15, mB5.4/4, mb4.7/6, MLv4.4/15, Mw(mB)4.9/4*

ISC 13 12:42:19.3±1.0, 5°.93S±0°.07×134°.1E±0°.1, h35km, n13, σ1s99/15, mb4.0/3, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMPI	**Kaimana, Papua**	**2.28**	**350**	P	**Pn**	**12 42 52.4**	**-2.1**
FAKI	**Fak Fak**	**3.51**	**328**	P	**Pn**	**12 43 08.5**	**-2.9**
RKPI	**Ransiki, Papua**	**4.39**	**1**	P	**Pn**	**12 43 23.5**	**0.0**
BNDI	**Bandanaira**	**4.40**	**288**	P	**Pn**	**12 43 23.3**	**-0.4**
MSAI	**Masohi**	**5.76**	**296**	P	**Pn**	**12 43 41.4**	**-0.9**
	0.3nm60nm,0.6s						
SIJI	**Sorong**	**5.76**	**331**	P	**Pn**	**12 43 40.7**	**-1.7**
SWI	**Sorong**	**5.77**	**330**	P	**Pn**	**12 43 41.4**	**-1.1**
	0.5nm32nm,0.5s						
KRAI	**Karang Ratu**	**6.25**	**294**	P	**Pn**	**12 43 48.9**	**-0.2**
WRA	**Warramunga Arr**	**13.94**	**179**	Pn	**Pn**	**12 45 35.8**	**+1.4**
	0.2nm,0.3s,baz=7.3,slow=12,SNR=18						
WRA				Sn	**Sn**	**12 48 04.6**	**-3.3**
	0.6nm,0.3s,baz=4.0,slow=23,SNR=6.3						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**17.64**	**181**	P	**P**	**12 46 24.9**	**+1.8**
	0.6nm,0.3s,baz=358,slow=13,SNR=32						
ASAR				S	**Sn**	**12 49 34.7**	**-3.3**
	0.3nm,0.4s,baz=352,slow=25,SNR=4.7						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**69.63**	**325**	P	**P**	**12 53 26.4**	**+1.2**
	1.3nm,0.6s,baz=116,slow=7.8,SNR=22						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**73.79**	**327**	P	**P**	**12 53 50.6**	**+0.6**
	0.7nm,0.4s,baz=126,slow=4.6,SNR=6.8						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**79.37**	**327**	P	**P**	**12 54 22.0**	**+0.4**
	0.7nm,0.7s,baz=113,slow=11,SNR=4.0						
	0.7nm,0.7s						

NOU ***13*** *12:47:30.7, 18°.76S×169°.51E, h0km, MLv4.6/13, Vanuatu Islands*

IDC ***13*** *12:47:32.5±4.5, 18°.59S×169°.29E, h0km, mb4.1/6, mbtmp4.1/7, ML4.0/1, MS4.9/2, Error ellipse: s-maj=104.5km s-min=36.4km az=114.0*

NEIC ***13*** *12:47:36.9±1.2, 18°.86S±0°.08×169°.46E±0°.07, h32km±7km, mb4.6/11, Error ellipse: s-maj=11.9km s-min=8.3km az=213.0*

ISC 13 12:47:36.3±0.8, 18°.74S±0°.05×169°.45E±0°.09, h35km, n34, σ1s18/31, mb4.5/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.35**	**314**	P	**Pn**	**12 47 56.5**	**-2.2**
DVP	**Devils Point**	**1.56**	**310**	P	**Pn**	**12 48 00.0**	**-1.6**
DVP	**Devils Point**	**1.56**	**310**	S	**Sn**	**12 48 22.3**	**+1.6**
MARNC	**Mare, Loyalty**	**3.04**	**206**		**Pn**	**12 48 19.9**	**-1.9**
MARNC	**Mare, Loyalty**	**3.04**	**206**	P	**Pn**	**12 48 20.0**	**-1.9**
YATNC	**Mamie plateau,**	**4.08**	**216**	P	**Pn**	**12 48 33.7**	**-2.6**
YATNC	**Mamie plateau,**	**4.08**	**216**	S	**Sn**	**12 49 24.1**	**+1.2**
PINNC	**Pines Island,**	**4.29**	**206**		**Pn**	**12 48 37.9**	**-1.2**
PINNC	**Pines Island,**	**4.29**	**206**	P	**Pn**	**12 48 38.2**	**-0.9**
PINNC	**Pines Island,**	**4.29**	**206**	S	**Sn**	**12 49 28.5**	**+0.6**
DZM	**Mont Dzumac**	**4.35**	**220**	Pn	**Pn**	**12 48 39.3**	**-0.7**
	8.6nm,0.3s,baz=125,slow=11,SNR=108						
DZM				Sn	**Sn**	**12 49 29.4**	**-0.2**
	16nm,0.3s,baz=136,slow=23,SNR=7.3						
	17nm,0.3s						
DZM	**Mont Dzumac**	**4.35**	**220**		**Pn**	**12 48 39.0**	**-1.1**
DZM	**Mont Dzumac**	**4.35**	**220**	P	**Pn**	**12 48 39.2**	**-0.9**
DZM	**Mont Dzumac**	**4.35**	**220**	S	**Sn**	**12 49 31.0**	**+1.4**
ONTNC	**Ouen Toro**	**4.53**	**218**		**Pn**	**12 48 41.7**	**-0.6**
MSVF	**Nonsavu**	**8.23**	**84**	Pn	**Pn**	**12 49 33.9**	**+0.5**
LTZ	**Lake Taylor**	**24.09**	**175**	P	**P**	**12 52 48.2**	**-0.4**
STKA	**Stephens Creek**	**28.28**	**237**	P	**P**	**12 53 26.6**	**0.0**
	1.9nm,0.7s,baz=64,slow=8.0,SNR=5.3						
	1.9nm,0.7s						
STKA	**Stephens Creek**	**28.28**	**237**	IAmb	IAmb	12 53 42.8	
	comp=Z,27nm,1.1s						
BBOO	**Buckleboo**	**33.02**	**238**	P	**P**	**12 54 08.9**	**+0.6**
BBOO				IAmb	IAmb	12 54 17.9	
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**33.08**	**262**	P	**P**	**12 54 08.5**	**-0.5**
WB0				IAmb	IAmb	12 54 51.1	
	comp=Z,7.7nm,1.1s						
WRAB	**Tennant Creek**	**33.10**	**262**	P	**P**	**12 54 08.9**	**-0.4**
WRAB				IAmb	IAmb	12 54 51.5	
	comp=Z,9.6nm,1.3s						
WRA	**Warramunga Arr**	**33.12**	**262**	P	**P**	**12 54 08.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=90,slow=8.5,SNR=10.0						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**33.12**	**262**	IAmb	IAmb	12 54 11.5	
	comp=Z,0.4nm,1.3s						
AS31	**Alice Springs**	**33.44**	**255**	P	**P**	**12 54 12.5**	**+0.3**
AS31				IAmb	IAmb	12 54 13.3	
	comp=Z,2.9nm,0.3s						
ASAR	**Alice Springs**	**33.44**	**255**	P	**P**	**12 54 12.2**	**0.0**
	comp=Z,2.9nm,0.4s,baz=81,slow=8.5,SNR=103						
	comp=Z,2.9nm,0.4s						
KNRA	**Kununurra**	**38.93**	**268**	P	**P**	**12 54 59.4**	**+0.3**
KNRA				IAmb	IAmb	12 55 41.7	
	comp=Z,19nm,1.1s						
FAKI	**Fak Fak**	**39.64**	**289**	P	**P**	**12 55 05.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**41.49**	**264**	P	**P**	**12 55 21.7**	**+1.4**
	comp=Z,2.5nm,0.5s,baz=89,slow=5.5,SNR=9.1						
	comp=Z,2.5nm,0.5s						
VNDA	**Vanda**	**58.94**	**182**	LR	LR	13 18 52.4	
	comp=Z,640nm,20.8s,baz=224,slow=32						
CM31	**Chiang Mai Arr**	**78.48**	**294**	P	**P**	**12 59 33.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**78.48**	**294**	P	**P**	**12 59 35.7**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=122,slow=4.8,SNR=1.4						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**86.94**	**323**	P	**P**	**13 00 18.0**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=115,slow=6.7,SNR=3.7						
SONM				LR	LR	13 36 01.3	
	comp=Z,1μm,21.0s,baz=306,slow=34						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**86.94**	**323**	IAmb	IAmb	13 00 20.3	
	comp=Z,3.0nm,1.2s						

IDC ***13*** *13:04:08.6±2.2,4°.10S×131°.81E, h0km, mb3.7/2, mbtmp3.7/6, ML3.7/4, Error ellipse: s-maj=116.4km s-min=22.5km az=81.0*

ISC 13 13:04:11.5±1.2, 4°.16S±0°.07×131°.8E±0°.3, h35km, n6, σ2s66/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.31**	**351**	Pn	**Pn**	**13 04 59.7**	**-1.1**
	1.6nm,0.3s,baz=155,slow=19,SNR=15						
SIJI				Sn	**Sn**	**13 05 36.1**	**-2.8**
	7.5nm,0.3s,baz=303,slow=23,SNR=15						
	4.7nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.10**	**203**	Pn	**Pn**	**13 07 42.2**	**-0.1**
	0.5nm,0.3s,baz=22,slow=7.8,SNR=6.9						
FITZ				Sn	**Sn**	**13 10 26.2**	**-2.3**
	0.1nm,0.3s,baz=234,slow=18,SNR=1.6						
	1.5nm,0.2s						
WRA	**Warramunga Arr**	**15.89**	**171**	Pn	**Pn**	**13 07 52.5**	**-0.1**
	0.4nm,0.3s,baz=354,slow=13,SNR=11						
WRA				Sn	**Sn**	**13 10 44.6**	**-3.1**
	0.2nm,0.3s,baz=6.9,slow=22,SNR=2.4						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**19.50**	**174**	P	**Pn**	**13 08 39.3**	**+2.1**
	0.4nm,0.3s,baz=351,slow=9.4,SNR=41						
	1.7nm,0.6s						
MKAR	**Makanchi Array**	**66.87**	**325**	P	**P**	**13 15 02.8**	**+2.7**
	0.4nm,0.5s,baz=112,slow=7.9,SNR=10						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**71.06**	**327**	P	**P**	**13 15 28.5**	**+2.5**
	0.4nm,0.7s,baz=121,slow=5.3,SNR=4.9						
	0.4nm,0.7s						

KOLA ***13*** *13:08:10.7, 80°.97N×3°.82W, h0km, ML2.2, Error ellipse: s-maj=87.7km s-min=17.3km az=50.0, Greenland sea, Knipovich ridge, north*

BER ***13*** *13:08:11.5±3.4, 81°.16N×2°.83W, h10km, Mw3.4, ML1.8(DNK), Confirmed Earthquake*

DNK ***13*** *13:08:13.3±3.2, 81°.18N×2°.17W, h36km±25km, ML1.8, Presumed earthquake*

FCIAR ***13*** *13:08:14.0, 81°.36N×1°.63E, h10km, station OMEGA has station magnitude of 3.70*

ISC 13 13:08:07.1±0.9, 81°.17N±0°.07×2°.91W±0°.04, h10km, n22, σ2s78/38, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.12**	**289**	*e*P	**Pb**	**13 08 46.4**	**+1.0**
NOR				*e*S	**Sn**	**13 09 08.7**	**-0.1**
NOR	**Nord**	**2.12**	**289**	*e*P	**Pb**	**13 08 46.3**	**+0.8**
NOR				*i* S	**Sn**	**13 09 09.1**	**+0.4**
NOR				IAML		13 09 29.4	
	comp=Z,5.9nm,0.4s						
KBS	**Kingsbay**	**3.41**	**124**	*e*P	**Pn**	**13 09 02.2**	**+1.9**
KBS				*e*S	**Sn**	**13 09 37.6**	**-3.1**
KBS				IAML		13 09 42.4	
	comp=Z,6.8nm,0.4s						
KBS	**Kingsbay**	**3.41**	**124**	P	**Pn**	**13 09 01.9**	**+1.7**
KBS				S	**Sn**	**13 09 37.8**	**-2.9**
KBS	**Kingsbay**	**3.41**	**124**	*i* P	**Pn**	**13 09 01.4**	**+1.1**
KBS				*i* S	**Sn**	**13 09 37.6**	**-3.1**
BRBB	**Barentsburg B**	**4.35**	**126**	*e*P	**Pn**	**13 09 17.0**	**+3.9**
BRBB	**Barentsburg B**	**4.35**	**126**	P	**Pn**	**13 09 16.2**	**+3.1**
BRBB				S	**Sn**	**13 10 04.3**	**+0.6**
BRBA	**Barentsburg A**	**4.38**	**127**	*e*P	**Pn**	**13 09 17.4**	**+3.9**
SPA0	**Spitsbergen Ar**	**4.56**	**121**	*e*P	**Pn**	**13 09 18.3**	**+2.3**
SPA0				IAML		13 09 20.2	
	comp=Z,5.6nm,0.3s						
SPA0				*e*S	**Sn**	**13 10 06.9**	**-2.1**
SPA0	**Spitsbergen Ar**	**4.56**	**121**	*e*P	**Pn**	**13 09 17.7**	**+1.7**
SPA0				*e*S	**Sn**	**13 10 07.1**	**-1.9**
SPITS	**Spitsbergen Ar**	**4.56**	**121**	P	**Pn**	**13 09 17.8**	**+1.7**
SPITS				S	**Sn**	**13 10 07.8**	**-1.2**
DAG	**Danmarks Havn**	**5.33**	**222**	*e*	**Pn**	**13 09 25.7**	**-0.8**
	baz=30,slow=14						
DAG				*i* P	**Pn**	**13 09 29.4**	**+3.0**
DAG				*i* S	**Sn**	**13 10 24.4**	**-3.3**
DAG				IAML		13 10 28.1	
	comp=Z,5.1nm,0.3s						
HSPB	**Hornsund (broa**	**5.42**	**131**	*e*P	**Pn**	**13 09 30.9**	**+3.1**
HSPB				IAML		13 09 31.3	
	comp=Z,12nm,0.3s						
HSPB	**Hornsund (broa**	**5.42**	**131**	*e*P	**Pn**	**13 09 28.0**	**+0.2**
HSPB				*e*S	**Sn**	**13 10 27.7**	**-2.3**
HSPB	**Hornsund (broa**	**5.42**	**131**	P	**Pn**	**13 09 30.7**	**+2.9**
HSPB				S	**Sn**	**13 10 29.0**	**-1.1**
HOPEN	**Hopen**	**7.05**	**116**	*e*P	**Pn**	**13 09 52.1**	**+2.0**
HOPEN				IAML		13 09 54.9	
	comp=Z,2.3nm,0.4s						
OMEGA	**Omega**	**7.75**	**68**	*e*P	**Pn**	**13 10 00.4**	**+0.7**
OMEGA				*e*S	**Sn**	**13 11 20.8**	**-6.6**
	comp=Z,23nm,2.6s						
DBG	**Daneborg**	**7.76**	**217**	*e*P	**Pn**	**13 10 02.9**	**+3.0**
DBG				*e*S	**Sn**	**13 11 22.2**	**-5.4**
DBG	**Daneborg**	**7.76**	**217**	*i* P	**Pn**	**13 10 01.8**	**+2.0**
DBG				*i* S	**Sn**	**13 11 22.1**	**-5.5**
DBG				IAML		13 11 35.2	
	comp=Z,2.2nm,0.4s						
NEEM	**North Greenlan**	**9.39**	**272**	*i* P	**Pn**	**13 10 24.4**	**+1.9**
NEEM	**North Greenlan**	**9.39**	**272**	*i* P	**Pn**	**13 10 24.4**	**+1.9**
NEEM				*i* S	Sn	13 12 02.3	-5.7
NEEM				IAML		13 12 05.4	
	comp=Z,2.2nm,0.3s						
SUMG	**Summit**	**11.49**	**242**	*i* P	**Pn**	**13 10 52.3**	**+1.1**
SUMG				*i* S	Sn	13 12 50.4	-9.2
SUMG				IAML		13 13 11.0	
	comp=Z,3.1nm,0.6s						

IDC 13 13:12:33.2±1.9, 2°.16N×126°.25E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=199.9km s-min=22.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.35**	**160**	P	P	13 17 43.2	-0.2
	0.3nm,0.4s,baz=339,slow=10,SNR=8.8						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**26.73**	**164**	P	P	13 18 14.7	+0.1
	0.2nm,0.6s,baz=354,slow=11,SNR=1.0						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.57**	**326**	P	P	13 22 31.3	-0.6
	0.1nm,0.5s,baz=119,slow=7.4,SNR=4.4						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**62.80**	**328**	P	P	13 23 01.1	+0.5
	0.2nm,0.3s,baz=128,slow=6.2,SNR=5.5						
	0.2nm,0.3s						

IDC ***13*** *13:25:29.0±3.4, 10°.55N×125°.32E, h103km±35km, mb3.5/11, mbtmp3.9/12, MS4.1/2, Error ellipse: s-maj=31.1km s-min=16.1km az=70.0*

ISC 13 13:25:29.1±0.8, 10°.66N±0°.08×125°.4E±0°.2, h100km, n14, σ1s28/14, mb3.9/12, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.57**	**177**	P	**Pn**	**13 26 21.8**	**-0.8**
	178nm,0.4s,baz=270,slow=20,SNR=4.4						
DAV				S	**Sn**	**13 27 06.7**	**+2.8**
	115nm,0.3s,baz=318,slow=22,SNR=7.5						
DAV				LR	LR	13 28 07.0	
	comp=Z,1μm,19.9s,baz=94,slow=46						
CMAR	**Chiang Mai Arr**	**26.71**	**290**	P	**P**	**13 30 57.8**	**-1.5**
	0.8nm,0.3s,baz=109,slow=7.1,SNR=5.1						
	0.8nm,0.3s						
KSRS	**Korea Array**	**26.77**	**4**	P	**P**	**13 30 59.9**	**+0.3**
	1.1nm,0.6s,baz=184,slow=10,SNR=5.7						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**31.66**	**164**	P	**P**	**13 31 41.7**	**-1.4**
	1.1nm,1.0s,baz=344,slow=8.3,SNR=3.0						
	1.1nm,1.0s						
USRK	**Ussuriysk Ar.**	**33.90**	**9**	P	**P**	**13 32 01.7**	**-0.6**
	1.9nm,0.6s,baz=186,slow=12,SNR=4.2						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**35.12**	**166**	P	**P**	**13 32 11.8**	**-1.3**
	1.2nm,0.6s,baz=340,slow=7.0,SNR=13						
	1.2nm,0.6s						
GTA2	**Gaotai**	**36.65**	**326**	*e*P	**P**	**13 32 26.6**	**+0.4**
GTA2				sP	pP	13 32 41.8	-7.2
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	**Songino Array**	**40.35**	**340**	P	**P**	**13 32 58.3**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=154,slow=7.9,SNR=2.2						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**51.19**	**323**	P	**P**	**13 34 22.3**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=122,slow=7.8,SNR=11						
	comp=Z,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**53.87**	**332**	P	**P**	**13 34 41.0**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=116,slow=8.2,SNR=8.4						
	comp=Z,1.5nm,0.7s						
KURBB	**Kurchatov Arra**	**55.26**	**326**	P	**P**	**13 34 52.3**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=124,slow=7.1,SNR=25						
	comp=Z,1.5nm,0.6s						
BVAR	**Borovoye Array**	**60.85**	**325**	P	**P**	**13 35 31.4**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=148,slow=8.7,SNR=3.7						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**79.47**	**26**	P	**P**	**13 37 24.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=279,slow=7.0,SNR=6.4						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**84.61**	**309**	LR	LR	14 19 03.4	
	comp=Z,222nm,21.3s,baz=19,slow=38						

KOLA ***13*** *13:29:20.4, 81°.36N×1°.49W, h0km, ML2.0, Error ellipse: s-maj=100.9km s-min=25.6km az=40.0, Greenland sea, Arctic Ocean, Knipovich ridge, north*

DNK ***13*** *13:29:20.7±3.1, 81°.24N×2°.15W, h36km±26km, ML1.6, Presumed earthquake*

BER ***13*** *13:29:24.0±2.5, 81°.00N×2°.39W, h23km±43km, Mw2.9, ML1.3(DNK), Confirmed Earthquake*

ISC 13 13:29:15.7±1.1, 81°.20N±0°.08×2°.93W±0°.04, h10km, n17, σ3s09/28, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.10**	**288**	*e*P	**Pg**	**13 29 58.1**	**+2.2**
NOR	**Nord**	**2.10**	**288**	*e*P	**Pn**	**13 29 52.5**	**+1.6**
NOR				*i* S	**Sb**	**13 30 19.1**	**-0.9**
NOR				IAML		13 30 26.4	
	comp=Z,4.7nm,0.9s						
KBS	**Kingsbay**	**3.44**	**124**	*e*P	**Pn**	**13 30 11.1**	**+1.9**
KBS				*e*S	**Sn**	**13 30 46.4**	**-3.5**
KBS				IAML		13 30 51.1	
	comp=Z,2.5nm,0.4s						
KBS	**Kingsbay**	**3.44**	**124**	P	**Pn**	**13 30 11.1**	**+1.9**
KBS				S	**Sn**	**13 30 46.4**	**-3.5**
KBS	**Kingsbay**	**3.44**	**124**	*i* P	**Pn**	**13 30 11.1**	**+1.9**
KBS				*i* S	**Sn**	**13 30 45.9**	**-3.9**
BRBB	**Barentsburg B**	**4.37**	**127**	*e*P	**Pn**	**13 30 25.7**	**+3.7**
BRBB	**Barentsburg B**	**4.37**	**127**	P	**Pn**	**13 30 25.0**	**+3.0**
BRBB				S	**Sn**	**13 31 13.3**	**+0.4**
BRBA	**Barentsburg A**	**4.40**	**127**	*e*P	**Pn**	**13 30 26.4**	**+4.0**
SPA0	**Spitsbergen Ar**	**4.58**	**121**	*e*P	**Pn**	**13 30 27.2**	**+2.2**
SPA0				*e*S	**Sn**	**13 31 15.8**	**-2.4**
SPA0				IAML		13 31 31.7	
	comp=Z,4.3nm,0.9s						
SPITS	**Spitsbergen Ar**	**4.58**	**121**	P	**Pn**	**13 30 27.2**	**+2.2**
SPITS				S	**Sn**	**13 31 15.7**	**-2.5**
DAG	**Danmarks Havn**	**5.35**	**222**	*e*P	**Pn**	**13 30 38.5**	**+3.1**
DAG				*e*S	**Sn**	**13 31 33.5**	**-3.4**
DAG	**Danmarks Havn**	**5.35**	**222**	*i* P	**Pn**	**13 30 38.2**	**+2.8**
DAG				*i* S	**Sn**	**13 31 34.1**	**-2.8**
DAG				IAML		13 31 37.0	
	comp=Z,1.2nm,0.3s						
HSPB	**Hornsund (broa**	**5.45**	**131**	*e*P	**Pn**	**13 30 39.0**	**+2.2**
HSPB	**Hornsund (broa**	**5.45**	**131**	P	**Pn**	**13 30 38.7**	**+1.9**
DBG	**Daneborg**	**7.79**	**217**	*e*P	**Pn**	**13 31 11.9**	**+3.1**
DBG				*e*S	Sn	13 32 31.4	-5.5
DBG	**Daneborg**	**7.79**	**217**	*i* P	**Pn**	**13 31 10.4**	**+1.6**
DBG				*i* S	**Sn**	**13 32 33.3**	**-3.6**
DBG				IAML		13 32 55.0	
	comp=Z,2.7nm,0.8s						
NEEM	**North Greenlan**	**9.38**	**272**	*i* P	**Pn**	**13 31 33.4**	**+2.4**
NEEM				*i* S	**Sn**	**13 33 09.8**	**-6.7**
NEEM				IAML		13 33 28.1	
	comp=Z,1.4nm,0.8s						

IDC 13 13:37:05.1±1.7, 12°.27S×121°.69E, h0km, mb3.5/1, mbtmp3.8/5, ML3.8/4, Error ellipse: s-maj=35.8km s-min=23.2km az=65.0, South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.82**	**43**	Pn	Pn	13 37 52.6	+1.0
	12nm,0.3s,baz=209,slow=2.9,SNR=11						
BATI				Sn	Sn	13 38 25.7	-0.6
	14nm,0.3s,baz=37,slow=22,SNR=12						
	24nm,0.3s						
FITZ	**Fitzroy Crossi**	**6.93**	**147**	Pn	Pn	13 38 50.1	+2.0
	1.1nm,0.3s,baz=323,slow=12,SNR=63						
FITZ				Sn	Sn	13 40 06.3	-1.4
	2.9nm,0.3s,baz=207,slow=17,SNR=8.7						
	7.4nm,0.7s						
WRA	**Warramunga Arr**	**14.34**	**124**	Pn	Pn	13 40 27.8	-1.8
	0.4nm,0.3s,baz=300,slow=13,SNR=26						
WRA				Sn	Sn	13 43 00.8	-8.7
	0.3nm,0.3s,baz=303,slow=25,SNR=6.6						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**16.21**	**136**	Pn	Pn	13 40 54.2	-0.3
	0.4nm,0.3s,baz=309,slow=11,SNR=34						
ASAR				Sn	Sn	13 43 45.7	-9.5
	0.1nm,0.3s,baz=310,slow=22,SNR=4.6						
	2.4nm,0.5s						
MKAR	**Makanchi Array**	**68.56**	**332**	P	P	13 48 09.6	-0.2
	0.2nm,0.4s,baz=131,slow=7.0,SNR=8.1						
	0.2nm,0.4s						

TEH ***13*** *13:41:40.5, 27°.70N×53°.08E, h5km, ML3.3, Presumed earthquake*

IDC ***13*** *13:41:44.1±45.0, 28°.41N×53°.17E, h0km, mb3.7/3, mbtmp3.7/3, MS4.4/2, Error ellipse: s-maj=884.1km s-min=51.9km az=8.0*

ISC 13 13:41:41.8±1.5, 27°.69N±0°.05×53°.13E±0°.06, h9km±11km, n18, σ2s00/16, mb3.7/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHL1	**Khalili_Fars**	**0.16**	**109**	Pg	**Pg**	**13 41 44.4**	**-0.9**
LMD1	**Lamerd**	**0.35**	**175**	Pg	**Pg**	**13 41 48.5**	**-0.2**
QIR1	**Qir**	**0.79**	**355**	Pg	**Pg**	**13 41 56.5**	**-0.4**
JHRM	**Jahrom**	**0.90**	**26**	Pg	**Pg**	**13 41 59.2**	**+0.1**
LAR1	**LAR**	**1.11**	**91**	Pg	**Pg**	**13 42 04.1**	**+1.1**
DSBU	**Dashti - Bushe**	**1.78**	**292**	Pg	**Pn**	**13 42 15.9**	**+3.1**
KLNJ	**Kolanjah**	**3.57**	**338**	Pn	**Pn**	**13 42 39.4**	**+1.8**
IMEH	**Mehriz**	**3.91**	**19**	Pn	**Pn**	**13 42 44.6**	**+2.4**
TAFT	**Taft - Yazd**	**4.12**	**12**	Pn	**Pn**	**13 42 47.1**	**+2.0**
IBAF	**Bafgh**	**4.43**	**28**	Pn	**Pn**	**13 42 50.9**	**+1.6**
CHMN	**Cheshme madani**	**4.43**	**60**	Pn	**Pn**	**13 42 51.8**	**+2.2**
KBAM	**BAM**	**4.91**	**72**	Pn	**Pn**	**13 42 57.8**	**+2.0**
TPRV	**Parvadeh(Tabas**	**6.14**	**29**	Pn	**Pn**	**13 43 14.8**	**+2.0**
MKAR	**Makanchi Array**	**29.78**	**42**	P	**P**	**13 47 47.9**	**-0.9**
	0.2nm,0.5s,baz=231,sl

MVOU	**Mavrovouni**	**4.70**	**89**	P		**Pn**	**13 48 24.2**	**+1.2**
ITM	**Ithomi**	**5.28**	**295**	P		**Pn**	**13 48 31.5**	**+0.6**
KLV	**Kalavryta, Ach**	**5.51**	**304**	P		**Pn**	**13 48 34.9**	**+0.8**
DSI	**Dead Sea**	**7.16**	**117**	P		**Pn**	**13 48 57.6**	**+0.8**
DSI				S		**Sn**	**13 50 17.9**	**-0.7**
RMNI	**Mount Ramon**	**7.29**	**126**	P		**Pn**	**13 48 59.1**	**+0.5**
RMNI				S		**Sn**	**13 50 20.4**	**-1.4**
KRMI	**Paran Flat**	**7.58**	**129**	P		**Pn**	**13 49 02.6**	**+0.1**
KRMI				S		**Sn**	**13 50 26.6**	**-2.2**
PRNI	**Paran**	**7.60**	**126**	P		**Pn**	**13 49 03.0**	**+0.1**
PRNI				S		**Sn**	**13 50 27.9**	**-1.7**
MBRI	**Mt Berech**	**7.91**	**130**	P		**Pn**	**13 49 07.4**	**+0.2**
MBRI				S		**Sn**	**13 50 34.8**	**-2.5**
EIL	**Elat**	**8.02**	**130**	P		**Pn**	**13 49 08.2**	**-0.4**
EIL				S		**Sn**	**13 50 37.5**	**-2.4**

*BJI **13** 14:07:37.0,51.71N×177.20E,h43km,mB5.2/20,mb5.1/78, Ms4.6/14,Ms7 4.4/14*
*MOS **13** 14:07:37.5±1.1,51.60N×177.29E,h44km,mb5.3/51, MS4.7/4, Error ellipse: s-maj=7.4km s-min=4.2km az=130.2*
*AEIC **13** 14:07:38.0±2.0,51.47N±0.08×177.30E±0.06,h36km±5km, Error ellipse: s-maj=11.0km s-min=5.5km az=181.0*
*IDC **13** 14:07:38.7±1.8,51.66N×177.39E,h38km±13km,mb4.6/37, mbtmp4.7/41,ML5.0/3,MS4.2/20,Error ellipse: s-maj=13.7km s-min=8.8km az=161.0*
*KRSC **13** 14:07:38.8±2.3,51.43N×176.91E,h61km±32km,Ml5.1*
*NEIC **13** 14:07:39.7±1.6,51.64N±0.08×177.31E±0.06,h44km±5km, mb5.0/151,ML4.9/12,ML4.6(AEIC),Error ellipse: s-maj=11.7km s-min=5.8km az=180.0*
*BGR **13** 14:07:40.2,51.67N×176.30E,h33km,mb5.2*
ISC 13 14:07:39.3±0.4,**51.52N**±0.05×**177.28E**±0.03,**h48**km±2km, **h49**km:**pP-P,n761,**σ1**25/757,mb5.0**/197,**MS4.4**/24, **28C-38D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
LSSA	**Little Sitkin**	**0.88**	**60**		**Pn**		**14 07 54.2**	**-1.2**
LSNW	**Little Sitkin**	**0.89**	**59**		**Pn**		**14 07 54.4**	**-1.1**
LSSE	**Little Sitkin**	**0.91**	**62**		**Pn**		**14 07 54.5**	**-1.1**
LSPA	**Little Sitkin**	**0.92**	**61**		**Pn**		**14 07 54.7**	**-1.2**
LSPA					**Sn**		**14 08 07.2**	**-0.8**
AMKA	**Amchitka**	**1.27**	**96**		**Sn**		**14 08 16.2**	**-0.4**
AMKA	**Amchitka**	**1.27**	**96**		**Pn**		**14 07 59.3**	**-1.3**
CERB	**Semis' Cerberu**	**1.52**	**73**		**Pn**		**14 08 04.0**	**0.0**
CERB					**Sn**		**14 08 22.0**	**-0.6**
CEPE	**Semis' Perret**	**1.54**	**72**		**Pn**		**14 08 04.2**	**-0.1**
SHEM	**Shemya Is, Ala**	**2.30**	**303**	Pn	**Pn**		**14 08 14.7**	**0.0**
	1μm,0.3s,baz=105,slow=2.9,SNR=130							
SHEM				Sn	**Sn**		**14 08 41.9**	**+0.1**
	1μm,0.3s,baz=305,slow=20,SNR=15							
SHEM				LR	LR		14 09 14.6	
	comp=Z,6μm,18.0s,baz=106,slow=42							
SHEM	**Shemya Is, Ala**	**2.30**	**303**	Pn	**Pn**		**14 08 14.3**	**-0.3**
SHEM				IAML			14 08 48.1	
	comp=E,6μm,0.7s							
SMY	**Shemya**	**2.30**	**303**		**Pn**		**14 08 14.6**	**-0.1**
SMY				Sn	**Sn**		**14 08 42.6**	**+0.8**
SMY	**Shemya**	**2.30**	**303**	P	**Pn**		**14 08 14.6**	**-0.1**
SMY				S	**Sn**		**14 08 41.8**	**0.0**
GASW	**Gareloi Southw**	**2.42**	**82**		**Pn**		**14 08 16.3**	**-0.1**
GASW					**Sn**		**14 08 43.6**	**-1.1**
GAKI	**Gareloi-Kavalg**	**2.44**	**88**		**Pn**		**14 08 16.7**	**+0.1**
GAKI					**Sn**		**14 08 45.7**	**+0.5**
GAKI					LR		14 08 45.9	
GANO	**Gareloi North**	**2.46**	**81**		**Pn**		**14 08 16.9**	**+0.1**
GANO					**Sn**		**14 08 45.9**	**+0.2**
GANE	**Gareloi Northe**	**2.48**	**82**		**Pn**		**14 08 17.3**	**+0.2**
TANO	**Tanaga North**	**2.89**	**80**		**Pn**		**14 08 22.9**	**+0.2**
TANO					**Sn**		**14 08 56.9**	**+0.7**
TASE	**Tanaga Southea**	**2.94**	**82**		**Pn**		**14 08 23.6**	**+0.2**
TAFP	**Tanaga Falls P**	**2.97**	**81**		**Pn**		**14 08 23.9**	**0.0**
TAFL	**Tanaga Flats**	**3.02**	**84**		**Pn**		**14 08 24.5**	**0.0**
KIMD	**Kanaga Island**	**3.43**	**84**		**Pn**		**14 08 30.1**	**0.0**
KIKV	**Kanaga Island**	**3.47**	**82**		**Pn**		**14 08 31.0**	**+0.2**
KIWB	**Kanaga Island**	**3.48**	**82**		**Pn**		**14 08 30.2**	**-0.7**
KIWB				IAML			14 09 26.9	
	comp=N,3μm,0.8s							
KIWB				IAML			14 09 29.1	
	comp=E,3μm,0.8s							
ADK	**Adak**	**3.77**	**82**		**Pn**		**14 08 35.3**	**+0.4**
ADK				IAML			14 09 36.3	
	comp=E,2μm,1.3s							
ADK				IAML			14 09 50.8	
	comp=E,2μm,0.9s							
ADK	**Adak**	**3.77**	**82**	P	**Pn**		**14 08 35.3**	**+0.4**
ETKA	**Kagalaska Isla**	**3.95**	**83**		**Pn**		**14 08 36.9**	**-0.3**
GSTD	**Great Sitkin T**	**4.12**	**80**		**Pn**		**14 08 39.3**	**-0.4**
GSMY	**Great Sitkin M**	**4.17**	**80**		**Pn**		**14 08 40.0**	**0.0**
GSIG	**Igitkin Island**	**4.25**	**81**		**Pn**		**14 08 41.3**	**-0.1**
KOWE	**Korovin West**	**5.31**	**78**		**Pn**		**14 08 56.9**	**+1.0**
ATKA	**Atka Island**	**5.33**	**79**		**Pn**		**14 08 56.8**	**+0.6**
ATKA				IAML			14 10 06.9	
	comp=E,742nm,0.8s							
KOKL	**Mount Kliuchef**	**5.34**	**78**		**Pn**		**14 08 57.3**	**+0.9**
KOFP	**Korovin Flat P**	**5.39**	**79**		**Pn**		**14 08 58.2**	**+1.1**
BKI	**Bering**	**7.70**	**303**	P	**Pn**		**14 09 29.3**	**+0.7**
BKI				S	**Sn**		**14 10 53.4**	**-1.0**
BKI	**Bering**	**7.70**	**303**	*eP*	**Pn**		**14 09 29.3**	**+0.7**
BKI				*eS*	**Sn**		**14 10 53.4**	**-1.0**
SPIA	**Saint Paul Isl**	**9.22**	**47**	P	**Pn**		**14 09 49.2**	**-0.3**
	baz=238							
P08K	**Saint George I**	**9.26**	**52**	P	**Pn**		**14 09 49.9**	**-0.1**
	baz=242							
KBTR	**Krutoberegovo**	**9.74**	**304**	P	**Pn**		**14 09 58.2**	**+1.7**
KBTR	**Krutoberegovo**	**9.74**	**304**	*eP*	**Pn**		**14 09 58.3**	**+1.7**
MKZ	**Mys Kozlova**	**9.84**	**294**	P	**Pn**		**14 09 57.6**	**-0.3**
MKZ	**Mys Kozlova**	**9.84**	**294**	*eP*	**Pn**		**14 09 57.7**	**-0.3**
MGOD	**Makushin Gods**	**9.90**	**70**		**Pn**		**14 10 00.3**	**+1.5**
MREP	**Makushin Rep't**	**9.97**	**70**		**Pn**		**14 10 01.4**	**+1.6**
UNV	**Unalaska Valle**	**10.12**	**70**		**Pn**		**14 10 04.3**	**+2.6**
UNV	**Unalaska Valle**	**10.12**	**70**	P	**Pn**		**14 10 01.8**	**0.0**
	baz=263							
LVA	**Lava Point**	**10.44**	**69**		**Pn**		**14 10 07.2**	**+1.1**
SPN	**Mys Shipunski**	**10.68**	**285**	P	**Pn**		**14 10 08.8**	**-0.7**
SPN	**Mys Shipunski**	**10.68**	**285**	*eP*	**Pn**		**14 10 08.8**	**-0.7**
KII	**Karymskiy**	**11.09**	**290**	P	**Pn**		**14 10 16.4**	**+1.4**
KII	**Karymskiy**	**11.09**	**290**	*eP*	**Pn**		**14 10 16.4**	**+1.4**
SDLR	**Sedlovina**	**11.37**	**286**	P	**Pn**		**14 10 21.1**	**+2.1**
SDLR	**Sedlovina**	**11.37**	**286**	*eP*	**Pn**		**14 10 21.2**	**+2.1**
UGLR	**Uglovaya**	**11.41**	**286**	P	**Pn**		**14 10 19.7**	**+0.3**
UGLR	**Uglovaya**	**11.41**	**286**	*eP*	**Pn**		**14 10 19.8**	**+0.3**
SMAR	**Somma**	**11.42**	**286**	P	**Pn**		**14 10 21.3**	**+1.6**
SMAR	**Somma**	**11.42**	**286**	*eP*	**Pn**		**14 10 21.4**	**+1.6**
DALK	**Dalny**	**11.45**	**285**	P	**Pn**		**14 10 19.7**	**-0.2**
DALK				S	**Sn**		**14 12 20.0**	**-6.2**
DALK	**Dalny**	**11.45**	**285**	*eP*	**Pn**		**14 10 19.8**	**-0.2**
DALK				*eS*	**Sn**		**14 12 20.1**	**-6.2**
KRER	**Koryakskii**	**11.46**	**286**	P	**Pn**		**14 10 22.4**	**+2.2**
KRER	**Koryakskii**	**11.46**	**286**	*eP*	**Pn**		**14 10 22.5**	**+2.2**
AVH	**Avacha**	**11.46**	**286**	P	**Pn**		**14 10 20.6**	**+0.4**
AVH	**Avacha**	**11.46**	**286**	*eP*	**Pn**		**14 10 20.6**	**+0.4**
PET	**Petropavlovsk**	**11.51**	**285**	*eP*	**Pn**		**14 10 17.6**	**-3.1**
PET				*eS*	**Sn**		**14 12 20.8**	**-6.9**
PET				MLR	MLR			
	comp=Z,800nm,16.0s							
PET				MLR	MLR			
	comp=Z,400nm,14.0s							
KRX	**Arik**	**11.52**	**286**	P	**Pn**		**14 10 21.1**	**+0.1**
KRX	**Arik**	**11.52**	**286**	*eP*	**Pn**		**14 10 21.2**	**+0.1**
KOK	**Koryaka**	**11.52**	**286**	P	**Pn**		**14 10 20.9**	**-0.1**
KOK	**Koryaka**	**11.52**	**286**	*eP*	**Pn**		**14 10 21.0**	**-0.1**
RUS	**Russkaya**	**11.61**	**282**	P	**Pn**		**14 10 21.9**	**-0.2**
RUS	**Russkaya**	**11.61**	**282**	*eP*	**Pn**		**14 10 21.9**	**-0.2**
MTVR	**Mutnovka**	**11.81**	**282**	P	**Pn**		**14 10 25.3**	**+0.4**
MTVR	**Mutnovka**	**11.81**	**282**	*eP*	**Pn**		**14 10 25.3**	**+0.4**
KRMR	**Karymshinskiy**	**11.83**	**284**	P	**Pn**		**14 10 26.0**	**+1.0**
KRMR				S	**Sn**		**14 12 30.9**	**-4.6**
KRMR	**Karymshinskiy**	**11.83**	**284**	*eP*	**Pn**		**14 10 26.1**	**+1.0**
KRMR				*eS*	**Sn**		**14 12 30.9**	**-4.6**
ESO	**Esso**	**11.84**	**299**	P	**Pn**		**14 10 26.4**	**+1.1**
ESO	**Esso**	**11.84**	**299**	*eP*	**Pn**		**14 10 26.4**	**+1.1**
GRL	**Gorelyy**	**11.87**	**283**	P	**Pn**		**14 10 27.1**	**+1.3**
GRL	**Gorelyy**	**11.87**	**283**	*eP*	**Pn**		**14 10 27.2**	**+1.3**
KDTR	**Khodutka, Kamc**	**11.93**	**279**	P	**Pn**		**14 10 25.2**	**-1.2**
KDTR				S	**Sn**		**14 12 30.5**	**-7.4**
KDTR	**Khodutka, Kamc**	**11.93**	**279**	*eP*	**Pn**		**14 10 25.3**	**-1.2**
KDTR				*eS*	**Sn**		**14 12 30.5**	**-7.4**

GNL	**Ganaly**	**11.95**	**288**	P		**Pn**	**14 10 27.5**	**+0.6**
GNL	**Ganaly**	**11.95**	**288**	*eP*		**Pn**	**14 10 27.5**	**+0.6**
ASAK	**Asacha**	**11.99**	**282**	P		**Pn**	**14 10 28.7**	**+1.4**
ASAK	**Asacha**	**11.99**	**282**	*eP*		**Pn**	**14 10 28.8**	**+1.4**
FALS	**False Pass**	**12.05**	**66**	P		**Pn**	**14 10 27.9**	**-0.1**
	baz=262							
PEA0B	**Petropavlovsk-**	**12.09**	**285**			**Pn**	**14 10 29.2**	**+0.6**
PEA0B	**Petropavlovsk-**	**12.09**	**285**	*ceP*		**Pn**	**14 10 29.5**	**+0.9**
PETK	**Petropavlovsk-**	**12.09**	**285**	Pn		**Pn**	**14 10 29.2**	**+0.6**
	comp=Z,12nm,0.9s,baz=90,slow=19,SNR=28							
PETK				Sn		**Sn**	**14 12 42.5**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=92,slow=36,SNR=4.5							
PETK				LR		LR	14 15 00.5	
	comp=Z,574nm,20.7s,baz=110,slow=36							
M11K	**Mekoryuk**	**12.79**	**40**	P		**Pn**	**14 10 38.2**	**0.0**
	baz=233,SNR=13							
GAMB	**Gambell**	**13.60**	**21**			**Pn**	**14 10 50.6**	**+1.4**
GAMB	**Gambell**	**13.60**	**21**	P		**Pn**	**14 10 48.7**	**-0.5**
	baz=211,SNR=14							
SDPT	**Sand Point**	**13.79**	**65**			**Pn**	**14 10 51.2**	**-0.6**
SDPT	**Sand Point**	**13.79**	**65**	P		**Pn**	**14 10 51.5**	**-0.2**
	baz=263							
M13K	**Dall Lake**	**13.98**	**43**	P		**Pn**	**14 10 54.3**	**-0.1**
	baz=239,SNR=9.0							
CHNA	**Chernabura Isl**	**14.24**	**67**	P		**Pn**	**14 10 57.8**	**-0.2**
	baz=266							
K13K	**Kusilvak Mount**	**14.33**	**36**	P		**Pn**	**14 10 59.2**	**+0.1**
	baz=232,SNR=14							
O14K	**Tigyukauivet M**	**14.39**	**49**	P		**Pn**	**14 10 59.6**	**-0.3**
	baz=247							
N14K	**Kuskokwak Cree**	**14.48**	**46**	P		**Pn**	**14 11 01.0**	**0.0**
	baz=244,SNR=9.8							
M14K	**Bethel**	**14.75**	**43**	P		**Pn**	**14 11 05.0**	**+0.4**
	baz=240,SNR=14							
L14K	**Kuka Creek**	**14.75**	**40**	P		**Pn**	**14 11 05.0**	**+0.4**
	baz=237,SNR=6.7							
O15K	**Ungalikthiuk R**	**15.05**	**50**	P		**Pn**	**14 11 08.9**	**+0.4**
	baz=250,SNR=9.8							
J14K	**Nanvaranak Lak**	**15.25**	**35**	P		**Pn**	**14 11 11.4**	**+0.4**
	baz=231,SNR=9.3							
M15K	**Kasigluk River**	**15.27**	**44**	P		**Pn**	**14 11 12.2**	**+0.8**
	baz=243,SNR=8.5							
N15K	**Kwethluk River**	**15.31**	**47**	P		**Pn**	**14 11 12.7**	**+0.8**
	baz=246,SNR=15							
L15K	**Ungalak Mounta**	**15.42**	**41**	P		**Pn**	**14 11 14.0**	**+0.7**
	baz=238,SNR=9.7							
K15K	**Wolf Creek Mou**	**15.73**	**39**	P		**Pn**	**14 11 17.9**	**+0.5**
	baz=236,SNR=23							
R16K	**Pilot Point**	**15.74**	**58**	P		**Pn**	**14 11 17.6**	**+0.1**
	baz=258							
ANM	**Nome**	**15.89**	**28**	P		**P**	**14 11 23.5**	**+1.2**
ANM	**Nome**	**15.89**	**28**	P		**P**	**14 11 23.5**	**+1.2**
ANM				pmax		pmax		
	comp=Z,11nm,0.8s							
ANM	**Nome**	**15.89**	**28**	P		**Pn**	**14 11 19.5**	**+0.1**
	baz=223,SNR=10							
P16K	**Nushagak River**	**15.90**	**52**	P		**P**	**14 11 22.6**	**+0.2**
P16K	**Nushagak River**	**15.90**	**52**	P		**Pn**	**14 11 19.5**	**0.0**
	baz=253							
TNA	**Tin City**	**15.99**	**23**			**Pn**	**14 11 20.3**	**-0.2**
TNA	**Tin City**	**15.99**	**23**	P		**Pn**	**14 11 20.9**	**+0.3**
	baz=215,SNR=30							
O16K	**Kokwok River B**	**16.03**	**50**	P		**Pn**	**14 11 21.3**	**+0.2**
	baz=251,SNR=8.3							
N16K	**Nishlik Lake**	**16.04**	**47**	P		**Pn**	**14 11 21.1**	**-0.1**
	baz=247							
M16K	**Timber Creek**	**16.18**	**45**	P		**Pn**	**14 11 22.8**	**-0.2**
	baz=245							
L16K	**Owhat River**	**16.27**	**42**	P		**Pn**	**14 11 24.4**	**+0.3**
	baz=242,SNR=12							
F14K	**Arctic Creek**	**16.32**	**25**	P		**Pn**	**14 11 25.2**	**+0.4**
	baz=219,SNR=16							
R17L	**Mt. Peulik Vol**	**16.40**	**58**	P		**Pn**	**14 11 25.8**	**0.0**
	baz=260							
Q16K	**King Salmon**	**16.47**	**54**	P		**Pn**	**14 11 26.8**	**+0.1**
	baz=256							
O17K	**Koliganek Bris**	**16.57**	**50**	P		**Pn**	**14 11 28.3**	**+0.4**
	baz=252,SNR=6.2							
CHIR	**Chirikof Islan**	**16.57**	**64**	P		**Pn**	**14 11 28.0**	**0.0**
	baz=266							
G15K	**Niukluk**	**16.60**	**28**	P		**Pn**	**14 11 28.4**	**+0.1**
	baz=224,SNR=16							
J16K	**Anvik River**	**16.65**	**36**	P		**Pn**	**14 11 29.2**	**+0.3**
	baz=235							
P17K	**Kvichak River**	**16.71**	**52**	P		**Pn**	**14 11 29.6**	**-0.1**
	baz=254,SNR=5.7							
Q17K	**Contact Creek**	**16.77**	**56**	P		**Pn**	**14 11 30.3**	**-0.3**
	baz=258							
N17K	**Nushagak Hills**	**16.78**	**48**	P		**Pn**	**14 11 30.6**	**0.0**
	baz=249,SNR=9.3							
H16K	**Elim**	**16.92**	**31**	P		**P**	**14 11 33.3**	**-0.3**
	baz=229,SNR=22							
MA2	**Magadan**	**16.93**	**309**	Pn		**Pn**	**14 11 33.2**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=91,slow=10,SNR=7.4							
	comp=Z,4.9nm,0.8s							
MA2	**Magadan**	**16.93**	**309**	*ceP*		**P**	**14 11 34.2**	**+0.4**
MA2				pmax		pmax		
	comp=Z,18nm,1.5s							
MA2	**Magadan**	**16.93**	**309**	P		**Pn**	**14 11 33.1**	**+0.7**
F15K	**North Star Dit**	**16.95**	**26**	P		**Pn**	**14 11 33.6**	**-0.4**
	baz=222							
L17K	**Donlin**	**16.96**	**42**	P		**P**	**14 11 33.6**	**-0.5**
	baz=242							
I17K	**Unalakleet**	**16.97**	**35**	P		**Pn**	**14 11 33.3**	**+0.5**
	baz=234,SNR=8.0							
M17K	**Holitna River**	**17.00**	**45**	P		**P**	**14 11 34.2**	**-0.5**
	baz=246,SNR=14							
ACHA	**Angle Creek He**	**17.05**	**56**	P		**Pn**	**14 11 31.9**	**-2.1**
K17K	**Iditarod**	**17.23**	**40**	P		**P**	**14 11 37.4**	**+0.2**
	baz=241							
J17K	**VABM Dome**	**17.28**	**37**	P		**P**	**14 11 37.6**	**-0.1**
	baz=238							
P18K	**Big Mountain,**	**17.37**	**52**			**P**	**14 11 40.2**	**+1.5**
P18K	**Big Mountain,**	**17.37**	**52**	P		**P**	**14 11 38.5**	**-0.1**
	baz=255,SNR=5.9							
G16K	**Koyuk River**	**17.39**	**29**	P		**P**	**14 11 38.8**	**0.0**
	baz=227,SNR=32							
BILL	**Bilibino**	**17.42**	**346**	*ceP*		**P**	**14 11 39.1**	**-0.1**
BILL				pmax		pmax		
	comp=Z,44nm,0.9s							
SII	**Sitkinak Islan**	**17.43**	**62**	P		**P**	**14 11 39.1**	**-0.2**
	baz=265							
N18K	**Kilae Creek**	**17.43**	**48**	P		**P**	**14 11 39.1**	**-0.3**
	baz=250							
O18K	**Koktuh Hills**	**17.50**	**51**	P		**P**	**14 11 40.2**	**0.0**
	baz=254,SNR=5.3							
SEY	**Seymchan**	**17.53**	**320**	P		**P**	**14 11 40.2**	**-0.2**
	comp=Z,6.5nm,0.8s,baz=119,slow=10,SNR=26							
SEY				LR		LR	14 17 44.5	
	comp=Z,875nm,21.8s,baz=118,slow=35							
SEY	**Seymchan**	**17.53**	**320**	*ceP*		**P**	**14 11 41.2**	**+0.8**
SEY				pmax		pmax		
	comp=Z,6.0nm,0.8s							
L18K	**Granite Mounta**	**17.67**	**43**	P		**P**	**14 11 42.3**	**+0.3**
	baz=245							
M18K	**Stony River**	**17.75**	**45**	P		**P**	**14 11 43.7**	**+0.8**
	baz=248,SNR=6.7							
H17K	**Granite Mounta**	**17.88**	**33**	P		**P**	**14 11 45.1**	**+0.9**
	baz=232,SNR=26							
OHAK	**Old Harbor**	**17.98**	**60**	P		**P**	**14 11 46.3**	**+0.9**
	baz=264							
G17K	**Kiwalik Mounta**	**17.99**	**30**	P		**P**	**14 11 46.3**	**+0.8**
	baz=230,SNR=38							
O19K	**Port Alsworth**	**18.02**	**50**	P		**Pn**	**14 11 46.8**	**+0.9**
	baz=254,SNR=19							
Q19K	**Cape Douglas,**	**18.05**	**54**	P		**Pn**	**14 11 46.6**	**+0.3**
	baz=259							
N19K	**Bonanza Creek**	**18.13**	**48**	P		**Pn**	**14 11 47.8**	**+0.5**
	baz=252							
J18K	**Innoko River**	**18.23**	**39**	P		**Pn**	**14 11 48.9**	**+0.5**
	baz=241,SNR=24							
P19K	**Oil Pt**	**18.42**	**52**	P		**Pn**	**14 11 50.6**	**-0.1**
	baz=257							
KDAK	**Kodiak Island**	**18.42**	**58**	P		**P**	**14 11 47.7**	**-2.5**
	comp=Z,2.8nm,0.3s,baz=80,slow=1.7,SNR=38							
	comp=Z,12nm,0.5s							
KDAK	**Kodiak Island**	**18.42**	**58**	*i* P		**P**	**14 11 48.9**	**-1.3**
KDAK				pmax		pmax		
	comp=Z,54nm,1.6s							
KDAK	**Kodiak Island**	**18.42**	**58**	P		**Pn**	**14 11 50.8**	**+0.1**
	baz=263							
L19K	**White Mountain**	**18.44**	**44**	P		**Pn**	**14 11 51.0**	**0.0**
	baz=248							
F17K	**Baldwin Pennin**	**18.44**	**28**	P		**Pn**	**14 11 51.3**	**+0.4**
	baz=226							
H18K	**Honhosa River**	**18.53**	**33**	P		**Pn**	**14 11 52.2**	**+0.1**
	baz=234,SNR=57							

ILSW	**Iliamna Southw**	**18.54**	**51**	P		**P**	**14 11 52.0**	**+0.3**
ILSW				IAmb		IAmb	14 11 54.4	
	comp=Z,110nm,1.3s							
Q20K	**Shuyak Island**	**18.64**	**56**	P		**Pn**	**14 11 53.2**	**-0.1**
	baz=261							
E17K	**Hotham Inlet**	**18.74**	**26**	P		**Pn**	**14 11 54.4**	**-0.1**
	baz=224,SNR=39							
C16K	**Lisburne Hills**	**18.80**	**20**	P		**Pn**	**14 11 55.1**	**-0.1**
	baz=215							
GCSA	**Galena City Sc**	**18.82**	**35**	P		**Pn**	**14 11 55.8**	**+0.3**
	baz=238,SNR=21							
RED	**Redoubt Volcan**	**18.83**	**50**	P		**P**	**14 11 54.2**	**-0.6**
RED				IAmb		IAmb	14 11 57.8	
	comp=Z,81nm,1.0s							
D17K	**Noatak River**	**18.87**	**23**	P		**Pn**	**14 11 56.5**	**+0.5**
	baz=220,SNR=72							
G18K	**Tagagawik**	**18.88**	**31**	P		**Pn**	**14 11 56.8**	**+0.6**
	baz=232,SNR=36							
J19K	**Poorman**	**18.91**	**38**	P		**Pn**	**14 11 56.8**	**+0.2**
	baz=242,SNR=10							
F18K	**Selawik**	**19.02**	**29**	P		**Pn**	**14 11 58.1**	**+0.2**
	baz=229							
M20K	**Styx River**	**19.09**	**46**	P		**Pn**	**14 11 59.0**	**+0.1**
	baz=251							
RDOG	**Red Dog Mine**	**19.18**	**23**	P		**Pn**	**14 11 59.8**	**0.0**
	baz=220,SNR=60							
HOM	**Homer**	**19.21**	**53**	P		**Pn**	**14 11 59.8**	**-0.3**
	baz=259							
K20K	**Telida**	**19.25**	**41**	P		**P**	**14 11 59.5**	**+0.2**
	baz=245							
E18K	**Tukpahlearik C**	**19.31**	**26**	IAmb		IAmb	14 12 03.9	
	comp=Z,97nm,1.1s							
E18K	**Tukpahlearik C**	**19.31**	**26**	P		**P**	**14 12 00.4**	**+0.5**
	baz=225							
C17K	**DeLong Mountai**	**19.45**	**22**	P		**Pn**	**14 12 02.2**	**-0.7**
	baz=219							
G19K	**Purcell Mounta**	**19.54**	**32**	P		**Pn**	**14 12 03.5**	**-0.6**
	baz=234,SNR=41							
J20K	**Nowinta River**	**19.57**	**39**	IAmb		IAmb	14 12 06.0	
	comp=Z,53nm,0.7s							
J20K	**Nowinta River**	**19.57**	**39**	P		**Pn**	**14 12 03.8**	**-0.6**
	baz=243,SNR=42							
BRLK	**Bradley Lake**	**19.60**	**53**	IAmb		IAmb	14 12 16.1	
	comp=Z,36nm,0.7s							
BRSE	**Bradley Lake S**	**19.67**	**53**	P		**P**	**14 12 03.9**	**0.0**
	baz=260							
CAPN	**Captain Cook N**	**19.69**	**50**	P		**P**	**14 12 04.3**	**+0.3**
	baz=256							
F19K	**Shaleruckik Mo**	**19.75**	**30**	IAmb		IAmb	14 12 10.2	
	comp=Z,50nm,0.9s							
F19K	**Shaleruckik Mo**	**19.75**	**30**	P		**P**	**14 12 05.5**	**+0.9**
	baz=231,SNR=51							
SKT	**Skwentna**	**19.84**	**46**	IAmb		IAmb	14 12 08.9	
	comp=Z,77nm,1.2s							
SKT	**Skwentna**	**19.84**	**46**	P		**Pn**	**14 12 06.8**	**-0.9**
	baz=252,SNR=17							
PPLA	**Purkeypile**	**19.86**	**43**	IAmb		IAmb	14 12 12.7	
	comp=Z,85nm,0.8s							
PPLA	**Purkeypile**	**19.86**	**43**	P		**P**	**14 12 06.2**	**+0.2**
	baz=249,SNR=23							
H20K	**Anotleneega Mo**	**19.94**	**35**	P		**Pn**	**14 12 07.9**	**-0.9**
	baz=239,SNR=39							
C18K	**Utukok River**	**20.05**	**23**	P		**P**	**14 12 09.0**	**+1.0**
	baz=222,SNR=93							
SUA	**Susitna One**	**20.05**	**48**	P		Pn	14 12 09.4	-0.9
	baz=255,SNR=8.6							
SLKM	**Skilak Lake**	**20.08**	**51**	IAmb		IAmb	14 12 09.6	
	comp=Z,90nm,0.8s							
CHUM	**Lake Minchumin**	**20.18**	**41**	P		**P**	**14 12 10.4**	**+1.0**
	baz=246,SNR=33							
E19K	**Redstone River**	**20.30**	**29

baz=250
E22K Anaktuvuk Pass 22.37 30 P P 14 12 32.4 -0.6
baz=238
COLD Coldfoot 22.44 33 P P 14 12 33.8 +0.1
baz=242,SNR=17
D22K Ayikyak River 22.52 28 P P 14 12 34.0 -0.6
baz=235
HDA Harding Lake 22.56 41 P P 14 12 35.2 +0.2
baz=252,SNR=14
H24K Noodor Dome 22.68 38 P P 14 12 36.5 +0.1
baz=248,SNR=96
ILAR Eielson Array 22.70 41 P P 14 12 34.6 -1.9
comp=Z,16nm,0.8s,baz=247,slow=7.1,SNR=129
ILAR PcP PcP 14 16 26.4 -0.5
comp=Z,0.7nm,0.6s,baz=281,slow=3.4,SNR=4.9
ILAR ScP ScP 14 20 01.1 +0.9
comp=Z,0.6nm,0.6s,baz=286,slow=3.3,SNR=5.3
ILAR LR LR 14 21 42.7
comp=Z,393nm,21.3s,baz=255,slow=37
comp=Z,16nm,0.8s
PAX Paxson 22.82 45 IAmb IAmb 14 12 39.4
comp=Z,49nm,0.9s
PAX Paxson 22.82 45 P P 14 12 37.3 -0.5
baz=257,SNR=32
HARP HAARP 22.84 47 P P 14 12 37.2 -0.8
baz=259
KAIM Kayak Island 22.86 53 P P 14 12 37.4 -0.7
baz=266
YSS Yuzhno-Sakhali 22.86 272 *e*P P 14 12 40.2 +2.0
YSS *e* 14 13 02.4
YSS pmax pmax
comp=Z,40nm,0.9s
BMRM Bremner River 22.87 51 IAmb IAmb 14 12 59.9
comp=Z,64nm,1.0s
BMRM Bremner River 22.87 51 P P 14 12 37.7 -0.6
baz=263,SNR=7.0
K24K Donnelly Dome 22.88 43 IAmb IAmb 14 12 38.5
comp=Z,64nm,1.1s
K24K Donnelly Dome 22.88 43 P P 14 12 37.3 -1.1
baz=255,SNR=9.3
N25K Chitina, Valde 22.96 49 P 14 12 38.8 -0.5
N25K IAmb IAmb 14 13 00.4
comp=Z,36nm,0.9s
N25K Chitina, Valde 22.96 49 P P 14 12 39.2 -0.1
baz=261,SNR=12
E23K Chandler 23.04 32 P P 14 12 39.6 -0.4
baz=241,SNR=69
A21K Barrow 23.09 21 P P 14 12 39.5 -0.8
baz=224,SNR=23
D23K Nanushuk River 23.17 29 P P 14 12 40.7 -0.6
baz=237
G24K Hadweenzic Riv 23.17 36 P P 14 12 41.2 0.0
baz=246,SNR=62
RIDG Independent Ri 23.27 44 P P 14 12 41.5 -0.8
baz=256,SNR=11
J25K Salcha River, 23.28 41 IAmb IAmb 14 12 43.5
comp=Z,85nm,1.7s
J25K Salcha River, 23.28 41 P P 14 12 41.2 -1.1
baz=254,SNR=16
GLB Gilahina Butte 23.32 50 IAmb IAmb 14 13 09.4
comp=Z,129nm,1.7s
VRDI Verde Repeater 23.46 50 IAmb IAmb 14 13 05.9
comp=Z,39nm,1.1s
PRP Porcupine Dome 23.49 39 P P 14 12 43.1 -1.3
PRP IAmb IAmb 14 12 45.0
comp=Z,36nm,1.0s
PRP Porcupine Dome 23.49 39 P P 14 12 43.7 -0.8
baz=251,SNR=32
CRQE Cirque 23.59 52 P P 14 12 44.9 -0.4
baz=265,SNR=6.9
DOT Dot Lake 23.59 44 IAmb IAmb 14 12 46.8
comp=Z,46nm,0.7s
WAX Waxell Ridge 23.68 52 IAmb IAmb 14 12 55.1
comp=Z,68nm,1.0s
MCARA McCarthy VSAT 23.68 50 P P 14 12 46.1 -0.1
baz=264,SNR=11
SCRK Sand Creek 23.70 43 IAmb IAmb 14 12 46.4
comp=Z,47nm,1.0s
SCRK Sand Creek 23.70 43 P P 14 12 45.6 -0.8
baz=257,SNR=24
L26K Log Cabin Wild 23.78 46 P P 14 12 47.6 +0.5
baz=260,SNR=43
M26K Nabesna, AK 23.83 47 P P 14 12 47.5 -0.1
baz=261
D24K Happy Valley 23.84 30 P P 14 12 46.6 -0.9
baz=240
J26L Joseph Creek 24.00 42 P P 14 12 47.8 -1.4
baz=256
MESA MESA 24.11 53 P P 14 12 48.4 -2.0
baz=267
F25K Christian Rive 24.19 34 P P 14 12 49.1 -1.7
baz=247,SNR=13
GRNC Granite Creek 24.24 52 IAmb IAmb 14 13 07.0
comp=Z,78nm,1.0s
JKA Kamikawa-asahi 24.26 266 P 14 12 53.2 +1.6
ASAJ Asahikawa 24.26 266 P P 14 12 54.0 +2.4
comp=Z,76nm,0.9s,baz=60,slow=7.3,SNR=63
comp=Z,76nm,0.9s
ASAJ Asahikawa 24.26 266 P P 14 12 53.2 +1.6
ASAJ pmax pmax
comp=Z,75nm,0.9s
M27K Edge Creek, AK 24.34 48 P P 14 12 51.0 -1.3
baz=262,SNR=17
E25K Arctic Village 24.43 33 P 14 12 53.0 +0.1
E25K Arctic Village 24.43 33 P P 14 12 52.1 -0.8
baz=246,SNR=80
CTG Chitna Glacier 24.46 51 P P 14 12 52.1 -1.3
baz=266,SNR=11
L27K Beaver Creek, 24.47 46 P P 14 12 53.5 +0.2
L27K Beaver Creek, 24.47 46 P P 14 12 52.4 -1.0
baz=261
BCAR Beaver Creek A 24.49 46 P 14 12 53.0 -0.6
BMAR Burnt Mountain 24.50 35 P 14 12 53.7 +0.1
G26K Porcupine Rive 24.62 36 P P 14 12 54.8 +0.2
G26K Porcupine Rive 24.62 36 P P 14 12 55.0 +0.4
baz=250,SNR=89
D25K Kavik River 24.69 30 P P 14 12 54.9 -0.4
baz=242
F26K Sheenjek River 24.75 35 P P 14 12 55.6 -0.3
baz=248
BVCY Beaver Creek 24.82 48 P P 14 12 55.1 -1.5
baz=263,SNR=12
YUK3 Moose Creek 24.94 49 P P 14 12 56.5 -1.4
baz=265,SNR=43
PINM Pinnacle 24.96 53 P P 14 12 56.6 -1.3
baz=269
O28M Mount Upton 25.01 52 P P 14 12 57.5 -1.1
baz=268,SNR=27
I27K Kandik River 25.07 40 IAmb IAmb 14 13 00.3
comp=Z,21nm,0.8s
I27K Kandik River 25.07 40 P P 14 12 57.9 -0.9
baz=256
YUK8 Steele Glacier 25.24 51 P P 14 12 60.0 -0.7
baz=267,SNR=21
H27K Steamboat Moun 25.27 39 P P 14 12 59.5 -1.1
baz=255,SNR=18
GRNR Gornyy 25.41 285⇑ *i*P P 14 13 02.2 +0.2
GRNR pmax pmax
comp=Z,20nm,1.3s
C27K Jago River 25.66 31 P P 14 13 03.6 -0.5
baz=245
I28M Miner Creek 25.72 41 IAmb IAmb 14 13 05.3
comp=Z,54nm,0.9s
I28M Miner Creek 25.72 41 P P 14 13 03.7 -1.1
baz=258
YUK4 Talbot Arm 25.78 50 P P 14 13 05.2 -0.3
baz=268,SNR=33
O29M Mount Kennedy 25.80 53 P P 14 13 04.9 -0.7
baz=270,SNR=8.7
YUK6 Outpost Mounta 25.91 51 P P 14 13 05.5 -1.1
baz=269,SNR=7.8
M29M Somme Creek 25.93 48 P P 14 13 06.2 -0.6
baz=266
L29M L29M 26.14 46 IAmb IAmb 14 13 37.2
comp=Z,26nm,1.0s
L29M L29M 26.14 46 P P 14 13 07.6 -0.9
baz=265
J29N Klondike Camp 26.26 43 P P 14 13 08.9 -0.7
baz=262
F28M Old Crow 26.27 36 PcP PcP 14 16 35.4 +0.8
F28M Old Crow 26.27 36 P P 14 13 09.2 -0.4
baz=254,SNR=40
HYT Haines Junctio 26.33 52 P P 14 13 09.7 -0.6
baz=270,SNR=18
I29M Ogilvie Camp, 26.37 41 P P 14 13 09.9 -0.6
baz=260,SNR=50
K29M Barlow Dome 26.49 45 IAmb IAmb 14 13 16.0
comp=Z,21nm,0.8s
K29M Barlow Dome 26.49 45 P P 14 13 11.3 -0.5
baz=264,SNR=26
P30M Million Dollar 26.61 53 P P 14 13 12.1 -0.6
baz=272
E28M Babbage River 26.69 34 P P 14 13 12.8 -0.5
baz=252
M30M Minto, Yukon 26.71 48 P P 14 13 13.2 -0.5
baz=267
G29M Pine Creek 26.79 38 P P 14 13 13.8 -0.6
baz=257
O30N Mendenhall 27.02 52 P P 14 13 15.6 -0.9
baz=271
J30M Hart River 27.09 43 P P 14 13 16.5 -0.6
baz=264,SNR=27
S31K Pelican 27.14 58 P P 14 13 17.1 -0.4
baz=277
I30M Mount Dempster 27.15 42 P P 14 13 17.4 -0.3
baz=262
N31M Braeburn, Yuko 27.16 50 P P 14 13 17.7 -0.1
baz=270
MAYO Mayo, Yukon 27.19 46 P P 14 13 17.1 -0.8
baz=266
EPYK Eagle Plains 27.19 39 P P 14 13 16.7 -1.3
baz=260
E29M Blow River 27.20 35 P P 14 13 17.1 -0.9
baz=254
SKAG Skagway 27.47 55 P P 14 13 19.2 -1.2
baz=274
YAK Yakutsk 27.48 311 LR LR 14 24 15.6
comp=Z,446nm,19.7s,baz=34,slow=36
YAK Yakutsk 27.48 311 *d*iP P 14 13 19.1 -1.3
YAK *e**PP pP 14 13 30.1 -2.6
YAK *e* 14 14 05.3
YAK *e* 14 16 35.6
YAK *e*S S 14 17 56.7 -0.7
YAK *e**SS sS 14 18 20.7 +3.2
YAK *e*SS SnSn 14 19 14.1 +3.5
YAK pmax pmax
comp=Z,132nm,1.3s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,51nm,1.5s
YAK pmax pmax
comp=Z,237nm,6.0s
YAK pmax pmax
comp=N,153nm,5.1s
YAK pmax pmax
comp=E,174nm,5.0s
YAK smax smax
comp=E,60nm,4.0s
YAK smax smax
comp=N,39nm,2.8s
G30M tAoh Zraii Nji 27.50 38 P P 14 13 19.5 -1.2
baz=259
WHY Whitehorse 27.62 52 P P 14 13 20.5 -1.4
baz=272
SIT Sitka 27.75 60 P P 14 13 21.8 -1.1
baz=279
F30M Barrier River 27.79 37 P P 14 13 21.9 -1.4
baz=258
M31M Drury Creek, Y 27.82 49 P P 14 13 22.0 -1.7
baz=270
R32K Eaglecrest 28.00 57 P P 14 13 24.1 -1.2
baz=277
H31M Peel River 28.07 41 P P 14 13 24.5 -1.2
baz=263
S32K Killisnoo 28.09 59 P P 14 13 24.2 -1.7
baz=279
G31M Satah River 28.25 39 P P 14 13 26.3 -1.0
baz=261
P32M Atlin 28.27 54 P P 14 13 26.6 -1.1
baz=275
N32M Quiet Lake 28.47 51 P P 14 13 28.5 -0.9
baz=273
F31M Tsiigehtchic 28.53 38 IAmb IAmb 14 13 31.6
comp=Z,22nm,0.8s
F31M Tsiigehtchic 28.53 38 P P 14 13 28.7 -1.1
baz=261,SNR=18
P33M Teslin, Yukon 28.67 53 P P 14 13 29.9 -1.3
baz=275
INK Inuvik 28.77 36 IAmb IAmb 14 13 40.0
comp=Z,31nm,1.1s
INK Inuvik 28.77 36 P P 14 13 30.8 -1.0
baz=259,SNR=18
KLR Kul'dur 28.77 284 *c*eP P 14 13 31.5 -0.6
KLR pmax pmax
comp=Z,19nm,0.7s
T33K Petersburg 29.07 60 P P 14 13 33.0 -1.7
baz=281
Q32M Nakina River 29.08 55 P P 14 13 33.5 -1.5
baz=278
U33K Whale Pass 29.12 61 P P 14 13 33.6 -1.5
baz=282
CRAG Craig 29.26 63 P P 14 13 35.1 -1.2
baz=283
TIXI Tiksi 29.31 331 *c*eP P 14 13 35.4 -1.3
TIXI pmax pmax
comp=Z,9.0nm,2.1s
WRAK Wrangell Islan 29.48 60 P P 14 13 36.3 -1.9
baz=282
R33M Jennings River 29.69 54 P P 14 13 38.8 -1.5
baz=278
S34M Telegraph Cree 29.84 57 P P 14 13 39.6 -1.9
baz=280
ZEA Zeya 29.94 294 *e*P P 14 13 41.7 -0.7
ZEA pmax pmax
comp=E,10.0nm,1.1s
ZEA pmax pmax
comp=Z,20nm,1.0s
V35K Ketchikan 30.13 62 P P 14 13 42.9 -1.2
baz=284
DLBC Dease Lake 30.32 56 P P 14 13 44.1 -1.8
baz=280
T35M Bob Quinn 30.49 59 P P 14 13 45.6 -1.7
baz=282
WTLY Watson Lake, Y 30.68 53 P P 14 13 48.3 -0.6
baz=278
USRK Ussuriysk Ar. 30.84 274 P P 14 13 50.8 +0.4
comp=Z,10nm,0.7s,baz=57,slow=9.1,SNR=10
USRK PcP PcP 14 16 47.6 +1.3
comp=Z,14nm,1.1s,baz=328,slow=5.1,SNR=5.7
comp=Z,10nm,0.7s
HEH HeiHe 31.00 288 *e*P P 14 13 50.8 -1.0
HEH PcP PcP 14 16 47.0 +0.4
HEH pmax pmax
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 31.40 257 P P 14 13 56.7 +1.2
comp=Z,2.5nm,0.8s,baz=57,slow=6.6,SNR=6.8
comp=Z,2.5nm,0.8s
MDJ Mudanjiang 32.12 277 P P 14 14 01.6 -0.1
MDJ pmax pmax
comp=Z,11nm,0.9s
A36M Sachs Harbour 32.16 30 P P 14 14 02.3 +0.5
A36M Sachs Harbour 32.16 30 P P 14 14 00.7 -1.0
baz=262,SNR=45
C36M Paulatuk 32.30 35 P P 14 14 02.3 -0.7
baz=267,SNR=7.9
PSTR Posyet 32.38 273 *i* P P 14 14 04.5 +0.5
TOAD Toad River Com 32.70 54 P P 14 14 05.2 -1.5
baz=283
H11N2 WAKE ISLAND Hy 32.76 198 T T 14 49 03.8
baz=11,slow=76,SNR=328
H11N3 WAKE ISLAND Hy 32.77 198 T T 14 49 01.4
baz=11,slow=76,SNR=280
H11N1 WAKE ISLAND Hy 32.77 198 T T 14 49 02.0
baz=11,slow=76,SNR=253
WRGLY Wrigley 32.78 46 P P 14 14 05.7 -1.6
baz=277
BNX BinXian 32.93 280 ⇓P P 14 14 08.1 -0.7
BNX pmax pmax
comp=Z,29nm,1.1s
KOTAN Kotaneelee Air 33.01 52 P P 14 14 08.3 -1.0
baz=282,SNR=7.0
BBB Bella Bella 33.07 67 LR LR 14 27 07.4
comp=Z,211nm,19.1s,baz=336,slow=36
H11S1 WAKE ISLAND Hy 33.99 198 T T 14 50 34.4
baz=11,slow=76,SNR=117
H11S3 WAKE ISLAND Hy 34.00 198 T T 14 50 34.0
baz=11,slow=76,SNR=98
H11S2 WAKE ISLAND Hy 34.00 198 T T 14 50 43.8
baz=11,slow=76,SNR=61
CN2 Changchun 35.10 278 P P 14 14 27.6 0.0
CN2 pmax pmax
comp=Z,10.0nm,0.9s
HILR Hailar Array B 35.81 290 P P 14 14 33.2 -0.5
comp=Z,6.1nm,0.5s,baz=60,slow=9.7,SNR=9.8
HILR PcP PcP 14 17 01.8 +1.5
comp=Z,3.6nm,0.6s,baz=99,slow=9.2,SNR=4.6
comp=Z,6.1nm,0.5s
YKA Yellowknife Ar 36.91 46 P P 14 14 42.9 +0.1
comp=Z,5.1nm,0.8s,baz=289,slow=9.1,SNR=61
YKA PcP PcP 14 17 03.4 +0.2
comp=Z,0.9nm,0.5s,baz=289,slow=3.4,SNR=8.5
YKA ScP ScP 14 20 45.4 -0.4
comp=Z,1.0nm,0.8s,baz=303,slow=4.0,SNR=7.6
YKA LR LR 14 31 03.0
comp=Z,434nm,18.2s,baz=286,slow=38
comp=Z,5.1nm,0.8s
YKA Yellowknife Ar 36.91 46 *i* P P 14 14 42.9 +0.1
YKA pmax pmax
comp=Z,6.0nm,0.8s
KSRS Korea Array 37.19 267 P P 14 14 47.3 +1.8
comp=Z,6.0nm,0.7s,baz=54,slow=8.2,SNR=26
KSRS PcP PcP 14 17 05.4 +0.9
comp=Z,2.3nm,1.0s,baz=65,slow=5.7,SNR=4.9
comp=Z,6.0nm,0.7s
KSAR Wonju Array Be 37.22 268 P 14 14 45.4 -0.4
KSAR Wonju Array Be 37.22 268 P P 14 14 45.4 -0.4
JNU Nakatsue 38.17 260 P P 14 14 55.1 +1.3
comp=Z,15nm,1.1s,baz=145,slow=5.4,SNR=3.7
comp=Z,15nm,1.1s
CIT Chita 38.30 297 *e*P P 14 14 54.8 0.0
CIT *e* 14 15 08.2
CIT *e* 14 16 27.8
CIT *e* 14 17 15.4
CIT pmax pmax
comp=Z,121nm,1.2s
XLT XiLinHaoTe 40.79 284 *e*P P 14 15 16.6 +0.9
XLT pmax pmax
comp=Z,38nm,1.0s
NEW Newport 41.12 68 P P 14 15 16.1 -2.2
NEW Newport 41.12 68 P P 14 15 16.1 -2.2
NEW pmax pmax
comp=Z,7.0nm,0.8s
L04D Klamath Falls 41.25 78 P P 14 15 18.6 -0.9
YBH Yreka Blue Hor 41.28 79 LR LR 14 29 02.3
comp=Z,18nm,22.0s,baz=279,slow=31
K05A Summer Lake 41.83 77 PcP PcP 14 17 20.8 +1.3
O03E Paynes Creek 42.67 80 P P 14 15 30.8 -0.3
O03E IAmb IAmb 14 15 55.1
comp=Z,21nm,0.9s
ALE Alert 42.90 10 P P 14 15 32.7 +0.3
ALE PcP PcP 14 17 22.3 +0.1
BJI2 Beijing 42.95 279 P P 14 15 34.1 +0.9
BJI2 pmax pmax
comp=Z,6.0nm,1.1s
NRIK Noril'sk 43.03 329 P P 14 15 33.1 -0.4
comp=Z,12nm,0.9s,baz=76,slow=9.1,SNR=17
NRIK PcP PcP 14 17 23.0 +0.3
comp=Z,6.7nm,0.9s,baz=76,slow=4.6,SNR=3.7
comp=Z,12nm,0.9s
NRIK Noril'sk 43.03 329 P P 14 15 31.1 -2.4
IRK Irkutsk 43.28 301 *e*P P 14 15 31.4 -4.4
IRK pmax pmax
comp=Z,66nm,1.4s
TLY Talaya 43.90 301 *c*eP P 14 15 41.2 +0.5
TLY pmax pmax
comp=Z,21nm,0.9s
ULN Ulaanbaatar 43.98 294 P P 14 15 42.4 +0.7
ULN PcP PcP 14 17 27.3 +0.7
BLKN Baker Lake 44.08 39 P P 14 15 39.6 -2.4
SONM Songino Array 44.37 294 P P 14 15 45.7 +1.0
comp=Z,20nm,0.6s,baz=60,slow=7.7,SNR=94
SONM PcP PcP 14 17 28.2 +0.4
comp=Z,5.2nm,0.6s,baz=68,slow=2.9,SNR=6.7
comp=Z,20nm,0.6s
SONM Songino Array 44.37 294 P 14 15 45.4 +0.7
SONM IAmb IAmb 14 15 46.2
comp=Z,21nm,0.6s
SONM Songino Array 44.37 294 P P 14 15 45.4 +0.7
SONM pmax pmax
comp=Z,21nm,0.6s
TIA Tai'an 44.71 274 P P 14 15 48.4 +1.0
TIA pmax pmax
comp=Z,44nm,0.9s
ZAK Zakamensk 44.76 299 *e*P P 14 15 48.0 +0.3
ZAK *e* 14 17 29.0
ZAK pmax pmax
comp=Z,29nm,1.4s
ZAK pmax pmax
comp=Z,9.0nm,1.3s
HHC Hu-ho-hao-te 45.28 283⇓ *i*P P 14 15 53.4 +1.4
HHC pP pP 14 16 05.3 +1.4
HHC pmax pmax
comp=Z,26nm,1.2s
MOY Mondy 45.32 302 *e*P P 14 15 52.5 +0.3
MOY pmax pmax
comp=Z,32nm,1.6s
HNS HongShan 45.46 277 ⇓P P 14 15 54.9 +1.6
HNS pmax pmax
comp=Z,30nm,1.2s
SSE Sheshan 45.55 266 P P 14 15 54.9 +0.8
TULEG Thule 45.59 17 *i* P P 14 15 53.0 -0.9
TULEG IAmb IAmb 14 15 54.0
comp=Z,5.5nm,0.7s
POIN Pond Inlet 45.78 24 P P 14 15 54.4 -1.0
NVAR Mina Array Bea 45.96 80 P P 14 15 58.5 +0.9
comp=Z,2.6nm,0.8s,baz=300,slow=7.5,SNR=22
comp=Z,2.6nm,0.8s
NJ2 Nanjing 46.35 269⇓ *i*P P 14 16 01.3 +0.9
NJ2 pmax pmax
comp=Z,21nm,1.0s
BTO2 Baotou 46.36 284 *e*P P 14 16 02.5 +1.9
BTO2 pP pwP 14 16 14.8 -2.5
BTO2 sP sP 14 16 20.4 +2.7
BTO2 pmax pmax
comp=Z,170nm,0.9s
BTO2 pmax pmax
comp=Z,540nm,5.6s
YHL Hebgen Lake 46.41 69 IAmb IAmb 14 16 24.3
comp=Z,10nm,0.9s
ILON Igloolik, Nuna 46.51 29 P P 14 16 01.1 0.0
ILON IAmb IAmb 14 16 04.3
comp=Z,16nm,0.7s
TIY Taiyuan 46.67 279 P P 14 16 04.8 +1.9
TIY S S 14 22 40.8 -8.0
TIY pmax pmax
comp=Z,23nm,1.0s
TIY pmax pmax
comp=Z,170nm,4.9s
NOR Nord 46.91 3 *i* P P 14 16 03.1 -1.0
NOR IAmb IAmb 14 16 04.7
comp=Z,3.5nm,0.8s
FCC Fort Churchill 47.62 45 IAmb IAmb 14 16 10.3
comp=Z,10nm,1.1s
KNGR Kungurtug, Tuv 47.74 302 *i* P P 14 16 10.9 -0.3
KNGR pmax pmax
comp=Z,12nm,0.9s
NEEM North Greenlan 47.85 13 *i* P P 14 16 10.6 -1.3
NEEM IAmb IAmb 14 16 12.5
comp=Z,66nm,0.7s
DUG Dugway, Tooele 48.22 75 IAmb IAmb 14 16 28.3
comp=Z,16nm,1.2s
PDAR Pinedale Array 48.59 70 P P 14 16 17.1 -0.9
comp=Z,2.2nm,0.7s,baz=320,slow=3.6,SNR=24
PDAR ScP ScP 14 21 35.0 +1.5
comp=Z,0.7nm,0.9s,baz=333,slow=1.7,SNR=3.8
comp=Z,2.2nm,0.7s
PDAR Pinedale Array 48.59 70 P P 14 16 16.7 -1.3
PSUT Pine Spring 48.62 77 IAmb IAmb 14 16 46.3
comp=Z,6.5nm,0.8s
LYN LuoYang 48.68 276 ⇓P P 14 16 19.8 +1.4
LYN pmax pmax
comp=Z,42nm,0.8s
GSC Goldstone, Bar 48.87 82 P P 14 16 20.6 +0.5
GSC IAmb IAmb 14 16 21.7
comp=Z,13nm,0.8s
GSC Goldstone, Bar 48.87 82 P P 14 16 20.6 +0.5
GSC pmax pmax
comp=Z,13nm,0.9s
KBS Kingsbay 49.52 356 *i* P P 14 16 24.7 +0.4
RDMU Red Mountain 49.93 72 IAmb IAmb 14 16 49.3
comp=Z,13nm,0.8s
SPA0 Spitsbergen Ar 50.04 355 *e*P P 14 16 27.9 -0.4
SPITS Spitsbergen Ar 50.04 355 P P 14 16 27.6 -0.6
comp=Z,15nm,0.5s,baz=40,slow=6.6,SNR=95
SPITS LR LR 14 38 24.1
comp=Z,153nm,18.1s,baz=8.5,slow=37
comp=Z,15nm,0.5s
SPITS Spitsbergen Ar 50.04 355 P P 14 16 28.0 -0.3
SPITS pmax pmax
comp=Z,28nm,0.8s
SPB2 Spitsbergen Ar 50.04 355 P P 14 16 27.6 -0.6

WHN Wuhan 50.20 271 P **P** 14 16 30.8 +0.8
WHN pmax pmax
comp=Z,70nm,0.6s
UPNV Upernavik 50.62 18 *i* P **P** 14 16 30.9 -1.7
UPNV IAmb IAmb 14 16 33.6
comp=Z,19nm,1.1s
HMU Henry Mountain 50.89 76 IAmb IAmb 14 16 48.0
comp=Z,13nm,0.9s
O20A White River Ci 50.99 72 P **P** 14 16 35.5 -0.7
O20A IAmb IAmb 14 17 00.5
comp=Z,7.7nm,0.7s
HOPEN Hopen 51.01 352 *eP* **P** 14 16 35.4 -0.2
XAN Xi'an 51.21 278 ⇓P **P** 14 16 38.1 +0.3
XAN pmax pmax
comp=Z,21nm,1.1s
XAN Xi'an 51.21 278 P **P** 14 16 37.9 +0.2
XAN pP **pP** 14 16 50.0 -0.2
XAN x x 14 16 52.2
HSPB Hornsund (broa 51.23 355 *eP* **P** 14 16 36.9 -0.3
DAG Danmarks Havn 51.58 5 *eP* **P** 14 16 39.2 -0.6
DAG Danmarks Havn 51.58 5 *i* P **P** 14 16 38.2 -1.6
DAG IAmb IAmb 14 16 39.6
comp=Z,14nm,0.6s
GLA Glamis 51.59 83 P **P** 14 16 40.4 -0.2
GLA IAmb IAmb 14 16 42.1
comp=Z,12nm,0.8s
GLA Glamis 51.59 83 P **P** 14 16 40.4 -0.2
GLA pmax pmax
comp=Z,12nm,0.8s
PV10 Paradox Valley 51.63 74 IAmb IAmb 14 17 24.8
comp=Z,17nm,0.9s
ULM Lac du Bonnet 51.63 55 P **P** 14 16 39.7 -0.9
comp=Z,1.7nm,0.5s,baz=291,slow=8.4,SNR=4.0
ULM PcP **PcP** 14 17 53.5 -0.2
comp=Z,4.3nm,0.6s,baz=296,slow=4.7,SNR=7.1
comp=Z,1.7nm,0.5s
ULM Lac du Bonnet 51.63 55 P **P** 14 16 39.3 -1.3
PV22 Blue Mesa, Par 51.68 74 IAmb IAmb 14 17 03.2
comp=Z,8.7nm,0.9s
PV20 West Nyswonger 51.70 74 IAmb IAmb 14 17 10.5
comp=Z,16nm,0.9s
PV16 Nyswonger Mesa 51.75 74 IAmb IAmb 14 17 34.9
comp=Z,8.6nm,0.8s
PV11 David Mesa, Pa 51.78 74 IAmb IAmb 14 17 21.7
comp=Z,13nm,0.6s
PV18 Skein Mesa, Pa 51.80 74 IAmb IAmb 14 16 52.6
comp=Z,20nm,0.9s
PV12 Saucer Basin, 51.81 74 IAmb IAmb 14 17 09.9
comp=Z,16nm,0.8s
PV03 Paradox Valley 51.83 74 IAmb IAmb 14 17 06.2
comp=Z,9.0nm,0.7s
PV13 Radium Mtn., P 51.91 74 IAmb IAmb 14 16 53.4
comp=Z,19nm,0.8s
ZAA0 Zalesovo Array 52.12 312 P **P** 14 16 43.2 -1.0
ZALV Zalesovo Beam 52.12 312 P **P** 14 16 43.5 -0.7
comp=Z,6.1nm,0.6s,baz=51,slow=6.8,SNR=23
ZALV PcP **PcP** 14 17 55.8 +0.4
comp=Z,5.0nm,0.8s,baz=34,slow=3.9,SNR=5.5
comp=Z,6.1nm,0.6s
NIAQ Niaqornat 52.67 19 *i* P **P** 14 16 47.3 -0.7
NIAQ IAmb IAmb 14 16 48.9
comp=Z,16nm,0.8s
LZH Lanzhou 52.97 283 *eP* **P** 14 16 52.4 +1.5
LZH pP pP 14 17 05.1 +1.7
LZH sP sP 14 17 09.8 +1.2
LZH pmax pmax
comp=Z,45nm,1.3s
LZH LR LR
comp=Z,250nm,18.2s
LZH LR LR
comp=Z,330nm,16.5s
LZH LR LR
comp=Z,310nm,19.8s
LZDM Lanzhou Array 53.15 283 P **P** 14 16 53.8 +1.3
comp=Z,9.1nm,0.8s,baz=47,slow=2.6,SNR=24
LZDM PcP **PcP** 14 18 01.0 +1.0
comp=Z,1.5nm,0.5s,baz=48,slow=2.2,SNR=4.3
LZDM LR LR 14 43 07.9
comp=Z,124nm,18.3s,baz=260,slow=40
comp=Z,9.1nm,0.8s
GTA2 Gaotai 53.20 289 P **P** 14 16 53.6 +1.1
GTA2 pP pP 14 17 05.4 -0.1
GTA2 pmax pmax
comp=Z,69nm,1.0s
GTA2 LR LR
comp=Z,260nm,18.9s
GTA2 LR LR
comp=Z,190nm,17.1s
GTA2 LR LR
comp=Z,430nm,18.5s
DGZ Jazzator, Alta 53.49 306 *i* P **P** 14 16 55.1 +0.5
DGZ pmax pmax
comp=Z,30nm,0.9s
SUMG Summit 53.72 13 P **P** 14 16 55.7 -0.5
SUMG IAmb IAmb 14 16 56.7
comp=Z,20nm,1.0s
SUMG Summit 53.72 13 P **P** 14 16 55.7 -0.5
SUMG pmax pmax
comp=Z,20nm,1.0s
SUMG Summit 53.72 13 *i* P **P** 14 16 55.0 -1.2
SUMG IAmb IAmb 14 16 57.0
comp=Z,18nm,0.9s
DBG Daneborg 53.91 6 *eP* **P** 14 16 56.2 -0.8
DBG Daneborg 53.91 6 *i* P **P** 14 16 55.0 -2.0
DBG IAmb IAmb 14 16 56.9
comp=Z,27nm,0.8s
ANMO Albuquerque 55.45 76 LR LR 14 40 33.2
comp=Z,151nm,18.3s,baz=325,slow=36
ZSN Zaisan 56.25 305*d i* P **P** 14 17 14.6 +0.3
ZSN pmax pmax
comp=Z,30nm,1.5s
ZSN Zaisan 56.25 305⇓*i* P **P** 14 17 14.7 +0.3
comp=Z,30nm,1.5s
CD2 Chengdu 56.53 279 P **P** 14 17 17.1 +0.5
CD2 pmax pmax
comp=Z,40nm,1.0s
KURK Kurchatov 57.12 312 **P** 14 17 20.4 +0.1
KURK Kurchatov 57.12 312*ce* P **P** 14 17 20.5 +0.1
KURK pmax pmax
comp=Z,129nm,1.2s
KURK Kurchatov 57.12 312 P **P** 14 17 20.6 +0.2
KURK pP **pP** 14 17 32.8 -0.4
KURK x x 14 17 35.0
WMQ Urumqi 57.18 301 *eP* **P** 14 17 22.1 +1.1
WMQ pP pwP 14 17 37.6 +1.6
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ LR LR
comp=Z,430nm,23.9s
WMQ LR LR
comp=Z,540nm,24.1s
KURBB Kurchatov Arra 57.22 312 P **P** 14 17 21.5 +0.3
comp=Z,39nm,0.6s,baz=43,slow=6.8,SNR=121
comp=Z,39nm,0.6s
KURBB Kurchatov Arra 57.22 312 P **P** 14 17 20.5 -0.6
ARCES ARCESS Array B 57.50 349 P **P** 14 17 21.4 -1.5
comp=Z,5.3nm,0.7s,baz=33,slow=7.2,SNR=6.9
ARCES LR LR 14 43 43.4
comp=Z,168nm,19.6s,baz=2.5,slow=38
comp=Z,5.3nm,0.7s
LVZ Lovozero 57.67 344*ce* P **P** 14 17 22.7 -1.4
LVZ pmax pmax
comp=Z,23nm,0.7s
GYA Guiyang 57.86 273 P **P** 14 17 27.0 +0.8
GYA pmax pmax
comp=Z,26nm,1.2s
MK31 Makanchi Array 57.99 306 *i* P **P** 14 17 26.0 -0.7
MKAR Makanchi Array 57.99 306 P **P** 14 17 26.3 -0.4
comp=Z,14nm,0.6s,baz=54,slow=6.5,SNR=296
MKAR LR LR 14 43 12.8
comp=Z,379nm,21.3s,baz=1.0,slow=37
comp=Z,14nm,0.6s
JETT Jettan, Norway 58.05 351 *eP* **P** 14 17 26.7 -0.1
MAKZ Makanchi 58.14 306 **P** 14 17 27.0 -0.7
MAKZ Makanchi 58.14 306 P **P** 14 17 27.0 -0.7
MAKZ pmax pmax
comp=Z,21nm,0.8s
MAKZ Makanchi 58.14 306 P **P** 14 17 27.2 -0.5
MAKZ x x 14 17 40.9
APA Apatity 58.17 345⇓*eP* **P** 14 17 24.8 -2.8
APA *e* 14 18 18.0
APA pmax pmax
comp=Z,10.0nm,1.2s
APA MLR MLR
comp=Z,1μm,16.1s
KTK1 Kautokeino 58.27 349 *eP* **P** 14 17 27.7 -0.5

GOMU GeErMu 58.30 290 P **P** 14 17 27.4 -2.0
GOMU pmax pmax
comp=Z,25nm,0.9s
KUQ Kuujjuuaa 58.32 35 IAmb IAmb 14 17 28.8
comp=Z,19nm,1.2s
BVA0 Borovoye Array 59.16 318 P **P** 14 17 33.9 -0.8
BVAR Borovoye Array 59.16 318 P **P** 14 17 35.0 +0.4
comp=Z,47nm,0.7s,baz=47,slow=6.4,SNR=204
BVAR LR LR 14 44 24.0
comp=Z,317nm,20.7s,baz=35,slow=37
comp=Z,47nm,0.7s
BORK Borovoye 59.18 318 **P** 14 17 35.1 +0.3
BORK Borovoye 59.18 318 P **P** 14 17 35.1 +0.3
BORK pmax pmax
comp=Z,41nm,0.7s
BORK Borovoye 59.18 318 P **P** 14 17 35.1 +0.3
STEI Steigen 60.11 352 *eP* **P** 14 17 40.5 -0.4
SVE Sverdlovsk 60.12 325 *eP* **P** 14 17 42.7 +1.5
MNHN Monahans 60.18 76 IAmb IAmb 14 17 53.2
comp=Z,13nm,0.8s
FAUS Fauske 60.65 352 *eP* **P** 14 17 44.5 -0.1
SGCY Sterling City 60.76 75 **P** 14 17 45.8 -0.3
PZH PanZhiHua 60.90 277 P **P** 14 17 47.5 +0.4
PZH pmax pmax
comp=Z,8.0nm,0.9s
PZH pmax pmax
comp=Z,120nm,4.7s
TX31 Lajitas Ar. Si 61.05 78 **P** 14 17 48.1 +0.1
TX31 IAmb IAmb 14 18 49.5
comp=Z,16nm,1.4s
TXAR Lajitas Array 61.05 78 P **P** 14 17 48.2 +0.1
comp=Z,3.0nm,0.7s,baz=300,slow=4.8,SNR=35
comp=Z,3.0nm,0.7s
TXAR Lajitas Array 61.05 78 **P** 14 17 48.0 0.0
TDK Taldyqorghan 61.19 307 *eP* **P** 14 17 49.0 +0.3
TDK pmax pmax
comp=Z,12nm,0.5s
TDK Taldyqorghan 61.19 307 *eP* **P** 14 17 49.1 +0.3
comp=Z,12nm,0.5s
KMI2 Kunming 61.25 275 ⇓P **P** 14 17 50.1 +0.5
KMI2 pmax pmax
comp=Z,14nm,0.7s
ARTI Arti 61.25 326 LR LR 14 47 35.1
comp=Z,314nm,18.2s,baz=6.0,slow=39
ARTI Arti 61.25 326 **P** 14 17 49.1 +0.2
ARTI Arti 61.25 326*d i* P **P** 14 17 49.5 +0.6
ARTI 14 18 29.6
ARTI S **S** 14 26 06.4 +1.5
ARTI SS **SS** 14 30 04.8 +0.1
ARTI pmax pmax
comp=Z,51nm,1.0s
ARTI Arti 61.25 326 P **P** 14 17 49.2 +0.3
ARTI x x 14 18 03.1
ARTI PcP **PcP** 14 18 30.2 -0.8
SCHQ Schefferville 61.38 36 P **P** 14 17 49.4 -0.4
comp=Z,17nm,1.0s,baz=316,slow=6.0,SNR=17
comp=Z,17nm,1.0s
SCHQ Schefferville 61.38 36 IAmb IAmb 14 17 50.7
comp=Z,19nm,0.9s
PDGK Podgornoye 61.83 305 P **P** 14 17 52.7 -0.5
MOR8 Moi Rana 61.91 352 *eP* **P** 14 17 51.7 -1.5
SHLS Shalkode 61.97 305 *eP* **P** 14 17 52.9 -1.2
SHLS pmax pmax
comp=Z,16nm,0.6s
SHLS Shalkode 61.97 305 *eP* **P** 14 17 52.9 -1.2
comp=Z,16nm,0.6s
VLDQ Val d'Or 62.02 47 IAmb IAmb 14 18 59.4
comp=Z,24nm,1.4s
LEIR Leirfjorden 62.07 353 *eP* **P** 14 17 54.1 -0.1
UZB Uzynbulak 62.20 305*d i* P **P** 14 17 55.8 +0.1
UZB Uzynbulak 62.20 305⇓*i* P **P** 14 17 55.9 +0.1
KIRV Kirov 62.34 332*ce* P **P** 14 17 57.2 +1.1
SATY Saty 62.58 305 *eP* **P** 14 17 58.4 +0.2
SATY pmax pmax
comp=Z,15nm,1.2s
SATY Saty 62.58 305 *eP* **P** 14 17 58.5 +0.2
comp=Z,15nm,1.2s
KLMR Klimovskoe 62.97 338 *eP* **P** 14 17 58.9 -1.4
KLMR pmax pmax
comp=Z,26nm,1.1s
MDOK Medeo 63.19 306 *eP* **P** 14 18 02.5 +0.2
MDOK Medeo 63.19 306 *eP* **P** 14 18 02.5 +0.2
AAA Alma-Ata 63.22 306 *eP* **P** 14 18 02.6 +0.2
AAA pmax pmax
comp=Z,31nm,1.1s
AAA Alma-Ata 63.22 306 *eP* **P** 14 18 02.7 +0.3
comp=Z,31nm,1.1s
TNSS Tian-Shan 63.33 306 *eP* **P** 14 18 03.4 -0.1
TNSS Tian-Shan 63.33 306 *eP* **P** 14 18 03.4 -0.1
WUS Wushi 63.50 303 P **P** 14 18 04.7 +0.4
WUS PcP **PcP** 14 18 41.2 +0.6
SADO Sadowa 63.67 51 LR LR 14 46 12.2
comp=Z,204nm,21.0s,baz=324,slow=36
TARG Taragay, Kyrgy 63.85 305 IAmb IAmb 14 18 11.4
comp=Z,7.0nm,0.7s
TNCH TengChong 63.96 278 ⇓P **P** 14 18 09.0 +1.4
TNCH pP pP 14 18 20.3 -0.1
TNCH sP sP 14 18 26.9 +1.3
TNCH S **S** 14 26 36.0 -4.1
TNCH sS sS 14 27 01.6 +0.6
TNCH pmax pmax
comp=Z,22nm,0.7s
TNCH pmax pmax
comp=Z,140nm,4.5s
TKM2 Tokmak 2 64.10 307 P **P** 14 18 09.0 +0.7
SNR=33
SGDS Sogindy 64.19 308 *eP* **P** 14 18 09.1 +0.3
ULHL Ulahol 64.27 306 P **P** 14 18 10.7 +1.2
SNR=6.9
USP Ospenovka 64.39 308 P **P** 14 18 11.0 +1.0
SNR=5.5
CHMS Chumysh 64.46 307 P **P** 14 18 11.3 +0.8
SNR=12
KBK Karagaybulak 64.61 307 P **P** 14 18 12.6 +0.9
SNR=28
AAK Ala-Archa 64.85 307 P **P** 14 18 14.0 +0.8
SNR=34
AAK Ala-Archa 64.85 307 **P** 14 18 14.0 +0.8
AAK Ala-Archa 64.85 307 P **P** 14 18 13.2 0.0
AAK Ala-Archa 64.85 307 P **P** 14 18 14.0 +0.8
AAK pP **pP** 14 18 26.9 +0.5
AAK sP **sP** 14 18 31.9 +0.3
NRN Naryn 64.98 306 IAmb IAmb 14 18 16.3
comp=Z,22nm,1.2s
SIJI Sorong 65.03 233 P **P** 14 18 15.8 +1.3
comp=Z,12nm,0.9s,baz=48,slow=5.7,SNR=3.8
comp=Z,12nm,0.9s
FINES FINESS Array B 65.06 345 P **P** 14 18 13.4 -0.6
comp=Z,7.5nm,0.7s,baz=28,slow=8.6,SNR=16
comp=Z,7.5nm,0.7s
FINES FINESS Array B 65.06 345 P **P** 14 18 13.3 -0.7
LSA Lhasa 65.06 287 P **P** 14 18 12.9 -2.2
LSA pmax pmax
comp=Z,19nm,0.9s
LSA Lhasa 65.06 287 P **P** 14 18 16.8 +1.7
UCH Uchtor 65.15 307 P **P** 14 18 16.2 +0.7
SNR=12
EKS2 Erkin-Say 65.19 308 P **P** 14 18 16.5 +1.1
SNR=27
T47A Sharon Grove 65.24 61 IAmb IAmb 14 18 34.8
comp=Z,14nm,1.0s
MOL Molde 65.97 355 *eP* **P** 14 18 20.1 +0.3
PMG Port Moresby 66.01 213*ce* P **P** 14 18 22.7 +2.0
PMG pmax pmax
comp=Z,41nm,2.5s
AKTO Aktyubinsk 66.11 322 P **P** 14 18 21.2 +0.2
DZA Taraz 66.21 309 *eP* **P** 14 18 22.2 +0.4
DZA Taraz 66.21 309 *eP* **P** 14 18 22.2 +0.4
AB31 Akbulak array 66.31 321 IAmb IAmb 14 18 23.9
comp=Z,21nm,1.0s
AB31 Akbulak array 66.31 321 *i* P **P** 14 18 22.0 -0.2
ABKAR Akbulak array 66.31 321 **P** 14 18 22.7 +0.5
AKN Aaknes 66.39 355 *eP* **P** 14 18 22.7 +0.1
KK31 Karatay Array 66.45 310 *i* P **P** 14 18 23.5 +0.2
KKAR Karatay Array 66.45 310 **P** 14 18 23.5 +0.2
KKAR Karatay Array 66.45 310 P **P** 14 18 23.5 +0.2
BRLS Borolday 66.82 310*d i* P **P** 14 18 27.6 +1.9
BRLS Borolday 66.82 310⇓*i* P **P** 14 18 27.7 +1.9
KSH2 Kashi 66.90 304 P **P** 14 18 27.6 +1.2
KSH2 pP pwP 14 18 41.8 +0.2
KSH2 pmax pmax
comp=Z,42nm,0.8s
NB2 NORSAR Subarra 67.24 353 P **P** 14 18 27.4 -0.6
comp=Z,3.6nm,0.5s,baz=8.1,slow=6.5
NB2 NORSAR Subarra 67.24 353 P **P** 14 18 27.4 -0.6
NB2 AMP 14 18 27.4
comp=Z,3.6nm,0.5s
NOA NORSAR Array B 67.24 353 P **P** 14 18 27.8 -0.3
comp=Z,4.6nm,0.6s,baz=8.9,slow=6.3,SNR=31
comp=Z,4.6nm,0.6s
CHM Chimkent 67.48 310 *eP* **P** 14 18 30.2 +0.3
CHM pmax pmax
comp=Z,29nm,1.2s
CHM Chimkent 67.48 310 *eP* **P** 14 18 30.2 +0.3
comp=Z,29nm,1.2s
SKAR Skarslia 67.80 354 *eP* **P** 14 18 31.8 +0.2
HFS Hagfors 67.92 351 P **P** 14 18 31.6 -0.7
comp=Z,3.9nm,0.5s,baz=33,slow=3.5,SNR=29
comp=Z,3.9nm,0.5s
MOS Moscow 68.00 337 *eP* **P** 14 18 31.9 -0.9
MOS pmax pmax
comp=Z,48nm,0.7s
BELG Belogornoye 68.12 329 *i* P **P** 14 18 33.5 -0.1
BELG pmax pmax
comp=Z,9.0nm,0.9s
CHTO Chiang Mai 68.29 273 **P** 14 18 35.7 +0.5
CHTO IAmb IAmb 14 18 36.8
comp=Z,15nm,0.8s
CHTO Chiang Mai 68.29 273 P **P** 14 18 35.7 +0.5
CHTO pmax pmax
comp=Z,15nm,0.8s
CHTO Chiang Mai 68.29 273 P **P** 14 18 35.7 +0.5
CHTO x x 14 18 52.4
CMAR Chiang Mai Arr 68.55 273 P **P** 14 18 37.8 +0.8
comp=Z,12nm,0.8s,baz=26,slow=7.0,SNR=58
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 68.55 273 **P** 14 18 37.6 +0.7
CMAR Chiang Mai Arr 68.55 273 *i* P **P** 14 18 37.7 +0.8
CMAR pmax pmax
comp=Z,10.0nm,0.5s
OBN Obninsk 68.82 337 LR LR 14 51 59.3
comp=Z,332nm,19.6s,baz=341,slow=39
OBN Obninsk 68.82 337⇑*eP* **P** 14 18 38.3 +0.3
OBN *e**PP **pP** 14 18 49.2 -2.4
OBN *e**SP **sP** 14 18 55.9 -1.1
OBN *e* 14 19 01.6
OBN pmax pmax
comp=Z,35nm,1.1s
OBN MLR MLR
comp=Z,315nm,19.0s
M65A Busby, Falmout 70.14 48 P **P** 14 18 44.8 -1.5
baz=322
LPSR Galich'ya Gora 70.49 335 *eP* **P** 14 18 47.7 -0.6
LPSR pmax pmax
comp=Z,10.0nm,0.6s
VRH Novokhopyorsk 70.96 332 *eP* **P** 14 18 49.8 -1.4
VRH pmax pmax
comp=Z,20nm,0.6s
VORR Voronezh 71.25 334 *eP* **P** 14 18 51.9 -1.0
VORR pmax pmax
comp=Z,50nm,0.4s
MNK Minsk 71.30 342 *i* P **P** 14 18 53.7 +0.4
comp=E,28nm,0.9s
MNK *i* P **P** 14 18 53.7 +0.4
MNK comp=N,20nm,0.9s
MNK *i* P **P** 14 18 53.7 +0.4
MNK comp=Z,29nm,0.9s,baz=20
MNK *i* pP **pP** 14 19 08.2 +1.4
MNK *i* sP **PcP** 14 19 14.8 +2.0
MNK *i* PP **PP** 14 21 32.7 +1.7
MNK *i* PPP PPP 14 23 16.6
MNK *i* S **S** 14 28 10.3 +3.5
MNK *i* SS **SS** 14 32 47.4 +7.1
MNK *i* SSS SSS 14 36 05.7
MNK *i* LQ LQ 14 44 46.0
MNK *i* LR LR 14 50 04.1
MNK *i* LRM MLR 14 52 24.1
comp=E,1μm,25.2s
MNK *i* LRM MLR 14 52 40.0
comp=Z,228nm,18.5s
MNK *i* LRM MLR 14 52 41.5
comp=N,681nm,24.2s
MNK Minsk 71.30 342 *i* P **P** 14 18 53.6 +0.4
MNK *i* *PP **pP** 14 19 08.2 +1.4
MNK *i* *SP **PcP** 14 19 14.8 +2.0
MNK *i* 14 21 32.7
MNK *i* PPP PPP 14 23 16.6
MNK *i* S **S** 14 28 10.3 +3.5
MNK *i* SS **SS** 14 32 47.4 +7.1
MNK pmax pmax
comp=N,20nm,0.9s
MNK pmax pmax
comp=E,28nm,0.9s
MNK pmax pmax
comp=Z,29nm,0.9s
MNK MLR MLR
comp=E,1μm,25.0s
MNK MLR MLR
comp=Z,228nm,19.0s
MNK MLR MLR
comp=N,681nm,24.0s
VSR Storozhevoye 71.67 334 *eP* **P** 14 18 55.2 -0.3
VSR pmax pmax
comp=Z,20nm,1.1s
VORD Divnogorie 71.86 334 *eP* **P** 14 18 55.8 -0.8
VORD pmax pmax
comp=Z,10.0nm,1.0s
NIL Nilore 72.28 302 **P** 14 19 00.2 +0.7
NIL Nilore 72.28 302 P **P** 14 19 00.2 +0.7
NIL pmax pmax
comp=Z,79nm,1.2s
EKA Eskdalemuir Ar 73.52 0 P **P** 14 19 06.0 -0.4
comp=Z,14nm,0.8s,baz=2.7,slow=4.9,SNR=22
comp=Z,14nm,0.8s
KBL Kabul 73.78 305 **P** 14 19 07.8 -0.7
KBL Kabul 73.78 305 P **P** 14 19 07.9 -0.7
KBL pmax pmax
comp=Z,32nm,0.9s
BSEG Bad Segeberg 74.35 352 *eP* **P** 14 19 12.4 +1.2
baz=9.4,slow=5.6
AK23 Malin Array Si 74.57 340 P **P** 14 19 12.3 -0.3
AK21 Malin Array Si 74.58 340 P **P** 14 19 12.2 -0.4
AKASG Malin Array Be 74.61 340 P **P** 14 19 12.7 -0.1
comp=Z,17nm,0.8s,baz=26,slow=6.0,SNR=38
comp=Z,17nm,0.8s
AKASG Malin Array Be 74.61 340 *i* P **P** 14 19 12.6 -0.2
AKASG pmax pmax
comp=Z,16nm,0.8s
AKBB Malin Array Si 74.61 340 IAmb IAmb 14 19 13.7
comp=Z,33nm,1.1s
AKBB Malin Array Si 74.61 340*ce* P **P** 14 19 12.7 -0.1
AKBB pmax pmax
comp=Z,36nm,1.2s
AKBB Malin Array Si 74.61 340 P **P** 14 19 11.8 -1.0
AK20 Malin Array Si 74.61 340 P **P** 14 19 11.9 -1.0
KIEV Kiev 74.62 340 **P** 14 19 12.7 -0.2
KIEV IAmb IAmb 14 19 13.7
comp=Z,30nm,1.1s
KIEV Kiev 74.62 340 ⇑P **P** 14 19 12.8 -0.1
KIEV Kiev 74.62 340 ⇑P **P** 14 19 12.8 -0.1
KIEV Kiev 74.62 340 P **P** 14 19 11.9 -1.0
comp=Z,123nm,1.0s
KIEV Kiev 74.62 340 P **P** 14 19 12.7 -0.2
KIEV pP **pP** 14 19 26.1 -0.6
AK01 Malin Array Si 74.62 340 P **P** 14 19 12.4 -0.5
AK18 Malin Array Si 74.62 340 P **P** 14 19 12.4 -0.5
RNPP9 Sopachiv 74.62 342 P **P** 14 19 12.0 -0.9
AK19 Malin Array Si 74.63 340 P **P** 14 19 12.4 -0.6
AK15 Malin Array Si 74.64 340 P **P** 14 19 12.1 -0.9
AK11 Malin Array Si 74.64 340 P **P** 14 19 12.2 -0.8
PPT Papeete 74.64 147 LR LR 14 46 12.6
comp=Z,301nm,19.4s,baz=302,slow=31
AK02 Malin Array Si 74.65 340 P **P** 14 19 12.3 -0.8
AK17 Malin Array Si 74.66 340 P **P** 14 19 12.3 -0.8
AK16 Malin Array Si 74.66 340 P **P** 14 19 12.3 -0.8
AK08 Malin Array Si 74.66 340 P **P** 14 19 12.3 -0.8
AK09 Malin Array Si 74.67 340 P **P** 14 19 12.4 -0.8
AK12 Malin Array Si 74.68 340 P **P** 14 19 12.4 -0.8
AK05 Malin Array Si 74.69 340 P **P** 14 19 12.8 -0.5
AK10 Malin Array Si 74.70 340 P **P** 14 19 12.8 -0.5
AK14 Malin Array Si 74.70 340 P **P** 14 19 12.8 -0.5
AK06 Malin Array Si 74.72 340 P **P** 14 19 13.5 0.0
MI28 Mi28,Pidlybu 74.72 341 P **P** 14 19 12.6 -0.9
AK13 Malin Array Si 74.73 340 P **P** 14 19 13.1 -0.4
RAR Rarotonga 75.17 158 LR LR 14 44 44.9
comp=Z,330nm,19.9s,baz=286,slow=30
LUBAR Lubar, Ukraine 75.66 340 P **P** 14 19 18.6 -0.3
IBBN Ibbenburen 76.17 353 *eP* **P** 14 19 22.3 +0.6
comp=Z,68nm,1.2s,baz=9.4,slow=5.6
MAK Makhachkala 76.30 324*c i* P **P** 14 19 22.5 -0.2

MAK				*e**PP	**pP**	**14 19 36.6**	**+0.6**
MAK				*e**SP	**sP**	**14 19 42.9**	**+1.7**
MAK				*e*PPP	PPP	14 23 57.1	
MAK				*e*S	**S**	**14 29 03.2**	**-0.3**
MAK				*e**SS	**SKSac**	**14 29 28.2**	**-1.4**
MAK				pmax	pmax		
	comp=Z,99nm,1.5s						
MAK				MLR	MLR		
	comp=Z,620nm,17.0s						
CLZ	**Clausthal**	**76.42 352**	*e*P	**P**	**14 19 23.4**	**+0.2**
	comp=Z,28nn,1.2s,baz=9.4,slow=5.6						
CLL	**Collm**	**76.69 350**	*i* P	**P**	**14 19 22.6**	**-2.1**
CLL			pmax	pmax		
	comp=Z,4.0nm,0.3s						
CLL	**Collm**	**76.69 350**	*i* P	**P**	**14 19 22.4**	**-2.3**
CLL	**Collm**	**76.69 350**	*i* P	**P**	**14 19 22.6**	**-2.1**
	comp=Z,4.0nm,0.3s						
BRG	**Berggiesshubel**	**77.01 349**	*e*P	**P**	**14 19 27.2**	**+0.7**
BRG			Amp		14 19 28.0	
	comp=Z,9.3nm,1.1s						
KIV	**Kislovodsk**	**77.10 328**	*e*P	**P**	**14 19 27.8**	**+0.5**
KIV			pmax	pmax		
	comp=Z,18nm,1.0s						
NCK	**Nalchik**	**77.20 327**	*i* P	**P**	**14 19 29.5**	**+1.7**
NCK			pmax	pmax		
	comp=Z,29nm,0.9s						
SORM	**Soroca**	**77.22 339**	⇓P	**P**	**14 19 27.5**	**-0.2**
SORM	**Soroca**	**77.22 339**	⇓P	**P**	**14 19 27.5**	**-0.2**
KASTN	**Kahler Asten**	**77.22 353**	*e*P	**P**	**14 19 27.6**	**-0.2**
	comp=Z,17nm,1.2s,baz=9.4,slow=5.6						
DPC	**Dobruska-Polom**	**77.22 348**	*e*P	**P**	**14 19 28.5**	**+0.7**
DPC	**Dobruska-Polom**	**77.22 348**	*e*P	**P**	**14 19 28.5**	**+0.7**
KBZ	**Khabaz**	**77.23 328**	P	**P**	**14 19 29.2**	**+1.3**
	comp=Z,11nn,0.8s,baz=83,slow=2.5,SNR=14						
	comp=Z,11nn,0.8s						
SHA1	**Shidzhatmaz**	**77.30 328**	*ce*P	**P**	**14 19 29.2**	**+0.6**
STHS	**Stebnicka Huta**	**77.38 344**	*e*P	**P**	**14 19 30.2**	**+1.5**
STHS	**Stebnicka Huta**	**77.38 344**	*e*P	**P**	**14 19 30.2**	**+1.5**
AKT	**Akhty**	**77.51 324**	*e*P	**P**	**14 19 30.5**	**+0.8**
AKT			*e*		14 19 39.8	
AKT			*e**PP	**pwP**	**14 19 44.7**	**-0.7**
AKT			*e**SP	**sP**	**14 19 49.8**	**+1.6**
AKT			pmax	pmax		
	comp=Z,47nm,1.2s						
MORC	**Moravsky Berou**	**77.61 347**	*e*P	**P**	**14 19 30.3**	**+0.3**
LANS	**Liptovska Anna**	**77.93 345**	*e*P	**P**	**14 19 33.4**	**+1.6**
LANS			pmax	pmax		
	comp=Z,13nm,1.2s						
LANS	**Liptovska Anna**	**77.93 345**	*e*P	**P**	**14 19 33.4**	**+1.6**
TNS	**Taunus Mts**	**78.19 353**	*e*P	**P**	**14 19 33.6**	**+0.4**
	comp=Z,14nm,0.9s,baz=9.4,slow=5.6						
VRAC	**Vranov**	**78.21 347**	*e*P	**P**	**14 19 33.8**	**+0.5**
BCLA	**Clavier**	**78.21 355**	*d*P	**P**	**14 19 33.2**	**0.0**
	comp=Z,10nm,1.0s						
BURAR	**Bucovina Array**	**78.38 341**		**P**	**14 19 35.0**	**+0.6**
BURAR	**Bucovina Array**	**78.38 341**	⇓P	**P**	**14 19 34.9**	**+0.6**
BURAR	**Bucovina Array**	**78.38 341**	⇓P	**P**	**14 19 34.9**	**+0.6**
GRF	**Grafenberg Arr**	**78.47 351**	*e*P	**P**	**14 19 34.9**	**+0.2**
	comp=Z,94nm,1.8s,baz=9.4,slow=5.6						
KRUC	**Moravsky**	**78.47 347**	*e*P	**P**	**14 19 35.5**	**+0.8**
JAVC	**Velka Javorina**	**78.49 346**	*e*P	**P**	**14 19 36.5**	**+1.6**
KHC	**Kasperske Hory**	**78.77 349**	*e*P	**P**	**14 19 36.0**	**-0.4**
KHC	**Kasperske Hory**	**78.77 349**	*e*P	**P**	**14 19 36.0**	**-0.4**
WET	**Wettzell**	**78.83 350**	*e*P	**P**	**14 19 37.4**	**+0.6**
	comp=Z,6.2nm,1.1s,baz=9.4,slow=5.6						
SMOL	**Smolenice**	**78.86 346**	*e*P	**P**	**14 19 38.3**	**+1.4**
SMOL			pmax	pmax		
	comp=Z,11nm,1.5s						
WLF	**Walferdange**	**78.91 354**	*e*P	**P**	**14 19 37.7**	**+0.6**
	comp=Z,60nm,1.5s,baz=9.4,slow=5.6						
MODS	**Modra-Piesok**	**79.02 347**	*e*P	**P**	**14 19 39.2**	**+1.4**
MODS	**Modra-Piesok**	**79.02 347**	*e*P	**P**	**14 19 39.2**	**+1.4**
GEC2	**GERESS Array S**	**79.03 349**	IAmb	IAmb	14 19 39.9	
	comp=Z,25nm,1.6s						
GEC2	**GERESS Array S**	**79.03 349**	*e*P	**P**	**14 19 37.7**	**-0.2**
	comp=Z,23nm,1.6s,baz=9.4,slow=5.6						
GERES	**GERESS Array B**	**79.03 349**	P	**P**	**14 19 38.4**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=338,slow=3.2,SNR=4.4						
	comp=Z,1.2nm,0.6s						
TESR	**Tescani**	**79.13 340**	⇓P	**P**	**14 19 38.7**	**+0.3**
SRO	**Srobarova**	**79.41 346**	*e*P	**P**	**14 19 41.1**	**+1.2**
SRO	**Srobarova**	**79.41 346**	*e*P	**P**	**14 19 41.1**	**+1.2**
DRGR		**79.65 343**	⇓P	**P**	**14 19 41.1**	**-0.2**
DRGR		**79.65 343**	⇓P	**P**	**14 19 41.1**	**-0.2**
CONA	**Conrad Observa**	**79.66 347**	*i* P	**P**	**14 19 42.2**	**+0.8**
	comp=Z,11nm,1.0s						
MARR	**Marisel-Cluj**	**79.69 342**	⇓P	**P**	**14 19 42.1**	**+0.6**
PLOR	**Plostina**	**79.75 340**	⇑P	**P**	**14 19 42.5**	**+0.6**
PLOR	**Plostina**	**79.75 340**	⇑P	**P**	**14 19 42.5**	**+0.6**
GNI	**Garni**	**79.76 325**	LR	LR	15 00 27.0	
	comp=Z,254nm,18.7s,baz=74,slow=40						
RONA	**Rosalia, Austr**	**79.82 347**	*e*P	**P**	**14 19 43.7**	**+1.5**
	comp=Z,16nm,1.4s						
COVR	**Voineasa-Covas**	**79.86 340**	⇓P	**P**	**14 19 43.8**	**+1.4**
TLCR		**79.89 338**	⇑P	**P**	**14 19 43.2**	**+0.7**
TLCR		**79.89 338**	⇑P	**P**	**14 19 43.2**	**+0.7**
CFR	**Carcaliu**	**80.06 338**	⇓P	**P**	**14 19 43.9**	**+0.5**
CFR	**Carcaliu**	**80.06 338**	⇓P	**P**	**14 19 43.9**	**+0.5**
BIOA	**Bad Ischl, Aus**	**80.18 349**	*i* P	**P**	**14 19 45.4**	**+1.3**
	comp=Z,11nn,1.2s						
MLR	**Muntele Rosu**	**80.25 340**	IAmb	IAmb	14 19 47.3		
	comp=Z,24nm,1.1s						
MLR	**Muntele Rosu**	**80.25 340**	⇑P	**P**	**14 19 45.6**	**+1.0**
MLR	**Muntele Rosu**	**80.25 340**	⇑P	**P**	**14 19 45.6**	**+1.0**
JURR	**Jurilovca**	**80.28 338**	⇓P	**P**	**14 19 45.1**	**+0.5**
TPGR	**Topolog**	**80.30 338**	⇓P	**P**	**14 19 45.3**	**+0.6**
ARSA	**Arzberg**	**80.37 348**	*i* P	**P**	**14 19 46.4**	**+1.3**
	comp=Z,12nn,1.4s						
WRA	**Warramunga Arr**	**80.47 221**	P	**P**	**14 19 46.1**	**+0.3**
	comp=Z,3.5nm,0.6s,baz=32,slow=5.7,SNR=29						
WRA			PKKPbc	**PKKPbc**	**14 38 25.3**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=225,slow=2.3,SNR=5.8						
	comp=Z,3.5nm,0.6s						
WRA	**Warramunga Arr**	**80.47 221**	*i* P	**P**	**14 19 46.0**	**+0.2**
WRA			pmax	pmax		
	comp=Z,4.0nm,0.6s						
VOIR		**80.49 341**	⇓P	**P**	**14 19 46.9**	**+1.1**
VOIR		**80.49 341**	⇓P	**P**	**14 19 46.9**	**+1.1**
LESA	**Schwarzleotal**	**80.55 349**	*i* P	**P**	**14 19 47.5**	**+1.4**
	comp=Z,10nm,1.5s						
ARR	**Arges**	**80.64 341**	⇑P	**P**	**14 19 47.5**	**+0.8**
TIRR	**Tirgusor**	**80.68 338**	IAmb	IAmb	14 19 48.4		
	comp=Z,19nm,1.1s						
WATA	**Walderalm**	**80.76 350**	*i* P	**P**	**14 19 48.1**	**+0.7**
	comp=Z,26nm,1.2s						
MOTA	**Moosalm**	**80.80 351**	*i* P	**P**	**14 19 48.2**	**+0.6**
	comp=Z,24nm,1.4s						
KBA	**Koelnbreinsper**	**80.81 349**	*i* P	**P**	**14 19 48.7**	**+1.1**
	comp=Z,23nm,0.7s						
WTTA	**Wattenberg**	**80.83 350**	*i* P	**P**	**14 19 48.3**	**+0.6**
	comp=Z,23nm,1.2s						
SQTA	**Sankt Quirin**	**80.91 350**	*i* P	**P**	**14 19 48.7**	**+0.6**
	comp=Z,24nm,1.6s						
DAVA	**Damuels**	**80.98 351**	*i* P	**P**	**14 19 47.7**	**-0.8**
	comp=Z,16nm,1.4s						
GZR	**Gura Zlata**	**80.99 342**	⇑P	**P**	**14 19 49.2**	**+0.7**
GZR	**Gura Zlata**	**80.99 342**	⇑P	**P**	**14 19 49.2**	**+0.7**
BZS	**Buzias**	**80.99 343**	⇓P	**P**	**14 19 49.1**	**+0.7**
BZS	**Buzias**	**80.99 343**	⇓P	**P**	**14 19 49.1**	**+0.7**
SOKA	**Soboth**	**81.00 348**	*i* P	**P**	**14 19 49.5**	**+1.0**
	comp=Z,20nm,0.9s						
FETA	**Feichten**	**81.16 351**	*i* P	**P**	**14 19 49.6**	**+0.1**
	comp=Z,11nm,1.0s						
MYKA	**Terra Mystica**	**81.22 349**	*e*P	**P**	**14 19 50.6**	**+0.9**
	comp=Z,12nm,1.3s						
OBKA	**Obir**	**81.22 348**	*i* P	**P**	**14 19 50.5**	**+0.7**
	comp=Z,7.2nm,0.7s						
ABTA	**Abfaltersbach**	**81.24 349**	*i* P	**P**	**14 19 50.4**	**+0.5**
	comp=Z,22nm,1.1s						
DAVOX	**Davos/Dischmat**	**81.48 351**	LR	LR	14 57 49.1		
	comp=Z,154nm,19.6s,baz=70,slow=37						
MDVR	**Moldovita**	**81.78 343**	⇓P	**P**	**14 19 52.9**	**+0.2**
TUE	**Stuetta**	**81.84 352**	IAmb	IAmb	14 19 54.8		
	comp=Z,12nm,0.8s						
CTI	**Castel Tesino**	**82.03 350**	IAmb	IAmb	14 19 56.2		
	comp=Z,23nm,1.3s						
FITZ	**Fitzroy Crossi**	**82.66 229**	P	**P**	**14 19 58.9**	**+1.5**
	comp=Z,10nm,0.6s,baz=10,slow=5.8,SNR=21						
	comp=Z,10nm,0.6s						
BOVS	**Bovan**	**82.89 342**	⇓P	**P**	**14 19 58.2**	**-0.2**
BR131	**Keskin Array S**	**83.74 333**	IAmb	IAmb	14 20 04.7		
	comp=Z,17nm,0.9s						
BR131	**Keskin Array S**	**83.74 333**	*i* P	**P**	**14 20 03.6**	**+0.5**
BRTR	**Keskin Array B**	**83.74 333**	P	**P**	**14 20 03.6**	**+0.5**
	comp=Z,12nm,0.9s,baz=50,slow=3.1,SNR=43						
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**83.98 219**		**P**	**14 20 05.3**	**+1.2**
ASAR	**Alice Springs**	**83.99 219**	P	**P**	**14 20 05.1**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=25,slow=5.5,SNR=113						
	comp=Z,3.4nm,0.6s						
ASAR	**Alice Springs**	**83.99 219**		**P**	**14 20 04.9**	**+0.7**
ASAR	**Alice Springs**	**83.99 219**	P	**P**	**14 20 04.9**	**+0.7**
KIRS	**Kirsehir-Merke**	**84.21 332**	⇓P	**P**	**14 20 06.6**	**+1.2**
BAND	**Balkesir-Ban**	**84.63 337**	⇑P	**P**	**14 20 06.4**	**-1.0**
STKA	**Stephens Creek**	**88.77 210**	P	**P**	**14 20 28.4**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=342,slow=9.3,SNR=6.1						
	comp=Z,3.9nm,0.9s						
STKA	**Stephens Creek**	**88.77 210**		**P**	**14 20 29.0**	**+1.6**
ESDC	**Sonseca Array**	**89.18 1**	P	**P**	**14 20 29.2**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=354,slow=3.7,SNR=18						
	comp=Z,2.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**115.49 355**	PKP	**PKiKP**	**14 26 15.5**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=268,slow=4.3,SNR=5.6						
DBIC	**Dimbokro**	**122.01 2**	PKP	**PKPdf**	**14 26 27.9**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=30,slow=3.1,SNR=4.7						
PLCA	**Paso Flores**	**133.37 105**	PKP	**PKiKP**	**14 26 50.1**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=256,slow=4.2,SNR=6.4						
PLCA			SKPbc	**SKPab**	**14 30 14.8**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=280,slow=3.5,SNR=3.7						
BOSA	**Boshof**	**148.99 307**	PKPbc	**PKPbc**	**14 27 21.7**	**0.0**
	comp=Z,7.0nm,0.5s,baz=91,slow=2.8,SNR=11						
BOSA	**Boshof**	**148.99 307**		**PKiKP**	**14 27 22.4**	**-0.6**
BOSA	**Boshof**	**148.99 307**	PKP2	**PKiKP**	**14 27 22.4**	**-0.6**
NVL	**N'lazarevskaya**	**159.56 194**	*e*PKIKP	**PKPdf**	**14 27 37.1**	**+6.3**
NVL			pmax	pmax		
	comp=Z,16nm,1.6s						

*PDG **13** 14:25:03.1±0.7,39.°45N×17.°18E,h17$^{km}_{\pm 1}$,ML3.5/11,*
Error ellipse: s-maj=1.0km s-min=1.6km az=0.0
*ROM **13** 14:25:03.2±0.1,39.°396N±0.°006×17.°14E±0.°01,*
h20$^{km}_{\pm 1}$,ML3.2/104, Error ellipse: s-maj=0.8km
s-min=0.4km az=90.0

ISC 13 14:25:03.3±1.0,39.°40N±0.°03×17.°14E±0.°04,h18$^{km}_{\pm 6}$,
n39,σ0^{s}63/55,5C-13D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LADO	**San Nicola del**	**0.17**	**229**	⇑P		**Pg**	**14 25 07.8**	**0.0**
LADO				S		**Sg**	**14 25 11.5**	**+0.7**
LADO				AML		AML		
	comp=N,718μm,0.9s							
LADO				AML		AML		
	comp=E,1395μm,0.4s							
LADO				AML		AML		
	comp=N,718μm,0.9s							
LADO				AML		AML		
	comp=E,1400μm,0.4s							
PIPA	**Pietrapaola**	**0.27**	**289**	⇓P		**Pb**	**14 25 09.5**	**-0.2**
PIPA				S		**Sb**	**14 25 14.6**	**+0.6**
PIPA				AML		AML		
	comp=E,48500μm,0.2s							
PIPA				AML		AML		
	comp=E,48500μm,0.2s							
PIPA				AML		AML		
	comp=E,48500μm,0.3s							
PIPA				AML		AML		
	comp=N,33100μm,1.3s							
PIPA				AML		AML		
	comp=N,34500μm,0.6s							
PIPA				AML		AML		
	comp=N,33100μm,0.7s							
PIPA				AML		AML		
	comp=N,34500μm,1.4s							
TIP	**Timpagrande**	**0.37**	**234**	⇑P		**Pg**	**14 25 11.0**	**-0.1**
TIP				S		**Sg**	**14 25 16.7**	**+0.4**
TIP				AML		AML		
	comp=N,1490μm,0.6s							
TIP				AML		AML		
	comp=E,2385μm,1.6s							
TIP				AML		AML		
	comp=E,2435μm,1.6s							
TIP				AML		AML		
	comp=N,1480μm,0.6s							
TIP				AML		AML		
	comp=N,1480μm,1.4s							
TIP				AML		AML		
	comp=E,2435μm,0.4s							
TIP				AML		AML		
	comp=N,1490μm,1.4s							
TIP				AML		AML		
	comp=E,2385μm,0.4s							
CELI	**Celico**	**0.49**	**271**	⇓P		**Pg**	**14 25 13.1**	**-0.2**
CELI				S		**Sb**	**14 25 21.5**	**+1.0**
CELI				AML		AML		
	comp=N,2360μm,0.4s							
CELI				AML		AML		
	comp=E,2490μm,1.3s							
CELI				AML		AML		
	comp=E,2490μm,0.7s							
CELI				AML		AML		
	comp=N,2360μm,1.6s							
SERS	**Sersale**	**0.51**	**225**	⇑P		**Pg**	**14 25 13.3**	**-0.2**
SERS				S		**Sg**	**14 25 21.0**	**+0.7**
SERS				AML		AML		
	comp=N,2360μm,0.7s							
SERS				AML		AML		
	comp=E,2325μm,0.8s							
SERS				AML		AML		
	comp=N,1725μm,0.3s							
SERS				AML		AML		
	comp=E,1640μm,0.4s							
SERS				AML		AML		
	comp=N,2360μm,1.3s							
SERS				AML		AML		
	comp=E,2325μm,1.2s							
SERS				AML		AML		
	comp=N,1725μm,1.7s							
SERS				AML		AML		
	comp=E,1640μm,1.6s							
SPS2	**Spezzano della**	**0.63**	**261**	⇓P		**Pb**	**14 25 15.2**	**-0.7**
SPS2				AML		AML		
	comp=E,1390μm,1.0s							
SPS2				AML		AML		
	comp=N,1020μm,0.3s							
TDS	**Terranova Siba**	**0.68**	**293**	⇓P		**Pb**	**14 25 15.7**	**-0.9**
TDS				S		**Sg**	**14 25 25.9**	**+0.2**
TDS				AML		AML		
	comp=E,1265μm,0.5s							
TDS				AML		AML		
	comp=N,1042μm,0.5s							
CAR1	**CAROLEI**	**0.74**	**259**	P		**Pb**	**14 25 16.7**	**-1.0**
CAR1				AML		AML		
	comp=E,2560μm,0.7s							
CAR1				AML		AML		
	comp=N,1885μm,0.7s							
CAR1				AML		AML		
	comp=E,2555μm,0.7s							
CAR1				AML		AML		
	comp=N,1885μm,0.7s							
CAR1				AML		AML		
	comp=N,1795μm,0.7s							
CAR1				AML		AML		
	comp=N,1890μm,0.7s							
CAR1				AML		AML		
	comp=E,2640μm,0.7s							
CAR1				AML		AML		
	comp=N,1795μm,1.3s							
CAR1				AML		AML		
	comp=E,2555μm,1.3s							
CAR1				AML		AML		
	comp=N,1890μm,1.3s							
CAR1				AML		AML		
	comp=E,2640μm,1.3s							
SALB	**San Lorenzo Be**	**0.78**	**308**	P		**Pb**	**14 25 17.4**	**-1.1**
SALB				S		**Sg**	**14 25 28.9**	**-0.1**
SALB				AML		AML		
	comp=N,2300μm,1.6s							
SALB				AML		AML		
	comp=N,2300μm,0.4s							
SALB				AML		AML		
	comp=E,3275μm,0.2s							
GRI	**Girifalco**	**0.80**	**225**	P		**Pb**	**14 25 18.7**	**-0.1**
ORI	**Oriolo Calabro**	**0.85**	**321**	P		**Pb**	**14 25 19.0**	**-0.6**
ORI				AML		AML		
	comp=E,8625μm,0.3s							
ORI				AML		AML		
	comp=N,9270μm,0.4s							
ORI				AML		AML		
	comp=E,8625μm,1.7s							
CET2	**Cetraro**	**0.93**	**279**	P		**Pb**	**14 25 19.8**	**-1.1**
CET2				AML		AML		
	comp=N,4940μm,0.6s							
CET2				AML		AML		
	comp=E,1785μm,0.7s							
MMN	**Mormanno**	**1.02**	**299**	P		**Pg**	**14 25 23.0**	**0.0**
MMN				AML		AML		
	comp=N,1975μm,1.5s							
MMN				AML		AML		
	comp=E,1835μm,0.5s							
MMN				AML		AML		
	comp=N,1975μm,0.5s							
PLAC	**Placanica**	**1.09**	**210**	P		**Pn**	**14 25 23.7**	**-0.1**
PLAC				AML		AML		
	comp=N,858μm,0.7s							
PLAC				AML		AML		
	comp=E,868μm,0.7s							
PLAC				AML		AML		
	comp=E,714μm,1.0s							
PLAC				AML		AML		
	comp=N,858μm,0.7s							
PLAC				AML		AML		
	comp=N,734μm,1.0s							
PLAC				AML		AML		
	comp=E,868μm,1.3s							
PLAC				AML		AML		
	comp=N,858μm,1.3s							
PLAC				AML		AML		
	comp=N,734μm,1.0s							
PLAC				AML		AML		
	comp=E,714μm,1.0s							
CRAC	**Craco**	**1.11**	**331**	P		**Pg**	**14 25 26.1**	**+1.3**
TAR1	**Taranto**	**1.13**	**5**	P		**Pg**	**14 25 24.6**	**-0.7**
TAR1				S		**Sg**	**14 25 40.1**	**0.0**
TAR1				AML		AML		
	comp=E,2055μm,1.0s							
TAR1				AML		AML		
	comp=E,2055μm,1.0s							
TAR1				AML		AML		
	comp=N,4220μm,0.5s							
CUC	**Castrocucco**	**1.19**	**301**	P		**Pb**	**14 25 25.4**	**+0.1**
CUC				AML		AML		
	comp=N,1335μm,0.5s							
CUC				AML		AML		
	comp=E,1550μm,0.6s							
CUC				AML		AML		
	comp=N,1310μm,0.5s							
CUC				AML		AML		
	comp=E,1720μm,0.8s							
CUC				AML		AML		
	comp=E,1550μm,1.4s							
LTRZ	**Laterza**	**1.23**	**348**	AML		AML		
	comp=E,944μm,1.4s							
LTRZ				AML		AML		
	comp=N,1280μm,1.6s							
LTRZ				AML		AML		
	comp=N,1280μm,0.4s							
JOPP	**Joppolo**	**1.26**	**232**	P		**Pb**	**14 25 26.5**	**-0.1**
JOPP				AML		AML		
	comp=E,347μm,1.0s							
JOPP				AML		AML		
	comp=E,347μm,1.0s							
JOPP				AML		AML		
	comp=N,324μm,0.6s							
SIRI	**Monte Sirino -**	**1.26**	**309**	P		**Pn**	**14 25 25.4**	**-0.7**
SIRI				AML		AML		
	comp=E,1003μm,0.3s							
SIRI				AML		AML		
	comp=N,1028μm,0.6s							
SIRI				AML		AML		
	comp=N,1044μm,0.6s							
SIRI				AML		AML		
	comp=E,1020μm,0.3s							
MATE	**Matera**	**1.30**	**345**	P		**Pb**	**14 25 27.0**	**-0.2**
MATE				AML		AML		
	comp=E,1550μm,1.3s							
MATE				AML		AML		
	comp=N,1235μm,1.6s							
MATE				AML		AML		
	comp=N,1235μm,0.4s							
MATE				AML		AML		
	comp=E,1550μm,0.7s							
MESG	**Mesagne**	**1.31**	**24**	P		**Pb**	**14 25 26.9**	**-0.5**
GALF	**Gagliano Caste**	**2.63**	**231**	AML		AML		
	comp=N,275μm,1.3s							
GALF				AML		AML		
	comp=N,275μm,0.7s							
GALF				AML		AML		
	comp=E,328μm,0.7s							
HLNI	**Lentini**	**2.71**	**222**	AML		AML		
	comp=N,54μm,1.2s							
HLNI				AML		AML		
	comp=E,54μm,1.5s							
ULC	**Ulcinj**	**3.02**	**31**	⇓*i*Pn		**Pn**	**14 25 49.8**	**-0.5**
ULC				*i* Sn		**Sn**	**14 26 27.0**	**+0.9**
BUM	**Brajici-Budva**	**3.19**	**24**	⇓*i*Pn		**Pn**	**14 25 52.2**	**-0.5**
BUM				*i* Sn		**Sn**	**14 26 29.8**	**-0.5**
HCY	**Herceg Novi**	**3.21**	**18**	⇓*i*Pn		**Pn**	**14 25 52.7**	**-0.3**
HCY				*i* Sn		**Sn**	**14 26 31.3**	**+0.5**
CEME	**Cevo**	**3.42**	**23**	⇓*i*Pn		**Pn**	**14 25 55.2**	**-0.7**
CEME				*e*Sn		**Sn**	**14 26 36.4**	**+0.4**
PDG	**Podgorica**	**3.43**	**27**	⇓*i*Pn		**Pn**	**14 25 55.7**	**-0.1**
PDG				*i* Sn		**Sn**	**14 26 35.8**	**-0.2**
NKME	**Niksic**	**3.63**	**22**	⇓*i*Pn		**Pn**	**14 25 58.4**	**-0.4**
NKME				*e*Sn		**Sn**	**14 26 41.0**	**-0.2**
BRY	**Bratogost**	**3.66**	**16**	⇑*i*Pn		**Pn**	**14 25 58.6**	**-0.6**
BRY				*i* Sn		**Sn**	**14 26 41.7**	**-0.2**
KOME	**Kolasin**	**3.89**	**27**	⇓*i*Pn		**Pn**	**14 26 03.5**	**+1.2**
KOME				*e*Sn		**Sn**	**14 26 47.2**	**-0.3**
UPM	**Unac-Piva**	**4.03**	**19**	⇑*i*Pn		**Pn**	**14 26 04.5**	**+0.2**
UPM				*i* Sn		**Sn**	**14 26 51.3**	**+0.2**
IVA	**Berane**	**4.04**	**30**	⇓*i*Pn		**Pn**	**14 26 04.3**	**-0.1**
IVA				*i* Sn		**Sn**	**14 26 51.8**	**+0.4**
PLE	**Pljevlja**	**4.28**	**23**	⇓*i*Pn		**Pn**	**14 26 07.8**	**+0.1**
PLE				*i* Sn		**Sn**	**14 26 57.5**	**+0.3**
OBKA	**Obir**	**7.36**	**346**	*e*Pn		**Pn**	**14 26 50.8**	**+0.8**
	comp=E,6.0nm,0.5s							
ARSA	**Arzberg**	**7.94**	**352**	*i* Pn		**Pn**	**14 26 58.8**	**+0.9**
	comp=E,5.1nm,0.5s							
KBA	**Koelnbreinsper**	**8.16**	**341**	*e*Pn		**Pn**	**14 26 59.7**	**-1.4**
	comp=E,1.0nm,0.5s							
MOA	**Molln**	**8.70**	**347**	*e*Pn		**Pn**	**14 27 09.3**	**+1.0**
	comp=E,1.4nm,0.3s							

IDC 13 14:26:31.8±4.3,18.°49S×177.°46W,h0^{km},mb3.9/4,
mbtmp3.9/4,Error ellipse: s-maj=188.1km
s-min=33.0km az=140.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.15**	**242**	P		P	14 34 02.2	+0.9
	1.0nm,0.4s,baz=65,slow=14,SNR=4.4							
	1.0nm,0.4s							
WRA	**Warramunga Arr**	**45.41**	**260**	P		P	14 34 52.0	-0.6
	0.5nm,0.7s,baz=98,slow=7.1,SNR=12							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**45.50**	**255**

KHEZ				S	Sn	14 36 39.9	-1.1	TKGZ	Te Karaka	3.63	64	P	Pn	14 36 48.9	+0.9	TCU	Taichung	0.98	355	eP	Pb	14 44 41.8	+0.1
LREZ	Lake Rotokare	0.84	42	P	Pn	14 36 20.5	+1.3	OKCZ	Okains Bay	3.66	187	P	Pn	14 36 49.3	+0.9	TEYL	Yanliau Villag	1.03	47	eP	Pn	14 44 43.4	+0.2
LREZ				S	Sn	14 36 40.2	-0.6	MQZ	McQueen's Vall	3.69	192	P	Pn	14 36 49.1	+0.4	TEYL				eS	Sn	14 44 58.2	+0.2
PKE	Pukeiti	0.93	15	P	Pn	14 36 21.0	+1.2	KUZ	Kuaotunu	3.70	26	P	Pn	14 36 51.0	+2.0	ETM	Tongmen	1.03	40	eP	Pg	14 44 42.1	-0.1
KHLK	Kaihoka Lakes	0.94	240	P	Pn	14 36 20.8	+1.1	KUZ	Kuaotunu	3.70	26	P	Pn	14 36 50.7	+1.7	ETM				eS	Sb	14 44 56.1	-0.3
DREZ	Durham Road	0.99	24	P	Pn	14 36 21.5	+1.3	WVZ	Waitaha Valley	3.71	216	P	Pn	14 36 50.0	+1.0	LXIB	Xiulin Townshi	1.03	35	⇑P	Pg	14 44 41.6	-0.6
INHS	Inglewood High	1.01	23	P	Pn	14 36 21.6	+1.2	RUGZ	Raukumara Rang	3.77	57	P	Pn	14 36 49.4	-0.4	LXIB				eS	Sn	14 44 57.4	-0.9
INHS				S	Sn	14 36 41.7	-1.1	MHCZ	Mount Hutt	3.78	204	P	Pn	14 36 50.8	+0.9	WDGT	Dungji	1.03	275	eP	Pg	14 44 41.6	-0.5
WAZ	Wanganui	1.06	72	P	Pn	14 36 22.4	+1.8	RACZ	Rakaia	3.81	197	P	Pn	14 36 51.3	+1.1	WDGT				eS	Sg	14 44 55.8	+0.3
WAZ				S	Sn	14 36 43.8	+0.4	AKCZ	Akaroa Harbour	3.82	188	P	Pn	14 36 51.2	+0.9	WHF	Hehuan Shan	1.07	25	eP	Pg	14 44 42.4	-0.5
TKNZ	Takaka Hill	1.09	210	P	Pn	14 36 22.1	+1.3	TWGZ	Tauwhareparae	3.85	62	P	Pn	14 36 51.6	+0.8	HWA	Hwalien	1.11	43	eP	Pn	14 44 44.4	0.0
TKNZ				S	Sn	14 36 42.3	-1.8	CNGZ	Carnagh Statio	3.86	67	P	Pn	14 36 52.0	+1.1	HWA				eS	Sn	14 45 00.0	+0.1
QRZ	Quartz Range	1.15	230	P	Pn	14 36 22.6	+1.4	HAZ	Te Kaha	3.96	55	P	Pn	14 36 51.6	-0.5	WHP	Taichung City	1.11	8	eP	Pg	14 44 43.9	+0.1
QRZ	Quartz Range	1.15	230	S	Sn	14 36 43.0	-1.7	GRZ	Great Barrier	4.08	21	P	Pn	14 36 49.8	+2.1	WHP				eS	Sn	14 45 00.9	+0.6
QRZ	Quartz Range	1.15	230	P	Pn	14 36 22.4	+1.2	PKGZ	Pakihiroa	4.08	58	P	Pn	14 36 54.2	+0.5	TDCB	Techi	1.13	18	eP	Pg	14 44 43.6	-0.5
QRZ				S	Sn	14 36 42.5	-2.2	WACZ	Wakanui South	4.09	199	P	Pn	14 36 54.9	+1.3	TDCB				eS	Sn	14 45 01.0	+0.2
NNZ	Nelson	1.15	192	P	Pn	14 36 22.8	+1.6	PUZ	Puketiti	4.09	62	P	Pn	14 36 53.9	+0.1	TWT	Tachien	1.14	19	eP	Pg	14 44 44.0	-0.3
NNZ				S	Sn	14 36 43.2	-1.6	RPZ	Rata Peaks	4.12	208	P	Pn	14 36 55.7	+1.6	TWT				eS	Sn	14 45 00.2	-0.8
MOTS	Motueka DOC wo	1.15	206	P	Pn	14 36 22.8	+1.5	RPZ	Rata Peaks	4.12	208	P	Pn	14 36 54.9	+0.9	SMST	Manzhou Townsh	1.15	177	eP	Pb	14 44 44.3	-0.2
MOTS				S	Sn	14 36 43.2	-1.5	WCZ	Waipu Caves	4.18	7	P	Pn	14 36 56.8	+1.9	SMST				eS	Sn	14 45 02.2	+1.3
TCW	Tory Channel	1.21	158	P	Pn	14 36 23.7	+2.0	ARCZ	Arundel	4.28	205	P	Pn	14 36 56.7	+0.6	FUSS	Fushou	1.16	22	eP	Pg	14 44 43.9	-0.6
TCW				S	Sn	14 36 43.9	-1.7	WMGZ	Waiomatatini S	4.33	60	P	Pn	14 36 56.8	+0.1	FUSS				eS	Sn	14 45 01.1	-0.4
KIW	Kapiti Island	1.21	130	P	Pn	14 36 23.4	+1.7	MXZ	Matakaoa Point	4.41	56	P	Pn	14 36 58.4	+0.7	PHUB	P'eng-hu	1.16	287	eP	Pb	14 44 43.5	-1.3
OHWZ	Ohakea	1.25	96	P	Pn	14 36 24.3	+2.3	MXZ	Matakaoa Point	4.41	56	P	Pn	14 36 58.0	+0.2	PHUB				eS	Sb	14 44 58.4	-1.6
OHWZ				S	Sn	14 36 45.5	-0.5	FOZ	Fox Glacier	4.49	219	P	Pn	14 36 59.3	+0.5	HEN	Hengchun	1.16	182	eP	Pn	14 44 44.8	-0.3
VRZ	Vera Road	1.27	41	P	Pn	14 36 23.3	+1.0	TMZ	Timaru	4.73	204	P	Pn	14 37 02.5	+0.8	TWQ1	Liyutan	1.17	360	⇓P	Pn	14 44 45.2	-0.1
VRZ				S	Sn	14 36 44.9	-1.5	OUZ	Omahuta	4.86	359	P	Pn	14 37 06.6	+3.0	TWQ1				eS	Sn	14 45 02.2	+0.6
OGWZ	Otaki Gorge	1.35	123	P	Pn	14 36 24.7	+1.9	OUZ	Omahuta	4.86	359	P	Pn	14 37 06.4	+2.8	TWD	Chiawan	1.18	40	eP	Pb	14 44 44.9	-0.2
PWES	Porirua West	1.35	140	P	Pn	14 36 24.9	+2.1	LBZ	Lake Benmore	5.02	210	P	Pn	14 37 06.1	+0.6	TWD				eS	Sg	14 45 00.6	+0.3
TUWZ	Tuamarina	1.35	172	P	Pn	14 36 25.1	+2.3	JCZ	Jackson Bay	5.39	221	P	Pn	14 37 11.2	+0.8	PNG	Penghu	1.19	290	⇓P	Pb	14 44 43.8	-1.5
TUWZ				S	Sn	14 36 46.3	-1.4	JCZ	Jackson Bay	5.39	221	P	Pn	14 37 10.9	+0.5	PNG				eS	Sb	14 44 59.8	-1.1
BWRS	Waikakaho Road	1.36	173	P	Pn	14 36 24.9	+2.0	ODZ	Otahua Downs	5.43	203	P	Pn	14 37 12.2	+1.4	ETLH	Xiulin Townshi	1.22	32	eS	Sn	14 45 03.0	+0.2
BWRS				S	Sn	14 36 46.0	-1.8	ODZ	Otahua Downs	5.43	203	P	Pn	14 37 11.7	+0.9	TWK1	Hengchun	1.22	179	eP	Pg	14 44 46.6	+0.7
MKBS	Makara Bunker	1.37	146	P	Pn	14 36 25.1	+2.1	WKZ	Wanaka	5.86	215	P	Pn	14 37 16.1	-0.3	TWKBT	Hengchun	1.23	178	eP	Pg	14 44 46.0	+0.1
NEWS	Newlands	1.43	143	P	Pn	14 36 25.5	+2.0	HHSZ	Highcliff Hill	6.22	200	P	Pn	14 37 23.2	+2.3	VCHM	Qimei	1.24	272	eP	Pn	14 44 44.5	-1.6
LHBS	Lower Hutt Nor	1.44	141	P	Pn	14 36 25.7	+2.1	MSZ	Milford Sound	6.25	221	P	Pn	14 37 22.0	+0.6	VCHM				eS	Sb	14 45 00.9	-1.4
POTA	Wellington Pot	1.44	145	P	Pn	14 36 25.6	+2.0	MLZ	Mavora Lakes	6.68	216	P	Pn	14 37 27.2	+0.2	NSY	Sanyi	1.24	359	eP	Pg	14 44 47.1	+0.9
SNZO	South Karori	1.44	148	P	Pn	14 36 25.7	+2.1	WHZ	Wether Hill Ro	7.16	214	P	Pn	14 37 33.0	-0.3	NSY				eS	Sn	14 45 05.1	+1.8
SNZO	South Karori	1.44	148	S	Sn	14 36 48.1	-1.0	APZ	The Paps	7.91	210	P	Pn	14 37 43.1	+0.1	NACB	Ninganchiao	1.25	37	eP	Pn	14 44 45.5	-0.9
WEL	Wellington	1.45	146	P	Pn	14 36 25.7	+2.0									NACB				eS	Sn	14 45 03.6	+0.1
CAW	Cannon Point	1.46	134	P	Pn	14 36 25.8	+2.0									ETL	Fush Village	1.25	38	eP	Pb	14 44 46.3	-0.1
MRNZ	Matariki Terra	1.48	208	P	Pn	14 36 25.5	+1.5									TSEB	Hengchuen, Pin	1.27	175	eP	Pg	14 44 47.6	+0.8
MISS	Wellington Mir	1.50	145	P	Pn	14 36 26.2	+2.1									TSEB				eS	Sn	14 45 07.3	+3.3
WDAS	Wainuiomata Bu	1.51	141	P	Pn	14 36 26.2	+1.9									LAY	Lan-yu	1.34	147	eP	Pn	14 44 46.5	-1.1
PKVZ	Pokaka	1.51	59	P	Pn	14 36 25.7	+1.3									LAY				eS	Sg	14 45 06.2	+0.8
PKVZ				S	Sn	14 36 48.5	-1.7									NMLH	Miaoli	1.36	1	eP	Sg	14 44 48.7	+0.2
SEAW	Seatoun School	1.51	145	P	Pn	14 36 26.3	+2.0									NMLH				eS	Sg	14 45 08.3	+2.1
MTVZ	Mangateitei	1.55	63	P	Pn	14 36 26.1	+1.3									NNSB	Datong	1.37	24	eP	Pn	14 44 47.4	-0.7
MTVZ				S	Sn	14 36 49.0	-1.8									NNSB				eS	Sg	14 45 07.6	+1.1
MRZ	Mangatainoka R	1.56	112	P	Pn	14 36 26.5	+1.8									LYUB	Lan-yu	1.38	147	eP	Pn	14 44 47.6	-1.2
MRZ				S	Sn	14 36 49.1	-1.7									LYUB				eS	Sn	14 45 06.2	-0.6
BHW	Baring Head	1.59	146	P	Pn	14 36 26.9	+1.9									EAHA	Aohua	1.45	37	eP	Pn	14 44 49.0	-0.2
BHW				S	Sn	14 36 49.7	-1.9									EAHA				eS	Sg	14 45 09.3	+0.2
HOWZ	Holdsworth Sta	1.61	121	P	Pn	14 36 27.1	+1.8									NSTT	Nanjuang	1.47	8	eP	Pb	14 44 50.0	-0.1
HOWZ				S	Sn	14 36 50.0	-1.8									NSTT				eS	Sg	14 45 10.2	+0.6
POWZ	Post Office Ro	1.62	101	P	Pn	14 36 27.1	+1.7									LIOB	Emei	1.48	9	eP	Pb	14 44 50.1	-0.3
BSWZ	Blackbirch Sta	1.63	175	P	Pn	14 36 27.7	+2.3									LIOB				eS	Sg	14 45 11.3	+1.2
TRVZ	Turoa	1.64	62	P	Pn	14 36 27.1	+1.3									NFF	Wufeng Townshi	1.49	12	eP	Pb	14 44 50.6	+0.1
WNVZ	Wahianoa	1.66	63	P	Pn	14 36 27.3	+1.4									NFF				eS	Sg	14 45 10.6	+0.4
MAVZ	Matarangi	1.67	61	P	Pn	14 36 27.6	+1.4									LATG	Datong	1.52	27	eP	Pn	14 44 50.2	-0.1
FWVZ	Far West T-bar	1.67	61	P	Pn	14 36 27.4	+1.3									LATG				eS	Sg	14 45 15.2	+3.8
WHVZ	Whangaehu Hut	1.68	62	P	Pn	14 36 27.7	+1.5									EWUT	Wuta	1.57	36	eP	Pb	14 44 51.3	-0.5
COVZ	Chateau Observ	1.69	59	P	Pn	14 36 27.4	+1.3									NSK	Sanguang	1.59	20	eP	Pb	14 44 51.8	-0.4
COVZ				S	Sn	14 36 51.0	-2.3									NSK				eS	Sg	14 45 14.2	+0.7
TWVZ	Taurewa	1.70	54	P	Pn	14 36 27.3	+1.1									YHNB	Yeheng	1.59	20	eP	Pb	14 44 51.7	-0.5
TWVZ				S	Sn	14 36 51.1	-2.3									YHNB				eS	Sg	14 45 14.0	+0.5
CMWZ	Cape Campbell	1.70	167	P	Pn	14 36 28.0	+2.8									ENTT	Nioudou	1.63	26	eP	Pg	14 44 53.4	-0.3
CMWZ				S	Sn	14 36 54.3	+0.8									ENTT				eS	Sg	14 45 17.4	+2.5
TUVZ	Tukino	1.73	62	P	Pn	14 36 28.2	+1.6									KSHI	Guanxi Townshi	1.64	13	eP	Pb	14 44 52.8	-0.2
MOVZ	Moawhango	1.73	67	P	Pn	14 36 27.7	+1.2									KSHI				eS	Sg	14 45 15.7	+0.6
MOVZ				S	Sn	14 36 51.1	-2.9									NDS	Dongshan	1.69	30	eP	Pb	14 44 53.2	-0.7
NGZ	Ngauruhoe	1.74	59	P	Pn	14 36 27.9	+1.2									NDS				eS	Sg	14 45 17.6	+0.8
MTW	Mount Morrison	1.75	128	P	Pn	14 36 28.5	+1.9									EOS4	EOS4	1.70	56	eS	Sb	14 45 15.7	+0.3
TSZ	Takapari Road	1.75	90	P	Pn	14 36 28.4	+1.8									NWLT	Wulai	1.73	22	eP	Pb	14 44 54.5	-0.1
TSZ				S	Sn	14 36 52.2	-2.0									NWLT				eS	Sg	14 45 17.6	-0.5
SNVZ	South Ngauruho	1.76	60	P	Pn	14 36 28.3	+1.4									TWC	Suao	1.74	34	⇓eP	Pb	14 44 55.1	+0.5
WTVZ	West Tongariro	1.77	57	P	Pn	14 36 28.2	+1.2									TWC				eS	Sg	14 45 18.8	+0.6
THZ	Tophouse	1.77	199	P	Pn	14 36 28.5	+1.7									TWE	Neicheng	1.75	28	eP	Pb	14 44 55.2	+0.4
NNVZ	North Ngauruho	1.77	58	P	Pn	14 36 28.3	+1.3									TWE				eS	Sg	14 45 18.8	+0.3
MSWZ	Moikau Station	1.78	139	P	Pn	14 36 28.7	+1.8									FUSB	Fushanzhiwuyua	1.75	25	eP	Pb	14 44 54.9	0.0
OTVZ	Oturere	1.79	59	P	Pn	14 36 28.6	+1.4									FUSB				eS	Sg	14 45 18.5	0.0
PRWZ	Pori Road	1.81	106	P	Pn	14 36 29.3	+2.1									EOS3	EOS3	1.80	52	eP	Pb	14 44 56.1	+0.5
KRVZ	Karewarewa	1.81	57	P	Pn	14 36 28.6	+1.2									TWA	Mucha	1.95	22	eP	Pg	14 44 59.0	-0.7
TIWZ	Tintock	1.81	113	P	Pn	14 36 29.2	+1.9									TIPB	Shuangxi	2.03	28	eP	Pb	14 44 59.7	-0.1
HIZ	Hauiti	1.82	30	P	Pn	14 36 28.5	+1.2									TIPB				eS	Sb	14 45 00.4	-0.3
HIZ	Hauiti	1.82	30	P	Pn	14 36 54.2	+1.2									YM01	YM01	2.10	20	eP	Pn	14 44 59.2	+1.2
HIZ	Hauiti	1.82	30	P	Pn	14 36 28.3	+1.0									NWF	Wu-fen Shan	2.10	26	eP	Pb	14 45 01.5	+0.6
HIZ				S	Sn	14 36 54.1	-1.3									ZUZH	Zhuzihu	2.10	19	eP	Pn	14 44 59.0	+0.9
NTVZ	North Tongarir	1.83	58	P	Pn	14 36 28.9	+1.3									ZUZH				eS	Sb	14 45 25.9	-1.4
ETVZ	East Tongariro	1.83	59	P	Pn	14 36 29.0	+1.5									TWB1	Santiao Chiao	2.14	31	eP	Pb	14 45 01.3	-0.2
TMVZ	Te Maari	1.84	59	P	Pn	14 36 29.2	+1.6									TWB1				eS	Sg	14 45 30.5	-0.7
PAWZ	Paruwai Farm	1.85	135	P	Pn	14 36 29.4	+1.8									YM08	YM08	2.14	20	eP	Pg	14 45 03.0	-0.4
DVHZ	Dannevirke	1.91	97	P	Pn	14 36 29.9	+1.6									SXI1	Grass Mountain	2.16	28	eP	Pb	14 45 00.9	-1.1
KATZ	Kakaramea	1.91	55	P	Pn	14 36 29.9	+1.4									SXI1				eS	Sg	14 45 31.1	-0.8
KATZ				S	Sn	14 36 55.7	-1.7									VWUC	VWUC	2.18	327	eP	Pn	14 44 58.0	-1.1
PNHZ	Pukenui	1.94	86	P	Pn	14 36 30.2	+1.6									JYNG	Yonagunijimaku	2.36	57	eS	Sb	14 45 32.6	-2.1
PNHZ				S	Sn	14 36 55.8	-1.8									YOJ	Yonaguni jima	2.42	57	eP	Pn	14 45 03.7	+1.3
TMWZ	Te Maipa	1.96	122	P	Pn	14 36 30.7	+2.0									YOJ				eS	Sn	14 45 33.8	+1.4
TRWZ	Traveller	2.00	131	P	Pn	14 36 31.1	+2.0									YOJ	Yonaguni jima	2.42	57	eP	Pn	14 45 03.0	+0.6
RATZ	Rangitukua	2.03	54	P	Pn	14 36 31.2	+1.7									YOJ				eS	Sn	14 45 33.7	+1.4
BFZ	Birch Farm	2.04	108	P	Pn	14 36 31.6	+2.0									KNM	Kinmen	2.48	300	eP	Pn	14 45 03.5	+0.3
BFZ	Birch Farm	2.04	108	P	Sn	14 36 57.9	-1.6									ZPLA	Ao Xicun	2.88	286	eP	Pn	14 45 07.3	-1.4
BFZ	Birch Farm	2.04	108	P	Pn	14 36 31.5	+1.9									IRIF	Iriomote-Funau	2.95	66	eS	Sn	14 45 46.6	+1.3
CPWZ	Castlepoint	2.09	114	P	Pn	14 36 32.6	+2.6									MATB	Ma-tsu	3.06	346	eP	Pn	14 45 10.5	-0.8
WATZ	Wairara	2.10	50	P	Pn	14 36 31.9	+1.6									AXDP	Jialang	3.09	304	eP	Pn	14 45 10.3	-1.3
KRHZ	Kereru	2.12	79	P	Pn	14 36 31.9	+1.5									DSXP	Dongshan	3.12	281	eP	Pn	14 45 10.6	-1.5
WPHZ	Waipukurau	2.12	90	P	Pn	14 36 32.2	+1.8									JKRS	Kuro-shima	3.15	70	eS	Sn	14 45 52.5	+2.1
ANWZ	Angora Road	2.17	101	P	Pn	14 36 33.1	+2.2									JIJ	Ishigaki jima	3.31	68	eP	Pn	14 45 16.2	+1.5
DSZ	Denniston Nort	2.18	220	P	Pn	14 36 32.7	+1.7									MHZQ	Yeshan	3.32	332	eP	Pn	14 45 14.5	-0.4
KWHZ	Kaweka Forest	2.21	73	P	Pn	14 36 33.3	+1.8									MHZQ				eS	Sn	14 45 52.0	-2.5
WHTZ	Whakaora	2.27	52	P	Pn	14 36 33.7	+1.7									LYJJ	Jianjiangzhen	3.49	345	eP	Pn	14 45 17.1	0.0
PRHZ	Porangahau	2.27	95	P	Pn	14 36 34.0	+2.0									JISG	Ishigakijimahi	3.53	66	P	Pn	14 44 18.3	+0.6
TLZ	Tolley Road	2.27	40	P	Pn	14 36 32.9	+0.8									JISG				eS	Sn	14 45 59.5	-0.3
KUTZ	Kaahu Road	2.31	47	P	Pn	14 36 34.3	+1.8									XPSS	Dashiqiu	3.78	352	eP	Pn	14 45 19.9	-1.3
KHZ	Kahutara	2.33	183	P	Pn	14 36 34.8	+2.3									SXFK	Yanhouchang	4.29	319	eP	Pn	14 45 27.7	-0.5
KHZ	Kahutara	2.33	183	P	Sn	14 37 03.5	-1.5																
KHZ	Kahutara	2.33	183	P	Pn	14 36 34.6	+2.1																
BKZ	Black Stump Fm	2.36	68	P	Pn	14 36 34.3	+1.2																
BKZ	Black Stump Fm	2.36	68	P	Sn	14 37 03.4	-2.3																
BKZ	Black Stump Fm	2.36	68	P	Pn	14 36 34.9	+1.0																
MCHZ	McNeill Hill	2.41	75	P	Pn	14 36 35.6	+2.1																
PXZ	Pawanui	2.44	90	P	Pn	14 36 35.8	+1.9																
MRHZ	Matea Rd	2.46	60	P	Pn	14 36 34.9	+0.7																
KAHZ	Kahuranaki	2.47	84	P	Pn	14 36 36.5	+2.2																
WPRZ	Whakapapatarin	2.48	52	P	Pn	14 36 35.5	+1.1																
ALRZ	Allen Road	2.57	54	P	Pn	14 36 36.1	+0.8																
NMHZ	Naumai	2.61	69	P	Pn	14 36 38.0	+2.1																
CKHZ	Cape Kidnapper	2.65	82	P	Pn	14 36 38.9	+2.7																
ARHZ	Aropaoanui	2.69	73	P	Pn	14 36 38.4	+1.7																
UTU	Utuhina	2.73	46	P	Pn	14 36 39.0	+1.7																
MTHZ	Maungataniwha	2.74	64	P	Pn	14 36 38.2	+0.9																
TOZ	Tahuroa Road	2.75	32	P	Pn	14 36 38.4	+0.9																
NGRZ	Ngongotaha	2.78	45	P	Pn	14 36 39.5	+1.6																
OMRZ	Omania	2.88	47	P	Pn	14 36 39.9	+0.9																
RAHZ	Arahi	2.88	67	P	Pn	14 36 40.4	+1.4																
MUGZ	Murupara	2.89	57	P	Pn	14 36 39.6	+0.5																
LTZ	Lake Taylor	2.89	201	P	Pn	14 36 40.6	+1.5																
GVZ	Greta Valley S	2.92	189	P	Pn	14 36 41.3	+1.7																
WHHZ	Waihua	2.92	71	P	Pn	14 36 41.1	+1.6																
RTZ	Ruatahuna	2.95	61	P	Pn	14 36 40.4	+0.5																
AWAZ	Awhitu Peninsu	3.12	14	P	Pn	14 36 43.9	+2.0																
SNGZ	Shannon Statio	3.12	66	P	Pn	14 36 43.1	+1.2																
INZ	Inchbonnie	3.12	212	P	Pn	14 36 43.1	+1.3																
AMCZ	Amberley	3.18	194	P	Pn	14 36 44.1	+1.6																
MKAZ	Moumakai	3.20	22	P	Pn	14 36 44.8	+2.0																
URZ	Urewera	3.23	57	P	Pn	14 36 43.8	+0.6																
URZ	Urewera	3.23	57	P	Pn	14 36 43.3	+0.1																
WTAZ	Waiatarua	3.23	13	P	Pn	14 36 45.5	+2.3																
KNZ	Kokohu	3.26	72	P	Pn	14 36 44.7	+1.2																
ETAZ	East Tamaki Re	3.28	18	P	Pn	14 36 46.0	+2.2																
RAGZ	Rawiri	3.31	62	P	Pn	14 36 45.2	+1.0																
RVAZ	Riverhead Bore	3.39	12	P	Pn	14 36 47.3	+2.2																
MHGZ	Mahia Peninsul	3.39	75	P	Pn	14 36 46.7	+1.5																
RIGZ	Rimuhau	3.45	68	P	Pn	14 36 46.9	+1.0																
MBAZ	Motutapu North	3.45	16	P	Pn	14 36 48.1	+2.2																
PRGZ	Paritu Road	3.45	72	P	Pn	14 36 47.1	+1.2																
OXZ	Oxford	3.46	200	P	Pn	14 36 46.6	+0.7																
MWZ	Matawai	3.46	61	P	Pn	14 36 46.5	+0.4																
WIAZ	Waiheke Island	3.48	20	P	Pn	14 36 48.7	+2.4																

TAP **13** *14:44:21.8,23.˙17N×120.˙76E,h7km,ML3.9,B*
JMA **13** *14:44:23.2±0.1,23.˙2N±0.˙1×120.˙8E±0.˙3,h11km±1km, MV3.5/13,TAIWAN REGION*
ISC 13 14:44:22.4±0.8**,23.˙17N**±0.˙01×**120.˙77E**±0.˙01**,h6**km±5km**, n133,σ0s89/225,19C-18D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYH	**Taoyuan**	**0.00**	**124**	⇑*iP*	**Pg**	**14 44 23.4**	**0.0**
STYH				*eS*	**Sg**	**14 44 24.3**	**+0.1**
WTP	**Ta-pu**	**0.17**	**297**	⇓*iP*	**Pg**	**14 44 25.7**	**0.0**
WTP				*i* S	**Sg**	**14 44 28.6**	**+0.6**
TPUB	**Ta-pu**	**0.18**	**314**	⇓*iP*	**Pg**	**14 44 26.2**	**+0.1**
TPUB				*i* S	**Sg**	**14 44 29.1**	**+0.5**
SGST	**Jiashian**	**0.20**	**243**	⇑*iP*	**Pg**	**14 44 25.3**	**-1.0**
SGST				*i* S	**Sg**	**14 44 28.5**	**-0.4**
ELDTW	**Lidau**	**0.22**	**86**	⇓*iP*	**Pg**	**14 44 27.5**	**+0.7**
ELDTW				S	**Sg**	**14 44 31.2**	**+1.3**
CHN1	**Nanshi**	**0.23**	**273**	⇓*iP*	**Pg**	**14 44 27.1**	**+0.2**
CHN1				S	**Sg**	**14 44 30.8**	**+0.9**
SNST	**Tainan City**	**0.26**	**281**	⇓P	**Pb**	**14 44 29.9**	**+0.5**
SNST				*eS*	**Sb**	**14 44 34.4**	**+0.3**
TWK	**Hsinying**	**0.28**	**290**	⇓*iP*	**Pg**	**14 44 28.2**	**+0.4**
TWK				S	**Sg**	**14 44 33.1**	**+1.5**
ALS	**Alishan**	**0.34**	**5**	⇑*iP*	**Pg**	**14 44 29.4**	**+0.3**
ALS				S	**Sg**	**14 44 34.5**	**+0.9**
CHN3	**Shinhua**	**0.39**	**256**	⇓P	**Pb**	**14 44 31.6**	**0.0**
CHN3				*eS*	**Sb**	**14 44 39.1**	**+1.2**
ECS	**Chishang**	**0.42**	**100**	⇓P	**Pb

*NEIC **13** 15:17:25.4±1.0, 11°.55S±0°.09×113°.21E±0°.08, h10km±1km, mb4.8/48, Error ellipse: s-maj=15.7km s-min=11.6km az=207.0*
*DJA **13** 15:17:25.9±0.5, 12°S±2°×11°3E±°, h12km±5km, M4.9/53, mb4.9/53, mB5.4/19, MLv5.2/45, Mw(mB)4.8/19, MwMwp5.0/1, Mwp5.2/1*
*IDC **13** 15:17:25.1±0.7, 11°.38S×113°.34E, h0km, mb4.3/22, mbtmp4.3/24, ML4.7/3, MS3.7/11, Error ellipse: s-maj=22.0km s-min=12.8km az=54.0*

ISC 13 15:17:28.0±0.4, 11°.66S±0°.04×113°.21E±0°.05, h35km, n185, σ2s10/180, mb4.6/46, MS3.8/12, 3C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**3.30**	**16**		**Pn**	**15 18 14.8**	**-2.5**
JAGI	**Jajag, Banyuwa**	**3.30**	**16**	P	**Pn**	**15 18 17.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**3.30**	**16**	P	**Pn**	**15 18 17.4**	**+0.1**
GMJI	**Gumukmas**	**3.37**	**4**	P	**Pn**	**15 18 17.0**	**-1.2**
IGBI	**Denpasar**	**3.41**	**34**	P	**Pn**	**15 18 17.3**	**-1.4**
IGBI				S	**Sn**	**15 18 58.3**	**+0.4**
DNP	**Denpasar**	**3.56**	**34**	P	**Pn**	**15 18 21.9**	**+1.1**
DNP				S	**Sn**	**15 19 03.2**	**+1.6**
RTBI	**Rangdo, Negare**	**3.61**	**28**	P	**Pn**	**15 18 22.1**	**+0.6**
BLJI	**Banyuglugur**	**3.91**	**6**	P	**Pn**	**15 18 25.6**	**0.0**
BLJI				S	**Sn**	**15 19 12.6**	**+2.3**
ABJI	**Asem Bagus**	**3.97**	**15**	P	**Pn**	**15 18 26.7**	**+0.3**
ABJI				S	**Sn**	**15 19 13.6**	**+1.8**
PCJI	**Pacitan**	**3.98**	**330**	P	**Pn**	**15 18 22.8**	**-3.8**
KHKI	**Kahang-Kahang**	**4.04**	**36**	P	**Pn**	**15 18 28.0**	**+0.7**
SNJI	**Sawahan-Nganju**	**4.11**	**339**	P	**Pn**	**15 18 26.4**	**-2.2**
SJI	**Sawahan**	**4.15**	**340**	P	**Pn**	**15 18 26.2**	**-2.8**
UGM	**Wanagama**	**4.57**	**324**		**Pn**	**15 18 32.2**	**-2.5**
UGM				Sn	**Sn**	**15 19 20.0**	**-6.7**
UGM	**Wanagama**	**4.57**	**324**	P	**Pn**	**15 18 32.4**	**-2.3**
UGM	**Wanagama**	**4.57**	**324**	P	**Pn**	**15 18 32.9**	**-1.8**
NGJI	**Ngawi**	**4.60**	**338**	P	**Pn**	**15 18 36.5**	**+1.4**
NGJI				S	**Sn**	**15 19 29.5**	**+2.1**
TWSI	**Taliwang, Sumb**	**4.63**	**52**	P	**Pn**	**15 18 34.8**	**-0.8**
KMMI	**Kalianget**	**4.64**	**9**	P	**Pn**	**15 18 35.8**	**+0.1**
PLAI	**Plampang**	**5.30**	**58**	P	**Pn**	**15 18 43.0**	**-1.8**
PLAI	**Plampang**	**5.30**	**58**	P	**Pn**	**15 18 43.8**	**-1.0**
	1.4nm3µm168nm,0.8s						
SMRI	**Semarang**	**5.34**	**329**	Sn	**Sn**	**15 19 41.5**	**-4.1**
SMRI	**Semarang**	**5.34**	**329**	P	**Pn**	**15 18 45.2**	**0.0**
DBNI	**Kabupaten Domp**	**5.92**	**58**	P	**Pn**	**15 18 53.6**	**+0.3**
	0.9nm63nm,0.7s						
KPJI	**Karang Pucung**	**6.03**	**315**	P	**Pn**	**15 18 56.1**	**+1.4**
	1.2nm72nm,0.7s						
CTJI	**Waduk Cacaban**	**6.10**	**319**	P	**Pn**	**15 18 55.8**	**+0.1**
	0.8nm57nm,0.7s						
WBSI	**Waikabubak, Su**	**6.40**	**72**	P	**Pn**	**15 18 59.4**	**-0.5**
	1.4nm1µm63nm,0.4s						
BBJI	**Bungbulang**	**6.89**	**307**		**Pn**	**15 19 04.1**	**-2.5**
BBJI				Sn	**Sn**	**15 20 15.4**	**-8.5**
BBJI	**Bungbulang**	**6.89**	**307**	P	**Pn**	**15 19 05.1**	**-1.6**
BBJI	**Bungbulang**	**6.89**	**307**	P	**Pn**	**15 19 05.3**	**-1.4**
	0.4nm73nm,0.7s						
WSI	**Waingapu**	**7.24**	**75**	P	**Pn**	**15 19 10.5**	**-0.9**
	2µm139nm,0.9s						
LEM	**Lembang**	**7.32**	**311**	Pn	**Pn**	**15 19 12.1**	**-0.5**
	5.1nm,0.3s,baz=40,slow=12,SNR=5.6						
LEM				Sn	**Sn**	**15 20 34.1**	**-0.5**
	3.5nm,0.3s,baz=341,slow=17,SNR=3.7						
LEM				LR	LR	15 22 10.8	
	comp=Z,157nm,20.9s,baz=246,slow=40						
	16nm,0.5s						
LEM	**Lembang**	**7.32**	**311**	P	**Pn**	**15 19 11.1**	**-1.5**
	0.3nm62nm,0.9s						
XMI	**Christmas Isla**	**7.48**	**279**	P	**Pn**	**15 19 12.4**	**-2.3**
DBJI	**Dramaga**	**8.15**	**308**	P	Pn	15 19 32.4	+8.5
BBKI	**Banjar Baru**	**8.30**	**11**	P	Pn	15 19 43.2	+17
EDFI	**Ende, Flores**	**8.83**	**72**	P	**Pn**	**15 19 34.2**	**+0.8**
	1µm51nm,0.5s						
BSSI	**Bau Bau, Buton**	**9.04**	**53**	P	**Pn**	**15 19 36.1**	**0.0**
	47nm,0.8s						
KAPI	**Kappang**	**9.24**	**45**	Pn	**Pn**	**15 19 37.0**	**-1.9**
	3.1nm,0.3s,baz=222,slow=10.0,SNR=3.7						
KAPI				Sn	**Sn**	**15 21 14.3**	**-7.4**
	2.7nm,0.3s,baz=50,slow=20,SNR=8.7						
KAPI				LR	LR	15 23 43.9	
	comp=Z,539nm,21.0s,baz=192,slow=42						
	8.7nm,0.3s						
KAPI	**Kappang**	**9.24**	**45**	P	**Pn**	**15 19 38.9**	**0.0**
MMRI	**Maumere**	**9.38**	**72**		**Pn**	**15 19 40.0**	**-0.8**
MMRI	**Maumere**	**9.38**	**72**	P	**Pn**	**15 19 41.4**	**+0.6**
MMRI	**Maumere**	**9.38**	**72**	P	**Pn**	**15 19 41.6**	**+0.8**
BATI	**Baumata**	**10.36**	**83**	Pn	**Pn**	**15 19 51.5**	**-2.9**
	32nm,0.3s,baz=127,slow=0.5,SNR=40						
BATI				Sn	**Sn**	**15 21 44.5**	**-4.9**
	6.8nm,0.3s,baz=336,slow=21,SNR=4.1						
BATI	**Baumata**	**10.36**	**83**	P	**Pn**	**15 19 54.8**	**+0.5**
KASI	**Kota Agung**	**10.55**	**305**	P	**Pn**	**15 19 58.8**	**+1.9**
	42nm,0.8s						
KLSI		**10.88**	**309**	P	**Pn**	**15 20 02.2**	**+0.9**
GIRL	**Giralia**	**10.97**	**175**	Pn	**Pn**	**15 19 59.9**	**-2.5**
SOEI	**Soe**	**11.03**	**81**		**Pn**	**15 20 01.4**	**-2.1**
SOEI	**Soe**	**11.03**	**81**	P	**Pn**	**15 20 02.3**	**-1.2**
SOEI	**Soe**	**11.03**	**81**	P	**Pn**	**15 20 04.0**	**+0.5**
	96nm,1.0s						
LWLI	**Liwa**	**11.20**	**305**	P	Pn	15 20 24.4	+19
MBWA	**Marble Bar**	**11.32**	**147**		**Pn**	**15 20 03.4**	**-4.0**
MBWA	**Marble Bar**	**11.32**	**147**	P	**Pn**	**15 20 05.2**	**-2.2**
MDSI	**Maura Dua**	**11.43**	**308**	P	**Pn**	**15 20 08.8**	**-0.1**
PSA00	**Pilbara Seismi**	**11.72**	**148**		**Pn**	**15 20 09.3**	**-3.5**
PSA00	**Pilbara Seismi**	**11.72**	**148**		**Pn**	**15 20 09.6**	**-3.3**
PSA00	**Pilbara Seismi**	**11.72**	**148**	P	**Pn**	**15 20 11.6**	**-1.3**
MNAI	**Manna**	**12.47**	**305**	Pn	**Pn**	**15 20 21.4**	**-1.8**
EGSI	**Enggano, Bengk**	**12.50**	**299**	P	**Pn**	**15 20 22.9**	**-0.6**
KSI	**Kapahiang**	**13.19**	**306**	P	**P**	**15 20 42.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**13.61**	**120**	Pn	**Pn**	**15 20 36.8**	**-1.8**
	2.5nm,0.3s,baz=291,slow=7.6,SNR=49						
FITZ				Sn	Sn	15 22 56.2	-12
	2.8nm,0.3s,baz=189,slow=20,SNR=9.3						
MASI	**Maura Aman, Be**	**13.78**	**307**	P	P	15 20 58.4	+9.4
SBUM	**Sibu**	**14.05**	**355**	Pn	**Pn**	**15 20 42.9**	**-1.9**
TOLI2	**Tolitoli**	**14.75**	**31**		**P**	**15 20 59.1**	**-0.7**
TOLI2	**Tolitoli**	**14.75**	**31**	P	**Pn**	**15 20 55.2**	**+1.0**
MRSI	**Marisa**	**14.85**	**36**	P	**P**	**15 21 00.3**	**-0.6**
	27nm,0.9s						
KNRA	**Kununurra**	**15.63**	**107**	Pn	**Pn**	**15 21 01.7**	**-4.1**
MEEK	**Meekatharra**	**15.74**	**162**	P	**Pn**	**15 21 05.3**	**-1.9**
SANI	**Sanana**	**15.87**	**54**	P	**Pn**	**15 21 09.9**	**+1.1**
	25nm,0.7s						
MORW	**Morawa**	**17.52**	**172**	P	**Pn**	**15 21 25.8**	**-3.8**
MORW	**Morawa**	**17.52**	**172**	P	**Pn**	**15 21 28.2**	**-1.4**
MTN	**Manton Dam**	**17.55**	**96**	Pn	**Pn**	**15 21 25.5**	**-4.6**
BLDU	**Ballidu**	**19.14**	**171**	P	**Pn**	**15 21 48.9**	**-0.4**
IPM	**Ipoh**	**20.10**	**322**	P	**P**	**15 21 56.9**	**-2.0**
IPM				IAmb	IAmb	15 22 08.8	
	comp=Z,44nm,0.8s						
KLBR	**Kellerberrin**	**20.27**	**169**	P	Pn	15 22 01.1	-1.7
MUN	**Mundaring**	**20.41**	**173**	P	**P**	**15 22 02.0**	**-0.1**
FAKI	**Fak Fak**	**20.77**	**67**		**P**	**15 22 04.5**	**-1.6**
FAKI				IAmb	IAmb	15 22 17.3	
	comp=Z,22nm,0.9s						
FAKI	**Fak Fak**	**20.77**	**67**	P	**P**	**15 22 04.9**	**-1.2**
SIJI	**Sorong**	**20.88**	**60**	P	**P**	**15 22 06.7**	**-0.7**
	comp=Z,20nm,0.8s,baz=190,slow=14,SNR=7.7						
	comp=Z,20nm,0.8s						
SIJI	**Sorong**	**20.88**	**60**	P	**P**	**15 22 08.0**	**+0.6**
KULM	**Kulim**	**20.97**	**323**	P	**P**	**15 22 07.4**	**-0.9**
KULM				IAmb	IAmb	15 22 16.3	
	comp=Z,18nm,0.7s						
KULM	**Kulim**	**20.97**	**323**	P	Pn	15 22 09.9	-1.1
NWAO	**Narrogin (SRO)**	**21.49**	**171**	P	**P**	**15 22 18.6**	**+4.9**
	comp=Z,17nm,1.1s,baz=359,slow=8.6,SNR=6.2						
NWAO				S	**S**	**15 26 09.2**	**-1.0**
	comp=Z,13nm,1.0s,baz=328,slow=1.4,SNR=2.4						
NWAO				LR	LR	15 30 57.8	
	comp=Z,288nm,20.4s,baz=298,slow=37						
	comp=Z,17nm,1.1s						
WB0	**Warramunga Arr**	**21.91**	**114**	P	**P**	**15 22 18.1**	**-0.3**
WB0				IAmb	IAmb	15 22 31.1	
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	**21.91**	**115**	P	**P**	**15 22 20.2**	**+1.7**
	comp=Z,10nm,1.0s,baz=291,slow=11,SNR=49						
WRA				S	**S**	**15 26 14.3**	**-4.5**
	comp=Z,1.4nm,0.6s,baz=286,slow=24,SNR=7.3						
	comp=Z,10nm,1.0s						
WRA	**Warramunga Arr**	**21.91**	**115**	P	**P**	**15 22 18.9**	**+0.4**
WRAB	**Tennant Creek**	**21.92**	**115**	P	**P**	**15 22 20.5**	**+2.0**
DAV	**Davao City (W)**	**22.31**	**34**	LR	LR	15 32 58.0	
	comp=Z,125nm,18.1s,baz=216,slow=42						

ASAR	**Alice Springs**	**23.01**	**124**	P	**P**	**15 22 32.0**	**+1.9**
	comp=Z,6.8nm,0.9s,baz=306,slow=10,SNR=92						
ASAR				S	**S**	**15 26 38.2**	**-0.3**
	comp=Z,4.1nm,0.8s,baz=291,slow=21,SNR=7.9						
ASAR				LR	LR	15 31 30.1	
	comp=Z,138nm,21.8s,baz=305,slow=37						
	comp=Z,6.8nm,0.9s						
ASAR	**Alice Springs**	**23.01**	**124**	P	**P**	**15 22 31.3**	**+1.2**
AS31	**Alice Springs**	**23.01**	**124**	P	**P**	**15 22 30.5**	**+0.4**
FORT	**Forrest**	**23.48**	**146**		**P**	**15 22 36.0**	**+1.4**
TGY	**Tagaytay City**	**26.72**	**17**	LR	LR	15 34 37.7	
	comp=Z,56nm,20.2s,baz=272,slow=39						
INKA	**Innaminka**	**30.35**	**126**		**P**	**15 23 37.7**	**+1.1**
QIZ	**Qiongzhong**	**30.68**	**354**	P	**P**	**15 23 39.9**	**+0.4**
QIZ				S	**S**	**15 28 44.1**	**+4.2**
QIZ				LR	LR		
	comp=Z,110nm,8.0s						
QIZ				LR	LR		
	comp=Z,110nm,8.6s						
QIZ				LR	LR		
	comp=Z,130nm,8.0s						
CTA	**Charters Tower**	**32.82**	**109**	LR	LR	15 38 34.4	
	comp=Z,151nm,18.6s,baz=268,slow=39						
STKA	**Stephens Creek**	**32.99**	**132**	P	**P**	**15 24 03.2**	**+3.5**
	comp=Z,2.8nm,0.7s,baz=311,slow=6.2,SNR=8.9						
	comp=Z,2.8nm,0.7s						
STKA	**Stephens Creek**	**32.99**	**132**	P	**P**	**15 23 59.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**33.07**	**335**	P	**P**	**15 24 01.9**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=169,slow=7.8,SNR=13						
CMAR				PcP	**PcP**	**15 26 47.5**	**+3.7**
	comp=Z,1.6nm,0.8s,baz=164,slow=3.2,SNR=5.9						
	comp=Z,1.2nm,0.7s						
SSLB	**Suanglung**	**36.03**	**12**	P	**P**	**15 24 26.8**	**+0.6**
KMI2	**Kunming**	**37.98**	**344**	⇑P	**P**	**15 24 45.9**	**+2.9**
KMI2				pmax	pmax		
	comp=Z,13nm,0.9s						
TNCH	**TengChong**	**39.18**	**339**	P	**P**	**15 24 54.1**	**+1.1**
TNCH				pP	pP	15 24 57.6	-4.4
TNCH				sP	sP	15 24 59.4	-6.3
TNCH				S	**S**	**15 30 53.6**	**+2.5**
TNCH				sS	sS	15 31 01.8	-4.0
TNCH				SS	**SS**	**15 33 39.8**	**-5.2**
TNCH				pmax	pmax		
	comp=Z,11nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,110nm,4.6s						
PZH	**PanZhiHua**	**39.54**	**344**	P	**P**	**15 24 58.8**	**+2.9**
H08S2	**Diego Garcia H**	**40.31**	**272**	T	T	16 08 19.4	
	baz=97						
H08S3	**Diego Garcia H**	**40.33**	**272**	T	T	16 08 26.2	
	baz=97						
H08S1	**Diego Garcia H**	**40.33**	**272**	T	T	16 08 25.1	
	baz=97						
ENH	**Enshi**	**41.84**	**355**	P	**P**	**15 25 13.8**	**-0.9**
ENH				IAmb	IAmb	15 25 23.2	
	comp=Z,9.0nm,0.9s						
SHL	**Shillong**	**42.44**	**331**	P	**P**	**15 25 19.6**	**-0.3**
CD2	**Chengdu**	**43.29**	**348**	P	**P**	**15 25 27.3**	**+0.8**
CD2				sP	pP	15 25 34.3	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**43.80**	**7**	*e*P	**P**	**15 25 31.6**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LYN	**LuoYang**	**45.96**	**359**	P	**P**	**15 25 51.6**	**+3.9**
LYN				pP	pP	15 25 56.5	-0.3
LYN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LYN				LR	LR		
	comp=Z,450nm,17.5s						
LYN				LR	LR		
	comp=Z,620nm,18.5s						
LYN				LR	LR		
	comp=Z,370nm,17.2s						
LSA	**Lhasa**	**46.30**	**333**	P	**P**	**15 25 50.8**	**-0.2**
LSA				IAmb	IAmb	15 26 00.8	
	comp=Z,15nm,0.9s						
LSA	**Lhasa**	**46.30**	**333**	P	**P**	**15 25 47.3**	**-3.7**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LZDM	**Lanzhou Array**	**48.20**	**350**	P	**P**	**15 26 06.7**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=167,slow=7.2,SNR=3.7						
	comp=Z,0.7nm,0.4s						
LZH	**Lanzhou**	**48.30**	**350**	*e*P	P	15 26 12.5	+6.3
LZH				sP	pwP	15 26 21.6	+0.8
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
HNS	**HongShan**	**48.82**	**2**	⇑P	**P**	**15 26 13.5**	**+3.6**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KSAR	**Wonju Array Be**	**50.75**	**15**	P	**P**	**15 26 24.4**	**-0.1**
KSRS	**Korea Array**	**50.77**	**15**	P	**P**	**15 26 25.9**	**+1.2**
	comp=Z,3.1nm,0.8s,baz=199,slow=7.7,SNR=16						
	comp=Z,3.1nm,0.8s						
KS19	**Wonju Array Si**	**50.80**	**15**	P	**P**	**15 26 24.2**	**-0.8**
BTO2	**Baotou**	**52.23**	**357**	*e*P	**P**	**15 26 38.1**	**+2.3**
BTO2				pP	**pP**	**15 26 42.6**	**-2.4**
BTO2				sP	**sP**	**15 26 45.1**	**-3.5**
BTO2				pmax	pmax		
	comp=Z,14nm,0.9s						
BTO2				pmax	pmax		
	comp=Z,310nm,5.2s						
HHC	**Hu-ho-hao-te**	**52.27**	**358**	*e*P	**P**	**15 26 38.9**	**+2.9**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA2	**Gaotai**	**52.40**	**347**	*e*P	**P**	**15 26 38.6**	**+1.5**
GTA2				sP	pP	15 26 46.1	-0.2
GTA2				PcP	**PcP**	**15 27 51.9**	**+4.3**
MAJO	**Matsushiro**	**53.42**	**25**	P	**P**	**15 26 44.0**	**-0.5**
MJAR	**Matsushiro Arr**	**53.42**	**25**	P	**P**	**15 26 44.0**	**-0.4**
	comp=Z,4.7nm,0.8s,baz=196,slow=7.3,SNR=11						
	comp=Z,4.7nm,0.8s						
MJAR	**Matsushiro Arr**	**53.42**	**25**	IAmb	IAmb	15 28 32.6	
	comp=Z,13nm,1.7s						
MJB9	**Matsu-Tunnel**	**53.42**	**25**	P	**P**	**15 26 44.2**	**-0.3**
XLT	**XiLinHaoTe**	**55.35**	**3**	*e*P	P	15 27 06.8	+8.3
XLT				sP	pwP	15 27 13.1	-0.2
XLT				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XLT				LR	LR		
	comp=N,35nm,22.6s						
CN2	**Changchun**	**56.31**	**11**	P	**P**	**15 27 04.8**	**-0.4**
CN2				pmax	pmax		
	comp=N,10.0nm,0.7s						
MDJ	**Mudanjiang**	**57.95**	**14**	P	**P**	**15 27 16.8**	**0.0**
MDJ				IAmb	IAmb	15 27 25.5	
	comp=Z,7.7nm,0.8s						
MDJ	**Mudanjiang**	**57.95**	**14**	P	**P**	**15 27 18.4**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,12nm,2.3s						
USRK	**Ussuriysk Ar.**	**58.16**	**16**	P	**P**	**15 27 19.1**	**+0.8**
	comp=Z,7.1nm,0.8s,baz=201,slow=6.6,SNR=10.0						
	comp=Z,7.1nm,0.8s						
BNX	**BinXian**	**58.55**	**12**	⇑P	**P**	**15 27 21.3**	**+0.3**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	**Songino Array**	**59.54**	**355**	P	**P**	**15 27 29.0**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=178,slow=9.2,SNR=10						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**59.54**	**355**	P	**P**	**15 27 27.4**	**-0.6**
THZ	**Tophouse**	**59.80**	**132**	P	**P**	**15 27 30.0**	**+0.1**
WMQ	**Urumqi**	**59.91**	**339**	*e*P	**P**	**15 27 32.8**	**+2.2**
WUS	**Wushi**	**61.24**	**331**	P	**P**	**15 27 39.7**	**-0.1**
KSH2	**Kashi**	**61.52**	**327**	P	P	15 27 49.3	+7.6
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JKA	**Kamikawa-asahi**	**61.61**	**24**	P	**P**	**15 27 42.0**	**0.0**
BKZ	**Black Stump Fm**	**62.05**	**128**	P	**P**	**15 27 45.0**	**-0.3**
HEH	**HeiHe**	**62.89**	**10**	*e*P	**P**	**15 27 49.8**	**-0.7**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HEH				LR	LR		
	comp=Z,200nm,12.2s						
HEH				LR	LR		
	comp=Z,410nm,14.9s						
HEH				LR	LR		
	comp=Z,400nm,14.3s						
KDJ	**Kajisay**	**62.93**	**331**	P	**P**	**15 27 51.2**	**0.0**
NRN	**Naryn**	**62.98**	**329**	P	**P**	**15 27 51.0**	**-0.7**
TKM2	**Tokmak 2**	**64.29**	**330**	P	P	15 28 09.2	+9.0
	SNR=7.6						
KBK	**Karagaybulak**	**64.42**	**330**	P	P	15 28 10.5	+10
	SNR=10						
MKAR	**Makanchi Array**	**64.44**	**337**	P	**P**	**15 28 01.8**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=143,slow=7.7,SNR=38						
	comp=Z,2.5nm,0.6s						

MKAR	**Makanchi Array**	**64.44**	**337**		**P**	**15 28 01.4**	**+0.6**
ARSB	**Arslanbob**	**64.45**	**327**	P	**P**	**15 28 01.4**	**+0.2**
MAKZ	**Makanchi**	**64.57**	**337**	P	**P**	**15 28 02.0**	**+0.4**
MAKZ				IAmb	IAmb	15 28 10.8	
	comp=Z,7.2nm,1.1s						
AAK	**Ala-Archa**	**64.63**	**329**	P	**P**	**15 28 03.9**	**+1.6**
	comp=Z,3.3nm,0.9s,baz=275,slow=4.9,SNR=7.3						
	comp=Z,3.3nm,0.9s						
AAK	**Ala-Archa**	**64.63**	**329**	P	P	15 28 11.1	+8.8
	SNR=6.9						
AAK	**Ala-Archa**	**64.63**	**329**	P	**P**	**15 28 02.1**	**-0.2**
AAK				IAmb	IAmb	15 28 12.2	
	comp=Z,11nm,0.8s						
BTK	**Batken**	**64.75**	**325**		**P**	**15 28 03.3**	**+0.2**
EKS2	**Erkin-Say**	**65.01**	**329**	P	P	15 28 14.3	+10
	SNR=6.5						
USP	**Ospenovka**	**65.09**	**330**	P	P	15 28 13.5	+8.4
	SNR=8.1						
KK31	**Karatay Array**	**67.01**	**327**	P	**P**	**15 28 18.2**	**+0.8**
KK31				IAmb	IAmb	15 30 42.4	
	comp=Z,3.5nm,0.7s						
KKAR	**Karatay Array**	**67.01**	**327**	P	**P**	**15 28 17.6**	**+0.2**
KURBB	**Kurchatov Arra**	**69.00**	**337**	P	**P**	**15 28 29.6**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=154,slow=5.8,SNR=6.4						
	comp=Z,0.8nm,0.9s						
KURK	**Kurchatov**	**69.04**	**337**	P	**P**	**15 28 30.1**	**0.0**
KURK				IAmb	IAmb	15 28 39.1	
	comp=Z,3.8nm,0.8s						
ZAA0	**Zalesovo Array**	**69.67**	**343**		**P**	**15 28 34.2**	**+0.4**
ZAA0				IAmb	IAmb	15 28 42.6	
	comp=Z,5.1nm,0.8s						
ZALV	**Zalesovo Beam**	**69.67**	**343**	P	**P**	**15 28 34.0**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=146,slow=3.6,SNR=9.4						
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**69.67**	**343**		**P**	**15 28 33.5**	**-0.3**
VNDA	**Vanda**	**70.32**	**170**	P	**P**	**15 28 41.7**	**+4.1**
	comp=Z,3.4nm,1.0s,baz=331,slow=6.6,SNR=3.7						
VNDA				LR	LR	15 56 56.7	
	comp=Z,80nm,20.1s,baz=240,slow=34						
	comp=Z,3.4nm,1.0s						
VNDA	**Vanda**	**70.32**	**170**	P	**P**	**15 28 40.6**	**+3.1**
VNDA				IAmb	IAmb	15 29 28.1	
	comp=Z,23nm,1.6s						
BVAR	**Borovoye Array**	**74.10**	**335**	P	**P**	**15 29 00.9**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=134,slow=8.3,SNR=8.7						
	comp=Z,0.6nm,0.6s						
BORK	**Borovoye**	**74.14**	**335**	P	**P**	**15 29 00.7**	**0.0**
YAK	**Yakutsk**	**74.58**	**8**	P	**P**	**15 29 03.4**	**+0.4**
	comp=Z,6.1nm,0.7s,baz=135,slow=0.6,SNR=2.0						
	comp=Z,6.1nm,0.7s						
YAK	**Yakutsk**	**74.58**	**8**	P	**P**	**15 29 03.5**	**+0.4**
YAK				IAmb	IAmb	15 29 12.5	
	comp=Z,17nm,0.8s						
RAYN	**Ar Rayn**	**74.85**	**298**	P	**P**	**15 29 05.2**	**-0.3**
PETK	**Petropavlovsk-**	**74.86**	**26**	P	**P**	**15 29 04.7**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=264,slow=1.5,SNR=4.2						
	comp=Z,1.5nm,0.8s						
AB31	**Akbulak array**	**76.58**	**327**	P	**P**	**15 29 15.2**	**+0.4**
AB31				IAmb	IAmb	15 29 24.2	
	comp=Z,11nm,0.7s						
ABKAR	**Akbulak array**	**76.58**	**327**	P	**P**	**15 29 15.5**	**+0.7**
ARTI	**Arti**	**81.55**	**333**	P	**P**	**15 29 42.0**	**+0.2**
ARTI				IAmb	IAmb	15 29 51.7	
	comp=Z,13nm,0.8s						
BOSA	**Boshof**	**82.74**	**242**	LR	LR	15 57 12.5	
	comp=Z,88nm,21.4s,baz=314,slow=29						
NRIK	**Noril'sk**	**82.78**	**351**	P	**P**	**15 29 48.5**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=159,slow=7.3,SNR=5.6						
	comp=Z,0.7nm,0.4s						
NRIK	**Noril'sk**	**82.78**	**351**	P	**P**	**15 29 48.6**	**+0.5**
NRIK				IAmb	IAmb	15 29 57.7	
	comp=Z,5.5nm,1.2s						
GURO	**Guroymak-BITLI**	**82.92**	**312**	P	**P**	**15 29 49.0**	**-0.7**
GURO				IAmb	IAmb	15 30 00.6	
	comp=Z,14nm,1.3s						
KARS	**Kars**	**82.93**	**314**	P	**P**	**15 29 49.4**	**-0.2**
LBTB	**Lobatse**	**83.03**	**246**	LR	LR	16 00 14.4	
	comp=Z,51nm,21.9s,baz=230,slow=31						
TIXI	**Tiksi**	**83.78**	**5**	P	**P**	**15 29 53.6**	**+0.5**
	comp=Z,6.0nm,0.3s,baz=170,slow=4.6,SNR=6.8						

STEB	**Steborice**	**0.42**	**250**	*e*PG		**Pb**	**15 22 15.5**	**-0.4**
STEB				*e*SG		**Sb**	**15 22 21.8**	**-0.9**
	comp=Z,551nm,0.4s							
MORC	**Moravsky Berou**	**0.62**	**241**	*e*Pg		**Pb**	**15 22 18.7**	**-0.6**
	baz=61							
MORC				*e*Sg		**Sb**	**15 22 27.1**	**-1.5**
	157nm,0.4s,baz=61							
ANAC	**Anensky vrch**	**0.65**	**270**	*e*Pg		**Pb**	**15 22 19.3**	**-0.5**
	baz=88							
ANAC				*e*Sg		**Sb**	**15 22 28.0**	**-1.4**
	132nm,0.3s,baz=88							
LOSC	**Losov**	**0.80**	**235**	*e*Pg		**Pb**	**15 22 22.2**	**-0.1**
	baz=56							
LOSC				*e*Sg		**Sb**	**15 22 32.7**	**-1.0**
	127nm,0.5s,baz=56							
MAUC	**Maruska**	**0.80**	**207**	*e*PG		**Pb**	**15 22 22.6**	**+0.2**
MAUC				*e*SG		**Sb**	**15 22 34.3**	**+0.6**
OJC	**Ojcow**	**0.92**	**81**	*e*Pg		**Pg**	**15 22 22.8**	**-0.5**
OJC				*e*Sg		**Sg**	**15 22 35.1**	**-0.1**
LANS	**Liptovska Anna**	**1.17**	**142**	*e*PG		**Pg**	**15 22 28.2**	**+0.2**
LANS				*e*SG		**Sn**	**15 22 45.4**	**-0.5**
LANS				*e*LG		Lg	15 22 47.5	
JAVC	**Velka Javorina**	**1.30**	**201**	*e*Pg		**Pn**	**15 22 31.4**	**+0.3**
	baz=22							
JAVC	**Velka Javorina**	**1.30**	**201**	*e*PG		**Pn**	**15 22 31.5**	**+0.3**
DPC	**Dobruska-Polom**	**1.35**	**282**	*e*PG		**Pb**	**15 22 32.2**	**+0.4**
DPC				*e*SG		**Sn**	**15 22 50.7**	**+0.3**
	comp=Z,97nm,0.5s							
VRAC	**Vranov**	**1.39**	**237**	*e*Pg		**Pb**	**15 22 32.7**	**+0.2**
	baz=56							
VRAC				*e*Sg		**Sn**	**15 22 51.3**	**-0.1**
	105nm,0.6s,baz=56							
NIE	**Niedzica**	**1.41**	**117**	*e*Pg		**Pg**	**15 22 32.8**	**+0.2**
NIE				*e*Sg		**Sn**	**15 22 51.8**	**0.0**
OSTC	**Ostas**	**1.47**	**290**	*e*PG		**Pn**	**15 22 33.5**	**+0.1**
OSTC				*e*SG		**Sn**	**15 22 54.5**	**+1.2**
	comp=Z,53nm,0.7s							
KSP	**Ksiaz**	**1.54**	**301**	*e*Pg		**Pn**	**15 22 34.3**	**0.0**
KSP				*e*Sg		**Sn**	**15 22 56.3**	**+1.4**
CHVC	**Chvalec**	**1.57**	**290**	*e*PG		**Pg**	**15 22 36.5**	**+0.7**
UPC	**Upice**	**1.58**	**287**	*e*PG		**Pg**	**15 22 35.8**	**0.0**
KRUC	**Moravsky**	**1.65**	**233**	*e*Pn		**Pb**	**15 22 36.7**	**-0.1**
	baz=52							
KRUC				*e*Sg		**Sg**	**15 22 59.1**	**+0.7**
	99nm,0.6s,baz=52							
MODS	**Modra-Piesok**	**1.85**	**203**	*e*PG		**Pn**	**15 22 39.2**	**+0.6**
MODS				*e*SG		**Sb**	**15 23 03.8**	**-0.3**
STHS	**Stebnicka Huta**	**1.97**	**109**	*e*PG		**Pb**	**15 22 42.4**	**0.0**
STHS				*e*SG		**Sg**	**15 23 11.2**	**+2.3**
TREC	**Trest**	**2.04**	**248**	*e*SG		**Sg**	**15 23 10.7**	**-0.3**
KECS	**Kecovo**	**2.11**	**138**	*e*PN		**Pn**	**15 22 41.7**	**-0.4**
KECS				*e*SN		**Sn**	**15 23 07.9**	**-1.2**
KECS				*e*LG		Lg	15 23 14.1	
PRU	**Pruhonice**	**2.48**	**269**	*e*SG		**Sg**	**15 23 23.7**	**-1.4**
	comp=Z,23nm,0.6s							
CONA	**Conrad Observa**	**2.72**	**219**	*e*Pn		**Pn**	**15 22 50.5**	**0.0**
	0.2nm,0.1s							
CONA				*i* Sn		**Sn**	**15 23 23.9**	**-0.3**
	3.4nm,0.4s							
RONA	**Rosalia, Austr**	**2.75**	**211**	*e*Pn		**Pn**	**15 22 51.9**	**+0.9**
	0.8nm,0.2s							
RONA				*e*Sn		**Sn**	**15 23 26.0**	**+1.1**
	4.1nm,0.4s							
CKRC	**Cesky Krumlov**	**2.94**	**246**	*e*PG		**Pg**	**15 23 00.8**	**-1.1**
CKRC				*e*SG		**Sg**	**15 23 40.5**	**+0.5**
	comp=Z,26nm,0.7s							
BRG	**Berggiesshubel**	**2.94**	**287**	*e*Pg		**Pg**	**15 23 01.0**	**-1.0**
BRG				*e*Sg		**Sg**	**15 23 40.3**	**+0.1**
BRG	**Berggiesshubel**	**2.94**	**287**	Pg		**Pg**	**15 23 01.1**	**-0.9**
BRG				Sg		**Sg**	**15 23 40.2**	**+0.1**
BRG				Amp			15 23 44.8	
	comp=Z,14nm,0.4s							
KHC	**Kasperske Hory**	**3.26**	**255**	*e*PG		**Pg**	**15 23 08.0**	**-0.1**
KHC				*e*SG		**Sg**	**15 23 49.5**	**-0.9**
GEC2	**GERESS Array S**	**3.29**	**250**	*e*Pg		**Pg**	**15 23 08.0**	**-0.7**
GEC2				*e*Sg		**Sb**	**15 23 47.3**	**+1.8**
MOA	**Molln**	**3.51**	**232**	*e*Pn		**Pn**	**15 23 01.5**	**+0.1**
	comp=Z,0.3nm,0.1s							
MOA				*e*Sn		**Sn**	**15 23 45.7**	**+2.1**
	comp=Z,3.6nm,0.4s							
CLL	**Collm**	**3.63**	**292**	*e*Pg		**Pg**	**15 23 15.9**	**+0.7**
CLL				*e*Sg		**Sg**	**15 24 03.7**	**+1.4**
WET	**Wettzell**	**3.70**	**257**	*e*Sg		**Sg**	**15 24 02.4**	**-1.9**
TANN	**Tannenbergstha**	**3.81**	**277**	*e*Pg		**Pg**	**15 23 17.0**	**-1.7**
WERN	**Wernitzgruen**	**3.87**	**275**	*e*Pg		**Pg**	**15 23 18.6**	**-1.0**
WERN				*e*Sg		**Sg**	**15 24 08.2**	**-1.4**
MODW	**Modelwitz**	**3.87**	**285**	*e*Sg		**Sg**	**15 24 09.9**	**0.0**
GUNZ	**Gunzen**	**3.90**	**277**	*e*Pg		**Pg**	**15 23 19.0**	**-1.2**
GUNZ				*e*Sg		**Sg**	**15 24 08.7**	**-2.0**
WERD	**Werda**	**3.92**	**278**	*e*Pg		**Pg**	**15 23 19.0**	**-1.6**
WERD				*e*Sg		**Sg**	**15 24 09.9**	**-1.4**
HKWD	**Heukewalde**	**3.98**	**283**	*e*Sg		**Sg**	**15 24 15.0**	**+1.7**
ROTZ	**Rotzenmuhle**	**4.00**	**268**	*e*Pg		**Sg**	**15 23 22.4**	**+0.2**
ROTZ				*e*Sg		**Sg**	**15 24 10.6**	**-3.5**
PLN	**Plauen**	**4.01**	**278**	*e*Sg		**Sg**	**15 24 14.4**	**-1.0**
TRIB	**Obertriebel**	**4.02**	**276**	*e*Pg		**Pg**	**15 23 21.2**	**-1.4**
TRIB				*e*Sg		**Sg**	**15 24 14.0**	**-0.7**

MOS ***13*** *15:26:22.2±1.0,51˚.36N×174˚.92W,h13km,mb5.0/47, MS4.3/7, Error ellipse: s-maj=8.6km s-min=5.3km az=110.4*

BJI ***13*** *15:26:22.5,51˚.43N×175˚.02W,h18km,mB5.2/26, mb4.9/72,Ms4.9/45,Ms7 4.7/42*

NEIC ***13*** *15:26:25.8±2.4,51˚.24N±0˚.04×174˚.99W±0˚.08,h24km±4km, mb5.0/387,ML4.9/12,Error ellipse: s-maj=7.3km s-min=5.1km az=84.0*

IDC ***13*** *15:26:26.2±2.3,51˚.54N×174˚.97W,h21km±13km,mb4.4/39, mbtmp4.5/41,ML4.2/2,MS4.3/39,Error ellipse: s-maj=17.8km s-min=9.2km az=172.0*

AEIC ***13*** *15:26:26.5±2.4,51˚.22N±0˚.03×175˚.02W±0˚.06,h24km±4km, Error ellipse: s-maj=5.4km s-min=4.8km az=112.0*

ISC 13 15:26:25.5±0.5,51˚.26N±0˚.05×174˚.94W±0˚.03,h25km±2km, h25km:pP-P,n844,σ1s34/726,mb5.0/260,MS4.5/59, 33C-17D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.95**	**320**			**Pn**	**15 26 43.3**	**0.0**
GSIG						**Sb**	**15 26 54.3**	**-1.2**
GSIG						**Sn**	**15 26 56.5**	**+0.4**
GSMY	**Great Sitkin M**	**1.05**	**319**			**Pn**	**15 26 44.9**	**+0.2**
GSMY						**Sn**	**15 26 59.0**	**+0.5**
ATKA	**Atka Island**	**1.05**	**26**			**Pb**	**15 26 45.1**	**+0.1**
ATKA						**Sn**	**15 26 59.8**	**+1.3**
ATKA				IAML			15 27 01.1	
	comp=E,32μm,0.5s							
ATKA	**Atka Island**	**1.05**	**26**	P		**Pb**	**15 26 45.5**	**+0.5**
ATKA	**Atka Island**	**1.05**	**26**	S		**Sb**	**15 26 56.7**	**-1.6**
GSCK	**Great Sitkin C**	**1.07**	**315**			**Pn**	**15 26 45.1**	**+0.1**
GSCK						**Sb**	**15 26 58.2**	**-0.7**
GSTR	**Great Sitkin T**	**1.09**	**321**			**Pn**	**15 26 45.4**	**+0.2**
GSTR				IAML			15 27 06.8	
	comp=E,36μm,0.5s							
GSTD	**Great Sitkin T**	**1.09**	**317**			**Pn**	**15 26 45.7**	**+0.3**
GSTD						**Sb**	**15 27 01.3**	**+1.6**
ETKA	**Kagalaska Isla**	**1.09**	**304**			**Pn**	**15 26 45.1**	**-0.2**
ETKA						**Sb**	**15 27 00.6**	**+0.9**
GSSP	**Great Sitkin S**	**1.13**	**318**			**Pn**	**15 26 46.2**	**+0.3**
GSSP						**Pb**	**15 26 46.3**	**-0.1**
KOFP	**Korovin Flat P**	**1.14**	**27**			**Pb**	**15 26 47.4**	**+0.8**
KOFP						**Pn**	**15 26 47.6**	**+1.6**
KOFP						**Sb**	**15 27 04.2**	**+3.2**
KOFP						**Sn**	**15 27 04.6**	**+3.7**
KOKL	**Mount Kliuchef**	**1.16**	**23**			**Sb**	**15 27 04.5**	**+3.0**
KOKV	**Korovin Volcan**	**1.20**	**23**			**Pb**	**15 26 48.5**	**+0.9**
KOSE	**Korovin Southe**	**1.22**	**27**			**Pb**	**15 26 48.8**	**+0.8**
KOSE						**Sb**	**15 27 06.2**	**+3.0**
KONE	**Korovin Northe**	**1.24**	**24**			**Pb**	**15 26 49.1**	**+0.8**
ADK	**Adak**	**1.25**	**300**			**Pn**	**15 26 47.2**	**-0.3**
ADK				IAML			15 27 09.7	
	comp=E,19μm,0.2s							
ADK	**Adak**	**1.25**	**300**	P		**Pn**	**15 26 47.5**	**0.0**
ADK	**Adak**	**1.25**	**300**	P		**Pn**	**15 26 47.2**	**-0.3**
KIRH	**Kanaga Island**	**1.49**	**296**			**Pn**	**15 26 51.2**	**+0.5**
KIWB	**Kanaga Island**	**1.50**	**294**			**Pn**	**15 26 51.1**	**+0.2**
KIWB				IAML			15 27 15.7	
	comp=N,16μm,0.4s							
KIWB				IAML			15 27 24.7	
	comp=E,17μm,0.8s							
TASE	**Tanaga Southea**	**2.02**	**288**			**Pn**	**15 26 59.0**	**+1.0**
GAKI	**Gareloi-Kavalg**	**2.44**	**278**			**Pn**	**15 27 04.5**	**+0.7**
GANO	**Gareloi North**	**2.48**	**285**			**Pn**	**15 27 05.4**	**+1.1**
CEPE	**Semis' Perret**	**3.45**	**284**			**Pn**	**15 27 18.5**	**+0.9**
CLES	**Cleveland East**	**3.49**	**61**		Pn	**Pn**	**15 27 17.4**	**-0.7**
CLES					IAML		15 28 19.4	
	comp=E,3μm,1.3s							
AMKA	**Amchitka**	**3.61**	**274**			**Pn**	**15 27 19.8**	**-0.1**
LSNW	**Little Sitkin**	**4.14**	**282**			**Pn**	**15 27 28.2**	**+1.0**
MGOD	**Makushin Gods**	**5.54**	**60**			**Pn**	**15 27 48.9**	**+2.5**
MREP	**Makushin Rep't**	**5.62**	**60**			**Pn**	**15 27 50.0**	**+2.5**
UNV	**Unalaska Valle**	**5.76**	**60**			**Pn**	**15 27 50.8**	**+1.5**
UNV	**Unalaska Valle**	**5.76**	**60**	P		**Pn**	**15 27 50.8**	**+1.5**
	baz=247,SNR=5.7							
AKRB	**Akutan Reef Bi**	**6.11**	**59**			**Pn**	**15 27 57.1**	**+2.9**
LVA	**Lava Point**	**6.14**	**58**	Pn		**Pn**	**15 27 54.6**	**0.0**
ZRO	**Akutan Zero**	**6.14**	**59**			**Pn**	**15 27 57.7**	**+3.0**
P08K	**Saint George I**	**6.22**	**29**			**Pn**	**15 27 56.6**	**+0.9**
P08K	**Saint George I**	**6.22**	**29**	P		**Pn**	**15 27 56.8**	**+1.1**
	baz=213							
AHB	**Akutan Harbor**	**6.24**	**59**			**Pn**	**15 27 59.3**	**+3.3**
AKUT	**Akutan**	**6.27**	**59**	Pn		**Pn**	**15 27 57.9**	**+1.5**
AKUT	**Akutan**	**6.27**	**59**	P		**Pn**	**15 27 59.3**	**+2.9**
SPIA	**Saint Paul Isl**	**6.53**	**23**			**Pn**	**15 28 03.5**	**+3.6**
SPIA	**Saint Paul Isl**	**6.53**	**23**	P		**Pn**	**15 28 01.7**	**+1.8**
	baz=207							
SHEM	**Shemya Is, Ala**	**6.93**	**287**		LR	LR	15 31 05.1	
	comp=E,4μm,18.5s,baz=109,slow=41							
SHEM	**Shemya Is, Ala**	**6.93**	**287**	Pn		**Pn**	**15 28 05.3**	**0.0**
SMY	**Shemya**	**6.93**	**287**	Pn		**Pn**	**15 28 06.3**	**+0.9**
SMY	**Shemya**	**6.93**	**287**	P		**Pn**	**15 28 06.3**	**+0.9**
FALS	**False Pass**	**7.82**	**58**	Pn		**Pn**	**15 28 17.9**	**+0.3**
FALS	**False Pass**	**7.82**	**58**	P		**Pn**	**15 28 20.4**	**+2.8**
FALS	**False Pass**	**7.82**	**58**	P		**Pn**	**15 28 18.8**	**+1.2**
	baz=247							
DT1	**Dutton Round H**	**8.52**	**58**			**Pn**	**15 28 29.2**	**+2.0**
DTNA	**Dutton South F**	**8.55**	**58**			**Pn**	**15 28 29.9**	**+2.3**
PS4A	**Pavlof South-4**	**8.84**	**57**			**Pn**	**15 28 34.5**	**+2.9**
PS1A	**Pavlof South-1**	**8.92**	**57**			**Pn**	**15 28 36.1**	**+3.4**
SDPT	**Sand Point**	**9.57**	**59**			**Pn**	**15 28 42.3**	**+0.7**
SDPT	**Sand Point**	**9.57**	**59**	P		**Pn**	**15 28 43.1**	**+1.5**
SDPT	**Sand Point**	**9.57**	**59**	P		**Pn**	**15 28 42.9**	**+1.2**
	baz=251							
CNBA	**Chernabura Isl**	**9.91**	**63**	Pn		**Pn**	**15 28 45.9**	**-0.2**
CHNA	**Chernabura Isl**	**9.91**	**63**	P		**Pn**	**15 28 46.7**	**+0.5**
CHNA	**Chernabura Isl**	**9.91**	**63**	P		**Pn**	**15 28 47.7**	**+1.5**
	baz=255							
M11K	**Mekoryuk**	**10.37**	**25**			**Pn**	**15 28 55.4**	**+2.9**
M11K	**Mekoryuk**	**10.37**	**25**	P		**Pn**	**15 28 54.3**	**+1.8**
	baz=212,SNR=27							
O14K	**Tigyukauivet M**	**11.16**	**39**			**Pn**	**15 29 07.6**	**+4.3**
O14K	**Tigyukauivet M**	**11.16**	**39**	P		**Pn**	**15 29 05.3**	**+2.0**
	baz=230,SNR=14							
M13K	**Dall Lake**	**11.23**	**31**	Pn		**Pn**	**15 29 05.7**	**+1.5**
M13K	**Dall Lake**	**11.23**	**31**	P		**Pn**	**15 29 05.8**	**+1.5**
	baz=220							
N14K	**Kuskokwak Cree**	**11.45**	**36**			**Pn**	**15 29 11.3**	**+4.1**
N14K	**Kuskokwak Cree**	**11.45**	**36**	P		**Pn**	**15 29 10.4**	**+3.2**
	baz=227,SNR=41							
O15K	**Ungalikthiuk R**	**11.70**	**41**			**Pn**	**15 29 15.1**	**+4.4**
O15K	**Ungalikthiuk R**	**11.70**	**41**	P		**Pn**	**15 29 13.2**	**+2.5**
	baz=234,SNR=9.3							
R16K	**Pilot Point**	**11.90**	**51**	Pn		**Pn**	**15 29 16.1**	**+2.6**
R16K	**Pilot Point**	**11.90**	**51**	P		**Pn**	**15 29 16.8**	**+3.3**
	baz=245							
M14K	**Bethel**	**11.94**	**32**			**Pn**	**15 29 17.6**	**+3.7**
M14K	**Bethel**	**11.94**	**32**	P		**Pn**	**15 29 17.2**	**+3.2**
	baz=223							
K13K	**Kusilvak Mount**	**12.09**	**24**			**Pn**	**15 29 19.3**	**+3.4**
K13K	**Kusilvak Mount**	**12.09**	**24**	P		**Pn**	**15 29 19.3**	**+3.4**
	baz=213,SNR=14							
L14K	**Kuka Creek**	**12.15**	**29**			**Pn**	**15 29 20.6**	**+3.7**
L14K	**Kuka Creek**	**12.15**	**29**	P		**Pn**	**15 29 20.4**	**+3.6**
	baz=219,SNR=9.0							
N15K	**Kwethluk River**	**12.21**	**37**			**Pn**	**15 29 21.7**	**+4.1**
N15K	**Kwethluk River**	**12.21**	**37**	P		**Pn**	**15 29 21.0**	**+3.4**
	baz=230,SNR=17							
M15K	**Kasigluk River**	**12.34**	**35**	P		**Pn**	**15 29 22.9**	**+3.4**
	baz=226,SNR=34							
CHIR	**Chirikof Islan**	**12.35**	**61**	Pn		**Pn**	**15 29 18.3**	**-1.3**
CHIR	**Chirikof Islan**	**12.35**	**61**	P		**Pn**	**15 29 22.0**	**+2.4**
	baz=256							
P16K	**Nushagak River**	**12.40**	**45**			**Pn**	**15 29 23.9**	**+3.6**
P16K	**Nushagak River**	**12.40**	**45**	P		**Pn**	**15 29 23.0**	**+2.8**
	baz=238,SNR=14							
R17L	**Mt. Peulik Vol**	**12.53**	**52**	P		**Pn**	**15 29 24.5**	**+2.4**
	baz=247							
PLK4	**Peulik 4**	**12.53**	**52**			**Pn**	**15 29 22.6**	**+0.4**
O16K	**Kokwok River B**	**12.66**	**42**			**Pn**	**15 29 25.1**	**+1.3**
O16K	**Kokwok River B**	**12.66**	**42**	P		**Pn**	**15 29 26.7**	**+2.8**
	baz=236,SNR=27							
GAMB	**Gambell**	**12.67**	**7**			**Pn**	**15 29 24.8**	**+1.0**
GAMB	**Gambell**	**12.67**	**7**	P		**Pn**	**15 29 26.4**	**+2.6**
	baz=190,SNR=15							
L15K	**Ungalak Mounta**	**12.78**	**30**	P		**Pn**	**15 29 28.0**	**+2.5**
	baz=221,SNR=19							
Q16K	**King Salmon**	**12.83**	**48**	P		**Pn**	**15 29 28.0**	**+1.8**
	baz=243							
N16K	**Nishlik Lake**	**12.91**	**38**	P		**Pn**	**15 29 28.8**	**+1.5**
	baz=232							
Q17K	**Contact Creek**	**13.02**	**50**	P		**Pn**	**15 29 30.0**	**+1.2**
	baz=246							
J14K	**Nanvaranak Lak**	**13.05**	**24**	Pn		**Pn**	**15 29 31.6**	**+2.5**
J14K	**Nanvaranak Lak**	**13.05**	**24**	P		**Pn**	**15 29 30.8**	**+1.7**
	baz=213							
P17K	**Kvichak River**	**13.18**	**46**			**Pn**	**15 29 32.5**	**+1.6**
P17K	**Kvichak River**	**13.18**	**46**	P		**Pn**	**15 29 32.1**	**+1.2**
	baz=241,SNR=6.7							
O17K	**Koliganek Bris**	**13.19**	**43**	P		**Pn**	**15 29 32.4**	**+1.5**
	baz=238							
M16K	**Timber Creek**	**13.19**	**36**			**Pn**	**15 29 32.8**	**+1.9**
M16K	**Timber Creek**	**13.19**	**36**	P		**Pn**	**15 29 32.9**	**+1.9**
	baz=229							
K15K	**Wolf Creek Mou**	**13.24**	**28**	P		**Pn**	**15 29 33.6**	**+1.9**
	baz=220							
SII	**Sitkinak Islan**	**13.31**	**58**	Pn		**Pn**	**15 29 31.7**	**-1.0**
SII	**Sitkinak Islan**	**13.31**	**58**	P		**Pn**	**15 29 34.4**	**+1.7**
	baz=255							
L16K	**Owhat River**	**13.47**	**33**			**Pn**	**15 29 36.6**	**+1.8**
L16K	**Owhat River**	**13.47**	**33**	P		**Pn**	**15 29 36.3**	**+1.5**
	baz=226,SNR=18							
N17K	**Nushagak Hills**	**13.57**	**40**			**Pn**	**15 29 38.4**	**+2.2**
N17K	**Nushagak Hills**	**13.57**	**40**	P		**Pn**	**15 29 36.7**	**+0.5**
	baz=235,SNR=13							
P18K	**Big Mountain,**	**13.82**	**46**			**Pn**	**15 29 41.1**	**+1.5**
P18K	**Big Mountain,**	**13.82**	**46**	P		**Pn**	**15 29 40.6**	**+0.9**
	baz=243,SNR=8.2							
OHAK	**Old Harbor**	**13.96**	**56**	P		**Pn**	**15 29 41.9**	**+0.3**
OHAK	**Old Harbor**	**13.96**	**56**	P		**Pn**	**15 29 42.6**	**+1.0**
	baz=254							
M17K	**Holitna River**	**14.00**	**37**			**Pn**	**15 29 42.9**	**+0.9**
M17K	**Holitna River**	**14.00**	**37**	P		**Pn**	**15 29 43.1**	**+1.1**
	baz=231,SNR=7.4							
O18K	**Koktuh Hills**	**14.05**	**45**			**Pn**	**15 29 44.1**	**+1.3**
O18K	**Koktuh Hills**	**14.05**	**45**	P		**Pn**	**15 29 44.0**	**+1.3**
	baz=241,SNR=8.5							
L17K	**Donlin**	**14.17**	**33**	P		**Pn**	**15 29 45.3**	**+0.9**
	baz=227,SNR=23							
N18K	**Kilae Creek**	**14.18**	**41**			**Pn**	**15 29 46.9**	**+2.2**
N18K	**Kilae Creek**	**14.18**	**41**	P		**Pn**	**15 29 45.8**	**+1.1**
	baz=237							
ANM	**Nome**	**14.25**	**17**			**Pn**	**15 29 47.9**	**+2.4**
ANM	**Nome**	**14.25**	**17**	P		**Pn**	**15 29 47.9**	**+2.4**
ANM	**Nome**	**14.25**	**17**	P		**Pn**	**15 29 46.3**	**+0.9**
	baz=205,SNR=38							
J16K	**Anvik River**	**14.28**	**27**			**Pn**	**15 29 48.5**	**+2.6**
J16K	**Anvik River**	**14.28**	**27**	P		**Pn**	**15 29 46.8**	**+0.9**
	baz=219,SNR=18							
Q19K	**Cape Douglas,**	**14.36**	**49**	P		**Pn**	**15 29 48.1**	**+1.1**
	baz=247							
KDAK	**Kodiak Island**	**14.49**	**55**	Pn		**Pn**	**15 29 46.4**	**-2.3**
	comp=E,7.1nm,0.3s,baz=205,slow=3.8,SNR=53							
KDAK					Sn	**Sn**	**15 32 20.5**	**-7.9**
	baz=346,slow=18							
KDAK	**Kodiak Island**	**14.49**	**55**	*i* P		**Pn**	**15 29 47.2**	**-1.5**
KDAK	**Kodiak Island**	**14.49**	**55**	P		**Pn**	**15 29 50.8**	**+2.0**
	baz=253							
K17K	**Iditarod**	**14.57**	**32**	P		**Pn**	**15 29 51.0**	**+1.1**
	baz=226							
O19K	**Port Alsworth**	**14.60**	**44**			**Pn**	**15 29 52.4**	**+2.1**
O19K	**Port Alsworth**	**14.60**	**44**	P		**Pn**	**15 29 51.7**	**+1.4**
	baz=241,SNR=8.4							
M18K	**Stony River**	**14.67**	**38**	P		**Pn**	**15 29 51.2**	**0.0**
	baz=234							
I17K	**Unalakleet**	**14.73**	**25**			**Pn**	**15 29 53.1**	**+1.1**
I17K	**Unalakleet**	**14.73**	**25**	P		**Pn**	**15 29 51.8**	**-0.2**
	baz=218							
TNA	**Tin City**	**14.79**	**11**			**Pn**	**15 29 54.1**	**+1.3**
TNA	**Tin City**	**14.79**	**11**	P		**Pn**	**15 29 53.6**	**+0.8**
	baz=198,SNR=18							
J17K	**VABM Dome**	**14.81**	**29**	P		**Pn**	**15 29 54.3**	**+1.2**
	baz=222							
N19K	**Bonanza Creek**	**14.84**	**42**	P		**Pn**	**15 29 55.1**	**+1.5**
	baz=239,SNR=7.2							
P19K	**Oil Pt**	**14.85**	**47**	P		**Pn**	**15 29 54.7**	**+1.1**
	baz=245							
Q20K	**Shuyak Island**	**14.85**	**52**	P		**Pn**	**15 29 54.3**	**+0.7**
	baz=250							
G15K	**Niukluk**	**14.89**	**18**	P		**Pn**	**15 29 55.3**	**+1.1**
	baz=208							
F14K	**Arctic Creek**	**14.93**	**14**	P		**Pn**	**15 29 55.8**	**+1.1**
	baz=202							
H16K	**Elim**	**14.96**	**22**	P		**Pn**	**15 29 56.3**	**+1.2**
	baz=212,SNR=27							
F15K	**North Star Dit**	**15.42**	**16**	P		**Pn**	**15 30 02.0**	**+0.8**
	baz=205							
L19K	**White Mountain**	**15.45**	**37**			**Pn**	**15 30 02.4**	**+0.8**
L19K					IAmb	IAmb	15 30 08.8	
	comp=Z,63nm,1.2s							
L19K	**White Mountain**	**15.45**	**37**	P		**Pn**	**15 30 02.7**	**+1.1**
	baz=234,SNR=15							
G16K	**Koyuk River**	**15.59**	**20**	P		**Pn**	**15 30 04.1**	**+0.9**
	baz=211							
HOM	**Homer**	**15.59**	**48**	P		**Pn**	**15 30 03.9**	**+0.6**
	baz=248							
J18K	**Innoko River**	**15.61**	**31**	P		**Pn**	**15 30 04.3**	**+0.6**
	baz=227,SNR=18							
CNPM	**China Poot**	**15.73**	**49**	IAmb		IAmb	15 30 09.6	
	comp=Z,221nm,1.7s							
H17K	**Granite Mounta**	**15.78**	**24**	P		**Pn**	**15 30 05.7**	**0.0**
	baz=217							
M20K	**Styx River**	**15.96**	**40**	P		**Pn**	**15 30 08.3**	**+0.1**
	baz=238							
BRSE	**Bradley Lake S**	**16.04**	**49**	P		**Pn**	**15 30 10.7**	**+1.5**
	baz=249							
G17K	**Kiwalik Mounta**	**16.06**	**22**	P		**Pn**	**15 30 09.8**	**+0.4**
	baz=214,SNR=18							
CAPN	**Captain Cook N**	**16.26**	**45**	P		**Pn**	**15 30 13.3**	**+1.3**
	baz=245							
PET	**Petropavlovsk**	**16.28**	**287**	*e*P		**P**	**15 30 17.8**	**+2.7**
PET				*e*S		**Sn**	**15 33 16.6**	**+4.8**
PET					pmax	pmax		
	comp=Z,37nm,1.2s							
PET					MLR	MLR		
	comp=Z,700nm,15.0s							
PET					MLR	MLR		
	comp=Z,800nm,15.0s							
J19K	**Poorman**	**16.33**	**31**	P		**Pn**	**15 30 13.5**	**+0.6**
	baz=228							
H18K	**Honhosa River**	**16.35**	**25**	P		**P**	**15 30 15.1**	**-0.8**
	baz=220							
K20K	**Telida**	**16.45**	**35**	P		**Pn**	**15 30 15.2**	**+0.8**
	baz=232,SNR=20							
GCSA	**Galena City Sc**	**16.46**	**28**	P		**Pn**	**15 30 15.4**	**+0.9**
	baz=224,SNR=20							
SLKM	**Skilak Lake**	**16.57**	**47**	IAmb		IAmb	15 30 20.3	
	comp=Z,178nm,1.6s							
SKT	**Skwentna**	**16.66**	**41**	P		**Pn**	**15 30 18.1**	**+1.0**
	baz=241,SNR=11						

baz=221
WAT6 Susitna Watana 18.51 42 P P 15 30 39.1 -0.8
baz=245
MCK McKinley 18.56 38 P P 15 30 39.2 -1.1
baz=240,SNR=17
C18K Utukok River 18.66 16 IAmb IAmb 15 30 50.8
comp=Z,115nm,1.4s
C18K Utukok River 18.66 16 P P 15 30 41.4 0.0
baz=208,SNR=30
EYAK Cordova Ski Ar 18.67 49 P P 15 30 40.7 -0.7
EYAK Cordova Ski Ar 18.67 49 P P 15 30 39.9 -1.5
baz=253
G21K Allakaket 18.71 27 IAmb IAmb 15 30 50.6
comp=Z,221nm,1.6s
G21K Allakaket 18.71 27 P P 15 30 41.5 -0.4
baz=226,SNR=33
DIV Divide 18.83 47 P P 15 30 42.5 -0.8
DHY Denali Highway 18.87 41 P P 15 30 43.7 -0.1
baz=244,SNR=9.4
KLU Klutina 18.88 46 IAmb IAmb 15 30 52.2
comp=Z,92nm,1.7s
KLU Klutina 18.88 46 P P 15 30 44.3 +0.4
baz=250
H22K Ishtalitna Cre 18.94 30 IAmb IAmb 15 30 54.5
comp=Z,74nm,1.4s
H22K Ishtalitna Cre 18.94 30 P Pn 15 30 44.9 -0.2
baz=231,SNR=18
NEA2 Nenana 18.96 35 P P 15 30 45.0 +0.3
baz=238,SNR=11
M24K Tolsona, Glenn 18.99 44 P P 15 30 45.2 +0.2
baz=248,SNR=5.7
KAIM Kayak Island 19.15 51 P Pn 15 30 47.8 +0.2
baz=257
I23K Minto, Yukon-K 19.16 34 IAmb IAmb 15 30 52.5
comp=Z,60nm,1.0s
I23K Minto, Yukon-K 19.16 34 P P 15 30 46.9 +0.1
baz=236,SNR=31
BILL Bilibino 19.17 338 P P 15 30 46.5 -0.4
BILL IAmb IAmb 15 30 49.4
comp=Z,92nm,1.2s
BILL Bilibino 19.17 338 *ce*P Pn 15 30 48.4 +0.6
BILL pmax pmax
comp=Z,92nm,1.3s
F21K Alatna River 19.22 26 IAmb IAmb 15 31 01.3
comp=Z,63nm,1.0s
F21K Alatna River 19.22 26 P P 15 30 48.0 +0.5
baz=224,SNR=52
BMRM Bremner River 19.33 48 P P 15 30 47.6 -1.2
baz=254
E20K Nigu River 19.33 21 P Pn 15 30 49.8 -0.1
baz=218
C19K Lookout Ridge 19.35 17 P P 15 30 49.3 +0.4
baz=210
H23K Yukon River 19.50 32 IAmb IAmb 15 31 00.3
comp=Z,56nm,1.1s
H23K Yukon River 19.50 32 P P 15 30 50.1 -0.4
baz=234
N25K Chitina, Valde 19.52 46 P P 15 30 51.0 +0.2
baz=252
HARP HAARP 19.54 44 P P 15 30 51.4 +0.5
baz=249
COLA College 19.55 36 P P 15 30 49.9 -1.2
COLA College 19.55 36 P P 15 30 51.6 +0.5
COLA College 19.55 36 P P 15 30 49.9 -1.2
COLA pmax pmax
comp=Z,37nm,1.1s
COLA College 19.55 36 P P 15 30 51.8 +0.7
baz=239
D20K Etivluk River 19.61 20 IAmb IAmb 15 31 02.6
comp=Z,275nm,1.8s
D20K Etivluk River 19.61 20 P P 15 30 50.5 -1.1
baz=216
PAX Paxson 19.62 42 P P 15 30 51.4 -0.5
baz=247,SNR=10
HDA Harding Lake 19.66 37 IAmb IAmb 15 31 00.7
comp=Z,59nm,0.7s
HDA Harding Lake 19.66 37 P P 15 30 52.9 +0.6
baz=241,SNR=39
BGLC Bering Glacier 19.75 51 P P 15 30 53.4 +0.3
baz=257
K24K Donnelly Dome 19.84 40 IAmb IAmb 15 31 09.3
comp=Z,60nm,0.8s
K24K Donnelly Dome 19.84 40 P Pn 15 30 55.2 -0.7
baz=244,SNR=12
ILAR Eielson Array 19.86 36 P P 15 30 53.1 -1.3
comp=Z,1.7nm,0.3s,baz=234,slow=8.9,SNR=100
ILAR ScP ScP 15 38 45.4 +0.3
comp=Z,1.6nm,1.1s,baz=287,slow=3.6,SNR=6.0
comp=Z,8.5nm,0.5s
ILAR Eielson Array 19.86 36 P P 15 30 52.5 -2.0
G23K Bananza Creek 19.88 30 P P 15 30 53.0 -1.7
G23K IAmb IAmb 15 30 58.3
comp=Z,52nm,0.9s
G23K Bananza Creek 19.88 30 P P 15 30 55.6 +0.9
baz=231,SNR=55
CRQE Cirque 19.98 49 P P 15 30 55.8 -0.1
baz=256
H24K Noodor Dome 20.07 33 IAmb IAmb 15 31 05.8
comp=Z,91nm,1.1s
H24K Noodor Dome 20.07 33 P P 15 30 56.9 +0.2
baz=236,SNR=36
COLD Coldfoot 20.16 28 IAmb IAmb 15 31 08.0
comp=Z,87nm,1.2s
COLD Coldfoot 20.16 28 P P 15 30 57.5 -0.2
baz=230,SNR=38
MCARA McCarthy VSAT 20.18 48 P P 15 30 58.1 +0.2
baz=254
RIDG Independent Ri 20.19 40 IAmb IAmb 15 31 14.9
comp=Z,47nm,0.9s
RIDG Independent Ri 20.19 40 P P 15 30 58.3 +0.2
baz=246,SNR=14
E22K Anaktuvuk Pass 20.32 25 P P 15 30 59.7 +0.2
baz=225,SNR=27
J25K Salcha River, 20.36 38 IAmb IAmb 15 31 08.0
comp=Z,74nm,0.6s
J25K Salcha River, 20.36 38 P P 15 31 00.1 +0.2
baz=243
MESA MESA 20.41 51 P P 15 31 00.9 +0.2
baz=259
DOT Dot Lake 20.47 41 P P 15 31 00.5 -0.7
DOT IAmb IAmb 15 31 13.2
comp=Z,64nm,1.0s
M26K Nabesna, AK 20.49 45 P P 15 31 01.9 +0.6
baz=252
L26K Log Cabin Wild 20.54 43 P P 15 31 01.8 0.0
baz=250,SNR=10.0
GRNC Granite Creek 20.62 50 IAmb IAmb 15 31 19.3
comp=Z,68nm,1.5s
SCRK Sand Creek 20.63 40 P P 15 31 01.9 -1.0
SCRK Sand Creek 20.63 40 P P 15 31 02.5 -0.4
baz=246,SNR=102
G24K Hadweenzic Riv 20.69 31 P P 15 31 04.0 +0.6
G24K IAmb IAmb 15 31 11.6
comp=Z,63nm,1.1s
G24K Hadweenzic Riv 20.69 31 P P 15 31 03.6 +0.2
baz=235,SNR=25
PRP Porcupine Dome 20.73 35 P P 15 31 04.2 +0.2
baz=241,SNR=22
CTG Chitna Glacier 20.87 49 P P 15 31 05.3 -0.2
baz=258
E23K Chandalar 20.87 27 IAmb IAmb 15 31 16.9
comp=Z,62nm,1.1s
E23K Chandalar 20.87 27 P P 15 31 05.4 -0.1
baz=229,SNR=18
MA2 Magadan 20.96 307 P P 15 31 06.7 +0.4
comp=Z,2.8nm,0.3s,baz=100,slow=14,SNR=8.6
MA2 LR LR 15 38 57.9
comp=Z,926nm,19.3s,baz=106,slow=36
comp=Z,2.8nm,0.3s
MA2 Magadan 20.96 307 P P 15 31 05.6 -0.7
MA2 IAmb IAmb 15 31 16.5
comp=Z,46nm,1.3s
MA2 Magadan 20.96 307 P P 15 31 05.6 -0.7
MA2 pmax pmax
comp=Z,46nm,1.3s
MA2 Magadan 20.96 307 P P 15 31 05.2 -1.1
comp=Z,912nmcomp=Z,43nm,1.8s
M27K Edge Creek, AK 20.97 45 P P 15 31 08.0 +1.4
baz=253,SNR=10
SEY Seymchan 20.98 316 P P 15 31 06.8 +0.2
comp=Z,9.9nm,1.1s,baz=101,slow=11,SNR=9.8
SEY LR LR 15 39 40.5
comp=Z,2µm,18.2s,baz=109,slow=38
comp=Z,9.9nm,1.1s
SEY Seymchan 20.98 316 *ce*P P 15 31 07.6 +1.1
SEY pmax pmax
comp=Z,39nm,2.5s
J26L Joseph Creek 21.01 39 IAmb IAmb 15 31 10.7
comp=Z,103nm,1.0s
J26L Joseph Creek 21.01 39 P P 15 31 06.9 -0.1
baz=246
D23K Nanushuk River 21.20 24 IAmb IAmb 15 31 14.0
comp=Z,52nm,0.9s
D23K Nanushuk River 21.20 24 P P 15 31 10.1 +1.1
baz=226
L27K Beaver Creek, 21.21 43 P P 15 31 11.2 +2.2
baz=252
BCAR Beaver Creek A 21.23 43 P P 15 31 09.7 +0.4
PINM Pinnacle 21.23 52 P P 15 31 10.4 +1.0
baz=261
FYU Fort Yukon 21.36 33 P P 15 31 10.7 0.0
FYU IAmb IAmb 15 31 18.3
comp=Z,82nm,1.2s
O28M Mount Upton 21.38 50 IAmb IAmb 15 31 19.7
comp=Z,45nm,1.3s
O28M Mount Upton 21.38 50 P P 15 31 12.8 +1.6
baz=259,SNR=6.7
BVCY Beaver Creek 21.44 46 P P 15 31 13.1 +1.5
baz=254,SNR=8.1
YUK3 Moose Creek 21.46 47 P P 15 31 11.3 -0.7
baz=256
YUK8 Steele Glacier 21.68 49 P P 15 31 13.8 -0.6
baz=258
A21K Barrow 21.78 16 P P 15 31 15.4 +0.5
baz=2,SNR=7.6
F25K Christian Rive 21.79 30 IAmb IAmb 15 31 23.8
comp=Z,42nm,1.2s
F25K Christian Rive 21.79 30 P P 15 31 14.5 -0.8
baz=236
D24K Happy Valley 21.82 25 IAmb IAmb 15 31 19.5
comp=Z,47nm,0.9s
D24K Happy Valley 21.82 25 P P 15 31 16.4 +0.8
baz=228,SNR=44
BMAR Burnt Mountain 22.04 31 P P 15 31 18.5 +0.6
G26K Porcupine Rive 22.05 33 P P 15 31 19.1 +1.0
baz=240,SNR=12
O29M Mount Kennedy 22.09 52 P P 15 31 18.9 +0.2
baz=262
E25K Arctic Village 22.11 29 IAmb IAmb 15 31 26.7
comp=Z,50nm,1.1s
E25K Arctic Village 22.11 29 P P 15 31 18.4 -0.3
baz=235
I27K Kandik River 22.22 37 IAmb IAmb 15 31 30.5
comp=Z,37nm,1.0s
I27K Kandik River 22.22 37 P P 15 31 19.1 -0.8
baz=246
YUK4 Talbot Arm 22.22 49 P P 15 31 20.3 +0.1
baz=259
YUK6 Outpost Mounta 22.29 50 P P 15 31 20.5 -0.4
baz=261
F26K Sheenjek River 22.32 31 IAmb IAmb 15 31 40.2
comp=Z,37nm,1.1s
F26K Sheenjek River 22.32 31 P P 15 31 20.4 -0.6
baz=238
H27K Steamboat Moun 22.52 36 P P 15 31 22.0 -1.1
baz=245
M29M Somme Creek 22.53 46 P P 15 31 23.1 -0.3
baz=257,SNR=8.7
D25K Kavik River 22.60 26 IAmb IAmb 15 31 26.0
comp=Z,59nm,1.0s
D25K Kavik River 22.60 26 P P 15 31 24.2 +0.3
baz=232
HYT Haines Junctio 22.69 51 P P 15 31 24.3 -0.8
baz=262
I28M Miner Creek 22.80 38 IAmb IAmb 15 31 34.1
comp=Z,43nm,1.2s
I28M Miner Creek 22.80 38 P P 15 31 25.3 -0.9
baz=248
L29M L29M 22.84 45 P P 15 31 26.8 +0.2
baz=256
P30M Million Dollar 22.87 52 P P 15 31 26.7 -0.2
baz=264
S31K Pelican 23.14 58 IAmb IAmb 15 31 39.6
comp=Z,46nm,0.9s
S31K Pelican 23.14 58 P P 15 31 28.3 -1.2
baz=270
J29N Klondike Camp 23.16 41 P P 15 31 29.7 -0.1
baz=253
K29M Barlow Dome 23.29 43 IAmb IAmb 15 31 40.2
comp=Z,40nm,1.0s
K29M Barlow Dome 23.29 43 P P 15 31 31.8 +0.6
baz=255,SNR=24
M30M Minto, Yukon 23.32 46 P P 15 31 30.0 -1.4
baz=259
O30N Mendenhall 23.37 51 P P 15 31 30.1 -1.8
baz=264
I29M Ogilvie Camp, 23.41 39 IAmb IAmb 15 31 40.2
comp=Z,73nm,1.1s
I29M Ogilvie Camp, 23.41 39 P P 15 31 32.2 -0.1
baz=251,SNR=29
C27K Jago River 23.53 27 P P 15 31 32.2 -1.2
baz=235
N31M Braeburn, Yuko 23.61 49 P P 15 31 33.3 -0.9
baz=262
SKAG Skagway 23.64 54 P P 15 31 33.6 -0.9
baz=267
SIT Sitka 23.65 60 P P 15 31 33.2 -1.3
baz=273
F28M Old Crow 23.71 33 P P 15 31 34.5 -0.7
baz=244,SNR=9.3
MAYO Mayo, Yukon 23.93 44 P P 15 31 36.3 -1.0
baz=257
WHY Whitehorse 23.95 51 P P 15 31 34.6 -2.9
baz=265
J30M Hart River 23.98 42 P P 15 31 36.0 -1.8
baz=255,SNR=12
S32K Killisnoo 24.04 59 P P 15 31 35.9 -2.3
baz=272
R32K Eaglecrest 24.04 57 P P 15 31 36.4 -1.9
baz=271
G29M Pine Creek 24.07 36 IAmb IAmb 15 31 39.4
comp=Z,36nm,1.1s
G29M Pine Creek 24.07 36 P P 15 31 36.9 -1.7
baz=248
D27M Malcolm River 24.13 29 P P 15 31 38.3 -0.8
baz=239
I30M Mount Dempster 24.14 40 IAmb IAmb 15 31 56.4
comp=Z,34nm,0.8s
I30M Mount Dempster 24.14 40 P P 15 31 38.4 -0.9
baz=253
E28M Babbage River 24.27 31 IAmb IAmb 15 31 48.0
comp=Z,79nm,1.5s
E28M Babbage River 24.27 31 P P 15 31 39.6 -0.8
baz=242
M31M Drury Creek, Y 24.36 48 P P 15 31 39.9 -1.3
baz=262
EPYK Eagle Plains 24.37 37 IAmb IAmb 15 31 49.6
comp=Z,33nm,1.0s
EPYK Eagle Plains 24.37 37 P P 15 31 40.2 -1.1
baz=250
P32M Atlin 24.47 54 P P 15 31 40.9 -1.4
baz=268
E29M Blow River 24.72 32 IAmb IAmb 15 31 53.4
comp=Z,34nm,0.8s
E29M Blow River 24.72 32 P P 15 31 43.8 -0.6
baz=245
G30M tAoh Zraii Nji 24.76 36 IAmb IAmb 15 32 02.7
comp=Z,36nm,1.2s
G30M tAoh Zraii Nji 24.76 36 P P 15 31 43.8 -1.1
baz=250
N32M Quiet Lake 24.87 50 P P 15 31 45.9 0.0
baz=266
U33K Whale Pass 24.94 62 P P 15 31 47.5 +1.0
U33K Whale Pass 24.94 62 P P 15 31 46.5 +0.1
baz=276
P33M Teslin, Yukon 24.94 53 IAmb IAmb 15 31 50.3
comp=Z,23nm,1.1s
P33M Teslin, Yukon 24.94 53 P P 15 31 46.3 -0.3
baz=268,SNR=12
T33K Petersburg 24.96 61 P P 15 31 45.8 -0.8
baz=275
CRAG Craig 25.02 64 P P 15 31 51.1 +3.9
CRAG Craig 25.02 64 P P 15 31 47.3 +0.1
baz=278
H31M Peel River 25.12 39 IAmb IAmb 15 31 59.5
comp=Z,56nm,1.0s
H31M Peel River 25.12 39 P P 15 31 48.1 +0.1
baz=254
F30M Barrier River 25.14 35 IAmb IAmb 15 31 57.6
comp=Z,34nm,0.9s
F30M Barrier River 25.14 35 P P 15 31 48.3 +0.1
baz=249
Q32M Nakina River 25.21 56 IAmb IAmb 15 31 53.5
comp=Z,30nm,1.1s
Q32M Nakina River 25.21 56 P P 15 31 49.2 0.0
baz=271,SNR=8.1
WRAK Wrangell Islan 25.34 62 P P 15 31 50.1 +0.1
baz=276,SNR=11
G31M Satah River 25.47 37 IAmb IAmb 15 31 59.7
comp=Z,39nm,1.4s
G31M Satah River 25.47 37 P P 15 31 51.7 +0.6
baz=252
F31M Tsiigehtchic 25.82 36 IAmb IAmb 15 32 24.1
comp=Z,102nm,1.9s
F31M Tsiigehtchic 25.82 36 P P 15 31 55.1 +0.7
baz=252,SNR=6.3
S34M Telegraph Cree 25.86 58 IAmb IAmb 15 32 00.5
comp=Z,38nm,1.1s
S34M Telegraph Cree 25.86 58 P P 15 31 55.3 +0.5
baz=274,SNR=13
R33M Jennings River 25.87 55 P P 15 31 55.0 -0.1
baz=271,SNR=6.7
V35K Ketchikan 25.89 64 P P 15 31 54.5 -0.6
baz=279
INK Inuvik 26.18 34 P P 15 31 56.9 -0.8
baz=250,SNR=7.7
TYV Tymovskoe 26.39 286 *e*P P 15 32 03.9 +4.3
TYV *e*S S 15 36 38.5 +7.2
TYV pmax pmax
comp=Z,200nm,3.4s
TYV pmax pmax
comp=Z,13nm,0.9s
TYV smax smax
comp=N,300nm,4.9s
TYV smax smax
comp=E,200nm,4.9s
TYV MLR MLR
comp=Z,2µm,21.0s
DLBC Dease Lake 26.40 57 P P 15 31 59.9 +0.1
baz=274,SNR=11
T35M Bob Quinn 26.42 60 IAmb IAmb 15 32 04.7
comp=Z,58nm,1.1s
T35M Bob Quinn 26.42 60 P P 15 31 59.4 -0.5
baz=277,SNR=9.4
WTLY Watson Lake, Y 26.95 53 P P 15 32 04.2 -0.5
baz=272
YSS Yuzhno-Sakhali 27.74 278 *e*P P 15 32 14.7 +2.9
YSS *e*S S 15 36 52.0 -0.6
YSS pmax pmax
comp=Z,20nm,1.1s
YSS pmax pmax
comp=Z,100nm,5.9s
YSS smax smax
comp=N,300nm,4.7s
YSS smax smax
comp=E,300nm,4.8s
YSS MLR MLR
comp=N,400nm,19.0s
YSS MLR MLR
comp=E,500nm,19.0s
YSS MLR MLR
comp=Z,700nm,19.0s
BBB Bella Bella 28.63 70 LR LR 15 41 57.3
comp=Z,609nm,18.5s,baz=292,slow=33
TOAD Toad River Com 28.86 55 P P 15 32 21.2 -0.6
baz=277
JKA Kamikawa-asahi 29.13 273 P P 15 32 24.0 -0.2
JKA IAmb IAmb 15 32 29.1
comp=Z,61nm,1.6s
ASAJ Asahikawa 29.13 273 P P 15 32 25.6 +1.3
comp=Z,13nm,0.9s,baz=66,slow=10,SNR=14
comp=Z,13nm,0.9s
ASAJ Asahikawa 29.13 273 P P 15 32 24.0 -0.2
ASAJ pmax pmax
comp=Z,61nm,1.6s
KOTAN Kotaneelee Air 29.32 52 P P 15 32 25.3 -0.5
baz=275
WRGLY Wrigley 29.45 46 P P 15 32 27.0 +0.2
baz=270
C36M Paulatuk 29.77 34 P P 15 32 29.2 -0.5
baz=259
A36M Sachs Harbour 30.03 28 IAmb IAmb 15 32 43.8
comp=Z,15nm,0.8s
A36M Sachs Harbour 30.03 28 P P 15 32 30.5 -1.4
baz=253,SNR=8.6
YAK Yakutsk 31.31 312 P P 15 32 41.8 -1.5
comp=Z,8.3nm,0.5s,baz=180,slow=1.7,SNR=4.3
YAK PcP PcP 15 35 37.3 +0.6
comp=Z,5.9nm,0.5s,baz=47,slow=3.4,SNR=2.9
YAK LR LR 15 45 36.1
comp=Z,1µm,19.2s,baz=84,slow=37
comp=Z,8.3nm,0.5s
YAK Yakutsk 31.31 312 P P 15 32 41.1 -2.2
YAK IAmb IAmb 15 32 43.6
comp=Z,14nm,0.8s
YAK Yakutsk 31.31 312 *e*P P 15 32 41.4 -1.9
YAK *e**PP pP 15 32 49.9 +0.6
YAK *e*PPP PPP 15 33 55.5
YAK *e* 15 35 36.3
YAK *e*S S 15 37 45.1 -3.3
YAK *e* 15 43 12.5
YAK pmax pmax
comp=Z,21nm,1.4s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,13nm,1.4s
YAK pmax pmax
comp=Z,131nm,5.3s
YAK pmax pmax
comp=N,45nm,4.8s
YAK pmax pmax
comp=E,48nm,4.6s
YAK smax smax
comp=E,155nm,5.8s
YAK smax smax
comp=N,143nm,4.2s
YAK MLR MLR
comp=Z,1µm,25.0s
YAK MLR MLR
comp=E,950nm,25.0s
YAK MLR MLR
comp=N,992nm,30.0s
TIXI Tiksi 31.94 330 P P 15 32 47.7 -1.0
comp=N,5.9nm,0.3s,baz=105,slow=9.9,SNR=5.5
TIXI PcP PcP 15 35 38.5 +0.3
comp=N,9.7nm,0.8s,baz=353,slow=1.7,SNR=15
TIXI ScP ScP 15 39 21.2 +1.4
comp=N,0.7nm,0.2s,baz=77,slow=1.7,SNR=3.8
TIXI LR LR 15 47 33.6
comp=N,385nm,18.1s,baz=166,slow=40
comp=N,5.9nm,0.3s
TIXI Tiksi 31.94 330 PcP PcP 15 35 38.9 +0.6
TIXI Tiksi 31.94 330 *i* P P 15 32 47.3 -1.4
TIXI pmax pmax
comp=Z,6.0nm,1.4s
KLR Kul'dur 33.53 288 LR LR 15 46 09.4
comp=Z,226nm,21.8s,baz=68,slow=35
KLR Kul'dur 33.53 288 *ce*P P 15 33 03.0 +0.1
KLR pmax pmax
comp=Z,32nm,1.6s
YKA Yellowknife Ar 33.55 47 P P 15 33 02.5 -0.4
comp=Z,0.8nm,0.4s,baz=282,slow=11,SNR=22
YKA PcP PcP 15 35 43.7 +0.8
comp=Z,1.4nm,0.8s,baz=290,slow=3.4,SNR=6.6
YKA ScP ScP 15 39 25.4 -0.1
comp=Z,0.7nm,0.9s,baz=286,slow=3.3,SNR=4.7
YKA LR LR 15 48 20.4
comp=Z,1µm,18.9s,baz=284,slow=39
comp=Z,0.8nm,0.4s
YKA Yellowknife Ar 33.55 47 P P 15 33 02.0 -0.9
YKA Yellowknife Ar 33.55 47 *i* P P 15 33 02.2 -0.7
YKA pmax pmax
comp=Z,1.0nm,0.3s
ZEA Zeya 34.45 297 *e*P P 15 33 12.9 +2.1
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=Z,500nm,15.0s
H11N2 WAKE ISLAND Hy 34.57 211 T T 16 10 02.4
baz=18,slow=76,SNR=344
H11N3 WAKE ISLAND Hy 34.57 211 T T 16 10 15.3
baz=18,slow=76,SNR=298
H11N1 WAKE ISLAND Hy 34.58 211 T T 16 10 03.7
baz=18,slow=76,SNR=224
H04A Detroit Lake 35.27 80 IAmb IAmb 15 33 52.6
comp=Z,25nm,1.0s
B08A Colville Reser 35.28 72 IAmb IAmb 15 33 35.6
comp=Z,21nm,0.8s
EPH Ephrata 35.57 74 IAmb IAmb 15 33 53.2
comp=Z,23nm,1.2s
I04A Tendick Farm, 35.58 81 IAmb IAmb 15 33 55.4
comp=Z,48nm,1.4s
HEH HeiHe 35.67 292 *e*P P 15 33 19.8 -1.6

HEH pmax pmax
comp=Z,24nm,1.1s
HEH LR LR
comp=Z,460nm,19.9s
HEH LR LR
comp=Z,710nm,19.4s
HEH LR LR
comp=Z,850nm,17.8s
USRK Ussuriysk Ar. 35.71 280 P **P** **15 33 21.8 0.0**
comp=Z,4.7nm,0.6s,baz=54,slow=11,SNR=8.9
comp=Z,4.7nm,0.6s
H11S1 WAKE ISLAND Hy 35.77 211 T T 16 12 11.3
baz=19,slow=76,SNR=516
H11S2 WAKE ISLAND Hy 35.79 211 T T 16 12 26.1
baz=19,slow=76,SNR=167
H11S3 WAKE ISLAND Hy 35.79 211 T T 16 12 31.8
baz=19,slow=76,SNR=146
WIFE Three Sisters- 35.81 80 P **P** **15 33 24.4 +1.5**
WIFE IAmb IAmb 15 33 57.7
comp=Z,17nm,1.0s
WAH2 Wahluke Slope 35.87 75 IAmb IAmb 15 33 49.3
comp=Z,17nm,0.9s
I05D Terrebonne, OR 35.96 80 IAmb IAmb 15 33 58.7
comp=Z,27nm,1.2s
HAWA Hanford 36.06 75 IAmb IAmb 15 33 49.4
comp=Z,14nm,0.8s
D08A Wollman Farm, 36.12 74 IAmb IAmb 15 33 57.9
comp=Z,20nm,1.1s
MJAR Matsushiro Arr 36.17 265 P **P** **15 33 26.8 +1.0**
comp=Z,4.1nm,0.7s,baz=44,slow=7.5,SNR=11
MJAR LR LR 15 46 50.2
comp=Z,540nm,20.0s,baz=66,slow=34
comp=Z,4.1nm,0.7s
MJAR Matsushiro Arr 36.17 265 P **P** **15 33 25.2 -0.6**
MJAR IAmb IAmb 15 33 28.3
comp=Z,18nm,1.4s
MJAR Matsushiro Arr 36.17 265 P **P** **15 33 25.3 -0.6**
MJAR pmax pmax
comp=Z,18nm,1.4s
MAJO Matsushiro 36.17 265 P **P** **15 33 25.0 -0.9**
MAJO IAmb IAmb 15 33 28.3
comp=Z,17nm,0.8s
MAJO Matsushiro 36.17 265 P **P** **15 33 25.0 -0.9**
MAJO pmax pmax
comp=Z,17nm,0.9s
MJB9 Matsu-Tunnel 36.17 265 IAmb IAmb 15 33 29.3
comp=Z,17nm,0.9s
VLA Vladivostok 36.33 278 *i* P **P** **15 33 25.2 -1.9**
VLA pmax pmax
comp=Z,70nm,1.5s
J05D Fort Rock, OR 36.58 81 P **P** **15 33 30.9 +1.5**
J05D IAmb IAmb 15 34 03.1
comp=Z,36nm,1.5s
NEW Newport 36.64 71 LR LR 15 46 50.6
comp=Z,244nm,18.4s,baz=304,slow=34
NEW Newport 36.64 71 IAmb IAmb 15 33 55.8
comp=Z,17nm,0.8s
E09A Wood Farm, Sta 36.84 75 IAmb IAmb 15 34 04.0
comp=Z,38nm,1.5s
MDJ Mudanjiang 36.97 282 P **P** **15 33 32.3 -0.3**
MDJ Mudanjiang 36.97 282 P **P** **15 33 31.6 -1.0**
MDJ pmax pmax
comp=Z,11nm,1.0s
K05A Summer Lake 37.08 82 P **P** **15 33 34.9 +1.1**
K05A IAmb IAmb 15 34 13.1
comp=Z,31nm,1.1s
I07A Izee 37.23 79 IAmb IAmb 15 34 09.4
comp=Z,17nm,1.1s
JGF Kuroka 37.30 264 IAmb IAmb 15 33 38.0
comp=Z,66nm,1.5s
BNX BinXian 37.74 285 ⇑P **P** **15 33 38.4 -0.7**
BNX pmax pmax
comp=Z,78nm,1.3s
J08A Circle Bar Ran 38.24 79 IAmb IAmb 15 34 17.9
comp=Z,17nm,1.0s
RES Resolute Bay 38.84 25 P **P** **15 33 46.3 -1.7**
comp=Z,0.7nm,0.5s,baz=249,slow=13,SNR=4.8
RES LR LR 15 54 51.2
comp=Z,457nm,18.3s,baz=298,slow=44
comp=Z,0.7nm,0.5s
MSO Missoula 39.22 72 IAmb IAmb 15 34 21.8
comp=Z,19nm,1.0s
PAHR Pah Rah Range 39.72 85 IAmb IAmb 15 34 27.9
comp=Z,23nm,1.2s
CN2 Changchun 39.94 283 P **P** **15 33 57.1 -0.4**
CN2 pP pP 15 34 04.3 +0.8
CN2 S **S** **15 39 59.3 -1.7**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 LR LR
comp=Z,900nm,19.0s
CN2 LR LR
comp=Z,600nm,19.0s
CN2 LR LR
comp=Z,900nm,20.0s
HILR Hailar Array B 40.42 294 P **P** **15 34 00.7 -0.8**
comp=Z,1.8nm,0.3s,baz=68,slow=9.7,SNR=8.5
comp=Z,1.8nm,0.3s
HLID Hailey 40.63 76 P **P** **15 34 05.1 +1.7**
BCYI Bear Canyon 40.84 75 P **P** **15 34 06.2 +1.0**
BCYI IAmb IAmb 15 34 23.1
comp=Z,27nm,1.2s
EGMT Eagleton 41.09 68 IAmb IAmb 15 34 12.0
comp=Z,19nm,0.9s
NVAR Mina Array Bea 41.16 85 P **P** **15 34 09.8 +1.9**
comp=Z,1.2nm,0.9s,baz=288,slow=7.3,SNR=4.5
NVAR ScP **ScP** **15 39 55.4 +0.6**
comp=Z,0.3nm,0.3s,baz=297,slow=4.1,SNR=5.8
comp=Z,1.2nm,0.9s
BOZ Bozeman (W) 41.23 72 IAmb IAmb 15 34 25.8
comp=Z,19nm,1.1s
ELK Elko 41.70 80 P **P** **15 34 13.6 +1.3**
comp=Z,3.6nm,0.8s,baz=290,slow=10,SNR=14
comp=Z,3.6nm,0.8s
YHL Hebgen Lake 41.89 73 IAmb IAmb 15 34 43.9
comp=Z,22nm,1.1s
KSRS Korea Array 42.06 274 P **P** **15 34 16.1 +1.1**
comp=Z,15nm,1.0s,baz=59,slow=7.8,SNR=32
comp=Z,15nm,1.0s
KS19 Wonju Array Si 42.07 274 P **P** **15 34 15.3 +0.2**
KS19 IAmb IAmb 15 34 19.3
comp=Z,35nm,1.4s
KSAR Wonju Array Be 42.09 274 P **P** **15 34 15.2 -0.1**
KSAR Wonju Array Be 42.09 274 P **P** **15 34 15.2 -0.1**
FFC Flin Flon 42.23 56 P **P** **15 34 16.5 +0.3**
FFC IAmb IAmb 15 34 18.2
comp=Z,24nm,1.2s
FFC Flin Flon 42.23 56 P **P** **15 34 16.5 +0.3**
FFC pmax pmax
comp=Z,24nm,1.3s
H17A Grant Village 42.50 73 IAmb IAmb 15 34 38.6
comp=Z,22nm,1.1s
YMP Mirror Lake Pl 42.56 72 IAmb IAmb 15 34 39.5
comp=Z,19nm,1.1s
RLMT Red Lodge 42.89 71 IAmb IAmb 15 34 39.9
comp=Z,38nm,1.1s
JNU Nakatsue 42.97 267 P **P** **15 34 23.9 +1.4**
comp=Z,14nm,0.8s,baz=74,slow=3.2,SNR=7.2
comp=Z,14nm,0.8s
TJN Taejon 43.08 273 P **P** **15 34 23.8 +0.5**
TJN Taejon 43.08 273 P **P** **15 34 23.8 +0.5**
TJN pmax pmax
comp=Z,60nm,0.6s
AHID Auburn Hatcher 43.09 75 IAmb IAmb 15 34 41.8
comp=Z,21nm,1.2s
TPNV Topopah Spring 43.35 86 IAmb IAmb 15 34 59.3
comp=Z,16nm,0.9s
DUG Dugway, Tooele 43.52 80 IAmb IAmb 15 34 46.2
comp=Z,27nm,1.2s
PRN Pahroc Range 43.81 84 IAmb IAmb 15 35 01.4
comp=Z,30nm,1.0s
LAO LASA Array 43.84 68 IAmb IAmb 15 35 01.8
comp=Z,22nm,1.1s
TCUT Toone Canyon 43.84 78 IAmb IAmb 15 35 03.8
comp=Z,18nm,1.1s
POIN Pond Inlet 43.99 25 P **P** **15 34 30.1 -0.1**
BW06 Boulder Array 44.02 74 IAmb IAmb 15 34 54.7
comp=Z,23nm,0.9s
PD31 Pinedale Array 44.02 74 IAmb IAmb 15 34 54.7
comp=Z,23nm,0.9s
PDAR Pinedale Array 44.02 74 P **P** **15 34 32.5 +1.3**
comp=Z,6.8nm,0.7s,baz=329,slow=3.3,SNR=54
comp=Z,6.8nm,0.7s
PDAR Pinedale Array 44.02 74 P **P** **15 34 32.0 +0.8**
GSC Goldstone, Bar 44.04 88 P **P** **15 34 32.1 +0.9**
GSC IAmb IAmb 15 35 04.8
comp=Z,14nm,0.9s
GSC Goldstone, Bar 44.04 88 P **P** **15 34 32.1 +0.9**
GSC pmax pmax
comp=Z,14nm,0.9s
TULEG Thule 44.32 19 *i* P **P** **15 34 32.0 -0.8**
TULEG IAmb IAmb 15 34 34.2
comp=Z,5.7nm,0.9s
JSU Suzuyama 44.32 265 IAmb IAmb 15 34 35.8
comp=Z,37nm,1.2s
ILON Igloolik, Nuna 44.33 30 P **P** **15 34 32.2 -0.7**
TMUT Trail Mountain 45.05 79 IAmb IAmb 15 35 15.7
comp=Z,18nm,1.2s
MTPU Mount Pierson 45.21 82 IAmb IAmb 15 35 17.6
comp=Z,23nm,1.5s
RDMU Red Mountain 45.29 77 IAmb IAmb 15 35 01.3
comp=Z,34nm,1.1s
P18A Preston Nutter 45.44 78 IAmb IAmb 15 35 09.1
comp=Z,22nm,1.0s
XLT XiLinHaoTe 45.53 289 *e*P **P** **15 34 43.4 +0.4**
XLT pP pP 15 34 49.9 +0.8
XLT pmax pmax
comp=Z,16nm,1.5s
XLT pmax pmax
comp=Z,180nm,4.9s
XLT LR LR
comp=Z,36nm,19.4s
XLT LR LR
comp=Z,300nm,21.9s
XLT LR LR
comp=Z,490nm,23.9s
SRU San Rafael Swe 45.59 79 IAmb IAmb 15 35 08.7
comp=Z,13nm,0.8s
NRIK Noril'sk 45.72 331 P **P** **15 34 43.3 -0.7**
comp=Z,1.3nm,0.4s,baz=123,slow=12,SNR=4.0
NRIK PcP **PcP** **15 36 22.4 +1.0**
comp=Z,4.2nm,0.9s,baz=27,slow=4.2,SNR=3.6
NRIK LR LR 15 56 46.4
comp=Z,303nm,18.7s,baz=25,slow=40
comp=Z,1.3nm,0.4s
NRIK Noril'sk 45.72 331 P **P** **15 34 42.9 -1.1**
NRIK Noril'sk 45.72 331 *i* P **P** **15 34 42.2 -1.8**
NRIK pmax pmax
comp=Z,9.0nm,1.4s
K22A Casper 45.92 73 P **P** **15 34 46.2 0.0**
K22A IAmb IAmb 15 35 08.5
comp=Z,9.3nm,0.8s
U15A North Rim 46.15 83 IAmb IAmb 15 35 12.6
comp=Z,15nm,0.9s
HMU Henry Mountain 46.17 81 IAmb IAmb 15 35 14.1
comp=Z,16nm,0.9s
RSSD Black Hills 46.55 70 P **P** **15 34 51.4 +0.3**
RSSD IAmb IAmb 15 35 03.3
comp=Z,10nm,1.1s
RSSD Black Hills 46.55 70 P **P** **15 34 51.4 +0.3**
RSSD pmax pmax
comp=Z,10.0nm,1.1s
NOR Nord 46.87 4 *i* P **P** **15 34 52.5 -0.4**
NOR IAmb IAmb 15 34 54.3
comp=Z,14nm,1.2s
PV23 Carpenter Ridg 46.92 79 IAmb IAmb 15 35 29.2
comp=Z,28nm,1.1s
NEEM North Greenlan 46.96 14 *i* P **P** **15 34 53.5 -0.5**
NEEM IAmb IAmb 15 34 55.2
comp=Z,12nm,0.6s
PV20 West Nyswonger 47.02 79 IAmb IAmb 15 35 26.0
comp=Z,35nm,1.2s
PV04 Paradox Valley 47.02 79 IAmb IAmb 15 35 32.0
comp=Z,18nm,1.0s
PV16 Nyswonger Mesa 47.07 79 IAmb IAmb 15 35 32.8
comp=Z,9.9nm,0.7s
PV05 Paradox Valley 47.10 79 IAmb IAmb 15 35 21.0
comp=Z,33nm,1.3s
PV11 David Mesa, Pa 47.10 79 IAmb IAmb 15 35 21.4
comp=Z,17nm,0.7s
PV12 Saucer Basin, 47.13 79 P **P** **15 34 56.5 +0.7**
IRK Irkutsk 47.52 305 *e*P **P** **15 34 53.9 -4.4**
IRK pmax pmax
comp=Z,26nm,3.5s
ULM Lac du Bonnet 47.70 58 P **P** **15 34 59.8 0.0**
comp=Z,5.7nm,0.4s,baz=308,slow=7.3,SNR=21
comp=Z,5.7nm,0.4s
ULM Lac du Bonnet 47.70 58 IAmb IAmb 15 35 01.7
comp=Z,42nm,1.4s
ULM Lac du Bonnet 47.70 58 *i* P **P** **15 34 59.0 -0.8**
BJI2 Beijing 47.77 285 P **P** **15 35 01.3 +0.9**
BJI2 pP **sP** **15 35 08.8 -0.2**
BJI2 sP **pwP** **15 35 13.3 +0.6**
BJI2 pmax pmax
comp=Z,9.0nm,1.2s
BJI2 LR LR
comp=Z,310nm,18.9s
BJI2 LR LR
comp=Z,180nm,17.8s
BJI2 LR LR
comp=Z,350nm,21.8s
BJT Baijiatuau 47.77 285 P **P** **15 35 00.8 +0.4**
BJT Baijiatuau 47.77 285 P **P** **15 35 00.8 +0.4**
BJT pmax pmax
comp=Z,55nm,1.6s
KULLO Kullorsuaq 47.83 19 *i* P **P** **15 35 00.8 +0.5**
KULLO IAmb IAmb 15 35 02.2
comp=Z,17nm,1.3s
ISCO Idaho Springs 48.17 75 IAmb IAmb 15 35 22.7
comp=Z,14nm,1.2s
ULN Ulaanbaatar 48.47 298 P **P** **15 35 05.2 -0.7**
ULN IAmb IAmb 15 35 06.9
comp=Z,12nm,1.1s
ULN Ulaanbaatar 48.47 298*ce*P **P** **15 35 05.9 0.0**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 48.47 298 P **P** **15 35 05.5 -0.4**
comp=Z,43nm,1.0s
S22A 4UR Ranch, Cre 48.71 78 IAmb IAmb 15 35 40.9
comp=Z,30nm,1.5s
AGMN Agassiz Nation 48.81 61 IAmb IAmb 15 35 11.0
comp=Z,19nm,0.8s
SONM Songino Array 48.85 299 P **P** **15 35 09.1 +0.3**
comp=Z,5.2nm,0.9s,baz=57,slow=8.8,SNR=31
SONM PcP **PcP** **15 36 33.7 +0.6**
comp=Z,3.1nm,0.9s,baz=56,slow=3.6,SNR=6.6
SONM ScP **ScP** **15 40 27.7 +1.5**
comp=Z,1.0nm,0.8s,baz=97,slow=3.5,SNR=4.6
SONM LR LR 15 59 17.4
comp=Z,699nm,18.1s,baz=58,slow=40
comp=Z,5.2nm,0.9s
SONM Songino Array 48.85 299 P **P** **15 35 07.7 -1.1**
SONM IAmb IAmb 15 35 10.0
comp=Z,14nm,1.3s
SONM PcP **PcP** **15 36 33.0 -0.1**
ZAK Zakamensk 49.07 303 *e*P **P** **15 35 10.0 -0.4**
ZAK *e* 15 36 34.1
ZAK pmax pmax
comp=Z,26nm,1.4s
ZAK pmax pmax
comp=Z,13nm,1.4s
UPNV Upernavik 49.27 20 *i* P **P** **15 35 10.9 -0.6**
UPNV IAmb IAmb 15 35 12.4
comp=Z,15nm,0.7s
MOY Mondy 49.53 305 *e*P **P** **15 35 14.0 +0.1**
MOY pmax pmax
comp=Z,24nm,1.4s
TIA Tai'an 49.58 280 P **P** **15 35 14.6 +0.2**
TIA pP **sP** **15 35 22.9 0.0**
TIA pmax pmax
comp=Z,22nm,1.2s
TIA LR LR
comp=Z,400nm,19.0s
TIA LR LR
comp=Z,370nm,17.8s
TIA LR LR
comp=Z,520nm,16.7s
F33A 5 Mile Ranch, 50.00 63 IAmb IAmb 15 35 45.6
comp=Z,44nm,1.6s
KBS Kingsbay 50.01 358 ⇓*i*P **P** **15 35 17.4 +0.3**
HHC Hu-ho-hao-te 50.04 288 ⇑*i*P **P** **15 35 19.1 +1.1**
HHC pP pP 15 35 25.1 +1.0
HHC sP pwP 15 35 31.6 +1.4
HHC pmax pmax
comp=Z,21nm,1.3s
HHC pmax pmax
comp=Z,190nm,8.5s
HHC LR LR
comp=Z,430nm,15.7s
HHC LR LR
comp=Z,310nm,20.0s
HHC LR LR
comp=Z,450nm,21.8s
HNS HongShan 50.30 283 ⇑P **P** **15 35 20.9 +1.1**
HNS S **S** **15 42 38.1 +7.2**
HNS pmax pmax
comp=Z,57nm,1.3s
HNS LR LR
comp=Z,380nm,17.5s
HNS LR LR
comp=Z,370nm,18.6s
HNS LR LR
comp=Z,290nm,19.1s
SPA0 Spitsbergen Ar 50.64 357 *e*P **P** **15 35 21.6 -0.3**
SPITS Spitsbergen Ar 50.64 357 P **P** **15 35 21.3 -0.6**
comp=Z,10nm,0.6s,baz=57,slow=6.1,SNR=49
SPITS PcP **PcP** **15 36 39.8 +0.8**
comp=Z,7.1nm,0.8s,baz=72,slow=2.7,SNR=6.9
SPITS LR LR 15 57 05.0
comp=Z,508nm,20.4s,baz=357,slow=36
comp=Z,10nm,0.6s
ANMO Albuquerque 50.73 81*ce*P **P** **15 35 23.1 -0.3**
NUUG Nuugaatsiaq 50.79 20 *i* P **P** **15 35 22.4 -0.7**
NUUG IAmb IAmb 15 35 24.1
comp=Z,8.0nm,0.7s
ECSD EROS Data Cent 51.09 66 IAmb IAmb 15 35 47.0
comp=Z,13nm,1.0s
BTO2 Baotou 51.11 289 *e*P **P** **15 35 27.4 +1.4**
BTO2 pP **sP** **15 35 34.8 +0.1**
BTO2 sP **pwP** **15 35 37.9 -0.4**
BTO2 pmax pmax
comp=Z,77nm,1.3s
BTO2 pmax pmax
comp=Z,490nm,8.3s
BTO2 LR LR
comp=Z,1μm,17.3s
BTO2 LR LR
comp=Z,1μm,19.8s
BTO2 LR LR
comp=Z,1μm,18.2s
NIAQ Niaqornat 51.24 21 *i* P **P** **15 35 26.9 +0.5**
NIAQ IAmb IAmb 15 35 28.5
comp=Z,13nm,0.4s
NJ2 Nanjing 51.24 275 *e*P **P** **15 35 25.1 -1.8**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
DAG Danmarks Havn 51.35 7 *i* P **P** **15 35 26.0 -1.2**
DAG IAmb IAmb 15 35 27.4
comp=Z,8.9nm,1.1s
EYMN Ely 51.38 59 IAmb IAmb 15 35 29.7
comp=Z,46nm,1.4s
TIY Taiyuan 51.49 285 P **P** **15 35 30.4 +1.5**
TIY pP **sP** **15 35 37.6 0.0**
TIY S **S** **15 42 48.6 +1.1**
TIY pmax pmax
comp=Z,38nm,1.3s
TIY LR LR
comp=Z,370nm,17.2s
TIY LR LR
comp=Z,320nm,15.8s
TIY LR LR
comp=Z,310nm,15.8s
FRB Frobisher Bay 51.84 33 P **P** **15 35 29.4 -1.5**
comp=Z,1.1nm,0.4s,baz=309,slow=7.3,SNR=39
comp=Z,11nm,0.4s
TBO Thunder Bay 52.07 57 IAmb IAmb 15 35 34.4
comp=Z,45nm,1.4s
GDH Godhavn 52.40 23 *i* P **P** **15 35 34.8 -0.3**
GDH IAmb IAmb 15 35 36.4
comp=Z,55nm,1.6s
I37A Lemond, Waseca 52.74 64 IAmb IAmb 15 36 04.5
comp=Z,33nm,1.0s
SUMG Summit 52.80 15 P **P** **15 35 38.2 -0.3**
SUMG IAmb IAmb 15 35 47.0
comp=Z,34nm,1.4s
SUMG Summit 52.80 15 P **P** **15 35 38.2 -0.3**
SUMG pmax pmax
comp=Z,34nm,1.4s
SUMG Summit 52.80 15 *i* P **P** **15 35 38.3 -0.3**
SUMG IAmb IAmb 15 35 39.6
comp=Z,10nm,0.4s
PH02 Texas Public H 53.22 77 IAmb IAmb 15 36 02.0
comp=Z,18nm,0.7s
DBG Daneborg 53.56 8 *i* P **P** **15 35 43.4 -0.2**
DBG IAmb IAmb 15 35 43.8
comp=Z,6.1nm,0.4s
KSU1 Kansas State U 54.02 70 IAmb IAmb 15 36 17.2
comp=Z,25nm,1.0s
VHRN Van Horn 54.44 84 IAmb IAmb 15 36 09.1
comp=Z,9.5nm,1.0s
128A Castleberry Fa 54.74 80 IAmb IAmb 15 36 10.5
comp=Z,15nm,1.1s
SFJD Kangerlussuaq 54.82 23 LR LR 16 01 07.1
comp=Z,295nm,21.2s,baz=313,slow=38
N38A Joes South For 54.89 67 P **P** **15 35 53.6 -0.2**
POST Post 55.05 79 IAmb IAmb 15 36 15.8
comp=Z,14nm,1.0s
WHN Wuhan 55.08 277 P **P** **15 35 55.8 +0.6**
WHN pmax pmax
comp=Z,82nm,1.2s
129A Stewart Farms, 55.12 80 IAmb IAmb 15 36 23.2
comp=Z,17nm,0.7s
MNHN Monahans 55.45 82 IAmb IAmb 15 36 21.1
comp=Z,9.4nm,0.8s
P38A Dawn 55.48 68 IAmb IAmb 15 36 18.5
comp=Z,17nm,0.7s
WMOK Wichita Mounta 55.59 76 IAmb IAmb 15 36 36.5
comp=Z,9.6nm,0.9s
ZALV Zalesovo Beam 55.84 315 P **P** **15 35 59.0 -1.4**
comp=Z,1.1nm,0.3s,baz=49,slow=6.9,SNR=6.6
ZALV PcP **PcP** **15 37 00.3 +1.3**
comp=Z,3.5nm,0.8s,baz=56,slow=3.7,SNR=10
comp=Z,1.1nm,0.3s
ZALV Zalesovo Beam 55.84 315 **PcP** **15 36 59.9 +0.9**
ZALV Zalesovo Beam 55.84 315 *i* P **P** **15 36 01.5 +1.1**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
XAN Xi'an 56.05 284 ⇑P **P** **15 36 02.5 +0.2**
XAN pP pP 15 36 10.0 +1.4
XAN pmax pmax
comp=Z,38nm,1.5s
SGCY Sterling City 56.07 80 IAmb IAmb 15 36 19.8
comp=Z,31nm,1.1s
TX31 Lajitas Ar. Si 56.27 84 IAmb IAmb 15 36 35.1
comp=Z,11nm,1.1s
TXAR Lajitas Array 56.27 84 P **P** **15 36 04.9 +0.9**
comp=Z,2.3nm,0.9s,baz=301,slow=5.3,SNR=11
TXAR LR LR 15 58 14.4
comp=Z,180nm,20.4s,baz=320,slow=34
comp=Z,2.3nm,0.9s
TXAR Lajitas Array 56.27 84 P **P** **15 36 03.7 -0.3**
U38A Gravette 57.10 71 IAmb IAmb 15 36 38.6
comp=Z,10nm,0.9s
R40A Maddies Statio 57.10 68 IAmb IAmb 15 37 12.3
comp=Z,12nm,0.8s
JMIC Jan Mayen 57.67 5 LR LR 16 01 52.2
comp=Z,193nm,19.0s,baz=40,slow=37
LZH Lanzhou 57.73 289 *e*P **P** **15 36 15.3 +1.0**
LZH pP sP 15 36 22.6 -0.4
LZH pmax pmax
comp=Z,47nm,1.2s
LZH pmax pmax
comp=Z,280nm,4.4s
LZH LR LR
comp=Z,620nm,14.8s
LZH LR LR
comp=Z,630nm,14.4s
LZH LR LR
comp=Z,960nm,14.4s
BRDY Brady 57.81 79 IAmb IAmb 15 36 47.2
comp=Z,11nm,1.0s
GTA2 Gaotai 57.82 294 P **P** **15 36 14.8 -0.1**
GTA2 sP pwP 15 36 27.5 +0.5
GTA2 pmax pmax
comp=Z,14nm,1.2s
GTA2 LR LR
comp=Z,700nm,18.2s
GTA2 LR LR
comp=Z,440nm,20.4s
GTA2 LR LR
comp=Z,910nm,20.0s
MGMO Mountain Grove 57.87 69 IAmb IAmb 15 37 14.8
comp=Z,17nm,0.8s
LZDM Lanzhou Array 57.91 289 P **P** **15 36 17.0 +1.3**
comp=Z,4.7nm,0.6s,baz=33,slow=3.5,SNR=21
comp=Z,4.7nm,0.6s
ENH Enshi 58.29 280 P **P** **15 36 17.2 -0.9**
ENH IAmb IAmb 15 36 33.2
comp=Z,31nm,1.5s
FVM French Village 58.38 67 IAmb IAmb 15 36 54.6
comp=Z,38nm,1.4s

SCHQ Schefferville 58.56 40 P **P** **15 36 19.6 0.0**
comp=Z,6.2nm,0.8s,baz=358,slow=6.8,SNR=6.1
SCHQ LR LR 16 02 51.7
comp=Z,600nm,18.2s,baz=306,slow=37
comp=Z,6.2nm,0.8s
SCHQ Schefferville 58.56 40 IAmb IAmb 15 37 43.5
comp=Z,25nm,1.5s
ARA0 ARCESS Array S 58.59 352 *e*P **P** **15 36 19.0 -0.6**
ARCES ARCESS Array B 58.59 352 P **P** **15 36 19.1 -0.5**
comp=Z,0.8nm,0.3s,baz=10,slow=7.4,SNR=11
ARCES PcP **PcP** **15 37 09.7 +0.1**
comp=Z,11nm,0.9s,baz=344,slow=3.1,SNR=5.5
comp=Z,0.8nm,0.3s
ARCES ARCESS Array B 58.59 352 P **P** **15 36 19.1 -0.5**
ARCES pmax pmax
comp=Z,77nm,1.6s
FCAR Ozark Folk Cen 58.81 70 IAmb IAmb 15 36 43.0
comp=Z,21nm,1.0s
JETT Jettan, Norway 58.97 354 *e*P **P** **15 36 21.8 -0.5**
WHAR Wooly Hollow 59.12 71 IAmb IAmb 15 37 01.6
comp=Z,25nm,1.4s
PBMO Poplar Bluff 59.20 68 IAmb IAmb 15 36 45.2
comp=Z,19nm,1.1s
OLIL Olney 59.21 65 P **P** **15 36 23.9 -0.5**
KTK1 Kautokeino 59.29 352 *e*P **P** **15 36 24.7 +0.2**
ZSN Zaisan 60.27 310 *e*P **P** **15 36 31.5 -0.1**
ZSN pmax pmax
comp=Z,9.0nm,1.6s
ZSN Zaisan 60.27 310 *e*P **P** **15 36 31.6 -0.1**
comp=Z,8.8nm,1.6s
KURK Kurchatov 60.83 316 **PcP** **15 37 19.9 +1.1**
KURK Kurchatov 60.83 316 P **P** **15 36 34.5 -0.7**
KURK Kurchatov 60.83 316 *ce*P **P** **15 36 35.3 +0.1**
KURK pmax pmax
comp=Z,22nm,1.0s
STEI Steigen 60.89 356 *e*P **P** **15 36 35.2 -0.2**
DELO Deloro Mine 60.90 54 P **P** **15 36 35.2 -0.6**
KURBB Kurchatov Arra 60.93 316 P **P** **15 36 35.5 -0.5**
comp=Z,8.0nm,0.4s,baz=43,slow=6.5,SNR=156
KURBB PcP **PcP** **15 37 19.9 +0.7**
comp=Z,7.2nm,1.0s,baz=43,slow=4.4,SNR=8.3
comp=Z,8.0nm,0.4s
T47A Sharon Grove 60.98 66 IAmb IAmb 15 36 53.2
comp=Z,14nm,0.7s
CD2 Chengdu 61.36 285 P **P** **15 36 39.9 +0.7**
CD2 pP pP 15 36 46.8 +1.2
CD2 pmax pmax
comp=Z,30nm,1.3s
WMQ Urumqi 61.41 305 *e*P **P** **15 36 40.1 +0.6**
WMQ pP sP 15 36 47.3 -0.9
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ LR LR
comp=Z,590nm,15.7s
WMQ LR LR
comp=Z,700nm,19.9s
WMQ LR LR
comp=Z,370nm,19.9s
O52A Adamsville 61.76 60 P **P** **15 36 41.1 -0.6**
MK31 Makanchi Array 61.98 311 *ce*P **P** **15 36 42.6 -0.6**
MKAR Makanchi Array 61.98 311 P **P** **15 36 42.3 -0.9**
comp=Z,5.7nm,0.3s,baz=46,slow=6.6,SNR=306
MKAR LR LR 16 06 04.7
comp=Z,400nm,18.0s,baz=28,slow=38
comp=Z,5.7nm,0.3s
CLTN Cedars of Leba 62.05 66 IAmb IAmb 15 36 48.6
comp=Z,7.6nm,0.9s
MAKZ Makanchi 62.12 311 P **P** **15 36 42.9 -1.2**
MAKZ IAmb IAmb 15 36 44.6
comp=Z,28nm,1.6s
MAKZ Makanchi 62.12 311 P **P** **15 36 42.9 -1.2**
MAKZ pmax pmax
comp=Z,28nm,1.6s
BVAR Borovoye Array 62.51 322 P **P** **15 36 47.0 +0.4**
comp=Z,13nm,0.3s,baz=57,slow=6.8,SNR=71
BVAR PcP **PcP** **15 37 26.7 +1.1**
comp=Z,7.1nm,0.5s,baz=66,slow=3.6,SNR=9.7
comp=Z,13nm,0.3s
BORK Borovoye 62.52 322 P **P** **15 36 46.0 -0.7**
BORK IAmb IAmb 15 37 27.9
comp=Z,8.3nm,0.8s
BORK Borovoye 62.52 322 *ce*P **P** **15 36 47.6 +0.9**
BORK pmax pmax
comp=Z,4.0nm,0.5s
STOK Stokkvaagen 62.58 356 *e*P **P** **15 36 46.6 -0.1**
GYA Guiyang 62.74 279 ⇑P **P** **15 36 48.8 +0.2**
GYA pP sP 15 36 56.6 -0.8
GYA pmax pmax
comp=Z,10.0nm,1.3s
GYA LR LR
comp=Z,420nm,20.8s
LEIR Leirfjorden 62.80 356 *e*P **P** **15 36 48.1 -0.2**
GOMU GeErMu 62.92 295 P **P** **15 36 49.4 -0.6**
GOMU sP pP 15 36 57.3 +0.9
GOMU LR LR
comp=Z,300nm,17.8s
GOMU LR LR
comp=Z,470nm,16.3s
W50A Signal Mountai 63.27 66 P **P** **15 36 52.1 +0.1**
W50A IAmb IAmb 15 37 28.4
comp=Z,16nm,0.9s
SSPA Standing Stone 63.52 58 P **P** **15 36 54.0 +0.5**
TKL Tuckaleechee C 63.83 65 LR LR 16 03 29.6
comp=Z,366nm,21.2s,baz=332,slow=35
ARTI Arti 64.03 330 LR LR 16 08 19.9
comp=Z,456nm,19.4s,baz=54,slow=39
ARTI Arti 64.03 330 P **P** **15 36 56.1 -0.5**
ARTI Arti 64.03 330 *c i*P **P** **15 36 56.7 +0.1**
ARTI 15 37 30.9
ARTI S **S** **15 45 32.3 +1.2**
ARTI SS **SS** **15 49 39.8 +0.8**
ARTI pmax pmax
comp=Z,23nm,2.6s
P57A Homestead Farm 64.28 59 IAmb IAmb 15 37 01.9
comp=Z,22nm,1.0s
KIRV Kirov 64.70 336 LR LR 16 09 31.8
comp=Z,212nm,18.2s,baz=21,slow=40
KIRV Kirov 64.70 336 *ce*P **P** **15 37 02.6 +1.7**
MVL Millersville 64.79 57 IAmb IAmb 15 37 04.5
comp=Z,17nm,0.9s
KLMR Klimovskoe 64.87 342 *e*P **P** **15 37 00.1 -1.8**
KLMR *e* 15 37 32.8
KLMR pmax pmax
comp=Z,19nm,1.6s
SDMD Soldier's Deli 64.95 58 IAmb IAmb 15 37 06.1
comp=Z,12nm,1.0s
TDK Taldyqorghan 65.13 311 *e*P **P** **15 37 04.1 +0.1**
TDK pmax pmax
comp=Z,10.0nm,0.8s
TDK Taldyqorghan 65.13 311 *e*P **P** **15 37 04.2 +0.1**
comp=Z,10nm,0.8s
PAL Palisades 65.32 55 P **P** **15 37 06.0 +0.7**
PAL Palisades 65.32 55 P **P** **15 37 06.0 +0.7**
PAL pmax pmax
comp=Z,59nm,1.3s
R58B Mineral 65.45 60 IAmb IAmb 15 37 22.7
comp=Z,12nm,0.8s
KMSC Kings Mountain 65.58 64 IAmb IAmb 15 37 15.4
comp=Z,23nm,1.0s
GOGA Godfrey 65.62 67 IAmb IAmb 15 37 26.0
comp=Z,16nm,1.0s
DAV Davao City (W) 65.68 250 LR LR 16 04 37.2
comp=Z,40nm,19.1s,baz=8.5,slow=35
PZH PanZhiHua 65.74 283 P **P** **15 37 08.6 +0.2**
SHLS Shalkode 66.01 310 *e*P **P** **15 37 08.5 -1.3**
SHLS pmax pmax
comp=Z,19nm,1.3s
SHLS Shalkode 66.01 310 *e*P **P** **15 37 08.5 -1.3**
comp=Z,19nm,1.3s
KMI2 Kunming 66.11 281 ⇑P **P** **15 37 11.6 +0.7**
KMI2 pP sP 15 37 19.8 +0.2
KMI2 pmax pmax
comp=Z,16nm,1.3s
KMI2 LR LR
comp=Z,240nm,17.9s
KMI2 LR LR
comp=Z,200nm,20.0s
KPKS Kokpek 66.15 310 *e*P **P** **15 37 10.9 +0.2**
KPKS Kokpek 66.15 310 *e*P **P** **15 37 10.1 -0.6**
UZB Uzunbulak 66.23 310 *e*P **P** **15 37 11.2 -0.1**
UZB pmax pmax
comp=Z,8.0nm,0.8s
UZB Uzunbulak 66.23 310 *e*P **P** **15 37 11.2 -0.1**
comp=Z,8.4nm,0.8s
FINES FINESS Array B 66.39 349 P **P** **15 37 10.7 -1.1**
comp=Z,1.3nm,0.3s,baz=0.9,slow=8.3,SNR=25
FINES LR LR 16 09 50.1
comp=Z,287nm,18.0s,baz=36,slow=39
comp=Z,1.3nm,0.3s
MOL Molde 66.50 359 *e*P **P** **15 37 12.5 +0.1**
M65A Busby, Falmout 66.56 52 P **P** **15 37 11.3 -1.9**
baz=318
SATY Saty 66.59 310 *e*P **P** **15 37 13.6 0.0**
SATY pmax pmax
comp=Z,18nm,1.7s
SATY Saty 66.59 310 *e*P **P** **15 37 13.7 0.0**
comp=Z,18nm,1.7s
AKN Aaknes 66.90 359 *e*P **P** **15 37 15.4 +0.4**
KUU Kurty 66.94 312 *e*P **P** **15 37 15.8 +0.2**
KUU Kurty 66.94 312 *e*P **P** **15 37 15.9 +0.2**
MDOK Medeo 67.16 311 *e*P **P** **15 37 17.3 +0.1**
MDOK Medeo 67.16 311 *e*P **P** **15 37 17.3 +0.1**
AAA Alma-Ata 67.19 311 *e*P **P** **15 37 17.4 +0.1**
AAA Alma-Ata 67.19 311 *e*P **P** **15 37 17.5 +0.1**
TNSS Tian-Shan 67.31 311 *e*P **P** **15 37 18.1 -0.4**
TNSS Tian-Shan 67.31 311 *e*P **P** **15 37 18.1 -0.4**
NB2 NORSAR Subarra 67.94 357 P **P** **15 37 21.2 -0.5**
comp=Z,29nm,1.4s,baz=3.1,slow=6.2
NB2 NORSAR Subarra 67.94 357 P **P** **15 37 21.2 -0.5**
NB2 AMP 15 37 21.2
comp=Z,29nm,1.4s
NOA NORSAR Array B 67.94 357 P **P** **15 37 21.3 -0.5**
comp=Z,8.2nm,1.0s,baz=2.5,slow=6.3,SNR=14
NOA LR LR 16 07 12.1
comp=Z,110nm,20.3s,baz=0.0,slow=36
comp=Z,8.2nm,1.0s
TKM2 Tokmak 2 68.03 312 P **P** **15 37 23.9 +1.1**
SNR=7.3
SGDS Sogindy 68.07 313 *e*P **P** **15 37 23.0 +0.1**
USP Ospenovka 68.28 313 P **P** **15 37 25.0 +0.9**
SNR=15
SKAR Skarslia 68.38 358 *e*P **P** **15 37 24.6 +0.1**
KBK Karagaybulak 68.54 312 P **P** **15 37 26.9 +1.0**
SNR=8.9
HFS Hagfors 68.74 355 P **P** **15 37 26.0 -0.7**
comp=Z,6.9nm,0.6s,baz=7.6,slow=2.2,SNR=33
HFS LR LR 16 07 06.1
comp=Z,132nm,20.4s,baz=344,slow=36
comp=Z,6.9nm,0.6s
HFS Hagfors 68.74 355 P **P** **15 37 26.0 -0.7**
AAK Ala-Archa 68.77 312 P **P** **15 37 28.3 +1.0**
comp=Z,5.0nm,0.3s,baz=123,slow=3.5,SNR=32
comp=Z,5.0nm,0.3s
AAK Ala-Archa 68.77 312 P **P** **15 37 28.4 +1.0**
SNR=14
AAK Ala-Archa 68.77 312 P **P** **15 37 27.5 +0.2**
AAK IAmb IAmb 15 37 29.3
comp=Z,35nm,1.5s
AAK Ala-Archa 68.77 312 *ce*P **P** **15 37 28.4 +1.1**
AAK pmax pmax
comp=Z,36nm,2.5s
TNCH TengChong 68.79 284 ⇑P **P** **15 37 28.9 +1.1**
TNCH pP pP 15 37 35.0 +0.8
TNCH sP sP 15 37 36.3 -0.3
TNCH S **S** **15 46 27.8 -2.3**
TNCH sS sS 15 46 40.4 -0.2
TNCH SS **SS** **15 50 56.3 +1.6**
TNCH pmax pmax
comp=Z,22nm,1.6s
TNCH pmax pmax
comp=Z,200nm,3.0s
SIJI Sorong 68.94 240 LR LR 16 03 10.3
comp=Z,85nm,20.7s,baz=40,slow=32
NRN Naryn 68.99 310 IAmb IAmb 15 37 31.2
comp=Z,14nm,1.2s
UCH Uchtor 69.08 312 P **P** **15 37 30.9 +1.3**
SNR=5.4
EKS2 Erkin-Say 69.08 313 P **P** **15 37 30.4 +1.1**
SNR=17
ODD1 Odda 69.17 359 *e*P **P** **15 37 29.5 +0.1**
VSU Vasula 69.21 348 *ce*P **P** **15 37 28.9 -0.7**
VSU pmax pmax
comp=Z,61nm,2.5s
AB31 Akbulak array 69.46 325 IAmb IAmb 15 37 56.3
comp=Z,11nm,1.1s
ABKAR Akbulak array 69.46 325 P **P** **15 37 31.0 -0.3**
LSA Lhasa 69.74 292 P **P** **15 37 31.3 -2.7**
LSA pmax pmax
comp=Z,34nm,1.1s
DZA Taraz 70.02 314 *e*P **P** **15 37 35.0 +0.1**
DZA pmax pmax
comp=Z,6.0nm,0.9s
DZA Taraz 70.02 314 *e*P **P** **15 37 35.0 +0.1**
comp=Z,6.0nm,0.9s
KKAR Karatay Array 70.22 315 P **P** **15 37 35.6 -0.5**
KKAR Karatay Array 70.22 315 P **P** **15 37 35.6 -0.5**
ARSB Arslanbob 70.50 312 IAmb IAmb 15 37 40.0
comp=Z,14nm,0.9s
BRLS Boroldav 70.57 315 *e*P **P** **15 37 39.9 +1.6**
BRLS Boroldav 70.57 315 *e*P **P** **15 37 40.0 +1.6**
BELG Belogornoye 70.66 334 P **P** **15 37 38.2 -0.4**
BELG pmax pmax
comp=Z,2.0nm,0.8s
OBN Obninsk 70.79 341 ⇑*e*P **P** **15 37 39.4 +0.1**
OBN *e**PP **sP** **15 37 47.8 -0.4**
OBN 15 38 00.0
OBN S **S** **15 46 49.0 -3.2**
OBN PS 15 47 32.0
OBN pmax pmax
comp=Z,20nm,1.2s
OBN MLR MLR
comp=Z,190nm,17.0s
KSH2 Kashi 70.97 309 P **P** **15 37 42.3 +1.4**
KSH2 pP sP 15 37 49.8 +0.1
KSH2 sP pwP 15 37 55.6 +2.3
KSH2 pmax pmax
comp=Z,25nm,1.0s
KSH2 pmax pmax
comp=Z,180nm,4.5s
KSH2 LR LR
comp=Z,670nm,15.5s
KSH2 LR LR
comp=Z,540nm,18.2s
KSH2 LR LR
comp=Z,370nm,19.2s
CHM Chimkent 71.24 315 *e*P **P** **15 37 42.5 +0.2**
CHM pmax pmax
comp=Z,19nm,1.2s
CHM Chimkent 71.24 315 *e*P **P** **15 37 42.6 +0.2**
comp=Z,19nm,1.2s
PPT Papeete 72.05 155 LR LR 16 04 33.7
comp=Z,339nm,21.0s,baz=348,slow=32
BTK Batken 72.50 313 IAmb IAmb 15 37 51.9
comp=Z,32nm,1.2s
DRK Karamyk 72.51 312 IAmb IAmb 15 39 33.6
comp=Z,24nm,1.0s
LPSR Galich'ya Gora 72.65 339 *e*P **P** **15 37 50.7 +0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MNK Minsk 72.89 346 *i* P **P** **15 37 51.0 -1.0**
comp=E,10.0nm,0.8s
MNK *i* P **P** **15 37 51.0 -1.0**
comp=N,10.0nm,0.7s
MNK *i* P **P** **15 37 51.0 -1.0**
comp=Z,8.0nm,0.8s,baz=15
MNK *i* PP **PP** **15 40 32.2 -1.3**
MNK *i* PPP PPP 15 42 18.9
MNK *i* S **S** **15 47 16.4 0.0**
MNK *i* SS **SS** **15 51 52.4 -3.1**
MNK *i* SSS SSS 15 55 19.9
MNK *i* LR LR 16 09 29.8
MNK *i* LRM MLR 16 11 32.9
comp=N,325nm,13.0s
MNK *i* LRM MLR 16 11 41.5
comp=Z,224nm,18.5s
MNK *i* LRM MLR 16 12 07.2
comp=E,484nm,19.0s
MNK Minsk 72.89 346 *i* P **P** **15 37 50.9 -1.0**
MNK *i* 15 40 32.2
MNK *i* PPP PPP 15 42 18.8
MNK *i* S **S** **15 47 16.4 0.0**
MNK *i* SS **SS** **15 51 52.4 -3.1**
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK pmax pmax
comp=N,10.0nm,0.7s
MNK pmax pmax
comp=Z,8.0nm,0.8s
MNK MLR MLR
comp=N,325nm,13.0s
MNK MLR MLR
comp=Z,224nm,19.0s
MNK MLR MLR
comp=E,484nm,19.0s
CHTO Chiang Mai 73.16 279 P **P** **15 37 53.9 -0.2**
CHTO IAmb IAmb 15 38 10.7
comp=Z,10nm,1.1s
CHTO Chiang Mai 73.16 279 P **P** **15 37 53.9 -0.2**
CHTO pmax pmax
comp=Z,10.0nm,1.2s
CHTO Chiang Mai 73.16 279 P **P** **15 37 55.2 +1.1**
VRH Novokhopyorsk 73.28 337 *e*P **P** **15 37 53.0 -1.3**
VRH pmax pmax
comp=Z,9.0nm,0.7s
CMAR Chiang Mai Arr 73.43 279 P **P** **15 37 56.8 +1.0**
comp=Z,1.0nm,0.4s,baz=23,slow=6.6,SNR=11
CMAR LR LR 16 12 47.0
comp=Z,98nm,20.1s,baz=45,slow=38
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 73.43 279 **P** **15 37 54.1 -1.6**
VORR Voronezh 73.45 339 *e*P **P** **15 37 55.3 0.0**
VORR pmax pmax
comp=Z,40nm,0.4s
EKA Eskdalemuir Ar 73.55 5 P **P** **15 37 56.1 +0.2**
comp=Z,12nm,1.0s,baz=5.2,slow=7.0,SNR=8.8
comp=Z,12nm,1.0s
VSR Storozhevoye 73.88 338 *e*P **P** **15 37 57.1 -0.7**
VSR pmax pmax
comp=Z,8.0nm,0.6s
VORD Divnogorie 74.09 338 *e*P **P** **15 37 58.7 -0.3**
VORD pmax pmax
comp=Z,10.0nm,0.8s
APG El Apazote 75.01 85 LR LR 16 08 31.4
comp=Z,14nm,21.0s,baz=166,slow=34
AK21 Malin Array Si 76.32 345 P **P** **15 38 10.6 -1.3**
AK22 Malin Array Si 76.33 345 P **P** **15 38 10.7 -1.2**
AK03 Malin Array Si 76.33 344 P **P** **15 38 11.0 -1.0**
AK04 Malin Array Si 76.35 345 P **P** **15 38 10.9 -1.2**
AK20 Malin Array Si 76.35 345 P **P** **15 38 10.9 -1.2**
AKASG Malin Array Be 76.36 344 P **P** **15 38 11.0 -1.1**
comp=Z,1.6nm,0.3s,baz=18,slow=6.0,SNR=9.0
comp=Z,1.6nm,0.3s
AKASG Malin Array Be 76.36 344 *i* P **P** **15 38 11.3 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKBB Malin Array Si 76.36 344 *ce*P **P** **15 38 10.8 -1.3**
AKBB pmax pmax
comp=Z,26nm,3.0s
AKBB Malin Array Si 76.36 344 P **P** **15 38 10.9 -1.2**
AK18 Malin Array Si 76.36 345 P **P** **15 38 10.9 -1.3**
KIEV Kiev 76.37 344 ⇑P **P** **15 38 11.5 -0.7**
KIEV Kiev 76.37 344 P **P** **15 38 11.5 -0.7**
KIEV Kiev 76.37 344 P **P** **15 38 10.9 -1.3**
comp=Z,26nm,0.5s
AK01 Malin Array Si 76.37 344 P **P** **15 38 11.0 -1.2**
AK19 Malin Array Si 76.37 345 P **P** **15 38 11.0 -1.2**
AK08 Malin Array Si 76.42 344 P **P** **15 38 10.9 -1.6**
NIL Nilore 76.45 307 P **P** **15 38 12.3 -0.7**
NIL Nilore 76.45 307 P **P** **15 38 12.3 -0.7**
NIL pmax pmax
comp=Z,74nm,1.4s
CLL Collm 77.58 355 IAmb IAmb 15 38 20.0
comp=Z,8.2nm,0.8s
CLL Collm 77.58 355 *i* P **P** **15 38 19.1 +0.1**
CLL pmax pmax
comp=Z,15nm,1.2s
CLL Collm 77.58 355 *i* P **P** **15 38 19.1 +0.1**
comp=Z,15nm,1.2s
KBL Kabul 77.78 311 P **P** **15 38 19.6 -1.1**
KBL IAmb IAmb 15 38 22.0
comp=Z,25nm,0.9s
KBL Kabul 77.78 311 P **P** **15 38 19.6 -1.1**
KBL pmax pmax
comp=Z,25nm,0.9s
BRG Berggiesshubel 77.96 354 *e*P **P** **15 38 21.1 -0.1**
BRG Amp 15 38 22.4
comp=Z,9.3nm,1.0s
BRG Berggiesshubel 77.96 354 P P 15 38 28.1 +7.0
BRG Amp 15 38 29.9
comp=Z,14nm,1.3s
HSKC Hora Svate Kat 78.26 355 *e*P **P** **15 38 23.1 +0.3**
DPC Dobruska-Polom 78.31 353 *e*P **P** **15 38 24.4 +1.2**
DPC Dobruska-Polom 78.31 353 *e*P **P** **15 38 24.4 +1.2**
DPC Dobruska-Polom 78.31 353 P **P** **15 38 22.4 -0.8**
comp=Z,11nm,1.1s
KWP Kalwaria Pacla 78.36 348 P **P** **15 38 22.6 -0.8**
comp=Z,23nm,1.5s
MEM Membach 78.50 359 *d*P **P** **15 38 25.5 +1.4**
SHIU Shidnytsya 78.68 348 P **P** **15 38 24.4 -0.8**
BCLA Clavier 78.70 360 *d*P **P** **15 38 25.9 +0.7**
BMRD Maredsous 78.81 0 *d*P **P** **15 38 26.7 +0.9**
comp=Z,12nm,1.0s
SORM Soroca 78.99 344 ⇑P **P** **15 38 27.3 +0.5**
SORM Soroca 78.99 344 ⇑P **P** **15 38 27.3 +0.5**
DOU Dourbes 79.02 0 *d*P **P** **15 38 28.0 +1.0**
MAK Makhachkala 79.17 330 *e*P **P** **15 38 26.9 -1.0**
MAK *e*PPP PPP 15 43 17.0
MAK *e*S **S** **15 48 26.2 +0.4**
MAK *e*SS **SS** **15 53 33.9 +3.0**
MAK *e*SSS SSS 15 56 57.4
MAK pmax pmax
comp=Z,32nm,0.3s
LANS Liptovska Anna 79.21 350 *e*P **P** **15 38 30.4 +2.3**
LANS Liptovska Anna 79.21 350 *e*P **P** **15 38 30.4 +2.3**
VRAC Vranov 79.33 352 LR LR 16 15 23.3
comp=Z,137nm,20.2s,baz=329,slow=37
KIV Kislovodsk 79.71 333 *e*P **P** **15 38 31.2 +0.2**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KHC Kasperske Hory 79.72 354 *e*P **P** **15 38 30.5 -0.4**
KHC Kasperske Hory 79.72 354 *e*P **P** **15 38 30.5 -0.4**
KBZ Khabaz 79.86 333 LR LR 16 20 07.7
comp=Z,240nm,18.1s,baz=7.5,slow=40
BUR08 Bucovina Ar. S 79.97 346 IAmb IAmb 15 38 32.9
comp=Z,11nm,1.2s
BURAR Bucovina Array 79.99 346 P **P** **15 38 32.0 -0.5**
BURAR Bucovina Array 79.99 346 ⇓P **P** **15 38 32.7 +0.2**
BURAR Bucovina Array 79.99 346 P **P** **15 38 32.7 +0.2**
GERES GERESS Array B 80.00 354 P **P** **15 38 31.5 -1.0**
comp=Z,2.0nm,0.8s,baz=1.9,slow=4.0,SNR=4.4
comp=Z,2.0nm,0.8s
MODS Modra-Piesok 80.19 352 *e*P **P** **15 38 35.1 +1.6**
MODS Modra-Piesok 80.19 352 *e*P **P** **15 38 35.0 +1.6**
RAO Raoul Island 80.20 183 LR LR 16 11 05.0
comp=Z,418nm,18.6s,baz=106,slow=33
AKT Akhty 80.43 329 *e*P **P** **15 38 34.5 -0.5**
AKT pmax pmax
comp=Z,6.0nm,0.4s
SOC Sochi 80.86 335 *e*P **P** **15 38 38.1 +1.1**
SOC *e*PPP PPP 15 43 39.3
SOC *e*S **S** **15 48 45.4 +1.8**
SOC *e*SSS SSS 15 57 22.9
SOC pmax pmax
comp=Z,50nm,1.0s
HRA Herat 81.04 315 IAmb IAmb 15 38 40.4
comp=Z,22nm,1.1s
BIOA Bad Ischl, Aus 81.15 354 *e*P **P** **15 38 39.0 +0.4**
comp=Z,5.7nm,0.9s
OZUR 81.39 346 ⇑P **P** **15 38 40.6 +0.7**
ARSA Arzberg 81.46 353 *i* P **P** **15 38 41.0 +0.8**
comp=Z,5.0nm,1.0s
PLOR Plostina 81.49 345 ⇓P **P** **15 38 41.0 +0.6**
PLOR Plostina 81.49 345 ⇓P **P** **15 38 41.0 +0.6**
COVR Voineasa-Covas 81.56 345 ⇑P **P** **15 38 41.6 +0.8**
MOTA Moosalm 81.64 356 *i* P **P** **15 38 41.1 -0.2**
comp=Z,9.1nm,1.5s
WTTA Wattenberg 81.69 355 *e*P **P** **15 38 42.5 +0.8**
comp=Z,10nm,1.0s
SQTA Sankt Quirin 81.75 356 *e*P **P** **15 38 41.2 -0.7**
comp=Z,12nm,1.4s
KBA Koelnbreinsper 81.78 354 *i* P **P** **15 38 43.0 +0.9**
comp=Z,11nm,1.0s
CFR Carcaliu 81.89 344 ⇑P **P** **15 38 42.6 +0.2**
CFR Carcaliu 81.89 344 ⇑P **P** **15 38 42.6 +0.2**
MLR Muntele Rosu 81.95 345 IAmb IAmb 15 38 45.9
comp=Z,18nm,1.3s
MLR Muntele Rosu 81.95 345 ⇓P **P** **15 38 44.0 +1.0**
MLR Muntele Rosu 81.95 345 ⇓P **P** **15 38 44.0 +1.0**
FETA Feichten 81.98 356 *e*P **P** **15 38 43.2 0.0**
comp=Z,7.3nm,1.2s
SOKA Soboth 82.06 353 *i* P **P** **15 38 44.0 +0.6**
comp=Z,9.2nm,1.2s
VOIR 82.14 346 ⇓P **P** **15 38 44.7 +0.8**
VOIR 82.14 346 ⇓P **P** **15 38 44.7 +0.8**
TPGR Topolog 82.15 343 ⇓P **P** **15 38 44.4 +0.5**
ABTA Abfaltersbach 82.16 355 *i* P **P** **15 38 43.7 -0.3**
comp=Z,4.9nm,1.0s

OBKA	**Obir**	**82.27**	**353**	*e*P		**P**	**15 38 44.9**	**+0.4**
	comp=Z,7.7nm,1.2s							
GZR	**Gura Zlata**	**82.51**	**348**	⇓P		**P**	**15 38 46.1**	**+0.3**
GZR	**Gura Zlata**	**82.51**	**348**	⇓P		**P**	**15 38 46.1**	**+0.3**
GNI	**Garni**	**82.59**	**330**	LR	LR		16 21 37.2	
	comp=Z,205nm,19.3s,baz=18,slow=40							
SGRR	**Singureni**	**83.18**	**345**	⇑P		**P**	**15 38 49.2**	**0.0**
MDVR	**Moldovita**	**83.26**	**348**	⇓P		**P**	**15 38 49.8**	**+0.1**
WRA	**Warramunga Arr**	**83.66**	**227**	P		**P**	**15 38 51.4**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=26,slow=5.2,SNR=5.3							
WRA	**Warramunga Arr**	**83.66**	**227**	*i* P		**P**	**15 38 52.2**	**+0.3**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.9s							
PLVB	**Pleven**	**84.21**	**346**	⇓P		**P**	**15 38 55.4**	**+0.9**
BOVS	**Bovan**	**84.38**	**348**	⇑P		**P**	**15 38 56.4**	**+1.0**
PSI	**Prapat**	**85.41**	**269**	P		**P**	**15 39 00.1**	**-1.0**
PSI				pmax	pmax			
	comp=Z,29nm,1.5s							
PSI	**Prapat**	**85.41**	**269**	P		**P**	**15 39 00.7**	**-0.4**
	comp=Z,13nm,1.1s							
RPSI	**Rantau Prapat**	**85.49**	**269**	P		**P**	**15 39 00.1**	**-1.2**
BR131	**Keskin Array S**	**86.00**	**338**	IAmb	IAmb		15 39 27.9	
	comp=Z,25nm,1.9s							
BRTR	**Keskin Array B**	**86.00**	**338**	P		**P**	**15 39 03.3**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=3.5,slow=2.3,SNR=13							
	comp=Z,2.6nm,0.9s							
BRTR	**Keskin Array B**	**86.00**	**338**	P		**P**	**15 39 03.1**	**-0.7**
BRTR	**Keskin Array B**	**86.00**	**338**	*i* P		**P**	**15 39 04.3**	**+0.5**
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
NRCA	**Norcia**	**86.02**	**354**	IAmb	IAmb		15 39 21.4	
	comp=Z,13nm,1.2s							
RDO	**Rodhopi**	**86.25**	**345**	IAmb	IAmb		15 39 08.1	
	comp=Z,8.9nm,1.0s							
BNN	**Bunyan**	**86.30**	**336**	IAmb	IAmb		15 39 07.0	
	comp=Z,10nm,1.0s							
FITZ	**Fitzroy Crossi**	**86.34**	**235**	LR	LR		16 12 10.1	
	comp=Z,90nm,21.1s,baz=91,slow=32							
HYB	**Hyderabad**	**86.50**	**293**	*e*P		**P**	**15 39 06.6**	**+0.2**
HYB				e**P**P		**sP**	**15 39 14.5**	**-0.8**
HYB				e**PP**		**PP**	**15 42 28.1**	**+0.4**
HYB				e**S**Sac		**SSac**	**15 49 30.9**	**-0.6**
KIRS	**Kirsehir-Merke**	**86.50**	**338**	⇑P		**P**	**15 39 07.6**	**+1.4**
ASAR	**Alice Springs**	**87.09**	**226**	P		**P**	**15 39 09.4**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=21,slow=5.0,SNR=18							
	comp=Z,1.6nm,1.0s							
ASAR	**Alice Springs**	**87.09**	**226**	P		**P**	**15 39 08.9**	**0.0**
ASAR	**Alice Springs**	**87.09**	**226**	P		**P**	**15 39 08.9**	**0.0**
INKA	**Innaminka**	**87.81**	**218**	P		**P**	**15 39 12.1**	**-0.1**
INKA				IAmb	IAmb		15 39 37.1	
	comp=Z,8.2nm,1.4s							
ESDC	**Sonseca Array**	**89.10**	**7**	P		**P**	**15 39 18.4**	**-0.1**
	comp=Z,4.3nm,1.0s,baz=352,slow=4.7,SNR=12							
	comp=Z,4.3nm,1.0s							
ESDC	**Sonseca Array**	**89.10**	**7**	P		**P**	**15 39 18.0**	**-0.6**
ESDC				IAmb	IAmb		15 39 19.7	
	comp=Z,8.6nm,1.2s							
UOSS	**Minazif**	**91.81**	**315**			**P**	**15 39 30.2**	**-1.1**
UOSS				IAmb	IAmb		15 39 32.4	
	comp=Z,7.8nm,0.8s							
SDV	**Santo Domingo**	**91.95**	**73**	LR	LR		16 21 03.7	
	comp=Z,120nm,21.8s,baz=342,slow=36							
EIL	**Elat**	**95.22**	**334**	LR	LR		16 30 03.8	
	comp=Z,118nm,19.0s,baz=324,slow=40							
RPZ	**Rata Peaks**	**95.38**	**190**	LR	LR		16 19 03.2	
	comp=Z,359nm,19.2s,baz=344,slow=33							
MDT	**Midelt**	**95.86**	**8**	LR	LR		16 26 34.4	
	comp=Z,51nm,18.0s,baz=24,slow=38							
RAYN	**Ar Rayn**	**97.48**	**323**	P		**P**	**15 39 55.6**	**-1.7**
RAYN				IAmb	IAmb		15 39 58.3	
	comp=Z,8.2nm,1.1s							
RAYN	**Ar Rayn**	**97.48**	**323**	⇑P		**P**	**15 39 57.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**115.80**	**4**	PKP		**PKPdf**	**15 45 06.1**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=281,slow=3.7,SNR=3.4							
H03N2	**Juan Fernandez**	**118.80**	**108**	T		T	17 55 38.5	
	baz=317,slow=77,SNR=78							
H03N1	**Juan Fernandez**	**118.81**	**108**	T		T	17 55 36.8	
	baz=317,slow=77,SNR=69							
H03N3	**Juan Fernandez**	**118.81**	**108**	T		T	17 55 41.4	
	baz=317,slow=77,SNR=73							
BROLN	**Tlhalogang**	**145.22**	**322**	*i* P		**PKPdf**	**15 46 01.4**	**+0.4**
KHWEE	**KHWEE**	**146.71**	**324**	*i* P		**PKPbc**	**15 46 04.9**	**-0.3**
GRTLG	**Ghanzi**	**147.59**	**331**	*i* P		**PKPbc**	**15 46 07.5**	**-0.2**
LPHEP	**Lephephe**	**147.84**	**322**	*i* P		**PKPbc**	**15 46 07.8**	**-0.5**
KGCAE	**Kacgae**	**148.68**	**328**	*i* P		**PKPbc**	**15 46 10.8**	**+0.3**
KOOLE	**Kule**	**149.44**	**332**	*i* P		**PKPbc**	**15 46 12.7**	**+0.2**
MAKGR	**Makgori**	**150.45**	**322**	*i* P		**PKPbc**	**15 46 13.1**	**-1.8**
BOSA	**Boshof**	**152.76**	**318**	PKPbc		**PKiKP**	**15 46 21.0**	**+0.7**
	comp=Z,5.5nm,0.4s,baz=33,slow=3.0,SNR=24							
BOSA	**Boshof**	**152.76**	**318**			**PKiKP**	**15 46 20.7**	**+0.4**
BOSA	**Boshof**	**152.76**	**318**	PKIKP		**PKiKP**	**15 46 20.7**	**+0.4**

*NNC **13** 15:29:01.0±3.2,36°.80N×70°.72E,h142km±51km, mb2.8, mpv3.5, Error ellipse: s-maj=28.0km s-min=20.9km az=-9.0*
*IDC **13** 15:29:05.2±8.6,37°.18N×70°.89E,h226km±56km, mb3.2/3, mbtmp3.6/6, Error ellipse: s-maj=91.7km s-min=46.5km az=168.0*

ISC 13 15:28:56.3±2.5,36°.6N±0°.2×70°.9E±0°.2,h150km,n10, σ2s20/11,mb3.5/3,3C,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**6.55**	**358**	⇑P		**Pn**	**15 30 31.9**	**+1.6**
	3.2nm,0.5s,baz=181,slow=11,SNR=30							
KK31				S		**Sn**	**15 31 42.6**	**-1.5**
	3.3nm,0.4s,baz=188,slow=24,SNR=10							
AAK	**Ala-Archa**	**6.70**	**24**	P		**Pn**	**15 30 34.4**	**+2.0**
	7.3nm,0.4s,baz=193,slow=9.3,SNR=38							
AAK				S		**Sn**	**15 31 45.5**	**-2.2**
	2.5nm,0.5s,baz=131,slow=22,SNR=7.7							
AAK	**Ala-Archa**	**6.70**	**24**	⇑P		**Pn**	**15 30 34.1**	**+1.6**
	1.3nm,0.4s							
AAK				⇑S		**Sn**	**15 31 48.5**	**+0.7**
	1.2nm,0.5s							
MK31	**Makanchi Array**	**13.32**	**36**	P		**Pn**	**15 32 02.4**	**+2.9**
	0.2nm,0.6s,baz=212,slow=11,SNR=4.8							
MKAR	**Makanchi Array**	**13.32**	**36**	P		**Pn**	**15 31 59.0**	**-0.5**
	0.1nm,0.3s,baz=221,slow=12,SNR=2.8							
AB31	**Akbulak array**	**14.99**	**331**	P		**Pn**	**15 32 22.1**	**+1.7**
	1.1nm,0.6s,baz=140,slow=12,SNR=18							
ZALV	**Zalesovo Beam**	**19.92**	**25**	P		**P**	**15 33 13.5**	**-2.6**
	0.6nm,0.5s,baz=215,slow=12,SNR=3.9							
FINES	**FINESS Array B**	**37.38**	**326**	P		**P**	**15 35 52.4**	**-1.9**
	1.2nm,0.8s,baz=111,slow=9.0,SNR=5.9							
	1.2nm,0.8s							
HFS	**Hagfors**	**42.96**	**322**	P		P	15 36 36.8	-3.3
	0.7nm,0.5s,baz=99,slow=9.3,SNR=1.1							
	0.7nm,0.5s							
NOA	**NORSAR Array B**	**44.28**	**323**	P		P	15 36 47.5	-3.2
	0.9nm,0.7s,baz=93,slow=7.8,SNR=3.7							
	0.9nm,0.7s							

*IDC **13** 15:29:08.7±1.1,3°.39N×74°.22W,h0km, mb3.7/3, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=29.7km s-min=13.8km az=91.0*
*RSNC **13** 15:29:10.1±0.0,3°.N±1°×7°.4W±°, h0km±2km, M3.6, mB5.0, mb4.8, ML4.0, Mw(mB)4.3*
*NEIC **13** 15:29:11.1±1.4,3°.54N±0°.05×74°.0W±0°.1, h9km±7km, mb4.4/6, Error ellipse: s-maj=16.0km s-min=7.0km az=96.0*

ISC 13 15:29:09.4±1.1,3°.51N±0°.02×74°.13W±0°.02,h2km±8km,n63, σ1s74/100,mb4.4/5,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URMC	**La Uribe, Meta**	**0.36**	**225**	P		**Pg**	**15 29 17.0**	**+0.7**
URMC				S		**Sg**	**15 29 21.6**	**+0.6**
VILC	**Villavicencio,**	**0.74**	**36**	P		**Pb**	**15 29 25.4**	**+0.3**
VILC				S		**Sb**	**15 29 36.4**	**+0.6**
PRAC	**Prado**	**0.79**	**285**	P		**Pg**	**15 29 24.4**	**-0.1**
PRAC				S		**Sg**	**15 29 34.4**	**-0.3**
CVER	**Cruz Verde, Cu**	**1.01**	**3**	P		**Pg**	**15 29 29.6**	**+0.8**
CVER				S		**Sb**	**15 29 44.3**	**+0.4**
CHIC	**Chingaza**	**1.18**	**19**	P		**Pg**	**15 29 32.7**	**+0.6**
CHIC				S		**Sg**	**15 29 48.7**	**+1.2**
ORTC	**Ortega, Tolima**	**1.19**	**290**	P		**Pg**	**15 29 31.5**	**-0.7**
ORTC				S		**Sg**	**15 29 47.0**	**-0.6**
ROSC	**El Rosal**	**1.34**	**352**	Pg		**Pb**	**15 29 36.5**	**+1.0**
	410nm,0.3s,baz=192,slow=14,SNR=379							
ROSC				Lg		Lg	15 29 54.8	
	621nm,0.3s,baz=77,slow=23,SNR=18							
ROSC	**El Rosal**	**1.34**	**352**			**Pb**	**15 29 36.0**	**+0.5**
ROSC				Sn		**Sb**	**15 29 53.9**	**+0.6**
MACC	**Macarena, Meta**	**1.38**	**168**	P		**Pn**	**15 29 35.5**	**-0.2**
MACC				S		**Sb**	**15 29 53.9**	**-0.2**
ANIL	**Santa Ana**	**1.61**	**308**	P		**Pn**	**15 29 38.8**	**-0.3**
ANIL				S		**Sn**	**15 30 00.4**	**-0.2**
GUVC	**San Jose del G**	**1.77**	**122**	P		**Pn**	**15 29 42.5**	**+1.3**
GUVC				S		**Sg**	**15 30 07.3**	**+0.9**
GARC	**Garzon, Huila**	**1.89**	**226**	P		**Pn**	**15 29 43.7**	**+0.7**
GARC				S		**Sn**	**15 30 07.3**	**-0.3**
RECRC	**Villamaria, Ca**	**1.89**	**320**	P		**Pn**	**15 29 44.2**	**+0.9**
RECRC				S		**Sn**	**15 30 08.4**	**+0.3**
PTGC	**Puerto Gaitan,**	**2.10**	**71**	P		**Pb**	**15 29 48.9**	**+0.6**
PTGC				S		**Sg**	**15 30 18.0**	**+1.0**
SPBC	**San Pablo de B**	**2.13**	**1**	P		**Pb**	**15 29 49.3**	**+0.4**
SPBC				S		**Sb**	**15 30 17.6**	**+1.7**
NORC	**Norcasia**	**2.17**	**340**	P		**Pn**	**15 29 47.8**	**+1.1**
NORC				S		**Sb**	**15 30 16.2**	**-0.8**
YOTC	**Yotoco, Valle**	**2.27**	**282**	P		**Pn**	**15 29 48.0**	**0.0**
YOTC				S		**Sb**	**15 30 18.7**	**-1.0**
FLOC	**Florencia**	**2.44**	**219**	P		**Pn**	**15 29 52.1**	**+1.7**
FLOC				S		**Sb**	**15 30 23.8**	**-1.0**
JAMC	**Jamundi, Valle**	**2.56**	**264**	P		**Pn**	**15 29 53.3**	**+1.1**
JAMC				S		**Sb**	**15 30 28.6**	**+0.3**
RUSC	**La Rusia**	**2.59**	**24**	P		**Pb**	**15 29 56.0**	**-0.9**
RUSC				S		**Sb**	**15 30 31.8**	**+2.4**
POPC	**Popayan, Colom**	**2.72**	**249**	P		**Pn**	**15 29 56.0**	**+1.6**
POPC				S		**Sb**	**15 30 32.8**	**-0.2**
CBOC	**Ciudad Bolivar**	**3.00**	**321**	P		**Pn**	**15 30 00.5**	**+2.2**
CBOC				S		**Sb**	**15 30 39.9**	**-1.2**
HELC	**Santa Helena**	**3.01**	**332**	P		**Pn**	**15 30 00.7**	**+2.2**
HELC				S		**Sb**	**15 30 39.4**	**-2.1**
PTBC	**PUERTO BERRIO,**	**3.03**	**354**	P		**Pn**	**15 29 59.9**	**+1.4**
PTBC				S		**Sn**	**15 30 38.3**	**+2.9**
BARC	**Barichara**	**3.21**	**17**	P		**Pb**	**15 30 06.3**	**-1.0**
BARC				S		**Sg**	**15 30 51.0**	**-1.5**
PTLC	**Puerto Leguiza**	**3.38**	**191**	P		**Pb**	**15 30 08.6**	**-1.5**
PTLC				S		**Sg**	**15 30 59.6**	**+1.5**
CRUC	**La Cruz**	**3.42**	**236**	P		**Pn**	**15 30 06.8**	**+2.7**
CRUC				S		**Sb**	**15 30 55.0**	**+1.9**
BBAC	**Balboa, Cauca**	**3.45**	**245**	P		**Pn**	**15 30 06.2**	**+1.8**
BBAC				S		**Sb**	**15 30 55.6**	**+1.7**
BRJC	**Barrancabermej**	**3.47**	**6**	P		**Pb**	**15 30 10.0**	**-1.6**
BRJC				S		**Sb**	**15 30 52.8**	**-1.4**
GCUF	**Volcan Galeras**	**3.93**	**235**	P		**Pn**	**15 30 13.9**	**+2.6**
GCUF				S		**Sg**	**15 31 13.1**	**-2.8**
DBBC	**Dabeiba**	**4.06**	**329**	P		**Pb**	**15 30 22.1**	**+0.4**
PAMC	**Pamplona, Colo**	**4.07**	**20**	P		**Pn**	**15 30 16.8**	**+3.7**
PAMC				S		**Sb**	**15 31 10.9**	**-1.0**
GR1C	**Gorgona, Isla**	**4.07**	**263**	P		**Pn**	**15 30 12.7**	**0.0**
URIC	**San Jos de Ur**	**4.45**	**342**	P		**Pn**	**15 30 20.8**	**+2.9**
URIC				S		**Sn**	**15 31 13.9**	**+3.6**
BONI	**La Bonita**	**4.56**	**228**	P		**Pn**	**15 30 22.7**	**+3.0**
BONI				S		**Sb**	**15 31 28.7**	**+2.8**
TULM	**Tulcn-Chalpat**	**4.59**	**233**	P		**Pb**	**15 30 32.5**	**+1.5**
TULM				S		**Sg**	**15 31 32.9**	**-4.1**
CASC	**Dorado de Casc**	**4.64**	**224**	P		**Pn**	**15 30 21.5**	**+0.8**
CASC				S		**Sb**	**15 31 31.5**	**+3.4**
OCAC	**Ocana**	**4.77**	**10**	P		Pn	15 30 28.5	+6.0
OCAC				S		**Sb**	**15 31 26.9**	**-5.0**
APAC	**Apartado, Choc**	**5.00**	**331**	P		Pb	15 30 32.5	-5.3
	106nm,0.7s							
APAC				S		**Sg**	**15 31 49.6**	**-0.6**
	106nm,0.7s							
OTAV	**Otavalo**	**5.41**	**233**			**Pn**	**15 30 35.8**	**+4.3**
SLOR	**San Lorenzo -**	**6.07**	**226**			**Pn**	**15 30 42.5**	**+1.9**
SDV	**Santo Domingo**	**6.37**	**33**	Pn		**Pn**	**15 30 46.8**	**+2.2**
	6.3nm,0.3s,baz=193,slow=4.1,SNR=29							
SDV				Sn		**Sn**	**15 31 59.0**	**+0.9**
	19nm,0.3s,baz=254,slow=22,SNR=8.2							
SDV				Lg		Lg	15 32 35.0	
	15nm,0.3s,baz=18,slow=12,SNR=5.2							
	19nm,0.3s							
SDV	**Santo Domingo**	**6.37**	**33**			**Pn**	**15 30 44.8**	**+0.1**
SDV				Sn		**Sn**	**15 31 55.7**	**-2.4**
SDV	**Santo Domingo**	**6.37**	**33**	P		**Pn**	**15 30 46.7**	**+2.1**
	973nm59nm,0.4s							
SJCC	**San Jacinto, C**	**6.44**	**351**	P		**Pn**	**15 30 45.8**	**+0.5**
CZSB	**Cruzeiro do Su**	**11.25**	**173**	Pn		**Pn**	**15 31 49.8**	**-1.6**
ATAH	**Atahualpa**	**11.40**	**202**	Pn		**Pn**	**15 31 54.2**	**+0.5**
	1.3nm,0.3s,baz=25,slow=14,SNR=8.5							
ATAH				Sn		**Sn**	**15 34 02.5**	**+0.5**
	0.3nm,0.3s,baz=256,slow=7.2,SNR=1.0							
JTS	**Las Juntas de**	**12.68**	**303**	Pn		**Pn**	**15 32 14.3**	**+3.3**
	2.0nm,0.3s,baz=346,slow=23,SNR=1.6							
BOAV	**Boa Vista**	**13.63**	**94**			**Pn**	**15 32 20.8**	**-3.2**
MACA	**Manacapuru-AM**	**14.98**	**116**	Pn		**Pn**	**15 32 40.7**	**-1.6**
MTDJ	**Mount Denham**	**15.01**	**347**	Pn		**Pn**	**15 32 41.5**	**-1.3**
SDDR	**Presa de Saban**	**15.63**	**10**	Pn		**Pn**	**15 32 50.0**	**-1.0**
SDDR				IAmb	IAmb		15 33 02.9	
	comp=Z,13nm,1.0s							
LPAZ	**La Paz**	**20.54**	**163**	P		**P**	**15 33 48.3**	**-1.7**
	comp=Z,1.3nm,0.8s,baz=322,slow=6.6,SNR=3.9							
	comp=Z,1.3nm,0.8s							
LPAZ	**La Paz**	**20.54**	**163**	P		**P**	**15 33 48.7**	**-1.3**
MDP	**Montagnes des**	**21.48**	**85**	P		**P**	**15 34 00.1**	**+0.5**
	comp=Z,14nm,0.8s,baz=274,slow=8.7,SNR=5.9							
	comp=Z,14nm,0.8s							
PB16	**IPOC Station P**	**22.17**	**168**	P		**P**	**15 34 07.8**	**+0.1**
PB16				IAmb	IAmb		15 34 33.1	
	comp=Z,8.1nm,1.5s							
S44A	**Carbondale**	**36.74**	**340**	P		**P**	**15 36 17.6**	**-0.7**
S44A				IAmb	IAmb		15 36 46.5	
	comp=Z,12nm,0.7s							
SIUC	**Southern Illin**	**36.75**	**340**	P		**P**	**15 36 18.5**	**+0.2**
SIUC				IAmb	IAmb		15 36 45.8	
	comp=Z,17nm,0.9s							
J59A	**Piesco**	**39.79**	**360**			**P**	**15 36 44.1**	**+0.2**
ILAR	**Eielson Array**	**79.53**	**335**	P		**P**	**15 41 17.2**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=111,slow=8.2,SNR=4.1							
	comp=Z,0.2nm,0.7s							
ASAR	**Alice Springs**	**146.31**	**231**	PKPbc		**PKPdf**	**15 48 51.5**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=120,slow=4.0,SNR=21							
ASAR	**Alice Springs**	**146.31**	**231**			**PKPdf**	**15 48 49.2**	**-2.5**
WRA	**Warramunga Arr**	**147.79**	**237**	PKPbc		**PKPdf**	**15 48 55.0**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=109,slow=3.1,SNR=7.3							

*IDC **13** 15:29:36.5±3.9,51°.22N×174°.90W,h0km, mb4.2/7, mbtmp4.2/9, ML3.5/2, Error ellipse: s-maj=93.7km s-min=33.1km az=160.0*
*NEIC **13** 15:29:37.1±2.3,51°.12N±0°.05×174°.91W±0°.06,h10km±1km, mb4.1/26, ML4.1/12, ML3.6(AEIC), Error ellipse: s-maj=7.9km s-min=5.9km az=180.0*
*AEIC **13** 15:29:41.7±4.0,51°.29N±0°.06×175°.05W±0°.05,h17km±4km, Error ellipse: s-maj=9.3km s-min=4.2km az=163.0*

ISC 13 15:29:36.6±1.9,51°.07N±0°.08×174°.98W±0°.04, h10km±11km,n84,σ1s14/90,mb4.2/11,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GSIG	**Igitkin Island**	**1.09**	**327**			**Pn**	**15 29 58.2**	**+0.2**
GSIG						**Sb**	**15 30 11.5**	**-0.4**
GSMY	**Great Sitkin M**	**1.18**	**326**			**Pb**	**15 29 59.8**	**+0.6**
GSMY						**Sb**	**15 30 13.9**	**-0.6**
ETKA	**Kagalaska Isla**	**1.19**	**312**			**Pb**	**15 30 00.1**	**+0.8**
ETKA						**Sb**	**15 30 15.0**	**+0.2**
GSCK	**Great Sitkin C**	**1.20**	**322**			**Pb**	**15 30 00.2**	**+0.8**
GSCK						**Sb**	**15 30 14.8**	**-0.1**
GSTD	**Great Sitkin T**	**1.22**	**324**			**Pb**	**15 30 00.5**	**+0.6**
GSTD						**Sb**	**15 30 15.9**	**+0.1**
GSTR	**Great Sitkin T**	**1.22**	**327**			**Pb**	**15 30 00.7**	**+0.8**
GSTR	**Great Sitkin T**	**1.22**	**327**			**Sb**	**15 30 15.0**	**-0.8**
GSTR				IAML			15 30 21.1	
	comp=E,5μm,0.7s							
ATKA	**Atka Island**	**1.23**	**23**			**Pb**	**15 30 00.3**	**+0.3**
ATKA				Sn		**Sb**	**15 30 15.0**	**-0.9**
GSSP	**Great Sitkin S**	**1.26**	**324**			**Pb**	**15 30 01.3**	**+0.7**
KOFP	**Korovin Flat P**	**1.32**	**24**			**Pg**	**15 30 02.5**	**+0.5**
KOFP						**Sn**	**15 30 18.4**	**-0.5**
ADK	**Adak**	**1.34**	**308**			**Pb**	**15 30 02.5**	**+0.6**
ADK	**Adak**	**1.34**	**308**	IAML			15 30 19.4	
	comp=E,2μm,0.3s							
KOKL	**Mount Kliuchef**	**1.34**	**21**			**Pb**	**15 30 02.5**	**+0.6**
KONW	**Korovin Northw**	**1.41**	**20**			**Pb**	**15 30 03.5**	**+0.4**
KONE	**Korovin Northe**	**1.43**	**22**			**Pb**	**15 30 04.2**	**+0.9**
KIRH	**Kanaga Island**	**1.56**	**303**			**Pb**	**15 30 06.3**	**+0.7**
KIWB	**Kanaga Island**	**1.57**	**301**	Pn		**Pb**	**15 30 06.1**	**+0.4**
KIWB						**Sn**	**15 30 24.6**	**-0.3**
KIWB				IAML			15 30 26.1	
	comp=E,2μm,0.7s							
KIWB				IAML			15 30 35.3	
	comp=N,2μm,0.4s							
KICM	**Kanaga Island**	**1.62**	**302**			**Pb**	**15 30 07.1**	**+0.4**
KICM						**Pg**	**15 30 07.2**	**-0.5**
TAPA	**Tanaga Point A**	**1.92**	**294**			**Pb**	**15 30 11.9**	**+0.1**
TAFL	**Tanaga Flats**	**1.95**	**292**			**Pb**	**15 30 12.2**	**-0.1**
TAFP	**Tanaga Falls P**	**2.05**	**295**			**Pb**	**15 30 13.9**	**-0.1**
TASE	**Tanaga Southea**	**2.06**	**293**			**Pb**	**15 30 14.3**	**+0.1**
GANE	**Gareloi Northe**	**2.49**	**289**			**Pb**	**15 30 20.6**	**-0.9**
GANO	**Gareloi North**	**2.51**	**289**			**Pb**	**15 30 20.8**	**-0.9**
CLES	**Cleveland East**	**3.60**	**59**	Pn		**Pn**	**15 30 32.9**	**+0.5**
AMKA	**Amchitka**	**3.61**	**277**	Pn		**Pn**	**15 30 33.5**	**+0.9**
AMKA				IAML			15 32 42.6	
	comp=E,288nm,0.6s							
AMKA				IAML			15 32 44.1	
	comp=N,584nm,0.6s							
UNV	**Unalaska Valle**	**5.88**	**59**	Pn		**Pn**	**15 31 04.0**	**+0.2**
LVA	**Lava Point**	**6.26**	**57**	Pn		**Pn**	**15 31 10.4**	**+1.3**
P08K	**Saint George I**	**6.40**	**28**	Pn		**Pn**	**15 31 11.6**	**+0.7**
SPIA	**Saint Paul Isl**	**6.72**	**23**	Pn		**Pn**	**15 31 14.8**	**-0.4**
SMY	**Shemya**	**6.96**	**288**	Pn		**Pn**	**15 31 19.1**	**+0.6**
FALS	**False Pass**	**7.94**	**57**	Pn		**Pn**	**15 31 30.8**	**-1.2**
SDPT	**Sand Point**	**9.69**	**58**	Pn		**Pn**	**15 31 55.5**	**-0.6**
CNBA	**Chernabura Isl**	**10.02**	**62**	Pn		**Pn**	**15 32 01.3**	**+0.9**
O14K	**Tigyukauivet M**	**11.32**	**38**	Pn		**Pn**	**15 32 18.5**	**+0.2**
N14K	**Kuskokwak Cree**	**11.62**	**35**	Pn		**Pn**	**15 32 22.3**	**0.0**
O15K	**Ungalikthiuk R**	**11.85**	**41**	Pn		**Pn**	**15 32 25.9**	**+0.3**
L14K	**Kuka Creek**	**12.33**	**29**	Pn		**Pn**	**15 32 31.3**	**-0.7**
GAMB	**Gambell**	**12.86**	**7**	Pn		**Pn**	**15 32 37.9**	**-1.3**
P18K	**Big Mountain,**	**13.96**	**46**	Pn		**Pn**	**15 32 52.3**	**-2.1**
O18K	**Koktuh Hills**	**14.20**	**44**	Pn		**Pn**	**15 32 55.6**	**-2.0**
ANM	**Nome**	**14.44**	**17**	Pn		**Pn**	**15 32 59.6**	**-1.2**
TNA	**Tin City**	**14.98**	**11**			**Pn**	**15 33 09.8**	**+1.7**
J17K	**VABM Dome**	**14.99**	**28**	P		**P**	**15 33 12.0**	**-1.8**
J18K	**Innoko River**	**15.78**	**31**	P		**P**	**15 33 21.9**	**-0.8**
J18K				IAmb	IAmb		15 33 28.3	
	comp=Z,15nm,1.3s							
J19K	**Poorman**	**16.50**	**31**	P		**Pn**	**15 33 28.1**	**+0.1**
J19K				IAmb	IAmb		15 33 37.4	
	comp=Z,15nm,1.4s							
K20K	**Telida**	**16.61**	**34**	P		**Pn**	**15 33 29.9**	**+0.5**
PEA0B	**Petropavlovsk-**	**16.88**	**288**	P		**Pn**	**15 33 33.5**	**+0.7**
PETK	**Petropavlovsk-**	**16.88**	**288**	Pn		**P**	**15 33 35.9**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=81,slow=11,SNR=2.5							
	comp=Z,6.5nm,0.9s							
PETK	**Petropavlovsk-**	**16.88**	**288**	P		**P**	**15 33 33.9**	**-0.9**
SUA	**Susitna One**	**16.90**	**43**	P		**Pn**	**15 33 32.6**	**-0.5**
SUA				IAmb	IAmb		15 33 49.1	
	comp=Z,15nm,0.8s							
F17K	**Baldwin Pennin**	**16.91**	**19**	P		**Pn**	**15 33 32.1**	**-0.9**
J20K	**Nowinta River**	**17.11**	**32**	P		**Pn**	**15 33 35.5**	**-0.1**
KNK	**Knik Glacier**	**17.87**	**44**	P		**Pn**	**15 33 42.5**	**-2.6**
C16K	**Lisburne Hills**	**17.89**	**12**	P		**Pn**	**15 33 43.9**	**-1.3**
F19K	**Shaleruckik Mo**	**18.01**	**22**	P		**Pn**	**15 33 45.2**	**-1.5**
SML	**Sawmill**	**18.09**	**43**	P		**Pn**	**15 33 45.1**	**-2.7**
SML				IAmb	IAmb		15 34 16.0	
	comp=Z,18nm,1.0s							
HIN	**Hinchinbrook I**	**18.41**	**49**	P		**P**	**15 33 49.2**	**-2.5**
SCM	**Sheep Creek Mo**	**18.53**	**44**	P		**P**	**15 33 51.1**	**-2.0**
G21K	**Allakaket**	**18.89**	**27**	P

KONW						Sn	15 31 28.3	+0.1
KIRH	**Kanaga Island**	**1.55**	**303**			**Pb**	**15 31 14.0**	**+0.9**
KIWB	**Kanaga Island**	**1.56**	**301**			**Pb**	**15 31 13.0**	**-0.3**
KIWB					Sn	**Sn**	**15 31 31.1**	**-0.6**
KIWB					IAML		15 31 43.5	
	comp=N,3μm,0.5s							
KIKV	**Kanaga Island**	**1.58**	**302**			**Pb**	**15 31 14.4**	**+0.7**
TAPA	**Tanaga Point A**	**1.92**	**294**			**Pb**	**15 31 19.4**	**0.0**
TAFL	**Tanaga Flats**	**1.94**	**292**			**Pb**	**15 31 19.9**	**+0.1**
TASE	**Tanaga Southea**	**2.05**	**293**			**Pb**	**15 31 21.7**	**0.0**
GAKI	**Gareloi-Kavalg**	**2.44**	**283**			**Pb**	**15 31 27.3**	**-1.0**
GANE	**Gareloi Northe**	**2.48**	**289**			**Pb**	**15 31 27.7**	**-1.3**
LVA	**Lava Point**	**6.27**	**57**	Pn		**Pn**	**15 32 15.6**	**-1.0**
AKUT	**Akutan**	**6.40**	**58**	Pn		**Pn**	**15 32 19.5**	**+1.2**
SPIA	**Saint Paul Isl**	**6.72**	**23**	Pn		**Pn**	**15 32 22.2**	**-0.5**
SHEM	**Shemya Is, Ala**	**6.95**	**288**	Pn		**Pn**	**15 32 25.9**	**0.0**
SMY	**Shemya**	**6.95**	**288**	Pn		**Pn**	**15 32 25.8**	**0.0**
SDPT	**Sand Point**	**9.70**	**58**	Pn		**Pn**	**15 33 03.4**	**-0.2**
CNBA	**Chernabura Isl**	**10.03**	**62**	Pn		**Pn**	**15 33 08.2**	**+0.3**
O14K	**Tigyukauivet M**	**11.33**	**38**	Pn		**Pn**	**15 33 26.3**	**+0.4**
N14K	**Kuskokwak Cree**	**11.62**	**35**	Pn		**Pn**	**15 33 33.2**	**+3.4**
N15K	**Kwethluk River**	**12.38**	**37**	Pn		**Pn**	**15 33 40.6**	**+0.4**
CHIR	**Chirikof Islan**	**12.47**	**60**	Pn		**Pn**	**15 33 42.4**	**+0.9**
P16K	**Nushagak River**	**12.56**	**44**	Pn		**Pn**	**15 33 43.5**	**+0.8**
PLK4	**Peulik 4**	**12.68**	**52**	Pn		**Pn**	**15 33 45.7**	**+1.4**
O16K	**Kokwok River B**	**12.83**	**42**	Pn		**Pn**	**15 33 48.7**	**+2.4**
J14K	**Nanvaranak Lak**	**13.24**	**23**	Pn		**Pn**	**15 33 54.0**	**+2.1**
M16K	**Timber Creek**	**13.36**	**36**	Pn		**Pn**	**15 33 56.3**	**+2.7**
K15K	**Wolf Creek Mou**	**13.43**	**28**	Pn		**Pn**	**15 33 56.0**	**+1.5**
L16K	**Owhat River**	**13.65**	**33**	Pn		**Pn**	**15 33 57.4**	**-0.1**
P18K	**Big Mountain,**	**13.97**	**46**	Pn		**Pn**	**15 34 02.3**	**+0.3**
M17K	**Holitna River**	**14.17**	**36**	Pn		**Pn**	**15 34 05.0**	**+0.4**
O18K	**Koktuh Hills**	**14.21**	**44**	Pn		**Pn**	**15 34 05.0**	**-0.2**
N18K	**Kilae Creek**	**14.35**	**41**	Pn		**Pn**	**15 34 07.2**	**0.0**
ANM	**Nome**	**14.44**	**17**	Pn		**Pn**	**15 34 07.8**	**-0.5**
Q19K	**Cape Douglas,**	**14.51**	**49**	Pn		**Pn**	**15 34 09.6**	**+0.3**
KDAK	**Kodiak Island**	**14.63**	**54**	Pn		**Pn**	**15 34 10.4**	**-0.5**
TNA	**Tin City**	**14.98**	**11**	Pn		**Pn**	**15 34 15.0**	**-0.6**
J17K	**VABM Dome**	**15.00**	**28**	Pn		**Pn**	**15 34 15.6**	**-0.2**
N19K	**Bonanza Creek**	**15.01**	**42**	Pn		**Pn**	**15 34 16.9**	**+0.8**
J18K	**Innoko River**	**15.79**	**31**	Pn		**Pn**	**15 34 25.2**	**-1.0**
J18K				IAmb		IAmb	15 34 59.4	
	comp=Z,19nm,1.5s							
CNPM	**China Poot**	**15.88**	**49**	Pn		**Pn**	**15 34 26.6**	**-0.9**
H17K	**Granite Mounta**	**15.96**	**24**	Pn		**Pn**	**15 34 27.2**	**-1.3**
J19K	**Poorman**	**16.51**	**31**	Pn		**Pn**	**15 34 35.2**	**-0.2**
H18K	**Honhosa River**	**16.54**	**25**	Pn		**Pn**	**15 34 35.1**	**-0.7**
K20K	**Telida**	**16.62**	**34**	Pn		**Pn**	**15 34 36.6**	**-0.2**
PEA0B	**Petropavlovsk-**	**16.87**	**288**	Pn		**Pn**	**15 34 40.1**	**+0.1**
PEA0B				IAmb		IAmb	15 35 23.7	
	comp=Z,30nm,1.3s							
PETK	**Petropavlovsk-**	**16.87**	**288**	P		**P**	**15 34 43.5**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=83,slow=11,SNR=4.9							
	comp=Z,6.3nm,0.7s							
PETK	**Petropavlovsk-**	**16.87**	**288**	Pn		**Pn**	**15 34 39.4**	**-0.6**
F17K	**Baldwin Pennin**	**16.91**	**19**	Pn		**Pn**	**15 34 40.2**	**-0.3**
F17K				IAmb		IAmb	15 34 55.7	
	comp=Z,13nm,1.1s							
SEW	**Seward**	**16.93**	**48**	Pn		**Pn**	**15 34 40.2**	**-0.5**
PPLA	**Purkeypile**	**17.05**	**37**			**Pn**	**15 34 42.5**	**+0.1**
PPLA				IAmb		IAmb	15 35 11.7	
	comp=Z,23nm,1.2s							
KNK	**Knik Glacier**	**17.88**	**44**	P		**Pn**	**15 34 51.0**	**-1.5**
KTH	**Kantishna Hill**	**17.89**	**36**	P		**Pn**	**15 34 52.5**	**-0.2**
KTH				IAmb		IAmb	15 35 34.6	
	comp=Z,14nm,1.1s							
C16K	**Lisburne Hills**	**17.89**	**12**	P		**Pn**	**15 34 52.2**	**-0.4**
F19K	**Shaleruckik Mo**	**18.02**	**22**	P		**Pn**	**15 34 52.6**	**-1.6**
RDOG	**Red Dog Mine**	**18.04**	**15**	P		**Pn**	**15 34 53.5**	**-1.0**
BPAW	**Bear Paw Mtn.**	**18.17**	**35**	P		**Pn**	**15 34 52.9**	**-3.2**
BPAW				IAmb		IAmb	15 35 07.4	
	comp=Z,15nm,1.3s							
GLI	**Glacier Island**	**18.30**	**47**	P		**Pn**	**15 34 54.7**	**-3.0**
H21K	**Melozitna Rive**	**18.52**	**30**	P		**P**	**15 34 57.9**	**-2.3**
SCM	**Sheep Creek Mo**	**18.54**	**44**	P		**P**	**15 34 58.5**	**-2.0**
RND	**Reindeer**	**18.61**	**38**	P		**P**	**15 34 58.4**	**-2.8**
RND				IAmb		IAmb	15 35 21.0	
	comp=Z,15nm,1.2s							
H22K	**Ishtalitna Cre**	**19.12**	**30**	P		**P**	**15 35 05.3**	**-1.6**
NEA2	**Nenana**	**19.14**	**35**	P		**P**	**15 35 05.9**	**-1.1**
NEA2				IAmb		IAmb	15 35 30.1	
	comp=Z,10nm,1.3s							
BILL	**Bilibino**	**19.33**	**339**	P		**P**	**15 35 07.8**	**-1.3**
BILL				IAmb		IAmb	15 35 12.2	
	comp=Z,14nm,1.2s							
I23K	**Minto, Yukon-K**	**19.34**	**34**	P		**P**	**15 35 06.8**	**-2.4**
I23K				IAmb		IAmb	15 35 14.4	
	comp=Z,21nm,1.3s							
F21K	**Alatna River**	**19.41**	**25**	P		**P**	**15 35 08.0**	**-1.9**
F21K				IAmb		IAmb	15 35 18.5	
	comp=Z,7.5nm,1.1s							
CCB	**Clear Creek Bu**	**19.63**	**36**	P		**P**	**15 35 09.3**	**-3.0**
D20K	**Etivluk River**	**19.80**	**20**	P		**P**	**15 35 11.2**	**-2.9**
D20K				IAmb		IAmb	15 35 18.6	
	comp=Z,7.6nm,0.7s							
ILAR	**Eielson Array**	**20.03**	**36**	P		Pn	15 35 18.1	-0.5
	comp=Z,1.7nm,0.6s,baz=224,slow=8.9,SNR=4.5							
	comp=Z,1.7nm,0.6s							
ILAR	**Eielson Array**	**20.03**	**36**	P		**P**	**15 35 14.9**	**-1.8**
G23K	**Bananza Creek**	**20.07**	**29**	P		**P**	**15 35 15.4**	**-1.8**
E22K	**Anaktuvuk Pass**	**20.51**	**25**	P		**P**	**15 35 21.0**	**-0.9**
E22K				IAmb		IAmb	15 35 25.2	
	comp=Z,6.2nm,1.1s							
J25K	**Salcha River,**	**20.53**	**37**	P		**P**	**15 35 21.6**	**-0.6**
SCRK	**Sand Creek**	**20.80**	**40**	P		**P**	**15 35 24.3**	**-0.9**
SCRK				IAmb		IAmb	15 35 35.1	
	comp=Z,14nm,1.0s							
J26L	**Joseph Creek**	**21.18**	**39**	P		**P**	**15 35 28.3**	**-1.0**
J26L				IAmb		IAmb	15 35 30.8	
	comp=Z,9.2nm,0.7s							
BMAR	**Burnt Mountain**	**22.22**	**31**	P		**P**	**15 35 39.5**	**-0.8**
I28M	**Miner Creek**	**22.98**	**38**	P		**P**	**15 35 47.7**	**-0.7**
I28M				IAmb		IAmb	15 36 13.1	
	comp=Z,16nm,1.4s							
K29M	**Barlow Dome**	**23.45**	**43**	P		**P**	**15 35 52.4**	**-0.8**
K29M				IAmb		IAmb	15 36 01.6	
	comp=Z,8.0nm,1.1s							
I30M	**Mount Dempster**	**24.31**	**40**	P		**P**	**15 35 59.4**	**-2.0**
I30M				IAmb		IAmb	15 36 09.8	
	comp=Z,7.8nm,0.9s							
E29M	**Blow River**	**24.90**	**32**	P		**P**	**15 36 05.1**	**-1.4**
E29M				IAmb		IAmb	15 36 10.6	
	comp=Z,4.2nm,0.9s							
EDM	**Edmonton**	**36.86**	**62**	P		**P**	**15 37 52.0**	**-0.1**
JGF	**Kuroka**	**37.25**	**264**	P		**P**	**15 37 54.4**	**-1.2**
BOZ	**Bozeman (W)**	**41.32**	**72**	P		**P**	**15 38 26.4**	**-3.2**
BOZ				IAmb		IAmb	15 38 58.0	
	comp=Z,4.1nm,1.3s							
FFC	**Flin Flon**	**42.37**	**55**	P		**P**	**15 38 35.3**	**-2.5**
FFC				IAmb		IAmb	15 38 52.8	
	comp=Z,4.5nm,1.1s							
BW06	**Boulder Array**	**44.11**	**74**	P		**P**	**15 38 54.7**	**+2.3**
BW06				IAmb		IAmb	15 39 24.9	
	comp=Z,5.1nm,1.3s							
PDAR	**Pinedale Array**	**44.11**	**74**	P		**P**	**15 38 54.2**	**+1.8**
FCC	**Fort Churchill**	**44.43**	**47**	P		**P**	**15 38 55.6**	**+1.2**
SPITS	**Spitsbergen Ar**	**50.83**	**357**	P		**P**	**15 39 44.5**	**+0.6**
	comp=Z,6.6nm,0.8s,baz=70,slow=8.2,SNR=4.5							
	comp=Z,6.6nm,0.8s							
LZDM	**Lanzhou Array**	**57.93**	**289**	P		**P**	**15 40 38.2**	**+1.7**
	comp=Z,0.6nm,0.4s,baz=75,slow=1.6,SNR=3.6							
	comp=Z,0.6nm,0.4s							
KURK	**Kurchatov**	**60.94**	**316**	P		**P**	**15 40 57.6**	**+1.0**
KURBB	**Kurchatov Arra**	**61.05**	**316**	P		**P**	**15 40 58.6**	**+1.3**
	comp=Z,2.5nm,0.5s,baz=44,slow=6.5,SNR=14							
	comp=Z,2.5nm,0.5s							
MKAR	**Makanchi Array**	**62.08**	**311**	P		**P**	**15 41 05.2**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=46,slow=6.5,SNR=9.1							
	comp=Z,0.9nm,0.3s							
BVAR	**Borovoye Array**	**62.64**	**322**	P		**P**	**15 41 10.2**	**+2.1**
	comp=Z,2.4nm,0.4s,baz=51,slow=6.2,SNR=6.6							
	comp=Z,2.4nm,0.4s							
AAK	**Ala-Archa**	**68.87**	**312**	P		**P**	**15 41 50.9**	**+2.3**
	comp=Z,1.5nm,0.4s,baz=93,slow=4.8,SNR=4.7							
	comp=Z,1.5nm,0.4s							
AAK	**Ala-Archa**	**68.87**	**312**	IAmb		IAmb	15 41 51.6	
	comp=Z,2.3nm,0.8s							
HFS	**Hagfors**	**68.93**	**355**	P		**P**	**15 41 48.7**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=306,slow=1.2,SNR=5.2							
	comp=Z,2.1nm,0.7s							
BOSA	**Boshof**	**152.88**	**318**	PKPbc		**PKiKP**	**15 50 41.6**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=30,slow=1.6,SNR=4.3							

*IDC **13** 15:38:41.7±1.3,51°.26N×174°.80W,h0km,mb4.2/18, mbtmp4.1/20,ML3.7/2,Error ellipse: s-maj=36.1km s-min=16.6km az=166.0*
*NEIC **13** 15:38:43.9±2.0,51°.18N±0°.05×174°.94W±0°.05,h10km±1km, mb4.2/82,ML4.3/10,ML3.8(AEIC),Error ellipse: s-maj=8.3km s-min=5.2km az=179.0*
*AEIC **13** 15:38:46.0±2.5,51°.26N±0°.04×175°.00W±0°.03,h10km±4km, Error ellipse: s-maj=6.5km s-min=1.7km az=161.0*
ISC 13 15:38:44.3±1.9,51°.18N±0°.07×174°.96W±0°.04, h14km±10km,n147,σ1$23/134,mb4.2/36,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**1.01**	**324**		**Pb**	**15 39 03.9**	**+0.4**
GSIG					**Sb**	**15 39 17.4**	**+0.8**
GSMY	**Great Sitkin M**	**1.10**	**322**		**Pg**	**15 39 05.3**	**-0.2**
GSMY					**Sb**	**15 39 20.2**	**+0.8**
GSCK	**Great Sitkin C**	**1.12**	**318**		**Pn**	**15 39 05.8**	**+0.3**
GSCK					**Sb**	**15 39 20.6**	**+0.7**
ATKA	**Atka Island**	**1.13**	**25**		**Pg**	**15 39 05.5**	**-0.5**
ATKA				Sn	**Sb**	**15 39 19.9**	**-0.1**
ATKA				IAML		15 39 21.4	
	comp=N,5μm,0.6s						
ATKA				IAML		15 39 21.5	
	comp=E,5μm,0.5s						
ETKA	**Kagalaska Isla**	**1.13**	**308**		**Pb**	**15 39 05.6**	**0.0**
ETKA					**Sb**	**15 39 20.4**	**+0.1**
GSTR	**Great Sitkin T**	**1.14**	**323**		**Pb**	**15 39 05.1**	**-0.7**
GSTR				Sn	**Sg**	**15 39 21.4**	**+0.1**
GSTR				IAML		15 39 27.1	
	comp=E,9μm,0.5s						
GSTD	**Great Sitkin T**	**1.15**	**320**		**Pg**	**15 39 06.1**	**-0.3**
GSSP	**Great Sitkin S**	**1.19**	**321**		**Pg**	**15 39 06.8**	**-0.3**
KOFP	**Korovin Flat P**	**1.22**	**26**		**Pg**	**15 39 07.6**	**-0.2**
KOFP					**Sn**	**15 39 24.0**	**+0.7**
KOKL	**Mount Kliuchef**	**1.24**	**22**		**Pg**	**15 39 07.9**	**-0.2**
ADK	**Adak**	**1.29**	**304**		**Pn**	**15 39 07.6**	**-0.2**
ADK				Sn	**Sb**	**15 39 24.0**	**-0.6**
KIRH	**Kanaga Island**	**1.52**	**299**		**Pb**	**15 39 11.9**	**-0.3**
KIRH					**Sb**	**15 39 31.4**	**+0.2**
KIWB	**Kanaga Island**	**1.53**	**297**		**Pn**	**15 39 11.6**	**+0.5**
KIWB				Sn	**Sn**	**15 39 30.1**	**-0.7**
KIWB				IAML		15 39 36.2	
	comp=E,3μm,0.6s						
KIWB				IAML		15 39 43.2	
	comp=N,3μm,0.5s						
TAFL	**Tanaga Flats**	**1.93**	**289**		**Pn**	**15 39 17.7**	**+1.1**
TASE	**Tanaga Southea**	**2.03**	**290**		**Pn**	**15 39 19.6**	**+1.5**
GANE	**Gareloi Northe**	**2.47**	**286**		**Pn**	**15 39 25.6**	**+1.5**
GANO	**Gareloi North**	**2.49**	**286**		**Pn**	**15 39 26.0**	**+1.6**
CLES	**Cleveland East**	**3.53**	**60**	Pn	**Pn**	**15 39 39.8**	**+1.2**
CLES				IAML		15 41 12.9	
	comp=E,762nm,2.0s						
MREP	**Makushin Rep't**	**5.66**	**59**		**Pn**	**15 40 10.1**	**+2.1**
UNV	**Unalaska Valle**	**5.81**	**59**	Pn	**Pn**	**15 40 11.1**	**+1.2**
LVA	**Lava Point**	**6.19**	**58**	Pn	**Pn**	**15 40 16.5**	**+1.3**
P08K	**Saint George I**	**6.30**	**28**	Pn	**Pn**	**15 40 15.7**	**-0.9**
SPIA	**Saint Paul Isl**	**6.61**	**23**	Pn	**Pn**	**15 40 21.3**	**+0.4**
DOL	**Dolgoi Island**	**8.81**	**58**		**Pn**	**15 40 52.6**	**+1.6**
HAG	**Hague Volcano**	**8.85**	**57**		**Pn**	**15 40 55.2**	**+3.6**
SDPT	**Sand Point**	**9.62**	**59**	Pn	**Pn**	**15 41 02.6**	**+0.4**
M11K	**Mekoryuk**	**10.45**	**25**		**Pn**	**15 41 16.7**	**+3.3**
O14K	**Tigyukauivet M**	**11.23**	**39**	Pn	**Pn**	**15 41 27.0**	**+2.9**
N14K	**Kuskokwak Cree**	**11.52**	**35**		**Pn**	**15 41 31.5**	**+3.4**
N15K	**Kwethluk River**	**12.28**	**37**		**Pn**	**15 41 41.6**	**+3.1**
PLK4	**Peulik 4**	**12.59**	**52**	Pn	**Pn**	**15 41 43.9**	**+1.0**
GAMB	**Gambell**	**12.75**	**7**	Pn	**Pn**	**15 41 45.0**	**+0.2**
K15K	**Wolf Creek Mou**	**13.32**	**28**		**Pn**	**15 41 56.3**	**+3.7**
L16K	**Owhat River**	**13.54**	**33**		**Pn**	**15 41 59.8**	**+4.1**
ANM	**Nome**	**14.33**	**17**		**Pn**	**15 42 07.0**	**+0.6**
KDAK	**Kodiak Island**	**14.54**	**54**	Pn	**Pn**	**15 42 06.4**	**-3.0**
	comp=E,0.9nm,0.3s,baz=188,slow=3.9,SNR=13						
KDAK	**Kodiak Island**	**14.54**	**54**	Pn	**Pn**	**15 42 06.7**	**-2.7**
TNA	**Tin City**	**14.87**	**11**		**Pn**	**15 42 13.6**	**-0.2**
F15K	**North Star Dit**	**15.50**	**16**	IAmb	IAmb	15 42 33.5	
	comp=Z,16nm,1.5s						
CNPM	**China Poot**	**15.79**	**49**	Pn	**Pn**	**15 42 24.7**	**-1.3**
CNPM				IAmb	IAmb	15 42 42.5	
	comp=Z,52nm,1.4s						
H17K	**Granite Mounta**	**15.85**	**24**		**Pn**	**15 42 28.4**	**+1.7**
H18K	**Honhosa River**	**16.43**	**25**		**Pn**	**15 42 34.3**	**+0.2**
SLKM	**Skilak Lake**	**16.64**	**46**		**Pn**	**15 42 35.8**	**-1.0**
F17K	**Baldwin Pennin**	**16.80**	**19**		**Pn**	**15 42 39.4**	**+0.7**
F17K				IAmb	IAmb	15 42 49.4	
	comp=Z,16nm,1.4s						
PETK	**Petropavlovsk-**	**16.86**	**287**	Pn	**Pn**	**15 42 39.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=93,slow=12,SNR=14						
	comp=Z,1.1nm,0.7s						
PPLA	**Purkeypile**	**16.94**	**37**		**Pn**	**15 42 41.5**	**+0.8**
PPLA				IAmb	IAmb	15 43 00.6	
	comp=Z,19nm,1.4s						
C16K	**Lisburne Hills**	**17.78**	**12**	P	**Pn**	**15 42 51.3**	**+0.4**
BPAW	**Bear Paw Mtn.**	**18.06**	**35**		**P**	**15 42 56.0**	**+1.1**
BPAW				IAmb	IAmb	15 43 08.2	
	comp=Z,15nm,1.4s						
H21K	**Melozitna Rive**	**18.41**	**30**	P	**Pn**	**15 42 59.2**	**+0.4**
BILL	**Bilibino**	**19.24**	**338**		**P**	**15 43 08.3**	**+0.6**
BILL				IAmb	IAmb	15 43 09.5	
	comp=Z,6.4nm,0.7s						
I23K	**Minto, Yukon-K**	**19.24**	**34**	P	**P**	**15 43 06.6**	**-1.1**
I23K				IAmb	IAmb	15 43 12.5	
	comp=Z,11nm,1.1s						
WRH	**Wood River Hil**	**19.33**	**36**		**P**	**15 43 07.4**	**-1.3**
C19K	**Lookout Ridge**	**19.43**	**17**	IAmb	IAmb	15 43 19.9	
	comp=Z,20nm,1.3s						
CCB	**Clear Creek Bu**	**19.53**	**36**		**P**	**15 43 09.7**	**-1.2**
D20K	**Etivluk River**	**19.68**	**20**	IAmb	IAmb	15 43 16.2	
	comp=Z,7.5nm,0.7s						
HDA	**Harding Lake**	**19.73**	**37**	P	**P**	**15 43 13.0**	**-0.1**
HDA				IAmb	IAmb	15 43 14.9	
	comp=Z,9.9nm,0.6s						
K24K	**Donnelly Dome**	**19.91**	**39**	P	**P**	**15 43 15.0**	**-0.1**
K24K				IAmb	IAmb	15 43 24.2	
	comp=Z,33nm,1.4s						
ILAR	**Eielson Array**	**19.93**	**36**	P	**P**	**15 43 13.6**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=232,slow=9.2,SNR=38						
	comp=Z,2.3nm,0.6s						
G23K	**Bananza Creek**	**19.96**	**29**	IAmb	IAmb	15 43 17.8	
	comp=Z,8.1nm,0.9s						
H24K	**Noodor Dome**	**20.14**	**33**	IAmb	IAmb	15 43 23.1	
	comp=Z,5.9nm,0.8s						
COLD	**Coldfoot**	**20.23**	**28**		**P**	**15 43 18.6**	**0.0**
COLD				IAmb	IAmb	15 43 20.8	
	comp=Z,9.3nm,1.2s						
E22K	**Anaktuvuk Pass**	**20.40**	**25**	P	**P**	**15 43 19.8**	**-0.6**
J25K	**Salcha River,**	**20.43**	**38**	IAmb	IAmb	15 43 22.1	
	comp=Z,12nm,0.6s						
SCRK	**Sand Creek**	**20.70**	**40**		**P**	**15 43 22.4**	**-1.4**
SCRK				IAmb	IAmb	15 43 24.4	
	comp=Z,14nm,0.7s						
SEY	**Seymchan**	**21.03**	**317**	P	**P**	**15 43 27.1**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=115,slow=13,SNR=5.3						
J26L	**Joseph Creek**	**21.08**	**39**	IAmb	IAmb	15 43 28.4	
	comp=Z,13nm,0.6s						
D24K	**Happy Valley**	**21.90**	**25**	P	**P**	**15 43 37.1**	**+0.6**
D24K				IAmb	IAmb	15 43 39.1	
	comp=Z,7.0nm,0.7s						
E25K	**Arctic Village**	**22.18**	**29**	IAmb	IAmb	15 43 40.9	
	comp=Z,6.8nm,1.2s						
D25K	**Kavik River**	**22.67**	**26**	IAmb	IAmb	15 43 46.1	
	comp=Z,6.3nm,1.0s						
J30M	**Hart River**	**24.05**	**41**	IAmb	IAmb	15 44 36.0	
	comp=Z,9.0nm,1.4s						
I30M	**Mount Dempster**	**24.21**	**40**	P	**P**	**15 43 58.5**	**-1.7**
I30M				IAmb	IAmb	15 44 07.0	
	comp=Z,4.3nm,0.9s						
E29M	**Blow River**	**24.79**	**32**	IAmb	IAmb	15 44 08.6	
	comp=Z,4.6nm,0.9s						
INK	**Inuvik**	**26.26**	**34**	P	**P**	**15 44 17.8**	**-0.7**
INK				IAmb	IAmb	15 44 20.4	
	comp=Z,4.4nm,1.3s						
HG4B	**Hotspring**	**26.82**	**70**	P	**P**	**15 44 22.6**	**-1.2**
JKA	**Kamikawa-asahi**	**29.12**	**273**	P	**P**	**15 44 43.8**	**-0.6**
ASAJ	**Asahikawa**	**29.12**	**273**	P	**P**	**15 44 45.0**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=70,slow=13,SNR=4.7						
	comp=Z,1.9nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**34.49**	**211**	T	T	16 22 46.5	
	baz=19,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**34.50**	**211**	T	T	16 22 47.0	
	baz=19,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**34.51**	**211**	T	T	16 22 46.8	
	baz=19,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**35.70**	**211**	T	T	16 24 45.2	
	baz=20,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**35.71**	**211**	T	T	16 24 44.6	
	baz=20,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**35.72**	**211**	T	T	16 24 51.5	
	baz=20,slow=75,SNR=8.7						
MJAR	**Matsushiro Arr**	**36.16**	**265**	P	**P**	**15 45 45.3**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=40,slow=8.4,SNR=4.3						
	comp=Z,1.2nm,0.6s						
MJAR	**Matsushiro Arr**	**36.16**	**265**	IAmb	IAmb	15 46 06.8	
	comp=Z,5.1nm,1.2s						
EDM	**Edmonton**	**36.79**	**62**		**P**	**15 45 52.2**	**+1.0**
BCYI	**Bear Canyon**	**40.87**	**75**	P	**P**	**15 46 25.7**	**0.0**
MCMT	**McKenzie Canyo**	**40.93**	**74**	P	**P**	**15 46 25.8**	**-0.5**
BOZ	**Bozeman (W)**	**41.26**	**72**	P	**P**	**15 46 26.7**	**-2.2**
KSRS	**Korea Array**	**42.06**	**274**	P	**P**	**15 46 36.4**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=46,slow=11,SNR=6.3						
	comp=Z,1.3nm,0.8s						
YHH	**Holmes Hill**	**42.16**	**73**	P	**P**	**15 46 37.6**	**+1.2**
BW06	**Boulder Array**	**44.05**	**74**	P	**P**	**15 46 51.8**	**+0.1**
BW06				IAmb	IAmb	15 47 17.4	
	comp=Z,2.6nm,1.0s						
PD31	**Pinedale Array**	**44.05**	**74**	P	**P**	**15 46 52.0**	**+0.3**
PD31				IAmb	IAmb	15 46 59.7	
	comp=Z,4.2nm,1.3s						
PDAR	**Pinedale Array**	**44.05**	**74**	P	**P**	**15 46 50.4**	**-1.3**
	comp=Z,2.5nm,1.1s,baz=311,slow=8.4,SNR=7.0						
	comp=Z,2.5nm,1.1s						
PDAR	**Pinedale Array**	**44.05**	**74**	P	**P**	**15 46 51.7**	**0.0**
FCC	**Fort Churchill**	**44.34**	**47**	P	**P**	**15 46 53.5**	**+0.1**
FCC				IAmb	IAmb	15 46 55.2	
	comp=Z,3.8nm,1.3s						
HMU	**Henry Mountain**	**46.19**	**81**	P	**P**	**15 47 07.3**	**-1.5**
HMU				IAmb	IAmb	15 47 46.6	
	comp=Z,2.1nm,0.8s						
PV13	**Radium Mtn., P**	**47.25**	**79**	P	**P**	**15 47 16.5**	**-0.5**
PV13				IAmb	IAmb	15 47 29.2	
	comp=Z,2.5nm,0.7s						
ULM	**Lac du Bonnet**	**47.75**	**58**	P	**P**	**15 47 18.7**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=305,slow=7.6,SNR=2.7						
	comp=Z,1.3nm,0.3s						
ULM	**Lac du Bonnet**	**47.75**	**58**	IAmb	IAmb	15 47 21.6	
	comp=Z,10nm,1.3s						
BJT	**Baijiatuau**	**47.78**	**285**	P	**P**	**15 47 21.9**	**+1.0**
SONM	**Songino Array**	**48.88**	**299**	P	**P**	**15 47 28.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=55,slow=9.0,SNR=3.4						
	comp=Z,0.5nm,0.5s						
EPLO	**Experimental L**	**49.23**	**58**	P	**P**	**15 47 31.7**	**-0.1**
EPLO				IAmb	IAmb	15 47 36.1	
	comp=Z,3.8nm,1.0s						
SPITS	**Spitsbergen Ar**	**50.72**	**357**	P	**P**	**15 47 42.2**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=52,slow=6.8,SNR=12						
	comp=Z,2.9nm,0.6s						
SPB2	**Spitsbergen Ar**	**50.72**	**357

KOWE				Sb	15 40 34.9	-0.2
KOKV	**Korovin Volcan**	**1.38**	**22**	Pg	15 40 19.8	+1.3
KIWB	**Kanaga Island**	**1.56**	**300**	Sn	15 40 40.1	+0.1
KIWB	**Kanaga Island**	**1.56**	**300**	Pn Pb	15 40 20.7	-0.2
KIWB				IAML	15 40 50.8	
	comp=N,768nm,0.5s					
UNV	**Unalaska Valle**	**5.88**	**59**	Pn Pn	15 41 16.4	-2.7

ASRS ***13*** *15:41:29.6±0.1, 52°.9N±0°.8×88°.1E±0°.9, h5km, MLh3.9/19, Error ellipse: s-maj=2.1km s-min=1.7km az=62.9, confirmed*

IDC ***13*** *15:41:33.5±1.3, 52°.97N×87°.94E, h0km, mb3.8/3, mbtmp3.8/7, ML3.4/3, Error ellipse: s-maj=16.1km s-min=12.0km az=107.0*

NNC ***13*** *15:41:37.0±1.7, 52°.79N×87°.62E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=14.9km s-min=6.2km az=81.0, Suspected Mining explosion.*

ISC 13 15:41:31.9±0.6, 52°.96N±0°.02×88°.10E±0°.02, h0km, n40, σ1s 53/70, mb3.8/3, 5C-20D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
KALT1	**Kaltan 1**	**0.61**	**319**	⇓Pg		**Pb**		**15 41 44.2**	**-1.4**
KALT1						Sg		**15 41 53.2**	**-1.5**
KIYZ	**Kiyzas, Kuzbas**	**0.64**	**342**	⇓Pg		**Pb**		**15 41 44.9**	**-1.1**
KIYZ						Sg		**15 41 54.6**	**-0.8**
KALT2	**Kaltan 2**	**0.65**	**314**	⇓Pg		**Pb**		**15 41 45.6**	**-0.5**
KALT2						Sg		**15 41 54.6**	**-1.0**
MALIN	**Malinovka, Kuz**	**0.68**	**314**			Pg		**15 41 45.1**	**+0.2**
MALIN						Sg		**15 41 54.6**	**+0.9**
KALT3	**Kaltan 3**	**0.69**	**325**	⇓Pg		**Pb**		**15 41 45.6**	**-1.2**
KALT3						Sg		**15 41 55.3**	**-1.4**
YALR	**Yailyu, Altay**	**1.22**	**194**	⇓Pg		**Pg**		**15 41 53.6**	**-1.7**
YALR						Sg		**15 42 11.1**	**-0.1**
ARTR	**Artybash**	**1.26**	**204**	⇓Pg		**Pg**		**15 41 54.5**	**-1.6**
ARTR						Sg		**15 42 11.3**	**-1.1**
VEH	**Verkhnyaya Baz**	**1.37**	**77**	Pg		**Pb**		**15 41 58.4**	**-0.2**
VEH						Sg		**15 42 18.4**	**+1.1**
BJR3	**Bachatsky-3 (S**	**1.72**	**319**	⇓Pg		**Pb**		**15 42 03.8**	**-0.6**
BJR3						Sg		**15 42 27.8**	**+0.7**
BJR1	**Bachatsky 1, K**	**1.78**	**317**	⇓Pg		**Pb**		**15 42 04.5**	**-0.9**
BJR1						Sg		**15 42 28.3**	**-0.6**
DJO	**Djoy, Khakassi**	**1.90**	**94**	Pg		**Pg**		**15 42 07.5**	**-0.8**
DJO						Sg		**15 42 34.0**	**+1.1**
CERR	**Cheremushki**	**2.01**	**92**	Pg		**Pg**		**15 42 09.4**	**-1.1**
CERR						Sg		**15 42 36.5**	**0.0**
SALR	**Pechorkino, Sa**	**2.04**	**317**	⇓Pg		**Pb**		**15 42 08.8**	**-1.0**
SALR						Sg		**15 42 36.5**	**-1.0**
ZAA0	**Zalesovo Array**	**2.20**	**298**	⇓Pn		**Pb**		**15 42 11.5**	**-1.0**
	33nm,0.4s								
ZAA0				⇑Sn		**Sb**		**15 42 40.2**	**0.0**
	220nm,0.9s								
ZALV	**Zalesovo Beam**	**2.20**	**298**	Pn		**Pb**		**15 42 11.4**	**-1.1**
	23nm,0.3s,baz=116,slow=16,SNR=390								
ZALV				Lg		Lg		15 42 40.1	
	46nm,0.3s,baz=120,slow=26,SNR=55								
	89nm,0.4s								
TEL	**Teeli**	**2.33**	**145**	Pg		**Pb**		**15 42 14.1**	**-0.7**
TEL				Sg		**Sb**		**15 42 43.6**	**-0.6**
KEM	**Kemerovo**	**2.67**	**335**	Pg		**Pb**		**15 42 19.3**	**-1.2**
KEM				Sg		**Sb**		**15 42 56.6**	**-0.9**
CHBI	**Chibit, Altay**	**2.67**	**188**	⇓Pg		**Pb**		**15 42 19.4**	**-1.2**
CHBI				Sg		**Sb**		**15 42 54.4**	**+0.4**
BRCR	**Berchikul'**	**2.69**	**3**	⇓Pg		**Pb**		**15 42 20.1**	**-0.8**
BRCR				Sg		**Sg**		**15 42 57.4**	**-1.0**
UKR	**Ust'-Kan**	**2.88**	**227**	Pg		**Pb**		**15 42 23.7**	**-0.5**
UKR				Sg		**Sb**		**15 43 01.6**	**+1.6**
TUNR	**Tungur**	**3.01**	**202**	Pg		**Pb**		**15 42 26.2**	**-0.2**
TUNR				Sg		**Sb**		**15 43 05.0**	**+1.4**
KHAR	**Kharino, NSO,**	**3.15**	**304**	Sg		**Sb**		**15 43 08.1**	**+0.5**
DGZ	**Jazzator, Alta**	**3.29**	**188**	Pg		**Pb**		**15 42 29.5**	**-1.7**
DGZ				Sg		**Sb**		**15 43 12.6**	**+0.9**
NVSII	**Novosibirsk**	**3.44**	**305**	Pg		**Pb**		**15 42 31.8**	**-1.9**
NVSII				Sg		**Sb**		**15 43 17.4**	**+1.4**
GZLN	**Zheleznogorsk**	**4.76**	**42**	Pn		**Pn**		**15 42 48.0**	**+3.2**
GZLN				Pg		**Pg**		**15 43 00.1**	**-2.9**
GZLN				Sg		**Sg**		**15 44 07.0**	**+2.4**
TDJR	**Todzha**	**4.90**	**93**	Pn		Pn		15 42 51.0	+4.1
TDJR				Sg		**Sg**		**15 44 06.0**	**-3.3**
KURK	**Kurchatov**	**6.29**	**253**	⇓Pn		**Pn**		**15 43 06.6**	**+0.8**
	0.9nm,0.7s								
KURK				⇓Sn		**Sn**		**15 44 15.1**	**-3.2**
	3.0nm,0.6s								
KURK				⇑Lg		Lg		15 44 46.7	
	23nm,1.0s								
KNGR	**Kungurtug, Tuv**	**6.30**	**108**	Pg		**Pg**		**15 43 32.2**	**-0.4**
KNGR				Sg		**Sg**		**15 44 50.1**	**-4.1**
KURBB	**Kurchatov Arra**	**6.38**	**252**	Pn		**Pn**		**15 43 08.5**	**+1.4**
	0.2nm,0.3s,baz=66,slow=16,SNR=20								
KURBB				Sn		**Sn**		**15 44 18.2**	**-2.3**
	0.3nm,0.3s,baz=64,slow=15,SNR=6.8								
KURBB				Lg		Lg		15 44 48.6	
	0.4nm,0.3s,baz=66,slow=36,SNR=6.0								
	2.4nm,0.6s								
KURBB	**Kurchatov Arra**	**6.38**	**252**	⇓Pn		**Pn**		**15 43 08.0**	**+1.0**
	3.4nm,0.6s								
KURBB				⇓Sn		**Sn**		**15 44 18.1**	**-2.5**
	18nm,0.6s								
KURBB				⇓Lg		Lg		15 44 49.2	
	98nm,1.1s								
MK31	**Makanchi Array**	**7.22**	**214**	⇓Pn		**Pn**		**15 43 21.0**	**+2.4**
	3.1nm,0.3s,baz=31,slow=13,SNR=557								
MK31				⇓Sn		**Sn**		**15 44 40.9**	**-0.4**
	14nm,0.7s,baz=36,slow=25,SNR=15								
MK31				⇑Lg		Lg		15 45 15.5	
	34nm,1.1s,baz=35,slow=27,SNR=5.4								
MKAR	**Makanchi Array**	**7.22**	**214**	Pn		**Pn**		**15 43 21.0**	**+2.4**
	5.0nm,0.3s,baz=30,slow=13,SNR=403								
MKAR				Sn		**Sn**		**15 44 41.5**	**+0.3**
	1.5nm,0.3s,baz=34,slow=25,SNR=19								
MKAR				Lg		Lg		15 45 15.6	
	0.4nm,0.3s,baz=45,slow=30,SNR=1.6								
	15nm,0.4s								
MAKZ	**Makanchi**	**7.31**	**215**	⇓Pn		**Pn**		**15 43 21.9**	**+2.0**
	11nm,0.7s								
MAKZ				⇑Sn		**Sn**		**15 44 42.9**	**-0.7**
	17nm,0.9s								
MAKZ				⇑Lg		Lg		15 45 19.0	
	29nm,1.0s								
MOY	**Mondy**	**8.01**	**94**	Pg		**Pg**		**15 44 02.2**	**-3.1**
MOY				Sg		**Sg**		**15 45 47.9**	**-1.1**
BVAR	**Borovoye Array**	**10.68**	**277**	Pn		**Pn**		**15 44 04.6**	**-1.4**
	0.4nm,0.4s,baz=84,slow=13,SNR=1.7								
BVAR				Sn		Sn		15 45 56.2	-10
	baz=266,slow=40,SNR=1.4								
SONM	**Songino Array**	**12.74**	**106**	Lg		Lg		15 48 12.7	
	baz=293,slow=30								
AAK	**Ala-Archa**	**13.76**	**227**	Lg		Lg		15 48 39.7	
	0.1nm,0.3s,baz=318,slow=24,SNR=1.2								
FINES	**FINESS Array B**	**33.42**	**310**	P		**P**		**15 48 12.1**	**+0.2**
	1.6nm,1.0s,baz=65,slow=8.1,SNR=1.0								
	1.6nm,1.0s								
HFS	**Hagfors**	**39.58**	**311**	P		**P**		**15 49 04.8**	**+0.4**
	2.4nm,0.9s,baz=60,slow=6.8,SNR=1.6								
	2.4nm,0.9s								
ILAR	**Eielson Array**	**55.21**	**25**	P		**P**		**15 51 07.3**	**+1.3**
	0.4nm,0.6s,baz=325,slow=5.9,SNR=7.2								
	0.4nm,0.6s								

MEX 13 15:50:19.7±0.8, 16°.62N×95°.53W, h98km±10km, MD3.4, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CMIG	**Matias Romero**	**0.78**	**53**	*eP*		Pn		15 50 38.4	+0.6
CMIG				*eS*		Sn		15 50 51.7	+0.5
HUIG	**Huatulco**	**1.01**	**213**	*eP*		Pn		15 50 39.3	-0.8
HUIG				*eS*		Sn		15 50 53.2	-2.2
UXUV	**UXUV**	**1.50**	**62**	*eP*		Pn		15 50 45.2	-0.6
UXUV				*eS*		Sn		15 51 03.3	-2.4

MEX 13 15:50:20.3±0.6, 16°.02N×97°.61W, h14km±7km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
PEIG	**Puerto Escondi**	**0.45**	**93**	*eP*		Pg		15 50 28.0	-1.2
PEIG				*eS*		Sg		15 50 34.4	-0.9
PNIG	**Pinotepa**	**0.62**	**306**	*eP*		Pg		15 50 30.7	-1.7
PNIG				*eS*		Sg		15 50 38.6	-2.1
YOIG	**Yosondua**	**0.83**	**4**	*eP*		Pg		15 50 33.6	-2.9
YOIG				*eS*		Sg		15 50 44.0	-3.5
TXIG	**Tlaxiaco**	**1.23**	**353**	*eP*		Pn		15 50 40.3	-3.1
TXIG				*eS*		Sb		15 50 55.2	-4.2
VHO	**Vista Hermosa**	**1.34**	**39**	*eP*		Pn		15 50 41.8	-2.9
VHO				*eS*		Sb		15 50 58.0	-4.5
VHO	**Vista Hermosa**	**1.34**	**39**	*eP*		Pn		15 50 41.4	-3.4
VHO				*eS*		Sb		15 50 58.0	-4.4
HUIG	**Huatulco**	**1.47**	**100**	*eS*		Sn		15 51 00.2	-5.2
MGIG	**Malinaltepec**	**1.55**	**321**	*eP*		Pn		15 50 45.9	-1.8
MGIG				*eS*		Sn		15 51 03.4	-4.3
CRIG	**Cruz Grande**	**1.62**	**296**	*eS*		Sn		15 51 03.5	-5.7
HLIG	**Huajuapan de L**	**1.81**	**354**	*eP*		Pn		15 50 49.2	-2.0
HLIG				*eS*		Sn		15 51 10.7	-3.4
FTIG	**Fresnillo de T**	**1.94**	**345**	*eP*		Pn		15 50 51.0	-2.0
FTIG				*eS*		Sn		15 51 15.1	-2.1
TOIG	**Toxpalan**	**2.12**	**14**	*eP*		Pn		15 50 53.8	-1.7
TOIG				*eS*		Sn		15 51 17.8	-3.9
DAIG	**Los Arroyos**	**2.19**	**297**	*eS*		Sn		15 51 19.1	-4.2

IDC ***13*** *15:57:13.7±1.7, 41°.52S×174°.16E, h0km, mb3.6/2, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=43.1km s-min=25.4km az=138.0*

NEIC ***13*** *15:57:16.6±1.7, 41°.71S±0°.04×174°.31E±0°.03, h21km±4km, mb4.5/8, Error ellipse: s-maj=5.9km s-min=2.1km az=156.0*

WEL ***13*** *15:57:16.8, 41°.66S×174°.28E, h19km, ML4.4, Mw4.1, Moment Tensor Solution. s6 Moment tensor: Scale 10^15 Nm; Mrr0.85; Mθθ0.80; Mϕϕ-1.65; Mrθ-0.28; Mθϕ-0.84; Mϕr0.22; Fault plane solution: M0 1.61000×10^15 NP1: ϕs 339.00000°, δ67.00000°, λ29.00000°. NP2: ϕs 237.00000°, δ63.00000°, λ155.00000°. Principal axes: T -1.9178, Plg37.0000°, Azm200.0000°; N 1.3055, Plg53.0000°, Azm13.0000°; P 0.6123, Plg3.0000°, Azm107.0000°; Stations used: KHZ MRZ QRZ BFZ LTZ INZ OBLIQUE-REVERSE FAULTING*

WEL ***13*** *15:57:17.1±0.4, 42°.52S±2°.×17°.4E±°, h11km±3km, M4.3/14, ML4.2/14, MLv4.3/14 Error ellipse: s-maj=3.2km s-min=2.6km az=142.0*

ISC 13 15:57:15.9±0.7, 41°.73S±0°.02×174°.37E±0°.02, h19km±2km, n203, σ1s 30/229, mb4.2/6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CMWZ	**Cape Campbell**	**0.12**	**259**				**Pg**	**15 57 20.6**	**+0.8**
CMWZ							**Sg**	**15 57 23.3**	**+0.8**
CMWZ	**Cape Campbell**	**0.12**	**259**	P			**Pg**	**15 57 20.7**	**+0.8**
CMWZ				S			**Sg**	**15 57 23.8**	**+1.3**
SDNS	**Seddon**	**0.18**	**290**	P			**Pg**	**15 57 21.0**	**+0.4**
SDNS				S			**Sg**	**15 57 24.2**	**+0.3**
WDFS	**Ward Fire Stat**	**0.20**	**239**	P			**Pg**	**15 57 22.0**	**+1.2**
WDFS				S			**Sg**	**15 57 26.0**	**+1.8**
SEDS	**Seddon Fire St**	**0.22**	**284**	P			**Pb**	**15 57 21.4**	**+0.6**
SEDS				S			**Sb**	**15 57 24.9**	**+0.7**
BSWZ	**Blackbirch Sta**	**0.37**	**272**				**Pg**	**15 57 23.7**	**+0.1**
BSWZ							**Sg**	**15 57 28.7**	**-0.1**
BSWZ	**Blackbirch Sta**	**0.37**	**272**	P			**Pg**	**15 57 23.7**	**+0.1**
BSWZ				S			**Sg**	**15 57 28.7**	**-0.1**
KEKS	**Kekerengu Vall**	**0.37**	**231**	P			**Pg**	**15 57 24.9**	**+1.0**
MGCS	**Blenheim Marlb**	**0.38**	**305**	P			**Pg**	**15 57 23.8**	**-0.1**
MGCS				S			**Sg**	**15 57 29.0**	**-0.3**
TUWZ	**Tuamarina**	**0.43**	**313**				**Pg**	**15 57 24.9**	**+0.2**
TUWZ							**Sg**	**15 57 30.0**	**-0.8**
TUWZ	**Tuamarina**	**0.43**	**313**	P			**Pg**	**15 57 25.0**	**+0.2**
TUWZ				S			**Sg**	**15 57 30.1**	**-0.6**
BWRS	**Waikakaho Road**	**0.45**	**310**	P			**Pg**	**15 57 24.9**	**-0.1**
BWRS				S			**Sg**	**15 57 30.7**	**-0.5**
SNZO	**South Karori**	**0.49**	**32**				**Pb**	**15 57 26.8**	**+1.0**
SNZO							**Sb**	**15 57 33.9**	**+1.4**
BHW	**Baring Head**	**0.49**	**50**				**Pn**	**15 57 27.4**	**-0.5**
BHW							**Sn**	**15 57 35.5**	**-0.5**
BHW	**Baring Head**	**0.49**	**50**	P			**Pn**	**15 57 27.7**	**-0.3**
BHW				S			**Sn**	**15 57 35.9**	**-0.1**
QCCS	**Picton Queen C**	**0.52**	**330**	P			**Pb**	**15 57 25.9**	**-0.4**
QCCS				S			**Sb**	**15 57 32.0**	**-1.3**
TCW	**Tory Channel**	**0.52**	**353**				**Pb**	**15 57 26.3**	**0.0**
TCW							**Sb**	**15 57 32.6**	**-0.9**
TCW	**Tory Channel**	**0.52**	**353**	P			**Pb**	**15 57 26.3**	**0.0**
TCW				S			**Sb**	**15 57 32.9**	**-0.6**
WEL	**Wellington**	**0.54**	**35**	P			**Pn**	**15 57 27.9**	**-0.6**
MSWZ	**Moikau Station**	**0.73**	**65**				**Pn**	**15 57 32.2**	**+1.0**
MSWZ							**Sg**	**15 57 40.6**	**+0.6**
MSWZ	**Moikau Station**	**0.73**	**65**	P			**Pn**	**15 57 32.5**	**+1.3**
MSWZ				S			**Sn**	**15 57 44.9**	**+3.0**
CAW	**Cannon Point**	**0.81**	**41**	P			**Pn**	**15 57 32.7**	**+0.4**
CAW				S			**Sn**	**15 57 44.1**	**+0.3**
PAWZ	**Paruwai Farm**	**0.87**	**67**	P			**Pn**	**15 57 34.4**	**+1.3**
NNZ	**Nelson**	**0.90**	**304**				**Pb**	**15 57 32.6**	**-0.2**
NNZ							**Sb**	**15 57 43.2**	**-1.2**
NNZ	**Nelson**	**0.90**	**304**	P			**Pb**	**15 57 32.7**	**-0.2**
KHZ	**Kahutara**	**0.92**	**221**				**Pg**	**15 57 35.0**	**+1.1**
KHZ							**Sg**	**15 57 43.8**	**-1.4**
KHZ	**Kahutara**	**0.92**	**221**	P			**Pg**	**15 57 35.0**	**+1.1**
KIW	**Kapiti Island**	**0.96**	**26**	P			**Pg**	**15 57 34.8**	**+0.2**
KIW				S			**Sg**	**15 57 47.1**	**0.0**
DUWZ	**D'Urville Isla**	**0.98**	**340**	P			**Pb**	**15 57 34.2**	**-0.1**
MTW	**Mount Morrison**	**1.03**	**57**	P			**Pg**	**15 57 36.5**	**+0.7**
TRWZ	**Traveller**	**1.05**	**72**	P			**Pg**	**15 57 36.7**	**+0.5**
OGWZ	**Otaki Gorge**	**1.09**	**34**	P			**Pg**	**15 57 37.2**	**+0.2**
THZ	**Tophouse**	**1.09**	**268**				**Pn**	**15 57 36.5**	**+0.2**
THZ							**Sb**	**15 57 49.4**	**-0.7**
THZ	**Tophouse**	**1.09**	**268**	P			**Pb**	**15 57 36.6**	**+0.4**
HOWZ	**Holdsworth Sta**	**1.20**	**47**	P			**Pg**	**15 57 38.8**	**-0.3**
MRNZ	**Matariki Terra**	**1.25**	**285**				**Pb**	**15 57 38.9**	**+0.1**
MRNZ							**Sb**	**15 57 54.7**	**+0.2**
MRNZ	**Matariki Terra**	**1.25**	**285**	P			**Pb**	**15 57 39.1**	**+0.3**
TKNZ	**Takaka Hill**	**1.26**	**303**				**Pn**	**15 57 38.8**	**+0.3**
TKNZ	**Takaka Hill**	**1.26**	**303**	P			**Pn**	**15 57 39.1**	**+0.6**
TMWZ	**Te Maipa**	**1.30**	**62**	P			**Pb**	**15 57 40.0**	**+0.3**
MRZ	**Mangatainoka R**	**1.40**	**41**				**Pb**	**15 57 41.7**	**+0.3**
MRZ	**Mangatainoka R**	**1.40**	**41**	P			**Pb**	**15 57 42.0**	**+0.3**
TIWZ	**Tintock**	**1.49**	**51**	P			**Pb**	**15 57 42.5**	**-0.4**
GVZ	**Greta Valley S**	**1.58**	**218**				**Pn**	**15 57 43.7**	**+0.8**
GVZ	**Greta Valley S**	**1.58**	**218**	P			**Pn**	**15 57 43.8**	**+0.8**
CPWZ	**Castlepoint**	**1.61**	**60**	P			**Pb**	**15 57 44.3**	**-0.6**
QRZ	**Quartz Range**	**1.65**	**302**				**Pb**	**15 57 45.2**	**-0.5**
QRZ	**Quartz Range**	**1.65**	**302**	P			**Pb**	**15 57 45.4**	**-0.3**
OHWZ	**Ohakea**	**1.68**	**26**	P			**Pb**	**15 57 46.9**	**+0.7**
PRWZ	**Pori Road**	**1.69**	**47**	P			**Pn**	**15 57 45.3**	**+0.9**
POWZ	**Post Office Ro**	**1.70**	**39**	P			**Pb**	**15 57 45.7**	**-0.9**
BFZ	**Birch Farm**	**1.76**	**54**				**Pn**	**15 57 45.7**	**+0.3**
BFZ	**Birch Farm**	**1.76**	**54**	P			**Pn**	**15 57 45.6**	**+0.3**
LTZ	**Lake Taylor**	**1.88**	**235**				**Pn**	**15 57 47.7**	**+0.7**
LTZ	**Lake Taylor**	**1.88**	**235**	P			**Pn**	**15 57 47.9**	**+0.9**
DSZ	**Denniston Nort**	**1.92**	**269**				**Pn**	**15 57 48.8**	**+1.2**
DSZ	**Denniston Nort**	**1.92**	**269**	P			**Pn**	**15 57 49.2**	**+1.7**
AMCZ	**Amberley**	**1.93**	**221**				**Pn**	**15 57 47.9**	**+0.3**
AMCZ	**Amberley**	**1.93**	**221**	P			**Pn**	**15 57 48.0**	**+0.4**
DVHZ	**Dannevirke**	**1.97**	**44**	P			**Pn**	**15 57 48.6**	**+0.3**
WAZ	**Wanganui**	**2.02**	**14**	P			**Pb**	**15 57 52.5**	**+0.5**
ANWZ	**Angora Road**	**2.04**	**52**	P			**Pg**	**15 57 56.1**	**+1.1**
TSZ	**Takapari Road**	**2.06**	**37**	P			**Pn**	**15 57 50.4**	**+0.9**
OKCZ	**Okains Bay**	**2.22**	**205**	P			**Pn**	**15 57 51.6**	**0.0**
PRHZ	**Porangahau**	**2.25**	**50**	P			**Pn**	**15 57 52.2**	**+0.1**
LREZ	**Lake Rotokare**	**2.26**	**1**	P			**Pb**	**15 57 55.8**	**-0.3**
PNHZ	**Pukenui**	**2.28**	**38**	P			**Pn**	**15 57 53.1**	**+0.5**
WPHZ	**Waipukurau**	**2.29**	**44**	P			**Pn**	**15 57 53.1**	**+0.5**
NMEZ	**Namu Road**	**2.34**	**351**	P			**Pb**	**15 57 57.3**	**-0.1**
MQZ	**McQueen's Vall**	**2.35**	**212**				**Pn**	**15 57 52.5**	**-0.9**
MQZ	**McQueen's Vall**	**2.35**	**212**	P			**Pn**	**15 57 52.6**	**-0.7**
OXZ	**Oxford**	**2.35**	**226**				**Pn**	**15 57 52.9**	**-0.5**
OXZ	**Oxford**	**2.35**	**226**	P			**Pn**	**15 57 53.1**	**-0.4**
PREZ	**Palmer Road**	**2.39**	**356**	P			**Pb**	**15 57 57.5**	**-0.8**
INZ	**Inchbonnie**	**2.39**	**244**				**Pn**	**15 57 54.3**	**+0.4**
INZ	**Inchbonnie**	**2.39**	**244**	P			**Pn**	**15 57 54.8**	**+0.9**
AKCZ	**Akaroa Harbour**	**2.40**	**206**	P			**Pn**	**15 57 53.9**	**-0.2**
KHEZ	**Kahui Hut**	**2.44**	**354**	P			**Pn**	**15 57 57.9**	**-1.3**
NBEZ	**Newall Road No**	**2.48**	**351**	P			**Pb**	**15 57 58.1**	**-1.8**
MTVZ	**Mangateitei**	**2.49**	**20**	P			**Pn**	**15 57 57.8**	**+2.4**
DREZ	**Durham Road**	**2.54**	**357**	P			**Pb**	**15 57 59.2**	**-1.6**
PXZ	**Pawanui**	**2.54**	**49**	P			**Pn**	**15 57 55.6**	**-0.4**
PKE	**Pukeiti**	**2.55**	**353**	P			**Pn**	**15 57 58.7**	**+2.5**
MOVZ	**Moawhango**	**2.55**	**25**	P			**Pn**	**15 57 57.7**	**+1.4**
PKVZ	**Pokaka**	**2.55**	**17**	P			**Pn**	**15 57 58.6**	**+2.4**
WNVZ	**Wahianoa**	**2.57**	**22**	P			**Pn**	**15 57 58.7**	**+2.0**
KRHZ	**Kereru**	**2.58**	**37**	P			**Pn**	**15 57 57.0**	**+0.3**
RACZ	**Rakaia**	**2.59**	**219**	P			**Pn**	**15 57 56.1**	**-0.5**
TRVZ	**Turoa**	**2.59**	**21**	P			**Pn**	**15 57 59.3**	**+2.3**
WHVZ	**Whangaehu Hut**	**2.61**	**21**	P			**Pn**	**15 57 59.8**	**+2.5**
VRZ	**Vera Road**	**2.62**	**7**	P			**Pb**	**15 57 59.9**	**-2.2**
MAVZ	**Matarangi**	**2.62**	**21**	P			**Pb**	**15 58 00.4**	**-1.9**
FWVZ	**Far West T-bar**	**2.63**	**21**	P			**Pn**	**15 57 59.8**	**+2.3**
TUVZ	**Tukino**	**2.65**	**22**	P			**Pn**	**15 57 59.8**	**+2.1**
MHEZ	**Mangahewa**	**2.65**	**359**	P			**Pb**	**15 58 02.8**	**+0.1**
COVZ	**Chateau Observ**	**2.68**	**20**	P			**Pn**	**15 58 00.7**	**+2.6**
KAHZ	**Kahuranaki**	**2.71**	**45**	P			**Pn**	**15 57 58.3**	**-0.2**
NGZ	**Ngauruhoe**	**2.72**	**21**	P			**Pn**	**15 58 01.0**	**+2.3**
SNVZ	**South Ngauruho**	**2.72**	**21**	P			**Pn**	**15 58 00.9**	**+2.3**
MHCZ	**Mount Hutt**	**2.74**	**228**	P			**Pn**	**15 57 58.3**	**-0.6**
OTVZ	**Oturere**	**2.75**	**22**	P			**Pn**	**15 58 01.1**	**+2.1**
NNVZ	**North Ngauruho**	**2.76**	**21**	P			**Pn**	**15 58 01.5**	**+2.2**
WTVZ	**West Tongariro**	**2.77**	**20**	P			**Pn**	**15 58 01.8**	**+2.5**
TWVZ	**Taurewa**	**2.78**	**18**	P			**Pb**	**15 58 05.4**	**+0.5**
KWHZ	**Kaweka Forest**	**2.78**	**35**	P			**Pn**	**15 57 59.7**	**+0.3**
ETVZ	**East Tongariro**	**2.78**	**22**	P			**Pn**	**15 58 01.6**	**+2.0**
TMVZ	**Te Maari**	**2.80**	**22**	P			**Pn**	**15 58 01.6**	**+1.8**
KRVZ	**Karewarewa**	**2.80**	**21**	P			**Pn**	**15 58 02.2**	**+2.4**
NTVZ	**North Tongariro**	**2.81**	**21**	P			**Pn**	**15 58 01.7**	**+1.8**
MCHZ	**McNeill Hill**	**2.89**	**39**	P			**Pn**	**15 58 01.0**	**+0.2**
WACZ	**Wakanui South**	**2.89**	**219**	P			**Pn**	**15 58 00.3**	**-0.6**
KATZ	**Kakaramea**	**2.93**	**21**	P			**Pb**	**15 58 05.7**	**-1.9**
RITZ	**Rihia Road**	**2.97**	**23**	P			**Pb**	**15 58 08.8**	**+0.6**
WVZ	**Waitaha Valley**	**3.01**	**242**	P			**Pn**	**15 58 03.0**	**+0.6**
BKZ	**Black Stump Fm**	**3.03**	**33**				**Pn**	**15 58 02.7**	**-0.1**
BKZ	**Black Stump Fm**	**3.03**	**33**	P			**Pn**	**15 58 02.9**	**+0.1**
RATZ	**Rangitukua**	**3.05**	**21**	P			**Pb**	**15 58 09.5**	**-0.1**
HATZ	**Hinemaiaia**	**3.12**	**26**	P			**Pb**	**15 58 12.4**	**+1.5**
RPZ	**Rata Peaks**	**3.15**	**230**	Pn			**Pn**	**15 58 04.3**	**-0.1**
	17nm,0.3s,baz=96,slow=0.4,SNR=75								
RPZ				Sn			**Sn**	**15 58 40.2**	**-1.2**
	18nm,0.3s,baz=185,slow=23,SNR=4.3								
	41nm,0.3s								
RPZ	**Rata Peaks**	**3.15**	**230**				**Pn**	**15 58 04.1**	**-0.4**
RPZ	**Rata Peaks**	**3.15**	**230**	P			**Pn**	**15 58 04.3**	**-0.1**
ARHZ	**Aropaoanui**	**3.17**	**40**	P			**Pn**	**15 58 05.

SHEM	**Shemya Is, Ala**	**1.90**	**305**			**Pn**	**16 02 59.4**	**+0.7**
SHEM					Sn	**Sn**	**16 03 21.9**	**0.0**
SHEM					IAML		16 03 26.1	
	comp=E,448nm,0.7s							
SMY	**Shemya**	**1.90**	**305**			**Pn**	**16 02 58.8**	**+0.1**
SMY					IAML		16 03 26.1	
	comp=N,885nm,0.6s							
SMY					IAML		16 03 27.4	
	comp=E,738nm,1.0s							
SMY	**Shemya**	**1.90**	**305**			**Sn**	**16 03 22.2**	**+0.3**
GANO	**Gareloi North**	**2.82**	**85**			**Pn**	**16 03 12.2**	**+0.9**
GANO						**Sn**	**16 03 45.1**	**+0.6**
GAKI	**Gareloi-Kavalg**	**2.82**	**91**			**Pn**	**16 03 12.4**	**+1.1**
GANE	**Gareloi Northe**	**2.83**	**85**			**Pn**	**16 03 12.1**	**+0.6**
TASE	**Tanaga Southea**	**3.29**	**85**			**Pn**	**16 03 19.1**	**+1.3**
TAFP	**Tanaga Falls P**	**3.33**	**84**			**Pn**	**16 03 19.2**	**+0.9**
TAFL	**Tanaga Flats**	**3.38**	**86**			**Pn**	**16 03 19.9**	**+0.9**
KIMD	**Kanaga Island**	**3.79**	**86**			**Pn**	**16 03 25.9**	**+1.2**
KIKV	**Kanaga Island**	**3.83**	**85**			**Pn**	**16 03 26.6**	**+1.3**
KIWB	**Kanaga Island**	**3.84**	**85**	Pn		**Pn**	**16 03 24.6**	**-0.7**
KIWB				Sn		**Sn**	**16 04 09.0**	**-0.8**
KIWB				IAML			16 04 15.1	
	comp=N,229nm,1.0s							
KIWB				IAML			16 04 34.9	
	comp=E,205nm,2.0s							
ADK	**Adak**	**4.13**	**84**	Pn		**Pn**	**16 03 27.9**	**-1.4**
ADK				Sn		**Sn**	**16 04 16.8**	**-0.2**
ADK				IAML			16 05 37.8	
	comp=E,152nm,4.8s							
GSTR	**Great Sitkin T**	**4.53**	**82**	Pn		**Pn**	**16 03 33.1**	**-1.6**
CLES	**Cleveland East**	**8.33**	**77**	Pn		**Pn**	**16 04 25.6**	**-1.3**
LVA	**Lava Point**	**10.74**	**70**	Pn		**Pn**	**16 04 59.1**	**-0.8**
AKUT	**Akutan**	**10.89**	**70**	Pn		**Pn**	**16 05 00.1**	**-1.8**
PEA0B	**Petropavlovsk-**	**11.68**	**285**	Pn		**Pn**	**16 05 13.2**	**+0.4**
PETK	**Petropavlovsk-**	**11.68**	**285**	P		**Pn**	**16 05 14.8**	**+2.1**
	comp=E,0.1nm,0.3s,baz=91,slow=18,SNR=7.0							
PETK				S		**Sn**	**16 07 15.8**	**-6.5**
	comp=E,6.0nm,1.1s,baz=153,slow=10.0,SNR=1.8							
	comp=E,1.9nm,0.8s							
PETK	**Petropavlovsk-**	**11.68**	**285**			**Pn**	**16 05 13.3**	**+0.5**
PETK						**Sn**	**16 07 18.1**	**-4.2**
N14K	**Kuskokwak Cree**	**14.65**	**47**	Pn		**Pn**	**16 05 52.6**	**-0.6**
N15K	**Kwethluk River**	**15.48**	**48**	Pn		**Pn**	**16 06 02.2**	**-2.1**
N15K				IAmb	IAmb		16 06 10.3	
	comp=Z,16nm,1.5s							
G16K	**Koyuk River**	**17.44**	**30**	P		**Pn**	**16 06 29.1**	**0.0**
H17K	**Granite Mounta**	**17.95**	**33**	P		**Pn**	**16 06 35.2**	**-0.3**
H17K				IAmb	IAmb		16 06 40.0	
	comp=Z,7.7nm,1.4s							
N19K	**Bonanza Creek**	**18.31**	**49**	P		**Pn**	**16 06 38.4**	**-1.6**
N19K				IAmb	IAmb		16 06 43.0	
	comp=Z,19nm,1.4s							
J18K	**Innoko River**	**18.35**	**40**	P		**P**	**16 06 39.1**	**-1.2**
H18K	**Honhosa River**	**18.61**	**34**	P		**P**	**16 06 42.3**	**-0.9**
H18K				IAmb	IAmb		16 06 47.8	
	comp=Z,9.1nm,1.5s							
KDAK	**Kodiak Island**	**18.66**	**59**	P		**P**	**16 06 43.9**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=137,slow=1.6,SNR=6.9							
	comp=Z,11nm,0.9s							
M19K	**Big River Lodg**	**18.70**	**46**	P		**P**	**16 06 43.0**	**-1.2**
ILSW	**Iliamna Southw**	**18.74**	**52**			**P**	**16 06 43.2**	**-1.5**
M20K	**Styx River**	**19.26**	**46**	P		**P**	**16 06 50.5**	**+0.2**
K20K	**Telida**	**19.38**	**42**	P		**P**	**16 06 52.0**	**+0.4**
CNPM	**China Poot**	**19.60**	**54**	P		**P**	**16 06 54.3**	**+0.3**
J20K	**Nowinta River**	**19.69**	**39**	P		**Pn**	**16 06 56.2**	**-0.2**
J20K				IAmb	IAmb		16 06 58.5	
	comp=Z,3.4nm,0.8s							
F19K	**Shaleruckik Mo**	**19.80**	**30**	P		**Pn**	**16 06 57.6**	**-0.1**
F19K				IAmb	IAmb		16 06 59.0	
	comp=Z,3.6nm,0.7s							
C18K	**Utukok River**	**20.06**	**24**	P		**P**	**16 07 00.0**	**+1.0**
C18K				IAmb	IAmb		16 07 06.6	
	comp=Z,6.0nm,1.4s							
SLKM	**Skilak Lake**	**20.27**	**51**	P		**P**	**16 07 01.9**	**+0.6**
E19K	**Redstone River**	**20.35**	**29**	P		**P**	**16 07 02.9**	**+0.7**
KTH	**Kantishna Hill**	**20.77**	**43**			Pn	16 07 08.3	-0.9
BPAW	**Bear Paw Mtn.**	**20.93**	**41**	P		Pn	16 07 10.7	-0.4
TRF	**Thorofare Moun**	**21.00**	**43**	P		**P**	**16 07 09.9**	**+0.5**
TRF				IAmb	IAmb		16 07 12.8	
	comp=Z,7.8nm,1.4s							
G21K	**Allakaket**	**21.03**	**34**	P		**P**	**16 07 10.6**	**+1.1**
GHO	**Glory Hole Cre**	**21.15**	**48**	P		**P**	**16 07 11.1**	**+0.1**
GHO				IAmb	IAmb		16 07 39.0	
	comp=Z,8.7nm,1.0s							
NEA2	**Nenana**	**21.89**	**41**	P		**P**	**16 07 19.6**	**+0.9**
NEA2				IAmb	IAmb		16 07 21.7	
	comp=Z,7.8nm,1.0s							
E22K	**Anaktuvuk Pass**	**22.43**	**31**	P		**P**	**16 07 24.6**	**0.0**
E22K				IAmb	IAmb		16 07 37.7	
	comp=Z,3.2nm,1.1s							
M24K	**Tolsona, Glenn**	**22.49**	**48**	P		**P**	**16 07 26.1**	**+0.9**
H24K	**Noodor Dome**	**22.80**	**38**	P		**P**	**16 07 28.8**	**+0.4**
H24K				IAmb	IAmb		16 07 32.3	
	comp=Z,3.6nm,0.7s							
ILAR	**Eielson Array**	**22.83**	**41**	P		**P**	**16 07 28.2**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=246,slow=10,SNR=9.7							
	comp=Z,0.7nm,0.9s							
G24K	**Hadweenzic Riv**	**23.27**	**36**	P		**P**	**16 07 33.2**	**0.0**
G24K				IAmb	IAmb		16 07 46.5	
	comp=Z,8.2nm,1.4s							
VRDI	**Verde Repeater**	**23.65**	**51**	P		**P**	**16 07 37.9**	**+0.6**
FYU	**Fort Yukon**	**24.06**	**37**	P		**P**	**16 07 41.8**	**+1.1**
E25K	**Arctic Village**	**24.50**	**34**	P		**P**	**16 07 45.7**	**+0.8**
E25K				IAmb	IAmb		16 07 53.1	
	comp=Z,3.8nm,1.3s							
L27K	**Beaver Creek,**	**24.63**	**46**	P		**P**	**16 07 46.7**	**+0.6**
PCA	**Pinnacle**	**25.17**	**54**	P		**P**	**16 07 51.2**	**+0.2**
G29M	**Pine Creek**	**26.91**	**38**	P		**P**	**16 08 06.4**	**-0.2**
G31M	**Satah River**	**28.36**	**39**	P		**P**	**16 08 19.9**	**+0.4**
G31M				IAmb	IAmb		16 08 31.7	
	comp=Z,4.7nm,1.2s							
TIXI	**Tiksi**	**29.00**	**331**	P		**P**	**16 08 25.9**	**+0.7**
TIXI				IAmb	IAmb		16 08 39.5	
	comp=Z,5.0nm,1.4s							
H11N2	**WAKE ISLAND Hy**	**32.79**	**197**	T		T	16 43 56.6	
	baz=11,slow=76,SNR=203							
H11N3	**WAKE ISLAND Hy**	**32.80**	**197**	T		T	16 43 57.5	
	baz=11,slow=76,SNR=133							
H11N1	**WAKE ISLAND Hy**	**32.81**	**197**	T		T	16 43 58.0	
	baz=11,slow=76,SNR=146							
H11S1	**WAKE ISLAND Hy**	**34.02**	**197**	T		T	16 45 34.9	
	baz=11,slow=76,SNR=56							
H11S3	**WAKE ISLAND Hy**	**34.03**	**197**	T		T	16 45 34.0	
	baz=11,slow=76,SNR=39							
H11S2	**WAKE ISLAND Hy**	**34.03**	**197**	T		T	16 45 33.7	
	baz=11,slow=76,SNR=31							
YKAW3	**Yellowknife Wh**	**37.05**	**46**	P		**P**	**16 09 36.3**	**+0.9**
YKAW3				IAmb	IAmb		16 09 40.9	
	comp=Z,4.2nm,1.5s							
YKA	**Yellowknife Ar**	**37.07**	**46**	P		**P**	**16 09 36.6**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=292,slow=9.1,SNR=8.5							
	comp=Z,0.5nm,0.7s							
SONM	**Songino Array**	**43.96**	**294**	P		**P**	**16 10 34.0**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=64,slow=9.8,SNR=2.3							
	comp=Z,0.5nm,0.6s							
SONM	**Songino Array**	**43.96**	**294**	IAmb		IAmb	16 10 34.4	
	comp=Z,0.5nm,0.6s							
ANMO	**Albuquerque**	**55.78**	**75**	P		**P**	**16 12 03.4**	**+0.4**
ANMO				IAmb	IAmb		16 12 19.8	
	comp=Z,1.2nm,0.9s							
KURK	**Kurchatov**	**56.73**	**311**	P		**P**	**16 12 09.2**	**0.0**
KURBB	**Kurchatov Arra**	**56.84**	**311**	P		**P**	**16 12 09.7**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=46,slow=6.7,SNR=7.5							
	comp=Z,1.4nm,0.8s							
MK31	**Makanchi Array**	**57.60**	**306**	P		**P**	**16 12 14.9**	**-0.5**
MK31				IAmb	IAmb		16 12 22.7	
	comp=Z,2.3nm,1.4s							
MKAR	**Makanchi Array**	**57.60**	**306**	P		**P**	**16 12 15.2**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=53,slow=6.3,SNR=13							
	comp=Z,0.4nm,0.5s							
MAKZ	**Makanchi**	**57.75**	**306**	P		**P**	**16 12 16.1**	**-0.4**
MAKZ				IAmb	IAmb		16 12 27.9	
	comp=Z,1.9nm,1.2s							
BVAR	**Borovoye Array**	**58.79**	**317**	P		**P**	**16 12 23.9**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=40,slow=6.2,SNR=7.6							
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**64.81**	**345**	P		**P**	**16 13 03.1**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=55,slow=5.3,SNR=1.9							
	comp=Z,1.9nm,0.9s							
WB0	**Warramunga Arr**	**80.16**	**220**	P		**P**	**16 14 36.6**	**+0.8**
WRA	**Warramunga Arr**	**80.34**	**220**	P		**P**	**16 14 37.9**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=27,slow=5.5,SNR=5.3							
	comp=Z,0.2nm,0.6s							
WRA	**Warramunga Arr**	**80.34**	**220**	P		**P**	**16 14 37.0**	**+0.2**
ASAR	**Alice Springs**	**83.87**	**219**	P		**P**	**16 14 57.0**	**+1.8**

comp=Z,0.5nm,1.0s,baz=24,slow=5.2,SNR=7.1
comp=Z,0.5nm,1.0s

IDC 13 16:07:42.8±2.7, 23°.01N×11°.53W, h0km, mb3.8/3, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=87.5km s-min=43.1km az=82.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**15.93**	**126**	Pn	Pn	16 11 27.7	-0.8
	0.3nm,0.3s,baz=320,slow=13,SNR=7.7						
	0.8nm,0.7s						
DBIC	**Dimbokro**	**17.47**	**157**	P	Pn	16 11 41.3	-6.8
	1.5nm,0.5s,baz=335,slow=15,SNR=3.9						
I48TN	**KESRA INFRASON**	**22.13**	**50**	I	I	18 20 00.0	
	baz=247,slow=310,SNR=5.3						
HFS	**Hagfors**	**41.09**	**19**	P	P	16 15 27.5	-0.5
	3.0nm,0.9s,baz=220,slow=8.8,SNR=2.5						
	3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**72.60**	**42**	P	P	16 19 12.3	+0.3
	0.6nm,0.7s,baz=279,slow=6.5,SNR=4.3						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**76.09**	**45**	P	P	16 19 32.7	+0.2
	0.3nm,0.8s,baz=298,slow=5.9,SNR=4.4						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**148.13**	**91**	PKPbc	PKPbc	16 27 30.6	-0.7
	0.5nm,0.7s,baz=289,slow=2.2,SNR=4.7						
ASAR	**Alice Springs**	**148.29**	**98**	PKPbc	PKPbc	16 27 31.0	-0.7
	0.6nm,0.8s,baz=280,slow=1.9,SNR=6.3						

IDC 13 16:13:26.9±6.3, 34°.51N×23°.32E, h0km, mb3.9/4, mbtmp3.7/6, ML3.3/2, Error ellipse: s-maj=119.8km s-min=39.7km az=27.0
ATH 13 16:13:34.5, 34°.67N×23°.43E, h25km±3km, ML3.2/9, Manual Solution by G.Panopoulou First location: 2020/02/13 16:14:52, This location: 2020/02/13 16:34:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km
THE 13 16:13:35.7, 35°.N±4°×2°.3E±°, h15km±7km, M3.1/6, MLh3.1/6

ISC 13 16:13:33.4±1.8, 34°.61N±0°.08×23°.41E±0°.06, h32km±10km, n76, σ1°926/86, mb3.9/4, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.60**	**68**	P	**Pb**	**16 13 45.7**	**+0.1**
GVD				S	**Sb**	**16 13 53.4**	**-0.6**
GVD	**Gavdhos**	**0.60**	**68**	P	**Pb**	**16 13 45.6**	**0.0**
GVD				S	**Sb**	**16 13 54.0**	**+0.1**
KNDR	**Palaiochora Ch**	**0.65**	**16**	P	**Pb**	**16 13 46.2**	**0.0**
KNDR				S	**Sb**	**16 13 53.5**	**-1.6**
IMMV	**Iera Moni Meta**	**0.97**	**29**	P	**Pn**	**16 13 51.7**	**+0.9**
IMMV				S	**Sn**	**16 14 04.1**	**+0.7**
IMMV	**Iera Moni Meta**	**0.97**	**29**	P	**Pn**	**16 13 51.9**	**+1.1**
IMMV				S	**Sn**	**16 14 03.8**	**+0.4**
CHNB	**Souda**	**1.02**	**32**	P	**Pb**	**16 13 53.0**	**+0.4**
VAM	**Vamos**	**1.02**	**39**	P	**Pn**	**16 13 52.9**	**+1.3**
VAM				S	**Sn**	**16 14 05.9**	**+1.1**
VAM	**Vamos**	**1.02**	**39**	P	**Pn**	**16 13 52.7**	**+1.1**
VAM				S	**Sn**	**16 14 05.5**	**+0.7**
CHAN	**Chania**	**1.04**	**30**	P	**Pn**	**16 13 52.2**	**+0.4**
ANKY	**Antikythira Is**	**1.25**	**356**	P	**Pb**	**16 13 56.4**	**0.0**
ANKY				S	**Sb**	**16 14 12.9**	**+0.7**
ANKY	**Antikythira Is**	**1.25**	**356**	P	**Pb**	**16 13 56.5**	**0.0**
ANKY				S	**Sn**	**16 14 11.3**	**+0.9**
IDI	**Anoyia**	**1.39**	**61**	P	**Pn**	**16 13 58.5**	**+1.9**
IDI	**Anoyia**	**1.39**	**61**	P	**Pn**	**16 13 58.5**	**+1.9**
IDI				S	**Sb**	**16 14 16.2**	**-0.1**
IACM	**Heraklion**	**1.53**	**63**	P	**Pn**	**16 13 59.1**	**+0.6**
KTHA	**Kythira Island**	**1.66**	**350**	P	**Pn**	**16 14 01.6**	**+1.3**
NPS1	**Neapolis Lacon**	**1.92**	**352**	P	**Pn**	**16 14 05.1**	**+1.4**
NPS	**Neapolis**	**1.92**	**70**	P	**Pn**	**16 14 06.2**	**+2.3**
VLI	**Veliai**	**2.13**	**350**	P	**Pn**	**16 14 09.1**	**+2.3**
VLI	**Veliai**	**2.13**	**350**	P	**Pn**	**16 14 08.8**	**+2.0**
MHLO	**Agia Marina, M**	**2.22**	**21**	P	**Pn**	**16 14 09.3**	**+1.3**
MHLO	**Agia Marina, M**	**2.22**	**21**	P	**Pn**	**16 14 09.0**	**+0.9**
THR9	**Santorini-Faro**	**2.36**	**42**	P	**Pn**	**16 14 11.1**	**+1.3**
ZKR	**Zakros**	**2.36**	**77**	P	**Pn**	**16 14 12.4**	**+2.5**
ZKR	**Zakros**	**2.36**	**77**	P	**Pn**	**16 14 11.4**	**+1.5**
THR5	**Thira Island,**	**2.40**	**41**	P	**Pn**	**16 14 10.9**	**+0.6**
SAP3	**Santorini-Thir**	**2.41**	**40**	P	**Pn**	**16 14 11.8**	**+1.3**
SAP3	**Santorini-Thir**	**2.41**	**40**	P	**Pn**	**16 14 11.5**	**+0.9**
SNT5	**Nea Kammeni, S**	**2.41**	**42**	P	**Pn**	**16 14 11.7**	**+1.1**
SNT5	**Nea Kammeni, S**	**2.41**	**42**	P	**Pn**	**16 14 11.2**	**+0.6**
THR3	**Thira Island,**	**2.42**	**42**	P	**Pn**	**16 14 11.6**	**+0.9**
THERA	**Ancient Thera,**	**2.43**	**43**	P	**Pn**	**16 14 11.3**	**+0.4**
THR8	**Santorini-Mono**	**2.46**	**43**	P	**Pn**	**16 14 11.9**	**+0.6**
PYL	**PYLOS**	**2.65**	**330**	P	**Pn**	**16 14 15.7**	**+1.8**
PYL	**PYLOS**	**2.65**	**330**	P	**Pn**	**16 14 14.9**	**+1.1**
ITM	**Ithomi**	**2.83**	**335**	P	**Pn**	**16 14 17.5**	**+1.2**
MET1	**Methana Town,**	**2.96**	**360**	P	**Pn**	**16 14 19.8**	**+1.7**
MET2	**Kameni Chora,**	**2.99**	**359**	P	**Pn**	**16 14 20.0**	**+1.4**
MET5	**Makryloggos,Me**	**3.00**	**359**	P	**Pn**	**16 14 20.2**	**+1.4**
KARP	**Karpathos**	**3.22**	**72**	P	**Pn**	**16 14 23.1**	**+1.4**
VLY	**Voula,Athens**	**3.25**	**5**	P	**Pn**	**16 14 22.3**	**+0.2**
LTK	**Loutraki**	**3.42**	**354**	P	**Pn**	**16 14 25.6**	**+1.1**
GUR	**Goura**	**3.42**	**346**	P	**Pn**	**16 14 26.9**	**+2.3**
PTL	**Penteli**	**3.45**	**6**	P	**Pn**	**16 14 25.7**	**+0.8**
MAGU	**Magoula**	**3.46**	**1**	P	**Pn**	**16 14 26.1**	**+1.1**
DION	**Dionisos Attik**	**3.48**	**7**	P	**Pn**	**16 14 26.0**	**+0.6**
KARY	**Karystos**	**3.51**	**13**	P	**Pn**	**16 14 26.3**	**+0.6**
STFN	**Stefani**	**3.56**	**2**	P	**Pn**	**16 14 27.0**	**+0.6**
KLV	**Kalavryta, Ach**	**3.57**	**344**	P	**Pn**	**16 14 28.0**	**+1.4**
VIL2	**Platees**	**3.59**	**358**	P	**Pn**	**16 14 27.1**	**+0.2**
ORTH	**Orthonies,Zaky**	**3.90**	**327**	P	**Pn**	**16 14 33.4**	**+2.3**
AXS	**Araxos**	**3.93**	**336**	P	**Pn**	**16 14 33.2**	**+1.7**
MG00	**Magoula, Dorid**	**3.97**	**343**	P	**Pn**	**16 14 34.1**	**+2.1**
EFP	**Efpalio**	**3.99**	**343**	P	**Pn**	**16 14 34.2**	**+1.9**
ATAL	**Atalanti**	**4.08**	**356**	P	**Pn**	**16 14 35.1**	**+1.5**
ANX	**Ano Chora**	**4.15**	**344**	P	**Pn**	**16 14 36.4**	**+1.8**
ARG	**Arkhangelos**	**4.17**	**66**	P	**Pn**	**16 14 35.6**	**+0.8**
AXAR	**Agios Charalam**	**4.18**	**352**	P	**Pn**	**16 14 36.4**	**+1.3**
VLS	**Valsamata**	**4.22**	**328**	P	**Pn**	**16 14 35.2**	**-0.2**
AGG	**Agios Georgios**	**4.48**	**349**	P	**Pn**	**16 14 41.2**	**+2.1**
MAKR	**Makrakomi, Fth**	**4.51**	**347**	P	**Pn**	**16 14 41.4**	**+1.9**
AOS2	**Alonissos-2**	**4.54**	**4**	P	**Pn**	**16 14 40.3**	**+0.5**
AMPL	**Ampelaki**	**4.65**	**338**	P	**Pn**	**16 14 41.9**	**+0.6**
LKD2	**Lefkada island**	**4.71**	**333**	P	**Pn**	**16 14 43.1**	**+0.8**
TSLK	**Tsoukalades, L**	**4.75**	**333**	P	**Pn**	**16 14 43.4**	**+0.7**
TETR	**Tetrakomo, Epi**	**5.02**	**341**	P	**Pn**	**16 14 48.0**	**+1.5**
THL	**Klokotos Trika**	**5.07**	**348**	P	**Pn**	**16 14 47.4**	**+0.4**
PRMD	**Pramanda**	**5.24**	**340**	P	**Pn**	**16 14 50.2**	**+0.7**
KSL	**Kastellorizon**	**5.27**	**71**	P	**Pn**	**16 14 49.6**	**-0.3**
NEST	**Nestorio**	**6.09**	**343**	P	**Pn**	**16 15 02.7**	**+1.5**
BRTR	**Keskin Array B**	**9.63**	**55**	Pn	**Pn**	**16 15 51.5**	**+1.7**
	0.1nm,0.3s,baz=235,slow=14,SNR=5.3						
	1.5nm,1.0s						
MMAI	**Meron Ar**	**10.11**	**96**	Pn	**Pn**	**16 15 55.0**	**-1.3**
	0.7nm,0.3s,baz=274,slow=11,SNR=1.8						
MMAI				Sn	Sn	16 17 41.7	-6.9
	1.9nm,0.3s,baz=273,slow=29,SNR=4.9						
	0.3nm,0.3s						
GERES	**GERESS Array B**	**15.94**	**336**	Pn	**P**	**16 17 17.8**	**-0.7**
	baz=134,slow=13						
HFS	**Hagfors**	**26.31**	**349**	P	**P**	**16 19 05.1**	**-0.7**
	2.5nm,0.8s,baz=154,slow=7.7,SNR=2.8						
	2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**42.58**	**51**	P	**P**	**16 21 25.2**	**-0.9**
	0.4nm,0.5s,baz=274,slow=8.7,SNR=7.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**45.27**	**56**	P	**P**	**16 21 47.3**	**-0.6**
	1.0nm,0.4s,baz=270,slow=7.8,SNR=39						
	1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**46.42**	**46**	P	**P**	**16 21 55.3**	**-1.4**
	0.6nm,0.5s,baz=265,slow=8.8,SNR=3.7						
	0.6nm,0.5s						

AFAD 13 16:20:55.0, 34°.76N×27°.61E, h11km±59km, MW4.1
HLW 13 16:20:58.9, 35°.18N×27°.90E, h5km±7km, Ml3.8
GII 13 16:21:01.2±0.0, 34°.924N±0°.002×27°.951E±0°.001, h0km, Mws3.8, confirmed
NIC 13 16:21:01.1, 35°.11N×27°.76E, h32km±41km, Ml3.5/13
ISK 13 16:21:01.2, 35°.24N×27°.76E, h14km, ML3.7/21
THE 13 16:21:03.6, 35°.N±9°×2°.8E±1°.1, h7km±25km, M3.3/12, MLh3.3/12
ATH 13 16:21:03.8, 35°.12N×27°.94E, h35km±8km, ML3.6/17, Manual Solution by A.Andreou First location: 2020/02/13 16:22:25, This location: 2020/09/03 09:03:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km
IDC 13 16:21:07.3±1.7, 35°.48N×27°.77E, h70km±15km, mb3.5/16, mbtmp3.7/21, MS3.8/1, Error ellipse: s-maj=22.0km s-min=9.6km az=155.0

ISC 13 16:21:01.0±0.5, 35°.12N±0°.03×27°.85E±0°.03, h22km±4km, n183, σ1°963/235, mb3.6/15, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.71**	**308**	Pg	**Pb**	**16 21 12.9**	**-1.7**
KARP				Sg	**Sb**	**16 21 21.5**	**-2.5**
KARP	**Karpathos**	**0.71**	**308**	P	**Pb**	**16 21 12.8**	**-1.9**
KARP				S	**Sb**	**16 21 21.2**	**-2.7**
KARP	**Karpathos**	**0.71**	**308**	P	**Pb**	**16 21 12.7**	**-2.0**
KARP				S	**Sb**	**16 21 23.2**	**-0.7**
KARP				AML	AML	16 21 33.3	
	9.4nm,0.5s						
KARP				AML	AML	16 21 33.9	
	8.2nm,0.7s						
ARG	**Arkhangelos**	**1.12**	**12**	Pg	**Pn**	**16 21 21.2**	**-0.2**
ARG				Sg	**Sn**	**16 21 35.7**	**-0.5**
ARG	**Arkhangelos**	**1.12**	**12**	P	**Pn**	**16 21 21.8**	**+0.4**
ARG				S	**Sn**	**16 21 35.7**	**-0.5**
ARG	**Arkhangelos**	**1.12**	**12**	P	**Pn**	**16 21 21.8**	**+0.4**
ARG				S	**Sb**	**16 21 36.0**	**+0.2**
ARG				AML	AML	16 21 46.9	
	4.8nm,1.1s						
ARG				AML	AML	16 21 50.8	
	3.9nm,0.9s						
ARG	**Arkhangelos**	**1.12**	**12**	P	**Pb**	**16 21 23.1**	**+1.4**
ARG				S	**Sb**	**16 21 36.2**	**+0.3**
ZKR	**Zakros**	**1.33**	**270**	Pn	**Pn**	**16 21 24.8**	**+0.5**
ZKR				Sn	**Sn**	**16 21 42.4**	**+1.0**
ZKR	**Zakros**	**1.33**	**270**	S	**Sn**	**16 21 39.1**	**-2.4**
ZKR				AML	AML	16 21 52.8	
	1.4nm,0.7s						
ZKR				AML	AML	16 21 58.0	
	3.4nm,1.0s						
YAZI	**Mula-Dat§a-**	**1.59**	**349**	P	**Pn**	**16 21 28.8**	**+0.9**
YAZI				S	**Sb**	**16 21 51.2**	**+1.7**
DAT	**Datca**	**1.62**	**352**	Pn	**Pn**	**16 21 28.2**	**-0.2**
DAT				Sn	**Sn**	**16 21 48.1**	**-0.6**
DAT	**Datca**	**1.62**	**352**	P	**Pn**	**16 21 28.8**	**+0.4**
DAT				S	**Sn**	**16 21 49.5**	**+0.7**
IZZE	**Mula-Seydike**	**1.73**	**40**	P	**Pn**	**16 21 30.1**	**+0.3**
KSL	**Kastellorizon**	**1.75**	**53**	P	**Pb**	**16 21 31.1**	**-1.3**
KSL	**Kastellorizon**	**1.75**	**53**	P	**Pn**	**16 21 30.6**	**+0.6**
KSL				S	**Sb**	**16 21 54.2**	**+0.2**
KSL				AML	AML	16 22 24.7	
	1.3nm,1.2s						
KSL				AML	AML	16 22 46.3	
	0.8nm,1.1s						
KSL	**Kastellorizon**	**1.75**	**53**	P	**Pb**	**16 21 31.0**	**-1.4**
KSL				S	**Sn**	**16 21 50.9**	**-0.8**
AKAS	**Kas**	**1.81**	**52**	Pn	**Pb**	**16 21 32.3**	**-1.3**
AKAS	**Kas**	**1.81**	**52**	P	**Pn**	**16 21 31.5**	**+0.4**
FETY	**Fethiye**	**1.82**	**33**	P	Pn	16 21 22.3	-8.8
DALY	**Dalyan (Mula)**	**1.82**	**21**	Pn	**Pn**	**16 21 31.7**	**+0.7**
NPS	**Neapolis**	**1.83**	**275**	P	**Pn**	**16 21 33.6**	**+2.4**
NPS	**Neapolis**	**1.83**	**275**	P	**Pn**	**16 21 33.7**	**+2.4**
NPS				S	**Sn**	**16 21 56.4**	**+2.6**
SABU	**Mula-Dalaman**	**1.93**	**28**	P	**Pn**	**16 21 33.6**	**+1.1**
BDRM	**Kayabasi**	**1.97**	**

0.3nm,0.7s
ALFC AML AML 16 22 53.1
0.4nm,0.8s
ALFC Alefka 3.90 88 P **Pn** **16 21 59.9 +0.4**
BNAZ Uak-Banaz 3.91 24 P **Pn** **16 22 00.6 +0.7**
DEMI Demirci 3.98 10 P **Pn** **16 22 01.8 +1.0**
KARY Karystos 4.00 318 P **Pn** **16 22 03.9 +2.9**
TROD Troodos 4.12 91 P **Pn** **16 22 03.2 +0.3**
TROD S **Sn** **16 22 52.4 +1.8**
TROD AML AML 16 22 53.2
0.1nm,1.2s
TROD AML AML 16 23 01.2
0.3nm,0.6s
SLUM Salum 4.23 212 S **Sn** **16 22 52.6 -0.3**
STEP BALIKESIR_Sava 4.25 359 P **Pn** **16 22 05.4 +0.9**
VLY Voula,Athens 4.26 311 P **Pn** **16 22 07.3 +2.9**
XYLS Xyliatos 4.27 90 P **Pn** **16 22 05.1 +0.3**
XYLS S **Sn** **16 22 56.4 +2.5**
XYLS AML AML 16 22 58.2
0.2nm,0.4s
XYLS AML AML 16 23 59.9
0.1nm,0.3s
VLI Veliai 4.29 293 P **Pn** **16 22 07.2 +2.2**
DION Dionisos Attik 4.32 314 P **Pn** **16 22 08.1 +2.7**
BUHA Balikesir, Bur 4.42 352 P **Pn** **16 22 06.6 -0.1**
ASGA Asgata 4.45 93 P **Pn** **16 22 07.9 +0.7**
ASGA S **Sn** **16 23 00.1 +1.8**
ASGA AML AML 16 23 05.6
0.3nm,0.7s
ASGA AML AML 16 23 05.9
0.5nm,0.6s
ASGA Asgata 4.45 93 P **Pn** **16 22 07.5 +0.4**
CSS Mathiatis 4.50 90 P **Pn** **16 22 09.1 +1.2**
CSS S **Sn** **16 23 00.8 +1.2**
CSS AML AML 16 23 04.4
0.1nm,0.8s
CSS AML AML 16 23 15.7
0.2nm,0.7s
CSS Mathiatis 4.50 90 P **Pn** **16 22 08.4 +0.5**
CSS S **Sn** **16 22 59.8 +0.2**
CSS Mathiatis 4.50 90 P **Pn** **16 22 08.9 +1.1**
STFN Stefani 4.62 313 P **Pn** **16 22 11.7 +2.3**
KYMI Kymi, Euboea I 4.62 321 P **Pn** **16 22 11.5 +2.0**
MVOU Mavrovouni 4.75 90 P **Pn** **16 22 12.3 +1.1**
MVOU S **Sn** **16 23 07.0 +1.5**
MVOU AML AML 16 23 12.1
0.2nm,1.8s
MVOU Mavrovouni 4.75 90 P **Pn** **16 22 11.7 +0.5**
LTK Loutraki 4.88 308 P **Pn** **16 22 16.1 +3.0**
ITM Ithomi 5.21 295 P **Pn** **16 22 19.9 +2.2**
DRO Drossia 5.69 302 P **Pn** **16 22 26.9 +2.7**
ANX Ano Chora 5.88 308 P **Pn** **16 22 29.4 +2.4**
AXS Araxos 6.04 302 P **Pn** **16 22 31.2 +2.2**
SWA2 6.20 200 P **Pn** **16 22 32.1 +1.0**
RDO Rodhopi 6.29 344 P **Pn** **16 22 34.6 +2.3**
RYAN Fayoum 6.36 160 P **Pn** **16 22 34.1 +0.7**
RYAN S **Sn** **16 23 43.2 -2.2**
ORTH Orthonies,Zaky 6.37 297 P **Pn** **16 22 36.5 +2.9**
HNTI Hanita 6.41 106 P **Pn** **16 22 34.4 +0.3**
HNTI S **Sn** **16 23 45.9 -0.7**
BRTR Keskin Array B 6.51 43 P **Pn** **16 22 36.2 +0.6**
1.6nm,0.5s,baz=219,slow=15,SNR=14
BRTR S **Sn** **16 23 48.9 -0.4**
0.7nm,0.7s,baz=291,slow=25,SNR=1.2
VLS Valsamata 6.58 300 P **Pn** **16 22 39.5 +3.0**
MMC7 Mount Meron ar 6.60 106 P **Pn** **16 22 36.7 -0.1**
MMA0B Mount Meron ar 6.61 106 P **Pn** **16 22 36.6 -0.3**
MMA0B S **Sn** **16 23 51.3 -0.4**
MMAI Mount Meron Ar 6.61 106 P **Pn** **16 22 36.7 -0.2**
1.4nm,0.3s,baz=300,slow=12,SNR=9.9
MMAI S **Sn** **16 23 49.6 -2.1**
4.9nm,0.5s,baz=293,slow=22,SNR=6.1
FSK Fiskardo 6.73 302 P **Pn** **16 22 40.8 +2.4**
TETR Tetrakomo, Epi 6.73 311 P **Pn** **16 22 41.0 +2.4**
SUZ Suez 6.74 140 P **Pn** **16 22 40.2 +1.6**
GEM Giv'at Ha'Em 6.75 104 P **Pn** **16 22 39.0 +0.2**
GEM S **Sn** **16 23 54.5 -0.5**
NATI Neve Ativ 6.79 104 P **Pn** **16 22 39.4 +0.1**
NATI S **Sn** **16 23 54.5 -1.5**
MMLI Mount Malkishu 6.85 111 P **Pn** **16 22 39.7 -0.5**
MMLI S **Sn** **16 23 56.9 -0.6**
AMAZ Amatzia 6.91 119 P **Pn** **16 22 40.4 -0.6**
AMAZ S **Sn** **16 23 57.6 -1.4**
KZIT Kziot 6.92 126 P **Pn** **16 22 40.5 -0.6**
KZIT S **Sn** **16 23 57.1 -2.1**
KSHT Keshet 6.95 106 P **Pn** **16 22 41.6 +0.1**
KSHT S **Sn** **16 23 59.7 -0.2**
PRMD Pramanda 6.95 311 P **Pn** **16 22 44.4 +2.8**
HMDT Nahal Hemdat 7.01 112 P **Pn** **16 22 42.1 -0.2**
HMDT S **Sn** **16 24 00.8 -0.5**
ZAF Zafarana 7.05 144 P **Pn** **16 22 43.3 +0.4**
ZAF S **Sn** **16 23 59.4 -3.0**
NBNS Bani Suef 7.11 155 P **Pn** **16 22 43.9 +0.2**
NBNS S **Sn** **16 24 01.0 -2.7**
YTIR Yattir 7.15 120 P **Pn** **16 22 44.0 -0.3**
YTIR S **Sn** **16 24 03.7 -1.2**
DSI Dead Sea 7.23 117 P **Pn** **16 22 44.8 -0.5**
DSI S **Sn** **16 24 05.1 -1.7**
MSBI Mazada 7.35 119 P **Pn** **16 22 46.7 -0.2**
MSBI S **Sn** **16 24 08.8 -0.8**
RMNI Mount Ramon 7.36 126 P **Pn** **16 22 46.5 -0.7**
RMNI S **Sn** **16 24 08.1 -2.0**
GHAJ Ghor Haditha 7.50 118 P **Pn** **16 22 49.0 0.0**
GHAJ S **Sn** **16 24 12.8 -0.7**
KRMI Paran Flat 7.65 129 P **Pn** **16 22 50.5 -0.6**
KRMI S **Sn** **16 24 14.9 -2.2**
ZFRI Zfri 7.66 124 P **Pn** **16 22 50.2 -1.1**
ZFRI S **Sn** **16 24 15.4 -2.1**
PRNI Paran 7.67 126 P **Pn** **16 22 50.9 -0.6**
PRNI S **Sn** **16 24 15.6 -2.2**
MBRI Mt Berech 7.99 130 P **Pn** **16 22 55.3 -0.5**
MBRI S **Sn** **16 24 24.0 -1.5**
GRB Gharib 8.02 147 P **Pn** **16 22 56.7 +0.5**
EIL Elat 8.10 130 P **Pn** **16 22 57.5 +0.3**
4.7nm,0.3s,baz=334,slow=5.3,SNR=18
EIL S **Sn** **16 24 23.3 -4.8**
21nm,0.5s,baz=44,slow=16,SNR=7.2
EIL Elat 8.10 130 P **Pn** **16 22 56.5 -0.7**
EIL S **Sn** **16 24 25.9 -2.2**
ASF Jabal al Asfar 8.10 109 P **Pn** **16 22 57.2 -0.1**
1.2nm,0.3s,baz=287,slow=11,SNR=1.7
ASF S **Sn** **16 24 27.5 -0.7**
1.4nm,0.4s,baz=111,slow=18,SNR=1.1
HBST Basata 8.28 133 P **Pn** **16 23 00.7 +0.9**
TR2 Tor 2 8.37 142 P **Pn** **16 23 01.2 +0.2**
HKAT Jabal Katrina 8.40 140 P **Pn** **16 23 01.7 +0.2**
HDHB Dhahab 8.59 136 P **Pn** **16 23 04.3 +0.4**
TR1 Tor 1 8.79 142 P **Pn** **16 23 06.9 +0.1**
HHRG Al Ghardaqah 9.27 147 P **Pn** **16 23 15.8 +2.5**
HDK1 Dakhla 9.63 172 P **Pn** **16 23 19.6 +1.2**
KVAR Kislovodsk Arr 14.45 48 P **Pn** **16 24 25.0 +0.8**
1.3nm,0.3s,baz=275,slow=12,SNR=1.7
KBZ Khabaz 14.45 49 P **P** **16 24 32.9 +2.2**
6.1nm,0.9s,baz=238,slow=12,SNR=8.7
KEST Kesra 15.10 278 P **P** **16 24 38.3 +0.2**
2.6nm,0.8s,baz=272,slow=4.0,SNR=3.8
AKASG Malin Array Be 15.61 3 P **Pn** **16 24 39.2 -0.3**
0.8nm,0.3s,baz=198,slow=11,SNR=2.4
GERES GERESS Array B 17.24 327 P **Pn** **16 24 59.0 -1.4**
0.7nm,0.7s,baz=134,slow=12,SNR=2.1
ESDC Sonseca Array 25.60 290 P **P** **16 26 28.6 -0.1**
0.5nm,0.5s,baz=89,slow=9.2,SNR=6.1
0.5nm,0.5s
FINES FINESS Array B 26.37 358 P **P** **16 26 34.0 -1.3**
0.9nm,0.6s,baz=147,slow=8.8,SNR=5.0
0.9nm,0.6s
HFS Hagfors 26.67 344 P **P** **16 26 35.5 -2.5**
2.4nm,0.8s,baz=175,slow=6.7,SNR=5.4
2.4nm,0.8s
NOA NORSAR Array B 28.05 343 P **P** **16 26 46.7 -3.7**
0.5nm,0.7s,baz=151,slow=7.9,SNR=1.8
0.5nm,0.7s
TORD Torodi Ar. Bea 32.19 234 P **P** **16 27 28.8 +1.3**
0.9nm,0.6s,baz=35,slow=6.4,SNR=6.5
0.9nm,0.6s
BVAR Borovoye Array 34.79 46 P **P** **16 27 48.8 -1.0**
0.5nm,0.7s,baz=282,slow=7.2,SNR=2.3
0.5nm,0.7s
KURBB Kurchatov Arra 39.44 51 P **P** **16 28 29.3 0.0**
0.4nm,0.6s,baz=275,slow=8.9,SNR=5.7
0.4nm,0.6s
DBIC Dimbokro 41.30 234 P **P** **16 28 48.0 +3.1**
0.7nm,0.4s,baz=34,slow=7.3,SNR=3.8
0.7nm,0.4s
MKAR Makanchi Array 41.96 57 P **P** **16 28 50.6 +0.4**
0.4nm,0.6s,baz=274,slow=8.4,SNR=10.0
0.4nm,0.6s
ZALV Zalesovo Beam 43.45 46 P **P** **16 29 01.9 -0.2**
0.6nm,0.6s,baz=270,slow=7.2,SNR=1.6
0.6nm,0.6s
SPITS Spitsbergen Ar 43.45 357 P **P** **16 29 00.3 -1.5**
6.3nm,0.9s,baz=156,slow=12,SNR=7.0
6.9nm,0.9s
TSUM Tsumeb 54.89 192 LR LR 16 54 46.5
comp=Z,100nm,21.8s,baz=342,slow=37
SONM Songino Array 57.80 51 P **P** **16 30 50.7 0.0**
0.3nm,0.4s,baz=272,slow=5.6,SNR=2.3
0.3nm,0.4s
CMAR Chiang Mai Arr 64.39 85 P **P** **16 31 36.5 +0.8**
0.3nm,0.5s,baz=301,slow=5.9,SNR=4.4
0.3nm,0.5s
SCHQ Schefferville 64.64 320 P **P** **16 31 35.3 -1.4**
2.1nm,0.8s,baz=61,slow=10,SNR=3.6
2.1nm,0.8s
ILAR Eielson Array 80.36 358 P **P** **16 33 08.8 -1.3**
0.3nm,0.8s,baz=5.7,slow=3.6,SNR=2.1
0.3nm,0.8s
ULM Lac du Bonnet 81.55 327 P **P** **16 33 14.2 -2.6**
1.6nm,0.4s,baz=15,slow=12,SNR=4.8
1.6nm,0.4s

KRSC 13 16:23:50.8±1.4, 49.74N×157.11E, h48km±24km, Ml3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.14**	**326**	*eP*	Pn	16 24 10.6	+0.4
SKR				*eS*	Sn	16 24 25.1	+0.4
PAU	**Pauzhetka**	**1.74**	**354**	*eP*	Pn	16 24 20.7	+2.3
PAU				*eS*	Sn	16 24 42.5	+3.1
KDTR	**Khodutka, Kamc**	**2.16**	**16**	*eP*	Pn	16 24 26.7	+2.5
KDTR				*eS*	Sn	16 24 53.4	+3.7
ASAK	**Asacha**	**2.69**	**10**	*eP*	Pn	16 24 34.8	+3.2
MTVR	**Mutnovka**	**2.83**	**13**	*eP*	Pn	16 24 37.0	+3.5
RUS	**Russkaya**	**2.84**	**18**	*eP*	Pn	16 24 36.3	+2.8
GRL	**Gorelyy**	**2.88**	**12**	*eP*	Pn	16 24 38.0	+3.8
GRL				*eS*	Sn	16 25 11.9	+4.3
KRMR	**Karymshinskiy**	**3.16**	**11**	*eP*	Pn	16 24 41.6	+3.7
PET	**Petropavlovsk**	**3.43**	**16**	*eP*	Pn	16 24 44.6	+3.0
DALK	**Dalny**	**3.45**	**17**	*eP*	Pn	16 24 45.3	+3.4
UGLR	**Uglovaya**	**3.63**	**17**	*eP*	Pn	16 24 48.5	+3.9
AVH	**Avacha**	**3.67**	**15**	*eP*	Pn	16 24 49.3	+4.3
KOK	**Koryaka**	**3.68**	**14**	*eP*	Pn	16 24 50.0	+4.8
SMAR	**Somma**	**3.68**	**16**	*eP*	Pn	16 24 49.5	+4.2
SDLR	**Sedlovina**	**3.71**	**17**	*eP*	Pn	16 24 49.0	+3.4
KRER	**Koryakskii**	**3.71**	**15**	*eP*	Pn	16 24 49.8	+4.1
KRX	**Arik**	**3.75**	**14**	*eP*	Pn	16 24 50.2	+4.0
SPN	**Mys Shipunski**	**3.83**	**27**	*eP*	Pn	16 24 50.2	+3.1
SPN				*eS*	Sn	16 25 34.1	+3.4
GNL	**Ganaly**	**3.99**	**7**	*eP*	Pn	16 24 53.5	+4.0

*BUC **13** 16:30:41.9±0.1, 46.80N×27.46E, h6km±1km, ml3.3/54, Error ellipse: s-maj=1.1km s-min=0.8km az=54.0*
*IDC **13** 16:30:41.3±2.7, 46.63N×27.63E, h0km, mbtmp3.5/3, ML2.9/4, Error ellipse: s-maj=55.3km s-min=8.3km az=120.0*
*SIGU **13** 16:30:41.7±0.1, 46.18N±0.8×27.74E±0.9, h6km, mb3.0/6, MD3.4/13*
*MCSM **13** 16:30:42.2±0.2, 47.7°N±2.°×2.°7E±.°, h5km, MLv3.4*
*CFUSG **13** 16:30:45.6, 46.69N×27.43E, h33km, Mb2.9/3, MD3.5/3, MSH3.1/4*

ISC 13 16:30:42.1±0.9, 46.78N±0.01×27.47E±0.02, h10km±8km, n96, σ1909/157, 48C-51D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VASR	**Vaslui**	**0.26**	**121**	⇓P	**Pg**	**16 30 47.9**	**+0.5**
VASR				⇓S	**Sg**	**16 30 51.5**	**+0.6**
IASR	**Iasi**	**0.41**	**10**	⇑P	**Pg**	**16 30 50.2**	**+0.1**
IASR				⇓S	**Sg**	**16 30 55.5**	**0.0**
BIR	**Birlad**	**0.52**	**168**	⇓P	**Pb**	**16 30 53.2**	**-0.2**
BIR				⇑S	**Sb**	**16 31 01.4**	**+0.4**
LEOM	**Leova**	**0.62**	**119**	P	**Pg**	**16 30 54.1**	**+0.1**
TESR	**Tescani**	**0.62**	**245**	⇓P	**Pg**	**16 30 53.6**	**-0.6**
TESR				⇓S	**Sg**	**16 31 02.0**	**-0.4**
TESR	**Tescani**	**0.62**	**245**	P	**Pg**	**16 30 53.4**	**-0.8**
GIRR	**Girov**	**0.69**	**285**	⇑P	**Pg**	**16 30 54.3**	**-1.1**
GIRR				⇑S	**Sg**	**16 31 04.0**	**-0.3**
GHRR		**0.72**	**183**	⇓P	**Pb**	**16 30 56.6**	**-0.1**
GHRR				⇓S	**Sb**	**16 31 07.4**	**+0.8**
GHB		**0.72**	**183**	P	**Pb**	**16 30 56.4**	**-0.3**
ONER	**Baraj Valea Uz**	**0.86**	**240**	⇓P	**Pg**	**16 30 58.5**	**-0.2**
ONER				⇑S	**Sb**	**16 31 11.2**	**+0.4**
VARL	**Varlezi**	**0.92**	**163**	⇓P	**Pg**	**16 30 59.7**	**0.0**
VARL				⇓S	**Sb**	**16 31 13.5**	**+1.2**
COSR	**Cosmesti PH**	**0.93**	**187**	⇑P	**Pn**	**16 31 01.2**	**0.0**
COSR				⇓S	**Sn**	**16 31 14.1**	**-0.4**
PANC	**Panciu**	**0.93**	**194**	⇑P	**Pb**	**16 31 00.4**	**+0.1**
PANC				⇑S	**Sn**	**16 31 14.3**	**-0.3**
KIS	**Kishinev**	**0.95**	**76**	⇑P	**Pg**	**16 31 00.2**	**-0.2**
KIS				⇑S	**Sg**	**16 31 13.0**	**+0.2**
KIS	**Kishinev**	**0.95**	**76**	P	**Pg**	**16 31 00.0**	**-0.4**
KIS				Rg	Rg	16 31 17.9	
KIS	**Kishinev**	**0.95**	**76**	P	**Pg**	**16 31 00.3**	**-0.1**
KIS				S	**Sg**	**16 31 13.2**	**+0.4**
VLDR	**Vladesti**	**1.02**	**155**	⇓P	**Pg**	**16 31 01.6**	**-0.2**
VLDR				⇓S	**Sn**	**16 31 16.8**	**-0.2**
PRAR	**RASCA**	**1.03**	**305**	⇑P	**Pg**	**16 31 01.2**	**-0.7**
PRAR				⇑S	**Sg**	**16 31 14.8**	**-0.5**
VRI	**Vrincioaia**	**1.05**	**210**	⇑P	**Pg**	**16 31 01.9**	**-0.3**
VRI				⇓S	**Sb**	**16 31 16.7**	**+0.6**
VRI	**Vrincioaia**	**1.05**	**210**	P	**Pg**	**16 31 01.9**	**-0.3**
ODBI	**Odobesti**	**1.05**	**196**	⇑P	**Pn**	**16 31 03.0**	**0.0**
ODBI				⇑S	**Sb**	**16 31 16.8**	**+0.6**
PLOR	**Plostina**	**1.09**	**212**	⇓P	**Pg**	**16 31 02.9**	**-0.1**
PLOR				⇓S	**Sn**	**16 31 18.4**	**-0.1**
SCTR	**Scanteiesti**	**1.16**	**161**	⇓P	**Pg**	**16 31 04.4**	**0.0**
SCTR				⇓S	**Sn**	**16 31 20.6**	**+0.2**
TUDR		**1.19**	**173**	⇑P	**Pb**	**16 31 04.9**	**+0.2**
TUDR				⇓S	**Sn**	**16 31 21.7**	**+0.7**
TURR	**Turia**	**1.24**	**235**	⇑P	**Pn**	**16 31 06.4**	**+0.9**
TURR				⇓S	**Sn**	**16 31 23.9**	**+1.6**
TATR	**Tatarca**	**1.25**	**161**	⇓P	**Pg**	**16 31 05.9**	**-0.1**
IZVR	**Izvoarele**	**1.25**	**170**	⇑P	**Pn**	**16 31 05.9**	**+0.2**
NEGRR	**Negrea**	**1.27**	**167**	⇑P	**Pn**	**16 31 05.9**	**0.0**
NEGRR				⇓S	**Sn**	**16 31 24.5**	**+1.5**
COVR	**Voineasa-Covas**	**1.28**	**224**	⇓P	**Pg**	**16 31 07.0**	**+0.3**
COVR				⇑S	**Sn**	**16 31 24.9**	**+1.6**
SCHL	**Schela**	**1.30**	**169**	⇑P	**Pn**	**16 31 06.1**	**-0.2**
SCHL				⇓S	**Sn**	**16 31 26.0**	**+2.2**
SCHLR	**Schela**	**1.33**	**169**	⇓P	**Pn**	**16 31 06.9**	**+0.2**
SCHLR				⇓S	**Sn**	**16 31 25.9**	**+1.4**
SCHLR	**Schela**	**1.33**	**169**	⇓P	**Pn**	**16 31 06.9**	**+0.2**
SCHLR				⇓S	**Sn**	**16 31 25.9**	**+1.4**
JOSR	**Joseni**	**1.34**	**268**	⇑P	**Pg**	**16 31 07.8**	**-0.1**
JOSR				⇓S	**Sn**	**16 31 26.4**	**+1.5**
OZUR		**1.35**	**240**	⇑P	**Pn**	**16 31 07.1**	**+0.1**
OZUR				⇓S	**Sn**	**16 31 26.1**	**+1.1**
GIUM	**Giurgiulesti**	**1.39**	**158**	⇑P	**Pb**	**16 31 08.4**	**+0.3**
GIUM				⇓S	**Sg**	**16 31 27.2**	**+0.4**
GIUM	**Giurgiulesti**	**1.39**	**158**	P	**Pb**	**16 31 08.4**	**+0.3**
GIUM				S	**Sg**	**16 31 27.2**	**+0.4**
GISR	**Galati**	**1.40**	**163**	⇓P	**Pb**	**16 31 08.3**	**+0.1**
GISR				⇓S	**Sg**	**16 31 27.2**	**+0.2**
BOSR	**Bodos**	**1.43**	**241**	⇑P	**Pb**	**16 31 08.8**	**+0.1**
SORM	**Soroca**	**1.48**	**23**	⇑P	**Pn**	**16 31 09.1**	**+0.3**
SORM				⇓S	**Sn**	**16 31 28.5**	**+0.2**
SORM	**Soroca**	**1.48**	**23**	P	**Pn**	**16 31 09.1**	**+0.3**
SORM				S	**Sn**	**16 31 28.5**	**+0.2**
SORM	**Soroca**	**1.48**	**23**	P	**Pn**	**16 31 09.1**	**+0.3**
SORM				S	**Sn**	**16 31 28.5**	**+0.2**
DRBR	**Darabani**	**1.54**	**338**	⇑P	**Pn**	**16 31 09.4**	**-0.3**
DRBR				⇑S	**Sn**	**16 31 29.9**	**+0.1**
NEHR	**Nehoiu**	**1.58**	**212**	⇑P	**Pb**	**16 31 11.3**	**0.0**
NEHR				⇓S	**Sg**	**16 31 33.5**	**+0.7**
DOPR	**Dopca**	**1.65**	**241**	⇑P	**Pn**	**16 31 11.7**	**+0.5**
CFR	**Carcaliu**	**1.67**	**164**	⇓P	**Pn**	**16 31 12.1**	**+0.8**
CFR				⇓S	**Sb**	**16 31 34.2**	**+0.3**
MLR	**Muntele Rosu**	**1.67**	**220**	Pg	**Pn**	**16 31 11.9**	**+0.4**
	4.3nm,0.3s,baz=35,slow=16,SNR=54						
MLR				Lg	Lg	16 31 34.2	
	13nm,0.3s,baz=294,slow=21,SNR=11						
MLR	**Muntele Rosu**	**1.67**	**220**	⇑P	**Pn**	**16 31 12.0**	**+0.4**
MLR				⇓S	**Sg**	**16 31 35.3**	**-0.4**
MLR	**Muntele Rosu**	**1.67**	**220**	P	**Pn**	**16 31 11.6**	**+0.1**
MLR				Sn	**Sg**	**16 31 34.9**	**-0.7**
BURAR	**Bucovina Array**	**1.75**	**299**	⇑P	**Pn**	**16 31 13.4**	**+0.8**
BURAR				⇑S	**Sb**	**16 31 36.8**	**+0.4**
ISR	**Istrita**	**1.78**	**202**	⇑P	**Pn**	**16 31 13.5**	**+0.5**
NDNU	**Novodnistrovsk**	**1.82**	**358**	P	**Pn**	**16 31 14.2**	**+0.7**
NDNU	**Novodnistrovsk**	**1.82**	**358**	⇓*i*P	**Pb**	**16 31 15.3**	**-0.2**
NDNU				*eS*	**Sb**	**16 31 38.3**	**0.0**
TLCR		**1.85**	**149**	⇓P	**Pb**	**16 31 15.4**	**-0.6**
TLCR				⇓S	**Sb**	**16 31 39.5**	**+0.4**
BAL3X	**Bal3x, Balta**	**1.86**	**51**	P	**Pn**	**16 31 15.1**	**+1.1**
BAL3X				S	**Sb**	**16 31 39.7**	**+0.3**
KMPD	**K-Podol'skiy**	**1.91**	**339**	P	**Pn**	**16 31 15.4**	**+0.7**
KMPD				P	**Pn**	**16 31 15.5**	**+0.7**
KMPD				Sn	**Sb**	**16 31 40.3**	**-0.7**
KMPD	**K-Podol'skiy**	**1.91**	**339**	⇑*i*P	**Pb**	**16 31 16.2**	**-0.9**
KMPD				*eS*	**Sb**	**16 31 41.0**	**0.0**
TPGR	**Topolog**	**2.03**	**161**	⇑S	**Sb**	**16 31 44.5**	**0.0**
VOIR		**2.15**	**232**	⇓P	**Pn**	**16 31 18.5**	**+0.4**
VOIR		**2.15**	**232**	P	**Pn**	**16 31 17.9**	**-0.2**
AMRR	**Amara**	**2.17**	**183**	⇓S	**Sb**	**16 31 48.0**	**-0.3**
KSV	**Kosov**	**2.24**	**314**	P	**Pn**	**16 31 20.7**	**+1.4**
KSV	**Kosov**	**2.24**	**314**	⇑*i*P	**Pn**	**16 31 21.0**	**+1.7**
KSV				pmax	pmax	16 31 22.4	
KSV				*eS*	**Sn**	**16 31 48.9**	**+1.9**
KSV				smax	smax	16 31 51.8	
SULR		**2.26**	**202**	⇓S	**Sb**	**16 31 49.8**	**-1.3**
TLBR	**Topalu**	**2.27**	**169**	⇑S	**Sb**	**16 31 50.1**	**-1.1**
TIRR	**Tirgusor**	**2.41**	**164**	⇑P	**Pn**	**16 31 22.4**	**+0.8**
TIRR				⇓S	**Sn**	**16 31 53.4**	**+2.2**
NSLU	**Nyzhne Selyshc**	**2.49**	**306**	*eP*	**Pg**	**16 31 30.6**	**+0.9**
NSLU				pmax	pmax	16 31 41.6	
NSLU				*eS*	**Sg**	**16 32 07.2**	**+5.2**
NSLU				smax	smax	16 32 12.5	
HORU	**Horodok**	**2.54**	**344**	*eP*	**Pn**	**16 31 23.5**	**+0.2**
HORU				pmax	pmax	16 31 31.2	
HORU				*eS*	**Sn**	**16 31 55.5**	**+1.2**
HORU				smax	smax	16 32 03.8	
RAKU	**Rahkiv**	**2.57**	**300**	*eP*	**Pn**	**16 31 23.9**	**+0.1**
RAKU				pmax	pmax	16 31 28.6	
RAKU				*eS*	**Sn**	**16 31 56.1**	**+1.0**
RAKU				smax	smax	16 32 07.6	
CJR	**Cluj-Napoca**	**2.66**	**270**	⇑P	**Pn**	**16 31 26.2**	**+1.1**
CJR				⇓S	**Sn**	**16 31 59.0**	**+1.5**
ICOR	**Ion Corvin**	**2.67**	**175**	⇓P	**Pn**	**16 31 26.5**	**+1.3**
MFTR	**Murfatlar**	**2.69**	**165**	⇓S	**Sn**	**16 32 00.9**	**+3.0**
STNU	**Starunia**	**2.78**	**315**	*eP*	**Pn**	**16 31 28.6**	**+1.9**
STNU				*eS*	**Sn**	**16 32 02.1**	**+1.7**
BMR	**Baia Mare**	**2.85**	**290**	⇑P	**Pn**	**16 31 28.5**	**+0.8**
BMR				⇓S	**Sn**	**16 32 02.2**	**+0.1**
LOT	**Lotru**	**2.90**	**244**	⇑P	**Pn**	**16 31 28.8**	**+0.4**
MARR	**Marisel-Cluj**	**2.99**	**270**	⇓P	**Pn**	**16 31 30.3**	**+0.6**
MARR				⇓S	**Sn**	**16 32 06.7**	**+1.1**
MANR	**Mangalia**	**3.06**	**165**	⇑P	**Pn**	**16 31 31.0**	**+0.5**
MESR	**Meseseni**	**3.12**	**279**	⇑S	**Sn**	**16 32 10.1**	**+1.5**
KORU	**Korolevo**	**3.25**	**297**	*eP*	**Pn**	**16 31 35.1**	**+2.0**
KORU				*eS*	**Sb**	**16 32 19.7**	**+0.3**
DRGR		**3.27**	**272**	⇓S	**Sn**	**16 32 13.2**	**+0.7**
GZR	**Gura Zlata**	**3.55**	**249**	⇓P	**Pn**	**16 31 38.1**	**+0.9**
SHIU	**Shidnytsya**	**3.69**	**313**	*eP*	**Pn**	**16 31 39.8**	**+0.6**
TARU	**Tarkhankut**	**3.79**	**110**	*eS*	**Sn**	**16 32 26.4**	**+1.2**
TARU				smax	smax	16 32 28.0	
	comp=N,12nm,0.3s						
TARU				smax	smax	16 32 28.0	
	comp=E,11nm,0.3s						
HOLU	**Holmets**	**3.86**	**299**	*eP*	**Pn**	**16 31 40.9**	**-0.5**
ELND	**Elena**	**4.01**	**197**	⇓P	**Pn**	**16 31 44.8**	**+1.2**
AKASG	**Malin Array Be**	**4.10**	**16**	Pn	**Pn**	**16 31 45.8**	**+1.1**
	comp=E,1.0nm,0.3s,baz=189,slow=6.6,SNR=2.3						
AKASG				Pg	**Pb**	**16 31 55.9**	**+1.6**
	comp=E,4.3nm,0.3s,baz=197,slow=15,SNR=9.0						
AKASG				Lg	Lg	16 32 43.8	
	comp=E,6.3nm,0.3s,baz=196,slow=30,SNR=5.2						
DNZ2	**Donuzlav2**	**4.24**	**107**	*eP*	**Pn**	**16 31 47.7**	**+1.0**
DNZ2				pmax	pmax	16 31 48.8	
	comp=Z,9.0nm,0.1s						
DNZ2				*eS*	**Sn**	**16 32 34.5**	**-1.7**
DNZ2				smax	smax	16 32 37.0	
	comp=N,12nm,0.1s						
DNZ2				smax	smax	16 32 37.0	
	comp=E,60nm,0.3s						
SEV	**Sevastopol'**	**4.88**	**115**	*eP*	**Pn**	**16 31 56.5**	**+0.9**
SEV				pmax	pmax	16 32 03.2	
	comp=Z,7.0nm,0.3s						
SEV				*eS*	**Sn**	**16 32 51.6**	**-0.5**
SEV				smax	smax	16 32 52.5	
	comp=N,8.0nm,0.3s						
SEV				smax	smax	16 32 52.5	
	comp=E,4.0nm,0.3s						
SEV	**Sevastopol'**	**4.88**	**115**	*eP*	**Pn**	**16 31 56.5**	**+0.9**
SEV				pmax	pmax	16 32 03.2	
SEV				*eS*	**Sn**	**16 32 51.6**	**-0.5**
SEV				smax	smax	16 32 52.5	
STHS	**Stebnicka Huta**	**4.94**	**305**	*e*PN	**Pn**	**16 31 55.7**	**-0.6**
KECS	**Kecovo**	**5.02**	**292**	*e*PN	**Pn**	**16 31 58.9**	**+1.5**
KECS				*e*SN	**Sn**	**16 32 54.2**	**-1.3**
SUDU	**Sudak**	**5.59**	**107**	*eP*	**Pn**	**16 32 06.7**	**+1.4**
SUDU				pmax	pmax	16 32 07.6	
	comp=Z,7.0nm,0.2s						
SUDU				*eS*	**Sn**	**16 33 07.2**	**-2.3**
SUDU				smax	smax	16 33 13.3	
	comp=E,10.0nm,0.5s						
SUDU				smax	smax	16 33 13.4	
	comp=N,37nm,0.4s						
SUDU	**Sudak**	**5.59**	**107**	*eP*	**Pn**	**16 32 06.7**	**+1.4**
SUDU				pmax	pmax	16 32 07.6	
SUDU				*eS*	**Sn**	**16 33 07.2**	**-2.3**
SUDU				smax	smax	16 33 13

2µm,0.2s
CRPR IAML 16 37 23.1
2µm,0.4s
CRPR Cabo Rojo, PR 0.33 281 *e*Pg **Pb 16 37 17.6 +0.3**
CRPR *e*Sg **Sb 16 37 22.7 +0.3**
CRPR IAML 16 37 22.8
comp=N,2µm,0.2s
CRPR Cabo Rojo, PR 0.33 281⇑*i*P **Pb 16 37 17.4 0.0**
CRPR *e*S **Sb 16 37 22.4 -0.1**
LSP Las Mesas 0.38 307 *e*P **Pb 16 37 18.0 -0.2**
LSP *e*S **Sb 16 37 23.9 0.0**
LSP Las Mesas 0.38 307⇓*e*P **Pb 16 37 18.0 -0.2**
LSP *e*S **Sb 16 37 23.9 0.0**
PRSN Puerto Rico Se 0.45 307 *e*S **Sg 16 37 25.0 -0.1**
PRSN Puerto Rico Se 0.45 307 Pg **Pg 16 37 18.9 0.0**
PRSN IAML 16 37 27.6
comp=N,3µm,0.2s
PRSN IAML 16 37 28.8
comp=N,3µm,0.3s
PRSN Puerto Rico Se 0.45 307 *e*Pg **Pg 16 37 19.1 +0.2**
PRSN *e*Sg **Sg 16 37 24.9 -0.1**
PRSN IAML 16 37 27.4
comp=N,2µm,0.3s
PRSN Puerto Rico Se 0.45 307⇓*e*P **Pg 16 37 19.1 +0.2**
PRSN *e*S **Sg 16 37 25.0 -0.1**
ECPR Experimental S 0.54 46 Pg **Pg 16 37 20.2 -0.2**
ECPR Sg **Sg 16 37 26.9 -0.7**
ECPR Experimental S 0.54 46⇓*e*P **Pg 16 37 20.4 0.0**
ECPR *e*S **Sg 16 37 27.2 -0.4**
EMPR Esperanza - Ma 0.58 23 **Pb 16 37 21.5 +0.1**
EMPR **Sb 16 37 29.4 0.0**
EMPR Esperanza - Ma 0.58 23⇑*e*P **Pb 16 37 21.5 +0.1**
EMPR *e*S **Sb 16 37 29.4 0.0**
SJG San Juan 0.61 74 **Pb 16 37 22.0 0.0**
SJG San Juan 0.61 74 **Sg 16 37 29.5 -0.5**
SJG San Juan 0.61 74 IAML 16 37 30.8
comp=N,1µm,0.4s
SJG IAML 16 37 31.2
comp=N,573nm,0.2s
SJG San Juan 0.61 74 *e*Pg **Pb 16 37 22.2 +0.2**
SJG *e*Sg **Sb 16 37 30.7 +0.4**
SJG San Juan 0.61 74⇑*e*P **Pb 16 37 22.0 0.0**
SJG *e*S **Sg 16 37 30.2 +0.2**
AGPR Aguadilla, PR 0.62 328 **Pg 16 37 21.6 -0.4**
AGPR Aguadilla, PR 0.62 328 *e*Pg **Pg 16 37 21.6 -0.4**
AGPR *e*Sg **Sb 16 37 31.9 +1.3**
AGPR IAML 16 37 35.3
comp=N,554nm,0.4s
AGPR Aguadilla, PR 0.62 328⇑*e*P **Pg 16 37 21.8 -0.2**
AGPR *e*S **Sb 16 37 31.2 +0.6**
PDPR Patillas Dam, 0.71 84 **Pg 16 37 23.6 -0.1**
PDPR Sg **Sg 16 37 33.1 0.0**
PDPR IAML 16 37 34.5
comp=N,701nm,0.3s
GCPR Guaynabo City 0.74 61 **Pg 16 37 24.0 -0.4**
GCPR **Sg 16 37 32.7 -1.5**
GCPR Guaynabo City 0.74 61⇑*e*P **Pg 16 37 24.3 -0.1**
GCPR *e*S **Sg 16 37 33.4 -0.8**
IDE Isla Desecheo 0.81 303 **Pg 16 37 25.1 -0.4**
IDE **Sg 16 37 36.0 -0.2**
IDE Isla Desecheo 0.81 303⇑*e*P **Pg 16 37 25.1 -0.4**
IDE *e*S **Sg 16 37 36.0 -0.2**
HUMP Col San Antoni 0.89 77 Pg **Pb 16 37 26.6 -0.2**
HUMP Sg **Sb 16 37 37.9 -0.6**
HUMP IAML 16 37 39.1
comp=N,384nm,0.2s
HUMP IAML 16 37 39.3
comp=N,338nm,0.2s
HUMP Col San Antoni 0.89 77⇑*e*P **Pb 16 37 26.7 -0.2**
HUMP *e*S **Sb 16 37 38.1 -0.4**
CUPR Culebra, Puert 1.46 75 Pn **Pb 16 37 36.3 -0.2**
CUPR Sn **Sb 16 37 55.4 +0.7**
PCDR Punta Cana, DR 1.64 291 *e*Pg **Pb 16 37 39.2 -0.3**
PCDR *e*Sg **Sn 16 37 57.9 -0.7**
PCDR IAML 16 38 13.5
comp=N,164nm,0.8s
DR12 Loma Pena Alta 2.62 289 Pn **Pn 16 37 52.5 +1.0**
HATOM Hato Mayor del 2.62 289 *e*Pg **Pb 16 37 54.3 -2.1**
HATOM *e*Sg **Sb 16 38 27.3 -1.1**
HATOM IAML 16 38 34.2
comp=N,42nm,2.1s
DR08 Loma La Naviza 3.25 289 *e*Pg **Pn 16 38 03.2 +3.1**
DR08 *e*Sg **Sb 16 38 44.5 -2.1**
DR08 IAML 16 39 22.4
comp=N,384nm,0.7s
SDDR Presa de Saban 4.42 284 Pn **Pn 16 38 15.8 -0.4**

*IDC **13** 16:42:22.1±1.6,5.°25S×133.°87E, h0km, mb3.9/1, mbtmp4.0/7, ML3.7/5, Error ellipse: s-maj=46.8km s-min=22.3km az=73.0*
*NEIC **13** 16:42:22.7±2.1,5.°25S±0.°06×133.°85E±0.°09, h10km±1km, mb4.1/6, Error ellipse: s-maj=15.6km s-min=9.7km az=81.0*
ISC 13 16:42:24.6±0.8,5.°29S±0.°05×133.°82E±0.°09, h32km, n24, σ2s85/32, mb4.1/4, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.83**	**326**			**Pn**	**16 43 07.7**	**0.0**
FAKI					Sn	**Sn**	**16 43 37.2**	**-3.5**
SAUI	**Saumlaki**	**3.67**	**223**	Pn	Pn	**Pn**	**16 43 19.8**	**+0.7**
SIJI	**Sorong**	**5.08**	**330**	Pn	Pn	**Pn**	**16 43 38.6**	**0.0**
	2.0nm,0.3s,baz=159,slow=17,SNR=11							
SIJI					Sn	**Sn**	**16 44 31.4**	**-4.8**
	5.9nm,0.3s,baz=51,slow=24,SNR=9.0							
	8.2nm,0.2s							
MTN	**Manton Dam**	**7.96**	**199**	Pn	Pn	**Pn**	**16 44 21.5**	**+3.3**
MTN				Sn	Sn	**Sn**	**16 45 49.4**	**+2.2**
SOEI	**Soe**	**10.46**	**244**	Pn	Pn	**Pn**	**16 44 54.9**	**+2.3**
BATI	**Baumata**	**11.19**	**244**	Pn	Pn	**Pn**	**16 45 05.9**	**+3.4**
	0.7nm,0.3s,baz=45,slow=7.1,SNR=2.3							
BATI					Sn	**Sn**	**16 47 07.9**	**+1.3**
	2.0nm,0.3s,baz=39,slow=1.2,SNR=2.1							
	11nm,0.4s							
KNRA	**Kununurra**	**11.46**	**205**	Pn		**Pn**	**16 45 06.9**	**+0.8**
COEN	**Coen**	**12.61**	**134**	Pn		**Pn**	**16 45 21.7**	**-0.2**
WB0	**Warramunga Arr**	**14.40**	**178**	Pn		**Pn**	**16 45 45.9**	**-0.5**
TOLI2	**Tolitoli**	**14.50**	**296**	Pn		**Pn**	**16 45 47.0**	**-0.7**
WRA	**Warramunga Arr**	**14.57**	**178**	Pn		**Pn**	**16 45 49.1**	**+0.3**
	0.1nm,0.3s,baz=353,slow=13,SNR=9.2							
WRA						**Sn**	**16 48 25.0**	**-4.2**
	0.1nm,0.3s,baz=353,slow=24,SNR=1.6							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**14.57**	**178**			**Pn**	**16 45 45.9**	**-2.8**
WRA						**Sn**	**16 48 23.4**	**-5.8**
WR8	**Warramunga Arr**	**14.59**	**177**	Pn		**Pn**	**16 45 48.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**15.03**	**211**	Pn		**Pn**	**16 45 55.1**	**+0.3**
	0.7nm,0.3s,baz=36,slow=12,SNR=12							
FITZ					Sn	**Sn**	**16 48 33.6**	**-6.8**
	0.2nm,0.3s,baz=165,slow=22,SNR=1.9							
	2.1nm,0.4s							
AS31	**Alice Springs**	**18.27**	**180**	P		**P**	**16 46 35.6**	**-0.2**
ASAR	**Alice Springs**	**18.27**	**180**	P		**Pn**	**16 46 37.7**	**+1.8**
	0.3nm,0.3s,baz=5.2,slow=11,SNR=24							
ASAR					S	**Sn**	**16 49 53.2**	**-5.8**
	0.4nm,0.8s,baz=356,slow=22,SNR=3.1							
	1.3nm,0.7s							
ASAR	**Alice Springs**	**18.27**	**180**	P		**P**	**16 46 35.0**	**-0.8**
CTA	**Charters Tower**	**19.04**	**142**	P		**Pn**	**16 46 46.3**	**+1.1**
	3.8nm,0.8s,baz=306,slow=11,SNR=2.3							
PSA00	**Pilbara Seismi**	**21.11**	**219**	P		**P**	**16 47 07.3**	**+0.6**
PSA00				IAmb	IAmb	IAmb	16 47 12.4	
	comp=Z,17nm,1.4s							
INKA	**Innaminka**	**23.28**	**164**	P		**P**	**16 47 31.4**	**+1.8**
INKA				IAmb	IAmb	IAmb	16 48 08.9	
	comp=Z,4.5nm,1.4s							
FORT	**Forrest**	**25.93**	**191**	P		**P**	**16 47 55.7**	**+1.6**
FORT				IAmb	IAmb	IAmb	16 48 00.9	
	comp=Z,4.6nm,0.8s							
TPUB	**Ta-pu**	**31.20**	**336**	P		**P**	**16 48 41.9**	**+0.7**
MKAR	**Makanchi Array**	**68.96**	**325**	P		**P**	**16 53 29.3**	**+2.5**
	comp=Z,0.7nm,0.5s,baz=117,slow=7.6,SNR=14							
	comp=Z,0.7nm,0.5s							
MAKZ	**Makanchi**	**69.15**	**325**	P		**P**	**16 53 30.0**	**+2.1**

*NEIC **13** 16:43:45.8±1.8,25.°3S±0.°1×179.°8W±0.°2, h465km±7km, mb4.3/22, Error ellipse: s-maj=21.2km s-min=15.0km az=101.0*
*IDC **13** 16:43:46.0±3.6,25.°27S×179.°86W, h468km±37km, mb3.5/13, mbtmp4.3/16, Error ellipse: s-maj=24.8km s-min=22.3km az=32.0*
ISC 13 16:43:48.0±0.5,25.°18S±0.°07×179.°86W±0.°09, h496km, n93, σ1s77/89, mb4.1/19, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.42**	**157**	P		**P**	**16 45 13.1**	**+3.6**
GLKZ				S		**S**	**16 46 20.0**	**+3.9**
MSVF	**Nonsavu**	**7.66**	**345**	P		**P**	**16 45 39.8**	**-1.2**
OUZ	**Omahuta**	**11.49**	**208**	P		**P**	**16 46 24.0**	**+2.9**
MARNC	**Mare, Loyalty**	**11.72**	**286**	P		**P**	**16 46 20.7**	**-3.0**
WCZ	**Waipu Caves**	**11.83**	**204**	P		**P**	**16 46 27.7**	**+3.1**
KUZ	**Kuaotunu**	**12.13**	**197**	P		**P**	**16 46 29.8**	**+2.0**
WIAZ	**Waiheke Island**	**12.35**	**199**	P		**P**	**16 46 32.6**	**+2.5**
MBAZ	**Motutapu North**	**12.39**	**200**	P		**P**	**16 46 33.1**	**+2.5**
MXZ	**Matakaoa Point**	**12.44**	**187**	P		**P**	**16 46 28.8**	**-2.3**
MXZ	**Matakaoa Point**	**12.44**	**187**	P		**P**	**16 46 30.4**	**-0.8**
WMGZ	**Waiomatatini S**	**12.69**	**186**	P		**P**	**16 46 35.6**	**+1.9**
HAZ	**Te Kaha**	**12.70**	**189**	P		**P**	**16 46 33.8**	**-0.1**
RUGZ	**Raukumara Rang**	**12.92**	**189**	P		**P**	**16 46 36.8**	**+0.5**
DZM	**Mont Dzumac**	**12.93**	**281**	P		**P**	**16 46 36.5**	**-0.2**
	3.0nm,0.7s,baz=178,slow=13,SNR=1.2							
PUZ	**Puketiti**	**12.95**	**187**	P		**P**	**16 46 39.6**	**+3.0**
TWGZ	**Tauwhareparae**	**13.09**	**188**	P		**P**	**16 46 37.3**	**-0.7**
TOZ	**Tahuroa Road**	**13.12**	**196**	P		**P**	**16 46 36.3**	**-2.0**
TOZ	**Tahuroa Road**	**13.12**	**196**	P		**P**	**16 46 39.3**	**+1.0**
URZ	**Urewera**	**13.29**	**190**	P		**P**	**16 46 37.9**	**-2.2**
	6.5nm,0.3s,baz=266,slow=3.6,SNR=21							
URZ				S		**S**	**16 49 00.1**	**-1.9**
	8.9nm,0.6s,baz=356,slow=19,SNR=14							
URZ	**Urewera**	**13.29**	**190**	P		**P**	**16 46 38.8**	**-1.3**
MWZ	**Matawai**	**13.30**	**189**	P		**P**	**16 46 39.9**	**-0.4**
CNGZ	**Carnagh Statio**	**13.37**	**187**	P		**P**	**16 46 42.4**	**+1.5**
RAGZ	**Rawiri**	**13.48**	**189**	P		**P**	**16 46 43.2**	**+1.0**
RTZ	**Ruatahuna**	**13.66**	**191**	P		**P**	**16 46 41.3**	**-2.8**
HIZ	**Hauiti**	**14.03**	**197**	P		**P**	**16 46 45.3**	**-2.6**
BKZ	**Black Stump Fm**	**14.28**	**192**	P		**P**	**16 46 47.9**	**-2.7**
BKZ	**Black Stump Fm**	**14.28**	**192**	P		**P**	**16 46 49.8**	**-0.9**
VRZ	**Vera Road**	**14.63**	**197**	P		**P**	**16 46 55.8**	**+1.5**
PXZ	**Pawanui**	**15.06**	**190**	P		**P**	**16 46 57.2**	**-1.6**
BFZ	**Birch Farm**	**15.80**	**191**	P		**P**	**16 47 05.9**	**-0.6**
MRZ	**Mangatainoka R**	**15.90**	**193**	P		**P**	**16 47 04.2**	**-3.4**
TCW	**Tory Channel**	**16.72**	**196**	P		**P**	**16 47 13.6**	**-2.5**
QRZ	**Quartz Range**	**16.85**	**200**	P		**P**	**16 47 15.6**	**-1.8**
QRZ	**Quartz Range**	**16.85**	**200**	P		**P**	**16 47 16.7**	**-0.7**
NNZ	**Nelson**	**16.96**	**198**	P		**P**	**16 47 17.4**	**-1.1**
TUWZ	**Tuamarina**	**17.01**	**196**	P		**P**	**16 47 16.2**	**-2.8**
THZ	**Tophouse**	**17.59**	**198**	P		**P**	**16 47 22.6**	**-2.2**
THZ				IAmb		IAmb	16 47 35.7	
	comp=Z,11nm,1.0s							
THZ	**Tophouse**	**17.59**	**198**	P		**P**	**16 47 24.0**	**-0.7**
DSZ	**Denniston Nort**	**17.91**	**201**	P		**P**	**16 47 27.4**	**-0.3**
KHZ	**Kahutara**	**18.04**	**196**	P		**P**	**16 47 28.0**	**-0.7**
GVZ	**Greta Valley S**	**18.68**	**196**	P		**P**	**16 47 33.6**	**-1.1**
LTZ	**Lake Taylor**	**18.71**	**198**			**P**	**16 47 32.6**	**-2.4**
LTZ				IAmb		IAmb	16 47 38.3	
	comp=Z,21nm,1.4s							
LTZ	**Lake Taylor**	**18.71**	**198**	P		**P**	**16 47 34.0**	**-1.1**
RAR	**Rarotonga**	**18.88**	**82**	P		**P**	**16 47 30.3**	**-6.5**
	comp=Z,8.7nm,0.5s,baz=73,slow=11,SNR=3.6							
INZ	**Inchbonnie**	**18.91**	**200**	P		**P**	**16 47 34.9**	**-1.8**
INZ				IAmb		IAmb	16 47 38.3	
	comp=Z,10nm,0.6s							
INZ	**Inchbonnie**	**18.91**	**200**	P		**P**	**16 47 36.2**	**-0.5**
OXZ	**Oxford**	**19.28**	**198**	P		**P**	**16 47 39.7**	**-0.5**
RPZ	**Rata Peaks**	**19.93**	**200**	P		**P**	**16 47 43.8**	**-2.2**
	comp=Z,3.8nm,0.6s,baz=19,slow=9.3,SNR=1.6							
FOZ	**Fox Glacier**	**20.16**	**202**	P		**P**	**16 47 47.0**	**-1.1**
FOZ				IAmb		IAmb	16 47 48.9	
	comp=Z,7.1nm,0.8s							
EIDS	**Eidsvold**	**26.26**	**263**	P		**P**	**16 48 43.2**	**+0.2**
EIDS				IAmb		IAmb	16 48 58.4	
	comp=Z,11nm,1.3s							
CTA	**Charters Tower**	**31.63**	**272**	P		**P**	**16 49 29.9**	**+0.1**
	comp=Z,7.3nm,0.4s,baz=93,slow=10,SNR=17							
	comp=Z,7.3nm,0.4s							
CTAO	**Charters Tower**	**31.63**	**272**	P		**P**	**16 49 29.6**	**-0.2**
CTAO				IAmb		IAmb	16 49 30.9	
	comp=Z,10nm,0.8s							
STKA	**Stephens Creek**	**34.38**	**250**	P		**P**	**16 49 53.1**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=89,slow=12,SNR=3.5							
	comp=Z,1.0nm,0.4s							
STKA	**Stephens Creek**	**34.38**	**250**	IAmb		IAmb	16 50 29.5	
	comp=Z,25nm,1.4s							
INKA	**Innaminka**	**35.26**	**257**	P		**P**	**16 50 00.9**	**+0.5**
BBOO	**Buckleboo**	**39.08**	**248**	P		**P**	**16 50 30.1**	**-1.8**
BBOO				IAmb		IAmb	16 50 56.0	
	comp=Z,25nm,1.4s							
AS31	**Alice Springs**	**41.97**	**262**	P		**P**	**16 50 54.7**	**-0.4**
ASAR	**Alice Springs**	**41.97**	**262**	P		**P**	**16 50 54.8**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=95,slow=7.2,SNR=43							
ASAR				PcP		**PcP**	**16 52 40.0**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=111,slow=3.4,SNR=2.6							
	comp=Z,1.7nm,0.4s							
ASAR	**Alice Springs**	**41.97**	**262**	P		**P**	**16 50 54.3**	**-0.9**
WRAB	**Tennant Creek**	**42.45**	**267**	P		**P**	**16 50 57.7**	**-1.3**
WRAB				IAmb		IAmb	16 51 39.9	
	comp=Z,7.6nm,1.0s							
WRA	**Warramunga Arr**	**42.46**	**267**	P		**P**	**16 50 58.3**	**-0.7**
	comp=Z,5.0nm,0.4s,baz=100,slow=7.1,SNR=30							
	comp=Z,5.0nm,0.4s							
WRA	**Warramunga Arr**	**42.46**	**267**	P		**P**	**16 50 57.6**	**-1.5**
FORT	**Forrest**	**46.00**	**251**	P		**P**	**16 51 24.9**	**-1.3**
MTN	**Manton Dam**	**47.69**	**275**	P		**P**	**16 51 38.0**	**-1.3**
KNRA	**Kununurra**	**48.82**	**271**	P		**P**	**16 51 47.0**	**-0.7**
KNRA				IAmb		IAmb	16 51 48.2	
	comp=Z,25nm,1.1s							
FITZ	**Fitzroy Crossi**	**50.87**	**267**	P		**P**	**16 52 02.3**	**-0.5**
	comp=Z,6.9nm,0.7s,baz=105,slow=7.9,SNR=8.5							
	comp=Z,6.9nm,0.7s							
SIJI	**Sorong**	**52.97**	**289**	P		**P**	**16 52 17.6**	**-0.5**
	comp=Z,33nm,1.1s,baz=155,slow=4.8,SNR=7.9							
	comp=Z,33nm,1.1s							
MBWA	**Marble Bar**	**55.29**	**261**	P		**P**	**16 52 33.5**	**-0.9**
MBWA				IAmb		IAmb	16 52 41.1	
	comp=Z,14nm,1.2s							
MORW	**Morawa**	**56.56**	**251**	P		**P**	**16 52 42.5**	**-0.6**
MORW				IAmb		IAmb	16 53 20.2	
	comp=Z,13nm,1.3s							
MJAR	**Matsushiro Arr**	**73.02**	**326**	P		**P**	**16 54 26.6**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=154,slow=5.7,SNR=3.5							
	comp=Z,1.6nm,0.8s							
MJAR	**Matsushiro Arr**	**73.02**	**326**	IAmb		IAmb	16 54 29.0	
	comp=Z,7.7nm,1.4s							
YULB	**Yu-li**	**74.71**	**305**	P		**P**	**16 54 37.1**	**+0.3**
KSRS	**Korea Array**	**79.31**	**320**	P		**P**	**16 55 02.8**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=125,slow=5.7,SNR=4.6							
	comp=Z,0.8nm,0.7s							
YSS	**Yuzhno-Sakhali**	**79.34**	**335**	P		**P**	**16 55 03.8**	**+2.2**
PEA0B	**Petropavlovsk-**	**80.37**	**347**	P		**P**	**16 55 07.5**	**+0.6**
PETK	**Petropavlovsk-**	**80.37**	**347**	P		**P**	**16 55 07.9**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=110,slow=7.9,SNR=11							
	comp=Z,2.4nm,0.6s							
USRK	**Ussuriysk Ar.**	**81.90**	**327**	P		**P**	**16 55 16.2**	**+1.2**
	comp=Z,1.0nm,0.4s,baz=114,slow=6.5,SNR=2.9							
	comp=Z,1.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**90.09**	**290**	P		**P**	**16 55 56.9**	**+1.8**
	comp=Z,1.0nm,0.7s,baz=121,slow=5.1,SNR=8.7							
	comp=Z,1.0nm,0.7s							
TXAR	**Lajitas Array**	**91.00**	**58**	P		**P**	**16 56 01.0**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=237,slow=4.0,SNR=3.0							
	comp=Z,0.4nm,0.8s							
ILAR	**Eielson Array**	**93.24**	**14**	P		**P**	**16 56 09.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=203,slow=3.9,SNR=4.3							
	comp=Z,0.2nm,0.5s							
MKAR	**Makanchi Array**	**113.11**	**312**	PKiKP		**PKiKP**	**17 01 28.4**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=59,slow=2.9,SNR=5.6							
BVAR	**Bovoye Array**	**121.48**	**318**	PKP		**PKPdf**	**17 01 44.8**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=102,slow=1.9,SNR=9.1							
SPITS	**Spitsbergen Ar**	**126.40**	**356**	PKP		**PKPdf**	**17 01 53.6**	**+0.5**
	comp=Z,9.2nm,1.1s,baz=65,slow=4.0,SNR=5.0							
ARCES	**ARCESS Array B**	**133.16**	**348**	PKP		**PKiKP**	**17 02 07.8**	**+0.3**
	comp=Z,5.1nm,1.0s,baz=33,slow=2.9,SNR=5.2							
FINES	**FINESS Array B**	**139.69**	**341**	PKhKP		PKPpre	17 02 11.3	
	comp=Z,2.1nm,0.8s,baz=29,slow=4.4,SNR=9.0							
NB2	**NORSAR Subarra**	**143.36**	**351**	PKP		PKPbc	17 02 23.8	+0.5
	comp=Z,0.9nm,0.6s,baz=15,slow=3.3							
NOA	**NORSAR Array B**	**143.36**	**351**	PKP		PKPbc	17 02 23.6	+0.2
	comp=Z,2.1nm,0.8s,baz=16,slow=5.0,SNR=7.5							
MARD	**Mardin**	**143.47**	**299**			PKPbc	17 02 25.2	+0.6
HFS	**Hagfors**	**143.82**	**349**	PKP		PKPab	17 02 25.1	+0.4
	comp=Z,7.4nm,0.6s,baz=48,slow=3.9,SNR=38							
AKASG	**Malin Array Be**	**146.10**	**326**	PKPbc		**PKPbc**	**17 02 32.0**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=46,slow=4.3,SNR=9.8							
MMAI	**Mount Meron Ar**	**148.32**	**293**	PKPbc		**PKiKP**	**17 02 40.4**	**+0.7**
	comp=Z,2.4nm,0.4s,baz=63,slow=7.6,SNR=8.5							
BRTR	**Keskin Array B**	**148.44**	**306**	PKPbc		**PKPbc**	**17 02 39.2**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=148,slow=4.2,SNR=8.4							
EKA	**Eskdalemuir Ar**	**149.78**	**4**	PKPbc		**PKPbc**	**17 02 41.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=359,slow=3.7,SNR=5.3							

*SJA **13** 16:48:20.9±0.6,24.°34S×67.°00W, h189km±7km, ML3.6, MW3.7*
*GUC **13** 16:48:21.0±0.7,24.°41S×66.°97W, h196km±7km, ML4.0*
ISC 13 16:48:23.0±1.3,24.°38S±0.°04×67.°05W±0.°05, h169km, n30, σ1s80/39, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SALTA		**0.67**	**77**	⇓*i*P		**Pn**	**16 48 48.5**	**+0.5**
SALTA		**0.67**	**77**	*e*P		**Pn**	**16 48 48.5**	**+0.5**
SALTA				*e*P			16 48 48.6	
AF01	**San Pedro de A**	**1.75**	**324**	*e*S		**Sn**	**16 49 31.0**	**+7.8**
AF01				IAML			16 49 44.9	
	comp=Z,156nm,0.5s							
AZAP	**Zapla**	**1.82**	**86**	*e*P		**Pn**	**16 48 56.9**	**-0.7**
FSA	**Cafayete**	**1.98**	**151**	*e*P		**Pn**	**16 48 59.3**	**0.0**
GO02	**Mina Guanaco**	**2.44**	**251**⇑	*i*P		**Pn**	**16 49 05.5**	**+0.8**
GO02				*e*S		**Sn**	**16 49 38.8**	**+1.9**
GO02				IAML			16 49 39.5	
	comp=N,678nm,0.3s							
GO02	**Mina Guanaco**	**2.44**	**251**	*e*P		**Pn**	**16 49 05.6**	**+1.0**
GO02				*e*S		**Sn**	**16 49 39.1**	**+2.2**
GO02				IAML			16 49 40.7	
	comp=Z,453nm,0.1s							
PB06	**IPOC Station P**	**2.85**	**305**⇑	*i*P		**Pn**	**16 49 10.0**	**+0.5**
PB06				IAML			16 49 48.0	
	comp=N,472nm,0.3s							
PB06	**IPOC Station P**	**2.85**	**305**	*e*P		**Pn**	**16 49 08.9**	**-0.6**
PB06				*e*S		**Sn**	**16 49 39.9**	**-5.7**
PB06				IAML			16 49 47.3	
	comp=Z,297nm,0.3s							
AHML	**Horco Molle**	**2.86**	**147**	*e*P		**Pn**	**16 49 08.4**	**-1.0**
AHML	**Horco Molle**	**2.86**	**147**	*e*P		**Pn**	**16 49 09.2**	**-0.2**
PB14	**IPOC Station P**	**3.06**	**265**	*e*P		**Pn**	**16 49 12.5**	**+0.2**
PB14				IAML			16 49 51.5	
	comp=E,63nm,0.4s							
PB14	**IPOC Station P**	**3.06**	**265**	*e*P		**Pn**	**16 49 12.5**	**+0.2**
PB14				*e*S		**Sn**	**16 49 50.4**	**-0.1**
PB14				IAML			16 49 54.3	
	comp=Z,102nm,0.3s							
AC02	**Maricunga**	**3.08**	**217**	*e*P		**Pn**	**16 49 13.9**	**+1.2**
AC02				*e*S		**Sn**	**16 49 51.5**	**+0.2**
PB05	**IPOC Station P**	**3.26**	**297**⇑	*i*P		**Pn**	**16 49 14.6**	**0.0**
PB05	**IPOC Station P**	**3.26**	**297**	*e*P		**Pn**	**16 49 14.6**	**0.0**
PB05				*e*S		**Sn**	**16 49 53.9**	**-0.7**
PB05				IAML			16 49 58.4	
	comp=Z,71nm,0.3s							
PB09	**IPOC Station P**	**3.27**	**321**	*e*P		**Pn**	**16 49 15.3**	**+0.6**
PB09	**IPOC Station P**	**3.27**	**321**	*e*P		**Pn**	**16 49 14.9**	**+0.2**
PB09				IAML			16 50 00.2	
	comp=Z,79nm,0.4s							
PB10	**IPOC Station P**	**3.32**	**284**⇑	*i*P		**Pn**	**16 49 15.3**	**+0.2**
PB03	**IPOC Station P**	**3.40**	**312**	*e*P		**Pn**	**16 49 16.1**	**-0.2**
PB03	**IPOC Station P**	**3.40**	**312**	*e*P		**Pn**	**16 49 16.1**	**-0.2**
PB03				*e*S		**Sn**	**16 49 56.3**	**-1.4**
PB03				IAML			16 49 59.3	
	comp=Z,192nm,0.3s							
AC01	**Pan de Azucar**	**3.66**	**240**	*e*P		**Pn**	**16 49 18.9**	**-0.6**
AC01	**Pan de Azucar**	**3.66**	**240**	*e*P		**Pn**	**16 49 18.8**	**-0.7**
AC01				*e*S		**Sn**	**16 50 03.0**	**-0.6**
AC01				IAML			16 50 03.2	
	comp=Z,64nm,0.1s							
PB07	**IPOC Station P**	**3.71**	**315**	*e*P		**Pn**	**16 49 19.8**	**-0.5**
PB07	**IPOC Station P**	**3.71**	**315**	*e*P		**Pn**	**16 49 19.3**	**-1.0**
PB07				IAML			16 50 07.3	
	comp=Z,141nm,0.4s							
PB01	**IPOC Station P**	**4.01**	**325**	*e*P		**Pn**	**16 49 23.1**	**-0.9**
PB01				IAML			16 50 12.0	
	comp=Z,67nm,0.2s							
PB02	**IPOC Station P**	**4.02**	**319**	*e*P		**Pn**	**16 49 23.3**	**-0.9**
PB02				IAML			16 50 15.8	
	comp=Z,203nm,0.3s							
GO03	**Copiapo**	**4.30**	**221**	*e*P		**Pn**	**16 49 27.4**	**-0.3**
GO03				*e*S		**Sn**	**16 50 16

comp=Z,72nm,21.6s,baz=304,slow=41
WB0 Warramunga Arr 18.25 138 Pn 16 55 47.6 -0.4
WRA Warramunga Arr 18.34 139 P **Pn 16 55 47.7 -1.4**
0.3nm,0.3s,baz=311,slow=12,SNR=14
3.4nm,0.8s
WR8 Warramunga Arr 18.46 138 P 16 55 48.8 -1.7
AS31 Alice Springs 20.91 147 P **P 16 56 17.1 -0.1**
ASAR Alice Springs 20.91 147 P **P 16 56 17.9 +0.7**
3.1nm,0.6s,baz=332,slow=13,SNR=23
3.1nm,0.6s
ASAR Alice Springs 20.91 147 P **P 16 56 16.9 -0.3**
MORW Morawa 23.18 192 P **P 16 56 39.5 -1.9**
MORW IAmb IAmb 16 57 13.2
comp=Z,23nm,1.4s
FORT Forrest 25.05 167 P **P 16 56 58.5 -0.4**
FORT IAmb IAmb 16 57 11.9
comp=Z,5.9nm,0.8s
INKA Innaminka 28.00 142 P **P 16 57 26.4 +0.8**
BBOO Buckleboo 29.58 155 P **P 16 57 39.4 -0.3**
STKA Stephens Creek 31.54 146 P **P 16 57 57.9 +0.8**
comp=Z,1.8nm,0.8s,baz=336,slow=8.6,SNR=4.0
comp=Z,1.8nm,0.8s
STKA Stephens Creek 31.54 146 P **P 16 57 56.5 -0.5**
CMAR Chiang Mai Arr 33.26 318 P **P 16 58 11.9 -0.2**
comp=Z,0.6nm,0.7s,baz=138,slow=9.3,SNR=6.8
comp=Z,0.6nm,0.7s
CMAR Chiang Mai Arr 33.26 318 P **P 16 58 10.4 -1.8**
JMN Monobe 41.54 16 P **P 16 59 23.1 +0.9**
KSRS Korea Array 43.99 7 P **P 16 59 42.0 +0.1**
comp=Z,0.7nm,0.8s,baz=181,slow=6.9,SNR=3.2
comp=Z,0.7nm,0.8s
LSA Lhasa 46.25 322 P **P 17 00 01.1 +0.4**
LSA Lhasa 46.25 322 P **P 16 59 58.4 -2.3**
LSA pmax pmax
comp=Z,8.0nm,0.7s
GTA2 Gaotai 49.87 338 *e*P **P 17 00 29.0 +0.8**
GTA2 sP pwP 17 00 37.0 +3.2
GTA2 pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 55.49 348 P **P 17 01 09.5 -0.2**
ULN IAmb IAmb 17 01 19.1
comp=Z,5.4nm,1.2s
SONM Songino Array 55.59 348 P **P 17 01 11.0 +0.7**
comp=Z,1.2nm,0.5s,baz=170,slow=8.5,SNR=8.3
comp=Z,1.2nm,0.5s
SONM Songino Array 55.59 348 P **P 17 01 10.5 +0.2**
SONM IAmb IAmb 17 01 20.5
comp=Z,1.7nm,0.7s
MKAR Makanchi Array 63.34 331 P **P 17 02 03.9 +0.1**
comp=Z,1.7nm,0.7s,baz=141,slow=6.9,SNR=19
comp=Z,1.7nm,0.7s
MKAR Makanchi Array 63.34 331 P **P 17 02 03.7 -0.1**
MAKZ Makanchi 63.50 331 P **P 17 02 04.6 -0.2**
MAKZ IAmb IAmb 17 02 27.6
comp=Z,3.7nm,1.4s
KBL Kabul 64.08 313 P **P 17 02 08.4 -0.7**
AAK Ala-Archa 64.83 323 P **P 17 02 13.9 +0.1**
AAK IAmb IAmb 17 02 15.2
comp=Z,2.3nm,0.7s
ARSB Arslanbob 64.98 321 P **P 17 02 15.2 +0.3**
PETK Petropavlovsk- 66.66 23 P **P 17 02 26.0 +0.8**
comp=Z,2.1nm,0.8s,baz=102,slow=19,SNR=4.5
comp=Z,2.1nm,0.8s
PETK Petropavlovsk- 66.66 23 P **P 17 02 25.6 +0.4**
ZALV Zalesovo Beam 67.54 338 P **P 17 02 30.1 -0.7**
comp=Z,2.2nm,0.9s,baz=131,slow=6.1,SNR=7.5
comp=Z,2.2nm,0.9s
ZALV Zalesovo Beam 67.54 338 P **P 17 02 29.0 -1.8**
KURBB Kurchatov Arra 67.79 332 P **P 17 02 32.0 -0.4**
comp=Z,0.6nm,0.6s,baz=143,slow=6.1,SNR=5.9
comp=Z,0.6nm,0.6s
KURK Kurchatov 67.81 332 P **P 17 02 32.0 -0.5**
KURK Kurchatov 67.81 332 IAmb IAmb 17 02 41.9
comp=Z,1.9nm,0.9s
BVAR Borovoye Array 73.22 331 P **P 17 03 05.6 0.0**
comp=Z,1.1nm,0.7s,baz=125,slow=7.4,SNR=6.7
comp=Z,1.1nm,0.7s
AB31 Akbulak array 76.91 324 P **P 17 03 26.2 -0.7**
AB31 IAmb IAmb 17 03 27.8
comp=Z,3.8nm,1.5s
ABKAR Akbulak array 76.91 324 P **P 17 03 26.1 -0.8**
H17K Granite Mounta 90.88 25 P **P 17 04 38.1 +0.1**
H17K IAmb IAmb 17 05 21.6
comp=Z,3.4nm,1.4s
G19K Purcell Mounta 92.28 24 P **P 17 04 43.4 -1.1**

*IPEC **13** 16:51:56.5±0.2,51.°54N×16.°20E,h1km,ML2.3/6,Error ellipse: s-maj=3.0km s-min=1.4km az=74.0*
*VIE **13** 16:51:57.6±0.6,51.°44N×15.°99E,h0km,mb2.5/1,ml2.8/2, Error ellipse: s-maj=4.8km s-min=3.8km az=28.0 81 km WNW of Wroclaw Suspected Mining induced.*
*IDC **13** 16:51:58.4±1.0,51.°48N×15.°95E,h0km, mbtmp3.1/4, ML2.1/3,Error ellipse: s-maj=21.0km s-min=9.5km az=119.0*
*DNK **13** 16:51:58.6±1.4,51.°43N×15.°96E,h39km±44km,ML3.0, Presumed earthquake*
*PRU **13** 16:51:58.7,51.°46N×16.°10E,h0km*
ISC 13 16:51:55.5±0.7,51°60N±0'03×16°04E±0'02,h0km,n38, σ1s20/74,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**168**	*e*Pg	**Pg**	**16 52 10.3**	**+0.1**
KSP				*e*Sg	**Sg**	**16 52 19.5**	**-0.7**
CHVC	**Chvalec**	**1.01**	**179**	*e*PG	**Pb**	**16 52 16.0**	**+0.2**
CHVC				*e*SG	**Sg**	**16 52 27.1**	**-0.8**
OSTC	**Ostas**	**1.05**	**174**	*e*PG	**Pg**	**16 52 15.8**	**+0.3**
OSTC				*e*SG	**Sg**	**16 52 28.1**	**-1.0**
UPC	**Upice**	**1.09**	**181**	*e*PG	**Pg**	**16 52 16.4**	**0.0**
UPC				*e*SG	**Sg**	**16 52 29.3**	**-1.2**
DPC	**Dobruska-Polom**	**1.26**	**172**	*e*PG	**Pg**	**16 52 19.2**	**-0.4**
DPC				*e*SG	**Sg**	**16 52 33.8**	**-2.1**
comp=Z,33nm,0.3s							
PVCC	**Panska Ves**	**1.41**	**221**	*e*PG	**Pb**	**16 52 23.4**	**+0.7**
PVCC				*e*SG	**Sn**	**16 52 42.1**	**+0.3**
comp=Z,74nm,0.2s							
PIVO	**Bartosovice**	**1.45**	**167**	*e*Pg	**Pn**	**16 52 22.2**	**-0.8**
baz=351							
PIVO				*e*Sg	**Sg**	**16 52 39.7**	**-2.3**
31nm,0.2s,baz=351							
BRG	**Berggiesshubel**	**1.50**	**242**	Pg	**Pg**	**16 52 25.5**	**+1.3**
BRG				Sg	**Sn**	**16 52 45.7**	**+1.7**
BRG				Amp		16 52 46.3	
comp=Z,65nm,0.4s							
RICC	**Richard**	**1.61**	**230**	*e*PG	**Pg**	**16 52 26.6**	**+0.2**
RICC				*e*SG	**Sg**	**16 52 48.6**	**+1.3**
RYBC	**Ceska Rybna**	**1.79**	**179**	*e*Pn	**Pn**	**16 52 27.8**	**+0.2**
baz=2.8							
RYBC				*e*Sg	**Sn**	**16 52 51.0**	**-0.1**
comp=Z,32nm,0.2s,baz=2.8							
PRU	**Pruhonice**	**1.87**	**211**	*e*PN	**Pn**	**16 52 28.8**	**+0.1**
PRU				*e*PG	**Pb**	**16 52 30.6**	**+0.1**
PRU				*e*SG	**Sb**	**16 52 54.6**	**+0.3**
comp=Z,18nm,0.5s							
HSKC	**Hora Svate Kat**	**1.92**	**240**	*e*PG	**Pb**	**16 52 31.6**	**+0.3**
HSKC				*e*SG	**Sg**	**16 52 57.2**	**+0.2**
comp=Z,28nm,0.5s							
CLL	**Collm**	**1.92**	**263**	*i* Pn	**Pb**	**16 52 30.5**	**-0.8**
CLL				*i* Pg	**Pg**	**16 52 33.4**	**+1.2**
CLL				*i* x	x	16 52 38.2	
CLL				*i* Sg	Sg	16 53 59.9	+63
comp=Z,19nm,0.4s							
STEB	**Steborice**	**2.00**	**146**	*e*PG	**Pb**	**16 52 31.8**	**-0.9**
STEB				*e*SG	**Sn**	**16 52 56.7**	**+0.6**
MORC	**Moravsky Berou**	**2.06**	**152**	*e*Pn	**Pn**	**16 52 31.0**	**-0.3**
baz=335							
MORC				*e*Sg	**Sn**	**16 52 58.0**	**+0.3**
comp=Z,23nm,0.4s,baz=335							
MORC	**Moravsky Berou**	**2.06**	**152**	*e*PN	**Pn**	**16 52 31.1**	**-0.3**
MORC				*e*SG	**Sn**	**16 52 58.1**	**+0.3**
OKC	**Ostrava-Krasne**	**2.21**	**142**	*e*PG	**Pb**	**16 52 36.8**	**+0.4**
VRAC	**Vranov**	**2.32**	**171**	*e*Pn	**Pn**	**16 52 34.8**	**-0.1**
baz=354							
VRAC				*e*Sg	**Sb**	**16 53 07.1**	**-0.2**
comp=Z,16nm,0.4s,baz=354							
ZVC	**Zvikov**	**2.46**	**209**	*e*PG	**Pg**	**16 52 41.9**	**-0.7**
KRUC	**Moravsky**	**2.55**	**175**	*e*Pn	**Pn**	**16 52 38.0**	**0.0**
baz=357							
KRUC				*e*Sg	**Sb**	**16 53 14.6**	**+0.7**
comp=Z,18nm,0.6s,baz=357							
OJC	**Ojcow**	**2.75**	**119**	*e*Pn	**Pn**	**16 52 40.7**	**-0.2**
OJC				*e*Pg	**Pg**	**16 52 47.9**	**-0.3**
OJC				*e*Sg	**Sg**	**16 53 23.6**	**-0.3**
KHC	**Kasperske Hory**	**2.93**	**213**	*e*PN	**Pn**	**16 52 43.5**	**+0.2**
KHC				*e*PG	**Pb**	**16 52 49.5**	**+1.0**
KHC				*e*SN	**Sn**	**16 53 17.5**	**-1.7**
KHC				*e*SG	**Sg**	**16 53 28.4**	**-1.1**
CKRC	**Cesky Krumlov**	**2.99**	**202**	*e*PN	**Pn**	**16 52 45.3**	**+1.1**
CKRC				*e*PG	**Pb**	**16 52 50.7**	**+1.1**
CKRC				*e*SG	**Sb**	**16 53 28.9**	**+2.2**
comp=Z,12nm,0.5s							
GERES	**GERESS Array B**	**3.13**	**209**	Pn	**Pn**	**16 52 47.1**	**+0.9**
comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=18							
GERES				Pg	**Pb**	**16 52 53.4**	**+1.3**
comp=Z,0.3nm,0.3s,baz=27,slow=17,SNR=25							
GERES				Lg	Lg	16 53 32.6	
comp=Z,0.4nm,0.3s,baz=32,slow=27,SNR=4.1							
comp=Z,1.7nm,0.4s							
LANS	**Liptovska Anna**	**3.29**	**137**	*e*PG	**Pg**	**16 53 00.1**	**+1.6**
LANS				*e*SG	**Sg**	**16 53 42.1**	**+1.0**
MODS	**Modra-Piesok**	**3.32**	**166**	*e*PG	**Pg**	**16 52 58.5**	**-0.7**
MODS				*e*SG	**Sg**	**16 53 41.5**	**-0.7**
BSD	**Bornholm Skovb**	**3.59**	**350**	*e*P	**Pn**	**16 52 54.3**	**+2.0**
BSD				*e*S	**Sn**	**16 53 34.4**	**-1.0**
BSD				IAML		16 53 37.9	
comp=Z,16nm,1.3s							
CONA	**Conrad Observa**	**3.67**	**182**	*i* Pn	**Pn**	**16 52 53.5**	**-0.1**
comp=Z,1.0nm,0.2s							
CONA				*i* Sn	**Sn**	**16 53 37.3**	**-0.4**
comp=Z,1.6nm,0.2s							
MOA	**Molln**	**3.92**	**198**	*e*Pn	**Pn**	**16 52 55.8**	**-1.1**
comp=Z,1.6nm,0.2s							
MOA				*e*Sn	**Sn**	**16 53 41.2**	**-2.5**
comp=Z,0.4nm,0.1s							
STHS	**Stebnicka Huta**	**3.98**	**121**	*e*PG	**Pg**	**16 53 12.7**	**+1.0**
STHS				*e*SG	**Sg**	**16 54 06.8**	**+3.6**
BLEU	**Blekinge**	**4.72**	**359**	*e*P	**Pn**	**16 53 09.7**	**+1.9**
BLEU				*e*S	**Sn**	**16 54 02.2**	**-1.0**
BJUU	**Bjuv**	**4.83**	**340**	*i* P	**Pn**	**16 53 10.3**	**+1.0**
BJUU				*i* S	**Sn**	**16 54 04.5**	**-1.4**
DEL	**Delary**	**5.05**	**346**	*i* P	**Pn**	**16 53 13.5**	**+1.1**
DEL				*e*S	**Sn**	**16 54 07.6**	**-3.7**
FABU	**Falkenberg**	**5.75**	**342**	*i* P	**Pn**	**16 53 23.7**	**+1.7**
AKASG	**Malin Array Be**	**8.34**	**91**	Pn	**Pn**	**16 53 57.1**	**-0.5**
comp=Z,0.2nm,0.3s,baz=282,slow=12,SNR=2.5							
HFS	**Hagfors**	**8.66**	**352**	Pn	**Pn**	**16 54 03.3**	**+1.5**
comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=1.6							
comp=Z,0.8nm,0.7s							
FINES	**FINESS Array B**	**11.30**	**25**	Pn	**Pn**	**16 54 38.5**	**+0.5**
comp=Z,0.1nm,0.3s,baz=219,slow=12,SNR=1.3							
comp=Z,1.7nm,0.9s							
EKA	**Eskdalemuir Ar**	**12.03**	**296**	Pn	**Pn**	**16 54 46.4**	**-1.5**
baz=102,slow=13							

*SJA **13** 17:08:34.7±0.8,29.°46S×71.°79W,h42km±999km,ML4.8, MW4.5*
*NEIC **13** 17:08:37.7±1.7,29.°44S±0.°03×71.°71W±0.°07,h46km±6km, mb4.6/97,ML5.0(GUC), Error ellipse: s-maj=8.3km s-min=4.9km az=85.0*
*GUC **13** 17:08:38.3±0.9,29.°54S×71.°53W,h63km±5km,ML5.0*
*IDC **13** 17:08:41.6±2.6,29.°49S×71.°39W,h84km±22km,mb3.9/11, mbtmp4.2/15,MS3.5/8,Error ellipse: s-maj=27.8km s-min=15.6km az=58.0*
ISC 13 17:08:36.7±0.9,29°45S±0'03×71°77W±0'05,h43km±9km, n179,σ1s37/149,mb4.7/52,MS3.7/4,19C-4D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.66**	**135**		**Pn**	**17 08 50.8**	**+1.2**
CO05				Sn	**Sn**	**17 08 59.4**	**+0.6**
CO05	**La Serena**	**0.66**	**135**	⇓*i*P	**Pn**	**17 08 50.9**	**+1.3**
CO05				*e*S	**Sn**	**17 08 59.5**	**+0.8**
CO05				IAML		17 09 00.7	
comp=N,199μm,0.4s							
LCO	**Las Campanas**	**1.03**	**65**	Sn	**Sn**	**17 09 07.2**	**-1.1**
LCO	**Las Campanas**	**1.03**	**65**	*e*P	**Pn**	**17 08 55.2**	**+0.3**
LCO				*i* S	**Sn**	**17 09 07.8**	**-0.5**
LCO	**Las Campanas**	**1.03**	**65**	*e*P	**Pn**	**17 08 54.6**	**-0.3**
LCO				*e*S	**Sn**	**17 09 08.2**	**-0.1**
LCO				IAML		17 09 10.0	
comp=Z,35μm,0.6s							
GO04	**Tololo Observa**	**1.11**	**131**		**Pn**	**17 08 56.0**	**0.0**
GO04	**Tololo Observa**	**1.11**	**131**	*i* P	**Pn**	**17 08 55.9**	**0.0**
GO04				*e*S	**Sn**	**17 09 08.8**	**-1.4**
GO04	**Tololo Observa**	**1.11**	**131**	*e*P	**Pn**	**17 08 55.2**	**-0.7**
GO04				IAML		17 09 12.6	
comp=Z,60μm,0.6s							
CO06	**Fray Jorge**	**1.22**	**175**		**Pn**	**17 08 58.4**	**+1.2**
CO06	**Fray Jorge**	**1.22**	**175**	⇑*i*P	**Pn**	**17 08 58.5**	**+1.2**
CO06				*e*S	**Sn**	**17 09 13.7**	**+1.1**
CO06				IAML		17 09 17.0	
comp=E,16μm,0.2s							
AC04	**Llanos de Chal**	**1.38**	**26**	⇑*i*P	**Pn**	**17 09 01.3**	**+1.8**
AC04				IAML		17 09 19.1	
comp=E,20μm,0.5s							
AC04	**Llanos de Chal**	**1.38**	**26**	*e*P	**Pn**	**17 08 58.9**	**-0.6**
AC04				*e*S	Sn	17 09 00.9	-16
AC04				IAML		17 09 18.3	
comp=Z,9μm,0.4s							
AC05	**El Transito**	**1.44**	**65**		**Pn**	**17 09 01.1**	**+0.6**
AC05				Sn	**Sn**	**17 09 17.7**	**-0.6**
AC05	**El Transito**	**1.44**	**65**	⇓*i*P	**Pn**	**17 09 01.3**	**+0.8**
AC05				*e*S	**Sn**	**17 09 17.9**	**-0.3**
AC05	**El Transito**	**1.44**	**65**	*e*P	**Pn**	**17 09 00.5**	**0.0**
AC05				*e*S	**Sn**	**17 09 18.6**	**+0.3**
CO01	**Juntas del Tor**	**1.55**	**110**		**Pn**	**17 09 02.1**	**+0.1**
CO01				Sn	**Sn**	**17 09 19.2**	**-1.9**
CO01	**Juntas del Tor**	**1.55**	**110**	⇑*i*P	**Pn**	**17 09 02.3**	**+0.3**
CO01				*i* S	**Sn**	**17 09 19.4**	**-1.6**
CO01				IAML		17 09 20.1	
comp=N,35μm,0.3s							
CO01	**Juntas del Tor**	**1.55**	**110**	*e*P	**Pn**	**17 09 01.6**	**-0.4**
CO01				IAML		17 09 23.8	
comp=Z,7μm,0.6s							
CO03	**El Pedregal**	**1.67**	**146**		**Pn**	**17 09 03.7**	**+0.2**
CO03				Sn	**Sn**	**17 09 22.2**	**-1.5**
CO03	**El Pedregal**	**1.67**	**146**	⇑*i*P	**Pn**	**17 09 03.8**	**+0.2**
CO03				*i* S	**Sn**	**17 09 22.5**	**-1.3**
CO03				IAML		17 09 22.8	
comp=N,45μm,0.2s							
CO03	**El Pedregal**	**1.67**	**146**	*e*P	**Pn**	**17 09 03.0**	**-0.5**
CO03				*e*S	**Sn**	**17 09 22.8**	**-1.0**
CO03				IAML		17 09 23.6	
comp=Z,31μm,0.5s							
CO02	**Combarbal**	**1.87**	**159**		**Pn**	**17 09 06.8**	**+0.6**
CO02	**Combarbal**	**1.87**	**159**	⇑*i*P	**Pn**	**17 09 07.0**	**+0.8**
CO02				*e*S	**Sn**	**17 09 28.4**	**-0.3**
CO02	**Combarbal**	**1.87**	**159**	*e*P	**Pn**	**17 09 06.2**	**0.0**
CO02				*e*S	**Sn**	**17 09 28.9**	**+0.2**
CO02				IAML		17 09 29.9	
comp=Z,17μm,0.3s							
AROD	**Rodeo**	**2.12**	**110**	*e*P	**Pn**	**17 09 11.2**	**+1.4**
GO03	**Copiapo**	**2.29**	**36**		**Pn**	**17 09 12.9**	**+0.9**
GO03	**Copiapo**	**2.29**	**36**	*e*P	**Pn**	**17 09 13.0**	**+0.9**
GO03				IAML		17 09 47.1	
comp=N,5μm,0.1s							
GO03	**Copiapo**	**2.29**	**36**	*e*P	**Pn**	**17 09 07.5**	**-4.6**
GO03				*e*P		17 09 12.4	
GO03				*e*S	**Sn**	**17 09 40.5**	**+1.4**
GO03				IAML		17 09 51.2	
comp=Z,4μm,0.5s							
ACDV	**Cuesta del Vie**	**2.41**	**108**	*e*P	**Pn**	**17 09 15.8**	**+2.1**
ACDV				IAML		17 09 52.2	
comp=Z,2μm,0.4s							
ACCO	**Cerro Coronel**	**2.60**	**116**	*e*P	**Pn**	**17 09 18.7**	**+2.1**
ACCO				*e*S	**Sn**	**17 09 49.7**	**+2.6**
CO04	**Los Peladeros**	**2.67**	**165**		**Pn**	**17 09 18.6**	**+1.1**
CO04	**Los Peladeros**	**2.67**	**165**	⇑*i*P	**Pn**	**17 09 18.7**	**+1.2**
CO04				*i* S	**Sn**	**17 09 48.8**	**+0.1**
CO04				IAML		17 09 50.9	
comp=E,12μm,0.5s							
VA06	**Catapilco**	**3.13**	**173**		**Pn**	**17 09 24.1**	**+0.7**
VA06	**Catapilco**	**3.13**	**173**	⇑*i*P	**Pn**	**17 09 24.1**	**+0.7**
VA06				IAML		17 10 13.1	
comp=N,6μm,0.6s							
VCA	**Vinchina**	**3.20**	**78**	*e*P	**Pn**	**17 09 27.5**	**+2.9**
VCA				*e*S	**Sn**	**17 10 05.5**	**+3.9**
VCA				IAML		17 10 09.8	
comp=Z,4μm,0.3s							
ZON	**Zonda**	**3.39**	**129**		**Pn**	**17 09 28.4**	**+1.3**
ZON	**Zonda**	**3.39**	**129**	*e*P	**Pn**	**17 09 28.0**	**+0.9**
ZON				*e*S	Sn	17 09 49.0	-17
ZON				IAML		17 09 52.6	
comp=Z,1μm,0.6s							
RTLL	**Cerro Villicun**	**3.41**	**124**	*e*P	**Pn**	**17 09 28.1**	**+0.7**
RTLL				IAML		17 10 27.8	
comp=Z,2μm,0.7s							
AC01	**Pan de Azucar**	**3.45**	**18**		**Pn**	**17 09 28.2**	**+0.3**
AC01	**Pan de Azucar**	**3.45**	**18**	*e*P	**Pn**	**17 09 28.0**	**+0.1**
AC01				IAML		17 10 07.2	
comp=E,1μm,0.6s							
AC01	**Pan de Azucar**	**3.45**	**18**	*e*P	**Pn**	**17 09 27.6**	**-0.3**
AC01				*e*S	**Sn**	**17 10 07.5**	**-0.1**
AC01				IAML		17 10 32.7	
comp=Z,1μm,0.6s							
SJA	**San Juan**	**3.46**	**128**	*e*P	**Pn**	**17 09 30.8**	**+2.8**
SJA				IAML		17 10 27.0	
comp=Z,1μm,1.0s							
VA03	**San Esteban**	**3.46**	**163**		**Pn**	**17 09 29.4**	**+1.2**
VA03	**San Esteban**	**3.46**	**163**	⇑*i*P	**Pn**	**17 09 29.4**	**+1.2**
VA03	**San Esteban**	**3.46**	**163**	*e*P	**Pn**	**17 09 28.9**	**+0.8**
VA03				*e*S	**Sn**	**17 10 09.4**	**+1.5**
VA03				IAML		17 10 21.9	
comp=Z,2μm,0.5s							
AC02	**Maricunga**	**3.50**	**42**		**Pn**	**17 09 30.5**	**+1.5**
AC02	**Maricunga**	**3.50**	**42**	*e*P	**Pn**	**17 09 30.4**	**+1.4**
AC02				IAML		17 10 27.8	
comp=E,3μm,0.6s							
AC02	**Maricunga**	**3.50**	**42**	*e*P	**Pn**	**17 09 29.9**	**+0.9**
AC02				IAML		17 10 26.9	
comp=Z,2μm,0.8s							
VA01	**Torpederas**	**3.56**	**178**		**Pn**	**17 09 29.2**	**-0.2**
VA01	**Torpederas**	**3.56**	**178**	*e*P	**Pn**	**17 09 29.3**	**-0.2**
VA01	**Torpederas**	**3.56**	**178**	*e*P	**Pn**	**17 09 29.1**	**-0.2**
ROCH	**El Roble**	**3.57**	**170**	⇓*e*P	**Pn**	**17 09 30.3**	**+0.6**
CFA	**Coronel Fontan**	**3.73**	**126**	P	**Pn**	**17 09 33.0**	**+1.2**
comp=Z,174nm,0.3s,baz=332,slow=12,SNR=459							
CFA				S	**Sn**	**17 10 13.4**	**-1.0**
comp=Z,342nm,0.3s,baz=83,slow=16,SNR=9.1							
CFA				LR	LR	17 11 10.3	
comp=Z,376nm,21.0s,baz=354,slow=43							
CFA	**Coronel Fontan**	**3.73**	**126**	*e*P	**Pn**	**17 09 32.2**	**+0.5**
CFA				*e*S	Sn	17 10 28.4	+14
CFA				IAML		17 10 38.9	
comp=Z,846nm,0.8s							
PEL	**Peldehue**	**3.79**	**166**		**Pn**	**17 09 33.3**	**+0.6**
PEL	**Peldehue**	**3.79**	**166**	⇑*e*P	**Pn**	**17 09 33.3**	**+0.6**
PEL				IAML		17 10 30.1	
comp=E,2μm,0.3s							
MT02	**Curacav**	**3.83**	**172**	⇑*e*P	**Pn**	**17 09 33.2**	**+0.1**
MT02				IAML		17 10 37.0	
comp=E,1μm,0.4s							
MT02	**Curacav**	**3.83**	**172**	*e*P	**Pn**	**17 09 33.3**	**+0.1**
MT02				*e*S	**Sn**	**17 10 17.2**	**+0.2**
MT02				IAML		17 10 33.3	
comp=Z,2μm,0.5s							
AVFE	**Valle Fertil**	**3.93**	**109**	*e*P	**Pn**	**17 09 35.5**	**+0.9**
AVFE				*e*S	**Sn**	**17 10 17.9**	**-1.5**
AVFE				IAML		17 10 20.2	
comp=Z,1μm,0.4s							
TINO	**Tinogasta**	**3.94**	**70**	*e*P	**Pn**	**17 09 36.2**	**+1.4**
MT10	**Hacienda Santa**	**3.95**	**165**	⇑*e*P	**Pn**	**17 09 36.0**	**+1.1**
MT05	**Renca**	**4.03**	**168**		**Pn**	**17 09 36.5**	**+0.7**
MT05	**Renca**	**4.03**	**168**	⇑*e*P	**Pn**	**17 09 36.6**	**+0.7**
MT14	**Cerro Cal¡n**	**4.07**	**165**	⇑*e*P	**Pn**	**17 09 37.6**	**+1.2**
MT16	**CCHEN**	**4.10**	**165**		**Pn**	**17 09 37.9**	**+1.0**
MT16	**CCHEN**	**4.10**	**165**	⇑*e*P	**Pn**	**17 09 38.0**	**+1.1**
MT03	**Universidad Ad**	**4.17**	**165**		**Pn**	**17 09 38.9**	**+1.0**
MT03	**Universidad Ad**	**4.17**	**165**	⇑*e*P	**Pn**	**17 09 39.0**	**+1.1**
MT04	**Ro Olivares**	**4.18**	**161**	⇑*e*P	**Pn**	**17 09 40.2**	**+2.1**
ACLC	**CERRO LA CRUZ**	**4.20**	**91**	*e*P	**Pn**	**17 09 39.3**	**+1.0**
MT08	**Bocatoma Ro**	**4.25**	**160**	*e*P	**Pn**	**17 09 41.4**	**+2.3**
MT08	**Bocatoma Ro**	**4.25**	**160**	*e*S	**Sn**	**17 10 32.8**	**+5.1**
MT08				*e*S		17 10 33.3	
MT08				IAML		17 10 55.1	
comp=Z,813nm,1.2s							
MT09	**Talagante**	**4.36**	**171**		**Pn**	**17 09 41.3**	**+0.7**
MT01	**Popeta**	**4.42**	**174**		**Pn**	**17 09 41.3**	**+0.1**
MT01	**Popeta**	**4.42**	**174**	*e*S	**Sn**	**17 10 25.9**	**-5.5**
MT01				*e*S	**S**	**17 10 31.5**	**+0.1**
MT01				*e*S	**S**	**17 10 31.5**	**+0.1**
MT13	**San Alfonso**	**4.46**	**164**	IAML		17 11 04.9	
comp=Z,752nm,0.8s							
GO02	**Mina Guanaco**	**4.69**	**25**	IAML		17 11 16.8	
comp=Z,1μm,0.7s							
PB14	**IPOC Station P**	**4.96**	**15**		**Pn**	**17 09 47.7**	**-1.2**
TCA	**Tanti**	**6.47**	**109**	⇑*e*P	**Pn**	**17 10 08.2**	**-1.3**
H03N1	**Juan Fernandez**	**7.28**	**235**	T	T	17 18 10.2	
baz=64,slow=72,SNR=919							
H03N2	**Juan Fernandez**	**7.30**	**235**	T	T	17 18 08.8	
baz=64,slow=72,SNR=859							
H03N3	**Juan Fernandez**	**7.30**	**235**	T	T	17 18 13.5	
baz=64,slow=72,SNR=726							
VA04	**Juan Fernndez**	**7.33**	**233**		**Pn**	**17 10 22.6**	**+1.5**
GO06	**Curarrehue**	**10.11**	**179**		**Pn**	**17 10 58.1**	**-1.2**
LR04	**Corral**	**10.49**	**187**		**Pn**	**17 11 02.7**	**-1.7**
LR05	**Currie**	**10.76**	**181**		**Pn**	**17 11 06.2**	**-1.9**
PB16	**IPOC Station P**	**11.26**	**11**		**Pn**	**17 11 13.9**	**-1.6**
PLCA	**Paso Flores**	**11.30**	**175**	P	**Pn**	**17 11 15.1**	**-0.5**
comp=Z,7.9nm,0.6s,baz=345,slow=11,SNR=28							
PLCA				LR	LR	17 15 57.4	
comp=Z,150nm,19.7s,baz=0.5,slow=39							
PLCA	**Paso Flores**	**11.30**	**175**		**Pn**	**17 11 14.4**	**-1.1**
TRQA	**Tornquist**	**11.82**	**139**		**Pn**	**17 11 20.7**	**-2.0**
CPUP	**Villa Florida**	**13.14**	**80**	P	**Pn**	**17 11 41.6**	**+0.8**
comp=Z,2.4nm,0.6s,baz=260,slow=13,SNR=5.0							
CPUP				LR	LR	17 16 55.4	
com

	comp=Z,9.5nm,1.1s						
MVCO	**Mesa Verde**	74.72	330	IAmb	IAmb	17 20 15.6	
	comp=Z,8.6nm,0.9s						
Q24A	**Divide**	74.85	334	IAmb	IAmb	17 20 16.2	
	comp=Z,9.6nm,0.9s						
BC3	**Big Chuckawall**	75.15	323	IAmb	IAmb	17 20 18.1	
	comp=Z,7.5nm,0.9s						
PV13	**Radium Mtn., P**	75.66	331	IAmb	IAmb	17 20 20.8	
	comp=Z,7.8nm,0.9s						
PV02	**Paradox Valley**	75.66	331	IAmb	IAmb	17 20 21.0	
	comp=Z,10nm,0.9s						
PV05	**Paradox Valley**	75.71	330	IAmb	IAmb	17 20 21.0	
	comp=Z,9.3nm,0.9s						
PV12	**Saucer Basin,**	75.78	331	IAmb	IAmb	17 20 21.6	
	comp=Z,8.0nm,0.8s						
U15A	**North Rim**	75.79	327	IAmb	IAmb	17 20 22.3	
	comp=Z,7.5nm,1.0s						
PV16	**Nyswonger Mesa**	75.83	331	IAmb	IAmb	17 20 21.6	
	comp=Z,6.7nm,1.0s						
DANC	**Danby, Needles**	75.88	324	IAmb	IAmb	17 20 22.4	
	comp=Z,8.1nm,0.9s						
PV23	**Carpenter Ridg**	75.98	331	IAmb	IAmb	17 20 22.6	
	comp=Z,8.7nm,1.0s						
ECSD	**EROS Data Cent**	76.31	342	IAmb	IAmb	17 20 22.4	
	comp=Z,6.7nm,0.8s						
HMU	**Henry Mountain**	76.31	329	IAmb	IAmb	17 20 24.6	
	comp=Z,5.1nm,0.9s						
V12A	**Nelson**	76.47	325	IAmb	IAmb	17 20 25.3	
	comp=Z,5.8nm,0.9s						
KNB	**Kanab**	76.52	327	IAmb	IAmb	17 20 26.9	
	comp=Z,9.5nm,1.1s						
BFSC	**Mount Baldy Ra**	76.77	322	IAmb	IAmb	17 20 27.2	
	comp=Z,4.9nm,0.8s						
HAYD	**Hayden**	77.01	333	IAmb	IAmb	17 20 29.1	
	comp=Z,7.2nm,0.9s						
MTPU	**Mount Pierson**	77.05	328	IAmb	IAmb	17 20 28.9	
	comp=Z,5.5nm,0.8s						
SRU	**San Rafael Swe**	77.19	330	IAmb	IAmb	17 20 29.1	
	comp=Z,5.8nm,0.9s						
CCUT	**Cedar City**	77.20	327	IAmb	IAmb	17 20 30.4	
	comp=Z,7.4nm,1.0s						
Q16A	**Castle Valley**	77.31	329	IAmb	IAmb	17 20 30.3	
	comp=Z,6.5nm,0.9s						
P18A	**Preston Nutter**	77.49	331	IAmb	IAmb	17 20 31.4	
	comp=Z,9.2nm,0.9s						
GWY	**Greenwater Val**	77.75	324	IAmb	IAmb	17 20 32.5	
	comp=Z,5.4nm,1.0s						
PRN	**Pahroc Range**	77.89	326	IAmb	IAmb	17 20 34.0	
	comp=Z,7.4nm,0.9s						
TPNV	**Topopah Spring**	78.13	325	IAmb	IAmb	17 20 35.1	
	comp=Z,4.5nm,0.9s						
BSUT	**Blindstream Ca**	78.47	331	IAmb	IAmb	17 20 37.3	
	comp=Z,9.8nm,1.0s						
TCUT	**Toone Canyon**	79.22	331	IAmb	IAmb	17 20 40.3	
	comp=Z,6.3nm,0.9s						
PDAR	**Pinedale Array**	79.83	333	P	P	17 20 41.8	+1.1
	comp=Z,1.2nm,0.6s,baz=134,slow=6.9,SNR=11						
	comp=Z,1.2nm,0.6s						
TSUM	**Tsumeb**	80.26	106	LR	LR	17 52 55.6	
	comp=Z,45nm,18.2s,baz=162,slow=33						
NVAR	**Mina Array Bea**	80.30	325	P	P	17 20 44.9	+1.5
	comp=Z,1.2nm,0.7s,baz=153,slow=7.4,SNR=7.2						
	comp=Z,1.2nm,0.7s						
HVU	**Hansel Valley**	80.35	330	IAmb	IAmb	17 20 45.9	
	comp=Z,6.0nm,0.8s						
BOSA	**Boshof**	81.99	118	P	P	17 20 50.6	-2.0
	comp=Z,1.9nm,0.9s,baz=239,slow=3.7,SNR=7.4						
	comp=Z,1.9nm,0.9s						
BOSA	**Boshof**	81.99	118	IAmb	IAmb	17 21 31.8	
	comp=Z,13nm,1.3s						
ULM	**Lac du Bonnet**	82.18	345	P	P	17 20 52.8	0.0
	comp=Z,5.1nm,0.9s,baz=177,slow=5.8,SNR=7.6						
	comp=Z,5.1nm,0.9s						
ULM	**Lac du Bonnet**	82.18	345	IAmb	IAmb	17 20 54.0	
	comp=Z,4.5nm,0.8s						
TORD	**Torodi Ar. Bea**	82.46	70	P	P	17 20 52.9	-2.1
	comp=Z,0.7nm,0.8s,baz=241,slow=8.3,SNR=5.2						
	comp=Z,0.7nm,0.8s						
ORV	**Oroville**	82.79	324	IAmb	IAmb	17 20 59.6	
	comp=Z,7.8nm,1.1s						
LBTB	**Lobatse**	84.02	115	LR	LR	17 56 20.8	
	comp=Z,29nm,18.7s,baz=226,slow=34						
SCHQ	**Schefferville**	84.05	3	P	P	17 21 01.8	-0.5
	comp=Z,1.3nm,0.6s,baz=233,slow=10,SNR=1.5						
	comp=Z,1.3nm,0.6s						
SCHQ	**Schefferville**	84.05	3	IAmb	IAmb	17 21 21.5	
	comp=Z,5.3nm,1.1s						
PLID	**Pearl Lake**	84.41	330	IAmb	IAmb	17 21 07.0	
	comp=Z,5.8nm,0.8s						
I07A	**Izee**	85.20	328	IAmb	IAmb	17 21 11.6	
	comp=Z,5.2nm,1.4s						
YKA	**Yellowknife Ar**	97.83	341	P	P	17 22 07.4	+0.4
	comp=Z,0.2nm,0.6s,baz=138,slow=3.8,SNR=2.4						
	comp=Z,0.2nm,0.6s						
H11S2	**WAKE ISLAND Hyl**	25.94	272	T	T	19 46 38.0	
	baz=115,slow=75,SNR=111						
H11S1	**WAKE ISLAND Hyl**	25.96	272	T	T	19 46 40.3	
	baz=115,slow=75,SNR=111						
H11S3	**WAKE ISLAND Hyl**	25.96	272	T	T	19 46 37.4	
	baz=115,slow=75,SNR=107						
H11N3	**WAKE ISLAND Hyl**	26.24	274	T	T	19 47 02.3	
	baz=114,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hyl**	26.26	274	T	T	19 47 03.1	
	baz=114,slow=75,SNR=5.2						
H11N2	**WAKE ISLAND Hyl**	26.26	274	T	T	19 47 02.5	
	baz=114,slow=75,SNR=20						
KURK	**Kurchatov**	149.28	38		PKPbc	**PKPbc**	17 28 20.2 -0.1
KURBB	**Kurchatov Arra**	149.28	38	PKPbc	PKPbc	17 28 20.2	-0.1
	comp=Z,5.7nm,0.7s,baz=300,slow=3.2,SNR=15						
ZALV	**Zalesovo Beam**	150.19	28	PKPbc	PKPbc	17 28 23.1	+0.6
	comp=Z,19nm,0.7s,baz=328,slow=2.2,SNR=4.1						
HYB	**Hyderabad**	150.34	107	*e*PKiKP	PKPbc	17 28 24.7	+0.7
HYB				*e*PP	PP	17 31 59.4	-0.4
MKAR	**Makanchi Array**	153.42	42	PKPbc	PKPbc	17 28 29.0	-1.2
	comp=Z,1.8nm,0.7s,baz=309,slow=1.8,SNR=9.0						
MJAR	**Matsushiro Arr**	153.95	294	PKPab	PKPab	17 28 46.7	+1.6
	comp=Z,2.9nm,0.7s,baz=110,slow=3.0,SNR=5.3						
HHC	**Hu-ho-hao-te**	168.31	347	*e*P	PKPdf	17 28 39.8	+1.0
NJ2	**Nanjing**	170.50	288	*e*P	PKPdf	17 28 41.9	+1.7
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PZH	**PanZhiHua**	173.56	116	PKP	PKPdf	17 28 41.3	-0.7

*NEIC **13** 17:17:04.6±2.2, 7.°44S±0.°08×128.°50E±0.°07, h158km, mb4.5/29, Error ellipse: s-maj=11.5km s-min=10.6km az=197.0*
*IDC **13** 17:17:05.0±1.7, 7.°40S×128.°54E, h158km±16km, mb4.0/17, mbtmp4.5/21, Error ellipse: s-maj=16.1km s-min=10.8km az=64.0*
*DJA **13** 17:17:06.0±0.1, 8.°S±2.°×12.°9E±.°, h130km±4km, M4.8/29, mb4.8/29, mB5.4/12, MLv4.8/25, Mw(mB)4.9/12, MwMwp5.6/1, Mwp5.8/1*

ISC 13 17:17:03.4±0.3, **7.°55S**±0.°04×**128.°54E**±0.°04, **h151**km, **n118, σ2s04**/131, **mb4.5**/40, **2C-3D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.77	99	P	**Pn**	17 17 51.0	+3.1
SAUI				Sn	**Sn**	17 18 18.2	-4.1
SAUI	**Saumlaki**	2.77	99	P	**Pn**	17 17 52.0	+4.1
SAUI				S	**Sn**	17 18 25.4	+3.1
BNDI	**Bandanaira**	3.30	24	P	**Pn**	17 17 57.8	+3.2
AAI	**Ambon**	3.85	355	P	**Pn**	17 18 03.7	+2.0
AAI				S	**Sn**	17 18 50.7	+3.6
MSAI	**Masohi**	4.19	5	P	**Pn**	17 18 09.7	+3.5
KRAI	**Karang Ratu**	4.20	358	P	**Pn**	17 18 10.1	+3.8
NLAI	**Namlea**	4.51	341	P	**Pn**	17 18 14.4	+4.0
SOEI	**Soe**	4.76	242		**Pn**	17 18 16.3	+2.5
SOEI				Sn	**Sn**	17 19 09.2	+0.6
SOEI	**Soe**	4.76	242	P	**Pn**	17 18 15.5	+1.8
SOEI				S	**Sn**	17 19 08.8	+0.2
BATI	**Baumata**	5.49	241	P	**Pn**	17 18 25.6	+2.2
	731nm,0.4s,baz=92,slow=2.4,SNR=198						
BATI				S	**Sn**	17 19 25.4	-0.5
	372nm,0.5s,baz=70,slow=23,SNR=12						
BATI	**Baumata**	5.49	241	P	**Pn**	17 18 25.9	+2.5
BATI				S	**Sn**	17 19 26.7	+0.8
MTN	**Manton Dam**	5.85	154		**Pn**	17 18 30.1	+2.0
MTN				Sn	**Sn**	17 19 34.0	-0.4
FAKI	**Fak Fak**	5.90	39		**Pn**	17 18 27.7	-1.1
FAKI				Sn	**Sn**	17 19 29.6	-6.0
FAKI	**Fak Fak**	5.90	39	P	**Pn**	17 18 31.3	+2.5
	0.8nm2μm70nm,0.4s						
SANI	**Sanana**	6.02	335	P	**Pn**	17 18 33.4	+3.0
MMRI	**Maumere**	6.33	260		**Pn**	17 18 35.5	+1.0
MMRI	**Maumere**	6.33	260	P	**Pn**	17 18 37.4	+2.9
	0.4nm110nm,0.7s						
MMRI				S	**Sn**	17 19 47.8	+1.9
	0.4nm110nm,0.7s						
KMPI	**Kaimana, Papua**	6.43	53	P	**Pn**	17 18 39.2	+3.4
EDFI	**Ende, Flores**	6.88	260	P	**Pn**	17 18 44.6	+2.6
	0.2nm39nm,0.9s						
EDFI				S	**Sn**	17 20 00.9	+1.6
	0.2nm39nm,0.9s						
SIJI	**Sorong**	7.17	22	P	**Pn**	17 18 46.0	+0.3
	18nm,0.3s,baz=197,slow=22,SNR=37						
SIJI				S	**Sn**	17 20 01.6	-4.5
	16nm,0.3s,baz=62,slow=22,SNR=7.0						
SIJI	**Sorong**	7.17	22	P	**Pn**	17 18 47.5	+1.8
SWI	**Sorong**	7.17	22	P	**Pn**	17 18 48.2	+2.4
	0.4nm53nm,0.7s						
KNRA	**Kununurra**	8.08	178		**Pn**	17 18 59.0	+1.1
BSSI	**Bau Bau, Buton**	8.11	279	P	Pn	17 19 06.0	+7.7
RKPI	**Ransiki, Papua**	8.22	43	P	**Pn**	17 19 01.7	+2.0
BASI	**Baing, Sumba**	8.30	251	P	**Pn**	17 19 03.0	+2.2
	161nm,0.8s						
WSI	**Waingapu**	8.42	255	P	**Pn**	17 19 01.3	-1.1
MWPI	**Manokwari, Pap**	8.56	40	P	**Pn**	17 19 06.7	+2.4
	93nm,0.5s						
KAPI	**Kappang**	9.09	286	P	**Pn**	17 19 13.6	+2.3
	4.8nm,0.3s,baz=161,slow=6.1,SNR=5.2						
KAPI	**Kappang**	9.09	286	P	**Pn**	17 19 12.9	+1.6
WBSI	**Waikabubak, Su**	9.28	256	P	**Pn**	17 19 16.5	+2.6
	67nm,0.7s						
SPSI	**Sidrap Palu**	9.42	292	P	**Pn**	17 19 19.1	+3.4
	19nm,0.7s						
BAKI	**Biak**	9.84	50	P	**Pn**	17 19 24.9	+3.6
	164nm,1.0s						
PLAI	**Plampang**	10.73	262	P	**Pn**	17 19 35.6	+2.5
	31nm,0.7s						
FITZ	**Fitzroy Crossi**	10.86	195	P	**Pn**	17 19 34.9	+0.2
	5.8nm,0.4s,baz=35,slow=11,SNR=32						
FITZ				S	**Sn**	17 21 29.2	-5.8
	18nm,0.3s,baz=97,slow=20,SNR=7.0						
WB0	**Warramunga Arr**	13.41	156		**Pn**	17 20 06.6	-1.3
WRAB	**Tennant Creek**	13.54	156		**Pn**	17 20 08.2	-1.3
WRA	**Warramunga Arr**	13.55	156	P	**Pn**	17 20 07.5	-2.1
	6.7nm,0.3s,baz=329,slow=15,SNR=163						
WRA				S	Sn	17 22 31.1	-8.6
	19nm,0.4s,baz=334,slow=22,SNR=12						
WR8	**Warramunga Arr**	13.62	155		**Pn**	17 20 09.0	-1.6
BBKI	**Banjar Baru**	14.22	286	P	**P**	17 20 24.0	+3.0
MTKI	**Muara Teweh, K**	15.10	295	P	**P**	17 20 32.9	+2.2
COEN	**Coen**	15.72	115		**Pn**	17 20 37.4	+0.6
AS31	**Alice Springs**	16.84	163		**P**	17 20 51.4	+1.5
AS31				IAmb	IAmb	17 20 54.0	
	comp=Z,17nm,0.5s						
ASAR	**Alice Springs**	16.84	163	P	**P**	17 20 50.9	+1.0
	comp=Z,33nm,0.5s,baz=336,slow=9.6,SNR=893						
ASAR				S	**S**	17 23 52.8	-4.7
	comp=Z,7.0nm,0.5s,baz=317,slow=18,SNR=6.3						
ASAR	**Alice Springs**	16.84	163		**P**	17 20 51.4	+1.5
PMG	**Port Moresby**	18.51	97	P	**P**	17 21 10.2	+1.9
	comp=Z,78nm,0.9s,baz=248,slow=4.6,SNR=14						
PMG	**Port Moresby**	18.51	97		**P**	17 21 08.4	+0.2
PMG	**Port Moresby**	18.51	97	P	**Pn**	17 21 14.4	+4.1
	comp=Z,101nm,1.1s						
SBUM	**Sibu**	19.07	301		**P**	17 21 13.5	-0.9
SBUM	**Sibu**	19.07	301	P	**Pn**	17 21 17.7	+0.9
CTA	**Charters Tower**	21.22	128	P	**P**	17 21 39.7	+2.3
	comp=Z,3.9nm,0.6s,baz=296,slow=12,SNR=6.7						
	comp=Z,3.9nm,0.6s						
INKA	**Innaminka**	23.18	152		**P**	17 21 59.3	+2.7
INKA				IAmb	IAmb	17 22 01.8	
	comp=Z,32nm,1.2s						
STKA	**Stephens Creek**	27.10	155	P	**P**	17 22 34.0	+1.9
	comp=Z,3.0nm,0.6s,baz=334,slow=8.2,SNR=6.2						
	comp=Z,3.0nm,0.6s						
CM31	**Chiang Mai Arr**	38.99	312	P	**P**	17 24 11.4	-3.9
CMAR	**Chiang Mai Arr**	38.99	312	P	**P**	17 24 15.7	+0.4
	comp=Z,2.4nm,0.7s,baz=127,slow=8.2,SNR=14						
CMAR				PcP	**PcP**	17 26 23.2	+0.5
	comp=Z,1.1nm,0.6s,baz=176,slow=2.7,SNR=8.5						
	comp=Z,2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	38.99	312	P	**P**	17 24 11.3	-4.0
CHTO	**Chiang Mai**	39.21	312	P	**P**	17 24 15.9	-1.2
CHTO				IAmb	IAmb	17 24 18.4	
	comp=Z,5.9nm,0.8s						
GYA	**Guiyang**	39.92	329	⇑P	**P**	17 24 22.8	-0.2
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NJ2	**Nanjing**	40.45	347	⇓P	**P**	17 24 27.3	+0.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.8s						
ENH	**Enshi**	41.81	335		**P**	17 24 37.7	-0.7
ENH				IAmb	IAmb	17 24 38.7	
	comp=Z,8.7nm,0.8s						
PZH	**PanZhiHua**	42.68	323	P	**P**	17 24 46.8	+1.3
LYN	**LuoYang**	44.54	341	P	**P**	17 25 00.1	0.0
LYN				pmax	pmax		
	comp=Z,15nm,1.0s						
KSRS	**Korea Array**	44.77	359	P	**P**	17 25 01.7	-0.1
	comp=Z,1.3nm,0.7s,baz=177,slow=9.6,SNR=6.3						
	comp=Z,1.3nm,0.7s						
MJAR	**Matsushiro Arr**	44.78	11	P	**P**	17 25 00.1	-2.0
	comp=Z,2.3nm,0.6s,baz=192,slow=9.6,SNR=9.0						
	comp=Z,2.3nm,0.6s						
TIA	**Tai'an**	44.83	347	P	**P**	17 25 01.6	-0.8
TIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2	**Chengdu**	45.01	329	P	**P**	17 25 03.6	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	**Xi'an**	45.35	337	⇓P	**P**	17 25 05.8	-0.8
XAN				pP	pP	17 25 11.5	-28
XAN				pmax	pmax		
	comp=Z,34nm,1.0s						
HNS	**HongShan**	46.55	345	⇑P	**P**	17 25 15.1	-0.7
HNS				pmax	pmax		
	comp=Z,29nm,0.9s						
SHL	**Shillong**	48.52	314	P	**P**	17 25 29.1	-2.4
SHL				IAmb	IAmb	17 25 32.4	
	comp=Z,6.3nm,0.6s						
BJT	**Baijiatuan**	48.69	347	IAmb	IAmb	17 25 32.7	
	comp=Z,9.5nm,0.8s						
LZDM	**Lanzhou Array**	49.18	333	P	**P**	17 25 36.7	+0.2
	comp=Z,3.2nm,0.5s,baz=168,slow=11,SNR=20						
	comp=Z,3.2nm,0.5s						
LZH	**Lanzhou**	49.22	333	*e*P	**P**	17 25 37.4	+0.7
LZH				pP	pP	17 26 09.5	-0.4
LZH				sP	sP	17 26 28.9	+2.6
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC	**Hu-ho-hao-te**	50.63	343	⇓*i*P	**P**	17 25 47.3	+0.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
USRK	**Ussuriysk Ar.**	51.60	3	P	**P**	17 25 53.5	-0.6
	comp=Z,2.9nm,0.5s,baz=208,slow=11,SNR=6.7						
	comp=Z,2.9nm,0.5s						
LSA	**Lhasa**	51.60	318		**P**	17 25 55.2	+0.1
XLT	**XiLinHaoTe**	52.43	349	*e*P	**P**	17 26 00.6	+0.1
XLT				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA2	**Gaotai**	53.85	333	P	**P**	17 26 11.3	+0.3
GTA2				pmax	pmax		
	comp=Z,14nm,1.2s						
HILR	**Hailar Array B**	57.38	353	P	**P**	17 26 36.1	+0.2
	comp=Z,2.3nm,0.5s,baz=171,slow=10,SNR=5.6						
	comp=Z,2.3nm,0.5s						
HEH	**HeiHe**	57.57	359	*e*P	**P**	17 26 36.4	-0.7
ULN	**Ulaanbaatar**	58.35	343	P	**P**	17 26 41.9	-0.9
ULN				IAmb	IAmb	17 26 45.1	
	comp=Z,8.3nm,1.1s						
SONM	**Songino Array**	58.51	343	P	**P**	17 26 44.6	+0.7
	comp=Z,2.8nm,0.6s,baz=168,slow=7.2,SNR=20						
	comp=Z,2.8nm,0.6s						
SONM	**Songino Array**	58.51	343	P	**P**	17 26 43.8	0.0
SONM				IAmb	IAmb	17 26 45.5	
	comp=Z,7.9nm,1.3s						
TLY	**Talaya**	62.75	343	P	**P**	17 27 12.5	+0.2
TLY				IAmb	IAmb	17 27 13.5	
	comp=Z,2.9nm,0.5s						
WMQ	**Urumqi**	63.07	328	*e*P	**P**	17 27 15.0	+0.3
WMQ				PcP	**pP**	17 27 46.9	-2.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WMQ				LR	LR		
	comp=Z,200nm,24.0s						
PETK	**Petropavlovsk-**	65.30	19	P	**P**	17 27 29.6	+0.7
	comp=Z,11nm,0.6s,baz=170,slow=3.4,SNR=34						
	comp=Z,11nm,0.6s						
PETK	**Petropavlovsk-**	65.30	19	P	**P**	17 27 29.4	+0.5
NIL	**Nilore**	66.48	312	P	**P**	17 27 36.0	-1.0
MKAR	**Makanchi Array**	67.90	328	P	**P**	17 27 45.8	+0.2
	comp=Z,5.5nm,0.6s,baz=118,slow=6.4,SNR=73						
	comp=Z,5.5nm,0.6s						
MKAR	**Makanchi Array**	67.90	328		**P**	17 27 45.3	-0.3
MAKZ	**Makanchi**	68.07	327		**P**	17 27 46.3	-0.4
MAKZ				IAmb	IAmb	17 27 47.8	
	comp=Z,8.2nm,1.1s						
YAK	**Yakutsk**	69.37	1		**P**	17 27 53.6	-0.7
ZALV	**Zalesovo Beam**	71.44	334	P	**P**	17 28 06.3	-0.8
	comp=Z,5.4nm,0.6s,baz=133,slow=5.5,SNR=28						
	comp=Z,5.4nm,0.6s						
ZALV	**Zalesovo Beam**	71.44	334		**P**	17 28 06.0	-1.1
KURBB	**Kurchatov Arra**	72.22	329	P	**P**	17 28 11.9	+0.1
	comp=Z,9.9nm,0.7s,baz=130,slow=5.0,SNR=76						
	comp=Z,9.9nm,0.7s						
KURK	**Kurchatov**	72.23	329		**P**	17 28 11.7	-0.2
KURK				IAmb	IAmb	17 28 12.8	
	comp=Z,11nm,0.8s						
KK31	**Karatay Array**	72.80	319		**P**	17 28 13.9	-1.6
KKAR	**Karatay Array**	72.80	319		**P**	17 28 13.7	-1.8
BVAR	**Borovoye Array**	77.76	328	P	**P**	17 28 43.6	0.0
	comp=Z,3.9nm,0.8s,baz=132,slow=6.2,SNR=11						
	comp=Z,3.9nm,0.8s						
BORK	**Borovoye**	77.80	328		**P**	17 28 42.4	-1.4
BORK				IAmb	IAmb	17 28 45.1	
	comp=Z,13nm,1.2s						
TIXI	**Tiksi**	79.03	0		**P**	17 28 49.1	-1.0
NRIK	**Noril'sk**	81.74	346	P	**P**	17 29 04.0	-0.7
	comp=Z,4.0nm,0.6s,baz=137,slow=6.2,SNR=8.1						
	comp=Z,4.0nm,0.6s						
NRIK	**Noril'sk**	81.74	346		**P**	17 29 04.0	-0.7
NRIK				IAmb	IAmb	17 29 06.7	
	comp=Z,9.8nm,1.1s						
AB31	**Akbulak array**	82.04	322		**P**	17 29 05.2	-1.5
AB31				IAmb	IAmb	17 29 07.2	
	comp=Z,7.6nm,1.1s						
ABKAR	**Akbulak array**	82.04	322	P	**P**	17 29 05.6	-1.0
QSPA	**South Pole Qui**	82.43	180	P	**P**	17 29 09.3	+0.7
	comp=Z,2.1nm,0.4s,baz=318,slow=3.7,SNR=4.1						
	comp=Z,2.1nm,0.4s						
QSPA	**South Pole Qui**	82.43	180	IAmb	IAmb	17 29 10.7	
	comp=Z,3.5nm,0.7s						
ARTI	**Arti**	85.48	328	P	**P**	17 29 23.0	-1.0
ILAR	**Eielson Array**	94.46	25	P	**P**	17 30 04.5	-1.5
	comp=Z,0.4nm,0.7s,baz=251,slow=2.8,SNR=4.2						
	comp=Z,0.4nm,0.7s						
SPITS	**Spitsbergen Ar**	101.82	349	P	**Pdif**	17 30 39.6	+0.8
	comp=Z,3.4nm,0.8s,baz=90,slow=4.3,SNR=4.8						
GERES	**GERESS Array B**	111.90	320	PKiKP	**PKiKP**	17 35 20.5	-0.2
	comp=Z,0.6nm,0.6s,baz=64,slow=3.1,SNR=4.3						
PDAR	**Pinedale Array**	118.30	45	PKP	**PKPdf**	17 35 33.8	+0.5
	comp=Z,0.3nm,0.7s,baz=282,slow=2.7,SNR=2.3						
EKA	**Eskdalemuir Ar**	118.94	331	PKP	**PKPdf**	17 35 33.9	0.0
	comp=Z,0.5nm,0.4s,baz=37,slow=2.8,SNR=4.5						
TXAR	**Lajitas Array**	126.45	59	PKP	**PKiKP**	17 35 50.6	+0.9
	comp=Z,0.3nm,0.4s,baz=184,slow=3.6,SNR=5.4						
TORD	**Torodi Ar. Bea**	127.49	281	PKP	**PKPdf**	17 35 52.1	+0.7
	comp=Z,1.5nm,0.8s,baz=207,slow=2.9,SNR=7.5						
SCHQ	**Schefferville**	131.26	12	PKP	**PKPdf**	17 35 58.5	+1.1
	comp=Z,1.4nm,0.5s,baz=104,slow=1.9,SNR=5.4						
DBIC	**Dimbokro**	133.76	272	PKP	**PKPdf**	17 36 04.7	+1.3
	comp=Z,1.7nm,0.5s,baz=236,slow=3.6,SNR=3.1						
CPUP	**Villa Florida**	145.85	171	PKPbc	**PKPbc**	17 36 26.8	+1.1
	comp=Z,2.1nm,0.7s,baz=202,slow=5.5,SNR=4.6						
LPAZ	**La Paz**	151.14	145	PKPbc	**PKiKP**	17 36 42.1	+1.1
	comp=Z,1.1nm,0.4s,baz=135,slow=1.4,SNR=4.9						

*UCR **13** 17:22:02.7±0.6, 10.°58N×85.°83W, h32km±1km, MW3.7, Presumed earthquake*
*CATAC **13** 17:22:03.0±0.4, 11.°N±2.°×8.°6W±.°, h28km±2km, M3.3/6, MLv3.3/6, Error ellipse: s-maj=6.4km s-min=3.3km az=68.3, confirmed*

ISC 13 17:22:02.5±1.2, **10.°54N**±0.°03×**85.°86W**±0.°05, **h28**km±11km, **n40, σ0s58**/51, **3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIBA	**Liberia Airpor**	0.32	80	⇓*e*P	**Pn**	17 22 11.5	+0.2
ALIBA				*e*S	**Sn**	17 22 18.2	+1.1
DELF	**Filadelfia**	0.32	106	*e*P	**Pn**	17 22 10.5	+0.4

HANM				IAML		17 29 23.0		
	comp=N,1μm,0.5s							
ARPR	**Arapgir-MALATY**	**1.00**	**309**	Pg	**Pg**	**17 29 04.9**	**-0.3**	
AZEY	**Adyaman-Merk**	**1.07**	**233**	P	**Pn**	**17 29 07.8**	**+0.3**	
AKCD	**Akcadag**	**1.12**	**262**	P	**Pg**	**17 29 06.5**	**-0.9**	
AKCD				S	**Sb**	**17 29 22.7**	**0.0**	
AKCD				IAML		17 29 27.0		
	comp=E,994nm,0.5s							
HEKM	**Malatya_Hekimh**	**1.15**	**292**	P	**Pg**	**17 29 07.3**	**-0.7**	
HEKM				S	**Sn**	**17 29 25.8**	**+0.7**	
HEKM				IAML		17 29 30.0		
	comp=N,644nm,0.4s							
ILIC	**ilic-Erzincan**	**1.16**	**329**	Pn	**Pg**	**17 29 07.6**	**-0.5**	
ERZN	**Erzincan**	**1.17**	**15**	Pn	**Pb**	**17 29 08.3**	**-0.3**	
ERZN				Sn	**Sn**	**17 29 25.0**	**-0.3**	
BNGB	**Bingl**	**1.18**	**63**	Pn	**Pb**	**17 29 08.7**	**-0.1**	
BNGB				Sn	**Sn**	**17 29 26.1**	**+0.5**	
EUZM	**Uzumlu**	**1.28**	**13**	P	**Pg**	**17 29 10.1**	**-0.4**	
EUZM				S	**Sn**	**17 29 29.0**	**+1.0**	
EUZM				IAML		17 29 35.0		
	comp=E,435nm,0.6s							
ATAB	**Bozova**	**1.28**	**220**	P	**Pn**	**17 29 11.4**	**+1.0**	
SANL	**SANLIURFA_Merk**	**1.31**	**192**	P	**Pb**	**17 29 11.4**	**+0.4**	
SANL				S	**Sn**	**17 29 29.3**	**+0.6**	
SANL				IAML		17 29 33.0		
	comp=N,940nm,0.5s							
MDIV		**1.32**	**311**	P	**Pn**	**17 29 10.3**	**-0.7**	
MDIV				S	**Sb**	**17 29 28.2**	**-0.3**	
MDIV				IAML		17 29 34.0		
	comp=N,468nm,0.7s							
MIMR	**Divri**	**1.32**	**311**	P	Pb	17 29 16.9	+5.7	
MIMR				S	Sn	17 29 41.7	+13	
MIMR				IAML		17 29 46.0		
	comp=N,273nm,1.5s							
YEDI	**Yedisu-Bingol**	**1.36**	**44**	Pn	**Pg**	**17 29 12.1**	**+0.1**	
SLHN	**Bingol, Solhan**	**1.41**	**69**	P	**Pg**	**17 29 13.1**	**+0.1**	
AKCA	**Adyaman/Gʈll**	**1.46**	**243**	P	**Pg**	**17 29 13.2**	**+0.1**	
AKCA				S	**Sg**	**17 29 33.2**	**+0.5**	
AKCA				IAML		17 29 39.0		
	comp=N,859nm,0.7s							
SVAN	**Silvan-Diyarba**	**1.50**	**101**	Pn	**Pb**	**17 29 13.9**	**-0.3**	
SVAN	**Silvan-Diyarba**	**1.50**	**101**	P	**Pn**	**17 29 13.4**	**-0.1**	
SVAN				S	**Sn**	**17 29 32.9**	**-0.5**	
SVAN				IAML		17 29 36.0		
	comp=N,268nm,0.6s							
SVAN				IAML		17 29 38.0		
	comp=E,310nm,0.6s							
KARO	**Karliova-Bingo**	**1.59**	**57**	Pn	**Pb**	**17 29 15.3**	**-0.5**	
SURC	**SANLIURFA_SURC**	**1.68**	**200**	P	**Pg**	**17 29 17.5**	**-0.6**	
MBOZ		**1.68**	**342**	P	**Pg**	**17 29 17.5**	**-0.6**	
KELT	**Kelkit**	**1.69**	**358**	P	**Pb**	**17 29 17.5**	**0.0**	
GZT	**Gaziantep**	**1.78**	**232**	P	**Pn**	**17 29 17.5**	**+0.1**	
GZT				S	**Sg**	**17 29 44.2**	**+1.1**	
VRTB	**Varto-Mus**	**1.80**	**66**	Pn	**Pb**	**17 29 18.5**	**-0.9**	
BAYT	**Aydıntepe-Bayb**	**2.03**	**18**	Pn	**Pb**	**17 29 22.3**	**-1.1**	
GAZ	**Gaziantep**	**2.12**	**233**	Pn	**Pn**	**17 29 22.6**	**+0.7**	
GURO	**Guroymak-BITLI**	**2.12**	**87**	Pn	**Pb**	**17 29 23.3**	**-1.5**	
KMRS	**Kahramanmaras**	**2.15**	**244**	Pn	**Pn**	**17 29 22.8**	**+0.5**	
SARI	**SarD1z-Kayseri**	**2.29**	**270**	Pn	**Pn**	**17 29 25.0**	**+0.6**	
SVSK	**Karacayir**	**2.33**	**309**	Pn	**Pn**	**17 29 25.5**	**+0.8**	

BJI ***13*** *17:49:17.8,24˚.26N×122˚.24E,h25km,mB4.7/16,mb4.3/58, ML4.5/6,Ms4.4/49,Ms7 4.1/52*

JMA ***13*** *17:49:19.4±0.1,24˚.2N±0˚.7×122˚.1E±0˚.3,h45km±2km, MD4.8/18,MV4.6/18,TAIWAN REGION*

NIED ***13*** *17:49:19.4,24˚.18N×122˚.10E,h45km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.78; Mθθ-1.31; Mφφ0.53; Mrθ0.60; Mθφ-0.16; Mrφ0.39; Fault plane solution: M₀1.32000×10¹⁶ NP1: φs296.00000°,δ37.00000°,λ138.00000°. NP2: φs61.00000°,δ66.00000°,λ60.00000°.*

NEIC ***13*** *17:49:19.9±2.0,24˚.23N±0˚.04×122˚.14E±0˚.04,h36km±4km, mb4.6/62 Error ellipse: s-maj=6.5km s-min=5.7km az=167.0*

TAP ***13*** *17:49:19.4,24˚.29N×122˚.12E,h39km,ML5.2,B*

IDC ***13*** *17:49:22.3±2.1,24˚.35N×122˚.29E,h65km±19km,mb4.0/24, mbtmp4.2/29,MS3.8/27,Error ellipse: s-maj=16.2km s-min=12.0km az=67.0*

ISC 13 17:49:19.2±0.6,24˚.25N±0˚.02×122˚.12E±0˚.02,h33km±2km, n342,σ1$45/482,mb4.5/56,MS4.0/28,9C-5D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EOS3	**EOS3**	**0.18**	**80**	*i* P		**Pb**	**17 49 25.8**	**+0.3**
EOS3				*i* S		**Sb**	**17 49 31.0**	**+1.2**
EOS2	**EOS2**	**0.19**	**32**	P		**Pb**	**17 49 25.6**	**0.0**
EOS2				*i* S		**Sb**	**17 49 30.5**	**+0.5**
EOS4	**EOS4**	**0.22**	**126**	*i* P		**Pn**	**17 49 25.5**	**+0.5**
EOS4				S		**Sb**	**17 49 30.7**	**+0.6**
EHP	**Heping Village**	**0.35**	**279**	P		**Pb**	**17 49 27.4**	**-0.3**
EHP				S		**Sn**	**17 49 33.7**	**+0.1**
EAHA	**Aohua**	**0.36**	**282**	*i* P		**Pb**	**17 49 27.2**	**-0.5**
EWUT	**Wuta**	**0.37**	**301**	*i* P		**Pb**	**17 49 27.0**	**-0.9**
TWC	**Suao**	**0.43**	**325**	*e*P		**Pb**	**17 49 27.9**	**-1.0**
TWC				*e*S		**Sb**	**17 49 33.2**	**-2.2**
ETL	**Fush Village**	**0.47**	**258**	P		**Pb**	**17 49 29.8**	**+0.5**
ETL				S		**Sn**	**17 49 38.1**	**+1.4**
NACB	**Ninganchiao**	**0.49**	**261**	Pn		**Pb**	**17 49 29.4**	**-0.3**
NACB	**Ninganchiao**	**0.49**	**261**	P		**Pb**	**17 49 29.8**	**+0.2**
NACB	**Ninganchiao**	**0.49**	**261**	S		**Sn**	**17 49 38.4**	**+1.2**
NACB	**Ninganchiao**	**0.49**	**261**	*i* P		**Pb**	**17 49 29.8**	**+0.2**
NACB				S		**Sn**	**17 49 38.4**	**+1.2**
TWD	**Chiawan**	**0.51**	**250**	*i* P		**Pb**	**17 49 30.3**	**+0.4**
TWD				S		**Sn**	**17 49 38.8**	**+1.1**
NDS	**Dongshan**	**0.53**	**316**	*i* P		**Pb**	**17 49 29.8**	**-0.5**
HWA	**Hwalien**	**0.55**	**240**	*e*P		**Pb**	**17 49 31.2**	**+0.7**
HWA				*e*S		**Sn**	**17 49 40.3**	**+1.7**
ETLH	**Xiulin Townshi**	**0.59**	**266**	*e*P		**Pn**	**17 49 31.4**	**+0.2**
ETLH				S		**Sb**	**17 49 40.9**	**+1.4**
LATG	**Datong**	**0.61**	**297**	*i* P		**Pn**	**17 49 31.4**	**-0.2**
LATG				*e*S		**Sb**	**17 49 41.7**	**+1.5**
EGS		**0.61**	**344**	⇓*i*P		**Pn**	**17 49 31.4**	**-0.1**
EGS				S		**Sn**	**17 49 40.0**	**-0.3**
ILA	**Ilan**	**0.61**	**326**	*e*P		**Pn**	**17 49 29.9**	**-1.6**
TEYL	**Yanliau Villag**	**0.61**	**231**	*e*P		**Pn**	**17 49 31.7**	**+0.2**
TEYL				S		**Sb**	**17 49 41.9**	**+1.7**
TWE	**Neicheng**	**0.62**	**318**	*e*P		**Pn**	**17 49 31.3**	**-0.3**
TWE				S		**Sn**	**17 49 39.9**	**-0.6**
ENTT	**Nioudou**	**0.64**	**307**	P		**Pn**	**17 49 31.9**	**0.0**
ENTT				*e*S		**Sb**	**17 49 42.4**	**+1.6**
ETM	**Tongmen**	**0.64**	**244**	*e*P		**Pn**	**17 49 32.1**	**+0.1**
ETM				*e*S		**Sb**	**17 49 41.9**	**+0.9**
NTC	**Toucheng**	**0.65**	**336**	*e*P		**Pn**	**17 49 32.2**	**+0.1**
NTC				*e*S		**Sn**	**17 49 41.2**	**-0.1**
LXIB	**Xiulin Townshi**	**0.69**	**250**	*i* P		**Pn**	**17 49 33.3**	**+0.6**
LXIB				S		**Sb**	**17 49 43.8**	**+1.4**
SHUL	**Shoufeng**	**0.69**	**228**	P		**Pn**	**17 49 33.0**	**+0.4**
SHUL				S		**Sb**	**17 49 43.5**	**+1.3**
NNSB	**Datong**	**0.70**	**285**	⇑*i*P		**Pn**	**17 49 33.2**	**+0.4**
NNSB				S		**Sb**	**17 49 43.6**	**+1.1**
FUSB	**Fushanzhiwuyua**	**0.70**	**316**	*i* P		**Pn**	**17 49 33.0**	**+0.1**
FUSB				*e*S		**Sb**	**17 49 44.4**	**+1.8**
NNS	**Nan Shan**	**0.71**	**285**	⇑*i*P		**Pn**	**17 49 33.4**	**+0.4**
NNS				*i* S		**Sb**	**17 49 43.8**	**+0.9**
TEGC	**Jichi Village**	**0.76**	**225**	P		**Pn**	**17 49 33.8**	**+0.2**
TEGC				*e*S		**Sb**	**17 49 46.8**	**+2.7**
TWB1	**Santiao Chiao**	**0.76**	**351**	*i* P		**Pn**	**17 49 33.8**	**+0.2**
TWB1				S		**Sn**	**17 49 43.2**	**-0.8**
TIPB	**Shuangxi**	**0.76**	**339**	*i* P		**Pn**	**17 49 34.0**	**+0.3**
TIPB				S		**Sn**	**17 49 43.8**	**-0.3**
ESL	**Shilin**	**0.77**	**235**	*i* P		**Pn**	**17 49 33.5**	**-0.2**
ESL				S		**Sn**	**17 49 44.5**	**+0.5**
NWLT	**Wulai**	**0.77**	**313**	*i* P		**Pn**	**17 49 34.0**	**+0.2**
NWLT				*i* S		**Sb**	**17 49 44.6**	**+0.2**
JYNG	**Yonagunijimaku**	**0.78**	**75**	P		**Pn**	**17 49 34.5**	**+0.7**
JYNG				A		A	17 49 34.5	
	comp=N,80nm,2.4s,comp=E,49nm,0.9s							
JYNG				*e*S		**Sb**	**17 49 45.6**	**+1.0**
WHF	**Hehuan Shan**	**0.79**	**262**	P		**Pn**	**17 49 34.9**	**+0.5**
WHF				S		**Sb**	**17 49 46.5**	**+1.1**
YHNB	**Yeheng**	**0.80**	**302**	Pn		**Pn**	**17 49 34.5**	**+0.4**
YHNB	**Yeheng**	**0.80**	**302**	P		**Pb**	**17 49 34.9**	**+0.2**
YHNB	**Yeheng**	**0.80**	**302**	S		**Sb**	**17 49 46.5**	**+1.2**
YHNB	**Yeheng**	**0.80**	**302**	*e*P		**Pn**	**17 49 34.7**	**+0.5**
YHNB				*e*S		**Sb**	**17 49 45.5**	**+0.2**
FUSS	**Fushou**	**0.80**	**270**	*i* P		**Pn**	**17 49 35.1**	**+0.7**
FUSS				S		**Sb**	**17 49 46.7**	**+1.1**
NSK	**Sanguang**	**0.81**	**301**	*i* P		**Pn**	**17 49 34.8**	**+0.4**
NSK				S		**Sb**	**17 49 46.7**	**+0.9**
YOJ	**Yonaguni jima**	**0.84**	**76**			**Pn**	**17 49 35.2**	**+0.6**
YOJ	**Yonaguni jima**	**0.84**	**76**	P		**Pb**	**17 49 35.9**	**+0.5**
YOJ	**Yonaguni jima**	**0.84**	**76**	S		**Sb**	**17 49 47.5**	**+1.2**
YOJ	**Yonaguni jima**	**0.84**	**76**	P		**Pb**	**17 49 35.5**	**+0.2**
YOJ				A		A	17 49 35.5	
	comp=N,81nm,1.3s,comp=E,40nm,0.6s							
YOJ				*e*S		**Sb**	**17 49 47.2**	**+0.8**
YOJ	**Yonaguni jima**	**0.84**	**76**	*i* P		**Pb**	**17 49 35.5**	**+0.2**
YOJ				*i* S		**Sb**	**17 49 46.8**	**+0.5**
WARBT	**Fenglin Townsh**	**0.86**	**232**	*e*P		**Pn**	**17 49 34.7**	**-0.3**
WARBT				*e*S		**Sb**	**17 49 47.4**	**+0.4**
EGFH	**Guangfu**	**0.86**	**228**	*e*P		**Pn**	**17 49 34.9**	**-0.1**
EGFH				S		**Sb**	**17 49 48.2**	**+1.1**
TWT	**Tachien**	**0.86**	**270**	*i* P		**Pb**	**17 49 36.4**	**+0.4**
TWT				*i* S		**Sb**	**17 49 48.6**	**+1.3**
SXI1	**Grass Mountain**	**0.87**	**345**	*i* P		**Pn**	**17 49 35.7**	**+0.6**
SXI1				S		**Sn**	**17 49 47.1**	**+0.5**
NWF	**Wu-fen Shan**	**0.87**	**339**	P		**Pb**	**17 49 36.0**	**0.0**
NWF				S		**Sb**	**17 49 47.8**	**+0.4**
WFSB	**Wu-fen Shan**	**0.87**	**339**	⇓*i*P		**Pb**	**17 49 36.1**	**+0.1**
WFSB				S		**Sn**	**17 49 47.0**	**+0.4**
TWA	**Mucha**	**0.87**	**326**	*i* P		**Pb**	**17 49 36.0**	**0.0**
TWA				S		**Sb**	**17 49 47.3**	**-0.1**
TDCB	**Techi**	**0.88**	**270**	*e*P		**Pb**	**17 49 36.3**	**+0.1**
TDCB				*e*S		**Sb**	**17 49 48.2**	**+0.5**
NHDH	**Xindian Distri**	**0.89**	**323**	*e*P		**Pb**	**17 49 36.8**	**+0.6**
OWD	**Renai**	**0.91**	**251**	P		**Pb**	**17 49 36.3**	**+0.5**
OWD				S		**Sb**	**17 49 49.0**	**+0.3**
TATO	**Taipei**	**0.92**	**321**	Pn		**Pb**	**17 49 37.3**	**+0.5**
TATO	**Taipei**	**0.92**	**321**	P		**Pb**	**17 49 37.3**	**+0.5**
TATO	**Taipei**	**0.92**	**321**	S		**Sb**	**17 49 49.5**	**+0.8**
NHY	**Taipei**	**0.93**	**327**	*e*P		**Pb**	**17 49 37.7**	**+0.8**
NHY				*e*S		**Sb**	**17 49 49.8**	**+0.8**
TNOU	**National Taiwa**	**0.95**	**341**	*i* P		**Pb**	**17 49 37.0**	**-0.2**
TNOU				S		**Sb**	**17 49 49.4**	**0.0**
WUSB	**Renai**	**0.95**	**254**	*i* P		**Pn**	**17 49 37.1**	**+0.8**
WUSB				*e*S		**Sb**	**17 49 49.9**	**+0.1**
NFF	**Wufeng Townshi**	**0.99**	**293**	*i* P		**Pb**	**17 49 38.1**	**+0.2**
NFF				*e*S		**Sb**	**17 49 51.3**	**+0.6**
HGSD	**Ruisui**	**0.99**	**220**	*e*P		**Pn**	**17 49 36.7**	**-0.1**
KSHI	**Guanxi Townshi**	**1.01**	**301**	*i* P		**Pb**	**17 49 39.0**	**+0.8**
KSHI				*e*S		**Sb**	**17 49 53.7**	**+2.5**
YM01	**YM01**	**1.02**	**331**	*e*P		**Pb**	**17 49 38.6**	**+0.1**
VWDT	**VWDT**	**1.02**	**241**	*e*P		**Pn**	**17 49 38.1**	**+0.9**
VWDT				*e*S		**Sb**	**17 49 52.2**	**+0.5**
EHYH	**Wanrong**	**1.04**	**223**	*e*P		**Pn**	**17 49 37.3**	**-0.2**
EHYH				*e*S		**Sb**	**17 49 52.4**	**+0.4**
ZUZH	**Zhuzihu**	**1.04**	**330**	*e*P		**Pn**	**17 49 38.4**	**+0.8**
YM08	**YM08**	**1.05**	**333**	*e*P		**Pn**	**17 49 38.3**	**+0.7**
YM08				*e*S		**Sb**	**17 49 52.3**	**-0.1**
TWS1	**Kuangyinshan**	**1.06**	**323**	*i* P		**Pb**	**17 49 39.6**	**+0.5**
TWS1				*e*S		**Sb**	**17 49 54.0**	**+1.3**
WHP	**Taichung City**	**1.07**	**272**	*i* P		**Pb**	**17 49 39.7**	**+0.3**
WHP				S		**Sb**	**17 49 53.6**	**+0.5**
ANP	**Anpu**	**1.08**	**330**	*e*P		**Pb**	**17 49 39.3**	**-0.2**
LIOB	**Emei**	**1.08**	**291**	⇑*e*P		**Pb**	**17 49 39.9**	**+0.5**
LIOB				*e*S		**Sb**	**17 49 54.3**	**+1.0**
NSTT	**Nanjuang**	**1.09**	**290**	⇑*i*P		**Pb**	**17 49 40.0**	**+0.4**
NSTT				S		**Sb**	**17 49 54.7**	**+1.2**
NTST	**Danshui**	**1.09**	**326**	*e*P		**Pb**	**17 49 40.0**	**+0.3**
NTST				*e*S		**Sb**	**17 49 54.3**	**+0.7**
NCU	**National Centr**	**1.11**	**310**	*e*P		**Pn**	**17 49 38.1**	**-0.3**
NCU				*e*S		**Sb**	**17 49 54.7**	**+0.8**
NCUH	**Zhongli**	**1.11**	**310**	*e*P		**Pb**	**17 49 40.0**	**+0.1**
NCUH				*e*S		**Sb**	**17 49 56.9**	**+2.7**
ECBN	**Changbin**	**1.12**	**213**	*e*P		**Pn**	**17 49 38.4**	**-0.1**
ECBN				*e*S		**Sn**	**17 49 52.9**	**+0.1**
WCS	**Beigang Elemen**	**1.12**	**260**	P		**Pb**	**17 49 40.1**	**0.0**
WCS				*e*S		**Sb**	**17 49 55.5**	**+1.0**
TWY	**Chenhua**	**1.12**	**335**	P		**Pb**	**17 49 40.8**	**+0.7**
TWY				*e*S		**Sb**	**17 49 54.7**	**+0.2**
YULB	**Yu-li**	**1.14**	**222**	Pn		**Pn**	**17 49 38.3**	**-0.6**
YULB	**Yu-li**	**1.14**	**222**	P		**Pn**	**17 49 39.8**	**+0.9**
YULB	**Yu-li**	**1.14**	**222**	S		**Sn**	**17 49 53.4**	**0.0**
YULB	**Yu-li**	**1.14**	**222**	*e*P		**Pn**	**17 49 38.6**	**-0.3**
YULB				*e*S		**Sn**	**17 49 54.4**	**+1.0**
SSLB	**Suanglung**	**1.16**	**247**			**Pn**	**17 49 39.8**	**+0.6**
SSLB	**Suanglung**	**1.16**	**247**	P		**Pn**	**17 49 40.5**	**+1.3**
SSLB	**Suanglung**	**1.16**	**247**	S		**Sn**	**17 49 54.0**	**0.0**
SSLB	**Suanglung**	**1.16**	**247**	P		**Pn**	**17 49 40.1**	**+0.9**
SSLB				S		**Sn**	**17 49 54.5**	**+0.5**
SBCB	**Hsinchu**	**1.17**	**298**	⇑*i*P		**Pb**	**17 49 41.1**	**+0.3**
SBCB				*e*S		**Sb**	**17 49 55.3**	**-0.4**
TWF1	**Yuli**	**1.17**	**220**	*e*P		**Pn**	**17 49 39.2**	**-0.1**
TWF1				*e*S		**Sn**	**17 49 54.9**	**+0.8**
SMLT	**Sun Moon Lake**	**1.18**	**252**	*i* P		**Pn**	**17 49 40.6**	**+1.1**
SMLT				*e*S		**Sn**	**17 49 55.5**	**+1.1**
HSN	**Hsinchu**	**1.18**	**298**	*e*P		**Pb**	**17 49 41.1**	**0.0**
HSN				*e*S		**Sb**	**17 49 57.2**	**+1.0**
TYC	**Yuchr**	**1.21**	**253**	*e*P		**Pn**	**17 49 41.0**	**+1.3**
TYC				*e*S		**Sb**	**17 49 57.0**	**+0.1**
TWQ1	**Liyutan**	**1.23**	**275**	*e*P		**Pb**	**17 49 42.6**	**+0.6**
TWQ1				*e*S		**Sb**	**17 49 58.9**	**+1.3**
NMLH	**Miaoli**	**1.25**	**283**	*e*P		**Pb**	**17 49 42.6**	**+0.4**
NMLH				*e*S		**Sb**	**17 49 59.7**	**+1.8**
CHKH	**Chenggong**	**1.25**	**212**	*e*P		**Pn**	**17 49 39.9**	**-0.4**
CHKH				S		**Sn**	**17 49 55.7**	**-0.3**
NSY	**Sanyi**	**1.25**	**278**	*e*P		**Pb**	**17 49 43.3**	**+1.0**
NSY				*e*S		**Sb**	**17 50 00.5**	**+2.3**
WHYT	**Xinyi Township**	**1.29**	**245**	P		**Pb**	**17 49 42.5**	**-0.4**
WHYT				*e*S		**Sb**	**17 49 59.1**	**-0.1**
FULB	**Fuli**	**1.29**	**216**	*e*P		**Pn**	**17 49 41.1**	**0.0**
FULB				*e*S		**Sb**	**17 49 59.2**	**-0.2**
TCU	**Taichung**	**1.32**	**266**	P		**Pb**	**17 49 44.0**	**+0.5**
TCU				*e*S		**Sb**	**17 50 01.9**	**+1.7**
CHKT	**Chengkung**	**1.34**	**211**	*e*P		**Pn**	**17 49 41.0**	**-0.6**
CHKT				*e*S		**Sn**	**17 49 56.9**	**-1.4**
WNT	**Mingjian**	**1.37**	**254**	*e*P		**Pb**	**17 49 44.5**	**+0.3**
WNT				S		**Sb**	**17 50 02.7**	**+1.4**
PCYT	**Pengchaiyu**	**1.37**	**358**	*e*P		**Pn**	**17 49 42.6**	**+0.6**
ALS	**Alishan**	**1.41**	**239**	P		**Pb**	**17 49 44.7**	**-0.5**
ALS				S		**Sb**	**17 50 02.6**	**-0.4**
ECS	**Chishang**	**1.42**	**216**	*e*P		**Pn**	**17 49 43.5**	**+0.8**
ECS				S		**Sb**	**17 50 02.5**	**-0.5**
WCHH	**Zhanghua**	**1.44**	**263**	*i* P		**Pb**	**17 49 45.4**	**-0.1**
WCHH				*e*S		**Sb**	**17 50 04.8**	**+1.4**
WCH1	**Changhua City**	**1.45**	**263**	P		**Pb**	**17 49 45.5**	**-0.1**
WCH1				*e*S		**Sb**	**17 50 05.4**	**+1.7**
ELDTW	**Lidau**	**1.47**	**224**	*e*P		**Pn**	**17 49 43.1**	**-0.3**
ELDTW				*e*S		**Sn**	**17 50 03.1**	**+1.6**
IRIF	**Iriomote-Funau**	**1.47**	**87**	*i* P		**Pn**	**17 49 44.6**	**+1.2**
IRIF				A		A	17 49 44.6	
	comp=N,24nm,2.2s,comp=E,17nm,1.4s							
IRIF				S		**Sb**	**17 50 03.6**	**-0.7**
CHN5	**Tsauling**	**1.47**	**244**	P		**Pb**	**17 49 45.9**	**-0.2**
CHN5				*e*S		**Sb**	**17 50 05.0**	**+0.5**
WGK	**Gukeng**	**1.53**	**249**	*e*P		**Pb**	**17 49 47.0**	**0.0**
WDL	**Douliou City**	**1.54**	**250**	*e*P		**Pb**	**17 49 47.0**	**-0.2**
WDL				*e*S		**Sb**	**17 50 08.0**	**+1.6**
HATJ	**Hateruma jima**	**1.55**	**97**	*e*P		**Pn**	**17 49 46.3**	**+1.8**
HATJ				A		A	17 49 46.3	
	comp=N,34nm,2.2s,comp=E,39nm,2.1s							
WDLH	**Douliu**	**1.55**	**249**	*e*P		**Pb**	**17 49 47.2**	**-0.2**
WDLH				*e*S		**Sb**	**17 50 08.6**	**+1.8**
WCKO	**Fanlu**	**1.61**	**240**	*e*P		**Pb**	**17 49 47.9**	**-0.4**
WCKO				*e*S		**Sb**	**17 50 09.9**	**+1.6**
WRL	**Guolierlin Hig**	**1.63**	**258**	*e*P		**Pn**	**17 49 47.7**	**+2.1**
WRL				*e*S		**Sb**	**17 50 08.4**	**-0.5**
STYH	**Taoyuan**	**1.64**	**229**	P		**Pn**	**17 49 47.1**	**+1.4**
STYH				*e*S		**Sb**	**17 50 08.4**	**-0.7**
TPUB	**Ta-pu**	**1.66**	**236**			**Pn**	**17 49 47.3**	**+1.3**
TPUB	**Ta-pu**	**1.66**	**236**	P		**Pb**	**17 49 48.7**	**-0.6**
TPUB	**Ta-pu**	**1.66**	**236**	S		**Sn**	**17 50 08.4**	**+2.1**
TPUB	**Ta-pu**	**1.66**	**236**	*e*P		**Pb**	**17 49 48.3**	**-1.0**
CHN2	**Minshiung**	**1.67**	**245**	*e*P		**Pb**	**17 49 49.6**	**+0.2**
CHN2				*e*S		**Sb**	**17 50 11.7**	**+1.7**
WTP	**Ta-pu**	**1.71**	**234**	P		**Pn**	**17 49 48.7**	**+2.0**
WTP				*e*S		**Sb**	**17 50 10.8**	**-0.4**
TWGBT	**Beinan**	**1.72**	**214**	P		**Pn**	**17 49 46.9**	**+0.1**
TWGBT	**Beinan**	**1.72**	**214**	*e*P		**Pn**	**17 49 46.5**	**-0.4**
TWGBT				*e*S		**Sn**	**17 50 09.2**	**+1.5**
TWG	**Pinlang**	**1.72**	**214**	Pn		**Pn**	**17 49 46.1**	**-0.7**
TWG	**Pinlang**	**1.72**	**214**	*e*P		**Pn**	**17 49 46.5**	**-0.4**
TWG				*e*S		**Sn**	**17 50 08.7**	**+1.0**
JKRS	**Kuro-shima**	**1.72**	**90**	*i* P		**Pn**	**17 49 48.8**	**+2.0**
JKRS				A		A	17 49 48.8	
	comp=N,40nm,2.5s,comp=E,39nm,3.1s							
JKRS				S		**Sb**	**17 50 10.8**	**-0.8**
CHY	**Chiayi**	**1.73**	**244**	*e*P		**Pb**	**17 49 49.9**	**-0.4**
CHY				S		**Sb**	**17 50 12.5**	**+0.9**
WTCT	**Ta-ch'eng**	**1.73**	**257**	*e*P		**Pn**	**17 49 47.6**	**+0.8**
WTCT				*e*S		**Sb**	**17 50 11.7**	**+0.1**
TTN	**Taitung**	**1.74**	**211**	*e*P		**Pn**	**17 49 47.9**	**+0.8**
TTN				*e*S		**Sn**	**17 50 09.6**	**+1.5**
TWK	**Hsinying**	**1.79**	**237**	*e*P		**Pb**	**17 49 50.4**	**-1.1**
TWK				*e*S		**Sb**	**17 50 13.2**	**-0.4**
CHN1	**Nanshi**	**1.81**	**234**	*e*P		**Pb**	**17 49 50.8**	**-0.9**
SNST	**Tainan City**	**1.81**	**236**	*e*P		**Pb**	**17 49 52.0**	**+0.3**
SGST	**Jiashian**	**1.83**	**231**	*e*P		**Pn**	**17 49 50.0**	**+1.6**
SGST				*e*S		**Sb**	**17 50 13.8**	**-0.8**
WSF	**Szhu**	**1.84**	**251**	P		**Pb**	**17 49 51.0**	**-1.2**
WSF				*e*S		**Sb**	**17 50 14.8**	**-0.1**
JIJ	**Ishigaki jima**	**1.85**	**86**	P		**Pn**	**17 49 49.7**	**+1.1**
JIJ				A		A	17 49 49.7	
	comp=N,9.0nm,4.1s,comp=E,5.0nm,1.4s							
WSL	**Shuilin Townsh**	**1.88**	**248**	*e*P		**Pn**	**17 49 51.5**	**+2.5**
WSL				S		**Sb**	**17 50 15.5**	**-0.6**
ECL	**Taimali**	**1.97**	**213**	*e*P		**Pn**	**17 49 49.7**	**-0.6**
ECL				S		**Sn**	**17 50 12.6**	**-1.2**
CHN8	**Yiju**	**1.97**	**243**	P		**Pb**	**17 49 52.9**	**-1.5**
CHN8				*i* S		**Sb**	**17 50 18.1**	**-0.5**
CHN3	**Shinhua**	**1.99**	**234**	*e*P		**Pb**	**17 49 54.3**	**-0.5**
CHN3				S		**Sb**	**17 50 20.0**	**+0.8**
SSHA	**Shanhua**	**2.02**	**237**	*e*P		**Pb**	**17 49 53.9**	**-1.3**
SSHA				*e*S		**Sb**	**17 50 20.1**	**+0.2**
JISG	**Ishigakijimahi**	**2.02**	**80**	*i* P		**Pn**	**17 49 52.1**	**+1.2**
SSD	**Sandimen**	**2.03**	**223**	*e*P		**Pn**	**17 49 53.0**	**+1.9**
SSD				S		**Sb**	**17 50 18.6**	**-1.8**
SHHT	**Tainan City**	**2.04**	**233**	*e*P		**Pb**	**17 49 54.5**	**-1.1**
SCLT	**Jiali**	**2.07**	**239**	*e*P		**Pn**	**17 49 54.1**	**+2.5**
SCLT				*e*S		**Sb**	**17 50 20.3**	**-1.1**
TWM1	**Shoushan**	**2.11

JNU LR LR 17 57 46.6
comp=Z,373nm,18.4s,baz=220,slow=44
QIZ Qiongzhong 12.54 248 P **Pn** **17 52 15.3 -0.1**
QIZ S **Sn** **17 54 35.1 +1.1**
QIZ LR LR
comp=Z,310nm,14.8s
QIZ LR LR
comp=Z,210nm,11.3s
QIZ LR LR
comp=Z,400nm,12.7s
TIA Tai'an 12.67 341 P Pn 17 52 09.1 -8.0
TIA S **Sn** **17 54 30.8 -6.3**
TIA pmax pmax
comp=Z,9.0nm,1.7s
TIA pmax pmax
comp=Z,220nm,5.5s
TIA LR LR
comp=N,560nm,4.1s
TIA LR LR
comp=E,1µm,5.3s
TIA LR LR
comp=Z,1µm,14.3s
ENH Enshi 12.73 301 **Pn** **17 52 18.8 +0.9**
LYN LuoYang 13.26 323 P **Pn** **17 52 25.1 0.0**
LYN PP **P** **17 52 37.8 +3.3**
LYN S **Sn** **17 54 57.0 +5.6**
LYN SS **S** **17 55 11.1 -4.0**
LYN pmax pmax
comp=Z,10.0nm,0.8s
LYN LR LR
comp=Z,2µm,4.8s
LYN LR LR
comp=Z,1µm,12.5s
KSAR Wonju Array Be 14.04 19 **Pn** **17 52 36.2 +0.5**
KSRS Korea Array 14.06 19 P **Pn** **17 52 37.5 +1.5**
comp=Z,2.6nm,0.8s,baz=203,slow=14,SNR=9.2
KSRS LR LR 17 58 40.5
comp=Z,46nm,19.7s,baz=200,slow=40
KS19 Wonju Array Si 14.09 19 **Pn** **17 52 36.0 -0.5**
GYA Guiyang 14.15 282 ⇓P **Pn** **17 52 39.0 +1.6**
GYA pP P 17 52 46.3 +1.7
GYA S **Sn** **17 55 14.6 +1.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA LR LR
comp=Z,1µm,16.2s
HNS HongShan 14.56 336 ⇓P **Pn** **17 52 43.3 +0.5**
HNS S **Sn** **17 55 26.9 +3.9**
HNS pmax pmax
comp=Z,13nm,1.1s
HNS LR LR
comp=Z,690nm,13.5s
HNS LR LR
comp=Z,770nm,15.1s
XAN Xi'an 15.09 313 ⇑P **Pn** **17 52 49.9 -0.1**
XAN pP P 17 52 56.3 +1.4
XAN S **Sn** **17 55 32.6 -3.5**
XAN pmax pmax
comp=Z,18nm,1.3s
XAN pmax pmax
comp=Z,77nm,6.8s
XAN LR LR
comp=Z,1µm,5.9s
BJI2 Beijing 16.50 344 P **P** **17 53 12.0 +1.6**
BJI2 pP **pP** **17 53 18.9 +0.1**
BJI2 pmax pmax
comp=Z,4.0nm,1.1s
BJI2 LR LR
comp=Z,210nm,13.9s
BJT Baijiatuan 16.50 344 **Pn** **17 53 08.1 0.0**
DAV Davao City (W) 17.41 168 LR LR 17 59 52.9
comp=Z,167nm,21.4s,baz=340,slow=36
CD2 Chengdu 17.57 296 P **P** **17 53 23.0 +0.6**
CD2 S **S** **17 56 41.8 -1.5**
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 LR LR
comp=Z,1µm,5.1s
CD2 LR LR
comp=Z,1µm,11.4s
KMI2 Kunming 17.63 277 P **P** **17 53 25.5 +2.2**
KMI2 pmax pmax
comp=Z,8.0nm,1.5s
KMI2 LR LR
comp=Z,320nm,13.3s
KMI2 LR LR
comp=Z,750nm,14.4s
KMI2 LR LR
comp=Z,770nm,12.7s
JCJ Chichijima 18.30 77 LR LR 18 00 11.8
comp=Z,110nm,18.9s,baz=194,slow=36
MJAR Matsushiro Arr 18.48 45 P **Pn** **17 53 33.2 +0.5**
comp=Z,0.3nm,0.4s,baz=234,slow=8.4,SNR=5.7
MJAR LR LR 18 01 14.3
comp=Z,164nm,21.3s,baz=220,slow=39
PZH PanZhiHua 18.55 281 P **Pn** **17 53 36.5 +2.7**
PZH S **Sn** **17 56 57.8 -2.5**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,210nm,4.5s
PZH LR LR
comp=Z,460nm,13.5s
PZH LR LR
comp=Z,550nm,16.1s
PZH LR LR
comp=Z,770nm,16.3s
HHC Hu-ho-hao-te 18.76 334 ⇓*i*P **Pn** **17 53 38.8 +2.6**
HHC S **S** **17 57 11.9 +4.6**
HHC pmax pmax
comp=Z,7.0nm,1.2s
HHC pmax pmax
comp=Z,150nm,7.6s
HHC LR LR
comp=Z,320nm,17.1s
HHC LR LR
comp=Z,210nm,16.1s
HHC LR LR
comp=Z,410nm,15.0s
KKM Kota Kinabalu 18.97 198 P **P** **17 53 37.4 -0.7**
KKM IAmb IAmb 17 53 59.2
comp=Z,48nm,1.2s
BTO2 Baotou 19.38 331 *e*P **Pn** **17 53 44.4 +0.7**
BTO2 pP **sP** **17 53 54.4 +0.2**
BTO2 PP **PnPn** **17 54 03.3 +6.1**
BTO2 S **S** **17 57 15.8 -4.0**
BTO2 SS **SnSn** **17 57 42.3 +7.7**
BTO2 pmax pmax
comp=Z,17nm,0.9s
BTO2 pmax pmax
comp=Z,130nm,6.3s
BTO2 LR LR
comp=Z,2µm,18.2s
BTO2 LR LR
comp=Z,1µm,15.1s
LZH Lanzhou 19.68 311 *e*P **Pn** **17 53 48.4 +1.1**
LZH pP pP 17 53 54.5 +0.7
LZH pmax pmax
comp=Z,16nm,1.3s
LZH LR LR
comp=Z,480nm,12.4s
LZH LR LR
comp=Z,570nm,11.3s
LZH LR LR
comp=Z,760nm,11.7s
CN2 Changchun 19.69 7 P **P** **17 53 45.5 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 LR LR
comp=Z,600nm,13.0s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,600nm,14.0s
LZDM Lanzhou Array 19.71 311 P **Pn** **17 53 49.0 +1.1**
comp=Z,19nm,0.9s,baz=143,slow=10,SNR=19
XLT XiLinHaoTe 20.21 347 *e*P **P** **17 53 52.6 +1.2**
XLT pP sP 17 54 03.0 -0.1
XLT sP pP 17 54 08.3 +8.5
XLT PP **PnPn** **17 54 13.3 +4.8**
XLT PcP **PcP** **17 58 04.3 -0.4**
XLT pmax pmax
comp=Z,7.0nm,1.1s
XLT pmax pmax
comp=Z,140nm,6.7s
XLT LR LR
comp=Z,630nm,18.5s
XLT LR LR
comp=Z,530nm,15.1s
MDJ Mudanjiang 21.21 15 P **P** **17 54 08.8 +6.8**
MDJ pmax pmax
comp=Z,8.0nm,1.4s
MDJ LR LR
comp=Z,740nm,13.7s
MDJ LR LR
comp=Z,310nm,17.2s
MDJ LR LR
comp=Z,1µm,16.5s
TNCH TengChong 21.46 277 ⇑P **P** **17 54 07.8 +2.7**
TNCH pP pP 17 54 11.9 -1.3
TNCH sP pwP 17 54 16.8 -0.4
TNCH PP **PnPn** **17 54 28.6 +2.8**
TNCH S **S** **17 57 53.8 -7.9**
TNCH PcS **PcS** **18 01 43.0 -3.2**
TNCH pmax pmax
comp=Z,21nm,1.1s
TNCH pmax pmax
comp=Z,140nm,3.3s
TNCH LR LR
comp=Z,360nm,6.4s
TNCH LR LR
comp=Z,450nm,8.8s
TNCH LR LR
comp=Z,1µm,14.0s
USRK Ussuriysk Ar. 21.47 20 P **P** **17 54 04.3 -0.5**
comp=Z,1.4nm,0.5s,baz=218,slow=11,SNR=4.6
comp=Z,1.4nm,0.5s
BNX BinXian 21.86 10 ⇑P **P** **17 54 07.5 -1.4**
CHTO Chiang Mai 22.22 260 **P** **17 54 13.7 +0.6**
CHTO Chiang Mai 22.22 260 P **P** **17 54 13.3 +0.2**
CM31 Chiang Mai Arr 22.33 260 P **P** **17 54 15.3 +1.0**
CMAR Chiang Mai Arr 22.33 260 P **P** **17 54 16.8 +2.5**
comp=Z,4.4nm,1.0s,baz=63,slow=8.1,SNR=21
CMAR PcP **PcP** **17 58 08.4 -0.8**
comp=Z,0.8nm,0.7s,baz=2.1,slow=1.3,SNR=6.3
CMAR LR LR 18 04 49.3
comp=Z,103nm,18.2s,baz=70,slow=41
comp=Z,4.4nm,1.0s
CMAR Chiang Mai Arr 22.33 260 **P** **17 54 15.1 +0.8**
SBUM Sibu 23.69 205 P **P** **17 54 28.6 +0.5**
SBUM Sibu 23.69 205 P **P** **17 54 28.7 +0.5**
GUMO Guam 23.95 112 LR LR 18 02 14.1
comp=Z,177nm,21.3s,baz=60,slow=32
GTA2 Gaotai 24.22 314 *e*P **P** **17 54 33.6 +0.5**
GTA2 sP pwP 17 54 44.5 -0.7
GTA2 pmax pmax
comp=Z,17nm,1.4s
GTA2 LR LR
comp=Z,340nm,12.7s
GTA2 LR LR
comp=Z,260nm,10.9s
GTA2 LR LR
comp=Z,440nm,12.7s
HILR Hailar Array B 25.32 356 P **P** **17 54 40.4 -2.4**
comp=Z,2.7nm,0.6s,baz=190,slow=9.1,SNR=5.7
comp=Z,2.7nm,0.6s
MTKI Muara Teweh, K 26.01 197 P **P** **17 54 50.7 +1.4**
comp=Z,33nm,1.1s
HEH HeiHe 26.28 8 *e*P **P** **17 54 52.4 +1.0**
HEH LR LR
comp=Z,470nm,10.3s
HEH LR LR
comp=Z,350nm,10.1s
HEH LR LR
comp=Z,530nm,11.2s
GOMU GeErMu 26.34 303 P **P** **17 54 53.6 +1.0**
GOMU pmax pmax
comp=Z,9.0nm,0.8s
ULN Ulaanbaatar 26.43 337 **P** **17 54 52.8 -0.3**
ULN IAmb IAmb 17 54 54.3
comp=Z,12nm,0.8s
ULN Ulaanbaatar 26.43 337 P **P** **17 54 52.9 -0.1**
SIJI Sorong 26.50 159 LR LR 18 06 07.8
comp=Z,38nm,19.4s,baz=254,slow=38
SONM Songino Array 26.64 336 P **P** **17 54 55.0 +0.1**
comp=Z,19nm,1.0s,baz=155,slow=8.9,SNR=57
SONM LR LR 18 06 56.5
comp=Z,327nm,18.1s,baz=170,slow=40
comp=Z,19nm,1.0s
SONM Songino Array 26.64 336 **P** **17 54 54.7 -0.2**
SONM IAmb IAmb 17 54 56.6
comp=Z,20nm,1.1s
SHL Shillong 27.43 279 IAmb IAmb 17 55 31.8
comp=Z,25nm,1.2s
LSA Lhasa 28.08 288 **P** **17 55 09.2 +0.8**
LSA Lhasa 28.08 288 P **P** **17 55 06.4 -2.0**
LSA S S 17 59 43.8 -7.7
LSA pmax pmax
comp=Z,8.0nm,0.8s
LSA LR LR
comp=Z,220nm,14.0s
LSA LR LR
comp=Z,320nm,26.9s
IPM Ipoh 28.27 229 P **P** **17 55 09.7 +0.1**
IPM IAmb IAmb 17 55 24.2
comp=Z,11nm,0.9s
IPM Ipoh 28.27 229 P **P** **17 55 10.1 +0.4**
RPSI Rantau Prapat 31.00 230 P **P** **17 55 31.8 -2.1**
RPSI IAmb IAmb 17 55 48.0
comp=Z,9.8nm,0.9s
MNSI Mandailing Nat 31.94 226 P **P** **17 55 43.1 +1.0**
EDFI Ende, Flores 32.80 181 P **P** **17 55 48.8 -0.9**
comp=Z,28nm,0.8s
KHKI Kahang-Kahang 33.04 192 P **P** **17 55 52.9 +1.3**
comp=Z,45nm,1.4s
SNJI Sawahan-Nganju 33.41 199 P **P** **17 55 57.1 +2.0**
comp=Z,28nm,1.0s
WMQ Urumqi 34.23 313 *e*P **P** **17 56 05.0 +3.1**
YAK Yakutsk 38.11 6 P **P** **17 56 32.9 -1.8**
YAK IAmb IAmb 17 56 42.1
comp=Z,7.4nm,0.8s
MKAR Makanchi Array 38.89 315 P **P** **17 56 41.9 +0.4**
comp=Z,6.4nm,0.7s,baz=100,slow=9.8,SNR=70
MKAR PcP **PcP** **17 58 50.0 -1.9**
comp=Z,1.2nm,0.8s,baz=86,slow=5.0,SNR=3.9
MKAR ScP **S** **18 02 35.8 -1.7**
comp=Z,0.6nm,0.9s,baz=101,slow=5.3,SNR=4.2
MKAR LR LR 18 14 17.0
comp=Z,161nm,19.4s,baz=100,slow=38
comp=Z,6.4nm,0.7s
MKAR Makanchi Array 38.89 315 **P** **17 56 41.1 -0.4**
MAKZ Makanchi 39.09 315 **P** **17 56 43.4 +0.1**
MAKZ IAmb IAmb 17 56 44.7
comp=Z,14nm,1.1s
ZAA0 Zalesovo Array 40.65 327 P **P** **17 56 54.9 -1.1**
ZAA0 IAmb IAmb 17 56 56.2
comp=Z,10nm,0.8s
ZALV Zalesovo Beam 40.65 327 P **P** **17 56 55.3 -0.8**
comp=Z,10nm,0.7s,baz=110,slow=7.9,SNR=50
ZALV LR LR 18 15 06.3
comp=Z,167nm,18.7s,baz=120,slow=38
comp=Z,10nm,0.7s
ZALV Zalesovo Beam 40.65 327 P **P** **17 56 55.1 -1.0**
NRN Naryn 41.84 306 P **P** **17 57 07.7 +1.3**
NRN IAmb IAmb 17 57 08.9
comp=Z,9.4nm,0.9s
KSH2 Kashi 41.85 302 P **P** **17 57 07.8 +1.5**
KSH2 sP sP 17 57 22.8 +3.8
KSH2 pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 42.59 320 P **P** **17 57 10.8 -1.2**
KURBB Kurchatov Arra 42.61 320 P **P** **17 57 12.0 -0.1**
comp=Z,4.0nm,0.9s,baz=116,slow=8.5,SNR=15
KURBB LR LR 18 15 17.8
comp=Z,67nm,19.6s,baz=164,slow=36
comp=Z,4.0nm,0.9s
AAK Ala-Archa 43.15 307 LR LR 18 18 07.9
comp=Z,138nm,20.2s,baz=96,slow=40
AAK Ala-Archa 43.15 307 P **P** **17 57 16.9 +0.1**
COEN Coen 43.19 149 P **P** **17 57 18.5 +1.3**
ARSB Arslanbob 44.07 305 P **P** **17 57 25.2 +0.9**
ARSB IAmb IAmb 17 57 26.6
comp=Z,8.6nm,1.1s
MBWA Marble Bar 45.20 183 P **P** **17 57 33.4 +0.2**
WB0 Warramunga Arr 45.36 164 P **P** **17 57 34.5 +0.1**
WB0 IAmb IAmb 17 57 49.5
comp=Z,11nm,0.9s
WRAB Tennant Creek 45.51 164 P **P** **17 57 36.0 +0.3**
WRAB IAmb IAmb 17 57 51.2
comp=Z,9.4nm,0.8s
WRA Warramunga Arr 45.51 164 P **P** **17 57 35.4 -0.3**
comp=Z,2.5nm,0.6s,baz=346,slow=8.6,SNR=17
comp=Z,2.5nm,0.6s
WRA Warramunga Arr 45.51 164 P **P** **17 57 34.7 -1.0**
WR8 Warramunga Ar 45.57 164 P **P** **17 57 36.6 +0.5**
PSA00 Pilbara Seismi 45.60 183 P **P** **17 57 35.2 -1.2**
KK31 Karatay Array 46.11 307 P **P** **17 57 41.3 +1.0**
KKAR Karatay Array 46.11 307 P **P** **17 57 41.0 +0.7**
KBL Kabul 46.91 295 P **P** **17 57 47.8 +0.9**
TIXI Tiksi 47.58 3 P **P** **17 57 49.7 -1.5**
comp=Z,9.2nm,0.4s,baz=172,slow=3.1,SNR=22
TIXI LR LR 18 20 20.9
comp=Z,259nm,18.3s,baz=188,slow=39
comp=Z,9.2nm,0.4s
TIXI Tiksi 47.58 3 P **P** **17 57 49.8 -1.5**
TIXI IAmb IAmb 17 57 50.5
comp=Z,5.7nm,0.8s
BVAR Borovoye Array 48.16 320 P **P** **17 57 56.1 0.0**
comp=Z,4.9nm,0.6s,baz=104,slow=7.1,SNR=24
BVAR PcP **PcP** **17 59 22.6 -0.6**
comp=Z,1.6nm,0.7s,baz=106,slow=4.7,SNR=4.0
BVAR LR LR 18 18 13.4
comp=Z,116nm,21.1s,baz=80,slow=36
comp=Z,4.9nm,0.6s
BORK Borovoye 48.21 320 **P** **17 57 55.8 -0.7**
BORK IAmb IAmb 17 57 57.9
comp=Z,7.7nm,0.8s
AS31 Alice Springs 48.99 166 P **P** **17 58 02.8 0.0**
ASAR Alice Springs 48.99 166 P **P** **17 58 03.9 +1.1**
comp=Z,0.9nm,0.5s,baz=344,slow=7.1,SNR=17
comp=Z,0.9nm,0.5s
ASAR Alice Springs 48.99 166 P **P** **17 58 02.2 -0.5**
NRIK Noril'sk 49.56 345 P **P** **17 58 05.0 -1.5**
comp=Z,1.8nm,0.6s,baz=113,slow=7.5,SNR=3.7
NRIK LR LR 18 20 55.3
comp=Z,118nm,21.0s,baz=150,slow=38
comp=Z,1.8nm,0.6s
NRIK Noril'sk 49.56 345 IAmb IAmb 17 58 26.1
comp=Z,7.0nm,1.2s
AB31 Akbulak array 54.01 314 P **P** **17 58 40.4 +0.3**
ABKAR Akbulak array 54.01 314 P **P** **17 58 39.9 -0.2**
INKA Innaminka 54.72 160 **P** **17 58 46.1 +0.7**
INKA IAmb IAmb 17 58 58.9
comp=Z,7.6nm,1.4s
ARTI Arti 55.66 323 LR LR 18 23 23.0
comp=Z,99nm,18.9s,baz=112,slow=37
ARTI Arti 55.66 323 P **P** **17 58 50.8 -1.1**
STKA Stephens Creek 58.84 161 P **P** **17 59 12.8 -1.7**
comp=Z,1.6nm,0.7s,baz=338,slow=8.0,SNR=5.6
comp=Z,1.6nm,0.7s
STKA Stephens Creek 58.84 161 P **P** **17 59 15.2 +0.7**
DZM Mont Dzumac 63.06 133 *e*LR LR 18 18 26.2
comp=Z,238nm,24.9s
TOO Toolangi 65.31 160 **P** **17 59 57.5 -0.4**
TOO IAmb IAmb 18 00 13.5
comp=Z,9.8nm,1.4s
KBZ Khabaz 66.10 309 P **P** **18 00 02.8 -0.3**
comp=Z,5.0nm,0.9s,baz=160,slow=3.8,SNR=6.2
comp=Z,5.0nm,0.9s
H22K Ishtalitna Cre 66.71 27 IAmb IAmb 18 00 09.1
comp=Z,4.7nm,0.9s
RND Reindeer 68.18 29 P **P** **18 00 15.9 -0.1**
RC01 Rabbit Creek A 68.20 32 P **P** **18 00 16.3 +0.2**
RC01 IAmb IAmb 18 00 18.4
comp=Z,7.5nm,0.8s
ILAR Eielson Array 68.76 27 P **P** **18 00 16.5 -3.0**
comp=Z,0.2nm,0.7s,baz=281,slow=9.2,SNR=5.5
comp=Z,0.2nm,0.7s
MARD Mardin 69.14 302 P **P** **18 00 21.4 -1.2**
RAYN Ar Rayn 69.14 287 P **P** **18 00 22.0 -0.8**
RAYN IAmb IAmb 18 00 24.3
comp=Z,6.2nm,1.2s
SPITS Spitsbergen Ar 69.60 348 P **P** **18 00 21.8 -2.7**
comp=Z,12nm,1.0s,baz=107,slow=4.5,SNR=5.1
SPITS LR LR 18 34 58.2
comp=Z,104nm,18.4s,baz=42,slow=39
comp=Z,12nm,1.0s
F28M Old Crow 70.81 24 P **P** **18 00 32.7 +0.5**
BCAR Beaver Creek A 71.36 29 P **P** **18 00 35.9 +0.3**
FINES FINESS Array B 71.82 330 P **P** **18 00 37.9 -0.3**
comp=Z,2.8nm,0.8s,baz=68,slow=5.9,SNR=10
FINES LR LR 18 35 12.0
comp=Z,160nm,18.3s,baz=83,slow=38
comp=Z,2.8nm,0.8s
FINES FINESS Array B 71.82 330 **P** **18 00 38.4 +0.2**
INK Inuvik 72.84 22 P **P** **18 00 43.8 -0.5**
INK IAmb IAmb 18 01 13.9
comp=Z,6.2nm,1.1s
F31M Tsiigehtchic 73.09 23 P **P** **18 00 45.0 -0.7**
F31M IAmb IAmb 18 00 46.7
comp=Z,5.7nm,0.9s
AKASG Malin Array Be 73.39 318 P **P** **18 00 46.4 -1.4**
comp=Z,0.2nm,0.3s,baz=61,slow=7.0,SNR=2.6
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 73.39 318 IAmb IAmb 18 01 04.1
comp=Z,6.0nm,1.2s
BR131 Keskin Array S 73.82 307 P **P** **18 00 51.0 +0.2**
BR131 IAmb IAmb 18 00 52.0
comp=Z,8.8nm,1.0s
BRTR Keskin Array B 73.82 307 P **P** **18 00 51.3 +0.5**
comp=Z,4.8nm,0.9s,baz=104,slow=5.8,SNR=18
comp=Z,4.8nm,0.9s
BRTR Keskin Array B 73.82 307 P **P** **18 00 51.1 +0.3**
C36M Paulatuk 75.45 20 IAmb IAmb 18 01 12.2
comp=Z,5.0nm,0.9s
BORA Eskisehir 76.09 308 IAmb IAmb 18 01 04.4
comp=Z,6.3nm,0.9s
BURAR Bucovina Array 76.91 316 P **P** **18 01 08.5 +0.2**
MLR Muntele Rosu 77.22 314 LR LR 18 40 11.2
comp=Z,114nm,18.5s,baz=44,slow=40
ELL Elmali 77.58 305 P **P** **18 01 11.4 -0.9**
HFS Hagfors 77.92 331 P **P** **18 01 14.0 +0.4**
comp=Z,2.8nm,1.0s,baz=79,slow=7.5,SNR=2.0
HFS LR LR 18 38 52.0
comp=Z,177nm,19.9s,baz=61,slow=38
comp=Z,2.8nm,1.0s
NOA NORSAR Array B 78.56 332 P **P** **18 01 16.3 -0.9**
comp=Z,1.8nm,0.8s,baz=60,slow=5.5,SNR=5.8
NOA LR LR 18 39 24.7
comp=Z,88nm,20.6s,baz=235,slow=38
comp=Z,1.8nm,0.8s
JMIC Jan Mayen 78.98 345 LR LR 18 40 01.0
comp=Z,90nm,18.9s,baz=59,slow=38
YKA Yellowknife Ar 82.57 23 P **P** **18 01 38.3 -0.3**
comp=Z,1.7nm,0.9s,baz=316,slow=5.7,SNR=28
comp=Z,1.7nm,0.9s
YKA Yellowknife Ar 82.57 23 P **P** **18 01 38.0 -0.6**
GERES GERESS Array B 83.33 321 P **P** **18 01 43.4 +0.4**
comp=Z,0.8nm,0.7s,baz=76,slow=5.6,SNR=3.6
GERES LR LR 18 43 22.4
comp=Z,128nm,20.2s,baz=359,slow=39
comp=Z,0.8nm,0.7s
DAVOX Davos/Dischmat 86.60 320 LR LR 18 45 50.2
comp=Z,129nm,20.2s,baz=254,slow=39
BORG Borgarnes 86.88 345 LR LR 18 43 32.1
comp=Z,69nm,20.0s,baz=45,slow=37
RAR Rarotonga 88.36 114 LR LR 18 37 40.7
comp=Z,68nm,21.6s,baz=207,slow=33
B08A Colville Reser 89.23 36 P **P** **18 02 12.4 +0.5**
B08A IAmb IAmb 18 02 13.1
comp=Z,3.4nm,0.8s
FFC Flin Flon 92.72 24 P **P** **18 02 27.4 -0.5**
PPT2 Papeete2 95.56 107 *e*LR LR 18 33 29.6
comp=Z,109nm,24.5s
NVAR Mina Array Bea 95.80 43 P **P** **18 02 42.0 -0.6**
comp=Z,0.6nm,0.7s,baz=301,slow=5.7,SNR=3.7
comp=Z,0.6nm,0.7s
GWY Greenwater Val 98.19 44 **P** **18 02 52.5 -0.9**
QSM Queen of Sheba 98.20 45 P **P** **18 02 50.9 -2.4**
TAOE Nuku Hiva Isla 100.59 95 *e*LR LR 18 36 01.2
comp=Z,219nm,27.1s

*UPP **13** 18:01:52.7±0.1, 67.05N×20.98E, h0km, ML2.0, Suspected explosion*
*IDC **13** 18:01:53.8±0.8, 67.04N×21.65E, h0km, mbtmp3.2/5, ML2.1/5, Error ellipse: s-maj=17.3km s-min=7.8km az=107.0*
*HEL **13** 18:01:54.3±0.3, 67.10N×21.18E, h0km, ML2.1, Explosion*
ISC 13 18:01:52.9±0.7, **67.10N**±0.02×**21.09E**±0.02, **h0km, n50,** σ1§**47**/60, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.20**	**276**	P	**Pg**		**18 01 56.3**	**-0.4**
DUNU				S	**Sg**		**18 01 58.9**	**-0.5**
MASU	**Masugnsbyn**	**0.50**	**44**	P	**Pg**		**18 02 03.7**	**+1.2**
ERTU	**Ertsjaerv**	**0.70**	**141**	P	**Pg**		**18 02 05.7**	**-0.6**

ERTU	**Ertsjaerv**	**0.70**	**141**	PG	**Pg**	**18 02 05.7**	**-0.6**
ERTU				SG	**Sg**	**18 02 14.5**	**-0.9**
PAJU	**Pajala**	**0.80**	**95**	P	**Pg**	**18 02 08.3**	**+0.2**
PAJU				S	**Sg**	**18 02 18.8**	**+0.3**
PAJU	**Pajala**	**0.80**	**95**	PG	**Pg**	**18 02 07.9**	**-0.3**
PAJU				SG	**Sg**	**18 02 15.3**	**-3.1**
KUA	**Kurravaara**	**0.90**	**342**	P	**Pg**	**18 02 09.9**	**-0.2**
RATU	**Laukkuluspa**	**0.93**	**322**	P	**Pg**	**18 02 10.1**	**-0.6**
HARU	**Harads**	**0.94**	**183**	P	**Pg**	**18 02 09.3**	**-1.6**
LANU	**Lannavaara**	**1.01**	**20**	P	**Pg**	**18 02 12.4**	**+0.2**
LANU	**Lannavaara**	**1.01**	**20**	PG	**Pg**	**18 02 12.4**	**+0.2**
LANU				SN	**Sn**	**18 02 30.0**	**+0.7**
SALU	**Saltoluokta**	**1.04**	**287**	*eP*	**Pg**	**18 02 11.7**	**-1.1**
SALU	**Saltoluokta**	**1.04**	**287**	P	**Pg**	**18 02 11.6**	**-1.2**
NIKU	**Nikkaluokta**	**1.10**	**315**	P	**Pg**	**18 02 13.1**	**-0.9**
KLF	**Kolari**	**1.13**	**82**	PB	**Pg**	**18 02 14.6**	**+0.1**
KLF	comp=Z,18nm,0.2s			smax	smax	18 02 27.8	
KLF				SN	**Sn**	**18 02 32.3**	**+0.1**
KOVU	**Salmi**	**1.18**	**343**	P	**Pg**	**18 02 15.1**	**-0.3**
KALU	**Kalix**	**1.54**	**143**	P	**Pn**	**18 02 20.7**	**-0.9**
SJUU	**Sjulsmark**	**1.61**	**172**	P	**Pn**	**18 02 21.4**	**-1.1**
HEF	**Hetta**	**1.64**	**36**	*eP*	**Pn**	**18 02 23.6**	**+0.6**
HEF	**Hetta**	**1.64**	**36**	PG	**Pn**	**18 02 23.5**	**+0.6**
HEF	baz=213			SG	**Sn**	**18 02 41.4**	**-3.2**
HEF	comp=Z,12nm,0.2s			smax	smax	18 02 42.8	
TOF	**Tornio**	**1.65**	**127**	PG	**Pn**	**18 02 23.0**	**0.0**
TOF	comp=Z,12nm,0.2s			smax	smax	18 02 42.8	
KIF	**Kilpisjarvi**	**1.92**	**357**	PG	**Pb**	**18 02 28.5**	**-0.1**
KIF	comp=Z,22nm,0.2s			smax	smax	18 02 52.6	
RNF	**Rovaniemi**	**2.01**	**102**	PG	**Pn**	**18 02 29.2**	**+1.2**
KTK1	**Kautokeino**	**2.08**	**22**	PG	**Pb**	**18 02 31.4**	**-0.1**
RANF	**Ranua**	**2.53**	**113**	PN	**Pn**	**18 02 35.8**	**+0.7**
BURU	**Burvik**	**2.53**	**177**	SG	**Sg**	**18 03 14.5**	**+0.4**
OUL	**Oulu**	**2.82**	**134**	PN	**Pn**	**18 02 40.6**	**+1.5**
OBF0	**Syolatti, Pyha**	**2.92**	**152**	PB	**Pb**	**18 02 44.4**	**-1.3**
OBF0	comp=Z,5.9nm,0.2s			smax	smax	18 03 19.6	
ARA0	**ARCESS Array S**	**2.94**	**32**	PN	**Pn**	**18 02 42.1**	**+1.3**
ARCES	**ARCESS Array B**	**2.94**	**32**	Pn	**Pn**	**18 02 41.3**	**+0.4**
ARCES	comp=Z,0.3nm,0.3s,baz=209,slow=14,SNR=21 comp=Z,0.5nm,0.3s,baz=208,slow=27,SNR=2.2 comp=Z,5.7nm,1.2s			Lg	Lg	18 03 22.9	
OBF8	**Ulkokalla**	**2.95**	**160**	PN	**Pn**	**18 02 43.8**	**+3.0**
OBF8	comp=Z,9.1nm,0.2s			smax	smax	18 03 20.6	
RAJF	**Raja-Jooseppi**	**3.07**	**60**	PB	**Pn**	**18 02 45.4**	**+2.8**
OUF	**Merijarvi**	**3.13**	**150**	PN	**Pn**	**18 02 44.8**	**+1.4**
OUF	comp=Z,3.0nm,0.2s			smax	smax	18 03 25.5	
KU2	**Taivalkoski**	**3.19**	**113**	PN	**Pn**	**18 02 45.6**	**+1.3**
UMAU	**Umeaa**	**3.24**	**183**	PN	**Pn**	**18 02 45.9**	**+1.1**
UMAU				SG	**Sg**	**18 03 36.0**	**-0.7**
VRF	**Varrio**	**3.35**	**75**	PN	**Pn**	**18 02 49.1**	**+2.7**
OLKF	**Oulanka, Finla**	**3.40**	**100**	PN	**Pn**	**18 02 48.3**	**+1.3**
MSF	**Maaselka**	**3.40**	**107**	PB	**Pb**	**18 02 51.6**	**-2.3**
KEV	**Kevo**	**3.45**	**37**	PN	**Pn**	**18 02 49.0**	**+1.3**
KEV	baz=224			SB	**Sb**	**18 03 35.5**	**-1.6**
KU6	**Riekki**	**3.68**	**103**	PN	**Pn**	**18 02 52.1**	**+1.1**
KU1	**Kurvinen**	**3.75**	**110**	PN	**Pn**	**18 02 53.1**	**+1.2**
HUSU	**Husum**	**3.86**	**193**	SN	**Sn**	**18 03 42.1**	**+2.8**
VAF	**Ylistaro**	**4.13**	**170**	PN	**Pn**	**18 02 58.2**	**+1.1**
HEMU	**Hemsoen**	**4.63**	**198**	PN	**Pn**	**18 03 05.8**	**+1.8**
HEMU				SB	**Sb**	**18 04 14.8**	**+3.7**
RMF	**Romuvaara**	**4.67**	**124**	PN	**Pn**	**18 03 07.4**	**+2.9**
NIF	**Nilsia**	**4.68**	**140**	PN	**Pn**	**18 03 05.6**	**+1.0**
FINES	**FINESS Array B**	**6.08**	**157**	Pn	**Pn**	**18 03 24.3**	**+0.4**
FINES	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=18 baz=341,slow=23,SNR=1.0			Sn	Sn	18 04 25.2	-8.8
FINES	comp=Z,0.1nm,0.3s,baz=343,slow=24,SNR=1.1 comp=Z,2.0nm,0.9s			Lg	Lg	18 04 59.7	
NOA	**NORSAR Array B**	**7.46**	**220**	Pn	**Pn**	**18 03 43.4**	**+0.5**
	baz=34,slow=11,SNR=6.4 comp=Z,0.4nm,0.7s						
HFS	**Hagfors**	**7.72**	**209**	Pn	**Pn**	**18 03 45.4**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=25,slow=14,SNR=14 comp=Z,1.5nm,0.7s						
SPITS	**Spitsbergen Ar**	**11.22**	**355**	Pn	**Pn**	**18 04 34.7**	**+0.5**
	baz=171,slow=15 comp=Z,5.1nm,0.9s						

IDC ***13*** *18:04:45.6±2.4, 56.30S×146.31E, h0km, mb4.0/3, mbtmp4.0/3, MS3.8/5, Error ellipse: s-maj=185.6km s-min=35.1km az=85.0*

NEIC ***13*** *18:04:48.1±2.4, 56.23S±0.05×145.8E±0.6, h10km±1km, mb4.4/14, Error ellipse: s-maj=56.2km s-min=7.0km az=84.0*

ISC 13 18:04:47.7±0.9, 56.2S±0.1×145.8E±0.4, h10km, n39, σ1§08/23, mb4.4/11, MS3.7/5, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOO	**Toolangi**	**18.66**	**359**	P	**P**	**18 09 05.4**	**-0.2**
RPZ	**Rata Peaks**	**20.34**	**63**	LR	LR	18 15 24.8	
	comp=Z,328nm,20.2s,baz=218,slow=32						
CAN	**Canberra**	**21.01**	**7**	P	**P**	**18 09 32.3**	**+1.0**
CAN	comp=Z,16nm,1.0s			IAmb	IAmb	18 09 37.5	
VNDA	**Vanda**	**22.12**	**171**		**P**	**18 09 43.5**	**+0.7**
VNDA	comp=Z,34nm,1.5s			IAmb	IAmb	18 10 19.4	
STKA	**Stephens Creek**	**24.52**	**351**	P	**P**	**18 10 08.6**	**+1.5**
	comp=Z,4.1nm,0.9s,baz=178,slow=15,SNR=7.0 comp=Z,4.1nm,0.9s						
STKA	**Stephens Creek**	**24.52**	**351**	P	**P**	**18 10 08.0**	**+0.9**
URZ	**Urewera**	**27.46**	**62**	LR	LR	18 18 59.7	
	comp=Z,150nm,21.5s,baz=198,slow=31						
FORT	**Forrest**	**28.34**	**326**	P	**P**	**18 10 42.0**	**+0.4**
FORT	comp=Z,9.3nm,1.1s			IAmb	IAmb	18 11 20.1	
INKA	**Innaminka**	**28.69**	**351**	P	**P**	**18 10 43.3**	**-1.4**
INKA	comp=Z,3.2nm,1.0s			IAmb	IAmb	18 10 49.3	
H01W1	**Cape Leeuwin H**	**30.34**	**301**	T	T	18 43 40.1	
	baz=143,slow=75,SNR=194						
H01W2	**Cape Leeuwin H**	**30.34**	**301**	T	T	18 43 41.4	
	baz=143,slow=75,SNR=253						
H01W3	**Cape Leeuwin H**	**30.36**	**301**	T	T	18 43 42.2	
	baz=143,slow=75,SNR=110						
ASAR	**Alice Springs**	**33.68**	**340**	P	**P**	**18 11 30.2**	**+1.5**
	comp=Z,2.2nm,1.0s,baz=169,slow=6.3,SNR=12						
ASAR	comp=Z,0.7nm,0.8s,baz=167,slow=1.1,SNR=4.2 comp=Z,2.2nm,1.0s			PcP	**PcP**	**18 14 07.7**	**-0.7**
AS31	**Alice Springs**	**33.68**	**340**	P	**P**	**18 11 28.0**	**-0.7**
QSPA	**South Pole Qui**	**33.89**	**180**	LR	LR	18 25 25.4	
	comp=Z,108nm,19.4s,baz=216,slow=37						
QSPA	**South Pole Qui**	**33.89**	**180**	P	**P**	**18 11 30.1**	**-0.2**
WR0	**Warramunga Arr**	**37.18**	**342**	P	**P**	**18 11 59.4**	**+0.6**
WR0	comp=Z,4.5nm,0.9s			IAmb	IAmb	18 12 08.9	
WRA	**Warramunga Arr**	**37.23**	**342**	P	**P**	**18 11 58.8**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=164,slow=7.7,SNR=12						
WRA	comp=Z,0.5nm,0.8s,baz=153,slow=2.1,SNR=2.8 comp=Z,2.1nm,0.8s			PcP	**PcP**	**18 14 18.6**	**-0.2**
WRA	**Warramunga Arr**	**37.23**	**342**	IAmb	IAmb	18 12 06.8	
	comp=Z,0.3nm,1.1s						
WRAB	**Tennant Creek**	**37.24**	**342**	P	**P**	**18 12 00.3**	**+1.0**
WRAB	comp=Z,10.0nm,1.2s			IAmb	IAmb	18 12 06.9	
WB0	**Warramunga Arr**	**37.40**	**342**	P	**P**	**18 11 57.9**	**-2.8**
WB0	comp=Z,11nm,1.2s			IAmb	IAmb	18 12 02.5	
MAW	**Mawson**	**37.60**	**219**	LR	LR	18 25 15.0	
	comp=Z,153nm,21.3s,baz=79,slow=33						
PSA00	**Pilbara Seismi**	**39.60**	**320**	P	**P**	**18 12 17.6**	**-1.6**
MBWA	**Marble Bar**	**40.02**	**320**	P	**P**	**18 12 23.4**	**+0.8**
MBWA	comp=Z,17nm,1.1s			IAmb	IAmb	18 12 43.7	
H04S2	**CROZET ISLANDS**	**54.77**	**237**	T	T	19 15 08.4	
	baz=140,slow=76,SNR=5.4						
H04S1	**CROZET ISLANDS**	**54.77**	**237**	T	T	19 15 02.6	
	baz=140,slow=76,SNR=6.0						
H04S3	**CROZET ISLANDS**	**54.79**	**237**	T	T	19 15 01.7	
	baz=140,slow=76,SNR=6.6						
H08S2	**Diego Garcia H**	**74.44**	**280**	T	T	19 38 57.5	
	baz=146,slow=76,SNR=6.5						
H08S1	**Diego Garcia H**	**74.45**	**280**	T	T	19 38 58.2	
	baz=146,slow=76,SNR=4.8						
H08S3	**Diego Garcia H**	**74.46**	**280**	T	T	19 38 58.8	
	baz=146,slow=76,SNR=5.1						
H03S2	**Juan Fernandez**	**82.55**	**144**	T	T	19 48 29.6	
	baz=202,slow=74,SNR=6.6						
H03S1	**Juan Fernandez**	**82.55**	**144**	T	T	19 48 30.8	
	baz=202,slow=74,SNR=5.9						
H03S3	**Juan Fernandez**	**82.57**	**144**	T	T	19 48 31.1	
	baz=202,slow=74,SNR=7.1						
LSZ	**Lusaka**	**91.89**	**239**	LR	LR	18 52 29.4	
	comp=Z,41nm,19.1s,baz=148,slow=31						
MKAR	**Makanchi Array**	**115.58**	**317**	PKP	**PKPdf**	**18 23 28.0**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=224,slow=2.3,SNR=5.6						
KEST	**Kesra**	**144.28**	**254**	PKP	**PKPdf**	**18 24 23.4**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=228,slow=3.2,SNR=5.5						
FINES	**FINESS Array B**	**149.39**	**305**	PKPbc	**PKPbc**	**18 24 35.5**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=132,slow=5.4,SNR=5.2						
GERES	**GERESS Array B**	**150.49**	**276**	PKPbc	**PKPbc**	**18 24 38.7**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=125,slow=2.1,SNR=4.1						
ARCES	**ARCESS Array B**	**151.12**	**321**	PKPbc	**PKiKP**	**18 24 39.6**	**-0.3**
	comp=Z,5.4nm,1.0s,baz=108,slow=2.5,SNR=4.4						

IDC 13 18:07:54.8±1.9, 3.20S×150.64E, h0km, mb3.5/3, mbtmp3.6/4, ML1.9/1, Error ellipse: s-maj=155.7km s-min=26.3km az=122.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.07**	**209**	Pn	Pn	18 09 41.5	+1.9
	1.3nm,0.3s,baz=34,slow=2.8,SNR=7.0 4.4nm,0.4s						
WRA	**Warramunga Arr**	**23.02**	**222**	P	P	18 13 01.9	+0.2
	1.2nm,0.9s,baz=47,slow=9.9,SNR=6.9 1.2nm,0.9s						
ASAR	**Alice Springs**	**26.00**	**217**	P	P	18 13 28.7	-0.9
	0.7nm,0.9s,baz=52,slow=8.9,SNR=5.7 0.7nm,0.9s						
ILAR	**Eielson Array**	**81.51**	**23**	P	P	18 20 13.9	+0.1
	0.4nm,0.7s,baz=241,slow=6.0,SNR=5.9 0.4nm,0.7s						

IDC 13 18:13:17.0±3.6, 47.69N×93.04W, h0km, mbtmp2.5/2, ML1.5/2, Error ellipse: s-maj=62.0km s-min=25.9km az=54.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULM	**Lac du Bonnet**	**3.17**	**325**	Pn	Pn	18 14 06.9	-1.3
	0.3nm,0.3s,baz=144,slow=16,SNR=4.4						
ULM	0.3nm,0.3s,baz=145,slow=17,SNR=3.3			Pg	Pb	18 14 13.5	-0.8
ULM	0.2nm,0.3s,baz=72,slow=20,SNR=3.8			Sn	Sn	18 14 43.9	-2.9
ULM	1.1nm,0.3s,baz=220,slow=18,SNR=4.8 0.9nm,0.6s			Lg	Lg	18 14 55.4	
I10CA	**LAC DU BONNET**	**3.20**	**323**	I	I	18 36 40.0	
	baz=140,slow=346,SNR=0.2						
PDAR	**Pinedale Array**	**12.64**	**253**	Lg	Lg	18 19 44.2	
	0.1nm,0.3s,baz=64,slow=34,SNR=3.5						
YKA	**Yellowknife Ar**	**19.15**	**329**	P	Pn	18 17 42.7	+0.4
	baz=126,slow=12,SNR=1.7 0.1nm,0.5s						

BJI ***13*** *18:17:25.3, 6.98S×130.85E, h81km, mB5.0/16, mb4.9/70, Ms4.6/2, Ms7.4.4/1*

MOS ***13*** *18:17:29.1±0.8, 6.51S×130.55E, h77km, mb5.3/40, Error ellipse: s-maj=11.2km s-min=6.0km az=116.7*

IDC ***13*** *18:17:30.8±1.7, 6.61S×130.59E, h82km±14km, mb4.7/20, mbtmp5.0/24, MS3.5/16, Error ellipse: s-maj=17.5km s-min=9.7km az=71.0*

NEIC ***13*** *18:17:31.0±1.4, 6.62S±0.06×130.61E±0.07, h80km±4km, mb5.2/101, Error ellipse: s-maj=10.6km s-min=8.0km az=93.0*

DJA ***13*** *18:17:32.1±0.1, 7.3S±1×133.1E±*, h104km±2km, M4.9/99, mB5.4/55, mb5.1/99, MLv5.5/31, Mw(mB)4.9/55*

ISC 13 18:17:30.1±0.4, 6.69S±0.03×130.62E±0.04, h84km±3km, h84km:pP-P, n677, σ1§47/673, mb5.1/136, 26C-3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.45**	**152**		**Pn**	**18 17 56.9**	**+1.9**
SAUI				Sn	**Sn**	**18 18 11.6**	**-2.1**
SAUI	**Saumlaki**	**1.45**	**152**	P	**Pn**	**18 17 58.2**	**+3.2**
SAUI				S	**Sn**	**18 18 17.8**	**+4.0**
BNDI	**Bandanaira**	**2.27**	**342**	P	**Pn**	**18 18 07.6**	**+1.9**
MSAI	**Masohi**	**3.72**	**333**	P	**Pn**	**18 18 28.0**	**+2.6**
MSAI				S	**Sn**	**18 19 12.0**	**+3.9**
AAI	**Ambon**	**3.84**	**321**	P	**Pn**	**18 18 28.7**	**+1.8**
AAI				S	**Sn**	**18 19 15.3**	**+4.4**
KRAI	**Karang Ratu**	**4.01**	**326**	P	**Pn**	**18 18 32.3**	**+3.0**
KRAI				S	**Sn**	**18 19 20.1**	**+4.8**
FAKI	**Fak Fak**	**4.08**	**24**	Pn	**Pn**	**18 18 29.5**	**-0.7**
FAKI				Sn	**Sn**	**18 19 10.6**	**-6.3**
FAKI	**Fak Fak**	**4.08**	**24**	P	**Pn**	**18 18 29.3**	**-1.0**
KMPI	**Kaimana, Papua**	**4.30**	**46**	P	**Pn**	**18 18 33.8**	**+0.6**
NLAI	**Namlea**	**4.90**	**314**	P	**Pn**	**18 18 43.8**	**+2.4**
SIJI	**Sorong**	**5.82**	**6**	P	**Pn**	**18 18 53.0**	**-1.0**
SIJI	210nm,0.3s,baz=198,slow=8.4,SNR=283 419nm,0.3s,baz=218,slow=24,SNR=20			S	**Sn**	**18 19 53.1**	**-6.1**
SIJI	**Sorong**	**5.82**	**6**	P	**Pn**	**18 18 52.7**	**-1.2**
SWI	**Sorong**	**5.82**	**6**	P	**Pn**	**18 18 53.9**	**-0.1**
MTN	**Manton Dam**	**6.14**	**175**	P	**Pn**	**18 18 57.5**	**-0.7**
MTN	**Manton Dam**	**6.14**	**175**		**Pn**	**18 18 57.9**	**-0.4**
MTN				Sn	**Sn**	**18 20 03.0**	**-4.1**
KDU	**Kakadu**	**6.23**	**163**	P	**Pn**	**18 18 58.8**	**-0.8**
RKPI	**Ransiki, Papua**	**6.25**	**35**	P	**Pn**	**18 18 59.8**	**0.0**
SANI	**Sanana**	**6.52**	**315**	P	**Pn**	**18 19 07.3**	**+3.8**
	2µm272nm,1.0s						
MWPI	**Manokwari, Pap**	**6.66**	**31**	P	**Pn**	**18 19 05.8**	**+0.4**
MWPI				S	**Sn**	**18 20 20.4**	**+0.5**
SOEI	**Soe**	**6.99**	**244**		**Pn**	**18 19 10.6**	**+0.6**
SOEI	**Soe**	**6.99**	**244**	P	**Pn**	**18 19 11.7**	**+1.7**
SRPI	**Serui, Papua**	**7.37**	**50**	P	**Pn**	**18 19 14.0**	**-1.1**
	1.6nm94nm,0.5s						
BATI	**Baumata**	**7.72**	**243**	P	**Pn**	**18 19 20.9**	**+1.0**
	151nm,0.4s,baz=98,slow=4.6,SNR=76						
BATI	407nm,0.6s,baz=58,slow=23,SNR=7.4			S	**Sn**	**18 20 40.7**	**-5.1**
BATI	**Baumata**	**7.72**	**243**	P	**Pn**	**18 19 20.7**	**+0.8**
	2.1nm3µm194nm,0.8s						
BAKI	**Biak**	**7.73**	**45**	P	**Pn**	**18 19 21.7**	**+1.7**
BAKI				S	**Sn**	**18 20 45.8**	**-0.3**
TNTI	**Ternate**	**8.09**	**336**		**Pn**	**18 19 23.7**	**-1.2**
TNTI	**Ternate**	**8.09**	**336**	P	Pn	18 19 33.9	+9.0
MMRI	**Maumere**	**8.53**	**256**		**Pn**	**18 19 32.2**	**+1.3**
MMRI	**Maumere**	**8.53**	**256**	P	**Pn**	**18 19 34.4**	**+3.5**
	70nm,0.9s						
EDFI	**Ende, Flores**	**9.08**	**256**	P	**Pn**	**18 19 42.0**	**+3.4**
	40nm,0.6s						
KNRA	**Kununurra**	**9.12**	**191**		**Pn**	**18 19 37.2**	**-1.7**
KNRA				Sn	**Sn**	**18 21 11.8**	**-8.1**
KKSI	**Kolaka, Sulawe**	**9.27**	**285**	P	Pn	18 19 46.0	+5.0
LUWI	**Luwuk**	**9.63**	**305**		**Pn**	**18 19 46.1**	**+0.2**
LUWI	**Luwuk**	**9.63**	**305**	P	**Pn**	**18 19 49.6**	**+3.7**
	2µm163nm,1.2s						
MMPI	**Merauke**	**9.84**	**101**	P	**Pn**	**18 19 50.6**	**+1.8**
BSSI	**Bau Bau, Buton**	**10.08**	**273**	P	**Pn**	**18 19 56.4**	**+4.3**
	2µm245nm,1.0s						
GENI	**Genyem**	**10.35**	**67**	P	**Pn**	**18 19 57.3**	**+1.5**
	111nm,0.8s						
APSI	**Ampana**	**10.63**	**302**	P	Pn	18 20 06.3	+6.7
	1µm143nm,1.0s						
WSI	**Waingapu**	**10.64**	**253**	P	**Pn**	**18 20 00.9**	**+1.2**
JAY	**Jayapura**	**10.87**	**68**	P	**Pn**	**18 20 03.7**	**+0.8**
	41nm,0.9s,baz=208,slow=13,SNR=8.6						
JAY	14nm,0.7s,baz=170,slow=18,SNR=1.7			S	**Sn**	**18 21 57.6**	**-5.2**
KAPI	**Kappang**	**10.94**	**278**	P	**Pn**	**18 20 07.7**	**+4.0**
	44nm,0.9s,baz=111,slow=9.3,SNR=23						
KAPI	**Kappang**	**10.94**	**278**		Pn	18 20 09.6	+5.8
KAPI	**Kappang**	**10.94**	**278**	*i* P	**Pn**	**18 20 00.9**	**-2.9**
KAPI	**Kappang**	**10.94**	**278**	P	**Pn**	**18 20 08.2**	**+4.4**
SPSI	**Sidrap Palu**	**11.14**	**284**	P	Pn	18 20 12.6	+6.1
	74nm,0.8s						
MKS	**Makassar**	**11.19**	**277**	P	**Pn**	**18 20 09.8**	**+2.7**
	82nm,1.1s						
MRSI	**Marisa**	**11.21**	**309**	P	**Pn**	**18 20 10.3**	**+2.8**
	948nm132nm,1.0s						
TTSI	**Tana Toraja**	**11.35**	**288**	P	Pn	18 20 15.4	+6.0
	36nm,0.7s						
WBSI	**Waikabubak, Su**	**11.49**	**254**	P	**Pn**	**18 20 13.6**	**+2.2**
	1µm115nm,0.6s						
PMSI	**Majene**	**12.08**	**285**	P	**P**	**18 20 29.4**	**+0.7**
PCI	**Palu**	**12.19**	**298**	P	**P**	**18 20 27.3**	**-2.7**
	2µm95nm,0.8s						
MMSI	**Mamuju**	**12.33**	**288**	P	**P**	**18 20 28.5**	**-2.9**
	773nm69nm,0.7s						
DBNI	**Kabupaten Domp**	**12.33**	**261**	P	**Pn**	**18 20 24.7**	**+2.0**
FITZ	**Fitzroy Crossi**	**12.34**	**203**	P	**Pn**	**18 20 18.4**	**-4.3**
	69nm,0.3s,baz=25,slow=9.8,SNR=178						
FITZ	161nm,0.7s,baz=343,slow=20,SNR=7.6			S	Sn	18 22 26.9	-12
TOLI2	**Tolitoli**	**12.51**	**308**	Pn	**Pn**	**18 20 24.7**	**-0.4**
MPSI	**Mapaga**	**12.77**	**303**	P	**P**	**18 20 34.2**	**-2.2**
PLAI	**Plampang**	**12.90**	**260**	P	**Pn**	**18 20 31.8**	**+1.4**
	53nm,0.7s						
WB0	**Warramunga Arr**	**13.51**	**165**		Pn	18 20 33.0	-5.4
WB9	**Warramunga Arr**	**13.53**	**165**	P	**Pn**	**18 20 33.8**	**-4.8**
	comp=Z,286nm,0.7s						
WRAB	**Tennant Creek**	**13.65**	**165**	Pn	Pn	18 20 35.5	-4.8
WRAB	**Tennant Creek**	**13.65**	**165**	P	**Pn**	**18 20 36.2**	**-4.1**
WRAB	**Tennant Creek**	**13.65**	**165**	P	**Pn**	**18 20 35.5**	**-4.8**
WR1	**Warramunga Arr**	**13.66**	**165**	P	Pn	18 20 35.2	-5.1
WRA	**Warramunga Arr**	**13.66**	**165**	P	**Pn**	**18 20 36.0**	**-4.3**
	comp=Z,153nm,0.5s,baz=340,slow=14,SNR=283						
WRA	comp=Z,95nm,0.6s,baz=341,slow=22,SNR=10			S	Sn	18 22 59.4	-11
WRA	**Warramunga Arr**	**13.66**	**165**		Pn	18 20 34.9	-5.5
WRA	**Warramunga Arr**	**13.66**	**165**	P	Pn	18 20 34.9	-5.5
WB2	**Warramunga Arr**	**13.66**	**165**	P	**Pn**	**18 20 35.8**	**-4.6**
	comp=Z,346nm,0.6s						
WB1	**Warramunga Ar.**	**13.68**	**165**	P	**Pn**	**18 20 36.3**	**-4.3**
WR8	**Warramunga Arr**	**13.72**	**164**		Pn	18 20 35.5	-5.6
COEN	**Coen**	**14.30**	**121**	P	**Pn**	**18 20 47.0**	**-1.7**
	comp=Z,148nm,0.7s						
COEN	**Coen**	**14.30**	**121**	Pn	**Pn**	**18 20 45.7**	**-3.1**
COEN	**Coen**	**14.30**	**121**	P	**Pn**	**18 20 45.8**	**-2.9**
DAV	**Davao City (W)**	**14.56**	**340**	LR	LR	18 27 04.6	
	comp=Z,134nm,21.2s,baz=172,slow=40						
BBKI	**Banjar Baru**	**16.04**	**281**	P	**P**	**18 21 15.8**	**+3.1**
QIS	**Mount Isa**	**16.31**	**149**	P	**Pn**	**18 21 11.9**	**-2.3**
	comp=Z,185nm,0.7s						
QIS	**Mount Isa**	**16.31**	**149**	P	**Pn**	**18 21 12.0**	**-2.2**
JAGI	**Jajag, Banyuwa**	**16.42**	**263**	Pn	**Pn**	**18 21 13.6**	**-2.0**
JAGI	**Jajag, Banyuwa**	**16.42**	**263**	P	**Pn**	**18 21 13.6**	**-2.0**
KMMI	**Kalianget**	**16.54**	**268**	P	**P**	**18 21 22.9**	**+4.7**
	comp=Z,1µmcomp=Z,196nm,0.8s						
PMG	**Port Moresby**	**16.60**	**100**	P	**P**	**18 21 18.8**	**-0.1**
	comp=Z,44nm,0.9s,baz=12,slow=5.1,SNR=16						
PMG	comp=Z,22nm,1.0s,baz=239,slow=20,SNR=1.9			S	Sn	18 24 08.2	-14
PMG	**Port Moresby**	**16.60**	**100**		**P**	**18 21 19.3**	**+0.3**
PMG	**Port Moresby**	**16.60**	**100**	P	**P**	**18 21 19.2**	**+0.3**
PMG	**Port Moresby**	**16.60**	**100**	*i* P	**P**	**18 21 19.8**	**+0.9**
PMG	**Port Moresby**	**16.60**	**100**	P	P	18 21 31.0	+12
MTKI	**Muara Teweh, K**	**16.69**	**289**	P	**P**	**18 21 23.1**	**+3.2**
	comp=Z,121nm,0.9s						
AS31	**Alice Springs**	**17.17**	**170**	P	**Pn**	**18 21 21.8**	**-3.0**
ASAR	**Alice Springs**	**17.17**	**170**	P	**Pn**	**18 21 22.6**	**-2.3**
	comp=Z,99nm,0.5s,baz=19,slow=12,SNR=760						
ASAR	comp=Z,37nm,0.7s,baz=353,slow=26,SNR=8.2			S	Sn	18 24 22.3	-13
ASAR	comp=Z,208nm,21.8s,baz=350,slow=37			LR	LR	18 28 03.6	
ASAR	**Alice Springs**	**17.17**	**170**	Pn	**Pn**	**18 21 21.6**	**-3.3**
ASAR	**Alice Springs**	**17.17**	**170**	P	**Pn**	**18 21 21.6**	**-3.3**
MTSU	**Mount Surprise**	**17.54**	**132**	P	**P**	**18 21 29.0**	**-0.4**
	comp=Z,38nm,0.5s						
MTSU	**Mount Surprise**	**17.54**	**132**	P	**P**	**18 21 28.7**	**-0.6**
MBWA	**Marble Bar**	**17.83**	**215**	P	**P**	**18 21 30.2**	**-2.2**
	comp=Z,40nm,0.6s						
MBWA	**Marble Bar**	**17.83**	**215**		**P**	**18 21 29.6**	**-2.9**
MBWA	**Marble Bar**	**17.83**	**215**	P	**P**	**18 21 31.2**	**-1.3**
PSAC2	**Pilbara Seismi**	**18.06**	**214**	P	**P**	**18 21 34.5**	**-0.5**
	comp=Z,59nm,0.8s						
PSAC1	**Pilbara Seismi**	**18.08**	**214**	P	**P**	**18 21 34.6**	**-0.6**
	comp=Z,65nm,0.6s						
PSA00	**Pilbara Seismi**	**18.09**	**214**	P	**P**	**

comp=Z,20nm,1.0s
PPI Padang Panjang 30.78 280 P P 18 23 39.0 +1.0
comp=Z,53nm,0.8s
IPM Ipoh 31.56 290 P P 18 23 44.1 -0.8
IPM Ipoh 31.56 290 P P 18 23 43.9 -1.0
comp=Z,18nm,1.1s
ARPS Mount Arapiles 31.65 163 P P 18 23 47.5 +2.1
comp=Z,19nm,1.3s
SSLB Suanglung 31.73 343 P P 18 23 44.9 -1.4
MNSI Mandailing Nat 31.86 282 P P 18 23 50.9 +3.4
YNG Young 32.01 152 P P 18 23 46.0 -2.6
comp=Z,19nm,0.8s
KULM Kulim 32.19 291 P P 18 23 49.0 -1.5
KULM Kulim 32.19 291 P P 18 23 49.4 -1.1
KULM Kulim 32.19 291 P P 18 23 50.0 -0.5
comp=Z,31nm,0.8s
YHNB Yeheng 32.44 344 P P 18 23 50.3 -2.3
RPSI Rantau Prapat 32.98 285 IAmb IAmb 18 24 00.4
comp=Z,49nm,1.4s
PSI Prapat 33.02 286 P P 18 23 56.7 -1.1
comp=Z,25nm,1.2s
CAN Canberra 33.13 152 P P 18 23 59.4 +0.9
JOW Kunigami 33.40 356 P P 18 24 01.6 +0.8
JOW IAmb IAmb 18 24 03.1
comp=Z,51nm,0.9s
JOW Kunigami 33.40 356 P P 18 24 01.6 +0.8
GSI Gunungsitoli 33.92 282 P P 18 24 02.7 -2.9
DZM Mont Dzumac 37.79 118 *e*LR LR 18 35 04.1
comp=Z,147nm,30.4s
DZM Mont Dzumac 37.79 118 LR LR 18 40 45.6
comp=Z,82nm,18.4s,baz=2.0,slow=37
JNU Nakatsue 39.59 0 LR LR 18 40 49.1
comp=Z,36nm,19.4s,baz=160,slow=35
CM31 Chiang Mai Arr 40.01 309 P P 18 24 57.4 +0.3
CM31 IAmb IAmb 18 24 58.5
comp=Z,60nm,1.4s
CMAR Chiang Mai Arr 40.01 309 P P 18 24 57.3 +0.2
comp=Z,8.1nm,0.6s,baz=135,slow=7.1,SNR=71
CMAR PcP **PcP 18 27 02.3 +1.5**
comp=Z,4.6nm,0.6s,baz=160,slow=2.7,SNR=12
CMAR ScP **ScP 18 30 42.5 -0.1**
comp=Z,0.3nm,0.3s,baz=115,slow=4.0,SNR=2.2
comp=Z,8.1nm,0.6s
CMAR Chiang Mai Arr 40.01 309 P P 18 24 57.2 0.0
CMAR **PcP 18 27 01.6 +0.8**
NJ2 Nanjing 40.12 344 ⇓P **P 18 24 58.8 +1.0**
NJ2 sP **sP 18 25 24.8 -0.1**
NJ2 pmax pmax
comp=Z,23nm,0.8s
WHN Wuhan 40.17 338 P P 18 24 58.9 +0.7
WHN pmax pmax
comp=Z,82nm,1.0s
CHTO Chiang Mai 40.22 310 P P 18 24 59.1 +0.3
CHTO IAmb IAmb 18 24 60.0
comp=Z,78nm,1.5s
CHTO Chiang Mai 40.22 310 P P 18 24 58.7 -0.1
CHTO Chiang Mai 40.22 310 P P 18 24 59.1 +0.3
CHTO pmax pmax
comp=Z,78nm,1.5s
CHTO Chiang Mai 40.22 310 P P 18 24 59.1 +0.3
comp=Z,339nmcomp=Z,34nm,0.9s
CHTO Chiang Mai 40.22 310 P P 18 24 59.0 +0.3
CHTO pP **pP 18 25 19.1 +1.7**
CHTO PcP **PcP 18 27 01.6 +0.1**
JMN Monobe 40.31 4 P P 18 24 59.4 0.0
JMN IAmb IAmb 18 25 25.2
comp=Z,81nm,1.5s
JMN Monobe 40.31 4 P P 18 25 00.4 +1.0
GYA Guiyang 40.32 326 P P 18 24 59.8 +0.1
GYA pP pP 18 25 21.5 +3.7
GYA PcP **PcP 18 27 02.8 +1.0**
GYA pmax pmax
comp=Z,8.0nm,0.9s
JHJ Hachijo jima 2 40.53 12 LR LR 18 40 11.2
comp=Z,88nm,19.6s,baz=308,slow=34
KMI2 Kunming 41.68 320 ⇑P **P 18 25 11.5 +0.5**
KMI2 pmax pmax
comp=Z,13nm,1.3s
ENH Enshi 41.97 332 P P 18 25 12.8 -0.3
ENH x x 18 25 41.9
ENH PcP **PcP 18 27 07.9 +0.8**
TJN Taejon 42.95 356 P P 18 25 20.9 +0.1
TJN IAmb IAmb 18 25 21.9
comp=Z,48nm,0.8s
TJN Taejon 42.95 356 P P 18 25 20.9 +0.1
TJN pmax pmax
comp=Z,48nm,0.8s
PZH PanZhiHua 43.28 321 P P 18 25 23.5 -0.3
PZH pmax pmax
comp=Z,6.0nm,1.1s
PZH pmax pmax
comp=Z,100nm,4.8s
MAJO Matsushiro 43.59 9 P P 18 25 24.9 -1.2
MAJO Matsushiro 43.59 9 P P 18 25 25.3 -0.8
MAJO Matsushiro 43.59 9 *i* P **P 18 25 24.0 -2.0**
MAJO pmax pmax
comp=Z,14nm,0.8s
MAJO Matsushiro 43.59 9 P P 18 25 25.3 -0.8
MAJO x x 18 25 52.9
MJAR Matsushiro Arr 43.59 9 P P 18 25 25.1 -1.0
comp=Z,9.9nm,0.9s,baz=188,slow=9.6,SNR=20
MJAR PcP **PcP 18 27 12.7 +0.4**
comp=Z,2.8nm,0.7s,baz=174,slow=4.6,SNR=5.0
comp=Z,9.9nm,0.9s
MJAR Matsushiro Arr 43.59 9 P P 18 25 25.7 -0.3
MJAR Matsushiro Arr 43.59 9 P P 18 25 25.7 -0.3
MJAR 18 27 12.7
MJAR pmax pmax
comp=Z,20nm,1.8s
MJB9 Matsu-Tunnel 43.59 9 P P 18 25 25.8 -0.2
KSAR Wonju Array Be 43.98 357 P P 18 25 28.4 -0.7
KSAR Wonju Array Be 43.98 357 P P 18 25 28.4 -0.7
KSRS Korea Array 43.98 357 P P 18 25 29.8 +0.7
comp=Z,5.3nm,0.6s,baz=174,slow=9.2,SNR=37
KSRS PcP **PcP 18 27 14.1 +0.5**
comp=Z,3.4nm,0.8s,baz=188,slow=3.2,SNR=7.9
KSRS LR LR 18 42 45.1
comp=Z,20nm,21.2s,baz=180,slow=34
comp=Z,5.3nm,0.6s
KS19 Wonju Array Si 44.04 357 P P 18 25 29.6 +0.1
KS19 IAmb IAmb 18 25 31.7
comp=Z,69nm,1.9s
TNCH TengChong 44.38 316 ⇑P **P 18 25 32.5 -0.3**
TNCH pP pP 18 25 53.5 +2.2
TNCH sP sP 18 26 03.8 +3.7
TNCH PcP **PP 18 27 16.8 -1.1**
TNCH PP **PP 18 27 19.1 +1.2**
TNCH S **S 18 32 00.3 -1.3**
TNCH sS sS 18 32 36.0 +2.3
TNCH pmax pmax
comp=Z,16nm,1.3s
TNCH pmax pmax
comp=Z,120nm,2.8s
LYN LuoYang 44.46 338 P P 18 25 32.8 -0.2
LYN PP **PcP 18 27 15.5 +0.2**
LYN pmax pmax
comp=Z,26nm,0.8s
TIA Tai'an 44.52 344 P P 18 25 33.0 -0.4
TIA PcP **PcP 18 27 16.8 +1.4**
TIA pmax pmax
comp=Z,15nm,0.9s
CD2 Chengdu 45.38 327 P P 18 25 39.5 -0.9
CD2 pmax pmax
comp=Z,10.0nm,0.7s
XAN Xi'an 45.42 334 P P 18 25 40.1 -0.6
XAN PcP **PcP 18 27 19.6 +0.9**
HNS HongShan 46.31 342 ⇑P **P 18 25 47.5 -0.1**
HNS PcP **PcP 18 27 23.0 +1.4**
HNS pmax pmax
comp=Z,53nm,0.8s
MORE Moreh 46.89 312 IAmb IAmb 18 25 52.1
comp=Z,26nm,0.8s
TIY Taiyuan 47.32 340 P P 18 25 55.5 -0.1
TIY pmax pmax
comp=Z,32nm,0.7s
BRDH Bariadhala 48.02 309 LR LR 18 47 31.9
comp=Z,53nm,20.9s,baz=202,slow=38
BJI2 Beijing 48.35 345 P P 18 26 03.6 +0.2
BJI2 sP **pwP 18 26 29.8 -0.6**
BJI2 PcP **PcP 18 27 30.4 +1.5**
BJI2 pmax pmax
comp=Z,27nm,0.6s
BJT Baijiatuau 48.35 345 P P 18 26 03.6 +0.2
BJT PcP **PcP 18 27 30.1 +1.2**
LZDM Lanzhou Array 49.39 331 P P 18 26 12.4 +0.6
comp=Z,14nm,1.0s,baz=163,slow=11,SNR=25
LZDM ScP **ScP 18 31 21.0 -0.2**
comp=Z,0.6nm,0.4s,baz=194,slow=5.4,SNR=4.2
comp=Z,14nm,1.0s
LZH Lanzhou 49.42 331 *e*P **P 18 26 12.3 +0.4**
LZH pP pwP 18 26 34.4 -3.2
LZH PcP **PcP 18 27 34.3 +1.2**
LZH ScP **ScP 18 31 21.8 +0.7**
LZH pmax pmax
comp=Z,22nm,1.3s
SHL Shillong 49.45 312 IAmb IAmb 18 26 12.9
comp=Z,35nm,0.9s
JCZ Jackson Bay 49.98 144 P P 18 26 17.6 +1.7
CN2 Changchun 50.47 355 P P 18 26 19.1 -0.4
CN2 pP pP 18 26 37.9 -0.2
CN2 sP sP 18 26 46.8 0.0
CN2 PcP **PcP 18 27 37.3 +0.8**
CN2 pmax pmax
comp=Z,20nm,0.6s
USRK Ussuriysk Ar. 50.67 1 P P 18 26 21.4 +0.5
comp=Z,9.9nm,0.7s,baz=198,slow=7.8,SNR=10
comp=Z,9.9nm,0.7s
MDJ Mudanjiang 51.08 359 P P 18 26 24.6 +0.6
MDJ pmax pmax
comp=Z,18nm,0.6s
RPZ Rata Peaks 51.11 143 LR LR 18 47 36.6
comp=Z,92nm,19.3s,baz=170,slow=35
TUWZ Tuamarina 51.71 139 P P 18 26 30.2 +1.3
KHZ Kahutara 51.95 140 P P 18 26 32.3 +1.7
XLT XiLinHaoTe 52.04 347 *e*P **P 18 26 31.1 -0.2**
XLT pP pP 18 26 48.8 -1.1
XLT sP pwP 18 26 59.8 +1.1
XLT PcP **PcP 18 27 40.8 -1.7**
XLT PP **PP 18 28 34.1 +3.7**
XLT pmax pmax
comp=Z,16nm,0.7s
XLT pmax pmax
comp=Z,93nm,4.7s
BNX BinXian 52.27 357 ⇓P **P 18 26 32.8 -0.1**
BNX pmax pmax
comp=Z,8.0nm,0.8s
LSA Lhasa 52.40 316 *i* P **P 18 26 35.5 +0.8**
SNR=17
LSA Lhasa 52.40 316 P P 18 26 35.1 +0.4
LSA pP **pP 18 26 54.7 +0.9**
LSA x x 18 27 01.9
GTA2 Gaotai 54.09 331 P P 18 26 47.0 +0.5
GTA2 sP pwP 18 27 13.3 +1.1
GTA2 PcP **PcP 18 27 51.9 +1.5**
GTA2 ScP **ScP 18 31 41.4 +0.2**
GTA2 S **S 18 34 13.0 -3.8**
GTA2 pmax pmax
comp=Z,16nm,1.4s
GOMU GeErMu 54.30 324 P P 18 26 49.8 +1.4
GOMU pP pP 18 27 07.0 -0.3
GOMU pmax pmax
comp=Z,3.0nm,0.9s
YSS Yuzhno-Sakhali 54.48 10 *e*P P 18 26 59.2 +10
YSS pmax pmax
comp=Z,20nm,1.2s
KLR Kul'dur 55.69 1 *ce*P **P 18 26 57.4 -0.3**
KLR pmax pmax
comp=Z,7.0nm,0.9s
HYB Hyderabad 56.73 296 *e*P **P 18 27 04.8 -0.9**
HEH HeiHe 56.78 358 *e*P **P 18 27 05.6 +0.2**
HEH PcP **PcP 18 28 00.8 +0.4**
HEH pmax pmax
comp=Z,15nm,1.3s
HILR Hailar Array B 56.81 352 P P **18 27 06.4 +0.7**
comp=Z,6.6nm,0.5s,baz=160,slow=9.4,SNR=11
comp=Z,6.6nm,0.5s
ULN Ulaanbaatar 58.16 342 P **P 18 27 16.2 +0.7**
ULN Ulaanbaatar 58.16 342 *ce*P **P 18 27 16.4 +1.0**
ULN pmax pmax
comp=Z,43nm,0.8s
ULN Ulaanbaatar 58.16 342 P **P 18 27 16.6 +1.1**
ULN Ulaanbaatar 58.16 342 P **P 18 27 16.6 +1.1**
ULN x x 18 27 43.7
TYV Tymovskoe 58.26 9 *e*P **P 18 27 17.0 +1.2**
TYV pmax pmax
comp=Z,10.0nm,1.0s
TYV pmax pmax
comp=Z,100nm,3.0s
SONM Songino Array 58.35 341 P **P 18 27 17.6 +0.9**
comp=Z,13nm,0.6s,baz=161,slow=6.5,SNR=79
comp=Z,13nm,0.6s
SONM Songino Array 58.35 341 P **P 18 27 17.3 +0.6**
SONM IAmb IAmb 18 27 18.6
comp=Z,26nm,1.2s
ZEA Zeya 60.27 358 *e*P **P 18 27 30.0 +0.4**
ZEA pmax pmax
comp=Z,20nm,0.9s
ZAK Zakamensk 61.58 340 *e*P **P 18 27 39.0 +0.3**
ZAK pmax pmax
comp=Z,13nm,1.2s
TLY Talaya 62.57 341 *ce*P **P 18 27 46.3 +1.0**
TLY pmax pmax
comp=Z,18nm,1.7s
IRK Irkutsk 62.87 342 *e*P **P 18 27 43.5 -3.7**
IRK pmax pmax
comp=Z,35nm,1.3s
MOY Mondy 63.44 340 *e*P **P 18 27 51.8 +0.7**
MOY pmax pmax
comp=Z,34nm,1.5s
WMQ Urumqi 63.47 327 *e*P **P 18 27 52.3 +0.9**
WMQ pP pwP 18 28 16.3 -2.2
WMQ sP sP 18 28 23.3 +3.8
WMQ pmax pmax
comp=Z,18nm,0.9s
KNGR Kungurtug, Tuv 63.83 337 *i* P **P 18 27 54.3 +0.6**
KNGR pmax pmax
comp=Z,9.0nm,0.9s
PEA0B Petropavlovsk- 63.84 18 *ce*P **P 18 27 55.2 +1.6**
PETK Petropavlovsk- 63.84 18 P **P 18 27 54.7 +1.1**
comp=Z,26nm,0.8s,baz=152,slow=2.6,SNR=22
comp=Z,26nm,0.8s
PETK Petropavlovsk- 63.84 18 P **P 18 27 54.3 +0.7**
PET Petropavlovsk 64.06 18 *e*P **P 18 27 56.1 +1.1**
PET pmax pmax
comp=Z,35nm,1.2s
ZSN Zaisan 67.33 328 *c i*P **P 18 28 16.8 +0.6**
ZSN Zaisan 67.33 328 ⇑*i*P **P 18 28 16.9 +0.6**
NIL Nilore 67.48 310 P **P 18 28 17.1 -0.4**
NIL Nilore 67.48 310 P **P 18 28 17.1 -0.4**
NIL pmax pmax
comp=Z,13nm,1.0s
DGZ Jazzator, Alta 67.53 331 *i* P **P 18 28 18.4 +0.8**
DGZ pmax pmax
comp=Z,30nm,1.0s
SHLS Shalkode 67.85 322 *c i*P **P 18 28 18.4 -1.3**
SHLS pmax pmax
comp=Z,10.0nm,0.8s
SHLS Shalkode 67.85 322 ⇑*i*P **P 18 28 18.5 -1.3**
comp=Z,10nm,0.8s
MA2 Magadan 67.98 11 LR LR 18 58 58.0
comp=Z,36nm,18.1s,baz=328,slow=37
MA2 Magadan 67.98 11 P **P 18 28 20.1 +0.2**
MA2 Magadan 67.98 11 *ce*P **P 18 28 20.3 +0.3**
MA2 pmax pmax
comp=Z,12nm,0.8s
MA2 Magadan 67.98 11 P **P 18 28 20.0 0.0**
comp=Z,26nm,1.0s
MA2 Magadan 67.98 11 P **P 18 28 20.8 +0.9**
MA2 PcP **PcP 18 28 46.3 +0.6**
UZB Uzunbulak 68.11 322 *c i*P **P 18 28 21.8 +0.4**
UZB pmax pmax
comp=Z,9.0nm,0.8s
UZB Uzunbulak 68.11 322 ⇑*i*P **P 18 28 21.8 +0.4**
comp=Z,9.5nm,0.8s
TARG Taragay, Kyrgy 68.12 320 P **P 18 28 22.7 +0.9**
TARG Taragay, Kyrgy 68.12 320 P **P 18 28 22.7 +0.9**
TARG pmax pmax
comp=Z,8.0nm,0.9s
KSH2 Kashi 68.30 317 P **P 18 28 23.6 +0.9**
KSH2 PcP **pwP 18 28 49.3 -1.0**
KSH2 pmax pmax
comp=Z,14nm,1.0s
MK31 Makanchi Array 68.31 326 *ce*P **P 18 28 22.4 0.0**
MKAR Makanchi Array 68.31 326 P **P 18 28 23.4 +1.0**
comp=Z,34nm,0.6s,baz=124,slow=7.7,SNR=516
comp=Z,34nm,0.6s
MKAR Makanchi Array 68.31 326 P **P 18 28 22.6 +0.3**
MKAR Makanchi Array 68.31 326 *i* P **P 18 28 23.1 +0.7**
MKAR pmax pmax
comp=Z,35nm,0.6s
SATY Saty 68.45 321 *e*P **P 18 28 23.9 +0.5**
SATY pmax pmax
comp=Z,16nm,0.9s
SATY Saty 68.45 321 *e*P **P 18 28 23.9 +0.5**
comp=Z,16nm,0.9s
MAKZ Makanchi 68.49 326 P **P 18 28 23.9 +0.4**
MAKZ IAmb IAmb 18 28 25.1
comp=Z,32nm,0.8s
MAKZ Makanchi 68.49 326 P **P 18 28 23.9 +0.4**
MAKZ pmax pmax
comp=Z,32nm,0.8s
KPKS Kokpek 68.50 322 *e*P **P 18 28 24.2 +0.5**
KPKS Kokpek 68.50 322 *e*P **P 18 28 24.2 +0.5**
YAK Yakutsk 68.52 360 P **P 18 28 23.6 +0.4**
YAK Yakutsk 68.52 360 *c i*P **P 18 28 23.6 +0.4**
YAK *e* 18 28 46.3
YAK *e**PP **pwP 18 28 51.9 +0.5**
YAK *e* 18 30 54.1
YAK *e*PPP PPP 18 32 33.0
YAK *e*S **S 18 37 16.8 -1.8**
YAK *e**SS **SKiKP 18 38 06.3 -2.4**
YAK *e*SS **SS 18 41 41.4 -3.0**
YAK pmax pmax
comp=Z,85nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.8s
YAK pmax pmax
comp=N,16nm,1.2s
YAK pmax pmax
comp=Z,143nm,6.5s
YAK pmax pmax
comp=N,88nm,3.6s
YAK pmax pmax
comp=E,131nm,3.4s
YAK smax smax
comp=N,50nm,3.6s
YAK smax smax
comp=E,39nm,3.1s
YAK Yakutsk 68.52 360 P **P 18 28 23.7 +0.4**
TNSS Tian-Shan 69.34 321 *e*P **P 18 28 29.4 +0.1**
TNSS Tian-Shan 69.34 321 *e*P **P 18 28 29.5 +0.1**
MDOK Medeo 69.35 321 *e*P **P 18 28 29.4 +0.4**
MDOK Medeo 69.35 321 *e*P **P 18 28 29.5 +0.4**
AAA Alma-Ata 69.45 321 *e*P **P 18 28 30.2 +0.6**
AAA pmax pmax
comp=Z,14nm,0.6s
AAA Alma-Ata 69.45 321 *e*P **P 18 28 30.3 +0.6**
comp=Z,14nm,0.6s
TDK Taldyqorghan 69.50 323 *e*P **P 18 28 30.5 +0.7**
TDK pmax pmax
comp=Z,26nm,0.9s
TDK Taldyqorghan 69.50 323 *e*P **P 18 28 30.6 +0.7**
comp=Z,26nm,0.9s
BOOM Boomskoye usch 69.70 320 IAmb IAmb 18 28 33.3
comp=Z,18nm,0.8s
TKM2 Tokmak 2 70.14 320 P **P 18 28 34.8 +0.8**
SNR=13
KBK Karagaybulak 70.42 320 P **P 18 28 36.9 +1.2**
SNR=10
UCH Uchtor 70.49 319 P **P 18 28 38.2 +1.8**
SNR=21
AAK Ala-Archa 70.70 320 P **P 18 28 38.7 +1.3**
SNR=15
AAK Ala-Archa 70.70 320 P **P 18 28 38.4 +1.0**
AAK IAmb IAmb 18 28 39.6
comp=Z,19nm,0.9s
AAK Ala-Archa 70.70 320 *i* P **P 18 28 38.4 +1.0**
SNR=16
AAK Ala-Archa 70.70 320 *ce*P **P 18 28 37.7 +0.3**
AAK pmax pmax
comp=Z,17nm,0.9s
AAK Ala-Archa 70.70 320 P **P 18 28 38.6 +1.2**
CHMS Chumysh 70.72 320 P **P 18 28 37.7 +0.4**
SNR=6.9
USP Ospenovka 71.01 320 P **P 18 28 40.0 +0.9**
SNR=32
SGDS Sogindy 71.02 320 *e*P **P 18 28 39.8 +0.6**
KBL Kabul 71.03 310 P **P 18 28 39.2 -0.5**
KBL IAmb IAmb 18 28 41.0
comp=Z,26nm,1.1s
KBL Kabul 71.03 310 P **P 18 28 39.2 -0.5**
KBL pmax pmax
comp=Z,26nm,1.1s
DRK Karamyk 71.05 316 IAmb IAmb 18 28 41.7
comp=Z,27nm,1.1s
ARSB Arslanbob 71.07 318 IAmb IAmb 18 28 41.6
comp=Z,40nm,0.8s
EKS2 Erkin-Say 71.18 319 P **P 18 28 41.6 +1.4**
SNR=15
SEY Seymchan 71.39 10 *ce*P **P 18 28 42.1 +1.2**
SEY pmax pmax
comp=Z,46nm,1.0s
ZAA0 Zalesovo Array 71.58 333 IAmb IAmb 18 28 42.9
comp=Z,33nm,1.1s
ZALV Zalesovo Beam 71.58 333 P **P 18 28 41.9 -0.3**
comp=Z,18nm,0.7s,baz=108,slow=4.8,SNR=101
comp=Z,18nm,0.7s
BTK Batken 71.98 316 IAmb IAmb 18 28 46.8
comp=Z,62nm,1.8s
KURBB Kurchatov Arra 72.57 328 P **P 18 28 48.5 +0.3**
comp=Z,22nm,0.7s,baz=127,slow=4.9,SNR=242
KURBB PKiKP **PKiKP 18 34 47.7 -1.1**
comp=Z,0.4nm,0.6s,baz=124,slow=1.6,SNR=4.9
comp=Z,22nm,0.7s
KURK Kurchatov 72.58 328 P **P 18 28 48.4 +0.2**
KURK IAmb IAmb 18 28 49.5
comp=Z,24nm,0.8s
KURK Kurchatov 72.58 328 *ce*P **P 18 28 48.6 +0.4**
KURK pmax pmax
comp=Z,28nm,0.8s
KURK Kurchatov 72.58 328 P **P 18 28 48.6 +0.4**
VNDA Vanda 72.68 173 P **P 18 28 49.6 +1.2**
comp=Z,8.3nm,0.8s,baz=317,slow=6.1,SNR=9.2
VNDA LR LR 18 58 32.4
comp=Z,42nm,20.8s,baz=294,slow=34
comp=Z,8.3nm,0.8s
VNDA Vanda 72.68 173 IAmb IAmb 18 28 51.5
comp=Z,17nm,1.0s
VNDA Vanda 72.68 173 P **P 18 28 49.7 +1.2**
VNDA pmax pmax
comp=Z,17nm,1.0s
DZA Taraz 72.88 319 *e*P **P 18 28 50.8 +0.5**
DZA Taraz 72.88 319 *e*P **P 18 28 50.8 +0.5**
KKAR Karatay Array 73.51 319 P **P 18 28 54.3 +0.3**
KKAR Karatay Array 73.51 319 P **P 18 28 54.3 +0.3**
CHM Chimkent 73.78 317 *e*P **P 18 28 56.2 +0.6**
CHM pmax pmax
comp=Z,13nm,0.8s
CHM Chimkent 73.78 317 *e*P **P 18 28 56.2 +0.6**
comp=Z,13nm,0.8s
BRLS Borolday 73.93 318 *c i*P **P 18 28 56.9 +0.5**
BRLS Borolday 73.93 318 ⇑*i*P **P 18 28 57.0 +0.5**
MAW Mawson 75.46 201 LR LR 19 01 53.3
comp=Z,66nm,18.1s,baz=36,slow=35
HRA Herat 76.25 308 P **P 18 29 09.9 -0.3**
BVAR Borovoye Array 78.13 328 P **P 18 29 20.2 +0.2**
comp=Z,13nm,0.6s,baz=129,slow=8.8,SNR=75
comp=Z,13nm,0.6s
TBI Tubuai 78.15 112 *e*LR LR 18 53 41.5
comp=Z,778nm,42.0s
BORK Borovoye 78.18 328 P **P 18 29 19.9 -0.4**
BORK IAmb IAmb 18 29 21.4
comp=Z,22nm,0.8s
BORK Borovoye 78.18 328 *ce*P **P 18 29 20.4 +0.1**
BORK pmax pmax
comp=Z,31nm,1.0s
BORK Borovoye 78.18 328 P **P 18 29 20.2 -0.1**
TIXI Tiksi 78.19 359 P **P 18 29 19.0 -0.9**
TIXI Tiksi 78.19 359 *ce*P **P 18 29 19.9 0.0**
TIXI pmax pmax
comp=Z,16nm,1.0s
PPT2 Papeete2 78.32 107 *e*LR LR 18 53 44.7
comp=Z,52nm,24.0s
SOHO SOHO 78.36 296 *i* P **P 18 29 21.9 0.0**
SNR=7.8
BILL Bilibino 78.67 13 *i* P **P 18 29 25.2 +2.5**
BILL pmax pmax
comp=Z,3.0nm,0.9s
UOSS Minazif 78.83 297 P **P 18 29 25.0 +0.5**
ALNE Al Ain 79.04 296 *i* P **P 18 29 26.2 +0.5**
SNR=5.3
SHME Shamm 79.13 298 *i* P **P 18 29 27.2 +1.1**
SNR=7.6
NAZ Nazwa, Dubai 79.32 297 P **P 18 29 27.8 +0.6**
FAQ Al Faqa, Dubai 79.33 297 P **P 18 29 27.6 +0.4**
SPIA Saint Paul Isl 79.60 28 P **P 18 29 29.1 +1.1**

baz=240
P08K Saint George I 79.65 29 P P 18 29 28.7 +0.5
baz=241
UNV Unalaska Valle 79.91 32 P P 18 29 30.5 +0.8
baz=244
MZR Muzera 80.87 295 *i* P P 18 29 36.3 +0.7
SNR=6.7
NRIK Noril'sk 81.41 346 P P 18 29 38.2 +0.8
comp=Z,20nm,0.7s,baz=131,slow=5.8,SNR=34
comp=Z,20nm,0.7s
NRIK Noril'sk 81.41 346 lAmb lAmb 18 29 40.6
comp=Z,22nm,0.8s
NRIK Noril'sk 81.41 346 *i* P P 18 29 38.0 +0.6
NRIK pmax pmax
comp=Z,25nm,0.8s
VOI Vohitsoka 81.83 249 P P 18 29 41.5 +0.7
VOI lAmb lAmb 18 29 42.6
comp=Z,26nm,0.7s
FALS False Pass 81.98 32 P P 18 29 41.0 +0.3
baz=246
GAMB Gambell 82.40 22 P P 18 29 43.3 +0.6
baz=238
ABKAR Akbulak array 82.65 321 P P 18 29 43.9 -0.4
M11K Mekoryuk 82.98 27 P P 18 29 46.4 +0.6
baz=243
QSPA South Pole Qui 83.28 180 P P 18 29 48.6 +1.1
comp=Z,22nm,0.8s,baz=320,slow=1.5,SNR=22
comp=Z,22nm,0.8s
QSPA South Pole Qui 83.28 180 P P 18 29 47.6 +0.1
QSPA lAmb lAmb 18 29 49.4
comp=Z,21nm,0.8s
QSPA South Pole Qui 83.28 180 P P 18 29 48.1 +0.6
SDPT Sand Point 83.73 32 P P 18 29 50.0 +0.3
baz=249
CHNA Chernabura Isl 84.02 33 P P 18 29 52.4 +1.1
baz=250
M13K Dall Lake 84.27 27 P P 18 29 53.4 +1.0
baz=246
K13K Kusilvak Mount 84.34 25 P P 18 29 53.3 +0.6
baz=244
TNA Tin City 84.71 22 P P 18 29 55.3 +0.9
baz=241
O14K Tigyukauivet M 84.78 29 P P 18 29 55.7 +0.8
baz=248
N14K Kuskokwak Cree 84.84 28 P P 18 29 56.5 +1.2
baz=247
L14K Kuka Creek 84.95 26 P P 18 29 56.8 +1.0
baz=246
M14K Bethel 85.04 27 P P 18 29 57.1 +0.9
baz=247
J14K Nanvaranak Lak 85.15 25 P P 18 29 57.5 +0.7
baz=245
ANM Nome 85.20 23 P P 18 29 58.1 +1.1
ANM lAmb lAmb 18 29 59.3
comp=Z,13nm,0.8s
ANM Nome 85.20 23 P P 18 29 58.1 +1.1
ANM pmax pmax
comp=Z,13nm,0.8s
ANM Nome 85.20 23 P P 18 29 58.0 +1.1
baz=244
F14K Arctic Creek 85.25 22 P P 18 29 57.8 +0.6
baz=243
O15K Ungalikthiuk R 85.44 29 P P 18 29 58.8 +0.5
baz=249
M15K Kasigluk River 85.59 27 P P 18 29 59.2 +0.2
baz=248
L15K Ungalak Mounta 85.61 26 P P 18 29 59.8 +0.8
baz=247
N15K Kwethluk River 85.67 28 lAmb lAmb 18 30 01.8
comp=Z,32nm,0.9s
N15K Kwethluk River 85.67 28 P P 18 30 00.0 +0.6
baz=249
K15K Wolf Creek Mou 85.83 26 P P 18 30 01.6 +1.4
baz=247
ARTI Arti 85.85 328 P P 18 29 59.8 -0.6
ARTI Arti 85.85 328 *c i* P P 18 29 59.4 -1.0
ARTI 18 33 14.9
ARTI S SKSac 18 40 15.7 -2.8
ARTI pmax pmax
comp=Z,18nm,0.7s
ARTI Arti 85.85 328 P P 18 29 59.6 -0.8
G15K Niukluk 85.91 23 P P 18 30 02.0 +1.5
baz=245
F15K North Star Dit 85.98 22 P P 18 30 02.0 +1.1
baz=244
R16K Pilot Point 86.01 31 P P 18 30 01.9 +0.8
baz=251
P16K Nushagak River 86.28 29 P P 18 30 03.2 +0.8
P16K Nushagak River 86.28 29 P P 18 30 03.5 +1.0
baz=251,SNR=7.2
N16K Nishlik Lake 86.40 28 P P 18 30 04.1 +1.1
baz=250
O16K Kokwok River B 86.42 29 P P 18 30 03.7 +0.6
baz=250
H16K Elim 86.46 23 P P 18 30 04.4 +1.2
baz=246
CHIR Chirikof Islan 86.49 33 P P 18 30 03.7 +0.1
baz=253
M16K Timber Creek 86.50 27 P P 18 30 04.5 +1.0
baz=250
L16K Owhat River 86.51 27 lAmb lAmb 18 30 05.8
comp=Z,26nm,0.8s
L16K Owhat River 86.51 27 P P 18 30 04.5 +0.9
baz=249
J16K Anvik River 86.60 25 P P 18 30 05.0 +1.1
baz=248
R17L Mt. Peulik Vol 86.65 31 P P 18 30 04.7 +0.4
baz=252
G16K Koyuk River 86.72 23 P P 18 30 04.7 +0.2
baz=246
I17K Unalakleet 86.79 24 P P 18 30 05.6 +0.8
baz=248
C16K Lisburne Hills 86.88 20 P P 18 30 05.6 +0.5
baz=243
O17K Koliganek Bris 86.96 29 P P 18 30 06.4 +0.7
baz=251,SNR=5.6
Q17K Contact Creek 87.08 30 P P 18 30 07.0 +0.5
baz=252
P17K Kvichak River 87.09 30 P P 18 30 07.0 +0.7
baz=252
N17K Nushagak Hills 87.16 28 P P 18 30 07.0 +0.3
baz=251
L17K Donlin 87.18 26 P P 18 30 07.4 +0.6
baz=250
J17K VABM Dome 87.28 25 P P 18 30 07.5 +0.2
baz=249
M17K Holitna River 87.32 27 P P 18 30 08.3 +0.8
baz=251
K17K Iditarod 87.38 26 P P 18 30 08.7 +1.0
baz=250
D17K Noatak River 87.39 20 P P 18 30 08.5 +0.8
baz=246
G17K Kiwalik Mounta 87.42 23 P P 18 30 08.8 +1.0
baz=248
SII Sitkinak Islan 87.47 32 P P 18 30 08.8 +0.5
baz=254
H17K Granite Mounta 87.50 24 lAmb lAmb 18 30 10.0
comp=Z,19nm,0.8s
H17K Granite Mounta 87.50 24 P P 18 30 09.3 +1.0
baz=249
F17K Baldwin Pennin 87.55 22 P P 18 30 09.3 +0.9
baz=247
E17K Hotham Inlet 87.59 21 P P 18 30 09.2 +0.5
baz=247
RDOG Red Dog Mine 87.60 20 P P 18 30 08.9 +0.2
baz=246
C17K DeLong Mountai 87.69 20 P P 18 30 09.8 +0.7
baz=245
P18K Big Mountain, 87.74 30 P P 18 30 09.9 +0.3
baz=253
N18K Kilae Creek 87.81 28 P P 18 30 10.3 +0.5
baz=252
O18K Koktuh Hills 87.89 29 P P 18 30 10.5 +0.2
baz=253
L18K Granite Mounta 87.92 27 P P 18 30 10.9 +0.5
baz=252
M18K Stony River 88.09 27 P P 18 30 11.7 +0.6
baz=252
OHAK Old Harbor 88.12 32 P P 18 30 11.6 +0.2
baz=255
E18K Tukpahlearik C 88.16 21 lAmb lAmb 18 30 12.9
comp=Z,13nm,0.8s
E18K Tukpahlearik C 88.16 21 P P 18 30 11.5 +0.2
baz=248
RAYN Ar Rayn 88.18 294 P P 18 30 12.8 +0.3
RAYN lAmb lAmb 18 30 14.2
comp=Z,18nm,0.8s
RAYN Ar Rayn 88.18 294 *i* P P 18 30 13.0 +0.5
SNR=27
RAYN Ar Rayn 88.18 294 P P 18 30 12.8 +0.3
RAYN pmax pmax
comp=Z,18nm,0.8s
H18K Honhosa River 88.19 24 P P 18 30 11.4 -0.1
baz=250
F18K Selawik 88.20 22 P P 18 30 11.3 -0.3
baz=249
J18K Innoko River 88.31 25 P P 18 30 12.2 +0.1
baz=252
G18K Tagagawik 88.33 23 P P 18 30 12.4 +0.2
baz=250
Q19K Cape Douglas, 88.39 30 P P 18 30 12.3 -0.4
baz=254
O19K Port Alsworth 88.41 29 P P 18 30 12.7 +0.1
baz=254
C18K Utukok River 88.42 20 P P 18 30 12.7 +0.1
baz=247
N19K Bonanza Creek 88.51 28 P P 18 30 13.4 +0.1
baz=254
KDAK Kodiak Island 88.64 31 P P 18 30 14.0 +0.2
baz=255
GCSA Galena City Sc 88.65 24 P P 18 30 14.2 +0.6
baz=251
L19K White Mountain 88.73 27 lAmb lAmb 18 30 16.7
comp=Z,20nm,0.9s
L19K White Mountain 88.73 27 P P 18 30 15.0 +0.8
baz=253,SNR=10
P19K Oil Pt 88.79 30 P P 18 30 14.9 +0.4
baz=255
M19K Big River Lodg 88.86 27 P P 18 30 14.8 0.0
baz=254
J19K Poorman 88.93 25 P P 18 30 15.1 +0.1
baz=252
Q20K Shuyak Island 88.94 31 P P 18 30 15.2 0.0
baz=255
ELIB Princess Elisa 88.97 197 *d* P P 18 30 17.3 +1.9
comp=Z,5.7nm,0.7s
F19K Shaleruckik Mo 88.98 22 P P 18 30 15.6 +0.4
baz=250
G19K Purcell Mounta 89.02 23 P P 18 30 15.9 +0.4
baz=251
AKT Akhty 89.08 312 *e* P P 18 30 15.1 -1.3
AKT pmax pmax
comp=Z,12nm,1.1s
C19K Lookout Ridge 89.14 20 P P 18 30 16.3 +0.3
baz=249
E19K Redstone River 89.39 22 P P 18 30 17.4 +0.2
baz=251
K20K Telida 89.41 26 lAmb lAmb 18 30 20.0
comp=Z,9.9nm,0.7s
K20K Telida 89.41 26 P P 18 30 17.4 0.0
baz=254,SNR=7.2
M20K Styx River 89.43 27 P P 18 30 17.9 +0.3
baz=255
HOM Homer 89.58 30 P P 18 30 18.3 +0.2
baz=256
J20K Nowinta River 89.61 25 lAmb lAmb 18 30 21.1
comp=Z,10.0nm,0.6s
J20K Nowinta River 89.61 25 P P 18 30 18.7 +0.5
baz=254
I20K Naaghedeneel 89.64 24 P P 18 30 19.2 +0.9
baz=254
H20K Anlleneega Mo 89.68 24 P P 18 30 19.3 +0.7
baz=253
SPCR Spurr Chakacha 89.68 28 P P 18 30 18.8 +0.1
baz=256
F20K Avaraart Lake 89.82 22 P P 18 30 19.5 +0.4
baz=252
D20K Etivluk River 90.02 20 lAmb lAmb 18 30 21.3
comp=Z,19nm,0.9s
D20K Etivluk River 90.02 20 P P 18 30 21.2 +1.1
baz=252
E20K Nigu River 90.02 21 P P 18 30 20.4 +0.2
baz=252
CAPN Captain Cook N 90.08 29 P P 18 30 20.6 +0.1
baz=256
PPLA Purkeypile 90.11 27 P P 18 30 20.6 -0.2
baz=256
SKT Skwentna 90.19 27 P P 18 30 20.8 -0.2
baz=256
CHUM Lake Minchumin 90.31 26 P P 18 30 21.8 +0.4
baz=256,SNR=9.0
SUA Susitna One 90.43 28 lAmb lAmb 18 30 23.9
comp=Z,14nm,0.8s
SUA Susitna One 90.43 28 P P 18 30 22.2 -0.1
baz=257
G21K Allakaket 90.51 23 P P 18 30 22.8 +0.4
baz=254
H21K Melozitna Rive 90.56 24 P P 18 30 23.2 +0.6
baz=255
O22K Cooper Landing 90.70 29 P P 18 30 23.7 +0.3
baz=258
F21K Alatna River 90.71 22 P P 18 30 24.0 +0.7
baz=254
SEW Seward 90.75 30 P P 18 30 24.3 +0.7
baz=258
M22K Willow 90.79 28 P P 18 30 23.9 +0.2
baz=257
RC01 Rabbit Creek A 90.82 29 P P 18 30 23.9 -0.1
baz=258
A21K Barrow 90.84 18 P P 18 30 24.0 +0.2
baz=252
BPAW Bear Paw Mtn. 90.93 25 P P 18 30 24.9 +0.5
baz=257
TRF Thorofare Moun 91.08 26 P P 18 30 25.9 +0.6
baz=257
KIRV Kirov 91.09 329 *ce* P P 18 30 24.6 -0.6
GNI Garni 91.12 310 LR LR 19 20 18.9
comp=Z,9.9nm,18.7s,baz=140,slow=41
H22K Ishtalitna Cre 91.19 24 P P 18 30 26.6 +1.0
baz=256
PMR Palmer 91.21 28 P P 18 30 26.3 +0.6
baz=258
RKT Rikitea 91.44 113 *e* LR LR 19 00 00.4
comp=Z,2µm,37.8s
KNK Knik Glacier 91.49 28 P P 18 30 27.6 +0.5
baz=259
E22K Anaktuvuk Pass 91.56 21 lAmb lAmb 18 30 28.8
comp=Z,14nm,0.8s
E22K Anaktuvuk Pass 91.56 21 P P 18 30 27.9 +0.7
baz=256
SML Sawmill 91.63 28 P P 18 30 28.5 +0.8
baz=259
WAT1 Susitna Watana 91.73 27 P P 18 30 29.1 +0.9
baz=259
MCK McKinley 91.73 26 P P 18 30 28.1 -0.1
baz=258
P23K Montague Islan 91.74 30 P P 18 30 28.6 +0.4
baz=260
I23K Minto, Yukon-K 91.84 25 P P 18 30 29.4 +0.8
baz=258,SNR=13
NEA2 Nenana 91.85 25 lAmb lAmb 18 30 30.5
comp=Z,7.5nm,1.1s
NEA2 Nenana 91.85 25 P P 18 30 29.2 +0.5
baz=258
G23K Bananza Creek 91.90 23 P P 18 30 29.4 +0.5
baz=258
H23K Yukon River 91.91 24 P P 18 30 29.2 +0.3
baz=258
M23K Glacier View 91.91 28 P P 18 30 29.9 +0.9
baz=260
COLD Coldfoot 91.95 22 P P 18 30 29.6 +0.6
baz=258
GLI Glacier Island 92.05 29 P P 18 30 30.3 +0.7
baz=260
WAT6 Susitna Watana 92.05 27 P P 18 30 30.0 +0.2
baz=260
SCM Sheep Creek Mo 92.10 28 P P 18 30 30.5 +0.5
baz=260
D23K Nanushuk River 92.16 21 P P 18 30 31.0 +1.0
baz=257
Q23K Middleton Isla 92.17 31 P P 18 30 30.9 +0.7
baz=261
WRH Wood River Hil 92.24 25 lAmb lAmb 18 30 30.7
comp=Z,13nm,0.9s
KIBK Kibwezi 92.28 267 P P 18 30 32.2 +0.3
DHY Denali Highway 92.30 27 lAmb lAmb 18 30 33.5
comp=Z,10nm,0.7s
DHY Denali Highway 92.30 27 P P 18 30 31.5 +0.5
baz=260
E23K Chandalar 92.34 22 P P 18 30 31.7 +0.7
baz=258
COLA College 92.42 25 P P 18 30 31.2 0.0
baz=260
H24K Noodor Dome 92.58 24 P P 18 30 32.7 +0.6
baz=260,SNR=13
M24K Tolsona, Glenn 92.69 28 P P 18 30 32.6 -0.1
baz=261
KLU Klutina 92.71 28 P P 18 30 33.2 +0.5
baz=261
HDA Harding Lake 92.72 26 lAmb lAmb 18 30 33.0
comp=Z,9.7nm,0.8s
HDA Harding Lake 92.72 26 P P 18 30 32.4 -0.3
baz=260
IL31 92.81 25 lAmb lAmb 18 30 32.5
comp=Z,7.4nm,0.7s
ILAR Eielson Array 92.81 25 P P 18 30 32.0 -1.0
comp=Z,6.7nm,0.7s,baz=271,slow=4.3,SNR=62
ILAR PP PP 18 34 12.9 -3.3
comp=Z,1.1nm,0.9s,baz=244,slow=8.4,SNR=4.7
comp=Z,6.7nm,0.7s
ILAR Eielson Array 92.81 25 P P 18 30 31.8 -1.2
D24K Happy Valley 92.85 21 P P 18 30 33.5 +0.4
baz=259
G24K Hadweenzic Riv 92.90 23 P P 18 30 33.6 +0.2
baz=260
KBZ Khabaz 92.93 314 P P 18 30 33.9 -0.2
comp=Z,2.4nm,0.9s,baz=166,slow=8.5,SNR=4.0
comp=Z,2.4nm,0.9s
C24K Franklin Bluff 93.00 20 P P 18 30 33.7 -0.1
baz=259
GURO Guroymak-BITLI 93.02 308 lAmb lAmb 18 30 36.7
comp=Z,11nm,1.1s
KIV Kislovodsk 93.10 314 *e* P P 18 30 34.7 -0.3
KIV pmax pmax
comp=Z,8.0nm,1.0s
K24K Donnelly Dome 93.13 26 P P 18 30 34.5 -0.1
baz=261
PAX Paxson 93.14 27 P P 18 30 34.9 +0.1
baz=262
HARP HAARP 93.20 28 P P 18 30 35.0 +0.1
baz=262
KAIM Kayak Island 93.21 30 P P 18 30 35.3 +0.3
baz=262
BMRM Bremner River 93.26 29 P P 18 30 35.8 +0.5
baz=262
N25K Chitina, Valde 93.35 28 P P 18 30 36.3 +0.5
baz=262
J25K Salcha River, 93.42 25 P P 18 30 36.5 +0.5
baz=262
PRP Porcupine Dome 93.49 25 lAmb lAmb 18 33 10.6
comp=Z,21nm,1.8s
PRP Porcupine Dome 93.49 25 P P 18 30 36.3 0.0
baz=262
RIDG Independent Ri 93.53 26 lAmb lAmb 18 30 36.9
comp=Z,7.6nm,0.8s
RIDG Independent Ri 93.53 26 P P 18 30 36.6 +0.1
baz=262
D25K Kavik River 93.74 21 P P 18 30 37.6 +0.2
baz=261
F25K Christian Rive 93.75 22 lAmb lAmb 18 30 39.3
comp=Z,11nm,0.8s
F25K Christian Rive 93.75 22 P P 18 30 37.5 +0.1
baz=262
BGLC Bering Glacier 93.80 30 P P 18 30 38.0 +0.3
baz=263
E25K Arctic Village 93.85 22 lAmb lAmb 18 30 40.1
comp=Z,15nm,0.9s
E25K Arctic Village 93.85 22 P P 18 30 38.0 +0.1
baz=262
SCRK Sand Creek 93.94 26 P P 18 30 38.8 +0.4
baz=263
CRQE Cirque 93.97 29 P P 18 30 39.3 +0.7
baz=264
MCARA McCarthy VSAT 94.07 29 P P 18 30 39.0 0.0
baz=264
L26K Log Cabin Wild 94.11 27 P P 18 30 39.6 +0.5
baz=263
BMAR Burnt Mountain 94.13 23 P P 18 30 40.0 +0.9
J26L Joseph Creek 94.18 26 P P 18 30 40.3 +0.8
baz=263
M26K Nabesna, AK 94.20 28 P P 18 30 39.1 -0.5
baz=264
F26K Sheenjek River 94.33 22 P P 18 30 40.1 +0.1
baz=263
G26K Porcupine Rive 94.38 23 P P 18 30 40.8 +0.6
baz=263
MESA MESA 94.47 30 P P 18 30 41.3 +0.2
baz=264
C27K Jago River 94.71 21 P P 18 30 42.5 +0.8
baz=264
M27K Edge Creek, AK 94.71 28 P P 18 30 42.5 +0.4
baz=265
L27K Beaver Creek, 94.80 27 P P 18 30 42.9 +0.6
baz=265
BCAR Beaver Creek A 94.82 27 P P 18 30 42.9 +0.4
CTG Chitna Glacier 94.84 29 P P 18 30 42.7 0.0
baz=269
I27K Kandik River 95.12 25 P P 18 30 44.8 +1.1
baz=265
BVCY Beaver Creek 95.19 28 P P 18 30 44.9 +0.8
baz=266
H27K Steamboat Moun 95.20 24 lAmb lAmb 18 30 46.1
comp=Z,19nm,1.3s
H27K Steamboat Moun 95.20 24 P P 18 30 44.9 +0.8
baz=265
PINM Pinnacle 95.31 30 P P 18 30 45.3 +0.6
baz=266
YUK3 Moose Creek 95.33 29 P P 18 30 45.4 +0.4
baz=266
O28M Mount Upton 95.39 30 P P 18 30 45.3 -0.1
baz=266
YUK8 Steele Glacier 95.63 29 P P 18 30 46.6 +0.2
baz=266
D27M Malcolm River 95.64 21 P P 18 30 47.2 +1.1
baz=266
I28M Miner Creek 95.80 25 P P 18 30 47.3 +0.3
baz=267
F28M Old Crow 95.95 23 lAmb lAmb 18 30 48.7
comp=Z,9.5nm,0.8s
F28M Old Crow 95.95 23 P P 18 30 48.2 +0.8
baz=267,SNR=9.0
SNAA Sanae 96.11 193 P P 18 30 49.2 +1.0
comp=Z,3.3nm,0.8s,baz=285,slow=6.6,SNR=3.6
SNAA LR LR 19 14 00.3
comp=Z,42nm,18.2s,baz=22,slow=35
comp=Z,3.3nm,0.8s
SNAA Sanae 96.11 193 *ce* P P 18 30 50.8 +2.6
SNAA pmax pmax
comp=Z,14nm,1.7s
E28M Babbage River 96.12 22 P P 18 30 48.4 +0.3
baz=267
O29M Mount Kennedy 96.16 30 P P 18 30 48.8 +0.1
baz=267
YUK4 Talbot Arm 96.17 29 P P 18 30 49.4 +0.6
baz=268
YUK6 Outpost Mounta 96.29 29 P P 18 30 49.6 +0.2
baz=268
M29M Somme Creek 96.31 28 P P 18 30 49.5 +0.3
baz=268
KLMR Klimovskoe 96.33 330 *e* P P 18 30 46.3 -2.9
KLMR *e* 18 34 39.6
KLMR pmax pmax
comp=Z,8.0nm,0.7s
I29M Ogilvie Camp, 96.48 25 P P 18 30 49.8 -0.1
baz=268
L29M L29M 96.48 27 P P 18 30 50.3 +0.3
baz=268
G29M Pine Creek 96.64 23 P P 18 30 50.8 +0.2
baz=269
HYT Haines Junctio 96.71 30 P P 18 30 51.3 +0.2
baz=268
E29M Blow River 96.72 22 P P 18 30 51.3 +0.5
baz=268
K29M Barlow Dome 96.78 26 P P 18 30 52.2 +0.8
baz=269
P30M Million Dollar 96.96 30 P P 18 30 52.9 +0.7
baz=269
M30M Minto, Yukon 97.08 28 P Pdif 18 30 53.2 +0.4
baz=269
I30M Mount Dempster 97.29 25 P P 18 30 53.1 -0.6
baz=270
S31K Pelican 97.30 32 P Pdif 18 30 53.9 +0.1
baz=269
J30M Hart River 97.31 26 P Pdif 18 30 53.9 0.0
baz=270
G30M tAoh Zraii Nji 97.35 23 P P 18 30 53.4 -0.4
baz=270
O30N Mendenhall 97.40 30 P P 18 30 54.1 -0.1
baz=270
F30M Barrier River 97.51 23 P P 18 30 53.9 -0.6
baz=271
N31M Braeburn, Yuko 97.55 29 P P 18 30 54.6 -0.2
baz=270
SIT Sitka 97.78 33 P Pdif 18 30 56.1 +0.2

baz=270
SKAG Skagway 97.78 31 P **P** 18 30 55.8 0.0
baz=270
WHY Whitehorse 98.00 30 P **P** 18 30 56.8 -0.1
baz=271
G31M Satah River 98.12 23 IAmb IAmb 18 30 57.8
comp=Z,8.0nm,0.8s
G31M Satah River 98.12 23 P **P** 18 30 57.1 0.0
baz=272
H31M Peel River 98.13 25 P **P** 18 30 57.3 0.0
baz=272
S32K Killisnoo 98.18 33 P Pdif 18 30 58.0 +0.4
baz=270
EIL Elat 98.19 299 LR LR 19 21 44.1
comp=Z,10nm,20.7s,baz=85,slow=39
M31M Drury Creek, Y 98.20 28 P **P** 18 30 57.6 -0.1
baz=271
F31M Tsiigehtchic 98.30 23 P Pdif 18 30 58.0 0.0
baz=273
INK Inuvik 98.34 22 IAmb IAmb 18 30 59.1
comp=Z,14nm,1.3s
INK Inuvik 98.34 22 P **P** 18 30 58.0 -0.1
baz=273,SNR=6.3
P32M Atlin 98.60 31 P **P** 18 30 59.3 -0.3
baz=272
N32M Quiet Lake 98.86 29 P Pdif 18 31 00.9 +0.1
baz=272
U33K Whale Pass 99.00 34 P **Pdif** 18 31 00.6 -0.7
baz=272
CRAG Craig 99.02 35 P **Pdif** 18 31 00.5 -1.0
baz=271
Q32M Nakina River 99.36 31 P **Pdif** 18 31 02.4 -0.8
baz=273
WRAK Wrangell Islan 99.43 34 P **Pdif** 18 31 03.0 -0.3
baz=272
V35K Ketchikan 99.88 35 P **Pdif** 18 31 04.9 -0.4
baz=273
R33M Jennings River 100.01 31 P **Pdif** 18 31 04.7 -1.3
baz=274
BOSA Boshof 100.15 239 P **Pdif** 18 31 07.3 0.0
comp=Z,3.5nm,0.9s,baz=74,slow=4.7,SNR=4.1
SPITS Spitsbergen Ar 101.38 349 P **Pdif** 18 31 11.6 0.0
comp=Z,9.7nm,1.1s,baz=99,slow=5.2,SNR=4.2
ARCES ARCESS Array B 101.50 340 P **Pdif** 18 31 13.8 +1.5
comp=Z,2.3nm,0.6s,baz=76,slow=4.9,SNR=5.0
C36M Paulatuk 101.61 20 P **Pdif** 18 31 13.2 +0.5
baz=282,SNR=6.9
FINES FINESS Array B 102.79 332 P **Pdif** 18 31 16.6 -1.5
comp=Z,4.0nm,1.1s,baz=66,slow=4.6,SNR=7.7
FINES PKiKP **PKiKP** 18 35 38.8 +0.6
comp=Z,2.2nm,0.7s,baz=101,slow=3.3,SNR=9.0
FINES FINESS Array B 102.79 332 *i* P **Pdif** 18 31 17.2 -0.9
FINES pmax pmax
comp=Z,4.0nm,1.1s
MNK Minsk 102.81 324 *i* P **Pdif** 18 31 17.6 -0.7
comp=E,23nm,1.1s
MNK *i* P **Pdif** 18 31 17.6 -0.7
comp=N,11nm,0.8s
MNK *i* P **Pdif** 18 31 17.6 -0.7
comp=Z,7.0nm,0.7s,baz=83
MNK *i* pP **pPdif** 18 31 38.9 0.0
MNK *i* sP **sPdif** 18 31 47.3 +0.3
MNK *i* PP **PP** 18 35 32.1 -1.0
MNK *i* PPP PPP 18 37 44.1
MNK *i* S **SKSac** 18 41 49.8 -0.6
MNK *i* sS **SKKSac** 18 42 29.2 -1.4
MNK *i* SS **SS** 18 50 04.7 -2.4
MNK *i* SSS SSS 18 54 03.5
MNK *i* LRM MLR 19 18 14.9
comp=E,176nm,21.7s
MNK *i* LRM MLR 19 18 50.6
comp=N,104nm,15.4s
MNK *i* LRM MLR 19 19 11.6
comp=Z,79nm,12.4s
MNK Minsk 102.81 324 *i* P **Pdif** 18 31 17.6 -0.7
MNK *i* 18 35 32.0
MNK *i* PPP PPP 18 37 44.1
MNK *i* S **SKSac** 18 41 49.8 -0.6
MNK *i* SS **SS** 18 50 04.7 -2.4
MNK *i* SSS SSS 18 54 03.4
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK pmax pmax
comp=N,11nm,0.8s
MNK pmax pmax
comp=E,23nm,1.1s
MNK MLR MLR
comp=E,176nm,22.0s
MNK MLR MLR
comp=N,104nm,15.0s
MNK MLR MLR
comp=Z,79nm,12.0s
YKA Yellowknife Ar 107.20 26 Pdiff **Pdif** 18 31 37.6 -0.1
comp=Z,0.4nm,0.7s,baz=297,slow=5.4,SNR=7.0
YKA PKiKP **PKiKP** 18 35 46.4 0.0
comp=Z,0.6nm,0.7s,baz=304,slow=2.5,SNR=8.7
YKA PKKPbc **PKKPbc** 18 47 02.9 -2.6
comp=Z,0.4nm,0.7s,baz=98,slow=2.1,SNR=4.5
HFS Hagfors 108.98 332 Pdiff **Pdif** 18 31 44.3 -1.4
comp=Z,2.5nm,0.9s,baz=122,slow=5.4,SNR=6.6
NOA NORSAR Array B 109.78 333 Pdiff **Pdif** 18 31 48.4 -0.9
comp=Z,0.4nm,0.7s,baz=60,slow=6.1,SNR=1.8
NOA PKiKP **PKiKP** 18 35 52.0 +0.7
comp=Z,1.1nm,0.8s,baz=262,slow=3.4,SNR=4.7
MODS Modra-Piesok 110.40 319 *i* P **Pdif** 18 31 57.0 +4.7
MODS Modra-Piesok 110.40 319 *e*PDIFF **Pdif** 18 31 57.0 +4.7
ZST Bratislava 110.56 319 *i* P **Pdif** 18 31 58.4 +5.4
ZST Bratislava 110.56 319 *e*PDIFF **Pdif** 18 31 58.4 +5.4
NVAR Mina Array Bea 110.62 52 PKKPbc PKKPbc 18 46 53.9 -0.2
comp=Z,0.8nm,0.7s,baz=106,slow=4.5,SNR=4.7
SOKA Soboth 112.29 318 *e*PKiKP **PKiKP** 18 35 57.8 +1.3
comp=Z,3.1nm,0.9s
GERES GERESS Array B 112.58 320 PKiKP **PKiKP** 18 35 57.4 +0.4
comp=Z,3.8nm,0.6s,baz=54,slow=2.5,SNR=24
BIOA Bad Ischl, Aus 112.94 319 *i* PKiKP **PKiKP** 18 35 57.6 0.0
comp=Z,2.5nm,0.7s
KBA Koelnbreinsper 113.30 319 *e*PKiKP **PKiKP** 18 35 59.6 +1.0
comp=Z,3.7nm,0.5s
LESA Schwarzleotal 113.64 319 *i* PKiKP **PKiKP** 18 35 59.0 -0.1
comp=Z,7.2nm,0.9s
ABTA Abfaltersbach 113.94 318 *i* PKP **PKiKP** 18 35 59.7 0.0
comp=Z,5.6nm,0.7s,SNR=6.5
WTTA Wattenberg 114.36 319 *i* PKP **PKiKP** 18 36 00.9 +0.3
comp=Z,21nm,0.5s,SNR=17
WATA Walderalm 114.38 319 *i* PKP **PKiKP** 18 36 00.8 +0.2
comp=Z,5.3nm,0.6s
SQTA Sankt Quirin 114.65 319 *i* PKP PKPdf 18 36 01.4 +0.3
comp=Z,3.4nm,0.5s
MOTA Moosalm 114.68 319 *i* PKP PKPdf 18 36 01.3 +0.1
comp=Z,5.8nm,0.5s,SNR=4.7
FETA Feichten 115.03 319 *i* PKP **PKPdf** 18 36 02.3 +0.4
comp=Z,3.9nm,0.6s
FUORN Ofenpass-Fuorn 115.46 319 **PKPdf** 18 36 03.1 +0.2
DAVA Damuels 115.49 320 *i* PKP **PKPdf** 18 36 03.3 +0.5
comp=Z,11nm,0.5s,SNR=9.2
TUE Stuetta 116.10 319 **PKiKP** 18 36 04.3 +0.3
PDAR Pinedale Array 116.23 45 PKP **PKiKP** 18 36 05.2 +0.8
comp=Z,0.9nm,0.7s,baz=220,slow=1.0,SNR=11
PDAR PKKPbc **PKKPbc** 18 46 33.9 -1.5
comp=Z,0.9nm,0.8s,baz=106,slow=4.8,SNR=5.7
KEST Kesra 119.13 307 PKP **PKiKP** 18 36 10.8 +0.7
comp=Z,5.9nm,0.9s,baz=228,slow=1.4,SNR=8.2
KEST Kesra 119.13 307 **PKiKP** 18 36 10.6 +0.5
EKA Eskdalemuir Ar 119.19 332 PKP **PKiKP** 18 36 09.6 +0.2
comp=Z,3.0nm,0.5s,baz=24,slow=2.4,SNR=21
ULM Lac du Bonnet 121.85 33 PKP **PKPdf** 18 36 14.5 -0.2
comp=Z,2.7nm,0.6s,baz=280,slow=1.7,SNR=5.9
VHRN Van Horn 122.81 58 **PKiKP** 18 36 18.2 +0.6
EPLO Experimental L 123.33 33 **PKPdf** 18 36 17.6 +0.1
TXAR Lajitas Array 124.24 59 PKP **PKiKP** 18 36 21.1 +0.8
comp=Z,1.4nm,0.6s,baz=220,slow=1.5,SNR=17
TXAR PKKPbc **PKKPbc** 18 46 05.0 +0.1
comp=Z,0.2nm,0.3s,baz=117,slow=6.8,SNR=3.9
ECSD EROS Data Cent 124.65 40 **PKiKP** 18 36 20.6 0.0
NRS Narsarsuaq 125.57 358 **PKPdf** 18 36 21.6 +0.2
NRS Narsarsuaq 125.57 358 PKiKP **PKPdf** 18 36 21.6 +0.2
ESDC Sonseca Array 127.71 316 PKP **PKiKP** 18 36 27.2 +0.3
comp=Z,2.3nm,1.0s,baz=12,slow=4.5,SNR=7.6
ESDC PP **PP** 18 38 26.4 -2.1
comp=Z,1.2nm,1.0s,baz=65,slow=6.3,SNR=4.7
PLCA Paso Flores 128.95 159 PKP **PKiKP** 18 36 30.6 +1.1
comp=Z,3.6nm,0.7s,baz=253,slow=2.5,SNR=11
TORD Torodi Ar. Bea 129.35 281 PKP **PKiKP** 18 36 30.5 -0.2
comp=Z,6.9nm,0.7s,baz=214,slow=2.5,SNR=37
SCHQ Schefferville 129.99 13 PKP **PKiKP** 18 36 31.4 +0.5
comp=Z,2.4nm,0.5s,baz=281,slow=2.8,SNR=4.4
DBIC Dimbokro 135.79 273 PKhKP PKPpre 18 36 33.2
comp=Z,1.3nm,0.5s,baz=159,slow=3.3,SNR=4.3
DBIC PKP **PKPdf** 18 36 42.6 +0.4
comp=Z,7.5nm,0.6s,baz=154,slow=4.2,SNR=12
CFA Coronel Fontan 137.88 156 PKhKP PKPpre 18 36 35.1
comp=Z,1.0nm,0.5s,baz=256,slow=6.3,SNR=3.9
CFA PKP **PKPdf** 18 36 46.2 +0.5
comp=Z,2.0nm,0.6s,baz=64,slow=0.2,SNR=5.6
GO02 Mina Guanaco 142.73 149 **PKPdf** 18 36 52.9 -2.1
PB05 IPOC Station P 144.26 146 **PKPdf** 18 36 58.0 +0.5
JTS Las Juntas de 144.65 82 **PKPdf** 18 36 58.9 +0.7
JTS Las Juntas de 144.65 82 PKiKP **PKPdf** 18 36 58.9 +0.7
PB06 IPOC Station P 144.73 146 **PKPdf** 18 36 59.3 +0.9
ITAB Concordia 146.17 176 **PKPbc** 18 37 01.9 +0.4
CPUP Villa Florida 146.28 167 PKPbc **PKPbc** 18 37 02.0 +0.1
comp=Z,17nm,0.9s,baz=200,slow=2.6,SNR=24
CPUP Villa Florida 146.28 167 **PKPbc** 18 37 02.0 +0.1
NNA Nana 146.98 124 PKPbc **PKPbc** 18 37 05.0 +0.7
comp=Z,21nm,0.6s,baz=246,slow=5.3,SNR=10.0
NNA Nana 146.98 124 PKP2 **PKPbc** 18 37 05.0 +0.7
PB11 IPOC Station P 147.00 143 **PKPdf** 18 37 02.0 -0.3
GO01 Chusmiza 147.34 144 **PKPdf** 18 37 03.8 +0.5
ATAH Atahualpa 147.96 115 PKPbc **PKPbc** 18 37 07.5 0.0
comp=Z,27nm,0.7s,baz=262,slow=5.0,SNR=8.8
PB16 IPOC Station P 148.18 142 **PKiKP** 18 37 10.2 +0.3
PB18 Visviri 148.76 141 **PKPdf** 18 37 04.1 -1.6
OTAV Otavalo 150.30 101 **PKPdf** 18 37 08.0 -0.2
OTAV Otavalo 150.30 101 PKiKP **PKPdf** 18 37 08.0 -0.2
TRCB Terra Rica 150.53 174 **PKiKP** 18 37 14.0 0.0
LPAZ La Paz 150.58 141 PKP **PKPdf** 18 37 09.7 +0.9
comp=Z,4.8nm,1.2s,baz=328,slow=1.1,SNR=6.0
LPAZ PKPbc **PKiKP** 18 37 16.2 +1.4
comp=Z,14nm,0.5s,baz=207,slow=2.2,SNR=49
AQDB Aquidauana 152.30 167 **PKiKP** 18 37 18.0 +0.5
SIV San Ignacio 154.67 153 PKP **PKPdf** 18 37 15.0 +1.0
comp=Z,1.1nm,0.7s,baz=227,slow=1.8,SNR=6.4
SIV PKPab **PKPab** 18 37 38.6 +1.2
comp=Z,6.7nm,0.8s,baz=188,slow=3.9,SNR=17
SDV Santo Domingo 158.83 83 **PKPdf** 18 37 19.5 -0.2

*JMA **13** 18:24:32.7±0.1,23°.8N±0°.6×122°.3E±0°.3, h26km±3km, MV2.0/11, TAIWAN REGION*
*TAP **13** 18:24:33.8, 23°.87N×122°.27E, h25km, ML2.6, C*
ISC 13 18:24:33.0±1.0, 23°.84N±0°.02×122°.28E±0°.03, h27km±9km, n80, σ0°.57/134, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.28**	**6**	*i* P		**Pb**		**18 24 39.8**	**+0.2**
EOS4				*i* S		**Sb**		**18 24 44.5**	**+0.3**
EOS3	**EOS3**	**0.45**	**4**	*i* P		**Pb**		**18 24 42.9**	**+0.5**
EOS3				*i* S		**Sn**		**18 24 49.9**	**-0.8**
EOS2	**EOS2**	**0.58**	**355**	*e*P		**Pn**		**18 24 45.2**	**-0.2**
EOS2				*e*S		**Sn**		**18 24 53.7**	**-0.3**
TEYL	**Yanliau Villag**	**0.63**	**273**	*e*P		**Pb**		**18 24 45.6**	**+0.2**
TEYL				*e*S		**Sn**		**18 24 54.7**	**-0.5**
HWA	**Hwalien**	**0.64**	**283**	*e*P		**Pb**		**18 24 45.6**	**+0.1**
HWA				*e*S		**Sb**		**18 24 54.6**	**+0.6**
SHUL	**Shoufeng**	**0.66**	**266**	P		**Pb**		**18 24 46.0**	**+0.1**
SHUL				*e*S		**Sb**		**18 24 55.4**	**+0.6**
TWD	**Chiawan**	**0.67**	**291**	P		**Pb**		**18 24 45.8**	**-0.6**
TWD				S		**Sb**		**18 24 54.6**	**-0.6**
ETL	**Fush Village**	**0.68**	**298**	*e*S		**Sb**		**18 24 55.7**	**+0.3**
EAHA	**Aohua**	**0.70**	**315**	*e*S		**Sn**		**18 24 56.7**	**-0.3**
NACB	**Ninganchiao**	**0.71**	**298**	P		**Pb**		**18 24 46.1**	**-0.7**
NACB				*e*S		**Sb**		**18 24 56.4**	**+0.1**
ETM	**Tongmen**	**0.73**	**280**	*e*P		**Pb**		**18 24 46.5**	**-0.7**
ETM				*e*S		**Sb**		**18 24 56.6**	**-0.3**
EWUT	**Wuta**	**0.76**	**323**	*e*P		**Pb**		**18 24 47.6**	**0.0**
EWUT				*e*S		**Sn**		**18 24 58.4**	**-0.2**
ENA	**Nanau**	**0.77**	**320**	*e*P		**Pn**		**18 24 48.1**	**0.0**
ENA				*e*S		**Sn**		**18 24 59.0**	**+0.2**
ESL	**Shilin**	**0.78**	**269**	*e*P		**Pb**		**18 24 46.9**	**-1.0**
ESL				*e*S		**Sb**		**18 24 57.5**	**-0.6**
EGFH	**Guangfu**	**0.80**	**258**	*e*P		**Pb**		**18 24 47.9**	**-0.5**
EGFH				*e*S		**Sb**		**18 24 58.8**	**0.0**
LXIB	**Xiulin Townshi**	**0.82**	**283**	*e*P		**Pb**		**18 24 48.1**	**-0.5**
LXIB				*e*S		**Sb**		**18 24 59.1**	**-0.3**
ETLH	**Xiulin Townshi**	**0.82**	**297**	*i* P		**Pb**		**18 24 48.3**	**-0.4**
ETLH				*e*S		**Sb**		**18 24 59.2**	**-0.2**
WARBT	**Fenglin Townsh**	**0.83**	**262**	*e*P		**Pb**		**18 24 47.8**	**-1.0**
WARBT				*e*S		**Sb**		**18 24 59.3**	**-0.3**
HGSD	**Ruisui**	**0.86**	**247**	*e*P		**Pb**		**18 24 48.7**	**-0.6**
HGSD				*e*S		**Sb**		**18 25 00.2**	**-0.3**
JYNG	**Yonagunijimaku**	**0.86**	**45**	*e*P		**Pb**		**18 24 48.8**	**-0.5**
JYNG				*e*S		**Sb**		**18 25 00.1**	**-0.4**
TWC	**Suao**	**0.86**	**333**	*e*P		**Pb**		**18 24 49.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.91**	**47**	*e*S		**Sb**		**18 25 01.5**	**-0.4**
YOJ	**Yonaguni jima**	**0.91**	**47**	*e*P		**Pn**		**18 24 50.5**	**+0.5**
ECBN	**Changbin**	**0.92**	**236**	*e*S		**Sb**		**18 25 02.0**	**-0.3**
EHYH	**Wanrong**	**0.93**	**249**	*i* P		**Pn**		**18 24 50.0**	**-0.2**
EHYH				S		**Sb**		**18 25 02.4**	**+0.1**
EHY	**Hungye**	**0.94**	**250**	*e*P		**Pn**		**18 24 49.9**	**-0.5**
EHY				*e*S		**Sb**		**18 25 01.9**	**-0.9**
NDS	**Dongshan**	**0.95**	**327**	*e*P		**Pb**		**18 24 50.8**	**0.0**
LATG	**Datong**	**0.98**	**315**	*e*P		**Pn**		**18 24 51.1**	**-0.1**
WHF	**Hehuan Shan**	**0.98**	**288**	*e*P		**Pn**		**18 24 50.9**	**-0.4**
WHF				*e*S		**Sb**		**18 25 03.8**	**-0.5**
YULB	**Yu-li**	**1.01**	**244**	*i* P		**Pn**		**18 24 51.2**	**-0.1**
YULB				*i* S		**Sb**		**18 25 04.0**	**-0.6**
NNSB	**Datong**	**1.01**	**306**	*e*P		**Pn**		**18 24 51.5**	**-0.1**
NNSB				*e*S		**Sb**		**18 25 04.4**	**-0.6**
NNSH	**Datong**	**1.01**	**306**	*e*P		**Pn**		**18 24 50.9**	**-0.6**
OWD	**Renai**	**1.02**	**277**	*e*P		**Pn**		**18 24 51.4**	**-0.3**
OWD				S		**Sb**		**18 25 04.2**	**-1.0**
NNS	**Nan Shan**	**1.02**	**306**	*e*P		**Pb**		**18 24 52.4**	**+0.2**
NNS				*e*S		**Sb**		**18 25 04.5**	**-0.9**
TWF1	**Yuli**	**1.02**	**242**	*e*P		**Pn**		**18 24 51.6**	**-0.1**
ENTT	**Nioudou**	**1.03**	**321**	*e*P		**Pb**		**18 24 52.2**	**0.0**
FUSS	**Fushou**	**1.03**	**294**	*e*S		**Sb**		**18 25 05.0**	**-0.7**
CHKH	**Chenggong**	**1.04**	**232**	*e*S		**Sb**		**18 25 03.8**	**-1.7**
TWE	**Neicheng**	**1.04**	**328**	*e*P		**Pb**		**18 24 52.4**	**0.0**
VWDT	**VWDT**	**1.05**	**266**	P		**Pn**		**18 24 51.9**	**0.0**
VWDT				*e*S		**Sb**		**18 25 05.4**	**-0.0**
WUSB	**Renai**	**1.08**	**278**	*e*P		**Pn**		**18 24 52.4**	**0.0**
WUSB				*e*S		**Sb**		**18 25 06.1**	**-0.7**
FULB	**Fuli**	**1.11**	**235**	*e*P		**Pn**		**18 24 52.2**	**-0.6**
FULB				*e*S		**Sn**		**18 25 07.1**	**-0.1**
TDCB	**Techi**	**1.11**	**292**	*e*S		**Sn**		**18 25 06.5**	**-0.8**
FUSB	**Fushanzhiwuyua**	**1.12**	**326**	*e*P		**Pb**		**18 24 54.0**	**+0.3**
YHNB	**Yeheng**	**1.17**	**315**	*e*P		**Pn**		**18 24 53.9**	**+0.2**
NSK	**Sanguang**	**1.19**	**315**	*e*P		**Pn**		**18 24 54.3**	**+0.4**
NSK				*e*S		**Sn**		**18 25 09.0**	**-0.3**
EHD	**Haiduan**	**1.20**	**236**	*e*P		**Pn**		**18 24 54.0**	**-0.1**
EHD				*e*S		**Sn**		**18 25 09.3**	**-0.2**
TIPB	**Shuangxi**	**1.21**	**340**	*e*P		**Pb**		**18 24 55.0**	**-0.2**
TIPB				S		**Sb**		**18 25 10.3**	**0.0**
SSLB	**Suanglung**	**1.22**	**268**	*e*P		**Pn**		**18 24 54.9**	**+0.6**
SSLB				S		**Sn**		**18 25 10.2**	**+0.3**
DPDB	**Guoxing**	**1.26**	**279**	*e*P		**Pn**		**18 24 55.4**	**+0.6**
SMLT	**Sun Moon Lake**	**1.27**	**272**	*e*P		**Pn**		**18 24 55.7**	**+0.6**
SMLT				*e*S		**Sn**		**18 25 11.5**	**+0.3**
YUS	**Yu-Shan**	**1.27**	**254**	*e*P		**Pn**		**18 24 55.7**	**+0.3**
WCS	**Beigang Elemen**	**1.27**	**280**	*e*P		**Pn**		**18 24 55.6**	**+0.6**
WCS				S		**Sb**		**18 25 11.8**	**-0.4**
WHP	**Taichung City**	**1.30**	**290**	*e*P		**Pb**		**18 24 56.8**	**0.0**
SXI1	**Grass Mountain**	**1.31**	**344**	*e*P		**Pn**		**18 24 55.8**	**+0.3**
TYC	**Yuchr**	**1.31**	**273**	*e*P		**Pn**		**18 24 56.3**	**+0.8**
WHYT	**Xinyi Township**	**1.32**	**264**	*e*P		**Pn**		**18 24 56.5**	**+0.8**
WHYT				*e*S		**Sb**		**18 25 13.7**	**+0.1**
NFF	**Wufeng Townshi**	**1.33**	**307**	*e*P		**Pb**		**18 24 57.1**	**-0.2**
NFF				*e*S		**Sb**		**18 25 13.8**	**-0.1**
ELDTW	**Lidau**	**1.33**	**241**	P		**Pn**		**18 24 55.4**	**-0.5**
ELDTW				*e*S		**Sn**		**18 25 11.5**	**-1.3**
KSHI	**Guanxi Townshi**	**1.38**	**313**	*e*P		**Pb**		**18 24 58.5**	**+0.4**
ALS	**Alishan**	**1.39**	**257**	*e*P		**Pn**		**18 24 57.8**	**+0.9**
ALS				*e*S		**Sn**		**18 25 15.3**	**+0.7**
LIOB	**Emei**	**1.41**	**305**	*e*P		**Pb**		**18 24 58.9**	**+0.2**
LIOB				*e*S		**Sb**		**18 25 16.0**	**-0.2**
NSTT	**Nanjuang**	**1.41**	**304**	P		**Pb**		**18 24 58.8**	**+0.1**
NSTT				*e*S		**Sb**		**18 25 16.2**	**-0.1**
YM01	**YM01**	**1.46**	**334**	*e*P		**Pn**		**18 24 58.3**	**+0.7**
WNT	**Mingjian**	**1.46**	**272**	*e*P		**Pb**		**18 24 59.6**	**+0.1**
WNT				*e*S		**Sb**		**18 25 18.1**	**+0.3**
TWQ1	**Liyutan**	**1.47**	**291**	*e*P		**Pb**		**18 25 00.2**	**+0.5**
TWQ1				*e*S		**Sb**		**18 25 17.8**	**-0.2**
ZUZH	**Zhuzihu**	**1.48**	**333**	*e*P		**Pn**		**18 24 58.6**	**+0.7**
ZUZH				S		**Sb**		**18 25 17.3**	**-1.0**
TWG	**Pinlang**	**1.50**	**228**	*e*P		**Pn**		**18 24 58.1**	**-0.1**
TWG				*e*S		**Sn**		**18 25 16.2**	**-0.8**
STYH	**Taoyuan**	**1.53**	**245**	*e*P		**Pn**		**18 24 59.5**	**+1.0**
STYH				*e*S		**Sb**		**18 25 19.1**	**-0.7**
STYT	**Tauyuan**	**1.55**	**245**	*e*P		**Pn**		**18 25 00.2**	**+1.3**
STYT				*e*S		**Sn**		**18 25 19.1**	**+0.9**
WCKO	**Fanlu**	**1.59**	**256**	*e*P		**Pn**		**18 25 00.4**	**+1.0**
WCKO				*e*S		**Sn**		**18 25 20.2**	**+1.2**
TPUB	**Ta-pu**	**1.61**	**251**	*e*P		**Pb**		**18 25 01.4**	**-0.6**
TPUB				*e*S		**Sb**		**18 25 21.8**	**-0.2**
CHN4	**Tsaushan**	**1.62**	**253**	*e*P		**Pb**		**18 25 01.7**	**-0.6**
CHN4				*e*S		**Sb**		**18 25 23.1**	**+0.8**
SGST	**Jiashian**	**1.73**	**245**	*e*P		**Pb**		**18 25 03.7**	**-0.4**
SGST				*e*S		**Sb**		**18 25 25.7**	**+0.2**
CHN1	**Nanshi**	**1.74**	**248**	*e*P		**Pb**		**18 25 04.3**	**+0.1**
CHN1				*e*S		**Sb**		**18 25 26.2**	**+0.6**
SNST	**Tainan City**	**1.75**	**250**	*e*P		**Pb**		**18 25 05.5**	**+1.0**
SNST				*e*S		**Sb**		**18 25 27.3**	**+1.3**
JIJ	**Ishigaki jima**	**1.78**	**72**	*e*P		**Pn**		**18 25 01.9**	**0.0**
JIJ				*e*S		**Sn**		**18 25 24.3**	**+0.6**
SSD	**Sandimen**	**1.87**	**235**	*e*P		**Pn**		**18 25 04.4**	**+1.2**
JISG	**Ishigakijimahi**	**2.00**	**68**	*e*P		**Pn**		**18 25 04.7**	**-0.3**
SMST	**Manzhou Townsh**	**2.25**	**217**	*e*P		**Pn**		**18 25 09.4**	**+1.0**
SMST				*e*S		**Sn**		**18 25 35.9**	**+0.6**

*GUC **13** 18:32:23.6±0.7, 24°.06S×66°.98W, h204km±8km, ML3.7*
*SJA **13** 18:32:23.1±0.6, 24°.02S×66°.92W, h215km±5km, ML3.5, MW3.4*
ISC 13 18:32:25.6±1.3, 24°.02S±0°.04×67°.01W±0°.05, h181km, n38, σ1843/51, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALTA		**0.64**	**109**	‖ *i* P		**Pn**		**18 32 53.1**	**+1.3**
SALTA		**0.64**	**109**	*e*P		**Pn**		**18 32 53.0**	**+1.3**
AF01	**San Pedro de A**	**1.51**	**314**	*e*S		Sn		18 33 36.9	+14
AF01				IAML				18 33 37.2	
comp=Z,127nm,0.3s									
SLA	**San Lorenzo**	**1.54**	**117**	*e*P		**Pn**		**18 32 58.9**	**+0.8**
AZAP	**Zapla**	**1.78**	**97**	*e*P		**Pn**		**18 33 00.7**	**+0.1**
FSA	**Cafayete**	**2.28**	**156**	*e*P		**Pn**		**18 33 06.1**	**+0.1**
GO02	**Mina Guanaco**	**2.61**	**244**	‖ *i* P		**Pn**		**18 33 10.9**	**+0.9**
GO02	**Mina Guanaco**	**2.61**	**244**	*e*P		**Pn**		**18 33 11.1**	**+1.2**
GO02				*e*S		**Sn**		**18 33 46.4**	**+2.0**
GO02				IAML				18 33 47.8	
comp=Z,196nm,0.2s									
PB06	**IPOC Station P**	**2.70**	**299**	‖ *i* P		**Pn**		**18 33 11.9**	**+1.1**
PB06				*e*S		**Sn**		**18 33 46.8**	**+0.9**
PB06				IAML				18 33 48.5	
comp=N,260nm,0.1s									
PB06	**IPOC Station P**	**2.70**	**299**	*e*P		**Pn**		**18 33 12.0**	**+1.1**
PB06				*e*S		**Sn**		**18 33 47.4**	**+1.4**
PB06				IAML				18 33 51.0	
comp=Z,118nm,0.2s									
PB09	**IPOC Station P**	**3.02**	**317**	*e*P		**Pn**		**18 33 16.0**	**+1.3**
PB09				IAML				18 33 57.1	
comp=E,60nm,0.2s									
PB09	**IPOC Station P**	**3.02**	**317**	*e*P		**Pn**		**18 33 16.2**	**+1.5**
PB09				*e*S		**Sn**		**18 33 55.6**	**+2.6**
PB09				IAML				18 33 57.2	
comp=Z,43nm,0.8s									
AHML	**Horco Molle**	**3.14**	**152**	*e*P		**Pn**		**18 33 15.3**	**-0.7**
PB05	**IPOC Station P**	**3.16**	**291**	*e*P		**Pn**		**18 33 16.8**	**+0.5**
PB05	**IPOC Station P**	**3.16**	**291**	*e*P		**Pn**		**18 33 16.4**	**+0.1**
PB05				*e*S		**Sn**		**18 33 55.6**	**-0.2**
PB05				IAML				18 34 00.1	
comp=Z,42nm,0.4s									
PB14	**IPOC Station P**	**3.16**	**258**	‖ *i* P		**Pn**		**18 33 16.7**	**+0.3**
PB14	**IPOC Station P**	**3.16**	**258**	*e*P		**Pn**		**18 33 16.9**	**+0.5**
PB14				*e*S		**Sn**		**18 33 56.2**	**+0.1**
PB14				IAML				18 33 58.9	
comp=Z,52nm,0.4s									
PB03	**IPOC Station P**	**3.20**	**307**	‖ *i* P		**Pn**		**18 33 17.3**	**+0.4**
PB03	**IPOC Station P**	**3.20**	**307**	*e*P		**Pn**		**18 33 17.5**	**+0.6**
PB03				*e*S		**Sn**		**18 33 57.3**	**+0.4**
PB03				IAML				18 34 00.2	
comp=Z,148nm,0.1s									
PB10	**IPOC Station P**	**3.29**	**278**	*i* P		**Pn**		**18 33 18.2**	**+0.4**
PB10	**IPOC Station P**	**3.29**	**278**	*e*P		**Pn**		**18 33 18.6**	**+0.8**
PB10				*e*S		**Sn**		**18 33 59.4**	**+0.8**
PB10				IAML				18 34 02.1	
comp=Z,33nm,0.4s									
AC02	**Maricunga**	**3.40**	**214**	*e*P		**Pn**		**18 33 19.8**	**+0.2**
AC02	**Maricunga**	**3.40**	**214**	*e*P		**Pn**		**18 33 21.1**	**+1.5**
AC02				*e*S		**Sn**		**18 34 04.4**	**+2.6**
PB07	**IPOC Station P**	**3.50**	**310**	*e*P		**Pn**		**18 33 20.8**	**+0.2**
PB07	**IPOC Station P**	**3.50**	**310**	*e*P		**Pn**		**18 33 20.9**	**+0.3**
PB07				*e*S		**Sn**		**18 34 03.2**	**-0.4**
PB07				IAML				18 34 04.5	
comp=Z,80nm,0.2s									
PB01	**IPOC Station P**	**3.75**	**322**	*e*P		**Pn**		**18 33 23.3**	**-0.3**
PB01	**IPOC Station P**	**3.75**	**322**	*e*P		**Pn**		**18 33 23.7**	**+0.1**
PB01

DBAD				IAML		18 53 27.0	
	comp=N,294nm,0.4s						
DDEM	**Demirkent**	**0.79**	**231**	P	**Pb**	**18 53 17.5**	**-0.3**
DDEM				S	**Sb**	**18 53 27.8**	**-0.7**
DDEM				IAML		18 53 33.0	
	comp=N,355nm,0.3s						
SENK	**Senkaya-Erzuru**	**0.84**	**191**	Pg	**Pg**	**18 53 18.3**	**-0.1**
SENK				Sg	**Sg**	**18 53 28.9**	**-0.5**
KARS	**Kars**	**0.85**	**153**	Pg	**Pg**	**18 53 18.6**	**0.0**
KARS				Sg	**Sg**	**18 53 29.3**	**-0.5**
BOZK	**Kars-Merkez-Bo**	**0.85**	**158**	P	**Pb**	**18 53 19.4**	**+0.4**
BOZK				S	**Sb**	**18 53 31.7**	**+1.2**
EOLT	**Oltu**	**0.95**	**208**	P	**Pb**	**18 53 20.9**	**+0.3**
EAK	**Akyaka**	**1.06**	**131**	P	**Pg**	**18 53 21.2**	**-1.3**
EAK				S	**Sg**	**18 53 34.8**	**-1.4**
CHOM	**Cayeli-Rize**	**1.39**	**259**	Pn	**Pg**	**18 53 28.6**	**-0.2**
KRIK	**Erzurum-spir**	**1.62**	**230**	P	**Pg**	**18 53 33.0**	**-0.3**
IZDR	**Rize**	**1.63**	**249**	P	**Pb**	**18 53 32.1**	**+0.1**
IZDR				S	**Sn**	**18 53 51.0**	**-0.6**
IZDR				IAML		18 53 53.0	
	comp=N,68nm,0.3s						
KOTA	**Agri, Merkez-K**	**1.66**	**163**	P	**Pg**	**18 53 34.8**	**+0.9**
TBLG	**Delisi**	**1.67**	**77**	Pn	**Pn**	**18 53 32.3**	**+1.1**
ERZM	**Erzurum**	**1.74**	**212**	P	**Pg**	**18 53 35.8**	**+0.3**
AGRB	**Hanur-Agry**	**1.84**	**170**	Pn	**Pn**	**18 53 32.9**	**-0.8**
GNI	**Garni**	**2.07**	**126**	Pn	**Pn**	**18 53 36.3**	**-0.5**
BAYT	**Aydıntepe-Bayb**	**2.09**	**242**	Pn	**Pn**	**18 53 38.3**	**+1.2**

IDC ***13*** *18:54:16.8±0.8, 1°.21S×120°.40E, h0km, mb3.7/8, mbtmp3.7/9, ML4.0/1, MS3.3/6, Error ellipse: s-maj=47.6km s-min=14.7km az=70.0*

NEIC ***13*** *18:54:18.9±2.0, 1°.23S±0°.06×120°.19E±0°.03, h10km±1km, mb4.1/9, Error ellipse: s-maj=10.5km s-min=5.4km az=193.0*

DJA ***13*** *18:54:18.5±0.2, 1°.S±1°×12°.0E±°, h10km, M4.5/31, mb4.5/3, MLv4.4/31*

ISC 13 18:54:17.9±0.6, 1°.28S±0°.04×120°.12E±0°.04, h10km, n44, σ1°55/43, mb4.0/12, MS3.3/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.47**	**322**	P	**Pg**	**18 54 27.0**	**-0.1**
APSI	**Ampana**	**1.57**	**77**	P	**Pg**	**18 54 47.4**	**-0.7**
MPSI	**Mapaga**	**1.62**	**352**	P	**Pn**	**18 54 45.9**	**-0.7**
TTSI	**Tana Toraja**	**1.78**	**190**	P	**Pn**	**18 54 48.8**	**0.0**
MMSI	**Mamuju**	**1.85**	**221**	P	**Pn**	**18 54 48.7**	**-1.1**
MMSI				S	**Sn**	**18 55 12.7**	**-0.6**
TOLI2	**Tolitoli**	**2.46**	**16**		**Pn**	**18 54 59.2**	**+1.0**
PMSI	**Majene**	**2.52**	**209**	P	**Pn**	**18 54 58.6**	**-0.3**
MRSI	**Marisa**	**2.52**	**46**	P	**Pn**	**18 55 00.3**	**+1.4**
MRSI				S	**Sb**	**18 55 32.5**	**-1.9**
LUWI	**Luwuk**	**2.66**	**85**		**Pn**	**18 55 01.2**	**+0.3**
LUWI	**Luwuk**	**2.66**	**85**	P	**Pn**	**18 55 01.6**	**+0.7**
SPSI	**Sidrap Palu**	**2.69**	**188**	P	**Pn**	**18 55 01.5**	**+0.2**
BKB	**Balikpapan**	**3.23**	**270**	Pn	**Pn**	**18 55 10.0**	**+1.4**
KKSI	**Kolaka, Sulawe**	**3.26**	**152**	P	**Pn**	**18 55 09.5**	**+0.4**
KAPI	**Kappang**	**3.73**	**186**	Pn	**Pn**	**18 55 16.4**	**+0.8**
	12nm,0.3s,baz=342,slow=12,SNR=16						
KAPI				Sn	**Sn**	**18 56 03.6**	**+4.0**
	2.4nm,0.3s,baz=68,slow=19,SNR=1.3						
KAPI				LR	LR	18 57 01.9	
	comp=Z,514nm,18.5s,baz=332,slow=43 27nm,0.4s						
KAPI	**Kappang**	**3.73**	**186**		**Pn**	**18 55 17.2**	**+1.7**
KAPI	**Kappang**	**3.73**	**186**	P	**Pn**	**18 55 17.3**	**+1.7**
MKS	**Makassar**	**3.97**	**189**	P	**Pn**	**18 55 19.7**	**+0.8**
BSSI	**Bau Bau, Buton**	**4.85**	**176**	P	**Pn**	**18 55 30.8**	**-0.2**
BBKI	**Banjar Baru**	**5.71**	**248**	P	**Pn**	**18 55 46.2**	**+3.4**
SANI	**Sanana**	**5.91**	**98**	P	**Pn**	**18 55 47.5**	**+1.8**
	0.1nm11nm,1.0s						
MYLDM	**Lahad Datu**	**6.62**	**346**		**Pn**	**18 55 58.4**	**+3.1**
MYLDM	**Lahad Datu**	**6.62**	**346**	P	**Pn**	**18 55 59.0**	**+3.7**
	0.2nm47nm,0.7s						
BATI	**Baumata**	**9.54**	**158**	LR	LR	19 01 04.3	
	comp=Z,166nm,18.1s,baz=324,slow=43						
WRAB	**Tennant Creek**	**23.18**	**144**	P	**P**	**18 59 27.2**	**+2.1**
WRAB				IAmb	IAmb	18 59 29.3	
	comp=Z,8.3nm,1.1s						
WRA	**Warramunga Arr**	**23.18**	**144**	P	**P**	**18 59 24.3**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=323,slow=11,SNR=22 comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**23.18**	**144**	P	**P**	**18 59 23.9**	**-1.1**
AS31	**Alice Springs**	**25.96**	**150**	P	**P**	**18 59 50.0**	**-0.9**
ASAR	**Alice Springs**	**25.96**	**150**	P	**P**	**18 59 50.7**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=328,slow=9.1,SNR=12						
ASAR				PcP	**PcP**	**19 03 18.7**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=342,slow=2.2,SNR=4.6 comp=Z,0.4nm,0.6s						
STKA	**Stephens Creek**	**36.57**	**148**	P	**P**	**19 01 24.3**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=316,slow=8.0,SNR=4.5 comp=Z,0.8nm,0.3s						
KSRS	**Korea Array**	**39.21**	**10**	P	**P**	**19 01 44.6**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=183,slow=9.7,SNR=1.6						
KSRS				LR	LR	19 18 28.4	
	comp=Z,9.8nm,18.9s,baz=90,slow=37 comp=Z,0.3nm,0.5s						
MJAR	**Matsushiro Arr**	**41.22**	**22**	LR	LR	19 18 34.4	
	comp=Z,16nm,19.2s,baz=226,slow=36						
LSA	**Lhasa**	**41.40**	**320**	P	**P**	**19 02 03.7**	**-1.6**
LSA				IAmb	IAmb	19 02 12.5	
	comp=Z,2.2nm,0.7s						
SONM	**Songino Array**	**50.36**	**348**	P	**P**	**19 03 16.0**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=159,slow=6.8,SNR=1.4 comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**50.36**	**348**	IAmb	IAmb	19 03 37.4	
	comp=Z,1.2nm,1.3s						
MKAR	**Makanchi Array**	**58.23**	**330**	P	**P**	**19 04 13.7**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=132,slow=7.9,SNR=14 comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**58.23**	**330**	P	**P**	**19 04 13.4**	**+0.8**
MAKZ	**Makanchi**	**58.40**	**330**	P	**P**	**19 04 13.5**	**-0.2**
MAKZ				IAmb	IAmb	19 04 30.2	
	comp=Z,3.5nm,1.4s						
AAK	**Ala-Archa**	**59.94**	**322**	P	**P**	**19 04 26.4**	**+1.7**
ZALV	**Zalesovo Beam**	**62.33**	**337**	P	**P**	**19 04 42.1**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=129,slow=3.9,SNR=2.8 comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**62.33**	**337**	P	**P**	**19 04 39.4**	**-1.0**
KURBB	**Kurchatov Arra**	**62.66**	**332**	P	**P**	**19 04 43.2**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=136,slow=6.3,SNR=8.3 comp=Z,0.5nm,0.5s						
KURK	**Kurchatov**	**62.68**	**332**	P	**P**	**19 04 43.5**	**+0.6**
KURK				IAmb	IAmb	19 04 44.5	
	comp=Z,1.9nm,0.8s						
AKTO	**Aktyubinsk**	**73.61**	**324**	LR	LR	19 43 54.8	
	comp=Z,41nm,18.1s,baz=180,slow=40						
AKASG	**Malin Array Be**	**91.55**	**321**	LR	LR	19 53 09.9	
	comp=Z,62nm,18.8s,baz=0.5,slow=38						

IDC ***13*** *19:07:11.2±2.6, 6°.56S×129°.85E, h147km±30km, mb3.3/3, mbtmp3.6/7, Error ellipse: s-maj=54.7km s-min=17.1km az=81.0*

ISC 13 19:07:09.4±0.8, 6°.63S±0°.06×130°.1E±0°.1, h146km, n8, σ3§27/12, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.85**	**12**	P	**Pn**	**19 08 35.4**	**+1.3**
	2.8nm,0.5s,baz=241,slow=23,SNR=16						
SIJI				S	**Sn**	**19 09 35.4**	**-5.0**
	4.5nm,0.2s,baz=214,slow=23,SNR=7.8						
BATI	**Baumata**	**7.27**	**240**	S	**Sn**	**19 10 13.1**	**-1.4**
	8.9nm,0.3s,baz=177,slow=20,SNR=8.0						
FITZ	**Fitzroy Crossi**	**12.19**	**200**	P	**Pn**	**19 10 00.8**	**+2.4**
	3.5nm,1.0s,baz=22,slow=12,SNR=6.5						
FITZ				S	**Sn**	**19 12 07.4**	**-5.7**
	1.1nm,0.3s,baz=284,slow=22,SNR=6.3						
WRA	**Warramunga Arr**	**13.86**	**163**	P	**P**	**19 10 22.2**	**-1.1**
	0.6nm,0.5s,baz=337,slow=14,SNR=22						
WRA				S	**Sn**	**19 12 50.2**	**-3.2**
	0.7nm,0.4s,baz=327,slow=26,SNR=8.9						
ASAR	**Alice Springs**	**17.33**	**168**	P	**Pn**	**19 11 05.5**	**+2.9**
	0.3nm,0.4s,baz=343,slow=11,SNR=14						
ASAR				S	**S**	**19 14 13.8**	**-1.2**
	0.2nm,0.4s,baz=2.7,slow=27,SNR=4.9						
STKA	**Stephens Creek**	**27.32**	**158**	P	**P**	**19 12 43.3**	**+2.6**
	0.5nm,0.3s,baz=344,slow=10.0,SNR=1.6 0.5nm,0.3s						
MKAR	**Makanchi Array**	**67.96**	**327**	P	**P**	**19 17 53.2**	**+0.5**
	0.5nm,0.5s,baz=121,slow=7.9,SNR=16 0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**72.24**	**328**	P	**P**	**19 18 19.1**	**+0.5**
	0.2nm,0.6s,baz=115,slow=4.0,SNR=1.6						

THE ***13*** *19:10:28.0, 41°.N±8°×2°.0E±°, h10km±16km, M2.9/10, MLh2.9/10*

SKO ***13*** *19:10:27.4, 41°.44N×19°.47E, h15km, ML3.1*

PDG ***13*** *19:10:28.5±0.3, 41°.41N×19°.56E, h9km, ML3.4/12, Error ellipse: s-maj=1.3km s-min=1.6km az=0.0*

BEO ***13*** *19:10:28.0±0.5, 41°.31N×19°.53E, h13km±3km, ML3.0/8*

TIR ***13*** *19:10:29.7, 41°.44N×19°.66E, h36km±5km, Ml3.4/3*

ISC 13 19:10:28.5±1.1, 41°.40N±0°.02×19°.57E±0°.02, h5km±9km, n83, σ1§05/123, 15C-17D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.23**	**104**	Pg	**Pg**	**19 10 33.0**	**0.0**
TIR				AML	AML	19 10 36.1	
	17nm,0.5s						
TIR				Sg	**Sg**	**19 10 36.1**	**+0.2**
ULC	**Ulcinj**	**0.61**	**336**	⇑*i* Pg	**Pg**	**19 10 40.0**	**-0.3**
ULC				*i* Sg	**Sg**	**19 10 49.1**	**+0.8**
SDA	**Shkodra**	**0.65**	**355**	Pg	**Pg**	**19 10 40.9**	**-0.2**
SDA				S	**Sb**	**19 10 53.0**	**+1.2**
PHP	**Peshkopia**	**0.71**	**66**	Pg	**Pg**	**19 10 41.2**	**-1.0**
PHP				Sg	**Sg**	**19 10 52.2**	**+0.8**
PHP				AML	AML	19 10 55.9	
	3.6nm,0.3s						
PHP	**Peshkopia**	**0.71**	**66**	P	**Pg**	**19 10 40.7**	**-1.5**
PHP				S	**Sg**	**19 10 51.7**	**+0.3**
VLO	**Vlora**	**0.93**	**184**	Pg	**Pg**	**19 10 47.8**	**+0.6**
VLO				S	**Sn**	**19 11 02.1**	**0.0**
VLO				AML	AML	19 11 05.6	
	5.0nm,0.4s						
VLO	**Vlora**	**0.93**	**184**	P	**Pg**	**19 10 47.4**	**+1.0**
VLO				S	**Sn**	**19 11 02.3**	**+0.3**
OHR	**Ohrid**	**0.97**	**107**	*i* Pg	**Pg**	**19 10 45.7**	**-1.4**
OHR				*i* Sg	**Sb**	**19 11 01.3**	**+0.3**
OHR				*e*Lg	Lg	19 11 01.6	
	comp=N,688nm,0.7s						
OHR				*e*Lg	Lg	19 11 04.0	
	comp=E,579nm,0.6s						
BUM	**Brajici-Budva**	**1.03**	**331**	⇑*i* Pg	**Pg**	**19 10 47.6**	**-0.7**
BUM				*i* Sg	**Sb**	**19 11 03.8**	**+1.0**
PDG	**Podgorica**	**1.05**	**347**	P	**Pg**	**19 10 48.3**	**-0.5**
PDG				S	**Sn**	**19 11 05.6**	**+0.5**
PDG	**Podgorica**	**1.05**	**347**	⇑P	**Pg**	**19 10 48.8**	**0.0**
PDG				⇑S	**Sn**	**19 11 04.7**	**-0.5**
PDG	**Podgorica**	**1.05**	**347**	⇓*i* Pg	**Pg**	**19 10 48.0**	**-0.8**
PDG				*i* Sg	**Sn**	**19 11 04.6**	**-0.5**
PDG	**Podgorica**	**1.05**	**347**	*e*Pg	**Pg**	**19 10 48.5**	**-0.3**
PDG				*e*Sg	**Sn**	**19 11 05.4**	**+0.3**
KBN	**Korca**	**1.20**	**130**	Pn	**Pg**	**19 10 50.9**	**-0.7**
KBN				Sn	**Sn**	**19 11 09.6**	**+0.7**
KBN	**Korca**	**1.20**	**130**	P	**Pg**	**19 10 50.9**	**-0.7**
KBN				S	**Sb**	**19 11 08.9**	**+1.1**
PVY	**Plav**	**1.23**	**13**	⇑*i* Pg	**Pg**	**19 10 51.3**	**-0.8**
PVY				*i* Sg	**Sn**	**19 11 10.2**	**+0.6**
CEME	**Cevo**	**1.24**	**337**	⇓*i* Pg	**Pg**	**19 10 50.9**	**-1.5**
CEME				*e*Sg	**Sn**	**19 11 10.9**	**+1.0**
HCY	**Herceg Novi**	**1.32**	**323**	⇑*i* Pg	**Pg**	**19 10 54.8**	**-0.8**
HCY				*i* Sg	**Sn**	**19 11 13.1**	**+1.4**
NKME	**Niksic**	**1.44**	**342**	⇑*i* Pg	**Pn**	**19 10 54.9**	**-0.5**
NKME				*e*Sg	**Sn**	**19 11 17.7**	**+3.0**
KOME	**Kolasin**	**1.45**	**358**	⇑*i* Pg	**Pn**	**19 10 55.1**	**-0.4**
KOME				*e*Sg	**Sn**	**19 11 17.8**	**+2.8**
IVA	**Berane**	**1.49**	**9**	⇓*i* Pg	**Pn**	**19 10 55.4**	**-0.7**
IVA				*i* Sg	**Sn**	**19 11 18.3**	**+2.3**
NEST	**Nestorio**	**1.49**	**131**	P	**Pn**	**19 10 55.5**	**-0.6**
NEST				S	**Sb**	**19 11 16.6**	**+0.5**
SKO	**Skopje**	**1.51**	**67**	*i* Pg	**Pn**	**19 10 55.8**	**-0.5**
SKO				*i* Sg	**Sg**	**19 11 17.4**	**+0.3**
SRN	**Sarande**	**1.55**	**168**	Pn	**Pn**	**19 10 54.9**	**-2.0**
SRN				Sn	**Sb**	**19 11 18.7**	**+0.9**
SRN	**Sarande**	**1.55**	**168**	P	**Pn**	**19 10 55.2**	**-1.7**
SRN				S	**Sn**	**19 11 17.5**	**+0.2**
BRY	**Bratogost**	**1.69**	**333**	⇑*i* Pn	**Pn**	**19 10 59.2**	**+0.4**
BRY				*i* Sn	**Sg**	**19 11 22.9**	**+0.2**
PENT	**Pentalofos**	**1.69**	**135**	P	**Pn**	**19 10 58.8**	**0.0**
PENT				S	**Sn**	**19 11 22.0**	**+1.0**
KEK	**Kerkira**	**1.70**	**174**	P	**Pn**	**19 10 57.1**	**-1.7**
KEK				S	**Sn**	**19 11 20.9**	**0.0**
UPM	**Unac-Piva**	**1.87**	**345**	⇓*i* Pn	**Pn**	**19 11 01.8**	**+0.4**
UPM				*i* Sn	**Sg**	**19 11 27.9**	**-0.6**
SJES	**Sjenica**	**1.88**	**9**	*e*Pn	**Pn**	**19 11 02.2**	**+0.7**
SJES				*e*Sn	**Sg**	**19 11 28.5**	**-0.5**
PLE	**Pljevlja**	**1.93**	**356**	⇓*i* Pn	**Pn**	**19 11 02.9**	**+0.7**
PLE				*i* Sn	**Sb**	**19 11 29.5**	**+0.7**
IGT	**Igoumenitsa**	**1.96**	**163**	*e*Pn	**Pn**	**19 11 00.8**	**-1.6**
KPRO	**Kipourio**	**1.99**	**136**	P	**Pn**	**19 11 03.0**	**+0.1**
LFKM	**Lefkimmi**	**1.99**	**169**	P	**Pn**	**19 11 03.3**	**+0.4**
KZN	**Kozani**	**1.99**	**123**	P	**Pn**	**19 11 02.8**	**-0.2**
JAN	**Janina**	**2.00**	**150**	P	**Pn**	**19 11 02.5**	**-0.5**
SELS	**Selova**	**2.15**	**32**	*e*Pn	**Pn**	**19 11 04.6**	**-0.5**
SELS				*e*Sn	**Sn**	**19 11 32.7**	**+0.5**
BARS	**Barje**	**2.19**	**49**	*e*Pn	**Pn**	**19 11 04.9**	**-0.7**
IVAS	**Ivanjica**	**2.21**	**11**	*e*Pn	**Pn**	**19 11 05.4**	**-0.9**
VAY	**Valandovo**	**2.26**	**91**	*i* Pn	**Pn**	**19 11 05.7**	**-0.9**
VAY				*i* Sn	**Sn**	**19 11 33.5**	**-1.2**
VAY				*e*Lg	Lg	19 11 33.7	
	comp=N,96nm,1.1s						
VAY				*e*Lg	Lg	19 11 34.1	
	comp=E,71nm,0.7s						
MATE	**Matera**	**2.30**	**252**	⇑P	**Pn**	**19 11 06.1**	**-1.0**
GOCS	**Kraljevo Serbi**	**2.36**	**24**	*e*Pn	**Pn**	**19 11 09.2**	**+1.1**
GOCS				*e*Sn	**Sn**	**19 11 38.0**	**+0.4**
BOSS	**Bosilegrad**	**2.43**	**62**	*e*Pn	**Pn**	**19 11 07.9**	**-1.0**
BBLS	**Lazi&#263i**	**2.47**	**357**	*e*Pn	**Pn**	**19 11 09.7**	**+0.2**
GRUS	**Gruza**	**2.62**	**18**	*e*Pn	**Pn**	**19 11 11.6**	**0.0**
DIVS	**Divibare**	**2.71**	**6**	*e*Pn	**Pn**	**19 11 12.0**	**-0.9**
BOVS	**Bovan**	**2.73**	**35**	⇓P	**Pn**	**19 11 12.7**	**-0.4**
BOVS	**Bovan**	**2.73**	**35**	*e*Pn	**Pn**	**19 11 13.0**	**-0.1**
BOVS				*e*Sn	**Sn**	**19 11 44.7**	**-1.8**
ZAPS	**Zavoj**	**2.94**	**49**	*e*Pn	**Pn**	**19 11 15.7**	**-0.3**
ZAPS				*e*Sn	**Sn**	**19 11 51.1**	**-0.6**
VTS	**Vitosha**	**2.99**	**65**	*e*Pn	**Pn**	**19 11 15.9**	**-0.8**
VTS				*e*Sn	**Sn**	**19 11 51.4**	**-1.6**
SRS	**Serrai**	**3.04**	**94**	*e*Pn	**Pn**	**19 11 16.2**	**-1.2**
TIP	**Timpagrande**	**3.09**	**225**	⇓P	**Pn**	**19 11 18.0**	**-0.1**
ZAGS	**Zajecar**	**3.11**	**38**	*e*Pn	**Pn**	**19 11 18.1**	**-0.1**
BLKB	**Belogradchik**	**3.19**	**45**	⇓S	**Sn**	**19 11 58.7**	**+0.8**
BLKB	**Belogradchik**	**3.19**	**45**	*e*Pn	**Pn**	**19 11 19.6**	**+0.2**
BLKB				*e*Sn	**Sn**	**19 11 57.6**	**-0.3**
MDVR	**Moldovita**	**3.72**	**24**	⇑P	**Pn**	**19 11 27.5**	**+0.7**
MDVR	**Moldovita**	**3.72**	**24**	*e*Pn	**Pn**	**19 11 25.6**	**-1.2**
FRGS	**Fruska Gora**	**3.76**	**3**	*e*Pn	**Pn**	**19 11 26.2**	**-1.0**
PUNG	**Punghina**	**3.79**	**40**	⇑P	**Pn**	**19 11 27.7**	**0.0**
SRE	**Strehaia**	**4.21**	**38**	⇓P	**Pn**	**19 11 33.3**	**0.0**
PLVB	**Pleven**	**4.23**	**60**	⇓P	**Pn**	**19 11 33.6**	**-0.1**
BZS	**Buzias**	**4.47**	**19**	⇓P	**Pn**	**19 11 37.6**	**+0.7**
BZS	**Buzias**	**4.47**	**19**	*e*Pn	**Pn**	**19 11 35.8**	**-1.1**
GZR	**Gura Zlata**	**4.62**	**29**	⇓P	**Pn**	**19 11 39.5**	**+0.3**
GZR	**Gura Zlata**	**4.62**	**29**	*e*Pn	**Pn**	**19 11 39.4**	**+0.3**
MORH	**Mrgy, Hungar**	**4.86**	**352**	⇑P	**Pn**	**19 11 43.3**	**+1.0**
ELND	**Elena**	**4.93**	**70**	⇓P	**Pn**	**19 11 43.2**	**-0.1**
HUMR	**Humele**	**5.05**	**50**	⇓P	**Pn**	**19 11 45.1**	**+0.2**
LOT	**Lotru**	**5.07**	**36**	⇓P	**Pn**	**19 11 45.2**	**-0.1**
BOJS	**Bojanci**	**5.17**	**324**	*e*Pn	**Pn**	**19 11 45.6**	**-0.9**
BOJS				*e*Sn	**Sn**	**19 12 44.0**	**-2.5**
VOIR		**5.67**	**43**	⇑P	**Pn**	**19 11 53.7**	**+0.1**
SKDS	**Skadanscina**	**5.79**	**318**	*e*Pn	**Pn**	**19 11 53.8**	**-1.3**
SKDS				*e*Sn	**Sn**	**19 12 56.5**	**-5.4**
MLR	**Muntele Rosu**	**6.18**	**46**	⇓P	**Pn**	**19 12 00.7**	**+0.1**
SOKA	**Soboth**	**6.21**	**330**	*e*Pn	**Pn**	**19 12 00.4**	**-0.5**
	comp=E,0.7nm,0.3s						
OBKA	**Obir**	**6.26**	**326**	*e*Pn	**Pn**	**19 12 01.8**	**+0.1**
	comp=E,0.5nm,0.2s						
ARSA	**Arzberg**	**6.53**	**335**	*e*Pn	**Pn**	**19 12 05.6**	**+0.4**
	comp=E,0.9nm,0.5s						
PLOR	**Plostina**	**6.79**	**47**	⇓P	**Pn**	**19 12 09.3**	**+0.4**
VRI	**Vrincioaia**	**6.84**	**47**	⇑P	**Pn**	**19 12 09.4**	**-0.1**
ABTA	**Abfaltersbach**	**7.37**	**319**	*i* Pn	**Pn**	**19 12 15.2**	**-1.7**
	comp=E,0.9nm,0.3s						
LESA	**Schwarzleotal**	**7.78**	**323**	*e*Pn	**Pn**	**19 12 22.1**	**-0.4**
	comp=E,0.7nm,0.2s						
WTTA	**Wattenberg**	**8.16**	**319**	*e*Pn	**Pn**	**19 12 29.3**	**+1.5**
	comp=E,1.0nm,0.3s						
WATA	**Walderalm**	**8.24**	**319**	*i* Pn	**Pn**	**19 12 29.9**	**+1.1**
	comp=E,0.2nm,0.1s						
MOTA	**Moosalm**	**8.49**	**317**	*i* Pn	**Pn**	**19 12 32.2**	**0.0**
	comp=E,0.9nm,0.4s						

IDC ***13*** *19:16:35.5±1.6, 41°.63S×173°.97E, h0km, mb3.3/2, mbtmp3.3/4, ML3.5/2, Error ellipse: s-maj=41.9km s-min=23.3km az=135.0*

WEL ***13*** *19:16:39.5, 41°.70S×174°.18E, h24km, ML3.7, Mw3.7, Moment Tensor Solution. s4 Moment tensor: Scale 10¹⁴ Nm; Mrr1.35; Mθθ3.08; Mφφ-4.43; Mrθ-1.03; Mθφ0.30; Mrφ2.03; Fault plane solution: Mo4.36000×10¹⁴ NP1: φs318.00000°, δ83.00000°, λ34.00000°. NP2: φs223.00000°, δ56.00000°, λ172.00000°. Principal axes: T 3.6130, Plg29.0000°, Azm187.0000°; N 1.4980, Plg55.0000°, Azm328.0000°; P -5.1110, Plg18.0000°, Azm86.0000°; Stations used: WEL KHZ MRZ LTZ OBLIQUE FAULTING*

WEL ***13*** *19:16:39.5±0.3, 42°.S±2°×17°.4E±°, h10km±2km, M3.7/18, ML3.6/18, MLv3.7/18 Error ellipse: s-maj=3.1km s-min=2.8km az=177.0*

ISC 13 19:16:38.6±0.8, 41°.79S±0°.03×174°.21E±0°.02, h19km±2km, n105, σ1§13/118, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.04**	**6**	P	**Pg**	**19 16 42.5**	**+0.6**
CMWZ				S	**Sg**	**19 16 45.6**	**+1.4**
WDFS	**Ward Fire Stat**	**0.06**	**235**	P	**Pg**	**19 16 43.1**	**+1.1**
SDNS	**Seddon**	**0.14**	**337**	P	**Pg**	**19 16 42.4**	**-0.3**
SDNS				S	**Sg**	**19 16 45.5**	**0.0**
SEDS	**Seddon Fire St**	**0.15**	**320**	P	**Pb**	**19 16 42.4**	**+0.7**
KEKS	**Kekerengu Vall**	**0.24**	**226**	P	**Pg**	**19 16 45.5**	**+1.3**
BSWZ	**Blackbirch Sta**	**0.26**	**287**	P	**Pb**	**19 16 44.4**	**-0.2**
BSWZ				S	**Sb**	**19 16 48.2**	**-0.3**
MGCS	**Blenheim Marlb**	**0.34**	**325**	P	**Pg**	**19 16 45.3**	**-0.6**
TUWZ	**Tuamarina**	**0.41**	**331**	P	**Pg**	**19 16 46.9**	**-0.2**
TCW	**Tory Channel**	**0.58**	**5**	P	**Pb**	**19 16 49.5**	**-0.6**
TCW				S	**Sb**	**19 16 56.8**	**-1.2**
BHW	**Baring Head**	**0.63**	**53**	P	**Pg**	**19 16 51.8**	**+0.8**
WEL	**Wellington**	**0.66**	**40**	P	**Pb**	**19 16 52.0**	**+0.5**
KHZ	**Kahutara**	**0.80**	**218**	P	**Pn**	**19 16 56.3**	**+1.4**
KHZ				S	**Sn**	**19 17 09.2**	**+3.0**
NNZ	**Nelson**	**0.85**	**312**	P	**Pb**	**19 16 54.2**	**-0.5**
MSWZ	**Moikau Station**	**0.87**	**65**	P	**Pn**	**19 16 56.6**	**+0.7**
MSWZ				S	**Sn**	**19 17 09.8**	**+1.8**
CAW	**Cannon Point**	**0.94**	**44**	P	**Pb**	**19 16 56.8**	**+0.5**
CAW				S	**Sn**	**19 17 10.9**	**+1.2**
THZ	**Tophouse**	**0.97**	**271**	P	**Pn**	**19 16 57.4**	**0.0**
PAWZ	**Paruwai Farm**	**1.00**	**66**	P	**Pn**	**19 16 58.2**	**+0.5**
DUWZ	**D'Urville Isla**	**1.01**	**348**	P	**Pb**	**19 16 56.8**	**-0.7**
DUWZ				S	**Sb**	**19 17 09.9**	**-0.6**
KIW	**Kapiti Island**	**1.07**	**30**	P	**Pb**	**19 16 58.5**	**0.0**
MRNZ	**Matariki Terra**	**1.16**	**289**	P	**Pb**	**19 17 00.5**	**+0.5**
MRNZ				S	**Sg**	**19 17 16.2**	**+0.1**
MTW	**Mount Morrison**	**1.16**	**57**	P	**Pn**	**19 17 00.3**	**+0.4**
MTW				S	**Sg**	**19 17 16.6**	**+0.3**
TRWZ	**Traveller**	**1.18**	**71**	P	**Pn**	**19 17 00.4**	**+0.3**
TKNZ	**Takaka Hill**	**1.21**	**308**	P	**Pn**	**19 17 00.6**	**0.0**
OGWZ	**Otaki Gorge**	**1.21**	**37**	P	**Pb**	**19 17 01.3**	**+0.3**
HOWZ	**

MOS Felt (IV) at Barguzin, (III-IV) at Uro.
*NEIC **13** 19:23:33.6±1.3,54˚.06N±0˚.06×109˚.3E±0˚.1,h10km±1km, mb4.5/39,Error ellipse: s-maj=16.6km s-min=7.6km az=121.0*
*BYKL **13** 19:23:33.9±0.2,54˚.03N×109˚.28E*
ISC 13 19:23:32.3±1.0,**54˚05N**±0˚.02×**109˚29E**±0˚.02,**h4**km±7km, **n185,σ1°78/253,mb4.3/40,MS3.4/9,20C-18D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SYVR	**Suvo**	**0.58**	**133**	⇑	*i*PG	**Pg**		**19 23 44.2**	**+0.9**
SYVR					*e*			19 23 51.3	
SYVR					pmax	pmax			
	comp=Z,13μm,0.5s								
SYVR					smax	smax			
	comp=N,31μm,0.6s								
SYVR	**Suvo**	**0.58**	**133**	⇓	*i*Pg	**Pg**		**19 23 44.3**	**+0.9**
	comp=N,3μm,0.6s								
SYVR				⇑	*i*Pg	**Pg**		**19 23 44.3**	**+0.9**
	comp=N,5μm,0.6s								
SYVR				⇑	*i*Pg	**Pg**		**19 23 44.3**	**+0.9**
	comp=N,10μm,0.6s								
SYVR					Pmax			19 23 44.8	
	comp=N,13μm,0.5s								
SYVR					*e*Sg	**Sg**		**19 23 51.9**	**+1.0**
SYVR					Smax			19 23 52.8	
	comp=N,31μm,0.8s								
MXMB	**Maximikha**	**0.86**	**203**	⇑	*i*Pg	**Pg**		**19 23 49.4**	**+0.7**
MXMB					*e*Sg	**Sg**		**19 24 00.6**	**+0.8**
OGRR	**Ongureny**	**1.09**	**248**	⇑	*i*PG	**Pg**		**19 23 53.6**	**+0.5**
OGRR					*e*			19 24 06.8	
OGRR					pmax	pmax			
	comp=Z,747nm,0.7s								
OGRR					smax	smax			
	comp=N,5μm,1.1s								
OGRR	**Ongureny**	**1.09**	**248**	⇓	*i*Pg	**Pg**		**19 23 53.7**	**+0.6**
	comp=N,81nm,0.8s								
OGRR				⇓	*i*Pg	**Pg**		**19 23 53.7**	**+0.6**
	comp=N,265nm,0.8s								
OGRR				⇑	*i*Pg	**Pg**		**19 23 53.7**	**+0.6**
	comp=N,190nm,0.8s								
OGRR					*e*Pb	**Pn**		**19 23 55.1**	**+0.7**
OGRR					max			19 23 55.4	
	comp=N,551nm,0.2s								
OGRR					*e*Sg	**Sg**		**19 24 07.2**	**0.0**
OGRR					Smax			19 24 08.8	
	comp=N,5μm,0.6s								
OGRR					*e*Sb	**Sn**		**19 24 10.1**	**+0.2**
UZR	**Uzur**	**1.18**	**232**	⇑	*i*Pg	**Pg**		**19 23 55.2**	**+0.3**
UZR					Pmax			19 23 56.2	
	comp=N,733nm,0.2s								
UZR					*e*Sg	**Sg**		**19 24 11.0**	**+0.9**
UZR					Smax			19 24 13.3	
	comp=N,7μm,0.7s								
GORB	**Goryachinsk**	**1.23**	**210**	⇑	*i*Pg	**Pb**		**19 23 56.2**	**+0.1**
GORB					*i* Sg	**Sb**		**19 24 12.7**	**+0.4**
YLYR	**Ulyunkhan**	**1.37**	**52**	⇓	*i*PG	**Pn**		**19 23 58.7**	**+0.4**
YLYR					*e*			19 24 15.5	
YLYR					pmax	pmax			
	comp=Z,709nm,0.2s								
YLYR					smax	smax			
	comp=E,5μm,0.3s								
YLYR	**Ulyunkhan**	**1.37**	**52**	⇓	*i*Pg	**Pn**		**19 23 58.6**	**+0.3**
YLYR					*e*Pb	**Pb**		**19 23 59.3**	**+0.8**
YLYR					max			19 23 59.7	
	comp=E,695nm,0.2s								
YLYR					*e*			19 24 02.7	
YLYR					*e*Sg	**Sn**		**19 24 17.4**	**+0.5**
YLYR					Smax			19 24 19.3	
	comp=E,5μm,0.2s								
KELR	**Kotokel**	**1.48**	**210**	⇓	*i*Pg	**Pn**		**19 23 59.5**	**-0.4**
KELR					*e*Sg	**Sn**		**19 24 19.4**	**-0.3**
NIZB	**Nizh Angarsk**	**1.73**	**5**	⇓	*i*PN	**Pb**		**19 24 05.0**	**+0.4**
NIZB					*e*			19 24 28.9	
NIZB					pmax	pmax			
	comp=Z,1μm,0.2s								
NIZB					smax	smax			
	comp=N,7μm,0.2s								
NIZB	**Nizh Angarsk**	**1.73**	**5**	⇓	*i*Pn	**Pb**		**19 24 05.0**	**+0.4**
NIZB					*e*Pg	**Pg**		**19 24 06.0**	**+0.6**
NIZB					Pmax			19 24 06.6	
	comp=N,1μm,0.2s								
NIZB					*e*Sg	**Sg**		**19 24 28.5**	**+0.7**
NIZB					Smax			19 24 30.9	
	comp=N,12μm,0.3s								
ZRHB	**Zarechye**	**1.98**	**221**		*e*Pn	**Pn**		**19 24 06.7**	**+0.1**
ZRHB					*e*Pg	**Pb**		**19 24 09.6**	**+0.7**
ZRHB					*e*			19 24 15.6	
ZRHB					max			19 24 22.2	
	comp=N,2μm,0.8s								
ZRHB					*e*Sg	**Sb**		**19 24 35.2**	**+1.4**
ZRHB					Smax			19 24 49.2	
	comp=N,10μm,1.0s								
KMO	**Kumora**	**2.14**	**30**	⇓	*i*PN	**Pn**		**19 24 10.2**	**+1.3**
KMO					*e*			19 24 12.8	
KMO					*e*			19 24 41.4	
KMO					pmax	pmax			
	comp=Z,422nm,0.3s								
KMO					smax	smax			
	comp=N,5μm,1.0s								
KMO	**Kumora**	**2.14**	**30**	⇓	*i*Pn	**Pn**		**19 24 10.2**	**+1.3**
KMO					*e*Pg	**Pb**		**19 24 12.7**	**+1.0**
KMO					*e*			19 24 16.1	
KMO					max			19 24 22.9	
	comp=N,1μm,0.5s								
KMO					*e*Sg	**Sg**		**19 24 41.7**	**+0.6**
KMO					Smax			19 24 51.6	
	comp=N,5μm,1.0s								
TRG	**Tyrgan**	**2.19**	**235**	⇓	*i*PN	**Pn**		**19 24 09.8**	**+0.3**
TRG					*e*			19 24 12.4	
TRG					*e*S	**Sn**		**19 24 37.6**	**+0.5**
TRG					*e*			19 24 40.9	
TRG					pmax	pmax			
	comp=Z,379nm,0.3s								
TRG					smax	smax			
	comp=N,3μm,0.4s								
TRG	**Tyrgan**	**2.19**	**235**	⇓	*i*Pn	**Pn**		**19 24 09.8**	**+0.3**
TRG					*e*Pg	**Pb**		**19 24 13.2**	**+0.7**
TRG					*e*			19 24 18.7	
TRG					max			19 24 22.2	
	comp=N,340nm,0.2s								
TRG					*e*Sn	**Sn**		**19 24 38.0**	**+0.9**
TRG					*e*Sg	**Sb**		**19 24 41.0**	**+1.0**
TRG					Smax			19 24 41.9	
	comp=N,3μm,0.4s								
UUDB	**Ulan-Yde**	**2.40**	**205**		*e*Pn	**Pn**		**19 24 12.7**	**+0.2**
UUDB					*e*Pg	**Pb**		**19 24 15.8**	**-0.3**
UUDB					Pmax			19 24 23.1	
	comp=N,373nm,0.4s								
UUDB					*e*			19 24 25.6	
UUDB					*e*Sn	**Sn**		**19 24 42.1**	**-0.2**
UUDB					*e*Sg	**Sb**		**19 24 47.0**	**+0.9**
UUDB					*e*			19 24 52.8	
UUDB					max			19 24 57.7	
	comp=N,5μm,1.6s								
YOAB	**Uoyan, Buryati**	**2.52**	**33**		*e*PN	**Pb**		**19 24 20.2**	**+2.1**
YOAB					*e*			19 24 53.7	
YOAB					pmax	pmax			
	comp=Z,247nm,0.3s								
YOAB					smax	smax			
	comp=E,3μm,0.3s								
YOAB	**Uoyan, Buryati**	**2.52**	**33**		*e*Pg	**Pb**		**19 24 20.1**	**+2.0**
YOAB					Pmax			19 24 27.7	
	comp=E,427nm,0.4s								
YOAB					*e*Sg	**Sg**		**19 24 53.5**	**+0.4**
YOAB					Smax			19 25 23.5	
	comp=E,7μm,1.6s								
FFNB	**Fofonovo**	**2.52**	**218**		*e*Pn	**Pn**		**19 24 14.1**	**0.0**
FFNB					*e*Pg	**Pb**		**19 24 18.8**	**+0.6**
FFNB					*e*Sn	**Sn**		**19 24 44.3**	**-1.0**
FFNB					*e*Sg	**Sb**		**19 24 51.2**	**+1.6**
KAB	**Kabansk**	**2.56**	**219**		*e*PN	**Pb**		**19 24 19.4**	**+0.5**
KAB					*e*			19 24 53.3	
KAB					pmax	pmax			
	comp=Z,634nm,0.5s								
KAB					smax	smax			
	comp=N,5μm,0.9s								
KAB	**Kabansk**	**2.56**	**219**		*e*Pn	**Pn**		**19 24 14.9**	**+0.2**
KAB					*e*Pg	**Pb**		**19 24 19.0**	**+0.1**
KAB					Pmax			19 24 33.0	
	comp=N,715nm,1.0s								
KAB					*e*Sn	**Sn**		**19 24 46.7**	**+0.4**
KAB					*e*Sg	**Sb**		**19 24 52.7**	**+2.0**
KAB					Smax			19 25 11.4	
	comp=N,5μm,0.8s								
UKT	**Uakit**	**2.89**	**58**	⇓	*i*PN	**Pn**		**19 24 20.0**	**+0.7**
UKT					*e*			19 24 25.4	
UKT					*e*			19 25 02.5	
UKT					pmax	pmax			
	comp=Z,36nm,0.2s								
UKT					smax	smax			
	comp=N,775nm,0.3s								
UKT	**Uakit**	**2.89**	**58**	⇓	*i*Pn	**Pn**		**19 24 20.1**	**+0.7**
UKT					*e*Pg	**Pb**		**19 24 25.6**	**+1.0**
UKT					Pmax			19 24 34.6	
	comp=N,216nm,0.3s								
UKT					*e*Sg	**Sb**		**19 25 02.8**	**+2.5**
UKT					Smax			19 25 13.4	
	comp=N,1μm,1.4s								
BGT	**Bolshoye Golou**	**3.09**	**231**		*e*Pn	**Pn**		**19 24 21.9**	**0.0**
BGT					*e*Pg	**Pb**		**19 24 28.8**	**+1.0**
BGT					Pmax			19 24 34.3	
	comp=N,119nm,0.3s								
BGT					*e*Sn	**Sn**		**19 24 57.6**	**-1.7**
BGT					*e*Sg	**Sb**		**19 25 07.9**	**+2.0**
BGT					Smax			19 25 13.5	
	comp=N,1μm,1.0s								
CIT	**Chita**	**3.28**	**127**		*e*PN	**Pn**		**19 24 25.8**	**+1.2**
CIT					*e*			19 24 32.4	
CIT					*e*S	**Sn**		**19 25 03.0**	**-1.1**
CIT					*e*			19 25 13.0	
CIT					pmax	pmax			
	comp=Z,1μm,1.3s								
CIT					smax	smax			
	comp=E,3μm,1.4s								
CIT	**Chita**	**3.28**	**127**		*e*Pn	**Pn**		**19 24 23.9**	**-0.7**
CIT					*e*Pg	**Pb**		**19 24 32.5**	**+1.4**
CIT					Pmax			19 24 32.9	
	comp=E,1μm,0.7s								
CIT					*e*Sn	**Sn**		**19 25 03.0**	**-1.1**
CIT					*e*Sg	**Sb**		**19 25 14.5**	**+3.1**
CIT					Smax			19 25 20.6	
	comp=E,2μm,0.6s								
LSTR	**Listvyanka**	**3.47**	**233**	⇓	*i*Pn	**Pn**		**19 24 27.3**	**+0.1**
LSTR					*e*Pg	**Pb**		**19 24 36.3**	**+1.9**
LSTR					*e*			19 24 41.1	
LSTR					max			19 24 50.7	
	comp=E,161nm,0.7s								
LSTR					*e*Sn	**Sn**		**19 25 08.1**	**-0.6**
LSTR					*e*Sg	**Sb**		**19 25 21.1**	**+4.2**
LSTR					Smax			19 25 26.2	
	comp=E,1μm,1.1s								
IRK	**Irkutsk**	**3.52**	**241**		*e*PN	**Pn**		**19 24 28.2**	**+0.4**
IRK					*e*			19 24 35.3	
IRK					*e*			19 25 20.9	
IRK					pmax	pmax			
	comp=Z,172nm,0.6s								
IRK					smax	smax			
	comp=N,3μm,0.5s								
IRK	**Irkutsk**	**3.52**	**241**		*e*Pn	**Pn**		**19 24 28.3**	**+0.4**
IRK					*e*Pg	**Pb**		**19 24 35.6**	**+0.3**
IRK					Pmax			19 24 46.3	
	comp=N,400nm,0.5s								
IRK					*e*Sn	**Sn**		**19 25 07.9**	**-2.1**
IRK					*e*Sg	**Sb**		**19 25 21.5**	**+3.1**
IRK					Smax			19 25 25.3	
	comp=N,3μm,0.8s								
IVK	**Ivanovka**	**3.71**	**235**	⇑	*i*Pn	**Pn**		**19 24 30.8**	**+0.3**
IVK					*e*Pg	**Pb**		**19 24 40.2**	**+1.7**
IVK					*e*			19 24 49.4	
IVK					max			19 24 56.5	
	comp=N,278nm,0.6s								
IVK					*e*Sg	**Sb**		**19 25 27.9**	**+4.0**
IVK					*e*SgSg	**SbSb**		**19 25 28.8**	**-0.2**
IVK					max			19 25 31.7	
	comp=N,2μm,0.9s								
TLY	**Talaya**	**4.17**	**237**			**Pn**		**19 24 36.7**	**0.0**
TLY	**Talaya**	**4.17**	**237**		*ce*PN	**Pn**		**19 24 36.6**	**-0.2**
TLY					pmax	pmax			
	comp=Z,28nm,0.6s								
TLY	**Talaya**	**4.17**	**237**	⇓	*i*Pn	**Pn**		**19 24 36.5**	**-0.2**
TLY					*e*Pg	**Pb**		**19 24 48.1**	**+1.9**
TLY					*e*			19 24 52.2	
TLY					max			19 24 57.8	
	comp=Z,201nm,0.6s								
TLY					*e*Sn	**Sn**		**19 25 24.4**	**-1.4**
TLY					*e*			19 25 38.0	
TLY					*e*Sg	**Sb**		**19 25 41.3**	**+4.4**
TLY					Smax			19 25 45.1	
	comp=Z,663nm,0.7s								
NLYR	**Nelyaty**	**4.41**	**54**	⇑	*i*Pn	**Pn**		**19 24 40.8**	**+0.8**
NLYR					*e*Pg	**Pb**		**19 24 54.5**	**+4.2**
NLYR					Pmax			19 25 07.8	
	comp=Z,191nm,0.8s								
NLYR					*e*Sg	**Sg**		**19 25 52.4**	**-1.3**
NLYR					Smax			19 26 12.6	
	comp=Z,1μm,1.1s								
BOD	**Bodaibo**	**4.61**	**33**		*e*Pn	**Pn**		**19 24 43.7**	**+0.9**
BOD					max			19 24 53.0	
	comp=Z,40nm,0.3s								
BOD					*e*Sn	**Sn**		**19 25 37.2**	**+0.5**
BOD					*e*Sg	**Sg**		**19 25 56.3**	**-4.0**
BOD					Smax			19 26 11.9	
	comp=Z,1μm,1.1s								
ARS	**Arshan**	**4.67**	**246**		*e*Pn	**Pn**		**19 24 43.6**	**0.0**
ARS					*e*Pg	**Pb**		**19 24 56.7**	**+1.9**
ARS					*e*			19 25 03.1	
ARS					max			19 25 14.2	
	comp=Z,226nm,0.5s								
ARS					*e*Sn	**Sn**		**19 25 37.0**	**-1.3**
ARS					*e*Sg	**Sb**		**19 25 57.2**	**+5.9**
ARS					Smax			19 26 03.6	
	comp=Z,3μm,0.8s								
KPC	**Khapcheranga**	**4.76**	**155**		*e*PN	**Pn**		**19 24 43.5**	**-1.4**
KPC					*e*			19 24 58.3	
KPC					*e*			19 25 58.3	
KPC					pmax	pmax			
	comp=Z,277nm,0.7s								
KPC					smax	smax			
	comp=E,1μm,1.3s								
KPC	**Khapcheranga**	**4.76**	**155**	⇑	*i*Pn	**Pn**		**19 24 43.4**	**-1.4**
KPC					*e*Pg	**Pb**		**19 24 59.1**	**+2.8**
KPC					Pmax			19 25 02.5	
	comp=E,277nm,0.6s								
KPC					*e*Sn	**Sn**		**19 25 39.7**	**-0.8**
KPC					*e*Sg	**Sg**		**19 26 00.8**	**-4.2**
KPC					Smax			19 26 01.6	
	comp=E,1μm,1.0s								
ZAK	**Zakamensk**	**5.21**	**228**		*e*PN	**Pn**		**19 24 51.7**	**+0.5**
ZAK					*e*			19 26 16.3	
ZAK					pmax	pmax			
	comp=Z,52nm,0.7s								
ZAK					smax	smax			
	comp=N,610nm,1.1s								
ZAK	**Zakamensk**	**5.21**	**228**		*e*Pn	**Pn**		**19 24 51.7**	**+0.5**
ZAK					*e*			19 24 59.3	
ZAK					*e*Pg	**Pb**		**19 25 07.7**	**+3.6**
ZAK					Pmax			19 25 26.5	
	comp=N,53nm,0.8s								
ZAK					*e*Sg	**Sg**		**19 26 14.9**	**-4.7**
ZAK					*e*			19 26 29.2	
ZAK					max			19 26 32.2	
	comp=N,609nm,1.3s								
MOY	**Mondy**	**5.57**	**248**		*e*PN	**Pn**		**19 24 57.5**	**+1.4**
MOY					*e*			19 25 14.6	
MOY					*e*S	**Sn**		**19 25 59.5**	**-1.0**
MOY					*e*			19 26 23.8	
MOY					pmax	pmax			
	comp=Z,138nm,1.1s								
MOY					smax	smax			
	comp=E,794nm,1.5s								
MOY	**Mondy**	**5.57**	**248**		*e*Pn	**Pn**		**19 24 57.4**	**+1.4**
MOY					*e*			19 25 03.9	
MOY					*e*Pg	**Pb**		**19 25 14.0**	**+3.9**
MOY					Pmax			19 25 23.1	
	comp=E,138nm,0.8s								
MOY					*e*Sn	**Sn**		**19 25 59.2**	**-1.3**
MOY					*e*Sg	**Sg**		**19 26 25.0**	**-6.0**
MOY					Smax			19 26 33.5	
	comp=E,802nm,1.1s								
VTMR	**Vitim**	**5.69**	**17**		*e*Pn	**Pn**		**19 24 58.0**	**+0.4**
VTMR					*e*Pg	**Pb**		**19 25 16.4**	**+4.3**
VTMR					*e*Sn	**Sn**		**19 26 02.2**	**-1.1**
VTMR					*e*Sg	**Sg**		**19 26 30.6**	**-4.3**
CRS	**Chara**	**5.85**	**57**		*e*Pn	**Pn**		**19 25 00.6**	**+0.8**
CRS					*e*Pg	**Pb**		**19 25 19.5**	**+4.7**
CRS					Pmax			19 25 31.7	
	comp=E,130nm,1.0s								
CRS					*e*Sg	**Sg**		**19 26 34.4**	**-5.5**
CRS					Smax			19 27 03.8	
	comp=E,632nm,1.6s								
ORL	**Orlik**	**5.88**	**259**		*e*PN	**Pn**		**19 25 01.8**	**+1.4**
ORL					*e*			19 25 19.6	
ORL					*e*S	**Sn**		**19 26 08.1**	**-0.2**
ORL					*e*			19 26 34.3	
ORL					pmax	pmax			
	comp=Z,247nm,0.9s								
ORL					smax	smax			
	comp=N,876nm,0.7s								
ORL	**Orlik**	**5.88**	**259**	⇓	*i*Pn	**Pn**		**19 25 02.0**	**+1.6**
ORL					*e*			19 25 09.6	
ORL					max			19 25 12.3	
	comp=N,231nm,0.8s								
ORL					*e*Sn	**Sn**		**19 26 07.8**	**-0.5**
ORL					*e*Sg	**Sg**		**19 26 36.3**	**-4.9**
ORL					Smax			19 26 45.9	
	comp=N,878nm,0.8s								
TUP	**Tupik**	**6.26**	**82**		*e*PN	**Pn**		**19 25 05.2**	**-0.3**
TUP					*e*			19 25 25.9	
TUP					*e*S	**Sn**		**19 26 16.9**	**-0.6**
TUP					*e*			19 26 47.5	
TUP					pmax	pmax			
	comp=Z,36nm,0.5s								
TUP					smax	smax			
	comp=N,1μm,1.1s								
TUP	**Tupik**	**6.26**	**82**		*e*Pn	**Pn**		**19 25 05.3**	**-0.3**
TUP					*e*Pg	**Pb**		**19 25 25.9**	**+4.0**
TUP					Pmax			19 25 35.3	
	comp=N,41nm,0.5s								
TUP					*e*Sg	**Sg**		**19 26 47.6**	**-5.7**
TUP					Smax			19 27 00.0	
	comp=N,1μm,0.9s								
ULN	**Ulaanbaatar**	**6.36**	**194**			**Pn**		**19 25 08.0**	**+1.1**
ULN	**Ulaanbaatar**	**6.36**	**194**		*ce*PN	**Pn**		**19 25 09.4**	**+2.5**
ULN					pmax	pmax			
	comp=Z,6.0nm,0.7s								
ULN	**Ulaanbaatar**	**6.36**	**194**		*e*Pn	**Pn**		**19 25 07.9**	**+1.0**
ULN					*e*Pg	Pb		19 25 28.6	+5.0
ULN					Pmax			19 25 29.0	
	comp=Z,88nm,0.5s								
ULN					*e*Sg	**Sg**		**19 26 51.7**	**-4.6**
ULN					Smax			19 26 55.3	
	comp=Z,2μm,2.0s								
SONM	**Songino Array**	**6.49**	**198**		Pn	**Pn**		**19 25 08.7**	**0.0**
	comp=Z,0.9nm,0.3s,baz=14,slow=14,SNR=19								
SONM					Lg	Lg		19 26 54.5	
	comp=Z,19nm,0.3s,baz=14,slow=26,SNR=11								
SONM					LR	LR		19 27 54.5	
	comp=Z,362nm,19.8s,baz=30,slow=41								
	comp=Z,2.1nm,0.4s								
SONM	**Songino Array**	**6.49**	**198**			**Pn**		**19 25 09.1**	**+0.4**
SONM	**Songino Array**	**6.49**	**198**		PN	**Pn**		**19 25 09.1**	**+0.4**
HILR	**Hailar Array B**	**7.89**	**121**		Pn	**Pn**		**19 25 25.7**	**-2.1**
	baz=23,slow=8.2								
HILR					Lg	Lg		19 27 39.0	
	baz=313,slow=26								
HILR					LR	LR		19 28 56.1	
	comp=Z,316nm,19.9s,baz=65,slow=41								
	comp=Z,7.5nm,0.4s								
KNGR	**Kungurtug, Tuv**	**8.00**	**249**		*i* PN	**Pn**		**19 25 31.3**	**+1.9**
HIA	**Hailar**	**8.07**	**122**			**Pn**		**19 25 28.0**	**-2.3**
HIA	**Hailar**	**8.07**	**122**		PN	**Pn**		**19 25 28.0**	**-2.3**
HIA	**Hailar**	**8.07**	**122**		*e*Pn	**Pn**		**19 25 31.1**	**+0.8**
HIA					*e*Sg	Sg		19 27 42.4	-8.9
HIA					Smax			19 28 07.6	
	comp=Z,498nm,1.7s								
TDJR	**Todzha**	**8.09**	**264**		*e*Pn	**Pn**		**19 25 33.6**	**+3.0**
TDJR					*e*Sg	Sg		19 27 42.7	-9.1
KZLR	**Kyzyl**	**9.28**	**261**		*e*Sg	Sn		19 28 20.6	+49
CLNS	**Chul'man**	**9.29**	**66**		*e*Sg	Sn		19 28 22.6	+51
ARDR	**Aradan**	**9.61**	**268**		*e*Pn	**Pn**		**19 25 52.3**	**+0.9**
ARDR					*e*Pg			19 26 26.2	
ARDR					*e*			19 28 00.5	
ARDR					*e*Sg	Sn		19 28 29.4	+50
ZEA	**Zeya**	**10.61**	**84**		*e*P	Pn		19 26 11.6	+6.7
ZEA					*e*			19 28 10.9	
HEH	**HeiHe**	**11.76**	**102**		*e*P	Pn		19 26 25.6	+4.9
HEH					S	Sn		19 28 54.6	+22
HEH					smax	smax			
	comp=N,400nm,1.0s								
HEH					smax	smax			
	comp=E,150nm,1.2s								
HHC	**Hu-ho-hao-te**	**13.30**	**172**		*e*P	**Pn**		**19 26 45.3**	**+3.4**
HHC					S	Sn		19 29 20.8	+11
HHC					pmax	pmax			
	comp=Z,5.0nm,1.0s								
HHC					pmax	pmax			
	comp=Z,200nm,5.5s								
HHC					LR	LR			
	comp=N,400nm,12.3s								
HHC					LR	LR			
	comp=E,190nm,9.5s								
HHC					LR	LR			
	comp=Z,480nm,12.0s								
BTO2	**Baotou**	**13.32**	**178**		*e*P	**Pn**		**19 26 42.3**	**0.0**
BTO2					pP	P		19 26 46.0	-6.2
BTO2					sP			19 26 49.0	
BTO2					PP	**PnPn**		**19 26 53.3**	**+3.3**
BTO2					S	**Sn**		**19 29 12.5**	**+1.7**
BTO2					pmax	pmax			
	comp=Z,15nm,0.5s								
BTO2					pmax	pmax			
	comp=Z,270nm,5.3s								
BTO2					LR	LR			
	comp=N,2μm,8.7s								
BTO2					LR	LR			
	comp=E,2μm,9.0s								
BTO2					LR	LR			
	comp=Z,2μm,10.0s								
YAK	**Yakutsk**	**13.38**	**45**		Pn	Pn		19 26 38.4	-4.4
	comp=Z,0.7nm,0.3s,baz=145,slow=2.2,SNR=4.2								
YAK					Lg	Lg		19 30 29.6	
	comp=Z,0.6nm,0.3s,baz=308,slow=19,SNR=5.2								
YAK					LR	LR		19 32 12.0	
	comp=Z,82nm,21.2s,baz=294,slow=39								
	comp=Z,5.9nm,0.6s								
YAK	**Yakutsk**	**13.38**	**45**		*e*P	**Pn**		**19 26 40.7**	**-2.1**
YAK					*e*S	**Sn**		**19 29 10.6**	**-1.2**
YAK					pmax	pmax			
	comp=Z,9.0nm,1.1s								
YAK					pmax	pmax			
	comp=N,3.0nm,1.4s								
YAK					pmax	pmax			
	comp=E,5.0nm,1.5s								
YAK					smax	smax			
	comp=N,133nm,5.6s								
YAK					smax	smax			
	comp=E,123nm,4.3s								
YAK					MLR	MLR			
	comp=Z,237nm,20.0s								
YAK					MLR	MLR			
	comp=N,197nm,29.0s								
YAK					MLR	MLR			
	comp=E,82nm,23.0s								
DGZ	**Jazzator, Alta**	**14.17**	**261**		*i* P	**Pn**		**19 26 54.4**	**+0.6**
BNX	**BinXian**	**14.30**	**118**	⇓	P	**Pn**		**19 26 55.6**	**+0.1**
BNX					S	**Sn**		**19 29 35.4**	**+0.9**
B

CN2					LR	LR				
	comp=Z,500nm,11.0s									
KLR	**Kul'dur**	**14.73**	**100**		LR	LR	19 33 12.1			
	comp=Z,52nm,20.9s,baz=298,slow=40									
KLR	**Kul'dur**	**14.73**	**100**	*i*	P	**Pn**	**19 27 02.2**	**+0.9**		
BJI2	**Beijing**	**14.79**	**159**		P	**Pn**	**19 27 01.1**	**-1.1**		
BJI2					sP	**P**	**19 27 06.3**	**-2.0**		
BJI2					pmax	pmax				
	comp=Z,5.0nm,0.6s									
BJT	**Baijiatuau**	**14.79**	**159**			**Pn**	**19 27 00.9**	**-1.3**		
BJT	**Baijiatuau**	**14.79**	**159**		P	**Pn**	**19 27 00.9**	**-1.3**		
GTA2	**Gaotai**	**15.94**	**208**		P	**P**	**19 27 22.1**	**+0.8**		
GTA2					pmax	pmax				
	comp=Z,5.0nm,1.4s									
GTA2					LR	LR				
	comp=N,180nm,10.5s									
GTA2					LR	LR				
	comp=E,350nm,10.2s									
GTA2					LR	LR				
	comp=Z,350nm,9.1s									
WMQ	**Urumqi**	**17.43**	**243**	*eP*		**P**	**19 27 38.4**	**+0.8**		
WMQ					sP	sP	19 27 44.4	+5.1		
WMQ					PP	**PnPn**	**19 27 49.0**	**+2.9**		
WMQ					S	**Sn**	**19 30 51.6**	**+1.1**		
USRK	**Ussuriysk Ar.**	**17.75**	**114**		Lg	Lg	19 32 48.4			
	comp=Z,0.2nm,0.3s,baz=310,slow=27,SNR=6.5									
NRIK	**Noril'sk**	**18.29**	**335**		P	**Pn**	**19 27 44.2**	**-2.5**		
	comp=Z,0.6nm,0.3s,baz=123,slow=14,SNR=10									
NRIK					S	Sn	19 30 54.2	-17		
	comp=Z,12nm,0.9s,baz=128,slow=19,SNR=6.9									
NRIK					LR	LR	19 35 26.5			
	comp=Z,198nm,20.2s,baz=169,slow=39									
	comp=Z,4.0nm,0.6s									
NRIK	**Noril'sk**	**18.29**	**335**			**Pn**	**19 27 44.6**	**-2.0**		
NRIK	**Noril'sk**	**18.29**	**335**		P	**Pn**	**19 27 44.6**	**-2.0**		
NRIK					pmax	pmax				
	comp=Z,12nm,0.8s									
LZH	**Lanzhou**	**18.36**	**194**	*eP*		**P**	**19 27 49.5**	**+1.4**		
LZH					sP	sP	19 27 59.0	+9.3		
LZH					SS	S	19 31 44.9	+26		
LZH					pmax	pmax				
	comp=Z,5.0nm,1.3s									
LZH					LR	LR				
	comp=N,470nm,11.7s									
LZH					LR	LR				
	comp=E,260nm,12.0s									
LZH					LR	LR				
	comp=Z,510nm,11.3s									
LZDM	**Lanzhou Array**	**18.51**	**194**		P	**P**	**19 27 48.2**	**-1.7**		
	comp=Z,1.2nm,0.6s,baz=1.6,slow=10,SNR=6.0									
MK31	**Makanchi Array**	**18.59**	**258**	*ceP*		**P**	**19 27 50.4**	**0.0**		
MKAR	**Makanchi Array**	**18.59**	**258**		P	**P**	**19 27 49.4**	**-1.0**		
	comp=Z,0.3nm,0.3s,baz=63,slow=9.6,SNR=22									
	comp=Z,1.5nm,0.7s									
MKAR	**Makanchi Array**	**18.59**	**258**			**P**	**19 27 47.1**	**-3.2**		
MAKZ	**Makanchi**	**18.77**	**258**			**P**	**19 27 50.0**	**-2.3**		
MAKZ	**Makanchi**	**18.77**	**258**		P	**P**	**19 27 50.0**	**-2.3**		
MAKZ					pmax	pmax				
	comp=Z,4.0nm,0.9s									
KURK	**Kurchatov**	**18.94**	**272**			**P**	**19 27 51.0**	**-3.0**		
KURK	**Kurchatov**	**18.94**	**272**	*ceP*		**P**	**19 27 52.2**	**-1.9**		
KURK					pmax	pmax				
	comp=Z,6.0nm,1.3s									
KURBB	**Kurchatov Arra**	**19.03**	**272**		P	**P**	**19 27 53.5**	**-1.6**		
	comp=Z,0.1nm,0.3s,baz=68,slow=11,SNR=12									
KURBB					Lg	Lg	19 33 27.0			
	baz=64,slow=30,SNR=3.6									
	comp=Z,1.9nm,0.6s									
TIXI	**Tiksi**	**19.60**	**18**		P	**P**	**19 28 00.6**	**-0.6**		
	comp=Z,0.9nm,0.3s,baz=233,slow=7.2,SNR=32									
TIXI					LR	LR	19 36 00.5			
	comp=Z,172nm,18.7s,baz=189,slow=38									
	comp=Z,7.6nm,0.5s									
TIXI	**Tiksi**	**19.60**	**18**			**P**	**19 27 59.0**	**-2.2**		
TIXI					IAmb	IAmb	19 28 13.2			
	comp=Z,23nm,1.1s									
TIXI	**Tiksi**	**19.60**	**18**	*ceP*		**P**	**19 27 59.8**	**-1.3**		
TIXI					pmax	pmax				
	comp=Z,16nm,1.0s									
XAN	**Xi'an**	**20.01**	**181**	⇑*P*		**P**	**19 28 03.8**	**-2.2**		
XAN					pP	sP	19 28 11.5	+3.8		
XAN					S	S	19 30 16.8	-95		
XAN					pmax	pmax				
	comp=Z,4.0nm,1.1s									
XAN					pmax	pmax				
	comp=Z,180nm,5.3s									
XAN					LR	LR				
	comp=N,490nm,6.2s									
XAN					LR	LR				
	comp=E,540nm,8.2s									
XAN					LR	LR				
	comp=Z,680nm,10.3s									
GOMU	**GeErMu**	**20.50**	**215**		P	**P**	**19 28 12.0**	**+0.4**		
GOMU					pmax	pmax				
	comp=Z,8.0nm,1.1s									
KSRS	**Korea Array**	**20.98**	**135**		P	**P**	**19 28 16.5**	**+0.1**		
	comp=Z,1.3nm,1.0s,baz=337,slow=11,SNR=7.3									
KSRS					LR	LR	19 37 28.9			
	comp=Z,108nm,18.3s,baz=335,slow=40									
	comp=Z,1.3nm,1.0s									
BVAR	**Borovoye Array**	**22.95**	**283**		P	**P**	**19 28 37.7**	**+0.3**		
	comp=Z,10nm,0.9s,baz=75,slow=12,SNR=19									
	comp=Z,10nm,0.9s									
BORK	**Borovoye**	**22.98**	**283**			**P**	**19 28 36.2**	**-1.5**		
BORK	**Borovoye**	**22.98**	**283**	*ceP*		**P**	**19 28 36.0**	**-1.7**		
BORK					pmax	pmax				
	comp=Z,14nm,0.8s									
MA2	**Magadan**	**23.06**	**59**		LR	LR	19 37 54.9			
	comp=Z,164nm,18.7s,baz=262,slow=37									
MA2	**Magadan**	**23.06**	**59**	*ceP*		**P**	**19 28 38.5**	**0.0**		
MA2					pmax	pmax				
	comp=Z,6.0nm,1.2s									
CD2	**Chengdu**	**23.47**	**192**		P	**P**	**19 28 42.8**	**-0.1**		
CD2					pmax	pmax				
	comp=Z,10.0nm,0.8s									
ASAJ	**Asahikawa**	**23.76**	**101**		LR	LR	19 39 05.4			
	comp=Z,105nm,19.2s,baz=298,slow=39									
SEY	**Seymchan**	**23.77**	**51**	*i*	P	**P**	**19 28 45.7**	**+0.2**		
SEY					pmax	pmax				
	comp=Z,5.0nm,1.2s									
WHN	**Wuhan**	**23.78**	**169**		P	**P**	**19 28 50.8**	**+5.0**		
WUS	**Wushi**	**23.79**	**250**			**P**	**19 28 44.8**	**-1.3**		
AAK	**Ala-Archa**	**25.53**	**258**		LR	LR	19 39 35.1			
	comp=Z,56nm,20.3s,baz=42,slow=38									
JNU	**Nakatsue**	**25.93**	**135**		LR	LR	19 40 50.3			
	comp=Z,50nm,18.1s,baz=341,slow=40									
KSH2	**Kashi**	**27.23**	**251**		P	**P**	**19 29 15.6**	**-1.8**		
KSH2					sP	sP	19 29 26.9	+7.7		
KSH2					pmax	pmax				
	comp=Z,3.0nm,0.7s									
PZH	**PanZhiHua**	**28.08**	**194**		P	**P**	**19 29 27.4**	**+2.3**		
ARTI	**Arti**	**28.59**	**296**		P	P	19 29 44.7	+15		
ARTI							19 30 39.3			
BILL	**Bilibino**	**29.63**	**40**	*ceP*		**P**	**19 29 39.2**	**+0.9**		
BILL					pmax	pmax				
	comp=Z,14nm,3.0s									
ABKAR	**Akbulak array**	**30.48**	**281**		P	**P**	**19 29 45.8**	**-0.2**		
KIRV	**Kirov**	**32.54**	**303**	*i*	P	**P**	**19 30 04.1**	**+0.1**		
CMAR	**Chiang Mai Arr**	**36.42**	**197**		P	**P**	**19 30 36.5**	**-1.5**		
	comp=Z,0.7nm,0.8s,baz=358,slow=8.2,SNR=6.4									
	comp=Z,0.7nm,0.8s									
CMAR	**Chiang Mai Arr**	**36.42**	**197**	*i*	P	**P**	**19 30 37.9**	**0.0**		
CMAR					pmax	pmax				
	comp=Z,1.0nm,0.9s									
KLMR	**Klimovskoe**	**36.48**	**309**	*eP*		**P**	**19 30 37.0**	**-1.1**		
KLMR				*e*			19 32 00.8			
KLMR					pmax	pmax				
	comp=Z,28nm,1.4s									
TNA	**Tin City**	**40.07**	**40**		P	**P**	**19 31 09.1**	**+0.9**		
FINES	**FINESS Array B**	**42.11**	**315**		P	**P**	**19 31 24.4**	**-0.7**		
	comp=Z,1.7nm,0.8s,baz=59,slow=7.4,SNR=6.2									
	comp=Z,1.7nm,0.8s									
FINES	**FINESS Array B**	**42.11**	**315**	*i*	P	**P**	**19 31 25.0**	**-0.1**		
FINES					pmax	pmax				
	comp=Z,2.0nm,0.8s									
F19K	**Shaleruckik Mo**	**43.13**	**35**		P	**P**	**19 31 33.3**	**0.0**		
KIV	**Kislovodsk**	**43.30**	**285**	*eP*		**P**	**19 31 34.8**	**-0.3**		
KIV					pmax	pmax				
	comp=Z,9.0nm,1.1s									
F21K	**Alatna River**	**44.35**	**34**			**P**	**19 31 43.5**	**+0.3**		
F21K					IAmb	IAmb	19 31 44.5			
	comp=Z,4.4nm,1.0s									
GNI	**Garni**	**44.52**	**279**		LR	LR	19 53 41.5			
	comp=Z,43nm,19.7s,baz=34,slow=41									
G21K	**Allakaket**	**44.73**	**34**		P	**P**	**19 31 46.2**	**0.0**		
J19K	**Poorman**	**45.42**	**38**		P	**P**	**19 31 52.2**	**+0.5**		
J19K					IAmb	IAmb	19 31 53.2			
	comp=Z,3.9nm,1.1s									
H21K	**Melozitna River**	**45.46**	**35**		P	**P**	**19 31 52.3**	**+0.3**		
H21K					IAmb	IAmb	19 31 53.2			
	comp=Z,6.6nm,1.0s									
H22K	**Ishtalitna Cre**	**45.80**	**34**		P	**P**	**19 31 55.0**	**+0.3**		
H22K					IAmb	IAmb	19 32 17.1			
	comp=Z,8.2nm,1.5s									
L18K	**Granite Mounta**	**46.04**	**40**		P	**P**	**19 31 57.2**	**+0.6**		
L18K					IAmb	IAmb	19 32 09.4			
	comp=Z,8.8nm,1.4s									
AKASG	**Malin Array Be**	**46.53**	**300**		P	**P**	**19 31 59.6**	**-1.0**		
	comp=Z,0.5nm,0.5s,baz=48,slow=9.3,SNR=6.1									
	comp=Z,0.5nm,0.5s									
AKASG	**Malin Array Be**	**46.53**	**300**		IAmb	IAmb	19 32 37.3			
	comp=Z,3.5nm,1.2s									
AKASG	**Malin Array Be**	**46.53**	**300**	*i*	P	**P**	**19 32 00.9**	**+0.4**		
AKASG					pmax	pmax				
	comp=Z,1.0nm,0.4s									
MLY	**Manley**	**46.53**	**35**		P	**P**	**19 32 00.6**	**+0.2**		
MLY					IAmb	IAmb	19 32 06.5			
	comp=Z,8.7nm,1.5s									
G24K	**Hadweenzic Riv**	**46.58**	**32**		P	**P**	**19 32 01.3**	**+0.5**		
G24K					IAmb	IAmb	19 32 02.0			
	comp=Z,2.7nm,0.9s									
H24K	**Noodor Dome**	**46.98**	**33**		P	**P**	**19 32 04.7**	**+0.6**		
H24K					IAmb	IAmb	19 32 05.1			
	comp=Z,3.4nm,0.8s									
BMAR	**Burnt Mountain**	**47.01**	**30**		P	**P**	**19 32 04.5**	**+0.3**		
G26K	**Porcupine Rive**	**47.56**	**31**		P	**P**	**19 32 09.1**	**+0.7**		
G26K					IAmb	IAmb	19 32 10.1			
	comp=Z,5.0nm,0.8s									
CCB	**Clear Creek Bu**	**47.76**	**35**		P	**P**	**19 32 10.6**	**+0.6**		
CCB					IAmb	IAmb	19 32 11.2			
	comp=Z,6.2nm,1.0s									
WRH	**Wood River Hil**	**47.77**	**35**		P	**P**	**19 32 09.7**	**-0.4**		
HFS	**Hagfors**	**47.90**	**318**		P	**P**	**19 32 09.7**	**-1.4**		
	comp=Z,1.7nm,0.6s,baz=37,slow=5.7,SNR=5.3									
	comp=Z,1.7nm,0.6s									
PRP	**Porcupine Dome**	**47.94**	**33**			**P**	**19 32 12.2**	**+0.6**		
ILAR	**Eielson Array**	**47.98**	**34**		P	**P**	**19 32 12.2**	**+0.4**		
	comp=Z,6.5nm,0.8s,baz=301,slow=6.4,SNR=65									
	comp=Z,6.5nm,0.8s									
ILAR	**Eielson Array**	**47.98**	**34**		P	**P**	**19 32 11.8**	**+0.1**		
E29M	**Blow River**	**48.28**	**27**		IAmb	IAmb	19 32 14.6			
	comp=Z,3.4nm,0.8s									
NOA	**NORSAR Array B**	**48.30**	**320**		P	**P**	**19 32 13.5**	**-0.8**		
	comp=Z,0.5nm,0.6s,baz=51,slow=7.4,SNR=2.8									
	comp=Z,0.5nm,0.6s									
DHY	**Denali Highway**	**48.91**	**36**		P	**P**	**19 32 19.0**	**-0.1**		
DHY					IAmb	IAmb	19 32 19.7			
	comp=Z,5.9nm,0.7s									
I27K	**Kandik River**	**49.11**	**31**		P	**P**	**19 32 21.3**	**+0.8**		
I27K					IAmb	IAmb	19 32 22.6			
	comp=Z,6.5nm,1.0s									
GHO	**Glory Hole Cre**	**49.21**	**38**		P	**P**	**19 32 22.4**	**+1.1**		
DOT	**Dot Lake**	**49.65**	**34**		P	**P**	**19 32 23.4**	**-1.2**		
I28M	**Miner Creek**	**49.73**	**31**		P	**P**	**19 32 25.0**	**-0.2**		
I28M					IAmb	IAmb	19 32 46.3			
	comp=Z,5.7nm,1.4s									
L27K	**Beaver Creek,**	**50.79**	**34**		P	**P**	**19 32 33.5**	**+0.3**		
L27K					IAmb	IAmb	19 32 34.4			
	comp=Z,5.3nm,0.8s									
BCAR	**Beaver Creek A**	**50.80**	**34**		P	**P**	**19 32 33.8**	**+0.4**		
H31M	**Peel River**	**51.10**	**28**		P	**P**	**19 32 34.9**	**-0.7**		
H31M					IAmb	IAmb	19 32 35.3			
	comp=Z,5.7nm,1.2s									
BRTR	**Keskin Array B**	**51.18**	**286**		P	**P**	**19 32 36.5**	**-0.2**		
	comp=Z,1.5nm,0.8s,baz=76,slow=4.8,SNR=6.6									
	comp=Z,1.5nm,0.8s									
BRTR	**Keskin Array B**	**51.18**	**286**		P	**P**	**19 32 36.3**	**-0.3**		
BRTR	**Keskin Array B**	**51.18**	**286**	*i*	P	**P**	**19 32 36.7**	**+0.1**		
BRTR					pmax	pmax				
	comp=Z,1.0nm,0.7s									
M27K	**Edge Creek, AK**	**51.27**	**34**		P	**P**	**19 32 38.2**	**+1.2**		
STHS	**Stebnicka Huta**	**51.33**	**303**	*eP*		**P**	**19 32 40.1**	**+2.6**		
STHS	**Stebnicka Huta**	**51.33**	**303**	*eP*		**P**	**19 32 40.1**	**+2.6**		
VRAC	**Vranov**	**53.67**	**306**		LR	LR	19 58 46.1			
	comp=Z,133nm,20.4s,baz=1.0,slow=39									
M31M	**Drury Creek, Y**	**53.78**	**31**		IAmb	IAmb	19 32 56.8			
	comp=Z,7.4nm,0.9s									
MODS	**Modra-Piesok**	**53.98**	**305**	*eP*		P	19 33 02.0	+4.9		
MODS	**Modra-Piesok**	**53.98**	**305**	*eP*		P	19 33 02.0	+4.9		
MMAI	**Mount Meron Ar**	**54.87**	**279**		LR	LR	19 59 33.0			
	comp=Z,48nm,20.6s,baz=12,slow=39									
RAYN	**Ar Rayn**	**55.97**	**264**			**P**	**19 33 11.3**	**-0.6**		
RAYN					IAmb	IAmb	19 33 12.2			
	comp=Z,4.2nm,0.9s									
RAYN	**Ar Rayn**	**55.97**	**264**		P	**P**	**19 33 11.3**	**-0.6**		
RAYN					pmax	pmax				
	comp=Z,4.0nm,0.9s									
YKA	**Yellowknife Ar**	**58.80**	**22**		P	**P**	**19 33 29.9**	**-1.3**		
	comp=Z,1.4nm,0.9s,baz=331,slow=7.7,SNR=15									
	comp=Z,1.4nm,0.9s									
YKA	**Yellowknife Ar**	**58.80**	**22**	*i*	P	**P**	**19 33 30.0**	**-1.1**		
YKA					pmax	pmax				
	comp=Z,1.0nm,0.9s									
WRA	**Warramunga Arr**	**76.78**	**156**		P	**P**	**19 35 23.5**	**-1.4**		
	comp=Z,3.9nm,0.8s,baz=348,slow=6.1,SNR=24									
	comp=Z,3.9nm,0.8s									
WRA	**Warramunga Arr**	**76.78**	**156**		IAmb	IAmb	19 35 24.6			
	comp=Z,2.9nm,0.9s									
PDAR	**Pinedale Array**	**77.98**	**28**		P	**P**	**19 35 31.1**	**-0.7**		
	comp=Z,0.2nm,0.7s,baz=331,slow=5.0,SNR=1.6									
	comp=Z,0.2nm,0.7s									
BGU	**Big Grassy Mou**	**78.65**	**31**		P	**P**	**19 35 35.5**	**0.0**		
BGU					IAmb	IAmb	19 35 57.4			
	comp=Z,2.7nm,1.0s									
ASAR	**Alice Springs**	**80.27**	**157**		P	**P**	**19 35 43.1**	**-1.0**		
	comp=Z,1.9nm,0.7s,baz=354,slow=5.6,SNR=28									
	comp=Z,1.9nm,0.7s									
STKA	**Stephens Creek**	**90.03**	**153**		P	**P**	**19 36 31.4**	**-1.3**		
	comp=Z,1.6nm,0.8s,baz=317,slow=2.9,SNR=3.5									
	comp=Z,1.6nm,0.8s									
STKA	**Stephens Creek**	**90.03**	**153**		IAmb	IAmb	19 36 31.8			
	comp=Z,13nm,1.0s									
STKA	**Stephens Creek**	**90.03**	**153**		P	**P**	**19 36 31.4**	**-1.3**		
STKA					pmax	pmax				
	comp=Z,13nm,1.0s									
NVL	**N'lazarevskaya**	**141.94**	**212**		*e*PKIKP	**PKPdf**	**19 43 05.3**	**+1.5**		
NVL					*e*		19 46 11.0			
NVL					*e*PPP	PPP	19 49 18.0			
NVL					*e*		19 50 15.3			
NVL					*e*SS	SS	20 04 45.5	+2.5		
NVL					*e*SSS	SSS	20 10 03.5			
NVL					pmax	pmax				
	comp=Z,15nm,1.5s									

SOME ***13*** *19:26:48.8,39°.32N×73°.20E,h5km*
NNC ***13*** *19:26:54.1±3.6,39°.20N×73°.89E,h2km±16km,mb3.5, mpv3.1,Error ellipse: s-maj=26.8km s-min=17.6km az=163.0*
KRNET ***13*** *19:27:01.6±0.1,39°.47N×73°.56E,h16km,mb2.8*
ISC 13 19:27:00.3±2.5,39°.5N±0°.1×73°.68E±0°.05,h10km,n21,
σ1s34/34,9C-7D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.56**	**346**			⇓*i*	**Pb**	**19 27 12.4**	**0.0**
SFK						⇓*i*	**Sb**	**19 27 20.0**	**-0.5**
OHH	**Osh**	**1.25**	**327**			⇓*e*	**Pg**	**19 27 23.7**	**-0.7**
OHH						⇓*e*	**Sn**	**19 27 40.9**	**-0.1**
SALK	**Salom-Alik**	**1.41**	**4**			⇓*e*	**Pg**	**19 27 28.1**	**+0.6**
SALK						⇑*i*	**Sg**	**19 27 47.2**	**+1.3**
ARSB	**Arslanbob**	**1.92**	**344**			⇓*e*	**Pg**	**19 27 36.8**	**-0.5**
ARSB						⇑*i*	**Sg**	**19 28 02.1**	**-0.1**
JNKS	**Jany-Kuch**	**2.17**	**43**			⇓*i*	**Pg**	**19 27 41.5**	**-0.5**
JNKS						⇓*i*	**Sg**	**19 28 10.3**	**+0.1**
ARLS	**Aral**	**2.44**	**11**			⇑*e*	**Pb**	**19 27 44.4**	**0.0**
ARLS						⇑*i*	**Sb**	**19 28 15.8**	**+1.3**
AAK	**Ala-Archa** 3.3nm,0.9s	**3.22**	**11**			⇑Pg	**Pb**	**19 27 56.4**	**-1.4**
AAK	4.1nm,0.8s					⇑Lg	Lg	19 28 44.4	
MRKS	**Merke** 0.7nm,0.2s	**3.29**	**354**			Pg	**Pn**	**19 27 52.6**	**+0.6**
MRKS	11nm,0.4s					Lg	Lg	19 28 38.3	
MRKS	**Merke** 0.7nm,0.2s	**3.29**	**354**		*eP*		**Pn**	**19 27 52.6**	**+0.6**
MRKS	11nm,0.4s				*e*S		**Sb**	**19 28 38.3**	**-0.6**
KST	**Kastek** 1.6nm,0.2s	**3.96**	**25**		Pg		**Pb**	**19 28 08.7**	**-1.6**
KST	9.4nm,0.5s					Lg	Lg	19 29 06.6	
KST	**Kastek** 1.6nm,0.2s	**3.96**	**25**	*eP*			**Pb**	**19 28 08.7**	**-1.6**
KST	9.4nm,0.5s				*e*S		**Sg**	**19 29 06.6**	**-0.9**
DGS	**Degeres** 1.7nm,0.5s	**4.08**	**22**		Pg		**Pb**	**19 28 10.3**	**-2.0**
DGS	5.9nm,0.6s					Lg	Lg	19 29 09.4	
DGS	**Degeres** 1.7nm,0.5s	**4.08**	**22**	*eP*			**Pb**	**19 28 10.3**	**-2.0**
DGS	5.9nm,0.6s				*e*S		**Sg**	**19 29 09.4**	**-2.1**
MTBS	**Maitube** 0.7nm,0.1s	**4.20**	**29**		Pg		**Pb**	**19 28 13.4**	**-1.0**
MTBS	4.3nm,0.3s					Lg	Lg	19 29 14.5	
MTBS	**Maitube** 0.7nm,0.1s	**4.20**	**29**	*eP*			**Pb**	**19 28 13.4**	**-1.0**
MTBS	4.3nm,0.3s				*e*S		**Sg**	**19 29 14.5**	**-0.8**
KK31	**Karatay Array** 0.2nm,0.2s,baz=143,slow=16,SNR=4.5	**4.34**	**328**	⇓Pg			**Pg**	**19 28 21.5**	**-2.0**
KK31	1.6nm,0.5s,baz=131,slow=20,SNR=4.0			⇑Sn			**Sn**	**19 29 01.2**	**+4.2**
KK31	1.8nm,0.4s,baz=129,slow=28,SNR=4.0			Lg			Lg	19 29 18.6	
MDOK	**Medeo** 5.7nm,0.8s	**4.48**	**33**	Pg			**Pb**	**19 28 18.8**	**-0.3**
MDOK	4.3nm,0.7s					Lg	Lg	19 29 23.4	
KOTS	**Kotyrbulak** 1.7nm,0.4s	**4.56**	**33**	Pg			**Pb**	**19 28 20.4**	**-0.1**
KOTS	12nm,0.6s					Lg	Lg	19 29 26.4	
KOTS	**Kotyrbulak** 1.7nm,0.4s	**4.56**	**33**	*eP*			**Pb**	**19 28 20.4**	**-0.1**
KOTS	12nm,0.6s				*e*S		**Sg**	**19 29 26.4**	**-0.4**
ARXS	**Arharly** 3.8nm,0.6s	**5.66**	**32**	Pg			**Pb**	**19 28 40.5**	**+1.3**
ARXS	2.5nm,0.3s					Lg	Lg	19 30 00.8	
ARXS	**Arharly** 3.8nm,0.6s	**5.66**	**32**	*eP*			**Pb**	**19 28 40.5**	**+1.3**
ARXS	2.5nm,0.3s				*e*S		**Sg**	**19 30 00.8**	**-1.2**

BUC ***13*** *19:55:21.3±0.2,45°.42N×26°.25E,h124km±1km,ml3.5/59, Error ellipse: s-maj=1.4km s-min=1.1km az=179.0*
BEO ***13*** *19:55:28.2±0.3,45°.08N×25°.38E,h0km,ML2.9/3*
ISC 13 19:55:19.8±1.3,45°.43N±0°.03×26°.22E±0°.02,h138km±6km,
n83,σ1s01/132,63C-42D,Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.06**	**89**			⇑*P*	**Pn**	**19 55 39.3**	**+0.8**
NEHR						⇓*S*	**Sn**	**19 55 52.1**	**-0.5**
MLR	**Muntele Rosu**	**0.20**	**289**			⇓*P*	**Pn**	**19 55 39.6**	**+0.7**
MLR						⇓*S*	**Sn**	**19 55 52.2**	**-1.0**
MLR	**Muntele Rosu**	**0.20**	**289**	*eP*			**Pn**	**19 55 39.5**	**+0.7**
MLR						*e*S	**Sn**	**19 55 52.0**	**-1.2**
ISR	**Istrita**	**0.38**	**143**			⇑*P*	**Pn**	**19 55 40.1**	**+0.7**
ISR						⇓*S*	**Sn**	**19 55 52.5**	**-1.6**
COVR	**Voineasa-Covas**	**0.42**	**359**			⇑*P*	**Pn**	**19 55 39.8**	**+0.3**
COVR						⇓*S*	**Sn**	**19 55 53.2**	**-1.3**
PLOR	**Plostina**	**0.52**	**35**			⇑*P*	**Pn**	**19 55 40.5**	**+0.5**
PLOR						⇓*S*	**Sn**	**19 55 55.0**	**-0.4**
PLAR	**PLOIESTI**	**0.53**	**195**			⇑*P*	**Pn**	**19 55 40.7**	**+0.8**
PLAR						⇓*S*	**Sn**	**19 55 55.0**	**-0.2**
VRI	**Vrincioaia**	**0.57**	**39**			⇑*P*	**Pn**	**19 55 40.9**	**+0.7**
VRI						⇓*S*	**Sn**	**19 55 55.3**	**-0.4**
TURR	**Turia**	**0.65**	**347**			⇑*P*	**Pn**	**19 55 41.3**	**+0.6**
TURR						⇓*S*	**Sn**	**19 55 55.4**	**-1.2**
OZUR		**0.73**	**336**			⇑*P*	**Pn**	**19 55 41.6**	**+0.3**
OZUR						⇓*S*	**Sn**	**19 55 56.5**	**-1.2**
SULR		**0.75**	**178**			⇓*P*	**Pn**	**19 55 41.9**	**+0.5**
SULR						⇑*S*	**Sn**	**19 55 57.6**	**-0.1**
BOSR	**Bodos**	**0.76**	**329**			⇑*S*	**Sn**	**19 55 56.9**	**-1.1**
PANC	**Panciu**	**0.79**	**55**			⇑*P*	**Pn**	**19 55 42.2**	**+0.5**
PANC						⇑*S*	**Sn**	**19 55 58.0**	**-0.3**
DOPR	**Dopca**	**0.79**	**313**			⇑*P*	**Pn**	**19 55 41.9**	**+0.2**
DOPR					

PUNG	**Punghina**	**2.60**	**245**	*eP*	**Pn**	**19 56 02.1**	**+0.5**
PUNG				*eS*	**Sn**	**19 56 31.9**	**-1.9**
DRGR		**2.79**	**301**	⇓*iP*	**Pn**	**19 56 04.7**	**+0.7**
DRGR		**2.79**	**301**	*eP*	**Pn**	**19 56 04.8**	**+0.7**
SORM	**Soroca**	**3.08**	**28**	⇓*iP*	**Pn**	**19 56 07.6**	**-0.1**
BZS	**Buzias**	**3.24**	**275**	⇑*iP*	**Pn**	**19 56 10.0**	**+0.3**
BZS	**Buzias**	**3.24**	**275**	*eP*	**Pn**	**19 56 10.2**	**+0.5**
MDVR	**Moldovita**	**3.25**	**260**	⇓*iP*	**Pn**	**19 56 10.7**	**+0.7**
MDVR	**Moldovita**	**3.25**	**260**	*eP*	**Pn**	**19 56 10.7**	**+0.7**
MDVR				*eS*	**Sn**	**19 56 47.2**	**-1.6**
ZAGS	**Zajecar**	**3.27**	**242**	*eP*	**Pn**	**19 56 10.3**	**+0.2**
ZAGS				*eS*	**Sn**	**19 56 46.2**	**-2.9**
BORS2	**Bor- Borsko je**	**3.27**	**247**	*eP*	**Pn**	**19 56 09.1**	**-1.1**
BORS2				*eS*	**Sn**	**19 56 45.7**	**-3.5**
ZAPS	**Zavoj**	**3.35**	**231**	*eP*	**Pn**	**19 56 11.9**	**+0.6**
ZAPS				*eS*	**Sn**	**19 56 49.0**	**-2.1**
KUBS	**Kucevo**	**3.38**	**254**	*eP*	**Pn**	**19 56 10.6**	**-1.0**
KUBS				*eS*	**Sn**	**19 56 48.7**	**-3.0**
VTS	**Vitosha**	**3.54**	**218**	*eP*	**Pn**	**19 56 15.5**	**+1.7**
BOVS	**Bovan**	**3.69**	**243**	⇓*iP*	**Pn**	**19 56 16.4**	**+0.8**
BOVS	**Bovan**	**3.69**	**243**	*eP*	**Pn**	**19 56 16.4**	**+0.8**
BOVS				*eS*	**Sn**	**19 56 57.7**	**-1.1**
BARS	**Barje**	**4.10**	**232**	*eP*	**Pn**	**19 56 22.6**	**+1.5**
GRUS	**Gruza**	**4.21**	**251**	*eP*	**Pn**	**19 56 23.4**	**+0.9**
TRUS	**Trudelj**	**4.30**	**256**	*eP*	**Pn**	**19 56 24.4**	**+0.7**
TRUS				*eS*	**Sn**	**19 57 10.7**	**-2.7**
DIVS	**Divibare**	**4.63**	**256**	*eP*	**Pn**	**19 56 28.6**	**+0.5**
BBLS	**Lazi&#263i**	**5.10**	**255**	*eP*	**Pn**	**19 56 35.4**	**+1.0**

IDC ***13*** *20:18:46.3±2.1,39˚.41N×73˚.49E, h0km, mb3.8/3, mbtmp3.7/6, ML2.8/3, MS2.8/2, Error ellipse: s-maj=39.9km s-min=26.4km az=138.0*

KRNET ***13*** *20:18:46.1±0.1,39˚.60N×73˚.89E, h35km, mb3.8*

SOME ***13*** *20:18:47.0,39˚.75N×74˚.10E, h15km*

NNC ***13*** *20:18:49.5±1.5,39˚.86N×74˚.15E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=11.6km s-min=5.3km az=174.0*

ISC 13 20:18:46.3±1.7**,39˚.60N**±0˚.06×**73˚.97E**±0˚.03**, h5**km±10km**, n71**,σ2**S18**/107**,24C-24D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.55**	**319**	⇓*iP*		**Pg**	**20 18 57.2**	**+0.3**
SFK				⇓*iS*		**Sg**	**20 19 05.0**	**+1.0**
SALK	**Salom-Alik**	**1.29**	**355**	⇓*iP*		**Pn**	**20 19 09.5**	**-1.7**
SALK				⇓*iS*		**Sn**	**20 19 26.5**	**-2.5**
OHH	**Osh**	**1.29**	**316**	⇓*iP*		**Pn**	**20 19 08.6**	**-2.6**
OHH				⇓*iS*		**Sn**	**20 19 25.5**	**-3.5**
DRK	**Karamyk**	**1.68**	**267**	⇑*iP*		**Pn**	**20 19 14.4**	**-2.3**
DRK				⇑*iS*		**Sn**	**20 19 35.1**	**-3.7**
ARSB	**Arslanbob**	**1.88**	**337**	⇓*iP*		**Pn**	**20 19 17.9**	**-1.4**
ARSB				⇓*iS*		**Sn**	**20 19 40.9**	**-2.6**
JNKS	**Jany-Kuch**	**1.93**	**41**	⇑*iP*		**Pn**	**20 19 19.7**	**-0.4**
JNKS				⇑*iS*		**Sn**	**20 19 44.2**	**-0.7**
ARLS	**Aral**	**2.27**	**7**	⇑*iP*		**Pn**	**20 19 23.7**	**-1.1**
ARLS				⇑*iS*		**Sn**	**20 19 51.1**	**-2.2**
NRN	**Naryn**	**2.40**	**40**	⇑*iP*		**Pn**	**20 19 25.6**	**-1.0**
NRN				⇑*iS*		**Sn**	**20 19 54.5**	**-2.1**
UCH	**Uchtor**	**2.66**	**9**	P		**Pb**	**20 19 36.9**	**+2.1**
	SNR=39							
UCH	**Uchtor**	**2.66**	**9**	⇑*iP*		**Pn**	**20 19 29.3**	**-1.0**
UCH				⇑*iS*		**Sn**	**20 20 00.9**	**-2.3**
ARK	**Arkit**	**2.67**	**326**	⇓*iP*		**Pn**	**20 19 28.8**	**-1.4**
ARK				⇓*iS*		**Sn**	**20 19 59.8**	**-3.3**
TRKS	**Terek-Say**	**2.89**	**313**	⇑*iP*		**Pn**	**20 19 30.7**	**-2.5**
TRKS				⇑*iS*		**Sn**	**20 20 03.3**	**-5.2**
AAK	**Ala-Archa**	**3.06**	**7**	LR		LR	20 21 10.3	
	comp=Z,41nm,19.1s,baz=244,slow=44							
AAK	**Ala-Archa**	**3.06**	**7**	P		**Pb**	**20 19 43.7**	**+2.3**
	SNR=14							
AAK	**Ala-Archa**	**3.06**	**7**	⇓*iP*		**Pn**	**20 19 34.8**	**-0.8**
AAK				⇓*iS*		**Sn**	**20 20 10.2**	**-2.5**
EKS2	**Erkin-Say**	**3.06**	**357**	P		**Pb**	**20 19 43.3**	**+1.9**
	SNR=9.6							
EKS2	**Erkin-Say**	**3.06**	**357**	⇑*iP*		**Pn**	**20 19 34.6**	**-1.0**
EKS2				⇑*iS*		**Sn**	**20 20 10.0**	**-2.7**
MNAS	**Manas**	**3.09**	**339**	⇑*iP*		**Pn**	**20 19 34.8**	**-1.2**
MNAS				⇑*iS*		**Sn**	**20 20 10.2**	**-3.2**
KBK	**Karagaybulak**	**3.14**	**13**	P		**Pb**	**20 19 44.8**	**+2.0**
	SNR=11							
KBK	**Karagaybulak**	**3.14**	**13**	⇓*iP*		**Pn**	**20 19 36.0**	**-0.7**
KBK				⇓*iS*		**Sn**	**20 20 12.3**	**-2.4**
ULHL	**Ulahol**	**3.16**	**32**	⇓*iP*		**Pn**	**20 19 36.4**	**-0.5**
ULHL				⇓*iS*		**Sn**	**20 20 13.1**	**-2.0**
MRKS	**Merke**	**3.19**	**350**	Pg		**Pb**	**20 19 42.4**	**-1.3**
	15nm,0.4s							
MRKS				Lg		Lg	20 20 22.3	
	158nm,0.7s							
MRKS	**Merke**	**3.19**	**350**	*eP*		**Pb**	**20 19 42.4**	**-1.3**
	15nm,0.4s							
MRKS				*eS*		**Sb**	**20 20 22.3**	**-0.6**
	158nm,0.7s							
BOOM	**Boomskoye usch**	**3.25**	**27**	⇓*iP*		**Pn**	**20 19 37.6**	**-0.6**
BOOM				⇓*iS*		**Sn**	**20 20 15.2**	**-2.2**
CHMS	**Chumysh**	**3.45**	**10**	P		**Pb**	**20 19 48.7**	**+0.8**
	SNR=6.9							
CHMS	**Chumysh**	**3.45**	**10**	⇓*iP*		**Pn**	**20 19 40.0**	**-0.8**
CHMS				⇓*iS*		**Sn**	**20 20 19.3**	**-2.7**
KDJ	**Kajisay**	**3.51**	**43**	⇓*iP*		**Pn**	**20 19 41.5**	**-0.3**
KDJ				⇓*iS*		**Sn**	**20 20 21.8**	**-2.0**
TKM2	**Tokmak 2**	**3.54**	**20**	P		**Pb**	**20 19 50.6**	**+1.1**
	SNR=8.4							
TKM2	**Tokmak 2**	**3.54**	**20**	⇑*iP*		**Pn**	**20 19 41.6**	**-0.6**
TKM2				⇑*iS*		**Sn**	**20 20 22.0**	**-2.5**
USP	**Ospenovka**	**3.69**	**6**	⇓*iP*		**Pn**	**20 19 43.4**	**-0.7**
USP				⇓*iS*		**Sn**	**20 20 24.9**	**-3.0**
KST	**Kastek**	**3.75**	**23**	Pg		**Pb**	**20 19 53.5**	**+0.3**
	11nm,0.5s							
KST				Lg		Lg	20 20 41.8	
	108nm,0.8s							
KST	**Kastek**	**3.75**	**23**	*eP*		**Pb**	**20 19 53.5**	**+0.3**
	11nm,0.5s							
KST				*eS*		**Sb**	**20 20 41.8**	**+2.7**
	108nm,0.8s							
DZA	**Taraz**	**3.84**	**330**	Pg		**Pb**	**20 19 56.7**	**+2.0**
	14nm,0.1s							
DZA				Lg		Lg	20 20 46.5	
	107nm,0.7s							
DZA	**Taraz**	**3.84**	**330**	*eP*		**Pb**	**20 19 56.7**	**+2.0**
	14nm,0.1s							
DZA				*eS*		**Sb**	**20 20 46.5**	**+5.0**
	107nm,0.7s							
DGS	**Degeres**	**3.88**	**20**	Pg		**Pb**	**20 19 54.4**	**-1.0**
	19nm,0.6s							
DGS				Lg		Lg	20 20 43.1	
	19nm,0.6s							
DGS	**Degeres**	**3.88**	**20**	*eP*		**Pb**	**20 19 54.4**	**-1.0**
	19nm,0.6s							
DGS				*eS*		**Sb**	**20 20 43.1**	**+0.3**
	19nm,0.6s							
IZV	**Izvestkoviy**	**3.97**	**29**	Pg		**Pb**	**20 19 55.6**	**-1.3**
	5.9nm,0.3s							
IZV				Lg		Lg	20 20 44.6	
	55nm,0.6s							
IZV	**Izvestkoviy**	**3.97**	**29**	*eP*		**Pb**	**20 19 55.6**	**-1.3**
	5.9nm,0.3s							
IZV				*eS*		**Sb**	**20 20 44.6**	**-0.7**
	55nm,0.6s							
MTBS	**Maitube**	**3.98**	**27**	Pg		**Pb**	**20 19 56.7**	**-0.4**
	8.3nm,0.5s							
MTBS				Lg		Lg	20 20 46.8	
	20nm,0.4s							
MTBS	**Maitube**	**3.98**	**27**	*eP*		**Pb**	**20 19 56.7**	**-0.4**
	8.3nm,0.5s							
MTBS				*eS*		**Sb**	**20 20 46.8**	**+1.1**
	20nm,0.4s							
TNSS	**Tian-Shan**	**4.10**	**32**	Pg		**Pb**	**20 19 58.5**	**-0.9**
	1.5nm,0.2s							
TNSS				Lg		Lg	20 20 49.8	
	9.8nm,0.6s							
TNSS	**Tian-Shan**	**4.10**	**32**	*eP*		**Pb**	**20 19 58.5**	**-0.9**
	1.5nm,0.2s							
TNSS				*eS*		**Sb**	**20 20 49.8**	**+0.4**
	9.8nm,0.6s							
ANVS	**Anan'yevo**	**4.23**	**40**	⇑*iP*		**Pn**	**20 19 51.4**	**-0.3**
ANVS				⇑*iS*		**Sn**	**20 20 39.1**	**-2.5**
MDOK	**Medeo**	**4.25**	**32**	Pg		**Pb**	**20 20 01.2**	**-0.4**
	9.6nm,0.7s							
MDOK				Lg		Lg	20 20 55.0	
	27nm,0.7s							
CHM	**Chimkent**	**4.28**	**311**	*eP*		**Pb**	**20 20 04.4**	**+2.4**
	33nm,0.2s							
CHM				*eS*		**Sg**	**20 21 00.2**	**-3.5**
	133nm,0.5s							
KRBS	**Karabastau**	**4.29**	**17**	Pg		**Pb**	**20 20 02.1**	**-0.1**
	1.5nm,0.4s							
KRBS				Lg		Lg	20 20 56.2	
	51nm,0.8s							
KRBS	**Karabastau**	**4.29**	**17**	*eP*		**Pb**	**20 20 02.1**	**-0.1**
	1.5nm,0.4s							
KRBS				*eS*		**Sb**	**20 20 56.2**	**+1.8**
	51nm,0.8s							
KOTS	**Kotyrbulak**	**4.33**	**32**	Pg		**Pb**	**20 20 03.4**	**+0.3**
	3.4nm,0.4s							
KOTS				Lg		Lg	20 20 58.5	
	87nm,0.8s							
KOTS	**Kotyrbulak**	**4.33**	**32**	*eP*		**Pb**	**20 20 03.4**	**+0.3**
	3.4nm,0.4s							
KOTS				*eS*		**Sb**	**20 20 58.5**	**+2.7**
	87nm,0.8s							
KK31	**Karatay Array**	**4.36**	**325**	Pn		**Pn**	**20 19 56.4**	**+3.1**
	2.3nm,0.4s,baz=129,slow=12,SNR=63							
KK31				⇑*Sn*		**Sn**	**20 20 48.1**	**+3.5**
	7.2nm,0.4s,baz=136,slow=20,SNR=4.0							
KK31				⇑*Lg*		Lg	20 21 03.6	
	26nm,0.6s,baz=155,slow=28,SNR=4.6							
PRZ	**Przheval'sk**	**4.42**	**48**	⇑*iP*		**Pn**	**20 19 54.1**	**-0.2**
PRZ				⇑*iS*		**Sn**	**20 20 43.8**	**-2.4**
KTBS	**Karatobe**	**4.58**	**25**	Pg		**Pb**	**20 20 07.8**	**+0.5**
	1.8nm,0.5s							
KTBS				Lg		Lg	20 21 05.8	
	0.2nm,0.2s							
KTBS	**Karatobe**	**4.58**	**25**	*eP*		**Pb**	**20 20 07.8**	**+0.5**
	1.8nm,0.5s							
KTBS				*eS*		**Sb**	**20 21 05.8**	**+2.9**
	0.2nm,0.2s							
BRLS	**Borolday**	**4.63**	**319**	Pg		**Pb**	**20 20 08.6**	**+0.6**
	2.8nm,0.4s							
BRLS				Lg		Lg	20 21 07.6	
	0.5nm,0.3s							
BRLS	**Borolday**	**4.63**	**319**	*eP*		**Pb**	**20 20 08.6**	**+0.6**
	2.8nm,0.4s							
BRLS				*eS*		**Sb**	**20 21 07.6**	**+3.5**
	0.5nm,0.3s							
SATY	**Saty**	**4.81**	**43**	Pg		**Pb**	**20 20 12.5**	**+1.4**
	3.1nm,0.5s							
SATY				Lg		Lg	20 21 13.8	
	22nm,0.7s							
KURS	**Kuram**	**5.00**	**38**	Pg		**Pb**	**20 20 14.5**	**+0.1**
	4.5nm,0.7s							
KURS				Lg		Lg	20 21 17.4	
	12nm,0.6s							
UZB	**Uzynbulak**	**5.20**	**45**	Pg		**Pb**	**20 20 17.6**	**-0.2**
	1.5nm,0.2s							
UZB				Lg		Lg	20 21 22.9	
	5.2nm,0.7s							
UZB	**Uzynbulak**	**5.20**	**45**	*eP*		**Pb**	**20 20 17.6**	**-0.2**
	1.5nm,0.2s							
UZB				*eS*		**Sb**	**20 21 22.9**	**+2.3**
	5.2nm,0.7s							
ARXS	**Arharly**	**5.43**	**31**	Pg		**Pb**	**20 20 26.0**	**+4.2**
	2.1nm,0.4s							
ARXS				Lg		Lg	20 21 36.7	
	32nm,0.8s							
ARXS	**Arharly**	**5.43**	**31**	*eP*		**Pb**	**20 20 26.0**	**+4.2**
	2.1nm,0.4s							
ARXS				*eS*		**Sg**	**20 21 36.7**	**-4.2**
	32nm,0.8s							
BTLS	**Baital**	**5.44**	**1**	Pg		**Pb**	**20 20 25.3**	**+3.5**
	4.0nm,0.8s							
BTLS				Lg		Lg	20 21 36.1	
	6.9nm,0.7s							
BTLS	**Baital**	**5.44**	**1**	*eP*		**Pb**	**20 20 25.3**	**+3.5**
	4.0nm,0.8s							
BTLS				*eS*		**Sg**	**20 21 36.1**	**-4.8**
	6.9nm,0.7s							
MKAR	**Makanchi Array**	**9.41**	**37**	Lg		Lg	20 23 51.7	
	0.1nm,0.3s,baz=227,slow=26,SNR=6.4							
KURBB	**Kurchatov Arra**	**11.48**	**15**	Pn		**Pn**	**20 21 32.9**	**+2.0**
	0.1nm,0.3s,baz=203,slow=12,SNR=2.1							
KURBB				Lg		Lg	20 24 51.2	
	0.1nm,0.3s,baz=201,slow=29,SNR=1.7							
	0.3nm,0.3s							
BVAR	**Borovoye Array**	**13.65**	**351**	Pn		**Pn**	**20 22 00.9**	**+0.4**
	baz=174,slow=15,SNR=1.9							
	1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**16.13**	**24**	Pn		**P**	**20 22 38.4**	**+1.3**
	0.2nm,0.3s,baz=211,slow=10,SNR=11							
	2.1nm,0.6s							
SONM	**Songino Array**	**24.70**	**60**	P		**P**	**20 24 13.3**	**+4.9**
	0.4nm,0.4s,baz=270,slow=8.5,SNR=3.9							
	0.4nm,0.4s							
FINES	**FINESS Array B**	**36.32**	**323**	P		**P**	**20 25 51.3**	**+0.6**
	3.8nm,1.2s,baz=111,slow=10,SNR=6.0							
	3.8nm,1.2s							
OPO	**Ambohidratompo**	**63.04**	**209**	LR		LR	20 55 05.0	
	comp=Z,25nm,18.9s,baz=3.5,slow=35							
TORD	**Torodi Ar. Bea**	**68.12**	**269**	P		**P**	**20 29 45.6**	**-2.0**
	0.5nm,0.7s,baz=56,slow=5.1,SNR=4.0							
	0.5nm,0.7s							

IDC ***13*** *20:24:58.2±0.9,23˚.24N×121˚.73E, h0km, mb3.5/10, mbtmp3.5/12, ML3.2/2, MS2.9/4, Error ellipse: s-maj=26.9km s-min=18.0km az=63.0*

JMA ***13*** *20:25:05.9±0.1,23˚.6N±0˚.6×12˚2E±˚, h39km±3km, MV3.9/18, TAIWAN REGION*

TAP ***13*** *20:25:06.9,23˚.66N×121˚.63E, h33km, ML4.2, B*

ISC 13 20:25:06.2±0.8**,23˚.65N**±0˚.01×**121˚.66E**±0˚.02**, h34**km±1km**, n183,σ1S06/293,mb3.6/9,MS2.6/3,2C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.13**	**299**	*iP*		**Pb**	**20 25 12.9**	**+0.7**
TEGC				*iS*		**Sb**	**20 25 17.5**	**+1.1**
SHUL	**Shoufeng**	**0.17**	**327**	⇑*iP*		**Pb**	**20 25 13.2**	**+0.6**
SHUL				*iS*		**Sb**	**20 25 18.3**	**+1.4**
EGFH	**Guangfu**	**0.21**	**276**	*iP*		**Pb**	**20 25 13.6**	**+0.6**
EGFH				*iS*		**Sb**	**20 25 18.3**	**+0.6**
TEYL	**Yanliau Villag**	**0.23**	**345**	*iP*		**Pn**	**20 25 14.3**	**+1.9**
TEYL				*iS*		**Sb**	**20 25 20.0**	**+2.1**
WARBT	**Fenglin Townsh**	**0.26**	**286**	*iP*		**Pb**	**20 25 13.7**	**+0.1**
WARBT				*iS*		**Sb**	**20 25 18.5**	**-0.2**
ESL	**Shilin**	**0.27**	**308**	⇑*iP*		**Pb**	**20 25 13.8**	**+0.1**
ESL				*iS*		**Sb**	**20 25 18.6**	**-0.1**
HGSD	**Ruisui**	**0.27**	**235**	⇓*iP*		**Pb**	**20 25 14.2**	**+0.6**
HGSD				*S*		**Sn**	**20 25 20.2**	**+3.0**
EHYH	**Wanrong**	**0.33**	**242**	⇓*iP*		**Pb**	**20 25 14.7**	**+0.4**
EHYH				*S*		**Sb**	**20 25 20.3**	**+0.4**
HWA	**Hwalien**	**0.33**	**351**	*P*		**Pb**	**20 25 15.1**	**+0.7**
HWA				*S*		**Sn**	**20 25 21.3**	**+1.6**
EHY	**Hungye**	**0.34**	**246**	*iP*		**Pb**	**20 25 14.7**	**+0.1**
EHY				*S*		**Sb**	**20 25 20.2**	**-0.1**
ETM	**Tongmen**	**0.35**	**334**	*iP*		**Pb**	**20 25 15.0**	**+0.2**
ETM				*S*		**Sb**	**20 25 21.0**	**+0.5**
ECBN	**Changbin**	**0.38**	**210**	⇓*iP*		**Pb**	**20 25 15.8**	**+0.7**
ECBN				*S*		**Sn**	**20 25 22.6**	**+1.3**
YULB	**Yu-li**	**0.42**	**233**	⇓*iP*		**Pb**	**20 25 15.8**	**+0.1**
YULB				*iS*		**Sb**	**20 25 22.1**	**0.0**
TWD	**Chiawan**	**0.43**	**352**	⇓*iP*		**Pb**	**20 25 16.0**	**+0.2**
TWD				*S*		**Sb**	**20 25 23.0**	**+0.5**
LXIB	**Xiulin Townshi**	**0.43**	**329**	⇓*iP*		**Pb**	**20 25 15.8**	**-0.2**
LXIB				*S*		**Sb**	**20 25 22.4**	**-0.4**
TWF1	**Yuli**	**0.45**	**229**	⇓*iP*		**Pb**	**20 25 16.2**	**+0.2**
TWF1				*S*		**Sb**	**20 25 22.9**	**+0.1**
VWDT	**VWDT**	**0.49**	**283**	*iP*		**Pb**	**20 25 17.0**	**+0.4**
VWDT				*S*		**Sb**	**20 25 23.8**	**0.0**
ETL	**Fush Village**	**0.51**	**356**	*eP*		**Pb**	**20 25 17.1**	**+0.1**
ETL				*iS*		**Sb**	**20 25 24.8**	**+0.3**
CHKH	**Chenggong**	**0.52**	**208**	*P*		**Pb**	**20 25 17.1**	**+0.1**
CHKH				*eS*		**Sn**	**20 25 25.5**	**+0.8**
NACB	**Ninganchiao**	**0.53**	**353**	⇓*iP*		**Pb**	**20 25 17.1**	**-0.1**
NACB				*iS*		**Sb**	**20 25 24.8**	**-0.1**
OWD	**Renai**	**0.54**	**305**	*iP*		**Pb**	**20 25 17.6**	**+0.1**
OWD				*S*		**Sb**	**20 25 24.6**	**-0.8**
FULB	**Fuli**	**0.56**	**217**	*eP*		**Pb**	**20 25 18.0**	**+0.2**
ETLH	**Xiulin Townshi**	**0.58**	**344**	*iP*		**Pb**	**20 25 18.0**	**-0.2**
ETLH				*eS*		**Sb**	**20 25 25.8**	**-0.6**
WUSB	**Renai**	**0.60**	**305**	*eP*		**Pb**	**20 25 18.8**	**+0.2**
WUSB				*S*		**Sb**	**20 25 26.5**	**-0.6**
CHKT	**Chengkung**	**0.61**	**206**	*iP*		**Pb**	**20 25 18.3**	**-0.3**
CHKT				*eS*		**Sb**	**20 25 26.5**	**-0.6**
WHF	**Hehuan Shan**	**0.61**	**324**	*P*		**Pb**	**20 25 18.6**	**-0.4**
WHF				*S*		**Sb**	**20 25 27.1**	**-0.6**
SSLB	**Suanglung**	**0.66**	**282**	*P*		**Pn**	**20 25 19.4**	**+0.2**
SSLB				*S*		**Sb**	**20 25 27.9**	**-0.7**
YUS	**Yu-Shan**	**0.67**	**256**	*P*		**Pn**	**20 25 20.0**	**+0.4**
YUS				*S*		**Sb**	**20 25 29.0**	**-0.2**
EAHA	**Aohua**	**0.68**	**6**	*P*		**Pn**	**20 25 19.5**	**+0.1**
EAHA				*S*		**Sb**	**20 25 29.5**	**+0.5**
ECS	**Chishang**	**0.68**	**217**	*eP*		**Pn**	**20 25 19.6**	**+0.1**
ECS				*S*		**Sn**	**20 25 30.0**	**+1.1**
FUSS	**Fushou**	**0.71**	**327**	*i P*		**Pn**	**20 25 20.3**	**+0.2**
FUSS				*S*		**Sb**	**20 25 29.7**	**-0.3**
SMLT	**Sun Moon Lake**	**0.73**	**289**	*eP*		**Pn**	**20 25 20.9**	**+0.6**
SMLT				*S*		**Sn**	**20 25 31.1**	**+0.7**
WPL	**Puli Township**	**0.74**	**299**	*P*		**Pn**	**20 25 20.9**	**+0.6**
WPL				*eS*		**Sn**	**20 25 30.8**	**+0.5**
WHYT	**Xinyi Township**	**0.74**	**274**	*i P*		**Pn**	**20 25 21.2**	**+0.8**
WHYT				*eS*		**Sn**	**20 25 30.7**	**+0.3**
ELDTW	**Lidau**	**0.75**	**232**	*i P*		**Pb**	**20 25 20.2**	**-0.3**
ELDTW				*i S*		**Sn**	**20 25 29.9**	**-0.8**
TWT	**Tachien**	**0.75**	**324**	*i P*		**Pn**	**20 25 21.2**	**+0.7**
TWT				*S*		**Sn**	**20 25 30.6**	**-0.2**
TDCB	**Techi**	**0.76**	**323**	⇓*iP*		**Pn**	**20 25 21.2**	**+0.5**
TDCB				*S*		**Sn**	**20 25 30.5**	**-0.5**
EOS4	**EOS4**	**0.76**	**52**	*i P*		**Pn**	**20 25 21.0**	**+0.7**
EOS4				*S*		**Sb**	**20 25 31.4**	**+0.5**
TYC	**Yuchr**	**0.78**	**289**	*eP*		**Pn**	**20 25 21.6**	**+0.8**
TYC				*eS*		**Sb**	**20 25 32.5**	**+0.8**
ENA	**Nanau**	**0.78**	**5**	*i P*		**Pn**	**20 25 21.3**	**+0.5**
ENA				*S*		**Sn**	**20 25 32.2**	**+0.9**
ALS	**Alishan**	**0.80**	**260**	*i P*		**Pb**	**20 25 22.4**	**+0.5**
ALS				*i S*		**Sn**	**20 25 32.8**	**+0.7**
WCS	**Beigang Elemen**	**0.80**	**301**	*P*		**Pn**	**20 25 21.8**	**+0.7**
WCS				*eS*		**Sn**	**20 25 31.9**	**+0.1**
EWUT	**Wuta**	**0.80**	**8**	*P*		**Pn**	**20 25 21.3**	**+0.2**
EWUT				*S*		**Sn**	**20 25 32.3**	**+0.5**
NNSB	**Datong**	**0.82**	**342**	*i P*		**Pn**	**20 25 21.7**	**+0.3**
NNSB				*S*		**Sn**	**20 25 32.2**	**-0.2**
NNS	**Nan Shan**	**0.83**	**342**	*P*		**Pn**	**20 25 21.9**	**+0.2**
NNS				*S*		**Sn**	**20 25 32.7**	**0.0**
EOS3	**EOS3**	**0.87**	**43**	*eP*		**Pb**	**20 25 23.0**	**+0.1**
EOS3				*eS*		**Sb**	**20 25 35.0**	**+0.7**
LATG	**Datong**	**0.89**	**352**	*i P*		**Pn**	**20 25 22.7**	**+0.3**
LATG				*eS*		**Sn**	**20 25 34.0**	**-0.2**
CHN5	**Tsauling**	**0.90**	**267**	*i P*		**Pb**	**20 25 24.2**	**+0.7**
CHN5				*eS*		**Sb**	**20 25 36.0**	**+0.7**
WHP	**Taichung City**	**0.91**	**314**	*i P*		**Pn**	**20 25 23.8**	**+1.2**
WHP				*S*		**Sn**	**20 25 35.3**	**+0.7**
WNT	**Mingjian**	**0.92**	**285**	*eP*		**Pb**	**20 25 24.6**	**+0.8**
WNT				*S*		**Sb**	**20 25 37.3**	**+1.5**
EOS2	**EOS2**	**0.93**	**34**	*eP*		**Pb**	**20 25 24.3**	**+0.5**
EOS2				*eS*		**Sb**	**20 25 37.4**	**+1.6**
STYH	**Taoyuan**	**0.94**	**240**	*P*		**Pn**	**20 25 23.9**	**+0.9**
STYH				*S*		**Sn**	**20 25 36.3**	**+1.1**
TWC	**Suao**	**0.97**	**10**	*P*		**Pn**	**20 25 24.3**	**+0.8**
TWC				*S*		**Sn**	**20 25 37.0**	**+0.9**
NDS	**Dongshan**	**0.98**	**3**	*eP*		**Pn**	**20 25 24.3**	**+0.7**
NDS				*eS*		**Sn**	**20 25 37.5**	**+1.2**
TWGBT	**Beinan**	**0.98**	**213**	*P*		**Pn**	**20 25 22.8**	**-0.9**
TWGBT				*eS*		**Sn**	**20 25 35.2**	**-1.1**
TWG	**Pinlang**	**0.99**	**213**	*eP*		**Pn**	**20 25 22.9**	**-0.7**
TWG				*eS*		**Sn**	**20 25 35.1**	**-1.3**
ENTT	**Nioudou**	**0.99**	**355**	*eP*		**Pn**	**20 25 24.3**	**+0.6**
WCKO	**Fanlu**	**0.99**	**258**	*P*		**Pb**	**20 25 25.7**	**+0.7**
WCKO				*S*		**Sb**	**20 25 38.8**	**+1.1**
TPUB	**Ta-pu**	**1.01**	**250**

SCLT	**Jiali**	**1.43**	**251**	*eP*		**Pb**	**20 25 31.9**	**-0.4**
SCLT				*eS*		**Sb**	**20 25 50.5**	**+0.4**
TAI1	**Yung-k'ang**	**1.45**	**246**	*eP*		**Pn**	**20 25 31.2**	**+1.3**
TAI1				*eS*		**Sb**	**20 25 52.6**	**+1.9**
SXI1	**Grass Mountain**	**1.45**	**8**	*eP*		**Pb**	**20 25 32.2**	**-0.5**
TWS1	**Kuangyinshan**	**1.46**	**351**	*eP*		**Pb**	**20 25 32.4**	**-0.5**
EAST	**Anshuo**	**1.47**	**211**	*eP*		**Pn**	**20 25 29.8**	**-0.5**
YOJ	**Yonaguni jima**	**1.48**	**56**	P		**Pn**	**20 25 31.9**	**+1.5**
YOJ				A		A	20 25 31.9	
	comp=N,5.0nm,2.5s,comp=E,4.0nm,2.3s							
YOJ				*eS*		**Sn**	**20 25 50.1**	**+1.6**
YOJ	**Yonaguni jima**	**1.48**	**56**	*eP*		**Pn**	**20 25 31.8**	**+1.5**
YOJ				*eS*		**Sn**	**20 25 49.9**	**+1.4**
YM01	**YM01**	**1.49**	**357**	*eP*		**Pn**	**20 25 32.2**	**+1.5**
TNOU	**National Taiwa**	**1.50**	**4**	*eP*		**Pn**	**20 25 32.3**	**+1.6**
ZUZH	**Zhuzihu**	**1.51**	**356**	*eP*		**Pn**	**20 25 31.9**	**+1.0**
NTST	**Danshui**	**1.52**	**353**	*eP*		**Pn**	**20 25 32.8**	**+1.8**
NTST				*eS*		**Sb**	**20 25 53.3**	**+0.5**
TSCK	**Chigu Township**	**1.53**	**251**	*eP*		**Pn**	**20 25 32.9**	**+1.8**
TSCK				*eS*		**Sn**	**20 25 51.7**	**+1.8**
YM08	**YM08**	**1.54**	**358**	*eP*		**Pn**	**20 25 32.0**	**+0.8**
ANP	**Anpu**	**1.54**	**355**	*eP*		**Pn**	**20 25 32.7**	**+1.4**
SCZT	**Fangliau**	**1.59**	**217**	*eP*		**Pb**	**20 25 34.2**	**-0.8**
SCZT				*eS*		**Sb**	**20 25 54.9**	**+0.1**
LAY	**Lan-yu**	**1.60**	**184**	*eP*		**Pn**	**20 25 31.3**	**-0.8**
TWY	**Chenhua**	**1.62**	**358**	*eP*		**Pn**	**20 25 33.5**	**+1.1**
WSSB	**Gushan**	**1.63**	**232**	*eP*		**Pn**	**20 25 34.6**	**+2.1**
WSSB				*eS*		**Sb**	**20 25 57.3**	**+1.3**
SLIU	**Shizi**	**1.63**	**209**	*eP*		**Pn**	**20 25 33.6**	**+1.0**
LYUB	**Lan-yu**	**1.64**	**182**	*eP*		**Pn**	**20 25 31.3**	**-1.3**
WLCH	**Liuqiu**	**1.75**	**223**	*eP*		**Pb**	**20 25 39.1**	**+1.5**
TWP	**Hsiaoliuchiu**	**1.76**	**223**	*eP*		**Pb**	**20 25 37.3**	**-0.7**
SMST	**Manzhou Townsh**	**1.79**	**205**	*eP*		**Pn**	**20 25 35.0**	**+0.3**
SMST				*eS*		**Sn**	**20 25 57.2**	**+0.9**
HEN	**Hengchun**	**1.84**	**208**	*eP*		**Pb**	**20 25 38.4**	**-0.9**
TWK1	**Hengchun**	**1.87**	**205**	*eP*		**Pn**	**20 25 36.7**	**+0.8**
TWK1				*eS*		**Sn**	**20 25 59.5**	**+1.2**
TWKBT	**Hengchun**	**1.87**	**205**	*eP*		**Pn**	**20 25 36.4**	**+0.6**
TWKBT				*eS*		**Sn**	**20 25 59.8**	**+1.6**
TSEB	**Hengchuen, Pin**	**1.88**	**202**	*eP*		**Pn**	**20 25 36.9**	**+1.0**
TSEB				*eS*		**Sn**	**20 26 00.3**	**+1.9**
WDGT	**Dungji**	**1.88**	**259**	*eP*		**Pn**	**20 25 37.0**	**+1.1**
WDGT				*eS*		**Sn**	**20 25 58.5**	**+0.1**
PHUB	**P'eng-hu**	**1.92**	**266**	*eP*		**Pn**	**20 25 37.6**	**+1.1**
PHUB				*eS*		**Sn**	**20 26 00.1**	**+0.6**
PNG	**Penghu**	**1.93**	**268**	*eP*		**Pn**	**20 25 37.8**	**+1.1**
PNG				*eS*		**Sn**	**20 26 00.3**	**+0.5**
HATJ	**Hateruma jima**	**2.00**	**78**	*eP*		**Pn**	**20 25 38.9**	**+1.3**
HATJ				*eS*		**Sn**	**20 26 02.6**	**+1.1**
PCYT	**Pengchaiyu**	**2.01**	**11**	*eP*		**Pn**	**20 25 39.2**	**+1.5**
IRIF	**Iriomote-Funau**	**2.01**	**70**	P		**Pn**	**20 25 39.4**	**+1.7**
IRIF				*eS*		**Sn**	**20 26 03.8**	**+2.1**
VCHM	**Qimei**	**2.10**	**258**	P		**Pn**	**20 25 39.7**	**+0.8**
VCHM				*eS*		**Sn**	**20 26 03.5**	**-0.3**
JKRS	**Kuro-shima**	**2.23**	**74**	*eP*		**Pn**	**20 25 43.0**	**+2.3**
JIJ	**Ishigaki jima**	**2.38**	**72**	P		**Pn**	**20 25 44.0**	**+1.2**
JIJ				*eS*		**Sn**	**20 26 11.2**	**+0.4**
VWUC	**VWUC**	**2.42**	**304**	*eP*		**Pn**	**20 25 43.8**	**+0.5**
JISG	**Ishigakijimahi**	**2.59**	**68**	P		**Pn**	**20 25 46.8**	**+1.1**
JISG				*eS*		**Sn**	**20 26 16.3**	**+0.2**
MATB	**Ma-tsu**	**2.94**	**328**	*eP*		**Pn**	**20 25 50.8**	**+0.3**
JTJ	**Tarama**	**2.95**	**70**	*eP*		**Pn**	**20 25 52.0**	**+1.4**
JTJ				*eS*		**Sn**	**20 26 25.6**	**+0.7**
KNM	**Kinmen**	**3.05**	**285**	*eP*		**Pn**	**20 25 54.2**	**+2.2**
KNMB	**Chin-men Tao**	**3.10**	**286**	*eP*		**Pn**	**20 25 53.2**	**+0.5**
LYJJ	**Jianjiangzhen**	**3.36**	**330**	*eP*		**Pn**	**20 25 56.9**	**+0.5**
JIRB	**Irabujima**	**3.41**	**69**	*eP*		**Pn**	**20 25 58.4**	**+1.3**
MHZQ	**Yeshan**	**3.42**	**316**	*eP*		**Pn**	**20 25 57.7**	**+0.7**
JIKM	**Ikemajima**	**3.51**	**68**	*eS*		**Sn**	**20 26 39.7**	**+1.0**
JMJ2	**Miyako jima3**	**3.52**	**71**	*eS*		**Sn**	**20 26 40.7**	**+1.7**
AXDP	**Jialang**	**3.59**	**291**	*eP*		**Pn**	**20 26 00.1**	**+0.6**
ZPLA	**Ao Xicun**	**3.59**	**275**	*eP*		**Pn**	**20 25 60.0**	**+0.5**
SXFK	**Yanhouchang**	**4.56**	**308**	*eP*		**Pn**	**20 26 13.9**	**+1.1**
JOW	**Kunigami**	**6.78**	**61**	Pn		**Pn**	**20 26 41.0**	**-2.3**
	comp=E,0.7nm,0.3s,baz=220,slow=14,SNR=6.4 comp=E,12nm,0.9s							
KSRS	**Korea Array**	**14.77**	**20**	Pn		**Pn**	**20 28 32.8**	**+0.1**
	comp=E,0.2nm,0.3s,baz=198,slow=11,SNR=18 comp=E,1.1nm,0.8s							
JCJ	**Chichijima**	**18.86**	**75**	LR		LR	20 35 02.6	
	comp=E,88nm,18.4s,baz=160,slow=32							
LZDM	**Lanzhou Array**	**19.80**	**312**	P		**P**	**20 29 34.4**	**+0.3**
	comp=E,0.3nm,0.3s,baz=128,slow=14,SNR=4.2 comp=E,0.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**21.81**	**261**	P		**P**	**20 29 52.4**	**-3.2**
	comp=E,0.1nm,0.3s,baz=62,slow=8.0,SNR=5.7							
CMAR				LR		LR	20 38 34.4	
	comp=E,22nm,19.0s,baz=75,slow=37 comp=E,0.1nm,0.3s							
KLR	**Kul'dur**	**26.74**	**15**	LR		LR	20 43 32.2	
	comp=E,8.0nm,18.2s,baz=258,slow=41							
SONM	**Songino Array**	**27.03**	**337**	P		**P**	**20 30 44.9**	**-0.4**
	comp=E,0.5nm,0.6s,baz=149,slow=9.3,SNR=3.0 comp=E,0.5nm,0.6s							
KAPI	**Kappang**	**28.55**	**184**	LR		LR	20 44 44.0	
	comp=E,40nm,18.2s,baz=91,slow=42							
MKAR	**Makanchi Array**	**39.02**	**316**	P		**P**	**20 32 29.9**	**+0.3**
	comp=E,0.9nm,0.7s,baz=110,slow=9.8,SNR=11 comp=E,0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**40.93**	**327**	P		**P**	**20 32 44.8**	**-0.5**
	comp=E,1.2nm,0.7s,baz=108,slow=9.5,SNR=5.9 comp=E,1.2nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**42.08**	**86**	T		T	21 17 59.7	
	baz=283,slow=75,SNR=10							
H11N2	**WAKE ISLAND Hy**	**42.09**	**86**	T		T	21 17 59.9	
	baz=283,slow=75,SNR=17							
H11N3	**WAKE ISLAND Hy**	**42.10**	**86**	T		T	21 18 01.0	
	baz=283,slow=75,SNR=12							
H11S3	**WAKE ISLAND Hy**	**42.20**	**88**	T		T	21 18 11.5	
	baz=285,slow=75,SNR=23							
H11S1	**WAKE ISLAND Hy**	**42.21**	**88**	T		T	21 18 10.4	
	baz=285,slow=75,SNR=16							
H11S2	**WAKE ISLAND Hy**	**42.22**	**88**	T		T	21 18 11.6	
	baz=285,slow=75,SNR=13							
WRA	**Warramunga Arr**	**45.05**	**163**	P		P	20 33 12.6	-6.4
	comp=E,0.2nm,0.6s,baz=343,slow=8.0,SNR=2.7 comp=E,0.2nm,0.6s							
ASAR	**Alice Springs**	**48.51**	**165**	P		P	20 33 40.0	-6.0
	comp=E,0.1nm,0.5s,baz=344,slow=8.4,SNR=1.4 comp=E,0.1nm,0.5s							
STKA	**Stephens Creek**	**58.41**	**160**	P		P	20 34 52.4	-6.1
	comp=E,0.7nm,0.7s,baz=25,slow=13,SNR=2.8 comp=E,0.7nm,0.7s							
KBZ	**Khabaz**	**66.15**	**309**	P		**P**	**20 35 49.4**	**-0.9**
	comp=E,2.4nm,1.1s,baz=84,slow=9.2,SNR=1.7 comp=E,2.4nm,1.1s							
YKA	**Yellowknife Ar**	**83.29**	**23**	P		**P**	**20 37 29.1**	**-0.1**
	comp=E,0.5nm,0.7s,baz=318,slow=5.5,SNR=9.4 comp=E,0.5nm,0.7s							

RSNC 13 20:27:30.9±0.0, 7°N±1°×7°3W±°, h148km±1km, M1.6, ML1.6, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**0.72**	**41**	P	Pn	20 27 53.5	-0.4
PAMC				S	Sn	20 28 11.0	-0.4
RUSC	**La Rusia**	**0.90**	**174**	P	Pn	20 27 54.6	-0.6
PTBC	**PUERTO BERRIO,**	**1.30**	**259**	P	Pn	20 27 57.9	-0.4
PTBC				S	Sn	20 28 18.7	-0.5
NORC	**Norcasia**	**2.08**	**234**	P	Pn	20 28 06.7	-0.3
NORC				S	Sn	20 28 35.2	+0.5

KRSC 13 20:38:23.7±1.4, 50.72N×157.25E, h97km±17km, MI3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.72**	**267**	*eP*	Pn	20 38 42.3	+1.3
SKR				*eS*	Sn	20 38 54.4	+0.5
PAU	**Pauzhetka**	**0.80**	**340**	*eP*	Pn	20 38 42.7	+1.0
PAU				*eS*	Sn	20 38 55.1	-0.2
KDTR	**Khodutka, Kamc**	**1.21**	**25**	*eP*	Pn	20 38 48.0	+1.8
KDTR				*eS*	Sn	20 39 04.4	+1.2
ASAK	**Asacha**	**1.71**	**13**	*eP*	Pn	20 38 54.2	+1.7
MTVR	**Mutnovka**	**1.86**	**18**	*eP*	Pn	20 38 56.7	+2.3
RUS	**Russkaya**	**1.89**	**24**	*eP*	Pn	20 38 56.4	+1.7
GRL	**Gorelyy**	**1.90**	**15**	*eP*	Pn	20 38 57.7	+2.7
KRMR	**Karymshinskiy**	**2.18**	**14**	*eS*	Sn	20 39 28.8	+3.7
DALK	**Dalny**	**2.49**	**21**	*eP*	Pn	20 39 04.7	+2.2
UGLR	**Uglovaya**	**2.67**	**21**	*eP*	Pn	20 39 07.7	+2.6
AVH	**Avacha**	**2.71**	**19**	*eP*	Pn	20 39 07.8	+2.3
KOK	**Koryaka**	**2.71**	**18**	*eP*	Pn	20 39 08.2	+2.6
SMAR	**Somma**	**2.72**	**20**	*eP*	Pn	20 39 08.0	+2.2
KRER	**Koryakskii**	**2.75**	**19**	*eP*	Pn	20 39 08.7	+2.5
SDLR	**Sedlovina**	**2.75**	**21**	*eP*	Pn	20 39 07.9	+1.7
KRX	**Arik**	**2.78**	**18**	*eP*	Pn	20 39 08.5	+2.0
SPN	**Mys Shipunski**	**2.94**	**35**	*eP*	Pn	20 39 10.2	+1.8
GNL	**Ganaly**	**3.01**	**8**	*eP*	Pn	20 39 10.2	+0.7
MKZ	**Mys Kozlova**	**4.71**	**34**	*eP*	Pn	20 39 33.0	+0.7
KBTR	**Krutoberegovo**	**6.42**	**29**	*eP*	Pn	20 39 56.6	+1.1

IDC 13 20:42:54.2±1.7, 7.36S×146.36E, h192km±24km, mb3.3/7, mbtmp3.8/9, Error ellipse: s-maj=36.7km s-min=22.7km az=128.0
ISC 13 20:42:54.8±0.9, 7.4S±0.1×146.3E±0.2, h200km, n11, σ0.82/13, mb3.6/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.12**	**157**	P	**Pn**	**20 43 34.9**	**+0.2**
	25nm,0.4s,baz=13,slow=5.5,SNR=21						
PMG				S	**Sn**	**20 44 05.5**	**-0.3**
	20nm,0.4s,baz=12,slow=18,SNR=8.5						
WRA	**Warramunga Arr**	**17.02**	**222**	P	**P**	**20 46 40.2**	**+0.2**
	1.2nm,0.8s,baz=50,slow=11,SNR=11						
ASAR	**Alice Springs**	**20.06**	**215**	P	**P**	**20 47 14.6**	**+1.5**
	1.2nm,0.5s,baz=52,slow=8.7,SNR=28						
ASAR				S	**S**	**20 50 46.3**	**-1.2**
	0.5nm,0.7s,baz=26,slow=20,SNR=4.8 1.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**22.76**	**240**	P	**P**	**20 47 39.3**	**-0.9**
	1.6nm,0.7s,baz=47,slow=12,SNR=1.4 1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**53.35**	**299**	P	**P**	**20 51 54.5**	**+0.5**
	1.3nm,0.6s,baz=121,slow=5.8,SNR=12 1.3nm,0.6s						
MKAR	**Makanchi Array**	**78.18**	**321**	P	**P**	**20 54 32.6**	**+0.5**
	0.6nm,0.6s,baz=103,slow=7.4,SNR=13 0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**79.87**	**328**	P	**P**	**20 54 40.3**	**-0.8**
	0.5nm,0.3s,baz=126,slow=7.5,SNR=4.0 0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**81.97**	**323**	P	**P**	**20 54 51.9**	**-0.4**
	0.3nm,0.7s,baz=133,slow=8.8,SNR=4.9 0.3nm,0.7s						
ILAR	**Eielson Array**	**87.06**	**23**	P	**P**	**20 55 16.9**	**-0.6**
	0.8nm,0.8s,baz=247,slow=5.6,SNR=6.0 0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**144.76**	**282**	PKP	**PKPdf**	**21 02 09.4**	**+0.6**
	2.6nm,0.9s,baz=64,slow=4.0,SNR=15						
DBIC	**Dimbokro**	**151.39**	**270**	PKPbc	**PKiKP**	**21 02 26.8**	**+0.4**
	2.2nm,0.5s,baz=160,slow=4.6,SNR=4.8						

MEX 13 20:46:50.5±0.4, 14.61N×92.63W, h62km±26km, MD4.0
GCG 13 20:46:50.9±0.4, 15.40N×92.21W, h52km±60km, MD3.4, Presumed earthquake
ISC 13 20:46:46.7±1.9, 14.7N±0.2×92.4W±0.2, h94km±21km, n10, σ1.53/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	**Catarina**	**0.38**	**57**	*i* P	**Pn**	**20 47 03.0**	**+1.9**
PATR	**El Naranjo**	**0.49**	**19**	*i* P	**Pn**	**20 47 02.8**	**+0.6**
PATR				*eS*	**Sn**	**20 47 12.8**	**-0.8**
CHUJ	**Union Juarez**	**0.52**	**33**	*i* P	**Pn**	**20 47 03.7**	**+1.3**
CHUJ				*eS*	**Sn**	**20 47 13.7**	**-0.4**
PAVE	**Pavencul**	**0.58**	**22**	*eP*	**Pn**	**20 47 04.0**	**+1.1**
PAVE				*eS*	**Sn**	**20 47 14.5**	**-0.3**
STG2	**El Palmar, Qui**	**1.01**	**102**	*i* S	**Sn**	**20 47 20.0**	**-2.3**
STG8	**El Palmar, Qui**	**1.04**	**101**	*i* P	**Pn**	**20 47 08.0**	**+0.7**
STG8				*i* S	**Sn**	**20 47 21.5**	**-1.4**
STG5	**El Palmar, Qui**	**1.05**	**103**	*i* P	**Pn**	**20 47 08.1**	**+0.8**
STG5				*i* S	**Sn**	**20 47 22.0**	**-0.9**
PCIG		**1.31**	**323**	*eP*	**Pn**	**20 47 10.2**	**-0.2**
PCIG				*eS*	**Sn**	**20 47 25.3**	**-2.9**
UXUV	**UXUV**	**3.14**	**328**	*eP*	**Pn**	**20 47 34.0**	**-0.2**
UXUV				*eS*	**Sn**	**20 48 10.9**	**+0.1**
CMIG	**Matias Romero**	**3.41**	**316**	*eP*	**Pn**	**20 47 40.4**	**+2.6**
CMIG				*eS*	**Sn**	**20 48 16.1**	**-1.1**

JMA 13 20:53:10.2±0.2, 22.2°N±1.1°×121.5E±0.7, h83km, MV3.1/11, TAIWAN REGION
TAP 13 20:53:14.3, 21.93N×121.67E, h21km, ML3.2, D
ISC 13 20:53:13.4±1.7, 21.85N±0.08×121.74E±0.06, h18km±6km, n41, σ1.54/44, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**0.20**	**316**	⇑*i*P	**Pg**	**20 53 19.0**	**+0.5**
LYUB				*i* S	**Sg**	**20 53 22.6**	**+0.7**
LAY	**Lan-yu**	**0.25**	**317**	⇑*i*P	**Pg**	**20 53 18.8**	**-0.5**
LAY				*i* S	**Sg**	**20 53 22.8**	**-0.5**
TSEB	**Hengchuen, Pin**	**0.78**	**274**	P	**Pg**	**20 53 29.7**	**+1.0**
SMST	**Manzhou Townsh**	**0.85**	**281**	*eP*	**Pg**	**20 53 29.1**	**-1.0**
TWKBT	**Hengchun**	**0.86**	**276**	*eP*	**Pg**	**20 53 29.3**	**-1.0**
TWK1	**Hengchun**	**0.87**	**276**	*i* P	**Pg**	**20 53 30.0**	**-0.5**
TAW	**Tawu**	**0.93**	**303**	*eP*	**Pg**	**20 53 31.2**	**-0.3**
HEN	**Hengchun**	**0.94**	**280**	*eP*	**Pg**	**20 53 30.1**	**-1.7**
SLIU	**Shizi**	**0.94**	**293**	*eP*	**Pg**	**20 53 30.9**	**-0.9**
ECL	**Taimali**	**1.04**	**316**	P	**Pg**	**20 53 31.8**	**-1.8**
ECL				S	**Sg**	**20 53 45.1**	**-2.1**
TWGBT	**Beinan**	**1.14**	**328**	P	**Pg**	**20 53 36.9**	**+1.4**
TWGBT	**Beinan**	**1.14**	**328**	*eP*	Pg	20 53 32.5	-2.9
TWGBT				*eS*	**Sg**	**20 53 50.0**	**-0.4**
TWG	**Pinlang**	**1.14**	**328**	P	**Pg**	**20 53 33.8**	**-1.8**
TWG				S	**Sg**	**20 53 49.2**	**-1.4**
SCZT	**Fangliau**	**1.16**	**297**	*eP*	**Pg**	**20 53 34.6**	**-1.2**
MASBT	**Mashibuluo**	**1.27**	**307**	*eP*	Pg	20 53 35.2	-2.8
CHKT	**Chengkung**	**1.29**	**345**	*eP*	Pg	20 53 35.0	-3.3
SSD	**Sandimen**	**1.36**	**311**	*eP*	**Pg**	**20 53 38.6**	**-1.1**
CHKH	**Chenggong**	**1.37**	**347**	*eP*	Pg	20 53 36.7	-3.2
FULB	**Fuli**	**1.40**	**343**	*eP*	Pn	20 53 36.3	-1.8
ELDTW	**Lidau**	**1.49**	**334**	*eP*	**Pn**	**20 53 40.8**	**+1.4**
YULB	**Yu-li**	**1.58**	**345**	P	Pn	20 53 40.2	-0.4
YULB	**Yu-li**	**1.58**	**345**	*eP*	Pn	20 53 40.3	-0.3
SGST	**Jiashian**	**1.62**	**319**	P	**Pn**	**20 53 41.6**	**+0.5**
TPUB	**Ta-pu**	**1.77**	**325**	P	**Pn**	**20 53 45.7**	**+2.5**
TPUB	**Ta-pu**	**1.77**	**325**	*eP*	**Pn**	**20 53 44.6**	**+1.5**
WARBT	**Fenglin Townsh**	**1.88**	**350**	*eP*	**Pn**	**20 53 45.6**	**+0.9**
WCKO	**Fanlu**	**1.89**	**327**	*eP*	Pn	20 53 44.4	-0.5
SHUL	**Shoufeng**	**1.93**	**355**	*eS*	**Sn**	**20 54 08.6**	**-0.6**
VWDT	**VWDT**	**1.97**	**344**	*eP*	**Pn**	**20 53 46.4**	**+0.5**
WHYT	**Xinyi Township**	**2.01**	**336**	*eP*	**Pn**	**20 53 46.2**	**+1.8**
SSLB	**Suanglung**	**2.06**	**340**	P	**Pn**	**20 53 50.0**	**+2.9**
SSLB	**Suanglung**	**2.06**	**340**	*eP*	**Pn**	**20 53 48.6**	**+1.5**
NACB	**Ninganchiao**	**2.31**	**357**	P	**Pn**	**20 53 55.1**	**+4.4**
YHNB	**Yeheng**	**2.82**	**353**	P	**Pn**	**20 54 01.4**	**+3.7**
YOJ	**Yonaguni jima**	**2.85**	**24**	*eP*	**Pn**	**20 53 58.9**	**+0.9**
YOJ				S	**Sn**	**20 54 32.4**	**+0.5**
IRIF	**Iriomote-Funau**	**3.08**	**36**	*eP*	**Pn**	**20 54 01.9**	**+0.8**
IRIF				*eS*	**Sn**	**20 54 36.5**	**-0.9**
JKRS	**Kuro-shima**	**3.17**	**41**	*eP*	**Pn**	**20 54 03.7**	**+1.4**
JKRS				*eS*	**Sn**	**20 54 38.8**	**-0.8**
JIJ	**Ishigaki jima**	**3.34**	**41**	*eP*	**Pn**	**20 54 05.2**	**+0.5**
JIJ				*eS*	**Sn**	**20 54 42.2**	**-1.7**
JISG	**Ishigakijimahi**	**3.61**	**41**	*eP*	**Pn**	**20 54 09.2**	**+0.7**
JISG				*eS*	**Sn**	**20 54 49.5**	**-1.0**
JTJ	**Tarama**	**3.89**	**44**	*eP*	**Pn**	**20 54 13.2**	**+0.9**
JTJ				*eS*	**Sn**	**20 54 57.5**	**0.0**
JIRB	**Irabujima**	**4.33**	**46**	*eS*	**Sn**	**20 55 07.9**	**-0.5**

IDC 13 20:54:32.1±3.1, 33.05S×178.76W, h0km, mb3.3/2, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=74.8km s-min=46.9km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.19**	**212**	Pn	Pn	20 56 04.3	-0.4
	0.6nm,0.3s,baz=265,slow=5.1,SNR=6.4						
URZ				Sn	Sn	20 57 08.9	-7.3
	1.6nm,0.3s,baz=2.9,slow=23,SNR=5.9 1.6nm,0.4s						
ASAR	**Alice Springs**	**42.39**	**270**	P	P	21 02 28.5	0.0
	0.3nm,0.8s,baz=113,slow=8.4,SNR=2.0 0.3nm,0.8s						
WRA	**Warramunga Arr**	**43.62**	**275**	P	P	21 02 38.4	-0.1
	0.3nm,0.5s,baz=116,slow=8.2,SNR=6.3 0.3nm,0.5s						
FINES	**FINESS Array B**	**147.38**	**338**	PKPbc	PKPbc	21 14 16.2	-0.8
	2.3nm,1.1s,baz=67,slow=6.7,SNR=5.0						

IDC 13 21:02:24.3±7.2, 17.26S×172.76W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=338.4km s-min=63.5km az=143.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**50.04**	**258**	P	P	21 11 20.8	-0.3
	0.6nm,0.8s,baz=97,slow=7.1,SNR=8.2 0.6nm,0.8s						
ASAR	**Alice Springs**	**50.15**	**253**	P	P	21 11 22.1	+0.1
	0.8nm,0.5s,baz=87,slow=8.9,SNR=8.9 0.8nm,0.5s						
BRTR	**Keskin Array B**	**147.98**	**320**	PKPbc	PKPbc	21 22 11.3	-0.8
	1.8nm,1.0s,baz=27,slow=3.5,SNR=4.8						

IDC 13 21:07:51.4±3.3, 51.07N×174.97W, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=94.9km s-min=31.3km az=1.0
NEIC 13 21:07:56.9±1.5, 51.3N±0.1×174.96W±0.02, h22km±13km, ML3.3/8, ML3.0(AEIC), Error ellipse: s-maj=16.9km s-min=1.3km az=174.0
AEIC 13 21:07:57.1±1.4, 51.28N±0.04×175.02W±0.05, h16km±4km, Error ellipse: s-maj=6.0km s-min=4.5km az=201.0
ISC 13 21:07:54.2±1.9, 51.17N±0.08×175.05W±0.04, h16km±11km, n28, σ1.13/30, mb3.9/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSIG	**Igitkin Island**	**0.99**	**327**		**Pn**	**21 08 14.1**	**+0.7**
GSIG					**Sn**	**21 08 27.5**	**+0.5**
GSMY	**Great Sitkin M**	**1.08**	**325**		**Pn**	**21 08 15.6**	**+0.9**
GSMY					**Sn**	**21 08 30.1**	**+0.8**
GSCK	**Great Sitkin C**	**1.09**	**321**		**Pg**	**21 08 15.8**	**+0.5**
GSCK					**Sn**	**21 08 30.9**	**+1.2**
ETKA	**Kagalaska Isla**	**1.10**	**310**		**Pg**	**21 08 16.0**	**+0.6**
GSTD	**Great Sitkin T**	**1.12**	**323**		**Pg**	**21 08 16.3**	**+0.5**
GSTD					**Sn**	**21 08 31.4**	**+0.9**
GSTR	**Great Sitkin T**	**1.12**	**326**	Pn	**Pg**	**21 08 16.3**	**+0.5**
GSTR					**Sb**	**21 08 27.1**	**-2.5**
ATKA	**Atka Island**	**1.17**	**27**	Pn	**Pn**	**21 08 15.6**	**-0.2**
ATKA					**Sb**	**21 08 26.7**	**-4.2**
ATKA				IAML		21 08 31.1	
	comp=N,797nm,0.9s						
ADK	**Adak**	**1.25**	**306**		**Pg**	**21 08 18.3**	**+0.1**
ADK				IAML		21 08 35.7	
	comp=N,443nm,0.4s						
KOFP	**Korovin Flat P**	**1.26**	**28**		**Pb**	**21 08 17.8**	**+0.2**
KOFP					**Sn**	**21 08 34.2**	**+0.4**
ADAG	**Mount Adagdak**	**1.27**	**311**		**Pg**	**21 08 19.1**	**+0.5**
KOKL	**Mount Kliuchef**	**1.27**	**24**		**Pb**	**21 08 18.0**	**+0.2**
KOKL					**Sb**	**21 08 34.4**	**+0.4**
KOWE	**Korovin West**	**1.30**	**22**		**Sn**	**21 08 35.3**	**+0.5**
KONE	**Korovin Northe**	**1.36**	**25**		**Pb**	**21 08 19.5**	**+0.3**
KIWB	**Kanaga Island**	**1.48**	**298**	Pn	**Pg**	**21 08 22.1**	**-0.6**
KIWB				IAML		21 08 50.8	
	comp=E,446nm,0.7s						
KIWB				IAML		21 08 55.1	
	comp=N,385nm,0.9s						
TAFP	**Tanaga Falls P**	**1.97**	**293**		**Pb**	**21 08 29.4**	**-0.3**
TASE	**Tanaga Southea**	**1.98**	**291**		**Pb**	**21 08 29.8**	**-0.1**
GANE	**Gareloi Northe**	**2.42**	**287**		**Pb**	**21 08 36.5**	**-0.8**
**

s-maj=8.1km s-min=3.9km az=182.0
AEIC ***13*** *21:15:07.0±2.7,51°.31N±0°.05×175°.02W±0°.05, h8km±5km, Error ellipse: s-maj=7.3km s-min=4.9km az=181.0*
ISC 13 21:15:02.2±2.1**,51°.05N**±0°.08×**174°.94W**±0°.04**, h5**km±12km, n74,σ1§13/74, mb3.6/7, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**1.12**	**327**		**Pb**	**21 15 24.4**	**+0.3**
GSIG					**Sb**	**21 15 37.4**	**-1.5**
GSMY	**Great Sitkin M**	**1.21**	**325**		**Pn**	**21 15 25.9**	**+0.1**
GSMY					**Sb**	**21 15 40.3**	**-1.3**
ETKA	**Kagalaska Isla**	**1.22**	**312**		**Pn**	**21 15 26.3**	**+0.3**
GSCK	**Great Sitkin C**	**1.23**	**322**		**Pn**	**21 15 26.2**	**+0.3**
GSCK					**Sb**	**21 15 41.0**	**-0.9**
ATKA	**Atka Island**	**1.24**	**22**		**Pg**	**21 15 26.1**	**+0.1**
ATKA				IAML		21 15 41.8	
	comp=N,1μm,0.5s						
ATKA				IAML		21 15 41.8	
	comp=E,802nm,0.5s						
ATKA	**Atka Island**	**1.24**	**22**		**Sg**	**21 15 41.2**	**-1.0**
GSTD	**Great Sitkin T**	**1.25**	**324**		**Pn**	**21 15 26.7**	**+0.3**
GSTD					**Sb**	**21 15 41.9**	**-1.0**
GSTR	**Great Sitkin T**	**1.25**	**327**		**Pn**	**21 15 26.9**	**+0.5**
GSSP	**Great Sitkin S**	**1.30**	**324**		**Pg**	**21 15 27.0**	**-0.1**
KOFP	**Korovin Flat P**	**1.33**	**23**		**Pn**	**21 15 28.2**	**+0.7**
KOFP					**Sn**	**21 15 44.8**	**-0.9**
KOKL	**Mount Kliuchef**	**1.35**	**20**		**Pn**	**21 15 28.2**	**+0.4**
KOKL					**Sg**	**21 15 44.8**	**-1.0**
ADK	**Adak**	**1.37**	**308**		**Pn**	**21 15 28.3**	**+0.4**
ADK				IAML		21 15 46.4	
	comp=E,726nm,0.3s						
ADK	**Adak**	**1.37**	**308**		**Sb**	**21 15 45.1**	**-1.0**
KOWE	**Korovin West**	**1.39**	**18**		**Pn**	**21 15 28.8**	**+0.6**
KOKV	**Korovin Volcan**	**1.40**	**20**		**Pg**	**21 15 29.3**	**+0.3**
KOSE	**Korovin Southe**	**1.41**	**23**		**Sg**	**21 15 46.8**	**-0.7**
KONE	**Korovin Northe**	**1.44**	**21**		**Pb**	**21 15 30.0**	**+0.5**
KIRH	**Kanaga Island**	**1.59**	**303**		**Pb**	**21 15 32.3**	**+0.3**
KIWB	**Kanaga Island**	**1.60**	**301**		**Pn**	**21 15 31.9**	**+0.9**
KIWB				IAML		21 16 00.9	
	comp=E,623nm,0.5s						
KIKV	**Kanaga Island**	**1.62**	**302**		**Pb**	**21 15 32.6**	**+0.1**
TAPA	**Tanaga Point A**	**1.95**	**294**		**Pn**	**21 15 37.9**	**+1.9**
TAFL	**Tanaga Flats**	**1.98**	**292**		**Pb**	**21 15 38.4**	**-0.2**
TAFP	**Tanaga Falls P**	**2.08**	**295**		**Pb**	**21 15 39.9**	**-0.5**
TASE	**Tanaga Southea**	**2.09**	**293**		**Pb**	**21 15 40.2**	**-0.4**
GANE	**Gareloi Northe**	**2.52**	**289**		**Pn**	**21 15 46.4**	**+2.7**
UNV	**Unalaska Valle**	**5.87**	**58**	Pn	**Pn**	**21 16 31.4**	**+1.7**
P08K	**Saint George I**	**6.41**	**28**	Pn	**Pn**	**21 16 38.2**	**+1.1**
FALS	**False Pass**	**7.93**	**57**	Pn	**Pn**	**21 16 59.3**	**+1.3**
M11K	**Mekoryuk**	**10.56**	**24**	Pn	**Pn**	**21 17 37.5**	**+3.5**
N14K	**Kuskokwak Cree**	**11.62**	**35**	Pn	**Pn**	**21 17 51.3**	**+2.9**
O15K	**Ungalikthiuk R**	**11.86**	**41**	Pn	**Pn**	**21 17 54.7**	**+3.0**
N15K	**Kwethluk River**	**12.38**	**37**	Pn	**Pn**	**21 17 59.7**	**+0.9**
L16K	**Owhat River**	**13.65**	**33**	Pn	**Pn**	**21 18 17.2**	**+1.1**
OHAK	**Old Harbor**	**14.08**	**56**	Pn	**Pn**	**21 18 21.5**	**-0.5**
KDAK	**Kodiak Island**	**14.61**	**54**	P	**P**	**21 18 36.7**	**+0.8**
L18K	**Granite Mounta**	**14.96**	**35**	Pn	**Pn**	**21 18 35.4**	**+1.3**
N19K	**Bonanza Creek**	**15.00**	**41**	Pn	**Pn**	**21 18 36.5**	**+1.9**
H18K	**Honhosa River**	**16.54**	**25**		**Pn**	**21 18 56.7**	**+2.1**
SLKM	**Skilak Lake**	**16.72**	**46**	Pn	**Pn**	**21 18 56.9**	**0.0**
SML	**Sawmill**	**18.09**	**43**		**Pn**	**21 19 14.2**	**+0.2**
SCM	**Sheep Creek Mo**	**18.53**	**44**	P	**P**	**21 19 19.9**	**+0.6**
RND	**Reindeer**	**18.60**	**38**	P	**P**	**21 19 20.7**	**+0.6**
RND				IAmb	IAmb	21 19 41.6	
	comp=E,3.2nm,1.1s						
E19K	**Redstone River**	**18.65**	**22**	P	**P**	**21 19 20.7**	**+0.2**
D19K	**Kuna River**	**19.31**	**19**		**P**	**21 19 28.4**	**+0.7**
D19K				IAmb	IAmb	21 19 58.8	
	comp=Z,2.5nm,1.1s						
C19K	**Lookout Ridge**	**19.55**	**16**	P	**P**	**21 19 30.8**	**+0.4**
C19K				IAmb	IAmb	21 19 40.5	
	comp=Z,2.0nm,1.1s						
CCB	**Clear Creek Bu**	**19.63**	**36**	P	**P**	**21 19 31.2**	**+0.1**
N25K	**Chitina, Valde**	**19.67**	**46**	P	**P**	**21 19 31.0**	**-0.8**
HDA	**Harding Lake**	**19.83**	**37**	P	**P**	**21 19 33.7**	**+0.3**
HDA				IAmb	IAmb	21 19 47.3	
	comp=Z,3.0nm,1.1s						
IL31		**20.03**	**36**	P	**P**	**21 19 35.3**	**-0.2**
IL31				IAmb	IAmb	21 19 41.7	
	comp=Z,1.9nm,1.1s						
ILAR	**Eielson Array**	**20.03**	**36**	P	**P**	**21 19 35.4**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=228,slow=9.6,SNR=6.7						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**20.03**	**36**	P	**P**	**21 19 35.6**	**+0.1**
H24K	**Noodor Dome**	**20.24**	**33**	P	**P**	**21 19 38.1**	**+0.2**
COLD	**Coldfoot**	**20.35**	**28**	P	**P**	**21 19 37.6**	**-1.4**
COLD				IAmb	IAmb	21 19 58.0	
	comp=Z,2.2nm,1.1s						
RIDG	**Independent Ri**	**20.35**	**40**	P	**P**	**21 19 39.4**	**+0.3**
E22K	**Anaktuvuk Pass**	**20.51**	**25**	P	**P**	**21 19 41.4**	**+0.5**
E22K				IAmb	IAmb	21 20 21.7	
	comp=Z,2.4nm,1.1s						
J25K	**Salcha River,**	**20.53**	**37**	P	**P**	**21 19 40.7**	**-0.4**
J25K				IAmb	IAmb	21 19 42.5	
	comp=Z,1.3nm,0.6s						
SCRK	**Sand Creek**	**20.79**	**40**	P	**P**	**21 19 43.9**	**-0.1**
SCRK				IAmb	IAmb	21 19 46.3	
	comp=Z,2.9nm,1.0s						
G24K	**Hadweenzic Riv**	**20.87**	**31**	P	**P**	**21 19 44.6**	**0.0**
PRP	**Porcupine Dome**	**20.90**	**35**	P	**P**	**21 19 45.5**	**+0.3**
E23K	**Chandalar**	**21.06**	**27**		**P**	**21 19 48.8**	**+2.0**
E23K				IAmb	IAmb	21 19 53.2	
	comp=Z,1.5nm,0.6s						
M27K	**Edge Creek, AK**	**21.12**	**45**	P	**P**	**21 19 48.7**	**+1.1**
M27K				IAmb	IAmb	21 20 30.5	
	comp=Z,2.4nm,1.0s						
J26L	**Joseph Creek**	**21.18**	**39**	P	**P**	**21 19 47.9**	**-0.2**
J26L				IAmb	IAmb	21 19 53.8	
	comp=Z,1.6nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**34.38**	**211**	T	T	21 58 31.2	
	baz=24						
H11N3	**WAKE ISLAND Hy**	**34.39**	**211**	T	T	21 58 27.2	
	baz=24						
H11N1	**WAKE ISLAND Hy**	**34.40**	**211**	T	T	21 58 28.9	
	baz=24						
H11S1	**WAKE ISLAND Hy**	**35.59**	**211**	T	T	21 59 58.6	
	baz=19						
H11S2	**WAKE ISLAND Hy**	**35.61**	**211**	T	T	21 59 56.3	
	baz=19						
H11S3	**WAKE ISLAND Hy**	**35.61**	**211**	T	T	21 59 55.7	
	baz=19						
PDAR	**Pinedale Array**	**44.08**	**74**	P	**P**	**21 23 08.8**	**-2.5**
	comp=Z,0.1nm,0.4s,baz=299,slow=6.8,SNR=1.6						
	comp=Z,0.1nm,0.4s						
KURK	**Kurchatov**	**60.97**	**316**	P	**P**	**21 25 16.5**	**+0.5**
KURBB	**Kurchatov Arra**	**61.08**	**316**	P	**P**	**21 25 17.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=52,slow=6.1,SNR=4.2						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**62.11**	**311**	P	**P**	**21 25 23.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=47,slow=6.6,SNR=18						
	comp=Z,0.3nm,0.3s						
MAKZ	**Makanchi**	**62.25**	**311**	P	**P**	**21 25 24.6**	**-0.1**
BVAR	**Borovoye Array**	**62.68**	**322**	P	**P**	**21 25 28.4**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=52,slow=7.0,SNR=7.8						
	comp=Z,1.1nm,0.4s						

BGSI ***13*** *21:29:52.6±1.0,26°.81S×26°.88E, h0km±52km, ML2.6*
ISC 13 21:29:48.7±2.0**,26°.92S**±0°.06×**26°.9E**±0°.1**, h6**km**, n7,** σ1§41/11**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKGR	**Makgori**	**2.21**	**300**	*i* P	**Pn**	**21 30 27.8**	**+1.9**
MAKGR				*i* S	**Sn**	**21 30 53.1**	**-0.5**
MAKGR				IAML		21 30 55.9	
	comp=N,295nm,0.6s						
LBTB	**Lobatse**	**2.25**	**327**	*i* P	**Pn**	**21 30 25.5**	**-1.0**
LBTB				*i* S	**Sn**	**21 30 54.9**	**+0.3**
BOSA	**Boshof**	**2.25**	**221**	*i* P	**Pn**	**21 30 27.3**	**+0.8**
BOSA				*i* S	**Sn**	**21 30 53.0**	**-1.7**
LPHEP	**Lephephe**	**3.67**	**344**	*i* P	**Pn**	**21 30 46.9**	**+0.8**
LPHEP				*i* S	**Sn**	**21 31 27.6**	**-2.1**
LPHEP				IAML		21 31 46.2	
	comp=E,14nm,0.3s						
KHWEE	**KHWEE**	**5.13**	**344**	*i* P	**Pn**	**21 31 07.6**	**+1.4**
KHWEE				IAML		21 32 38.8	
	comp=E,48nm,0.4s						
BROLN	**Tlhalogang**	**5.80**	**4**	*i* P	**Pn**	**21 31 16.2**	**+0.7**
BROLN				IAML		21 32 51.9	
	comp=E,8.1nm,0.3s						
KGCAE	**Kacgae**	**5.90**	**312**	*i* P	**Pn**	**21 31 16.9**	**+0.1**
KGCAE				IAML		21 32 56.0	
	comp=E,12nm,0.4s						

ISK ***13*** *21:31:03.5, 37°.23N×26°.59E, h13km, ML2.6/22*
AFAD ***13*** *21:31:05.0, 37°.27N×26°.66E, h7km±3km, ML2.6*
ATH ***13*** *21:31:05.4, 37°.27N×26°.71E, h22km±2km, ML2.7/6, Manual Solution by A.Agalos First location: 2020/02/13 21:32:30, This location: 2020/02/13 21:44:08 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
THE ***13*** *21:31:07.6, 37°N±2°×2°.7E±°, h28km±2km, M2.8/5, MLh2.8/5*
ISC 13 21:31:05.4±1.1**,37°.27N**±0°.02×**26°.68E**±0°.02**, h19**km±3km**, n68,**σ0§63/93**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNA	**Kalymnos**	**0.39**	**143**	P	**Pg**	**21 31 13.6**	**0.0**
KLNA				S	**Sg**	**21 31 19.5**	**+0.4**
SMG	**Samos**	**0.46**	**16**	P	**Pg**	**21 31 14.6**	**-0.1**
SMG				S	**Sg**	**21 31 20.3**	**-0.7**
SMG	**Samos**	**0.46**	**16**	P	**Pg**	**21 31 14.7**	**-0.1**
SMG				S	**Sg**	**21 31 21.2**	**+0.2**
DIDI	**Didim-Aydin**	**0.46**	**77**	Pg	**Pg**	**21 31 14.6**	**-0.2**
DIDI				Sg	**Sb**	**21 31 22.8**	**+1.3**
DDIM	**Aydin, Didim**	**0.49**	**67**	P	**Pb**	**21 31 14.8**	**-0.6**
YKAV	**Yalikavak-Bodr**	**0.50**	**107**	Pg	**Pb**	**21 31 14.9**	**-0.8**
YKAV				Sg	**Sb**	**21 31 23.1**	**+0.5**
KRL1	**Karlovasi Samo**	**0.52**	**3**	P	**Pb**	**21 31 15.8**	**-0.2**
KRL1				S	**Sb**	**21 31 23.6**	**+0.4**
BODT	**Bodrum**	**0.55**	**112**	P	**Pn**	**21 31 18.2**	**-0.1**
BODT				S	**Sn**	**21 31 26.1**	**-0.9**
GCAM	**G?zelcaml?**	**0.62**	**46**	Pg	**Pb**	**21 31 17.5**	**0.0**
GCAM				Sg	**Sn**	**21 31 27.7**	**-0.9**
GCAM	**G?zelcaml?**	**0.62**	**46**	P	**Pb**	**21 31 17.8**	**+0.3**
BDRM	**Kayabasi**	**0.65**	**108**	P	**Pn**	**21 31 19.3**	**-0.4**
BDRM				S	**Sn**	**21 31 29.4**	**0.0**
BDRM				IAML		21 31 31.0	
	comp=E,356nm,0.5s						
KUSD	**Kusadasi-Aydin**	**0.76**	**39**	Pg	**Pb**	**21 31 20.2**	**+0.1**
KUSD				Sg	**Sn**	**21 31 32.1**	**-0.2**
DGB	**zmir**	**0.80**	**12**	P	**Pb**	**21 31 20.9**	**+0.2**
DGB				S	**Sb**	**21 31 31.6**	**+0.5**
DGB				IAML		21 31 34.0	
	comp=E,308nm,0.3s						
DGB				IAML		21 31 35.0	
	comp=N,219nm,0.3s						
GMLD	**Gumuldur**	**0.83**	**13**	Pg	**Pb**	**21 31 20.8**	**-0.4**
GMLD				Sg	**Sg**	**21 31 33.5**	**+0.9**
YAZI	**Mula-Dat§a-**	**0.86**	**133**	P	**Pb**	**21 31 22.1**	**+0.3**
YAZI				S	**Sg**	**21 31 34.2**	**+0.7**
YAZI				IAML		21 31 38.0	
	comp=E,122nm,0.4s						
DAT	**Datca**	**0.90**	**127**	Pg	**Pb**	**21 31 22.6**	**0.0**
DAT	**Datca**	**0.90**	**127**	P	**Pn**	**21 31 23.9**	**+0.6**
DAT				S	**Sn**	**21 31 36.5**	**+0.7**
ZEYE	**Izmir, Urla-Ze**	**0.98**	**352**	P	**Pb**	**21 31 23.7**	**-0.1**
ZEYE				S	**Sb**	**21 31 37.1**	**+0.8**
ZEYE				IAML		21 31 39.0	
	comp=N,514nm,0.3s						
AYDN	**Tasoluk**	**1.03**	**68**	P	**Pb**	**21 31 24.4**	**-0.4**
AYDN				S	**Sg**	**21 31 39.9**	**+0.8**
AYDN				IAML		21 31 45.0	
	comp=E,147nm,0.4s						
NAX1	**Naxos Island**	**1.05**	**261**	P	**Pb**	**21 31 24.7**	**-0.4**
NAX1				S	**Sn**	**21 31 39.4**	**0.0**
URLA	**Izmir**	**1.09**	**357**	Pn	**Pn**	**21 31 25.7**	**-0.1**
URLA	**Izmir**	**1.09**	**357**	P	**Pn**	**21 31 25.8**	**+0.1**
URLA				S	**Sg**	**21 31 41.1**	**+0.2**
URLA				IAML		21 31 43.0	
	comp=N,346nm,0.7s						
URLA				IAML		21 31 44.0	
	comp=E,253nm,0.9s						
CESE	**eme**	**1.10**	**344**	Pn	**Pn**	**21 31 25.5**	**-0.4**
DUVT	**Torbali**	**1.13**	**33**	P	**Pb**	**21 31 26.9**	**+0.6**
BLCB	**Balcova**	**1.15**	**14**	Pn	**Pn**	**21 31 26.7**	**+0.1**
BLCB	**Balcova**	**1.15**	**14**	P	**Pn**	**21 31 25.0**	**-1.6**
BLCB				S	**Sb**	**21 31 38.6**	**-2.7**
AYDB	**Zeytinkoy-Aydi**	**1.18**	**55**	Pn	**Pb**	**21 31 27.5**	**+0.2**
CHOS	**Chios island**	**1.22**	**336**	Pn	**Pn**	**21 31 26.9**	**-0.7**
CHOS	**Chios island**	**1.22**	**336**	P	**Pn**	**21 31 27.3**	**-0.3**
CHOS				S	**Sb**	**21 31 42.6**	**-0.8**
CHOS	**Chios island**	**1.22**	**336**	P	**Pn**	**21 31 27.3**	**-0.3**
CHOS				S	**Sb**	**21 31 43.8**	**+0.4**
TNSA	**Tinos**	**1.23**	**283**	P	**Pb**	**21 31 28.8**	**+0.6**
YER	**Yerkesik**	**1.29**	**96**	P	**Pn**	**21 31 27.8**	**-0.7**
MULA	**Mugla, Merkez-**	**1.31**	**90**	P	**Pb**	**21 31 29.9**	**+0.4**
THERA	**Ancient Thera,**	**1.32**	**227**	P	**Pn**	**21 31 28.9**	**0.0**
THERA				S	**Sb**	**21 31 46.6**	**+0.4**
IZMR	**zmir-demi**	**1.33**	**49**	P	**Pn**	**21 31 29.1**	**+0.1**
THR3	**Thira Island,**	**1.34**	**230**	P	**Pn**	**21 31 29.4**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.34**	**230**	P	**Pn**	**21 31 29.5**	**+0.3**
EAG2	**Marmaro, Chios**	**1.35**	**341**	P	**Pb**	**21 31 30.6**	**+0.5**
EAG2				S	**Sn**	**21 31 46.9**	**+0.2**
SAP3	**Santorini-Thir**	**1.35**	**232**	P	**Pb**	**21 31 30.6**	**+0.4**
SAP3				S	**Sb**	**21 31 47.6**	**+0.4**
THR9	**Santorini-Faro**	**1.40**	**230**	P	**Pn**	**21 31 29.5**	**-0.4**
KARB	**zmir-Karabur**	**1.41**	**351**	P	**Pb**	**21 31 31.0**	**-0.1**
ESEN	**Aydn-Nazilli**	**1.43**	**68**	P	**Pn**	**21 31 31.0**	**+0.7**
ODEM	**Odemis-Izmir**	**1.49**	**47**	Pn	**Pn**	**21 31 31.6**	**+0.2**
CAMT	**Merkez**	**1.56**	**19**	P	**Pn**	**21 31 33.2**	**+1.0**
ARG	**Arkhangelos**	**1.57**	**132**	Pn	**Pn**	**21 31 32.2**	**-0.1**
KIRA	**zmir-Kiraz**	**1.65**	**55**	P	**Pb**	**21 31 34.7**	**-0.6**
IZMD	**zmir-Dikili-**	**1.72**	**7**	P	**Pg**	**21 31 38.1**	**-0.5**
IZMD				S	**Sg**	**21 32 01.6**	**+0.6**
ZEDA	**zmir-Bergama**	**1.72**	**10**	P	**Pn**	**21 31 34.6**	**+0.1**
GOMA	**Golmarmara-Man**	**1.74**	**34**	Pn	**Pn**	**21 31 34.9**	**+0.3**
KARP	**Karpathos**	**1.76**	**167**	Pn	**Pn**	**21 31 34.2**	**-0.9**
KARP	**Karpathos**	**1.76**	**167**	P	**Pn**	**21 31 34.4**	**-0.6**
KTTT	**Salihli**	**1.80**	**38**	P	**Pg**	**21 31 39.8**	**-0.4**
DKL	**Dikili**	**1.81**	**6**	Pn	**Pn**	**21 31 35.7**	**+0.1**
SULTU	**Buldan**	**1.83**	**64**	P	**Pg**	**21 31 41.1**	**+0.3**
AKHS	**Akhisar**	**1.84**	**29**	P	**Pb**	**21 31 39.5**	**+1.0**
MANT	**Manisa**	**1.92**	**50**	P	**Pg**	**21 31 42.8**	**+0.3**
KARY	**Karystos**	**1.93**	**294**	P	**Pn**	**21 31 37.7**	**+0.4**
PRK	**Paraskevi**	**2.00**	**351**	P	**Pn**	**21 31 39.2**	**+1.0**
SOMA	**Soma-Manisa**	**2.00**	**19**	Pn	**Pn**	**21 31 38.8**	**+0.5**
GORD	**Gordes-Manisa**	**2.02**	**35**	Pn	**Pn**	**21 31 39.3**	**+0.7**
SIGR	**SIGRI**	**2.04**	**342**	Pn	**Pn**	**21 31 38.9**	**+0.1**
SIGR	**SIGRI**	**2.04**	**342**	P	**Pn**	**21 31 38.9**	**+0.1**
NPS	**Neapolis**	**2.18**	**204**	P	**Pn**	**21 31 40.7**	**-0.1**
ZKR	**Zakros**	**2.18**	**190**	Pn	**Pn**	**21 31 39.7**	**-1.1**
STEP	**BALIKESIR_Sava**	**2.26**	**21**	P	**Pg**	**21 31 48.1**	**-0.6**
DION	**Dionisos Attik**	**2.32**	**291**	P	**Pn**	**21 31 42.9**	**+0.2**
USAK	**Uak-Merkez**	**2.34**	**51**	P	**Pg**	**21 31 49.5**	**-1.0**
IDI	**Anoyia**	**2.45**	**217**	Pn	**Pn**	**21 31 43.1**	**-1.4**

JMA ***13*** *21:38:41.5±0.2,22°.5N±0°.8×121°.5E±0°.4, h9km, MV4.7/19, TAIWAN REGION*
TAP ***13*** *21:38:41.6, 22°.40N×121°.38E, h26km, ML4.8, C*
NIED ***13*** *21:38:41.5, 22°.53N×121°.53E, h9km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.92; Mθθ5.39; Mϕϕ-8.31; Mrθ1.38; Mθϕ-4.04; Mϕr-1.36; Fault plane solution: M₀8.33000×10¹⁵ NP1:♢₀59.00000°, δ71.00000°, λ167.00000°. NP2:♢₀153.00000°, δ78.00000°, λ19.00000°.*
NEIC ***13*** *21:38:41.7, 22°.46N×121°.31E, h10km*
BJI ***13*** *21:38:41.4, 22°.36N×121°.35E, h18km, mB4.8/14, mb4.2/49, ML4.5/5, Ms4.4/50, Ms7 4.3/51*
IDC ***13*** *21:38:42.7±2.4, 22°.30N×121°.62E, h31km±16km, mb4.0/26, mbtmp4.2/28, ML4.1/2, MS3.9/49, Error ellipse: s-maj=17.5km s-min=12.2km az=69.0*
NEIC ***13*** *21:38:44.2±2.0, 22°.46N±0°.06×121°.32E±0°.07, h35km±1km, mb4.5/67, Mwr4.6/27, Error ellipse: s-maj=10.8km s-min=9.9km az=136.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr6.19; Mθθ2.41; Mϕϕ-8.60; Mrθ-3.43; Mθϕ-2.79; Mϕr1.35; Fault plane solution: M₀8.97000×10¹⁵ NP1:♢₀344.71000°, δ55.62000°, λ48.25000°. NP2:♢₀222.39000°, δ52.00000°, λ134.22000°. Principal axes: T 8.6120, Plg57.0000°, Azm196.0000°; N 0.6765, Plg33.0000°, Azm11.0000°; P -9.2885, Plg2.0000°, Azm103.0000°;*
ISC 13 21:38:41.5±0.8**,22°.39N**±0°.02×**121°.43E**±0°.02**, h18**km±3km**, n378,**σ1§45/477**, mb4.5**/79**, MS4.0**/55**, 2C-3D, Taiwan**

region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.37**	**162**	*i* P	**Pb**	**21 38 49.6**	**+0.1**
LAY				S	**Sb**	**21 38 56.2**	**+1.2**
LYUB	**Lan-yu**	**0.41**	**160**	*i* P	**Pg**	**21 38 49.2**	**-0.8**
LYUB				*e*S	**Sg**	**21 38 55.7**	**0.0**
TTN	**Taitung**	**0.45**	**324**	P	**Pb**	**21 38 51.1**	**+0.2**
TTN				S	**Sb**	**21 38 58.6**	**+1.3**
ECL	**Taimali**	**0.49**	**295**	*e*P	**Pg**	**21 38 50.5**	**-0.9**
ECL				S	**Sg**	**21 38 56.8**	**-1.2**
TAW	**Tawu**	**0.50**	**266**	*i* P	**Pg**	**21 38 50.7**	**-0.8**
TAW				S	**Sg**	**21 38 57.0**	**-1.3**
TAWH	**Dawu Township**	**0.51**	**264**	*e*P	**Pg**	**21 38 50.9**	**-0.8**
TWGBT	**Beinan**	**0.54**	**323**	P	**Pg**	**21 38 51.9**	**-0.4**
TWGBT	**Beinan**	**0.54**	**323**	*e*P	**Pg**	**21 38 51.7**	**-0.6**
TWGBT				S	**Sb**	**21 39 00.3**	**+0.6**
EAST	**Anshuo**	**0.54**	**269**	*i* P	**Pg**	**21 38 51.4**	**-0.9**
EAST				S	**Sg**	**21 38 58.2**	**-1.5**
TWG	**Pinlang**	**0.54**	**322**		**Pg**	**21 38 51.5**	**-0.9**
TWG	**Pinlang**	**0.54**	**322**	*e*P	**Pg**	**21 38 51.6**	**-0.8**
TWG				S	**Sb**	**21 39 00.6**	**+0.7**
SLIU	**Shizi**	**0.61**	**254**	*i* P	**Pb**	**21 38 52.6**	**-1.0**
SLIU				S	**Sg**	**21 39 01.4**	**-0.5**
SMST	**Manzhou Townsh**	**0.66**	**236**	*i* P	**Pb**	**21 38 53.9**	**-0.5**
SMST				S	**Sb**	**21 39 02.3**	**-1.0**
TSEB	**Hengchuen, Pin**	**0.69**	**225**	P	**Pb**	**21 38 55.0**	**+0.1**
TSEB				S	**Sg**	**21 39 04.8**	**+0.4**
CHKT	**Chengkung**	**0.71**	**355**	P	**Pb**	**21 38 54.4**	**-0.9**
CHKT				*i* S	**Sb**	**21 39 04.4**	**-0.3**
TWKBT	**Hengchun**	**0.73**	**232**	P	**Pb**	**21 38 54.9**	**-0.7**
TWKBT				S	**Sb**	**21 39 04.2**	**-1.0**
ECS	**Chishang**	**0.73**	**345**	*e*P	**Pb**	**21 38 55.4**	**-0.3**
ECS				S	**Sn**	**21 39 06.8**	**-1.0**
TWK1	**Hengchun**	**0.73**	**233**	P	**Pb**	**21 38 54.9**	**-0.8**
TWK1				S	**Sb**	**21 39 04.1**	**-1.2**
HEN	**Hengchun**	**0.75**	**239**	*i* P	**Pb**	**21 38 55.4**	**-0.5**
HEN				S	**Sb**	**21 39 04.8**	**-1.0**
SCZT	**Fangliau**	**0.75**	**269**	*i* P	**Pb**	**21 38 54.8**	**-1.2**
SCZT				S	**Sb**	**21 39 04.2**	**-1.7**
MASBT	**Mashibuluo**	**0.77**	**287**	*e*P	**Pb**	**21 38 55.0**	**-1.3**
EHD	**Haiduan**	**0.78**	**345**	*e*P	**Pb**	**21 38 56.0**	**-0.6**
EHD				*e*S	**Sg**	**21 39 07.7**	**+0.4**
CHKH	**Chenggong**	**0.80**	**358**	*e*P	**Pb**	**21 38 56.0**	**-0.8**
CHKH				S	**Sb**	**21 39 06.8**	**-0.5**
FULB	**Fuli**	**0.81**	**351**	*e*P	**Pb**	**21 38 56.3**	**-0.8**
FULB				*e*S	**Sg**	**21 39 07.9**	**-0.4**
SSD	**Sandimen**	**0.82**	**296**	*i* P	**Pb**	**21 38 55.6**	**-1.5**
SSD				*e*S	**Sb**	**21 39 05.2**	**-2.7**
ELDTW	**Lidau**	**0.88**	**334**	*e*P	**Pb**	**21 38 57.2**	**-1.2**
ELDTW				*e*S	**Sb**	**21 39 06.7**	**-3.4**
ECBN	**Changbin**	**0.92**	**1**	*e*P	**Pb**	**21 38 58.2**	**-0.8**
ECBN				*e*S	**Sb**	**21 39 10.7**	**-0.2**
SGLT	**Jiouru**	**0.93**	**291**	*e*P	**Pb**	**21 38 59.0**	**-0.1**
TWF1	**Yuli**	**0.97**	**353**	*e*P	**Pb**	**21 38 59.1**	**-0.6**
TWF1				*e*S	**Sb**	**21 39 12.4**	**+0.3**
WLCH	**Liuqiu**	**0.97**	**268**	*e*P	**Pg**	**21 39 01.7**	**+1.2**
STYH	**Taoyuan**	**0.98**	**322**	*e*P	**Pb**	**21 38 58.9**	**-1.1**
TWP	**Hsiaoliuchiu**	**0.99**	**268**	*e*P	**Pg**	**21 39 01.8**	**+1.1**
YULB	**Yu-li**	**1.01**	**353**		**Pb**	**21 38 58.3**	**-2.1**
YULB	**Yu-li**	**1.01**	**353**	P	**Pb**	**21 38 59.6**	**-0.8**
YULB	**Yu-li**	**1.01**	**353**	*e*P	**Pb**	**21 38 59.3**	**-1.1**
TWM1	**Shoushan**	**1.03**	**295**	*e*P	**Pg**	**21 39 01.4**	**-0.1**
TWM1				*e*S	**Sn**	**21 39 17.1**	**+2.2**
SGST	**Jiashian**	**1.04**	**312**	*e*P	**Pb**	**21 38 59.6

ETLH	**Xiulin Townshi**	**1.81**	**1**	*e*P		**Pn**	**21 39 11.7**	**-0.2**
WTCT	**Ta-ch'eng**	**1.81**	**324**	*e*P		**Pn**	**21 39 11.2**	**-0.5**
WTCT				*e*S		**Sb**	**21 39 35.5**	**-0.9**
WDGT	**Dungji**	**1.85**	**298**	*e*P		**Pn**	**21 39 11.4**	**-0.8**
WDGT				*e*S		**Sn**	**21 39 33.7**	**-1.4**
FUSS	**Fushou**	**1.86**	**355**	*e*P		**Pn**	**21 39 13.6**	**+1.0**
WCH1	**Changhua City**	**1.86**	**334**	*e*P		**Pb**	**21 39 14.1**	**-0.9**
WCH1				*e*S		**Sb**	**21 39 38.2**	**+0.3**
WCHH	**Zhanghua**	**1.86**	**335**	*e*P		**Pb**	**21 39 13.9**	**-1.1**
WCHH				*e*S		**Sb**	**21 39 37.8**	**-0.2**
TWT	**Tachien**	**1.87**	**353**	*e*P		**Pb**	**21 39 14.1**	**-1.2**
TDCB	**Techi**	**1.87**	**352**	*e*P		**Pn**	**21 39 13.8**	**+1.1**
TCU	**Taichung**	**1.88**	**339**	*e*P		**Pn**	**21 39 13.9**	**+1.1**
TCU				*e*S		**Sn**	**21 39 35.9**	**-0.2**
EOS4	**EOS4**	**1.91**	**25**	*e*P		**Pn**	**21 39 12.6**	**-0.1**
EOS4				*e*S		**Sn**	**21 39 34.6**	**-1.5**
EAHA	**Aohua**	**1.95**	**8**	*e*P		**Pn**	**21 39 14.0**	**+0.3**
EAHA				*e*S		**Sn**	**21 39 37.6**	**-0.1**
VCHM	**Qimei**	**2.02**	**294**	P		**Pn**	**21 39 13.3**	**-1.3**
VCHM				*e*S		**Sn**	**21 39 36.6**	**-2.8**
NNSB	**Datong**	**2.03**	**359**	*e*P		**Pn**	**21 39 15.4**	**+0.5**
TWQ1	**Liyutan**	**2.04**	**343**	P		**Pb**	**21 39 16.9**	**-1.2**
TWQ1				*e*S		**Sb**	**21 39 42.4**	**-0.7**
NNS	**Nan Shan**	**2.04**	**359**	*e*P		**Pb**	**21 39 16.6**	**-1.5**
PHUB	**P'eng-hu**	**2.05**	**303**	*e*P		**Pn**	**21 39 14.2**	**-0.8**
PHUB				S		**Sn**	**21 39 37.3**	**-2.7**
EOS3	**EOS3**	**2.06**	**23**	P		**Pn**	**21 39 15.4**	**+0.4**
EOS3				S		**Sn**	**21 39 39.0**	**-1.0**
EWUT	**Wuta**	**2.07**	**9**	*e*P		**Pn**	**21 39 15.9**	**+0.6**
PNG	**Penghu**	**2.09**	**304**	*e*P		**Pn**	**21 39 15.1**	**-0.5**
PNG				*e*S		**Sn**	**21 39 39.2**	**-1.9**
NSY	**Sanyi**	**2.11**	**343**	*e*P		**Pb**	**21 39 18.5**	**-0.7**
NSY				*e*S		**Sb**	**21 39 44.8**	**-0.3**
LATG	**Datong**	**2.14**	**2**	*e*P		**Pn**	**21 39 16.9**	**+0.6**
EOS2	**EOS2**	**2.15**	**20**	*e*P		**Pn**	**21 39 17.2**	**+0.9**
EOS2				*e*S		**Sn**	**21 39 43.2**	**+0.7**
NMLH	**Miaoli**	**2.22**	**345**	*e*P		**Pb**	**21 39 19.4**	**-1.6**
NMLH				S		**Sb**	**21 39 47.1**	**-1.1**
TWC	**Suao**	**2.24**	**10**	*e*P		**Pn**	**21 39 18.8**	**+1.1**
TWC				S		**Sn**	**21 39 44.9**	**+0.1**
ENTT	**Nioudou**	**2.24**	**3**	*e*P		**Pn**	**21 39 19.0**	**+1.3**
NDS	**Dongshan**	**2.25**	**7**	*e*P		**Pn**	**21 39 18.9**	**+1.1**
NDS				*e*S		**Sn**	**21 39 45.6**	**+0.5**
NFF	**Wufeng Townshi**	**2.25**	**353**	*i* P		**Pn**	**21 39 19.5**	**+1.7**
NFF				S		**Sb**	**21 39 47.8**	**-1.4**
NSTT	**Nanjuang**	**2.27**	**350**	*e*P		**Pn**	**21 39 19.6**	**+1.6**
NSTT				S		**Sb**	**21 39 48.3**	**-1.3**
YHNB	**Yeheng**	**2.27**	**359**			**Pn**	**21 39 18.6**	**+0.5**
YHNB	**Yeheng**	**2.27**	**359**	P		**Pb**	**21 39 20.6**	**-1.4**
YHNB	**Yeheng**	**2.27**	**359**	*e*P		**Pn**	**21 39 19.3**	**+1.1**
NSK	**Sanguang**	**2.28**	**358**	*e*P		**Pn**	**21 39 19.8**	**+1.5**
NSK				*e*S		**Sb**	**21 39 48.8**	**-1.2**
LIOB	**Emei**	**2.28**	**350**	*e*P		**Pn**	**21 39 19.6**	**+1.4**
LIOB				*e*S		**Sb**	**21 39 49.3**	**-0.7**
TWE	**Neicheng**	**2.33**	**5**	*e*P		**Pn**	**21 39 20.6**	**+1.7**
FUSB	**Fushanzhiwuyua**	**2.36**	**3**	*e*P		**Pn**	**21 39 20.6**	**+1.2**
NWLT	**Wulai**	**2.38**	**2**	*e*P		**Pn**	**21 39 20.9**	**+1.3**
ILA	**Ilan**	**2.38**	**7**	*e*P		**Pn**	**21 39 21.1**	**+1.5**
KSHI	**Guanxi Townshi**	**2.39**	**354**	*e*P		**Pb**	**21 39 22.3**	**-1.6**
SBCB	**Hsinchu**	**2.43**	**350**	*e*P		**Pb**	**21 39 22.7**	**-1.9**
SBCB				*e*S		**Sb**	**21 39 53.4**	**-0.8**
HSN	**Hsinchu**	**2.44**	**350**	*e*P		**Pn**	**21 39 22.1**	**+1.7**
HSN				*e*S		**Sb**	**21 39 52.1**	**-2.4**
JYNG	**Yonagunijimaku**	**2.48**	**34**	*e*P		**Pn**	**21 39 21.4**	**+0.4**
EGS		**2.49**	**11**	*e*P		**Pb**	**21 39 23.4**	**-2.2**
EGS				*e*S		**Sn**	**21 39 52.2**	**+1.3**
YOJ	**Yonaguni jima**	**2.52**	**35**			**Pn**	**21 39 22.8**	**+1.3**
YOJ	**Yonaguni jima**	**2.52**	**35**	P		**Pb**	**21 39 25.0**	**-1.2**
YOJ	**Yonaguni jima**	**2.52**	**35**	*e*P		**Pn**	**21 39 22.3**	**+0.7**
YOJ	**Yonaguni jima**	**2.52**	**35**	*e*P		**Pn**	**21 39 22.5**	**+0.9**
YOJ				*e*S		**Sn**	**21 39 53.1**	**+1.4**
TATO	**Taipei**	**2.58**	**1**			**Pn**	**21 39 22.5**	**+0.3**
TATO	**Taipei**	**2.58**	**1**	P		**Pb**	**21 39 25.6**	**-1.5**
TWA	**Mucha**	**2.58**	**3**	*e*P		**Pb**	**21 39 25.9**	**-1.4**
TIPB	**Shuangxi**	**2.60**	**8**	*e*P		**Pn**	**21 39 24.7**	**+2.1**
TIPB				*e*S		**Sn**	**21 39 55.5**	**+1.8**
TAP	**Taipei**	**2.64**	**1**	*e*P		**Pn**	**21 39 25.4**	**+2.3**
NHY	**Taipei**	**2.64**	**3**	*e*P		**Pb**	**21 39 26.7**	**-1.6**
TWB1	**Santiao Chiao**	**2.66**	**11**	*e*P		**Pn**	**21 39 25.1**	**+1.7**
TWB1				*e*S		**Sn**	**21 39 55.6**	**+0.5**
NWF	**Wu-fen Shan**	**2.69**	**7**	*e*P		**Pn**	**21 39 26.2**	**+2.3**
WFSB	**Wu-fen Shan**	**2.69**	**7**	*e*P		**Pn**	**21 39 26.3**	**+2.5**
WFSB				*e*S		**Sn**	**21 39 57.0**	**+1.1**
TWS1	**Kuangyinshan**	**2.70**	**360**	*e*P		**Pb**	**21 39 26.8**	**-2.5**
TWS1				*e*S		**Sn**	**21 39 58.4**	**+2.3**
SXI1	**Grass Mountain**	**2.72**	**9**	*e*P		**Pn**	**21 39 26.2**	**+1.9**
SXI1				S		**Sn**	**21 39 57.7**	**+0.8**
HATJ	**Hateruma jima**	**2.74**	**52**	P		**Pn**	**21 39 24.5**	**-0.1**
HATJ				*e*S		**Sn**	**21 39 55.7**	**-1.5**
YM01	**YM01**	**2.75**	**3**	*e*P		**Pn**	**21 39 27.2**	**+2.6**
YM01				*e*S		**Sn**	**21 39 57.4**	**0.0**
NTST	**Danshui**	**2.76**	**0**	*e*P		**Pb**	**21 39 28.0**	**-2.4**
NTST				*e*S		**Sb**	**21 40 01.1**	**-2.8**
ZUZH	**Zhuzihu**	**2.76**	**2**	*e*P		**Pn**	**21 39 26.2**	**+1.4**
ZUZH				*e*S		**Sn**	**21 39 59.0**	**+1.2**
TNOU	**National Taiwa**	**2.77**	**6**	*e*P		**Pn**	**21 39 26.8**	**+1.9**
TNOU				*e*S		**Sn**	**21 39 59.6**	**+1.8**
ANP	**Anpu**	**2.79**	**2**	*e*P		**Pn**	**21 39 27.8**	**+2.5**
YM08	**YM08**	**2.79**	**3**	*e*P		**Pn**	**21 39 27.1**	**+1.9**
IRIF	**Iriomote-Funau**	**2.87**	**47**	*e*P		**Pn**	**21 39 26.4**	**+0.2**
IRIF				*e*S		**Sn**	**21 40 00.2**	**-0.1**
TWY	**Chenhua**	**2.88**	**3**	*e*P		**Pb**	**21 39 29.6**	**-2.6**
JKRS	**Kuro-shima**	**3.00**	**52**	P		**Pn**	**21 39 28.3**	**+0.2**
JKRS				S		**Sn**	**21 40 02.8**	**-0.8**
VWUC	**VWUC**	**3.16**	**325**	*e*P		**Pn**	**21 39 29.9**	**-0.4**
VWUC				*e*S		**Sn**	**21 40 05.5**	**-2.1**
JIJ	**Ishigaki jima**	**3.17**	**51**	*e*P		**Pn**	**21 39 30.1**	**-0.4**
PCYT	**Pengchaiyu**	**3.28**	**10**	*e*P		**Pn**	**21 39 33.5**	**+1.6**
KNM	**Kinmen**	**3.41**	**307**	*e*P		**Pn**	**21 39 34.8**	**+1.0**
KNM				*i* S		**Sn**	**21 40 13.8**	**0.0**
JISG	**Ishigakijimahi**	**3.43**	**50**	*e*P		**Pn**	**21 39 33.4**	**-0.6**
JISG				*e*S		**Sn**	**21 40 12.9**	**-1.3**
KNMB	**Chin-men Tao**	**3.47**	**307**			**Pn**	**21 39 33.5**	**-1.2**
KNMB	**Chin-men Tao**	**3.47**	**307**	P		**Pn**	**21 39 34.1**	**-0.5**
KNMB				*e*S		**Sn**	**21 40 13.4**	**-1.9**
QZH2	**Quanzhou**	**3.64**	**315**	Pn		**Pn**	**21 39 35.9**	**-1.0**
QZH2				Sn		**Sn**	**21 40 16.0**	**-3.3**
QZH2				smax	smax			
	comp=N,680nm,0.9s							
QZH2				smax	smax			
	comp=E,580nm,0.9s							
QZH2				LR	LR			
	comp=Z,4μm,11.4s							
ZPLA	**Ao Xicun**	**3.72**	**295**	P		**Pn**	**21 39 37.3**	**-0.7**
ZPLA				*i* S		**Sn**	**21 40 18.9**	**-2.5**
JTJ	**Tarama**	**3.75**	**53**	*e*P		**Pn**	**21 39 38.3**	**0.0**
DSXP	**Dongshan**	**3.92**	**290**	*e*P		**Pn**	**21 39 39.9**	**-0.8**
DSXP				S		**Sn**	**21 40 24.1**	**-2.1**
MATB	**Ma-tsu**	**3.98**	**340**	*e*P		**Pn**	**21 39 41.0**	**-0.6**
MATB				*e*S		**Sn**	**21 40 24.7**	**-3.2**
AXDP	**Jialang**	**4.04**	**309**	*e*P		**Pn**	**21 39 41.6**	**-0.8**
JIRB	**Irabujima**	**4.20**	**54**	*e*P		**Pn**	**21 39 44.8**	**+0.1**
JIRB				*e*S		**Sn**	**21 40 32.0**	**-1.3**
JMJ2	**Miyako jima3**	**4.27**	**56**	*e*P		**Pn**	**21 39 46.2**	**+0.6**
MHZQ	**Yeshan**	**4.29**	**330**	*e*P		**Pn**	**21 39 46.4**	**+0.4**
JIKM	**Ikemajima**	**4.31**	**53**	P		**Pn**	**21 39 46.3**	**+0.1**
JIKM				*e*S		**Sn**	**21 40 34.8**	**-1.2**
JOGS	**Gusukube**	**4.34**	**56**	*e*P		**Pn**	**21 39 46.8**	**+0.2**
LYJJ	**Jianjiangzhen**	**4.41**	**340**	*e*P		**Pn**	**21 39 47.4**	**-0.2**
XPSS	**Dashiqiu**	**4.66**	**346**	*e*P		**Pn**	**21 39 50.8**	**-0.1**
SXFK	**Yanhouchang**	**5.28**	**320**	*e*P		**Pn**	**21 39 58.7**	**-0.7**
HKPS	**Hong Kong Po S**	**6.75**	**270**			**Pn**	**21 40 19.4**	**-0.3**
GZH2	**Guangzhou**	**7.27**	**281**	Pn		**Pn**	**21 40 26.3**	**-0.6**
GZH2				Sn		**Sn**	**21 41 46.5**	**-2.5**
GZH2				smax	smax			
	comp=N,330nm,0.9s							
GZH2				smax	smax			
	comp=E,230nm,0.8s							
JOW	**Kunigami**	**7.64**	**53**	Pn		**Pn**	**21 40 29.6**	**-2.2**
	9.2nm,0.3s,baz=143,slow=18,SNR=16							
JOW				Sn		**Sn**	**21 41 52.6**	**-5.4**
	0.5nm,0.3s,baz=306,slow=30,SNR=1.1							
	18nm,0.2s							
TGY	**Tagaytay City**	**8.26**	**183**	LR		LR	21 44 38.0	
	comp=Z,619nm,21.1s,baz=97,slow=43							
SSE	**Sheshan**	**8.67**	**359**	P		**Pn**	**21 40 46.5**	**+0.4**
SSE				S		**Sn**	**21 42 24.6**	**+1.2**
SSE				pmax	pmax			
	comp=Z,4.0nm,1.3s							
SSE				pmax	pmax			
	comp=Z,98nm,5.6s							
SSE				LR	LR			
	comp=N,390nm,12.4s							
SSE				LR	LR			
	comp=E,460nm,12.2s							
CNSH	**ChangSha**	**9.61**	**309**	P		**Pn**	**21 40 56.4**	**-2.5**
CNSH				S		**Sn**	**21 42 39.3**	**-7.2**
CNSH				smax	smax			
	comp=N,100nm,0.8s							
CNSH				smax	smax			
	comp=E,110nm,1.0s							
NJ2	**Nanjing**	**9.89**	**347**	*e*P		**Pn**	**21 40 58.4**	**-4.4**
NJ2				S		**Sn**	**21 42 54.0**	**+0.7**
NJ2				pmax	pmax			
	comp=Z,8.0nm,0.9s							
NJ2				smax	smax			
	comp=N,55nm,0.9s							
NJ2				smax	smax			
	comp=E,47nm,1.1s							
NJ2				LR	LR			
	comp=N,1μm,14.2s							
NJ2				LR	LR			
	comp=E,750nm,12.3s							
NJ2				LR	LR			
	comp=Z,1μm,14.2s							
WHN	**Wuhan**	**10.30**	**324**	P		**Pn**	**21 41 08.3**	**-0.1**
WHN				S		**Sn**	**21 43 01.1**	**-2.3**
WHN				LR	LR			
	comp=Z,2μm,7.7s							
WHN				LR	LR			
	comp=Z,2μm,6.3s							
WHN				LR	LR			
	comp=Z,4μm,14.0s							
GULI	**GuiLin**	**10.53**	**288**	P		**Pn**	**21 41 12.6**	**+1.0**
GULI				S		**Sn**	**21 43 09.4**	**+0.3**
GULI				LR	LR			
	comp=Z,980nm,16.5s							
GULI				LR	LR			
	comp=Z,970nm,14.1s							
GULI				LR	LR			
	comp=Z,1μm,13.8s							
QIZ	**Qiongzhong**	**11.35**	**255**	P		**Pn**	**21 41 22.8**	**0.0**
QIZ				S		**Sn**	**21 43 29.3**	**+0.1**
QIZ				LR	LR			
	comp=Z,690nm,13.2s							
QIZ				LR	LR			
	comp=Z,990nm,11.3s							
QIZ				LR	LR			
	comp=Z,1μm,10.6s							
GYA	**Guiyang**	**14.05**	**290**	P		**Pn**	**21 41 59.6**	**-0.2**
GYA				S		**Sn**	**21 44 32.5**	**-2.8**
GYA				pmax	pmax			
	comp=Z,8.0nm,1.5s							
GYA				LR	LR			
	comp=Z,620nm,9.0s							
GYA				LR	LR			
	comp=Z,710nm,10.8s							
GYA				LR	LR			
	comp=Z,1μm,18.2s							
TIA	**Tai'an**	**14.27**	**346**	P		**P**	**21 42 09.3**	**-0.5**
TIA				LR	LR			
	comp=Z,1μm,15.9s							
TIA				LR	LR			
	comp=Z,490nm,9.0s							
TIA				LR	LR			
	comp=Z,2μm,13.5s							
LYN	**LuoYang**	**14.44**	**329**	P		**Pn**	**21 42 05.8**	**+0.8**
LYN				sP		P	21 42 13.6	+1.9
LYN				PP		**PnPn**	**21 42 19.0**	**+5.9**
LYN				pmax	pmax			
	comp=Z,9.0nm,0.8s							
LYN				LR	LR			
	comp=Z,2μm,12.0s							
LYN				LR	LR			
	comp=Z,930nm,11.2s							
LYN				LR	LR			
	comp=Z,2μm,12.4s							
DAV	**Davao City (W)**	**15.75**	**165**	LR		LR	21 48 32.4	
	comp=Z,540nm,21.3s,baz=340,slow=38							
XAN	**Xi'an**	**15.99**	**319**	⇑P		**Pn**	**21 42 26.3**	**+0.7**
XAN				pP		pP	21 42 33.4	-0.1
XAN				pmax	pmax			
	comp=Z,9.0nm,1.1s							
XAN				pmax	pmax			
	comp=Z,260nm,4.4s							
XAN				LR	LR			
	comp=Z,1μm,11.0s							
XAN				LR	LR			
	comp=Z,1μm,14.7s							
XAN				LR	LR			
	comp=Z,2μm,15.1s							
KSAR	**Wonju Array Be**	**16.00**	**19**			**Pn**	**21 42 26.4**	**+0.7**
KSRS	**Korea Array**	**16.02**	**19**	Pn		**Pn**	**21 42 25.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=199,slow=12,SNR=25							
KSRS				LR	LR		21 49 16.4	
	comp=Z,121nm,19.4s,baz=200,slow=40							
	comp=Z,3.2nm,0.9s							
HNS	**HongShan**	**16.05**	**340**	⇑P		**P**	**21 42 33.9**	**+4.4**
HNS				S		**S**	**21 45 42.3**	**+5.2**
HNS				pmax	pmax			
	comp=Z,31nm,1.5s							
HNS				LR	LR			
	comp=N,1μm,14.3s							
HNS				LR	LR			
	comp=E,1μm,13.5s							
HNS				LR	LR			
	comp=Z,2μm,14.3s							
KS19	**Wonju Array Si**	**16.05**	**19**			**Pn**	**21 42 25.5**	**-0.8**
KS19				IAmb	IAmb	IAmb	21 42 33.9	
	comp=Z,38nm,1.2s							
KKM	**Kota Kinabalu**	**17.01**	**198**			**Pn**	**21 42 38.8**	**+0.1**
KKM				IAmb	IAmb	IAmb	21 42 43.9	
	comp=Z,28nm,1.0s							
KMI2	**Kunming**	**17.32**	**283**	P		**Pn**	**21 42 42.6**	**-0.1**
KMI2				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KMI2				LR	LR			
	comp=Z,610nm,23.9s							
KMI2				LR	LR			
	comp=Z,590nm,15.6s							
KMI2				LR	LR			
	comp=Z,920nm,20.8s							
MYLDM	**Lahad Datu**	**17.34**	**190**			**P**	**21 42 44.7**	**+0.7**
MYLDM				IAmb	IAmb	IAmb	21 43 08.3	
	comp=Z,48nm,1.1s							
CD2	**Chengdu**	**17.92**	**302**	P		**P**	**21 42 51.6**	**+1.3**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.7s							
CD2				LR	LR			
	comp=Z,1μm,10.8s							
CD2				LR	LR			
	comp=Z,2μm,13.3s							
CD2				LR	LR			
	comp=Z,2μm,12.7s							
BJT	**Baijiatuau**	**18.13**	**347**			**P**	**21 42 52.9**	**+0.3**
PZH	**PanZhiHua**	**18.38**	**287**	P		**Pn**	**21 42 57.3**	**+1.6**
PZH				S		**Sn**	**21 46 18.8**	**-1.9**
PZH				sS		**S**	**21 46 27.8**	**+2.7**
PZH				pmax	pmax			
	comp=Z,6.0nm,0.9s							
PZH				pmax	pmax			
	comp=Z,140nm,6.2s							
PZH				LR	LR			
	comp=Z,720nm,17.6s							
PZH				LR	LR			
	comp=Z,730nm,16.5s							
PZH				LR	LR			
	comp=Z,840nm,17.2s							
INU	**Inuyama**	**18.76**	**43**			**P**	**21 42 59.7**	**+0.2**
INU				IAmb	IAmb	IAmb	21 43 04.9	
	comp=Z,26nm,0.9s							
JGF	**Kuroka**	**19.13**	**43**			**Pn**	**21 43 04.8**	**+0.3**
JGF				IAmb	IAmb	IAmb	21 43 10.2	
	comp=Z,28nm,1.0s							
JCJ	**Chichijima**	**19.42**	**72**	LR		LR	21 48 49.9	
	comp=Z,88nm,21.7s,baz=247,slow=32							
HHC	**Hu-ho-hao-te**	**20.20**	**338**	⇓*i* P		Pn	21 43 21.0	+3.6
HHC				S		Sn	21 47 03.1	-1.3
HHC				pmax	pmax			
	comp=Z,16nm,1.5s							
HHC				pmax	pmax			
	comp=Z,230nm,7.6s							
HHC				LR	LR			
	comp=Z,750nm,15.6s							
HHC				LR	LR			
	comp=Z,380nm,13.0s							
HHC				LR	LR			
	comp=Z,810nm,16.8s							
MJAR	**Matsushiro Arr**	**20.26**	**42**	P		**P**	**21 43 16.8**	**+0.8**
	comp=Z,34nm,1.0s,baz=229,slow=9.6,SNR=42							
	comp=Z,34nm,1.0s							
LZH	**Lanzhou**	**20.49**	**316**	*e*P		Pn	21 43 21.1	+0.3
LZH				pP		pwP	21 43 26.6	+0.3
LZH				pmax	pmax			
	comp=Z,11nm,1.2s							
LZH				LR	LR			
	comp=Z,670nm,13.1s							
LZH				LR	LR			
	comp=Z,650nm,12.7s							
LZH				LR	LR			
	comp=Z,880nm,13.4s							
LZDM	**Lanzhou Array**	**20.51**	**315**	P		Pn	21 43 21.1	-0.2
	comp=Z,4.7nm,0.7s,baz=148,slow=12,SNR=17							
LZDM				LR	LR		21 51 41.1	
	comp=Z,327nm,21.6s,baz=205,slow=38							
	comp=Z,4.7nm,0.7s							
BTO2	**Baotou**	**20.74**	**335**	*e*P		Pn	21 43 22.6	-1.1
BTO2				pP		pP	21 43 26.6	+0.8
BTO2				sP		pwP	21 43 29.5	+0.5
BTO2				PP		**PnPn**	**21 43 44.8**	**+5.3**
BTO2				S		Sn	21 47 14.8	-2.6
BTO2				sS		pS	21 47 21.8	-1.6
BTO2				SS		**SnSn**	**21 47 40.5**	**+8.1**
BTO2				pmax	pmax			
	comp=Z,11nm,0.7s							
BTO2				pmax	pmax			
	comp=Z,610nm,5.2s							
BTO2				LR	LR			
	comp=Z,3μm,13.9s							
BTO2				LR	LR			
	comp=Z,2μm,15.5s							
BTO2				LR	LR			
	comp=Z,4μm,13.3s							
TNCH	**TengChong**	**21.14**	**282**	⇓P		**P**	**21 43 27.4**	**+1.7**
TNCH				pP		pP	21 43 30.5	-0.1
TNCH				sP		sP	21 43 33.3	+0.9
TNCH				PP		**PnPn**	**21 43 44.9**	**-0.2**
TNCH				SS		Sn	21 47 45.8	+19
TNCH				pmax	pmax			
	comp=Z,10.0nm,1.2s							
TNCH				pmax	pmax			
	comp=Z,120nm,4.8s							
TNCH				LR	LR			
	comp=Z,350nm,7.8s							
TNCH				LR	LR			
	comp=Z,440nm,8.2s							
TNCH				LR	LR			
	comp=Z,830nm,18.1s							
TOLI2	**Tolitoli**	**21.16**	**182**			**P**	**21 43 26.2**	**+0.5**
TOLI2				IAmb	IAmb	IAmb	21 43 30.0	
	comp=Z,34nm,1.2s							
CHTO	**Chiang Mai**	**21.34**	**265**			**P**	**21 43 26.7**	**-1.1**
CHTO	**Chiang Mai**	**21.34**	**265**	P		**P**	**21 43 30.0**	**+2.2**
CM31	**Chiang Mai Arr**	**21.43**	**264**	P		**P**	**21 43 29.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**21.43**	**264**	P		**P**	**21 43 30.6**	**+1.9**
	comp=Z,1.4nm,0.7s,baz=66,slow=9.4,SNR=13							
CMAR				PcP		**PcP**	**21 47 32.2**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=65,slow=1.8,SNR=5.6							
CMAR				ScP		**ScP**	**21 51 06.0**	**-2.2**
	comp=Z,1.2nm,0.3s,baz=68,slow=1.6,SNR=4.1							
CMAR				LR	LR	LR	21 52 56.4	
	comp=Z,580nm,18.2s,baz=75,slow=40							
	comp=Z,1.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**21.43**	**264**			**P**	**21 43 28.3**	**-0.4**
CN2	**Changchun**	**21.61**	**8**	P		**P**	**21 43 32.9**	**+2.5**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				LR	LR			
	comp=Z,400nm,13.0s							
CN2				LR	LR			
	comp=Z,300nm,13.0s							
CN2				LR	LR			
	comp=Z,600nm,12.0s							
SBUM	**Sibu**	**21.75**	**206**			**P**	**21 43 32.1**	**+0.1**
SBUM	**Sibu**	**21.75**	**206**	P		**P**	**21 43 32.8**	**+0.7**
MRSI	**Marisa**	**21.79**	**179**	P		**P**	**21 43 33.1**	**+0.6**
	comp=Z,50nm,1.1s							
MPSI	**Mapaga**	**21.97**	**184**	P		**P**	**21 43 37.0**	**+2.5**
APSI	**Ampana**	**23.16**	**179**	P		**P**	**21 43 49.1**	**+2.0**
	comp=Z,49nm,1.3s							
MDJ	**Mudanjiang**	**23.16**	**15**	P		**P**	**21 43 49.8**	**+2.9**
MDJ				S		**S**	**21 48 00.8**	**+3.2**
MDJ				pmax	pmax			
	comp=Z,7.0nm,1.7s							
MDJ				LR	LR			
	comp=Z,330nm,13.7s							
MDJ				LR	LR			
	comp=Z,360nm,10.3s							
MDJ				LR	LR			
	comp=Z,510nm,15.1s							
PCI	**Palu**	**23.21**	**184**	P		**P**	**21 43 48.5**	**+1.0**
	comp=Z,51nm,1.1s							
USRK	**Ussuriysk Ar.**	**23.43**	**19**	P		**P**	**21 43 49.6**	**0.0**
	comp=Z,4.6nm,0.7s,baz=221,slow=12,SNR=6.2							
	comp=Z,4.6nm,0.7s							
USRK	**Ussuriysk Ar.**	**23.43**	**19**	P		**P**	**21 43 46.8**	**-2.8**
BNX	**BinXian**	**23.80**	**10**	⇓P		**P**	**21 43 55.6**	**+2.5**
BNX				pmax	pmax			
	comp=Z,6.0nm,1.3s							
GUMO	**Guam**	**23.92**	**107**	LR		LR	21 50 56.8	
	comp=Z,167nm,21.4s,baz=71,slow=31							
MTKI	**Muara Teweh, K**	**24.05**	**196**	P		**P**	**21 43 56.6**	**+0.9**
	comp=Z,43nm,0.5s							
SANI	**Sanana**	**24.69**	**169**	P		**P**	**21 44 02.7**	**+1.1**
	comp=Z,20nm,1.0s							
MMSI	**Mamuju**	**25.05**	**186**	P		**P**	**21 44 07.4**	**+2.6**
	comp=Z,55nm,1.3s							
**G

SONM ScP **ScP** 21 51 23.9 -2.6
comp=Z,0.9nm,1.0s,baz=158,slow=0.8,SNR=4.9
SONM LR LR 21 56 54.0
comp=Z,750nm,19.7s,baz=146,slow=39
comp=Z,1.7nm,0.7s
SONM Songino Array 28.11 338 P P 21 44 30.0 -2.4
PSI Prapat 29.26 231 P P 21 44 46.7 +3.8
RPSI Rantau Prapat 29.33 231 P P 21 44 41.7 -1.7
RPSI IAmb IAmb 21 44 48.0
comp=Z,7.3nm,1.0s
MNSI Mandailing Nat 30.21 228 P P 21 44 55.1 +3.9
comp=Z,18nm,1.3s
PPI Padang Panjang 30.59 225 P P 21 44 56.1 +1.6
comp=Z,21nm,0.8s
PDSI Padang 30.89 224 P P 21 45 05.8 +8.6
EDFI Ende, Flores 30.95 180 P P 21 44 57.6 -0.1
comp=Z,21nm,1.2s
KHKI Kahang-Kahang 31.09 191 P P 21 45 02.1 +3.2
comp=Z,41nm,0.9s
SNJI Sawahan-Nganju 31.45 199 P P 21 45 05.5 +3.3
comp=Z,25nm,1.0s
MASI Maura Aman, Be 31.55 219 P P 21 45 08.4 +5.4
WMQ Urumqi 35.07 316 *e*P P 21 45 34.5 +1.0
WMQ LR LR
comp=Z,170nm,21.9s
MKAR Makanchi Array 39.79 317 P P 21 46 14.1 +0.7
comp=Z,3.5nm,0.7s,baz=108,slow=8.3,SNR=45
MKAR PcP PcP 21 48 19.6 +0.2
comp=Z,0.6nm,0.8s,baz=97,slow=4.0,SNR=4.2
MKAR ScP ScP 21 52 06.0 -1.5
comp=Z,0.8nm,1.0s,baz=99,slow=6.3,SNR=6.5
MKAR LR LR 22 04 13.3
comp=Z,268nm,18.2s,baz=129,slow=38
comp=Z,3.5nm,0.7s
MKAR Makanchi Array 39.79 317 P 21 46 13.5 0.0
MKAR PcP 21 48 18.5 -0.9
MKAR ScP 21 52 04.6 -2.9
MAKZ Makanchi 39.99 317 P P 21 46 14.5 -0.6
MAKZ IAmb IAmb 21 46 32.2
comp=Z,9.5nm,1.1s
YAK Yakutsk 40.02 6 LR LR 22 04 07.0
comp=Z,126nm,19.1s,baz=189,slow=38
PETK Petropavlovsk- 41.23 33 LR LR 22 06 36.6
comp=Z,47nm,18.1s,baz=243,slow=41
ZAA0 Zalesovo Array 41.88 328 P 21 46 30.4 -0.1
ZAA0 IAmb IAmb 21 46 35.0
comp=Z,13nm,0.9s
ZALV Zalesovo Beam 41.88 328 P P 21 46 31.0 +0.6
comp=Z,16nm,0.9s,baz=113,slow=7.8,SNR=20
ZALV LR LR 22 05 41.1
comp=Z,139nm,19.8s,baz=120,slow=38
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 41.88 328 P 21 46 30.4 0.0
PALK Pallekele 41.98 255 LR LR 22 05 57.0
comp=Z,151nm,18.6s,baz=60,slow=39
KSH2 Kashi 42.33 304 P P 21 46 37.0 +2.4
KSH2 sP pwP 21 46 45.8 +3.4
KSH2 pmax pmax
comp=Z,3.0nm,1.2s
KSH2 LR LR
comp=Z,330nm,14.4s
KSH2 LR LR
comp=Z,250nm,13.1s
KSH2 LR LR
comp=Z,320nm,19.6s
H11N1 WAKE ISLAND Hy 42.39 85 T T 22 32 02.9
baz=282,slow=75,SNR=222
H11N2 WAKE ISLAND Hy 42.39 85 T T 22 32 05.3
baz=282,slow=75,SNR=365
H11N3 WAKE ISLAND Hy 42.41 85 T T 22 32 04.7
baz=282,slow=75,SNR=234
NRN Naryn 42.44 307 P P 21 46 35.7 +0.1
NRN IAmb IAmb 21 46 56.0
comp=Z,8.3nm,1.0s
H11S3 WAKE ISLAND Hy 42.47 87 T T 22 32 06.1
baz=284,slow=75,SNR=717
H11S1 WAKE ISLAND Hy 42.48 87 T T 22 32 06.5
baz=284,slow=75,SNR=485
H11S2 WAKE ISLAND Hy 42.48 87 T T 22 32 06.6
baz=284,slow=75,SNR=337
MA2 Magadan 42.56 22 LR LR 22 05 07.6
comp=Z,131nm,18.2s,baz=225,slow=37
AAK Ala-Archa 43.79 309 LR LR 22 07 47.7
comp=Z,274nm,18.3s,baz=98,slow=40
WRA Warramunga Arr 43.92 162 P P 21 46 44.8 -2.6
comp=Z,4.3nm,0.7s,baz=340,slow=9.1,SNR=34
WRA PcP PcP 21 48 32.3 -1.1
comp=Z,0.7nm,0.8s,baz=342,slow=3.2,SNR=2.3
comp=Z,4.3nm,0.7s
WRA Warramunga Arr 43.92 162 P P 21 46 45.8 -1.6
WR8 Warramunga Arr 43.98 162 P P 21 46 45.9 -2.0
WR8 IAmb IAmb 21 46 46.2
comp=Z,6.7nm,0.8s
ARSB Arslanbob 44.64 307 P P 21 46 52.3 -1.0
DRK Karamyk 45.27 304 P P 21 46 58.1 -0.3
GIRL Giralia 45.31 189 P P 21 46 58.2 -0.2
SEY Seymchan 45.58 19 LR LR 22 06 02.7
comp=Z,114nm,20.6s,baz=270,slow=36
BTK Batken 46.09 305 P P 21 47 03.7 -1.0
BTK IAmb IAmb 21 47 27.7
comp=Z,8.1nm,1.3s
KK31 Karatay Array 46.75 309 P P 21 47 08.3 -1.4
KK31 IAmb IAmb 21 47 26.3
comp=Z,7.6nm,1.3s
KKAR Karatay Array 46.75 309 P P 21 47 08.8 -0.9
KBL Kabul 47.15 297 P P 21 47 11.8 -1.4
KBL IAmb IAmb 21 47 33.5
comp=Z,10.0nm,1.2s
AS31 Alice Springs 47.36 164 P P 21 47 13.5 -1.0
ASAR Alice Springs 47.36 164 P P 21 47 13.0 -1.6
comp=Z,1.4nm,0.3s,baz=348,slow=7.2,SNR=34
ASAR PcP PcP 21 48 44.4 -0.9
comp=Z,0.7nm,0.7s,baz=337,slow=4.0,SNR=2.2
comp=Z,1.4nm,0.3s
ASAR Alice Springs 47.36 164 P P 21 47 13.4 -1.1
CTA Charters Tower 48.68 148 LR LR 22 05 50.2
comp=Z,104nm,22.0s,baz=41,slow=34
CTAO Charters Tower 48.68 148 P P 21 47 24.4 -0.5
BVAR Borovoye Array 49.21 322 P P 21 47 29.4 +0.8
comp=Z,2.0nm,0.6s,baz=105,slow=5.2,SNR=7.8
BVAR PcP PcP 21 48 51.3 -0.2
comp=Z,1.2nm,0.6s,baz=98,slow=4.4,SNR=2.4
BVAR LR LR 22 10 19.0
comp=Z,81nm,19.7s,baz=98,slow=38
comp=Z,2.0nm,0.6s
BORK Borovoye 49.25 322 P P 21 47 28.9 0.0
BORK IAmb IAmb 21 47 33.6
comp=Z,7.4nm,0.9s
TIXI Tiksi 49.47 3 P P 21 47 29.9 -0.3
comp=Z,1.0nm,0.3s,baz=207,slow=3.6,SNR=5.2
TIXI LR LR 22 09 48.6
comp=Z,164nm,20.0s,baz=190,slow=38
comp=Z,1.0nm,0.3s
NRIK Noril'sk 51.19 345 LR LR 22 10 41.4
comp=Z,145nm,20.7s,baz=150,slow=37
NRIK Noril'sk 51.19 345 P P 21 47 41.2 -2.0
NRIK IAmb IAmb 21 47 48.5
comp=Z,10nm,1.1s
ABKAR Akbulak array 54.86 315 P P 21 48 10.5 -0.2
AKTO Aktyubinsk 56.22 317 LR LR 22 14 36.4
comp=Z,146nm,18.4s,baz=355,slow=38
ARTI Arti 56.77 324 LR LR 22 12 56.1
comp=Z,115nm,19.5s,baz=101,slow=36
ARTI Arti 56.77 324 P P 21 48 23.9 -0.3
STKA Stephens Creek 57.31 160 P P 21 48 26.4 -1.9
comp=Z,2.3nm,0.7s,baz=343,slow=9.3,SNR=8.8
comp=Z,2.3nm,0.7s
STKA Stephens Creek 57.31 160 P P 21 48 26.6 -1.7
KIRV Kirov 61.82 326 LR LR 22 18 06.6
comp=Z,244nm,18.5s,baz=93,slow=38
GNI Garni 66.01 305 LR LR 22 21 08.1
comp=Z,58nm,18.3s,baz=71,slow=38
L18K Granite Mounta 66.68 30 P P 21 49 30.8 -0.2
L18K IAmb IAmb 21 50 05.3
comp=Z,8.7nm,1.4s
KBZ Khabaz 66.78 309 P P 21 49 33.2 +1.3
comp=Z,2.7nm,0.9s,baz=154,slow=2.2,SNR=3.6
comp=Z,2.7nm,0.9s
J19K Poorman 67.04 28 P P 21 49 34.4 +1.2
J19K IAmb IAmb 21 49 37.5
comp=Z,6.7nm,1.2s
H21K Melozitna Rive 68.10 26 P P 21 49 41.1 +1.2
H21K IAmb IAmb 21 49 43.5
comp=Z,4.1nm,1.0s
D23K Nanushuk River 68.56 23 P P 21 49 43.6 +0.9
D23K IAmb IAmb 21 49 57.2
comp=Z,7.2nm,1.3s

MARD Mardin 69.61 303 P P 21 49 48.6 -1.3
ILAR Eielson Array 70.70 27 P P 21 49 55.4 -0.6
comp=Z,0.2nm,0.6s,baz=263,slow=5.1,SNR=1.6
comp=Z,0.2nm,0.6s
ILAR Eielson Array 70.70 27 P P 21 49 55.6 -0.3
SPB2 Spitsbergen Ar 71.28 348 P P 21 49 59.0 -0.3
SPITS Spitsbergen Ar 71.28 348 P P 21 49 59.5 +0.3
comp=Z,2.6nm,0.6s,baz=104,slow=7.0,SNR=9.6
SPITS LR LR 22 26 07.3
comp=Z,97nm,18.6s,baz=57,slow=40
comp=Z,2.6nm,0.6s
ARCES ARCESS Array B 71.28 338 P P 21 49 59.5 +0.1
comp=Z,4.0nm,0.9s,baz=12,slow=6.2,SNR=3.6
ARCES LR LR 22 25 52.0
comp=Z,67nm,18.6s,baz=74,slow=40
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 71.28 338 P P 21 49 58.2 -1.2
J25K Salcha River, 71.37 27 P P 21 49 59.5 -0.6
J25K IAmb IAmb 21 50 11.3
comp=Z,4.4nm,1.3s
K24K Donnelly Dome 71.38 28 P P 21 49 58.2 -1.9
G26K Porcupine Rive 71.47 24 P P 21 49 59.8 -0.8
RIDG Independent Ri 71.79 28 P P 21 50 01.9 -0.8
RIDG IAmb IAmb 21 50 29.0
comp=Z,8.2nm,1.5s
SCRK Sand Creek 72.11 28 P P 21 50 03.9 -0.8
SCRK IAmb IAmb 21 50 40.5
comp=Z,6.4nm,1.4s
FINES FINESS Array B 73.10 330 P P 21 50 10.7 +0.3
comp=Z,3.2nm,0.9s,baz=65,slow=5.1,SNR=7.9
FINES LR LR 22 26 12.8
comp=Z,164nm,18.5s,baz=72,slow=39
comp=Z,3.2nm,0.9s
FINES FINESS Array B 73.10 330 P P 21 50 10.6 +0.2
ASF Jabal al Asfar 74.01 299 LR LR 22 27 59.2
comp=Z,71nm,18.3s,baz=22,slow=40
AKASG Malin Array Be 74.36 319 P P 21 50 20.1 +2.1
comp=Z,0.3nm,0.2s,baz=63,slow=5.3,SNR=4.9
AKASG LR LR 22 26 20.1
comp=Z,70nm,18.7s,baz=44,slow=38
comp=Z,0.3nm,0.2s
BRTR Keskin Array B 74.42 307 P P 21 50 19.3 +0.5
comp=Z,1.6nm,0.7s,baz=102,slow=4.2,SNR=7.0
BRTR LR LR 22 26 39.6
comp=Z,41nm,19.1s,baz=12,slow=39
comp=Z,1.6nm,0.7s
BRTR Keskin Array B 74.42 307 P P 21 50 17.6 -1.2
INK Inuvik 74.80 22 P P 21 50 20.1 -0.1
INK IAmb IAmb 21 50 21.4
comp=Z,5.8nm,1.2s
I30M Mount Dempster 74.87 25 P P 21 50 20.8 0.0
L29M L29M 74.87 28 P P 21 50 20.7 -0.1
L29M IAmb IAmb 21 50 28.4
comp=Z,12nm,1.5s
M29M Somme Creek 74.94 28 P P 21 50 21.1 -0.2
M29M IAmb IAmb 21 50 47.4
comp=Z,12nm,1.5s
MMAI Mount Meron Ar 74.97 300 P P 21 50 22.6 +0.6
comp=Z,2.1nm,1.0s,baz=36,slow=6.3,SNR=4.6
MMAI LR LR 22 25 40.7
comp=Z,64nm,21.0s,baz=38,slow=38
comp=Z,2.1nm,1.0s
G31M Satah River 75.05 23 P P 21 50 20.8 -0.9
J30M Hart River 75.11 26 P P 21 50 19.8 -2.5
H31M Peel River 75.44 24 P P 21 50 24.2 +0.1
H31M IAmb IAmb 21 50 46.5
comp=Z,12nm,1.4s
CSS Mathiatis 76.04 302 P P 21 50 25.3 -2.7
EIL Elat 76.35 297 LR LR 22 27 17.4
comp=Z,75nm,21.8s,baz=64,slow=38
MLR Muntele Rosu 78.06 314 LR LR 22 29 40.0
comp=Z,140nm,18.4s,baz=48,slow=39
ELL Elmali 78.12 305 P P 21 50 38.9 -1.0
DAG Danmarks Havn 78.17 351 *i* P P 21 50 37.7 -1.5
DAG IAmb IAmb 21 50 40.2
comp=Z,2.7nm,0.8s
HFS Hagfors 79.24 331 P P 21 50 45.2 -0.2
comp=Z,0.9nm,0.4s,baz=99,slow=5.4,SNR=6.8
HFS LR LR 22 29 09.3
comp=Z,293nm,18.2s,baz=67,slow=38
comp=Z,0.9nm,0.4s
URZ Urewera 79.79 139 LR LR 22 27 47.5
comp=Z,29nm,18.0s,baz=308,slow=37
NB2 NORSAR Subarra 79.91 332 P P 21 50 48.3 -0.8
comp=Z,0.9nm,0.7s,baz=62,slow=5.1
NOA NORSAR Array B 79.91 332 P P 21 50 48.1 -1.0
comp=Z,1.9nm,0.9s,baz=78,slow=5.8,SNR=5.2
NOA LR LR 22 29 06.3
comp=Z,125nm,18.6s,baz=60,slow=38
comp=Z,1.9nm,0.9s
RPZ Rata Peaks 79.98 146 LR LR 22 25 26.3
comp=Z,28nm,18.2s,baz=116,slow=35
FURI Furi 80.00 276 LR LR 22 26 54.3
comp=Z,26nm,19.4s,baz=54,slow=36
NEEM North Greenlan 80.28 358 *i* P P 21 50 50.5 -0.6
NEEM IAmb IAmb 21 50 52.0
comp=Z,11nm,1.0s
DBG Daneborg 80.39 350 *i* P P 21 50 49.9 -1.4
DBG IAmb IAmb 21 50 51.8
comp=Z,6.9nm,0.9s
LANS Liptovska Anna 80.81 319 *e*P P 21 50 53.9 -0.3
CLL Collm 83.62 323 *i* P P 21 51 09.3 +0.6
comp=Z,6.0nm,0.9s
CLL L L 22 32 00.0
comp=Z,200nm,18.9s
ITM Ithomi 83.92 308 P P 21 51 09.6 -1.1
SUMG Summit 84.30 354 *i* P P 21 51 11.2 -1.2
SUMG IAmb IAmb 21 51 14.1
comp=Z,24nm,1.4s
GERES GERESS Array B 84.37 321 P P 21 51 12.0 -0.7
comp=Z,2.0nm,0.8s,baz=54,slow=6.8,SNR=7.2
GERES LR LR 22 31 12.9
comp=Z,153nm,18.1s,baz=307,slow=37
comp=Z,2.0nm,0.8s
KEK Kerkira 84.43 311 P P 21 51 12.2 -0.9
YKAW3 Yellowknife Wh 84.48 23 P P 21 51 12.6 -0.3
YKAW3 IAmb IAmb 21 51 49.9
comp=Z,4.6nm,1.4s
YKA Yellowknife Ar 84.53 23 P P 21 51 12.4 -0.8
comp=Z,0.5nm,0.7s,baz=312,slow=5.6,SNR=7.4
comp=Z,0.5nm,0.7s
SOKA Soboth 84.56 318 *i* P P 21 51 14.6 +0.8
comp=Z,0.5nm,0.3s
OBKA Obir 84.94 318 *e*P P 21 51 16.7 +1.0
comp=Z,0.9nm,0.4s
BIOA Bad Ischl, Aus 84.94 320 *e*PcP PcP 21 51 18.0 -0.9
comp=Z,8.0nm,1.4s
KBA Koelnbreinsper 85.41 319 *e*P P 21 51 17.9 -0.2
comp=Z,0.3nm,0.3s
LESA Schwarzleotal 85.64 320 *e*PcP P 21 51 20.4 +1.2
comp=Z,0.1nm,0.1s
DAVOX Davos/Dischmat 87.62 320 LR LR 22 34 09.3
comp=Z,188nm,18.1s,baz=78,slow=38
BORG Borgarnes 88.51 345 LR LR 22 34 25.2
comp=Z,120nm,19.1s,baz=8.1,slow=38
EKA Eskdalemuir Ar 89.39 332 P P 21 51 37.3 +0.3
comp=Z,0.9nm,0.8s,baz=66,slow=1.8,SNR=1.6
EKA LR LR 22 36 28.6
comp=Z,376nm,19.2s,baz=46,slow=39
comp=Z,0.9nm,0.8s
FRB Frobisher Bay 93.79 4 LR LR 22 37 28.2
comp=Z,32nm,18.5s,baz=54,slow=38
LSZ Lusaka 98.61 257 LR LR 22 33 30.5
comp=Z,77nm,19.2s,baz=130,slow=33
TXAR Lajitas Array 112.70 42 PKiKP **PKiKP** 21 57 16.6 -1.1
comp=Z,0.1nm,0.4s,baz=255,slow=2.3,SNR=3.7

*MOS **13** 21:39:14.4±0.7, 52°.74N×153°.52E, h472km, mb3.9/6, Error ellipse: s-maj=10.5km s-min=7.9km az=78.8*
*KRSC **13** 21:39:14.7±1.4, 52°.46N×153°.97E, h482km±16km, Ml4.3*
*IDC **13** 21:39:15.3±0.7, 52°.75N×153°.44E, h464km±9km, mb3.3/18, mbtmp4.1/24, Error ellipse: s-maj=15.3km s-min=10.8km az=103.0*
*NEIC **13** 21:39:15.6±1.0, 52°.8N±0°.1×153°.3E±0°.2, h460km±9km, mb4.1/25, Error ellipse: s-maj=19.9km s-min=16.3km az=114.0*
ISC 13 21:39:15.0±0.5, 52°.59N±0°.07×153°.72E±0°.06, h482km, n133, σ1°61/149, mb3.9/34, 9C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**2.11**	**80**	PN	**P**		**21 40 18.1**	**-0.8**
APC				S	**S**		**21 41 08.7**	**-2.3**
APC	**Apacha**	**2.11**	**80**	*e*P	**P**		**21 40 18.2**	**-0.8**

APC *e*S **S** 21 41 08.8 -2.3
PAU Pauzhetka 2.21 119 PN **P** 21 40 18.8 -0.7
PAU Pauzhetka 2.21 119 *e*P **P** 21 40 18.9 -0.7
SKR Severo-Kuril's 2.42 141 *i* PN **P** 21 40 19.9 -0.9
SKR Severo-Kuril's 2.42 141 *e*P **P** 21 40 19.6 -1.2
PEA0B Petropavlovsk- 2.47 76 **P** 21 40 20.9 -0.1
PEA0B Petropavlovsk- 2.47 76 *ce*PN **P** 21 40 20.7 -0.3
PETK Petropavlovsk- 2.47 76 P **P** 21 40 20.6 -0.4
27nm,0.8s,baz=206,slow=2.9,SNR=29
PETK S **S** 21 41 13.4 -1.4
2.6nm,0.5s,baz=282,slow=13,SNR=1.4
PETK Petropavlovsk- 2.47 76 **P** 21 40 20.8 -0.2
PETK Petropavlovsk- 2.47 76 PN **P** 21 40 20.8 -0.2
ASAK Asacha 2.56 93 PN **P** 21 40 21.7 0.0
ASAK Asacha 2.56 93 *e*P **P** 21 40 21.7 0.0
GRL Gorelyy 2.66 89 PN **P** 21 40 22.7 +0.4
GRL Gorelyy 2.66 89 *e*P **P** 21 40 22.7 +0.4
KRMR Karymshinskiy 2.69 83 PN **P** 21 40 22.1 -0.2
KRMR S **S** 21 41 14.8 -2.5
KRMR Karymshinskiy 2.69 83 *e*P **P** 21 40 22.1 -0.2
KRMR *e*S **S** 21 41 14.8 -2.5
MTVR Mutnovka 2.73 90 PN **P** 21 40 23.0 +0.2
MTVR Mutnovka 2.73 90 *e*P **P** 21 40 23.0 +0.2
GNL Ganaly 2.77 65 PN **P** 21 40 22.8 -0.2
GNL Ganaly 2.77 65 *e*P **P** 21 40 22.8 -0.2
KDTR Khodutka, Kamc 2.79 105 PN **P** 21 40 21.8 -1.2
KDTR S **S** 21 41 14.1 -4.3
KDTR Khodutka, Kamc 2.79 105 *e*P **P** 21 40 21.8 -1.2
KDTR *e*S **S** 21 41 14.2 -4.3
RUS Russkaya 2.93 91 PN **P** 21 40 23.2 -0.8
RUS Russkaya 2.93 91 *e*P **P** 21 40 23.2 -0.8
PET Petropavlovsk 3.02 80 P **P** 21 40 25.2 +0.6
PET Petropavlovsk 3.02 80 *e*PN **P** 21 40 25.2 +0.6
PET *e*S **S** 21 41 20.9 -0.4
PET pmax pmax
comp=Z,78nm,0.7s
PET smax smax
comp=E,77nm,0.7s
PET smax smax
comp=N,47nm,0.6s
PET Petropavlovsk 3.02 80 *e*P **P** 21 40 24.6 0.0
PET *e*S **S** 21 41 18.9 -2.4
KOK Koryaka 3.06 75 PN **P** 21 40 25.6 +0.7
KOK Koryaka 3.06 75 *e*P **P** 21 40 25.7 +0.7
KRX Arik 3.08 74 PN **P** 21 40 25.6 +0.5
KRX Arik 3.08 74 *e*P **P** 21 40 25.7 +0.5
DALK Dalny 3.08 80 PN **P** 21 40 25.0 0.0
DALK S **S** 21 41 20.0 -2.1
DALK Dalny 3.08 80 *e*P **P** 21 40 25.1 0.0
DALK *e*S **S** 21 41 20.1 -2.1
AVH Avacha 3.11 75 PN **P** 21 40 25.8 +0.5
AVH Avacha 3.11 75 *e*P **P** 21 40 25.8 +0.5
KRER Koryakskii 3.12 75 PN **P** 21 40 25.9 +0.4
KRER Koryakskii 3.12 75 *e*P **P** 21 40 26.0 +0.4
SMAR Somma 3.15 76 PN **P** 21 40 26.2 +0.5
SMAR Somma 3.15 76 *e*P **P** 21 40 26.3 +0.5
UGLR Uglovaya 3.15 77 PN **P** 21 40 26.1 +0.5
UGLR Uglovaya 3.15 77 *e*P **P** 21 40 26.2 +0.5
SDLR Sedlovina 3.20 76 PN **P** 21 40 26.0 0.0
SDLR Sedlovina 3.20 76 *e*P **P** 21 40 26.1 0.0
NLC Nalytchevo 3.46 78 *e*S **S** 21 41 24.8 -2.3
KII Karymskiy 3.73 65 PN **P** 21 40 31.1 +1.1
KII Karymskiy 3.73 65 *e*P **P** 21 40 31.1 +1.1
SPN Mys Shipunski 3.85 80 PN **P** 21 40 29.4 -1.5
SPN S **S** 21 41 27.4 -5.4
SPN Mys Shipunski 3.85 80 *e*P **P** 21 40 29.5 -1.5
SPN *e*S **S** 21 41 27.5 -5.4
ESO Esso 4.44 39 PN **P** 21 40 36.6 +0.9
ESO Esso 4.44 39 *e*P **P** 21 40 36.7 +0.9
MKZ Mys Kozlova 5.16 64 PN **P** 21 40 41.7 -0.6
MKZ Mys Kozlova 5.16 64 *e*P **P** 21 40 41.8 -0.6
KBG Krutoberegovo 6.40 51 PN **P** 21 40 54.5 +0.3
KBG Krutoberegovo 6.40 51 *e*P **P** 21 40 54.6 +0.3
KBTR Krutoberegovo 6.43 52 PN **P** 21 40 53.5 -1.1
KBTR Krutoberegovo 6.43 52 *e*P **P** 21 40 53.5 -1.1
MA2 Magadan 7.19 348 P **P** 21 41 01.2 -1.1
comp=N,5.8nm,0.5s,baz=164,slow=8.6,SNR=7.3
MA2 Magadan 7.19 348 *ce*PN **P** 21 41 00.6 -1.7
MA2 pmax pmax
comp=Z,11nm,1.7s
BKI Bering 7.70 65 *e*S **S** 21 42 38.2 -1.8
YSS Yuzhno-Sakhali 9.06 236 *e*PN **P** 21 41 22.7 +0.6
YSS *e*S **S** 21 43 04.1 -2.5
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS smax smax
comp=N,20nm,0.8s
YSS smax smax
comp=E,20nm,0.7s
SEY Seymchan 10.40 357 P **P** 21 41 36.5 +0.3
comp=E,4.0nm,0.6s,baz=161,slow=8.8,SNR=20
SEY Seymchan 10.40 357 *ce*PN **P** 21 41 36.4 +0.3
SEY pmax pmax
comp=Z,7.0nm,2.5s
JKA Kamikawa-asahi 11.24 225 P **P** 21 41 46.2 +0.7
ASAJ Asahikawa 11.24 225 P **P** 21 41 45.8 +0.3
comp=Z,5.9nm,0.7s,baz=16,slow=3.3,SNR=5.6
ASAJ Asahikawa 11.24 225 PN **P** 21 41 46.2 +0.7
KLR Kul'dur 14.25 265 *i* P **P** 21 42 16.6 -0.9
KLR pmax pmax
comp=Z,1.0nm,0.6s
YAK Yakutsk 15.96 316 P **P** 21 42 33.3 -1.9
comp=Z,20nm,0.5s,baz=75,slow=2.2,SNR=7.1
YAK Yakutsk 15.96 316 **P** 21 42 33.6 -1.6
YAK Yakutsk 15.96 316 *ce*P **P** 21 42 33.3 -1.9
YAK pmax pmax
comp=Z,18nm,0.6s
BILL Bilibino 16.64 17 P **P** 21 42 42.1 -0.2
BILL IAmb IAmb 21 42 42.8
comp=Z,2.8nm,0.6s
BILL Bilibino 16.64 17 *i* P **P** 21 42 42.0 -0.3
MJA0 Matsu Arr-Jizo 19.40 220 *e*P **P** 21 43 10.2 +1.0
MJA0 pmax pmax
comp=Z,3.0nm,0.5s
MJB9 Matsu-Tunnel 19.41 220 P **P** 21 43 10.7 +1.4
MAJO Matsushiro 19.41 220 P **P** 21 43 09.5 +0.3
MAJO Matsushiro 19.41 220 P **P** 21 43 09.5 +0.3
MAJO pmax pmax
comp=Z,40nm,1.1s
MJAR Matsushiro Arr 19.41 220 P **P** 21 43 10.6 +1.3
comp=Z,2.0nm,0.5s,baz=17,slow=9.9,SNR=16
GAMB Gambell 21.09 44 P **P** 21 43 26.1 +2.1
GAMB IAmb IAmb 21 43 36.0
comp=Z,8.7nm,1.2s
JHJ2 Mitsune 21.90 213 P **P** 21 43 33.2 +1.4
JHJ Hachijo jima 2 21.91 213 P **P** 21 43 33.1 +1.3
comp=Z,174nm,0.7s,baz=53,slow=20,SNR=2.5
TIXI Tiksi 22.05 339 P **P** 21 43 32.4 -0.2
comp=Z,13nm,0.4s,baz=143,slow=7.5,SNR=14
comp=Z,13nm,0.4s
TIXI Tiksi 22.05 339 **P** 21 43 32.4 -0.2
TIXI IAmb IAmb 21 43 33.3
comp=Z,7.9nm,1.0s
TIXI Tiksi 22.05 339 *ce*P **P** 21 43 32.5 -0.2
TIXI pmax pmax
comp=Z,4.0nm,0.9s
C16K Lisburne Hills 24.91 35 P **P** 21 43 59.7 +1.5
F17K Baldwin Pennin 26.00 40 P **P** 21 44 10.3 +2.5
F17K IAmb IAmb 21 44 45.0
comp=Z,8.1nm,1.4s
N15K Kwethluk River 26.18 55 P **P** 21 44 13.0 +3.4
G18K Tagagawik 26.96 42 P **P** 21 44 19.2 +2.8
G18K IAmb IAmb 21 44 19.9
comp=Z,6.2nm,1.1s
H18K Honhosa River 27.01 44 P **P** 21 44 19.6 +2.7
M17K Holitna River 27.40 52 P **P** 21 44 23.4 +3.1
M17K IAmb IAmb 21 44 41.8
comp=Z,25nm,1.5s
G21K Allakaket 29.09 41 P **P** 21 44 37.2 +2.2
E22K Anaktuvuk Pass 29.83 38 P **P** 21 44 43.8 +2.3
H22K Ishtalitna Cre 29.95 42 P **P** 21 44 45.4 +3.0
SPU Mount Spurr 30.01 52 P **P** 21 44 46.1 +3.0
SPU IAmb IAmb 21 44 47.4
comp=Z,8.1nm,1.3s
SLKM Skilak Lake 31.01 53 P **P** 21 44 53.7 +2.0
SLKM IAmb IAmb 21 45 23.4
comp=Z,15nm,1.3s
WRH Wood River Hil 31.41 45 P **P** 21 44 57.8 +2.7
WRH IAmb IAmb 21 45 30.3
comp=Z,5.0nm,1.3s
G24K Hadweenzic Riv 31.50 41 P **P** 21 44 59.0 +3.1
G24K IAmb IAmb 21 45 19.7
comp=Z,6.4nm,1.4s

CCB	**Clear Creek Bu**	**31.52**	**45**	P		**P**	**21 44 58.4**	**+2.5**
SML	**Sawmill**	**31.67**	**50**	P		**P**	**21 44 59.3**	**+1.9**
SML				IAmb		IAmb	21 45 23.3	
	comp=Z,31nm,1.5s							
KNK	**Knik Glacier**	**31.68**	**51**	P		**P**	**21 45 00.2**	**+2.6**
D25K	**Kavik River**	**31.86**	**36**	P		**P**	**21 45 00.8**	**+1.8**
ILAR	**Eielson Array**	**31.89**	**44**	P		**P**	**21 45 01.6**	**+2.3**
	comp=Z,0.9nm,0.8s,baz=277,slow=8.3,SNR=11							
	comp=Z,0.9nm,0.8s							
ILAR	**Eielson Array**	**31.89**	**44**	P		**P**	**21 45 01.7**	**+2.4**
ZALV	**Zalesovo Beam**	**39.74**	**300**	P		**P**	**21 46 04.0**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=54,slow=7.2,SNR=6.1							
	comp=Z,0.9nm,0.5s							
DGZ	**Jazzator, Alta**	**40.37**	**293**	*i* P		**P**	**21 46 10.5**	**+0.6**
DGZ				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KURK	**Kurchatov**	**44.66**	**299**	*ce* P		**P**	**21 46 43.6**	**+0.2**
KURK				pmax	pmax			
	comp=Z,20nm,2.5s							
KURK	**Kurchatov**	**44.66**	**299**			**P**	**21 46 43.5**	**0.0**
KURBB	**Kurchatov Arra**	**44.76**	**299**	P		**P**	**21 46 44.2**	**0.0**
	comp=Z,3.5nm,0.5s,baz=60,slow=7.4,SNR=20							
	comp=Z,3.5nm,0.5s							
MK31	**Makanchi Array**	**44.83**	**293**	*i* P		**P**	**21 46 45.8**	**+0.9**
MKAR	**Makanchi Array**	**44.83**	**293**	P		**P**	**21 46 44.8**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=60,slow=6.8,SNR=13							
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**44.83**	**293**	*ce* P		**P**	**21 46 44.7**	**-0.2**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
SPITS	**Spitsbergen Ar**	**46.94**	**349**	P		**P**	**21 47 00.7**	**+0.1**
	comp=Z,13nm,1.1s,baz=58,slow=7.9,SNR=8.6							
	comp=Z,13nm,1.1s							
BVAR	**Borovoye Array**	**47.61**	**306**	P		**P**	**21 47 05.9**	**0.0**
	comp=Z,2.5nm,0.5s,baz=50,slow=6.6,SNR=13							
	comp=Z,2.5nm,0.5s							
BORK	**Borovoye**	**47.63**	**306**	*ce* P		**P**	**21 47 05.5**	**-0.6**
BORK				pmax	pmax			
	comp=Z,3.0nm,0.5s							
ARTI	**Arti**	**51.18**	**315**	*c i* P		**P**	**21 47 31.5**	**-0.8**
ARTI							21 49 31.3	
ARTI				S		**S**	**21 54 12.3**	**-1.1**
ARTI				SS		**SS**	**21 57 54.7**	**-1.3**
ARTI				pmax	pmax			
	comp=Z,19nm,2.5s							
AB31	**Akbulak array**	**55.09**	**307**	P		**P**	**21 48 00.2**	**-0.2**
AB31				IAmb		IAmb	21 48 15.4	
	comp=Z,6.6nm,1.1s							
FINES	**FINESS Array B**	**58.95**	**334**	P		**P**	**21 48 26.7**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=32,slow=7.1,SNR=32							
	comp=Z,1.6nm,0.3s							
NB2	**NORSAR Subarra**	**62.83**	**341**	P		**P**	**21 48 52.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=25,slow=6.5							
NOA	**NORSAR Array B**	**62.83**	**341**	P		**P**	**21 48 52.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=25,slow=6.5,SNR=5.3							
	comp=Z,1.3nm,0.7s							
HFS	**Hagfors**	**63.13**	**339**	P		**P**	**21 48 54.2**	**0.0**
	comp=Z,0.8nm,0.4s,baz=60,slow=6.0,SNR=13							
	comp=Z,0.8nm,0.4s							
AKASG	**Malin Array Be**	**66.94**	**325**	P		**P**	**21 49 17.9**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=33,slow=6.3,SNR=5.4							
	comp=Z,1.5nm,0.5s							
AKASG	**Malin Array Be**	**66.94**	**325**	*e* P		**P**	**21 49 16.9**	**-1.5**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KBZ	**Khabaz**	**67.14**	**313**	P		**P**	**21 49 20.4**	**+0.7**
	comp=Z,3.3nm,1.1s,baz=211,slow=6.1,SNR=4.6							
	comp=Z,3.3nm,1.1s							
EKA	**Eskdalemuir Ar**	**70.75**	**346**	P		**P**	**21 49 40.5**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=18,slow=5.1,SNR=7.2							
	comp=Z,0.4nm,0.4s							
BUR08	**Bucovina Ar. S**	**70.93**	**326**	P		**P**	**21 49 43.1**	**+0.4**
BUR08				IAmb		IAmb	21 49 43.9	
	comp=Z,2.7nm,0.8s							
GERES	**GERESS Array B**	**73.38**	**334**	P		**P**	**21 49 57.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=19,slow=3.8,SNR=4.0							
	comp=Z,0.6nm,0.4s							
WRA	**Warramunga Arr**	**74.17**	**199**	P		**P**	**21 50 04.0**	**+2.4**
	comp=Z,0.4nm,0.6s,baz=10,slow=5.8,SNR=2.2							
	comp=Z,0.4nm,0.6s							
WRA	**Warramunga Arr**	**74.17**	**199**	P		**P**	**21 50 04.0**	**+2.4**
BRTR	**Keskin Array B**	**74.42**	**316**	P		**P**	**21 50 03.4**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=42,slow=2.6,SNR=3.0							
	comp=Z,0.7nm,0.6s							
ASAR	**Alice Springs**	**77.88**	**199**	P		**P**	**21 50 25.0**	**+2.9**
	comp=Z,0.5nm,0.4s,baz=17,slow=4.8,SNR=5.1							
	comp=Z,0.5nm,0.4s							
ASAR	**Alice Springs**	**77.88**	**199**	P		**P**	**21 50 24.9**	**+2.9**
ASAR	**Alice Springs**	**77.88**	**199**	P		**P**	**21 50 24.9**	**+2.9**
MMAI	**Mount Meron Ar**	**79.25**	**311**	P		**P**	**21 50 30.4**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=18,slow=9.8,SNR=3.1							
	comp=Z,0.8nm,0.4s							
PLCA	**Paso Flores**	**147.88**	**86**	PKPbc		**PKPab**	**21 58 07.5**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=61,slow=3.7,SNR=2.8							

IDC ***13*** *21:59:25.7±2.3,23˚.22S×69˚.04W, h0km, mb3.8/2, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=55.4km s-min=54.8km az=138.0*

GUC ***13*** *21:59:48.4±0.9,22˚.00S×68˚.57W, h118km±5km, ML3.4*

ISC 13 21:59:46.7±1.0,21˚.99S±0˚.05×68˚.57W±0˚.09, h131km±8km, n20, σ0s89/29, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB09	**IPOC Station P**	**0.65**	**287**	⇑ *i*	P	**Pn**	**22 00 07.2**	**+0.2**
PB09					S	**Sn**	**22 00 21.6**	**-0.7**
PB09					AML		22 00 22.6	
	comp=N,664nm,0.3s							
AF01	**San Pedro de A**	**1.02**	**159**	*e* P		**Pn**	**22 00 10.4**	**+0.2**
AF01					AML		22 00 44.1	
	comp=E,1μm,0.6s							
PB03	**IPOC Station P**	**1.10**	**267**	⇑ *i*	P	**Pn**	**22 00 10.9**	**+0.1**
PB03					S	**Sn**	**22 00 28.8**	**-0.2**
PB03					AML		22 00 29.8	
	comp=N,718nm,0.4s							
PB06	**IPOC Station P**	**1.17**	**232**	⇑ *i*	P	**Pn**	**22 00 11.7**	**+0.3**
PB06					S	**Sn**	**22 00 30.0**	**-0.2**
PB06					AML		22 00 33.8	
	comp=N,871nm,0.2s							
PB07	**IPOC Station P**	**1.25**	**282**	⇑ *i*	P	**Pn**	**22 00 12.7**	**+0.4**
PB07					S	**Sn**	**22 00 31.4**	**-0.4**
PB07					AML		22 00 32.1	
	comp=N,968nm,0.1s							
PB01	**IPOC Station P**	**1.27**	**318**	⇑ *i*	P	**Pn**	**22 00 12.6**	**+0.1**
PB01					S	**Sn**	**22 00 31.9**	**-0.1**
PB01					AML		22 00 33.3	
	comp=E,1μm,0.1s							
PB02	**IPOC Station P**	**1.40**	**298**	*i* P		**Pn**	**22 00 14.1**	**+0.2**
PB02					S	**Sn**	**22 00 34.0**	**-0.5**
PB02					AML		22 00 34.7	
	comp=N,1μm,0.4s							
PB05	**IPOC Station P**	**1.74**	**240**	⇑ *i*	P	**Pn**	**22 00 17.7**	**+0.1**
PB05					AML		22 00 47.4	
	comp=E,454nm,0.2s							
PB08	**IPOC Station P**	**1.92**	**343**	⇓ *i*	P	**Pn**	**22 00 21.5**	**+1.4**
PB08					S	**Sn**	**22 00 46.3**	**+0.6**
PB08					AML		22 00 50.2	
	comp=E,215nm,0.2s							
HMBC	**Humberstone**	**2.10**	**324**	*e* P		**Pn**	**22 00 22.1**	**0.0**
HMBC					S	**Sn**	**22 00 48.5**	**-0.7**
HMBC					AML		22 00 52.9	
	comp=E,376nm,0.2s							
PB10	**IPOC Station P**	**2.38**	**230**	*e* P		**Pn**	**22 00 25.6**	**+0.3**
PB10					AML		22 01 05.4	
	comp=E,114nm,0.3s							
GO01	**Chusmiza**	**2.38**	**346**	*e* P		**Pn**	**22 00 27.0**	**+1.0**
GO01					AML		22 01 01.9	
	comp=E,408nm,0.1s							
PB11	**IPOC Station P**	**2.44**	**335**	*e* P		**Pn**	**22 00 26.5**	**+0.2**
PB11					S	**Sn**	**22 00 56.3**	**-0.4**
PB11					AML		22 01 01.2	
	comp=E,241nm,0.2s							
PB14	**IPOC Station P**	**3.12**	**212**	*e* P		**Pn**	**22 00 35.1**	**0.0**
PB14					AML		22 01 23.4	
	comp=E,72nm,0.3s							
PB16	**IPOC Station P**	**3.74**	**346**	*e* P		**Pn**	**22 00 44.9**	**+1.2**
LPAZ	**La Paz**	**5.69**	**4**	Pn		**Pn**	**22 01 10.8**	**+1.1**
	comp=E,0.2nm,0.3s,baz=186,slow=9.5,SNR=2.0							
	comp=E,0.8nm,0.3s							
SIV	**San Ignacio**	**9.27**	**51**	Pn		**Pn**	**22 01 54.3**	**-3.0**
	comp=E,0.2nm,0.3s,baz=231,slow=8.9,SNR=23							
	comp=E,4.4nm,0.3s							
TORD	**Torodi Ar. Bea**	**77.22**	**70**	P		**P**	**22 11 27.5**	**+0.7**
	comp=E,0.4nm,0.3s,baz=246,slow=5.6,SNR=7.9							
	comp=E,0.4nm,0.3s							
YKA	**Yellowknife Ar**	**91.75**	**340**	P		**P**	**22 12 39.3**	**+0.3**
	comp=E,0.2nm,0.5s,baz=145,slow=4.3,SNR=5.5							
	comp=E,0.2nm,0.5s							
MKAR	**Makanchi Array**	**145.84**	**37**	PKPbc		**PKPdf**	**22 19 08.6**	**-1.3**
	comp=E,0.5nm,1.0s,baz=315,slow=1.2,SNR=3.9							

TAP ***13*** *22:09:18.9,22˚.38N×121˚.37E, h24km, ML3.7, C*

JMA ***13*** *22:09:19.4±0.3,23˚.N±1˚×121˚.5E±0˚.7, h9km, MW3.7/11, TAIWAN REGION*

ISC 13 22:09:18.0±1.0,22˚.43N±0˚.02×121˚.42E±0˚.02, h12km±9km, n94, σ1s00/131, 5C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LAY	**Lan-yu**	**0.41**	**163**	⇑ *i*	P	**Pg**	**22 09 26.9**	**+0.8**
LAY					S	**Sg**	**22 09 32.4**	**+0.9**
TTN	**Taitung**	**0.41**	**322**	*i*	P	**Pb**	**22 09 28.3**	**+1.1**
TTN					S	**Sb**	**22 09 35.9**	**+2.4**
LYUB	**Lan-yu**	**0.45**	**160**	⇓ *i*	P	**Pg**	**22 09 26.3**	**-0.5**
LYUB					S	**Sg**	**22 09 31.7**	**-1.2**
ECL	**Taimali**	**0.46**	**291**	⇓ *i*	P	**Pg**	**22 09 27.6**	**+0.5**
ECL					S	**Sb**	**22 09 34.1**	**-0.8**
TAW	**Tawu**	**0.49**	**262**	⇓ *i*	P	**Pg**	**22 09 27.8**	**+0.2**
TAW					S	**Sg**	**22 09 34.2**	**+0.1**
TWGBT	**Beinan**	**0.50**	**321**		P	**Pb**	**22 09 28.5**	**-0.2**
TWGBT	**Beinan**	**0.50**	**321**	⇓ *i*	P	**Pb**	**22 09 28.9**	**+0.2**
TWGBT					S	**Sb**	**22 09 36.1**	**+0.1**
TAWH	**Dawu Township**	**0.50**	**260**	⇓ *i*	P	**Pg**	**22 09 28.0**	**+0.2**
TWG	**Pinlang**	**0.51**	**321**	⇓ *i*	P	**Pb**	**22 09 28.9**	**+0.1**
TWG					S	**Sb**	**22 09 37.0**	**+0.8**
EAST	**Anshuo**	**0.53**	**265**	⇓ *i*	P	**Pg**	**22 09 28.5**	**+0.1**
EAST					S	**Sg**	**22 09 35.4**	**-0.1**
SLIU	**Shizi**	**0.61**	**250**	⇓ *i*	P	**Pg**	**22 09 29.6**	**-0.3**
SLIU					S	**Sg**	**22 09 36.9**	**-1.1**
CHKT	**Chengkung**	**0.67**	**356**		P	**Pb**	**22 09 31.7**	**+0.1**
CHKT					S	**Sb**	**22 09 41.5**	**+0.6**
SMST	**Manzhou Townsh**	**0.68**	**233**		P	**Pg**	**22 09 30.9**	**-0.2**
SMST					S	**Sg**	**22 09 39.3**	**-0.7**
ECS	**Chishang**	**0.69**	**344**		P	**Pn**	**22 09 33.4**	**-0.1**
ECS					S	**Sn**	**22 09 45.2**	**+0.9**
TSEB	**Hengchuen, Pin**	**0.71**	**223**	*i*	P	**Pg**	**22 09 32.0**	**+0.2**
TSEB					S	**Sg**	**22 09 41.9**	**+0.7**
SCZT	**Fangliau**	**0.74**	**266**	⇑ *i*	P	**Pg**	**22 09 32.0**	**-0.4**
TWKBT	**Hengchun**	**0.74**	**229**	⇑	P	**Pg**	**22 09 31.9**	**-0.5**
TWKBT					S	**Sg**	**22 09 41.6**	**-0.5**
TWK1	**Hengchun**	**0.75**	**230**	⇑ *i*	P	**Pg**	**22 09 31.9**	**-0.6**
TWK1					S	**Sg**	**22 09 41.3**	**-1.0**
MASBT	**Mashibuluo**	**0.75**	**284**	⇓	P	**Pg**	**22 09 32.1**	**-0.4**
HEN	**Hengchun**	**0.76**	**236**	*e*	P	**Pg**	**22 09 32.8**	**+0.1**
HEN					S	**Sg**	**22 09 41.8**	**-0.8**
CHKH	**Chenggong**	**0.76**	**358**	*e*	P	**Pb**	**22 09 33.9**	**+0.8**
FULB	**Fuli**	**0.78**	**351**		P	**Pb**	**22 09 34.1**	**+0.7**
FULB					S	**Sb**	**22 09 45.1**	**+1.2**
SSD	**Sandimen**	**0.79**	**294**	*e*	P	**Pg**	**22 09 32.8**	**-0.5**
SSD					S	**Sg**	**22 09 43.9**	**+0.1**
ELDTW	**Lidau**	**0.84**	**334**	*e*	P	**Pb**	**22 09 34.4**	**-0.2**
ECBN	**Changbin**	**0.89**	**2**	*e*	P	**Pb**	**22 09 35.9**	**+0.6**
ECBN					S	**Sb**	**22 09 47.5**	**+0.4**
TWF1	**Yuli**	**0.93**	**353**	*e*	P	**Pb**	**22 09 36.7**	**+0.7**
TWF1					S	**Sb**	**22 09 49.3**	**+1.0**
STYH	**Taoyuan**	**0.95**	**321**	*e*	P	**Pg**	**22 09 36.1**	**-0.2**
WLCH	**Liuqiu**	**0.97**	**266**	*e*	P	**Pn**	**22 09 39.0**	**+1.6**
YULB	**Yu-li**	**0.97**	**353**		P	**Pn**	**22 09 37.6**	**+0.2**
YULB	**Yu-li**	**0.97**	**353**	*e*	P	**Pb**	**22 09 37.1**	**+0.4**
TWP	**Hsiaoliuchiu**	**0.98**	**265**	*e*	P	**Pn**	**22 09 38.9**	**+1.4**
TWM1	**Shoushan**	**1.00**	**293**	*i*	P	**Pn**	**22 09 38.7**	**+0.8**
SGST	**Jiashian**	**1.01**	**310**	⇑ *i*	P	**Pg**	**22 09 37.1**	**-0.3**
SGST					S	**Sn**	**22 09 53.1**	**+1.0**
HGSD	**Ruisui**	**1.06**	**0**	*e*	P	**Pn**	**22 09 38.9**	**+0.2**
EHYH	**Wanrong**	**1.06**	**356**	*e*	P	**Pb**	**22 09 38.9**	**+0.6**
WSSB	**Gushan**	**1.09**	**281**	*e*	P	**Pg**	**22 09 38.8**	**-0.2**
WTP	**Ta-pu**	**1.10**	**318**	*e*	P	**Pb**	**22 09 39.7**	**+0.6**
CHN1	**Nanshi**	**1.12**	**313**		P	**Pn**	**22 09 40.0**	**+0.5**
CHN1					S	**Sn**	**22 09 56.2**	**+1.4**
TPUB	**Ta-pu**	**1.13**	**320**		P	**Pb**	**22 09 40.0**	**+0.1**
TPUB	**Ta-pu**	**1.13**	**320**	*i*	P	**Pb**	**22 09 40.0**	**+0.4**
SHHT	**Tainan City**	**1.15**	**301**	*e*	P	**Pn**	**22 09 42.1**	**+2.2**
CHN3	**Shinhua**	**1.17**	**304**	*e*	P	**Pn**	**22 09 42.7**	**+2.6**
TWK	**Hsinying**	**1.20**	**314**	*i*	P	**Pb**	**22 09 40.9**	**+0.2**
ALS	**Alishan**	**1.22**	**332**	*e*	P	**Pn**	**22 09 42.8**	**+1.7**
WCKO	**Fanlu**	**1.26**	**323**	*e*	P	**Pg**	**22 09 40.4**	**-1.8**
WARBT	**Fenglin Townsh**	**1.28**	**359**	*e*	P	**Pb**	**22 09 42.2**	**+0.1**
VWDT	**VWDT**	**1.34**	**349**	*e*	P	**Pb**	**22 09 43.4**	**+0.3**
CHN5	**Tsauling**	**1.35**	**330**	*i*	P	**Pb**	**22 09 44.3**	**+1.1**
SHUL	**Shoufeng**	**1.36**	**6**	*e*	P	**Pb**	**22 09 43.8**	**+0.4**
WHYT	**Xinyi Township**	**1.37**	**338**	*e*	P	**Pb**	**22 09 43.9**	**+0.4**
CHY	**Chiayi**	**1.41**	**319**	*e*	P	**Pg**	**22 09 44.7**	**-0.3**
SSLB	**Suanglung**	**1.42**	**343**		P	**Pg**	**22 09 44.7**	**-0.6**
SSLB	**Suanglung**	**1.42**	**343**	*e*	P	**Pb**	**22 09 44.6**	**+0.2**
SSLB					S	**Sn**	**22 10 04.7**	**+2.4**
TSCK	**Chigu Township**	**1.42**	**300**	*e*	P	**Pn**	**22 09 44.2**	**+0.5**
TSCK					S	**Sb**	**22 10 02.8**	**+0.3**
WGK	**Gukeng**	**1.48**	**328**	*e*	P	**Pg**	**22 09 46.3**	**-0.2**
WDLH	**Douliu**	**1.50**	**327**	*e*	P	**Pg**	**22 09 46.1**	**-0.7**
SMLT	**Sun Moon Lake**	**1.53**	**342**	*i*	P	**Pg**	**22 09 46.9**	**-0.4**
SMLT					S	**Sg**	**22 10 09.4**	**+2.3**
OWD	**Renai**	**1.54**	**352**	*e*	P	**Pb**	**22 09 46.4**	**-0.1**
WSL	**Shuilin Townsh**	**1.55**	**315**	*i*	P	**Pn**	**22 09 46.1**	**+0.8**
WSL					S	**Sn**	**22 10 06.0**	**+0.6**
TYC	**Yuchr**	**1.56**	**341**	*e*	P	**Pg**	**22 09 47.2**	**-0.7**
TYC					S	**Sg**	**22 10 07.8**	**-0.4**
WUSB	**Renai**	**1.58**	**350**	*e*	P	**Pn**	**22 09 46.6**	**+0.6**
LXIB	**Xiulin Townshi**	**1.59**	**360**	*e*	P	**Pn**	**22 09 46.4**	**+0.4**
WNT	**Mingjian**	**1.59**	**335**	*e*	P	**Pb**	**22 09 47.3**	**-0.1**
WCS	**Beigang Elemen**	**1.69**	**344**	*e*	P	**Pg**	**22 09 50.6**	**+0.2**
WCS					S	**Sg**	**22 10 12.9**	**+0.6**
WHF	**Hehuan Shan**	**1.71**	**355**	*e*	P	**Pb**	**22 09 49.4**	**-0.3**
NACB	**Ninganchiao**	**1.75**	**5**	P		**Pn**	**22 09 48.9**	**+0.8**
NACB	**Ninganchiao**	**1.75**	**5**	*e*	P	**Pn**	**22 09 48.2**	**+0.1**
ETLH	**Xiulin Townshi**	**1.77**	**2**	*e*	P	**Pn**	**22 09 49.1**	**+0.6**
ETLH					S	**Sb**	**22 10 12.2**	**-0.5**
WDGT	**Dungji**	**1.82**	**297**	*e*	P	**Pn**	**22 09 48.5**	**-0.6**
WDGT					S	**Sn**	**22 10 11.6**	**-0.6**
WCHH	**Zhanghua**	**1.82**	**334**	*e*	S	**Sg**	**22 10 15.9**	**-0.9**
EOS4	**EOS4**	**1.88**	**26**	*e*	P	**Pn**	**22 09 51.1**	**+1.6**
VCHM	**Qimei**	**1.99**	**293**	*e*	P	**Pn**	**22 09 50.8**	**-0.7**
VCHM					S	**Sn**	**22 10 13.9**	**-2.5**
TWQ1	**Liyutan**	**2.00**	**343**	*e*	P	**Pb**	**22 09 53.8**	**-0.5**
TWQ1					S	**Sb**	**22 10 20.0**	**+0.8**
PHUB	**P'eng-hu**	**2.02**	**303**	*e*	P	**Pn**	**22 09 51.2**	**-0.6**
PHUB					S	**Sn**	**22 10 14.8**	**-2.1**
EOS3	**EOS3**	**2.03**	**24**	*e*	P	**Pn**	**22 09 53.1**	**+1.3**
PNG	**Penghu**	**2.06**	**304**	*e*	S	**Sn**	**22 10 16.2**	**-1.8**
NSY	**Sanyi**	**2.07**	**343**	*e*	S	**Sg**	**22 10 22.6**	**-2.0**
LATG	**Datong**	**2.10**	**3**	*e*	P	**Pb**	**22 09 55.4**	**-0.7**
ENTT	**Nioudou**	**2.21**	**3**	*e*	P	**Pb**	**22 09 56.7**	**-1.1**
TWC	**Suao**	**2.21**	**10**	*e*	S	**Sn**	**22 10 22.3**	**+0.7**
NFF	**Wufeng Townshi**	**2.21**	**353**	*i*	P	**Pb**	**22 09 57.6**	**-0.3**
NFF					S	**Sg**	**22 10 26.9**	**-2.3**
NDS	**Dongshan**	**2.21**	**7**	*e*	S	**Sn**	**22 10 23.3**	**+1.4**
NSTT	**Nanjuang**	**2.23**	**350**	*e*	S	**Sb**	**22 10 25.6**	**-0.1**
YHNB	**Yeheng**	**2.23**	**359**		P	**Pn**	**22 09 56.2**	**+1.3**
YHNB	**Yeheng**	**2.23**	**359**	*e*	P	**Pb**	**22 09 57.0**	**-1.3**
LIOB	**Emei**	**2.24**	**351**	*e*	P	**Pb**	**22 09 58.2**	**-0.2**
NWLT	**Wulai**	**2.34**	**2**	*e*	P	**Pb**	**22 09 59.2**	**-0.9**
SXI1	**Grass Mountain**	**2.69**	**9**	*e*	P	**Pn**	**22 10 03.9**	**+2.8**
SXI1					S	**Sb**	**22 10 37.3**	**-1.8**
HATJ	**Hateruma jima**	**2.73**	**53**	*e*	S	**Sn**	**22 10 33.2**	**-1.3**
IRIF	**Iriomote-Funau**	**2.85**	**48**	*e*	P	**Pn**	**22 10 03.6**	**+0.4**
JKRS	**Kuro-shima**	**2.98**	**52**	P		**Pn**	**22 10 05.7**	**+0.5**
JISG	**Ishigakijimahi**	**3.42**	**50**	*e*	P	**Pn**	**22 10 11.1**	**0.0**
JISG					S	**Sn**	**22 10 50.1**	**-1.4**
ZPLA	**Ao Xicun**	**3.69**	**295**	*e*	P	**Pn**	**22 10 14.6**	**-0.2**
ZPLA					S	**Sn**	**22 10 56.0**	**-2.3**
JTJ	**Tarama**	**3.73**	**53**	*e*	P	**Pn**	**22 10 15.9**	**+0.5**

SJA ***13*** *22:23:30.3±0.7, 22˚.73S×69˚.08W, h91km±6km, ML4.3, MW4.2*

IDC ***13*** *22:23:31.7±2.2, 22˚.74S×68˚.89W, h89km±20km, mb3.6/6, mbtmp4.0/11, Error ellipse: s-maj=24.1km s-min=18.7km az=74.0*

NEIC ***13*** *22:23:31.6±1.9, 22˚.73S±0˚.03×69˚.10W±0˚.04, h89km±5km, mb4.2/12, Mwr4.1/14, Mwr4.3(GUC), Error ellipse: s-maj=6.5km s-min=3.0km az=57.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=0.72; Mθθ=0.56; Mφφ 1.28; Mrθ=0.07; Mθφ 1.08; Mφr=0.54; Fault plane solution: M0 1.64000×10^15 NP1:φ69.17000°, δ63.10000°, λ-11.25000°. NP2:φ164.31000°, δ79.98000°, λ-152.65000°. Principal axes: T 1.8809, Plg11.0000°, Azm294.0000°; N -0.7446, Plg61.0000°, Azm183.0000°; P -1.1363, Plg26.0000°, Azm30.0000°;*

NEIC ***13*** *22:23:31.5,22˚.73S×69˚.11W, h94km*

GUC ***13*** *22:23:31.9±0.6,22˚.71S×69˚.09W, h86km±3km, ML4.5*

ISC 13 22:23:31.0±0.6,22˚.75S±0˚.03×69˚.05W±0˚.04, h86km±6km, n107, σ1s93/111, mb4.1/8, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB06	**IPOC Station P**	**0.48**	**275**			**Pn**	**22 23 46.2**	**+0.8**
PB06					Sn	**Sn**	**22 23 57.0**	**+0.9**
PB06	**IPOC Station P**	**0.48**	**275**	*i*	P	**Pn**	**22 23 46.2**	**+0.8**
PB06				*e*	S	**Sn**	**22 23 57.4**	**+1.3**
PB06					IAML		22 23 58.1	
	comp=E,12μm,0.2s							
PB06	**IPOC Station P**	**0.48**	**275**	*e*	P	**Pn**	**22 23 45.5**	**+0.1**
PB06					IAML		22 24 01.2	
	comp=Z,7μm,0.3s							
AF01	**San Pedro de A**	**0.83**	**104**			**Pn**	**22 23 50.6**	**+1.8**
AF01					Sn	**Sn**	**22 24 04.6**	**+2.4**
AF01	**San Pedro de A**	**0.83**	**104**	*i*	P	**Pn**	**22 23 50.6**	**+1.8**
AF01				*e*	S	**Sn**	**22 24 05.1**	**+3.0**
AF01	**San Pedro de A**	**0.83**	**104**	*e*	P	**Pn**	**22 23 49.9**	**+1.1**
AF01					IAML		22 24 06.7	
	comp=Z,12μm,0.4s							
PB03	**IPOC Station P**	**0.95**	**317**			**Pn**	**22 23 50.5**	**+0.4**
PB03	**IPOC Station P**	**0.95**	**317**	*i*	P	**Pn**	**22 23 50.7**	**+0.6**
PB03				*e*	S	**Sn**	**22 24 04.8**	**+0.4**
PB03					IAML		22 24 07.0	
	comp=E,14μm,0.1s							
PB03	**IPOC Station P**	**0.95**	**317**	*e*	P	**Pn**	**22 23 50.0**	**-0.1**
PB09	**IPOC Station P**	**0.97**	**349**			**Pn**	**22 23 51.3**	**+1.0**
PB09					Sn	**Sn**	**22 24 05.5**	**+0.8**
PB09	**IPOC Station P**	**0.97**	**349**	⇓ *i*	P	**Pn**	**22 23 51.4**	**+1.0**
PB09				*e*	S	**Sn**	**22 24 05.7**	**+1.1**
PB09					IAML		22 24 06.6	
	comp=N,6μm,0.4s							
PB09	**IPOC Station P**	**0.97**	**349**	*e*	P	**Pn**	**22 23 50.6**	**+0.4**
PB09					IAML		22 24 07.1	
	comp=Z,5μm,0.4s							
PB05	**IPOC Station P**	**1.07**	**264**			**Pn**	**22 23 52.2**	**+0.9**
PB05	**IPOC Station P**	**1.07**	**264**	⇑ *e*	P	**Pn**	**22 23 52.2**	**+0.9**
PB05				*e*	S	**Sn**	**22 24 07.9**	**+1.3**
PB05	**IPOC Station P**	**1.07**	**264**	*e*	P	**Pn**	**22 23 51.5**	**+0.2**
PB05					IAML		22 24 10.9	
	comp=Z,5μm,0.7s							
PB07	**IPOC Station P**	**1.28**

CPUP	**Villa Florida**	**11.25**	**111**	Pn		**Pn**	**22 26 10.0**	**+1.1**	
PTLB	**Pontes e Lacer**	**11.85**	**54**			**Pn**	**22 26 15.9**	**-1.2**	
H03N1	**Juan Fernandez**	**13.74**	**217**	T		T	22 39 48.2		
	baz=40,slow=72,SNR=34								
H03N2	**Juan Fernandez**	**13.75**	**217**	T		T	22 39 52.6		
	baz=40,slow=72,SNR=16								
H03N3	**Juan Fernandez**	**13.76**	**217**	T		T	22 39 47.3		
	baz=40,slow=72,SNR=17								
BI02	**San Fabin de**	**14.00**	**187**	Pn		**Pn**	**22 26 44.7**	**-0.8**	
PLTB	**Pedras Altas**	**16.39**	**126**			**Pn**	**22 27 16.6**	**+0.7**	
PLTB				IAmb		IAmb	22 27 32.2		
	comp=Z,14nm,1.4s								
TRQA	**Tornquist**	**16.42**	**160**			**Pn**	**22 27 16.4**	**+0.2**	
TRQA				IAmb		IAmb	22 27 24.2		
	comp=Z,9.7nm,0.7s								
GO06	**Curarrehue**	**16.91**	**186**			**Pn**	**22 27 22.0**	**-0.3**	
PLCA	**Paso Flores**	**17.97**	**184**	P		**Pn**	**22 27 36.3**	**+1.0**	
	comp=Z,3.5nm,1.1s,baz=345,slow=12,SNR=4.7								
PLCA	**Paso Flores**	**17.97**	**184**	P		**Pn**	**22 27 35.4**	**+0.1**	
LL01	**San Ignacio de**	**19.77**	**187**	P		**P**	**22 27 54.2**	**0.0**	
LL01				IAmb		IAmb	22 28 00.3		
	comp=Z,9.9nm,0.7s								
VAO	**Valinhos**	**20.35**	**95**	P		**P**	**22 27 59.9**	**-0.9**	
BDFB	**Brasilia**	**21.07**	**74**	P		**P**	**22 28 06.6**	**-2.1**	
	comp=Z,1.7nm,0.4s,baz=258,slow=12,SNR=3.3								
	comp=Z,1.7nm,0.4s								
BDFB	**Brasilia**	**21.07**	**74**	P		**P**	**22 28 07.4**	**-1.2**	
MACA	**Manacapuru-AM**	**21.09**	**24**	P		**P**	**22 28 06.6**	**-2.1**	
MACA				IAmb		IAmb	22 28 08.3		
	comp=Z,9.5nm,0.5s								
AY01	**Puyuhuapi**	**21.82**	**187**	P		**P**	**22 28 15.3**	**-0.8**	
AY01				IAmb		IAmb	22 28 41.2		
	comp=Z,16nm,1.1s								
MG02	**Cerro Sombrero**	**29.98**	**180**	P		**P**	**22 29 31.2**	**0.0**	
TXAR	**Lajitas Array**	**61.58**	**326**	P		**P**	**22 33 40.4**	**+0.8**	
	comp=Z,0.2nm,0.6s,baz=145,slow=7.8,SNR=3.1								
	comp=Z,0.2nm,0.6s								
PDAR	**Pinedale Array**	**75.12**	**330**	P		**P**	**22 35 04.8**	**+0.7**	
	comp=Z,0.1nm,0.4s,baz=146,slow=7.7,SNR=3.4								
	comp=Z,0.1nm,0.4s								
TORD	**Torodi Ar. Bea**	**77.90**	**70**	P		**P**	**22 35 19.8**	**-0.3**	
	comp=Z,3.4nm,0.6s,baz=265,slow=3.0,SNR=33								
	comp=Z,3.4nm,0.6s								
TORD	**Torodi Ar. Bea**	**77.90**	**70**	P		**P**	**22 35 19.6**	**-0.4**	
TORD				IAmb		IAmb	22 35 20.2		
	comp=Z,2.0nm,0.7s								
BOSA	**Boshof**	**82.98**	**118**	P		**P**	**22 35 47.3**	**0.0**	
	comp=Z,2.8nm,0.9s,baz=266,slow=2.8,SNR=3.6								
	comp=Z,2.8nm,0.9s								
BOSA	**Boshof**	**82.98**	**118**	IAmb		IAmb	22 35 48.3		
	comp=Z,6.7nm,1.1s								
YKA	**Yellowknife Ar**	**92.32**	**341**	P		**P**	**22 36 30.8**	**-0.4**	
	comp=Z,0.7nm,0.8s,baz=139,slow=3.5,SNR=9.9								
	comp=Z,0.7nm,0.8s								
H11S2	**WAKE ISLAND Hyl**	**27.89**	**276**	T		T	01 02 44.6		
	baz=104,slow=74,SNR=41								
H11S1	**WAKE ISLAND Hyl**	**27.90**	**276**	T		T	01 02 41.3		
	baz=104,slow=74,SNR=28								
H11S3	**WAKE ISLAND Hyl**	**27.91**	**276**	T		T	01 02 42.4		
	baz=104,slow=74,SNR=24								
H11N3	**WAKE ISLAND Hyl**	**28.01**	**278**	T		T	01 02 46.2		
	baz=104,slow=75,SNR=25								
H11N2	**WAKE ISLAND Hyl**	**28.02**	**278**	T		T	01 02 47.4		
	baz=104,slow=75,SNR=19								
H11N1	**WAKE ISLAND Hyl**	**28.02**	**278**	T		T	01 02 49.6		
	baz=104,slow=75,SNR=13								
ASAR	**Alice Springs**	**128.75**	**207**	PKP		**PKPdf**	**22 42 29.1**	**-0.2**	
	comp=Z,0.6nm,0.7s,baz=108,slow=1.7,SNR=6.0								
WRA	**Warramunga Arr**	**131.81**	**210**	PKP		**PKPdf**	**22 42 35.7**	**+0.6**	
	comp=Z,0.7nm,0.6s,baz=159,slow=1.7,SNR=13								
ZALV	**Zalesovo Beam**	**143.13**	**26**	PKP		PKPbc	22 42 52.9	+1.1	
	comp=Z,1.0nm,0.6s,baz=324,slow=4.0,SNR=5.0								
KSH2	**Kashi**	**145.79**	**53**	PKPbc		**PKPab**	**22 43 02.0**	**+0.8**	
KSH2				pPKP		pPKPab	22 43 26.5	+0.9	
MKAR	**Makanchi Array**	**146.71**	**37**	PKPbc		**PKPdf**	**22 43 02.3**	**+1.1**	
	comp=Z,1.4nm,0.6s,baz=326,slow=2.3,SNR=22								
HHC	**Hu-ho-hao-te**	**161.95**	**358**	*eP*		**PKPdf**	**22 43 20.1**	**-2.5**	

*SJA **13** 23:13:53.7±0.7,21.°59S×68.°67W,h133km±4km, ML3.5, MW3.6*
*GUC **13** 23:13:55.2±0.8,21.°58S×68.°62W,h124km±4km, ML3.6*
*IDC **13** 23:13:58.5±10.0,21.°40S×68.°03W,h133km±76km, mb3.4/1, mbtmp3.6/3, Error ellipse: s-maj=127.7km s-min=41.1km az=1.0*

ISC 13 23:13:55.2±1.0,**21.°57S**±0.°03×**68.°83W**±0.°08,**h137**km±7km, **n38**,σ0°**76**/58,**6C**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.45**	**240**	*iP*	**Pn**		**23 14 14.3**	**-0.7**
PB09				*eS*	**Sn**		**23 14 28.8**	**-1.1**
PB09				IAML			23 14 31.0	
	comp=E,808nm,0.6s							
PB09	**IPOC Station P**	**0.45**	**240**	*eP*	**Pn**		**23 14 14.2**	**-0.7**
PB09				*eS*	**Sn**		**23 14 29.2**	**-0.7**
PB09				IAML			23 14 29.6	
	comp=Z,672nm,0.2s							
PB01	**IPOC Station P**	**0.81**	**310**	⇑*iP*	**Pn**		**23 14 16.7**	**-0.5**
PB01				*eS*	**Sn**		**23 14 33.5**	**-0.3**
PB01				IAML			23 14 34.6	
	comp=E,2μm,0.3s							
PB01	**IPOC Station P**	**0.81**	**310**	*eS*	Sn		23 14 16.7	-17
PB01				IAML			23 14 17.2	
	comp=Z,1μm,0.3s							
PB07	**IPOC Station P**	**1.00**	**261**	*iP*	**Pn**		**23 14 19.3**	**+0.4**
PB07				*eS*	**Sn**		**23 14 37.4**	**+0.6**
PB07				IAML			23 14 39.0	
	comp=E,3μm,0.3s							
PB07	**IPOC Station P**	**1.00**	**261**	*eP*	**Pn**		**23 14 19.3**	**+0.4**
PB07				*eS*	**Sn**		**23 14 38.0**	**+1.2**
PB02	**IPOC Station P**	**1.03**	**284**	⇑*iP*	**Pn**		**23 14 19.3**	**+0.3**
PB02				*eS*	**Sn**		**23 14 38.1**	**+0.9**
PB02				IAML			23 14 39.4	
	comp=N,3μm,0.2s							
PB02	**IPOC Station P**	**1.03**	**284**	*eP*	**Pn**		**23 14 18.6**	**-0.4**
PB02				*eS*	**Sn**		**23 14 38.3**	**+1.2**
PB06	**IPOC Station P**	**1.32**	**211**	⇑*iP*	**Pn**		**23 14 21.8**	**-0.2**
PB06				*eS*	**Sn**		**23 14 42.2**	**-0.3**
PB06				IAML			23 14 43.2	
	comp=E,1μm,0.5s							
PB06	**IPOC Station P**	**1.32**	**211**	*eP*	**Pn**		**23 14 21.8**	**-0.2**
PB06				*eS*	**Sn**		**23 14 42.8**	**+0.3**
PB06				IAML			23 14 43.1	
	comp=Z,578nm,0.3s							
PB08	**IPOC Station P**	**1.46**	**348**	*iP*	**Pn**		**23 14 23.6**	**-0.1**
PB08				*eS*	**Sn**		**23 14 44.8**	**-0.6**
PB08				IAML			23 14 46.7	
	comp=E,1μm,0.2s							
PB08	**IPOC Station P**	**1.46**	**348**	*eP*	**Pn**		**23 14 23.1**	**-0.6**
PB08				*eS*	**Sn**		**23 14 45.6**	**+0.3**
PB08				IAML			23 14 46.6	
	comp=Z,343nm,0.3s							
AF01	**San Pedro de A**	**1.50**	**157**	IAML			23 14 59.0	
	comp=E,297nm,0.5s							
AF01	**San Pedro de A**	**1.50**	**157**	*eP*	Pn		23 14 37.6	+14
AF01				*eS*	**Sn**		**23 14 49.0**	**+3.0**
AF01				IAML			23 15 04.9	
	comp=Z,257nm,0.7s							
HMBC	**Humberstone**	**1.63**	**322**	⇑*iP*	**Pn**		**23 14 25.1**	**-0.2**
HMBC				*eS*	**Sn**		**23 14 48.2**	**0.0**
HMBC				IAML			23 14 50.9	
	comp=N,1μm,0.6s							
HMBC	**Humberstone**	**1.63**	**322**	*eP*	Pn		23 14 17.7	-7.6
HMBC				*eS*	**Sn**		**23 14 48.8**	**+0.5**
HMBC				IAML			23 14 50.5	
	comp=Z,1μm,0.6s							
TA02	**Huaiquique**	**1.78**	**316**	*eP*	**Pn**		**23 14 27.1**	**+0.2**
TA02				*eS*	**Sn**		**23 14 52.5**	**+1.3**
TA02				IAML			23 14 57.1	
	comp=Z,602nm,0.1s							
PB05	**IPOC Station P**	**1.80**	**225**	*eP*	**Pn**		**23 14 27.5**	**+0.2**
PB05				*eS*	**Sn**		**23 14 52.0**	**+0.1**
PB05				IAML			23 14 53.3	
	comp=N,283nm,0.3s							
PB05	**IPOC Station P**	**1.80**	**225**	*eP*	**Pn**		**23 14 27.7**	**+0.4**
PB05				*eS*	**Sn**		**23 14 52.0**	**+0.1**
PB05				IAML			23 14 58.4	
	comp=Z,186nm,0.3s							
GO01	**Chusmiza**	**1.93**	**350**	*eP*	**Pn**		**23 14 28.8**	**-0.3**
GO01				IAML			23 14 56.8	
	comp=N,998nm,0.2s							
GO01	**Chusmiza**	**1.93**	**350**	*eP*	**Pn**		**23 14 29.1**	**-0.1**
GO01				*eS*	**Sn**		**23 14 55.9**	**+0.9**
GO01				IAML			23 14 58.1	
	comp=Z,224nm,0.6s							
PB11	**IPOC Station P**	**1.96**	**337**	⇑*iP*	**Pn**		**23 14 29.0**	**-0.2**
PB11				*eS*	**Sn**		**23 14 54.9**	**-0.5**
PB11				IAML			23 14 56.8	
	comp=N,979nm,0.3s							
PB11	**IPOC Station P**	**1.96**	**337**	*eP*	**Pn**		**23 14 28.4**	**-0.8**
PB11				*eS*	**Sn**		**23 14 55.4**	**+0.1**
PB11				IAML			23 14 56.8	
	comp=Z,540nm,0.7s							
PB10	**IPOC Station P**	**2.51**	**219**	*eP*	**Pn**		**23 14 36.3**	**+0.6**
PB10				IAML			23 15 20.5	
	comp=N,72nm,0.4s							
PB10	**IPOC Station P**	**2.51**	**219**	*eP*	**Pn**		**23 14 36.1**	**+0.4**
PB10				*eS*	**Sn**		**23 15 05.4**	**-1.5**
PB10				IAML			23 15 22.6	
	comp=Z,60nm,0.4s							
PB12	**IPOC Station P**	**3.27**	**334**	*eP*	**Pn**		**23 14 44.2**	**-1.3**
PB12				IAML			23 15 33.4	
	comp=N,165nm,0.5s							
PB12	**IPOC Station P**	**3.27**	**334**	*eP*	**Pn**		**23 14 44.3**	**-1.3**
PB12				*eS*	**Sn**		**23 15 24.8**	**+0.3**
PB12				IAML			23 15 33.4	
	comp=Z,88nm,0.3s							
PB16	**IPOC Station P**	**3.29**	**349**	*eP*	**Pn**		**23 14 46.8**	**+0.5**
PB16				IAML			23 15 32.9	
	comp=N,68nm,0.5s							
PB16	**IPOC Station P**	**3.29**	**349**	*eP*	**Pn**		**23 14 46.8**	**+0.5**
PB16				*eS*	**Sn**		**23 15 26.5**	**+0.8**
PB16				IAML			23 15 30.1	
	comp=Z,58nm,0.6s							
PB14	**IPOC Station P**	**3.37**	**205**	*eP*	**Pn**		**23 14 47.1**	**0.0**
PB14	**IPOC Station P**	**3.37**	**205**	*eP*	**Pn**		**23 14 46.8**	**-0.3**
PB14				*eS*	**Sn**		**23 15 27.3**	**+0.1**
PB14				IAML			23 15 28.1	
	comp=Z,46nm,0.4s							
GO02	**Mina Guanaco**	**3.64**	**191**	*eP*	**Pn**		**23 14 49.8**	**-0.8**
GO02	**Mina Guanaco**	**3.64**	**191**	*eP*	**Pn**		**23 14 50.0**	**-0.6**
GO02				*eS*	**Sn**		**23 15 33.5**	**-0.1**
GO02				IAML			23 16 04.7	
	comp=Z,74nm,0.5s							
AC02	**Maricunga**	**5.25**	**183**	*eP*	**Pn**		**23 15 11.8**	**-0.3**
AC02				*eS*	Sn		23 15 57.7	-14
AC02				IAML			23 15 59.5	
	comp=Z,15nm,0.8s							
LPAZ	**La Paz**	**5.30**	**7**	P		**Pn**	**23 15 13.3**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=192,slow=5.8,SNR=4.7							
SIV	**San Ignacio**	**9.20**	**54**	P		Pn	23 15 58.8	-6.0
	comp=Z,1.6nm,0.5s,baz=238,slow=13,SNR=11							
SIV				S		Sn	23 17 33.9	-13
	comp=Z,0.4nm,0.3s,baz=307,slow=20,SNR=1.9							
TORD	**Torodi Ar. Bea**	**77.31**	**70**	P		**P**	**23 25 34.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=253,slow=4.2,SNR=8.0							
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**145.65**	**36**	PKPbc		**PKPab**	**23 33 19.2**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=310,slow=4.2,SNR=6.8							

RSNC 13 23:19:15.9±0.0,**3.°N**±1.°×**7.°4W**±.°,**h-1**km±2km,**M2.7,mb3.6, ML2.6,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.29**	**239**	P		Pg	23 19 21.3	-0.2
URMC				S		Sg	23 19 25.3	0.0
PRAC	**Prado**	**0.82**	**292**	P		Pg	23 19 30.3	-1.3
PRAC				S		Sg	23 19 41.0	-1.2
VILC	**Villavicencio,**	**0.83**	**32**	P		Pg	23 19 31.4	-0.5
VILC				S		Sg	23 19 43.0	+0.4
ORTC	**Ortega, Tolima**	**1.22**	**294**	P		Pg	23 19 37.5	-1.9
ORTC				S		Sg	23 19 53.7	-1.6
MACC	**Macarena, Meta**	**1.28**	**167**	P		Pg	23 19 39.0	-1.4
MACC				S		Sg	23 19 56.1	-0.9
CHIC	**Chingaza**	**1.28**	**18**	P		Pg	23 19 39.0	-1.6
CHIC				S		Sg	23 19 55.2	-2.0
ROSC	**El Rosal**	**1.44**	**352**	P		Pg	23 19 42.5	-1.1
ROSC				S		Sg	23 20 01.8	-0.5
ANIL	**Santa Ana**	**1.67**	**311**	P		Pn	23 19 45.0	-1.7
ANIL				S		Sn	23 20 07.5	-1.5
GARC	**Garzon, Huila**	**1.82**	**229**	P		Pn	23 19 48.1	-0.6
GARC				S		Sn	23 20 10.6	-2.0
RECRC	**Villamaria, Ca**	**1.97**	**322**	P		Pn	23 19 50.6	-0.5
RECRC				S		Sn	23 20 15.9	-0.9
NIZA	**Niza - Manizal**	**2.12**	**321**	P		Pn	23 19 53.1	+0.2
NIZA				S		Sn	23 20 20.0	-0.1
SPBC	**San Pablo de B**	**2.24**	**1**	P		Pn	23 19 54.9	+0.6
SPBC				S		Sb	23 20 25.7	+0.1
NORC	**Norcasia**	**2.27**	**341**	P		Pn	23 19 54.3	-0.5
NORC				S		Sn	23 20 23.5	0.0
YOTC	**Yotoco, Valle**	**2.29**	**285**	P		Pn	23 19 54.3	-0.7
YOTC				S		Sn	23 20 25.1	+1.1
FLOC	**Florencia**	**2.36**	**220**	P		Pn	23 19 57.2	+1.2
FLOC				S		Sb	23 20 26.2	+0.5
JAMC	**Jamundi, Valle**	**2.55**	**266**	P		Pn	23 19 59.1	+0.4
JAMC				S		Sb	23 20 32.8	-1.8
POPC	**Popayan, Colom**	**2.68**	**251**	P		Pn	23 20 01.1	+0.5
POPC				S		Sb	23 20 37.8	-0.8
RUSC	**La Rusia**	**2.69**	**23**	P		Pn	23 20 01.2	+0.3
RUSC				S		Sn	23 20 36.0	+1.6
HELC	**Santa Helena**	**3.10**	**333**	P		Pn	23 20 07.2	+0.7
HELC				S		Sn	23 20 46.5	+2.0
PTBC	**PUERTO BERRIO,**	**3.14**	**354**	P		Pn	23 20 06.2	-0.4
PTBC				S		Sn	23 20 45.7	+0.9
SDV	**Santo Domingo**	**6.46**	**32**	P		Pn	23 20 51.9	-0.7
SDV				S		Sn	23 22 05.7	-1.5
SJCC	**San Jacinto, C**	**6.54**	**351**	P		Pn	23 20 52.5	-1.0

*JMA **13** 23:19:57.7±0.2,25.°N±1.°×122.°4E±0.°4, h113km±1km, MV3.0/17, NW OFF ISHIGAKIJIMA IS*
*TAP **13** 23:19:57.8,24.°81N×122.°41E,h113km, ML4.0, C*
*IDC **13** 23:20:00.5±6.1,24.°99N×122.°84E,h153km±64km, mb2.9/3, mbtmp3.5/4, Error ellipse: s-maj=56.2km s-min=21.7km az=66.0*

ISC 13 23:19:57.2±0.8,**24.°79N**±0.°03×**122.°43E**±0.°02,**h115**km±5km, **n138**,σ1°**09**/235,**mb3.3**/4,**10C-2D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.41**	**207**	*iP*		**Pn**	**23 20 14.8**	**+0.9**
EOS2				S		**Sn**	**23 20 28.0**	**+1.5**
EGS		**0.46**	**277**	P		**Pn**	**23 20 15.6**	**+1.3**
EGS				S		**Sn**	**23 20 28.1**	**+0.9**
TWB1	**Santiao Chiao**	**0.46**	**299**	⇑*iP*		**Pn**	**23 20 14.9**	**+0.6**
TWB1				*iS*		**Sn**	**23 20 26.6**	**-0.6**
EOS3	**EOS3**	**0.51**	**192**	P		**Pn**	**23 20 15.6**	**+1.1**
EOS3				*iS*		**Sn**	**23 20 29.2**	**+1.7**
TWC	**Suao**	**0.56**	**252**	*iP*		**Pn**	**23 20 15.1**	**+0.1**
TWC				*eS*		**Sn**	**23 20 26.8**	**-1.6**
JYNG	**Yonagunijimaku**	**0.57**	**126**	P		**Pn**	**23 20 15.3**	**+0.2**
JYNG				S		**Sn**	**23 20 28.4**	**-0.1**
TIPB	**Shuangxi**	**0.58**	**288**	P		**Pn**	**23 20 15.7**	**+0.5**
TIPB				*iS*		**Sn**	**23 20 28.2**	**-0.6**
SXI1	**Grass Mountain**	**0.59**	**301**	⇓*iP*		**Pn**	**23 20 15.7**	**+0.4**
SXI1				*iS*		**Sn**	**23 20 29.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.62**	**122**	P		**Pn**	**23 20 15.9**	**+0.5**
YOJ	**Yonaguni jima**	**0.62**	**122**	*eP*		**Pn**	**23 20 15.6**	**+0.2**
YOJ				S		**Sn**	**23 20 28.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.62**	**122**	⇑P		**Pn**	**23 20 15.6**	**+0.2**
YOJ				*eS*		**Sn**	**23 20 29.1**	**0.0**
ILA	**Ilan**	**0.62**	**268**	*eP*		**Pn**	**23 20 14.3**	**-1.1**
ILA				S		**Sn**	**23 20 27.9**	**-1.2**
NWF	**Wu-fen Shan**	**0.66**	**296**	⇑*iP*		**Pn**	**23 20 16.4**	**+0.7**
NWF				*iS*		**Sn**	**23 20 29.3**	**-0.5**
WFSB	**Wu-fen Shan**	**0.66**	**296**	P		**Pn**	**23 20 16.4**	**+0.8**
WFSB				*iS*		**Sn**	**23 20 30.2**	**+0.6**
NDS	**Dongshan**	**0.67**	**257**	P		**Pn**	**23 20 16.4**	**+0.6**
NDS				S		**Sn**	**23 20 28.8**	**-1.0**
EOS4	**EOS4**	**0.67**	**189**	P		**Pn**	**23 20 15.7**	**+0.3**
EOS4				*eS*		**Sn**	**23 20 29.7**	**+0.6**
EWUT	**Wuta**	**0.69**	**240**	P		**Pn**	**23 20 16.7**	**+0.8**
EWUT				*iS*		**Sn**	**23 20 30.2**	**+0.2**
TNOU	**National Taiwa**	**0.70**	**301**	*eP*		**Pn**	**23 20 16.0**	**0.0**
TNOU				*eS*		**Sn**	**23 20 29.4**	**-0.8**
TWE	**Neicheng**	**0.70**	**265**	⇑*iP*		**Pn**	**23 20 16.5**	**+0.5**
TWE				*iS*		**Sn**	**23 20 30.1**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.77**	**268**	P		**Pn**	**23 20 17.1**	**+0.4**
FUSB				*eS*		**Sn**	**23 20 30.7**	**-0.7**
EAHA	**Aohua**	**0.78**	**234**	P		**Pn**	**23 20 17.3**	**+0.6**
EAHA				*eS*		**Sn**	**23 20 31.9**	**+0.5**
TWA	**Mucha**	**0.80**	**284**	*eP*		**Pn**	**23 20 17.0**	**+0.1**
TWA				*eS*		**Sn**	**23 20 31.3**	**-0.4**
ENTT	**Nioudou**	**0.80**	**260**	*iP*		**Pn**	**23 20 17.9**	**+1.0**
ENTT				*eS*		**Sn**	**23 20 33.1**	**+1.3**
NWLT	**Wulai**	**0.85**	**269**	*iP*		**Pn**	**23 20 17.7**	**+0.4**
NWLT				*eS*		**Sn**	**23 20 31.3**	**-1.3**
YM01	**YM01**	**0.86**	**295**	⇓P		**Pn**	**23 20 18.0**	**+0.5**
YM01				*iS*		**Sn**	**23 20 32.8**	**-0.1**
LATG	**Datong**	**0.86**	**253**	⇑P		**Pn**	**23 20 18.5**	**+0.9**
LATG				S		**Sn**	**23 20 33.6**	**+0.7**
YM08	**YM08**	**0.86**	**298**	*eP*		**Pn**	**23 20 18.1**	**+0.6**
YM08				*iS*		**Sn**	**23 20 32.4**	**-0.4**
TATO	**Taipei**	**0.88**	**282**	P		**Pn**	**23 20 19.8**	**+2.2**
ZUZH	**Zhuzihu**	**0.89**	**295**	*eP*		**Pn**	**23 20 17.9**	**+0.2**
ZUZH				*eS*		**Sn**	**23 20 32.4**	**-0.9**
TWY	**Chenhua**	**0.90**	**303**	*iP*		**Pn**	**23 20 18.6**	**+0.9**
TWY				*eS*		**Sn**	**23 20 34.6**	**+1.3**
PCYT	**Pengchaiyu**	**0.90**	**339**	*eP*		**Pn**	**23 20 18.8**	**+1.0**
PCYT				*eS*		**Sn**	**23 20 34.7**	**+1.3**
ANP	**Anpu**	**0.92**	**296**	P		**Pn**	**23 20 18.4**	**+0.3**
ETL	**Fush Village**	**0.97**	**230**	*eP*		**Pn**	**23 20 18.4**	**-0.1**
ETL				*eS*		**Sn**	**23 20 34.3**	**-0.3**
NTST	**Danshui**	**0.97**	**293**	*eP*		**Pn**	**23 20 19.2**	**+0.8**
NTST				*eS*		**Sn**	**23 20 34.7**	**+0.2**
YHNB	**Yeheng**	**0.97**	**263**	P		**Pn**	**23 20 19.5**	**+0.9**
YHNB	**Yeheng**	**0.97**	**263**	*iP*		**Pn**	**23 20 19.3**	**+0.8**
YHNB				S		**Sn**	**23 20 34.9**	**+0.2**
TWS1	**Kuangyinshan**	**0.97**	**289**	*iP*		**Pn**	**23 20 19.1**	**+0.6**
TWS1				*eS*		**Sn**	**23 20 34.7**	**+0.1**
NACB	**Ninganchiao**	**0.98**	**232**	P		**Pn**	**23 20 18.6**	**0.0**
NACB	**Ninganchiao**	**0.98**	**232**	P		**Pn**	**23 20 18.5**	**0.0**
NACB				*iS*		**Sn**	**23 20 34.0**	**-0.8**
NSK	**Sanguang**	**0.98**	**264**	⇑*iP*		**Pn**	**23 20 19.4**	**+0.7**
NSK				S		**Sn**	**23 20 34.8**	**-0.1**
NNSB	**Datong**	**1.02**	**250**	*iP*		**Pn**	**23 20 19.9**	**+0.7**
NNSB				*eS*		**Sn**	**23 20 36.1**	**+0.4**
NNS	**Nan Shan**	**1.02**	**250**	P		**Pn**	**23 20 20.1**	**+1.0**
NNS				*eS*		**Sn**	**23 20 36.2**	**+0.4**
TWD	**Chiawan**	**1.04**	**227**	*iP*		**Pn**	**23 20 19.2**	**+0.1**
TWD				*eS*		**Sn**	**23 20 35.5**	**-0.3**
ETLH	**Xiulin Townshi**	**1.04**	**236**	*eP*		**Pn**	**23 20 19.5**	**+0.2**
ETLH				S		**Sn**	**23 20 36.3**	**+0.3**
HWA	**Hwalien**	**1.11**	**223**	*iP*		**Pn**	**23 20 20.3**	**+0.4**
HWA				*iS*		**Sn**	**23 20 38.0**	**+1.0**
KSHI	**Guanxi Townshi**	**1.14**	**270**	*eP*		**Pn**	**23 20 21.2**	**+1.0**
KSHI				*iS*		**Sn**	**23 20 38.4**	**+0.7**
NCU	**National Centr**	**1.15**	**279**	*eS*		**Sn**	**23 20 36.6**	**-1.2**
NCUH	**Zhongli**	**1.15**	**279**	*eP*		**Pn**	**23 20 20.6**	**+0.3**
NCUH				*eS*		**Sn**	**23 20 38.6**	**+0.8**
ETM	**Tongmen**	**1.19**	**227**	⇑P		**Pn**	**23 20 20.7**	**0.0**
ETM				*eS*		**Sn**	**23 20 37.6**	**-1.0**
TEYL	**Yanliau Villag**	**1.19**	**220**	*iP*		**Pn**	**23 20 20.9**	**+0.1**
TEYL				*eS*		**Sn**	**23 20 38.4**	**-0.3**
LXIB	**Xiulin Townshi**	**1.20**	**231**	⇑P		**Pn**	**23 20 21.0**	**-0.1**
LXIB				*eS*		**Sn**	**23 20 39.7**	**+0.5**
NFF	**Wufeng Townshi**	**1.21**	**263**	*eP*		**Pn**	**23 20 21.7**	**+0.7**
NFF				*iS*		**Sn**	**23 20 38.3**	**-0.7**
FUSS	**Fushou**	**1.21**	**244**	P		**Pn**	**23 20 22.2**	**+1.0**
FUSS				S		**Sn**	**23 20 39.8**	**+0.4**
WHF	**Hehuan Shan**	**1.24**	**239**	P		**Pn**	**23 20 22.6**	**+0.7**
WHF				*iS*		**Sn**	**23 20 40.3**	**-0.1**
TWT	**Tachien**	**1.26**	**245**	⇑*iP*		**Pn**	**23 20 23.1**	**+1.3**
TWT				*iS*

WSL				S		**Sn**	**23 21 04.4**	**+0.1**
SGST	**Jiashian**	**2.40**	**225**	*e*P		**Pn**	**23 20 37.5**	**+2.1**
JIRB	**Irabujima**	**2.49**	**89**	*e*P		**Pn**	**23 20 38.6**	**+2.0**
ECL	**Taimali**	**2.57**	**212**	*e*P		**Pn**	**23 20 37.0**	**-0.7**
JMJ	**Miyako jima 2**	**2.60**	**89**	P		**Pn**	**23 20 41.6**	**+3.6**
SCLT	**Jiali**	**2.60**	**232**	*e*S		**Sn**	**23 21 11.2**	**+1.6**
SSD	**Sandimen**	**2.62**	**219**	*e*P		**Pn**	**23 20 39.3**	**+1.0**
MATB	**Ma-tsu**	**2.63**	**302**	*e*P		**Pn**	**23 20 38.2**	**-0.2**
JMJ2	**Miyako jima3**	**2.63**	**90**	*e*P		**Pn**	**23 20 40.3**	**+1.8**
JMJ2				*e*S		**Sn**	**23 21 11.7**	**+1.5**
TSCK	**Chigu Township**	**2.70**	**233**	P		**Pn**	**23 20 40.3**	**+0.9**
TSCK				*e*S		**Sn**	**23 21 12.2**	**+0.5**
VWUC	**VWUC**	**2.72**	**275**	*i* P		**Pn**	**23 20 39.6**	**0.0**
MASBT	**Mashibuluo**	**2.72**	**218**	*e*P		**Pn**	**23 20 41.1**	**+1.4**
PHUB	**P'eng-hu**	**2.91**	**245**	P		**Pn**	**23 20 41.8**	**-0.2**
PHUB				S		**Sn**	**23 21 14.9**	**-1.7**
WDGT	**Dungji**	**2.96**	**240**	P		**Pn**	**23 20 43.0**	**+0.3**
WDGT				*e*S		**Sn**	**23 21 16.5**	**-1.3**
KNMB	**Chin-men Tao**	**3.69**	**266**	*e*P		**Pn**	**23 20 52.9**	**+0.4**
KNMB				*i* S		**Sn**	**23 21 33.2**	**-2.1**
AXDP	**Jialang**	**4.06**	**273**	*i* P		**Pn**	**23 20 57.7**	**+0.4**
AXDP				*i* S		**Sn**	**23 21 41.8**	**-2.3**
ZPLA	**Ao Xicun**	**4.36**	**260**	P		**Pn**	**23 21 02.0**	**+0.6**
ZPLA				*i* S		**Sn**	**23 21 49.3**	**-1.9**
DSXP	**Dongshan**	**4.70**	**258**	*e*P		**Pn**	**23 21 06.6**	**+0.7**
DSXP				*i* S		**Sn**	**23 21 57.0**	**-2.4**
JOW	**Kunigami**	**5.64**	**68**	P		**Pn**	**23 21 17.8**	**-0.9**
	10nm,0.5s,baz=272,slow=29,SNR=11							
JOW				S		**Sn**	**23 22 16.4**	**-5.9**
	4.8nm,0.3s,baz=261,slow=18,SNR=1.4							
SONM	**Songino Array**	**26.28**	**335**	P		**P**	**23 25 21.6**	**-0.2**
	0.5nm,0.8s,baz=134,slow=6.2,SNR=2.5							
	0.5nm,0.8s							
MKAR	**Makanchi Array**	**38.71**	**315**	P		**P**	**23 27 10.0**	**+0.1**
	0.5nm,1.0s,baz=102,slow=12,SNR=2.5							
	0.5nm,1.0s							
WRA	**Warramunga Arr**	**45.95**	**164**	P		**P**	**23 28 08.6**	**-0.1**
	0.4nm,0.6s,baz=347,slow=8.8,SNR=6.8							
	0.4nm,0.6s							
SPITS	**Spitsbergen Ar**	**69.14**	**348**	P		**P**	**23 30 49.4**	**-1.1**
	15nm,1.2s,baz=79,slow=9.0,SNR=1.5							

IDC ***13*** *23:31:34.2±0.8, 10°37S×161°43E, h96km±5km, mb4.0/18, mbtmp4.3/19, MS3.1/9, Error ellipse: s-maj=15.1km s-min=11.7km az=42.0*

NEIC ***13*** *23:31:34.6±1.7, 10°38S±0°10×161°52E±0°10, h90km±6km, mb4.6/124, Error ellipse: s-maj=17.2km s-min=9.7km az=46.0*

NOU ***13*** *23:31:34.8, 10°49S×161°35E, h16km, MLv5.0/9, Solomon Islands*

ISC 13 23:31:34.6±0.6, 10°46S±0°05×161°46E±0°07, h97km±5km, h97km:pP-P, n185, σ1s10/189, mb4.6/85, 1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HURO	**Huro Makira**	**0.43**	**90**	P		Pn	23 31 46.6	-3.0
NGOA	**Tingoa Renbel**	**1.75**	**232**	P		Pn	**23 32 02.9**	**-0.9**
NGOA	**Tingoa Renbel**	**1.75**	**232**	S		**Sn**	**23 32 24.6**	**-1.5**
HNR	**Honiara**	**1.81**	**304**	P		**Pn**	**23 32 04.6**	**0.0**
	73nm,0.3s,baz=29,slow=3.6,SNR=42							
HNR				S		**Sn**	**23 32 25.2**	**-2.3**
	48nm,0.3s,baz=95,slow=16,SNR=5.8							
HNR				LR		LR	23 32 28.8	
	comp=Z,14nm,19.9s,baz=218,slow=32							
HNR	**Honiara**	**1.81**	**304**			**Pn**	**23 32 04.0**	**-0.6**
HNR						**Sn**	**23 32 26.5**	**-0.9**
HNR	**Honiara**	**1.81**	**304**	P		**Pn**	**23 32 04.4**	**-0.2**
HNR	**Honiara**	**1.81**	**304**	S		**Sn**	**23 32 26.9**	**-0.6**
ALEG	**Aligegeo Malai**	**1.86**	**336**	P		**Pn**	**23 32 05.9**	**+0.6**
ALEG	**Aligegeo Malai**	**1.86**	**336**	S		**Sn**	**23 32 29.5**	**+0.9**
SAVO	**Savo Central**	**2.08**	**309**	P		**Pn**	**23 32 07.9**	**-0.3**
TATA	**Tatamba Isabel**	**2.63**	**321**	P		**Pn**	**23 32 15.5**	**+0.1**
DZM	**Mont Dzumac**	**12.49**	**158**	P		**Pn**	**23 34 31.7**	**+2.7**
	7.0nm,0.3s,baz=34,slow=8.1,SNR=60							
DZM				S		**Sn**	**23 36 41.7**	**-4.7**
	13nm,0.5s,baz=142,slow=23,SNR=8.9							
DZM				LR		LR	23 38 35.9	
	comp=Z,90nm,19.8s,baz=150,slow=34							
DZM	**Mont Dzumac**	**12.49**	**158**			**Pn**	**23 34 31.3**	**+2.3**
DZM						**Sn**	**23 36 44.6**	**-1.8**
MARNC	**Mare, Loyalty**	**12.64**	**151**	Pn		**Pn**	**23 34 34.3**	**+1.4**
ONTNC	**Ouen Toro**	**12.71**	**159**	Pn		**Pn**	**23 34 34.3**	**+2.5**
PINNC	**Pines Island,**	**13.37**	**155**	Pn		**Pn**	**23 34 42.4**	**+1.9**
CTA	**Charters Tower**	**17.50**	**235**	P		**Pn**	**23 35 35.1**	**+2.5**
	12nm,0.7s,baz=53,slow=11,SNR=16							
CTA				LR		LR	23 41 32.2	
	comp=Z,48nm,19.6s,baz=52,slow=34							
CTAO	**Charters Tower**	**17.50**	**235**			**Pn**	**23 35 35.0**	**+2.5**
EIDS	**Eidsvold**	**17.80**	**212**	P		**Pn**	**23 35 36.7**	**+0.6**
COEN	**Coen**	**18.20**	**257**	P		**Pn**	**23 35 42.6**	**+1.5**
ARMA	**Armidale**	**21.86**	**203**	P		**P**	**23 36 22.1**	**+2.5**
ARMA					IAmb	IAmb	23 36 53.6	
	comp=Z,40nm,1.5s							
WR8	**Warramunga Arr**	**27.64**	**247**	P		**P**	**23 37 13.2**	**-0.2**
WB0	**Warramunga Arr**	**27.68**	**247**			**P**	**23 37 13.6**	**-0.2**
WRAB	**Tennant Creek**	**27.77**	**247**	P		**P**	**23 37 14.2**	**-0.3**
WRA	**Warramunga Arr**	**27.78**	**247**	P		**P**	**23 37 14.4**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=77,slow=9.1,SNR=27							
WRA				ScP		**ScP**	**23 44 00.9**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=71,slow=3.4,SNR=5.2							
	comp=Z,2.2nm,0.6s							
WRA	**Warramunga Arr**	**27.78**	**247**	P		**P**	**23 37 13.0**	**-1.7**
STKA	**Stephens Creek**	**28.14**	**218**	P		**P**	**23 37 18.1**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=52,slow=15,SNR=4.2							
STKA				LR		LR	23 47 19.5	
	comp=Z,50nm,19.1s,baz=24,slow=34							
	comp=Z,1.4nm,0.4s							
STKA	**Stephens Creek**	**28.14**	**218**	P		**P**	**23 37 18.2**	**+0.6**
STKA					IAmb	IAmb	23 37 27.2	
	comp=Z,14nm,0.9s							
AS31	**Alice Springs**	**29.36**	**240**	P		**P**	**23 37 27.8**	**-0.9**
ASAR	**Alice Springs**	**29.36**	**240**	P		**P**	**23 37 27.8**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=65,slow=9.9,SNR=11							
ASAR				pP		**pP**	**23 37 51.4**	**+2.6**
	comp=Z,1.1nm,0.7s,baz=72,slow=10,SNR=6.4							
ASAR				LR		LR	23 48 40.7	
	comp=Z,103nm,19.3s,baz=84,slow=35							
	comp=Z,1.1nm,0.4s							
ASAR	**Alice Springs**	**29.36**	**240**	P		**P**	**23 37 28.7**	**0.0**
TOO	**Toolangi**	**30.58**	**205**	P		**P**	**23 37 40.4**	**+1.1**
RTZ	**Ruatahuna**	**31.29**	**156**	P		**P**	**23 37 46.4**	**+0.9**
BKZ	**Black Stump Fm**	**31.57**	**157**	P		**P**	**23 37 48.8**	**+0.8**
BKZ					IAmb	IAmb	23 37 56.8	
	comp=Z,18nm,1.3s							
KNRA	**Kununurra**	**32.25**	**257**	P		**P**	**23 37 53.8**	**-0.3**
BBOO	**Buckleboo**	**32.27**	**223**	P		**P**	**23 37 55.3**	**+1.1**
BBOO					IAmb	IAmb	23 38 13.6	
	comp=Z,22nm,1.4s							
JNU	**Nakatsue**	**52.23**	**327**	LR		LR	00 03 12.8	
	comp=Z,24nm,18.0s,baz=94,slow=36							
ASAJ	**Asahikawa**	**56.96**	**344**	LR		LR	00 02 45.4	
	comp=Z,30nm,20.7s,baz=12,slow=33							
KSRS	**Korea Array**	**57.10**	**328**	P		**P**	**23 41 09.8**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=133,slow=6.8,SNR=4.2							
KSRS				LR		LR	00 06 06.3	
	comp=Z,7.3nm,18.2s,baz=135,slow=36							
	comp=Z,1.2nm,0.7s							
NJ2	**Nanjing**	**58.70**	**318**	*e*P		**P**	**23 41 24.8**	**+2.5**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
USRK	**Ussuriysk Ar.**	**60.62**	**336**	P		**P**	**23 41 34.5**	**-0.7**
	comp=Z,6.6nm,0.9s,baz=152,slow=7.7,SNR=4.1							
	comp=Z,6.6nm,0.9s							
USRK	**Ussuriysk Ar.**	**60.62**	**336**	P		**P**	**23 41 34.8**	**-0.4**
CN2	**Changchun**	**63.15**	**332**	P		**P**	**23 41 51.1**	**-1.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
BNX	**BinXian**	**63.77**	**334**	⇓P		**P**	**23 41 56.3**	**0.0**
BNX				pmax		pmax		
	comp=Z,6.0nm,0.8s							
HEH	**HeiHe**	**67.37**	**337**	*e*P		**P**	**23 42 18.3**	**-1.0**
HEH				pP		**pP**	**23 42 42.1**	**-1.1**
HEH				pmax		pmax		
	comp=Z,8.0nm,0.8s							
XLT	**XiLinHaoTe**	**67.99**	**326**	*e*P		**P**	**23 42 23.4**	**-0.1**
XLT				pP		PcP	23 42 47.0	-2.1
XLT				sP		sP	23 42 57.9	0.0
XLT				pmax		pmax		
	comp=Z,11nm,1.2s							
CMAR	**Chiang Mai Arr**	**68.03**	**295**	P		**P**	**23 42 23.9**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=128,slow=5.1,SNR=12							
CMAR				LR		LR	00 12 28.8	
	comp=Z,4.9nm,18.1s,baz=80,slow=36							
	comp=Z,1.1nm,0.4s							
PZH	**PanZhiHua**	**68.63**	**304**	P		**P**	**23 42 28.1**	**+0.2**
HHC	**Hu-ho-hao-te**	**68.71**	**321**	*e*P		**P**	**23 42 30.8**	**+2.7**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.8s							
HILR	**Hailar Array B**	**70.05**	**333**	P		**P**	**23 42 35.8**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=143,slow=5.0,SNR=4.1							
HILR				pP		**PcP**	**23 42 59.1**	**+1.6**
	comp=Z,1.7nm,0.6s,baz=113,slow=11,SNR=2.2							
	comp=Z,0.4nm,0.3s							
MA2	**Magadan**	**70.33**	**354**	LR		LR	00 16 21.5	
	comp=Z,13nm,18.1s,baz=104,slow=38							
LZDM	**Lanzhou Array**	**71.33**	**314**	P		**P**	**23 42 44.9**	**+0.4**
	comp=Z,0.3nm,0.2s,baz=183,slow=10.0,SNR=4.5							
	comp=Z,0.3nm,0.2s							
ULN	**Ulaanbaatar**	**75.40**	**326**			**P**	**23 43 07.5**	**-0.4**
ULN					IAmb	IAmb	23 43 08.9	
	comp=Z,6.3nm,0.8s							
O14K	**Tigyukauivet M**	**75.68**	**19**	P		**P**	**23 43 08.0**	**-1.0**
GTA2	**Gaotai**	**75.72**	**315**	P		**P**	**23 43 10.3**	**+0.4**
GTA2				pP		pP	23 43 32.8	-1.8
GTA2				pmax		pmax		
	comp=Z,9.0nm,1.4s							
SONM	**Songino Array**	**75.75**	**325**	P		**P**	**23 43 09.9**	**0.0**
	comp=Z,5.3nm,0.8s,baz=145,slow=5.9,SNR=33							
SONM				pP		**pP**	**23 43 33.4**	**-0.9**
	comp=Z,4.2nm,0.7s,baz=146,slow=6.0,SNR=9.3							
	comp=Z,5.3nm,0.8s							
SONM	**Songino Array**	**75.75**	**325**	IAmb		IAmb	23 43 10.6	
	comp=Z,5.1nm,0.8s							
M14K	**Bethel**	**76.66**	**18**	P		**P**	**23 43 14.1**	**-0.5**
ACHA	**Angle Creek He**	**76.92**	**22**	P		**P**	**23 43 15.9**	**-0.2**
ACHA				IAmb		IAmb	23 43 42.2	
	comp=Z,15nm,1.4s							
N18K	**Kilae Creek**	**78.52**	**20**	P		**P**	**23 43 25.3**	**+0.3**
N18K				IAmb		IAmb	23 43 26.4	
	comp=Z,13nm,1.3s							
P19K	**Oil Pt**	**78.71**	**22**	P		**P**	**23 43 23.4**	**-2.6**
QSPA	**South Pole Qui**	**79.54**	**180**	P		**P**	**23 43 30.9**	**+0.3**
	comp=Z,3.8nm,0.5s,baz=298,slow=1.0,SNR=6.0							
	comp=Z,3.8nm,0.5s							
QSPA	**South Pole Qui**	**79.54**	**180**	P		**P**	**23 43 31.0**	**+0.3**
QSPA				IAmb		IAmb	23 43 33.6	
	comp=Z,8.8nm,1.1s							
L19K	**White Mountain**	**79.96**	**19**	P		**P**	**23 43 33.5**	**+0.8**
F15K	**North Star Dit**	**80.01**	**14**	P		**P**	**23 43 32.9**	**0.0**
G16K	**Koyuk River**	**80.30**	**15**	P		**P**	**23 43 34.7**	**+0.3**
SLKM	**Skilak Lake**	**80.39**	**22**	P		**P**	**23 43 35.4**	**+0.2**
SUA	**Susitna One**	**80.85**	**21**	P		**P**	**23 43 37.3**	**-0.3**
J20K	**Nowinta River**	**81.63**	**18**	P		**P**	**23 43 42.1**	**+0.5**
J20K				IAmb		IAmb	23 43 43.0	
	comp=Z,8.7nm,1.0s							
G18K	**Tagagawik**	**81.64**	**15**	P		**P**	**23 43 41.1**	**-0.5**
KNK	**Knik Glacier**	**81.64**	**22**	P		**P**	**23 43 41.2**	**-0.5**
GHO	**Glory Hole Cre**	**81.70**	**21**	P		**P**	**23 43 41.4**	**-0.7**
KTH	**Kantishna Hill**	**82.21**	**20**	P		**P**	**23 43 44.2**	**-0.5**
KTH				IAmb		IAmb	23 43 44.5	
	comp=Z,7.7nm,0.9s							
SCM	**Sheep Creek Mo**	**82.33**	**22**	P		**P**	**23 43 45.4**	**0.0**
RDOG	**Red Dog Mine**	**82.34**	**13**			**P**	**23 43 45.3**	**0.0**
RDOG				IAmb		IAmb	23 43 46.2	
	comp=Z,6.2nm,0.9s							
TRF	**Thorofare Moun**	**82.35**	**20**	P		**P**	**23 43 44.4**	**-1.2**
MCK	**McKinley**	**82.99**	**20**			**P**	**23 43 48.2**	**-0.5**
H21K	**Melozitna Rive**	**83.09**	**17**	P		**P**	**23 43 50.0**	**+0.9**
GLB	**Gilahina Butte**	**83.41**	**23**	P		**P**	**23 43 51.3**	**+0.3**
GLB				IAmb		IAmb	23 43 52.4	
	comp=Z,10nm,1.0s							
VRDI	**Verde Repeater**	**83.43**	**24**	P		**P**	**23 43 51.4**	**+0.2**
VRDI				IAmb		IAmb	23 44 01.9	
	comp=Z,14nm,1.3s							
NEA2	**Nenana**	**83.51**	**19**	P		**P**	**23 43 50.5**	**-0.9**
NEA2				IAmb		IAmb	23 43 51.4	
	comp=Z,10.0nm,1.0s							
MCARA	**McCarthy VSAT**	**83.69**	**24**	P		**P**	**23 43 52.3**	**0.0**
WRH	**Wood River Hil**	**83.75**	**20**	P		**P**	**23 43 52.0**	**-0.5**
WRH				IAmb		IAmb	23 43 53.0	
	comp=Z,8.9nm,1.2s							
GRNC	**Granite Creek**	**83.82**	**24**	P		**P**	**23 43 53.9**	**+0.6**
CCB	**Clear Creek Bu**	**83.96**	**20**	P		**P**	**23 43 52.5**	**-1.1**
F21K	**Alatna River**	**84.01**	**16**	P		**P**	**23 43 53.7**	**-0.2**
BARN	**Barnard Glacie**	**84.05**	**24**	P		**P**	**23 43 55.0**	**+0.6**
PCA	**Pinnacle**	**84.09**	**25**	P		**P**	**23 43 52.7**	**-1.8**
COLA	**College**	**84.09**	**19**	P		**P**	**23 43 54.0**	**-0.3**
HDA	**Harding Lake**	**84.10**	**20**	P		**P**	**23 43 54.8**	**+0.4**
HDA				IAmb		IAmb	23 43 55.1	
	comp=Z,7.5nm,0.8s							
K24K	**Donnelly Dome**	**84.12**	**21**	P		**P**	**23 43 55.1**	**+0.6**
CTGM	**Chitina Glacie**	**84.12**	**24**	P		**P**	**23 43 55.3**	**+0.5**
LOGN	**Logan Glacier**	**84.18**	**25**	P		**P**	**23 43 55.4**	**+0.4**
H23K	**Yukon River**	**84.18**	**18**	P		**P**	**23 43 54.9**	**+0.2**
H23K				IAmb		IAmb	23 43 55.7	
	comp=Z,6.1nm,0.8s							
BCPM	**Bancas Point**	**84.28**	**26**	P		**P**	**23 43 55.4**	**+0.1**
M26K	**Nabesna, AK**	**84.29**	**23**	P		**P**	**23 43 56.0**	**+0.6**
M26K				IAmb		IAmb	23 43 57.3	
	comp=Z,9.4nm,0.8s							
D20K	**Etivluk River**	**84.30**	**14**	P		**P**	**23 43 53.9**	**-1.4**
D20K				IAmb		IAmb	23 43 55.8	
	comp=Z,15nm,1.5s							
MENT	**Mentasta**	**84.33**	**22**	P		**P**	**23 43 54.5**	**-1.2**
MENT				IAmb		IAmb	23 43 56.7	
	comp=Z,5.2nm,0.7s							
IL31		**84.35**	**20**	P		**P**	**23 43 54.8**	**-0.7**
IL31				IAmb		IAmb	23 43 56.2	
	comp=Z,6.9nm,1.1s							
ILAR	**Eielson Array**	**84.35**	**20**	P		**P**	**23 43 54.6**	**-1.0**
	comp=Z,2.9nm,1.0s,baz=263,slow=4.7,SNR=20							
	comp=Z,2.9nm,1.0s							
ILAR	**Eilson Array**	**84.35**	**20**	P		**P**	**23 43 55.4**	**-0.2**
RIDG	**Independent Ri**	**84.41**	**21**	P		**P**	**23 43 56.1**	**+0.1**
O28M	**Mount Upton**	**84.48**	**25**	P		**P**	**23 43 56.7**	**0.0**
O28M				IAmb		IAmb	23 43 58.3	
	comp=Z,8.9nm,0.8s							
L26K	**Log Cabin Wild**	**84.52**	**22**	P		**P**	**23 43 57.3**	**+0.7**
L26K				IAmb		IAmb	23 43 58.6	
	comp=Z,6.4nm,0.9s							
DOT	**Dot Lake**	**84.63**	**21**	P		**P**	**23 43 57.4**	**+0.3**
DOT				IAmb		IAmb	23 43 58.0	
	comp=Z,7.0nm,0.8s							
G23K	**Bananza Creek**	**84.63**	**17**	P		**P**	**23 43 57.5**	**+0.4**
M27K	**Edge Creek, AK**	**84.69**	**23**	P		**P**	**23 43 58.5**	**+0.9**
J25K	**Salcha River,**	**84.76**	**20**	P		**P**	**23 43 57.6**	**-0.1**
SCRK	**Sand Creek**	**84.85**	**21**			**P**	**23 43 58.6**	**+0.3**
SCRK				IAmb		IAmb	23 43 59.4	
	comp=Z,6.0nm,0.8s							
O29M	**Mount Kennedy**	**84.91**	**26**	P		**P**	**23 43 57.9**	**-0.8**
O29M				IAmb		IAmb	23 44 26.6	
	comp=Z,11nm,1.3s							
COLD	**Coldfoot**	**84.93**	**17**	P		**P**	**23 43 59.1**	**+0.7**
COLD				IAmb		IAmb	23 44 06.7	
	comp=Z,7.8nm,1.4s							
E22K	**Anaktuvuk Pass**	**85.11**	**16**	P		**P**	**23 43 59.4**	**-0.1**
L27K	**Beaver Creek,**	**85.11**	**22**	P		**P**	**23 43 59.9**	**+0.4**
L27K				IAmb		IAmb	23 44 01.4	
	comp=Z,5.8nm,1.1s							
BCAR	**Beaver Creek A**	**85.13**	**22**	P		**P**	**23 44 00.5**	**+0.9**
PRP	**Porcupine Dome**	**85.26**	**20**	P		**P**	**23 44 00.2**	**-0.1**
J26L	**Joseph Creek**	**85.31**	**21**	P		**P**	**23 44 01.4**	**+0.8**
G24K	**Hadweenzic Riv**	**85.39**	**18**	P		**P**	**23 44 01.2**	**+0.4**
G24K				IAmb		IAmb	23 44 02.6	
	comp=Z,6.3nm,0.9s							
HYT	**Haines Junctio**	**85.64**	**25**	P		**P**	**23 44 02.6**	**+0.3**
HYT				IAmb		IAmb	23 44 03.7	
	comp=Z,4.2nm,0.8s							
D23K	**Nanushuk River**	**85.99**	**16**	P		**P**	**23 44 04.8**	**+1.1**
O02D	**Mt. Diablo Mer**	**86.01**	**48**	P		**P**	**23 44 05.6**	**+1.0**
O02D				IAmb		IAmb	23 44 06.6	
	comp=Z,6.7nm,0.9s							
M29M	**Somme Creek**	**86.08**	**24**	P		**P**	**23 44 03.8**	**-0.7**
M29M				IAmb		IAmb	23 44 45.0	
	comp=Z,9.3nm,1.4s							
O30N	**Mendenhall**	**86.21**	**26**	P		**P**	**23 44 05.0**	**0.0**
O30N				IAmb		IAmb	23 44 18.3	
	comp=Z,11nm,1.4s							
M02C	**Callahan**	**86.32**	**47**	P		**P**	**23 44 06.7**	**+0.6**
M02C				IAmb		IAmb	23 44 07.8	
	comp=Z,4.2nm,0.9s							
I02E	**Swisshome, OR**	**86.45**	**44**	P		**P**	**23 44 07.2**	**+0.7**
F25K	**Christian Rive**	**86.51**	**18**	P		**P**	**23 44 07.3**	**+1.0**
YBH	**Yreka Blue Hor**	**86.53**	**47**	P		**P**	**23 44 07.6**	**+0.5**
I27K	**Kandik River**	**86.63**	**20**	P		**P**	**23 44 08.1**	**+1.1**
I27K				IAmb		IAmb	23 44 32.2	
	comp=Z,12nm,1.3s							
N31M	**Braeburn, Yuko**	**86.69**	**25**	P		**P**	**23 44 07.8**	**+0.5**
BMAR	**Burnt Mountain**	**86.73**	**18**	P		**P**	**23 44 08.0**	**+0.5**
M30M	**Minto, Yukon**	**86.81**	**24**	P		**P**	**23 44 08.0**	**+0.1**
M30M				IAmb		IAmb	23 44 17.6	
	comp=Z,6.2nm,1.4s							
E25K	**Arctic Village**	**86.86**	**17**			**P**	**23 44 08.8**	**+0.7**
L04D	**Klamath Falls**	**86.96**	**46**	P		**P**	**23 44 09.8**	**+0.6**
H27K	**Steamboat Moun**	**87.01**	**20**	P		**P**	**23 44 09.6**	**+0.8**
H27K				IAmb		IAmb	23 44 34.8	
	comp=Z,8.1nm,1.4s							
C24K	**Franklin Bluff**	**87.02**	**15**	P		**P**	**23 44 09.2**	**+0.5**
F26K	**Sheenjek River**	**87.03**	**18**	P		**P**	**23 44 09.9**	**+1.0**
I28M	**Miner Creek**	**87.12**	**21**	P		**P**	**23 44 10.0**	**+0.5**
K29M	**Barlow Dome**	**87.16**	**23**	P		**P**	**23 44 09.9**	**+0.2**
K29M				IAmb		IAmb	23 44 32.8	
	comp=Z,9.1nm,1.5s							
D25K	**Kavik River**	**87.38**	**16**	P		**P**	**23 44 10.6**	**0.0**
I29M	**Ogilvie Camp,**	**87.66**	**21**	P		**P**	**23 44 12.7**	**+0.8**
I29M				IAmb		IAmb	23 44 13.1	
	comp=Z,6.5nm,0.8s							
J05D	**Fort Rock, OR**	**88.02**	**45**	P		**P**	**23 44 13.2**	**-1.1**
E27K	**Coleen River**	**88.10**	**18**	P		**P**	**23 44 15.1**	**+1.1**
E27K				IAmb		IAmb	23 44 15.9	
	comp=Z,6.8nm,1.0s							
I30M	**Mount Dempster**	**88.28**	**22**	P		**P**	**23 44 15.2**	**+0.2**
I30M				IAmb		IAmb	23 44 17.0	
	comp=Z,4.0nm,0.8s							
F28M	**Old Crow**	**88.32**	**19**	P		**P**	**23 44 13.0**	**-2.0**
F28M				IAmb		IAmb	23 44 15.3	
	comp=Z,4.8nm,1.1s							
G29M	**Pine Creek**	**88.56**	**20**	P		**P**	**23 44 16.3**	**+0.1**
G29M				IAmb		IAmb	23 44 17.9	
	comp=Z,6.4nm,1.0s							
NVAR	**Mina Array Bea**	**88.89**	**51**	P		**P**	**23 44 19.1**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=234,slow=6.1,SNR=12							
	comp=Z,2.1nm,0.7s							
MPMC	**Manual Prospec**	**88.95**	**53**	P		**P**	**23 44 19.3**	**+0.3**
MPMC				IAmb		IAmb	23 44 21.3	
	comp=Z,4.6nm,1.1s							
G30M	**tAoh Zraii Nji**	**89.21**	**20**	P		**P**	**23 44 19.8**	**+0.5**
G30M				IAmb		IAmb	23 44 20.9	
	comp=Z,4.6nm,1.3s							
H31M	**Peel River**	**89.31**	**22**	P		**P**	**23 44 19.6**	**-0.1**
H31M				IAmb		IAmb	23 44 21.1	
	comp=Z,4.1nm,0.7s							
QSM	**Queen of Sheba**	**89.42**	**53**	P		**P**	**23 44 21.3**	**+0.4**
QSM				IAmb		IAmb	23 44 22.5	
	comp=Z,5.4nm,0.9s							
I07A	**Izee**	**89.44**	**45**	P		**P**	**23 44 21.6**	**+0.7**
F30M	**Barrier River**	**89.67**	**20**	P		**P**	**23 44 21.9**	**+0.6**
F30M				IAmb		IAmb	23 44 58.9	
	comp=Z,8.7nm,1.4s							
G31M	**Satah River**	**89.86**	**21**	P		**P**	**23 44 22.1**	**0.0**
G31M				IAmb		IAmb	23 44 23.5	
	comp=Z,2.5nm,0.7s							
J08A	**Circle Bar Ran**	**89.98**	**46**	P		**P**	**23 44 23.3**	**-0.2**
J08A				IAmb		IAmb	23 44 25.2	
	comp=Z,8.1nm,1.1s							
BC3	**Big Chuckawall**	**90.04**	**56**	P		**P**	**23 44 24.3**	**+0.3**
BC3				IAmb		IAmb	23 44 25.4	
	comp=Z,2.5nm,0.7s							
TPNV	**Topopah Spring**	**90.

KBK	Karagaybulak SNR=5.9	6.50	25	P		Pn	23 35 18.4	+0.1
CHMS	Chumysh SNR=9.0	6.74	23	P		Pn	23 35 21.0	-0.4
USP	Ospenovka SNR=18	6.91	21	P		Pn	23 35 23.2	-0.5
TKM2	Tokmak 2 SNR=6.4	6.96	28	P		Pn	23 35 23.8	-0.8
MK31	Makanchi Array 0.9nm,0.7s,baz=223,slow=15,SNR=10.0	12.94	36	⇑P		Pn	23 36 41.7	-1.5
MKAR	Makanchi Array 0.6nm,0.6s,baz=224,slow=15,SNR=12	12.94	36	P		Pn	23 36 41.9	-1.2
KURBB	Kurchatov Arra 1.0nm,0.5s,baz=210,slow=11,SNR=3.0	14.76	19	P		Pn	23 37 03.9	-2.2
AB31	Akbulak array 1.2nm,0.4s,baz=138,slow=12,SNR=68	14.86	330	⇑P		Pn	23 37 07.2	-0.2
AB31	3.3nm,0.8s,baz=148,slow=23,SNR=6.4			S		Sn	23 39 51.3	-0.8
BVA0	Borovoye Array 1.6nm,0.8s	16.20	358	⇑P		P	23 37 26.2	+2.1
BVAR	Borovoye Array 0.9nm,0.5s,baz=172,slow=12,SNR=7.7	16.20	358	P		Pn	23 37 23.9	+0.1
AKTO	Aktyubinsk 5.8nm,0.8s,baz=136,slow=6.7,SNR=20	16.56	329	P		Pn	23 37 29.7	+1.5
AKTO	0.7nm,0.3s,baz=331,slow=8.8,SNR=3.8			S		S	23 40 28.9	-3.1
AKTO	Aktyubinsk 4.7nm,0.8s	16.56	329	⇑P		Pn	23 37 29.8	+1.5
ZALV	Zalesovo Beam 1.4nm,0.4s,baz=215,slow=9.2,SNR=9.4 1.4nm,0.4s	19.55	25	P		P	23 38 01.0	+0.3
BELG	Belogornoye comp=Z,115nm,20.9s,baz=95,slow=42	22.71	321	LR		LR	23 49 55.6	
FINES	FINESS Array B 4.7nm,1.1s,baz=125,slow=9.6,SNR=4.4 4.7nm,1.1s	37.28	326	P		P	23 40 42.5	+0.7
ARCES	ARCESS Array B 1.0nm,0.6s,baz=114,slow=8.3,SNR=3.6 1.0nm,0.6s	40.89	337	P		P	23 41 13.1	+1.4
HFS	Hagfors 2.0nm,0.6s,baz=96,slow=14,SNR=7.9 2.0nm,0.6s	42.89	322	P		P	23 41 28.1	0.0
NB2	NORSAR Subarra comp=Z,0.7nm,0.6s,baz=97,slow=7.9	44.19	323	P		P	23 41 38.3	-0.3
NOA	NORSAR Array B comp=Z,0.7nm,0.5s,baz=96,slow=8.0,SNR=4.9 comp=Z,0.7nm,0.5s	44.19	323	P		P	23 41 38.1	-0.5
TORD	Torodi Ar. Bea comp=Z,0.3nm,0.5s,baz=54,slow=9.7,SNR=4.3 comp=Z,0.3nm,0.5s	65.86	269	P		P	23 44 09.3	-5.3
BOSA	Boshof comp=Z,1.9nm,0.8s,baz=98,slow=2.8,SNR=3.1 comp=Z,1.9nm,0.8s	78.09	220	P		P	23 45 22.2	-5.0
YKA	Yellowknife Ar comp=Z,0.3nm,0.6s,baz=348,slow=5.7,SNR=6.7 comp=Z,0.3nm,0.6s	80.90	3	P		P	23 45 40.7	-1.2

ISK ***13*** *23:47:13.0, 40.83N×28.03E, h18km, ML2.1/12*

AFAD 13 23:47:12.2, 40.80N×28.01E, h7km±4km, ML1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOTS	Marmara Eregli	0.19	354	Pg	Pg	23 47 17.8	+1.7
BOTS				Sg	Sg	23 47 21.1	+2.4
MADA	Marmara adas	0.41	239	P	Pb	23 47 22.6	+0.9
BAND	Balkesir-Ban	0.45	171	P	Pg	23 47 21.2	+0.3
BAND				S	Sg	23 47 27.8	+1.1
BAND				IAML		23 47 29.0	
	comp=N,65nm,0.3s						
SLVT	Silivri	0.46	19	Pg	Pb	23 47 22.2	-0.4
SLVT				Sg	Sb	23 47 28.9	-0.7
MURA	Muratl, TEK	0.53	312	P	Pb	23 47 23.2	-0.6
CATL	atalca, ST	0.60	26	P	Pg	23 47 24.3	+0.5
ARMT	Armutlu	0.69	110	Pg	Pb	23 47 27.0	+0.5
BGKT	Bogazkoy	0.69	56	Pg	Pb	23 47 26.6	0.0
CTYL	Yalikoy Yolu	0.71	17	Pg	Pb	23 47 26.7	-0.1
CMHT	Manyas	0.79	182	P	Pb	23 47 28.2	0.0
VIZE	Kirklareli, Vi	0.79	351	P	Pg	23 47 27.6	+0.3
VIZE				S	Sg	23 47 37.4	-0.2
VIZE				IAML		23 47 41.0	
	comp=N,65nm,0.3s						
ATIT	Gnen	0.79	206	P	Pn	23 47 29.7	-0.1
MDNY	Mudanya-Bursa	0.79	123	Pg	Pn	23 47 29.1	-0.7
ISK	Istanbul-Kandi	0.84	71	Pg	Pb	23 47 29.4	+0.3
KAVV	Kandilli-Istan	0.84	71	Pg	Pb	23 47 29.3	+0.2
KLYT	Kilyos	0.90	60	Pg	Pb	23 47 30.3	+0.1
SATE	Sancaktepe,	0.99	77	P	Pg	23 47 30.8	-0.5
KESN	Edirne-Kesan	1.01	272	P	Pb	23 47 32.4	+0.2
KESN				S	Sb	23 47 45.3	-0.5
ORLT	Orhaneli	1.01	138	P	Pn	23 47 33.0	+0.2
LAPS	Lapseki, ANA	1.05	239	P	Pn	23 47 33.7	+0.4
LAPS				S	Sb	23 47 46.8	+0.2
LAPS				IAML		23 47 51.0	
	comp=N,18nm,0.3s						
IGD	Bursa	1.05	120	P	Pb	23 47 32.8	+0.1
IGD				S	Sb	23 47 46.8	0.0
GOKT	Kean, EDRN	1.06	263	P	Pn	23 47 33.7	+0.2
GOKT				S	Sb	23 47 47.4	+0.5
HRT	Hereke	1.26	88	Pn	Pn	23 47 35.9	-0.4
SILT	Sile	1.29	74	Pn	Pn	23 47 35.9	-0.7
SEMS	Kocaeli-K¶rfe	1.31	86	P	Pn	23 47 36.2	-0.8
SEMS				S	Sb	23 47 53.5	-0.8
SEMS				IAML		23 47 57.0	
	comp=N,28nm,0.3s						
HISA	Bilecik-Osmane	1.49	102	P	Pg	23 47 41.4	+0.6
HISA				S	Sg	23 48 00.3	+0.2
HISA				IAML		23 48 02.0	
	comp=N,13nm,0.7s						
BAYC	CANAKKALE_Bayr	1.54	227	P	Pn	23 47 36.8	-3.3
BAYC				S	Sn	23 47 51.6	-8.7
DOMA	Ktahya-Doman	1.64	128	P	Pb	23 47 43.0	+0.2
DOMA				S	Sn	23 48 01.8	-1.1

AFAD ***13*** *23:47:14.1, 39.07N×27.84E, h7km±3km, ML1.4*

ISK 13 23:47:13.2, 39.16N×27.86E, h10km, ML1.6/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.24	333	P	Pb	23 47 19.9	+0.2
STEP	BALIKESIR_Sava	0.24	333	P	Pb	23 47 20.3	+0.5
SOMA	Soma-Manisa	0.25	269	Pg	Pb	23 47 19.2	-0.7
SOMA				Sg	Sg	23 47 22.6	+0.8
AKHS	Akhisar	0.28	187	P	Pg	23 47 18.7	-0.3
AKHS	Akhisar	0.28	187	P	Pg	23 47 18.4	-0.5
AKHS				S	Sg	23 47 22.1	-0.6
AKHS				IAML		23 47 23.0	
	comp=E,103nm,0.2s						
AKS	Akhisar	0.28	187	Pg	Pg	23 47 19.4	+0.5
GORD	Gordes-Manisa	0.35	135	Pg	Pg	23 47 20.6	+0.4
GORD				Sg	Sb	23 47 26.1	-1.1
GOMA	Golmarmara-Man	0.45	174	Pg	Pg	23 47 22.5	+0.4
BALB	Balikesir	0.48	2	Pg	Pb	23 47 23.3	-0.4
KTTT	Salihli	0.51	159	P	Pg	23 47 23.0	0.0
KTTT				S	Sg	23 47 28.8	-0.9
BKES	Balkesir-Mer	0.57	5	P	Pn	23 47 26.8	-0.7
BKES	Balkesir-Mer	0.57	5	P	Pn	23 47 27.2	-0.3
CAMT	Merkez	0.59	226	P	Pg	23 47 24.6	-0.1
CAMT				S	Sg	23 47 33.2	+0.7
CAMT				IAML		23 47 35.0	
	comp=N,24nm,0.3s						
ZEDA	zmir-Bergama	0.64	253	P	Pg	23 47 25.7	+0.1
ZEDA				S	Sg	23 47 33.2	-0.8
ZEDA				IAML		23 47 35.0	
	comp=N,25nm,0.6s						
DURS	Dursunbey	0.65	47	P	Pb	23 47 27.2	+0.5
DEMI	Demirci	0.68	100	P	Pb	23 47 27.8	+0.7
DEMI				S	Sb	23 47 36.4	-0.2
DEMI				IAML		23 47 40.0	
	comp=N,28nm,0.2s						
DEMI	Demirci	0.68	100	P	Pb	23 47 27.5	+0.4
DEMI				S	Sb	23 47 36.6	0.0
DEMI				IAML		23 47 40.0	
	comp=N,28nm,0.2s						
BUHA	Balikesir, Bur	0.70	300	P	Pg	23 47 26.8	+0.2
IZMD	zmir-Dikili-	0.75	257	P	Pb	23 47 28.1	-0.2
IZMD				S	Sg	23 47 36.5	-0.9
DKL	Dikili	0.75	264	Pg	Pb	23 47 28.0	-0.3
YAYO	Edremit-Balk	0.76	307	Pg	Pb	23 47 28.2	-0.3
SUSR	Susurluk-Balik	0.82	12	Pg	Pb	23 47 29.3	-0.3
MANT	Manisa	0.86	141	P	Pb	23 47 30.3	-0.1
MANT				S	Sg	23 47 40.5	-0.7
SIMA	Simav-Kutahya	0.88	95	Pg	Pg	23 47 30.2	+0.1
GONE	Gonen-Balikesi	0.90	351	Pg	Pg	23 47 30.6	+0.1
KULA	Kula-Manisa	0.90	136	Pg	Pg	23 47 30.6	+0.1
ODEM	Odemis-Izmir	0.90	169	Pg	Pb	23 47 31.0	+0.1
BLCB	Balcova	1.00	220	Pg	Pn	23 47 33.1	-0.2
IZMR	zmir-demi	1.02	176	P	Pg	23 47 31.7	-1.2
IZMR				S	Sg	23 47 43.5	-2.7
KIRA	zmir-Kiraz	1.05	156	P	Pb	23 47 33.5	0.0
KIRA				S	Sg	23 47 46.1	-1.0
KIRA				IAML		23 47 48.0	
	comp=N,7.8nm,0.2s						
CANM	Can-anakkale	1.05	324	Pg	Pn	23 47 34.3	+0.3
AYDB	Zeytinkoy-Aydi	1.21	179	Pn	Pg	23 47 36.5	0.0
NAZL	Nazilli-Aydin	1.24	164	Pn	Pb	23 47 36.7	0.0

IDC ***13*** *23:52:57.8±3.3, 56.85N×118.36E, h0km, mb3.4/2, mbtmp3.5/5, ML3.7/3, MS3.1/2, Error ellipse: s-maj=70.6km s-min=29.2km az=81.0*
MOS ***13*** *23:52:59.8±1.8, 56.65N×117.98E, h11km, mb3.7/2, Error ellipse: s-maj=12.9km s-min=8.7km az=71.5*
MOS Felt (III) at Chara.
BYKL ***13*** *23:53:01.2±0.1, 56.68N×118.01E, h8km±2km, FELT I=III MSK at Chara*

ISC 13 23:52:59.9±0.5, 56.64N±0.02×117.97E±0.02, h10km, n70, σ3s19/105, mb3.6/4, 4C-8D, East of Lake Baikal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	Chara	0.31	32	⇑iPG	Pb	23 53 06.1	-1.5
CRS				e		23 53 09.9	
CRS				pmax	pmax		
	comp=Z,3μm,0.8s						
CRS				smax	smax		
	comp=E,7μm,0.6s						
CRS	Chara	0.31	32	⇓iPg	Pb	23 53 06.2	-1.4
	comp=E,4μm,0.5s						
CRS				⇓iPg	Pb	23 53 06.2	-1.4
	comp=E,759nm,0.5s						
CRS				⇓iPg	Pb	23 53 06.2	-1.4
	comp=E,4μm,0.5s						
CRS				Pmax		23 53 06.7	
	comp=E,3μm,0.8s						
CRS				eSg	Sg	23 53 09.7	-0.6
CRS				Smax		23 53 10.6	
	comp=E,7μm,0.7s						
NLYR	Nelyaty	1.26	264	⇓iPg	Pg	23 53 24.3	+0.2
NLYR				ePb	Pb	23 53 26.4	+2.6
NLYR				max		23 53 26.5	
	comp=E,339nm,0.4s						
NLYR				eSg	Sn	23 53 41.1	+0.4
NLYR				eSb	Sg	23 53 44.0	+3.5
NLYR				e		23 53 45.5	
NLYR				max		23 53 49.6	
	comp=E,3μm,0.9s						
YKLR	Yuktali	2.04	90	ePN	Pg	23 53 37.4	-1.5
YKLR				eS	Sg	23 54 03.8	-1.5
YKLR	Yuktali	2.04	90	ePn	Pb	23 53 36.7	-0.2
YKLR				ePg	Pg	23 53 37.3	-1.6
YKLR				eSg	Sg	23 54 03.8	-1.5
BOD	Bodaibo	2.46	300	ePN	Pb	23 53 41.8	-2.4
BOD				e		23 53 45.1	
BOD				e		23 54 16.7	
BOD				pmax	pmax		
	comp=Z,220nm,0.4s						
BOD				smax	smax		
	comp=N,3μm,0.6s						
BOD	Bodaibo	2.46	300	ePn	Pb	23 53 41.8	-2.4
BOD				⇑iPg	Pg	23 53 45.1	-1.9
BOD				Pmax		23 53 45.3	
	comp=N,220nm,0.8s						
BOD				eSn	Sn	23 54 11.3	+1.2
BOD				eSg	Sg	23 54 17.3	-1.6
BOD				Smax		23 54 17.8	
	comp=N,3μm,0.7s						
TUP	Tupik	2.49	152	ePN	Pb	23 53 42.6	-2.0
TUP				e		23 53 45.3	
TUP				e		23 54 18.8	
TUP				pmax	pmax		
	comp=Z,271nm,0.4s						
TUP				smax	smax		
	comp=E,443nm,0.7s						
TUP	Tupik	2.49	152	ePn	Pb	23 53 42.4	-2.2
TUP				ePg	Pg	23 53 45.6	-1.9
TUP				Pmax		23 53 47.2	
	comp=E,268nm,0.7s						
TUP				eSn	Sb	23 54 13.4	-1.9
TUP				eSg	Sg	23 54 19.0	-0.7
TUP				Smax		23 54 22.7	
	comp=E,518nm,1.0s						
TUP				eSgSg	SnSn	23 54 28.3	+6.8
SVKR	Severomuysk	2.51	260	ePg	Pg	23 53 46.9	-1.0
SVKR				Pmax		23 53 49.0	
	comp=E,311nm,0.6s						
SVKR				eSg	Sg	23 54 19.8	-0.6
SVKR				Smax		23 54 29.1	
	comp=E,2μm,0.8s						
UKT	Uakit	2.69	247	⇓iPN	Pb	23 53 45.9	-2.3
UKT				e		23 53 50.0	
UKT				e		23 54 25.5	
UKT				pmax	pmax		
	comp=Z,208nm,0.4s						
UKT				smax	smax		
	comp=N,441nm,0.4s						
UKT	Uakit	2.69	247	⇓iPn	Pb	23 53 46.0	-2.3
UKT				⇑iPg	Pg	23 53 50.2	-1.3
UKT				Pmax		23 53 51.5	
	comp=N,203nm,0.5s						
UKT				eSg	Sg	23 54 26.0	-0.4
UKT				Smax		23 54 27.5	
	comp=N,434nm,0.5s						
YOAB	Uoyan, Buryati	3.51	264	eSg	Sg	23 54 50.8	-1.7
YOAB				Smax		23 55 02.8	
	comp=N,1μm,1.3s						
CLNS	Chul'man	3.82	84	ePN	Pb	23 54 08.4	+1.1
CLNS				eS	Sb	23 54 56.8	+3.2
CLNS	Chul'man	3.82	84	ePn	Pn	23 54 01.0	+2.3
CLNS				ePg	Pg	23 54 09.5	-3.5
CLNS				eSn	Sn	23 54 43.3	-0.3
CLNS				eSg	Sg	23 54 58.9	-3.5
KMO	Kumora	3.85	262	ePN	Pn	23 54 01.8	+2.7
KMO				e		23 54 10.1	
KMO				eS	Sn	23 54 43.8	-0.6
KMO				e		23 55 00.2	
KMO				pmax	pmax		
	comp=Z,54nm,0.3s						
KMO				smax	smax		
	comp=N,585nm,1.1s						
KMO	Kumora	3.85	262	ePn	Pn	23 54 01.9	+2.8
KMO				ePg	Pg	23 54 10.7	-2.9
KMO				Pmax		23 54 15.1	
	comp=N,73nm,0.6s						
KMO				eSn	Sn	23 54 45.8	+1.4
KMO				eSg	Sg	23 55 01.3	-2.1
KMO				Smax		23 55 10.5	
	comp=N,587nm,1.2s						
VTMR	Vitim	4.03	317	ePN	Pn	23 54 03.4	+1.9
VTMR				e		23 54 13.3	
VTMR				e		23 55 05.8	
VTMR	Vitim	4.03	317	ePn	Pn	23 54 03.0	+1.5
VTMR				ePg	Pg	23 54 13.2	-3.7
VTMR				eSn	Sn	23 54 48.3	-0.3
VTMR				eSg	Sg	23 55 05.8	-3.2
YLYR	Ulyunkhan	4.23	248	ePN	Pn	23 54 07.2	+2.8
YLYR				e		23 54 17.1	
YLYR				eS	Sn	23 54 53.4	-0.4
YLYR				e		23 55 13.1	
YLYR				pmax	pmax		
	comp=Z,43nm,0.7s						
YLYR				smax	smax		
	comp=E,255nm,0.6s						
YLYR	Ulyunkhan	4.23	248	⇓iPn	Pn	23 54 07.2	+2.8
YLYR				ePg	Pb	23 54 17.2	+2.8
YLYR				Pmax		23 54 19.7	
	comp=E,41nm,0.7s						
YLYR				eSn	Sn	23 54 56.0	+2.2
YLYR				eSg	Sg	23 55 13.6	-2.1
YLYR				Smax		23 55 27.6	
	comp=E,253nm,1.0s						
NIZB	Nizh Angarsk	4.79	263	ePn	Pn	23 54 14.1	+2.1
NIZB				ePg	Pb	23 54 27.2	+3.4
NIZB				e		23 54 30.3	
NIZB				max		23 54 31.4	
	comp=E,63nm,1.6s						
NIZB				eSg	Sg	23 55 29.2	-4.2
NIZB				Smax		23 55 37.5	
	comp=E,200nm,0.9s						
CIT	Chita	5.30	211	eSg	Sg	23 55 46.8	-3.0
CIT				Smax		23 55 48.6	
	comp=E,275nm,1.2s						
SYVR	Suvo	5.46	240	ePN	Pn	23 54 23.9	+2.7
SYVR				e		23 54 40.1	
SYVR				e		23 55 52.3	
SYVR				pmax	pmax		
	comp=Z,36nm,1.7s						
SYVR				smax	smax		
	comp=E,149nm,1.2s						
SYVR	Suvo	5.46	240	⇓iPn	Pn	23 54 23.9	+2.7
SYVR				ePg	Pg	23 54 40.1	-4.3
SYVR				Pmax		23 54 42.0	
	comp=E,36nm,1.9s						
SYVR				eSg	Sg	23 55 51.9	-3.1
SYVR				Smax		23 56 09.9	
	comp=E,145nm,1.3s						
ZEA	Zeya	6.06	115	ePN	Pn	23 54 31.8	+2.4
ZEA				e		23 54 52.6	
ZEA				e		23 56 09.5	
MXMB	Maximikha	6.30	241	ePn	Pn	23 54 35.5	+2.8
MXMB				ePg	Pg	23 54 55.4	-5.0
MXMB				eSg	Sg	23 56 17.4	-4.5
OGRR	Ongureny	6.66	248	ePN	Pn	23 54 40.4	+2.7
OGRR				e		23 55 01.7	
OGRR				e		23 56 28.2	
OGRR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OGRR				smax	smax		
	comp=E,58nm,1.7s						
OGRR	Ongureny	6.66	248	ePn	Pn	23 54 40.3	+2.6
OGRR				ePg	Pg	23 55 02.0	-5.3
OGRR				Pmax		23 55 05.9	
	comp=E,9.0nm,1.0s						
OGRR				eSn	Sn	23 55 52.9	-0.7
OGRR				eSg	Sg	23 56 29.2	-4.3
OGRR				Smax		23 57 02.4	
	comp=E,58nm,1.8s						
GORB	Goryachinsk	6.69	241	ePn	Pn	23 54 40.9	+2.8
GORB				ePg	Pb	23 55 01.6	+5.5
GORB				eSg	Sg	23 56 28.5	-5.8
UZR	Uzur	6.76	245	ePn	Pn	23 54 42.0	+2.9
UZR				ePg	Pg	23 55 04.0	-5.2
UZR				Pmax		23 55 08.2	
	comp=E,7.0nm,0.5s						
UZR				eSg	Sg	23 56 31.9	-4.7
UZR				Smax		23 56 38.4	
	comp=E,62nm,1.8s						
KELR	Kotokel	6.92	240	eSg	Sg	23 56 37.1	-4.8
HILR	Hailar Array B baz=359,slow=13	7.17	171	Pn	Pn	23 54 46.2	+1.4
HILR	baz=12,slow=28			Lg	Lg	23 56 44.7	
	comp=E,1.5nm,0.3s						
HIA	Hailar	7.46	171	iPG	Pb	23 55 14.2	+4.9
HIA	Hailar	7.46	171	ePg	Pg	23 55 16.2	-6.4
HIA				Pmax		23 55 17.9	
	comp=E,4.0nm,0.6s						
HIA				eSg	Sg	23 56 53.2	-5.9
HIA				Smax		23 56 56.9	
	comp=E,140nm,1.7s						
ZRHB	Zarechye	7.50	241	eSg	Sg	23 56 55.0	-5.2
ZRHB				Smax		23 57 10.5	
	comp=E,228nm,0.9s						
UUDB	Ulan-Yde	7.70	236	eSg	Sg	23 57 00.3	-6.4
UUDB				Smax		23 57 14.8	
	comp=E,104nm,1.4s						
KPC	Khapcheranga	7.71	208	ePN	Pn	23 54 53.1	+0.9
KPC				e		23 55 19.8	
KPC				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KPC	Khapcheranga	7.71	208	e	Pn	23 54 53.3	+1.1
KPC				ePg	Pg	23 55 20.7	-6.7
KPC				Pmax		23 55 25.1	
	comp=E,5.0nm,0.6s						
KPC				eSg	Sg	23 57 01.6	-5.6
KPC				Smax		23 57 16.7	
	comp=Z,104nm,1.5s						
TRG	Tyrgan	7.77	245	ePn	Pn	23 54 55.7	+2.7
TRG				max		23 55 05.4	
	comp=Z,3.0nm,0.5s						
TRG				eSg	Sg	23 57 02.7	-6.4
TRG				Smax		23 57 25.6	
	comp=Z,43nm,1.8s						
FFNB	Fofonovo	8.00	240	eSg	Sg	23 57 10.5	-5.8
KAB	Kabansk	8.05	240	eSg	Sg	23 57 12.1	-5.9
KAB				Smax		23 57 21.7	
	comp=Z,212nm,1.0s						
YAK	Yakutsk	8.06	43	Lg	Lg	23 57 02.9	
	comp=Z,3.3nm,0.3s,baz=283,slow=15,SNR=6.0						
YAK	Yakutsk	8.06	43	ePN	Pn	23 54 56.0	-0.8
YAK				eS	Sn	23 56 25.3	-2.6
YAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				smax	smax		
	comp=E,27nm,0.8s						
YAK				smax	smax		
	comp=N,12nm,0.7s						
YAK				MLR	MLR		
	comp=Z,39nm,22.0s						
YAK				MLR	MLR		
	comp=N,37nm,20.0s						
YAK				MLR	MLR		
	comp=E,33nm,20.0s						
STDB	Stepnoy Dvoret	8.11	241	eSg	Sg	23 57 12.9	-7.1
VBR	Suhoy Ruchey	8.52	240	eSg	Sg	23 57 26.0	-6.9
LSTR	Listvyanka	9.05	244	eSg	Sn	23 57 42.6	+50
LSTR				Smax		23 58 00.7	
	comp=E,29nm,1.9s						
IRK	Irkutsk	9.11	247	eSg	Sn	23 57 45.0	+51
IRK				Smax		23 57 50.6	
	comp=E,102nm,0.2s						
IVK	Ivanovka	9.30	244	ePg	Pn	23 55 49.2	+35
IVK				Pmax		23 55 52.8	
	comp=E,5.0nm,0.8s						
IVK				eSg	Sn	23 57 49.1	+51
IVK				Smax		23 58 15.7	
	comp=E,64nm,1.8s						
TLY	Talaya	9.75	245	eSg	Sn	23 58 03.5	+54
TLY				Smax		23 58 12.7	
	comp=E,19nm,1.5s						
ARS	Arshan	10.24	249	eSg	Sn	23 58 18.9	+57
ARS				Smax		23 58 39.9	
	comp=E,90nm,1.2s						
ZAK	Zakamensk	10.75	241	eSg		23 58 34.8	
ZAK				Smax		23 58 49.9	
	comp=E,31nm,1.5s						
ULN	Ulaanbaatar	11.03	222	iP	Pn	23 55 37.9	+0.2
ULN	Ulaanbaatar	11.03	222	eSg		23 58 44.2	
ULN				Smax		23 59 06.3	
	comp=E,92nm,1.6s						
MOY	Mondy	11.12	251	ePn	Pn	23 55 42.7	+3.8
MOY				max		23 56 16.0	
	comp=E,1.0nm,0.8s						
MOY				eSg		23 58 45.3	
MOY				Smax		23 59 08.8	
	comp=E,44nm,1.9s						
KLR	Kul'dur	11.13	126	iP	Pn	23 55 42.1	+3.2
ORL	Orlik	11.30	256	ePn	Pn	23 55 44.4	+3.1
ORL				max		23 56 04.3	
	comp=E,1.0nm,0.7s						
ORL				eSn	Sn	23 57 45.7	-1.9
ORL				eSg		23 58 51.0	
ORL				Smax		23 58 59.2	
	comp=E,51nm,1.5s						
SONM	Songino Array	11.30	224	Pn	Pn	23 55 43.7	+2.3
	comp=E,0.1nm,0.3s,baz=28,slow=13,SNR=3.2						
SONM				Lg	Lg	23 58 58.0	
	comp=E,0.8nm,0.3s,baz=41,slow=24,SNR=14						
SONM				LR	LR	00 00 31.3	
	comp=E,66nm,18.4s,baz=328,slow=39 comp=E,0.5nm,0.7s						
KNGR	Kungurtug, Tuv	13.53	252	iP	P	23 56 24.3	+3.2
TIXI	Tiksi	15.75	13	Pn	Pn	23 56 36.6	-4.8
	comp=E,0.9nm,0.3s,baz=220,slow=9.9,SNR=5.9						
TIXI	Tiksi	15.75	13	iP	Pn	23 56 36.9	-4.6
SEY	Seymchan	18.25	56	eP	P	23 57 17.0	+3.9
NRIK	Noril'sk	18.50	326	P	P	23 57 12.3	-3.4
	comp=E,0.5nm,0.3s,baz=113,slow=10,SNR=7.8			

comp=E,2.0nm,0.4s
DGZ Jazzator, Alta 19.46 262 *i* P Pn 23 57 38.8 +11
KURK Kurchatov 23.79 272 ⇑ *i* P **P 23 58 10.7 -1.7**
KURK pmax pmax
comp=Z,1.0nm,1.0s
MKAR Makanchi Array 23.94 261 P **P 23 58 15.8 +1.9**
comp=Z,0.1nm,0.7s,baz=69,slow=8.2,SNR=2.2
comp=Z,0.1nm,0.7s
MKAR Makanchi Array 23.94 261 *e*P P 23 58 24.9 +11
BORK Borovoye 27.23 283 *i* P **P 23 58 49.1 +5.4**
BORK pmax pmax
comp=Z,2.0nm,0.9s
JHJ Hachijo jima 2 27.90 138 LR LR 00 10 25.8
comp=Z,47nm,19.2s,baz=76,slow=38
FINES FINESS Array B 43.76 316 P **P 00 01 05.2 +0.2**
comp=Z,2.9nm,0.9s,baz=59,slow=7.4,SNR=4.9
comp=Z,2.9nm,0.9s

CATAC ***14*** *00:12:26.5±0.5, 13°N±2°×8°9W±°, h24km±3km, M3.7/30, MLv3.7/30, Error ellipse: s-maj=5.1km s-min=2.2km az=29.9, confirmed*
SNET ***14*** *00:12:27.2±3.5, 12°.86N×88°.93W, h27km, ML3.7, Presumed earthquake*
GCG ***14*** *00:12:29.4±0.6, 12°.91N×89°.07W, h33km±3km, MD3.9, Presumed earthquake*
ISC 14 00:12:26.6±1.4, 12°.83N±0°.05×88°.95W±0°.03, h24km±13km, n66, σ0s93/100, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.73**	**13**	P	**Pn**	**00 12 41.5**	**+0.1**
TECO				S	**Sn**	**00 12 51.4**	**-0.5**
LALI	**Alcalda de L**	**0.75**	**331**	P	**Pn**	**00 12 41.6**	**-0.1**
LALI				S	**Sn**	**00 12 52.2**	**-0.2**
LALI	**Alcalda de L**	**0.75**	**331**	*i* P	**Pn**	**00 12 41.7**	**-0.1**
LALI				*i* S	**Sb**	**00 12 51.2**	**+0.3**
COEG	**Centro de Oper**	**0.79**	**5**	P	**Pn**	**00 12 42.1**	**-0.4**
COEG				S	**Sn**	**00 12 53.7**	**+0.2**
TECA	**Tecapa**	**0.80**	**33**	⇓ *i* P	**Pb**	**00 12 42.5**	**-0.1**
PANCS	**Alcalda de**	**0.81**	**344**	P	**Pb**	**00 12 42.1**	**-0.1**
PANCS				S	**Sn**	**00 12 53.4**	**-0.6**
LOMA	**Loma Larga**	**0.84**	**345**	*i* P	**Pn**	**00 12 43.1**	**0.0**
LOMA				*e*S	**Sn**	**00 12 54.7**	**-0.2**
LCY	**Lacayo**	**0.87**	**47**	*e*P	**Pn**	**00 12 43.4**	**-0.2**
PQSS	**Presa 15 de Se**	**0.88**	**26**	*e*S	**Sb**	**00 12 48.0**	**-6.7**
PAVA	**Las Pavas**	**0.88**	**1**	P	**Pn**	**00 12 43.8**	**+0.1**
PAVA				S	**Sn**	**00 12 56.7**	**+0.8**
PAVA	**Las Pavas**	**0.88**	**1**	*e*P	**Pn**	**00 12 43.5**	**-0.1**
PAVA				*e*S	**Sn**	**00 12 56.0**	**+0.1**
PACA	**Pacayal**	**0.89**	**44**	P	**Pn**	**00 12 43.8**	**0.0**
PACA				S	**Sn**	**00 12 56.8**	**+0.8**
PACA	**Pacayal**	**0.89**	**44**	*e*P	**Pn**	**00 12 43.7**	**-0.1**
RANC	**El Ranchito**	**0.89**	**47**	P	**Pb**	**00 12 43.4**	**-0.1**
RANC				S	**Sn**	**00 12 55.7**	**-0.2**
RANC	**El Ranchito**	**0.89**	**47**	*e*P	**Pb**	**00 12 43.3**	**+0.1**
VSM	**San Miguel**	**0.89**	**48**	*e*P	**Pn**	**00 12 43.9**	**0.0**
SCLA	**Alcaldia de Sa**	**0.90**	**14**	P	**Pb**	**00 12 44.2**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.90**	**14**	*i* P	**Pb**	**00 12 44.1**	**+0.5**
SCLA				*e*S	**Sn**	**00 12 56.5**	**+0.4**
UTEC	**Universidad Te**	**0.90**	**344**	P	**Pn**	**00 12 43.6**	**-0.3**
UDBS	**Universidad Do**	**0.91**	**347**	P	**Pb**	**00 12 44.4**	**+0.7**
IGN	**Direccin Gen**	**0.91**	**347**	P	**Pb**	**00 12 43.9**	**+0.1**
IGN				S	**Sn**	**00 12 56.6**	**+0.2**
IGN	**Direccin Gen**	**0.91**	**347**	*e*P	**Pb**	**00 12 44.6**	**+0.9**
SEMO	**Seminario San**	**0.91**	**343**	P	**Pn**	**00 12 43.8**	**-0.3**
SEMO				S	**Sn**	**00 12 55.7**	**-0.7**
BLLM	**Bellamira**	**0.93**	**49**	*e*P	**Pn**	**00 12 44.1**	**-0.2**
UEES	**Universidad Ev**	**0.93**	**343**	P	**Pn**	**00 12 44.0**	**-0.3**
UEES				S	**Sn**	**00 12 57.9**	**+1.0**
PMON	**Piamonte**	**0.95**	**338**	P	**Pb**	**00 12 44.7**	**+0.2**
PMON	**Piamonte**	**0.95**	**338**	*e*P	**Pb**	**00 12 44.8**	**+0.2**
PMON				*e*S	**Sn**	**00 12 57.3**	**-0.1**
JAYA	**Jayaque - finc**	**0.95**	**330**	P	**Pb**	**00 12 44.7**	**+0.1**
JAYA				S	**Sn**	**00 12 57.7**	**0.0**
JAYA	**Jayaque - finc**	**0.95**	**330**	*i* P	**Pb**	**00 12 44.8**	**+0.1**
JAYA				*e*S	**Sn**	**00 12 57.0**	**-0.7**
JAYA	**Jayaque - finc**	**0.95**	**330**	*i* P	**Pb**	**00 12 44.8**	**+0.1**
JAYA				*i* S	**Sb**	**00 12 56.3**	**-0.6**
BOQS	**Boqueron**	**0.96**	**341**	*i* P	**Pb**	**00 12 45.1**	**+0.4**
CNRM	**Centro Naciona**	**1.00**	**50**	P	**Pb**	**00 12 45.5**	**+0.3**
CNRM				S	**Sn**	**00 12 58.8**	**+0.3**
CEDA	**San Andres**	**1.06**	**336**	P	**Pb**	**00 12 46.5**	**+0.2**
CEDA				S	**Sb**	**00 13 01.2**	**+1.3**
LCND	**La Caada**	**1.14**	**65**	P	**Pn**	**00 12 46.9**	**-0.3**
LCND	**La Caada**	**1.14**	**65**	*e*P	**Pn**	**00 12 47.0**	**-0.1**
LCND				*e*P	**Pn**	**00 12 47.1**	**-0.1**
CNCH	**Conchagua**	**1.18**	**68**	P	**Pn**	**00 12 47.3**	**-0.5**
CNCH				S	**Sb**	**00 13 04.9**	**+1.6**
CNCH	**Conchagua**	**1.18**	**68**	*e*P	**Pn**	**00 12 47.4**	**-0.4**
CEVE	**Cerro Verde**	**1.19**	**327**	P	**Pb**	**00 12 48.5**	**-0.2**
CEVE				S	**Sb**	**00 13 05.3**	**+1.5**
CEVE	**Cerro Verde**	**1.19**	**327**	*e*P	**Pb**	**00 12 49.3**	**+0.6**
UNIC	**Universidad Ca**	**1.29**	**333**	P	**Pb**	**00 12 49.7**	**-0.5**
UNIC				S	**Sb**	**00 13 06.8**	**+0.4**
LLGN	**La Laguna**	**1.33**	**0**	P	**Pb**	**00 12 50.4**	**-0.5**
LLGN				S	**Sb**	**00 13 08.3**	**+0.7**
NUBE	**Las Nubes**	**1.34**	**323**	P	**Pn**	**00 12 50.1**	**+0.1**
NUBE				S	**Sb**	**00 13 07.4**	**-0.6**
NUBE	**Las Nubes**	**1.34**	**323**	*i* P	**Pn**	**00 12 50.2**	**+0.2**
NUBE				*i* S	**Sn**	**00 13 06.9**	**-0.2**
CSGN	**Cosiguina Volc**	**1.37**	**84**	P	**Pn**	**00 12 50.2**	**-0.1**
CSGN				S	**Sb**	**00 13 10.7**	**+2.0**
LOAL	**Lomas de Alarc**	**1.42**	**325**	P	**Pn**	**00 12 50.1**	**-0.9**
SLOZ	**Alcaldia de Sa**	**1.44**	**326**	P	**Pb**	**00 12 52.1**	**-0.8**
FAME	**Alcaldia de Sa**	**1.45**	**314**	P	**Pn**	**00 12 51.6**	**+0.2**
FAME				S	**Sn**	**00 13 09.2**	**-0.4**
MTO3	**Montecristo**	**1.61**	**346**	P	**Pn**	**00 12 54.5**	**+0.7**
MTO3				S	**Sn**	**00 13 14.3**	**+0.3**
MTO3	**Montecristo**	**1.61**	**346**	*i* P	**Pn**	**00 12 54.4**	**+0.6**
MTO3	**Montecristo**	**1.61**	**346**	*i* P	**Pn**	**00 12 54.5**	**+0.7**
ESQI	**Esquipulas**	**1.77**	**348**	P	**Pb**	**00 12 57.2**	**-1.2**
CRIN	**San Cristobal**	**1.86**	**94**	S	**Sn**	**00 13 19.5**	**-0.5**
SARH	**Santa Rosa de**	**1.95**	**5**	P	**Pn**	**00 12 59.4**	**+1.1**
SARH	**Santa Rosa de**	**1.95**	**5**	*i* P	**Pn**	**00 12 59.6**	**+1.3**
TGUH	**Tegucigalpa,Un**	**2.04**	**53**	P	**Pn**	**00 12 59.9**	**+0.3**
TGUH				S	**Sn**	**00 13 25.1**	**+0.6**
QUEN	**Al S del Volca**	**2.06**	**96**	P	**Pn**	**00 13 01.2**	**+1.3**
HERN	**Volcan Telica**	**2.08**	**96**	P	**Pn**	**00 12 59.5**	**-0.6**
POLN	**Al Sur del Vol**	**2.10**	**95**	P	**Pn**	**00 13 00.3**	**+0.1**
POLN				S	**Sn**	**00 13 24.7**	**-1.0**
CNGN	**Cerro Negro**	**2.22**	**98**	S	**Sn**	**00 13 28.9**	**0.0**
MACN	**El Madrono**	**2.25**	**99**	P	**Pn**	**00 13 02.2**	**-0.3**
MACN				S	**Sn**	**00 13 27.5**	**-2.0**
YUSH	**Yuscaran**	**2.34**	**61**	P	**Pn**	**00 13 04.0**	**+0.3**
MOMN	**Momotombo**	**2.39**	**100**	P	**Pn**	**00 13 04.4**	**0.0**
COPN	**Copaltepe**	**2.39**	**105**	P	**Pn**	**00 13 04.9**	**+0.6**
LIMN	**Finca el Limon**	**2.53**	**84**	P	**Pn**	**00 13 05.6**	**-0.8**
LIMN				S	**Sn**	**00 13 37.8**	**+1.2**
SAPS	**Ciudad Sandino**	**2.57**	**104**	S	**Sn**	**00 13 36.6**	**-0.8**
RCVN	**Varillal2**	**2.79**	**74**	P	**Pn**	**00 13 10.3**	**+0.3**

IDC ***14*** *01:13:37.0±1.0, 28°.48N×143°.01E, h0km, mb4.1/15, mbtmp4.1/17, ML3.6/2, MS3.0/4, Error ellipse: s-maj=31.9km s-min=17.9km az=79.0*
NEIC ***14*** *01:13:40.0±0.7, 28°.46N±0°.06×142°.8E±0°.2, h10km±1km, mb4.6/19, Error ellipse: s-maj=23.0km s-min=9.8km az=87.0*
NIED ***14*** *01:13:41.0, 28°.56N×142°.50E, h45km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=1.59; Mθθ=0.01; Mφφ=-1.59; Mrθ=-0.18; Mθφ=0.32; Mφr=0.68; Fault plane solution: M0=1.76000×10¹⁵ NP1: φs=171.00000°, δ=33.00000°, λ=93.00000°. NP2: φs=347.00000°, δ=57.00000°, λ=88.00000°.*
ISC 14 01:13:42.5±0.9, 28°.52N±0°.09×142°.8E±0°.1, h34km, n66, σ1s16/62, mb4.4/34, 1D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.53**	**202**	Pn	Pn	01 13 53.1	-14
JCJ	22nm,0.3s,baz=12,slow=19,SNR=24			Sn	Sn	01 14 12.2	-14
	99nm,0.3s,baz=287,slow=19,SNR=6.0						
JCJ	**Chichijima**	**1.53**	**202**		**Pn**	**01 14 06.2**	**-1.1**
JHJ2	**Mitsune**	**5.26**	**331**	Pn	**Pn**	**01 14 59.1**	**+0.5**
JGF	**Kuroka**	**8.45**	**328**	Pn	**Pn**	**01 15 42.2**	**-0.2**
MJAR	**Matsushiro Arr**	**8.90**	**335**	Pn	**Pn**	**01 15 48.3**	**-0.3**
	0.4nm,0.3s,baz=158,slow=10,SNR=16						
MJAR				Sn	Sn	01 17 19.5	-8.2
	baz=151,slow=12,SNR=1.3						
	5.5nm,0.7s						
MJAR	**Matsushiro Arr**	**8.90**	**335**		**Pn**	**01 15 47.1**	**-1.5**
MAJO	**Matsushiro**	**8.90**	**335**		**Pn**	**01 15 48.3**	**-0.3**
MJB9	**Matsu-Tunnel**	**8.90**	**335**		**Pn**	**01 15 49.4**	**+0.7**
JNU	**Nakatsue**	**11.25**	**297**	LR	LR	01 20 18.6	
	comp=Z,114nm,18.4s,baz=112,slow=35						
KSRS	**Korea Array**	**15.34**	**309**	Pn	**P**	**01 17 19.1**	**-1.7**
	0.4nm,0.3s,baz=116,slow=12,SNR=7.9						
KSRS				LR	LR	01 23 07.6	
	comp=Z,58nm,18.9s,baz=115,slow=37						
	1.7nm,0.6s						
ASAJ	**Asahikawa**	**15.57**	**359**	LR	LR	01 24 17.3	
	comp=Z,61nm,21.6s,baz=161,slow=41						
YULB	**Yu-li**	**20.01**	**260**	P	**P**	**01 18 13.3**	**+1.0**
NJ2	**Nanjing**	**20.99**	**286**	*e*P	**P**	**01 18 22.1**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BNX	**BinXian**	**21.07**	**329**	⇓ P	**P**	**01 18 24.0**	**+0.4**
BNX				pmax	pmax		
	comp=Z,13nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**23.61**	**106**	T	T	01 43 58.9	
	baz=297,SNR=11						
H11N1	**WAKE ISLAND Hy**	**23.61**	**106**	T	T	01 43 57.8	
	baz=297						
H11N3	**WAKE ISLAND Hy**	**23.63**	**106**	T	T	01 43 50.2	
	baz=297						
HEH	**HeiHe**	**24.66**	**336**	*e*P	**P**	**01 18 54.3**	**-5.6**
HILR	**Hailar Array B**	**27.42**	**326**	P	**P**	**01 19 25.3**	**+0.4**
	comp=Z,2.9nm,0.5s,baz=129,slow=12,SNR=6.9						
	comp=Z,2.9nm,0.5s						
HHC	**Hu-ho-hao-te**	**28.34**	**304**	*e*P	**P**	**01 19 35.0**	**+1.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ENH	**Enshi**	**29.04**	**282**		**P**	**01 19 38.2**	**-1.3**
ENH				IAmb	IAmb	01 19 39.6	
	comp=Z,5.6nm,0.7s						
ULN	**Ulaanbaatar**	**33.70**	**315**		**P**	**01 20 20.3**	**-0.2**
ULN				IAmb	IAmb	01 20 23.2	
	comp=Z,5.6nm,1.1s						
CD2	**Chengdu**	**33.90**	**284**	P	**P**	**01 20 21.1**	**-1.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	**Songino Array**	**34.10**	**314**	P	**P**	**01 20 24.3**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=116,slow=6.4,SNR=7.5						
	comp=Z,0.8nm,0.4s						
SONM	**Songino Array**	**34.10**	**314**	P	**P**	**01 20 24.4**	**+0.3**
KMI2	**Kunming**	**35.81**	**274**	P	**P**	**01 20 39.0**	**0.0**
KMI2				pmax	pmax		
	comp=Z,6.0nm,1.4s						
PZH	**PanZhiHua**	**36.37**	**277**	P	**P**	**01 20 44.6**	**+0.9**
GTA2	**Gaotai**	**37.03**	**299**	*e*P	**P**	**01 20 48.6**	**-0.6**
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TLY	**Talaya**	**37.21**	**319**		**P**	**01 20 50.8**	**+0.3**
TLY				IAmb	IAmb	01 20 53.1	
	comp=Z,18nm,1.5s						
TNCH	**TengChong**	**39.54**	**276**	P	**P**	**01 21 10.8**	**+0.2**
TNCH				pmax	pmax		
	comp=Z,16nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,130nm,3.5s						
GOMU	**GeErMu**	**40.93**	**293**	P	**P**	**01 21 20.9**	**-1.3**
GOMU				sP	pP	01 21 25.3	-5.5
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**41.28**	**266**	P	**P**	**01 21 26.3**	**+1.5**
	comp=Z,1.3nm,0.3s,baz=54,slow=12,SNR=4.5						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.28**	**266**	P	**P**	**01 21 25.5**	**+0.7**
WMQ	**Urumqi**	**46.22**	**305**	*e*P	**P**	**01 22 05.9**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
ZALV	**Zalesovo Beam**	**48.80**	**318**	P	**P**	**01 22 24.7**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=89,slow=8.1,SNR=8.8						
ZALV				PcP	**PcP**	**01 23 49.0**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=98,slow=2.2,SNR=3.6						
ZALV				LR	LR	01 41 50.1	
	comp=Z,11nm,18.1s,baz=40,slow=35						
	comp=Z,1.6nm,0.4s						
ZALV	**Zalesovo Beam**	**48.80**	**318**	P	**P**	**01 22 25.2**	**+1.1**
WR8	**Warramunga Arr**	**48.86**	**190**	P	**P**	**01 22 24.2**	**-0.7**
WR8				IAmb	IAmb	01 22 34.4	
	comp=Z,5.6nm,0.9s						
WRA	**Warramunga Arr**	**48.87**	**191**	P	**P**	**01 22 24.6**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=12,slow=8.2,SNR=26						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**48.87**	**191**	P	**P**	**01 22 23.6**	**-1.4**
RPSI	**Rantau Prapat**	**49.04**	**247**		**P**	**01 22 26.6**	**+0.1**
RPSI				IAmb	IAmb	01 22 26.9	
	comp=Z,5.2nm,0.7s						
MKAR	**Makanchi Array**	**50.02**	**309**	P	**P**	**01 22 33.7**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=92,slow=9.3,SNR=14						
	comp=Z,1.4nm,0.8s						
KURK	**Kurchatov**	**52.41**	**314**		**P**	**01 22 52.0**	**+0.6**
KURK				IAmb	IAmb	01 22 52.8	
	comp=Z,15nm,1.1s						
KURBB	**Kurchatov Array**	**52.46**	**314**	P	**P**	**01 22 52.2**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=90,slow=7.4,SNR=45						
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**52.59**	**190**	P	**P**	**01 22 52.2**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=5.3,slow=5.9,SNR=6.3						
	comp=Z,0.3nm,0.4s						
KDAK	**Kodiak Island**	**52.89**	**37**	P	**P**	**01 22 56.0**	**+1.2**
BOOM	**Boomskoye usch**	**54.89**	**304**	P	**P**	**01 23 09.1**	**-0.8**
AAK	**Ala-Archa**	**55.92**	**304**	P	**P**	**01 23 17.8**	**+0.4**
ILAR	**Eielson Array**	**56.20**	**29**	P	**P**	**01 23 18.8**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=234,slow=12,SNR=2.7						
	comp=Z,0.2nm,0.7s						
ARSB	**Arslanbob**	**57.26**	**303**	P	**P**	**01 23 27.8**	**+0.9**
ARSB				IAmb	IAmb	01 23 51.6	
	comp=Z,12nm,1.4s						
BVAR	**Borovoye Array**	**57.39**	**317**	P	**P**	**01 23 28.3**	**+0.9**
	comp=Z,3.8nm,0.5s,baz=94,slow=7.4,SNR=28						
	comp=Z,3.8nm,0.5s						
BORK	**Borovoye**	**57.43**	**317**		**P**	**01 23 28.5**	**+0.8**
BORK				IAmb	IAmb	01 23 40.9	
	comp=Z,4.1nm,0.7s						
KK31	**Karatay Array**	**58.72**	**305**	P	**P**	**01 23 37.6**	**+0.7**
KK31				IAmb	IAmb	01 23 38.7	
	comp=Z,4.7nm,0.6s						
KKAR	**Karatay Array**	**58.72**	**305**	P	**P**	**01 23 37.6**	**+0.7**
ARTI	**Arti**	**63.76**	**322**	P	**P**	**01 24 10.5**	**-0.2**
ARTI				IAmb	IAmb	01 24 17.3	
	comp=Z,5.0nm,0.6s						
AB31	**Akbulak array**	**64.52**	**314**	P	**P**	**01 24 16.6**	**+0.8**
AB31				IAmb	IAmb	01 24 22.5	
	comp=Z,2.8nm,0.7s						
ABKAR	**Akbulak array**	**64.52**	**314**	P	**P**	**01 24 16.6**	**+0.8**
AKTO	**Aktyubinsk**	**65.41**	**316**	P	**P**	**01 24 22.9**	**+1.3**
	comp=Z,1.9nm,0.6s,baz=83,slow=13,SNR=6.5						
	comp=Z,1.9nm,0.6s						
FIA1	**FINESS Array S**	**76.92**	**334**	P	**P**	**01 25 32.4**	**+1.3**
FINES	**FINESS Array B**	**76.92**	**334**	P	**P**	**01 25 31.8**	**+0.7**
	comp=Z,2.4nm,1.1s,baz=64,slow=6.6,SNR=8.1						
	comp=Z,2.4nm,1.1s						
FINES	**FINESS Array B**	**76.92**	**334**	P	**P**	**01 25 32.3**	**+1.3**
KBZ	**Khabaz**	**77.46**	**313**	P	**P**	**01 25 35.6**	**+1.3**
	comp=Z,3.9nm,1.0s,baz=109,slow=7.5,SNR=4.4						
	comp=Z,3.9nm,1.0s						
NOA	**NORSAR Array B**	**82.50**	**338**	P	**P**	**01 25 59.9**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=42,slow=5.2,SNR=3.1						
	comp=Z,0.6nm,0.6s						
RAYN	**Ar Rayn**	**85.09**	**294**	P	**P**	**01 26 16.5**	**+1.2**
BRTR	**Keskin Array B**	**85.45**	**313**	P	**P**	**01 26 16.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=96,slow=2.5,SNR=5.0						
	comp=Z,0.9nm,0.7s						
BRTR	**Keskin Array B**	**85.45**	**313**	P	**P**	**01 26 17.5**	**+0.5**
CLL	**Collm**	**89.08**	**331**	*i* P	**P**	**01 26 33.4**	**-0.7**
CLL				*i* x	x	01 26 56.3	
CLL				*i* x	x	01 27 05.0	
CLL				*e*PP	**PP**	**01 30 03.0**	**-0.6**

DJA ***14*** *01:27:43.1±0.4, 7°S±6°×10°7E±°, h185km±4km, M3.3/24, MLv3.3/24*
IDC ***14*** *01:27:45.5±1.1, 6°.44S×107°.84E, h158km±35km, mb3.2/4, mbtmp3.7/4, MS3.0/1, Error ellipse: s-maj=175.9km s-min=20.1km az=50.0*
ISC 14 01:27:45.4±1.0, 7°.0S±0°.2×107°.4E±0°.1, h171km±7km, n14, σ1s18/15, mb3.3/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**0.31**	**51**	P	**Pn**	**01 28 09.2**	**+0.4**
	149nm,0.6s,baz=300,slow=0.4,SNR=22						
LEM				S	**Sn**	**01 28 25.1**	**-1.5**
	59nm,0.4s,baz=194,slow=9.5,SNR=3.7						
LEM	**Lembang**	**0.31**	**51**	P	**Pn**	**01 28 09.0**	**+0.2**
BBJI	**Bungbulang**	**0.52**	**148**	P	**Pn**	**01 28 08.4**	**-1.0**
DBJI	**Dramaga**	**0.78**	**307**	P	**Pn**	**01 28 11.6**	**+0.9**
SKJI	**Sukabumi**	**0.81**	**271**	P	**Pn**	**01 28 10.0**	**-0.9**
SBJI	**Serang**	**1.53**	**306**	P	**Pn**	**01 28 17.9**	**+1.0**
KPJI	**Karang Pucung**	**1.58**	**101**	P	**Pn**	**01 28 17.1**	**-0.3**
KPJI				S	**Sn**	**01 28 43.5**	**+1.4**
UGM	**Wanagama**	**3.25**	**106**	P	**Pn**	**01 28 35.5**	**-1.3**
KLSI		**3.50**	**311**	P	**Pn**	**01 28 39.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**26.65**	**342**	LR	LR	01 45 11.4	
	comp=Z,31nm,18.1s,baz=65,slow=40						
WRA	**Warramunga Arr**	**29.14**	**119**	P	**P**	**01 33 30.9**	**+0.2**
	0.6nm,1.0s,baz=296,slow=7.9,SNR=4.2						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**30.38**	**126**	P	**P**	**01 33 42.4**	**+0.8**
	0.4nm,0.5s,baz=301,slow=8.5,SNR=5.8						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**40.35**	**132**	P	**P**	**01 35 07.9**	**+1.4**
	1.9nm,0.6s,baz=304,slow=7.9,SNR=4.8						
	1.9nm,0.6s						
MKAR	**Makanchi Array**	**58.03**	**340**	P	**P**	**01 37 18.9**	**-1.5**
	0.2nm,0.4s,baz=152,slow=8.5,SNR=6.9						
	0.2nm,0.4s						

CATAC ***14*** *01:29:40.3±0.5, 6°N±2°×7°4W±°, h13km±3km, M4.5/12, mb4.5/3, MLv4.6/12, Error ellipse: s-maj=4.9km s-min=4.1km az=97.0, confirmed*
IDC ***14*** *01:29:40.6±0.7, 5°.98N×73°.98W, h44km±6km, mb3.6/12, mbtmp3.9/13, ML3.3/1, MS3.3/11, Error ellipse: s-maj=16.0km s-min=12.0km az=88.0*
NEIC ***14*** *01:29:41.5±1.7, 5°.51N±0°.07×73°.32W±0°.07, h5km±6km, mb4.5/22, Error ellipse: s-maj=12.8km s-min=6.5km az=137.0*
RSNC ***14*** *01:29:42.5±0.0, 6°N±1°×7°4W±°, h11km±3km, M4.1, mB4.9, mb4.8, ML3.8, Mw(mB)4.2*
VAO ***14*** *01:29:43.6±0.8, 5°.87N×73°.75W, h54km±9km, mb4.3, Presumed earthquake*
ISC 14 01:29:39.9±0.5, 6°.10N±0°.02×73°.93W±0°.02, h28km±3km, n111, σ2s41/123, mb4.3/21, MS3.3/7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.46**	**198**	P	**Pb**	**01 29 51.0**	**+1.2**
SPBC				S	**Sb**	**01 29 57.9**	**+1.5**
PTBC	**PUERTO BERRIO,**	**0.68**	**310**	P	**Pb**	**01 29 54.3**	**+0.9**
PTBC				S	**Sn**	**01 30 04.4**	**+0.8**
RUSC	**La Rusia**	**0.87**	**103**	P	**Pb**	**01 29 57.2**	**+0.5**
RUSC				S	**Sb**	**01 30 09.4**	**+1.2**
RUSC	**La Rusia**	**0.87**	**103**	P	**Pb**	**01 29 57.4**	**+0.7**
RUSC				S	**Sb**	**01 30 09.0**	**+0.8**
BARC	**Barichara**	**0.89**	**56**	P	**Pn**	**01 29 58.4**	**+1.5**
BARC				S	**Sn**	**01 30 11.3**	**+2.3**
VMM09	**Lebrija**	**1.21**	**32**	P	**Pb**	**01 30 03.7**	**+1.5**
VMM09				S	**Sn**	**01 30 20.1**	**+3.5**
VMM07	**Puerto Wilches**	**1.26**	**4**	P	**Pn**	**01 30 03.5**	**+1.8**
VMM07				S	**Sb**	**01 30 21.3**	**+2.4**
ROSC	**El Rosal**	**1.31**	**197**	P	**Pb**	**01 30 05.2**	**+1.1**
	534nm,0.3s,baz=333,slow=6.0,SNR=402						
ROSC				S	**Sb**	**01 30 22.0**	**+1.4**
	4μm,0.5s,baz=105,slow=20,SNR=10						
ROSC	**El Rosal**	**1.31**	**197**	P	**Pb**	**01 30 05.3**	**+1.2**
ROSC				S	**Sb**	**01 30 22.3**	**+1.7**
CHIC	**Chingaza**	**1.47**	**172**	P	**Pb**	**01 30 07.6**	**+0.7**
CHIC				S	**Sb**	**01 30 27.9**	**+2.6**
CVER	**Cruz Verde, Cu**	**1.57**	**185**	P	**Pb**	**01 30 09.6**	**+1.0**
CVER				S	**Sb**	**01 30 30.7**	**+2.4**
HELC	**Santa Helena**	**1.59**	**273**	P	**Pn**	**01 30 07.8**	**+1.2**
HELC				S	**Sn**	**01 30 28.0**	**+1.6**
HELC	**Santa Helena**	**1.59**	**273**	P	**Pn**	**01 30 07.8**	**+1.2**
HELC				S	**Sn**	**01 30 26.9**	**+0.4**
PAMC	**Pamplona, Colo**	**1.74**	**45**	P	**Pb**	**01 30 12.7**	**+1.2**
PAMC				S	**Sb**	**01 30 35.6**	**+2.5**
VMM05	**San Martn**	**1.84**	**12**	P	**Pn**	**01 30 11.9**	**+2.2**
VMM05				S	**Sb**	**01 30 36.3**	**+0.8**
VILC	**Villavicencio,**	**1.98**	**173**	P	**Pb**	**01 30 15.1**	**-0.4**
CBOC	**Ciudad Bolivar**	**2.08**	**264**	P

	comp=Z,4.4nm,1.0s							
LPAZ	**La Paz**	**22.97**	**166**	P		**P**	**01 34 38.8**	**-4.3**
LPAZ				IAmb		IAmb	01 35 17.9	
	comp=Z,14nm,1.1s							
LPAZ	**La Paz**	**22.97**	**166**	*e*P		**P**	**01 34 40.7**	**-2.4**
CMIG	**Matias Romero**	**23.22**	**300**	LR		LR	01 44 43.7	
	comp=Z,70nm,20.9s,baz=173,slow=39							
PDRB	**Porto dos Gac**	**24.54**	**136**	*e*P		**P**	**01 34 56.0**	**-1.6**
CLDB	**Colider**	**24.70**	**133**	*e*P		**P**	**01 34 57.2**	**-1.8**
SIV	**San Ignacio**	**25.37**	**150**	P		**P**	**01 35 03.8**	**-1.3**
	comp=Z,6.5nm,0.8s,baz=320,slow=10,SNR=20							
SIV				pP		**sP**	**01 35 15.6**	**-1.8**
	comp=Z,5.2nm,0.8s,baz=308,slow=5.7,SNR=7.6							
SIV				LR		LR	01 45 40.9	
	comp=Z,156nm,18.7s,baz=295,slow=38							
	comp=Z,6.5nm,0.8s							
PTLB	**Pontes e Lacer**	**25.94**	**146**	*e*P		**P**	**01 35 08.6**	**-1.6**
PB14	**IPOC Station P**	**30.73**	**174**	P		**P**	**01 35 51.0**	**-2.2**
X40A	**Basin Creek Fa**	**33.22**	**331**	P		P	01 36 27.7	+13
X40A				IAmb		IAmb	01 36 28.2	
	comp=Z,5.1nm,0.7s							
BDFB	**Brasilia**	**33.55**	**130**	LR		LR	01 51 12.2	
	comp=Z,90nm,19.1s,baz=305,slow=39							
WHAR	**Wooly Hollow**	**33.62**	**332**	P		P	01 36 29.4	+11
WHAR				IAmb		IAmb	01 36 38.0	
	comp=Z,7.9nm,1.2s							
BRDY	**Brady**	**34.34**	**320**	P		P	01 36 36.4	+12
BRDY				IAmb		IAmb	01 36 36.7	
	comp=Z,3.1nm,0.8s							
LCO	**Las Campanas**	**35.04**	**175**	P		**P**	**01 36 28.9**	**-1.9**
CPUP	**Villa Florida**	**36.03**	**154**	LR		LR	01 50 41.2	
	comp=Z,52nm,19.7s,baz=4.5,slow=35							
TX31	**Lajitas Ar. Si**	**36.35**	**313**	P		P	01 36 52.8	+11
TXAR	**Lajitas Array**	**36.35**	**313**	P		**P**	**01 36 42.9**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=122,slow=8.3,SNR=2.4							
	comp=Z,0.1nm,0.6s							
TXAR	**Lajitas Array**	**36.35**	**313**	P		P	01 36 52.9	+11
QUOK	**Quay**	**36.50**	**328**	P		P	01 36 54.0	+11
QUOK				IAmb		IAmb	01 36 55.6	
	comp=Z,9.7nm,0.6s							
SMWD	**Samnorwood**	**37.70**	**324**			P	01 37 04.8	+12
SMWD				IAmb		IAmb	01 37 06.6	
	comp=Z,15nm,0.8s							
CFA	**Coronel Fontan**	**37.88**	**172**	P		**P**	**01 36 52.7**	**-2.1**
	comp=Z,1.6nm,0.8s,baz=338,slow=12,SNR=4.6							
	comp=Z,1.6nm,0.8s							
CO04	**Los Peladeros**	**38.03**	**176**	P		P	**01 36 54.4**	**-1.9**
MNTX	**Cornudas Mount**	**38.90**	**315**	P		P	01 37 14.4	+11
SDCO	**Great Sand Dun**	**42.61**	**322**	P		P	01 37 45.6	+11
PLCA	**Paso Flores**	**46.70**	**176**	P		**P**	**01 38 03.9**	**-2.6**
	comp=Z,1.7nm,0.8s,baz=350,slow=10,SNR=4.4							
	comp=Z,1.7nm,0.8s							
PLCA	**Paso Flores**	**46.70**	**176**	P		**P**	**01 38 04.3**	**-2.2**
PLCA				IAmb		IAmb	01 38 22.7	
	comp=Z,5.2nm,1.1s							
BSUT	**Blindstream Ca**	**47.55**	**322**	P		P	01 38 25.6	+12
PD31	**Pinedale Array**	**48.20**	**325**	P		P	01 38 29.0	+11
PD31				IAmb		IAmb	01 38 32.4	
	comp=Z,6.8nm,1.4s							
PDAR	**Pinedale Array**	**48.20**	**325**	P		**P**	**01 38 18.7**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=75,slow=5.4,SNR=2.7							
PDAR				pP		**sP**	**01 38 30.1**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=125,slow=7.9,SNR=7.8							
	comp=Z,0.3nm,0.7s							
TCUT	**Toone Canyon**	**48.29**	**322**	P		P	01 38 30.5	+11
SCHQ	**Schefferville**	**48.93**	**5**	pP		pP	01 38 37.1	+5.0
	comp=Z,3.5nm,0.7s,baz=135,slow=10.0,SNR=3.3							
MOOW	**Moose Ponds**	**49.49**	**325**			P	01 38 39.2	+11
YHL	**Hebgen Lake**	**50.42**	**326**			P	01 38 46.6	+11
YHL				IAmb		IAmb	01 38 51.0	
	comp=Z,9.5nm,1.2s							
YKA	**Yellowknife Ar**	**63.67**	**340**	P		**P**	**01 40 07.3**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=139,slow=5.8,SNR=12							
YKA				pP		**sP**	**01 40 20.0**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=135,slow=5.9,SNR=9.6							
	comp=Z,0.3nm,0.6s							
SUMG	**Summit**	**69.84**	**11**	*i* P		**P**	**01 40 47.0**	**-1.2**
SUMG				IAmb		IAmb	01 40 49.0	
	comp=Z,4.6nm,0.6s							
NEEM	**North Greenlan**	**72.34**	**5**	*i* P		**P**	**01 41 01.3**	**-1.9**
NEEM				IAmb		IAmb	01 41 03.9	
	comp=Z,3.5nm,0.7s							
EKA	**Eskdalemuir Ar**	**74.11**	**34**	P		**P**	**01 41 11.9**	**-1.8**
	comp=Z,3.7nm,1.1s,baz=283,slow=4.9,SNR=4.1							
	comp=Z,3.7nm,1.1s							
DAG	**Danmarks Havn**	**76.52**	**11**	*i* P		**P**	**01 41 25.0**	**-2.0**
ILAR	**Eielson Array**	**77.28**	**335**	P		**P**	**01 41 29.1**	**-2.4**
	comp=Z,0.2nm,0.7s,baz=117,slow=9.2,SNR=3.7							
ILAR				pP		**sP**	**01 41 43.0**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=105,slow=4.3,SNR=6.8							
ILAR				LR		LR	02 16 08.6	
	comp=Z,33nm,18.8s,baz=168,slow=36							
	comp=Z,0.2nm,0.7s							
NB2	**NORSAR Subarra**	**82.35**	**29**	P		**P**	**01 41 59.6**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=269,slow=5.3							
NOA	**NORSAR Array B**	**82.35**	**29**	P		**P**	**01 41 59.5**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=270,slow=5.2,SNR=4.4							
	comp=Z,1.7nm,0.8s							
HFS	**Hagfors**	**83.57**	**30**	P		**P**	**01 42 05.1**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=280,slow=2.6,SNR=5.9							
	comp=Z,1.6nm,0.7s							
FINES	**FINESS Array B**	**89.46**	**28**	P		**P**	**01 42 33.3**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=282,slow=5.3,SNR=5.8							
	comp=Z,1.1nm,0.7s							
MKAR	**Makanchi Array**	**123.27**	**19**	PKP		**PKPdf**	**01 48 32.5**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=330,slow=2.0,SNR=6.0							
HHC	**Hu-ho-hao-te**	**133.01**	**354**	*e*P		**PKPdf**	**01 48 55.1**	**+1.7**
PZH	**PanZhiHua**	**147.32**	**7**	PKPbc		**PKPbc**	**01 49 24.3**	**+2.4**
ASAR	**Alice Springs**	**148.04**	**234**	PKPbc		**PKPdf**	**01 49 19.5**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=120,slow=3.5,SNR=8.6							
WRA	**Warramunga Arr**	**149.28**	**241**	PKPbc		**PKPdf**	**01 49 25.0**	**+2.2**
	comp=Z,1.0nm,0.4s,baz=107,slow=3.2,SNR=20							

MEX 14 01:39:56.9±0.4, 16°.10N×99°.25W, h16$^{km}_{\pm 24}$km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	**Cruz Grande**	**0.64**	**10**	*e*P	Pg	01 40 07.1	-2.5
CRIG				*i* S	Sg	01 40 15.5	-2.6
DAIG	**Los Arroyos**	**0.99**	**337**	*e*P	Pb	01 40 12.8	-3.0
DAIG				*e*S	Sb	01 40 24.6	-4.1
PNIG	**Pinotepa**	**1.11**	**75**	*e*P	Pb	01 40 13.9	-3.9
PNIG				*e*S	Sb	01 40 26.2	-5.9
MGIG	**Malinaltepec**	**1.27**	**27**	*e*P	Pn	01 40 16.7	-3.5
MGIG				*e*S	Sb	01 40 33.4	-3.3
CAIG	**El Cayaco**	**1.36**	**314**	*e*P	Pn	01 40 18.4	-2.8
CAIG				*e*S	Sn	01 40 36.8	-2.1
TLIG	**Tlapa**	**1.59**	**24**	*e*P	Pn	01 40 21.7	-2.9
TLIG				*i* S	Sn	01 40 44.5	-0.4
YOIG	**Yosondua**	**1.80**	**65**	*e*P	Pn	01 40 24.6	-2.8
YOIG				*i* S	Sb	01 40 51.4	-0.6
TXIG	**Tlaxiaco**	**1.82**	**51**	*e*P	Pn	01 40 25.0	-2.9
TXIG				*i* S	Sb	01 40 52.5	-0.3
MEIG	**Mezcala**	**1.85**	**349**	*e*P	Pn	01 40 26.6	-1.4
MEIG				*e*S	Sb	01 40 53.9	+0.5
PEIG	**Puerto Escondi**	**2.02**	**93**	*e*P	Pg	01 40 35.9	+0.2
PEIG				*e*S	Sn	01 40 48.1	-7.2
FTIG	**Fresnillo de T**	**2.09**	**30**	*i* P	Pn	01 40 28.6	-2.7
FTIG				*i* S	Sb	01 40 58.9	-1.4
HLIG	**Huajuapan de L**	**2.21**	**39**	*e*P	Pn	01 40 28.8	-4.3
HLIG				*i* S	Sb	01 41 02.4	-1.3
PLIG	**Platanillo**	**2.29**	**354**	*e*P	Pb	01 40 37.2	-0.7
PLIG				*e*S	Sb	01 41 06.3	+0.2
YAIG	**Yautepec**	**2.75**	**4**	*e*P	Pn	01 40 38.9	-1.6
YAIG				*i* S	Sn	01 41 10.6	-3.0
TOIG	**Toxpalan**	**2.88**	**46**	*e*P	Pn	01 40 37.9	-4.4
TOIG				*e*S	Sn	01 41 13.3	-3.4
TPIG	**Tehuac#an**	**2.93**	**38**	*e*P	Pn	01 40 41.8	-1.1
TPIG				*i* S	Sn	01 41 15.3	-2.6
PPM	**Popocatepetl**	**3.01**	**11**	*e*P	Pb	01 40 50.2	-0.2
PPM				*i* S	Sg	01 41 32.9	-0.8
HUIG	**Huatulco**	**3.04**	**96**	*e*P	Pn	01 40 42.1	-2.2
HUIG				*e*S	Sn	01 41 10.8	-10

*IDC **14** 01:39:31.4±32.0, 17°.67S×177°.51W, h313$^{km}_{\pm 273}$km, mb3.6/3, mbtmp4.3/3, Error ellipse: s-maj=156.1km s-min=93.3km az=101.0*

*NEIC **14** 01:39:55.3±1.1, 17°.9S±0°.1×178°.6W±0°.2, h504$^{km}_{\pm 11}$km, mb4.3/12, Error ellipse: s-maj=24.9km s-min=8.5km az=59.0*

ISC 14 01:39:59.3±1.0, **18°.2S**±0°.1×**178°.5W**±0°.2, **h579**^{km}, **n28,**

σ1§10/25, mb4.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.32**	**278**	P	P	01 41 08.0	-11
RAO	**Raoul Island**	**10.98**	**177**	P	**P**	**01 42 25.4**	**-2.1**
QRZ	**Quartz Range**	**23.80**	**197**	P	**P**	**01 44 30.0**	**+2.1**
CMWZ	**Cape Campbell**	**24.25**	**193**	P	**P**	**01 44 32.9**	**+1.0**
EIDS	**Eidsvold**	**29.08**	**250**	P	**P**	**01 45 14.7**	**+0.3**
EIDS				IAmb	IAmb	01 45 40.2	
	comp=Z,13nm,1.4s						
CTAO	**Charters Tower**	**33.31**	**261**	P	**P**	**01 45 50.6**	**+0.1**
CTAO				IAmb	IAmb	01 46 24.5	
	comp=Z,12nm,1.4s						
TOO	**Toolangi**	**36.90**	**231**	P	**P**	**01 46 21.5**	**+1.4**
TOO				IAmb	IAmb	01 46 26.8	
	comp=Z,8.3nm,1.4s						
COEN	**Coen**	**37.02**	**271**	P	**P**	**01 46 19.6**	**-1.7**
COEN				IAmb	IAmb	01 46 23.7	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**38.40**	**241**	P	**P**	**01 46 33.9**	**+1.6**
	comp=Z,2.3nm,0.7s,baz=82,slow=15,SNR=4.6						
	comp=Z,2.3nm,0.7s						
STKA	**Stephens Creek**	**38.40**	**241**	P	**P**	**01 46 33.4**	**+1.1**
BBOO	**Buckleboo**	**43.18**	**241**	P	**P**	**01 47 11.1**	**+0.9**
BBOO				IAmb	IAmb	01 47 20.3	
	comp=Z,15nm,1.2s						
WRA	**Warramunga Arr**	**44.49**	**260**	P	**P**	**01 47 20.1**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=96,slow=6.7,SNR=35						
	comp=Z,1.1nm,0.5s						
WRA	**Warramunga Arr**	**44.49**	**260**	P	**P**	**01 47 19.5**	**-1.0**
AS31	**Alice Springs**	**44.62**	**255**	P	**P**	**01 47 21.8**	**+0.3**
ASAR	**Alice Springs**	**44.62**	**255**	P	**P**	**01 47 21.9**	**+0.4**
	comp=Z,8.2nm,0.6s,baz=88,slow=8.3,SNR=144						
ASAR				PcP	**PcP**	**01 48 52.5**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=101,slow=4.0,SNR=4.1						
	comp=Z,8.2nm,0.6s						
ASAR	**Alice Springs**	**44.62**	**255**	P	**P**	**01 47 21.4**	**-0.1**
FORT	**Forrest**	**49.80**	**245**	P	**P**	**01 48 00.1**	**+0.1**
KNRA	**Kununurra**	**50.37**	**264**	P	**P**	**01 48 03.6**	**-0.9**
P33M	**Teslin, Yukon**	**86.44**	**21**	P	**P**	**01 51 42.4**	**+1.5**
P33M				IAmb	IAmb	01 52 01.3	
	comp=Z,7.8nm,1.4s						
BVAR	**Borovoye Array**	**117.04**	**321**	PKP	**PKPdf**	**01 57 38.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=96,slow=1.4,SNR=3.7						
HFS	**Hagfors**	**137.24**	**351**	PKhKP	PKPpre	01 58 10.1	
	comp=Z,2.3nm,1.0s,baz=352,slow=3.1,SNR=4.2						
BUR08	**Bucovina Ar. S**	**144.84**	**332**		**PKPab**	**01 58 32.1**	**-0.6**
BURAR	**Bucovina Array**	**144.86**	**332**		**PKPab**	**01 58 32.4**	**-0.4**
BRTR	**Keskin Array B**	**144.95**	**314**	PKPbc	PKPbc	01 58 32.4	-0.1
	comp=Z,0.6nm,0.4s,baz=46,slow=4.4,SNR=7.5						
BRTR	**Keskin Array B**	**144.95**	**314**		PKPbc	01 58 32.5	+0.1
MLR	**Muntele Rosu**	**146.06**	**329**	PKPdf	**PKPbc**	**01 58 34.8**	**-0.6**
BORA	**Eskisehir**	**146.99**	**317**	PKPdf	**PKPbc**	**01 58 37.8**	**-0.3**
GERES	**GERESS Array B**	**147.90**	**345**	PKPbc	**PKPbc**	**01 58 39.6**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=23,slow=3.7,SNR=3.8						

*NEIC **14** 01:47:58.3±2.1, 4°.45S±0°.09×102°.81E±0°.10, h63$^{km}_{\pm 3}$km, mb4.7/31, Error ellipse: s-maj=15.4km s-min=10.8km az=51.0*

*DJA **14** 01:47:58.7±0.3, 5°.S±3°×10°.3E±°, h37$^{km}_{\pm 6}$km, M4.5/30, mB5.6/2, mb4.3/10, MLv4.5/30, Mw(mB)5.1/2*

*IDC **14** 01:48:00.8±4.0, 4°.43S×102°.80E, h91$^{km}_{\pm 34}$km, mb4.1/17, mbtmp4.4/18, MS3.0/3, Error ellipse: s-maj=31.3km s-min=12.2km az=59.0*

ISC 14 01:47:57.7±0.8, **4°.54S**±0°.07×**102°.77E**±0°.06, **h65**$^{km}_{\pm 6}$km, **n110, σ1§12/108, mb4.6/44, 1C-1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.26**	**47**		**Pn**	**01 48 08.1**	**0.0**
MNAI				Sn	**Sn**	**01 48 14.9**	**-0.8**
MNAI	**Manna**	**0.26**	**47**	P	**Pn**	**01 48 08.1**	**0.0**
KSI	**Kapahiang**	**0.90**	**349**	P	**Pn**	**01 48 15.6**	**+0.9**
UBSI	**University, Be**	**0.92**	**327**	P	**Pn**	**01 48 15.6**	**+0.7**
UBSI				S	**Sn**	**01 48 28.7**	**+1.1**
LWLI	**Liwa**	**1.37**	**110**	P	**Pn**	**01 48 21.5**	**+0.6**
MDSI	**Maura Dua**	**1.41**	**88**	P	**Pn**	**01 48 21.9**	**+0.6**
MDSI				S	**Sn**	**01 48 39.4**	**+0.4**
MASI	**Maura Aman, Be**	**1.48**	**339**	P	**Pn**	**01 48 23.7**	**+1.4**
KLSI		**1.96**	**95**	P	**Pn**	**01 48 29.8**	**+1.1**
KASI	**Kota Agung**	**1.98**	**120**	P	**Pn**	**01 48 29.0**	**0.0**
KLI	**Kotabumi**	**2.11**	**99**	P	**Pn**	**01 48 32.5**	**+1.8**
KRJI	**Kerinci**	**2.76**	**332**	P	**Pn**	**01 48 41.3**	**+1.7**
PPSI	**Pulau Pagai**	**3.27**	**303**	P	**Pn**	**01 48 47.9**	**+1.4**
PDSI	**Padang**	**4.27**	**327**	P	**Pn**	**01 49 02.3**	**+2.0**
DSRI	**Dabo**	**4.42**	**24**	P	**Pn**	**01 49 04.3**	**+2.1**
SISI	**Saibi**	**4.86**	**311**	P	**Pn**	**01 49 08.8**	**+0.4**
TPI	**Tanjungpandan**	**5.19**	**70**	P	**Pn**	**01 49 13.7**	**+0.9**
	22nm,0.9s						
LEM	**Lembang**	**5.34**	**115**	P	**Pn**	**01 49 19.6**	**+4.6**
	17nm,0.5s,baz=323,slow=20,SNR=3.0						
LEM				LR	LR	01 51 50.8	
	comp=Z,119nm,19.5s,baz=338,slow=43						
BBJI	**Bungbulang**	**5.66**	**121**		**Pn**	**01 49 18.5**	**-0.9**
BBJI	**Bungbulang**	**5.66**	**121**	P	**Pn**	**01 49 20.9**	**+1.6**
	0.2nm16nm,0.5s						
MYKOM	**Kota Tinggi**	**6.38**	**10**	Pn	**Pn**	**01 49 28.8**	**-0.3**
KPJI	**Karang Pucung**	**6.73**	**115**	P	**Pn**	**01 49 36.2**	**+2.3**
	0.1nm12nm,0.6s						
GSI	**Gunungsitoli**	**7.78**	**318**	Pn	**Pn**	**01 49 47.2**	**-1.2**
UGM	**Wanagama**	**8.41**	**114**	Pn	**Pn**	**01 49 57.7**	**+0.8**
UGM	**Wanagama**	**8.41**	**114**	P	**Pn**	**01 49 58.5**	**+1.6**
	28nm,1.0s						
KCSI	**Kotacane, Aceh**	**9.43**	**328**	P	**Pn**	**01 50 11.1**	**+0.2**
SNJI	**Sawahan-Nganju**	**9.50**	**110**	P	**Pn**	**01 50 14.4**	**+2.4**
KAPI	**Kappang**	**16.93**	**92**	LR	LR	01 58 38.5	
	comp=Z,59nm,18.9s,baz=232,slow=38						
TOLI2	**Tolitoli**	**18.85**	**73**	P	**P**	**01 52 11.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**23.16**	**351**	P	**P**	**01 52 58.1**	**-0.6**
	1.2nm,0.4s,baz=184,slow=8.4,SNR=16						
CMAR				LR	LR	02 02 25.0	
	comp=Z,33nm,18.6s,baz=185,slow=38						
	1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**23.16**	**351**	P	**P**	**01 52 56.0**	**-2.7**
KNRA	**Kununurra**	**27.84**	**115**	P	**P**	**01 53 40.2**	**-1.1**
KNRA				IAmb	IAmb	01 54 03.4	
	comp=Z,36nm,1.4s						
PZH	**PanZhiHua**	**30.87**	**358**	P	**P**	**01 54 11.3**	**+3.2**
H01W3	**Cape Leeuwin H**	**31.98**	**162**	T	T	02 28 05.8	
	baz=339,slow=76,SNR=9.3						
H01W2	**Cape Leeuwin H**	**32.00**	**162**	T	T	02 28 07.6	
	baz=339,slow=76,SNR=18						
H01W1	**Cape Leeuwin H**	**32.00**	**162**	T	T	02 28 09.4	
	baz=339,slow=76,SNR=9.7						
WRA	**Warramunga Arr**	**34.34**	**119**	P	**P**	**01 54 38.7**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=303,slow=8.9,SNR=36						
	comp=Z,2.4nm,0.6s						
WRA	**Warramunga Arr**	**34.34**	**119**	P	**P**	**01 54 38.0**	**-0.5**
WR8	**Warramunga Arr**	**34.49**	**119**		**P**	**01 54 39.6**	**-0.1**
WR8				IAmb	IAmb	01 54 41.4	
	comp=Z,4.8nm,0.6s						
CD2	**Chengdu**	**35.26**	**1**	P	**P**	**01 54 46.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASAR	**Alice Springs**	**35.54**	**125**	P	**P**	**01 54 49.0**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=296,slow=7.6,SNR=32						
ASAR				PcP	**PcP**	**01 57 16.9**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=308,slow=2.9,SNR=4.7						
	comp=Z,1.5nm,0.3s						
ASAR	**Alice Springs**	**35.54**	**125**	P	**P**	**01 54 48.1**	**-0.7**
AS31	**Alice Springs**	**35.54**	**125**		**P**	**01 54 48.9**	**0.0**
AS31				IAmb	IAmb	01 54 55.4	
	comp=Z,2.5nm,0.3s						
XAN	**Xi'an**	**38.80**	**8**	⇑P	**P**	**01 55 16.0**	**-0.3**
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
NJ2	**Nanjing**	**39.47**	**22**	*e*P	**P**	**01 55 22.9**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LZDM	**Lanzhou Array**	**40.29**	**1**	P	**P**	**01 55 29.2**	**+0.3**
	comp=Z,2.9nm,0.5s,baz=184,slow=12,SNR=10						
	comp=Z,2.9nm,0.5s						
LZH	**Lanzhou**	**40.42**	**1**	*e*P	**P**	**01 55 30.5**	**+0.7**
LZH				pP	pP	01 55 45.3	-1.0
LZH				sP	sP	01 55 54.3	+0.4
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
COEN	**Coen**	**40.90**	**106**	P	**P**	**01 55 32.5**	**-1.5**
COEN				IAmb	IAmb	01 55 59.2	
	comp=Z,22nm,1.4s						
GTA2	**Gaotai**	**43.89**	**357**	*e*P	**P**	**01 55 57.9**	**-0.1**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						

CTAO	**Charters Tower**	**45.04**	**114**	P		**P**	**01 56 07.8**	**+0.5**
CTAO				IAmb		IAmb	01 56 08.4	
	comp=Z,9.6nm,0.8s							
STKA	**Stephens Creek**	**45.41**	**131**	P		**P**	**01 56 11.1**	**+1.0**
	comp=Z,8.6nm,0.5s,baz=310,slow=7.8,SNR=30							
	comp=Z,8.6nm,0.5s							
STKA	**Stephens Creek**	**45.41**	**131**			**P**	**01 56 11.0**	**+0.9**
HHC	**Hu-ho-hao-te**	**45.88**	**9**	*e*P		**P**	**01 56 17.1**	**+3.4**
HHC				pmax	pmax			
	comp=Z,5.0nm,0.5s							
NIL	**Nilore**	**47.13**	**326**	P		**P**	**01 56 22.8**	**-0.8**
NIL				IAmb		IAmb	01 56 23.9	
	comp=Z,8.7nm,0.6s							
KSRS	**Korea Array**	**47.89**	**27**	P		**P**	**01 56 28.9**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=227,slow=7.0,SNR=4.7							
	comp=Z,1.1nm,0.5s							
XLT	**XiLinHaoTe**	**49.68**	**13**	*e*P		**P**	**01 56 43.3**	**+0.2**
XLT				pmax	pmax			
	comp=Z,6.0nm,1.0s							
WMQ	**Urumqi**	**50.02**	**346**	*e*P		**P**	**01 56 46.8**	**+1.2**
WMQ				pmax	pmax			
	comp=Z,13nm,0.7s							
KSH2	**Kashi**	**50.20**	**332**	P		**P**	**01 56 47.0**	**-0.2**
KSH2				pmax	pmax			
	comp=Z,6.0nm,0.6s							
WUS	**Wushi**	**50.35**	**337**			**P**	**01 56 47.4**	**-0.9**
WUS				IAmb		IAmb	01 56 49.1	
	comp=Z,8.3nm,0.9s							
EIDS	**Eidsvold**	**50.71**	**119**	P		**P**	**01 56 51.0**	**-0.1**
EIDS				IAmb		IAmb	01 57 26.8	
	comp=Z,6.7nm,1.2s							
TARG	**Taragay, Kyrgy**	**51.36**	**336**	P		**P**	**01 56 56.0**	**-0.2**
KDJ	**Kajisay**	**51.95**	**336**	P		**P**	**01 57 00.9**	**+0.6**
SONM	**Songino Array**	**52.25**	**3**	P		**P**	**01 57 03.1**	**+0.7**
	comp=Z,9.1nm,0.6s,baz=184,slow=9.3,SNR=77							
SONM				PcP		**PcP**	**01 58 12.5**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=182,slow=4.4,SNR=5.3							
	comp=Z,9.1nm,0.6s							
SONM	**Songino Array**	**52.25**	**3**	P		**P**	**01 57 03.1**	**+0.7**
SONM				IAmb		IAmb	01 57 03.6	
	comp=Z,9.8nm,0.6s							
DRK	**Karamyk**	**52.28**	**330**	P		**P**	**01 57 03.7**	**+0.8**
DRK				IAmb		IAmb	01 57 10.5	
	comp=Z,5.1nm,0.5s							
ULN	**Ulaanbaatar**	**52.31**	**4**			**P**	**01 57 03.5**	**+0.7**
ULN				IAmb		IAmb	01 57 04.0	
	comp=Z,4.4nm,0.9s							
MJAR	**Matsushiro Arr**	**52.59**	**36**	P		**P**	**01 57 03.0**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=210,slow=6.8,SNR=4.7							
	comp=Z,0.9nm,0.3s							
BOOM	**Boomskoye usch**	**52.76**	**335**	P		**P**	**01 57 06.0**	**-0.4**
ARSB	**Arslanbob**	**53.13**	**332**	P		**P**	**01 57 09.1**	**+0.1**
ARSB				IAmb		IAmb	01 57 12.8	
	comp=Z,7.0nm,1.1s							
AAK	**Ala-Archa**	**53.50**	**334**	P		**P**	**01 57 11.8**	**+0.1**
AAK				IAmb		IAmb	01 57 15.2	
	comp=Z,5.6nm,1.4s							
MKAR	**Makanchi Array**	**54.23**	**343**	P		**P**	**01 57 16.2**	**-0.6**
	comp=Z,12nm,0.8s,baz=146,slow=8.2,SNR=94							
	comp=Z,12nm,0.8s							
MKAR	**Makanchi Array**	**54.23**	**343**			**P**	**01 57 16.3**	**-0.4**
MAKZ	**Makanchi**	**54.33**	**343**			**P**	**01 57 16.8**	**-0.7**
BNX	**BinXian**	**54.65**	**21**	⇓P		**P**	**01 57 19.8**	**0.0**
BNX				pmax	pmax			
	comp=Z,10.0nm

MXZ				S	Sn	02 19 05.3	+2.9		
WMGZ	**Waiomatatini S**	**4.10**	**194**	P	Pn	02 18 18.9	-1.1		
WMGZ				S	Sn	02 19 08.9	+1.0		
HAZ	**Te Kaha**	**4.20**	**201**	P	Pn	02 18 22.3	+0.9		
HAZ				S	Sn	02 19 12.1	+1.7		
PKGZ	**Pakihiroa**	**4.22**	**198**	P	Pn	02 18 21.6	-0.1		
PKGZ				S	Sn	02 19 14.7	+3.7		
KUZ	**Kuaotunu**	**4.36**	**227**	P	Pn	02 18 23.3	-0.2		
PUZ	**Puketiti**	**4.38**	**195**	P	Pn	02 18 22.9	-0.9		
PUZ				S	Sn	02 19 16.4	+1.6		
RUGZ	**Raukumara Rang**	**4.43**	**201**	P	Pn	02 18 25.8	+1.2		
RUGZ				S	Sn	02 19 15.9	-0.2		
TWGZ	**Tauwhareparae**	**4.54**	**197**	P	Pn	02 18 25.9	-0.2		
TWGZ				S	Sn	02 19 21.9	+3.0		
CNGZ	**Carnagh Statio**	**4.79**	**194**	P	Pn	02 18 28.4	-0.9		
MWZ	**Matawai**	**4.81**	**201**	P	Pn	02 18 28.9	-0.9		
MWZ				S	Sn	02 19 26.5	+1.0		
WCZ	**Waipu Caves**	**4.88**	**243**	P	Pn	02 18 31.7	+1.1		
URZ	**Urewera**	**4.88**	**205**	P	Pn	02 18 31.8	+1.1		
URZ				S	Sn	02 19 27.6	+0.5		
RIGZ	**Rimuhau**	**5.10**	**197**	P	Pn	02 18 31.8	-1.9		
RIGZ				S	Sn	02 19 33.3	+0.8		
RTZ	**Ruatahuna**	**5.25**	**204**	P	Pn	02 18 35.0	-0.8		
SNGZ	**Shannon Statio**	**5.28**	**200**	P	Pn	02 18 36.4	+0.1		
SNGZ				S	Sn	02 19 37.2	+0.1		
MTHZ	**Maungataniwha**	**5.51**	**204**	P	Pn	02 18 37.8	-1.5		
MTHZ				S	Sn	02 19 42.0	-0.6		
NMHZ	**Naumai**	**5.74**	**203**	P	Pn	02 18 41.7	-0.8		
NMHZ				S	Sn	02 19 47.5	-0.8		
BKZ	**Black Stump Fm**	**5.91**	**205**	P	Pn	02 18 43.6	-1.3		
BKZ				S	Sn	02 19 50.6	-1.9		
HIZ	**Hauiti**	**6.09**	**219**	P	Pn	02 18 49.7	+2.4		
TMVZ	**Te Maari**	**6.17**	**210**	P	Pn	02 18 48.0	-0.5		
TMVZ				S	Sn	02 19 59.7	+0.7		
OTVZ	**Oturere**	**6.22**	**210**	P	Pn	02 18 49.0	-0.3		
OTVZ				S	Sn	02 20 00.7	+0.3		
SNVZ	**South Ngauruho**	**6.25**	**210**	P	Pn	02 18 48.7	-1.0		
SNVZ				S	Sn	02 19 59.6	-1.7		
KAHZ	**Kahuranaki**	**6.36**	**200**	P	Pn	02 18 49.5	-1.5		
KRHZ	**Kereru**	**6.38**	**204**	P	Pn	02 18 49.0	-2.3		
KRHZ				S	Sn	02 19 58.3	-5.7		
PNHZ	**Pukenui**	**6.68**	**204**	P	Pn	02 18 52.5	-2.9		
PRHZ	**Porangahau**	**6.86**	**200**	P	Pn	02 18 54.7	-3.3		
ANWZ	**Angora Road**	**7.09**	**200**	P	Pn	02 18 55.1	-5.8		

MOS ***14*** *02:27:19.9±1.2, 47°.28N×154°.04E, h44km, mb4.4/1, Error ellipse: s-maj=12.8km s-min=7.9km az=56.4*
SKHL ***14*** *02:27:20.6±0.7, 47°.30N×154°.20E, h52km±8km, mb4.8/5*
NEIC ***14*** *02:27:21.8±1.6, 47°.4N±0°.1×154°.0E±0°.2, h35km±2km, mb4.4/12, Error ellipse: s-maj=22.9km s-min=13.2km az=142.0*
IDC ***14*** *02:27:23.1±2.7, 47°.34N×153°.89E, h49km±25km, mb3.6/18, mbtmp3.9/21, ML3.3/3, MS3.1/6, Error ellipse: s-maj=21.2km s-min=15.3km az=141.0*

ISC 14 02:27:20.5±0.6, 47°.27N±0°.08×154°.13E±0°.08, h31km, n84, σ1s23/75, mb4.1/25, MS3.0/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.66**	**20**	*e*PN		Pb		02 28 18.4	-6.0
SKR				pmax	pmax				
	comp=Z,210nm,0.9s								
SKR				MLR	MLR				
	comp=Z,700nm,14.0s								
SKR	**Severo-Kuril's**	**3.66**	**20**	*e*P		**Pn**		**02 28 15.0**	**+0.1**
SKR				AMB	AMB			02 28 20.0	
	comp=Z,60nm,0.3s								
SKR				*e*S		**Sn**		**02 28 55.1**	**-1.9**
SKR				A	A			02 28 58.9	
	comp=Z,80nm,0.3s								
SKR				A	A			02 28 58.9	
	comp=Z,90nm,0.3s								
PAU	**Pauzhetka**	**4.55**	**22**	*e*P		**Pn**		**02 28 27.7**	**+0.5**
PAU				AMB	AMB			02 28 32.4	
	comp=Z,90nm,0.8s								
PAU				*e*S		**Sn**		**02 29 18.1**	**-0.9**
PAU				A	A			02 29 36.4	
	comp=Z,210nm,0.5s								
PAU				A	A			02 29 36.4	
	comp=Z,120nm,0.5s								
KUR	**Kuril'sk**	**4.80**	**247**	*e*PN		**Pn**		**02 28 29.3**	**-1.2**
KUR	**Kuril'sk**	**4.80**	**247**	*e*P		**Pn**		**02 28 31.6**	**+1.1**
KUR				AMB	AMB			02 28 36.3	
	comp=Z,100nm,0.5s								
KUR				*i* S		**Sn**		**02 29 24.4**	**-0.6**
KUR				A	A			02 29 28.1	
	comp=Z,170nm,0.5s								
KUR				A	A			02 29 28.1	
	comp=Z,220nm,0.5s								
PEA0B	**Petropavlovsk-**	**6.28**	**20**	Pn		**Pn**		**02 28 49.8**	**-1.1**
PEA0B	**Petropavlovsk-**	**6.28**	**20**	PN		**Pn**		**02 28 49.8**	**-1.1**
PETK	**Petropavlovsk-**	**6.28**	**20**	P		**Pn**		**02 28 52.0**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=205,slow=14,SNR=6.3								
PETK				LR		LR		02 31 26.9	
	comp=Z,124nm,19.6s,baz=229,slow=39								
	comp=Z,5.6nm,0.6s								
PETK	**Petropavlovsk-**	**6.28**	**20**	Pn		**Pn**		**02 28 50.1**	**-0.8**
PET	**Petropavlovsk**	**6.46**	**25**	*e*S		**Sn**		**02 30 04.7**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**6.64**	**244**	PN		**Pn**		**02 28 57.0**	**+1.2**
YUK				pmax	pmax				
	comp=Z,109nm,0.3s								
YUK				pmax	pmax				
	comp=N,197nm,0.4s								
YUK				pmax	pmax				
	comp=E,80nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**6.64**	**244**	*e*P		**Pn**		**02 28 56.9**	**+1.2**
YUK				AMB	AMB			02 28 57.9	
	comp=E,60nm,0.5s								
YUK				*e*S		**Sn**		**02 30 08.7**	**-1.6**
YUK				A	A			02 30 21.1	
	comp=E,190nm,0.6s								
YUK				A	A			02 30 21.1	
	comp=E,230nm,0.6s								
RUSJ	**Misakicho**	**6.98**	**246**	*e*PN		**Pn**		**02 29 03.6**	**+3.1**
RUSJ				*i* S		**Sn**		**02 30 21.5**	**+2.7**
GLVR	**Golovnino**	**7.00**	**243**	PN		**Pn**		**02 29 02.3**	**+1.5**
GLVR				pmax	pmax				
	comp=N,32nm,0.5s								
GLVR				pmax	pmax				
	comp=E,67nm,0.5s								
GLVR				pmax	pmax				
	comp=E,28nm,0.4s								
GLVR	**Golovnino**	**7.00**	**243**	*e*P		**Pn**		**02 29 02.3**	**+1.5**
GLVR				AMB	AMB			02 29 05.6	
	comp=E,70nm,0.5s								
GLVR				*i* S		**Sn**		**02 30 19.3**	**0.0**
NMR	**Nemuro--Hokkai**	**7.09**	**240**	*e*PN		**Pn**		**02 28 59.8**	**-2.2**
NMR	**Nemuro--Hokkai**	**7.09**	**240**	*e*P		**Pn**		**02 29 00.5**	**-1.5**
YSS	**Yuzhno-Sakhali**	**7.77**	**272**	*e*PN		**Pn**		**02 29 14.0**	**+2.7**
YSS				pmax	pmax				
	comp=Z,20nm,1.1s								
YSS	**Yuzhno-Sakhali**	**7.77**	**272**	*e*P		**Pn**		**02 29 13.5**	**+2.2**
JKA	**Kamikawa-asahi**	**8.67**	**253**			**Pn**		**02 29 23.8**	**+0.2**
JKA	**Kamikawa-asahi**	**8.67**	**253**	*e*P		**Pn**		**02 29 25.3**	**+1.7**
ASAJ	**Asahikawa**	**8.67**	**253**	P		**Pn**		**02 29 25.3**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=76,slow=22,SNR=6.3								
	comp=Z,9.8nm,0.8s								
MA2	**Magadan**	**12.49**	**352**	LR		LR		02 35 01.9	
	comp=Z,83nm,18.7s,baz=126,slow=37								
MJAR	**Matsushiro Arr**	**15.95**	**234**	P		**Pn**		**02 31 00.9**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=37,slow=8.3,SNR=1.9								
	comp=Z,1.3nm,0.6s								
MJAR	**Matsushiro Arr**	**15.95**	**234**	P		**Pn**		**02 31 01.0**	**-1.5**
ADK	**Adak**	**19.41**	**65**	P		**P**		**02 31 43.9**	**+0.1**
ADK	**Adak**	**19.41**	**65**	P		**P**		**02 31 43.9**	**+0.1**
ADK				pmax	pmax				
	comp=Z,245nm,1.5s								
YAK	**Yakutsk**	**20.28**	**326**	LR		LR		02 40 23.1	
	comp=Z,39nm,18.1s,baz=130,slow=39								
KSRS	**Korea Array**	**21.62**	**253**	P		**P**		**02 32 08.1**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=63,slow=9.3,SNR=5.7								
	comp=Z,1.1nm,0.6s								
TIXI	**Tiksi**	**27.18**	**343**	LR		LR		02 44 50.4	
	comp=Z,42nm,19.1s,baz=194,slow=39								
H11N2	**WAKE ISLAND Hy**	**29.37**	**155**	T		T		03 05 04.7	
	baz=342,slow=74,SNR=56								
H11N1	**WAKE ISLAND Hy**	**29.39**	**155**	T		T		03 05 02.7	
	baz=342,slow=74,SNR=46								
H11N3	**WAKE ISLAND Hy**	**29.39**	**155**	T		T		03 05 06.3	
	baz=342,SNR=27								
H11S1	**WAKE ISLAND Hy**	**30.48**	**156**	T		T		03 05 27.0	
	baz=343,slow=75,SNR=126								
H11S3	**WAKE ISLAND Hy**	**30.49**	**156**	T		T		03 05 26.9	
	baz=343,slow=75,SNR=128								
H11S2	**WAKE ISLAND Hy**	**30.50**	**156**	T		T		03 05 32.3	
	baz=343,slow=75,SNR=112								
K17K	**Iditarod**	**30.50**	**42**	P		**P**		**02 33 31.3**	**+1.0**
K17K				IAmb	IAmb			02 34 16.1	
	comp=Z,7.5nm,1.4s								
D22K	**Ayikyak River**	**33.87**	**31**	P		**P**		**02 34 01.2**	**+1.4**
D22K				IAmb	IAmb			02 34 30.6	
	comp=Z,5.5nm,1.4s								
ILAR	**Eielson Array**	**35.71**	**39**	P		**P**		**02 34 17.9**	**+2.2**
	comp=Z,0.3nm,0.8s,baz=272,slow=10,SNR=3.7								
	comp=Z,0.3nm,0.8s								
D25K	**Kavik River**	**36.17**	**31**	P		**P**		**02 34 21.1**	**+1.5**
ZALV	**Zalesovo Beam**	**42.88**	**306**	P		**P**		**02 35 13.7**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=61,slow=8.8,SNR=4.9								
	comp=Z,0.9nm,0.5s								
ZALV	**Zalesovo Beam**	**42.88**	**306**	P		**P**		**02 35 13.5**	**-2.1**
MKAR	**Makanchi Array**	**47.33**	**297**	P		**P**		**02 35 49.4**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=65,slow=8.2,SNR=11								
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**47.33**	**297**	P		**P**		**02 35 49.8**	**-1.3**
MKAR	**Makanchi Array**	**47.33**	**297**	P		**P**		**02 35 49.8**	**-1.3**
MKAR	**Makanchi Array**	**47.33**	**297**	*e*P		**P**		**02 35 49.8**	**-1.3**
KURK	**Kurchatov**	**47.66**	**304**	P		**P**		**02 35 52.5**	**-1.1**
KURK				IAmb	IAmb			02 35 53.0	
	comp=Z,3.4nm,0.7s								
KURK	**Kurchatov**	**47.66**	**304**	P		**P**		**02 35 52.8**	**-0.8**
KURK	**Kurchatov**	**47.66**	**304**	*e*P		**P**		**02 35 52.8**	**-0.8**
KURBB	**Kurchatov Arra**	**47.75**	**304**	P		**P**		**02 35 52.8**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=69,slow=8.5,SNR=12								
	comp=Z,2.2nm,0.7s								
YKA	**Yellowknife Ar**	**50.09**	**37**	P		**P**		**02 36 12.9**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=297,slow=8.0,SNR=4.8								
	comp=Z,0.2nm,0.7s								
RES	**Resolute Bay**	**50.12**	**19**	LR		LR		02 59 17.8	
	comp=Z,22nm,19.7s,baz=16,slow=38								
BVAR	**Borovoye Array**	**51.07**	**309**	P		**P**		**02 36 19.2**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=58,slow=6.8,SNR=3.1								
	comp=Z,0.5nm,0.3s								
CMAR	**Chiang Mai Arr**	**53.17**	**257**	P		**P**		**02 36 36.2**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=37,slow=6.6,SNR=4.4								
	comp=Z,0.7nm,0.3s								
ARTI	**Arti**	**55.21**	**318**	P		**P**		**02 36 49.1**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=51,slow=13,SNR=3.6								
	comp=Z,1.6nm,0.6s								
O02D	**Mt. Diablo Mer**	**57.76**	**64**	P		**P**		**02 37 08.3**	**-0.2**
O02D				IAmb	IAmb			02 37 35.9	
	comp=Z,8.8nm,1.5s								
AB31	**Akbulak array**	**58.63**	**310**	P		**P**		**02 37 13.1**	**-1.2**
ABKAR	**Akbulak array**	**58.63**	**310**	P		**P**		**02 37 13.4**	**-0.9**
KAPI	**Kappang**	**60.24**	**220**	LR		LR		03 08 43.1	
	comp=Z,11nm,18.1s,baz=106,slow=41								
FINES	**FINESS Array B**	**63.87**	**335**	P		**P**		**02 37 49.1**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=37,slow=7.5,SNR=15								
	comp=Z,0.6nm,0.4s								
FINES	**FINESS Array B**	**63.87**	**335**	P		**P**		**02 37 48.9**	**-0.6**
OBN	**Obninsk**	**65.28**	**326**	*e*P		**P**		**02 37 58.5**	**-0.3**
OBN				*e*				02 38 29.1	
OBN				*e*				02 40 22.1	
OBN				pmax	pmax				
	comp=Z,2.0nm,0.9s								
OBN	**Obninsk**	**65.28**	**326**	*e*P		**P**		**02 37 58.5**	**-0.3**
NB201	**NORSAR Array S**	**67.94**	**342**	P		**P**		**02 38 15.8**	**0.0**
NB2	**NORSAR Subarra**	**67.96**	**342**	P		**P**		**02 38 15.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=26,slow=6.5								
NOA	**NORSAR Array B**	**67.96**	**342**	P		**P**		**02 38 15.5**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=26,slow=6.3,SNR=8.0								
	comp=Z,1.3nm,0.6s								
HFS	**Hagfors**	**68.22**	**340**	P		**P**		**02 38 17.2**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=57,slow=5.5,SNR=28								
	comp=Z,2.2nm,0.4s								
WB0	**Warramunga Arr**	**69.05**	**200**	P		**P**		**02 38 22.6**	**-0.5**
AKASG	**Malin Array Be**	**71.50**	**327**	P		**P**		**02 38 36.7**	**-1.1**
	comp=Z,1.3nm,0.4s,baz=33,slow=6.0,SNR=6.2								
	comp=Z,1.3nm,0.4s								
SCHQ	**Schefferville**	**72.56**	**23**	P		**P**		**02 38 45.1**	**+1.0**
SCHQ				IAmb	IAmb			02 39 08.1	
	comp=Z,7.2nm,1.2s								
ASAR	**Alice Springs**	**72.92**	**199**	P		**P**		**02 38 46.8**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=14,slow=5.8,SNR=14								
	comp=Z,1.7nm,0.8s								
ASAR	**Alice Springs**	**72.92**	**199**	P		**P**		**02 38 47.0**	**+0.4**
BUR08	**Bucovina Ar. S**	**75.52**	**327**	P		**P**		**02 39 02.2**	**+0.5**
BUR08				IAmb	IAmb			02 39 02.5	
	comp=Z,4.5nm,0.9s								
BURAR	**Bucovina Array**	**75.54**	**327**	P		**P**		**02 39 01.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**76.00**	**347**	P		**P**		**02 39 03.8**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=19,slow=5.7,SNR=3.4								
	comp=Z,0.3nm,0.4s								
TXAR	**Lajitas Array**	**76.63**	**61**	P		**P**		**02 39 08.6**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=284,slow=5.0,SNR=4.8								
	comp=Z,0.3nm,0.6s								
TXAR	**Lajitas Array**	**76.63**	**61**	P		**P**		**02 39 08.8**	**+0.5**
BRTR	**Keskin Array B**	**78.49**	**317**	P		**P**		**02 39 19.1**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=69,slow=4.2,SNR=3.9								
	comp=Z,1.1nm,0.9s								
MMAI	**Mount Meron Ar**	**82.99**	**312**	P		**P**		**02 39 43.3**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=37,slow=9.9,SNR=4.4								
	comp=Z,0.9nm,0.6s								
H03N2	**Juan Fernandez**	**138.06**	**90**	T		T		05 20 22.0	
	baz=308,slow=77,SNR=9.0								
H03N1	**Juan Fernandez**	**138.07**	**90**	T		T		05 20 19.4	
	baz=308,slow=77,SNR=13								
H03N3	**Juan Fernandez**	**138.07**	**90**	T		T		05 20 23.1	
	baz=308,slow=77,SNR=9.5								
BI02	**San Fabin de**	**145.06**	**89**	PKPbc		**PKPab**		**02 46 53.7**	**-0.2**
PLCA	**Paso Flores**	**147.56**	**95**	PKPbc		**PKPbc**		**02 47 01.1**	**0.0**
	comp=Z,6.2nm,1.3s,baz=314,slow=2.7,SNR=3.8								

SOME ***14*** *02:35:01.0, 41°.50N×83°.92E, h10km*
NNC ***14*** *02:35:08.3±3.5, 41°.45N×83°.47E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=28.5km s-min=20.5km az=4.0*

ISC 14 02:35:10.8±2.8, 42°.0N±0°.1×83°.7E±0°.1, h15km, n13, σ1s88/19, 7C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.34**	**292**	Pg		**Pn**		**02 36 04.8**	**+2.1**
	16nm,0.1s								
SHLS				Lg		Lg		02 36 51.3	
	46nm,0.4s								
SHLS	**Shalkode**	**3.34**	**292**	*e*P		**Pn**		**02 36 04.3**	**+1.6**
	9.4nm,0.3s								
SHLS				*e*S		**Sb**		**02 36 49.7**	**-0.8**
	46nm,0.3s								
PDGK	**Podgornoye**	**3.39**	**295**	⇑Pn		**Pn**		**02 36 05.8**	**+2.6**
	1.2nm,0.4s								
PDGK				⇑Pg		**Pg**		**02 36 14.1**	**-1.6**
	3.3nm,0.5s								
PDGK				⇑Sn		**Sb**		**02 36 48.3**	**-3.3**
	4.3nm,0.3s								
PDGK				⇓Lg		Lg		02 37 00.8	
	11nm,0.6s								
UZB	**Uzunbulak**	**3.65**	**290**	Pg		**Pb**		**02 36 14.1**	**-1.0**
	4.5nm,0.2s								
UZB				Lg		Lg		02 37 07.0	
	16nm,0.6s								
UZB	**Uzunbulak**	**3.65**	**290**	*e*P		**Pb**		**02 36 14.1**	**-1.0**
	4.5nm,0.2s								
UZB				*e*S		**Sg**		**02 37 07.0**	**-0.9**
	16nm,0.6s								
DJR	**Jarkent**	**3.70**	**311**	Pg		**Pb**		**02 36 17.8**	**+1.9**
	6.1nm,0.3s								
DJR				Lg		Lg		02 37 12.0	
	4.9nm,0.3s								
DJR	**Jarkent**	**3.70**	**311**	*e*P		**Pb**		**02 36 17.6**	**+1.7**
	1.3nm,0.2s								
DJR				*e*S		**Sg**		**02 37 12.9**	**+3.4**
	2.3nm,0.2s								
KPKS	**Kokpek**	**3.98**	**293**	Pg		**Pb**		**02 36 21.4**	**+0.6**
	0.3nm,0.1s								
KPKS				Lg		Lg		02 37 18.6	
	21nm,0.3s								
KPKS	**Kokpek**	**3.98**	**293**	*e*P		**Pb**		**02 36 20.8**	**0.0**
	0.3nm,0.1s								
KPKS				*e*S		**Sg**		**02 37 18.2**	**-0.5**
	24nm,0.4s								
SATY	**Saty**	**4.06**	**287**	Pg		**Pb**		**02 36 21.6**	**-0.5**
	5.1nm,0.5s								
SATY				Lg		Lg		02 37 19.4	
	24nm,0.9s								
KNOS	**Konyrlen**	**4.07**	**307**	Pg		**Pb**		**02 36 23.5**	**+1.2**
	4.9nm,0.5s								
KNOS				Lg		Lg		02 37 23.1	
	5.8nm,0.4s								
MK31	**Makanchi Array**	**4.91**	**349**	⇑Pn		**Pb**		**02 36 34.6**	**-1.8**
	baz=154,slow=12,SNR=5.7								
MK31				⇑Pg		Pg		02 36 49.7	+5.0
	0.2nm,0.3s,baz=170,slow=16,SNR=3.9								
MK31				⇓Sn		**Sb**		**02 37 33.5**	**-1.7**
	0.1nm,0.2s,baz=49,slow=58,SNR=7.1								
MK31				⇑Lg		Lg		02 37 59.2	
	1.6nm,0.5s,baz=165,slow=28,SNR=5.9								
AAK	**Ala-Archa**	**6.86**	**278**	⇑Lg		Lg		02 38 45.0	
	1.9nm,0.7s								

DJA ***14*** *02:54:11.5±0.2, 3°.3S±2°.2×12°.7E±°, h10km, M4.0/15, mb4.0/2, MLv3.9/15*
IDC ***14*** *02:54:18.5±3.7, 2°.79S×127°.37E, h83km±38km, mb3.3/3, mbtmp3.9/6, Error ellipse: s-maj=30.3km s-min=18.0km az=74.0*

ISC 14 02:54:11.8±0.9, 2°.72S±0°.06×126°.86E±0°.06, h35km, n15, σ2s13/17, mb3.6/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.57**	**155**	P		**Pn**		**02 54 23.5**	**0.0**
NLAI				S		**Sn**		**02 54 31.4**	**-0.4**
SANI	**Sanana**	**1.09**	**307**	P		**Pn**		**02 54 31.2**	**+0.6**
SANI				S		**Sn**		**02 54 44.7**	**+0.2**
AAI	**Ambon**	**1.65**	**126**	P		Pn		02 54 43.3	+5.0
KRAI	**Karang Ratu**	**1.65**	**111**	P		**Pn**		**02 54 41.0**	**+2.7**
MSAI	**Masohi**	**2.16**	**107**	P		**Pn**		**02 54 48.6**	**+3.2**
BNDI	**Bandanaira**	**3.53**	**121**	P		**Pn**		**02 55 07.6**	**+3.4**
LUWI	**Luwuk**	**4.41**	**292**	P		**Pn**		**02 55 19.2**	**+2.9**
SIJI	**Sorong**	**4.77**	**67**	P		**Pn**		**02 55 21.4**	**+0.1**
	15nm,0.3s,baz=11,slow=23,SNR=9.6								
SIJI				S		**Sn**		**02 56 12.4**	**-3.1**
	9.0nm,0.2s,baz=218,slow=23,SNR=5.9								
SIJI	**Sorong**	**4.77**	**67**	P		**Pn**		**02 55 23.2**	**+1.9**
FAKI	**Fak Fak**	**5.39**	**92**	P		**Pn**		**02 55 30.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**15.33**	**184**	P		**P**		**02 57 49.7**	**-0.4**
	1.5nm,0.6s,baz=4.1,slow=14,SNR=1.9								
WRA	**Warramunga Arr**	**18.62**	**157**	P		**Pn**		**02 58 26.3**	**-0.7**
	15nm,1.0s,baz=339,slow=12,SNR=20								
ASAR	**Alice Springs**	**21.92**	**162**	P		**P**		**02 59 02.8**	**+0.5**
	1.3nm,0.7s,baz=342,slow=12,SNR=19								
ASAR				S		**S**		**03 02 59.3**	**-3.3**
	0.8nm,0.9s,baz=352,slow=25,SNR=4.9								
	1.3nm,0.7s								
STKA	**Stephens Creek**	**32.16**	**156**	P		**P**		**03 00 36.1**	**-0.2**
	1.0nm,0.5s,baz=315,slow=16,SNR=3.6								
	1.0nm,0.5s								
MKAR	**Makanchi Array**	**62.95**	**327**	P		P		03 04 38.6	+3.6
	0.4nm,0.8s,baz=131,slow=8.2,SNR=3.8								
	0.4nm,0.8s								

IDC ***14*** *03:16:33.3±1.7, 12°.62N×87°.02W, h136km±34km, mb3.1/4, mbtmp3.6/6, Error ellipse: s-maj=71.6km s-min=21.2km az=32.0*
CATAC ***14*** *03:16:34.3±0.2, 12°.N±2°.×8°.7W±°, h103km±2km, M3.7/29, MLv3.7/29, Error ellipse: s-maj=5.6km s-min=2.4km az=36.0, confirmed*
SNET ***14*** *03:16:35.5±1.1, 12°.15N×87°.65W, h20km±8km, ML3.4, Presumed earthquake*

ISC 14 03:16:31.9±0.9, 12°.44N±0°.05×87°.19W±0°.04, h126km±6km, n73, σ1s03/108, mb3.3/4, 6C-20D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.29**	**27**	⇓P		**Pn**		**03 16 50.3**	**+0.6**
CRIN				S		**Sn**		**03 17 03.2**	**+0.1**
ALEN	**Leon**	**0.31**	**87**	P		**Pn**		**03 16 50.5**	**+0.9**
ALEN				S		**Sn**		**03 17 02.5**	**-0.4**
QUEN	**Al S del Volca**	**0.36**	**65**	⇓P		**Pn**		**03 16 50.4**	**+0.6**
HOYN	**Al Sur del Vol**	**0.38**	**66**	⇓P		**Pn**		**03 16 50.3**	**+0.3**
HOYN				S		**Sn**		**03 17 03.2**	**-0.4**
HERN	**Volcan Telica**	**0.38**	**64**	⇓P		**Pn**		**03 16 50.3**	**+0.3**
HERN				S		**Sn**		**03 17 03.2**	**-0.5**
POLN

PMON				eS		Sn	03 17 40.0	-1.2
JAYA	**Jayaque - finc**	**2.51**	**299**	P		Pn	03 17 13.3	+1.0
JAYA	**Jayaque - finc**	**2.51**	**299**	eP		Pn	03 17 13.1	+0.8
JAYA				eS		Sn	03 17 40.5	-2.8
SBLS	**San Blas**	**2.75**	**301**	eP		Pn	03 17 16.1	+0.7
SNJE	**San Jose**	**2.75**	**301**	eP		Pn	03 17 16.2	+0.9
SNJE				eS		Sn	03 17 48.9	+0.1
SLOZ	**Alcaldia de Sa**	**2.98**	**302**	P		Pn	03 17 19.6	+1.4
SLOZ	**Alcaldia de Sa**	**2.98**	**302**	eP		Pn	03 17 19.3	+1.1
JTS	**Las Juntas de**	**3.06**	**134**	P		Pn	03 17 21.1	+1.9
	comp=Z,20nm,0.3s,baz=321,slow=16,SNR=32							
JTS				S		Sn	03 17 54.7	-1.0
	comp=Z,52nm,0.3s,baz=292,slow=21,SNR=13							
FAME	**Alcaldia de Sa**	**3.09**	**297**	P		Pn	03 17 20.7	+1.1
FAME				S		Sn	03 17 57.7	+1.3
APG	**El Apazote**	**4.08**	**309**	P		Pn	03 17 34.9	+2.0
	comp=Z,0.5nm,0.3s,baz=128,slow=9.3,SNR=8.5							
CMIG	**Matias Romero**	**8.76**	**303**	P		Pn	03 18 36.9	+1.2
	comp=Z,1.6nm,0.3s,baz=164,slow=11,SNR=23							
CMIG				S		Sn	03 20 12.5	-0.3
	comp=Z,1.0nm,0.3s,baz=277,slow=19,SNR=1.9							
TXAR	**Lajitas Array**	**22.75**	**320**	P		P	03 21 24.4	+0.8
	comp=Z,0.6nm,0.4s,baz=140,slow=9.6,SNR=13							
	comp=Z,0.6nm,0.4s							
PDAR	**Pinedale Array**	**35.90**	**331**	P		P	03 23 20.2	+0.1
	comp=Z,0.3nm,0.6s,baz=124,slow=11,SNR=4.5							
	comp=Z,0.3nm,0.6s							
SCHQ	**Schefferville**	**45.21**	**16**	P		P	03 24 35.1	-1.1
	comp=Z,1.9nm,0.5s,baz=204,slow=5.6,SNR=6.6							
	comp=Z,1.9nm,0.5s							
YKA	**Yellowknife Ar**	**53.69**	**345**	P		P	03 25 39.0	-1.3
	comp=Z,0.1nm,0.5s,baz=133,slow=7.3,SNR=5.4							
	comp=Z,0.1nm,0.5s							

*IDC **14** 03:17:57.6±2.4, 7.°05S×128.°99E, h0km, mb3.4/1, mbtmp3.7/3, ML4.1/2, Error ellipse: s-maj=200.7km s-min=32.2km az=67.0*
*DJA **14** 03:18:13.2±0.4, 7.°S×12.°9E±.°, h164km±12km, M4.5/14, mB4.9/3, mb4.3/9, MLv4.5/14, Mw(mB)4.2/3*
ISC 14 03:18:11.5±0.9, **7.°59S**±0.°07×**129.°6E**±0.°1, **h150**km, **n9, σ2°37/11, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**5.33**	**30**	P	**Pn**	**03 19 27.5**	**-1.9**
KMPI	**Kaimana, Papua**	**5.63**	**46**	P	**Pn**	**03 19 34.2**	**+0.8**
SOEI	**Soe**	**5.71**	**248**	P	**Pn**	**03 19 34.7**	**+0.1**
	0.3nm55nm,0.8s						
BATI	**Baumata**	**6.43**	**246**	P	**Pn**	**03 19 44.6**	**+0.5**
	0.4nm40nm,0.5s						
SIJI	**Sorong**	**6.88**	**14**	P	**Pn**	**03 19 49.9**	**-0.1**
RKPI	**Ransiki, Papua**	**7.56**	**37**	P	**Pn**	**03 20 00.6**	**+1.5**
WRA	**Warramunga Arr**	**13.10**	**160**	Pn	**P**	**03 21 14.7**	**-2.1**
	1.3nm,0.3s,baz=333,slow=14,SNR=40						
WRA				Sn	**Sn**	**03 23 34.6**	**-2.5**
	1.0nm,0.3s,baz=333,slow=22,SNR=9.9						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**16.50**	**166**	P	**Pn**	**03 21 59.7**	**+5.2**
	0.4nm,0.3s,baz=338,slow=10.0,SNR=23						
ASAR				S	**S**	**03 24 57.8**	**-0.2**
	0.5nm,0.6s,baz=333,slow=22,SNR=5.8						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**68.51**	**327**	P	**P**	**03 28 57.0**	**-0.7**
	0.2nm,0.4s,baz=112,slow=6.5,SNR=4.5						
	0.2nm,0.4s						

*ATH **14** 03:23:31.7, 36.°21N×29.°02E, h12km±2km, ML3.0/11, Manual Solution by I.Dede First location: 2020/02/14 03:25:02, This location: 2020/10/26 17:14:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*ISK **14** 03:23:32.7, 36.°26N×28.°97E, h18km, ML3.2/18*
*AFAD **14** 03:23:32.1, 36.°18N×28.°87E, h23km±1km, ML3.2*
*GII **14** 03:23:32.1±0.0, 35.°889N±0.°001×29.°032E±0.°001, h0km, Mws3.2, confirmed*
*THE **14** 03:23:33.8, 36.°N±4.°×2.°9E±.°, h13km±13km, M2.8/8, ML h2.8/8*
ISC 14 03:23:30.4±1.2, **36.°08N**±0.°03×**28.°98E**±0.°02, **h10**km±9km, **n93, σ1°18/127, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZZE	**Mula-Seydike**	**0.41**	**29**	P	**Pb**	**03 23 40.1**	**+0.2**
KSL	**Kastellorizon**	**0.50**	**81**	P	**Pn**	**03 23 44.2**	**+0.6**
KSL				S	**Sb**	**03 23 53.0**	**+4.5**
AKAS	**Kas**	**0.53**	**73**	P	**Pn**	**03 23 44.1**	**-0.1**
FETY	**Fethiye**	**0.56**	**9**	P	Pg	03 23 32.7	-8.7
FETY				S	Sg	03 23 37.4	-11
ARG	**Arkhangelos**	**0.70**	**282**	Pg	**Pb**	**03 23 45.9**	**+1.1**
ARG				Sg	**Sn**	**03 23 57.5**	**+0.1**
ARG	**Arkhangelos**	**0.70**	**282**	P	**Pb**	**03 23 45.9**	**+1.1**
ARG				S	**Sb**	**03 23 56.2**	**+1.6**
ARG	**Arkhangelos**	**0.70**	**282**	P	**Pb**	**03 23 45.7**	**+0.9**
ARG				S	**Sb**	**03 23 55.5**	**+0.9**
RDI1	**Rhodes Town Ha**	**0.72**	**302**	P	**Pb**	**03 23 45.1**	**+0.1**
RDI1				S	**Sg**	**03 23 54.3**	**+0.7**
RODB	**Rodos**	**0.72**	**301**	P	**Pb**	**03 23 44.8**	**-0.2**
RODB				S	**Sg**	**03 23 54.2**	**+0.6**
SABU	**Mula-Dalaman**	**0.75**	**359**	P	**Pg**	**03 23 44.4**	**-0.5**
SABU				S	**Sg**	**03 23 54.0**	**-0.7**
SABU				IAML		03 23 57.0	
	comp=N,877nm,0.4s						
DEMR	**Demre-Antalya**	**0.77**	**78**	Pg	**Pn**	**03 23 47.9**	**+0.5**
DALY	**Dalyan (Mula)**	**0.79**	**341**	Pg	**Pg**	**03 23 44.9**	**-0.7**
DALY				Sg	**Sg**	**03 23 54.5**	**-1.3**
CAME	**Cameli-Denizli**	**0.91**	**17**	Pg	**Pg**	**03 23 47.9**	**0.0**
KNIK	**Mula-Seydike**	**0.91**	**32**	P	**Pb**	**03 23 48.5**	**+0.2**
KNIK				S	**Sb**	**03 24 01.9**	**+1.4**
ELL	**Elmali**	**1.01**	**48**	Pg	**Pb**	**03 23 50.6**	**+0.5**
CAEL	**Denizli, Camel**	**1.08**	**15**	P	**Pg**	**03 23 51.0**	**-0.3**
CAEL				S	**Sg**	**03 24 05.6**	**+0.3**
CAEL				IAML		03 24 11.0	
	comp=N,483nm,0.7s						
AKUM	**Antalya-Kumluc**	**1.13**	**77**	P	**Pn**	**03 23 53.3**	**+0.9**
YER	**Yerkesik**	**1.20**	**332**	Pg	**Pg**	**03 23 52.5**	**-0.9**
YER	**Yerkesik**	**1.20**	**332**	P	**Pg**	**03 23 52.7**	**-0.7**
YER				S	**Sg**	**03 24 08.2**	**-0.7**
DNZT	**Denizli-Tavas-**	**1.20**	**2**	P	**Pg**	**03 23 53.3**	**-0.3**
DNZT				P	**Pb**	**03 23 54.4**	**0.0**
GOLH	**Golhisar**	**1.25**	**22**	P	**Pn**	**03 23 54.8**	**+0.6**
GOLH				S	**Sb**	**03 24 11.6**	**+1.2**
GOLH				IAML		03 24 13.0	
	comp=N,647nm,0.4s						
DATC	**Datca-Mugla**	**1.26**	**303**	Pn	**Pn**	**03 23 54.8**	**+0.6**
DAT	**Datca**	**1.30**	**300**	Pn	**Pb**	**03 23 55.3**	**+0.2**
DAT	**Datca**	**1.30**	**300**	P	**Pn**	**03 23 55.8**	**+0.9**
DAT				S	**Sb**	**03 24 12.7**	**+0.7**
YAZI	**Mula-Dat§a-**	**1.37**	**297**	P	**Pn**	**03 23 55.9**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.39**	**358**	P	**Pn**	**03 23 55.9**	**-0.1**
TAVA				S	**Sg**	**03 24 12.3**	**-2.8**
TAVA				IAML		03 24 14.0	
	comp=N,636nm,0.3s						
TAVA				IAML		03 24 14.0	
	comp=E,554nm,0.2s						
APMY	**Acipayam-Deniz**	**1.42**	**10**	Pn	**Pn**	**03 23 55.7**	**-0.7**
KORT	**Korkueli**	**1.44**	**50**	P	**Pb**	**03 23 58.9**	**+1.5**
KORT				S	**Sn**	**03 24 18.8**	**+3.0**
KORT				IAML		03 24 21.0	
	comp=N,295nm,0.7s						
KORT				IAML		03 24 21.0	
	comp=E,313nm,0.6s						
DNIZ	**Denizli-Tavas-**	**1.55**	**2**	P	**Pn**	**03 23 58.8**	**+0.6**
DNIZ				S	**Sn**	**03 24 17.5**	**-0.9**
DNIZ				IAML		03 24 19.0	
	comp=E,2µm,0.6s						
MLSB	**Milas**	**1.55**	**322**	Pn	**Pn**	**03 23 56.6**	**-1.6**
KARP	**Karpathos**	**1.57**	**251**	Pn	**Pg**	**03 24 01.1**	**+0.6**
KARP	**Karpathos**	**1.57**	**251**	P	**Pg**	**03 24 01.2**	**+0.7**
KARP	**Karpathos**	**1.57**	**251**	P	**Pg**	**03 24 00.7**	**+0.2**
BDRM	**Kayabasi**	**1.58**	**309**	P	**Pn**	**03 23 59.6**	**+1.0**
BODT	**Bodrum**	**1.67**	**307**	Pn	**Pn**	**03 24 00.1**	**+0.4**
BODT	**Bodrum**	**1.67**	**307**	P	**Pn**	**03 24 00.7**	**+0.9**
INCE	**Denizli-Bozkur**	**1.70**	**16**	P	**Pb**	**03 24 01.6**	**-0.3**
INCE				S	**Sn**	**03 24 22.4**	**+0.2**
INCE				IAML		03 24 26.0	
	comp=N,311nm,0.5s						
BUCA	**Burdur, Bucak-**	**1.78**	**45**	P	**Pn**	**03 24 02.6**	**+1.2**
ESEN	**Aydn-Nazilli**	**1.79**	**344**	P	**Pn**	**03 24 02.4**	**+0.9**
ESEN				S	**Sn**	**03 24 23.6**	**-0.7**
ESEN				IAML		03 24 26.0	
	comp=N,240nm,0.2s						
AYDN	**Tasoluk**	**1.81**	**331**	P	**Pn**	**03 24 02.1**	**+0.4**
AYDN				S	**Sn**	**03 24 23.6**	**-1.2**
AYDN				IAML		03 24 30.0	
	comp=N,203nm,0.5s						
BRDR	**BURDUR-Merkez**	**1.84**	**28**	P	**Pb**	**03 24 03.6**	**-0.5**
KLNA	**Kalymnos**	**1.84**	**299**	P	**Pb**	**03 24 03.8**	**-0.4**
BCK	**Bucak**	**1.89**	**43**	Pn	**Pn**	**03 24 03.5**	**+0.6**
DIDI	**Didim-Aydin**	**1.91**	**313**	Pn	**Pn**	**03 24 03.4**	**+0.4**
NAZL	**Nazilli-Aydin**	**1.96**	**344**	Pn	**Pn**	**03 24 03.5**	**-0.4**
SULTU	**Buldan**	**1.98**	**355**	P	**Pn**	**03 24 03.8**	**-0.4**
SULTU				S	**Sn**	**03 24 28.8**	**-0.4**
SULTU				IAML		03 24 33.0	
	comp=N,192nm,0.4s						
SULTU				IAML		03 24 33.0	
	comp=E,194nm,0.4s						
BASM	**Basmaki-Afyon**	**2.03**	**25**	Pn	**Pn**	**03 24 04.7**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**2.06**	**335**	Pn	**Pn**	**03 24 05.2**	**-0.1**
ISP	**Isparta**	**2.14**	**35**	P	**Pb**	**03 24 09.4**	**+0.1**
ISP				S	**Sb**	**03 24 37.6**	**+1.6**
ISP	**Isparta**	**2.14**	**35**	P	**Pn**	**03 24 07.8**	**+1.5**
GCAM	**G?zelcaml?**	**2.14**	**320**	P	**Pn**	**03 24 06.0**	**-0.3**
KIRA	**zmir-Kiraz**	**2.17**	**348**	P	**Pn**	**03 24 06.7**	**-0.1**
IZMR	**zmir-demi**	**2.21**	**339**	P	**Pn**	**03 24 07.2**	**0.0**
PASA	**Karahalli, USA**	**2.31**	**10**	P	**Pn**	**03 24 08.8**	**+0.3**
ODEM	**Odemis-Izmir**	**2.31**	**342**	Pn	**Pn**	**03 24 08.6**	**-0.1**
SMG	**Samos**	**2.37**	**314**	P	**Pn**	**03 24 09.6**	**+0.2**
SMG	**Samos**	**2.37**	**314**	P	**Pn**	**03 24 09.1**	**-0.3**
KZIL	**AFYON_Kizioren**	**2.37**	**23**	P	**Pn**	**03 24 11.3**	**+1.8**
BAGO	**Egridir - ISPA**	**2.40**	**37**	P	**Pn**	**03 24 10.5**	**+0.6**
MANT	**Manisa**	**2.43**	**352**	P	**Pn**	**03 24 09.5**	**-1.0**
ZKR	**Zakros**	**2.45**	**248**	P	**Pb**	**03 24 13.5**	**-1.0**
ZKR	**Zakros**	**2.45**	**248**	P	**Pb**	**03 24 13.3**	**-1.2**
KULA	**Kula-Manisa**	**2.45**	**354**	Pn	**Pn**	**03 24 10.3**	**-0.3**
AFYN	**Afyon-Dinar-K**	**2.51**	**29**	P	**Pn**	**03 24 13.2**	**+1.8**
BLCB	**Balcova**	**2.78**	**327**	P	**Pn**	**03 24 14.9**	**-0.1**
THERA	**Ancient Thera,**	**2.85**	**277**	P	**Pn**	**03 24 16.9**	**+0.9**
THERA	**Ancient Thera,**	**2.85**	**277**	P	**Pn**	**03 24 16.8**	**+0.8**
THR8	**Santorini-Mono**	**2.85**	**278**	P	**Pn**	**03 24 16.8**	**+0.8**
THR3	**Thira Island,**	**2.91**	**278**	P	**Pn**	**03 24 18.0**	**+1.2**
SNT5	**Nea Kammeni, S**	**2.92**	**278**	P	**Pn**	**03 24 18.1**	**+1.2**
SNT5	**Nea Kammeni, S**	**2.92**	**278**	P	**Pn**	**03 24 17.9**	**+1.1**
AKMS	**Akamas**	**2.93**	**110**	P	**Pn**	**03 24 18.6**	**+1.4**
CHOS	**Chios island**	**3.28**	**316**	P	**Pn**	**03 24 22.6**	**+0.6**
IDI	**Anoyia**	**3.42**	**258**	P	**Pn**	**03 24 25.7**	**+1.8**
CSS	**Mathiatis**	**3.72**	**106**	P	**Pn**	**03 24 28.2**	**+0.2**
CSS				S	**Sn**	**03 25 11.2**	**-0.7**
CSS	**Mathiatis**	**3.72**	**106**	P	**Pn**	**03 24 29.6**	**+1.6**
PRK	**Paraskevi**	**3.83**	**327**	P	**Pn**	**03 24 29.7**	**+0.3**
VAM	**Vamos**	**3.94**	**262**	P	**Pn**	**03 24 32.8**	**+1.8**
SIGR	**SIGRI**	**3.99**	**323**	P	**Pn**	**03 24 31.8**	**+0.1**
IMMV	**Iera Moni Meta**	**4.11**	**263**	P	**Pn**	**03 24 35.0**	**+1.7**
MMC7	**Mount Meron ar**	**6.11**	**118**	P	**Pn**	**03 25 00.9**	**+0.1**
MMA0B	**Mount Meron ar**	**6.12**	**118**	P	**Pn**	**03 25 01.0**	**+0.1**
MMA0B				S	**Sn**	**03 26 09.5**	**-1.5**
HMDT	**Nahal Hemdat**	**6.63**	**123**	P	**Pn**	**03 25 07.8**	**-0.1**
HMDT				S	**Sn**	**03 26 21.6**	**-2.0**
YTIR	**Yattir**	**6.94**	**131**	P	**Pn**	**03 25 12.2**	**-0.2**
YTIR				S	**Sn**	**03 26 29.2**	**-1.9**
DSI	**Dead Sea**	**6.97**	**128**	P	**Pn**	**03 25 12.0**	**-0.6**
DSI				S	**Sn**	**03 26 29.9**	**-2.1**
GHAJ	**Ghor Haditha**	**7.26**	**129**	P	**Pn**	**03 25 16.4**	**-0.3**
GHAJ				S	**Sn**	**03 26 37.1**	**-2.1**
RMNI	**Mount Ramon**	**7.30**	**137**	P	**Pn**	**03 25 16.7**	**-0.5**
RMNI				S	**Sn**	**03 26 38.1**	**-2.1**
ZFRI	**Zfri**	**7.56**	**135**	P	**Pn**	**03 25 19.5**	**-1.3**
ZFRI				S	**Sn**	**03 26 44.0**	**-2.6**
PRNI	**Paran**	**7.62**	**137**	P	**Pn**	**03 25 21.0**	**-0.6**
PRNI				S	**Sn**	**03 26 45.8**	**-2.2**
KRMI	**Paran Flat**	**7.65**	**139**	P	**Pn**	**03 25 21.5**	**-0.5**
KRMI				S	**Sn**	**03 26 46.2**	**-2.5**
HRFI	**Mount Harif**	**7.88**	**138**	P	**Pn**	**03 25 24.7**	**-0.4**
HRFI				S	**Sn**	**03 26 51.9**	**-2.6**
MBRI	**Mt Berech**	**8.01**	**140**	P	**Pn**	**03 25 26.6**	**-0.3**
MBRI				S	**Sn**	**03 26 55.2**	**-2.4**
EIL	**Elat**	**8.12**	**140**	P	**Pn**	**03 25 27.8**	**-0.6**
EIL				S	**Sn**	**03 26 57.9**	**-2.5**

*UPP **14** 03:31:08.7±0.1, 67.°85N×20.°19E, h0km, ML2.6, Confirmed Induced event*
*HEL **14** 03:31:09.5±0.2, 67.°83N×20.°16E, h0km, ML1.1, Suspected explosion*
ISC 14 03:31:08.2±0.9, **67.°84N**±0.°02×**20.°18E**±0.°03, **h0**km, **n21, σ0°82/29, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**27**	P	**Pg**	**03 31 11.1**	**+0.3**
KUA				S	**Sg**	**03 31 12.8**	**+0.4**
RATU	**Laukkuluspa**	**0.22**	**267**	P	**Pg**	**03 31 13.2**	**+0.7**
KOVU	**Salmi**	**0.39**	**359**	P	**Pg**	**03 31 15.9**	**+0.2**
NIKU	**Nikkaluokta**	**0.43**	**275**	P	**Pg**	**03 31 17.1**	**+0.6**
LANU	**Lannavaara**	**0.72**	**72**	P	**Pg**	**03 31 22.1**	**+0.2**
LANU	**Lannavaara**	**0.72**	**72**	PB	**Pb**	**03 31 23.6**	**0.0**
LANU				SG	**Sg**	**03 31 32.0**	**+0.8**
DUNU	**Dundret**	**0.73**	**168**	S	**Sg**	**03 31 32.8**	**+1.1**
SALU	**Saltoluokta**	**0.79**	**235**	P	**Pg**	**03 31 23.7**	**+0.4**
KIF	**Kilpisjarvi** baz=189	**1.20**	**11**	PG	**Pn**	**03 31 31.8**	**-0.3**
KIF				smax	smax	03 31 47.1	
	comp=Z,1.8nm,0.2s						
KIF				SB	**Sn**	**03 31 48.2**	**-0.8**
PAJU	**Pajala**	**1.40**	**124**	P	**Pn**	**03 31 34.1**	**-0.8**
PAJU	**Pajala** baz=304	**1.40**	**124**	PG	**Pn**	**03 31 34.2**	**-0.8**
PAJU				SB	**Sg**	**03 31 53.0**	**0.0**
HEF	**Hetta**	**1.43**	**65**	PN	**Pb**	**03 31 36.4**	**+0.7**
HEF				smax	smax	03 31 52.8	
	comp=Z,0.9nm,0.2s						
HEF				SN	**Sn**	**03 31 55.8**	**+1.1**
ERTU	**Ertsjaerv**	**1.51**	**148**	P	**Pg**	**03 31 37.2**	**+0.2**
ERTU	**Ertsjaerv**	**1.51**	**148**	PN	**Pg**	**03 31 37.6**	**+0.5**
ERTU				SN	**Sn**	**03 31 57.8**	**+1.0**
KLF	**Kolari** baz=297	**1.57**	**111**	PG	**Pb**	**03 31 37.9**	**-0.3**
KLF				smax	smax	03 31 56.9	
	comp=Z,0.8nm,0.2s						
KLF				SN	**Sg**	**03 31 58.9**	**+0.2**
TRO	**Tromso**	**1.86**	**346**	SG	**Sg**	**03 32 08.0**	**+0.1**
TOF	**Tornio**	**2.40**	**135**	PG	**Pb**	**03 31 51.2**	**-1.0**
TOF				smax	smax	03 32 20.5	
	comp=Z,0.7nm,0.2s						
TOF				SG	**Sb**	**03 32 23.6**	**+1.3**
RNF	**Rovaniemi**	**2.58**	**116**	SG	**Sb**	**03 32 27.8**	**+0.2**
ARA0	**ARCESS Array S**	**2.59**	**46**	SG	**Sb**	**03 32 27.5**	**-0.2**
KEV	**Kevo**	**3.14**	**49**	SB	**Sb**	**03 32 42.5**	**-1.1**
UMAU	**Umeaa**	**3.98**	**177**	SB	**Sb**	**03 33 05.4**	**-2.2**

*IDC **14** 04:11:34.1±2.3, 27.°73N×53.°07E, h0km, mb3.7/9, mbtmp3.7/9, Error ellipse: s-maj=52.1km s-min=23.0km az=165.0*
*TEH **14** 04:11:35.3, 27.°69N×53.°10E, h8km±28km, ML3.5, Presumed earthquake*
ISC 14 04:11:36.9±0.8, **27.°67N**±0.°05×**53.°11E**±0.°05, **h20**km, **n27, σ1°53/26, mb3.8/7, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHL1	**Khalili_Fars**	**0.17**	**101**	Pg	**Pb**	**04 11 38.7**	**-3.1**
LMD1	**Lamerd**	**0.33**	**171**	Pg	**Pb**	**04 11 42.8**	**-1.4**
QIR1	**Qir**	**0.81**	**356**	Pg	**Pb**	**04 11 50.7**	**-1.6**
JHRM	**Jahrom**	**0.93**	**26**	Pg	**Pb**	**04 11 52.7**	**-1.7**
LAR1	**LAR**	**1.12**	**90**	Pg	**Pb**	**04 11 58.0**	**+0.3**
DSBU	**Dashti - Bushe**	**1.77**	**293**	Pg	**Pb**	**04 12 08.9**	**+0.1**
SHI	**Shiraz**	**2.03**	**345**	Pn	**Pb**	**04 12 11.7**	**-1.6**
BNDS	**Bandar-Abbas**	**2.73**	**95**	Pn	**Pn**	**04 12 21.3**	**+1.4**
KLNJ	**Kolanjah**	**3.58**	**339**	Pn	**Pn**	**04 12 33.1**	**+1.5**
NGHK	**Negar Kerman**	**3.74**	**57**	Pn	**Pn**	**04 12 35.1**	**+1.2**
KHGB	**Koh Gabri**	**4.00**	**47**	Pn	**Pn**	**04 12 38.9**	**+1.6**
TAFT	**Taft - Yazd**	**4.14**	**13**	Pn	**Pn**	**04 12 40.9**	**+1.6**
IBAF	**Bafgh**	**4.46**	**28**	Pn	**Pn**	**04 12 45.2**	**+1.7**
CHMN	**Cheshme madani**	**4.46**	**60**	Pn	**Pn**	**04 12 45.8**	**+2.0**
DOBD	**Dorbid, Yazd**	**4.47**	**15**	Pn	**Pn**	**04 12 45.9**	**+2.1**
KBAM	**BAM**	**4.93**	**72**	Pn	**Pn**	**04 12 52.2**	**+2.2**
AMIS	**Naft Sefid**	**5.19**	**321**	Pn	**Pn**	**04 12 54.4**	**+0.9**
TPRV	**Parvadeh(Tabas**	**6.17**	**29**	Pn	**Pn**	**04 13 08.4**	**+1.4**
BRTR	**Keskin Array B** 1.0nm,0.7s,baz=137,slow=12,SNR=5.6	**20.12**	**312**	P	Pn	04 16 10.7	-0.9
	1.0nm,0.7s						
BVAR	**Borovoye Array** 0.5nm,0.6s,baz=208,slow=8.4,SNR=4.2	**28.39**	**22**	P	**P**	**04 17 29.1**	**-0.7**
	0.5nm,0.6s						
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=232,slow=7.3,SNR=5.4	**29.81**	**42**	P	**P**	**04 17 43.1**	**+0.5**
	0.5nm,0.6s						
KURBB	**Kurchatov Arra** 0.2nm,0.2s,baz=240,slow=8.1,SNR=2.0	**29.96**	**33**	P	**P**	**04 17 43.4**	**-0.4**
	0.2nm,0.2s						
ZALV	**Zalesovo Beam** 1.5nm,0.9s,baz=245,slow=9.7,SNR=5.0	**35.06**	**33**	P	**P**	**04 18 27.4**	**-0.9**
	1.5nm,0.9s						
FINES	**FINESS Array B** 1.2nm,0.6s,baz=144,slow=9.7,SNR=12	**38.30**	**339**	P	**P**	**04 18 55.4**	**-0.5**
	1.2nm,0.6s						
HFS	**Hagfors** 1.4nm,0.7s,baz=127,slow=9.4,SNR=4.1	**42.02**	**332**	P	**P**	**04 19 25.9**	**-0.8**
	1.4nm,0.7s						
SONM	**Songino Array** 1.0nm,0.9s,baz=257,slow=7.0,SNR=6.1	**45.69**	**49**	P	**P**	**04 19 57.5**	**+1.0**
	1.0nm,0.9s						
TORD	**Torodi Ar. Bea** 0.7nm,0.8s,baz=79,slow=3.5,SNR=5.1	**49.96**	**264**	P	**P**	**04 20 29.6**	**-0.3**
	0.7nm,0.8s						

*IDC **14** 04:13:23.7±5.3, 28.°40N×142.°53E, h0km, mb3.8/6, mbtmp3.8/7, ML3.2/1, Error ellipse: s-maj=219.0km s-min=20.1km az=74.0*
*NEIC **14** 04:13:25.4±1.7, 28.°38N±0.°05×142.°7E±0.°2, h10km±2km, mb4.5/9, Error ellipse: s-maj=26.1km s-min=9.0km az=95.0*
ISC 14 04:13:27.2±1.2, **28.°37N**±0.°06×**142.°7E**±0.°2, **h25**km, **n26, σ1°20/26, mb4.2/11, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.34**	**199**	LR	LR	04 14 06.0	
	comp=Z,38nm,19.6s,baz=196,slow=32						
JCJ	**Chichijima**	**1.34**	**199**		**Pn**	**04 13 50.0**	**-0.3**
JCJ					**Sb**	**04 14 09.5**	**+1.2**
JHJ2	**Mitsune**	**5.33**	**333**	Pn	**Pn**	**04 14 45.6**	**+0.4**
MJAR	**Matsushiro Arr**	**8.98**	**336**	Pn	**Pn**	**04 15 32.3**	**-3.0**
	0.2nm,0.3s,baz=135,slow=14,SNR=6.3						
	1.5nm,0.3s						
MJAR	**Matsushiro Arr**	**8.98**	**336**		**Pn**	**04 15 33.1**	**-2.2**
MAJO	**Matsushiro**	**8.98**	**336**	Pn	**Pn**	**04 15 33.3**	**-2.0**
MJB9	**Matsu-Tunnel**	**8.99**	**336**	Pn	**Pn**	**04 15 34.2**	**-1.2**
SONM	**Songino Array**	**34.12**	**315**	P	**P**	**04 20 10.9**	**+0.9**
SOEI	**Soe**	**41.87**	**208**	P	**P**	**04 21 16.4**	**+0.8**
MTN	**Manton Dam**	**42.46**	**197**	P	**P**	**04 21 19.0**	**-1.2**
MTN				IAmb	IAmb	04 21 36.6	
	comp=Z,22nm,1.4s						
WB0	**Warramunga Arr**	**48.52**	**190**	P	**P**	**04 22 08.5**	**+0.4**
WB0				IAmb	IAmb	04 22 09.4	
	comp=Z,8.5nm,1.3s						
WR0	**Warramunga Arr**	**48.68**	**190**	P	**P**	**04 22 08.4**	**-1.0**
WR0				IAmb	IAmb	04 22 38.8	
	comp=Z,6.7nm,1.2s						
WRA	**Warramunga Arr**	**48.70**	**190**	P	**P**	**04 22 10.0**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=13,slow=8.3,SNR=18						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**48.83**	**318**	P	**P**	**04 22 10.9**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=87,slow=9.2,SNR=3.6						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**48.83**	**318**	P	**P**	**04 22 10.0**	**-0.3**
MKAR	**Makanchi Array**	**50.02**	**309**	P	**P**	**04 22 17.5**	**-2.0**
	comp=Z,0.2nm,0.4s,baz=85,slow=7.5,SNR=2.8						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**50.02**	**309**	P	**P**	**04 22 19.2**	**-0.3**
C19K	**Lookout Ridge**	**52.41**	**23**	P	**P**	**04 22 37.8**	**+0.6**
ASAR	**Alice Springs**	**52.42**	**190**	P	**P**	**04 22 38.0**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=10,slow=6.8,

σ1⁹41/8, **mb3.6**/7, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.95**	**171**	P	Pn	04 46 23.3	-11
	15nm,0.3s,baz=289,slow=22,SNR=7.5						
MJAR	**Matsushiro Arr**	**6.16**	**334**	P	**Pn**	**04 47 05.9**	**+1.5**
	0.1nm,0.3s,baz=148,slow=10,SNR=4.7						
MJAR				LR	LR	04 49 33.4	
	comp=Z,93nm,19.3s,baz=180,slow=39						
	0.9nm,0.3s						
JNU	**Nakatsue**	**9.26**	**286**	LR	LR	04 50 56.2	
	comp=Z,83nm,21.5s,baz=125,slow=35						
KSRS	**Korea Array**	**12.94**	**303**	LR	LR	04 53 33.3	
	comp=Z,64nm,18.5s,baz=90,slow=37						
CMAR	**Chiang Mai Arr**	**40.40**	**262**	LR	LR	05 10 31.9	
	comp=Z,16nm,18.4s,baz=200,slow=37						
MKAR	**Makanchi Array**	**47.59**	**307**	P	**P**	**04 54 07.7**	**-0.4**
	0.1nm,0.4s,baz=79,slow=9.1,SNR=2.5						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**49.93**	**312**	P	**P**	**04 54 23.6**	**-2.4**
	0.3nm,0.5s,baz=94,slow=9.9,SNR=4.9						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**51.13**	**189**	P	**P**	**04 54 35.6**	**+0.3**
	0.9nm,0.5s,baz=6.6,slow=7.7,SNR=9.7						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**54.85**	**189**	P	**P**	**04 55 03.5**	**+0.7**
	0.6nm,0.5s,baz=4.9,slow=6.0,SNR=7.4						
	0.6nm,0.5s						
YKA	**Yellowknife Ar**	**69.00**	**29**	P	**P**	**04 56 36.4**	**-0.9**
	0.2nm,0.6s,baz=300,slow=7.2,SNR=4.5						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**78.58**	**52**	P	**P**	**04 57 34.1**	**-0.1**
	0.3nm,0.6s,baz=309,slow=7.0,SNR=2.8						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**93.72**	**53**	P	**P**	**04 58 50.0**	**+0.7**
	0.5nm,0.7s,baz=294,slow=4.0,SNR=4.4						
	0.5nm,0.7s						

IDC 14 04:48:00.8±6.3, 2.59S×138.88E, h127km±89km, mb3.0/2, mbtmp3.4/3, ML3.7/1, MS3.3/1, Error ellipse: s-maj=105.6km s-min=26.7km az=101.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.82**	**88**	P	Pn	04 48 31.3	-1.2
	5.7nm,0.3s,baz=158,slow=19,SNR=1.3						
JAY				S	Sn	04 48 57.4	+0.6
	6.4nm,0.3s,baz=126,slow=19,SNR=1.4						
WRA	**Warramunga Arr**	**17.81**	**194**	P	P	04 52 00.0	+0.2
	0.2nm,0.3s,baz=19,slow=12,SNR=8.9						
	0.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**20.15**	**219**	P	Pn	04 52 28.2	-0.2
	1.2nm,0.7s,baz=53,slow=10,SNR=1.5						
ASAR	**Alice Springs**	**21.50**	**193**	P	P	04 52 39.8	0.0
	0.9nm,0.7s,baz=22,slow=11,SNR=11						
	0.9nm,0.7s						
TGY	**Tagaytay City**	**24.32**	**313**	LR	LR	05 03 01.6	
	comp=Z,74nm,19.5s,baz=14,slow=37						
MKAR	**Makanchi Array**	**69.80**	**322**	P	P	04 58 57.7	+0.1
	0.3nm,0.9s,baz=116,slow=8.6,SNR=2.8						
	0.3nm,0.9s						

SJA 14 04:49:11.8±0.7, 25.88S×66.67W, h10km, ML3.8, MW4.2
IDC 14 04:49:12.4±1.2, 26.09S×66.50W, h0km, mb3.9/1, mbtmp3.8/5, ML3.7/4, MS3.5/10, Error ellipse: s-maj=30.8km s-min=27.0km az=136.0

ISC 14 04:49:15.5±0.8, 25.94S±0.04×66.60W±0.04, h21km±4km, n31, σ1⁹68/33, MS3.7/7, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSA	**Cafayete**	**0.58**	**107**	*eP*	**Pb**	**04 49 25.1**	**-2.2**
FSA				*eS*	**Sn**	**04 49 35.6**	**-2.1**
AHML	**Horco Molle**	**1.41**	**127**	*eP*	**Pn**	**04 49 39.6**	**-0.4**
AHML				*eS*	**Sb**	**04 50 00.7**	**+1.9**
AHML				IAML		04 50 02.2	
	comp=Z,1μm,0.3s						
SLA	**San Lorenzo**	**1.57**	**39**	*eP*	**Pb**	**04 49 43.4**	**-0.5**
SLA				*eS*	**Sb**	**04 50 07.7**	**+4.3**
SALTA		**1.73**	**8**	*eP*	**Pn**	**04 49 43.5**	**-1.3**
SALTA				*eP*	**Pn**	**04 49 43.5**	**-1.3**
SALTA				*eP*	**Pb**	**04 49 43.7**	**-3.2**
SALTA				IAML		04 50 10.0	
	comp=Z,2μm,0.5s						
TINO	**Tinogasta**	**2.28**	**202**	*eP*	**Pn**	**04 49 51.7**	**-0.4**
TINO				*eS*	**Sb**	**04 50 23.1**	**-0.9**
TINO				IAML		04 50 28.2	
	comp=Z,498nm,0.6s						
AC02	**Maricunga**	**2.44**	**248**	*eP*	**Pn**	**04 49 53.9**	**-0.7**
AC02				*eS*	**Sn**	**04 50 25.7**	**+1.8**
GO02	**Mina Guanaco**	**2.81**	**285**	*eP*	**Pn**	**04 50 00.2**	**+0.7**
AANI	**Anillaco**	**2.88**	**186**	*eP*	**Pn**	**04 50 00.2**	**0.0**
AANI				*eS*	**Sb**	**04 50 40.6**	**-0.5**
AANI				IAML		04 50 50.8	
	comp=Z,603nm,0.8s						
VCA	**Vinchina**	**3.13**	**207**	*eP*	**Pn**	**04 50 04.9**	**+1.1**
VCA				*eS*	**Sn**	**04 50 43.4**	**+2.9**
VCA				IAML		04 50 52.6	
	comp=Z,367nm,0.8s						
AF01	**San Pedro de A**	**3.31**	**334**	*eP*	**Pn**	**04 50 06.8**	**+0.5**
AF01				IAML		04 51 28.2	
	comp=Z,119nm,1.1s						
ACLC	**CERRO LA CRUZ**	**3.48**	**185**	*eP*	**Pn**	**04 50 08.7**	**+0.1**
ACLC				*eS*	**Sb**	**04 50 58.6**	**0.0**
ACLC				IAML		04 51 02.9	
	comp=Z,253nm,0.6s						
AC01	**Pan de Azucar**	**3.60**	**266**	*eP*	**Pn**	**04 50 07.9**	**-2.2**
AC01				*eS*	**Sb**	**04 51 02.6**	**+0.7**
LCO	**Las Campanas**	**4.76**	**229**	*eP*	**Pn**	**04 50 26.9**	**+0.7**
LCO				IAML		04 52 57.5	
	comp=Z,58nm,2.5s						
AROD	**Rodeo**	**4.92**	**210**	*eP*	**Pn**	**04 50 30.4**	**+1.9**
CFA	**Coronel Fontan**	**5.82**	**194**	Pn	**Pn**	**04 50 40.3**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=13,slow=13,SNR=13						
CFA				Sn	Sn	04 51 35.7	-11
	comp=Z,1.4nm,0.3s,baz=347,slow=9.0,SNR=3.6						
CFA				Lg	Lg	04 52 11.1	
	comp=Z,2.4nm,0.3s,baz=107,slow=14,SNR=6.3						
	comp=Z,4.6nm,0.6s						
CPUP	**Villa Florida**	**8.34**	**95**	Pn	**Pn**	**04 51 15.0**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=265,slow=12,SNR=11						
CPUP				Lg	Lg	04 53 34.7	
	comp=Z,0.9nm,0.3s,baz=14,slow=18,SNR=2.9						
CPUP				LR	LR	04 54 50.3	
	comp=Z,93nm,20.7s,baz=256,slow=41						
	comp=Z,2.8nm,0.5s						
LPAZ	**La Paz**	**9.71**	**351**	Pn	**Pn**	**04 51 36.8**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=162,slow=7.3,SNR=4.0						
LPAZ				LR	LR	04 56 36.0	
	comp=Z,310nm,21.0s,baz=166,slow=45						
	comp=Z,2.1nm,0.7s						
SIV	**San Ignacio**	**11.16**	**29**	Pn	**Pn**	**04 51 56.3**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=8.5						
	comp=Z,1.4nm,0.5s						
PLCA	**Paso Flores**	**15.11**	**192**	LR	LR	04 58 56.8	
	comp=Z,413nm,18.6s,baz=350,slow=39						
BDFB	**Brasilia**	**20.15**	**63**	LR	LR	05 02 50.0	
	comp=Z,59nm,18.7s,baz=211,slow=41						
ROSC	**El Rosal**	**31.50**	**345**	LR	LR	05 09 35.5	
	comp=Z,153nm,19.7s,baz=128,slow=39						
SDV	**Santo Domingo**	**34.84**	**353**	LR	LR	05 11 40.4	
	comp=Z,63nm,19.8s,baz=229,slow=38						
TKL	**Tuckaleechee C**	**63.38**	**344**	LR	LR	05 29 34.0	
	comp=Z,46nm,18.2s,baz=144,slow=38						
SADO	**Sadowa**	**71.30**	**351**	LR	LR	05 36 25.9	
	comp=Z,37nm,18.5s,baz=140,slow=40						
SUR	**Sutherland**	**74.56**	**119**	LR	LR	05 30 22.1	
	comp=Z,29nm,20.5s,baz=218,slow=33						
TORD	**Torodi Ar. Bea**	**76.94**	**68**	P	**P**	**05 01 05.3**	**-1.5**
	comp=Z,1.0nm,0.9s,baz=236,slow=8.8,SNR=4.8						
	comp=Z,1.0nm,0.9s						
KEST	**Kesra**	**94.30**	**52**	LR	LR	05 44 38.5	
	comp=Z,27nm,18.2s,baz=330,slow=35						
ASAR	**Alice Springs**	**126.84**	**204**	PKP	**PKPdf**	**05 08 18.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=131,slow=3.8,SNR=3.7						
KURBB	**Kurchatov Arra**	**143.70**	**38**	PKP	**PKPdf**	**05 08 48.2**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=336,slow=2.9,SNR=2.2						
ZALV	**Zalesovo Beam**	**144.91**	**29**	PKPbc	PKPbc	05 08 49.7	-0.1
	comp=Z,3.8nm,0.7s,baz=306,slow=3.5,SNR=16						
MKAR	**Makanchi Array**	**147.75**	**42**	PKPbc	**PKPbc**	**05 08 58.7**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=290,slow=3.0,SNR=7.7						

SOME 14 05:07:54.2, 42.10N×80.72E, h15km

NNC 14 05:07:55.4±1.4, 42.15N×80.65E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=9.2km s-min=7.7km az=137.0
KRNET 14 05:07:57.5±0.1, 42.21N×80.57E, mb3.1

ISC 14 05:08:00.3±1.8, 42.38N±0.07×80.45E±0.07, h10km, n37, σ1⁹76/57, 20C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.06**	**317**	P	**Pg**	**05 08 17.5**	**-3.3**
	44nm,0.1s						
SHLS				S	**Sg**	**05 08 34.1**	**-0.4**
	100nm,0.3s						
SHLS	**Shalkode**	**1.06**	**317**	*eP*	**Pg**	**05 08 17.1**	**-3.7**
	44nm,0.1s						
SHLS				*eS*	**Sg**	**05 08 33.4**	**-1.2**
	174nm,0.4s						
PDGK	**Podgornoye**	**1.18**	**324**	⇓P	**Pb**	**05 08 22.7**	**-0.2**
	9.9nm,0.5s						
PDGK				⇑S	**Sn**	**05 08 42.8**	**+3.6**
	19nm,0.5s						
PRZ	**Przheval'sk**	**1.52**	**275**	⇑*iP*	**Pb**	**05 08 28.3**	**-0.4**
PRZ				⇑*iS*	**Sg**	**05 08 50.7**	**+1.5**
SATY	**Saty**	**1.65**	**295**	Pg	**Pb**	**05 08 31.3**	**+0.4**
	24nm,0.3s						
SATY				Lg	Lg	05 08 58.0	
	106nm,0.1s						
KPKS	**Kokpek**	**1.69**	**311**	Pg	**Pb**	**05 08 31.9**	**+0.4**
	25nm,0.4s						
KPKS				Lg	Lg	05 08 59.1	
	114nm,0.2s						
KPKS	**Kokpek**	**1.69**	**311**	*eP*	**Pb**	**05 08 31.4**	**-0.1**
	24nm,0.3s						
KPKS				*eS*	**Sg**	**05 08 58.2**	**+3.5**
	130nm,0.2s						
KURS	**Kuram**	**2.01**	**304**	Pg	**Pb**	**05 08 37.5**	**+0.6**
	23nm,0.4s						
KURS				Lg	Lg	05 09 08.7	
	48nm,0.6s						
DJR	**Jarkent**	**2.01**	**346**	Pg	**Pb**	**05 08 36.2**	**-0.8**
	5.7nm,0.2s						
DJR				Lg	Lg	05 09 06.9	
	26nm,0.4s						
DJR	**Jarkent**	**2.01**	**346**	*eP*	**Pb**	**05 08 36.2**	**-0.8**
	5.7nm,0.2s						
DJR				*eS*	**Sg**	**05 09 06.9**	**+2.1**
	26nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.07**	**253**	⇑*iP*	**Pn**	**05 08 36.3**	**+0.8**
TARG				⇑*iS*	**Sb**	**05 09 05.0**	**+0.8**
ANVS	**Anan'yevo**	**2.09**	**282**	*eP*	**Pb**	**05 08 38.0**	**-0.5**
ANVS				⇑*eS*	**Sg**	**05 09 07.3**	**-0.3**
KNOS	**Konyrlen**	**2.18**	**335**	Pg	**Pb**	**05 08 39.7**	**-0.3**
	8.9nm,0.3s						
KNOS				Lg	Lg	05 09 13.3	
	68nm,0.4s						
KDJ	**Kajisay**	**2.44**	**265**	⇑*iP*	**Pn**	**05 08 41.9**	**+1.6**
KDJ				⇑*eS*	**Sb**	**05 09 14.2**	**-0.3**
KOTS	**Kotyrbulak**	**2.60**	**290**	Pg	**Pb**	**05 08 46.9**	**-0.2**
	13nm,0.3s						
KOTS				Lg	Lg	05 09 25.2	
	109nm,0.2s						
KOTS	**Kotyrbulak**	**2.60**	**290**	*eP*	**Pb**	**05 08 46.9**	**-0.2**
	13nm,0.3s						
KOTS				*eS*	**Sg**	**05 09 25.2**	**+1.4**
	109nm,0.2s						
MDOK	**Medeo**	**2.62**	**288**	Pg	**Pb**	**05 08 47.5**	**0.0**
	14nm,0.2s						
MDOK				Lg	Lg	05 09 25.6	
	52nm,0.7s						
ARXS	**Arharly**	**2.65**	**315**	Pg	**Pb**	**05 08 47.8**	**0.0**
	5.5nm,0.3s						
ARXS				Lg	Lg	05 09 26.8	
	35nm,0.3s						
ARXS	**Arharly**	**2.65**	**315**	*eP*	**Pb**	**05 08 47.8**	**0.0**
	5.5nm,0.3s						
ARXS				*eS*	**Sg**	**05 09 26.8**	**+1.4**
	35nm,0.3s						
KAPS	**Kapalarasan**	**3.01**	**345**	Pg	**Pb**	**05 08 53.9**	**-0.1**
	5.6nm,0.3s						
KAPS				Lg	Lg	05 09 36.6	
	57nm,0.2s						
MTBS	**Maitube**	**3.05**	**286**	Pg	**Pb**	**05 08 54.3**	**-0.5**
	4.0nm,0.2s						
MTBS				Lg	Lg	05 09 37.5	
	29nm,0.4s						
MTBS	**Maitube**	**3.05**	**286**	*eP*	**Pb**	**05 08 54.3**	**-0.5**
	4.0nm,0.2s						
MTBS				*eS*	**Sg**	**05 09 37.5**	**-0.9**
	29nm,0.4s						
KTBS	**Karatobe**	**3.07**	**297**	Pg	**Pb**	**05 08 54.3**	**-0.6**
	4.5nm,0.3s						
KTBS				Lg	Lg	05 09 39.2	
	23nm,0.7s						
KTBS	**Karatobe**	**3.07**	**297**	*eP*	**Pb**	**05 08 54.3**	**-0.6**
	2.6nm,0.2s						
KTBS				*eS*	**Sg**	**05 09 37.4**	**-1.3**
	0.2nm,0.2s						
ULHL	**Ulahol**	**3.12**	**269**	⇑*iP*	**Pn**	**05 08 51.6**	**+1.8**
ULHL				⇑*eS*	**Sb**	**05 09 31.2**	**-3.1**
BOOM	**Boomskoye usch**	**3.34**	**273**	⇑*iP*	**Pn**	**05 08 54.7**	**+2.0**
BOOM				⇑*iS*	**Sb**	**05 09 36.5**	**-3.9**
KST	**Kastek**	**3.37**	**283**	Pg	**Pb**	**05 08 59.3**	**-0.9**
	3.5nm,0.1s						
KST				Lg	Lg	05 09 46.0	
	20nm,0.4s						
KST	**Kastek**	**3.37**	**283**	*eP*	**Pb**	**05 08 59.3**	**-0.9**
	3.5nm,0.1s						
KST				*eS*	**Sg**	**05 09 46.0**	**-2.5**
	20nm,0.4s						
DGS	**Degeres**	**3.55**	**286**	Pg	**Pb**	**05 09 03.2**	**+0.1**
	3.0nm,0.3s						
DGS				Lg	Lg	05 09 52.5	
	16nm,0.3s						
DGS	**Degeres**	**3.55**	**286**	*eP*	**Pb**	**05 09 03.2**	**+0.1**
	3.0nm,0.3s						
DGS				*eS*	**Sg**	**05 09 52.5**	**-1.7**
	16nm,0.3s						
TKM2	**Tokmak 2**	**3.62**	**280**	⇑*iP*	**Pn**	**05 08 59.0**	**+2.4**
TKM2				⇑*iS*	**Sn**	**05 09 43.8**	**+4.3**
KRBS	**Karabastau**	**3.74**	**292**	Pg	**Pb**	**05 09 06.1**	**-0.3**
	3.1nm,0.4s						
KRBS				Lg	Lg	05 09 57.6	
	4.2nm,0.5s						
KRBS	**Karabastau**	**3.74**	**292**	*eP*	**Pb**	**05 09 07.1**	**+0.7**
	1.8nm,0.4s						
KRBS				*eS*	**Sg**	**05 09 59.2**	**-1.1**
	8.4nm,0.4s						
KBK	**Karagaybulak**	**4.08**	**276**	⇓*eP*	**Pn**	**05 09 05.2**	**+2.4**
KBK				⇓*eS*	**Sn**	**05 09 54.5**	**+3.8**
AAK	**Ala-Archa**	**4.41**	**275**	⇓Pg	**Pg**	**05 09 22.5**	**-2.2**
	1.5nm,0.7s						
AAK				⇑Lg	Lg	05 10 21.0	
	2.9nm,0.5s						
MK31	**Makanchi Array**	**4.60**	**16**	⇑Pn	**Pn**	**05 09 11.2**	**+1.3**
	0.9nm,0.5s,baz=201,slow=14,SNR=38						
MK31				⇑Sn	**Sn**	**05 10 04.0**	**+0.5**
	0.4nm,0.3s,baz=186,slow=21,SNR=5.1						
MK31				⇓Lg	Lg	05 10 25.3	
	4.8nm,0.6s,baz=151,slow=40,SNR=3.5						
KURBB	**Kurchatov Arra**	**8.35**	**352**	⇑Sn	Sb	05 11 52.0	-12
	2.0nm,0.7s						
KURBB				⇑Lg	Lg	05 12 29.4	
	4.7nm,0.6s						

NEIC 14 05:59:00, 56.45S×141.92W, h12km, Moment Tensor Solution. Duration: 397 Moment tensor: Scale 10¹⁷Nm; Mrr=0.17; Mθθ=2.52; Mφφ=-2.35; Mrθ=0.08; Mθφ=2.59; Mφr=0.50; Fault plane solution: M0=3.59000×10¹⁷ NP1: φs=291.36000°, δ82.85000°, λ=-4.56000°. NP2: φs=21.93000°, δ85.47000°, λ=-172.83000°. Principal axes: T 3.6454, Plg2.0000°, Azm157.0000°; N -0.1035, Plg82.0000°, Azm54.0000°; P -3.5419, Plg8.0000°, Azm247.0000°;
NEIC 14 05:59:00, 56.64S×142.29W, h10km
GFZ 14 05:59:00.3, 56.66S×142.17W, h15km, MW5.6, Moment Tensor Solution. s72 Moment tensor: Mrr=0.47; Mθθ=2.90; Mφφ=-2.43; Mrθ=-0.66; Mθφ=1.79; Mφr=0.41; Fault plane solution: NP1: φs=117.00000°, δ86.00000°, λ=-13.00000°. NP2: φs=208.00000°, δ76.00000°, λ=-175.00000°. Principal axes: T 3.5100, Plg7.0000°, Azm164.0000°; N -0.4100, Plg75.0000°, Azm283.0000°; P -3.1000, Plg13.0000°, Azm72.0000°;
IDC 14 05:59:00.1±0.8, 57.08S×142.76W, h0km, mb4.3/6, mbtmp4.3/6, MS4.8/45 Error ellipse: s-maj=48.6km s-min=21.0km az=3.0

NEIC 14 05:59:00.0±1.5, 56.7S±0.1×142.29W±0.03, h10km±1km, mb5.2/48, Ms_20 5.4/152, Mwb5.6/42, Mww5.6/10, Error ellipse: s-maj=21.2km s-min=4.0km az=184.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.14; Mθθ=2.18; Mφφ=-2.04; Mrθ=0.62; Mθφ=1.62; Mφr=-1.04; Fault plane solution: M0=2.92000×10¹⁷ NP1: φs=296.47000°, δ65.55000°, λ=-0.24000°. NP2: φs=26.57000°, δ89.78000°, λ=-155.55000°. Principal axes: T 3.0077, Plg17.0000°, Azm159.0000°; N -0.1815, Plg66.0000°, Azm27.0000°; P -2.8261, Plg17.0000°, Azm254.0000°;
NEIC 14 05:59:00, 56.65S×142.29W, h12km
GCMT 14 05:59:05.0±0.1, 56.69S±0.01×142.26W±0.01, h20km, MW5.7/150, Moment Tensor Solution. s138, c245; s150, c298; Duration: 19.7 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.39±.04; Mθθ=3.31±.04; Mφφ=-2.92±.04; Mrθ=0.18±.08; Mθφ=2.31±.03; Mφr=-0.59±.08; Best double couple: M0=3.93100×10¹⁷ NP1: φs=297.00000°, δ81.00000°, λ=-3.00000°. NP2: φs=27.00000°, δ87.00000°, λ=-171.00000°. Principal axes: T 4.1010, Plg5.0000°, Azm161.0000°; N -0.3370, Plg80.0000°, Azm44.0000°; P -3.7600, Plg9.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 14 05:59:00.3±0.4, 56.7S±0.1×142.30W±0.07, h10km, n218, σ1⁹79/94, mb5.1/29, MS5.3/123, 3C-2D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTZ	**Chatham Island**	**25.19**	**286**	P	**P**	**06 04 25.5**	**-0.2**
CTZ				IAMs_20	IAMs_20	06 11 29.9	
	comp=Z,6μm,18.0s						
VNDA	**Vanda**	**28.21**	**202**	LR	LR	06 12 34.9	
	comp=Z,2μm,21.6s,baz=76,slow=29						
VNDA	**Vanda**	**28.21**	**202**		**P**	**06 04 50.6**	**-2.0**
BFZ	**Birch Farm**	**31.12**	**283**	IAMs_20	IAMs_20	06 14 22.9	
	comp=Z,5μm,18.0s						
MSWZ	**Moikau Station**	**31.15**	**281**	P	**P**	**06 05 19.1**	**+0.2**
ODZ	**Otahua Downs**	**31.28**	**271**	IAMs_20	IAMs_20	06 14 30.6	
	comp=Z,5μm,18.0s						
KHZ	**Kahutara**	**31.39**	**278**	IAMs_20	IAMs_20	06 13 53.9	
	comp=Z,5μm,21.0s						
MRZ	**Mangatainoka R**	**31.50**	**282**	P	**P**	**06 05 21.5**	**-0.5**
MRZ				IAMs_20	IAMs_20	06 14 44.7	
	comp=Z,5μm,19.0s						
SNZO	**South Karori**	**31.51**	**281**	IAMs_20	IAMs_20	06 14 33.2	
	comp=Z,5μm,20.0s						
RPZ	**Rata Peaks**	**31.90**	**274**	LR	LR	06 15 11.4	
	comp=Z,4μm,20.8s,baz=271,slow=31						
RPZ	**Rata Peaks**	**31.90**	**274**	IAMs_20	IAMs_20	06 14 49.1	
	comp=Z,5μm,18.0s						
LBZ	**Lake Benmore**	**31.95**	**272**	IAMs_20	IAMs_20	06 14 50.3	
	comp=Z,5μm,20.0s						
BKZ	**Black Stump Fm**	**32.08**	**285**	IAMs_20	IAMs_20	06 15 27.2	
	comp=Z,6μm,20.0s						
RTZ	**Ruatahuna**	**32.22**	**287**	IAMs_20	IAMs_20	06 15 43.0	
	comp=Z,6μm,18.0s						
MXZ	**Matakaoa Point**	**32.31**	**289**	P	**P**	**06 05 28.5**	**-0.7**
INZ	**Inchbonnie**	**32.34**	**276**	P	**P**	**06 05 29.6**	**+0.2**
INZ				IAmb	IAmb	06 05 40.7	
	comp=Z,24nm,1.2s						
URZ	**Urewera**	**32.41**	**287**	LR	LR	06 15 26.9	
	comp=Z,4μm,21.9s,baz=128,slow=31						
MRNZ	**Matariki Terra**	**32.51**	**279**	P	**P**	**06 05 30.3**	**-0.7**
TKNZ	**Takaka Hill**	**32.66**	**279**	P	**P**	**06 05 31.9**	**-0.3**
FOZ	**Fox Glacier**	**32.70**	**273**	P	**P**	**06 05 32.5**	**0.0**
FOZ				IAmb	IAmb	06 06 05.0	
	comp=Z,43nm,1.3s						
FOZ				IAMs_20	IAMs_20	06 15 34.3	
	comp=Z,6μm,22.0s						
PTCN	**Pitcairn Islan**	**32.78**	**21**	P	**P**	**06 05 33.0**	**-0.4**
DSZ	**Denniston Nort**	**32.80**	**277**	IAMs_20	IAMs_20	06 14 59.0	
	comp=Z,5μm,20.0s						
HIZ	**Hauiti**	**33.42**	**284**	P	**P**	**06 05 38.6**	**-0.3**
HIZ				IAmb	IAmb	06 05 44.2	
	comp=Z,50nm,1.5s						
QSPA	**South Pole Qui**	**33.49**	**180**	P	**P**	**06 05 41.5**	**+1.9**
	comp=Z,10nm,1.0s,baz=50,slow=2.8,SNR=4.5						
QSPA				LR	LR	06 16 32.7	
	comp=Z,4μm,21.9s,baz=67,slow=32						
QSPA	**South Pole Qui**	**33.49**	**180**	P	**P**	**06 05 39.7**	**+0.2**
QSPA				IAmb	IAmb	06 06 22.2	
	comp=Z,27nm,1.2s						
TOZ	**Tahuroa Road**	**33.66**	**286**	P	**P**	**06 05 41.0**	**+0.1**
TOZ				IAMs_20	IAMs_20	06 16 37.1	
	comp=Z,4μm,19.0s						
OUZ	**Omahuta**	**36.55**	**287**	IAMs_20	IAMs_20	06 17 58.8	
	comp=Z,5μm,19.0s						
PMSA	**Palmer Station**	**36.73**	**135**	LR	LR	06 17 05.6	
	comp=Z,2μm,19.9s,baz=256,slow=30						
RAO	**Raoul Island**		**37.10**	**302**	LR	LR	06 19 50.7
	comp=Z,499nm,19.6s,baz=146,slow=34						
RAR	**Rarotonga**	**37.69**	**333**	LR	LR	06 17 34.1	
	comp=Z,2μm,18.8s,baz=174,slow=29						
RPN	**Rapa Nui**	**37.72**	**52**	LR	LR	06 18 25.4	
	comp=Z,1μm,18.4s,baz=213,slow=30						
BELA	**Belgrano 2**	**38.79**	**161**	P	**P**	**06 06 24.3**	**-0.2**
PPT	**Papeete**	**39.41**	**349**	LR	LR	06 18 44.0	
	comp=Z,2μm,18.7s,baz=184,slow=30						
USHA	**Ushuaia**	**39.75**	**120**	LR	LR	06 19 12.7	
	comp=Z,605nm,19.0s,baz=242,slow=30						
LHI	**Lord Howe Isla**	**47.22**	**277**	P	**P**	**06 07 33.3**	**+0.1**
PLCA	**Paso Flores**	**47.67**	**103**	P	**P**	**06 07 36.7**	**+0.1**
H03S2	**Juan Fernandez**	**48.08**	**90**	T	T	06 59 35.7	
	baz=220,slow=74,SNR=84						
H03S1	**Juan Fernandez**	**48.09**	**90**	T	T	06 59 40.0	
	baz=220,slow=74,SNR=91						
VNA3	**Neumayer Olymp**	**48.09**	**161**	⇑P	**P**	**06 07 39.9**	**+0.5**
	comp=Z,17nm,0.8s						
H03S3	**Juan Fernandez**	**48.10**	**90**	T	T	06 59 40.0	
	baz=220,slow=74,SNR=179						
H03N3	**Juan Fernandez**

comp=Z,16nm,1.2s
GO01 Chusmiza 64.52 87 P **P** **06 09 37.4 -0.4**
FORT Forrest 64.69 252 P **P** **06 09 37.8 -0.5**
PB12 IPOC Station P 64.75 86 P **P** **06 09 38.1 -0.8**
PB12 IAmb IAmb 06 11 46.6
comp=Z,31nm,1.5s
HNR Honiara 64.76 293 LR LR 06 33 17.8
comp=Z,35nm,19.3s,baz=240,slow=32
PB16 IPOC Station P 65.42 86 P **P** **06 09 43.9 +0.1**
CPUP Villa Florida 65.71 101 P **P** **06 09 47.6 +2.6**
comp=Z,0.8nm,0.8s,baz=185,slow=11,SNR=3.2
CPUP LR LR 06 33 54.6
comp=Z,385nm,18.1s,baz=220,slow=32
comp=Z,0.8nm,0.8s
CPUP Villa Florida 65.71 101 P **P** **06 09 44.6 -0.3**
CPUP IAmb IAmb 06 09 56.1
comp=Z,27nm,1.9s
PB18 Visviri 66.04 86 P **P** **06 09 46.8 -1.0**
NNA Nana 66.64 76 LR LR 06 32 17.1
comp=Z,534nm,20.3s,baz=215,slow=30
NNA Nana 66.64 76 P **P** **06 09 49.6 -1.4**
NNA IAmb IAmb 06 10 01.6
comp=Z,15nm,1.0s
AS31 Alice Springs 67.20 261 P **P** **06 09 52.8 -1.8**
ASAR Alice Springs 67.20 261 P **P** **06 09 53.4 -1.2**
comp=Z,4.2nm,0.7s,baz=142,slow=6.4,SNR=58
ASAR LR LR 06 34 51.4
comp=Z,1μm,21.6s,baz=142,slow=32
comp=Z,4.2nm,0.7s
ASAR Alice Springs 67.20 261 P **P** **06 09 52.2 -2.4**
LPAZ La Paz 67.85 86 P **P** **06 10 02.6 +3.3**
comp=Z,1.0nm,0.5s,baz=198,slow=6.4,SNR=4.4
comp=Z,1.0nm,0.5s
LPAZ La Paz 67.85 86 P **P** **06 09 58.4 -1.0**
LPAZ IAmb IAmb 06 10 16.1
comp=Z,17nm,1.3s
H01W1 Cape Leeuwin H 68.38 239 T T 07 25 21.5
baz=144,slow=76,SNR=861
H01W2 Cape Leeuwin H 68.39 239 T T 07 25 21.8
baz=144,slow=76,SNR=1095
H01W3 Cape Leeuwin H 68.40 239 T T 07 25 22.7
baz=144,slow=76,SNR=1031
NWAO Narrogin (SRO) 68.49 243 LR LR 06 33 19.9
comp=Z,1μm,18.9s,baz=124,slow=30
NWAO Narrogin (SRO) 68.49 243 P **P** **06 10 01.4 -1.1**
NWAO Narrogin (SRO) 68.49 243 IAms_20 IAms_20 06 34 10.4
comp=Z,1μm,18.0s
WR0 Warramunga Arr 69.83 264 P **P** **06 10 09.6 -1.4**
WR0 IAmb IAmb 06 10 37.7
comp=Z,48nm,1.9s
ATAH Atahualpa 69.88 72 LR LR 06 33 51.6
comp=Z,901nm,21.1s,baz=223,slow=30
WB2 Warramunga Arr 69.95 264 P **P** **06 10 10.1 -1.7**
WB2 IAmb IAmb 06 10 25.4
comp=Z,45nm,1.6s
WRA Warramunga Arr 69.96 264 P **P** **06 10 10.8 -0.9**
comp=Z,3.1nm,0.8s,baz=146,slow=5.7,SNR=23
comp=Z,3.1nm,0.8s
WRA Warramunga Arr 69.96 264 P **P** **06 10 10.5 -1.3**
WRAB Tennant Creek 69.96 264 IAms_20 IAms_20 06 36 34.4
comp=Z,1μm,19.0s
WB0 Warramunga Arr 70.07 264 P **P** **06 10 11.2 -1.3**
WB0 IAmb IAmb 06 10 24.9
comp=Z,22nm,1.4s
PMG Port Moresby 71.53 281 LR LR 06 37 49.0
comp=Z,920nm,20.0s,baz=155,slow=33
SIV San Ignacio 71.98 92 LR LR 06 37 27.5
comp=Z,156nm,20.1s,baz=117,slow=32
MORW Morawa 72.23 244 P **P** **06 10 24.0 -1.4**
MORW IAmb IAmb 06 10 32.3
comp=Z,57nm,1.6s
VILB Vilhena 74.95 91 P **P** **06 10 40.6 -0.9**
VILB IAmb IAmb 06 10 54.0
comp=Z,15nm,0.9s
OTAV Otavalo 76.11 68 P **P** **06 10 47.1 -1.7**
FITZ Fitzroy Crossi 76.20 258 LR LR 06 40 09.2
comp=Z,2μm,21.6s,baz=139,slow=32
PSA00 Pilbara Seismi 76.44 252 P **P** **06 10 48.9 -1.2**
PSA00 IAmb IAmb 06 11 11.7
comp=Z,21nm,1.5s
KNRA Kununurra 76.48 262 P **P** **06 10 48.9 -1.4**
KNRA IAmb IAmb 06 11 16.6
comp=Z,43nm,1.4s
STCH Steam Cracks 76.52 348 P **P** **06 10 48.9 -1.4**
BDFB Brasilia 79.42 102 LR LR 06 43 06.5
comp=Z,579nm,18.1s,baz=210,slow=33
JAY Jayapura 80.77 280 LR LR 06 43 23.6
comp=Z,596nm,20.4s,baz=196,slow=33
SAUI Saumlaki 81.41 269 IAms_20 IAms_20 06 44 34.3
comp=Z,2μm,19.0s
JTS Las Juntas de 81.65 57 LR LR 06 39 24.6
comp=Z,504nm,19.7s,baz=209,slow=30
ROSC El Rosal 82.16 69 LR LR 06 42 48.3
comp=Z,520nm,18.1s,baz=208,slow=32
CMIG Matias Romero 83.46 45 LR LR 06 40 18.4
comp=Z,294nm,20.7s,baz=203,slow=30
BATI Baumata 83.77 261 LR LR 06 45 29.6
comp=Z,2μm,20.8s,baz=156,slow=33
SOEI Soe 83.82 262 IAms_20 IAms_20 06 46 40.6
comp=Z,2μm,20.0s
LPIG La Paz 84.87 29 LR LR 06 40 27.5
comp=Z,513nm,19.3s,baz=202,slow=29
FAKI Fak Fak 85.07 272 IAms_20 IAms_20 06 47 47.5
comp=Z,1μm,21.0s
MMRI Maumere 85.85 261 IAms_20 IAms_20 06 46 51.4
comp=Z,1μm,21.0s
SIJI Sorong 87.31 272 LR LR 06 48 59.7
comp=Z,679nm,20.4s,baz=164,slow=34
BOAV Boa Vista 87.46 82 P **P** **06 11 46.6 -1.3**
BOAV IAmb IAmb 06 12 15.3
comp=Z,16nm,1.3s
SDV Santo Domingo 87.49 70 LR LR 06 44 44.7
comp=Z,428nm,20.4s,baz=208,slow=31
SDV Santo Domingo 87.49 70 P **P** **06 11 47.3 -1.0**
SDV IAmb IAmb 06 12 29.6
comp=Z,30nm,1.9s
SUR Sutherland 90.16 166 LR LR 06 50 13.3
comp=Z,397nm,18.1s,baz=180,slow=34
KAPI Kappang 90.21 261 LR LR 06 49 37.2
comp=Z,1μm,20.5s,baz=151,slow=34
KAPI Kappang 90.21 261 IAms_20 IAms_20 06 49 05.0
comp=Z,1μm,20.0s
BAR Barrett 91.61 21 IAms_20 IAms_20 06 43 04.2
comp=Z,1μm,20.0s
TXAR Lajitas Array 91.70 33 LR LR 06 43 51.1
comp=Z,328nm,21.3s,baz=202,slow=29
GUMO Guam 92.08 292 LR LR 06 47 34.2
comp=Z,95nm,18.4s,baz=142,slow=32
PFO Pinyon Flats O 92.56 21 LR LR 06 45 18.7
comp=Z,886nm,18.6s,baz=196,slow=30
PASC Pasadena Art C 92.77 20 IAms_20 IAms_20 06 43 24.7
comp=Z,1μm,22.0s
OSI Osito Audit: C 93.10 19 IAms_20 IAms_20 06 43 32.5
comp=Z,2μm,19.0s
NEE2 Needles Airpor 94.05 23 IAms_20 IAms_20 06 45 11.9
comp=Z,1μm,19.0s
BOSA Boshof 94.41 169 LR LR 06 53 02.2
comp=Z,854nm,18.6s,baz=192,slow=34
BKB Balikpapan 94.89 260 IAms_20 IAms_20 06 54 18.3
comp=Z,1μm,20.0s
LEM Lembang 95.16 249 LR LR 06 49 39.1
comp=Z,233nm,21.0s,baz=164,slow=32
FURC Furnace Creek, 95.24 20 IAms_20 IAms_20 06 45 13.4
comp=Z,1μm,19.0s
TIN Tinemaha, Big 95.56 19 IAms_20 IAms_20 06 45 23.7
comp=Z,1μm,21.0s
CMB Columbia Colle 96.14 17 IAms_20 IAms_20 06 45 40.1
comp=Z,768nm,19.0s
ANMO Albuquerque 96.18 29 LR LR 06 47 02.9
comp=Z,528nm,21.5s,baz=204,slow=30
NVAR Mina Array Bea 96.88 19 LR LR 06 46 17.5
comp=Z,928nm,20.9s,baz=193,slow=29
DAV Davao City (W) 97.02 272 LR LR 06 54 54.6
comp=Z,253nm,19.8s,baz=140,slow=35
SJG San Juan 97.58 69 LR LR 06 52 43.7
comp=Z,147nm,18.7s,baz=190,slow=33
LBTB Lobatse 98.00 169 LR LR 06 54 02.7
comp=Z,866nm,19.1s,baz=180,slow=34
FOMA Nahampoana Res 98.31 188 IAms_20 IAms_20 06 53 53.2
comp=Z,1μm,19.0s
KRPM Rodgers 98.67 14 IAms_20 IAms_20 06 45 35.9
comp=Z,1μm,19.0s
N02D Trinity Center 98.67 15 IAms_20 IAms_20 06 46 08.9
comp=Z,2μm,22.0s
WIN Windhoek 99.19 161 IAms_20 IAms_20 06 52 44.0
comp=Z,2μm,20.0s
YBH Yreka Blue Hor 99.41 15 LR LR 06 47 16.6
comp=Z,78nm,21.3s,baz=173,slow=29
VOI Vohitsoka 101.37 189 IAms_20 IAms_20 06 53 58.3
comp=Z,1μm,21.0s
H10S3 ASCENSION HYDR 101.78 127 T T 08 07 39.9
baz=208,slow=74,SNR=20
H10S2 ASCENSION HYDR 101.78 127 T T 08 07 40.0
baz=12,slow=74,SNR=26
TSUM Tsumeb 102.56 161 IAms_20 IAms_20 06 52 31.4
comp=Z,1μm,21.0s
HLID Hailey 102.58 20 IAms_20 IAms_20 06 49 31.4
comp=Z,1μm,20.0s
H10N3 ASCENSION HYDR 102.84 127 T T 08 08 58.7
baz=207,slow=74,SNR=20
H10N1 ASCENSION HYDR 102.85 127 T T 08 09 11.7
baz=207,slow=74,SNR=27
H10N2 ASCENSION HYDR 102.86 127 T T 08 09 03.1
baz=207,slow=74,SNR=20
BCX Boston College 115.28 51 IAms_20 IAms_20 06 55 51.0
comp=Z,924nm,21.0s
QIZ Qiongzhong 115.50 266 PKP **PKiKP** **06 17 42.8 +0.6**
QIZ PP **PP** **06 18 45.0 +0.9**
QIZ SS SS 06 34 44.9 +1.8
QIZ LR LR
comp=Z,210nm,12.3s
QIZ LR LR
comp=Z,200nm,16.7s
QIZ LR LR
comp=Z,230nm,13.2s
P17K Kvichak River 116.06 352 IAms_20 IAms_20 06 56 39.9
comp=Z,1μm,21.0s
P18K Big Mountain, 116.16 353 IAms_20 IAms_20 06 56 22.7
comp=Z,1μm,21.0s
MSEY Mahe Island 117.17 200 IAms_20 IAms_20 06 59 27.2
comp=Z,781nm,19.0s
N17K Nushagak Hills 117.44 352 IAms_20 IAms_20 07 05 21.4
comp=Z,1μm,18.0s
M22K Willow 118.23 356 IAms_20 IAms_20 07 01 40.5
comp=Z,1μm,19.0s
SSE Sheshan 118.83 283 PKP **PKiKP** **06 17 48.3 0.0**
SSE PP **PP** **06 19 07.8 +0.4**
SSE SS SS 06 35 29.0 +2.5
SSE LR LR
comp=Z,120nm,21.6s
SSE LR LR
comp=Z,120nm,21.3s
K17K Iditarod 119.69 352 IAms_20 IAms_20 06 59 34.0
comp=Z,913nm,20.0s
J18K Innoko River 120.31 353 IAms_20 IAms_20 07 04 48.4
comp=Z,1μm,20.0s
PALK Pallekele 120.36 232 IAms_20 IAms_20 06 58 21.1
comp=Z,656nm,20.0s
BPAW Bear Paw Mtn. 120.62 356 IAms_20 IAms_20 06 59 33.4
comp=Z,1μm,20.0s
NJ2 Nanjing 120.83 282 *e*PKP **PKiKP** **06 17 53.3 +1.1**
J25K Salcha River, 120.97 358 IAms_20 IAms_20 06 59 54.0
comp=Z,888nm,20.0s
J30M Hart River 121.00 3 IAms_20 IAms_20 07 05 19.4
comp=Z,1μm,21.0s
MBO M'Bour 121.03 113 IAms_20 IAms_20 07 08 20.5
comp=Z,744nm,18.0s
ILAR Eielson Array 121.16 358 PKP **PKiKP** **06 17 54.2 +2.5**
comp=Z,1.8nm,0.9s,baz=292,slow=1.4,SNR=13
H17K Granite Mounta 122.02 351 IAms_20 IAms_20 07 07 57.4
comp=Z,1μm,18.0s
H18K Honhosa River 122.10 352 IAms_20 IAms_20 07 00 29.8
comp=Z,1μm,21.0s
ANM Nome 122.18 348 IAms_20 IAms_20 06 58 38.9
comp=Z,974nm,22.0s
H22K Ishtalitna Cre 122.43 356 IAms_20 IAms_20 06 58 56.3
comp=Z,929nm,20.0s
MBAR Mbarara 122.64 172 IAms_20 IAms_20 07 08 56.2
comp=Z,936nm,19.0s
G18K Tagagawik 122.86 352 IAms_20 IAms_20 07 04 14.7
comp=Z,1μm,20.0s
FYU Fort Yukon 122.93 359 IAms_20 IAms_20 07 01 08.5
comp=Z,975nm,18.0s
G19K Purcell Mounta 122.99 353 IAms_20 IAms_20 07 00 16.2
comp=Z,1μm,22.0s
GYA Guiyang 123.17 268 ⇓PKP **PKPdf** **06 17 55.3 -1.6**
GYA PP **PP** **06 19 41.5 +4.3**
GYA AMB AMB
comp=Z,200nm,7.6s
GYA LR LR
comp=Z,240nm,4.8s
GYA LR LR
comp=Z,100nm,5.3s
GYA LR LR
comp=Z,180nm,10.2s
TNA Tin City 123.44 348 IAms_20 IAms_20 07 02 37.1
comp=Z,1μm,20.0s
E19K Redstone River 124.30 353 IAms_20 IAms_20 07 03 25.8
comp=Z,961nm,18.0s
E24K Your Creek 124.51 357 IAms_20 IAms_20 07 04 56.7
comp=Z,1μm,19.0s
E18K Tukpahlearik C 124.52 352 IAms_20 IAms_20 07 04 34.5
comp=Z,930nm,20.0s
E23K Chandalar 124.53 357 IAms_20 IAms_20 07 04 59.7
comp=Z,809nm,20.0s
E28M Babbage River 124.97 1 IAms_20 IAms_20 07 09 34.6
comp=Z,1μm,20.0s
D19K Kuna River 125.39 353 IAms_20 IAms_20 07 06 21.5
comp=Z,1μm,19.0s
D23K Nanushuk River 125.47 356 IAms_20 IAms_20 07 00 55.7
comp=Z,954nm,18.0s
C16K Lisburne Hills 125.78 350 IAms_20 IAms_20 07 05 43.9
comp=Z,768nm,19.0s
LODK Lodwar 126.88 177 IAms_20 IAms_20 07 08 09.4
comp=Z,1μm,22.0s
MA2 Magadan 127.42 324 IAms_20 IAms_20 07 04 46.8
comp=Z,822nm,20.0s
MORE Moreh 128.16 256 IAms_20 IAms_20 07 06 00.2
comp=Z,390nm,22.0s
BILL Bilibino 130.02 337 IAms_20 IAms_20 07 03 14.8
comp=Z,677nm,21.0s
HYB Hyderabad 130.30 235 *e*PKiKP **PKiKP** **06 18 11.4 -0.1**
HHC Hu-ho-hao-te 131.28 284 *e*PKP **PKPdf** **06 18 09.3 -2.6**
BTO2 Baotou 132.10 283 *e*PKP **PKPdf** **06 18 10.6 -2.9**
BTO2 PP **PP** **06 20 39.1 +3.0**
BTO2 LR LR
comp=Z,490nm,4.9s
BTO2 LR LR
comp=Z,380nm,11.8s
FURI Furi 132.35 181 IAms_20 IAms_20 07 13 23.2
comp=Z,894nm,20.0s
ATD Arta Tunnel 134.80 187 IAms_20 IAms_20 07 13 14.2
comp=Z,814nm,21.0s
TIXI Tiksi 141.93 329 IAms_20 IAms_20 07 13 02.1
comp=Z,514nm,20.0s
MORF Marmelete 143.80 102 *e*tx **PKPdf** **06 18 34.9 -0.1**
PTEO Sao Teotonio 143.94 102 *e*tx **PKPdf** **06 18 36.1 +0.9**
MESJ Messejana 144.43 102 *e*tx **PKPdf** **06 18 41.8 +5.8**
NEEM North Greenlan 144.70 22 *i* P **PKiKP** **06 18 40.0 +0.5**
PMTG Montargil 145.32 101 *e*tx **PKPdf** **06 18 40.4 +2.9**
UOSS Minazif 145.59 211 IAms_20 IAms_20 07 17 56.8
comp=Z,476nm,21.0s
PCAS Nomilo, Conde 145.87 99 *e*tx **PKPdf** **06 18 41.0 +2.6**
PMRV Marv??o 146.03 101 *e*tx **PKPdf** **06 18 39.0 +0.3**
PCBR Castelo Branco 146.27 100 *e*tx **PKPdf** **06 18 40.0 +0.9**
WMQ Urumqi 146.33 269 *e*PKPbc **PKPbc** **06 18 39.8 -0.6**
WMQ LR LR
comp=Z,240nm,23.3s
RAYN Ar Rayn 146.41 193 IAms_20 IAms_20 07 22 05.0
comp=Z,514nm,20.0s
SUMG Summit 146.59 32 *i* P **PKiKP** **06 18 49.0 +5.5**
PVIS Viseu 146.66 99 *e*tx **PKPdf** **06 18 44.6 +4.8**
PBRG Braganca 148.04 99 *e*tx **PKPdf** **06 18 45.5 +3.5**
ESDC Sonseca Array 148.05 104 PKPbc **PKPbc** **06 18 45.7 +0.4**
comp=Z,2.7nm,0.9s,baz=251,slow=2.8,SNR=9.7
WUS Wushi 149.21 258 **PKPdf** **06 18 43.3 -0.9**
MKAR Makanchi Array 151.16 269 PKPbc **PKPbc** **06 18 51.6 -1.1**
comp=Z,5.0nm,0.9s,baz=130,slow=1.9,SNR=19
DAG Danmarks Havn 151.85 24 *i* P **PKiKP** **06 18 58.0 +4.2**
DBG Daneborg 151.89 29 *i* P **PKiKP** **06 18 57.2 +3.3**
ZALV Zalesovo Beam 153.46 284 PKPbc **PKiKP** **06 19 00.3 +2.6**
comp=Z,0.9nm,0.7s,baz=134,slow=4.2,SNR=2.5
KURBB Kurchatov Arra 155.35 273 PKPbc PKPdf 06 19 02.9 +10
comp=Z,1.3nm,1.0s,baz=119,slow=1.1,SNR=5.0
CSS Mathiatis 158.09 170 IAms_20 IAms_20 07 42 01.6
comp=Z,529nm,22.0s
BVAR Bonovoye Array 160.94 273 PKPab **PKPab** **06 19 44.6 +2.2**
comp=Z,2.6nm,0.7s,baz=108,slow=4.7,SNR=5.8

KRSC 14 06:01:59.0±2.6, 49.71N×157.20E, h15km±57km, Ml3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.20**	**325**	*e*P		Pn 06 02 19.3	-1.9
SKR				*e*S		Sb 06 02 33.9	-2.7
PAU	**Pauzhetka**	**1.78**	**352**	*e*S		Sb 06 02 52.6	-0.7
KDTR	**Khodutka, Kamc**	**2.17**	**14**	*e*P		Pb 06 02 37.1	-0.9
KDTR				*e*S		Sb 06 03 04.7	+0.1
ASAK	**Asacha**	**2.71**	**9**	*e*P		Pb 06 02 45.2	-2.1
MTVR	**Mutnovka**	**2.84**	**12**	*e*P		Pb 06 02 46.8	-2.7
MTVR				*e*S		Sb 06 03 21.1	-3.0
RUS	**Russkaya**	**2.85**	**16**	*e*P		Pn 06 02 46.2	+2.3
GRL	**Gorelyy**	**2.90**	**11**	*e*P		Pb 06 02 47.9	-2.6
AVH	**Avacha**	**3.69**	**14**	*e*P		Pn 06 02 59.6	+4.1
SMAR	**Somma**	**3.69**	**15**	*e*P		Pb 06 03 00.2	-3.8
KOK	**Koryaka**	**3.70**	**13**	*e*P		Pb 06 03 00.0	-4.0
SDLR	**Sedlovina**	**3.72**	**16**	*e*P		Pn 06 02 58.6	+2.6
KRX	**Arik**	**3.76**	**13**	*e*P		Pn 06 03 00.0	+3.5
SPN	**Mys Shipunski**	**3.82**	**26**	*e*P		Pn 06 02 58.7	+1.5

WEL 14 06:04:19.9±1.1, 38°S±10°×177°6E±°, h176km±9km, M2.1/14, MLv2.1/14, Error ellipse: s-maj=14.9km s-min=8.4km az=139.9, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.75**	**187**	P		Pn 06 04 46.1	+0.4
MRHZ	**Matea Rd**	**0.77**	**142**	P		Pn 06 04 45.9	+0.3
TWVZ	**Taurewa**	**0.89**	**199**	P		Pn 06 04 46.8	+0.3
WTVZ	**West Tongariro**	**0.90**	**191**	P		Pn 06 04 47.0	+0.3
OTVZ	**Oturere**	**0.94**	**187**	P		Pn 06 04 47.6	+0.7
OTVZ				S		Sn 06 05 08.2	+0.2
NGZ	**Ngauruhoe**	**0.96**	**190**	P		Pn 06 04 47.0	-0.1
RTZ	**Ruatahuna**	**0.99**	**113**	P		Pn 06 04 47.0	-0.2
RTZ				S		Sn 06 05 08.6	+0.3
MTHZ	**Maungataniwha**	**1.01**	**128**	P		Pn 06 04 47.7	+0.4
MTHZ				S		Sn 06 05 08.5	0.0
TUVZ	**Tukino**	**1.05**	**187**	P		Pn 06 04 47.8	+0.1
WNVZ	**Wahianoa**	**1.11**	**189**	P		Pn 06 04 48.1	-0.2
WNVZ				S		Sn 06 05 09.8	-0.5
MOVZ	**Moawhango**	**1.18**	**183**	P		Pn 06 04 48.4	-0.3
MOVZ				S		Sn 06 05 09.3	-1.7
RAGZ	**Rawiri**	**1.28**	**103**	P		Pn 06 04 49.9	+0.3
KWHZ	**Kaweka Forest**	**1.28**	**159**	P		Pn 06 04 50.2	+0.6
KWHZ				S		Sn 06 05 12.6	-0.1
SNGZ	**Shannon Statio**	**1.31**	**115**	P		Pn 06 04 49.9	+0.1
MCHZ	**McNeill Hill**	**1.39**	**151**	P		Pn 06 04 51.4	+0.9
MCHZ				S		Sn 06 05 14.8	+0.5
KRHZ	**Kereru**	**1.48**	**163**	P		Pn 06 04 51.5	+0.2
KRHZ				S		Sn 06 05 14.9	-0.9
RUGZ	**Raukumara Rang**	**1.49**	**80**	P		Pn 06 04 50.7	-0.9
TKGZ	**Te Karaka**	**1.61**	**98**	P		Pn 06 04 53.3	+0.7
TKGZ				S		Sn 06 05 17.8	0.0
HAZ	**Te Kaha**	**1.62**	**74**	P		Pn 06 04 52.3	-0.3
HAZ				S		Sn 06 05 16.6	-1.4
WAZ	**Wanganui**	**1.66**	**203**	P		Pn 06 04 52.9	-0.2
PNHZ	**Pukenui**	**1.71**	**170**	P		Pn 06 04 53.5	-0.1
PNHZ				S		Sn 06 05 17.9	-2.0
CKHZ	**Cape Kidnapper**	**1.73**	**146**	P		Pn 06 04 54.1	+0.3
KAHZ	**Kahuranaki**	**1.77**	**153**	P		Pn 06 04 54.6	+0.3
CNGZ	**Carnagh Statio**	**1.89**	**98**	P		Pn 06 04 56.0	+0.5
DVHZ	**Dannevirke**	**2.08**	**173**	P		Pn 06 04 56.4	-1.2
DVHZ				S		Sn 06 05 23.7	-3.4
WMGZ	**Waiomatatini S**	**2.09**	**80**	P		Pn 06 04 57.4	-0.3
WMGZ				S		Sn 06 05 25.8	-1.1
MRZ	**Mangatainoka R**	**2.44**	**184**	P		Pn 06 04 59.8	-1.7
MRZ				S		Sn 06 05 29.9	-4.2
OGWZ	**Otaki Gorge**	**2.63**	**191**	P		Pn 06 05 02.0	-1.9
HOWZ	**Holdsworth Sta**	**2.68**	**185**	P		Pn 06 05 02.2	-2.2
HOWZ				S		Sn 06 05 34.2	-5.0

CATAC ***14*** *06:07:56.3±0.6, 15°N±4°×8°8W±°, h3km±3km, M2.7/6, MLv2.7/6, Error ellipse: s-maj=10.1km s-min=5.2km az=43.5, confirmed*
GCG ***14*** *06:07:56.4±1.9, 15°45N×87°93W, h1km±36km, MD3.6, Presumed earthquake*
ISC 14 06:07:54.1±2.3, 15°51N±0°10×87°86W±0°05, h15km±15km, n13, σ0°56/23, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZABA	**Izabal, Puerto**	**0.74**	**288**	P		**Pn 06 08 09.7**	**-0.3**
IZABA				S		**Sn 06 08 21.0**	**+0.1**
SARH	**Santa Rosa de**	**1.14**	**230**	P		**Pg 06 08 16.1**	**+0.1**
SARH				S		**Sg 06 08 31.4**	**+0.5**
SARH	**Santa Rosa de**	**1.14**	**230**	*i* P		**Pg 06 08 16.1**	**+0.1**
SARH				*i* S		**Sb 06 08 30.1**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.55**	**159**	P		**Pb 06 08 23.2**	**+0.7**
TGUH				S		**Sg 06 08 43.8**	**-0.2**
LLGN	**La Laguna**	**1.70**	**218**	P		**Pb 06 08 25.6**	**+0.5**
LLGN				S		**Sg 06 08 48.8**	**-0.1**
ZAFR2	**Estanzuela, Za**	**1.71**	**238**	*i* P		**Pb 06 08 25.6**	**+0.3**
ZAFR2				*i* S		**Sg 06 08 50.1**	**+0.8**
ESQI	**Esquipulas**	**1.72**	**237**	P		**Pb 06 08 49.3**	**+0.7**
ESQI				S		**Sg 06 08 49.6**	**+0.2**
MTO3	**Montecristo**	**1.82**	**233**	P		**Pb 06 08 27.8**	**+0.4**
MTO3				S		**Sg 06 08 52.0**	**-0.8**
MTO3	**Montecristo**	**1.82**	**233**	*i* P		**Pb 06 08 27.6**	**+0.3**
YUSH	**Yuscaran**	**1.83**	**147**	P		**Pb 06 08 27.7**	**+0.4**
YUSH				S		**Sg 06 08 52.4**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.98**	**205**	P		**Pb 06 08 30.0**	**+0.1**
SCLA				S		**Sg 06 08 57.3**	**-0.6**
PAVA	**Las Pavas**	**2.07**	**211**	S		**Sg 06 08 59.4**	**-1.2**
APG	**El Apazote**	**2.57**	**259**	*i* P		**Pb 06 08 39.7**	**-0.3**

BJI ***14*** *06:22:23.2, 29°97N×142°49E, h17km, mB5.0/11, mb4.6/53, Ms4.3/8, Ms7 4.2/8*
NIED ***14*** *06:22:26.2, 30°04N×142°24E, h42km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr1.98; Mθθ0.88; Mφφ-2.86; Mrθ0.50; Mrφ0.25; Mθφ-1.97; Fault plane solution: M0 3.18000×10^15 NP1: φs10.00000°, δ26.00000°, λ111.00000°. NP2: φs167.00000°, δ65.00000°, λ80.00000°.*
NEIC ***14*** *06:22:26.3±1.9, 30°05N±0°05×142°5E±0°.1, h10km±1km, mb4.7/40 Error ellipse: s-maj=20.9km s-min=7.4km az=81.0*
JMA ***14*** *06:22:26.2±0.2, 30°0N±0°9×14°2E±°, h42km, MV4.5/33, NEAR TORISHIMA IS*
MOS ***14*** *06:22:27.0±1.0, 29°98N×142°35E, h30km, mb4.6/28, Error ellipse: s-maj=11.8km s-min=5.3km az=116.2*
IDC ***14*** *06:22:30.2±0.7, 30°01N×142°25E, h36km±5km, mb4.1/26, mbtmp4.3/28, ML3.7/2, MS3.3/6, Error ellipse: s-maj=15.6km s-min=12.5km az=57.0*
ISC 14 06:22:29.4±0.4, 30°02N±0°05×142°33E±0°07, h35km, n178, σ1°73/188, mb4.6/71, MS4.2/6, 16C-8D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.92**	**183**	*e*P		**Pn 06 23 11.6**	**-1.6**
CBIJ				*e*S		**Sn 06 23 46.0**	**-1.0**
JCJ	**Chichijima**	**2.92**	**183**	Pn		Pn 06 22 59.4	-14
	20nm,0.3s,baz=359,slow=19,SNR=21						
JCJ				Sn		Sn 06 23 32.5	-15
	41nm,0.3s,baz=259,slow=19,SNR=4.8						
JCJ	**Chichijima**	**2.92**	**183**	Pn		**Pn 06 23 12.7**	**-0.5**
JHH2	**Haha-jima-NKT2**	**3.38**	**182**	*e*P		**Pn 06 23 18.6**	**-1.0**
JHCJ	**Hachijojimakas**	**3.73**	**325**	*e*P		**Pn 06 23 22.0**	**-2.5**
JHCJ				*e*S		**Sn 06 24 03.5**	**-3.8**
JHJ2	**Mitsune**	**3.76**	**326**	Pn		**Pn 06 23 23.0**	**-1.9**
JHJ2	**Mitsune**	**3.76**	**326**	*e*P		**Pn 06 23 22.5**	**-2.4**
JHJ2				*e*S		**Sn 06 24 04.6**	**-3.3**
JHJ	**Hachijo jima 2**	**3.78**	**326**	Pn		**Pn 06 23 22.6**	**-2.5**
	18nm,0.3s,baz=92,slow=22,SNR=4.8						
JHJ				Sn		**Sn 06 24 04.2**	**-4.2**
	25nm,0.3s,baz=75,slow=23,SNR=4.0						
JHJ				LR		06 24 37.2	
	comp=Z,232nm,20.4s,baz=157,slow=34						
BSO1	**Boso 1**	**4.76**	**346**	*e*P		**Pn 06 23 36.2**	**-1.9**
BSO3	**Boso 3**	**5.01**	**343**	*e*P		**Pn 06 23 40.5**	**-1.3**
BSO4	**Boso 4**	**5.24**	**342**	*e*P		**Pn 06 23 44.2**	**-0.8**
JNY	**Yasuok**	**6.52**	**326**	*e*P		**Pn 06 24 03.8**	**+0.9**
JRY	**Ryogami san**	**6.64**	**335**	*e*P		**Pn 06 24 03.6**	**-0.8**
JRY				*e*S		**Sn 06 25 18.0**	**-0.9**
INU	**Inuyama**	**6.95**	**321**	Pn		**Pn 06 24 07.0**	**-1.7**
JGF	**Kuroka**	**6.96**	**324**			**Pn 06 24 10.1**	**+1.1**
MJAR	**Matsushiro Arr**	**7.36**	**333**	Pn		**Pn 06 24 13.4**	**-1.0**

1.5nm,0.3s,baz=154,slow=11,SNR=210
MJAR Sn **Sn** **06 25 31.4 -5.3**
0.2nm,0.3s,baz=163,slow=18,SNR=13
46nm,0.7s
MJAR Matsushiro Arr 7.36 333 Pn Pn 06 24 13.9 -0.5
MJAR Matsushiro Arr 7.36 333 P **Pn 06 24 13.9 -0.5**
MAJO Matsushiro 7.37 333 Pn Pn 06 24 14.1 -0.3
MAJO Matsushiro 7.37 333⇓*iP* **Pn 06 24 13.4 -1.0**
MJB9 Matsu-Tunnel 7.37 333 Pn **Pn 06 24 14.8 +0.4**
JFK Kawauchi 7.43 351 *eP* **Pn 06 24 11.8 -3.5**
JNU Nakatsue 10.25 290 LR LR 06 29 05.9
comp=Z,248nm,19.2s,baz=116,slow=39
JOW Kunigami 12.77 259 LR LR 06 29 54.1
comp=Z,189nm,21.7s,baz=126,slow=35
KSRS Korea Array 14.09 306 Pn **P 06 25 48.9 -4.7**
0.3nm,0.3s,baz=113,slow=13,SNR=14
KSRS LR LR 06 29 48.2
comp=Z,72nm,20.4s,baz=120,slow=31
3.1nm,0.6s
KS19 Wonju Array Si 14.15 306 Pn **P 06 25 50.3 -4.1**
PSTR Posyet 15.64 327⇑*iP* **Pn 06 26 05.8 -1.2**
PSTR pmax pmax
comp=Z,2.0nm,1.0s
YSS Yuzhno-Sakhali 16.91 1 *eP* **P 06 26 23.8 -1.1**
YSS *eS* **Sn 06 29 30.0 0.0**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,300nm,15.0s
MDJ Mudanjiang 17.71 329 P 06 26 32.5 -1.3
MDJ Mudanjiang 17.71 329 P **P 06 26 33.3 -0.5**
MDJ pmax pmax
comp=Z,42nm,0.9s
DL2 Dalian 19.20 303 *eP* **Pn 06 26 51.5 +0.2**
DL2 pmax pmax
comp=Z,44nm,1.1s
CN2 Changchun 19.22 320 P **P 06 26 48.5 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
BNX BinXian 19.57 327⇓P **Pn 06 26 53.5 -2.2**
BNX pmax pmax
comp=Z,19nm,0.7s
YULB Yu-li 19.90 256 P **Pn 06 26 58.6 -1.1**
YULB IAmb IAmb 06 27 04.4
comp=Z,25nm,0.8s
SSLB Suanglung 20.04 257 Pn 06 26 59.7 -1.7
SSLB IAmb IAmb 06 27 11.6
comp=Z,33nm,1.0s
NJ2 Nanjing 20.22 282 *eP* Pn 06 27 01.5 -1.9
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KLR Kul'dur 20.81 340⇓*iP* Pn 06 27 09.0 -1.1
KLR pmax pmax
comp=Z,7.0nm,0.9s
TYV Tymovskoe 20.82 1 *eP* Pn 06 27 08.9 -1.4
TYV *eS* Sn 06 31 02.9 -1.4
TYV pmax pmax
comp=Z,6.0nm,1.3s
TYV pmax pmax
comp=Z,200nm,3.3s
TYV smax smax
comp=N,200nm,4.5s
TYV smax smax
comp=E,300nm,4.5s
GRNR Gornyy 21.20 350⇑*iP* **P 06 27 12.0 +0.2**
GRNR pmax pmax
comp=Z,2.0nm,0.9s
HEH HeiHe 23.12 335 *eP* **P 06 27 32.0 -0.2**
HEH pmax pmax
comp=Z,21nm,0.6s
HEH LR LR
comp=Z,290nm,15.9s
HEH LR LR
comp=Z,490nm,14.5s
HEH LR LR
comp=Z,270nm,13.4s
BJT Baijiatuan 23.56 302 P **P 06 27 35.8 -0.8**
BJT Baijiatuan 23.56 302 P **P 06 27 35.8 -0.8**
BJT pmax pmax
comp=Z,10.0nm,1.0s
HNS HongShan 24.07 295⇓P **P 06 27 39.0 -2.4**
HNS pmax pmax
comp=Z,6.0nm,0.7s
XLT XiLinHaoTe 25.01 311 *eP* **P 06 27 49.4 -0.6**
XLT pmax pmax
comp=Z,17nm,0.9s
PETK Petropavlovsk- 25.67 22 LR LR 06 37 47.2
comp=Z,71nm,21.8s,baz=297,slow=36
HIA Hailar 25.76 325 P 06 27 56.7 +0.1
HIA IAmb IAmb 06 28 15.7
comp=Z,13nm,0.9s
HIA Hailar 25.76 325 P **P 06 27 56.7 +0.1**
HIA pmax pmax
comp=Z,13nm,0.9s
HILR Hailar Array B 25.94 325 P **P 06 27 59.2 +0.9**
comp=Z,7.1nm,0.6s,baz=132,slow=11,SNR=14
comp=Z,7.1nm,0.6s
ZEA Zeya 26.12 339 *eP* **P 06 28 00.0 +0.2**
ZEA *e* 06 28 04.4
ZEA pmax pmax
comp=N,10.0nm,0.4s
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 27.17 302 *eP* **P 06 28 11.3 +1.7**
HHC pmax pmax
comp=Z,7.0nm,0.6s
ULN Ulaanbaatar 32.35 313 P 06 28 56.0 +0.5
ULN IAmb IAmb 06 29 08.8
comp=Z,6.1nm,0.9s
ULN Ulaanbaatar 32.35 313⇑*iP* **P 06 28 56.6 +1.1**
ULN pmax pmax
comp=Z,6.0nm,1.0s
LZH Lanzhou 32.67 291 *eP* **P 06 28 58.0 -0.4**
LZH sP sP 06 29 07.0 -3.6
LZH pmax pmax
comp=Z,11nm,1.2s
SONM Songino Array 32.76 313 P **P 06 28 59.7 +0.7**
comp=Z,2.0nm,0.5s,baz=115,slow=7.9,SNR=19
comp=Z,2.0nm,0.5s
SONM Songino Array 32.76 313 P 06 28 59.7 +0.7
SONM Songino Array 32.76 313 P **P 06 28 59.7 +0.7**
SONM pmax pmax
comp=Z,6.0nm,1.1s
LZDM Lanzhou Array 32.79 291 P **P 06 28 58.2 -1.5**
comp=Z,6.0nm,0.7s,baz=141,slow=5.7,SNR=15
comp=Z,6.0nm,0.7s
YAK Yakutsk 33.08 349 LR LR 06 44 18.4
comp=Z,50nm,18.2s,baz=119,slow=40
CD2 Chengdu 33.15 281 P **P 06 29 00.9 -1.7**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 LR LR
comp=Z,450nm,12.7s
CD2 LR LR
comp=Z,280nm,13.3s
CD2 LR LR
comp=Z,250nm,12.1s
SEY Seymchan 33.56 8⇓*iP* **P 06 29 06.1 +0.5**
SEY pmax pmax
comp=Z,3.0nm,1.1s
ZAK Zakamensk 35.55 316 *eP* **P 06 29 23.8 +0.6**
ZAK pmax pmax
comp=Z,7.0nm,1.5s
PZH PanZhiHua 35.79 275 P **P 06 29 27.8 +2.2**
GTA2 Gaotai 35.95 297 *eP* **P 06 29 25.8 -1.0**
GTA2 pmax pmax
comp=Z,8.0nm,1.1s
TNCH TengChong 38.99 274⇑P P 06 29 56.9 +4.1
TNCH pmax pmax
comp=Z,19nm,0.7s
TNCH pmax pmax
comp=Z,95nm,3.0s
KNGR Kungurtug, Tuv 39.13 315⇑*iP* **P 06 29 55.8 +2.2**
KNGR pmax pmax
comp=Z,1.0nm,0.9s
GOMU GeErMu 39.96 292 P **P 06 29 57.5 -3.4**
GOMU pmax pmax
comp=Z,9.0nm,0.8s
BILL Bilibino 40.59 14 P 06 30 04.4 -0.8
BILL Bilibino 40.59 14⇓*iP* **P 06 30 04.8 -0.5**
BILL pmax pmax
comp=Z,3.0nm,0.9s
CMAR Chiang Mai Arr 40.98 264 P **P 06 30 08.6 -0.6**
comp=Z,1.1nm,0.5s,baz=57,slow=6.7,SNR=7.8
comp=Z,1.1nm,0.5s
KAPI Kappang 41.01 216⇓*iP* **P 06 30 07.2 -2.1**
KAPI pmax pmax
comp=Z,4.0nm,0.9s
TIXI Tiksi 42.33 354⇑*iP* **P 06 30 20.3 +0.9**
TIXI pmax pmax
comp=Z,2.0nm,0.9s
MTN Manton Dam 43.96 196 P **P 06 30 33.0 -0.2**
MTN IAmb IAmb 06 30 33.1
comp=Z,15nm,0.8s
LVA Lava Point 44.01 42 P **P 06 30 30.7 -2.6**
WMQ Urumqi 45.03 303 *eP* P 06 30 44.3 +2.7
DGZ Jazzator, Alta 45.38 312⇑*iP* **P 06 30 45.0 +0.5**
DGZ pmax pmax
comp=Z,7.0nm,0.8s
ANM Nome 47.31 28 P 06 30 59.4 +0.2
ANM IAmb IAmb 06 31 12.9
comp=Z,6.0nm,1.0s
ANM Nome 47.31 28 P **P 06 30 59.4 +0.2**
ANM pmax pmax
comp=Z,6.0nm,1.0s
ZALV Zalesovo Beam 47.40 317 P **P 06 31 01.5 +1.4**
comp=Z,2.0nm,0.7s,baz=120,slow=8.7,SNR=5.3
ZALV PcP **PcP 06 32 30.0 -0.2**
comp=Z,1.9nm,0.7s,baz=106,slow=2.8,SNR=4.7
comp=Z,2.0nm,0.7s
N15K Kwethluk River 48.43 34 P **P 06 31 08.0 +0.1**
MK31 Makanchi Array 48.76 308 *iP* **P 06 31 10.9 +0.2**
MKAR Makanchi Array 48.76 308 P **P 06 31 11.2 +0.4**
comp=Z,3.9nm,0.8s,baz=89,slow=9.6,SNR=56
comp=Z,3.9nm,0.6s
MKAR Makanchi Array 48.76 308 P 06 31 10.7 0.0
MAKZ Makanchi 48.97 308 P 06 31 12.2 -0.2
MAKZ IAmb IAmb 06 31 25.5
comp=Z,19nm,1.4s
MAKZ Makanchi 48.97 308 P **P 06 31 12.2 -0.2**
MAKZ pmax pmax
comp=Z,19nm,1.4s
M16K Timber Creek 49.15 33 P **P 06 31 13.2 -0.3**
K17K Iditarod 49.80 31 P **P 06 31 18.6 +0.2**
K17K IAmb IAmb 06 31 32.4
comp=Z,8.7nm,1.1s
M17K Holitna River 49.94 33 P **P 06 31 18.1 -1.3**
M17K IAmb IAmb 06 31 38.2
comp=Z,9.8nm,1.2s
NRIK Noril'sk 49.99 338 P **P 06 31 19.6 0.0**
comp=Z,1.2nm,0.4s,baz=99,slow=8.7,SNR=4.2
comp=Z,1.2nm,0.4s
NRIK Noril'sk 49.99 338⇑*iP* **P 06 31 19.7 0.0**
NRIK pmax pmax
comp=Z,3.0nm,0.9s
WB0 Warramunga Arr 50.08 190 P 06 31 20.6 -0.4
WRAB Tennant Creek 50.25 190⇑*iP* **P 06 31 22.2 0.0**
WRAB pmax pmax
comp=Z,6.0nm,0.8s
WRA Warramunga Arr 50.26 190 P **P 06 31 22.1 -0.3**
comp=Z,8.2nm,0.7s,baz=8.6,slow=7.9,SNR=73
comp=Z,8.2nm,0.7s
WRA Warramunga Arr 50.26 190 P 06 31 21.3 -1.1
WRA Warramunga Arr 50.26 190 *iP* **P 06 31 21.7 -0.6**
WRA pmax pmax
comp=Z,8.0nm,0.7s
G18K Tagagawik 50.41 27 P 06 31 19.2 -3.8
O18K Koktuh Hills 50.79 35 P **P 06 31 27.3 +1.4**
O18K IAmb IAmb 06 31 50.6
comp=Z,13nm,1.4s
F19K Shaleruckik Mo 51.00 26 P **P 06 31 27.0 -0.3**
PDGK Podgornoye 51.01 303 P **P 06 31 27.4 -0.6**
C19K Lookout Ridge 51.01 23 P **P 06 31 28.5 +1.0**
C19K IAmb IAmb 06 31 53.9
comp=Z,12nm,1.5s
KURK Kurchatov 51.07 313 P 06 31 28.6 +0.5
KURK Kurchatov 51.07 313 P **P 06 31 28.8 +0.7**
KURBB Kurchatov Arra 51.13 313 P **P 06 31 28.8 +0.3**
comp=Z,3.6nm,0.6s,baz=91,slow=7.4,SNR=43
comp=Z,3.6nm,0.6s
WUS Wushi 51.49 301 P 06 31 31.2 -0.5
WUS IAmb IAmb 06 31 45.0
comp=Z,20nm,1.3s
KDAK Kodiak Island 51.97 38 P **P 06 31 34.5 -0.3**
KDAK Kodiak Island 51.97 38 P **P 06 31 34.5 -0.3**
KDAK pmax pmax
comp=Z,33nm,1.3s
TARG Taragay, Kyrgy 52.46 302 P **P 06 31 40.5 +1.3**
TARG IAmb IAmb 06 31 53.1
comp=Z,14nm,1.0s
TARG Taragay, Kyrgy 52.46 302 P **P 06 31 40.5 +1.3**
TARG pmax pmax
comp=Z,14nm,1.0s
ASAR Alice Springs 53.99 190 P **P 06 31 49.5 -0.4**
comp=Z,2.2nm,0.8s,baz=14,slow=9.0,SNR=18
ASAR PcP **PcP 06 32 57.1 +2.2**
comp=Z,1.2nm,0.7s,baz=6.4,slow=4.1,SNR=4.6
comp=Z,2.2nm,0.8s
KSH2 Kashi 54.62 299 P **P 06 31 55.0 +0.3**
KSH2 sP sP 06 32 06.4 -0.7
KSH2 pmax pmax
comp=Z,12nm,0.7s
AAK Ala-Archa 54.73 303 P **P 06 31 56.4 +0.9**
comp=Z,2.5nm,0.4s,baz=108,slow=4.8,SNR=3.7
comp=Z,2.5nm,0.4s
D24K Happy Valley 54.77 24 P **P 06 31 55.9 +0.8**
D24K IAmb IAmb 06 32 14.8
comp=Z,5.2nm,0.8s
ILAR Eielson Array 55.10 30 P **P 06 31 57.4 -0.3**
comp=Z,1.3nm,0.9s,baz=268,slow=6.0,SNR=8.5
comp=Z,1.3nm,0.9s
F25K Christian Rive 55.78 26 P **P 06 32 03.5 +0.9**
F25K IAmb IAmb 06 32 20.8
comp=Z,7.7nm,1.4s
BVA0 Borovoye Array 56.01 316 P **P 06 32 06.1 +1.8**
BVAR Borovoye Array 56.01 316 P **P 06 32 04.3 0.0**
comp=Z,10nm,0.7s,baz=86,slow=7.9,SNR=29
comp=Z,10nm,0.7s
BORK Borovoye 56.05 316 P 06 32 06.5 +1.9
BORK IAmb IAmb 06 32 08.9
comp=Z,7.9nm,0.7s
BORK Borovoye 56.05 316⇑*iP* **P 06 32 06.6 +1.9**
BORK pmax pmax
comp=Z,7.0nm,0.9s
ARSB Arslanbob 56.10 302 P **P 06 32 06.1 +0.8**
ARSB Arslanbob 56.10 302 P **P 06 32 06.1 +0.8**
ARSB pmax pmax
comp=Z,25nm,1.4s
F26K Sheenjek River 56.36 26 P **P 06 32 07.5 +0.8**
H27K Steamboat Moun 57.37 28 P 06 32 14.8 +0.9
H27K IAmb IAmb 06 32 41.8
comp=Z,6.7nm,1.1s
KK31 Karatay Array 57.51 304 P 06 32 16.2 +1.0
KK31 Karatay Array 57.51 304 *iP* **P 06 32 15.8 +0.6**
KKAR Karatay Array 57.51 304 P 06 32 16.1 +0.9
KKAR Karatay Array 57.51 304 P **P 06 32 16.1 +0.9**
STKA Stephens Creek 61.56 181 P **P 06 32 43.8 +0.8**
comp=Z,2.6nm,0.8s,baz=346,slow=9.8,SNR=5.6
comp=Z,2.6nm,0.8s
STKA Stephens Creek 61.56 181⇑*iP* **P 06 32 44.0 +1.0**
PALK Pallekele 61.87 262 LR LR 07 00 38.4
comp=Z,536nm,19.5s,baz=154,slow=37
ARTI Arti 62.32 321 P **P 06 32 48.2 +0.2**
comp=Z,4.2nm,0.6s,baz=84,slow=2.8,SNR=7.3
comp=Z,4.2nm,0.6s
ARTI Arti 62.32 321 P 06 32 47.8 -0.1
ARTI Arti 62.32 321*c iP* **P 06 32 48.3 +0.4**
ARTI S **S 06 41 15.8 +4.1**
ARTI SS **SS 06 45 13.1 -1.8**
ARTI pmax pmax
comp=Z,5.0nm,0.8s
CRAG Craig 62.86 40 P **P 06 32 49.8 -1.8**
AB31 Akbulak array 63.17 313 P 06 32 55.2 +1.5
AB31 Akbulak array 63.17 313 *iP* **P 06 32 54.2 +0.5**
ABKAR Akbulak array 63.17 313 P 06 32 53.7 0.0
AKTO Aktyubinsk 64.05 315 P **P 06 33 00.2 +0.7**
comp=Z,5.5nm,0.7s,baz=70,slow=7.3,SNR=14
comp=Z,5.5nm,0.7s
KIRV Kirov 66.37 325⇓*iP* **P 06 33 15.3 +1.0**
BBB Bella Bella 66.65 42 P **P 06 33 14.5 -1.8**
YKA Yellowknife Ar 69.52 29 P **P 06 33 34.3 +0.2**
comp=Z,1.1nm,0.8s,baz=298,slow=7.0,SNR=16
YKA pP **sP 06 33 46.1 +0.3**
comp=Z,1.6nm,0.6s,baz=300,slow=7.1,SNR=15
comp=Z,1.1nm,0.8s
YKA Yellowknife Ar 69.52 29 *iP* **P 06 33 34.2 +0.1**
YKA pmax pmax
comp=Z,1.0nm,0.7s
BELG Belogornoye 69.53 319⇑*iP* **P 06 33 35.6 +1.3**
BELG pmax pmax
comp=Z,1.0nm,0.8s
YKAW1 Yellowknife Wh 69.58 29 P 06 33 34.7 +0.2
YKAW1 IAmb IAmb 06 33 46.9
comp=Z,4.2nm,0.7s
KLMR Klimovskoe 70.13 329 *eP* **P 06 33 39.7 +1.8**
KLMR pmax pmax
comp=Z,20nm,1.3s
OBN Obninsk 74.22 325 *eP* **P 06 34 02.2 -0.2**
OBN *e* 06 34 13.2
OBN *e* 06 36 46.5
OBN *e*PPP PPP 06 38 32.4
OBN pmax pmax
comp=Z,3.0nm,1.0s
OBN Obninsk 74.22 325 P **P 06 34 02.6 +0.2**
comp=Z,28nm,0.5s
FINES FINESS Array B 75.39 334 P **P 06 34 09.4 +0.3**
comp=Z,1.3nm,0.5s,baz=81,slow=6.4,SNR=9.3
comp=Z,1.3nm,0.5s
FINES FINESS Array B 75.39 334 *iP* **P 06 34 09.6 +0.5**
FINES pmax pmax
comp=Z,1.0nm,0.5s
KBZ Khabaz 76.13 313 P **P 06 34 14.9 +1.3**
comp=Z,5.2nm,0.8s,baz=65,slow=1.4,SNR=9.3
comp=Z,5.2nm,0.8s
KBZ Khabaz 76.13 313⇑*iP* **P 06 34 14.9 +1.3**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 76.15 313 *eP* **P 06 34 15.1 +1.2**
KIV pmax pmax
comp=Z,8.0nm,1.1s
NVAR Mina Array Bea 78.62 52 P **P 06 34 29.3 +1.2**
comp=Z,1.1nm,0.8s,baz=287,slow=5.6,SNR=9.2
NVAR pP **sP 06 34 40.7 +1.4**
comp=Z,1.3nm,0.6s,baz=298,slow=5.3,SNR=8.8
comp=Z,1.1nm,0.8s
MNK Minsk 78.76 327 *iP* **P 06 34 29.3 +1.2**
comp=E,18nm,0.9s
MNK *iP* **P 06 34 29.3 +1.2**
comp=N,11nm,0.9s
MNK *iP* **P 06 34 29.3 +1.2**
comp=Z,12nm,0.9s,baz=54
MNK *i*PP **PP 06 37 28.9 +2.8**
MNK *i*PPP PPP 06 39 15.6
MNK *i*S **S 06 44 28.3 +5.2**
MNK *i*SS **SS 06 49 34.2 +7.2**
MNK *i*SSS SSS 06 52 59.5
MNK *i*LQ LQ 07 04 49.5
MNK *i*LR LR 07 10 02.6
MNK *i*LRM MLR 07 12 06.5
comp=N,174nm,29.1s
MNK *i*LRM MLR 07 12 11.0
comp=Z,47nm,7.6s
MNK *i*LRM MLR 07 12 27.0
comp=E,64nm,12.5s
MNK Minsk 78.76 327 *iP* **P 06 34 29.3 +1.2**
MNK *i* 06 37 28.9
MNK *i*PPP PPP 06 39 15.6
MNK *i*S **S 06 44 28.3 +5.2**
MNK *i*SS **SS 06 49 34.1 +7.2**
MNK pmax pmax
comp=N,11nm,0.9s
MNK pmax pmax
comp=Z,12nm,0.9s
MNK pmax pmax
comp=E,18nm,0.9s
MNK MLR MLR
comp=N,174nm,29.0s
MNK MLR MLR
comp=Z,47nm,8.0s
MNK MLR MLR
comp=E,64nm,13.0s
AK03 Malin Array Si 80.33 324 P **P 06 34 37.2 +0.4**
AKASG Malin Array Be 80.35 324 P **P 06 34 36.9 +0.1**
comp=E,1.0nm,0.4s,baz=49,slow=5.8,SNR=12
comp=E,1.0nm,0.4s
AKASG Malin Array Be 80.35 324 *iP* **P 06 34 37.2 +0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 80.35 324 P 06 34 37.2 +0.3
AKBB IAmb IAmb 06 34 37.9
comp=Z,5.7nm,0.8s
AKBB Malin Array Si 80.35 324⇑*iP* **P 06 34 37.0 +0.1**
AKBB pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 80.35 324 P **P 06 34 37.1 +0.3**
KIEV Kiev 80.36 324 P 06 34 37.6 +0.7
KIEV IAmb IAmb 06 34 37.9
comp=Z,5.2nm,0.8s
KIEV Kiev 80.36 324 P **P 06 34 37.6 +0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.8s
KIEV Kiev 80.36 324 P **P 06 34 37.1 +0.2**
AK22 Malin Array Si 80.39 324 P **P 06 34 37.3 +0.2**
AK21 Malin Array Si 80.40 324 P **P 06 34 37.5 +0.4**
AK17 Malin Array Si 80.44 324 P **P 06 34 37.7 +0.3**
HFS Hagfors 80.80 337 P **P 06 34 39.9 +0.8**
comp=Z,3.5nm,0.7s,baz=63,slow=7.5,SNR=8.1
comp=Z,3.5nm,0.7s
NB2 NORSAR Subarra 80.95 338 P **P 06 34 39.9 -0.1**
comp=Z,2.1nm,0.7s,baz=41,slow=5.3
NOA NORSAR Array B 80.95 338 P **P 06 34 40.3 +0.3**
comp=Z,2.7nm,0.7s,baz=41,slow=5.2,SNR=16
comp=Z,2.7nm,0.7s
RNPP9 Sopachiv 81.59 325 P **P 06 34 43.9 +0.4**
PDAR Pinedale Array 82.05 45 P **P 06 34 47.1 +0.7**
comp=Z,0.4nm,0.8s,baz=292,slow=9.3,SNR=3.6
PDAR pP **sP 06 34 58.0 -0.4**
comp=Z,0.4nm,0.6s,baz=279,slow=2.1,SNR=5.8
comp=Z,0.4nm,0.8s
BR131 Keskin Array S 84.12 313⇑*iP* **P 06 34 57.9 +0.9**
BRTR Keskin Array B 84.12 313 P **P 06 34 58.2 +1.2**
comp=Z,2.6nm,0.8s,baz=106,slow=3.6,SNR=13
comp=Z,2.6nm,0.8s
BRTR Keskin Array B 84.12 313 P **P 06 34 57.5 +0.5**
MODS Modra-Piesok 87.78 327 *eP* **P 06 35 15.6 +0.8**
MODS Modra-Piesok 87.78 327 *eP* **P 06 35 15.6 +0.8**
TXAR Lajitas Array 93.75 53 P **P 06 35 45.0 +1.9**
comp=Z,1.3nm,0.8s,baz=308,slow=2.9,SNR=11
TXAR pP **sP 06 35 55.9 +0.6**
comp=Z,2.0nm,0.8s,baz=283,slow=1.6,SNR=12
comp=Z,1.3nm,0.8s
LPAZ La Paz 148.95 71 PKPbc **PKPab 06 42 16.4 -2.6**
comp=Z,3.7nm,1.0s,baz=160,slow=1.5,SNR=4.7
PLCA Paso Flores 151.29 121 PKPbc **PKPab 06 42 21.5 -5.9**
comp=Z,1.1nm,0.7s,baz=297,slow=4.5,SNR=2.9

PGC 14 06:32:19.4±0.0,53.75N×132.81W,h12km,ML3.7/15,
41km west of Port Clements, Bc Haida Gwaii Region,
Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
PCLB	**Port Clements**	**0.17**	**101**	P	Pg	06 32 23.2	-0.1
PCLB				S	Sg	06 32 26.0	-0.1
NDB	**Naden**	**0.22**	**339**	P	Pg	06 32 24.2	0.0
NDB				S	Sg	06 32 27.1	-0.4
MASB	**Masset**	**0.54**	**60**	P	Pg	06 32 29.5	-0.4
MASB				S	Sg	06 32 37.2	+0.3
DI2B	**Dawson Inlet**	**0.58**	**160**	P	Pg	06 32 30.2	-0.5
DI2B				S	Sg	06 32 37.9	-0.5
DI2B				Sg	Sb	06 32 40.9	+1.3
DIB	**Dawson Inlet,**	**0.58**	**160**	P	Pg	06 32 30.2	-0.6
DIB				S	Sg	06 32 37.8	-0.6
DIB				Sg	Sb	06 32 40.8	+1.1
MOBC	**Moresby Island**	**0.79**	**140**	P	Pg	06 32 33.3	-1.3
MOBC				S	Sg	06 32 43.8	-1.1
HG1B	**Mitchell Dam**	**0.91**	**153**	P	Sg	06 32 36.0	-0.9
HG1B				S	Sg	06 32 47.7	-1.2
BNAB	**Bonilla**	**1.32**	**100**	P	Pn	06 32 41.4	-2.2
BNAB				S	Sb	06 32 59.1	-1.7
BAIB	**Barry Inlet**	**1.33**	**151**	P	Pn	06 32 41.7	-2.2
BAIB				Pg	Pb	06 32 43.1	-1.3
BAIB				S	Sb	06 33 00.5	-1.0
GRNB	**Grenville Isla**	**1.69**	**86**	Pn	Pn	06 32 46.2	-2.6
GRNB				Pg	Pb	06 32 48.3	-2.2
GRNB				Sg	Sn	06 33 09.7	-0.7
JEDB	**Jedway, Haida**	**1.75**	**146**	Pn	Pn	06 32 47.7	-1.9
JEDB				Sg	Sn	06 33 12.4	+0.6
GRIB	**Gribbell Islan**	**2.23**	**99**	Pn	Pn	06 32 53.9	-2.2
GRIB				Pg	Pb	06 32 57.1	-2.5
GRIB				Sg	Sb	06 33 26.5	-0.5
KITB	**Kitimat**	**2.49**	**81**	Pn	Pn	06 32 57.5	-2.2
KITB				Sg	Sb	06 33 33.8	-0.7
WRAK	**Wrangell Islan**	**2.69**	**5**	Pn	Pn	06 33 01.4	-1.1

WRAK				Pg	Pb	06 33 06.5	-1.0
U35K	**Hyder**	**2.70**	**35**	Pn	Pn	06 33 01.7	-1.0
BBB	**Bella Bella**	**3.24**	**117**	Pn	Pn	06 33 07.5	-2.5
T35M	**Bob Quinn**	**3.55**	**23**	Pn	Pn	06 33 14.5	+0.1
S34M	**Telegraph Cree**	**4.28**	**12**	Pn	Pn	06 33 24.7	+0.4
PHC	**Port Hardy**	**4.49**	**131**	Pn	Pn	06 33 24.8	-2.4
DLBC	**Dease Lake**	**4.95**	**17**	Pn	Pn	06 33 34.4	+0.8
FSJB	**Fort St James**	**5.06**	**78**	Pn	Pn	06 33 33.5	-1.6
FHBB	**Fair Harbour**	**5.10**	**134**	Pn	Pn	06 33 34.5	-1.1
WOSB	**Woss**	**5.27**	**130**	Pn	Pn	06 33 36.6	-1.3
TAHB	**Tahsis**	**5.42**	**133**	Pn	Pn	06 33 38.9	-1.0
P32M	**Atlin**	**5.88**	**355**	Pn	Pn	06 33 47.3	+1.0

YARS ***14*** *06:32:53.0±0.1, 65.°93N×111.°14E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 14 06:32:53.0±3.0, 65.°41N×111.°97E, h0km, mb3.3/3, mbtmp3.4/4, MS4.0/3, Error ellipse: s-maj=263.4km s-min=22.8km az=143.0, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**17.70**	**243**	P	P	06 37 02.1	+0.5
	0.8nm,0.5s,baz=59,slow=6.9,SNR=3.8						
KURBB	**Kurchatov Arra**	**22.70**	**245**	P	P	06 37 55.5	-0.3
	1.0nm,0.6s,baz=38,slow=11,SNR=9.0						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**24.54**	**235**	P	P	06 38 13.8	-0.2
	0.2nm,0.4s,baz=35,slow=8.3,SNR=4.3						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**38.19**	**43**	P	P	06 40 13.7	-0.1
	0.4nm,0.6s,baz=316,slow=7.7,SNR=10						
	0.4nm,0.6s						
JOW	**Kunigami**	**39.95**	**157**	LR	LR	06 58 29.4	
	comp=Z,413nm,20.8s,baz=144,slow=38						
CMAR	**Chiang Mai Arr**	**47.72**	**197**	LR	LR	07 05 36.8	
	comp=Z,54nm,20.6s,baz=165,slow=41						
SCHQ	**Schefferville**	**60.08**	**359**	LR	LR	07 08 49.3	
	comp=Z,202nm,18.9s,baz=240,slow=36						

ASRS ***14*** *06:56:53.0±1.2, 53.°61N×88.°07E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 14 06:56:54.2±1.6, 51.°32N×81.°76E, h0km, mbtmp2.1/2, ML1.7/2, Error ellipse: s-maj=18.9km s-min=13.3km az=149.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.16**	**252**	Pg	Pn	06 57 32.8	+1.4
	0.1nm,0.3s,baz=72,slow=18,SNR=3.4						
KURBB				Lg	Lg	06 58 03.2	
	0.2nm,0.3s,baz=73,slow=33,SNR=8.0						
ZALV	**Zalesovo Beam**	**3.22**	**34**	Pn	Pn	06 57 48.2	+2.2
	0.4nm,0.3s,baz=216,slow=15,SNR=4.3						
ZALV				Lg	Lg	06 58 34.5	
	baz=212,slow=28						
	1.1nm,0.6s						
I46RU	**ZALESOVO INFRA**	**3.22**	**34**	I	I	07 13 30.0	
	baz=216,slow=330,SNR=3.7						
MKAR	**Makanchi Array**	**4.55**	**175**	Pn	Pn	06 58 05.2	+0.9
	baz=0.6,slow=10,SNR=5.5						
MKAR				Lg	Lg	06 59 13.8	
	0.3nm,0.3s,baz=3.4,slow=27,SNR=6.3						
	0.1nm,0.3s						

ASRS ***14*** *07:09:17.0±1.4, 51.°37N×82.°02E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC ***14*** *07:09:21.1±1.1, 51.°37N×81.°78E, h0km, mbtmp2.7/3, ML2.2/3, Error ellipse: s-maj=10.7km s-min=10.1km az=53.0*
ISC 14 07:09:20.0±0.9, 51.°59N±0.°05×81.°88E±0.°06, h10km, n7, σ2°25/11, 2C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.32**	**247**	Pg	**Pn**	**07 09 60.0**	**+1.7**
	0.8nm,0.3s,baz=71,slow=18,SNR=23						
KURBB				Lg	Lg	07 10 31.8	
	1.1nm,0.3s,baz=73,slow=32,SNR=10						
KURBB	**Kurchatov Arra**	**2.32**	**247**	⇑Pg	**Pb**	**07 10 00.6**	**-1.3**
	5.7nm,0.3s						
KURBB				⇓Lg	Lg	07 10 31.6	
	6.7nm,0.2s						
ZALV	**Zalesovo Beam**	**2.96**	**36**	Pn	**Pb**	**07 10 11.1**	**-1.8**
	0.7nm,0.3s,baz=220,slow=16,SNR=8.5						
ZALV				Pg	**Pg**	**07 10 18.8**	**+2.0**
	1.6nm,0.3s,baz=216,slow=15,SNR=13						
ZALV				Sn	**Sb**	**07 10 47.5**	**-1.6**
	1.0nm,0.3s,baz=214,slow=27,SNR=4.3						
ZALV				Lg	Lg	07 11 01.7	
	1.3nm,0.3s,baz=214,slow=26,SNR=6.1						
	1.1nm,0.3s						
I46RU	**ZALESOVO INFRA**	**2.96**	**36**	I	I	07 26 00.0	
	0.1nm,0.7s,baz=215,slow=330,SNR=3.8						
MK31	**Makanchi Array**	**4.80**	**177**	⇑Pn	**Pn**	**07 10 33.4**	**+0.9**
	0.1nm,0.2s,baz=4.5,slow=10,SNR=6.8						
MK31				Pg	**Pb**	**07 10 44.3**	**0.0**
	0.2nm,0.2s,baz=4.6,slow=11,SNR=8.8						
MK31				⇓Lg	Lg	07 11 45.3	
	2.2nm,0.5s,baz=9.9,slow=26,SNR=8.4						
MKAR	**Makanchi Array**	**4.80**	**177**	Pn	**Pn**	**07 10 33.5**	**+1.1**
	0.3nm,0.3s,baz=355,slow=13,SNR=17						
MKAR				Sn	**Sn**	**07 11 24.4**	**-3.8**
	0.3nm,0.3s,baz=357,slow=25,SNR=3.8						
MKAR				Lg	Lg	07 11 44.4	
	0.5nm,0.3s,baz=357,slow=29,SNR=7.7						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**7.19**	**286**	Pn	**Pn**	**07 11 07.5**	**+2.3**
	baz=106,slow=15,SNR=5.5						
BVAR				Sn	**Sn**	**07 12 24.8**	**-2.1**
	baz=104,slow=24,SNR=1.6						
	0.5nm,0.4s						

ATH ***14*** *07:17:02.9, 38.°19N×20.°72E, h17km±1km, ML3.0/25, Manual Solution by M.Kolligri First location: 2020/02/14 07:17:58, This location: 2020/02/14 07:24:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
THE ***14*** *07:17:03.4, 38.°2N±0.°8×2.°1E±.°, h27km±8km, M2.9/9, MLh2.9/9*
IDC ***14*** *07:17:04.2±19.0, 38.°59N×21.°08E, h0km, mb3.5/5, mbtmp3.5/5, MS4.1/2, Error ellipse: s-maj=363.5km s-min=43.5km az=39.0*
ISC 14 07:17:03.0±0.8, 38.°19N±0.°02×20.°73E±0.°02, h14km±5km, n72, σ0°54/91, mb3.5/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMHA	**Samh**	**0.08**	**313**	P	**Pg**	**07 17 04.9**	**-1.0**
SMHA				S	**Sg**	**07 17 07.0**	**-0.9**
VLS	**Valsamata**	**0.11**	**261**	P	**Pb**	**07 17 06.8**	**-0.1**
VLS	**Valsamata**	**0.11**	**261**	P	**Pb**	**07 17 06.7**	**-0.1**
VLS				S	**Sb**	**07 17 09.0**	**-0.4**
RTZL	**Ratzakli, Kefa**	**0.12**	**163**	P	**Pg**	**07 17 06.8**	**+0.4**
RTZL	**Ratzakli, Kefa**	**0.12**	**163**	P	**Pg**	**07 17 06.7**	**+0.4**
RTZL				S	**Sg**	**07 17 09.1**	**+0.4**
KFL1	**Kefalonia,Entr**	**0.18**	**261**	P	**Pg**	**07 17 07.8**	**+0.6**
KFL1				S	**Sg**	**07 17 11.2**	**+1.1**
ARG2	**Argostoli**	**0.19**	**265**	P	**Pg**	**07 17 07.4**	**+0.1**
ARG2	**Argostoli**	**0.19**	**265**	P	**Pg**	**07 17 07.3**	**+0.1**
ARG2				S	**Sg**	**07 17 10.7**	**+0.4**
LXR1	**Lixouri, Cepha**	**0.23**	**272**	P	**Pb**	**07 17 09.0**	**+0.1**
LXR1				S	**Sb**	**07 17 13.6**	**+0.8**
DMLN	**Damoulianata-K**	**0.28**	**279**	P	**Pg**	**07 17 09.6**	**+0.8**
DMLN				S	**Sb**	**07 17 14.6**	**+0.2**
DMLN	**Damoulianata-K**	**0.28**	**279**	P	**Pg**	**07 17 09.5**	**+0.6**
DMLN				S	**Sb**	**07 17 14.1**	**-0.3**
FSK	**Fiskardo**	**0.29**	**334**	P	**Pg**	**07 17 09.9**	**+0.8**
FSK	**Fiskardo**	**0.29**	**334**	P	**Pg**	**07 17 09.5**	**+0.4**
FSK				S	**Sg**	**07 17 14.0**	**+0.7**
ORTH	**Orthonies,Zaky**	**0.34**	**184**	P	**Pb**	**07 17 11.2**	**+0.4**
ORTH	**Orthonies,Zaky**	**0.34**	**184**	P	**Pb**	**07 17 11.1**	**+0.2**
ORTH				S	**Sg**	**07 17 15.7**	**+0.9**
KYPS	**Kipseli, Zakin**	**0.38**	**168**	P	**Pg**	**07 17 11.2**	**+0.6**
KYPS				S	**Sg**	**07 17 16.7**	**+0.8**
EVGI	**Lefkada island**	**0.43**	**353**	P	**Pg**	**07 17 12.3**	**+0.7**
EVGI				S	**Sb**	**07 17 19.6**	**+0.9**
EVGI	**Lefkada island**	**0.43**	**353**	P	**Pg**	**07 17 12.2**	**+0.6**
EVGI				S	**Sb**	**07 17 18.5**	**-0.2**
ZAK2	**Zakynthos**	**0.43**	**161**	P	**Pb**	**07 17 12.5**	**+0.2**
ZAK2				S	**Sb**	**07 17 19.8**	**+1.2**
CLEM	**Kyllini,Ilia,G**	**0.44**	**133**	P	**Pb**	**07 17 12.7**	**+0.2**
CLEM				S	**Sg**	**07 17 18.4**	**+0.6**
AST1	**Astakos**	**0.45**	**39**	P	**Pb**	**07 17 12.7**	**+0.1**
AST1				S	**Sb**	**07 17 20.4**	**+1.1**
LTHK	**Lithakia**	**0.49**	**170**	P	**Pg**	**07 17 12.7**	**0.0**
LTHK				S	**Sb**	**07 17 20.4**	**-0.1**
LTHK	**Lithakia**	**0.49**	**170**	P	**Pg**	**07 17 12.5**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.50**	**346**	P	**Pg**	**07 17 13.1**	**+0.2**
AXS	**Araxos**	**0.51**	**90**	P	**Pg**	**07 17 13.4**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.52**	**358**	P	**Pg**	**07 17 13.8**	**+0.6**
NYDR				S	**Sg**	**07 17 22.5**	**+1.3**
NYDR	**Nydri-Lefkada**	**0.52**	**358**	P	**Pg**	**07 17 13.4**	**+0.2**
NYDR				S	**Sb**	**07 17 21.1**	**-0.1**
MSL1	**Messolongi**	**0.58**	**72**	P	**Pb**	**07 17 15.5**	**+0.6**
LKD2	**Lefkada island**	**0.60**	**355**	P	**Pg**	**07 17 15.2**	**+0.5**
LKD2	**Lefkada island**	**0.60**	**355**	P	**Pg**	**07 17 14.9**	**+0.2**
RLS	**Riolos of Patr**	**0.60**	**103**	P	**Pg**	**07 17 15.0**	**+0.3**
RLS	**Riolos of Patr**	**0.60**	**103**	P	**Pg**	**07 17 14.8**	**0.0**
TSLK	**Tsoukalades, L**	**0.63**	**355**	P	**Pb**	**07 17 16.0**	**+0.2**
TSLK	**Tsoukalades, L**	**0.63**	**355**	P	**Pg**	**07 17 15.7**	**+0.4**
PVO	**Paravola**	**0.76**	**56**	P	**Pg**	**07 17 18.2**	**+0.5**
AGRP	**Agrapidokambos**	**0.81**	**75**	P	**Pb**	**07 17 18.3**	**-0.5**
DRO	**Drossia**	**0.81**	**107**	P	**Pb**	**07 17 18.7**	**-0.2**
AMPL	**Ampelaki**	**0.82**	**28**	P	**Pb**	**07 17 18.7**	**-0.3**
UPR	**University Cam**	**0.84**	**84**	P	**Pg**	**07 17 19.7**	**+0.5**
MALA	**Malamata, Dori**	**0.92**	**77**	P	**Pb**	**07 17 20.8**	**0.0**
EFP	**Efpalio**	**0.96**	**76**	P	**Pb**	**07 17 21.0**	**-0.3**
ZIRI	**Ziria, Aigiali**	**0.97**	**83**	P	**Pb**	**07 17 21.4**	**-0.1**
MG00	**Magoula, Dorid**	**0.99**	**77**	P	**Pb**	**07 17 21.5**	**-0.3**
ANX	**Ano Chora**	**1.02**	**67**	P	**Pb**	**07 17 22.2**	**-0.3**
AMT	**Artemida-Makis**	**1.02**	**130**	P	**Pb**	**07 17 22.8**	**+0.4**
AGEO	**AgiosGiorgios,**	**1.06**	**86**	P	**Pb**	**07 17 22.9**	**-0.1**
SERG	**Sergoula**	**1.07**	**78**	P	**Pb**	**07 17 23.0**	**-0.3**
TRIZ	**Trizonia**	**1.07**	**80**	P	**Pb**	**07 17 23.1**	**-0.2**
TEME	**Temeni, Aigial**	**1.10**	**88**	P	**Pb**	**07 17 23.7**	**0.0**
EVR	**Evrytania**	**1.11**	**49**	P	**Pb**	**07 17 23.9**	**-0.2**
KALE	**Kalíthea**	**1.13**	**80**	P	**Pn**	**07 17 24.0**	**-0.5**
KLV	**Kalavryta, Ach**	**1.13**	**97**	P	**Pn**	**07 17 23.9**	**-0.6**
TETR	**Tetrakomo, Epi**	**1.23**	**20**	P	**Pb**	**07 17 26.1**	**+0.1**
GUR	**Goura**	**1.30**	**101**	P	**Pn**	**07 17 26.8**	**0.0**
PRMD	**Pramanda**	**1.36**	**12**	P	**Pb**	**07 17 28.6**	**+0.2**
IGT	**Igoumenitsa**	**1.37**	**347**	P	**Pb**	**07 17 28.7**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.37**	**53**	P	**Pb**	**07 17 29.2**	**+0.7**
AGG	**Agios Georgios**	**1.50**	**56**	P	**Pb**	**07 17 30.5**	**-0.2**
THL	**Klokotos Trika**	**1.70**	**36**	P	**Pb**	**07 17 34.3**	**+0.3**
LTK	**Loutraki**	**1.78**	**95**	P	**Pb**	**07 17 35.8**	**+0.5**
KPRO	**Kipourio**	**1.83**	**16**	P	**Pg**	**07 17 37.4**	**-0.6**
LKR	**Lokris**	**1.84**	**75**	P	**Pb**	**07 17 36.6**	**+0.2**
ATAL	**Atalanti**	**1.87**	**74**	P	**Pb**	**07 17 37.2**	**+0.2**
VIL2	**Platees**	**2.00**	**89**	P	**Pb**	**07 17 39.7**	**+0.5**
PENT	**Pentalofos**	**2.02**	**9**	P	**Pb**	**07 17 40.5**	**+0.8**
MET2	**Kameni Chora,**	**2.14**	**105**	P	**Pb**	**07 17 40.0**	**-1.5**
NEST	**Nestorio**	**2.23**	**6**	P	**Pb**	**07 17 43.5**	**+0.4**
HFS	**Hagfors**	**22.41**	**351**	P	**P**	**07 22 00.3**	**-0.6**
	0.7nm,0.5s,baz=156,slow=11,SNR=1.7						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**23.51**	**6**	P	**P**	**07 22 11.3**	**-0.9**
	1.6nm,0.9s,baz=194,slow=10.0,SNR=1.1						
	1.6nm,0.9s						
KURBB	**Kurchatov Arra**	**42.09**	**54**	P	**P**	**07 24 53.7**	**-0.5**
	0.1nm,0.3s,baz=277,slow=8.3,SNR=1.6						
KURBB				LR	LR	07 46 00.5	
	comp=Z,224nm,20.5s,baz=232,slow=42						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**45.16**	**58**	P	**P**	**07 25 18.9**	**-0.2**
	0.5nm,0.5s,baz=271,slow=7.9,SNR=10						
MKAR				LR	LR	07 49 36.5	
	comp=Z,232nm,20.0s,baz=330,slow=44						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**07 25 21.7**	**-0.4**
	0.8nm,0.5s,baz=273,slow=7.4,SNR=4.6						
	0.8nm,0.5s						

ASRS ***14*** *07:20:09.0±0.8, 55.°83N×86.°06E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 14 07:20:10.6±7.5, 55.°84N×86.°39E, h0km, mbtmp2.4/3, ML2.0/3, Error ellipse: s-maj=77.2km s-min=30.5km az=28.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.10**	**206**	I	I	07 34 00.0	
	baz=31,slow=341,SNR=1.0						
ZALV	**Zalesovo Beam**	**2.10**	**206**	Pn	Pn	07 20 45.4	-1.7
	1.0nm,0.3s,baz=21,slow=16,SNR=11						
ZALV				Sn	Sn	07 21 14.2	+0.3
	0.6nm,0.3s,baz=21,slow=25,SNR=3.5						
	1.3nm,0.3s						
KURBB	**Kurchatov Arra**	**7.04**	**225**	Pn	Pn	07 21 53.8	-1.1
	baz=42,slow=14,SNR=2.8						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**9.41**	**197**	Pn	Pn	07 22 29.1	+1.7
	baz=13,slow=15,SNR=1.8						
	0.1nm,0.3s						

RSPR ***14*** *07:23:20.8, 17.°98N×66.°84W, h12km, MD3.6/4*
NEIC ***14*** *07:23:20.3±1.5, 17.°96N±0.°05×66.°80W±0.°01, h10km±1km, ML3.8/31, MD3.6/4(RSPR), Error ellipse: s-maj=9.0km s-min=2.6km az=2.0*
OSPL ***14*** *07:23:20.3±0.4, 17.°88N×66.°84W, h12km±3km, ML3.4, Presumed earthquake*
TRN ***14*** *07:23:20.9, 17.°74N×66.°51W, h6km, MD0.0, South of Puerto Rico.*
ISC 14 07:23:20.7±0.8, 17.°93N±0.°05×66.°80W±0.°02, h23km, n50, σ1°92/71, 5C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**298**		**Pb**	**07 23 23.3**	**-1.6**
GBPR	**Guanica, Bosqu**	**0.09**	**298**	⇑*i* P	**Pb**	**07 23 23.3**	**-1.6**
OBIP	**Obispado Ponce**	**0.21**	**59**		**Pb**	**07 23 25.3**	**-1.0**
OBIP	**Obispado Ponce**	**0.21**	**59**	⇓*e*P	**Pb**	**07 23 25.5**	**-0.8**
OBIP				*e*S	**Sb**	**07 23 29.5**	**-0.7**
OBIP	**Obispado Ponce**	**0.21**	**59**	*i* P	**Pb**	**07 23 25.5**	**-0.8**
OBIP				*e*S	**Sb**	**07 23 29.5**	**-0.7**
OBIP				IAML		07 23 29.9	
	comp=Z,5μm,0.2s						
MLPR	**Magueyes Islan**	**0.24**	**279**		**Pb**	**07 23 24.9**	**-1.8**
MLPR				IAML		07 23 28.8	
	comp=Z,20μm,0.4s						
MLPR				IAML		07 23 29.5	
	comp=Z,25μm,0.3s						
CELP	**Cerrillos**	**0.25**	**56**		**Pb**	**07 23 26.1**	**-0.7**
CELP				IAML		07 23 30.8	
	comp=Z,11μm,0.5s						
CELP				IAML		07 23 30.9	
	comp=Z,25μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.31**	**284**		**Pb**	**07 23 26.0**	**-1.6**
CRPR				IAML		07 23 30.4	
	comp=Z,15μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.31**	**284**	⇑*e*P	**Pb**	**07 23 26.0**	**-1.6**
CRPR				*e*S	**Sb**	**07 23 29.9**	**-2.4**
CRPR	**Cabo Rojo, PR**	**0.31**	**284**	*i* P	**Pb**	**07 23 26.0**	**-1.6**
CRPR				*e*S	**Sb**	**07 23 29.8**	**-2.6**
CRPR				IAML		07 23 30.2	
	comp=Z,13μm,0.2s						
UUPR	**Utuado, UPR, P**	**0.33**	**13**		**Pb**	**07 23 26.6**	**-1.5**
LSP	**Las Mesas**	**0.36**	**311**		**Pb**	**07 23 27.0**	**-1.6**
LSP	**Las Mesas**	**0.36**	**311**	⇓*e*P	**Pb**	**07 23 27.0**	**-1.6**
PRSN	**Puerto Rico Se**	**0.43**	**311**		**Pb**	**07 23 27.9**	**-1.8**
PRSN				IAML		07 23 35.8	
	comp=Z,12μm,0.2s						
PRSN	**Puerto Rico Se**	**0.43**	**311**		**Sb**	**07 23 34.3**	**-1.6**
PRSN	**Puerto Rico Se**	**0.43**	**311**	⇑*i* P	**Pb**	**07 23 28.0**	**-1.8**
PRSN				*e*S	**Sb**	**07 23 34.3**	**-1.6**
ECPR	**Experimental S**	**0.56**	**47**		**Pb**	**07 23 31.0**	**-1.0**
ECPR				IAML		07 23 40.1	
	comp=Z,4μm,0.2s						
ECPR				IAML		07 23 41.8	
	comp=Z,4μm,0.2s						
ECPR	**Experimental S**	**0.56**	**47**	⇓*e*P	**Pb**	**07 23 31.0**	**-1.0**
AGPR	**Aguadilla, PR**	**0.61**	**331**		**Pb**	**07 23 30.8**	**-1.9**
AGPR	**Aguadilla, PR**	**0.61**	**331**	⇑*e*P	**Pb**	**07 23 31.1**	**-1.6**
AGPR				*e*S	**Sb**	**07 23 39.1**	**-1.8**
SJG	**San Juan**	**0.64**	**74**		**Pb**	**07 23 32.4**	**-0.9**
SJG				IAML		07 23 42.8	
	comp=Z,5μm,0.5s						
SJG				IAML		07 23 43.5	
	comp=Z,3μm,0.3s						
SJG	**San Juan**	**0.64**	**74**	*e*P	**Pb**	**07 23 33.1**	**-0.1**
SJG				*e*S	**Sb**	**07 23 42.0**	**+0.2**
SJG	**San Juan**	**0.64**	**74**	⇓*e*P	**Pb**	**07 23 32.5**	**-0.7**
SJG				*e*S	**Sb**	**07 23 42.2**	**+0.4**
SJG	**San Juan**	**0.64**	**74**	*i* P	**Pb**	**07 23 32.6**	**-0.7**
SJG				*e*S	**Sb**	**07 23 41.9**	**+0.1**
SJG				IAML		07 23 43.6	
	comp=Z,2μm,0.8s						
PDPR	**Patillas Dam,**	**0.74**	**83**		**Pb**	**07 23 34.4**	**-0.5**
GCPR	**Guaynabo City**	**0.78**	**61**		**Pb**	**07 23 34.4**	**-1.1**
GCPR	**Guaynabo City**	**0.78**	**61**		**Sb**	**07 23 45.0**	**-0.7**
GCPR	**Guaynabo City**	**0.78**	**61**	⇓*e*P	**Pb**	**07 23 34.0**	**-0.9**
GCPR				*e*S	**Sb**	**07 23 45.0**	**-0.7**
IDE	**Isla Desecheo**	**0.79**	**305**		**Pb**	**07 23 34.0**	**-1.7**
IDE					**Sb**	**07 23 44.5**	**-1.5**
IDE	**Isla Desecheo**	**0.79**	**305**	⇑*e*P	**Pb**	**07 23 34.0**	**-1.7**
IDE				*e*S	**Sb**	**07 23 44.5**	**-1.5**
HUMP	**Col San Antoni**	**0.93**	**77**		**Pb**	**07 23 37.0**	**-1.0**
HUMP				IAML		07 23 54.0	
	comp=Z,3μm,0.2s						
HUMP				IAML		07 23 54.1	
	comp=Z,3μm,0.3s						
HUMP	**Col San Antoni**	**0.93**	**77**		**Sn**	**07 23 50.4**	**-0.5**
HUMP	**Col San Antoni**	**0.93**	**77**	⇓*e*P	**Pb**	**07 23 37.0**	**-1.0**
HUMP				*e*S	**Sn**	**07 23 50.4**	**-0.5**
CUPR	**Culebra, Puert**	**1.49**	**75**		**Pb**	**07 23 47.2**	**-0.4**
DR12	**Loma Pena Alta**	**2.60**	**290**		**Pn**	**07 24 02.1**	**+0.8**
BANI	**BANI**	**3.42**	**278**	Pn	**Pn**	**07 24 11.5**	**-1.2**
SMRT	**St. Maarten**	**3.54**	**88**	Pn	**Pn**	**07 24 14.9**	**+0.5**
SKI	**Saint Kitts**	**3.92**	**98**	*e*P	**Pn**	**07 24 20.4**	**+0.9**
SKI				*e*S	**Sn**	**07 25 03.0**	**-1.8**
SC01	**Santiago de lo**	**4.01**	**292**	Pn	**Pn**	**07 24 23.8**	**+3.0**
SDDR	**Presa de Saban**	**4.39**	**284**	Pn	**Pn**	**07 24 28.2**	**+2.2**
SDDR	**Presa de Saban**	**4.39**	**284**	*i* P	**Pb**	**07 24 35.3**	**-1.8**
SDDR				*i* S	**Sb**	**07 25 36.0**	**+6.3**
MBFL	**Flemmings, Mon**	**4.54**	**104**	*e*P	**Pn**	**07 24 29.1**	**+1.1**
MBFL				*e*S	**Sn**	**07 25 19.0**	**-1.0**
ANWB	**Willy Bob**	**4.78**	**92**	*e*P	**Pn**	**07 24 33.2**	**+1.9**
ANWB				*e*S	**Sn**	**07 25 24.7**	**-1.4**
DHSZ	**Broadband at M**	**5.09**	**108**	*e*P	**Pn**	**07 24 36.6**	**+1.1**
DHSZ				*e*S	**Sn**	**07 25 30.8**	**-2.8**
MMLZ	**Guadeloupe Bro**	**5.25**	**110**	*e*S	**Sn**	**07 25 34.9**	**-2.9**
DSLB	**Salisbury**	**5.72**	**115**	*e*P	**Pn**	**07 24 44.3**	**0.0**
DSLB				*e*S	**Sn**	**07 25 45.8**	**-3.5**
BIM	**Bigot**	**6.46**	**121**	*e*P	**Pn**	**07 24 54.6**	**0.0**
BIM				*e*S	**Sn**	**07 26 03.2**	**-4.5**
SLBI	**Saint Lucia, B**	**6.82**	**124**	*e*P	**Pn**	**07 24 58.9**	**-0.4**
SLBI				*e*S	**Sn**	**07 26 12.6**	**-3.7**
MASC	**Masc**	**7.38**	**289**	*i* P	**Pb**	**07 25 31.8**	**+3.8**
QMBU	**Quimbuelo**	**7.91**	**288**	*i* P	**Pn**	**07 25 18.8**	**+4.5**

SNET ***14*** *07:35:13.8±5.2, 15.°55N×87.°78W, h7km, ML3.9, Presumed earthquake*
GCG ***14*** *07:35:13.3±2.0, 15.°56N×87.°86W, h0km±17km, MD4.1, ML4.2, Presumed earthquake*
NEIC ***14*** *07:35:14.4±1.1, 15.°52N±0.°03×87.°80W±0.°03, h10km±2km, mb_Lg3.6/14, Error ellipse: s-maj=7.0km s-min=3.1km az=314.0*
CATAC ***14*** *07:35:16.7±0.3, 15°N±2°×8°8W±°, h1km, M4.0/25, MLv4.0/25, Error ellipse: s-maj=4.3km s-min=3.4km az=26.3, confirmed*
ISC 14 07:35:12.8±0.8, 15.°53N±0.°03×87.°87W±0.°03, h10km, n73, σ1°90/98, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZABA	**Izabal, Puerto**	**0.72**	**287**	P	**Pn**	**07 35 28.7**	**-0.3**
IZABA				S	**Sn**	**07 35 40.0**	**-0.1**
SARH	**Santa Rosa de**	**1.14**	**229**	P	**Pn**	**07 35 35.0**	**+0.1**
SARH	**Santa Rosa de**	**1.14**	**229**	*i* P	**Pn**	**07 35 35.4**	**+0.1**
SARH				*i* S	**Sg**	**07 35 49.5**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.57**	**158**	Pn	**Pn**	**07 35 41.9**	**-1.0**
TGUH				Sn	**Sb**	**07 36 01.8**	**-0.3**
TGUH				IAmb_Lg		07 36 04.7	
	comp=Z,507nm,0.9s						
TGUH	**Tegucigalpa,Un**	**1.57**	**158**	P	**Pg**	**07 35 42.2**	**-0.8**
TGUH				S	**Sg**	**07 36 03.7**	**+0.3**
LLGN	**La Laguna**	**1.71**	**218**	P	**Pg**	**07 35 45.1**	**-0.5**
LLGN	**La Laguna**	**1.71**	**218**	*e*P	**Pg**	**07 35 44.8**	**-0.8**

FAME	**Alcaldia de Sa**	**2.67**	**231**	P	**Pb**	**07 35 59.9**	**-0.7**
FAME				S	**Sb**	**07 36 33.0**	**-0.4**
CRIN	**San Cristobal**	**2.92**	**164**	Pn	**Pn**	**07 36 00.6**	**+1.2**
CRIN				IAmb_Lg		07 36 53.5	
	comp=Z,500nm,0.8s						
HERN	**Volcan Telica**	**3.07**	**161**	Pn	**Pn**	**07 36 03.0**	**+1.6**
HERN				IAmb_Lg		07 36 55.6	
	comp=Z,154nm,0.8s						
CNGN	**Cerro Negro**	**3.21**	**159**	Pn	**Pn**	**07 36 04.9**	**+1.4**
SIUN	**Universidad Ur**	**3.50**	**121**	Pn	**Pn**	**07 36 08.4**	**+1.2**
SIUN				IAmb_Lg		07 37 09.6	
	comp=Z,150nm,0.8s						
HUEH	**Huehuetenango**	**3.51**	**267**	Pn	**Pn**	**07 36 09.8**	**+2.2**
HUEH				IAmb_Lg		07 37 14.2	
	comp=Z,137nm,0.9s						
MGAN	**Managua**	**3.71**	**155**	Pn	**Pn**	**07 36 11.3**	**+1.1**
BOAB	**BOACO BROADBAN**	**3.73**	**145**	Pn	**Pn**	**07 36 11.2**	**+0.7**
RTAL	**Retalhuleu**	**3.83**	**255**	IAmb_Lg		07 37 25.7	
	comp=Z,150nm,1.1s						
BILN	**Bilwi Airport**	**4.59**	**108**	Pn	**Pn**	**07 36 23.1**	**+0.9**
TEIG	**Tepich**	**4.69**	**355**	Pn	**Pn**	**07 36 24.4**	**+0.7**
JTS	**Las Juntas de**	**5.93**	**151**	Pn	**Pn**	**07 36 41.4**	**+0.6**
RAFA	**San Farael, Vo**	**6.80**	**144**		**Pn**	**07 36 51.4**	**-1.7**
SOR	**Soroa**	**8.56**	**32**	Pn	**Pn**	**07 37 18.6**	**+1.7**
SOR	**Soroa**	**8.56**	**32**	*i* P	Pn	07 37 21.6	+4.7
SOR				*i* S	**Sn**	**07 38 54.5**	**+0.9**
MGV	**Manicaragua**	**9.93**	**48**	*i* P	**Pn**	**07 37 38.2**	**+2.5**
MGV				IAML		07 38 33.7	
	comp=Z,23nm,1.0s						
060A	**Indiantown**	**13.41**	**30**	Pn	**Pn**	**07 38 23.8**	**+0.5**

IDC 14 07:45:28.9±3.3, 53°82N×87°36E, h0km, mbtmp2.5/2, ML2.4/2, Error ellipse: s-maj=31.6km s-min=17.5km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**276**	I	I	07 55 10.0	
	baz=94,slow=344,SNR=3.4						
ZALV	**Zalesovo Beam**	**1.51**	**276**	Pg	Pn	07 45 55.1	-2.1
	1.0nm,0.3s,baz=98,slow=16,SNR=13						
ZALV				Lg	Lg	07 46 17.2	
	1.4nm,0.3s,baz=95,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**6.30**	**243**	Pn	Pn	07 47 04.0	+1.1
	baz=57,slow=13,SNR=5.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.75**	**207**	Pn	Pn	07 47 24.1	+1.2
	0.1nm,0.3s,baz=26,slow=13,SNR=5.9						
	0.1nm,0.3s						

*OSPL **14** 07:52:52.8±0.3, 17°.93N×66°.84W, h18km±11km, ML3.2, Presumed earthquake*
*NEIC **14** 07:52:52.7±1.5, 17°.97N±0°.06×66°.803W±0°.009, h10km±1km, ML3.6/33, Md3.5/5(RSPR), Error ellipse: s-maj=10.4km s-min=2.6km az=4.0*
*RSPR **14** 07:52:53.5, 18°.01N×66°.82W, h10km, MD3.5/5*
*SDD **14** 07:52:53.3±0.9, 17°.95N×66°.85W, h23km±7km, MD3.2, ML3.2, MW3.5, Presumed earthquake*

ISC 14 07:52:52.6±0.9, 17°96N±0°.05×66°81W±0°.02, h16km±6km, n44, σ0°63/62, 13C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**279**		**Pg**	**07 52 55.8**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.07**	**279**	⇑*i*P	**Pg**	**07 52 55.8**	**+0.1**
OBIP	**Obispado Ponce**	**0.21**	**68**		**Pg**	**07 52 57.7**	**+0.2**
OBIP	**Obispado Ponce**	**0.21**	**68**	⇓*e*P	**Pb**	**07 52 57.9**	**-0.1**
OBIP				*e*S	**Sb**	**07 53 02.0**	**+0.3**
OBIP	**Obispado Ponce**	**0.21**	**68**	*i* P	**Pb**	**07 52 58.0**	**-0.1**
OBIP				*e*S	**Sb**	**07 53 02.0**	**+0.3**
OBIP				IAML		07 53 02.4	
	comp=Z,2μm,0.2s						
MLPR	**Magueyes Islan**	**0.22**	**271**		**Pg**	**07 52 57.4**	**-0.3**
MLPR				IAML		07 53 01.5	
	comp=Z,8μm,0.3s						
MLPR				IAML		07 53 01.9	
	comp=Z,10μm,0.3s						
CELP	**Cerrillos**	**0.24**	**63**		**Pb**	**07 52 58.6**	**-0.1**
CELP				IAML		07 53 03.2	
	comp=Z,12μm,0.3s						
CELP				IAML		07 53 03.3	
	comp=Z,9μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.29**	**278**		**Pg**	**07 52 58.5**	**-0.4**
CRPR				IAML		07 53 02.7	
	comp=Z,14μm,0.3s						
CRPR				IAML		07 53 02.9	
	comp=Z,9μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**278**	⇑*e*Pg	**Pg**	**07 52 58.6**	**-0.2**
CRPR				⇓*e*Sg	**Sg**	**07 53 02.7**	**-0.3**
CRPR				IAML		07 53 02.7	
	comp=N,14μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**278**	⇑*e*P	**Pg**	**07 52 58.4**	**-0.4**
CRPR				*e*S	**Sg**	**07 53 02.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.29**	**278**	*i* P	**Pg**	**07 52 58.4**	**-0.4**
CRPR				*e*S	**Sg**	**07 53 02.3**	**-0.7**
CRPR				IAML		07 53 02.7	
	comp=Z,7μm,0.2s						
UUPR	**Utuado, UPR, P**	**0.30**	**16**		**Pg**	**07 52 59.0**	**0.0**
LSP	**Las Mesas**	**0.34**	**309**		**Pg**	**07 52 59.5**	**-0.2**
LSP	**Las Mesas**	**0.34**	**309**	⇓*e*P	**Pg**	**07 52 59.5**	**-0.2**
PRSN	**Puerto Rico Se**	**0.41**	**308**		**Pg**	**07 53 00.5**	**-0.4**
PRSN	**Puerto Rico Se**	**0.41**	**308**		**Sg**	**07 53 06.7**	**+0.2**
PRSN	**Puerto Rico Se**	**0.41**	**308**	⇑*e*Pg	**Pg**	**07 53 00.6**	**-0.4**
PRSN				⇑*e*Sg	**Sg**	**07 53 06.9**	**+0.4**
PRSN				IAML		07 53 08.1	
	comp=N,8μm,0.2s						
PRSN	**Puerto Rico Se**	**0.41**	**308**	⇑*i* P	**Pg**	**07 53 00.5**	**-0.4**
PRSN				*e*S	**Sg**	**07 53 06.7**	**+0.2**
ECPR	**Experimental S**	**0.55**	**50**		**Pg**	**07 53 03.4**	**-0.2**
ECPR				IAML		07 53 12.6	
	comp=N,4μm,0.2s						
ECPR				IAML		07 53 13.7	
	comp=N,3μm,0.2s						
ECPR	**Experimental S**	**0.55**	**50**	⇓*e*P	**Pg**	**07 53 03.5**	**-0.1**
ECPR				*e*S	**Sg**	**07 53 11.2**	**+0.2**
AGPR	**Aguadilla, PR**	**0.58**	**330**		**Pg**	**07 53 03.5**	**-0.6**
AGPR	**Aguadilla, PR**	**0.58**	**330**	*e*Pg	**Pg**	**07 53 03.6**	**-0.4**
AGPR				⇑*e*Sg	**Sg**	**07 53 11.5**	**-0.3**
AGPR				IAML		07 53 11.6	
	comp=N,2μm,0.4s						
AGPR	**Aguadilla, PR**	**0.58**	**330**	⇑*e*P	**Pg**	**07 53 03.5**	**-0.6**
AGPR				*e*S	**Sg**	**07 53 11.6**	**-0.2**
SJG	**San Juan**	**0.64**	**77**		**Pg**	**07 53 04.8**	**-0.5**
SJG				IAML		07 53 15.3	
	comp=N,3μm,0.5s						
SJG	**San Juan**	**0.64**	**77**	⇑*e*Pg	**Pg**	**07 53 05.2**	**-0.1**
SJG				⇑*e*Sg	**Sb**	**07 53 14.6**	**+0.3**
SJG	**San Juan**	**0.64**	**77**	⇓*e*P	**Pg**	**07 53 05.0**	**-0.3**
SJG				*e*S	**Sb**	**07 53 14.5**	**+0.3**
SJG	**San Juan**	**0.64**	**77**	*i* P	**Pg**	**07 53 05.1**	**-0.3**
SJG				*e*S	**Sb**	**07 53 14.2**	**-0.1**
SJG				IAML		07 53 16.2	
	comp=Z,1μm,0.6s						
PDPR	**Patillas Dam,**	**0.75**	**86**		**Pg**	**07 53 06.8**	**-0.5**
IDE	**Isla Desecheo**	**0.76**	**304**		**Pg**	**07 53 06.5**	**-1.0**
IDE					**Sg**	**07 53 17.0**	**-0.5**
IDE	**Isla Desecheo**	**0.76**	**304**	⇑*e*P	**Pg**	**07 53 06.5**	**-1.0**
IDE				*e*S	**Sg**	**07 53 17.0**	**-0.5**
GCPR	**Guaynabo City**	**0.77**	**63**		**Pb**	**07 53 06.9**	**-0.7**
GCPR	**Guaynabo City**	**0.77**	**63**		**Sb**	**07 53 17.6**	**-0.3**
GCPR	**Guaynabo City**	**0.77**	**63**	⇑*e*P	**Pb**	**07 53 07.0**	**-0.7**
GCPR				*e*S	**Sb**	**07 53 17.6**	**-0.3**
HUMP	**Col San Antoni**	**0.93**	**79**		**Pb**	**07 53 09.7**	**-0.7**
HUMP				IAML		07 53 26.5	
	comp=Z,1μm,0.2s						
HUMP				IAML		07 53 26.6	
	comp=Z,2μm,0.3s						
HUMP	**Col San Antoni**	**0.93**	**79**		**Sb**	**07 53 22.2**	**-0.3**
HUMP	**Col San Antoni**	**0.93**	**79**	⇑*e*P	**Sb**	**07 53 09.8**	**-0.6**
HUMP				*e*S	**Sb**	**07 53 22.2**	**-0.3**
CUPR	**Culebra, Puert**	**1.49**	**77**		**Pn**	**07 53 19.3**	**+0.5**
MIDR	**Miches**	**2.36**	**296**	⇑*e*Pg	**Pn**	**07 53 31.2**	**+0.5**
MIDR				IAML		07 54 08.6	
	comp=N,61nm,0.5s						
DR12	**Loma Pena Alta**	**2.58**	**289**	Pn	**Pn**	**07 53 35.4**	**+1.6**
HATOM	**Hato Mayor del**	**2.58**	**289**	⇑*e*Pg	**Pn**	**07 53 35.5**	**+1.8**
HATOM				⇓*e*Sg	**Sn**	**07 54 05.0**	**+0.2**
HATOM				IAML		07 54 18.4	
	comp=N,47nm,0.7s						
BANI	**BANI**	**3.40**	**278**	Pn	**Pn**	**07 53 46.6**	**+1.4**
SMRT	**St. Maarten**	**3.56**	**88**	Pn	**Pn**	**07 53 46.6**	**-0.6**
SDDR	**Presa de Saban**	**4.37**	**284**		**Pn**	**07 54 00.5**	**+2.1**
CBE	**Ff, Capester**	**5.32**	**110**	Pn	**Pn**	**07 54 12.5**	**+1.0**

*IDC **14** 07:53:19.0±1.0, 31°.62N×49°.87E, h0km, mb3.9/21, mbtmp3.9/25, ML3.6/4, MS3.1/1, Error ellipse: s-maj=22.2km s-min=13.7km az=165.0*
*DSN **14** 07:53:19.3±0.6, 31°.63N×49°.86E, h10km, mb4.8/1, ML3.5/11, Error ellipse: s-maj=13.8km s-min=7.0km az=49.0*
*NEIC **14** 07:53:20.1±1.6, 31°.48N±0°.04×49°.89E±0°.09, h10km±1km, mb4.3/22, Error ellipse: s-maj=13.3km s-min=7.5km az=87.0*
*TEH **14** 07:53:20.2, 31°.63N×50°.03E, h8km±22km, ML3.9, Presumed earthquake*
*OMAN **14** 07:53:26.7±0.1, 31°.28N×50°.43E, h10km, mb4.0/24, Error ellipse: s-maj=4.7km s-min=3.4km az=287.0*

ISC 14 07:53:22.3±0.4, 31°59N±0°.04×50°01E±0°.03, h26km, n142, σ2s07/172, mb4.1/31, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMIS	**Naft Sefid**	**0.62**	**277**	Pg	**Pb**	**07 53 32.8**	**-1.8**
JHBN	**Jahan bin**	**0.85**	**41**	Pg	**Pb**	**07 53 36.9**	**-1.8**
ZNGN	**Zangian**	**0.90**	**54**	Pg	**Pb**	**07 53 37.8**	**-1.7**
IBRJ	**Brojen**	**1.12**	**73**	Pg	**Pn**	**07 53 42.3**	**-0.2**
AHWZ	**Ahwaz**	**1.19**	**258**	Pg	**Pb**	**07 53 45.0**	**+0.7**
IPIR	**Pirpir**	**1.33**	**34**	Pg	**Pb**	**07 53 46.0**	**-0.8**
KLNJ	**Kolanjah**	**1.48**	**113**	Pg	**Pb**	**07 53 49.2**	**-0.1**
IRAM	**Ramesheh**	**2.04**	**83**	Pn	**Pb**	**07 53 58.0**	**-0.8**
KAZ2	**Kazeron-Fars-I**	**2.43**	**144**	Pn	**Pb**	**07 54 03.8**	**-1.6**
BDRS	**Dareh Seyedi**	**2.54**	**338**	Pn	**Pb**	**07 54 04.9**	**-2.6**
IDOB	**Doab**	**2.68**	**325**	Pn	**Pn**	**07 54 06.6**	**+2.6**
SHI	**Shiraz**	**2.90**	**131**	Pn	**Pn**	**07 54 10.0**	**+3.0**
IQOM	**Qom**	**3.37**	**15**	Pn	**Pn**	**07 54 15.8**	**+2.4**
DSBU	**Dashti - Bushe**	**3.39**	**161**	Pn	**Pn**	**07 54 16.8**	**+3.1**
TAFT	**Taft - Yazd**	**3.56**	**87**	Pn	**Pn**	**07 54 18.9**	**+2.9**
QABG	**Abgarm-Qazvin**	**4.13**	**355**	Pn	**Pn**	**07 54 26.3**	**+2.4**
IBAF	**Bafgh**	**4.75**	**89**	Pn	**Pn**	**07 54 35.2**	**+2.9**
SAKB	**Bahrain**	**5.61**	**175**	P	**Pn**	**07 54 46.7**	**+2.7**
SAKB				S	**Sn**	**07 55 49.6**	**+2.0**
SHMA	**Al-Shehemyia**	**5.77**	**171**	P	**Pn**	**07 54 48.2**	**+1.9**
	SNR=12						
SHMA				S	**Sn**	**07 55 52.0**	**+0.3**
SMRA	**Abu-Samra**	**6.85**	**174**	P	**Pn**	**07 55 02.9**	**+1.7**
SMRA				S	**Sn**	**07 56 19.2**	**+0.9**
TRNA	**Turayna**	**6.91**	**171**	P	**Pn**	**07 55 03.4**	**+1.5**
	SNR=31						
JRN	**Qarnain Island**	**7.08**	**159**	P	**Pn**	**07 55 05.3**	**+1.0**
JRN				S	**Sn**	**07 56 24.7**	**+0.9**
SHME	**Shamm**	**7.71**	**134**	P	**Pn**	**07 55 13.7**	**+0.9**
SHME	**Shamm**	**7.71**	**134**	P	**Pn**	**07 55 13.8**	**+0.9**
UMQ	**Umm Al-Quwin**	**7.82**	**139**	P	**Pn**	**07 55 15.2**	**+0.8**
BANOM	**Banah**	**7.89**	**134**	*i* P	**Pn**	**07 55 15.8**	**+0.3**
	SNR=18						
BANOM	**Banah**	**7.89**	**134**	P	**Pn**	**07 55 16.2**	**+0.7**
GHWR	**Ruwais**	**8.01**	**161**	P	**Pn**	**07 55 18.0**	**+1.0**
GHWR				S	**Sn**	**07 56 44.7**	**-2.0**
MASF	**Masafi**	**8.22**	**137**	P	**Pn**	**07 55 20.5**	**+0.4**
	SNR=9.5						
MASF				S	**Sn**	**07 56 49.8**	**-2.3**
MSFE	**Esma-Masafi**	**8.23**	**137**	*i* P	**Pn**	**07 55 19.7**	**-0.4**
	SNR=9.5						
NAZ	**Nazwa, Dubai**	**8.25**	**141**	P	**Pn**	**07 55 20.9**	**+0.6**
NAZ	**Nazwa, Dubai**	**8.25**	**141**	P	**Pn**	**07 55 21.2**	**+0.9**
	SNR=16						
NAZ				S	**Sn**	**07 56 50.2**	**-2.5**
AJN	**Ajban**	**8.26**	**147**	P	**Pn**	**07 55 22.0**	**+1.4**
AJN	**Ajban**	**8.26**	**147**	P	**Pn**	**07 55 21.2**	**+0.7**
AJN				S	**Sn**	**07 56 51.5**	**-1.5**
MDH	**Madha**	**8.36**	**137**	P	**Pn**	**07 55 22.3**	**+0.5**
MDH	**Madha**	**8.36**	**137**	P	**Pn**	**07 55 21.7**	**-0.2**
MDH				S	**Sn**	**07 56 51.7**	**-3.7**
MDH				S	**Sn**	**07 56 52.4**	**-3.0**
ASUD	**Al Ashush, Dub**	**8.38**	**145**	P	**Pn**	**07 55 24.1**	**+2.1**
ASUD	**Al Ashush, Dub**	**8.38**	**145**	P	**Pn**	**07 55 23.9**	**+1.9**
ASUD				S	**Sn**	**07 56 50.9**	**-4.9**
FAQ	**Al Faqa, Dubai**	**8.41**	**143**	P	**Pn**	**07 55 24.6**	**+2.0**
FAQ				S	**Sn**	**07 56 52.2**	**-4.5**
MZWR	**Madinat Zayed**	**8.52**	**155**	P	**Pn**	**07 55 24.9**	**+0.9**
MZWR				S	**Sn**	**07 56 57.1**	**-2.2**
UOSS	**Minazif**	**8.58**	**139**		**Pn**	**07 55 24.6**	**-0.3**
UOSS	**Minazif**	**8.58**	**139**	P	**Pn**	**07 55 24.6**	**-0.3**
UOSS	**Minazif**	**8.58**	**139**	P	**Pn**	**07 55 25.1**	**+0.2**
UOSS				S	**Sn**	**07 56 57.2**	**-3.6**
HATD	**Hatta, Dubai**	**8.63**	**140**	P	**Pn**	**07 55 25.9**	**+0.2**
HATD	**Hatta, Dubai**	**8.63**	**140**	P	**Pn**	**07 55 26.5**	**+0.8**
HATD				S	**Sn**	**07 57 00.2**	**-2.0**
ASHO	**Ashiyiah**	**8.71**	**141**	*i* P	**Pn**	**07 55 26.8**	**+0.1**
	SNR=22						
ASHO	**Ashiyiah**	**8.71**	**141**	P	**Pn**	**07 55 27.0**	**+0.3**
	SNR=21						
ASHO				S	**Sn**	**07 57 01.1**	**-2.9**
RAYN	**Ar Rayn**	**8.97**	**208**		**Pn**	**07 55 28.1**	**-2.2**
RAYN	**Ar Rayn**	**8.97**	**208**	*i* P	**Pn**	**07 55 28.3**	**-2.0**
	SNR=15						
ALNE	**Al Ain**	**9.06**	**144**	P	**Pn**	**07 55 31.9**	**+0.4**
	SNR=5.9						
ALNE				S	**Sn**	**07 57 11.3**	**-1.4**
MZR	**Muzera**	**9.09**	**159**	*i* P	**Pn**	**07 55 32.7**	**+0.8**
	SNR=12						
MZR	**Muzera**	**9.09**	**159**	P	**Pn**	**07 55 33.0**	**+1.1**
	SNR=12						
MZR				S	**Sn**	**07 57 11.7**	**-1.7**
SOHO	**SOHO**	**9.40**	**141**	P	**Pn**	**07 55 35.4**	**-0.7**
SOHO	**SOHO**	**9.40**	**141**	P	**Pn**	**07 55 35.4**	**-0.7**
SOHO				S	**Sn**	**07 57 18.6**	**-2.5**
GURO	**Guroymak-BITLI**	**9.53**	**319**	Pn	**Pn**	**07 55 38.8**	**+0.8**
UMZA	**Um Al Zommool**	**9.96**	**151**	P	**Pn**	**07 55 44.3**	**+0.6**
UMZA				S	**Sn**	**07 57 30.2**	**-4.4**
HOQ	**Hoqain**	**10.27**	**139**	P	**Pn**	**07 55 48.2**	**+0.1**
HOQ				S	**Sn**	**07 57 38.3**	**-4.1**
BIDO	**Bidbid**	**10.79**	**136**	P	**Pn**	**07 55 55.1**	**0.0**
BIDO				S	**Sn**	**07 57 51.0**	**-4.0**
BSY	**Bisya**	**10.89**	**142**	P	**Pn**	**07 55 58.2**	**+1.7**
	SNR=6.5						
BSY				S	**Sn**	**07 57 50.6**	**-6.9**
SMDO	**Samad**	**11.10**	**138**	P	**Pn**	**07 55 59.8**	**+0.3**
	SNR=5.4						
SMDO				S	**Sn**	**07 57 59.3**	**-3.5**
ASF	**Jabal al Asfar**	**11.16**	**276**	Pn	**Pn**	**07 55 58.9**	**-1.4**
	0.9nm,0.3s,baz=76,slow=6.1,SNR=5.7						
ASF				Sn	**Sn**	**07 57 56.1**	**-8.2**
	baz=90,slow=20						
	2.6nm,0.4s						
WSAR	**Wadi Sarin**	**11.30**	**135**	P	**Pn**	**07 56 01.6**	**-0.6**
WSAR				S	**Sn**	**07 58 01.7**	**-6.0**
JMDO	**Jabal Madar**	**11.67**	**140**	P	**Pn**	**07 56 07.9**	**+0.6**
	SNR=20						
JMDO				S	**Sn**	**07 58 11.6**	**-5.2**
WBK	**Wadi Bani Khal**	**11.98**	**136**	P	**Pn**	**07 56 10.2**	**-1.3**
	SNR=12						
WBK				S	**Sn**	**07 58 20.4**	**-3.9**
JLN	**Jalan Bani Buh**	**12.59**	**136**	P	**Pn**	**07 56 18.1**	**-1.8**
JLN				S	**Sn**	**07 58 32.9**	**-6.4**
MHTO	**MHTO**	**12.74**	**144**	P	**Pn**	**07 56 23.0**	**+1.1**
	SNR=12						
EIL	**Elat**	**13.11**	**266**	Pn	**Pn**	**07 56 24.4**	**-2.5**
	0.2nm,0.3s,baz=80,slow=12,SNR=2.2						
	3.5nm,0.7s						
KBZ	**Khabaz**	**13.36**	**337**	LR	LR	08 01 13.6	
	comp=Z,87nm,19.0s,baz=12,slow=36						
DOK	**Doka**	**13.44**	**163**	P	**Pn**	**07 56 31.0**	**-0.4**
	SNR=27						
DQM	**DQM**	**13.44**	**148**	P	**Pn**	**07 56 31.1**	**-0.3**
SHAO	**Shalim**	**14.43**	**158**	*i* P	**Pn**	**07 56 44.2**	**-0.8**
	SNR=9.9						
SHAO	**Shalim**	**14.43**	**158**	P	**Pn**	**07 56 43.5**	**-1.4**
	SNR=9.9						
ABTO	**Aybut**	**14.48**	**167**	P	**Pn**	**07 56 43.9**	**-1.9**
DMTO	**DMTO**	**14.52**	**161**	P	**Pn**	**07 56 44.3**	**-1.8**
	SNR=19						
RBK	**Rabkut**	**14.53**	**164**	P	**Pn**	**07 56 44.5**	**-1.8**
BR104	**Keskin Array S**	**15.56**	**306**	P	**P**	**07 57 02.5**	**-1.6**
BRTR	**Keskin Array B**	**15.57**	**306**	Pn	**Pn**	**07 57 00.5**	**+0.3**
	0.1nm,0.3s,baz=134,slow=14,SNR=5.8						
	0.3nm,0.5s						
BRTR	**Keskin Array B**	**15.57**	**306**		**Pn**	**07 56 59.6**	**-0.6**
KBL	**Kabul**	**16.23**	**74**		**P**	**07 57 11.1**	**-0.5**
BTK	**Batken**	**18.84**	**58**	P	**Pn**	**07 57 40.9**	**-0.1**
AB31	**Akbulak array**	**19.17**	**20**	P	**P**	**07 57 44.0**	**+0.3**
ABKAR	**Akbulak array**	**19.17**	**20**	P	**Pn**	**07 57 44.2**	**-0.6**
AKTO	**Aktyubinsk**	**19.75**	**15**	P	**Pn**	**07 57 50.8**	**-0.9**
	0.4nm,0.3s,baz=207,slow=9.6,SNR=8.1						
	1.8nm,0.5s						
KK31	**Karatay Array**	**19.89**	**49**	P	**P**	**07 57 52.3**	**+0.6**
KK31				IAmb	IAmb	07 57 59.9	
	comp=Z,13nm,1.5s						
KKAR	**Karatay Array**	**19.89**	**49**	P	**P**	**07 57 52.1**	**+0.4**
ARSB	**Arslanbob**	**20.83**	**56**	P	**P**	**07 58 02.9**	**+0.9**
IDI	**Anoyia**	**21.26**	**287**	P	**P**	**07 58 06.8**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=105,slow=9.3,SNR=4.2						
	comp=Z,5.3nm,0.7s						
IDI	**Anoyia**	**21.26**	**287**	P	**P**	**07 58 06.0**	**-0.7**
IDI				IAmb	IAmb	07 58 16.2	
	comp=Z,13nm,1.0s						
RDO	**Rodhopi**	**21.83**	**303**	P	**P**	**07 58 10.7**	**-2.0**
RDO				IAmb	IAmb	07 58 28.1	
	comp=Z,7.9nm,1.0s						
AAK	**Ala-Archa**	**22.35**	**54**	P	**P**	**07 58 20.0**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=216,slow=14,SNR=1.5						
	comp=Z,0.4nm,0.3s						
BOOM	**Boomskoye usch**	**23.30**	**55**	P	**P**	**07 58 29.0**	**+0.6**
BOOM				IAmb	IAmb	07 58 47.8	
	comp=Z,20nm,1.3s						
VOIR		**23.81**	**313**	P	**P**	**07 58 36.8**	**+3.7**
	comp=Z,5.8nm,1.6s						
VOIR				pP	**P**	**07 58 37.7**	**+4.6**
	comp=Z,5.8nm,1.6s						
AK07	**Malin Array Si**	**24.45**	**327**	P	**P**	**07 58 38.0**	**-0.8**
AK07				pP	**P**	**07 58 42.4**	**+3.6**
AK09	**Malin Array Si**	**24.45**	**327**	P	**P**	**07 58 38.2**	**-0.7**
AK10	**Malin Array Si**	**24.46**	**327**	P	**P**	**07 58 39.0**	**+0.1**
AK05	**Malin Array Si**	**24.50**	**327**	P	**P**	**07 58 38.4**	**-0.9**
AK02	**Malin Array Si**	**24.52**	**327**	P	**P**	**07 58 38.7**	**-0.8**
AK01	**Malin Array Si**	**24.54**	**327**	P	**P**	**07 58 38.9**	**-0.8**
AKASG	**Malin Array Be**	**24.54**	**327**	P	**P**	**07 58 38.9**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=131,slow=8.8,SNR=10						
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**24.54**	**327**	P	**P**	**07 58 39.1**	**-0.6**
AKBB	**Malin Array Si**	**24.54**	**327**	P	**P**	**07 58 39.0**	**-0.7**
AKBB				IAmb	IAmb	07 59 02.1	
	comp=Z,11nm,1.3s						
AKBB	**Malin Array Si**	**24.54**	**327**	P	**P**	**07 58 39.0**	**-0.7**
KIEV	**Kiev**	**24.54**	**327**	P	**P**	**07 58 38.8**	**-0.8**
KIEV				IAmb	IAmb	07 59 02.1	
	comp=Z,9.9nm,1.3s						
KIEV	**Kiev**	**24.54**	**327**	P	**P**	**07 58 38.1**	**-1.6**
KIEV	**Kiev**	**24.54**	**327**	P	**P**	**07 58 38.9**	**-0.8**
	comp=Z,23nm,0.9s						
AK11	**Malin Array Si**	**24.55**	**327**	P	**P**	**07 58 39.3**	**-0.5**
AK16	**Malin Array Si**	**24.57**	**327**	P	**P**	**07 58 39.3**	**-0.7**
AK04	**Malin Array Si**	**24.58**	**327**	P	**P**	**07 58 39.4**	**-0.7**
AK17	**Malin Array Si**	**24.61**	**327**	P	**P**	**07 58 39.9**	**-0.4**
LUBAR	**Lubar, Ukraine**	**24.73**	**324**	P	**P**	**07 58 41.2**	**-0.2**
BUR08	**Bucovina Ar. S**	**24.79**	**317**	P	**P**	**07 58 42.0**	**-0.2**
BUR08				IAmb	IAmb	07 58 55.0	
	comp=Z,10nm,1.5s						
MI30	**MI30,Zelenitsa**	**25.06**	**326**	P	**P**	**07 58 43.7**	**-0.7**
	comp=Z,26nm,0.7s						
MI28	**Mi28,Pidlybu**	**25.43**	**326**	P	**P**	**07 58 45.9**	**-1.8**
ARTI	**Arti**	**25.48**	**11**	P	**P**	**07 58 49.2**	**+1.1**
	comp=Z,1.3nm,0.4s,baz=185,slow=11,SNR=2.2						
	comp=Z,1.3nm,0.4s						
ARTI	**Arti**	**25.48**	**11**	P	**P**	**07 58 48.9**	**+0.8**
ARTI				IAmb	IAmb	07 59 13.7	
	comp=Z,7.6nm,1.1s						
BORK	**Borovoye**	**26.01**	**29**	P	**P**	**07 58 53.7**	**+0.7**
BORK				IAmb	IAmb	07 59 18.2	
	comp=Z,2.5nm,0.8s						
BVAR	**Borovoye Array**	**26.02**	**29**	P	**P**	**07 58 54.2**	**+1.1**
	comp=Z,2.2nm,0.5s,baz=228,slow=7.8,SNR=12						
	comp=Z,2.2nm,0.5s						
KURBB	**Kurchatov Arra**	**28.43**	**40**	P	**P**	**07 59 16.4**	**+1.7**
	comp=Z,0.9nm,0.9s,baz=243,slow=9.8,SN

LOMA	**Loma Larga**	**1.30**	**9**	*eP*	**Pn**	07 54 00.0	-0.3		
TECO	**Alcaldia de Te**	**1.32**	**26**	P	**Pn**	07 53 60.0	-0.5		
TECO				S	**Sg**	07 54 18.5	-0.4		
COEG	**Centro de Oper**	**1.35**	**21**	P	**Pn**	07 54 00.4	-0.5		
COEG				S	**Sg**	07 54 21.2	+1.1		
COEG	**Centro de Oper**	**1.35**	**21**	*eP*	**Pg**	07 54 02.8	+0.3		
SEMO	**Seminario San**	**1.35**	**6**	P	**Pn**	07 54 00.6	-0.4		
SEMO				S	**Sg**	07 54 20.5	+0.3		
PMON	**Piamonte**	**1.36**	**3**	P	**Pb**	07 54 01.6	-0.1		
PMON				S	**Sg**	07 54 21.1	+0.8		
UEES	**Universidad Ev**	**1.36**	**6**	P	**Pn**	07 54 00.9	-0.3		
UEES				S	**Sg**	07 54 21.7	+1.2		
UEES	**Universidad Ev**	**1.36**	**6**	*eP*	**Pb**	07 54 02.1	+0.2		
IGN	**Direccin Gen**	**1.37**	**8**	P	**Pb**	07 54 01.8	-0.1		
IGN				S	**Sg**	07 54 20.2	-0.5		
UDBS	**Universidad Do**	**1.38**	**9**	P	**Pn**	07 54 01.4	+0.1		
UDBS				S	**Sg**	07 54 21.3	+0.5		
BOQS	**Boqueron**	**1.38**	**4**	*eP*	**Pn**	07 54 01.7	+0.2		
PIC2	**El Picacho**	**1.39**	**5**	*eP*	**Pn**	07 54 01.6	-0.1		
LBRS	**Las Brisas**	**1.42**	**13**	*eP*	**Pn**	07 54 01.8	-0.1		
PAVA	**Las Pavas**	**1.42**	**17**	P	**Pn**	07 54 02.1	+0.1		
PAVA				S	**Sg**	07 54 23.2	+0.8		
TECA	**Tecapa**	**1.42**	**37**	*eP*	**Pg**	07 54 03.7	-0.2		
CEDA	**San Andres**	**1.45**	**359**	P	**Pn**	07 54 02.5	+0.3		
CEDA				S	**Sg**	07 54 24.3	+1.2		
SCLA	**Alcaldia de Sa**	**1.48**	**25**	P	**Pn**	07 54 02.1	-0.7		
SCLA				S	**Sg**	07 54 23.8	-0.6		
CEVE	**Cerro Verde**	**1.49**	**351**	P	**Pn**	07 54 03.2	+0.2		
CEVE				S	**Sg**	07 54 25.9	+1.4		
CEVE	**Cerro Verde**	**1.49**	**351**	*eP*	**Pb**	07 54 04.0	0.0		
LCY	**Lacayo**	**1.50**	**45**	*eP*	**Pn**	07 54 00.7	-2.3		
RANC	**El Ranchito**	**1.51**	**44**	S	**Sg**	07 54 24.5	-0.8		
PACA	**Pacayal**	**1.51**	**43**	P	**Pb**	07 54 04.1	-0.3		
PACA				S	**Sg**	07 54 24.5	-0.8		
NUBE	**Las Nubes**	**1.59**	**346**	P	**Pb**	07 54 05.8	0.0		
NUBE				S	**Sb**	07 54 26.2	+0.4		
NUBE	**Las Nubes**	**1.59**	**346**	*eP*	**Pn**	07 54 05.0	+0.7		
NUBE	**Las Nubes**	**1.59**	**346**	*eP*	**Pn**	07 54 03.8	-0.6		
NUBE				*eS*	**Sn**	07 54 24.1	-0.7		
FAME	**Alcaldia de Sa**	**1.61**	**337**	P	**Pn**	07 54 04.3	-0.1		
CNRM	**Centro Naciona**	**1.62**	**46**	P	**Pb**	07 54 05.6	-0.5		
CNRM				S	**Sb**	07 54 27.0	+0.5		
UNIC	**Universidad Ca**	**1.63**	**354**	P	**Pn**	07 54 04.8	+0.1		
UNIC				S	**Sg**	07 54 28.1	-0.9		
LOAL	**Lomas de Alarc**	**1.69**	**347**	P	**Pb**	07 54 06.5	-0.8		
LOAL				S	**Sg**	07 54 29.9	-0.8		
SLOZ	**Alcaldia de Sa**	**1.71**	**347**	P	**Pb**	07 54 08.0	+0.3		
SLOZ				S	**Sg**	07 54 32.1	+0.4		
SLOZ	**Alcaldia de Sa**	**1.71**	**347**	*eP*	**Pn**	07 54 06.8	+0.9		
SLOZ				*eS*	**Sg**	07 54 31.2	-0.4		
LCND	**La Caada**	**1.73**	**56**	P	**Pn**	07 54 06.1	0.0		
CNCH	**Conchagua**	**1.76**	**58**	P	**Pn**	07 54 07.4	+0.8		
CNCH				S	**Sb**	07 54 30.4	-0.3		
RBDL	**Robledal**	**1.78**	**350**	*eP*	**Pb**	07 54 08.1	-0.9		
RBDL				*eS*	**Sn**	07 54 29.8	+0.4		
LLGN	**La Laguna**	**1.85**	**13**	P	**Pn**	07 54 08.8	+0.9		
LLGN				S	**Sb**	07 54 34.4	+1.2		
CSGN	**Cosiguina Volc**	**1.88**	**70**	P	**Pb**	07 54 09.8	-0.8		
CSGN				S	**Sb**	07 54 33.0	-1.0		
MTO3	**Montecristo**	**2.04**	**0**	Pn	**Pn**	07 54 11.1	+0.6		
MTO3	**Montecristo**	**2.04**	**0**	P	**Pn**	07 54 10.9	+0.4		
MTO3				S	**Sg**	07 54 40.3	-1.7		
MTO3	**Montecristo**	**2.04**	**0**	*eP*	**Pn**	07 54 11.1	+0.6		
ESQI	**Esquipulas**	**2.20**	**1**	Pn	**Pn**	07 54 12.8	+0.2		
ESQI	**Esquipulas**	**2.20**	**1**	P	**Pn**	07 54 14.0	+1.4		
ESQI				S	**Sb**	07 54 42.8	-0.4		
ZAFR2	**Estanzuela, Za**	**2.22**	**1**	*i P*	**Pg**	07 54 20.4	+1.5		
CRIN	**San Cristobal**	**2.30**	**81**	Pn	**Pn**	07 54 15.1	+1.2		
CRIN	**San Cristobal**	**2.30**	**81**	P	**Pb**	07 54 15.8	-1.9		
CRIN				S	**Sb**	07 54 44.5	-1.5		
TEL3	**Telica 3**	**2.48**	**85**	P	**Pn**	07 54 17.4	+0.9		
SARH	**Santa Rosa de**	**2.48**	**14**	P	**Pn**	07 54 18.3	+1.8		
SARH				S	**Sb**	07 54 50.7	-0.7		
SARH	**Santa Rosa de**	**2.48**	**14**	*eP*	**Pn**	07 54 18.6	+2.1		
HERN	**Volcan Telica**	**2.50**	**84**	Pn	**Pn**	07 54 17.2	+0.4		
HERN	**Volcan Telica**	**2.50**	**84**	P	**Pn**	07 54 17.8	+1.0		
HERN				S	**Sn**	07 54 48.1	+1.1		
POLN	**Al Sur del Vol**	**2.52**	**83**	P	**Pn**	07 54 18.7	+1.7		
POLN				S	**Sn**	07 54 48.8	+1.2		
PACN	**Al O del Volca**	**2.53**	**86**	P	**Pn**	07 54 18.6	+1.5		
CNGA	**Al SSO del Vol**	**2.62**	**87**	P	**Pn**	07 54 19.7	+1.4		
CNGN	**Cerro Negro**	**2.62**	**86**		**Pn**	07 54 19.4	+1.1		
CNGN	**Cerro Negro**	**2.62**	**86**	P	**Pn**	07 54 19.1	+0.8		
CNGN				S	**Sn**	07 54 52.6	+2.5		
MACN	**El Madrono**	**2.64**	**87**	P	**Pn**	07 54 19.5	+0.8		
MACN				S	**Sn**	07 54 51.3	+0.8		
TGUH	**Tegucigalpa,Un**	**2.66**	**50**		**Pn**	07 54 19.5	+0.5		
TGUH	**Tegucigalpa,Un**	**2.66**	**50**	P	**Pn**	07 54 19.8	+0.8		
TGUH				S	**Sb**	07 54 54.1	-2.5		
COPN	**Copaltepe**	**2.73**	**93**	P	**Pn**	07 54 20.9	+1.1		
MOMN	**Momotombo**	**2.77**	**88**	P	**Pn**	07 54 21.6	+1.2		
MOMN				S	**Sn**	07 54 53.4	-0.4		
MOM2	**El Cardon**	**2.83**	**88**	P	**Pn**	07 54 22.4	+1.2		
MOM2				S	**Sn**	07 54 54.5	-0.5		
APG	**El Apazote**	**2.84**	**338**	Pn	**Pn**	07 54 21.7	+0.1		
	0.3nm,0.3s,baz=169,slow=9.9,SNR=19								
APG				Sn	Sn	07 54 43.2	-13		
	0.5nm,0.3s,baz=90,slow=15,SNR=11								
APG	**El Apazote**	**2.84**	**338**	*eP*	**Pb**	07 54 24.4	-2.7		
STG2	**El Palmar, Qui**	**2.84**	**317**	*eP*	**Pb**	07 54 27.5	+0.5		
STG2				*eS*	**Sb**	07 55 02.0	+0.1		
AMTN	**Mateare**	**2.88**	**92**	P	**Pn**	07 54 23.4	+1.5		
AMTN				S	**Sn**	07 54 58.0	+1.6		
SAPS	**Ciudad Sandino**	**2.91**	**93**	P	**Pn**	07 54 24.1	+1.8		
SAPS				S	**Sn**	07 54 57.5	+0.4		
YUSH	**Yuscaran**	**2.94**	**57**	P	**Pn**	07 54 24.0	+1.2		
YUSH				S	**Sn**	07 54 59.9	+1.9		
APYN	**Apoyeque**	**2.96**	**92**	S	**Sn**	07 54 58.9	+0.5		
APQ2	**Apoyeque**	**2.99**	**93**	S	**Sn**	07 54 59.2	+0.3		
LIMN	**Finca el Limon**	**3.02**	**76**	P	**Pn**	07 54 24.8	+0.9		
LIMN				S	**Sn**	07 55 01.1	+1.1		
TISN	**Laguna Tiscapa**	**3.04**	**94**	P	**Pn**	07 54 24.6	+0.5		
UNAN	**Cigeo UNAN**	**3.04**	**94**	P	**Pn**	07 54 24.6	+0.4		
UNAN				S	**Sn**	07 55 00.4	-0.1		
MGAN	**Managua**	**3.06**	**93**	Pn	**Pn**	07 54 25.5	+1.1		
MGAN	**Managua**	**3.06**	**93**	P	**Pn**	07 54 25.1	+0.6		
MGAN				S	**Sn**	07 55 01.3	+0.4		
OCON	**Estacion meteo**	**3.10**	**65**	P	**Pn**	07 54 25.8	+0.8		
OCON				S	**Sn**	07 55 03.2	+1.4		
RTAL	**Retalhuleu**	**3.12**	**314**	S	**Sb**	07 55 07.0	-2.7		
AERN	**Aeropuerto Man**	**3.14**	**93**	S	**Sn**	07 55 03.9	+1.0		
MAS3	**Al N del Volca**	**3.15**	**96**	P	**Pn**	07 54 26.7	+1.1		
MAS3				S	**Sn**	07 55 02.7	-0.3		
RCON	**San Juan de Ri**	**3.34**	**70**	P	**Pn**	07 54 29.9	+1.6		
RCON				S	**Sn**	07 55 09.8	+2.0		
RCVN	**Varillal2**	**3.34**	**68**	P	**Pn**	07 54 29.8	+1.5		
RCPN	**Sur Rio San Ju**	**3.41**	**70**	P	**Pn**	07 54 30.9	+1.6		
MATN	**Matagalpa**	**3.42**	**80**	P	**Pn**	07 54 28.3	-1.1		
MATN				S	**Sn**	07 55 10.4	+0.6		
HUEH	**Huehuetenango**	**3.60**	**325**		**Pn**	07 54 32.6	+0.6		
HUEH	**Huehuetenango**	**3.60**	**325**	P	**Pn**	07 54 34.1	+2.0		
BOAB	**BOACO BROADBAN**	**3.63**	**88**		**Pn**	07 54 32.7	+0.6		
BOAB	**BOACO BROADBAN**	**3.63**	**88**	P	**Pn**	07 54 33.1	+0.9		
BOAB				S	**Sn**	07 55 15.0	+0.2		
ELI1	**Hacienda Flor**	**4.11**	**114**	P	**Pn**	07 54 40.2	+1.4		
ELI1				S	**Sn**	07 55 27.1	+0.3		
JUD3	**Juan Diaz 3**	**4.34**	**120**		**Pn**	07 54 43.8	+1.7		
UPAL	**Upala**	**4.51**	**108**	S	**Sn**	07 55 36.8	+0.2		
CMARA	**Lajas Hojancha**	**4.52**	**120**	P	**Pn**	07 54 46.4	+1.9		
INDI	**Punta indio, G**	**4.53**	**123**	P	**Pn**	07 54 45.8	+1.1		
PETF	**Flores**	**4.56**	**354**	Pn	**Pn**	07 54 45.9	+0.8		
PETF	**Flores**	**4.56**	**354**	P	**Pn**	07 54 47.9	+2.8		
SIUN	**Universidad Ur**	**4.69**	**73**	Pn	**Pn**	07 54 47.7	+0.9		
SIUN	**Universidad Ur**	**4.69**	**73**	P	**Pn**	07 54 48.1	+1.3		
JTS	**Las Juntas de**	**4.80**	**115**	Pn	**Pn**	07 54 51.1	+2.8		
	3.1nm,0.3s,baz=308,slow=23,SNR=21								
	7.0nm,0.3s								
JTS	**Las Juntas de**	**4.80**	**115**	Pn	**Pn**	07 54 50.2	+1.9		
JTS	**Las Juntas de**	**4.80**	**115**	P	**Pn**	07 54 48.4	+0.1		
JTS				S	**Sn**	07 55 43.3	-0.4		
LCR2	**La Lucha 2**	**5.88**	**116**	S	**Sn**	07 56 10.3	-0.3		
CMIG	**Matias Romero**	**7.11**	**312**	Pn	**Pn**	07 55 21.6	+1.5		
	0.3nm,0.3s,baz=137,slow=13,SNR=11								
CMIG				Sn	**Sn**	07 56 38.5	-2.3		
	0.4nm,0.3s,baz=135,slow=14,SNR=2.0								
	0.8nm,0.3s								
BRU2	**Volcan**	**7.46**	**118**	Pn	**Pn**	07 55 28.4	+3.3		
TEIG	**Tepich**	**7.90**	**8**	Pn	**Pn**	07 55 34.6	+3.7		
545A	**Edgard**	**17.64**	**357**		**Pn**	07 57 41.9	+0.2		
SDV	**Santo Domingo**	**18.74**	**99**	P	**Pn**	07 57 55.6	-0.1		
	0.3nm,0.3s,baz=266,slow=8.9,SNR=4.3								
	2.5nm,0.6s								
SDV	**Santo Domingo**	**18.74**	**99**	P	**Pn**	07 57 55.8	+0.2		
352A	**Blakely**	**19.48**	**11**	P	**Pn**	07 58 04.2	0.0		
VBMS	**Vicksburg**	**19.80**	**357**	P	**P**	07 58 06.8	+0.3		
435B	**Jarrell**	**19.85**	**339**	P	**P**	07 58 07.4	+0.3		
435B				IAmb	IAmb	07 58 08.7			
	comp=Z,28nm,0.9s								
NATX	**Nacogdoches**	**19.92**	**347**	P	**P**	07 58 07.5	-0.3		
NATX				IAmb	IAmb	07 58 09.3			
	comp=Z,18nm,0.8s								
DRIO	**Del Rio**	**19.95**	**330**		**Pn**	07 58 09.1	-0.7		
JCT	**Junction City**	**20.46**	**333**	P	**P**	07 58 13.6	-0.1		
LRAL	**Lakeview Retre**	**20.70**	**6**	P	**P**	07 58 16.3	0.0		
LRAL				IAmb	IAmb	07 58 19.7			
	comp=Z,15nm,1.2s								
Z47A	**Carrollton**	**20.79**	**3**	P	**P**	07 58 17.7	+0.5		
Z47A				IAmb	IAmb	07 58 33.8			
	comp=Z,38nm,1.5s								
BRDY	**Brady**	**20.83**	**336**		**P**	07 58 17.4	-0.3		
BRDY				IAmb	IAmb	07 58 18.5			
	comp=Z,14nm,1.0s								
WHTX	**Lake Whitney,**	**20.91**	**340**		**P**	07 58 18.6	0.0		
Z41A	**Richland Creek**	**21.05**	**352**	P	**P**	07 58 22.1	+2.2		
Z41A				IAmb	IAmb	07 58 27.1			
	comp=Z,20nm,0.9s								
FW13	**Cleburne**	**21.24**	**341**	P	**P**	07 58 21.9	-0.2		
FW13				IAmb	IAmb	07 58 22.6			
	comp=Z,14nm,0.7s								
OZNA	**Ozona**	**21.44**	**331**	P	**P**	07 58 25.6	+1.2		
TX31	**Lajitas Ar. Si**	**21.50**	**324**		**P**	07 58 26.4	+1.3		
TXAR	**Lajitas Array**	**21.50**	**324**	P	**P**	07 58 27.3	+2.2		
	comp=Z,8nm,0.7s,baz=140,slow=10,SNR=27								
	comp=Z,2.8nm,0.7s								
TXAR	**Lajitas Array**	**21.50**	**324**	P	**P**	07 58 26.6	+1.6		
Y49A	**Blount Mountai**	**21.58**	**7**	P	**P**	07 58 25.8	0.0		
GOGA	**Godfrey**	**21.65**	**13**	P	**P**	07 58 26.8	+0.3		
GOGA				IAmb	IAmb	07 58 43.3			
	comp=Z,25nm,1.4s								
PLPT	**Palo Pinto**	**21.95**	**340**	P	**P**	07 58 29.5	-0.3		
PLPT				IAmb	IAmb	07 58 30.1			
	comp=Z,19nm,0.8s								
OXF	**Oxford**	**22.06**	**360**		**P**	07 58 31.2	+0.3		
ABTX	**Abilene, Hawle**	**22.27**	**337**		**P**	07 58 32.8	-0.4		
ABTX				IAmb	IAmb	07 58 35.2			
	comp=Z,11nm,1.1s								
MNHN	**Monahans**	**22.58**	**329**		**P**	07 58 38.7	+2.2		
MNHN				IAmb	IAmb	07 58 39.6			
	comp=Z,7.2nm,0.8s								
LOOK	**Love County**	**22.69**	**343**	P	**P**	07 58 36.9	-0.7		
WTFS	**Witchita Falls**	**22.88**	**340**		**P**	07 58 38.4	-1.2		
WTFS				IAmb	IAmb	07 58 39.1			
	comp=Z,16nm,0.8s								
APMT	**Aspermont**	**23.08**	**337**		**P**	07 58 40.9	-0.8		
APMT				IAmb	IAmb	07 58 42.3			
	comp=Z,9.8nm,0.8s								
PDAR	**Pinedale Array**	**35.00**	**334**	P	**P**	08 00 30.1	+1.4		
	comp=Z,0.4nm,0.8s,baz=174,slow=5.8,SNR=2.3								
PDAR				PcP	**PcP**	08 03 01.8	+0.9		
	comp=Z,0.4nm,0.8s,baz=201,slow=3.9,SNR=2.7								
	comp=Z,0.4nm,0.8s								
NVAR	**Mina Array Bea**	**36.56**	**320**	P	**P**	08 00 44.9	+2.7		
	comp=Z,1.4nm,0.9s,baz=134,slow=9.1,SNR=8.9								
NVAR				PcP	**PcP**	08 03 07.7	+2.1		
	comp=Z,0.3nm,0.7s,baz=119,slow=2.1,SNR=3.2								
	comp=Z,1.4nm,0.9s								
MDP	**Montagnes des**	**36.98**	**98**	LR	LR	08 18 24.6			
	comp=Z,47nm,18.6s,baz=356,slow=41								
ULM	**Lac du Bonnet**	**38.17**	**353**	P	**P**	08 00 53.0	-2.3		
	comp=Z,2.9nm,0.7s,baz=138,slow=8.4,SNR=7.1								
	comp=Z,2.9nm,0.7s								
SCHQ	**Schefferville**	**45.94**	**18**	P	**P**	08 01 56.0	-2.7		
	comp=Z,4.4nm,0.8s,baz=222,slow=6.3,SNR=5.1								
	comp=Z,4.4nm,0.8s								
YKA	**Yellowknife Ar**	**53.23**	**346**	P	**P**	08 02 53.1	-1.0		
	comp=Z,1.4nm,0.8s,baz=147,slow=7.1,SNR=12								
	comp=Z,1.4nm,0.8s								
FRB	**Frobisher Bay**	**53.38**	**11**	LR	LR	08 25 32.2			
	comp=Z,108nm,18.7s,baz=49,slow=36								
INK	**Inuvik**	**62.74**	**343**	P	**P**	08 04 00.2	-0.6		
	comp=Z,1.9nm,1.0s,baz=147,slow=5.5,SNR=3.8								
	comp=Z,1.9nm,1.0s								
ILAR	**Eielson Array**	**65.36**	**337**	P	**P**	08 04 17.3	-0.7		
	comp=Z,0.8nm,1.0s,baz=144,slow=4.7,SNR=6.5								
	comp=Z,0.8nm,1.0s								
NRIK	**Norilsk**	**98.49**	**1**	LR	LR	08 54 01.8			
	comp=Z,42nm,18.2s,baz=0.5,slow=37								
YAK	**Yakutsk**	**99.81**	**342**	LR	LR	08 59 34.7			
	comp=Z,30nm,18.7s,baz=55,slow=40								
CMAR	**Chiang Mai Arr**	**148.31**	**345**	PKPbc	**PKPbc**	08 13 23.8	+0.5		
	comp=Z,2.4nm,0.8s,baz=15,slow=2.6,SNR=9.2								

*IDC **14** 07:54:21.2±2.1, 13.°06N×88.°83W, h0km, mb3.9/5, mbtmp3.9/7, ML3.0/3, MS3.4/1, Error ellipse: s-maj=63.3km s-min=25.8km az=37.0*
ISC 14 07:54:24.1±1.1, 12.°7N±0.°2×89.°1W±0.°2, h40km, n9, σ25.°22/11, mb3.9/5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**2.63**	**331**	Pn	**Pn**	**07 55 05.3**	**+1.0**
	0.8nm,0.3s,baz=237,slow=22,SNR=7.5						
JTS	**Las Juntas de**	**4.75**	**120**	Pn	**Pn**	**07 55 34.9**	**+1.7**
	2.1nm,0.3s,baz=306,slow=19,SNR=4.8						
JTS				Sn	**Sn**	**07 56 24.1**	**-3.0**
	1.1nm,0.3s,baz=302,slow=19,SNR=3.9						
	13nm,0.5s						
CMIG	**Matias Romero**	**7.06**	**309**	Pn	**Pn**	**07 56 04.9**	**-0.1**
	0.4nm,0.3s,baz=117,slow=11,SNR=1.3						
CMIG				Sn	**Sn**	**07 57 20.2**	**-3.9**
	1.0nm,0.3s,baz=69,slow=17,SNR=6.5						
CMIG				LR	LR	07 58 52.5	
	comp=Z,304nm,19.4s,baz=170,slow=38						
	3.9nm,0.6s						
TXAR	**Lajitas Array**	**21.36**	**323**	P	**P**	**07 59 10.3**	**+2.1**
	2.4nm,0.7s,baz=145,slow=10,SNR=8.4						
	2.4nm,0.7s						
NVAR	**Mina Array Bea**	**36.44**	**320**	P	**P**	**08 01 27.6**	**+2.2**
	0.7nm,0.8s,baz=127,slow=9.0,SNR=2.1						
	0.7nm,0.8s						
ULM	**Lac du Bonnet**	**37.85**	**353**	P	**P**	**08 01 36.1**	**-0.7**
	2.8nm,0.7s,baz=157,slow=6.8,SNR=3.6						
	2.8nm,0.7s						
SCHQ	**Schefferville**	**45.53**	**18**	P	**P**	**08 02 39.2**	**-0.5**
	2.6nm,0.5s,baz=214,slow=13,SNR=3.2						
	2.6nm,0.5s						
YKA	**Yellowknife Ar**	**52.95**	**346**	P	**P**	**08 03 36.6**	**+0.4**
	1.0nm,0.8s,baz=147,slow=7.1,SNR=4.2						
	1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**148.03**	**345**	PKPbc	**PKiKP**	**08 14 07.0**	**-1.2**
	1.2nm,0.3s,baz=332,slow=4.0,SNR=4.6						

*IDC **14** 07:55:02.4±1.2, 7.°72S×112.°00E, h0km, mb3.8/5, mbtmp3.9/7, ML3.7/2, Error ellipse: s-maj=47.2km s-min=17.9km az=42.0*
*DJA **14** 07:55:04.6±0.1, 8.°3S±2.°×111.°2E±.°, h10km, M4.1/36, mb4.4/2, MLv3.9/36*
ISC 14 07:55:04.3±0.7, 7.°71S±0.°05×112.°00E±0.°03, h10km, n31, σ0.°86/35, mb3.9/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJI	**Sawahan**	**0.23**	**265**	P	**Pg**	**07 55 08.9**	**-0.3**
SNJI	**Sawahan-Nganju**	**0.25**	**254**	P	**Pg**	**07 55 10.1**	**+0.6**
SNJI				S	**Sg**	**07 55 13.7**	**+0.8**
NGJI	**Ngawi**	**0.63**	**303**	P	**Pg**	**07 55 18.1**	**+1.4**
TBJI	**Tambak Boyo**	**0.90**	**350**	P	**Pg**	**07 55 21.5**	**-0.3**
TBJI				S	**Sg**	**07 55 34.0**	**+0.5**
PCJI	**Pacitan**	**0.94**	**240**	P	**Pg**	**07 55 21.2**	**-1.3**
UGM	**Wanagama**	**1.48**	**262**	P	**Pn**	**07 55 31.1**	**+0.1**
UGM				S	**Sn**	**07 55 51.7**	**+1.3**
GMJI	**Gumukmas**	**1.54**	**111**	P	**Pn**	**07 55 32.0**	**+0.2**
BLJI	**Banyuglugur**	**1.58**	**91**	P	**Pn**	**07 55 32.6**	**+0.1**
SMRI	**Semarang**	**1.68**	**293**	P	**Pn**	**07 55 33.2**	**-0.6**
KMMI	**Kalianget**	**2.06**	**71**	P	**Pn**	**07 55 37.9**	**-1.1**
ABJI	**Asem Bagus**	**2.22**	**92**	P	**Pn**	**07 55 41.5**	**+0.3**
JAGI	**Jajag, Banyuwa**	**2.26**	**110**	P	**Pn**	**07 55 43.3**	**+1.5**
BYJI	**Banyuwangi**	**2.39**	**102**	P	**Pn**	**07 55 43.8**	**+0.3**
SCJI	**Gunung Srandil**	**2.81**	**270**	P	**Pn**	**07 55 49.3**	**0.0**
CTJI	**Waduk Cacaban**	**2.88**	**284**	P	**Pn**	**07 55 50.3**	**0.0**
RTBI	**Rangdo, Negare**	**3.01**	**104**	P	**Pn**	**07 55 52.9**	**+0.8**
KPJI	**Karang Pucung**	**3.06**	**277**	P	**Pn**	**07 55 53.4**	**+0.5**
SRBI	**Singaraja**	**3.21**	**97**	P	**Pn**	**07 55 54.7**	**-0.1**
CMJI	**Cimerak**	**3.52**	**269**	P	**Pn**	**07 55 59.7**	**+0.6**
KHKI	**Kahang-Kahang**	**3.63**	**101**	P	**Pn**	**07 56 01.0**	**+0.3**
KLNI	**Mataram**	**4.12**	**100**	P	**Pn**	**07 56 09.2**	**+1.8**
BBJI	**Bungbulang**	**4.32**	**273**	P	**Pn**	**07 56 10.5**	**+0.3**
LEM	**Lembang**	**4.43**	**281**	Pn	**Pn**	**07 56 11.4**	**-0.5**
	5.1nm,0.3s,baz=157,slow=15,SNR=1.9						
LEM				Sn	**Sn**	**07 57 04.1**	**+0.4**
	4.4nm,0.3s,baz=122,slow=22,SNR=1.7						
	16nm,0.5s						
TWSI	**Taliwang, Sumb**	**4.94**	**102**	P	**Pn**	**07 56 19.0**	**+0.3**
PLAI	**Plampang**	**5.82**	**101**	P	**Pn**	**07 56 32.9**	**+2.0**
	30nm,0.8s						
FITZ	**Fitzroy Crossi**	**16.82**	**129**	Pn	**Pn**	**07 59 00.1**	**0.0**
	0.2nm,0.3s,baz=315,slow=10.0,SNR=2.6						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**24.82**	**122**	P	**P**	**08 00 26.3**	**-0.7**
	0.5nm,0.3s,baz=294,slow=11,SNR=13						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**26.32**	**130**	P	**P**	**08 00 40.0**	**-0.7**
	1.3nm,0.5s,baz=304,slow=8.3,SNR=36						
	1.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**29.02**	**334**	P	**P**	**08 01 05.1**	**+0.4**
	0.8nm,0.3s,baz=152,slow=9.5,SNR=4.8						
	0.8nm,0.3s						
STKA	**Stephens Creek**	**36.56**	**135**	P	**P**	**08 02 10.3**	**-0.2**
	0.6nm,0.3s,baz=312,slow=9.3,SNR=4.5						
	0.6nm,0.3s						
SONM	**Songino Array**	**55.53**	**355**	P	**P**	**08 04 38.5**	**-1.3**
	0.3nm,0.5s,baz=173,slow=6.2,SNR=2.8						
	0.3nm,0.5s						

*IDC **14** 07:58:41.4±1.5, 55.°19S×32.°52W, h0km, mb4.1/5, mbtmp4.1/5, MS3.6/2, Error ellipse: s-maj=68.8km s-min=23.8km az=13.0*
*NEIC **14** 07:58:43.2±1.1, 55.°2S±0.°1×32.°5W±0.°1, h10km±1km, mb4.7/19, Error ellipse: s-maj=22.9km s-min=6.9km az=198.0*
ISC 14 07:58:42.8±0.6, 55.°2S±0.°1×32.°51W±0.°09, h10km, n40, σ0.°54/35, mb4.7/12, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.47**	**289**	Pn	**Pn**	**07 59 23.3**	**+0.2**
PMSA	**Palmer Station**

ISC 14 08:02:34.9±0.6, 43°90N±0°06×86°42E±0°05, h10km, n27, σ1s41/39, mb3.6/10, 6C-16D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**0.92**	**95**	*e*Pg	**Pn**	**08 02 54.8**	**+0.8**
WMQ				Sg	**Sn**	**08 03 09.0**	**+1.6**
WMQ				smax	smax		
	comp=N,280nm,0.7s						
WMQ				smax	smax		
	comp=E,460nm,0.9s						
MK31	**Makanchi Array**	**4.11**	**316**	⇓Pn	**Pn**	**08 03 39.4**	**+1.7**
	comp=E,5.5nm,0.4s,baz=132,slow=14,SNR=228						
MK31				⇓Pg	**Pb**	**08 03 50.5**	**+3.3**
	comp=E,23nm,0.5s,baz=136,slow=15,SNR=39						
MK31				⇓Sn	**Sn**	**08 04 26.6**	**+0.8**
	comp=E,41nm,0.6s,baz=130,slow=26,SNR=5.3						
MK31				⇑Lg	Lg	08 04 44.4	
	comp=E,137nm,0.7s,baz=138,slow=30,SNR=11						
MKAR	**Makanchi Array**	**4.11**	**316**	Pn	**Pn**	**08 03 39.4**	**+1.7**
	comp=E,4.7nm,0.3s,baz=132,slow=13,SNR=193						
MKAR				Pg	**Pb**	**08 03 48.1**	**+0.9**
	comp=E,8.0nm,0.3s,baz=129,slow=17,SNR=21						
MKAR				Sn	**Sn**	**08 04 26.9**	**+1.2**
	comp=E,19nm,0.3s,baz=137,slow=22,SNR=7.7						
MKAR				Lg	Lg	08 04 46.0	
	comp=E,12nm,0.3s,baz=139,slow=29,SNR=3.7						
	comp=E,10nm,0.4s						
MAKZ	**Makanchi**	**4.27**	**314**	⇓Pn	**Pn**	**08 03 41.4**	**+1.4**
	comp=E,10nm,0.5s						
MAKZ				⇓Pg	**Pb**	**08 03 50.7**	**+0.6**
	comp=E,17nm,0.5s						
MAKZ				⇑Sn	**Sn**	**08 04 30.9**	**+1.0**
	comp=E,40nm,0.6s						
MAKZ				⇓Lg	Lg	08 04 48.9	
	comp=E,133nm,0.8s						
PDGK	**Podgornoye**	**5.07**	**266**	⇑Pn	**Pn**	**08 03 50.4**	**-0.6**
PDGK				⇓Pg	**Pb**	**08 04 05.1**	**+1.5**
	comp=E,23nm,0.8s						
PDGK				⇓Sn	**Sn**	**08 04 47.6**	**-2.0**
	comp=E,23nm,0.5s						
PDGK				⇑Lg	Lg	08 05 09.6	
	comp=E,99nm,1.0s						
KURBB	**Kurchatov Arra**	**8.60**	**324**	Pn	**Pn**	**08 04 38.9**	**-0.4**
	comp=E,0.4nm,0.3s,baz=132,slow=13,SNR=11						
KURBB				Sn	**Sn**	**08 06 16.3**	**0.0**
	comp=E,0.5nm,0.3s,baz=86,slow=28,SNR=5.3						
KURBB				Lg	Lg	08 07 06.8	
	comp=E,0.6nm,0.3s,baz=146,slow=30,SNR=3.7						
	comp=E,1.8nm,0.4s						
KURBB	**Kurchatov Arra**	**8.60**	**324**	⇓Pn	**Pn**	**08 04 39.1**	**-0.2**
	comp=E,4.7nm,0.5s						
KURBB				⇓Sn	**Sn**	**08 06 13.6**	**-2.7**
	comp=E,25nm,0.7s						
KURBB				⇓Lg	Lg	08 07 01.8	
	comp=E,132nm,0.9s						
KURK	**Kurchatov**	**8.63**	**325**	⇓Pn	**Pn**	**08 04 39.1**	**-0.6**
	comp=E,1.5nm,0.5s						
KURK				⇑Sn	**Sn**	**08 06 19.1**	**+2.0**
	comp=E,5.0nm,0.6s						
KURK				⇑Lg	Lg	08 07 10.1	
	comp=E,17nm,0.7s						
AAK	**Ala-Archa**	**8.80**	**266**	Lg	Lg	08 07 16.4	
	comp=E,0.5nm,0.3s,baz=246,slow=19,SNR=1.3						
GOMU	**GeErMu**	**10.02**	**137**	Pn	**Pn**	**08 04 59.1**	**-0.1**
GOMU				Sn	**Sn**	**08 06 53.1**	**+1.2**
GOMU				smax	smax		
	comp=N,10.0nm,0.8s						
GOMU				smax	smax		
	comp=E,16nm,0.9s						
ZAA0	**Zalesovo Array**	**10.11**	**355**	⇓Pn	**Pn**	**08 04 58.9**	**-1.1**
	comp=E,5.1nm,0.7s						
ZAA0				⇓Sn	**Sn**	**08 06 49.5**	**-3.9**
	comp=E,5.6nm,0.5s						
ZALV	**Zalesovo Beam**	**10.11**	**355**	Pn	**Pn**	**08 04 59.8**	**-0.2**
	comp=E,1.5nm,0.3s,baz=177,slow=14,SNR=32						
ZALV				Sn	**Sn**	**08 06 51.2**	**-2.2**
	comp=E,1.9nm,0.3s,baz=175,slow=22,SNR=12						
	comp=E,7.5nm,0.5s						
GTA2	**Gaotai**	**10.90**	**109**	*e*P	**Pn**	**08 05 11.0**	**0.0**
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	**Karatay Array**	**11.59**	**272**	⇓Sn	Sn	08 07 49.6	+20
	comp=Z,1.1nm,0.5s,baz=129,slow=16,SNR=5.8						
KK31				⇓Lg	Lg	08 08 43.3	
	comp=Z,1.8nm,0.5s,baz=75,slow=23,SNR=4.2						
BVAR	**Borovoye Array**	**13.99**	**316**	Pn	**Pn**	**08 05 52.1**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=139,slow=9.0,SNR=2.3						
BVAR				Sn	Sn	08 08 20.1	-8.2
	comp=Z,0.1nm,0.3s,baz=112,slow=22,SNR=3.6						
BVAR				Lg	Lg	08 10 02.0	
	baz=135,slow=29,SNR=2.1						
	comp=Z,0.4nm,0.3s						
SONM	**Songino Array**	**14.45**	**67**	Lg	Lg	08 10 16.1	
	baz=267,slow=29,SNR=6.6						
LZDM	**Lanzhou Array**	**15.43**	**115**	Pn	**Pn**	**08 06 12.7**	**-0.2**
	baz=289,slow=14						
	comp=Z,0.4nm,0.3s						
NRIK	**Noril'sk**	**25.51**	**1**	P	**P**	**08 08 03.3**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=166,slow=8.3,SNR=2.7						
	comp=Z,1.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.47**	**154**	P	**P**	**08 08 21.3**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=333,slow=9.5,SNR=5.0						
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**38.94**	**318**	P	**P**	**08 10 00.9**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=71,slow=6.6,SNR=4.0						
	comp=Z,1.4nm,0.9s						
BRTR	**Keskin Array B**	**39.01**	**283**	P	**P**	**08 10 01.4**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=48,slow=8.2,SNR=4.5						
	comp=Z,0.8nm,0.7s						
HFS	**Hagfors**	**45.12**	**318**	P	**P**	**08 10 51.0**	**0.0**
	comp=Z,0.6nm,0.5s,baz=76,slow=12,SNR=1.4						
	comp=Z,0.6nm,0.5s						
NOA	**NORSAR Array B**	**46.09**	**319**	P	**P**	**08 10 58.6**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=75,slow=8.1,SNR=1.6						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**63.95**	**22**	P	**P**	**08 13 07.9**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=326,slow=6.0,SNR=2.5						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**72.62**	**10**	P	**P**	**08 14 01.7**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=229,slow=15,SNR=2.3						
	comp=Z,0.1nm,0.5s						
WRA	**Warramunga Arr**	**77.20**	**134**	P	**P**	**08 14 27.8**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=334,slow=5.0,SNR=8.1						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**80.09**	**137**	P	**P**	**08 14 43.6**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=337,slow=5.3,SNR=6.2						
	comp=Z,0.4nm,0.7s						

*NEIC **14** 08:18:07.0±1.1, 25°9N±0°1×140°7E±0°1, h111km±10km, mb4.4/13, Error ellipse: s-maj=21.0km s-min=13.5km az=136.0*
*IDC **14** 08:18:08.7±3.5, 25°73N×141°02E, h139km±35km, mb3.5/6, mbtmp4.0/10, MS3.3/1, Error ellipse: s-maj=47.2km s-min=14.6km az=99.0*

ISC 14 08:18:05.6±0.7, 25°70N±0°09×140°8E±0°1, h100km, n37, σ1s68/35, mb4.3/13, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.85**	**41**	P	Pn	08 18 23.8	-13
	308nm,0.3s,baz=50,slow=10,SNR=131						
JCJ				S	Sn	08 18 44.7	-15
	974nm,0.3s,baz=288,slow=22,SNR=56						
JCJ	**Chichijima**	**1.85**	**41**		**Pn**	**08 18 37.1**	**+0.8**
JHJ2	**Mitsune**	**7.44**	**353**	Pn	**Pn**	**08 19 50.5**	**-0.9**
JHJ	**Hachijo jima 2**	**7.45**	**353**	P	**Pn**	**08 19 53.9**	**+2.3**
	32nm,0.4s,baz=184,slow=14,SNR=1.3						
JMZ	**Minamidaito 2**	**8.65**	**273**	Pn	**Pn**	**08 20 08.8**	**+0.8**
JGF	**Kuroka**	**10.31**	**344**	Pn	**Pn**	**08 20 28.3**	**-2.2**
JYT	**Yasato**	**10.51**	**357**	Pn	**Pn**	**08 20 31.8**	**-1.4**
MJAR	**Matsushiro Arr**	**11.04**	**349**	P	**Pn**	**08 20 41.4**	**+1.0**
	1.8nm,0.5s,baz=161,slow=10,SNR=7.9						
MJAR	**Matsushiro Arr**	**11.04**	**349**	Pn	**Pn**	**08 20 37.8**	**-2.5**
MAJO	**Matsushiro**	**11.04**	**349**	Pn	**Pn**	**08 20 37.4**	**-3.0**
MJB9	**Matsu-Tunnel**	**11.04**	**349**	Pn	**Pn**	**08 20 37.7**	**-2.8**
KSRS	**Korea Array**	**16.05**	**320**	P	**P**	**08 21 49.5**	**+2.7**
	0.7nm,0.5s,baz=135,slow=12,SNR=4.3						
ASAJ	**Asahikawa**	**18.43**	**4**	P	**P**	**08 22 13.8**	**+0.7**
	3.4nm,0.6s,baz=180,slow=14,SNR=5.4						
JKA	**Kamikawa-asahi**	**18.43**	**4**	P	**Pn**	**08 22 15.4**	**+1.0**
JKA					IAmb	IAmb	08 22 53.7
	comp=Z,38nm,1.5s						
SIJI	**Sorong**	**27.98**	**201**	LR	LR	08 33 23.0	
	comp=Z,53nm,18.6s,baz=141,slow=33						
WB0	**Warramunga Arr**	**45.62**	**188**	P	**P**	**08 26 16.1**	**-0.1**
WB0					IAmb	IAmb	08 26 16.5
	comp=Z,4.4nm,0.7s						
WRA	**Warramunga Arr**	**45.80**	**189**	P	**P**	**08 26 17.4**	**-0.2**
	comp=Z,5.1nm,0.6s,baz=9.6,slow=8.7,SNR=52						
	comp=Z,5.1nm,0.6s						
WRA	**Warramunga Ar**	**45.80**	**189**	P	**P**	**08 26 17.0**	**-0.6**
AS31	**Alice Springs**	**49.53**	**188**	P	**P**	**08 26 47.7**	**+1.4**
ASAR	**Alice Springs**	**49.53**	**188**	P	**P**	**08 26 45.3**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=4.1,slow=6.7,SNR=6.2						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**49.53**	**188**	P	**P**	**08 26 46.0**	**-0.3**
L14K	**Kuka Creek**	**51.83**	**31**	P	**P**	**08 27 02.2**	**-0.9**
N15K	**Kwethluk River**	**52.75**	**33**	P	**P**	**08 27 09.2**	**-0.9**
C18K	**Utukok River**	**54.80**	**22**	P	**P**	**08 27 24.2**	**-0.7**
C18K				IAmb	IAmb	08 27 24.8	
	comp=Z,5.1nm,1.4s						
O18K	**Koktuh Hills**	**55.10**	**34**	P	**P**	**08 27 26.4**	**-0.8**
C19K	**Lookout Ridge**	**55.50**	**22**	P	**P**	**08 27 29.7**	**-0.2**
E19K	**Redstone River**	**55.84**	**24**	P	**P**	**08 27 31.1**	**-1.2**
E19K				IAmb	IAmb	08 27 34.3	
	comp=Z,4.0nm,1.1s						
D20K	**Etivluk River**	**56.41**	**23**	P	**P**	**08 27 35.5**	**-0.9**
D20K				IAmb	IAmb	08 28 09.9	
	comp=Z,3.4nm,0.9s						
H21K	**Melozitna Rive**	**57.16**	**27**	P	**P**	**08 27 41.2**	**-0.4**
H21K				IAmb	IAmb	08 27 43.0	
	comp=Z,7.3nm,1.3s						
STKA	**Stephens Creek**	**57.26**	**179**	P	**P**	**08 27 41.8**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=356,slow=8.0,SNR=5.7						
	comp=Z,1.3nm,0.5s						
D24K	**Happy Valley**	**59.25**	**23**	P	**P**	**08 27 55.4**	**-0.8**
D24K				IAmb	IAmb	08 27 56.8	
	comp=Z,5.0nm,0.8s						
ILAR	**Eielson Array**	**59.52**	**28**	P	**P**	**08 27 56.0**	**-2.0**
	comp=Z,1.3nm,0.8s,baz=265,slow=5.6,SNR=14						
	comp=Z,1.3nm,0.8s						
YKA	**Yellowknife Ar**	**73.94**	**28**	P	**P**	**08 29 28.0**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=297,slow=6.4,SNR=5.1						
YKA				pP	**pP**	**08 29 58.5**	**+3.8**
	comp=Z,0.8nm,0.8s,baz=297,slow=6.6,SNR=8.5						
	comp=Z,0.4nm,0.8s						
FINES	**FINESS Array B**	**78.65**	**334**	P	**P**	**08 29 54.7**	**-1.6**
	comp=Z,1.7nm,0.9s,baz=60,slow=4.9,SNR=6.0						
	comp=Z,1.7nm,0.9s						
FINES	**FINESS Array B**	**78.65**	**334**	P	**P**	**08 29 54.9**	**-1.5**
NVAR	**Mina Array Bea**	**82.34**	**51**	pP	pP	08 30 47.4	+5.4
	comp=Z,0.2nm,0.6s,baz=297,slow=6.5,SNR=3.6						
PLCA	**Paso Flores**	**149.97**	**128**	PKPbc	**PKPdf**	**08 37 42.1**	**+2.6**
	comp=Z,4.0nm,1.3s,baz=243,slow=2.3,SNR=3.2						

*CATAC **14** 08:20:44.9±0.4, 15°N±3°×8°8W±°, h1km, M3.0/8, MLv3.0/8, Error ellipse: s-maj=6.2km s-min=3.2km az=12.8, confirmed*
*GCG **14** 08:20:45.8±1.3, 15°45N×87°95W, h2km±39km, MD3.9, Presumed earthquake*

ISC 14 08:20:43.8±2.0, 15°47N±0°06×87°85W±0°05, h5km±15km, n17, σ0s56/28, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZABA	**Izabal, Puerto**	**0.75**	**290**	P	**Pb**	**08 20 59.1**	**-0.3**
IZABA				S	**Sb**	**08 21 10.2**	**+0.3**
SARH	**Santa Rosa de**	**1.12**	**232**	P	**Pg**	**08 21 05.3**	**0.0**
SARH				S	**Sb**	**08 21 20.2**	**-0.4**
SARH	**Santa Rosa de**	**1.12**	**232**	*i* P	**Pg**	**08 21 05.3**	**0.0**
SARH				*i* S	**Sg**	**08 21 19.9**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.52**	**158**	P	**Pb**	**08 21 12.6**	**+0.1**
TGUH				S	**Sb**	**08 21 32.5**	**+0.3**
LLGN	**La Laguna**	**1.68**	**219**	P	**Pb**	**08 21 15.0**	**-0.3**
LLGN				S	**Sb**	**08 21 37.3**	**+0.6**
ZAFR2	**Estanzuela, Za**	**1.70**	**239**	*i* P	**Pg**	**08 21 16.0**	**-0.5**
ZAFR2				*i* S	**Sg**	**08 21 39.5**	**+1.0**
ESQI	**Esquipulas**	**1.70**	**238**	P	**Pb**	**08 21 15.6**	**-0.1**
ESQI				S	**Sg**	**08 21 39.3**	**+0.7**
YUSH	**Yuscaran**	**1.80**	**147**	P	**Pb**	**08 21 16.9**	**-0.5**
YUSH				S	**Sb**	**08 21 40.7**	**+0.5**
MTO3	**Montecristo**	**1.81**	**234**	P	**Pb**	**08 21 17.0**	**-0.6**
MTO3				S	**Sb**	**08 21 41.0**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.96**	**206**	P	**Pb**	**08 21 19.4**	**-0.6**
PAVA	**Las Pavas**	**2.04**	**211**	S	**Sb**	**08 21 47.1**	**-0.1**
PACA	**Pacayal**	**2.04**	**193**	P	**Pb**	**08 21 20.7**	**-0.8**
COEG	**Centro de Oper**	**2.10**	**209**	P	**Pb**	**08 21 21.3**	**-1.1**
COEG				S	**Sb**	**08 21 49.5**	**+0.7**
LCND	**La Caada**	**2.15**	**181**	P	**Pb**	**08 21 22.4**	**-0.9**
CNCH	**Conchagua**	**2.19**	**180**	P	**Pb**	**08 21 24.0**	**0.0**
CNCH				S	**Sg**	**08 21 54.5**	**+0.4**
UNIC	**Universidad Ca**	**2.21**	**228**	S	**Sb**	**08 21 52.8**	**+0.7**
APG	**El Apazote**	**2.56**	**260**	*i* P	**Pn**	**08 21 26.3**	**0.0**

*ASRS **14** 08:39:00.0±2.3, 53°77N×91°03E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 14 08:39:11.3±4.2, 53°43N×90°49E, h0km, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=36.3km s-min=25.5km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.41**	**281**	Pn	Pn	08 40 07.1	+1.4
	0.8nm,0.3s,baz=96,slow=16,SNR=9.0						
ZALV				Lg	Lg	08 40 57.6	
	1.1nm,0.3s,baz=101,slow=26,SNR=4.4						
	3.1nm,0.6s						
KURBB	**Kurchatov Arra**	**7.89**	**254**	Pn	Pn	08 41 07.5	+0.3
	0.2nm,0.3s,baz=64,slow=14,SNR=3.0						
KURBB				Lg	Lg	08 43 23.4	
	baz=67,slow=34,SNR=1.2						
	1.7nm,0.2s						
MKAR	**Makanchi Array**	**8.47**	**222**	Pn	Pn	08 41 15.1	-0.1
	0.1nm,0.3s,baz=37,slow=14,SNR=2.7						
MKAR				Sn	Sn	08 42 51.5	0.0
	0.1nm,0.3s,baz=36,slow=25,SNR=1.9						
	0.3nm,0.5s						
I34MN	**SONGINO INFRAS**	**11.57**	**113**	I	I	09 50 35.0	
	baz=309,slow=335,SNR=7.9						

*ASRS **14** 08:50:14.0±0.8, 54°62N×83°68E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 14 08:50:15.8±1.7, 54°64N×83°76E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=16.4km s-min=10.8km az=16.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**138**	I	I	08 55 49.9	
	baz=317,slow=340						
ZALV	**Zalesovo Beam**	**0.93**	**138**	Pg	Pg	08 50 32.7	-0.9
	1.9nm,0.3s,baz=322,slow=19,SNR=19						
ZALV				Lg	Lg	08 50 47.2	
	5.0nm,0.3s,baz=317,slow=29,SNR=6.3						
KURBB	**Kurchatov Arra**	**5.13**	**220**	Lg	Lg	08 53 00.8	
	0.2nm,0.3s,baz=42,slow=32,SNR=5.3						
MKAR	**Makanchi Array**	**7.92**	**187**	Pn	Pn	08 52 12.6	+0.5
	0.1nm,0.3s,baz=11,slow=12,SNR=8.1						
MKAR				Lg	Lg	08 54 28.8	
	baz=9.8,slow=26,SNR=3.4						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**8.08**	**264**	Pn	Pn	08 52 13.3	-0.9
	0.1nm,0.3s,baz=71,slow=14,SNR=5.6						
	0.8nm,0.4s						

ISK 14 09:03:58.1, 40°07N×27°04E, h5km, ML1.4/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CANM	**Can-anakkale**	**0.06**	**172**	Pg	Pg	09 03 59.4	-0.1
YENI	**Yenice-Canakka**	**0.20**	**131**	Pg	Pg	09 04 03.1	+1.0
KRBG	**Karabiga-Canak**	**0.38**	**31**	Pg	Pb	09 04 06.6	-0.7
KRBG				Sg	Sb	09 04 13.8	+0.3
COMU	**Canakkale**	**0.44**	**274**	Pg	Pb	09 04 07.8	-0.5
YAYO	**Edremit-Balk**	**0.46**	**177**	Pg	Pb	09 04 08.3	-0.3
YAYO				Sg	Sb	09 04 15.5	-0.2
EZN	**Ezine**	**0.60**	**247**	Pg	Pb	09 04 11.0	-0.1
GAZK	**Gazikoy-TEKIRD**	**0.71**	**18**	Pg	Pb	09 04 12.8	-0.2
ERIK	**Erikli-Kesan**	**0.72**	**326**	Pg	Pb	09 04 13.2	0.0
ERIK				Sg	Sb	09 04 24.4	+0.9
SOMA	**Soma-Manisa**	**0.99**	**157**	Pg	Pn	09 04 18.3	-0.3
ALN	**Alexandroupoli**	**1.12**	**318**	Pn	Pn	09 04 20.7	+0.2

AFAD 14 09:04:22.1, 39°04N×27°82E, h7km±4km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.16**	**181**	P	Pg	09 04 25.8	+0.5
AKHS				S	Sg	09 04 28.7	+1.2
AKHS				IAML		09 04 29.0	
	comp=E,123nm,0.1s						
CAMT	**Merkez**	**0.49**	**234**	P	Pb	09 04 32.9	-0.2
CAMT				S	Sb	09 04 40.4	0.0
CAMT				IAML		09 04 48.0	
	comp=E,16nm,0.7s						
IZMD	**zmir-Dikili-**	**0.70**	**266**	P	Pg	09 04 34.7	-0.8
IZMD				S	Sg	09 04 45.3	+0.8
BALY	**Balya**	**0.72**	**348**	P	Pg	09 04 36.5	+0.5
BALY				S	Sb	09 04 46.5	-0.7
BALY				IAML		09 04 47.0	
	comp=E,12nm,0.5s						
KIRA	**zmir-Kiraz**	**0.95**	**151**	P	Pg	09 04 40.1	-0.3
KIRA				S	Sg	09 04 52.4	-0.4
KIRA				IAML		09 04 54.0	
	comp=E,6.8nm,0.3s						
KIRA				IAML		09 05 15.0	
	comp=N,7.5nm,2.9s						

*OTT **14** 09:11:10.9±0.1, 74°44N×82°05W, h18km, MN3.8/4, 14km southeast from Dundas Harbour, Nu Eastern Arctic Background Seismic Zone.*
*DNK **14** 09:11:16.4±4.1, 74°14N×80°86W, h17km±26km, ML2.4, Presumed earthquake*

ISC 14 09:11:08.8±0.8, 74°31N±0°05×81°58W±0°05, h10km, n14, σ3s21/23, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POIN	**Pond Inlet**	**1.92**	**146**	PN	**Pg**	**09 11 45.2**	**-0.4**
POIN				SN	**Sg**	**09 12 10.7**	**+0.2**
POIN				Trac		09 12 16.2	
	comp=Z,440nm,0.3s						
RES	**Resolute Bay**	**3.59**	**282**	*i* P	**Pb**	**09 12 14.2**	**+1.8**
RES				*i* S	**Sb**	**09 12 58.3**	**+2.4**
RES	**Resolute Bay**	**3.59**	**282**	PN	**Sn**	**09 12 03.8**	**-0.6**
RES				SN	**Sn**	**09 12 42.0**	**-4.9**
RES				LG	Lg	09 12 58.3	
RES				Trac		09 13 03.4	
	comp=Z,139nm,0.3s						
TULEG	**Thule**	**3.92**	**49**	*i* P	**Pn**	**09 12 12.8**	**+3.9**
TULEG				*i* S	**Sn**	**09 12 56.2**	**+1.4**
TULEG				IAML		09 12 59.3	
	comp=Z,24nm,0.3s						
ILON	**Igloolik, Nuna**	**4.97**	**181**	PN	**Pn**	**09 12 25.7**	**+2.4**
ILON				SN	**Sn**	**09 13 19.7**	**-1.0**
ILON				LG	Lg	09 13 48.2	
ILON				Trac		09 13 51.6	
	comp=Z,59nm,0.4s						
CLRN	**Clyde River**	**5.50**	**128**	PN	Pn	09 12 35.7	+5.0
CLRN				SN	**Sn**	**09 13 36.2**	**+2.3**
CLRN				LG	Lg	09 14 08.7	
CLRN				Trac		09 14 14.6	
	comp=Z,5.9nm,0.2s						
KULLO	**Kullorsuaq**	**6.53**	**76**	*e*P	**Pn**	**09 12 48.6**	**+3.9**
KULLO				*i* S	**Sn**	**09 13 55.9**	**-3.2**
KULLO				IAML		09 14 03.8	
	comp=Z,12nm,0.7s						
KULLO	**Kullorsuaq**	**6.53**	**76**	PN	**Pn**	**09 12 45.5**	**+0.7**
KULLO				SN	**Sn**	**09 13 57.5**	**-1.7**
KULLO				Trac		09 14 17.0	
	comp=Z,297nm,1.7s						
UPNV	**Upernavik**	**7.35**	**90**	*i* P	**Pn**	**09 12 59.3**	**+3.3**
UPNV				*i* S	**Sn**	**09 14 14.4**	**-4.8**
NEEM	**North Greenlan**	**8.01**	**53**	*i* P	**Pn**	**09 13 08.2**	**+2.9**
NEEM				*e*S	**Sn**	**09 14 33.6**	**-2.3**
NUUG	**Nuugaatsiaq**	**8.74**	**94**	*e*S	**Sn**	**09 14 47.0**	**-6.3**
SAATT	**Saattut**	**9.56**	**97**	*e*P	Pn	09 13 30.3	+4.1
GDH	**Godhavn**	**10.04**	**106**	*i* P	**Pn**	**09 13 35.7**	**+2.8**
GDH				*e*S	Sn	09 15 15.4	-10
FRB	**Frobisher Bay**	**11.55**	**150**	PN	**Pn**	**09 13 55.5**	**+2.1**
FRB				SN	**Sn**	**09 15 58.4**	**-3.8**
FRB				LG	Lg	09 17 18.2	
FRB				Trac		09 17 23.9	
	comp=Z,60nm,0.8s						

*SJA **14** 09:32:54.9±0.6, 30°18S×71°28W, h56km±5km, ML3.7, MW3.7*
*GUC **14** 09:32:55.2±0.8, 30°18S×71°18W, h65km±2km, ML4.0*

ISC 14 09:32:57.5±1.2, 30°19S±0°02×71°26W±0°04, h54km±8km, n42, σ1s67/66, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.27**	**3**	⇓*i*P	**Pn**	**09 33 06.7**	**0.0**
CO05				*i* S	**Sn**	**09 33 14.5**	**+1.2**
CO05				IAML		09 33 15.1	
	comp=N,20μm,0.4s						
GO04	**Tololo Observa**	**0.39**	**88**	*e*P	**Pn**	**09 33 07.6**	**-0.5**
GO04				*i* S	**Sn**	**09 33 16.6**	**+0.8**
GO04	**Tololo Observa**	**0.39**	**88**	*e*P	**Pn**	**09 33 07.1**	**-1.0**
GO04				IAML		09 33 18.0	
	comp=Z,33μm,0.4s						
CO06	**Fray Jorge**	**0.59**	**214**	⇓*i*P	**Pn**	**09 33 09.7**	**-0.3**
CO06				*i* S	**Sn**	**09 33 20.4**	**+1.3**
CO06				IAML		09 33 22.0	
	comp=N,4μm,0.2s						
CO03	**El Pedregal**	**0.81**	**143**	⇑*i*P	**Pn**	**09 33 12.1**	**-0.

comp=Z,159nm,0.4s
VA03 San Esteban 2.64 167 *e*P **Pn 09 33 37.3 -0.4**
VA03 San Esteban 2.64 167 *e*P **Pn 09 33 37.1 -0.6**
VA03 *e*S **Sn 09 34 08.3 -0.2**
VA03 IAML 09 34 17.2
comp=Z,392nm,0.6s
RTLL Cerro Villicun 2.65 116 *e*P **Pn 09 33 35.5 -2.3**
RTLL *e*S Sn 09 34 27.1 +18
RTLL IAML 09 34 32.7
comp=Z,392nm,0.7s
SJA San Juan 2.67 121 *e*P **Pn 09 33 37.9 -0.2**
SJA IAML 09 34 41.1
comp=Z,136nm,0.7s
GO03 Copiapo 2.73 19 *e*P **Pn 09 33 37.4 -1.6**
GO03 Copiapo 2.73 19 *e*P **Pn 09 33 38.0 -1.0**
GO03 *e*S **Sn 09 34 16.9 +6.0**
GO03 IAML 09 34 17.0
comp=Z,212nm,0.4s
ROCH El Roble 2.79 176 *e*P **Pn 09 33 39.0 -0.8**
ROCH *e*P 09 33 39.1
VA01 Torpederas 2.85 187 *e*P Pn 09 33 24.5 -16
VA01 *e*S **Sn 09 34 15.6 +2.1**
VA01 IAML 09 34 23.6
comp=Z,230nm,0.6s
CFA Coronel Fontan 2.95 119 *e*P **Pn 09 33 42.3 +0.4**
CFA *e*S **Sn 09 34 17.9 +1.7**
CFA IAML 09 34 24.1
comp=Z,136nm,0.7s
PEL Peldehue 2.99 171 *e*P **Pn 09 33 41.9 -0.5**
VCA Vinchina 3.03 62 *e*P Pn 09 33 45.0 +2.0
VCA Vinchina 3.03 62 *e*P **Pn 09 33 44.4 +1.4**
VCA *e*S **Sn 09 34 17.4 -0.8**
VCA IAML 09 34 30.1
comp=Z,669nm,0.4s
MT02 Curacav 3.07 178 *e*P **Pn 09 33 42.0 -1.5**
MT02 *e*S **Sn 09 34 25.3 +6.4**
MT02 IAML 09 34 26.9
comp=Z,227nm,0.3s
MT05 Renca 3.23 172 *e*P **Pn 09 33 45.9 +0.2**
MT05 *e*S **Sn 09 34 26.8 +3.9**
MT05 IAML 09 34 38.6
comp=Z,249nm,0.6s
AVFE Valle Fertil 3.31 99 *e*P **Pn 09 33 47.2 +0.2**
AVFE *e*S Sn 09 34 09.0 -16
AVFE IAML 09 34 29.2
comp=Z,169nm,0.9s
MT04 Ro Olivares 3.35 164 *e*P **Pn 09 33 48.6 +1.1**
MT04 *e*S **Sn 09 34 26.9 +0.7**
MT04 IAML 09 34 42.7
comp=Z,145nm,0.4s
MT03 Universidad Ad 3.36 169 *e*P **Pn 09 33 47.8 +0.3**
MT03 IAML 09 34 44.4
comp=Z,283nm,0.7s
ACLC CERRO LA CRUZ 3.81 80 *e*P **Pn 09 33 54.1 +0.3**
ACLC IAML 09 34 48.2
comp=Z,83nm,0.4s
GO05 Hualane 4.84 187 *e*S **Sn 09 34 58.0 -4.6**
GO05 IAML 09 35 35.1
comp=Z,56nm,1.0s
TCA Tanti 5.84 103⇓ *e*P **Pn 09 34 20.1 -1.6**

IDC 14 09:51:09.8±1.3,53˚14N×85˚38E,h0km,mbtmp2.5/2, ML2.3/2,Error ellipse: s-maj=12.7km s-min=8.5km az=103.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**0.88**	**338**	Pg		Pg	09 51 26.6	0.0
	0.6nm,0.3s,baz=155,slow=18,SNR=14							
ZALV				Lg		Lg	09 51 38.6	
	1.9nm,0.3s,baz=155,slow=30,SNR=19							
I46RU	**ZALESOVO INFRA**	**0.88**	**338**	I		I	09 56 14.3	
	0.4nm,0.7s,baz=159,slow=335,SNR=105							
KURBB	**Kurchatov Arra**	**4.94**	**242**	Pn		Pn	09 52 26.4	+1.3
	baz=58,slow=13,SNR=4.8							
KURBB				Lg		Lg	09 53 43.0	
	0.1nm,0.3s,baz=64,slow=28,SNR=6.1							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**6.66**	**199**	Pn		Pn	09 52 50.2	+1.4
	0.1nm,0.3s,baz=22,slow=15,SNR=7.8							
MKAR				Lg		Lg	09 54 37.9	
	0.1nm,0.3s,baz=22,slow=27,SNR=7.4							
	0.2nm,0.3s							

MOS ***14*** *09:55:27.8±1.2,59˚03S×25˚57W,h42km,mb5.2/10,Error ellipse: s-maj=21.8km s-min=10.8km az=109.6*
NEIC ***14*** *09:55:28.6±1.6,58˚91S±0˚10×25˚5W±0˚2,h35km±1km, mb5.1/74,Error ellipse: s-maj=16.8km s-min=15.2km az=197.0*
IDC ***14*** *09:55:30.7±2.6,59˚02S×25˚74W,h59km±21km,mb4.6/12, mbtmp4.9/14,ML4.9/2,MS3.9/29,Error ellipse: s-maj=17.8km s-min=13.6km az=73.0*
GCMT ***14*** *09:55:30.6±0.3,59˚26S±0˚03×25˚28W±0˚05,h43km±1km, MW5.0/57,Moment Tensor Solution. s35,c43; s57,c67; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.88±.27; Mθθ0.58±.19; Mϕϕ-4.46±.17; Mrθ-0.63±.16; Mrϕ-0.38±.12; Mθϕ0.93±.16; Best double couple: Mo4.34600×10¹⁶ NP1:ϕs196.00000°,δ40.00000°,λ107.00000°. NP2: ϕs353.00000°,δ52.00000°,λ76.00000°. Principal axes: T 4.1100, Plg77.0000°, Azm211.0000°; N 0.4770, Plg11.0000°, Azm2.0000°; P -4.5810, Plg6.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 09:55:28.7±0.8,58˚99S±0˚06×25˚48W±0˚06,h42km±6km, n509,σ0˚87/474,mb5.1/50,MS3.9/27,8C-9D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**7.68**	**303**	Pn		**Pn**	**09 57 19.7**	**+1.9**
HOPE	**Hope Point**	**7.68**	**303**	P		**Pn**	**09 57 19.7**	**+1.9**
VNA1	**Neumayer--Stat**	**13.73**	**155**	⇑P		**Pn**	**09 58 40.0**	**-0.3**
	comp=Z,57nm,0.2s							
VNA3	**Neumayer Olymp**	**13.91**	**158**	⇑P		**Pn**	**09 58 41.9**	**-1.0**
	comp=Z,76nm,0.2s							
VNA3				⇓S		Sn	10 00 59.8	-16
	comp=E,75nm,0.5s							
VNA2	**Neumayer--Watz**	**14.12**	**155**	⇓P		**Pn**	**09 58 43.8**	**-2.0**
	comp=Z,64nm,0.6s,baz=311,slow=14							
VNA2				⇓S		Sn	10 01 05.6	-15
	comp=E,16nm,0.3s,baz=325,slow=17							
SNAA	**Sanae**	**15.69**	**153**	⇑P		**Pn**	**09 59 06.0**	**-0.4**
	comp=Z,1μm,0.4s							
SNAA				⇓S		Sn	10 01 44.7	-14
	comp=E,814nm,0.7s							
SNAA	**Sanae**	**15.69**	**153**	P		**Pn**	**09 59 06.3**	**-0.1**
	comp=E,12nm,0.3s,baz=309,slow=14,SNR=92							
SNAA				S		Sn	10 01 44.4	-14
	comp=E,24nm,0.7s,baz=183,slow=22,SNR=4.7							
SNAA				LR		LR	10 03 48.1	
	comp=E,546nm,21.9s,baz=360,slow=32							
	comp=E,59nm,0.5s							
SNAA	**Sanae**	**15.69**	**153**			**Pn**	**09 59 05.9**	**-0.4**
SNAA				IAmb		IAmb	09 59 07.4	
	comp=Z,61nm,0.5s							
SNAA	**Sanae**	**15.69**	**153**	*c* *i*P		**Pn**	**09 59 06.0**	**-0.4**
SNAA				pmax		pmax		
	comp=Z,47nm,0.4s							
ESPZ	**Base Esperanza**	**15.71**	**240**			**Pn**	**09 59 07.1**	**+0.4**
ESPZ				IAmb		IAmb	09 59 14.6	
	comp=Z,122nm,1.1s							
PMSA	**Palmer Station**	**18.83**	**236**	P		**P**	**09 59 43.1**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=45,slow=5.7,SNR=5.8							
PMSA				S		Sn	10 02 56.8	-18
	comp=Z,11nm,0.4s,baz=41,slow=18,SNR=11							
PMSA				LR		LR	10 05 51.1	
	comp=Z,393nm,20.4s,baz=122,slow=33							
	comp=Z,13nm,0.8s							
PMSA	**Palmer Station**	**18.83**	**236**	P		**P**	**09 59 44.7**	**+0.2**
BELA	**Belgrano 2**	**19.22**	**186**			**P**	**09 59 49.4**	**+0.6**
NVL	**N'iazarevskaya**	**19.33**	**143**	*e*P		**P**	**09 59 49.4**	**-0.5**
NVL				pmax		pmax		
	comp=Z,33nm,1.4s							
EFI	**East Falkland**	**19.76**	**277**			**P**	**09 59 54.7**	**-0.1**
EFI				IAmb		IAmb	09 59 59.8	
	comp=Z,79nm,1.0s							
EFI	**East Falkland**	**19.76**	**277**	*d* *i*P		**Pn**	**09 59 56.7**	**+0.1**
EFI				pmax		pmax		
	comp=Z,79nm,0.9s							
MG01	**Puerto William**	**23.04**	**262**	P		**P**	**10 00 29.6**	**-0.3**
MG01				IAmb		IAmb	10 00 33.7	
	comp=Z,57nm,0.8s							
MG02	**Cerro Sombrero**	**24.93**	**265**	P		**P**	**10 00 46.6**	**-0.9**
MG03	**Isla Dawson**	**25.02**	**262**	P		**P**	**10 00 47.3**	**-1.0**
GO10	**Punta Arenas**	**25.68**	**263**	P		**P**	**10 00 53.9**	**-0.4**
GO10				IAmb		IAmb	10 01 17.9	
	comp=Z,75nm,1.1s							
MG04	**Isla Riesco**	**26.10**	**263**	P		**P**	**10 00 58.4**	**+0.3**
MG04				IAmb		IAmb	10 01 11.9	
	comp=Z,52nm,1.0s							
MG05	**Puerto Natales**	**27.22**	**265**	P		**P**	**10 01 07.3**	**-0.9**
MG05				IAmb		IAmb	10 01 48.0	
	comp=Z,33nm,1.0s							
GO09	**Cerro Castillo**	**27.37**	**266**	P		**P**	**10 01 08.1**	**-1.4**
GO09				IAmb		IAmb	10 01 22.4	
	comp=Z,60nm,1.5s							
GO08	**Villa O'Higgin**	**29.17**	**270**	P		**P**	**10 01 25.9**	**+0.4**
QSPA	**South Pole Qui**	**31.26**	**180**	P		**P**	**10 01 45.1**	**+1.1**
	comp=Z,30nm,0.6s,baz=202,slow=2.4,SNR=43							
QSPA				PcP		**PcP**	**10 04 37.4**	**+0.1**
	comp=Z,11nm,0.8s,baz=240,slow=9.9,SNR=3.5							
QSPA				LR		LR	10 13 50.0	
	comp=Z,288nm,20.0s,baz=210,slow=35							
	comp=Z,30nm,0.6s							
QSPA	**South Pole Qui**	**31.26**	**180**			**P**	**10 01 45.9**	**+1.8**
QSPA				IAmb		IAmb	10 01 46.0	
	comp=Z,31nm,0.7s							
QSPA	**South Pole Qui**	**31.26**	**180**	P		**P**	**10 01 45.6**	**+1.5**
QSPA				PcP		**PcP**	**10 04 37.6**	**+0.3**
TRQA	**Tornquist**	**31.38**	**296**	P		**P**	**10 01 45.8**	**+0.6**
TRQA	**Tornquist**	**31.38**	**296**	P		**P**	**10 01 45.8**	**+0.6**
TRQA				pmax		pmax		
	comp=Z,17nm,0.9s							
AY01	**Puyuhuapi**	**31.90**	**276**	P		**P**	**10 01 49.2**	**-0.4**
AY01				IAmb		IAmb	10 01 52.0	
	comp=Z,22nm,0.8s							
PLTB	**Pedras Altas**	**33.16**	**313**	P		**P**	**10 02 00.1**	**-0.8**
PLTB				IAmb		IAmb	10 02 19.2	
	comp=Z,27nm,1.4s							
PLCA	**Paso Flores**	**33.49**	**283**	P		**P**	**10 02 03.6**	**-0.1**
	comp=Z,6.5nm,0.7s,baz=131,slow=7.6,SNR=23							
PLCA				PcP		**PcP**	**10 04 43.8**	**0.0**
	comp=Z,1.9nm,0.7s,baz=138,slow=1.8,SNR=3.1							
PLCA				LR		LR	10 16 12.8	
	comp=Z,152nm,18.3s,baz=148,slow=37							
	comp=Z,6.5nm,0.7s							
PLCA	**Paso Flores**	**33.49**	**283**			**P**	**10 02 03.8**	**0.0**
PLCA	**Paso Flores**	**33.49**	**283**	*e*P		**P**	**10 02 04.3**	**+0.6**
PLCA				pmax		pmax		
	comp=Z,7.0nm,0.7s							
PLCA	**Paso Flores**	**33.49**	**283**	*e*P		**P**	**10 02 03.5**	**-0.1**
PLCA	**Paso Flores**	**33.49**	**283**	P		**P**	**10 02 03.6**	**-0.1**
PLCA				PcP		**PcP**	**10 04 42.1**	**-1.6**
LR05	**Currie**	**34.60**	**282**			**P**	**10 02 13.4**	**+0.2**
LR05				IAmb		IAmb	10 02 16.4	
	comp=Z,17nm,0.7s							
GO06	**Curarrehue**	**34.82**	**283**	P		**P**	**10 02 14.8**	**-0.5**
LR04	**Corral**	**35.58**	**281**			**P**	**10 02 21.5**	**-0.2**
BI02	**San Fabin de**	**36.97**	**287**			**P**	**10 02 32.5**	**-1.2**
MAW	**Mawson**	**37.26**	**141**	LR		LR	10 15 36.5	
	comp=Z,226nm,21.8s,baz=239,slow=32							
ML02	**Panimavida**	**37.75**	**287**	P		**P**	**10 02 39.4**	**-0.8**
BI05	**Punta Hualpn**	**37.86**	**285**	P		**P**	**10 02 41.3**	**+0.2**
BO02	**Sierra Bellavi**	**38.21**	**289**			**P**	**10 02 43.4**	**-0.8**
BO02				IAmb		IAmb	10 02 49.3	
	comp=Z,19nm,0.6s							
GO05	**Hualane**	**38.60**	**288**	P		**P**	**10 02 47.3**	**-0.2**
GO05				IAmb		IAmb	10 02 50.8	
	comp=Z,27nm,0.9s							
BO01	**Tunca**	**38.69**	**289**	P		**P**	**10 02 47.8**	**-0.3**
BO01				IAmb		IAmb	10 02 50.6	
	comp=Z,28nm,1.0s							
BO04	**La Punta**	**38.78**	**290**	P		**P**	**10 02 48.7**	**-0.2**
BO04				IAmb		IAmb	10 02 51.7	
	comp=Z,36nm,0.8s							
MT08	**Bocatoma Ro**	**38.93**	**291**	IAmb		IAmb	10 02 55.2	
	comp=Z,67nm,1.3s							
MT03	**Universidad Ad**	**39.13**	**290**	IAmb		IAmb	10 02 55.2	
	comp=Z,41nm,0.7s							
MT16	**CCHEN**	**39.19**	**291**	P		**P**	**10 02 52.4**	**0.0**
MT01	**Popeta**	**39.19**	**289**	IAmb		IAmb	10 02 52.6	
	comp=Z,31nm,0.8s							
CPUP	**Villa Florida**	**39.45**	**312**	P		**P**	**10 02 52.9**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=162,slow=11,SNR=3.6							
CPUP				LR		LR	10 16 09.6	
	comp=Z,91nm,21.3s,baz=146,slow=32							
	comp=Z,1.4nm,0.6s							
CPUP	**Villa Florida**	**39.45**	**312**	P		**P**	**10 02 53.2**	**-1.3**
CPUP	**Villa Florida**	**39.45**	**312**	P		**P**	**10 02 53.2**	**-1.3**
CPUP				pmax		pmax		
	comp=Z,26nm,1.9s							
PEL	**Peldehue**	**39.50**	**291**			**P**	**10 02 55.4**	**+0.4**
PEL	**Peldehue**	**39.50**	**291**	P		**P**	**10 02 55.4**	**+0.4**
PEL				pmax		pmax		
	comp=Z,60nm,0.7s							
PEL	**Peldehue**	**39.50**	**291**	P		**P**	**10 02 55.5**	**+0.4**
CFA	**Coronel Fontan**	**39.60**	**295**	LR		LR	10 18 32.7	
	comp=Z,153nm,22.0s,baz=166,slow=35							
MT02	**Curacav**	**39.63**	**290**	P		**P**	**10 02 56.2**	**+0.2**
VA03	**San Esteban**	**39.74**	**291**	P		**P**	**10 02 57.1**	**0.0**
ZON	**Zonda**	**39.85**	**294**	IAmb		IAmb	10 03 01.0	
	comp=Z,106nm,1.9s							
VA06	**Catapilco**	**40.27**	**290**			**P**	**10 03 01.6**	**+0.3**
CO04	**Los Peladeros**	**40.54**	**291**	P		**P**	**10 03 04.1**	**+0.2**
CO04				IAmb		IAmb	10 03 08.6	
	comp=Z,30nm,0.7s							
SUR	**Sutherland**	**40.65**	**70**	LR		LR	10 15 54.1	
	comp=Z,248nm,20.0s,baz=198,slow=30							
CO02	**Combarbal**	**41.24**	**292**	P		**P**	**10 03 09.6**	**+0.1**
CO02				IAmb		IAmb	10 03 17.5	
	comp=Z,30nm,0.7s							
BB19B	**Bebedouro**	**41.35**	**326**	*e*P		**P**	**10 03 10.5**	**+0.2**
CO03	**El Pedregal**	**41.40**	**293**	IAmb		IAmb	10 03 14.8	
	comp=Z,32nm,1.1s							
CO01	**Juntas del Tor**	**41.83**	**294**	P		**P**	**10 03 15.9**	**+1.4**
CO01				IAmb		IAmb	10 03 19.6	
	comp=Z,38nm,0.9s							
AC05	**El Transito**	**42.87**	**295**	P		**P**	**10 03 23.4**	**+0.6**
LCO	**Las Campanas**	**42.92**	**294**	P		**P**	**10 03 23.1**	**-0.3**
LCO	**Las Campanas**	**42.92**	**294**	P		**P**	**10 03 23.1**	**-0.3**
LCO				pmax		pmax		
	comp=Z,177nm,2.0s							
VNDA	**Vanda**	**43.67**	**182**	P		**P**	**10 03 28.6**	**+0.1**
	comp=Z,19nm,0.6s,baz=187,slow=7.0,SNR=45							
VNDA				LR		LR	10 21 29.9	
	comp=Z,88nm,18.9s,baz=186,slow=36							
	comp=Z,19nm,0.6s							
VNDA	**Vanda**	**43.67**	**182**	P		**P**	**10 03 30.6**	**+2.1**
VNDA				IAmb		IAmb	10 03 31.4	
	comp=Z,17nm,0.7s							
VNDA	**Vanda**	**43.67**	**182**	P		**P**	**10 03 30.7**	**+2.1**
VNDA				pmax		pmax		
	comp=Z,17nm,0.7s							
VNDA	**Vanda**	**43.67**	**182**	P		**P**	**10 03 30.4**	**+1.9**
VNDA				x		x	10 03 39.4	
AC04	**Llanos de Chal**	**43.78**	**294**	P		**P**	**10 03 30.4**	**+0.4**
AC02	**Maricunga**	**44.03**	**297**	P		**P**	**10 03 32.9**	**+0.3**
AC02				IAmb		IAmb	10 03 54.2	
	comp=Z,23nm,1.1s							
CCD	**Concordia, Ant**	**44.61**	**169**	P		**P**	**10 03 37.3**	**+0.8**
CCD				x		x	10 03 50.1	
H04S2	**CROZET ISLANDS**	**45.58**	**110**	T		T	10 53 24.3	
	baz=225,slow=75,SNR=55							
H04S3	**CROZET ISLANDS**	**45.59**	**110**	T		T	10 53 24.3	
	baz=225,slow=75,SNR=48							
H04S1	**CROZET ISLANDS**	**45.60**	**110**	T		T	10 53 24.3	
	baz=225,slow=75,SNR=58							
GO02	**Mina Guanaco**	**45.68**	**298**	P		**P**	**10 03 45.4**	**-0.1**
GO02				IAmb		IAmb	10 04 00.3	
	comp=Z,18nm,0.6s							
BOSA	**Boshof**	**45.92**	**71**	P		**P**	**10 03 48.0**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=215,slow=6.7,SNR=8.8							
BOSA				LR		LR	10 19 45.8	
	comp=Z,148nm,18.9s,baz=210,slow=32							
	comp=Z,3.1nm,0.7s							
BOSA	**Boshof**	**45.92**	**71**	P		**P**	**10 03 47.5**	**+0.4**
BOSA	**Boshof**	**45.92**	**71**	P		**P**	**10 03 48.0**	**+0.9**
JANB	**Januaria**	**46.02**	**334**	*e*P		**P**	**10 03 47.8**	**-0.1**
BDFB	**Brasilia**	**46.37**	**329**	P		**P**	**10 03 51.0**	**+0.3**
	comp=Z,3.1nm,0.4s,baz=163,slow=11,SNR=7.1							
BDFB				LR		LR	10 20 26.5	
	comp=Z,106nm,19.5s,baz=166,slow=32							
	comp=Z,3.1nm,0.4s							
BDFB	**Brasilia**	**46.37**	**329**	P		**P**	**10 03 51.1**	**+0.3**
BDFB				IAmb		IAmb	10 05 34.2	
	comp=Z,57nm,2.0s							
BDFB	**Brasilia**	**46.37**	**329**	P		**P**	**10 03 51.1**	**+0.3**
BDFB				pmax		pmax		
	comp=Z,57nm,2.0s							
PB07	**IPOC Station P**	**48.79**	**300**	P		**P**	**10 04 09.5**	**-0.1**
PB07				IAmb		IAmb	10 04 25.7	
	comp=Z,12nm,0.7s							
LBTB	**Lobatse**	**49.09**	**69**	LR		LR	10 20 53.7	
	comp=Z,252nm,21.1s,baz=193,slow=31							
LBTB	**Lobatse**	**49.09**	**69**	P		**P**	**10 04 12.4**	**+0.7**
LBTB				IAmb		IAmb	10 04 36.3	
	comp=Z,23nm,1.6s							
LBTB	**Lobatse**	**49.09**	**69**	P		**P**	**10 04 12.5**	**+0.7**
LBTB				pmax		pmax		
	comp=Z,23nm,1.6s							
PB01	**IPOC Station P**	**49.21**	**301**	IAmb		IAmb	10 04 29.4	
	comp=Z,44nm,1.6s							
KGCAE	**Kacgae**	**49.31**	**64**	P		**P**	**10 04 14.0**	**+0.5**
KGCAE				IAmb		IAmb	10 04 31.0	
	comp=Z,34nm,1.3s							
PTLB	**Pontes e Lacer**	**50.05**	**316**	P		**P**	**10 04 17.5**	**-1.5**
PTLB	**Pontes e Lacer**	**50.05**	**316**	*e*P		**P**	**10 04 17.8**	**-1.2**
SIV	**San Ignacio**	**50.27**	**313**	LR		LR	10 25 41.9	
	comp=Z,100nm,19.7s,baz=79,slow=36							
GO01	**Chusmiza**	**50.29**	**302**	P		**P**	**10 04 20.6**	**-0.7**
TSUM	**Tsumeb**	**50.42**	**57**	LR		LR	10 21 20.7	
	comp=Z,158nm,21.3s,baz=155,slow=31							
TSUM	**Tsumeb**	**50.42**	**57**	P		**P**	**10 04 22.5**	**+0.6**
H10S2	**ASCENSION HYDR**	**50.59**	**14**	T		T	10 58 55.4	
	baz=188,slow=74,SNR=84							
H10S3	**ASCENSION HYDR**	**50.60**	**14**	T		T	10 58 55.7	
	baz=32,slow=74,SNR=88							
SNDB	**Serra Nova Dou**	**50.77**	**327**	*e*P		**P**	**10 04 23.7**	**-0.7**
CASY	**Casey**	**50.83**	**159**	P		**P**	**10 04 25.6**	**+1.3**
CASY				IAmb		IAmb	10 04 26.1	
	comp=Z,10nm,0.7s							
CASY	**Casey**	**50.83**	**159**	P		**P**	**10 04 25.3**	**+1.0**
CASY				x		x	10 04 34.2	
CASY				PcP		**PcP**	**10 05 41.6**	**+1.2**
PB16	**IPOC Station P**	**51.60**	**303**	IAmb		IAmb	10 05 03.5	
	comp=Z,27nm,1.9s							
H10N1	**ASCENSION HYDR**	**51.71**	**14**	T		T	11 00 18.9	
	baz=187,slow=75,SNR=12							
H10N3	**ASCENSION HYDR**	**51.72**	**14**	T		T	11 00 19.3	
	baz=187,slow=75,SNR=19							
H10N2	**ASCENSION HYDR**	**51.73**	**14**	T		T	11 00 20.0	
	baz=187,slow=75,SNR=18							
SMTB	**Santa Maria do**	**52.77**	**332**	*e*P		**P**	**10 04 39.9**	**+0.6**
PDRB	**Porto dos Gac**	**52.78**	**320**	*e*P		**P**	**10 04 38.2**	**-1.3**
LPAZ	**La Paz**	**52.83**	**305**	P		**P**	**10 04 39.9**	**-0.6**
	comp=Z,3.5nm,0.4s,baz=130,slow=6.7,SNR=6.8							
LPAZ				LR		LR	10 28 59.6	
	comp=Z,41nm,20.1s,baz=134,slow=38							
	comp=Z,3.5nm,0.4s							
LPAZ	**La Paz**	**52.83**	**305**	P		**P**	**10 04 38.9**	**-1.6**
LPAZ	**La Paz**	**52.83**	**305**	*e*P		**P**	**10 04 42.4**	**+1.9**
LPAZ				pmax		pmax		
	comp=Z,4.0nm,0.4s							
LPAZ	**La Paz**	**52.83**	**305**	*e*P		**P**	**10 04 39.7**	**-0.8**
RCBR	**Riachuelo**	**53.63**	**347**	P		**P**	**10 04 46.0**	**+0.4**
RCBR				IAmb		IAmb	10 05 26.2	
	comp=Z,55nm,1.7s							
RCBR	**Riachuelo**	**53.63**	**347**	P		**P**	**10 04 46.1**	**+0.4**
RCBR				pmax		pmax		
	comp=Z,55nm,1.7s							
DRV	**Dumont d'Urvil**	**54.20**	**173**	P		**P**	**10 04 49.7**	**+0.5**
KSANE	**Kasane**	**55.06**	**64**	P		**P**	**10 04 56.5**	**+0.4**
LSZ	**Lusaka**	**58.66**	**66**	LR		LR	10 27 24.2	
	comp=Z,230nm,19.5s,baz=156,slow=32							
LSZ	**Lusaka**	**58.66**	**66**	P		**P**	**10 05 21.7**	**0.0**
LSZ				IAmb		IAmb	10 05 23.7	
	comp=Z,10.0nm,0.7s							
LSZ	**Lusaka**	**58.66**	**66**	P		**P**	**10 05 21.7**	**0.0**
LSZ				pmax		pmax		
	comp=Z,10.0nm,0.7s							
NNA	**Nana**	**60.47**	**299**	LR		LR	10 29 52.0	
	comp=Z,96nm,21.4s,baz=148,slow=34							
NNA	**Nana**	**60.47**	**299**⇑	*i*P		**P**	**10 05 33.9**	**-0.2**
NNA				*i* *PP		**pP**	**10 05 45.1**	**-0.6**
NNA				pmax		pmax		
	comp=Z,17nm,0.9s							
TEFE	**Tefe**	**63.08**	**315**	*e*P		**P**	**10 05 49.9**	**-1.6**
OPO	**Ambohidratompo**	**65.35**	**85**	LR		LR	10 30 57.0	
	comp=Z,39nm,20.0s,baz=340,slow=32							
ATAH	**Atahualpa**	**65.45**	**300**	LR		LR	10 33 51.1	
	comp=Z,49nm,21.8s,baz=167,slow=35							
BOAV	**Boa Vista**	**67.17**	**322**	P		**P**	**10 06 16.6**	**-1.5**
BOAV	**Boa Vista**	**67.17**	**322**	*e*P		**P**	**10 06 16.5**	**-1.5**
MDP	**Montagnes des**	**67.46**	**331**	LR		LR	10 32 46.8	
	comp=Z,68nm,21.8s,baz=148,slow=33							
DBIC	**Dimbokro**	**67.50**	**22**	P		**P**	**10 06 21.2**	**+1.2**
	comp=Z,12nm,0.7s,baz=211,slow=6.3,SNR=19							
DBIC				LR		LR	10 29 07.9	
	comp=Z,69nm,18.8s,baz=190,slow=30							
	comp=Z,12nm,0.7s							
DBIC	**Dimbokro**	**67.50**	**22**	P		**P**	**10 06 20.9**	**+0.8**
DBIC				IAmb		IAmb	10 06 22.2	
	comp=Z,13nm,0.8s							
DBIC	**Dimbokro**	**67.50**	**22**	P		**P**	**10 06 21.3**	**+1.2**
DBIC				x		x	10 06 33.8	
EDA	**Edea**	**68.66**	**39**	P		**P**	**10 06 26.2**	**-1.3**
EDA				IAmb		IAmb	10 06 29.7	
	comp=Z,22nm,1.6s							
OTAV	**Otavalo**	**72.04**	**303**	*e*P		**P**	**10 06 49.4**	**+0.7**
MBAR	**Mbarara**	**72.73**	**60**	LR		LR	10 36 13.8	
	comp=Z,98nm,19.7s,baz=51,slow=34							
ROSC	**El Rosal**	**74.46**	**309**	LR		LR	10 40 21.0	
	comp=Z,116nm,21.4s,baz=166,slow=36							
WHZ	**Wether Hill Ro**	**74.90**	**190**	P		**P**	**10 07 05.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**75.20**	**27**	P		**P**	**10 07 08.0**	**+1.4**
	comp=Z,25nm,0.7s,baz=208,slow=9.9,SNR=134							
	comp=Z,25nm,0.7s							
KMBO

TBI	Tubuai	85.92	230	eLR	LR	10 35 11.2			
	comp=Z,298nm,24.2s								
HTT	Hallett	87.02	167	P	P	10 08 09.5	+0.1		
	comp=Z,8.3nm,1.1s								
FORT	Forrest	87.90	157	P	P	10 08 13.9	+0.4		
	comp=Z,22nm,0.8s								
FORT	Forrest	87.90	157	P	P	10 08 14.7	+1.2		
STKA	Stephens Creek	88.84	169	P	P	10 08 18.6	+0.6		
	comp=Z,8.6nm,0.7s,baz=175,slow=5.9,SNR=14								
STKA				LR	LR	10 46 41.2			
	comp=Z,127nm,19.0s,baz=210,slow=35								
	comp=Z,8.6nm,0.7s								
STKA	Stephens Creek	88.84	169	P	P	10 08 18.7	+0.7		
STKA	Stephens Creek	88.84	169	eP	P	10 08 18.1	+0.1		
STKA				pmax	pmax				
	comp=Z,9.0nm,0.7s								
CMSA	Cobar Meteorol	89.52	172	P	P	10 08 21.6	+0.4		
	comp=Z,26nm,1.0s								
PPT	Papeete	91.16	232	LR	LR	10 43 23.7			
	comp=Z,73nm,18.1s,baz=52,slow=32								
MDT	Midelt	93.09	17	LR	LR	10 44 12.7			
	comp=Z,100nm,18.7s,baz=186,slow=31								
TAOE	Nuku Hiva Isla	94.75	244	eLR	LR	10 39 16.3			
	comp=Z,230nm,26.3s								
ASAR	Alice Springs	95.91	161	P	P	10 08 50.5	-0.4		
	comp=Z,6.8nm,0.7s,baz=184,slow=4.1,SNR=120								
ASAR				PP	PP	10 12 38.6	-3.8		
	comp=Z,1.3nm,0.9s,baz=187,slow=8.0,SNR=5.7								
ASAR				PKiKP	PKiKP	10 13 29.1	-0.6		
	comp=Z,0.3nm,0.8s,baz=160,slow=0.7,SNR=5.0								
ASAR				PKKPbc	PKKPbc	10 25 38.3	+2.1		
	comp=Z,2.1nm,0.6s,baz=11,slow=2.3,SNR=35								
ASAR				LR	LR	10 48 55.6			
	comp=Z,133nm,21.6s,baz=187,slow=33								
	comp=Z,6.8nm,0.7s								
AS31	Alice Springs	95.91	161	P	P	10 08 50.4	-0.5		
DZM	Mont Dzumac	98.65	191	eLR	LR	10 41 07.0			
	comp=Z,118nm,23.1s								
KEST	Kesra	98.72	28	SKKPbc	SKKPbc	10 29 11.2	+2.4		
	comp=Z,4.8nm,0.5s,baz=29,slow=2.1,SNR=4.2								
WRA	Warramunga Arr	99.62	161	P	Pdif	10 09 06.6	-1.0		
	comp=Z,0.6nm,0.6s,baz=194,slow=4.3,SNR=8.5								
WRA				PKiKP	PKiKP	10 13 36.2	0.0		
	comp=Z,0.4nm,0.8s,baz=218,slow=1.4,SNR=1.8								
WRA				PKKPbc	PKKPdf	10 25 28.4	-0.5		
	comp=Z,1.4nm,0.7s,baz=349,slow=2.0,SNR=12								
	comp=Z,0.6nm,0.6s								
AKASG	Malin Array Be	118.03	36	PKP	PKPdf	10 14 08.6	-0.9		
	comp=Z,1.5nm,0.5s,baz=247,slow=1.2,SNR=6.3								
AKASG	Malin Array Be	118.03	36	iPKiKP	PKPdf	10 14 09.1	-0.4		
AKASG				pmax	pmax				
	comp=Z,2.0nm,0.5s								
SCHQ	Schefferville	118.22	334	PKP	PKPdf	10 14 09.6	-0.2		
	comp=Z,5.2nm,0.7s,baz=78,slow=1.9,SNR=7.4								
GWY	Greenwater Val	120.77	290		PKiKP	10 14 16.5	+0.9		
RSSD	Black Hills	121.30	304		PKPdf	10 14 15.7	-0.6		
RSSD	Black Hills	121.30	304	PKiKP	PKPdf	10 14 15.7	-0.6		
PDAR	Pinedale Array	122.64	300	PKP	PKPdf	10 14 18.1	-0.9		
	comp=Z,0.6nm,0.4s,baz=116,slow=5.1,SNR=11								
PDAR	Pinedale Array	122.64	300		PKPdf	10 14 18.9	-0.1		
HFS	Hagfors	122.67	22	PKP	PKPdf	10 14 17.2	-0.9		
	comp=Z,0.8nm,0.4s,baz=177,slow=3.0,SNR=5.4								
ULM	Lac du Bonnet	122.98	314	PKP	PKPdf	10 14 18.3	-0.7		
	comp=Z,7.8nm,0.5s,baz=141,slow=2.9,SNR=20								
ULM	Lac du Bonnet	122.98	314		PKPdf	10 14 18.6	-0.4		
ULM	Lac du Bonnet	122.98	314	PKiKP	PKPdf	10 14 18.6	-0.4		
NB2	NORSAR Subarra	123.04	20	PKPdf	PKiKP	10 14 19.1	0.0		
NB2				AMP		10 14 19.1			
	comp=Z,22nm,1.4s								
NOA	NORSAR Array B	123.04	20	PKP	PKPdf	10 14 18.5	-0.3		
	comp=Z,1.0nm,0.4s,baz=202,slow=2.4,SNR=9.0								
CMAR	Chiang Mai Arr	123.17	111	PKP	PKiKP	10 14 21.1	+0.4		
	comp=Z,4.4nm,0.7s,baz=234,slow=3.7,SNR=24								
NVAR	Mina Array Bea	123.34	290	PKP	PKiKP	10 14 20.9	+0.2		
	comp=Z,1.4nm,0.6s,baz=130,slow=3.2,SNR=14								
OBN	Obninsk	124.11	38	ePKiKP	PKPdf	10 14 20.3	-0.7		
OBN				ePPP	PPP	10 18 48.2			
OBN				pmax	pmax				
	comp=Z,8.0nm,0.8s								
FINES	FINESS Array B	126.55	28	PKP	PKPdf	10 14 25.8	+0.3		
	comp=Z,4.9nm,0.6s,baz=186,slow=1.3,SNR=31								
KSH2	Kashi	127.95	75	PKP	PKiKP	10 14 30.0	+0.3		
ABKAR	Akbulak array	128.26	56		PKPdf	10 14 29.2	+0.1		
FCC	Fort Churchill	129.18	321		PKPdf	10 14 30.1	-0.5		
FCC	Fort Churchill	129.18	321	PKiKP	PKPdf	10 14 30.1	-0.5		
KLMR	Klimovskoe	129.71	35	ePKiKP	PKPdf	10 14 30.7	-0.8		
KLMR				pmax	pmax				
	comp=Z,37nm,1.4s								
AAK	Ala-Archa	130.06	72		PKiKP	10 14 33.7	-0.1		
AAK	Ala-Archa	130.06	72	PKiKP	PKiKP	10 14 33.7	-0.1		
KIRV	Kirov	131.16	42	⇑iPKiKP	PKiKP	10 14 35.3	+0.1		
PZH	PanZhiHua	131.33	108	PKP	PKiKP	10 14 37.3	+0.4		
ARTI	Arti	132.86	49	iPKiKP	PKiKP	10 14 40.2	+1.4		
DBG	Daneborg	133.07	2	iP	PKPdf	10 14 37.3	-0.3		
ARCES	ARCESS Array B	133.33	22	PKP	PKPdf	10 14 38.8	+0.6		
	comp=Z,8.6nm,0.8s,baz=205,slow=1.9,SNR=9.9								
BLKN	Baker Lake	134.01	325		PKPdf	10 14 39.7	+0.1		
ILON	Igloolik, Nuna	134.29	336		PKPdf	10 14 40.4	+0.5		
BORK	Borovoye	135.53	59	⇓iPKiKP	PKiKP	10 14 45.0	+0.7		
BVAR	Borovoye Array	135.54	59	PKP	PKPdf	10 14 43.6	+0.8		
	comp=Z,4.1nm,0.5s,baz=222,slow=1.1,SNR=7.3								
DAG	Danmarks Havn	135.57	2	iP	PKPdf	10 14 42.0	-0.2		
MK31	Makanchi Array	136.90	73	⇑iPKiKP	PKiKP	10 14 47.9	+0.5		
MKAR	Makanchi Array	136.90	73	PKhKP	PKPpre	10 14 37.2			
	comp=Z,0.9nm,0.6s,baz=271,slow=1.6,SNR=9.6								
MKAR				PKP	PKPdf	10 14 44.8	-0.8		
	comp=Z,1.8nm,0.7s,baz=258,slow=1.9,SNR=9.7								
MKAR				SKPbc	SKPbc	10 18 12.2	-2.4		
	comp=Z,1.0nm,0.8s,baz=248,slow=0.7,SNR=5.0								
NEEM	North Greenlan	137.10	352	iP	PKPpre	10 14 34.0			
WMQ	Urumqi	137.54	80	ePKP	PKiKP	10 14 49.5	+0.6		
KURBB	Kurchatov Arra	137.68	67	PKP	PKPdf	10 14 46.1	-0.7		
	comp=Z,2.6nm,0.6s,baz=235,slow=2.5,SNR=5.7								
KURK	Kurchatov	137.78	67	PKiKP	PKPdf	10 14 46.2	-0.8		
YKA	Yellowknife Ar	138.94	315	PKP	PKPdf	10 14 49.0	+0.3		
	comp=Z,13nm,0.7s,baz=124,slow=1.6,SNR=172								
YKA				PKKP	PKKPdf	10 24 17.1	-0.2		
	comp=Z,0.2nm,0.6s,baz=343,slow=9.3,SNR=3.8								
YKA	Yellowknife Ar	138.94	315		PKPdf	10 14 48.7	-0.1		
SPITS	Spitsbergen Ar	139.25	12	PKhKP	PKPpre	10 14 41.4			
	comp=Z,2.4nm,0.7s,baz=159,slow=4.9,SNR=8.1								
LZDM	Lanzhou Array	139.90	100	PKhKP	PKPpre	10 14 45.1			
	comp=Z,0.6nm,0.3s,baz=256,slow=5.8,SNR=4.5								
LZH	Lanzhou	140.13	102	ePKP	PKiKP	10 14 54.9	+0.4		
NOR	Nord	140.44	2	iP	PKPdf	10 14 45.4	-5.7		
GTA2	Gaotai	140.63	95	ePKP	PKPdf	10 14 51.4	-1.4		
RES	Resolute Bay	140.93	337		PKPpre	10 14 47.0			
RES	Resolute Bay	140.93	337	PKHKP	PKPpre	10 14 47.0			
TOAD	Toad River Com	140.93	306	P	PKPdf	10 14 53.5	+0.9		
	baz=126								
XAN	Xi'an	141.03	109	⇓PKP	PKPdf	10 14 53.6	0.0		
KOTAN	Kotaneelee Air	141.19	308	P	PKPdf	10 14 53.4	+0.4		
	baz=125								
T35M	Bob Quinn	142.01	301	P	PKPdf	10 14 55.0	+0.5		
	baz=126								
CRAG	Craig	142.43	297	P	PKPdf	10 14 56.1	+0.8		
	baz=126								
WRAK	Wrangell Islan	142.63	299	P	PKPdf	10 14 56.4	+0.9		
	baz=125								
DLBC	Dease Lake	142.75	303	P	PKPdf	10 14 56.7	+0.8		
	baz=124								
ZAA0	Zalesovo Array	142.77	66		PKPpre	10 14 53.1			
ZALV	Zalesovo Beam	142.77	66	PKhKP	PKPpre	10 14 51.8			
	comp=Z,2.9nm,0.6s,baz=247,slow=3.3,SNR=12								
ZALV	Zalesovo Beam	142.77	66	ePKiKP	PKPdf	10 14 54.5	-1.4		
ZALV				pmax	pmax				
	comp=Z,3.0nm,0.6s								
U33K	Whale Pass	142.81	298	P	PKPdf	10 14 56.4	+0.5		
	baz=125								
S34M	Telegraph Cree	142.94	301	P	PKPdf	10 14 56.4	+0.3		
	baz=124								
WTLY	Watson Lake, Y	143.15	306	P	PKPdf	10 14 57.1	+0.6		
	baz=123								
R33M	Jennings River	143.69	304	P	PKPdf	10 14 57.6	0.0		
	baz=123								
NJ2	Nanjing	144.00	123	ePKP	PKiKP	10 15 00.8	-1.5		
Q32M	Nakina River	144.02	302	P	PKPdf	10 14 58.5	+0.2		
	baz=122								
S32K	Killisnoo	144.23	299	P	PKPdf	10 14 59.3	+1.0		
	baz=123								
SIT	Sitka	144.34	298	P	PKPdf	10 14 58.8	+0.3		
	baz=123								
R32K	Eaglecrest	144.64	300	P	PKPbc	10 14 58.2	+0.1		
	baz=122								
P33M	Teslin, Yukon	144.91	304	P	PKPdf	10 14 59.4	-0.2		
	baz=121								
P32M	Atlin	144.98	303	P	PKPab	10 14 59.5	+0.3		
	baz=121								
S31K	Pelican	145.25	299	P	PKPab	10 15 00.2	0.0		
	baz=122								
N32M	Quiet Lake	145.50	305	P	PKPdf	10 15 00.7	+0.1		
	baz=119								
SKAG	Skagway	145.62	302	P	PKPbc	10 15 01.0	-0.1		
	baz=120								
C36M	Paulatuk	145.82	321		PKPdf	10 15 00.4	-0.4		
C36M	Paulatuk	145.82	321	P	PKPbc	10 15 01.6	+0.1		
	baz=114								
WHY	Whitehorse	146.02	304	P	PKPdf	10 15 01.9	+0.3		
	baz=119								
FARO	Faro, Yukon	146.13	307	P	PKPbc	10 15 02.8	+0.2		
	baz=118								
HNS	HongShan	146.53	112	⇓PKPbc	PKPbc	10 15 05.0	+0.5		
M31M	Drury Creek, Y	146.55	306	P	PKPbc	10 15 03.8	-0.1		
	baz=117								
O30N	Mendenhall	146.60	303	P	PKPbc	10 15 03.8	-0.3		
	baz=118								
BTO2	Baotou	146.74	103	ePKPbc	PKPdf	10 15 01.8	-1.6		
BTO2				PKPab	PKPab	10 15 06.1	-0.4		
BTO2				LR	LR				
	comp=Z,350nm,6.6s								
N31M	Braeburn, Yuko	146.80	305	P	PKPbc	10 15 04.2	-0.4		
	baz=118								
A36M	Sachs Harbour	147.18	326		PKPdf	10 15 01.9	-1.1		
A36M	Sachs Harbour	147.18	326	P	PKPbc	10 15 04.8	-0.5		
	baz=110								
HYT	Haines Junctio	147.24	303	P	PKPbc	10 15 05.3	-0.7		
	baz=118								
O29M	Mount Kennedy	147.46	302	P	PKPbc	10 15 05.7	-0.9		
	baz=118								
HHC	Hu-ho-hao-te	147.66	105	ePKPbc	PKPbc	10 15 06.6	-1.2		
YUK6	Outpost Mounta	147.66	303	P	PKPdf	10 15 05.4	+0.9		
	baz=117								
M30M	Minto, Yukon	147.72	306		PKPdf	10 15 03.2	-1.0		
M30M	Minto, Yukon	147.72	306	P	PKPdf	10 15 05.6	+1.3		
	baz=115,SNR=15								
MAYO	Mayo, Yukon	147.78	308	P	PKPbc	10 15 06.4	-0.9		
	baz=114								
YUK4	Talbot Arm	147.97	303	P	PKPdf	10 15 06.6	+1.7		
	baz=116,SNR=6.6								
H31M	Peel River	148.04	313	P	PKPbc	10 15 06.7	-1.2		
	baz=112								
PINM	Pinnacle	148.11	301	P	PKPbc	10 15 07.7	-0.6		
	baz=117								
J30M	Hart River	148.35	310	P	PKPbc	10 15 08.2	-0.7		
	baz=113								
M29M	Somme Creek	148.36	305	P	PKPbc	10 15 08.3	-0.6		
	baz=115								
O28M	Mount Upton	148.39	302	P	PKPbc	10 15 08.5	-0.8		
	baz=116								
F31M	Tsiigehtchic	148.41	316	P	PKPbc	10 15 08.9	+0.2		
	baz=110								
YUK8	Steele Glacier	148.43	303	P	PKPbc	10 15 09.0	-0.3		
	baz=116,SNR=13								
L29M	L29M	148.50	307	P	PKPbc	10 15 08.9	-0.3		
	baz=114								
K29M	Barlow Dome	148.54	308	P	PKPbc	10 15 09.0	-0.4		
	baz=113								
I30M	Mount Dempster	148.61	311		PKPdf	10 15 03.8	-2.0		
I30M	Mount Dempster	148.61	311	P	PKPbc	10 15 09.3	-0.2		
	baz=112								
INK	Inuvik	148.63	317		PKPdf	10 15 03.6	-1.8		
INK	Inuvik	148.63	317	PKHKP	PKPpre	10 15 03.7			
INK	Inuvik	148.63	317	P	PKPbc	10 15 09.1	-0.1		
	baz=109								
YUK3	Moose Creek	148.94	303	P	PKPbc	10 15 09.9	-0.6		
	baz=114,SNR=8.8								
CTG	Chitna Glacier	148.98	302	P	PKPbc	10 15 10.0	-0.6		
	baz=115								
J29N	Klondike Camp	149.06	309	P	PKPbc	10 15 10.0	-0.6		
	baz=112								
G30M	tAoh Zraii Nji	149.17	314	P	PKPbc	10 15 10.3	-0.5		
	baz=107								
F30M	Barrier River	149.21	315	P	PKPbc	10 15 10.5	-0.3		
	baz=108								
BVCY	Beaver Creek	149.37	304	P	PKPbc	10 15 10.7	-0.6		
	baz=113								
DAWY	Dawson	149.39	308	P	PKPbc	10 15 11.0	-0.4		
	baz=112,SNR=23								
MOY	Mondy	149.43	80	ePKP2	PKPbc	10 15 12.5	+0.5		
MOY				pmax	pmax				
	comp=Z,27nm,1.5s								
BGLC	Bering Glacier	149.48	299	P	PKPbc	10 15 11.1	-0.5		
	baz=116								
CRQE	Cirque	149.66	301	P	PKPbc	10 15 10.6	-1.6		
	baz=115								
JNU	Nakatsue	149.69	138	PKPbc	PKPbc	10 15 13.5	+0.4		
	comp=Z,14nm,0.9s,baz=108,slow=3.2,SNR=8.5								
M27K	Edge Creek, AK	149.78	304	P	PKPbc	10 15 10.8	-1.7		
	baz=113								
G29M	Pine Creek	149.82	314	P	PKPbc	10 15 11.3	-1.0		
	baz=108								
ZAK	Zakamensk	149.85	84	ePKiKP	PKPdf	10 15 06.5	-1.7		
ZAK				pmax	pmax				
	comp=Z,24nm,1.2s								
SONM	Songino Array	149.89	90	PKP	PKPdf	10 15 08.2	-0.1		
	comp=Z,2.7nm,1.1s,baz=231,slow=1.9,SNR=6.1								
SONM				PKPbc	PKPbc	10 15 13.5	+0.2		
	comp=Z,9.8nm,0.7s,baz=229,slow=2.3,SNR=30								
SONM	Songino Array	149.89	90		PKPbc	10 15 13.6	+0.3		
SONM	Songino Array	149.89	90	ePKHKP	PKPpre	10 15 11.3			
SONM				pmax	pmax				
	comp=Z,10.0nm,0.7s								
MCARA	McCarthy VSAT	149.90	302	P	PKPbc	10 15 12.0	-0.6		
	baz=114								
KAIM	Kayak Island	149.91	298	P	PKPbc	10 15 12.0	-0.7		
	baz=115								
L27K	Beaver Creek,	150.03	305	P	PKPbc	10 15 12.3	-0.6		
	baz=112								
I28M	Miner Creek	150.09	310	P	PKPbc	10 15 12.7	-0.5		
	baz=106								
E29M	Blow River	150.20	316	P	PKPbc	10 15 12.8	-0.3		
	baz=106								
ULN	Ulaanbaatar	150.25	91		PKPbc	10 15 14.4	+0.2		
ULN	Ulaanbaatar	150.25	91	PKiKP	PKPbc	10 15 14.4	+0.2		
M26K	Nabesna, AK	150.28	304	P	PKPbc	10 15 13.5	-0.1		
	baz=112								
BMRM	Bremner River	150.43	300	P	PKPbc	10 15 13.5	-0.5		
	baz=114								
Q23K	Middleton Isla	150.59	297	P	PKPbc	10 15 14.3	0.0		
	baz=115								
NRIK	Noril'sk	150.66	42	PKPbc	PKiKP	10 15 14.8	0.0		
	comp=Z,10nm,0.8s,baz=27,slow=2.3,SNR=19								
NRIK	Noril'sk	150.66	42		PKiKP	10 15 14.7	-0.2		
NRIK	Noril'sk	150.66	42	PKiKP	PKiKP	10 15 14.7	-0.2		
L26K	Log Cabin Wild	150.66	305	P	PKPbc	10 15 14.5	0.0		
	baz=111								
N25K	Chitina, Valde	150.68	301	P	PKPbc	10 15 14.6	0.0		
	baz=112								
F28M	Old Crow	150.71	315	P	PKiKP	10 15 14.9	-0.2		
	baz=105								
EYAK	Cordova Ski Ar	150.78	299	P	PKPbc	10 15 15.1	+0.4		
	baz=114								
TLY	Talaya	150.80	82		PKPdf	10 15 10.3	+0.8		
I27K	Kandik River	150.80	310	P	PKiKP	10 15 15.2	-0.1		
	baz=108								
E28M	Babbage River	150.84	317	P	PKPbc	10 15 14.4	-0.3		
	baz=104								
H27K	Steamboat Moun	150.95	311		PKPbc	10 15 13.8	-1.3		
H27K	Steamboat Moun	150.95	311	P	PKiKP	10 15 15.7	0.0		
	baz=107								
HARP	HAARP	151.22	303	P	PKPbc	10 15 15.8	0.0		
	baz=111								
KLU	Klutina	151.22	301	P	PKPbc	10 15 15.6	-0.3		
	baz=112								
JMN	Monobe	151.24	142		PKiKP	10 15 17.8	+0.6		
J26L	Joseph Creek	151.25	307	P	PKiKP	10 15 16.3	-0.1		
	baz=108								
SCRK	Sand Creek	151.25	306		PKiKP	10 15 16.3	-0.2		
SCRK	Sand Creek	151.25	306	P	PKiKP	10 15 16.3	-0.2		
	baz=109								
TJN	Taejon	151.28	130		PKiKP	10 15 17.3	+0.1		
TJN	Taejon	151.28	130	PKiKP	PKiKP	10 15 17.3	+0.1		
P23K	Montague Islan	151.31	297	P	PKiKP	10 15 16.6	+0.1		
	baz=114								
GLI	Glacier Island	151.51	299	P	PKiKP	10 15 16.9	0.0		
	baz=112								
RIDG	Independent Ri	151.54	306	P	PKiKP	10 15 17.0	+0.1		
	baz=109								
PAX	Paxson	151.55	304	P	PKiKP	10 15 17.8	+0.8		
	baz=110								
M24K	Tolsona, Glenn	151.56	302	P	PKiKP	10 15 17.2	+0.1		
	baz=111								
K24K	Donnelly Dome	151.95	305	P	PKiKP	10 15 17.8	0.0		
	baz=108								
SCM	Sheep Creek Mo	151.97	301	P	PKPbc	10 15 17.2	-0.4		
	baz=111								
G26K	Porcupine Rive	152.01	312	P	PKPbc	10 15 17.5	+0.1		
	baz=104								
J25K	Salcha River,	152.03	307	P	PKPbc	10 15 17.9	+0.2		
	baz=107								
M23K	Glacier View	152.13	301	P	PKPbc	10 15 17.9	0.0		
	baz=110								
XLT	XiLinHaoTe	152.17	106	ePKPbc	PKiKP	10 15 19.3	+0.4		
XLT				pPKP	sPKPdf	10 15 29.4	+0.4		
SEW	Seward	152.30	297	P	PKPbc	10 15 18.4	+0.2		
	baz=112								
F26K	Sheenjek River	152.32	314	P	PKiKP	10 15 18.5	+0.1		
	baz=102								
KNK	Knik Glacier	152.33	300	P	PKPbc	10 15 18.5	+0.2		
	baz=111								
PRP	Porcupine Dome	152.34	309	P	PKiKP	10 15 18.8	+0.1		
	baz=105								
DHY	Denali Highway	152.41	303	P	PKPbc	10 15 18.8	+0.1		
	baz=108								
WAT6	Susitna Watana	152.41	302	P	PKPbc	10 15 18.5	-0.1		
	baz=109								
SML	Sawmill	152.41	301	P	PKPbc	10 15 18.5	0.0		
	baz=110								
KSAR	Wonju Array Be	152.41	130		PKPbc	10 15 18.7	-0.6		
KSAR	Wonju Array Be	152.41	130	PKIKP	PKPbc	10 15 18.7	-0.6		
BMAR	Burnt Mountain	152.42	313		PKiKP	10 15 18.7	0.0		
KSRS	Korea Array	152.44	130	PKP	PKPdf	10 15 09.9	-2.5		
	comp=Z,0.5nm,0.7s,baz=240,slow=2.6,SNR=1.8								
KSRS				PKPbc	PKPbc	10 15 18.7	-0.6		
	comp=Z,2.7nm,0.7s,baz=198,slow=2.0,SNR=13								
C27K	Jago River	152.51	318	P	PKiKP	10 15 19.0	+0.3		
	baz=99								
O22K	Cooper Landing	152.56	297	P	PKiKP	10 15 19.3	+0.3		
	baz=112								
HDA	Harding Lake	152.62	306	P	PKiKP	10 15 19.2	+0.1		
	baz=106								
PMR	Palmer	152.69	300	P	PKiKP	10 15 19.3	0.0		
	baz=110								
ILAR	Eielson Array	152.70	307	PKP	PKPdf	10 15 08.7	-3.2		
	comp=Z,1.0nm,0.8s,baz=298,slow=0.9,SNR=8.8								
ILAR				PKPbc	PKPbc	10 15 18.2	-0.8		
	comp=Z,12nm,1.0s,baz=187,slow=0.2,SNR=6.3								
BRSE	Bradley Lake S	152.76	295	P	PKPbc	10 15 19.4	+0.1		
	baz=112								
RC01	Rabbit Creek A	152.79	299	P	PKiKP	10 15 19.9	+0.4		
	baz=111								
KDAK	Kodiak Island	152.84	291	P	PKPbc	10 15 19.5	0.0		
	baz=115								
WAT1	Susitna Watana	152.84	303	P	PKiKP	10 15 19.8	+0.1		
	baz=108								
F25K	Christian Rive	152.86	313	P	PKiKP	10 15 20.0	+0.4		
	baz=101								
E25K	Arctic Village	152.93	315	P	PKiKP	10 15 20.0	+0.3		
	baz=100								
OHAK	Old Harbor	152.94	289	P	PKiKP	10 15 20.0	+0.1		
	baz=116								
SII	Sitkinak Islan	153.08	287	P	PKiKP	10 15 20.8	+0.5		
	baz=117								
Q20K	Shuyak Island	153.09	292	P	PKiKP	10 15 20.7	+0.5		
	baz=114								
COLA	College	153.12	307	P	PKiKP	10 15 21.0	+0.9		
	baz=105								
HOM	Homer	153.15	295	P	PKiKP	10 15 21.3	+1.1		
	baz=112								
M22K	Willow	153.19	300	P	PKiKP	10 15 21.5	+1.2		
	baz=109								
MCK	McKinley	153.27	304	P	PKiKP	10 15 21.1	+0.6		
	baz=106								
CAPN	Captain Cook N	153.32	297	P	PKiKP	10 15 21.2	+0.7		
	baz=110								
H24K	Noodor Dome	153.36	309	P	PKPbc	10 15 20.6	+0.1		
	baz=103								
SUA	Susitna One	153.38	299	P	PKiKP	10 15 21.3	+0.4		
	baz=109								
G24K	Hadweenzic Riv	153.38	311	P	PKiKP	10 15 20.7	+0.1		

SDPT	Sand Point	155.69	281	P	PKPab	10 15 42.1 -0.9
	baz=117					
M18K	Stony River	155.70	297	P	PKPab	10 15 42.2 -0.8
	baz=106					
G21K	Allakaket	155.73	310	P	PKPab	10 15 42.4 -0.5
	baz=97					
O17K	Koliganek Bris	155.77	293	P	PKPab	10 15 42.6 -0.7
	baz=109					
F21K	Alatna River	155.80	312	P	PKPab	10 15 42.5 -0.8
	baz=96					
P16K	Nushagak River	155.95	291	P	PKPab	10 15 42.9 -1.1
	baz=110					
N17K	Nushagak Hills	156.05	295	P	PKPab	10 15 44.5 -0.1
	baz=108					
E21K	Killik River	156.07	315	P	PKPab	10 15 44.4 -0.1
	baz=92					
H20K	Anotaneega Mo	156.15	307	P	PKPab	10 15 45.0 +0.2
	baz=98					
O16K	Kokwok River B	156.19	292	P	PKPab	10 15 45.3 +0.2
	baz=109					
J19K	Poorman	156.21	303	P	PKPab	10 15 46.1 +1.0
	baz=101					
L18K	Granite Mounta	156.29	299	P	PKPab	10 15 45.9 +0.4
	baz=104					
M17K	Holitna River	156.42	297	P	PKPab	10 15 46.2 +0.1
	baz=106					
J18K	Innoko River	156.58	302	P	PKPab	10 15 47.2 +0.5
	baz=102					
F20K	Avaraart Lake	156.66	311	P	PKPab	10 15 47.3 +0.4
	baz=94					
N16K	Nishlik Lake	156.79	294	P	PKPab	10 15 47.7 0.0
	baz=107					
A21K	Barrow	156.87	322	P	PKPab	10 15 48.2 +0.5
	baz=83					
GCSA	Galena City Sc	156.88	305	P	PKPab	10 15 48.5 +0.6
	baz=98					
E20K	Nigu River	156.89	314	P	PKPab	10 15 48.6 +0.6
	baz=91					
O15K	Ungalikthiuk R	156.89	290	P	PKPab	10 15 48.7 +0.6
	baz=109					
FALS	False Pass	156.97	278	P	PKPab	10 15 49.6 +1.1
	baz=118					
L17K	Donlin	157.00	298	P	PKPab	10 15 49.9 +1.3
	baz=104					
M16K	Timber Creek	157.03	295	P	PKPab	10 15 49.9 +1.2
	baz=106					
D20K	Etivluk River	157.04	315	P	PKPab	10 15 49.8 +1.2
	baz=89					
G19K	Purcell Mounta	157.13	309	P	PKPab	10 15 50.3 +1.3
	baz=95					
K17K	Iditarod	157.14	300	P	PKPab	10 15 50.6 +1.5
	baz=102					
E19K	Redstone River	157.26	312	P	PKPab	10 15 50.7 +1.1
	baz=92					
N15K	Kwethluk River	157.33	293	P	PKPab	10 15 51.5 +1.5
	baz=107					
L16K	Owhat River	157.45	297	P	PKPab	10 15 52.0 +1.6
	baz=104					
F19K	Shaleruckik Mo	157.45	310	P	PKPab	10 15 51.6 +1.3
	baz=93					
H18K	Honhosa River	157.56	306	P	PKPab	10 15 51.7 +0.8
	baz=96					
D19K	Kuna River	157.60	315	P	PKPab	10 15 51.7 +0.6
	baz=88					
O14K	Tigyukauivet M	157.61	290	P	PKPab	10 15 52.2 +1.0
	baz=108					
G18K	Tagagawik	157.75	308	P	PKPab	10 15 52.5 +0.8
	baz=94					
M15K	Kasigluk River	157.76	294	P	PKPab	10 15 53.1 +1.3
	baz=105					
HILR	Hailar Array B	157.85	100	PKPab	PKPab	10 15 51.9 -0.8
	comp=Z,6.9nm,0.7s,baz=204,slow=3.3,SNR=9.2					
N14K	Kuskokwak Cree	158.02	291	P	PKPab	10 15 53.4 +0.5
	baz=107					
UNV	Unalaska Valle	158.07	274	P	PKPab	10 15 53.8 +0.5
	baz=119					
C19K	Lookout Ridge	158.10	316	P	PKPab	10 15 53.8 +0.6
	baz=86					
F18K	Selawik	158.19	310	P	PKPab	10 15 53.6 +0.1
	baz=92					
H17K	Granite Mounta	158.19	305	P	PKPab	10 15 53.8 +0.1
	baz=96					
J16K	Anvik River	158.27	301	P	PKPab	10 15 55.1 +1.1
	baz=99					
L15K	Ungalak Mounta	158.37	296	P	PKPab	10 15 54.8 +0.3
	baz=103					
K15K	Wolf Creek Mou	158.52	298	P	PKPab	10 15 55.6 +0.5
	baz=101					
G17K	Kiwalik Mounta	158.54	307	P	PKPab	10 15 55.8 +0.6
	baz=94					
E18K	Tukpahlearik C	158.56	312	P	PKPab	10 15 56.0 +0.9
	baz=89					
C18K	Utukok River	158.72	315	P	PKPab	10 15 56.4 +0.5
	baz=85					
F17K	Baldwin Pennin	158.82	309	P	PKPab	10 15 56.6 +0.3
	baz=91					
L14K	Kuka Creek	158.86	295	P	PKPab	10 15 57.1 +0.5
	baz=103					
M13K	Dall Lake	158.95	292	P	PKPab	10 15 56.9 0.0
	baz=105					
BNX	BinXian	158.98	117	⇓P	PKPab	10 15 56.8 -0.7
BNX				pmax	pmax	
	comp=Z,9.0nm,0.7s					
H16K	Elim	159.15	304	P	PKPab	10 15 58.0 +0.2
	baz=94					
G16K	Koyuk River	159.25	306	P	PKPab	10 15 58.5 +0.4
	baz=92					
RDOG	Red Dog Mine	159.41	314	P	PKPab	10 15 58.7 -0.1
	baz=85					
C17K	DeLong Mountai	159.46	315	P	PKPab	10 15 58.8 -0.3
	baz=83					
D17K	Noatak River	159.50	313	P	PKPab	10 15 59.9 +0.6
	baz=86					
J14K	Nanvaranak Lak	159.52	298	P	PKPab	10 16 00.9 +1.5
	baz=98					
G15K	Niukluk	159.94	305	P	PKPab	10 16 01.7 +0.5
	baz=92					
F15K	North Star Dit	160.21	307	P	PKPab	10 16 02.9 +0.6
	baz=90					
C16K	Lisburne Hills	160.28	315	P	PKPab	10 16 03.4 +0.8
	baz=82					
M11K	Mekoryuk	160.32	291	P	PKPab	10 16 04.8 +1.8
	baz=103					
ANM	Nome	160.50	304	P	PKPab	10 16 04.9 +1.2
	baz=92					
P08K	Saint George I	160.84	278	P	PKPab	10 16 05.8 +0.5
	baz=112					
F14K	Arctic Creek	160.91	306	P	PKPab	10 16 06.2 +0.8
	baz=89					
SPIA	Saint Paul Isl	161.41	280	P	PKPab	10 16 08.5 +0.6
	baz=110					
TNA	Tin City	161.57	307	P	PKPab	10 16 08.3 0.0
	baz=87					
PETK	Petropavlovsk-	173.85	198	PKPab	PKPab	10 17 02.2 -0.6
	comp=Z,5.1nm,0.8s,baz=120,slow=9.0,SNR=4.0					

*OSPL **14** 09:56:17.3±0.5, 18°.13N×72°.14W, h10km±8km, ML2.2, Presumed earthquake*

*SDD **14** 09:56:18.1±1.5, 18°.12N×72°.17W, h16km±8km, MD3.0, ML2.3, MW2.9, Presumed earthquake*

*SSNC **14** 09:56:25.0±1.8, 19°.86N×71°.76W, h7km±16km, MD2.9, ML1.4, Presumed earthquake*

ISC 14 09:56:17.5±1.3, 18°.10N±0°.05×72°.09W±0°.05, h25km±12km, n13, σ1°21/25, 9C, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIDR	**Jimani**	**0.45**	**30**	⇑*i*	P	**Pb**	**09 56 26.6**	**-0.4**
JIDR				⇑*i*	S	**Sb**	**09 56 33.3**	**0.0**
JIDR					IAML		09 56 34.4	
	comp=N,248nm,0.5s							
LOBH	**Bahia de las A**	**0.49**	**119**	*i*	P	**Pb**	**09 56 27.6**	**0.0**
LOBH				*e*	S	**Sb**	**09 56 34.6**	**+0.2**
LOBH					IAML		09 56 35.7	
	comp=Z,171nm,0.5s							
LODU1	**El Espartillar**	**0.64**	**67**	*i*	P	**Pb**	**09 56 29.3**	**-0.8**
LODU1					IAML		09 56 40.7	
	comp=Z,130nm,0.9s							
NEDR	**Neiba UASD**	**0.74**	**59**	⇑*i*	P	**Pb**	**09 56 30.8**	**-1.1**
NEDR				*i*	S	**Sb**	**09 56 41.2**	**-0.5**
NEDR					IAML		09 56 42.7	
	comp=N,112nm,0.6s							
LOVI	**El Cajuil, Ovi**	**0.75**	**113**	*i*	P	**Pb**	**09 56 31.8**	**-0.2**
LOVI				*e*	S	**Sb**	**09 56 42.2**	**+0.5**
LOVI					IAML		09 56 43.4	
	comp=Z,107nm,1.0s							
PODR	**Polo**	**0.77**	**85**	⇑*i*	P	**Pn**	**09 56 33.1**	**0.0**
PODR				⇑*i*	S	**Sn**	**09 56 44.9**	**+0.9**
PODR					IAML		09 56 49.0	
	comp=N,176nm,0.3s							
PODR	**Polo**	**0.77**	**85**	*i*	P	**Pb**	**09 56 32.2**	**-0.2**
PODR				*e*	S	**Sb**	**09 56 43.4**	**+0.7**
SDDR	**Presa de Saban**	**1.16**	**41**	*e*	P	**Pb**	**09 56 42.2**	**+3.2**
SDDR				*e*	S	**Sb**	**09 56 53.9**	**+0.2**
SDDR					IAML		09 56 54.7	
	comp=N,5.3nm,0.1s							
SDDR					IAML		09 56 55.0	
	comp=N,5.1nm,0.1s							
SDDR					IAML		09 56 55.5	
	comp=N,9.2nm,0.1s							
SDDR	**Presa de Saban**	**1.16**	**41**	⇑*i*	P	**Pn**	**09 56 38.3**	**0.0**
SDDR				⇑*i*	S	**Sn**	**09 56 52.4**	**-1.1**
SDDR					IAML		09 57 08.8	
	comp=N,30nm,2.5s							
SDDR	**Presa de Saban**	**1.16**	**41**	*i*	P	**Pn**	**09 56 37.7**	**-0.6**
SDDR				*e*	S	**Sn**	**09 56 53.0**	**-0.4**
SDDR					IAML		09 56 55.5	
	comp=Z,24nm,1.8s							
REDR	**Restauracion**	**1.25**	**32**	⇑*i*	P	**Pn**	**09 56 39.2**	**-0.2**
REDR				⇑*i*	S	**Sn**	**09 56 55.4**	**-0.2**
REDR					IAML		09 56 56.0	
	comp=N,91nm,0.2s							
QMBU	**Quimbuelo**	**3.31**	**310**	*e*	P	**Pn**	**09 57 08.4**	**+0.6**
QMBU				*e*	S	**Sn**	**09 57 42.9**	**-3.6**
QMBU				*e*	Sg	**Sn**	**09 57 46.8**	**+0.2**
QMBU					IAML		09 57 55.6	
	comp=E,3.0nm,0.3s							
QMBU					IAML		09 57 56.6	
	comp=N,2.2nm,0.2s							
RCC	**Rio Carpintero**	**3.90**	**300**	*e*	S	**Sn**	**09 58 01.9**	**+1.0**

PGC 14 09:56:58.9±0.3, 52°.72N×132°.31W, h21km, ML3.5/18, 62km south of Village of Queen Charlotte, Bc Haida Gwaii Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HG1B	**Mitchell Dam**	**0.25**	**26**	P		Pb	09 57 04.4	-0.6
HG1B				S		Sb	09 57 08.6	-0.6
BAIB	**Barry Inlet**	**0.37**	**112**	P		Pb	09 57 06.5	-0.1
BAIB				S		Sb	09 57 11.6	-0.3
MOBC	**Moresby Island**	**0.48**	**26**	P		Pb	09 57 08.3	-0.3
MOBC				S		Sb	09 57 14.8	-0.4
DIB	**Dawson Inlet,**	**0.50**	**348**	P		Pb	09 57 08.6	-0.3
DIB				S		Sb	09 57 15.4	-0.3
JEDB	**Jedway, Haida**	**0.80**	**121**	P		Pb	09 57 13.7	-0.4
JEDB				S		Sb	09 57 24.6	+0.2
PCLB	**Port Clements**	**1.01**	**353**	P		Pb	09 57 17.6	-0.1
PCLB				S		Sn	09 57 31.3	-0.1
BNAB	**Bonilla**	**1.28**	**52**	P		Pn	09 57 21.5	+0.1
BNAB				S		Sb	09 57 38.4	+0.3
NDB	**Naden**	**1.30**	**343**	S		Sn	09 57 38.5	0.0
GRNB	**Grenville Isla**	**1.81**	**50**	Pn		Pn	09 57 29.3	+0.5
GRNB				S		Sn	09 57 52.3	+1.2
GRIB	**Gribbell Islan**	**2.02**	**71**	Pn		Pn	09 57 31.5	-0.1
GRIB				S		Sn	09 57 56.8	+0.2
MBLB	**Minette Bay Lo**	**2.58**	**58**	S		Sn	09 58 09.4	-0.5
KITB	**Kitimat**	**2.59**	**57**	Pn		Pn	09 57 40.1	+0.7
BBB	**Bella Bella**	**2.62**	**100**	Pn		Pn	09 57 39.3	-0.6
BBB				S		Sn	09 58 09.9	-1.2
U35K	**Hyder**	**3.48**	**22**	Pn		Pn	09 57 52.6	+0.9
PHC	**Port Hardy**	**3.64**	**122**	Pn		Pn	09 57 53.7	-0.2
PHC				S		Sn	09 58 33.8	-2.3
WRAK	**Wrangell Islan**	**3.71**	**360**	Pn		Pn	09 57 56.0	+1.1
PACB	**Port Alice, BC**	**3.77**	**125**	Pn		Pn	09 57 56.1	+0.4
PACB				S		Sn	09 58 37.6	-1.8
BPEB	**Brooks Peninsu**	**3.82**	**130**	S		Sn	09 58 39.6	-1.2
FHBB	**Fair Harbour**	**4.20**	**127**	S		Sn	09 58 48.9	-1.1
WOSB	**Woss**	**4.41**	**123**	Pn		Pn	09 58 03.9	-0.7
WOSB				S		Sn	09 58 53.7	-1.5
TAHB	**Tahsis**	**4.53**	**126**	Pn		Pn	09 58 06.0	-0.1
TAHB				S		Sn	09 58 56.2	-1.8
NCSB	**Newcastle Ridg**	**4.54**	**118**	S		Sn	09 58 56.8	-1.7
CBB	**Campbell River**	**5.11**	**119**	S		Sn	09 59 09.5	-3.0
TXDB	**Texada**	**5.80**	**118**	S		Sn	09 59 26.3	-3.0

*IDC **14** 10:00:00.9±2.6, 64°.59N×31°.12E, h0km, mbtmp3.1/4, ML2.3/4, Error ellipse: s-maj=36.7km s-min=8.8km az=101.0*

*UPP **14** 10:00:00.2±2.7, 64°.54N×30°.68E, h0km, ML1.9, Presumed earthquake*

*KOLA **14** 10:00:01.7, 64°.75N×31°.10E, h0km, ML2.4, Error ellipse: s-maj=22.4km s-min=11.6km az=160.0, Kostomuksha, Karelia*

ISC 14 09:59:59.4±1.3, 64°.67N±0°.05×30°.83E±0°.07, h0km, n19, σ1°23/30, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KVDA	**Kovda**	**2.20**	**22**	P		**Pn**	**10 00 36.9**	**-0.2**
KVDA				S		**Sn**	**10 01 02.6**	**-2.4**
APA0	**Apatity Array**	**3.08**	**16**	P		**Pn**	**10 00 50.0**	**+0.8**
APA0				S		**Sn**	**10 01 25.4**	**-1.3**
APA	**Apatity**	**3.10**	**19**	P		**Pn**	**10 00 50.6**	**+1.2**
APA				S		**Sn**	**10 01 26.9**	**-0.2**
KALU	**Kalix**	**3.36**	**294**	P		**Pn**	**10 00 53.9**	**+0.9**
KALU				S		**Sn**	**10 01 34.8**	**+1.2**
FINES	**FINESS Array B**	**3.89**	**216**	Pn		**Pn**	**10 01 01.4**	**+1.1**
	0.2nm,0.3s,baz=36,slow=13,SNR=6.7							
FINES				Pg		**Pb**	**10 01 08.8**	**+0.1**
	0.4nm,0.3s,baz=30,slow=15,SNR=8.0							
FINES				Lg		Lg	10 02 00.5	
	0.4nm,0.3s,baz=34,slow=28,SNR=4.0							
	0.6nm,0.3s							
PAJU	**Pajala**	**3.96**	**310**	P		**Pn**	**10 01 01.7**	**+0.4**
PAJU				S		**Sn**	**10 01 48.3**	**0.0**
SJUU	**Sjulsmark**	**4.00**	**286**	P		**Pn**	**10 01 02.1**	**+0.4**
ERTU	**Ertsjaerv**	**4.05**	**302**	P		**Pn**	**10 01 02.9**	**+0.3**
BURU	**Burvik**	**4.07**	**273**	P		**Pn**	**10 01 02.5**	**-0.3**
ODEU	**Stanfors**	**4.38**	**271**	P		**Pn**	**10 01 06.3**	**-0.6**
HARU	**Harads**	**4.38**	**294**	P		**Pn**	**10 01 07.1**	**0.0**
UMAU	**Umeaa**	**4.50**	**265**	P		**Pn**	**10 01 08.2**	**-0.4**
MASU	**Masugnsbyn**	**4.56**	**312**	P		**Pn**	**10 01 11.0**	**+1.5**
ARCES	**ARCESS Array B**	**5.31**	**339**	Pn		**Pn**	**10 01 19.9**	**0.0**
	0.2nm,0.3s,baz=154,slow=14,SNR=8.2							
ARCES				Pg		**Pb**	**10 01 34.8**	**+1.8**
	0.2nm,0.3s,baz=153,slow=16,SNR=5.6							
ARCES				Sn		**Sn**	**10 02 20.0**	**-1.7**
	0.3nm,0.3s,baz=151,slow=23,SNR=5.4							
ARCES				Lg		Lg	10 02 44.5	
	0.3nm,0.3s,baz=150,slow=34,SNR=2.4							
	0.7nm,0.3s							
ARCES	**ARCESS Array B**	**5.31**	**339**	P		**Pn**	**10 01 19.8**	**0.0**
ARCES				S		**Sn**	**10 02 19.4**	**-2.2**
VADS	**Vadso**	**5.51**	**355**	P		**Pn**	**10 01 22.9**	**+0.4**
VADS				S		**Sn**	**10 02 23.3**	**-3.1**
FAUS	**Fauske**	**6.89**	**300**	P		**Pn**	**10 01 41.5**	**+0.1**
FAUS				S		**Sn**	**10 02 58.5**	**-1.9**
HFS	**Hagfors**	**9.15**	**248**	Pn		**Pn**	**10 02 11.9**	**-0.5**
	0.3nm,0.3s,baz=54,slow=14,SNR=5.8							
HFS				Lg		Lg	10 04 42.3	
	0.3nm,0.3s,baz=54,slow=34,SNR=2.8							
	0.8nm,0.4s							
NOA	**NORSAR Array B**	**9.66**	**257**	Pn		**Pn**	**10 02 19.2**	**-0.3**
	baz=64,slow=13,SNR=2.1							
	0.9nm,0.9s							

*ASRS **14** 10:00:00.0±1.8, 51°.55N×94°.43E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 14 10:00:02.4±3.9, 52°.02N×94°.68E, h0km, mbtmp2.8/1, ML2.6/1, Error ellipse: s-maj=46.8km s-min=27.4km az=22.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZALV	**Zalesovo Beam**	**6.26**	**292**	Pg		Pb	10 01 56.7	+4.6
	0.1nm,0.3s,baz=108,slow=14,SNR=4.0							
ZALV				Lg		Lg	10 03 19.6	
	0.2nm,0.3s,baz=103,slow=31,SNR=6.3							
SONM	**Songino Array**	**8.64**	**114**	Pg		Pg	10 02 38.4	-9.3
	0.4nm,0.3s,baz=305,slow=18,SNR=4.4							
I34MN	**SONGINO INFRAS**	**8.66**	**115**	I		I	10 53 20.0	
	baz=301,slow=335,SNR=2.9							
MKAR	**Makanchi Array**	**9.62**	**242**	Pn		Pn	10 02 22.8	+0.8
	0.1nm,0.3s,baz=47,slow=17,SNR=3.2							
MKAR				Lg		Lg	10 05 07.3	
	baz=59,slow=34,SNR=4.2							
	0.4nm,0.8s							
KURBB	**Kurchatov Arra**	**10.21**	**268**	Lg		Lg	10 05 26.5	
	0.1nm,0.3s,baz=80,slow=36,SNR=4.8							

*NNC **14** 10:12:39.2±1.9, 51°.61N×75°.73E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=20.7km s-min=12.0km az=27.0, Suspected Mining explosion.*

*IDC **14** 10:12:39.8±1.2, 51°.50N×75°.59E, h0km, mbtmp2.5/3, ML1.8/3, Error ellipse: s-maj=23.0km s-min=9.5km az=29.0*

ISC 14 10:12:39.7±1.0, 51°.4N±0°.1×75°.47E±0°.06, h0km, n9, σ1°65/11, 6C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KURBB	**Kurchatov Arra**	**2.07**	**109**	Pg		**Pb**	**10 13 17.1**	**-1.0**
	0.5nm,0.3s,baz=301,slow=18,SNR=15							
KURBB				Lg		Lg	10 13 42.8	
	1.1nm,0.3s,baz=300,slow=30,SNR=15							
KURBB	**Kurchatov Arra**	**2.07**	**109**	⇓Pg		**Pn**	**10 13 16.9**	**+1.2**
	4.3nm,0.3s,baz=300,slow=17							
KURBB				⇑Lg		Lg	10 13 43.9	
	30nm,0.4s,baz=300,slow=30							
KURK	**Kurchatov**	**2.09**	**106**	⇑Pg		**Pn**	**10 13 15.9**	**-0.1**
	0.6nm,0.5s							
KURK				⇓Lg		Lg	10 13 42.0	
	3.3nm,0.3s							
BVA0	**Borovoye Array**	**3.55**	**300**	⇑Pg		**Pb**	**10 13 44.3**	**+1.0**
	2.2nm,0.8s							
BVA0				⇑Lg		Lg	10 14 30.6	
	2.0nm,0.5s							
BVAR	**Borovoye Array**	**3.55**	**300**	Pn		**Pn**	**10 13 35.1**	**-0.9**
	0.1nm,0.3s,baz=108,slow=13,SNR=3.2							
BVAR				Lg		Lg	10 14 31.5	
	0.3nm,0.3s,baz=115,slow=26,SNR=5.6							
	0.7nm,0.3s							
I46RU	**ZALESOVO INFRA**	**6.26**	**62**	I		I	10 46 50.0	
	baz=251,slow=322,SNR=2.8							
ZALV	**Zalesovo Beam**	**6.26**	**62**	Pn		**Pn**	**10 14 13.5**	**+0.2**
	0.3nm,0.3s,baz=258,slow=14,SNR=4.3							
ZALV				Lg		Lg	10 15 55.2	
	baz=255,slow=27							
	0.8nm,0.5s							
MK31	**Makanchi Array**	**6.39**	**133**	Pg		**Pg**	**10 14 43.6**	**+1.4**
MK31				⇑Sn		**Sn**	**10 15 29.9**	**+1.1**
	0.6nm,0.5s							
MK31				⇑Lg		Lg	10 15 59.4	
	1.0nm,0.5s,baz=340,slow=28,SNR=3.4							
MKAR	**Makanchi Array**	**6.39**	**133**	Pn		**Pn**	**10 14 16.8**	**+1.7**
	baz=313,slow=13,SNR=1.7							
MKAR				Pg		**Pb**	**10 14 28.5**	**-3.3**
	0.1nm,0.3s,baz=315,slow=14,SNR=11							
MKAR				Sn		**Sn**	**10 15 27.9**	**-0.9**
	0.2nm,0.3s,baz=305,slow=23,SNR=4.8							
MKAR				Lg		Lg	10 15 59.1	
	0.6nm,0.3s,baz=321,slow=28,SNR=7.5							
	0.1nm,0.4s							

*NEIC **14** 10:14:48.7±1.2, 31°.43S±0°.08×176°.97W±0°.07, h10km±2km, mb4.5/14, Error ellipse: s-maj=14.8km s-min=7.3km az=33.0*

*IDC **14** 10:14:51.0±3.0, 31°.69S×177°.61W, h0km, mb4.0/4, mbtmp4.0/5, ML3.2/1, Error ellipse: s-maj=68.6km s-min=35.8km az=118.0*

ISC 14 10:14:52.1±1.6, 31°.58S±0°.07×177°.2W±0°.2, h35km, n30, σ1°61/36, mb4.3/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GLKZ	**Green Lake**	**2.39**	**345**	P		**Pn**	**10 15 27.4**	**-1.3**
GLKZ				S		**Sn**	**10 15 55.0**	**-1.7**
RAO	**Raoul Island**	**2.40**	**345**	Pn		**Pn**	**10 15 26.4**	**-2.4**
HAZ	**Te Kaha**	**7.42**	**212**	P		**Pn**	**10 16 38.1**	**+0.3**
HAZ				S		**Sn**	**10 18 01.9**	**+1.2**
MWZ	**Matawai**	**8.01**	**211**	P		**Pn**	**10 16 44.7**	**-1.3**
MWZ				S		**Sn**	**10 18 13.8**	**-1.5**
URZ	**Urewera**	**8.14**	**213**	Pn		**Pn**	**10 16 46.1**	**-1.6**
	0.4nm,0.3s,baz=6.3,slow=9.2,SNR=6.2							
URZ				Sn		**Sn**	**10 18 16.3**	**-2.1**
	2.5nm,0.3s,baz=190,slow=18,SNR=15							
	7.0nm,1.0s							
URZ	**Urewera**	**8.14**	**213**	P		**Pn**	**10 16 46.5**	**-1.2**
URZ				S		**Sn**	**10 18 16.0**	**-2.4**
RAHZ	**Arahi**	**8.68**	**211**	P		**Pn**	**10 16 53.9**	**-1.4**
RAHZ				P		**Sn**	**10 18 31.5**	**-0.4**
BKZ	**Black Stump Fm**	**9.15**	**212**	P		**Pn**	**10 17 03.4**	**+1.7**
BKZ	**Black Stump Fm**	**9.15**	**212**	P		**Pn**	**10 17 00.7**	**-1.0**
PRHZ	**Porangahau**	**10.00**	**208**	P		**Pn**	**10 17 10.1**	**-3.2**
PRHZ				P		**Sn**	**10 19 00.3**	**-3.9**
LHI	**Lord Howe Isla**	**20.22**	**264**	P		Pn	10 19 25.8	-0.4
ARMA	**Armidale**	**26.70**	**264**	P		**P**	**10 20 27.7**	**-0.5**
ARMA				IAmb		IAmb	10 20 33.6	
	comp=Z,11nm,1.1s							
TOO	**Toolangi**	**31.15**	**249**	P		**P**	**10 21 09.1**	**+1.4**
CTAO	**Charters Tower**	**34.67**	**280**	P		**P**	**10 21 38.7**	**+0.2**
STKA	**Stephens Creek**	**34.89**	**258**	P		**P**	**10 21 41.4**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=90,slow=8.1,SNR=2.4							
	comp=Z,1.8nm,0.8s							
STKA	**Stephens Creek**	**34.89**	**258**	P		**P**	**10 21 42.3**	**+2.0**
BBOO	**Buckleboo**	**39.32**	**255**	P		**P**	**10 22 19.3**	**+1.4**
BBOO				IAmb		IAmb	10 22 43.2	
	comp=Z,13nm,1.1s							
RABL	**Rabaul**	**39.62**	**307**	P		**P**	**10 22 20.6**	**+0.1**
PMG	**Port Moresby**	**39.73**	**296**	P		**P**	**10 22 21.6**	**+0.2**
PMG				IAmb		IAmb	10 22 21.8	
	comp=Z,12nm,0.8s							
AS31	**Alice Springs**	**43.73**	**268**	P		**P**	**10 22 55.9**	**+1.7**
ASAR	**Alice Springs**	**43.73**	**268**	P		**P**	**10 22 56.0**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=106,slow=7.7,SNR=19							
	comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**43.73**	**268**	P		**P**	**10 22 55.0**	**+0.7**
WRAB	**Tennant Creek**	**44.82**	**273**	P		**P**	**10 23 04.2**	**+1.3**
WRAB				IAmb		IAmb	10 23 09.3	
	comp=Z,4.6nm,0.9s							
WRA	**Warramunga Arr**	**44.83**	**273**	P		**P**	**10 23 04.0**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=113,slow=7.7,SNR=24							
	comp=Z,2.6nm,0.7s							
WB0	**Warramunga Arr**	**44.86**	**273**	P		**P**	**10 23 03.9**	**+0.7**
WB0				IAmb		IAmb	10 23 05.5	
	comp=Z,3.1nm,0.8s							
FORT	**Forrest**	**46.41**	**256**

WB0	**Warramunga Arr**	**32.18**	**252**	P	**P**	**10 42 11.2 +0.8**
WB0				IAmb	IAmb	10 42 11.9
	comp=Z,3.1nm,0.9s					
WRA	**Warramunga Arr**	**32.26**	**252**	P	**P**	**10 42 11.8 +0.8**
	comp=Z,1.0nm,0.8s,baz=83,slow=9.0,SNR=7.1					
	comp=Z,1.0nm,0.8s					
ASAR	**Alice Springs**	**33.40**	**245**	P	**P**	**10 42 22.1 +1.3**
	comp=Z,0.6nm,0.8s,baz=70,slow=9.4,SNR=6.7					
	comp=Z,0.6nm,0.8s					
BBOO	**Buckleboo**	**34.97**	**229**	P	**P**	**10 42 34.8 +0.5**
BBOO				IAmb	IAmb	10 43 04.2
	comp=Z,8.1nm,1.1s					
MTN	**Manton Dam**	**34.99**	**265**	P	**P**	**10 42 34.9 +0.3**
VNDA	**Vanda**	**65.39**	**181**	P	**P**	**10 46 22.2 +1.0**
VNDA				IAmb	IAmb	10 46 30.2
	comp=Z,8.0nm,1.1s					
CASY	**Casey**	**65.77**	**202**	P	**P**	**10 46 25.5 +1.6**
CASY				IAmb	IAmb	10 46 46.4
	comp=Z,7.6nm,1.1s					
CMAR	**Chiang Mai Arr**	**73.67**	**293**	P	**P**	**10 47 13.4 +0.5**
	comp=Z,0.6nm,0.3s,baz=108,slow=5.9,SNR=6.2					
	comp=Z,0.6nm,0.3s					
CMAR	**Chiang Mai Arr**	**73.67**	**293**	P	**P**	**10 47 12.7 -0.3**
J18K	**Innoko River**	**80.41**	**16**	P	**P**	**10 47 49.0 -0.5**
G16K	**Koyuk River**	**80.69**	**12**	P	**P**	**10 47 50.4 -0.5**
G16K				IAmb	IAmb	10 47 51.0
	comp=Z,3.0nm,0.9s					
MKAR	**Makanchi Array**	**95.17**	**317**	P	**P**	**10 49 01.4 +0.2**
	comp=Z,0.7nm,0.8s,baz=106,slow=5.9,SNR=6.9					
	comp=Z,0.7nm,0.8s					
MKAR	**Makanchi Array**	**95.17**	**317**	P	**P**	**10 49 00.9 -0.4**

IDC 14 11:07:34.5±2.9, 6°91S×128°80E, h0km, mb3.2/1, mbtmp3.6/3, ML3.9/2, Error ellipse: s-maj=276.8km s-min=33.0km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.03**	**158**	Pn	Pn	11 10 53.8	-1.0
	0.7nm,0.3s,baz=337,slow=15,SNR=35						
WRA				Sn	Sn	11 13 15.4	-16
	0.8nm,0.3s,baz=342,slow=21,SNR=6.6						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**17.37**	**164**	P	P	11 11 39.3	-0.7
	0.4nm,0.3s,baz=338,slow=10,SNR=16						
ASAR				S	Sn	11 14 40.6	-12
	0.2nm,0.3s,baz=346,slow=27,SNR=4.6						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**67.50**	**327**	P	P	11 18 32.5	0.0
	0.1nm,0.4s,baz=118,slow=6.9,SNR=2.2						
	0.1nm,0.4s						

FUNV 14 11:13:10.5, 9°13N×61°12W, h29km, MW3.8, Presumed earthquake, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCRV	**Puerto La Cruz**	**3.62**	**287**	*e*P	Pn	11 14 03.3	-1.3
CACV	**CAICARA DEL OR**	**5.58**	**254**	*e*P	Pn	11 14 23.0	-8.6
CACV				*e*S	Sn	11 15 16.8	-18
TACV	**Tcata**	**5.91**	**280**	*e*P	Pn	11 14 33.5	-2.6
TACV				*e*S	Sn	11 15 36.2	-6.7
BENV	**Beln**	**6.44**	**278**	*e*P	Pn	11 14 41.0	-2.5
BENV				*e*S	Sn	11 15 48.2	-7.9
TURV	**Turiamo**	**6.75**	**282**	*e*P	Pn	11 14 45.6	-2.0
TURV				*e*S	Sn	11 15 55.3	-8.3
MAPV	**Macapo**	**7.27**	**276**	*e*P	Pn	11 14 52.9	-1.9
MAPV				*e*S	Sn	11 16 08.6	-7.8

*IDC **14** 11:16:01.5±1.4, 27.°99N×111.°81W, h0km, mbtmp3.3/7, ML3.4/7, Error ellipse: s-maj=18.5km s-min=11.0km az=31.0*

*MEX **14** 11:16:02.4±0.6, 27.°91N×111.°95W, h10km, MD4.3*

ISC 14 11:16:00.8±1.2, 27°92N±0.°03×111°94W±0.°03, h5km±10km, n25, σ1s99/39, 3C-3D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRIG	**Santa Rosalia**	**0.66**	**204**	↓↓*i*P	**Pg**	**11 16 13.2**	**-0.2**
SRIG				*e*S	**Sg**	**11 16 22.5**	**+0.6**
SRIG				IAML		11 16 23.1	
	comp=N,12μm,0.3s						
SRIG	**Santa Rosalia**	**0.66**	**204**	*i*P	**Pg**	**11 16 13.3**	**-0.1**
SRIG				*i*S	**Sg**	**11 16 22.3**	**+0.4**
BKIRB	**Bahia Kino**	**0.93**	**356**	↓↓*i*P	**Pg**	**11 16 17.9**	**-0.8**
BKIRB				*e*S	**Sg**	**11 16 30.7**	**-0.1**
GUYB	**Guaymas**	**0.94**	**91**	↑↑*i*P	**Pg**	**11 16 17.7**	**-1.2**
GUYB				*e*S	**Sg**	**11 16 31.5**	**+0.5**
GUYB				IAML		11 16 39.5	
	comp=N,4μm,0.4s						
GUYB	**Guaymas**	**0.94**	**91**	*e*P	**Pg**	**11 16 17.6**	**-1.2**
GUYB				*e*S	**Sg**	**11 16 30.2**	**-0.9**
HSIG		**1.40**	**38**	*e*P	**Pn**	**11 16 24.8**	**-2.0**
HSIG				*e*S	**Sn**	**11 16 43.0**	**-2.7**
HSIG				IAML		11 16 52.1	
	comp=E,2μm,0.8s						
HSIG		**1.40**	**38**	*i*P	**Pn**	**11 16 25.1**	**-1.7**
HSIG				*e*S	**Sn**	**11 16 43.9**	**-1.7**
CDOB	**Cd. Obregon**	**1.68**	**107**	↑↑*i*P	**Pn**	**11 16 28.3**	**-2.4**
CDOB				*e*S	**Sn**	**11 16 49.8**	**-2.7**
CDOB				IAML		11 16 51.4	
	comp=E,3μm,0.3s						
CDOB				IAML		11 16 51.7	
	comp=N,3μm,0.3s						
BAHB	**Baha de los**	**1.76**	**306**	*e*P	**Pn**	**11 16 29.1**	**-2.7**
BAHB				*e*S	**Sn**	**11 16 50.4**	**-4.1**
NE74	**Guerrero Negro**	**1.84**	**273**	*e*P	**Pn**	**11 16 31.3**	**-1.6**
NE74				IAML		11 17 06.6	
	comp=E,496nm,0.6s						
NE77	**Loreto B.C.S**	**1.97**	**165**	↓↓*i*P	**Pn**	**11 16 33.2**	**-1.5**
NOVRB	**El Novillo Son**	**2.26**	**63**	↑↑*e*P	**Pn**	**11 16 36.9**	**-1.8**
NE80	**Navojoa**	**2.61**	**112**	*e*P	**Pn**	**11 16 41.2**	**-2.3**
NE80				IAML		11 17 31.6	
	comp=N,219nm,0.7s						
NZIG	**Nacozari, Sono**	**3.21**	**40**	*e*P	**Pn**	**11 16 53.5**	**+1.6**
NZIG				*e*S	**Sn**	**11 17 32.4**	**+1.7**
CSIG	**Choix**	**3.35**	**108**	*e*P	**Pn**	**11 16 52.4**	**-1.4**
CSIG				*e*S	**Sn**	**11 17 31.6**	**-2.3**
TSIG	**Topolobambo**	**3.47**	**131**	*e*P	**Pn**	**11 16 58.9**	**+3.5**
TSIG				*e*S	**Sn**	**11 17 40.3**	**+3.5**
LPIG	**La Paz**	**4.08**	**159**	Pn	**Pn**	**11 17 05.4**	**+1.6**
	comp=N,3.4nm,0.3s,baz=342,slow=3.2,SNR=2.2						
LPIG				Lg	Lg	11 18 12.3	
	comp=N,6.7nm,0.3s,baz=13,slow=19,SNR=6.6						
	comp=N,7.4nm,0.4s						
TUC	**Tucson**	**4.49**	**13**	*e*P	**Pn**	**11 17 09.2**	**-0.2**
BCIG	**La Boquilla**	**5.79**	**92**	*e*P	**Pn**	**11 17 27.1**	**-0.4**
BCIG				*e*S	**Sn**	**11 18 33.3**	**-1.1**
PFO	**Pinyon Flats O**	**6.88**	**327**	Pn	**Pn**	**11 17 44.4**	**+2.1**
	comp=N,0.1nm,0.3s,baz=135,slow=4.3,SNR=2.2						
PFO				Lg	Lg	11 19 48.4	
	comp=N,0.1nm,0.3s,baz=151,slow=10,SNR=7.1						
	comp=N,1.5nm,0.9s						
TXAR	**Lajitas Array**	**7.40**	**77**	Pn	**Pn**	**11 17 49.8**	**+0.3**
	comp=N,1.3nm,0.3s,baz=258,slow=13,SNR=122						
TXAR				Sn	**Sn**	**11 19 11.4**	**-2.6**
	comp=N,0.5nm,0.3s,baz=255,slow=20,SNR=3.8						
TXAR				Lg	Lg	11 19 51.3	
	comp=N,2.7nm,0.3s,baz=261,slow=31,SNR=8.3						
	comp=N,1.9nm,0.4s						
ANMO	**Albuquerque**	**8.42**	**32**	Pn	**Pn**	**11 18 05.0**	**+1.4**
	comp=N,0.1nm,0.3s,baz=213,slow=14,SNR=4.3						
ANMO				Lg	Lg	11 20 26.0	
	comp=N,0.7nm,0.3s,baz=285,slow=19,SNR=9.7						
	comp=N,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**11.75**	**335**	Pn	**Pn**	**11 18 51.4**	**+2.1**
	baz=152,slow=9.5,SNR=6.1						
	comp=N,0.4nm,0.7s						
ELK	**Elko**	**13.08**	**349**	Pn	**Pn**	**11 19 09.8**	**+2.4**
	comp=N,0.1nm,0.3s,baz=167,slow=18,SNR=7.1						
	comp=N,1.8nm,0.9s						
PDAR	**Pinedale Array**	**14.94**	**7**	Pn	**P**	**11 19 39.3**	**+0.8**
	comp=N,0.1nm,0.3s,baz=189,slow=9.1,SNR=11						
	comp=N,1.2nm,0.8s						

*NEIC **14** 11:17:00.5, 51.°29N×131.°38W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr=0.05; Mθθ=0.79; Mφφ 1.28; Mrθ=0.40; Mθφ 0.85; Mφr 0.39; Fault plane solution: M0 1.50000×10^16^ NP1:φs63.00000°, δ68.00000°, λ-10.00000°. NP2:φs157.00000°, δ80.00000°, λ-158.00000°. Principal axes: T 1.4742, Plg8.0000°, Azm288.0000°; N -0.0242, Plg66.0000°, Azm179.0000°; P -1.4501, Plg22.0000°, Azm22.0000°;*

*PGC **14** 11:17:00.5±0.7, 51.°30N×131.°38W, h10km, ML4.3/28, Mw4.7, 223km south of Village of Queen Charlotte, Bc Haida Gwaii Region*

*IDC **14** 11:17:03.2±0.6, 51.°47N×130.°96W, h0km, mb4.1/17, mbtmp4.1/25, ML3.9/8, MS3.9/78, Error ellipse: s-maj=8.6km s-min=7.4km az=18.0*

*NEIC **14** 11:17:05.4±2.1, 51.°55N±0.°05×131.°0W±0.°1, h10km±1km, mb4.6/271, Mwr4.6/21, Mwr4.7(OTT), Error ellipse: s-maj=13.6km s-min=6.6km az=240.0, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr=0.09; Mθθ=0.94; Mφφ 0.85; Mrθ=-0.20; Mθφ 0.35; Mφr 0.40; Fault plane solution: M0 1.06000×10^16^ NP1:φs56.55000°, δ65.18000°, λ5.10000°. NP2:φs324.40000°, δ85.37000°, λ155.09000°. Principal axes: T 1.0527, Plg21.0000°, Azm278.0000°; N 0.0208, Plg65.0000°, Azm135.0000°; P -1.0735, Plg14.0000°, Azm13.0000°;*

*NEIC **14** 11:17:06.3, 51.°55N×130.°99W, h10km*

*GCMT **14** 11:17:06.4±0.3, 51.°31N±0.°02×131.°19W±0.°02, h18km±1km, MW4.9/106, Moment Tensor Solution. s35,c38; s106,c151; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.15±.11; Mθθ-2.21±.09; Mφφ 2.35±.10; Mrθ 0.67±.24; Mθφ 1.51±.08; Mφr-1.28±.23; Best double couple: M0 3.09400×10^16^ NP1:φs242.00000°, δ62.00000°, λ-2.00000°. NP2:φs332.00000°, δ89.00000°, λ-152.00000°. Principal axes: T 3.1460, Plg18.0000°, Azm103.0000°; N -0.1120, Plg62.0000°, Azm335.0000°; P -3.0420, Plg20.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 11:17:04.9±0.5, 51°54N±0.°05×130°95W±0.°05, h10km, n571, σ1s39/405, mb4.6/50, MS4.0/70, 1D, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.77**	**348**		**Pg**	**11 17 19.7**	**-0.1**
JEDB	**Jedway, Haida**	**0.77**	**348**	P	**Pg**	**11 17 19.7**	**-0.1**
JEDB				S	**Sg**	**11 17 31.0**	**+1.1**
BAIB	**Barry Inlet**	**1.15**	**335**	P	**Pb**	**11 17 24.1**	**-2.9**
BAIB				S	**Sb**	**11 17 39.6**	**-2.4**
HG1B	**Mitchell Dam**	**1.58**	**333**	P	**Pn**	**11 17 29.7**	**-3.2**
MOBC	**Moresby Island**	**1.73**	**339**		**Pn**	**11 17 33.4**	**-1.7**
MOBC	**Moresby Island**	**1.73**	**339**	P	**Pn**	**11 17 33.1**	**-2.0**
MOBC				S	**Sn**	**11 17 53.8**	**-3.4**
BBB	**Bella Bella**	**1.87**	**69**	Pg	**Pn**	**11 17 37.1**	**+0.1**
	44nm,0.3s,baz=248,slow=16,SNR=216						
BBB				Lg	Lg	11 18 01.8	
	221nm,0.3s,baz=258,slow=19,SNR=9.2						
BBB				LR	LR	11 18 05.2	
	comp=Z,460nm,21.9s,baz=245,slow=32						
BBB	**Bella Bella**	**1.87**	**69**		**Pn**	**11 17 37.0**	**+0.1**
BBB	**Bella Bella**	**1.87**	**69**	P	**Pn**	**11 17 37.1**	**+0.1**
DI2B	**Dawson Inlet**	**1.91**	**331**	P	**Pn**	**11 17 34.5**	**-3.0**
DIB	**Dawson Inlet,**	**1.91**	**331**		**Pn**	**11 17 34.6**	**-2.9**
DIB	**Dawson Inlet,**	**1.91**	**331**	P	**Pn**	**11 17 34.4**	**-3.1**
H02S2	**DAWSON INLET T**	**1.91**	**331**	Pn	**Pn**	**11 17 34.4**	**-3.1**
H02S2				Sn	**Sn**	**11 17 56.8**	**-4.9**
BNAB	**Bonilla**	**1.97**	**5**	P	**Pn**	**11 17 38.1**	**-0.2**
HOLB	**Holberg**	**1.99**	**116**	Pn	**Pn**	**11 17 35.5**	**-3.1**
GRIB	**Gribbell Islan**	**2.12**	**31**	P	**Pn**	**11 17 40.7**	**+0.3**
PHC	**Port Hardy**	**2.37**	**109**	P	**Pn**	**11 17 40.7**	**-3.1**
PCLB	**Port Clements**	**2.38**	**337**	Pn	**Pn**	**11 17 42.4**	**-1.6**
GRNB	**Grenville Isla**	**2.39**	**14**	Pn	**Pn**	**11 17 44.7**	**+0.5**
BPEB	**Brooks Peninsu**	**2.44**	**123**	P	**Pn**	**11 17 41.2**	**-3.7**
PACB	**Port Alice, BC**	**2.44**	**115**	P	**Pn**	**11 17 41.9**	**-3.0**
FHBB	**Fair Harbour**	**2.84**	**120**	P	**Pn**	**11 17 47.6**	**-2.8**
MBLB	**Minette Bay Lo**	**2.87**	**28**	Pn	**Pn**	**11 17 50.2**	**-0.5**
KITB	**Kitimat**	**2.91**	**28**	Pn	**Pn**	**11 17 51.9**	**+0.7**
EDB	**Eliza Dome**	**2.95**	**123**	Pn	**Pn**	**11 17 48.6**	**-3.2**
EDB				Pg	**Pb**	**11 17 53.5**	**-4.1**
WOSB	**Woss**	**3.10**	**115**	P	**Pn**	**11 17 52.2**	**-1.7**
TAHB	**Tahsis**	**3.17**	**120**	Pn	**Pn**	**11 17 52.6**	**-2.3**
NCSB	**Newcastle Ridg**	**3.29**	**108**	Pn	**Pn**	**11 17 54.5**	**-2.1**
NTKA	**Nootka**	**3.38**	**124**	Pn	**Pn**	**11 17 54.0**	**-3.6**
ETB	**Estevan Point**	**3.55**	**126**	Pn	**Pn**	**11 17 56.8**	**-3.2**
GDR	**Gold River**	**3.59**	**117**	Pn	**Pn**	**11 17 58.3**	**-2.2**
V35K	**Ketchikan**	**3.82**	**354**		**Pn**	**11 18 04.2**	**+0.4**
V35K	**Ketchikan**	**3.82**	**354**	P	**Pn**	**11 18 04.2**	**+0.4**
	baz=174,SNR=35						
CBB	**Campbell River**	**3.85**	**111**		**Pn**	**11 18 02.6**	**-1.6**
CBB	**Campbell River**	**3.85**	**111**	Pn	**Pn**	**11 18 02.6**	**-1.6**
MYRA	**Myra Falls**	**3.96**	**118**	Pn	**Pn**	**11 18 02.3**	**-3.4**
CRAG	**Craig**	**4.15**	**343**		**Pn**	**11 18 07.6**	**-0.6**
CRAG	**Craig**	**4.15**	**343**	P	**Pn**	**11 18 08.3**	**+0.1**
	baz=161						
B012	**Ucluelet**	**4.34**	**125**	Pn	**Pn**	**11 18 08.0**	**-3.0**
U35K	**Hyder**	**4.42**	**7**		**Pn**	**11 18 13.6**	**+1.6**
U35K	**Hyder**	**4.42**	**7**	P	**Pn**	**11 18 13.3**	**+1.3**
	baz=187,SNR=51						
TXDB	**Texada**	**4.53**	**111**	Pn	**Pn**	**11 18 12.6**	**-1.0**
B927	**Port Alberni**	**4.56**	**118**	Pn	**Pn**	**11 18 11.8**	**-2.1**
PABB	**Port Alberni**	**4.56**	**118**	Pn	**Pn**	**11 18 11.3**	**-2.6**
BFSB	**Bamfield**	**4.61**	**124**	Pn	**Pn**	**11 18 12.3**	**-2.3**
U33K	**Whale Pass**	**4.76**	**345**		**Pn**	**11 18 16.2**	**-0.5**
U33K	**Whale Pass**	**4.76**	**345**	P	**Pn**	**11 18 16.7**	**0.0**
	baz=163						
SHB	**Sechelt**	**4.91**	**111**	P	**Pn**	**11 18 18.2**	**-0.6**
WRAK	**Wrangell Islan**	**4.96**	**351**		**Pn**	**11 18 20.2**	**+0.9**
WRAK	**Wrangell Islan**	**4.96**	**351**	P	**Pn**	**11 18 20.3**	**+0.9**
	baz=170,SNR=19						
NLLB	**Nanaimo Lost L**	**5.02**	**115**	P	**Pn**	**11 18 19.4**	**-0.7**
CLRS	**Cowichan Lake**	**5.15**	**119**		**Pn**	**11 18 20.4**	**-1.6**
WPB	**Watts Point**	**5.27**	**108**	P	**Pn**	**11 18 23.7**	**0.0**
WSLR	**Whistler**	**5.28**	**102**	P	**Pn**	**11 18 24.5**	**+0.6**
T35M	**Bob Quinn**	**5.47**	**4**		**Pn**	**11 18 28.8**	**+2.4**
T35M	**Bob Quinn**	**5.47**	**4**	P	**Pn**	**11 18 27.6**	**+1.1**
	baz=184,SNR=30						
C03A	**Quillayute Air**	**5.48**	**129**	Pn	**Pn**	**11 18 26.4**	**-0.1**
PGC	**Sidney**	**5.62**	**118**		**Pn**	**11 18 27.9**	**-0.6**
PGC	**Sidney**	**5.62**	**118**	P	**Pn**	**11 18 27.9**	**-0.6**
SNB	**Saturna Island**	**5.71**	**116**	P	**Pn**	**11 18 30.1**	**+0.3**
LLLB	**Lillooet**	**5.79**	**96**		**Pn**	**11 18 31.5**	**+0.6**
LLLB	**Lillooet**	**5.79**	**96**	P	**Pn**	**11 18 31.2**	**+0.4**
VGZ	**Gonzales**	**5.83**	**119**	P	**Pn**	**11 18 30.3**	**-1.0**
B04A	**Port Angeles**	**5.94**	**123**		**Pn**	**11 18 33.0**	**0.0**
A04D	**Lummi Island**	**6.00**	**115**		**Pn**	**11 18 34.6**	**+0.9**
SIT	**Sitka**	**6.09**	**337**	P	**Pn**	**11 18 36.2**	**+1.3**
	baz=153						
NLWA	**Neilton Lookou**	**6.20**	**129**		**Pn**	**11 18 35.4**	**-1.1**
S32K	**Killisnoo**	**6.31**	**342**	Pn	**Pn**	**11 18 38.4**	**+0.6**
S32K	**Killisnoo**	**6.31**	**342**	P	**Pn**	**11 18 39.3**	**+1.4**
	baz=159						
S34M	**Telegraph Cree**	**6.39**	**359**		**Pn**	**11 18 41.3**	**+2.3**
S34M	**Telegraph Cree**	**6.39**	**359**	P	**Pn**	**11 18 40.6**	**+1.6**
	baz=179,SNR=9.6						
WISH	**Wishkah**	**6.45**	**131**		**Pn**	**11 18 39.8**	**0.0**
HOPB	**Hope**	**6.45**	**106**	P	**Pn**	**11 18 40.4**	**+0.5**
GNW	**Green Mountain**	**6.61**	**124**		**Pn**	**11 18 41.8**	**-0.3**
DLBC	**Dease Lake**	**6.94**	**4**	Pn	**Pn**	**11 18 49.6**	**+3.0**
	7.7nm,0.3s,baz=171,slow=11,SNR=386						
DLBC				Sn	**Sn**	**11 20 07.2**	**+1.7**
	baz=149,slow=18						
DLBC				Lg	Lg	11 20 43.9	
	baz=163,slow=20						
DLBC				LR	LR	11 21 29.5	
	comp=Z,2μm,21.1s,baz=171,slow=38						
	17nm,0.3s						
DLBC	**Dease Lake**	**6.94**	**4**	P	**Pn**	**11 18 48.7**	**+2.1**
	baz=185,SNR=14						
DLBC	**Dease Lake**	**6.94**	**4**	P	**Pn**	**11 18 49.5**	**+3.0**
RADR	**Rader Ridge**	**6.95**	**135**	Pn	**Pn**	**11 18 46.4**	**-0.3**
R32K	**Eaglecrest**	**7.06**	**344**	Pn	**Pn**	**11 18 48.8**	**+0.6**
S31K	**Pelican**	**7.12**	**337**	Pn	**Pn**	**11 18 48.8**	**-0.3**
S31K	**Pelican**	**7.12**	**337**	P	**Pn**	**11 18 50.1**	**+1.0**
	baz=152						
F03A	**Seaside**	**7.44**	**136**		**Pn**	**11 18 53.4**	**-0.1**
Q32M	**Nakina River**	**7.48**	**355**	P	**Pn**	**11 18 55.1**	**+0.9**
	baz=174						
F04D	**Rainier, OR**	**7.56**	**133**		**Pn**	**11 18 55.7**	**+0.5**
PNT	**Penticton**	**7.57**	**103**	P	**Pn**	**11 18 56.7**	**+1.4**
LON	**Longmire**	**7.67**	**125**		**Pn**	**11 18 57.2**	**+0.6**
R33M	**Jennings River**	**7.88**	**360**	P	**Pn**	**11 19 01.4**	**+1.9**
	baz=180						
LTY	**Liberty**	**7.95**	**119**		**Pn**	**11 19 00.8**	**+0.2**
TOAD	**Toad River Com**	**8.02**	**22**	P	**Pn**	**11 19 02.4**	**+1.0**
	baz=206,SNR=14						
G03D	**McMinnville, O**	**8.13**	**138**		**Pn**	**11 19 03.2**	**+0.2**
P32M	**Atlin**	**8.22**	**350**	P	**Pn**	**11 19 05.7**	**+1.5**
	baz=168						
SKAG	**Skagway**	**8.32**	**344**	P	**Pn**	**11 19 06.9**	**+1.5**
	baz=161						
EPH	**Ephrata**	**8.50**	**115**		**Pn**	**11 19 07.7**	**-0.3**
COR	**Corvallis**	**8.63**	**141**		**Pn**	**11 19 11.5**	**+1.7**
WTLY	**Watson Lake, Y**	**8.68**	**7**		**Pn**	**11 19 14.0**	**+3.5**
WTLY	**Watson Lake, Y**	**8.68**	**7**	P	**Pn**	**11 19 12.4**	**+1.9**
	baz=189,SNR=24						
P33M	**Teslin, Yukon**	**8.76**	**354**	P	**Pn**	**11 19 13.5**	**+1.9**
	baz=172,SNR=15						
HOOD	**Mount Hood Mea**	**8.76**	**132**		**Pn**	**11 19 12.9**	**+1.2**
I02E	**Swisshome, OR**	**8.83**	**145**	Pn	**Pn**	**11 19 13.3**	**+0.8**
WAH2	**Wahluke Slope**	**8.86**	**118**		**Pn**	**11 19 12.6**	**-0.3**
G05A	**Wamic**	**8.98**	**131**		**Pn**	**11 19 15.5**	**+0.9**
H04A	**Detroit Lake**	**9.02**	**136**		**Pn**	**11 19 15.6**	**+0.4**
D08A	**Wollman Farm,**	**9.04**	**115**		**Pn**	**11 19 15.0**	**-0.4**
BUCK	**Buck Mountain**	**9.08**	**141**		**Pn**	**11 19 17.4**	**+1.3**
HAWA	**Hanford**	**9.10**	**120**		**Pn**	**11 19 16.6**	**+0.4**
P30M	**Million Dollar**	**9.24**	**341**	P	**Pn**	**11 19 19.7**	**+1.6**
	baz=156						
WHY	**Whitehorse**	**9.40**	**348**		**Pn**	**11 19 22.1**	**+1.6**
WHY	**Whitehorse**	**9.40**	**348**	P	**Pn**	**11 19 22.2**	**+1.8**
	baz=165,SNR=5.8						
KOTAN	**Kotaneelee Air**	**9.44**	**21**	P	**Pn**	**11 19 22.8**	**+2.0**
	baz=207						
NEW	**Newport**	**9.50**	**105**	Pn	**Pn**	**11 19 23.1**	**+1.3**
	1.6nm,0.3s,baz=290,slow=14,SNR=22						
NEW				Lg	Lg	11 21 50.5	
	0.2nm,0.3s,baz=260,slow=6.1,SNR=3.1						
NEW				LR	LR	11 22 56.0	
	comp=Z,892nm,20.4s,baz=275,slow=37						
	13nm,0.7s						
I05D	**Terrebonne, OR**	**9.66**	**134**		**Pn**	**11 19 24.7**	**+0.7**
O30N	**Mendenhall**	**9.69**	**345**	P	**Pn**	**11 19 26.3**	**+2.0**
	baz=161						
N32M	**Quiet Lake**	**9.71**	**354**	P	**Pn**	**11 19 26.6**	**+2.0**
	baz=172						
O29M	**Mount Kennedy**	**9.77**	**337**	P	**Pn**	**11 19 27.5**	**+2.0**
	baz=151						
HYT	**Haines Junctio**	**9.99**	**341**	P	**Pn**	**11 19 30.2**	**+1.6**
	baz=156						
PINM	**Pinnacle**	**10.04**	**332**	P	**Pn**	**11 19 30.6**	**+1.5**
	baz=145						
PCA	**Pinnacle**	**10.04**	**332**	Pn	**Pn**	**11 19 29.9**	**+0.8**
LNOR	**Lincton Mounta**	**10.10**	**119**		**Pn**	**11 19 31.5**	**+1.5**
G08A	**Pilot Rock**	**10.12**	**123**		**Pn**	**11 19 31.1**	**+0.8**
K02D	**Willamette Mer**	**10.14**	**148**		**Pn**	**11 19 33.3**	**+2.8**
YUK6	**Outpost Mounta**	**10.28**	**339**	P	**Pn**	**11 19 34.5**	**+1.9**
	baz=153						
BBOR	**Butler Butte**	**10.31**	**144**		**Pn**	**11 19 36.2**	**+3.1**
N31M	**Braeburn, Yuko**	**10.32**	**347**		**Pn**	**11 19 35.2**	**+2.3**
O28M	**Mount Upton**	**10.58**	**335**	P	**Pn**	**11 19 38.3**	**+1.5**
	baz=147						
F10A	**Beach Ranch, E**	**10.62**	**116**		**Pn**	**11 19 37.0**	**-0.3**
MESA	**MESA**	**10.62**	**329**	P	**Pn**	**11 19 36.8**	**-0.5**
	baz=140						
YUK4	**Talbot Arm**	**10.71**	**340**	P	**Pn**	**11 19 39.2**	**+0.8**
	baz=154						
FARO	**Faro, Yukon**	**10.80**	**354**		**Pn**	**11 19 42.3**	**+2.8**
M31M	**Drury Creek, Y**	**10.86**	**351**	P	**Pn**	**11 19 40.9**	**+0.7**
	baz=168						
EDM	**Edmonton**	**10.89**	**74**		**Pn**	**11 19 41.3**	**+0.6**
YUK8	**Steele Glacier**	**10.91**	**337**	P	**Pn**	**11 19 42.1**	**+0.9**
	baz=150						
CTG	**Chitna Glacier**	**11.06**	**333**	P	**Pn**	**11 19 43.2**	**0.0**
	baz=144						
BARN	**Barnard Glacie**	**11.23**	**332**		**Pn**	**11 19 47.6**	**+2.2**
KAIM	**Kayak Island**	**11.31**	**323**	P	**Pn**	**11 19 46.8**	**+0.5**
	baz=132						
YBH	**Yreka Blue Hor**	**11.32**	**147**	Pn	**Pn**	**11 19 46.1**	**-0.6**
	baz=339,slow=9.9,SNR=16						
CRQE	**Cirque**	**11.43**	**329**	P	**Pn**	**11 19 47.8**	**-0.4**
	baz=138						
YUK3	**Moose Creek**	**11.50**	**337**	P	**Pn**	**11 19 50.1**	**+0.9**
	baz=149						
M30M	**Minto, Yukon**	**11.51**	**346**	P	**Pn**	**11 19 49.7**	**+0.5**
	baz=161						
M29M	**Som

OHAK Old Harbor 14.17 302 P Pn 11 20 25.6 +0.1
baz=104
HOM Homer 14.20 313 P Pn 11 20 26.2 +0.4
baz=116
SCRK Sand Creek 14.24 336 P Pn 11 20 27.0 +0.5
baz=145
RIDG Independent Ri 14.27 334 P Pn 11 20 27.2 +0.3
baz=142
WAT6 Susitna Watana 14.29 327 P Pn 11 20 27.8 +0.5
baz=133
I29M Ogilvie Camp, 14.37 348 P Pn 11 20 28.8 +0.6
baz=161
H31M Peel River 14.41 354 P Pn 11 20 30.0 +1.2
baz=171
CAPN Captain Cook N 14.51 317 P Pn 11 20 31.2 +1.2
baz=121
SII Sitkinak Islan 14.51 299 P Pn 11 20 30.8 +0.6
baz=100
DHY Denali Highway 14.52 329 P Pn 11 20 31.1 +0.7
baz=135
J26L Joseph Creek 14.57 338 P Pn 11 20 32.1 +1.1
baz=147
K24K Donnelly Dome 14.58 333 P Pn 11 20 32.1 +1.0
baz=141
M22K Willow 14.63 322 P Pn 11 20 32.8 +1.1
baz=126
I28M Miner Creek 14.70 345 P Pn 11 20 33.7 +1.0
baz=157
SUA Susitna One 14.71 320 P Pn 11 20 33.4 +0.5
baz=124
WAT1 Susitna Watana 14.74 327 P Pn 11 20 34.5 +1.3
baz=132
Q19K Cape Douglas, 14.86 309 P Pn 11 20 36.1 +1.2
baz=110
P19K Oil Pt 14.93 312 P Pn 11 20 35.8 0.0
baz=113
ILSW Iliamna Southw 15.02 313 Pn 11 20 37.3 +0.1
ILSW IAmb IAmb 11 20 44.9
comp=Z,18nm,0.8s
RED Redoubt Volcan 15.04 315 Pn 11 20 36.9 -0.5
RED IAmb IAmb 11 20 45.2
comp=Z,46nm,1.1s
CUT Chulitna 15.07 324 IAmb IAmb 11 20 50.4
comp=Z,42nm,1.2s
CUT Chulitna 15.07 324 P Pn 11 20 38.0 +0.3
baz=127
SPU Mount Spurr 15.10 318 Pn 11 20 37.4 -0.7
SPU IAmb IAmb 11 20 46.9
comp=Z,17nm,1.2s
J25K Salcha River, 15.11 336 P Pn 11 20 39.3 +1.0
baz=143
I27K Kandik River 15.13 343 P Pn 11 20 39.2 +0.7
baz=154
YNR Norris Junctio 15.13 109 IAmb IAmb 11 20 47.7
comp=Z,33nm,0.8s
SPCR Spurr Chakacha 15.17 318 P Pn 11 20 39.5 +0.4
baz=120
RND Reindeer 15.23 328 IAmb IAmb 11 20 48.2
comp=Z,14nm,0.9s
ELK Elko 15.29 129 Pn Pn 11 20 41.0 0.0
comp=Z,0.1nm,0.3s,baz=313,slow=11,SNR=14
comp=Z,6.7nm,1.0s
ELK Elko 15.29 129 IAmb IAmb 11 20 48.7
comp=Z,30nm,0.9s
YPP Pitchstone Pla 15.31 110 IAmb IAmb 11 20 49.8
comp=Z,16nm,0.9s
SKT Skwentna 15.31 321 P Pn 11 20 41.3 +0.4
baz=124
L22K Petersville 15.33 324 IAmb IAmb 11 20 49.2
comp=Z,33nm,1.4s
H17A Grant Village 15.37 110 IAmb IAmb 11 20 47.2
comp=Z,50nm,1.2s
HDA Harding Lake 15.37 333 P Pn 11 20 42.6 +0.9
baz=140
JRSC Jasper Ridge 15.42 153 IAmb IAmb 11 20 57.2
comp=Z,66nm,1.1s
YMP Mirror Lake Pl 15.43 108 IAmb IAmb 11 20 45.7
comp=Z,38nm,1.1s
FLWY Flagg Ranch 15.48 111 IAmb IAmb 11 20 57.2
comp=Z,59nm,1.1s
MCK McKinley 15.48 329 IAmb IAmb 11 20 57.2
comp=Z,24nm,0.9s
MCK McKinley 15.48 329 P Pn 11 20 44.1 +1.0
baz=134,SNR=8.3
ILAR Eielson Array 15.63 334 Pn Pn 11 20 46.4 +1.3
comp=Z,0.1nm,0.3s,baz=133,slow=10,SNR=33
ILAR LR LR 11 26 08.0
comp=Z,394nm,18.9s,baz=185,slow=35
comp=Z,0.4nm,0.8s
ILAR Eielson Array 15.63 334 Pn 11 20 44.7 -0.4
O19K Port Alsworth 15.65 313 IAmb IAmb 11 20 51.6
comp=Z,44nm,1.0s
O19K Port Alsworth 15.65 313 P Pn 11 20 45.8 +0.6
baz=113,SNR=8.9
MHC Mount Hamilton 15.65 151 IAmb IAmb 11 20 58.2
comp=Z,42nm,1.5s
H27K Steamboat Moun 15.68 344 P Pn 11 20 46.7 +1.0
baz=155
G30M tAoh Zraii Nji 15.71 352 P Pn 11 20 47.1 +0.9
baz=168
TRF Thorofare Moun 15.74 327 P Pn 11 20 47.2 +0.6
baz=130
WRH Wood River Hil 15.75 332 IAmb IAmb 11 20 59.5
comp=Z,29nm,1.0s
RLMT Red Lodge 15.75 106 IAmb IAmb 11 20 53.6
comp=Z,21nm,0.8s
P18K Big Mountain, 15.78 309 P Pn 11 20 47.4 +0.3
baz=109
Q17K Contact Creek 15.78 305 P Pn 11 20 47.2 +0.1
baz=104
CCB Clear Creek Bu 15.80 333 IAmb IAmb 11 21 00.5
comp=Z,26nm,1.1s
HVU Hansel Valley 15.80 121 IAmb IAmb 11 20 50.2
comp=Z,37nm,1.1s
LOHW Long Hollow 15.81 112 IAmb IAmb 11 20 55.6
comp=Z,77nm,1.2s
SNOW Snow King Moun 15.82 113 IAmb IAmb 11 20 56.0
comp=Z,60nm,0.9s
G29M Pine Creek 15.82 350 IAmb IAmb 11 21 06.1
comp=Z,42nm,1.2s
G29M Pine Creek 15.82 350 P Pn 11 20 48.2 +0.7
baz=164
NVAR Mina Array Bea 15.84 141 Pn Pn 11 20 48.5 +0.5
comp=Z,0.2nm,0.3s,baz=328,slow=14,SNR=51
NVAR LR LR 11 26 07.6
comp=Z,156nm,19.7s,baz=330,slow=34
comp=Z,9.0nm,1.0s
PRP Porcupine Dome 15.88 337 P Pn 11 20 49.9 +1.5
baz=145
R17L Mt. Peulik Vol 15.88 302 P Pn 11 20 48.8 +0.4
baz=102
M20K Styx River 15.90 319 P Pn 11 20 49.4 +0.9
baz=121
LHV Little Huntoon 15.91 142 IAmb IAmb 11 21 01.4
comp=Z,45nm,1.0s
O18K Koktuh Hills 15.93 311 P Pn 11 20 49.8 +0.9
baz=111
N19K Bonanza Creek 15.97 315 IAmb IAmb 11 20 55.4
comp=Z,32nm,1.1s
N19K Bonanza Creek 15.97 315 P Pn 11 20 50.2 +0.6
baz=115,SNR=6.0
COLA College 15.98 333 P P 11 20 55.8 +2.7
COLA College 15.98 333 P Pn 11 20 50.6 +1.1
baz=139
F31M Tsiigehtchic 16.01 356 IAmb IAmb 11 20 57.7
comp=Z,41nm,1.2s
F31M Tsiigehtchic 16.01 356 P Pn 11 20 51.4 +1.5
baz=174
KTH Kantishna Hill 16.02 326 IAmb IAmb 11 20 57.5
comp=Z,39nm,1.3s
AHID Auburn Hatcher 16.06 115 IAmb IAmb 11 20 58.9
comp=Z,46nm,1.2s
PPLA Purkeypile 16.08 323 P Pn 11 20 52.3 +1.3
baz=125
NEA2 Nenana 16.13 331 IAmb IAmb 11 21 04.2
comp=Z,38nm,1.1s
NEA2 Nenana 16.13 331 P Pn 11 20 52.4 +0.9
baz=136,SNR=12
MDPB Devils Postpil 16.24 144 IAmb IAmb 11 21 05.0
comp=Z,29nm,1.0s
Q16K King Salmon 16.28 306 P Pn 11 20 54.4 +1.0
baz=105
F30M Barrier River 16.30 353 IAmb IAmb 11 21 00.9
comp=Z,33nm,1.1s
F30M Barrier River 16.30 353 P Pn 11 20 54.8 +1.2
baz=169
SPUT South Promonto 16.30 122 IAmb IAmb 11 21 00.1
comp=Z,36nm,1.2s

P17K Kvichak River 16.31 308 IAmb IAmb 11 21 00.3
comp=Z,37nm,0.8s
P17K Kvichak River 16.31 308 P Pn 11 20 54.7 +0.9
baz=107
BPAW Bear Paw Mtn. 16.40 328 P Pn 11 20 56.3 +1.3
baz=131
M19K Big River Lodg 16.43 318 P Pn 11 20 56.3 +1.0
baz=119
R16K Pilot Point 16.52 302 P Pn 11 20 56.2 -0.2
baz=100
N18K Kilae Creek 16.55 313 IAmb IAmb 11 21 01.0
comp=Z,43nm,1.4s
N18K Kilae Creek 16.55 313 P Pn 11 20 57.3 +0.4
baz=112
I23K Minto, Yukon-K 16.62 332 P Pn 11 20 58.2 +0.6
baz=136
FYU Fort Yukon 16.69 340 IAmb IAmb 11 21 12.3
comp=Z,59nm,1.2s
F28M Old Crow 16.71 348 P Pn 11 21 00.1 +1.2
baz=160,SNR=8.2
CHUM Lake Minchumin 16.72 326 P Pn 11 20 59.8 +0.9
baz=128
H24K Noodor Dome 16.73 335 IAmb IAmb 11 21 12.6
comp=Z,66nm,1.4s
H24K Noodor Dome 16.73 335 P Pn 11 21 00.1 +1.0
baz=141
G26K Porcupine Rive 16.73 342 P Pn 11 21 00.1 +1.0
baz=151
L19K White Mountain 16.75 319 P Pn 11 20 60.0 +0.5
baz=119
O17K Koliganek Bris 16.80 310 P Pn 11 21 00.7 +0.7
baz=108,SNR=6.0
M18K Stony River 16.85 316 P Pn 11 21 01.4 +0.8
baz=115,SNR=5.6
LAO LASA Array 16.86 97 IAmb IAmb 11 21 03.4
comp=Z,76nm,1.1s
INK Inuvik 16.87 357 Pn Pn 11 21 02.1 +1.3
comp=Z,0.2nm,0.3s,baz=170,slow=9.4,SNR=12
INK Lg Lg 11 25 58.4
baz=172,slow=7.1,SNR=2.0
INK LR LR 11 28 16.1
comp=Z,604nm,18.5s,baz=188,slow=40
comp=Z,7.3nm,1.0s
INK Inuvik 16.87 357 P Pn 11 21 01.8 +1.0
baz=174,SNR=8.7
DSP Deep Springs 16.89 142 IAmb IAmb 11 21 12.1
comp=Z,49nm,1.3s
DUG Dugway, Tooele 16.92 125 IAmb IAmb 11 21 06.5
comp=Z,57nm,1.3s
BW06 Boulder Array 16.94 113 IAmb IAmb 11 21 08.2
comp=Z,51nm,0.9s
PD31 Pinedale Array 16.94 113 IAmb IAmb 11 21 08.2
comp=Z,51nm,0.9s
PDAR Pinedale Array 16.94 113 Pn P 11 21 03.9 -0.2
comp=Z,0.9nm,0.3s,baz=311,slow=15,SNR=64
PDAR Sn Sn 11 24 07.9 -2.5
baz=320,slow=33,SNR=1.3
PDAR LR LR 11 27 33.3
comp=Z,443nm,19.1s,baz=305,slow=37
PDAR Pinedale Array 16.94 113 P Pn 11 21 03.3 +1.2
PMPB Monarch Peak 16.95 151 IAmb IAmb 11 21 09.1
comp=Z,70nm,1.2s
MLY Manley 16.95 330 P Pn 11 21 02.4 +0.5
baz=134,SNR=5.8
P16K Nushagak River 17.04 307 IAmb IAmb 11 21 07.1
comp=Z,63nm,1.0s
P16K Nushagak River 17.04 307 P Pn 11 21 03.3 +0.3
baz=104
K20K Telida 17.05 323 P Pn 11 21 03.5 +0.3
baz=123
N17K Nushagak Hills 17.09 312 IAmb IAmb 11 21 17.9
comp=Z,50nm,1.4s
N17K Nushagak Hills 17.09 312 P Pn 11 21 04.3 +0.6
baz=110
H23K Yukon River 17.17 334 P Pn 11 21 05.1 +0.5
baz=138
O16K Kokwok River B 17.24 308 P Pn 11 21 06.5 +1.0
baz=106
E29M Blow River 17.24 351 IAmb IAmb 11 21 12.6
comp=Z,48nm,1.4s
E29M Blow River 17.24 351 P Pn 11 21 06.4 +0.9
baz=165
BMAR Burnt Mountain 17.30 342 Pn 11 21 07.6 +1.3
G24K Hadweenzic Riv 17.31 338 P Pn 11 21 07.1 +0.7
baz=143
CHNA Chernabura Isl 17.42 292 P Pn 11 21 08.5 +0.7
baz=89
I21K Tanana 17.44 330 P Pn 11 21 09.0 +1.1
baz=132
F26K Sheenjek River 17.45 343 P Pn 11 21 09.4 +1.2
baz=152
M17K Holitna River 17.52 315 IAmb IAmb 11 21 12.8
comp=Z,60nm,1.4s
M17K Holitna River 17.52 315 P Pn 11 21 10.1 +1.0
baz=112
L18K Granite Mounta 17.53 318 P Pn 11 21 09.6 +0.4
baz=116
J20K Nowinta River 17.54 325 P Pn 11 21 09.8 +0.6
baz=125
S11A Rachel 17.56 136 IAmb IAmb 11 21 22.1
comp=Z,64nm,1.2s
FFC Flin Flon 17.61 68 Pn 11 21 10.6 +0.3
E28M Babbage River 17.62 350 P Pn 11 21 11.7 +1.5
baz=162
F25K Christian Rive 17.65 341 P Pn 11 21 11.3 +0.6
baz=148
CWC Cottonwood Cre 17.66 144 IAmb IAmb 11 21 19.7
comp=Z,35nm,1.3s
H22K Ishtalitna Cre 17.74 332 P Pn 11 21 12.5 +0.7
baz=134
N16K Nishlik Lake 17.82 311 P Pn 11 21 13.3 +0.6
baz=108
VES Vestal, Richgr 17.84 147 IAmb IAmb 11 21 20.8
comp=Z,28nm,1.0s
WCT Wildcat Mounta 17.92 140 IAmb IAmb 11 21 23.4
comp=Z,78nm,1.0s
SDPT Sand Point 17.93 294 P Pn 11 21 14.5 +0.4
baz=90
TPNV Topopah Spring 17.94 139 IAmb IAmb 11 21 23.8
comp=Z,58nm,1.1s
G23K Bananza Creek 17.96 335 P Pn 11 21 15.2 +0.7
baz=139
J19K Poorman 17.98 323 P Pn 11 21 15.9 +1.2
J19K Poorman 17.98 323 P Pn 11 21 15.1 +0.5
baz=122
O15K Ungalikthiuk R 17.99 306 IAmb IAmb 11 21 15.7
comp=Z,44nm,1.4s
O15K Ungalikthiuk R 17.99 306 P Pn 11 21 15.0 +0.1
baz=102
H21K Melozitna Rive 18.01 330 P Pn 11 21 15.6 +0.5
baz=131
PRN Pahroc Range 18.06 135 IAmb IAmb 11 21 24.4
comp=Z,33nm,1.2s
M16K Timber Creek 18.08 313 IAmb IAmb 11 21 17.7
comp=Z,44nm,1.4s
M16K Timber Creek 18.08 313 P Pn 11 21 16.2 +0.3
baz=109
E25K Arctic Village 18.09 342 P Pn 11 21 16.6 +0.5
baz=150
J18K Innoko River 18.12 321 P Pn 11 21 16.9 +0.4
baz=119
C36M Paulatuk 18.16 8 IAmb IAmb 11 21 22.2
comp=Z,39nm,1.4s
C36M Paulatuk 18.16 8 P Pn 11 21 17.5 +0.6
baz=194
L17K Donlin 18.19 316 P Pn 11 21 18.2 +1.0
baz=113
TCRU Three Creeks R 18.31 128 IAmb IAmb 11 21 26.2
comp=Z,32nm,1.3s
N15K Kwethluk River 18.36 309 IAmb IAmb 11 21 24.2
comp=Z,34nm,1.4s
N15K Kwethluk River 18.36 309 P Pn 11 21 19.9 +0.5
baz=105
RDMU Red Mountain 18.38 118 P Pn 11 21 17.6 -2.4
COLD Coldfoot 18.39 336 P P 11 21 20.3 +0.5
baz=139
CLC China Lake 18.40 144 IAmb IAmb 11 21 28.6
comp=Z,43nm,1.1s
K17K Iditarod 18.43 318 IAmb IAmb 11 21 24.5
comp=Z,26nm,1.1s
K17K Iditarod 18.43 318 P P 11 21 20.3 +0.2
baz=115
GWY Greenwater Val 18.43 141 IAmb IAmb 11 21 31.7
comp=Z,54nm,1.5s
P17A Butcher Ranch, 18.53 123 IAmb IAmb 11 21 24.3
comp=Z,21nm,0.9s
QSM Queen of Sheba 18.54 142 IAmb IAmb 11 21 31.1
comp=Z,30nm,0.8s

L16K Owhat River 18.55 314 P P 11 21 22.0 +0.6
baz=110
H20K Anotleneega Mo 18.57 328 P P 11 21 22.3 +0.5
baz=127
E24K Your Creek 18.66 339 P P 11 21 23.3 +0.6
baz=144
LRMC Laurel Mtn Rad 18.66 144 IAmb IAmb 11 21 32.2
comp=Z,22nm,0.9s
P18A Preston Nutter 18.68 122 IAmb IAmb 11 21 38.4
comp=Z,30nm,1.1s
CCUT Cedar City 18.71 132 IAmb IAmb 11 21 26.1
comp=Z,26nm,1.1s
Q16A Castle Valley 18.72 125 IAmb IAmb 11 21 28.3
comp=Z,78nm,1.4s
O14K Tigyukauivet M 18.73 306 P P 11 21 23.9 +0.4
baz=101
M15K Kasigluk River 18.79 311 P P 11 21 24.6 +0.6
baz=106
G21K Allakaket 18.80 332 P P 11 21 24.8 +0.6
baz=132
GCSA Galena City Sc 18.84 324 P P 11 21 25.7 +1.1
baz=122
MTPU Mount Pierson 18.88 128 IAmb IAmb 11 21 41.0
comp=Z,26nm,1.1s
E23K Chandalar 18.90 338 P P 11 21 25.6 +0.2
baz=142
SRU San Rafael Swe 18.91 123 IAmb IAmb 11 21 34.4
comp=Z,44nm,1.1s
TPO Tropico Hills 19.01 146 IAmb IAmb 11 21 35.3
comp=Z,46nm,1.1s
N14K Kuskokwak Cree 19.08 308 P P 11 21 28.3 +1.0
baz=102
C27K Jago River 19.12 346 P P 11 21 28.8 +1.2
baz=155
GSC Goldstone, Bar 19.15 142 IAmb IAmb 11 21 39.5
comp=Z,27nm,0.9s
F21K Alatna River 19.27 333 P P 11 21 29.9 +0.5
baz=134
D25K Kavik River 19.28 343 P P 11 21 30.1 +0.5
baz=150
M14K Bethel 19.41 310 IAmb IAmb 11 21 41.8
comp=Z,48nm,1.4s
M14K Bethel 19.41 310 P P 11 21 31.0 +0.2
baz=104
O20A White River Ci 19.41 117 IAmb IAmb 11 21 42.5
comp=Z,26nm,0.9s
L15K Ungalak Mounta 19.44 313 P P 11 21 31.8 +0.5
baz=108
RSSD Black Hills 19.45 102 P 11 21 31.3 -0.4
RSSD IAmb IAmb 11 21 47.3
comp=Z,14nm,0.8s
MTPC Mountain Pass 19.48 139 IAmb IAmb 11 21 40.1
comp=Z,27nm,1.0s
E22K Anaktuvuk Pass 19.49 336 IAmb IAmb 11 21 44.6
comp=Z,51nm,1.5s
E22K Anaktuvuk Pass 19.49 336 P P 11 21 32.7 +0.9
baz=138
H18K Honhosa River 19.59 325 P P 11 21 33.6 +0.7
baz=121,SNR=5.9
D24K Happy Valley 19.61 341 P P 11 21 33.4 +0.3
baz=145
J16K Anvik River 19.62 318 P P 11 21 34.2 +1.0
baz=113
FALS False Pass 19.63 293 P P 11 21 33.7 +0.3
baz=86
K15K Wolf Creek Mou 19.66 315 IAmb IAmb 11 21 43.4
comp=Z,19nm,0.8s
K15K Wolf Creek Mou 19.66 315 P P 11 21 34.2 +0.6
baz=109
PASC Pasadena Art C 19.67 147 IAmb IAmb 11 21 41.4
comp=Z,17nm,0.9s
G19K Purcell Mounta 19.70 328 P P 11 21 34.1 +0.1
baz=125
HAYD Hayden 19.70 115 IAmb IAmb 11 21 41.9
comp=Z,45nm,0.9s
BFSC Mount Baldy Ra 19.79 146 IAmb IAmb 11 21 46.9
comp=Z,29nm,1.1s
F20K Avaraart Lake 19.81 331 IAmb IAmb 11 21 41.2
comp=Z,46nm,1.4s
F20K Avaraart Lake 19.81 331 P P 11 21 36.4 +1.1
baz=130
D23K Nanushuk River 19.86 339 P P 11 21 36.7 +1.0
baz=142
I17K Unalakleet 19.90 320 P P 11 21 37.1 +0.9
baz=114
L14K Kuka Creek 19.90 312 IAmb IAmb 11 21 39.7
comp=Z,49nm,1.2s
L14K Kuka Creek 19.90 312 P P 11 21 36.6 +0.4
baz=105,SNR=11
M13K Dall Lake 20.00 309 P 11 21 38.5 +1.2
M13K Dall Lake 20.00 309 P P 11 21 38.2 +0.9
baz=102
C24K Franklin Bluff 20.06 342 IAmb IAmb 11 21 50.3
comp=Z,29nm,1.2s
C24K Franklin Bluff 20.06 342 P P 11 21 39.0 +1.1
baz=146
H17K Granite Mounta 20.06 323 P P 11 21 38.6 +0.7
baz=118
G18K Tagagawik 20.09 326 Pn 11 21 40.8 +0.7
G18K IAmb IAmb 11 21 42.8
comp=Z,23nm,1.4s
G18K Tagagawik 20.09 326 P P 11 21 39.3 +1.0
baz=122,SNR=9.1
PV21 Cone Mtn., Par 20.13 122 IAmb IAmb 11 22 01.1
comp=Z,63nm,1.1s
PV22 Blue Mesa, Par 20.25 121 P Pn 11 21 43.0 +0.5
D22K Ayikyak River 20.26 337 P P 11 21 40.3 +0.2
baz=138
E21K Killik River 20.26 335 P P 11 21 40.7 +0.5
baz=135
F19K Shalerukkik Mo 20.32 329 P P 11 21 41.8 +1.1
baz=126
E28A Huff 20.35 92 IAmb IAmb 11 21 49.1
comp=Z,32nm,0.8s
PV07 Paradox Valley 20.40 121 IAmb IAmb 11 22 07.2
comp=Z,62nm,1.3s
PV18 Skein Mesa, Pa 20.40 122 P 11 21 38.1 -4.0
ELS Elsinore Mount 20.40 146 IAmb IAmb 11 21 55.4
comp=Z,61nm,1.2s
PV05 Paradox Valley 20.42 123 P 11 21 39.2 -3.2
NEE2 Needles Airpor 20.48 139 P Pn 11 21 47.7 +2.8
W13A Hualapai Mount 20.51 137 IAmb IAmb 11 21 48.3
comp=Z,52nm,1.1s
E19K Redstone River 20.53 331 IAmb IAmb 11 21 55.3
comp=Z,38nm,0.9s
E19K Redstone River 20.53 331 P P 11 21 44.7 +1.6
baz=128
PV15 Paradox Valley 20.56 121 IAmb IAmb 11 21 48.9
comp=Z,50nm,1.0s
G17K Kiwalik Mounta 20.60 324 P P 11 21 45.1 +1.2
baz=118,SNR=23
A36M Sachs Harbour 20.68 5 P P 11 21 43.2 -1.4
A36M IAmb IAmb 11 21 51.7
comp=Z,17nm,1.1s
A36M Sachs Harbour 20.68 5 P P 11 21 46.1 +1.5
baz=190
J14K Nanvaranak Lak 20.69 315 P P 11 21 45.9 +1.1
J14K IAmb IAmb 11 21 50.4
comp=Z,43nm,1.4s
J14K Nanvaranak Lak 20.69 315 P P 11 21 46.1 +1.3
baz=108
E20K Nigu River 20.73 333 P P 11 21 47.2 +1.9
baz=131
PMD Palm Desert 20.78 144 IAmb IAmb 11 21 56.6
comp=Z,23nm,0.8s
PFO Pinyon Flats O 20.78 144 P P 11 21 47.3 +1.1
comp=Z,13nm,0.8s,baz=329,slow=6.8,SNR=12
PFO LR LR 11 29 52.4
comp=Z,362nm,20.0s,baz=320,slow=37
comp=Z,13nm,0.8s
F18K Selawik 20.81 327 P P 11 21 47.8 +1.7
baz=122,SNR=14
H16K Elim 20.82 321 P P 11 21 47.7 +1.5
baz=114,SNR=20
K13K Kusilvak Mount 20.96 313 P P 11 21 49.1 +1.4
baz=104
ISCO Idaho Springs 21.12 114 IAmb IAmb 11 22 08.8
comp=Z,27nm,1.2s
D20K Etivluk River 21.16 334 P P 11 21 50.7 +0.9
baz=132
DPP Dos Picos Cty 21.16 146 IAmb IAmb 11 21 57.4
comp=Z,13nm,0.8s
G16K Koyuk River 21.19 323 P P 11 21 50.8 +0.7
baz=116
F17K Baldwin Pennin 21.27 326 IAmb IAmb 11 22 27.0
comp=Z,29nm,0.6s
F17K Baldwin Pennin 21.27 326 P P 11 21 52.6 +1.5
baz=120

M11K	**Mekoryuk**	**21.39**	**308**	P	**P**	**11 21 53.2 +0.9**
	baz=99					
D19K	**Kuna River**	**21.44**	**333**	P	**P**	**11 21 53.7 +0.9**
	baz=129					
UNV	**Unalaska Valle**	**21.54**	**290**	P	**P**	**11 21 54.4 +0.4**
	baz=82					
BAR	**Barrett**	**21.54**	**146**	IAmb	IAmb	11 22 05.1
	comp=Z,22nm,1.1s					
E18K	**Tukpahlearik C**	**21.57**	**329**		**P**	**11 21 56.9 +2.7**
E18K				IAmb	IAmb	11 22 07.2
	comp=Z,19nm,1.1s					
E18K	**Tukpahlearik C**	**21.57**	**329**	P	**P**	**11 21 55.5 +1.2**
	baz=123					
G15K	**Niukluk**	**21.67**	**321**	P	**P**	**11 21 55.5 +0.2**
	baz=113					
E17K	**Hotham Inlet**	**21.80**	**327**	P	**P**	**11 21 57.1 +0.4**
	baz=120,SNR=9.7					
CBX	**Cerro Bola**	**21.88**	**146**	IAmb	IAmb	11 22 21.2
	comp=Z,42nm,1.3s					
Q24A	**Divide**	**21.95**	**115**	IAmb	IAmb	11 22 03.1
	comp=Z,32nm,1.1s					
FCC	**Fort Churchill**	**22.03**	**56**		**P**	**11 22 01.7 +2.5**
FCC				IAmb	IAmb	11 22 10.7
	comp=Z,25nm,0.9s					
ULM	**Lac du Bonnet**	**22.04**	**79**	P	**P**	**11 21 59.4 0.0**
	comp=Z,16nm,0.9s,baz=287,slow=14,SNR=20					
ULM				LR	LR	11 29 40.6
	comp=Z,297nm,21.0s,baz=226,slow=34					
	comp=Z,16nm,0.9s					
ULM	**Lac du Bonnet**	**22.04**	**79**		**P**	**11 22 00.5 +1.1**
ULM				IAmb	IAmb	11 22 05.2
	comp=Z,34nm,1.0s					
ANM	**Nome**	**22.05**	**319**		**P**	**11 22 00.3 +0.9**
ANM	**Nome**	**22.05**	**319**	P	**P**	**11 21 59.7 +0.2**
	baz=110					
BLKN	**Baker Lake**	**22.18**	**41**		**P**	**11 22 03.4 +2.6**
BLKN				IAmb	IAmb	11 22 04.3
	comp=Z,16nm,0.9s					
F15K	**North Star Dit**	**22.19**	**323**	IAmb	IAmb	11 22 03.2
	comp=Z,20nm,1.3s					
F15K	**North Star Dit**	**22.19**	**323**	P	**P**	**11 22 02.3 +1.4**
	baz=113					
C19K	**Lookout Ridge**	**22.24**	**333**	P	**P**	**11 22 03.3 +1.9**
C19K	**Lookout Ridge**	**22.24**	**333**	P	**P**	**11 22 01.8 +0.4**
	baz=128					
C18K	**Utukok River**	**22.44**	**331**	IAmb	IAmb	11 22 16.0
	comp=Z,14nm,1.1s					
C18K	**Utukok River**	**22.44**	**331**	P	**P**	**11 22 04.3 +0.7**
	baz=124					
OGNE	**Ogallala**	**22.48**	**107**		**P**	**11 22 06.5 +2.1**
D17K	**Noatak River**	**22.53**	**328**	P	**P**	**11 22 05.0 +0.5**
	baz=120					
SDCO	**Great Sand Dun**	**22.61**	**118**	IAmb	IAmb	11 22 08.0
	comp=Z,25nm,1.1s					
RDOG	**Red Dog Mine**	**22.65**	**329**	P	**P**	**11 22 07.2 +1.4**
	baz=121					
AGMN	**Agassiz Nation**	**22.69**	**84**	IAmb	IAmb	11 22 14.1
	comp=Z,26nm,1.0s					
F14K	**Arctic Creek**	**22.75**	**321**	P	**P**	**11 22 07.7 +0.9**
	baz=111					
K30B	**Basset**	**22.95**	**100**	P	**P**	**11 22 11.4 +2.2**
C17K	**DeLong Mountai**	**22.95**	**330**	P	**P**	**11 22 10.3 +1.3**
	baz=121					
P08K	**Saint George I**	**22.98**	**298**	P	**P**	**11 22 09.6 +0.2**
	baz=86					
SPIA	**Saint Paul Isl**	**23.34**	**299**	P	**P**	**11 22 12.9 -0.1**
	baz=87					
TNA	**Tin City**	**23.40**	**321**		**P**	**11 22 14.3 +0.8**
TNA	**Tin City**	**23.40**	**321**	P	**P**	**11 22 13.7 +0.2**
	baz=109					
F33A	**5 Mile Ranch,**	**23.42**	**90**	IAmb	IAmb	11 22 16.5
	comp=Z,31nm,1.0s					
EPLO	**Experimental L**	**23.53**	**80**		**P**	**11 22 15.5 +0.5**
C16K	**Lisburne Hills**	**23.55**	**328**	P	**P**	**11 22 17.8 +2.8**
C16K				IAmb	IAmb	11 22 44.1
	comp=Z,14nm,1.2s					
C16K	**Lisburne Hills**	**23.55**	**328**	P	**P**	**11 22 15.3 +0.3**
	baz=118					
T25A	**Trinidad**	**23.65**	**117**	IAmb	IAmb	11 22 18.5
	comp=Z,34nm,1.0s					
ANMO	**Albuquerque**	**24.18**	**124**	P	**P**	**11 22 21.6 0.0**
	comp=Z,15nm,0.9s,baz=317,slow=10,SNR=7.3					
ANMO				LR	LR	11 32 11.0
	comp=Z,148nm,21.9s,baz=316,slow=38					
	comp=Z,15nm,0.9s					
ANMO	**Albuquerque**	**24.18**	**124**	P	**P**	**11 22 22.0 +0.5**
ANMO				IAmb	IAmb	11 22 23.5
	comp=Z,19nm,0.9s					
ECSD	**EROS Data Cent**	**24.24**	**95**	IAmb	IAmb	11 22 27.4
	comp=Z,28nm,1.1s					
GAMB	**Gambell**	**24.52**	**316**	P	**P**	**11 22 25.6 +1.5**
GAMB				IAmb	IAmb	11 22 26.3
	comp=Z,12nm,1.1s					
GAMB	**Gambell**	**24.52**	**316**	P	**P**	**11 22 24.7 +0.6**
	baz=101					
SPMN	**Marine on St.**	**25.88**	**89**	IAmb	IAmb	11 22 39.2
	comp=Z,18nm,1.0s					
I37A	**Lemond, Waseca**	**26.10**	**92**	IAmb	IAmb	11 22 41.2
	comp=Z,20nm,1.0s					
TBO	**Thunder Bay**	**26.55**	**80**		**P**	**11 22 45.5 +2.8**
TBO				IAmb	IAmb	11 22 47.0
	comp=Z,18nm,0.9s					
KSU1	**Kansas State U**	**26.89**	**104**	IAmb	IAmb	11 22 56.1
	comp=Z,15nm,0.8s					
RES	**Resolute Bay**	**27.49**	**20**	LR	LR	11 33 50.5
	comp=Z,435nm,20.6s,baz=203,slow=37					
T35A	**Sooner Cattle**	**28.37**	**107**	P	**P**	**11 23 00.4 +1.3**
OK048	**Pawnee Station**	**28.45**	**109**	IAmb	IAmb	11 23 01.7
	comp=Z,20nm,1.0s					
P38A	**Dawn**	**28.45**	**100**	IAmb	IAmb	11 23 01.6
	comp=Z,20nm,1.0s					
DEOK	**Depew**	**29.10**	**109**	P	**P**	**11 23 05.3 -0.3**
W35A	**Tecumseh**	**29.36**	**111**	IAmb	IAmb	11 23 09.7
	comp=Z,19nm,1.1s					
N41A	**Harden Midland**	**29.47**	**96**	IAmb	IAmb	11 23 10.4
	comp=Z,18nm,1.0s					
TUL3	**Leonard**	**29.47**	**108**	IAmb	IAmb	11 23 18.6
	comp=Z,17nm,1.1s					
U38A	**Gravette**	**29.96**	**106**	IAmb	IAmb	11 23 14.4
	comp=Z,12nm,1.3s					
TXAR	**Lajitas Array**	**30.08**	**127**	P	**P**	**11 23 14.4 0.0**
	comp=Z,3.4nm,0.9s,baz=327,slow=9.1,SNR=4.6					
TXAR				LR	LR	11 35 48.8
	comp=Z,278nm,18.2s,baz=316,slow=38					
	comp=Z,3.4nm,0.9s					
TXAR	**Lajitas Array**	**30.08**	**127**	P	**P**	**11 23 15.7 +1.2**
LPIG	**La Paz**	**31.65**	**142**	LR	LR	11 36 05.1
	comp=Z,102nm,18.9s,baz=336,slow=36					
FCAR	**Ozark Folk Cen**	**31.69**	**104**	IAmb	IAmb	11 23 29.4
	comp=Z,12nm,0.8s					
SHEM	**Shemya Is, Ala**	**33.06**	**294**	LR	LR	11 34 26.4
	comp=Z,185nm,21.9s,baz=54,slow=32					
FRB	**Frobisher Bay**	**34.09**	**45**	LR	LR	11 37 03.5
	comp=Z,268nm,20.7s,baz=252,slow=35					
SADO	**Sadowa**	**34.59**	**80**	LR	LR	11 38 45.7
	comp=Z,321nm,20.4s,baz=326,slow=38					
TKL	**Tuckaleechee C**	**36.96**	**97**	LR	LR	11 39 53.9
	comp=Z,535nm,18.5s,baz=334,slow=37					
SCHQ	**Schefferville**	**37.37**	**59**	LR	LR	11 40 08.6
	comp=Z,290nm,18.5s,baz=304,slow=37					
SEY	**Seymchan**	**40.51**	**317**	LR	LR	11 41 26.1
	comp=Z,228nm,19.5s,baz=78,slow=36					
SFJD	**Kangerlussuaq**	**40.59**	**37**	LR	LR	11 40 57.4
	comp=Z,493nm,19.3s,baz=124,slow=35					
PETK	**Petropavlovsk-**	**41.97**	**301**	P	**P**	**11 24 55.7 0.0**
	comp=Z,3.4nm,0.8s,baz=76,slow=13,SNR=2.2					
PETK				LR	LR	11 41 33.8
	comp=Z,100nm,18.3s,baz=43,slow=35					
	comp=Z,3.4nm,0.8s					
MA2	**Magadan**	**42.54**	**313**	LR	LR	11 41 39.4
	comp=Z,234nm,20.3s,baz=92,slow=35					
CMIG	**Matias Romero**	**44.69**	**127**	P	**P**	**11 25 18.0 0.0**
	comp=Z,1.4nm,0.5s,baz=307,slow=10,SNR=1.9					
CMIG				LR	LR	11 44 02.9
	comp=Z,117nm,19.5s,baz=352,slow=36					
	comp=Z,1.4nm,0.5s					
TIXI	**Tiksi**	**45.11**	**334**	LR	LR	11 47 15.6
	comp=Z,133nm,18.4s,baz=38,slow=40					
SPITS	**Spitsbergen Ar**	**49.02**	**8**	LR	LR	11 49 40.9
	comp=Z,73nm,18.5s,baz=328,slow=40					
YAK	**Yakutsk**	**50.15**	**323**	LR	LR	11 47 41.5
	comp=Z,150nm,18.9s,baz=95,slow=37					
ASAJ	**Asahikawa**	**55.28**	**299**	LR	LR	11 49 08.8
	comp=Z,50nm,19.9s,baz=50,slow=35					
JTS	**Las Juntas de**	**55.55**	**121**	LR	LR	11 53 35.6
	comp=Z,83nm,18.4s,baz=334,slow=40					
NRIK	**Noril'sk**	**56.17**	**345**	P	**P**	**11 26 47.1 +2.9**
	comp=Z,0.8nm,0.3s,baz=11,slow=5.2,SNR=3.5					
KLR	**Kul'dur**	**57.47**	**310**	LR	LR	11 50 59.2
	comp=Z,21nm,19.0s,baz=28,slow=35					
H11N2	**WAKE ISLAND Hy**	**57.53**	**261**	T	T	12 29 25.4
	baz=41,slow=76,SNR=129					
H11N3	**WAKE ISLAND Hy**	**57.53**	**261**	T	T	12 29 12.9
	baz=41,slow=76,SNR=101					
H11N1	**WAKE ISLAND Hy**	**57.55**	**261**	T	T	12 29 34.1
	baz=41,slow=76,SNR=93					
ARCES	**ARCESS Array B**	**58.01**	**10**	LR	LR	11 53 01.2
	comp=Z,126nm,19.7s,baz=328,slow=37					
H11S1	**WAKE ISLAND Hy**	**58.57**	**260**	T	T	12 31 03.0
	baz=40,slow=76,SNR=14					
H11S2	**WAKE ISLAND Hy**	**58.58**	**260**	T	T	12 31 14.6
	baz=40					
H11S3	**WAKE ISLAND Hy**	**58.59**	**260**	T	T	12 30 53.7
	baz=40,slow=76,SNR=10					
HEH	**HeiHe**	**58.81**	**313**	*eP*	**P**	**11 27 01.8 -1.2**
HEH				pmax	pmax	
	comp=Z,6.0nm,0.9s					
SJG	**San Juan**	**60.38**	**98**	LR	LR	11 56 08.0
	comp=Z,71nm,18.7s,baz=344,slow=39					
USRK	**Ussuriysk Ar.**	**60.84**	**305**	P	**P**	**11 27 15.6 -1.4**
	comp=Z,2.2nm,0.9s,baz=52,slow=9.3,SNR=2.4					
	comp=Z,2.2nm,0.9s					
HILR	**Hailar Array B**	**62.73**	**316**	LR	LR	11 55 24.2
	comp=Z,116nm,20.0s,baz=35,slow=37					
MJAR	**Matsushiro Arr**	**62.90**	**295**	LR	LR	11 50 38.7
	comp=Z,43nm,21.6s,baz=40,slow=32					
NOA	**NORSAR Array B**	**63.76**	**19**	P	**P**	**11 27 37.2 +0.8**
	comp=Z,1.1nm,0.9s,baz=335,slow=6.6,SNR=5.1					
NOA				LR	LR	11 57 06.4
	comp=Z,150nm,18.6s,baz=335,slow=38					
	comp=Z,1.1nm,0.9s					
JHJ	**Hachijo jima 2**	**64.45**	**292**	LR	LR	11 54 09.4
	comp=Z,17nm,19.7s,baz=44,slow=34					
SDV	**Santo Domingo**	**64.82**	**108**	LR	LR	11 58 43.5
	comp=Z,75nm,20.3s,baz=311,slow=39					
EKA	**Eskdalemuir Ar**	**65.02**	**30**	P	**P**	**11 27 45.2 +0.5**
	comp=Z,4.3nm,1.0s,baz=313,slow=5.3,SNR=1.6					
EKA				LR	LR	11 57 12.9
	comp=Z,152nm,19.6s,baz=2.5,slow=37					
	comp=Z,4.3nm,1.0s					
HFS	**Hagfors**	**65.09**	**19**	P	**P**	**11 27 45.7 +0.5**
	comp=Z,1.7nm,0.7s,baz=343,slow=9.5,SNR=3.9					
HFS				LR	LR	11 55 40.7
	comp=Z,254nm,18.2s,baz=317,slow=36					
	comp=Z,1.7nm,0.7s					
FINES	**FINESS Array B**	**65.88**	**12**	P	**P**	**11 27 50.2 +0.1**
	comp=Z,1.7nm,0.8s,baz=354,slow=9.8,SNR=2.2					
FINES				LR	LR	11 57 15.3
	comp=Z,158nm,18.1s,baz=333,slow=37					
	comp=Z,1.7nm,0.8s					
FINES	**FINESS Array B**	**65.88**	**12**	P	**P**	**11 27 50.8 +0.6**
ROSC	**El Rosal**	**65.93**	**114**	LR	LR	11 59 15.9
	comp=Z,48nm,21.9s,baz=294,slow=38					
KSRS	**Korea Array**	**67.85**	**303**	P	**P**	**11 28 02.7 -0.4**
	comp=Z,1.0nm,0.7s,baz=30,slow=7.5,SNR=5.6					
KSRS				LR	LR	11 56 50.7
	comp=Z,41nm,20.0s,baz=75,slow=35					
	comp=Z,1.0nm,0.7s					
JNU	**Nakatsue**	**69.50**	**298**	LR	LR	11 55 37.2
	comp=Z,53nm,21.2s,baz=30,slow=33					
SONM	**Songino Array**	**69.51**	**323**	LR	LR	11 59 13.7
	comp=Z,156nm,21.2s,baz=34,slow=36					
KIRV	**Kirov**	**70.24**	**360**	LR	LR	12 04 39.2
	comp=Z,48nm,18.4s,baz=0.9,slow=41					
ZALV	**Zalesovo Beam**	**70.71**	**339**	P	**P**	**11 28 19.9 -0.6**
	comp=Z,0.8nm,0.6s,baz=28,slow=6.5,SNR=4.2					
ZALV				LR	LR	12 02 29.1
	comp=Z,45nm,18.7s,baz=4.5,slow=38					
	comp=Z,0.8nm,0.6s					
ZALV	**Zalesovo Beam**	**70.71**	**339**	P	**P**	**11 28 20.3 -0.2**
PPT	**Papeete**	**70.72**	**199**	LR	LR	11 50 05.0
	comp=Z,143nm,19.7s,baz=62,slow=28					
ARTI	**Arti**	**72.16**	**355**	LR	LR	12 00 46.2
	comp=Z,85nm,21.4s,baz=3.5,slow=36					
HHC	**Hu-ho-hao-te**	**73.13**	**315**	*eP*	**P**	**11 28 34.8 -0.7**
HHC				pmax	pmax	
	comp=Z,7.0nm,0.7s					
ATAH	**Atahualpa**	**73.71**	**125**	LR	LR	12 01 02.0
	comp=Z,95nm,19.1s,baz=354,slow=36					
BVAR	**Borovoye Array**	**74.28**	**347**	LR	LR	12 05 56.5
	comp=Z,66nm,18.2s,baz=18,slow=40					
HNS	**HongShan**	**74.50**	**311**	⇓P	**P**	**11 28 44.5 +1.1**
HNS				pmax	pmax	
	comp=Z,5.0nm,1.3s					
KURK	**Kurchatov**	**75.08**	**341**	P	**P**	**11 28 46.0 -0.6**
KURBB	**Kurchatov Arra**	**75.18**	**341**	P	**P**	**11 28 45.7 -1.5**
	comp=Z,0.3nm,0.4s,baz=19,slow=5.9,SNR=1.3					
	comp=Z,0.3nm,0.4s					
GERES	**GERESS Array B**	**75.53**	**23**	LR	LR	12 03 06.4
	comp=Z,124nm,18.4s,baz=330,slow=37					
VRAC	**Vranov**	**75.78**	**21**	LR	LR	12 02 17.1
	comp=Z,151nm,21.3s,baz=318,slow=36					
GUMO	**Guam**	**75.89**	**274**	LR	LR	11 55 35.0
	comp=Z,110nm,20.5s,baz=62,slow=30					
DAVOX	**Davos/Dischmat**	**76.43**	**27**	LR	LR	12 02 18.4
	comp=Z,159nm,21.7s,baz=260,slow=36					
RAR	**Rarotonga**	**76.73**	**208**	LR	LR	11 55 48.8
	comp=Z,56nm,21.9s,baz=95,slow=30					
NJ2	**Nanjing**	**76.74**	**305**	*eP*	**P**	**11 28 54.6 -1.7**
NJ2				pmax	pmax	
	comp=Z,4.0nm,0.5s					
AKASG	**Malin Array Be**	**76.75**	**13**	P	**P**	**11 28 55.3 -0.8**
	comp=Z,0.3nm,0.4s,baz=350,slow=4.7,SNR=1.2					
AKASG				LR	LR	12 03 42.0
	comp=Z,98nm,19.1s,baz=348,slow=36					
	comp=Z,0.3nm,0.4s					
MODS	**Modra-Piesok**	**76.82**	**21**	*eP*	**P**	**11 28 57.7 +1.2**
MKAR	**Makanchi Array**	**77.96**	**337**	P	**P**	**11 29 02.5 -0.5**
	comp=Z,0.6nm,0.6s,baz=33,slow=4.6,SNR=7.8					
MKAR				LR	LR	12 06 10.5
	comp=Z,72nm,18.5s,baz=9.0,slow=38					
	comp=Z,0.6nm,0.6s					
MKAR	**Makanchi Array**	**77.96**	**337**	P	**P**	**11 29 02.6 -0.4**
ESDC	**Sonseca Array**	**78.08**	**39**	P	**P**	**11 29 04.5 +0.7**
	comp=Z,0.7nm,0.9s,baz=322,slow=6.5,SNR=5.1					
	comp=Z,0.7nm,0.9s					
AKTO	**Aktyubinsk**	**78.12**	**354**	LR	LR	12 04 34.2
	comp=Z,58nm,21.9s,baz=42,slow=36					
MDP	**Montagnes des**	**78.75**	**96**	LR	LR	12 06 13.0
	comp=Z,53nm,19.4s,baz=310,slow=38					
WMQ	**Urumqi**	**79.30**	**333**	*eP*	**P**	**11 29 13.3 +2.9**
LZDM	**Lanzhou Array**	**80.60**	**318**	LR	LR	12 06 52.1
	comp=Z,63nm,18.1s,baz=320,slow=37					
MLR	**Muntele Rosu**	**81.31**	**16**	LR	LR	12 06 28.3
	comp=Z,176nm,18.5s,baz=342,slow=36					
AAK	**Ala-Archa**	**83.63**	**341**	LR	LR	12 11 35.6
	comp=Z,68nm,18.4s,baz=18,slow=39					
MDT	**Midelt**	**83.71**	**43**	LR	LR	12 05 52.5
	comp=Z,85nm,18.2s,baz=341,slow=35					
KBZ	**Khabaz**	**84.96**	**4**	LR	LR	12 09 49.3
	comp=Z,60nm,20.8s,baz=342,slow=37					
VAE	**Valguarnera**	**86.31**	**27**	LR	LR	12 09 09.7
	comp=Z,137nm,19.0s,baz=336,slow=36					
LPAZ	**La Paz**	**86.77**	**121**	LR	LR	12 11 53.7
	comp=Z,33nm,18.2s,baz=351,slow=38					
BRTR	**Keskin Array B**	**88.12**	**12**	LR	LR	12 12 40.5
	comp=Z,56nm,18.4s,baz=330,slow=38					
GNI	**Garni**	**88.61**	**3**	LR	LR	12 16 42.4
	comp=Z,21nm,18.1s,baz=357,slow=40					
PZH	**PanZhiHua**	**89.58**	**315**	P	**P**	**11 30 02.8 0.0**
JAY	**Jayapura**	**90.92**	**267**	LR	LR	12 05 19.1
	comp=Z,74nm,18.9s,baz=353,slow=32					
PMG	**Port Moresby**	**92.29**	**258**	LR	LR	12 04 46.3
	comp=Z,52nm,19.3s,baz=58,slow=31					
DAV	**Davao City (W)**	**92.81**	**285**	LR	LR	12 05 41.0
	comp=Z,55nm,21.9s,baz=346,slow=31					
SIJI	**Sorong**	**95.53**	**276**	LR	LR	12 05 47.9
	comp=Z,73nm,20.7s,baz=130,slow=31					
ASF	**Jabal al Asfar**	**95.97**	**10**	LR	LR	12 16 45.3
	comp=Z,40nm,21.7s,baz=359,slow=37					
BRDH	**Bariadhala**	**97.20**	**321**	LR	LR	12 18 38.6
	comp=Z,103nm,18.8s,baz=348,slow=38					
RCBR	**Riachuelo**	**97.67**	**90**	LR	LR	12 12 57.6
	comp=Z,37nm,18.2s,baz=24,slow=34					
BDFB	**Brasilia**	**97.77**	**105**	LR	LR	12 19 28.4
	comp=Z,39nm,18.3s,baz=336,slow=38					
CMAR	**Chiang Mai Arr**	**97.83**	**313**	LR	LR	12 19 34.1
	comp=Z,41nm,18.8s,baz=30,slow=38					
EIL	**Elat**	**98.19**	**12**	LR	LR	12 18 32.3
	comp=Z,31nm,18.6s,baz=170,slow=38					

*DNK **14** 11:19:59.8±0.8, 63°.88N×25°.14E, h0km, ML2.9(UPP), Suspected explosion*
*UPP **14** 11:20:00.4±1.3, 63°.89N×24°.99E, h0km, ML2.9, Presumed earthquake*
*IDC **14** 11:20:00.4±1.4, 64°.02N×25°.37E, h0km, mbtmp2.7/2, ML1.5/2, Error ellipse: s-maj=48.2km s-min=10.5km az=87.0*
*HEL **14** 11:20:00.5±0.1, 63°.98N×25°.16E, h0km, ML1.2, Explosion*

ISC 14 11:19:58.3±0.8, 64°.01N±0°.02×25°.13E±0°.02, h0km, n40, σ0§88/61, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUF	**Merijarvi**	**0.40**	**334**	PG	**Pb**	**11 20 08.1**	**-0.1**
OUF				SG	**Sb**	**11 20 13.6**	**-1.2**
OBF0	**Syolatti, Pyha**	**0.62**	**322**	PG	**Pb**	**11 20 12.7**	**+0.7**
OBF0				SG	**Sb**	**11 20 21.1**	**-0.2**
OBF0				smax	smax	11 20 21.3	
	comp=Z,2.6nm,0.2s						
OBF8	**Ulkokalla**	**0.80**	**294**	PG	**Pb**	**11 20 15.6**	**+0.6**
OBF8				smax	smax	11 20 26.2	
	comp=Z,2.2nm,0.2s						
OUL	**Oulu**	**1.13**	**17**	PG	**Pn**	**11 20 21.5**	**+0.2**
OUL				SB	**Sn**	**11 20 36.6**	**-0.9**
NIF	**Nilsia**	**1.35**	**116**	PG	**Pb**	**11 20 24.3**	**0.0**
NIF				smax	smax	11 20 40.4	
	comp=Z,1.3nm,0.2s						
NIF				SB	**Sn**	**11 20 43.0**	**+0.2**
SUF	**Sumiainen**	**1.38**	**160**	PG	**Pb**	**11 20 24.9**	**0.0**
	baz=337						
SUF				smax	smax	11 20 40.9	
	comp=Z,0.7nm,0.2s						
BURU	**Burvik**	**1.73**	**291**	P	**Pg**	**11 20 31.9**	**+0.4**
BURU				S	**Sg**	**11 20 55.2**	**+1.3**
BURU	**Burvik**	**1.73**	**291**	P	**Pg**	**11 20 31.9**	**+0.4**
BURU				S	**Sg**	**11 20 55.2**	**+1.3**
BURU	**Burvik**	**1.73**	**291**	PG	**Pg**	**11 20 32.0**	**+0.6**
BURU				SN	**Sg**	**11 20 54.5**	**+0.6**
KEF	**Keuruu**	**1.85**	**184**	PG	**Pb**	**11 20 33.0**	**0.0**
KEF				smax	smax	11 20 54.9	
	comp=Z,1.3nm,0.2s						
KEF				SG	**Sb**	**11 20 56.2**	**-0.4**
UMAU	**Umeaa**	**1.97**	**268**	P	**Pb**	**11 20 34.9**	**0.0**
UMAU	**Umeaa**	**1.97**	**268**	P	**Pb**	**11 20 34.9**	**0.0**
UMAU	**Umeaa**	**1.97**	**268**	PG	**Pg**	**11 20 35.7**	**-0.2**
	baz=84						
UMAU				SG	**Sg**	**11 21 01.1**	**-0.3**
ODEU	**Stanfors**	**1.97**	**284**	P	**Pb**	**11 20 34.6**	**-0.4**
ODEU	**Stanfors**	**1.97**	**284**	P	**Pb**	**11 20 34.6**	**-0.4**
KALU	**Kalix**	**2.00**	**339**	P	**Pg**	**11 20 36.2**	**-0.5**
KALU				S	**Sg**	**11 21 03.6**	**+1.0**
KALU	**Kalix**	**2.00**	**339**	P	**Pg**	**11 20 36.2**	**-0.5**
KALU				S	**Sg**	**11 21 03.6**	**+1.0**
KALU	**Kalix**	**2.00**	**339**	PG	**Pg**	**11 20 36.6**	**-0.1**
KALU				SG	**Sg**	**11 21 05.1**	**+2.5**
TOF	**Tornio**	**2.11**	**351**	PG	**Pg**	**11 20 38.8**	**+0.2**
TOF				smax	smax	11 21 03.7	
	comp=Z,0.6nm,0.2s						
TOF				SG	**Sg**	**11 21 06.5**	**+0.7**
RMF	**Romuvaara**	**2.12**	**82**	PG	**Pb**	**11 20 37.9**	**+0.4**
RMF				smax	smax	11 21 03.0	
	comp=Z,1.3nm,0.2s						
RMF				SG	**Sg**	**11 21 06.3**	**0.0**
SJUU	**Sjulsmark**	**2.13**	**316**	P	**Pg**	**11 20 38.9**	**-0.1**
SJUU	**Sjulsmark**	**2.13**	**316**	P	**Pg**	**11 20 38.9**	**-0.1**
RANF	**Ranua**	**2.13**	**19**	PB	**Pb**	**11 20 38.0**	**+0.2**
RANF				SG	**Sg**	**11 21 06.5**	**-0.2**
KUI2	**Taivalkoski**	**2.16**	**36**	SG	**Sg**	**11 21 03.3**	**+0.7**
KUI1	**Kurvinen**	**2.46**	**49**	PB	**Pb**	**11 20 43.7**	**+0.5**
KU1				SG	**Sg**	**11 21 17.2**	**+0.1**
KPF	**Kankaanpaa**	**2.59**	**214**	PB	**Pb**	**11 20 45.3**	**-0.3**
KPF				smax	smax	11 21 16.4	
	comp=Z,0.6nm,0.2s						
KPF				SG	**Sb**	**11 21 18.4**	**+0.5**
FIA0	**FINESS Array S**	**2.61**	**170**	PB	**Pb**	**11 20 45.3**	**-0.6**
	baz=352						
FIA0				smax	smax	11 21 16.7	
	comp=Z,1.5nm,0.2s						
FIA0				SG	**Sb**	**11 21 18.3**	**-0.3**
FINES	**FINESS Array B**	**2.61**	**170**	Pn	**Pb**	**11 20 45.1**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=354,slow=13,SNR=5.2						
FINES				Sn	**Sb**	**11 21 18.2**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=354,slow=25,SNR=24						
	comp=Z,2.3nm,0.7s						
RNF	**Rovaniemi**	**2.64**	**8**	SG	**Sg**	**11 21 22.2**	**-0.6**
HARU	**Harads**	**2.79**	**323**	P	**Pb**	**11 20 47.5**	**-1.4**
HARU	**Harads**	**2.79**	**323**	P	**Pb**	**11 20 47.5**	**-1.4**
ERTU	**Ertsjaerv**	**2.84**	**336**	P	**Pb**	**11 20 48.6**	**-1.2**
ERTU	**Ertsjaerv**	**2.84**	**336**	P	**Pb**	**11 20 48.6**	**-1.2**
ERTU	**Ertsjaerv**	**2.84**	**336**	PB	**Pb**	**11 20 48.5**	**-1.2**
ERTU				SG	**Sg**	**11 21 27.9**	**-1.4**
KUI6	**Riekki**	**2.86**	**43**	PB	**Pb**	**11 20 48.7**	**-1.4**
KU6				smax	smax	11 21 25.0	
	comp=Z,0.5nm,0.2s						
KU6				SB	**Sb**	**11 21 27.5**	**+1.9**
JOF	**Joensuu**	**2.99**	**109**	SB	**Sb**	**11 21 29.1**	**-0.1**
PAJU	**Pajala**	**3.14**	**345**	SG	**Sg**	**11 21 38.0**	**-1.1**
NUR	**Nurmijarvi**	**3.52**	**184

FG16					IAML			11 27 15.1	
	comp=E,107μm,0.2s								
PCG5	**San Vicente Pa**	**0.62**	**47**	*i*	P		**Pn**	**11 27 00.8**	**-1.6**
PCG5				*i*	S		**Sn**	**11 27 11.7**	**-2.1**
STG5	**El Palmar, Qui**	**0.78**	**321**	*eP*			**Pn**	**11 27 06.2**	**+2.3**
STG5				*i*	S		**Sn**	**11 27 20.8**	**+4.1**
FAME	**Alcaldia de Sa**	**0.80**	**86**		P		**Pn**	**11 27 03.2**	**-0.8**
FAME					S		**Sn**	**11 27 15.9**	**-1.0**
STG8	**El Palmar, Qui**	**0.82**	**323**	*i*	P		**Pn**	**11 27 07.2**	**+2.6**
STG8				*i*	S		**Sn**	**11 27 22.6**	**+4.9**
STG8					IAML			11 27 24.5	
	comp=E,7μm,0.1s								
STG2	**El Palmar, Qui**	**0.83**	**321**	*i*	P		**Pn**	**11 27 07.2**	**+2.7**
STG2				*i*	S		**Sn**	**11 27 21.7**	**+4.2**
GCG4	**OSOP**	**0.84**	**21**	*i*	P		**Pn**	**11 27 04.3**	**-0.4**
GCG4				*i*	S		**Sn**	**11 27 17.9**	**-0.1**
GCG4					IAML			11 27 19.4	
	comp=N,8μm,0.9s								
NUBE	**Las Nubes**	**1.03**	**84**		P		**Pn**	**11 27 06.5**	**-0.3**
NUBE	**Las Nubes**	**1.03**	**84**	*i*	P		**Pn**	**11 27 06.5**	**-0.3**
NUBE	**Las Nubes**	**1.03**	**84**	*i*	P		**Pn**	**11 27 06.5**	**-0.3**
NUBE				*i*	S		**Sn**	**11 27 21.3**	**-0.5**
LOAL	**Lomas de Alarc**	**1.05**	**79**		P		**Pn**	**11 27 06.8**	**-0.1**
LOAL					S		**Sn**	**11 27 22.4**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.05**	**77**		P		**Pn**	**11 27 06.5**	**-0.4**
SLOZ					S		**Sn**	**11 27 22.3**	**+0.4**
RTAL	**Retalhuleu**	**1.10**	**311**		P		**Pn**	**11 27 05.8**	**-1.7**
RTAL					S		**Sn**	**11 27 20.4**	**-2.5**
SOKI	**Kika Raxquin**	**1.16**	**332**	*i*	P		**Pn**	**11 27 07.2**	**-1.4**
SOKI				*i*	S		**Sn**	**11 27 23.5**	**-1.3**
SOKI					IAML			11 27 26.2	
	comp=E,4μm,0.3s								
RBDL	**Robledal**	**1.16**	**74**	*eS*			**Sn**	**11 27 25.1**	**+0.5**
CEVE	**Cerro Verde**	**1.18**	**88**		P		**Pn**	**11 27 08.8**	**+0.2**
CEVE					S		**Sn**	**11 27 25.2**	**+0.2**
CEVE	**Cerro Verde**	**1.18**	**88**	*eP*			**Pn**	**11 27 08.7**	**0.0**
SBLS	**San Blas**	**1.18**	**88**	*i*	P		**Pn**	**11 27 08.8**	**+0.2**
SNJE	**San Jose**	**1.20**	**86**	*i*	P		**Pn**	**11 27 08.9**	**0.0**
APG	**El Apazote**	**1.26**	**17**		P		**Pn**	**11 27 09.2**	**-0.5**
	comp=E,12nm,0.3s,baz=194,slow=14,SNR=450								
APG					S		**Sn**	**11 27 26.4**	**-0.3**
	comp=E,33nm,0.5s,baz=129,slow=12,SNR=45								
APG	**El Apazote**	**1.26**	**17**	*i*	P		**Pn**	**11 27 09.1**	**-0.5**
APG				*i*	S		**Sn**	**11 27 25.5**	**-1.2**
UNIC	**Universidad Ca**	**1.27**	**81**		P		**Pn**	**11 27 09.2**	**-0.3**
UNIC					S		**Sn**	**11 27 27.2**	**+0.6**
JAYA	**Jayaque - finc**	**1.36**	**96**		P		**Pn**	**11 27 10.5**	**-0.2**
JAYA					S		**Sn**	**11 27 29.2**	**+0.4**
JAYA	**Jayaque - finc**	**1.36**	**96**	*i*	P		**Pn**	**11 27 10.6**	**-0.2**
JAYA				*i*	S		**Sn**	**11 27 28.9**	**+0.1**
CEDA	**San Andres**	**1.40**	**89**		S		**Sn**	**11 27 30.8**	**+1.2**
CEDA	**San Andres**	**1.40**	**89**	*eP*			**Pn**	**11 27 11.9**	**+0.6**
PMON	**Piamonte**	**1.48**	**93**		P		**Pn**	**11 27 12.4**	**+0.1**
PMON	**Piamonte**	**1.48**	**93**	*i*	P		**Pn**	**11 27 12.3**	**0.0**
PMON				*eS*			**Sn**	**11 27 32.0**	**+0.4**
LALI	**Alcalda de L**	**1.51**	**101**		P		**Pn**	**11 27 12.4**	**-0.1**
LALI	**Alcalda de L**	**1.51**	**101**	*i*	P		**Pn**	**11 27 13.0**	**+0.4**
LALI				*eS*			**Sn**	**11 27 32.9**	**+1.1**
LALI	**Alcalda de L**	**1.51**	**101**	*i*	P		**Pn**	**11 27 12.9**	**+0.4**
LALI				*i*	S		**Sn**	**11 27 32.2**	**+0.4**
LALI					IAML			11 27 34.1	
	comp=E,471nm,0.4s								
BOQS	**Boqueron**	**1.52**	**92**	*eP*			**Pn**	**11 27 12.9**	**0.0**
MTO3	**Montecristo**	**1.56**	**67**		P		**Pn**	**11 27 12.8**	**-0.5**
MTO3					S		**Sn**	**11 27 33.4**	**0.0**
MTO3	**Montecristo**	**1.56**	**67**	*i*	P		**Pn**	**11 27 12.7**	**-0.7**
MTO3	**Montecristo**	**1.56**	**67**	*i*	P		**Pn**	**11 27 12.8**	**-0.5**
UEES	**Universidad Ev**	**1.56**	**93**		P		**Pn**	**11 27 13.2**	**-0.1**
UEES					S		**Sn**	**11 27 34.8**	**+1.6**
UEES	**Universidad Ev**	**1.56**	**93**	*eP*			**Pn**	**11 27 13.4**	**+0.2**
SEMO	**Seminario San**	**1.57**	**93**		P		**Pn**	**11 27 14.2**	**+0.8**
SEMO					S		**Sn**	**11 27 34.2**	**+0.7**
UTEC	**Universidad Te**	**1.59**	**93**		P		**Pn**	**11 27 13.2**	**-0.5**
UTEC					S		**Sn**	**11 27 35.1**	**+1.1**
SMCA	**Catarina**	**1.60**	**312**	*i*	P		**Pn**	**11 27 12.3**	**-1.4**
SMCA				*i*	S		**Sn**	**11 27 30.7**	**-3.3**
PANCS	**Alcalda de**	**1.62**	**96**		P		**Pn**	**11 27 14.3**	**+0.3**
PANCS					S		**Sn**	**11 27 35.2**	**+0.5**
IGN	**Direccin Gen**	**1.62**	**93**		P		**Pn**	**11 27 15.2**	**+1.2**
LOMA	**Loma Larga**	**1.63**	**95**	*eP*			**Pn**	**11 27 14.7**	**+0.5**
UDBS	**Universidad Do**	**1.64**	**92**		P		**Pn**	**11 27 14.8**	**+0.5**
UDBS					S		**Sn**	**11 27 37.2**	**+2.2**
ESQI	**Esquipulas**	**1.64**	**62**		P		**Pn**	**11 27 14.1**	**-0.2**
ESQI					S		**Sn**	**11 27 35.5**	**+0.4**
ZAFR2	**Estanzuela, Za**	**1.64**	**61**	*i*	P		**Pn**	**11 27 13.7**	**-0.6**
HUEH	**Huehuetenango**	**1.65**	**337**		P		**Pn**	**11 27 14.1**	**-0.5**
HUEH	**Huehuetenango**	**1.65**	**337**	*i*	P		**Pn**	**11 27 14.2**	**-0.3**
HUEH	**Huehuetenango**	**1.65**	**337**	*i*	P		**Pn**	**11 27 14.2**	**-0.3**
HUEH				*i*	S		**Sn**	**11 27 35.5**	**0.0**
HUEH					IAML			11 27 39.7	
	comp=N,2μm,0.5s								
LFU	**La Fuente**	**1.68**	**91**	*i*	P		**Pn**	**11 27 14.8**	**0.0**
AVCB	**Coban**	**1.72**	**14**	*i*	S		**Sn**	**11 27 37.2**	**+0.2**
AVCB					IAML			11 27 40.8	
	comp=N,3μm,0.3s								
LBRS	**Las Brisas**	**1.75**	**92**	*i*	P		**Pn**	**11 27 15.7**	**0.0**
PAVA	**Las Pavas**	**1.85**	**92**		P		**Pn**	**11 27 17.4**	**+0.3**
PAVA					S		**Sn**	**11 27 41.1**	**+1.1**
LLGN	**La Laguna**	**1.88**	**78**		P		**Pn**	**11 27 17.0**	**-0.4**
COEG	**Centro de Oper**	**1.91**	**95**		P		**Pn**	**11 27 17.9**	**+0.1**
COEG					S		**Sn**	**11 27 42.6**	**+1.2**
TECO	**Alcaldia de Te**	**2.02**	**97**		P		**Pn**	**11 27 19.5**	**+0.3**
TECO					S		**Sn**	**11 27 44.3**	**+0.5**
SCLA	**Alcaldia de Sa**	**2.05**	**92**		P		**Pn**	**11 27 20.0**	**+0.3**
SCLA					S		**Sn**	**11 27 45.9**	**+1.2**
SARH	**Santa Rosa de**	**2.24**	**64**	*i*	P		**Pn**	**11 27 22.5**	**+0.3**
SARH	**Santa Rosa de**	**2.24**	**64**	*i*	P		**Pn**	**11 27 22.5**	**+0.3**
TECA	**Tecapa**	**2.29**	**97**	*i*	P		**Pn**	**11 27 23.5**	**+0.6**
PACA	**Pacayal**	**2.47**	**97**		P		**Pn**	**11 27 25.5**	**+0.2**
PACA					S		**Sn**	**11 27 55.9**	**+1.2**
RANC	**El Ranchito**	**2.51**	**98**		P		**Pn**	**11 27 26.0**	**+0.2**
LCND	**La Caada**	**2.91**	**99**		P		**Pn**	**11 27 31.7**	**+0.6**
CNCH	**Conchagua**	**2.97**	**100**		P		**Pn**	**11 27 32.5**	**+0.5**
CNCH					S		**Sn**	**11 28 09.2**	**+2.4**
PETF	**Flores**	**3.25**	**17**		P		**Pn**	**11 27 35.9**	**+0.3**
PETF	**Flores**	**3.25**	**17**	*i*	P		**Pn**	**11 27 36.2**	**+0.6**
CSGN	**Cosiguina Volc**	**3.29**	**104**		P		**Pn**	**11 27 37.3**	**+0.9**
CSGN					S		**Sn**	**11 28 16.0**	**+1.4**
YUSH	**Yuscaran**	**3.88**	**87**		P		**Pn**	**11 27 44.5**	**+0.1**
TEL3	**Telica 3**	**4.08**	**107**		P		**Pn**	**11 27 47.3**	**+0.3**
HERN	**Volcan Telica**	**4.08**	**106**		P		**Pn**	**11 27 47.1**	**+0.1**
HERN					S		**Sn**	**11 28 31.6**	**-2.1**
POLN	**Al Sur del Vol**	**4.08**	**106**		P		**Pn**	**11 27 47.4**	**+0.3**
POLN					S		**Sn**	**11 28 31.8**	**-1.9**
CNGA	**Al SSO del Vol**	**4.23**	**107**		P		**Pn**	**11 27 49.3**	**+0.2**
CNGN	**Cerro Negro**	**4.23**	**107**		P		**Pn**	**11 27 49.3**	**+0.2**
CNGN					S		**Sn**	**11 28 38.3**	**+0.9**
MACN	**El Madrono**	**4.27**	**108**		P		**Pn**	**11 27 49.7**	**+0.1**
MACN					S		**Sn**	**11 28 36.5**	**-1.7**
MOMN	**Momotombo**	**4.41**	**108**		P		**Pn**	**11 27 52.0**	**+0.5**
LIMN	**Finca el Limon**	**4.41**	**99**		P		**Pn**	**11 27 51.9**	**+0.3**
LIMN					S		**Sn**	**11 28 40.7**	**-1.1**
COPN	**Copaltepe**	**4.44**	**111**		P		**Pn**	**11 27 51.7**	**-0.2**
MOM2	**El Cardon**	**4.45**	**107**		P		**Pn**	**11 27 52.6**	**+0.6**
MOM2					S		**Sn**	**11 28 41.5**	**-1.1**
RCVN	**Varillal2**	**4.52**	**92**		P		**Pn**	**11 27 53.2**	**+0.1**
RCON	**San Juan de Ri**	**4.56**	**93**		P		**Pn**	**11 27 54.5**	**+0.8**
MAS3	**Al N del Volca**	**4.88**	**111**		P		**Pn**	**11 27 57.8**	**0.0**
CMIG	**Matias Romero**	**5.10**	**311**		P		**Pn**	**11 28 00.3**	**-0.5**
	comp=N,5.7nm,0.3s,baz=138,slow=12,SNR=24								
CMIG					S		**Sn**	**11 28 57.5**	**-0.8**
	comp=N,7.8nm,0.3s,baz=128,slow=19,SNR=2.3								
SCIG	**Sabancuy**	**5.16**	**356**		P		**Pn**	**11 28 00.4**	**-1.3**
BOAB	**BOACO BROADBAN**	**5.21**	**104**		P		**Pn**	**11 28 02.2**	**-0.2**
SIUN	**Universidad Ur**	**5.89**	**90**		P		**Pn**	**11 28 12.6**	**+0.9**
JTS	**Las Juntas de**	**6.73**	**121**		P		**Pn**	**11 28 22.6**	**-0.5**
	comp=N,6.5nm,0.3s,baz=300,slow=18,SNR=21								
JTS					S		**Sn**	**11 29 35.3**	**-3.0**
	comp=N,3.1nm,0.4s,baz=301,slow=19,SNR=1.4								
TXAR	**Lajitas Array**	**19.50**	**325**		P		**Pn**	**11 31 08.4**	**-1.1**
	comp=N,0.5nm,0.7s,baz=138,slow=9.7,SNR=12								
NVAR	**Mina Array Bea**	**34.55**	**320**		P		**P**	**11 33 29.4**	**+1.8**
	comp=N,1.3nm,0.6s,baz=130,slow=6.7,SNR=15								
	comp=N,1.3nm,0.6s								
WRA	**Warramunga Arr**	**136.44**	**256**		PKP		**PKiKP**	**11 46 01.1**	**-0.4**
	comp=N,0.3nm,0.8s,baz=89,slow=2.9,SNR=1.6								
CMAR	**Chiang Mai Arr**	**146.53**	**343**		PKPbc		**PKPbc**	**11 46 18.2**	**-1.1**
	comp=N,0.6nm,0.4s,baz=358,slow=2.7,SNR=4.4								

*IDC **14** 11:28:06.1±1.0, 12°.31N×144°.52E, h0km, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=32.5km s-min=16.1km az=103.0*
*NEIC **14** 11:28:08.6±1.7, 12°.42N±0°.08×144°.56E±0°.07, h10km±1km, mb4.1/15, Error ellipse: s-maj=14.3km s-min=11.1km az=170.0*

ISC 14 11:28:10.4±0.6, **12°.36N**±0°.07×**144°.6E**±0°.1, **h30**km, **n38**, σ0**s84**/32, **mb4.0**/18, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.26**	**14**	Pn	**Pb**	**11 28 33.6**	**0.0**
	78nm,0.3s,baz=338,slow=19,SNR=16						
GUMO				Sn	**Sb**	**11 28 50.7**	**+1.2**
	104nm,0.3s,baz=197,slow=19,SNR=13						
GUMO	**Guam**	**1.26**	**14**		**Pb**	**11 28 33.9**	**+0.3**
PATS	**Pohnpei**	**14.63**	**111**	Pn	**Pn**	**11 31 34.5**	**-1.0**
H11S3	**WAKE ISLAND Hy**	**22.18**	**71**	T	T	11 56 18.2	
	baz=258,slow=74,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**22.19**	**71**	T	T	11 56 28.7	
	baz=258						
H11S2	**WAKE ISLAND Hy**	**22.19**	**71**	T	T	11 56 16.3	
	baz=258,slow=74,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**22.66**	**68**	T	T	11 56 53.3	
	baz=255,slow=75,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**22.67**	**68**	T	T	11 56 47.7	
	baz=255,slow=75,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	**22.68**	**68**	T	T	11 56 58.7	
	baz=255,slow=75,SNR=5.0						
JGF	**Kuroka**	**24.04**	**345**	P	**P**	**11 33 22.5**	**-0.5**
JGF				IAmb	IAmb	11 33 45.9	
	comp=Z,2.1nm,0.9s						
JYT	**Yasato**	**24.09**	**351**		**P**	**11 33 22.5**	**-0.8**
SSLB	**Suanglung**	**25.11**	**300**	P	**P**	**11 33 31.1**	**-1.8**
SSLB				IAmb	IAmb	11 33 52.7	
	comp=Z,12nm,1.0s						
KS19	**Wonju Array Si**	**29.16**	**332**	P	**P**	**11 34 08.1**	**-0.9**
KS19				IAmb	IAmb	11 34 21.3	
	comp=Z,2.9nm,0.9s						
KNRA	**Kununurra**	**31.94**	**210**	P	**P**	**11 34 34.2**	**+0.4**
WB0	**Warramunga Arr**	**33.45**	**198**	P	**P**	**11 34 46.3**	**-0.7**
WB0				IAmb	IAmb	11 34 48.6	
	comp=Z,5.6nm,1.1s						
WRA	**Warramunga Arr**	**33.64**	**198**	P	**P**	**11 34 48.8**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=18,slow=9.0,SNR=5.8						
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**33.64**	**198**	P	**P**	**11 34 47.0**	**-1.6**
AS31	**Alice Springs**	**37.29**	**196**	P	**P**	**11 35 21.3**	**+1.3**
AS31				IAmb	IAmb	11 35 23.1	
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**37.29**	**196**	P	**P**	**11 35 19.5**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=19,slow=11,SNR=14						
	comp=Z,1.2nm,0.7s						
ASAR	**Alice Springs**	**37.29**	**196**	P	**P**	**11 35 21.2**	**+1.2**
PEA0B	**Petropavlovsk-**	**41.98**	**12**		**P**	**11 35 58.8**	**+0.1**
PETK	**Petropavlovsk-**	**41.98**	**12**	P	**P**	**11 35 59.1**	**+0.4**
CM31	**Chiang Mai Arr**	**44.30**	**284**		**P**	**11 36 18.4**	**+0.4**
CM31				IAmb	IAmb	11 36 26.7	
	comp=Z,2.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**44.30**	**284**	P	**P**	**11 36 18.2**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=87,slow=8.8,SNR=1.5						
	comp=Z,0.6nm,0.3s						
BBOO	**Buckleboo**	**45.64**	**190**	P	**P**	**11 36 30.1**	**+1.8**
ULN	**Ulaanbaatar**	**47.22**	**326**		**P**	**11 36 40.6**	**-0.2**
ULN				IAmb	IAmb	11 36 45.0	
	comp=Z,2.5nm,1.1s						
SONM	**Songino Array**	**47.56**	**326**	P	**P**	**11 36 44.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=145,slow=6.9,SNR=2.7						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**47.56**	**326**	P	**P**	**11 36 44.1**	**+0.7**
MKAR	**Makanchi Array**	**62.16**	**317**	P	**P**	**11 38 29.4**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=91,slow=8.3,SNR=12						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.16**	**317**	P	**P**	**11 38 29.7**	**+0.7**
ZAA0	**Zalesovo Array**	**62.45**	**325**	P	**P**	**11 38 30.6**	**-0.1**
ZAA0				IAmb	IAmb	11 38 44.1	
	comp=Z,1.2nm,0.9s						
ZALV	**Zalesovo Beam**	**62.45**	**325**		**P**	**11 38 31.1**	**+0.4**
KURK	**Kurchatov**	**65.33**	**320**	P	**P**	**11 38 49.5**	**-0.2**
KURK	**Kurchatov**	**65.33**	**320**	IAmb	IAmb	11 38 50.4	
	comp=Z,1.5nm,0.8s						
KURBB	**Kurchatov Arra**	**65.36**	**320**	P	**P**	**11 38 49.5**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=104,slow=6.9,SNR=8.7						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**69.81**	**25**	P	**P**	**11 39 17.2**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=264,slow=6.3,SNR=2.8						
	comp=Z,0.3nm,0.8s						
BVAR	**Borovoye Array**	**70.70**	**322**	P	**P**	**11 39 24.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=86,slow=7.7,SNR=6.2						
	comp=Z,0.8nm,0.3s						
NVAR	**Mina Array Bea**	**87.92**	**51**	P	**P**	**11 40 58.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=293,slow=4.0,SNR=3.6						
	comp=Z,0.3nm,0.6s						

IDC 14 11:31:46.8±4.6, **37°.01N**×**98°.85E**, **h0**km, **mbtmp3.1**/4, **ML2.9**/4, **Error ellipse: s-maj=122.3km s-min=18.5km az=26.0, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**4.04**	**104**	Pn	Pn	11 32 50.9	+0.7
	baz=282,slow=14						
LZDM				Sn	Sn	11 33 39.2	+0.8
	baz=259,slow=35						
LZDM				Lg	Lg	11 33 55.1	
	baz=284,slow=30						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**15.71**	**314**	Pn	Pn	11 35 25.7	-3.6
	0.1nm,0.3s,baz=119,slow=12,SNR=8.5						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**19.53**	**335**	P	P	11 36 15.4	-0.1
	baz=155,slow=11,SNR=1.9						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**19.92**	**320**	P	P	11 36 19.1	-0.7
	baz=125,slow=11,SNR=5.4						
	0.7nm,0.7s						

*SSNC **14** 11:47:43.8±3.2, 19°.04N×80°.71W, h11km±17km, MD3.7, ML3.0, Presumed earthquake*
*JSN **14** 11:47:43.7±2.0, 19°.16N×80°.65W, h48km±999km, MD4.5, MW4.9, Presumed earthquake*

ISC 14 11:47:43.6±1.9, **19°.07N**±0°.09×**80°.69W**±0°.07, **h35**km, **n13**, σ1**s87**/23, **1C**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.83**	**44**	*eP*	**Pn**	**11 47 58.6**	**-0.1**
LCCY				*e*		11 47 58.7	
	baz=224,slow=14						
LCCY				*eS*	**Sn**	**11 48 09.4**	**-0.3**
LCCY				IAML		11 48 11.3	
	comp=E,226nm,0.1s						
LCCY				IAML		11 48 11.4	
	comp=N,175nm,0.1s						
CBCY	**The Bluff, Cay**	**1.10**	**53**	*eP*	**Pn**	**11 48 02.1**	**-0.4**
CBCY				*eS*	**Sn**	**11 48 14.7**	**-1.8**
CBCY				IAML		11 48 17.4	
	comp=E,188nm,0.5s						
CBCY				IAML		11 48 17.6	
	comp=N,209nm,0.1s						
MGV	**Manicaragua**	**3.10**	**12**	*eP*	**Pn**	**11 48 30.1**	**+0.1**
MGV				*eS*	**Sn**	**11 49 06.3**	**+0.5**
MGV				IAML		11 49 08.2	
	comp=N,40nm,0.2s						
MGV				IAML		11 49 09.3	
	comp=E,175nm,0.2s						
MTDJ	**Mount Denham**	**3.10**	**105**	*eP*	**Pn**	**11 48 29.7**	**-0.5**
MTDJ				*eS*	**Sn**	**11 49 03.9**	**-2.2**
MTDJ				IAML		11 49 06.7	
	comp=E,70nm,0.8s						
MTDJ				IAML		11 49 08.0	
	comp=E,71nm,0.6s						
CCCC	**Cccc**	**3.47**	**52**	*eP*	Pn	11 48 41.4	+6.3
CCCC				*eS*	Sn	11 49 24.6	+10
CCCC				IAML		11 49 29.9	
	comp=E,8.7nm,0.7s						
CCCC				IAML		11 49 31.3	
	comp=N,6.0nm,0.9s						
LMGC	**Las Mercedes**	**3.61**	**73**	*eP*	**Pn**	**11 48 38.3**	**+1.3**
LMGC				*eS*	**Sn**	**11 49 17.8**	**-0.7**
LMGC				IAML		11 49 24.0	
	comp=E,21nm,0.3s						
LMGC				IAML		11 49 25.2	
	comp=N,17nm,0.4s						
STH	**Stony Hill**	**3.81**	**104**	*i*	**Pn**	**11 48 39.2**	**-0.5**

CAMR	**Camarioca**	**4.03**	**351**	*eP*			**Pn**	**11 48 42.2**	**-0.5**
CAMR				*eS*			**Sn**	**11 49 24.1**	**-4.5**
CAMR					IAML			11 49 30.9	
	comp=N,19nm,0.8s								
CAMR					IAML			11 49 31.1	
	comp=E,12nm,0.6s								
CHIV	**Chivirico**	**4.13**	**77**	*eP*			**Pn**	**11 48 46.3**	**+2.1**
CHIV				*eS*			**Sn**	**11 49 29.0**	**-2.2**
CHIV					IAML			11 49 35.0	
	comp=E,10nm,0.2s								
CHIV					IAML			11 49 37.1	
	comp=N,20nm,0.8s								
SOR	**Soroa**	**4.29**	**330**	*eP*			**Pn**	**11 48 49.5**	**+3.1**
SOR				*eS*			**Sn**	**11 49 34.6**	**-0.8**
PINC	**Pinares de May**	**4.82**	**72**	*eP*			**Pn**	**11 48 57.1**	**+3.5**
PINC				*eS*			**Sn**	**11 49 49.5**	**+1.2**
PINC					IAML			11 49 56.3	
	comp=N,8.5nm,0.5s								
PINC					IAML			11 49 57.9	
	comp=E,8.2nm,0.2s								
GTBY	**Guantanamo Bay**	**5.33**	**80**	*eP*			**Pn**	**11 49 02.0**	**+1.3**
GTBY				*i*	S		**Sn**	**11 50 00.2**	**-0.6**
QMBU	**Quimbuelo**	**5.65**	**78**	*eP*			**Pn**	**11 49 06.8**	**+1.7**
QMBU				*eS*			**Sn**	**11 50 08.8**	**-0.1**
QMBU					IAML			11 50 09.7	
	comp=E,7.2nm,0.6s								
QMBU					IAML			11 50 09.9	
	comp=N,7.9nm,0.5s								

*IDC **14** 11:59:06.2±3.1, 51°.00N×174°.71W, h0km, mb3.7/4, mbtmp3.7/6, ML3.4/2, MS3.3/1, Error ellipse: s-maj=84.3km s-min=24.6km az=175.0*
*NEIC **14** 11:59:10.7±0.9, 51°.17N±0°.02×175°.02W±0°.04, h10km±2km, ML3.8/8, ML3.3(AEIC), Error ellipse: s-maj=5.0km s-min=3.0km az=237.0*
*AEIC **14** 11:59:12.9±1.0, 51°.25N±0°.05×175°.05W±0°.05, h16km±7km, Error ellipse: s-maj=8.6km s-min=2.5km az=149.0*

ISC 14 11:59:08.4±2.2, **51°.06N**±0°.09×**175°.02W**±0°.04, **h4**km±12km, **n35**, σ1**s82**/38, **mb4.1**/4, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**1.08**	**329**		**Pg**	**11 59 29.8**	**+0.7**
GSIG					**Sb**	**11 59 43.6**	**-0.6**
GSMY	**Great Sitkin M**	**1.18**	**327**		**Pg**	**11 59 31.4**	**+0.5**
GSMY					**Sb**	**11 59 46.0**	**-0.8**
ETKA	**Kagalaska Isla**	**1.18**	**313**		**Pb**	**11 59 31.7**	**+0.4**
ETKA					**Sg**	**11 59 46.4**	**+0.1**
GSCK	**Great Sitkin C**	**1.19**	**323**		**Pb**	**11 59 31.7**	**+0.3**
GSCK					**Sg**	**11 59 46.2**	**-0.4**
GSTR	**Great Sitkin T**	**1.22**	**328**		**Pn**	**11 59 32.6**	**+0.4**
GSTR				IAML		11 59 57.9	
	comp=E,2μm,0.4s						
ATKA	**Atka Island**	**1.25**	**24**		**Pb**	**11 59 32.5**	**0.0**
ATKA					**Sb**	**11 59 47.7**	**-1.2**
ADK	**Adak**	**1.33**	**309**		**Pn**	**11 59 33.9**	**+0.3**
ADK				IAML		11 59 50.8	
	comp=E,2μm,0.3s						
ADK				IAML		11 59 54.9	
	comp=E,1μm,0.2s						
ADK	**Adak**	**1.33**	**309**		**Sb**	**11 59 50.0**	**-1.2**
KOFP	**Korovin Flat P**	**1.34**	**25**		**Pn**	**11 59 34.2**	**+0.3**
KOFP					**Sn**	**11 59 51.0**	**-1.2**
ADAG	**Mount Adagdak**	**1.35**	**313**		**Pb**	**11 59 35.0**	**+0.8**
KOKL	**Mount Kliuchef**	**1.36**	**22**		**Pn**	**11 59 34.2**	**+0.1**
KOKL					**Sb**	**11 59 51.0**	**-1.1**
KOWE	**Korovin West**	**1.39**	**20**		**Pb**	**11 59 34.9**	**+0.1**
KOSE	**Korovin Southe**	**1.42**	**25**		**Pb**	**11 59 35.8**

AS31	**Alice Springs**	**45.16**	**255**	P	**P**	**12 11 42.3 +0.3**
ASAR	**Alice Springs**	**45.16**	**255**	P	**P**	**12 11 42.1 0.0**
	comp=Z,3.4nm,0.7s,baz=94,slow=7.9,SNR=81					
ASAR				PcP	**PcP**	12 13 09.0 **-0.4**
	comp=Z,0.1nm,0.8s,baz=97,slow=4.1,SNR=1.1					
	comp=Z,3.4nm,0.7s					
MTN	**Manton Dam**	**49.37**	**269**	P	**P**	**12 12 13.4 -0.2**
FORT	**Forrest**	**50.22**	**245**	P	**P**	**12 12 18.7 -0.9**
FORT				IAmb	IAmb	12 12 20.8
	comp=Z,3.7nm,0.8s					
KNRA	**Kununurra**	**51.00**	**265**	P	**P**	**12 12 25.4 -0.1**
KNRA				IAmb	IAmb	12 12 29.2
	comp=Z,11nm,1.1s					
PSA00	**Pilbara Seismi**	**58.29**	**256**	P	**P**	**12 13 15.8 -0.4**
PSA00				IAmb	IAmb	12 13 31.3
	comp=Z,14nm,1.1s					
RLMT	**Red Lodge**	**88.80**	**41**	P	**P**	**12 16 07.5 -1.0**

*IDC **14** 12:14:43.2±1.3,3˚.56S×127˚.36E, h0km, mb3.6/3, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=33.5km s-min=22.9km az=80.0*
*DJA **14** 12:14:44.8±0.4,4˚S±3˚×12˚7E±˚, h10km, M4.1/17, mb4.3/4, MLv4.0/17*
ISC 14 12:14:47.6±0.9,3˚.48S±0˚.08×127˚.24E±0˚.06, h35km, n15, σ2s03/18, mb3.4/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.28**	**329**	P	**Pn**	**12 14 52.4**	**-2.9**
NLAI				S	**Sn**	**12 14 56.8**	**-3.7**
AAI	**Ambon**	**0.97**	**102**	P	**Pn**	**12 15 03.5**	**-1.2**
KRAI	**Karang Ratu**	**1.16**	**82**	P	**Pn**	**12 15 05.3**	**-2.1**
MSAI	**Masohi**	**1.69**	**86**	P	**Pn**	**12 15 16.0**	**+1.4**
SANI	**Sanana**	**1.89**	**319**	P	**Pn**	**12 15 18.5**	**+1.1**
SANI				S	**Sn**	**12 15 43.3**	**+3.2**
BNDI	**Bandanaira**	**2.85**	**111**	P	**Pn**	**12 15 32.1**	**+1.5**
SWI	**Sorong**	**4.78**	**57**	P	**Pn**	**12 15 57.8**	**+0.6**
SIJI	**Sorong**	**4.79**	**57**	Pn	**Pn**	**12 15 57.2**	**0.0**
	5.1nm,0.3s,baz=232,slow=17,SNR=16						
SIJI				Sn	**Sn**	**12 16 51.3**	**-0.2**
	2.7nm,0.3s,baz=253,slow=19,SNR=11						
	13nm,0.3s						
SIJI	**Sorong**	**4.79**	**57**	P	**Pn**	**12 15 57.6**	**+0.4**
FAKI	**Fak Fak**	**5.03**	**84**	P	**Pn**	**12 16 00.7**	**+0.1**
	0.1nm16nm,1.6s						
FITZ	**Fitzroy Crossi**	**14.61**	**186**	Pn	**Pn**	**12 18 11.5**	**-0.3**
	baz=7.6,slow=15,SNR=1.4						
	1.9nm,1.0s						
WRA	**Warramunga Arr**	**17.77**	**158**	P	**Pn**	**12 18 49.1**	**-3.2**
	0.3nm,0.3s,baz=342,slow=13,SNR=17						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**21.08**	**163**	P	**P**	**12 19 28.8**	**-0.2**
	7.3nm,0.6s,baz=344,slow=11,SNR=154						
	7.3nm,0.6s						
MKAR	**Makanchi Array**	**63.80**	**327**	P	**P**	**12 25 16.9**	**+0.6**
	0.2nm,0.6s,baz=132,slow=7.4,SNR=3.8						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**68.10**	**329**	P	**P**	**12 25 46.4**	**+2.7**
	0.1nm,0.3s,baz=136,slow=5.9,SNR=4.2						
	0.1nm,0.3s						

*IDC **14** 12:25:26.1±2.3,1˚.44S×134˚.28E, h0km, mb3.1/2, mbtmp3.3/5, ML3.4/3, MS2.3/1, Error ellipse: s-maj=44.2km s-min=23.0km az=57.0*
*DJA **14** 12:25:30.6±0.3,1˚S±3˚×13˚4E±˚, h10km, M3.7/11, MLv3.7/11*
ISC 14 12:25:29.8±1.1,1˚.51S±0˚.07×134˚.17E±0˚.05, h25km±8km, n13, σ2s67/16, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.01**	**106**	P	**Pb**	**12 25 33.7**	**-0.4**
MWPI	**Manokwari, Pap**	**0.59**	**348**	P	**Pb**	**12 25 40.3**	**-1.2**
BAKI	**Biak**	**1.97**	**81**	P	**Pb**	**12 26 05.7**	**+0.7**
SRPI	**Serui, Papua**	**2.10**	**100**	P	**Pb**	**12 26 06.5**	**-0.8**
KMPI	**Kaimana, Papua**	**2.19**	**192**	P	**Pn**	**12 26 07.7**	**+3.1**
FAKI	**Fak Fak**	**2.37**	**234**	P	**Pn**	**12 26 08.2**	**+1.0**
SIJI	**Sorong**	**2.97**	**282**	Pn	**Pn**	**12 26 15.1**	**-0.3**
	3.8nm,0.3s,baz=73,slow=19,SNR=13						
SIJI				Pg	**Pb**	**12 26 22.6**	**+0.6**
	22nm,0.3s,baz=82,slow=18,SNR=35						
SIJI				Sn	**Sb**	**12 26 57.7**	**-0.2**
	18nm,0.3s,baz=142,slow=19,SNR=13						
SIJI				LR	LR	12 27 23.8	
	comp=Z,51nm,21.4s,baz=44,slow=38						
	9.4nm,0.3s						
SIJI	**Sorong**	**2.97**	**282**	P	**Pn**	**12 26 15.6**	**+0.2**
SWI	**Sorong**	**2.98**	**282**	P	**Pn**	**12 26 18.3**	**+2.8**
WRA	**Warramunga Arr**	**18.32**	**179**	P	**P**	**12 29 43.4**	**+1.0**
	0.1nm,0.3s,baz=0.2,slow=12,SNR=9.7						
WRA				S	**Sn**	**12 32 58.6**	**-7.9**
	0.8nm,1.0s,baz=356,slow=24,SNR=2.7						
	0.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**18.49**	**206**	P	**P**	**12 29 44.4**	**+0.1**
	0.1nm,0.3s,baz=20,slow=13,SNR=1.4						
FITZ				S	Sn	12 32 57.5	-13
	1.9nm,0.8s,baz=25,slow=14,SNR=1.8						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**22.03**	**181**	P	**P**	**12 30 23.5**	**+0.8**
	0.7nm,0.7s,baz=6.6,slow=12,SNR=13						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**66.11**	**324**	P	**P**	**12 36 15.2**	**+0.2**
	0.1nm,0.5s,baz=109,slow=7.2,SNR=1.3						
	0.1nm,0.5s						

*IDC **14** 12:28:46.2±1.0,14˚.27N×121˚.57E, h0km, mb3.6/7, mbtmp3.7/7, MS2.7/1, Error ellipse: s-maj=18.2km s-min=10.0km az=166.0*
ISC 14 12:28:51.5±1.2,14˚.1N±0˚.2×121˚.3E±0˚.2, h35km, n8, σ2s16/8, mb3.7/7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.35**	**267**	Pg	**Pn**	**12 28 58.4**	**-1.7**
	964nm,0.3s,baz=90,slow=6.1,SNR=47						
TGY				Lg	Lg	12 29 07.3	
	3µm,0.3s,baz=18,slow=20,SNR=19						
CMAR	**Chiang Mai Arr**	**21.88**	**284**	P	**P**	**12 33 45.0**	**+3.5**
	0.7nm,0.5s,baz=94,slow=12,SNR=8.2						
CMAR				LR	LR	12 41 54.2	
	comp=Z,20nm,19.2s,baz=30,slow=36						
	0.7nm,0.5s						
SONM	**Songino Array**	**35.82**	**343**	P	**P**	**12 35 48.2**	**+0.5**
	0.7nm,0.8s,baz=152,slow=6.5,SNR=4.3						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**36.20**	**159**	P	**P**	**12 35 50.8**	**-0.3**
	0.7nm,0.6s,baz=338,slow=8.8,SNR=11						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**39.53**	**162**	P	**P**	**12 36 19.7**	**+0.5**
	0.8nm,0.6s,baz=343,slow=8.6,SNR=21						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**46.04**	**323**	P	**P**	**12 37 10.3**	**-1.5**
	0.2nm,0.6s,baz=123,slow=5.3,SNR=2.0						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**48.95**	**332**	P	**P**	**12 37 32.0**	**-2.1**
	0.3nm,0.4s,baz=140,slow=7.6,SNR=1.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**50.16**	**326**	P	**P**	**12 37 44.5**	**+1.0**
	2.0nm,0.2s,baz=130,slow=8.6,SNR=4.2						
	2.0nm,0.2s						

IDC 14 12:50:38.1±4.8,19˚.90S×177˚.30W, h422km±48km, mb3.1/3, mbtmp4.0/5, Error ellipse: s-maj=38.2km s-min=20.9km az=93.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.34**	**259**	P	P	12 53 54.2	+0.5
	10.0nm,0.8s,baz=80,slow=12,SNR=6.7						
URZ	**Urewera**	**18.93**	**194**	P	P	12 54 30.9	-0.2
	4.6nm,0.7s,baz=25,slow=15,SNR=7.1						
URZ				S	S	12 57 42.9	+1.1
	5.2nm,0.9s,baz=12,slow=18,SNR=1.6						
ASAR	**Alice Springs**	**45.30**	**256**	P	P	12 58 16.9	+0.2
	1.5nm,0.6s,baz=95,slow=8.2,SNR=23						
	1.5nm,0.6s						
WRA	**Warramunga Arr**	**45.34**	**261**	P	P	12 58 16.4	-0.6
	0.8nm,0.3s,baz=96,slow=8.2,SNR=36						
	0.8nm,0.3s						
ILAR	**Eielson Array**	**87.59**	**13**	P	P	13 02 39.5	0.0
	0.2nm,0.7s,baz=212,slow=3.8,SNR=4.4						
	0.2nm,0.7s						

*IDC **14** 12:53:34.0±1.2,63˚.64N×26˚.06E, h0km, mbtmp2.8/2, ML1.4/2, Error ellipse: s-maj=44.0km s-min=7.8km az=89.0*
*HEL **14** 12:53:34.9±0.1,63˚.66N×26˚.05E, h0km, ML1.2, Explosion*
ISC 14 12:53:33.6±0.8,63˚.67N±0˚.02×26˚.06E±0˚.02, h0km, n26, σ0s89/38, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.83**	**109**	PG	**Pg**	**12 53 49.8**	**+0.2**
NIF				smax	smax	12 54 00.8	
	comp=Z,1.3nm,0.2s						
NIF				SG	**Sg**	**12 54 00.9**	**+0.5**
OUF	**Merijarvi**	**0.91**	**321**	PG	**Pg**	**12 53 51.4**	**+0.3**
	baz=140						
OUF				smax	smax	12 54 03.2	
	comp=Z,2.4nm,0.2s						
OUF				SB	**Sb**	**12 54 04.2**	**-0.7**
SUF	**Sumiainen**	**0.95**	**177**	PB	**Pb**	**12 53 52.4**	**-0.6**
	baz=358						
SUF				smax	smax	12 54 04.0	
	comp=Z,0.7nm,0.2s						
SUF				SB	**Sg**	**12 54 04.6**	**+0.4**
OBF0	**Syolatti, Pyha**	**1.15**	**317**	smax	smax	12 54 10.2	
	comp=Z,1.8nm,0.2s						
OBF0				SB	**Sb**	**12 54 12.1**	**+0.2**
OBF8	**Ulkokalla**	**1.33**	**301**	PN	**Pb**	**12 53 59.7**	**+0.3**
OBF8				smax	smax	12 54 15.1	
	comp=Z,1.2nm,0.2s						
OUL	**Oulu**	**1.43**	**357**	PG	**Pg**	**12 54 00.9**	**0.0**
OUL				SG	**Sb**	**12 54 19.7**	**0.0**
KEF	**Keuruu**	**1.60**	**200**	PG	**Pb**	**12 54 03.6**	**-0.4**
KEF				smax	smax	12 54 22.6	
	comp=Z,2.1nm,0.2s						
KEF				SG	**Sn**	**12 54 23.8**	**-0.7**
VAF	**Ylistaro**	**1.65**	**249**	PN	**Pg**	**12 54 05.2**	**0.0**
VAF				smax	smax	12 54 24.1	
	comp=Z,2.2nm,0.2s						
VAF				SN	**Sb**	**12 54 26.1**	**0.0**
RMF	**Romuvaara**	**1.80**	**70**	PG	**Pb**	**12 54 07.2**	**-0.2**
RMF				smax	smax	12 54 28.8	
	comp=Z,1.5nm,0.2s						
RMF				SG	**Sb**	**12 54 30.6**	**+0.1**
FIA0	**FINESS Array S**	**2.23**	**180**	PG	**Pb**	**12 54 14.6**	**-0.2**
	baz=360						
FIA0				smax	smax	12 54 40.7	
	comp=Z,1.8nm,0.2s						
FIA0				SG	**Sb**	**12 54 43.0**	**+0.1**
FINES	**FINESS Array B**	**2.23**	**180**	Pn	**Pb**	**12 54 14.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=359,slow=14,SNR=6.3						
FINES				Lg	Lg	12 54 43.0	
	comp=Z,1.9nm,0.3s,baz=0.6,slow=28,SNR=42						
	comp=Z,2.2nm,0.9s						
BURU	**Burvik**	**2.25**	**296**	PG	**Pb**	**12 54 14.8**	**-0.2**
BURU				SG	**Sg**	**12 54 44.8**	**-0.9**
KU2	**Taivalkoski**	**2.25**	**24**	PG	**Pb**	**12 54 15.1**	**-0.1**
KU2				SG	**Sb**	**12 54 44.4**	**+0.9**
RANF	**Ranua**	**2.38**	**7**	SG	**Sb**	**12 54 46.1**	**-1.0**
UMAU	**Umeaa**	**2.40**	**278**	PG	**Pg**	**12 54 19.0**	**-0.5**
UMAU				SB	**Sb**	**12 54 47.0**	**-0.7**
KU1	**Kurvinen**	**2.43**	**37**	PG	**Pb**	**12 54 17.8**	**-0.3**
KU1				SG	**Sb**	**12 54 48.6**	**0.0**
JOF	**Joensuu**	**2.49**	**105**	SG	**Sb**	**12 54 49.4**	**-0.9**
TOF	**Tornio**	**2.53**	**344**	smax	smax	12 54 49.8	
	comp=Z,0.4nm,0.2s						
TOF				SG	**Sg**	**12 54 54.3**	**-0.5**
MSF	**Maaselka**	**2.59**	**28**	SN	**Sn**	**12 54 48.9**	**+0.1**
KPF	**Kankaanpaa**	**2.60**	**227**	smax	smax	12 54 51.3	
	comp=Z,1.3nm,0.2s						
KPF				SG	**Sb**	**12 54 53.5**	**+0.1**
KU6	**Riekki**	**2.88**	**33**	smax	smax	12 54 59.9	
	comp=Z,0.6nm,0.2s						
KU6				SG	**Sb**	**12 55 01.3**	**-0.2**
RAF	**Rauma**	**3.32**	**219**	SG	**Sb**	**12 55 16.7**	**+2.4**
ERTU	**Ertsjaerv**	**3.33**	**332**	SG	**Sb**	**12 55 16.5**	**+2.1**
KLF	**Kolari**	**3.69**	**347**	SN	**Sn**	**12 55 17.9**	**+2.0**
ARCES	**ARCESS Array B**	**5.90**	**358**	Pn	**Pn**	**12 55 02.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=175,slow=14,SNR=2.1						
ARCES				Sn	**Sn**	**12 56 08.0**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=180,slow=22,SNR=1.8						
	comp=Z,3.0nm,1.0s						
I43RU	**DUBNA INFRASON**	**8.90**	**136**	I	I	13 43 40.0	
	baz=322,slow=323,SNR=2.3						

*IDC **14** 12:56:31.0±1.7,27˚.77N×87˚.71E, h0km, mb3.3/5, mbtmp3.3/7, ML4.2/1, Error ellipse: s-maj=55.3km s-min=22.2km az=65.0*
*DMN **14** 12:56:40.7±0.3,27˚.92N×87˚.96E, h65km±8km, Ml4.3/10, Error ellipse: s-maj=13.0km s-min=3.5km az=29.0*
ISC 14 12:56:41.5±1.3,28˚.0N±0˚.1×87˚.85E±0˚.09, h84km±19km, n18, σ0s66/29, mb3.1/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODAN	**Odare**	**1.17**	**201**	Pg	**Pn**	**12 57 02.5**	**-0.7**
	baz=206,slow=0.0						
ODAN				Sg	**Sn**	**12 57 19.5**	**+0.1**
	343nm,0.2s,baz=206,slow=0.0						
RAMN	**Ramite**	**1.50**	**228**	Pn	**Pn**	**12 57 07.2**	**-0.1**
	baz=232,slow=0.0						
RAMN				Sn	**Sn**	**12 57 26.8**	**+0.1**
	545nm,0.3s,baz=232,slow=0.0						
GUN	**Gumba**	**1.75**	**269**	Pn	**Pn**	**12 57 11.5**	**+1.0**
	baz=270,slow=0.0						
GUN				Sn	**Sn**	**12 57 32.8**	**+0.3**
	526nm,0.3s,baz=270,slow=0.0						
PKI	**Pulchoki**	**2.20**	**260**	Pn	**Pn**	**12 57 16.9**	**+0.4**
	baz=262,slow=0.0						
PKI				Sn	**Sn**	**12 57 43.2**	**0.0**
	165nm,0.2s,baz=262,slow=0.0						
PKIN	**Phulchoki**	**2.21**	**261**	Pn	**Pn**	**12 57 16.9**	**+0.3**
	baz=262,slow=0.0						
PKIN				Sn	**Sn**	**12 57 43.3**	**-0.1**
	301nm,0.2s,baz=262,slow=0.0						
KKN	**Kakani**	**2.28**	**266**	Pg	**Pn**	**12 57 18.2**	**+0.7**
	baz=268,slow=0.0						
KKN				Sg	**Sn**	**12 57 45.3**	**+0.2**
	274nm,0.2s,baz=268,slow=0.0						
DMN	**Daman**	**2.46**	**262**	Pn	**Pn**	**12 57 20.6**	**+0.7**
	baz=264,slow=0.0						
DMN				Sn	**Sn**	**12 57 49.4**	**+0.1**
	106nm,0.2s,baz=264,slow=0.0						
GKN	**Gorkha**	**2.84**	**272**	Pn	**Pn**	**12 57 25.1**	**+0.1**
	baz=272,slow=0.0						
GKN				Sn	**Sn**	**12 57 58.6**	**+0.2**
	217nm,0.2s,baz=272,slow=0.0						
DANN	**Dangsing**	**3.63**	**277**	Pn	**Pn**	**12 57 34.7**	**-1.1**
	baz=278,slow=0.0						
DANN				Sn	**Sn**	**12 58 16.6**	**-1.2**
	88nm,0.2s,baz=278,slow=0.0						
KOLN	**Koldanda**	**3.77**	**268**	Pg	**Pn**	**12 57 37.3**	**-0.3**
	baz=269,slow=0.0						
KOLN				Sg	**Sn**	**12 58 20.7**	**-0.2**
	84nm,0.2s,baz=269,slow=0.0						
PYUN	**Piuthan**	**4.30**	**273**	Pn	**Pn**	**12 57 43.2**	**-1.6**
	baz=273,slow=0.0						
PYUN				Sn	**Sn**	**12 58 32.8**	**-1.1**
	baz=273,slow=0.0						
LZDM	**Lanzhou Array**	**15.62**	**55**	Pn	**Pn**	**13 00 16.3**	**-0.7**
	baz=238,slow=14						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**19.30**	**348**	P	**P**	**13 01 00.2**	**+0.6**
	0.1nm,0.4s,baz=163,slow=10,SNR=3.9						
KURBB	**Kurchatov Arra**	**23.71**	**345**	P	**P**	**13 01 46.3**	**+0.7**
	0.5nm,0.7s,baz=165,slow=9.1,SNR=5.5						
	0.5nm,0.7s						
SONM	**Songino Array**	**24.53**	**31**	P	**P**	**13 01 53.8**	**+0.5**
	0.3nm,0.4s,baz=222,slow=10.0,SNR=4.6						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**28.19**	**337**	P	**P**	**13 02 25.9**	**0.0**
	0.2nm,0.5s,baz=157,slow=7.8,SNR=1.9						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**65.49**	**131**	P	**P**	**13 07 15.9**	**-0.1**
	0.6nm,1.0s,baz=320,slow=6.0,SNR=5.8						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**67.87**	**135**	P	**P**	**13 07 31.6**	**+0.5**
	0.2nm,0.6s,baz=316,slow=6.2,SNR=2.5						
	0.2nm,0.6s						

RSNC 14 13:00:18.1±0.4,10˚N±5˚×7˚8W±˚, h0km, M2.7, mb4.1, mB4.8, ML2.6, Mw(mB)4.1, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	**Isla Barro Col**	**1.44**	**252**	P	Pn	13 00 45.1	-0.4
BCIP				S	Sg	13 01 01.3	-3.3
CAPC	**Capurgana**	**1.47**	**132**	P	Pn	13 00 45.2	-0.6
APAC	**Apartado, Choc**	**2.52**	**133**	P	Pn	13 01 01.3	+0.9
APAC				S	Sn	13 01 32.3	+0.4
SJCC	**San Jacinto, C**	**3.23**	**85**	P	Pn	13 01 13.0	+2.8
SJCC				S	Sn	13 01 48.9	-0.6
ARGC	**Ariguani, Magd**	**4.15**	**87**	P	Pn	13 01 17.1	-5.7
CRJC	**Cerrejon, Guaj**	**5.65**	**75**	P	Pn	13 01 45.8	+2.3
CRJC				S	Sn	13 02 46.9	-2.3

TRN 14 13:02:53.8,14˚.90N×60˚.66W, h100km, MD3.7, East of Martinique., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVN	**Savane Anatole**	**0.49**	**264**	*e*P	Pn	13 03 11.2	+1.6
BIM	**Bigot**	**0.55**	**226**	*e*P	Pn	13 03 11.7	+1.7
DLPL	**La Plaine**	**0.71**	**308**	*e*P	Pn	13 03 12.7	+1.3
DLPL				*e*S	Sn	13 03 25.7	+1.1
DSLB	**Salisbury**	**0.91**	**306**	*e*P	Pn	13 03 14.4	+1.0
DWS	**Wesley**	**0.92**	**317**	*e*P	Pn	13 03 14.7	+1.3
DWS				*e*S	Sn	13 03 29.6	+1.5
SLBI	**Saint Lucia, B**	**0.92**	**199**	*e*P	Pn	13 03 14.6	+1.2
SLBI				*e*S	Sn	13 03 28.7	+0.6
SLCP	**Castries, St.**	**0.94**	**200**	*e*S	Sn	13 03 29.4	+1.0
SLAC	**Saint Lucia, A**	**1.02**	**193**	*e*P	Pn	13 03 15.9	+1.4
SLAC				*e*S	Sn	13 03 31.4	+1.4
MCLT	**Moule a Chique**	**1.21**	**193**	*e*P	Pn	13 03 18.5	+1.8
MCLT				*e*S	Sn	13 03 34.8	+0.9
TBG	**Guadaloupe-3**	**1.34**	**315**	*e*P	Pn	13 03 18.2	0.0
DSDZ	**La Diserade, G**	**1.46**	**345**	*e*P	Pn	13 03 21.4	+1.8
MMLZ	**Guadeloupe Bro**	**1.50**	**320**	*e*P	Pn	13 03 20.8	+0.7
MMLZ				*e*S	Sn	13 03 41.9	+1.9
ATGZ	**Broadband at L**	**1.57**	**319**	*e*P	Pn	13 03 22.1	+1.1
SVB	**Belmont**	**1.71**	**200**	*e*S	Sn	13 03 46.3	+1.4
DHSZ	**Broadband at M**	**1.73**	**322**	*e*P	Pn	13 03 24.5	+1.5
MBWH	**Windy Hill**	**2.35**	**321**	*e*P	Pn	13 03 32.4	+1.3
MBWH				*e*S	Sn	13 04 01.4	+1.8
MBFL	**Flemmings, Mon**	**2.37**	**321**	*e*P	Pn	13 03 32.1	+0.9
ANWB	**Willy Bob**	**2.96**	**339**	*e*P	Pn	13 03 39.8	+0.8
ANWB				*e*S	Sn	13 04 13.2	-0.6
SKI	**Saint Kitts**	**3.14**	**321**	*e*P	Pn	13 03 42.4	+0.9

IDC 14 13:24:19.1±3.2,42˚.33N×126˚.58W, h0km, mb2.7/3, mbtmp2.9/4, ML1.7/2, MS3.1/1, Error ellipse: s-maj=73.9km s-min=19.4km az=48.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YBH	**Yreka Blue Hor**	**2.94**	**100**	Pn	Pn	13 25 07.1	-0.1
	baz=304,slow=8.2,SNR=1.9						
NVAR	**Mina Array Bea**	**7.42**	**119**	Pn	Pn	13 26 11.2	+2.3
	0.1nm,0.3s,baz=304,slow=16,SNR=7.2						
	0.7nm,0.7s						
ELK	**Elko**	**8.65**	**97**	LR	LR	13 30 06.2	
	comp=Z,117nm,20.5s,baz=345,slow=40						
YKA	**Yellowknife Ar**	**21.41**	**15**	P	P	13 29 09.1	+0.9
	0.2nm,0.8s,baz=212,slow=11,SNR=4.6						
	0.2nm,0.8s						
TXAR	**Lajitas Array**	**22.57**	**118**	P	P	13 29 19.4	-1.7
	0.3nm,0.8s,baz=317,slow=7.7,SNR=4.2						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**25.28**	**340**	P	P	13 29 46.6	-0.3
	0.3nm,0.9s,baz=142,slow=9.0,SNR=3.2						
	0.3nm,0.9s						
H11N3	**WAKE ISLAND Hy**	**59.77**	**270**	T	T	14 38 45.4	
	baz=52						
H11N2	**WAKE ISLAND Hy**	**59.77**	**270**	T	T	14 38 47.0	
	baz=52						
H11N1	**WAKE ISLAND Hy**	**59.79**	**270**	T	T	14 38 50.7	
	baz=52						

IDC 14 13:26:57.4±1.2,14˚.33N×121˚.56E, h0km, mb3.5/4, mbtmp3.5/4, MS3.0/1, Error ellipse: s-maj=24.3km s-min=10.1km az=164.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.64**	**250**	Pg	Pg	13 27 10.0	+0.3
	489nm,0.3s,baz=92,slow=3.6,SNR=21						
TGY				Lg	Lg	13 27 18.3	
	1µm,0.3s,baz=208,slow=23,SNR=14						
DAV	**Davao City (W)**	**8.22**	**151**	LR	LR	13 32 55.7	
	comp=Z,99nm,18.1s,baz=338,slow=44						
WRA	**Warramunga Arr**	**36.30**	**159**	P	P	13 34 02.6	-0.4
	0.4nm,0.6s,baz=337,slow=9.2,SNR=7.6						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**39.64**	**162**	P	P	13 34 31.5	+0.3
	0.5nm,0.6s,baz=342,slow=7.3,SNR=13						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**50.14**	**326**	P	P	13 35 55.4	+0.9
	0.6nm,0.9s,baz=120,slow=7.9,SNR=4.7						
	0.6nm,0.9s						
ILAR	**Eielson Array**	**77.83**	**26**	P	P	13 38 55.2	-1.3
	0.6nm,1.0s,baz=280,slow=7.3,SNR=3.0						
	0.6nm,1.0s						

*IDC **14** 13:38:15.6±4.0,30˚.05N×131˚.22E, h0km, mb3.8/5, mbtmp3.7/7, ML3.0/2, MS3.9/2, Error ellipse: s-maj=79.6km s-min=44.5km az=153.0*
*JMA **14** 13:38:21.5±0.1,30˚.4N±0˚.4×131˚.4E±0˚.7, h30km, MV3.1/36, NEAR TANEGASHIMA ISLAND*
ISC 14 13:38:22.4±1.9,30˚.37N±0˚.09×131˚.3E±0˚.1, h32km±8km, n19, σ0s53/24, mb4.0/5, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.31**	**276**	*i* P	**Pb**	**13 38 30.1**	**-0.2**
JMTN				*e*S	**Sb**	**13 38 36.0**	**+0.4**
JTN	**Tanegashima 3**	**0.38**	**320**	P	**Pb**	**13 38 30.7**	**-0.5**
JTN				*e*S	**Sb**	**13 38 37.5**	**+0.4**
JYAK	**Yak

mb4.4/23, Error ellipse: s-maj=19.4km s-min=8.4km az=99.0
*DJA **14** 13:43:13.4±1.7, 10˚N±13˚×12˚7E±˚, h69km±8km, M4.9/25, mB5.7/3, mb4.6/25, MLv5.0/2, Mw(mB)5.2/3*
ISC 14 13:43:13.5±0.5, 9˚32N±0.05×126˚55E±0.08, h43km, n80, σ1§50/66, mb4.3/34, MS3.1/9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.44**	**203**	Pn	**Pn**	**13 43 51.9**	**+1.1**
	84nm,0.3s,baz=316,slow=5.8,SNR=4.1						
DAV				Sn	**Sn**	**13 44 18.9**	**-0.5**
	121nm,0.3s,baz=116,slow=20,SNR=5.8						
DAV				Lg	Lg	13 44 30.1	
	118nm,0.3s,baz=109,slow=21,SNR=2.3						
DAV				LR	LR	13 45 01.1	
	comp=Z,1μm,21.2s,baz=14,slow=44 322nm,0.5s						
DAV	**Davao City (W)**	**2.44**	**203**		**Pn**	**13 43 50.0**	**-0.9**
DAV	**Davao City (W)**	**2.44**	**203**	P	Pn	13 44 00.3	+9.5
TNTI	**Ternate**	**8.53**	**174**	P	**Pn**	**13 45 16.2**	**+1.6**
MYLDM	**Lahad Datu**	**8.98**	**243**	P	Pn	13 45 26.4	+5.7
	22nm,1.3s						
GTOI	**Gorontalo**	**9.32**	**202**	P	**Pn**	**13 45 25.9**	**+0.5**
MRSI	**Marisa**	**9.91**	**208**	P	Pn	13 45 42.4	+8.9
	27nm,0.7s						
KKM	**Kota Kinabalu**	**10.75**	**253**		**Pn**	**13 45 45.7**	**+0.7**
KKM	**Kota Kinabalu**	**10.75**	**253**	P	Pn	13 45 49.7	+4.7
	17nm,0.8s						
SIJI	**Sorong**	**11.16**	**155**	Pn	**Pn**	**13 45 50.9**	**+0.3**
	1.3nm,0.3s,baz=299,slow=23,SNR=8.4						
SIJI				Sn	**Sn**	**13 47 50.0**	**-4.1**
	0.3nm,0.3s,baz=177,slow=21,SNR=1.9 3.9nm,0.3s						
FAKI	**Fak Fak**	**13.42**	**155**	Pn	**Pn**	**13 46 20.8**	**-0.7**
TTSI	**Tana Toraja**	**14.00**	**209**	P	**P**	**13 46 35.8**	**-0.5**
SPSI	**Sidrap Palu**	**14.83**	**207**	P	**P**	**13 46 46.1**	**+0.5**
	16nm,0.7s						
KAPI	**Kappang**	**15.77**	**206**	Pn	**P**	**13 46 54.0**	**-2.1**
	0.3nm,0.3s,baz=43,slow=14,SNR=5.8						
KAPI				LR	LR	13 53 52.9	
	comp=Z,78nm,18.1s,baz=38,slow=41 2.9nm,0.3s						
KAPI	**Kappang**	**15.77**	**206**		**Pn**	**13 46 51.6**	**-1.2**
SBUM	**Sibu**	**15.80**	**245**		**P**	**13 46 53.9**	**-2.4**
SBUM	**Sibu**	**15.80**	**245**	P	**P**	**13 46 57.3**	**+0.9**
JOW	**Kunigami**	**17.49**	**5**	LR	LR	13 54 53.5	
	comp=Z,39nm,19.0s,baz=136,slow=40						
MMRI	**Maumere**	**18.35**	**194**	P	**P**	**13 47 23.2**	**-1.4**
MMRI				IAmb	IAmb	13 47 59.8	
	comp=Z,58nm,1.3s						
GUMO	**Guam**	**18.45**	**75**	LR	LR	13 55 02.1	
	comp=Z,69nm,18.4s,baz=80,slow=38						
LBFI	**Labuhan Bajo,**	**18.89**	**201**	P	**Pn**	**13 47 36.6**	**+5.2**
	comp=Z,34nm,0.6s						
SOEI	**Soe**	**19.09**	**187**	P	**P**	**13 47 31.6**	**-1.2**
SOEI				IAmb	IAmb	13 47 52.7	
	comp=Z,38nm,0.8s						
SOEI	**Soe**	**19.09**	**187**	P	**Pn**	**13 47 38.5**	**+4.6**
	comp=Z,50nm,0.9s						
DBNI	**Kabupaten Domp**	**19.52**	**205**	P	**P**	**13 47 40.6**	**+1.7**
	comp=Z,11nm,0.7s						
BATI	**Baumata**	**19.61**	**188**	P	**Pn**	**13 47 40.4**	**+0.3**
	comp=Z,5.0nm,0.3s,baz=15,slow=0.5,SNR=15						
BATI	**Baumata**	**19.61**	**188**	P	**Pn**	**13 47 40.0**	**-0.1**
	comp=Z,76nm,0.9s						
JNU	**Nakatsue**	**24.02**	**9**	LR	LR	13 58 02.3	
	comp=Z,30nm,19.3s,baz=139,slow=37						
KNRA	**Kununurra**	**24.94**	**175**		**P**	**13 48 33.4**	**+0.6**
IPM	**Ipoh**	**25.78**	**261**	P	**P**	**13 48 40.8**	**+0.1**
IPM				IAmb	IAmb	13 48 43.4	
	comp=Z,10nm,0.9s						
KLSI		**25.82**	**238**	P	**P**	**13 48 41.8**	**+0.8**
	comp=Z,17nm,0.7s						
MDSI	**Maura Dua**	**26.18**	**239**	P	**P**	**13 48 44.9**	**+0.7**
	comp=Z,12nm,0.9s						
JHJ	**Hachijo jima 2**	**26.65**	**25**	LR	LR	13 59 46.1	
	comp=Z,48nm,19.1s,baz=194,slow=37						
FITZ	**Fitzroy Crossi**	**27.26**	**182**	P	**P**	**13 48 54.5**	**+0.6**
	comp=Z,10nm,0.6s,baz=13,slow=8.0,SNR=18 comp=Z,10nm,0.6s						
KSRS	**Korea Array**	**28.03**	**2**	P	**P**	**13 49 01.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=184,slow=9.9,SNR=4.4						
KSRS				LR	LR	14 01 52.5	
	comp=Z,42nm,18.7s,baz=355,slow=40 comp=Z,0.5nm,0.4s						
RPSI	**Rantau Prapat**	**28.23**	**258**	P	**P**	**13 49 03.1**	**+0.4**
RPSI				IAmb	IAmb	13 49 15.0	
	comp=Z,7.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**28.26**	**292**	P	**P**	**13 49 02.6**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=110,slow=6.8,SNR=6.2						
CMAR				LR	LR	14 00 28.3	
	comp=Z,26nm,18.6s,baz=150,slow=37 comp=Z,1.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**28.26**	**292**	P	**P**	**13 49 02.5**	**-0.4**
MJAR	**Matsushiro Arr**	**29.09**	**20**	LR	LR	13 58 51.8	
	comp=Z,74nm,21.1s,baz=172,slow=32						
WRA	**Warramunga Arr**	**30.08**	**165**	P	**P**	**13 49 18.0**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=343,slow=8.8,SNR=14 comp=Z,1.0nm,0.6s						
AS31	**Alice Springs**	**33.57**	**168**		**P**	**13 49 48.5**	**-1.1**
ASAR	**Alice Springs**	**33.57**	**168**	P	**P**	**13 49 49.4**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=352,slow=6.9,SNR=45 comp=Z,0.7nm,0.4s						
CTA	**Charters Tower**	**35.08**	**147**	P	**P**	**13 50 04.2**	**+1.5**
	comp=Z,2.7nm,0.7s,baz=360,slow=6.0,SNR=2.4 comp=Z,2.7nm,0.7s						
ASAJ	**Asahikawa**	**37.36**	**19**	P	**P**	**13 50 20.1**	**-1.9**
	comp=Z,1.7nm,0.6s,baz=253,slow=11,SNR=4.8 comp=Z,1.7nm,0.6s						
JKA	**Kamikawa-asahi**	**37.36**	**19**	P	**P**	**13 50 23.8**	**+1.9**
LSA	**Lhasa**	**38.80**	**306**	P	**P**	**13 50 35.0**	**+0.1**
LSA				IAmb	IAmb	13 50 38.2	
	comp=Z,2.4nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**39.93**	**72**	T	T	14 33 39.7	
	baz=262,slow=75,SNR=83						
H11S1	**WAKE ISLAND Hy**	**39.95**	**72**	T	T	14 33 37.8	
	baz=262,slow=75,SNR=80						
H11S2	**WAKE ISLAND Hy**	**39.95**	**72**	T	T	14 33 38.7	
	baz=262,slow=75,SNR=104						
KLR	**Kul'dur**	**40.02**	**5**	LR	LR	14 05 11.8	
	comp=Z,12nm,21.8s,baz=36,slow=33						
ULN	**Ulaanbaatar**	**41.80**	**340**	P	**P**	**13 50 58.8**	**-0.3**
ULN				IAmb	IAmb	13 51 01.1	
	comp=Z,4.9nm,1.5s						
SONM	**Songino Array**	**42.00**	**340**	P	**P**	**13 50 58.9**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=156,slow=11,SNR=2.3 comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**42.00**	**340**	P	**P**	**13 50 60.0**	**-0.7**
NWAO	**Narrogin (SRO)**	**42.94**	**192**	P	**P**	**13 51 09.3**	**+1.0**
	comp=Z,12nm,0.8s,baz=8.3,slow=8.9,SNR=7.7 comp=Z,12nm,0.8s						
NWAO	**Narrogin (SRO)**	**42.94**	**192**	P	**P**	**13 51 08.2**	**-0.1**
PALK	**Pallekele**	**45.39**	**271**	LR	LR	14 10 48.2	
	comp=Z,23nm,19.1s,baz=52,slow=37						
PEA0B	**Petropavlovsk-**	**50.38**	**24**	P	**P**	**13 52 06.5**	**+0.1**
PETK	**Petropavlovsk-**	**50.38**	**24**	P	**P**	**13 52 07.8**	**+1.5**
	comp=Z,6.7nm,0.9s,baz=198,slow=3.1,SNR=12 comp=Z,6.7nm,0.9s						
PETK	**Petropavlovsk-**	**50.38**	**24**	P	**P**	**13 52 08.0**	**+1.6**
MK31	**Makanchi Array**	**52.94**	**323**	P	**P**	**13 52 24.8**	**-0.8**
MK31				IAmb	IAmb	13 52 26.9	
	comp=Z,2.4nm,0.7s						
MKAR	**Makanchi Array**	**52.94**	**323**	P	**P**	**13 52 24.6**	**-1.1**
	comp=Z,2.6nm,0.5s,baz=124,slow=8.3,SNR=26 comp=Z,2.6nm,0.5s						
MKAR	**Makanchi Array**	**52.94**	**323**	P	**P**	**13 52 24.8**	**-0.8**
MAKZ	**Makanchi**	**53.14**	**323**	P	**P**	**13 52 25.8**	**-1.2**
MAKZ				IAmb	IAmb	13 52 28.2	
	comp=Z,2.4nm,0.5s						
TARG	**Taragay, Kyrgy**	**53.57**	**316**	P	**P**	**13 52 30.3**	**-0.5**
TARG				IAmb	IAmb	13 52 38.3	
	comp=Z,2.2nm,0.7s						
ZALV	**Zalesovo Beam**	**55.58**	**332**	P	**P**	**13 52 42.3**	**-2.3**
	comp=Z,0.6nm,0.4s,baz=132,slow=7.5,SNR=4.2 comp=Z,0.6nm,0.4s						
AAK	**Ala-Archa**	**56.19**	**316**	LR	LR	14 19 46.5	
	comp=Z,50nm,19.0s,baz=21,slow=39						
KURK	**Kurchatov**	**57.00**	**326**	P	**P**	**13 52 53.2**	**-1.6**
KURK				IAmb	IAmb	13 52 54.8	
	comp=Z,5.1nm,1.1s						
KURBB	**Kurchatov Arra**	**57.00**	**326**	P	**P**	**13 52 53.2**	**-1.6**
	comp=Z,1.7nm,0.6s,baz=123,slow=6.9,SNR=20 comp=Z,1.7nm,0.6s						
TIXI	**Tiksi**	**62.29**	**1**	LR	LR	14 22 53.0	
	comp=Z,61nm,19.2s,baz=16,slow=38						
BVAR	**Borovoye Array**	**62.60**	**326**	P	**P**	**13 53 32.1**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=118,slow=7.8,SNR=6.0						
	comp=Z,1.3nm,0.7s						
BORK	**Borovoye**	**62.64**	**326**	P	**P**	**13 53 32.5**	**-1.0**
BORK				IAmb	IAmb	13 53 33.0	
	comp=Z,3.1nm,0.6s						
NRIK	**Noril'sk**	**64.99**	**346**	P	**P**	**13 53 48.2**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=132,slow=9.6,SNR=4.6 comp=Z,1.9nm,0.4s						
E19K	**Redstone River**	**76.16**	**23**		**P**	**13 54 59.0**	**+2.1**
E19K				IAmb	IAmb	13 55 18.4	
	comp=Z,9.2nm,1.4s						
ILAR	**Eielson Array**	**80.17**	**26**	P	**P**	**13 55 18.9**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=237,slow=5.0,SNR=12 comp=Z,0.3nm,0.5s						
G29M	**Pine Creek**	**83.62**	**23**	P	**P**	**13 55 38.5**	**+1.3**
G29M				IAmb	IAmb	13 56 02.8	
	comp=Z,4.4nm,1.1s						
SPITS	**Spitsbergen Ar**	**84.99**	**349**	P	**P**	**13 55 43.3**	**-0.6**
	comp=Z,9.6nm,1.0s,baz=96,slow=6.8,SNR=6.1 comp=Z,9.6nm,1.0s						
ARCES	**ARCESS Array B**	**85.17**	**340**	P	**P**	**13 55 44.3**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=78,slow=6.6,SNR=15 comp=Z,1.5nm,0.4s						
ARCES	**ARCESS Array B**	**85.17**	**340**	P	**P**	**13 55 44.6**	**-0.4**
BRTR	**Keskin Array B**	**86.34**	**309**	P	**P**	**13 55 51.7**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=66,slow=3.6,SNR=3.0 comp=Z,0.7nm,0.8s						
FINES	**FINESS Array B**	**86.85**	**332**	P	**P**	**13 55 52.0**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=100,slow=5.2,SNR=13 comp=Z,0.7nm,0.4s						
YKA	**Yellowknife Ar**	**94.50**	**24**	P	**P**	**13 56 30.1**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=304,slow=5.1,SNR=7.4 comp=Z,0.4nm,0.8s						

*AUST **14** 13:49:16.4±0.2, 33˚S±2˚×13˚9E±˚, h10km, ML3.5/9, Error ellipse: s-maj=4.7km s-min=3.6km az=67.5*
*NOU **14** 13:49:16.2, 32.84S×138.90E, h0km, ML4.1/13, Near Coast of South Australia*
*IDC **14** 13:49:19.4±4.2, 32.21S×138.96E, h0km, mbtmp3.7/4, ML3.7/4, Error ellipse: s-maj=45.7km s-min=16.4km az=24.0*
ISC 14 13:49:15.8±1.0, 32˚80S±0.03×138˚87E±0.03, h26km±11km, n39, σ2§05/55, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	**Hallett**	**0.63**	**176**	P	**Pb**	**13 49 27.0**	**-1.4**
HTT				S	**Sb**	**13 49 34.7**	**-2.2**
HTT	**Hallett**	**0.63**	**176**	P	**Pb**	**13 49 27.0**	**-1.4**
HTT	**Hallett**	**0.63**	**176**	S	**Sb**	**13 49 35.5**	**-1.4**
NAPP	**Napperby**	**0.72**	**237**	P	**Pb**	**13 49 29.1**	**-0.7**
PTPS	**Port Pirie**	**0.82**	**243**	P	**Pn**	**13 49 31.3**	**-0.4**
PTPS	**Port Pirie**	**0.82**	**243**	P	**Pn**	**13 49 31.5**	**-0.2**
PTPS	**Port Pirie**	**0.82**	**243**	S	**Sb**	**13 49 42.7**	**+0.4**
YAPP	**Yappala Statio**	**1.04**	**333**	P	**Pb**	**13 49 36.0**	**+0.8**
YAPP				S	**Sb**	**13 49 50.3**	**+1.9**
SDAN	**Sedan**	**1.75**	**167**	P	**Pb**	**13 49 46.8**	**-0.5**
SDAN				S	**Sb**	**13 50 09.2**	**+0.4**
GHSS	**Government Hou**	**2.13**	**186**	P	**Pb**	**13 49 53.0**	**-0.7**
GHSS	**Government Hou**	**2.13**	**186**	P	**Pb**	**13 49 53.0**	**-0.7**
BBOO	**Buckleboo**	**2.37**	**269**	P	**Pn**	**13 49 55.3**	**+2.3**
BBOO	**Buckleboo**	**2.37**	**269**	P	**Pb**	**13 49 56.2**	**-1.6**
BBOO	**Buckleboo**	**2.37**	**269**	S	**Sb**	**13 50 27.7**	**+1.1**
LCRK	**Leigh Creek**	**2.41**	**346**	P	**Pb**	**13 49 56.9**	**-1.6**
LCRK				S	**Sb**	**13 50 26.8**	**-0.9**
STKA	**Stephens Creek**	**2.48**	**69**	P	**Pb**	**13 49 58.8**	**-1.0**
STKA				S	**Sb**	**13 50 30.4**	**+0.5**
STKA	**Stephens Creek**	**2.48**	**69**	Pn	**Pb**	**13 49 58.8**	**-1.0**
	18nm,0.3s,baz=267,slow=10,SNR=78						
STKA				Sn	**Sn**	**13 50 22.8**	**-1.3**
	27nm,0.3s,baz=255,slow=15,SNR=7.6						
STKA				Lg	Lg	13 50 30.1	
	55nm,0.3s,baz=283,slow=18,SNR=5.0 69nm,0.4s						
STKA	**Stephens Creek**	**2.48**	**69**	P	**Pb**	**13 49 59.2**	**-0.6**
STKA	**Stephens Creek**	**2.48**	**69**	S	**Sb**	**13 50 29.9**	**0.0**
ARPS	**Mount Arapiles**	**4.66**	**149**	P	**Pn**	**13 50 25.9**	**+1.4**
ARPS				S	**Sn**	**13 51 17.9**	**+0.3**
MULG	**Mulgathing**	**4.81**	**300**	P	**Pn**	**13 50 28.7**	**+2.1**
MULG				S	**Sn**	**13 51 22.5**	**+1.0**
MGBR	**Mount Gambier**	**5.11**	**165**	P	**Pn**	**13 50 33.6**	**+2.9**
	comp=Z,141nm,2.0s,comp=Z,0.3nm						
MGBR				S	**Sn**	**13 51 30.9**	**+2.1**
INKA	**Innaminka**	**5.29**	**18**	P	**Pn**	**13 50 36.6**	**+3.4**
	comp=Z,14nm,0.7s,comp=Z,0.1nm						
INKA				S	**Sn**	**13 51 35.0**	**+1.6**
OOD	**Oodnadatta**	**5.69**	**330**	P	**Pn**	**13 50 42.2**	**+3.5**
	comp=Z,9.9nm,0.4s,comp=Z,0.1nm						
OOD				S	**Sn**	**13 51 43.5**	**+0.3**
CMSA	**Cobar Meteorol**	**5.92**	**80**	P	**Pn**	**13 50 43.5**	**+1.7**
	comp=Z,10nm,1.9s,comp=Z,0.1nm						
CMSA				S	**Sn**	**13 51 49.0**	**+0.1**
CMSA	**Cobar Meteorol**	**5.92**	**80**	P	**Pn**	**13 50 44.3**	**+2.5**
BRAT	**Ballarat**	**6.30**	**140**	P	**Pn**	**13 50 49.4**	**+2.4**
GVL	**Greenvale**	**6.89**	**136**	P	**Pn**	**13 50 58.2**	**+3.1**
	comp=Z,6.3nm,0.7s,comp=Z,0.0nm						
TOO	**Toolangi**	**7.22**	**133**	P	**Pn**	**13 51 01.4**	**+1.7**
	comp=Z,6.7nm,1.6s,comp=Z,0.0nm						
QLP	**Quilpie**	**7.75**	**38**	P	**Pn**	**13 51 09.5**	**+2.5**
	comp=Z,13nm,1.0s,comp=Z,0.1nm						
QLP	**Quilpie**	**7.75**	**38**	P	**Pn**	**13 51 10.0**	**+3.0**
YNG	**Young**	**8.09**	**103**	P	**Pn**	**13 51 14.8**	**+3.1**
CAN	**Canberra**	**8.77**	**109**	P	**Pn**	**13 51 22.1**	**+1.1**
CAN	**Canberra**	**8.77**	**109**	P	**Pn**	**13 51 22.4**	**+1.4**
FORT	**Forrest**	**9.42**	**279**	P	**Pn**	**13 51 31.0**	**+1.1**
FORT				S	**Sn**	**13 53 10.9**	**-4.0**
ASAR	**Alice Springs**	**10.09**	**333**	Pn	**Pn**	**13 51 39.4**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=148,slow=13,SNR=19						
ASAR				Sn	**Sn**	**13 53 27.3**	**-4.3**
	comp=Z,1.9nm,0.3s,baz=159,slow=22,SNR=23						
ASAR				Lg	Lg	13 54 24.1	
	baz=154,slow=32 comp=Z,0.7nm,0.3s						
WRKA	**Warakurna**	**12.06**	**307**	P	**Pn**	**13 52 05.1**	**-0.9**
WRA	**Warramunga Arr**	**13.43**	**341**	Pn	**Pn**	**13 52 23.3**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=165,slow=11,SNR=17						
WRA				Sn	**Sn**	**13 54 47.6**	**-5.5**
	comp=Z,0.5nm,0.3s,baz=165,slow=24,SNR=7.3						
WRA				Lg	Lg	13 56 11.9	
	baz=161,slow=31 comp=Z,0.7nm,0.3s						
CTA	**Charters Tower**	**14.27**	**29**	Pn	**Pn**	**13 52 37.0**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=203,slow=14,SNR=1.4						
CTA				Sn	**Sn**	**13 55 10.7**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=212,slow=6.9,SNR=1.4 comp=Z,1.0nm,0.4s						

*IDC **14** 13:50:01.0±3.9, 36˚20N×71˚18E, h220km±36km, mb3.4/11, mbtmp4.0/15, Error ellipse: s-maj=31.3km s-min=14.5km az=40.0*
*NEIC **14** 13:50:04.5±1.3, 36˚47N±0.08×71˚2E±0.1, h238km±11km, mb4.1/5, Error ellipse: s-maj=16.6km s-min=10.2km az=119.0*
*NNC **14** 13:50:10.0±1.1, 36˚97N×71˚07E, h238km±13km, mb2.5, mpv3.5, Error ellipse: s-maj=11.4km s-min=7.7km az=23.0*
ISC 14 13:50:03.0±0.7, 36˚46N±0.05×71˚42E±0.07, h250km, n47, σ2§42/47, mb3.7/11, 1C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.73**	**226**		Pn	13 50 52.0	-0.8
KBL				Sn	**S**	**13 51 28.0**	**-4.2**
DRK	**Karamyk**	**3.03**	**6**	Pn	**Pn**	**13 50 57.0**	**+0.9**
DRK				Sn	S	**13 51 34.9**	**-3.2**
NIL	**Nilore**	**3.18**	**151**	Pn	Pn	13 51 00.1	+2.5
BTK	**Batken**	**3.62**	**353**	Pn	**Pn**	**13 51 03.5**	**+1.1**
SRNI	**Srinagar**	**3.67**	**130**	*e*P	**Pn**	**13 51 02.0**	**-1.2**
SRNI				*e*S	**S**	**13 51 47.6**	**-3.3**
SRNI				IAML		13 58 04.8	
	comp=N,747nm,0.2s						
SRNI				IAML		13 58 07.5	
	comp=E,206nm,0.2s						
JMU	**Jammu**	**4.63**	**142**	*e*P	**Pn**	**13 51 14.2**	**-0.1**
JMU				*e*S	**S**	**13 52 08.1**	**-3.0**
JMU				IAML		13 52 14.4	
	comp=N,552nm,0.5s						
JMU				IAML		13 52 15.1	
	comp=E,667nm,0.4s						
ARSB	**Arslanbob**	**5.01**	**14**	Pn	**Pn**	**13 51 19.6**	**+0.7**
ALCI	**Alchi Leh**	**5.22**	**114**	*e*P	**Pn**	**13 51 22.1**	**+0.2**
ALCI				*e*S	**S**	**13 52 21.6**	**-3.1**
ALCI				IAML		13 52 28.0	
	comp=N,423nm,0.2s						
ALCI				IAML		13 52 28.8	
	comp=E,649nm,0.3s						
TSSA	**Tissa**	**5.32**	**131**	*e*P	**Pn**	**13 51 23.9**	**+0.9**
TSSA				*e*S	**S**	**13 52 23.7**	**-3.0**
TSSA				IAML		13 52 28.3	
	comp=E,251nm,0.5s						
TSSA				IAML		13 52 29.9	
	comp=N,280nm,0.4s						
THN	**Thein Dam**	**5.38**	**137**	*e*P	**Pn**	**13 51 24.5**	**+1.0**
THN				*e*S	**S**	**13 52 25.6**	**-2.2**
THN				IAML		13 52 30.5	
	comp=E,2μm,0.3s						
THN				IAML		13 52 30.7	
	comp=N,150nm,0.3s						
DHRM	**DHARAMSHALA**	**5.83**	**135**	*e*P	**Pn**	**13 51 29.9**	**+0.6**
DHRM				*e*S	**S**	**13 52 33.8**	**-4.3**
DHRM				IAML		13 52 40.6	
	comp=E,252nm,0.5s						
DHRM				IAML		13 52 40.9	
	comp=N,100nm,0.4s						
NRN	**Naryn**	**6.11**	**34**		**Pn**	**13 51 33.0**	**+0.2**
BHK	**Bhakra**	**6.52**	**139**	*e*P	Pn	13 51 42.2	+4.4
BHK				IAML		13 52 55.0	
	comp=N,80nm,0.8s						
BHK				IAML		13 52 55.4	
	comp=E,90nm,0.7s						
BHK				*e*S	**S**	**13 52 56.1**	**+2.4**
AAK	**Ala-Archa**	**6.61**	**20**	P	**Pn**	**13 51 41.3**	**+2.5**
	comp=E,6.0nm,0.3s,baz=165,slow=6.2,SNR=25						
AAK				S	**S**	**13 52 51.8**	**-3.8**
	comp=E,3.0nm,0.3s,baz=246,slow=8.9,SNR=6.2						
AAK	**Ala-Archa**	**6.61**	**20**		**Pn**	**13 51 41.0**	**+2.2**
AAK	**Ala-Archa**	**6.61**	**20**	⇓P	**Pn**	**13 51 41.1**	**+2.3**
	comp=E,0.6nm,0.3s						
AAK				⇓S	**S**	**13 52 54.2**	**-1.5**
	comp=E,5.1nm,0.8s						
KK31	**Karatay Array**	**6.67**	**354**		**Pn**	**13 51 39.3**	**-0.1**
KK31	**Karatay Array**	**6.67**	**354**	⇓P	**Pn**	**13 51 39.4**	**0.0**
	comp=E,4.4nm,0.5s,baz=175,slow=12,SNR=38						
KK31				⇓S	**S**	**13 52 51.7**	**-5.1**
	comp=E,15nm,0.5s,baz=185,slow=16,SNR=16						
KKAR	**Karatay Array**	**6.67**	**354**		**Pn**	**13 51 39.5**	**0.0**
BOOM	**Boomskoye usch**	**6.96**	**29**	Pn	**Pn**	**13 51 45.3**	**+2.0**
SMLA	**Simla**	**7.15**	**136**	*e*P	**Pn**	**13 51 48.6**	**+3.0**
SMLA				*e*S	**S**	**13 53 04.4**	**-3.6**
SMLA				IAML		13 53 09.7	
	comp=N,84nm,0.4s						
SMLA				IAML		13 53 10.1	
	comp=E,84nm,0.6s						
KLP	**Kalpa**	**7.50**	**129**	*e*P	**Pn**	**13 51 53.5**	**+3.1**
KLP				*e*S	**S**	**13 53 12.4**	**-4.3**
KLP				IAML		13 53 19.1	
	comp=N,103nm,0.4s						
KLP				IAML		13 53 19.6	
	comp=E,82nm,0.5s						
JOSI	**Joshimath**	**8.99**	**129**	*e*P	**Pn**	**13 52 10.2**	**+1.0**
JOSI				*e*S	**S**	**13 53 45.9**	**-5.1**
JOSI				IAML		13 53 55.0	
	comp=E,37nm,0.2s						
JOSI				IAML		13 53 55.0	
	comp=N,35nm,0.7s						
MAKZ	**Makanchi**	**12.99**	**34**	Pn	**P**	**13 53 00.9**	**+0.4**
MKAR	**Makanchi Array**	**13.13**	**35**	P	**P**	**13 53 04.2**	**+2.2**
	comp=N,0.4nm,0.4s,baz=210,slow=12,SNR=4.8						
AB31	**Akbulak array**	**15.28**	**330**	P	**Pn**	**13 53 26.8**	**+0.4**
AB31	**Akbulak array**	**15.28**	**330**	P	**Pn**	**13 53 26.9**	**+0.5**
	comp=N,0.4nm,0.3s,baz=138,slow=11,SNR=19						
ABKAR	**Akbulak array**	**15.28**	**330**	P	**Pn**	**13 53 27.2**	**+0.8**
BVAR	**Borovoye Array**	**16.58**	**358**	P	**Pn**	**13 53 42.6**	**+0.9**
	comp=N,1.1nm,0.5s,baz=170,slow=10,SNR=8.6						
AKTO	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**13 53 46.0**	**-0.5**
	comp=N,4.2nm,0.3s,baz=142,slow=9.1,SNR=14						
AKTO	**Aktyubinsk**	**16.98**	**330**	⇑P	**Pn**	**13 53 45.7**	**-0.8**
	comp=N,2.1nm,0.5s						
ZALV	**Zalesovo Beam**	**19.81**	**24**	P	Pn	13 54 17.0	-2.6
	comp=N,1.2nm,0.3s,baz=212,slow=12,SNR=8.3 comp=N,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.14**	**119**	P	**P**	**13 55 49.8**	**-0.2**
	comp=N,0.2nm,0.3s,baz=322,slow=8.9,SNR=4.4 comp=N,0.2nm,0.3s						
FINES	**FINESS Array B**	**37.70**	**326**	P	P	13 56 56.0	+1.7
	comp=N,1.2nm,0.4s,baz=120,slow=9.0,SNR=8.5 comp=N,1.2nm,0.4s						
ARCES	**ARCESS Array B**	**41.31**	**338**	P	P	13 57 26.2	+2.4
	comp=N,1.2nm,0.4s,baz=111,slow=7.2,SNR=6.4 comp=N,1.2nm,0.4s						
ARCES	**ARCESS Array B**	**41.31**	**338**	P	P	13 57 26.3	+2.4
ARCES				IAmb	IAmb	13 58 00.1	
	comp=Z,24nm,1.5s						
HFS	**Hag

GO01 eS Sn 13 52 46.1 +1.4
PX03 IPOC Station P 4.85 141 eP Pn 13 51 55.3 +0.6
PB08 IPOC Station P 4.97 135 Pn 13 51 59.0 +2.3
PB08 IPOC Station P 4.97 135 i/P Pn 13 51 58.9 +2.3
PB08 eS Sn 13 52 53.5 +0.5
PB01 IPOC Station P 5.43 144 Pn 13 52 04.2 +1.5
PB01 IPOC Station P 5.43 144 i/P Pn 13 52 04.0 +1.3
PB02 IPOC Station P 5.44 149 Pn 13 52 04.3 +1.4
PB02 IPOC Station P 5.44 149 eP Pn 13 52 04.2 +1.4
PB07 IPOC Station P 5.79 151 eP Pn 13 52 08.7 +1.0
PB07 IPOC Station P 5.79 151 i/P Pn 13 52 08.7 +1.0
PB07 i/S Sn 13 53 08.2 -4.7
NNA Nana 6.01 320 P Pn 13 52 12.8 +2.2
comp=E,54nm,0.4s,baz=140,slow=7.6,SNR=13
NNA S Sn 13 53 17.7 -0.5
comp=E,162nm,0.4s,baz=73,slow=21,SNR=5.6
NNA Nana 6.01 320 Pn 13 52 10.2 -0.5
NNA Nana 6.01 320 P Pn 13 52 11.3 +0.6
comp=E,2µmcomp=E,189nm,0.8s
PB03 IPOC Station P 6.13 151 Pn 13 52 12.9 +0.5
PB09 IPOC Station P 6.17 146 Pn 13 52 15.3 +2.4
PB09 IPOC Station P 6.17 146 eP Pn 13 52 15.2 +2.2
PB05 IPOC Station P 6.66 158 Pn 13 52 20.0 +0.4
PB06 IPOC Station P 6.78 153 Pn 13 52 22.1 +0.8
PB10 IPOC Station P 7.16 162 Pn 13 52 26.4 0.0
PB14 IPOC Station P 8.26 164 Pn 13 52 41.2 -0.5
CZSB Cruzeiro do Su 8.89 1 eP Pn 13 52 44.1 -5.9
CZSB Cruzeiro do Su 8.89 1 P Pn 13 52 48.0 -2.0
GO02 Mina Guanaco 9.00 160 Pn 13 52 53.4 +1.5
AC01 Pan de Azucar 9.68 168 Pn Pn 13 53 00.2 -0.6
AC02 Maricunga 10.71 161 Pn 13 53 17.6 +2.2
ATAH Atahualpa 10.88 330 P Pn 13 53 21.1 +3.3
comp=E,13nm,0.7s,baz=142,slow=11,SNR=8.2
ATAH S Sn 13 55 22.3 +4.1
comp=E,4.7nm,0.6s,baz=312,slow=21,SNR=1.1
SIV San Ignacio 11.39 88 P Pn 13 53 26.1 +1.8
comp=E,14nm,0.6s,baz=283,slow=8.6,SNR=55
SIV S Sn 13 55 26.6 -3.5
comp=E,3.8nm,0.6s,baz=327,slow=15,SNR=1.8
VILB Vilhena 12.84 75 eP Pn 13 53 44.3 +0.3
PTLB Pontes e Lacer 13.30 87 Pn 13 53 50.5 +0.2
PTLB Pontes e Lacer 13.30 87 eP Pn 13 53 50.8 +0.5
MCRA Macar, Loja 14.04 330 P Pn 13 54 01.8 +1.4
comp=E,35nm,0.7s
TEFE Tefe 15.40 33 eP Pn 13 54 17.2 -0.9
CFA Coronel Fontan 15.47 165 P P 13 54 21.6 -0.7
comp=E,48nm,0.8s,baz=340,slow=12,SNR=15
CFA S Sn 13 57 03.3 -6.0
comp=E,1.6nm,0.5s,baz=309,slow=20,SNR=2.2
PDRB Porto dos Gac 16.48 74 eP P 13 54 34.4 +0.8
SALV Santo Antonio 16.55 90 eP Pn 13 54 32.4 -0.2
PTLC Puerto Leguiza 16.84 353 P Pn 13 54 31.5 -4.7
MT09 Talagante 17.12 175 Pn 13 54 38.5 -1.3
MT01 Popeta 17.19 175 Pn 13 54 38.4 -2.1
CASC Dorado de Casc 17.26 345 P P 13 54 43.0 +0.7
comp=E,39nm,1.6s
CPUP Villa Florida 17.38 126 P P 13 54 45.2 +1.6
comp=E,0.9nm,0.4s,baz=333,slow=12,SNR=2.9
CPUP LR LR 14 01 26.4
comp=E,59nm,19.8s,baz=262,slow=37
H03N1 Juan Fernandez 17.55 197 T T 14 12 58.6
baz=19,slow=74,SNR=501
H03N2 Juan Fernandez 17.56 197 T T 14 12 53.5
baz=19,slow=74,SNR=564
H03N3 Juan Fernandez 17.57 197 T T 14 13 06.4
baz=19,slow=74,SNR=616
CLDB Colider 17.59 73 eP Pn 13 54 45.6 0.0
OTAV Otavalo 17.66 341 P P 13 54 49.4 +2.2
comp=E,11nm,0.8s
MACA Manacapuru-AM 18.02 43 P 13 54 47.4 -3.2
MACA IAmb IAmb 13 54 51.3
comp=Z,57nm,0.5s
MACA Manacapuru-AM 18.02 43 eP P 13 54 47.1 -3.5
BBAC Balboa, Cauca 19.06 347 P Pn 13 55 03.5 0.0
comp=Z,1µmcomp=Z,50nm,0.8s
POPC Popayan, Colom 19.44 349 P Pn 13 55 07.7 -0.4
comp=Z,425nmcomp=Z,30nm,1.0s
NPGB Novo Progresso 19.65 63 eP P 13 55 07.0 -1.4
JAMC Jamundi, Valle 20.10 349 P P 13 55 13.7 +0.1
comp=Z,27nm,0.9s
ARAG Araguaiana, MT 20.29 90 eP Pn 13 55 18.4 +0.5
ORTC Ortega, Tolima 20.57 353 P P 13 55 18.6 0.0
comp=Z,2µmcomp=Z,153nm,1.2s
YOTC Yotoco, Valle 20.80 350 P P 13 55 17.8 -3.2
ITTB Itaituba 20.82 56 eP P 13 55 20.2 -1.0
PTGB Pitanga 21.07 116 eP P 13 55 25.4 +1.5
CVER Cruz Verde, Cu 21.09 357 P P 13 55 26.1 +1.6
comp=Z,3µmcomp=Z,66nm,1.3s
ANIL Santa Ana 21.17 353 P P 13 55 24.8 -0.4
comp=Z,1µmcomp=Z,57nm,0.7s
CHIC Chingaza 21.18 358 P P 13 55 26.4 +1.0
comp=Z,42nm,1.1s
ROSC El Rosal 21.42 356 P P 13 55 29.5 +1.5
comp=Z,21nm,0.4s,baz=147,slow=4.8,SNR=6.5
comp=Z,21nm,0.4s
ROSC El Rosal 21.42 356 P P 13 55 30.2 +2.3
SNDB Serra Nova Dou 21.46 80 eP P 13 55 28.4 +0.3
LDASE Londrina, Braz 21.53 112 eP P 13 55 29.9 +1.1
ITRB Iturama 21.64 101 eP P 13 55 31.5 +1.6
SPBC San Pablo de B 22.21 357 P P 13 55 36.2 +0.1
comp=Z,1µmcomp=Z,41nm,1.0s
RUSC La Rusia 22.42 360 P P 13 55 37.0 -1.8
comp=Z,780nmcomp=Z,69nm,0.7s
BOAV Boa Vista 22.55 34 P 13 55 39.0 -0.8
BOAV Boa Vista 22.55 34 eP P 13 55 39.0 -0.8
CBOC Ciudad Bolivar 22.60 352 P P 13 55 38.8 -1.6
GO06 Curarrehue 22.87 177 P 13 55 40.8 -2.2
GO06 IAmb IAmb 13 55 45.9
comp=Z,36nm,1.1s
PTBC PUERTO BERRIO, 23.11 356 P P 13 55 43.9 -1.6
BB19B Bebedouro 23.48 105 eP P 13 55 50.5 +1.5
IPMB Ipameri, GO 23.61 97 eP P 13 55 50.7 +0.4
BDFB Brasilia 23.94 91 P P 13 55 53.8 +0.4
comp=Z,9.3nm,0.5s,baz=260,slow=11,SNR=15
BDFB LR LR 14 05 29.1
comp=Z,83nm,20.0s,baz=53,slow=37
comp=Z,9.3nm,0.5s
BDFB Brasilia 23.94 91 P 13 55 54.1 +0.7
PLCA Paso Flores 24.07 176 P P 13 55 56.4 +2.1
comp=Z,24nm,0.9s,baz=350,slow=10,SNR=51
PLCA LR LR 14 05 11.3
comp=Z,33nm,18.1s,baz=358,slow=36
comp=Z,24nm,0.9s
PLCA Paso Flores 24.07 176 P 13 55 54.9 +0.6
PLCA IAmb IAmb 13 55 57.0
comp=Z,22nm,0.8s
RCLB Rio Claro- Sao 24.58 108 eP P 13 56 01.0 +1.9
PRPB Parauapebas 24.90 68 eP P 13 56 01.6 -0.5
SDV Santo Domingo 25.49 5 LR LR 14 07 12.9
comp=Z,103nm,18.9s,baz=167,slow=39
SDV Santo Domingo 25.49 5 P 13 56 06.3 -1.3
SDV IAmb IAmb 13 56 10.9
comp=Z,20nm,0.8s
SDV Santo Domingo 25.49 5 eP P 13 56 03.5 -4.1
SMTB Santa Maria do 25.87 76 eP P 13 56 11.3 +0.5
JANB Januaria 27.55 91 eP P 13 56 26.1 +0.1
DIAM Diamantina, MG 27.93 98 eP P 13 56 30.3 +0.9
JTS Las Juntas de 29.31 335 LR LR 14 06 59.9
comp=Z,67nm,20.1s,baz=130,slow=33
MDP Montagnes des 29.49 45 LR LR 14 09 05.7
comp=Z,147nm,18.4s,baz=184,slow=37
RIB01 Linhares ES 31.02 100 eP P 13 56 57.6 +0.9
GUA01 Guaratinga, BA 31.71 95 eP P 13 57 04.0 +1.2
CMC01 Camacan, BA 32.11 92 eP P 13 57 07.3 +1.0
NBIT Itapeh - BA 32.24 92 eP P 13 57 08.2 +0.8
SJG San Juan 35.20 11 LR LR 14 13 51.2
comp=Z,89nm,19.3s,baz=144,slow=40
RPN Rapa Nui 35.24 246 LR LR 14 07 48.5
comp=Z,171nm,19.6s,baz=86,slow=29
RCBR Riachuelo 37.79 78 LR LR 14 14 42.6
comp=Z,34nm,18.9s,baz=240,slow=38
TEIG Tepich 39.65 337 P P 13 58 10.8 +0.2
TEIG x x 13 58 23.1
PMSA Palmer Station 48.44 175 LR LR 14 19 33.0
comp=Z,30nm,18.5s,baz=293,slow=36
HNDO Hondo 52.51 331 P P 13 59 49.9 -1.9
TXAR Lajitas Array 54.53 327 P P 14 00 06.2 -0.5
comp=Z,1.9nm,0.7s,baz=148,slow=8.8,SNR=16
TXAR PcP PcP 14 01 09.9 +0.5
comp=Z,0.5nm,0.6s,baz=147,slow=4.7,SNR=2.2
comp=Z,1.9nm,0.7s
LCAR Lake Charles 55.22 342 P P 14 00 09.3 -2.0
LCAR IAmb IAmb 14 00 11.1
comp=Z,8.1nm,0.7s
PBMO Poplar Bluff 55.67 343 IAmb IAmb 14 00 14.3
comp=Z,14nm,0.8s
MNHN Monahans 55.68 329 IAmb IAmb 14 00 15.6
comp=Z,11nm,0.9s
TPB01 Permian Basin 55.87 328 IAmb IAmb 14 00 16.6
comp=Z,3.6nm,0.8s
CGM3 Cape Girardeau 55.95 344 IAmb IAmb 14 00 16.3
comp=Z,9.9nm,0.8s
T42A Van Buren 56.09 342 IAmb IAmb 14 00 16.9
comp=Z,9.7nm,1.1s
SN07 Snyder 07 56.24 332 IAmb IAmb 14 00 19.1
comp=Z,13nm,0.7s
W35A Tecumseh 56.33 336 IAmb IAmb 14 00 19.4
comp=Z,18nm,1.0s
VHRN Van Horn 56.37 327 IAmb IAmb 14 00 20.6
comp=Z,21nm,1.7s
POST Post 56.50 331 IAmb IAmb 14 00 21.2
comp=Z,20nm,1.1s
MGMO Mountain Grove 56.56 341 IAmb IAmb 14 00 21.0
comp=Z,17nm,1.1s
U38A Gravette 56.59 339 IAmb IAmb 14 00 21.4
comp=Z,6.6nm,0.9s
DKNS Dickens 56.74 332 IAmb IAmb 14 00 22.7
comp=Z,12nm,0.7s
QUOK Quay 57.17 337 IAmb IAmb 14 00 25.9
comp=Z,15nm,0.8s
SSPA Standing Stone 57.20 355 P P 14 00 25.4 0.0
S39A Bolivar 57.38 341 IAmb IAmb 14 00 26.8
comp=Z,15nm,0.8s
MSTX Muleshoe 57.84 331 IAmb IAmb 14 00 31.1
comp=Z,13nm,0.9s
P40A Paris 58.69 343 IAmb IAmb 14 00 35.5
comp=Z,12nm,0.8s
319A Douglas 59.17 324 IAmb IAmb 14 00 40.9
comp=Z,13nm,1.0s
121A Cookes Peak, D 59.22 326 IAmb IAmb 14 00 41.4
comp=Z,8.2nm,0.9s
Y22A Socorro 59.88 327 IAmb IAmb 14 00 45.8
comp=Z,9.0nm,1.1s
ANMO Albuquerque 60.41 329 P P 14 00 47.8 -0.3
ANMO Albuquerque 60.41 329 P P 14 00 48.3 +0.2
ANMO x x 14 00 56.7
ANMO x x 14 01 02.1
SDCO Great Sand Dun 62.20 331 P P 14 00 59.1 -1.1
SDCO IAmb IAmb 14 01 01.4
comp=Z,13nm,0.9s
X16A Lo Mia Camp, P 62.64 325 IAmb IAmb 14 01 04.9
comp=Z,8.6nm,1.0s
MVCO Mesa Verde 63.21 329 IAmb IAmb 14 01 08.0
comp=Z,11nm,1.1s
ECSD EROS Data Cent 63.91 341 IAmb IAmb 14 01 11.4
comp=Z,14nm,1.1s
PV15 Paradox Valley 64.09 329 IAmb IAmb 14 01 14.3
comp=Z,17nm,0.8s
PV02 Paradox Valley 64.11 329 IAmb IAmb 14 01 13.7
comp=Z,11nm,0.8s
PV13 Radium Mtn., P 64.11 329 IAmb IAmb 14 01 14.0
comp=Z,9.7nm,0.9s
PV05 Paradox Valley 64.19 329 IAmb IAmb 14 01 14.3
comp=Z,13nm,1.2s
PV18 Skein Mesa, Pa 64.22 329 IAmb IAmb 14 01 14.5
comp=Z,13nm,1.0s
PV12 Saucer Basin, 64.23 329 IAmb IAmb 14 01 14.3
comp=Z,6.0nm,0.7s
LDAQ Lac Daran 64.35 1 P 14 01 13.7 -0.3
PV10 Paradox Valley 64.39 329 IAmb IAmb 14 01 15.2
comp=Z,9.4nm,1.0s
U15A North Rim 64.59 325 IAmb IAmb 14 01 18.0
comp=Z,8.2nm,1.0s
BORC Borrego Spring 64.73 320 IAmb IAmb 14 01 19.5
comp=Z,20nm,1.7s
HMU Henry Mountain 64.91 328 IAmb IAmb 14 01 19.4
comp=Z,6.8nm,0.8s
PFO Pinyon Flats O 64.99 321 P P 14 01 19.6 +1.0
KNB Kanab 65.32 326 IAmb IAmb 14 01 22.8
comp=Z,12nm,0.9s
O20A White River Ci 65.39 331 IAmb IAmb 14 01 22.4
comp=Z,8.2nm,0.9s
V12A Nelson 65.52 323 IAmb IAmb 14 01 23.4
comp=Z,10nm,1.4s
SRU San Rafael Swe 65.69 329 IAmb IAmb 14 01 24.2
comp=Z,9.4nm,0.9s
Q16A Castle Valley 65.87 328 IAmb IAmb 14 01 26.6
comp=Z,6.5nm,0.8s
SZCU Shurtz Canyon 65.89 326 IAmb IAmb 14 01 26.3
comp=Z,13nm,1.5s
CCUT Cedar City 66.00 326 IAmb IAmb 14 01 27.5
comp=Z,9.0nm,1.0s
P17A Butcher Ranch, 66.08 329 IAmb IAmb 14 01 26.8
comp=Z,14nm,0.8s
ICQ Pointe Anglais 66.08 4 P 14 01 24.6 -0.5
RDMU Red Mountain 66.36 330 IAmb IAmb 14 01 28.3
comp=Z,7.9nm,0.8s
EYMN Ely 66.44 346 IAmb IAmb 14 01 27.3
comp=Z,13nm,0.8s
TBO Thunder Bay 66.66 348 IAmb IAmb 14 01 28.8
comp=Z,23nm,1.1s
QSM Queen of Sheba 66.85 322 IAmb IAmb 14 01 31.9
comp=Z,9.5nm,1.2s
BSUT Blindstream Ca 66.90 329 IAmb IAmb 14 01 32.5
comp=Z,8.4nm,1.0s
MPU Maple Canyon 66.94 329 IAmb IAmb 14 01 32.5
comp=Z,9.7nm,1.2s
PSUT Pine Spring 66.98 326 IAmb IAmb 14 01 33.3
comp=Z,7.9nm,0.9s
FURC Furnace Creek, 67.20 323 IAmb IAmb 14 01 34.5
comp=Z,7.3nm,0.8s
WCT Wildcat Mounta 67.28 323 IAmb IAmb 14 01 35.4
comp=Z,11nm,1.1s
TCUT Toone Canyon 67.66 329 IAmb IAmb 14 01 38.0
comp=Z,11nm,1.0s
DUG Dugway, Tooele 67.67 328 IAmb IAmb 14 01 37.4
comp=Z,13nm,1.0s
AGMN Agassiz Nation 67.84 344 IAmb IAmb 14 01 36.9
comp=Z,16nm,0.8s
SNAA Sanae 68.05 161 P P 14 01 38.9 +1.4
comp=Z,5.7nm,0.6s,baz=284,slow=9.3,SNR=7.0
comp=Z,5.7nm,0.6s
PDAR Pinedale Array 68.07 332 P P 14 01 37.5 -0.7
comp=Z,1.1nm,0.9s,baz=154,slow=5.1,SNR=9.2
comp=Z,1.1nm,0.9s
HWUT Hardware Ranch 68.11 330 IAmb IAmb 14 01 39.3
comp=Z,7.9nm,0.8s
EPLO Experimental L 68.57 346 IAmb IAmb 14 01 40.8
comp=Z,18nm,0.8s
HVU Hansel Valley 68.83 329 IAmb IAmb 14 01 43.8
comp=Z,9.8nm,0.7s
Q09A Carvers 69.02 324 IAmb IAmb 14 01 46.1
comp=Z,21nm,1.2s
NVAR Mina Array Bea 69.38 323 P P 14 01 47.2 +0.8
comp=Z,24nm,0.8s,baz=153,slow=7.0,SNR=23
NVAR pP sP 14 02 06.0 -2.7
comp=Z,1.1nm,0.9s,baz=150,slow=5.4,SNR=3.1
comp=Z,2.4nm,0.8s
FLWY Flagg Ranch 69.62 332 IAmb IAmb 14 01 49.3
comp=Z,9.3nm,0.8s
ULM Lac du Bonnet 69.63 345 P P 14 01 46.4 -1.0
comp=Z,11nm,0.7s,baz=150,slow=6.2,SNR=26
ULM LR LR 14 34 06.9
comp=Z,192nm,19.0s,baz=13,slow=37
comp=Z,11nm,0.7s
ULM Lac du Bonnet 69.63 345 IAmb IAmb 14 01 47.2
comp=Z,14nm,0.8s
PNTR Pine Nut 70.57 323 IAmb IAmb 14 01 55.9
comp=Z,8.8nm,0.8s
PAHR Pah Rah Range 70.86 324 IAmb IAmb 14 01 57.5
comp=Z,13nm,0.8s
DBIC Dimbokro 71.16 77 P P 14 01 57.2 -0.3
comp=Z,23nm,0.6s,baz=266,slow=6.1,SNR=40
comp=Z,23nm,0.6s
DBIC Dimbokro 71.16 77 P 14 01 57.9 +0.4
DBIC Dimbokro 71.16 77 P P 14 01 57.1 -0.3
SCHQ Schefferville 71.40 4 LR LR 14 36 50.7
comp=Z,159nm,18.1s,baz=80,slow=39
MFID Camas Ranch 71.56 328 IAmb IAmb 14 02 01.4
comp=Z,17nm,0.9s
ORV Oroville 71.98 322 IAmb IAmb 14 02 04.1
comp=Z,12nm,0.9s
J08A Circle Bar Ran 72.87 327 IAmb IAmb 14 04 02.9
comp=Z,14nm,1.6s
QSPA South Pole Qui 73.50 180 P P 14 02 11.8 +1.1
comp=Z,4.2nm,0.5s,baz=164,slow=5.4,SNR=5.0
comp=Z,4.2nm,0.5s
QSPA South Pole Qui 73.50 180 P P 14 02 11.8 +1.1
QSPA IAmb IAmb 14 02 19.9
comp=Z,44nm,2.0s
QSPA South Pole Qui 73.50 180 P P 14 02 12.6 +1.9
J05D Fort Rock, OR 74.30 325 IAmb IAmb 14 02 18.1
comp=Z,22nm,1.5s
PINE Pine Mountain 74.48 326 IAmb IAmb 14 02 19.0
comp=Z,9.1nm,0.9s
WIFE Three Sisters- 75.13 326 IAmb IAmb 14 02 22.4
comp=Z,9.8nm,0.8s
FFC Flin Flon 75.30 343 P 14 02 19.6 -1.3
FFC IAmb IAmb 14 03 40.0
comp=Z,23nm,1.9s
FCC Fort Churchill 77.14 349 P 14 02 30.3 -1.1
FCC IAmb IAmb 14 02 32.0
comp=Z,12nm,1.2s
TORD Torodi Ar. Bea 79.43 73 P P 14 02 44.8 -0.2
comp=Z,25nm,0.8s,baz=245,slow=9.0,SNR=137
comp=Z,25nm,0.8s
MORF Marmelete 80.80 47 eP P 14 02 52.8 +0.8
PBDV Barranco-do-Ve 81.28 47 eP P 14 02 55.7 +1.2
MESJ Messejana 81.36 46 eP P 14 02 55.8 +1.0
MESJ IAmb IAmb 14 02 57.5
comp=Z,22nm,1.3s
MESJ Messejana 81.36 46 eP P 14 02 56.4 +1.5
PCVE Castro Verde 81.39 47 eP P 14 02 56.4 +1.4
PVAQ Vaqueiros 81.50 47 eP P 14 02 57.1 +1.4
MOE Montemor 81.60 46 eP P 14 02 56.7 +0.5
PBEJ Beja 81.69 46 eP P 14 02 57.8 +1.1
EVO Evora 81.83 46 eP P 14 02 58.5 +1.2
PMTG Montargil 81.95 45 eP P 14 02 59.1 +1.2
PARRA Arraiolos 81.95 46 eP P 14 02 59.0 +1.1
PCAS Casmilo, Conde 82.24 44 eP P 14 03 00.5 +1.0
PBAR Barrancos 82.34 47 eP P 14 03 01.0 +1.0
MTE Manteigas 83.05 44 eP P 14 03 05.1 +1.4
POLO Lamas de Olo 83.35 43 eP P 14 03 06.4 +1.1
PVRL Vila Real 83.36 44 eP P 14 03 06.8 +1.5
PCAB Cabril 83.36 43 eP P 14 03 06.1 +0.8
MVO Moncorvo 83.76 44 eP P 14 03 08.2 +0.8
PBRG Braganca 84.25 43 eP P 14 03 10.7 +0.9
PAB San Pablo 84.83 46 P 14 03 13.2 +0.3
ESDC Sonseca Array 85.16 46 P P 14 03 15.8 +1.3
comp=Z,7.9nm,0.7s,baz=256,slow=5.2,SNR=50
ESDC pP pP 14 03 33.5 +2.7
comp=Z,2.5nm,0.9s,baz=254,slow=5.1,SNR=4.0
comp=Z,7.9nm,0.7s
ESDC Sonseca Array 85.16 46 P P 14 03 15.8 +1.3
ESDC IAmb IAmb 14 03 16.1
comp=Z,7.5nm,0.9s
ESBB Sonseca Array 85.16 46 IAmb IAmb 14 03 16.1
comp=Z,8.6nm,0.8s
YKAW1 Yellowknife Wh 85.38 342 IAmb IAmb 14 03 15.5
comp=Z,7.5nm,0.8s
YKA Yellowknife Ar 85.42 342 P P 14 03 14.8 -0.3
comp=Z,4.6nm,0.7s,baz=139,slow=4.5,SNR=94
YKA pP sP 14 03 35.9 -1.7
comp=Z,0.8nm,0.6s,baz=136,slow=4.6,SNR=2.9
comp=Z,4.6nm,0.7s
YKA Yellowknife Ar 85.42 342 P P 14 03 15.1 0.0
YKAW3 Yellowknife Wh 85.47 342 IAmb IAmb 14 03 16.1
comp=Z,11nm,0.8s
TAM Tamanrasset 86.13 65 P 14 03 21.3 +1.5
POIN Pond Inlet 89.22 358 IAmb IAmb 14 03 34.7
comp=Z,8.6nm,1.0s
SUMG Summit 91.93 10 P P 14 03 47.5 +1.1
L29M L29M 94.08 336 IAmb IAmb 14 03 56.8
comp=Z,6.2nm,0.8s
A36M Sachs Harbour 95.09 346 IAmb IAmb 14 04 00.7
comp=Z,5.6nm,0.8s
ILAR Eielson Array 98.29 335 P P 14 04 14.3 -0.7
comp=Z,0.3nm,0.6s,baz=141,slow=2.7,SNR=8.5
comp=Z,0.3nm,0.6s
H11N3 WAKE ISLAND Hy 123.33 283 T T 16 24 46.4
baz=98,slow=74,SNR=7.7
H11N2 WAKE ISLAND Hy 123.35 283 T T 16 25 02.7
baz=98,slow=74,SNR=13
H11N1 WAKE ISLAND Hy 123.35 283 T T 16 25 02.8
baz=98,slow=74,SNR=7.7
H11S2 WAKE ISLAND Hy 123.36 281 T T 16 25 02.3
baz=99,slow=75,SNR=4.0
H11S1 WAKE ISLAND Hy 123.37 281 T T 16 25 03.3
baz=99,slow=75,SNR=21
H11S3 WAKE ISLAND Hy 123.38 281 T T 16 25 03.8
baz=99,slow=75,SNR=3.0
ASAR Alice Springs 132.11 214 PKP PKPdf 14 09 52.5 +0.1
comp=Z,0.3nm,0.7s,baz=143,slow=2.0,SNR=4.6
ASAR pPKP pPKPdf 14 10 11.0 +1.9
comp=Z,0.6nm,0.6s,baz=134,slow=2.0,SNR=4.7
BVAR Borovoye Array 133.74 30 PKP PKiKP 14 09 55.2 -0.6
comp=Z,0.7nm,0.7s,baz=314,slow=5.2,SNR=2.6
WRA Warramunga Arr 134.83 217 PKP PKPdf 14 09 57.6 +0.1
comp=Z,0.3nm,0.7s,baz=147,slow=1.8,SNR=5.6
WRA pPKP pPKPdf 14 10 16.6 +2.3
comp=Z,0.6nm,0.7s,baz=146,slow=1.8,SNR=3.1
ZALV Zalesovo Beam 138.96 20 PKP PKPdf 14 10 03.1 -1.0
comp=Z,2.9nm,0.7s,baz=300,slow=2.3,SNR=11
ZALV pPKP pPKPdf 14 10 23.2 +2.2
comp=Z,1.8nm,0.7s,baz=315,slow=3.1,SNR=4.4
ZALV Zalesovo Beam 138.96 20 PKPdf 14 10 04.3 +0.2
KURBB Kurchatov Arra 139.12 28 PKP PKPdf 14 10 04.5 0.0
comp=Z,0.9nm,0.7s,baz=316,slow=2.6,SNR=4.5
KURBB pPKP pPKPdf 14 10 24.4 +3.0
comp=Z,0.6nm,0.7s,baz=308,slow=2.8,SNR=3.6
MKAR Makanchi Array 143.61 29 PKP PKPbc 14 10 10.8 +0.5
comp=Z,1.0nm,0.7s,baz=316,slow=3.3,SNR=5.9
MKAR pPKP sPKPdf 14 10 32.9 -2.9
comp=Z,0.9nm,0.7s,baz=359,slow=2.4,SNR=3.7
KSH2 Kashi 144.55 44 PKPdf 14 10 14.8 0.0
KSH2 pPKP PKiKP 14 10 23.6 +5.1
TLY Talaya 144.96 4 PKPbc PKPbc 14 10 14.7 +0.4
NIL Nilore 145.22 55 PKPab 14 10 15.9 +0.1
USRK Ussuriysk Ar. 145.42 328 PKPbc PKPbc 14 10 16.1 +0.2
comp=Z,6.5nm,0.7s,baz=33,slow=4.2,SNR=8.0
USRK pPKPbc sPKPdf 14 10 36.2 -2.6
comp=Z,1.5nm,0.6s,baz=54,slow=31,SNR=1.6
HILR Hailar Array B 145.62 345 PKPbc PKPab 14 10 16.8 0.0
comp=Z,16nm,0.6s,baz=52,slow=2.5,SNR=27
HILR pPKPbc pPKPab 14 10 35.2 +1.8
comp=Z,5.1nm,0.7s,baz=14,slow=3.1,SNR=2.9
HIA Hailar 145.90 345 PKPdf PKPbc 14 10 17.3 0.0
MJAR Matsushiro Arr 146.08 312 PKPbc PKPbc 14 10 18.2 0.0
comp=Z,3.7nm,0.9s,baz=89,slow=0.7,SNR=12
MJAR Matsushiro Arr 146.08 312 PKPdf 14 10 17.5 +0.2
MAJO Matsushiro 146.08 312 PKPab PKPbc 14 10 18.4 +0.1
MJB9 Matsu-Tunnel 146.08 312 PKPab PKPab 14 10 19.5 +0.5
BNX BinXian 146.41 334 i/P PKPbc 14 10 18.5 -0.4
BNX pmax pmax
comp=Z,7.0nm,0.8s
SONM Songino Array 148.91 1 PKPbc PKPbc 14 10 26.4 +0.6
comp=Z,5.9nm,0.7s,baz=329,slow=1.9,SNR=42
SONM pPKPbc sPKPdf 14 10 44.7 -0.1
comp=Z,2.5nm,0.7s,baz=309,slow=1.6,SNR=5.3
SONM SKPbc SKPbc 14 13 54.9 -3.8
comp=Z,0.2nm,0.3s,baz=331,slow=3.0,SNR=3.9
KSRS Korea Array 152.31 322 PKPbc PKiKP 14 10 34.9 +0.6
comp=Z,2.5nm,0.8s,baz=27,slow=2.1,SNR=11
KSRS pPKPbc pPKPbc 14 10 52.6 +1.8
comp=Z,2.1nm,0.9s,baz=344,slow=2.0,SNR=4.8
HHC Hu-ho-hao-te 155.59 352 eP PKPdf 14 10 33.9 +2.0
GTA2 Gaotai 156.38 14 eP PKPab 14 11 00.9 -0.5
GTA2 sP pPKPab 14 11 07.8 -10
GTA2 pmax pmax
comp=Z,3.0nm,1.3s
NJ2 Nanjing 161.33 327 eP PKPdf 14 10 36.6 -2.3
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
PZH PanZhiHua 169.03 26 PKP PKPdf 14 10 43.8 -2.0

IDC ***14*** *14:00:14.4±1.2,31°44.4S×66°75.7W,h116km±13km,mb3.7/3, mbtmp4.0/7,Error ellipse: s-maj=30.5km s-min=19.1km az=150.0*

NEIC ***14*** *14:00:14.6±1.7,31°53.5S±0°08×66°74.4W±0°03, h115km±11km,mb4.1/6,ML4.1(GUC),Error ellipse: s-maj=12.1km s-min=3.4km az=178.0*

SJA ***14*** *14:00:14.9±0.6,31°51.5S×66°90.9W,h125km±3km,ML4.1, MW3.9*

GUC ***14*** *14:00:17.1±0.5,31°55.5S×67°11.1W,h141km±50km,ML4.1*

ISC 14 14:00:14.5±0.7,31°45.5S±0°04×66°82.8W±0°03,h122km±6km, n104,σ1s28/125,mb4.0/3,4C-1D,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACHE	Chepes	0.32	25	eP	Pn	14 00 33.9	+2.0
ACHE				eS	Sn	14 00 39.0	-6.0
AVFE	Valle Fertil	0.96	325	eP	Pn	14 00 38.1	+1.8
AVFE				eS	Sn	14 00 55.0	+2.1
AVFE				IAML		14 00 55.8	
	comp=Z,2µm,0.2s						
CFA	Coronel Fontan	1.22	262	P	Pn	14 00 39.4	+0.5
	comp=Z,686nm,0.3s,baz=84,slow=20,SNR=2033						

CFA				S		Sn	14 00 57.5	0.0
	comp=Z,612nm,0.2s,baz=344,slow=22,SNR=46							
CFA	**Coronel Fontan**	**1.22**	**262**	*eP*		**Pn**	**14 00 39.5**	**+0.6**
CFA				*eS*		**Sn**	**14 00 57.5**	**0.0**
CFA				IAML			14 00 58.2	
	comp=Z,2μm,0.3s							
MRA	**San Martin**	**1.35**	**136**	*eP*		**Pn**	**14 00 42.1**	**+1.7**
MRA				*eS*		**Sn**	**14 01 01.8**	**+1.7**
MRA				IAML			14 01 02.4	
	comp=Z,1μm,0.5s							
RTLL	**Cerro Villicun**	**1.42**	**274**	*eP*		**Pn**	**14 00 41.7**	**+0.6**
RTLL				*eS*		**Sn**	**14 01 01.8**	**+0.4**
RTLL				IAML			14 01 02.2	
	comp=Z,2μm,0.3s							
SJA	**San Juan**	**1.49**	**267**	*eP*		**Pn**	**14 00 42.8**	**+0.9**
SJA				IAML			14 01 05.3	
	comp=Z,1μm,0.3s							
ZON	**Zonda**	**1.59**	**266**			**Pn**	**14 00 43.7**	**+0.6**
ZON	**Zonda**	**1.59**	**266**	*eP*		**Pn**	**14 00 43.7**	**+0.6**
ZON				*eS*		**Sn**	**14 01 05.6**	**+0.7**
ZON				IAML			14 01 06.2	
	comp=Z,998nm,0.2s							
TCA	**Tanti**	**1.91**	**87**⇑	*iP*		**Pn**	**14 00 49.0**	**+2.0**
TCA	**Tanti**	**1.91**	**87**	*eP*		**Pn**	**14 00 48.7**	**+1.8**
TCA				*eS*		**Sn**	**14 01 12.5**	**+0.7**
TCA				IAML			14 01 14.2	
	comp=Z,1μm,0.3s							
ACLC	**CERRO LA CRUZ**	**2.02**	**357**	*eP*		**Pn**	**14 00 50.1**	**+1.6**
ACLC				*eS*		**Sn**	**14 01 14.9**	**+0.5**
ACLC				IAML			14 01 17.5	
	comp=Z,776nm,0.4s							
ASAL	**Salagasta**	**2.05**	**236**	*eP*		**Pn**	**14 00 49.3**	**+0.5**
ASAL				*eS*		**Sn**	**14 01 16.7**	**+1.7**
ACCO	**Cerro Coronel**	**2.11**	**293**	*eP*		**Pn**	**14 00 50.9**	**+1.2**
ACCO				*eS*		**Sn**	**14 01 17.6**	**+1.0**
ACDV	**Cuesta del Vie**	**2.35**	**302**	*eP*		**Pn**	**14 00 54.3**	**+1.6**
ACDV				*eS*		**Sn**	**14 01 22.2**	**+0.3**
ACDV				IAML			14 01 24.3	
	comp=Z,570nm,0.4s							
AROD	**Rodeo**	**2.62**	**299**	*eP*		**Pn**	**14 00 57.6**	**+1.5**
AROD				*eS*		Sn	14 01 18.0	-10
VCA	**Vinchina**	**2.96**	**336**⇓	*eP*		**Pn**	**14 01 02.3**	**+1.9**
VCA	**Vinchina**	**2.96**	**336**	*eP*		**Pn**	**14 01 02.5**	**+2.0**
VCA				*eS*		**Sn**	**14 01 35.0**	**-0.9**
VCA				IAML			14 01 42.1	
	comp=Z,595nm,0.4s							
CO01	**Juntas del Tor**	**3.18**	**297**			**Pn**	**14 01 05.5**	**+2.1**
CO01	**Juntas del Tor**	**3.18**	**297**	*eP*		**Pn**	**14 01 05.5**	**+2.1**
CO01				*eS*		**Sn**	**14 01 42.2**	**+1.1**
CO01	**Juntas del Tor**	**3.18**	**297**	*eP*		**Pn**	**14 01 05.5**	**+2.1**
CO01				*eS*		**Sn**	**14 01 42.4**	**+1.3**
CO01				IAML			14 01 42.9	
	comp=Z,469nm,0.8s							
MT08	**Bocatoma Ro**	**3.35**	**233**			**Pn**	**14 01 06.3**	**+0.6**
MT08	**Bocatoma Ro**	**3.35**	**233**	*eP*		**Pn**	**14 01 06.6**	**+0.9**
MT08				IAML			14 01 50.0	
	comp=N,126nm,0.3s							
MT08	**Bocatoma Ro**	**3.35**	**233**	*eP*		**Pn**	**14 01 06.5**	**+0.9**
MT08				*eS*		**Sn**	**14 01 46.5**	**+1.3**
CO03	**El Pedregal**	**3.37**	**279**			**Pn**	**14 01 07.1**	**+1.3**
CO03	**El Pedregal**	**3.37**	**279**⇓	*eP*		**Pn**	**14 01 07.1**	**+1.3**
CO03				*eS*		**Sn**	**14 01 45.1**	**-0.4**
CO03	**El Pedregal**	**3.37**	**279**	*eP*		**Pn**	**14 01 07.5**	**+1.7**
CO03				*eS*		**Sn**	**14 01 46.3**	**+0.9**
CO03				IAML			14 01 47.9	
	comp=Z,582nm,0.3s							
MT04	**Ro Olivares**	**3.42**	**234**	*eP*		**Pn**	**14 01 07.0**	**+0.6**
MT04				IAML			14 01 48.5	
	comp=N,96nm,0.5s							
MT04	**Ro Olivares**	**3.42**	**234**	*eP*		**Pn**	**14 01 07.1**	**+0.6**
MT04				*eS*		**Sn**	**14 01 47.9**	**+1.3**
VA03	**San Esteban**	**3.42**	**247**			**Pn**	**14 01 07.1**	**+0.6**
VA03	**San Esteban**	**3.42**	**247**	*eP*		**Pn**	**14 01 07.1**	**+0.6**
VA03				IAML			14 01 54.3	
	comp=E,431nm,0.2s							
VA03	**San Esteban**	**3.42**	**247**	*eP*		**Pn**	**14 01 08.2**	**+1.7**
VA03				*eS*		**Sn**	**14 01 49.3**	**+2.6**
VA03				IAML			14 01 53.8	
	comp=Z,224nm,0.8s							
TINO	**Tinogasta**	**3.44**	**349**	*eP*		**Pn**	**14 01 09.2**	**+2.5**
TINO				*eS*		**Sn**	**14 01 45.8**	**-1.3**
CO02	**Combarbal**	**3.58**	**273**			**Pn**	**14 01 09.3**	**+0.6**
CO02	**Combarbal**	**3.58**	**273**⇑	*eP*		**Pn**	**14 01 09.3**	**+0.6**
CO02	**Combarbal**	**3.58**	**273**	*eP*		**Pn**	**14 01 09.5**	**+0.9**
CO02				*eS*		**Sn**	**14 01 51.3**	**+0.8**
CO02				IAML			14 01 52.0	
	comp=Z,609nm,0.5s							
CO04	**Los Peladeros**	**3.59**	**259**			**Pn**	**14 01 08.4**	**-0.4**
CO04	**Los Peladeros**	**3.59**	**259**	*eP*		**Pn**	**14 01 08.7**	**-0.2**
CO04				IAML			14 01 52.2	
	comp=N,746nm,0.3s							
RFA	**San Rafael**	**3.59**	**202**	*eP*		**Pn**	**14 01 08.4**	**-0.2**
RFA				*eS*		Sn	14 01 38.6	-12
RFA				IAML			14 01 49.7	
	comp=Z,418nm,0.5s							
MT10	**Hacienda Santa**	**3.63**	**239**	*i P*		**Pn**	**14 01 09.5**	**+0.2**
GO04	**Tololo Observa**	**3.65**	**289**			**Pn**	**14 01 11.3**	**+1.6**
GO04	**Tololo Observa**	**3.65**	**289**	*eP*		**Pn**	**14 01 10.8**	**+1.1**
GO04	**Tololo Observa**	**3.65**	**289**	IAML			14 01 56.7	
	comp=Z,636nm,0.3s							
PEL	**Peldehue**	**3.68**	**242**			**Pn**	**14 01 09.7**	**-0.2**
PEL	**Peldehue**	**3.68**	**242**	*eP*		**Pn**	**14 01 09.8**	**0.0**
PEL				IAML			14 01 54.9	
	comp=N,200nm,0.4s							
MT14	**Cerro Cal¡n**	**3.69**	**237**	*eP*		**Pn**	**14 01 10.3**	**+0.3**
MT14				IAML			14 01 57.8	
	comp=N,265nm,0.4s							
MT16	**CCHEN**	**3.70**	**237**			**Pn**	**14 01 10.3**	**+0.3**
MT13	**San Alfonso**	**3.71**	**231**			**Pn**	**14 01 11.4**	**+1.1**
MT13	**San Alfonso**	**3.71**	**231**	*i P*		**Pn**	**14 01 11.3**	**+1.0**
MT13				IAML			14 02 00.5	
	comp=N,132nm,0.2s							
MT13	**San Alfonso**	**3.71**	**231**	*eP*		Pn	14 01 01.8	-8.5
LMEL	**Las Melosas**	**3.72**	**229**⇑	*eP*		**Pn**	**14 01 10.9**	**+0.4**
MT03	**Universidad Ad**	**3.73**	**236**			**Pn**	**14 01 10.8**	**+0.3**
MT03	**Universidad Ad**	**3.73**	**236**	*eP*		**Pn**	**14 01 10.8**	**+0.3**
MT03	**Universidad Ad**	**3.73**	**236**	IAML			14 02 00.7	
	comp=Z,142nm,0.2s							
MT15	**Las Vizcachas**	**3.78**	**234**	*eP*		**Pn**	**14 01 11.3**	**+0.1**
MT15				IAML			14 02 02.8	
	comp=N,250nm,0.2s							
MT05	**Renca**	**3.84**	**239**			**Pn**	**14 01 12.0**	**+0.1**
MT05	**Renca**	**3.84**	**239**	*eP*		**Pn**	**14 01 12.1**	**+0.1**
MT05				IAML			14 01 59.6	
	comp=E,316nm,0.2s							
ROCH	**El Roble**	**3.86**	**246**	*eP*		**Pn**	**14 01 11.8**	**-0.6**
ROCH				IAML			14 01 59.5	
	comp=N,458nm,0.2s							
MT12	**Pirque**	**3.88**	**233**	*eP*		**Pn**	**14 01 12.7**	**+0.2**
VA06	**Catapilco**	**3.96**	**253**			**Pn**	**14 01 12.7**	**-0.8**
VA06	**Catapilco**	**3.96**	**253**	*eP*		**Pn**	**14 01 12.6**	**-0.8**
AC05	**El Transito**	**3.97**	**310**			**Pn**	**14 01 15.7**	**+2.0**
AC05	**El Transito**	**3.97**	**310**	*eP*		**Pn**	**14 01 15.8**	**+2.1**
AC05	**El Transito**	**3.97**	**310**	IAML			14 02 04.0	
	comp=Z,151nm,0.3s							
MT02	**Curacav**	**4.07**	**243**			**Pn**	**14 01 13.9**	**-1.1**
MT02	**Curacav**	**4.07**	**243**	*eP*		**Pn**	**14 01 13.9**	**-1.1**
BO04	**La Punta**	**4.08**	**231**			**Pn**	**14 01 15.2**	**+0.1**
CO05	**La Serena**	**4.10**	**291**	*eP*		**Pn**	**14 01 16.0**	**+0.6**
LCO	**Las Campanas**	**4.14**	**305**			**Pn**	**14 01 17.3**	**+1.1**
LCO	**Las Campanas**	**4.14**	**305**	*eP*		**Pn**	**14 01 17.2**	**+1.0**
LCO	**Las Campanas**	**4.14**	**305**	*eS*		**Sn**	**14 02 04.2**	**+0.1**
MT09	**Talagante**	**4.21**	**235**	*eP*		**Pn**	**14 01 16.0**	**-1.0**
MT01	**Popeta**	**4.45**	**236**	*eP*		**Pn**	**14 01 18.1**	**-1.8**
MT01				*eP*		**Pn**	**14 01 18.1**	**-1.8**
MT01				*eS*		**Sn**	**14 02 08.6**	**-2.2**
BO01	**Tunca**	**4.63**	**230**			**Pn**	**14 01 21.1**	**-1.4**
BO02	**Sierra Bellavi**	**4.71**	**224**			**Pn**	**14 01 23.1**	**-0.4**
BO02	**Sierra Bellavi**	**4.71**	**224**	*eP*		**Pn**	**14 01 23.6**	**0.0**
GO03	**Copiapo**	**4.86**	**321**			**Pn**	**14 01 26.3**	**+0.7**
GO03	**Copiapo**	**4.86**	**321**	*eP*		**Pn**	**14 01 26.8**	**+1.1**
GO03				IAML			14 02 24.2	
	comp=Z,86nm,0.3s							
AC02	**Maricunga**	**5.02**	**336**			**Pn**	**14 01 30.2**	**+2.0**
AC01	**Pan de Azucar**	**6.24**	**327**			**Pn**	**14 01 45.5**	**+1.3**
TRQA	**Tornquist**	**7.70**	**150**			**Pn**	**14 02 03.8**	**0.0**
PLCA	**Paso Flores**	**9.74**	**197**	P		**Pn**	**14 02 31.5**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=15,slow=12,SNR=2.0							
CPUP	**Villa Florida**	**9.76**	**61**	P		**Pn**	**14 02 30.4**	**-1.2**
	comp=Z,3.1nm,0.4s,baz=246,slow=13,SNR=12							
CPUP	**Villa Florida**	**9.76**	**61**			**Pn**	**14 02 31.3**	**-0.4**
PB07	**IPOC Station P**	**10.06**	**343**	Pn		**Pn**	**14 02 33.7**	**-2.3**
PB02	**IPOC Station P**	**10.46**	**344**			**Pn**	**14 02 38.9**	**-2.3**
LPAZ	**La Paz**	**15.14**	**355**	P		**Pn**	**14 03 43.0**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=180,slow=6.6,SNR=4.8							
LPAZ	**La Paz**	**15.14**	**355**			**Pn**	**14 03 42.7**	**+0.1**
LPAZ				IAmb		IAmb	14 03 53.5	
	comp=Z,3.0nm,0.8s							
TRCB	**Terra Rica**	**15.28**	**59**	Pn		**Pn**	**14 03 42.4**	**-1.5**
SIV	**San Ignacio**	**16.26**	**20**	P		**Pn**	**14 03 56.1**	**+0.2**
	comp=Z,2.3nm,0.4s,baz=198,slow=13,SNR=9.8							
PTLB	**Pontes e Lacer**	**17.41**	**26**	P		**P**	**14 04 09.0**	**-0.4**
VILB	**Vilhena**	**19.39**	**20**	P		**P**	**14 04 31.4**	**+0.3**
VILB				IAmb		IAmb	14 04 34.4	
	comp=Z,7.5nm,0.6s							
BDFB	**Brasilia**	**23.28**	**52**	P		**P**	**14 05 10.8**	**-0.9**
	comp=Z,3.2nm,0.4s,baz=228,slow=9.4,SNR=5.3							
	comp=Z,3.2nm,0.4s							
BDFB	**Brasilia**	**23.28**	**52**	P		**P**	**14 05 10.9**	**-0.8**
BDFB				IAmb		IAmb	14 05 11.8	
	comp=Z,7.4nm,1.0s							
CZSB	**Cruzeiro do Su**	**24.23**	**346**	P		**P**	**14 05 20.7**	**+0.6**
CZSB				IAmb		IAmb	14 05 23.5	
	comp=Z,14nm,0.8s							
TXAR	**Lajitas Array**	**69.87**	**326**	P		**P**	**14 11 12.5**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=156,slow=5.6,SNR=2.1							
	comp=Z,0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	**79.19**	**67**	P		**P**	**14 12 06.8**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=251,slow=9.1,SNR=17							
	comp=Z,3.2nm,0.8s							
WRA	**Warramunga Arr**	**125.01**	**204**	PKP		**PKPdf**	**14 19 00.3**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=152,slow=1.8,SNR=1.7							
KURBB	**Kurchatov Arra**	**148.00**	**43**	PKPbc		**PKPbc**	**14 19 45.7**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=298,slow=3.1,SNR=7.5							
KURK	**Kurchatov**	**148.02**	**43**			**PKPbc**	**14 19 46.0**	**+0.8**
ZALV	**Zalesovo Beam**	**149.69**	**34**	PKPbc		**PKPbc**	**14 19 49.9**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=299,slow=3.0,SNR=7.7							
ZALV	**Zalesovo Beam**	**149.69**	**34**			**PKPbc**	**14 19 49.7**	**+0.4**
MKAR	**Makanchi Array**	**151.78**	**48**	PKPbc		**PKPbc**	**14 19 54.7**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=291,slow=1.9,SNR=14							
MKAR				PKPab		**PKPab**	**14 20 04.2**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=304,slow=3.0,SNR=4.0							
MKAR	**Makanchi Array**	**151.78**	**48**			**PKiKP**	**14 19 55.0**	**+0.1**

*IDC **14** 14:02:59.5±1.6, 15°.14S×173°.81W, h0km, mb4.1/8, mbtmp4.1/8, MS3.2/5, Error ellipse: s-maj=77.4km s-min=19.9km az=143.0*
*NEIC **14** 14:03:07.1±0.5, 15°.2S±0°.1×173°.7W±0°.1, h59km±8km, mb4.4/8, Error ellipse: s-maj=20.8km s-min=12.6km az=130.0*

ISC 14 14:03:04.8±0.6, 15°.2S±0°.1×173°.8W±0°.1, h35km, n30, σ0§92/26, mb4.3/12, MS3.1/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.35**	**58**			**Pn**	**Pn**	**14 03 42.1**	**+1.1**
NIUE	**Niue**	**5.38**	**137**	Pn		Pn	**Pn**	**14 04 22.9**	**+0.3**
DZM	**Mont Dzumac**	**19.90**	**247**	P		**P**	**P**	**14 07 34.8**	**+1.2**
PPT	**Papeete**	**23.38**	**99**	LR		LR	LR	14 15 59.5	
	comp=Z,56nm,18.1s,baz=70,slow=33								
CTA	**Charters Tower**	**38.29**	**257**	LR		LR	LR	14 23 27.0	
	comp=Z,33nm,21.6s,baz=48,slow=32								
STKA	**Stephens Creek**	**43.79**	**240**	P		**P**	**P**	**14 11 08.4**	**+0.9**
	0.9nm,0.3s,baz=6.2,slow=22,SNR=7.5								
	0.9nm,0.3s								
WR0	**Warramunga Arr**	**49.30**	**257**	P		**P**	**P**	**14 11 50.2**	**-0.6**
WR0				IAmb		IAmb	IAmb	14 11 57.4	
	comp=Z,4.0nm,0.9s								
WB0	**Warramunga Arr**	**49.45**	**257**	P		**P**	**P**	**14 11 51.3**	**-0.7**
WRA	**Warramunga Arr**	**49.49**	**257**	P		**P**	**P**	**14 11 51.7**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=89,slow=7.2,SNR=42								
	comp=Z,2.9nm,0.7s								
WRA	**Warramunga Arr**	**49.49**	**257**	P		**P**	**P**	**14 11 49.9**	**-2.4**
AS31	**Alice Springs**	**49.79**	**252**			**P**	**P**	**14 11 54.2**	**-0.3**
AS31				IAmb		IAmb	IAmb	14 11 54.6	
	comp=Z,3.2nm,0.7s								
ASAR	**Alice Springs**	**49.79**	**252**	P		**P**	**P**	**14 11 54.0**	**-0.5**
	comp=Z,11nm,0.6s,baz=86,slow=7.9,SNR=152								
ASAR				LR		LR	LR	14 33 48.0	
	comp=Z,26nm,18.2s,baz=92,slow=37								
	comp=Z,11nm,0.6s								
ASAR	**Alice Springs**	**49.79**	**252**				**P**	**14 11 53.7**	**-0.8**
FORT	**Forrest**	**55.15**	**243**	P			**P**	**14 12 33.6**	**-0.5**
JHJ	**Hachijo jima 2**	**65.33**	**318**	LR		LR	LR	14 38 22.5	
	comp=Z,22nm,20.4s,baz=74,slow=32								
PETK	**Petropavlovsk-**	**72.30**	**342**	P		**P**	**P**	**14 14 27.1**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=158,slow=5.2,SNR=4.3								
	comp=Z,4.9nm,0.8s								
NVAR	**Mina Array Bea**	**74.44**	**42**	P		**P**	**P**	**14 14 40.3**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=229,slow=8.0,SNR=7.9								
	comp=Z,0.8nm,0.8s								
KSRS	**Korea Array**	**75.72**	**316**	LR		LR	LR	14 41 11.0	
	comp=Z,11nm,21.5s,baz=130,slow=30								
CCB	**Clear Creek Bu**	**82.03**	**11**	P			**P**	**14 15 20.5**	**-0.4**
CCB				IAmb		IAmb	IAmb	14 15 21.6	
	comp=Z,2.9nm,1.0s								
JTMT	**Jette**	**82.05**	**36**	P			**P**	**14 15 19.5**	**-2.1**
ILAR	**Eielson Array**	**82.31**	**11**	P			**P**	**14 15 22.2**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=230,slow=6.0,SNR=12								
	comp=Z,0.4nm,0.6s								
PDAR	**Pinedale Array**	**82.38**	**42**	P			**P**	**14 15 23.0**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=229,slow=3.3,SNR=3.6								
	comp=Z,0.4nm,0.8s								
F19K	**Shaleruckik Mo**	**82.64**	**6**	P			**P**	**14 15 24.9**	**+0.8**
F19K				IAmb		IAmb	IAmb	14 15 33.3	
	comp=Z,5.3nm,1.4s								
YKA	**Yellowknife Ar**	**90.06**	**24**	P			**P**	**14 16 00.0**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=234,slow=4.2,SNR=4.4								
	comp=Z,0.3nm,0.9s								
MORC	**Moravsky Berou**	**144.27**	**347**	*e*PKP			**PKPab**	**14 22 35.0**	**-0.1**
VRAC	**Vranov**	**144.91**	**348**	*e*PKP			**PKPab**	**14 22 37.1**	**-0.3**
JAVC	**Velka Javorina**	**145.11**	**347**	*e*PKP			**PKPdf**	**14 22 39.5**	**+0.8**
KRUC	**Moravsky**	**145.19**	**348**	*e*PKP			**PKPbc**	**14 22 38.0**	**-0.3**
BRTR	**Keskin Array B**	**145.73**	**321**	PKPbc			**PKPdf**	**14 22 40.5**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=79,slow=2.9,SNR=18								
GERES	**GERESS Array B**	**145.86**	**351**	PKPbc			**PKPdf**	**14 22 40.3**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=15,slow=5.5,SNR=6.7								

*ASRS **14** 14:03:28.4±0.3, 48°.N×2°.8°.2E±°, h9km, MLh3.3/9, Error ellipse: s-maj=5.2km s-min=3.2km az=131.4, confirmed*
*SOME **14** 14:03:30.4, 47°.28N×81°.80E, h0km*
*NNC **14** 14:03:33.5±2.0, 47°.53N×82°.17E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=34.5km s-min=8.2km az=70.0*

ISC 14 14:03:40.9±0.9, 47°.16N±0°.04×82°.27E±0°.05, h19km, n17, σ2§55/27, 6C-2D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**0.37**	**177**	⇑P			**Pg**	**14 03 47.9**	**-0.9**
	3.5nm,0.2s,baz=360,slow=18,SNR=432								
MK31				⇑S			**Sn**	**14 03 58.1**	**+0.1**
	5.9nm,0.2s,baz=358,slow=30,SNR=16								
MAKZ	**Makanchi**	**0.41**	**209**	Pg			**Pg**	**14 03 47.5**	**-1.8**
MAKZ				Sg			**Sb**	**14 03 57.0**	**+1.6**
ZSN	**Zaisan**	**1.79**	**80**	*eP*			**Pn**	**14 04 09.7**	**-1.1**
	6.7nm,0.2s								
ZSN				*eS*			**Sb**	**14 04 37.7**	**+2.4**
	284nm,0.3s								
SEM	**Semipalatinsk**	**3.51**	**338**	*eP*			Pn	14 04 31.9	-2.7
	7.1nm,0.2s								
SEM				*eS*			**Sn**	**14 05 15.9**	**+0.2**
	31nm,0.3s								
TUNR	**Tungur**	**4.03**	**40**	Pg			**Pn**	**14 04 39.1**	**-2.5**
TUNR				Sg			**Sn**	**14 05 28.7**	**+0.4**
UKR	**Ust'-Kan**	**4.12**	**23**	Pg			**Pn**	**14 04 44.4**	**+1.5**
UKR				Sg			**Sn**	**14 05 33.7**	**+3.1**
KURBB	**Kurchatov Arra**	**4.25**	**326**	⇑Pg			**Pn**	**14 04 45.0**	**+0.5**
	1.6nm,0.2s								
KURBB				⇑Lg			Lg	14 05 39.6	
	54nm,0.6s								
DGZ	**Jazzator, Alta**	**4.27**	**52**	Pg			**Pn**	**14 04 44.6**	**-0.4**
DGZ				Sg			**Sn**	**14 05 42.0**	**+7.6**
KURK	**Kurchatov**	**4.29**	**327**	⇑Pg			**Pn**	**14 04 44.5**	**-0.6**
	0.6nm,0.2s								
KURK				⇓Lg			Lg	14 05 37.2	
	7.6nm,0.5s								
KURK	**Kurchatov**	**4.29**	**327**	Pg			**Pn**	**14 04 44.6**	**-0.5**
KURK				Sg			**Sn**	**14 05 37.0**	**+2.4**
PDGK	**Podgornoye**	**4.31**	**208**	⇑Pn			**Pn**	**14 04 46.3**	**+0.8**
	0.3nm,0.2s								
PDGK				⇓Lg			Lg	14 05 54.8	
	4.8nm,0.6s								
CHBI	**Chibit, Altay**	**4.68**	**46**	Pg			**Pn**	**14 04 48.6**	**-2.1**
CHBI				Sg			**Sb**	**14 05 56.3**	**-2.2**
AKAR	**Aktash**	**4.75**	**46**	Pg			**Pn**	**14 04 49.5**	**-2.0**
AKAR				Sg			**Sb**	**14 05 57.1**	**-3.2**
CUR	**Chagan-Uzun**	**4.99**	**52**	Pg			**Pn**	**14 04 52.5**	**-2.4**
CUR				Sg			**Sb**	**14 06 06.7**	**-0.6**
ULGR	**Ulagan, Altay**	**5.11**	**45**	Pg			Pn	14 04 53.6	-2.9
ULGR				Sg			**Sb**	**14 06 08.2**	**-2.4**
ARTR	**Artybash**	**5.67**	**33**	Sg			**Sb**	**14 06 24.3**	**-2.5**
TEL	**Teeli**	**6.48**	**51**	Sg			**Sb**	**14 06 54.3**	**+4.2**

*MEX **14** 14:49:49.7±0.6, 15°.64N×93°.51W, h95km±5km, MD4.0*
*GCG **14** 14:49:50.4±0.4, 15°.58N×93°.31W, h99km±32km, ML3.6, Presumed earthquake*

ISC 14 14:49:46.9±1.4, 15°.60N±0°.05×93°.54W±0°.03, h108km±10km, n23, σ1§84/40, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCIG		**0.32**	**71**	*eP*			**Pn**	**14 50 02.2**	**-0.3**
PCIG				*eS*			**Sn**	**14 50 12.4**	**-1.7**
CARR	**Arriaga**	**0.74**	**331**	*eP*			**Pn**	**14 50 06.8**	**+1.5**
CARR				*i* S			**Sn**	**14 50 20.5**	**+1.3**
TGIG		**1.24**	**19**	*i* P			**Pn**	**14 50 11.3**	**+0.7**
TGIG				*eS*			**Sn**	**14 50 27.0**	**-1.5**
TGBT	**Tuxtla Gutierr**	**1.25**	**20**	*i* P			**Pn**	**14 50 11.3**	**+0.7**
TGBT				*eS*			**Sn**	**14 50 27.2**	**-1.4**
PATR	**El Naranjo**	**1.35**	**111**	*eP*			**Pn**	**14 50 12.1**	**+0.1**
PATR				*eS*			**Sn**	**14 50 30.3**	**-0.7**
PAVE	**Pavencul**	**1.37**	**107**	*eP*			**Pn**	**14 50 12.8**	**+0.6**
PAVE				*eS*			**Sn**	**14 50 31.5**	**0.0**
THIG		**1.41**	**119**	*eS*			**Sn**	**14 50 31.8**	**-0.1**
CHUJ	**Union Juarez**	**1.47**	**110**	*eP*			**Pn**	**14 50 13.9**	**+0.5**
CHUJ				*eS*			**Sn**	**14 50 33.2**	**-0.3**
CCIG	**Comitan**	**1.51**	**63**	*eP*			**Pn**	**14 50 14.9**	**+1.1**
CCIG				*eS*			**Sn**	**14 50 33.7**	**-0.5**
SMCA	**Catarina**	**1.59**	**117**	*i* P			**Pn**	**14 50 15.6**	**+0.9**
SMCA				*i* S			**Sn**	**14 50 35.1**	**-0.8**
UXUV	**UXUV**	**1.81**	**341**	*eP*			**Pn**	**14 50 19.8**	**+2.5**
UXUV				*eS*			**Sn**	**14 50 40.1**	**-0.4**
CMIG	**Matias Romero**	**1.97**	**319**	*eP*			**Pn**	**14 50 21.5**	**+2.1**
CMIG				*eS*			**Sn**	**14 50 42.9**	**-1.3**
STG8	**El Palmar, Qui**	**2.40**	**118**	*eP*			Pn	14 50 22.4	-2.8
STG8				*i* S			Sn	14 50 47.2	-7.3
STG8				IAML				14 50 51.1	
	comp=E,450nm,0.2s								
STG5	**El Palmar, Qui**	**2.43**	**119**	*eP*			Pn	14 50 22.0	-3.4
HUIG	**Huatulco**	**2.48**	**274**	*eP*			**Pn**	**14 50 26.6**	**+0.6**
HUIG				*eS*			**Sn**	**14 50 53.8**	**-2.2**
APG	**El Apazote**	**3.02**	**101**	*i* P			**Pn**	**14 50 34.8**	**+1.4**
PEIG	**Puerto Escondi**	**3.50**	**277**	*eP*			**Pn**	**14 50 40.8**	**+1.3**
PEIG				*eS*			**Sn**	**14

666nm73nm,1.3s
BBAC Balboa, Cauca 14.48 3 P Pn 15 14 13.5 +0.2
33nm,0.9s
GARC Garzon, Huila 14.83 9 P Pn 15 14 15.7 -2.3
993nm71nm,0.8s
POPC Popayan, Colom 15.03 5 P Pn 15 14 19.9 -0.9
35nm,1.0s
MACC Macarena, Meta 15.14 16 P Pn 15 14 19.9 -2.1
903nm65nm,0.7s
JAMC Jamundi, Valle 15.70 5 P Pn 15 14 30.7 +1.1
42nm,0.9s
URMC La Uribe, Meta 16.07 13 P Pn 15 14 32.4 -1.8
838nm100nm,0.8s
PRAC Prado 16.43 11 P Pn 15 14 31.3 -7.4
37nm,1.1s
YOTC Yotoco, Valle 16.49 5 P Pn 15 14 36.1 -3.5
22nm,0.9s
ORTC Ortega, Tolima 16.55 9 P Pn 15 14 39.1 -1.3
35nm,0.9s
SIV San Ignacio 16.67 104 Pn Pn 15 14 40.5 -1.3
baz=280,slow=15,SNR=6.0
SIV Lg Lg 15 19 36.3
baz=60,slow=22,SNR=3.7
SIV LR LR 15 21 33.2
comp=Z,1µm,19.3s,baz=286,slow=39
5.3nm,0.9s
VILC Villavicencio, 17.07 14 P Pn 15 14 47.7 +0.8
1µm78nm,0.6s
VILB Vilhena 17.27 93 eP Pn 15 14 48.1 -1.3
ROSC El Rosal 17.63 12 P Pn 15 14 54.3 +0.1
3.3nm,0.3s,baz=177,slow=13,SNR=4.7
ROSC S Sn 15 18 11.1 +0.1
5.9nm,0.3s,baz=64,slow=22,SNR=1.1
ROSC LR LR 15 22 24.2
comp=Z,1µm,18.4s,baz=206,slow=40
6.4nm,0.4s
CBOC Ciudad Bolivar 18.38 6 P P 15 15 07.6 +4.3
22nm,0.8s
CBOC P pwP 15 15 10.2 +4.5
22nm,0.8s
CBOC P pwP 15 15 10.2 +4.5
22nm,0.8s
PTLB Pontes e Lacer 18.43 101 eP Pn 15 15 02.9 -0.9
SPBC San Pablo de B 18.47 12 P P 15 15 02.8 -1.4
MACA Manacapuru-AM 19.42 63 eP P 15 15 14.4 -0.1
PDRB Porto dos Gac 20.72 90 eP P 15 15 28.4 -0.4
H03N2 Juan Fernandez 20.82 182 T T 15 37 24.6
baz=3.3,slow=76,SNR=215
H03N1 Juan Fernandez 20.82 182 T T 15 37 05.8
baz=3.3,slow=76,SNR=242
H03N3 Juan Fernandez 20.84 182 T T 15 37 03.7
baz=3.3,slow=76,SNR=233
CFA Coronel Fontan 20.96 156 P P 15 15 33.6 +2.4
13nm,1.0s,baz=340,slow=12,SNR=9.6
13nm,1.0s
CLDB Colider 21.71 88 eP P 15 15 37.6 -1.8
BDQN Bodoquena, MS 21.73 114 eP P 15 15 40.2 +0.6
SALV Santo Antonio 21.78 101 eP P 15 15 39.9 -0.2
MT13 San Alfonso 22.22 163 P P 15 15 45.7 +0.9
MT13 IAmb IAmb 15 16 02.8
comp=Z,35nm,1.1s
SDV Santo Domingo 22.48 19 LR LR 15 25 47.6
comp=Z,1µm,19.1s,baz=192,slow=40
SDV Santo Domingo 22.48 19 P 15 15 47.3 -0.5
SDV Santo Domingo 22.48 19 eP P 15 15 48.7 +0.8
BOAV Boa Vista 22.76 50 P 15 15 50.3 -0.4
BOAV IAmb IAmb 15 16 02.1
comp=Z,32nm,0.9s
BOAV Boa Vista 22.76 50 eP P 15 15 50.2 -0.5
PP1B Ponte de Pedra 22.78 106 eP P 15 15 50.2 -0.7
NPGB Novo Progresso 22.87 78 eP P 15 15 50.4 -1.4
ITTB Itaituba 23.36 72 eP P 15 15 55.6 -1.3
CPUP Villa Florida 23.71 128 P P 15 16 00.5 +0.3
comp=Z,6.4nm,1.1s,baz=304,slow=12,SNR=5.6
CPUP LR LR 15 26 39.8
comp=Z,202nm,19.6s,baz=318,slow=40
comp=Z,6.4nm,1.1s
JTS Las Juntas de 23.74 343 LR LR 15 23 09.0
comp=Z,271nm,21.0s,baz=191,slow=31
ARAG Araguaiana, MT 25.49 100 eP P 15 16 16.3 -0.3
SNDB Serra Nova Dou 26.00 92 eP P 15 16 20.6 -0.8
PTGB Pitanga 27.25 120 eP P 15 16 32.5 -0.1
ITRB Iturama 27.37 109 eP P 15 16 33.8 +0.1
CPSB Cacapava Do Su 28.77 132 eP P 15 16 46.3 +0.3
PLCA Paso Flores 28.82 168 P P 15 16 47.4 +1.0
comp=Z,4.1nm,1.0s,baz=349,slow=10,SNR=3.6
comp=Z,4.1nm,1.0s
IPMB Ipameri, GO 29.13 104 eP P 15 16 48.2 -1.1
BDFB Brasilia 29.14 100 P P 15 16 48.6 -0.9
comp=Z,3.6nm,0.7s,baz=260,slow=9.9,SNR=6.9
BDFB LR LR 15 29 11.8
comp=Z,737nm,19.7s,baz=268,slow=38
comp=Z,3.6nm,0.7s
SMTB Santa Maria do 30.00 86 eP P 15 16 57.4 +0.3
MDP Montagnes des 30.62 57 P P 15 17 01.4 -1.1
comp=Z,18nm,0.9s,baz=241,slow=10,SNR=2.5
MDP LR LR 15 29 31.1
comp=Z,728nm,18.7s,baz=255,slow=37
comp=Z,18nm,0.9s
SDBA SAO DESIDERIO 32.21 93 eP P 15 17 16.2 -0.4
SJG San Juan 32.59 21 LR LR 15 33 14.3
comp=Z,325nm,18.8s,baz=157,slow=41
JANB Januaria 32.70 98 eP P 15 17 20.1 -0.8
RPN Rapa Nui 32.82 239 LR LR 15 26 42.9
comp=Z,344nm,20.7s,baz=110,slow=29
DUB01 Friburgo-RJ 35.14 111 eP P 15 17 41.8 -0.3
RIB01 Linhares ES 36.63 105 eP P 15 17 54.7 -0.1
NBPS Pedro II - PI 36.91 81 eP P 15 17 57.1 -0.3
GUA01 Guaratinga, BA 37.05 101 eP P 15 17 58.3 -0.2
RCBR Riachuelo 41.95 85 LR LR 15 36 05.1
comp=Z,108nm,20.3s,baz=254,slow=36
TKL Tuckaleechee C 48.26 354 LR LR 15 42 15.1
comp=Z,232nm,18.3s,baz=44,slow=39
TXAR Lajitas Array 48.50 330 P P 15 19 31.3 +0.1
comp=Z,1.3nm,0.7s,baz=152,slow=8.8,SNR=11
comp=Z,1.3nm,0.7s
TXAR Lajitas Array 48.50 330 P P 15 19 31.0 -0.2
TPB01 Permian Basin 49.88 331 IAmb IAmb 15 20 04.5
comp=Z,5.9nm,0.9s
LCAR Lake Charles 49.94 346 IAmb IAmb 15 19 52.7
comp=Z,8.7nm,1.0s
FCAR Ozark Folk Cen 50.01 345 IAmb IAmb 15 19 59.5
comp=Z,9.6nm,1.1s
APMT Aspermont 50.30 336 IAmb IAmb 15 19 50.7
comp=Z,11nm,0.8s
VHRN Van Horn 50.34 329 P P 15 19 46.5 +1.2
MNTX Cornudas Mount 51.27 330 P P 15 19 52.5 +0.3
P43A Skaggs, Pawnee 53.03 349 IAmb IAmb 15 20 15.4
comp=Z,7nm,1.1s
ANMO Albuquerque 54.44 331 LR LR 15 41 59.6
comp=Z,157nm,18.3s,baz=56,slow=34
SADO Sadowa 57.05 359 LR LR 15 48 24.8
comp=Z,198nm,18.2s,baz=78,slow=40
TAOE Nuku Hiva Isla 61.16 267 eLR LR 15 39 01.7
comp=Z,185nm,26.7s
PDAR Pinedale Array 62.22 334 P P 15 21 10.0 -0.1
comp=Z,0.3nm,0.6s,baz=138,slow=6.3,SNR=3.8
comp=Z,0.3nm,0.6s
NVAR Mina Array Bea 63.23 325 P P 15 21 18.1 +1.2
comp=Z,1.2nm,0.8s,baz=142,slow=6.8,SNR=6.2
comp=Z,1.2nm,0.8s
EPLO Experimental L 63.49 349 P P 15 21 15.8 -2.4
ULM Lac du Bonnet 64.48 347 P P 15 21 23.5 -1.1
comp=Z,12nm,0.8s,baz=156,slow=7.1,SNR=20
comp=Z,12nm,0.8s
ULM Lac du Bonnet 64.48 347 P P 15 21 22.9 -1.6
SCHQ Schefferville 67.76 7 P P 15 21 45.9 +0.3
comp=Z,6.4nm,0.8s,baz=184,slow=6.7,SNR=5.7
comp=Z,6.4nm,0.8s
SCHQ Schefferville 67.76 7 P P 15 21 43.9 -1.7
SCHQ IAmb IAmb 15 21 46.7
comp=Z,14nm,1.0s
TBI Tubuai 68.35 250 eLR LR 15 42 22.7
comp=Z,351nm,21.8s
PPT2 Papeete2 69.05 256 eLR LR 15 42 41.3
comp=Z,170nm,28.0s
FCC Fort Churchill 72.27 351 P P 15 22 12.7 -0.4
FCC IAmb IAmb 15 22 14.0
comp=Z,6.7nm,1.0s
DBIC Dimbokro 75.05 80 P P 15 22 29.1 -1.4
comp=Z,4.8nm,0.8s,baz=268,slow=4.0,SNR=5.7
comp=Z,4.8nm,0.8s
FRB Frobisher Bay 76.39 4 LR LR 15 57 43.6
comp=Z,302nm,20.7s,baz=95,slow=37
QSPA South Pole Qui 77.59 180 P P 15 22 44.3 +0.1
comp=Z,0.9nm,0.3s,baz=208,slow=4.7,SNR=3.3
comp=Z,0.9nm,0.3s

RAR Rarotonga 78.09 251 LR LR 15 47 25.4
comp=Z,58nm,21.4s,baz=150,slow=28
YKA Yellowknife Ar 80.07 344 P P 15 22 57.0 -0.6
comp=Z,2.2nm,0.8s,baz=147,slow=5.5,SNR=29
comp=Z,2.2nm,0.8s
YKA Yellowknife Ar 80.07 344 P P 15 22 56.8 -0.8
PTEO Sao Teotonio 81.66 49 epP P 15 23 09.5 +2.9
PBDV Barranco-do-Ve 82.13 49 epP P 15 23 11.9 +2.8
MESJ Messejana 82.15 49 epP P 15 23 10.7 +1.6
PCVE Castro Verde 82.20 49 epP P 15 23 11.8 +2.4
MOE Montemor 82.31 48 epP P 15 23 12.3 +2.3
PVAQ Vaqueiros 82.35 49 epP P 15 23 12.5 +2.3
EVO Evora 82.56 48 epP P 15 23 13.0 +1.7
PMTG Montargil 82.61 47 epP P 15 23 13.3 +1.7
PARRA Arraiolos 82.65 48 epP P 15 23 13.5 +1.8
TORD Torodi Ar. Bea 82.93 75 P P 15 23 14.4 +0.7
comp=Z,6.9nm,0.9s,baz=249,slow=8.5,SNR=28
comp=Z,6.9nm,0.9s
PCBR Castelo Branco 83.44 47 epP P 15 23 16.9 +1.1
PVIS Viseu 83.48 46 epP P 15 23 17.1 +1.0
MVO Moncorvo 84.25 46 epP P 15 23 21.7 +1.6
ESDC Sonseca Array 85.91 48 P P 15 23 29.0 +0.6
comp=Z,1.6nm,0.8s,baz=260,slow=5.2,SNR=10
comp=Z,1.6nm,0.8s
M29M Somme Creek 88.16 336 P P 15 23 38.8 0.0
K29M Barlow Dome 88.54 338 IAmb IAmb 15 24 01.2
comp=Z,6.0nm,1.0s
I30M Mount Dempster 88.88 339 IAmb IAmb 15 23 53.0
comp=Z,6.7nm,1.1s
INK Inuvik 89.73 342 LR LR 16 05 53.4
comp=Z,272nm,19.1s,baz=2.5,slow=37
BCAR Beaver Creek A 89.79 336 P P 15 23 46.3 -0.2
F30M Barrier River 90.03 341 IAmb IAmb 15 24 03.9
comp=Z,6.1nm,0.9s
G29M Pine Creek 90.37 340 IAmb IAmb 15 24 00.1
comp=Z,13nm,1.2s
E29M Blow River 91.12 341 IAmb IAmb 15 24 03.2
comp=Z,7.1nm,1.2s
ILAR Eielson Array 92.57 336 P P 15 23 58.5 -0.7
comp=Z,0.6nm,0.8s,baz=154,slow=3.2,SNR=9.3
ILAR LR LR 16 09 37.7
comp=Z,85nm,18.7s,baz=62,slow=38
comp=Z,0.6nm,0.8s
ILAR Eielson Array 92.57 336 P P 15 23 58.7 -0.5
C24K Franklin Bluff 95.18 341 IAmb IAmb 15 24 18.9
comp=Z,4.5nm,0.8s
JMIC Jan Mayen 95.23 18 LR LR 16 07 57.5
comp=Z,95nm,18.4s,baz=114,slow=36
DZM Mont Dzumac 108.15 242 eLR LR 16 00 50.0
comp=Z,53nm,24.4s
H11N3 WAKE ISLAND Hyl 17.64 286 T T 17 38 11.4
baz=94,slow=75,SNR=26
H11N2 WAKE ISLAND Hyl 17.65 286 T T 17 38 12.4
baz=94,slow=75,SNR=28
H11N1 WAKE ISLAND Hyl 17.66 286 T T 17 38 08.7
baz=94,slow=75,SNR=18
H11S2 WAKE ISLAND Hyl 17.74 284 T T 17 38 18.3
baz=94,slow=75,SNR=55
H11S1 WAKE ISLAND Hyl 17.74 284 T T 17 38 17.1
baz=94,slow=75,SNR=54
H11S3 WAKE ISLAND Hyl 17.75 284 T T 17 38 17.9
baz=94,slow=75,SNR=44
BVAR Borovoye Array 132.35 25 PKP PKPdf 15 30 02.6 +0.3
comp=Z,0.7nm,0.9s,baz=338,slow=3.1,SNR=5.3
ASAR Alice Springs 132.43 221 PKP PKPdf 15 30 03.3 -0.2
comp=Z,0.5nm,0.8s,baz=105,slow=1.9,SNR=6.9
WRA Warramunga Arr 134.74 225 PKP PKPdf 15 30 08.3 +0.4
comp=Z,1.4nm,0.8s,baz=136,slow=1.7,SNR=9.5
WRA Warramunga Arr 134.74 225 PKPdf PKPdf 15 30 08.8 +1.0
ZALV Zalesovo Beam 136.48 15 PKP PKPdf 15 30 10.5 +0.5
comp=Z,3.1nm,0.8s,baz=318,slow=2.0,SNR=13
KURBB Kurchatov Arra 137.43 22 PKP PKPdf 15 30 12.1 +0.2
comp=Z,1.2nm,0.7s,baz=316,slow=2.6,SNR=13
MKAR Makanchi Array 142.00 22 PKhKP PKPpre 15 30 13.6
comp=Z,0.8nm,0.9s,baz=352,slow=2.6,SNR=4.6
KSH2 Kashi 144.59 37 PKP PKPab 15 30 25.3 +1.5
KSH2 pPKP sPKPdf 15 30 35.1 +5.8
SONM Songino Array 144.63 355 PKP PKPab 15 30 24.4 +0.7
comp=Z,6.3nm,0.8s,baz=324,slow=2.1,SNR=42
SONM Songino Array 144.63 355 PKPab 15 30 24.5 +0.8
KSRS Korea Array 146.11 322 PKPbc PKPdf 15 30 28.1 +0.3
comp=Z,1.3nm,0.7s,baz=10,slow=0.5,SNR=7.2
HHC Hu-ho-hao-te 150.60 345 eP PKPdf 15 30 31.9 -3.3
HNS HongShan 152.79 338 ↓PKPbc PKPbc 15 30 46.0 +0.4
GTA2 Gaotai 153.08 4 eP PKPbc 15 30 46.4 0.0
GTA2 pmax pmax
comp=Z,5.0nm,1.0s
NJ2 Nanjing 155.22 324 eP PKPdf 15 30 38.8 -3.2
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
PZH PanZhiHua 166.11 1 PKP PKPdf 15 30 51.3 -2.9

*JMA **14** 15:11:28.4±0.1,24°.2N±0°.5×12°2E±°, h19km, MV2.6/10, TAIWAN REGION*
*TAP **14** 15:11:28.2,24°.19N×121°.59E, h22km, ML3.8, B*
ISC 14 15:11:28.5±0.9,**24°.19N**±0°.01×**121°.61E**±0°.02,**h19**km±2km,
n126, σ0**972**/220,**12C-21D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.02**	**234**	↓*i*P		**Pg**		**15 11 32.0**	**+0.2**
NACB				*i*S		**Sg**		**15 11 34.4**	**+0.4**
ETL	**Fush Village**	**0.03**	**163**	↓P		**Pg**		**15 11 32.1**	**+0.3**
ETL				S		**Sg**		**15 11 34.5**	**+0.4**
TWD	**Chiawan**	**0.11**	**189**	↑*i*P		**Pg**		**15 11 32.6**	**+0.3**
TWD				S		**Sg**		**15 11 35.3**	**+0.4**
ETLH	**Xiulin Townshi**	**0.12**	**280**	↓*i*P		**Pg**		**15 11 32.7**	**+0.1**
ETLH				S		**Sg**		**15 11 35.4**	**0.0**
EHP	**Heping Village**	**0.17**	**43**	P		**Pg**		**15 11 33.5**	**+0.4**
EHP				S		**Sg**		**15 11 36.9**	**+0.7**
EAHA	**Aohua**	**0.18**	**39**	↓P		**Pg**		**15 11 33.5**	**+0.2**
EAHA				S		**Sg**		**15 11 37.0**	**+0.5**
HWA	**Hwalien**	**0.21**	**182**	↑*i*P		**Pg**		**15 11 34.2**	**+0.6**
HWA				S		**Sg**		**15 11 38.1**	**+1.0**
ETM	**Tongmen**	**0.25**	**207**	P		**Pg**		**15 11 34.0**	**-0.2**
ETM				S		**Sb**		**15 11 38.2**	**+0.4**
LXIB	**Xiulin Townshi**	**0.25**	**228**	↓P		**Pg**		**15 11 34.1**	**-0.2**
LXIB				S		**Sb**		**15 11 38.1**	**+0.1**
EWUT	**Wuta**	**0.30**	**30**	↓P		**Pg**		**15 11 35.3**	**+0.2**
EWUT				eS		**Sg**		**15 11 39.6**	**0.0**
TEYL	**Yanliau Villag**	**0.32**	**183**	eP		**Pg**		**15 11 35.7**	**0.0**
NNSB	**Datong**	**0.32**	**319**	↓P		**Pg**		**15 11 35.5**	**0.0**
NNSB				S		**Sg**		**15 11 40.2**	**-0.1**
WHF	**Hehuan Shan**	**0.32**	**263**	P		**Pg**		**15 11 35.5**	**-0.2**
WHF				S		**Sg**		**15 11 39.9**	**-0.7**
NNS	**Nan Shan**	**0.34**	**319**	↓P		**Pg**		**15 11 35.7**	**-0.1**
NNS				S		**Sg**		**15 11 40.6**	**-0.1**
FUSS	**Fushou**	**0.34**	**280**	↓P		**Pg**		**15 11 36.0**	**+0.1**
FUSS				S		**Sg**		**15 11 41.0**	**-0.1**
LATG	**Datong**	**0.36**	**347**	↓P		**Pg**		**15 11 36.0**	**-0.1**
LATG				S		**Sg**		**15 11 41.1**	**-0.2**
SHUL	**Shoufeng**	**0.40**	**187**	P		**Pg**		**15 11 37.3**	**+0.5**
SHUL				S		**Sb**		**15 11 43.4**	**+0.6**
ESL	**Shilin**	**0.41**	**204**	↓P		**Pg**		**15 11 36.2**	**-0.7**
ESL				S		**Sg**		**15 11 42.3**	**-0.3**
TWT	**Tachien**	**0.41**	**280**	↑*i*P		**Pg**		**15 11 37.2**	**+0.2**
TWT				S		**Sg**		**15 11 42.5**	**-0.2**
TDCB	**Techi**	**0.42**	**279**	↑*i*P		**Pg**		**15 11 37.2**	**0.0**
TDCB				S		**Sg**		**15 11 42.5**	**-0.7**
ENTT	**Nioudou**	**0.45**	**354**	↓*i*P		**Pg**		**15 11 37.7**	**-0.1**
ENTT				S		**Sg**		**15 11 44.1**	**+0.1**
NDS	**Dongshan**	**0.46**	**12**	P		**Pg**		**15 11 37.9**	**+0.1**
NDS				S		**Sg**		**15 11 44.2**	**+0.1**
OWD	**Renai**	**0.46**	**240**	↑P		**Pg**		**15 11 37.6**	**-0.4**
OWD				S		**Sg**		**15 11 43.8**	**-0.6**
TWC	**Suao**	**0.47**	**27**	↓P		**Pg**		**15 11 38.2**	**+0.1**
TWC				S		**Sg**		**15 11 44.6**	**+0.1**
TEGC	**Jichi Village**	**0.48**	**188**	eP		**Pg**		**15 11 38.4**	**+0.2**
TEGC				eS		**Sn**		**15 11 47.2**	**-1.0**
WUSB	**Renai**	**0.49**	**247**	↑*i*P		**Pg**		**15 11 38.2**	**-0.3**
WUSB				S		**Sg**		**15 11 45.0**	**-0.3**
WARBT	**Fenglin Townsh**	**0.51**	**204**	↓P		**Pg**		**15 11 37.5**	**-1.3**
WARBT				S		**Sg**		**15 11 44.9**	**-0.9**
YHNB	**Yeheng**	**0.53**	**336**	↓P		**Pg**		**15 11 38.9**	**-0.3**
YHNB				S		**Sg**		**15 11 45.7**	**-0.6**
TWE	**Neicheng**	**0.53**	**5**	↓P		**Pg**		**15 11 39.2**	**-0.1**
TWE				S		**Sg**		**15 11 46.5**	**0.0**
NSK	**Sanguang**	**0.54**	**334**	↓P		**Pg**		**15 11 39.0**	**-0.4**
NSK				S		**Sg**		**15 11 46.0**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.57**	**358**	↓P		**Pb**		**15 11 39.8**	**-0.1**
FUSB				S		**Sg**		**15 11 46.8**	**-0.9**
ILA	**Ilan**	**0.59**	**12**	eP		**Pb**		**15 11 38.6**	**-1.5**
ILA				eS		**Sb**		**15 11 47.5**	**-0.5**
NWLT	**Wulai**	**0.60**	**350**	↓P		**Pb**		**15 11 40.0**	**-0.2**
NWLT				S		**Sb**		**15 11 47.3**	**-1.0**
EOS2	**EOS2**	**0.61**	**68**	eP		**Pn**		**15 11 41.8**	**-0.2**
VWDT	**VWDT**	**0.61**	**225**	↓P		**Pb**		**15 11 40.3**	**-0.2**
VWDT				eS		**Sb**		**15 11 48.7**	**+0.1**
WHP	**Taichung City**	**0.62**	**279**	eP		**Pb**		**15 11 40.5**	**-0.2**
WHP				eS		**Sb**		**15 11 48.7**	**-0.1**
NFF	**Wufeng Townshi**	**0.63**	**315**	↑P		**Pb**		**15 11 40.8**	**-0.1**
EOS4	**EOS4**	**0.65**	**96**	eP		**Pn**		**15 11 42.4**	**+0.1**
EOS3	**EOS3**	**0.65**	**81**	eP		**Pn**		**15 11 43.1**	**+0.6**
WCS	**Beigang Elemen**	**0.66**	**259**	eP		**Pb**		**15 11 41.0**	**-0.3**
WCS				eS		**Sb**		**15 11 49.5**	**-0.4**
KSHI	**Guanxi Townshi**	**0.71**	**326**	eP		**Pg**		**15 11 42.8**	**+0.3**
KSHI				eS		**Sg**		**15 11 52.4**	**+0.4**
LIOB	**Emei**	**0.71**	**310**	eP		**Pb**		**15 11 42.5**	**+0.3**
LIOB				eS		**Sb**		**15 11 51.9**	**+0.2**
HGSD	**Ruisui**	**0.71**	**194**	eP		**Pb**		**15 11 42.3**	**0.0**
NSTT	**Nanjuang**	**0.71**	**308**	↑P		**Pb**		**15 11 42.4**	**+0.1**
NSTT				eS		**Sb**		**15 11 50.8**	**-0.9**
EGS		**0.72**	**24**	eP		**Pb**		**15 11 42.6**	**+0.3**
SMLT	**Sun Moon Lake**	**0.72**	**245**	↑P		**Pb**		**15 11 42.1**	**-0.3**
SSLB	**Suanglung**	**0.72**	**237**	↑P		**Pb**		**15 11 41.9**	**-0.6**
SSLB				eS		**Sb**		**15 11 50.6**	**-1.4**
EHY	**Hungye**	**0.73**	**202**	eP		**Pb**		**15 11 40.5**	**-2.0**
EHY				eS		**Sb**		**15 11 51.0**	**-1.2**
EHYH	**Wanrong**	**0.73**	**200**	eP		**Pb**		**15 11 41.4**	**-1.2**
EHYH				eS		**Sb**		**15 11 51.5**	**-0.7**
TYC	**Yuchr**	**0.75**	**248**	↑P		**Pb**		**15 11 42.4**	**-0.4**
NHDH	**Xindian Distri**	**0.78**	**354**	eP		**Pb**		**15 11 43.8**	**+0.4**
NHDH				eS		**Sb**		**15 11 53.5**	**0.0**
TWO1	**Liyutan**	**0.78**	**282**	eP		**Pb**		**15 11 43.9**	**+0.3**
TWA	**Mucha**	**0.79**	**358**	eP		**Pb**		**15 11 44.0**	**+0.3**
TWA				eS		**Sb**		**15 11 53.9**	**-0.1**
TIPB	**Shuangxi**	**0.81**	**14**	eP		**Pb**		**15 11 43.9**	**0.0**
TIPB				eS		**Sb**		**15 11 54.4**	**0.0**
NSY	**Sanyi**	**0.81**	**287**	eP		**Pn**		**15 11 45.1**	**+0.2**
NMLH	**Miaoli**	**0.83**	**295**	eP		**Pg**		**15 11 45.3**	**+0.6**
NMLH				eS		**Sg**		**15 11 56.2**	**+0.5**
SBCB	**Hsinchu**	**0.83**	**317**	eP		**Pb**		**15 11 44.8**	**+0.5**
SBCB				eS		**Sn**		**15 11 57.9**	**+0.9**
YULB	**Yu-li**	**0.84**	**200**	eP		**Pb**		**15 11 42.0**	**-2.5**
HSN	**Hsinchu**	**0.85**	**316**	eP		**Pg**		**15 11 45.5**	**+0.4**
HSN				eS		**Sn**		**15 11 57.4**	**+0.1**
WHYT	**Xinyi Township**	**0.85**	**235**	eP		**Pb**		**15 11 44.5**	**-0.1**
WHYT				eS		**Sb**		**15 11 56.3**	**+0.6**
TCU	**Taichung**	**0.86**	**268**	eP		**Pn**		**15 11 46.0**	**+0.5**
TCU				eS		**Sn**		**15 11 58.7**	**+1.2**
NCUH	**Zhongli**	**0.87**	**333**	eP		**Pg**		**15 11 45.8**	**+0.3**
NCUH				eS		**Sn**		**15 11 58.4**	**+0.5**
NCU	**National Centr**	**0.87**	**334**	eP		**Pb**		**15 11 43.8**	**-1.2**
NCU				eS		**Sb**		**15 11 56.5**	**+0.2**
TWF1	**Yuli**	**0.88**	**199**	eP		**Pb**		**15 11 44.9**	**-0.3**
TWF1				eS		**Sb**		**15 11 56.8**	**+0.2**
TWB1	**Santiao Chiao**	**0.89**	**23**	eP		**Pb**		**15 11 45.4**	**+0.1**
TWB1				eS		**Sb**		**15 11 56.5**	**-0.2**
NWF	**Wu-fen Shan**	**0.89**	**10**	eP		**Pg**		**15 11 46.1**	**+0.2**
NWF				eS		**Sb**		**15 11 57.1**	**+0.1**
WFSB	**Wu-fen Shan**	**0.89**	**10**	eP		**Pg**		**15 11 46.2**	**+0.3**
WFSB				eS		**Sb**		**15 11 57.3**	**+0.4**
TWS1	**Kuangyinshan**	**0.93**	**349**	eP		**Pg**		**15 11 46.8**	**+0.2**
TWS1				eS		**Sn**		**15 12 00.0**	**+0.7**
SXI1	**Grass Mountain**	**0.93**	**15**	eP		**Pb**		**15 11 46.5**	**+0.4**
SXI1				eS		**Sb**		**15 11 58.7**	**+0.5**
YM01	**YM01**	**0.96**	**358**	↓P		**Pn**		**15 11 47.0**	**+0.1**
YM01				eS		**Sb**		**15 11 59.2**	**+0.4**
TNOU	**National Taiwa**	**0.97**	**9**	eP		**Pb**		**15 11 47.1**	**+0.4**
WCHH	**Zhanghua**	**0.97**	**264**	eP		**Pb**		**15 11 47.3**	**+0.6**
ZUZH	**Zhuzihu**	**0.97**	**356**	eP		**Pb**		**15 11 47.1**	**+0.4**
ZUZH				eS		**Sg**		**15 12 00.1**	**-0.2**
NTST	**Danshui**	**0.98**	**351**	eP		**Pn**		**15 11 47.6**	**+0.4**
NTST				eS		**Sn**		**15 12 01.4**	**+0.7**
YM08	**YM08**	**1.00**	**359**	eP		**Pn**		**15 11 47.7**	**+0.2**
ANP	**Anpu**	**1.00**	**355**	eP		**Pb**		**15 11 47.6**	**+0.4**
ALS	**Alishan**	**1.00**	**228**	eP		**Pb**		**15 11 47.1**	**-0.2**
ALS				eS		**Sb**		**15 12 00.6**	**+0.3**
CHKH	**Chenggong**	**1.01**	**191**	eP		**Pb**		**15 11 45.6**	**-1.8**
CHKH				eS		**Sb**		**15 11 59.3**	**-1.0**
CHN5	**Tsauling**	**1.04**	**236**	eP		**Pn**		**15 11 48.4**	**+0.5**
CHN5				eS		**Sn**		**15 12 02.7**	**+0.5**
WGK	**Gukeng**	**1.08**	**243**	eP		**Pn**		**15 11 49.2**	**+0.6**
WGK				eS		**Sg**		**15 12 04.8**	**+1.1**
TWY	**Chenhua**	**1.08**	**359**	eP		**Pg**		**15 11 49.4**	**-0.1**
WDL	**Douliou City**	**1.09**	**245**	eS		**Sg**		**15 12 04.9**	**+0.9**
WDLH	**Douliu**	**1.10**	**244**	eP		**Pb**		**15 11 49.6**	**+0.7**
WDLH				eS		**Sg**		**15 12 05.2**	**+0.8**
ELDTW	**Lidau**	**1.13**	**209**	eP		**Pn**		**15 11 47.0**	**-2.4**
ELDTW				eS		**Sb**		**15 12 03.9**	**-0.1**
WRL	**Guolierlin Hig**	**1.17**	**256**	↑P		**Pn**		**15 11 50.0**	**+0.2**
WRL				eS		**Sn**		**15 12 05.5**	**+0.4**
CHN2	**Minshiung**	**1.23**	**238**	eP		**Pg**		**15 11 52.2**	**-0.1**
CHN2				eS		**Sg**		**15 12 10.4**	**+2.0**
JYNG	**Yonagunijimaku**	**1.24**	**77**	P		**Pn**		**15 11 51.1**	**+0.3**
WTCT	**Ta-ch'eng**	**1.26**	**256**	eP		**Pn**		**15 11 51.7**	**+0.6**
WTCT				eS		**Sg**		**15 12 09.0**	**-0.4**
TPUB	**Ta-pu**	**1.26**	**226**	eP		**Pn**		**15 11 51.7**	**+0.6**
TPUB				eS		**Sg**		**15 12 09.3**	**-0.1**
STYH	**Taoyuan**	**1.27**	**217**	eP		**Pn**		**15 11 50.9**	**-0.3**
CHY	**Chiayi**	**1.29**	**238**	eP		**Pb**		**15 11 52.7**	**+0.7**
CHY				eS		**Sb**		**15 12 09.7**	**+1.5**
YOJ	**Yonaguni jima**	**1.30**	**78**	eP		**Pn**		**15 11 51.7**	**+0.1**
WTP	**Ta-pu**	**1.31**	**225**	eP		**Pn**		**15 11 52.5**	**+0.7**
WTP				eS		**Sg**		**15 12 12.4**	**+1.4**
TWK	**Hsinying**	**1.38**	**229**	eP		**Pb**		**15 11 53.9**	**+0.2**
TWK				eS		**Sg**		**15 12 12.6**	**-0.5**
WSF	**Szhu**	**1.39**	**247**	eP		**Pn**		**15 11 53.4**	**+0.7**
WSF				eS		**Sb**		**15 12 12.7**	**+1.6**
SNST	**Tainan City**	**1.41**	**227**	eP		**Pg**		**15 11 55.9**	**+0.3**
SNST				eS		**Sg**		**15 12 15.6**	**+1.7**
CHN1	**Nanshi**	**1.41**	**225**	eP		**Pn**		**15 11 54.1**	**+1.0**
CHN

NEIC ***14*** *15:40:18.2±2.6, 52°.9S±0°.1×21°.1E±0°.3, h10km±1km, mb4.6/18, Error ellipse: s-maj=28.0km s-min=17.9km az=115.0*

IDC ***14*** *15:40:22.6±0.6, 52°.86S×19°.91E, h0km, mb4.3/17, mbtmp4.3/17, MS4.0/18, Error ellipse: s-maj=21.5km s-min=15.0km az=75.0*

GCMT ***14*** *15:40:26.8±0.3, 52°.93S±0°.02×20°.23E±0°.09, h12km, MW4.8/88, Moment Tensor Solution. s12, c12; s88, c111; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.10±.08; Mθθ 1.89±.06; Mϕϕ 0.20±.10; Mrθ 0.30±.35; Mθϕ -0.09±.08; Mϕr -0.10±.62; Best double couple: M☐2.02200×10^16 NP1: ϕ☐91.00000°, δ41.00000°, λ-93.00000°. NP2: ϕ☐275.00000°, δ49.00000°, λ-87.00000°. Principal axes: T 1.9180, Plg4.0000°, Azm3.0000°; N 0.2030, Plg2.0000°, Azm93.0000°; P -2.1260, Plg85.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 15:40:23.4±0.5, 52°.87S±0°.09×19°.6E±0°.1, h10km, n67, σ2 9 00/40, mb4.5/21, MS4.0/19, 2C, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRHM	**Grahamstown, E**	**20.18**	**17**	P	P	15 44 48.2	-10
SUR	**Sutherland**	**20.49**	**3**	P	**P**	**15 45 02.8**	**+1.2**
	27nm,1.1s,baz=149,slow=9.2,SNR=5.9						
SUR				S	S	15 48 40.0	-11
	2.0nm,0.7s,baz=233,slow=8.8,SNR=0.8						
SUR				LR	LR	15 51 03.0	
	comp=Z,639nm,21.4s,baz=189,slow=31						
	27nm,1.1s						
SUR	**Sutherland**	**20.49**	**3**	P	P	15 44 53.8	-7.7
SUR				IAmb	IAmb	15 45 09.4	
	comp=Z,32nm,1.1s						
SNAA	**Sanae**	**21.30**	**199**	⇑P	**P**	**15 45 12.9**	**+3.0**
	comp=Z,543nm,0.8s						
SNAA	**Sanae**	**21.30**	**199**	P	**P**	**15 45 12.5**	**+2.7**
	comp=Z,20nm,0.8s,baz=40,slow=9.3,SNR=20						
SNAA				LR	LR	15 51 29.3	
	comp=Z,394nm,20.7s,baz=14,slow=31						
	comp=Z,20nm,0.8s						
SNAA	**Sanae**	**21.30**	**199**	P	**P**	**15 45 06.0**	**-3.9**
SNAA				IAmb	IAmb	15 45 13.9	
	comp=Z,26nm,0.8s						
H04S2	**CROZET ISLANDS**	**21.54**	**87**	T	T	16 07 40.2	
	baz=241,slow=75,SNR=97						
H04S3	**CROZET ISLANDS**	**21.54**	**87**	T	T	16 07 40.4	
	baz=241,slow=75,SNR=100						
H04S1	**CROZET ISLANDS**	**21.55**	**87**	T	T	16 07 37.7	
	baz=241,slow=75,SNR=86						
VNA2	**Neumayer--Watz**	**21.77**	**204**	⇑P	**P**	**15 45 17.3**	**+2.4**
	comp=Z,26nm,0.7s,baz=28,slow=10						
H04N3	**CROZET ISLANDS**	**21.80**	**85**	T	T	16 07 51.6	
	baz=242,slow=75,SNR=15						
H04N1	**CROZET ISLANDS**	**21.80**	**85**	T	T	16 07 50.7	
	baz=242,slow=75,SNR=12						
H04N2	**CROZET ISLANDS**	**21.82**	**85**	T	T	16 07 45.9	
	baz=242,slow=75,SNR=12						
BOSA	**Boshof**	**24.59**	**12**	P	**P**	**15 45 44.3**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=195,slow=10,SNR=5.9						
BOSA				LR	LR	15 53 31.4	
	comp=Z,445nm,21.3s,baz=201,slow=32						
	comp=Z,3.2nm,0.8s						
BOSA	**Boshof**	**24.59**	**12**	P	P	15 45 35.3	-8.3
MAW	**Mawson**	**25.34**	**142**	P	**P**	**15 45 49.7**	**-0.2**
	comp=Z,6.9nm,0.4s,baz=41,slow=10,SNR=13						
MAW				LR	LR	15 54 43.9	
	comp=Z,125nm,18.7s,baz=298,slow=34						
	comp=Z,6.9nm,0.4s						
LBTB	**Lobatse**	**28.18**	**12**	LR	LR	15 55 40.1	
	comp=Z,436nm,21.3s,baz=194,slow=33						
WIN	**Windhoek**	**30.31**	**355**	P	P	15 46 29.8	-5.3
BELA	**Belgrano 2**	**31.55**	**199**	P	**P**	**15 46 43.8**	**-1.5**
BELA				IAmb	IAmb	15 46 52.3	
	comp=Z,5.9nm,0.8s						
TSUM	**Tsumeb**	**33.64**	**357**	P	P	15 46 59.0	-5.2
TSUM				IAmb	IAmb	15 47 11.5	
	comp=Z,8.7nm,1.4s						
QSPA	**South Pole Qui**	**37.36**	**180**	P	**P**	**15 47 36.3**	**+0.4**
	comp=Z,6.6nm,0.8s,baz=250,slow=6.0,SNR=7.4						
QSPA				LR	LR	16 02 09.7	
	comp=Z,364nm,19.9s,baz=228,slow=35						
	comp=Z,6.6nm,0.8s						
QSPA	**South Pole Qui**	**37.36**	**180**	P	P	15 47 30.9	-5.0
QSPA				IAmb	IAmb	15 47 41.4	
	comp=Z,5.1nm,0.7s						
LSZ	**Lusaka**	**38.11**	**13**	LR	LR	16 01 36.9	
	comp=Z,377nm,21.0s,baz=224,slow=34						
PMSA	**Palmer Station**	**41.65**	**220**	LR	LR	16 01 50.9	
	comp=Z,224nm,20.4s,baz=96,slow=31						
PMSA	**Palmer Station**	**41.65**	**220**	P	**P**	**15 48 09.6**	**-1.7**
PMSA				IAmb	IAmb	15 48 32.3	
	comp=Z,19nm,1.1s						
VNDA	**Vanda**	**47.78**	**170**	P	**P**	**15 49 01.6**	**+1.5**
	comp=Z,8.2nm,1.1s,baz=169,slow=1.2,SNR=2.8						
VNDA				LR	LR	16 08 00.2	
	comp=Z,208nm,21.5s,baz=198,slow=35						
	comp=Z,8.2nm,1.1s						
H10S2	**ASCENSION HYDR**	**51.83**	**315**	T	T	16 45 36.8	
	baz=153,slow=74,SNR=30						
H10S3	**ASCENSION HYDR**	**51.84**	**315**	T	T	16 45 39.0	
	baz=67,slow=74,SNR=34						
MBAR	**Mbarara**	**52.91**	**14**	LR	LR	16 10 22.2	
	comp=Z,545nm,21.7s,baz=198,slow=34						
MBAR	**Mbarara**	**52.91**	**14**	P	P	15 49 31.8	-8.0
TRQA	**Tornquist**	**56.07**	**250**	P	**P**	**15 50 01.6**	**-0.8**
TRQA				IAmb	IAmb	15 50 22.0	
	comp=Z,4.0nm,1.0s						
COYC	**Coyhaique**	**56.40**	**237**	P	**P**	**15 50 03.2**	**-1.4**
AY01	**Puyuhuapi**	**57.48**	**238**	P	**P**	**15 50 12.9**	**+0.7**
LL02	**Futaleuf**	**57.92**	**240**	P	**P**	**15 50 14.6**	**-0.9**
PLCA	**Paso Flores**	**58.96**	**242**	P	**P**	**15 50 23.8**	**+1.0**
	comp=Z,2.3nm,1.1s,baz=173,slow=4.0,SNR=3.6						
	comp=Z,2.3nm,1.1s						
GO06	**Curarrehue**	**60.27**	**243**	P	**P**	**15 50 32.0**	**+0.1**
CPUP	**Villa Florida**	**61.72**	**263**	P	**P**	**15 50 43.4**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=140,slow=12,SNR=3.0						
CPUP				LR	LR	16 12 23.0	
	comp=Z,69nm,21.8s,baz=74,slow=31						
	comp=Z,0.8nm,0.3s						
DBIC	**Dimbokro**	**62.85**	**332**	P	**P**	**15 50 50.0**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=165,slow=5.5,SNR=6.1						
DBIC				LR	LR	16 12 00.2	
	comp=Z,191nm,19.9s,baz=158,slow=30						
	comp=Z,4.6nm,0.8s						
DBIC	**Dimbokro**	**62.85**	**332**	P	**P**	**15 50 46.7**	**-2.6**
DBIC				IAmb	IAmb	15 50 59.7	
	comp=Z,7.2nm,0.9s						
BDFB	**Brasilia**	**64.19**	**278**	P	**P**	**15 51 01.1**	**+2.6**
	comp=Z,0.9nm,0.3s,baz=160,slow=6.3,SNR=3.9						
	comp=Z,0.9nm,0.3s						
H01W2	**Cape Leeuwin H**	**65.56**	**116**	T	T	17 03 01.7	
	baz=221,slow=75,SNR=14						
H01W3	**Cape Leeuwin H**	**65.58**	**116**	T	T	17 03 01.0	
	baz=221,slow=75,SNR=14						
H01W1	**Cape Leeuwin H**	**65.58**	**116**	T	T	17 03 05.2	
	baz=221,slow=75,SNR=14						
ATD	**Arta Tunnel**	**67.17**	**25**	LR	LR	16 20 29.1	
	comp=Z,6.4nm,19.2s,baz=133,slow=36						
TORD	**Torodi Ar. Bea**	**67.53**	**341**	P	**P**	**15 51 20.6**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=190,slow=8.6,SNR=6.3						
	comp=Z,1.3nm,0.8s						
PTLB	**Pontes e Lacer**	**71.06**	**269**	P	**P**	**15 51 41.9**	**+0.2**
PTLB				IAmb	IAmb	15 51 52.8	
	comp=Z,3.6nm,0.8s						
LPAZ	**La Paz**	**75.84**	**262**	P	**P**	**15 52 12.5**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=124,slow=4.2,SNR=2.1						
LPAZ				LR	LR	16 23 13.3	
	comp=Z,62nm,19.7s,baz=60,slow=34						
	comp=Z,1.1nm,0.6s						
TAM	**Tamanrasset**	**76.33**	**347**	P	**P**	**15 52 09.2**	**-3.3**
RPZ	**Rata Peaks**	**80.70**	**159**	LR	LR	16 28 15.0	
	comp=Z,59nm,18.0s,baz=338,slow=36						
NNA	**Nana**	**84.41**	**258**	LR	LR	16 26 42.1	
	comp=Z,45nm,20.9s,baz=40,slow=33						
ASAR	**Alice Springs**	**84.91**	**123**	P	**P**	**15 52 58.9**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=208,slow=4.0,SNR=14						
	comp=Z,1.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**85.05**	**113**	LR	LR	16 25 43.2	
	comp=Z,59nm,18.8s,baz=196,slow=32						
URZ	**Urewera**	**87.16**	**162**	LR	LR	16 31 39.3	
	comp=Z,70nm,18.1s,baz=142,slow=35						
IDI	**Anoyia**	**87.91**	**4**	LR	LR	16 34 10.3	
	comp=Z,278nm,20.1s,baz=289,slow=37						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**88.22**	**121**	P	**P**	**15 53 14.5**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=210,slow=4.3,SNR=4.6						
	comp=Z,1.0nm,1.0s						
KAPI	**Kappang**	**92.14**	**101**	P	**P**	**15 53 33.6**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=55,slow=16,SNR=4.7						
	comp=Z,1.5nm,0.3s						
BRTR	**Keskin Array B**	**93.02**	**11**	P	**P**	**15 53 37.5**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=222,slow=1.9,SNR=1.9						
	comp=Z,0.3nm,0.7s						
ESDC	**Sonseca Array**	**94.41**	**342**	P	**P**	**15 53 45.1**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=177,slow=5.1,SNR=4.8						
	comp=Z,0.9nm,0.9s						
SONM	**Songino Array**	**124.39**	**55**	PKP	**PKPdf**	**15 59 20.4**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=232,slow=2.0,SNR=3.7						
SHPR	**Sheep Range**	**144.59**	**261**	PKPdf	**PKPab**	**15 59 54.6**	**-3.8**
GSC	**Goldstone, Bar**	**144.76**	**258**	PKPdf	**PKPab**	**15 59 55.7**	**-3.2**
BW06	**Boulder Array**	**145.09**	**274**	PKPdf	**PKPbc**	**15 59 56.7**	**-3.3**
PD31	**Pinedale Array**	**145.09**	**274**	PKPdf	**PKPbc**	**15 59 57.0**	**-3.1**
PDAR	**Pinedale Array**	**145.09**	**274**	PKPbc	**PKPdf**	**16 00 01.0**	**+0.5**
	comp=Z,6.9nm,0.9s,baz=127,slow=5.0,SNR=45						
PSUT	**Pine Spring**	**145.13**	**265**	PKPdf	**PKPbc**	**15 59 57.2**	**-3.0**
NVAR	**Mina Array Bea**	**147.74**	**260**	PKPbc	**PKPbc**	**16 00 08.0**	**0.0**
	comp=Z,1.5nm,0.7s,baz=89,slow=1.8,SNR=8.2						
YKA	**Yellowknife Ar**	**154.25**	**310**	PKPbc	**PKiKP**	**16 00 23.0**	**+0.7**
YKA				PKPab	**pPKPab**	**16 00 38.4**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=62,slow=1.4,SNR=7.3						
	comp=Z,1.7nm,0.9s,baz=92,slow=4.2,SNR=14						

BJI ***14*** *16:02:10.9, 35°.43N×26°.44E, h13km, mB5.2/8, mb4.5/55, Ms5.0/2, Ms7 4.8/2*

MOS ***14*** *16:02:14.8±1.3, 35°.72N×26°.97E, h16km, mb4.9/37, Error ellipse: s-maj=5.8km s-min=3.2km az=80.5*

HLW ***14*** *16:02:15.8, 35°.72N×27°.19E, h2km±11km, Ml4.9*

ISK ***14*** *16:02:15.4, 35°.73N×26°.86E, h5km, ML4.6/37*

PDG ***14*** *16:02:16.1±0.6, 35°.56N×26°.90E, h20km, ML4.8/11, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

ATH ***14*** *16:02:16.4, 35°.76N×26°.95E, h13km, Mw4.6, Moment Tensor Solution. s11 Moment tensor: Mrr-4.54; Mθθ-1.65; Mϕϕ 6.18; Mrθ-4.69; Mϕθ 0.64; Mϕr-8.44; Fault plane solution: NP1: ϕ☐27.00000°, δ77.00000°, λ-76.00000°. NP2: ϕ☐158.00000°, δ19.00000°, λ-137.00000°.*

NEIC ***14*** *16:02:16.3±2.2, 35°.78N±0°.05×26°.95E±0°.05, h14km±4km, mb4.9/99 Error ellipse: s-maj=7.3km s-min=5.4km az=182.0*

MCSM ***14*** *16:02:16.4±0.5, 36°.N±4°×2°.7E±°, h20km±2km, mb4.8, mB4.8, MLv4.5, Mw(mB)4.0*

GCMT ***14*** *16:02:17.4±0.4, 35°.86N±0°.05×26°.94E±0°.03, h21km±1km, MW4.8/81, Moment Tensor Solution. s15, c16; s81, c98; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.98±.16; Mθθ 0.49±.09; Mϕϕ 1.49±.10; Mrθ 0.65±.23; Mθϕ 0.14±.06; Mϕr-0.63±.14; Best double couple: M☐1.92700×10^16 NP1: ϕ☐198.00000°, δ37.00000°, λ-67.00000°. NP2: ϕ☐350.00000°, δ56.00000°, λ-107.00000°. Principal axes: T 1.6010, Plg10.0000°, Azm91.0000°; N 0.6470, Plg14.0000°, Azm359.0000°; P -2.2520, Plg73.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

THE ***14*** *16:02:17.3, 36°.N±2°×2°.7E±°, h18km±5km, M4.8/11, MLh4.8/11*

GII ***14*** *16:02:17.1±0.0, 35°.37N±0°.002×27°.010E±0°.001, h0km, Mws4.8, confirmed*

MED_RC ***14*** *16:02:18.0±0.3, 35°.78N×26°.95E, h11km±1km, MW4.7/38, Moment Tensor Solution.Mantle waves: s38, c49; Duration: 1‡1 Moment tensor: Scale 10^16 Nm; Mrr-0.90±.10; Mθθ-0.13±.07; Mϕϕ 1.03±.07; Mrθ 0.60±.21; Mθϕ 0.24±.04; Mϕr-0.84±.18; Best double couple: M☐1.43000×10^16 NP1: ϕ☐215.00000°, δ32.00000°, λ-42.00000°. NP2: ϕ☐342.00000°, δ69.00000°, λ-115.00000°. Principal axes: T 1.3400, Plg20.0000°, Azm91.0000°; N 0.1700, Plg24.0000°, Azm351.0000°; P -1.5100, Plg58.0000°, Azm217.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

IDC ***14*** *16:02:18.1±1.5, 35°.87N×26°.86E, h27km±9km, mb4.4/29, mbtmp4.6/39, ML4.2/9, MS3.9/31 Error ellipse: s-maj=11.6km s-min=8.7km az=152.0*

AFAD ***14*** *16:02:18.3, 35°.86N×26°.91E, h9km±2km, MW4.5*

BGR ***14*** *16:02:27.6, 36°.32N×26°.20E, h33km, mb4.6, Ms3.9*

NAO ***14*** *16:02:47.6, 38°.49N×22°.60E, h10km, MB4.1*

ISC 14 16:02:16.9±0.3, 35°.72N±0°.02×27°.01E±0°.02, h21km±1km, n1007, σ1 9 44/1094, mb4.8/140, MS3.8/23, 65C-66D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.21**	**145**		**Pb**	**16 02 21.5**	**-1.3**
KARP					**Sb**	**16 02 26.4**	**-0.6**
KARP	**Karpathos**	**0.21**	**145**	Pg	**Pb**	**16 02 22.1**	**-0.7**
KARP				Sg	**Sb**	**16 02 26.3**	**-0.6**
KARP	**Karpathos**	**0.21**	**145**	P	**Pb**	**16 02 22.2**	**-0.7**
KARP				S	**Sb**	**16 02 26.3**	**-0.6**
KARP	**Karpathos**	**0.21**	**145**	P	**Pb**	**16 02 22.0**	**-0.7**
KARP	**Karpathos**	**0.21**	**145**	⇑P	**Pb**	**16 02 21.2**	**-1.5**
KARP	**Karpathos**	**0.21**	**145**	P	**Pb**	**16 02 21.7**	**-1.1**
KARP				S	**Sb**	**16 02 26.2**	**-0.8**
ZKR	**Zakros**	**0.89**	**227**	Pg	**Pb**	**16 02 33.5**	**0.0**
ZKR	**Zakros**	**0.89**	**227**	P	**Pb**	**16 02 33.6**	**+0.1**
ZKR	**Zakros**	**0.89**	**227**	P	**Pb**	**16 02 33.4**	**-0.1**
ZKR				S	**Sb**	**16 02 45.5**	**+0.6**
SIT2	**Siteia**	**0.90**	**236**	P	**Pb**	**16 02 33.6**	**-0.1**
SIT2				S	**Sb**	**16 02 45.7**	**+0.4**
YAZI	**Mula-Dat§a-**	**1.02**	**20**	P	**Pb**	**16 02 35.1**	**-0.8**
YAZI				S	**Sb**	**16 02 47.2**	**-1.7**
ARG	**Arkhangelos**	**1.03**	**61**		**Pb**	**16 02 34.7**	**-1.3**
ARG				Sn	**Sn**	**16 02 51.4**	**+1.5**
ARG	**Arkhangelos**	**1.03**	**61**	Pn	**Pb**	**16 02 36.1**	**+0.1**
ARG	**Arkhangelos**	**1.03**	**61**	P	**Pn**	**16 02 36.3**	**+0.1**
ARG				S	**Sn**	**16 02 51.4**	**+1.5**
ARG	**Arkhangelos**	**1.03**	**61**	⇑P	**Pb**	**16 02 36.0**	**+0.1**
ARG	**Arkhangelos**	**1.03**	**61**	P	**Pb**	**16 02 35.8**	**-0.2**
ARG				S	**Sn**	**16 02 50.1**	**+0.2**
DAT	**Datca**	**1.11**	**24**	Pn	**Pb**	**16 02 37.6**	**+0.2**
DAT	**Datca**	**1.11**	**24**	P	**Pb**	**16 02 38.0**	**+0.6**
DAT				S	**Sn**	**16 02 52.0**	**0.0**
DAT	**Datca**	**1.11**	**24**	P	**Pb**	**16 02 37.9**	**+0.6**
DAT				S	**Sb**	**16 02 50.2**	**-1.2**
DATC	**Datca-Mugla**	**1.16**	**27**	Pn	**Pb**	**16 02 38.9**	**+0.6**
RODB	**Rodos**	**1.22**	**53**	P	**Pb**	**16 02 39.6**	**+0.4**
RODB				S	**Sn**	**16 02 55.8**	**+1.2**
RDI1	**Rhodes Town Ha**	**1.22**	**53**	P	**Pb**	**16 02 39.7**	**+0.4**
RDI1				S	**Sn**	**16 02 56.3**	**+1.6**
NPS	**Neapolis**	**1.23**	**249**	P	**Pn**	**16 02 38.9**	**0.0**
NPS				S	**Sn**	**16 02 54.8**	**-0.1**
NPS	**Neapolis**	**1.23**	**249**	P	**Pn**	**16 02 38.4**	**-0.5**
NPS				S	**Sb**	**16 02 54.2**	**-0.6**
KLNA	**Kalymnos**	**1.24**	**359**	P	**Pn**	**16 02 37.9**	**-1.0**
BODT	**Bodrum**	**1.36**	**10**	Pn	**Pb**	**16 02 41.8**	**+0.1**
BODT	**Bodrum**	**1.36**	**10**	P	**Pn**	**16 02 41.0**	**+0.3**
BODT				S	**Sb**	**16 02 59.7**	**+1.1**
BDRM	**Kayabasi**	**1.39**	**14**	P	**Pn**	**16 02 40.5**	**-0.6**
BDRM				S	**Sn**	**16 02 57.9**	**-0.9**
THERA	**Ancient Thera,**	**1.40**	**298**	P	**Pn**	**16 02 41.5**	**+0.3**
THERA				S	**Sb**	**16 02 59.9**	**+0.1**
THERA	**Ancient Thera,**	**1.40**	**298**	P	**Pn**	**16 02 40.7**	**-0.5**
THERA				S	**Sb**	**16 02 59.4**	**-0.4**
THR8	**Santorini-Mono**	**1.42**	**299**	P	**Pn**	**16 02 41.0**	**-0.5**
THR8	**Santorini-Mono**	**1.42**	**299**	P	**Pn**	**16 02 40.7**	**-0.8**
YKAV	**Yalikavak-Bodr**	**1.42**	**9**	Pn	**Pb**	**16 02 42.4**	**-0.2**
THR6	**Thira Island,**	**1.46**	**296**	P	**Pn**	**16 02 42.0**	**+0.1**
THR6	**Thira Island,**	**1.46**	**296**	P	**Pn**	**16 02 41.6**	**-0.3**
THRA	**Thira**	**1.46**	**299**	P	**Pn**	**16 02 41.6**	**-0.4**
THR3	**Thira Island,**	**1.48**	**298**	P	**Pn**	**16 02 42.2**	**-0.1**
THR3	**Thira Island,**	**1.48**	**298**	P	**Pn**	**16 02 41.7**	**-0.5**
SNT5	**Nea Kammeni, S**	**1.48**	**298**	P	**Pn**	**16 02 42.3**	**0.0**
SNT5				S	**Sb**	**16 03 02.0**	**+0.1**
SNT5	**Nea Kammeni, S**	**1.48**	**298**	P	**Pn**	**16 02 42.0**	**-0.3**
THR9	**Santorini-Faro**	**1.48**	**296**	P	**Pn**	**16 02 41.2**	**-0.8**
SAP3	**Santorini-Thir**	**1.53**	**298**	P	**Pb**	**16 02 43.6**	**-0.8**
SAP3				S	**Sb**	**16 03 03.5**	**+0.1**
SAP3	**Santorini-Thir**	**1.53**	**298**	P	**Pn**	**16 02 42.5**	**-0.4**
IACM	**Heraklion**	**1.64**	**256**	P	**Pn**	**16 02 45.0**	**+0.5**
IACM				S	**Sn**	**16 03 04.7**	**-0.1**
IACM	**Heraklion**	**1.64**	**256**	P	**Pn**	**16 02 44.5**	**+0.1**

IACM					S	**Sn**	**16 03 04.1** -0.7
DIDI	**Didim-Aydin**	**1.67**	**6**	Pn	**Pb**	**16 02 45.9**	**-0.9**
MLSB	**Milas**	**1.69**	**21**	Pn	**Pb**	**16 02 46.6**	**-0.7**
DALY	**Dalyan (Mula)**	**1.72**	**50**	Pn	**Pb**	**16 02 48.0**	**+0.3**
DDIM	**Aydin, Didim**	**1.75**	**6**	P	**Pn**	**16 02 45.6**	**-0.3**
DDIM					S	**Sn**	**16 03 08.0** +0.5
YER	**Yerkesik**	**1.75**	**36**	Pn	**Pb**	**16 02 47.9**	**-0.3**
YER	**Yerkesik**	**1.75**	**36**	P	**Pn**	**16 02 46.8**	**+0.8**
YER					S	**Sb**	**16 03 08.9** -0.8
IDI	**Anoyia**	**1.78**	**257**	Pn	**Pn**	**16 02 45.7**	**-0.8**
	207nm,0.3s,baz=61,slow=18,SNR=485						
IDI					Sn	**Sn**	**16 03 06.0** -2.6
	547nm,0.3s,baz=78,slow=17,SNR=7.3						
IDI	**Anoyia**	**1.78**	**257**				
IDI	**Anoyia**	**1.78**	**257**	Pn	**Pn**	**16 02 46.3**	**-0.2**
IDI					Sn	**Sn**	**16 03 08.0** -0.6
IDI	**Anoyia**	**1.78**	**257**	P	**Pn**	**16 02 46.7**	**+0.1**
IDI					S	**Sn**	**16 03 08.5** -0.1
IDI	**Anoyia**	**1.78**	**257**	P	**Pn**	**16 02 46.0**	**-0.5**
IDI					S	**Sn**	**16 03 08.3** -0.3
MULA	**Mugla, Merkez-**	**1.86**	**34**	P	**Pb**	**16 02 49.8**	**-0.5**
MULA					S	**Sn**	**16 03 04.8** -5.8
FETY	**Fethiye**	**1.91**	**61**	Pn	**Pb**	**16 02 50.7**	**-0.3**
FETY	**Fethiye**	**1.91**	**61**	P	**Pb**	**16 02 50.1**	**-0.9**
FETY					S	**Sb**	**16 03 13.7** -0.7
NAX1	**Naxos Island**	**1.91**	**317**	P	**Pn**	**16 02 47.8**	**-0.4**
NAX1					S	**Sn**	**16 03 09.9** -1.7
SABU	**Mula-Dalaman**	**1.93**	**55**	P	**Pb**	**16 02 50.8**	**-0.5**
IZZE	**Mula-Seydike**	**1.93**	**68**	P	**Pb**	**16 02 50.0**	**-1.4**
IZZE					S	**Sn**	**16 03 12.3** +0.2
GCAM	**G?zelcaml?**	**1.98**	**5**	P	**Pn**	**16 02 49.8**	**+0.6**
SMG	**Samos**	**1.99**	**356**	P	**Pn**	**16 02 48.3**	**-1.1**
AYDN	**Tasoluk**	**2.06**	**20**	P	**Pb**	**16 02 52.3**	**-1.2**
AYDN					S	**Sn**	**16 03 14.3** -1.1
KRL1	**Karlovasi Samo**	**2.09**	**353**	P	**Pn**	**16 02 49.5**	**-1.1**
KSL	**Kastellorizon**	**2.13**	**78**	P	**Pn**	**16 02 52.5**	**+1.3**
KSL					S	**Sn**	**16 03 17.8** +0.7
KSL	**Kastellorizon**	**2.13**	**78**	P	**Pn**	**16 02 52.8**	**+1.6**
KSL					S	**Sb**	**16 03 19.8** -1.0
KUSD	**Kusadasi-Aydin**	**2.15**	**6**	Pn	**Pn**	**16 02 52.6**	**+1.1**
AKAS	**Kas**	**2.17**	**76**			**16 02 53.3**	**+1.5**
AKAS	**Kas**	**2.17**	**76**	P	**Pn**	**16 02 53.1**	**+1.3**
CAME	**Cameli-Denizli**	**2.22**	**56**	Pn	**Pb**	**16 02 55.1**	**-1.2**
DNZT	**Denizli-Tavas-**	**2.25**	**46**	P	**Pb**	**16 02 55.7**	**-1.1**
DNZT					S	**Sn**	**16 03 21.2** +1.1
VAM	**Vamos**	**2.31**	**263**	P	**Pn**	**16 02 53.1**	**-0.6**
TAVA	**DENIZLI_Tavas**	**2.32**	**41**	P	**Pb**	**16 02 56.3**	**-1.7**
TAVA					S	**Sb**	**16 03 24.4** -1.9
MHLO	**Agia Marina, M**	**2.32**	**295**	P	**Pn**	**16 02 54.4**	**+0.6**
CAEL	**Denizli, Camel**	**2.33**	**52**	P	**Pb**	**16 02 56.5**	**-1.7**
CAEL					S	**Sb**	**16 03 25.4** -1.2
DGB	**zmir**	**2.33**	**357**	P	**Pn**	**16 02 52.8**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**2.33**	**17**	Pn	**Pn**	**16 02 55.6**	**+1.5**
ESEN	**Aydn-Nazilli**	**2.34**	**27**	P	**Pn**	**16 02 55.7**	**+1.7**
ESEN					S	**Sn**	**16 03 19.4** -2.7
TNSA	**Tinos**	**2.35**	**321**	P	**Pn**	**16 02 53.7**	**-0.5**
GMLD	**Gumuldur**	**2.35**	**358**	Pn	**Pn**	**16 02 55.6**	**+1.3**
KNIK	**Mula-Seydike**	**2.35**	**61**	P	**Pb**	**16 02 56.7**	**-1.9**
DEMR	**Demre-Antalya**	**2.40**	**77**	Pn	**Pb**	**16 02 58.3**	**-1.1**
CHNB	**Souda**	**2.41**	**265**	P	**Pn**	**16 02 55.0**	**0.0**
CHAN	**Chania**	**2.43**	**266**	P	**Pn**	**16 02 55.4**	**+0.1**
CH01	**Chania**	**2.44**	**266**	P	**Pn**	**16 02 55.3**	**-0.3**
NAZL	**Nazilli-Aydin**	**2.46**	**24**	Pn	**Pn**	**16 02 57.9**	**+2.0**
IMMI	**Iera Moni Meta**	**2.48**	**265**	P	**Pn**	**16 02 55.8**	**-0.3**
DNIZ	**Denizli-Tavas-**	**2.50**	**40**	P	**Pn**	**16 02 58.3**	**+1.8**
DUVT	**Torbali**	**2.52**	**8**	P	**Pn**	**16 03 00.5**	**-0.9**
IZMR	**zmir-demi**	**2.53**	**17**	P	**Pn**	**16 02 58.9**	**+2.2**
IZMR					S	**Sn**	**16 03 28.5** +1.7
APMY	**Acipay

SDAG Sultandagi-AFY 4.14 48 Pn **Pn** 16 03 22.2 +3.3
AOS2 Alonissos-2 4.25 325 P **Pn** 16 03 20.1 -0.3
GUR Goura 4.35 302 P **Pn** 16 03 22.9 +1.0
ITM Ithomi 4.35 291 **Pn** 16 03 17.8 -4.0
ITM Ithomi 4.35 291 ⇑P **Pn** 16 03 24.3 +2.6
ATAL Atalanti 4.35 314 P **Pn** 16 03 22.2 +0.4
AKMS Akamas 4.41 98 P **Pn** 16 03 23.1 +0.6
SLUM Salum 4.47 200 P **Pn** 16 03 24.8 +1.3
KLV Kalavryta, Ach 4.54 302 P **Pn** 16 03 24.8 +0.4
AXAR Agios Charalam 4.62 313 P **Pn** 16 03 26.7 +1.2
BORA Eskisehir 4.97 32 **Pn** 16 03 29.4 -1.0
AGG Agios Georgios 4.98 313 ⇑P **Pn** 16 03 31.9 +1.5
CAVK Edirne/Enez-Ca 5.01 353 ⇓P **Pn** 16 03 31.2 +0.5
CSS Mathiatis 5.22 96 **Pn** 16 03 34.1 +0.4
CSS Mathiatis 5.22 96 P **Pn** 16 03 34.3 +0.6
1.1nm2µm183nm0,7s
CSS Mathiatis 5.22 96 P **Pn** 16 03 34.3 +0.6
CSS S **Sn** 16 04 34.5 +1.2
CSS Mathiatis 5.22 96 ⇑P **Pn** 16 03 34.5 +0.8
ALN Alexandroupoli 5.23 352 **Pn** 16 03 34.0 +0.2
ALN Alexandroupoli 5.23 352 P **Pn** 16 03 34.0 +0.2
ALN Alexandroupoli 5.23 352 ⇓P **Pn** 16 03 33.7 -0.1
RDO Rodhopi 5.54 348 **Pn** 16 03 38.3 +0.2
RDO Rodhopi 5.54 348 ⇑P **Pn** 16 03 37.9 -0.2
LIT Litokhoron 5.65 322 **Pn** 16 03 40.9 +1.3
LIT Litokhoron 5.65 322 P **Pn** 16 03 40.9 +1.3
SILT Sile 5.80 20 ⇓P **Pn** 16 03 44.3 +2.6
CTYL Yalikoy Yolu 5.83 9 P **Pn** 16 03 44.0 +1.9
0.4nm1µm70nm,0.5s
KDZ Kurdzhali 6.05 348 *e*P **Pn** 16 03 43.3 -1.7
RZN Rozhen 6.22 344 *e*P **Pn** 16 03 48.3 +0.6
MMB Musomishta 6.35 337 *e*P **Pn** 16 03 50.2 +0.9
DIM Dimitrovgrad 6.42 350 *e*P **Pn** 16 03 50.6 +0.5
KIRS Kirsehir-Merke 6.46 56 ⇑P **Pn** 16 03 53.1 +2.2
BR105 Keskin Array S 6.58 51 P **Pn** 16 03 54.4 +1.8
0.1nm324nm35nm,0.8s
VAY Valandovo 6.59 329 *i* Pn **Pn** 16 03 55.8 +3.3
SWA2 6.59 192 P **Pn** 16 03 54.1 +1.5
BR104 Keskin Array S 6.59 51 P **Pn** 16 03 54.7 +2.0
0.1nm281nm31nm,0.9s
BR106 Keskin Array S 6.59 51 P **Pn** 16 03 54.5 +1.8
0.1nm306nm27nm,0.7s
BR131 Keskin Array S 6.60 51 **Pn** 16 03 54.7 +1.9
BR131 Keskin Array S 6.60 51 *de*P **Pn** 16 03 54.8 +2.0
BRTR Keskin Array B 6.60 51 Pn **Pn** 16 03 54.5 +1.7
1.3nm,0.3s,baz=234,slow=14,SNR=49
BRTR Sn **Sn** 16 05 08.1 +0.6
1.1nm,0.3s,baz=180,slow=36,SNR=5.3
BRTR LR LR 16 07 17.4
comp=Z,535nm,20.9s,baz=230,slow=45
9.1nm,0.7s
BRTR Keskin Array B 6.60 51 *i* P **Pn** 16 03 54.7 +1.9
BRTR pmax pmax
comp=Z,9.0nm,0.7s
PLD Plovdiv 6.66 345 *e*P **Pn** 16 03 54.1 +0.7
KKB Krupnik 6.82 335 *e*P **Pn** 16 03 57.6 +1.9
KEK Kerkira 6.97 307 **Pn** 16 03 59.7 +2.0
KEK Kerkira 6.97 307 ⇑P **Pn** 16 04 00.5 +2.7
KOT Kottamia 7.05 144 P **Pn** 16 03 59.0 +0.1
KOT S **Sn** 16 05 15.3 -3.2
RYAN Fayoum 7.17 156 P **Pn** 16 04 01.2 +0.7
HNTI Hanita 7.24 109 P **Pn** 16 04 01.7 +0.2
HNTI S **Sn** 16 05 22.7 -0.4
ELND Elena 7.25 353 ⇑P **Pn** 16 04 02.4 +0.8
OHR Ohrid 7.26 320 *e*Pn **Pn** 16 04 05.7 +3.9
OFRI `Ofer 7.29 113 P **Pn** 16 04 01.9 -0.4
OFRI S **Sn** 16 05 23.6 -0.8
PLNA Plana 7.30 339 *e*P **Pn** 16 04 04.1 +1.7
DQRL Deir Qamar 7.33 103 *e*P **Pn** 16 04 03.4 +0.6
BHL Bhannes 7.33 102 *e*P **Pn** 16 04 02.2 -0.6
BLGI Bet Lehem HaGe 7.40 111 P **Pn** 16 04 04.1 +0.5
BLGI S **Sn** 16 05 26.4 -0.6
MMC7 Mount Meron ar 7.43 109 P **Pn** 16 04 04.9 +0.7
PRD Provadia 7.44 2 *e*P **Pn** 16 04 05.8 +1.7
QRWL Qaraoun 7.47 104 *e*P **Pn** 16 04 05.4 +0.7
VTS Vitosha 7.49 338 *e*P **Pn** 16 04 06.7 +1.7
SLTI Sal'it 7.52 115 P **Pn** 16 04 05.1 -0.2
SLTI S **Sn** 16 05 28.7 -1.1
PVL Pavlikeni 7.53 350 *e*P **Pn** 16 04 06.2 +0.8
ZAHL Zahle 7.53 102 *e*P **Pn** 16 04 05.7 +0.1
NEF NEVSHA 7.54 1 *e*P **Pn** 16 04 06.7 +1.2
GEM Giv'at Ha'Em 7.57 107 P **Pn** 16 04 06.1 +0.1
GEM S **Sn** 16 05 31.3 +0.2
GEM Giv'at Ha'Em 7.57 107 ⇑P **Pn** 16 04 07.3 +0.3
SZH Strazhitsa 7.58 354 *e*P **Pn** 16 04 07.1 +1.0
RCY Rachaya 7.61 104 *e*P **Pn** 16 04 06.7 +0.1
BEIL Beino 7.61 96 *e*P **Pn** 16 04 06.0 -0.5
SKO Skopje 7.61 327 *i* Pn **Pn** 16 04 09.4 +3.0
NATI Neve Ativ 7.61 106 P **Pn** 16 04 07.3 +0.8
NATI S **Sn** 16 05 32.4 +0.3
BNN Bunyan 7.70 63 ⇓P **Pn** 16 04 11.4 +3.5
MMLI Mount Malkishu 7.71 113 P **Pn** 16 04 07.8 0.0
MMLI S **Sn** 16 05 33.8 -0.8
SALP Salfit 7.71 116 P **Pn** 16 04 07.9 -0.1
SALP S **Sn** 16 05 33.7 -1.1
AMAZ Amatzia 7.80 120 P **Pn** 16 04 08.6 -0.6
AMAZ S **Sn** 16 05 34.9 -2.0
KZIT Kziot 7.82 126 P **Pn** 16 04 08.4 -1.1
KZIT S **Sn** 16 05 34.4 -3.0
KZIT Kziot 7.82 126 ⇑P **Pn** 16 04 09.2 -0.3
RAZG Razgrad 7.85 357 ⇓P **Pn** 16 04 11.2 +1.4
TRAN Tran 7.87 336 *e*P **Pn** 16 04 12.3 +2.2
HMDT Nahal Hemdat 7.87 114 P **Pn** 16 04 10.1 0.0
HMDT S **Sn** 16 05 37.5 -1.0
PLVB Pleven 7.88 347 ⇓P **Pn** 16 04 11.0 +0.8
ZAF Zafarana 7.94 142 P **Pn** 16 04 11.0 0.0
NBNS Bani Suef 7.95 152 P **Pn** 16 04 12.0 +0.8
UJAP Al Uja 7.97 116 P **Pn** 16 04 11.1 -0.4
UJAP S **Sn** 16 05 39.6 -1.4
ZNM Zenema 8.03 140 P **Pn** 16 04 12.8 +0.5
MPEP Malo Peshtene 8.03 343 *e*P **Pn** 16 04 13.4 +1.1
YTIR Yattir 8.04 120 P **Pn** 16 04 11.9 -0.6
YTIR S **Sn** 16 05 40.9 -1.9
DSI Dead Sea 8.11 118 P **Pn** 16 04 12.9 -0.5
DSI S **Sn** 16 05 42.6 -1.8
MSBI Mazada 8.24 120 P **Pn** 16 04 14.6 -0.5
MSBI S **Sn** 16 05 45.4 -2.1
MSBI Mazada 8.24 120 ⇑P **Pn** 16 04 15.5 +0.4
GHAJ Ghor Haditha 8.39 119 **Pn** 16 04 17.7 +0.5
GHAJ Ghor Haditha 8.39 119 P **Pn** 16 04 16.6 -0.6
GHAJ S **Sn** 16 05 49.2 -2.1
IDAN Idan 8.46 123 P **Pn** 16 04 17.2 -1.0
IDAN S **Sn** 16 05 50.4 -2.6
KRMI Paran Flat 8.56 129 P **Pn** 16 04 18.2 -1.3
KRMI S **Sn** 16 05 52.2 -3.3
ZFRI Zfri 8.57 125 P **Pn** 16 04 18.4 -1.3
ZFRI S **Sn** 16 05 52.7 -2.9
PRNI Paran 8.58 126 P **Pn** 16 04 18.6 -1.3
PRNI S **Sn** 16 05 53.3 -2.7
TAMRE El Minia 8.67 156 P **Pn** 16 04 21.7 +0.6
ULC Ulcinj 8.69 318 ⇓*i*Pn **Pn** 16 04 22.8 +1.4
ULC *i* Sn **Sn** 16 05 58.0 -0.7
PVY Plav 8.78 324 *e*Pn **Pn** 16 04 25.2 +2.5
PVY *e*Sn **Sn** 16 06 01.5 +0.4
HRFI Mount Harif 8.81 128 P **Pn** 16 04 21.7 -1.4
HRFI S **Sn** 16 05 58.5 -3.3
TIP Timpagrande 8.85 296 **Pn** 16 04 22.8 -0.8
TIP Timpagrande 8.85 296 ⇑P **Pn** 16 04 23.6 0.0
TIP Timpagrande 8.85 296 P **Pn** 16 04 23.5 -0.2
comp=Z,2µmcomp=Z,88nm,0.9s
TIP Timpagrande 8.85 296 ⇑P **Pn** 16 04 23.3 -0.3
GRB Gharib 8.90 145 P **Pn** 16 04 24.2 0.0
MBRI Mt Berech 8.90 129 P **Pn** 16 04 22.6 -1.6
MBRI S **Sn** 16 06 00.7 -3.2
BOVS Bovan 8.90 334 ⇓P **Pn** 16 04 25.7 +1.5
ASF Jabal al Asfar 8.94 110 Pn **Pn** 16 04 25.8 +0.9
comp=Z,1.6nm,0.3s,baz=281,slow=17,SNR=12
ASF Sn **Sn** 16 06 08.2 +3.2
comp=Z,1.6nm,0.3s,baz=296,slow=24,SNR=1.5
ASF LR LR 16 09 23.3
comp=Z,272nm,18.7s,baz=281,slow=47
comp=Z,4.4nm,0.3s
EIL Elat 9.01 130 Pn **Pn** 16 04 26.1 +0.5
comp=Z,11nm,0.3s,baz=339,slow=4.6,SNR=115
EIL Sn **Sn** 16 06 01.3 -5.2
comp=Z,31nm,0.3s,baz=346,slow=17,SNR=11
EIL LR LR 16 10 23.9
comp=Z,342nm,18.7s,baz=284,slow=53
EIL Elat 9.01 130 P **Pn** 16 04 24.1 -1.6
EIL S **Sn** 16 06 02.7 -3.7
PDG Podgorica 9.01 320 ⇓P **Pn** 16 04 26.8 +1.1

PDG Podgorica 9.01 320 ⇓*i*Pn **Pn** 16 04 27.0 +1.3
PDG *e*Sn **Sn** 16 06 06.5 0.0
PDG Podgorica 9.01 320 ⇑P **Pn** 16 04 27.3 +1.6
IVA Berane 9.02 324 *e*Pn **Pn** 16 04 28.3 +2.3
IVA *i* Sn **Sn** 16 06 07.1 +0.2
BUM Brajici-Budva 9.11 319 ⇑*i*Pn **Pn** 16 04 28.7 +1.5
BUM *e*Sn **Sn** 16 06 09.1 0.0
ASUT 9.16 154 P **Pn** 16 04 28.6 +0.7
KOME Kolasin 9.19 323 ⇓*i*Pn **Pn** 16 04 29.9 +1.7
KOME *e*Sn **Sn** 16 06 12.2 +1.2
HBST Basata 9.19 133 P **Pn** 16 04 28.5 +0.2
CEL Celeste 9.25 289 **Pn** 16 04 28.5 -0.5
CEL Celeste 9.25 289 P **Pn** 16 04 28.9 -0.2
comp=Z,100nm,0.8s
CEL Celeste 9.25 289 ⇑P **Pn** 16 04 28.7 -0.3
TR2 Tor 2 9.27 140 P **Pn** 16 04 29.5 +0.2
CEME Cevo 9.27 320 ⇑*i*Pn **Pn** 16 04 30.7 +1.4
CEME *e*Sn **Sn** 16 06 13.0 0.0
HKAT Jabal Katrina 9.30 139 P **Pn** 16 04 30.4 +0.5
NKME Niksic 9.41 321 ⇓*i*Pn **Pn** 16 04 32.7 +1.5
NKME *e*Sn **Sn** 16 06 16.2 -0.2
MATE Matera 9.49 304 ⇑P **Pn** 16 04 31.6 -0.6
MATE Matera 9.49 304 ⇑P **Pn** 16 04 31.9 -0.3
HDHB Dhahab 9.49 135 P **Pn** 16 04 32.7 +0.3
PLE Pljevlja 9.61 325 ⇓*i*Pn **Pn** 16 04 36.4 +2.4
PLE *i* Sn **Sn** 16 06 20.6 -0.8
MTUR Matau 9.61 352 ⇑P **Pn** 16 04 37.1 +3.1
MTUR Matau 9.61 352 P **Pn** 16 04 37.1 +3.1
BRY Bratogost 9.72 320 ⇓*i*Pn **Pn** 16 04 37.5 +1.9
BRY *i* Sn **Sn** 16 06 23.4 -0.7
UPM Unac-Piva 9.75 322 ⇑*i*Pn **Pn** 16 04 38.0 +2.0
UPM *i* Sn **Sn** 16 06 24.1 -0.8
MLR Muntele Rosu 9.79 356 Pn **Pn** 16 04 36.8 +0.3
comp=Z,0.9nm,0.3s,baz=194,slow=7.9,SNR=21
MLR LR LR 16 08 39.0
comp=Z,461nm,20.9s,baz=195,slow=40
comp=Z,21nm,1.3s
MLR Muntele Rosu 9.79 356 ⇓P **Pn** 16 04 38.7 +2.1
HERR Herculane 9.80 340 ⇓P **Pn** 16 04 36.8 +0.2
VOIR 9.82 352 ⇓P **Pn** 16 04 37.8 +0.8
VOIR 9.82 352 ⇑P **Pn** 16 04 37.7 +0.8
VOIR 9.82 352 P **Pn** 16 04 37.6 +0.7
comp=Z,19nm,1.1s
CUC Castrocucco 9.83 299 **Pn** 16 04 37.0 0.0
CUC Castrocucco 9.83 299 ⇑P **Pn** 16 04 37.3 +0.4
MRVN Minervino Murg 10.02 305 ⇑P **Pn** 16 04 38.9 -0.7
ACER Acerenza 10.07 303 **Pn** 16 04 39.6 -0.6
PLOR Plostina 10.13 359 ⇑P **Pn** 16 04 43.8 +2.7
PLOR Plostina 10.13 359 P **Pn** 16 04 43.7 +2.7
VRI Vrincioaia 10.14 359 ⇑P **Pn** 16 04 43.4 +2.2
VRI Vrincioaia 10.14 359 P **Pn** 16 04 43.3 +2.2
HHRG Al Ghardaqah 10.15 145 P **Pn** 16 04 44.1 +2.7
HHRG S **Sn** 16 06 31.9 -2.8
GZR Gura Zlata 10.19 343 ⇓P **Pn** 16 04 42.3 +0.4
GZR Gura Zlata 10.19 343 P **Pn** 16 04 42.2 +0.4
VAE Valguarnera 10.28 284 Pn **Pn** 16 04 41.8 -1.4
comp=Z,5.3nm,0.4s,baz=331,slow=23,SNR=3.0
VAE Sn **Sn** 16 06 30.8 -7.0
comp=Z,8.5nm,0.3s,baz=249,slow=14,SNR=7.0
VAE LR LR 16 08 40.7
comp=Z,457nm,18.3s,baz=326,slow=38
RAFF Raffo Rosso 10.30 282 **Pn** 16 04 42.3 -1.1
DOPR Dopca 10.31 354 ⇓P **Pn** 16 04 45.6 +2.1
OZUR 10.41 355 ⇓P **Pn** 16 04 46.7 +1.8
SIM Simferopol' 10.69 28 *e*P **Pn** 16 04 51.7 +3.0
SIM pmax pmax
comp=Z,35nm,0.9s
SIM MLR MLR
comp=Z,200nm,16.0s
BZS Buzias 10.70 339 ⇑P **Pn** 16 04 49.0 +0.2
BZS Buzias 10.70 339 P **Pn** 16 04 49.0 +0.2
BZS Buzias 10.70 339 ⇑P **Pn** 16 04 49.0 +0.2
NE56 Odesa 11.33 14 P **Pn** 16 04 58.4 +1.0
MARR Marisel-Cluj 11.33 346 ⇓P **Pn** 16 04 59.0 +1.5
BURAR Bucovina Array 11.96 354 **Pn** 16 05 07.4 +1.2
BURAR Bucovina Array 11.96 354 ⇓P **Pn** 16 05 08.8 +2.6
BURAR Bucovina Array 11.96 354 P **Pn** 16 05 08.8 +2.6
BUR08 Bucovina Ar. S 11.99 354 **Pn** 16 05 06.0 -0.6
ANN Anapa 12.06 38 *e*P **Pn** 16 05 08.6 +1.2
ANN *e*S **Sn** 16 07 25.5 +4.3
ANN pmax pmax
comp=Z,29nm,1.1s
MORH Mrgy, Hungar 12.24 332 ⇓P **Pn** 16 05 12.0 +2.1
MORH Mrgy, Hungar 12.24 332 P **Pn** 16 05 11.9 +2.1
comp=Z,17nm,1.4s
SOC Sochi 12.54 47 *e*P **Pn** 16 05 14.9 +0.9
SOC *e* 16 07 36.6
SOC MLR MLR
comp=Z,373nm,12.0s
MUKU Mukachevo 13.12 347 P **Pn** 16 05 25.2 +3.3
HOLU Holmets 13.25 346 P **Pn** 16 05 25.7 +2.1
PSZ Piszkesteto 13.29 339 **Pn** 16 05 24.2 0.0
PSZ Piszkesteto 13.29 339 ⇑P **Pn** 16 05 26.2 +1.9
PSZ Piszkesteto 13.29 339 P **Pn** 16 05 24.2 0.0
PSZ Piszkesteto 13.29 339 ⇓P **Pn** 16 05 26.6 +2.3
CRES Cresnjevec Ost 13.35 323 *e*Pn **Pn** 16 05 25.5 +0.5
MPLH Magyarpolny 13.45 331 P **Pn** 16 05 28.4 +1.9
comp=Z,171nm,1.1s
MORS Morshin 13.60 351 P **Pn** 16 05 31.5 +3.1
KECS Kecovo 13.64 341 *e*P **P** 16 05 38.7 +1.0
KECS Kecovo 13.64 341 *e*P **P** 16 05 38.7 +1.0
KOLS Kolonicke sedl 13.66 347 *e*P **Pn** 16 05 32.5 +3.2
SRO Srobarova 13.71 335 *e*P **P** 16 05 39.4 +1.0
SRO Srobarova 13.71 335 *e*P **P** 16 05 39.3 +0.9
LABN Labinsk 13.74 45 *e*P **Pn** 16 05 31.0 +0.6
LABN *e*S **Sn** 16 08 05.8 +3.4
LABN pmax pmax
comp=Z,13nm,0.6s
CRNS Crni Vrh 14.13 321 *e*Pn **Pn** 16 05 34.9 -0.8
SOKA Soboth 14.16 324 *i* Pn **Pn** 16 05 37.3 +1.0
comp=Z,50nm,0.9s,SNR=11
LUBAR Lubar, Ukraine 14.21 2 P **Pn** 16 05 37.3 +0.6
NEUR Neytrino 14.25 53⇑*e*P **Pn** 16 05 40.3 +2.7
KWP Kalwaria Pacla 14.26 349 *e*P **P** 16 05 41.0 -3.5
ERBR Yeremizino-Bor 14.27 41 *e*P **Pn** 16 05 38.6 +1.0
ERBR *e*S **Sn** 16 08 18.6 +3.5
ERBR pmax pmax
comp=Z,9.0nm,1.1s
OBKA Obir 14.28 323 *e*Pn **Pn** 16 05 39.5 +1.7
comp=Z,27nm,1.3s
STHS Stebnicka Huta 14.33 345 *e*P **P** 16 05 47.4 +2.0
STHS Stebnicka Huta 14.33 345 *e*P **P** 16 05 47.4 +2.0
KEST Kesra 14.36 275 Pn **Pn** 16 05 37.5 -1.4
comp=Z,1.1nm,0.3s,baz=96,slow=8.3,SNR=11
KEST Sn Sn 16 08 07.7 -10
comp=Z,0.3nm,0.3s,baz=81,slow=17,SNR=1.3
KEST LR LR 16 11 50.1
comp=Z,437nm,20.5s,baz=42,slow=40
comp=Z,11nm,1.0s
KEST Kesra 14.36 275 **Pn** 16 05 36.0 -3.0
ARSA Arzberg 14.36 327 *e*Pn **Pn** 16 05 39.8 +0.9
comp=Z,19nm,1.5s
RONA Rosalia, Austr 14.38 330 *e*Pn **Pn** 16 05 40.3 +1.1
comp=Z,8.0nm,0.7s
ZST Bratislava 14.47 333 *e*P **P** 16 05 47.4 +0.5
ZST Bratislava 14.47 333 *e*P **P** 16 05 47.4 +0.5
LANS Liptovska Anna 14.52 340 *e*P **P** 16 05 49.5 +1.9
LANS Liptovska Anna 14.52 340 *e*P **P** 16 05 49.5 +1.9
NIE Niedzica 14.55 342 *e*P **P** 16 05 45.5 -2.3
MODS Modra-Piesok 14.55 333 *e*P **P** 16 05 48.1 +0.2
MODS Modra-Piesok 14.55 333 *e*P **P** 16 05 48.0 +0.2
KIV Kislovodsk 14.57 51 **P** 16 05 51.0 +2.9
KIV Kislovodsk 14.57 51 *e*P **Pn** 16 05 43.6 +1.8
KIV pmax pmax
comp=Z,46nm,1.1s
KIV MLR MLR
comp=Z,137nm,13.0s
KBZ Khabaz 14.59 52 Pn **P** 16 05 47.1 -1.1
comp=Z,0.5nm,0.3s,baz=254,slow=8.6,SNR=24
comp=Z,8.2nm,0.9s
KBZ Khabaz 14.59 52⇑*e*P **Pn** 16 05 41.9 -0.1
SMOL Smolenice 14.61 334 *e*P **P** 16 05 48.8 +0.3
GNI Garni 14.67 67 Pn **P** 16 05 47.2 -2.2
comp=Z,0.4nm,0.3s,baz=190,slow=3.5,SNR=5.3
comp=Z,8.0nm,0.6s
GNI Garni 14.67 67⇑*e*P **Pn** 16 05 46.3 +3.0
GNI pmax pmax
comp=Z,74nm,1.7s
CONA Conrad Observa 14.74 329 *e*Pn **Pn** 16 05 45.3 +1.1
comp=Z,8.3nm,1.0s
CONA *i* P **P** 16 05 50.5 +0.4
comp=Z,4.0nm,0.9s
MYKA Terra Mystica 14.81 321 *e*Pn **Pn** 16 05 45.5 +0.4

comp=Z,9.1nm,0.9s
JAVC Velka Javorina 14.82 335 *e*PN **Pn** 16 05 47.2 +2.0
AK13 Malin Array Si 14.96 5 P **Pn** 16 05 48.0 +1.0
AK10 Malin Array Si 14.96 6 P **Pn** 16 05 48.7 +1.7
AK10 pP **P** 16 05 53.6 +1.2
AK09 Malin Array Si 14.98 6 P **Pn** 16 05 48.9 +1.7
AK02 Malin Array Si 15.02 5 P **Pn** 16 05 49.2 +1.5
AK11 Malin Array Si 15.03 5 P **Pn** 16 05 49.9 +2.0
KIEV Kiev 15.05 5 **Pn** 16 05 50.0 +1.8
KIEV Kiev 15.05 5 P **Pn** 16 05 50.0 +1.8
KIEV pmax pmax
comp=Z,7.0nm,0.7s
KIEV Kiev 15.05 5 ⇓P **P** 16 05 52.0 -1.4
AKASG Malin Array Be 15.06 5 Pn **Pn** 16 05 45.5 -2.8
comp=Z,3.3nm,0.3s,baz=192,slow=11,SNR=18
AKASG Malin Array Be 15.06 5 P **P** 16 05 54.7 +1.2
AKBB Malin Array Si 15.06 5 **Pn** 16 05 50.4 +2.1
AKBB Malin Array Si 15.06 5⇓*e*P **Pn** 16 05 47.4 -0.9
AK19 Malin Array Si 15.07 5 P **Pn** 16 05 49.9 +1.5
TEOL Teolo 15.10 314 IAmb IAmb 16 05 55.0
comp=Z,25nm,0.6s
MAUC Maruska 15.21 337 *e*P **P** 16 05 56.4 +1.2
KBA Koelnbreinsper 15.27 322 *i* Pn **Pn** 16 05 51.3 +0.1
comp=Z,54nm,0.8s,SNR=17
GOF Gofitskoye 15.35 48*ce*P **P** 16 06 01.3 +4.6
MOA Molln 15.38 326 *i* P **P** 16 05 57.6 +0.5
comp=Z,3.7nm,0.4s,SNR=6.1
OJC Ojcow 15.41 342 *e*P **P** 16 05 58.5 +1.1
OJC Ojcow 15.41 342 ⇓P **P** 16 05 58.0 +0.6
KRUC Moravsky 15.45 333 *e*PN **Pn** 16 05 54.7 +1.3
ABTA Abfaltersbach 15.48 320 *e*Pn **Pn** 16 05 52.9 -0.9
comp=Z,18nm,0.9s
CTI Castel Tesino 15.51 316 IAmb IAmb 16 05 59.8
comp=Z,32nm,0.6s
OKC Ostrava-Krasne 15.52 338 *e*P **P** 16 05 59.7 +1.1
OKC Ostrava-Krasne 15.52 338 *e*P **P** 16 05 59.7 +1.1
RNPP5 Staryi Chortor 15.53 357 P **Pn** 16 05 54.9 +0.5
BIOA Bad Ischl, Aus 15.55 324 *i* Pn **Pn** 16 05 55.7 +0.8
comp=Z,37nm,1.1s,SNR=6.8
VRAC Vranov 15.58 334 Pn **Pn** 16 05 56.1 +1.0
comp=Z,46nm,0.6s,baz=144,slow=11,SNR=60
VRAC LR LR 16 13 03.3
comp=Z,490nm,18.8s,baz=168,slow=42
VRAC Vranov 15.58 334 *e*PN **Pn** 16 05 56.1 +1.0
RNPP8 Varash 15.63 357 P **Pn** 16 05 56.3 +0.5
MORC Moravsky Berou 15.66 337 IAmb IAmb 16 06 02.0
comp=Z,44nm,0.7s
MORC Moravsky Berou 15.66 337 ⇓P **P** 16 05 59.2 -1.0
MORC Moravsky Berou 15.66 337 *e*PN **Pn** 16 05 56.9 +0.7
LESA Schwarzleotal 15.84 322 *i* Pn **Pn** 16 05 59.7 +1.1
comp=Z,8.7nm,0.6s,SNR=13
TREC Trest 15.98 332 *e*P **P** 16 06 04.4 +0.7
TREC Trest 15.98 332 *e*P **P** 16 06 04.4 +0.7
CKRC Cesky Krumlov 16.09 328 *e*P **P** 16 06 04.2 -0.7
CKRC Cesky Krumlov 16.09 328 *e*P **P** 16 06 04.2 -0.7
BOB Bobbio (Coli) 16.14 309 ⇑P **P** 16 06 05.5 -0.1
WTTA Wattenberg 16.27 320 *i* Pn **Pn** 16 06 04.6 +0.4
comp=Z,21nm,0.6s,SNR=18
WATA Walderalm 16.34 320 *i* Pn **Pn** 16 06 05.2 +0.1
comp=Z,48nm,0.8s,SNR=21
GEC2 GERESS Array S 16.37 327 *e*P **P** 16 06 06.9 -1.2
comp=Z,64nm,1.1s,baz=135,slow=11
GERES GERESS Array B 16.37 327 Pn **Pn** 16 06 06.5 +1.2
comp=Z,0.3nm,0.3s,baz=128,slow=8.6,SNR=63
GERES PcP **PcP** 16 10 57.2 -0.4
comp=Z,0.7nm,0.5s,baz=66,slow=2.5,SNR=2.9
GERES LR LR 16 12 41.0
comp=Z,419nm,21.1s,baz=199,slow=38
comp=Z,16nm,0.8s
SQTA Sankt Quirin 16.47 319 *i* Pn **Pn** 16 06 06.5 -0.2
comp=Z,25nm,0.6s,SNR=15
DPC Dobruska-Polom 16.55 335 *e*P **P** 16 06 10.0 -0.1
DPC Dobruska-Polom 16.55 335 *e*P **P** 16 06 10.0 -0.1
DPC Dobruska-Polom 16.55 335 P **P** 16 06 09.3 -0.8
comp=Z,55nm,1.0s
MOTA Moosalm 16.60 319 *i* Pn **Pn** 16 06 08.4 0.0
comp=Z,29nm,1.1s,SNR=9.3
FETA Feichten 16.60 318 *i* Pn **P** 16 06 09.9 -0.9
comp=Z,22nm,1.0s,SNR=16
KHC Kasperske Hory 16.64 328 *e*P **Pn** 16 06 09.5 +0.8
KHC *ex* x 16 06 41.5
KHC Kasperske Hory 16.64 328 *e*P **Pn** 16 06 09.5 +0.8
BEL Belsk 16.71 346 *e*P **P** 16 06 13.3 +1.5
UPC Upice 16.79 335 *e*P **P** 16 06 13.6 +0.9
UPC Upice 16.79 335 *e*P **P** 16 06 13.6 +0.9
CHVC Chvalec 16.85 335 *e*P **P** 16 06 14.0 +0.7
CHVC Chvalec 16.85 335 *e*P **P** 16 06 14.0 +0.7
RETA Reutte 16.87 319 *i* Pn **Pn** 16 06 11.9 +0.2
comp=Z,0.3nm,0.2s,SNR=9.2
PRU Pruhonice 16.91 331 *e*P **P** 16 06 14.7 +0.8
PRU Pruhonice 16.91 331 *e*P **P** 16 06 14.7 +0.8
DAVOX Davos/Dischmat 16.93 316 Pn **Pn** 16 06 11.5 -1.1
comp=Z,2.3nm,0.3s,baz=222,slow=2.7,SNR=16
DAVOX PcP **PcP** 16 10 59.4 +0.8
comp=Z,1.8nm,0.5s,baz=85,slow=2.3,SNR=1.6
DAVOX LR LR 16 12 52.8
comp=Z,420nm,20.8s,baz=109,slow=38
comp=Z,5.1nm,0.5s
WET Wettzell 16.95 327 *e*P **P** 16 06 14.3 -0.3
comp=Z,37nm,1.1s,baz=135,slow=11
KSP Ksiaz 16.98 336 *e*P **P** 16 06 14.8 0.0
KSP Ksiaz 16.98 336 P **P** 16 06 14.5 -0.3
comp=Z,39nm,1.3s
KSP Ksiaz 16.98 336 ⇑P **P** 16 06 14.8 0.0
PRA Prague 17.01 331 *e*P **P** 16 06 16.7 +1.6
PRA Prague 17.01 331 *e*P **P** 16 06 16.7 +1.6
R9F13 Warsaw-Wawer 17.02 348 *e*P **Pn** 16 06 10.1 -3.3
TUE Stuetta 17.07 314 P **Pn** 16 06 14.0 -0.3
comp=Z,112nm,1.3s
TUE Stuetta 17.07 314 ⇓P **P** 16 06 15.8 -0.2
AKT Akhty 17.17 64 *e*P **P** 16 06 18.1 +1.0
AKT pmax pmax
comp=Z,23nm,1.0s
DAVA Damuels 17.23 317 *i* Pn **Pn** 16 06 16.9 +0.6
comp=Z,27nm,0.6s,SNR=19
UBR Ueberruh 17.34 319 *e*P **P** 16 06 18.1 -0.7
comp=Z,55nm,0.9s,baz=135,slow=11
MAK Makhachkala 17.40 59*c i*P **Pn** 16 06 16.7 -1.6
MAK *e*S **Sn** 16 09 28.7 -2.6
MAK pmax pmax
comp=Z,183nm,1.3s
MAK MLR MLR
comp=Z,121nm,9.0s
VORD Divnogorie 17.63 26 *e*P **P** 16 06 22.0 +0.1
VORD pmax pmax
comp=Z,20nm,1.0s
ROTZ Rotzenmuhle 17.71 327 *e*P **P** 16 06 23.0 +0.1
comp=Z,41nm,1.9s,baz=135,slow=11
VSR Storozhevoye 17.79 26 *e*P **P** 16 06 24.2 +0.5
VSR pmax pmax
comp=Z,50nm,1.6s
HSKC Hora Svate Kat 17.83 331 *e*P **P** 16 06 24.1 -0.1
BRG Berggiesshubel 17.84 332 *e*P **P** 16 06 24.4 +0.1
comp=Z,22nm,0.9s,baz=135,slow=11
BRG Berggiesshubel 17.84 332 *e*P **P** 16 06 24.4 +0.1
BRG Amp 16 06 27.7
comp=Z,22nm,0.9s
MANZ Manzenberg 17.91 327 *e*P **P** 16 06 25.4 +0.3
comp=Z,66nm,1.9s,baz=135,slow=11
BNI Bardonecchia 18.04 307 **P** 16 06 27.2 +0.5
BNI Bardonecchia 18.04 307 P **P** 16 06 27.2 +0.5
BNI pmax pmax
comp=Z,37nm,1.5s
BNI Bardonecchia 18.04 307 ⇓P **P** 16 06 28.9 +2.2
GRF Grafenberg Arr 18.10 325 *e*P **P** 16 06 27.3 +0.1
comp=Z,91nm,1.3s,baz=135,slow=11
GRF *e*L L 16 15 27.4
comp=Z,664nm,20.1s
VORR Voronezh 18.18 25 *e*P **Pn** 16 06 26.0 -1.8
VORR pmax pmax
comp=Z,79nm,0.4s
SENIN Lac Senin/Sane 18.23 312 **Pn** 16 06 27.8 -0.9
SUW Suwalki 18.49 353 *e*P **Pn** 16 06 31.7 +0.2
SUW Suwalki 18.49 353 **P** 16 06 31.0 -0.3
SUW Suwalki 18.49 353 P **P** 16 06 31.0 -0.3
SUW Suwalki 18.49 353 *e*P **Pn** 16 06 32.5 +1.0
SUW Suwalki 18.49 353 ⇑P **Pn** 16 06 32.0 +0.5
CLL Collm 18.55 331 **P** 16 06 32.0 -0.1
CLL Collm 18.55 331

CLL *i* x x 16 06 34.7
comp=Z,41nm,0.8s
CLL *i* x x 16 06 38.6
CLL *i* x x 16 06 40.6
CLL *ex* x 16 08 08.0
CLL Collm 18.55 331 *e*P **Pn 16 06 34.6 +2.3**
comp=Z,33nm,0.7s,baz=135,slow=11
MOX Moxa 18.61 328 *e*P **Pn 16 06 33.0 -0.2**
comp=Z,73nm,1.7s,baz=135,slow=11
MOX *e*L L 16 15 48.8
comp=Z,763nm,18.0s
BFO Black Forest 18.68 318 P 16 06 30.6 -3.0
BFO Black Forest 18.68 318 P **P 16 06 30.6 -3.0**
BFO pmax pmax
comp=Z,42nm,1.1s
BFO Black Forest 18.68 318 ⇑P **P 16 06 33.7 +0.1**
BFO Black Forest 18.68 318 *e*P **P 16 06 33.3 -0.3**
comp=Z,35nm,1.0s,baz=135,slow=11
VRH Novokhopyorsk 18.75 30 *e*P **Pn 16 06 34.8 +0.1**
VRH *e*S **S 16 10 05.1 -1.4**
VRH pmax pmax
comp=Z,61nm,0.7s
MNK Minsk 18.79 2 *i*P P 16 06 21.9 -13
comp=Z,20nm,0.5s,baz=182
MNK *i* P Pn 16 06 22.3 -13
comp=E,31nm,0.8s
MNK *i* P Pn 16 06 22.3 -13
comp=N,19nm,0.8s
MNK *i* PP pP 16 06 32.4 -7.6
MNK *i* PPP PPP 16 06 40.2
MNK *i* S Sn 16 09 41.3 -23
MNK *i* SS S 16 09 56.2 -11
MNK *i* SSS SSS 16 10 08.8
MNK *i* LQ LQ 16 11 53.3
MNK *i* LR LR 16 13 01.2
MNK *i* LRM MLR 16 14 19.3
comp=N,504nm,13.1s
MNK *i* LRM MLR 16 14 35.2
comp=E,232nm,15.8s
MNK *i* LRM MLR 16 14 38.6
comp=Z,302nm,14.2s
MNK Minsk 18.79 2 *i*P P 16 06 21.8 -13
MNK *i* SS **Sn 16 09 56.2 -8.6**
MNK pmax pmax
comp=Z,20nm,0.5s
MNK pmax pmax
comp=E,31nm,0.8s
MNK pmax pmax
comp=N,19nm,0.8s
MNK MLR MLR
comp=N,504nm,13.0s
MNK MLR MLR
comp=E,232nm,16.0s
MNK MLR MLR
comp=Z,302nm,14.0s
GKP Gorka Klasztor 18.85 342 *e*P **P 16 06 35.3 -0.1**
GKP Gorka Klasztor 18.85 342 *e*P **Pn 16 06 36.4 +0.4**
LPSR Galich'ya Gora 18.88 23 *e*P **P 16 06 34.0 -1.6**
LPSR *e*S **S 16 10 12.7 +3.6**
LPSR pmax pmax
comp=Z,56nm,0.7s
LPSR smax smax
comp=E,400nm,4.1s
NEUB Neuenburg 18.97 329 *e*P **P 16 06 36.8 +0.2**
comp=E,46nm,1.1s,baz=135,slow=11
NACGM Naroch 19.19 360 *e*P **Pn 16 06 39.6 -0.4**
comp=Z,50nm,1.0s,baz=180
RUE Ruedersdorf 19.21 335 *e*P **P 16 06 39.1 -0.1**
comp=Z,52nm,0.7s,baz=135,slow=11
ECH Echery 19.27 316 ⇓P **P 16 06 40.1 +0.1**
SSB Saint Sauveur 19.52 306 **P 16 06 39.3 -3.5**
SSB lAmb lAmb 16 06 43.7
comp=Z,141nm,2.0s
SSB Saint Sauveur 19.52 306 P **P 16 06 39.3 -3.5**
SSB pmax pmax
comp=Z,141nm,2.0s
SSB Saint Sauveur 19.52 306 ⇓P **P 16 06 42.5 -0.3**
TNS Taunus Mts 19.79 323 *e*P **P 16 06 45.7 0.0**
comp=Z,59nm,0.8s,baz=135,slow=11
PABE Paberze 19.90 355 P **P 16 06 44.8 -2.0**
PABE Paberze 19.90 355 *e*P **P 16 06 46.6 -0.2**
GTTG Gottingen 19.98 328 *e*P **P 16 06 47.9 +0.1**
comp=Z,183nm,1.6s,baz=135,slow=11
CLZ Clausthal 20.02 329 *e*P **P 16 06 47.7 -0.5**
comp=Z,24nm,0.9s,baz=135,slow=11
FLTG Flechtingen 20.04 331 *e*P **P 16 06 47.4 -0.9**
comp=Z,27nm,0.8s,baz=135,slow=11
ASSE Asse, Remlinge 20.11 330 *e*P **P 16 06 48.5 -0.6**
comp=Z,21nm,1.0s,baz=135,slow=11
RAYN Ar Rayn 20.11 122 ⇑P Pn 16 06 53.7 +2.4
KASTN Kahler Asten 20.45 325 *e*P **P 16 06 52.7 -0.2**
comp=Z,32nm,1.0s,baz=135,slow=11
OBN Obninsk 20.49 16 P **P 16 06 52.8 -0.3**
comp=Z,19nm,0.5s,baz=188,slow=6.2,SNR=4.7
comp=Z,19nm,0.5s
OBN Obninsk 20.49 16 *e*PPP PPP 16 07 18.8
OBN Obninsk 20.49 16 *de*P **P 16 06 52.8 -0.3**
OBN *e* 16 11 03.5
OBN pmax pmax
comp=Z,67nm,1.4s
OBN MLR MLR
comp=Z,269nm,17.0s
MTLF Montolieu 20.54 299 ⇓P **P 16 06 53.2 -0.6**
PBUR Paburge 20.60 352 *e*P **P 16 06 54.9 +0.5**
WLF Walferdange 20.63 319 **P 16 06 52.6 -2.2**
WLF lAmb lAmb 16 06 58.8
comp=Z,43nm,0.9s
WLF Walferdange 20.63 319 P **P 16 06 52.6 -2.2**
WLF pmax pmax
comp=Z,43nm,0.9s
WLF Walferdange 20.63 319 *d*P **P 16 06 55.0 +0.2**
comp=Z,33nm,1.0s
WLF Walferdange 20.63 319 ⇑P **P 16 06 55.2 +0.5**
WLF Walferdange 20.63 319 *e*P **P 16 06 55.1 +0.3**
comp=Z,47nm,0.9s,baz=135,slow=11
LOR Lormes 20.75 311 ⇓P **P 16 06 55.4 -0.7**
BHOU Houvegnez 21.10 320 *d*P **P 16 06 59.9 0.0**
comp=Z,18nm,1.1s
BSD Bornholm Skovb 21.11 340 *i*P **P 16 06 57.0 -2.9**
BSD lAmb lAmb 16 07 01.8
comp=Z,25nm,0.8s
BSD Bornholm Skovb 21.11 340 *e*P **P 16 06 57.9 -2.0**
BSD Bornholm Skovb 21.11 340 ⇑P **P 16 06 58.0 -2.0**
BTNL Ternell 21.18 321 *d*P **P 16 07 00.8 +0.1**
comp=Z,46nm,1.0s
MEM Membach 21.25 321 *d*P **P 16 07 01.8 +0.3**
comp=Z,73nm,1.0s
MOS Moscow 21.30 17 *e*P **P 16 07 01.6 -0.3**
MOS *e*S **S 16 11 00.4 +2.9**
MOS *e* 16 18 23.9
MOS pmax pmax
comp=Z,50nm,1.1s
RCHB Rochefort 21.40 319 *d*P **P 16 07 03.0 -0.1**
comp=Z,23nm,0.7s
BSTI Sart Tilman 21.46 320 *d*P **P 16 07 05.2 +1.4**
comp=Z,11nm,1.3s
BCLA Clavier 21.51 320 *d*P **P 16 07 04.7 +0.4**
comp=Z,35nm,1.1s
BGES Gesves 21.60 320 *d*P **P 16 07 05.6 +0.3**
DOU Dourbes 21.70 318 *d*P **P 16 07 06.3 -0.1**
comp=Z,39nm,0.7s
BMRD Maredsous 21.72 319 *d*P **P 16 07 06.6 0.0**
comp=Z,17nm,0.9s
BLEU Blekinge 21.95 343 *i*P **P 16 07 05.5 -3.5**
LUNU Lund 21.98 339 *i*P **P 16 07 07.0 -2.2**
CLF Chambon-Foret 22.05 312 **P 16 07 06.3 -3.7**
CLF lAmb lAmb 16 07 12.7
comp=Z,64nm,0.8s
CLF Chambon-Foret 22.05 312 ⇑P **P 16 07 10.1 0.0**
SLIT Slitere, Latvi 22.14 353 *e*P **P 16 07 08.8 -2.2**
SLIT Slitere, Latvi 22.14 353 ⇑P **P 16 07 09.1 -1.9**
BELG Belogornoye 22.17 35 *de*P **P 16 07 12.0 +0.7**
BELG pmax pmax
comp=Z,25nm,1.5s
UCC Uccle 22.22 320 P **P 16 07 10.9 -0.9**
UCC lAmb lAmb 16 07 13.3
comp=Z,62nm,1.0s
UCC Uccle 22.22 320 P **P 16 07 10.9 -0.9**
UCC pmax pmax
comp=Z,62nm,1.0s
UCC Uccle 22.22 320 *d*P **P 16 07 11.8 0.0**
BJUU Bjuv 22.48 339 *i*P **P 16 07 12.2 -2.4**
CART Cartagena 22.52 283 P **P 16 07 13.5 -1.8**
DEL Delary 22.59 341 *i*P **P 16 07 13.0 -2.8**

TAM Tamanrasset 22.69 241 **P 16 07 16.3 -1.0**
TAM lAmb lAmb 16 07 38.0
comp=Z,29nm,0.7s
TAM Tamanrasset 22.69 241 P **P 16 07 16.3 -1.0**
TAM pmax pmax
comp=Z,29nm,0.7s
TAM Tamanrasset 22.69 241 ⇑P **P 16 07 18.8 +1.5**
VSU Vasula 22.75 360 *c i*P **P 16 07 17.1 -0.4**
VSU pmax pmax
comp=Z,51nm,0.9s
VSU Vasula 22.75 360 *e*P **P 16 07 16.8 -0.6**
MFF Saint Martin d 23.05 306 ⇓P **P 16 07 19.6 -1.1**
MTSE Matsula 23.10 356 *e*P **P 16 07 20.1 -1.0**
FABU Falkenberg 23.37 340 *i*P **P 16 07 22.0 -1.7**
ARBE Arbavere 23.74 359 *e*P **P 16 07 26.7 -0.7**
BORU Boraas 23.90 341 *i*P **P 16 07 26.5 -2.5**
MEF Metsahovi 24.57 357 *e*P **P 16 07 35.1 0.0**
ESBB Sonseca Array 24.76 288 P **P 16 07 36.0 -1.1**
ESDC Sonseca Array 24.76 288 P **P 16 07 36.5 -0.5**
comp=Z,42nm,0.6s,baz=80,slow=9.9,SNR=338
ESDC PcP **PcP 16 11 14.3 +0.9**
comp=Z,1.9nm,0.9s,baz=60,slow=2.5,SNR=5.9
ESDC ScP **ScP 16 14 48.7 -2.4**
comp=Z,0.2nm,0.4s,baz=116,slow=3.0,SNR=2.9
comp=Z,42nm,0.6s
AAL Aland 24.89 352 *e*P **P 16 07 37.0 -0.9**
PAB San Pablo 25.06 288 P **P 16 07 39.5 -0.4**
PAB lAmb lAmb 16 07 40.9
comp=Z,41nm,0.7s
PAB San Pablo 25.06 288 P **P 16 07 39.5 -0.4**
PAB pmax pmax
comp=Z,41nm,0.7s
RAF Rauma 25.55 354 *e*P **P 16 07 43.2 -0.7**
FINES FINESS Array B 25.75 359 P **P 16 07 44.8 -0.9**
comp=Z,17nm,0.7s,baz=155,slow=10,SNR=45
FINES PcP **PcP 16 11 15.0 -0.1**
comp=Z,2.3nm,0.5s,baz=131,slow=4.2,SNR=7.0
FINES ScP **ScP 16 14 52.3 -1.0**
comp=Z,2.2nm,0.8s,baz=129,slow=3.8,SNR=4.8
comp=Z,17nm,0.7s
FINES FINESS Array B 25.75 359 P **P 16 07 44.7 -1.0**
FIA1 FINESS Array S 25.75 359 P **P 16 07 45.1 -0.6**
HFS Hagfors 25.91 345 P **P 16 07 45.3 -1.9**
comp=Z,5.2nm,0.5s,baz=148,slow=12,SNR=32
HFS PcP **PcP 16 11 15.0 -0.5**
comp=Z,1.0nm,0.5s,baz=180,slow=1.4,SNR=2.0
HFS LR LR 16 19 52.7
comp=Z,514nm,19.0s,baz=202,slow=41
comp=Z,5.2nm,0.5s
MDT Midelt 26.23 273 LR LR 16 20 51.6
comp=Z,202nm,19.6s,baz=30,slow=43
MD01 Midelt array s 26.34 273 P **P 16 07 51.0 -0.6**
MD31 MD31 26.34 273 P **P 16 07 50.5 -1.0**
MD31 lAmb lAmb 16 07 55.0
comp=Z,16nm,0.8s
KLMR Klimovskoe 26.40 14 *e*P **P 16 07 50.3 -1.3**
KLMR pmax pmax
comp=Z,29nm,1.0s
KEF Keuruu 26.51 358 *e*P **P 16 07 55.0 +2.4**
AKTO Aktyubinsk 26.76 47 LR LR 16 23 48.3
comp=Z,176nm,18.2s,baz=36,slow=48
AKTO Aktyubinsk 26.76 47 P **P 16 07 55.3 +0.3**
PBRG Braganca 26.90 293 *e*P **P 16 07 55.7 -0.7**
PBRG *i* lAmb lAmb 16 07 58.8
comp=Z,81nm,1.1s
SUF Sumiainen 27.03 359 *e*P **P 16 07 59.5 +2.2**
MVO Moncorvo 27.10 292 *e*P **P 16 07 57.8 -0.4**
MVO *i* lAmb lAmb 16 08 00.8
comp=Z,98nm,0.9s
KIRV Kirov 27.23 26 ⇓*e*P **P 16 07 58.6 -0.5**
PBAR Barrancos 27.24 285 *e*P **P 16 07 59.1 -0.4**
PBAR *i* lAmb lAmb 16 08 02.0
comp=Z,57nm,1.2s
NB201 NORSAR Array S 27.26 343 P **P 16 07 57.9 -1.5**
NB201 lAmb lAmb 16 08 09.1
comp=Z,23nm,1.2s
NB2 NORSAR Subarra 27.27 343 P **P 16 07 57.9 -1.7**
comp=Z,3.7nm,0.6s,baz=157,slow=10
NOA NORSAR Array B 27.27 343 P **P 16 07 56.8 -2.8**
comp=Z,0.8nm,0.5s,baz=143,slow=6.6,SNR=11
NOA PcP **PcP 16 11 18.3 -0.5**
comp=Z,1.5nm,0.8s,baz=123,slow=3.2,SNR=3.4
NOA ScP **ScP 16 14 54.7 -3.3**
comp=Z,1.1nm,0.7s,baz=137,slow=3.4,SNR=3.7
NOA LR LR 16 19 46.5
comp=Z,202nm,18.1s,baz=155,slow=39
comp=Z,0.8nm,0.5s
JOF Joensuu 27.36 4 *e*P **P 16 07 59.1 -1.0**
PMRV Marv??o 27.42 288 *e*P **P 16 08 00.5 -0.5**
PMRV *i* lAmb lAmb 16 08 03.5
comp=Z,32nm,0.8s
PCBR Castelo Branco 27.46 289 *e*P **P 16 08 01.5 +0.1**
PCBR *i* lAmb lAmb 16 08 03.9
comp=Z,32nm,1.0s
VAF Ylistaro 27.48 356 *e*P **P 16 08 04.0 +2.7**
MTE Manteigas 27.50 290 *e*P **P 16 08 01.8 -0.1**
MTE *i* lAmb lAmb 16 08 04.3
comp=Z,44nm,0.9s
MTE Manteigas 27.50 290 *e*P **P 16 08 03.3 +1.4**
MTE Manteigas 27.50 290 ⇓P **P 16 08 01.9 +0.1**
AB31 Akbulak array 27.55 50 P **P 16 08 02.2 +0.1**
AB31 Akbulak array 27.55 50 *i*P **P 16 08 03.4 +1.3**
ABKAR Akbulak array 27.55 50 P **P 16 08 03.3 +1.2**
ABKAR ScP **ScP 16 14 59.2 +0.3**
NC204 NORSAR Array S 27.59 343 P **P 16 08 00.8 -1.6**
NC204 lAmb lAmb 16 08 32.8
comp=Z,26nm,1.2s
PESTR Estremoz 27.61 287 P **P 16 08 01.7 -1.1**
PESTR lAmb lAmb 16 08 04.4
comp=Z,18nm,0.7s
PESTR Estremoz 27.61 287 *e*P **P 16 08 02.4 -0.4**
PESTR *i* lAmb lAmb 16 08 07.1
comp=Z,32nm,1.1s
PESTR Estremoz 27.61 287 ⇓P **P 16 08 02.6 -0.2**
PVRL Vila Real 27.62 292 *e*P **P 16 08 05.2 +2.4**
POLO Lamas de Olo 27.68 292 *e*P **P 16 08 03.4 0.0**
PVIS Viseu 27.76 291 *e*P **P 16 08 03.9 -0.2**
PCAB Cabril 27.86 293 *e*P **P 16 08 05.1 +0.2**
PVAQ Vaqueiros 27.86 284 P **P 16 08 04.3 -0.7**
PVAQ Vaqueiros 27.86 284 *e*P **P 16 08 04.5 -0.4**
PVAQ *i* lAmb lAmb 16 08 05.5
comp=Z,74nm,1.0s
PVAQ Vaqueiros 27.86 284 ⇑P **P 16 08 04.3 -0.7**
PBEJ Beja 27.90 285 *e*P **P 16 08 05.6 +0.2**
PBEJ *i* lAmb lAmb 16 08 09.1
comp=Z,56nm,1.5s
PARRA Arraiolos 27.96 287 *e*P **P 16 08 05.4 -0.5**
PARRA *i* lAmb lAmb 16 08 07.9
comp=Z,30nm,2.0s
EVO Evora 27.97 286 *e*P **P 16 08 06.1 +0.1**
EVO *i* lAmb lAmb 16 08 09.6
comp=Z,32nm,2.2s
PSARD Sardoal 28.00 289 *e*P **P 16 08 08.4 +2.1**
PGAV Gavieira, Arco 28.04 294 *e*P **P 16 08 07.5 +0.8**
PBDV Barranco-do-Ve 28.05 284 *e*P **P 16 08 06.9 +0.2**
PBDV *i* lAmb lAmb 16 08 07.5
comp=Z,92nm,1.0s
PCVE Castro Verde 28.08 284 *e*P **P 16 08 06.8 -0.1**
PCVE *i* lAmb lAmb 16 08 47.9
comp=Z,30nm,1.8s
PMTG Montargil 28.09 287 *e*P **P 16 08 06.7 -0.4**
MESJ Messejana 28.20 285 *e*P **P 16 08 07.5 -0.6**
MESJ lAmb lAmb 16 08 11.3
comp=Z,30nm,0.7s
MESJ Messejana 28.20 285 P **P 16 08 06.5 -1.5**
MESJ lAmb lAmb 16 08 11.4
comp=Z,32nm,0.8s
MESJ Messejana 28.20 285 *e*P **P 16 08 08.0 -0.1**
MESJ *i* lAmb lAmb 16 08 11.2
comp=Z,37nm,0.8s
MESJ Messejana 28.20 285 *e*P **P 16 08 07.5 -0.6**
MESJ Messejana 28.20 285 ⇑P **P 16 08 08.0 -0.1**
MOE Montemor 28.23 286 *e*P **P 16 08 08.9 +0.6**
PCAS Casmilo, Conde 28.24 290 *e*P **P 16 08 08.8 +0.4**
PCAS *i* lAmb lAmb 16 08 09.6
comp=Z,50nm,2.0s
EKA Eskdalemuir Ar 28.48 323 P **P 16 08 07.0 -3.3**
comp=Z,6.2nm,0.9s,baz=118,slow=10,SNR=11
EKA PcP **PcP 16 11 21.9 +0.2**
comp=Z,4.0nm,0.7s,baz=106,slow=2.7,SNR=5.1
EKA ScP **ScP 16 14 59.1 -2.5**
comp=Z,0.5nm,0.4s,baz=152,slow=3.2,SNR=3.4
comp=Z,6.2nm,0.9s
MORF Marmelete 28.61 284 *e*P **P 16 08 13.9 +2.2**
PTEO Sao Teotonio 28.63 284 *e*P **P 16 08 12.2 +0.4**

PTEO *i* lAmb lAmb 16 08 18.2
comp=Z,59nm,1.0s
ARTI Arti 29.61 36 P **P 16 08 19.4 -1.0**
ARTI Arti 29.61 36 *c i*P **P 16 08 20.5 +0.2**
ARTI 16 09 11.3
ARTI S **S 16 13 16.3 +2.0**
ARTI SS **SnSn 16 14 42.7 -0.4**
ARTI pmax pmax
comp=Z,5.0nm,0.8s
TORD Torodi Ar. Bea 32.01 232 P **P 16 08 41.5 -0.5**
comp=Z,6.5nm,0.4s,baz=39,slow=13,SNR=100
TORD PcP **PcP 16 11 31.9 +0.3**
comp=Z,2.4nm,0.7s,baz=327,slow=0.9,SNR=4.6
comp=Z,6.5nm,0.4s
APA Apatity 32.11 5 ⇓*e*P **P 16 08 39.3 -2.9**
APA *e* 16 09 54.9
APA pmax pmax
comp=Z,9.0nm,0.7s
APA MLR MLR
comp=Z,1µm,4.5s
ARCES ARCESS Array B 33.88 359 P **P 16 08 57.2 -0.5**
comp=Z,2.6nm,0.8s,baz=181,slow=7.9,SNR=7.5
ARCES PcP **PcP 16 11 35.3 -0.6**
comp=Z,0.8nm,0.4s,baz=195,slow=2.8,SNR=1.3
comp=Z,2.6nm,0.8s
BORK Borovoye 34.83 46 ⇓*e*P **P 16 09 07.2 +1.1**
BORK pmax pmax
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 34.87 47 P **P 16 09 07.5 +1.1**
comp=Z,2.9nm,0.8s,baz=261,slow=5.9,SNR=11
BVAR ScP **ScP 16 15 23.1 -0.2**
comp=Z,1.4nm,0.6s,baz=267,slow=5.5,SNR=6.9
BVAR LR LR 16 28 16.1
comp=Z,115nm,19.6s,baz=285,slow=45
comp=Z,2.9nm,0.8s
AAK Ala-Archa 37.05 65 LR LR 16 25 18.3
comp=Z,121nm,21.1s,baz=297,slow=37
AAK Ala-Arcba 37.05 65 ⇑*e*P **P 16 09 27.1 +1.6**
AAK pmax pmax
comp=Z,10.0nm,1.5s
KSH2 Kashi 38.35 70 P **P 16 09 38.8 +2.3**
KSH2 sP sP 16 09 47.3 +2.3
KSH2 pmax pmax
comp=Z,3.0nm,1.5s
KURBB Kurchatov Arra 39.59 51 P **P 16 09 46.9 +0.3**
comp=Z,11nm,0.8s,baz=277,slow=8.8,SNR=36
KURBB PcP **PcP 16 11 54.0 +0.6**
comp=Z,3.3nm,0.6s,baz=271,slow=4.1,SNR=7.3
KURBB ScP **ScP 16 15 40.7 -0.3**
comp=Z,1.4nm,0.7s,baz=270,slow=5.0,SNR=10
KURBB LR LR 16 27 37.8
comp=Z,132nm,20.2s,baz=174,slow=38
comp=Z,11nm,0.8s
KURK Kurchatov 39.65 51 P **P 16 09 47.7 +0.6**
KURK Kurchatov 39.65 51 *ce*P **P 16 09 47.8 +0.7**
KURK pmax pmax
comp=Z,14nm,0.9s
BORG Borgarnes 40.79 331 LR LR 16 30 10.7
comp=Z,990nm,18.9s,baz=294,slow=41
DBIC Dimbokro 41.10 233 P **P 16 09 59.0 -0.4**
comp=Z,7.8nm,0.5s,baz=62,slow=7.9,SNR=16
DBIC PcP **PcP 16 11 59.9 +1.0**
comp=Z,6.5nm,0.5s,baz=53,slow=5.4,SNR=4.6
DBIC LR LR 16 29 45.4
comp=Z,206nm,18.7s,baz=48,slow=40
comp=Z,7.8nm,0.5s
DBIC Dimbokro 41.10 233 P **P 16 09 59.0 -0.4**
DBIC lAmb lAmb 16 10 00.5
comp=Z,24nm,1.1s
DBIC PcP **PcP 16 11 59.5 +0.7**
MAKZ Makanchi 41.99 57 P **P 16 10 07.6 +1.2**
MAKZ Makanchi 41.99 57 P **P 16 10 07.6 +1.2**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 41.99 57 ⇓P **P 16 10 07.7 +1.3**
MK31 Makanchi Array 42.20 57 ⇑*e*P **P 16 10 08.6 +0.4**
MKAR Makanchi Array 42.20 57 P **P 16 10 09.2 +1.0**
comp=Z,6.9nm,0.7s,baz=280,slow=6.6,SNR=48
MKAR ScP **ScP 16 15 51.4 0.0**
comp=Z,2.6nm,0.7s,baz=279,slow=4.0,SNR=12
MKAR LR LR 16 32 47.4
comp=Z,114nm,18.1s,baz=288,slow=43
comp=Z,6.9nm,0.7s
MKAR Makanchi Array 42.20 57 P **P 16 10 08.8 +0.6**
MKAR ScP **ScP 16 15 51.5 +0.1**
SPITS Spitsbergen Ar 42.81 357 P **P 16 10 11.5 -1.2**
comp=Z,5.2nm,0.6s,baz=146,slow=11,SNR=17
SPITS PcP **PcP 16 12 03.4 -0.1**
comp=Z,7.9nm,0.9s,baz=126,slow=9.1,SNR=1.5
comp=Z,5.2nm,0.6s
ZALV Zalesovo Beam 43.52 47 P **P 16 10 18.5 -0.3**
comp=Z,3.7nm,0.4s,baz=266,slow=9.2,SNR=13
ZALV ScP **ScP 16 15 56.0 -0.6**
comp=Z,1.6nm,0.6s,baz=272,slow=4.0,SNR=7.6
ZALV LR LR 16 30 11.6
comp=Z,74nm,18.2s,baz=308,slow=38
comp=Z,3.7nm,0.4s
ZALV Zalesovo Beam 43.52 47 *i*P **P 16 10 18.7 0.0**
ZALV pmax pmax
comp=Z,4.0nm,0.4s
DBG Daneborg 44.79 344 *i*P **P 16 10 26.8 -1.8**
DBG lAmb lAmb 16 10 30.1
comp=Z,1.3nm,0.5s
DGZ Jazzator, Alta 45.34 53 *ce*P **P 16 10 33.7 +0.2**
DGZ pmax pmax
comp=Z,8.0nm,0.6s
DAG Danmarks Havn 45.85 347 *i*P **P 16 10 35.0 -1.9**
DAG lAmb lAmb 16 10 39.4
comp=Z,2.4nm,0.8s
DAG Danmarks Havn 45.85 347 ⇑P **P 16 10 35.6 -1.3**
WMQ Urumqi 46.41 61 *e*P **P** 16 10 46.8 +4.8
WMQ pmax pmax
comp=Z,22nm,0.9s
NRIK Noril'sk 46.73 25 P **P 16 10 43.9 -0.1**
comp=Z,2.8nm,0.7s,baz=249,slow=6.0,SNR=6.4
comp=Z,2.8nm,0.7s
NRIK Noril'sk 46.73 25 P **P 16 10 44.1 +0.1**
NRIK Noril'sk 46.73 25 ⇑*i*P **P 16 10 43.1 -0.9**
NRIK pmax pmax
comp=Z,13nm,1.8s
NOR Nord 48.59 352 *i*P P 16 10 53.2 -5.1
NOR lAmb lAmb 16 10 57.3
comp=Z,5.2nm,0.6s
SUMG Summit 49.00 339 *i*P **P 16 10 59.1 -3.0**
KNGR Kungurtug, Tuv 51.61 50 ⇓*e*P **P 16 11 23.8 +2.0**
KNGR pmax pmax
comp=Z,15nm,1.2s
NEEM North Greenlan 52.85 344 *i*P **P 16 11 27.9 -2.9**
NEEM lAmb lAmb 16 11 30.2
comp=Z,4.0nm,1.0s
SFJD Kangerlussuaq 52.92 331 LR LR 16 37 21.1
comp=Z,625nm,19.5s,baz=132,slow=40
LSA Lhasa 53.46 77 P P 16 11 29.5 -6.7
LSA pmax pmax
comp=Z,2.0nm,2.1s
MOY Mondy 53.52 48 *e*P **P 16 11 39.6 +3.7**
MOY pmax pmax
comp=Z,14nm,1.7s
GOMU GeErMu 53.81 68 P **P 16 11 39.1 +0.5**
GOMU pmax pmax
comp=Z,4.0nm,1.1s
TLY Talaya 55.11 48 ⇓*e*P **P 16 11 49.3 +1.9**
TLY pmax pmax
comp=Z,13nm,1.5s
ZAK Zakamensk 55.24 49 *e*P **P 16 11 50.3 +1.9**
ZAK pmax pmax
comp=Z,11nm,1.2s
IRK Irkutsk 55.34 47 *e*P P 16 11 44.2 -4.8
IRK pmax pmax
comp=Z,38nm,2.8s
TSUM Tsumeb 55.35 191 LR LR 16 38 27.9
comp=Z,122nm,19.1s,baz=338,slow=39
TSUM Tsumeb 55.35 191 **P 16 11 50.8 +1.4**
TSUM lAmb lAmb 16 11 52.1
comp=Z,10nm,0.9s
GTA2 Gaotai 56.30 63 *e*P **P 16 11 57.1 +0.9**
GTA2 pP pP 16 12 03.3 +0.6
GTA2 pmax pmax
comp=Z,2.0nm,1.0s
PALK Pallekele 56.56 107 LR LR 16 36 51.6
comp=Z,71nm,20.9s,baz=314,slow=37
SONM Songino Array 57.96 51 P **P 16 12 08.9 +1.1**
comp=Z,4.9nm,0.8s,baz=283,slow=8.1,SNR=16
SONM ScP **ScP 16 16 57.4 -1.4**
comp=Z,1.6nm,0.7s,baz=282,slow=4.9,SNR=7.8
comp=Z,4.9nm,0.8s
SONM Songino Array 57.96 51 P **P 16 12 08.5 +0.7**

SONM IAmb IAmb 16 12 17.1
comp=Z,7.5nm,0.8s
ULN Ulaanbaatar 58.37 51 P P 16 12 11.1 +0.4
ULN IAmb IAmb 16 12 20.8
comp=Z,8.0nm,0.8s
ULN Ulaanbaatar 58.37 51⇓ eP P 16 12 11.6 +0.9
ULN pmax pmax
comp=Z,9.0nm,0.8s
ULN Ulaanbaatar 58.37 51 P P 16 12 11.3 +0.6
TIXI Tiksi 60.11 21⇑ eP P 16 12 22.4 +0.3
TIXI pmax pmax
comp=Z,6.0nm,0.9s
LBTB Lobatse 60.42 181 P 16 12 26.1 +1.2
LBTB IAmb IAmb 16 12 28.6
comp=Z,12nm,0.8s
LBTB Lobatse 60.42 181 P P 16 12 26.1 +1.2
LBTB pmax pmax
comp=Z,12nm,0.8s
LZDM Lanzhou Array 60.54 65 P P 16 12 25.4 -0.7
comp=Z,1.3nm,0.5s,baz=297,slow=6.3,SNR=7.5
comp=Z,1.3nm,0.5s
LZH Lanzhou 60.59 65 eP P 16 12 28.3 +2.0
LZH pP pP 16 12 33.5 +0.6
LZH pmax pmax
comp=Z,13nm,1.2s
TNCH TengChong 61.40 78 P P 16 12 33.8 +1.9
TNCH pP pP 16 12 37.8 -0.7
TNCH sP sP 16 12 42.6 +1.6
TNCH PcP **PcP 16 13 16.4 +2.4**
TNCH pmax pmax
comp=Z,10.0nm,2.4s
TNCH pmax pmax
comp=Z,110nm,3.6s
CD2 Chengdu 62.78 70 P P 16 12 42.3 +1.4
CD2 pmax pmax
comp=Z,10.0nm,0.7s
KUQ Kuujjuuaa 63.15 324 P P 16 12 41.3 -1.5
KUQ IAmb IAmb 16 12 43.0
comp=Z,16nm,0.9s
PZH PanZhiHua 63.26 75 P P 16 12 45.3 +1.1
PZH pmax pmax
comp=Z,120nm,5.2s
SCHQ Schefferville 63.74 320 P P 16 12 45.5 -1.3
comp=Z,35nm,0.6s,baz=58,slow=6.1,SNR=53
comp=Z,35nm,0.6s
BOSA Boshof 64.01 182 P P 16 12 50.5 +1.6
comp=Z,6.9nm,0.5s,baz=2.3,slow=7.4,SNR=24
comp=Z,6.9nm,0.5s
BOSA Boshof 64.01 182 P 16 12 51.0 +2.1
BOSA IAmb IAmb 16 12 52.0
comp=Z,13nm,0.9s
BOSA Boshof 64.01 182 P P 16 12 51.0 +2.1
BOSA pmax pmax
comp=Z,13nm,1.0s
HHC Hu-ho-hao-te 64.07 57⇓ iP P 16 12 51.4 +2.0
HHC pP pwP 16 12 57.0 -1.2
HHC pmax pmax
comp=Z,13nm,1.3s
YAK Yakutsk 64.63 31 eP P 16 12 51.5 -1.0
YAK pmax pmax
comp=Z,5.0nm,0.8s
YAK pmax pmax
comp=N,1.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.4s
KMI2 Kunming 64.70 76 P P 16 12 57.9 +4.0
KMI2 pmax pmax
comp=E,6.0nm,0.7s
CHTO Chiang Mai 64.83 84 P P 16 13 00.4 +5.9
CHTO Chiang Mai 64.83 84 P P 16 12 57.4 +2.9
comp=E,5.4nm,1.2s
CMAR Chiang Mai Arr 65.01 85 P P 16 12 56.6 +0.9
comp=E,0.9nm,0.5s,baz=299,slow=7.4,SNR=8.3
CMAR LR LR 16 47 32.6
comp=E,59nm,20.3s,baz=255,slow=42
comp=E,0.9nm,0.5s
XAN Xi'an 65.23 65 ⇓P P 16 12 57.8 +0.8
XAN pP pP 16 13 02.4 -0.5
XAN pmax pmax
comp=E,8.0nm,0.8s
HILR Hailar Array B 65.43 46 P P 16 12 59.0 +1.0
comp=E,1.3nm,0.8s,baz=312,slow=11,SNR=5.7
HIA Hailar 65.56 46 P P 16 13 02.1 +3.3
XLT XiLinHaoTe 65.72 52 eP P 16 13 03.1 +3.0
XLT pmax pmax
comp=E,8.0nm,1.4s
ICQ Pointe Anglais 66.34 315 P P 16 13 03.3 -0.5
GYA Guiyang 67.13 73 ⇓P P 16 13 11.5 +2.1
GYA pmax pmax
comp=E,6.0nm,1.3s
ZEA Zeya 67.57 39 eP P 16 13 15.6 +4.1
BJT Baijiatuau 67.58 56 P P 16 13 12.6 +0.8
HNS HongShan 67.82 59 ⇓P P 16 13 15.3 +1.9
HNS pmax pmax
comp=E,9.0nm,1.4s
SUR Sutherland 67.99 186 LR LR 16 44 58.9
comp=E,98nm,20.1s,baz=356,slow=38
D62A Allapoint, All 68.56 313 P 16 13 17.9 0.0
LMQ La Malbaie 69.08 314 P P 16 13 20.1 -1.0
HEH HeiHe 69.43 42 eP P 16 13 24.0 +0.8
HEH pmax pmax
comp=E,8.0nm,1.3s
TIA Tai'an 70.09 59 P P 16 13 29.5 +1.9
TIA pmax pmax
comp=E,15nm,1.3s
A36M Sachs Harbour 70.83 351 IAmb IAmb 16 13 46.1
comp=Z,5.2nm,0.7s
A36M Sachs Harbour 70.83 351 P P 16 13 30.9 -0.5
baz=24
CN2 Changchun 71.67 49 P P 16 13 38.8 +1.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s
BNX BinXian 71.81 46 ⇑P P 16 13 39.8 +1.9
BNX pmax pmax
comp=Z,6.0nm,1.5s
BILL Bilibino 72.14 15 P 16 13 38.7 -0.8
BILL IAmb IAmb 16 13 40.1
comp=Z,7.8nm,0.7s
BILL Bilibino 72.14 15 d iP P 16 13 38.9 -0.6
BILL pmax pmax
comp=Z,8.0nm,0.7s
KLR Kul'dur 72.35 42⇑ eP P 16 13 41.5 +0.5
KLR pmax pmax
comp=Z,10.0nm,1.6s
SEY Seymchan 72.46 23⇑ iP P 16 13 41.9 +0.5
SEY pmax pmax
comp=Z,7.0nm,0.7s
C36M Paulatuk 73.10 350 IAmb IAmb 16 15 16.4
comp=Z,26nm,1.8s
C36M Paulatuk 73.10 350 P P 16 13 44.4 -0.7
baz=24
A21K Barrow 73.23 1 P P 16 13 45.1 -0.7
baz=357
NJ2 Nanjing 73.46 62 eP P 16 13 47.4 -0.5
NJ2 pmax pmax
comp=Z,7.0nm,1.5s
MA2 Magadan 74.32 26 P 16 13 52.9 +0.4
MA2 IAmb IAmb 16 13 54.5
comp=Z,12nm,0.7s
MA2 Magadan 74.32 26 P P 16 13 53.3 +0.8
MA2 Magadan 74.32 26⇑ iP P 16 13 52.8 +0.4
MA2 pmax pmax
comp=Z,12nm,0.7s
C27K Jago River 74.74 357 P P 16 13 53.5 -1.2
baz=7.8
C24K Franklin Bluff 74.82 358 P P 16 13 54.2 -0.9
baz=3.6
D25K Kavik River 75.16 358 P P 16 13 56.0 -1.2
baz=5.6
INK Inuvik 75.27 353 P P 16 13 56.3 -1.4
baz=16
NBPS Pedro II - PI 75.30 254 eP P 16 13 59.0 +0.1
USRK Ussuriysk Ar. 75.37 46 P P 16 13 58.5 -0.2
comp=Z,3.4nm,0.6s,baz=282,slow=3.8,SNR=11
comp=Z,3.4nm,0.6s
C19K Lookout Ridge 75.37 2 P P 16 13 57.5 -0.9
baz=354
D24K Happy Valley 75.39 358 P P 16 13 57.8 -0.6
baz=3.5
E28M Babbage River 75.51 355 P P 16 13 58.5 -0.7
baz=11
E29M Blow River 75.59 354 P P 16 13 59.1 -0.6
baz=13
D23K Nanushuk River 75.61 359 P P 16 13 59.0 -0.8
baz=2.0
D22K Ayikyak River 75.71 360 P P 16 13 59.4 -0.9
baz=0.3
C18K Utukok River 75.77 3 P P 16 13 59.9 -0.8
baz=353
C17K DeLong Mountai 75.84 4 P P 16 13 59.7 -1.4
baz=352
D20K Etivluk River 75.84 1 P P 16 13 59.5 -1.6
baz=357
C16K Lisburne Hills 75.91 5 P P 16 14 00.2 -1.2
baz=350
D19K Kuna River 76.03 2 P P 16 14 01.1 -1.1
baz=356
F31M Tsiigehtchic 76.13 352 P P 16 14 01.7 -1.0
baz=16
E21K Killik River 76.15 0 P P 16 14 01.7 -1.2
baz=359
F30M Barrier River 76.17 353 P P 16 14 01.2 -1.7
baz=14
RDOG Red Dog Mine 76.27 4 IAmb IAmb 16 14 04.0
comp=Z,6.6nm,0.8s
RDOG Red Dog Mine 76.27 4 P P 16 14 02.0 -1.6
baz=352,SNR=7.0
E20K Nigu River 76.31 1 P P 16 14 02.5 -1.3
baz=357
E25K Arctic Village 76.33 357 P P 16 14 02.7 -1.2
baz=6.2
E22K AnaKuvuk Pass 76.46 360 P P 16 14 03.8 -0.9
baz=1.0
E24K Your Creek 76.47 358 P P 16 14 03.5 -1.2
baz=3.8
E23K Chandalar 76.51 359 P P 16 14 03.8 -1.1
baz=2.9
F28M Old Crow 76.51 355 IAmb IAmb 16 15 02.4
comp=Z,18nm,1.9s
F28M Old Crow 76.51 355 P P 16 14 03.7 -1.2
baz=11
D17K Noatak River 76.62 4 P P 16 14 04.4 -1.1
baz=352,SNR=11
F26K Sheenjek River 76.69 357 P P 16 14 05.2 -0.7
baz=7.4
KSAR Wonju Array Be 76.72 53 P 16 14 06.0 -0.5
KSAR Wonju Array Be 76.72 53 P P 16 14 06.1 -0.5
KSRS Korea Array 76.74 53 P P 16 14 07.0 +0.3
comp=Z,4.4nm,0.8s,baz=309,slow=4.6,SNR=21
KSRS LR LR 16 50 43.6
comp=Z,56nm,21.2s,baz=335,slow=38
comp=Z,4.4nm,0.8s
G30M tAoh Zraii Nji 76.82 353 P P 16 14 06.0 -0.8
baz=14
F25K Christian Rive 76.86 357 P P 16 14 06.3 -0.7
baz=6.2
E18K Tukpahlearik C 77.02 3 IAmb IAmb 16 14 08.4
comp=Z,9.9nm,0.8s
E18K Tukpahlearik C 77.02 3 P P 16 14 06.9 -0.8
baz=354
G29M Pine Creek 77.05 354 P P 16 14 07.4 -0.6
baz=12
E19K Redstone River 77.09 2 P P 16 14 07.3 -0.9
baz=356
E17K Hotham Inlet 77.30 4 P P 16 14 08.6 -0.7
baz=353,SNR=6.2
COLD Coldfoot 77.35 359 P P 16 14 08.9 -0.7
baz=2.4
YKA Yellowknife Ar 77.37 343 P P 16 14 08.3 -1.5
comp=Z,0.9nm,0.7s,baz=30,slow=5.4,SNR=13
comp=Z,0.9nm,0.7s
YKA Yellowknife Ar 77.37 343 i P P 16 14 08.6 -1.2
YKA pmax pmax
comp=Z,1.0nm,0.7s
F21K Alatna River 77.38 0 IAmb IAmb 16 14 10.9
comp=Z,10nm,0.9s
F21K Alatna River 77.38 0 P P 16 14 08.9 -1.0
baz=360,SNR=5.3
G26K Porcupine Rive 77.41 356 P P 16 14 08.6 -1.4
baz=7.7
F20K Avaraart Lake 77.53 1 P P 16 14 10.4 -0.2
baz=358
E46A Sault Ste Mari 77.62 319 IAmb IAmb 16 14 12.5
comp=Z,13nm,0.8s
F19K Shaleruckik Mo 77.70 2 IAmb IAmb 16 14 11.7
comp=Z,8.7nm,1.0s
F19K Shaleruckik Mo 77.70 2 P P 16 14 11.3 -0.3
baz=356,SNR=8.0
H31M Peel River 77.77 352 P P 16 14 11.5 -0.5
baz=16
G24K Hadweenzic Riv 77.81 358 P P 16 14 11.6 -0.6
baz=4.6
G23K Bananza Creek 77.87 359 P P 16 14 11.7 -0.9
baz=2.5
F18K Selawik 77.88 3 P P 16 14 11.4 -1.1
baz=354
F17K Baldwin Pennin 77.96 3 IAmb IAmb 16 14 13.8
comp=Z,8.1nm,0.8s
F17K Baldwin Pennin 77.96 3 P P 16 14 12.0 -1.0
baz=353
H27K Steamboat Moun 77.99 355 IAmb IAmb 16 14 14.3
comp=Z,7.1nm,0.8s
H27K Steamboat Moun 77.99 355 P P 16 14 12.5 -0.8
baz=9.5
G21K Allakaket 78.09 0 P P 16 14 12.3 -1.4
baz=360,SNR=9.0
TNA Tin City 78.38 6 IAmb IAmb 16 14 16.2
comp=Z,7.7nm,0.8s
TNA Tin City 78.38 6 P P 16 14 14.1 -1.2
baz=348,SNR=7.9
G19K Purcell Mounta 78.41 2 IAmb IAmb 16 14 16.4
comp=Z,8.8nm,0.9s
G19K Purcell Mounta 78.41 2 P P 16 14 14.0 -1.5
baz=357,SNR=7.9
F15K North Star Dit 78.49 5 IAmb IAmb 16 14 16.6
comp=Z,8.3nm,0.8s
F15K North Star Dit 78.49 5 P P 16 14 14.9 -1.1
baz=350,SNR=9.0
I30M Mount Dempster 78.55 353 P P 16 14 15.1 -1.4
baz=14
I29M Ogilvie Camp, 78.60 354 P P 16 14 15.7 -0.9
baz=12,SNR=8.2
F14K Arctic Creek 78.60 6 P P 16 14 15.4 -1.1
baz=349,SNR=14
WRGLY Wrigley 78.61 347 P P 16 14 15.9 -0.7
baz=24,SNR=5.2
G18K Tagagawik 78.62 2 P P 16 14 15.8 -0.8
baz=355
I27K Kandik River 78.62 355 P P 16 14 15.5 -1.3
baz=9.4
I28M Miner Creek 78.65 354 P P 16 14 16.0 -1.0
baz=11
H24K Noodor Dome 78.69 358 P P 16 14 16.6 -0.6
baz=4.3
H22K Ishtalitna Cre 78.71 359 P P 16 14 16.4 -0.8
baz=1.4
H23K Yukon River 78.75 359 P P 16 14 16.3 -1.1
baz=2.9
PRP Porcupine Dome 78.92 357 P P 16 14 17.5 -1.0
baz=6.2
G17K Kiwalik Mounta 78.93 3 P P 16 14 17.5 -0.9
baz=354
G16K Koyuk River 78.95 4 P P 16 14 17.8 -0.7
baz=352
H21K Melozitna Rive 78.95 360 P P 16 14 17.8 -0.8
baz=0.2
H20K Anotleneega Mo 79.11 1 P P 16 14 18.5 -0.9
baz=358
J30M Hart River 79.18 353 P P 16 14 18.9 -1.0
baz=14
G15K Niukluk 79.24 5 P P 16 14 18.9 -1.2
baz=351,SNR=12
H18K Honhosa River 79.37 2 P P 16 14 20.1 -0.8
baz=356
I23K Minto, Yukon-K 79.42 358 P P 16 14 19.8 -1.3
baz=3.0
I21K Tanana 79.43 360 P P 16 14 20.4 -0.7
baz=0.9
J29N Klondike Camp 79.48 354 P P 16 14 20.7 -0.9
baz=12
H17K Granite Mounta 79.53 3 P P 16 14 21.2 -0.5
baz=354
YSS Yuzhno-Sakhali 79.55 39 P P 16 14 26.0 +3.9
YSS Yuzhno-Sakhali 79.55 39 eP P 16 14 23.3 +1.2
YSS pmax pmax
comp=Z,10.0nm,1.3s
MLY Manley 79.56 359 P P 16 14 21.2 -0.7
baz=1.9
ANM Nome 79.57 5 IAmb IAmb 16 14 22.9
comp=Z,12nm,0.8s
ANM Nome 79.57 5 P P 16 14 20.7 -1.2
baz=350,SNR=13
COLA College 79.66 358 ⇓ iP P 16 14 22.6 +0.3
COLA pmax pmax
comp=Z,20nm,2.7s
H16K Elim 79.71 4 P P 16 14 22.2 -0.5
baz=352,SNR=15
ILAR Eielson Array 79.73 357 P P 16 14 21.9 -0.8
comp=Z,1.5nm,0.6s,baz=340,slow=3.5,SNR=40
ILAR PKKPbc **PKKPbc 16 33 07.8 -1.9**
comp=Z,0.3nm,0.7s,baz=191,slow=1.5,SNR=4.9
comp=Z,1.5nm,0.6s
ILAR Eielson Array 79.73 357 P P 16 14 22.0 -0.8
GAMB Gambell 79.73 8 P P 16 14 21.6 -1.1
baz=345
GCSA Galena City Sc 79.82 2 P P 16 14 22.4 -0.8
baz=357
J25K Salcha River, 79.82 357 IAmb IAmb 16 14 28.6
comp=Z,19nm,2.0s
J25K Salcha River, 79.82 357 P P 16 14 22.5 -0.9
baz=6.3
J26L Joseph Creek 79.83 356 P P 16 14 22.6 -0.9
baz=7.8
FFC Flin Flon 79.84 333 P 16 14 22.1 -1.4
FFC IAmb IAmb 16 14 23.8
comp=Z,17nm,0.9s
FFC Flin Flon 79.84 333 P P 16 14 22.1 -1.4
FFC pmax pmax
comp=Z,17nm,1.0s
DAWY Dawson 79.97 354 P P 16 14 23.1 -1.1
baz=11,SNR=6.6
NEA2 Nenana 79.97 358 P P 16 14 23.0 -1.1
baz=3.3
K29M Barlow Dome 80.01 353 P P 16 14 22.9 -1.6
baz=13
WRH Wood River Hil 80.07 358 IAmb IAmb 16 14 24.8
comp=Z,16nm,0.7s
HDA Harding Lake 80.09 357 P P 16 14 24.2 -0.5
baz=5.0,SNR=5.6
EPLO Experimental L 80.12 325 IAmb IAmb 16 14 25.4
comp=Z,11nm,0.8s
SCRK Sand Creek 80.38 356 P P 16 14 25.5 -0.9
baz=7.4
J20K Nowinta River 80.43 1 IAmb IAmb 16 14 54.2
comp=Z,38nm,1.9s
J20K Nowinta River 80.43 1 P P 16 14 25.9 -0.6
baz=359
I17K Unalakleet 80.54 3 P P 16 14 26.1 -1.1
baz=354
J19K Poorman 80.60 1 P 16 14 27.3 -0.2
J19K IAmb IAmb 16 14 28.6
comp=Z,9.0nm,0.9s
J19K Poorman 80.60 1 P P 16 14 26.5 -1.0
baz=358
K24K Donnelly Dome 80.65 357 P P 16 14 25.1 -2.7
K24K IAmb IAmb 16 14 28.4
comp=Z,12nm,0.7s
K24K Donnelly Dome 80.65 357 P P 16 14 26.8 -1.0
baz=6.0,SNR=5.3
RIDG Independent Ri 80.67 356 P P 16 14 27.3 -0.6
baz=6.7
ULM Lac du Bonnet 80.68 327 P P 16 14 26.6 -1.5
comp=Z,9.6nm,0.7s,baz=41,slow=5.3,SNR=15
comp=Z,9.6nm,0.7s
ULM Lac du Bonnet 80.68 327 P 16 14 27.1 -1.1
ULM IAmb IAmb 16 14 28.2
comp=Z,11nm,0.8s
ULM Lac du Bonnet 80.68 327 P P 16 14 27.1 -1.1
ULM pmax pmax
comp=Z,11nm,0.8s
CHUM Lake Minchumin 80.73 360 P P 16 14 26.8 -1.3
baz=0.6
L29M L29M 80.79 353 P P 16 14 27.5 -1.1
baz=12
CMC01 Camacan, BA 80.81 244 eP P 16 14 29.5 +0.2
MCK McKinley 80.83 358 P P 16 14 27.7 -1.0
baz=3.4
J17K VABM Dome 81.10 3 P P 16 14 29.3 -0.9
baz=355
J18K Innoko River 81.11 2 P P 16 14 28.2 -2.1
baz=357
FARO Faro, Yukon 81.11 351 P P 16 14 29.6 -0.6
baz=16
TRF Thorofare Moun 81.14 359 P P 16 14 28.8 -1.8
baz=2.2
J16K Anvik River 81.15 3 P P 16 14 29.4 -1.0
baz=354
L27K Beaver Creek, 81.15 355 P P 16 14 29.6 -0.9
baz=9.2
M30M Minto, Yukon 81.18 352 P P 16 14 29.4 -1.2
baz=13
M31M Drury Creek, Y 81.27 351 P P 16 14 30.0 -1.1
baz=15
L26K Log Cabin Wild 81.29 356 P P 16 14 30.5 -0.7
baz=7.9
ASAJ Asahikawa 81.37 41 LR LR 16 54 30.3
comp=Z,116nm,19.1s,baz=9.5,slow=38
MENT Mentasta 81.40 356 P P 16 14 31.7 -0.1
DHY Denali Highway 81.44 357 P P 16 14 31.1 -1.0
DHY IAmb IAmb 16 14 33.0
comp=Z,12nm,0.8s
DHY Denali Highway 81.44 357 P P 16 14 31.2 -1.0
baz=4.6,SNR=11
PAX Paxson 81.46 357 P P 16 14 31.3 -0.9
baz=6.2
M29M Somme Creek 81.48 353 P P 16 14 31.5 -0.9
baz=12,SNR=15
J14K Nanvaranak Lak 81.50 5 P P 16 14 31.9 -0.4
baz=351
KOTAN Kotaneelee Air 81.56 346 P P 16 14 32.3 -0.4
baz=24
BVCY Beaver Creek 81.72 354 P P 16 14 32.4 -1.1
baz=10.0
PPLA Purkeypile 81.72 360 P P 16 14 32.4 -1.2
baz=0.7,SNR=5.6
WAT1 Susitna Watana 81.73 358 P P 16 14 32.3 -1.2
baz=3.7
PEA0B Petropavlovsk- 81.73 28⇓ eP P 16 14 36.1 +2.4
K17K Iditarod 81.81 2 IAmb IAmb 16 14 34.7
comp=Z,12nm,0.9s
K17K Iditarod 81.81 2 P P 16 14 32.9 -1.0
baz=356
GUA01 Guaratinga, BA 81.82 243 eP P 16 14 34.5 -0.1
M27K Edge Creek, AK 81.85 355 P P 16 14 33.6 -0.8
baz=9.1
M26K Nabesna, AK 81.89 355 P P 16 14 32.9 -1.6
baz=8.2
WAT6 Susitna Watana 81.95 358 P P 16 14 33.6 -1.3
baz=4.3
HARP HAARP 82.02 356 P P 16 14 34.3 -0.7
baz=6.5
K15K Wolf Creek Mou 82.08 4 P P 16 14 34.4 -1.0
baz=353
N32M Quiet Lake 82.11 350 P P 16 14 34.9 -0.7
baz=16
N31M Braeburn, Yuko 82.13 352 P P 16 14 34.9 -0.8
baz=14
PET Petropavlovsk 82.15 27⇑ eP P 16 14 35.0 -0.9
PET pmax pmax
comp=Z,40nm,1.2s
CUT Chulitna 82.19 359 P P 16 14 35.1 -0.8
baz=2.3
K13K Kusilvak Mount 82.23 6 P P 16 14 35.6 -0.5
baz=350
YUK3 Moose Creek 82.32 354 P P 16 14 36.5 -0.4
baz=10,SNR=7.9
M24K Tolsona, Glenn 82.36 357 P P 16 14 35.7 -1.3
baz=5.6
L17K Donlin 82.39 3 P P 16 14 35.9 -1.1
baz=356
L19K White Mountain 82.43 1 IAmb IAmb 16 14 38.1
comp=Z,10nm,1.0s
L19K White Mountain 82.43 1 P P 16 14 36.1 -1.1
baz=358
WTLY Watson Lake, Y 82.45 348 P P 16 14 36.7 -0.7
baz=20,SNR=5.9
YUK4 Talbot Arm 82.58 353 P P 16 14 37.0 -1.3
baz=12
SKT Skwentna 82.64 359 IAmb IAmb 16 14 37.8
comp=Z,10.0nm,0.6s
SKT Skwentna 82.64 359 P P 16 14 36.9 -1.4
baz=1.2,SNR=7.3
SCM Sheep Creek Mo 82.68 357 P P 16 14 37.5 -1.2
baz=4.7
L15K Ungalak Mounta 82.70 4 P P 16 14 37.2 -1.4
baz=353
M19K Big River Lodg 82.71 1 P P 16 14 37.7 -1.0
baz=359
M23K Glacier View 82.74 357 P P 16 14 37.6 -1.2
baz=4.3
YUK8 Steele Glacier 82.74 354 P P 16 14 37.8 -1.4
baz=11

M20K	**Styx River** baz=360	82.74	0	P		P	16 14 38.5	-0.5
SML	**Sawmill** baz=3.8	82.74	358	P		P	16 14 37.5	-1.4
L16K	**Owhat River** baz=355	82.77	3	P		P	16 14 38.2	-0.8
N25K	**Chitina, Valde** baz=6.9	82.78	356	P		P	16 14 38.0	-1.2
WHY	**Whitehorse** baz=15	82.82	351	P		P	16 14 39.1	-0.3
M22K	**Willow** baz=2.4	82.84	359	P		P	16 14 38.6	-0.7
O30N	**Mendenhall** baz=14	82.86	352	P		P	16 14 38.6	-0.9
MCARA	**McCarthy VSAT** baz=8.2	82.90	355	P		P	16 14 38.6	-1.1
YUK6	**Outpost Mounta** baz=12	82.94	353	P		P	16 14 39.3	-0.9
L14K	**Kuka Creek** baz=352	82.96	5	P		P	16 14 39.8	-0.1
KLU	**Klutina** baz=5.8	82.96	357	P		P	16 14 39.4	-0.7
HYT	**Haines Junctio** baz=13	82.97	352	P		P	16 14 39.2	-1.0
P33M	**Teslin, Yukon** baz=16	82.98	350	P		P	16 14 39.2	-1.0
PMR	**Palmer** baz=3.2	82.98	358	P		P	16 14 39.0	-1.0
TOAD	**Toad River Com** baz=22	82.98	346	P		P	16 14 39.5	-0.7
M18K	**Stony River** baz=358	83.11	1	P		P	16 14 40.5	-0.2
KNK	**Knik Glacier** baz=3.7	83.14	358	P		P	16 14 40.4	-0.5
SUA	**Susitna One** baz=1.9,SNR=5.7	83.14	359	P		P	16 14 40.1	-1.0
M17K	**Holitna River** baz=356	83.16	2	P		P	16 14 40.7	-0.3
CTG	**Chitna Glacier** baz=9.5	83.19	354	P		P	16 14 41.1	-0.2
O28M	**Mount Upton** baz=10	83.28	354	P		P	16 14 41.1	-0.9
BMRM	**Bremner River** baz=6.9	83.42	356	P		P	16 14 41.0	-1.4
SPCR	**Spurr Chakacha** baz=0.7	83.42	360	P		P	16 14 42.1	-0.4
M16K	**Timber Creek** baz=355	83.48	3	P		P	16 14 41.8	-0.8
R33M	**Jennings River** baz=18	83.49	349	P		P	16 14 41.1	-1.9
RC01	**Rabbit Creek A** comp=Z,12nm,0.8s	83.50	358	IAmb		IAmb	16 14 43.2	
RC01	**Rabbit Creek A** baz=2.7	83.50	358	P		P	16 14 41.3	-1.4
CRQE	**Cirque** baz=8.1	83.53	355	P		P	16 14 41.7	-1.4
O29M	**Mount Kennedy** baz=12	83.59	353	P		P	16 14 42.5	-0.9
M14K	**Bethel** baz=353	83.59	4	P		P	16 14 42.4	-0.8
P30M	**Million Dollar** baz=13	83.60	352	P		P	16 14 42.4	-1.0
GLI	**Glacier Island** baz=4.8	83.63	357	P		P	16 14 42.8	-0.6
M11K	**Mekoryuk** baz=349	83.63	7	P		P	16 14 42.5	-0.9
P32M	**Atlin** baz=16	83.71	350	P		P	16 14 43.1	-0.8
M15K	**Kasigluk River** baz=354	83.72	4	P		P	16 14 43.1	-0.8
N19K	**Bonanza Creek** baz=359	83.81	1	P		P	16 14 43.6	-0.9
MAJO	**Matsushiro**	83.82	49	P		P	16 14 46.8	+1.9
MAJO	**Matsushiro**	83.82	49	*i*P		P	16 14 45.1	+0.2
MAJO	comp=Z,17nm,1.7s			pmax		pmax		
MJAR	**Matsushiro Arr** comp=Z,2.8nm,0.8s,baz=318,slow=2.5,SNR=7.1 comp=Z,2.8nm,0.8s	83.82	49	P		P	16 14 45.6	+0.7
M13K	**Dall Lake** baz=352	83.84	5	P		P	16 14 43.1	-1.4
CAPN	**Captain Cook N** baz=1.5	83.85	359	P		P	16 14 43.4	-1.1
EYAK	**Cordova Ski Ar** baz=5.9	83.89	356	P		P	16 14 43.9	-0.8
T50A	**Nancy** comp=Z,16nm,1.0s	83.91	312	IAmb		IAmb	16 14 46.5	
N18K	**Kilae Creek** baz=358	83.92	1	P		P	16 14 44.2	-0.8
PINM	**Pinnacle** baz=10	83.96	354	P		P	16 14 44.6	-0.6
MESA	**MESA** baz=9.0	84.02	354	P		P	16 14 44.9	-0.8
N16K	**Nishlik Lake** baz=355	84.04	3	P		P	16 14 44.8	-0.8
N17K	**Nushagak Hills** baz=357	84.04	2	P		P	16 14 44.7	-0.8
SKAG	**Skagway** baz=14	84.05	351	P		P	16 14 44.8	-0.7
Q32M	**Nakina River** baz=17	84.11	349	P		P	16 14 45.0	-1.2
O22K	**Cooper Landing** baz=2.7	84.11	358	P		P	16 14 44.9	-0.9
JANB	**Januaria**	84.16	247	*e*P		P	16 14 46.9	+0.1
DLBC	**Dease Lake** baz=19	84.25	348	P		P	16 14 46.1	-0.7
N15K	**Kwethluk River** baz=354	84.28	4	P		P	16 14 46.0	-0.8
O19K	**Port Alsworth** baz=359	84.43	1	P		P	16 14 47.0	-0.5
N14K	**Kuskokwak Cree** baz=353	84.44	4	P		P	16 14 46.9	-0.6
KAIM	**Kayak Island** baz=7.0	84.44	356	P		P	16 14 46.7	-0.9
SEW	**Seward** baz=2.9	84.48	358	P		P	16 14 47.4	-0.4
P23K	**Montague Islan** baz=4.6	84.52	357	P		P	16 14 47.4	-0.5
O18K	**Koktuh Hills** baz=358	84.76	1	P		P	16 14 48.4	-0.8
O17K	**Koliganek Bris** baz=357	84.80	2	P		P	16 14 48.7	-0.6
BRSE	**Bradley Lake S** baz=1.9	84.87	359	P		P	16 14 49.0	-0.8
S34M	**Telegraph Cree** baz=18	84.93	348	P		P	16 14 49.5	-0.6
O16K	**Kokwok River B** baz=356	84.94	3	P		P	16 14 49.7	-0.4
HOM	**Homer** baz=1.1	84.97	359	P		P	16 14 48.8	-1.4
P19K	**Oil Pt** baz=360	84.98	0	P		P	16 14 49.0	-1.4
Q23K	**Middleton Isla** baz=5.5	85.04	357	P		P	16 14 49.3	-1.3
R32K	**Eaglecrest** baz=15	85.09	350	P		P	16 14 49.2	-1.7
O14K	**Tigvukauivet M** baz=353	85.13	4	P		P	16 14 49.3	-1.7
P18K	**Big Mountain,** baz=358	85.22	1	P		P	16 14 50.8	-0.8
O15K	**Ungalikthiuk R** baz=354	85.28	4	P		P	16 14 50.3	-1.6
P17K	**Kvichak River** baz=357	85.39	2	P		P	16 14 51.7	-0.6
P16K	**Nushagak River** baz=356	85.51	3	P		P	16 14 51.7	-1.2
S31K	**Pelican** baz=14	85.62	351	P		P	16 14 52.3	-1.2
T35M	**Bob Quinn** baz=18	85.67	348	P		P	16 14 52.2	-1.7
Q19K	**Cape Douglas,** baz=360	85.70	0	P		P	16 14 52.6	-1.4
S32K	**Killisnoo** baz=15	85.88	350	P		P	16 14 53.2	-1.6
Q20K	**Shuyak Island** baz=0.5	86.02	360	P		P	16 14 54.0	-1.4
Q17K	**Contact Creek** baz=358	86.34	2	P		P	16 14 56.1	-1.2
LEM	**Lembang** comp=Z,69nm,18.2s,baz=341,slow=39	86.37	101	LR		LR	16 59 07.8	
SIT	**Sitka** baz=14	86.38	350	P		P	16 14 56.0	-1.2
WRAK	**Wrangell Islan** baz=17	86.56	349	P		P	16 14 56.8	-1.4
BOAV	**Boa Vista**	86.61	271	*e*P		P	16 14 59.1	-0.1
ITTB	**Itaituba**	86.65	262	*e*P		P	16 14 59.1	-0.2
KDAK	**Kodiak Island** baz=0.3	86.85	360	P		P	16 14 58.4	-1.2
R17L	**Mt. Peulik Vol** baz=357	86.96	2	P		P	16 14 58.4	-1.7
P08K	**Saint George I** baz=347	86.97	9	P		P	16 14 58.9	-1.2
U33K	**Whale Pass** baz=16	86.97	349	P		P	16 14 58.9	-1.2
R16K	**Pilot Point** baz=356	86.99	2	P		P	16 14 58.8	-1.4
BDFB	**Brasilia** comp=Z,15nm,0.7s,baz=72,slow=4.8,SNR=20	87.31	249	P		P	16 15 04.3	+1.7
BDFB	comp=Z,81nm,19.1s,baz=105,slow=36 comp=Z,15nm,0.7s			LR		LR	16 55 03.9	
BDFB	**Brasilia**	87.31	249			P	16 15 01.7	-0.9
OHAK	**Old Harbor** baz=360	87.42	0	P		P	16 15 01.0	-1.3
V35K	**Ketchikan** baz=17	87.48	348	P		P	16 15 01.0	-1.7
CRAG	**Craig** baz=16	87.59	349	P		P	16 15 01.8	-1.4
SNDB	**Serra Nova Dou**	87.62	254	*e*P		P	16 15 04.4	+0.4
NPGB	**Novo Progresso**	87.91	260	*e*P		P	16 15 06.3	+0.8
SII	**Sitkinak Islan** baz=359	88.08	1	P		P	16 15 04.3	-1.2
SDPT	**Sand Point** baz=354	89.07	4	P		P	16 15 08.7	-1.5
FALS	**False Pass** baz=352	89.34	6	P		P	16 15 10.1	-1.4
CHNA	**Chernabura Isl** baz=355	89.64	4	P		P	16 15 11.3	-1.5
UNV	**Unalaska Valle** baz=349	90.04	8	P		P	16 15 13.0	-1.7
ARAG	**Araguaiana, MT**	90.25	251	*e*P		P	16 15 17.0	+0.7
NIKH	**Nikolski High** baz=347	90.60	10	P		P	16 15 15.8	-1.7
SDV	**Santo Domingo**	91.02	282	*e*P		P	16 15 21.0	+0.7
PDRB	**Porto dos Gac**	91.68	257	*e*P		P	16 15 23.6	+0.6
PDAR	**Pinedale Array** comp=Z,0.8nm,0.9s,baz=24,slow=4.1,SNR=5.4	92.40	330	P		P	16 15 24.9	-1.4
PDAR	comp=Z,74nm,18.2s,baz=28,slow=38 comp=Z,0.8nm,0.9s			LR		LR	17 00 01.7	
KAPI	**Kappang** comp=Z,32nm,18.3s,baz=331,slow=40	95.12	92	LR		LR	17 05 44.4	
NVAR	**Mina Array Bea** comp=Z,0.8nm,0.7s,baz=32,slow=7.0,SNR=4.4 comp=Z,0.8nm,0.7s	99.54	333	P		Pdif	16 15 58.6	-0.2
TXAR	**Lajitas Array** comp=Z,0.1nm,0.4s,baz=300,slow=2.4,SNR=2.0	100.36	318	P		Pdif	16 16 02.2	-0.3
WRA	**Warramunga Arr** comp=Z,0.4nm,0.8s,baz=338,slow=1.6,SNR=4.5	115.16	97	PKP		PKPdf	16 20 55.1	-1.8
ASAR	**Alice Springs** comp=Z,0.6nm,0.7s,baz=311,slow=1.4,SNR=13	116.67	101	PKP		PKiKP	16 20 59.9	+0.1
ASAR	comp=Z,0.5nm,0.9s,baz=105,slow=3.5,SNR=5.3			PKKPbc		PKKPbc	16 31 26.8	+0.8
PLCA	**Paso Flores** comp=Z,3.2nm,1.1s,baz=95,slow=1.3,SNR=3.2	117.33	238	PKP		PKiKP	16 21 01.7	+1.0
QSPA	**South Pole Qui** comp=Z,2.3nm,0.5s,baz=228,slow=1.5,SNR=4.0	125.57	180	PKP		PKPdf	16 21 14.7	-1.0

IDC 14 16:25:24.3±10.0, 21.77N×142.18E, h338km±87km, mb3.0/4, mbtmp3.6/5, Error ellipse: s-maj=149.0km s-min=20.2km az=77.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	19.91	325	P	P	16 29 31.7	-0.3
	1.0nm,0.8s,baz=155,slow=16,SNR=4.3						
WRA	**Warramunga Arr**	42.16	191	P	P	16 32 44.8	-0.2
	0.3nm,0.6s,baz=7.2,slow=8.6,SNR=6.4						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	53.96	313	P	P	16 34 13.6	-0.6
	0.1nm,0.5s,baz=94,slow=7.2,SNR=1.8						
	0.1nm,0.5s						
BVAR	**Borovoye Array**	62.01	319	P	P	16 35 10.2	+0.7
	1.0nm,0.3s,baz=99,slow=7.3,SNR=16						
	1.0nm,0.3s						
FINES	**FINESS Array B**	82.72	334	P	P	16 37 09.7	-0.9
	1.9nm,0.8s,baz=57,slow=5.1,SNR=4.9						
	1.9nm,0.8s						

*JMA **14** 16:44:01.5±0.9, 45°N±4°×14°9E±°, h30km, MV3.5/11, NEAR ETOROFU ISLAND*
*SKHL **14** 16:44:02.1±0.3, 44.80N×149.20E, h37km±7km, mb4.5/2*
ISC 14 16:44:01.0±4.3, 44.76N±0.09×149.2E±0.2, h35km, n14, σ2§18/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	1.08	297	*e*P	Pn	16 44 19.0	-0.6
KUR				AMB	AMB	16 44 19.3	
	180nm,0.3s						
KUR				*e*S	Sn	16 44 31.9	-1.4
KUR				A	A	16 44 32.5	
	1μm,0.2s						
KUR				A	A	16 44 32.5	
	400nm,0.2s						
YUK	**Yuzh-Kuril'sk**	2.52	254	*e*P	Pn	16 44 41.0	+1.6
YUK				AMB	AMB	16 44 45.9	
	70nm,0.5s						
YUK				*e*S	Sn	16 45 10.0	+1.1
YUK				A	A	16 45 14.5	
	80nm,0.4s						
YUK				A	A	16 45 14.5	
	190nm,0.4s						
NEM2	**Nemuro 2**	2.88	242	P	Pn	16 44 45.1	+0.8
NEM2				S	Sn	16 45 17.7	+0.1
NMR	**Nemuro--Hokkai**	2.88	242	*i* P	Pn	16 44 45.1	+0.7
NMR				*i* S	Sn	16 45 16.5	-1.3
JNK	**Nakash**	3.45	252	P	Pn	16 44 54.1	+1.9
AKK	**Akkeshi**	3.62	243	*e*P	Pn	16 44 56.5	+2.0
JAK	**Akkeshi**	3.72	243	P	Pn	16 44 57.0	+1.0
JAK				S	Sn	16 45 38.1	-0.4
JTKR	**Abashiri--Toko**	3.90	260	P	Pn	16 44 59.5	+1.1
JAR	**Ashorobuto**	4.20	252	*e*S	Sn	16 45 51.8	+1.4
JOB	**Onbets**	4.32	246	*e*P	Pn	16 45 06.3	+2.1
JOB				*e*S	Sn	16 45 53.1	-0.2
JKK2	**Kamakawa 2**	4.74	261	P	Pn	16 45 12.0	+2.1
JCH	**Churui**	4.77	245	P	Pn	16 45 11.7	+1.4
JCH				*e*S	Sn	16 46 02.7	-1.6
JNBK	**Urakawa-nobuka**	5.32	245	*e*P	Pn	16 45 18.2	+0.2
JANG	**Nango**	7.19	235	*e*S	Sn	16 46 56.8	-7.2

*NEIC **14** 16:43:58.7±2.2, 5.71S±0.09×153.51E±0.08, h10km±2km, mb4.2/8, Error ellipse: s-maj=18.1km s-min=9.9km az=142.0*
*IDC **14** 16:44:07.4±4.5, 5.62S×152.99E, h59km±40km, mb3.6/12, mbtmp4.0/13, ML2.2/1, MS3.6/3, Error ellipse: s-maj=26.5km s-min=22.9km az=77.0*
ISC 14 16:44:03.9±0.8, 5.75S±0.08×153.3E±0.1, h43km, n30, σ1§09/27, mb4.0/14, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	1.93	323	Pn	Pn	16 44 33.0	-1.4
PMG	**Port Moresby**	7.12	239	P	Pn	16 45 45.6	0.0
	2.9nm,0.3s,baz=48,slow=14,SNR=11						
PMG				S	Sn	16 47 04.4	-0.8
	37nm,0.4s,baz=96,slow=20,SNR=11						
	15nm,0.6s						
PMG	**Port Moresby**	7.12	239		Pn	16 45 46.0	+0.5
JAY	**Jayapura**	12.99	284	LR	LR	16 50 59.8	
	comp=Z,114nm,19.8s,baz=137,slow=33						
EIDS	**Eidsvold**	19.63	186	P	Pn	16 48 29.9	-0.7
EIDS				IAmb	IAmb	16 48 41.3	
	comp=Z,11nm,1.4s						
DZM	**Mont Dzumac**	20.60	143	P	Pn	16 48 46.5	+4.3
	comp=Z,6.8nm,0.8s,baz=317,slow=15,SNR=6.2						
	comp=Z,6.8nm,0.8s						
DZM	**Mont Dzumac**	20.60	143	P	P	16 48 38.0	-1.6
MTN	**Manton Dam**	23.00	251	P	P	16 49 06.8	+1.6
WB0	**Warramunga Arr**	23.10	231	P	P	16 49 03.8	-2.5
WB0				IAmb	IAmb	16 49 17.5	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	23.23	231	P	P	16 49 06.0	-1.6
WRA	**Warramunga Arr**	23.24	231	P	P	16 49 07.3	-0.4
	comp=Z,1.2nm,0.7s,baz=56,slow=10,SNR=6.2						
	comp=Z,1.2nm,0.7s						
INKA	**Innaminka**	24.93	207	P	P	16 49 22.2	-1.0
INKA				IAmb	IAmb	16 49 26.4	
	comp=Z,3.5nm,0.8s						
AS31	**Alice Springs**	25.83	224	P	P	16 49 30.4	-1.1
ASAR	**Alice Springs**	25.83	224	P	P	16 49 31.4	0.0
	comp=Z,1.2nm,0.9s,baz=48,slow=9.8,SNR=13						
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	25.83	224	P	P	16 49 30.6	-0.8
KNRA	**Kununurra**	26.05	246	P	P	16 49 33.0	-0.4
KNRA				IAmb	IAmb	16 49 51.5	
	comp=Z,5.7nm,0.7s						
NWAO	**Narrogin (SRO)**	43.11	226	LR	LR	17 10 50.7	
	comp=Z,60nm,18.7s,baz=200,slow=37						
PETK	**Petropavlovsk-**	58.75	3	P	P	16 53 57.2	-0.2
	comp=Z,9.7nm,1.1s,baz=143,slow=7.8,SNR=5.0						
	comp=Z,9.7nm,1.1s						
LZDM	**Lanzhou Array**	62.31	316	P	P	16 54 22.9	+0.5
	comp=Z,0.5nm,0.4s,baz=111,slow=7.9,SNR=1.9						
	comp=Z,0.5nm,0.4s						
MA2	**Magadan**	65.15	359	LR	LR	17 24 09.3	
	comp=Z,93nm,18.7s,baz=326,slow=37						
SONM	**Songino Array**	67.40	328	P	P	16 54 55.8	+0.8
	comp=Z,0.4nm,0.5s,baz=148,slow=5.0,SNR=2.6						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	81.38	319	P	P	16 56 17.1	+0.9
	comp=Z,0.9nm,0.8s,baz=108,slow=5.0,SNR=8.4						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	81.38	319	P	P	16 56 15.9	-0.4
ZALV	**Zalesovo Beam**	82.23	326	P	P	16 56 20.5	0.0
	comp=Z,1.0nm,0.6s,baz=134,slow=6.4,SNR=6.1						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	82.23	326	P	P	16 56 19.1	-1.5
ILAR	**Eielson Array**	82.83	22	P	P	16 56 24.4	+0.9
	comp=Z,0.2nm,0.7s,baz=246,slow=5.1,SNR=1.5						
	comp=Z,0.2nm,0.7s						
QSPA	**South Pole Qui**	84.22	180	P	P	16 56 32.8	+2.0
	comp=Z,1.6nm,0.5s,baz=346,slow=4.7,SNR=2.3						
	comp=Z,1.6nm,0.5s						
KURBB	**Kurchatov Arra**	84.86	322	P	P	16 56 33.9	-0.3
	comp=Z,0.8nm,0.8s,baz=112,slow=3.8,SNR=6.2						
	comp=Z,0.8nm,0.8s						
BVAR	**Borovoye Array**	90.31	323	P	P	16 57 00.3	0.0
	comp=Z,0.8nm,0.6s,baz=117,slow=5.6,SNR=6.5						
	comp=Z,0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	151.09	287	PKPbc	PKiKP	17 03 53.9	-0.1
	comp=Z,2.8nm,0.8s,baz=209,slow=2.2,SNR=13						

*IDC **14** 16:49:46.1±2.1, 14.64N×119.60E, h68km±20km, mb3.5/14, mbtmp3.8/14, MS3.1/3, Error ellipse: s-maj=28.0km s-min=14.9km az=58.0*
ISC 14 16:49:42.5±0.7, 14.6N±0.2×119.5E±0.1, h36km, n18, σ1§07/19, mb4.0/13, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	1.54	110	P	Pn	16 50 07.5	+0.1
	610nm,0.3s,baz=42,slow=3.9,SNR=13						
TGY				S	Sn	16 50 28.0	+1.8
	973nm,0.3s,baz=358,slow=21,SNR=6.0						
DAV	**Davao City (W)**	9.63	141	LR	LR	16 56 34.5	
	comp=Z,192nm,21.3s,baz=338,slow=43						
CMAR	**Chiang Mai Arr**	20.02	284	P	Pn	16 54 14.8	+0.4
	0.2nm,0.4s,baz=81,slow=7.0,SNR=4.4						
CMAR				LR	LR	17 01 43.2	
	comp=Z,38nm,20.1s,baz=110,slow=36						
	0.2nm,0.4s						
KSRS	**Korea Array**	23.93	17	LR	LR	17 06 09.0	
	comp=Z,33nm,18.0s,baz=0.0,slow=41						
WRA	**Warramunga Arr**	37.36	157	P	P	16 56 50.9	-1.0
	1.6nm,0.4s,baz=339,slow=8.9,SNR=49						
	1.6nm,0.4s						
ASAR	**Alice Springs**	40.61	159	P	P	16 57 19.1	0.0
	1.9nm,0.4s,baz=336,slow=6.9,SNR=125						
ASAR				PcP	PcP	16 59 19.8	-1.0
	0.3nm,0.8s,baz=320,slow=3.1,SNR=2.2						
	1.9nm,0.4s						
MKAR	**Makanchi Array**	44.56	324	P	P	16 57 51.9	+0.9
	0.2nm,0.8s,baz=122,slow=7.0,SNR=1.6						
MKAR				PcP	PcP	16 59 34.0	+0.4
	0.3nm,0.7s,baz=116,slow=3.4,SNR=2.4						
	0.2nm,0.8s						
KURBB	**Kurchatov Arra**	48.74	326	P	P	16 58 25.2	+1.6
	0.5nm,0.9s,baz=118,slow=8.4,SNR=3.6						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	54.32	326	P	P	16 59 06.7	+1.5
	0.5nm,0.7s,baz=90,slow=5.8,SNR=2.6						
	0.5nm,0.7s						
NRIK	**Noril'sk**	58.23	347	P	P	16 59 32.2	-0.7
	1.2nm,0.5s,baz=123,slow=6.2,SNR=4.0						
	1.2nm,0.5s						
ARCES	**ARCESS Array B**	77.78	339	P	P	17 01 36.3	+0.7
	1.9nm,0.8s,baz=84,slow=4.8,SNR=4.7						
	1.9nm,0.8s						
SPITS	**Spitsbergen Ar**	78.42	348	P	P	17 01 39.2	+0.1
	2.2nm,0.8s,baz=90,slow=7.5,SNR=6.0						
	2.2nm,0.8s						
ILAR	**Eielson Array**	78.43	26	P	P	17 01 37.4	-2.0
	0.7nm,1.1s,baz=259,slow=5.3,SNR=4.2						
	0.7nm,1.1s						
FINES	**FINESS Array B**	78.88	331	P	P	17 01 42.8	+0.9
	0.7nm,0.5s,baz=43,slow=6.1,SNR=12						
	0.7nm,0.5s						
HFS	**Hagfors**	85.07	331	P	P	17 02 14.3	-0.1
	0.8nm,0.6s,baz=128,slow=2.4,SNR=8.3						
	0.8nm,0.6s						
NOA	**NORSAR Array B**	85.87	332	P	P	17 02 18.6	+0.2
	0.7nm,0.7s,baz=62,slow=6.8,SNR=3.8						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	92.36	22	P	P	17 02 48.2	-0.9
	0.3nm,0.6s,baz=312,slow=5.0,SNR=6.2						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	119.63	43	PKP	PKiKP	17 08 29.8	+0.3
	0.3nm,0.5s,baz=314,slow=2.8,SNR=5.1						

*NEIC **14** 17:03:41.9±1.3, 0.03S±0.06×123.19E±0.06, h156km±6km, mb4.2/40, Error ellipse: s-maj=8.9km s-min=8.2km az=190.0*
*IDC **14** 17:03:41.3±1.7, 0.02S×123.20E, h160km±17km, mb3.6/15, mbtmp4.1/19, Error ellipse: s-maj=17.5km s-min=10.3km az=74.0*
*DJA **14** 17:03:43.1±0.2, 0°S±2°×12°3E±°, h140km±4km, M4.2/42, mB4.8/7, mb4.3/12, MLv4.3/42, Mw(mB)4.1/7*
ISC 14 17:03:41.8±0.4, 0.01S±0.04×123.23E±0.04, h162km, n107, σ1§41/117, mb4.1/33, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	1.12	204		Pn	17 04 07.8	-0.9
LUWI				Sn	Sn	17 04 26.8	-2.7
LUWI	**Luwuk**	1.12	204	P	Pn	17 04 08.2	-0.6
LUWI	**Luwuk**	1.12	204	S	Sn	17 04 27.0	-2.5
LUWI	**Luwuk**	1.12	204	P	Pn	17 04 08.0	-0.8
LUWI				S	Sn	17 04 26.8	-2.7
MRSI	**Marisa**	1.38	291	P	Pn	17 04 10.0	-1.1
MRSI				S	Sn	17 04 30.9	-2.6
APSI	**Ampana**	1.82	240	P	Pn	17 04 15.1	-0.5
MNI	**Manado**	2.16	48	P	Pn	17 04 21.8	+2.2
TOLI2	**Tolitoli**	2.69	294		Pn	17 04 25.2	-0.6
TOLI2				Sn	Sn	17 04 55.4	-4.5
MPSI	**Mapaga**	3.35	276	P	Pn	17 04 34.6	+0.5
MPSI				S	Sn	17 05 13.7	-0.9
SANI	**Sanana**	3.42	126	P	Pn	17 04 34.0	-1.0
SANI	**Sanana**	3.42	126	S	Sn	17 05 12.6	-3.7
SANI	**Sanana**	3.42	126	P	Pn	17 04 33.6	-1.4
PCI	**Palu**	3.51	255	P	Pn	17 04 36.0	-0.1
KDI	**Kendari**	3.97	189	P	Pn	17 04 41.8	-0.2
KDI				S	Sn	17 05 28.8	-0.2
TNTI	**Ternate**	4.21	79		Pn	17 04 45.7	+0.6
TNTI				Sn	Sn	17 05 33.2	-1.2
TNTI	**Ternate**	4.21	79	P	Pn	17 04 46.2	+1.1
TNTI	**Ternate**	4.21	79	S	Sn	17 05 33.8	-0.7
TNTI	**Ternate**	4.21	79	P	Pn	17 04 46.0	+0.9
KKSI	**Kolaka, Sulawe**	4.42	201	P	Pn	17 04 48.0	+0.1
TTSI	**Tana Toraja**	4.55	228	P	Pn	17 04 49.3	-0.3
TTSI				S	Sn	17 05 42.4	-0.1
NLAI	**Namlea**	5.03	130	P	Pn	17 04 57.0	+1.2
MMSI	**Mamuju**	5.07	238	P	Pn	17 04 55.6	-0.8
	0.1nm24nm,0.7s						
MMSI				S	Sn	17 05 54.5	-

3.3nm,0.3s,baz=27,slow=22,SNR=0.9

KAPI	**Kappang**	**6.06**	**215**		**Pn**	17 05 08.7 -0.8
KAPI	**Kappang**	**6.06**	**215**	P	**Pn**	17 05 11.0 +1.5
KAPI	**Kappang**	**6.06**	**215**	S	**Sn**	17 06 19.5 +1.2
KAPI	**Kappang**	**6.06**	**215**	P	**Pn**	17 05 10.3 +0.8
KRAI	**Karang Ratu**	**6.12**	**123**	P	**Pn**	17 05 12.9 +2.6
	0.3nm1µm28nm,0.7s					
BSSI	**Bau Bau, Buton**	**6.68**	**204**	P	**Pn**	17 05 18.3 +0.6
	0.1nm34nm,0.6s					
MYLDM	**Lahad Datu**	**6.99**	**318**	Pn	**Pn**	17 05 26.2 +4.4
MYLDM	**Lahad Datu**	**6.99**	**318**	P	Pn	17 05 28.3 +6.5
MYLDM	**Lahad Datu**	**6.99**	**318**	P	**Pn**	17 05 26.6 +4.8
SIJI	**Sorong**	**8.08**	**96**	P	**Pn**	17 05 35.4 -1.0
	6.1nm,0.9s,baz=184,slow=22,SNR=4.2					
KKM	**Kota Kinabalu**	**9.23**	**311**	Pn	**Pn**	17 05 51.9 +0.3
KKM	**Kota Kinabalu**	**9.23**	**311**	P	Pn	17 05 58.0 +6.4
FAKI	**Fak Fak**	**9.47**	**108**	Pn	**Pn**	17 05 55.4 +0.7
FAKI	**Fak Fak**	**9.47**	**108**	P	**Pn**	17 05 55.8 +1.1
SOEI	**Soe**	**9.74**	**174**	Pn	**Pn**	17 05 58.7 +0.3
BATI	**Baumata**	**10.14**	**178**	P	**Pn**	17 06 01.3 -2.3
	6.4nm,0.4s,baz=11,slow=4.2,SNR=4.2					
PLAI	**Plampang**	**10.31**	**212**	P	**Pn**	17 06 09.7 +4.0
JAGI	**Jajag, Banyuwa**	**12.35**	**227**		**Pn**	17 06 31.9 -0.4
MTN	**Manton Dam**	**14.97**	**149**		**Pn**	17 07 06.1 +0.7
KNRA	**Kununurra**	**16.50**	**161**		**P**	17 07 23.2 -0.6
KNRA				IAmb	IAmb	17 07 46.1
	comp=Z,8.9nm,0.9s					
BBJI	**Bungbulang**	**17.21**	**244**		**P**	17 07 30.9 -0.9
BBJI				IAmb	IAmb	17 07 35.1
	comp=Z,22nm,1.3s					
FITZ	**Fitzroy Crossi**	**18.13**	**173**	P	**P**	17 07 41.9 +0.2
	comp=Z,14nm,0.7s,baz=1.8,slow=7.6,SNR=27					
MNAI	**Manna**	**20.71**	**258**	P	**P**	17 08 09.2 -0.4
MBWA	**Marble Bar**	**21.30**	**189**	P	**P**	17 08 15.2 -0.6
MBWA				IAmb	IAmb	17 08 16.5
	comp=Z,17nm,1.1s					
PSA00	**Pilbara Seismi**	**21.68**	**189**	P	**P**	17 08 19.1 -0.9
WB0	**Warramunga Arr**	**22.48**	**152**	P	**P**	17 08 27.2 -0.6
WB0				IAmb	IAmb	17 08 28.9
	comp=Z,9.7nm,0.6s					
WRAB	**Tennant Creek**	**22.60**	**152**	P	**P**	17 08 28.3 -0.7
WRAB				IAmb	IAmb	17 08 30.5
	comp=Z,5.4nm,0.6s					
WRA	**Warramunga Arr**	**22.60**	**152**	P	**P**	17 08 28.6 -0.4
	comp=Z,4.5nm,0.6s,baz=330,slow=11,SNR=72					
	comp=Z,4.5nm,0.6s					
IPM	**Ipoh**	**22.63**	**282**		**P**	17 08 29.3 0.0
IPM				IAmb	IAmb	17 08 32.0
	comp=Z,8.8nm,0.7s					
QIZ	**Qiongzhong**	**23.04**	**326**	P	**P**	17 08 33.5 +0.6
KULM	**Kulim**	**23.15**	**283**	P	**P**	17 08 33.7 -0.4
KULM				IAmb	IAmb	17 08 36.2
	comp=Z,8.0nm,1.0s					
TPUB	**Ta-pu**	**23.31**	**354**	P	**P**	17 08 35.6 +0.2
YULB	**Yu-li**	**23.34**	**356**	P	**P**	17 08 35.3 -0.4
COEN	**Coen**	**24.12**	**126**	P	**P**	17 08 43.1 +0.2
AS31	**Alice Springs**	**25.70**	**157**	P	**P**	17 08 57.0 -0.1
ASAR	**Alice Springs**	**25.70**	**157**	P	**P**	17 08 57.5 +0.4
	comp=Z,1.7nm,0.9s,baz=327,slow=7.3,SNR=26					
ASAR				PcP	**PcP**	17 12 23.0 -0.2
	comp=Z,0.3nm,0.4s,baz=329,slow=2.3,SNR=5.3					
ASAR				ScP	**ScP**	17 15 46.8 -1.0
	comp=Z,0.5nm,1.0s,baz=332,slow=3.1,SNR=2.6					
	comp=Z,1.7nm,0.9s					
ASAR	**Alice Springs**	**25.70**	**157**	P	**P**	17 08 57.1 0.0
MORW	**Morawa**	**29.70**	**193**	P	**P**	17 09 31.9 -0.7
CM31	**Chiang Mai Arr**	**30.10**	**309**	P	**P**	17 09 37.2 +0.9
CM31				IAmb	IAmb	17 09 41.0
	comp=Z,2.2nm,0.6s					
CMAR	**Chiang Mai Arr**	**30.10**	**309**	P	**P**	17 09 37.6 +1.3
	comp=Z,1.5nm,0.7s,baz=134,slow=7.4,SNR=13					
	comp=Z,1.5nm,0.7s					
CTAO	**Charters Tower**	**30.11**	**133**	P	**P**	17 09 38.4 +2.0
CTAO				IAmb	IAmb	17 10 01.5
	comp=Z,4.2nm,1.1s					
CHTO	**Chiang Mai**	**30.31**	**309**	P	**P**	17 09 38.4 +0.3
CHTO				IAmb	IAmb	17 09 40.9
	comp=Z,3.9nm,1.1s					
INKA	**Innaminka**	**32.29**	**150**	P	**P**	17 09 55.5 +0.1
INKA				IAmb	IAmb	17 09 57.7
	comp=Z,3.0nm,0.9s					
ENH	**Enshi**	**32.83**	**338**		**P**	17 10 00.4 +0.3
STKA	**Stephens Creek**	**36.15**	**153**	P	**P**	17 10 28.8 +0.2
	comp=Z,2.8nm,0.5s,baz=337,slow=6.8,SNR=5.9					
	comp=Z,2.8nm,0.5s					
KSAR	**Wonju Array Be**	**37.51**	**6**	P	**P**	17 10 41.5 +1.4
KSRS	**Korea Array**	**37.53**	**6**	P	**P**	17 10 39.9 -0.3
	comp=Z,0.6nm,0.6s,baz=190,slow=9.3,SNR=2.6					
	comp=Z,0.6nm,0.6s					
JGF	**Kuroka**	**37.80**	**19**	P	**P**	17 10 42.7 +0.2
JGF				IAmb	IAmb	17 10 44.4
	comp=Z,5.4nm,0.8s					
MJAR	**Matsushiro Arr**	**38.94**	**19**	P	**P**	17 10 51.2 -0.8
	comp=Z,3.7nm,0.8s,baz=190,slow=9.0,SNR=12					
	comp=Z,3.7nm,0.8s					
LZDM	**Lanzhou Array**	**40.13**	**335**	P	**P**	17 11 03.2 +0.9
	comp=Z,0.3nm,0.3s,baz=131,slow=15,SNR=2.0					
	comp=Z,0.3nm,0.3s					
HHC	**Hu-ho-hao-te**	**42.03**	**347**	*e*P	**P**	17 11 20.5 +3.1
HHC				pmax	pmax	
	comp=Z,2.0nm,0.6s					
LSA	**Lhasa**	**42.51**	**317**		**P**	17 11 22.6 +0.7
CAN	**Canberra**	**42.56**	**148**	P	**P**	17 11 22.5 +0.8
USRK	**Ussuriysk Ar.**	**44.70**	**9**	P	**P**	17 11 38.3 -0.3
	comp=Z,2.3nm,0.6s,baz=229,slow=7.9,SNR=3.4					
	comp=Z,2.3nm,0.6s					
GTA2	**Gaotai**	**44.79**	**334**	*e*P	**P**	17 11 40.5 +0.9
GTA2				pmax	pmax	
	comp=Z,6.0nm,1.0s					
MDJ	**Mudanjiang**	**44.79**	**6**	P	**P**	17 11 39.3 -0.1
MDJ				IAmb	IAmb	17 11 40.5
	comp=Z,4.0nm,0.7s					
JKA	**Kamikawa-asahi**	**47.20**	**19**	P	**P**	17 11 58.1 -0.1
HILR	**Hailar Array B**	**49.47**	**357**	P	**P**	17 12 16.6 +1.1
	comp=Z,2.4nm,0.5s,baz=181,slow=10,SNR=5.5					
	comp=Z,2.4nm,0.5s					
ULN	**Ulaanbaatar**	**49.72**	**346**	P	**P**	17 12 18.0 +0.4
SONM	**Songino Array**	**49.85**	**345**	P	**P**	17 12 18.9 +0.3
	comp=Z,3.0nm,0.7s,baz=161,slow=9.1,SNR=22					
	comp=Z,3.0nm,0.7s					
SONM	**Songino Array**	**49.85**	**345**	P	**P**	17 12 19.0 +0.4
MKAR	**Makanchi Array**	**58.74**	**328**	ScP	**ScP**	17 17 52.6 -3.4
	comp=Z,0.2nm,0.6s,baz=131,slow=4.4,SNR=1.9					
PEA0B	**Petropavlovsk-**	**60.20**	**23**	P	**P**	17 13 33.2 +0.6
PETK	**Petropavlovsk-**	**60.20**	**23**	P	**P**	17 13 33.2 +0.6
	comp=Z,3.9nm,0.9s,baz=222,slow=7.0,SNR=1.6					
	comp=Z,3.9nm,0.9s					
PETK	**Petropavlovsk-**	**60.20**	**23**	P	**P**	17 13 33.0 +0.4
AAK	**Ala-Archa**	**60.88**	**321**	P	**P**	17 13 36.5 -1.1
	comp=Z,1.1nm,0.7s,baz=90,slow=3.0,SNR=5.5					
	comp=Z,1.1nm,0.7s					
AAK	**Ala-Archa**	**60.88**	**321**	IAmb	IAmb	17 13 39.9
	comp=Z,1.5nm,0.9s					
KBL	**Kabul**	**61.12**	**310**	P	**P**	17 13 38.9 -0.5
KBL				IAmb	IAmb	17 13 40.8
	comp=Z,2.8nm,0.8s					
TCW	**Tory Channel**	**61.68**	**138**	P	**P**	17 13 42.2 -0.5
BKZ	**Black Stump Fm**	**62.28**	**135**	P	**P**	17 13 46.6 -0.3
ZALV	**Zalesovo Beam**	**62.42**	**336**	P	**P**	17 13 45.8 -1.6
	comp=Z,0.3nm,0.4s,baz=150,slow=12,SNR=2.2					
	comp=Z,0.3nm,0.4s					
MSWZ	**Moikau Station**	**62.42**	**138**	P	**P**	17 13 48.0 +0.3
KURBB	**Kurchatov Arra**	**63.09**	**330**	P	**P**	17 13 50.2 -1.6
	comp=Z,1.0nm,0.7s,baz=140,slow=6.0,SNR=14					
	comp=Z,1.0nm,0.7s					
KURK	**Kurchatov**	**63.10**	**330**		**P**	17 13 50.9 -1.1
KURK				IAmb	IAmb	17 13 51.6
	comp=Z,2.4nm,0.6s					
TIXI	**Tiksi**	**71.64**	**2**	P	**P**	17 14 43.7 -1.5
TIXI				IAmb	IAmb	17 14 44.7
	comp=Z,2.5nm,0.8s					
ABKAR	**Akbulak array**	**72.88**	**322**	P	**P**	17 14 52.2 -0.8
NRIK	**Noril'sk**	**73.25**	**348**	P	**P**	17 14 53.6 -1.3
	comp=Z,1.5nm,0.6s,baz=131,slow=5.5,SNR=5.8					
	comp=Z,1.5nm,0.6s					
NRIK	**Noril'sk**	**73.25**	**348**	P	**P**	17 14 53.8 -1.1
UNV	**Unalaska Valle**	**78.47**	**35**	P	**P**	17 15 25.6 +0.9
M14K	**Bethel**	**82.62**	**29**	P	**P**	17 15 47.6 +0.9
M14K				IAmb	IAmb	17 16 01.0
	comp=Z,8.3nm,1.2s					
G16K	**Koyuk River**	**83.55**	**24**	P	**P**	17 15 52.4 +1.0
G16K				IAmb	IAmb	17 15 53.9
	comp=Z,4.1nm,0.9s					
D19K	**Kuna River**	**85.85**	**21**	P	**P**	17 16 03.4 +0.5

DJA 14 17:10:15.0±0.2, 0°S×2°×12°3E±°, h42km±8km, M4.0/25, mB5.2/1, mb4.2/6, MLv3.9/25, Mw(mB)4.6/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.80**	**194**	P	Pn	17 10 30.1	+0.2
LUWI				S	Sn	17 10 43.2	+2.6
GTOI	**Gorontalo**	**0.89**	**3**	P	Pn	17 10 32.6	+1.5
MRSI	**Marisa**	**1.25**	**306**	P	Pn	17 10 36.6	+0.5
APSI	**Ampana**	**1.46**	**244**	P	Pn	17 10 39.4	+0.5
MPSI	**Mapaga**	**3.12**	**281**	P	Pn	17 11 03.1	+1.4
PCI	**Palu**	**3.19**	**258**	P	Pn	17 11 03.2	+0.5
SANI	**Sanana**	**3.51**	**120**	P	Pn	17 11 02.1	-5.0
KKSI	**Kolaka, Sulawe**	**4.10**	**199**	P	Pn	17 11 13.9	-1.3
TTSI	**Tana Toraja**	**4.18**	**229**	P	Pn	17 11 16.3	-0.1
SPSI	**Sidrap Palu**	**4.87**	**221**	P	Pn	17 11 24.7	-1.1
KAPI	**Kappang**	**5.71**	**214**	P	Pn	17 11 37.4	+0.1
	0.0nm11nm,0.5s						
BSSI	**Bau Bau, Buton**	**6.34**	**203**	P	Pn	17 11 45.9	-0.1

*AEIC **14** 17:26:54.7±0.6, 58°.31N±0°.05×156°.07W±0°.04, h150km±4km, Error ellipse: s-maj=7.2km s-min=1.9km az=157.0*

NEIC 14 17:26:53.4±0.8, 58°.33N±0°.04×156°.05W±0°.07, h155km±5km, ML2.9/103, ML2.8(AEIC), Error ellipse: s-maj=6.1km s-min=4.4km az=217.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNTC	**Contact Creek**	**0.11**	**126**		Pn	17 27 14.0	-0.3
CNTC					Sn	17 27 28.9	-1.3
ANCK	**Angle Creek**	**0.32**	**114**		Pn	17 27 14.6	-0.1
ACHA	**Angle Creek He**	**0.40**	**107**		Pn	17 27 14.9	-0.2
ACHA				Sn	Sn	17 27 30.5	-0.9
ACHA				IAML		17 27 31.3	
	comp=N,58nm,0.8s						
KABU	**Katmai Buttres**	**0.41**	**98**		Pn	17 27 15.1	0.0
KABU					Sn	17 27 31.1	-0.5
Q16K	**King Salmon**	**0.47**	**318**		Pn	17 27 15.1	-0.1
Q16K					Sn	17 27 31.4	-0.5
KAKN	**Katmai Knife C**	**0.52**	**93**		Pn	17 27 15.2	-0.4
KAKN					Sn	17 27 31.9	-0.6
PLK5	**Peulik 5**	**0.55**	**233**		Pn	17 27 15.7	+0.1
PLK5					Sn	17 27 32.2	-0.3
PLK1	**Peulik 1**	**0.60**	**210**		Pn	17 27 15.8	-0.1
PLK1					Sn	17 27 32.7	-0.3
KAWH	**Katmai**	**0.66**	**85**		Pn	17 27 16.1	-0.2
KAWH					Sn	17 27 33.2	-0.6
PLK4	**Peulik 4**	**0.72**	**193**		Pn	17 27 16.4	-0.4
PLK4					Sn	17 27 34.4	-0.1
PLK4	**Peulik 4**	**0.72**	**193**	IAML		17 27 34.6	
	comp=E,351nm,1.3s						
PLK4				IAML		17 27 35.2	
	comp=N,177nm,0.6s						
KARR	**Katmai Rainbow**	**0.73**	**76**		Pn	17 27 16.8	+0.1
KARR					Sn	17 27 34.5	0.0
PLBL	**Peulik Blue Cr**	**0.75**	**213**		Pn	17 27 16.9	0.0
KAHG	**Katmai Hook Gl**	**0.81**	**77**		Pn	17 27 17.6	+0.3
KAHG					Sn	17 27 35.5	0.0
P17K	**Kvichak River**	**0.89**	**347**		Pn	17 27 17.7	-0.1
P17K				Sn	Sn	17 27 35.6	-0.9
P17K				IAML		17 27 36.5	
	comp=N,207nm,1.0s						
P17K				IAML		17 27 36.7	
	comp=E,88nm,1.2s						
R16K	**Pilot Point**	**1.12**	**228**		Pn	17 27 19.8	+0.2
R16K				IAML		17 27 44.7	
	comp=N,68nm,1.2s						
R16K				IAML		17 27 51.2	
	comp=E,52nm,1.0s						
P18K	**Big Mountain,**	**1.15**	**21**	Pn	Pn	17 27 19.7	-0.3
P16K	**Nushagak River**	**1.24**	**306**		Pn	17 27 20.6	-0.1
P16K				IAML		17 27 42.2	
	comp=E,248nm,1.0s						
P16K				IAML		17 27 44.8	
	comp=N,77nm,1.0s						
Q19K	**Cape Douglas,**	**1.39**	**63**		Pn	17 27 22.5	+0.2
Q19K				IAML		17 27 48.9	
	comp=N,144nm,0.8s						
Q19K				IAML		17 27 49.6	
	comp=E,198nm,0.8s						
O17K	**Koliganek Bris**	**1.55**	**340**		Pn	17 27 23.5	-0.3
O18K	**Koktuh Hills**	**1.59**	**15**		Pn	17 27 24.5	+0.2
O16K	**Kokwok River B**	**1.66**	**321**		Pn	17 27 24.7	-0.3
O16K				IAML		17 27 48.1	
	comp=N,27nm,1.5s						
O16K				IAML		17 27 48.8	
	comp=E,73nm,0.8s						
ANNW	**Aniakchak Nort**	**1.79**	**221**		Pn	17 27 26.7	+0.1
OHAK	**Old Harbor**	**1.85**	**126**		Pn	17 27 26.6	-0.5
OHAK				IAML		17 27 51.8	
	comp=E,153nm,0.3s						
KDAK	**Kodiak Island**	**1.92**	**105**		Pn	17 27 27.3	-0.6
KDAK				IAML		17 27 54.1	
	comp=E,109nm,0.3s						
KDAK				IAML		17 27 56.2	
	comp=E,78nm,0.5s						
SYI	**Shuyak Island**	**1.94**	**80**	Pn	Pn	17 27 28.2	+0.1
SYI					Sn	17 27 53.5	-1.3
SYI				IAML		17 27 53.8	
	comp=N,148nm,0.8s						
SYI				IAML		17 27 55.0	
	comp=E,110nm,0.9s						
ANPB	**Aniakchak Plen**	**1.95**	**219**		Pn	17 27 28.4	+0.1
P19K	**Oil Pt**	**1.97**	**46**	Pn	Pn	17 27 28.9	+0.3
P19K				IAML		17 27 56.4	
	comp=N,85nm,1.2s						
P19K				IAML		17 27 56.4	
	comp=E,101nm,1.1s						
O15K	**Ungalikthiuk R**	**2.15**	**295**		Pn	17 27 30.6	+0.2
O15K				IAML		17 27 58.4	
	comp=N,44nm,0.9s						
O15K				IAML		17 27 59.1	
	comp=E,34nm,1.1s						
ILSW	**Iliamna Southw**	**2.23**	**41**	Pn	Pn	17 27 31.7	+0.1
ILSW				IAML		17 28 01.8	
	comp=E,25nm,1.4s						
ILSW				IAML		17 28 02.8	
	comp=N,18nm,1.1s						
ILS	**Iliamna Low So**	**2.24**	**42**		Pn	17 27 32.0	+0.2
N17K	**Nushagak Hills**	**2.28**	**346**		Pn	17 27 32.6	+0.5
N18K	**Kilae Creek**	**2.36**	**2**	Pn	Pn	17 27 33.6	+0.5
N19K	**Bonanza Creek**	**2.62**	**17**	Pn	Pn	17 27 37.0	+0.7
RED	**Redoubt Volcan**	**2.69**	**37**	Pn	Pn	17 27 37.6	+0.5
CNPM	**China Poot**	**2.77**	**62**	Pn	Pn	17 27 37.9	-0.1
CNPM				IAML		17 28 11.8	
	comp=E,60nm,0.4s						
N15K	**Kwethluk River**	**2.78**	**313**	Pn	Pn	17 27 38.3	+0.1
O14K	**Tigyukauivet M**	**2.87**	**291**		Pn	17 27 39.5	+0.2
O14K				IAML		17 28 31.2	
	comp=N,10.0nm,0.9s						
RDT	**Redoubt**	**2.92**	**38**		Pn	17 27 40.8	+0.8
BRLK	**Bradley Lake**	**3.03**	**59**	Pn	Pn	17 27 41.7	+0.4
BRLK				IAML		17 28 21.8	
	comp=N,38nm,0.9s						
M16K	**Timber Creek**	**3.08**	**333**		Pn	17 27 42.4	+0.5
BRSE	**Bradley Lake S**	**3.09**	**60**		Pn	17 27 42.3	+0.3
M17K	**Holitna River**	**3.16**	**348**	Pn	Pn	17 27 43.4	+0.5
M17K				IAML		17 28 23.2	
	comp=E,7.3nm,1.1s						
M17K				IAML		17 28 37.4	
	comp=N,12nm,0.9s						
N14K	**Kuskokwak Cree**	**3.32**	**301**		Pn	17 27 45.0	+0.1
N14K				IAML		17 28 45.1	
	comp=N,16nm,1.1s						
N14K				IAML		17 28 49.9	
	comp=E,16nm,1.2s						
CKL	**Chakachamna La**	**3.44**	**32**		Pn	17 27 47.6	+1.1
SPCR	**Spurr Chakacha**	**3.47**	**32**		Pn	17 27 48.1	+1.1
SPNN	**North Nagishla**	**3.48**	**28**		Pn	17 27 48.3	+1.0
SPCN	**Chakachatna No**	**3.50**	**32**		Pn	17 27 48.3	+1.0
SPU	**Mount Spurr**	**3.50**	**34**		Pn	17 27 47.7	+0.4
SPCG	**Spurr Capps Gl**	**3.60**	**33**		Pn	17 27 48.5	-0.2
SLKM	**Skilak Lake**	**3.69**	**51**	Pn	Pn	17 27 50.3	+0.5
L16K	**Owhat River**	**3.81**	**335**	Pn	Pn	17 27 51.0	-0.2
SEW	**Seward**	**3.83**	**59**	Pn	Pn	17 27 51.7	+0.2
SEW				IAML		17 28 35.2	
	comp=E,32nm,0.5s						
SEW				IAML		17 28 37.2	
	comp=N,25nm,0.5s						
SDPT	**Sand Point**	**3.85**	**221**	Pn	Pn	17 27 50.8	-1.0
SDPT				IAML		17 28 42.9	
	comp=N,17nm,1.0s						
SDPT				IAML		17 28 45.4	
	comp=E,23nm,1.2s						
M14K	**Bethel**	**3.87**	**311**		Pn	17 27 52.4	+0.5
O22K	**Cooper Landing**	**3.89**	**54**	Pn	Pn	17 27 52.1	-0.1
O22K					Sn	17 28 34.1	-3.9
L19K	**White Mountain**	**3.91**	**8**		Pn	17 27 52.4	-0.2
SUA	**Susitna One**	**4.12**	**38**		Pn	17 27 56.0	+0.5
SUA				IAML		17 28 44.7	
	comp=E,22nm,1.0s						
SUA				IAML		17 28 48.2	
	comp=N,18nm,0.8s						
RC01	**Rabbit Creek A**	**4.23**	**46**	Pn	Pn	17 27 56.5	-0.2
M13K	**Dall Lake**	**4.28**	**302**	Pn	Pn	17 27 57.2	-0.2
SKT	**Skwentna**	**4.30**	**30**		Pn	17 27 58.3	+0.7
SKT				IAML		17 28 51.3	
	comp=N,7.6nm,1.1s						
SKT				IAML		17 28 55.7	
	comp=E,7.8nm,0.4s						
L14K	**Kuka Creek**	**4.51**	**315**		Pn	17 28 00.6	+0.3
L14K				IAML		17 29 25.1	
	comp=N,4.3nm,1.2s						
L14K				IAML		17 30 40.5	
	comp=E,3.6nm,1.2s						
K17K	**Iditarod**	**4.54**	**347**	Pn	Pn	17 28 00.7	0.0
M22K	**Willow**	**4.54**	**38**	Pn	Pn	17 28 00.1	-0.6
P23K	**Montague Islan**	**4.75**	**66**	Pn	Pn	17 28 03.5	0.0
PMR	**Palmer**	**4.77**	**44**	Pn	Pn	17 28 03.2	-0.6
PMR				IAML		17 28 56.2	
	comp=E,10nm,0.3s						
PMR				IAML		17 28 57.2	
	comp=N,13nm,0.3s						
K15K	**Wolf Creek Mou**	**4.82**	**328**		Pn	17 28 04.0	-0.4
K15K				IAML		17 29 10.0	
	comp=E,2.5nm,1.2s						
K15K				IAML		17 30 14.8	
	comp=N,2.3nm,1.2s						
KNK	**Knik Glacier**	**4.92**	**48**	Pn	Pn	17 28 04.6	-1.1
L22K	**Petersville**	**4.96**	**30**		Pn	17 28 06.1	-0.1
L22K				IAML		17 29 03.7	
	comp=E,9.5nm,0.8s						
L22K				IAML		17 29 05.0	
	comp=N,5.7nm,0.2s						
PPLA	**Purkeypile**	**4.96**	**21**		Pn	17 28 08.0	+1.6
PPLA				IAML		17 29 10.8	
	comp=E,3.9nm,1.0s						
PPLA				IAML		17 30 30.0	
	comp=N,2.2nm,1.1s						
GHO	**Glory Hole Cre**	**4.97**	**43**		Pn	17 28 05.3	-1.2
CUT	**Chulitna**	**4.99**	**33**		Pn	17 28 05.4	-1.2
K20K	**Telida**	**5.14**	**10**	Pn	Pn	17 28 10.1	+1.5
K20K				IAML		17 29 18.1	
	comp=N,1.9nm,0.6s						
K20K				IAML		17 30 29.2	
	comp=E,2.4nm,1.1s						
MID	**Middleton Isla**	**5.16**	**74**	Pn	Pn	17 28 09.3	+0.4
J18K	**Innoko River**	**5.17**	**357**		Pn	17 28 09.3	+0.3
SML	**Sawmill**	**5.21**	**45**	Pn	Pn	17 28 08.1	-1.5
SML				IAML		17 29 13.0	
	comp=N,12nm,1.1s						
SML				IAML		17 29 16.1	
	comp=E,12nm,0.4s						
GLI	**Glacier Island**	**5.22**	**57**	Pn	Pn	17 28 08.3	-1.4
HIN	**Hinchinbrook I**	**5.30**	**63**	Pn	Pn	17 28 10.7	-0.2
J16K	**Anvik River**	**5.45**	**338**	Pn	Pn	17 28 13.2	+0.5
SCM	**Sheep Creek Mo**	**5.60**	**47**		Pn	17 28 13.7	-1.1
K13K	**Kusilvak Mount**	**5.62**	**314**	Pn	Pn	17 28 13.9	-1.1
J19K	**Poorman**	**5.69**	**2**	Pn	Pn	17 28 14.1	-1.8
EYAK	**Cordova Ski Ar**	**5.71**	**63**	Pn	Pn	17 28 13.9	-2.2
J14K	**Nanvaranak Lak**	**5.78**	**323**	Pn	Pn	17 28 17.0	0.0
KTH	**Kantishna Hill**	**5.81**	**23**	Pn	Pn	17 28 17.0	-0.5
TRF	**Thorofare Moun**	**5.86**	**26**		Pn	17 28 17.6	-0.6
DIV	**Divide**	**5.91**	**57**		Pn	17 28 16.8	-2.0
J20K	**Nowinta River**	**5.94**	**8**		Pn	17 28 18.5	-0.7
KLU	**Klutina**	**6.00**	**54**		Pn	17 28 19.3	-0.8
I17K	**Unalakleet**	**6.01**	**340**	Pn	Pn	17 28 19.7	-0.4
RAGM	**Ragged Mountai**	**6.17**	**66**	Pn	Pn	17 28 22.1	-0.3
RND	**Reindeer**	**6.19**	**32**		Pn	17 28 21.6	-1.0
KAIM	**Kayak Island**	**6.20**	**70**	Pn	Pn	17 28 24.3	+1.7
M24K	**Tolsona, Glenn**	**6.21**	**48**		Pn	17 28 22.2	-0.6
BMRM	**Bremner River**	**6.38**	**61**	Pn	Pn	17 28 24.4	-0.7
DHY	**Denali Highway**	**6.38**	**38**		Pn	17 28 23.9	-1.3
MCK	**McKinley**	**6.43**	**29**		Pn	17 28 24.8	-0.9
N25K	**Chitina, Valde**	**6.62**	**55**		Pn	17 28 28.3	0.0
BERG	**Berg Lake**	**6.64**	**67**	Pn	Pn	17 28 28.4	-0.1
GLB	**Gilahina Butte**	**6.90**	**58**	Pn	Pn	17 28 31.9	-0.2
H18K	**Honhosa River**	**6.94**	**352**	Pn	Pn	17 28 32.9	+0.4
PAX	**Paxson**	**6.97**	**44**		Pn	17 28 32.3	-0.7
VRDI	**Verde Repeater**	**6.99**	**60**	Pn	Pn	17 28 33.2	-0.1
CRQM	**Cirque**	**7.00**	**64**	Pn	Pn	17 28 33.1	-0.4
SNH	**Sunshine Point**	**7.02

JRY	Ryogami san	10.07	336	*eP*		Pn	17 43 28.2	-1.1
JRY				*eS*		Sn	17 45 17.1	-3.9
JHO	Hitachi	10.11	344	*eP*		Pn	17 43 27.9	-1.9
JHO				*eS*		Sn	17 45 11.9	-10
JAG	Ashikaga	10.25	339	*eP*		Pn	17 43 30.1	-1.7
JAG				*eS*		Sn	17 45 18.9	-6.5
INU	Inuyama	10.32	326	Pn		Pn	17 43 33.9	+1.2
JGF	Kuroka	10.36	328	Pn		Pn	17 43 34.6	+1.3
MJAR	Matsushiro Arr	10.80	334	Pn		Pn	17 43 38.4	-0.8
	0.3nm,0.3s,baz=159,slow=12,SNR=18							
	2.4nm,0.4s							
MJAR	Matsushiro Arr	10.80	334			Pn	17 43 38.0	-1.2
MAJO	Matsushiro	10.80	334			Pn	17 43 38.5	-0.8
MAT	Matsushiro	10.80	334	*eP*		Pn	17 43 38.9	-0.3
MJB9	Matsu-Tunnel	10.80	334			Pn	17 43 39.5	+0.3
KSRS	Korea Array	17.18	312	P		P	17 45 07.1	+1.5
	0.2nm,0.3s,baz=122,slow=11,SNR=4.8							
	1.5nm,0.8s							
KSAR	Wonju Array Be	17.20	312			P	17 45 07.8	+1.9
JKA	Kamikawa-asahi	17.21	357	P		Pn	17 45 04.3	-0.4
ASAJ	Asahikawa	17.21	357	P		Pn	17 45 05.4	+0.7
	0.6nm,0.3s,baz=223,slow=15,SNR=7.3							
ASAJ				S		Sn	17 48 04.8	-10
	2.8nm,0.9s,baz=33,slow=32,SNR=1.8							
	1.7nm,0.4s							
USRK	Ussuriysk Ar.	19.80	334	P		Pn	17 45 37.5	+1.4
	2.6nm,0.6s,baz=124,slow=7.9,SNR=4.1							
	2.6nm,0.6s							
YHNB	Yeheng	20.49	269	P		P	17 45 42.0	-0.2
YHNB				IAmb		IAmb	17 46 11.4	
	comp=Z,44nm,1.4s							
YULB	Yu-li	20.84	265	P		P	17 45 45.3	-0.7
YULB				IAmb		IAmb	17 45 58.2	
	comp=Z,35nm,1.3s							
SSLB	Suanglung	21.05	267	P		P	17 45 48.8	+0.5
SSLB				IAmb		IAmb	17 45 50.9	
	comp=Z,15nm,0.9s							
MDJ	Mudanjiang	21.14	330	P		P	17 45 51.3	+2.4
TPUB	Ta-pu	21.46	266	P		P	17 45 53.2	+0.6
TPUB				IAmb		IAmb	17 46 31.9	
	comp=Z,50nm,1.4s							
H11N2	WAKE ISLAND Hy	22.19	104	T		T	18 08 54.6	
	baz=291,slow=74							
H11N1	WAKE ISLAND Hy	22.19	104	T		T	18 08 52.0	
	baz=291							
H11N3	WAKE ISLAND Hy	22.20	104	T		T	18 08 50.8	
	baz=291,slow=74							
H11S3	WAKE ISLAND Hy	22.52	107	T		T	18 09 21.0	
	baz=294							
H11S1	WAKE ISLAND Hy	22.52	107	T		T	18 09 10.8	
	baz=294							
H11S2	WAKE ISLAND Hy	22.53	107	T		T	18 09 28.1	
	baz=294							
HILR	Hailar Array B	29.33	327	P		P	17 47 10.4	+3.9
	comp=Z,0.7nm,0.4s,baz=137,slow=49,SNR=1.6							
ENH	Enshi	30.42	285	P		P	17 47 15.9	-0.4
ENH				IAmb		IAmb	17 47 51.2	
	comp=Z,5.4nm,1.1s							
TNTI	Ternate	30.50	214	P		P	17 47 16.4	-0.7
KKM	Kota Kinabalu	33.61	237	P		P	17 47 42.5	-2.0
LZDM	Lanzhou Array	35.35	295	P		P	17 47 59.7	0.0
	comp=Z,0.6nm,0.3s,baz=132,slow=9.9,SNR=7.0							
	comp=Z,0.6nm,0.3s							
ULN	Ulaanbaatar	35.58	316			P	17 48 02.2	+0.9
ULN				IAmb		IAmb	17 48 04.6	
	comp=Z,4.1nm,0.8s							
SONM	Songino Array	35.98	316	P		P	17 48 06.8	+2.1
	comp=Z,2.3nm,0.7s,baz=118,slow=7.1,SNR=18							
	comp=Z,2.3nm,0.7s							
SONM	Songino Array	35.98	316	P		P	17 48 05.3	+0.6
MTN	Manton Dam	41.44	199	P		P	17 48 49.0	-1.5
CHTO	Chiang Mai	42.11	269	P		P	17 48 55.1	-1.0
CMAR	Chiang Mai Arr	42.23	268	P		P	17 48 57.2	0.0
	comp=Z,0.5nm,0.3s,baz=62,slow=8.6,SNR=5.8							
	comp=Z,0.5nm,0.3s							
KNRA	Kununurra	44.84	201	P		P	17 49 17.0	-1.0
CTAO	Charters Tower	46.76	177	P		P	17 49 31.4	-1.7
WB0	Warramunga Arr	47.32	192	P		P	17 49 36.1	-1.4
WRAB	Tennant Creek	47.49	192	P		P	17 49 37.6	-1.3
WRAB				IAmb		IAmb	17 50 06.4	
	comp=Z,7.3nm,1.2s							
WRA	Warramunga Arr	47.50	192	P		P	17 49 37.6	-1.4
	comp=Z,1.7nm,0.5s,baz=8.7,slow=8.6,SNR=34							
WRA				PcP		PcP	17 51 08.6	-0.2
	comp=Z,0.5nm,0.9s,baz=19,slow=3.4,SNR=1.6							
	comp=Z,1.7nm,0.5s							
WRA	Warramunga Arr	47.50	192	P		P	17 49 36.8	-2.1
O15K	Ungalikthiuk R	50.08	34	P		P	17 49 58.7	+0.4
N15K	Kwethluk River	50.21	33	P		P	17 49 59.9	+0.6
N15K				IAmb		IAmb	17 50 20.1	
	comp=Z,11nm,1.2s							
ZALV	Zalesovo Beam	50.69	319	P		P	17 50 03.9	+0.8
	comp=Z,1.3nm,0.6s,baz=96,slow=6.8,SNR=7.3							
ZALV				PcP		PcP	17 51 19.8	-0.2
	comp=Z,0.6nm,0.5s,baz=80,slow=5.2,SNR=4.0							
	comp=Z,1.3nm,0.6s							
ZALV	Zalesovo Beam	50.69	319	P		P	17 50 04.0	+1.0
ASAR	Alice Springs	51.21	192	P		P	17 50 05.2	-2.1
	comp=Z,0.2nm,0.3s,baz=8.8,slow=7.1,SNR=8.3							
ASAR				PcP		PcP	17 51 21.7	-0.6
	comp=Z,0.5nm,0.8s,baz=29,slow=2.1,SNR=2.9							
	comp=Z,0.2nm,0.3s							
N17K	Nushagak Hills	51.70	33	P		P	17 50 11.2	+0.8
N17K				IAmb		IAmb	17 50 40.8	
	comp=Z,7.0nm,1.4s							
MK31	Makanchi Array	51.84	310	P		P	17 50 13.2	+1.4
MKAR	Makanchi Array	51.84	310	P		P	17 50 13.1	+1.3
	comp=Z,2.7nm,0.8s,baz=91,slow=9.2,SNR=27							
MKAR				PcP		PcP	17 51 24.1	-0.3
	comp=Z,0.5nm,0.7s,baz=90,slow=5.3,SNR=2.0							
	comp=Z,2.7nm,0.8s							
MAKZ	Makanchi	52.06	310	P		P	17 50 14.3	+0.9
MAKZ				IAmb		IAmb	17 50 16.0	
	comp=Z,9.0nm,1.4s							
N18K	Kilae Creek	52.35	33	P		P	17 50 15.9	+0.5
N18K				IAmb		IAmb	17 50 46.2	
	comp=Z,12nm,1.5s							
H18K	Honhosa River	52.42	27	P		P	17 50 16.5	+0.7
H18K				IAmb		IAmb	17 50 37.6	
	comp=Z,7.1nm,1.4s							
C19K	Lookout Ridge	53.32	22	P		P	17 50 23.5	+1.1
C19K				IAmb		IAmb	17 50 24.3	
	comp=Z,2.0nm,0.6s							
NRIK	Noril'sk	53.42	338	P		P	17 50 24.6	+1.5
	comp=Z,2.2nm,0.7s,baz=105,slow=12,SNR=2.4							
	comp=Z,2.2nm,0.7s							
NRIK	Noril'sk	53.42	338	IAmb		IAmb	17 50 25.1	
	comp=Z,2.6nm,0.9s							
KDAK	Kodiak Island	53.55	37	P		P	17 50 24.3	+0.1
ILSW	Iliamna Southw	53.57	34	P		P	17 50 25.1	+0.6
D19K	Kuna River	53.60	23	P		P	17 50 25.6	+1.1
J20K	Nowinta River	53.91	29	P		P	17 50 26.6	-0.2
J20K				IAmb		IAmb	17 50 49.1	
	comp=Z,5.1nm,1.3s							
KURK	Kurchatov	54.27	315	P		P	17 50 30.3	+0.7
KURK				IAmb		IAmb	17 50 31.4	
	comp=Z,1.9nm,0.5s							
KURBB	Kurchatov Arra	54.33	314	P		P	17 50 30.9	+0.9
	comp=Z,2.4nm,0.5s,baz=90,slow=8.2,SNR=47							
	comp=Z,2.4nm,0.5s							
CNPM	China Poot	54.46	35	P		P	17 50 32.9	+2.0
PRZ	Przheval'sk	54.85	305	P		P	17 50 36.1	+1.9
SLKM	Skilak Lake	55.08	33	P		P	17 50 37.6	+2.2
D22K	Ayikyak River	55.61	23	P		P	17 50 40.5	+1.5
D22K				IAmb		IAmb	17 50 41.3	
	comp=Z,5.0nm,1.2s							
KDJ	Kajisay	55.79	304	P		P	17 50 42.4	+1.5
KDJ				IAmb		IAmb	17 50 43.7	
	comp=Z,4.1nm,0.8s							
BOOM	Boomskoye usch	56.65	305	P		P	17 50 48.5	+1.3
BOOM				IAmb		IAmb	17 50 49.9	
	comp=Z,3.1nm,0.7s							
E24K	Your Creek	56.95	24	P		P	17 50 49.2	+0.6
ILAR	Eielson Array	57.11	28	P		P	17 50 49.0	-0.7
	comp=Z,0.3nm,0.6s,baz=277,slow=6.7,SNR=2.2							
	comp=Z,0.3nm,0.6s							
AAK	Ala-Archa	57.69	305	P		P	17 50 55.6	+1.2
	comp=Z,0.8nm,0.4s,baz=109,slow=8.4,SNR=3.3							
	comp=Z,0.8nm,0.4s							
AAK	Ala-Archa	57.69	305	IAmb		IAmb	17 50 56.9	
	comp=Z,1.4nm,0.8s							
SCRK	Sand Creek	58.30	30	P		P	17 50 58.2	0.0
BMAR	Burnt Mountain	58.33	25	P		P	17 50 59.8	+1.5
J26L	Joseph Creek	58.51	29	P		P	17 50 59.7	0.0
J26L				IAmb		IAmb	17 51 24.7	
	comp=Z,3.2nm,1.2s							

F26K	Sheenjek River	58.52	25	P		P	17 51 00.9	+1.2
ARSB	Arslanbob	59.01	304	P		P	17 51 04.2	+0.5
ARSB				IAmb		IAmb	17 51 06.6	
	comp=Z,3.8nm,0.6s							
BVAR	Borovoye Array	59.28	318	P		P	17 51 06.6	+1.4
	comp=Z,2.5nm,0.5s,baz=83,slow=5.9,SNR=23							
	comp=Z,2.5nm,0.5s							
BORK	Borovoye	59.32	318	P		P	17 51 06.7	+1.3
BORK				IAmb		IAmb	17 51 07.5	
	comp=Z,3.6nm,0.8s							
FORT	Forrest	59.35	196	P		P	17 51 04.5	-1.2
FORT				IAmb		IAmb	17 51 33.8	
	comp=Z,5.4nm,0.9s							
NIL	Nilore	60.41	295	P		P	17 51 14.3	+1.1
KK31	Karatay Array	60.51	306			P	17 51 14.9	+1.2
KK31				IAmb		IAmb	17 51 16.4	
	comp=Z,3.3nm,0.7s							
KKAR	Karatay Array	60.51	306			P	17 51 14.6	+0.8
BTK	Batken	60.87	303	P		P	17 51 17.4	+1.0
BTK				IAmb		IAmb	17 51 55.1	
	comp=Z,4.5nm,1.3s							
I30M	Mount Dempster	61.58	28	P		P	17 51 20.9	+0.1
MORW	Morawa	61.77	208	P		P	17 51 20.7	-1.6
INK	Inuvik	62.53	25	P		P	17 51 27.1	+0.2
INK				IAmb		IAmb	17 51 29.5	
	comp=Z,3.7nm,1.4s							
AB31	Akbulak array	66.39	315	P		P	17 51 53.5	+1.0
AB31				IAmb		IAmb	17 51 54.1	
	comp=Z,2.9nm,0.6s							
ABKAR	Akbulak array	66.39	315	P		P	17 51 53.4	+0.9
SPB2	Spitsbergen Ar	70.86	350	P		P	17 52 21.0	+1.1
SPITS	Spitsbergen Ar	70.86	350	P		P	17 52 21.3	+1.4
	comp=Z,5.3nm,0.9s,baz=1.9,slow=4.3,SNR=4.2							
	comp=Z,5.3nm,0.9s							
YKAW3	Yellowknife Wh	71.51	29	P		P	17 52 24.0	-0.1
YKA	Yellowknife Ar	71.54	29	P		P	17 52 24.1	-0.2
	comp=Z,0.2nm,0.4s,baz=297,slow=6.8,SNR=5.6							
	comp=Z,0.2nm,0.4s							
DSZ	Denniston Nort	72.99	159	P		P	17 52 33.5	+0.5
TCW	Tory Channel	73.35	157	P		P	17 52 36.4	+1.2
ARCES	ARCESS Array B	74.25	341	P		P	17 52 41.2	+1.0
L04D	Klamath Falls	75.02	50	P		P	17 52 45.2	-0.2
N02D	Trinity Center	75.22	51	P		P	17 52 45.9	-0.6
PINE	Pine Mountain	75.33	48	P		P	17 52 46.0	-1.1
K05A	Summer Lake	75.78	49	P		P	17 52 50.4	+0.6
EDM	Edmonton	76.00	37	P		P	17 52 50.5	-0.1
EDM				IAmb		IAmb	17 53 11.6	
	comp=Z,7.6nm,1.1s							
MCCM	Marconi Confer	76.20	54	P		P	17 52 53.0	+1.0
JTMT	Jette	77.89	43	P		P	17 53 01.4	-0.1
PNTR	Pine Nut	78.16	52	P		P	17 53 04.3	+1.0
PNTR				IAmb		IAmb	17 53 18.9	
	comp=Z,3.0nm,0.8s							
ILON	Igloolik, Nuna	78.44	15	P		P	17 53 03.6	-0.3
FINES	FINESS Array B	78.83	334	P		P	17 53 06.2	0.0
	comp=Z,1.2nm,0.8s,baz=100,slow=5.8,SNR=7.3							
	comp=Z,1.2nm,0.8s							
KBZ	Khabaz	79.32	314	P		P	17 53 10.4	+1.2
	comp=Z,4.4nm,0.8s,baz=108,slow=5.0,SNR=9.9							
	comp=Z,4.4nm,0.8s							
NVAR	Mina Array Bea	79.36	52	P		P	17 53 10.6	+0.7
	comp=Z,1.1nm,0.6s,baz=298,slow=6.9,SNR=7.8							
	comp=Z,1.1nm,0.6s							
FFC	Flin Flon	81.04	32	P		P	17 53 19.2	+0.9
FFC				IAmb		IAmb	17 53 19.9	
	comp=Z,3.8nm,0.9s							
TPNV	Topopah Spring	81.48	53	P		P	17 53 21.3	0.0
TPNV				IAmb		IAmb	17 53 22.3	
	comp=Z,1.8nm,0.6s							
GWY	Greenwater Val	81.52	54	P		P	17 53 21.2	-0.2
GWY				IAmb		IAmb	17 53 22.6	
	comp=Z,3.5nm,0.8s							
RLMT	Red Lodge	82.19	43	P		P	17 53 25.7	+0.8
DUG	Dugway, Tooele	82.34	49	P		P	17 53 26.1	+0.5
DUG				IAmb		IAmb	17 53 26.7	
	comp=Z,1.7nm,0.7s							
PDAR	Pinedale Array	83.20	45	P		P	17 53 29.9	-0.3
	comp=Z,0.4nm,0.7s,baz=267,slow=2.7,SNR=4.0							
	comp=Z,0.4nm,0.7s							
HFS	Hagfors	84.23	337	P		P	17 53 34.9	+0.1
	comp=Z,1.2nm,0.7s,baz=5.7,slow=2.9,SNR=1.9							
	comp=Z,1.2nm,0.7s							
EPLO	Experimental L	88.15	33	P		P	17 53 53.7	-0.6
STHS	Stebnicka Huta	88.55	327	eP		P	17 53 58.2	+2.0
MODS	Modra-Piesok	91.18	328	eP		P	17 54 07.9	-0.7
TXAR	Lajitas Array	94.41	54	P		P	17 54 24.1	+0.2
	comp=Z,0.2nm,0.5s,baz=331,slow=6.5,SNR=2.0							
	comp=Z,0.2nm,0.5s							
LPAZ	La Paz	148.40	77	PKPbc		PKPbc	18 00 50.1	-1.3
	comp=Z,3.7nm,0.8s,baz=336,slow=3.4,SNR=9.6							
LPAZ	La Paz	148.40	77			PKPbc	18 00 49.6	-1.8

*IDC **14** 17:50:48.6±0.9, 35°.25N×27°.96E, h0km, mb3.7/10, mbtmp3.6/16, ML3.3/5, Error ellipse: s-maj=20.4km s-min=13.8km az=178.0*
*ISK **14** 17:50:50.2, 35°.22N×27°.92E, h8km, ML3.3/21*
*AFAD **14** 17:50:51.2, 35°.29N×27°.87E, h7km±2km, ML3.3*
*GII **14** 17:50:52.0±0.0, 35°.118N±0°.002×28°.081E±0°.001, h0km, Mws3.5, confirmed*
*THE **14** 17:50:51.2, 35°N±5°×2°8E±°, h0km±6km, M3.2/5, MLh3.2/5*
*ATH **14** 17:50:51.0±0.6, 35°.26N×28°.02E, h10km±4km, ML3.4/16, Manual Solution by N.Liadopoulou First location: 2020/02/14 17:52:27, This location: 2020/02/14 18:00:24 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*NIC **14** 17:50:51.1, 35°.29N×27°.99E, h18km±2km, Ml3.2/12*

ISC 14 17:50:50.2±1.2, 35°.20N±0°.03×27°.99E±0°.02, h11km±8km, n141, σ1‰06/203, mb3.5/9, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KARP	Karpathos	0.76	297	Op	ISC		
KARP				Pg	Pg	17 51 03.6	-1.3
KARP				Sg	Sg	17 51 14.5	-0.3
KARP	Karpathos	0.76	297	P	Pg	17 51 04.2	-0.7
KARP				S	Sg	17 51 15.9	+1.1
KARP	Karpathos	0.76	297	P	Pg	17 51 03.9	-1.0
KARP				S	Sg	17 51 15.3	+0.5
KARP				AML	AML	17 51 20.9	
	11nm,0.7s						
KARP				AML	AML	17 51 21.0	
	5.0nm,0.8s						
KARP	Karpathos	0.76	297	P	Pg	17 51 04.2	-0.7
KARP				S	Sb	17 51 17.2	+1.3
ARG	Arkhangelos	1.02	6	Pg	Pb	17 51 10.2	+0.3
ARG				Sg	Sb	17 51 24.5	+1.2
ARG	Arkhangelos	1.02	6	P	Pg	17 51 09.7	-0.1
ARG				S	Sb	17 51 24.0	+0.7
ARG	Arkhangelos	1.02	6	P	Pg	17 51 08.8	+0.2
ARG				S	Sg	17 51 22.7	-0.4
ARG				AML	AML	17 51 30.9	
	2.8nm,0.5s						
ARG				AML	AML	17 51 34.9	
	2.4nm,0.9s						
ARG	Arkhangelos	1.02	6	P	Pg	17 51 09.9	0.0
ARG				S	Sb	17 51 23.5	+0.2
RODB	Rodos	1.26	9	P	Pn	17 51 13.0	-0.8
RODB				S	Sb	17 51 29.9	-0.3
RDI1	Rhodes Town Ha	1.26	9	P	Pn	17 51 14.1	+0.2
RDI1				S	Sb	17 51 29.2	-1.1
ZKR	Zakros	1.45	267	Pn	Pn	17 51 16.9	+0.4
ZKR				Sn	Sn	17 51 28.8	+0.2
ZKR	Zakros	1.45	267	P	Pn	17 51 17.9	+1.4
ZKR	Zakros	1.45	267	P	Pn	17 51 16.7	+0.2
ZKR				S	Sn	17 51 36.3	+0.7
ZKR				AML	AML	17 51 46.0	
	0.9nm,0.8s						
ZKR				AML	AML	17 51 46.0	
	2.8nm,0.7s						
ZKR	Zakros	1.45	267	P	Pn	17 51 17.3	+0.8
YAZI	Mula-Dat§a-	1.54	344	P	Pn	17 51 17.2	-0.5
YAZI				S	Sn	17 51 35.5	-2.2
YAZI				IAML		17 51 43.0	
	comp=E,370nm,0.8s						
SIT2	Siteia	1.54	271	P	Pn	17 51 18.7	+1.0
DAT	Datca	1.56	348	Pn	Pn	17 51 18.5	+0.4
DAT	Datca	1.56	348	P	Pn	17 51 18.7	+0.6
DAT				S	Sb	17 51 40.0	+1.0
DAT	Datca	1.56	348	P	Pn	17 51 18.0	-0.1
DAT				S	Sn	17 51 39.0	+0.7
DAT				IAML		17 51 43.0	
	comp=E,401nm,0.6s						
DAT				IAML		17 51 53.0	
	comp=N,333nm,0.6s						
DATC	Datca-Mugla	1.58	350	Pn	Pn	17 51 18.8	+0.6
IZZE	Mula-Seydike	1.59	39	P	Pn	17 51 18.8	+0.4
IZZE				S	Sg	17 51 40.4	-1.0
IZZE				IAML		17 52 00.0	
	comp=N,387nm,0.6s						
KSL	Kastellorizon	1.61	53	P	Pb	17 51 19.8	-0.1
KSL				S	Sg	17 51 42.6	+0.7
KSL	Kastellorizon	1.61	53	P	Pn	17 51 18.2	-0.4
AKAS	Kas	1.67	52	P	Pn	17 51 20.3	+0.7
AKAS				IAML		17 52 19.0	
	comp=N,559nm,1.3s						
FETY	Fethiye	1.69	32	Pn	Pb	17 51 20.9	-0.4
FETY	Fethiye	1.69	32	P	Pn	17 51 19.9	+0.2
DALY	Dalyan (Mula)	1.70	18	Pn	Pb	17 51 21.3	-0.2
SABU	Mula-Dalaman	1.80	26	P	Pn	17 51 21.8	+0.5
SABU				S	Sg	17 51 52.1	+3.9
BDRM	Kayabasi	1.91	347	P	Pn	17 51 22.1	-0.7
BDRM				S	Sn	17 51 48.0	+1.1
KLNA	Kalymnos	1.93	335	P	Pn	17 51 23.3	+0.2
BODT	Bodrum	1.94	344	Pn	Pn	17 51 23.7	+0.6
YER	Yerkesik	1.94	7	Pn	Pn	17 51 24.1	+0.8
YER	Yerkesik	1.94	7	P	Pn	17 51 24.8	+1.5
YER				S	Sb	17 51 50.0	0.0
NPS	Neapolis	1.94	272	P	Pn	17 51 24.8	+1.5
YKAV	Yalikavak-Bodr	2.00	344	Pn	Pn	17 51 24.9	+0.9
CAME	Cameli-Denizli	2.04	31	Pn	Pn	17 51 25.8	+1.1
MULA	Mugla, Merkez-	2.07	7	P	Pb	17 51 29.0	+1.1
MULA				S	Sg	17 51 56.3	-0.4
KNIK	Mula-Seydike	2.08	38	P	Pn	17 51 26.6	+1.3
KNIK				S	Sn	17 51 52.0	+0.6
ELL	Elmali	2.19	45	Pn	Pn	17 51 28.2	+1.4
CAEL	Denizli, Camel	2.20	29	P	Pn	17 51 27.9	+1.0
CAEL				IAML		17 52 03.0	
	comp=N,259nm,0.6s						
CAEL				IAML		17 52 14.0	
	comp=E,268nm,0.7s						
DNZT	Denizli-Tavas-	2.24	22	P	Pn	17 51 27.8	+0.4
DNZT				S	Sn	17 51 56.2	+1.1
DDIM	Aydin, Didim	2.33	345	P	Pb	17 51 31.6	-0.7
THERA	Ancient Thera,	2.35	300	P	Pn	17 51 29.6	+0.8
THERA	Ancient Thera,	2.35	300	P	Pn	17 51 29.2	+0.4
THR8	Santorini-Mono	2.37	301	P	Pn	17 51 29.3	+0.2
TAVA	DENIZLI_Tavas	2.38	18	P	Pn	17 51 29.9	+0.6
GOLH	Golhisar	2.40	32	P	Pn	17 51 31.3	+1.7
GOLH				S	Sn	17 52 00.8	+1.8
GOLH				IAML		17 52 03.0	
	comp=E,172nm,0.8s						
GOLH				IAML		17 52 26.0	
	comp=N,172nm,1.5s						
THR6	Thira Island,	2.40	299	P	Pn	17 51 29.7	+0.2
THR3	Thira Island,	2.42	301	P	Pn	17 51 29.9	+0.1
SNT5	Nea Kammeni, S	2.42	300	P	Pn	17 51 29.7	-0.1
THR9	Santorini-Faro	2.43	299	P	Pn	17 51 30.0	+0.1
AYDN	Tasoluk	2.46	358	P	Pn	17 51 30.5	+0.2
AYDN				S	Sn	17 51 59.1	-1.2
AYDN				IAML		17 52 13.0	
	comp=E,138nm,0.6s						
AYDN				IAML		17 52 14.0	
	comp=N,139nm,0.6s						
SAP3	Santorini-Thir	2.47	301	P	Pn	17 51 32.1	+1.5
APMY	Acipayam-Deniz	2.50	25	Pn	Pn	17 51 32.4	+1.4
IDI	Anoyia	2.54	273	Pn	Pn	17 51 32.9	+1.5
	25nm,0.6s,baz=93,slow=15,SNR=33						
IDI				Sn	Sn	17 52 04.0	+1.6
	7.5nm,0.3s,baz=87,slow=14,SNR=4.7						
IDI	Anoyia	2.54	273	P	Pn	17 51 33.8	+2.3
DNIZ	Denizli-Tavas-	2.56	19	P	Pn	17 51 32.9	+1.1
DNIZ				IAML		17 52 20.0	
	comp=N,153nm,0.4s						
GCAM	G?zelcaml?	2.57	347	P	Pn	17 51 34.3	+2.5
ESEN	Aydn-Nazilli	2.61	6	P	Pn	17 51 32.7	+0.3
ESEN				S	Sn	17 52 02.8	-1.2
SMG	Samos	2.67	340	P	Pn	17 51 32.7	-0.5
APE	Apeiranthos	2.72	314	Pn	Pn	17 51 35.3	+1.3
APE	Apeiranthos	2.72	314	P	Pn	17 51 34.1	+0.4
AYBB	Zeytinkoy-Aydi	2.74	358	Pn	Pn	17 51 35.7	+1.4
ANTB	Antalya	2.75	51	Pn	Pn	17 51 36.0	+1.8
NAZL	Nazilli-Aydin	2.77	5	Pn	Pn	17 51 35.5	+0.9
INCE	Denizli-Bozkur	2.81	27	P	Pn	17 51 36.2	+0.9
INCE				S	Sn	17 52 10.3	+1.1
SULTU	Buldan	2.91	12	P	Pn	17 51 36.7	0.0
SULTU				IAML		17 52 36.0	
	comp=N,110nm,1.1s						
IZMR	zmir-demi	2.93	359	P	Pn	17 51 37.4	+0.6
IZMR				S	Sn	17 52 10.3	-1.7
DGB	zmir	2.98	343	S	Sb	17 52 17.3	-2.4
KIRA	zmir-Kiraz	3.01	6	P	Pn	17 51 36.9	-1.1
DUVT	Torbali	3.04	352	P	Pn	17 51 38.2	-0.1
ODEM	Odemis-Izmir	3.07	1	Pn	Pn	17 51 40.1	+1.3
VAM

MVOU	**Mavrovouni**	**4.63**	**91**	P	**Pn**	17 52 01.0	+0.8
MVOU				S	**Sn**	17 52 55.0	+1.1
MVOU				AML	AML	17 52 56.6	
	0.1nm,1.1s						
HNTI	**Hanita**	**6.32**	**107**	P	**Pn**	17 52 24.1	+0.6
HNTI				S	**Sn**	17 53 35.4	-0.3
BRTR	**Keskin Array B**	**6.37**	**43**	Pn	**Pn**	17 52 24.8	+0.6
	0.2nm,0.3s,baz=218,slow=15,SNR=11						
BRTR				Sn	**Sn**	17 53 37.8	+0.7
	0.2nm,0.3s,baz=206,slow=26,SNR=7.2						
	1.7nm,0.7s						
MMC7	**Mount Meron ar**	**6.52**	**107**	P	**Pn**	17 52 26.8	+0.7
MMAI	**Mount Meron Ar**	**6.53**	**107**	Pn	**Pn**	17 52 27.3	+1.0
	3.3nm,0.3s,baz=317,slow=9.8,SNR=3.4						
	1.3nm,0.3s						
SLTI	**Sal'it**	**6.58**	**115**	P	**Pn**	17 52 27.6	+0.7
SLTI				S	**Sn**	17 53 41.6	-0.3
GEM	**Giv'at Ha'Em**	**6.66**	**105**	P	**Pn**	17 52 28.8	+0.7
GEM				S	**Sn**	17 53 43.6	-0.4
NATI	**Neve Ativ**	**6.70**	**105**	P	**Pn**	17 52 29.4	+0.8
NATI				S	**Sn**	17 53 45.1	+0.1
SALP	**Salfit**	**6.77**	**115**	P	**Pn**	17 52 30.0	+0.4
SALP				S	**Sn**	17 53 46.4	-0.4
MMLI	**Mount Malkishu**	**6.77**	**112**	P	**Pn**	17 52 30.3	+0.7
MMLI				S	**Sn**	17 53 46.5	-0.4
AMAZ	**Amatzia**	**6.85**	**120**	P	**Pn**	17 52 31.4	+0.7
AMAZ				S	**Sn**	17 53 48.4	-0.5
KZIT	**Kziot**	**6.88**	**127**	P	**Pn**	17 52 31.4	+0.4
KZIT				S	**Sn**	17 53 48.9	-0.5
HMDT	**Nahal Hemdat**	**6.94**	**113**	P	**Pn**	17 52 32.6	+0.7
HMDT				S	**Sn**	17 53 50.4	-0.4
YTIR	**Yattir**	**7.09**	**121**	P	**Pn**	17 52 34.8	+0.8
YTIR				S	**Sn**	17 53 54.4	-0.3
DSI	**Dead Sea**	**7.17**	**118**	P	**Pn**	17 52 35.6	+0.6
DSI				S	**Sn**	17 53 56.1	-0.3
MSBI	**Mazada**	**7.29**	**120**	P	**Pn**	17 52 37.3	+0.7
MSBI				S	**Sn**	17 53 59.1	-0.4
RMNI	**Mount Ramon**	**7.32**	**127**	P	**Pn**	17 52 37.8	+0.6
RMNI				S	**Sn**	17 53 60.0	-0.3
GHAJ	**Ghor Haditha**	**7.44**	**119**	P	**Pn**	17 52 39.3	+0.5
GHAJ				S	**Sn**	17 54 02.9	-0.4
IDAN	**Idan**	**7.51**	**123**	P	**Pn**	17 52 40.3	+0.6
IDAN				S	**Sn**	17 54 04.5	-0.5
KRMI	**Paran Flat**	**7.61**	**130**	P	**Pn**	17 52 41.5	+0.3
KRMI				S	**Sn**	17 54 07.1	-0.4
ZFRI	**Zfri**	**7.62**	**125**	P	**Pn**	17 52 41.9	+0.7
ZFRI				S	**Sn**	17 54 06.9	-0.6
PRNI	**Paran**	**7.63**	**127**	P	**Pn**	17 52 42.2	+0.7
PRNI				S	**Sn**	17 54 07.7	-0.3
HRFI	**Mount Harif**	**7.87**	**129**	P	**Pn**	17 52 45.1	+0.5
HRFI				S	**Sn**	17 54 13.2	-0.5
MBRI	**Mt Berech**	**7.96**	**131**	P	**Pn**	17 52 46.6	+0.7
MBRI				S	**Sn**	17 54 16.1	+0.1
ASF	**Jabal al Asfar**	**8.02**	**110**	Pn	**Pn**	17 52 45.3	-1.5
	0.4nm,0.3s,baz=309,slow=6.5,SNR=1.5						
ASF				Sn	**Sn**	17 54 18.5	+1.0
	0.3nm,0.3s,baz=288,slow=13,SNR=1.6						
	1.6nm,0.3s						
EIL	**Elat**	**8.06**	**131**	Pn	**Pn**	17 52 48.0	+0.6
	1.3nm,0.3s,baz=319,slow=4.0,SNR=21						
EIL				Sn	**Sn**	17 54 13.6	-5.0
	1.5nm,0.3s,baz=11,slow=5.2,SNR=6.3						
	3.0nm,0.3s						
EIL	**Elat**	**8.06**	**131**	P	**Pn**	17 52 48.0	+0.6
EIL				S	**Sn**	17 54 16.2	-2.4
MLR	**Muntele Rosu**	**10.39**	**352**	Pn	**Pn**	17 53 22.9	+3.5
	0.1nm,0.3s,baz=202,slow=12,SNR=3.2						
GERES	**GERESS Array B**	**17.23**	**327**	P	**Pn**	17 54 51.0	0.0
	baz=135,slow=13,SNR=4.3						
	0.5nm,0.7s						
ESDC	**Sonseca Array**	**25.68**	**290**	P	**P**	17 56 18.9	-1.5
	0.7nm,0.6s,baz=81,slow=10,SNR=9.6						
	0.7nm,0.6s						
FINES	**FINESS Array B**	**26.29**	**358**	P	**P**	17 56 23.6	-1.8
	0.4nm,0.4s,baz=160,slow=13,SNR=4.2						
	0.4nm,0.4s						
HFS	**Hagfors**	**26.62**	**344**	P	**P**	17 56 26.8	-1.7
	0.5nm,0.5s,baz=143,slow=10,SNR=1.3						
	0.5nm,0.5s						
NOA	**NORSAR Array B**	**28.00**	**343**	P	**P**	17 56 41.3	+0.4
	1.3nm,1.1s,baz=156,slow=11,SNR=2.7						
	1.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**32.34**	**234**	P	**P**	17 57 19.1	-0.6
	1.1nm,0.8s,baz=7.0,slow=4.7,SNR=6.5						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**39.30**	**51**	P	**P**	17 58 18.8	-0.2
	0.4nm,0.6s,baz=276,slow=9.1,SNR=8.6						
KURBB				PcP	**PcP**	18 00 28.0	+0.4
	0.1nm,0.6s,baz=276,slow=3.8,SNR=0.9						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**41.82**	**57**	P	**P**	17 58 40.5	+0.6
	0.3nm,0.6s,baz=278,slow=6.6,SNR=5.0						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**43.30**	**46**	P	**P**	17 58 51.1	-0.8
	0.3nm,0.4s,baz=258,slow=7.2,SNR=2.0						
	0.3nm,0.4s						
SPITS	**Spitsbergen Ar**	**43.37**	**357**	P	**P**	17 58 52.5	+0.4
	10nm,1.2s,baz=152,slow=6.5,SNR=1.6						
	10nm,1.2s						
SONM	**Songino Array**	**57.66**	**51**	P	**P**	18 00 41.2	+0.5
	0.5nm,0.7s,baz=288,slow=7.8,SNR=4.2						
	0.5nm,0.7s						

NEIC ***14*** *17:54:52.3±1.4, 43.°41N±0.°04×17.°79E±0.°05, h5km±1km, ML3.3/48, Error ellipse: s-maj=8.7km s-min=3.0km az=224.0*

PDG ***14*** *17:54:52.4±0.2, 43.°43N×17.°71E, h5km, MD3.4/3, ML3.3/13, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

BEO ***14*** *17:54:52.2±0.3, 43.°49N×17.°65E, h4km±2km, ML3.2/14*

PRU ***14*** *17:54:54.4, 43.°67N×18.°19E, h1km*

ISC 14 17:54:52.1±1.1, 43.°46N±0.°02×17.°73E±0.°02, h5km±8km, n143, σ1s23/220, 10C-16D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
				Op			h m s	
MAKA	**Makarska**	**0.55**	**252**	*i*	Pg	**Pg**	17 55 02.5	-0.2
MAKA					Sg	**Sb**	17 55 11.4	-0.9
STON	**Ston**	**0.59**	**182**	*e*	Pg	**Pg**	17 55 02.9	-0.5
STON					Sg	**Sb**	17 55 12.0	-1.5
STON	**Ston**	**0.59**	**182**	*e*	Pg	**Pg**	17 55 02.9	-0.5
STON				*e*	Sg	**Sb**	17 55 12.4	-1.1
BRY	**Bratogost**	**0.81**	**133**	⇓ *i*	Pg	**Pg**	17 55 07.0	-0.7
BRY				*e*	Sg	**Sb**	17 55 20.2	+0.1
DBRK	**Dubrovnik**	**0.84**	**159**	*e*	Pg	**Pg**	17 55 07.4	-0.9
DBRK					Sg	**Sb**	17 55 19.9	-1.0
UPM	**Unac-Piva**	**0.89**	**106**	⇓ *i*	Pg	**Pg**	17 55 08.9	-0.4
UPM					Sg	**Sb**	17 55 22.8	+0.3
LSTV	**Lastovo**	**0.92**	**222**	*e*	Pg	**Pg**	17 55 08.8	-1.1
LSTV					Sg	**Sb**	17 55 23.1	-0.1
HVAR	**Hvar**	**0.98**	**254**	*i*	Pg	**Pg**	17 55 10.1	-0.8
HVAR					Sg	**Sn**	17 55 25.8	-1.0
KIJV	**Kijevo**	**1.11**	**300**	*i*	Pg	**Pb**	17 55 13.7	-0.1
KIJV					Sn	**Sn**	17 55 32.0	+2.1
NKME	**Niksic**	**1.13**	**127**	⇓ *i*	Pg	**Pg**	17 55 13.0	-0.8
NKME				*e*	Sg	**Sn**	17 55 30.8	+0.2
HCY	**Herceg Novi**	**1.16**	**151**	⇑ *i*	Pg	**Pg**	17 55 13.4	-0.9
HCY				*e*	Sg	**Sn**	17 55 31.3	+0.2
PLE	**Pljevlja**	**1.22**	**95**	⇓ *i*	Pg	**Pb**	17 55 15.2	-0.5
PLE				*i*	Sg	**Sn**	17 55 34.2	+1.4
CEME	**Cevo**	**1.26**	**136**	⇓ *i*	Pg	**Pg**	17 55 15.2	-1.1
CEME				*e*	Sg	**Sn**	17 55 34.7	+0.9
BBLS	**Lazi&#263i**	**1.28**	**71**	*e*	Pg	**Pg**	17 55 16.4	-0.3
BBLS				*e*	Sg	**Sb**	17 55 33.8	+0.2
BLY	**Banja Luka**	**1.35**	**343**	⇑	P	**Pb**	17 55 18.2	+0.3
BLY				⇓	S	**Sn**	17 55 37.1	+1.2
BLY	**Banja Luka**	**1.35**	**343**	*e*	Pg	**Pg**	17 55 17.9	0.0
BLY				*e*	Sg	**Sg**	17 55 35.2	-0.3
BUM	**Brajici-Budva**	**1.44**	**143**	⇑ *i*	Pg	**Pb**	17 55 18.8	-0.6
BUM				*e*	Sg	**Sn**	17 55 40.6	+2.4
KOME	**Kolasin**	**1.44**	**114**	⇓ *i*	Pg	**Pb**	17 55 19.4	-0.1
KOME				*e*	Sg	**Sn**	17 55 41.6	+3.3
PDG	**Podgorica**	**1.52**	**132**			**Pn**	17 55 19.6	-0.3
PDG					Sn	**Sb**	17 55 39.1	-1.2
PDG					IAML		17 55 52.4	
	comp=E,272nm,0.6s							
PDG	**Podgorica**	**1.52**	**132**	⇑	P	**Pn**	17 55 19.7	-0.3
PDG				⇓	S	**Sg**	17 55 40.2	-0.7
PDG	**Podgorica**	**1.52**	**132**	⇓ *i*	Pg	**Pb**	17 55 20.0	-0.8
PDG				*i*	Sg	**Sg**	17 55 43.8	+2.9
PDG	**Podgorica**	**1.52**	**132**	*e*	Pn	**Pb**	17 55 20.0	-0.8
PDG				*e*	Sn	**Sg**	17 55 41.9	+1.0
MORI	**Morici**	**1.52**	**286**	*e*	Pn	**Pg**	17 55 20.6	-0.7
MORI					Sn	**Sg**	17 55 42.2	+1.1
ZIRJ	**Zirje**	**1.53**	**278**	*i*	Pg	**Pg**	17 55 20.6	-0.9
ZIRJ					Sg	**Sg**	17 55 43.4	+2.1
SJES	**Sjenica**	**1.65**	**96**	*e*	Pn	**Pg**	17 55 22.9	-0.8
SJES				*e*	Sn	**Sg**	17 55 45.4	+0.4
DRME	**Dracevica, Mon**	**1.66**	**139**	⇑ *i*	Pn	**Pg**	17 55 22.8	-1.2
DRME				*e*	Sn	**Sg**	17 55 47.3	+1.8
IVA	**Berane**	**1.69**	**110**	⇓ *i*	Pn	**Pg**	17 55 23.9	-0.6
IVA				*e*	Sn	**Sg**	17 55 48.9	+2.6
DIVS	**Divibare**	**1.76**	**68**	*e*	Pn	**Pn**	17 55 23.7	+0.4
DIVS				*e*	Sn	**Sb**	17 55 47.4	+0.1
IVAS	**Ivanjica**	**1.77**	**85**	*e*	Pn	**Pn**	17 55 23.4	0.0
IVAS				*e*	Sn	**Sg**	17 55 48.4	-0.4
UDBI	**Udbina**	**1.78**	**308**	*e*	Pg	**Pg**	17 55 25.9	-0.3
UDBI					Sg	**Sg**	17 55 50.4	+1.2
PVY	**Plav**	**1.85**	**117**	*e*	Pn	**Pg**	17 55 27.2	-0.3
PVY				*e*	Sn	**Sg**	17 55 53.7	+2.2
ULC	**Ulcinj**	**1.86**	**143**	*e*	Pn	**Pb**	17 55 26.2	-0.5
ULC				*e*	Sn	**Sg**	17 55 52.8	+0.8
DUGI	**Dugi Otok**	**2.01**	**286**	*i*	Pg	**Pb**	17 55 28.9	-0.3
DUGI					Sg	**Sg**	17 55 57.3	+0.6
PLIT	**Plitvice**	**2.08**	**314**	*e*	Pg	**Pb**	17 55 30.5	+0.2
PLIT					Sg	**Sg**	17 55 59.9	+1.0
TRUS	**Trudelj**	**2.08**	**68**	*e*	Pn	**Pn**	17 55 27.7	0.0
TRUS				*e*	Sn	**Sn**	17 55 55.1	+1.1
VIRC	**Vir**	**2.11**	**294**	*e*	Pg	**Pb**	17 55 30.7	-0.2
VIRC					Sg	**Sg**	17 56 00.4	+0.5
GRUS	**Gruza**	**2.21**	**78**	*e*	Pn	**Pn**	17 55 29.8	+0.4
GRUS				*e*	Sn	**Sb**	17 55 58.9	-1.2
FRGS	**Fruska Gora**	**2.26**	**41**	*e*	Pn	**Pn**	17 55 29.8	-0.4
FRGS				*e*	Sn	**Sn**	17 55 59.6	+1.1
MOSL	**Moslavina**	**2.27**	**342**	*e*	Pn	**Pn**	17 55 30.4	+0.2
MOSL					Sn	**Sb**	17 56 01.6	-0.2
GOCS	**Kraljevo Serbi**	**2.29**	**86**	*e*	Pn	**Pn**	17 55 31.6	+1.0
GOCS				*e*	Sn	**Sb**	17 56 01.0	-1.6
NVLJ	**Novalja**	**2.34**	**299**	*i*	Pn	**Pn**	17 55 32.5	+1.3
NVLJ					Sn	**Sb**	17 56 02.5	-1.5
AVAS	**Avala Beograd**	**2.36**	**57**	*e*	Pn	**Pn**	17 55 31.6	+0.1
AVAS				*e*	Sn	**Sn**	17 56 01.7	+0.9
SELS	**Selova**	**2.48**	**94**	*e*	Pn	**Pn**	17 55 33.7	+0.5
SELS				*e*	Sn	**Sb**	17 56 06.2	-1.9
RABC	**Rab**	**2.49**	**302**	*e*	Pg	**Pg**	17 55 38.6	-1.2
RABC					Sg	**Sg**	17 56 12.1	+0.1
OZLJ	**Ozalj**	**2.70**	**324**	*e*	Pn	**Pn**	17 55 37.1	+0.9
BOJS	**Bojanci**	**2.71**	**320**	*i*	Pn	**Pn**	17 55 37.7	+1.4
PTJ	**Puntijarka**	**2.75**	**333**	*i*	Pn	**Pn**	17 55 37.6	+0.6
KALN	**Kalnik**	**2.82**	**342**	*i*	Pn	**Pn**	17 55 38.1	+0.1
MORH	**Mrgy, Hungar**	**2.83**	**13**	⇓	P	**Pn**	17 55 37.8	-0.2
BOVS	**Bovan**	**2.90**	**85**	⇑	P	**Pn**	17 55 38.8	0.0
BOVS	**Bovan**	**2.90**	**85**	*e*	Pn	**Pn**	17 55 39.9	+1.0
BOVS				*e*	Sn	**Sn**	17 56 15.2	+1.2
MATE	**Matera**	**2.91**	**196**	⇑	P	**Pn**	17 55 38.5	-0.5
LOBO	**Lobor**	**2.94**	**337**	*e*	Pn	**Pn**	17 55 40.7	+1.2
ACER	**Acerenza**	**2.98**	**207**	Pn		**Pn**	17 55 39.6	-0.5
ACER				IAML			17 56 38.3	
	comp=E,220nm,0.8s							
KUBS	**Kucevo**	**3.00**	**70**	*e*	Pn	**Pn**	17 55 39.9	-0.5
BARS	**Barje**	**3.06**	**101**	*e*	Pn	**Pn**	17 55 41.5	+0.4
VRSS	**Vrsac**	**3.07**	**56**	*e*	Pn	**Pn**	17 55 41.2	-0.1
BEHE	**Becsehely**	**3.09**	**348**	Pn		**Pn**	17 55 42.1	+0.6
BORS2	**Bor- Borsko je**	**3.17**	**77**	*e*	Pn	**Pn**	17 55 42.5	-0.2
INTR	**Introdacqua**	**3.17**	**244**	Pn		**Pn**	17 55 42.6	-0.1
INTR				IAML			17 56 54.8	
	comp=E,76nm,0.9s							
INTR				IAML			17 57 04.2	
	comp=N,142nm,0.9s							
GUMA	**Gualdo di Mace**	**3.24**	**264**	Pn		**Pn**	17 55 44.5	+0.9
GUMA				IAML			17 56 52.0	
	comp=N,137nm,0.7s							
OHR	**Ohrid**	**3.27**	**135**	*e*	Pg	**Pn**	17 55 46.6	+2.6
OHR				*e*	Sn	**Sg**	17 56 39.3	+2.2
ZAGS	**Zajecar**	**3.29**	**82**	*e*	Pn	**Pn**	17 55 45.0	+0.7
CAMP	**Campotosto**	**3.30**	**255**	Pn		**Pn**	17 55 45.5	+0.9
CAMP				Sn		**Sn**	17 56 26.4	+2.1
CAMP				IAML			17 56 33.3	
	comp=E,44nm,0.9s							
PAOL	**Paolisi**	**3.38**	**225**	Pn		**Pn**	17 55 44.8	-0.8
PAOL				Sn		**Sn**	17 56 26.1	0.0
PAOL				IAML			17 56 60.0	
	comp=N,57nm,2.8s							
GROS	**Grobnik**	**3.39**	**333**	*i*	Pn	**Pn**	17 55 46.3	+0.5
FDMO	**Fiordimonte**	**3.42**	**265**	Pn		**Pn**	17 55 46.1	0.0
FDMO				Sn		**Sn**	17 56 28.6	+1.6
NRCA	**Norcia**	**3.44**	**261**	Pn		**Pn**	17 55 47.5	+1.1
NRCA				IAML			17 56 45.5	
	comp=E,40nm,0.5s							
BZS	**Buzias**	**3.52**	**51**	⇓	P	**Pn**	17 55 47.0	-0.4
ZAPS	**Zavoj**	**3.58**	**91**	*e*	Pn	**Pn**	17 55 49.2	+0.9
CRNS	**Crni Vrh**	**3.60**	**318**	*e*	Pn	**Pn**	17 55 50.4	+1.9
BOSS	**Bosilegrad**	**3.61**	**104**	*e*	Pn	**Pn**	17 55 50.5	+1.7
TRI	**Trieste**	**3.62**	**310**	Pn		**Pn**	17 55 49.0	+0.1
TRI				Sn		**Sn**	17 56 33.6	+1.7
HERR	**Herculane**	**3.66**	**66**	⇑	P	**Pn**	17 55 49.4	0.0
SOKA	**Soboth**	**3.74**	**330**	*e*	Pn	**Pn**	17 55 51.6	+1.0
	comp=E,0.9nm,0.2s,SNR=15							
SOKA				*i*	Sn	**Sn**	17 56 33.5	-1.6
	comp=E,0.1nm,0.1s							
CUC	**Castrocucco**	**3.75**	**203**	Pn		**Pn**	17 55 50.0	-0.6
CUC				IAML			17 57 04.8	
	comp=N,39nm,2.8s							
CUC				IAML			17 57 13.8	
	comp=E,51nm,0.8s							
OBKA	**Obir**	**3.79**	**325**	*i*	Pn	**Pn**	17 55 52.5	+1.2
	comp=E,1.5nm,0.2s							
OBKA				*i*	Sn	**Sn**	17 56 39.6	+3.2
	comp=E,2.7nm,0.3s							
MURB	**Monte Urbino**	**3.80**	**269**	Pn		**Pn**	17 55 52.7	+1.2
MURB				IAML			17 56 45.2	
	comp=E,106nm,0.5s							
CESX	**Cesi**	**3.87**	**259**	Pn		**Pn**	17 55 52.6	+0.2
CESX				Sn		**Sn**	17 56 38.3	+0.2
CESX				IAML			17 56 46.3	
	comp=N,41nm,0.8s							
CESX				IAML			17 56 56.5	
	comp=E,43nm,0.6s							
SABO	**M.te Sabotino**	**3.88**	**312**	Pn		**Pn**	17 55 54.0	+1.6
SABO				Sn		**Sn**	17 56 41.4	+3.1
KEK	**Kerkira**	**4.05**	**157**	Pn		**Pn**	17 55 53.5	-1.3
KEK				Sn		**Sn**	17 56 40.6	-1.9
KEK				IAML			17 56 55.3	
	comp=N,61nm,1.7s							
KEK				IAML			17 58 25.7	
	comp=E,53nm,2.4s							
ARSA	**Arzberg**	**4.10**	**338**	Pn		**Pn**	17 55 56.0	+0.5
ARSA				Sn		**Sn**	17 56 44.6	+0.8
ARSA	**Arzberg**	**4.10**	**338**	*i*	Pn	**Pn**	17 55 56.3	+0.8
	comp=E,8.1nm,0.4s,SNR=21							
ARSA				*i*	Sn	**Sn**	17 56 45.2	+1.4
	comp=E,4.7nm,0.4s							
GZR	**Gura Zlata**	**4.10**	**60**	⇑	P	**Pn**	17 55 55.5	0.0
VAY	**Valandovo**	**4.17**	**119**	*e*	Pg	**Pg**	17 56 09.6	-2.5
VAY				*e*	Sn	**Sg**	17 57 07.9	+1.8
PRED	**Cave del Predi**	**4.20**	**317**	Pn		**Pn**	17 55 57.3	+0.4
MYKA	**Terra Mystica**	**4.30**	**319**	*i*	Pn	**Pn**	17 55 56.5	-1.7
	comp=E,0.4nm,0.2s							
MYKA				*e*	Sg	**Sg**	17 57 12.4	+2.4
	comp=E,1.9nm,0.3s							
TIP	**Timpagrande**	**4.34**	**190**	Pn		**Pn**	17 55 58.3	-0.5
TIP				IAML			17 56 45.9	
	comp=E,26nm,3.0s							
TIP				IAML			17 57 36.6	
	comp=N,26nm,2.5s							
TIP	**Timpagrande**	**4.34**	**190**	⇓	P	**Pn**	17 55 58.1	-0.7
RONA	**Rosalia, Austr**	**4.36**	**347**	*i*	Pn	**Pn**	17 56 00.2	+1.1
	comp=N,0.9nm,0.1s							
RONA				*i*	Sn	**Sn**	17 56 49.7	-0.6
	comp=N,3.5nm,0.3s							
SRO	**Srobarova**	**4.38**	**5**	*e*	PN	**Pn**	17 56 00.8	+1.6
STAL	**STALIGIAL**	**4.54**	**310**	Pn		**Pn**	17 56 01.7	+0.2
STAL				IAML			17 57 30.7	
	comp=N,44nm,0.7s							
STAL				IAML			17 57 41.9	
	comp=E,52nm,0.8s							
CONA	**Conrad Observa**	**4.66**	**344**	*i*	Pn	**Pn**	17 56 04.2	+1.0
	comp=E,3.4nm,0.3s							
CONA				*i*	Sn	**Sn**	17 56 55.8	-1.9
	comp=E,4.2nm,0.3s							
PSZ	**Piszkesteto**	**4.71**	**18**	Pn		**Pn**	17 56 03.8	-0.1
PSZ				IAML			17 57 25.0	
	comp=N,16nm,4.4s							
PSZ				IAML			17 57 28.6	
	comp=E,15nm,4.0s							
PSZ	**Piszkesteto**	**4.71**	**18**	⇓	P	**Pn**	17 56 03.8	-0.1
TEOL	**Teolo**	**4.74**	**296**	Pn		**Pn**	17 56 05.1	+0.8
KBA	**Koelnbreinsper**	**4.76**	**321**	*e*	Pn	**Pn**	17 56 02.6	-2.1
	comp=E,2.1nm,0.5s							
LIT	**Litokhoron**	**4.89**	**132**	Pn		**Pn**	17 56 05.6	-0.7
LIT				IAML			17 57 34.6	
	comp=N,19nm,0.5s							
LIT				IAML			17 57 35.7	
	comp=E,15nm,1.6s							
MODS	**Modra-Piesok**	**4.93**	**356**	*e*	PN	**Pn**	17 56 07.6	+0.8
MODS				*e*	SN	**Sn**	17 57 03.2	-1.0
ABTA	**Abfaltersbach**	**4.95**	**313**	*i*	Pn	**Pn**	17 56 08.3	+1.1
	comp=E,2.5nm,0.3s,SNR=7.5							
ABTA				*i*	Sn	**Sn**	17 57 04.3	-0.5
	comp=E,1.3nm,0.3s							
ZCCA	**Zocca**	**4.96**	**283**	Pn		**Pn**	17 56 08.0	+0.7
MARR	**Marisel-Cluj**	**4.99**	**48**	⇑	P	**Pn**	17 56 07.5	-0.3
MOA	**Molln**	**5.02**	**332**	*e*	Pn	**Pn**	17 56 09.5	+1.4
	comp=E,0.8nm,0.1s,SNR=10							
MOA				*e*	Sn	**Sn**	17 57 07.1	+0.6
	comp=E,1.2nm,0.2s							
CTI	**Castel Tesino**	**5.05**	**303**	Pn		**Pn**	17 56 09.0	+0.4
CTI				IAML			17 57 10.5	
	comp=E,33nm,0.3s							
BIOA	**Bad Ischl, Aus**	**5.12**	**327**	*i*	Pn	**Pn**	17 56 08.5	-0.9
	comp=E,4.9nm,0.3s							
BIOA				*e*	Sn	**Sn**	17 57 07.8	-1.1
	comp=E,0.3nm,0.1s							
LESA	**Schwarzleotal**	**5.33**	**320**	*i*	Pn	**Pn**	17 56 13.0	+0.6
	comp=E,1.1nm,0.2s,SNR=14							
LESA				*i*	Sn	**Sn**	17 57 13.5	-0.7
	comp=E,1.2nm,0.3s							
CEL	**Celeste**	**5.38**	**196**	Pn		**Pn**	17 56 12.6	-0.4
KECS	**Kecovo**	**5.38**	**20**	*e*	PN	**Pn**	17 56 16.8	+3.8
KECS				*e*	SN	**Sn**	17 57 13.7	-1.6
JAVC	**Velka Javorina**	**5.40**	**360**	*e*	PN	**Pn**	17 56 14.2	+0.8
VOIR		**5.60**	**67**	⇓	P	**Pn**	17 56 15.9	-0.2
KRUC	**Moravsky**	**5.68**	**351**	*e*	PN	**Pn**	17 56 17.3	+0.1
KRUC				*e*	SN	**Sn**	17 57 20.7	-2.0
WTTA	**Wattenberg**	**5.74**	**314**	*i*	Pn	**Pn**	17 56 15.2	-2.9
	comp=E,5.2nm,0.4s							
WTTA				*i*	Sn	**Sn**	17 57 22.1	-2.3
	comp=E,2.3nm,0.4s							
WATA	**Walderalm**	**5.81**	**314**	*i*	Pn	**Pn**	17 56 17.7	-1.4
	comp=E,1.4nm,0.3s							
WATA				*i*	Sn	**Sn**	17 57 25.5	-0.8
	comp=E,2.4nm,0.3s							
CKRC	**Cesky Krumlov**	**5.87**	**337**	*e*	PN	**Pn**	17 56 21.2	+1.5
CKRC				*e*	SN	**Sn**	17 57 26.4	-0.9
SQTA	**Sankt Quirin**	**5.94**	**312**	*e*	Pn	**Pn**	17 56 20.8	0.0
	comp=E,1.3nm,0.3s							
SQTA				*i*	Sn	**Sn**	17 57 28.1	-1.2
	comp=E,5.9nm,0.6s							
GEC2	**GERESS Array S**	**6.07**	**334**	Pn		**Pn**	17 56 22.5	-0.1
MOTA	**Moosalm**	**6.07**	**312**	*i*	Pn	**Pn**	17 56 21.8	-0.8
	comp=E,0.5nm,0.1s,SNR=7.9							
MOTA				*i*	Sn	**S

H01W1	**Cape Leeuwin H**	**39.83 269**	T	T	18 48 30.7		
	baz=125,slow=75,SNR=22						
H01W2	**Cape Leeuwin H**	**39.84 269**	T	T	18 48 33.9		
	baz=125,slow=75,SNR=19						
H01W3	**Cape Leeuwin H**	**39.85 269**	T	T	18 48 28.2		
	baz=125,slow=75,SNR=22						
FINES	**FINESS Array B**	**152.93 316**	PKPbc	**PKiKP**	**18 18 27.8**	**-0.1**	
	1.5nm,0.9s,baz=56,slow=6.1,SNR=4.3						

*IDC **14** 18:02:09.4±2.0, 7°.17S×129°.25E, h166km±23km, mb2.9/2, mbtmp3.7/7, Error ellipse: s-maj=33.8km s-min=19.7km az=95.0*
ISC 14 18:02:06.5±0.9, **7°.30S**±0°.06×**129°.33E**±0°.10, **h150**km, **n7,** σ**4**s**34/12, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.30**	**242**	P		**P**	**Pn**	**18 03 40.5**	**+3.2**
	47nm,0.4s,baz=52,slow=11,SNR=26								
BATI				S			**Sn**	**18 04 43.5**	**-4.8**
	49nm,0.3s,baz=59,slow=22,SNR=16								
SIJI	**Sorong**	**6.67**	**17**	P		**P**	**Pn**	**18 03 44.1**	**+1.9**
	8.9nm,0.9s,baz=198,slow=20,SNR=9.2								
SIJI				S			**Sn**	**18 04 51.0**	**-6.3**
	6.9nm,0.3s,baz=242,slow=22,SNR=12								
FITZ	**Fitzroy Crossi**	**11.32**	**198**	P		**P**	**Pn**	**18 04 46.9**	**+3.0**
	1.7nm,0.8s,baz=15,slow=11,SNR=10								
FITZ				S			**Sn**	**18 06 44.1**	**-4.9**
	2.6nm,0.3s,baz=155,slow=16,SNR=6.6								
WRA	**Warramunga Arr**	**13.47**	**159**	P		**P**	**Pn**	**18 05 14.9**	**+3.2**
	0.6nm,0.6s,baz=342,slow=12,SNR=56								
WRA				S			**Sn**	**18 07 38.4**	**-2.6**
	1.3nm,0.5s,baz=331,slow=21,SNR=6.5								
ASAR	**Alice Springs**	**16.85**	**165**	P		**P**	**Pn**	**18 05 58.2**	**+4.6**
	2.6nm,0.4s,baz=347,slow=11,SNR=140								
ASAR				S			**S**	**18 08 56.5**	**-4.6**
	0.5nm,0.7s,baz=344,slow=26,SNR=4.8								
MKAR	**Makanchi Array**	**68.12**	**327**	P		**P**	**P**	**18 12 50.0**	**-0.2**
	0.2nm,0.5s,baz=119,slow=7.7,SNR=6.4								
	0.2nm,0.5s								
KURBB	**Kurchatov Arra**	**72.42**	**329**	P		**P**	**P**	**18 13 17.1**	**+0.9**
	0.2nm,0.6s,baz=111,slow=5.1,SNR=1.8								
	0.2nm,0.6s								

IDC 14 18:05:50.4±1.8, **5°.79S×125°.31E, h0**km, **mb3.5**/1, **mbtmp3.7**/4, **ML3.7**/2, **MS3.1**/2, **Error ellipse: s-maj=57.8km s-min=25.6km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.68**	**200**	Pn		Pn	Pn	18 07 02.3	0.0
	3.2nm,0.3s,baz=28,slow=15,SNR=4.1								
BATI				Sn			Sn	18 07 58.6	+1.3
	0.4nm,0.3s,baz=14,slow=19,SNR=0.9								
BATI				LR			LR	18 09 24.2	
	comp=Z,182nm,18.1s,baz=331,slow=46								
	13nm,0.4s								
FITZ	**Fitzroy Crossi**	**12.24**	**178**	LR			LR	18 14 11.7	
	comp=Z,72nm,18.2s,baz=3.5,slow=41								
WRA	**Warramunga Arr**	**16.58**	**149**	Pn			Pn	18 09 42.8	-1.7
	1.3nm,0.8s,baz=326,slow=13,SNR=2.6								
ASAR	**Alice Springs**	**19.61**	**156**	P			Pn	18 10 21.1	-0.6
	0.2nm,0.3s,baz=338,slow=13,SNR=11								
	2.3nm,0.7s								
MKAR	**Makanchi Array**	**64.72**	**329**	P			P	18 16 30.5	0.0
	0.4nm,0.8s,baz=148,slow=5.0,SNR=4.9								
	0.4nm,0.8s								

*IDC **14** 18:44:22.1±0.9, 30°.98N×137°.71E, h0km, mb3.7/10, mbtmp3.7/14, ML3.2/4, MS2.7/2, Error ellipse: s-maj=23.8km s-min=16.6km az=86.0*
*NIED **14** 18:44:22.9, 31°.13N×137°.60E, h46km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.04; $M_{\theta\theta}$-2.38; $M_{\phi\phi}$-0.66; $M_{r\theta}$-3.21; $M_{\theta\phi}$-1.43; $M_{\phi r}$-1.86; Fault plane solution: $M_0$4.84000×10^{14} NP1: ϕ_s61.00000°, δ20.00000°, λ91.00000°. NP2:ϕ_s240.00000°, δ70.00000°, λ90.00000°.*
*JMA **14** 18:44:22.9±0.4, 31°.2N×137°.6E±0°.9, h46km, MV4.2/20, SHIKOKU BASIN*
ISC 14 18:44:27.6±0.9, **31°.18N**±0°.08×**137°.62E**±0°.06, **h35**km, **n26,** σ**2**s**25/30, mb3.7**/10, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**2.54**	**344**	*eP*		**Pn**	**Pn**	**18 45 03.6**	**-2.4**
TTO1				eS			**Sn**	**18 45 34.1**	**-1.5**
TTO2	**TONANKAI O.B.S**	**2.60**	**349**	*eP*		**Pn**	**Pn**	**18 45 04.6**	**-2.3**
JHJ	**Hachijo jima 2**	**2.67**	**43**	Pn		**Pn**	**Pn**	**18 45 06.1**	**-2.0**
	17nm,0.3s,baz=217,slow=8.6,SNR=5.4								
JHJ				Sn			**Sn**	**18 45 35.9**	**-3.3**
	15nm,0.3s,baz=52,slow=22,SNR=1.9								
	65nm,0.9s								
TTO3	**TONANKAI O.B.S**	**2.69**	**356**	*eP*		**Pn**	**Pn**	**18 45 05.8**	**-2.3**
JWKM	**Wakayamakushim**	**2.76**	**326**	P		**Pn**	**Pn**	**18 45 06.2**	**-3.1**
JWKM				eS			**Sn**	**18 45 38.5**	**-3.0**
JTNC	**Tanabenakahech**	**3.13**	**328**	P		**Pn**	**Pn**	**18 45 11.7**	**-2.8**
JTNC				eS			**Sn**	**18 45 48.0**	**-2.6**
JIE	**Ise**	**3.30**	**347**	*eP*		**Pn**	**Pn**	**18 45 14.0**	**-2.7**
JWY	**Kouya**	**3.48**	**331**	P		**Pn**	**Pn**	**18 45 17.2**	**-2.1**
JAI	**Aioi**	**3.74**	**315**	P		**Pn**	**Pn**	**18 45 20.3**	**-2.4**
JMN	**Monobe**	**4.06**	**310**	*eP*		**Pn**	**Pn**	**18 45 25.0**	**-2.2**
JTO	**Tosashimizu**	**4.42**	**294**	*eP*		**Pn**	**Pn**	**18 45 29.3**	**-2.9**
MJAR	**Matsushiro Arr**	**5.38**	**5**	Pn		**Pn**	**Pn**	**18 45 44.6**	**-0.7**
	0.7nm,0.3s,baz=178,slow=13,SNR=42								
MJAR				Sn			**Sn**	**18 46 49.1**	**+3.1**
	0.2nm,0.3s,baz=193,slow=31,SNR=4.9								
	5.9nm,0.4s								
JCJ	**Chichijima**	**5.70**	**134**	Pn			Pn	18 45 34.1	-16
	12nm,0.3s,baz=257,slow=23,SNR=6.7								
JCJ				Sn			Sn	18 46 36.2	-18
	baz=288,slow=18								
JCJ				LR			LR	18 47 30.6	
	comp=Z,97nm,19.8s,baz=248,slow=34								
JNU	**Nakatsue**	**6.04**	**291**	Pn		**Pn**	**Pn**	**18 45 53.1**	**-1.3**
	0.6nm,0.3s,baz=108,slow=9.6,SNR=7.5								
JNU				Sn			**Sn**	**18 47 02.1**	**-0.2**
	3.8nm,0.3s,baz=55,slow=17,SNR=18								
	5.5nm,0.9s								
KSRS	**Korea Array**	**10.17**	**311**	Pn		**Pn**	**Pn**	**18 46 52.5**	**+1.5**
	0.1nm,0.3s,baz=119,slow=13,SNR=2.5								
KSRS				LR		LR	LR	18 50 32.9	
	comp=Z,36nm,21.1s,baz=15,slow=36								
	0.7nm,0.6s								
CMAR	**Chiang Mai Arr**	**37.13**	**259**	P		**P**	**P**	**18 51 35.1**	**+0.1**
	0.4nm,0.6s,baz=66,slow=8.0,SNR=2.4								
	0.4nm,0.6s								
ZALV	**Zalesovo Beam**	**43.80**	**317**	P		**P**	**P**	**18 52 30.4**	**+0.7**
	0.2nm,0.3s,baz=104,slow=6.1,SNR=1.7								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**44.82**	**307**	P		**P**	**P**	**18 52 39.0**	**+0.9**
	0.2nm,0.6s,baz=91,slow=10,SNR=11								
	0.2nm,0.6s								
KURBB	**Kurchatov Arra**	**47.34**	**312**	P		**P**	**P**	**18 52 59.1**	**+1.3**
	1.0nm,0.2s,baz=86,slow=7.4,SNR=6.0								
	1.0nm,0.2s								
WRA	**Warramunga Arr**	**50.92**	**184**	P		**P**	**P**	**18 53 23.3**	**-2.2**
	1.7nm,0.8s,baz=0.5,slow=7.6,SNR=15								
	1.7nm,0.8s								
BVAR	**Borovoye Array**	**52.34**	**315**	P		**P**	**P**	**18 53 36.7**	**+0.8**
	0.3nm,0.5s,baz=100,slow=8.1,SNR=4.8								
	0.3nm,0.5s								
ASAR	**Alice Springs**	**54.65**	**184**	P		**P**	**P**	**18 53 51.0**	**-2.0**
	1.5nm,0.7s,baz=14,slow=12,SNR=36								
	1.5nm,0.7s								
ILAR	**Eielson Array**	**56.12**	**30**	P		**P**	**P**	**18 54 05.0**	**+1.9**
	0.3nm,0.8s,baz=282,slow=5.6,SNR=6.5								
	0.3nm,0.8s								
AKTO	**Aktyubinsk**	**60.33**	**314**	LR			LR	19 22 55.4	
	comp=Z,222nm,18.3s,baz=284,slow=38								
KBZ	**Khabaz**	**72.32**	**311**	P			**P**	**18 55 52.1**	**+2.5**
	1.1nm,0.8s,baz=63,slow=9.0,SNR=5.1								
	1.1nm,0.8s								
FINES	**FINESS Array B**	**72.51**	**332**	P			**P**	**18 55 52.1**	**+1.7**
	2.8nm,1.0s,baz=2.9,slow=5.6,SNR=7.1								
	2.8nm,1.0s								

IDC 14 18:59:52.8±2.8, **6°.62S×128°.69E, h0**km, **mb3.3**/1, **mbtmp3.1**/3, **ML3.1**/2, **MS4.1**/1, **Error ellipse: s-maj=273.6km s-min=31.9km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.34**	**158**	Pn		Pn	Pn	19 03 17.4	+0.2
	0.1nm,0.3s,baz=337,slow=15,SNR=6.1								
WRA				Sn			Sn	19 05 40.6	-17
	0.2nm,0.3s,baz=337,slow=22,SNR=7.4								
	0.1nm,0.3s								
ASAR	**Alice Springs**	**17.68**	**164**	P			Pn	19 04 00.6	-0.1
	0.1nm,0.3s,baz=341,slow=9.9,SNR=10								
ASAR				S			Sn	19 07 05.8	-13
	0.4nm,1.1s,baz=343,slow=34,SNR=1.4								
	0.2nm,0.5s								
SONM	**Songino Array**	**57.68**	**342**	LR			LR	19 39 18.1	
	comp=Z,157nm,18.2s,baz=348,slow=41								
MKAR	**Makanchi Array**	**67.20**	**327**	P			P	19 10 48.9	0.0
	0.1nm,0.3s,baz=118,slow=8.1,SNR=4.9								
	0.1nm,0.3s								

*IDC **14** 19:09:32.9±29.0, 37°.50N×72°.27E, h242km±165km, mb2.7/1, mbtmp3.5/5, Error ellipse: s-maj=284.0km s-min=60.4km az=29.0*
ISC 14 19:09:31.2±3.2, **37°.4N**±0°.2×**71°.9E**±0°.2, **h250**km, **n15,** σ**0**s**78/17, 2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.22**	**22**	P		P	**Pn**	**19 10 50.0**	**0.0**
	SNR=41								
EKS2	**Erkin-Say**	**5.45**	**15**	P		P	**Pn**	**19 10 52.5**	**0.0**
	SNR=11								
AAK	**Ala-Archa**	**5.59**	**20**	P		P	**Pn**	**19 10 54.8**	**+0.4**
	SNR=16								
AAK	**Ala-Archa**	**5.59**	**20**	⇑P		P	**Pn**	**19 10 54.2**	**-0.2**
	4.4nm,0.6s								
AAK				⇑S			**S**	**19 12 01.8**	**+1.0**
	0.4nm,0.3s								
KBK	**Karagaybulak**	**5.74**	**23**	P		P	**Pn**	**19 10 56.9**	**+0.7**
	SNR=9.6								
KK31	**Karatay Array**	**5.79**	**350**	P		P	**Pn**	**19 10 57.2**	**+0.5**
	1.1nm,0.2s,baz=176,slow=13,SNR=28								
KK31				⇓S			**S**	**19 12 03.3**	**-1.8**
	6.8nm,0.5s,baz=174,slow=22,SNR=14								
ULHL	**Ulahol**	**5.87**	**33**	P		P	**Pn**	**19 10 57.5**	**-0.4**
	SNR=8.2								
CHMS	**Chumysh**	**6.00**	**20**	P		P	**Pn**	**19 10 59.2**	**-0.1**
	SNR=7.2								
USP	**Ospenovka**	**6.18**	**18**	P		P	**Pn**	**19 11 02.4**	**+0.9**
	SNR=5.0								
TKM2	**Tokmak 2**	**6.19**	**26**	P		P	**Pn**	**19 11 02.0**	**+0.1**
	SNR=12								
MKAR	**Makanchi Array**	**12.13**	**36**	P		P	**Pn**	**19 12 15.3**	**-1.0**
	0.4nm,0.6s,baz=219,slow=11,SNR=7.4								
KURBB	**Kurchatov Arra**	**14.04**	**18**	P		P	**Pn**	**19 12 38.7**	**-0.9**
	0.6nm,0.4s,baz=206,slow=12,SNR=4.4								
BVAR	**Borovoye Array**	**15.66**	**357**	P		P	**Pn**	**19 12 59.5**	**+0.5**
	0.8nm,0.6s,baz=168,slow=10.0,SNR=7.5								
ZALV	**Zalesovo Beam**	**18.79**	**24**	P			P	**19 13 32.2**	**+0.2**
	0.8nm,0.3s,baz=220,slow=10,SNR=5.7								
SONM	**Songino Array**	**27.23**	**56**	P			P	**19 14 52.0**	**-0.3**
	0.3nm,0.7s,baz=279,slow=9.5,SNR=2.7								
	0.3nm,0.7s								

*ISK **14** 19:14:00.7, 35°.10N×27°.91E, h9km, ML3.0/19*
*THE **14** 19:14:01.7, 35°.N±14°.×2°.8E±1°.1, h3km±30km, M2.9/4, MLh2.9/4*
*AFAD **14** 19:14:01.0, 35°.18N×27°.98E, h19km±2km, ML2.8*
*IDC **14** 19:14:08.7±3.0, 35°.15N×28°.23E, h101km±35km, mb3.1/4, mbtmp3.3/6, Error ellipse: s-maj=23.6km s-min=20.8km az=120.0*
ISC 14 19:14:00.7±1.6, **35°.11N**±0°.05×**27°.91E**±0°.04, **h8**km±10km, **n48,** σ**1**s**52/66, mb3.3**/3, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.75**	**306**	Pg		**Pg**	**Pg**	**19 14 15.2**	**+0.1**
KARP				Sg			**Sb**	**19 14 27.0**	**+0.5**
KARP	**Karpathos**	**0.75**	**306**	P		**Pg**	**Pg**	**19 14 15.4**	**+0.3**
KARP				S			**Sb**	**19 14 27.3**	**+0.8**
ARG	**Arkhangelos**	**1.12**	**9**	Pn		**Pn**	**Pn**	**19 14 23.3**	**+0.6**
ARG	**Arkhangelos**	**1.12**	**9**	P		**Pn**	**Pn**	**19 14 24.5**	**+1.8**
ARG				S			**Sn**	**19 14 41.6**	**+3.3**
ZKR	**Zakros**	**1.39**	**271**	Pn		**Pn**	**Pn**	**19 14 27.1**	**+0.7**
ZKR	**Zakros**	**1.39**	**271**	P		**Pn**	**Pn**	**19 14 27.0**	**+0.6**
YAZI	**Mula-Dat§a-**	**1.61**	**347**	P		**Pn**	**Pn**	**19 14 29.9**	**+0.4**
YAZI				S			**Sg**	**19 14 52.0**	**-0.6**
DAT	**Datca**	**1.64**	**351**	Pn		**Pb**	**Pb**	**19 14 30.7**	**-0.6**
DAT	**Datca**	**1.64**	**351**	P		**Pb**	**Pb**	**19 14 30.7**	**-0.6**
DAT				S			**Sn**	**19 14 51.7**	**+0.4**
DAT				IAML				19 15 00.0	
	comp=E,123nm,0.8s								
FETY	**Fethiye**	**1.80**	**32**	Pn		**Pb**	**Pb**	**19 14 32.8**	**-1.1**
FETY	**Fethiye**	**1.80**	**32**	P		**Pb**	**Pb**	**19 14 33.1**	**-0.8**
FETY				S			**Sg**	**19 14 58.3**	**-0.1**
DALY	**Dalyan (Mula)**	**1.81**	**19**	Pn		**Pb**	**Pb**	**19 14 33.2**	**-0.9**
SABU	**Mula-Dalaman**	**1.91**	**26**	P		**Pb**	**Pb**	**19 14 34.6**	**-1.3**
SABU				S			**Sg**	**19 15 08.2**	**+6.0**
SABU				IAML				19 15 21.0	
	comp=N,70nm,0.9s								
BDRM	**Kayabasi**	**1.99**	**349**	P			**Pn**	**19 14 35.1**	**+0.4**
BDRM				IAML				19 15 08.0	
	comp=E,81nm,0.6s								
BODT	**Bodrum**	**2.01**	**346**	Pn			**Pn**	**19 14 35.7**	**+0.7**
YER	**Yerkesik**	**2.04**	**8**	Pn			**Pn**	**19 14 36.3**	**+0.8**
YER	**Yerkesik**	**2.04**	**8**	P			**Pb**	**19 14 37.5**	**-0.6**
YER				S			**Sg**	**19 15 05.3**	**-1.1**
CAME	**Cameli-Denizli**	**2.15**	**31**	Pn			**Pn**	**19 14 37.8**	**+0.7**
MULA	**Mugla, Merkez-**	**2.17**	**9**	P			**Pn**	**19 14 37.4**	**+0.1**
MLSB	**Milas**	**2.18**	**357**	Pn			**Pn**	**19 14 38.3**	**+0.9**
ELL	**Elmali**	**2.30**	**44**	Pn			**Pn**	**19 14 40.1**	**+1.0**
CAEL	**Denizli, Camel**	**2.31**	**29**	P			**Pb**	**19 14 40.9**	**-1.9**
DNZT	**Denizli-Tavas-**	**2.35**	**22**	P			**Pn**	**19 14 40.3**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.42**	**303**	P			**Pn**	**19 14 41.2**	**+0.6**
SNT5				S			**Sb**	**19 15 13.4**	**-1.1**
IDI	**Anoyia**	**2.48**	**275**	Pn			**Pn**	**19 14 42.9**	**+1.4**
TAVA	**DENİZLİ_Tavas**	**2.49**	**19**	P			**Pb**	**19 14 43.6**	**-2.1**
TAVA				S			**Sn**	**19 15 13.0**	**+0.7**
TAVA				IAML				19 15 33.0	
	comp=E,48nm,0.6s								
TAVA				IAML				19 15 51.0	
	comp=N,64nm,2.1s								
AYDN	**Tasoluk**	**2.55**	**359**	P			**Pn**	**19 14 44.0**	**+1.6**
AYDN				S			**Sn**	**19 15 10.7**	**-2.9**
APMY	**Acipayam-Deniz**	**2.61**	**25**	Pn			**Pn**	**19 14 44.4**	**+1.1**
GCAM	**G?zelcaml?**	**2.64**	**348**	P			**Pn**	**19 14 44.5**	**+0.8**
GCAM				IAML				19 15 29.0	
	comp=N,46nm,0.7s								
DNIZ	**Denizli-Tavas-**	**2.67**	**20**	P			**Pn**	**19 14 45.1**	**+0.9**
DNIZ				S			**Sn**	**19 15 15.9**	**-0.9**
ESEN	**Aydn-Nazilli**	**2.71**	**7**	P			**Pn**	**19 14 44.2**	**-0.3**
ESEN				S			**Sn**	**19 15 18.0**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**2.83**	**360**	Pn			**Pn**	**19 14 47.7**	**+1.3**
NAZL	**Nazilli-Aydin**	**2.87**	**6**	Pn			**Pn**	**19 14 48.0**	**+1.2**
SULTU	**Buldan**	**3.02**	**13**	P			**Pb**	**19 14 52.6**	**-2.2**
SULTU				S			**Sg**	**19 15 35.3**	**-2.4**
IZMR	**zmir-demi**	**3.02**	**1**	P			**Pn**	**19 14 49.0**	**+0.2**
IZMR				S			**Sn**	**19 15 26.8**	**+1.5**
DGB	**zmir**	**3.05**	**345**	P			**Pn**	**19 14 50.9**	**+1.7**
DGB				S			**Sn**	**19 15 28.9**	**+2.9**
KIRA	**zmir-Kiraz**	**3.11**	**7**	P			**Pn**	**19 14 51.1**	**+1.0**
KIRA				S			**Sn**	**19 15 24.5**	**-3.1**
KIRA				IAML				19 15 59.0	
	comp=E,24nm,1.1s								
ODEM	**Odemis-Izmir**	**3.16**	**2**	Pn			**Pn**	**19 14 52.4**	**+1.5**
URLA	**Izmir**	**3.41**	**342**	P			**Pn**	**19 14 53.8**	**-0.4**
KULA	**Kula-Manisa**	**3.45**	**10**	Pn			**Pn**	**19 14 56.2**	**+1.3**
GORD	**Gordes-Manisa**	**3.80**	**3**	Pn			**Pn**	**19 15 01.3**	**+1.7**
TVSB	**Tavsanli**	**4.51**	**15**	Pn			**Pn**	**19 15 10.6**	**+1.2**
BRTR	**Keskin Array B**	**6.48**	**43**	P			**Pn**	**19 15 38.1**	**+1.5**
	0.5nm,0.7s,baz=210,slow=14,SNR=2.9								
BRTR				S			**Sn**	**19 16 50.1**	**-0.7**
	0.9nm,0.8s,baz=211,slow=24,SNR=3.2								
MMAI	**Mount Meron Ar**	**6.56**	**106**	P			**Pn**	**19 15 37.8**	**+0.2**
	0.5nm,0.3s,baz=295,slow=14,SNR=5.9								
MMAI				S			**Sn**	**19 16 52.6**	**0.0**
	1.0nm,0.4s,baz=291,slow=28,SNR=1.4								
ESDC	**Sonseca Array**	**25.65**	**290**	P			**P**	**19 19 30.0**	**-1.0**
	0.6nm,0.8s,baz=91,slow=10,SNR=5.7								
	0.6nm,0.8s								
FINES	**FINESS Array B**	**26.38**	**358**	P			**P**	**19 19 35.8**	**-1.4**
	1.3nm,0.8s,baz=160,slow=8.9,SNR=3.4								
	1.3nm,0.8s								
TORD	**Torodi Ar. Bea**	**32.23**	**234**	P			**P**	**19 20 30.8**	**+1.1**
	0.6nm,0.8s,baz=29,slow=7.4,SNR=3.7								
	0.6nm,0.8s								
MKAR	**Makanchi Array**	**41.92**	**57**	P			P	19 21 46.6	-5.1
	0.1nm,0.5s,baz=284,slow=7.8,SNR=5.3								
	0.1nm,0.5s								

KRSC 14 19:22:50.3±1.8, **48°.89N×156°.89E, h30**km±21km, **Ml3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.86**	**345**	*eP*			Pn	19 23 20.4	+0.2
SKR				*eS*			Sn	19 23 43.7	+1.0
PAU	**Pauzhetka**	**2.58**	**359**	*eS*			Sb	19 24 04.0	-3.1
ASAK	**Asacha**	**3.56**	**10**	*eP*			Pn	19 23 47.9	+4.4
MTVR	**Mutnovka**	**3.69**	**12**	*eP*			Pn	19 23 49.2	+3.8
MTVR				*eS*			Sn	19 24 33.4	+5.5
GRL	**Gorelyy**	**3.74**	**11**	*eP*			Pn	19 23 50.6	+4.5
DALK	**Dalny**	**4.31**	**15**	*eP*			Pn	19 23 58.1	+4.4
UGLR	**Uglovaya**	**4.49**	**15**	*eP*			Pn	19 24 01.2	+4.8
AVK	**Avacha**	**4.53**	**14**	*eP*			Pn	19 24 01.8	+4.9
SMAR	**Somma**	**4.54**	**15**	*eP*			Pn	19 24 02.5	+5.4
KOK	**Koryaka**	**4.54**	**13**	*eP*			Pn	19 24 02.4	+5.4
SDLR	**Sedlovina**	**4.57**	**15**	*eP*			Pn	19 24 01.6	+4.2
KRER	**Koryakskii**	**4.57**	**14**	*eP*			Pn	19 24 02.6	+5.0
KRX	**Arik**	**4.61**	**13**	*eP*			Pn	19 24 03.0	+5.0
SPN	**Mys Shipunski**	**4.65**	**24**	*eP*			Pn	19 24 02.8	+4.3

*DJA **14** 19:25:18.5±0.3, 3°.S±2°.×12°.7E±°, h10km, M3.5/11, mb4.0/1, MLv3.3/11*
*IDC **14** 19:25:19.9±2.3, 3°.23S×127°.01E, h0km, mb2.9/2, mbtmp3.0/3, ML3.1/1, Error ellipse: s-maj=188.4km s-min=29.9km az=65.0*
ISC 14 19:25:19.2±1.4, **2°.8S**±0°.1×**126°.75E**±0°.10, **h35**km, **n8,** σ**1**s**02/8, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.57**	**142**	P		P	**Pn**	**19 25 30.0**	**-0.9**
NLAI				S			**Sn**	**19 25 40.2**	**+1.2**
SANI	**Sanana**	**1.06**	**314**	P		P	**Pn**	**19 25 37.9**	**+0.4**
AAI	**Ambon**	**1.70**	**122**	P		P	**Pn**	**19 25 47.5**	**+1.1**
KRAI	**Karang Ratu**	**1.72**	**108**	P		P	**Pn**	**19 25 47.1**	**+0.4**
SIJI	**Sorong**	**4.90**	**67**	P		P	**Pn**	**19 26 29.9**	**-0.5**
WRA	**Warramunga Arr**	**18.59**	**157**	P		**P**	**P**	**19 29 32.5**	**-1.1**
	0.1nm,0.3s,baz=336,slow=11,SNR=5.2								
	0.4nm,0.8s								
ASAR	**Alice Springs**	**21.88**	**162**	P		**P**	**P**	**19 30 09.0**	**-0.3**
	0.1nm,0.5s,baz=342,slow=11,SNR=1.4								
	0.1nm,0.5s								
MKAR	**Makanchi Array**	**62.95**	**327**	P		P	P	19 35 52.1	+10
	0.4nm,0.9s,baz=132,slow=6.0,SNR=2.1								
	0.4nm,0.9s								

IDC 14 19:35:02.8±3.1, **35°.35S×179°.53W, h0**km, **mb3.6**/2, **mbtmp3.6**/3, **ML3.5/1, Error ellipse: s-maj=75.2km s-min=36.6km az=125.0, East of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.96**	**222**	Pn		Pn	Pn	19 36 04.9	+0.1
	3.2nm,0.3s,baz=68,slow=16,SNR=26								
URZ				Sn			Sn	19 36 51.0	-0.8
	1.4nm,0.3s,baz=49,slow=18,SNR=1.6								
	6.3nm,0.3s								
ASAR	**Alice Springs**	**41.82**	**273**	P		P	P	19 42 54.7	+0.2
	0.5nm,0.8s,baz=116,slow=8.4,SNR=3.9								
	0.5nm,0.8s								
WRA	**Warramunga Arr**	**43.26**	**278**	P		P	P	19 43 06.1	-0.2
	0.9nm,0.6s,baz=118,slow=7.8,SNR=9.4								
	0.9nm,0.6s								
FINES	**FINESS Array B**	**149.25**	**336**	PKPbc		PKPbc	PKPbc	19 54

OWD			*i* S		**Sn**	19 44 14.1	**-1.0**
KSHI	**Guanxi Townshi**	**1.30 290**	*e*P		**Pn**	19 44 00.5	**+1.7**
HGSD	**Ruisui**	**1.31 230**	*e*P		**Pn**	19 43 58.7	**-0.3**
NFF	**Wufeng Townshi**	**1.31 283**	*e*P		**Pn**	19 43 59.7	**+0.7**
WUSB	**Renai**	**1.32 255**	P		**Pn**	19 43 59.6	**+0.3**
WUSB			*e*S		**Sn**	19 44 15.8	**-0.2**
EHYH	**Wanrong**	**1.36 232**	*e*P		**Pn**	19 43 59.9	**+0.3**
JKRS	**Kuro-shima**	**1.36 94**	P		**Pn**	19 44 00.4	**+0.7**
EHY	**Hungye**	**1.37 233**	*e*P		**Pn**	19 43 59.5	**-0.3**
VWDT	**VWDT**	**1.39 246**	P		**Pn**	19 44 00.5	**+0.5**
VWDT			*i* S		**Sn**	19 44 17.2	**-0.1**
LIOB	**Emei**	**1.40 283**	*i* P		**Pn**	19 44 01.4	**+1.2**
LIOB			*i* S		**Sn**	19 44 19.6	**+1.8**
NSTT	**Nanjuang**	**1.41 282**	*e*P		**Pn**	19 44 01.6	**+1.3**
WHP	**Taichung City**	**1.44 268**	*e*P		**Pn**	19 44 02.1	**+1.3**
YULB	**Yu-li**	**1.46 230**	*e*P		**Pn**	19 44 00.9	**-0.1**
YULB			*e*S		**Sn**	19 44 18.2	**-1.0**
JIJ	**Ishigaki jima**	**1.48 89**	P		**Pn**	19 44 01.4	**+0.2**
TWF1	**Yuli**	**1.49 229**	*e*P		**Pn**	19 44 01.5	**+0.2**
WCS	**Beigang Elemen**	**1.49 260**	*e*P		**Pn**	19 44 01.7	**+0.3**
SSLB	**Suanglung**	**1.53 249**	*e*P		**Pn**	19 44 02.1	**+0.1**
SMLT	**Sun Moon Lake**	**1.55 253**	*i* P		**Pn**	19 44 02.9	**+0.6**
SMLT			S		**Sn**	19 44 21.7	**+0.3**
TYC	**Yuchr**	**1.58 254**	P		**Pn**	19 44 04.2	**+1.7**
FULB	**Fuli**	**1.59 225**	*e*P		**Pn**	19 44 03.4	**+0.5**
WHYT	**Xinyi Township**	**1.65 248**	*i* P		**Pn**	19 44 04.6	**+1.0**
JISG	**Ishigakijimahi**	**1.65 81**	P		**Pn**	19 44 03.5	**-0.1**
ELDTW	**Lidau**	**1.79 231**	*e*P		**Pn**	19 44 05.2	**-0.3**
ELDTW			S		**Sn**	19 44 26.0	**-1.2**
CHN5	**Tsauling**	**1.84 247**	P		**Pn**	19 44 07.6	**+1.4**
WDLH	**Douliu**	**1.92 251**	*e*P		**Pn**	19 44 09.3	**+2.1**
WCKO	**Fanlu**	**1.97 243**	P		**Pn**	19 44 08.2	**+0.3**
STYH	**Taoyuan**	**1.98 234**	*e*P		**Pn**	19 44 09.2	**+1.2**
JTJ	**Tarama**	**2.01 81**	P		**Pn**	19 44 09.1	**+0.7**
JTJ			*e*S		**Sn**	19 44 32.7	**+0.2**
SGST	**Jiashian**	**2.17 235**	*e*P		**Pn**	19 44 11.3	**+0.7**
VWUC	**VWUC**	**2.87 284**	P		**Pn**	19 44 19.8	**-0.3**
VWUC			*e*S		**Sn**	19 44 52.2	**-1.2**

IDC ***14*** *19:54:02.4±2.1,6.6°61S×129.96E, h152km±22km, mb3.5/6, mbtmp4.0/11, Error ellipse: s-maj=36.8km s-min=18.4km az=95.0*

NEIC ***14*** *19:54:02.6±1.7, 6.6°63S±0.06°×129.86E±0.08, h150km±5km, mb4.1/22, Error ellipse: s-maj=11.3km s-min=8.6km az=105.0*

DJA ***14*** *19:54:03.4±0.2, 7.2°S±2.2°×13.0°E±1.0°, h188km±5km, M4.5/24, mB5.0/4, mb4.2/13, MLv4.6/24, Mw(mB)4.3/4*

ISC 14 19:54:02.1±0.5, 6.64S±0.04×129.86E±0.04, h150km, n72, σ2s05/80, mb4.0/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**1.95**	**133**			**Pn**	**19 54 39.7**	**+3.0**
SAUI					Sn	**Sn**	**19 55 05.1**	**+1.8**
SAUI	**Saumlaki**	**1.95**	**133**	P		**Pn**	**19 54 40.2**	**+3.5**
SAUI	**Saumlaki**	**1.95**	**133**	P		**Sn**	**19 55 06.7**	**+3.4**
SAUI	**Saumlaki**	**1.95**	**133**	P		**Pn**	**19 54 40.1**	**+3.4**
SAUI				S		**Sn**	**19 55 09.0**	**+5.7**
BNDI	**Bandanaira**	**2.10**	**1**	P		Pn	19 54 44.3	+5.9
BNDI	**Bandanaira**	**2.10**	**1**	P		**Pn**	**19 54 41.9**	**+3.5**
MSAI	**Masohi**	**3.40**	**344**	P		**Pn**	**19 54 58.9**	**+4.3**
FAKI	**Fak Fak**	**4.39**	**33**			**Pn**	**19 55 07.5**	**0.0**
FAKI					Sn	**Sn**	**19 55 55.3**	**-3.2**
FAKI	**Fak Fak**	**4.39**	**33**	P		**Pn**	**19 55 07.7**	**+0.1**
KMPI	**Kaimana, Papua**	**4.84**	**52**	P		**Pn**	**19 55 14.9**	**+1.5**
DRS	**Darwin Rock St**	**5.85**	**170**	P		**Pn**	**19 55 27.8**	**+1.0**
SIJI	**Sorong**	**5.90**	**14**	P		**Pn**	**19 55 27.2**	**-0.3**
	4.9nm,0.2s,baz=188,slow=15,SNR=24							
SIJI				S		**Sn**	**19 56 27.6**	**-6.8**
	21nm,0.2s,baz=302,slow=24,SNR=14							
SIJI	**Sorong**	**5.90**	**14**	P		**Pn**	**19 55 28.7**	**+1.2**
	0.4nm2µm15nm,0.5s							
SWI	**Sorong**	**5.90**	**14**	P		**Pn**	**19 55 29.1**	**+1.5**
	0.5nm15nm,0.6s							
SANI	**Sanana**	**5.97**	**320**	P		Pn	19 55 33.7	+5.2
SANI	**Sanana**	**5.97**	**320**	P		Pn	19 55 33.2	+4.7
	0.1nm18nm,0.7s							
MTN	**Manton Dam**	**6.29**	**169**			**Pn**	**19 55 33.1**	**+0.3**
MTN					Sn	**Sn**	**19 56 39.9**	**-3.8**
SOEI	**Soe**	**6.34**	**240**			**Pn**	**19 55 36.1**	**+1.6**
SOEI						**Sn**	**19 56 44.8**	**-0.3**
SOEI	**Soe**	**6.34**	**240**	P		**Pn**	**19 55 36.1**	**+2.5**
SOEI	**Soe**	**6.34**	**240**	S		**Sn**	**19 56 45.7**	**+0.6**
SOEI	**Soe**	**6.34**	**240**	P		**Pn**	**19 55 36.1**	**+2.5**
	0.4nm32nm,0.5s							
SOEI				S		**Sn**	**19 56 48.6**	**+3.5**
	0.4nm32nm,0.5s							
RKPI	**Ransiki, Papua**	**6.67**	**40**	P		**Pn**	**19 55 40.1**	**+2.3**
	0.9nm2µm91nm,0.8s							
MWPI	**Manokwari, Pap**	**7.04**	**36**	P		**Pn**	**19 55 44.0**	**+1.3**
MWPI				S		**Sn**	**19 57 04.4**	**+2.8**
BATI	**Baumata**	**7.08**	**240**	P		**Pn**	**19 55 45.4**	**+2.0**
	60nm,0.5s,baz=66,slow=12,SNR=26							
BATI				S		**Sn**	**19 56 60.0**	**-2.8**
	46nm,0.3s,baz=67,slow=15,SNR=7.3							
BATI	**Baumata**	**7.08**	**240**	P		**Pn**	**19 55 45.3**	**+2.0**
BATI				S		**Sn**	**19 57 05.1**	**+2.4**
MMRI	**Maumere**	**7.81**	**255**	P		**Pn**	**19 55 53.8**	**+0.7**
	0.1nm24nm,0.4s							
MMRI				S		**Sn**	**19 57 22.5**	**+2.2**
	0.1nm24nm,0.4s							
EDFI	**Ende, Flores**	**8.37**	**255**	P		**Pn**	**19 56 01.8**	**+1.3**
KNRA	**Kununurra**	**9.05**	**187**	Pn		**Pn**	**19 56 08.7**	**-0.8**
WSI	**Waingapu**	**9.94**	**252**	P		**Pn**	**19 56 21.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**12.11**	**199**	P		**Pn**	**19 56 50.2**	**+0.4**
	1.9nm,0.3s,baz=24,slow=11,SNR=33							
FITZ				S		Sn	19 58 56.0	-7.9
	11nm,0.4s,baz=129,slow=13,SNR=9.4							
PLAI	**Plampang**	**12.17**	**259**	P		**Pn**	**19 56 52.5**	**+1.8**
WB0	**Warramunga Arr**	**13.77**	**162**			**Pn**	**19 57 08.5**	**-2.7**
WRA	**Warramunga Arr**	**13.92**	**162**	P		**Pn**	**19 57 11.9**	**-1.1**
	0.9nm,0.4s,baz=346,slow=12,SNR=34							
WRA				S		Sn	19 59 37.6	-10
	1.8nm,0.4s,baz=326,slow=26,SNR=8.5							
WRA	**Warramunga Arr**	**13.92**	**162**			Pn	19 57 09.6	-3.5
WRA						Sn	19 59 38.6	-8.8
COEN	**Coen**	**14.97**	**120**	Pn		**Pn**	**19 57 24.2**	**-2.1**
COEN	**Coen**	**14.97**	**120**	P		**P**	**19 57 29.0**	**+0.9**
JAGI	**Jajag, Banyuwa**	**15.68**	**262**	Pn		**Pn**	**19 57 34.3**	**-0.8**
QIS	**Mount Isa**	**16.75**	**147**	P		**P**	**19 57 49.1**	**+1.3**
AS31	**Alice Springs**	**17.37**	**167**	P		**P**	**19 57 55.3**	**+0.7**
ASAR	**Alice Springs**	**17.37**	**168**	P		**P**	**19 57 56.3**	**+1.7**
	1.3nm,0.5s,baz=348,slow=11,SNR=34							
ASAR				S		S	20 00 57.2	-11
	0.4nm,0.6s,baz=349,slow=8.6,SNR=1.7							
ASAR	**Alice Springs**	**17.37**	**168**	P		**P**	**19 57 55.5**	**+0.9**
ASAR						**S**	**20 01 03.5**	**-4.4**
MBWA	**Marble Bar**	**17.45**	**213**	P		**P**	**19 57 54.4**	**-1.1**
PSA00	**Pilbara Seismi**	**17.73**	**212**	P		**P**	**19 57 58.8**	**+0.3**
PSA00	**Pilbara Seismi**	**17.73**	**212**	P		**P**	**19 57 58.5**	**+0.1**
PSA00					IAmb	IAmb	19 58 00.9	
	comp=Z,9.8nm,0.8s							
PSA00	**Pilbara Seismi**	**17.73**	**212**	P		**P**	**19 57 59.8**	**+1.4**
MTSU	**Mount Surprise**	**18.14**	**130**	P		**Pn**	**19 58 06.8**	**+2.1**
KKM	**Kota Kinabalu**	**18.55**	**312**	P		**P**	**19 58 06.4**	**-1.3**
CTAO	**Charters Tower**	**20.78**	**132**	P		**P**	**19 58 31.0**	**-0.5**
GIRL	**Giralia**	**21.91**	**222**	P		**P**	**19 58 44.7**	**+1.2**
BBJI	**Bungbulang**	**22.06**	**267**	P		**P**	**19 58 44.7**	**-0.5**
BBJI					IAmb	IAmb	19 58 45.9	
	comp=Z,7.0nm,0.8s							
MEEK	**Meekatharra**	**22.59**	**207**	P		**P**	**19 58 50.8**	**+0.6**
FORT	**Forrest**	**24.08**	**184**	P		**P**	**19 59 02.6**	**-1.1**
FORT					IAmb	IAmb	19 59 17.4	
	comp=Z,4.6nm,0.8s							
NWAO	**Narrogin (SRO)**	**28.67**	**203**	P		**P**	**19 59 43.9**	**-1.0**
LZDM	**Lanzhou Array**	**48.99**	**332**	P		**P**	**20 02 34.1**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=161,slow=11,SNR=4.0							
	comp=Z,0.4nm,0.4s							
HILR	**Hailar Array B**	**56.65**	**352**	P		**P**	**20 03 30.0**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=147,slow=8.6,SNR=1.8							
	comp=Z,0.7nm,0.4s							
SONM	**Songino Array**	**58.06**	**342**	P		**P**	**20 03 40.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=155,slow=6.2,SNR=4.6							
	comp=Z,0.3nm,0.5s							
MIDW	**Midway**	**61.55**	**53**	P		**P**	**20 04 02.4**	**-1.2**
KSH2	**Kashi**	**67.75**	**317**	P		**P**	**20 04 43.9**	**0.0**
KSH2					pmax	pmax		
	comp=Z,3.0nm,1.2s							
MKAR	**Makanchi Array**	**67.85**	**327**	P		**P**	**20 04 44.9**	**+0.7**
	comp=Z,4.0nm,0.5s,baz=115,slow=8.5,SNR=93							
	comp=Z,4.0nm,0.5s							

MAKZ	**Makanchi**	**68.03**	**327**	P		**P**	**20 04 45.5**	**+0.3**
BOOM	**Boomskoye usch**	**69.18**	**320**	P		**P**	**20 04 52.9**	**+0.1**
BOOM						IAmb	IAmb	20 04 54.3
	comp=Z,1.7nm,0.7s							
AAK	**Ala-Archa**	**70.18**	**320**	P		**P**	**20 04 58.3**	**-0.6**
AAK						IAmb	IAmb	20 05 00.7
	comp=Z,2.7nm,0.9s							
ARSB	**Arslanbob**	**70.53**	**318**	P		**P**	**20 05 00.5**	**-0.4**
ARSB						IAmb	IAmb	20 05 02.6
	comp=Z,2.8nm,0.8s							
ZALV	**Zalesovo Beam**	**71.20**	**334**	P		**P**	**20 05 03.8**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=126,slow=2.5,SNR=2.9							
	comp=Z,0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**72.13**	**328**	P		**P**	**20 05 10.3**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=127,slow=5.1,SNR=16							
	comp=Z,1.0nm,0.5s							
KURK	**Kurchatov**	**72.14**	**329**	P		**P**	**20 05 10.1**	**-0.1**
KURK						IAmb	IAmb	20 05 10.7
	comp=Z,5.3nm,1.4s							
KK31	**Karatay Array**	**72.98**	**319**	P		**P**	**20 05 14.9**	**-0.4**
KKAR	**Karatay Array**	**72.98**	**319**	P		**P**	**20 05 15.9**	**+0.5**
ABKAR	**Akbulak array**	**82.14**	**322**	P		**P**	**20 06 05.6**	**-0.5**
RAYN	**Ar Rayn**	**87.47**	**294**	P		**P**	**20 06 34.2**	**+0.8**
RAYN						IAmb	IAmb	20 06 34.3
	comp=Z,2.0nm,0.7s							
Q19K	**Cape Douglas,**	**88.73**	**30**	P		**P**	**20 06 38.9**	**+0.4**
BPAW	**Bear Paw Mtn.**	**91.21**	**26**	P		**P**	**20 06 50.5**	**+0.6**

IDC 14 20:04:31.2±2.8, 32.98S×178.35W, h0km, mb4.0/3, mbtmp4.0/4, ML3.8/1, Error ellipse: s-maj=62.4km s-min=35.3km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**6.44**	**214**	Pn		Pn	20 06 08.1	+0.9
	2.2nm,0.3s,baz=41,slow=7.3,SNR=19							
URZ					Sn	Sn	20 07 21.0	-0.4
	2.1nm,0.3s,baz=168,slow=23,SNR=6.4							
	6.0nm,0.3s							
CTA	**Charters Tower**	**34.00**	**283**	P		P	20 11 17.8	+0.9
	4.0nm,1.0s,baz=113,slow=7.7,SNR=2.1							
	4.0nm,1.0s							
ASAR	**Alice Springs**	**42.74**	**270**	P		P	20 12 30.0	-0.5
	0.6nm,0.6s,baz=109,slow=7.9,SNR=10.0							
	0.6nm,0.6s							
WRA	**Warramunga Arr**	**43.96**	**275**	P		P	20 12 39.8	-0.5
	1.1nm,0.4s,baz=114,slow=8.0,SNR=5.9							
	1.1nm,0.4s							
FINES	**FINESS Array B**	**147.44**	**338**	PKPbc		PKPbc	20 24 15.4	-0.9
	2.2nm,0.8s,baz=38,slow=2.5,SNR=12							

IDC 14 20:06:35.4±2.0, 7.75N×125.39E, h0km, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=208.5km s-min=19.3km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.89**	**162**	P		P	20 12 37.1	+0.9
	2.0nm,0.4s,baz=342,slow=9.1,SNR=42							
	2.0nm,0.4s							
ASAR	**Alice Springs**	**32.31**	**165**	P		P	20 13 06.3	-0.1
	1.3nm,0.3s,baz=338,slow=7.5,SNR=32							
	1.3nm,0.3s							
STKA	**Stephens Creek**	**42.33**	**159**	P		P	20 14 30.0	-1.3
	1.0nm,0.5s,baz=317,slow=5.5,SNR=3.7							
	1.0nm,0.5s							
MKAR	**Makanchi Array**	**53.52**	**324**	P		P	20 15 58.5	+0.6
	0.9nm,0.4s,baz=122,slow=8.5,SNR=33							
	0.9nm,0.4s							
KURBB	**Kurchatov Arra**	**57.66**	**327**	P		P	20 16 26.6	-0.9
	0.8nm,0.2s,baz=123,slow=7.1,SNR=4.7							
	0.8nm,0.2s							

CATAC ***14*** *20:16:27.9±0.4, 13.7°N±2.7°×8.9W±, h36km±5km, M4.8/10, MLv4.8/10, Error ellipse: s-maj=5.7km s-min=1.9km az=30.3, confirmed*

SNET ***14*** *20:16:28.6±3.6, 12.2°90N×88.53W, h19km, ML5.4, Presumed earthquake*

IDC ***14*** *20:16:28.3±0.6, 13.13N×88.03W, h58km±4km, mb4.2/19, mbtmp4.5/21, MS4.0/35, Error ellipse: s-maj=18.4km s-min=9.1km az=44.0*

GCMT ***14*** *20:16:29.4±0.4, 12.66N±0.03°×88.53W±0.03°, h55km±1km, MW4.9/66, Moment Tensor Solution. s46,c49; s66,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.62±.16; $M_{\theta\theta}$-2.61±.13; $M_{\phi\phi}$-0.01±.14; $M_{r\theta}$0.15±.07; $M_{r\phi}$ 1.04±.11; $M_{\theta\phi}$-0.81±.08; Best double couple: M_o2.92900×10^{16} NP1:ϕs274.00000°, δ43.00000°, λ67.00000°. NP2: ϕs125.00000°, δ51.00000°, λ110.00000°. Principal axes: T 2.8520, Plg74.0000°, Azm95.0000°; N 0.1490, Plg16.0000°, Azm291.0000°; P -3.0070, Plg4.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***14*** *20:16:29.4±1.3, 13.0°2N×88.21W, h78km, mb5.2/15 Error ellipse: s-maj=13.3km s-min=6.5km az=112.7*

NEIC ***14*** *20:16:30.4±2.0, 12.87N±0.06°×88.46W±0.06°, h76km±5km, mb4.9/498, Error ellipse: s-maj=10.6km s-min=6.6km az=220.0*

BJI ***14*** *20:16:30.1, 13.06N×88.12W, h84km, Ms5.3/1, Ms7 5.0/1*

GCG ***14*** *20:16:31.7±1.4, 12.95N×88.82W, h32km±10km, MD4.9, ML5.1, Presumed earthquake*

ISC 14 20:16:29.0±0.4, 12.85N±0.04×88.53W±0.03, h72km±3km, h72km:pP-P, n834, σ1s20/694, mb4.9/245, 8C-33D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RANC	**El Ranchito**	**0.63**	**22**	P		**Pn**	**20 16 42.5**	**-1.0**
RANC				S		**Sn**	**20 16 53.6**	**-0.5**
RANC	**El Ranchito**	**0.63**	**22**	*e*P		**Pn**	**20 16 42.6**	**-0.9**
PACA	**Pacayal**	**0.65**	**18**	⇓P		**Pn**	**20 16 42.7**	**-1.0**
PACA				S		**Sn**	**20 16 53.7**	**-0.7**
PACA	**Pacayal**	**0.65**	**18**	*e*P		**Pn**	**20 16 42.8**	**-0.8**
CNRM	**Centro Naciona**	**0.71**	**29**	⇓P		**Pn**	**20 16 43.6**	**-0.6**
CNRM				S		**Sn**	**20 16 55.7**	**+0.3**
CNRM	**Centro Naciona**	**0.71**	**29**	*e*P		**Pn**	**20 16 43.7**	**-0.6**
TECO	**Alcaldia de Te**	**0.73**	**340**	⇓P		**Pn**	**20 16 42.6**	**-1.8**
TECO	**Alcaldia de Te**	**0.73**	**340**	*e*P		**Pn**	**20 16 43.0**	**-1.5**
TECO				*e*S		**Sn**	**20 16 53.8**	**-2.0**
LCND	**La Caada**	**0.77**	**53**	⇓P		**Pn**	**20 16 43.9**	**-1.0**
LCND				S		**Sn**	**20 16 56.9**	**+0.3**
LCND	**La Caada**	**0.77**	**53**	*e*P		**Pn**	**20 16 44.1**	**-0.7**
CNCH	**Conchagua**	**0.80**	**58**	⇓P		**Pn**	**20 16 44.2**	**-1.1**
CNCH				S		**Sn**	**20 16 58.2**	**+0.8**
CNCH	**Conchagua**	**0.80**	**58**	*e*P		**Pn**	**20 16 44.7**	**-0.6**
CNCH				*e*P			20 16 44.9	
CNCH				*e*S		**Sn**	**20 16 59.1**	**+1.7**
COEG	**Centro de Oper**	**0.84**	**336**	⇓P		**Pn**	**20 16 44.3**	**-1.4**
COEG	**Centro de Oper**	**0.84**	**336**	*e*P		**Pn**	**20 16 44.4**	**-1.3**
SCLA	**Alcaldia de Sa**	**0.87**	**347**	⇓P		**Pn**	**20 16 45.5**	**-0.6**
SCLA				S		**Sn**	**20 16 58.7**	**0.0**
SCLA	**Alcaldia de Sa**	**0.87**	**347**	*e*P		**Pn**	**20 16 45.6**	**-0.6**
PAVA	**Las Pavas**	**0.95**	**335**	⇓P		**Pn**	**20 16 46.0**	**-1.1**
PAVA				S		**Sn**	**20 16 59.7**	**-0.8**
CSGN	**Cosiguina Volc**	**0.95**	**82**	⇓P		**Pn**	**20 16 46.1**	**-1.0**
CSGN				S		**Sn**	**20 16 59.9**	**-0.7**
CAHU	**Cacacuatique**	**0.97**	**19**	*e*P		**Pn**	**20 16 47.3**	**-0.1**
PANCS	**Alcalda de**	**0.99**	**320**	⇓P		**Pn**	**20 16 45.6**	**-1.9**
PANCS				S		**Sn**	**20 16 58.9**	**-2.5**
LALI	**Alcalda de L**	**1.00**	**310**	P		**Pn**	**20 16 45.7**	**-1.9**
LALI	**Alcalda de L**	**1.00**	**310**	*e*P		**Pn**	**20 16 45.7**	**-1.9**
LALI				*e*S		**Sn**	**20 16 57.9**	**-3.6**
LALI	**Alcalda de L**	**1.00**	**310**	*i* P		**Pn**	**20 16 45.4**	**-2.2**
	comp=Z,8µm,0.5s							
LALI					IAML		20 16 59.2	
	comp=E,17µm,0.4s							
LOMA	**Loma Larga**	**1.01**	**322**	*e*P		**Pn**	**20 16 46.4**	**-1.4**
LOMA				*e*S		**Sn**	**20 16 59.7**	**-2.2**
LBRS	**Las Brisas**	**1.02**	**330**	*e*P		**Pn**	**20 16 46.9**	**-1.1**
UDBS	**Universidad Do**	**1.06**	**325**	⇓P		**Pn**	**20 16 47.1**	**-1.3**
UDBS				S		**Sn**	**20 17 01.5**	**-1.4**
UDBS	**Universidad Do**	**1.06**	**325**	*e*P		**Pn**	**20 16 47.2**	**-1.3**
LFU	**La Fuente**	**1.06**	**328**	*e*P		**Pn**	**20 16 47.4**	**-1.0**
IGN	**Direccin Gen**	**1.06**	**324**	⇓P		**Pn**	**20 16 47.2**	**-1.3**
IGN				S		**Sn**	**20 17 01.7**	**-1.3**
IGN	**Direccin Gen**	**1.06**	**324**	*e*P		**Pn**	**20 16 47.1**	**-1.3**
IGN				*e*P			20 16 48.3	
UTEC	**Universidad Te**	**1.07**	**322**	⇓P		**Pn**	**20 16 47.1**	**-1.4**
UTEC	**Universidad Te**	**1.07**	**322**	*e*P		**Pn**	**20 16 47.3**	**-1.3**
UTEC				*e*S		**Sn**	**20 17 01.5**	**-1.6**
SEMO	**Seminario San**	**1.09**	**321**	P		**Pn**	**20 16 47.4**	**-1.5**
SEMO				S		**Sn**	**20 17 01.4**	**-2.1**
SEMO	**Seminario San**	**1.09**	**321**	*e*P		**Pn**	**20 16 47.3**	**-1.5**
UEES	**Universidad Ev**	**1.11**	**321**	⇓P		**Pn**	**20 16 47.6**	**-1.4**
UEES	**Universidad Ev**	**1.11**	**321**	*e*P		**Pn**	**20 16 47.7**	**-1.4**
UEES				*e*S		**Sn**	**20 17 02.7**	**-1.3**
PIC2	**El Picacho**	**1.14**	**322**	*e*P		**Pn**	**20 16 48.5**	**-1.1**
PIC2				*e*S		**Sn**	**20 17 04.0**	**-1.0**
PMON	**Piamonte**	**1.15**	**318**	⇓P		**Pn**	**20 16 47.9**	**-1.7**
PMON				S		**Sn**	**20 17 03.1**	**-1.9**
PMON	**Piamonte**	**1.15**	**318**	*e*P		**Pn**	**20 16 48.3**	**-1.3**
JAYA	**Jayaque - finc**	**1.20**	**312**	⇓P		**Pn**	**20 16 48.3**	**-2.1**
JAYA	**Jayaque - finc**	**1.20**	**312**	*i* P		**Pn**	**20 16 48.2**	**-2.1**
QUEZ	**Alcaldia de Qu**	**1.22**	**324**	*e*P		**Pn**	**20 16 49.6**	**-0.9**
QUEZ				*e*S		**Sn**	**20 17 06.1**	**-0.4**
CEDA	**San Andres**	**1.27**	**318**	⇓P		**Pn**	**20 16 49.8**	**-1.3**
CEDA				S		**Sn**	**20 17 05.9**	**-1.7**
CEDA	**San Andres**	**1.27**	**318**	*e*P		**Pn**	**20 16 49.7**	**-1.4**
LLGN	**La Laguna**	**1.37**	**343**	⇓P		**Pn**	**20 16 52.0**	**-0.5**
LLGN				S		**Sn**	**20 17 10.4**	**+0.5**
LLGN	**La Laguna**	**1.37**	**343**	*e*P		**Pn**	**20 16 52.0**	**-0.5**
CEVE	**Cerro Verde**	**1.45**	**312**	⇑P		**Pn**	**20 16 52.4**	**-1.2**
CEVE	**Cerro Verde**	**1.45**	**312**	*e*P		**Pn**	**20 16 52.7**	**-0.8**
CEVE				*e*S		**Sn**	**20 17 11.0**	**-1.0**
CRIN	**San Cristobal**	**1.45**	**96**			**Pn**	**20 16 52.7**	**-0.7**
CRIN					Sn	**Sn**	**20 17 12.2**	**+0.3**
CRIN	**San Cristobal**	**1.45**	**96**	⇓P		**Pn**	**20 16 53.5**	**+0.1**
CRIN	**San Cristobal**	**1.45**	**96**	P		**Pn**	**20 16 53.2**	**-0.2**
CRIN				S		**Sn**	**20 17 12.9**	**+1.1**
SBLS	**San Blas**	**1.45**	**313**	*e*P		**Pn**	**20 16 52.7**	**-1.0**
UNIC	**Universidad Ca**	**1.50**	**319**	P		**Pn**	**20 16 52.9**	**-1.2**
UNIC				S		**Sn**	**20 17 12.0**	**-1.0**
UNIC	**Universidad Ca**	**1.50**	**319**	*e*P		**Pn**	**20 16 53.2**	**-0.9**
NUBE	**Las Nubes**	**1.61**	**311**	⇓P		**Pn**	**20 16 54.2**	**-1.5**
NUBE	**Las Nubes**	**1.61**	**311**	*e*P		**Pn**	**20 16 54.4**	**-1.2**
NUBE				*e*S		**Sn**	**20 17 13.6**	**-2.1**
NUBE	**Las Nubes**	**1.61**	**311**	*i* P		**Pn**	**20 16 54.2**	**-1.5**
NUBE				*i* S		**Sn**	**20 17 13.0**	**-2.7**
ALEN	**Leon**	**1.66**	**103**	P		**Pn**	**20 16 55.3**	**-0.9**
ALEN				S		**Sn**	**20 17 16.6**	**-0.2**
HERN	**Volcan Telica**	**1.67**	**98**			**Pn**	**20 16 55.4**	**-1.0**
LOAL	**Lomas de Alarc**	**1.67**	**313**	⇓P		**Pn**	**20 16 55.5**	**-0.9**
LOAL	**Lomas de Alarc**	**1.67**	**313**	*e*P		**Pn**	**20 16 55.8**	**-0.6**
RBDL	**Robledal**	**1.69**	**318**	*e*P		**Pn**	**20 16 56.1**	**-0.7**
SLOZ	**Alcaldia de Sa**	**1.69**	**314**	*e*P		**Pn**	**20 16 55.9**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.71**	**45**			**Pn**	**20 16 57.1**	**+0.1**
MTO3	**Montecristo**	**1.74**	**332**			**Pn**	**20 16 56.9**	**-0.5**
MTO3	**Montecristo**	**1.74**	**332**	*e*P		**Pn**	**20 16

553A Crawfordville 17.67 12 P Pn 20 20 30.5 +0.2
SDV Santo Domingo 18.01 101 P P 20 20 34.3 0.0
comp=E,38nm,0.8s,baz=280,slow=8.5,SNR=19
SDV PcP PcP 20 25 08.8 +2.2
comp=E,7.5nm,0.8s,baz=297,slow=2.3,SNR=6.5
SDV LR LR 20 29 13.9
comp=E,224nm,18.6s,baz=286,slow=44
SDV Santo Domingo 18.01 101 P P 20 20 33.0 -1.4
SDV Santo Domingo 18.01 101 eP P 20 20 33.3 -1.1
SDV Santo Domingo 18.01 101 P Pn 20 20 34.8 0.0
comp=E,56nm,0.9s
MACC Macarena, Meta 18.01 125 P Pn 20 20 36.9 +2.3
comp=E,49nm,0.8s
HKT Hockley 18.32 339 P Pn 20 20 38.7 +0.6
HKT Hockley 18.32 339 ||/P Pn 20 20 41.4 +3.3
HKT pmax pmax
comp=Z,41nm,1.6s
441A DeRidder 18.33 347 P P 20 20 38.0 +0.4
BANI BANI 18.34 70 P P 20 20 37.8 -0.1
833A Chaparral WMA, 18.43 328 P Pn 20 20 39.5 -0.1
PTLC Puerto Leguiza 18.55 132 P Pn 20 20 46.5 +5.4
MLDN Muldoon 18.62 336 P P 20 20 40.6 -0.2
352A Blakely 18.84 10 P Pn 20 20 43.9 -0.5
HNVL Huntsville, TX 18.94 341 P P 20 20 44.7 +0.5
TIGA Tifton 19.05 13 P P 20 20 46.2 +0.7
250A Grady 19.15 6 P Pn 20 20 48.1 -0.1
DR12 Loma Pena Alta 19.34 70 P P 20 20 48.2 -0.6
VBMS Vicksburg 19.37 355 P Pn 20 20 51.1 +0.4
HNDO Hondo 19.37 331 P Pn 20 20 50.2 -0.6
NATX Nacogdoches 19.65 344 P P 20 20 52.8 +0.8
146A Union 19.70 359 P Pn 20 20 53.8 -0.9
435B Jarrell 19.71 336 P P 20 20 53.8 +1.1
143A Socs Landing, 19.94 353 P Pn 20 20 56.4 -1.0
DRIO Del Rio 19.95 328 P P 20 20 56.3 +0.9
152A Waverly Hall 20.04 9 P Pn 20 20 58.1 -0.5
LRAL Lakeview Retre 20.14 4 P Pn 20 20 59.4 -0.4
237A Washetta, Mont 20.20 342 P Pn 20 21 01.0 +0.5
Z47A Carrollton 20.26 1 P P 20 20 58.6 -0.1
154A Montrose 20.29 13 P P 20 20 58.4 -0.5
JCT Junction City 20.41 331 P P 20 21 00.5 +0.2
JCT Junction City 20.41 331 P P 20 21 00.5 +0.2
BRDY Brady 20.73 334 P P 20 21 03.9 +0.1
WHTX Lake Whitney, 20.74 338 P P 20 21 04.6 +0.7
Y45A Yeager Farm, C 20.94 358 P P 20 21 06.8 +0.8
GOGA Godfrey 20.98 12 P P 20 21 07.5 +1.1
GOGA Godfrey 20.98 12 P P 20 21 07.5 +1.1
Y49A Blount Mountai 21.00 5 P P 20 21 07.5 +0.8
FW13 Cleburne 21.06 339 P P 20 21 08.4 +1.2
Z38A Mt. Pleasant 21.16 345 P P 20 21 09.1 +0.8
WLAR White Oak Lake 21.16 349 P P 20 21 10.8 +2.5
SAND Sanderson 21.18 326 P P 20 21 08.9 +0.3
CCAR Cane Creek 21.18 353 P P 20 21 09.9 +1.4
CRPR Cabo Rojo, PR 21.27 73 P P 20 21 09.0 -0.6
Y52A Lilburn 21.31 10 P P 20 21 11.2 +1.2
Y52A IAmb IAmb 20 21 29.2
comp=Z,49nm,0.8s
HPIG 21.32 314 P P 20 21 11.3 +1.0
MLPR Magueyes Islan 21.32 73 P P 20 21 10.0 -0.1
MLPR IAmb IAmb 20 21 15.5
comp=Z,43nm,1.0s
AGPR Aguadilla, PR 21.36 72 P P 20 21 10.8 +0.2
OZNA Ozona 21.42 329 P P 20 21 11.1 -0.1
OZNA IAmb IAmb 20 21 17.8
comp=Z,42nm,0.7s
X48A Hartselle 21.55 3 P P 20 21 12.9 +0.5
X48A IAmb IAmb 20 21 33.1
comp=Z,73nm,1.3s
NHSC New Hope 21.56 19 P P 20 21 12.8 +0.2
OXF Oxford 21.58 358 P P 20 21 13.5 +0.7
OXF IAmb IAmb 20 21 36.7
comp=Z,63nm,0.9s
OXF Oxford 21.58 358 P P 20 21 13.5 +0.7
OXF pmax pmax
comp=Z,63nm,1.0s
TXAR Lajitas Array 21.61 322 P P 20 21 15.2 +1.9
comp=Z,34nm,0.7s,baz=144,slow=9.8,SNR=166
TXAR PcP PcP 20 25 14.7 +1.9
comp=Z,2.8nm,0.8s,baz=125,slow=0.6,SNR=7.8
TXAR ScP ScP 20 28 47.6 +3.9
comp=Z,0.4nm,0.7s,baz=147,slow=5.9,SNR=3.2
TXAR LR LR 20 30 06.7
comp=Z,253nm,21.3s,baz=60,slow=38
comp=Z,34nm,0.7s
TXAR Lajitas Array 21.61 322 P P 20 21 14.9 +1.7
TX31 Lajitas Ar. Si 21.61 322 P P 20 21 14.5 +1.3
TX31 IAmb IAmb 20 21 18.4
comp=Z,32nm,0.6s
UUPR Utuado, UPR, P 21.68 73 P P 20 21 13.5 -0.4
UUPR IAmb IAmb 20 21 16.9
comp=Z,31nm,0.7s
FPAL Fort Paine 21.76 7 P P 20 21 15.5 +0.8
PLPT Palo Pinto 21.80 337 P P 20 21 16.0 +0.8
PLPT IAmb IAmb 20 21 19.9
comp=Z,42nm,0.6s
HODGE Hodges 22.04 14 P P 20 21 19.3 +1.6
HODGE IAmb IAmb 20 21 37.5
comp=Z,52nm,0.9s
UALR University of 22.10 352 P P 20 21 19.3 +0.9
UALR IAmb IAmb 20 21 44.1
comp=Z,59nm,1.0s
ABTX Abilene, Hawle 22.16 334 P P 20 21 19.6 +0.5
ABTX IAmb IAmb 20 21 23.0
comp=Z,44nm,0.7s
SJG San Juan 22.18 74 P P 20 21 15.2 -4.2
comp=Z,18nm,0.8s,baz=225,slow=11,SNR=4.3
SJG LR LR 20 30 45.3
comp=Z,216nm,19.3s,baz=276,slow=40
comp=Z,18nm,0.8s
SJG San Juan 22.18 74 P P 20 21 17.7 -1.7
SGCY Sterling City 22.23 331 P P 20 21 20.4 +0.5
ATAH Atahualpa 22.26 153 LR LR 20 29 14.0
comp=Z,224nm,20.2s,baz=343,slow=34
JSC Jenkinsville 22.34 16 IAmb IAmb 20 21 40.9
comp=Z,75nm,1.0s
Y57A Sumter 22.34 18 P P 20 21 21.8 +0.8
ALPN Alpine 22.35 324 P P 20 21 21.8 +0.5
ALPN IAmb IAmb 20 21 25.4
comp=Z,27nm,0.7s
SWET Sewanee 22.39 6 IAmb IAmb 20 21 42.8
comp=Z,44nm,1.0s
W50A Signal Mountai 22.44 7 IAmb IAmb 20 21 42.9
comp=Z,35nm,0.9s
W52A Murphy 22.54 10 IAmb IAmb 20 21 47.0
comp=Z,41nm,0.8s
TPB05 Hovey Rd 22.58 325 IAmb IAmb 20 21 29.7
comp=Z,23nm,0.6s
WHAR Wooly Hollow 22.60 352 IAmb IAmb 20 21 47.4
comp=Z,41nm,0.9s
PAULI Pauline 22.71 14 IAmb IAmb 20 21 51.8
comp=Z,42nm,1.1s
WTFS Witchita Falls 22.71 338 IAmb IAmb 20 21 49.1
comp=Z,46nm,0.7s
TPB01 Permian Basin 22.86 324 IAmb IAmb 20 21 30.4
comp=Z,47nm,0.8s
BIRD Birdtown, Kers 22.90 17 IAmb IAmb 20 21 29.4
comp=Z,54nm,0.6s
APMT Aspermont 22.97 334 IAmb IAmb 20 21 42.7
comp=Z,54nm,0.8s
SLBS Sierra La Lagu 22.98 301 P P 20 21 30.4 +2.5
CUPR Culebra, Puert 23.03 73 P P 20 21 27.8 -0.5
CUPR IAmb IAmb 20 21 30.0
comp=Z,45nm,0.8s
Y60A Bolivia 23.06 22 P P 20 21 28.9 +0.6
TPB06 Permian Basin 23.08 327 IAmb IAmb 20 21 31.4
comp=Z,126nm,0.7s
ODSA Odessa 23.10 328 IAmb IAmb 20 21 30.0
comp=Z,40nm,0.7s
TKL Tuckaleechee C 23.11 10 LR LR 20 31 05.9
comp=Z,299nm,19.8s,baz=141,slow=39
TKL Tuckaleechee C 23.11 10 IAmb IAmb 20 21 54.1
comp=Z,54nm,0.9s
KMSC Kings Mountain 23.13 15 IAmb IAmb 20 21 47.4
comp=Z,42nm,1.0s
FCAR Ozark Folk Cen 23.17 353 P P 20 21 29.6 +0.2
129A Stewart Farms, 23.17 330 IAmb IAmb 20 21 31.4
comp=Z,59nm,0.8s
WVT Waverly 23.19 1 P P 20 21 29.8 +0.1
WVT Waverly 23.19 1 P P 20 21 29.8 +0.1
WVT pmax pmax
comp=Z,15nm,0.7s
LCAR Lake Charles 23.24 355 P P 20 21 30.8 +0.6
V53A Saluda 23.30 12 IAmb IAmb 20 21 50.0
comp=Z,59nm,1.0s
POST Post 23.36 332 P P 20 21 31.0 -0.4

W35A Tecumseh 23.46 343 IAmb IAmb 20 21 34.6
comp=Z,29nm,0.6s
LPIG La Paz 23.46 302 LR LR 20 30 27.7
comp=Z,65nm,21.0s,baz=45,slow=35
128A Castleberry Fa 23.47 329 IAmb IAmb 20 21 35.8
comp=Z,32nm,0.7s
W57A Gilead 23.51 18 IAmb IAmb 20 21 54.2
comp=Z,39nm,1.0s
U49A Red Boiling Sp 23.69 6 IAmb IAmb 20 21 52.9
comp=Z,44nm,1.1s
V55A Taylorsville 23.84 15 IAmb IAmb 20 21 53.8
comp=Z,41nm,1.0s
HHAR Hobbs 23.84 349 P P 20 21 37.6 +2.0
HHAR IAmb IAmb 20 21 39.8
comp=Z,36nm,0.5s
TUL3 Leonard 23.88 345 IAmb IAmb 20 22 04.7
comp=Z,42nm,0.8s
PBMO Poplar Bluff 23.89 356 IAmb IAmb 20 21 40.9
comp=Z,50nm,0.7s
RLO Rose Lookout 23.94 347 IAmb IAmb 20 21 39.5
comp=Z,28nm,0.6s
DEOK Depew 24.00 344 IAmb IAmb 20 21 38.5
comp=Z,28nm,0.5s
TZTN Tazewell 24.02 10 IAmb IAmb 20 22 05.0
comp=Z,47nm,1.1s
T47A Sharon Grove 24.07 3 IAmb IAmb 20 21 38.9
comp=Z,42nm,0.7s
U38A Grayette 24.07 348 IAmb IAmb 20 21 41.5
comp=Z,45nm,1.0s
T42A Van Buren 24.19 355 P P 20 21 38.7 0.0
U54A Nelsons Funny 24.33 13 IAmb IAmb 20 22 01.1
comp=Z,65nm,0.7s
MNTX Cornudas Mount 24.34 323 IAmb IAmb 20 21 43.3
comp=Z,60nm,1.8s
QUOK Quay 24.36 344 IAmb IAmb 20 21 44.0
comp=Z,52nm,0.7s
MGMO Mountain Grove 24.43 353 IAmb IAmb 20 22 12.9
comp=Z,51nm,1.1s
OK048 Pawnee Station 24.66 344 IAmb IAmb 20 21 46.8
comp=Z,32nm,0.6s
S44A Carbondale 24.75 359 IAmb IAmb 20 21 50.0
comp=Z,42nm,0.8s
SIUC Southern Illin 24.77 359 IAmb IAmb 20 21 50.1
comp=Z,32nm,0.8s
CCM Cathedral Cave 25.22 355 P P 20 21 48.0 -0.1
CCM IAmb IAmb 20 21 50.8
comp=Z,36nm,0.7s
CCM Cathedral Cave 25.22 355 P P 20 21 48.0 -0.1
CCM pmax pmax
comp=Z,36nm,0.7s
OK038 West end E0370 25.26 340 IAmb IAmb 20 21 51.4
comp=Z,48nm,0.6s
BLA Blacksburg 25.32 15 IAmb IAmb 20 22 15.1
comp=Z,36nm,0.8s
WCI Wyandotte Cave 25.36 4 P P 20 21 49.7 +0.4
WCI IAmb IAmb 20 21 50.7
comp=Z,30nm,0.8s
WCI Wyandotte Cave 25.36 4 P P 20 21 49.7 +0.4
WCI pmax pmax
comp=Z,30nm,0.9s
R40A Maddies Statio 25.56 353 IAmb IAmb 20 22 16.1
comp=Z,35nm,0.9s
OLIL Olney 25.78 1 IAmb IAmb 20 22 14.1
comp=Z,30nm,0.9s
CZSB Cruzeiro do Su 25.79 142 P P 20 21 55.4 +1.9
CZSB IAmb IAmb 20 22 17.3
comp=Z,39nm,1.1s
Q44A Meyer Farm, Va 25.95 359 IAmb IAmb 20 21 55.8
comp=Z,27nm,0.6s
T59A Double "B" Far 25.96 20 P P 20 21 55.4 +0.6
T59A IAmb IAmb 20 22 21.1
comp=Z,33nm,0.9s
121A Cookes Peak, D 26.36 321 P P 20 21 60.0 +1.2
R55A Marlinton 26.41 15 IAmb IAmb 20 22 25.7
comp=Z,41nm,1.1s
Q51A Peebles 26.48 9 IAmb IAmb 20 22 18.8
comp=Z,35nm,0.8s
Q52A Bidwell 26.60 11 IAmb IAmb 20 22 28.1
comp=Z,48nm,1.2s
RTBA Rita Blanca 26.74 334 IAmb IAmb 20 22 20.2
comp=Z,42nm,0.9s
P40A Paris 26.76 354 IAmb IAmb 20 22 04.4
comp=Z,36nm,0.9s
Y22A Socorro 26.88 324 IAmb IAmb 20 22 07.8
comp=Z,32nm,0.8s
P51A Williamsport 26.96 9 IAmb IAmb 20 22 45.0
comp=Z,36nm,1.1s
P38A Dawn 27.04 351 IAmb IAmb 20 22 24.9
comp=Z,23nm,0.8s
DUN6 Lazy B Ranch 27.19 320 P P 20 22 07.4 +1.3
DUN6 IAmb IAmb 20 22 24.9
comp=Z,21nm,0.8s
P53A Whipple 27.27 12 IAmb IAmb 20 22 26.6
comp=Z,54nm,1.1s
ANMO Albuquerque 27.34 327 LR LR 20 35 04.7
comp=Z,146nm,18.3s,baz=90,slow=41
ANMO Albuquerque 27.34 327 P P 20 22 08.7 +1.2
ANMO Albuquerque 27.34 327 ||/P P 20 22 09.7 +2.1
ANMO pmax pmax
comp=Z,8.0nm,0.8s
Q56A Snyder Ridge, 27.37 16 IAmb IAmb 20 22 33.8
comp=Z,52nm,1.4s
ACSO Alum Creek Sta 27.71 9 IAmb IAmb 20 22 11.9
comp=Z,30nm,0.9s
O52A Adamsville 27.79 11 IAmb IAmb 20 22 12.7
comp=Z,25nm,0.9s
O53A New Philadelph 28.04 12 IAmb IAmb 20 22 33.0
comp=Z,35nm,1.1s
T25A Trinidad 28.06 332 IAmb IAmb 20 22 17.6
comp=Z,36nm,0.7s
TUC Tucson 28.13 317 P P 20 22 16.4 +1.9
TUC Tucson 28.13 317 P P 20 22 16.4 +1.9
TUC pmax pmax
comp=Z,9.0nm,1.0s
O54A Avella 28.16 13 IAmb IAmb 20 22 33.8
comp=Z,32nm,1.1s
N53A Lisbon 28.66 12 IAmb IAmb 20 22 22.1
comp=Z,19nm,0.7s
M50A Fremont 28.85 9 IAmb IAmb 20 22 21.6
comp=Z,40nm,0.8s
PAGS Pennsylvania G 29.19 19 IAmb IAmb 20 22 50.5
comp=Z,44nm,0.9s
BBSR BB Station 29.23 44 P P 20 22 25.9 +1.8
PIX Pinacate 29.54 313 P P 20 22 26.9 0.0
PAOC Oil Creek Stat 29.59 14 IAmb IAmb 20 23 19.1
comp=Z,50nm,1.7s
BOAV Boa Vista 29.60 108 P P 20 22 26.0 -1.6
BOAV Boa Vista 29.60 108 eP P 20 22 26.3 -1.3
JFWS Jewell Farm 30.00 357 IAmb IAmb 20 22 35.4
comp=Z,15nm,0.6s
M57A Sunshine Farm, 30.08 17 IAmb IAmb 20 23 02.7
comp=Z,63nm,1.6s
MVCO Mesa Verde 30.13 327 IAmb IAmb 20 22 37.6
comp=Z,13nm,0.7s
ISCO Idaho Springs 30.79 334 P P 20 22 39.0 +0.8
ISCO IAmb IAmb 20 22 42.0
comp=Z,17nm,0.8s
ISCO Idaho Springs 30.79 334 P P 20 22 39.0 +0.8
ISCO pmax pmax
comp=Z,17nm,0.9s
I42A Draeger Farm, 30.93 359 IAmb IAmb 20 22 39.7
comp=Z,40nm,1.2s
PV02 Paradox Valley 31.01 328 IAmb IAmb 20 22 44.9
comp=Z,15nm,0.7s
PV13 Radium Mtn., P 31.01 328 IAmb IAmb 20 22 44.8
comp=Z,12nm,0.7s
PV05 Paradox Valley 31.10 328 IAmb IAmb 20 22 45.1
comp=Z,21nm,0.7s
PV03 Paradox Valley 31.10 328 IAmb IAmb 20 22 44.9
comp=Z,21nm,0.8s
VTX Valle De La Tr 31.13 311 P P 20 22 42.6 +1.6
PV17 East Wray Mesa 31.18 328 IAmb IAmb 20 22 45.4
comp=Z,31nm,0.8s
PV16 Nyswonger Mesa 31.18 328 IAmb IAmb 20 22 45.5
comp=Z,22nm,0.7s
WSPT Westport, CT 31.19 22 P P 20 22 41.7 +0.3
WSPT IAmb IAmb 20 23 07.3
comp=Z,50nm,1.2s
PV04 Paradox Valley 31.23 328 IAmb IAmb 20 22 46.0
comp=Z,28nm,0.8s
PV14 Lion Creek, Pa 31.28 328 IAmb IAmb 20 22 46.3
comp=Z,18nm,0.8s
PV10 Paradox Valley 31.29 328 P P 20 22 43.0 +0.4
ECSD EROS Data Cent 31.55 349 IAmb IAmb 20 22 46.7
comp=Z,29nm,1.6s
ESJX Sierra Juarez 31.57 312 P P 20 22 46.7 +1.7
M63A Gales Ferry 31.89 24 P P 20 22 48.6 +1.2

BC3 Big Chuckawall 32.09 315 P P 20 22 50.2 +0.7
BC3 IAmb IAmb 20 23 06.9
comp=Z,14nm,0.9s
HAYD Hayden 32.10 333 IAmb IAmb 20 22 54.0
comp=Z,16nm,0.8s
CBX Cerro Bola 32.24 312 P P 20 22 52.5 +1.6
CBX IAmb IAmb 20 23 08.9
comp=Z,23nm,0.8s
M65A Busby, Falmout 32.59 25 P P 20 22 53.8 +0.2
baz=214
DANC Danby, Needles 32.60 316 IAmb IAmb 20 22 58.2
comp=Z,15nm,0.8s
SRU San Rafael Swe 32.61 327 IAmb IAmb 20 22 58.0
comp=Z,12nm,0.8s
PFO Pinyon Flats O 32.77 314 LR LR 20 36 16.9
comp=Z,297nm,19.0s,baz=87,slow=36
SADO Sadowa 32.81 12 LR LR 20 36 16.3
comp=Z,261nm,18.2s,baz=152,slow=37
SADO Sadowa 32.81 12 IAmb IAmb 20 23 14.4
comp=Z,22nm,1.1s
P18A Preston Nutter 32.85 328 IAmb IAmb 20 23 00.3
comp=Z,13nm,0.8s
P17A Butcher Ranch, 32.99 327 IAmb IAmb 20 23 01.9
comp=Z,19nm,0.8s
BUKO Buck Lake 33.40 12 IAmb IAmb 20 23 17.6
comp=Z,27nm,1.0s
F33A 5 Mile Ranch, 33.54 350 IAmb IAmb 20 23 19.9
comp=Z,14nm,0.6s
LONY Lake Ozonia 33.84 18 IAmb IAmb 20 23 23.5
comp=Z,18nm,0.9s
MPU Maple Canyon 33.86 327 IAmb IAmb 20 23 09.2
comp=Z,15nm,0.8s
PSUT Pine Spring 34.06 323 IAmb IAmb 20 23 10.7
comp=Z,9.8nm,0.8s
S11A Rachel 34.63 320 IAmb IAmb 20 23 15.8
comp=Z,15nm,0.8s
LRMC Laurel Mtn Rad 34.63 316 P P 20 23 13.0 +1.4
PDAR Pinedale Array 34.93 333 PcP PcP 20 25 45.7 +0.3
comp=Z,2.9nm,0.6s,baz=173,slow=3.0,SNR=3.8
PDAR ScP ScP 20 29 28.7 +3.9
comp=Z,0.4nm,0.7s,baz=120,slow=6.4,SNR=3.6
PDAR LR LR 20 41 06.9
comp=Z,136nm,18.8s,baz=30,slow=42
HWUT Hardware Ranch 34.99 329 IAmb IAmb 20 23 17.3
comp=Z,14nm,0.6s
EYMN Ely 35.08 357 IAmb IAmb 20 23 16.1
comp=Z,16nm,0.8s
LPAZ La Paz 35.28 145 P P 20 23 19.2 +1.3
comp=Z,4.5nm,0.7s,baz=337,slow=8.3,SNR=14
LPAZ LR LR 20 38 10.1
comp=Z,209nm,19.5s,baz=323,slow=37
comp=Z,4.5nm,0.7s
LPAZ La Paz 35.28 145 P P 20 23 17.1 -0.7
LPAZ La Paz 35.28 145 eP P 20 23 19.5 +1.7
LPAZ La Paz 35.28 145 P P 20 23 19.6 +1.7
LPAZ x pP 20 23 35.4 +0.4
LPAZ x sP 20 23 43.3 +0.1
DSP Deep Springs 35.89 318 P P 20 23 23.8 +1.6
PB12 IPOC Station P 36.05 150 P P 20 23 23.9 0.0
PB12 IAmb IAmb 20 24 22.7
comp=Z,25nm,1.3s
PB16 IPOC Station P 36.22 148 P P 20 23 25.8 -0.1
PB16 IAmb IAmb 20 23 31.7
comp=Z,14nm,0.7s
MDP Montagnes des 36.24 99 LR LR 20 38 41.3
comp=Z,193nm,20.4s,baz=331,slow=37
FXWY Fox Creek 36.28 332 IAmb IAmb 20 23 29.9
comp=Z,13nm,0.7s
NVAR Mina Array Bea 36.72 319 P P 20 23 31.2 +1.7
comp=Z,7.2nm,0.7s,baz=132,slow=7.2,SNR=39
NVAR PcP PcP 20 25 52.5 +1.7
comp=Z,9.0nm,0.6s,baz=132,slow=4.0,SNR=27
NVAR ScP ScP 20 29 35.3 +3.8
comp=Z,1.4nm,0.7s,baz=73,slow=3.3,SNR=7.7
NVAR LR LR 20 39 51.0
comp=Z,210nm,21.6s,baz=92,slow=38
comp=Z,7.2nm,0.7s
LHV Little Huntoon 36.74 319 IAmb IAmb 20 23 33.9
comp=Z,13nm,0.8s
YFT Old Faithful 36.83 333 IAmb IAmb 20 23 34.0
comp=Z,19nm,0.7s
G65A Princeton 36.86 25 P P 20 23 31.4 +1.1
PB11 IPOC Station P 37.35 150 P P 20 23 35.8 +0.8
PB11 IAmb IAmb 20 24 32.7
comp=Z,39nm,1.5s
GO01 Chusmiza 37.50 149 P P 20 23 36.3 -0.3
GO01 IAmb IAmb 20 23 45.0
comp=Z,10.0nm,0.6s
ULM Lac du Bonnet 37.78 352 P P 20 23 37.0 -1.1
comp=Z,26nm,0.6s,baz=164,slow=9.2,SNR=51
ULM LR LR 20 41 15.1
comp=Z,320nm,20.0s,baz=191,slow=40
comp=Z,26nm,0.6s
ULM Lac du Bonnet 37.78 352 ceP P 20 23 37.3 -0.8
D62A Allapoint, All 37.84 22 P P 20 23 38.6 -0.1
D62A IAmb IAmb 20 23 56.4
comp=Z,17nm,1.0s
PNTR Pine Nut 37.92 319 IAmb IAmb 20 23 48.7
comp=Z,11nm,0.8s
VILB Vilhena 38.03 131 P P 20 23 40.5 -0.1
VILB Vilhena 38.03 131 eP P 20 23 41.1 +0.5
DLMT Dillon 38.33 332 IAmb IAmb 20 23 47.1
comp=Z,19nm,0.7s
NPGB Novo Progresso 38.43 119 eP P 20 23 45.4 +1.4
PB01 IPOC Station P 38.53 151 P P 20 23 46.2 +1.4
PB09 IPOC Station P 39.29 151 P P 20 23 52.5 +1.3
WVOR Wild Horse Val 39.37 324 IAmb IAmb 20 23 54.3
comp=Z,9.0nm,0.7s
GBN Guysborough 39.74 30 P P 20 23 55.1 +0.6
PDRB Porto dos Gac 39.83 126 eP P 20 23 55.1 -0.6
J08A Circle Bar Ran 39.87 325 IAmb IAmb 20 23 59.0
comp=Z,8.2nm,0.7s
MSO Missoula 40.05 333 IAmb IAmb 20 23 59.2
comp=Z,14nm,0.9s
CLDB Colider 40.14 125 eP P 20 23 58.0 -0.3
PTLB Pontes e Lacer 40.45 133 P P 20 24 00.2 -0.5
PTLB Pontes e Lacer 40.45 133 eP P 20 24 01.1 +0.4
F10A Beach Ranch, E 40.98 329 IAmb IAmb 20 24 07.6
comp=Z,19nm,1.1s
YBH Yreka Blue Hor 41.38 320 LR LR 20 45 08.4
comp=Z,20nm,21.2s,baz=93,slow=42
PINE Pine Mountain 41.53 324 P P 20 24 09.3 -0.3
J04A Umpqua Nationa 41.88 323 IAmb IAmb 20 24 16.1
comp=Z,13nm,0.6s
I04A Tendick Farm, 42.38 323 IAmb IAmb 20 24 18.8
comp=Z,12nm,0.8s
D08A Wollman Farm, 42.57 329 IAmb IAmb 20 24 19.6
comp=Z,9.5nm,0.7s
E07A Sunnyside 42.71 328 P P 20 24 19.7 +0.7
E07A IAmb IAmb 20 24 22.4
comp=Z,10nm,0.7s
C09A Chrisman Ranch 42.77 330 IAmb IAmb 20 24 24.1
comp=Z,14nm,0.6s
H04A Detroit Lake 42.78 324 IAmb IAmb 20 24 20.8
comp=Z,19nm,1.0s
FFC Flin Flon 43.10 349 P P 20 24 21.9 +0.1
FFC IAmb IAmb 20 24 23.1
comp=Z,18nm,0.5s
FFC Flin Flon 43.10 349 P P 20 24 22.0 +0.1
FFC pmax pmax
comp=Z,18nm,0.5s
FFC Flin Flon 43.10 349 P P 20 24 22.5 +0.6
FFC x x 20 24 37.5
FFC x x 20 24 37.5
SALV Santo Antonio 43.25 130 eP P 20 24 23.9 +0.3
DRLN Deer Lake 44.40 29 P P 20 24 32.2 -0.2
SNDB Serra Nova Dou 44.42 122 eP P 20 24 33.2 +0.2
RPN Rapa Nui 44.58 207 LR LR 20 38 27.0
comp=Z,179nm,21.8s,baz=106,slow=29
LCO Las Campanas 45.04 158 P P 20 24 38.9 +0.8
LCO Las Campanas 45.04 158 P P 20 24 38.9 +0.8
LCO pmax pmax
comp=Z,99nm,1.9s
SCHQ Schefferville 45.21 18 P P 20 24 37.2 -1.6
comp=Z,20nm,0.6s,baz=212,slow=6.9,SNR=36
SCHQ PcP PcP 20 26 17.0 -0.8
comp=Z,2.7nm,0.6s,baz=201,slow=5.7,SNR=1.6
SCHQ LR LR 20 44 32.9
comp=Z,533nm,19.0s,baz=72,slow=38
comp=Z,20nm,0.6s
SCHQ Schefferville 45.21 18 P P 20 24 37.9 -0.9
SCHQ IAmb IAmb 20 24 39.0
comp=Z,22nm,0.7s
ARAG Araguaiana, MT 46.09 127 eP P 20 24 46.0 -0.3
AQDB Aquidauana 46.25 135 P P 20 24 47.1 -0.3
AQDB IAmb IAmb 20 24 49.1

comp=Z,37nm,1.3s
LLLB Lillooet 46.42 331 IAmb IAmb 20 24 50.4
comp=Z,11nm,0.9s
CO03 El Pedregal 46.70 159 P **P** **20 24 51.6 +0.7**
CO03 IAmb IAmb 20 25 13.8
comp=Z,22nm,1.1s
CO02 Combarbal 46.92 159 P **P** **20 24 54.1 +1.5**
KUQ Kuujjuuaa 47.67 14 P **P** **20 24 57.3 -0.7**
KUQ IAmb IAmb 20 25 14.6
comp=Z,28nm,1.0s
AMBA Amambai (Brazi 48.40 137 *e*P **P** **20 25 04.6 +0.5**
VA03 San Esteban 48.50 160 P **P** **20 25 05.6 +0.8**
BDFB Brasilia 49.07 124 P **P** **20 25 09.2 -0.3**
comp=Z,11nm,0.7s,baz=297,slow=10,SNR=12
BDFB PcP **PcP** **20 26 32.8 +0.4**
comp=Z,2.2nm,0.4s,baz=315,slow=5.7,SNR=3.7
BDFB LR LR 20 48 10.8
comp=Z,95nm,19.2s,baz=325,slow=39
comp=Z,11nm,0.7s
BDFB Brasilia 49.07 124 P **P** **20 25 08.8 -0.7**
BDFB IAmb IAmb 20 25 10.3
comp=Z,10nm,0.7s
BDFB PcP **PcP** **20 26 33.5 +1.2**
MT09 Talagante 49.28 161 P **P** **20 25 12.0 +1.1**
MT08 Bocatoma Ro 49.30 160 P **P** **20 25 11.9 +0.8**
CPUP Villa Florida 49.37 142 P **P** **20 25 11.5 +0.1**
comp=Z,5.4nm,0.9s,baz=341,slow=9.9,SNR=12
CPUP LR LR 20 46 41.1
comp=Z,103nm,18.0s,baz=22,slow=37
comp=Z,5.4nm,0.9s
CPUP Villa Florida 49.37 142 P **P** **20 25 11.4 0.0**
CPUP IAmb IAmb 20 25 12.9
comp=Z,18nm,1.3s
CPUP Villa Florida 49.37 142 P **P** **20 25 11.7 +0.2**
CPUP x x 20 25 26.2
CPUP pP **pP** **20 25 30.9 +1.5**
ITRB Iturama 49.58 130 *e*P **P** **20 25 13.7 +0.5**
TRCB Terra Rica 49.91 135 P **P** **20 25 14.5 -1.2**
GO05 Hualane 50.13 162 P **P** **20 25 18.5 +1.3**
IPMB Ipameri, GO 50.21 127 *e*P **P** **20 25 17.8 -0.2**
ML02 Panimavida 50.98 162 P **P** **20 25 24.2 +0.7**
BI02 San Fabin de 51.86 162 P **P** **20 25 31.1 +0.9**
FRTB Fartura 52.42 133 *e*P **P** **20 25 34.4 -0.1**
PSAL Palomas, Salto 52.82 146 *e*P **P** **20 25 39.1 +1.9**
YKA Yellowknife Ar 52.96 345 P **P** **20 25 37.8 0.0**
comp=Z,17nm,0.7s,baz=144,slow=7.0,SNR=255
YKA pP **pP** **20 25 53.2 -2.9**
comp=Z,12nm,0.9s,baz=144,slow=6.9,SNR=8.9
YKA PcP **PcP** **20 26 46.1 +0.3**
comp=Z,2.3nm,0.6s,baz=146,slow=3.2,SNR=4.4
YKA LR LR 20 50 44.8
comp=Z,320nm,19.1s,baz=72,slow=39
comp=Z,17nm,0.7s
YKA Yellowknife Ar 52.96 345 P **P** **20 25 37.4 -0.4**
YKA PcP **PcP** **20 26 45.7 -0.1**
ITAB Concordia 53.24 139 P **P** **20 25 39.8 -0.6**
TOAD Toad River Com 53.47 337 P **P** **20 25 42.0 +0.2**
baz=133,SNR=10.0
U35K Hyder 53.57 332 P **P** **20 25 43.0 +0.6**
baz=126
KOTAN Kotaneelee Air 53.94 339 P **P** **20 25 45.8 +0.7**
baz=135,SNR=13
V35K Ketchikan 53.96 331 P **P** **20 25 46.1 +0.8**
baz=124
VAO Valinhos 54.09 131 P **P** **20 25 46.4 -0.4**
T35M Bob Quinn 54.31 333 P **P** **20 25 48.9 +1.0**
baz=127
CRAG Craig 54.75 331 P **P** **20 25 51.4 +0.4**
baz=123
WRAK Wrangell Islan 54.92 332 P **P** **20 25 52.5 +0.3**
baz=124
DLBC Dease Lake 55.10 335 LR LR 20 54 47.7
comp=Z,283nm,18.9s,baz=38,slow=42
DLBC Dease Lake 55.10 335 P **P** **20 25 54.9 +1.3**
baz=128,SNR=23
U33K Whale Pass 55.11 331 P **P** **20 25 54.4 +0.8**
baz=123
S34M Telegraph Cree 55.25 334 IAmb IAmb 20 26 10.7
comp=Z,11nm,1.2s
S34M Telegraph Cree 55.25 334 P **P** **20 25 55.3 +0.7**
baz=126
RCBR Riachuelo 55.48 106 LR LR 20 50 52.6
comp=Z,60nm,20.7s,baz=338,slow=38
PLTB Pedras Altas 55.57 144 P **P** **20 25 57.0 -0.2**
WTLY Watson Lake, Y 55.67 337 P **P** **20 25 58.7 +1.0**
baz=130,SNR=8.3
PLCA Paso Flores 55.85 164 P **P** **20 26 00.5 +1.3**
comp=Z,4.5nm,0.9s,baz=341,slow=7.7,SNR=5.5
PLCA LR LR 20 44 29.9
comp=Z,110nm,20.6s,baz=32,slow=30
comp=Z,4.5nm,0.9s
PLCA Paso Flores 55.85 164 P **P** **20 26 00.8 +1.6**
PLCA x x 20 26 21.4
PLCA sP **sP** **20 26 28.5 +3.0**
WRGLY Wrigley 56.01 342 P **P** **20 26 00.7 +0.8**
baz=138
R33M Jennings River 56.08 335 IAmb IAmb 20 26 02.7
comp=Z,12nm,0.7s
R33M Jennings River 56.08 335 P **P** **20 26 01.1 +0.4**
baz=128
Q32M Nakina River 56.35 335 P **P** **20 26 03.5 +0.8**
baz=126
TGTN Hyland Airport 56.41 338 P **P** **20 26 03.4 +0.5**
baz=132,SNR=12
S32K Killisnoo 56.52 332 P **P** **20 26 04.1 +0.5**
baz=123
ILON Igloolik, Nuna 56.64 3 P **P** **20 26 03.7 -0.7**
SIT Sitka 56.64 332 P **P** **20 26 05.0 +0.5**
baz=122
R32K Eaglecrest 56.93 333 P **P** **20 26 06.9 +0.3**
baz=123
P33M Teslin, Yukon 57.31 336 IAmb IAmb 20 26 10.6
comp=Z,8.9nm,0.9s
P33M Teslin, Yukon 57.31 336 P **P** **20 26 09.7 +0.3**
baz=126,SNR=5.7
P32M Atlin 57.32 335 P **P** **20 26 10.1 +0.7**
baz=125
CAM01 Campos-RJ 57.46 126 *e*P **P** **20 26 11.4 +0.6**
S31K Pelican 57.53 332 P **P** **20 26 11.1 +0.3**
baz=121
SKAG Skagway 57.93 334 P **P** **20 26 13.9 +0.3**
baz=123
N32M Quiet Lake 57.98 336 P **P** **20 26 14.3 +0.4**
baz=126
MMPY Sheldon Lake, 58.19 338 P **P** **20 26 16.2 +0.7**
baz=129,SNR=20
WHY Whitehorse 58.41 335 P **P** **20 26 17.6 +0.5**
baz=124
FARO Faro, Yukon 58.72 337 P **P** **20 26 19.5 +0.4**
baz=126
O30N Mendenhall 58.97 335 P **P** **20 26 21.6 +0.7**
baz=123,SNR=11
P30M Million Dollar 58.99 334 P **P** **20 26 21.4 +0.4**
baz=122
M31M Drury Creek, Y 59.10 337 P **P** **20 26 22.0 +0.3**
baz=125
N31M Braeburn, Yuko 59.24 336 P **P** **20 26 22.9 +0.2**
baz=124,SNR=5.6
HYT Haines Junctio 59.59 335 P **P** **20 26 25.6 +0.4**
baz=121
O29M Mount Kennedy 59.77 334 P **P** **20 26 26.8 +0.3**
baz=120
YUK6 Outpost Mounta 60.01 334 P **P** **20 26 28.6 +0.3**
baz=121
POIN Pond Inlet 60.15 4 P **P** **20 26 27.9 -0.9**
M30M Minto, Yukon 60.24 337 IAmb IAmb 20 26 30.6
comp=Z,7.2nm,0.9s
M30M Minto, Yukon 60.24 337 P **P** **20 26 30.1 +0.6**
baz=123
YUK4 Talbot Arm 60.33 335 P **P** **20 26 31.0 +0.6**
baz=121
PINM Pinnacle 60.40 333 P **P** **20 26 31.1 +0.4**
baz=118
MAYO Mayo, Yukon 60.46 338 P **P** **20 26 31.1 0.0**
baz=124
O28M Mount Upton 60.70 334 P **P** **20 26 32.9 -0.1**
baz=119
YUK8 Steele Glacier 60.77 334 P **P** **20 26 33.8 +0.4**
baz=119,SNR=7.8
C36M Paulatuk 60.78 346 P **P** **20 26 32.4 -0.6**
baz=139
M29M Somme Creek 60.82 336 P **P** **20 26 34.0 +0.3**
baz=121
L29M L29M 61.04 337 IAmb IAmb 20 26 36.1
comp=Z,8.3nm,0.7s
L29M L29M 61.04 337 P **P** **20 26 35.1 +0.1**
baz=122

J30M Hart River 61.18 339 IAmb IAmb 20 26 37.3
comp=Z,6.6nm,0.8s
J30M Hart River 61.18 339 P **P** **20 26 35.7 -0.3**
baz=124
MESA MESA 61.19 333 P **P** **20 26 36.5 +0.2**
baz=117
K29M Barlow Dome 61.20 338 IAmb IAmb 20 26 37.0
comp=Z,6.6nm,0.9s
K29M Barlow Dome 61.20 338 P **P** **20 26 36.1 -0.1**
baz=123
H31M Peel River 61.22 340 IAmb IAmb 20 26 38.2
comp=Z,7.1nm,0.8s
H31M Peel River 61.22 340 P **P** **20 26 36.4 +0.3**
baz=127
CTGM Chitina Glacie 61.28 334 IAmb IAmb 20 26 39.0
comp=Z,12nm,0.8s
CTG Chitna Glacier 61.28 334 P **P** **20 26 37.3 +0.5**
baz=118
YUK3 Moose Creek 61.30 335 P **P** **20 26 36.9 -0.1**
baz=119,SNR=5.2
BARN Barnard Glacie 61.47 334 IAmb IAmb 20 26 44.2
comp=Z,9.1nm,0.8s
I30M Mount Dempster 61.56 339 P **P** **20 26 38.7 +0.1**
baz=125
BGLC Bering Glacier 61.77 332 P **P** **20 26 40.2 +0.4**
baz=115
BVCY Beaver Creek 61.77 335 P **P** **20 26 40.0 +0.1**
baz=119
J29N Klondike Camp 61.79 338 IAmb IAmb 20 26 44.6
comp=Z,13nm,0.8s
J29N Klondike Camp 61.79 338 P **P** **20 26 40.3 +0.2**
baz=122
G31M Satah River 61.88 341 P **P** **20 26 40.4 -0.1**
G31M Satah River 61.88 341 P **P** **20 26 40.8 +0.3**
baz=128,SNR=42
RES Resolute Bay 61.93 358 LR LR 20 53 31.3
comp=Z,34nm,21.0s,baz=114,slow=36
RES Resolute Bay 61.93 358 IAmb IAmb 20 26 40.5
comp=Z,7.9nm,0.6s
CRQE Cirque 61.96 333 P **P** **20 26 41.6 +0.3**
baz=116
DAWY Dawson 62.02 337 IAmb IAmb 20 26 42.0
comp=Z,7.5nm,0.8s
DAWY Dawson 62.02 337 P **P** **20 26 41.5 -0.1**
baz=121,SNR=7.4
F31M Tsiigehtchic 62.03 342 P **P** **20 26 41.7 +0.2**
baz=128,SNR=19
M27K Edge Creek, AK 62.16 335 IAmb IAmb 20 26 46.0
comp=Z,9.0nm,0.7s
M27K Edge Creek, AK 62.16 335 P **P** **20 26 43.2 +0.5**
baz=118
MCARA McCarthy VSAT 62.20 334 P **P** **20 26 43.8 +1.0**
baz=116,SNR=6.0
KAIM Kayak Island 62.20 332 P **P** **20 26 43.4 +0.6**
baz=114
I29M Ogilvie Camp, 62.31 339 IAmb IAmb 20 26 44.3
comp=Z,12nm,0.8s
I29M Ogilvie Camp, 62.31 339 P **P** **20 26 43.5 -0.1**
baz=123,SNR=11
BCAR Beaver Creek A 62.46 336 P **P** **20 26 44.3 -0.3**
L27K Beaver Creek, 62.47 336 IAmb IAmb 20 26 46.1
comp=Z,14nm,0.8s
L27K Beaver Creek, 62.47 336 P **P** **20 26 44.5 -0.2**
baz=118
INK Inuvik 62.52 343 P **P** **20 26 45.0 +0.2**
baz=129,SNR=30
G30M tAoh Zraii Nji 62.53 341 IAmb IAmb 20 26 49.7
comp=Z,11nm,0.8s
G30M tAoh Zraii Nji 62.53 341 P **P** **20 26 45.1 +0.2**
baz=126,SNR=12
GLB Gilahina Butte 62.57 334 IAmb IAmb 20 26 47.0
comp=Z,9.7nm,0.9s
M26K Nabesna, AK 62.65 335 P **P** **20 26 46.1 +0.3**
baz=117
BMRM Bremner River 62.72 333 IAmb IAmb 20 26 48.0
comp=Z,14nm,0.7s
BMRM Bremner River 62.72 333 P **P** **20 26 46.9 +0.6**
baz=114
F30M Barrier River 62.76 342 P **P** **20 26 46.8 +0.4**
baz=126
Q23K Middleton Isla 62.91 331 P **P** **20 26 47.7 +0.2**
baz=112
I28M Miner Creek 62.94 338 IAmb IAmb 20 26 50.8
comp=Z,7.2nm,0.7s
I28M Miner Creek 62.94 338 P **P** **20 26 48.1 +0.4**
baz=121
N25K Chitina, Valde 62.98 334 P **P** **20 26 48.8 +0.7**
baz=115,SNR=7.4
A36M Sachs Harbour 63.05 348 IAmb IAmb 20 26 48.4
comp=Z,15nm,0.9s
A36M Sachs Harbour 63.05 348 P **P** **20 26 47.9 -0.3**
baz=139,SNR=13
EYAK Cordova Ski Ar 63.06 332 P **P** **20 26 48.1 -0.5**
baz=113
G29M Pine Creek 63.07 340 P **P** **20 26 48.6 +0.1**
G29M Pine Creek 63.07 340 P **P** **20 26 48.9 +0.3**
baz=124
L26K Log Cabin Wild 63.07 335 P **P** **20 26 48.8 +0.2**
baz=116
MENT Mentasta 63.19 335 IAmb IAmb 20 26 50.5
comp=Z,7.9nm,0.6s
KLU Klutina 63.51 333 IAmb IAmb 20 26 53.1
comp=Z,12nm,0.7s
KLU Klutina 63.51 333 P **P** **20 26 51.7 +0.1**
baz=113,SNR=6.2
HARP HAARP 63.55 334 P **P** **20 26 51.6 -0.2**
baz=114
P23K Montague Islan 63.62 331 P **P** **20 26 52.1 -0.2**
baz=111
I27K Kandik River 63.62 338 IAmb IAmb 20 26 56.8
comp=Z,14nm,0.7s
I27K Kandik River 63.62 338 P **P** **20 26 52.5 +0.3**
baz=119
DOT Dot Lake 63.64 336 P **P** **20 26 52.4 0.0**
DOT IAmb IAmb 20 26 53.7
comp=Z,16nm,0.7s
SCRK Sand Creek 63.75 336 P **P** **20 26 53.6 +0.4**
baz=116,SNR=7.8
GLI Glacier Island 63.80 332 P **P** **20 26 53.3 -0.2**
baz=112
J26L Joseph Creek 63.83 337 IAmb IAmb 20 26 55.2
comp=Z,16nm,0.8s
J26L Joseph Creek 63.83 337 P **P** **20 26 54.3 +0.7**
baz=117,SNR=20
E29M Blow River 63.87 342 IAmb IAmb 20 26 56.5
comp=Z,16nm,0.7s
E29M Blow River 63.87 342 P **P** **20 26 54.2 +0.5**
baz=124
M24K Tolsona, Glenn 63.87 334 P **P** **20 26 54.0 +0.1**
baz=113
H27K Steamboat Moun 63.90 339 P **P** **20 26 54.2 +0.2**
baz=120
PAX Paxson 63.92 335 P **P** **20 26 54.4 +0.1**
baz=114,SNR=9.2
RIDG Independent Ri 63.99 336 IAmb IAmb 20 26 56.5
comp=Z,16nm,0.8s
RIDG Independent Ri 63.99 336 P **P** **20 26 55.1 +0.4**
baz=115,SNR=12
I26K Coal Creek Min 64.04 338 IAmb IAmb 20 26 56.8
comp=Z,13nm,0.6s
I26K Coal Creek Min 64.04 338 P **P** **20 26 54.9 0.0**
baz=118
F28M Old Crow 64.06 341 P **P** **20 26 55.4 +0.3**
baz=122,SNR=35
SCM Sheep Creek Mo 64.26 333 P **P** **20 26 56.5 0.0**
baz=112
K24K Donnelly Dome 64.39 336 P **P** **20 26 57.7 +0.4**
baz=114,SNR=8.2
M23K Glacier View 64.42 333 P **P** **20 26 57.7 +0.1**
baz=112
E28M Babbage River 64.49 342 P **P** **20 26 58.4 +0.6**
baz=123
J25K Salcha River, 64.58 336 P **P** **20 26 58.5 0.0**
J25K IAmb IAmb 20 27 00.2
comp=Z,16nm,0.7s
J25K Salcha River, 64.58 336 P **P** **20 26 58.7 +0.2**
baz=115
KNK Knik Glacier 64.61 333 IAmb IAmb 20 26 59.9
comp=Z,13nm,0.7s
KNK Knik Glacier 64.61 333 P **P** **20 26 59.4 +0.7**
baz=111,SNR=5.5
SEW Seward 64.62 331 P **P** **20 26 59.0 +0.3**
baz=109
SML Sawmill 64.70 333 P **P** **20 26 59.7 +0.3**
baz=111
WAT6 Susitna Watana 64.73 334 P **P** **20 27 00.4 +0.8**
baz=112,SNR=7.9
DHY Denali Highway 64.76 334 IAmb IAmb 20 27 15.1
comp=Z,35nm,1.9s
DHY Denali Highway 64.76 334 P **P** **20 27 00.3 +0.4**
baz=113
O22K Cooper Landing 64.87 331 P **P** **20 27 00.5 +0.1**
baz=109
PMR Palmer 64.98 333 IAmb IAmb 20 27 01.9
comp=Z,8.7nm,0.6s
PMR Palmer 64.98 333 P **P** **20 27 01.5 +0.4**
baz=110
PRP Porcupine Dome 65.03 337 IAmb IAmb 20 27 02.9
comp=Z,17nm,0.7s
PRP Porcupine Dome 65.03 337 P **P** **20 27 01.7 +0.2**
baz=116,SNR=20
G26K Porcupine Rive 65.04 339 IAmb IAmb 20 27 04.5
comp=Z,13nm,0.8s
G26K Porcupine Rive 65.04 339 P **P** **20 27 01.7 +0.4**
baz=118
RC01 Rabbit Creek A 65.08 332 IAmb IAmb 20 27 06.9
comp=Z,13nm,0.6s
RC01 Rabbit Creek A 65.08 332 P **P** **20 27 02.4 +0.6**
baz=110,SNR=7.2
HDA Harding Lake 65.11 336 IAmb IAmb 20 27 02.6
comp=Z,19nm,0.7s
HDA Harding Lake 65.11 336 P **P** **20 27 02.2 +0.3**
baz=114,SNR=20
BRSE Bradley Lake S 65.12 330 P **P** **20 27 02.2 +0.1**
baz=109
WAT1 Susitna Watana 65.17 334 P **P** **20 27 02.3 0.0**
baz=111
IL31 65.23 336 IAmb IAmb 20 27 04.9
comp=Z,13nm,0.7s
ILAR Eielson Array 65.23 336 P **P** **20 27 02.5 -0.3**
comp=Z,9.4nm,0.8s,baz=170,slow=5.0,SNR=124
ILAR pP **pP** **20 27 17.9 -3.7**
comp=Z,6.7nm,0.9s,baz=125,slow=4.7,SNR=7.8
comp=Z,9.4nm,0.8s
ILAR Eielson Array 65.23 336 P **P** **20 27 02.1 -0.6**
D27M Malcolm River 65.27 342 P **P** **20 27 03.1 +0.2**
baz=122
FYU Fort Yukon 65.38 338 IAmb IAmb 20 27 04.8
comp=Z,15nm,0.7s
KDAK Kodiak Island 65.47 328 LR LR 20 58 03.8
comp=Z,125nm,18.2s,baz=53,slow=38
KDAK Kodiak Island 65.47 328 *e*P **P** **20 27 05.3 +1.0**
KDAK pmax pmax
comp=Z,92nm,2.2s
KDAK Kodiak Island 65.47 328 P **P** **20 27 04.6 +0.2**
baz=105
M22K Willow 65.48 333 P **P** **20 27 04.8 +0.5**
baz=109
F26K Sheenjek River 65.52 340 IAmb IAmb 20 27 06.1
comp=Z,19nm,0.7s
F26K Sheenjek River 65.52 340 P **P** **20 27 05.0 +0.5**
baz=118
HOM Homer 65.53 330 P **P** **20 27 04.9 +0.3**
baz=107
BMAR Burnt Mountain 65.54 339 P **P** **20 27 04.7 0.0**
CCB Clear Creek Bu 65.55 336 IAmb IAmb 20 27 06.5
comp=Z,8.4nm,0.7s
WRH Wood River Hil 65.59 336 IAmb IAmb 20 27 05.6
comp=Z,9.8nm,0.7s
Q20K Shuyak Island 65.60 329 P **P** **20 27 05.6 +0.5**
baz=106
CAPN Captain Cook N 65.63 331 P **P** **20 27 05.8 +0.5**
baz=108
COLA College 65.65 336 P **P** **20 27 04.7 -0.6**
COLA IAmb IAmb 20 27 06.2
comp=Z,12nm,0.7s
COLA College 65.65 336 P **P** **20 27 04.7 -0.6**
COLA pmax pmax
comp=Z,12nm,0.7s
COLA College 65.65 336 P **P** **20 27 05.6 +0.3**
baz=113
COLA College 65.65 336 P **P** **20 27 04.8 -0.6**
COLA pP **pP** **20 27 25.4 +1.2**
MCK McKinley 65.66 335 IAmb IAmb 20 27 06.9
comp=Z,20nm,1.0s
MCK McKinley 65.66 335 P **P** **20 27 05.5 0.0**
baz=111,SNR=12
SUA Susitna One 65.66 332 IAmb IAmb 20 27 06.7
comp=Z,15nm,0.6s
SUA Susitna One 65.66 332 P **P** **20 27 05.8 +0.1**
baz=109,SNR=6.9
OHAK Old Harbor 65.69 327 P **P** **20 27 06.1 +0.4**
baz=104
CUT Chulitna 65.76 333 P **P** **20 27 06.2 +0.1**
baz=110,SNR=5.9
F25K Christian Rive 65.98 339 P **P** **20 27 08.4 +0.9**
F25K Christian Rive 65.98 339 P **P** **20 27 08.2 +0.7**
baz=116
SII Sitkinak Islan 66.01 326 P **P** **20 27 07.8 -0.1**
baz=103
NEA2 Nenana 66.03 336 IAmb IAmb 20 27 08.8
comp=Z,11nm,0.7s
NEA2 Nenana 66.03 336 P **P** **20 27 07.9 +0.1**
baz=112,SNR=8.5
H24K Noodor Dome 66.05 337 IAmb IAmb 20 27 09.0
comp=Z,13nm,0.8s
H24K Noodor Dome 66.05 337 P **P** **20 27 08.3 +0.3**
baz=113
TRF Thorofare Moun 66.12 334 IAmb IAmb 20 27 10.3
comp=Z,18nm,0.7s
TRF Thorofare Moun 66.12 334 P **P** **20 27 08.4 -0.3**
baz=110,SNR=14
SKT Skwentna 66.18 333 P **P** **20 27 08.5 -0.3**
SKT IAmb IAmb 20 27 09.7
comp=Z,14nm,0.7s
SKT Skwentna 66.18 333 P **P** **20 27 09.0 +0.1**
baz=108,SNR=9.9
E25K Arctic Village 66.19 340 IAmb IAmb 20 27 10.5
comp=Z,20nm,0.7s
E25K Arctic Village 66.19 340 P **P** **20 27 09.4 +0.6**
baz=116,SNR=31
G24K Hadweenzic Riv 66.25 338 IAmb IAmb 20 27 10.7
comp=Z,16nm,0.8s
G24K Hadweenzic Riv 66.25 338 P **P** **20 27 09.6 +0.4**
baz=114
SPCR Spurr Chakacha 66.25 332 P **P** **20 27 09.6 +0.1**
baz=107
C27K Jago River 66.30 342 IAmb IAmb 20 27 11.0
comp=Z,16nm,0.8s
C27K Jago River 66.30 342 P **P** **20 27 09.9 +0.4**
baz=119
P19K Oil Pt 66.30 330 P **P** **20 27 10.1 +0.4**
baz=106
Q19K Cape Douglas, 66.31 329 P **P** **20 27 09.8 +0.1**
baz=105
I23K Minto, Yukon-K 66.35 336 IAmb IAmb 20 27 11.0
comp=Z,17nm,0.8s
I23K Minto, Yukon-K 66.35 336 P **P** **20 27 10.2 +0.4**
baz=112,SNR=15
KTH Kantishna Hill 66.43 334 IAmb IAmb 20 27 11.0
comp=Z,14nm,0.8s
CHIR Chirikof Islan 66.63 326 P **P** **20 27 11.5 -0.3**
baz=102
BPAW Bear Paw Mtn. 66.64 335 P **P** **20 27 11.4 -0.3**
baz=110
H23K Yukon River 66.67 337 P **P** **20 27 12.3 +0.4**
baz=112
PPLA Purkeypile 66.76 333 IAmb IAmb 20 27 13.2
comp=Z,10nm,0.7s
PPLA Purkeypile 66.76 333 P **P** **20 27 12.4 -0.3**
baz=108
MLY Manley 66.86 336 P **P** **20 27 13.3 +0.1**
baz=110,SNR=8.1
M20K Styx River 66.88 332 P **P** **20 27 12.9 -0.4**
M20K IAmb IAmb 20 27 14.1
comp=Z,11nm,0.7s
M20K Styx River 66.88 332 P **P** **20 27 13.7 +0.3**
baz=107
O19K Port Alsworth 66.97 330 P **P** **20 27 13.9 0.0**
baz=105
D25K Kavik River 66.99 341 P **P** **20 27 14.5 +0.6**
baz=116
CHUM Lake Minchumin 67.12 334 P **P** **20 27 15.4 +0.6**
baz=108
E24K Your Creek 67.16 339 P **P** **20 27 15.7 +0.7**
baz=114
G23K Bananza Creek 67.18 338 IAmb IAmb 20 27 16.7
comp=Z,11nm,0.8s
G23K Bananza Creek 67.18 338 P **P** **20 27 16.0 +0.8**
baz=112
N19K Bonanza Creek 67.21 331 IAmb IAmb 20 27 16.0
comp=Z,14nm,0.8s
N19K Bonanza Creek 67.21 331 P **P** **20 27 16.2 +0.7**
baz=105,SNR=5.7
P18K Big Mountain, 67.22 329 P **P** **20 27 15.6 0.0**
baz=104

Q17K	**Contact Creek**	67.29	328	P		P		20 27 16.3	+0.2
	baz=103								
O18K	**Koktuh Hills**	67.32	330	IAmb		IAmb		20 27 17.0	
	comp=Z,13nm,0.7s								
O18K	**Koktuh Hills**	67.32	330	P		P		20 27 16.7	+0.5
	baz=104,SNR=5.2								
NEEM	**North Greenlan**	67.36	8	*i* P		P		20 27 14.2	-2.3
NEEM				IAmb		IAmb		20 27 18.8	
	comp=Z,23nm,1.2s								
I21K	**Tanana**	67.40	336	P		P		20 27 16.6	+0.1
	baz=109								
H22K	**Ishtalitna Cre**	67.40	337	P		P		20 27 16.7	+0.1
	baz=110								
R17L	**Mt. Peulik Vol**	67.41	327	P		P		20 27 17.2	+0.5
	baz=102								
PPT	**Papeete**	67.41	245	LR		LR		20 48 02.5	
	comp=Z,190nm,19.2s,baz=40,slow=28								
COLD	**Coldfoot**	67.44	338	IAmb		IAmb		20 27 18.8	
	comp=Z,18nm,0.9s								
COLD	**Coldfoot**	67.44	338	P		P		20 27 17.4	+0.6
	baz=112,SNR=15								
M19K	**Big River Lodg**	67.45	332	IAmb		IAmb		20 27 36.7	
	comp=Z,22nm,1.4s								
M19K	**Big River Lodg**	67.45	332	P		P		20 27 17.3	+0.3
	baz=105								
E23K	**Chandalar**	67.55	339	P		P		20 27 18.4	+0.8
	baz=112,SNR=30								
D24K	**Happy Valley**	67.71	340	P		P		20 27 18.2	-0.2
	baz=114								
K20K	**Telida**	67.71	334	P		P		20 27 18.4	-0.1
	baz=106								
L19K	**White Mountain**	67.74	332	P		P		20 27 18.2	-0.5
	baz=105								
Q16K	**King Salmon**	67.78	328	P		P		20 27 19.4	+0.5
	baz=102								
P17K	**Kvichak River**	67.78	329	P		P		20 27 18.7	-0.2
	baz=102								
N18K	**Kilae Creek**	67.85	331	P		P		20 27 18.9	-0.6
N18K				IAmb		IAmb		20 27 43.4	
	comp=Z,46nm,1.8s								
N18K	**Kilae Creek**	67.85	331	P		P		20 27 19.0	-0.4
	baz=104								
H21K	**Melozitna Rive**	67.88	336	P		P		20 27 19.2	-0.4
	baz=108,SNR=5.3								
C24K	**Franklin Bluff**	67.90	341	P		P		20 27 19.7	+0.1
	baz=114								
J20K	**Nowinta River**	67.98	335	P		P		20 27 20.0	-0.2
	baz=106								
M18K	**Stony River**	68.01	331	P		P		20 27 20.2	-0.2
	baz=104								
R16K	**Pilot Point**	68.03	327	P		P		20 27 20.8	+0.2
	baz=101								
O17K	**Koliganek Bris**	68.23	330	P		P		20 27 21.9	+0.1
	baz=102,SNR=6.9								
D23K	**Nanushuk River**	68.25	340	P		P		20 27 22.1	+0.2
D23K				IAmb		IAmb		20 27 23.7	
	comp=Z,10.0nm,0.9s								
D23K	**Nanushuk River**	68.25	340	P		P		20 27 21.6	-0.2
	baz=112								
E22K	**Anaktuvuk Pass**	68.34	339	IAmb		IAmb		20 27 23.7	
	comp=Z,13nm,0.7s								
E22K	**Anaktuvuk Pass**	68.34	339	P		P		20 27 22.6	+0.2
	baz=110,SNR=22								
G21K	**Allakaket**	68.42	337	IAmb		IAmb		20 27 24.1	
	comp=Z,12nm,0.7s								
G21K	**Allakaket**	68.42	337	P		P		20 27 22.9	0.0
	baz=108								
N17K	**Nushagak Hills**	68.44	330	P		P		20 27 22.9	-0.2
	baz=102								
P16K	**Nushagak River**	68.53	329	P		P		20 27 23.4	-0.2
	baz=101								
J19K	**Poorman**	68.55	334	P		P		20 27 23.8	0.0
	baz=105,SNR=9.5								
L18K	**Granite Mounta**	68.58	332	P		P		20 27 24.0	0.0
	baz=103								
F21K	**Alatna River**	68.64	338	P		P		20 27 24.7	+0.4
	baz=108								
H20K	**Anotleneega Mo**	68.66	336	P		P		20 27 24.4	0.0
	baz=106								
O16K	**Kokwok River B**	68.69	329	P		P		20 27 24.8	+0.1
	baz=101								
CHNA	**Chernabura Isl**	68.69	324	P		P		20 27 25.3	+0.5
	baz=98								
M17K	**Holitna River**	68.74	331	P		P		20 27 25.1	+0.1
	baz=102								
J18K	**Innoko River**	68.89	333	P		P		20 27 25.6	-0.3
	baz=104								
D22K	**Ayikyak River**	68.90	340	IAmb		IAmb		20 27 27.3	
	comp=Z,11nm,0.7s								
D22K	**Ayikyak River**	68.90	340	P		P		20 27 26.6	+0.7
	baz=110,SNR=11								
N16K	**Nishlik Lake**	69.19	330	P		P		20 27 28.1	+0.2
	baz=101								
E21K	**Killik River**	69.20	339	IAmb		IAmb		20 27 28.8	
	comp=Z,11nm,0.7s								
E21K	**Killik River**	69.20	339	P		P		20 27 28.5	+0.8
	baz=108								
SDPT	**Sand Point**	69.27	325	P		P		20 27 28.4	0.0
	baz=97								
GCSA	**Galena City Sc**	69.27	335	P		P		20 27 28.7	+0.5
	baz=104								
L17K	**Donlin**	69.30	332	P		P		20 27 28.4	0.0
	baz=102								
M16K	**Timber Creek**	69.39	331	P		P		20 27 28.7	-0.3
	baz=101								
F20K	**Avaraart Lake**	69.42	337	P		P		20 27 29.3	+0.3
	baz=106								
K17K	**Iditarod**	69.42	332	P		P		20 27 29.4	+0.2
	baz=102								
O15K	**Ungalikthiuk R**	69.49	329	P		P		20 27 29.4	-0.2
	baz=99								
C21K	**Knifeblade Rid**	69.70	340	P		P		20 27 30.9	+0.1
	baz=108								
G19K	**Purcell Mounta**	69.71	336	P		P		20 27 30.7	-0.1
	baz=104								
L16K	**Owhat River**	69.76	331	P		P		20 27 31.6	+0.3
	baz=101								
N15K	**Kwethluk River**	69.78	330	P		P		20 27 31.6	+0.1
	baz=100								
J17K	**VABM Dome**	69.91	333	P		P		20 27 32.6	+0.4
	baz=102								
E20K	**Nigu River**	69.93	338	P		P		20 27 32.8	+0.5
	baz=106								
H18K	**Honhosa River**	69.98	335	IAmb		IAmb		20 27 33.9	
	comp=Z,7.2nm,0.7s								
H18K	**Honhosa River**	69.98	335	P		P		20 27 32.1	-0.5
	baz=103,SNR=7.3								
E19K	**Redstone River**	70.10	338	P		P		20 27 33.1	-0.1
	baz=105								
F19K	**Shaleruckik Mo**	70.14	337	IAmb		IAmb		20 27 34.4	
	comp=Z,8.3nm,0.8s								
F19K	**Shaleruckik Mo**	70.14	337	P		P		20 27 33.6	+0.1
	baz=104								
M15K	**Kasigluk River**	70.16	330	P		P		20 27 33.6	-0.2
	baz=99								
D20K	**Etivluk River**	70.21	339	IAmb		IAmb		20 27 35.2	
	comp=Z,19nm,0.8s								
D20K	**Etivluk River**	70.21	339	P		P		20 27 33.9	0.0
	baz=106								
O14K	**Tigyukauivet M**	70.23	329	P		P		20 27 33.9	-0.3
	baz=98								
G18K	**Tagagawik**	70.27	336	P		P		20 27 34.0	-0.4
	baz=103								
N14K	**Kuskokwak Cree**	70.54	329	P		P		20 27 36.0	0.0
	baz=98								
J16K	**Anvik River**	70.56	333	IAmb		IAmb		20 27 37.9	
	comp=Z,11nm,0.8s								
J16K	**Anvik River**	70.56	333	P		P		20 27 36.2	+0.1
	baz=100								
H17K	**Granite Mounta**	70.58	335	P		P		20 27 36.2	-0.1
	baz=101								
D19K	**Kuna River**	70.68	339	P		P		20 27 36.7	-0.1
D19K				IAmb		IAmb		20 27 37.9	
	comp=Z,9.1nm,0.6s								
D19K	**Kuna River**	70.68	339	P		P		20 27 36.8	-0.1
	baz=104								
L15K	**Ungalak Mounta**	70.70	331	P		P		20 27 37.0	-0.1
	baz=99								
I17K	**Unalakleet**	70.71	333	P		P		20 27 36.3	-0.7
	baz=100								
M14K	**Bethel**	70.79	330	IAmb		IAmb		20 27 39.3	
	comp=Z,18nm,0.7s								
M14K	**Bethel**	70.79	330	P		P		20 27 37.0	-0.5
	baz=98,SNR=6.0								
F18K	**Selawik**	70.82	336	P		P		20 27 37.2	-0.4
	baz=102								
K15K	**Wolf Creek Mou**	70.82	332	IAmb		IAmb		20 27 39.8	
	comp=Z,14nm,0.7s								
K15K	**Wolf Creek Mou**	70.82	332	P		P		20 27 37.5	-0.2
	baz=99								
FALS	**False Pass**	70.90	324	P		P		20 27 37.7	-0.6
	baz=95								
A21K	**Barrow**	70.95	342	P		P		20 27 37.7	-0.6
	baz=107								
G17K	**Kiwalik Mounta**	71.00	335	P		P		20 27 38.4	-0.4
	baz=101,SNR=6.2								
L14K	**Kuka Creek**	71.22	331	P		P		20 27 39.7	-0.4
	baz=98								
C19K	**Lookout Ridge**	71.35	339	IAmb		IAmb		20 27 42.6	
	comp=Z,9.0nm,0.8s								
C19K	**Lookout Ridge**	71.35	339	P		P		20 27 40.6	-0.3
	baz=103								
E18K	**Tukpahlearik C**	71.35	337	P		P		20 27 40.6	-0.3
	baz=102								
F17K	**Baldwin Pennin**	71.41	336	P		P		20 27 41.0	-0.2
	baz=101								
M13K	**Dall Lake**	71.43	330	P		P		20 27 41.0	-0.4
	baz=97								
H16K	**Elim**	71.50	334	P		P		20 27 41.5	-0.3
	baz=99,SNR=7.4								
G16K	**Koyuk River**	71.68	335	IAmb		IAmb		20 29 47.0	
	comp=Z,12nm,0.7s								
G16K	**Koyuk River**	71.68	335	P		P		20 27 43.2	+0.4
	baz=99								
E17K	**Hotham Inlet**	71.76	337	P		P		20 27 43.4	+0.1
	baz=100,SNR=26								
J14K	**Nanvaranak Lak**	71.81	332	IAmb		IAmb		20 27 45.6	
	comp=Z,12nm,0.8s								
J14K	**Nanvaranak Lak**	71.81	332	P		P		20 27 44.0	+0.3
	baz=97								
C18K	**Utukok River**	71.82	338	IAmb		IAmb		20 27 44.5	
	comp=Z,7.2nm,0.7s								
C18K	**Utukok River**	71.82	338	P		P		20 27 43.4	-0.4
	baz=101								
K13K	**Kusilvak Mount**	72.23	331	P		P		20 27 46.4	+0.2
	baz=96								
G15K	**Niukluk**	72.32	334	P		P		20 27 46.7	0.0
	baz=98								
RDOG	**Red Dog Mine**	72.33	338	P		P		20 27 47.3	+0.5
	baz=100								
D17K	**Noatak River**	72.34	337	P		P		20 27 46.3	-0.5
	baz=99,SNR=6.2								
C17K	**DeLong Mountai**	72.50	338	P		P		20 27 47.7	-0.1
	baz=100								
UNV	**Unalaska Valle**	72.64	323	P		P		20 27 48.3	-0.5
	baz=92								
F15K	**North Star Dit**	72.67	335	IAmb		IAmb		20 29 15.4	
	comp=Z,23nm,0.8s								
F15K	**North Star Dit**	72.67	335	P		P		20 27 48.7	-0.1
	baz=97								
M11K	**Mekoryuk**	72.83	329	P		P		20 27 49.7	-0.1
	baz=94								
ANM	**Nome**	72.83	334	P		P		20 27 49.6	-0.2
	baz=96								
DAG	**Danmarks Havn**	73.00	13	*i* P		P		20 27 48.6	-2.0
DAG				IAmb		IAmb		20 27 50.3	
	comp=Z,6.8nm,0.6s								
C16K	**Lisburne Hills**	73.27	338	IAmb		IAmb		20 27 53.8	
	comp=Z,9.5nm,0.8s								
C16K	**Lisburne Hills**	73.27	338	P		P		20 27 52.2	0.0
	baz=97,SNR=13								
F14K	**Arctic Creek**	73.33	335	P		P		20 27 52.7	0.0
	baz=96								
TNA	**Tin City**	74.00	335	P		P		20 27 56.6	0.0
	baz=94,SNR=5.2								
NIKH	**Nikolski High**	74.03	322	P		P		20 27 57.3	+0.2
	baz=90								
P08K	**Saint George I**	74.44	325	P		P		20 27 59.8	+0.5
	baz=90								
MESJ	**Messejana**	74.63	54	P		P		20 28 00.3	-0.6
MESJ				IAmb		IAmb		20 28 03.1	
	comp=Z,28nm,1.8s								
MESJ	**Messejana**	74.63	54	P		P		20 28 00.3	-0.6
MESJ				pmax		pmax			
	comp=Z,28nm,1.8s								
SPIA	**Saint Paul Isl**	74.82	326	P		P		20 28 01.4	-0.1
	baz=90								
GAMB	**Gambell**	75.56	333	P		P		20 28 05.6	0.0
	baz=90								
EKA	**Eskdalemuir Ar**	76.92	36	P		P		20 28 10.3	-3.2
	comp=Z,3nm,0.8s,baz=260,slow=5.0,SNR=4.1								
	comp=Z,2.3nm,0.8s								
RAR	**Rarotonga**	77.70	245	LR		LR		20 56 48.2	
	comp=Z,64nm,19.6s,baz=76,slow=31								
ESDC	**Sonseca Array**	77.77	52	P		P		20 28 16.7	-2.0
	comp=Z,1.7nm,0.8s,baz=288,slow=6.0,SNR=15								
ESDC				pP		pP		20 28 33.3	-4.7
	comp=Z,1.6nm,0.8s,baz=286,slow=6.1,SNR=6.9								
ESDC				LR		LR		20 57 40.1	
	comp=Z,105nm,20.8s,baz=335,slow=32								
	comp=Z,1.7nm,0.8s								
ESDC	**Sonseca Array**	77.77	52	P		P		20 28 16.9	-1.8
ESBB	**Sonseca Array**	77.77	52	P		P		20 28 17.0	-1.7
MDT	**Midelt**	78.10	59	LR		LR		20 55 52.2	
	comp=Z,202nm,20.4s,baz=351,slow=30								
PMSA	**Palmer Station**	79.59	170	LR		LR		20 57 52.8	
	comp=Z,110nm,19.9s,baz=304,slow=31								
SPITS	**Spitsbergen Ar**	80.53	12	P		P		20 28 32.4	-0.6
	comp=Z,4.2nm,0.8s,baz=242,slow=6.2,SNR=16								
	comp=Z,4.2nm,0.8s								
NOA	**NORSAR Array B**	83.53	29	P		P		20 28 47.6	-1.4
	comp=Z,1.1nm,0.7s,baz=286,slow=5.0,SNR=3.7								
	comp=Z,1.1nm,0.7s								
BILL	**Bilibino**	83.77	339	P		P		20 28 49.6	-0.4
BILL	**Bilibino**	83.77	339	⇑*i* P		P		20 28 49.9	-0.1
BILL				pmax		pmax			
	comp=Z,13nm,1.3s								
BILL	**Bilibino**	83.77	339	P		P		20 28 49.9	-0.1
BILL				x		x		20 29 05.3	
HFS	**Hagfors**	84.95	29	P		P		20 28 53.9	-2.3
	comp=Z,2.5nm,0.7s,baz=235,slow=5.1,SNR=2.4								
	comp=Z,2.5nm,0.7s								
ARCES	**ARCESS Array B**	86.15	19	P		P		20 29 00.6	-1.3
	comp=Z,3.5nm,0.8s,baz=316,slow=5.1,SNR=5.2								
ARCES				LR		LR		21 07 20.9	
	comp=Z,229nm,18.3s,baz=265,slow=36								
	comp=Z,3.5nm,0.8s								
FUORN	**Ofenpass-Fuorn**	86.71	43	P		P		20 29 05.7	+0.2
FUORN				IAmb		IAmb		20 29 58.1	
	comp=Z,35nm,2.0s								
TORD	**Torodi Ar. Bea**	87.35	77	P		P		20 29 06.1	-2.8
	comp=Z,0.4nm,0.6s,baz=264,slow=5.5,SNR=4.5								
	comp=Z,0.4nm,0.6s								
GERES	**GERESS Array B**	88.31	40	P		P		20 29 11.0	-1.9
	comp=Z,0.1nm,0.3s,baz=264,slow=3.0,SNR=2.3								
	comp=Z,0.1nm,0.3s								
GERES	**GERESS Array B**	88.31	40	P		P		20 29 11.0	-1.9
SEY	**Seymchan**	91.17	336	⇓*i* P		P		20 29 25.7	-0.1
SEY				pmax		pmax			
	comp=Z,37nm,4.3s								
TIXI	**Tiksi**	92.06	349	LR		LR		21 17 15.0	
	comp=Z,76nm,18.1s,baz=12,slow=40								
TIXI	**Tiksi**	92.06	349	P		P		20 29 28.2	-1.5
TIXI				IAmb		IAmb		20 29 29.9	
	comp=Z,5.7nm,0.7s								
TIXI	**Tiksi**	92.06	349	⇓*i* P		P		20 29 28.8	-0.9
TIXI				pmax		pmax			
	comp=Z,6.0nm,0.8s								
PUL	**Pulkovo**	92.72	26	⇑*e* P		P		20 29 34.6	+1.6
PUL				pmax		pmax			
	comp=Z,92nm,0.5s								
MA2	**Magadan**	93.63	334	LR		LR		21 18 41.4	
	comp=Z,170nm,18.6s,baz=346,slow=40								
NRIK	**Noril'sk**	97.98	1	LR		LR		21 15 12.8	
	comp=Z,267nm,21.2s,baz=319,slow=36								
OBN	**Obninsk**	98.12	28	*e* P		Pdif		20 29 59.7	+1.9
OBN				*e** SP		pP		20 30 21.3	+3.7
OBN				*e*				20 34 00.4	
OBN				*e* PPP		PPP		20 36 04.0	
OBN				pmax		pmax			
	comp=Z,4.0nm,1.0s								
OBN				MLR		MLR			
	comp=Z,241nm,12.0s								
YAK	**Yakutsk**	99.58	343	LR		LR		21 19 33.6	
	comp=Z,94nm,21.9s,baz=345,slow=38								
YAK	**Yakutsk**	99.58	343	⇓*e* P		Pdif		20 30 06.5	+2.4
YAK				pmax		pmax			
	comp=Z,13nm,2.3s								
KURK	**Kurchatov**	115.72	9			PKiKP		20 35 02.0	-1.2
KURK	**Kurchatov**	115.72	9	⇓*i* PKiKP		PKiKP		20 35 03.1	-0.1
KURBB	**Kurchatov Arra**	115.79	9	PKP		PKiKP		20 35 02.0	-1.3
	comp=Z,0.3nm,0.5s,baz=350,slow=1.8,SNR=6.7								
KNGR	**Kungurtug, Tuv**	116.60	356	⇑*i* PKiKP		PKPdf		20 35 05.1	0.0
BOSA	**Boshof**	116.81	116	PKP		PKPdf		20 35 05.8	-0.3
	comp=Z,4.8nm,0.8s,baz=288,slow=2.5,SNR=10								
BOSA				pPKP		pPKPdf		20 35 23.6	-3.0
	comp=Z,3.8nm,0.7s,baz=230,slow=1.3,SNR=4.9								
BOSA	**Boshof**	116.81	116	PKPdf		PKPdf		20 35 04.3	-1.7
DGZ	**Jazzator, Alta**	117.62	3	⇑*i* PKiKP		PKPdf		20 35 06.6	-0.5
ULN	**Ulaanbaatar**	117.98	348	⇓*i* PKiKP		PKiKP		20 35 08.2	+0.3
SONM	**Songino Array**	118.14	349	PKP		PKPdf		20 35 07.9	-0.2
	comp=Z,1.9nm,0.6s,baz=350,slow=1.1,SNR=18								
SONM				PKKPbc		PKKPbc		20 45 28.8	-0.1
	comp=Z,0.7nm,1.0s,baz=174,slow=4.0,SNR=4.7								
LSZ	**Lusaka**	118.75	100			PKPdf		20 35 10.2	+0.1
LSZ	**Lusaka**	118.75	100	PKiKP		PKPdf		20 35 10.2	+0.1
XLT	**XiLinHaoTe**	119.23	340	*e* PKiKP		PKiKP		20 35 10.6	+0.2
KSRS	**Korea Array**	119.37	327	PKP		PKiKP		20 35 11.7	+1.0
	comp=Z,3.8nm,0.6s,baz=13,slow=1.7,SNR=16								
KSRS				pPKP		pPKPdf		20 35 28.0	-3.1
	comp=Z,3.6nm,0.7s,baz=8.2,slow=1.9,SNR=7.5								
MK31	**Makanchi Array**	120.06	7	*c i* PKiKP		PKPdf		20 35 10.3	-1.4
MKAR	**Makanchi Array**	120.06	7	PKP		PKPdf		20 35 10.2	-1.5
	comp=Z,0.2nm,0.4s,baz=334,slow=2.5,SNR=11								
AAK	**Ala-Archa**	122.63	15	⇑*i* PKiKP		PKPdf		20 35 16.6	-0.4
HHC	**Hu-ho-hao-te**	123.43	342	*e* PKP		PKPdf		20 35 14.6	-3.9
WMQ	**Urumqi**	123.50	3	*e* PKP		PKiKP		20 35 18.8	+0.1
BTO2	**Baotou**	124.02	343	*e* PKP		PKPdf		20 35 17.8	-1.9
HNS	**HongShan**	125.46	337	⇓PKP		PKiKP		20 35 23.3	+0.6
TOO	**Toolangi**	126.12	233	PKPdf		PKiKP		20 35 23.9	-0.1
TOO	**Toolangi**	126.12	233	PKiKP		PKiKP		20 35 23.9	-0.1
KSH2	**Kashi**	126.19	15	PKP		PKiKP		20 35 25.1	+0.8
GTA2	**Gaotai**	127.37	352	*e* PKP		PKPdf		20 35 26.3	+0.2
NJ2	**Nanjing**	128.22	330	*e* PKP		PKiKP		20 35 28.9	+0.5
LZH	**Lanzhou**	129.95	347	*e* PKP		PKiKP		20 35 33.5	+1.5
LZDM	**Lanzhou Array**	130.10	347	PKP		PKiKP		20 35 32.9	+0.5
	comp=Z,2.6nm,0.5s,baz=31,slow=6.7,SNR=14								
STKA	**Stephens Creek**	130.40	239	PKP		PKiKP		20 35 33.6	+0.9
	comp=Z,2.1nm,0.7s,baz=99,slow=2.4,SNR=6.7								
STKA	**Stephens Creek**	130.40	239	⇓*e* PKiKP		PKPdf		20 35 30.9	-0.9
BBOO	**Buckleboo**	134.76	236	PKPdf		PKPdf		20 35 37.1	-2.9
LSA	**Lhasa**	137.70	0	PKP		PKiKP		20 35 39.9	-6.4
WRAB	**Tennant Creek**	138.36	254	⇓*i* PKiKP		PKiKP		20 35 49.3	+0.1
WRA	**Warramunga Arr**	138.37	254	PKhKP		PKPpre		20 35 40.3	
	comp=Z,1.1nm,0.7s,baz=91,slow=3.2,SNR=8.9								
WRA				PKP		PKiKP		20 35 49.0	-0.1
	comp=Z,5.0nm,0.8s,baz=89,slow=2.0,SNR=24								
WRA				pPKP		pPKPdf		20 36 05.5	-2.1
	comp=Z,7.4nm,0.8s,baz=94,slow=1.6,SNR=10								
WRA	**Warramunga Arr**	138.37	254			PKPpre		20 35 38.0	
ASAR	**Alice Springs**	138.44	249	PKhKP		PKPpre		20 35 38.4	
	comp=Z,1.1nm,0.7s,baz=112,slow=3.2,SNR=12								
ASAR				PKP		PKiKP		20 35 48.5	-0.8
	comp=Z,2.7nm,0.8s,baz=97,slow=1.8,SNR=13								
ASAR				SKPbc		SKPab		20 39 23.4	-1.0
	comp=Z,0.4nm,0.7s,baz=95,slow=3.2,SNR=4.1								
PZH	**PanZhiHua**	139.63	346	PKP		PKPdf		20 35 48.6	-0.8
KMI2	**Kunming**	140.67	344	PKP		PKiKP		20 35 53.3	-0.8
MTN	**Manton Dam**	141.36	265	PKPdf		PKPdf		20 35 50.8	-1.8
TNCH	**TengChong**	141.73	350	PKP		PKPdf		20 35 54.4	+1.0
FORT	**Forrest**	141.86	236	PKPdf		PKPdf		20 35 49.3	-3.8
LUWI	**Luwuk**	146.85	288	PKPdf		PKPdf		20 35 59.4	-2.9
TOLI2	**Tolitoli**	147.78	293	PKPdf		PKPdf		20 36 00.8	-3.0
CMAR	**Chiang Mai Arr**	148.03	347	PKPbc		PKPdf		20 36 05.2	+1.1
	comp=Z,6.4nm,0.7s,baz=322,slow=2.5,SNR=39								
CMAR	**Chiang Mai Arr**	148.03	347			PKPdf		20 36 05.0	+0.9
CMAR	**Chiang Mai Arr**	148.03	347	PKiKP		PKPdf		20 36 05.0	+0.9
NWAO	**Narrogin (SRO)**	149.12	225			PKiKP		20 36 10.9	0.0
NWAO	**Narrogin (SRO)**	149.12	225	PKP2		PKiKP		20 36 10.9	0.0
MORW	**Morawa**	152.04	231	PKPbc		PKPbc		20 36 15.9	-0.8

KRSC 14 20:42:21.6±2.0, 48.91N×156.90E, h20km±28km, Ml3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	1.85	344	*e*P		Pn	20 42 52.1	-0.1
SKR				*e*S		Sn	20 43 15.2	+0.2
PAU	**Pauzhetka**	2.56	359	*e*P		Pn	20 43 04.3	+2.3
PAU				*e*S		Sb	20 43 35.7	-2.3
KDTR	**Khodutka, Kamc**	3.00	14	*e*P		Pb	20 43 11.6	-2.8
KDTR				*e*S		Sb	20 43 48.3	-2.3
ASAK	**Asacha**	3.54	10	*e*P		Pn	20 43 19.1	+3.6
MTVR	**Mutnovka**	3.67	12	*e*P		Pn	20 43 21.0	+3.6
GRL	**Gorelyy**	3.73	11	*e*P		Pn	20 43 22.4	+4.2
GRL				*e*S		Sb	20 44 07.6	-3.9
DALK	**Dalny**	4.29	15	*e*P		Pn	20 43 29.5	+3.7
UGLR	**Uglov

s-min=16.2km az=161.0

ISC 14 21:06:15.2±0.5, 21.67S±0.07×177.78W±0.08, h412km, n101, σ1§06/103, mb4.0/25, 5C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.54	314		P	21 07 39.3	-4.1
GLKZ	Green Lake	7.56	181	S	S	21 09 31.0	-4.5
NIUE	Niue	7.81	72	P	P	21 08 06.7	-1.8
NIUE				S	S	21 09 31.7	-9.0
DZM	Mont Dzumac	14.65	266	P	P	21 09 23.4	-0.3
	6.2nm,0.9s,baz=90,slow=19,SNR=2.9						
DZM	Mont Dzumac	14.65	266	P	P	21 09 23.8	+0.1
HAZ	Te Kaha	16.49	192	P	P	21 09 43.6	+0.6
HAZ				S	S	21 12 38.0	+3.0
PUZ	Puketiti	16.70	191	P	P	21 09 47.0	+1.6
PUZ				S	S	21 12 40.8	+1.5
RUGZ	Raukumara Rang	16.71	193	P	P	21 09 45.6	+0.1
MWZ	Matawai	17.09	193	P	P	21 09 49.8	+0.2
URZ	Urewera	17.11	194	P	P	21 09 49.7	0.0
	1.9nm,0.3s,baz=27,slow=2.3,SNR=7.5						
URZ				S	S	21 12 46.4	-0.9
	7.6nm,0.9s,baz=18,slow=20,SNR=1.5						
URZ	Urewera	17.11	194	P	P	21 09 50.1	+0.4
URZ				S	S	21 12 45.7	-1.6
RTZ	Ruatahuna	17.48	194	P	P	21 09 54.5	+0.7
MTHZ	Maungataniwha	17.74	194	P	P	21 09 57.6	+1.2
TMVZ	Te Maari	18.27	196	P	P	21 10 02.6	+0.5
ETVZ	East Tongariro	18.28	196	P	P	21 10 02.5	+0.2
OTVZ	Oturere	18.32	196	P	P	21 10 03.3	+0.7
SNVZ	South Ngauruho	18.35	196	P	P	21 10 03.9	+0.9
KWHZ	Kaweka Forest	18.38	194	P	P	21 10 02.6	-0.6
WNVZ	Wahianoa	18.49	196	P	P	21 10 04.8	+0.3
BFZ	Birch Farm	19.62	194	P	P	21 10 14.8	-0.5
OGWZ	Otaki Gorge	20.00	196	P	P	21 10 17.9	-0.8
TCW	Tory Channel	20.61	197	P	P	21 10 24.1	-0.1
THZ	Tophouse	21.52	199	P	P	21 10 34.1	+1.5
THZ				IAmb	IAmb	21 11 04.3	
	comp=Z,17nm,1.2s						
LTZ	Lake Taylor	22.64	199	P	P	21 10 44.5	+1.8
LTZ				IAmb	IAmb	21 10 45.3	
	comp=Z,15nm,1.2s						
TARA	Tarawa	24.62	337	P	P	21 10 59.1	-1.7
TARA				IAmb	IAmb	21 11 31.0	
	comp=Z,6.5nm,0.6s						
ARMA	Armidale	28.76	246	P	P	21 11 38.3	+0.8
ARMA				IAmb	IAmb	21 11 58.8	
	comp=Z,7.5nm,1.1s						
CAN	Canberra	32.04	238	P	P	21 12 07.0	+1.1
CAN				IAmb	IAmb	21 12 07.7	
	comp=Z,5.5nm,0.8s						
CTAO	Charters Tower	33.59	266	P	P	21 12 19.6	+0.3
CTAO				IAmb	IAmb	21 12 20.0	
	comp=Z,5.5nm,0.6s						
TOO	Toolangi	35.39	235	P	P	21 12 35.0	+0.8
STKA	Stephens Creek	37.48	246	P	P	21 12 52.1	+0.4
	comp=Z,4.9nm,0.6s,baz=91,slow=9.1,SNR=14						
	comp=Z,4.9nm,0.6s						
STKA	Stephens Creek	37.48	246	P	P	21 12 52.3	+0.5
BBOO	Buckleboo	42.22	245	P	P	21 13 29.5	-0.7
BBOO				IAmb	IAmb	21 13 33.4	
	comp=Z,8.8nm,1.1s						
AS31	Alice Springs	44.46	258		P	21 13 47.7	-0.3
ASAR	Alice Springs	44.46	258	P	P	21 13 48.1	+0.1
	comp=Z,5.5nm,0.7s,baz=98,slow=7.9,SNR=77						
ASAR				PcP	PcP	21 15 23.4	+0.1
	comp=Z,0.6nm,0.6s,baz=97,slow=4.1,SNR=3.4						
	comp=Z,5.5nm,0.7s						
ASAR	Alice Springs	44.46	258	P	P	21 13 47.7	-0.3
WB0	Warramunga Arr	44.63	263	P	P	21 13 48.4	-1.0
WB0				IAmb	IAmb	21 13 49.2	
	comp=Z,4.5nm,0.8s						
WRAB	Tennant Creek	44.64	263	P	P	21 13 49.2	-0.3
WRAB				IAmb	IAmb	21 13 49.4	
	comp=Z,7.2nm,1.0s						
WRA	Warramunga Arr	44.65	263	P	P	21 13 48.4	-1.2
	comp=Z,2.7nm,0.8s,baz=94,slow=7.6,SNR=27						
	comp=Z,2.7nm,0.8s						
WRA	Warramunga Arr	44.65	263		P	21 13 48.5	-1.0
FORT	Forrest	49.03	248	P	P	21 14 22.8	0.0
FORT				IAmb	IAmb	21 14 23.2	
	comp=Z,5.6nm,0.7s						
MTN	Manton Dam	49.38	271	P	P	21 14 24.8	-0.8
MTN				IAmb	IAmb	21 15 07.9	
	comp=Z,9.0nm,0.9s						
KNRA	Kununurra	50.79	267	P	P	21 14 35.9	-0.1
FITZ	Fitzroy Crossi	53.08	263	P	P	21 14 53.0	+0.3
	comp=Z,3.8nm,0.8s,baz=77,slow=3.4,SNR=3.7						
	comp=Z,3.8nm,0.8s						
SOEI	Soe	56.74	272	P	P	21 15 19.5	+0.8
BATI	Baumata	57.16	272	P	P	21 15 22.2	+0.8
	comp=Z,12nm,0.4s,baz=78,slow=9.3,SNR=5.2						
	comp=Z,12nm,0.4s						
MBWA	Marble Bar	57.80	258	P	P	21 15 24.9	-0.9
MBWA				IAmb	IAmb	21 15 29.5	
	comp=Z,9.1nm,1.0s						
MORW	Morawa	59.58	248	P	P	21 15 37.8	0.0
TOLI2	Tolitoli	64.05	282	P	P	21 16 07.2	-0.1
JGF	Kuroka	71.06	323	P	P	21 16 51.3	+1.1
YBH	Yreka Blue Hor	81.07	38	P	P	21 17 46.9	+1.0
	comp=Z,0.2nm,0.7s,baz=270,slow=1.0,SNR=6.8						
YBH	Yreka Blue Hor	81.07	38	P	P	21 17 46.5	+0.6
YBH				IAmb	IAmb	21 17 48.3	
	comp=Z,2.5nm,0.7s						
NVAR	Mina Array Bea	81.73	43	P	P	21 17 50.5	+0.9
	comp=Z,0.9nm,0.6s,baz=222,slow=9.3,SNR=5.4						
	comp=Z,0.9nm,0.6s						
ENH	Enshi	86.86	304	P	P	21 18 15.9	+1.0
TXAR	Lajitas Array	87.51	57	P	P	21 18 19.7	+1.6
	comp=Z,0.7nm,0.7s,baz=220,slow=6.2,SNR=8.3						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	87.51	57	P	P	21 18 19.3	+1.2
SEY	Seymchan	87.55	347	P	P	21 18 17.2	-0.1
	comp=Z,3.1nm,0.7s,baz=131,slow=5.6,SNR=9.0						
	comp=Z,3.1nm,0.7s						
ILAR	Eielson Array	89.40	13	P	P	21 18 24.6	-1.3
	comp=Z,0.5nm,0.6s,baz=208,slow=5.0,SNR=5.4						
	comp=Z,0.5nm,0.6s						
ILAR	Eielson Array	89.40	13	P	P	21 18 24.5	-1.4
M29M	Somme Creek	89.44	17	P	P	21 18 26.4	+0.1
M29M				IAmb	IAmb	21 18 33.3	
	comp=Z,2.7nm,1.1s						
F19K	Shaleruckik Mo	89.50	8	P	P	21 18 25.8	-0.6
PDAR	Pinedale Array	89.67	43	P	P	21 18 28.6	+0.5
	comp=Z,0.6nm,0.7s,baz=202,slow=2.6,SNR=6.8						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	89.67	43	P	P	21 18 28.4	+0.3
CMAR	Chiang Mai Arr	90.69	289	P	P	21 18 34.6	+1.6
	comp=Z,1.1nm,0.7s,baz=136,slow=3.1,SNR=7.7						
	comp=Z,1.1nm,0.7s						
K29M	Barlow Dome	90.83	17	P	P	21 18 32.7	-0.1
ZALV	Zalesovo Beam	111.52	321	PKiKP	PKiKP	21 24 00.1	-1.0
	comp=Z,0.7nm,0.6s,baz=120,slow=2.4,SNR=4.4						
ZALV	Zalesovo Beam	111.52	321	PKiKP	PKiKP	21 24 00.6	-0.5
MKAR	Makanchi Array	112.14	313	PKiKP	PKiKP	21 24 02.0	-0.6
	comp=Z,0.4nm,0.4s,baz=68,slow=1.4,SNR=7.7						
MKAR	Makanchi Array	112.14	313		PKiKP	21 24 02.1	-0.6
KURK	Kurchatov	114.98	317		PKiKP	21 24 08.7	+0.9
KURBB	Kurchatov Arra	115.03	317	PKP	PKiKP	21 24 08.6	+0.7
	comp=Z,0.2nm,0.4s,baz=91,slow=2.0,SNR=6.3						
BVAR	Borovoye Array	120.10	320	PKP	PKPdf	21 24 17.1	-0.5
	comp=Z,2.8nm,0.4s,baz=124,slow=1.8,SNR=26						
SPITS	Spitsbergen Ar	123.04	357	PKP	PKPdf	21 24 22.1	-0.5
	comp=Z,7.8nm,1.1s,baz=48,slow=14,SNR=5.0						
ARCES	ARCESS Array B	130.10	350	PKP	PKPdf	21 24 36.4	+0.1
	comp=Z,4.3nm,0.9s,baz=34,slow=2.9,SNR=5.5						
FINES	FINESS Array B	136.94	343	PKhKP	PKPpre	21 24 39.4	
	comp=Z,0.7nm,0.7s,baz=132,slow=26,SNR=1.7						
FINES				PKP	PKPdf	21 24 49.1	-0.2
	comp=Z,1.1nm,0.7s,baz=42,slow=2.3,SNR=4.0						
HFS	Hagfors	140.72	351	PKhKP	PKPpre	21 24 50.8	
	comp=Z,1.3nm,0.4s,baz=56,slow=3.7,SNR=15						
AKASG	Malin Array Be	144.13	330	PKP	PKPbc	21 25 00.5	-1.1
	comp=Z,4.3nm,0.4s,baz=45,slow=4.3,SNR=22						
AKASG	Malin Array Be	144.13	330		PKPbc	21 25 01.9	+0.3
DEL	Delary	144.19	349	*i* P	PKPbc	21 24 59.0	-2.6
ARPR	Arapgir-MALATY	144.61	308	PKPbc	PKPab	21 25 04.8	+0.7
EKA	Eskdalemuir Ar	146.14	6	PKPbc	PKPdf	21 25 06.5	+0.6
	comp=Z,0.8nm,0.5s,baz=351,slow=1.9,SNR=3.7						
BRTR	Keskin Array B	147.76	311	PKPbc	PKPbc	21 25 12.1	-0.7
	comp=Z,2.4nm,0.5s,baz=70,slow=1.7,SNR=14						
BUR08	Bucovina Ar. S	148.16	330		PKPbc	21 25 14.4	+0.9
BURAR	Bucovina Array	148.17	330	PKPbc	PKPbc	21 25 14.5	+1.0
BURAR	Bucovina Array	148.17	330	⇓P	PKiKP	21 25 14.8	-0.1
ONER	Baraj Valea Uz	148.50	327	⇓P	PKPbc	21 25 15.0	+0.8
MMAI	Mount Meron Ar	148.55	298	PKPbc	PKiKP	21 25 16.2	+0.1
	comp=Z,3.8nm,0.4s,baz=54,slow=2.5,SNR=4.9						
OSTC	Ostas	149.14	342	*e*PKP	PKPbc	21 25 16.6	+0.9
STEB	Steborice	149.23	340	*e*PKP	PKPbc	21 25 15.2	-0.7
DOPR	Dopca	149.26	328	⇑P	PKPbc	21 25 17.0	+0.9
DPC	Dobruska-Polom	149.29	342	*e*PKP	PKPbc	21 25 16.8	+0.7
DPC				*ex*	x	21 25 22.5	
MLR	Muntele Rosu	149.31	326	⇑P	PKiKP	21 25 17.7	+0.4
VOIR		149.80	327	⇓P	PKPbc	21 25 18.0	+0.4
ARR	Arges	150.06	327	⇑P	PKiKP	21 25 19.5	+0.7
CKRC	Cesky Krumlov	151.24	343	*e*PKP	PKPbc	21 25 20.9	+0.2
BZS	Buzias	151.31	331	⇓P	PKPbc	21 25 20.5	-0.4
GERES	GERESS Array B	151.37	344	PKPbc	PKPbc	21 25 20.5	-0.6
	comp=Z,0.9nm,0.6s,baz=45,slow=3.1,SNR=6.8						
PLVB	Pleven	151.43	324	⇑P	PKPbc	21 25 21.7	+0.5
HERR	Herculane	151.50	329	⇓P	PKPbc	21 25 21.4	+0.1
ELL	Elmali	151.67	308	PKPbc	PKiKP	21 25 23.9	+1.4
ELL				PKPab	PKPab	21 25 33.6	+0.9
MORH	Mrgy, Hungar	152.09	335	⇑P	PKPbc	21 25 21.3	-1.3
BOVS	Bovan	152.76	328	⇓P	PKPbc	21 25 24.0	-0.2

IDC 14 21:20:14.7±9.1, 30.80S×179.63W, h368km±103km, mb2.7/2, mbtmp3.6/3, Error ellipse: s-maj=104.5km s-min=43.0km az=2.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.91	199	P	P	21 22 08.5	-0.4
	3.1nm,0.3s,baz=0.0,slow=0.0,SNR=23						
URZ				S	S	21 23 39.8	-0.7
	3.6nm,0.4s,baz=83,slow=23,SNR=13						
ASAR	Alice Springs	41.69	268	P	P	21 27 29.2	+0.1
	0.3nm,0.7s,baz=110,slow=7.6,SNR=5.0						
	0.3nm,0.7s						
WRA	Warramunga Arr	42.72	273	P	P	21 27 37.2	-0.1
	0.4nm,0.4s,baz=112,slow=8.0,SNR=4.5						
	0.4nm,0.4s						
FINES	FINESS Array B	145.03	339	PKPbc	PKPdf	21 39 07.1	-0.8
	1.6nm,0.7s,baz=50,slow=2.2,SNR=12						

SSNC 14 21:27:43.2±1.4, 18.02N×81.71W, h26km±31km, MD3.6, ML3.0, Presumed earthquake, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	Blossom Villag	2.25	43	*e*P	Pn	21 28 17.0	-1.7
LCCY				*e*S	Sn	21 28 41.5	-4.1
LCCY				IAML		21 28 49.0	
	comp=E,105nm,1.0s						
LCCY				IAML		21 28 50.4	
	comp=N,71nm,0.7s						
CBCY	The Bluff, Cay	2.52	47	*e*P	Pn	21 28 20.1	-2.3
CBCY				*e*S	Sn	21 28 48.0	-4.2
CBCY				IAML		21 28 48.6	
	comp=E,66nm,0.6s						
CBCY				IAML		21 28 55.3	
	comp=N,52nm,0.6s						
MGV	Manicaragua	4.38	22	*e*P	Pn	21 28 47.0	-1.1
MGV				*e*S	Sn	21 29 36.4	-1.8
MGV				*e*Sg	Sn	21 29 38.3	+0.1
MGV				IAML		21 29 39.0	
	comp=N,9.5nm,0.2s						
CCCC	Cccc	4.88	49	*e*P	Pn	21 28 59.6	+4.7
CCCC				*e*S	Sn	21 29 56.4	+5.8
CCCC				IAML		21 29 59.1	
	comp=E,5.2nm,0.8s						
YAR	Yar	5.57	64	*e*P	Pn	21 29 04.5	+0.1
YAR				*i* S	Sn	21 30 03.2	-4.4
PINC	Pinares de May	6.11	65	*e*P	Pn	21 29 11.0	-0.8

*NOU **14** 21:28:07.6, 39.44S×174.23E, h232km, ML3.5/11, North Island, New Zealand*
*WEL **14** 21:28:10.3±1.1, 39.5S±11×17.4E±, h210km±7km, M2.8/10, ML2.3/9, MLv2.8/10, Error ellipse: s-maj=14.3km s-min=8.3km az=159.9*

ISC 14 21:28:07.7±1.9, 39.49S±0.06×174.31E±0.06, h231km±11km, n86, σ1§11/95, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	Lake Rotokare	0.07	68	P	Pn	21 28 38.7	+1.1
LREZ				S	S	21 29 00.6	-0.4
PREZ	Palmer Road	0.19	320	P	Pn	21 28 38.7	+0.9
KHEZ	Kahui Hut	0.30	310	P	Pn	21 28 38.5	+0.5
KHEZ	Kahui Hut	0.30	310	S	S	21 29 02.2	+0.5
KHEZ	Kahui Hut	0.30	310	P	Pn	21 28 39.1	+1.0
KHEZ				S	S	21 29 01.2	-0.6
NMEZ	Namu Road	0.35	282	P	Pn	21 28 39.1	+1.1
NMEZ				S	S	21 29 01.9	+0.3
PKE	Pukeiti	0.39	319	P	Pn	21 28 39.3	+1.2
MHZ	Mangahewa	0.41	1	P	Pn	21 28 39.4	+1.2
VRZ	Vera Road	0.50	44	P	Pn	21 28 38.8	+0.4
WAZ	Wanganui	0.58	117	P	Pn	21 28 40.2	+1.5
WAZ				S	S	21 29 02.2	-0.8
PKVZ	Pokaka	0.82	76	P	Pn	21 28 40.5	+0.7
MTVZ	Mangateitei	0.90	84	P	Pn	21 28 41.2	+1.0
MTVZ				S	S	21 29 04.2	-1.5
TWVZ	Taurewa	0.97	65	P	Pn	21 28 41.2	+0.6
TRVZ	Turoa	0.97	79	P	Pn	21 28 41.7	+0.8
FWVZ	Far West T-bar	0.99	77	P	Pn	21 28 41.7	+0.8
MAVZ	Matarangi	0.99	78	P	Pn	21 28 41.8	+0.8
COVZ	Chateau Observ	0.99	74	P	Pn	21 28 41.8	+0.9
COVZ				S	S	21 29 05.1	-1.6
WHVZ	Whangaehu Hut	1.01	79	P	Pn	21 28 42.0	+1.0
NGZ	Ngauruhoe	1.05	73	P	Pn	21 28 42.1	+1.0
NGZ				S	S	21 29 05.7	-1.6
WTVZ	West Tongariro	1.06	70	P	Pn	21 28 42.1	+0.9
WTVZ				S	S	21 29 05.7	-1.7
HIZ	Hauiti	1.06	24	P	Pn	21 28 41.4	+0.3
HIZ	Hauiti	1.06	24	P	Pn	21 28 41.7	+0.5
TUVZ	Tukino	1.06	78	P	Pn	21 28 42.4	+1.1
NNVZ	North Ngauruho	1.07	71	P	Pn	21 28 42.3	+0.9
SNVZ	South Ngauruho	1.07	74	P	Pn	21 28 42.5	+1.1
OTVZ	Oturere	1.10	73	P	Pn	21 28 42.6	+1.1
KRVZ	Karewarewa	1.10	70	P	Pn	21 28 42.5	+1.0
MOVZ	Moawhango	1.12	86	P	Pn	21 28 42.1	+0.6
MOVZ				S	S	21 29 04.8	-3.1
NTVZ	North Tongariro	1.13	70	P	Pn	21 28 42.7	+1.0
ETVZ	East Tongariro	1.14	72	P	Pn	21 28 42.7	+1.0
TMVZ	Te Maari	1.14	71	P	Pn	21 28 43.0	+1.3
KATZ	Kakaramea	1.19	65	P	Pn	21 28 43.0	+0.9
RATZ	Rangitukua	1.29	62	P	Pn	21 28 43.7	+1.0
RITZ	Rihia Road	1.30	67	P	Pn	21 28 43.7	+1.0
TSZ	Takapari Road	1.39	115	P	Pn	21 28 44.5	+1.2
TLZ	Tolley Road	1.50	40	P	Pn	21 28 45.0	+0.7
KWHZ	Kaweka Forest	1.63	88	P	Pn	21 28 46.8	+1.4
BKZ	Black Stump Fm	1.72	80	P	Pn	21 28 46.8	+0.7
BKZ	Black Stump Fm	1.72	80	P	Pn	21 28 46.9	+0.8
TCW	Tory Channel	1.72	181	P	Pn	21 28 47.0	+1.0
WPRZ	Whakapapataran	1.73	57	P	Pn	21 28 46.9	+0.7
WPHZ	Waipukurau	1.74	110	P	Pn	21 28 47.5	+1.3
MCHZ	McNeill Hill	1.84	89	P	Pn	21 28 49.2	+2.0
SNZO	South Karori	1.84	171	P	Pn	21 28 47.7	+0.7
TKNZ	Takaka Hill	1.86	213	P	Pn	21 28 47.8	+0.5
NNZ	Nelson	1.87	202	P	Pn	21 28 48.3	+1.0
BFZ	Birch Farm	1.90	129	P	Pn	21 28 48.4	+0.8
BFZ	Birch Farm	1.90	129	P	Pn	21 28 48.5	+0.8
QRZ	Quartz Range	1.91	225	P	Pn	21 28 48.0	+0.3
ANWZ	Angora Road	1.92	121	P	Pn	21 28 49.3	+1.5
PRHZ	Porangahau	1.95	114	P	Pn	21 28 49.5	+1.4
TUWZ	Tuamarina	1.96	188	P	Pn	21 28 49.6	+1.5
BHW	Baring Head	1.96	168	P	Pn	21 28 48.7	+0.5
NMHZ	Naumai	1.97	79	P	Pn	21 28 50.3	+1.9
KAHZ	Kahuranaki	2.00	100	P	Pn	21 28 50.4	+1.7
TMWZ	Te Maipa	2.02	144	P	Pn	21 28 49.5	+0.8
CPWZ	Castlepoint	2.03	135	P	Pn	21 28 50.3	+1.5
PXZ	Pawanui	2.04	106	P	Pn	21 28 50.3	+1.4
MSWZ	Moikau Station	2.05	160	P	Pn	21 28 49.5	+0.5
MTHZ	Maungataniwha	2.06	73	P	Pn	21 28 50.1	+0.9
PAWZ	Paruwai Farm	2.07	156	P	Pn	21 28 49.9	+0.6
ARHZ	Aropaoanui	2.09	85	P	Pn	21 28 51.1	+1.7
OMRZ	Omania	2.12	50	P	Pn	21 28 51.0	+1.2
TARZ	Mount Tarawera	2.12	55	P	Pn	21 28 50.9	+1.0
CKHZ	Cape Kidnapper	2.14	95	P	Pn	21 28 51.9	+2.0
TRWZ	Traveller	2.18	152	P	Pn	21 28 51.0	+0.7
RAHZ	Arahi	2.23	76	P	Pn	21 28 52.2	+1.4
MRNZ	Matariki Terra	2.25	211	P	Pn	21 28 51.6	+0.7
BSWZ	Blackbirch Sta	2.25	188	P	Pn	21 28 52.4	+1.4
RTZ	Ruatahuna	2.25	68	P	Pn	21 28 51.7	+0.6
WHHZ	Waihua	2.30	81	P	Pn	21 28 52.7	+1.1
SNGZ	Shannon Statio	2.46	74	P	Pn	21 28 54.3	+1.2
MKAZ	Moumakai	2.47	16	P	Pn	21 28 55.1	+1.8
URZ	Urewera	2.50	62	P	Pn	21 28 53.8	+0.2
URZ	Urewera	2.50	62	P	Pn	21 28 53.8	+0.2
THZ	Tophouse	2.51	205	P	Pn	21 28 54.6	+0.9
KNZ	Kokohu	2.65	81	P	Pn	21 28 56.4	+1.2
MWZ	Matawai	2.76	66	P	Pn	21 28 56.9	+0.5
RIGZ	Rimuhau	2.79	75	P	Pn	21 28 58.0	+1.2
DSZ	Denniston Nort	2.96	219	P	Pn	21 28 59.0	+0.5
KHZ	Kahutara	2.98	191	P	Pn	21 28 59.4	+0.7
KHZ	Kahutara	2.98	191	P	Pn	21 28 59.6	+0.9
RUGZ	Raukumara Rang	3.04	61	P	Pn	21 28 59.3	-0.3
MXZ	Matakaoa Point	3.67	60	P	Pn	21 29 07.2	+0.4
RPZ	Rata Peaks	4.88	209	P	Pn	21 29 21.5	+0.2
ODZ	Otahua Downs	6.18	205	P	Pn	21 29 37.3	-0.3

*SJA **14** 21:37:19.8±0.7, 30.03S×71.44W, h35km±3km, ML3.2, MW3.5*
*GUC **14** 21:37:22.1±0.7, 30.10S×71.27W, h63km±2km, ML3.5*

ISC 14 21:37:19.7±2.2, 30.02S±0.02×71.43W±0.05, h20km±7km, n46, σ1§60/65, 3C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	La Serena	0.19	58	⇓*i* P	Pg	21 37 31.3	+6.6
CO05				*i* S	Sg	21 37 38.3	+10
CO05				IAML		21 37 38.7	
	comp=E,3µm,0.4s						
GO04	Tololo Observa	0.57	106	*i* P	Pn	21 37 33.3	+0.3
GO04				*i* S	Sn	21 37 42.0	+0.1
GO04				IAML		21 37 43.4	
	comp=E,11µm,0.4s						
GO04	Tololo Observa	0.57	106	*e*P	Pb	21 37 32.5	+1.4
CO06	Fray Jorge	0.68	195	⇓*i* P	Pn	21 37 36.0	+1.8
CO06				*i* S	Sn	21 37 46.2	+2.0
CO06				IAML		21 37 49.8	
	comp=E,2µm,0.2s						
CO03	El Pedregal	1.04	142	⇓*i* P	Pb	21 37 39.0	-0.1
CO03				*i* S	Sb	21 37 51.6	-0.7
CO03				IAML		21 37 52.3	
	comp=E,2µm,0.2s						
CO03	El Pedregal	1.04	142	*e*P	Pb	21 37 38.3	-0.8
CO03				IAML		21 37 53.5	
	comp=Z,678nm,0.5s						
CO01	Juntas del Tor	1.16	88	⇑*i* P	Pb	21 37 41.4	+0.1
CO01				*i* S	Sb	21 37 54.9	-1.1
CO01	Juntas del Tor	1.16	88	*e*P	Pb	21 37 41.4	+0.1
CO01				IAML		21 37 58.5	
	comp=Z,270nm,0.2s						
LCO	Las Campanas	1.19	32	⇑*i* P	Pn	21 37 42.6	+1.1
LCO				*i* S	Sn	21 37 58.3	+1.0
LCO	Las Campanas	1.19	32	*e*P	Pn	21 37 41.9	+0.3
LCO				IAML		21 38 00.7	
	comp=Z,1µm,0.2s						
CO02	Combarbal	1.24	163	⇓*i* P	Pn	21 37 42.2	+0.1
CO02				*i* S	Sb	21 37 57.1	-1.0
CO02				IAML		21 37 59.5	
	comp=N,3µm,0.3s						
CO02	Combarbal	1.24	163	*e*P	Pn	21 37 42.3	+0.2
CO02				IAML		21 38 05.0	
	comp=Z,499nm,0.6s						
AC05	El Transito	1.55	41	⇑*i* P	Pn	21 37 47.9	+1.5
AC05				*i* S	Sb	21 38 07.5	+0.4
AC05				IAML		21 38 08.6	
	comp=N,833nm,0.5s						
AC05	El Transito	1.55	41	*e*P	Pn	21 37 48.0	+1.5
AC05				*e*S	Sb	21 38 07.7	+0.5
AC05				IAML		21 38 07.9	
	comp=Z,416nm,0.4s						
AROD	Rodeo	1.70	95	*e*P	Pn	21 37 49.8	+1.1
AC04	Llanos de Chal	1.84	10	*e*P	Pn	21 37 51.8	+1.5
AC04	Llanos de Chal	1.84	10	*e*P	Pn	21 37 52.0	+1.8
AC04				*e*S	Sn	21 38 07.9	-5.0
AC04				IAML		21 38 21.5	
	comp=Z,143nm,0.5s						
ACDV	Cuesta del Vie	2.01	95	*e*P	Pn	21 37 40.6	-12
ACDV				IAML		21 38 39.7	
	comp=Z,90nm,0.7s						
CO04	Los Peladeros	2.05	169	*i* P	Pn	21 37 53.9	+0.5
CO04				*i* S	Sn	21 38 18.2	-0.4
CO04				IAML		21 38 19.4	
	comp=N,367nm,0.3s						
ACCO	Cerro

comp=Z,17nm,2.9s
BO02 Sierra Bellavi 4.79 174 *e*P **Pn 21 38 31.8 +0.9**

*IDC **14** 21:44:17.2±1.0,5.9°99S×127.88E,h384km±12km,mb3.3/5, mbtmp4.0/9,Error ellipse: s-maj=18.0km s-min=10.3km az=87.0*
*DJA **14** 21:44:20.5±0.4,6.5°S±5.1°×12.8E±.1°,h354km±10km,M4.3/16, mB4.8/7,mb4.3/12,MLv4.5/16,Mw(mB)4.1/7*
ISC 14 21:44:18.2±0.7,**6.01S**±0.06×**127.81E**±0.07,**h400**km,**n28,** σ1§**32**/33,**mb3.6/5,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.98**	**120**	P	**Pn**	**21 45 30.4**	**+0.3**
SAUI	**Saumlaki**	**3.98**	**120**	S	**S**	**21 46 28.4**	**0.0**
SOEI	**Soe**	**5.12**	**223**	P	**Pn**	**21 45 41.6**	**0.0**
SOEI	**Soe**	**5.12**	**223**	P	**Pn**	**21 45 41.2**	**-0.4**
SOEI				S	**S**	**21 46 46.5**	**-2.8**
FAKI	**Fak Fak**	**5.38**	**55**	P	**Pn**	**21 45 43.3**	**-1.0**
FAKI	**Fak Fak** 0.5nm40nm,0.6s	**5.38**	**55**	P	**Pn**	**21 45 43.4**	**-0.9**
BATI	**Baumata** 165nm,0.3s,baz=51,slow=3.1,SNR=44	**5.85**	**224**	P	**Pn**	**21 45 49.4**	**+0.1**
BATI				S	**S**	**21 47 01.4**	**-2.1**
BATI	35nm,0.6s,baz=47,slow=19,SNR=4.5 **Baumata**	**5.85**	**224**	P	**Pn**	**21 45 49.5**	**+0.1**
MMRI	**Maumere** 0.2nm34nm,0.9s	**6.11**	**244**	P	**Pn**	**21 45 52.3**	**+0.2**
SIJI	**Sorong** 12nm,0.3s,baz=200,slow=15,SNR=12	**6.16**	**34**	P	**Pn**	**21 45 51.7**	**-0.9**
SIJI				S	**S**	**21 47 04.8**	**-4.8**
SIJI	10nm,0.3s,baz=273,slow=23,SNR=9.9 **Sorong**	**6.16**	**34**	P	**Pn**	**21 45 53.8**	**+1.2**
SWI	**Sorong** 0.2nm36nm,0.6s	**6.16**	**34**	P	**Pn**	**21 45 54.1**	**+1.5**
EDFI	**Ende, Flores** 0.2nm40nm,0.6s	**6.65**	**245**	P	**Pn**	**21 45 57.8**	**-0.4**
DRS	**Darwin Rock St**	**7.07**	**155**	P	**P**	**21 46 04.1**	**+0.8**
BSSI	**Bau Bau, Buton**	**7.28**	**269**	P	**P**	**21 46 06.4**	**+0.7**
BKSI	**Bulukumba**	**7.68**	**275**	P	**Pn**	**21 46 10.0**	**+0.4**
WSI	**Waingapu**	**8.29**	**243**	P	**Pn**	**21 46 15.5**	**-1.0**
TOLI2	**Tolitoli**	**9.96**	**315**	P	**Pn**	**21 46 37.1**	**+1.2**
PLAI	**Plampang**	**10.34**	**254**	P	**Pn**	**21 46 40.7**	**+0.5**
FITZ	**Fitzroy Crossi** 1.7nm,0.6s,baz=9.4,slow=14,SNR=5.4	**12.20**	**190**	P	**P**	**21 47 00.2**	**+0.1**
WRAB	**Tennant Creek**	**15.23**	**156**	P	**P**	**21 47 34.7**	**+1.5**
WRA	**Warramunga Arr** 1.1nm,0.4s,baz=334,slow=11,SNR=19	**15.23**	**156**	P	**P**	**21 47 33.9**	**+0.6**
WRA				S	**S**	**21 50 13.6**	**-1.2**
ASAR	0.3nm,0.5s,baz=332,slow=24,SNR=1.5 **Alice Springs**	**18.51**	**162**	P	**P**	**21 48 09.0**	**+0.8**
ASAR	0.8nm,0.3s,baz=342,slow=12,SNR=20			S	**S**	**21 51 17.9**	**+0.1**
CMAR	0.5nm,0.8s,baz=341,slow=17,SNR=3.6 **Chiang Mai Arr**	**37.44**	**311**	P	**P**	**21 50 55.5**	**0.0**
SONM	0.6nm,0.2s,baz=138,slow=7.4,SNR=6.1 0.6nm,0.2s **Songino Array**	**56.84**	**343**	P	**P**	**21 53 23.8**	**+1.0**
MKAR	0.3nm,0.5s,baz=162,slow=7.8,SNR=2.9 0.3nm,0.5s **Makanchi Array**	**66.22**	**328**	P	**P**	**21 54 25.3**	**+0.6**
ZALV	1.4nm,0.4s,baz=131,slow=7.3,SNR=28 1.4nm,0.4s **Zalesovo Beam**	**69.75**	**335**	P	**P**	**21 54 46.5**	**+0.3**
KURBB	0.8nm,0.5s,baz=148,slow=7.8,SNR=4.5 0.8nm,0.5s **Kurchatov Arra**	**70.54**	**329**	P	**P**	**21 54 51.9**	**+0.9**
	0.9nm,0.4s,baz=126,slow=5.2,SNR=16 0.9nm,0.4s						

*IDC **14** 21:52:55.9±4.6,18.27S×177.99W,h530km±51km, mb3.5/10,mbtmp4.4/10,Error ellipse: s-maj=25.1km s-min=24.1km az=53.0*
*NEIC **14** 21:52:59.8±1.9,18.3S±0.1×178.1W±0.1,h575km±9km, mb4.1/21,Error ellipse: s-maj=22.2km s-min=17.1km az=151.0*
ISC 14 21:52:58.5±0.5,**18.3S**±0.1×**178.09W**±0.10,**h557**km,**n45,** σ1§**12**/47,**mb4.1**/20,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.71**	**278**	P	**P**	**21 54 21.0**	**+2.1**
NIUE	**Niue**	**7.78**	**97**	P	**P**	**21 54 55.9**	**+1.7**
RAO	**Raoul Island**	**10.89**	**179**	P	**P**	**21 55 24.4**	**-1.1**
URZ	**Urewera** 5.1nm,0.3s,baz=286,slow=1.4,SNR=7.2 5.1nm,0.3s	**20.31**	**191**	P	**P**	**21 56 55.6**	**-1.2**
THZ	**Tophouse**	**24.60**	**196**	P	**P**	**21 57 35.5**	**+0.2**
LTZ	**Lake Taylor**	**25.72**	**196**	P	**P**	**21 57 44.4**	**-0.7**
LTZ	comp=Z,6.2nm,0.8s			IAmb	IAmb	21 57 47.4	
FOZ	**Fox Glacier**	**27.13**	**200**	P	**P**	**21 57 57.6**	**+0.2**
MLZ	**Mavora Lakes**	**29.32**	**200**	P	**P**	**21 58 17.2**	**+0.7**
CTAO	**Charters Tower**	**33.68**	**261**	P	**P**	**21 58 54.3**	**+0.3**
CTAO	comp=Z,5.3nm,0.7s			IAmb	IAmb	21 58 55.0	
PMG	**Port Moresby** comp=Z,16nm,0.8s,baz=46,slow=1.3,SNR=4.3 comp=Z,16nm,0.8s	**34.82**	**280**	P	**P**	**21 59 04.3**	**+0.7**
TOO	**Toolangi**	**37.15**	**231**	P	**P**	**21 59 22.9**	**+0.4**
TOO	comp=Z,4.2nm,1.1s			IAmb	IAmb	22 00 03.1	
COEN	**Coen**	**37.41**	**271**	P	**P**	**21 59 25.3**	**+0.3**
BBOO	**Buckleboo**	**43.47**	**241**	P	**P**	**22 00 13.2**	**+0.2**
BBOO	comp=Z,11nm,1.1s			IAmb	IAmb	22 00 21.9	
WB0	**Warramunga Arr**	**44.82**	**260**	P	**P**	**22 00 23.9**	**+0.2**
WB0	comp=Z,4.2nm,0.7s			IAmb	IAmb	22 00 24.0	
WRA	**Warramunga Arr** comp=Z,3.3nm,0.7s,baz=97,slow=7.1,SNR=52	**44.85**	**260**	P PcP	**P PcP**	**22 00 23.7**	**-0.2**
WRA	comp=Z,0.7nm,0.8s,baz=91,slow=3.5,SNR=3.6 comp=Z,3.3nm,0.7s					**22 01 53.1**	**-0.6**
WRA	**Warramunga Arr**	**44.85**	**260**	P	**P**	**22 00 23.8**	**-0.2**
AS31	**Alice Springs**	**44.97**	**255**		**P**	**22 00 25.2**	**+0.4**
AS31	comp=Z,3.7nm,0.6s			IAmb	IAmb	22 00 26.0	
ASAR	**Alice Springs** comp=Z,13nm,0.6s,baz=88,slow=8.7,SNR=207	**44.97**	**255**	P PcP	**P PcP**	**22 00 25.1**	**+0.3**
ASAR	comp=Z,0.6nm,0.6s,baz=104,slow=4.0,SNR=4.4 comp=Z,13nm,0.6s					**22 01 53.6**	**-0.5**
ASAR	**Alice Springs**	**44.97**	**255**		**P**	**22 00 25.2**	**+0.5**
MTN	**Manton Dam**	**49.09**	**269**	P	**P**	**22 00 54.5**	**-1.2**
MTN	comp=Z,10nm,1.0s			IAmb	IAmb	22 00 54.7	
FORT	**Forrest**	**50.10**	**245**	P	**P**	**22 01 01.9**	**-1.1**
FORT	comp=Z,5.6nm,0.9s			IAmb	IAmb	22 01 02.3	
KNRA	**Kununurra**	**50.75**	**264**	P	**P**	**22 01 06.7**	**-1.2**
KNRA	comp=Z,12nm,1.1s			IAmb	IAmb	22 01 12.8	
PSA00	**Pilbara Seismi**	**58.10**	**256**	P	**P**	**22 01 57.8**	**-1.6**
PSA00	**Pilbara Seismi**	**58.10**	**256**	P	**P**	**22 01 58.5**	**-0.9**
PSA00	comp=Z,8.7nm,1.1s			IAmb	IAmb	22 01 59.2	
MBWA	**Marble Bar**	**58.27**	**256**	P	**P**	**22 02 00.1**	**-0.4**
MBWA	comp=Z,6.9nm,1.0s			IAmb	IAmb	22 02 31.6	
MJAR	**Matsushiro Arr** comp=Z,1.7nm,0.5s,baz=154,slow=5.8,SNR=7.7 comp=Z,1.7nm,0.5s	**68.41**	**323**	P	**P**	**22 03 03.8**	**-1.3**
MJAR	**Matsushiro Arr**	**68.41**	**323**	P	**P**	**22 03 04.3**	**-0.8**
PETK	**Petropavlovsk-** comp=Z,13nm,1.1s,baz=112,slow=6.5,SNR=5.6 comp=Z,13nm,1.1s	**74.15**	**345**	P	**P**	**22 03 37.7**	**-0.5**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.7s,baz=214,slow=6.7,SNR=4.4 comp=Z,0.3nm,0.7s	**85.96**	**57**	P	**P**	**22 04 41.8**	**+1.3**
TXAR	**Lajitas Array**	**85.96**	**57**	P	**P**	**22 04 41.2**	**+0.7**
ILAR	**Eielson Array** comp=Z,0.5nm,0.4s,baz=222,slow=5.2,SNR=11 comp=Z,0.5nm,0.4s	**86.22**	**13**	P	**P**	**22 04 39.5**	**-1.2**
ILAR	**Eielson Array**	**86.22**	**13**	P	**P**	**22 04 39.9**	**-0.9**
F19K	**Shaleruckik Mo**	**86.24**	**8**	P	**P**	**22 04 39.2**	**-1.6**
ISCO	**Idaho Springs**	**88.79**	**47**	P	**P**	**22 04 50.7**	**-3.1**
CMAR	**Chiang Mai Arr** comp=Z,1.6nm,0.3s,baz=108,slow=4.7,SNR=4.9 comp=Z,1.6nm,0.3s	**89.30**	**290**	P	**P**	**22 04 57.6**	**+1.3**
SONM	**Songino Array** comp=Z,0.3nm,0.7s,baz=99,slow=6.6,SNR=2.0 comp=Z,0.3nm,0.7s	**94.05**	**319**	P	**P**	**22 05 18.0**	**+0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**94.05**	**319**	P	**P**	**22 05 18.5**	**+0.9**
BRTR	**Keskin Array B** comp=Z,1.8nm,0.9s,baz=64,slow=3.4,SNR=6.5	**145.28**	**315**	PKPbc	**PKPdf**	**22 11 34.0**	**+0.5**
OSTC	**Ostas**	**145.86**	**344**	*e*PKP	**PKPdf**	**22 11 35.0**	**+1.0**
STEB	**Steborice**	**145.98**	**342**	*e*PKP	**PKPdf**	**22 11 36.2**	**+2.0**
DPC	**Dobruska-Polom**	**146.02**	**343**	*e*PKP	**PKPdf**	**22 11 36.1**	**+1.8**
MMAI	**Mount Meron Ar** comp=Z,0.8nm,0.4s,baz=81,slow=8.9,SNR=2.0	**146.61**	**303**	PKPbc	**PKPbc**	**22 11 38.4**	**-0.1**
ZVC	**Zvikov**	**147.41**	**345**	*e*PKP	**PKiKP**	**22 11 43.5**	**+1.9**
CKRC	**Cesky Krumlov**	**147.95**	**344**	*e*PKP	**PKPbc**	**22 11 41.4**	**0.0**
GERES	**GERESS Array B** comp=Z,0.8nm,0.6s,baz=20,slow=4.3,SNR=7.3	**148.08**	**345**	PKPbc	**PKPbc**	**22 11 41.2**	**-0.6**

*IDC **14** 22:08:10.9±3.5,8.91S×118.56E,h108km±30km,mb2.9/3, mbtmp3.5/7,Error ellipse: s-maj=40.1km s-min=11.2km az=60.0*
*DJA **14** 22:08:11.1±0.3,9°S±3°×11°8E±.1°,h76km±4km,M4.0/18, mb4.2/3,MLv3.9/18*
ISC 14 22:08:09.3±0.8,**9.06S**±0.05×**118.44E**±0.04,**h100**km,**n23,** σ1§**82**/31,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	**Kabupaten Domp**	**0.56**	**347**	P	**Pn**	**22 08 25.9**	**+0.3**
DBNI				S	**Sn**	**22 08 37.6**	**-0.2**
PLAI	**Plampang**	**0.69**	**289**	P	**Pn**	**22 08 37.5**	**+0.8**
PLAI				S	**Sn**	**22 08 39.6**	**-0.1**
WBSI	**Waikabubak, Su**	**1.11**	**122**	P	**Pn**	**22 08 31.9**	**+0.9**
WBSI				S	**Sn**	**22 08 47.4**	**+0.1**
LBFI	**Labuhan Bajo,**	**1.55**	**68**	P	**Pn**	**22 08 37.1**	**+1.0**
WSI	**Waingapu**	**1.93**	**108**	P	**Pn**	**22 08 42.5**	**+1.5**
BASI	**Baing, Sumba**	**2.41**	**119**	P	**Pn**	**22 08 46.7**	**-0.5**
DNP	**Denpasar**	**3.21**	**276**	P	**Pn**	**22 08 59.6**	**+1.7**
EDFI	**Ende, Flores**	**3.23**	**85**	P	**Pn**	**22 09 00.2**	**+2.0**
IGBI	**Denpasar**	**3.26**	**274**	P	**Pn**	**22 08 59.0**	**+0.4**
IGBI				S	**Sn**	**22 09 38.0**	**+1.4**
BSSI	**Bau Bau, Buton**	**3.54**	**35**	P	**Pn**	**22 09 02.5**	**+0.2**
MMRI	**Maumere**	**3.78**	**84**	P	**Pn**	**22 09 07.3**	**+1.8**
MKS	**Makassar**	**3.95**	**15**	P	**Pn**	**22 09 08.7**	**+0.8**
KAPI	**Kappang** 7.5nm,0.3s,baz=180,slow=7.6,SNR=11	**4.22**	**18**	P	**Pn**	**22 09 12.2**	**+0.7**
KAPI				S	**Sn**	**22 09 57.7**	**-2.1**
KAPI	12nm,0.3s,baz=230,slow=23,SNR=9.1 **Kappang**	**4.22**	**18**	P	**Pn**	**22 09 12.0**	**+0.4**
JAGI	**Jajag, Banyuwa**	**4.28**	**278**	P	**Pn**	**22 09 12.3**	**0.0**
BATI	**Baumata** 15nm,0.6s,baz=11,slow=8.4,SNR=2.0	**5.28**	**103**	P	**Pn**	**22 09 27.5**	**+1.6**
BATI				S	**Sn**	**22 10 24.9**	**-0.6**
PMSI	13nm,0.3s,baz=188,slow=20,SNR=2.4 **Majene** 44nm,0.7s	**5.54**	**5**	P	**Pn**	**22 09 30.2**	**+0.8**
SOEI	**Soe**	**5.79**	**97**	P	**Pn**	**22 09 35.2**	**+2.2**
FITZ	**Fitzroy Crossi** 3.2nm,1.1s,baz=333,slow=16,SNR=3.5	**11.39**	**143**	P	**Pn**	**22 10 49.7**	**+0.8**
FITZ				S	**Sn**	**22 12 47.0**	**-7.2**
WRA	1.2nm,0.3s,baz=352,slow=19,SNR=6.0 **Warramunga Arr** 0.5nm,0.7s,baz=301,slow=12,SNR=4.6	**18.80**	**127**	P	**P**	**22 12 21.4**	**+0.3**
ASAR	**Alice Springs** 0.8nm,0.7s,baz=314,slow=9.6,SNR=13	**20.73**	**136**	P	**P**	**22 12 43.9**	**+1.8**
ASAR				S	**S**	**22 16 30.4**	**+2.2**
SONM	0.3nm,0.8s,baz=314,slow=27,SNR=2.0 0.8nm,0.7s **Songino Array**	**57.64**	**350**	P	**P**	**22 17 49.6**	**+0.5**
	0.2nm,0.5s,baz=156,slow=7.4,SNR=1.7 0.2nm,0.5s						
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=149,slow=5.9,SNR=2.2 0.2nm,0.7s	**64.26**	**333**	P	**P**	**22 18 33.1**	**-0.8**

*RSNC **14** 22:10:12.0±0.0,9°N±1°×7°3W±°,h24km±2km,M3.1,ML2.9*
*FUNV **14** 22:10:13.0,8.77N×73.27W,h1km,MW3.5,Presumed earthquake*
ISC 14 22:10:10.7±1.1,**8.79N**±0.02×**73.44W**±0.03,**h18**km±4km, **n31,**σ1§**54**/53,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGCC	**Aguachica**	**0.31**	**207**	P	**Pg**	**22 10 17.7**	**+0.2**
AGCC				S	**Sg**	**22 10 23.3**	**+1.2**
OCAC	**Ocana**	**0.56**	**167**	P	**Pg**	**22 10 21.4**	**-0.6**
OCAC				S	**Sg**	**22 10 29.4**	**-0.2**
LL8C	**La Loma 8 Chim**	**0.65**	**327**	P	**Pg**	**22 10 22.8**	**-0.8**
LL8C				S	**Sg**	**22 10 32.3**	**0.0**
VMM05	**San Martn**	**0.88**	**187**	P	**Pg**	**22 10 27.1**	**-0.9**
VMM05				S	**Sg**	**22 10 38.2**	**-1.5**
EZNC	**La Esperanza**	**1.16**	**174**	P	**Pb**	**22 10 30.8**	**-1.5**
EZNC				S	**Sb**	**22 10 45.6**	**-1.5**
ARGC	**Ariguani, Magd**	**1.33**	**323**	P	**Pn**	**22 10 33.7**	**-0.7**
ARGC				S	**Sn**	**22 10 51.1**	**-0.5**
CAPV	**Capacho**	**1.45**	**129**	*e*P	**Pn**	**22 10 37.1**	**+0.9**
CAPV				*e*S	**Sb**	**22 10 55.4**	**0.0**
VMM07	**Puerto Wilches**	**1.48**	**196**	P	**Pn**	**22 10 35.0**	**-1.4**
VMM07				S	**Sn**	**22 10 54.4**	**-0.9**
PAMC	**Pamplona, Colo**	**1.62**	**153**	P	**Pn**	**22 10 38.9**	**+0.1**
PAMC				S	**Sn**	**22 11 00.2**	**+0.8**
VMM09	**Lebrija**	**1.66**	**175**	P	**Pn**	**22 10 40.1**	**+1.0**
VMM09				S	**Sn**	**22 11 00.3**	**+0.3**
BRJC	**Barrancabermej**	**1.83**	**189**	P	**Pn**	**22 10 39.2**	**-2.1**
BRJC				S	**Sn**	**22 11 02.0**	**-2.0**
SJCC	**San Jacinto, C**	**2.04**	**303**	P	**Pn**	**22 10 44.3**	**+0.1**
SJCC				S	**Sn**	**22 11 09.3**	**+0.1**
SJCC	**San Jacinto, C**	**2.04**	**303**	*e*P	**Pb**	**22 10 49.6**	**+2.3**
BARC	**Barichara**	**2.20**	**173**	P	**Pn**	**22 10 48.0**	**+1.4**
BARC				S	**Sn**	**22 11 15.6**	**+2.2**
CRJC	**Cerrejon, Guaj**	**2.29**	**14**	P	**Pn**	**22 10 47.0**	**-0.7**
CRJC				S	**Sn**	**22 11 15.1**	**-0.3**
PTBC	**PUERTO BERRIO,**	**2.45**	**204**	P	Pn	22 10 47.4	-2.5
PTBC				S	**Sn**	**22 11 18.9**	**-0.5**
SMRC	**Santa Marta, M**	**2.48**	**342**	P	**Pn**	**22 10 48.7**	**-1.6**
SMRC				S	**Sn**	**22 11 19.1**	**-1.1**
SOCV	**Socops**	**2.61**	**101**	*e*P	**Pn**	**22 10 53.7**	**+1.6**
SOCV				*e*S	**Sn**	**22 11 22.5**	**-0.8**
SDV	**Santo Domingo**	**2.78**	**88**	P	**Pn**	**22 10 55.7**	**+1.2**
SDV				S	**Sn**	**22 11 27.5**	**-0.2**
SDV	**Santo Domingo**	**2.78**	**88**	*e*P	**Pn**	**22 10 55.8**	**+1.2**
SDV				*e*S	**Sn**	**22 11 27.3**	**-0.4**
RUSC	**La Rusia**	**2.90**	**173**	P	**Pn**	**22 10 55.9**	**-0.6**
RUSC				S	**Sn**	**22 11 31.3**	**+0.2**
RUSC	**La Rusia**	**2.90**	**173**	*e*P	**Pn**	**22 10 59.4**	**+2.9**
RUSC				*e*S	**Sn**	**22 11 32.5**	**+1.4**
SPBC	**San Pablo de B**	**3.18**	**191**	P	Pn	22 10 57.2	-2.7
SPBC				S	**Sn**	**22 11 36.4**	**-1.1**
URIC	**Uribia, Colomb**	**3.23**	**26**	P	**Pn**	**22 10 58.5**	**-2.0**
URIC	**Uribia, Colomb**	**3.23**	**26**	*e*P	**Pn**	**22 11 02.9**	**+2.3**
URIC				*e*S	**Sn**	**22 11 40.3**	**+1.7**
HELC	**Santa Helena**	**3.31**	**219**	P	**Pn**	**22 11 02.2**	**+0.2**
HELC	**Santa Helena**	**3.31**	**219**	*e*P	**Pn**	**22 11 06.0**	**+4.0**
HELC				*e*S	**Sn**	**22 11 46.0**	**+5.0**
NORC	**Norcasia**	**3.50**	**204**	P	**Pn**	**22 11 02.7**	**-1.7**
PRAC	**Prado**	**5.24**	**196**	P	**Pn**	**22 11 27.7**	**-0.6**
URMC	**La Uribe, Meta**	**5.58**	**190**	P	**Pn**	**22 11 33.6**	**+0.6**
BENV	**Beln**	**5.88**	**78**	*e*P	**Pn**	**22 11 37.8**	**+0.6**

RSNC 14 22:31:53.3±0.0,**6°N**±1°×**7°4W**±°,**h7**km±2km,**M3.5,mb4.3, ML3.1,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.46**	**191**	P	Pg	22 32 02.0	-0.3
SPBC				S	Sg	22 32 08.8	+0.4
PTBC	**PUERTO BERRIO,**	**0.64**	**312**	P	Pg	22 32 05.2	-0.4
PTBC				S	Sg	22 32 14.7	+0.8
BRJC	**Barrancabermej**	**0.89**	**15**	P	Pg	22 32 09.4	-1.0
BRJC				S	Sb	22 32 22.8	-0.4
RUSC	**La Rusia**	**0.92**	**104**	P	Pg	22 32 08.5	-2.5
RUSC				S	Sg	22 32 20.1	-2.9
BARC	**Barichara**	**0.93**	**59**	P	Pg	22 32 09.5	-1.6
BARC				S	Sg	22 32 22.0	-1.2
NORC	**Norcasia**	**1.04**	**239**	P	Pg	22 32 10.2	-3.1
NORC				S	Sg	22 32 23.3	-3.5
VMM09	**Lebrija**	**1.22**	**34**	P	Pg	22 32 14.7	-2.1
VMM09				S	Sg	22 32 31.0	-1.6
VMM07	**Puerto Wilches**	**1.25**	**6**	P	Pn	22 32 14.6	-2.6
VMM07				S	Sg	22 32 33.4	-0.1
ROSC	**El Rosal**	**1.31**	**195**	P	Pn	22 32 16.2	-2.1
ROSC				S	Sg	22 32 34.4	-1.0
CHIC	**Chingaza**	**1.49**	**170**	P	Pn	22 32 18.9	-2.0
CHIC				S	Sn	22 32 38.9	-1.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HELC	**Santa Helena**	**1.54**	**273**	P	Pn	22 32 18.7	-2.9
HELC				S	Sn	22 32 38.1	-3.9
CVER	**Cruz Verde, Cu**	**1.58**	**183**	P	Pn	22 32 21.4	-0.8
MEDEC	**Medelln, Ant**	**1.61**	**276**	P	Pn	22 32 20.6	-1.7
MEDEC				S	Sn	22 32 40.5	-2.9
EZNC	**La Esperanza**	**1.64**	**24**	P	Pn	22 32 20.2	-2.5
EZNC				S	Sb	22 32 44.7	-0.3
PAMC	**Pamplona, Colo**	**1.76**	**46**	P	Pn	22 32 22.7	-2.0
PAMC				S	Sn	22 32 47.0	-0.7
RECRC	**Villamaria, Ca**	**1.78**	**230**	P	Pn	22 32 23.1	-1.9
RECRC				S	Sn	22 32 46.2	-2.0
NIZA	**Niza - Manizal**	**1.81**	**235**	P	Pn	22 32 23.8	-1.4
NIZA				S	Sn	22 32 46.5	-2.2
VMM05	**San Martn**	**1.83**	**13**	P	Pn	22 32 22.7	-2.6
VMM05				S	Sn	22 32 47.5	-1.2
VILC	**Villavicencio,**	**2.00**	**172**	P	Pn	22 32 26.0	-1.7
VILC				S	Sn	22 32 53.2	0.0
CBOC	**Ciudad Bolivar**	**2.04**	**263**	P	Pn	22 32 27.1	-1.1
CBOC				S	Sn	22 32 53.4	-0.6
ANIL	**Santa Ana**	**2.14**	**221**	P	Pn	22 32 27.7	-2.1
ANIL				S	Sn	22 32 55.3	-1.5
OCAC	**Ocana**	**2.21**	**17**	P	Pn	22 32 27.4	-3.2
OCAC				S	Sn	22 32 57.8	-0.6
UREC	**San Jos de Ur**	**2.24**	**317**	P	Pn	22 32 28.9	-2.0
UREC				S	Sn	22 32 57.1	-1.8
DBBC	**Dabeiba**	**2.39**	**292**	P	Pn	22 32 33.0	0.0
DBBC				S	Sn	22 33 03.8	+1.2
AGCC	**Aguachica**	**2.42**	**9**	P	Pn	22 32 29.7	-3.6
AGCC				S	Sn	22 33 01.6	-1.7
ORTC	**Ortega, Tolima**	**2.52**	**210**	P	Pn	22 32 32.5	-2.3
ORTC				S	Sn	22 33 04.2	-1.7
PRAC	**Prado**	**2.55**	**201**	P	Pn	22 32 32.6	-2.5
PRAC				S	Sn	22 33 05.2	-1.2
PTGC	**Puerto Gaitan,**	**2.64**	**136**	P	Pn	22 32 35.3	-1.1
URMC	**La Uribe, Meta**	**2.87**	**188**	P	Pn	22 32 37.0	-2.6
URMC				S	Sn	22 33 13.6	-0.9
YOTC	**Yotoco, Valle**	**3.16**	**228**	P	Pn	22 32 41.1	-2.6
LL8C	**La Loma 8 Chim**	**3.21**	**3**	P	Pn	22 32 40.1	-4.1
ARGC	**Ariguani, Magd**	**3.73**	**356**	P	Pn	22 32 50.3	-1.1
JAMC	**Jamundi, Valle**	**3.93**	**223**	P	Pn	22 32 53.3	-1.1
MACC	**Macarena, Meta**	**3.94**	**178**	P	Pn	22 32 50.1	-4.2
MACC				S	Sn	22 33 37.4	-3.4
SJCC	**San Jacinto, C**	**3.94**	**343**	P	Pn	22 32 52.5	-1.9
SJCC				S	Sn	22 33 39.1	-1.9
GARC	**Garzon, Huila**	**4.18**	**201**	P	Pn	22 32 53.9	-3.9
GARC				S	Sn	22 33 44.8	-2.2
SDV	**Santo Domingo**	**4.32**	**50**	P	Pn	22 32 57.5	-2.1
SDV				S	Sn	22 33 46.8	-3.5
POPC	**Popayan, Colom**	**4.45**	**217**	P	Pn	22 33 00.1	-1.4
FLOC	**Florencia**	**4.80**	**200**	P	Pn	22 32 02.9	-3.2
FLOC				S	Sn	22 34 02.1	+0.1
CRJC	**Cerrejon, Guaj** 22nm,0.6s	**5.00**	**12**	P	Pn	22 33 05.8	-3.1
CRJC				S	Sn	22 34 06.0	-1.0
SMRC	22nm,0.6s **Santa Marta, M**	**5.03**	**357**	P	Pn	22 33 08.7	-0.5

*ATH **14** 22:45:39.2,37.62N×20.54E,h16km±2km,ML2.5/3, Manual Solution by S.Koutrakis First location: 2020/02/14 22:46:38, This location: 2020/02/14 23:03:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **14** 22:45:40.1,38°N±2°×2°1E±°,h6km±3km,M2.3/8,MLh2.3/8*
ISC 14 22:45:40.1±1.7,**37.66N**±0.06×**20.57E**±0.05,**h13**km±7km, **n21,**σ1§**52**/42,**Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORTH	**Orthonies,Zaky**	**0.22**	**28**	P	**Pb**	**22 45 45.4**	**-0.5**
ORTH				S	**Sg**	**22 45 47.9**	**-0.2**
LTHK	**Lithakia**	**0.22**	**77**	P	**Pg**	**22 45 44.6**	**-0.2**
LTHK				S	**Sg**	**22 45 48.0**	**-0.1**
LTHK	**Lithakia**	**0.22**	**77**	P	**Pg**	**22 45 44.7**	**-0.2**
LTHK				S	**Sg**	**22 45 47.6**	**-0.4**
KYPS	**Kipseli, Zakin**	**0.26**	**52**	P	**Pg**	**22 45 45.6**	**+0.1**
KYPS				S	**Sg**	**22 45 49.5**	**+0.3**
ZAK2	**Zakynthos**	**0.29**	**64**	P	**Pg**	**22 45 46.4**	**+0.3**
ZAK2				S	**Sg**	**22 45 51.3**	**+1.1**
RTZL	**Ratzakli, Kefa**	**0.45**	**21**	P	**Pg**	**22 45 48.6**	**-0.3**
RTZL				S	**Sg**	**22 45 55.2**	**+0.3**
CLEM	**Kyllini,Ilia,G**	**0.50**	**63**	P	**Pg**	**22 45 50.1**	**+0.1**
CLEM				S	**Sg**	**22 45 57.4**	**+0.7**
KFL1	**Kefalonia,Entr**	**0.51**	**354**	P	**Pg**	**22 45 50.0**	**-0.1**
KFL1				S	**Sg**	**22 45 57.6**	**+0.7**
VLS	**Valsamata**	**0.52**	**2**	P	**Pg**	**22 45 50.0**	**-0.3**
VLS	

MBAZ	Motutapu North	1.65 277	P		Pn	23 09 59.0	+1.7
ALRZ	Allen Road	1.65 196	P		Pn	23 09 59.3	+2.0
WPRZ	Whakapapatarin	1.66 202	P		Pn	23 09 59.6	+2.3
TLZ	Tolley Road	1.75 219	P		Pn	23 10 01.0	+3.0
CNGZ	Carnagh Statio	1.81 147	P		Pn	23 10 01.0	+2.5
SNGZ	Shannon Statio	1.83 170	P		Pn	23 10 00.5	+1.9
AWAZ	Awhitu Peninsu	1.84 267	P		Pn	23 10 00.3	+1.6
RIGZ	Rimuhau	1.85 160	P		Pn	23 10 01.1	+2.3
MTHZ	Maungataniwha	1.87 182	P		Pn	23 10 00.4	+1.4
MRHZ	Matea Rd	1.90 192	P		Pn	23 10 00.9	+1.7
RAHZ	Arahi	1.94 177	P		Pn	23 10 01.6	+2.1
WATZ	Wairara	1.97 209	P		Pn	23 10 02.1	+2.3
PRGZ	Paritu Road	2.08 159	P		Pn	23 10 02.8	+2.2
WHTZ	Waihua	2.11 174	P		Pn	23 10 03.1	+2.3
NMHZ	Naumai	2.12 183	P		Pn	23 10 03.5	+2.5
KNZ	Kokohu	2.12 164	P		Pn	23 10 02.8	+1.9
RITZ	Rihia Road	2.17 203	P		Pn	23 10 03.7	+2.3
BKZ	Black Stump Fm	2.21 189	P		Pn	23 10 02.8	+1.0
BKZ	Black Stump Fm	2.21 189	S		S	23 10 39.1	-0.6
BKZ	Black Stump Fm	2.21 189	P		Pn	23 10 03.1	+1.4
HIZ	Hauiti	2.25 226	P		Pn	23 10 04.9	+2.8
ARHZ	Aropaoanui	2.28 179	P		Pn	23 10 04.6	+2.3
MHGZ	Mahia Peninsul	2.30 161	P		Pn	23 10 05.1	+2.6
WCZ	Waipu Caves	2.33 296	P		Pn	23 10 04.3	+1.5
NTVZ	North Tongarir	2.34 205	P		Pn	23 10 05.5	+2.5
TMVZ	Te Maari	2.35 204	P		Pn	23 10 05.2	+2.2
ETVZ	East Tongariro	2.36 204	P		Pn	23 10 05.1	+1.9
WTVZ	West Tongariro	2.38 206	P		Pn	23 10 05.5	+2.2
NNVZ	North Ngauruho	2.39 205	P		Pn	23 10 05.3	+1.8
OTVZ	Oturere	2.40 204	P		Pn	23 10 05.5	+1.9
TWVZ	Taurewa	2.40 209	P		Pn	23 10 05.8	+2.2
SNVZ	South Ngauruho	2.41 209	P		Pn	23 10 06.0	+2.2
NGZ	Ngauruhoe	2.44 205	P		Pn	23 10 06.2	+2.3
MCHZ	McNeill Hill	2.47 184	P		Pn	23 10 06.3	+2.3
KWHZ	Kaweka Forest	2.48 189	P		Pn	23 10 06.1	+2.0
TUVZ	Tukino	2.50 203	P		Pn	23 10 06.5	+2.0
FWVZ	Far West T-bar	2.52 205	P		Pn	23 10 06.9	+2.2
MAVZ	Matarangi	2.53 205	P		Pn	23 10 07.1	+2.1
WHVZ	Whangaehu Hut	2.54 204	P		Pn	23 10 06.9	+2.0
TRVZ	Turoa	2.56 205	P		Pn	23 10 07.2	+2.0
WNVZ	Wahianoa	2.57 204	P		Pn	23 10 07.0	+1.8
MOVZ	Moawhango	2.60 201	P		Pn	23 10 06.7	+1.4
PKVZ	Pokaka	2.63 208	P		Pn	23 10 07.7	+2.1
CKHZ	Cape Kidnapper	2.68 178	P		Pn	23 10 08.1	+2.2
KRHZ	Kereru	2.70 189	P		Pn	23 10 07.8	+1.6
VRZ	Vera Road	2.75 218	P		Pn	23 10 09.7	+3.1
KAHZ	Kahuranaki	2.81 181	P		Pn	23 10 09.4	+2.1
PXZ	Pawanui	3.05 181	P		Pn	23 10 11.4	+1.8
OUZ	Omahuta	3.22 302	P		Pn	23 10 13.0	+1.5
OUZ	Omahuta	3.22 302	P		Pn	23 10 13.3	+1.8
DVHZ	Dannevirke	3.37 190	P		Pn	23 10 14.4	+1.4
POWZ	Post Office Ro	3.53 195	P		Pn	23 10 16.1	+1.5
PRWZ	Pori Road	3.65 192	P		Pn	23 10 18.1	+2.2
BFZ	Birch Farm	3.74 188	P		Pn	23 10 17.9	+1.0
BFZ	Birch Farm	3.74 188	S		S	23 11 06.2	-0.8
MRZ	Mangatainoka R	3.83 196	P		Pn	23 10 18.7	+0.8
TIWZ	Tintock	3.88 192	P		Pn	23 10 20.4	+1.9
HOWZ	Holdsworth Sta	4.07 195	P		Pn	23 10 21.5	+0.9
OGWZ	Otaki Gorge	4.07 199	P		Pn	23 10 21.5	+1.0
KIW	Kapiti Island	4.19 202	P		Pn	23 10 22.6	+0.7
MTW	Mount Morrison	4.32 195	P		Pn	23 10 24.2	+0.8
CAW	Cannon Point	4.37 199	P		Pn	23 10 24.7	+0.7
DUWZ	D'Urville Isla	4.49 211	P		Pn	23 10 25.9	+0.6
MSWZ	Moikau Station	4.62 196	P		Pn	23 10 27.0	+0.1
SNZO	South Karori	4.66 201	P		Pn	23 10 28.0	+0.8
TCW	Tory Channel	4.71 205	P		Pn	23 10 28.4	+0.6
TUWZ	Tuamarina	5.02 207	P		Pn	23 10 29.7	+1.3
NNZ	Nelson	5.06 212	P		Pn	23 10 32.3	+0.5
TKNZ	Takaka Hill	5.10 216	P		Pn	23 10 32.3	-0.1
QRZ	Quartz Range	5.16 220	P		Pn	23 10 32.8	-0.3
QRZ	Quartz Range	5.16 220	P		Pn	23 10 33.1	0.0
BSWZ	Blackbirch Sta	5.29 206	P		Pn	23 10 35.9	+1.3
MRNZ	Matariki Terra	5.48 215	P		Pn	23 10 37.9	+1.0
THZ	Tophouse	5.71 212	P		Pn	23 10 40.5	+0.8
KHZ	Kahutara	6.03 205	P		Pn	23 10 44.5	+1.0
KHZ	Kahutara	6.03 205	P		Pn	23 10 44.7	+1.3
DSZ	Denniston Nort	6.20 218	P		Pn	23 10 46.6	+1.0
GVZ	Greta Valley S	6.69 205	P		Pn	23 10 52.9	+1.3
LTZ	Lake Taylor	6.82 210	P		Pn	23 10 53.7	+0.6
INZ	Inchbonnie	7.13 215	P		Pn	23 10 57.4	+0.5
MHCZ	Mount Hutt	7.73 210	P		Pn	23 11 05.0	+0.8
ARCZ	Arundel	8.23 210	P		Pn	23 11 10.7	+0.3
TMZ	Timaru	8.66 209	P		Pn	23 11 17.1	+1.3
ODZ	Otahua Downs	9.35 209	P		Pn	23 11 25.1	+0.8
ODZ	Otahua Downs	9.35 209	P		Pn	23 11 26.0	+1.7
JCZ	Jackson Bay	9.42 219	P		Pn	23 11 25.9	+0.7

*NOU **14** 23:19:54.3, 10°.05S × 161°.12E, h3km, mb4.9/18, Solomon Islands*
*NEIC **14** 23:19:56.4±1.5, 10°.0S±0°.1 × 161°.09E±0°.08, h37km±7km, mb4.1/15, Error ellipse: s-maj=17.1km s-min=8.8km az=211.0*
*IDC **14** 23:19:57.4±2.4, 10°.14S × 161°.03E, h51km±19km, mb3.8/9, mbtmp4.1/11, ML4.1/2, MS3.5/5, Error ellipse: s-maj=22.1km s-min=14.6km az=69.0*

ISC 14 23:19:56.1±0.6, 10°.05S±0°.05 × 161°.14E±0°.05, h35km, n49, σ1s47/49, mb4.0/15, MS3.6/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HURO	Huro Makira	0.85	119	P		Pn	Pn	23 20 11.4	-0.2
HURO	Huro Makira	0.85	119	S		Sn	Sn	23 20 23.0	+0.1
HNR	Honiara	1.33	297	P		Pn	Pn	23 20 17.1	-1.1
	76nm,0.4s,baz=41,slow=18,SNR=58								
HNR				S			Sn	23 20 35.1	+0.4
	369nm,0.8s,baz=142,slow=23,SNR=24								
HNR				LR			LR	23 21 07.6	
	comp=Z,28nm,21.7s,baz=213,slow=55								
HNR	Honiara	1.33	297				Sn	23 20 34.4	-0.3
HNR	Honiara	1.33	297	P			Pn	23 20 17.1	-1.1
HNR	Honiara	1.33	297	S			Sn	23 20 36.2	+1.5
ALEG	Aligegeo Malai	1.36	341	S			Sn	23 20 37.8	+2.3
SAVO	Savo Central	1.59	304	P			Pn	23 20 21.4	-0.4
NGOA	Tingoa Renbel	1.83	215	P			Pn	23 20 27.6	+2.5
TATA	Tatamba Isabel	2.12	321	P			Pn	23 20 31.2	+2.2
TATA	Tatamba Isabel	2.12	321	P			Sn	23 20 57.7	+3.6
KOUNC	Koumac, New Ca	10.87	164	P			Pn	23 22 30.8	+1.5
DZM	Mont Dzumac	12.99	158	P			Pn	23 23 00.1	+1.7
	1.7nm,0.3s,baz=347,slow=6.0,SNR=43								
DZM				S			Sn	23 25 21.7	0.0
	4.5nm,0.7s,baz=46,slow=22,SNR=1.8								
DZM				LR			LR	23 27 20.0	
	comp=Z,120nm,20.0s,baz=94,slow=34								
	3.9nm,0.3s								
DZM	Mont Dzumac	12.99	158				Pn	23 22 59.1	+0.7
DZM	Mont Dzumac	12.99	158	P			Pn	23 23 00.0	+1.7
MARNC	Mare, Loyalty	13.15	151	Pn			Pn	23 23 01.8	+1.3
MARNC	Mare, Loyalty	13.15	151	P			Pn	23 23 02.8	+2.3
YATNC	Mamie plateau,	13.15	156	P			Pn	23 23 02.0	+1.5
ONTNC	Ouen Toro	13.21	158	Pn			Pn	23 23 02.2	+0.9
ONTNC	Ouen Toro	13.21	158	P			Pn	23 23 03.2	+2.0
OUENC	Ouen Island, N	13.46	157	P			Pn	23 23 07.1	+2.5
CTA	Charters Tower	17.49	233	P			Pn	23 23 56.6	-0.7
	0.3nm,0.3s,baz=58,slow=13,SNR=5.0								
CTA				LR			LR	23 30 06.3	
	comp=Z,94nm,19.7s,baz=44,slow=35								
	4.1nm,0.8s								
CTAO	Charters Tower	17.49	233				Pn	23 23 58.4	+1.0
EIDS	Eidsvold	17.98	211				Pn	23 24 02.9	-0.5
COEN	Coen	18.00	256				Pn	23 24 04.7	+1.1
COEN					IAmb		IAmb	23 24 43.7	
	comp=Z,9.5nm,1.1s								
ARMA	Armidale	22.12	202	P			P	23 24 47.9	-0.8
ARMA					IAmb		IAmb	23 24 51.1	
	comp=Z,3.3nm,0.8s								
INKA	Innaminka	26.04	225	P			P	23 25 26.0	-0.2
INKA					IAmb		IAmb	23 25 27.7	
	comp=Z,2.3nm,0.6s								
CAN	Canberra	27.48	202	P			P	23 25 39.3	+0.1
CAN					IAmb		IAmb	23 26 03.2	
	comp=Z,5.5nm,1.0s								
WB0	Warramunga Arr	27.56	246	P			P	23 25 38.4	-1.6
WB0					IAmb		IAmb	23 26 19.4	
	comp=Z,6.5nm,1.1s								
WRAB	Tennant Creek	27.64	246	P			P	23 25 39.3	-1.5
WRAB					IAmb		IAmb	23 26 12.0	
	comp=Z,6.5nm,1.1s								
WRA	Warramunga Arr	27.66	246	P			P	23 25 39.1	-1.8
	comp=Z,1.3nm,0.6s,baz=75,slow=9.2,SNR=30								
	comp=Z,1.3nm,0.6s								
WRA	Warramunga Arr	27.66	246	P			P	23 25 37.8	-3.1
STKA	Stephens Creek	28.27	217	P			P	23 25 45.0	-1.3
	comp=Z,1.8nm,0.7s,baz=29,slow=8.4,SNR=3.2								
	comp=Z,1.3nm,0.7s								
STKA	Stephens Creek	28.27	217	P			P	23 25 45.2	-1.0
STKA					IAmb		IAmb	23 26 26.0	
	comp=Z,18nm,1.1s								
ASAR	Alice Springs	29.30	239	P			P	23 25 53.9	-1.7
	comp=Z,0.5nm,0.5s,baz=63,slow=10,SNR=7.8								
ASAR					LR		LR	23 37 25.0	
	comp=Z,74nm,18.9s,baz=74,slow=36								
	comp=Z,0.5nm,0.5s								
RAR	Rarotonga	39.13	111	LR			LR	23 41 30.1	
	comp=Z,100nm,19.7s,baz=335,slow=33								
SONM	Songino Array	75.23	325	P			P	23 31 35.4	0.0
	comp=Z,0.5nm,0.4s,baz=122,slow=5.9,SNR=7.1								
	comp=Z,0.5nm,0.4s								
SONM	Songino Array	75.23	325	P			P	23 31 34.8	-0.6
SONM					IAmb		IAmb	23 31 41.8	
	comp=Z,1.2nm,0.7s								
O14K	Tigyukauivet M	75.39	19	P			P	23 31 36.0	+0.1
N14K	Kuskokwak Cree	75.79	18	P			P	23 31 38.2	0.0
O15K	Ungalikthiuk R	75.80	20	P			P	23 31 38.2	0.0
O15K					IAmb		IAmb	23 32 07.3	
	comp=Z,8.3nm,1.1s								
PLK4	Peulik 4	75.85	22	P			P	23 31 37.2	-1.5
YAK	Yakutsk	75.93	345	LR			LR	00 02 01.5	
	comp=Z,94nm,20.5s,baz=304,slow=33								
ILAR	Eielson Array	84.07	20	P			P	23 32 22.4	-0.4
	comp=Z,0.6nm,0.5s,baz=248,slow=5.0,SNR=13								
	comp=Z,0.6nm,0.5s								
NVAR	Mina Array Bea	88.88	51	P			P	23 32 48.3	+1.0
	comp=Z,0.8nm,0.7s,baz=231,slow=5.3,SNR=5.3								
	comp=Z,0.8nm,0.7s								
MKAR	Makanchi Array	89.72	318	P			P	23 32 49.6	-1.2
	comp=Z,0.2nm,0.4s,baz=90,slow=6.3,SNR=6.1								
	comp=Z,0.2nm,0.4s								
MKAR	Makanchi Array	89.72	318	P			P	23 32 49.5	-1.3
KURBB	Kurchatov Arra	93.04	321	P			P	23 33 04.7	-1.3
	comp=Z,1.1nm,0.2s,baz=100,slow=5.1,SNR=1.1								
	comp=Z,1.1nm,0.2s								
YKA	Yellowknife Ar	96.19	28	P			P	23 33 20.1	-0.1
	comp=Z,0.2nm,0.3s,baz=268,slow=4.8,SNR=5.9								
	comp=Z,0.2nm,0.3s								

NNC 14 23:23:04.7±13.0, 37°.83N × 71°.45E, h0km, mb3.5, mpv3.2, 1C-3D, Error ellipse: s-maj=105.6km s-min=76.0km az=167.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.31	353	P			Pn	23 24 27.6	+2.3
	0.8nm,0.3s,baz=179,slow=14,SNR=36								
KK31				⇓S			Sn	23 25 29.8	+2.5
	7.8nm,0.4s,baz=176,slow=23,SNR=23								
AAK	Ala-Archa	5.33	25	⇓P			Pn	23 24 25.4	-0.4
	2.0nm,0.6s								
AAK				⇑S			Sn	23 25 26.7	-1.3
	1.3nm,0.5s								
AB31	Akbulak array	14.12	328	⇓P			Pn	23 26 23.1	-2.7
	0.3nm,0.5s,baz=162,slow=9.8,SNR=11								

IDC 14 23:28:58.9±5.3, 21°.58N × 93°.72E, h86km±47km, mb2.9/3, mbtmp3.3/4, ML4.0/1, Error ellipse: s-maj=64.3km s-min=25.6km az=70.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.81	121	P			Pn	23 30 22.7	0.0
	1.0nm,0.3s,baz=297,slow=14,SNR=14								
	2.0nm,0.4s								
MKAR	Makanchi Array	26.81	342	P			P	23 34 31.4	+0.4
	0.1nm,0.4s,baz=151,slow=9.1,SNR=1.6								
	0.1nm,0.4s								
SONM	Songino Array	28.11	18	P			P	23 34 42.2	-0.6
	0.2nm,0.4s,baz=187,slow=10,SNR=2.3								
	0.2nm,0.4s								
WRA	Warramunga Arr	57.27	133	P			P	23 38 38.0	0.0
	0.2nm,0.3s,baz=318,slow=7.8,SNR=4.7								
	0.2nm,0.3s								

*IDC **14** 23:31:09.9±1.9, 16°.25S × 178°.49W, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=105.0km s-min=23.3km az=152.0*

ISC 14 23:31:15.1±1.8, 16°.3S±0°.6 × 178°.5W±0°.3, h35km, n7, σ0s58/7, mb3.9/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.84	258	P			P	23 39 26.6	+0.3
	0.4nm,0.2s,baz=95,slow=7.7,SNR=26								
	0.4nm,0.2s								
ASAR	Alice Springs	45.15	253	P			P	23 39 28.7	0.0
	6.9nm,0.6s,baz=86,slow=8.5,SNR=66								
	6.9nm,0.6s								
NVAR	Mina Array Bea	78.34	44	P			P	23 43 13.1	+0.8
	1.0nm,0.8s,baz=243,slow=8.2,SNR=3.5								
	1.0nm,0.8s								
ILAR	Eielson Array	84.34	13	P			P	23 43 43.4	+0.2
	0.8nm,0.9s,baz=226,slow=7.1,SNR=4.4								
	0.8nm,0.9s								
TXAR	Lajitas Array	85.22	58	P			P	23 43 48.2	-0.4
	0.6nm,0.8s,baz=207,slow=8.0,SNR=5.9								
	0.6nm,0.8s								
SONM	Songino Array	92.26	319	P			P	23 44 21.5	-0.2
	0.1nm,0.4s,baz=103,slow=7.1,SNR=1.7								
	0.1nm,0.4s								
YKA	Yellowknife Ar	92.91	25	P			P	23 44 23.6	-0.6
	0.1nm,0.4s,baz=260,slow=4.7,SNR=4.1								
	0.1nm,0.4s								

*IDC **14** 23:41:43.9±1.0, 0°.23N × 126°.04E, h0km, mb3.6/7, mbtmp3.6/7, MS3.9/1, Error ellipse: s-maj=66.0km s-min=19.8km az=69.0*
*DJA **14** 23:41:47.9±0.3, 1°.N±4°.×12°.6E±°, h10km, M3.3/11, MLv3.3/11*

ISC 14 23:41:49.9±0.9, 0°.59N±0°.10 × 126°.7E±0°.1, h35km, n13, σ2s38/12, mb3.5/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	Ternate	0.71	75	P			Pn	23 42 05.6	+2.1
MNI	Manado	2.02	295	P			Pn	23 42 19.0	-2.5
GTOI	Gorontalo	3.67	271	P			Pn	23 42 42.9	-1.2
KRAI	Karang Ratu	4.25	156	P			Pn	23 42 55.3	+3.2
TARAI	Tarakan	9.50	287	P			Pn	23 44 06.9	+2.6
WRA	Warramunga Arr	21.74	160	P			P	23 46 35.8	-2.6
	0.3nm,0.4s,baz=334,slow=10.0,SNR=8.5								
	0.3nm,0.4s								
ASAR	Alice Springs	25.11	164	P			P	23 47 09.2	-2.4
	0.6nm,0.5s,baz=344,slow=10,SNR=9.0								
	0.6nm,0.5s								
DZM	Mont Dzumac	44.84	123	LR			LR	00 07 01.1	
	comp=Z,168nm,21.5s,baz=203,slow=34								
SONM	Songino Array	50.25	342	P			P	23 50 42.9	+0.1
	0.2nm,0.4s,baz=136,slow=6.3,SNR=2.0								
	0.2nm,0.4s								
PETK	Petropavlovsk-	58.35	21	P			P	23 51 44.0	+2.5
	4.5nm,1.0s,baz=219,slow=6.6,SNR=1.3								
	4.5nm,1.0s								
MKAR	Makanchi Array	60.11	326	P			P	23 51 52.5	-1.3
	0.4nm,0.6s,baz=123,slow=7.5,SNR=8.9								
	0.4nm,0.6s								
KURBB	Kurchatov Arra	64.35	328	P			P	23 52 21.7	-0.4
	0.5nm,0.2s,baz=126,slow=6.2,SNR=2.0								
	0.5nm,0.2s								
BVAR	Borovoye Array	69.92	328	P			P	23 52 57.2	-0.2
	0.2nm,0.4s,baz=134,slow=4.2,SNR=2.4								
	0.2nm,0.4s								

*SJA **14** 23:48:00.6±0.7, 21°.44S × 66°.98W, h235km±7km, ML3.7, MW3.6*
*SCB **14** 23:48:01.8±1.3, 21°.48S × 66°.99W, h212km±10km, ML3.8/3, Error ellipse: s-maj=5.2km s-min=3.7km az=0.0*

ISC 14 23:48:00.2±1.6, 21°.50S±0°.04 × 66°.97W±0°.04, h231km±13km, n49, σ1s44/71, 3C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOCB	Mochara	1.26	79	Pg			Pn	23 48 35.8	+0.3
MOCB				Sg			S	23 49 01.3	-1.7
MOCB				IAML				23 49 02.5	
	410nm,0.5s								
YJA	Yavi	1.51	117	eP			Pn	23 48 38.0	+0.7
YJA	Yavi	1.51	117	eP			Pn	23 48 38.9	+1.5
YJA				eS			S	23 49 05.2	-1.0
YJA	Yavi	1.51	117	Pg			Pn	23 48 37.3	0.0
PB09	IPOC Station P	2.14	262	eP			Pn	23 48 44.2	+1.4
PB09				IAML				23 49 19.2	
	comp=E,76nm,0.1s								
PB09	IPOC Station P	2.14	262	eP			Pn	23 48 44.1	+1.4
PB09				eS			S	23 49 17.5	+1.6
PB09				IAML				23 49 19.7	
	comp=Z,86nm,0.1s								
PB08	IPOC Station P	2.45	303	eP			Pn	23 48 47.3	+1.2
PB08	IPOC Station P	2.45	303	eP			Pn	23 48 46.7	+0.6
PB03	IPOC Station P	2.65	258	eP			Pn	23 48 49.0	+1.0
PB03				eS			S	23 49 24.5	-0.8
PB03				IAML				23 49 28.8	
	comp=Z,194nm,0.1s								
PB06	IPOC Station P	2.70	243	eP			Pn	23 48 50.0	+1.5
PB06				IAML				23 49 27.7	
	comp=N,207nm,0.2s								
PB06	IPOC Station P	2.70	243	eP			Pn	23 48 49.8	+1.3
PB06				eS			S	23 49 26.3	0.0
PB06				IAML				23 49 28.1	
	comp=Z,157nm,0.2s								
PB06	IPOC Station P	2.70	243	Pg			Pn	23 48 50.0	+1.5
PB07	IPOC Station P	2.73	265	eP			Pn	23 48 49.7	+0.9
PB07				eS			S	23 49 26.2	-0.6
PB07				IAML				23 49 27.1	
	comp=Z,132nm,0.1s								
PB02	IPOC Station P	2.74	273	eP			Pn	23 48 49.7	+0.9
PB02				eS			S	23 49 25.1	-1.7
PB02				IAML				23 49 25.8	
	comp=N,505nm,0.4s								
PB02	IPOC Station P	2.74	273	eP			Pn	23 48 49.7	+0.9
PB02				eS			S	23 49 25.9	-1.0
PB02				IAML				23 49 27.9	
	comp=Z,405nm,0.2s								
PB02	IPOC Station P	2.74	273	Pg			Pn	23 48 49.6	+0.8
PB02				Sg			S	23 49 25.1	-1.7
PB02				IAML				23 49 26.8	
	comp=Z,363nm,0.4s								
GO01	Chusmiza	2.77	311	eP			Pn	23 48 50.6	+1.0
GO01	Chusmiza	2.77	311	eP			Pn	23 48 51.2	+1.6
GO01				eS			S	23 49 30.1	+1.9
GO01				IAML				23 49 33.9	
	comp=Z,58nm,0.2s								
GO01	Chusmiza	2.77	311	Pg			Pn	23 48 50.3	+0.7
SALTA		2.77	168	eP			Pn	23 48 46.8	-2.9
SALTA				eP				23 48 52.8	
HMBC	Humberstone	2.99	293	eP			Pn	23 48 51.7	+0.1
HMBC	Humberstone	2.99	293	eP			Pn	23 48 51.8	+0.1
HMBC				eS			S	23 49 29.6	-2.4
HMBC				IAML				23 49 32.1	
	comp=Z,237nm,0.7s								
SOEO	Opoqueri	3.04	343	Pg			Pn	23 48 53.9	+1.2
PB11	IPOC Station P	3.06	304	eP			Pn	23 48 52.7	+0.3
PB11	IPOC Station P	3.06	304	eP			Pn	23 48 52.7	+0.3
PB11				eS			S	23 49 31.8	-1.6
PB11				IAML				23 49 33.8	
	comp=Z,233nm,0.2s								
PB11	IPOC Station P	3.06	304	Pg			Pn	23 48 52.8	+0.3
PB11				Sg			S	23 49 31.0	-2.3
PB11				IAML				23 49 35.0	
	comp=Z,172nm,0.4s								
TA02	Huaiquique	3.20	292	eS			S	23 49 34.9	-1.1
TA02				IAML				23 49 37.5	
	comp=Z,214nm,0.3s								
PB05	IPOC Station P	3.29	245	eP			Pn	23 48 56.3	+1.3
PB05				eS			S	23 49 36.5	-1.6
PB05				IAML				23 49 39.9	
	comp=E,93nm,0.2s								
PB05	IPOC Station P	3.29	245	eP			Pn	23 48 56.2	+1.2
PB05				eS			S	23 49 37.0	-1.1
PB05				IAML				23 49 39.8	
	comp=Z,66nm,0.2s								
SLA	San Lorenzo	3.48	158	eP			Pn	23 48 59.4	+2.2
SOET	ToroToro	3.54	18	Pg			Pn	23 48 58.7	+0.5
AOEA	Aiguile	3.68	27	Pg			Pn	23 49 00.2	+0.4
PB10	IPOC Station P	3.88	238	eP			Pn	23 49 02.9	+1.1
PB10				eS			S	23 49 49.2	-1.1
PB10				IAML				23 49 49.7	
	comp=Z,71nm,0.2s								
PB16	IPOC Station P	3.95	322	eP			Pn	23 49 04.7	+1.4
PB16				eS			S	23 49 53.3	+0.4
PB16	IPOC Station P	3.95	322	eP			Pn	23 49 04.7	+1.4
PB16				eS			S	23 49 54.0	+1.1
PB16	IPOC Station P	3.95	322	Pg			Pn	23 49 04.7	+1.4
PB12	IPOC Station P	4.27	312	eP			Pn	23 49 05.7	-0.9
PB12				eS			S	23 49 54.8	-4.3
PB12	IPOC Station P	4.27	312	eP			Pn	23

	baz=180						
F30M			S		Sn	00 00 34.0	+0.7
	baz=180						
F30M	**Barrier River**	**1.13 359**	P		Pn	00 00 18.7	-0.1
F30M			S		Sn	00 00 33.7	+0.4
F31M	**Tsiigehtchic**	**1.25 39**	P		Pn	00 00 20.8	+0.4
	baz=220,SNR=197						
F31M			S		Sb	00 00 37.7	+0.2
	baz=220						
F31M	**Tsiigehtchic**	**1.25 39**	P		Pn	00 00 20.8	+0.4
F31M			S		Sn	00 00 36.9	+0.8
I30M	**Mount Dempster**	**1.29 192**	P		Pn	00 00 20.9	-0.3
	baz=11,SNR=1000						
I30M			S		Sn	00 00 37.2	-0.3
	baz=11						
I30M	**Mount Dempster**	**1.29 192**	P		Pn	00 00 21.1	-0.1
I30M			S		Sn	00 00 37.5	-0.1
I29M	**Ogilvie Camp,**	**1.54 224**	P		Pn	00 00 24.5	+0.1
	baz=42,SNR=148						
I29M			S		Sn	00 00 44.1	+0.7
	baz=42						
I29M	**Ogilvie Camp,**	**1.54 224**	Pn		Pn	00 00 24.0	-0.4
I29M			Sg		Sn	00 00 44.5	+1.1
J30M	**Hart River**	**1.93 187**	P		Pn	00 00 30.1	+0.1
	baz=6.5						
J30M			S		Sn	00 00 53.7	+0.4
	baz=6.5						
J30M	**Hart River**	**1.93 187**	Pn		Pn	00 00 30.1	+0.1
J30M			Pg		Pb	00 00 35.7	+2.1
F28M	**Old Crow**	**1.97 307**	P		Pn	00 00 30.0	-0.4
	baz=124,SNR=343						
F28M			Sb		Sb	00 00 59.1	+0.8
	baz=124						
F28M	**Old Crow**	**1.97 307**	Pn		Pn	00 00 30.1	-0.4
F28M			Sn		Sn	00 00 53.7	-0.4
I28M	**Miner Creek**	**2.00 241**	P		Pn	00 00 29.9	-1.0
	baz=57						
I28M			Sb		Sb	00 00 59.3	0.0
	baz=57						
I28M	**Miner Creek**	**2.00 241**	Pn		Pn	00 00 29.9	-1.0
I28M			Sg		Sb	00 00 59.2	-0.1
INK	**Inuvik**	**2.02 24**	P		Pn	00 00 31.1	0.0
	baz=206,SNR=128						
INK			Sb		Sb	00 01 02.3	+2.5
	baz=206						
INK	**Inuvik**	**2.02 24**	Pn		Pn	00 00 31.1	0.0
INK			Pg		Pb	00 00 36.7	+1.6
INK			Sn		Sn	00 00 54.2	-1.0
E29M	**Blow River**	**2.08 338**	P		Pn	00 00 32.6	+0.7
	baz=156,SNR=147						
E29M	**Blow River**	**2.08 338**	Pn		Pn	00 00 32.8	+0.9
J29N	**Klondike Camp**	**2.28 208**	P		Pn	00 00 34.8	+0.1
	baz=26,SNR=11						
J29N	**Klondike Camp**	**2.28 208**	Pn		Pn	00 00 35.4	+0.6
H27K	**Steamboat Moun**	**2.34 266**	P		Pn	00 00 34.9	-0.6
	baz=82,SNR=256						
H27K	**Steamboat Moun**	**2.34 266**	Pn		Pn	00 00 35.0	-0.4
I27K	**Kandik River**	**2.55 252**	P		Pn	00 00 37.7	-0.7
	baz=67						
E28M	**Babbage River**	**2.58 327**	P		Pn	00 00 38.8	+0.1
	baz=144						
E28M	**Babbage River**	**2.58 327**	Pn		Pn	00 00 38.7	+0.1
E28M			Sn		Sn	00 01 07.6	-1.4
K29M	**Barlow Dome**	**2.75 196**	P		Pn	00 00 41.2	-0.1
	baz=15,SNR=346						
K29M	**Barlow Dome**	**2.75 196**	Pn		Pn	00 00 41.4	+0.1
DAWY	**Dawson**	**2.87 214**	P		Pn	00 00 42.6	-0.1
	baz=30,SNR=218						
DAWY	**Dawson**	**2.87 214**	Pn		Pn	00 00 42.4	-0.4
DAWY			Pg		Pb	00 00 43.7	-5.9
G26K	**Porcupine Rive**	**3.22 282**	P		Pn	00 00 46.8	-0.7
	baz=95						
G26K	**Porcupine Rive**	**3.22 282**	Pn		Pn	00 00 46.5	-1.0
I26K	**Coal Creek Min**	**3.26 252**	P		Pn	00 00 47.7	-0.3
	baz=66						
D27M	**Malcolm River**	**3.40 327**	P		Pn	00 00 50.5	+0.4
	baz=142						
D27M	**Malcolm River**	**3.40 327**	Pn		Pn	00 00 50.5	+0.4
D27M			Sn		Sn	00 01 28.6	-0.8
F26K	**Sheenjek River**	**3.50 294**	P		Pn	00 00 50.9	-0.5
	baz=107						
F26K	**Sheenjek River**	**3.50 294**	Pn		Pn	00 00 50.8	-0.5
L29M	**L29M**	**3.54 198**	P		Pn	00 00 51.8	-0.2
	baz=16						
L29M	**L29M**	**3.54 198**	Pn		Pn	00 00 51.8	-0.2
J26L	**Joseph Creek**	**3.81 242**	P		Pn	00 00 54.6	-1.2
	baz=55						
M30M	**Minto, Yukon**	**3.95 187**	P		Pn	00 00 57.7	+0.1
	baz=5.9,SNR=492						
M30M	**Minto, Yukon**	**3.95 187**	Pn		Pn	00 00 57.6	+0.1
F25K	**Christian Rive**	**4.03 291**	P		Pn	00 00 58.1	-0.5
	baz=102						
F25K	**Christian Rive**	**4.03 291**	Pn		Pn	00 00 58.2	-0.5
PRP	**Porcupine Dome**	**4.11 261**	P		Pn	00 00 58.8	-1.0
	baz=72						
E25K	**Arctic Village**	**4.14 298**	P		Pn	00 01 00.1	-0.1
	baz=109,SNR=7.8						
E25K	**Arctic Village**	**4.14 298**	Pn		Pn	00 00 59.9	-0.3
M29M	**Somme Creek**	**4.22 197**	P		Pn	00 01 01.4	0.0
	baz=15,SNR=222						
M29M	**Somme Creek**	**4.22 197**	Pn		Pn	00 01 01.5	0.0
M29M			Sn		Sn	00 01 46.9	-2.9
SCRK	**Sand Creek**	**4.28 238**	P		Pn	00 01 01.1	-1.0
	baz=50,SNR=22						
L27K	**Beaver Creek,**	**4.31 220**	P		Pn	00 01 01.8	-0.8
	baz=34						
L27K	**Beaver Creek,**	**4.31 220**	Pn		Pn	00 01 01.7	-0.8
MMPY	**Sheldon Lake,**	**4.34 151**	P		Pn	00 01 03.4	+0.4
	baz=335,SNR=36						
MMPY	**Sheldon Lake,**	**4.34 151**	Pn		Pn	00 01 02.7	-0.2
MMPY			Sn		Sn	00 01 50.9	-1.6
C27K	**Jago River**	**4.34 320**	P		Pn	00 01 04.0	+1.2
	baz=133						
C27K	**Jago River**	**4.34 320**	Pn		Pn	00 01 04.2	+1.3
C27K			Sn		Sn	00 01 52.1	-0.3
M31M	**Drury Creek, Y**	**4.34 171**	P		Pn	00 01 03.0	+0.1
	baz=352,SNR=14						
M31M	**Drury Creek, Y**	**4.34 171**	Pn		Pn	00 01 02.7	-0.3
J25K	**Salcha River,**	**4.41 249**	P		Pn	00 01 03.1	-0.8
	baz=61						
DOT	**Dot Lake**	**4.52 235**	Pn		Pn	00 01 04.4	-1.1
BVCY	**Beaver Creek**	**4.64 211**	P		Pn	00 01 06.8	-0.4
	baz=26,SNR=16						
BVCY	**Beaver Creek**	**4.64 211**	Pn		Pn	00 01 06.6	-0.5
G24K	**Hadweenzic Riv**	**4.68 278**	P		Pn	00 01 06.9	-0.7
	baz=88						
C26K	**Camden Bay**	**4.85 319**	P		Pn	00 01 10.0	+0.2
	baz=131,SNR=23						
C26K	**Camden Bay**	**4.85 319**	Pn		Pn	00 01 11.1	+1.2
C26K			Sn		Sn	00 02 05.6	+0.8
D25K	**Kavik River**	**4.91 310**	P		Pn	00 01 11.3	+0.5
	baz=121						
D25K	**Kavik River**	**4.91 310**	Pn		Pn	00 01 11.4	+0.6
D25K			Sn		Sn	00 02 06.4	-0.2
M27K	**Edge Creek, AK**	**4.92 215**	P		Pn	00 01 10.3	-0.7
	baz=30,SNR=22						
H24K	**Noodor Dome**	**4.96 268**	P		Pn	00 01 10.9	-0.5
	baz=77						
K24K	**Donnelly Dome**	**5.01 242**	P		Pn	00 01 11.8	-0.3
	baz=53						
N31M	**Braeburn, Yuko**	**5.02 180**	P		Pn	00 01 12.5	+0.2
	baz=360,SNR=11						
N31M	**Braeburn, Yuko**	**5.02 180**	Pn		Pn	00 01 12.7	+0.4
HDA	**Harding Lake**	**5.11 251**	P		Pn	00 01 13.0	-0.5
	baz=61						
YUK3	**Moose Creek**	**5.16 206**	P		Pn	00 01 14.0	-0.2
	baz=21,SNR=66						
YUK3	**Moose Creek**	**5.16 206**	Pn		Pn	00 01 14.1	-0.2
M26K	**Nabesna, AK**	**5.16 221**	P		Pn	00 01 13.5	-0.7
	baz=34						
E24K	**Your Creek**	**5.18 294**	P		Pn	00 01 14.4	-0.1
	baz=102						
YUK2	**White River**	**5.21 208**	Pn		Pn	00 01 14.5	-0.5
C36M	**Paulatuk**	**5.26 52**	Pn		Pn	00 01 14.2	-1.3
YUK4	**Talbot Arm**	**5.32 195**	P		Pn	00 01 15.5	-1.0
	baz=12,SNR=209						
YUK4	**Talbot Arm**	**5.32 195**	Pn		Pn	00 01 15.5	-1.0
BRWY	**Burwash Landin**	**5.33 197**	Pn		Pn	00 01 16.8	+0.2
PAX	**Paxson**	**5.45 234**	P		Pn	00 01 18.1	-0.1
	baz=46						
PAX	**Paxson**	**5.45 234**	Pn		Pn	00 01 18.0	-0.3
PAX			Sn		Sn	00 02 17.0	-3.0
YUK5	**Granite Creek**	**5.46 191**	Pn		Pn	00 01 18.5	+0.1
N32M	**Quiet Lake**	**5.49 166**	P		Pn	00 01 18.4	-0.2
	baz=348						
N32M	**Quiet Lake**	**5.49 166**	Pn		Pn	00 01 18.3	-0.3
YUK8	**Steele Glacier**	**5.51 201**	P		Pn	00 01 19.4	+0.1
	baz=17,SNR=87						
YUK8	**Steele Glacier**	**5.51 201**	Pn		Pn	00 01 19.2	0.0
E23K	**Chandalar**	**5.60 293**	P		Pn	00 01 20.5	+0.3
	baz=100						
D24K	**Happy Valley**	**5.62 304**	P		Pn	00 01 21.0	+0.6
	baz=112						
YUK6	**Outpost Mounta**	**5.68 193**	P		Pn	00 01 21.8	+0.2
	baz=10,SNR=341						
YUK6	**Outpost Mounta**	**5.68 193**	Pn		Pn	00 01 21.9	+0.3
G23K	**Bananza Creek**	**5.69 279**	P		Pn	00 01 20.9	-0.5
	baz=86						
TOLK	**Toolik Lake Re**	**5.71 299**	P		Pn	00 01 22.4	+0.7
	baz=106						
HYT	**Haines Junctio**	**5.74 189**	P		Pn	00 01 22.0	-0.2
	baz=6.9,SNR=40						
HYT	**Haines Junctio**	**5.74 189**	Pn		Pn	00 01 22.1	0.0
O30N	**Mendenhall**	**5.74 182**	P		Pn	00 01 22.1	0.0
	baz=1.2,SNR=34						
O30N	**Mendenhall**	**5.74 182**	Pn		Pn	00 01 22.2	0.0
COLD	**Coldfoot**	**5.74 284**	P		Pn	00 01 22.2	+0.1
	baz=91						
COLD	**Coldfoot**	**5.74 284**	Pn		Pn	00 01 21.9	-0.3
I23K	**Minto, Yukon-K**	**5.75 263**	P		Pn	00 01 22.2	0.0
	baz=70						
HARP	**HAARP**	**5.77 229**	P		Pn	00 01 22.8	+0.2
	baz=41						
C24K	**Franklin Bluff**	**5.82 310**	P		Pn	00 01 23.5	+0.3
	baz=118						
WHY	**Whitehorse**	**5.86 176**	P		Pn	00 01 23.9	0.0
	baz=356,SNR=19						
WHY	**Whitehorse**	**5.86 176**	Pn		Pn	00 01 23.7	-0.2
TGTN	**Hyland Airport**	**5.96 143**	P		Pn	00 01 25.4	+0.2
	baz=330						
DHY	**Denali Highway**	**6.03 241**	P		Pn	00 01 25.8	-0.4
	baz=50						
MCARA	**McCarthy VSAT**	**6.04 215**	P		Pn	00 01 26.2	+0.1
	baz=29						
MCARA	**McCarthy VSAT**	**6.04 215**	Pn		Pn	00 01 26.1	-0.1
O28M	**Mount Upton**	**6.07 201**	P		Pn	00 01 26.9	0.0
	baz=17						
O28M	**Mount Upton**	**6.07 201**	Pn		Pn	00 01 27.8	+0.9
CTGM	**Chitina Glacie**	**6.07 207**	Pn		Pn	00 01 26.8	+0.1
CTG	**Chitna Glacier**	**6.07 207**	P		Pn	00 01 27.0	+0.2
	baz=22,SNR=20						
YUK7	**Dusty Glacier**	**6.07 191**	Pn		Pn	00 01 27.8	+0.9
LOGN	**Logan Glacier**	**6.14 205**	Pn		Pn	00 01 28.3	+0.5
D23K	**Nanushuk River**	**6.19 300**	P		Pn	00 01 29.0	+0.8
	baz=107						
MCK	**McKinley**	**6.21 250**	P		Pn	00 01 28.3	-0.3
	baz=58						
KIAG	**Kiagna River**	**6.30 211**	Pn		Pn	00 01 30.4	+0.4
M24K	**Tolsona, Glenn**	**6.31 231**	P		Pn	00 01 30.0	+0.1
	baz=41						
O29M	**Mount Kennedy**	**6.33 193**	P		Pn	00 01 30.7	+0.3
	baz=10,SNR=99						
O29M	**Mount Kennedy**	**6.33 193**	Pn		Pn	00 01 31.5	+1.1
H22K	**Ishtalitna Cre**	**6.35 272**	P		Pn	00 01 29.8	-0.7
	baz=78						
GRNC	**Grite Creek**	**6.36 208**	Pn		Pn	00 01 31.4	+0.5
P30M	**Million Dollar**	**6.41 185**	P		Pn	00 01 31.3	0.0
	baz=4.2						
P30M	**Million Dollar**	**6.41 185**	Pn		Pn	00 01 31.5	+0.1
E22K	**Anaktuvuk Pass**	**6.42 292**	P		Pn	00 01 31.6	+0.1
	baz=98						
P33M	**Teslin, Yukon**	**6.43 167**	P		Pn	00 01 31.2	-0.5
	baz=349,SNR=9.1						
P33M	**Teslin, Yukon**	**6.43 167**	Pn		Pn	00 01 30.8	-0.9
WAT6	**Susitna Watana**	**6.48 238**	P		Pn	00 01 32.2	-0.2
	baz=48						
A36M	**Sachs Harbour**	**6.66 29**	P		Pn	00 01 34.8	+0.1
	baz=219						
A36M	**Sachs Harbour**	**6.66 29**	Pn		Pn	00 01 34.0	-0.7
A36M			Sn		Sn	00 02 43.9	-5.5
KLU	**Klutina**	**6.71 226**	P		Pn	00 01 34.0	-1.5
	baz=37						
PINM	**Pinnacle**	**6.72 200**	P		Pn	00 01 35.4	-0.3
	baz=16						
BMRM	**Bremner River**	**6.78 219**	P		Pn	00 01 36.2	-0.3
	baz=32						
D22K	**Kayiyak River**	**6.87 298**	P		Pn	00 01 38.0	+0.4
	baz=103						
TRF	**Thorofare Moun**	**6.87 250**	P		Pn	00 01 37.6	-0.2
	baz=57						
SCM	**Sheep Creek Mo**	**6.87 233**	P		Pn	00 01 37.8	+0.1
	baz=42						
H21K	**Melozitna Rive**	**6.98 271**	P		Pn	00 01 38.7	-0.4
	baz=76						
P32M	**Atlin**	**6.98 171**	P		Pn	00 01 39.1	-0.1
	baz=353,SNR=7.5						
F21K	**Alatna River**	**7.02 284**	P		Pn	00 01 39.4	-0.3
	baz=88						
SKAG	**Skagway**	**7.05 178**	P		Pn	00 01 40.3	+0.2
	baz=358						
G21K	**Allakaket**	**7.09 278**	P		Pn	00 01 40.0	-0.6
	baz=82						
B22K	**Teshekpuk Lake**	**7.56 309**	P		Pn	00 01 47.4	+0.4
	baz=112						
C21K	**Knifeblade Rid**	**7.67 299**	P		Pn	00 01 48.0	-0.5
	baz=102						
B21K	**Ikpikpuk River**	**7.71 303**	P		Pn	00 01 49.3	+0.2
	baz=105						
F20K	**Avaraart Lake**	**7.91 283**	P		Pn	00 01 51.2	-0.5
	baz=85						
J20K	**Nowinta River**	**8.02 262**	P		Pn	00 01 52.9	-0.5
	baz=65						
E20K	**Nigu River**	**8.06 292**	P		Pn	00 01 54.8	+0.9
	baz=93						
P23K	**Montague Islan**	**8.35 224**	P		Pn	00 01 58.0	+0.1
	baz=34						
E19K	**Redstone River**	**8.46 286**	P		Pn	00 01 59.7	+0.3
	baz=87						
DLBC	**Dease Lake**	**8.50 159**	P		Pn	00 02 00.2	+0.2
	baz=344						
D19K	**Kuna River**	**8.79 293**	P		Pn	00 02 03.9	0.0
	baz=93						
C19K	**Lookout Ridge**	**9.36 297**	P		Pn	00 02 13.1	+1.3
	baz=95						
C18K	**Utukok River**	**9.92 294**	P		Pn	00 02 20.0	+0.5
	baz=91						
C17K	**DeLong Mountai**	**10.65 293**	P		Pn	00 02 28.9	-0.5
	baz=88						

IDC 15 00:03:13.1±2.9, 9.67N×126.76E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=182.0km s-min=31.4km az=77.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**27.61**	**182**	P	P	00 09 02.4	0.0
	1.4nm,0.8s,baz=0.0,slow=10,SNR=1.4						
	1.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**39.63**	**73**	T	T	00 53 40.0	
	baz=262,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**39.65**	**73**	T	T	00 53 41.0	
	baz=262,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**39.65**	**73**	T	T	00 53 41.2	
	baz=262,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy**	**39.99**	**71**	T	T	00 54 18.0	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**40.00**	**71**	T	T	00 54 18.0	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**40.01**	**71**	T	T	00 54 26.4	
	baz=265						
MKAR	**Makanchi Array**	**52.80**	**323**	P	P	00 12 30.4	+0.1
	0.3nm,0.5s,baz=116,slow=8.0,SNR=5.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**56.84**	**325**	P	P	00 12 59.1	-0.4
	0.3nm,0.7s,baz=121,slow=7.0,SNR=2.0						
	0.3nm,0.7s						
ARCES	**ARCESS Array B**	**84.92**	**340**	P	P	00 15 50.1	+0.3
	2.4nm,0.8s,baz=63,slow=5.2,SNR=3.9						
	2.4nm,0.8s						
FINES	**FINESS Array B**	**86.65**	**332**	P	P	00 15 58.2	-0.3
	2.8nm,1.0s,baz=79,slow=3.0,SNR=5.6						
	2.8nm,1.0s						

IDC 15 00:11:10.7±1.7, 5.51N×126.45E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=184.6km s-min=20.5km az=67.0

ISC 15 00:11:20.8±2.9, 5.6N±0.9×12.7E±, h84km, n6, σ0.93/7, mb3.7/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.45**	**164**	P	**P**	**00 16 48.7**	**-1.4**
	0.4nm,0.5s,baz=342,slow=10,SNR=5.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**29.91**	**167**	P	**P**	**00 17 21.5**	**+0.6**
	0.2nm,0.8s,baz=345,slow=8.4,SNR=4.6						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**56.09**	**324**	P	**P**	**00 20 50.6**	**-0.7**
	0.4nm,0.5s,baz=116,slow=7.5,SNR=7.6						
MKAR				PcP	**PcP**	**00 21 49.1**	**+0.6**
	0.2nm,0.6s,baz=135,slow=3.4,SNR=4.6						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**60.23**	**327**	P	**P**	**00 21 19.7**	**-0.4**
	1.0nm,0.6s,baz=128,slow=6.5,SNR=13						
	1.0nm,0.6s						
BVAR	**Borovoye Array**	**65.82**	**326**	P	**P**	**00 21 57.4**	**+0.2**
	0.5nm,0.5s,baz=148,slow=8.7,SNR=5.2						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**90.23**	**332**	P	**P**	**00 24 12.1**	**+0.2**
	0.9nm,0.7s,baz=45,slow=5.7,SNR=3.8						
	0.9nm,0.7s						

IDC 15 00:34:32.9±0.9, 46.90N×155.41E, h0km, mb3.7/14, mbtmp3.7/17, ML3.6/3, Error ellipse: s-maj=23.6km s-min=16.1km az=147.0

ISC 15 00:34:35.5±0.9, 46.9N±0.1×155.4E±0.1, h18km, n21, σ1.9/18, mb3.6/14, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.38**	**13**	Pn	**Pn**	**00 36 07.2**	**-1.4**
	1.1nm,0.3s,baz=194,slow=11,SNR=16						
	5.1nm,0.5s						
ASAJ	**Asahikawa**	**9.38**	**257**	Pn	**Pn**	**00 36 50.3**	**+0.6**
	0.9nm,0.3s,baz=68,slow=5.5,SNR=5.5						
	15nm,0.9s						
MJAR	**Matsushiro Arr**	**16.43**	**237**	Pn	**Pn**	**00 38 22.2**	**-2.9**
	baz=29,slow=13,SNR=7.9						
USRK	**Ussuriysk Ar.**	**16.57**	**269**	Pn	**Pn**	**00 38 25.2**	**-1.6**
	0.5nm,0.3s,baz=54,slow=14,SNR=5.8						
	6.2nm,0.7s						
KSRS	**Korea Array**	**22.32**	**255**	P	**P**	**00 39 33.9**	**+1.9**
	2.9nm,0.7s,baz=57,slow=10.0,SNR=7.0						
	2.9nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**29.83**	**158**	T	T	01 12 02.1	
	baz=345,slow=76,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**29.84**	**158**	T	T	01 12 02.3	
	baz=345,slow=76,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**29.84**	**158**	T	T	01 12 01.4	
	baz=345,slow=76,SNR=6.8						
SONM	**Songino Array**	**32.73**	**290**	P	**P**	**00 41 06.5**	**-0.6**
	0.3nm,0.7s,baz=61,slow=5.8,SNR=2.8						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**35.46**	**39**	P	**P**	**00 41 30.3**	**-0.1**
	0.5nm,0.5s,baz=251,slow=8.4,SNR=7.6						
	0.5nm,0.5s						
INK	**Inuvik**	**40.69**	**33**	P	**P**	**00 42 14.6**	**+0.2**
	0.7nm,0.5s,baz=287,slow=5.3,SNR=4.5						
	0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**43.76**	**306**	P	**P**	**00 42 39.5**	**-0.1**
	0.3nm,0.3s,baz=72,slow=9.6,SNR=2.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**48.23**	**298**	P	**P**	**00 43 15.2**	**+0.3**
	0.2nm,0.6s,baz=53,slow=5.6,SNR=4.0						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**48.64**	**304**	P	**P**	**00 43 19.1**	**+1.2**
	1.2nm,0.8s,baz=69,slow=8.3,SNR=7.4						
	1.2nm,0.8s						
YKA	**Yellowknife Ar**	**49.87**	**37**	P	**P**	**00 43 27.2**	**0.0**
	0.1nm,0.4s,baz=249,slow=8.4,SNR=3.9						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**51.94**	**310**	P	**P**	**00 43 43.8**	**+0.9**
	0.6nm,0.4s,baz=53,slow=7.1,SNR=6.4						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**64.54**	**336**	P	**P**	**00 45 11.2**	**+0.4**
	1.0nm,0.5s,baz=34,slow=7.1,SNR=12						
	1.0nm,0.5s						
HFS	**Hagfors**	**68.83**	**341**	P	**P**	**00 45 39.5**	**+1.2**
	2.2nm,0.9s,baz=46,slow=6.2,SNR=1.8						
	2.2nm,0.9s						
WRA	**Warramunga Arr**	**69.19**	**201**	P	**P**	**00 45 40.8**	**-0.1**
	0.5nm,0.8s,baz=20,slow=5.0,SNR=2.9						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**72.87**	**201**	P	**P**	**00 46 03.5**	**+0.3**
	0.3nm,0.5s,baz=17,slow=6.1,SNR=5.7						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	**76.07**	**62**	P	**P**	**00 46 22.5**	**+0.4**
	0.2nm,0.5s,baz=287,slow=4.5,SNR=5.7						
	0.2nm,0.5s						

KRSC 15 00:51:58.0±0.5, 55.54N×162.03E, h68km±14km, Ml3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.80**	**33**	eP	Pn	00 52 15.4	+1.5
KBTR				eS	Sn	00 52 28.3	+2.6
KBG	**Krutoberegovo**	**0.81**	**28**	eP	Pn	00 52 15.0	+1.0
KBG				eS	Sn	00 52 27.7	+1.9
ZLN	**Zelenaya**	**0.84**	**305**	eP	Pn	00 52 15.1	+0.6
ZLN				eS	Sn	00 52 27.9	+1.1
BZGR	**Bezymyannyi-Gr**	**0.86**	**299**	eP	Pn	00 52 15.4	+0.7
BZGR				eS	Sn	00 52 28.6	+1.6
CIRR	**Tsirk**	**0.93**	**309**	eS	Sn	00 52 30.4	+1.8
LGNR	**Loginova**	**0.93**	**306**	eP	Pn	00 52 17.1	+1.3
LGNR				eS	Sn	00 52 30.6	+1.6
BZWR	**Bezymyannyi-We**	**0.97**	**297**	eP	Pn	00 52 17.0	+0.9
BZWR				eS	Sn	00 52 31.1	+1.5
TUMD	**Tumrok D**	**0.99**	**251**	eP	Pn	00 52 17.0	+0.8
TUMD				eS	Sn	00 52 30.6	+0.7
MKZ	**Mys Kozlova**	**1.00**	**190**	eP	Pn	00 52 17.5	+1.2
MKZ				eS	Sn	00 52 31.5	+1.5
KMNR	**Kamenistaya**	**1.04**	**283**	eP	Pn	00 52 18.4	+1.4
KMNR				eS	Sn	00 52 32.7	+1.6
KIRR	**Kirishev**	**1.04**	**294**	eP	Pn	00 52 18.3	+1.2
KIR

	0.3nm,0.3s,baz=15,slow=12,SNR=12							
	1.2nm,0.5s							
FITZ	**Fitzroy Crossi**	**21.69**	**226**	P		**P**	**01 10 55.7**	**+1.3**
	3.0nm,0.9s,baz=67,slow=7.7,SNR=2.2							
FITZ				S		**S**	**01 14 48.1**	**-6.6**
	2.7nm,1.0s,baz=34,slow=18,SNR=2.0							
	3.0nm,0.9s							
ASAR	**Alice Springs**	**21.76**	**200**	P		**P**	**01 10 56.4**	**+1.1**
	1.1nm,0.8s,baz=27,slow=11,SNR=11							
	1.1nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**32.63**	**48**	T		T	01 46 44.6	
	baz=232,slow=75,SNR=18							
H11S2	**WAKE ISLAND Hy**	**32.64**	**48**	T		T	01 46 45.0	
	baz=232,slow=75,SNR=15							
H11S1	**WAKE ISLAND Hy**	**32.65**	**48**	T		T	01 46 47.8	
	baz=232,slow=75,SNR=19							
H11N1	**WAKE ISLAND Hy**	**33.55**	**46**	T		T	01 47 52.8	
	baz=230,slow=76,SNR=142							
H11N2	**WAKE ISLAND Hy**	**33.57**	**46**	T		T	01 47 51.0	
	baz=230,slow=76,SNR=211							
H11N3	**WAKE ISLAND Hy**	**33.57**	**46**	T		T	01 47 53.2	
	baz=230,slow=76,SNR=97							
MKAR	**Makanchi Array**	**72.03**	**322**	P		**P**	**01 17 28.6**	**+1.0**
	0.2nm,0.7s,baz=96,slow=10,SNR=3.8							
	0.2nm,0.7s							
ILAR	**Eielson Array**	**84.98**	**24**	P		**P**	**01 18 37.3**	**-1.3**
	0.4nm,0.6s,baz=263,slow=4.6,SNR=9.3							
	0.4nm,0.6s							
LPAZ	**La Paz**	**144.68**	**124**	PKP		**PKPdf**	**01 25 42.2**	**+0.1**
	1.2nm,0.7s,baz=250,slow=1.5,SNR=5.2							

IDC ***15*** *01:35:29.2±5.1, 4.°83S×152.°27E, h148km±40km, mb3.6/9, mbtmp4.1/10, MS3.2/1, Error ellipse: s-maj=48.3km s-min=24.4km az=101.0*

NEIC ***15*** *01:35:31.1±1.2, 4.°78S±0.°09×152.°3E±0.°2, h163km±6km, mb4.4/14, Error ellipse: s-maj=25.1km s-min=11.2km az=75.0*

ISC 15 01:35:29.6±0.9, 4.°93S±0.°08×152.°3E±0.°1, h150km, n31, σ1ᵍ31/33, mb4.2/17, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**0.74**	**350**			**Pn**	**01 35 54.5**	**+2.0**
RABL				Sn		**Sn**	**01 36 11.4**	**+1.5**
MANU	**Manus Island**	**5.69**	**300**	Pn		**Pn**	**01 36 52.8**	**+0.5**
PMG	**Port Moresby**	**6.76**	**229**	P		**Pn**	**01 37 07.6**	**+1.1**
	28nm,0.5s,baz=349,slow=4.1,SNR=7.4							
PMG				S		**Sn**	**01 38 22.7**	**+0.2**
	93nm,0.4s,baz=316,slow=14,SNR=13							
PMG	**Port Moresby**	**6.76**	**229**			**Pn**	**01 37 08.4**	**+1.8**
COEN	**Coen**	**12.70**	**224**	Pn		**Pn**	**01 38 28.2**	**+3.2**
WB0	**Warramunga Arr**	**22.84**	**228**	P		**P**	**01 40 20.1**	**0.0**
WB0				IAmb		IAmb	01 40 22.0	
	comp=Z,13nm,1.0s							
WR0	**Warramunga Arr**	**22.84**	**228**	P		**P**	**01 40 20.4**	**+0.3**
WR0				IAmb		IAmb	01 40 22.2	
	comp=Z,26nm,1.4s							
WRA	**Warramunga Arr**	**22.98**	**228**	P		**P**	**01 40 21.5**	**+0.1**
	comp=Z,7.6nm,0.4s,baz=50,slow=10,SNR=142							
	comp=Z,7.6nm,0.4s							
WRA	**Warramunga Arr**	**22.98**	**228**	P		**P**	**01 40 20.4**	**-1.0**
INKA	**Innaminka**	**25.21**	**205**	P		**P**	**01 40 39.3**	**-2.2**
INKA				IAmb		IAmb	01 41 18.3	
	comp=Z,4.5nm,1.3s							
KNRA	**Kununurra**	**25.46**	**243**	P		**P**	**01 40 43.3**	**-0.7**
AS31	**Alice Springs**	**25.71**	**222**	P		**P**	**01 40 46.5**	**+0.3**
ASAR	**Alice Springs**	**25.72**	**222**	P		**P**	**01 40 46.8**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=52,slow=9.0,SNR=22							
ASAR				LR		LR	01 51 14.3	
	comp=Z,52nm,18.8s,baz=310,slow=37							
	comp=Z,1.1nm,0.4s							
ASAR	**Alice Springs**	**25.72**	**222**	P		**P**	**01 40 46.5**	**+0.3**
BBOO	**Buckleboo**	**31.61**	**207**	P		**P**	**01 41 39.3**	**+0.9**
BBOO				IAmb		IAmb	01 42 20.2	
	comp=Z,11nm,1.1s							
FORT	**Forrest**	**34.37**	**219**	P		**P**	**01 42 02.6**	**+0.2**
FORT				IAmb		IAmb	01 42 37.5	
	comp=Z,6.2nm,1.0s							
MBWA	**Marble Bar**	**35.47**	**240**	P		**P**	**01 42 11.0**	**-1.0**
MBWA				IAmb		IAmb	01 42 36.1	
	comp=Z,19nm,1.3s							
GIRL	**Giralia**	**40.76**	**241**	P		**P**	**01 42 56.3**	**+0.1**
MORW	**Morawa**	**41.87**	**231**	P		**P**	**01 43 04.7**	**-0.5**
MORW				IAmb		IAmb	01 43 29.5	
	comp=Z,26nm,1.5s							
CMAR	**Chiang Mai Arr**	**57.47**	**295**	P		**P**	**01 45 03.0**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=117,slow=5.0,SNR=13							
	comp=Z,1.7nm,0.4s							
LZDM	**Lanzhou Array**	**61.01**	**316**	P		**P**	**01 45 27.4**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=169,slow=8.3,SNR=6.6							
	comp=Z,1.6nm,0.6s							
SONM	**Songino Array**	**66.16**	**328**	P		**P**	**01 46 00.2**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=129,slow=4.8,SNR=4.4							
	comp=Z,0.6nm,0.7s							
SONM	**Songino Array**	**66.16**	**328**	P		**P**	**01 46 01.2**	**+0.1**
CASY	**Casey**	**67.75**	**197**	P		**P**	**01 46 10.7**	**+0.1**
MKAR	**Makanchi Array**	**80.09**	**319**	P		**P**	**01 47 22.2**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=101,slow=6.0,SNR=8.1							
	comp=Z,1.0nm,0.8s							
MKAR	**Makanchi Array**	**80.09**	**319**	P		**P**	**01 47 21.4**	**-1.5**
ZALV	**Zalesovo Beam**	**80.98**	**326**	P		**P**	**01 47 25.9**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=131,slow=5.9,SNR=1.9							
	comp=Z,0.7nm,0.3s							
ILAR	**Eielson Array**	**82.47**	**22**	P		**P**	**01 47 34.4**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=247,slow=5.1,SNR=2.8							
	comp=Z,0.3nm,0.7s							
KURK	**Kurchatov**	**83.56**	**322**	P		**P**	**01 47 37.2**	**-3.7**
KURK				IAmb		IAmb	01 48 20.2	
	comp=Z,3.2nm,1.3s							
KURBB	**Kurchatov Arra**	**83.59**	**322**	P		**P**	**01 47 40.0**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=110,slow=4.0,SNR=5.7							
	comp=Z,0.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**149.87**	**288**	PKPbc		**PKPbc**	**01 55 02.5**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=203,slow=2.2,SNR=10							

IDC 15 01:44:00.8±52.0, 16.°71S×171.°88W, h0km, mb4.0/3, mbtmp4.0/3, MS5.4/1, Error ellipse: s-maj=1003.0km s-min=184.8km az=80.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**44.67**	**241**	P		P	01 52 16.5	+0.8
	0.5nm,0.3s,baz=63,slow=14,SNR=4.2							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**50.98**	**258**	P		P	01 53 04.4	-0.4
	0.9nm,0.4s,baz=98,slow=7.0,SNR=20							
WRA				LR		LR	02 14 20.9	
	comp=Z,4μm,21.0s,baz=126,slow=36							
	0.9nm,0.4s							
ASAR	**Alice Springs**	**51.11**	**253**	P		P	01 53 05.2	-0.5
	2.4nm,0.7s,baz=90,slow=7.6,SNR=31							
	2.4nm,0.7s							

JSN ***15*** *01:49:24.7±1.5, 19.°26N×79.°73W, h0km±949km, MD4.2, MW4.3, Presumed earthquake*

SSNC ***15*** *01:49:25.1±1.1, 19.°13N×80.°02W, h20km±14km, MD3.6, ML2.6, Presumed earthquake*

ISC 15 01:49:23.5±2.1, 19.°14N±0.°08×80.°02W±0.°08, h33km±5km, n15, σ1ᵍ84/27, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LCCY	**Blossom Villag**	**0.53**	**354**	*e*P		**Pb**	**01 49 34.7**	**+0.2**
LCCY				*e*S		**Sb**	**01 49 41.9**	**-0.1**
LCCY				IAML			01 49 42.5	
	comp=N,549nm,0.2s							
LCCY				IAML			01 49 43.8	
	comp=E,396nm,0.2s							
CBCY	**The Bluff, Cay**	**0.64**	**23**	*e*P		**Pn**	**01 49 36.3**	**0.0**
CBCY				*e*S		**Sb**	**01 49 44.8**	**-0.4**
CBCY				IAML			01 49 45.8	
	comp=E,473nm,0.2s							
CBCY				IAML			01 49 48.6	
	comp=N,361nm,0.0s							
MTDJ	**Mount Denham**	**2.53**	**111**	*e*P		**Pn**	**01 50 03.2**	**+0.9**
MTDJ				*e*S		**Sn**	**01 50 30.8**	**-1.3**
MTDJ				IAML			01 50 32.4	
	comp=N,69nm,0.3s							
MTDJ				IAML			01 50 32.8	
	comp=N,78nm,0.4s							
MTDJ	**Mount Denham**	**2.53**	**111**	*i*P		**Pn**	**01 50 03.3**	**+0.9**
CCCC	**Cccc**	**2.95**	**46**	*e*P		**Pb**	**01 50 14.2**	**-1.1**
CCCC				*e*S		**Sb**	**01 50 50.9**	**0.0**
CCCC				IAML			01 50 54.0	
	comp=N,4.7nm,0.4s							
CCCC				IAML			01 50 54.4	
	comp=E,3.4nm,0.9s							
MGV	**Manicaragua**	**2.95**	**1**	*e*P		**Pn**	**01 50 08.3**	**+0.3**
MGV				*e*S		**Sn**	**01 50 42.0**	**-0.4**
MGV				IAML			01 50 43.4	
	comp=N,8.6nm,0.2s							
LMGC	**Las Mercedes**	**2.99**	**72**	*e*P		**Pn**	**01 50 09.7**	**+1.1**
LMGC				*e*S		**Sn**	**01 50 43.6**	**+0.3**
LMGC				IAML			01 50 45.5	
	comp=E,16nm,0.2s							
LMGC				IAML			01 50 45.5	
	comp=N,12nm,0.1s							
STH	**Stony Hill**	**3.23**	**109**	*i* P		**Pn**	**01 50 12.6**	**+0.7**
CHIV	**Chivirico**	**3.50**	**76**	*e*P		**Pn**	**01 50 19.7**	**+4.1**
CHIV				*e*S		**Sn**	**01 50 55.3**	**-0.6**
CHIV				IAML			01 50 57.3	
	comp=N,8.6nm,0.6s							
CHIV				IAML			01 50 57.8	
	comp=E,7.1nm,1.1s							
YAR	**Yar**	**3.66**	**70**	*e*P		**Pn**	**01 50 20.2**	**+2.4**
YAR				*e*S		**Sn**	**01 51 00.8**	**+0.9**
MARVS	**Santiago de Cu**	**3.98**	**77**	*e*P		**Pn**	**01 50 22.8**	**+0.6**
MARVS				*e*S		**Sn**	**01 51 04.7**	**-3.0**
HLGC	**Holguin**	**4.11**	**64**	*e*P		**Pn**	**01 50 27.8**	**+3.8**
RCC	**Rio Carpintero**	**4.17**	**78**	*e*P		**Pn**	**01 50 27.7**	**+2.9**
RCC				*e*S		**Sn**	**01 51 10.9**	**-1.5**
GTBY	**Guantanamo Bay**	**4.70**	**80**	*e*P		**Pn**	**01 50 34.2**	**+2.2**
GTBY				*e*S		**Sn**	**01 51 23.1**	**-2.4**
QMBU	**Quimbuelo**	**5.02**	**77**	*e*P		**Pn**	**01 50 36.5**	**0.0**
QMBU				*e*S		**Sn**	**01 51 31.7**	**-1.8**

IDC 15 01:51:12.1±7.9, 24.°42S×148.°15E, h0km, mbtmp3.3/2, ML3.3/2, Error ellipse: s-maj=98.5km s-min=22.0km az=93.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**4.65**	**337**	Pg		Pg	01 52 38.6	-2.7
	0.2nm,0.3s,baz=150,slow=18,SNR=1.7							
CTA				Lg		Lg	01 53 39.5	
	0.9nm,0.3s,baz=127,slow=17,SNR=8.4							
STKA	**Stephens Creek**	**9.42**	**216**	Pn		Pn	01 53 28.8	-0.3
	0.3nm,0.3s,baz=36,slow=13,SNR=5.1							
STKA				Lg		Lg	01 56 13.2	
	0.1nm,0.3s,baz=113,slow=23,SNR=1.3							
	0.6nm,0.3s							
ASAR	**Alice Springs**	**13.04**	**270**	Pn		Pn	01 54 17.2	-1.6
	0.1nm,0.3s,baz=94,slow=13,SNR=4.8							
	0.5nm,0.8s							
I07AU	**WARRAMUNGA INI**	**13.56**	**286**	I		I	03 14 10.0	
	0.1nm,1.2s,baz=111,slow=308,SNR=2.1							

IDC ***15*** *02:24:48.7±0.8, 57.°09S×25.°12W, h0km, mb4.4/6, mbtmp4.4/7, ML4.3/1, MS3.8/9, Error ellipse: s-maj=36.7km s-min=22.3km az=36.0*

NEIC ***15*** *02:24:57.0±1.6, 57.°3S±0.°1×25.°4W±0.°2, h58km±6km, mb4.8/21, Error ellipse: s-maj=20.4km s-min=13.9km az=217.0*

ISC 15 02:24:52.2±0.6, 57.°14S±0.°09×25.°1W±0.°1, h22km, n56, σ0ᵍ81/43, mb4.8/13, MS3.8/9, 1C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**7.05**	**289**			**Pn**	**02 26 36.1**	**+2.1**
VNA1	**Neumayer--Stat**	**15.35**	**159**	⇑P		**Pn**	**02 28 27.4**	**+0.4**
	comp=Z,6.2nm,0.3s							
VNA3	**Neumayer Olymp**	**15.58**	**161**	⇓P		**Pn**	**02 28 29.8**	**-0.3**
	comp=Z,2.8nm,0.2s							
VNA2	**Neumayer--Watz**	**15.74**	**158**	⇓P		**Pn**	**02 28 31.6**	**-0.7**
	comp=Z,3.8nm,0.2s,baz=332,slow=15							
ESPZ	**Base Esperanza**	**16.89**	**235**	Pn		**Pn**	**02 28 44.5**	**-2.2**
ESPZ				IAmb		IAmb	02 29 23.4	
	comp=Z,74nm,1.3s							
SNAA	**Sanae**	**17.27**	**156**	⇓P		**P**	**02 28 53.2**	**+0.2**
	comp=Z,42nm,0.2s							
SNAA	**Sanae**	**17.27**	**156**	P		**Pn**	**02 28 52.1**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=288,slow=5.5,SNR=10.0							
	comp=Z,4.0nm,0.5s							
SNAA	**Sanae**	**17.27**	**156**	P		**Pn**	**02 28 52.4**	**+0.7**
EFI	**East Falkland**	**19.83**	**272**	P		**P**	**02 29 21.9**	**+0.8**
EFI				IAmb		IAmb	02 29 59.9	
	comp=Z,99nm,1.4s							
PMSA	**Palmer Station**	**20.10**	**232**	LR		LR	02 36 18.3	
	comp=Z,212nm,18.2s,baz=110,slow=34							
BELA	**Belgrano 2**	**21.09**	**186**	P		**P**	**02 29 34.8**	**+0.2**
MG02	**Cerro Sombrero**	**25.37**	**261**	P		**P**	**02 30 16.4**	**-1.0**
MG03	**Isla Dawson**	**25.55**	**258**	P		**P**	**02 30 19.5**	**+0.5**
MG03				IAmb		IAmb	02 30 25.3	
	comp=Z,33nm,1.2s							
QSPA	**South Pole Qui**	**33.11**	**180**	LR		LR	02 45 03.2	
	comp=Z,118nm,18.2s,baz=204,slow=37							
QSPA	**South Pole Qui**	**33.11**	**180**	P		**P**	**02 31 26.9**	**+0.7**
QSPA				x		x	02 31 42.5	
PLCA	**Paso Flores**	**33.34**	**280**	P		**P**	**02 31 27.0**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=106,slow=10.0,SNR=3.7							
PLCA				LR		LR	02 43 35.8	
	comp=Z,92nm,21.2s,baz=107,slow=34							
	comp=Z,1.1nm,0.8s							
CPUP	**Villa Florida**	**38.41**	**310**	P		**P**	**02 32 10.3**	**-1.5**
	comp=Z,4.7nm,0.6s,baz=152,slow=9.9,SNR=19							
	comp=Z,4.7nm,0.6s							
CPUP	**Villa Florida**	**38.41**	**310**			**P**	**02 32 11.0**	**-0.9**
CPUP				IAmb		IAmb	02 32 11.5	
	comp=Z,14nm,1.4s							
CPUP	**Villa Florida**	**38.41**	**310**	P		**P**	**02 32 10.9**	**-0.9**
SUR	**Sutherland**	**39.84**	**72**	LR		LR	02 44 51.9	
	comp=Z,132nm,18.6s,baz=306,slow=30							
CO01	**Juntas del Tor**	**41.31**	**292**	P		**P**	**02 32 35.7**	**-0.6**
BDFB	**Brasilia**	**44.90**	**328**	P		**P**	**02 33 05.1**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=154,slow=7.4,SNR=3.6							
	comp=Z,1.1nm,0.3s							
BDFB	**Brasilia**	**44.90**	**328**	P		**P**	**02 33 06.4**	**+1.2**
BOSA	**Boshof**	**45.14**	**73**	LR		LR	02 49 03.4	
	comp=Z,122nm,18.9s,baz=352,slow=32							
VNDA	**Vanda**	**45.53**	**182**	P		**P**	**02 33 10.0**	**+0.6**
VNDA				IAmb		IAmb	02 33 52.1	
	comp=Z,24nm,1.3s							
CCD	**Concordia, Ant**	**46.39**	**169**	P		**P**	**02 33 16.8**	**+0.2**
H10S2	**ASCENSION HYDR**	**48.75**	**14**	T		T	03 26 37.8	
	baz=32,slow=74,SNR=20							
H10S3	**ASCENSION HYDR**	**48.75**	**14**	T		T	03 26 32.9	
	baz=188,slow=74,SNR=20							
PTLB	**Pontes e Lacer**	**48.90**	**314**	P		**P**	**02 33 36.3**	**0.0**
PTLB				IAmb		IAmb	02 33 39.2	
	comp=Z,7.0nm,0.7s							
TSUM	**Tsumeb**	**49.24**	**58**	LR		LR	02 48 25.6	
	comp=Z,75nm,20.9s,baz=344,slow=29							
GO01	**Chusmiza**	**49.51**	**300**	P		**P**	**02 33 41.0**	**-0.5**
GO01				IAmb		IAmb	02 33 46.8	
	comp=Z,8.8nm,0.6s							
H10N1	**ASCENSION HYDR**	**49.87**	**14**	T		T	03 28 04.4	
	baz=188							
H10N3	**ASCENSION HYDR**	**49.87**	**14**	T		T	03 28 00.0	
	baz=188,slow=74							
H10N2	**ASCENSION HYDR**	**49.88**	**14**	T		T	03 28 09.0	
	baz=188,slow=74							
PB16	**IPOC Station P**	**50.81**	**301**	P		**P**	**02 33 51.5**	**-0.1**
LPAZ	**La Paz**	**51.96**	**304**	P		**P**	**02 34 00.6**	**+0.4**
	comp=Z,17nm,0.5s,baz=190,slow=6.9,SNR=75							
	comp=Z,17nm,0.5s							
LPAZ	**La Paz**	**51.96**	**304**	P		**P**	**02 34 00.6**	**+0.4**
LPAZ	**La Paz**	**51.96**	**304**	P		**P**	**02 34 00.5**	**+0.3**
LPAZ				x		x	02 34 14.4	
LPAZ				x		x	02 34 21.9	
LSZ	**Lusaka**	**57.71**	**66**	LR		LR	02 55 59.8	
	comp=Z,131nm,19.8s,baz=330,slow=32							
MACA	**Manacapuru-AM**	**60.76**	**318**	P		**P**	**02 35 01.7**	**-0.5**
BOAV	**Boa Vista**	**65.86**	**321**	P		**P**	**02 35 35.8**	**-0.2**
BOAV				IAmb		IAmb	02 35 36.9	
	comp=Z,6.0nm,0.8s							
OTAV	**Otavalo**	**71.23**	**302**	P		**P**	**02 36 11.4**	**+1.3**
OTAV				IAmb		IAmb	02 36 29.0	
	comp=Z,12nm,1.5s							
MBAR	**Mbarara**	**71.64**	**61**	LR		LR	03 02 15.7	
	comp=Z,86nm,21.4s,baz=4.0,slow=31							
TORD	**Torodi Ar. Bea**	**73.46**	**27**	P		**P**	**02 36 22.3**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=194,slow=6.1,SNR=19							
	comp=Z,2.7nm,0.7s							
SDV	**Santo Domingo**	**75.61**	**313**	P		**P**	**02 36 36.0**	**+0.5**
SDV				IAmb		IAmb	02 36 40.5	
	comp=Z,6.3nm,0.8s							
FURI	**Furi**	**83.72**	**63**	LR		LR	03 11 12.4	
	comp=Z,84nm,20.7s,baz=348,slow=33							
BBOO	**Buckleboo**	**88.99**	**164**	P		**P**	**02 37 45.1**	**0.0**
BBOO				IAmb		IAmb	02 37 46.6	
	comp=Z,18nm,1.2s							
TEIG	**Tepich**	**93.28**	**303**	P		**P**	**02 38 05.2**	**+0.2**
ASAR	**Alice Springs**	**97.58**	**161**	P		**P**	**02 38 24.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=188,slow=3.8,SNR=5.9							
	comp=Z,0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**123.59**	**109**	PKP		**PKPdf**	**02 43 47.9**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=183,slow=1.1,SNR=1.2							
FINES	**FINESS Array B**	**124.81**	**27**	PKP		**PKPdf**	**02 43 48.0**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=199,slow=2.5,SNR=5.1							
MKAR	**Makanchi Array**	**136.13**	**71**	PKP		**PKiKP**	**02 44 12.2**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=215,slow=1.8,SNR=2.3							
YKA	**Yellowknife Ar**	**137.77**	**316**	PKP		**PKPdf**	**02 44 12.1**	**-1.0**
	comp=Z,1.1nm,0.9s,baz=124,slow=1.4,SNR=11							
SONM	**Songino Array**	**149.63**	**87**	PKPbc		**PKPbc**	**02 44 38.4**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=231,slow=3.2,SNR=9.1							
ILAR	**Eielson Array**	**151.71**	**310**	PKPbc		**PKPbc**	**02 44 43.3**	**0.0**
	comp=Z,2.7nm,0.9s,baz=132,slow=1.7,SNR=27							
ILAR	**Eielson Array**	**151.71**	**310**			**PKPbc**	**02 44 43.4**	**+0.1**

IDC ***15*** *02:32:45.2±9.2, 37.°72N×143.°11E, h0km, mb3.5/3, mbtmp3.4/4, ML2.2/1, MS3.5/1, Error ellipse: s-maj=165.4km s-min=45.9km az=137.0*

JMA ***15*** *02:32:52.0±0.2, 37.°8N±0.°4×142.°3E±0.°8, h28km±2km, MV3.5/30, SE OFF MIYAGI PREF*

ISC 15 02:32:52.6±2.0, 37.°86N±0.°07×142.°3E±0.°1, h14km, n22, σ1ᵍ05/19, mb3.3/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakibou**	**0.77**	**306**	*e*P		**Pg**	**02 33 07.5**	**-0.1**
JIO	**Ouri**	**0.93**	**310**	*e*P		**Pb**	**02 33 10.4**	**-0.1**
JIO				*e*S		**Sb**	**02 33 23.3**	**+0.6**
JMST	**Minamisoumatoc**	**1.09**	**264**	P		**Pb**	**02 33 12.4**	**-0.8**
JMST				*e*S		**Sb**	**02 33 27.0**	**-0.2**
JMM	**Marumori**	**1.16**	**271**	*e*P		**Pn**	**02 33 13.6**	**-0.8**
JMM				*e*S		**Sb**	**02 33 29.1**	**-0.1**
JFK	**Kawauchi**	**1.20**	**246**	*e*P		**Pb**	**02 33 13.8**	**-1.3**
JOU	**Okura**	**1.35**	**293**	*e*P		**Pb**	**02 33 17.3**	**-0.4**
JMK	**Ichinoseki**	**1.36**	**324**	*e*P		**Pn**	**02 33 16.9**	**-0.3**
JOTO	**OTAMA OYAMA**	**1.55**	**260**	*e*P		**Pb**	**02 33 19.5**	**-1.6**
JYS	**Shirataka**	**1.77**	**283**	*e*P		**Pb**	**02 33 24.0**	**-0.8**
JOM	**Ohasama**	**1.78**	**335**	*e*P		**Pn**	**02 33 23.4**	**+0.5**
JYK	**Kaneyama**	**1.83**	**306**	*e*P		**Pn**	**02 33 24.1**	**+0.6**
MJAR	**Matsushiro Arr**	**3.49**	**249**	Pn		**Pn**	**02 33 48.5**	**+2.1**
	0.2nm,0.3s,baz=69,slow=14,SNR=7.0							
MJAR				Sn		**Sb**	**02 34 38.5**	**+2.2**
	0.1nm,0.3s,baz=136,slow=14,SNR=4.9							
	1.0nm,0.3s							
YAK	**Yakutsk**	**25.43**	**346**	LR		LR	02 49 59.3	
	comp=Z,119nm,20.5s,baz=348,slow=40							
SONM	**Songino Array**	**27.90**	**302**	P		**P**	**02 38 42.8**	**+0.7**
	0.3nm,0.5s,baz=112,slow=9.1,SNR=2.2							
	0.3nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.02**	**123**	T		T	03 07 49.8	
	baz=316,slow=75,SNR=24							
H11N1	**WAKE ISLAND Hy**	**28.02**	**123**	T		T	03 07 53.4	
	baz=316,slow=75,SNR=9.9							
H11N3	**WAKE ISLAND Hy**	**28.03**	**123**	T		T	03 07 59.9	
	baz=316,slow=75,SNR=15							
H11S1	**WAKE ISLAND Hy**	**28.77**	**125**	T		T	03 08 48.2	
	baz=318,slow=76,SNR=7.1							
H11S3	**WAKE ISLAND Hy**	**28.77**	**125**	T		T	03 08 44.8	
	baz=318,slow=76,SNR=7.5							
H11S2	**WAKE ISLAND Hy**	**28.78**	**125**	T		T	03 08 53.6	
	baz=318,slow=76,SNR=7.9							
MKAR	**Makanchi Array**	**44.26**	**302**	P		**P**	**02 41 00.8**	**-0.6**
	0.2nm,0.5s,baz=88,slow=12,SNR=2.7							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**46.03**	**307**	P		**P**	**02 41 15.2**	**-0.3**
	0.9nm,0.5s,baz=81,slow=8.2,SNR=9.7							
	0.9nm,0.5s							

MEX 15 02:41:22.9±0.6, 15.°37N×93.°75W, h70km±11km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PCIG		**0.61**	**57**	*e*P		Pn	02 41 35.2	-1.7
PCIG				*e*P			02 41 35.4	
PCIG				*e*S		Sn	02 41 45.3	-1.8
**CAR

VNA3	Neumayer Olymp	15.58 161	⇓P		Pn	02 50 40.5	0.0
	comp=Z,2.7nm,0.3s						
VNA2	Neumayer--Watz	15.74 158	⇑P		Pn	02 50 41.4	-1.2
	comp=Z,2.4nm,0.3s,baz=329,slow=14						
SNAA	Sanae	17.27 156	P		P	02 51 03.9	+0.6
	comp=Z,0.4nm,0.3s,baz=318,slow=16,SNR=2.1						
	comp=Z,1.1nm,0.3s						
SNAA	Sanae	17.27 156	P		P	02 51 03.6	+0.3
EFI	East Falkland	19.84 272	P		P	02 51 31.7	+0.2
PMSA	Palmer Station	20.11 232	LR		LR	02 58 40.7	
	comp=Z,91nm,18.9s,baz=302,slow=35						
BELA	Belgrano 2	21.09 186	P		P	02 51 45.1	+0.1
BELA			IAmb		IAmb	02 52 00.6	
	comp=Z,18nm,1.3s						
GO09	Cerro Castillo	27.80 262	P		P	02 52 48.7	-0.9
TRQA	Tornquist	30.83 292	P		P	02 53 14.9	-1.7
TRQA			IAmb		IAmb	02 53 45.5	
	comp=Z,10nm,1.4s						
PLTB	Pedras Altas	32.10 310	P		P	02 53 28.4	+0.5
PLTB			IAmb		IAmb	02 54 06.2	
	comp=Z,16nm,1.4s						
CPUP	Villa Florida	38.41 310	P		P	02 54 21.9	-0.3
	comp=Z,1.7nm,0.8s,baz=106,slow=8.8,SNR=5.0						
	comp=Z,1.7nm,0.8s						
CPUP	Villa Florida	38.41 310	P		P	02 54 22.2	+0.1
BOSA	Boshof	45.13 73	LR		LR	03 10 31.7	
	comp=Z,98nm,18.6s,baz=352,slow=31						
PTLB	Pontes e Lacer	48.90 314	P		P	02 55 46.7	+0.2
PTLB			IAmb		IAmb	02 55 49.7	
	comp=Z,2.9nm,0.9s						
SIV	San Ignacio	49.18 312	P		P	02 55 48.7	-0.1
	comp=Z,1.1nm,0.6s,baz=168,slow=6.0,SNR=6.1						
	comp=Z,1.1nm,0.6s						
PB16	IPOC Station P	50.81 301	P		P	02 56 01.1	-0.7
PB16			IAmb		IAmb	02 56 35.3	
	comp=Z,5.6nm,1.3s						
LPAZ	La Paz	51.96 304	P		P	02 56 10.4	0.0
	comp=Z,3.2nm,0.3s,baz=116,slow=4.1,SNR=20						
	comp=Z,3.2nm,0.3s						
LPAZ	La Paz	51.96 304			P	02 56 11.1	+0.6
LPAZ			IAmb		IAmb	02 56 13.5	
	comp=Z,5.5nm,0.5s						
BOAV	Boa Vista	65.86 321	P		P	02 57 45.6	-0.6
BOAV			IAmb		IAmb	02 57 49.9	
	comp=Z,9.1nm,1.5s						
TORD	Torodi Ar. Bea	73.45 27	P		P	02 58 32.9	0.0
	comp=Z,1.3nm,0.6s,baz=190,slow=5.1,SNR=19						
	comp=Z,1.3nm,0.6s						
YKA	Yellowknife Ar	137.77 316	PKP		PKPdf	03 06 24.2	+0.9
	comp=Z,0.3nm,0.8s,baz=117,slow=1.5,SNR=4.3						
A36M	Sachs Harbour	145.76 327	PKPdf		PKPbc	03 06 38.1	+0.2
SONM	Songino Array	149.62 87	PKPbc		PKPbc	03 06 49.2	-0.1
	comp=Z,0.6nm,0.4s,baz=226,slow=3.0,SNR=6.0						
I26K	Coal Creek Min	150.29 312	PKPbc		PKPbc	03 06 50.7	+0.5
BMAR	Burnt Mountain	151.28 316	PKPbc		PKiKP	03 06 53.6	+0.5
ILAR	Eielson Array	151.72 310	PKPbc		PKiKP	03 06 54.2	+0.2
	comp=Z,0.3nm,0.4s,baz=120,slow=1.4,SNR=14						
ILAR	Eielson Array	151.72 310			PKPbc	03 06 53.8	+0.2

IDC ***15*** *02:56:22.5±0.7, 28.°01N× 139.°70E, h399km±10km, mb3.1/12, mbtmp3.8/13, Error ellipse: s-maj=20.4km s-min=17.4km az=2.0*

ISC 15 02:56:31.5±1.0, 28.°0N±0.°2×139.°5E±0.°2, h507km, n13, σ0s53/12, mb3.1/12, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	2.51	110	P	P	02 57 19.4	-21
	44nm,0.3s,baz=354,slow=18,SNR=45						
JCJ				S	S	02 58 08.8	-27
	112nm,0.3s,baz=304,slow=23,SNR=18						
SONM	Songino Array	32.46	317	P	P	03 02 19.3	-0.2
	0.2nm,0.5s,baz=108,slow=7.7,SNR=1.8						
	0.2nm,0.5s						
WRA	Warramunga Arr	47.90	187	P	P	03 04 23.1	-0.2
	0.2nm,0.3s,baz=360,slow=7.6,SNR=6.3						
	0.2nm,0.3s						
MKAR	Makanchi Array	48.10	309	P	P	03 04 24.9	+0.3
	0.2nm,0.4s,baz=88,slow=10,SNR=6.2						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	50.75	314	P	P	03 04 44.0	0.0
	1.1nm,0.3s,baz=92,slow=7.9,SNR=9.2						
	1.1nm,0.3s						
KDAK	Kodiak Island	55.08	37	P	P	03 05 14.2	-0.6
	7.2nm,1.0s,baz=357,slow=1.9,SNR=7.8						
	7.2nm,1.0s						
BVAR	Borovoye Array	55.81	317	P	P	03 05 20.4	+0.4
	1.9nm,0.4s,baz=87,slow=6.9,SNR=14						
	1.9nm,0.4s						
ILAR	Eielson Array	58.08	29	P	P	03 05 34.5	-0.8
	0.2nm,0.5s,baz=249,slow=5.6,SNR=7.6						
	0.2nm,0.5s						
INK	Inuvik	63.21	25	P	P	03 06 08.9	-0.3
	0.3nm,0.4s,baz=329,slow=6.9,SNR=1.3						
	0.3nm,0.4s						
YKA	Yellowknife Ar	72.48	28	P	P	03 07 05.9	0.0
	0.2nm,0.5s,baz=304,slow=6.6,SNR=4.3						
	0.2nm,0.5s						
FINES	FINESS Array B	76.11	333	P	P	03 07 26.8	+0.3
	0.6nm,0.3s,baz=64,slow=4.6,SNR=11						
	0.6nm,0.3s						
HFS	Hagfors	81.68	336	P	P	03 07 55.7	-0.4
	7.6nm,1.1s,baz=114,slow=3.6,SNR=4.4						
	7.6nm,1.1s						
NVAR	Mina Array Bea	81.81	51	P	P	03 07 58.5	+0.9
	0.3nm,0.7s,baz=310,slow=5.7,SNR=2.7						
	0.3nm,0.7s						

NOU ***15*** *03:02:00.4, 22.°21S× 179.°25W, h599km, mb4.1/10, South of Fiji Islands*

NEIC ***15*** *03:02:02.6±1.2, 22.°1S±0.°1× 179.°5W±0.°1, h595km±4km, mb4.5/30, Error ellipse: s-maj=18.5km s-min=17.5km az=70.0*

IDC ***15*** *03:02:03.5±2.0, 22.°11S× 179.°70W, h602km±21km, mb3.6/12, mbtmp4.6/13, Error ellipse: s-maj=26.2km s-min=12.8km az=157.0*

ISC 15 03:02:01.7±0.5, 22.°22S±0.°08× 179.°52W±0.°08, h592km, n68, σ1s25/68, mb4.5/28, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	4.02	10	P	P	03 03 25.8	-1.1
MSVF	Nonsavu	5.01	332	P	P	03 03 33.8	-0.6
MSVF	Nonsavu	5.01	332	P	P	03 03 33.6	-0.8
AFI	Afiamalu	11.07	43	P	P	03 04 28.4	-2.8
MARNC	Mare, Loyalty	11.58	271	P	P	03 04 35.4	-0.9
DZM	Mont Dzumac	13.01	268	P	P	03 04 52.7	+1.8
	10nm,0.5s,baz=121,slow=20,SNR=19						
DZM	Mont Dzumac	13.01	268	P	P	03 04 53.2	+2.4
DZM	Mont Dzumac	13.01	268	P	P	03 04 52.5	+1.7
URZ	Urewera	16.25	190	P	P	03 05 20.0	-1.4
	3.8nm,0.3s,baz=260,slow=2.8,SNR=10						
URZ				S	S	03 07 58.7	-5.5
	5.9nm,0.5s,baz=197,slow=24,SNR=12						
URZ	Urewera	16.25	190	P	P	03 05 19.9	-1.6
URZ	Urewera	16.25	190	S	S	03 08 04.0	-0.2
BKZ	Black Stump Fm	17.23	191	P	P	03 05 28.6	-2.0
BFZ	Birch Farm	18.75	190	P	P	03 05 43.8	-0.5
TCW	Tory Channel	19.64	194	P	P	03 05 53.9	+1.5
EIDS	Eidsvold	27.05	257	P	P	03 06 59.0	+0.5
EIDS				IAmb	IAmb	03 06 59.5	
	comp=Z,9.0nm,0.8s						
ARMA	Armidale	27.06	246	P	P	03 07 00.3	+1.7
ARMA				IAmb	IAmb	03 07 13.8	
	comp=Z,33nm,1.4s						
CAN	Canberra	30.39	238	P	P	03 07 28.6	+1.3
CTAO	Charters Tower	31.95	267	P	P	03 07 40.8	+0.1
TOO	Toolangi	33.75	235	P	P	03 07 56.8	+1.2
PMG	Port Moresby	34.40	286	P	P	03 08 01.2	-0.1
STKA	Stephens Creek	35.78	246	P	P	03 08 13.1	+0.5
	comp=Z,8.2nm,0.5s,baz=94,slow=10,SNR=28						
	comp=Z,8.2nm,0.5s						
STKA	Stephens Creek	35.78	246		P	03 08 13.5	+1.0
COEN	Coen	36.32	277	P	P	03 08 17.3	+0.1
COEN				IAmb	IAmb	03 08 18.5	
	comp=Z,10nm,0.8s						
BBOO	Buckleboo	40.53	245	P	P	03 08 50.9	0.0
BBOO				IAmb	IAmb	03 08 51.7	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	42.77	259		P	03 09 08.8	+0.1
ASAR	Alice Springs	42.77	259	P	P	03 09 08.7	0.0
	comp=Z,22nm,0.8s,baz=97,slow=8.1,SNR=208						
ASAR				S	S	03 14 49.7	-1.3
	comp=Z,0.9nm,0.8s,baz=92,slow=17,SNR=6.7						
	comp=Z,22nm,0.8s						
WB0	Warramunga Arr	42.97	264		P	03 09 09.7	-0.6
WB0				IAmb	IAmb	03 09 10.3	
	comp=Z,22nm,1.0s						
WRA	Warramunga Arr	42.98	264	P	P	03 09 09.7	-0.7
	comp=Z,6.0nm,0.4s,baz=95,slow=8.0,SNR=331						
WRA				ScP	ScP	03 13 43.1	+0.6
	comp=Z,1.7nm,1.0s,baz=100,slow=3.5,SNR=5.5						
WRA				S	S	03 14 52.0	-2.2
	comp=Z,0.4nm,0.6s,baz=99,slow=14,SNR=2.6						
	comp=Z,6.0nm,0.4s						
WRA	Warramunga Arr	42.98	264		P	03 09 08.3	-2.1
JAY	Jayapura	43.29	291	P	P	03 09 12.3	-0.5
	comp=Z,13nm,0.5s,baz=150,slow=18						
	comp=Z,13nm,0.5s						
FORT	Forrest	47.33	248	P	P	03 09 43.3	0.0
FORT				IAmb	IAmb	03 09 43.8	
	comp=Z,8.9nm,0.7s						
MTN	Manton Dam	47.79	273	P	P	03 09 46.3	-0.6
MTN				IAmb	IAmb	03 09 47.0	
	comp=Z,8.9nm,0.7s						
KNRA	Kununurra	49.16	268		P	03 09 57.0	0.0
KNRA				IAmb	IAmb	03 09 57.6	
	comp=Z,13nm,0.6s						
FITZ	Fitzroy Crossi	51.42	264	P	P	03 10 13.6	+0.1
	comp=Z,4.9nm,0.3s,baz=75,slow=5.7,SNR=51						
	comp=Z,4.9nm,0.3s						
SOEI	Soe	55.16	274		P	03 10 41.5	+1.3
PSA00	Pilbara Seismi	55.91	258		P	03 10 44.9	-0.2
MBWA	Marble Bar	56.11	259		P	03 10 46.3	-0.2
MBWA				IAmb	IAmb	03 10 46.8	
	comp=Z,19nm,0.8s						
GIRL	Giralia	60.74	256	P	P	03 11 18.5	+1.0
GIRL				IAmb	IAmb	03 11 39.1	
	comp=Z,54nm,1.4s						
TOLI2	Tolitoli	62.60	284	P	P	03 11 29.6	-0.2
TOLI2				IAmb	IAmb	03 11 31.2	
	comp=Z,8.5nm,0.6s						
QSPA	South Pole Qui	67.86	180	P	P	03 12 03.4	+1.6
UGM	Wanagama	68.53	270	P	P	03 12 06.2	-0.4
MJAR	Matsushiro Arr	70.77	325	P	P	03 12 19.0	-0.5
	comp=Z,2.6nm,0.6s,baz=156,slow=6.3,SNR=10						
	comp=Z,2.6nm,0.6s						
MJAR	Matsushiro Arr	70.77	325	P	P	03 12 19.0	-0.5
BBJI	Bungbulang	71.35	269	P	P	03 12 22.7	-0.7
TPUB	Ta-pu	73.74	304	P	P	03 12 35.6	-1.3
SSLB	Suanglung	73.76	305	P	P	03 12 35.9	-1.1
SSLB				IAmb	IAmb	03 12 36.6	
	comp=Z,13nm,0.9s						
PEA0B	Petropavlovsk-	77.58	346	P	P	03 12 57.4	+0.1
PEA0B				IAmb	IAmb	03 12 57.8	
	comp=Z,46nm,1.3s						
PETK	Petropavlovsk-	77.58	346	P	P	03 12 57.0	-0.3
	comp=Z,4.2nm,0.7s,baz=129,slow=5.5,SNR=6.3						
	comp=Z,4.2nm,0.7s						
PETK	Petropavlovsk-	77.58	346	P	P	03 12 57.4	0.0
BELA	Belgrano 2	78.04	173	P	P	03 12 59.9	+0.3
BELA				IAmb	IAmb	03 13 24.3	
	comp=Z,34nm,1.4s						
USRK	Ussuriysk Ar.	79.60	327	P	P	03 13 08.8	+0.5
	comp=Z,1.7nm,0.6s,baz=138,slow=6.7,SNR=2.5						
	comp=Z,1.7nm,0.6s						
N14K	Kuskokwak Cree	83.14	9	P	P	03 13 26.4	+0.4
N14K				IAmb	IAmb	03 14 01.7	
	comp=Z,35nm,1.5s						
NVAR	Mina Array Bea	83.24	44	P	P	03 13 28.1	+0.7
	comp=Z,0.4nm,0.6s,baz=220,slow=8.9,SNR=4.8						
	comp=Z,0.4nm,0.6s						
N15K	Kwethluk River	83.61	10	P	P	03 13 28.9	+0.6
N15K				IAmb	IAmb	03 13 29.6	
	comp=Z,7.3nm,0.8s						
PLCA	Paso Flores	89.11	134	P	P	03 13 56.2	+0.9
	comp=Z,0.9nm,0.7s,baz=231,slow=6.5,SNR=3.9						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	89.17	58	P	P	03 13 56.8	+1.2
	comp=Z,0.9nm,0.8s,baz=215,slow=4.1,SNR=4.2						
	comp=Z,0.9nm,0.8s						
CMAR	Chiang Mai Arr	89.36	290	P	P	03 13 57.8	+1.1
	comp=Z,1.5nm,0.3s,baz=130,slow=3.5,SNR=16						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Ar	89.36	290		P	03 13 57.3	+0.7
BVAR	Borovoye Array	119.47	319	PKP	PKPdf	03 19 43.8	-0.8
	comp=Z,0.6nm,0.3s,baz=144,slow=1.3,SNR=6.0						
FINES	FINESS Array B	136.99	342	PKP	PKiKP	03 20 18.8	-0.8
	comp=Z,3.1nm,1.0s,baz=146,slow=1.0,SNR=4.6						
HFS	Hagfors	140.99	350	PKhKP	PKPpre	03 20 18.8	
	comp=Z,1.0nm,0.4s,baz=53,slow=3.5,SNR=14						
AKASG	Malin Array Be	143.78	329	PKP	PKPbc	03 20 28.2	-1.1
	comp=Z,3.3nm,0.4s,baz=42,slow=4.1,SNR=13						
AKBB	Malin Array Si	143.78	329	PKPbc	PKPbc	03 20 28.5	-0.9
KIEV	Kiev	143.80	329	PKPbc	PKPbc	03 20 28.5	-0.9
EKA	Eskdalemuir Ar	146.82	4	PKPbc	PKiKP	03 20 40.0	+0.1
	comp=Z,1.0nm,0.7s,baz=355,slow=1.5,SNR=1.7						
BRTR	Keskin Array B	146.89	309	PKPbc	PKPbc	03 20 38.5	-0.5
	comp=Z,1.0nm,0.5s,baz=143,slow=4.5,SNR=6.5						
MMAI	Mount Meron Ar	147.38	297	PKPbc	PKPbc	03 20 41.1	+0.8
	comp=Z,4.2nm,0.8s,baz=27,slow=3.8,SNR=4.2						
BURAR	Bucovina Array	147.81	328	PKPbc	PKPbc	03 20 41.2	+0.3

NEIC ***15*** *03:05:38.2±1.8, 17.°90N±0.°04× 66.°806W±0.°004, h10km±1km, ML3.7/35, Md3.6/4(RSPR), Error ellipse: s-maj=5.9km s-min=2.8km az=359.0*

RSPR ***15*** *03:05:39.3, 17.°98N× 66.°85W, h12km, MD3.6/4*

SDD ***15*** *03:05:39.2±1.6, 17.°95N× 66.°86W, h23km±11km, MD3.6, ML3.6, MW3.8, Presumed earthquake*

ISC 15 03:05:38.7±0.9, 17.°97N±0.°04× 66.°82W±0.°02, h15km±6km, n43, σ0s74/63, 12C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.06	276		Pg	03 05 41.9	+0.3
GBPR	Guanica, Bosqu	0.06	276	⇑*i*P	Pg	03 05 41.9	+0.3
OBIP	Obispado Ponce	0.21	70		Pb	03 05 43.9	-0.3
OBIP				Sg	Sb	03 05 47.8	-0.2
OBIP	Obispado Ponce	0.21	70	⇓*e*P	Pb	03 05 44.0	-0.3
OBIP				*e*S	Sb	03 05 48.0	0.0
MLPR	Magueyes Islan	0.22	270		Pg	03 05 43.4	-0.2
MLPR				Sg	Sg	03 05 46.9	0.0
MLPR				IAML		03 05 47.3	
	13μm,0.2s						
MLPR				IAML		03 05 47.6	
	15μm,0.3s						
CELP	Cerrillos	0.25	65		Pb	03 05 44.6	-0.3
CELP				Sg	Sb	03 05 48.9	-0.2
CELP				IAML		03 05 49.2	
	8μm,0.4s						
CELP				IAML		03 05 49.3	
	10μm,0.5s						
CRPR	Cabo Rojo, PR	0.28	278		Pg	03 05 44.4	-0.3
CRPR				Sg	Sg	03 05 48.4	-0.3
CRPR				IAML		03 05 48.9	
	18μm,0.2s						
CRPR	Cabo Rojo, PR	0.28	278	⇓*e*Pg	Pg	03 05 44.4	-0.3
CRPR				⇑*e*Sg	Sg	03 05 48.6	-0.2
CRPR				IAML		03 05 48.9	
	comp=N,20μm,0.2s						
CRPR	Cabo Rojo, PR	0.28	278	⇓*e*P	Pg	03 05 44.4	-0.3
CRPR				*e*S	Sg	03 05 48.4	-0.3
UUPR	Utuado, UPR, P	0.30	18		Pg	03 05 45.0	+0.1
UUPR				Sg	Sg	03 05 49.5	+0.2
LSP	Las Mesas	0.33	309		Pg	03 05 45.3	-0.2
LSP	Las Mesas	0.33	309	⇑*e*P	Pg	03 05 45.3	-0.2
PRSN	Puerto Rico Se	0.40	308		Pg	03 05 46.4	-0.3
PRSN	Puerto Rico Se	0.40	308		Sg	03 05 52.4	+0.2
PRSN	Puerto Rico Se	0.40	308	⇓*e*Pg	Pg	03 05 46.4	-0.3
PRSN				⇓*e*Sg	Sg	03 05 52.1	-0.1
PRSN				IAML		03 05 53.1	
	comp=N,24μm,0.2s						
PRSN	Puerto Rico Se	0.40	308	⇓*e*P	Pg	03 05 46.4	-0.3
PRSN				*e*S	Sg	03 05 52.4	+0.2
ECPR	Experimental S	0.56	51		Pg	03 05 49.3	-0.4
ECPR				IAML		03 05 59.8	
	comp=N,3μm,0.2s						
ECPR	Experimental S	0.56	51	⇑*e*P	Pg	03 05 49.5	-0.2
ECPR				*e*S	Sb	03 05 58.2	+0.3
AGPR	Aguadilla, PR	0.57	331		Pg	03 05 49.4	-0.5
AGPR				IAML		03 05 57.9	
	comp=N,7μm,0.5s						
AGPR				IAML		03 05 58.9	
	comp=N,3μm,0.6s						
AGPR	Aguadilla, PR	0.57	331	⇑*e*Pg	Pg	03 05 49.4	-0.5
AGPR				⇓*e*Sg	Sg	03 05 57.5	0.0
AGPR				IAML		03 05 57.7	
	comp=N,6μm,0.5s						
AGPR	Aguadilla, PR	0.57	331	⇑*e*P	Pg	03 05 49.3	-0.6
AGPR				*e*S	Sg	03 05 57.1	-0.4
EMPR	Esperanza - Ma	0.57	28		Pg	03 05 50.1	+0.1
EMPR					Sb	03 05 58.5	+0.1
EMPR	Esperanza - Ma	0.57	28	⇑*e*P	Pg	03 05 50.1	+0.1
EMPR				*e*S	Sb	03 05 58.5	+0.1
SJG	San Juan	0.65	77		Pb	03 05 51.0	-0.7
SJG	San Juan	0.65	77	⇑*e*P	Pb	03 05 51.0	-0.7
SJG				*e*S	Sg	03 06 00.4	+0.3
IDE	Isla Desecheo	0.75	304		Sb	03 05 52.3	-1.1
IDE					Sb	03 06 02.1	-1.4
IDE	Isla Desecheo	0.75	304	⇑*e*P	Pb	03 05 52.3	-1.1
IDE				*e*S	Sb	03 06 02.1	-1.4
PDPR	Patillas Dam,	0.76	86		Pb	03 05 52.8	-0.8
GCPR	Guaynabo City	0.78	64		Pb	03 05 53.0	-0.8
GCPR	Guaynabo City	0.78	64		Sb	03 06 04.1	-0.1
GCPR	Guaynabo City	0.78	64	⇑*e*P	Pb	03 05 53.1	-0.8
GCPR				*e*S	Sb	03 06 04.1	-0.1
HUMP	Col San Antoni	0.94	79		Pb	03 05 55.6	-0.9
HUMP				IAML		03 06 11.9	
	comp=N,1μm,0.3s						
HUMP				IAML		03 06 12.3	
	comp=N,1μm,0.6s						
HUMP	Col San Antoni	0.94	79		Sb	03 06 08.4	-0.4
HUMP	Col San Antoni	0.94	79	⇑*e*P	Pb	03 05 55.7	-0.9
HUMP				*e*S	Sb	03 06 08.4	-0.4
CUPR	Culebra, Puert	1.50	77		Pn	03 06 04.9	-0.1
MIDR	Miches	2.35	296	⇑*e*Pg	Pb	03 06 19.3	-1.3
MIDR				IAML		03 06 59.0	
	comp=N,142nm,0.7s						
DR12	Loma Pena Alta	2.57	289		Pn	03 06 20.9	+1.1
HATOM	Hato Mayor del	2.57	289	⇓*e*Pg	Pn	03 06 20.7	+0.9
HATOM				⇑*e*Sg	Sn	03 06 52.5	+1.7
HATOM				IAML		03 07 02.6	
	comp=N,146nm,0.6s						
BANI	BANI	3.39	278		Pn	03 06 33.2	+2.1
SABA	Saba	3.42	95		Pn	03 06 31.0	-0.5
SMRT	St. Maarten	3.56	88		Pn	03 06 33.1	-0.3
SC01	Santiago de lo	3.98	292	Pn	Pn	03 06 41.7	+2.5
SDDR	Presa de Saban	4.36	284		Pn	03 06 49.1	+4.6

IDC ***15*** *03:31:53.9±0.5, 41.°72N× 79.°27E, h0km, mb4.4/43, mbtmp4.4/49, ML4.2/7, MS4.3/57, Error ellipse: s-maj=10.4km s-min=7.9km az=9.0*

MOS ***15*** *03:31:54.6±1.2, 41.°72N× 79.°47E, h11km, mb5.1/46, MS4.4/11, Error ellipse: s-maj=4.2km s-min=3.3km az=129.4*

MOS Felt (IV-V) at Kurgak, Tash-Koroo, Enil'chek, (III-IV) at Koylu, May-Saz, (II-III) at Karakol, (II) at Almaty.

BJI ***15*** *03:31:55.4, 41.°85N× 79.°32E, h15km, mB5.0/29, mb4.7/65, ML5.0/10, Ms4.5/50, Ms7 4.4/50*

GCMT ***15*** *03:31:56.3±0.3, 41.°77N±0.°02× 79.°75E±0.°04, h28km±1km, MW5.1/63, Moment Tensor Solution. s30,c30; s63,c74; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.08±.28; Mθθ-3.60±.15; Mφφ-0.47±.16; Mrθ-2.00±.24; Mθφ0.05±.11; Mφr3.35±.41; Best double couple: Mo5.26100×10^16 NP1:φs79.00000°, δ31.00000°, λ49.00000°. NP2: φs305.00000°, δ67.00000°, λ112.00000°. Principal axes: T 6.1680, Plg62.0000°, Azm248.0000°; N -1.8140, Plg20.0000°, Azm116.0000°; P -4.3530, Plg19.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *03:31:56.3±2.2, 41.°82N±0.°02× 79.°28E±0.°04, h10km±1km, mb5.1/191 Error ellipse: s-maj=6.5km s-min=2.9km az=238.0*

SOME ***15*** *03:31:56.7, 41.°88N× 79.°22E, h5km, MS4.2*

NNC ***15*** *03:31:57.8±1.0, 41.°87N× 79.°27E, h0km, mb5.5, mpv5.2, Error ellipse: s-maj=6.9km s-min=4.1km az=152.0*

KRNET ***15*** *03:31:58.5±0.1, 41.°84N× 79.°11E, h11km, mb5.5*

ISC 15 03:31:57.0±0.6, 41.°75N±0.°02× 79.°30E±0.°02, h13km±3km, n896, σ1s61/856, mb5.0/245, MS4.3/81, 81C-62D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WUS	Wushi	0.56	186		Pg	03 32 08.0	+0.1
WUS				Sg	Sb	03 32 16.8	+0.2
PRZ	Przheval'sk	0.99	318		Pb	03 32 14.8	-1.3
PRZ				Sg	Sb	03 32 27.4	-1.7
PRZ	Przheval'sk	0.99	318	*i* PG	Pb	03 32 14.8	-1.3
PRZ	Przheval'sk	0.99	318	⇓*i*P	Pb	03 32 14.8	-1.3
PRZ				⇓*i*S	Sb	03 32 26.6	-2.5
TARG	Taragay, Kyrgy	1.12	269		Pb	03 32 17.3	-1.1
TARG				Sg	Sb	03 32 30.7	-2.3
TARG	Taragay, Kyrgy	1.12	269	*i* PG	Pb	03 32 17.3	-1.1
TARG	Taragay, Kyrgy	1.12	269	⇓*i*P	Pb	03 32 17.3	-1.1
TARG				⇓*e*S	Sb	03 32 31.1	-1.9
UZB	Uzunbulak	1.41	352	P	Pn	03 32 21.4	-1.1
	1μm,0.5s						
UZB				S	Sn	03 32 39.4	-1.5
	3μm,0.7s						
UZB	Uzunbulak	1.41	352	*e*PG	Pn	03 32 21.3	-1.1
UZB	Uzunbulak	1.41	352	*e*P	Pn	03 32 21.3	-1.1
UZB	Uzunbulak	1.41	352	*e*P	Pn	03 32 21.4	-1.1
	1μm,0.5s						
UZB				*e*S	Sn	03 32 39.4	-1.5
	3μm,0.7s						
SHLS	Shalkode	1.41	5	P	Pb	03 32 23.0	-0.2
	3μm,0.2s						
SHLS			

MDOK eS Sb 03 33 03.0 -0.5
KOTS Kotyrbulak 2.19 313 Pg Pb 03 32 35.7 -0.8
2µm,0.4s
KOTS Lg Lg 03 33 04.4
12µm,0.6s
KOTS Kotyrbulak 2.19 313 *e*P Pb 03 32 35.7 -0.8
2µm,0.4s
KOTS eS Sb 03 33 04.4 +0.7
12µm,0.6s
KNDC Almaty 2.26 311 ⇑Pn Pb 03 32 36.9 -0.9
3µm,0.7s
KNDC ⇓Sn Sb 03 33 05.9 +0.2
6µm,0.7s
KNDC Almaty 2.26 311 PN Pb 03 32 36.8 -0.9
KNDC 03 33 05.8
AAA Alma-Ata 2.29 310 Pg Pb 03 32 37.9 -0.2
2µm,0.4s
AAA Lg Lg 03 33 07.9
408nm,0.4s
AAA Alma-Ata 2.29 310 *e*PN Pb 03 32 36.4 -1.7
AAA Alma-Ata 2.29 310 *e*P Pb 03 32 36.4 -1.7
AAA Alma-Ata 2.29 310 *e*P Pb 03 32 37.9 -0.2
2µm,0.4s
AAA eS Sb 03 33 07.9 +1.6
408nm,0.4s
ULHL Ulahol 2.33 283 P Pn 03 32 37.1 +2.0
SNR=243
ULHL Ulahol 2.33 283 *e*PN Pb 03 32 37.9 -1.1
ULHL eS Sb 03 33 06.8 -0.9
ULHL Ulahol 2.33 283⇓*e*P Pb 03 32 37.9 -1.1
ULHL ⇓eS Sb 03 33 06.8 -0.9
NRN Naryn 2.49 264 Pn 03 32 39.1 +1.6
NRN Naryn 2.49 264 PN Pn 03 32 39.1 +1.6
NRN Naryn 2.49 264⇓*i*P Pb 03 32 41.0 -0.8
NRN ⇓eS Sb 03 33 12.0 -0.5
MTBS Maitube 2.53 304 Pg Pb 03 32 42.3 0.0
672nm,0.5s
MTBS Lg Lg 03 33 15.1
6µm,0.4s
MTBS Maitube 2.53 304 *e*P Pb 03 32 42.3 0.0
672nm,0.5s
MTBS eS Sb 03 33 15.1 +1.7
6µm,0.4s
DJR Jarkent 2.60 8 Pg Pb 03 32 42.7 -0.9
2µm,0.5s
DJR Lg Lg 03 33 15.9
4µm,0.6s
DJR Jarkent 2.60 8 *e*P Pb 03 32 42.7 -0.9
2µm,0.5s
DJR eS Sb 03 33 15.9 +0.5
4µm,0.6s
BOOM Boomskoye usch 2.60 288 *i* PN Pb 03 32 41.6 -2.0
BOOM *i* S Sb 03 33 13.2 -2.4
BOOM Boomskoye usch 2.60 288⇑*i*P Pb 03 32 41.6 -2.0
BOOM ⇑eS Sb 03 33 13.2 -2.4
KNOS Konyrlen 2.61 358 Pg Pb 03 32 43.0 -0.7
2µm,0.4s
KNOS Lg Lg 03 33 16.3
3µm,0.5s
ARXS Arharly 2.69 337 Pg Pb 03 32 44.2 -0.7
1µm,0.4s
ARXS Lg Lg 03 33 18.8
3µm,0.5s
ARXS Arharly 2.69 337 *e*PN Pn 03 32 42.2 +2.2
ARXS Arharly 2.69 337 *e*P Pb 03 32 44.2 -0.7
1µm,0.4s
ARXS eS Sb 03 33 18.8 +1.0
3µm,0.5s
KTBS Karatobe 2.75 316 Pg Pb 03 32 45.9 -0.1
1µm,0.5s
KTBS Lg Lg 03 33 21.3
2.0nm,0.4s
KTBS Karatobe 2.75 316 *e*P Pb 03 32 45.9 -0.1
1µm,0.5s
KTBS eS Sb 03 33 21.3 +1.8
2.0nm,0.4s
KST Kastek 2.79 299 Pg Pb 03 32 47.1 +0.4
2µm,0.5s
KST Lg Lg 03 33 23.4
9µm,0.7s
KST Kastek 2.79 299 *e*P Pb 03 32 47.1 +0.4
2µm,0.5s
KST eS Sb 03 33 23.4 +2.6
9µm,0.7s
JNKS Jany-Kuch 2.85 257⇑*e*P Pb 03 32 45.4 -2.4
JNKS ⇑*i*S Sn 03 33 19.8 +3.2
TKM2 Tokmak 2 2.98 294 P Pn 03 32 46.5 +2.3
SNR=87
TKM2 Tokmak 2 2.98 294 *e*PN Pn 03 32 46.9 +2.8
TKM2 eS Sn 03 33 22.2 +2.3
TKM2 Tokmak 2 2.98 294⇓*e*P Pn 03 32 46.9 +2.8
TKM2 ⇓eS Sn 03 33 22.2 +2.3
DGS Degeres 3.00 301 Pg Pb 03 32 49.4 -1.0
573nm,0.6s
DGS Lg Lg 03 33 27.8
8µm,0.7s
DGS Degeres 3.00 301 *e*P Pb 03 32 49.4 -1.0
573nm,0.6s
DGS eS Sb 03 33 27.8 +0.9
8µm,0.7s
KRBS Karabastau 3.30 307 Pg Pb 03 32 55.3 -0.1
505nm,0.5s
KRBS Lg Lg 03 33 37.5
2µm,0.5s
KRBS Karabastau 3.30 307 *e*P Pb 03 32 55.3 -0.1
505nm,0.5s
KRBS eS Sb 03 33 37.5 +2.0
2µm,0.5s
TDK Taldyqorghan 3.31 349 Pg Pb 03 32 58.0 +2.4
3µm,0.5s
TDK Lg Lg 03 33 41.9
20nm,0.6s
TDK Taldyqorghan 3.31 349 *e*PN Pn 03 32 49.9 +1.4
TDK Taldyqorghan 3.31 349 *e*P Pn 03 32 50.0 +1.4
TDK Taldyqorghan 3.31 349 *e*P Pb 03 32 55.2 -0.3
3µm,0.5s
TDK eS Sb 03 33 38.0 +2.2
3µm,0.4s
KBK Karagaybulak 3.36 287 P Pn 03 32 51.7 +2.5
SNR=61
KBK Karagaybulak 3.36 287 *e*PN Pn 03 32 52.1 +2.8
KBK eS Sn 03 33 31.2 +2.2
KBK Karagaybulak 3.36 287⇑*e*P Pn 03 32 52.1 +2.8
KBK ⇑eS Sn 03 33 31.2 +2.2
KAPS Kapalarasan 3.53 1 Pg Pb 03 33 00.7 +1.4
399nm,0.5s
KAPS Lg Lg 03 33 46.6
1µm,0.3s
CHMS Chumysh 3.59 292 P Pn 03 32 54.2 +1.9
SNR=12
CHMS Chumysh 3.59 292 *e*PN Pn 03 32 55.2 +2.8
CHMS eS Sn 03 33 36.6 +2.0
CHMS Chumysh 3.59 292⇑*e*P Pn 03 32 55.2 +2.8
CHMS ⇑eS Sn 03 33 36.6 +2.0
UCH Uchtor 3.60 279 P Pb 03 32 57.1 -3.6
SNR=9.1
UCH Uchtor 3.60 279 *e*PN Pn 03 32 55.8 +3.0
UCH eS Sn 03 33 37.5 +2.1
UCH Uchtor 3.60 279⇓*e*P Pn 03 32 55.8 +3.0
UCH ⇓eS Sn 03 33 37.5 +2.1
FRU1 Bishkek 3.62 289 Pn 03 32 54.4 +1.6
FRU1 Bishkek 3.62 289 PN Pn 03 32 54.4 +1.6
AAK Ala-Archa 3.68 286 Pn Pn 03 32 55.7 +2.0
16nm,0.3s,baz=119,slow=12,SNR=91
AAK Lg Lg 03 33 51.7
187nm,0.3s,baz=262,slow=20,SNR=6.0
41nm,0.4s
AAK Ala-Archa 3.68 286 P Pn 03 32 56.5 +2.9
SNR=30
AAK Ala-Archa 3.68 286 Pn 03 32 55.8 +2.1
AAK Ala-Archa 3.68 286 ⇓Pn Pn 03 32 56.2 +2.5
787nm,0.7s
AAK ⇑Pg Pg 03 33 06.0 -1.4
4µm,0.6s
AAK ⇓Lg Lg 03 33 55.1
11µm,0.8s
AAK Ala-Archa 3.68 286⇑*e*P Pn 03 32 56.6 +2.9
AAK ⇑eS Sn 03 33 39.0 +2.1
ARLS Aral 3.72 273 *i* PN Pn 03 32 57.3 +3.0
ARLS eS Sn 03 33 40.2 +2.2
ARLS Aral 3.72 273⇑*i*P Pn 03 32 57.3 +3.0
ARLS ⇑eS Sn 03 33 40.2 +2.2
SGDS Sogindy 3.84 298 Pg Pb 03 33 04.3 -0.3
153nm,0.6s
SGDS Lg Lg 03 33 53.3
1µm,1.0s
SGDS Sogindy 3.84 298 *e*P Pn 03 32 58.0 +2.2
USP Ospenovka 3.86 295 P Pn 03 32 57.7 +1.7
SNR=54
USP Ospenovka 3.86 295 *e*PN Pn 03 32 58.9 +2.9
USP eS Sn 03 33 43.0 +1.8
USP Ospenovka 3.86 295⇓*e*P Pn 03 32 58.9 +2.9
USP ⇓eS Sn 03 33 43.0 +1.8
KSH2 Kashi 3.86 229 Pn Pn 03 32 59.8 +3.7
KSH2 Sn Sn 03 33 45.5 +4.1
KSH2 smax smax
comp=N,3µm,0.8s
KSH2 smax smax
comp=E,4µm,0.7s
EKS2 Erkin-Say 4.20 284 P Pn 03 33 05.4 +4.6
SNR=13
EKS2 Erkin-Say 4.20 284 *e*PN Pn 03 33 03.8 +3.0
EKS2 eS Sn 03 33 51.5 +1.7
EKS2 Erkin-Say 4.20 284⇓*e*P Pn 03 33 03.8 +3.0
EKS2 ⇓eS Sn 03 33 51.5 +1.7
SALK Salom-Alik 4.21 260 *e*PN Pn 03 33 04.6 +3.5
SALK *i* S Sn 03 33 52.7 +2.5
SALK Salom-Alik 4.21 260⇑*e*P Pn 03 33 04.6 +3.5
SALK ⇑*i*S Sn 03 33 52.7 +2.5
MRKS Merke 4.62 284 Pg Pb 03 33 20.7 +2.8
240nm,0.7s
MRKS Lg Lg 03 34 20.8
709nm,0.4s
MRKS Merke 4.62 284 *e*P Pb 03 33 20.7 +2.8
240nm,0.7s
MRKS eS Sg 03 34 20.8 -4.4
709nm,0.4s
SFK Sufi-Kurgan 4.72 250 *i* PN Pn 03 33 12.0 +3.9
SFK eS Sn 03 34 05.5 +2.7
SFK Sufi-Kurgan 4.72 250⇓*i*P Pn 03 33 12.0 +3.9
SFK ⇓eS Sn 03 34 05.5 +2.7
ARSB Arslanbob 4.76 267 Pn Pn 03 33 06.8 -1.7
ARSB Arslanbob 4.76 267 PN Pn 03 33 06.8 -1.7
BTLS Baital 5.04 312 Pg Pb 03 33 25.3 +0.2
163nm,0.7s
BTLS Lg Lg 03 34 30.0
280nm,0.7s
BTLS Baital 5.04 312 *e*P Pb 03 33 25.3 +0.2
163nm,0.7s
BTLS eS Sb 03 34 30.0 +4.5
280nm,0.7s
OHH Osh 5.07 258 *e*PN Pn 03 33 16.2 +3.5
OHH eS Sn 03 34 13.1 +2.0
OHH Osh 5.07 258⇑*e*P Pn 03 33 16.2 +3.5
OHH ⇑eS Sn 03 34 13.1 +2.0
MNAS Manas 5.11 281 *i* PN Pn 03 33 16.4 +3.1
MNAS eS Sn 03 34 13.2 +1.1
MNAS Manas 5.11 281⇑*i*P Pn 03 33 16.4 +3.1
MNAS ⇑eS Sn 03 34 13.2 +1.1
MAKZ Makanchi 5.41 20 Pn 03 33 18.4 +1.1
MAKZ Makanchi 5.41 20 ⇑Pn Pn 03 33 18.5 +1.1
136nm,0.7s
MAKZ ⇑Sn Sn 03 34 19.2 -0.1
274nm,0.9s
MAKZ ⇑Lg Lg 03 34 49.1
596nm,1.4s
MAKZ Makanchi 5.41 20 PN Pn 03 33 18.4 +1.1
MK31 Makanchi Array 5.48 22 PN Pn 03 33 19.2 +1.0
62nm,0.4s,baz=207,slow=11,SNR=2520
MK31 ⇓Sn Sn 03 34 21.2 +0.1
210nm,0.7s,baz=202,slow=23,SNR=4.5
MK31 ⇓Lg Lg 03 34 49.4
1µm,1.1s,baz=171,slow=40,SNR=3.5
MK31 Makanchi Array 5.48 22*d* PN Pn 03 33 19.1 +0.8
MKAR Makanchi Array 5.48 22 Pn Pn 03 33 19.1 +0.9
26nm,0.3s,baz=206,slow=15,SNR=280
MKAR Lg Lg 03 34 51.7
42nm,0.3s,baz=195,slow=28,SNR=6.7
26nm,0.3s
MKAR Makanchi Array 5.48 22*ce* PN Pn 03 33 19.2 +0.9
MKAR pmax pmax
comp=Z,27nm,0.3s
ARK Arkit 5.49 273 *e*PN Pn 03 33 21.7 +3.2
ARK *i* S Sn 03 34 22.4 +1.0
ARK Arkit 5.49 273⇑*e*P Pn 03 33 21.7 +3.2
ARK ⇑*i*S Sn 03 34 22.4 +1.0
DZA Taraz 6.01 284 *e*PN Pn 03 33 27.4 +1.8
DZA Taraz 6.01 284 *e*P Pn 03 33 27.4 +1.8
TRKS Terek-Say 6.12 271 *i* PN Pn 03 33 30.2 +3.0
TRKS Terek-Say 6.12 271⇑*i*P Pn 03 33 30.2 +3.0
TRKS ⇑eS Sn 03 34 37.2 +0.1
DRK Karamyk 6.14 251 Pn 03 33 31.0 +3.4
DRK Karamyk 6.14 251 PN Pn 03 33 31.0 +3.4
DRK Karamyk 6.14 251⇑*e*P Pn 03 33 31.3 +3.7
DRK ⇑eS Sn 03 34 39.1 +1.3
WMQ Urumqi 6.51 69 Pn Pn 03 33 34.4 +1.9
WMQ Sn Sn 03 34 51.0 +4.3
WMQ smax smax
comp=Z,540nm,0.9s
WMQ smax smax
comp=Z,870nm,1.1s
KK31 Karatay Array 6.64 285 Pn 03 33 35.5 +1.3
KK31 Karatay Array 6.64 285 ⇑Pn Pn 03 33 41.6 +7.4
comp=Z,24nm,0.9s,baz=89,slow=13,SNR=322
KK31 ⇓Pg Pg 03 33 59.4 -4.7
comp=Z,82nm,0.6s,baz=93,slow=15,SNR=24
KK31 ⇓Lg Lg 03 35 26.9
comp=Z,437nm,0.7s,baz=96,slow=27,SNR=7.3
KK31 Karatay Array 6.64 285 PN Pn 03 33 35.5 +1.3
KKAR Karatay Array 6.64 285 Pn 03 33 36.0 +1.7
KKAR Karatay Array 6.64 285 PN Pn 03 33 36.0 +1.7
BTK Batken 6.64 258 Pn 03 33 37.1 +2.8
BTK Batken 6.64 258 PN Pn 03 33 37.2 +2.8
BTK Batken 6.64 258⇑*e*P Pn 03 33 37.9 +3.6
BTK ⇑*i*S Sn 03 34 50.5 +0.6
IUG Iuzhnay 6.92 276 *e*PN Pn 03 33 40.1 +2.0
IUG Iuzhnay 6.92 276 *e*P Pn 03 33 40.2 +2.0
ZSN Zaisan 6.94 33 *e*PN Pn 03 33 39.7 +1.3
ZSN Zaisan 6.94 33 *e*P Pn 03 33 39.7 +1.3
BRLS Boroldaу 7.12 283 *e*P Pn 03 33 44.2 +3.4
BRLS Boroldaу 7.12 283 *e*P Pn 03 33 44.2 +3.4
KURBB Kurchatov Arra 8.89 357 Pn Pn 03 34 05.5 +0.6
comp=Z,0.3nm,0.3s,baz=180,slow=12,SNR=13
KURBB Lg Lg 03 36 36.6
comp=Z,2.5nm,0.3s,baz=183,slow=30,SNR=5.8
KURBB LR LR 03 37 44.3
comp=Z,2µm,20.1s,baz=146,slow=39
KURBB Kurchatov Arra 8.89 357 ⇑Pn Pn 03 34 06.4 +1.4
comp=Z,37nm,0.8s
KURBB ⇓Lg Lg 03 36 38.6
comp=Z,1µm,1.1s
KURBB Kurchatov Arra 8.89 357 P Pn 03 34 06.4 +1.4
KURK Kurchatov 8.98 357 Pn 03 34 06.6 +0.4
KURK Kurchatov 8.98 357 ⇑Pn Pn 03 34 06.4 +0.2
comp=Z,21nm,0.7s
KURK ⇓Lg Lg 03 36 39.7
comp=Z,288nm,0.8s
KURK Kurchatov 8.98 357⇓*i*P Pn 03 34 05.5 -0.7
NIL Nilore 9.40 213 Pn 03 34 14.5 +2.4
NIL Nilore 9.40 213 P Pn 03 34 14.5 +2.4
DGZ Jazzator, Alta 9.77 33 *ce*P Pn 03 34 18.3 +1.1
KBL Kabul 10.81 232 Pn 03 34 32.4 +0.8
KBL Kabul 10.81 232 P Pn 03 34 32.4 +0.8
ZAA0 Zalesovo Array 12.75 15 Pn 03 34 57.0 -0.7
ZALV Zalesovo Beam 12.75 15 Pn Pn 03 34 56.9 -0.9
comp=Z,1.4nm,0.3s,baz=198,slow=12,SNR=44
ZALV Lg Lg 03 38 37.8
baz=189,slow=23
ZALV LR LR 03 40 09.7
comp=Z,2µm,19.1s,baz=196,slow=39
comp=Z,7.3nm,0.3s
ZALV Zalesovo Beam 12.75 15 Pn 03 34 57.2 -0.5
BVA0 Borovoye Array 12.78 335 P Pn 03 34 56.4 -1.8
BVAR Borovoye Array 12.78 335 Pn Pn 03 34 57.9 -0.3
comp=Z,0.1nm,0.3s,baz=144,slow=14,SNR=16
BVAR Lg Lg 03 38 38.2
comp=Z,0.5nm,0.3s,baz=140,slow=31,SNR=7.2
BVAR LR LR 03 40 05.7
comp=Z,2µm,19.1s,baz=140,slow=38
BORK Borovoye 12.82 335 Pn 03 34 58.5 -0.3
BORK Borovoye 12.82 335⇓*i*P Pn 03 34 57.8 -0.9
BORK pmax pmax
comp=Z,14nm,1.7s
GOMU GeErMu 13.28 110 P Pn 03 35 02.9 -2.6
GOMU S Sn 03 37 36.1 +3.0
GOMU pmax pmax
comp=Z,90nm,0.8s
GOMU LR LR
comp=Z,700nm,8.8s
GOMU LR LR
comp=Z,500nm,8.8s
KNGR Kungurtug, Tuv 15.38 49⇑*i*P Pn 03 35 35.1 +1.4
LSA Lhasa 15.38 138 P P 03 35 38.1 -0.7
LSA Lhasa 15.38 138 P Pn 03 35 31.3 -2.9
LSA LR LR
comp=Z,660nm,15.5s
LSA LR LR
comp=Z,780nm,15.8s
LSA LR LR
comp=Z,1µm,15.1s
LSA Lhasa 15.38 138 P P 03 35 38.1 -0.7
LSA pmax pmax
comp=Z,16nm,0.8s
AB31 Akbulak array 15.48 306 Pn 03 35 33.1 -1.7
AB31 Akbulak array 15.48 306 *e*P Pn 03 35 34.0 -0.8
ABKAR Akbulak array 15.48 306 Pn 03 35 33.6 -1.3
GTA2 Gaotai 15.70 92 P Pn 03 35 34.1 -3.8
GTA2 sP P 03 35 42.6 +0.7
GTA2 pmax pmax
comp=Z,15nm,1.6s
GTA2 LR LR
comp=Z,430nm,10.2s
GTA2 LR LR
comp=Z,890nm,12.7s
GTA2 LR LR
comp=Z,990nm,11.6s
AKTO Aktyubinsk 17.08 308 P Pn 03 35 54.9 -0.4
comp=Z,1.2nm,0.3s,baz=108,slow=11,SNR=27
AKTO Lg Lg 03 40 55.2
comp=Z,0.4nm,0.3s,baz=198,slow=20,SNR=2.0
AKTO LR LR 03 42 46.1
comp=Z,2µm,20.6s,baz=60,slow=38
comp=Z,9.7nm,0.6s
MOY Mondy 17.82 49 *e*P P 03 36 05.8 +0.5
MOY pmax pmax
comp=Z,66nm,2.5s
ZAK Zakamensk 18.68 54 *e*P P 03 36 12.9 -1.9
ZAK pmax pmax
comp=Z,30nm,1.6s
SHL Shillong 19.21 143 P 03 36 18.8 -2.0
SHL Shillong 19.21 143 P P 03 36 18.8 -2.0
SHL pmax pmax
comp=Z,58nm,0.8s
SVE Sverdlovsk 19.28 328 *e*P Pn 03 36 28.4 +6.2
SVE pmax pmax
comp=E,43nm,1.4s
TLY Talaya 19.34 51 P 03 36 21.6 -0.3
TLY Talaya 19.34 51⇑*e*P P 03 36 21.8 -0.1
TLY pmax pmax
comp=Z,10.0nm,1.0s
LZDM Lanzhou Array 19.83 99 P P 03 36 28.5 +0.7
baz=286,slow=11
LZDM LR LR 03 44 50.9
comp=Z,452nm,20.1s,baz=0.0,slow=39
comp=Z,23nm,0.8s
LZH Lanzhou 19.89 98 *e*P Pn 03 36 29.8 0.0
LZH pP sP 03 36 35.5 +0.7
LZH pmax pmax
comp=Z,40nm,1.3s
LZH LR LR
comp=Z,970nm,12.7s
LZH LR LR
comp=Z,770nm,12.1s
LZH LR LR
comp=Z,1µm,12.4s
IRK Irkutsk 19.91 50 *e*P P 03 36 27.8 -0.3
ARTI Arti 19.93 324 P P 03 36 27.9 -0.4
comp=Z,0.9nm,0.3s,baz=106,slow=5.4,SNR=7.0
ARTI Lg Lg 03 42 19.8
comp=Z,0.2nm,0.3s,baz=106,slow=9.2,SNR=4.9
ARTI LR LR 03 44 41.6
comp=Z,1µm,18.5s,baz=134,slow=38
comp=Z,8.1nm,0.7s
ARTI Arti 19.93 324 P 03 36 28.5 +0.2
ARTI Arti 19.93 324 P P 03 36 28.9 +0.6
ARTI 03 36 44.3
ARTI S Sn 03 40 13.5 -0.3
ARTI MLR MLR
comp=Z,1µm,11.0s
SONM Songino Array 20.11 63 P P 03 36 30.1 -0.4
comp=Z,43nm,0.8s,baz=265,slow=11,SNR=261
SONM Lg Lg 03 42 31.3
comp=Z,0.2nm,0.3s,baz=254,slow=25,SNR=4.3
SONM LR LR 03 45 10.5
comp=Z,1µm,18.2s,baz=272,slow=40
comp=Z,43nm,0.8s
SONM Songino Array 20.11 63 P 03 36 30.6 +0.1
SONM Songino Array 20.11 63 P P 03 36 30.6 +0.1
SONM pmax pmax
comp=Z,53nm,0.8s
ULN Ulaanbaatar 20.55 63 P 03 36 35.3 0.0
ULN Ulaanbaatar 20.55 63 P P 03 36 35.3 0.0
ULN pmax pmax
comp=Z,75nm,1.4s
ULN Ulaanbaatar 20.55 63 P P 03 36 35.5 +0.2
comp=Z,180nm,1.0s
BRDH Bariadhala 21.66 148 P P 03 36 47.7 +0.5
comp=Z,75nm,0.3s,baz=66,slow=20,SNR=4.0
BRDH LR LR 03 47 02.9
comp=Z,552nm,19.2s,baz=324,slow=42
CD2 Chengdu 22.41 111 P P 03 36 56.3 +1.0
CD2 pmax pmax
comp=Z,60nm,1.3s
CD2 pmax pmax
comp=Z,360nm,5.1s
CD2 LR LR
comp=Z,600nm,12.1s
CD2 LR LR
comp=Z,770nm,16.5s
CD2 LR LR
comp=Z,1µm,19.7s
BTO2 Baotou 22.96 82 *e*P P 03 36 59.9 -1.2
BTO2 sP pP 03 37 06.9 +0.9
BTO2 PP PnPn 03 37 28.8 +3.1
BTO2 S S 03 41 10.6 -0.5
BTO2 pmax pmax
comp=Z,26nm,0.7s
BTO2 pmax pmax
comp=Z,510nm,4.4s
BTO2 LR LR
comp=Z,1µm,8.1s
BTO2 LR LR
comp=Z,1µm,8.1s
BTO2 LR LR
comp=Z,1µm,20.6s
TNCH TengChong 23.06 130 ⇑P P 03 37 03.5 +1.2
TNCH pP pP 03 37 05.1 -1.9
TNCH sP sP 03 37 08.1 -0.9
TNCH PP 03 37 35.9
TNCH S S 03 41 07.8 -5.3
TNCH sS pS 03 41 14.5 -4.3
TNCH SS SnSn 03 41 56.5 +11
TNCH pmax pmax
comp=Z,26nm,0.8s
TNCH pmax pmax
comp=Z,190nm,4.7s
TNCH LR LR
comp=Z,560nm,13.9s
TNCH LR LR
comp=Z,540nm,15.1s
TNCH LR LR
comp=Z,1µm,18.2s
AKT Akhty 23.54 280 *e*P P 03 37 07.1 +0.2
AKT *e*PPP PPP 03 37 42.5
AKT pmax pmax
comp=Z,46nm,1.4s
AKT MLR MLR
comp=Z,1µm,19.0s
BELG Belogornoye 23.87 307 P P 03 37 08.9 -0.9
comp=Z,17nm,0.7s,baz=284,slow=0.8,SNR=11
comp=Z,17nm,0.7s
BELG Belogornoye 23.87 307*d* *i*P P 03 37 08.9 -0.9
BELG pmax pmax
comp=Z,13nm,0.6s
PZH PanZhiHua 23.91 122 P P 03 37 12.6 +1.9
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,230nm,5.4s
HHC Hu-ho-hao-te 24.18 81 *e*P P 03 37 13.0 -0.1
HHC sP sP 03 37 20.8 +0.6
HHC PP PnPn 03 37 47.3 +4.9
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,210nm,6.2s

HHC LR LR
comp=Z,410nm,10.4s
HHC LR LR
comp=Z,390nm,10.6s
HHC LR LR
comp=Z,260nm,10.6s
HYB Hyderabad 24.26 182 *e*P P **03 37 14.2 +0.3**
HYB IVmB_BB 03 37 22.0
comp=Z,709nm,2.7s
HYB *e*S **S** **03 41 34.4 +2.2**
HYB IVMs_BB IVMs_BB 03 42 04.9
comp=Z,220nm,4.1s
XAN Xi'an 24.53 99 ⇑P P **03 37 16.0 -0.2**
XAN pP sP 03 37 24.6 +1.6
XAN S **S** **03 41 31.4 -5.0**
XAN pmax pmax
comp=Z,17nm,0.9s
XAN pmax pmax
comp=Z,340nm,9.5s
XAN LR LR
comp=Z,910nm,13.7s
XAN LR LR
comp=Z,1μm,13.8s
XAN LR LR
comp=Z,1μm,15.1s
KIRV Kirov 25.18 322 P P **03 37 21.4 -0.4**
comp=Z,9.6nm,0.5s,baz=102,slow=11,SNR=5.9
KIRV Lg Lg 03 45 12.5
comp=Z,0.5nm,0.3s,baz=235,slow=23,SNR=4.9
KIRV LR LR 03 48 05.9
comp=Z,390nm,21.5s,baz=215,slow=38
comp=Z,9.6nm,0.5s
KIRV Kirov 25.18 322⇑ *e*P P **03 37 21.8 0.0**
KMI2 Kunming 25.51 123 ⇓P P **03 37 25.6 +0.3**
KMI2 pmax pmax
comp=Z,32nm,1.1s
KMI2 pmax pmax
comp=Z,230nm,6.6s
KMI2 LR LR
comp=Z,670nm,13.1s
KMI2 LR LR
comp=Z,290nm,14.2s
KMI2 LR LR
comp=Z,780nm,18.5s
TIY Taiyuan 25.71 88 P P **03 37 29.1 +2.2**
TIY S **S** **03 41 53.4 -1.9**
TIY pmax pmax
comp=Z,30nm,1.0s
TIY pmax pmax
comp=Z,370nm,8.7s
TIY LR LR
comp=Z,280nm,12.6s
TIY LR LR
comp=Z,290nm,8.8s
TIY LR LR
comp=Z,380nm,11.9s
GNI Garni 26.05 278 LR LR 03 49 27.2
comp=Z,409nm,18.2s,baz=50,slow=40
GNI Garni 26.05 278 P P **03 37 31.7 +1.6**
GNI IAmb IAmb 03 37 49.4
comp=Z,34nm,0.8s
GNI Garni 26.05 278⇑ *e*P P **03 37 32.2 +2.1**
GNI pmax pmax
comp=Z,47nm,1.1s
NCK Nalchik 26.21 286⇑ *e*P P **03 37 31.5 +0.2**
NCK pmax pmax
comp=Z,41nm,1.2s
GOF Gofitskoye 26.41 290 *ce*P P 03 37 42.1 +9.0
KBZ Khabaz 26.67 287 P P **03 37 36.2 +0.8**
KBZ comp=Z,1.8nm,0.9s,baz=136,slow=2.7,SNR=9.0
LR LR 03 51 08.2
comp=Z,338nm,18.1s,baz=34,slow=43
comp=Z,1.8nm,0.9s
KBZ Khabaz 26.67 287⇑ *e*P P **03 37 37.3 +1.8**
KBZ pmax pmax
comp=Z,12nm,0.9s
KIV Kislovodsk 26.79 287 *e*P P **03 37 38.7 +2.0**
KIV *e*S **S** **03 42 15.2 +2.8**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,240nm,15.0s
ENH Enshi 26.84 106 P P **03 37 37.4 +0.3**
ENH IAmb IAmb 03 37 51.7
comp=Z,31nm,0.9s
SHA1 Shidzhatmaz 26.84 287⇑ *e*P P **03 37 38.7 +1.4**
NEUR Neytrino 26.89 286⇑ *e*P P **03 37 38.8 +1.1**
NEUR pmax pmax
comp=Z,13nm,1.3s
XLT XiLinHaoTe 26.92 73 *e*P P **03 37 38.6 +0.7**
XLT sP sP 03 37 46.1 +1.2
XLT PP **PnPn** **03 38 20.4 +0.6**
XLT S **S** **03 42 18.0 +3.6**
XLT pmax pmax
comp=Z,5.0nm,0.8s
XLT LR LR
comp=Z,710nm,14.9s
LYN LuoYang 26.94 95 P P **03 37 39.3 +1.4**
LYN pmax pmax
comp=Z,22nm,0.7s
LYN LR LR
comp=Z,860nm,13.1s
LYN LR LR
comp=Z,600nm,12.0s
LYN LR LR
comp=Z,770nm,11.3s
GYA Guiyang 27.16 116 ⇓P P **03 37 41.3 +1.1**
GYA S **S** **03 42 18.8 +0.3**
GYA pmax pmax
comp=Z,25nm,1.1s
GYA pmax pmax
comp=Z,280nm,8.3s
GYA LR LR
comp=Z,230nm,9.7s
GYA LR LR
comp=Z,220nm,5.9s
GYA LR LR
comp=Z,310nm,7.8s
VRH Novokhopyorsk 27.28 303 *e*P P **03 37 43.3 +2.4**
VRH pmax pmax
comp=Z,33nm,0.8s
HNS HongShan 27.51 87 ⇑P P **03 37 43.8 +0.7**
HNS S **S** **03 42 29.6 +6.0**
HNS pmax pmax
comp=Z,9.0nm,1.1s
HNS LR LR
comp=Z,790nm,15.9s
HNS LR LR
comp=Z,610nm,14.3s
NRIK Noril'sk 27.99 6 P P **03 37 47.0 0.0**
comp=Z,2.1nm,0.6s,baz=172,slow=8.5,SNR=3.9
NRIK LR LR 03 49 58.0
comp=Z,670nm,19.6s,baz=284,slow=39
comp=Z,2.1nm,0.6s
NRIK Noril'sk 27.99 6 P P **03 37 45.4 -1.7**
NRIK Noril'sk 27.99 6⇑ *e*P P **03 37 45.3 -1.7**
NRIK pmax pmax
comp=Z,29nm,1.3s
LABN Labinsk 28.09 289 *e*P P **03 37 47.4 -0.8**
LABN *e*PPP PPP 03 38 43.3
LABN *e*S S **03 42 33.0 +0.3**
LABN *e*SS SS 03 43 51.1 -40
LABN pmax pmax
comp=Z,24nm,0.9s
ERBR Yeremizino-Bor 28.13 291 *e*P P **03 37 49.5 +0.9**
ERBR *e* 03 38 34.6
ERBR *e*S **S** **03 42 31.6 -1.7**
ERBR *e*SS SS 03 43 52.0 -40
ERBR pmax pmax
comp=Z,17nm,0.8s
ERBR MLR MLR
comp=Z,759nm,13.0s
CHTO Chiang Mai 28.34 138 P **03 37 49.8 -0.8**
CHTO Chiang Mai 28.34 138 P P **03 37 52.6 +2.0**
CHTO Chiang Mai 28.34 138 P P **03 37 49.8 -0.8**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 28.34 138 P P **03 37 51.4 +0.8**
CMAR Chiang Mai Arr 28.64 138 P P **03 37 53.0 -0.3**
comp=Z,2.2nm,0.4s,baz=316,slow=9.2,SNR=21
CMAR LR LR 03 51 27.4
comp=Z,522nm,18.4s,baz=335,slow=41
comp=Z,2.2nm,0.4s
CMAR Chiang Mai Arr 28.64 138 P P **03 37 52.8 -0.5**
CMAR Chiang Mai Arr 28.64 138 *ce*P P **03 37 53.5 +0.2**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
VSR Storozhevoye 28.89 303 *e*P P **03 37 57.9 +2.7**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 28.89 304 *e*P P **03 37 59.8 +4.6**
VORR pmax pmax
comp=Z,30nm,0.3s
SOC Sochi 28.98 287 *e*P P **03 37 56.0 -0.1**
SOC *e* 03 38 48.5
SOC *e*S S **03 42 47.5 +1.0**
SOC *e* 03 44 10.8
SOC MLR MLR
comp=Z,318nm,13.0s
HILR Hailar Array B 29.04 60 PcP PcP **03 41 03.7 -1.0**
comp=Z,3.7nm,0.7s,baz=267,slow=2.9,SNR=3.5
HILR LR LR 03 50 35.9
comp=Z,823nm,20.2s,baz=75,slow=39
LPSR Galich'ya Gora 29.14 306 *e*P P **03 37 58.8 +1.4**
LPSR pmax pmax
comp=Z,40nm,0.8s
TIA Tai'an 29.75 88 P P **03 38 03.8 +0.8**
TIA pmax pmax
comp=Z,11nm,1.2s
MARD Mardin 29.87 274 IAmb IAmb 03 38 18.6
comp=Z,21nm,0.7s
WHN Wuhan 30.24 100 ⇑P P **03 38 08.1 +0.7**
WHN sP **sP** **03 38 15.5 +1.3**
WHN pmax pmax
comp=Z,52nm,0.8s
MOS Moscow 30.32 312 *e*P P **03 38 07.0 -0.8**
MOS *e* 03 39 08.0
MOS MLR MLR
comp=Z,800nm,11.0s
MOS MLR MLR
comp=E,600nm,12.0s
GULI GuiLin 30.45 113 P P **03 38 09.3 0.0**
GULI S **S** **03 43 09.0 -1.0**
GULI pmax pmax
comp=E,20nm,1.0s
GULI pmax pmax
comp=E,200nm,4.6s
GULI LR LR
comp=E,320nm,15.9s
GULI LR LR
comp=E,340nm,15.3s
GULI LR LR
comp=E,500nm,17.8s
KLMR Klimovskoe 30.68 322 *e*P P **03 38 09.3 -1.7**
KLMR *e* 03 39 09.3
KLMR pmax pmax
comp=Z,54nm,1.8s
KLMR MLR MLR
comp=Z,2μm,11.0s
OBN Obninsk 30.82 310 LR LR 03 50 57.2
comp=Z,808nm,21.2s,baz=16,slow=37
OBN Obninsk 30.82 310⇑ *e*P P **03 38 11.9 -0.3**
OBN *e* 03 39 09.9
OBN pmax pmax
comp=Z,132nm,4.7s
OBN MLR MLR
comp=Z,706nm,15.0s
ARPR Arapgir-MALATY 31.09 279 IAmb IAmb 03 38 18.6
comp=Z,28nm,1.0s
DL2 Dalian 32.16 81 P P **03 38 25.0 +0.8**
DL2 S **S** **03 43 37.9 +1.4**
DL2 pmax pmax
comp=Z,43nm,1.2s
DL2 pmax pmax
comp=Z,500nm,7.2s
DL2 LR LR
comp=Z,1μm,14.5s
DL2 LR LR
comp=Z,880nm,16.2s
DL2 LR LR
comp=Z,720nm,16.6s
GAZ Gaziantep 32.57 276 IAmb IAmb 03 38 30.8
comp=Z,18nm,0.8s
SIM Simferopol' 32.69 291 *e*P P 03 38 35.3 +6.5
SIM pmax pmax
comp=Z,39nm,0.8s
SIM MLR MLR
comp=Z,221nm,19.0s
NJ2 Nanjing 32.83 94 *e*P P **03 38 29.9 -0.3**
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
RAYN Ar Rayn 33.48 248 **P** **03 38 35.2 -0.8**
RAYN IAmb IAmb 03 38 37.0
comp=Z,20nm,0.8s
RAYN Ar Rayn 33.48 248 P P **03 38 35.2 -0.8**
RAYN pmax pmax
comp=Z,20nm,0.9s
CN2 Changchun 33.60 71 *e*P P **03 38 36.5 -0.3**
CN2 *es*P pP 03 38 43.0 +1.1
CN2 *e*S **S** **03 43 56.1 -2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=Z,400nm,10.0s
CN2 LR LR
comp=Z,500nm,10.0s
CN2 LR LR
comp=Z,700nm,11.0s
ZEA Zeya 33.76 53 *e*P P **03 38 38.7 +0.7**
ZEA *e* 03 38 46.7
ZEA *e* 03 39 46.6
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=E,200nm,15.0s
ZEA MLR MLR
comp=Z,300nm,16.0s
HEH HeiHe 33.97 59 *e*P P **03 38 40.3 +0.4**
HEH pmax pmax
comp=Z,18nm,1.1s
HEH LR LR
comp=Z,790nm,15.7s
HEH LR LR
comp=Z,680nm,15.3s
HEH LR LR
comp=Z,1μm,16.6s
KIRS Kirsehir-Merke 34.33 281 ⇓P P **03 38 44.4 +1.1**
BR131 Keskin Array S 34.35 282 P P **03 38 43.2 -0.3**
BR131 Keskin Array S 34.35 282 *c*P P **03 38 44.1 +0.6**
BRTR Keskin Array B 34.35 282 P P **03 38 43.5 0.0**
comp=Z,7.6nm,0.9s,baz=97,slow=6.7,SNR=35
BRTR LR LR 03 54 45.0
comp=Z,124nm,20.4s,baz=323,slow=40
comp=Z,7.6nm,0.9s
BRTR Keskin Array B 34.35 282 P P **03 38 43.4 0.0**
BRTR Keskin Array B 34.35 282 *ce*P P **03 38 43.5 0.0**
BRTR pmax pmax
comp=Z,6.0nm,0.7s
BR104 Keskin Array S 34.35 282 P P **03 38 43.0 -0.5**
comp=Z,85nmcomp=Z,12nm,1.0s
BR106 Keskin Array S 34.36 282 P P **03 38 43.3 -0.3**
comp=Z,83nmcomp=Z,10nm,1.1s
PALK Pallekele 34.36 178 LR LR 03 53 36.7
comp=Z,424nm,18.8s,baz=344,slow=38
BR105 Keskin Array S 34.37 282 P P **03 38 43.4 -0.3**
comp=Z,108nmcomp=Z,16nm,0.8s
QIZ Qiongzhong 34.45 122 P P **03 38 44.0 -0.3**
QIZ S **S** **03 44 13.8 +1.5**
QIZ LR LR
comp=Z,240nm,10.8s
QIZ LR LR
comp=Z,340nm,8.0s
QIZ LR LR
comp=Z,530nm,12.8s
BNX BinXian 34.56 67 ⇓P P **03 38 45.5 +0.4**
BNX pmax pmax
comp=Z,7.0nm,0.8s
ASF Jabal al Asfar 34.90 268 LR LR 03 55 37.6
comp=Z,161nm,21.3s,baz=27,slow=41
AK09 Malin Array Si 35.15 302 P P **03 38 49.1 -1.0**
AK10 Malin Array Si 35.17 302 P P **03 38 49.1 -1.2**
AKASG Malin Array Be 35.18 302 P P **03 38 49.7 -0.6**
comp=Z,0.5nm,0.4s,baz=74,slow=8.2,SNR=5.3
AKASG LR LR 03 54 55.4
comp=Z,162nm,19.4s,baz=346,slow=39
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 35.18 302 P P **03 38 49.3 -1.0**
AKBB Malin Array Si 35.18 302⇑ *e*P P **03 38 48.3 -2.0**
AKBB pmax pmax
comp=Z,17nm,0.9s
AK01 Malin Array Si 35.18 302 P P **03 38 49.2 -1.2**
AK07 Malin Array Si 35.20 302 P P **03 38 49.9 -0.7**
AK06 Malin Array Si 35.20 302 P P **03 38 49.6 -1.0**
AK11 Malin Array Si 35.21 302 P P **03 38 49.8 -0.9**
AK17 Malin Array Si 35.28 302 P P **03 38 50.2 -1.1**
PURM Purcari 35.32 295 ⇑P P 03 38 58.6 +7.0
MMAI Mount Meron Ar 35.63 270 P P **03 38 53.1 -1.4**
comp=Z,1.0nm,0.4s,baz=82,slow=12,SNR=2.5
MMAI LR LR 03 56 40.6
comp=Z,312nm,18.2s,baz=360,slow=42
comp=Z,1.0nm,0.4s
APA Apatity 35.66 332 *e*P P **03 38 57.8 +3.5**
APA pmax pmax
comp=Z,9.0nm,1.2s
APA MLR MLR
comp=Z,2μm,10.3s
MNK Minsk 35.80 309 *i* P P **03 38 56.5 +0.9**
comp=E,8.0nm,0.8s
MNK *i* P P **03 38 56.5 +0.9**
comp=N,7.0nm,0.7s
MNK *i* P P **03 38 56.5 +0.9**
comp=Z,16nm,0.8s,baz=89
MNK *i* PP PP **03 40 17.0 +0.2**
MNK *i* PPP PPP 03 40 30.7
MNK *i* S S **03 44 34.8 +2.3**
MNK *i* SS SnSn **03 46 59.6 +4.8**
MNK *i* SSS SSS 03 47 15.9
MNK *i* LQ LQ 03 50 57.3
MNK *i* LR LR 03 53 41.3
MNK *i* LRM MLR 03 54 07.7
comp=N,512nm,19.4s
MNK *i* LRM MLR 03 54 10.7
comp=Z,866nm,15.9s
MNK *i* LRM MLR 03 54 21.4
comp=E,172nm,12.1s
MNK Minsk 35.80 309 *i* P P **03 38 56.5 +0.9**
MNK *i* 03 40 17.0
MNK *i* 03 41 23.2
MNK *i* S S **03 44 34.7 +2.3**
MNK *i* SS SnSn **03 46 59.5 +4.8**
MNK *i* 03 49 17.1
MNK pmax pmax
comp=N,7.0nm,0.7s
MNK pmax pmax
comp=E,8.0nm,0.8s
MNK pmax pmax
comp=Z,16nm,0.8s
MNK MLR MLR
comp=N,512nm,19.0s
MNK MLR MLR
comp=Z,866nm,16.0s
MNK MLR MLR
comp=E,172nm,12.0s
YAK Yakutsk 35.90 38 P P **03 38 55.6 -0.9**
comp=E,28nm,0.5s,baz=61,slow=4.0,SNR=9.1
YAK LR LR 03 54 28.6
comp=E,390nm,20.6s,baz=264,slow=38
comp=E,28nm,0.5s
YAK Yakutsk 35.90 38 P P **03 38 52.7 -3.8**
YAK Yakutsk 35.90 38 *e*P P **03 38 55.9 -0.5**
YAK *e* 03 40 18.0
YAK *e* 03 41 23.0
YAK *e*S S **03 44 34.2 +0.4**
YAK *e*SS SnSn **03 46 57.5 +0.5**
YAK *e* 03 49 10.7
YAK pmax pmax
comp=Z,34nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,13nm,1.3s
YAK pmax pmax
comp=Z,247nm,6.2s
YAK pmax pmax
comp=N,127nm,6.2s
YAK pmax pmax
comp=E,183nm,6.6s
YAK smax smax
comp=E,57nm,2.8s
YAK smax smax
comp=N,25nm,2.5s
YAK MLR MLR
comp=Z,547nm,19.0s
YAK MLR MLR
comp=E,296nm,19.0s
YAK MLR MLR
comp=N,148nm,20.0s
SORM Soroca 36.06 298 ⇑P P **03 38 58.2 +0.2**
MI28 Mi28,Pidlybu 36.14 303 P P **03 38 57.7 -0.9**
LUBAR Lubar, Ukraine 36.20 301 P P **03 38 58.9 -0.2**
MDJ Mudanjiang 36.32 68 P P **03 39 01.8 +1.6**
MDJ pmax pmax
comp=N,15nm,1.7s
MDJ LR LR
comp=N,640nm,13.1s
MDJ LR LR
comp=N,780nm,15.8s
MDJ LR LR
comp=N,1μm,15.8s
NACGM Naroch 36.43 309 *e*P P **03 39 00.1 -0.9**
comp=Z,23nm,0.8s,baz=89
VSU Vasula 36.54 315⇓ *e*P P **03 39 01.3 -0.6**
VSU pmax pmax
comp=Z,31nm,0.7s
TPGR Topolog 36.66 292 ⇓P P 03 39 08.5 +5.3
CFR Carcaliu 36.79 293 ⇓P P 03 39 10.6 +6.4
CFR Carcaliu 36.79 293 ⇓P P 03 39 10.6 +6.4
KLR Kul'dur 36.88 60 LR LR 03 56 01.7
comp=Z,60nm,19.9s,baz=286,slow=39
KLR Kul'dur 36.88 60 *ce*P P **03 39 04.8 -0.1**
KLR pmax pmax
comp=Z,18nm,0.9s
FINES FINESS Array B 37.15 320 P P **03 39 06.3 -0.7**
comp=Z,3.3nm,0.6s,baz=96,slow=6.1,SNR=19
FINES LR LR 03 54 53.2
comp=Z,913nm,20.5s,baz=262,slow=37
comp=Z,3.3nm,0.6s
FINES FINESS Array B 37.15 320 P P **03 39 05.7 -1.4**
HORU Horodok 37.15 300 P P **03 39 06.5 -0.8**
RNPP9 Sopachiv 37.20 304 P P **03 39 06.6 -1.0**
RNPP5 Staryi Chortor 37.22 303 P P **03 39 06.8 -1.0**
RNPP8 Varash 37.23 304 P P **03 39 07.3 -0.6**
KMPD K-Podol'skiy 37.24 299 P P **03 39 07.0 -1.0**
KSRS Korea Array 37.31 80 P P **03 39 08.2 -0.5**
comp=Z,2.6nm,0.8s,baz=286,slow=8.4,SNR=5.7
KSRS LR LR 03 55 17.4
comp=Z,229nm,18.8s,baz=280,slow=38
comp=Z,2.6nm,0.8s
TESR Tescani 37.50 296 ⇓P P **03 39 14.7 +4.4**
EIL Elat 37.59 266 LR LR 03 55 22.8
comp=Z,58nm,19.4s,baz=54,slow=38
VRI Vrincioaia 37.59 295 ⇑P P 03 39 17.7 +6.6
VRI Vrincioaia 37.59 295 ⇑P P 03 39 17.7 +6.6
PRAR RASCA 37.61 297 ⇓P P 03 39 20.3 +9.1
PLOR Plostina 37.65 295 ⇑P P **03 39 14.9 +3.3**
ONER Baraj Valea Uz 37.72 295 ⇓P P 03 39 22.9 +11
ISR Istrita 37.90 293 ⇓P P 03 39 20.4 +6.7
ISR Istrita 37.90 293 ⇓P P 03 39 20.4 +6.7
COVR Voineasa-Covas 37.95 295 ⇑P P **03 39 17.6 +3.5**
PABE Paberze 38.02 311 P P **03 39 13.8 -0.7**
TURR Turia 38.03 295 ⇑P P **03 39 14.7 -0.1**
USRK Ussuriysk Ar. 38.08 68 P P **03 39 16.3 +1.1**
comp=Z,6.8nm,0.8s,baz=299,slow=6.7,SNR=8.5
comp=Z,6.8nm,0.8s
MLR Muntele Rosu 38.21 294 P P **03 39 15.9 -0.5**
comp=Z,1.9nm,0.4s,baz=198,slow=7.4,SNR=5.7
MLR LR LR 03 56 36.0
comp=Z,426nm,21.5s,baz=8.5,slow=39
comp=Z,1.9nm,0.4s
MLR Muntele Rosu 38.21 294 ⇑P P **03 39 20.6 +4.2**
MLR Muntele Rosu 38.21 294 ⇑P P **03 39 20.6 +4.2**
MLR Muntele Rosu 38.21 294 P P **03 39 16.0 -0.5**
comp=Z,32nm,1.0s
BURAR Bucovina Array 38.23 298 ⇑P P **03 39 17.5 +0.9**
BURAR Bucovina Array 38.23 298 ⇑P P **03 39 17.5 +0.9**
TIXI Tiksi 38.47 23 LR LR 03 55 57.9
comp=Z,645nm,20.0s,baz=280,slow=38
TIXI Tiksi 38.47 23 P P **03 39 16.8 -1.3**
TIXI Tiksi 38.47 23⇓ *i*P P **03 39 17.6 -0.5**
TIXI pmax pmax
comp=Z,32nm,1.2s
DOPR Dopca 38.48 295 ⇓P P **03 39 18.5 -0.1**
STNU Starunia 38.49 300 P P **03 39 17.4 -1.2**

SUW Suwalki 38.58 308 *e*P P 03 39 26.2 +7.0
MORS Morshin 38.80 300 P **P** **03 39 21.5 +0.3**
VOIR 38.84 294 ⇑P **P** **03 39 24.2 +2.6**
VOIR 38.84 294 ⇑P **P** **03 39 24.2 +2.6**
ELND Elena 38.95 290 ⇓P **P** **03 39 26.7 +4.1**
ARCES ARCESS Array B 39.06 333 P **P** **03 39 21.2 -2.0**
comp=Z,3.9nm,0.6s,baz=112,slow=8.9,SNR=12
ARCES LR LR 03 56 10.5
comp=Z,414nm,18.6s,baz=252,slow=37
comp=Z,3.9nm,0.6s
ARCES ARCESS Array B 39.06 333 P **P** **03 39 22.1 -1.0**
ARCES IAmb IAmb 03 39 40.6
comp=Z,64nm,1.5s
ARCES ARCESS Array B 39.06 333 P **P** **03 39 22.1 -1.0**
ARCES pmax pmax
comp=Z,64nm,1.5s
SHIU Shidnytsya 39.13 301 P **P** **03 39 23.9 -0.1**
ARR Arges 39.14 294 ⇑P **P** **03 39 24.4 +0.2**
TNR Turnu Rosu 39.31 295 ⇑P P 03 39 33.4 +7.9
TNR Turnu Rosu 39.31 295 ⇑P P 03 39 33.4 +7.9
KWP Kalwaria Pacla 39.47 301 *e*P **P** **03 39 27.6 +0.8**
KWP Kalwaria Pacla 39.47 301 P **P** **03 39 26.8 0.0**
comp=Z,35nm,0.9s
CJR Cluj-Napoca 39.51 297 ⇑P P 03 39 36.7 +9.5
CJR Cluj-Napoca 39.51 297 ⇑P P 03 39 36.7 +10
LOT Lotru 39.71 295 ⇓P **P** **03 39 29.9 +1.0**
BERU Beregovo 39.79 299 P **P** **03 39 29.2 -0.3**
MARR Marisel-Cluj 39.84 297 ⇑P **P** **03 39 30.2 +0.2**
KOLS Kolonicke sedl 39.89 300 *e*P P 03 39 37.5 +7.2
HOLU Holmets 39.90 300 P **P** **03 39 29.3 -1.1**
GZR Gura Zlata 40.40 295 ⇓P P 03 39 41.2 +6.6
GZR Gura Zlata 40.40 295 ⇓P P 03 39 41.2 +6.6
STHS Stebnicka Huta 40.45 301 *e*P P 03 39 43.1 +8.1
STHS Stebnicka Huta 40.45 301 *e*P P 03 39 43.1 +8.1
NIE Niedzica 41.05 302 *e*P **P** **03 39 41.2 +1.3**
NIE Niedzica 41.05 302 P **P** **03 39 40.3 +0.4**
comp=Z,16nm,1.2s
BZS Buzias 41.12 296 ⇑P **P** **03 39 40.4 -0.1**
BZS Buzias 41.12 296 ⇑P **P** **03 39 40.4 -0.1**
OJC Ojcow 41.20 303 *e*P **P** **03 39 40.2 -0.9**
OJC Ojcow 41.20 303 P **P** **03 39 40.0 -1.1**
comp=Z,30nm,1.0s
JNU Nakatsue 41.32 85 LR LR 03 58 08.3
comp=Z,249nm,18.8s,baz=340,slow=38
KAAM Kaadhehdhoo 41.47 190 P **P** **03 39 46.2 +2.7**
comp=Z,79nm,1.5s
BOVS Bovan 41.64 293 ⇓P **P** **03 39 46.0 +1.2**
LANS Liptovska Anna 41.64 301 *e*P P 03 39 52.2 +7.4
LANS Liptovska Anna 41.64 301 *e*P P 03 39 52.2 +7.4
PSZ Piszkesteto 41.66 299 ⇓P P 03 39 51.8 +6.8
PSZ Piszkesteto 41.66 299 ⇓P P 03 39 51.8 +6.8
GKP Gorka Klasztor 42.18 308 *e*P P 03 39 56.4 +7.3
STEB Steborice 42.54 303 *e*P **P** **03 39 52.2 +0.2**
STEB *ex* x 03 39 59.0
MAUC Maruska 42.64 302 *e*P P 03 39 58.2 +5.3
SRO Srobarova 42.72 300 *e*P P 03 40 03.0 +10
SRO Srobarova 42.72 300 *e*P P 03 40 03.0 +10
MORC Moravsky Berou 42.72 303 *e*P **P** **03 39 52.6 -1.0**
JAVC Velka Javorina 42.86 301 *e*P **P** **03 39 55.3 +0.5**
MORH Mrgy, Hungar 42.94 297 ⇑P **P** **03 39 54.5 -0.9**
MORH Mrgy, Hungar 42.94 297 P **P** **03 39 55.4 +0.1**
comp=Z,12nm,1.1s
SMOL Smolenice 43.11 301 *e*P P 03 40 05.7 +9.0
HFS Hagfors 43.19 318 P **P** **03 39 54.7 -2.5**
comp=Z,7.3nm,0.8s,baz=91,slow=8.9,SNR=16
HFS LR LR 03 58 38.4
comp=Z,957nm,18.4s,baz=231,slow=37
comp=Z,7.3nm,0.8s
MODS Modra-Piesok 43.24 301 *e*P P 03 40 07.5 +10
MODS *e* 03 41 48.9
MODS Modra-Piesok 43.24 301 *e*P P 03 40 07.5 +10
MODS *e*PP **PcP** **03 41 48.9 +2.1**
MODS *e* 04 03 58.0
KSP Ksiaz 43.25 304 *e*P P 03 40 03.5 +5.7
DPC Dobruska-Polom 43.35 304 *e*P **P** **03 39 57.7 -0.9**
DPC *ex* x 03 40 05.2
DPC Dobruska-Polom 43.35 304 *e*P **P** **03 39 57.7 -0.9**
DPC *e* 03 40 05.2
DPC Dobruska-Polom 43.35 304 P **P** **03 39 58.3 -0.3**
comp=Z,13nm,0.9s
OSTC Ostas 43.36 304 *e*P P 03 40 04.6 +5.9
OSTC Ostas 43.36 304 *e*P P 03 40 04.6 +5.9
MPLH Magyarpolny 43.40 299 P **P** **03 39 58.5 -0.5**
comp=Z,55nm,1.3s
VRAC Vranov 43.43 302 P **P** **03 39 58.6 -0.7**
comp=Z,1.0nm,0.5s,baz=83,slow=13,SNR=4.7
VRAC LR LR 04 01 46.4
comp=Z,544nm,19.6s,baz=10.0,slow=41
comp=Z,1.0nm,0.5s
VRAC Vranov 43.43 302 *e*P **P** **03 39 57.7 -1.6**
TYV Tymovskoe 43.46 55 *e*P **P** **03 40 00.1 +0.6**
TYV pmax pmax
comp=Z,7.0nm,1.5s
TYV pmax pmax
comp=Z,200nm,4.8s
UPC Upice 43.50 304 *e*P **P** **03 39 59.7 -0.1**
UPC Upice 43.50 304 *e*P **P** **03 39 59.7 -0.1**
KRUC Moravsky 43.62 302 *e*P **P** **03 39 59.8 -1.0**
PDG Podgorica 43.73 292 IAmb IAmb 03 40 12.9
comp=Z,22nm,0.7s
ATD Arta Tunnel 43.81 237 LR LR 04 02 08.6
comp=Z,11nm,18.4s,baz=18,slow=42
SPITS Spitsbergen Ar 44.00 345 P **P** **03 40 02.7 -0.8**
comp=Z,13nm,1.2s,baz=128,slow=9.3,SNR=10
SPITS LR LR 04 00 51.9
comp=Z,474nm,19.9s,baz=192,slow=40
comp=Z,13nm,1.2s
RONA Rosalia, Austr 44.06 300 *e*P **P** **03 40 03.4 -1.0**
comp=Z,7.4nm,1.2s
NC405 NORSAR Array S 44.07 320 IAmb IAmb 03 40 15.2
comp=Z,36nm,1.0s
NC303 NORSAR Array S 44.22 320 **P** **03 40 04.8 -0.6**
NC303 IAmb IAmb 03 40 16.9
comp=Z,34nm,1.1s
CONA Conrad Observa 44.27 300 *e*pP **P** **03 40 06.7 +0.5**
comp=Z,19nm,1.4s
NB2 NORSAR Subarra 44.32 320 P **P** **03 40 04.7 -1.6**
comp=Z,7.1nm,0.6s,baz=84,slow=8.6
NOA NORSAR Array B 44.32 320 P **P** **03 40 05.0 -1.2**
comp=Z,4.0nm,0.8s,baz=84,slow=7.9,SNR=11
NOA LR LR 03 59 23.2
comp=Z,783nm,20.9s,baz=95,slow=37
comp=Z,4.0nm,0.8s
PVCC Panska Ves 44.39 304 *e*P **P** **03 40 09.1 +2.2**
PVCC Panska Ves 44.39 304 *e*P **P** **03 40 09.1 +2.2**
NC204 NORSAR Array S 44.51 320 P **P** **03 40 06.2 -1.6**
PRU Pruhonice 44.55 304 *e*P **P** **03 40 10.1 +1.9**
PRU *ex* x 03 40 15.6
PRU Pruhonice 44.55 304 *e*P **P** **03 40 10.1 +1.9**
PRU *e* 03 40 15.6
YSS Yuzhno-Sakhali 44.57 61 *e*P P 03 40 02.8 -5.6
YSS MLR MLR
comp=Z,500nm,12.0s
YSS MLR MLR
comp=N,300nm,17.0s
BRG Berggiesshubel 44.69 305 *e*P **P** **03 40 12.6 +3.2**
BRG Amp 03 40 12.9
comp=Z,2.3nm,0.7s
BRG Berggiesshubel 44.69 305 P P 03 40 16.4 +7.1
BRG Amp 03 40 24.0
comp=Z,6.1nm,0.7s
BRG PP **PP** **03 41 57.5 +4.0**
BRG Amp 03 42 05.5
comp=Z,4.2nm,0.9s
ARSA Arzberg 44.69 300 *e*P **P** **03 40 09.2 -0.3**
comp=Z,7.1nm,1.1s
JGF Kuroka 45.00 78 P P 03 40 21.9 +10
CKRC Cesky Krumlov 45.01 302 *e*P **P** **03 40 13.4 +1.4**
CKRC *ex* x 03 40 19.7
CKRC Cesky Krumlov 45.01 302 *e*P **P** **03 40 13.4 +1.4**
CKRC *e* 03 40 19.7
KBS Kingsbay 45.04 345 *i*P **P** **03 40 12.2 +4.4**
CLL Collm 45.15 306 **P** **03 40 11.9 -1.1**
CLL IAmb IAmb 03 40 25.5
comp=Z,12nm,0.6s
CLL Collm 45.15 306 *i*P **P** **03 40 12.5 -0.5**
CLL *i* 03 40 18.7
CLL pmax pmax
comp=Z,14nm,1.4s
CLL Collm 45.15 306 P **P** **03 40 11.8 -1.1**
comp=Z,17nm,1.2s
CLL Collm 45.15 306 *i*P **P** **03 40 12.5 -0.5**
comp=Z,14nm,1.4s
CLL *i* x x 03 40 18.7
comp=Z,11nm,0.8s
CLL *i* x x 03 40 23.4
comp=Z,41nm,1.6s
CLL *i* x x 03 42 16.9
SOKA Soboth 45.19 299 *e*pP **P** **03 40 14.7 +1.2**
comp=Z,24nm,1.3s
MAJO Matsushiro 45.21 76⇓ *e*P **P** **03 40 10.9 -2.8**
MAJO pmax pmax
comp=Z,18nm,1.8s
MJAR Matsushiro Arr 45.22 76 P **P** **03 40 12.7 -1.1**
comp=Z,4.0nm,1.0s,baz=290,slow=8.4,SNR=12
comp=Z,4.0nm,1.0s
MJAR Matsushiro Arr 45.22 76 **P** **03 40 12.9 -0.8**
MJAR Matsushiro Arr 45.22 76 P **P** **03 40 12.9 -0.8**
MJAR pmax pmax
comp=Z,22nm,1.9s
MOA Molln 45.32 301 *e*pP **P** **03 40 15.4 +0.9**
comp=Z,5.3nm,1.1s
ASAJ Asahikawa 45.38 65 P **P** **03 40 14.6 -0.3**
comp=Z,5.1nm,0.7s,baz=266,slow=7.3,SNR=6.2
ASAJ LR LR 04 01 12.2
comp=Z,343nm,19.4s,baz=97,slow=39
comp=Z,5.1nm,0.7s
ASAJ Asahikawa 45.38 65 P **P** **03 40 14.6 -0.3**
ASAJ pmax pmax
comp=Z,18nm,0.9s
JKA Kamikawa-asahi 45.38 65 P **P** **03 40 14.6 -0.3**
JKA Kamikawa-asahi 45.38 65 IAmb IAmb 03 40 30.8
comp=Z,18nm,0.9s
KHC Kasperske Hory 45.38 303 *e*P **P** **03 40 14.5 -0.5**
KHC Kasperske Hory 45.38 303 *e*P **P** **03 40 14.5 -0.5**
GERES GERESS Array B 45.39 302 P **P** **03 40 14.1 -1.0**
comp=Z,0.6nm,0.6s,baz=70,slow=4.7,SNR=6.6
GERES LR LR 04 02 54.1
comp=Z,488nm,20.2s,baz=317,slow=41
comp=Z,0.6nm,0.6s
OBKA Obir 45.55 299 *e*P **P** **03 40 15.7 -0.7**
comp=Z,8.5nm,1.1s
BIOA Bad Ischl, Aus 45.77 301 *e*P **P** **03 40 17.6 -0.4**
comp=Z,8.6nm,1.5s
MUD Monsted U'grnd 46.13 314 *i*P P 03 40 25.4 +4.8
MUD IAmb IAmb 03 40 25.8
comp=Z,54nm,1.4s
KBA Koelnbreinsper 46.16 300 *e*pP **P** **03 40 22.0 +0.8**
comp=Z,12nm,1.9s
MA2 Magadan 46.20 42 P **P** **03 40 20.0 -1.2**
comp=Z,2.5nm,0.4s,baz=307,slow=10,SNR=3.8
MA2 LR LR 04 00 11.6
comp=Z,201nm,20.4s,baz=327,slow=37
comp=Z,2.5nm,0.4s
MA2 Magadan 46.20 42 P **P** **03 40 20.6 -0.6**
MA2 IAmb IAmb 03 40 34.4
comp=Z,37nm,1.6s
MA2 Magadan 46.20 42⇓ *e*P **P** **03 40 20.3 -0.9**
MA2 pmax pmax
comp=Z,23nm,1.6s
SEY Seymchan 46.41 37⇓ *e*P **P** **03 40 21.4 -1.3**
SEY pmax pmax
comp=Z,11nm,1.4s
LESA Schwarzleotal 46.48 301 *e*pP **P** **03 40 24.7 +1.0**
comp=Z,11nm,0.9s
ABTA Abfaltersbach 46.80 300 *e*pP **P** **03 40 27.1 +0.9**
comp=Z,8.7nm,1.2s
WTTA Wattenberg 47.20 301 *e*pP **P** **03 40 29.5 +0.1**
comp=Z,28nm,1.5s
WATA Walderalm 47.21 301 *e*P **P** **03 40 29.0 -0.5**
comp=Z,28nm,1.3s
SQTA Sankt Quirin 47.49 301 *e*pP **P** **03 40 31.7 +0.2**
comp=Z,7.5nm,0.9s
MOTA Moosalm 47.51 301 *e*P **P** **03 40 31.4 -0.4**
comp=Z,3.0nm,0.7s
RETA Reutte 47.68 301 *e*pP **P** **03 40 32.9 -0.2**
comp=Z,11nm,0.5s
FETA Feichten 47.86 301 *e*P **P** **03 40 34.0 -0.6**
comp=Z,10nm,1.2s
JHJ Haijo jima 2 47.92 80 LR LR 04 02 52.2
comp=Z,148nm,18.2s,baz=250,slow=39
DAVA Damuels 48.32 301 *e*P **P** **03 40 36.9 -1.2**
comp=Z,17nm,1.1s
KKM Kota Kinabalu 48.37 127 P **P** **03 40 40.2 +1.5**
KKM Kota Kinabalu 48.37 127 P **P** **03 40 39.6 +0.9**
comp=Z,30nm,1.2s
FURI Furi 48.46 239 LR LR 04 04 20.7
comp=Z,142nm,18.4s,baz=26,slow=40
DAVOX Davos/Dischmat 48.49 301 P **P** **03 40 38.2 -1.2**
comp=Z,2.9nm,0.7s,baz=117,slow=13,SNR=5.7
DAVOX LR LR 04 05 53.8
comp=Z,509nm,21.0s,baz=0.0,slow=42
comp=Z,2.9nm,0.7s
TUE Stuetta 48.95 301 **P** **03 40 41.0 -1.9**
SBUM Sibu 49.03 134 P **P** **03 40 44.3 +0.7**
SBUM Sibu 49.03 134 P **P** **03 40 45.6 +1.9**
SBUM Sibu 49.03 134 P **P** **03 40 45.5 +1.9**
comp=Z,9.5nm,1.1s
NOR Nord 49.85 349 *i*P **P** **03 40 53.5 +4.3**
NOR IAmb IAmb 03 40 55.9
comp=Z,12nm,1.3s
MYLDM Lahad Datu 50.43 125 P **P** **03 40 57.8 +3.5**
BILL Bilibino 50.98 29 **P** **03 40 57.8 -0.1**
BILL Bilibino 50.98 29⇓ *e*P **P** **03 40 57.6 -0.2**
BILL pmax pmax
comp=Z,10.0nm,1.0s
BNI Bardonecchia 51.22 300 **P** **03 40 59.9 -0.2**
BNI Bardonecchia 51.22 300 P **P** **03 40 59.9 -0.2**
BNI pmax pmax
comp=Z,56nm,1.4s
DAG Danmarks Havn 51.56 343 *i*P **P** **03 41 06.6 +4.6**
DAG IAmb IAmb 03 41 09.4
comp=Z,53nm,1.1s
SKR Severo-Kuril's 51.65 52 *e*P P 03 40 43.8 -19
SKR *e* 03 42 20.2
SKR pmax pmax
comp=Z,400nm,5.3s
SKR pmax pmax
comp=Z,103nm,1.0s
SKR MLR MLR
comp=Z,1μm,18.0s
PETK Petropavlovsk- 51.68 49 P **P** **03 41 03.2 -0.1**
comp=Z,2.6nm,0.9s,baz=215,slow=7.0,SNR=4.1
comp=Z,2.6nm,0.9s
DBG Daneborg 52.79 340 *i*P **P** **03 41 15.3 +4.1**
DBG IAmb IAmb 03 41 19.7
comp=Z,11nm,0.9s
JCJ Chichijima 52.80 85 LR LR 04 06 32.5
comp=Z,116nm,18.6s,baz=212,slow=39
EKA Eskdalemuir Ar 53.09 315 P **P** **03 41 12.4 -1.3**
comp=Z,3.9nm,0.8s,baz=74,slow=9.6,SNR=5.9
EKA LR LR 04 07 25.7
comp=Z,640nm,19.8s,baz=358,slow=40
comp=Z,3.9nm,0.8s
KEST Kesra 53.53 288 P **P** **03 41 16.1 -1.3**
comp=Z,6.1nm,1.1s,baz=82,slow=9.2,SNR=3.0
comp=Z,6.1nm,1.1s
KEST Kesra 53.53 288 IAmb IAmb 03 41 29.7
comp=Z,29nm,1.5s
LEM Lembang 54.85 145 LR LR 04 08 28.4
comp=Z,126nm,19.1s,baz=20,slow=40
MPSI Mapaga 55.11 127 P **P** **03 41 29.8 +0.9**
comp=Z,21nm,1.2s
NEEM North Greenlan 57.23 349 *i*P P 03 41 48.7 +5.1
NEEM IAmb IAmb 03 41 53.5
comp=Z,10.0nm,0.7s
BORG Borgarnes 57.31 330 LR LR 04 06 04.7
comp=Z,827nm,18.2s,baz=287,slow=36
TTSI Tana Toraja 57.79 130 P **P** **03 41 49.1 +1.1**
comp=Z,16nm,1.1s
SUMG Summit 58.15 342 *i*P P 03 41 55.8 +5.5
SUMG IAmb IAmb 03 41 58.2
comp=Z,7.2nm,0.9s
SPSI Sidrap Palu 58.51 131 P **P** **03 41 52.4 -0.7**
comp=Z,10nm,1.0s
KAPI Kappang 59.36 131 P **P** **03 41 58.4 -0.6**
KAPI IAmb IAmb 03 41 59.6
comp=Z,16nm,1.2s
KAPI Kappang 59.36 131 P **P** **03 41 58.4 -0.6**
KAPI pmax pmax
comp=Z,16nm,1.3s
KAPI Kappang 59.36 131 P **P** **03 41 58.4 -0.6**
KHKI Kahang-Kahang 59.95 137 P **P** **03 42 03.0 0.0**
comp=Z,17nm,1.3s
C16K Lisburne Hills 60.24 23 IAmb IAmb 03 42 05.2
comp=Z,12nm,0.9s
C16K Lisburne Hills 60.24 23 P **P** **03 42 03.7 -0.6**
baz=309,SNR=11
TULEG Thule 60.26 352 *i*P **P** **03 42 05.5 +1.1**
TULEG IAmb IAmb 03 42 11.7
comp=Z,98nm,1.9s
KULLO Kullorsuaq 60.40 348 *i*P P 03 42 10.8 +5.5
KULLO IAmb IAmb 03 42 14.0
comp=Z,5.7nm,0.6s
A21K Barrow 60.47 18 P **P** **03 42 04.8 -1.0**
baz=315,SNR=6.0
ESDC Sonseca Array 60.68 298 P **P** **03 42 06.7 -1.2**
comp=Z,3.5nm,1.1s,baz=48,slow=7.7,SNR=16
comp=Z,3.5nm,1.1s
SANI Sanana 60.70 124 P **P** **03 42 08.4 +0.2**
SANI Sanana 60.70 124 P **P** **03 42 08.7 +0.5**
comp=Z,34nm,1.5s
C17K DeLong Mountai 60.73 22 P **P** **03 42 06.8 -0.9**
baz=310
MBAR Mbarara 60.77 239 LR LR 04 13 46.4
comp=Z,107nm,18.9s,baz=24,slow=41
MBAR Mbarara 60.77 239 P **P** **03 42 07.5 -1.4**
MBAR IAmb IAmb 03 42 14.6
comp=Z,11nm,0.9s
MBAR Mbarara 60.77 239⇓ *e*P **P** **03 42 07.2 -1.7**
MBAR pmax pmax
comp=Z,13nm,0.9s
GAMB Gambell 60.91 29 P **P** **03 42 08.7 -0.2**
baz=306
TNA Tin City 61.13 26 P **P** **03 42 10.3 -0.1**
TNA IAmb IAmb 03 42 20.6
comp=Z,18nm,1.1s
TNA Tin City 61.13 26 P **P** **03 42 10.1 -0.4**
baz=308,SNR=6.9
C18K Utukok River 61.16 21 P **P** **03 42 10.3 -0.4**
baz=312
D17K Noatak River 61.26 23 P **P** **03 42 10.7 -0.6**
baz=311,SNR=18
C19K Lookout Ridge 61.28 21 P **P** **03 42 11.1 -0.4**
baz=313,SNR=6.8
UPNV Upernavik 61.67 346 *i*P P 03 42 19.9 +5.9
UPNV IAmb IAmb 03 42 23.0
comp=Z,8.3nm,1.2s
F14K Arctic Creek 61.71 26 P **P** **03 42 13.8 -0.5**
baz=309
MVO Moncorvo 61.89 301 *e*P P 03 42 21.8 +5.7
MVO *i* IAmb IAmb 03 42 26.3
comp=Z,41nm,1.8s
E17K Hotham Inlet 62.04 23 P **P** **03 42 16.1 -0.4**
baz=312,SNR=9.0
D19K Kuna River 62.09 21 P **P** **03 42 16.1 -0.8**
baz=314
F15K North Star Dit 62.09 25 P **P** **03 42 16.4 -0.5**
baz=311,SNR=11
E18K Tukpahlearik C 62.16 22 P **P** **03 42 17.0 -0.3**
baz=313
PCAB Cabril 62.23 302 *e*P **P** **03 42 19.2 +0.9**
PCAB *etx* tx 03 42 31.2
PGAV Gavieira, Arco 62.25 303 *e*P **P** **03 42 20.2 +1.7**
POLO Lamas de Olo 62.26 302 *e*P **P** **03 42 21.2 +2.6**
D20K Etivluk River 62.32 20 P **P** **03 42 17.3 -1.1**
baz=316
C21K Knifeblade Rid 62.46 19 P **P** **03 42 18.8 -0.5**
baz=317
ANM Nome 62.60 26 P **P** **03 42 20.1 -0.3**
ANM IAmb IAmb 03 42 30.2
comp=Z,16nm,1.1s
ANM Nome 62.60 26 P **P** **03 42 20.1 -0.3**
ANM pmax pmax
comp=Z,16nm,1.1s
ANM Nome 62.60 26 P **P** **03 42 19.7 -0.6**
baz=310,SNR=8.4
F17K Baldwin Pennin 62.64 23 P **P** **03 42 19.9 -0.6**
baz=313
PVIS Viseu 62.68 301 *e*P **P** **03 42 21.3 0.0**
PVIS *etx* tx 03 42 34.1
G15K Niukluk 62.76 25 P **P** **03 42 20.7 -0.6**
baz=311
E20K Nigu River 62.76 20 P **P** **03 42 20.8 -0.6**
baz=316
F18K Selawik 62.99 23 P **P** **03 42 22.1 -0.8**
baz=314,SNR=9.8
G16K Koyuk River 63.02 24 P **P** **03 42 22.2 -0.8**
baz=312
SAQQ Saqqaq 63.04 343 *i*P P 03 42 31.9 +8.7
SAQQ IAmb IAmb 03 42 37.5
comp=Z,12nm,0.5s
PMRV Marv??o 63.06 300 *e*P **P** **03 42 23.6 -0.2**
PMRV *i* IAmb IAmb 03 42 33.9
comp=Z,20nm,1.8s
PMRV *etx* tx 03 42 37.2
E19K Redstone River 63.06 21 P **P** **03 42 22.3 -1.1**
baz=316
D22K Ayikyak River 63.17 19 P **P** **03 42 23.1 -1.0**
baz=319
E21K Kilik River 63.19 19 P **P** **03 42 23.2 -1.0**
baz=318,SNR=20
TAM Tamanrasset 63.35 278 P **P** **03 42 25.9 -0.3**
TAM Tamanrasset 63.35 278 P **P** **03 42 25.9 -0.3**
TAM pmax pmax
comp=Z,16nm,0.6s
PCAS Casmilo, Conde 63.43 301 *e*P **P** **03 42 28.4 +2.1**
C24K Franklin Bluff 63.43 17 P **P** **03 42 24.7 -1.1**
baz=322
G17K Kiwalik Mounta 63.46 24 P **P** **03 42 25.4 -0.6**
baz=314
ILULI Ilulissat 63.48 342 *i*P **P** **03 42 30.2 +4.2**
ILULI IAmb IAmb 03 42 33.3
comp=Z,11nm,0.6s
PBAR Barrancos 63.51 299 *e*P **P** **03 42 26.6 -0.2**
PBAR *i* IAmb IAmb 03 42 28.1
comp=Z,48nm,1.9s
PBAR *etx* tx 03 42 33.1
H16K Elim 63.57 25 P **P** **03 42 25.8 -1.0**
baz=313,SNR=8.6
D23K Nanushuk River 63.58 18 P **P** **03 42 26.1 -0.7**
baz=320
F20K Avaraart Lake 63.76 21 P **P** **03 42 27.1 -0.8**
baz=317
G18K Tagagawik 63.78 23 P **P** **03 42 27.4 -0.8**
baz=315
RES Resolute Bay 63.78 358 P **P** **03 42 26.8 -1.3**
comp=Z,2.9nm,1.0s,baz=20,slow=5.8,SNR=4.9
RES LR LR 04 14 24.0
comp=Z,306nm,18.3s,baz=36,slow=40
comp=Z,2.9nm,1.0s
PMTG Montargil 63.79 300 *e*P **P** **03 42 28.5 -0.2**
D24K Happy Valley 63.85 17 P **P** **03 42 27.6 -1.0**
baz=322
PSBE So Bento 63.92 301 *e*P **P** **03 42 31.4 +1.8**
E22K Anaktuvuk Pass 63.95 19 P **P** **03 42 28.6 -0.7**
baz=320
EVO Evora 63.95 299 *etx* tx 03 42 42.6
GDH Godhavn 63.99 343 *i*P P 03 42 36.9 +7.5
GDH IAmb IAmb 03 42 40.1
comp=Z,11nm,0.7s
G19K Purcell Mounta 64.05 22 P **P** **03 42 29.4 -0.5**
baz=316,SNR=6.7
C26K Camden Bay 64.07 16 P **P** **03 42 29.1 -0.9**
baz=325
H17K Granite Mounta 64.08 24 P **P** **03 42 29.6 -0.5**
baz=314
MOE Montemor 64.18 299 *e*P **P** **03 42 32.4 +1.1**
MOE *etx* tx 03 42 43.7
MOE *i* IAmb IAmb 03 42 45.9
comp=Z,27nm,1.0s
F21K Alatna River 64.22 20 P **P** **03 42 30.4 -0.7**
baz=319
D25K Kavik River 64.25 16 P **P** **03 42 30.8 -0.5**
baz=324,SNR=10.0
PVAQ Vaqueiros 64.39 298 *e*P **P** **03 42 32.6 0.0**
PVAQ *i* IAmb IAmb 03 42 42.0
comp=Z,16nm,1.4s
PVAQ *etx* tx 03 42 44.5
H18K Honhosa River 64.39 23 P **P** **03 42 31.6 -0.6**
baz=316
J14K Nanvaranak Lak 64.42 27 P **P** **03 42 31.4 -0.9**
baz=312
MESJ Messejana 64.47 299 *etx* tx 03 42 45.5
E23K Chandalar 64.53 18 P **P** **03 42 32.5 -0.7**
baz=321,SNR=8.6
C27K Jago River 64.55 15 P **P** **03 42 32.9 -0.2**
baz=326,SNR=8.4
I17K Unalakleet 64.58 25 P **P** **03 42 33.1 -0.3**
baz=314
K13K Kusilvak Mount 64.59 28 P **P** **03 42 32.9 -0.6**
baz=312
PBDV Barranco-do-Ve 64.62 298 *e*P **P** **03 42 34.4 +0.3**
PBDV *i* IAmb IAmb 03 42 44.0
comp=Z,27nm,1.5s
PBDV *etx* tx 03 42 46.7
POIN Pond Inlet 64.75 353 P **P** **03 42 34.0 -0.4**

G21K	Allakaket	64.75	21	P	P	03 42 33.6	-0.9	
	baz=319							
E24K	Your Creek	64.78	18	P	P	03 42 33.7	-1.1	
	baz=322							
MD01	Midelt array s	64.94	292	P	P	03 42 34.4	-2.1	
MD31	MD31	64.94	292	P	P	03 42 35.2	-1.2	
MD31				IAmb	IAmb	03 42 43.5		
	comp=Z,26nm,1.9s							
J16K	Anvik River	65.03	26	IAmb	IAmb	03 42 46.0		
	comp=Z,18nm,1.1s							
J16K	Anvik River	65.03	26	P	P	03 42 35.9	-0.4	
	baz=314,SNR=6.7							
COLD	Coldfoot	65.04	19	P	P	03 42 35.3	-1.1	
COLD				IAmb	IAmb	03 42 43.5		
	comp=Z,16nm,0.8s							
COLD	Coldfoot	65.04	19	P	P	03 42 35.5	-0.9	
	baz=321,SNR=23							
M11K	Mekoryuk	65.06	30	P	P	03 42 36.2	-0.4	
	baz=311							
SFJD	Kangerlussuaq	65.08	341	*i* P	P	03 42 41.3	+4.7	
SFJD				IAmb	IAmb	03 42 47.1		
	comp=Z,10nm,0.6s							
GCSA	Galena City Sc	65.13	23	P	P	03 42 36.4	-0.5	
	baz=317							
H20K	Anotleneega Mo	65.15	22	P	P	03 42 36.3	-0.8	
	baz=318,SNR=18							
A36M	Sachs Harbour	65.24	8	P	P	03 42 37.2	-0.4	
	baz=340,SNR=6.9							
D27M	Malcolm River	65.40	15	IAmb	IAmb	03 42 51.3		
	comp=Z,10nm,0.9s							
D27M	Malcolm River	65.40	15	P	P	03 42 38.3	-0.4	
	baz=328							
E25K	Arctic Village	65.40	17	P	P	03 42 38.2	-0.5	
	baz=325							
K15K	Wolf Creek Mou	65.42	27	P	P	03 42 38.7	-0.2	
	baz=314							
J17K	VABM Dome	65.43	25	IAmb	IAmb	03 42 48.4		
	comp=Z,11nm,1.3s							
J17K	VABM Dome	65.43	25	P	P	03 42 38.7	-0.3	
	baz=316							
G23K	Bananza Creek	65.49	19	P	P	03 42 38.6	-0.7	
	baz=322							
SPIA	Saint Paul Isl	65.54	34	P	P	03 42 39.3	-0.5	
	baz=310							
H21K	Melozitna Rive	65.59	21	IAmb	IAmb	03 42 46.5		
	comp=Z,11nm,1.0s							
H21K	Melozitna Rive	65.59	21	P	P	03 42 39.4	-0.6	
	baz=320,SNR=10							
L14K	Kuka Creek	65.68	28	IAmb	IAmb	03 42 50.2		
	comp=Z,17nm,0.8s							
L14K	Kuka Creek	65.68	28	P	P	03 42 40.1	-0.5	
	baz=314							
H22K	Ishtalitna Cre	65.79	20	P	P	03 42 40.3	-0.9	
	baz=321							
F25K	Christian Rive	65.81	17	IAmb	IAmb	03 42 49.0		
	comp=Z,15nm,1.0s							
F25K	Christian Rive	65.81	17	P	P	03 42 40.8	-0.6	
	baz=325							
L15K	Ungalak Mounta	65.86	27	P	P	03 42 41.2	-0.5	
	baz=314							
J19K	Poorman	66.05	23	IAmb	IAmb	03 42 44.4		
	comp=Z,12nm,1.0s							
J19K	Poorman	66.05	23	P	P	03 42 42.2	-0.8	
	baz=318							
F26K	Sheenjek River	66.06	17	P	P	03 42 42.4	-0.6	
	baz=326,SNR=7.2							
M13K	Dall Lake	66.09	29	P	P	03 42 42.7	-0.5	
	baz=313							
J18K	Innoko River	66.12	24	P	P	03 42 43.1	-0.4	
	baz=317							
G24K	Hadweenzic Riv	66.12	18	IAmb	IAmb	03 42 44.5		
	comp=Z,14nm,0.9s							
G24K	Hadweenzic Riv	66.12	18	P	P	03 42 42.7	-0.7	
	baz=324,SNR=13							
K17K	Iditarod	66.17	25	P	P	03 42 43.4	-0.3	
	baz=316							
I21K	Tanana	66.18	21	IAmb	IAmb	03 42 56.1		
	comp=Z,16nm,1.1s							
I21K	Tanana	66.18	21	P	P	03 42 42.9	-0.9	
	baz=320							
BMAR	Burnt Mountain	66.18	17	P	P	03 42 43.6	-0.2	
E28M	Babbage River	66.22	15	IAmb	IAmb	03 42 53.2		
	comp=Z,12nm,1.0s							
E28M	Babbage River	66.22	15	P	P	03 42 43.4	-0.6	
	baz=329							
H23K	Yukon River	66.31	20	P	P	03 42 43.9	-0.7	
	baz=322							
J20K	Nowinta River	66.34	23	IAmb	IAmb	03 42 52.4		
	comp=Z,14nm,0.9s							
J20K	Nowinta River	66.34	23	P	P	03 42 44.3	-0.6	
	baz=319,SNR=9.1							
M14K	Bethel	66.35	28	P	P	03 42 44.7	-0.2	
	baz=314							
L16K	Owhat River	66.52	26	IAmb	IAmb	03 42 55.8		
	comp=Z,25nm,1.2s							
L16K	Owhat River	66.52	26	P	P	03 42 45.2	-0.8	
	baz=316,SNR=5.2							
L17K	Donlin	66.59	26	P	P	03 42 45.9	-0.6	
	baz=317,SNR=5.8							
MLY	Manley	66.63	21	P	P	03 42 46.2	-0.5	
	baz=321							
E29M	Blow River	66.71	14	IAmb	IAmb	03 42 54.2		
	comp=Z,16nm,0.9s							
E29M	Blow River	66.71	14	P	P	03 42 46.7	-0.3	
	baz=331,SNR=12							
H24K	Noodor Dome	66.72	19	P	P	03 42 46.6	-0.6	
	baz=323							
G26K	Porcupine Rive	66.76	17	IAmb	IAmb	03 42 58.5		
	comp=Z,13nm,1.1s							
G26K	Porcupine Rive	66.76	17	P	P	03 42 46.4	-1.0	
	baz=326							
M15K	Kasigluk River	66.83	28	P	P	03 42 47.7	-0.3	
	baz=315							
I23K	Minto, Yukon-K	66.90	20	IAmb	IAmb	03 42 55.7		
	comp=Z,13nm,1.0s							
I23K	Minto, Yukon-K	66.90	20	P	P	03 42 47.9	-0.4	
	baz=322,SNR=8.8							
K20K	Telida	66.99	23	IAmb	IAmb	03 42 50.4		
	comp=Z,16nm,0.9s							
K20K	Telida	66.99	23	P	P	03 42 48.6	-0.4	
	baz=319,SNR=5.8							
F28M	Old Crow	67.01	15	IAmb	IAmb	03 42 55.9		
	comp=Z,13nm,1.1s							
F28M	Old Crow	67.01	15	P	P	03 42 48.7	-0.4	
	baz=329,SNR=9.1							
N14K	Kuskokwak Cree	67.03	29	P	P	03 42 48.6	-0.6	
	baz=315							
CHUM	Lake Minchumin	67.09	22	P	P	03 42 49.0	-0.5	
	baz=320,SNR=7.1							
M16K	Timber Creek	67.19	27	P	P	03 42 49.8	-0.5	
	baz=316							
BPAW	Bear Paw Mtn.	67.29	21	P	P	03 42 50.3	-0.6	
	baz=322							
M17K	Holitna River	67.41	26	P	P	03 42 51.1	-0.6	
	baz=317,SNR=5.1							
N15K	Kwethluk River	67.41	28	P	P	03 42 51.3	-0.5	
	baz=316							
NEA2	Nenana	67.41	20	IAmb	IAmb	03 42 52.2		
	comp=Z,15nm,1.1s							
NEA2	Nenana	67.41	20	P	P	03 42 51.5	-0.2	
	baz=323,SNR=6.1							
COLA	College	67.50	20	P	P	03 42 52.3	+0.2	
COLA	College	67.50	20	*d i* P	P	03 42 51.6	-0.5	
COLA				pmax	pmax			
	comp=Z,15nm,0.7s							
COLA	College	67.50	20	P	P	03 42 51.6	-0.5	
	baz=324							
INK	Inuvik	67.54	13	P	P	03 42 50.4	-1.9	
	comp=Z,11nm,1.0s,baz=356,slow=7.1,SNR=17							
	comp=Z,11nm,1.0s							
INK	Inuvik	67.54	13	P	P	03 42 51.0	-1.3	
INK	Inuvik	67.54	13	P	P	03 42 51.0	-1.3	
INK				pmax	pmax			
	comp=Z,27nm,1.2s							
INK	Inuvik	67.54	13	P	P	03 42 51.4	-0.9	
	baz=334,SNR=11							
PRP	Porcupine Dome	67.55	19	P	P	03 42 51.7	-1.0	
	baz=325							
L19K	White Mountain	67.65	24	IAmb	IAmb	03 43 02.7		
	comp=Z,23nm,1.3s							
L19K	White Mountain	67.65	24	P	P	03 42 52.2	-1.0	
	baz=319							
N16K	Nishlik Lake	67.65	27	P	P	03 42 51.8	-1.4	
	baz=317							
O14K	Tigyukauivet M	67.65	29	P	P	03 42 51.9	-1.3	
	baz=315							
CCB	Clear Creek Bu	67.70	20	IAmb	IAmb	03 42 59.4		
	comp=Z,18nm,1.4s							
F30M	Barrier River	67.78	14	P	P	03 42 52.9	-0.9	
	baz=332							
IL31		67.83	20	IAmb	IAmb	03 43 00.5		
	comp=Z,11nm,0.9s							
ILAR	Eielson Array	67.83	20	P	P	03 42 52.0	-2.2	
	comp=Z,7.8nm,0.9s,baz=318,slow=4.3,SNR=64							
ILAR				LR	LR	04 16 29.3		
	comp=Z,269nm,19.1s,baz=320,slow=39							
	comp=Z,7.8nm,0.9s							
ILAR	Eielson Array	67.83	20	P	P	03 42 52.9	-1.4	
ILAR	Eielson Array	67.83	20	P	P	03 42 52.9	-1.4	
H27K	Steamboat Moun	67.85	17	P	P	03 42 53.0	-1.4	
	baz=328							
M18K	Stony River	67.86	25	P	P	03 42 53.3	-1.2	
	baz=319							
C36M	Paulatuk	67.88	9	P	P	03 42 53.2	-1.2	
	baz=341,SNR=19							
PPLA	Purkeypile	67.89	23	IAmb	IAmb	03 43 07.0		
	comp=Z,16nm,0.8s							
PPLA	Purkeypile	67.89	23	P	P	03 42 53.5	-1.3	
	baz=321,SNR=5.3							
G29M	Pine Creek	67.98	15	P	P	03 42 53.5	-1.6	
	baz=331							
TRF	Thorofare Moun	68.00	22	P	P	03 42 53.8	-1.7	
	baz=322							
HDA	Harding Lake	68.11	20	P	P	03 42 54.8	-1.3	
	baz=324							
MCK	McKinley	68.14	21	IAmb	IAmb	03 43 28.3		
	comp=Z,10nm,1.0s							
MCK	McKinley	68.14	21	P	P	03 42 55.4	-0.8	
	baz=323							
N17K	Nushagak Hills	68.14	26	P	P	03 42 55.4	-0.9	
	baz=318							
O15K	Ungalikthiuk R	68.22	28	P	P	03 42 55.2	-1.6	
	baz=316							
G30M	tAoh Zraii Nji	68.26	14	IAmb	IAmb	03 43 03.9		
	comp=Z,20nm,1.2s							
G30M	tAoh Zraii Nji	68.26	14	P	P	03 42 55.5	-1.4	
	baz=332,SNR=7.6							
I26K	Coal Creek Min	68.28	18	IAmb	IAmb	03 43 06.6		
	comp=Z,13nm,1.0s							
I26K	Coal Creek Min	68.28	18	P	P	03 42 56.1	-0.9	
	baz=327							
F31M	Tsiigehtchic	68.28	13	IAmb	IAmb	03 43 03.2		
	comp=Z,16nm,1.0s							
F31M	Tsiigehtchic	68.28	13	P	P	03 42 55.9	-1.1	
	baz=334,SNR=6.7							
J25K	Salcha River,	68.33	19	P	P	03 42 56.3	-1.2	
	baz=326,SNR=7.2							
I27K	Kandik River	68.37	17	P	P	03 42 56.2	-1.5	
	baz=328							
M20K	Styx River	68.40	24	P	P	03 42 57.3	-0.7	
	baz=320							
RND	Reindeer	68.42	21	IAmb	IAmb	03 43 23.6		
	comp=Z,11nm,1.1s							
N18K	Kilae Creek	68.45	26	P	P	03 42 58.2	0.0	
	baz=319							
O16K	Kokwok River B	68.53	27	P	P	03 42 58.7	0.0	
O16K	Kokwok River B	68.53	27	P	P	03 42 57.6	-1.1	
	baz=317,SNR=5.9							
O17K	Koliganek Bris	68.73	27	P	P	03 42 59.2	-0.8	
	baz=318							
SKT	Skwentna	68.80	23	P	P	03 42 59.5	-0.9	
	baz=322,SNR=9.1							
N19K	Bonanza Creek	68.80	25	P	P	03 42 60.0	-0.6	
	baz=320							
CUT	Chulitna	68.83	22	P	P	03 43 00.1	-0.4	
	baz=322							
J26L	Joseph Creek	68.86	18	IAmb	IAmb	03 43 07.4		
	comp=Z,8.9nm,0.7s							
J26L	Joseph Creek	68.86	18	P	P	03 42 59.9	-0.9	
	baz=327,SNR=7.4							
I28M	Miner Creek	68.86	16	P	P	03 42 59.8	-1.1	
	baz=330							
K24K	Donnelly Dome	68.90	20	IAmb	IAmb	03 43 00.8		
	comp=Z,13nm,0.8s							
K24K	Donnelly Dome	68.90	20	P	P	03 43 00.0	-1.0	
	baz=326							
NIKH	Nikolski High	68.90	37	P	P	03 43 00.2	-1.0	
	baz=312							
WAT1	Susitna Watana	68.97	21	P	P	03 43 00.6	-0.9	
	baz=324							
P16K	Nushagak River	68.98	28	P	P	03 43 00.5	-1.0	
	baz=318							
DHY	Denali Highway	69.09	21	IAmb	IAmb	03 43 08.8		
	comp=Z,9.5nm,0.7s							
DHY	Denali Highway	69.09	21	P	P	03 43 01.2	-1.1	
	baz=324,SNR=6.5							
RIDG	Independent Ri	69.19	19	P	P	03 43 01.6	-1.2	
	baz=326,SNR=9.0							
SCRK	Sand Creek	69.20	19	IAmb	IAmb	03 43 09.2		
	comp=Z,23nm,1.5s							
SCRK	Sand Creek	69.20	19	P	P	03 43 02.0	-1.0	
	baz=327,SNR=7.8							
I29M	Ogilvie Camp,	69.28	16	P	P	03 43 02.5	-0.9	
	baz=331							
O18K	Koktuh Hills	69.30	26	P	P	03 43 03.0	-0.6	
	baz=319,SNR=5.5							
O19K	Port Alsworth	69.33	25	IAmb	IAmb	03 43 05.2		
	comp=Z,8.1nm,0.7s							
O19K	Port Alsworth	69.33	25	P	P	03 43 03.2	-0.4	
	baz=320							
UNV	Unalaska Valle	69.35	35	P	P	03 43 03.6	-0.3	
	baz=313							
P17K	Kvichak River	69.39	27	P	P	03 43 03.6	-0.4	
	baz=319							
WAT6	Susitna Watana	69.39	21	P	P	03 43 03.3	-0.9	
	baz=324							
M22K	Willow	69.39	23	P	P	03 43 03.5	-0.5	
	baz=323							
SUA	Susitna One	69.44	23	IAmb	IAmb	03 43 28.2		
	comp=Z,17nm,1.1s							
SUA	Susitna One	69.44	23	P	P	03 43 03.5	-1.0	
	baz=322							
P18K	Big Mountain,	69.65	26	P	P	03 43 05.0	-0.7	
	baz=320,SNR=5.7							
RED	Redoubt Volcan	69.65	25	IAmb	IAmb	03 43 06.8		
	comp=Z,17nm,1.2s							
H31M	Peel River	69.65	14	IAmb	IAmb	03 43 14.5		
	comp=Z,15nm,1.0s							
H31M	Peel River	69.65	14	P	P	03 43 04.7	-1.0	
	baz=334							
PAX	Paxson	69.67	20	IAmb	IAmb	03 43 14.2		
	comp=Z,20nm,1.3s							
PAX	Paxson	69.67	20	P	P	03 43 04.8	-1.1	
	baz=326,SNR=6.8							
Q16K	King Salmon	69.70	27	P	P	03 43 05.4	-0.6	
	baz=319							
I30M	Mount Dempster	69.79	15	IAmb	IAmb	03 43 18.0		
	comp=Z,13nm,0.8s							
I30M	Mount Dempster	69.79	15	P	P	03 43 05.7	-0.9	
	baz=332,SNR=10.0							
PMR	Palmer	69.81	22	IAmb	IAmb	03 43 13.0		
	comp=Z,12nm,0.9s							
PMR	Palmer	69.81	22	P	P	03 43 05.7	-0.9	
	baz=324							
SML	Sawmill	69.86	22	P	P	03 43 04.9	-2.1	
SML	Sawmill	69.86	22	P	P	03 43 06.1	-0.9	
	baz=324,SNR=9.2							
RC01	Rabbit Creek A	70.03	23	IAmb	IAmb	03 43 08.3		
	comp=Z,22nm,1.0s							
RC01	Rabbit Creek A	70.03	23	P	P	03 43 07.4	-0.6	
	baz=323							
M23K	Glacier View	70.04	22	P	P	03 43 07.0	-1.1	
	baz=324,SNR=8.0							
J29N	Klondike Camp	70.09	16	P	P	03 43 08.0	-0.5	
	baz=331							
P19K	Oil Pt	70.10	25	P	P	03 43 07.6	-0.8	
	baz=321							
SCM	Sheep Creek Mo	70.11	22	P	P	03 43 07.7	-0.9	
	baz=325,SNR=8.0							
KNK	Knik Glacier	70.14	22	P	P	03 43 08.1	-0.6	
	baz=324							
L26K	Log Cabin Wild	70.16	19	IAmb	IAmb	03 43 40.1		
	comp=Z,25nm,1.9s							
L26K	Log Cabin Wild	70.16	19	P	P	03 43 08.0	-0.8	
	baz=328							
DAWY	Dawson	70.18	17	P	P	03 43 07.8	-1.1	
	baz=330,SNR=6.0							
M24K	Tolsona, Glenn	70.20	21	P	P	03 43 08.4	-0.7	
	baz=326,SNR=5.9							
HARP	HAARP	70.23	20	P	P	03 43 08.5	-0.7	
	baz=326,SNR=6.5							
Q17K	Contact Creek	70.28	27	P	P	03 43 08.6	-1.2	
	baz=319							
J30M	Hart River	70.37	15	P	P	03 43 09.7	-0.5	
	baz=332							
L27K	Beaver Creek,	70.49	19	P	P	03 43 10.2	-0.7	
	baz=329							
BCAR	Beaver Creek A	70.50	19	P	P	03 43 10.3	-0.6	
O22K	Cooper Landing	70.53	23	P	P	03 43 10.6	-0.4	
	baz=323							
Q19K	Cape Douglas,	70.53	26	P	P	03 43 10.8	-0.3	
	baz=321							
HOM	Homer	70.60	25	P	P	03 43 11.4	-0.1	
	baz=322							
R17L	Mt. Peulik Vol	70.60	28	P	P	03 43 10.4	-1.2	
	baz=319							
SDPT	Sand Point	70.77	32	P	P	03 43 11.9	-0.6	
	baz=317							
M26K	Nabesna, AK	70.77	19	P	P	03 43 11.8	-0.8	
	baz=328							
KLU	Klutina	70.78	21	IAmb	IAmb	03 43 33.4		
	comp=Z,16nm,1.1s							
KLU	Klutina	70.78	21	P	P	03 43 11.8	-0.8	
	baz=326							
K29M	Barlow Dome	70.78	16	IAmb	IAmb	03 43 24.6		
	comp=Z,11nm,1.0s							
K29M	Barlow Dome	70.78	16	P	P	03 43 11.8	-0.9	
	baz=332							
BRSE	Bradley Lake S	70.81	24	P	P	03 43 11.9	-1.0	
	baz=323							
SEW	Seward	70.91	23	P	P	03 43 12.3	-1.0	
	baz=324							
GLI	Glacier Island	70.96	22	P	P	03 43 12.9	-0.8	
	baz=325							
N25K	Chitina, Valde	71.03	21	P	P	03 43 13.4	-0.8	
	baz=327,SNR=6.2							
M27K	Edge Creek, AK	71.08	19	IAmb	IAmb	03 43 27.1		
	comp=Z,19nm,1.2s							
M27K	Edge Creek, AK	71.08	19	P	P	03 43 13.6	-1.0	
	baz=329							
Q20K	Shuyak Island	71.19	26	P	P	03 43 14.2	-0.9	
	baz=322							
BVCY	Beaver Creek	71.28	18	P	P	03 43 14.9	-0.8	
	baz=329							
L29M	L29M	71.30	17	IAmb	IAmb	03 43 16.7		
	comp=Z,15nm,1.1s							
L29M	L29M	71.30	17	P	P	03 43 14.8	-0.9	
	baz=331							
CHNA	Chernabura Isl	71.49	31	P	P	03 43 16.4	-0.5	
	baz=318							
BMRM	Bremner River	71.57	21	IAmb	IAmb	03 43 40.0		
	comp=Z,18nm,1.0s							
BMRM	Bremner River	71.57	21	P	P	03 43 16.6	-0.8	
	baz=327							
P23K	Montague Islan	71.60	23	P	P	03 43 16.6	-0.9	
	baz=325							
EYAK	Cordova Ski Ar	71.61	22	P	P	03 43 16.8	-0.8	
	baz=326							
MCARA	McCarthy VSAT	71.63	20	P	P	03 43 16.9	-0.8	
	baz=328							
VRDI	Verde Repeater	71.65	20	IAmb	IAmb	03 43 25.2		
	comp=Z,17nm,0.9s							
KDAK	Kodiak Island	71.77	26	P	P	03 43 16.4	-2.2	
	comp=Z,16nm,0.7s,baz=300,slow=4.0,SNR=12							
KDAK				LR	LR	04 18 10.6		
	comp=Z,272nm,20.5s,baz=9.8,slow=39							
	comp=Z,16nm,0.7s							
KDAK	Kodiak Island	71.77	26	P	P	03 43 17.2	-1.4	
KDAK	Kodiak Island	71.77	26	P	P	03 43 17.2	-1.4	
KDAK				pmax	pmax			
	comp=Z,154nm,1.7s							
KDAK	Kodiak Island	71.77	26	P	P	03 43 17.4	-1.2	
	baz=322							
FRB	Frobisher Bay	71.79	346	LR	LR	04 17 38.6		
	comp=Z,304nm,19.7s,baz=87,slow=38							
M29M	Somme Creek	71.81	17	P	P	03 43 17.7	-1.2	
	baz=331							
YUK3	Moose Creek	71.93	19	P	P	03 43 18.3	-1.5	
	baz=330							
OHAK	Old Harbor	71.98	27	P	P	03 43 18.7	-1.1	
	baz=321							
EDA	Edea	71.99	259	P	P	03 43 18.5	-2.1	
EDA				IAmb	IAmb	03 43 29.9		
	comp=Z,10.0nm,0.8s							
M30M	Minto, Yukon	72.06	17	P	P	03 43 19.5	-0.8	
	baz=332							
CRQE	Cirque	72.15	20	P	P	03 43 19.3	-1.7	
	baz=328							
TORD	Torodi Ar. Bea	72.16	272	P	P	03 43 19.0	-2.6	
	comp=Z,3.6nm,0.9s,baz=48,slow=7.4,SNR=20							
	comp=Z,3.6nm,0.9s							
TORD	Torodi Ar. Bea	72.16	272	P	P	03 43 20.2	-1.4	
SII	Sitkinak Islan	72.19	28	P	P	03 43 19.6	-1.5	
	baz=321							
TGL	Tana Glacier	72.22	20	IAmb	IAmb	03 43 34.1		
	comp=Z,26nm,1.0s							
CHIR	Chirikof Islan	72.24	29	P	P	03 43 21.0	-0.4	
	baz=320							
BARN	Barnard Glacie	72.25	20	IAmb	IAmb	03 43 30.9		
	comp=Z,22nm,1.2s							
Q23K	Middleton Isla	72.37	23	P	P	03 43 21.5	-0.6	
	baz=326							
CTG	Chitna Glacier	72.41	19	P	P	03 43 21.5	-1.1	
	baz=329							
CTGM	Chitina Glacie	72.42	19	IAmb	IAmb	03 43 36.0		
	comp=Z,27nm,1.3s							
KAIM	Kayak Island	72.50	21	P	P	03 43 22.1	-0.8	
	baz=327							
YUK8	Steele Glacier	72.52	19	P	P	03 43 22.6	-0.8	
	baz=330							
YUK4	Talbot Arm	72.73	18	P	P	03 43 22.6	-2.0	
	baz=331							
O28M	Mount Upton	72.86	19	P	P	03 43 24.2	-1.3	
	baz=330							
M31M	Drury Creek, Y	72.89	16	IAmb	IAmb	03 43 34.2		
	comp=Z,13nm,1.0s							
M31M	Drury Creek, Y	72.89	16	P	P	03 43 24.4	-0.9	
	baz=334							
MBWA	Marble Bar	72.93	141	P	P	03 43 21.9	-4.1	
	comp=Z,19nm,1.2s							
MESA	MESA	72.94	20	P	P	03 43 25.2	-0.6	
	baz=329							
FARO	Faro, Yukon	73.08	15	P	P	03 43 25.5	-0.9	
	baz=335							
KNRA	Kununurra	73.12	130	P	P	03 43 26.9	-0.3	
	comp=Z,26nm,1.4s							
KNRA	Kununurra	73.12	130	P	P	03 43 26.6	-0.6	
YUK6	Outpost Mounta	73.15	18	P	P	03 43 26.3	-0.8	
	baz=332							
N31M	Braeburn, Yuko	73.25	17	IAmb	IAmb	03 43 34.4		
	comp=Z,29nm,1.2s							
N31M	Braeburn, Yuko	73.25	17	P	P	03 43 27.0	-0.4	
	baz=333							
PSAC1	Pilbara Seismi	73.29	141	P	P	03 43 24.4	-3.6	
	comp=Z,24nm,1.2s							
PSA00	Pilbara Seismi	73.34	141	P	P	03 43 28.4	+0.1	
	comp=Z,25nm,1.0s							
PSA00	Pilbara Seismi	73.34	141	P	P	03 43 27.4	-1.0	
PSA00				IAmb	IAmb	03 43 28.9		
	comp=Z,16nm,0.9s							
PSAC2	Pilbara Seismi	73.36	141	P	P	03 43 28.6	+0.1	
	comp=Z,21nm,1.0s							
PSAB3	Pilbara Seismi	73.36	141	P	P	03 43 27.5	-0.9	
	comp=Z,25nm,1.0s							
PINM	Pinnacle	73.44	19	P	P	03 43 27.9	-0.7	
	baz=330							
HYT	Haines Junctio	73.45	18	IAmb	IAmb	03 43 43.7		
	comp=Z,16nm,1.0s							
HYT	Haines Junctio	73.45	18	P	P	03 43 28.1	-0.7	
	baz=332,SNR=6.0							
LSZ	Lusaka	73.76	231	LR	LR	04 18 31.1		
	comp=Z,148nm,19.9s,baz=328,slow=38							

baz=336
SKAG Skagway 75.17 17 P **P** 03 43 38.1 -0.5
baz=334
P32M Atlin 75.41 17 P **P** 03 43 39.3 -0.7
baz=335
YKA Yellowknife Ar 75.50 7 P **P** 03 43 38.6 -1.8
comp=Z,4.1nm,0.9s,baz=343,slow=6.2,SNR=32
YKA LR LR 04 18 54.2
comp=Z,213nm,19.4s,baz=48,slow=37
comp=Z,4.1nm,0.9s
YKA Yellowknife Ar 75.50 7 P **P** 03 43 38.9 -1.5
YKA Yellowknife Ar 75.50 7 P **P** 03 43 38.9 -1.5
YKAW1 Yellowknife Wh 75.52 7 IAmb IAmb 03 43 49.3
comp=Z,25nm,0.9s
WTLY Watson Lake, Y 75.90 14 P **P** 03 43 42.4 -0.5
baz=339
R33M Jennings River 76.15 15 P **P** 03 43 43.9 -0.5
baz=337
Q32M Nakina River 76.29 16 P **P** 03 43 45.2 -0.1
baz=336
S31K Pelican 76.31 19 P **P** 03 43 45.1 0.0
baz=334
R32K Eaglecrest 76.42 18 P **P** 03 43 45.2 -0.6
baz=335
KOTAN Kotaneelee Air 76.67 12 P **P** 03 43 46.9 -0.3
baz=342
KUQ Kuujjuaa 76.91 343 P **P** 03 43 46.4 -2.1
KUQ IAmb IAmb 03 43 54.9
comp=Z,12nm,0.7s
S32K Killisnoo 77.14 18 P **P** 03 43 49.1 -0.7
baz=335
DLBC Dease Lake 77.23 15 P **P** 03 43 49.5 -0.9
comp=Z,1.9nm,0.9s,baz=323,slow=5.1,SNR=5.4
DLBC LR LR 04 24 20.3
comp=Z,290nm,18.4s,baz=21,slow=41
comp=Z,1.9nm,0.9s
DLBC Dease Lake 77.23 15 P **P** 03 43 50.2 -0.2
baz=338
SIT Sitka 77.34 19 P **P** 03 43 51.1 +0.2
baz=334
S34M Telegraph Cree 77.49 16 IAmb IAmb 03 44 07.1
comp=Z,18nm,0.9s
S34M Telegraph Cree 77.49 16 P **P** 03 43 52.0 +0.2
baz=337
KSANE Kasane 77.52 232 IAmb IAmb 03 44 00.3
comp=Z,17nm,0.9s
KSANE Kasane 77.52 232 *i* P **P** 03 43 50.6 -1.9
TOAD Toad River Com 77.71 13 P **P** 03 43 52.9 -0.1
baz=342
MORW Morawa 78.22 148 P **P** 03 43 55.9 -0.1
MORW Morawa 78.22 148 P **P** 03 43 54.5 -1.6
MORW IAmb IAmb 03 44 05.0
comp=Z,25nm,1.1s
T35M Bob Quinn 78.53 16 P **P** 03 43 56.7 -0.9
baz=338
WRAK Wrangell Islan 78.60 17 P **P** 03 43 56.8 -1.2
baz=336
U33K Whale Pass 78.71 18 P **P** 03 43 57.2 -1.4
baz=336
BROLN Tlhalogang 78.87 229 *i* P **P** 03 43 58.1 -1.9
CRAG Craig 79.30 18 P **P** 03 44 00.3 -1.5
baz=336
U35K Hyder 79.57 16 P **P** 03 44 02.2 -1.0
baz=338
WB0 Warramunga Arr 79.62 128 IAmb IAmb 03 44 10.3
comp=Z,20nm,1.0s
WRA Warramunga Arr 79.72 128 P **P** 03 44 03.3 -1.3
comp=Z,12nm,1.1s,baz=327,slow=5.4,SNR=32
comp=Z,12nm,1.1s
WRA Warramunga Arr 79.72 128 P **P** 03 44 03.1 -1.5
WRA Warramunga Arr 79.72 128 *i* P **P** 03 44 03.2 -1.3
WRA pmax pmax
comp=Z,13nm,1.1s
WRAB Tennant Creek 79.72 128 P **P** 03 44 03.5 -1.1
WRAB IAmb IAmb 03 44 05.5
comp=Z,28nm,1.2s
WRAB Tennant Creek 79.72 128*c i* P **P** 03 44 04.2 -0.4
WRAB pmax pmax
comp=Z,31nm,1.4s
V35K Ketchikan 79.77 17 P **P** 03 44 02.9 -1.5
baz=337
WRKA Warakurna 80.44 136 P **P** 03 44 07.8 -0.5
comp=Z,4.7nm,1.8s
KHWEE KHWEE 80.60 229 *i* P **P** 03 44 08.1 -1.3
COEN Coen 80.74 118 P **P** 03 44 08.8 -1.4
COEN IAmb IAmb 03 44 16.5
comp=Z,19nm,0.8s
DBIC Dimbokro 81.24 271 P **P** 03 44 11.4 -1.6
comp=Z,4.6nm,0.9s,baz=47,slow=5.0,SNR=3.7
comp=Z,4.6nm,0.9s
DBIC Dimbokro 81.24 271 IAmb IAmb 03 44 40.6
comp=Z,39nm,1.9s
LPHEP Lephephe 81.49 228 *i* P **P** 03 44 11.9 -2.1
NWAO Narrogin (SRO) 82.10 149 P **P** 03 44 15.6 -1.3
comp=Z,34nm,1.5s
ASAR Alice Springs 82.38 131 P **P** 03 44 17.4 -1.3
comp=Z,6.1nm,0.8s,baz=326,slow=5.5,SNR=51
comp=Z,6.1nm,0.8s
ASAR Alice Springs 82.38 131 P **P** 03 44 17.5 -1.2
ASAR Alice Springs 82.38 131 P **P** 03 44 17.5 -1.2
GRTLG Ghanzi 82.62 233 IAmb IAmb 03 44 27.3
comp=Z,14nm,1.0s
GRTLG Ghanzi 82.62 233 *i* P **P** 03 44 18.9 -1.2
LBTB Lobatse 82.94 227 LR LR 04 25 42.1
comp=Z,101nm,18.2s,baz=348,slow=39
LBTB Lobatse 82.94 227 P **P** 03 44 20.9 -0.8
LBTB IAmb IAmb 03 44 28.7
comp=Z,12nm,1.1s
LBTB Lobatse 82.94 227 P **P** 03 44 20.9 -0.8
LBTB pmax pmax
comp=Z,12nm,1.1s
KGCAE Kacgae 83.18 231 *i* P **P** 03 44 21.7 -1.2
TSUM Tsumeb 83.21 237 LR LR 04 23 27.3
comp=Z,93nm,21.9s,baz=10,slow=37
QIS Mount Isa 83.35 125 P **P** 03 44 23.5 -0.3
comp=Z,19nm,0.9s
KOOLE Kule 84.47 233 *i* P **P** 03 44 28.1 -1.5
FORT Forrest 85.03 139 P **P** 03 44 31.1 -0.9
comp=Z,11nm,0.9s
BOSA Boshof 85.97 226 P **P** 03 44 36.1 -0.8
comp=Z,2.9nm,0.9s,baz=32,slow=8.5,SNR=4.0
comp=Z,2.9nm,0.9s
BOSA Boshof 85.97 226 IAmb IAmb 03 44 43.4
comp=Z,14nm,1.2s
CTAO Charters Tower 87.20 120 P **P** 03 44 43.5 +0.4
CTAO Charters Tower 87.20 120 P **P** 03 44 43.5 +0.4
CTAO pmax pmax
comp=Z,33nm,1.7s
ULM Lac du Bonnet 88.28 357 P **P** 03 44 49.0 +1.1
comp=Z,2.6nm,0.8s,baz=314,slow=3.0,SNR=4.3
ULM LR LR 04 28 12.9
comp=Z,283nm,18.2s,baz=33,slow=38
comp=Z,2.6nm,0.8s
ULM Lac du Bonnet 88.28 357 IAmb IAmb 03 44 55.5
comp=Z,16nm,1.3s
ULM Lac du Bonnet 88.28 357 P **P** 03 44 49.0 +1.1
B08A Colville Reser 88.77 12 IAmb IAmb 03 44 56.5
comp=Z,9.0nm,1.1s
NEW Newport 89.20 11 P **P** 03 44 52.6 +0.4
comp=Z,0.9nm,0.6s,baz=336,slow=5.8,SNR=6.7
comp=Z,0.9nm,0.6s
C09A Chrisman Ranch 89.48 12 IAmb IAmb 03 45 04.9
comp=Z,9.8nm,0.8s
EGMT Eagleton 90.25 6 IAmb IAmb 03 45 09.4
comp=Z,13nm,1.1s
SUR Sutherland 91.30 226 LR LR 04 29 33.2
comp=Z,99nm,18.1s,baz=348,slow=38
SADO Sadowa 91.72 345 LR LR 04 29 18.7
comp=Z,252nm,19.2s,baz=114,slow=38
PLID Pearl Lake 92.47 11 IAmb IAmb 03 45 20.5
comp=Z,17nm,1.8s
YBH Yreka Blue Hor 94.55 16 LR LR 04 31 05.8
comp=Z,11nm,20.8s,baz=28,slow=38
PDAR Pinedale Array 95.48 7 P **P** 03 45 20.2 -1.5
comp=Z,0.1nm,0.5s,baz=346,slow=5.2,SNR=6.3
comp=Z,0.1nm,0.5s
NVAR Mina Array Bea 98.60 14 P **P** 03 45 35.5 -0.3
comp=Z,0.2nm,0.7s,baz=309,slow=5.7,SNR=2.3
NVAR LR LR 04 37 25.9
comp=Z,185nm,18.3s,baz=28,slow=40
comp=Z,0.2nm,0.7s
PPT2 Papeete2 131.96 75 *e*LR LR 04 33 01.0
comp=Z,167nm,25.5s
PPT2 *e*LR LR 04 33 07.9
comp=Z,160nm,27.2s
PB16 IPOC Station P 144.63 302 **PKPab** **03 51 31.2 -1.6**
GO01 Chusmiza 145.40 300 **PKPbc** **03 51 33.6 -1.8**
PB11 IPOC Station P 145.76 300 PKPdf **PKPdf** **03 51 34.5 -1.2**

ISK 15 03:37:21.1, 39°04'N×27°88'E, h12km±1km, ML1.5/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akshisar**	**0.17**	**197**	Pg	Pg	03 37 25.3	+0.3
AKS				Sg	Sg	03 37 28.4	+0.7
GORD	**Gordes-Manisa**	**0.27**	**120**	Pg	Pg	03 37 26.9	+0.2
GORD				Sg	Sb	03 37 31.5	-1.0
SOMA	**Soma-Manisa**	**0.29**	**293**	Pg	Pg	03 37 27.3	+0.2
SOMA				Sg	Sb	03 37 32.2	-0.9
ODEM	**Odemis-Izmir**	**0.78**	**169**	Pg	Pb	03 37 36.7	+0.1
KULA	**Kula-Manisa**	**0.81**	**130**	Pg	Pb	03 37 37.2	+0.1
YAYO	**Edremit-Balk**	**0.84**	**313**	Pg	Pb	03 37 37.9	+0.2
SIMA	**Simav-Kutahya**	**0.86**	**87**	Pg	Pb	03 37 38.0	-0.1
SUSR	**Susurluk-Balik**	**0.93**	**10**	Pg	Pb	03 37 39.4	+0.2
AYDB	**Zeytinkoy-Aydi**	**1.09**	**179**	Pn	Pn	03 37 42.9	+0.5
NAZL	**Nazilli-Aydin**	**1.12**	**163**	Pn	Pg	03 37 43.1	+0.4

*NEIC **15** 03:44:18.3±2.5, 18°.6S±0°.2×176°.5E±0°.1, h10km±1km, mb4.5/12, Error ellipse: s-maj=34.6km s-min=4.9km az=151.0*
*IDC **15** 03:44:19.1±1.0, 18°.34S×175°.79E, h0km, mb4.1/10, mbtmp4.2/11, ML4.1/1, MS3.6/13, Error ellipse: s-maj=33.4km s-min=21.8km az=140.0*
ISC 15 03:44:21.8±0.6, 18°.5S±0°.1×176°.0E±0°.1, h26km, n58, σ1s27/38, mb4.4/17, MS3.5/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.10**	**68**		Pn	03 44 46.6	-8.7
MSVF				Sn	Sn	03 45 10.4	-10
DZM	**Mont Dzumac**	**9.64**	**247**	*e*LR	LR	03 49 15.7
	695nm,26.2s						
DZM	**Mont Dzumac**	**9.64**	**247**	LR	LR	03 49 24.8
	comp=Z,170nm,18.8s,baz=0.5,slow=32						
HNR	**Honiara**	**18.02**	**298**	LR	LR	03 54 16.9
	comp=Z,11nm,21.6s,baz=207,slow=34						
URZ	**Urewera**	**19.67**	**177**	P	**Pn**	**03 48 51.3**	**+1.0**
	0.5nm,0.3s,baz=165,slow=2.1,SNR=3.7						
	24nm,1.1s						
BKZ	**Black Stump Fm**	**20.55**	**179**	P	**P**	**03 48 59.2**	**+0.7**
TCW	**Tory Channel**	**22.64**	**183**	P	**P**	**03 49 16.1**	**-4.8**
RAR	**Rarotonga**	**22.92**	**101**	LR	LR	03 56 28.6
	comp=Z,115nm,20.3s,baz=278,slow=32						
THZ	**Tophouse**	**23.30**	**186**	P	**P**	**03 49 27.0**	**-0.7**
THZ				IAmb	IAmb	03 49 30.8
	comp=Z,26nm,1.0s						
EIDS	**Eidsvold**	**24.08**	**249**	P	**P**	**03 49 36.4**	**+1.1**
EIDS				IAmb	IAmb	03 49 53.4
	comp=Z,11nm,1.1s						
ARMA	**Armidale**	**25.09**	**237**	P	**P**	**03 49 46.4**	**+1.9**
ARMA				IAmb	IAmb	03 49 47.5
	comp=Z,8.9nm,0.8s						
RPZ	**Rata Peaks**	**25.44**	**188**	LR	LR	03 58 56.3
	comp=Z,65nm,20.2s,baz=124,slow=34						
CTA	**Charters Tower**	**28.11**	**262**	LR	LR	03 59 45.2
	comp=Z,152nm,21.1s,baz=46,slow=33						
PMG	**Port Moresby**	**29.40**	**284**	LR	LR	04 00 12.6
	comp=Z,211nm,18.3s,baz=130,slow=33						
TBI	**Tubuai**	**32.55**	**104**	*e*LR	LR	03 59 27.8
	comp=Z,846nm,26.8s						
TBI				*e*LR	LR	03 59 31.3
	comp=Z,1μm,27.5s						
PPT2	**Papeete2**	**32.70**	**94**	*e*LR	LR	03 59 31.6
	comp=Z,287nm,26.0s						
PPT2				*e*LR	LR	03 59 39.4
	comp=Z,257nm,29.0s						
PPT	**Papeete**	**32.70**	**94**	LR	LR	04 00 00.4
	comp=Z,78nm,21.9s,baz=302,slow=29						
STKA	**Stephens Creek**	**33.70**	**240**	P	**P**	**03 51 01.7**	**+0.7**
	comp=Z,4.4nm,0.9s,baz=46,slow=7.4,SNR=6.5						
STKA				LR	LR	04 03 08.0
	comp=Z,70nm,21.3s,baz=30,slow=34						
	comp=Z,4.4nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**37.92**	**346**	T	T	04 31 52.9
	baz=166,slow=76,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**37.93**	**346**	T	T	04 31 58.4
	baz=166,slow=76,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**37.94**	**346**	T	T	04 31 57.5
	baz=166,slow=76,SNR=6.1						
BBOO	**Buckleboo**	**38.47**	**240**	P	**P**	**03 51 42.7**	**+0.9**
WB0	**Warramunga Arr**	**39.27**	**261**		**P**	**03 51 48.2**	**-0.4**
WB0				IAmb	IAmb	03 51 48.8
	comp=Z,9.1nm,0.8s						
WRA	**Warramunga Arr**	**39.30**	**261**	P	**P**	**03 51 48.1**	**-0.9**
	comp=Z,5.3nm,0.8s,baz=92,slow=8.5,SNR=30						
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**39.30**	**261**		**P**	**03 51 48.1**	**-0.9**
AS31	**Alice Springs**	**39.51**	**255**		**P**	**03 51 50.7**	**-0.1**
ASAR	**Alice Springs**	**39.51**	**255**	P	**P**	**03 51 50.6**	**-0.1**
	comp=Z,8.7nm,0.8s,baz=84,slow=9.1,SNR=81						
ASAR				LR	LR	04 06 41.9
	comp=Z,137nm,21.2s,baz=101,slow=34						
	comp=Z,8.7nm,0.8s						
ASAR	**Alice Springs**	**39.51**	**255**	P	**P**	**03 51 50.0**	**-0.7**
TAOE	**Nuku Hiva Isla**	**43.56**	**83**	*e*LR	LR	04 04 32.3
	comp=Z,103nm,26.0s						
GUMO	**Guam**	**44.30**	**314**	LR	LR	04 08 17.5
	comp=Z,84nm,19.3s,baz=67,slow=33						
FORT	**Forrest**	**44.94**	**245**	P	**P**	**03 52 34.9**	**+0.1**
FORT				IAmb	IAmb	03 52 36.0
	comp=Z,9.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**47.69**	**262**	LR	LR	04 11 54.8
	comp=Z,189nm,18.6s,baz=80,slow=35						
PSA00	**Pilbara Seismi**	**52.61**	**257**	P	**P**	**03 53 33.7**	**-0.2**
PSA00				IAmb	IAmb	03 53 34.7
	comp=Z,3.9nm,0.8s						
MJAR	**Matsushiro Arr**	**65.40**	**327**	P	**P**	**03 55 01.1**	**-1.2**
	comp=Z,3.7nm,1.0s,baz=158,slow=6.8,SNR=9.3						
	comp=Z,3.7nm,1.0s						
RPN	**Rapa Nui**	**68.46**	**112**	LR	LR	04 18 22.9
	comp=Z,64nm,20.1s,baz=84,slow=30						
KSRS	**Korea Array**	**71.77**	**321**	LR	LR	04 22 44.8
	comp=Z,23nm,21.3s,baz=20,slow=32						
NVAR	**Mina Array Bea**	**83.62**	**46**	P	**P**	**03 56 49.8**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=294,slow=3.7,SNR=2.0						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**84.15**	**292**	P	**P**	**03 56 52.2**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=117,slow=3.6,SNR=12						
CMAR				LR	LR	04 33 22.9
	comp=Z,17nm,19.3s,baz=310,slow=35						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**84.15**	**292**	P	**P**	**03 56 51.7**	**+0.5**
F17K	**Baldwin Pennin**	**86.43**	**9**	P	**P**	**03 57 00.7**	**-0.8**
LZH	**Lanzhou**	**87.14**	**309**	*e*P	**P**	**03 57 07.0**	**+1.1**
LZH				pP	sP	03 57 15.8	-0.6
LZH				pmax	pmax	
	comp=Z,11nm,1.3s						
LZDM	**Lanzhou Array**	**87.19**	**309**	P	**P**	**03 57 06.9**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=73,slow=5.4,SNR=5.8						
	comp=Z,0.4nm,0.4s						
ILAR	**Eielson Array**	**87.78**	**15**	P	**P**	**03 57 09.8**	**+1.7**
	comp=Z,0.5nm,0.9s,baz=205,slow=5.1,SNR=4.1						
	comp=Z,0.5nm,0.9s						
SONM	**Songino Array**	**90.63**	**321**	P	**P**	**03 57 21.2**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=126,slow=2.0,SNR=3.5						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**90.85**	**59**	P	**P**	**03 57 25.4**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=266,slow=3.3,SNR=4.2						
	comp=Z,0.6nm,0.8s						
BLOK	**Blackwell**	**98.36**	**54**	P	**P**	**03 57 55.2**	**-2.4**
EKA	**Eskdalemuir Ar**	**143.27**	**359**	PKP	**PKiKP**	**04 03 56.4**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=76,slow=3.5,SNR=4.0						
STEB	**Steborice**	**144.16**	**336**	*e*PKP	**PKPab**	**04 03 52.5**	**-0.4**
OSTC	**Ostas**	**144.23**	**338**	*e*PKP	PKPbc	04 03 54.0	+0.4
DPC	**Dobruska-Polom**	**144.36**	**338**	*e*PKP	**PKPab**	**04 03 53.6**	**-0.1**
MORC	**Moravsky Berou**	**144.37**	**336**	*e*PKP	**PKPab**	**04 03 53.1**	**-0.7**
BRG	**Berggiesshubel**	**144.73**	**340**	*e*PKP	**PKPab**	**04 03 54.4**	**-0.6**
BRG				Amp		04 03 55.3
	comp=Z,8.3nm,1.2s						
JAVC	**Velka Javorina**	**145.06**	**335**	*e*PKP	**PKPab**	**04 03 56.6**	**+0.3**
VRAC	**Vranov**	**145.12**	**336**	*e*PKP	**PKPbc**	**04 03 55.6**	**-0.8**
PRU	**Pruhonice**	**145.29**	**339**	*e*PKP	**PKPbc**	**04 03 56.0**	**-0.9**
KRUC	**Moravsky**	**145.39**	**336**	*e*PKP	**PKPbc**	**04 03 56.5**	**-0.8**
CKRC	**Cesky Krumlov**	**146.36**	**338**	*e*PKP	**PKPdf**	**04 03 59.3**	**+0.2**
GERES	**GERESS Array B**	**146.56**	**339**	PKPbc	**PKPbc**	**04 04 00.5**	**-0.5**
	comp=Z,1.7nm,0.9s,baz=63,slow=0.6,SNR=10						

*IDC **15** 04:00:52.3±0.9, 2°.98S×129°.92E, h0km, mb4.0/8, mbtmp4.0/11, ML4.1/3, MS3.3/1, Error ellipse: s-maj=35.4km s-min=17.2km az=78.0*

*NEIC **15** 04:00:54.3±1.2, 2°.93S±0°.07×129°.82E±0°.06, h10km±1km, mb4.3/9, Error ellipse: s-maj=11.9km s-min=9.5km az=193.0*
*DJA **15** 04:00:57.1±0.4, 3°.S±2°.×13°.0E±°, h16km±3km, M4.2/22, mB5.0/1, mb4.4/5, MLv4.1/22, Mw(mB)4.3/1*
ISC 15 04:00:55.5±0.6, 2°.89S±0°.05×129°.87E±0°.04, h21km±4km, n39, σ1s89/45, mb4.0/11, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.04**	**244**	P	**Pn**	**04 01 17.2**	**+2.3**
MSAI				S	**Sn**	**04 01 32.9**	**+4.0**
KRAI	**Karang Ratu**	**1.53**	**254**	P	**Pb**	**04 01 25.2**	**+2.0**
BNDI	**Bandanaira**	**1.62**	**179**	P	**Pb**	**04 01 26.4**	**+1.6**
AAI	**Ambon**	**1.85**	**245**	P	**Pb**	**04 01 29.9**	**+1.3**
FAKI	**Fak Fak**	**2.38**	**91**		**Pn**	**04 01 34.3**	**+0.9**
FAKI	**Fak Fak**	**2.38**	**91**	P	**Pn**	**04 01 34.6**	**+1.3**
SIJI	**Sorong**	**2.44**	**35**	Pn	**Pn**	**04 01 35.0**	**+0.8**
	30nm,0.3s,baz=197,slow=19,SNR=75						
SIJI				Sn	**Sn**	**04 02 03.2**	**-0.4**
	29nm,0.3s,baz=217,slow=20,SNR=6.5						
	77nm,0.3s						
SIJI	**Sorong**	**2.44**	**35**	P	**Pn**	**04 01 35.6**	**+1.3**
SIJI				S	**Sn**	**04 02 04.8**	**+1.2**
SWI	**Sorong**	**2.45**	**35**	P	**Pn**	**04 01 35.2**	**+0.9**
SWI				S	**Sn**	**04 02 04.8**	**+1.2**
NLAI	**Namlea**	**2.79**	**263**	P	**Pb**	**04 01 42.3**	**-2.3**
NLAI				S	**Sb**	**04 02 16.0**	**-2.3**
KMPI	**Kaimana, Papua**	**3.91**	**101**	P	**Pn**	**04 01 56.5**	**+2.2**
KMPI				S	**Sn**	**04 02 42.7**	**+3.1**
SANI	**Sanana**	**3.96**	**282**	P	**Pn**	**04 01 56.5**	**+1.3**
RKPI	**Ransiki, Papua**	**4.52**	**72**	P	**Pn**	**04 02 04.3**	**+1.5**
BAKI	**Biak**	**6.46**	**75**	P	**Pn**	**04 02 31.2**	**+1.7**
MTN	**Manton Dam**	**9.97**	**173**		**Pn**	**04 03 16.5**	**-1.1**
KNRA	**Kununurra**	**12.75**	**185**	Pn	**Pn**	**04 03 53.8**	**-2.0**
FITZ	**Fitzroy Crossi**	**15.67**	**195**	Pn	**Pn**	**04 04 33.6**	**-1.7**
	1.1nm,0.3s,baz=15,slow=16,SNR=22						
	4.8nm,0.6s						
COEN	**Coen**	**17.14**	**131**		**Pn**	**04 04 53.5**	**-0.5**
COEN				IAmb	IAmb	04 05 05.0
	comp=Z,12nm,0.8s						
WB0	**Warramunga Arr**	**17.35**	**166**		**Pn**	**04 04 53.5**	**-3.0**
WRA	**Warramunga Arr**	**17.50**	**166**	P	**Pn**	**04 04 55.7**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=347,slow=11,SNR=18						
WRA				S	Sn	04 08 01.5	-11
	comp=Z,0.5nm,0.5s,baz=8.2,slow=22,SNR=2.8						
	comp=Z,4.3nm,0.8s						
WRA	**Warramunga Arr**	**17.50**	**166**		**Pn**	**04 04 55.3**	**-3.2**
PSA00	**Pilbara Seismi**	**20.97**	**207**	P	**P**	**04 05 36.2**	**-1.3**
PSA00				IAmb	IAmb	04 05 52.9
	comp=Z,27nm,1.4s						
AS31	**Alice Springs**	**21.02**	**170**	P	**P**	**04 05 38.4**	**+0.3**
AS31				IAmb	IAmb	04 05 39.1
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**21.02**	**170**	P	**P**	**04 05 37.7**	**-0.3**
	comp=Z,28nm,0.8s,baz=349,slow=10,SNR=212						
ASAR				S	**S**	**04 09 26.1**	**-5.4**
	comp=Z,1.0nm,0.9s,baz=350,slow=21,SNR=6.5						
	comp=Z,28nm,0.8s						
ASAR	**Alice Springs**	**21.02**	**170**	P	**P**	**04 05 38.2**	**+0.2**
BBJI	**Bungbulang**	**22.58**	**258**	P	**P**	**04 05 53.5**	**-1.5**
BBJI				IAmb	IAmb	04 06 12.8
	comp=Z,23nm,1.4s						
CTAO	**Charters Tower**	**23.41**	**138**	P	**P**	**04 06 03.8**	**+0.4**
CTAO				IAmb	IAmb	04 06 13.4
	comp=Z,7.0nm,1.1s						
JOW	**Kunigami**	**29.59**	**357**	LR	LR	04 17 07.4
	comp=Z,64nm,20.2s,baz=130,slow=33						
BBOO	**Buckleboo**	**30.33**	**170**	P	**P**	**04 07 05.4**	**-0.3**
STKA	**Stephens Creek**	**30.88**	**160**	P	**P**	**04 07 09.5**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=326,slow=11,SNR=4.1						
	comp=Z,1.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.11**	**306**	P	**P**	**04 08 06.2**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=120,slow=8.8,SNR=4.6						
	comp=Z,0.8nm,0.3s						
MJAR	**Matsushiro Arr**	**39.99**	**10**	P	**P**	**04 08 28.8**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=172,slow=9.8,SNR=4.0						
	comp=Z,0.6nm,0.3s						
MKAR	**Makanchi Array**	**64.75**	**326**	P	**P**	**04 11 32.9**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=112,slow=8.5,SNR=5.1						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**64.75**	**326**	P	**P**	**04 11 33.8**	**+1.3**
ZALV	**Zalesovo Beam**	**67.87**	**333**	P	**P**	**04 11 53.4**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=116,slow=6.6,SNR=2.2						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**68.97**	**328**	P	**P**	**04 11 59.9**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=128,slow=5.5,SNR=7.9						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**68.97**	**328**	P	**P**	**04 11 59.6**	**+0.4**
BVAR	**Borovoye Array**	**74.55**	**327**	P	**P**	**04 12 33.2**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=123,slow=7.1,SNR=3.8						
	comp=Z,0.8nm,0.8s						
ABKAR	**Akbulak array**	**79.23**	**321**	P	**P**	**04 12 59.8**	**+0.6**

*NIED **15** 04:05:44.0, 28°.06N×128°.19E, h14km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.15; $M_{\theta\theta}$2.97; $M_{\phi\phi}$-3.11; $M_{r\theta}$2.68; $M_{\theta\phi}$-0.14; $M_{\phi r}$1.51; Fault plane solution: $M_0$4.28000×10^{14} NP1: ϕ_s140.00000°, δ46.00000°, λ5.00000°. NP2:ϕ_s47.00000°, δ87.00000°, λ136.00000°.*
JMA 15 04:05:44.0±0.2, 28°.1N±0°.4×128°.2E±0°.5, h14km±2km, MV3.5/18, NW OFF OKINAWAJIMA IS, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.73**	**112**	P	Pg	04 05 57.9	-0.2
JTK				*e*S	Sg	04 06 07.7	-0.1
JOKE	**Okinoerabujima**	**0.77**	**154**	*e*P	Pg	04 05 58.5	-0.6
JOKE				*e*S	Sg	04 06 08.9	-0.3
JAMN	**Amaminishikomi**	**0.89**	**78**	P	Pb	04 06 00.8	-0.5
JAMN				*e*S	Sg	04 06 12.3	-0.7
JIH	**Iheya**	**1.04**	**191**	P	Pb	04 06 03.3	-0.5
JIH				*e*S	Sb	04 06 17.2	0.0
JYRO	**Yoronjima**	**1.05**	**167**	*e*P	Pb	04 06 03.7	-0.3
JYRO				*e*S	Sb	04 06 17.2	-0.5
JOW	**Kunigami**	**1.22**	**176**	*e*P	Pn	04 06 06.3	-0.4
JOW				*e*S	Sb	04 06 22.4	-0.2
JAM	**Amami Oshima**	**1.30**	**74**	*e*P	Pn	04 06 07.6	-0.2
JAM				*e*S	Sb	04 06 24.6	-0.2
JTAJ	**Takarajima**	**1.41**	**39**	*e*P	Pn	04 06 08.9	-0.4
JNTH	**Nagotoyohara**	**1.54**	**185**	*e*P	Pn	04 06 11.4	+0.4
JNTH				*e*S	Sn	04 06 31.1	+0.2
JZK	**Kikaishima**	**1.60**	**80**	*e*P	Pn	04 06 12.5	+0.7
JAGN	**Aguni-jima**	**1.69**	**210**	*e*P	Pn	04 06 13.8	+0.7
JJT3	**Tamagusuku3**	**1.94**	**191**	*e*P	Pb	04 06 18.0	-1.2
JYAK	**Yakushimahirau**	**2.98**	**43**	*e*P	Pn	04 06 32.3	+1.5

**IDC 15 04:18:47.5±1.8, 55°.52S×125°.01W, h0km, mb4.3/3, mbtmp4.3/3, MS3.5/3, Error ellipse: s-maj=78.2km s-min=

WRA	**Warramunga Arr**	**79.63**	**250**	P	P	04 30 56.5	-0.2
	1.4nm,1.0s,baz=149,slow=4.9,SNR=4.8						
	1.4nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**93.42**	**298**	T	T	06 16 22.3	
	baz=148,slow=76						
H11S3	**WAKE ISLAND Hy**	**93.43**	**298**	T	T	06 16 29.2	
	baz=148,slow=76						
H11S1	**WAKE ISLAND Hy**	**93.43**	**298**	T	T	06 16 23.3	
	baz=148,slow=76						
H11N3	**WAKE ISLAND Hy**	**94.35**	**299**	T	T	06 17 38.7	
	baz=147,slow=76						
H11N1	**WAKE ISLAND Hy**	**94.35**	**299**	T	T	06 17 39.7	
	baz=147,slow=76						
H11N2	**WAKE ISLAND Hy**	**94.37**	**299**	T	T	06 17 32.8	
	baz=147,slow=76						
ILAR	**Eielson Array**	**121.13**	**349**	PKP	PKPdf	04 37 40.4	-0.2
	0.7nm,1.0s,baz=190,slow=3.5,SNR=5.5						

*IDC **15** 04:24:08.5±1.6,9°.27S×114°.41E,h0^{km},mb3.9/8, mbtmp3.9/9,ML3.9/1,MS3.5/2,Error ellipse: s-maj=102.9km s-min=13.5km az=50.0*
*DJA **15** 04:24:14.8±0.3,10°.S±3°.×11°.4E±°,h10^{km},M4.3/30, mB4.9/4,mb4.6/7,MLv4.3/30,Mw(mB)4.2/4*
ISC 15 04:24:13.1±3.1,9°.75S±0°.07×114°.24E±0°.04,h12^{km}±19^{km}, n38,σ1°.44/40,mb4.0/8,South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.27**	**356**	P		**Pn**	**04 24 35.7**	**-1.0**
IGBI	**Denpasar**	**1.29**	**44**	P		**Pn**	**04 24 36.5**	**-0.4**
IGBI				S		**Sb**	**04 24 53.4**	**-0.4**
DNP	**Denpasar**	**1.44**	**42**	P		**Pn**	**04 24 39.9**	**+1.0**
DNP				S		**Sb**	**04 24 57.1**	**-0.9**
RTBI	**Rangdo, Negare**	**1.46**	**29**	P		**Pn**	**04 24 39.0**	**-0.3**
BYJI	**Banyuwangi**	**1.53**	**4**	P		**Pn**	**04 24 40.1**	**-0.1**
BYJI				S		**Sn**	**04 24 58.6**	**-1.4**
GMJI	**Gumukmas**	**1.66**	**332**	P		**Pn**	**04 24 41.4**	**-0.6**
SRBI	**Singaraja**	**1.92**	**30**	P		**Pn**	**04 24 45.7**	**+0.2**
KHKI	**Kahang-Kahang**	**1.93**	**45**	P		**Pn**	**04 24 47.7**	**+2.0**
ABJI	**Asem Bagus**	**1.94**	**360**	P		**Pn**	**04 24 46.9**	**+1.0**
ABJI				S		**Sn**	**04 25 10.3**	**+0.1**
BLJI	**Banyuglugur**	**2.09**	**342**	P		**Pn**	**04 24 48.9**	**+1.0**
BLJI				S		**Sn**	**04 25 14.8**	**+0.9**
KLNI	**Mataram**	**2.26**	**54**	P		**Pn**	**04 24 51.2**	**+0.9**
KMMI	**Kalianget**	**2.70**	**354**	P		**Pn**	**04 24 57.8**	**+1.5**
TWSI	**Taliwang, Sumb**	**2.80**	**69**	P		**Pn**	**04 24 58.5**	**+0.8**
SNJI	**Sawahan-Nganju**	**3.13**	**308**	P		**Pn**	**04 25 04.0**	**+1.6**
SNJI				S		**Sn**	**04 25 41.3**	**+1.4**
SJI	**Sawahan**	**3.16**	**309**	P		**Pn**	**04 25 03.4**	**+0.7**
PCJI	**Pacitan**	**3.39**	**297**	P		**Pn**	**04 25 06.4**	**+0.5**
PLAI	**Plampang**	**3.61**	**76**	P		**Pn**	**04 25 10.2**	**+1.3**
NGJI	**Ngawi**	**3.62**	**311**	P		**Pn**	**04 25 12.1**	**+3.1**
NGJI				S		**Sn**	**04 25 53.4**	**+1.7**
TBJI	**Tambak Boyo**	**3.75**	**321**	P		**Pn**	**04 25 11.7**	**+0.9**
UGM	**Wanagama**	**4.10**	**296**	P		**Pn**	**04 25 17.1**	**+1.5**
DBNI	**Kabupaten Domp**	**4.21**	**73**	P		**Pn**	**04 25 19.2**	**+2.1**
DBNI				S		**Sn**	**04 26 08.2**	**+1.9**
SMRI	**Semarang**	**4.62**	**305**	P		**Pb**	**04 25 34.5**	**+0.5**
KPJI	**Karang Pucung**	**5.77**	**294**	P		**Pn**	**04 25 40.5**	**+2.0**
BBJI	**Bungbulang**	**6.90**	**289**	P		**Pn**	**04 25 55.2**	**+1.1**
	0.1nm19nm,0.9s							
BSSI	**Bau Bau, Buton**	**7.16**	**60**	P		**Pn**	**04 25 59.3**	**+1.7**
	0.1nm13nm,0.4s							
EDFI	**Ende, Flores**	**7.43**	**83**	P		**Pn**	**04 26 03.4**	**+2.0**
FITZ	**Fitzroy Crossi**	**13.83**	**128**	Pn		Pn	04 27 26.8	-2.2
	0.4nm,0.3s,baz=320,slow=11,SNR=9.2							
FITZ				Sn		Sn	04 29 53.6	-9.0
	0.2nm,0.3s,baz=176,slow=18,SNR=1.3							
	1.5nm,0.4s							
WRA	**Warramunga Arr**	**21.89**	**120**	P		**P**	**04 29 05.0**	**-1.2**
	0.5nm,0.4s,baz=295,slow=13,SNR=16							
WRA				PcP		**PcP**	**04 33 03.4**	**-2.3**
	0.5nm,0.8s,baz=313,slow=3.1,SNR=2.8							
	0.5nm,0.4s							
NWAO	**Narrogin (SRO)**	**23.23**	**174**	LR		LR	04 38 30.5	
	comp=Z,32nm,20.8s,baz=302,slow=36							
ASAR	**Alice Springs**	**23.33**	**129**	P		**P**	**04 29 21.4**	**+0.1**
	1.8nm,0.5s,baz=303,slow=8.9,SNR=59							
ASAR				PcP		**PcP**	**04 33 06.5**	**-2.0**
	0.4nm,0.6s,baz=308,slow=2.2,SNR=5.0							
ASAR				S		**S**	**04 33 36.0**	**+2.0**
	0.2nm,0.6s,baz=300,slow=22,SNR=1.9							
	1.8nm,0.5s							
STKA	**Stephens Creek**	**33.57**	**135**	P		**P**	**04 30 52.0**	**-1.1**
	2.1nm,0.7s,baz=331,slow=6.8,SNR=3.1							
	2.1nm,0.7s							
SONM	**Songino Array**	**57.75**	**354**	P		P	04 33 58.6	-5.4
	0.8nm,0.7s,baz=179,slow=7.3,SNR=5.6							
SONM				PcP		PcP	04 34 51.5	-5.2
	0.2nm,0.3s,baz=180,slow=2.8,SNR=2.4							
	0.8nm,0.7s							
MKAR	**Makanchi Array**	**63.10**	**336**	P		P	04 34 35.9	-4.5
	1.1nm,0.5s,baz=147,slow=7.3,SNR=22							
	1.1nm,0.5s							
KURBB	**Kurchatov Arra**	**67.66**	**336**	P		P	04 35 04.9	-5.0
	0.6nm,0.7s,baz=156,slow=3.9,SNR=4.1							
	0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**68.17**	**342**	P		P	04 35 07.2	-5.8
	0.9nm,0.5s,baz=155,slow=4.6,SNR=4.5							
	0.9nm,0.5s							
BVAR	**Borovoye Array**	**72.82**	**334**	P		P	04 35 36.8	-4.6
	1.2nm,0.7s,baz=116,slow=6.8,SNR=4.9							
	1.2nm,0.7s							
TIXI	**Tiksi**	**81.81**	**5**	LR		LR	05 17 38.3	
	comp=Z,84nm,18.7s,baz=8.5,slow=40							
YKA	**Yellowknife Ar**	**116.76**	**23**	PKP		PKPdf	04 42 52.2	-4.8
	0.2nm,0.8s,baz=316,slow=2.6,SNR=3.0							

*NEIC **15** 04:48:35.7±0.9,17°.85N±0°.03×66°.68W±0°.01,h10^{km}±1^{km}, ML2.7/35,Md3.1/6(RSPR),Error ellipse: s-maj=5.1km s-min=1.8km az=354.0*
*RSPR **15** 04:48:36.7,17°.92N×66°.69W,h7^{km},MD3.1/6*
*SDD **15** 04:48:37.1±2.3,17°.88N×66°.70W,h15^{km}±28^{km},MD3.7, ML2.6,MW3.2,Presumed earthquake*
ISC 15 04:48:35.8±1.0,17°.90N±0°.06×66°.68W±0°.02,h17^{km}±5^{km}, n37,σ0°.47/61,13C-6D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.16**	**26**			**Pg**	**04 48 39.9**	**-0.2**
OBIP				Sg		**Sg**	**04 48 42.8**	**-0.1**
OBIP	**Obispado Ponce**	**0.16**	**26**	↑*i*P		**Pg**	**04 48 40.0**	**0.0**
OBIP				*e*S		**Sg**	**04 48 42.6**	**-0.3**
CELP	**Cerrillos**	**0.20**	**28**			**Pg**	**04 48 40.8**	**+0.1**
CELP				Sg		**Sg**	**04 48 44.0**	**0.0**
CELP				IAML			04 48 45.2	
	1μm,0.2s							
CELP				IAML			04 48 45.3	
	1μm,0.2s							
GBPR	**Guanica, Bosqu**	**0.21**	**292**			**Pg**	**04 48 40.7**	**0.0**
GBPR						**Sg**	**04 48 43.6**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.21**	**292**	↓*i*P		**Pg**	**04 48 40.7**	**0.0**
GBPR				*e*S		**Sg**	**04 48 43.6**	**-0.4**
MLPR	**Magueyes Islan**	**0.35**	**282**			**Pb**	**04 48 43.6**	**-0.1**
MLPR				IAML			04 48 49.6	
	678nm,0.4s							
UUPR	**Utuado, UPR, P**	**0.36**	**354**			**Pg**	**04 48 43.1**	**-0.1**
UUPR				Sg		**Sg**	**04 48 48.8**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.42**	**285**			**Sb**	**04 48 51.1**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.42**	**285**	Pg		**Pg**	**04 48 44.4**	**+0.1**
CRPR				IAML			04 48 53.7	
	401nm,0.3s							
CRPR				IAML			04 48 55.5	
	303nm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.42**	**285**	↑*e*Pg		**Pg**	**04 48 44.5**	**+0.1**
CRPR				↑*e*Sg		**Sg**	**04 48 50.6**	**+0.4**
CRPR				IAML			04 48 53.6	
	comp=N,350nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.42**	**285**	↑*e*P		**Pg**	**04 48 44.5**	**+0.1**
CRPR				*e*S		**Sb**	**04 48 51.1**	**+0.1**
LSP	**Las Mesas**	**0.48**	**306**			**Pg**	**04 48 45.5**	**+0.1**
LSP						**Sb**	**04 48 52.9**	**+0.4**
LSP	**Las Mesas**	**0.48**	**306**	↑*e*P		**Pg**	**04 48 45.5**	**+0.1**
LSP				*e*S		**Sb**	**04 48 52.9**	**+0.4**
ECPR	**Experimental S**	**0.52**	**36**			**Pb**	**04 48 46.4**	**-0.1**
ECPR				IAML			04 48 56.2	
	comp=N,661nm,0.2s							
ECPR				IAML			04 48 57.3	
	comp=N,807nm,0.2s							
ECPR	**Experimental S**	**0.52**	**36**	↓*i*P		**Pb**	**04 48 46.4**	**0.0**
ECPR				*e*S		**Sb**	**04 48 53.7**	**0.0**
PRSN	**Puerto Rico Se**	**0.55**	**306**	Pg		**Pg**	**04 48 46.4**	**-0.2**
PRSN				IAML			04 48 57.1	
	comp=N,1μm,0.3s							
PRSN				IAML			04 48 58.6	
	comp=N,2μm,0.3s							
PRSN	**Puerto Rico Se**	**0.55**	**306**			**Sg**	**04 48 54.3**	**+0.4**
PRSN	**Puerto Rico Se**	**0.55**	**306**	↑*e*Pg		**Pg**	**04 48 46.5**	**-0.2**
PRSN				*e*Sg		**Sb**	**04 48 54.8**	**+0.3**
PRSN				IAML			04 48 58.5	
	comp=N,958nm,0.2s							
PRSN	**Puerto Rico Se**	**0.55**	**306**	↑*e*P		**Pg**	**04 48 46.4**	**-0.2**
PRSN				*e*S		**Sg**	**04 48 54.3**	**+0.4**
SJG	**San Juan**	**0.55**	**67**			**Pb**	**04 48 47.3**	**+0.4**
SJG				IAML			04 48 56.8	
	comp=N,300nm,0.5s							
SJG	**San Juan**	**0.55**	**67**	↓*e*Pg		**Pb**	**04 48 47.3**	**+0.4**
SJG				*e*Sg		**Sb**	**04 48 55.3**	**+0.7**
SJG	**San Juan**	**0.55**	**67**	↓*e*P		**Pb**	**04 48 47.3**	**+0.3**
SJG				*e*S		**Sb**	**04 48 55.2**	**+0.7**
PDPR	**Patillas Dam,**	**0.64**	**79**			**Pb**	**04 48 49.0**	**+0.5**
GCPR	**Guaynabo City**	**0.70**	**54**			**Pb**	**04 48 49.7**	**+0.2**
GCPR				Sg		**Sb**	**04 48 59.5**	**+0.5**
GCPR	**Guaynabo City**	**0.70**	**54**	↑*e*P		**Pb**	**04 48 49.8**	**+0.2**
GCPR				*e*S		**Sb**	**04 48 59.2**	**+0.2**
AGPR	**Aguadilla, PR**	**0.70**	**324**			**Pg**	**04 48 49.3**	**-0.3**
AGPR				IAML			04 48 59.6	
	comp=N,308nm,0.5s							
AGPR				IAML			04 49 02.6	
	comp=N,291nm,0.5s							
AGPR	**Aguadilla, PR**	**0.70**	**324**	↑*e*Pg		**Pg**	**04 48 49.1**	**-0.4**
AGPR				↑*e*Sg		**Sb**	**04 48 59.3**	**+0.3**
AGPR				IAML			04 49 00.8	
	comp=N,304nm,1.3s							
AGPR	**Aguadilla, PR**	**0.70**	**324**	↓*e*P		**Pg**	**04 48 49.5**	**-0.1**
AGPR				*e*S		**Sg**	**04 48 59.0**	**+0.1**
HUMP	**Col San Antoni**	**0.83**	**73**			**Pg**	**04 48 52.0**	**+0.1**
HUMP						**Sn**	**04 49 03.7**	**-0.8**
HUMP	**Col San Antoni**	**0.83**	**73**			**Pn**	**04 48 52.1**	**-0.6**
HUMP				IAML			04 49 04.9	
	comp=N,190nm,0.3s							
HUMP				IAML			04 49 05.3	
	comp=N,178nm,0.2s							
HUMP	**Col San Antoni**	**0.83**	**73**	↓*e*P		**Pg**	**04 48 52.0**	**+0.1**
HUMP				*e*S		**Sn**	**04 49 03.7**	**-0.8**
IDE	**Isla Desecheo**	**0.90**	**303**			**Pb**	**04 48 52.7**	**-0.3**
IDE						**Sb**	**04 49 04.9**	**+0.2**
IDE	**Isla Desecheo**	**0.90**	**303**	↑*e*P		**Pb**	**04 48 52.7**	**-0.3**
IDE				*e*S		**Sb**	**04 49 04.9**	**+0.2**
CUPR	**Culebra, Puert**	**1.39**	**73**	Pn		**Pg**	**04 49 01.9**	**-0.7**
MIDR	**Miches**	**2.50**	**296**	↑*e*Pg		**Pb**	**04 49 21.7**	**+1.5**
MIDR				IAML			04 50 08.8	
	comp=N,46nm,3.2s							
DR12	**Loma Pena Alta**	**2.71**	**289**	Pn		**Pn**	**04 49 19.9**	**+1.1**
HATOM	**Hato Mayor del**	**2.71**	**289**	↑*e*Pg		**Pb**	**04 49 22.4**	**-1.5**
HATOM				↑*e*Sg		**Sb**	**04 49 56.6**	**-0.5**
HATOM				IAML			04 50 01.5	
	comp=N,33nm,3.9s							

*IDC **15** 04:48:56.7±3.8,23°.70N×126°.25E,h0^{km},mb3.5/5, mbtmp3.5/5,MS3.5/1,Error ellipse: s-maj=251.1km s-min=22.0km az=64.0*
*JMA **15** 04:49:00.4±0.2,24°.N±2°.×12°.6E±°,h107^{km}±4^{km},MV2.9/13, NEAR MIYAKOJIMA ISLAND*
ISC 15 04:48:58.5±2.1,23°.89N±0°.08×126°.40E±0°.06,h16^{km}±11^{km}, n17,σ0°.78/24,mb3.4/5,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.26**	**314**	*e*P		**Pg**	**04 49 22.7**	**-0.1**
JOGS				*e*S		**Sg**	**04 49 39.3**	**+0.1**
JMJ2	**Miyako jima3**	**1.30**	**311**	*e*P		**Pb**	**04 49 22.8**	**+0.3**
JMJ2				*e*S		**Sg**	**04 49 39.6**	**-0.9**
JIRB	**Irabujima**	**1.46**	**310**	*e*S		**Sb**	**04 49 43.2**	**-0.4**
JIKM	**Ikemajima**	**1.47**	**315**	*e*S		**Sb**	**04 49 44.1**	**+0.1**
JTJ	**Tarama**	**1.72**	**296**	*e*P		**Pn**	**04 49 28.4**	**+0.6**
JTJ				*e*S		**Sn**	**04 49 49.1**	**-0.4**
JISG	**Ishigakijimahi**	**2.03**	**291**	*e*P		**Pn**	**04 49 32.5**	**+0.4**
JISG				*e*S		**Sn**	**04 49 56.4**	**-0.7**
JIJ	**Ishigaki jima**	**2.12**	**283**	*e*P		**Pn**	**04 49 33.7**	**+0.4**
JIJ				*e*S		**Sn**	**04 49 58.3**	**-0.9**
JKRS	**Kuro-shima**	**2.21**	**280**	*e*P		**Pn**	**04 49 35.2**	**+0.7**
JKRS				*e*S		**Sn**	**04 50 00.5**	**-1.0**
HATJ	**Hateruma jima**	**2.38**	**275**	*e*P		**Pn**	**04 49 36.8**	**-0.1**
JKE	**Kume jima 2**	**2.46**	**8**	*e*P		**Pn**	**04 49 38.1**	**+0.2**
JKE				*e*S		**Sn**	**04 50 06.2**	**-1.3**
IRIF	**Iriomote-Funau**	**2.48**	**281**	*e*P		**Pn**	**04 49 38.6**	**+0.4**
IRIF				*e*S		**Sn**	**04 50 07.5**	**-0.7**
BATI	**Baumata**	**33.99**	**185**	LR		LR	05 11 37.2	
	comp=Z,72nm,19.4s,baz=285,slow=40							
MKAR	**Makanchi Array**	**41.92**	**314**	P		**P**	**04 56 49.0**	**+0.7**
	0.5nm,0.8s,baz=100,slow=10.0,SNR=5.4							
	0.5nm,0.8s							
ZALV	**Zalesovo Beam**	**43.16**	**325**	P		**P**	**04 56 59.5**	**+1.3**
	0.4nm,0.5s,baz=116,slow=6.6,SNR=1.8							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**44.24**	**169**	P		**P**	**04 57 06.9**	**-0.4**
	1.0nm,0.7s,baz=351,slow=8.7,SNR=6.9							
	1.0nm,0.7s							
KURBB	**Kurchatov Arra**	**45.45**	**318**	P		**P**	**04 57 17.8**	**+1.2**
	1.0nm,0.8s,baz=111,slow=8.9,SNR=5.1							
	1.0nm,0.8s							
ASAR	**Alice Springs**	**47.83**	**171**	P		**P**	**04 57 34.5**	**-1.0**
	0.2nm,0.7s,baz=353,slow=13,SNR=2.1							
	0.2nm,0.7s							

*SJA **15** 04:53:32.4±0.5,24°.25S×67°.18W,h198^{km}±6^{km},ML3.9, MW3.7*
*IDC **15** 04:53:33.3±2.0,24°.25S×66°.98W,h170^{km}±30^{km},mb3.2/1, mbtmp3.6/6,Error ellipse: s-maj=48.5km s-min=19.6km az=106.0*
*GUC **15** 04:53:34.3±0.6,24°.24S×67°.54W,h228^{km}±8^{km},ML3.9*
ISC 15 04:53:33.1±0.8,24°.21S±0°.04×67°.20W±0°.05,h183^{km}±9^{km}, n36,σ1°.39/58,2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SALTA		**0.78**	**91**	↓*e*P		**Pn**	**04 54 01.1**	**+0.8**
SALTA		**0.78**	**91**	*e*P		**Pn**	**04 54 01.3**	**+1.1**
AF01	**San Pedro de A**	**1.55**	**324**	*e*P		**Pn**	**04 54 08.4**	**+2.3**
AF01				*e*S		**Sn**	**04 54 30.1**	**-1.5**
SLA	**San Lorenzo**	**1.62**	**108**	↓*e*P		**Pn**	**04 54 07.7**	**+1.1**
HJA	**Humahuaca**	**1.92**	**59**	*e*P		Pn	04 54 05.6	-4.4
HJA				*e*P			04 54 11.5	
FSA	**Cafayete**	**2.19**	**150**	*e*P		**Pn**	**04 54 13.3**	**+0.7**
GO02	**Mina Guanaco**	**2.37**	**246**	*e*P		**Pn**	**04 54 16.2**	**+1.4**
GO02				*i* S		**Sn**	**04 54 48.1**	**+0.9**
GO02				IAML			04 54 51.8	
	comp=N,455nm,0.2s							
GO02	**Mina Guanaco**	**2.37**	**246**	*e*P		**Pn**	**04 54 15.7**	**+0.8**
GO02				*e*S		**Sn**	**04 54 48.7**	**+1.5**
GO02				IAML			04 54 51.4	
	comp=Z,235nm,0.2s							
PB06	**IPOC Station P**	**2.65**	**304**	*e*P		**Pn**	**04 54 19.7**	**+1.8**
PB06				*i* S		**Sn**	**04 54 53.0**	**+0.3**
PB06				IAML			04 54 55.8	
	comp=E,489nm,0.3s							
PB06	**IPOC Station P**	**2.65**	**304**	*e*P		**Pn**	**04 54 19.0**	**+1.2**
PB06				*e*S		**Sn**	**04 54 53.4**	**+0.7**
PB06				IAML			04 54 56.4	
	comp=Z,261nm,0.1s							
PB14	**IPOC Station P**	**2.95**	**261**	*e*P		**Pn**	**04 54 22.6**	**+1.0**
PB14	**IPOC Station P**	**2.95**	**261**	*e*P		**Pn**	**04 54 22.6**	**+1.0**
PB14				*e*P			04 54 22.6	
PB14				*e*S		**Sn**	**04 54 59.6**	**+0.2**
AHML	**Horco Molle**	**3.06**	**147**	*e*P		**Pn**	**04 54 22.6**	**0.0**
AHML				*e*S		Sn	04 54 51.1	-10
PB05	**IPOC Station P**	**3.07**	**296**	*e*P		**Pn**	**04 54 23.8**	**+0.8**
PB05				*i* S		**Sn**	**04 55 00.4**	**-1.3**
PB05	**IPOC Station P**	**3.07**	**296**	*e*P		**Pn**	**04 54 24.0**	**+1.1**
PB05				*e*S		**Sn**	**04 55 01.4**	**-0.4**
AC02	**Maricunga**	**3.14**	**213**	*e*P		**Pn**	**04 54 25.0**	**+1.0**
AC02				*e*S		**Sn**	**04 55 05.6**	**+1.8**
PB10	**IPOC Station P**	**3.15**	**282**	*e*P		**Pn**	**04 54 24.3**	**+0.6**
PB10				*i* S		**Sn**	**04 55 01.8**	**-1.4**
PB10				IAML			04 55 08.2	
	comp=N,107nm,0.3s							
PB10	**IPOC Station P**	**3.15**	**282**	*e*P		**Pn**	**04 54 24.8**	**+1.1**
PB10				*e*S		**Sn**	**04 55 03.3**	**+0.1**
PB03	**IPOC Station P**	**3.19**	**312**	*e*P		**Pn**	**04 54 25.7**	**+1.3**
PB03				*i* S		**Sn**	**04 55 03.6**	**-0.8**
PB03	**IPOC Station P**	**3.19**	**312**	*e*P		**Pn**	**04 54 25.4**	**+1.0**
PB03				*e*S		**Sn**	**04 55 03.8**	**-0.6**
PB03				IAML			04 55 06.9	
	comp=Z,265nm,0.3s							
PB07	**IPOC Station P**	**3.50**	**314**	*e*P		**Pn**	**04 54 29.4**	**+1.1**
PB07				*i* S		**Sn**	**04 55 10.1**	**-1.2**
PB07	**IPOC Station P**	**3.50**	**314**	*e*P		**Pn**	**04 54 29.5**	**+1.2**
PB07				*e*S		**Sn**	**04 55 11.5**	**+0.2**
AC01	**Pan de Azucar**	**3.63**	**237**	*e*P		**Pn**	**04 54 29.7**	**+0.1**
AC01				*i* S		**Sn**	**04 55 12.4**	**-1.6**
AC01	**Pan de Azucar**	**3.63**	**237**	*e*P		**Pn**	**04 54 29.7**	**+0.1**
AC01				*e*S		**Sn**	**04 55 12.9**	**-1.1**
PB02	**IPOC Station P**	**3.81**	**319**	*e*P		**Pn**	**04 54 32.9**	**+0.9**
PB02				*i* S		**Sn**	**04 55 16.3**	**-1.8**
PB02	**IPOC Station P**	**3.81**	**319**	*e*P		**Pn**	**04 54 33.0**	**+0.9**
PB02				*e*S		**Sn**	**04 55 17.4**	**-0.7**
TINO	**Tinogasta**	**3.85**	**185**	*e*P		**Pn**	**04 54 34.8**	**+2.3**
GO03	**Copiapo**	**4.34**	**218**	*e*P		**Pn**	**04 54 38.3**	**-0.3**
GO03				*i* S		**Sn**	**04 55 27.8**	**-2.3**
GO03	**Copiapo**	**4.34**	**218**	*e*P		**Pn**	**04 54 38.6**	**0.0**
GO03				*e*S		**Sn**	**04 55 28.1**	**-2.0**
GO03				IAML			04 55 31.2	
	comp=Z,86nm,0.2s							
VCA	**Vinchina**	**4.59**	**191**	*e*P		**Pn**	**04 54 44.5**	**+2.5**
VCA				*e*S		Sn	04 55 47.7	+12
VCA				IAML			04 56 13.2	
	comp=Z,98nm,0.8s							
CFA	**Coronel Fontan**	**7.42**	**187**	P		**Pn**	**04 55 18.6**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=18,slow=12,SNR=14							
CFA				S		**Sn**	**04 56 37.4**	**-5.0**
	comp=Z,0.6nm,0.4s,baz=265,slow=12,SNR=1.5							
LPAZ	**La Paz**	**7.93**	**353**	P		**Pn**	**04 55 27.4**	**+1.2**
	comp=Z,2.8nm,0.4s,baz=169,slow=19,SNR=20							
LPAZ				S		**Sn**	**04 56 53.8**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=335,slow=17,SNR=1.5							
SIV	**San Ignacio**	**10.00**	**36**	P		**Pn**	**04 55 51.6**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=220,slow=14,SNR=3.6							
PLCA	**Paso Flores**	**16.71**	**189**	P		**Pn**	**04 57 17.3**	**+0.6**
	comp=Z,1.0nm,1.0s,baz=30,slow=14,SNR=5.6							
BDFB	**Brasilia**	**19.93**	**68**	P		**P**	**04 57 50.7**	**-0.5**
	comp=Z,6.7nm,0.8s,baz=245,slow=10.0,SNR=13							
TORD	**Torodi Ar. Bea**	**76.81**	**69**	P		**P**	**05 05 05.7**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=257,slow=6.1,SNR=5.5							
	comp=Z,0.5nm,0.9s							

*IDC **15** 05:00:36.8±1.9,12°.36N×141°.83E,h0^{km},mb4.1/7, mbtmp4.1/7,Error ellipse: s-maj=66.9km s-min=20.8km az=80.0*
*NEIC **15** 05:00:41.6±1.2,12°.4N±0°.1×141°.7E±0°.1,h22^{km}±6^{km}, mb4.5/14,Error ellipse: s-maj=17.5km s-min=14.9km az=189.0*
ISC 15 05:00:42.0±0.7,12°.3N±0°.1×141°.65E±0°.10,h33^{km},n26, σ0°.90/26,mb4.4/14,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.39**	**68**	Pn		**Pn**	**05 01 32.3**	**-0.3**
DPSS	**Saipan**	**4.97**	**54**	Pn		**Pn**	**05 01 53.0**	**-1.4**
TNTI	**Ternate**	**18.22**	**232**	P		**P**	**05 04 51.6**	**-0.9**
TNTI				IAmb		IAmb	05 05 02.3	
	comp=Z,44nm,1.0s							
JOW	**Kunigami**	**19.14**	**321**	P		**Pn**	**05 05 02.9**	**-0.7**
RABL	**Rabaul**	**19.44**	**147**	P		**Pn**	**05 05 07.1**	**-0.1**
TWG	**Pinlang**	**22.20**	**301**	P		**P**	**05 05 35.1**	**-0.6**
TWG				IAmb		IAmb	05 05 43.5	
	comp=Z,48nm,1.3s							
WB0	**Warramunga Arr**	**32.66**	**193**	P		**P**	**05 07 11.1**	**-0.2**
WB0				IAmb		IAmb	05 07 46.4	
	comp=Z,6.2nm,1.2s							
WRA	**Warramunga Arr**	**32.85**	**193**	P		**P**	**05 07 12.8**	**0.0**
	comp=Z,1.7nm,

94nm,0.2s
UCH Uchtor 1.32 107 ⇓*e*P Pg 05 08 46.6 -1.3
UCH ⇓*i*S Sg 05 09 04.3 -0.7
FRU1 Bishkek 1.35 82 ⇑*i*P Pn 05 08 46.9 -1.4
FRU1 ⇑*e*S Sg 05 09 04.7 -1.2
ARLS Aral 1.36 124 ⇑*i*P Pg 05 08 47.4 -1.2
ARLS ⇑*e*S Sg 05 09 05.5 -0.7
USP Ospenovka 1.39 62 P Pn 05 08 47.6 -1.1
153nm,0.3s,SNR=358
USP ⇓S Sg 05 09 06.2 -1.0
356nm,0.2s
USP Ospenovka 1.39 62 ⇓*i*P Pn 05 08 47.7 -1.1
USP ⇓*e*S Sg 05 09 06.3 -1.0
CHMS Chumysh 1.47 75 ⇑P Pn 05 08 49.2 -0.7
47nm,0.1s,SNR=60
CHMS ⇑S Sb 05 09 08.6 -1.0
181nm,0.1s
SGDS Sogindy 1.56 58 P Pn 05 08 50.7 -0.5
35nm,0.2s
SGDS S Sn 05 09 11.5 -0.5
883nm,0.3s
KBK Karagaybulak 1.58 88 ⇑P Pn 05 08 51.6 +0.1
42nm,0.1s,SNR=36
KBK ⇑S Sn 05 09 12.6 +0.2
293nm,0.2s
KBK Karagaybulak 1.58 88 ⇑*i*P Pn 05 08 51.1 -0.4
KBK ⇑*e*S Sn 05 09 12.0 -0.4
TRKS Terek-Say 1.66 229 ⇓*e*P Pn 05 08 53.4 +0.8
TRKS ⇓*i*S Sn 05 09 16.1 +1.6
KK31 Karatay Array 1.75 286 ⇓Pn Pn 05 08 53.6 -0.2
11nm,0.2s,baz=101,slow=13,SNR=334
KK31 ⇑Sn Sn 05 09 17.2 +0.5
226nm,0.6s,baz=112,slow=27,SNR=22
SALK Salom-Alik 1.90 156 ⇓*i*P Pn 05 08 56.6 +0.6
SALK ⇓*e*S Sb 05 09 21.7 -0.4
TKM2 Tokmak 2 2.07 81 ⇑P Pn 05 08 58.8 +0.6
51nm,0.4s,SNR=34
TKM2 ⇓S Sb 05 09 26.7 -0.3
229nm,0.2s
TKM2 Tokmak 2 2.07 81 ⇑*i*P Pn 05 08 58.9 +0.6
TKM2 ⇑*e*S Sn 05 09 25.7 +1.0
OHH Osh 2.11 181 ⇓*i*P Pn 05 08 59.5 +0.8
OHH ⇓*e*S Sn 05 09 26.5 +1.1
IUG Iuzhnay 2.12 258 Pg Pn 05 09 01.8 +3.0
113nm,0.3s
IUG Lg Lg 05 09 29.9
610nm,0.4s
IUG Iuzhnay 2.12 258 *e*P Pn 05 09 01.8 +3.0
113nm,0.3s
IUG *e*S Sb 05 09 29.9 +1.7
610nm,0.4s
BRLS Borolday 2.23 281 *e*P Pn 05 09 02.3 +2.1
19nm,0.2s
BRLS *e*S Sn 05 09 31.1 +2.9
136nm,0.3s
DGS Degeres 2.26 73 Pg Pn 05 09 02.5 +1.8
63nm,0.4s
DGS Lg Lg 05 09 30.9
230nm,0.4s
DGS Degeres 2.26 73 *e*P Pn 05 09 02.5 +1.8
63nm,0.4s
DGS *e*S Sn 05 09 30.9 +1.8
230nm,0.4s
BOOM Boomskoye usch 2.31 92 ⇓*i*P Pn 05 09 02.3 +0.7
BOOM ⇓*e*S Sn 05 09 31.5 +0.8
KRBS Karabastau 2.35 62 Pg Pn 05 09 03.8 +1.8
44nm,0.3s
KRBS Lg Lg 05 09 33.2
158nm,0.3s
KRBS Karabastau 2.35 62 *e*P Pn 05 09 03.8 +1.8
44nm,0.3s
KRBS *e*S Sn 05 09 33.2 +1.9
158nm,0.3s
KST Kastek 2.35 79 Pg Pb 05 09 05.4 -0.2
54nm,0.6s
KST Lg Lg 05 09 35.7
297nm,0.4s
KST Kastek 2.35 79 *e*P Pb 05 09 05.4 -0.2
54nm,0.6s
KST *e*S Sb 05 09 35.7 +0.7
297nm,0.4s
BTLS Baital 2.57 20 Pg Pn 05 09 03.6 -1.3
16nm,0.3s
BTLS Lg Lg 05 09 32.9
44nm,0.3s
BTLS Baital 2.57 20 *e*P Pn 05 09 03.6 -1.3
16nm,0.3s
BTLS *e*S Sn 05 09 32.9 -3.7
44nm,0.3s
ULHL Ulahol 2.57 98 ⇑P Pn 05 09 06.2 +1.1
24nm,0.3s,SNR=10
ULHL Ulahol 2.57 98 ⇓*i*P Pn 05 09 05.8 +0.7
ULHL ⇓*i*S Sn 05 09 37.6 +0.7
JNKS Jany-Kuch 2.63 126 ⇓*i*P Pn 05 09 07.0 +1.0
JNKS ⇓*e*S Sn 05 09 39.5 +1.0
NRN Naryn 2.66 116 ⇑*i*P Pn 05 09 07.0 +0.5
NRN ⇑*e*S Sn 05 09 39.5 +0.1
SFK Sufi-Kurgan 2.67 169 ⇑*i*P Pn 05 09 07.3 +0.8
SFK ⇑*e*S Sn 05 09 40.2 +0.8
MTBS Maitube 2.71 78 Pg Pb 05 09 11.5 0.0
7.6nm,0.3s
MTBS Lg Lg 05 09 46.4
73nm,0.4s
MTBS Maitube 2.71 78 *e*P Pb 05 09 11.5 0.0
7.6nm,0.3s
MTBS *e*S Sb 05 09 46.4 +1.3
73nm,0.4s
BTK Batken 2.98 211 ⇓*i*P Pn 05 09 11.7 +1.1
BTK ⇓*e*S Sn 05 09 47.8 +0.9
KTBS Karatobe 3.03 68 Pg Pb 05 09 17.5 +0.5
24nm,0.4s
KTBS Lg Lg 05 09 56.5
0.4nm,0.2s
KTBS Karatobe 3.03 68 *e*P Pb 05 09 17.5 +0.5
24nm,0.4s
KTBS *e*S Sb 05 09 56.5 +2.1
0.4nm,0.2s
TNSS Tian-Shan 3.07 81 Pg Pb 05 09 17.8 -0.1
2.2nm,0.3s
TNSS Lg Lg 05 09 56.9
16nm,0.5s
TNSS Tian-Shan 3.07 81 *e*P Pb 05 09 17.8 -0.1
2.2nm,0.3s
TNSS *e*S Sb 05 09 56.9 +1.0
16nm,0.5s
MDOK Medeo 3.16 79 Pg Pb 05 09 18.9 -0.4
10nm,0.3s
MDOK Lg Lg 05 09 58.8
126nm,0.5s
KOTS Kotyrbulak 3.21 78 Pg Pb 05 09 20.9 +0.6
8.5nm,0.3s
KOTS Lg Lg 05 10 02.3
77nm,0.6s
KOTS Kotyrbulak 3.21 78 *e*P Pb 05 09 20.9 +0.6
8.5nm,0.3s
KOTS *e*S Sb 05 10 02.3 +2.5
77nm,0.6s
DRK Karamyk 3.24 194 ⇑*i*P Pn 05 09 15.4 +0.9
DRK ⇑*e*S Sn 05 09 54.2 +0.5
KDJ Kajisay 3.27 97 ⇓*i*P Pn 05 09 15.9 +1.1
KDJ ⇓*e*S Sn 05 09 54.9 +0.6
TARG Taragay, Kyrgy 3.82 102 *e*P Pn 05 09 23.4 +0.9
TARG ⇑*e*S Sn 05 10 07.8 -0.3
ARXS Arharly 3.98 65 *e*P Pb 05 09 33.9 +0.6
6.0nm,0.3s
ARXS *e*S Sb 05 10 24.5 +2.7
105nm,0.4s
KSH2 Kashi 4.06 148 Pn Pb 05 09 34.6 -0.1
KSH2 Sn Sn 05 10 14.1 +0.4
KSH2 smax smax
comp=N,17nm,0.7s
KSH2 smax smax
comp=E,20nm,0.7s
PDGK Podgornoye 4.95 80 ⇑Pg Pg 05 09 55.9 -1.4
comp=E,5.8nm,0.6s
PDGK ⇑Lg Lg 05 11 00.9
comp=E,12nm,0.5s
MAKZ Makanchi 7.75 54 ⇑Pn Pn 05 10 19.4 +3.3
comp=E,1.6nm,0.6s
MAKZ ⇑Sn Sn 05 11 43.7 -0.5
comp=E,1.5nm,0.4s
MAKZ ⇓Lg Lg 05 12 26.2
comp=E,8.8nm,0.8s
MK31 Makanchi Array 7.93 55 ⇓Pn Pn 05 10 18.6 +0.1
comp=E,0.2nm,0.2s,baz=233,slow=11,SNR=46
MK31 ⇑Sn Sn 05 11 49.0 +0.3
comp=E,0.7nm,0.3s
MK31 ⇑Lg Lg 05 12 31.1
comp=E,4.8nm,0.7s,baz=240,slow=27,SNR=6.5
KURBB Kurchatov Arra 8.90 24 ⇑Pn Pn 05 10 31.5 -0.4
comp=E,0.7nm,0.3s
KURBB ⇑Lg Lg 05 13 04.8
comp=E,24nm,0.7s
KURK Kurchatov 9.01 24 ⇑Pn Pn 05 10 31.8 -1.6
comp=E,0.6nm,0.8s
KURK ⇑Lg Lg 05 13 09.4
comp=E,7.6nm,0.7s
BVA0 Borovoye Array 10.53 352 ⇓Pn Pn 05 10 52.4 -1.7
comp=E,1.6nm,0.7s
BVA0 ⇑Sn Sn 05 12 50.6 -1.8
comp=E,1.0nm,0.6s
BVA0 ⇑Lg Lg 05 13 57.5
comp=E,5.0nm,0.8s

*RSNC **15** 05:09:13.2±0.0, 7°N±1°×7°3W±°, h151km±2km, M3.5, mb3.6, ML3.2, MLv3.9*
*FUNV **15** 05:09:13.1, 6°.80N×73°.13W, h162km, MW4.0, Presumed earthquake*
*IDC **15** 05:09:14.6±4.2, 6°.58N×73°.27W, h189km±27km, mb2.8/2, mbtmp3.4/3, Error ellipse: s-maj=87.7km s-min=31.0km az=84.0*
ISC 15 05:09:11.6±0.8, **6°.86N**±0°.03×**73°.11W**±0°.04, **h158**km±6km, **n51**,σ1s**92**/92, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**196**	P	**Pn**	**05 09 33.7**	**+0.3**
BARC				S	**Sn**	**05 09 49.0**	**-1.0**
PAMC	**Pamplona, Colo**	**0.62**	**40**	P	**Pn**	**05 09 36.5**	**+1.4**
PAMC				S	**Sn**	**05 09 53.6**	**+0.5**
BRJC	**Barrancabermej**	**0.64**	**280**	P	**Pn**	**05 09 35.3**	**+0.7**
RUSC	**La Rusia**	**0.96**	**179**	P	**Pn**	**05 09 37.5**	**+0.1**
RUSC				S	**Sn**	**05 09 56.2**	**-1.0**
RUSC	**La Rusia**	**0.96**	**179**	*e*P	**Pn**	**05 09 37.8**	**+0.4**
RUSC				*e*S	**Sn**	**05 09 56.0**	**-1.2**
CAPV	**Capacho**	**1.27**	**38**	*e*P	**Pn**	**05 09 41.5**	**+1.7**
CAPV				*e*S	**Sn**	**05 10 02.2**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	P	**Pn**	**05 09 40.2**	**-0.4**
PTBC				S	**Sn**	**05 10 01.1**	**-1.7**
OCAC	**Ocana**	**1.39**	**351**	P	**Pn**	**05 09 41.7**	**+0.9**
OCAC				S	**Sn**	**05 10 04.3**	**+1.0**
SPBC	**San Pablo de B**	**1.54**	**219**	P	**Pn**	**05 09 42.6**	**+0.3**
SPBC				S	**Sn**	**05 10 04.6**	**-1.2**
CHIC	**Chingaza**	**2.30**	**196**	P	**Pn**	**05 09 51.5**	**+0.3**
CHIC				S	**Sn**	**05 10 21.0**	**-0.7**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**05 09 53.5**	**+1.9**
	85nm,0.4s,baz=72,slow=19,SNR=166						
ROSC				S	**Sn**	**05 10 22.8**	**+0.3**
	266nm,0.4s,baz=114,slow=20,SNR=9.4						
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**05 09 53.2**	**+1.6**
ROSC				S	**Sn**	**05 10 20.1**	**-2.4**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	P	**Pn**	**05 09 55.0**	**+1.2**
CVER				S	**Sn**	**05 10 27.5**	**+1.2**
UREC	**San Jos de Ur**	**2.56**	**290**	P	**Pn**	**05 09 54.1**	**+0.2**
UREC				S	**Sn**	**05 10 24.7**	**-1.9**
SOCV	**Socops**	**2.64**	**57**	*e*P	**Pn**	**05 09 56.6**	**+1.7**
SOCV				*e*S	**Sn**	**05 10 27.9**	**-0.5**
VILC	**Villavicencio,**	**2.79**	**192**	P	**Pn**	**05 09 57.5**	**+0.6**
VILC				S	**Sn**	**05 10 31.3**	**-0.6**
RECRC	**Villamaria, Ca**	**2.92**	**230**	P	**Pn**	**05 10 02.4**	**+3.5**
RECRC				S	**Sn**	**05 10 38.2**	**+2.8**
NIZA	**Niza - Manizal**	**2.96**	**233**	P	Pn	05 10 04.2	+5.2
NIZA				S	**Sn**	**05 10 40.6**	**+4.9**
CBOC	**Ciudad Bolivar**	**3.05**	**251**	P	**Pn**	**05 10 01.5**	**+1.4**
CBOC				S	**Sn**	**05 10 37.8**	**+0.1**
DBBC	**Dabeiba**	**3.08**	**273**	P	**Pn**	**05 10 01.0**	**+0.6**
DBBC				S	**Sn**	**05 10 36.6**	**-1.7**
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**05 10 03.0**	**+1.4**
SDV				S	**Sn**	**05 10 40.0**	**-0.5**
SDV	**Santo Domingo**	**3.17**	**50**	*e*P	**Pn**	**05 10 03.2**	**+1.6**
SDV				*e*S	**Sn**	**05 10 39.8**	**-0.7**
ARGC	**Ariguani, Magd**	**3.19**	**339**	P	**Pn**	**05 10 03.7**	**+2.0**
ARGC				S	**Sn**	**05 10 42.3**	**+1.8**
MCQV	**Machiques**	**3.22**	**10**	*e*P	**Pn**	**05 10 03.8**	**+1.7**
MCQV				*e*S	**Sn**	**05 10 40.8**	**-0.5**
ANIL	**Santa Ana**	**3.28**	**224**	P	**Pn**	**05 10 04.7**	**+1.6**
ANIL				S	**Sn**	**05 10 43.8**	**+0.7**
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	**05 10 06.7**	**-0.2**
PRAC				S	**Sn**	**05 10 49.0**	**-0.9**
APAC	**Apartado, Choc**	**3.60**	**287**	P	**Pn**	**05 10 07.3**	**+0.4**
APAC				S	**Sn**	**05 10 49.3**	**-0.5**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	**05 10 07.9**	**+0.6**
ORTC				S	**Sn**	**05 10 50.0**	**-0.6**
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	**05 10 07.3**	**-0.3**
SJCC				S	**Sn**	**05 10 48.7**	**-2.5**
SJCC	**San Jacinto, C**	**3.65**	**326**	*e*P	**Pn**	**05 10 08.0**	**+0.4**
SJCC				*e*S	**Sn**	**05 10 49.3**	**-1.9**
URMC	**La Uribe, Meta**	**3.81**	**200**	P	**Pn**	**05 10 10.5**	**+0.8**
URMC				S	**Sn**	**05 10 53.7**	**-1.2**
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	P	**Pn**	**05 10 13.8**	**-0.2**
CRJC				S	**Sn**	**05 11 01.0**	**-1.7**
YOTC	**Yotoco, Valle**	**4.31**	**229**	P	**Pn**	**05 10 16.2**	**0.0**
YOTC				S	**Sn**	**05 11 10.6**	**+4.0**
SMRC	**Santa Marta, M**	**4.42**	**346**	P	**Pn**	**05 10 18.2**	**+0.7**
SMRC				S	**Sn**	**05 11 06.5**	**-2.5**
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	**05 10 20.8**	**-1.0**
MACC				S	**Sn**	**05 11 11.1**	**-5.5**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**05 10 23.9**	**-0.4**
URIC				S	**Sn**	**05 11 20.5**	**-0.7**
URIC	**Uribia, Colomb**	**4.94**	**13**	*e*P	**Pn**	**05 10 24.3**	**-0.1**
URIC				*e*S	**Sn**	**05 11 18.2**	**-2.9**
TEPV	**Terepaima**	**4.95**	**51**	*e*P	**Pn**	**05 10 25.2**	**+0.6**
JAMC	**Jamundi, Valle**	**5.07**	**225**	P	**Pn**	**05 10 28.4**	**+2.0**
	0.1nm5.0nm,0.6s						
JAMC				S	**Sn**	**05 11 24.6**	**-0.1**
	0.1nm5.0nm,0.6s						
MAPV	**Macapo**	**5.47**	**57**	*e*P	**Pn**	**05 10 31.9**	**+0.5**
MAPV				*e*S	**Sn**	**05 11 29.4**	**-4.4**
POPC	**Popayan, Colom**	**5.57**	**220**	P	**Pn**	**05 10 33.1**	**+0.1**
	5.6nm,0.6s						
POPC				S	**Sn**	**05 11 34.6**	**-2.0**
	5.6nm,0.6s						
FLOC	**Florencia**	**5.82**	**206**	P	**Pn**	**05 10 35.6**	**-0.5**
	9.6nm,0.8s						
FLOC				S	**Sn**	**05 11 41.7**	**-0.6**
	9.6nm,0.8s						
BENV	**Beln**	**6.26**	**60**	*e*P	**Pn**	**05 10 42.3**	**+0.3**
BENV				*e*S	**Sn**	**05 11 47.8**	**-4.9**
TURV	**Turiamo**	**6.31**	**55**	*e*P	**Pn**	**05 10 43.0**	**+0.5**
BBAC	**Balboa, Cauca**	**6.33**	**221**	P	**Pn**	**05 10 44.6**	**+1.5**
CACV	**CAICARA DEL OR**	**6.55**	**83**	*e*P	Pn	05 10 52.3	+6.5
CACV				*e*S	**Sn**	**05 12 05.3**	**+5.7**
TACV	**Tcata**	**6.84**	**61**	*e*P	**Pn**	**05 10 49.5**	**-0.1**
TACV				*e*S	**Sn**	**05 12 00.3**	**-6.3**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**05 16 02.5**	**+1.0**
	0.2nm,0.6s,baz=118,slow=8.7,SNR=2.0						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**63.23**	**340**	P	**P**	**05 19 23.7**	**+0.8**
	0.3nm,0.6s,baz=136,slow=5.9,SNR=5.2						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**05 28 40.6**	**-1.6**
	0.4nm,0.7s,baz=122,slow=2.9,SNR=5.6						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**05 28 43.4**	**-1.9**
	0.3nm,0.4s,baz=106,slow=2.7,SNR=10						

*IDC **15** 05:56:54.7±7.3, 34°.77S×178°.37E, h194km±77km, mb3.3/2, mbtmp4.0/3, Error ellipse: s-maj=92.3km s-min=43.7km az=4.0*
*NOU **15** 05:56:57.5, 35°.61S×178°.95E, h280km, MLv4.5/19, Off E. Coast of N. Island, N.Z.*
*WEL **15** 05:56:58.4±1.2, 35°.S±14°×17°9E±1°3, h234km±20km, M4.2/15, ML4.2/8, MLv4.2/15, Error ellipse: s-maj=22.7km s-min=11.5km az=41.9*
ISC 15 05:57:00.7±1.3, **35°.57S**±0°.09×**178°.54E**±0°.09, **h274**km±7km, **n156**,σ1s**50**/167, **mb3.8**/4, **2C**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.00**	**185**	P	**Pn**	**05 57 42.9**	**-2.1**
MXZ	**Matakaoa Point**	**2.00**	**185**	S	**S**	**05 58 18.5**	**-1.7**
MXZ	**Matakaoa Point**	**2.00**	**185**	P	**Pn**	**05 57 43.0**	**-2.1**
MXZ				S	**S**	**05 58 17.5**	**-2.7**
WIZ	**White Island**	**2.23**	**209**	P	**Pn**	**05 57 46.9**	**-0.2**
WMGZ	**Waiomatatini S**	**2.25**	**182**	P	**Pn**	**05 57 46.2**	**-1.0**
WMGZ				S	**S**	**05 58 24.1**	**-0.1**
HAZ	**Te Kaha**	**2.26**	**195**	P	**Pn**	**05 57 45.6**	**-1.8**
HAZ				S	**S**	**05 58 23.5**	**-1.0**
PKGZ	**Pakihiroa**	**2.32**	**189**	P	**Pn**	**05 57 46.6**	**-1.3**
PKGZ				S	**S**	**05 58 24.8**	**-0.6**
RUGZ	**Raukumara Rang**	**2.49**	**196**	P	**Pn**	**05 57 47.7**	**-1.8**
PUZ	**Puketiti**	**2.51**	**185**	P	**Pn**	**05 57 48.1**	**-1.5**
PUZ				S	**S**	**05 58 27.5**	**-1.2**
KUZ	**Kuaotunu**	**2.56**	**242**	P	**Pn**	**05 57 48.9**	**-1.3**
KUZ	**Kuaotunu**	**2.56**	**242**	P	**Pn**	**05 57 48.7**	**-1.5**
GRZ	**Great Barrier**	**2.59**	**254**	P	**Pn**	**05 57 47.7**	**-2.7**
WHRZ	**Whale Island**	**2.60**	**208**	P	**Pn**	**05 57 52.0**	**+1.4**
TWGZ	**Tauwhareparae**	**2.64**	**190**	P	**Pn**	**05 57 50.5**	**-0.5**
TWGZ				S	**S**	**05 58 31.3**	**+0.3**
OPRZ	**Ohinepanea**	**2.77**	**214**	P	**Pn**	**05 57 50.3**	**-1.9**
TBAS	**Tolaga Bay Are**	**2.80**	**184**	P	**Pn**	**05 57 54.1**	**+1.6**
TGRZ	**Tauranga**	**2.83**	**220**	P	**Pn**	**05 57 52.7**	**-0.1**
MWZ	**Matawai**	**2.87**	**196**	P	**Pn**	**05 57 52.4**	**-0.9**
MWZ				S	**S**	**05 58 36.1**	**+0.9**
EDRZ	**Edgecumbe**	**2.91**	**209**	P	**Pn**	**05 57 54.4**	**+0.7**
TKGZ	**Te Karaka**	**2.92**	**191**	P	**Pn**	**05 57 52.7**	**-1.0**
TKGZ				S	**S**	**05 58 36.1**	**+0.2**
URZ	**Urewera**	**2.92**	**203**	P	**Pn**	**05 57 52.3**	**-1.4**
	85nm,0.3s,baz=342,slow=20,SNR=231						
URZ				S	**S**	**05 58 36.3**	**+0.5**
	65nm,0.3s,baz=72,slow=20,SNR=19						
URZ	**Urewera**	**2.92**	**203**	P	**Pn**	**05 57 52.0**	**-1.7**
URZ	**Urewera**	**2.92**	**203**	S	**S**	**05 58 36.2**	**+0.3**
URZ	**Urewera**	**2.92**	**203**	P	**Pn**	**05 57 52.3**	**-1.4**
URZ				S	**S**	**05 58 36.4**	**+0.5**
CNGZ	**Carnagh Statio**	**2.92**	**185**	P	**Pn**	**05 57 53.2**	**-0.5**
WIAZ	**Waiheke Island**	**3.01**	**245**	P	**Pn**	**05 57 54.3**	**-0.4**
RAGZ	**Rawiri**	**3.05**	**197**	P	**Pn**	**05 57 54.6**	**-0.6**
KARZ	**Kaharoa**	**3.06**	**216**	P	**Pn**	**05 57 56.4**	**+1.2**
OMRZ	**Omania**	**3.07**	**214**	P	**Pn**	**05 57 56.3**	**+1.0**
TARZ	**Mount Tarawera**	**3.12**	**211**	P	**Pn**	**05 57 57.2**	**+1.3**
MKAZ	**Moumakai**	**3.12**	**240**	P	**Pn**	**05 57 55.6**	**-0.3**
MBAZ	**Motutapu North**	**3.18**	**247**	P	**Pn**	**05 57 55.9**	**-0.5**
RIGZ	**Rimuhau**	**3.19**	**191**	P	**Pn**	**05 57 55.6**	**-1.0**
RIGZ				S	**S**	**05 58 42.0**	**+0.8**
HLRZ	**Highlands Stat**	**3.20**	**213**	P	**Pn**	**05 57 57.6**	**+0.9**
RRRZ	**Republican Roa**	**3.20**	**210**	P	**Pn**	**05 57 57.3**	**+0.6**
MUGZ	**Murupara**	**3.23**	**205**	P	**Pn**	**05 57 56.6**	**-0.4**
TOZ	**Tahuroa Road**	**3.26**	**228**	P	**Pn**	**05 57 58.1**	**+0.9**
RTZ	**Ruatahuna**	**3.28**	**202**	P	**Pn**	**05 57 56.5**	**-1.1**
HSHZ	**Hossack Road**	**3.29**	**213**	P	**Pn**	**05 57 59.2**	**+1.5**
HRRZ	**Handcock Road**	**3.34**	**212**	P	**Pn**	**05 57 59.7**	**+1.4**
SNGZ	**Shannon Statio**	**3.34**	**196**	P	**Pn**	**05 57 57.5**	**-0.7**
PRGZ	**Paritu Road**	**3.39**	**189**	P	**Pn**	**05 57 57.5**	**-1.2**
PRRZ	**Plateau Road**	**3.39**	**210**	P	**Pn**	**05 57 58.8**	**+0.1**
WCZ	**Waipu Caves**	**3.43**	**263**	P	**Pn**	**05 57 56.4**	**-2.8**
ALRZ	**Allen Road**	**3.46**	**210**	P	**Pn**	**05 57 59.1**	**-0.4**
KNZ	**Kokohu**	**3.51**	**191**	P	**Pn**	**05 57 58.8**	**-1.2**
RAHZ	**Arahi**	**3.53**	**199**	P	**Pn**	**05 57 59.7**	**-0.5**
MTHZ	**Maungataniwha**	**3.54**	**202**	P	**Pn**	**05 57 59.7**	**-0.7**
MHGZ	**Mahia Peninsul**	**3.61**	**188**	P	**Pn**	**05 58 00.4**	**-0.6**
KUTZ	**Kaahu Road**	**3.63**	**216**	P	**Pn**	**05 58 02.7**	**+1.4**
WHHZ	**Waihua**	**3.65**	**196**	P	**Pn**	**05 58 01.0**	**-0.5**
TLZ	**Tolley Road**	**3.65**	**220**	P	**Pn**	**05 58 02.8**	**+1.2**
MRHZ	**Matea Rd**	**3.67**	**207**	P	**Pn**	**05 58 00.7**	**-1.1**
NMHZ	**Naumai**	**3.78**	**201**	P	**Pn**	**05 58 02.7**	**-0.3**
HATZ	**Hinemaiaia**	**3.84**	**210**	P	**Pn**	**05 58 03.3**	**-0.4**
WATZ	**Wairara**	**3.85**	**215**	P	**Pn**	**05 58 04.5**	**+0.7**
ARHZ	**Arapaanui**	**3.88**	**198**	P	**Pn**	**05 58 03.5**	**-0.6**
BKZ	**Black Stump Fm**	**3.94**	**204**	P	**Pn**	**05 58 03.7**	**-1.1**
BKZ	**Black Stump Fm**	**3.94**	**204**	S	**S**	**05 58 56.5**	**+0.4**
BKZ	**Black Stump Fm**	**3.94**	**204**	P	**Pn**	**05 58 03.8**	**-1.1**
RATZ	**Rangitukua**	**3.96**	**213**	P	**Pn**	**05 58 05.6**	**+0.5**
RITZ	**Rihia Road**	**4.01**	**211**	P	**Pn**	**05 58 06.1**	**+0.5**
OUZ	**Omahuta**	**4.05**	**274**	P	**Pn**	**05 58 02.6**	**-3.5**
KATZ	**Kakaramea**	**4.08**	**213**	P	**Pn**	**05 58 07.0**	**+0.5**
MCHZ	**McNeill Hill**	**4.13**	**200**	P	**Pn**	**05 58 06.4**	**-0.6**
HIZ	**Hauiti**	**4.16**	**224**	P	**Pn**	**05 58 09.0**	**+1.8**
HIZ	**Hauiti**	**4.16**	**224**	P	**Pn**	**05 58 09.0**	**+1.8**
NTVZ	**North Tongarir**	**4.19**	**212**	P	**Pn**	**05 58 07.7**	**-0.1**
TMVZ	**Te Maari**	**4.20**	**212**	P	**Pn**	**05 58 07.4**	**-0.4**
KWHZ	**Kaweka Forest**	**4.20**	**203**	P	**Pn**	**05 58 06.6**	**-1.2**
KRVZ	**Karewarewa**	**4.21**	**212**	P	**Pn**	**05 58 08.5**	**+0.5**
ETVZ	**East Tongariro**	**4.21**	**211**	P	**Pn**	**05 58 07.6**	**-0.4**
CKHZ	**Cape Kidnapper**	**4.24**	**195**	P	**Pn**	**05 58 07.2**	**-1.0**
WTVZ	**West Tongariro**	**4.25**	**213**	P	**Pn**	**05 58 08.3**	**+0.1**
NNVZ	**North Ngauruho**	**4.25**	**212**	P	**Pn**	**05 58 08.7**	**+0.2**
OTVZ	**Oturere**	**4.25**	**212**	P	**Pn**	**05 58 07.9**	**-0.6**
TWVZ	**Taurewa**	**4.28**	**214**	P	**Pn**	**05 58 08.8**	**0.0**
SNVZ	**South Ngauruho**	**4.28**	**212**	P	**Pn**	**05 58 08.6**	**-0.3**
NGZ	**Ngauruhoe**	**4.29**	**212**	P	**Pn**	**05 58 08.9**	**0.0**
COVZ	**Chateau Observ**	**4.34**	**212**	P	**Pn**	**05 58 09.6**	**+0.2**
TUVZ	**Tukino**	**4.34**	**211**	P	**Pn**	**05 58 09.2**	**-0.4**
FWVZ	**Far West T-bar**	**4.38**	**212**	P	**Pn**	**05 58 09.5**	**-0.6**
MAVZ	**Matarangi**	**4.38**	**212**	P	**Pn**	**05 58 09.9**	**-0.3**
WHVZ	**Whangaehu Hut**	**4.38**	**211**	P	**Pn**	**05 58 10.1**	**0.0**
KRHZ	**Kereru**	**4.41**	**202**	P	**Pn**	**05 58 08.7**	**-1.5**
TRVZ	**Turoa**	**4.42**	**212**	P	**Pn**	**05 58 10.2**	**-0.2**
KAHZ	**Kahuranaki**	**4.42**	**197**	P	**Pn**	**05 58 09.6**	**-0.7**
WNVZ	**Wahianoa**	**4.42**	**211**	P	**Pn**	**05 58 09.5**	**-1.0**
MOVZ	**Moawhango**	**4.42**	**209**	P	**Pn**	**05 58 09.2**	**-1.2**
PKVZ	**Pokaka**	**4.50**	**213**	P	**Pn**	**05 58 11.4**	**+0.1**
PXZ	**Pawanui**	**4.65**	**196**	P	**Pn**	**05 58 11.5**	**-1.4**
WPHZ	**Waipukurau**	**4.78**	**200**	P	**Pn**	**05 58 14.2**	**-0.3**
TSZ	**Takapari Road**	**4.92**	**204**	P	**Pn**	**05 58 14.8**	**-1.4**
PRHZ	**Porangahau**	**4.92**	**197**	P	**Pn**	**05 58 15.1**	**-1.1**
WAZ	**Wanganui**	**5.04**	**213**	P	**Pn**	**05 58 17.1**	**-0.4**
DVHZ	**Dannevirke**	**5.08**	**201**	P	**Pn**	**05 58 16.4**	**-1.6**
LREZ	**Lake Rotokare**	**5.09**	**219**	P	**Pn**	**05 58 19.3**	**+1.2**
PKE	**Pukeiti**	**5.12**	**224**	P	**Pn**	**05 58 20.6**	**+2.0**
KHEZ	**Kahui Hut**	**5.17**	**223**	P	**Pn**	**05 58 20.6**	**+1.3**
KHEZ	**Kahui Hut**	**5.17**	**223**	P	**Pn**	**05 58 20.8**	**+1.6**
POWZ	**Post Office Ro**	**5.29**	**204**	P	**Pn**	**05 58 19.2**	**-1.3**
PRWZ	**Pori Road**	**5.37**	**201**	P	**Pn**	**05 58 20.7**	**-0.9**
BFZ	**Birch Farm**	**5.41**	**199**	P	**Pn**	**05 58 20.3**	**-1.7**
BFZ	**Birch Farm**	**5.41**	**199**	S	**S**	**05 59 27.0**	**-0.3**
BFZ	**Birch

ASAR	**Alice Springs**	**40.26**	**275**	P	**P**	**06 04 11.4**	**-0.2**
	0.8nm,0.5s,baz=115,slow=7.8,SNR=13						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**41.73**	**280**	P	**P**	**06 04 22.4**	**-1.2**
	0.6nm,0.4s,baz=118,slow=7.7,SNR=11						
	0.6nm,0.4s						
VNA3	**Neumayer Olymp**	**73.33**	**177**	⇑P	**P**	**06 08 05.2**	**+3.1**
	comp=Z,2.4nm,0.3s						
VNA2	**Neumayer--Watz**	**73.72**	**178**	⇑P	**P**	**06 08 07.7**	**+3.4**
	comp=Z,1.5nm,0.3s,baz=176,slow=5.4						
FINES	**FINES Array B**	**148.78**	**335**	PKPbc	**PKiKP**	**06 16 15.5**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=54,slow=3.6,SNR=6.9						

IDC ***15*** *05:57:00.9±0.4,20.˙10N×121.˙45E,h0km,mb4.6/33, mbtmp4.6/37,ML4.6/4,MS4.1/35,Error ellipse: s-maj=14.8km s-min=10.9km az=71.0*

BJI ***15*** *05:57:02.6,20.˙21N×121.˙23E,h7km,mB5.1/22,mb4.4/67, ML4.6/4,Ms4.5/57,Ms7 4.4/55*

JMA ***15*** *05:57:03.8±0.5,20˚N-2˚×12˚2E±˚,h0km,MV5.3/16, PHILIPPINE ISL REGION*

GCMT ***15*** *05:57:06.5±0.4,20.˙26N±0.˙03×121.˙11E±0.˙03,h29km±1km, MW5.0/72,Moment Tensor Solution. s36,c43; s72,c93; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.43±.21; Mθθ0.76±.14; Mθφ-3.19±.14; Mrθ-1.14±.22; Mφφ-0.46±.07; Mφr-1.54±.19; Best double couple: Mo3.47000×10^16 NP1:φs344.00000°,δ34.00000°,λ54.00000°. NP2: φs206.00000°,δ63.00000°,λ112.00000°. Principal axes: T 3.2340, Plg65.0000°, Azm154.0000°; N 0.4720, Plg19.0000°, Azm16.0000°; P -3.7060, Plg16.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *05:57:06.5±1.5,20.˙14N±0.˙06×121.˙33E±0.˙08,h32km±2km, mb4.9/75 Error ellipse: s-maj=11.0km s-min=8.5km az=116.0*

ISC 15 05:57:04.8±0.9,20.˙08N±0.˙03×121.˙40E±0.˙04,h26km±6km, n554,σ1$09/567,mb4.8/138,MS4.1/45,1C-4D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWGBT	**Beinan**	**2.74**	**354**	P	**Pn**	**05 57 48.5**	**+1.3**
TWG	**Pinlang**	**2.74**	**354**		**Pn**	**05 57 45.4**	**-1.9**
TPUB	**Ta-pu**	**3.28**	**348**		**Pn**	**05 57 53.2**	**-1.5**
TPUB	**Ta-pu**	**3.28**	**348**	P	**Pn**	**05 57 54.2**	**-0.5**
YULB	**Yu-li**	**3.30**	**358**		**Pn**	**05 57 55.2**	**+0.4**
YULB	**Yu-li**	**3.30**	**358**	P	**Pn**	**05 57 56.1**	**+1.2**
SSLB	**Suanglung**	**3.71**	**354**		**Pn**	**05 58 00.8**	**+0.2**
SSLB	**Suanglung**	**3.71**	**354**	P	**Pn**	**05 58 02.2**	**+1.6**
NACB	**Ninganchiao**	**4.08**	**3**		**Pn**	**05 58 05.8**	**+0.3**
NACB	**Ninganchiao**	**4.08**	**3**	P	**Pn**	**05 58 06.0**	**+0.4**
HATJ	**Hateruma jima**	**4.54**	**29**	*e*P	**Pn**	**05 58 12.4**	**+0.4**
HATJ				S	**Sn**	**05 59 02.1**	**-1.9**
YHNB	**Yeheng**	**4.57**	**360**		**Pn**	**05 58 13.2**	**+0.8**
YHNB	**Yeheng**	**4.57**	**360**	P	**Pn**	**05 58 14.7**	**+2.3**
JYNG	**Yonaguni jima**	**4.58**	**18**	*e*P	**Pn**	**05 58 13.4**	**+0.9**
JYNG				S	**Sn**	**05 59 05.4**	**+0.5**
YOJ	**Yonaguni jima**	**4.61**	**19**		**Pn**	**05 58 13.6**	**+0.7**
YOJ	**Yonaguni jima**	**4.61**	**19**	P	**Pn**	**05 58 14.5**	**+1.6**
YOJ	**Yonaguni jima**	**4.61**	**19**	P	**Pn**	**05 58 13.8**	**+1.0**
YOJ				*e*S	**Sn**	**05 59 06.2**	**+0.5**
IRIF	**Iriomote-Funau**	**4.75**	**27**	P	**Pn**	**05 58 15.5**	**+0.7**
IRIF				*e*S	**Sn**	**05 59 08.2**	**-1.0**
JKRS	**Kuro-shima**	**4.79**	**30**	P	**Pn**	**05 58 15.9**	**+0.5**
JKRS				*e*S	**Sn**	**05 59 09.3**	**-0.8**
TATO	**Taipei**	**4.87**	**1**		**Pn**	**05 58 17.1**	**+0.6**
JIJ	**Ishigaki jima**	**4.96**	**30**	P	**Pn**	**05 58 17.7**	**-0.1**
JIJ				S	**Sn**	**05 59 11.2**	**-3.2**
KNMB	**Chin-men Tao**	**5.18**	**328**		**Pn**	**05 58 20.4**	**-0.3**
JISG	**Ishigakijimahi**	**5.23**	**30**	P	**Pn**	**05 58 21.7**	**+0.3**
JISG				*e*S	**Sn**	**05 59 20.2**	**-0.8**
JTJ	**Tarama**	**5.47**	**33**	P	**Pn**	**05 58 25.1**	**+0.4**
JTJ				*e*S	**Sn**	**05 59 25.5**	**-1.4**
JMJ2	**Miyako jima3**	**5.89**	**37**	*e*S	**Sn**	**05 59 37.2**	**0.0**
JOGS	**Gusukube**	**5.96**	**38**	*e*P	**Pn**	**05 58 32.1**	**+0.8**
TGY	**Tagaytay City**	**5.96**	**184**	Pn	**Pn**	**05 58 31.2**	**-0.3**
	78nm,0.3s,baz=105,slow=4.5,SNR=2.1						
TGY				LR	LR	06 01 26.6	
	comp=Z,1μm,18.2s,baz=198,slow=44						
	197nm,0.3s						
JIKM	**Ikemajima**	**5.99**	**36**	S	**Sn**	**05 59 40.0**	**+0.3**
HKPS	**Hong Kong Po S**	**7.11**	**289**		**Pn**	**05 58 44.6**	**-2.7**
HKPS	**Hong Kong Po S**	**7.11**	**289**	P	**Pn**	**05 58 44.4**	**-2.9**
GZH2	**Guangzhou**	**8.02**	**298**	Pn	**Pn**	**05 58 56.6**	**-3.1**
GZH2				Sn	**Sn**	**06 00 25.4**	**-4.2**
GZH2				smax	smax		
	comp=N,200nm,0.9s						
GZH2				smax	smax		
	comp=E,180nm,1.0s						
JOW	**Kunigami**	**9.22**	**42**	Pn	**Pn**	**05 59 16.0**	**-0.2**
	16nm,0.3s,baz=192,slow=15,SNR=13						
JOW				Sn	**Sn**	**06 00 55.9**	**-3.2**
	3.9nm,0.3s,baz=107,slow=27,SNR=1.6						
	49nm,0.4s						
JOW	**Kunigami**	**9.22**	**42**	P	**Pn**	**05 59 15.9**	**-0.3**
JMZ	**Minamidaito 2**	**10.70**	**56**	Pn	**Pn**	**05 59 36.0**	**-0.5**
JMZ	**Minamidaito 2**	**10.70**	**56**	P	**Pn**	**05 59 35.3**	**-1.2**
QIZ	**Qiongzhong**	**10.94**	**266**		**Pn**	**05 59 38.0**	**-1.8**
QIZ	**Qiongzhong**	**10.94**	**266**	P	**Pn**	**05 59 38.1**	**-1.8**
QIZ				S	**Sn**	**06 01 39.1**	**-2.4**
QIZ				pmax	pmax		
	comp=Z,38nm,0.7s						
QIZ				LR	LR		
	comp=N,700nm,13.2s						
QIZ				LR	LR		
	comp=E,970nm,15.7s						
QIZ				LR	LR		
	comp=Z,1μm,13.6s						
SSE	**Sheshan**	**10.97**	**359**	P	**Pn**	**05 59 39.3**	**-0.9**
SSE				S	**Sn**	**06 01 43.8**	**+1.7**
SSE				pmax	pmax		
	comp=Z,11nm,0.7s						
SSE				pmax	pmax		
	comp=Z,78nm,3.7s						
SSE				LR	LR		
	comp=N,360nm,15.5s						
SSE				LR	LR		
	comp=E,290nm,15.5s						
CNSH	**ChangSha**	**11.17**	**318**	P	**Pn**	**05 59 40.9**	**-2.0**
CNSH				S	Sn	06 01 37.3	-10
GULI	**GuiLin**	**11.42**	**299**	P	**Pn**	**05 59 44.0**	**-2.4**
GULI				S	**Sn**	**06 01 53.1**	**-0.2**
GULI				pmax	pmax		
	comp=Z,19nm,1.5s						
GULI				pmax	pmax		
	comp=Z,240nm,6.6s						
GULI				LR	LR		
	comp=N,830nm,15.7s						
GULI				LR	LR		
	comp=E,1μm,14.7s						
GULI				LR	LR		
	comp=Z,2μm,15.1s						
NJ2	**Nanjing**	**12.14**	**350**	*e*P	**Pn**	**05 59 59.4**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NJ2				LR	LR		
	comp=N,950nm,16.6s						
NJ2				LR	LR		
	comp=E,490nm,14.7s						
NJ2				LR	LR		
	comp=Z,1μm,18.0s						
WHN	**Wuhan**	**12.21**	**330**	P	**Pn**	**05 59 54.8**	**-2.3**
WHN				pP	P	05 59 59.5	-10
WHN				LR	LR		
	comp=N,4μm,15.3s						
WHN				LR	LR		
	comp=E,3μm,15.5s						
KKM	**Kota Kinabalu**	**14.83**	**201**		**Pn**	**06 00 33.0**	**-0.1**
KKM	**Kota Kinabalu**	**14.83**	**201**	P	**Pn**	**06 00 33.8**	**+0.7**
	49nm,1.0s						
GYA	**Guiyang**	**14.95**	**298**	⇓P	**Pn**	**06 00 34.8**	**+0.2**
GYA				S	**Sn**	**06 03 21.0**	**+1.5**
GYA				pmax	pmax		
	comp=Z,21nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,3.1s						
GYA				LR	LR		
	comp=N,380nm,12.8s						
GYA				LR	LR		
	comp=E,1μm,16.5s						
GYA				LR	LR		
	comp=Z,2μm,15.3s						
MYLDM	**Lahad Datu**	**15.08**	**191**	P	**Pn**	**06 00 38.1**	**+1.8**
	38nm,1.1s						
JNU	**Nakatsue**	**15.50**	**31**	Pn	**Pn**	**06 00 42.0**	**+0.2**
	0.8nm,0.3s,baz=183,slow=7.2,SNR=9.8						
JNU				LR	LR	06 06 45.1	
	comp=Z,346nm,21.4s,baz=208,slow=38						
	8.1nm,0.9s						
JTU	**Tsushima**	**16.04**	**25**	P	**Pn**	**06 00 49.8**	**+1.1**
LYN	**LuoYang**	**16.44**	**333**	P	**Pn**	**06 00 54.4**	**+0.6**
LYN				pmax	pmax		
	comp=Z,18nm,1.2s						
LYN				LR	LR		
	comp=N,1μm,17.2s						
LYN				LR	LR		
	comp=E,1μm,15.8s						
LYN				LR	LR		
	comp=Z,1μm,17.5s						
TIA	**Tai'an**	**16.50**	**348**	P	**P**	**06 00 58.3**	**+1.2**
TIA				pmax	pmax		
	comp=Z,21nm,0.9s						
TIA				LR	LR		
	comp=N,840nm,17.2s						
TIA				LR	LR		
	comp=E,690nm,16.5s						
TIA				LR	LR		
	comp=Z,2μm,19.2s						
KMI2	**Kunming**	**17.94**	**290**	P	**Pn**	**06 01 11.6**	**-1.2**
KMI2				pmax	pmax		
	comp=Z,11nm,1.9s						
KMI2				pmax	pmax		
	comp=Z,150nm,3.1s						
KMI2				LR	LR		
	comp=N,430nm,12.6s						
KMI2				LR	LR		
	comp=E,1μm,16.1s						
KMI2				LR	LR		
	comp=Z,1μm,17.4s						
KSAR	**Wonju Array Be**	**18.20**	**17**		**Pn**	**06 01 14.9**	**-0.8**
HNS	**HongShan**	**18.22**	**343**	⇓P	**P**	**06 01 17.3**	**+1.4**
HNS				S	**S**	**06 04 41.8**	**-1.3**
HNS				pmax	pmax		
	comp=Z,30nm,1.0s						
HNS				LR	LR		
	comp=N,940nm,17.5s						
HNS				LR	LR		
	comp=E,750nm,17.5s						
HNS				LR	LR		
	comp=Z,1μm,17.5s						
KSRS	**Korea Array**	**18.22**	**17**	P	**P**	**06 01 16.1**	**+0.1**
	1.4nm,0.3s,baz=197,slow=11,SNR=23						
KSRS				LR	LR	06 09 22.7	
	comp=Z,180nm,18.1s,baz=200,slow=41						
	4.4nm,0.5s						
KS19	**Wonju Array Si**	**18.25**	**17**	P	**Pn**	**06 01 15.4**	**-0.9**
TOLI2	**Tolitoli**	**18.86**	**182**	P	**Pn**	**06 01 23.5**	**-0.4**
PZH	**PanZhiHua**	**19.14**	**293**	P	**Pn**	**06 01 28.4**	**+1.0**
CD2	**Chengdu**	**19.20**	**308**	P	**P**	**06 01 26.5**	**-0.4**
CD2				sP	pwP	06 01 38.6	+1.2
CD2				S	**Sn**	**06 05 01.3**	**-1.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				LR	LR		
	comp=N,2μm,15.2s						
CD2				LR	LR		
	comp=E,2μm,15.9s						
CD2				LR	LR		
	comp=Z,2μm,15.2s						
GTOI	**Gorontalo**	**19.39**	**175**	P	**P**	**06 01 29.0**	**0.0**
	55nm,0.9s						
MRSI	**Marisa**	**19.49**	**178**	P	**Pn**	**06 01 32.7**	**+1.3**
	1μm44nm,0.7s						
MPSI	**Mapaga**	**19.68**	**184**	P	**Pn**	**06 01 34.0**	**+0.4**
SBUM	**Sibu**	**19.68**	**208**	P	**Pn**	**06 01 33.4**	**-0.3**
SBUM	**Sibu**	**19.68**	**208**	P	**Pn**	**06 01 33.7**	**0.0**
JCJ	**Chichijima**	**20.28**	**66**	LR	LR	06 08 03.9	
	comp=Z,258nm,20.0s,baz=197,slow=33						
BJI2	**Beijing**	**20.37**	**348**	P	**P**	**06 01 40.3**	**+0.8**
BJI2				pmax	pmax		
	comp=Z,66nm,0.8s						
BJI2				LR	LR		
	comp=N,230nm,17.8s						
BJI2				LR	LR		
	comp=E,240nm,17.3s						
BJI2				LR	LR		
	comp=Z,440nm,18.1s						
BJT	**Baijiatuan**	**20.37**	**348**		**P**	**06 01 39.6**	**+0.1**
INU	**Inuyama**	**20.52**	**39**	P	**P**	**06 01 41.6**	**+0.5**
INU				IAmb	IAmb	06 01 48.6	
	comp=Z,27nm,0.6s						
APSI	**Ampana**	**20.86**	**179**	P	Pn	06 01 47.1	-0.5
	comp=Z,85nm,0.7s						
JGF	**Kuroka**	**20.89**	**39**	P	**P**	**06 01 45.4**	**+0.2**
JGF				IAmb	IAmb	06 02 08.1	
	comp=Z,68nm,1.4s						
JHJ	**Hachijo jima 2**	**20.91**	**48**	LR	LR	06 08 37.8	
	comp=Z,312nm,20.1s,baz=305,slow=33						
LUWI	**Luwuk**	**21.03**	**176**	P	**P**	**06 01 47.2**	**+0.3**
CHTO	**Chiang Mai**	**21.21**	**270**		**P**	**06 01 49.1**	**+0.3**
CHTO	**Chiang Mai**	**21.21**	**270**	P	**P**	**06 01 49.9**	**+1.1**
CM31	**Chiang Mai Arr**	**21.26**	**269**	P	**P**	**06 01 49.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**21.26**	**269**	P	**P**	**06 01 50.5**	**+1.3**
	comp=Z,6.5nm,0.7s,baz=77,slow=8.7,SNR=21						
CMAR				PcP	**PcP**	**06 05 54.6**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=76,slow=2.4,SNR=11						
CMAR				LR	LR	06 10 12.0	
	comp=Z,486nm,20.4s,baz=85,slow=37						
	comp=Z,6.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**21.26**	**269**		**P**	**06 01 49.0**	**-0.3**
BKB	**Balikpapan**	**21.66**	**192**	P	**P**	**06 01 51.6**	**-2.0**
TNCH	**TengChong**	**21.68**	**287**	P	**P**	**06 01 55.3**	**+1.3**
TNCH				S	**S**	**06 05 51.0**	**-2.1**
TNCH				pmax	pmax		
	comp=Z,35nm,1.2s						
TNCH				pmax	pmax		
	comp=Z,290nm,4.9s						
TNCH				LR	LR		
	comp=Z,640nm,11.2s						
TNCH				LR	LR		
	comp=Z,920nm,12.2s						
TNCH				LR	LR		
	comp=Z,2μm,14.9s						
SNY	**Shenyang**	**21.76**	**4**	⇓P	**P**	**06 01 55.0**	**+0.6**
SNY				S	**S**	**06 05 54.8**	**+0.9**
SNY				pmax	pmax		
	comp=Z,16nm,0.6s						
SNY				pmax	pmax		
	comp=Z,170nm,4.3s						
SNY				LR	LR		
	comp=Z,420nm,16.5s						
SNY				LR	LR		
	comp=Z,460nm,19.5s						
SNY				LR	LR		
	comp=Z,400nm,14.3s						
MTKI	**Muara Teweh, K**	**21.84**	**198**	P	**P**	**06 01 57.2**	**+1.7**
	comp=Z,20μmcomp=Z,89nm,0.5s						
MAJO	**Matsushiro**	**22.04**	**38**	P	**P**	**06 01 57.6**	**+0.1**
MAJO				IAmb	IAmb	06 02 26.9	
	comp=Z,45nm,1.4s						
MJAR	**Matsushiro Arr**	**22.04**	**38**	P	**P**	**06 01 57.7**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=225,slow=8.0,SNR=15						
	comp=Z,2.5nm,0.5s						
MJAR	**Matsushiro Arr**	**22.04**	**38**	P	**P**	**06 01 57.5**	**-0.1**
MJB9	**Matsu-Tunnel**	**22.04**	**38**	P	**P**	**06 01 58.1**	**+0.6**
LZH	**Lanzhou**	**22.17**	**320**	*e*P	**P**	**06 02 00.5**	**+1.4**
LZH				sP	pwP	06 02 11.1	+1.3
LZH				S	**S**	**06 06 01.1**	**-1.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				LR	LR		
	comp=Z,870nm,13.1s						
LZH				LR	LR		
	comp=Z,810nm,12.0s						
LZH				LR	LR		
	comp=Z,1μm,12.4s						
LZDM	**Lanzhou Array**	**22.18**	**319**	P	**P**	**06 02 00.4**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=150,slow=12,SNR=16						
LZDM				PcP	**PcP**	**06 05 56.4**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=173,slow=2.3,SNR=4.9						
LZDM				LR	LR	06 11 29.2	
	comp=Z,647nm,18.1s,baz=40,slow=39						
	comp=Z,1.1nm,0.3s						
HHC	**Hu-ho-hao-te**	**22.34**	**340**	*e*P	**P**	**06 02 03.1**	**+2.3**
HHC				pP	sP	06 02 10.8	+0.9
HHC				S	**S**	**06 06 02.8**	**-2.3**
HHC				sS	pS	06 06 12.8	0.0
HHC				SS	**SnSn**	**06 06 44.1**	**+10**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,5.3s						
HHC				LR	LR		
	comp=Z,770nm,11.4s						
HHC				LR	LR		
	comp=Z,350nm,11.8s						
HHC				LR	LR		
	comp=Z,730nm,11.7s						
SANI	**Sanana**	**22.45**	**168**	P	**P**	**06 01 59.6**	**-2.5**
	comp=Z,25nm,0.7s						
MMSI	**Mamuju**	**22.76**	**186**	P	**P**	**06 02 07.6**	**+2.2**
	comp=Z,93nm,1.0s						
BTO2	**Baotou**	**22.82**	**337**	*e*P	**P**	**06 02 06.0**	**0.0**
BTO2				sP	**pP**	**06 02 13.4**	**+1.2**
BTO2				PP	pwP	06 02 35.1	+18
BTO2				pmax	pmax		
	comp=Z,24nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,760nm,6.0s						
BTO2				LR	LR		
	comp=Z,850nm,9.3s						
BTO2				LR	LR		
	comp=Z,880nm,10.5s						
BTO2				LR	LR		
	comp=Z,1μm,10.8s						
SIJI	**Sorong**	**22.96**	**154**	LR	LR	06 12 30.8	
	comp=Z,98nm,18.4s,baz=60,slow=40						
TTSI	**Tana Toraja**	**23.03**	**184**	P	**P**	**06 02 10.2**	**+2.0**
	comp=Z,29nm,0.8s						
GUMO	**Guam**	**23.36**	**102**	LR	LR	06 11 17.6	
	comp=Z,429nm,19.3s,baz=328,slow=37						
PMSI	**Majene**	**23.56**	**186**	P	**P**	**06 02 15.5**	**+2.0**
	comp=Z,2μmcomp=Z,117nm,1.3s						
NLAI	**Namlea**	**23.84**	**166**	P	**P**	**06 02 18.2**	**+2.1**
	comp=Z,96nm,0.8s						
CN2	**Changchun**	**23.89**	**7**	*e*P	**P**	**06 02 17.3**	**+0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SPSI	**Sidrap Palu**	**23.95**	**184**	P	**P**	**06 02 18.3**	**+1.2**
	comp=Z,43nm,1.0s						
XLT	**XiLinHaoTe**	**24.16**	**351**	*e*P	**P**	**06 02 18.0**	**-1.0**
XLT				pP	pP	06 02 23.3	-2.4
XLT				sP	sP	06 02 27.4	-1.0
XLT				PcP	**PcP**	**06 05 58.0**	**-1.5**
XLT				S	**S**	**06 06 37.3**	**+1.7**
XLT				sS	pS	06 06 44.0	+1.5
XLT				pmax	pmax		
	comp=Z,20nm,1.0s						
XLT				LR	LR		
	comp=Z,520nm,14.9s						
XLT				LR	LR		
	comp=Z,540nm,16.2s						
KRAI	**Karang Ratu**	**24.25**	**163**	P	**P**	**06 02 22.1**	**+2.2**
	comp=Z,37nm,0.7s						
BBKI	**Banjar Baru**	**24.27**	**196**	P	**P**	**06 02 21.7**	**+1.6**
KAPI	**Kappang**	**24.99**	**184**	LR	LR	06 12 49.0	
	comp=Z,328nm,19.7s,baz=348,slow=38						
KAPI	**Kappang**	**24.99**	**184**	P	**P**	**06 02 27.1**	**+0.5**
KAPI				IAmb	IAmb	06 02 43.1	
	comp=Z,21nm,0.8s						
KAPI	**Kappang**	**24.99**	**184**	P	**P**	**06 02 27.5**	**+0.9**
	comp=Z,19nm,0.9s						
IPM	**Ipoh**	**25.18**	**235**	P	**P**	**06 02 27.9**	**-0.5**
IPM				IAmb	IAmb	06 02 45.2	
	comp=Z,19nm,0.9s						
MDJ	**Mudanjiang**	**25.40**	**14**		**P**	**06 02 29.7**	**-0.4**
MDJ	**Mudanjiang**	**25.40**	**14**	P	**P**	**06 02 30.3**	**+0.2**
MDJ				S	**S**	**06 06 55.3**	**0.0**
MDJ				pmax	pmax		
	comp=Z,18nm,1.7s						
MDJ				LR	LR		
	comp=Z,670nm,19.9s						
MDJ				LR	LR		
	comp=Z,470nm,16.5s						
MDJ				LR	LR		
	comp=Z,590nm,13.7s						
USRK	**Ussuriysk Ar.**	**25.62**	**18**	P	**P**	**06 02 32.5**	**+0.3**
	comp=Z,5.9nm,0.7s,baz=209,slow=10,SNR=8.1						
	comp=Z,5.9nm,0.7s						
BNX	**BinXian**	**26.07**	**10**	⇑P	**P**	**06 02 35.6**	**-0.6**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA2	**Gaotai**	**26.84**	**321**	P	**P**	**06 02 44.6**	**+1.2**
GTA2				pP	sP	06 02 52.0	-0.7
GTA2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA2				LR	LR		
	comp=Z,500nm,13.8s						
GTA2				LR	LR		
	comp=Z,410nm,11.6s						
GTA2				LR	LR		
	comp=Z,760nm,10.5s						
SHL	**Shillong**	**27.71**	**287**	P	**P**	**06 02 51.1**	**-0.3**
BRDH	**Bariadhala**	**27.81**	**281**	LR	LR	06 15 57.6	
	comp=Z,934nm,18.2s,baz=106,slow=41						
PSI	**Prapat**	**27.86**	**235**	P	**P**	**06 02 55.3**	**+2.6**
	comp=Z,9.0nm,0.9s						
RPSI	**Rantau Prapat**	**27.92**	**235**	P	**P**	**06 02 53.3**	**+0.2**
GOMU	**GeErMu**	**28.28**	**310**	P	**P**	**06 02 57.4**	**+0.7**
GOMU				sP	pP	06 03 04.3	+1.1
GOMU				PcP	**PcP**	**06 06 09.3**	**-0.3**
GOMU				S	**S**	**06 07 46.4**	**+4.7**
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GOMU				LR	LR		
	comp=Z,440nm,13.7s						
GOMU				LR	LR		
	comp=Z,970nm,14.7s						
TBJI	**Tambak Boyo**	**28.33**	**200**	P	**P**	**06 02 59.2**	**+2.4**
DBNI	**Kabupaten Domp**	**28.56**	**186**	P	**P**	**06 02 59.8**	**+1.0**
	comp=Z,26nm,1.0s						
EDFI	**Ende, Flores**	**28.65**	**179**	P	**P**	**06 02 59.6**	**-0.1**
KHKI	**Kahang-Kahang**	**28.83**	**192**	P	**P**	**06 03 03.7**	**+2.5**
PLAI	**Plampang**	**28.95**	**187**	P	**P**	**06 03 02.5**	**+0.3**
	comp=Z,34nm,0.9s						
TWSI	**Taliwang, Sumb**	**28.98**	**189**	P	**P**	**06 03 03.9**	**+1.4**
	comp=Z,30nm,0.8s						
LSA	**Lhasa**	**28.99**	**295**	P	**P**	**06 02 58.5**	**-4.6**
SNJI	**Sawahan-Nganju**	**29.27**	**200**	P	**P**	**06 03 07.5**	**+2.2**
	comp=Z,25nm,0.8s						
JAY	**Jayapura**	**29.38**	**138**	LR	LR	06 12 38.8	
	comp=Z,234nm,19.9s,baz=332,slow=32						
HILR	**Hailar Array B**	**29.44**	**358**	P	**P**	**06 03 06.0**	**-0.4**
	comp=Z,4.0nm,0.6s,baz=173,slow=15,SNR=4.0						
HILR				PcP	**PcP**	**06 06 11.9**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=151,slow=3.3,SNR=4.7						
HILR				LR	LR	06 15 38.5	
	comp=Z,135nm,20.8s,baz=255,slow=38						
	comp=Z,4.0nm,0.6s						
ASAJ	**Asahikawa**	**29.78**	**32**	P	**P**	**06 03 09.2**	**-0.2**
	comp=Z,5.3nm,0.6s,baz=185,slow=27,SNR=4.1						
	comp=Z,5.3nm,0.6s						
ULN	**Ulaanbaatar**	**30.06**	**341**		**P**	**06 03 11.6**	**-0.5**
ULN	**Ulaanbaatar**	**30.06**	**341**	P	**P**	**06 03 13.3**	**+1.3**
	comp=Z,52nm,0.9s						
SONM	**Songino Array**	**30.24**	**340**	P	**P**	**06 03 14.0**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=157,slow=10.0,SNR=12						
SONM				PcP	**PcP**	**06 06 13.9**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=147,slow=2.9,SNR=4.2						
SONM				LR	LR	06 16 45.2	
	comp=Z,381nm,20.7s,baz=128,slow=39						
	comp=Z,2.7nm,0.5s						
SONM	**Songino Array**	**30.24**	**340**	P	**P**	**06 03 13.0**	**-0.6**
KLR	**Kul'dur**	**30.25**	**14**	LR	LR	06 17 33.9	
	comp=Z,110nm,18.4s,baz=196,slow=41						
HEH	**HeiHe**	**30.49**	**8**	*e*P	**P**	**

COEN Coen 40.04 146 P P 06 04 37.3 -0.7
COEN IAmb IAmb 06 04 37.5
comp=Z,23nm,1.4s
ZSN Zaisan 40.25 321 eP P 06 04 40.5 +1.0
MBWA Marble Bar 41.02 182 P P 06 04 46.2 +0.1
comp=Z,26nm,0.9s
MBWA Marble Bar 41.02 182 P P 06 04 46.1 +0.1
MBWA IAmb IAmb 06 04 46.6
comp=Z,19nm,0.8s
PSAC1 Pilbara Seismi 41.39 182 P P 06 04 49.3 +0.3
comp=Z,51nm,1.0s
PSAC2 Pilbara Seismi 41.41 182 P P 06 04 49.6 +0.3
comp=Z,57nm,0.9s
PSA00 Pilbara Seismi 41.42 182 P P 06 04 49.7 +0.3
comp=Z,56nm,1.0s
PSA00 Pilbara Seismi 41.42 182 P P 06 04 49.5 +0.1
PSA00 IAmb IAmb 06 04 50.1
comp=Z,34nm,0.8s
PSA00 Pilbara Seismi 41.42 182 P P 06 04 49.5 +0.1
PSA00 IAmb IAmb 06 04 50.1
comp=Z,28nm,0.9s
PSAB3 Pilbara Seismi 41.45 182 P P 06 04 49.5 -0.1
comp=Z,55nm,0.9s
WUS Wushi 41.45 310 P P 06 04 49.9 +0.2
MKAR Makanchi Array 41.48 319 P P 06 04 50.5 +0.8
comp=Z,6.2nm,0.6s,baz=113,slow=9.0,SNR=65
MKAR PcP PcP 06 06 46.9 -0.3
comp=Z,4.5nm,0.8s,baz=85,slow=2.9,SNR=5.5
MKAR LR LR 06 25 07.9
comp=Z,295nm,18.5s,baz=333,slow=41
comp=Z,6.2nm,0.6s
WB0 Warramunga Arr 41.60 161 P P 06 04 50.3 -0.6
MAKZ Makanchi 41.68 319 P 06 04 51.9 +0.5
MAKZ IAmb IAmb 06 05 05.2
comp=Z,10nm,0.8s
WRAB Tennant Creek 41.74 162 P P 06 04 51.5 -0.5
WRAB IAmb IAmb 06 04 52.5
comp=Z,27nm,0.8s
WRAB Tennant Creek 41.74 162 P P 06 04 51.2 -0.8
WRA Warramunga Arr 41.75 162 P P 06 04 51.2 -0.9
comp=Z,28nm,0.6s,baz=342,slow=9.0,SNR=130
WRA PcP PcP 06 06 48.6 +0.3
comp=Z,4.0nm,0.8s,baz=333,slow=3.6,SNR=5.3
comp=Z,28nm,0.6s
WRA Warramunga Arr 41.75 162 P P 06 04 51.0 -1.1
SHLS Shalkode 41.90 313 eP P 06 04 52.1 -1.3
UZB Uzynbulak 42.20 313 eP P 06 04 56.9 +1.1
YAK Yakutsk 42.31 6 LR LR 06 24 25.6
comp=Z,194nm,18.9s,baz=286,slow=39
YAK Yakutsk 42.31 6 P P 06 04 55.0 -1.1
SATY Saty 42.60 312 eP P 06 05 00.2 +1.2
TARG Taragay, Kyrgy 42.62 310 P P 06 04 58.0 -1.5
H11N1 WAKE ISLAND Hy 42.68 82 T T 06 50 47.0
baz=278,slow=75,SNR=38
H11N2 WAKE ISLAND Hy 42.68 82 T T 06 50 47.1
baz=278,slow=75,SNR=30
H11S3 WAKE ISLAND Hy 42.68 84 T T 06 50 47.1
baz=281,slow=75
H11S1 WAKE ISLAND Hy 42.69 84 T T 06 50 48.0
baz=281,slow=75
H11N3 WAKE ISLAND Hy 42.70 82 T T 06 50 44.9
baz=278,slow=75,SNR=24
H11S2 WAKE ISLAND Hy 42.70 84 T T 06 50 44.2
baz=281,slow=75
PEA0B Petropavlovsk- 43.20 31 P P 06 05 03.5 -0.1
PETK Petropavlovsk- 43.20 31 P P 06 05 02.2 -1.4
comp=Z,8.6nm,0.8s,baz=205,slow=2.8,SNR=8.0
PETK LR LR 06 23 37.0
comp=Z,203nm,19.4s,baz=333,slow=37
comp=Z,8.6nm,0.8s
PETK Petropavlovsk- 43.20 31 P P 06 05 03.5 -0.1
TDK Taldyqorghan 43.25 315 eP P 06 05 05.5 +1.3
comp=Z,17nm,1.1s
MDOK Medeo 43.58 312 eP P 06 05 08.0 +1.0
TNSS Tian-Shan 43.61 312 eP P 06 05 08.2 +0.7
KSH2 Kashi 43.62 306 P P 06 05 09.3 +1.9
KSH2 pmax pmax
comp=Z,4.0nm,0.9s
KSH2 LR LR
comp=Z,420nm,10.0s
KSH2 LR LR
comp=Z,540nm,13.1s
KSH2 LR LR
comp=Z,680nm,11.7s
AAA Alma-Ata 43.68 312 eP P 06 05 09.0 +1.3
comp=Z,11nm,0.5s
ZAA0 Zalesovo Array 43.82 329 P P 06 05 08.4 -0.2
ZAA0 IAmb IAmb 06 05 10.1
comp=Z,12nm,1.0s
ZALV Zalesovo Beam 43.82 329 P P 06 05 08.5 0.0
comp=Z,9.2nm,0.7s,baz=119,slow=7.6,SNR=38
ZALV LR LR 06 24 38.2
comp=Z,285nm,19.6s,baz=308,slow=38
comp=Z,9.2nm,0.7s
NRN Naryn 43.84 309 P 06 05 09.9 +0.6
NRN IAmb IAmb 06 05 31.1
comp=Z,16nm,1.1s
MTSU Mount Surprise 44.14 148 P P 06 05 12.0 +0.5
comp=Z,9.0nm,0.7s
QIS Mount Isa 44.15 155 P P 06 05 11.3 -0.3
comp=Z,26nm,0.7s
NIL Nilore 44.65 298 P P 06 05 14.0 -1.5
NIL IAmb IAmb 06 05 29.7
comp=Z,9.4nm,0.7s
MA2 Magadan 44.71 21 LR LR 06 26 57.2
comp=Z,209nm,18.0s,baz=288,slow=40
AS31 Alice Springs 45.16 164 P 06 05 19.4 -0.1
AS31 IAmb IAmb 06 05 20.6
comp=Z,9.7nm,0.6s
ASAR Alice Springs 45.16 164 P P 06 05 19.4 -0.1
comp=Z,25nm,0.7s,baz=347,slow=7.2,SNR=316
comp=Z,25nm,0.7s
AAK Ala-Archa 45.23 311 LR LR 06 26 55.0
comp=Z,614nm,18.5s,baz=72,slow=40
WRKA Warakurna 45.34 171 P P 06 05 21.6 +0.5
comp=Z,19nm,1.4s
SGDS Sogindy 45.35 312 eP P 06 05 22.1 +1.1
KURK Kurchatov 45.41 323 P P 06 05 21.6 +0.4
KURK IAmb IAmb 06 05 34.8
comp=Z,9.3nm,0.9s
KURK Kurchatov 45.41 323 P P 06 05 21.9 +0.6
KURBB Kurchatov Arra 45.42 323 P P 06 05 21.8 +0.5
comp=Z,8.3nm,0.5s,baz=117,slow=7.7,SNR=28
KURBB LR LR 06 24 27.0
comp=Z,283nm,18.1s,baz=188,slow=36
comp=Z,8.3nm,0.5s
MEEK Meekatharra 46.52 183 P P 06 05 29.7 -0.6
comp=Z,19nm,1.1s
CTA Charters Tower 46.76 147 LR LR 06 23 45.4
comp=Z,156nm,21.6s,baz=325,slow=34
CTAO Charters Tower 46.76 147 P P 06 05 32.9 +0.6
CTAO IAmb IAmb 06 05 36.5
comp=Z,11nm,0.9s
DZA Taraz 47.55 310 eP P 06 05 39.5 +1.2
HNR Honiara 47.95 124 LR LR 06 25 51.1
comp=Z,7.0nm,18.7s,baz=20,slow=36
HNR Honiara 47.95 124 P P 06 05 42.2 +0.6
KK31 Karatay Array 48.19 310 P P 06 05 43.8 +0.6
KK31 IAmb IAmb 06 06 03.6
comp=Z,10nm,0.9s
KKAR Karatay Array 48.19 310 P P 06 05 43.9 +0.7
IUG Iuzhnay 48.35 309 eP P 06 05 45.8 +1.2
comp=Z,6.1nm,0.8s
BRLS Borolday 48.66 310 eP P 06 05 48.3 +1.5
CHM Chimkent 48.69 309 eP P 06 05 48.4 +1.3
MORW Morawa 49.13 186 P P 06 05 51.1 +0.6
comp=Z,37nm,0.9s
MORW Morawa 49.13 186 P P 06 05 50.4 -0.1
BLDU Ballidu 50.60 185 P P 06 05 59.0 -2.6
comp=Z,16nm,0.9s
FORT Forrest 50.97 173 P P 06 06 05.4 +1.0
comp=Z,81nm,0.7s
FORT Forrest 50.97 173 P P 06 06 05.4 +1.0
BVAR Borovoye Array 51.01 323 P P 06 06 05.0 +0.5
comp=Z,3.9nm,0.6s,baz=113,slow=7.2,SNR=26
BVAR PcP PcP 06 07 20.0 -0.3
comp=Z,9.1nm,0.6s,baz=111,slow=3.7,SNR=13
comp=Z,3.9nm,0.6s
BORK Borovoye 51.05 323 P P 06 06 05.6 +0.8
BORK IAmb IAmb 06 06 26.1
comp=Z,8.6nm,0.8s
BORK Borovoye 51.05 323 P P 06 06 05.7 +0.8
BORK x x 06 06 15.7
BORK PcP PcP 06 07 20.3 -0.2
INKA Innaminka 51.09 158 P 06 06 06.3 +0.9
KMBL Kambalda 51.15 179 P P 06 06 05.7 0.0
comp=Z,14nm,1.5s
QLP Quilpie 51.40 154 P P 06 06 08.3 +0.6
comp=Z,25nm,1.2s
KLBR Kellerberrin 51.49 184 P P 06 06 08.4 +0.1
comp=Z,57nm,0.7s
TIXI Tiksi 51.76 3 LR LR 06 30 58.5
comp=Z,342nm,18.1s,baz=198,slow=39
TIXI Tiksi 51.76 3 P P 06 06 09.1 -0.7
TIXI IAmb IAmb 06 06 23.5
comp=Z,8.4nm,0.9s
NWAO Narrogin (SRO) 52.86 184 LR LR 06 30 54.8
comp=Z,71nm,20.1s,baz=252,slow=38
NWAO Narrogin (SRO) 52.86 184 P P 06 06 18.8 +0.4
NRIK Noril'sk 53.40 346 P P 06 06 22.1 0.0
comp=Z,22nm,0.7s,baz=130,slow=7.4,SNR=39
NRIK PcP PcP 06 07 29.2 +0.2
comp=Z,13nm,0.9s,baz=146,slow=4.7,SNR=4.1
NRIK LR LR 06 31 28.1
comp=Z,357nm,18.9s,baz=290,slow=39
comp=Z,22nm,0.7s
NRIK Noril'sk 53.40 346 P P 06 06 22.2 +0.2
EIDS Eidsvold 53.61 146 P P 06 06 24.7 +0.7
comp=Z,15nm,1.0s
EIDS Eidsvold 53.61 146 P P 06 06 24.6 +0.6
EIDS IAmb IAmb 06 06 25.2
comp=Z,11nm,0.7s
BBOO Buckleboo 54.43 165 P P 06 06 30.9 +1.0
comp=Z,37nm,1.2s
BBOO Buckleboo 54.43 165 P P 06 06 30.9 +1.0
STKA Stephens Creek 55.17 159 P P 06 06 36.6 +1.3
comp=Z,63nm,0.8s
STKA Stephens Creek 55.17 159 P P 06 06 36.4 +1.1
comp=Z,6.0nm,0.6s,baz=333,slow=6.8,SNR=15
STKA LR LR 06 32 35.2
comp=Z,72nm,18.6s,baz=20,slow=39
comp=Z,6.0nm,0.6s
STKA Stephens Creek 55.17 159 P P 06 06 37.2 +1.9
BILL Bilibino 55.47 19 P P 06 06 36.9 -0.2
BILL IAmb IAmb 06 06 37.5
comp=Z,11nm,0.7s
BILL Bilibino 55.47 19 P P 06 06 36.9 -0.2
CMSA Cobar Meteorol 56.37 155 P P 06 06 45.9 +2.0
comp=Z,25nm,1.2s
AB31 Akbulak array 56.49 316 P P 06 06 45.2 +0.6
AB31 IAmb IAmb 06 06 58.5
comp=Z,6.1nm,0.8s
ABKAR Akbulak array 56.49 316 P P 06 06 45.2 +0.6
ARTI Arti 58.61 325 LR LR 06 34 59.1
comp=Z,262nm,19.0s,baz=293,slow=39
ARTI Arti 58.61 325 P P 06 06 59.2 -0.2
ARTI IAmb IAmb 06 07 14.9
comp=Z,14nm,0.8s
ARTI Arti 58.61 325 P P 06 06 59.8 +0.3
ARPS Mount Arapiles 59.75 161 P P 06 07 08.9 +1.4
comp=Z,38nm,0.9s
YNG Young 59.87 154 P P 06 07 10.3 +1.8
comp=Z,23nm,1.5s
DZM Mont Dzumac 60.76 131 P P 06 07 15.4 +0.6
comp=Z,4.8nm,0.8s,baz=152,slow=17,SNR=1.8
comp=Z,4.8nm,0.8s
DZM Mont Dzumac 60.76 131 P P 06 07 15.6 +0.7
SPIA Saint Paul Isl 61.64 35 P P 06 07 20.3 +0.1
baz=263
TOO Toolangi 61.67 158 P P 06 07 22.9 +2.2
comp=Z,24nm,1.2s
TOO Toolangi 61.67 158 P P 06 07 22.2 +1.6
TOO IAmb IAmb 06 07 23.3
comp=Z,14nm,0.8s
P08K Saint George I 61.95 36 P P 06 07 22.5 +0.2
baz=264
GAMB Gambell 61.99 28 P P 06 07 22.3 -0.1
baz=258
NIKH Nikolski High 62.06 40 P P 06 07 23.0 -0.1
baz=267
UNV Unalaska Valle 63.51 39 P P 06 07 32.5 -0.2
baz=268
TNA Tin City 63.91 26 P P 06 07 35.7 +0.5
TNA IAmb IAmb 06 08 02.8
comp=Z,5.6nm,0.9s
TNA Tin City 63.91 26 P P 06 07 35.7 +0.5
baz=261
M11K Mekoryuk 64.06 32 P P 06 07 36.8 +0.6
baz=265
F14K Arctic Creek 64.56 26 P P 06 07 39.9 +0.5
baz=262
ANM Nome 64.85 27 P P 06 07 41.8 +0.5
baz=264,SNR=7.4
K13K Kusilvak Mount 64.94 30 P P 06 07 42.0 +0.1
baz=266
F15K North Star Dit 65.28 26 P P 06 07 43.9 -0.2
baz=264
C16K Lisburne Hills 65.32 23 P P 06 07 44.3 0.0
baz=262
M13K Dall Lake 65.48 32 P P 06 07 45.9 +0.4
baz=268
J14K Nanvranak Lak 65.50 29 P P 06 07 45.7 +0.1
baz=266
L14K Kuka Creek 65.84 31 P P 06 07 48.4 +0.5
baz=268
D17K Noatak River 66.10 24 P P 06 07 50.1 +0.7
baz=265,SNR=21
C17K DeLong Mountai 66.14 23 P P 06 07 50.1 +0.5
baz=264
M14K Bethel 66.17 31 P P 06 07 50.3 +0.3
baz=269,SNR=7.5
RDOG Red Dog Mine 66.20 23 P P 06 07 50.1 0.0
baz=265
G16K Koyuk River 66.20 26 P P 06 07 50.2 +0.1
baz=266
H16K Elim 66.21 27 P P 06 07 50.5 +0.3
baz=267,SNR=12
N14K Kuskokwak Cree 66.30 32 P P 06 07 50.7 0.0
baz=269
K15K Wolf Creek Mou 66.42 30 P P 06 07 51.8 +0.3
baz=268
L15K Ungalak Mounta 66.43 30 P P 06 07 51.9 +0.3
baz=269
O14K Tigyukauivet M 66.51 33 P P 06 07 52.5 +0.4
baz=270
E17K Hotham Inlet 66.53 25 P P 06 07 52.5 +0.4
baz=266,SNR=6.5
F17K Baldwin Pennin 66.72 25 P P 06 07 54.0 +0.6
baz=267
M15K Kasigluk River 66.80 32 P P 06 07 54.5 +0.5
baz=270
I17K Unalakleet 66.85 28 P P 06 07 55.1 +0.9
baz=268
J16K Anvik River 66.87 29 P P 06 07 55.3 +0.8
baz=269
C18K Utukok River 66.88 23 P P 06 07 55.1 +0.6
baz=266
G17K Kiwalik Mounta 66.92 26 P P 06 07 55.5 +0.8
baz=268
SDPT Sand Point 67.01 37 P P 06 07 55.8 +0.4
baz=272
E18K Tukpahlearik C 67.03 24 P P 06 07 56.1 +0.8
baz=267,SNR=6.4
N15K Kwethluk River 67.10 32 P P 06 07 56.5 +0.6
baz=271
H17K Granite Mounta 67.21 27 P P 06 07 57.2 +0.6
baz=269
O15K Ungalikthiuk R 67.25 33 P P 06 07 57.4 +0.6
baz=271
F18K Selawik 67.37 25 P P 06 07 57.9 +0.5
baz=268,SNR=14
L16K Owhat River 67.39 30 P P 06 07 58.2 +0.5
baz=270,SNR=5.0
C19K Lookout Ridge 67.49 22 P P 06 07 59.1 +0.7
baz=267
CHNA Chernabura Isl 67.54 38 P P 06 07 57.8 -0.9
baz=273
J17K VABM Dome 67.56 29 P P 06 07 59.3 +0.5
baz=270
M16K Timber Creek 67.64 31 P P 06 07 59.8 +0.5
baz=271
N16K Nishlik Lake 67.75 32 P P 06 08 00.4 +0.3
baz=272
G18K Tagagawik 67.76 26 P P 06 07 59.9 -0.1
baz=269,SNR=9.2
H18K Honhosa River 67.87 27 P P 06 08 01.5 +0.7
baz=270
K17K Iditarod 67.92 29 P P 06 08 01.3 +0.3
baz=271
L17K Donlin 67.94 30 P P 06 08 01.6 +0.5
baz=271
D19K Kuna River 68.00 23 P P 06 08 02.1 +0.5
baz=269
O16K Kokwok River B 68.12 33 P P 06 08 02.6 +0.2
baz=272
P16K Nushagak River 68.20 33 P P 06 08 02.7 -0.1
baz=273
KBZ Khabaz 68.22 310 P P 06 08 03.7 +0.4
comp=Z,6.4nm,1.0s,baz=135,slow=5.7,SNR=8.4
comp=Z,6.4nm,1.0s
E19K Redstone River 68.33 24 P 06 08 03.9 +0.4
E19K IAmb IAmb 06 08 16.7
comp=Z,9.8nm,0.9s
E19K Redstone River 68.33 24 P P 06 08 04.0 +0.4
baz=270,SNR=9.9
KIV Kislovodsk 68.35 310 P P 06 08 05.3 +1.1
comp=Z,16nm,0.9s
M17K Holitna River 68.37 31 P P 06 08 04.2 +0.3
baz=272
G19K Purcell Mounta 68.40 26 P P 06 08 04.5 +0.6
baz=271,SNR=7.9
R16K Pilot Point 68.50 35 P P 06 08 05.1 +0.3
baz=274
GCSA Galena City Sc 68.51 27 P P 06 08 05.0 +0.3
baz=272
N17K Nushagak Hills 68.53 32 P P 06 08 05.7 +0.8
baz=273
D20K Etivluk River 68.56 23 P P 06 08 05.6 +0.6
baz=270
A21K Barrow 68.57 20 P P 06 08 05.8 +0.9
baz=269
O17K Koliganek Bris 68.62 33 P P 06 08 06.2 +0.8
baz=273
J18K Innoko River 68.62 29 P P 06 08 06.3 +0.8
baz=272
E20K Nigu River 68.72 23 P P 06 08 06.4 +0.3
baz=271
Q16K King Salmon 68.91 34 P P 06 08 07.4 +0.1
baz=274
F20K Avaraart Lake 68.92 25 P P 06 08 07.7 +0.4
baz=272
P17K Kvichak River 68.99 33 P P 06 08 08.5 +0.8
baz=274,SNR=5.4
J19K Poorman 69.09 28 P P 06 08 08.9 +0.6
baz=273
M18K Stony River 69.14 31 P P 06 08 09.1 +0.5
baz=274,SNR=5.2
R17L Mt. Peulik Vol 69.15 35 P P 06 08 09.1 +0.2
baz=275
N18K Kilae Creek 69.16 31 P P 06 08 09.5 +0.6
baz=274
C21K Knifeblade Rid 69.21 22 P P 06 08 09.9 +0.9
baz=272
H20K Anotleneega Mo 69.33 26 P P 06 08 10.4 +0.6
baz=273,SNR=7.1
Q17K Contact Creek 69.35 34 P P 06 08 10.2 0.0
baz=275
L19K White Mountain 69.55 30 P P 06 08 11.9 +0.6
baz=274
O18K Koktuh Hills 69.56 32 P P 06 08 12.2 +0.9
baz=275,SNR=8.7
P18K Big Mountain, 69.59 33 P P 06 08 11.9 +0.3
baz=275
J20K Nowinta River 69.72 28 P 06 08 12.8 +0.6
J20K IAmb IAmb 06 08 14.2
comp=Z,10nm,0.6s
J20K Nowinta River 69.72 28 P P 06 08 12.7 +0.5
baz=274,SNR=10
CHIR Chirikof Islan 69.72 37 P P 06 08 12.8 +0.4
baz=276
RAYN Ar Rayn 69.77 288 P 06 08 13.6 +0.2
RAYN IAmb IAmb 06 08 14.0
comp=Z,6.9nm,0.8s
F21K Alatna River 69.79 24 P P 06 08 13.3 +0.7
baz=274
K20K Telida 69.82 29 P P 06 08 13.1 +0.2
baz=275
G21K Allakaket 69.83 25 P P 06 08 13.2 +0.4
baz=274,SNR=8.4
N19K Bonanza Creek 69.84 31 P P 06 08 13.8 +0.7
N19K IAmb IAmb 06 08 28.2
comp=Z,20nm,1.4s
N19K Bonanza Creek 69.84 31 P P 06 08 13.2 +0.1
baz=275
O19K Port Alsworth 69.97 32 P P 06 08 14.2 +0.3
baz=276,SNR=6.3
D22K Ayikyak River 69.98 23 P P 06 08 14.1 +0.3
baz=274
H21K Melozitna Rive 70.18 26 P P 06 08 16.4 +1.4
H21K IAmb IAmb 06 08 17.4
comp=Z,10nm,0.9s
H21K Melozitna Rive 70.18 26 P P 06 08 15.7 +0.7
baz=275,SNR=10
E22K Anaktuvuk Pass 70.36 23 P P 06 08 17.2 +1.0
baz=275,SNR=6.8
M20K Styx River 70.38 30 P P 06 08 16.8 +0.3
baz=276
SII Sitkinak Islan 70.44 36 P P 06 08 17.5 +0.7
baz=277
Q19K Cape Douglas, 70.45 33 P P 06 08 17.0 +0.1
baz=276
CHUM Lake Minchumin 70.55 28 P P 06 08 18.0 +0.7
baz=276
I21K Tanana 70.56 27 P P 06 08 18.0 +0.6
baz=276
P19K Oil Pt 70.58 32 P P 06 08 17.5 -0.1
baz=277
D23K Nanushuk River 70.70 22 P P 06 08 18.8 +0.6
baz=276
PPLA Purkeypile 70.71 29 P P 06 08 18.9 +0.4
baz=276
H22K Ishtalitna Cre 70.74 26 P P 06 08 19.1 +0.7
baz=276,SNR=9.1
OHAK Old Harbor 70.84 35 P P 06 08 19.5 +0.3
baz=277
COLD Coldfoot 71.06 24 P P 06 08 20.6 +0.2
baz=277
MLY Manley 71.10 27 P P 06 08 21.2 +0.5
baz=277
SKT Skwentna 71.12 30 P P 06 08 21.3 +0.4
baz=277
Q20K Shuyak Island 71.14 33 P P 06 08 21.6 +0.6
baz=278
KDAK Kodiak Island 71.15 34 P P 06 08 20.3 -0.7
comp=Z,11nm,0.8s,baz=309,slow=1.9,SNR=19
comp=Z,11nm,0.8s
KDAK Kodiak Island 71.15 34 P P 06 08 21.2 +0.2
baz=278
E23K Chandalar 71.19 23 P P 06 08 21.6 +0.4
baz=277
G23K Bananza Creek 71.19 25 P P 06 08 21.9 +0.6
baz=277
C24K Franklin Bluff 71.31 22 P P 06 08 22.6 +0.8
baz=277
D24K Happy Valley 71.34 22 P P 06 08 22.6 +0.6
baz=277
HOM Homer 71.38 32 P P 06 08 23.0 +0.6
baz=278
CAPN Captain Cook N 71.47 31 P P 06 08 23.3 +0.4
baz=278
H23K Yukon River 71.50 26 P P 06 08 23.7 +0.6
baz=278
TRF Thorofare Moun 71.50 28 P P 06 08 23.5 +0.2
baz=278
SUA Susitna One 71.56 30 P P 06 08 23.7 0.0
baz=278,SNR=6.1
E24K Your Creek 71.60 23 P P 06 08 24.2 +0.5
baz=278
CUT Chulitna 71.65 29 P P 06 08 23.9 -0.1
baz=278
I23K Minto, Yukon-K 71.67 26 P P 06 08 24.3 +0.2
baz=278
BRSE Bradley Lake S 71.82 32 P P 06 08 25.1 0.0
baz=279
M22K Willow 71.82 30 P P 06 08 25.6 +0.6
baz=278
NEA2 Nenana 71.87 27 P P 06 08 26.1 +0.8
baz=278
MCK McKinley 72.06 28 P P 06 08 26.3 -0.2
baz=279,SNR=6.1
H24K Noodor Dome 72.17 26 P P 06 08 27.0 -0.2
baz=279
D25K Kavik River 72.18 22 P P 06 08 27.6 +0.4
baz=279
G24K Hadweenzic Riv 72.20 25 P P 06 08 27.8 +0.5
baz=279,SNR=7.6
PMR Palmer 72.31 30 P P 06 08 27.8 -0.1
baz=279
COLA College 72.34 27 P P 06 08 28.6 +0.6
baz=280
WAT1 Susitna Watana 72.37 29 P P 06 08 28.4 0.0
baz=280

SEW	Seward	72.40	32	P		P	06 08 28.2	-0.3
	baz=280							
SML	Sawmill	72.65	30	P		P	06 08 30.2	+0.1
	baz=280							
KNK	Knik Glacier	72.66	30	P		P	06 08 30.0	-0.1
	baz=280							
E25K	Arctic Village	72.68	23	P		P	06 08 30.9	+0.7
	baz=280							
F25K	Christian Rive	72.75	24	P		P	06 08 30.9	+0.4
	baz=281							
ILAR	Eielson Array	72.77	27	P		P	06 08 29.6	-1.1
	comp=Z,1.3nm,0.7s,baz=273,slow=4.9,SNR=23							
	comp=Z,1.3nm,0.7s							
WAT6	Susitna Watana	72.78	29	P		P	06 08 30.8	-0.2
	baz=280,SNR=6.3							
HDA	Harding Lake	72.81	27	P		P	06 08 31.1	+0.2
	baz=280							
DHY	Denali Highway	72.86	28	P		P	06 08 31.0	-0.5
	baz=280							
M23K	Glacier View	72.93	30	P		P	06 08 31.7	0.0
	baz=281							
C27K	Jago River	73.05	21	P		P	06 08 32.5	+0.2
	baz=282							
SCM	Sheep Creek Mo	73.11	30	P		P	06 08 33.1	+0.3
	baz=281							
PRP	Porcupine Dome	73.19	26	P		P	06 08 33.9	+0.6
	baz=281							
F26K	Sheenjek River	73.29	23	P		P	06 08 34.6	+0.8
	baz=282,SNR=5.7							
ARCES	ARCESS Array B	73.41	339	P		P	06 08 34.5	+0.1
	comp=Z,3.5nm,0.7s,baz=69,slow=8.1,SNR=8.5							
	comp=Z,3.5nm,0.7s							
GLI	Glacier Island	73.41	31	P		P	06 08 34.5	0.0
	baz=281							
K24K	Donnelly Dome	73.42	28	P		P	06 08 34.7	+0.1
	baz=282							
P23K	Montague Islan	73.43	32	P		P	06 08 34.7	0.0
	baz=281							
J25K	Salcha River,	73.44	27	P		P	06 08 34.6	-0.2
	baz=282							
SPITS	Spitsbergen Ar	73.52	348	P		P	06 08 35.4	+0.5
	comp=Z,7.5nm,0.6s,baz=90,slow=9.2,SNR=22							
SPITS				LR		LR	06 45 31.9	
	comp=Z,308nm,18.6s,baz=226,slow=40							
	comp=Z,7.5nm,0.6s							
G26K	Porcupine Rive	73.58	24	P		P	06 08 36.0	+0.6
	baz=282							
M24K	Tolsona, Glenn	73.59	29	P		P	06 08 36.0	+0.4
M24K	Tolsona, Glenn	73.59	29	P		P	06 08 35.5	-0.2
	baz=282							
PAX	Paxson	73.73	28	P		P	06 08 36.8	+0.2
	baz=282							
KLU	Klutina	73.84	30	P		P	06 08 36.9	-0.2
	baz=282							
RIDG	Independent Ri	73.84	28	P		P	06 08 36.7	-0.4
RIDG				IAmb		IAmb	06 08 38.6	
	comp=Z,11nm,1.0s							
RIDG	Independent Ri	73.84	28	P		P	06 08 37.0	-0.2
	baz=282							
HARP	HAARP	74.00	29	P		P	06 08 36.9	-1.0
	baz=283							
D27M	Malcolm River	74.08	22	P		P	06 08 38.6	+0.2
	baz=284							
EYAK	Cordova Ski Ar	74.12	31	P		P	06 08 38.6	-0.1
	baz=283							
SCRK	Sand Creek	74.16	27	P		P	06 08 38.6	-0.5
	baz=283							
I26K	Coal Creek Min	74.20	26	P		P	06 08 39.4	+0.3
	baz=284							
J26L	Joseph Creek	74.22	27	P		P	06 08 40.1	+0.7
	baz=283,SNR=5.0							
N25K	Chitina, Valde	74.43	30	P		P	06 08 40.5	-0.1
	baz=283							
BMRM	Bremner River	74.58	30	P		P	06 08 42.0	+0.6
	baz=284							
H27K	Steamboat Moun	74.63	25	P		P	06 08 42.0	+0.3
	baz=285							
L26K	Log Cabin Wild	74.66	28	P		P	06 08 42.1	+0.2
	baz=284							
E28M	Babbage River	74.74	22	P		P	06 08 42.5	+0.3
	baz=286							
I27K	Kandik River	74.75	25	P		P	06 08 42.5	+0.1
	baz=285							
F28M	Old Crow	74.89	23	P		P	06 08 43.5	+0.4
	baz=286,SNR=5.6							
KAIM	Kayak Island	74.91	31	P		P	06 08 44.0	+0.7
	baz=284							
M26K	Nabesna, AK	74.97	29	P		P	06 08 43.4	-0.3
	baz=284							
FINES	FINESS Array B	75.08	330	P		P	06 08 44.4	+0.2
	comp=Z,7.7nm,0.8s,baz=44,slow=6.7,SNR=23							
	comp=Z,7.7nm,0.8s							
ASF	Jabal al Asfar	75.09	299	LR		LR	06 44 53.6	
	comp=Z,101nm,19.6s,baz=354,slow=38							
MCARA	McCarthy VSAT	75.22	30	P		P	06 08 44.9	-0.1
	baz=285							
L27K	Beaver Creek,	75.33	28	P		P	06 08 45.8	+0.1
	baz=285							
CRQE	Cirque	75.35	30	P		P	06 08 46.1	+0.2
	baz=285							
E29M	Blow River	75.39	22	P		P	06 08 46.4	+0.5
	baz=287							
I28M	Miner Creek	75.47	25	P		P	06 08 46.8	+0.2
	baz=286							
M27K	Edge Creek, AK	75.49	29	P		P	06 08 46.7	-0.1
	baz=285							
BRTR	Keskin Array B	75.78	307	P		P	06 08 48.9	-0.1
	comp=Z,1.2nm,0.5s,baz=128,slow=2.8,SNR=9.1							
	comp=Z,1.2nm,0.5s							
G29M	Pine Creek	75.78	24	P		P	06 08 48.9	+0.7
	baz=288							
BR106	Keskin Array S	75.79	307	P		P	06 08 49.3	+0.3
	comp=Z,2.6nm,1.0s							
BVCY	Beaver Creek	75.93	28	P		P	06 08 48.8	-0.4
	baz=286							
MESA	MESA	76.04	31	P		P	06 08 49.7	-0.4
	baz=286							
AK09	Malin Array Si	76.05	319	P		P	06 08 49.5	-0.5
AK03	Malin Array Si	76.06	319	P		P	06 08 49.6	-0.5
AK08	Malin Array Si	76.07	319	P		P	06 08 49.6	-0.5
AKASG	Malin Array Be	76.07	319	P		P	06 08 49.8	-0.4
	comp=Z,2.6nm,0.6s,baz=63,slow=5.8,SNR=7.9							
	comp=Z,2.6nm,0.6s							
AKBB	Malin Array Si	76.07	319	P		P	06 08 49.7	-0.4
AK10	Malin Array Si	76.08	319	P		P	06 08 49.7	-0.5
AK10				pP		pP	06 08 57.3	-0.1
KIEV	Kiev	76.08	319	P		P	06 08 49.6	-0.6
	comp=Z,41nm,1.8s							
DAWY	Dawson	76.09	27	P		P	06 08 50.1	0.0
	baz=287,SNR=5.8							
CTG	Chitna Glacier	76.12	30	P		P	06 08 50.1	-0.3
	baz=286							
I29M	Ogilvie Camp,	76.15	25	P		P	06 08 50.9	+0.5
	baz=288							
YUK3	Moose Creek	76.29	29	P		P	06 08 51.6	+0.1
	baz=287							
F30M	Barrier River	76.39	23	P		P	06 08 52.5	+0.8
	baz=290							
G30M	tAoh Zraii Nji	76.44	23	P		P	06 08 52.3	+0.3
	baz=289							
J29N	Klondike Camp	76.46	26	P		P	06 08 51.9	-0.3
	baz=288							
O28M	Mount Upton	76.71	30	P		P	06 08 53.3	-0.6
	baz=287							
YUK8	Steele Glacier	76.76	29	P		P	06 08 54.0	-0.2
	baz=288							
PINM	Pinnacle	76.88	31	P		P	06 08 54.7	+0.1
	baz=287							
L29M	L29M	76.92	27	P		P	06 08 54.3	-0.5
	baz=288							
INK	Inuvik	76.94	22	P		P	06 08 54.5	-0.3
	comp=Z,2.4nm,0.8s,baz=296,slow=5.9,SNR=7.0							
	comp=Z,2.4nm,0.8s							
INK	Inuvik	76.94	22	P		P	06 08 54.8	+0.1
	baz=291							
K29M	Barlow Dome	76.95	27	P		P	06 08 55.5	+0.5
	baz=289							
I30M	Mount Dempster	76.96	25	P		P	06 08 55.7	+0.6
	baz=290							
MI28	Mi28,Pidlybu	76.96	320	P		P	06 08 54.0	-1.2
M29M	Somme Creek	76.99	28	P		P	06 08 55.4	+0.2
	baz=288,SNR=6.2							
F31M	Tsiigehtchic	77.18	22	P		P	06 08 56.2	+0.2
	baz=291							
LUBAR	Lubar, Ukraine	77.18	319	P		P	06 08 55.4	-1.0
J30M	Hart River	77.20	26	P		P	06 08 56.7	+0.3
	baz=290							
YUK4	Talbot Arm	77.25	29	P		P	06 08 57.2	+0.3
	baz=288							
YUK6	Outpost Mounta	77.51	29	P		P	06 08 58.7	+0.3
	baz=289							
H31M	Peel River	77.55	24	P		P	06 08 58.3	+0.1
	baz=291							
O29M	Mount Kennedy	77.61	30	P		P	06 08 59.4	+0.6
	baz=289							
M30M	Mino, Yukon	77.68	28	P		P	06 08 59.6	+0.6
	baz=290							
MAYO	Mayo, Yukon	77.71	27	P		P	06 08 59.8	+0.6
	baz=290							
RNPP9	Sopachiv	77.90	320	P		P	06 09 00.2	-0.2
RNPP8	Varash	77.94	320	P		P	06 09 00.4	-0.2
HYT	Haines Junctio	77.94	29	P		P	06 09 01.1	+0.4
	baz=290							
A36M	Sachs Harbour	77.97	17	P		P	06 09 00.8	+0.4
	baz=298							
KMPD	K-Podol'skiy	78.38	317	P		P	06 09 02.4	-0.7
P30M	Million Dollar	78.44	30	P		P	06 09 03.0	-0.3
	baz=290							
N31M	Braeburn, Yuko	78.50	29	P		P	06 09 03.4	-0.2
	baz=291							
O30N	Mendenhall	78.61	29	P		P	06 09 04.9	+0.6
	baz=291							
SUW	Suwalki	78.68	323	eP		P	06 09 04.9	+0.2
M31M	Drury Creek, Y	78.86	28	P		P	06 09 06.2	+0.7
	baz=292							
WHY	Whitehorse	79.21	29			P	06 09 07.2	-0.4
WHY				IAmb		IAmb	06 09 15.0	
	comp=Z,26nm,1.3s							
WHY	Whitehorse	79.21	29	P		P	06 09 07.3	-0.4
	baz=292							
FARO	Faro, Yukon	79.30	27	P		P	06 09 08.5	+0.6
	baz=293							
SKAG	Skagway	79.44	30	P		P	06 09 09.4	+0.7
	baz=292							
S31K	Pelican	79.55	32	P		P	06 09 09.6	+0.3
	baz=291							
N32M	Quiet Lake	79.84	28	P		P	06 09 11.2	+0.3
	baz=293							
P32M	Atlin	80.16	30	P		P	06 09 12.7	0.0
	baz=293							
R32K	Eaglecrest	80.28	31	P		P	06 09 13.7	+0.4
	baz=292							
P33M	Teslin, Yukon	80.33	29	P		P	06 09 13.5	-0.1
	baz=294							
DAG	Danmarks Havn	80.43	351	*i* P		P	06 09 12.0	-1.8
DAG				IAmb		IAmb	06 09 14.5	
	comp=Z,13nm,0.9s							
S32K	Killisnoo	80.56	32	P		P	06 09 14.8	0.0
	baz=292							
Q32M	Nakina River	81.09	30	P		P	06 09 17.1	-0.8
	baz=294							
HFS	Hagfors	81.23	331	P		P	06 09 17.9	-0.5
	comp=Z,8.4nm,0.7s,baz=104,slow=6.3,SNR=15							
	comp=Z,8.4nm,0.7s							
STHS	Stebnicka Huta	81.36	319	eP		P	06 09 22.8	+3.5
R33M	Jennings River	81.52	30	P		P	06 09 19.3	-0.8
	baz=295							
NC405	NORSAR Array S	81.68	332	P		P	06 09 20.2	-0.5
U33K	Whale Pass	81.83	33	P		P	06 09 21.6	+0.1
	baz=294							
NB2	NORSAR Subarra	81.93	333	P		P	06 09 21.6	-0.5
	comp=Z,2.8nm,0.7s,baz=62,slow=5.3							
NIE	Niedzica	81.93	320	eP		P	06 09 23.1	+0.7
NOA	NORSAR Array B	81.93	333	P		P	06 09 21.4	-0.8
	comp=Z,4.6nm,0.8s,baz=62,slow=5.3,SNR=15							
NOA				LR		LR	06 49 44.2	
	comp=Z,283nm,20.1s,baz=300,slow=39							
	comp=Z,4.6nm,0.8s							
OJC	Ojcow	81.94	321	eP		P	06 09 22.3	0.0
OJC	Ojcow	81.94	321	P		P	06 09 22.5	+0.2
	comp=Z,21nm,0.8s							
S34M	Telegraph Cree	82.07	31	P		P	06 09 23.5	+0.6
	baz=295							
WRAK	Wrangell Islan	82.10	33	P		P	06 09 22.9	0.0
	baz=294							
DLBC	Dease Lake	82.37	30	P		P	06 09 25.0	+0.5
	comp=Z,3.5nm,0.9s,baz=259,slow=9.0,SNR=4.0							
DLBC				LR		LR	06 47 04.5	
	comp=Z,146nm,19.0s,baz=24,slow=36							
	comp=Z,3.5nm,0.9s							
DLBC	Dease Lake	82.37	30	P		P	06 09 25.0	+0.5
	baz=295							
LANS	Lipovska Anna	82.54	320	eP		P	06 09 27.0	+1.5
NEEM	North Greenlan	82.58	358	*i* P		P	06 09 24.2	-1.3
DBG	Daneborg	82.65	350	*i* P		P	06 09 23.2	-2.4
DBG				IAmb		IAmb	06 09 26.5	
	comp=Z,20nm,1.0s							
T35M	Bob Quinn	82.90	32	P		P	06 09 27.1	-0.1
	baz=296							
STEB	Steborice	83.26	321	eP		P	06 09 29.8	+0.6
MORC	Moravsky Berou	83.46	321	eP		P	06 09 29.9	-0.4
JAVC	Velka Javorina	83.74	320	eP		P	06 09 33.2	+1.4
KSP	Ksiaz	83.76	322	eP		P	06 09 32.0	+0.2
KSP	Ksiaz	83.76	322	P		P	06 09 32.2	+0.4
	comp=Z,29nm,0.8s							
OSTC	Ostas	83.92	322	eP		P	06 09 33.7	+1.1
DPC	Dobruska-Polom	83.95	322	eP		P	06 09 33.4	+0.6
DPC	Dobruska-Polom	83.95	322	P		P	06 09 33.2	+0.4
	comp=Z,9.3nm,0.4s							
CHVC	Chvalec	84.00	322	eP		P	06 09 33.3	+0.3
MORH	Mrgy, Hungar	84.17	317	P		P	06 09 34.2	+0.3
	comp=Z,10nm,2.8s							
MODS	Modra-Piesok	84.17	319	eP		P	06 09 35.4	+1.4
VRAC	Vranov	84.21	321	eP		P	06 09 34.3	+0.2
KRUC	Moravsky	84.43	320	eP		P	06 09 35.2	0.0
MPLH	Magyarpolny	84.50	318	P		P	06 09 35.9	+0.3
	comp=Z,37nm,1.2s							
PVCC	Panska Ves	84.89	322	eP		P	06 09 38.2	+0.7
RONA	Rosalia, Austr	85.05	319	eP		P	06 09 37.9	-0.6
	comp=Z,5.8nm,1.1s							
BRG	Berggiesshubel	85.10	323	*i* P		P	06 09 39.0	+0.5
BRG				Amp			06 09 39.8	
	comp=Z,8.9nm,0.9s							
PRU	Pruhonice	85.14	322	eP		P	06 09 39.2	+0.5
CONA	Conrad Observa	85.22	319	eP		P	06 09 39.5	+0.2
	comp=Z,5.7nm,1.0s							
CLL	Collm	85.44	323			P	06 09 40.2	+0.1
CLL				IAmb		IAmb	06 09 41.0	
	comp=Z,8.5nm,0.8s							
CLL	Collm	85.44	323	P		P	06 09 40.3	+0.1
	comp=Z,13nm,1.3s							
CLL	Collm	85.44	323	⇓ *i* P		P	06 09 40.3	+0.1
	comp=Z,12nm,1.0s							
CLL				*ex*		x	06 09 57.0	
ZVC	Zvikov	85.58	321	eP		P	06 09 41.2	+0.2
ARSA	Arzberg	85.72	319	eP		P	06 09 41.3	-0.4
	comp=Z,6.4nm,1.1s							
CKRC	Cesky Krumlov	85.78	321	eP		P	06 09 42.8	+0.8
KHC	Knesperske Hory	86.08	321	eP		P	06 09 39.5	-4.0
GEC2	GERESS Array S	86.13	321	P		P	06 09 43.8	-0.1
GEC2				IAmb		IAmb	06 09 44.7	
	comp=Z,3.8nm,0.9s							
GERES	GERESS Array B	86.13	321	P		P	06 09 43.9	+0.1
	comp=Z,1.6nm,0.6s,baz=57,slow=4.9,SNR=14							
	comp=Z,1.6nm,0.6s							
MOA	Molln	86.23	320	eP		P	06 09 43.9	-0.4
	comp=Z,7.5nm,0.9s							
SOKA	Soboth	86.26	319	*i* P		P	06 09 44.4	-0.1
	comp=Z,3.3nm,0.9s,SNR=7.8							
SUMG	Summit	86.58	354	*i* P		P	06 09 44.8	-1.1
SUMG				IAmb		IAmb	06 09 47.1	
	comp=Z,19nm,1.1s							
YKA	Yellowknife Ar	86.66	23	P		P	06 09 45.9	-0.1
	comp=Z,1.4nm,0.6s,baz=313,slow=5.1,SNR=40							
	comp=Z,1.4nm,0.6s							
LESA	Schwarzleotal	87.38	320	eP		P	06 09 48.8	-1.2
	comp=Z,5.0nm,1.2s							
ABTA	Abtersbach	87.79	319	eP		P	06 09 50.9	-1.0
	comp=Z,6.4nm,1.1s							
WTTA	Wattenberg	88.08	320	*i* P		P	06 09 53.1	-0.4
	comp=Z,3.0nm,0.6s,SNR=6.8							
WATA	Walderalm	88.08	320	eP		P	06 09 52.4	-1.0
	comp=Z,2.9nm,0.7s							
SQTA	Sankt Quirin	88.36	320	*i* P		P	06 09 53.1	-1.5
	comp=Z,4.5nm,0.7s,SNR=4.6							
MOTA	Moosalm	88.36	320	*i* P		P	06 09 53.9	-0.9
	comp=Z,3.6nm,0.7s							
RETA	Reutte	88.50	321	eP		P	06 09 54.3	-1.0
	comp=Z,1.4nm,1.0s							
NUUG	Nuugaatsiaq	88.55	358	*i* P		P	06 09 50.3	-4.5
NUUG				IAmb		IAmb	06 09 52.1	
	comp=Z,5.5nm,0.8s							
FETA	Feichten	88.74	320	*i* P		P	06 09 55.5	-1.0
	comp=Z,4.3nm,1.0s,SNR=6.7							
TEOL	Teolo	88.95	318	P		P	06 09 57.1	-0.3
	baz=288							
DAVA	Damuels	89.12	321	*e*PcP		P	06 09 58.7	+0.4
	comp=Z,5.6nm,1.0s							
FUORN	Ofenpass-Fuorn	89.22	320			P	06 09 58.6	-0.3
FUORN				IAmb		IAmb	06 09 59.7	
	comp=Z,7.8nm,0.8s							
BORG	Borgarnes	90.72	345	LR		LR	06 53 46.9	
	comp=Z,378nm,18.9s,baz=221,slow=38							
MBAR	Mbarara	90.82	270	LR		LR	06 50 26.7	
	comp=Z,73nm,20.0s,baz=8.5,slow=35							
EKA	Eskdalemuir Ar	91.41	332	P		P	06 10 08.7	+0.1
	comp=Z,1.2nm,0.6s,baz=62,slow=2.6,SNR=5.9							
	comp=Z,1.2nm,0.6s							
PPT	Papeete	95.00	107	LR		LR	06 43 52.9	
	comp=Z,61nm,19.9s,baz=338,slow=30							
NVAR	Mina Array Bea	99.28	43	P		Pdif	06 10 45.7	+0.5
	comp=Z,0.4nm,0.6s,baz=273,slow=4.9,SNR=3.6							
	comp=Z,0.4nm,0.6s							
TORD	Torodi Ar. Bea	112.12	294	PKiKP		PKiKP	06 15 37.2	-1.7
	comp=Z,0.6nm,0.6s,baz=242,slow=3.5,SNR=6.1							
TORD				PKKPab		PKKPab	06 26 39.1	-0.7
	comp=Z,0.4nm,0.7s,baz=246,slow=9.3,SNR=4.2							
TXAR	Lajitas Array	114.42	43	PKP		PKiKP	06 15 43.1	-0.1
	comp=Z,0.4nm,0.6s,baz=312,slow=1.8,SNR=7.1							
TXAR				PKKPab		PKKPab	06 26 28.3	-2.1
	comp=Z,0.4nm,0.7s,baz=105,slow=2.3,SNR=5.6							
ROSC	El Rosal	150.81	34	PKPbc		PKiKP	06 16 57.1	0.0
	comp=Z,5.5nm,0.5s,baz=62,slow=2.7,SNR=5.6							
PLCA	Paso Flores	157.02	156	PKP		PKPdf	06 16 57.6	-0.9
	comp=Z,1.7nm,1.0s,baz=202,slow=5.4,SNR=3.0							
CFA	Coronel Fontan	165.63	145	PKP		PKPdf	06 17 07.3	-0.4
	comp=Z,0.8nm,0.8s,baz=332,slow=4.1,SNR=3.9							
LPAZ	La Paz	170.19	69	PKP		PKPdf	06 17 12.2	+0.1
	comp=Z,1.1nm,0.7s,baz=323,slow=2.5,SNR=5.3							
LPAZ				PKPab		PKPab	06 18 27.5	-0.4
	comp=Z,0.8nm,0.5s,baz=310,slow=2.7,SNR=4.8							

NEIC ***15*** *06:08:24.9±1.0, 33.2N±0.1×136.8E±0.1, h387km±11km, mb4.0/23, Error ellipse: s-maj=18.2km s-min=13.2km az=154.0*

IDC ***15*** *06:08:24.6±0.9, 33.14N×136.83E, h387km±9km, mb3.4/25, mbtmp4.1/31, Error ellipse: s-maj=10.4km s-min=9.3km az=97.0*

JMA ***15*** *06:08:24.4±0.3, 33.1N±1.1×13.7E±1.1, h392km±2km, MV3.5/38, SE OFF KII PENINSULA*

ISC 15 06:08:24.6±0.7, 33.21N±0.07×136.86E±0.05, h387km±5km, n103, σθ91/115, mb3.8/42, 2D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO2	TONANKAI O.B.S	0.54	15	eP	Pn	06 09 14.0	+1.4
JIE	Ise	1.19	354	P	Pn	06 09 15.8	+0.9
JIE				eS	S	06 09 55.5	-0.1
JTNC	Tanabenakahech	1.20	301	P	Pn	06 09 15.5	+0.5
JTNC				eS	S	06 09 56.0	+0.2
JWY	Kouya	1.46	314	P	Pn	06 09 17.1	+0.9
JWY				eS	S	06 09 57.7	-0.3
JSG	Sagara	1.83	37		Pn	06 09 18.5	+0.4
JAI	Aioi	2.09	287	P	Pn	06 09 20.7	+0.8
JAI				eS	S	06 10 04.1	-0.4
INU	Inuyama	2.14	4		Pn	06 09 20.6	+0.5
JYTA	Yamagatataniai	2.38	358	P	Pn	06 09 22.7	+0.8
JYTA				eS	S	06 10 07.8	-0.3
JWT	Wachi	2.39	330	P	Pn	06 09 22.7	+0.8
JWT				eS	S	06 10 07.6	-0.7
JGF	Kuroka	2.42	10		Pn	06 09 22.6	+0.4
JHJ	Hachijo jima 2	2.46	91	P	Pn	06 09 23.1	+0.6
	579nm,0.7s,baz=82,slow=22,SNR=29						
JHJ2	Mitsune	2.49	91		Pn	06 09 22.9	+0.2
JHJ2	Mitsune	2.49	91	eP	Pn	06 09 23.2	+0.5
JMN	Monobe	2.54	283		Pn	06 09 23.6	+0.5
JMN	Monobe	2.54	283	eP	Pn	06 09 24.1	+0.9
JMN				eS	S	06 10 10.2	-0.3
JAOM	Aogashimamukai	2.56	106	eP	Pn	06 09 24.0	+0.7
JYN	Shimob	2.68	31	eP	Pn	06 09 24.2	0.0
JOD2	Odawara 2	2.76	41	eP	Pn	06 09 24.7	0.0
JKG	Kaga	3.09	352	eP	Pn	06 09 27.4	0.0
JRY	Ryogami san	3.27	31	eP	Pn	06 09 29.3	+0.2
JRY				eS	S	06 10 20.2	-1.0
JTO	Tosashimizu	3.42	265	P	Pn	06 09 31.1	+0.7
MJAR	Matsushiro Arr	3.50	18	P	Pn	06 09 31.1	0.0
	37nm,0.5s,baz=188,slow=9.5,SNR=162						
MJAR				S	S	06 10 23.3	-1.7
	6.6nm,0.6s,baz=194,slow=13,SNR=5.0						
MJAR	Matsushiro Arr	3.50	18		Pn	06 09 31.4	+0.2
MAJO	Matsushiro	3.51	18		Pn	06 09 31.2	0.0
MAT	Matsushiro	3.51	18	P	Pn	06 09 31.1	-0.1
MAT				eS	S	06 10 23.9	-1.2
MJB9	Matsu-Tunnel	3.51	18		Pn	06 09 32.3	+1.1
JHS	Saijyo	3.58	301	eP	Pn	06 09 32.6	+0.7
JNA	Nagahama	3.68	277	eP	Pn	06 09 33.6	+0.8
BSO1	Boso 1	3.72	66	eP	Pn	06 09 30.4	-2.1
BSO1				eS	S	06 10 24.5	-3.1
JAG	Ashikaga	3.85	33	eP	Pn	06 09 33.0	-1.4
JHT	Toyohira	3.96	293	eP	Pn	06 09 36.1	+0.6
JGT2	ShimaneMisato	4.05	298	eP	Pn	06 09 36.6	+0.3
JNU	Nakatsue	5.01	271	P	Pn	06 09 46.5	+0.4
	14nm,0.7s,baz=81,slow=8.1,SNR=7.9						
JNU				S	S	06 10 49.0	-3.3
	8.5nm,0.7s,baz=261,slow=3.9,SNR=6.9						
JCJ	Chichijima	7.64	141	P	Pn	06 09 57.2	-18
	39nm,0.6s,baz=359,slow=18,SNR=7.6						
JCJ				S	S	06 11 23.4	-23
	34nm,0.3s,baz=286,slow=23,SNR=11						
TJN	Taejon	8.42	295	P	P	06 10 25.3	+0.4
KSRS	Korea Array	8.44	303	P	Pn	06 10 24.4	+0.2
	3.5nm,0.5s,baz=115,slow=11,SNR=11						
JOW	Kunigami	9.78	232		Pn	06 10 39.6	-0.5
USRK	Ussuriysk Ar.	11.61	342	P	P	06 10 59.1

CHTO	**Chiang Mai**	**36.75**	**257**	P		**P**		**06 14 55.9**	**-1.2**
CHTO				IAmb		IAmb		06 14 57.0	
	comp=Z,3.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**36.93**	**256**	P		**P**		**06 14 58.4**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=49,slow=7.6,SNR=11								
	comp=Z,1.7nm,0.3s								
BILL	**Bilibino**	**38.76**	**17**			**P**		**06 15 13.8**	**+0.8**
ZALV	**Zalesovo Beam**	**41.88**	**316**	P		**P**		**06 15 38.6**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=74,slow=9.4,SNR=4.7								
	comp=Z,0.8nm,0.3s								
MKAR	**Makanchi Array**	**43.11**	**305**	P		**P**		**06 15 48.6**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=87,slow=9.8,SNR=39								
MKAR				ScP		**ScP**		**06 20 42.4**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=76,slow=4.4,SNR=4.3								
	comp=Z,1.6nm,0.4s								
MKAR	**Makanchi Array**	**43.11**	**305**	P		**P**		**06 15 48.0**	**-0.5**
NRIK	**Noril'sk**	**45.28**	**338**	P		**P**		**06 16 05.2**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=90,slow=3.9,SNR=4.2								
	comp=Z,1.8nm,0.4s								
NRIK	**Noril'sk**	**45.28**	**338**	P		**P**		**06 16 05.4**	**+0.4**
KURK	**Kurchatov**	**45.46**	**311**			**P**		**06 16 06.0**	**-0.7**
KURK				IAmb		IAmb		06 16 07.5	
	comp=Z,5.0nm,0.9s								
KURBB	**Kurchatov Arra**	**45.52**	**311**	P		**P**		**06 16 07.1**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=96,slow=6.8,SNR=17								
	comp=Z,2.0nm,0.5s								
TNA	**Tin City**	**46.00**	**28**	P		**P**		**06 16 11.8**	**+1.2**
ANM	**Nome**	**46.78**	**30**	P		**P**		**06 16 17.9**	**+1.2**
ANM				IAmb		IAmb		06 16 18.9	
	comp=Z,3.1nm,0.6s								
J14K	**Nanvaranak Lak**	**47.21**	**33**	P		**P**		**06 16 21.1**	**+1.2**
J14K				IAmb		IAmb		06 16 37.8	
	comp=Z,12nm,1.4s								
F15K	**North Star Dit**	**47.35**	**29**			**P**		**06 16 22.4**	**+1.5**
F15K				IAmb		IAmb		06 16 23.7	
	comp=Z,7.0nm,0.6s								
C16K	**Lisburne Hills**	**47.76**	**25**			**P**		**06 16 24.8**	**+0.9**
C16K				IAmb		IAmb		06 16 26.0	
	comp=Z,5.2nm,0.8s								
N15K	**Kwethluk River**	**48.54**	**36**	P		**P**		**06 16 31.2**	**+1.2**
N15K				IAmb		IAmb		06 16 32.4	
	comp=Z,12nm,0.8s								
KSH2	**Kashi**	**49.01**	**295**	P		**P**		**06 16 34.9**	**+0.8**
KSH2				pmax		pmax			
	comp=Z,4.0nm,0.6s								
E18K	**Tukpahlearik C**	**49.30**	**27**			**P**		**06 16 36.8**	**+1.2**
E18K				IAmb		IAmb		06 16 38.4	
	comp=Z,6.1nm,0.8s								
G18K	**Tagagawik**	**49.81**	**29**	P		**P**		**06 16 40.3**	**+0.8**
G18K				IAmb		IAmb		06 16 41.6	
	comp=Z,4.5nm,0.9s								
BVAR	**Borovoye Array**	**50.46**	**314**	P		**P**		**06 16 44.6**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=100,slow=6.7,SNR=12								
	comp=Z,1.3nm,0.4s								
KKAR	**Karatay Array**	**51.86**	**301**			**P**		**06 16 54.8**	**-0.2**
FITZ	**Fitzroy Crossi**	**52.13**	**194**	P		**P**		**06 16 56.6**	**-0.4**
	comp=Z,4.3nm,0.9s,baz=359,slow=8.3,SNR=5.2								
	comp=Z,4.3nm,0.9s								
WRA	**Warramunga Arr**	**52.91**	**183**	P		**P**		**06 17 01.8**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=0.3,slow=7.6,SNR=18								
	comp=Z,1.3nm,0.7s								
SUA	**Susitna One**	**53.14**	**35**	P		**P**		**06 17 04.2**	**+0.2**
D24K	**Happy Valley**	**53.84**	**25**	P		**P**		**06 17 09.9**	**+1.2**
D24K				IAmb		IAmb		06 17 11.1	
	comp=Z,12nm,0.7s								
GHO	**Glory Hole Cre**	**53.99**	**34**			**P**		**06 17 10.6**	**+0.5**
GHO				IAmb		IAmb		06 17 11.7	
	comp=Z,14nm,1.0s								
ILAR	**Eielson Array**	**54.70**	**31**	P		**P**		**06 17 14.8**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=251,slow=5.5,SNR=16								
	comp=Z,1.3nm,0.9s								
MENT	**Mentasta**	**56.28**	**33**	P		**P**		**06 17 26.7**	**+0.6**
MENT				IAmb		IAmb		06 17 29.0	
	comp=Z,11nm,1.3s								
ASAR	**Alice Springs**	**56.63**	**183**	P		**P**		**06 17 28.2**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=354,slow=4.4,SNR=17								
	comp=Z,0.6nm,0.7s								
AB31	**Akbulak array**	**57.57**	**311**			**P**		**06 17 35.1**	**-0.1**
INK	**Inuvik**	**59.46**	**26**	P		**P**		**06 17 48.6**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=303,slow=7.0,SNR=9.9								
	comp=Z,1.1nm,0.4s								
SPITS	**Spitsbergen Ar**	**63.53**	**349**	P		**P**		**06 18 14.7**	**0.0**
	comp=Z,7.4nm,1.0s,baz=73,slow=5.0,SNR=1.8								
	comp=Z,7.4nm,1.0s								
ARCES	**ARCESS Array B**	**66.24**	**339**	P		**P**		**06 18 32.1**	**+0.2**
	comp=Z,4.2nm,1.0s,baz=51,slow=9.6,SNR=5.8								
	comp=Z,4.2nm,1.0s								
RES	**Resolute Bay**	**67.19**	**13**	P		**P**		**06 18 38.3**	**+0.5**
YKA	**Yellowknife Ar**	**68.96**	**28**	P		**P**		**06 18 49.0**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=308,slow=6.9,SNR=10.0								
	comp=Z,0.3nm,0.4s								
TULEG	**Thule**	**69.33**	**6**	*i* P		P		06 18 44.0	-6.9
FINES	**FINESS Array B**	**70.42**	**332**	P		**P**		**06 18 57.5**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=56,slow=7.1,SNR=14								
	comp=Z,1.0nm,0.4s								
KBZ	**Khabaz**	**70.52**	**310**	P		**P**		**06 18 59.2**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=96,slow=6.0,SNR=6.8								
	comp=Z,3.0nm,0.8s								
NB2	**NORSAR Subarra**	**76.20**	**336**	P		**P**		**06 19 30.9**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=44,slow=5.6								
NOA	**NORSAR Array B**	**76.20**	**336**	P		**P**		**06 19 30.9**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=46,slow=5.5,SNR=3.7								
	comp=Z,1.0nm,0.7s								
BRTR	**Keskin Array B**	**78.51**	**310**	P		**P**		**06 19 44.7**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=108,slow=7.9,SNR=3.6								
	comp=Z,0.9nm,0.8s								
NVAR	**Mina Array Bea**	**80.28**	**50**	P		**P**		**06 19 55.0**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=296,slow=5.6,SNR=9.8								
	comp=Z,0.7nm,0.5s								
PDAR	**Pinedale Array**	**83.00**	**43**	P		**P**		**06 20 08.3**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=310,slow=2.1,SNR=9.9								
	comp=Z,1.1nm,0.8s								
TXAR	**Lajitas Array**	**95.42**	**50**	P		**P**		**06 21 07.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=288,slow=2.6,SNR=5.8								
	comp=Z,0.4nm,0.6s								

KRSC ***15*** *07:05:56.7± 1.7, 49.˚65N× 156.˚48E, h70km± 24km, Ml4.9, Felt [II] at Podgornay.*
MOS ***15*** *07:05:57.8± 1.0, 49.˚82N× 155.˚79E, h98km, mb4.5/14, Error ellipse: s-maj=9.4km s-min=3.8km az=75.3*
IDC ***15*** *07:05:58.3± 0.5, 49.˚84N× 155.˚71E, h88km± 4km, mb3.9/28, mbtmp4.2/35, MS3.5/9, Error ellipse: s-maj=12.1km s-min=9.1km az=150.0*
NEIC ***15*** *07:06:00.2± 1.6, 49.˚89N± 0.˚07× 155.˚7E± 0.˚1, h102km± 8km, mb4.5/32, Error ellipse: s-maj=14.5km s-min=8.6km az=112.0*

ISC 15 07:05:58.4±0.5, **49.˚83N**±0.˚05×**155.˚91E**±0.˚05, **h90**km±4km, **h90**km:**pP-P, n198,** σ1§**46**/235**, mb4.4**/66**, 11C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SKR	**Severo-Kuril's**	**0.86**	**9**	⇓*i*	PN	**Pn**	**07 06 17.0**		**+0.4**
SKR					eS	**Sn**	**07 06 31.3**		**+1.1**
SKR				pmax		pmax			
	comp=Z,3μm,0.4s								
SKR				smax		smax			
	comp=N,6μm,0.2s								
SKR				smax		smax			
	comp=E,6μm,0.3s								
SKR	**Severo-Kuril's**	**0.86**	**9**	*e*P		**Pn**	**07 06 17.0**		**+0.4**
SKR				*e*S		**Sn**	**07 06 31.2**		**+1.1**
PAU	**Pauzhetka**	**1.74**	**19**	P		**Pn**	**07 06 28.1**		**+1.0**
PAU				S		**Sn**	**07 06 50.5**		**+1.5**
PAU	**Pauzhetka**	**1.74**	**19**	*e*P		**Pn**	**07 06 28.2**		**+1.0**
PAU				*e*S		**Sn**	**07 06 50.5**		**+1.5**
KDTR	**Khodutka, Kamc**	**2.41**	**34**	PN		**Pn**	**07 06 36.0**		**0.0**
KDTR				S		**Sn**	**07 07 04.1**		**-0.7**
KDTR	**Khodutka, Kamc**	**2.41**	**34**	*e*P		**Pn**	**07 06 36.0**		**0.0**
KDTR				*e*S		**Sn**	**07 07 04.2**		**-0.7**
ASAK	**Asacha**	**2.85**	**25**	PN		**Pn**	**07 06 43.1**		**+1.2**
ASAK				S		**Sn**	**07 07 16.3**		**+0.9**
ASAK	**Asacha**	**2.85**	**25**	*e*P		**Pn**	**07 06 43.1**		**+1.2**
ASAK				*e*S		**Sn**	**07 07 16.3**		**+0.9**
MTVR	**Mutnovka**	**3.02**	**27**	PN		**Pn**	**07 06 45.2**		**+1.0**
MTVR				S		**Sn**	**07 07 20.8**		**+1.3**
MTVR	**Mutnovka**	**3.02**	**27**	*e*P		**Pn**	**07 06 45.2**		**+1.0**
MTVR				*e*S		**Sn**	**07 07 20.9**		**+1.3**
GRL	**Gorelyy**	**3.05**	**26**	PN		**Pn**	**07 06 46.2**		**+1.6**
GRL				S		**Sn**	**07 07 22.0**		**+1.8**
GRL	**Gorelyy**	**3.05**	**26**	*e*P		**Pn**	**07 06 46.3**		**+1.6**
GRL				*e*S		**Sn**	**07 07 22.1**		**+1.8**
RUS	**Russkaya**	**3.08**	**31**	PN		**Pn**	**07 06 44.9**		**0.0**
RUS				S		**Sn**	**07 07 19.4**		**-1.4**
RUS	**Russkaya**	**3.08**	**31**	*e*P		**Pn**	**07 06 45.0**		**0.0**
RUS				*e*S		**Sn**	**07 07 19.5**		**-1.4**
APC	**Apacha**	**3.20**	**14**	PN		**Pn**	**07 06 49.1**		**+2.6**
APC	**Apacha**	**3.20**	**14**	*e*P		**Pn**	**07 06 49.1**		**+2.6**
KRMR	**Karymshinskiy**	**3.31**	**24**	PN		**Pn**	**07 06 49.9**		**+1.9**
KRMR	**Karymshinskiy**	**3.31**	**24**	*e*P		**Pn**	**07 06 49.9**		**+1.9**
PEA0B	**Petropavlovsk-**	**3.47**	**18**			**Pn**	**07 06 52.1**		**+1.9**
PEA0B	**Petropavlovsk-**	**3.47**	**18**	*de*	PN	**Pn**	**07 06 52.5**		**+2.3**
PETK	**Petropavlovsk-**	**3.47**	**18**	P		**Pn**	**07 06 52.4**		**+2.2**
	comp=E,136nm,0.5s,baz=189,slow=12,SNR=404								
PETK	**Petropavlovsk-**	**3.47**	**18**			**Pn**	**07 06 52.1**		**+1.9**
PET	**Petropavlovsk**	**3.63**	**27**			**Pn**	**07 06 53.5**		**+1.1**
PET	**Petropavlovsk**	**3.63**	**27**	*e*	PN	**Pn**	**07 06 53.3**		**+1.0**
PET				*e*S		**Sn**	**07 07 36.0**		**+1.9**
PET				pmax		pmax			
	comp=Z,132nm,0.6s								
PET				smax		smax			
	comp=N,316nm,0.6s								
PET				smax		smax			
	comp=E,272nm,0.4s								
PET				MLR		MLR			
	comp=Z,600nm,12.0s								
PET	**Petropavlovsk**	**3.63**	**27**	*e*P		**Pn**	**07 06 53.4**		**+1.1**
PET				*e*S		**Sn**	**07 07 35.1**		**+1.1**
INSR	**Institute**	**3.65**	**26**	PN		**Pn**	**07 06 54.1**		**+1.5**
INSR				S		**Sn**	**07 07 36.3**		**+1.6**
INSR	**Institute**	**3.65**	**26**	*e*P		**Pn**	**07 06 54.1**		**+1.5**
INSR				*e*S		**Sn**	**07 07 36.3**		**+1.6**
DALK	**Dalny**	**3.67**	**28**	PN		**Pn**	**07 06 53.9**		**+1.1**
DALK				S		**Sn**	**07 07 36.2**		**+1.3**
DALK	**Dalny**	**3.67**	**28**	*e*P		**Pn**	**07 06 53.9**		**+1.1**
DALK				*e*S		**Sn**	**07 07 36.3**		**+1.3**
UGLR	**Uglovaya**	**3.84**	**27**	PN		**Pn**	**07 06 57.2**		**+1.9**
UGLR	**Uglovaya**	**3.84**	**27**	*e*P		**Pn**	**07 06 57.2**		**+1.9**
KOK	**Koryaka**	**3.86**	**25**	PN		**Pn**	**07 06 58.2**		**+2.6**
KOK	**Koryaka**	**3.86**	**25**	*e*P		**Pn**	**07 06 58.2**		**+2.6**
AVH	**Avacha**	**3.87**	**26**	PN		**Pn**	**07 06 57.8**		**+2.2**
AVH	**Avacha**	**3.87**	**26**	*e*P		**Pn**	**07 06 57.9**		**+2.2**
SMAR	**Somma**	**3.88**	**27**	PN		**Pn**	**07 06 57.8**		**+1.8**
SMAR				S		**Sn**	**07 07 42.9**		**+2.3**
SMAR	**Somma**	**3.88**	**27**	*e*P		**Pn**	**07 06 57.8**		**+1.8**
SMAR				*e*S		**Sn**	**07 07 42.9**		**+2.3**
KRER	**Koryakskii**	**3.90**	**26**	PN		**Pn**	**07 06 57.9**		**+1.7**
KRER				S		**Sn**	**07 07 43.0**		**+2.0**
KRER	**Koryakskii**	**3.90**	**26**	*e*P		**Pn**	**07 06 57.9**		**+1.7**
KRER				*e*S		**Sn**	**07 07 43.1**		**+2.0**
SDLR	**Sedlovina**	**3.92**	**27**	PN		**Pn**	**07 06 57.6**		**+1.2**
SDLR				S		**Sn**	**07 07 41.8**		**+0.5**
SDLR	**Sedlovina**	**3.92**	**27**	*e*P		**Pn**	**07 06 57.7**		**+1.2**
SDLR				*e*S		**Sn**	**07 07 41.8**		**+0.5**
KRX	**Arik**	**3.92**	**25**	PN		**Pn**	**07 06 58.7**		**+2.2**
KRX	**Arik**	**3.92**	**25**	*e*P		**Pn**	**07 06 58.8**		**+2.2**
NLC	**Nalytchevo**	**3.98**	**31**	PN		**Pn**	**07 06 56.2**		**-0.8**
NLC	**Nalytchevo**	**3.98**	**31**	*e*P		**Pn**	**07 06 56.3**		**-0.8**
GNL	**Ganaly**	**4.07**	**17**	PN		**Pn**	**07 07 00.8**		**+2.4**
GNL	**Ganaly**	**4.07**	**17**	*e*P		**Pn**	**07 07 00.9**		**+2.4**
SPN	**Mys Shipunski**	**4.16**	**37**	PN		**Pn**	**07 06 59.3**		**-0.2**
SPN				S		**Sn**	**07 07 44.7**		**-2.3**
SPN	**Mys Shipunski**	**4.16**	**37**	*e*P		**Pn**	**07 06 59.3**		**-0.2**
SPN				*e*S		**Sn**	**07 07 44.8**		**-2.3**
KII	**Karymskiy**	**4.75**	**26**	PN		**Pn**	**07 07 09.4**		**+1.9**
KII				S		**Sn**	**07 08 03.7**		**+2.4**
KII	**Karymskiy**	**4.75**	**26**	*e*P		**Pn**	**07 07 09.5**		**+1.9**
KII				*e*S		**Sn**	**07 08 03.8**		**+2.4**
MKZ	**Mys Kozlova**	**5.93**	**35**	PN		**Pn**	**07 07 22.3**		**-1.3**
MKZ	**Mys Kozlova**	**5.93**	**35**	*e*P		**Pn**	**07 07 22.3**		**-1.3**
ESO	**Esso**	**6.33**	**14**	PN		**Pn**	**07 07 31.5**		**+2.4**
ESO	**Esso**	**6.33**	**14**	*e*P		**Pn**	**07 07 31.5**		**+2.4**
KMNR	**Kamenistaya**	**6.49**	**22**	PN		**Pn**	**07 07 31.9**		**+0.7**
KMNR	**Kamenistaya**	**6.49**	**22**	*e*P		**Pn**	**07 07 32.0**		**+0.7**
KUR	**Kuril'sk**	**7.12**	**233**	PN		**Pn**	**07 07 41.8**		**+1.9**
KUR				*i* S		**Sn**	**07 08 57.8**		**-1.4**
KUR				pmax		pmax			
	comp=Z,58nm,0.8s								
KUR				pmax		pmax			
	comp=N,41nm,0.6s								
KUR				pmax		pmax			
	comp=E,39nm,0.5s								
KUR				smax		smax			
	comp=N,69nm,0.6s								
KUR				smax		smax			
	comp=E,91nm,0.6s								
TYV	**Tymovskoe**	**8.54**	**282**	*e*PN		**Pn**	**07 08 02.8**		**+3.6**
TYV				*e*S		**Sn**	**07 09 34.9**		**+1.1**
TYV				pmax		pmax			
	comp=Z,42nm,1.2s								
TYV				pmax		pmax			
	comp=Z,100nm,2.1s								
TYV				smax		smax			
	comp=N,8.0nm,1.4s								
TYV				smax		smax			
	comp=E,7.0nm,1.4s								
TYV				smax		smax			
	comp=N,100nm,3.1s								
TYV				smax		smax			
	comp=E,200nm,3.1s								
UGL	**Uglegorsk**	**9.05**	**271**	*e*PN		Pn	07 08 10.7		+4.6
UGL				pmax		pmax			
	comp=Z,180nm,1.1s								
YSS	**Yuzhno-Sakhali**	**9.21**	**257**	*e*PN		**Pn**	**07 08 10.8**		**+2.5**
YSS				*e*S		**Sn**	**07 09 53.5**		**+3.3**
YSS				pmax		pmax			
	comp=Z,30nm,1.3s								
YSS				smax		smax			
	comp=E,20nm,1.1s								
MA2	**Magadan**	**10.21**	**345**	P		**Pn**	**07 08 22.6**		**+0.9**
	comp=E,9.1nm,0.8s,baz=145,slow=4.9,SNR=6.7								
MA2	**Magadan**	**10.21**	**345**			**Pn**	**07 08 23.3**		**+1.5**
JKA	**Kamikawa-asahi**	**10.74**	**243**			**Pn**	**07 08 29.3**		**+0.2**
ASAJ	**Asahikawa**	**10.74**	**243**	P		**Pn**	**07 08 29.2**		**+0.1**
	comp=E,27nm,0.8s,baz=76,slow=11,SNR=14								
ASAJ				LR		LR	07 11 52.4		
	comp=E,184nm,19.6s,baz=94,slow=33								
ASAJ	**Asahikawa**	**10.74**	**243**	PN		**Pn**	**07 08 29.3**		**+0.2**
SHEM	**Shemya Is, Ala**	**11.75**	**69**	P		**Pn**	**07 08 44.7**		**+2.0**
	comp=E,47nm,0.8s,baz=298,slow=20,SNR=1.3								
SHEM				S		Sn	07 10 42.3		-9.5
	comp=E,299nm,0.8s,baz=290,slow=20,SNR=9.4								
SHEM				LR		LR	07 14 00.3		
	comp=E,54nm,19.6s,baz=82,slow=41								
SEY	**Seymchan**	**13.28**	**353**	*ce*	PN	**Pn**	**07 09 04.7**		**+1.7**
SEY				pmax		pmax			
	comp=Z,4.0nm,1.1s								
AMKA	**Amchitka**	**14.92**	**75**			**P**	**07 09 28.5**		**+0.8**
KLR	**Kul'dur**	**15.69**	**277**	LR		LR	07 15 42.2		
	comp=Z,36nm,18.5s,baz=24,slow=38								
KLR	**Kul'dur**	**15.69**	**277**	*i* P		**Pn**	**07 09 33.7**		**-0.4**
USRK	**Ussuriysk Ar.**	**17.22**	**260**	P		**Pn**	**07 09 52.3**		**-0.8**
	comp=Z,2.3nm,0.7s,baz=80,slow=12,SNR=2.2								
ZEA	**Zeya**	**18.10**	**293**	*e*P		**Pn**	**07 10 03.9**		**+0.3**
ZEA				pmax		pmax			
	comp=Z,10.0nm,1.3s								
HEH	**HeiHe**	**18.27**	**282**	*e*P		**Pn**	**07 10 05.8**		**+0.1**
HEH				pmax		pmax			
	comp=Z,16nm,0.9s								
MJA0	**Matsu Arr-Jizo**	**18.44**	**231**	*e*P		**P**	**07 10 07.1**		**+0.4**
MJA0				pmax		pmax			
	comp=Z,3.0nm,0.6s								
MJB9	**Matsu-Tunnel**	**18.46**	**231**	P		**P**	**07 10 06.2**		**-0.8**
MAJO	**Matsushiro**	**18.46**	**231**			**P**	**07 10 05.3**		**-1.6**
MAJO	**Matsushiro**	**18.46**	**231**	*i* P		**P**	**07 10 06.1**		**-0.8**
MAJO				pmax		pmax			
	comp=Z,5.0nm,0.4s								
MJAR	**Matsushiro Arr**	**18.46**	**231**	P		**P**	**07 10 05.4**		**-1.5**
	comp=Z,3.7nm,0.7s,baz=27,slow=11,SNR=13								
MDJ	**Mudanjiang**	**18.57**	**264**	P		**Pn**	**07 10 11.6**		**+2.2**
MDJ				pmax		pmax			
	comp=Z,14nm,1.2s								
YAK	**Yakutsk**	**18.94**	**320**	P		**Pn**	**07 10 11.9**		**-1.7**
	comp=Z,25nm,0.7s,baz=96,slow=16,SNR=8.3								
YAK				pP		**pP**	**07 10 27.4**		**-1.5**
	comp=Z,13nm,0.4s,baz=253,slow=0.1,SNR=1.9								
YAK				LR		LR	07 17 15.9		
	comp=Z,129nm,18.5s,baz=10.0,slow=36								
YAK	**Yakutsk**	**18.94**	**320**	*e*P		**Pn**	**07 10 12.0**		**-1.5**
YAK				*e*S		**Sn**	**07 13 42.3**		**-2.9**
YAK				pmax		pmax			
	comp=Z,43nm,1.1s								
YAK				pmax		pmax			
	comp=E,20nm,1.1s								
YAK				pmax		pmax			
	comp=N,6.0nm,1.1s								
YAK				smax		smax			
	comp=E,55nm,1.7s								
YAK				smax		smax			
	comp=N,33nm,1.8s								
BILL	**Bilibino**	**18.98**	**12**			**Pn**	**07 10 13.4**		**-0.5**
BILL	**Bilibino**	**18.98**	**12**	*ce*	P	**Pn**	**07 10 14.6**		**+0.6**
BILL				pmax		pmax			
	comp=Z,9.0nm,1.7s								
HILR	**Hailar Array B**	**23.26**	**283**	P		**P**	**07 10 56.4**		**-1.5**
	comp=Z,1.4nm,0.4s,baz=76,slow=10,SNR=5.6								
	comp=Z,1.4nm,0.4s								
HIA	**Hailar**	**23.34**	**283**	*i* P		**P**	**07 10 56.7**		**-1.9**
HIA				pmax		pmax			
	comp=Z,4.0nm,0.8s								
KSRS	**Korea Array**	**23.58**	**249**	P		**P**	**07 11 01.4**		**+0.6**
	comp=Z,1.3nm,0.6s,baz=49,slow=11,SNR=4.5								
	comp=Z,1.3nm,0.6s								
KSRS	**Korea Array**	**23.58**	**249**	*e*P		**P**	**07 11 03.1**		**+2.3**
KSRS				pmax		pmax			
	comp=Z,1.0nm,0.7s								
TNA	**Tin City**	**24.44**	**36**			**P**	**07 11 08.1**		**-0.1**
TNA				IAmb		IAmb	07 11 30.1		
	comp=Z,19nm,1.3s								
JCJ	**Chichijima**	**25.04**	**210**	LR		LR	07 22 31.7		
	comp=Z,40nm,18.9s,baz=317,slow=40								
ANM	**Nome**	**25.11**	**40**			**P**	**07 11 16.0**		**+1.6**
ANM				IAmb		IAmb	07 11 36.9		
	comp=Z,15nm,1.2s								
ANM	**Nome**	**25.11**	**40**	P		**P**	**07 11 16.0**		**+1.6**
ANM				pmax		pmax			
	comp=Z,15nm,1.2s								
TIXI	**Tiksi**	**25.12**	**340**			**P**	**07 11 13.7**		**-0.7**
TIXI	**Tiksi**	**25.12**	**340**	*i* P		**P**	**07 11 13.4**		**-1.0**
TIXI				pmax		pmax			
	comp=Z,5.0nm,0.9s								
XLT	**XiLinHaoTe**	**27.62**	**273**	*e*P		**P**	**07 11 37.3**		**0.0**
XLT				PP		**PnPn**	**07 12 30.3**		**+2.6**
XLT				S		**S**	**07 16 12.5**		**+0.1**
XLT				pmax		pmax			
	comp=Z,6.0nm,0.6s								
XLT				pmax		pmax			
	comp=Z,380nm,7.2s								
E22K	**Anaktuvuk Pass**	**31.25**	**35**	P		**P**	**07 12 09.7**		**+0.6**
E22K				IAmb		IAmb	07 12 29.2		
	comp=Z,12nm,1.4s								
H11N2	**WAKE ISLAND Hy**	**31.29**	**160**	T		T	07 45 19.0		
	baz=347,slow=77,SNR=244								
H11N1	**WAKE ISLAND Hy**	**31.30**	**160**	T		T	07 45 22.8		
	baz=347,slow=77,SNR=199								
H11N3	**WAKE ISLAND Hy**	**31.30**	**160**	T		T	07 45 19.9		
	baz=347,slow=77,SNR=312								
HNS	**HongShan**	**31.91**	**263**	⇑P		**P**	**07 12 15.3**		**+0.1**
HNS				pmax		pmax			
	comp=Z,7.0nm,1.1s								
HHC	**Hu-ho-hao-te**	**32.03**	**271**	*e*P		**P**	**07 12 17.4**		**+1.1**
HHC				pmax		pmax			
	comp=Z,3.0nm,0.5s								
HHC				pmax		pmax			
	comp=Z,150nm,5.4s								
E23K	**Chandalar**	**32.05**	**35**			**P**	**07 12 16.7**		**+0.5**
SONM	**Songino Array**	**32.18**	**286**	P		**P**	**07 12 16.2**		**-1.4**
	comp=Z,0.4nm,0.4s,baz=79,slow=8.9,SNR=4.2								
SONM				PcP		**PcP**	**07 15 04.5**		**+0.3**
	comp=Z,0.5nm,0.6s,baz=75,slow=3.3,SNR=3.3								
SONM				LR		LR	07 25 20.9		
	comp=Z,171nm,19.3s,baz=6.0,slow=36								
	comp=Z,0.4nm,0.4s								
SONM	**Songino Array**	**32.18**	**286**	*e*P		**P**	**07 12 16.7**		**-0.9**
H11S1	**WAKE ISLAND Hy**	**32.43**	**161**	T		T	07 46 46.4		
	baz=347

ARTI	**Arti**	**54.12**	**317**	*d*	iP		**P**	07 15 11.1	-2.5
ARTI					*PP		**pP**	07 15 32.4	-3.3
ARTI					S		**S**	07 22 39.3	-3.8
ARTI					pmax	pmax			
	comp=Z,8.0nm,1.1s								
AAK	**Ala-Archa**	**54.16**	**296**	*ce*	P		**P**	07 15 14.1	-0.2
AAK					pmax	pmax			
	comp=Z,5.0nm,1.3s								
CHTO	**Chiang Mai**	**54.65**	**257**		P		**P**	07 15 17.8	-0.1
CHTO	**Chiang Mai**	**54.65**	**257**		P		**P**	07 15 17.8	-0.1
CHTO					pmax	pmax			
	comp=Z,7.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**54.91**	**257**		P		**P**	07 15 19.4	-0.5
	comp=Z,1.0nm,0.2s,baz=32,slow=6.8,SNR=7.1								
	comp=Z,1.0nm,0.2s								
CMAR	**Chiang Mai Arr**	**54.91**	**257**	*e*	P		**P**	07 15 21.5	+1.6
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ARCES	**ARCESS Array B**	**55.55**	**341**		P		**P**	07 15 24.2	+0.4
	comp=Z,4.3nm,1.0s,baz=32,slow=8.3,SNR=1.6								
ARCES					LR		LR	07 42 31.2	
	comp=Z,270nm,18.7s,baz=248,slow=40								
	comp=Z,4.3nm,1.0s								
PLID	**Pearl Lake**	**56.42**	**58**				**P**	07 15 32.1	+1.5
PLID					IAmb		IAmb	07 15 33.0	
	comp=Z,5.0nm,0.8s								
SUMG	**Summit**	**57.48**	**5**	*i*	P		**P**	07 15 37.0	-0.9
ABKAR	**Akbulak array**	**57.89**	**310**		P		**P**	07 15 39.4	-1.2
HLID	**Hailey**	**58.27**	**59**				**P**	07 15 44.7	+1.1
HLID					IAmb		IAmb	07 15 46.6	
	comp=Z,4.6nm,1.4s								
NVAR	**Mina Array Bea**	**59.40**	**66**		P		**P**	07 15 52.8	+1.3
	comp=Z,2.5nm,0.8s,baz=293,slow=7.5,SNR=20								
	comp=Z,2.5nm,0.8s								
PDAR	**Pinedale Array**	**61.45**	**57**		P		**P**	07 16 06.0	+0.5
	comp=Z,3.2nm,0.9s,baz=319,slow=2.9,SNR=22								
PDAR					pP		**pP**	07 16 28.5	+0.6
	comp=Z,3.6nm,0.8s,baz=332,slow=3.0,SNR=13								
	comp=Z,3.2nm,0.9s								
PDAR	**Pinedale Array**	**61.45**	**57**		P		**P**	07 16 06.8	+1.3
BELG	**Belogornoye**	**61.47**	**319**	*i*	P		**P**	07 16 04.0	-1.1
BELG					pmax	pmax			
	comp=Z,4.0nm,0.9s								
CCCA	**Chr Cany lake**	**61.90**	**67**		P		**P**	07 16 09.2	+0.8
FINES	**FINESS Array B**	**62.04**	**335**		P		**P**	07 16 07.3	-1.4
	comp=Z,1.1nm,0.5s,baz=26,slow=8.5,SNR=13								
FINES					PcP		**PcP**	07 16 47.7	-0.7
	comp=Z,1.6nm,0.7s,baz=47,slow=3.2,SNR=7.3								
	comp=Z,1.1nm,0.5s								
OBN	**Obninsk**	**63.81**	**326**	*i*	eP		**P**	07 16 21.9	+1.3
OBN					*e*			07 18 45.8	
OBN					eS		S	07 25 08.7	+20
OBN					pmax	pmax			
	comp=Z,5.0nm,0.9s								
IRM	**Iron Mountain**	**64.17**	**67**		P		**P**	07 16 24.4	+1.1
IRM					IAmb		IAmb	07 16 25.5	
	comp=Z,5.6nm,1.0s								
PV10	**Paradox Valley**	**64.77**	**60**		P		**P**	07 16 29.1	+1.6
PV16	**Nyswonger Mesa**	**64.88**	**60**		P		**P**	07 16 29.4	+1.2
PV16					IAmb		IAmb	07 16 30.5	
	comp=Z,10nm,1.1s								
PV05	**Paradox Valley**	**64.94**	**60**				**P**	07 16 30.1	+1.5
NOA	**NORSAR Array B**	**65.89**	**342**		P		**P**	07 16 33.8	-0.3
	comp=Z,0.4nm,0.5s,baz=27,slow=6.5,SNR=2.1								
	comp=Z,0.4nm,0.5s								
HFS	**Hagfors**	**66.20**	**340**		P		**P**	07 16 35.3	-0.7
	comp=Z,2.2nm,0.8s,baz=75,slow=7.8,SNR=6.8								
	comp=Z,2.2nm,0.8s								
ANMO	**Albuquerque**	**68.66**	**61**	*ce*	P		**P**	07 16 54.3	+2.1
ANMO					pmax	pmax			
	comp=Z,6.0nm,2.5s								
SCHQ	**Schefferville**	**69.74**	**25**		P		**P**	07 16 58.9	+0.6
	comp=Z,1.6nm,0.6s,baz=192,slow=5.7,SNR=1.5								
	comp=Z,1.6nm,0.6s								
AKASG	**Malin Array Be**	**70.00**	**327**		P		**P**	07 16 58.9	-1.0
	comp=Z,0.3nm,0.3s,baz=34,slow=6.0,SNR=2.8								
	comp=Z,0.3nm,0.3s								
KBZ	**Khabaz**	**70.04**	**315**	*i*	P		**P**	07 17 00.4	+0.1
KBZ					pmax	pmax			
	comp=Z,2.0nm,0.9s								
WB0	**Warramunga Arr**	**71.87**	**201**		P		**P**	07 17 10.8	-0.7
WB0					IAmb		IAmb	07 17 11.9	
	comp=Z,17nm,1.1s								
WRAB	**Tennant Creek**	**72.04**	**201**	*ce*	P		**P**	07 17 12.8	+0.3
WRAB					pmax	pmax			
	comp=Z,18nm,1.3s								
WRA	**Warramunga Arr**	**72.05**	**201**		P		**P**	07 17 11.8	-0.7
	comp=Z,6.3nm,1.0s,baz=18,slow=6.5,SNR=18								
WRA					pP		**PcP**	07 17 34.5	+4.0
	comp=Z,1.1nm,0.7s,baz=11,slow=6.2,SNR=2.3								
	comp=Z,6.3nm,1.0s								
WRA	**Warramunga Arr**	**72.05**	**201**		P		**P**	07 17 11.6	-1.0
EKA	**Eskdalemuir Ar**	**73.76**	**348**		P		**P**	07 17 22.2	-0.1
	comp=Z,0.6nm,0.3s,baz=11,slow=5.0,SNR=7.7								
	comp=Z,0.6nm,0.3s								
KOLS	**Kolonicke sedl**	**73.85**	**330**	*e*	P		P	07 17 28.5	+5.5
TX31	**Lajitas Ar. Si**	**74.39**	**63**				**P**	07 17 27.7	+1.2
TX31					IAmb		IAmb	07 17 28.7	
	comp=Z,7.1nm,0.8s								
TXAR	**Lajitas Array**	**74.39**	**63**		P		**P**	07 17 27.8	+1.3
	comp=Z,5.5nm,0.7s,baz=298,slow=4.3,SNR=58								
TXAR					pP		**pP**	07 17 49.6	-0.1
	comp=Z,1.9nm,0.8s,baz=294,slow=3.5,SNR=5.5								
	comp=Z,5.5nm,0.7s								
TXAR	**Lajitas Array**	**74.39**	**63**		P		**P**	07 17 27.6	+1.0
CLL	**Collm**	**74.40**	**337**	*e*	P		**P**	07 17 28.0	+1.9
CLL	**Collm**	**74.40**	**337**	*e*	P		**P**	07 17 28.0	+1.9
ASAR	**Alice Springs**	**75.74**	**201**		P		**P**	07 17 34.3	+0.3
	comp=Z,3.4nm,0.7s,baz=14,slow=5.5,SNR=39								
ASAR					pP		**pP**	07 17 57.0	-0.3
	comp=Z,0.8nm,0.6s,baz=16,slow=5.1,SNR=2.9								
	comp=Z,3.4nm,0.7s								
DRIO	**Del Rio**	**76.06**	**61**				**P**	07 17 36.9	+0.8
DRIO					IAmb		IAmb	07 17 38.4	
	comp=Z,4.9nm,0.9s								
GERES	**GERESS Array B**	**76.47**	**335**		P		**P**	07 17 37.8	-0.3
	comp=Z,0.1nm,0.3s,baz=29,slow=6.1,SNR=4.4								
	comp=Z,0.1nm,0.3s								
BRTR	**Keskin Array B**	**77.39**	**318**		P		**P**	07 17 42.6	-0.9
	comp=Z,1.6nm,1.0s,baz=72,slow=4.7,SNR=4.6								
	comp=Z,1.6nm,1.0s								
BRTR	**Keskin Array B**	**77.39**	**318**	*e*	P		**P**	07 17 43.8	+0.3
BRTR					pmax	pmax			
	comp=Z,1.0nm,1.0s								
KBA	**Koelnbreinsper**	**78.18**	**335**	*e*	P		**P**	07 17 49.1	+1.3
	comp=Z,12nm,1.4s								
WATA	**Walderalm**	**78.42**	**336**	*i*	P		**P**	07 17 50.0	+0.9
	comp=Z,5.6nm,1.2s								
WTTA	**Wattenberg**	**78.47**	**336**	*i*	P		**P**	07 17 50.6	+1.2
	comp=Z,3.5nm,0.7s								
MOTA	**Moosalm**	**78.54**	**336**	*i*	P		**P**	07 17 50.5	+0.8
	comp=Z,7.5nm,1.4s								
SQTA	**Sankt Quirin**	**78.62**	**336**	*i*	P		**P**	07 17 50.8	+0.7
	comp=Z,5.5nm,1.2s								
DAVA	**Damuels**	**78.90**	**337**	*i*	P		**P**	07 17 52.6	+0.8
	comp=Z,7.4nm,1.6s								
MMAI	**Mount Meron Ar**	**82.13**	**313**		P		**P**	07 18 09.5	+0.4
	comp=Z,2.8nm,0.4s,baz=27,slow=9.7,SNR=5.2								
	comp=Z,2.8nm,0.4s								
ESDC	**Sonseca Array**	**89.13**	**345**		P		**P**	07 18 43.0	-0.7
	comp=Z,0.5nm,0.4s,baz=356,slow=4.7,SNR=8.8								
	comp=Z,0.5nm,0.4s								
H03N2	**Juan Fernandez**	**136.86**	**89**		T		T	09 57 27.2	
	baz=313,slow=77,SNR=180								
H03N1	**Juan Fernandez**	**136.88**	**89**		T		T	09 57 28.5	
	baz=313,slow=77,SNR=171								
H03N3	**Juan Fernandez**	**136.88**	**89**		T		T	09 57 25.0	
	baz=313,slow=77,SNR=181								
CPUP	**Villa Florida**	**145.31**	**60**		PKPbc		**PKPdf**	07 25 25.5	**0.0**
	comp=Z,4.9nm,1.1s,baz=297,slow=2.5,SNR=8.9								
CPUP					pPKPbc		pPKPab	07 25 49.7	-0.2
	comp=Z,2.1nm,0.9s,baz=0.9,slow=7.3,SNR=4.5								
PLCA	**Paso Flores**	**146.54**	**92**		PKPbc		**PKPbc**	07 25 29.1	+0.2
	comp=Z,3.0nm,0.8s,baz=242,slow=3.0,SNR=8.5								
SNAA	**Sanae**	**156.04**	**196**		PKPab		**PKPab**	07 26 07.0	-1.6
	comp=Z,3.3nm,0.9s,baz=320,slow=8.2,SNR=3.3								
SNAA	**Sanae**	**156.04**	**196**		PKP2		**PKPab**	07 26 07.0	-1.6

NOU ***15*** *07:06:25.9, 40.˚16S×174.˚73E, h24km, MLv3.7/16, Cook Strait, New Zealand*
WEL ***15*** *07:06:27.3±0.4, 40.˚3S±2.˚×17.˚5E±.˚, h52km±6km, M3.7/26, ML3.7/26, MLv3.7/26, Error ellipse: s-maj=4.3km s-min=3.1km az=73.8*
ISC 15 07:06:25.7±1.5, 40.˚15S±0.˚02×174.˚68E±0.˚02, h12km±12km, n130, σ1.˚58/144, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WCDS	**Wanganui Civil**	**0.35**	**53**	P	**Pn**	**07 06 37.7**	**+1.1**
WCDS				S	Sb	07 06 47.4	+8.0
WAZ	**Wanganui**	**0.45**	**31**	P	**Pn**	**07 06 39.3**	**+1.2**
WAZ				S	**Sb**	**07 06 48.9**	**+6.6**
OHWZ	**Ohakea**	**0.49**	**97**	S	**Sb**	**07 06 49.6**	**+6.2**
FXBS	**Foxton Beach S**	**0.52**	**127**	P	**Pn**	**07 06 40.0**	**+1.1**
FXBS				S	**Sn**	**07 06 50.4**	**+2.6**
HOCS	**Levin Horowhen**	**0.66**	**136**	P	**Pb**	**07 06 39.8**	**+0.6**
HOCS				S	**Sn**	**07 06 52.6**	**+1.4**
FAHS	**Feilding Agric**	**0.69**	**96**	S	**Sn**	**07 06 53.9**	**+2.1**
OTKS	**Otaki School**	**0.70**	**150**	P	**Pn**	**07 06 41.7**	**+0.2**
OTKS				S	**Sn**	**07 06 52.6**	**+0.3**
LREZ	**Lake Rotokare**	**0.72**	**342**	P	**Pn**	**07 06 41.9**	**+0.2**
LREZ				S	**Sn**	**07 06 53.7**	**+1.2**
KIW	**Kapiti Island**	**0.74**	**166**	P	**Pn**	**07 06 42.0**	**0.0**
KIW				S	**Sn**	**07 06 53.2**	**+0.1**
OGWZ	**Otaki Gorge**	**0.77**	**151**	P	**Pn**	**07 06 42.4**	**0.0**
OGWZ				S	**Sn**	**07 06 54.8**	**+0.9**
MRZ	**Mangatainoka R**	**0.86**	**127**	P	**Pn**	**07 06 43.2**	**-0.4**
MRZ				S	**Sn**	**07 06 56.9**	**+0.8**
POWZ	**Post Office Ro**	**0.87**	**107**	P	**Pn**	**07 06 43.3**	**-0.4**
POWZ				S	**Sn**	**07 06 57.1**	**+0.8**
DUWZ	**D'Urville Isla**	**0.88**	**221**	P	**Pg**	**07 06 43.3**	**+0.6**
DUWZ				S	**Sb**	**07 06 56.0**	**+1.4**
PREZ	**Palmer Road**	**0.90**	**333**	P	**Pn**	**07 06 44.6**	**+0.4**
PREZ				S	**Sn**	**07 06 58.7**	**+1.6**
NMEZ	**Namu Road**	**0.96**	**319**	P	**Pn**	**07 06 44.7**	**-0.3**
NMEZ				S	**Sn**	**07 06 58.9**	**+0.4**
MTVZ	**Mangateitei**	**0.97**	**39**	P	**Pn**	**07 06 44.9**	**-0.4**
HOWZ	**Holdsworth Sta**	**0.98**	**140**	P	**Pn**	**07 06 45.5**	**+0.1**
HOWZ				S	**Sn**	**07 07 00.5**	**+1.3**
TSZ	**Takapari Road**	**0.98**	**85**	P	**Pn**	**07 06 44.8**	**-0.6**
TSZ				S	**Sn**	**07 06 58.4**	**-0.9**
KHEZ	**Kahui Hut**	**0.99**	**329**	P	**Pn**	**07 06 45.2**	**-0.3**
KHEZ	**Kahui Hut**	**0.99**	**329**	P	**Pn**	**07 06 45.4**	**-0.2**
PKVZ	**Pokaka**	**1.00**	**31**	P	**Pn**	**07 06 44.9**	**-0.7**
CAW	**Cannon Point**	**1.00**	**163**	P	**Pb**	**07 06 45.1**	**0.0**
VRZ	**Vera Road**	**1.02**	**3**	P	**Pn**	**07 06 45.5**	**-0.3**
DREZ	**Durham Road**	**1.02**	**339**	P	**Pn**	**07 06 46.1**	**+0.2**
PRWZ	**Pori Road**	**1.07**	**113**	P	**Pb**	**07 06 45.9**	**-0.3**
TRVZ	**Turoa**	**1.08**	**39**	P	**Pn**	**07 06 46.0**	**-0.8**
NBEZ	**Newall Road No**	**1.08**	**324**	P	**Pn**	**07 06 46.2**	**-0.4**
WNVZ	**Wahianoa**	**1.08**	**41**	P	**Pn**	**07 06 46.1**	**-0.7**
PKE	**Pukeiti**	**1.09**	**330**	P	**Pn**	**07 06 46.5**	**-0.3**
MHEZ	**Mangahewa**	**1.10**	**345**	P	**Pn**	**07 06 47.6**	**+0.6**
MOVZ	**Moawhango**	**1.11**	**49**	P	**Pn**	**07 06 46.3**	**-0.8**
MAVZ	**Matarangi**	**1.11**	**38**	P	**Pn**	**07 06 46.7**	**-0.6**
TCW	**Tory Channel**	**1.11**	**196**	P	**Pb**	**07 06 46.5**	**-0.3**
WHVZ	**Whangaehu Hut**	**1.11**	**39**	P	**Pn**	**07 06 46.9**	**-0.4**
FWVZ	**Far West T-bar**	**1.11**	**37**	P	**Pn**	**07 06 46.6**	**-0.8**
TIWZ	**Tintock**	**1.11**	**125**	P	**Pb**	**07 06 46.7**	**-0.3**
WEL	**Wellington**	**1.14**	**177**	P	**Pn**	**07 06 47.0**	**-0.5**
DVHZ	**Dannevirke**	**1.15**	**98**	P	**Pb**	**07 06 46.4**	**-1.1**
TUVZ	**Tukino**	**1.15**	**41**	P	**Pn**	**07 06 47.5**	**-0.3**
COVZ	**Chateau Observ**	**1.15**	**35**	P	**Pn**	**07 06 46.9**	**-0.9**
SNZO	**South Karori**	**1.17**	**179**	P	**Pn**	**07 06 47.0**	**-0.8**
SNZO	**South Karori**	**1.17**	**179**	S	**Sb**	**07 07 02.4**	**-0.4**
MTW	**Mount Morrison**	**1.19**	**149**	P	**Pn**	**07 06 48.3**	**+0.2**
NGZ	**Ngauruhoe**	**1.20**	**37**	P	**Pb**	**07 06 47.5**	**-1.0**
SNVZ	**South Ngauruho**	**1.21**	**38**	P	**Pn**	**07 06 47.8**	**-0.8**
TWVZ	**Taurewa**	**1.22**	**29**	P	**Pb**	**07 06 47.7**	**-1.1**
OTVZ	**Oturere**	**1.24**	**38**	P	**Pb**	**07 06 48.1**	**-1.0**
NNVZ	**North Ngauruho**	**1.24**	**36**	P	**Pb**	**07 06 48.0**	**-1.2**
WTVZ	**West Tongariro**	**1.24**	**35**	P	**Pn**	**07 06 48.0**	**-1.0**
BHW	**Baring Head**	**1.27**	**174**	P	**Pn**	**07 06 48.5**	**-0.8**
ETVZ	**East Tongariro**	**1.28**	**39**	P	**Pn**	**07 06 48.8**	**-0.8**
KRVZ	**Karewarewa**	**1.28**	**36**	P	**Pb**	**07 06 49.1**	**-0.8**
NTVZ	**North Tongarir**	**1.30**	**37**	P	**Pn**	**07 06 48.9**	**-0.9**
TMVZ	**Te Maari**	**1.30**	**38**	P	**Pn**	**07 06 48.9**	**-0.9**
BFZ	**Birch Farm**	**1.31**	**115**	P	**Pn**	**07 06 49.0**	**-0.8**
BFZ	**Birch Farm**	**1.31**	**115**	S	**Sb**	**07 07 04.9**	**-2.1**
BFZ	**Birch Farm**	**1.31**	**115**	P	**Pn**	**07 06 48.3**	**-1.5**
TMWZ	**Te Maipa**	**1.33**	**137**	P	**Pn**	**07 06 49.6**	**-0.5**
MSWZ	**Moikau Station**	**1.34**	**161**	P	**Pn**	**07 06 49.3**	**-1.0**
WPHZ	**Waipukurau**	**1.35**	**87**	P	**Pn**	**07 06 49.3**	**-1.1**
PAWZ	**Paruwai Farm**	**1.36**	**156**	P	**Pn**	**07 06 49.9**	**-0.7**
CPWZ	**Castlepoint**	**1.39**	**124**	P	**Pg**	**07 06 53.0**	**+0.6**
KRHZ	**Kereru**	**1.39**	**69**	P	**Pn**	**07 06 50.2**	**-0.8**
TUWZ	**Tuamarina**	**1.40**	**203**	P	**Pn**	**07 06 50.7**	**-0.4**
KATZ	**Kakaramea**	**1.41**	**34**	P	**Pn**	**07 06 50.2**	**-1.1**
NNZ	**Nelson**	**1.46**	**222**	P	**Pn**	**07 06 51.1**	**-0.7**
TRWZ	**Traveller**	**1.47**	**149**	P	**Pn**	**07 06 52.2**	**+0.1**
RITZ	**Rihia Road**	**1.48**	**38**	P	**Pn**	**07 06 51.3**	**-0.9**
PRHZ	**Poutahau**	**1.50**	**95**	P	**Pn**	**07 06 51.3**	**-1.1**
KWHZ	**Kaweka Forest**	**1.52**	**62**	P	**Pn**	**07 06 51.7**	**-1.1**
RATZ	**Rangitukua**	**1.53**	**34**	P	**Pb**	**07 06 53.0**	**-1.1**
TKNZ	**Takaka Hill**	**1.58**	**235**	P	**Pn**	**07 06 52.6**	**-1.0**
HIZ	**Hauiti**	**1.64**	**5**	P	**Pn**	**07 06 53.6**	**-0.7**
HIZ	**Hauiti**	**1.64**	**5**	S	**Sb**	**07 07 15.4**	**-1.0**
HIZ	**Hauiti**	**1.64**	**5**	P	**Pn**	**07 06 53.7**	**-0.7**
CMWZ	**Cape Campbell**	**1.64**	**192**	P	**Pb**	**07 06 56.5**	**+0.5**
WATZ	**Wairara**	**1.65**	**30**	P	**Pn**	**07 06 54.1**	**-0.5**
PXZ	**Pawanui**	**1.68**	**87**	P	**Pn**	**07 06 53.1**	**-1.8**
BSWZ	**Blackbirch Sta**	**1.68**	**201**	P	**Pn**	**07 06 54.1**	**-0.9**
MCHZ	**McNeill Hill**	**1.70**	**66**	P	**Pn**	**07 06 54.0**	**-1.2**
BKZ	**Black Stump Fm**	**1.71**	**56**	P	**Pn**	**07 06 54.2**	**-1.1**
BKZ	**Black Stump Fm**	**1.71**	**56**	S	**Sn**	**07 07 15.9**	**-1.2**
BKZ	**Black Stump Fm**	**1.71**	**56**	P	**Pn**	**07 06 54.3**	**-1.1**
KAHZ	**Kahuranaki**	**1.72**	**79**	P	**Pn**	**07 06 54.0**	**-1.6**
QRZ	**Quartz Range**	**1.78**	**247**	P	**Pn**	**07 06 54.5**	**-1.7**
QRZ	**Quartz Range**	**1.78**	**247**	P	**Pn**	**07 06 54.5**	**-1.7**
KUTZ	**Kaahu Road**	**1.88**	**29**	P	**Pn**	**07 06 57.8**	**+0.1**
MRHZ	**Matea Rd**	**1.88**	**46**	P	**Pn**	**07 06 56.1**	**-1.5**
MRNZ	**Matariki Terra**	**1.93**	**229**	P	**Pn**	**07 06 57.3**	**-1.0**
TLZ	**Tolley Road**	**1.93**	**20**	P	**Pn**	**07 06 57.3**	**-1.1**
NMHZ	**Naumai**	**1.95**	**58**	P	**Pn**	**07 06 57.3**	**-1.3**
ARHZ	**Aropaoanui**	**1.99**	**64**	P	**Pb**	**07 07 00.2**	**-1.7**
ALRZ	**Allen Road**	**2.04**	**40**	P	**Pn**	**07 06 58.6**	**-1.2**
THZ	**Tophouse**	**2.10**	**219**	P	**Pn**	**07 06 59.9**	**-0.9**
MTHZ	**Maungataniwha**	**2.11**	**53**	P	**Pn**	**07 06 58.9**	**-2.0**
RAHZ	**Arahi**	**2.23**	**57**	P	**Pn**	**07 07 00.3**	**-2.2**
WHHZ	**Waihua**	**2.24**	**62**	P	**Pn**	**07 07 00.5**	**-2.1**
MUGZ	**Murupara**	**2.32**	**45**	P	**Pn**	**07 07 02.6**	**-1.2**
RTZ	**Ruatahuna**	**2.35**	**50**	P	**Pn**	**07 07 04.1**	**0.0**
KHZ	**Kahutara**	**2.43**	**200**	P	**Pn**	**07 07 03.2**	**-2.0**
KHZ	**Kahutara**	**2.43**	**200**	P	**Pn**	**07 07 03.3**	**-1.8**
SNGZ	**Shannon Statio**	**2.47**	**57**	P	**Pn**	**07 07 03.4**	**-2.4**
TOZ	**Tahuroa Road**	**2.49**	**15**	P	**Pn**	**07 07 05.0**	**-1.1**
KNZ	**Kokohu**	**2.57**	**65**	P	**Pn**	**07 07 03.8**	**-3.3**
URZ	**Urewera**	**2.67**	**46**	P	**Pn**	**07 07 05.4**	**-3.1**
URZ	**Urewera**	**2.67**	**46**	S	**Sn**	**07 07 38.8**	**-1.9**
URZ	**Urewera**	**2.67**	**46**	P	**Pn**	**07 07 05.5**	**-2.9**
DSZ	**Dennistion Nort**	**2.70**	**233**	P	**Pn**	**07 07 07.1**	**-2.0**
TGRZ	**Tauranga**	**2.71**	**28**	P	**Pn**	**07 07 08.5**	**-0.6**
PRGZ	**Paritu Road**	**2.76**	**65**	P	**Pn**	**07 07 06.6**	**-3.2**
RIGZ	**Rimuhau**	**2.79**	**60**	P	**Pn**	**07 07 07.2**	**-3.0**
MWZ	**Matawai**	**2.85**	**52**	P	**Pn**	**07 07 08.0**	**-3.1**
TKGZ	**Te Karaka**	**2.99**	**56**	P	**Pn**	**07 07 09.8**	**-3.1**
KBAZ	**Karaka Road Bo**	**3.05**	**3**	P	**Pn**	**07 07 13.5**	**-0.3**
MKAZ	**Moumakai**	**3.06**	**7**	P	**Pn**	**07 07 12.9**	**-1.0**
AWAZ	**Awhitu Peninsu**	**3.08**	**359**	P	**Pn**	**07 07 13.5**	**-0.6**
GVZ	**Greta Valley S**	**3.08**	**203**	P	**Pn**	**07 07 11.4**	**-2.8**
RUGZ	**Raukumara Rang**	**3.19**	**48**	P	**Pn**	**07 07 12.0**	**-3.8**
ETAZ	**East Tamaki Re**	**3.19**	**4**	P	**Pn**	**07 07 15.0**	**-0.7**
LTZ	**Lake Taylor**	**3.20**	**214**	P	**Pn**	**07 07 13.0**	**-2.8**
WTAZ	**Waiatarua**	**3.21**	**358**	P	**Pn**	**07 07 15.6**	**-0.3**
EPAZ	**Eden Park BICE**	**3.26**	**1**	P	**Pn**	**07 07 16.6**	**-0.1**
RVAZ	**Riverhead Bore**	**3.37**	**359**	P	**Pn**	**07 07 17.3**	**-0.9**
MBAZ	**Motutapu North**	**3.38**	**3**	P	**Pn**	**07 07 17.4**	**-0.8**
PKGZ	**Pakihiroa**	**3.49**	**50**	P	**Pn**	**07 07 16.1**	**-3.7**
KUZ	**Kuaotunu**	**3.49**	**14**	P	**Pn**	**07 07 19.0**	**-0.8**
KUZ	**Kuaotunu**	**3.49**	**14**	P	**Pn**	**07 07 18.5**	**-1.3**
OKCZ	**Okains Bay**	**3.77**	**198**	P	**Pn**	**07 07 20.8**	**-3.0**
MXZ	**Matakaoa Point**	**3.83**	**49**	P	**Pn**	**07 07 21.5**	**-2.9**
OUZ	**Omahuta**	**4.99**	**350**	P	**Pn**	**07 07 40.3**	**-0.1**

IDC 15 07:07:22.7±2.3, 7.˚00S×128.˚45E, h0km, mb3.2/1, mbtmp3.1/3, ML2.7/2, Error ellipse: s-maj=135.2km s-min=34.0km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.08**	**157**	Pn	Pn	07 10 44.5	+0.8
	baz=336,slow=12,SNR=1.6						
WRA				Sn	Sn	07 13 16.5	-4.3
	0.1nm,0.3s,baz=339,slow=21,SNR=5.2						
	0.3nm,0.8s						

ASAR	**Alice Springs**	**17.38**	**163**		P		Pn	07 11 26.4	-0.6
	baz=338,slow=9.2,SNR=4.4								
	0.5nm,0.9s								
MKAR	**Makanchi Array**	**67.39**	**328**		P		P	07 18 20.0	0.0
	0.2nm,0.7s,baz=115,slow=6.8,SNR=1.8								
	0.2nm,0.7s								

MOS ***15*** *07:17:20.0±1.0, 62.˚88N×149.˚79W, h90km, mb4.3/11, Error ellipse: s-maj=16.2km s-min=7.0km az=93.7*
IDC ***15*** *07:17:20.7±1.6, 62.˚92N×149.˚77W, h82km±15km, mb3.7/23, mbtmp4.0/28, MS4.4/1, Error ellipse: s-maj=16.3km s-min=12.5km az=36.0*
NEIC ***15*** *07:17:21.6, 62.˚84N×149.˚64W, h88km*
AEIC ***15*** *07:17:21.6±0.9, 62.˚83N±0.˚02×149.˚58W±0.˚05, h83km±5km, Error ellipse: s-maj=4.5km s-min=1.0km az=51.0*
NEIC ***15*** *07:17:21.5±1.0, 62.˚84N±0.˚03×149.˚59W±0.˚07, h90km±3km, mb4.4/14, ML4.4/250, Mwr4.3/48, ML4.2(AEIC), Error ellipse: s-maj=4.6km s-min=4.5km az=122.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.74; Mθθ2.60; Mφφ-3.34; Mrθ2.29; Mθφ0.29; Mφr-0.33; Fault plane solution: Mo3.83000×10¹⁵ NP1:ϕs36.33000°, δ60.74000°, λ159.90000°. NP2:ϕs136.48000°, δ72.55000°, λ30.83000°. Principal axes: T 4.1460, Plg34.0000°, Azm359.0000°; N -0.7272, Plg55.0000°, Azm163.0000°; P -3.4189, Plg8.0000°, Azm264.0000°;*
ANF ***15*** *07:17:21.9±0.1, 62.˚81N×149.˚56W, h80km±1km, ML4.6/105 Error ellipse: s-maj=0.9km s-min=0.7km az=8.0*
ISC 15 07:17:21.4±0.5, 62.˚86N±0.˚03×149.˚58W±0.˚03, h91km±5km, n616, σ0.˚80/618, mb4.2/44, 10C, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAT7	**Susitna Watana**	**0.34**	**94**		**Pn**	**07 17 34.6**	**-0.6**
WAT1	**Susitna Watana**	**0.47**	**93**		**Pn**	**07 17 35.4**

KNK Knik Glacier 1.54 159 Pn 07 17 47.7 -0.1
KNK IAML 07 18 14.8
comp=N,4µm,0.6s
KNK Knik Glacier 1.54 159 P Pn 07 17 47.5 -0.3
baz=341,SNR=676
KNK S Sn 07 18 07.8 +0.1
baz=341
CHUM Lake Minchumin 1.60 311 Pn 07 17 48.6 +0.1
CHUM Sn 07 18 08.2 -0.7
CHUM Lake Minchumin 1.60 311 P Pn 07 17 48.7 +0.3
baz=129,SNR=1000
CHUM S Sn 07 18 08.3 -0.7
baz=129
STLK Strandline Lak 1.73 219 Pn 07 17 50.4 +0.2
STLK IAML 07 18 13.9
comp=E,2µm,0.7s
STLK IAML 07 18 15.7
comp=N,2µm,0.8s
WRH Wood River Hil 1.75 22 Pn 07 17 50.2 -0.1
WRH IAML 07 18 12.7
comp=N,2µm,0.8s
WRH IAML 07 18 15.6
comp=E,2µm,0.8s
M24K Tolsona, Glenn 1.75 114 Pn 07 17 51.0 +0.5
M24K Tolsona, Glenn 1.75 114 P Pn 07 17 51.1 +0.7
baz=297,SNR=541
NEA2 Nenana 1.76 7 Pn 07 17 50.4 -0.1
NEA2 IAML 07 18 12.7
comp=N,2µm,0.9s
NEA2 Nenana 1.76 7 P Pn 07 17 50.3 -0.1
baz=187,SNR=137
NEA2 S Sn 07 18 11.4 -1.1
baz=187
RC01 Rabbit Creek A 1.78 182 Pn 07 17 51.0 +0.3
RC01 IAML 07 18 18.3
comp=E,3µm,0.4s
RC01 IAML 07 18 18.5
comp=N,3µm,0.3s
RC01 Rabbit Creek A 1.78 182 P Pn 07 17 50.2 -0.5
baz=3.1,SNR=550
PAX Paxson 1.89 85 Pn 07 17 53.1 +0.9
PAX IAML 07 18 23.3
comp=E,2µm,0.7s
PAX IAML 07 18 24.7
comp=N,2µm,0.5s
PAX Paxson 1.89 85 P Pn 07 17 53.1 +0.9
PAX Paxson 1.89 85 P Pn 07 17 52.7 +0.5
baz=268,SNR=1000
M20K Styx River 1.92 241 Pn 07 17 52.4 -0.3
M20K Sn 07 18 15.7 -0.8
M20K Styx River 1.92 241 P Pn 07 17 52.4 -0.3
baz=59
M20K S Sn 07 18 15.6 -0.8
baz=59
SPCG Spurr Capps Gl 1.95 217 Pn 07 17 53.1 +0.1
HDA Harding Lake 1.95 36 Pn 07 17 53.0 0.0
HDA IAML 07 18 17.8
comp=E,3µm,0.4s
HDA Harding Lake 1.95 36 Sn 07 18 16.3 -0.7
HDA Harding Lake 1.95 36 P Pn 07 17 53.2 +0.2
baz=217,SNR=637
HDA S Sn 07 18 16.6 -0.4
baz=217
K24K Donnelly Dome 1.96 59 Pn 07 17 54.1 +1.0
K24K Donnelly Dome 1.96 59 P Pn 07 17 54.3 +1.2
baz=242,SNR=249
CCB Clear Creek Bu 1.96 23 Pn 07 17 53.2 +0.1
CCB IAML 07 18 17.4
comp=E,2µm,0.8s
SPCN Chakachatna No 2.05 218 Pn 07 17 54.5 +0.2
SPU Mount Spurr 2.05 216 Pn 07 17 53.7 -0.6
SPNN North Nagishla 2.09 226 Pn 07 17 54.8 -0.2
HARP HAARP 2.10 101 Pn 07 17 55.5 +0.6
HARP HAARP 2.10 101 P Pn 07 17 55.7 +0.8
baz=284,SNR=402
K20K Telida 2.10 286 Pn 07 17 54.8 -0.1
K20K Telida 2.10 286 P Pn 07 17 54.9 -0.1
baz=102,SNR=165
CKL Chakachamna La 2.11 219 Pn 07 17 54.9 -0.3
SPWE Spurr West 2.12 223 Pn 07 17 55.3 +0.1
COLA College 2.16 20 Pn 07 17 56.2 +0.5
COLA College 2.16 20 P Pn 07 17 56.2 +0.5
COLA College 2.16 20 /P Pn 07 17 55.6 -0.1
COLA College 2.16 20 P Pn 07 17 56.2 +0.5
baz=201
MDM Murphy Dome 2.19 15 Pn 07 17 56.5 +0.3
KLU Klutina 2.20 127 Pn Pn 07 17 56.5 +0.3
KLU IAML 07 18 33.3
comp=E,2µm,0.6s
KLU Klutina 2.20 127 P Pn 07 17 55.8 -0.5
baz=310,SNR=22
CAPN Captain Cook N 2.23 200 P Pn 07 17 59.2 +2.7
baz=20,SNR=78
MLY Manley 2.24 347 Pn 07 17 57.2 +0.4
MLY Manley 2.24 347 P Pn 07 17 56.9 +0.1
baz=166,SNR=58
IL31 2.26 31 Pn 07 17 57.3 +0.3
ILAR Eielson Array 2.26 31 P Pn 07 17 56.9 -0.2
comp=E,182nm,0.4s,baz=215,slow=14,SNR=2655
ILAR S Sn 07 18 19.3 -5.0
comp=E,416nm,0.8s,baz=218,slow=17,SNR=10
ILAR Eielson Array 2.26 31 Pn 07 17 57.3 +0.2
I23K Minto, Yukon-K 2.30 2 Pn 07 17 57.6 +0.1
I23K Minto, Yukon-K 2.30 2 P Pn 07 17 57.9 +0.4
baz=182,SNR=348
GLI Glacier Island 2.31 148 Pn 07 17 57.1 -0.6
GLI Glacier Island 2.31 148 P Pn 07 17 57.1 -0.6
baz=331,SNR=28
RIDG Independent Ri 2.31 65 Pn 07 17 59.0 +1.2
RIDG IAML 07 18 31.3
comp=N,3µm,0.8s
RIDG Independent Ri 2.31 65 P Pn 07 17 58.6 +0.8
baz=249,SNR=626
SLKM Skilak Lake 2.38 188 Pn 07 17 59.2 +0.6
SLKM IAML 07 18 35.2
comp=E,2µm,0.7s
SLKM IAML 07 18 35.4
comp=N,1µm,0.5s
O22K Cooper Landing 2.39 182 Pn 07 17 59.8 +1.1
O22K Cooper Landing 2.39 182 P Pn 07 17 57.8 -0.9
baz=2.1,SNR=110
J20K Nowinta River 2.44 305 Pn 07 17 59.6 +0.3
J20K Nowinta River 2.44 305 P Pn 07 17 59.6 +0.3
baz=121,SNR=379
M19K Big River Lodg 2.44 249 Pn 07 17 59.0 -0.4
M19K Big River Lodg 2.44 249 IAML 07 18 33.4
comp=E,2µm,0.6s
M19K IAML 07 18 34.3
comp=N,1µm,0.5s
M19K Big River Lodg 2.44 249 P Pn 07 17 59.0 -0.4
baz=66
DIV Divide 2.50 132 Pn 07 17 59.3 -0.9
L19K White Mountain 2.54 257 Pn 07 18 00.5 -0.2
L19K IAML 07 18 31.0
comp=N,898nm,0.7s
L19K White Mountain 2.54 257 P Pn 07 18 00.4 -0.4
baz=73,SNR=473
I21K Tanana 2.56 337 Pn 07 18 01.4 +0.5
I21K Tanana 2.56 337 P Pn 07 18 01.5 +0.5
baz=154
J25K Salcha River, 2.57 45 Pn 07 18 01.2 -0.1
J25K IAML 07 18 36.8
comp=N,1µm,0.6s
J25K IAML 07 18 38.1
comp=E,1µm,0.5s
J25K Salcha River, 2.57 45 P Pn 07 18 01.5 +0.3
baz=228,SNR=171
WACK Wrangell Chich 2.60 107 Pn 07 18 01.8 +0.1
DOT Dot Lake 2.62 70 Pn 07 18 02.7 +0.8
DOT IAML 07 18 37.4
comp=N,2µm,0.6s
DOT IAML 07 18 43.5
comp=E,1µm,0.9s
WAZA Wrangell Mount 2.64 105 Pn 07 18 02.6 +0.3
N25K Chitina, Valde 2.65 116 Pn 07 18 02.4 +0.1
N25K IAML 07 18 41.6
comp=E,1µm,0.6s
N25K IAML 07 18 46.9
comp=N,2µm,0.9s
N25K Chitina, Valde 2.65 116 P Pn 07 18 02.1 -0.2
baz=300,SNR=123
RDT Redoubt 2.66 212 Pn 07 18 01.6 -0.7
MENT Mentasta 2.69 86 Pn 07 18 03.5 +0.8
MENT IAML 07 18 49.1
comp=N,2µm,0.8s
MENT IAML 07 18 53.3
comp=E,2µm,0.6s
MENT Mentasta 2.69 86 P Pn 07 18 03.6 +0.8
MENT Mentasta 2.69 86 S Sn 07 18 34.8 +0.4
DFR Drift River 2.71 214 Pn 07 18 02.9 -0.3
RDJH Redoubt Jeurge 2.74 215 Pn 07 18 03.4 -0.2
SCRK Sand Creek 2.76 63 Pn 07 18 04.3 +0.6
SCRK IAML 07 18 39.0
comp=N,1µm,1.1s
SCRK IAML 07 18 39.8
comp=E,890nm,0.7s
SCRK Sand Creek 2.76 63 P Pn 07 18 04.1 +0.3
baz=248,SNR=620
SEW Seward 2.77 179 Pn 07 18 03.8 +0.1
SEW IAML 07 18 49.2
comp=N,917nm,0.7s
SEW IAML 07 18 52.0
comp=E,1µm,0.6s
SEW Seward 2.77 179 P Pn 07 18 03.8 +0.1
baz=359,SNR=36
NCT North Crescent 2.80 216 Pn 07 18 04.2 -0.2
RDWB Redoubt West 2.84 215 Pn 07 18 05.1 +0.2
RDSO Redoubt South 2.84 213 Pn 07 18 05.1 +0.1
L26K Log Cabin Wild 2.85 84 Pn 07 18 05.9 +1.0
L26K IAML 07 18 45.9
comp=N,2µm,0.4s
L26K IAML 07 18 50.1
comp=E,2µm,0.5s
L26K Log Cabin Wild 2.85 84 P Pn 07 18 05.7 +0.7
baz=269,SNR=1000
HIN Hinchinbrook I 2.88 148 Pn 07 18 05.0 -0.2
RED Redoubt Volcan 2.88 213 Pn 07 18 06.1 +0.7
RED IAML 07 18 47.0
comp=N,665nm,0.8s
RED IAML 07 18 47.9
comp=E,994nm,0.9s
J19K Poorman 2.94 295 Pn 07 18 06.5 +0.4
J19K Poorman 2.94 295 IAML 07 18 42.3
comp=N,854nm,1.0s
J19K Poorman 2.94 295 P Pn 07 18 06.6 +0.4
baz=110,SNR=1000
EYAK Cordova Ski Ar 2.95 140 Pn 07 18 05.7 -0.5
EYAK IAML 07 18 50.9
comp=E,1µm,0.7s
EYAK Cordova Ski Ar 2.95 140 P Pn 07 18 06.0 -0.2
EYAK Cordova Ski Ar 2.95 140 S Sn 07 18 40.1 -0.6
EYAK Cordova Ski Ar 2.95 140 P Pn 07 18 05.9 -0.3
baz=324,SNR=12
H23K Yukon River 2.98 0 Pn 07 18 06.9 +0.3
H23K Yukon River 2.98 0 P Pn 07 18 07.1 +0.5
baz=180
BMRM Bremner River 3.02 127 Pn 07 18 05.9 -1.4
BMRM Bremner River 3.02 127 P Pn 07 18 06.2 -1.0
baz=311,SNR=43
P23K Montague Islan 3.06 159 Pn 07 18 06.4 -1.3
P23K IAML 07 18 54.8
comp=E,1µm,0.9s
P23K Montague Islan 3.06 159 P Pn 07 18 06.5 -1.1
baz=341,SNR=21
GLB Gilahina Butte 3.06 115 Pn 07 18 07.8 +0.1
GLB IAML 07 18 53.0
comp=E,853nm,0.7s
GLB IAML 07 18 55.5
comp=N,1µm,0.7s
M26K Nabesna, AK 3.08 96 Pn 07 18 07.9 0.0
M26K Nabesna, AK 3.08 96 IAML 07 18 57.9
comp=N,905nm,0.6s
M26K Nabesna, AK 3.08 96 P Pn 07 18 08.0 0.0
baz=281
H24K Noodor Dome 3.08 13 Pn 07 18 08.4 +0.4
H24K Noodor Dome 3.08 13 P Pn 07 18 08.6 +0.6
baz=194,SNR=90
N19K Bonanza Creek 3.10 231 Pn 07 18 07.8 -0.5
N19K Bonanza Creek 3.10 231 IAML 07 19 05.1
comp=N,803nm,1.1s
N19K Bonanza Creek 3.10 231 P Pn 07 18 08.0 -0.3
baz=47,SNR=27
H21K Melozitna Rive 3.14 335 Pn 07 18 09.2 +0.5
H21K Melozitna Rive 3.14 335 IAML 07 18 44.3
comp=E,600nm,0.9s
H21K Melozitna Rive 3.14 335 P Pn 07 18 09.3 +0.5
baz=152,SNR=337
H22K Ishtalitna Cre 3.15 346 Pn 07 18 09.3 +0.4
H22K Ishtalitna Cre 3.15 346 P Pn 07 18 09.4 +0.5
baz=165,SNR=178
J26L Joseph Creek 3.15 56 Pn 07 18 09.4 +0.4
J26L IAML 07 18 51.1
comp=E,1µm,0.5s
J26L Joseph Creek 3.15 56 P Pn 07 18 09.8 +0.8
baz=240,SNR=325
BRLK Bradley Lake 3.17 192 Pn 07 18 09.5 +0.3
BRLK IAML 07 18 59.1
comp=E,682nm,0.7s
BRLK IAML 07 18 59.9
comp=N,606nm,0.6s
BRSE Bradley Lake S 3.18 191 Pn 07 18 09.4 +0.1
BRSE Bradley Lake S 3.18 191 P Pn 07 18 09.4 +0.1
baz=10,SNR=36
PRP Porcupine Dome 3.21 32 Pn 07 18 09.9 +0.1
PRP IAML 07 18 47.9
comp=N,1µm,0.5s
PRP IAML 07 18 52.5
comp=E,634nm,0.7s
PRP Porcupine Dome 3.21 32 P Pn 07 18 10.2 +0.5
baz=215,SNR=135
M18K Stony River 3.23 248 Pn 07 18 09.8 -0.2
M18K Stony River 3.23 248 P Pn 07 18 09.8 -0.2
baz=63,SNR=384
J18K Innoko River 3.29 284 Pn 07 18 11.0 +0.2
J18K Innoko River 3.29 284 IAML 07 18 50.0
comp=E,508nm,0.9s
J18K Innoko River 3.29 284 P Pn 07 18 11.1 +0.2
baz=98,SNR=872
VRDI Verde Repeater 3.32 117 Pn 07 18 10.6 -0.7
VRDI IAML 07 19 00.5
comp=N,1µm,0.8s
VRDI IAML 07 19 01.8
comp=E,690nm,0.7s
ILSW Iliamna Southw 3.35 212 Pn 07 18 12.5 +0.7
ILSW IAML 07 18 56.5
comp=N,471nm,1.1s
ILSW IAML 07 18 57.1
comp=E,465nm,0.7s
L18K Granite Mounta 3.35 262 Pn 07 18 11.3 -0.3
L18K Granite Mounta 3.35 262 P Pn 07 18 11.4 -0.3
baz=17
ILS Iliamna Low So 3.36 211 Pn 07 18 11.9 +0.1
HOM Homer 3.36 198 Pn 07 18 12.2 +0.5
HOM Homer 3.36 198 P Pn 07 18 12.3 +0.5
baz=17,SNR=10.0
RAGM Ragged Mountai 3.41 134 Pn 07 18 12.7 +0.2
MCARA McCarthy VSAT 3.42 113 Pn 07 18 12.5 0.0
MCARA McCarthy VSAT 3.42 113 P Pn 07 18 12.6 0.0
baz=298,SNR=36
CNPM China Poot 3.44 194 Pn 07 18 13.1 +0.2
CNPM IAML 07 19 02.5
comp=E,896nm,0.7s
CNPM IAML 07 19 05.9
comp=N,641nm,0.6s
O19K Port Alsworth 3.50 222 Pn 07 18 12.7 -1.0
O19K IAML 07 19 13.7
comp=E,558nm,0.8s
O19K IAML 07 19 26.4
comp=N,731nm,0.5s
O19K Port Alsworth 3.50 222 P Pn 07 18 13.2 -0.5
baz=39,SNR=13
H20K Anotleneega Mo 3.52 321 Pn 07 18 14.3 +0.4
H20K Anotleneega Mo 3.52 321 P Pn 07 18 14.4 +0.5
baz=136,SNR=100
L27K Beaver Creek, 3.55 83 P Pn 07 18 14.2 -0.1
baz=270,SNR=260
BCAR Beaver Creek A 3.57 83 Pn 07 18 14.5 -0.1
M27K Edge Creek, AK 3.60 95 Pn 07 18 15.7 +0.6
M27K Edge Creek, AK 3.60 95 P Pn 07 18 15.8 +0.7
baz=281,SNR=50
IM02 Indian Mountai 3.65 332 Pn 07 18 16.1 +0.5
P19K Oil Pt 3.67 210 Pn 07 18 16.8 +0.9
P19K IAML 07 19 08.3
comp=N,869nm,0.8s
P19K IAML 07 19 25.4
comp=E,929nm,1.0s
P19K Oil Pt 3.67 210 P Pn 07 18 16.9 +0.9
baz=28,SNR=8.9
N18K Kilae Creek 3.71 237 IAML 07 19 28.6
comp=N,385nm,0.9s
N18K IAML 07 19 29.5
comp=E,373nm,0.8s
N18K Kilae Creek 3.71 237 P Pn 07 18 16.0 -0.5
baz=52,SNR=41
CRQM Cirque 3.71 122 Pn 07 18 16.4 -0.3
CRQE Cirque 3.73 122 P Pn 07 18 16.5 -0.4
baz=307,SNR=10.0
BERG Berg Lake 3.74 129 Pn 07 18 16.8 -0.1
I26K Coal Creek Min 3.74 46 Pn 07 18 17.5 +0.6
I26K Coal Creek Min 3.74 46 IAML 07 19 02.3
comp=N,579nm,0.6s
I26K IAML 07 19 03.6
comp=E,759nm,0.6s
I26K Coal Creek Min 3.74 46 P Pn 07 18 17.7 +0.9
baz=231,SNR=113
GCSA Galena City Sc 3.75 304 P Pn 07 18 17.6 +0.7
baz=117,SNR=62
Q23K Middleton Isla 3.78 154 P Pn 07 18 17.8 +0.4
baz=337
TGL Tana Glacier 3.84 120 Pn 07 18 18.1 -0.2
KAIM Kayak Island 3.85 138 Pn 07 18 17.3 -1.0
KAIM Kayak Island 3.85 138 IAML 07 19 24.2
comp=N,652nm,0.6s
KAIM IAML 07 19 25.6
comp=E,778nm,0.6s
KAIM Kayak Island 3.85 138 P Pn 07 18 17.6 -0.7
baz=322
G23K Bananza Creek 3.87 357 Pn 07 18 19.5 +0.8
G23K Bananza Creek 3.87 357 P Pn 07 18 19.4 +0.8
baz=177,SNR=188
KHIT Khitrov Hills 3.87 126 Pn 07 18 17.8 -1.0
SUCK Suckling Hills 3.95 133 Pn 07 18 18.8 -0.9
GRIN Grindle Hills 3.96 128 Pn 07 18 18.8 -1.0
G24K Hadweenzic Riv 3.96 12 P Pn 07 18 20.7 +0.9
baz=194,SNR=324
M17K Holitna River 3.97 252 Pn 07 18 19.2 -0.8
M17K Holitna River 3.97 252 IAML 07 19 34.7
comp=E,673nm,0.9s
M17K IAML 07 19 35.8
comp=N,744nm,1.0s
M17K Holitna River 3.97 252 P Pn 07 18 19.1 -0.8
baz=65,SNR=72
AGU Augustine-Summ 3.98 210 Pn 07 18 20.4 +0.2
AUJK Augustine Jueg 3.98 210 Pn 07 18 20.6 +0.5
AUI Augustine Isla 4.00 210 Pn 07 18 20.6 +0.3
K17K Iditarod 4.01 272 Pn 07 18 20.1 -0.3
K17K IAML 07 19 06.5
comp=E,450nm,0.9s
K17K Iditarod 4.01 272 P Pn 07 18 20.7 +0.3
baz=84,SNR=403
WAX Waxell Ridge 4.02 124 Pn 07 18 20.9 +0.2
G21K Allakaket 4.04 337 Pn 07 18 21.5 +0.6
G21K Allakaket 4.04 337 IAML 07 19 07.8
comp=E,322nm,0.9s
G21K Allakaket 4.04 337 P Pn 07 18 21.5 +0.6
baz=153,SNR=122
O18K Koktuh Hills 4.05 224 Pn 07 18 20.1 -1.0
O18K IAML 07 19 33.8
comp=N,310nm,1.0s
O18K Koktuh Hills 4.05 224 P Pn 07 18 20.6 -0.5
baz=40,SNR=11
BVCY Beaver Creek 4.05 92 P Pn 07 18 21.5 +0.3
baz=280,SNR=81
BGLC Bering Glacier 4.08 129 Pn 07 18 21.4 -0.1
BGLC Bering Glacier 4.08 129 P Pn 07 18 21.9 +0.4
baz=315
L17K Donlin 4.11 264 Pn 07 18 21.6 -0.3
L17K Donlin 4.11 264 P Pn 07 18 21.6 -0.3
baz=76
ISLE Juniper Island 4.12 120 Pn 07 18 21.7 -0.5
BARN Barnard Glacie 4.15 112 Pn 07 18 23.0 +0.3
BARN IAML 07 19 26.8
comp=E,449nm,0.9s
BARN IAML 07 19 37.4
comp=N,455nm,1.0s
FYU Fort Yukon 4.16 25 Pn 07 18 23.2 +0.7
FYU IAML 07 19 18.2
comp=E,485nm,0.8s
FYU IAML 07 19 23.7
comp=N,358nm,1.4s
SNH Sunshine Point 4.20 127 Pn 07 18 22.6 -0.5
GRNC Granite Creek 4.29 116 Pn 07 18 23.5 -0.9
GRNC IAML 07 19 34.1
comp=N,472nm,0.9s
GRNC IAML 07 19 39.2
comp=E,313nm,1.2s
BAGL Bagley Icefiel 4.29 120 Pn 07 18 23.3 -1.0
N17K Nushagak Hills 4.31 241 Pn 07 18 24.2 -0.4
N17K Nushagak Hills 4.31 241 IAML 07 19 35.1
comp=N,423nm,0.9s
N17K IAML 07 19 35.1
comp=E,298nm,0.8s
N17K Nushagak Hills 4.31 241 P Pn 07 18 24.2 -0.4
baz=54,SNR=90
CTG Chitna Glacier 4.34 112 P Pn 07 18 24.9 -0.2
baz=299,SNR=22
CTGM Chitina Glacie 4.34 112 Pn 07 18 24.9 -0.2
CTGM IAML 07 19 48.1
comp=N,332nm,1.4s
J17K VABM Dome 4.34 281 Pn 07 18 25.2 +0.2
J17K VABM Dome 4.34 281 P Pn 07 18 25.2 +0.2
baz=93,SNR=306
YUK3 Moose Creek 4.39 100 P Pn 07 18 26.3 +0.4
baz=288,SNR=131
COLD Coldfoot 4.39 357 Pn 07 18 26.6 +0.9
COLD Coldfoot 4.39 357 P Pn 07 18 26.7 +1.0
baz=176,SNR=533
Q19K Cape Douglas, 4.41 209 Pn 07 18 25.8 -0.2
Q19K Cape Douglas, 4.41 209 P Pn 07 18 26.1 0.0
baz=25,SNR=12
P18K Big Mountain, 4.42 221 Pn 07 18 25.6 -0.6
P18K Big Mountain, 4.42 221 P Pn 07 18 25.8 -0.4
baz=36,SNR=11
I27K Kandik River 4.44 48 Pn 07 18 26.9 +0.6
I27K Kandik River 4.44 48 IAML 07 19 39.0
comp=N,353nm,0.8s
I27K IAML 07 19 39.1
comp=E,501nm,0.7s
I27K Kandik River 4.44 48 P Pn 07 18 27.4 +1.1
baz=235,SNR=32
SYI Shuyak Island 4.48 199 Pn 07 18 26.1 -0.7
SYI Shuyak Island 4.48 199 IAML 07 19 30.6
comp=N,447nm,0.9s
SYI IAML 07 19 33.3
comp=E,410nm,0.9s
Q20K Shuyak Island 4.48 199 P Pn 07 18 26.5 -0.4
baz=17
H18K Honhosa River 4.50 305 P Pn 07 18 27.7 +0.6
baz=117,SNR=199
MESA MESA 4.54 123 Pn 07 18 27.0 -0.8
MESA MESA 4.54 123 P Pn 07 18 27.7 -0.1
baz=310,SNR=8.1
LOGN Logan Glacier 4.55 113 Pn 07 18 27.3 -0.7
LOGN Logan Glacier 4.55 113 IAML 07 19 39.8
comp=E,354nm,1.1s
LOGN IAML 07 19 48.4
comp=N,441nm,1.3s
G19K Purcell Mounta 4.62 319 Pn 07 18 28.4 -0.4
G19K Purcell Mounta 4.62 319 P Pn 07 18 29.4 +0.6
baz=132,SNR=34
F21K Alatna River 4.68 341 Pn 07 18 30.5 +0.9
F21K Alatna River 4.68 341 IAML 07 19 23.8
comp=N,217nm,0.7s
F21K Alatna River 4.68 341 P Pn 07 18 30.6 +0.9
baz=157,SNR=384
RKAV Rock Avalanche 4.70 119 Pn 07 18 28.8 -1.2
DAWY Dawson 4.73 71 P Pn 07 18 30.6 +0.3
baz=259,SNR=314
L16K Owhat River 4.76 260 Pn 07 18 30.1 -0.6
L16K IAML 07 19 56.1
comp=N,168nm,0.8s
L16K Owhat River 4.76 260 P Pn 07 18 30.5 -0.2
baz=72,SNR=90
O17K Koliganek Bris 4.76 233 Pn 07 18 30.4 -0.3
O17K Koliganek Bris 4.76 233 P Pn 07 18 30.9 +0.2
baz=47,SNR=28
G26K Porcupine Rive 4.79 28 Pn 07 18 31.4 +0.3
G26K Porcupine Rive 4.79 28 IAML 07 19 29.5
comp=E,252nm,1.1s
G26K IAML 07 19 30.9
comp=N,357nm,1.1s
G26K Porcupine Rive 4.79 28 P Pn 07 18 31.4 +0.3
baz=213,SNR=112
M16K Timber Creek 4.80 252 Pn 07 18 30.5 -0.7
M16K Timber Creek 4.80 252 IAML 07 19 26.2
comp=N,166nm,0.6s
M16K IAML 07 19 57.7
comp=E,163nm,0.9s

M16K Timber Creek 4.80 252 P Pn 07 18 30.5 -0.7
baz=64,SNR=18
H27K Steamboat Moun 4.85 42 Pn 07 18 32.4 +0.5
H27K Steamboat Moun 4.85 42 IAML 07 19 56.0
comp=N,209nm,0.9s
H27K IAML 07 19 57.2
comp=E,207nm,1.1s
H27K Steamboat Moun 4.85 42 P Pn 07 18 32.6 +0.7
baz=229,SNR=99
YUK8 Steele Glacier 4.88 104 Pn 07 18 32.8 +0.2
YUK8 Steele Glacier 4.88 104 P Pn 07 18 32.9 +0.3
baz=293,SNR=32
O28M Mount Upton 4.92 111 Pn 07 18 33.0 -0.1
O28M Mount Upton 4.92 111 IAML 07 19 55.6
comp=N,205nm,1.1s
O28M IAML 07 20 06.7
comp=E,145nm,0.9s
O28M Mount Upton 4.92 111 P Pn 07 18 33.2 +0.1
baz=299,SNR=16
F20K Avaraart Lake 4.95 331 Pn 07 18 34.3 +1.1
F20K IAML 07 19 30.0
comp=E,153nm,0.8s
F20K Avaraart Lake 4.95 331 P Pn 07 18 34.1 +1.0
baz=145,SNR=271
I28M Miner Creek 4.96 54 Pn 07 18 33.9 +0.4
I28M Miner Creek 4.96 54 IAML 07 20 00.7
comp=N,265nm,0.8s
I28M IAML 07 20 00.9
comp=E,377nm,1.0s
I28M Miner Creek 4.96 54 P Pn 07 18 34.9 +1.4
baz=242,SNR=95
P17K Kvichak River 4.96 225 P Pn 07 18 33.5 +0.1
baz=40,SNR=8.6
G18K Tagagawik 4.98 312 Pn 07 18 34.7 +1.1
G18K Tagagawik 4.98 312 IAML 07 19 30.1
comp=N,156nm,1.3s
G18K IAML 07 19 32.5
comp=E,136nm,0.7s
G18K Tagagawik 4.98 312 P Pn 07 18 34.8 +1.1
baz=124,SNR=224
N16K Nishlik Lake 4.99 245 Pn 07 18 33.6 -0.1
N16K Nishlik Lake 4.99 245 P Pn 07 18 33.5 -0.3
baz=58,SNR=57
KAHG Katmai Hook Gl 5.01 211 Pn 07 18 34.1 -0.1
H17K Granite Mounta 5.02 299 Pn 07 18 35.2 +1.0
H17K Granite Mounta 5.02 299 IAML 07 19 31.2
comp=N,222nm,1.0s
H17K Granite Mounta 5.02 299 P Pn 07 18 35.4 +1.2
baz=110,SNR=175
J16K Anvik River 5.03 280 Pn 07 18 34.4 +0.1
J16K Anvik River 5.03 280 P Pn 07 18 34.4 +0.1
baz=90,SNR=126
F25K Christian Rive 5.03 17 Pn 07 18 34.7 +0.3
F25K Christian Rive 5.03 17 P Pn 07 18 35.2 +0.8
baz=201,SNR=211
KARR Katmai Rainbow 5.05 212 Pn 07 18 34.3 -0.3
BMAR Burnt Mountain 5.05 22 Pn 07 18 35.5 +0.8
I17K Unalakleet 5.11 287 Pn 07 18 35.8 +0.4
I17K IAML 07 19 34.3
comp=E,216nm,0.9s
I17K Unalakleet 5.11 287 P Pn 07 18 36.3 +1.0
baz=97,SNR=251
M29M Somme Creek 5.15 90 Pn 07 18 36.4 +0.3
M29M Somme Creek 5.15 90 P Pn 07 18 36.4 +0.3
baz=279,SNR=107
KAWH Katmai 5.17 212 Pn 07 18 36.1 -0.3
E23K Chandalar 5.22 360 Pn 07 18 37.3 +0.3
E23K Chandalar 5.22 360 P Pn 07 18 38.0 +0.9
baz=180,SNR=166
L29M L29M 5.23 82 Pn 07 18 36.9 -0.2
L29M L29M 5.23 82 IAML 07 20 13.6
comp=N,289nm,0.8s
L29M IAML 07 20 16.3
comp=E,310nm,1.1s
L29M L29M 5.23 82 P Pn 07 18 37.2 +0.1
baz=272
O16K Kokwok River B 5.25 235 Pn 07 18 36.9 -0.5
O16K Kokwok River B 5.25 235 IAML 07 20 13.3
comp=E,182nm,0.9s
O16K IAML 07 20 18.3
comp=N,166nm,1.3s
O16K Kokwok River B 5.25 235 P Pn 07 18 36.2 -1.2
baz=48,SNR=10
PCA Pinnacle 5.26 118 Pn 07 18 36.9 -0.6
E24K Your Creek 5.26 4 Pn 07 18 38.5 +1.0
E24K Your Creek 5.26 4 P Pn 07 18 38.4 +0.9
baz=185
PINM Pinnacle 5.26 118 P Pn 07 18 37.0 -0.5
baz=306,SNR=16
KDAK Kodiak Island 5.31 198 P Pn 07 18 36.0 -2.1
comp=N,9.6nm,0.3s,baz=60,slow=4.9,SNR=96
KDAK S Sn 07 19 32.1 -5.7
comp=N,66nm,0.7s,baz=23,slow=16,SNR=3.7
KDAK Kodiak Island 5.31 198 Pn 07 18 36.8 -1.3
KDAK IAML 07 19 54.9
comp=N,233nm,1.1s
KDAK IAML 07 19 57.9
comp=N,267nm,0.8s
KDAK Kodiak Island 5.31 198 *i* P Pn 07 18 37.5 -0.6
KDAK Kodiak Island 5.31 198 P Pn 07 18 36.6 -1.5
baz=15
J29N Klondike Camp 5.31 67 P Pn 07 18 38.5 +0.3
baz=257,SNR=13
YUK4 Talbot Arm 5.36 102 P Pn 07 18 39.2 +0.2
baz=290,SNR=14
F26K Sheenjek River 5.36 23 Pn 07 18 39.6 +0.7
F26K Sheenjek River 5.36 23 P Pn 07 18 39.3 +0.4
baz=207,SNR=106
E22K Anaktuvuk Pass 5.38 351 P Pn 07 18 40.1 +1.0
baz=169,SNR=78
Q16K King Salmon 5.44 223 P Pn 07 18 40.3 +0.4
baz=37
ACHA Angle Creek He 5.46 214 Pn 07 18 40.3 +0.1
ANCK Angle Creek 5.51 215 Pn 07 18 41.0 +0.1
G17K Kiwalik Mounta 5.51 304 Pn 07 18 41.8 +0.9
G17K Kiwalik Mounta 5.51 304 P Pn 07 18 41.9 +0.9
baz=114
K29M Barlow Dome 5.52 74 Pn 07 18 41.1 0.0
K29M Barlow Dome 5.52 74 P Pn 07 18 41.0 -0.2
baz=265,SNR=117
E25K Arctic Village 5.54 16 Pn 07 18 42.1 +0.8
E25K Arctic Village 5.54 16 P Pn 07 18 42.1 +0.8
baz=199,SNR=202
I29M Ogilvie Camp, 5.54 58 Pn 07 18 41.5 +0.2
I29M Ogilvie Camp, 5.54 58 P Pn 07 18 42.1 +0.8
baz=248,SNR=32
K15K Wolf Creek Mou 5.55 269 Pn 07 18 41.8 +0.3
K15K Wolf Creek Mou 5.55 269 P Pn 07 18 41.6 +0.2
baz=79
CNTC Contact Creek 5.56 217 Pn 07 18 41.9 +0.3
Q17K Contact Creek 5.56 217 P Pn 07 18 41.8 +0.2
baz=32
BCPM Bancas Point 5.59 117 Pn 07 18 41.4 -0.7
P16K Nushagak River 5.61 231 Pn 07 18 42.6 +0.4
P16K Nushagak River 5.61 231 P Pn 07 18 43.1 +0.8
baz=44,SNR=8.2
E19K Redstone River 5.63 328 Pn 07 18 43.5 +1.0
E19K Redstone River 5.63 328 P Pn 07 18 43.5 +1.0
baz=142,SNR=88
YUK6 Outpost Mounta 5.64 105 P Pn 07 18 42.7 -0.2
baz=295,SNR=10
L15K Ungalak Mounta 5.68 263 P Pn 07 18 42.8 -0.4
baz=73,SNR=36
M15K Kasigluk River 5.70 253 Pn 07 18 42.9 -0.6
M15K Kasigluk River 5.70 253 P Pn 07 18 43.6 +0.2
baz=63,SNR=15
N15K Kwethluk River 5.71 246 Pn 07 18 43.2 -0.4
N15K Kwethluk River 5.71 246 P Pn 07 18 43.1 -0.5
baz=58,SNR=24
F18K Selawik 5.71 315 Pn 07 18 44.5 +0.9
F18K Selawik 5.71 315 P Pn 07 18 44.7 +1.2
baz=126,SNR=19
O29M Mount Kennedy 5.85 111 Pn 07 18 45.5 -0.1
O29M Mount Kennedy 5.85 111 P Pn 07 18 44.5 -1.1
baz=301
YKU2 Yakutat 5.85 121 P Pn 07 18 45.1 -0.4
M30M Minto, Yukon 5.89 87 Pn 07 18 45.5 -0.6
M30M Minto, Yukon 5.89 87 P Pn 07 18 45.8 -0.3
baz=278,SNR=19
H16K Elim 5.89 293 Pn 07 18 46.6 +0.6
H16K Elim 5.89 293 P Pn 07 18 47.0 +0.9
baz=102,SNR=102
OHAK Old Harbor 5.95 200 Pn 07 18 44.2 -2.6
OHAK Old Harbor 5.95 200 P Pn 07 18 45.2 -1.7
OHAK Old Harbor 5.95 200 P Pn 07 18 45.5 -1.3
baz=17

PLK5 Peulik 5 6.07 220 Pn 07 18 48.9 +0.5
E20K Nigu River 6.07 336 Pn 07 18 49.8 +1.2
E20K Nigu River 6.07 336 P Pn 07 18 49.9 +1.4
baz=150
HYT Haines Junctio 6.07 104 Pn 07 18 47.7 -0.9
HYT Haines Junctio 6.07 104 P Pn 07 18 48.3 -0.4
baz=295,SNR=12
J30M Hart River 6.13 68 Pn 07 18 49.9 +0.5
J30M Hart River 6.13 68 P Pn 07 18 49.8 +0.3
baz=299
G16K Koyuk River 6.14 300 Pn 07 18 50.3 +0.9
G16K Koyuk River 6.14 300 P Pn 07 18 50.4 +1.0
baz=109
D23K Nanushuk River 6.15 356 Pn 07 18 51.4 +1.8
D23K Nanushuk River 6.15 356 P Pn 07 18 51.3 +1.7
baz=175
PLK1 Peulik 1 6.15 218 Pn 07 18 49.9 +0.3
F17K Baldwin Pennin 6.16 311 Pn 07 18 51.1 +1.4
F17K Baldwin Pennin 6.16 311 P Pn 07 18 51.1 +1.4
baz=120
D22K Ayikyak River 6.18 350 Pn 07 18 51.0 +1.1
D22K Ayikyak River 6.18 350 P Pn 07 18 51.0 +1.1
baz=166
O15K Ungalikthiuk R 6.20 238 Pn 07 18 50.8 +0.6
O15K Ungalikthiuk R 6.20 238 P Pn 07 18 50.3 +0.1
baz=49
PLK4 Peulik 4 6.23 216 Pn 07 18 50.8 0.0
MAYO Mayo, Yukon 6.23 77 Pn 07 18 52.9 +2.2
R17L Mt. Peulik Vol 6.23 216 P Pn 07 18 51.0 +0.2
baz=30
M14K Bethel 6.24 256 Pn 07 18 50.9 +0.2
M14K Bethel 6.24 256 P Pn 07 18 50.7 0.0
baz=65,SNR=35
I30M Mount Dempster 6.26 62 Pn 07 18 51.3 +0.1
I30M Mount Dempster 6.26 62 P Pn 07 18 51.1 -0.1
baz=254,SNR=24
F28M Old Crow 6.27 36 Pn 07 18 51.0 -0.2
F28M Old Crow 6.27 36 P Pn 07 18 51.7 +0.5
baz=225,SNR=30
PLBL Peulik Blue Cr 6.30 218 Pn 07 18 51.9 +0.3
D24K Happy Valley 6.33 2 Pn 07 18 53.8 +1.8
D24K Happy Valley 6.33 2 P Pn 07 18 53.0 +1.0
baz=183
L14K Kuka Creek 6.33 262 Pn 07 18 52.2 +0.1
L14K Kuka Creek 6.33 262 P Pn 07 18 52.5 +0.4
baz=71,SNR=50
G29M Pine Creek 6.38 45 P Pn 07 18 54.0 +1.3
baz=236
J14K Nanvaranak Lak 6.41 275 P Pn 07 18 53.3 +0.3
baz=83,SNR=51
N14K Kuskokwak Cree 6.51 249 Pn 07 18 54.6 +0.1
N14K Kuskokwak Cree 6.51 249 P Pn 07 18 54.3 -0.1
baz=58
E18K Tukpahlearik C 6.52 319 Pn 07 18 55.9 +1.4
E18K Tukpahlearik C 6.52 319 P Pn 07 18 55.9 +1.4
baz=130,SNR=25
D20K Etivluk River 6.55 337 Pn 07 18 55.9 +0.9
D20K Etivluk River 6.55 337 P Pn 07 18 56.0 +1.0
baz=150
N31M Braeburn, Yuko 6.61 96 Pn 07 18 55.9 +0.1
N31M Braeburn, Yuko 6.61 96 P Pn 07 18 56.0 +0.2
baz=288,SNR=9.9
D25K Kavik River 6.62 10 Pn 07 18 57.4 +1.5
D25K Kavik River 6.62 10 P Pn 07 18 57.4 +1.5
baz=193
R16K Pilot Point 6.63 220 P Pn 07 18 56.1 0.0
baz=34
P30M Million Dollar 6.64 109 Pn 07 18 55.8 -0.4
P30M Million Dollar 6.64 109 P Pn 07 18 56.2 0.0
baz=300
D19K Kuna River 6.66 332 Pn 07 18 57.5 +1.0
D19K Kuna River 6.66 332 P Pn 07 18 57.6 +1.0
baz=144
C21K Knifeblade Rid 6.67 344 Pn 07 18 58.5 +1.9
C21K Knifeblade Rid 6.67 344 P Pn 07 18 58.4 +1.9
baz=159
E17K Hotham Inlet 6.70 315 P Pn 07 18 58.2 +1.3
baz=124,SNR=85
G15K Niukluk 6.72 295 Pn 07 18 58.3 +1.0
G15K Niukluk 6.72 295 P Pn 07 18 58.4 +1.1
baz=102
O14K Tigyukauivet M 6.72 243 Pn 07 18 57.8 +0.4
O14K Tigyukauivet M 6.72 243 P Pn 07 18 57.7 +0.3
baz=53,SNR=16
O30N Mendenhall 6.73 102 Pn 07 18 56.5 -0.9
O30N Mendenhall 6.73 102 P Pn 07 18 56.6 -0.9
baz=294,SNR=7.2
SII Sitkinak Islan 6.73 202 P Pn 07 18 58.0 +0.5
SII Sitkinak Islan 6.73 202 P Pn 07 18 56.7 -0.8
baz=18
C24K Franklin Bluff 6.90 3 Pn 07 19 01.1 +1.3
C24K Franklin Bluff 6.90 3 P Pn 07 19 01.0 +1.3
baz=183
M13K Dall Lake 7.00 256 Pn 07 19 01.9 +0.8
M13K Dall Lake 7.00 256 P Pn 07 19 02.0 +0.8
baz=64,SNR=22
G30M tAoh Zraii Nji 7.02 48 Pn 07 19 02.0 +0.6
G30M tAoh Zraii Nji 7.02 48 P Pn 07 19 02.0 +0.6
baz=240,SNR=23
M31M Drury Creek, Y 7.06 89 Pn 07 19 02.4 +0.5
M31M Drury Creek, Y 7.06 89 P Pn 07 19 02.6 +0.7
baz=282,SNR=15
K13K Kusilvak Mount 7.07 269 Pn 07 19 02.0 +0.1
K13K Kusilvak Mount 7.07 269 P Pn 07 19 02.1 +0.1
baz=76
E28M Babbage River 7.09 31 Pn 07 19 02.5 +0.1
E28M Babbage River 7.09 31 P Pn 07 19 02.5 +0.1
baz=220
F15K North Star Dit 7.15 300 Pn 07 19 04.5 +1.4
F15K North Star Dit 7.15 300 P Pn 07 19 04.5 +1.4
baz=107,SNR=44
C27K Jago River 7.19 17 Pn 07 19 05.2 +1.4
C27K Jago River 7.19 17 P Pn 07 19 05.4 +1.6
baz=202
ANM Nome 7.22 291 Pn 07 19 04.7 +0.7
ANM Nome 7.22 291 P Pn 07 19 04.7 +0.7
ANM Nome 7.22 291 P Pn 07 19 05.1 +1.0
baz=97,SNR=60
H31M Peel River 7.24 59 Pn 07 19 05.0 +0.5
H31M Peel River 7.24 59 P Pn 07 19 05.1 +0.6
baz=253
D27M Malcolm River 7.30 25 Pn 07 19 06.0 +0.8
D27M Malcolm River 7.30 25 P Pn 07 19 06.3 +1.0
baz=212
WHY Whitehorse 7.32 101 Pn 07 19 04.9 -0.6
WHY Whitehorse 7.32 101 P Pn 07 19 05.7 +0.2
baz=294,SNR=5.9
E29M Blow River 7.35 36 Pn 07 19 06.5 +0.6
E29M Blow River 7.35 36 P Pn 07 19 06.6 +0.7
baz=226
D17K Noatak River 7.45 317 Pn 07 19 08.7 +1.6
D17K Noatak River 7.45 317 P Pn 07 19 08.8 +1.7
baz=124,SNR=13
C19K Lookout Ridge 7.47 331 Pn 07 19 08.3 +0.8
C19K Lookout Ridge 7.47 331 P Pn 07 19 08.4 +0.8
baz=142
F30M Barrier River 7.49 44 Pn 07 19 09.2 +1.4
F30M Barrier River 7.49 44 P Pn 07 19 09.0 +1.2
baz=237,SNR=14
C18K Utukok River 7.51 326 Pn 07 19 08.7 +0.6
C18K Utukok River 7.51 326 P Pn 07 19 09.0 +0.9
baz=135,SNR=38
FARO Faro, Yukon 7.53 88 P Pn 07 19 09.0 +0.6
baz=282,SNR=14
RDOG Red Dog Mine 7.60 319 Pn 07 19 10.5 +1.2
RDOG Red Dog Mine 7.60 319 P Pn 07 19 10.7 +1.4
baz=127
SKAG Skagway 7.69 110 Pn 07 19 10.1 -0.3
SKAG Skagway 7.69 110 P Pn 07 19 09.9 -0.5
SKAG Skagway 7.69 110 P Pn 07 19 10.1 -0.3
baz=302
CHIR Chirikof Islan 7.70 206 P Pn 07 19 09.4 -1.3
CHIR Chirikof Islan 7.70 206 P Pn 07 19 10.5 -0.2
baz=21
F14K Arctic Creek 7.76 297 Pn 07 19 12.7 +1.2
F14K Arctic Creek 7.76 297 P Pn 07 19 12.6 +1.2
baz=102,SNR=45
C17K DeLong Mountai 7.94 321 Pn 07 19 14.9 +1.0
C17K DeLong Mountai 7.94 321 P Pn 07 19 15.2 +1.3
baz=129,SNR=35
N32M Quiet Lake 7.95 95 Pn 07 19 14.7 +0.6
N32M Quiet Lake 7.95 95 P Pn 07 19 14.4 +0.3
baz=290
F31M Tsiigehtchic 8.09 48 Pn 07 19 16.0 +0.1
F31M Tsiigehtchic 8.09 48 P Pn 07 19 16.0 +0.1
baz=243,SNR=8.3
S31K Pelican 8.22 121 Pn 07 19 17.2 -0.6
S31K Pelican 8.22 121 P Pn 07 19 17.1 -0.6
baz=312
M11K Mekoryuk 8.29 260 P Pn 07 19 19.5 +0.8
baz=66,SNR=16
VNSG Veniaminof 6 8.30 220 Pn 07 19 18.2 -0.6
P32M Atlin 8.32 106 Pn 07 19 18.0 -1.2
P32M Atlin 8.32 106 P Pn 07 19 18.5 -0.7
baz=300
BESE Bessie Mountai 8.39 114 Pn 07 19 18.8 -1.3
P33M Teslin, Yukon 8.43 101 P Pn 07 19 20.6 -0.1
baz=295
TNA Tin City 8.43 297 Pn 07 19 22.0 +1.3
TNA Tin City 8.43 297 P Pn 07 19 21.9 +1.3
baz=100,SNR=29
C16K Lisburne Hills 8.48 317 Pn 07 19 22.2 +1.1
C16K Lisburne Hills 8.48 317 P Pn 07 19 22.4 +1.3
baz=122,SNR=30
INK Inuvik 8.59 44 P Pn 07 19 23.1 +0.5
comp=N,17nm,0.7s,baz=240,slow=20,SNR=25
INK S Sn 07 20 55.4 -2.3
comp=N,15nm,0.6s,baz=320,slow=16,SNR=6.9
INK Inuvik 8.59 44 P Pn 07 19 23.3 +0.7
baz=238,SNR=22
R32K Eaglecrest 8.72 115 P Pn 07 19 24.1 -0.4
baz=308
JIS Juneau Island 8.77 115 Pn 07 19 24.1 -1.2
JIS Juneau Island 8.77 115 P Pn 07 19 24.0 -1.2
A21K Barrow 8.92 345 P Pn 07 19 26.6 -0.6
baz=159,SNR=32
SIT Sitka 9.21 123 Pn 07 19 30.7 -0.4
SIT Sitka 9.21 123 P Pn 07 19 30.7 -0.4
SIT Sitka 9.21 123 P Pn 07 19 30.7 -0.4
SIT Sitka 9.21 123 P Pn 07 19 30.3 -0.8
baz=315
S32K Killisnoo 9.21 119 Pn 07 19 31.0 -0.3
S32K Killisnoo 9.21 119 P Pn 07 19 30.8 -0.4
baz=312
Q32M Nakina River 9.28 107 Pn 07 19 31.7 -0.8
Q32M Nakina River 9.28 107 P Pn 07 19 31.6 -0.8
baz=302
SDPT Sand Point 9.37 222 P Pn 07 19 33.2 -0.2
baz=32
CHNA Chernabura Isl 9.56 217 P Pn 07 19 35.8 -0.2
baz=29
R33M Jennings River 9.64 103 Pn 07 19 37.4 +0.2
R33M Jennings River 9.64 103 P Pn 07 19 36.9 -0.3
baz=299,SNR=6.0
GAMB Gambell 9.98 285 P Pn 07 19 42.7 +1.1
baz=85,SNR=12
WTLY Watson Lake, Y 10.30 96 P Pn 07 19 46.4 +0.4
baz=294,SNR=8.2
S34M Telegraph Cree 10.37 110 Pn 07 19 46.8 -0.2
S34M Telegraph Cree 10.37 110 P Pn 07 19 46.9 -0.1
baz=306
DLBC Dease Lake 10.55 106 P Pn 07 19 49.0 -0.6
comp=N,0.9nm,0.2s,baz=317,slow=14,SNR=7.8
DLBC Dease Lake 10.55 106 Pn 07 19 49.3 -0.2
DLBC Dease Lake 10.55 106 P Pn 07 19 48.8 -0.7
baz=303
FALS False Pass 10.73 228 P Pn 07 19 51.6 -0.3
baz=36
U33K Whale Pass 10.73 122 P Pn 07 19 51.3 -0.6
baz=316
WRAK Wrangell Islan 10.83 119 P Pn 07 19 52.8 -0.4
baz=314
CRAG Craig 11.21 124 P Pn 07 19 57.2 -1.2
baz=318
T35M Bob Quinn 11.32 113 P Pn 07 19 58.3 -1.6
baz=309
V35K Ketchikan 11.89 121 P Pn 07 20 07.1 -0.5
baz=317
U35K Hyder 12.12 116 P Pn 07 20 09.0 -1.6
baz=313
C36M Paulatuk 12.13 47 Pn 07 20 08.8 -1.9
C36M Paulatuk 12.13 47 P Pn 07 20 09.4 -1.3
baz=250,SNR=14
KOTAN Kotaneelee Air 12.46 91 P Pn 07 20 14.9 -0.3
baz=294
TOAD Toad River Com 12.49 98 P Pn 07 20 15.2 -0.5
baz=299
A36M Sachs Harbour 12.96 35 Pn 07 20 20.4 -1.3
A36M Sachs Harbour 12.96 35 P Pn 07 20 21.6 -0.1
baz=237,SNR=32
YKA Yellowknife Ar 15.95 76 P Pn 07 21 00.1 0.0
comp=N,1.2nm,0.8s,baz=289,slow=14,SNR=40
YKA ScP ScP 07 29 18.1 +0.7
comp=N,0.7nm,0.8s,baz=302,slow=2.8,SNR=7.2
YKA Yellowknife Ar 15.95 76 *i* P P 07 21 02.7 +0.7
YKA pmax pmax
comp=Z,3.0nm,0.6s
YKAW1 Yellowknife Wh 16.00 76 P Pn 07 21 01.0 +0.2
ATKA Atka Island 16.86 242 Pn 07 21 11.2 -0.2
ATKA IAmb IAmb 07 21 43.2
comp=Z,68nm,1.0s
ATKA Atka Island 16.86 242 P Pn 07 21 11.9 +0.4
ADK Adak 18.12 245 P P 07 21 26.2 +0.2
ADK Adak 18.12 245 P P 07 21 26.2 +0.2
ADK pmax pmax
comp=Z,113nm,1.0s
BILL Bilibino 18.71 305 *i* P P 07 21 31.3 -1.0
BILL pmax pmax
comp=Z,1.0nm,1.0s
EDM Edmonton 21.18 100 P P 07 22 00.0 +0.9
EDM IAmb IAmb 07 22 01.0
comp=Z,15nm,0.7s
EDM Edmonton 21.18 100 P P 07 22 00.0 +0.9
EDM pmax pmax
comp=Z,15nm,0.7s
RES Resolute Bay 22.01 35 P P 07 22 08.0 +0.3
comp=Z,4.7nm,0.6s,baz=238,slow=12,SNR=14
comp=Z,4.7nm,0.6s
RES Resolute Bay 22.01 35 P P 07 22 08.8 +1.1
NEW Newport 23.12 114 P P 07 22 20.5 +1.1
comp=Z,1.5nm,0.7s,baz=308,slow=5.1,SNR=3.6
comp=Z,1.5nm,0.7s
SEY Seymchan 25.68 296 P P 07 22 42.4 0.0
comp=Z,1.0nm,0.3s,baz=187,slow=24,SNR=2.3
comp=Z,1.0nm,0.3s
ILON Igloolik, Nuna 26.81 47 P P 07 22 53.8 +1.2
ILON IAmb IAmb 07 22 58.1
comp=Z,13nm,0.8s
POIN Pond Inlet 26.98 39 P P 07 22 54.9 +0.9
POIN IAmb IAmb 07 23 04.1
comp=Z,16nm,1.3s
PEA0B Petropavlovsk- 28.78 275 *ce* P P 07 23 09.4 -0.9
TIXI Tiksi 30.21 321 *ce* P P 07 23 21.8 -0.8
TIXI pmax pmax
comp=Z,3.0nm,0.8s
PDAR Pinedale Array 30.70 112 P P 07 23 28.7 +1.1
comp=Z,2.4nm,0.8s,baz=299,slow=6.1,SNR=3.7
comp=Z,0.4nm,0.8s
NVAR Mina Array Bea 30.92 127 P P 07 23 31.7 +2.2
comp=Z,0.3nm,0.7s,baz=332,slow=8.4,SNR=3.6
comp=Z,0.3nm,0.7s
NEEM North Greenlan 31.54 24 *i* P P 07 23 34.0 -0.8
NEEM IAmb IAmb 07 23 35.4
comp=Z,7.4nm,0.9s
KULLO Kullorsuaq 31.66 31 *i* P P 07 23 29.9 -5.5
KULLO IAmb IAmb 07 23 32.8
comp=Z,23nm,0.9s
DAG Danmarks Havn 37.29 17 *i* P P 07 24 23.0 -0.9
DAG IAmb IAmb 07 24 24.9
comp=Z,5.2nm,0.7s
SPITS Spitsbergen Ar 38.94 5 P P 07 24 37.7 -0.1
comp=Z,8.4nm,0.8s,baz=22,slow=5.4,SNR=27
comp=Z,8.4nm,0.8s
DBG Daneborg 39.11 19 *i* P P 07 24 38.5 -0.7
DBG IAmb IAmb 07 24 42.7
comp=Z,2.2nm,1.0s
NRIK Noril'sk 42.06 334 P P 07 25 03.1 -0.3
comp=Z,2.5nm,0.5s,baz=48,slow=5.7,SNR=9.9
comp=Z,2.5nm,0.5s
NRIK Noril'sk 42.06 334 P 07 25 03.4 -0.1
NRIK IAmb IAmb 07 25 05.5
comp=Z,4.6nm,0.8s
NRIK Noril'sk 42.06 334 *i* P P 07 25 03.5 +0.1
NRIK pmax pmax
comp=Z,6.0nm,1.1s
TXAR Lajitas Array 44.62 117 P P 07 25 25.7 +1.0
comp=Z,0.2nm,0.6s,baz=330,slow=8.1,SNR=2.8
comp=Z,0.2nm,0.6s
TXAR Lajitas Array 44.62 117 P P 07 25 25.9 +1.2
ARCES ARCESS Array B 47.84 2 P P 07 25 48.4 -0.9
comp=Z,4.4nm,0.8s,baz=355,slow=7.3,SNR=5.8
comp=Z,4.4nm,0.8s

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	47.84	2	P	P	07 25 49.0	-0.3
ARCES	ARCESS Array B	47.84	2	P	P	07 25 49.0	-0.3
ARCES				pmax	pmax		
	comp=Z,25nm,1.5s						
HILR	Hailar Array B	47.86	299	P	P	07 25 49.5	-0.3
	comp=Z,0.4nm,0.3s,baz=42,slow=9.6,SNR=2.7						
	comp=Z,0.4nm,0.3s						
KSRS	Korea Array	54.14	283	P	P	07 26 36.8	0.0
	comp=Z,1.0nm,0.6s,baz=34,slow=7.3,SNR=2.2						
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	54.42	307	P	P	07 26 39.1	+0.2
	comp=Z,1.4nm,0.8s,baz=36,slow=7.7,SNR=5.5						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	54.42	307	P	P	07 26 39.8	+0.9
SONM				IAmb	IAmb	07 26 44.0	
	comp=Z,3.9nm,1.4s						
SONM	Songino Array	54.42	307	P	P	07 26 39.8	+0.9
SONM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
FINES	FINESS Array B	55.97	3	P	P	07 26 48.7	-0.9
	comp=Z,1.6nm,0.7s,baz=1.9,slow=11,SNR=6.7						
	comp=Z,1.6nm,0.7s						
FINES	FINESS Array B	55.97	3	P	P	07 26 48.5	-1.1
ZALV	Zalesovo Beam	56.02	325	P	P	07 26 49.4	-0.7
	comp=Z,1.6nm,0.7s,baz=28,slow=6.7,SNR=11						
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	56.02	325	P	P	07 26 49.0	-1.1
HFS	Hagfors	56.67	10	P	P	07 26 53.4	-1.2
	comp=Z,1.6nm,0.7s,baz=4.8,slow=3.6,SNR=5.7						
	comp=Z,1.6nm,0.7s						
KIRV	Kirov	58.00	348	LR	LR	07 55 56.7	
	comp=Z,308nm,18.4s,baz=294,slow=40						
KIRV	Kirov	58.00	348	ceP	P	07 27 04.4	+0.4
HHC	Hu-ho-hao-te	58.30	298	eP	P	07 27 08.3	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,4.7s						
ARTI	Arti	59.12	342		P	07 27 11.6	-0.2
ARTI	Arti	59.12	342	c iP	P	07 27 11.4	-0.4
ARTI						07 27 59.0	
ARTI				S	S	07 35 11.4	-0.1
ARTI				SS	SS	07 39 04.7	-1.2
ARTI				pmax	pmax		
	comp=Z,12nm,0.6s						
EKA	Eskdalemuir Ar	59.27	22	P	P	07 27 12.8	0.0
	comp=Z,1.2nm,0.6s,baz=336,slow=5.6,SNR=7.1						
	comp=Z,1.2nm,0.6s						
BORK	Borovoye	60.27	334		P	07 27 19.8	+0.1
BORK				IAmb	IAmb	07 27 19.8	
	comp=Z,4.5nm,1.0s						
BORK	Borovoye	60.27	334	ceP	P	07 27 19.5	-0.2
BORK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BVAR	Borovoye Array	60.27	333	P	P	07 27 19.2	-0.5
	comp=Z,4.7nm,0.7s,baz=28,slow=7.4,SNR=23						
	comp=Z,4.7nm,0.7s						
KURK	Kurchatov	60.55	327	ceP	P	07 27 21.4	-0.3
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURBB	Kurchatov Arra	60.66	327	P	P	07 27 21.6	-0.9
	comp=Z,1.6nm,0.8s,baz=24,slow=6.8,SNR=11						
	comp=Z,1.6nm,0.8s						
OBN	Obninsk	62.27	356	⇑eP	P	07 27 33.4	+0.3
OBN				e		07 29 54.6	
OBN				eS	S	07 36 25.2	+34
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MK31	Makanchi Array	63.18	323	ceP	P	07 27 38.5	-0.9
MKAR	Makanchi Array	63.18	323	P	P	07 27 38.2	-1.3
	comp=Z,1.3nm,0.6s,baz=46,slow=6.9,SNR=17						
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	63.18	323	P	P	07 27 38.4	-1.1
MKAR	Makanchi Array	63.18	323	P	P	07 27 38.4	-1.1
LYN	LuoYang	63.30	294	P	P	07 27 42.0	+1.7
LYN				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA2	Gaotai	64.05	306	eP	P	07 27 45.8	+0.4
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BELG	Belogornoye	64.29	348	iP	P	07 27 45.9	-0.6
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	66.78	1	P	P	07 28 01.8	-0.8
	comp=Z,0.6nm,0.3s,baz=4.6,slow=6.7,SNR=4.5						
	comp=Z,0.6nm,0.3s						
AKASG	Malin Array Be	66.78	1	iP	P	07 28 02.4	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GOMU	GeErMu	68.76	309	P	P	07 28 16.1	+0.3
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	Ala-Archa	69.11	327	ceP	P	07 28 18.1	+0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH2	Kashi	72.11	325	P	P	07 28 35.8	0.0
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV	Kislovodsk	73.08	351	eP	P	07 28 41.1	-0.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	73.29	351	P	P	07 28 42.5	0.0
	comp=Z,3.3nm,0.8s,baz=15,slow=4.0,SNR=6.0						
	comp=Z,3.3nm,0.8s						
KBZ	Khabaz	73.29	351	ceP	P	07 28 43.2	+0.7
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ESDC	Sonseca Array	74.16	27	P	P	07 28 47.9	+0.2
	comp=Z,0.7nm,0.7s,baz=341,slow=6.2,SNR=6.3						
	comp=Z,0.7nm,0.7s						
ESDC	Sonseca Array	74.16	27	P	P	07 28 49.1	+1.4
CHGR	Chuyangaron	74.17	329	iP	P	07 28 47.7	-0.2
CHGR				pmax	pmax		
	comp=Z,16nm,0.8s						
PZH	PanZhiHua	74.76	298	P	P	07 28 52.4	+0.9
BRTR	Keskin Array B	77.73	357	P	P	07 29 08.1	0.0
	comp=Z,1.2nm,0.9s,baz=54,slow=2.1,SNR=3.6						
	comp=Z,1.2nm,0.9s						
BRTR	Keskin Array B	77.73	357	iP	P	07 29 09.8	+1.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BOSA	Boshof	145.58	8	PKPbc	PKPdf	07 36 48.5	0.0
	comp=Z,7.4nm,0.7s,baz=351,slow=3.1,SNR=15						

*IDC **15** 07:20:58.0±6.0, 18°.34N×146°.58E, h203^{km}±57^{km}, mb3.3/12, mbtmp3.8/13, MS3.3/1, Error ellipse: s-maj=34.5km s-min=13.6km az=84.0*

ISC 15 07:20:41.7±0.9**, 18°.4N**±0°.1×**146°.9E**±0°.3**, h52^{km}, n14, σ1^{s}32**/13**, mb3.9**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	19.63	339	P	Pn	07 25 10.7	+3.0
	0.6nm,0.3s,baz=143,slow=10,SNR=4.3						
DAV	Davao City (W)	23.58	244	LR	LR	07 36 54.8	
	comp=Z,69nm,18.7s,baz=330,slow=41						
WRA	Warramunga Arr	40.02	198	P	P	07 28 11.8	0.0
	0.8nm,0.8s,baz=20,slow=8.7,SNR=5.3						
	0.8nm,0.8s						
ASAR	Alice Springs	43.67	197	P	P	07 28 42.2	+0.7
	0.4nm,0.7s,baz=31,slow=8.0,SNR=6.7						
	0.4nm,0.7s						
STKA	Stephens Creek	50.23	186	P	P	07 29 33.2	+0.7
	1.3nm,0.7s,baz=333,slow=4.5,SNR=2.0						
	1.3nm,0.7s						
ZALV	Zalesovo Beam	58.93	322	P	P	07 30 34.0	-1.4
	0.8nm,0.8s,baz=101,slow=7.7,SNR=3.9						
	0.8nm,0.8s						
MKAR	Makanchi Array	59.47	314	P	P	07 30 38.3	-1.1
	0.2nm,0.5s,baz=95,slow=8.3,SNR=2.3						
	0.2nm,0.5s						
NRIK	Noril'sk	62.28	340	P	P	07 30 57.7	-0.3
	1.3nm,0.6s,baz=94,slow=8.1,SNR=2.1						
	1.3nm,0.6s						
KURBB	Kurchatov Arra	62.29	318	P	P	07 30 57.1	-1.2
	0.3nm,0.4s,baz=92,slow=7.3,SNR=8.1						
	0.3nm,0.4s						
BVAR	Borovoye Array	67.42	321	P	P	07 31 30.9	-0.8
	1.7nm,0.5s,baz=91,slow=6.5,SNR=12						
	1.7nm,0.5s						
YKA	Yellowknife Ar	77.75	28	P	P	07 32 33.3	+0.5
	0.2nm,0.7s,baz=232,slow=26,SNR=2.4						
	0.2nm,0.7s						
NVAR	Mina Array Bea	82.46	52	P	P	07 32 58.5	-0.6
	0.4nm,0.7s,baz=313,slow=4.0,SNR=2.8						
	0.4nm,0.7s						
ARCES	ARCESS Array B	83.12	342	P	P	07 33 01.9	+0.2
	2.6nm,0.6s,baz=65,slow=8.0,SNR=15						
	2.6nm,0.6s						
FINES	FINESS Array B	87.62	336	P	P	07 33 22.9	-1.2
	1.7nm,0.7s,baz=63,slow=5.6,SNR=8.8						
	1.7nm,0.7s						

SDD 15 08:08:48.3±0.3**, 18°.45N×68°.94W, h158^{km}**±12^{km}**, MD3.6, ML2.7, MW3.4, 4C, Presumed earthquake, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.54	83	⇑ePg	Pn	08 09 09.5	-1.2
PCDR				IAML		08 09 59.1	
	comp=N,224nm,1.2s						
MIDR	Miches	0.54	349	⇑ePg	Pn	08 09 09.5	-1.2
MIDR				IAML		08 09 48.7	
	comp=N,35nm,3.6s						
AGPR	Aguadilla, PR	1.74	89	⇑ePg	Pn	08 09 19.5	-1.5
AGPR				IAML		08 09 50.9	
	comp=N,77nm,2.2s						
CRPR	Cabo Rojo, PR	1.80	104	⇑eSg	Sn	08 09 44.0	-3.2
CRPR				IAML		08 09 45.3	
	comp=N,40nm,1.4s						

*IDC **15** 08:12:10.8±0.7, 22°.55N×93°.65E, h0^{km}, mb4.0/15, mbtmp4.0/16, ML4.3/1, MS3.7/1, Error ellipse: s-maj=18.3km s-min=12.5km az=29.0*
*NDI **15** 08:12:17.3±1.4, 22°.61N×93°.56E, h49^{km}, ML4.1, MW4.2*
*NEIC **15** 08:12:18.5±1.4, 22°.57N±0°.06×93°.6E±0°.1, h47^{km}±5^{km}, mb4.2/15, Error ellipse: s-maj=14.0km s-min=7.6km az=74.0*

ISC 15 08:12:17.4±1.1**, 22°.63N**±0°.05×**93°.56E**±0°.05**, h46^{km}**±10^{km}**, n55, σ1^{s}52**/64**, mb4.1**/23**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAIH	SAIHA	0.55	256	eP	Pn	08 12 29.4	+0.2
SAIH				eS	Sn	08 12 37.8	+0.2
SAIH				IAML		08 12 38.6	
	comp=N,7μm,0.3s						
SAIH				IAML		08 12 39.7	
	comp=E,8μm,0.2s						
MORE	Moreh	1.74	23	Pn	Pn	08 12 47.9	+2.7
BRDH	Bariadhala	1.77	272	Pn	Pn	08 12 45.8	+0.2
	comp=E,56nm,0.3s,baz=75,slow=11,SNR=7.4						
BRDH				Lg	Lg	08 13 09.5	
	comp=E,65nm,0.3s,baz=63,slow=19,SNR=12						
BELO	BELONIA	2.04	288	eP	Pn	08 12 49.4	+0.1
BELO				eS	Sn	08 13 12.4	-1.2
IMP	Imphal	2.22	9	eP	Pn	08 12 51.8	-0.1
IMP				IAML		08 13 08.2	
	comp=N,976nm,0.1s						
IMP				IAML		08 13 09.1	
	comp=E,724nm,0.3s						
IMP				eS	Sn	08 13 17.9	-0.3
SILR	SILCHAR	2.25	342	eP	Pn	08 12 52.5	+0.3
SILR				eS	Sn	08 13 18.6	-0.2
SILR				IAML		08 13 33.2	
	comp=E,389nm,0.1s						
SILR				IAML		08 13 34.3	
	comp=N,457nm,0.7s						
AGT	Agartala	2.47	301	eP	Pn	08 12 55.8	+0.6
AGT				eS	Sn	08 13 23.3	-0.8
AGT				IAML		08 13 35.8	
	comp=E,2μm,0.1s						
AGT				IAML		08 13 48.6	
	comp=N,822nm,0.7s						
KOHI	KOHIMA	3.12	9	eP	Pn	08 13 04.1	-0.1
KOHI				IAML		08 13 13.7	
	comp=E,944nm,0.0s						
KOHI				eS	Sn	08 13 36.8	-3.6
KOHI				IAML		08 13 40.8	
	comp=N,938nm,0.3s						
SHL	Shillong	3.30	333		Pn	08 13 10.3	+3.5
MOKO	MOKOCHONG	3.78	13	eP	Pn	08 13 13.4	+0.1
MOKO				IAML		08 13 41.0	
	comp=E,1μm,0.7s						
MOKO				IAML		08 13 41.6	
	comp=N,1μm,0.4s						
MOKO				eS	Sn	08 13 54.7	-1.9
GUWA	GUWAHATI	3.94	335	eP	Pn	08 13 15.5	+0.1
GUWA				eS	Sn	08 13 58.2	-2.1
GUWA				IAML		08 14 04.0	
	comp=E,878nm,0.4s						
GUWA				IAML		08 14 04.6	
	comp=N,780nm,0.2s						
TEZP	TEZPUR	4.03	350	eP	Pn	08 13 15.6	-1.0
TEZP				eS	Sn	08 13 58.9	-3.7
TEZP				IAML		08 14 07.8	
	comp=E,780nm,0.2s						
TEZP				IAML		08 14 08.7	
	comp=N,835nm,0.4s						
DHUB	DHUBRI	4.69	317	eP	Pn	08 13 25.1	-0.5
DHUB				IAML		08 13 28.4	
	comp=N,1μm,0.2s						
DHUB				IAML		08 13 28.8	
	comp=E,2μm,0.2s						
DHUB				eS	Sn	08 14 14.3	-4.4
CHTO	Chiang Mai	6.31	126	Pn	Pn	08 13 49.7	+1.8
CM31	Chiang Mai Arr	6.53	128	Pn	Pn	08 13 51.5	+0.5
CMAR	Chiang Mai Arr	6.53	128	Pn	Pn	08 13 48.4	-2.6
	comp=E,1.5nm,0.3s,baz=309,slow=14,SNR=21						
	comp=E,2.2nm,0.3s						
CMAR	Chiang Mai Arr	6.53	128	Pn	Pn	08 13 52.4	+1.4
LSA	Lhasa	7.37	343	Pn	Pn	08 14 05.8	+2.9
NIL	Nilore	20.97	306	P	P	08 16 56.8	+0.1
WUS	Wushi	22.11	330	P	P	08 17 08.7	-0.3
WUS				IAmb	IAmb	08 17 12.8	
	comp=Z,5.3nm,0.8s						
TARG	Taragay, Kyrgy	23.18	329	P	P	08 17 22.9	+2.4
KBL	Kabul	24.52	304	P	P	08 17 34.0	+1.2
KBL				IAmb	IAmb	08 17 35.1	
	comp=Z,7.2nm,1.1s						
DRK	Karamyk	24.99	317	P	P	08 17 38.1	+0.9
DRK				IAmb	IAmb	08 17 39.7	
	comp=Z,8.2nm,0.5s						
AAK	Ala-Archa	25.50	326	LR	LR	08 30 09.1	
	comp=Z,185nm,19.8s,baz=330,slow=42						
MKAR	Makanchi Array	25.77	342	P	P	08 17 45.2	+1.3
	comp=Z,4.3nm,0.7s,baz=153,slow=9.9,SNR=52						
	comp=Z,4.3nm,0.7s						
MKAR	Makanchi Array	25.77	342	P	P	08 17 44.8	+0.9
SONM	Songino Array	27.17	19	P	P	08 17 56.3	-0.3
	comp=Z,0.7nm,0.7s,baz=212,slow=6.6,SNR=4.2						
	comp=Z,0.7nm,0.7s						
KURBB	Kurchatov Arra	30.31	341	P	P	08 18 25.2	+0.9
	comp=Z,1.1nm,0.6s,baz=154,slow=8.5,SNR=6.7						
	comp=Z,1.1nm,0.6s						
ZAA0	Zalesovo Array	31.97	350	P	P	08 18 39.6	+0.7
ZAA0				IAmb	IAmb	08 18 40.8	
	comp=Z,1.3nm,0.5s						
ZALV	Zalesovo Beam	31.97	350	P	P	08 18 39.9	+1.0
	comp=Z,1.1nm,0.3s,baz=164,slow=8.5,SNR=8.0						
	comp=Z,1.1nm,0.3s						
ZALV	Zalesovo Beam	31.97	350	P	P	08 18 39.3	+0.5
BVAR	Borovoye Array	35.12	336	P	P	08 19 07.2	+0.9
	comp=Z,0.8nm,0.7s,baz=134,slow=12,SNR=3.9						
	comp=Z,0.8nm,0.7s						
AB31	Akbulak array	37.52	323	P	P	08 19 28.1	+1.2
AB31				IAmb	IAmb	08 19 28.7	
	comp=Z,1.8nm,0.6s						
ABKAR	Akbulak array	37.52	323	P	P	08 19 27.8	+1.0
NRIK	Noril'sk	46.86	357	P	P	08 20 43.5	+0.9
	comp=Z,1.0nm,0.4s,baz=110,slow=4.5,SNR=4.4						
	comp=Z,1.0nm,0.4s						
MBWA	Marble Bar	50.45	148	P	P	08 21 10.3	-0.4
KNRA	Kununurra	51.35	135	P	P	08 21 15.0	-2.5
WB0	Warramunga Arr	58.01	133	P	P	08 22 04.4	-1.4
WRA	Warramunga Arr	58.10	134	P	P	08 22 05.6	-0.8
	comp=Z,0.7nm,0.3s,baz=319,slow=7.7,SNR=34						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	58.10	134	P	P	08 22 04.2	-2.2
FINES	FINESS Array B	59.64	329	P	P	08 22 17.4	+0.9
	comp=Z,0.6nm,0.6s,baz=92,slow=7.8,SNR=0.8						
	comp=Z,0.6nm,0.6s						
AS31	Alice Springs	60.46	137	P	P	08 22 22.3	-0.5
AS31				IAmb	IAmb	08 22 23.2	
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	60.46	137	P	P	08 22 21.9	-0.9
	comp=Z,1.2nm,0.5s,baz=316,slow=6.6,SNR=28						
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	60.46	137	P	P	08 22 22.4	-0.4
ARCES	ARCESS Array B	61.34	338	P	P	08 22 28.2	+0.1
	comp=Z,3.9nm,1.0s,baz=106,slow=6.9,SNR=3.7						
	comp=Z,3.9nm,1.0s						
SPITS	Spitsbergen Ar	65.38	347	P	P	08 22 54.9	+0.2
	comp=Z,6.2nm,1.0s,baz=114,slow=8.3,SNR=5.5						
	comp=Z,6.2nm,1.0s						
HFS	Hagfors	65.64	327	P	P	08 22 55.6	-1.0
	comp=Z,4.4nm,0.8s,baz=91,slow=5.9,SNR=7.4						
	comp=Z,4.4nm,0.8s						
GERES	GERESS Array B	66.76	315	P	P	08 23 04.3	+0.2
	comp=Z,0.7nm,0.7s,baz=80,slow=6.7,SNR=4.5						
	comp=Z,0.7nm,0.7s						
E24K	Your Creek	78.94	20	P	P	08 24 16.6	+0.7
E24K				IAmb	IAmb	08 24 47.3	
	comp=Z,4.3nm,1.3s						
H22K	Ishtalitna Cre	79.16	22	P	P	08 24 17.6	+0.6
H22K				IAmb	IAmb	08 24 48.4	
	comp=Z,6.6nm,1.4s						
F25K	Christian Rive	80.10	20	P	P	08 24 23.4	+1.2
BMAR	Burnt Mountain	80.53	19	P	P	08 24 25.8	+1.4
ILAR	Eielson Array	81.36	22	P	P	08 24 28.1	-0.8
	comp=Z,0.2nm,0.6s,baz=289,slow=5.2,SNR=4.1						
	comp=Z,0.2nm,0.6s						
BOSA	Boshof	83.22	235	P	P	08 24 39.1	-0.2
	comp=Z,2.1nm,0.9s,baz=42,slow=4.4,SNR=3.9						
	comp=Z,2.1nm,0.9s						
BOSA	Boshof	83.22	235	P	P	08 24 38.5	-0.8
BOSA				IAmb	IAmb	08 25 09.9	
	comp=Z,7.2nm,1.3s						

*IDC **15** 08:42:50.1±3.3, 4°.34S×128°.13E, h296^{km}±43^{km}, mb3.0/3, mbtmp3.8/6, Error ellipse: s-maj=60.4km s-min=15.7km az=81.0*

ISC 15 08:42:46.6±1.3**, 4°.4S**±0°.1×**127°.8E**±0°.2**, h250^{km}, n6, σ1^{s}14**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.96	45	P	Pn	08 44 04.4	+2.4
	20nm,0.3s,baz=255,slow=7.1,SNR=8.2						
SIJI				S	S	08 45 02.5	+0.5
	12nm,0.3s,baz=90,slow=20,SNR=6.0						
FITZ	Fitzroy Crossi	13.76	189	P	P	08 45 54.0	+1.2
	1.0nm,0.5s,baz=18,slow=9.6,SNR=1.5						
WRA	Warramunga Arr	16.71	158	P	Pn	08 46 25.8	-1.4
	0.7nm,0.5s,baz=341,slow=11,SNR=13						
ASAR	Alice Springs	20.04	163	P	P	08 47 00.9	-0.3
	0.8nm,0.3s,baz=346,slow=11,SNR=22						
	0.8nm,0.3s						
STKA	Stephens Creek	30.25	156	P	P	08 48 34.7	+0.2
	1.2nm,0.8s,baz=311,slow=11,SNR=3.6						
	1.2nm,0.8s						
MKAR	Makanchi Array	64.86	327	P	P	08 52 58.7	-0.5
	0.2nm,0.3s,baz=120,slow=8.0,SNR=5.6						
	0.2nm,0.3s						

IDC 15 08:45:60.0±1.9**, 4°.94S×152°.53E, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=205.3km s-min=32.7km az=137.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.15	228	P	P	08 51 07.4	-0.8
	0.6nm,0.6s,baz=53,slow=9.9,SNR=4.5						
	0.6nm,0.6s						
ASAR	Alice Springs	25.86	222	P	P	08 51 34.0	+0.4
	0.9nm,0.8s,baz=59,slow=9.4,SNR=9.4						
	0.9nm,0.8s						
NVAR	Mina Array Bea	92.38	52	P	P	08 59 13.1	0.0
	0.5nm,0.9s,baz=228,slow=7.5,SNR=4.8						
	0.5nm,0.9s						

IDC 15 08:53:35.2±3.2**, 23°.86S×176°.93W, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, MS3.4**/1**, Error ellipse: s-maj=283.6km s-min=37.2km az=163.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	34.28	269	LR	LR	09 12 50.1	
	comp=Z,53nm,19.3s,baz=33,slow=34						
ASAR	Alice Springs	44.81	260	P	P	09 01 50.5	-0.6
	0.3nm,0.4s,baz=96,slow=7.5,SNR=9.0						
	0.3nm,0.4s						
WRA	Warramunga Arr	45.21	265	P	P	09 01 54.8	+0.5
	0.5nm,0.5s,baz=104,slow=8.6,SNR=6.3						
	0.5nm,0.5s						
TXAR	Lajitas Array	88.04	57	P	P	09 06 27.7	-0.1
	0.2nm,0.8s,baz=208,slow=4.8,SNR=1.9						
	0.2nm,0.8s						

*IDC **15** 09:04:54.1±1.9, 23°.79N×121°.49E, h0^{km}, mb3.3/4, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=72.9km s-min=26.1km az=99.0*
*JMA **15** 09:04:56.8±0.1, 23°.8N±0°.4×12°2E±°, h6^{km}±3^{km}, MV3.1/12, TAIWAN REGION*
*TAP **15** 09:04:57.4, 23°.85N×121°.51E, h9^{km}, ML3.9, B*

ISC 15 09:04:57.4±0.7**, 23°.82N**±0°.01×**121°.53E**±0°.02**, h16^{km}**±3^{km}**, n171, σ1^{s}02**/266**, mb3.4**/4**, 3C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHUL	Shoufeng	0.05	133	⇑iP	Pg	09 05 00.3	0.0
SHUL				iS	Sg	09 05 02.2	+0.1
TEYL	Yanliau Villag	0.08	54	iP	Pg	09 05 00.7	+0.2
TEYL				iS	Sg	09 05 02.9	+0.2
ESL	Shilin	0.08	266	⇑iP	Pg	09 04 59.8	-0.8
ESL				iS	Sg	09 05 01.1	-1.6
TEGC	Jichi Village	0.11	173	iP	Pg	09 05 01.2	+0.3
TEGC				S	Sg	09 05 04.3	+1.2
ETM	Tongmen	0.15	349	⇓iP	Pg	09 05 00.7	-0.7
ETM				iS	Sg	09 05 02.5	-1.5
WARBT	Fenglin Townsh	0.16	231	⇑iP	Pg	09 05 01.0	-0.5
WARBT				iS	Sg	09 05 03.3	-1.0
HWA	Hwalien	0.17	25	P	Pg	09 05 01.7	0.0
HWA				S	Sg	09 05 05.0	+0.4
EGFH	Guangfu	0.17	211	eP	Pg	09 05 01.4	-0.3
LXIB	Xiulin Townshi	0.23	333	⇓iP	Pg	09 05 01.9	-0.7
LXIB				iS	Sg	09 05 04.8	-1.4
TWD	Chiawan	0.27	14	iP	Pg	09 05 02.8	-0.4
TWD				iS	Sg	09 05 06.2	-0.9
HGSD	Ruisui	0.34	196	P	Pb	09 05 05.0	-0.1
HGSD				S	Sb	09 05 11.4	+1.2
OWD	Renai	0.35	293	⇓iP	Pg	09 05 04.3	-0.3
OWD				iS	Sg	09 05 08.9	-0.7
ETL	Fush Village	0.35	15	iP	Pg	09 05 04.2	-0.5
ETL				iS	Sg	09 05 08.6	-1.0
VWDT	VWDT	0.36	259	iP	Pb	09 05 05.0	-0.4
VWDT				iS	Sb	09 05 09.7	-1.1
NACB	Ninganchiao	0.36	10	P	Pg	09 05 03.8	-1.0
NACB	Ninganchiao	0.36	10	S	Sg	09 05 08.6	-1.2
NACB	Ninganchiao	0.36	10	⇓iP	Pg	09 05 04.2	-0.6
NACB				S	Sg	09 05 08.3	-1.6
EHY	Hungye	0.36	211	iP	Pb	09 05 04.6	-0.9
EHYH	Wanrong	0.36	207	P	Pb	09 05 04.7	-0.8
EHYH				eS	Sg	09 05 09.5	-0.4
ETLH	Xiulin Townshi	0.39	354	iP	Pg	09 05 04.8	-0.6
ETLH				eS	Sg	09 05 09.9	-0.8
WHF	Hehuan Shan	0.40	324	⇓iP	Pg	09 05 05.3	-0.5
WHF				iS	Sg	09 05 10.5	-0.9
WUSB	Renai	0.41	295	⇓iP	Pb	09 05 05.7	-0.7
WUSB				S	Sg	09 05 11.1	-0.4
YULB	Yu-li	0.47	206	iP	Pb	09 05 06.7	-0.7
YULB				S	Sb	09 05 13.2	-1.0
FUSS	Fushou	0.50	329	iP	Pg	09 05 07.2	-0.2
FUSS				iS	Sg	09 05 13.8	-0.3
ECBN	Changbin	0.51	188	eP	Pb	09 05 09.0	+1.1
TWF1	Yuli	0.51	204	iP	Pb	09 05 07.5	-0.6
SSLB	Suanglung	0.52	267	P	Pb	09 05 07.7	-0.6
SSLB	Suanglung	0.52	267	S	Sg	09 05 14.5	-0.3
SSLB	Suanglung	0.52	267	⇓iP	Pb	09 05 07.8	-0.5
SSLB				iS	Sg	09 05 14.1	-0.7
EHP	Heping Village	0.53	22	eP	Pb	09 05 08.1	-0.2
TWT	Tachien	0.54	324	iP	Pb	09 05 08.1	-0.5
TWT				iS	Sg	09 05 15.0	-0.4
EAHA	Aohua	0.54	21	iP	Pg	09 05 07.7	-0.5
EAHA				eS	Sg	09 05 15.1	-0.4
TDCB	Techi	0.55	322	⇓iP	Pb	09 05 08.3	-0.5
TDCB				iS	Sg	09 05 15.2	-0.5
WPL	Puli Township	0.55	290	P	Pb	09 05 08.5	-0.2

WPL				S	Sg	09 05 15.6	-0.2	MASBT	Mashibuluo	1.46	214	eP	Pg	09 05 24.5	-0.9	LATG	Datong	0.56	231	⇑iP	Pn	09 08 34.0	+0.8
SMLT	**Sun Moon Lake**	**0.58**	**276**	*i* P	**Pb**	**09 05 09.0**	**-0.2**	MASBT				eS	Sg	**09 05 44.7**	**+0.3**	LATG				eS	Sn	**09 08 47.3**	**+0.8**
SMLT				S	Sb	09 05 16.6	-0.7	**TSCK**	**Chigu Township**	**1.48**	**243**	eP	Pg	**09 05 24.9**	**-1.0**	**NTST**	**Danshui**	**0.58**	**298**	eP	Pn	**09 08 33.8**	**+0.7**
DPDB	**Guoxing**	**0.59**	**291**	P	**Pb**	**09 05 09.1**	**-0.2**	TSCK				eS	Sg	**09 05 45.5**	**+0.4**	NTST				eS	Sn	**09 08 46.9**	**+0.6**
DPDB				S	Sb	09 05 16.9	-0.6	**YOJ**	**Yonaguni jima**	**1.50**	**64**	P	Pn	**09 05 24.1**	**+0.4**	**EAHA**	**Aohua**	**0.61**	**204**	eP	Pn	**09 08 33.6**	**+0.2**
WCS	**Beigang Elemen**	**0.61**	**293**	P	**Pb**	**09 05 09.4**	**-0.3**	**YOJ**	**Yonaguni jima**	**1.50**	**64**	eP	Pn	**09 05 24.1**	**+0.4**	EAHA				eS	Sn	**09 08 48.0**	**+1.2**
TYC	**Yuchr**	**0.62**	**278**	*i* P	**Pb**	**09 05 09.5**	**-0.3**	YOJ				eS	Sn	**09 05 43.4**	**+0.4**	**YHNB**	**Yeheng**	**0.62**	**249**	P	Pn	**09 08 33.6**	**0.0**
TYC				S	Sg	09 05 17.2	-0.6	**EAST**	**Anshuo**	**1.56**	**204**	eP	Pn	**09 05 25.3**	**+0.7**	**YHNB**	**Yeheng**	**0.62**	**249**	⇑*i*P	Pn	**09 08 33.9**	**+0.3**
NNSB	**Datong**	**0.62**	**348**	⇓*j*P	**Pg**	**09 05 09.3**	**-0.3**	**WSSB**	**Gushan**	**1.65**	**225**	eP	Pg	**09 05 30.3**	**+1.2**	YHNB				eS	Sn	**09 08 46.5**	**-0.6**
NNSB				*j* S	Sg	09 05 16.8	-1.1	**SCZT**	**Fangliau**	**1.66**	**210**	eP	Pg	**09 05 28.6**	**-0.8**	**NSK**	**Sanguang**	**0.63**	**250**	⇑*i*P	Pn	**09 08 33.9**	**+0.2**
NNSH	**Datong**	**0.62**	**348**	P	**Pg**	**09 05 09.3**	**-0.3**	SCZT				eS	Sg	**09 05 51.0**	**-0.1**	NSK				eS	Sn	**09 08 46.6**	**-0.6**
NNSH				eS	Sg	09 05 16.7	-1.2	**LAY**	**Lan-yu**	**1.77**	**179**	eP	Pn	**09 05 27.4**	**-0.1**	**EOS3**	**EOS3**	**0.66**	**155**	eP	Pn	**09 08 34.6**	**+0.9**
WHYT	**Xinyi Township**	**0.63**	**259**	P	**Pb**	**09 05 09.8**	**-0.2**	**WDGT**	**Dungji**	**1.80**	**252**	eP	Pb	**09 05 30.0**	**0.0**	EOS3				eS	Sn	**09 08 48.9**	**+1.7**
WHYT				eS	Sb	09 05 18.1	-0.5	WDGT				*j* S	Sg	**09 05 54.1**	**-1.3**	**NNS**	**Nan Shan**	**0.73**	**232**	⇑*i*P	Pn	**09 08 35.1**	**+0.5**
NNS	**Nan Shan**	**0.63**	**347**	*i* P	**Pg**	**09 05 09.6**	**-0.3**	**LYUB**	**Lan-yu**	**1.81**	**178**	eP	Pn	**09 05 25.1**	**-2.9**	NNS				eS	Sn	**09 08 48.8**	**0.0**
NNS				eS	Sg	09 05 17.1	-1.2	**PHUB**	**P'eng-hu**	**1.82**	**261**	eP	Pn	**09 05 29.2**	**+1.2**	**NNSB**	**Datong**	**0.73**	**231**	⇑*i*P	Pn	**09 08 35.1**	**+0.5**
CHKH	**Chenggong**	**0.64**	**191**	P	**Pn**	**09 05 11.5**	**-0.3**	PHUB				eS	Sn	**09 05 52.0**	**+1.2**	NNSB				eS	Sn	**09 08 48.3**	**-0.5**
CHKH				S	Sn	09 05 23.1	+1.4	**PNG**	**Penghu**	**1.82**	**262**	eP	Pn	**09 05 29.4**	**+1.3**	**PCYT**	**Pengchaiyu**	**0.74**	**4**	eP	Pn	**09 08 35.1**	**+0.6**
FULB	**Fuli**	**0.65**	**199**	P	**Pn**	**09 05 11.6**	**-0.5**	PNG				eS	Sb	**09 05 53.3**	**+0.3**	PCYT				eS	Sn	**09 08 49.4**	**+0.7**
FULB				S	Sn	09 05 22.0	-0.1	**PCYT**	**Pengchaiyu**	**1.87**	**15**	eP	Pn	**09 05 30.2**	**+1.5**	**NCU**	**National Centr**	**0.75**	**276**	eP	Pn	**09 08 33.4**	**-1.1**
EWUT	**Wuta**	**0.67**	**20**	*i* P	**Pg**	**09 05 09.8**	**-0.7**	**SMST**	**Manzhou Townsh**	**1.90**	**200**	eP	Pb	**09 05 30.8**	**-0.9**	NCU				eS	Sn	**09 08 47.6**	**-1.3**
EWUT				*i* S	Sg	09 05 18.6	-0.6	SMST				eS	Sb	**09 05 55.7**	**+0.4**	**NCUH**	**Zhongli**	**0.75**	**276**	eP	Pn	**09 08 35.2**	**+0.6**
WHP	**Taichung City**	**0.70**	**311**	P	**Pb**	**09 05 11.2**	**-0.1**	**TWK1**	**Hengchun**	**1.98**	**200**	eP	Pb	**09 05 32.2**	**-0.9**	NCUH				eS	Sn	**09 08 49.5**	**+0.6**
WHP				S	Sg	09 05 19.9	-0.5	**TWKBT**	**Hengchun**	**1.98**	**199**	eP	Pb	**09 05 32.9**	**-0.2**	**KSHI**	**Guanxi Townshi**	**0.77**	**262**	eP	Pn	**09 08 35.5**	**+0.8**
LATG	**Datong**	**0.71**	**0**	⇓*i*P	**Pg**	**09 05 10.8**	**-0.6**	**VCHM**	**Qimei**	**2.02**	**253**	eP	Pb	**09 05 32.7**	**-1.0**	KSHI				eS	Sn	**09 08 49.8**	**+0.7**
LATG				S	Sg	09 05 20.3	-0.6	VCHM				eS	Sb	**09 05 59.3**	**+0.7**	**NACB**	**Ninganchiao**	**0.81**	**208**	P	Pn	**09 08 34.9**	**-0.2**
ALS	**Alishan**	**0.73**	**245**	P	**Pb**	**09 05 12.2**	**+0.3**	**IRIF**	**Iriomote-Funau**	**2.08**	**75**	eP	Pn	**09 05 32.5**	**+0.8**	**NACB**	**Ninganchiao**	**0.81**	**208**	eP	Pn	**09 08 34.8**	**-0.3**
ALS				S	Sb	09 05 21.8	0.0	**HATJ**	**Hateruma jima**	**2.10**	**83**	eS	Sn	**09 05 57.9**	**+0.1**	NACB				eS	Sn	**09 08 48.4**	**-1.3**
EHD	**Haiduan**	**0.73**	**204**	eP	**Pb**	**09 05 11.9**	**+0.2**	**VWUC**	**VWUC**	**2.22**	**302**	eP	Pn	**09 05 33.4**	**-0.3**	**ETL**	**Fush Village**	**0.81**	**206**	eP	Pn	**09 08 35.0**	**-0.1**
CHKT	**Chengkung**	**0.73**	**192**	P	**Pb**	**09 05 12.7**	**+0.9**	**JIJ**	**Ishigaki jima**	**2.45**	**77**	P	Pn	**09 05 36.8**	**-0.1**	**EOS4**	**EOS4**	**0.81**	**160**	eP	Pn	**09 08 34.9**	**+0.1**
CHKT				eS	Sn	09 05 26.0	+2.0	**JISG**	**Ishigakijimahi**	**2.66**	**73**	eP	Pn	**09 05 40.0**	**+0.4**	EOS4				eS	Sn	**09 08 49.1**	**0.0**
WNT	**Mingjian**	**0.77**	**274**	eP	**Pn**	**09 05 13.7**	**-1.0**	JISG				eS	Sn	**09 06 10.8**	**-0.7**	**ETLH**	**Xiulin Townshi**	**0.83**	**215**	eP	Pn	**09 08 35.6**	**+0.1**
WNT				S	Sb	09 05 24.3	+1.6	**MATB**	**Ma-tsu**	**2.73**	**329**	eP	Pn	**09 05 41.1**	**+0.5**	ETLH				eS	Sn	**09 08 49.7**	**-0.6**
ECS	**Chishang**	**0.77**	**201**	eP	**Pn**	**09 05 13.8**	**+0.1**	MATB				eS	Sn	**09 06 13.5**	**+0.2**	**NFF**	**Wufeng Townshi**	**0.85**	**253**	⇑*i*P	Pn	**09 08 35.8**	**+0.3**
ELDTW	**Lidau**	**0.78**	**217**	eP	**Pg**	**09 05 12.1**	**-0.6**	**KNM**	**Kinmen**	**2.89**	**283**	eP	Pn	**09 05 44.9**	**+2.1**	NFF				eS	Sn	**09 08 50.1**	**-0.4**
ELDTW				S	Sb	09 05 22.7	-0.4	**KNMB**	**Chin-men Tao**	**2.94**	**283**	eP	Pn	**09 05 44.0**	**+0.5**	**TWD**	**Chiawan**	**0.89**	**205**	eP	Pn	**09 08 35.5**	**-0.3**
EOS4	**EOS4**	**0.79**	**67**	eP	**Pb**	**09 05 12.8**	**+0.3**	**LYJJ**	**Jianjiangzhen**	**3.15**	**330**	eP	Pn	**09 05 47.4**	**+0.9**	TWD				eS	Sn	**09 08 50.5**	**-0.6**
EOS4				eS	Sb	09 05 25.0	+2.2	**MHZQ**	**Yeshan**	**3.21**	**316**	eP	Pn	**09 05 47.6**	**+0.4**	**LIOB**	**Emei**	**0.94**	**255**	eP	Pn	**09 08 36.8**	**+0.5**
CHN5	**Tsauling**	**0.81**	**254**	*i* P	**Pn**	**09 05 14.1**	**-0.1**	**XPSS**	**Dashiqiu**	**3.32**	**339**	eP	Pn	**09 05 49.5**	**+0.7**	LIOB				eS	Sn	**09 08 51.7**	**-0.2**
CHN5				S	Sb	09 05 25.4	+1.5	**AXDP**	**Jialang**	**3.42**	**289**	eP	Pn	**09 05 50.5**	**+0.5**	**SBCB**	**Hsinchu**	**0.94**	**264**	eP	Pn	**09 08 36.9**	**+0.7**
ENTT	**Nioudou**	**0.82**	**3**	*i* P	**Pg**	**09 05 13.0**	**-0.3**	**ZPLA**	**Ao Xicun**	**3.46**	**273**	eP	Pn	**09 05 51.5**	**+0.8**	SBCB				eS	Sn	**09 08 52.1**	**+0.3**
ENTT				S	Sg	09 05 23.7	-0.4	**DSXP**	**Dongshan**	**3.76**	**269**	eP	Pn	**09 05 56.0**	**+1.2**	**FUSS**	**Fushou**	**0.95**	**228**	eP	Pn	**09 08 37.5**	**+0.9**
NDS	**Dongshan**	**0.83**	**12**	P	**Pg**	**09 05 13.2**	**-0.3**	**SXFK**	**Yanhouchang**	**4.36**	**307**	eP	Pn	**09 06 03.3**	**+0.3**	FUSS				eS	Sn	**09 08 52.8**	**+0.3**
NDS				S	Sg	09 05 24.2	-0.3	**JOW**	**Kunigami**	**6.80**	**62**	Pn	Pn	**09 06 35.9**	**-0.8**	**HSN**	**Hsinchu**	**0.95**	**265**	eP	Pn	**09 08 36.6**	**+0.3**
TWC	**Suao**	**0.84**	**21**	eP	**Pg**	**09 05 13.3**	**-0.5**		2.4nm,0.3s,baz=140,slow=14,SNR=5.2							HSN				eS	Sn	**09 08 50.8**	**-1.3**
TWC				eS	Sg	09 05 24.4	-0.5		7.5nm,0.3s							**NSTT**	**Nanjuang**	**0.95**	**255**	⇑*i*P	Pn	**09 08 36.9**	**+0.4**
TCU	**Taichung**	**0.84**	**293**	eP	**Pn**	**09 05 15.2**	**+0.6**	**KSRS**	**Korea Array**	**14.66**	**21**	Pn	**Pn**	**09 08 24.9**	**+0.8**	NSTT				eS	Sn	**09 08 51.9**	**-0.3**
YHNB	**Yeheng**	**0.86**	**351**	P	**Pb**	**09 05 13.9**	**-0.1**		0.3nm,0.3s,baz=202,slow=11,SNR=11							**JYNG**	**Yonagunijimaku**	**0.96**	**117**	eS	Sn	**09 08 52.0**	**-0.2**
YHNB	**Yeheng**	**0.86**	**351**	S	**Sg**	**09 05 24.4**	**-1.0**		0.9nm,0.8s							**HWA**	**Hwalien**	**0.98**	**202**	eP	Pn	**09 08 36.9**	**+0.2**
YHNB	**Yeheng**	**0.86**	**351**	⇓*j*P	**Pb**	**09 05 14.0**	**-0.1**	**H11N1**	**WAKE ISLAND Hy**	**42.20**	**86**	T	T	09 57 47.3		HWA				eS	Sn	**09 08 52.6**	**+0.1**
YHNB				S	Sg	09 05 23.9	-1.5		baz=279							**TWT**	**Tachien**	**0.99**	**230**	eP	Pn	**09 08 38.2**	**+1.2**
EOS3	**EOS3**	**0.86**	**57**	eP	**Pb**	**09 05 15.0**	**+1.1**	**H11N2**	**WAKE ISLAND Hy**	**42.20**	**86**	T	T	09 57 47.4		TWT				eS	Sn	**09 08 53.5**	**+0.4**
TWQ1	**Liyutan**	**0.86**	**308**	P	**Pn**	**09 05 15.2**	**+0.2**		baz=279,slow=74							**TDCB**	**Techi**	**1.00**	**231**	⇑P	Pn	**09 08 38.1**	**+1.0**
NSK	**Sanguang**	**0.87**	**350**	*i* P	**Pb**	**09 05 14.1**	**-0.1**	**H11N3**	**WAKE ISLAND Hy**	**42.21**	**86**	T	T	09 57 49.7		TDCB				eS	Sn	**09 08 53.5**	**+0.1**
NSK				S	Sg	09 05 24.4	-1.2		baz=279,slow=74							**WHF**	**Hehuan Shan**	**1.00**	**223**	eP	Pn	**09 08 38.0**	**+0.5**
EOS2	**EOS2**	**0.88**	**47**	eP	**Pn**	**09 05 15.8**	**+0.8**	**H11S3**	**WAKE ISLAND Hy**	**42.32**	**88**	T	T	09 57 56.9		WHF				eS	Sn	**09 08 53.9**	**0.0**
NFF	**Wufeng Townshi**	**0.89**	**335**	eP	**Pb**	**09 05 14.6**	**+0.1**		baz=284,slow=75,SNR=11							**YOJ**	**Yonaguni jima**	**1.00**	**115**	P	Pn	**09 08 37.0**	**+0.1**
WGK	**Gukeng**	**0.89**	**262**	eP	**Pn**	**09 05 16.3**	**+0.9**	**H11S1**	**WAKE ISLAND Hy**	**42.33**	**88**	T	T	09 57 58.5		**YOJ**	**Yonaguni jima**	**1.00**	**115**	P	Pn	**09 08 37.1**	**+0.1**
WGK				S	Sn	**09 05 29.2**	**+1.2**		baz=284,slow=75,SNR=7.7							YOJ				eS	Sn	**09 08 52.9**	**-0.2**
TWE	**Neicheng**	**0.91**	**8**	eP	**Pg**	**09 05 14.5**	**-0.5**	**H11S2**	**WAKE ISLAND Hy**	**42.34**	**88**	T	T	09 57 58.0		**YOJ**	**Yonaguni jima**	**1.00**	**115**	eP	Pn	**09 08 37.1**	**+0.1**
TWE				S	Sg	**09 05 26.4**	**-0.5**		baz=284,slow=75,SNR=5.6							YOJ				eS	Sn	**09 08 52.5**	**-0.6**
WDLH	**Douliu**	**0.91**	**262**	eP	**Pn**	**09 05 16.4**	**+0.8**	**WRA**	**Warramunga Arr**	**45.26**	**163**	P	**P**	**09 13 13.2**	**-1.2**	**LXIB**	**Xiulin Townshi**	**1.02**	**212**	⇑*i*P	Pn	**09 08 36.9**	**-0.4**
WDLH				eS	Sn	**09 05 29.6**	**+1.1**		0.3nm,0.7s,baz=344,slow=8.0,SNR=1.9							LXIB				eS	Sn	**09 08 52.5**	**-1.2**
NSY	**Sanyi**	**0.92**	**311**	P	**Pn**	**09 05 16.3**	**+0.6**		0.3nm,0.7s							**ETM**	**Tongmen**	**1.03**	**207**	eP	Pn	**09 08 37.0**	**-0.3**
NSY				S	Sn	**09 05 30.0**	**+1.4**	**ASAR**	**Alice Springs**	**48.71**	**165**	P	**P**	**09 13 40.5**	**-0.8**	ETM				eS	Sn	**09 08 52.4**	**-1.3**
WCHH	**Zhanghua**	**0.92**	**287**	P	**Pn**	**09 05 16.2**	**+0.5**		0.2nm,0.5s,baz=352,slow=14,SNR=1.7							**TEYL**	**Yanliau Villag**	**1.08**	**200**	eP	Pn	**09 08 38.0**	**+0.2**
WCHH				eS	Sn	**09 05 30.2**	**+1.6**		0.2nm,0.5s							TEYL				eS	Sn	**09 08 54.1**	**-0.1**
WCKO	**Fanlu**	**0.93**	**246**	eP	**Pn**	**09 05 16.7**	**+0.9**	**ILAR**	**Eielson Array**	**69.39**	**27**	P	**P**	**09 16 03.2**	**-1.1**	**WHP**	**Taichung City**	**1.14**	**238**	⇑*i*P	Pn	**09 08 39.5**	**+0.9**
WCH1	**Changhua City**	**0.93**	**286**	eP	**Pn**	**09 05 16.2**	**+0.4**		0.2nm,0.6s,baz=282,slow=6.5,SNR=1.5							WHP				eS	Sn	**09 08 55.9**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.94**	**3**	*i* P	**Pg**	**09 05 15.2**	**-0.4**		0.2nm,0.6s							**NMLH**	**Miaoli**	**1.16**	**253**	eP	Pn	**09 08 39.2**	**+0.6**
FUSB				S	Sg	**09 05 26.2**	**-1.7**	**YKA**	**Yellowknife Ar**	**83.18**	**23**	P	**P**	**09 17 22.2**	**-0.4**	NMLH				eS	Sn	**09 08 56.0**	**-0.1**
NSTT	**Nanjuang**	**0.94**	**329**	*i* P	**Pb**	**09 05 15.8**	**+0.4**		0.6nm,1.0s,baz=310,slow=6.1,SNR=6.2							**SHUL**	**Shoufeng**	**1.17**	**200**	eP	Pn	**09 08 39.0**	**+0.3**
NSTT				*i* S	Sb	**09 05 27.6**	**+0.1**		0.6nm,1.0s							SHUL				eS	Sn	**09 08 56.1**	**-0.1**
STYH	**Taoyuan**	**0.94**	**227**	*i* P	**Pb**	**09 05 15.7**	**+0.3**									**ESL**	**Shilin**	**1.19**	**206**	eP	Pn	**09 08 38.3**	**-0.7**
STYH				eS	Sb	**09 05 27.4**	**-0.3**									ESL				eS	Sn	**09 08 55.0**	**-1.7**
LIOB	**Emei**	**0.94**	**331**	*i* P	**Pb**	**09 05 16.0**	**+0.6**									**OWD**	**Renai**	**1.20**	**219**	⇑*i*P	Pn	**09 08 39.8**	**+0.5**
LIOB				eS	Sb	**09 05 28.0**	**+0.2**									OWD				eS	Sn	**09 08 57.1**	**0.0**
NWLT	**Wulai**	**0.95**	**359**	P	**Pg**	**09 05 15.4**	**-0.5**									**WUSB**	**Renai**	**1.21**	**223**	eP	Pn	**09 08 40.2**	**+0.9**
NWLT				eS	Sg	**09 05 26.6**	**-1.9**									WUSB				eS	Sn	**09 08 57.4**	**+0.2**
ILA	**Ilan**	**0.96**	**12**	eP	**Pg**	**09 05 15.2**	**-0.9**									**NSY**	**Sanyi**	**1.23**	**248**	eP	Pn	**09 08 40.4**	**+1.0**
TPUB	**Ta-pu**	**0.97**	**238**	P	**Pn**	**09 05 17.0**	**+0.6**									NSY				eS	Sn	**09 08 57.8**	**+0.4**
TPUB	**Ta-pu**	**0.97**	**238**	S	**Sn**	**09 05 29.9**	**0.0**									**TWQ1**	**Liyutan**	**1.25**	**245**	eP	Pn	**09 08 40.1**	**+0.5**
TPUB	**Ta-pu**	**0.97**	**238**	*i* P	**Pn**	**09 05 17.2**	**+0.7**									TWQ1				eS	Sn	**09 08 57.7**	**-0.1**
TPUB				S	Sn	**09 05 30.4**	**+0.5**									**TEGC**	**Jichi Village**	**1.25**	**200**	eP	Pn	**09 08 39.8**	**+0.1**
CHN4	**Tsaushan**	**0.97**	**242**	eP	**Pn**	**09 05 17.4**	**+1.1**									TEGC				eS	Sn	**09 08 39.8**	**+0.5**
CHN4				eS	Sn	**09 05 31.3**	**+1.4**									**WARBT**	**Fenglin Townsh**	**1.30**	**206**	eP	Pn	**09 08 39.2**	**+1.0**
NMLH	**Miaoli**	**0.98**	**317**	eP	**Pn**	**09 05 17.5**	**+1.0**									WARBT				eS	Sn	**09 08 56.8**	**-2.0**
NMLH				eS	Sn	**09 05 31.0**	**+0.9**									**WCS**	**Beigang Elemen**	**1.30**	**231**	⇑P	Pn	**09 08 41.0**	**+0.8**
CHN2	**Minshiung**	**1.00**	**254**	eP	**Pn**	**09 05 18.1**	**+1.2**									WCS				eS	Sn	**09 08 58.6**	**-0.2**
CHN2				eS	Sn	**09 05 32.7**	**+2.0**									**EGFH**	**Guangfu**	**1.33**	**204**	eP	Pn	**09 08 41.1**	**+0.5**
KSHI	**Guanxi Townshi**	**1.00**	**342**	eP	**Pb**	**09 05 17.0**	**+0.5**									EGFH				eS	Sn	**09 08 57.8**	**-1.6**
KSHI				eS	Sb	**09 05 30.1**	**+0.6**									**VWDT**	**VWDT**	**1.38**	**215**	⇑P	Pn	**09 08 41.9**	**+0.8**
WTP	**Ta-pu**	**1.01**	**236**	eP	**Pn**	**09 05 17.8**	**+0.8**									VWDT				eS	Sn	**09 09 00.8**	**+0.4**
WTP				eS	Sb	**09 05 30.9**	**+1.2**									**TCU**	**Taichung**	**1.42**	**239**	eP	Pn	**09 08 42.4**	**+0.8**
WRL	**Guolierlin Hig**	**1.05**	**275**	eP	**Pn**	**09 05 18.2**	**+0.7**									TCU				eS	Sn	**09 09 01.7**	**+0.4**
WRL				eS	Sn	**09 05 33.0**	**+1.0**									**SMLT**	**Sun Moon Lake**	**1.42**	**226**	eP	Pn	**09 08 42.5**	**+0.8**
CHY	**Chiayi**	**1.06**	**253**	eP	**Pn**	**09 05 18.6**	**+1.0**									SMLT				eS	Sn	**09 09 02.9**	**+1.3**
CHY				eS	Sn	**09 05 33.6**	**+1.5**									**TYC**	**Yuchr**	**1.44**	**227**	eP	Pn	**09 08 42.4**	**+0.6**
TWG	**Pinlang**	**1.08**	**203**	eP	**Pn**	**09 05 18.6**	**+0.7**									TYC				eS	Sn	**09 09 02.3**	**+0.6**
TWGBT	**Beinan**	**1.08**	**202**	eP	**Pn**	**09 05 18.1**	**+0.2**									**SSLB**	**Suanglung**	**1.46**	**222**	P	Pn	**09 08 42.8**	**+0.7**
EGS		**1.09**	**20**	eP	**Pb**	**09 05 18.4**	**+0.5**									**SSLB**	**Suanglung**	**1.46**	**222**	⇑P	Pn	**09 08 42.9**	**+0.7**
EGS				eS	Sb	**09 05 32.7**	**+0.9**									SSLB				eS	Sn	**09 08 42.9**	**+0.6**
SBCB	**Hsinchu**	**1.09**	**333**	eP	**Pn**	**09 05 19.4**	**+1.4**									**HGSD**	**Ruisui**	**1.49**	**201**	eP	Pn	**09 08 42.7**	**+0.3**
SBCB				eS	Sn	**09 05 34.0**	**+1.3**									HGSD				eS	Sn	**09 09 02.9**	**+0.2**
TWK	**Hsinying**	**1.10**	**240**	eP	**Pn**	**09 05 19.6**	**+1.3**									**EHY**	**Hungye**	**1.51**	**205**	eP	Pn	**09 08 41.5**	**-1.2**
TWK				eS	Sn	**09 05 34.7**	**+1.6**									**EHYH**	**Wanrong**	**1.52**	**204**	eS	Sn	**09 09 01.5**	**-1.8**
HSN	**Hsinchu**	**1.10**	**333**	eP	**Pn**	**09 05 19.8**	**+1.6**									**WCHH**	**Zhanghua**	**1.55**	**239**	eS	Sn	**09 09 04.1**	**+0.1**
HSN				S	Sn	**09 05 34.7**	**+1.6**									**WNT**	**Mingjian**	**1.57**	**230**	eP	Pn	**09 08 44.4**	**+1.0**
CHN1	**Nanshi**	**1.11**	**236**	eP	**Pn**	**09 05 19.8**	**+1.5**									WNT				eS	Sn	**09 09 05.3**	**+0.8**
CHN1				eS	Sn	**09 05 35.5**	**+2.0**									**WHYT**	**Xinyi Township**	**1.59**	**222**	eP	Pn	**09 08 44.6**	**+1.0**
SNST	**Tainan City**	**1.12**	**238**	eP	**Pn**	**09 05 20.0**	**+1.6**									WHYT				eS	Sn	**09 09 05.9**	**+1.0**
TTN	**Taitung**	**1.12**	**198**	eP	**Pb**	**09 05 18.2**	**-0.1**									**YULB**	**Yu-li**	**1.63**	**204**	P	Pn	**09 08 44.0**	**-0.1**
TTN				*i* S	Sn	**09 05 33.8**	**+0.3**									**YULB**	**Yu-li**	**1.63**	**204**	eP	Pn	**09 08 42.9**	**-1.2**
SGST	**Jiashian**	**1.14**	**230**	eP	**Pn**	**09 05 19.2**	**+0.5**									YULB				eS	Sn	**09 09 03.5**	**-2.2**
SGST				*i* S	Sn	**09 05 35.1**	**+1.2**									**ECBN**	**Changbin**	**1.65**	**198**	eP	Pn	**09 08 44.4**	**+0.1**
WTCT	**Ta-ch'eng**	**1.14**	**272**	eP	**Pn**	**09 05 19.3**	**+0.5**									ECBN				eS	Sn	**09 09 05.1**	**-1.0**
WTCT				eS	Sn	**09 05 35.8**	**+1.8**									**IRIF**	**Iriomote-Funau**	**1.66**	**109**	P	Pn	**09 08 44.7**	**+0.3**
TATO	**Taipei**	**1.15**	**358**	P	**Pb**	**09 05 19.4**	**+0.4**									**TWF1**	**Yuli**	**1.66**	**203**	eP	Pn	**09 08 43.4**	**-1.1**
TATO	**Taipei**	**1.15**	**358**	S	**Sg**	**09 05 34.1**	**-0.6**									**ALS**	**Alishan**	**1.76**	**219**	eP	Pn	**09 08 46.9**	**+0.9**
TWA	**Mucha**	**1.16**	**3**	eP	**Pn**	**09 05 19.8**	**+0.8**									ALS				eS	Sn	**09 08 47.0**	**+0.7**
TWA				S	Sg	**09 05 33.6**	**-1.2**									**CHN5**	**Tsauling**	**1.77**	**224**	eP	Pn	**09 08 46.7**	**+0.8**
TIPB	**Shuangxi**	**1.18**	**13**	eP	**Pg**	**09 05 19.5**	**-0.7**									CHN5				eS	Sn	**09 09 09.3**	**+0.3**
TIPB				eS	Sg	**09 05 34.7**	**-0.9**									**CHKH**	**Chenggong**	**1.78**	**199**	eP	Pn	**09 08 45.9**	**0.0**
NCUH	**Zhongli**	**1.18**	**345**	eP	**Pn**	**09 05 20.8**	**+1.4**									CHKH				eS	Sn	**09 09 07.8**	**-1.2**
NCUH				eS	Sn	**09 05 36.8**	**+1.6**									**WRL**	**Guolierlin Hig**	**1.78**	**237**	eP	Pn	**09 08 46.3**	**+0.3**
NCU	**National Centr**	**1.19**	**345**	eP	**Pg**	**09 05 18.8**	**-1.5**									WRL				eS	Sn	**09 09 08.4**	**-0.7**
NCU				eS	Sb	**09 05 36.0**	**+1.3**									**WDLH**	**Douliu**	**1.80**	**229**	eP	Pn	**09 08 46.9**	**+0.8**
WSF	**Szhu**	**1.21**	**262**	eP	**Pn**	**09 05 21.0**	**+1.4**									WDLH				eS	Sn	**09 09 09.6**	**+0.2**
WSF				eS	Sn	**09 05 38.2**	**+2.5**									**FULB**	**Fuli**	**1.81**	**201**	eP	Pn	**09 08 46.4**	**+0.1**
TAP	**Taipei**	**1.21**	**359**	eP	**Pn**	**09 05 21.0**	**+1.2**									FULB				eS	Sn	**09 09 09.9**	**+0.3**
TAP				eS	Sg	**09 05 36.1**	**-0.6**									**HATJ**	**Hateruma jima**	**1.83**	**117**	eS	Sn	**09 09 10.7**	**+0.5**
WSL	**Shuilin Townsh**	**1.23**	**256**	eP	**Pn**	**09 05 21.5**	**+1.6**									**CHKT**	**Chengkung**	**1.88**	**198**	eP	Pn	**09 08 47.0**	**-0.2**
WSL				eS	Sn	**09 05 38.9**	**+2.8**									CHKT				eS	Sn	**09 09 09.3**	**-1.8**
TWB1	**Santiao Chiao**	**1.26**	**20**	eP	**Pb**	**09 05 21.2**	**+0.4**									**ELDTW**	**Lidau**	**1.92**	**208**	eP	Pn	**09 08 48.0**	**+0.2**
TWB1				S	Sg	**09 05 36.7**	**-1.4**									ELDTW				eS	Sn	**09 09 11.7**	**-0.6**
NWF	**Wu-fen Shan**	**1.27**	**11**	eP	**Pb**	**09 05 21.8**	**+0.8**									**JKRS**	**Kuro-shima**	**1.93**	**109**	P	Pn	**09 08 48.4**	**+0.5**
NWF				eS	Sg	**09 05 37.2**	**-1.2**									JKRS				S	Sn	**09 09 11.8**	**-0.6**
WFSB	**Wu-fen Shan**	**1.27**	**11**	eP	**Pg**	**09 05 21.8**	**-0.1**									**CHY**	**Chiayi**	**2.00**	**227**	eP	Pn	**09 08 49.2**	**+0.7**
CHN8	**Yiju**	**1.29**	**249**	eP	**Pg**	**09 05 22.6**	**+0.2**									CHY				eS	Sn	**09 09 13.6**	**-0.4**
CHN8				eS	Sn	**09 05 41.2**	**+3.3**									**JIJ**	**Ishigaki jima**	**2.01**	**105**	P	Pn	**09 08 49.0**	**+0.3**
CHN3	**Shinhua**	**1.30**	**235**	eP	**Pg**	**09 05 22.1**	**-0.2**									**TPUB**	**Ta-pu**	**2.02**	**219**	P	Pn	**09 08 50.6**	**+1.6**
CHN3				eS	Sn	**09 05 43.0**	**+5.1**									**TPUB**	**Ta-pu**	**2.02**	**219**	eP	Pn	**09 08 49.5**	**+0.5**
SXI1	**Grass Mountain**	**1.31**	**14**	eP	**Pn**	**09 05 21.3**	**+0.2**									TPUB		

TWGBT	**Beinan**	**2.23**	**203**	*e*P	**Pn**	**09 08 51.5**	**-0.1**
TWGBT				*e*S	**Sn**	**09 09 16.7**	**-2.5**
MATB	**Ma-tsu**	**2.25**	**304**	*e*P	**Pn**	**09 08 51.8**	**0.0**
CHN8	**Yiju**	**2.25**	**227**	*e*S	**Sn**	**09 09 19.9**	**+0.2**
VWUC	**VWUC**	**2.33**	**273**	*e*P	**Pn**	**09 08 52.9**	**+0.1**
VWUC				*e*S	**Sn**	**09 09 19.4**	**-2.0**
SSD	**Sandimen**	**2.48**	**211**	*e*P	**Pn**	**09 08 57.0**	**+2.1**
MASBT	**Mashibuluo**	**2.59**	**209**	*e*P	**Pn**	**09 08 57.2**	**+0.9**
MASBT				*e*S	**Sn**	**09 09 27.1**	**-0.5**
PHUB	**P'eng-hu**	**2.61**	**239**	*e*P	**Pn**	**09 08 55.9**	**-0.7**
PHUB				*e*S	**Sn**	**09 09 25.8**	**-2.2**

RSNC 15 09:21:13.4±0.7, 1°S±4′×7°8W±°, h191km±12km, M3.3, mb4.0, ML2.9, MLv3.6, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASC	**Dorado de Casc**	**1.63**	**20**	P	Pn	09 21 47.4	-0.3
OTAV	**Otavalo**	**1.72**	**341**	P	Pn	09 21 48.6	-0.3
COHC	**Cochancay**	**1.72**	**232**	P	Pn	09 21 47.8	-0.6
COHC				S	Sn	09 22 14.1	-1.5
CUSE	**Cuicocha Este**	**1.77**	**344**	P	Pn	09 21 50.0	+0.6
CUSE				S	Sn	09 22 28.2	+11
PAC1	**Pacto, Paraso**	**1.88**	**332**	P	Pn	09 21 50.6	+0.4
PAC1				S	Sn	09 22 19.0	+0.2
TULM	**Tulcn-Chalpat**	**2.10**	**3**	P	Pn	09 21 53.6	+0.7
CRUC	**La Cruz**	**3.10**	**18**	P	Pn	09 22 05.4	+1.3
BBAC	**Balboa, Cauca**	**3.46**	**11**	P	Pn	09 22 08.0	-0.4
BBAC				S	Sn	09 22 51.7	+0.2
PTLC	**Puerto Leguiza**	**3.47**	**63**	P	Pn	09 22 06.5	-1.9
FLOC	**Florencia**	**3.72**	**37**	P	Pn	09 22 11.7	+0.3
POPC	**Popayan, Colom**	**4.10**	**17**	P	Pn	09 22 16.0	-0.4
POPC				S	Sn	09 23 04.6	-1.3
GARC	**Garzon, Huila**	**4.30**	**34**	P	Pn	09 22 19.4	+0.5
GR1C	**Gorgona, Isla**	**4.38**	**357**	S	Sn	09 23 07.7	-4.2
JAMC	**Jamundi, Valle**	**4.75**	**15**	P	Pn	09 22 23.5	-1.1
JAMC				S	Sn	09 23 21.5	+0.9
MACC	**Macarena, Meta** 0.1nm23nm,0.6s	**5.37**	**49**	P	Pn	09 22 32.5	+0.1
YOTC	**Yotoco, Valle**	**5.57**	**16**	P	Pn	09 22 33.0	-2.1
YOTC				S	Sn	09 23 35.6	-4.0

SOME 15 09:24:12.3, 39°17N×73°23E, h15km
KRNET 15 09:24:21.8±0.1, 39°51N×73°20E, h14km, mb3.7
ISC 15 09:24:21.3±1.5, 39°52N±0′05×73°18E±0′03, h0km±11km, n44, σ2s56/80, 34C-21D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.55**	**27**	⇑*e*P	**Pg**	**09 24 32.6**	**+0.7**
SFK				⇑e S	**Sb**	**09 24 40.7**	**-1.8**
OHH	**Osh**	**1.05**	**343**	⇓*e*P	**Pb**	**09 24 42.0**	**-0.3**
OHH				⇓e S	**Sn**	**09 24 56.9**	**-1.8**
DRK	**Karamyk**	**1.07**	**268**	⇓*e*P	**Pb**	**09 24 42.6**	**-0.2**
DRK				⇓e S	**Sn**	**09 24 57.7**	**-1.7**
SALK	**Salom-Alik**	**1.45**	**20**	⇓*e*P	**Pb**	**09 24 48.9**	**-0.3**
SALK				⇓e S	**Sg**	**09 25 09.2**	**+1.4**
ARSB	**Arslanbob**	**1.81**	**355**	⇑*e*P	**Pb**	**09 24 55.7**	**+0.4**
ARSB				⇑e S	**Sg**	**09 25 20.5**	**+1.1**
BTK	**Batken**	**1.90**	**287**	⇑*e*P	**Pb**	**09 24 57.4**	**+0.6**
BTK				⇑e S	**Sg**	**09 25 23.4**	**+1.2**
JNKS	**Jany-Kuch**	**2.42**	**50**	⇑*e*P	**Pb**	**09 25 04.9**	**-0.9**
JNKS				⇑e S	**Sb**	**09 25 36.4**	**+0.1**
ARK	**Arkit**	**2.46**	**338**	⇑*e*P	**Pb**	**09 25 05.4**	**-1.0**
ARK				⇑e S	**Sb**	**09 25 37.2**	**0.0**
ARLS	**Aral**	**2.49**	**20**	⇓*e*P	**Pb**	**09 25 05.7**	**-1.4**
ARLS				⇓e S	**Sb**	**09 25 37.6**	**-0.8**
TRKS	**Terek-Say**	**2.54**	**323**	⇓*e*P	**Pb**	**09 25 05.7**	**-2.1**
TRKS				⇓e S	**Sb**	**09 25 37.6**	**-2.0**
NRN	**Naryn**	**2.88**	**48**	⇑*e*P	**Pb**	**09 25 10.6**	**-3.1**
NRN				⇑e S	**Sb**	**09 25 46.4**	**-3.2**
UCH	**Uchtor** SNR=23	**2.89**	**20**	P	**Pb**	**09 25 12.7**	**-1.3**
UCH	**Uchtor**	**2.89**	**20**	⇑*e*P	**Pb**	**09 25 11.4**	**-2.5**
UCH				⇑e S	**Sb**	**09 25 47.7**	**-2.3**
MNAS	**Manas**	**3.01**	**350**	⇑*e*P	**Pb**	**09 25 13.1**	**-2.7**
MNAS				⇑e S	**Sb**	**09 25 50.4**	**-2.7**
EKS2	**Erkin-Say** SNR=11	**3.17**	**8**	P	**Pb**	**09 25 17.2**	**-1.4**
EKS2	**Erkin-Say**	**3.17**	**8**	⇑*e*P	**Pb**	**09 25 15.1**	**-3.5**
EKS2				⇑e S	**Sb**	**09 25 54.2**	**-3.6**
MRKS	**Merke** 6.0nm,0.4s	**3.22**	**1**	*e*P	**Pb**	**09 25 17.7**	**-1.7**
MRKS				*e*S	**Sg**	**09 26 04.9**	**+0.1**
CHGR	**Chuyangaron** 51nm,0.4s	**3.25**	**256**	⇑*e*P	**Pb**	**09 25 16.2**	**-3.6**
CHGR				⇑e S	**Sb**	**09 25 56.1**	**-3.8**
AAK	**Ala-Archa** SNR=18	**3.27**	**17**	P	**Pb**	**09 25 18.4**	**-1.9**
AAK	**Ala-Archa** 5.3nm,0.5s	**3.27**	**17**	⇑Pn	**Pb**	**09 25 18.0**	**-2.2**
AAK				⇑Lg	Lg	09 26 00.6	
AAK	**Ala-Archa** 25nm,0.9s	**3.27**	**17**	⇑*e*P	**Pb**	**09 25 16.5**	**-3.8**
AAK				⇑e S	**Sb**	**09 25 56.6**	**-4.1**
KBK	**Karagaybulak** SNR=12	**3.41**	**23**	P	**Pb**	**09 25 21.3**	**-1.3**
KBK	**Karagaybulak**	**3.41**	**23**	⇑*e*P	**Pb**	**09 25 18.5**	**-4.1**
KBK				⇑e S	**Sb**	**09 25 59.8**	**-4.8**
IUG	**Iuzhnay** 17nm,0.4s	**3.55**	**319**	*e*P	**Pb**	**09 25 23.3**	**-1.6**
IUG				*e*S	**Sg**	**09 26 14.7**	**-0.6**
ULHL	**Ulahol** SNR=9.9	**3.58**	**39**	P	**Pb**	**09 25 27.0**	**+1.4**
ULHL	**Ulahol**	**3.58**	**39**	⇓*e*P	**Pn**	**09 25 20.8**	**+2.6**
ULHL				⇓e S	**Sb**	**09 26 03.8**	**-5.8**
BOOM	**Boomskoye usch**	**3.63**	**34**	⇓*e*P	**Pn**	**09 25 21.5**	**+2.6**
BOOM				⇓e S	**Sb**	**09 26 05.1**	**-5.9**
CHMS	**Chumysh** SNR=5.6	**3.67**	**18**	P	**Pb**	**09 25 23.6**	**-3.5**
CHMS	**Chumysh**	**3.67**	**18**	⇓*e*P	**Pn**	**09 25 22.0**	**+2.7**
CHMS				⇓e S	**Sn**	**09 26 05.9**	**+2.6**
TKM2	**Tokmak 2** SNR=6.8	**3.85**	**27**	P	**Pb**	**09 25 25.8**	**-4.5**
TKM2	**Tokmak 2**	**3.85**	**27**	⇑*e*P	**Pn**	**09 25 24.6**	**+2.6**
TKM2				⇑e S	**Sn**	**09 26 10.6**	**+2.5**
USP	**Ospenovka** SNR=7.0	**3.87**	**14**	P	**Pb**	**09 25 26.2**	**-4.2**
USP	**Ospenovka**	**3.87**	**14**	⇓*e*P	**Pn**	**09 25 24.8**	**+2.7**
USP				⇓e S	**Sn**	**09 26 10.9**	**+2.6**
KDJ	**Kajisay**	**4.00**	**48**	⇑*e*P	**Pn**	**09 25 26.6**	**+2.6**
KDJ				⇑e S	**Sn**	**09 26 14.1**	**+2.4**
KST	**Kastek** 3.7nm,0.7s	**4.10**	**30**	*e*P	**Pb**	**09 25 31.6**	**-2.8**
KST				*e*S	**Sg**	**09 26 28.9**	**-4.0**
KK31	**Karatay Array** 26nm,0.8s	**4.10**	**332**	Pn	**Pb**	**09 25 32.2**	**-2.2**
KK31	1.1nm,0.5s,baz=140,slow=12,SNR=19			⇑Pg	**Pg**	**09 25 43.5**	**+3.6**
KK31	2.6nm,0.4s,baz=139,slow=16,SNR=6.3			⇓Sn	**Sb**	**09 26 22.7**	**-1.8**
KK31	9.4nm,0.5s,baz=153,slow=26,SNR=5.0			⇑Lg	Lg	09 26 37.3	
TARG	**Taragay, Kyrgy**	**4.16**	**56**	⇑*e*P	**Pn**	**09 25 28.7**	**+2.4**
TARG	9.7nm,0.4s,baz=137,slow=31,SNR=4.3			⇑e S	**Sn**	**09 26 17.7**	**+1.9**
DGS	**Degeres** 4.6nm,0.3s	**4.20**	**27**	*e*P	**Pb**	**09 25 35.7**	**-0.4**
DGS				*e*S	**Sg**	**09 26 35.6**	**-0.5**
BRLS	**Boroldaу** 1.7nm,0.2s	**4.32**	**325**	*e*P	**Pb**	**09 25 36.2**	**-1.8**
BRLS				*e*S	**Sg**	**09 26 36.6**	**-3.3**
MTBS	**Maitube** 3.9nm,0.4s	**4.36**	**33**	*e*P	**Pb**	**09 25 37.9**	**-0.8**
MTBS				*e*S	**Sg**	**09 26 39.4**	**-1.9**
TNSS	**Tian-Shan** 0.6nm,0.3s	**4.52**	**38**	*e*P	**Pb**	**09 25 41.3**	**-0.4**
TNSS				*e*S	**Sg**	**09 26 45.1**	**-1.3**
KRBS	**Karabastau** 3.3nm,0.4s	**4.57**	**23**	*e*P	**Pb**	**09 25 41.7**	**-0.7**
KRBS				*e*S	**Sg**	**09 26 46.5**	**-1.7**
ANVS	**Anan'yevo**	**4.70**	**45**	⇓*e*P	**Pn**	**09 25 36.4**	**+2.8**
ANVS				⇓e S	**Sn**	**09 26 30.8**	**+1.8**
KOTS	**Kotyrbulak**	**4.75**	**37**	*e*P	**Pb**	**09 25 45.4**	**0.0**
KOTS				*e*S	**Sg**	**09 26 52.1**	**-1.7**

IDC 15 09:29:53.1±0.6, 56°92N×118°94E, h0km, mb3.6/14, mbtmp3.7/21, ML4.4/6, Error ellipse: s-maj=13.8km s-min=11.9km az=118.0
MOS 15 09:29:54.6±2.5, 57°00N×119°16E, h9km, mb4.2/9, Error ellipse: s-maj=8.2km s-min=6.2km az=76.4
BYKL 15 09:29:55.6±0.2, 57°03N×118°95E, h10km±3km
ISC 15 09:29:55.5±1.1, 57°10N±0′03×119°08E±0′02, h10km±7km, n99, σ2s76/127, mb3.8/20, 11C-5D, East of Lake Baikal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**0.48**	**246**	⇓*i*PG	**Pg**	**09 30 03.9**	**-1.0**
CRS				*e*		09 30 09.2	
CRS	comp=Z,3μm,0.1s			Pmax	Pmax		
CRS	comp=N,15μm,0.3s			smax	smax		
CRS	**Chara**	**0.48**	**246**	⇓*i*Pg	**Pg**	**09 30 03.9**	**-1.0**
CRS	comp=N,3μm,0.3s			Pmax		09 30 04.1	
CRS				*e*Sg	**Sg**	**09 30 09.2**	**-2.1**
CRS	comp=N,15μm,0.3s			Smax		09 30 09.6	
YKLR	**Yuktali**	**1.50**	**109**	*e*PG	**Pb**	**09 30 23.3**	**-0.2**
YKLR				*e*S	**Sg**	**09 30 43.5**	**-0.3**
YKLR	**Yuktali**	**1.50**	**109**	⇑*i*Pg	**Pb**	**09 30 23.3**	**-0.2**
YKLR				*e*Sg	**Sg**	**09 30 43.7**	**-0.1**
NLYR	**Nelyaty**	**1.95**	**253**	*e*PN	**Pb**	**09 30 29.7**	**-1.5**
NLYR				*e*		09 30 53.0	
NLYR	comp=Z,2μm,0.5s			pmax	pmax		
NLYR	comp=E,6μm,1.0s			smax	smax		
NLYR	**Nelyaty**	**1.95**	**253**	⇓*i*Pn	**Pn**	**09 30 28.1**	**-0.6**
NLYR				⇓*i*Pg	**Pb**	**09 30 29.7**	**-1.5**
NLYR				Pmax		09 30 30.2	
NLYR	comp=E,2μm,0.5s			*e*Sg	**Sn**	**09 30 53.1**	**-0.2**
NLYR	comp=E,6μm,1.0s			Smax		09 30 58.3	
TUP	**Tupik**	**2.73**	**169**	⇑*i*PN	**Pn**	**09 30 38.7**	**-0.6**
TUP				*e*		09 30 43.3	
TUP				*e*S	**Sn**	**09 31 09.2**	**-3.2**
TUP				*e*		09 31 18.1	
TUP	comp=Z,509nm,0.6s			pmax	pmax		
TUP	comp=E,3μm,0.8s			smax	smax		
TUP	**Tupik**	**2.73**	**169**	⇑*i*Pn	**Pn**	**09 30 38.8**	**-0.6**
TUP				*e*Pg	**Pb**	**09 30 43.3**	**-1.0**
TUP				*e*		09 30 47.1	
TUP	comp=E,507nm,0.6s			max		09 30 48.4	
TUP				*e*Sn	**Sn**	**09 31 09.2**	**-3.2**
TUP				*e*Sg	**Sb**	**09 31 17.4**	**-0.4**
TUP				Smax		09 31 18.5	
BOD	**Bodaibo**	**2.83**	**287**	*e*PN	**Pn**	**09 30 40.2**	**-0.6**
BOD				*e*		09 30 45.1	
BOD				*e*		09 31 20.5	
BOD	comp=Z,237nm,0.8s			pmax	pmax		
BOD	comp=N,4μm,1.2s			smax	smax		
BOD	**Bodaibo**	**2.83**	**287**	*e*Pn	**Pn**	**09 30 40.2**	**-0.6**
BOD				*e*Pg	**Pb**	**09 30 45.0**	**-1.2**
BOD				Pmax		09 30 47.3	
BOD	comp=N,200nm,0.6s			*e*Sg	**Sb**	**09 31 20.3**	**-0.6**
BOD				Smax		09 31 23.8	
CLNS	**Chul'man**	**3.19**	**92**	*e*PN	**Pn**	**09 30 47.8**	**+2.0**
CLNS	comp=N,4μm,0.8s			*e*		09 30 54.3	
CLNS				*e*S	**Sn**	**09 31 24.1**	**+0.2**
CLNS				*e*		09 31 35.4	
CLNS	**Chul'man**	**3.19**	**92**	⇑*i*Pn	**Pn**	**09 30 47.8**	**+2.0**
CLNS				*e*Pg	**Pb**	**09 30 54.3**	**+2.0**
CLNS				*e*Sn	**Sn**	**09 31 25.2**	**+1.3**
CLNS				*e*Sg	**Sg**	**09 31 36.6**	**-1.4**
SVKR	**Severomuysk**	**3.21**	**254**	*e*PN	**Pb**	**09 30 51.7**	**-0.8**
SVKR				*e*		09 31 32.1	
SVKR	comp=Z,540nm,0.7s			pmax	pmax		
SVKR	comp=N,3μm,0.6s			smax	smax		
SVKR	**Severomuysk**	**3.21**	**254**	*e*Pn	**Pn**	**09 30 46.2**	**+0.2**
SVKR				*e*Pg	**Pb**	**09 30 51.7**	**-0.8**
SVKR				Pmax		09 30 55.2	
SVKR	comp=N,454nm,0.6s			*e*Sn	**Sn**	**09 31 20.9**	**-3.3**
SVKR				*e*Sg	**Sb**	**09 31 32.8**	**+1.2**
SVKR				Smax		09 31 38.4	
UKT	**Uakit**	**3.44**	**244**	*i* PN	**Pb**	**09 30 55.7**	**-0.8**
UKT				*e*		09 31 39.4	
UKT	comp=Z,254nm,0.7s			pmax	pmax		
UKT	comp=N,720nm,1.1s			smax	smax		
UKT	**Uakit**	**3.44**	**244**	⇓*i*Pn	**Pn**	**09 30 48.4**	**-0.8**
UKT				⇑*i*Pg	**Pb**	**09 30 56.2**	**-0.3**
UKT				Pmax		09 30 56.5	
UKT	comp=N,253nm,0.5s			*e*Sg	**Sb**	**09 31 39.3**	**+0.9**
UKT				*e*SgSg	**Sg**	**09 31 47.6**	**+1.8**
UKT				max		09 31 49.8	
VTMR	**Vitim**	**4.17**	**307**	*e*Pn	**Pn**	**09 31 00.3**	**+1.2**
VTMR	comp=N,713nm,1.2s			*e*Pg	**Pb**	**09 31 10.4**	**+1.5**
VTMR				*e*Sn	**Sn**	**09 31 44.5**	**-3.4**
VTMR				*e*Sg	**Sg**	**09 32 04.1**	**-5.2**
YOAB	**Uoyan, Buryati**	**4.17**	**260**	*e*Sg	**Sb**	**09 32 01.9**	**+2.4**
YOAB				Smax		09 32 20.0	
KMO	**Kumora**	**4.53**	**258**	*e*PN	**Pn**	**09 31 04.2**	**+0.1**
KMO	comp=N,3μm,1.5s			*e*		09 31 15.6	
KMO				*e*S	**Sn**	**09 31 52.2**	**-4.6**
KMO				*e*		09 32 13.0	
KMO	comp=Z,47nm,0.6s			pmax	pmax		
KMO	comp=N,1μm,1.5s			smax	smax		
KMO	**Kumora**	**4.53**	**258**	*e*Pn	**Pn**	**09 31 04.0**	**-0.1**
KMO				*e*Pg	**Pb**	**09 31 15.1**	**0.0**
KMO				Pmax		09 31 24.8	
KMO	comp=N,110nm,0.8s			*e*Sn	**Sn**	**09 31 52.2**	**-4.6**
KMO				*e*Sg	**Sb**	**09 32 13.0**	**+3.3**
KMO				Smax		09 32 20.0	
YLYR	**Ulyunkhan**	**4.97**	**247**	*e*PN	**Pn**	**09 31 09.6**	**-0.6**
YLYR				*e*		09 31 22.4	
YLYR				*e*S	**Sn**	**09 32 01.9**	**-5.8**
YLYR				*e*		09 32 25.9	
YLYR	comp=Z,89nm,1.0s			pmax	pmax		
YLYR	comp=E,469nm,1.2s			smax	smax		
YLYR	**Ulyunkhan**	**4.97**	**247**	*e*Pn	**Pn**	**09 31 09.4**	**-0.8**
YLYR				*e*Pg	**Pb**	**09 31 23.3**	**+0.7**
YLYR				*e*		09 31 26.9	
YLYR	comp=E,89nm,0.9s			max		09 31 29.3	
YLYR				*e*Sn	**Sn**	**09 32 02.1**	**-5.6**
YLYR				*e*Sg	**Sb**	**09 32 26.0**	**+3.7**
YLYR				Smax		09 32 32.0	
NIZB	**Nizh Angarsk**	**5.46**	**260**	*e*Pn	**Pn**	**09 31 17.1**	**+0.3**
NIZB				*e*Pg	**Pb**	**09 31 31.7**	**+0.9**
NIZB				Pmax		09 31 42.6	
NIZB	comp=E,44nm,0.7s			*e*Sn	**Sn**	**09 32 15.5**	**-4.1**
NIZB				*e*Sg	**Sb**	**09 32 40.6**	**+4.4**
NIZB				Smax		09 32 44.3	
ZEA	**Zeya**	**5.74**	**122**	*e*PN	**Pn**	**09 31 21.8**	**+1.1**
ZEA	comp=E,30nm,0.6s			*e*		09 32 24.0	
ZEA				*e*		09 32 55.2	
ZEA				pmax	pmax		
ZEA	comp=N,10.0nm,0.4s			pmax	pmax		
ZEA	comp=Z,40nm,0.4s			pmax	pmax		
ZEA	comp=N,40nm,0.5s			smax	smax		
ZEA	comp=E,80nm,0.5s			smax	smax		
CIT	**Chita**	**6.02**	**215**	*e*Sg	**Sb**	**09 32 59.0**	**+6.6**
CIT	comp=E,980nm,1.2s			Smax		09 33 02.9	
SYVR	**Suvo**	**6.22**	**240**	*e*PN	**Pn**	**09 31 26.5**	**-0.8**
SYVR				*e*		09 31 46.1	
SYVR				*e*		09 33 05.0	
SYVR	comp=Z,69nm,1.3s			pmax	pmax		
SYVR	comp=E,328nm,1.2s			smax	smax		
SYVR	**Suvo**	**6.22**	**240**	*e*Pn	**Pn**	**09 31 26.4**	**-0.8**
SYVR				*e*Pg	**Pb**	**09 31 46.0**	**+2.2**
SYVR				Pmax		09 31 49.1	
SYVR	comp=E,68nm,1.4s			*e*Sg	**Sb**	**09 33 04.9**	**+6.8**
SYVR	comp=E,318nm,1.3s			Smax		09 33 31.1	
MXMB	**Maximikha**	**7.05**	**241**	*e*Sg	Sg	09 33 31.7	-10
YAK	**Yakutsk** comp=E,7.4nm,0.3s,baz=51,slow=4.0,SNR=4.0	**7.31**	**43**	Pn	**Pn**	**09 31 42.0**	**-0.1**
YAK	comp=E,16nm,0.3s,baz=72,slow=23,SNR=6.8			Sn	**Sn**	**09 32 57.5**	**-7.6**
YAK	comp=E,19nm,0.3s,baz=320,slow=22,SNR=7.0			Lg	Lg	09 33 39.6	
YAK	**Yakutsk** comp=E,17nm,0.5s	**7.31**	**43**	*e*PN	**Pn**	**09 31 44.6**	**+2.5**
YAK				*e*		09 32 08.4	
YAK				*e*		09 33 06.0	
YAK				*e*		09 33 44.6	
YAK	comp=Z,18nm,0.6s			pmax	pmax		
YAK	comp=Z,40nm,0.6s			pmax	pmax		
YAK	comp=E,16nm,0.6s			pmax	pmax		
YAK	comp=N,15nm,0.6s			smax	smax		
YAK	comp=N,54nm,0.9s			smax	smax		
YAK	comp=E,14nm,0.5s			smax	smax		
YAK	comp=N,352nm,0.9s			smax	smax		
YAK	comp=E,209nm,1.1s			smax	smax		
OGRR	**Ongureny**	**7.40**	**247**	*e*PN	**Pn**	**09 31 42.7**	**-0.8**
OGRR				*e*		09 32 06.6	
OGRR				*e*		09 33 41.4	
OGRR	comp=Z,25nm,1.4s			pmax	pmax		
OGRR	comp=E,162nm,1.7s			smax	smax		
OGRR	**Ongureny**	**7.40**	**247**	*e*Pn	**Pn**	**09 31 42.6**	**-0.9**
OGRR				*e*Pg	**Pb**	**09 32 06.7**	**+2.8**
OGRR				Pmax		09 32 12.8	
OGRR	comp=E,20nm,1.0s			*e*Sg	Sb	09 33 41.1	+9.0
OGRR	comp=E,161nm,1.6s			Smax		09 34 01.9	
GORB	**Goryachinsk**	**7.44**	**241**	*e*Pn	**Pn**	**09 31 42.8**	**-1.3**
GORB				*e*Pg	**Pb**	**09 32 07.3**	**+2.7**
GORB				*e*Sg	Sg	09 33 42.8	-11
UZR	**Uzur**	**7.50**	**245**	*e*Pg	**Pb**	**09 32 09.5**	**+3.8**
UZR	comp=E,8.0nm,0.5s			Pmax		09 32 17.9	
UZR	comp=E,171nm,1.3s			*e*Sg	Sb	09 33 44.5	+9.3
UZR				Smax		09 34 06.1	
HILR	**Hailar Array B** baz=2.0,slow=11	**7.57**	**177**	Pn	**Pn**	**09 31 42.7**	**-3.1**
HILR	baz=24,slow=33			Sn	**Sn**	**09 33 08.6**	**-3.1**
HILR	baz=6.8,slow=30 comp=E,2.0nm,0.3s			Lg	Lg	09 33 46.8	
KELR	**Kotokel**	**7.68**	**240**	*e*Sg	Sg	09 33 50.0	-12
HIA	**Hailar**	**7.86**	**177**	*i* PN	**Pn**	**09 31 54.0**	**+4.2**
HIA	**Hailar**	**7.86**	**177**	*e*Sn	**Sn**	**09 33 12.4**	**-6.3**
HIA				*e*Sg	Sg	09 33 56.2	-11
HIA	comp=E,1μm,1.9s			Smax		09 34 13.2	
ZRHB	**Zarechye**	**8.25**	**242**	*e*Pg	Pb	09 32 22.6	+4.2
ZRHB				Pmax		09 32 27.8	
ZRHB	comp=E,58nm,0.4s			*e*Sg	Sg	09 34 08.1	-12
ZRHB				Smax		09 34 46.7	
KPC	**Khapcheranga**	**8.42**	**211**	*e*PN	**Pn**	**09 31 55.1**	**-2.4**
KPC	comp=E,514nm,0.8s			*e*S	**Sn**	**09 33 26.2**	**-6.3**
KPC	comp=E,297nm,1.5s			smax	smax		
KPC	**Khapcheranga**	**8.42**	**211**	*e*	**Pn**	**09 31 54.9**	**-2.6**
KPC				*e*Pg	Pb	09 32 25.7	+4.5
KPC	comp=E,13nm,1.2s			Pmax		09 32 37.0	
KPC	comp=E,298nm,1.2s			*e*Sg	Sg	09 34 12.7	-13
KPC				Smax		09 34 21.9	
HEH	**HeiHe**	**8.45**	**141**	*e*P	**Pn**	**09 31 57.3**	**-0.6**
HEH				S	Sn	09 33 18.3	-15
HEH	comp=N,180nm,0.8s			smax	smax		
HEH	comp=E,190nm,1.0s			smax	smax		
UUDB	**Ulan-Yde**	**8.46**	**237**	*e*Sg	Sb	09 34 13.6	+11
UUDB	comp=E,396nm,2.2s			Smax		09 34 52.9	
TRG	**Tyrgan**	**8.52**	**245**	*e*Pn	**Pn**	**09 31 58.7**	**-0.1**
TRG				*e*Sg	Sg	09 34 16.4	-12
TRG	comp=E,116nm,1.8s			Smax		09 34 43.6	
FFNB	**Fofonovo**	**8.76**	**240**	*e*Pg	Pg	09 32 31.9	-11
FFNB				*e*Sg	Sg	09 34 24.1	-12
KAB	**Kabansk**	**8.81**	**240**	*e*Sg	Sg	09 34 25.7	-12
KAB	comp=E,881nm,1.5s			Smax		09 34 54.1	
BGT	**Bolshoye Golou**	**9.41**	**243**	*e*Sg	Sn	09 34 44.1	+47
BGT	comp=E,80nm,1.1s			Smax		09 35 12.1	
LSTR	**Listvyanka**	**9.80**	**244**	*e*Sg	Sn	09 34 56.7	+50
LSTR	comp=E,89nm,2.2s			Smax		09 35 17.4	
IRK	**Irkutsk**	**9.85**	**247**	*e*Pg	Pn	09 32 52.1	+35
IRK				*e*Sg	Sn	09 34 57.7	+50
IRK	comp=E,192nm,0.4s			Smax		09 35 03.2	
IVK	**Ivanovka**	**10.04**	**244**	*e*Sg	Sn	09 35 03.5	+51
IVK	comp=E,132nm,1.4s			Smax		09 35 26.7	
TLY	**Talaya**	**10.50**	**245**	*i* P	**Pn**	**09 32 27.2**	**+1.3**
TLY	**Talaya**	**10.50**	**245**	*e*Sg	Sn	09 35 18.0	+54
TLY	comp=E,61nm,1.7s			Smax		09 35 29.3	
KLR	**Kul'dur**	**10.94**	**131**	*i* P	**Pn**	**09 32 33.3**	**+1.4**
ARS	**Arshan**	**10.97**	**249**	*e*Sg	Sn	09 35 31.2	+56
ARS	comp=E,208nm,1.3s			Smax		09 35 54.6	
ULN	**Ulaanbaatar**	**11.78**	**223**	*ce*P	**Pn**	**09 32 46.8**	**+3.2**
ULN	comp=Z,4.0nm,1.7s			pmax	pmax		
ULN	**Ulaanbaatar**	**11.78**	**223**	*e*Sg		09 35 56.6	
ULN	comp=Z,247nm,2.0s			Smax		09 36 09.9	
MOY	**Mondy**	**11.85**	**250**	*e*P	Pn	09 32 49.5	+5.0
MOY				*e*S	**Sn**	**09 34 54.5**	**-2.2**
MOY	**Mondy**	**11.85**	**250**	*e*Pn	**Pn**	**09 32 45.3**	**+0.8**
MOY				*e*Sg		09 35 58.9	
MOY	comp=Z,138nm,2.2s			Smax		09 36 26.7	
ORL	**Orlik**	**12.00**	**256**	*e*Pn	**Pn**	**09 32 47.8**	**+1.2**
ORL				*e*Sn	**Sn**	**09 34 52.7**	**-7.7**
ORL				*e*Sg		09 36 03.8	
ORL	comp=Z,106nm,1.5s			Smax		09 36 17.6	
SONM	**Songino Array** comp=Z,0.4nm,0.3s,baz=29,slow=13,SNR=2.3	**12.06**	**225**	Pn	**Pn**	**09 32 44.6**	**-2.8**
SONM				Lg	Lg	09 36 07.9	

	comp=Z,0.5nm,0.3s,baz=46,slow=26,SNR=5.1								
	comp=Z,0.3nm,0.3s								
TIXI	**Tiksi**	**15.17**	**12**	Pn		**Pn**	**09 33 24.2**	**-5.3**	
	comp=Z,1.5nm,0.3s,baz=218,slow=10,SNR=7.0								
TIXI				Sn		Sn	09 36 04.2	-13	
	comp=Z,1.0nm,0.3s,baz=38,slow=5.2,SNR=6.6								
TIXI				Lg		Lg	09 37 52.1		
	comp=Z,1.3nm,0.3s,baz=160,slow=5.0,SNR=1.6								
	comp=Z,6.0nm,0.4s								
TIXI	**Tiksi**	**15.17**	**12**	*ce*P		**Pn**	**09 33 30.5**	**+1.0**	
TIXI				pmax		pmax			
	comp=Z,4.0nm,0.6s								
USRK	**Ussuriysk Ar.**	**15.25**	**142**	Lg		Lg	09 37 49.7		
	comp=Z,0.1nm,0.3s,baz=332,slow=32,SNR=1.8								
MA2	**Magadan**	**16.73**	**68**	Pn		**Pn**	**09 33 49.0**	**-0.7**	
	comp=Z,0.4nm,0.3s,baz=104,slow=23,SNR=1.6								
MA2				Lg		Lg	09 38 36.0		
	comp=Z,0.3nm,0.3s,baz=138,slow=6.0,SNR=4.1								
	comp=Z,1.3nm,0.3s								
SEY	**Seymchan**	**17.49**	**57**	Pn		**Pn**	**09 33 57.4**	**-1.8**	
	comp=Z,0.3nm,0.3s,baz=273,slow=16,SNR=10								
SEY				Lg		Lg	09 39 03.6		
	comp=Z,0.2nm,0.3s,baz=6.8,slow=11,SNR=7.6								
	comp=Z,1.2nm,0.5s								
SEY	**Seymchan**	**17.49**	**57**	*ce*P		**P**	**09 34 01.9**	**+1.6**	
SEY				pmax		pmax			
	comp=Z,8.0nm,1.6s								
YSS	**Yuzhno-Sakhali**	**17.67**	**115**	*e*P		**Pn**	**09 33 57.5**	**-3.9**	
YSS				MLR		MLR			
	comp=Z,400nm,8.0s								
NRIK	**Noril'sk**	**18.47**	**324**	P		**P**	**09 34 07.9**	**-3.2**	
	comp=Z,6.8nm,0.6s,baz=118,slow=9.6,SNR=15								
NRIK				S		Sn	09 37 23.7	-14	
	comp=Z,4.3nm,0.9s,baz=115,slow=14,SNR=2.7								
NRIK				Lg		Lg	09 39 34.4		
	comp=Z,0.2nm,0.3s,baz=208,slow=23,SNR=4.0								
NRIK	**Noril'sk**	**18.47**	**324**	*e*P		**P**	**09 34 11.0**	**-0.1**	
NRIK				pmax		pmax			
	comp=Z,7.0nm,0.9s								
ZALV	**Zalesovo Beam**	**19.52**	**275**	P		**P**	**09 34 20.4**	**-2.3**	
	comp=Z,0.3nm,0.4s,baz=74,slow=7.9,SNR=6.4								
ZALV	**Zalesovo Beam**	**19.52**	**275**	*e*P		**Pn**	**09 34 28.2**	**+4.2**	
DGZ	**Jazzator, Alta**	**20.12**	**262**	*i* P		Pn	09 34 32.9	+1.6	
DGZ				pmax		pmax			
	comp=Z,4.0nm,1.2s								
KSRS	**Korea Array**	**20.52**	**160**	P		**P**	**09 34 30.7**	**-2.9**	
	comp=Z,0.7nm,0.7s,baz=354,slow=10,SNR=4.8								
	comp=Z,0.7nm,0.7s								
BILL	**Bilibino**	**23.67**	**43**	*i* P		**P**	**09 35 10.1**	**+3.4**	
BILL				pmax		pmax			
	comp=Z,14nm,2.8s								
MJAR	**Matsushiro Arr**	**24.22**	**140**	P		**P**	**09 35 10.5**	**-1.7**	
	comp=Z,0.8nm,0.5s,baz=336,slow=9.5,SNR=5.9								
	comp=Z,0.8nm,0.5s								
MJA0	**Matsu Arr-Jizo**	**24.23**	**140**	*e*P		**P**	**09 35 12.6**	**+0.3**	
MJA0				pmax		pmax			
	comp=Z,1.0nm,0.5s								
KURK	**Kurchatov**	**24.38**	**272**	*i* P		**P**	**09 35 17.3**	**+3.7**	
KURK				pmax		pmax			
	comp=Z,2.0nm,0.9s								
KURBB	**Kurchatov Arra**	**24.48**	**272**	P		**P**	**09 35 14.4**	**-0.1**	
	comp=Z,0.5nm,0.2s,baz=62,slow=8.8,SNR=2.8								
	comp=Z,0.5nm,0.2s								
MK31	**Makanchi Array**	**24.61**	**261**	*ce*P		**P**	**09 35 18.0**	**+2.3**	
MKAR	**Makanchi Array**	**24.61**	**261**	P		**P**	**09 35 15.0**	**-0.8**	
	comp=Z,0.1nm,0.5s,baz=59,slow=8.9,SNR=8.4								
	comp=Z,0.1nm,0.5s								
MKAR	**Makanchi Array**	**24.61**	**261**	*e*P		**P**	**09 35 21.7**	**+6.0**	
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
BVAR	**Borovoye Array**	**27.70**	**283**	P		**P**	**09 35 43.2**	**-0.2**	
	comp=Z,1.0nm,0.6s,baz=46,slow=10,SNR=6.8								
	comp=Z,1.0nm,0.6s								
ARTI	**Arti**	**32.33**	**295**	*i* P		**P**	**09 36 23.9**	**-0.5**	
ARTI				pmax		pmax			
	comp=Z,3.0nm,1.2s								
CHGR	**Chuyangaron**	**37.21**	**262**	*i* P		**P**	**09 37 08.9**	**+2.0**	
CHGR				pmax		pmax			
	comp=Z,5.0nm,0.9s								
SPITS	**Spitsbergen Ar**	**37.33**	**341**	P		**P**	**09 37 06.5**	**-0.8**	
	comp=Z,7.5nm,1.1s,baz=83,slow=12,SNR=1.3								
	comp=Z,7.5nm,1.1s								
APA	**Apatity**	**37.85**	**321**	*e*P		**P**	**09 37 14.6**	**+2.8**	
APA				pmax		pmax			
	comp=Z,6.0nm,1.2s								
APA				MLR		MLR			
	comp=Z,876nm,8.0s								
ILAR	**Eielson Array**	**42.22**	**40**	P		**P**	**09 37 48.5**	**+0.4**	
	comp=Z,0.2nm,0.5s,baz=302,slow=6.2,SNR=4.3								
	comp=Z,0.2nm,0.5s								
ILAR	**Eielson Array**	**42.22**	**40**	*e*P		**P**	**09 37 51.3**	**+3.2**	
OBN	**Obninsk**	**43.39**	**304**	*e*P		**P**	**09 38 00.1**	**+2.5**	
OBN				*e*			09 39 42.7		
OBN				pmax		pmax			
	comp=Z,2.0nm,0.8s								
OBN				MLR		MLR			
	comp=Z,344nm,19.0s								
FINES	**FINESS Array B**	**43.85**	**316**	P		**P**	**09 38 00.8**	**-0.5**	
	comp=Z,1.8nm,0.7s,baz=28,slow=6.7,SNR=5.0								
	comp=Z,1.8nm,0.7s								
FINES	**FINESS Array B**	**43.85**	**316**	*ce*P		**P**	**09 38 04.9**	**+3.6**	
FINES				pmax		pmax			
	comp=Z,2.0nm,0.8s								
KBZ	**Khabaz**	**47.80**	**288**	*i* P		**P**	**09 38 35.3**	**+2.6**	
KBZ				pmax		pmax			
	comp=Z,2.0nm,1.0s								
HFS	**Hagfors**	**49.23**	**320**	P		**P**	**09 38 42.7**	**-0.8**	
	comp=Z,2.8nm,0.5s,baz=55,slow=7.6,SNR=12								
	comp=Z,2.8nm,0.5s								
NOA	**NORSAR Array B**	**49.42**	**322**	P		**P**	**09 38 44.1**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=42,slow=7.2,SNR=3.2								
	comp=Z,0.4nm,0.6s								
NOA	**NORSAR Array B**	**49.42**	**322**	*e*P		**P**	**09 38 49.7**	**+4.7**	
NOA				pmax		pmax			
	comp=Z,1.0nm,0.8s								
YKA	**Yellowknife Ar**	**53.70**	**28**	P		**P**	**09 39 17.3**	**+0.4**	
	comp=Z,0.2nm,0.7s,baz=332,slow=7.3,SNR=4.4								
	comp=Z,0.2nm,0.7s								
ESDC	**Sonseca Array**	**72.35**	**317**	P		**P**	**09 41 20.5**	**-0.8**	
	comp=Z,0.2nm,0.4s,baz=27,slow=4.7,SNR=5.5								
	comp=Z,0.2nm,0.4s								
WRA	**Warramunga Arr**	**77.81**	**165**	P		**P**	**09 41 50.8**	**-2.0**	
	comp=Z,0.8nm,0.8s,baz=345,slow=6.3,SNR=5.0								
	comp=Z,0.8nm,0.8s								
ASAR	**Alice Springs**	**81.42**	**166**	P		**P**	**09 42 11.1**	**-1.2**	
	comp=Z,0.5nm,1.1s,baz=349,slow=5.2,SNR=2.1								
	comp=Z,0.5nm,1.1s								

IDC ***15*** *09:39:13.0±0.6, 15.°54S×180.°00E, h0km, mb4.7/24, mbtmp4.7/25, ML2.9/1, MS4.8/63, Error ellipse: s-maj=22.9km s-min=13.9km az=148.0*

MOS ***15*** *09:39:14.2±2.1, 15.°80S×179.°92E, h10km, mb5.1/25, MS5.0/6, Error ellipse: s-maj=10.1km s-min=9.3km az=57.1*

GFZ ***15*** *09:39:15.0, 15.°55S×180.°00E, h17km, MW5.7, Moment Tensor Solution. s6 Moment tensor: Mrr0.04; Mθθ-2.47; Mϕϕ2.44; Mrθ-1.30; Mθϕ2.66; Mϕr-1.30; Fault plane solution: NP1:φs157.00000°, δ66.00000°, λ172.00000°. NP2:φs250.00000°, δ82.00000°, λ24.00000°. Principal axes: T 4.2900, Plg22.0000°, Azm116.0000°; N -0.5300, Plg65.0000°, Azm266.0000°; P -3.7600, Plg11.0000°, Azm21.0000°;*

BJI ***15*** *09:39:15.3, 15.°75S×179.°84E, h16km, mB5.5/18, mb4.8/48, Ms5.4/33, Ms7 5.2/33*

NEIC ***15*** *09:39:15.2, 15.°69S×179.°95E, h30km*

NEIC ***15*** *09:39:15.2, 15.°69S×179.°95E, h30km, Moment Tensor Solution. Duration: 3x2 Moment tensor: Scale 1017Nm; Mrr-0.42; Mθθ-2.27; Mϕϕ2.69; Mrθ2.03; Mθϕ3.39; Mϕr1.35; Fault plane solution: Mo4.87000×1017 NP1: φs340.56000°, δ60.98000°, λ178.45000°. NP2: φs71.31000°, δ88.65000°, λ29.03000°. Principal axes: T 5.2292, Plg21.0000°, Azm300.0000°; N -0.8234, Plg61.0000°, Azm74.0000°; P -4.4058, Plg19.0000°, Azm202.0000°;*

NEIC ***15*** *09:39:15.1±1.4, 15.°69S±0.°07×180.°0E±0.°1, h10km±1km, mb5.2/243, Ms_20 5.2/136, Mww5.7/20 Error ellipse: s-maj=18.8km s-min=11.5km az=111.0*

GCMT ***15*** *09:39:19.2±0.1, 15.°56S±0.°01×179.°90W±0.°01, h22km, MW5.7/161, Moment Tensor Solution. s126,c229; s161,c321; Duration: 1s7 Moment tensor: Scale 1017 Nm; Mrr-0.21±.04; Mθθ-1.90±.04; Mϕϕ2.11±.04;*

Mrθ-0.23±.07; Mθϕ3.39±.04; Mϕr-0.32±.07; Best double couple: Mo3.95700×1017 NP1:φs165.00000°, δ86.00000°, λ177.00000°. NP2:φs255.00000°, δ87.00000°, λ4.00000°. Principal axes: T 4.0790, Plg5.0000°, Azm120.0000°; N -0.2480, Plg85.0000°, Azm294.0000°; P -3.8340, Plg1.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 15 09:39:17.3±0.3, 15.°76S±0.°05×179.°95W±0.°07, h26km, n665, σ1ϟ57/482, mb5.2/191, MS5.1/142, 16C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.74**	**224**			**Pn**	**09 39 58.6**	**-1.1**
MSVF	**Nonsavu**	**2.74**	**224**	P		**Pn**	**09 39 58.6**	**-1.1**
FUNA	**Funafuti**	**7.24**	**353**	Pn		**Pn**	**09 40 59.6**	**-1.9**
NIUE	**Niue**	**10.12**	**110**	Pn		Pn	09 41 46.6	+5.6
RAO	**Raoul Island**	**13.56**	**172**	LR		LR	09 46 56.0	
	comp=Z,7μm,19.8s,baz=354,slow=34							
RAO	**Raoul Island**	**13.56**	**172**	Pn		**Pn**	**09 42 28.1**	**+0.1**
RAO	**Raoul Island**	**13.56**	**172**	P		**Pn**	**09 42 28.1**	**+0.1**
PINNC	**Pines Island,**	**13.71**	**238**	Pn		**Pn**	**09 42 27.0**	**-3.1**
DZM	**Mont Dzumac**	**14.31**	**242**	Pn		**Pn**	**09 42 37.6**	**-0.9**
	0.1nm,0.3s,baz=87,slow=10.0,SNR=7.4							
DZM				LR		LR	09 47 41.3	
	comp=Z,2μm,18.6s,baz=65,slow=35							
	32nm,1.4s							
DZM	**Mont Dzumac**	**14.31**	**242**	Pn		**Pn**	**09 42 36.4**	**-2.1**
ONTNC	**Ouen Toro**	**14.40**	**241**	Pn		**Pn**	**09 42 36.5**	**-3.0**
RAR	**Rarotonga**	**19.88**	**109**	LR		LR	09 49 41.7	
	comp=Z,3μm,19.8s,baz=296,slow=31							
OUZ	**Omahuta**	**20.22**	**195**	IAMs_20		IAMs_20	09 50 13.0	
	comp=Z,9μm,19.0s							
HNR	**Honiara**	**20.59**	**285**	LR		LR	09 50 31.2	
	comp=Z,739nm,21.6s,baz=207,slow=33							
HNR	**Honiara**	**20.59**	**285**	IAMs_20		IAMs_20	09 50 18.8	
	comp=Z,12μm,20.0s							
MXZ	**Matakaoa Point**	**21.77**	**184**	IAMs_20		IAMs_20	09 51 59.1	
	comp=Z,10μm,18.0s							
TOZ	**Tahuroa Road**	**22.25**	**190**			**P**	**09 44 13.2**	**+1.0**
TOZ				IAmb		IAmb	09 44 23.1	
	comp=Z,160nm,1.3s							
TOZ				IAMs_20		IAMs_20	09 53 16.3	
	comp=Z,6μm,18.0s							
URZ	**Urewera**	**22.56**	**186**	LR		LR	09 52 14.8	
	comp=Z,6μm,18.3s,baz=6.0,slow=34							
RTZ	**Ruatahuna**	**22.93**	**186**			**P**	**09 44 18.8**	**-0.7**
RTZ				IAmb		IAmb	09 44 21.6	
	comp=Z,185nm,1.5s							
RTZ				IAMs_20		IAMs_20	09 51 24.5	
	comp=Z,7μm,20.0s							
HIZ	**Hauiti**	**23.12**	**190**	P		**P**	**09 44 22.8**	**+1.4**
BFZ	**Birch Farm**	**25.05**	**187**	IAMs_20		IAMs_20	09 52 11.6	
	comp=Z,7μm,22.0s							
MRZ	**Mangatainoka R**	**25.11**	**188**	IAMs_20		IAMs_20	09 53 39.2	
	comp=Z,5μm,18.0s							
QRZ	**Quartz Range**	**25.81**	**193**	IAMs_20		IAMs_20	09 55 02.2	
	comp=Z,6μm,18.0s							
THZ	**Tophouse**	**26.63**	**192**	IAMs_20		IAMs_20	09 56 27.1	
	comp=Z,5μm,18.0s							
DSZ	**Denniston Nort**	**26.85**	**194**	IAMs_20		IAMs_20	09 55 08.7	
	comp=Z,5μm,18.0s							
GVZ	**Greta Valley S**	**27.77**	**191**	IAMs_20		IAMs_20	09 54 52.3	
	comp=Z,4μm,19.0s							
CTZ	**Chatham Island**	**28.03**	**175**	IAMs_20		IAMs_20	09 54 55.6	
	comp=Z,5μm,19.0s							
OXZ	**Oxford**	**28.31**	**192**	IAMs_20		IAMs_20	09 55 58.4	
	comp=Z,5μm,19.0s							
MQZ	**McQueen's Vall**	**28.56**	**191**	IAMs_20		IAMs_20	09 55 09.0	
	comp=Z,4μm,18.0s							
EIDS	**Eidsvold**	**28.70**	**246**	P		**P**	**09 45 11.5**	**-1.0**
RPZ	**Rata Peaks**	**28.90**	**194**	LR		LR	09 54 32.2	
	comp=Z,3μm,21.8s,baz=0.0,slow=32							
RPZ	**Rata Peaks**	**28.90**	**194**	IAMs_20		IAMs_20	09 56 57.8	
	comp=Z,5μm,18.0s							
FOZ	**Fox Glacier**	**29.02**	**195**	IAMs_20		IAMs_20	09 56 17.9	
	comp=Z,4μm,19.0s							
PPT	**Papeete**	**29.14**	**98**	LR		LR	09 53 53.7	
	comp=Z,2μm,19.2s,baz=266,slow=30							
LBZ	**Lake Benmore**	**29.73**	**194**	IAMs_20		IAMs_20	09 57 13.9	
	comp=Z,4μm,18.0s							
ARMA	**Armidale**	**29.83**	**236**	P		**P**	**09 45 20.4**	**-2.2**
	comp=Z,22nm,1.3s							
ARMA	**Armidale**	**29.83**	**236**	P		**P**	**09 45 20.3**	**-2.2**
ODZ	**Otahua Downs**	**30.25**	**193**	IAMs_20		IAMs_20	09 57 08.6	
	comp=Z,5μm,19.0s							
WKZ	**Wanaka**	**30.44**	**196**	IAMs_20		IAMs_20	09 57 11.4	
	comp=Z,4μm,18.0s							
MLZ	**Mavora Lakes**	**31.18**	**196**	P		**P**	**09 45 33.9**	**-0.3**
PYZ	**Puysegur Point**	**32.31**	**197**	IAMs_20		IAMs_20	09 58 26.8	
	comp=Z,4μm,18.0s							
CTA	**Charters Tower**	**32.41**	**257**	P		**P**	**09 45 44.4**	**-0.9**
	comp=Z,11nm,1.0s,baz=91,slow=10,SNR=8.5							
CTA				LR		LR	09 57 30.7	
	comp=Z,2μm,18.6s,baz=80,slow=34							
	comp=Z,11nm,1.0s							
CTAO	**Charters Tower**	**32.41**	**257**			**P**	**09 45 43.7**	**-1.6**
CTAO				IAmb		IAmb	09 45 46.7	
	comp=Z,59nm,1.6s							
CTAO	**Charters Tower**	**32.41**	**257**	P		**P**	**09 45 43.7**	**-1.6**
CTAO				pmax		pmax		
	comp=Z,59nm,1.6s							
CTAO				MLR		MLR		
	comp=Z,3μm,19.0s							
PMG	**Port Moresby**	**32.69**	**277**	P		**P**	**09 45 46.2**	**-1.6**
	comp=Z,58nm,1.0s,baz=103,slow=5.2,SNR=9.0							
	comp=Z,58nm,1.0s							
PMG	**Port Moresby**	**32.69**	**277**			**P**	**09 45 47.0**	**-0.8**
PMG	**Port Moresby**	**32.69**	**277**	*i* P		**P**	**09 45 47.7**	**-0.1**
PMG				pmax		pmax		
	comp=Z,28nm,1.2s							
PMG	**Port Moresby**	**32.69**	**277**	P		**P**	**09 45 45.8**	**-2.0**
	comp=Z,73nm,1.2s							
YNG	**Young**	**33.90**	**231**	P		**P**	**09 46 00.1**	**+1.8**
CAN	**Canberra**	**33.91**	**229**	IAMs_20		IAMs_20	09 56 33.9	
	comp=Z,5μm,21.0s							
MTSU	**Mount Surprise**	**34.23**	**261**	P		**P**	**09 46 01.5**	**+0.3**
	comp=Z,12nm,1.2s							
QLP	**Quilpie**	**34.98**	**246**	P		**P**	**09 46 07.5**	**-0.2**
	comp=Z,109nm,1.5s							
CMSA	**Cobar Meteorol**	**34.99**	**237**	P		**P**	**09 46 08.4**	**+0.7**
	comp=Z,39nm,1.2s							
COEN	**Coen**	**35.66**	**268**	P		**P**	**09 46 13.8**	**+0.2**
	comp=Z,19nm,1.3s							
H11S2	**WAKE ISLAND Hy**	**36.48**	**338**	T		T	10 25 07.5	
	baz=154,slow=76,SNR=7.3							
H11S3	**WAKE ISLAND Hy**	**36.49**	**338**	T		T	10 25 07.4	
	baz=154,slow=76,SNR=7.7							
H11S1	**WAKE ISLAND Hy**	**36.50**	**338**	T		T	10 25 11.3	
	baz=154,slow=76,SNR=7.9							
TOO	**Toolangi**	**37.44**	**228**	P		**P**	**09 46 30.1**	**+1.5**
	comp=Z,16nm,1.6s							
TOO	**Toolangi**	**37.44**	**228**			**P**	**09 46 28.0**	**-0.6**
TOO	**Toolangi**	**37.44**	**228**	P		**P**	**09 46 28.0**	**-0.6**
TOO				pmax		pmax		
	comp=Z,59nm,2.0s							
H11N3	**WAKE ISLAND Hy**	**37.55**	**339**	T		T	10 26 29.8	
	baz=155,slow=76,SNR=7.3							
H11N1	**WAKE ISLAND Hy**	**37.55**	**339**	T		T	10 26 24.8	
	baz=155,slow=76,SNR=9.8							
H11N2	**WAKE ISLAND Hy**	**37.57**	**339**	T		T	10 26 26.6	
	baz=155,slow=76,SNR=8.0							
INKA	**Innaminka**	**38.24**	**245**			**P**	**09 46 34.9**	**-0.6**
INKA				IAmb		IAmb	09 46 50.3	
	comp=Z,61nm,1.4s							
STKA	**Stephens Creek**	**38.43**	**238**	P		**P**	**09 46 38.3**	**+1.4**
	comp=Z,134nm,1.0s							
STKA	**Stephens Creek**	**38.43**	**238**	P		**P**	**09 46 37.1**	**+0.1**
	comp=Z,26nm,1.0s,baz=64,slow=8.1,SNR=23							
STKA				LR		LR	10 00 44.2	
	comp=Z,2μm,21.6s,baz=71,slow=34							
	comp=Z,26nm,1.0s							
STKA	**Stephens Creek**	**38.43**	**238**			**P**	**09 46 37.3**	**+0.3**
STKA	**Stephens Creek**	**38.43**	**238**	*e*P		**P**	**09 46 38.0**	**+1.0**
STKA				pmax		pmax		
	comp=Z,22nm,0.9s							
QIS	**Mount Isa**	**38.65**	**257**	P		**P**	**09 46 38.3**	**-0.7**
	comp=Z,15nm,2.3s							
ARPS	**Mount Arapiles**	**39.79**	**231**	P		**P**	**09 46 49.1**	**+0.8**
	comp=Z,16nm,2.1s							
JAY	**Jayapura**	**40.91**	**285**	LR		LR	10 03 59.7	
	comp=Z,2μm,18.1s,baz=96,slow=36							
HTT	**Hallett**	**41.01**	**237**	P		**P**	**09 46 59.6**	**+1.0**
	comp=Z,16nm,1.2s							
BBOO	**Buckleboo**	**43.20**	**239**	P		**P**	**09 47 16.0**	**-0.4**
	comp=Z,39nm,1.2s							
BBOO	**Buckleboo**	**43.20**	**239**	P		**P**	**09 47 15.9**	**-0.4**
BBOO				IAmb		IAmb	09 47 17.4	
	comp=Z,41nm,1.1s							
WB0	**Warramunga Arr**	**43.56**	**258**	P		**P**	**09 47 18.2**	**-1.2**
WB0				IAmb		IAmb	09 47 22.6	
	comp=Z,53nm,1.6s							
WRAB	**Tennant Creek**	**43.60**	**258**	P		**P**	**09 47 18.2**	**-1.5**
WRAB	**Tennant Creek**	**43.60**	**258**	*i* P		**P**	**09 47 18.9**	**-0.8**
WRAB				pmax		pmax		
	comp=Z,9.0nm,1.0s							
WRA	**Warramunga Arr**	**43.61**	**258**	P		**P**	**09 47 18.2**	**-1.6**
	comp=Z,5.9nm,1.0s,baz=89,slow=8.3,SNR=28							
WRA				PcP		**PcP**	**09 49 08.1**	**+0.9**
	comp=Z,17nm,1.3s,baz=88,slow=3.1,SNR=7.5							
	comp=Z,5.9nm,1.0s							
WRA	**Warramunga Arr**	**43.61**	**258**	P		**P**	**09 47 17.2**	**-2.6**
AS31	**Alice Springs**	**43.99**	**252**	P		**P**	**09 47 21.7**	**-1.2**
ASAR	**Alice Springs**	**43.99**	**252**	P		**P**	**09 47 22.1**	**-0.8**
	comp=Z,22nm,0.8s,baz=85,slow=8.3,SNR=189							
ASAR				PcP		**PcP**	**09 49 08.8**	**+0.4**
	comp=Z,5.3nm,0.9s,baz=96,slow=3.3,SNR=4.8							
	comp=Z,22nm,0.8s							
ASAR	**Alice Springs**	**43.99**	**252**	P		**P**	**09 47 21.6**	**-1.3**
GUMO	**Guam**	**45.39**	**308**	LR		LR	10 03 38.1	
	comp=Z,736nm,21.5s,baz=133,slow=32							
KDU	**Kakadu**	**46.15**	**267**	P		**P**	**09 47 39.9**	**-0.1**
	comp=Z,14nm,1.6s							
MTN	**Manton Dam**	**47.41**	**267**	P		**P**	**09 47 49.5**	**-0.5**
MTN	**Manton Dam**	**47.41**	**267**	P		**P**	**09 47 48.8**	**-1.1**
WRKA	**Warakurna**	**49.13**	**250**	P		**P**	**09 48 03.6**	**+0.4**
	comp=Z,21nm,1.3s							
KNRA	**Kununurra**	**49.26**	**263**	P		**P**	**09 48 03.2**	**-1.0**
FORT	**Forrest**	**49.62**	**243**	P		**P**	**09 48 06.6**	**-0.3**
	comp=Z,23nm,0.9s							
FORT	**Forrest**	**49.62**	**243**	P		**P**	**09 48 06.3**	**-0.5**
FORT				IAmb		IAmb	09 48 13.9	
	comp=Z,37nm,1.4s							
SIJI	**Sorong**	**50.32**	**282**	LR		LR	10 07 42.4	
	comp=Z,1μm,21.1s,baz=84,slow=34							
FITZ	**Fitzroy Crossi**	**51.95**	**259**	P		**P**	**09 48 23.8**	**-0.7**
	comp=Z,19nm,1.3s,baz=89,slow=11,SNR=5.9							
FITZ				LR		LR	10 08 52.3	
	comp=Z,3μm,19.9s,baz=93,slow=34							
	comp=Z,19nm,1.3s							
KRAI	**Karang Ratu**	**52.27**	**278**	P		**P**	**09 48 25.8**	**-1.2**
	comp=Z,4μmcomp=Z,74nm,1.3s							
NLAI	**Namlea**	**53.53**	**278**	P		**P**	**09 48 34.9**	**-1.3**
SOEI	**Soe**	**54.61**	**269**	P		**P**	**09 48 44.0**	**-0.3**
SOEI	**Soe**	**54.61**	**269**	P		**P**	**09 48 44.1**	**-0.2**
KMBL	**Kambalda**	**54.95**	**243**	P		**P**	**09 48 50.5**	**+4.1**
BATI	**Baumata**	**55.09**	**268**	P		**P**	**09 48 47.2**	**-0.5**
	comp=Z,47nm,0.6s,baz=124,slow=6.7,SNR=13							
BATI				LR		LR	10 11 03.6	
	comp=Z,1μm,21.6s,baz=132,slow=35							
	comp=Z,47nm,0.6s							
BATI	**Baumata**	**55.09**	**268**	P		**P**	**09 48 48.4**	**+0.7**
JCJ	**Chichijima**	**56.26**	**319**	LR		LR	10 09 47.7	
	comp=Z,978nm,20.3s,baz=141,slow=33							
PSAC2	**Pilbara Seismi**	**56.99**	**254**	P		**P**	**09 49 02.8**	**+1.6**
	comp=Z,41nm,1.4s							
PSAB3	**Pilbara Seismi**	**57.03**	**254**	P		**P**	**09 49 02.0**	**+0.6**
	comp=Z,42nm,1.3s							
PSA00	**Pilbara Seismi**	**57.04**	**254**	P		**P**	**09 49 02.7**	**+1.2**
	comp=Z,45nm,1.2s							
PSA00	**Pilbara Seismi**	**57.04**	**254**	P		**P**	**09 49 00.5**	**-1.0**
PSAC1	**Pilbara Seismi**	**57.08**	**254**	P		**P**	**09 49 04.3**	**+2.5**
	comp=Z,33nm,1.2s							
MBWA	**Marble Bar**	**57.19**	**255**	P		**P**	**09 49 04.9**	**+2.4**
	comp=Z,38nm,1.4s							
MBWA	**Marble Bar**	**57.19**	**255**	IAMs_20		IAMs_20	10 12 16.4	
	comp=Z,2μm,21.0s							
KLBR	**Kellerberrin**	**58.48**	**242**	P		**P**	**09 49 11.5**	**0.0**
DAV	**Davao City (W)**	**58.51**	**289**	LR		LR	10 10 36.4	
	comp=Z,593nm,20.4s,baz=100,slow=32							
NWAO	**Narrogin (SRO)**	**58.93**	**241**	LR		LR	10 14 18.0	
	comp=Z,1μm,18.7s,baz=96,slow=36							
NWAO	**Narrogin (SRO)**	**58.93**	**241**	IAMs_20		IAMs_20	10 12 10.0	
	comp=Z,2μm,21.0s							
MORW	**Morawa**	**60.01**	**245**	P		P	09 49 27.1	+5.0
**K

comp=Z,17nm,0.4s,baz=76,slow=3.0,SNR=5.4
comp=Z,17nm,0.4s
KSRS Korea Array 72.12 319 P **P** **09 50 38.8 -0.8**
comp=Z,1.2nm,0.8s,baz=134,slow=7.2,SNR=4.4
KSRS LR LR 10 16 37.4
comp=Z,745nm,21.3s,baz=135,slow=31
comp=Z,1.2nm,0.8s
KSRS Korea Array 72.12 319 *e*P **P** **09 50 39.5 -0.1**
KSRS pmax pmax
comp=Z,3.0nm,1.0s
INCN Inchon 72.97 318 IAMs_20 IAMs_20 10 16 06.2
comp=Z,1μm,21.0s
TYV Tymovskoe 73.98 336 *e*P **P** **09 50 52.4 +2.1**
TYV pmax pmax
comp=Z,8.0nm,1.1s
TYV pmax pmax
comp=Z,100nm,2.4s
USRK Ussuriysk Ar. 74.02 326 P **P** **09 50 50.6 -0.1**
comp=Z,2.1nm,0.7s,baz=131,slow=5.6,SNR=7.0
comp=Z,2.1nm,0.7s
CHIR Chirikof Islan 74.20 14 P **P** **09 50 50.5 -0.9**
baz=204
QSPA South Pole Qui 74.28 180 P **P** **09 50 53.2 +1.0**
comp=Z,10nm,1.1s,baz=15,slow=3.5,SNR=5.8
QSPA LR LR 10 17 42.6
comp=Z,1μm,22.0s,baz=44,slow=31
comp=Z,10nm,1.1s
QSPA South Pole Qui 74.28 180 **P** **09 50 53.7 +1.6**
QSPA IAmb IAmb 09 51 11.6
comp=Z,33nm,1.2s
QSPA South Pole Qui 74.28 180 IAMs_20 IAMs_20 10 17 19.9
comp=Z,1μm,22.0s
SII Sitkinak Islan 75.21 14 P **P** **09 50 55.6 -1.8**
baz=206
NJ2 Nanjing 75.44 310 *e*P **P** **09 51 00.6 +1.4**
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
MDJ Mudanjiang 75.59 325 IAMs_20 IAMs_20 10 22 04.1
comp=Z,897nm,19.0s
MDJ Mudanjiang 75.59 325 P P 09 51 05.1 +5.3
MDJ pP PcP 09 51 13.9 +1.3
MDJ PP **PP** **09 53 51.3 +1.6**
MDJ S **S** **10 00 41.6 +2.4**
MDJ SS **SS** **10 05 31.3 +0.3**
MDJ pmax pmax
comp=Z,23nm,2.4s
MDJ LR LR
comp=Z,730nm,24.0s
MDJ LR LR
comp=Z,660nm,22.7s
MDJ LR LR
comp=Z,1μm,20.6s
R17L Mt. Peulik Vol 75.69 13 P **P** **09 50 58.7 -1.5**
baz=204
OHAK Old Harbor 76.02 15 P **P** **09 51 00.8 -1.2**
baz=206
O14K Tigyukauivet M 76.29 10 P **P** **09 51 02.0 -1.4**
baz=199
Q17K Contact Creek 76.38 13 P **P** **09 51 02.7 -1.4**
baz=204
O15K Ungalikthiuk R 76.46 11 P **P** **09 51 03.1 -1.3**
baz=200
Q16K King Salmon 76.60 12 P **P** **09 51 03.3 -1.9**
baz=203
P16K Nushagak River 76.66 11 P **P** **09 51 04.3 -1.2**
baz=202,SNR=6.0
M11K Mekoryuk 76.69 7 P **P** **09 51 04.9 -0.8**
baz=194
KDAK Kodiak Island 76.70 15 LR LR 10 17 33.9
comp=Z,395nm,21.4s,baz=206,slow=30
KDAK Kodiak Island 76.70 15 P **P** **09 51 04.8 -1.0**
baz=207
N14K Kuskokwak Cree 76.86 9 P **P** **09 51 05.6 -1.0**
baz=198
O02D Mt. Diablo Mer 76.91 41 **P** **09 51 07.9 +0.4**
O02D IAmb IAmb 09 51 17.6
comp=Z,62nm,1.6s
M13K Dall Lake 77.08 8 P **P** **09 51 06.7 -1.2**
baz=196
P17K Kvichak River 77.12 12 P **P** **09 51 06.6 -1.5**
baz=203,SNR=6.5
O16K Kokwok River B 77.17 11 IAmb IAmb 09 51 07.8
comp=Z,23nm,1.2s
O16K IAMs_20 IAMs_20 10 16 22.7
comp=Z,1μm,22.0s
O16K Kokwok River B 77.17 11 P **P** **09 51 07.0 -1.3**
baz=202
QIZ Qiongzhong 77.23 294 P **P** **09 51 09.5 -0.2**
QIZ S **S** **10 00 59.8 +1.6**
QIZ SS **SS** **10 05 57.3 +0.5**
QIZ LR LR
comp=Z,330nm,18.1s
QIZ LR LR
comp=Z,680nm,16.2s
QIZ LR LR
comp=Z,1μm,19.8s
BFSC Mount Baldy Ra 77.31 49 IAMs_20 IAMs_20 10 15 32.5
comp=Z,1μm,22.0s
CMB Columbia Colle 77.32 44 **P** **09 51 09.3 -0.5**
CMB Columbia Colle 77.32 44 P **P** **09 51 09.3 -0.5**
CMB pmax pmax
comp=Z,6.0nm,0.9s
N15K Kwethluk River 77.35 10 P **P** **09 51 07.8 -1.6**
baz=200
ORV Oroville 77.39 42 **P** **09 51 08.7 -1.4**
ORV Oroville 77.39 42 P **P** **09 51 08.7 -1.4**
ORV pmax pmax
comp=Z,10.0nm,1.1s
SNY Shenyang 77.40 320 ⇑P P 09 51 16.1 +6.0
SNY pmax pmax
comp=Z,15nm,1.6s
CN2 Changchun 77.43 323 *e*P **P** **09 51 13.3 +3.1**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
Q19K Cape Douglas, 77.47 14 P **P** **09 51 08.3 -1.9**
baz=206
Q20K Shuyak Island 77.48 14 P **P** **09 51 07.9 -2.2**
baz=207
BNX BinXian 77.50 325 ⇑P **P** **09 51 12.5 +1.9**
BNX S **S** **10 01 04.6 +4.6**
BNX pmax pmax
comp=Z,15nm,1.4s
BNX pmax pmax
comp=Z,450nm,5.0s
BNX LR LR
comp=Z,550nm,20.8s
BNX LR LR
comp=Z,560nm,20.3s
BNX LR LR
comp=Z,820nm,22.3s
O17K Koliganek Bris 77.52 12 P **P** **09 51 08.3 -2.0**
baz=203
KLR Kul'dur 77.52 330 LR LR 10 20 23.5
comp=Z,303nm,21.4s,baz=143,slow=32
KLR Kul'dur 77.52 330 *ce*P **P** **09 51 14.2 +3.6**
KLR pmax pmax
comp=Z,6.0nm,2.5s
M02C Callahan 77.54 40 IAmb IAmb 09 51 21.9
comp=Z,22nm,1.2s
P18K Big Mountain, 77.55 13 P **P** **09 51 08.3 -2.3**
baz=204,SNR=7.3
O03E Paynes Creek 77.60 42 IAmb IAmb 09 51 20.6
comp=Z,32nm,1.2s
M14K Bethel 77.61 9 P **P** **09 51 09.5 -1.3**
baz=198
M15K Kasigluk River 77.75 10 P **P** **09 51 10.4 -1.2**
baz=199
BORC Borrego Spring 77.75 50 IAmb IAmb 09 51 20.7
comp=Z,53nm,1.9s
YBH Yreka Blue Hor 77.82 40 LR LR 10 17 24.7
comp=Z,83nm,20.9s,baz=254,slow=30
N16K Nishlik Lake 77.87 11 P **P** **09 51 11.6 -0.7**
baz=201
PFO Pinyon Flats O 77.88 50 LR LR 10 18 47.8
comp=Z,705nm,19.5s,baz=251,slow=30
O18K Koktuh Hills 77.98 12 P **P** **09 51 11.7 -1.3**
baz=204,SNR=8.2
L14K Kuka Creek 78.07 8 IAmb IAmb 09 51 22.0
comp=Z,23nm,1.2s
L14K Kuka Creek 78.07 8 P **P** **09 51 12.2 -1.1**
baz=197
CCCA Chr Cany lake 78.14 48 IAmb IAmb 09 51 24.3
comp=Z,17nm,1.1s
WHN Wuhan 78.15 307 ⇓P **P** **09 51 15.1 +0.6**
WHN sP **pP** **09 51 22.0 -0.5**
N17K Nushagak Hills 78.20 11 P **P** **09 51 12.4 -1.7**
baz=202
MPK Martis Peak 78.22 43 IAmb IAmb 09 51 24.6
comp=Z,50nm,1.6s
P19K Oil Pt 78.22 13 P **P** **09 51 12.3 -2.0**
baz=206
TIN Tinemaha, Big 78.29 46 IAMs_20 IAMs_20 10 17 17.2
comp=Z,1μm,19.0s
M16K Timber Creek 78.35 10 IAmb IAmb 09 51 24.1
comp=Z,49nm,1.2s
M16K Timber Creek 78.35 10 P **P** **09 51 14.1 -0.8**
baz=201
K13K Kusilvak Mount 78.38 7 IAmb IAmb 09 51 23.1
comp=Z,38nm,1.6s
K13K Kusilvak Mount 78.38 7 P **P** **09 51 14.0 -1.0**
baz=195
PNTR Pine Nut 78.40 44 IAmb IAmb 09 51 23.7
comp=Z,19nm,1.1s
O19K Port Alsworth 78.47 13 P **P** **09 51 14.2 -1.4**
baz=205,SNR=17
L15K Ungalak Mounta 78.56 9 P **P** **09 51 14.7 -1.4**
baz=198
N18K Kilae Creek 78.59 12 IAmb IAmb 09 51 26.4
comp=Z,45nm,1.8s
N18K Kilae Creek 78.59 12 P **P** **09 51 15.5 -0.8**
baz=204
LPIG La Paz 78.67 61 LR LR 10 17 21.5
comp=Z,1μm,21.4s,baz=258,slow=29
MA2 Magadan 78.75 345 IAMs_20 IAMs_20 10 21 37.3
comp=Z,979nm,20.0s
MA2 Magadan 78.75 345 *ce*P **P** **09 51 20.2 +3.0**
MA2 pmax pmax
comp=Z,51nm,2.5s
GLA Glamis 78.84 51 P **P** **09 51 17.9 -0.5**
GLA IAmb IAmb 09 51 26.4
comp=Z,23nm,1.3s
GLA Glamis 78.84 51 P **P** **09 51 17.9 -0.5**
GLA pmax pmax
comp=Z,23nm,1.3s
BRSE Bradley Lake S 78.88 15 P **P** **09 51 16.4 -1.5**
baz=209
L16K Owhat River 78.91 10 **P** **09 51 17.4 -0.7**
L16K IAmb IAmb 09 51 26.2
comp=Z,37nm,1.5s
L16K Owhat River 78.91 10 P **P** **09 51 17.3 -0.7**
baz=200
NVAR Mina Array Bea 78.93 45 P **P** **09 51 17.4 -1.5**
comp=Z,2.9nm,0.9s,baz=227,slow=8.5,SNR=19
NVAR LR LR 10 18 15.1
comp=Z,1μm,21.8s,baz=256,slow=30
comp=Z,2.9nm,0.9s
M17K Holitna River 78.97 11 IAmb IAmb 09 51 29.2
comp=Z,48nm,1.3s
M17K Holitna River 78.97 11 P **P** **09 51 17.9 -0.5**
baz=202,SNR=6.4
N19K Bonanza Creek 79.00 12 IAmb IAmb 09 51 25.5
comp=Z,39nm,1.6s
N19K Bonanza Creek 79.00 12 P **P** **09 51 17.6 -1.1**
baz=205
SHOC Shoshone, Teco 79.10 48 IAmb IAmb 09 51 27.1
comp=Z,35nm,1.6s
SHOC IAMs_20 IAMs_20 10 22 20.9
comp=Z,1μm,19.0s
IRM Iron Mountain 79.11 50 IAmb IAmb 09 51 28.5
comp=Z,54nm,2.0s
IRM IAMs_20 IAMs_20 10 32 25.2
comp=Z,1μm,20.0s
K15K Wolf Creek Mou 79.14 9 P **P** **09 51 18.6 -0.7**
baz=198
J14K Nanvaranak Lak 79.31 8 P **P** **09 51 19.2 -0.9**
baz=196
M18K Stony River 79.35 12 P **P** **09 51 19.4 -1.1**
baz=204
K05A Summer Lake 79.50 40 IAmb IAmb 09 51 29.9
comp=Z,34nm,1.2s
L17K Denin 79.50 10 P **P** **09 51 20.4 -0.8**
baz=201
SEW Seward 79.52 15 P **P** **09 51 20.2 -1.1**
baz=210
GAMB Gambell 79.54 4 P **P** **09 51 20.5 -0.9**
baz=188
J05D Fort Rock, OR 79.59 39 IAmb IAmb 09 51 30.2
comp=Z,31nm,1.2s
TPNV Topopah Spring 79.62 47 IAMs_20 IAMs_20 10 17 34.5
comp=Z,1μm,22.0s
CAPN Captain Cook N 79.69 14 P **P** **09 51 20.7 -1.6**
baz=208
O22K Cooper Landing 79.78 15 P **P** **09 51 20.9 -1.8**
baz=210
L18K Granite Mounta 79.86 11 IAmb IAmb 09 51 32.5
comp=Z,44nm,1.1s
L18K Granite Mounta 79.86 11 P **P** **09 51 21.8 -1.4**
baz=203
P23K Montague Islan 79.95 16 P **P** **09 51 22.0 -1.7**
baz=212
M19K Big River Lodg 80.01 12 P **P** **09 51 22.6 -1.4**
baz=205
K17K Iditarod 80.05 10 IAmb IAmb 09 51 32.7
comp=Z,97nm,1.9s
K17K Iditarod 80.05 10 P **P** **09 51 23.5 -0.7**
baz=201
L19K White Mountain 80.17 12 IAmb IAmb 09 51 33.6
comp=Z,44nm,1.3s
L19K White Mountain 80.17 12 P **P** **09 51 24.6 -0.3**
baz=205,SNR=12
J16K Anvik River 80.22 9 P **P** **09 51 24.3 -0.9**
baz=199
M20K Styx River 80.25 13 IAMs_20 IAMs_20 10 19 47.1
comp=Z,987nm,19.0s
M20K Styx River 80.25 13 P **P** **09 51 24.0 -1.4**
baz=206
RC01 Rabbit Creek A 80.31 14 P **P** **09 51 24.0 -1.7**
baz=210
HEH HeiHe 80.32 329 *e*P **P** **09 51 28.9 +2.9**
HEH pP **PcP** **09 51 32.6 -0.4**
HEH pmax pmax
comp=Z,12nm,1.5s
HEH LR LR
comp=Z,710nm,14.5s
HEH LR LR
comp=Z,490nm,16.0s
HEH LR LR
comp=Z,1μm,16.7s
SUA Susitna One 80.40 14 P **P** **09 51 24.5 -1.8**
baz=208
J17K VABM Dome 80.56 9 **P** **09 51 26.9 -0.1**
J17K VABM Dome 80.56 9 P **P** **09 51 26.1 -0.9**
baz=200
SKT Skwentna 80.68 13 P **P** **09 51 25.2 -2.5**
baz=208
IPM Ipoh 80.69 277 P **P** **09 51 29.5 +0.7**
comp=Z,25nm,1.3s
KAIM Kak Island 80.71 17 P **P** **09 51 26.3 -1.5**
baz=215
GLI Glacier Island 80.78 16 P **P** **09 51 26.3 -1.9**
baz=212
I17K Unalakleet 80.78 9 P **P** **09 51 26.7 -1.4**
baz=199
M22K Willow 80.80 14 P **P** **09 51 26.5 -1.7**
baz=209,SNR=8.0
ANM Nome 80.85 6 IAMs_20 IAMs_20 10 20 22.7
comp=Z,1μm,21.0s
ANM Nome 80.85 6 P **P** **09 51 27.0 -1.5**
baz=194
EYAK Cordova Ski Ar 80.86 16 P **P** **09 51 27.2 -1.4**
baz=213
PMR Palmer 80.89 14 P **P** **09 51 27.0 -1.7**
baz=210,SNR=6.6
KNK Knik Glacier 80.90 15 P **P** **09 51 26.8 -2.0**
baz=211
HNS HongShan 80.99 313 ⇑P **P** **09 51 30.0 +0.2**
HNS S **S** **10 01 40.5 +3.1**
HNS SS **SS** **10 06 52.6 +0.1**
HNS pmax pmax
comp=Z,12nm,1.3s
HNS LR LR
comp=Z,730nm,22.2s
HNS LR LR
comp=Z,810nm,22.3s
J18K Innoko River 81.01 10 IAmb IAmb 09 51 38.1
comp=Z,27nm,1.0s
J18K IAMs_20 IAMs_20 10 19 35.1
comp=Z,936nm,19.0s
J18K Innoko River 81.01 10 P **P** **09 51 28.3 -1.1**
baz=203
GHO Glory Hole Cre 81.09 14 IAmb IAmb 09 51 37.2
comp=Z,18nm,1.0s
BBB Bella Bella 81.17 29 LR LR 10 19 11.1
comp=Z,1μm,21.8s,baz=214,slow=30
CRAG Craig 81.19 25 P **P** **09 51 28.9 -1.5**
baz=225
SML Sawmill 81.27 15 P **P** **09 51 29.3 -1.5**
baz=211
H16K Elim 81.29 8 P **P** **09 51 29.5 -1.3**
baz=197,SNR=16
L22K Petersville 81.33 13 IAmb IAmb 09 51 37.7
comp=Z,58nm,1.8s
LYN LuoYang 81.33 309 P **P** **09 51 32.5 +0.8**
LYN sS sS 10 01 54.1 -0.6
LYN pmax pmax
comp=Z,19nm,1.0s
LYN LR LR
comp=Z,1μm,17.5s
LYN LR LR
comp=Z,550nm,17.5s
LYN LR LR
comp=Z,1μm,19.2s
J08A Circle Bar Ran 81.33 40 IAmb IAmb 09 51 41.2
comp=Z,27nm,1.4s
CUT Chulitna 81.34 13 P **P** **09 51 28.9 -2.2**
baz=209
PPLA Purkeypile 81.36 12 P **P** **09 51 30.3 -1.1**
baz=207
SEY Seymchan 81.37 348 *e*P **P** **09 51 28.5 -2.8**
SEY pmax pmax
comp=Z,34nm,1.3s
K20K Telida 81.40 11 P **P** **09 51 30.4 -1.0**
baz=205
M23K Glacier View 81.40 15 P **P** **09 51 29.9 -1.6**
baz=211
SIT Sitka 81.47 23 P **P** **09 51 30.7 -1.2**
baz=223
BMRM Bremner River 81.52 17 P **P** **09 51 30.8 -1.4**
baz=214,SNR=7.7
SCM Sheep Creek Mo 81.54 15 P **P** **09 51 30.7 -1.6**
baz=212
TUC Tucson 81.58 53 P **P** **09 51 33.4 +0.1**
TUC Tucson 81.58 53 P **P** **09 51 33.4 +0.1**
TUC pmax pmax
comp=Z,17nm,1.4s
TNA Tin City 81.59 5 IAmb IAmb 09 51 40.3
comp=Z,19nm,1.2s
TNA IAMs_20 IAMs_20 10 21 17.9
comp=Z,976nm,22.0s
TNA Tin City 81.59 5 P **P** **09 51 30.6 -1.7**
baz=192,SNR=7.4
KLU Klutina 81.61 16 P **P** **09 51 30.7 -2.0**
baz=213
MESA MESA 81.64 18 P **P** **09 51 32.1 -0.9**
baz=217
F14K Arctic Creek 81.64 6 P **P** **09 51 31.6 -1.0**
baz=193
J19K Poorman 81.69 11 IAmb IAmb 09 51 42.5
comp=Z,71nm,1.8s
J19K Poorman 81.69 11 P **P** **09 51 32.4 -0.6**
baz=204
V35K Ketchikan 81.71 26 P **P** **09 51 31.7 -1.4**
baz=227
CRQM Cirque 81.76 17 IAmb IAmb 09 51 35.2
comp=Z,35nm,1.2s
CRQE Cirque 81.77 17 P **P** **09 51 32.6 -1.1**
baz=216,SNR=5.6
S31K Pelican 81.81 22 P **P** **09 51 32.9 -0.7**
baz=222
ENH Enshi 81.85 304 **P** **09 51 33.6 -1.0**
ENH IAMs_20 IAMs_20 10 24 42.6
comp=Z,926nm,20.0s
H17K Granite Mounta 81.89 8 P **P** **09 51 33.1 -0.9**
baz=200
G16K Koyuk River 82.00 7 P **P** **09 51 33.6 -0.9**
baz=197
F15K North Star Dit 82.04 6 IAmb IAmb 09 51 44.0
comp=Z,42nm,1.9s
F15K IAMs_20 IAMs_20 10 20 49.0
comp=Z,1μm,22.0s
F15K North Star Dit 82.04 6 P **P** **09 51 33.6 -1.2**
baz=195
S32K Killisnoo 82.05 23 P **P** **09 51 33.5 -1.4**
baz=224
N25K Chitina, Valde 82.05 16 P **P** **09 51 34.0 -1.0**
baz=214,SNR=5.5
VRDI Verde Repeater 82.06 17 IAmb IAmb 09 51 49.5
comp=Z,40nm,1.4s
M24K Tolsona, Glenn 82.06 15 P **P** **09 51 33.6 -1.4**
baz=213
WAT6 Susitna Watana 82.08 14 P **P** **09 51 33.6 -1.6**
baz=211,SNR=9.5
KNB Kanab 82.09 48 IAmb IAmb 09 51 45.0
comp=Z,24nm,1.4s
PINM Pinnacle 82.09 19 P **P** **09 51 33.7 -1.6**
baz=218
WAT1 Susitna Watana 82.10 14 P **P** **09 51 33.1 -2.1**
baz=210
ELK Elko 82.13 44 LR LR 10 21 54.4
comp=Z,1μm,19.7s,baz=260,slow=31
J20K Nowinta River 82.13 11 P **P** **09 51 34.1 -1.1**
baz=205
GRNC Granite Creek 82.14 18 IAmb IAmb 09 51 44.9
comp=Z,26nm,1.2s
SZCU Shurtz Canyon 82.15 48 IAmb IAmb 09 51 44.3
comp=Z,41nm,1.8s
WRAK Wrangell Islan 82.17 24 P **P** **09 51 33.9 -1.7**
baz=226
GCSA Galena City Sc 82.17 10 P **P** **09 51 33.8 -1.7**
baz=202
E07A Sunnyside 82.19 37 IAmb IAmb 09 51 36.6
comp=Z,32nm,1.5s
RPSI Rantau Prapat 82.19 275 **P** **09 51 35.7 -1.1**
T33K Petersburg 82.20 24 P **P** **09 51 33.9 -1.9**
baz=225
CHUM Lake Minchumin 82.21 12 P **P** **09 51 34.2 -1.5**
baz=207,SNR=7.9
PSI Prapat 82.22 275 P **P** **09 51 35.7 -1.4**
PSI pmax pmax
comp=Z,55nm,1.4s
PSI Prapat 82.22 275 P **P** **09 51 35.5 -1.6**
comp=Z,27nm,1.4s
TRF Thorofare Moun 82.25 13 IAmb IAmb 09 51 42.9
comp=Z,27nm,1.1s
TRF Thorofare Moun 82.25 13 P **P** **09 51 34.4 -1.8**
baz=209,SNR=5.6
MCARA McCarthy VSAT 82.30 17 IAmb IAmb 09 51 43.4
comp=Z,52nm,1.6s
MCARA McCarthy VSAT 82.30 17 P **P** **09 51 34.8 -1.5**
baz=216,SNR=6.1
H18K Honhosa River 82.32 9 IAmb IAmb 09 51 43.8
comp=Z,18nm,1.3s
H18K Honhosa River 82.32 9 P **P** **09 51 34.9 -1.4**
baz=201
G17K Kiwalik Mounta 82.32 8 P **P** **09 51 35.0 -1.3**
baz=199
319A Douglas 82.37 55 IAmb IAmb 09 51 45.8
comp=Z,24nm,1.2s
CTG Chitna Glacier 82.45 18 P **P** **09 51 35.8 -1.4**
baz=217
CTGM Chitina Glacie 82.45 18 IAmb IAmb 09 51 46.5
comp=Z,24nm,1.1s
WUAZ Wupatki 82.49 50 IAmb IAmb 09 52 10.2
comp=Z,20nm,1.4s
RND Reindeer 82.53 14 IAmb IAmb 09 51 45.3
comp=Z,33nm,1.0s
HARP HAARP 82.56 16 P **P** **09 51 35.7 -2.0**
baz=214
DHY Denali Highway 82.59 14 P **P** **09 51 36.1 -1.8**
baz=212
ZEA Zeya 82.61 332 *e*P **P** **09 51 40.0 +2.0**
ZEA *e*S **SKSac** **10 01 56.8 -0.5**
ZEA *e*SS **SS** **10 07 18.0 +2.0**
ZEA pmax pmax
comp=Z,100nm,5.0s
ZEA pmax pmax
comp=Z,20nm,1.3s
ZEA smax smax
comp=N,200nm,14.4s
ZEA MLR MLR
comp=Z,400nm,23.0s
O28M Mount Upton 82.64 18 IAmb IAmb 09 51 47.7
comp=Z,19nm,0.9s
O28M Mount Upton 82.64 18 P **P** **09 51 36.3 -2.1**
baz=218
R32K Eaglecrest 82.66 22 P **P** **09 51 36.3 -1.8**
baz=224
BPAW Bear Paw Mtn. 82.68 12 P **P** **09 51 36.6 -1.5**
baz=208
GYA Guiyang 82.69 300 ⇑P **P** **09 51 40.3 +1.1**
GYA pmax pmax
comp=Z,9.0nm,1.2s
U35K Hyder 82.77 26 P **P** **09 51 37.3 -1.5**

baz=228
O29M Mount Kennedy 82.78 19 P **P** **09 51 37.5 -1.4**
baz=220
MCK McKinley 82.80 13 P **P** **09 51 36.9 -1.9**
baz=210,SNR=11
BMO Blue Mountains 82.82 40 IAmb IAmb 09 51 45.9
comp=Z,27nm,2.0s
PAX Paxson 82.96 15 P **P** **09 51 38.6 -1.2**
baz=213
G18K Tagagawik 82.97 9 P **P** **09 51 38.5 -1.2**
baz=201,SNR=12
MTPU Mount Pierson 82.99 47 IAmb IAmb 09 51 49.4
comp=Z,25nm,1.6s
M26K Nabesna, AK 83.14 16 IAmb IAmb 09 51 48.6
comp=Z,28nm,1.2s
M26K Nabesna, AK 83.14 16 P **P** **09 51 39.5 -1.1**
baz=216
F17K Baldwin Pennin 83.14 7 P **P** **09 51 39.3 -1.1**
baz=198
P30M Million Dollar 83.17 20 P **P** **09 51 39.7 -1.1**
baz=222
XLT XiLinHaoTe 83.17 319 *e*P P 09 51 46.9 +5.6
XLT pP sP 09 51 51.5 -1.0
XLT sP pP 09 51 55.6 +6.1
XLT S **S** **10 02 06.9 +7.1**
XLT sS ScS 10 02 16.3 +2.5
XLT pmax pmax
comp=Z,8.0nm,1.3s
XLT pmax pmax
comp=Z,330nm,4.9s
XLT LR LR
comp=Z,690nm,21.3s
XLT LR LR
comp=Z,820nm,23.8s
YUK8 Steele Glacier 83.17 18 P **P** **09 51 39.5 -1.6**
baz=219,SNR=5.8
H20K Anotleneega Mo 83.20 10 P **P** **09 51 39.9 -1.0**
baz=204
SKAG Skagway 83.23 21 P **P** **09 51 39.8 -1.2**
baz=223
YUK6 Outpost Mounta 83.34 19 P **P** **09 51 40.4 -1.6**
baz=220
YUK3 Moose Creek 83.35 18 P **P** **09 51 40.7 -1.2**
baz=218,SNR=9.6
MENT Mentasta 83.39 16 IAmb IAmb 09 52 14.4
comp=Z,10nm,0.5s
T35M Bob Quinn 83.39 25 P **P** **09 51 40.5 -1.6**
baz=229
M27K Edge Creek, AK 83.41 17 P **P** **09 51 40.6 -1.6**
baz=217
G19K Purcell Mounta 83.44 9 P **P** **09 51 41.1 -0.9**
baz=202,SNR=21
I21K Tanana 83.44 11 P **P** **09 51 40.7 -1.4**
baz=207
F18K Selawik 83.50 8 P **P** **09 51 40.9 -1.4**
baz=200,SNR=11
NEA2 Nenana 83.52 13 P **P** **09 51 41.3 -1.2**
baz=210
HYT Haines Junctio 83.52 19 **P** **09 51 42.1 -0.6**
HYT IAmb IAmb 09 51 50.4
comp=Z,44nm,1.6s
HYT Haines Junctio 83.52 19 P **P** **09 51 41.4 -1.3**
baz=221
MLY Manley 83.55 12 P **P** **09 51 40.9 -1.8**
baz=208
L26K Log Cabin Wild 83.56 16 P **P** **09 51 42.8 +0.1**
L26K IAmb IAmb 09 51 54.3
comp=Z,17nm,1.2s
L26K Log Cabin Wild 83.56 16 P **P** **09 51 41.6 -1.1**
baz=215,SNR=6.1
YUK4 Talbot Arm 83.56 19 P **P** **09 51 42.2 -0.8**
baz=220
K24K Donnelly Dome 83.59 15 P **P** **09 51 41.8 -1.1**
baz=213,SNR=9.4
WRH Wood River Hil 83.62 13 **P** **09 51 42.5 -0.5**
S34M Telegraph Cree 83.68 24 IAmb IAmb 09 51 52.3
comp=Z,26nm,1.1s
S34M Telegraph Cree 83.68 24 P **P** **09 51 42.3 -1.1**
baz=227
E17K Hotham Inlet 83.69 7 P **P** **09 51 42.0 -1.3**
baz=198,SNR=25
H21K Melozitna Rive 83.72 11 IAMs_20 IAMs_20 10 21 32.6
comp=Z,998nm,21.0s
H21K Melozitna Rive 83.72 11 P **P** **09 51 42.3 -1.2**
baz=206
BVCY Beaver Creek 83.74 17 P **P** **09 51 42.8 -1.0**
baz=218,SNR=8.2
RIDG Independent Ri 83.76 15 P **P** **09 51 42.3 -1.5**
baz=214,SNR=6.7
HIA Hailar 83.77 325 IAMs_20 IAMs_20 10 25 15.6
comp=Z,809nm,21.0s
HIA Hailar 83.77 325 *i*P **P** **09 51 45.4 +1.2**
HIA pmax pmax
comp=Z,4.0nm,1.0s
XAN Xi'an 83.79 308 ⇑P **P** **09 51 43.9 -0.7**
XAN pP pP 09 51 52.3 -0.4
XAN pmax pmax
comp=Z,13nm,1.0s
XAN pmax pmax
comp=Z,200nm,8.9s
XAN LR LR
comp=Z,870nm,19.2s
XAN LR LR
comp=Z,690nm,21.0s
XAN LR LR
comp=Z,2µm,22.0s
HDA Harding Lake 83.83 14 P **P** **09 51 42.5 -1.5**
baz=212,SNR=16
P32M Atlin 83.89 22 IAmb IAmb 09 51 52.6
comp=Z,33nm,1.4s
P32M Atlin 83.89 22 P **P** **09 51 43.4 -1.2**
baz=224
HILR Hailar Array B 83.92 325 P **P** **09 51 44.4 -0.5**
comp=Z,0.6nm,0.4s,baz=160,slow=4.6,SNR=5.7
HILR LR LR 10 25 31.2
comp=Z,468nm,20.1s,baz=100,slow=33
comp=Z,0.6nm,0.4s
I23K Minto, Yukon-K 83.94 12 P **P** **09 51 43.8 -0.8**
baz=210,SNR=6.8
O30N Mendenhall 83.94 20 P **P** **09 51 43.4 -1.4**
baz=222,SNR=6.7
Q32M Nakina River 83.97 23 P **P** **09 51 43.4 -1.8**
baz=226
HMU Henry Mountain 83.98 48 IAmb IAmb 09 51 53.1
comp=Z,25nm,1.6s
L27K Beaver Creek, 83.99 16 IAmb IAmb 09 51 52.5
comp=Z,28nm,1.4s
L27K Beaver Creek, 83.99 16 P **P** **09 51 43.3 -1.7**
baz=217
121A Cookes Peak, D 84.00 54 IAmb IAmb 09 51 54.3
comp=Z,12nm,1.1s
BCAR Beaver Creek A 84.01 16 **P** **09 51 43.4 -1.7**
COLA College 84.02 13 *e*P **P** **09 51 48.2 +3.2**
COLA pmax pmax
comp=Z,83nm,1.6s
COLA College 84.02 13 P **P** **09 51 43.5 -1.5**
baz=211
D17K Noatak River 84.14 6 P **P** **09 51 44.6 -1.0**
baz=196,SNR=19
ILAR Eielson Array 84.15 14 P **P** **09 51 43.6 -2.1**
comp=Z,19nm,1.1s,baz=230,slow=5.2,SNR=55
ILAR LR LR 10 25 08.6
comp=Z,263nm,20.0s,baz=214,slow=33
comp=Z,19nm,1.1s
ILAR Eielson Array 84.15 14 P **P** **09 51 43.2 -2.5**
E18K Tukpahlearik C 84.16 7 P **P** **09 51 44.7 -1.0**
baz=199
BILL Bilibino 84.17 355 *i*P **P** **09 51 49.2 +3.5**
BILL pmax pmax
comp=Z,8.0nm,1.3s
SCRK Sand Creek 84.17 15 P **P** **09 51 44.5 -1.5**
baz=215,SNR=9.2
H22K Ishtalitna Cre 84.19 11 P **P** **09 51 44.6 -1.3**
baz=208,SNR=19
MPU Maple Canyon 84.24 46 IAmb IAmb 09 52 05.6
comp=Z,34nm,1.9s
HVU Hansel Valley 84.25 44 IAmb IAmb 09 51 54.6
comp=Z,14nm,1.1s
SPUT South Promonto 84.26 44 IAmb IAmb 09 51 54.7
comp=Z,12nm,1.1s
WHY Whitehorse 84.26 21 P **P** **09 51 45.7 -0.8**
baz=223
G21K Allakaket 84.37 10 IAMs_20 IAMs_20 10 25 01.7
comp=Z,935nm,18.0s
G21K Allakaket 84.37 10 P **P** **09 51 45.7 -1.1**
baz=206,SNR=11
J25K Salcha River, 84.37 14 P **P** **09 51 45.4 -1.5**
baz=213,SNR=20

BELA Belgrano 2 84.47 173 **P** **09 51 47.1 -0.2**
DLBC Dease Lake 84.47 24 LR LR 10 23 30.6
comp=Z,614nm,19.5s,baz=220,slow=32
DLBC Dease Lake 84.47 24 P **P** **09 51 46.5 -1.0**
baz=228
M29M Somme Creek 84.47 18 IAmb IAmb 09 51 55.1
comp=Z,24nm,1.4s
M29M Somme Creek 84.47 18 P **P** **09 51 46.1 -1.4**
baz=220
C16K Lisburne Hills 84.47 5 IAMs_20 IAMs_20 10 21 37.4
comp=Z,1µm,22.0s
C16K Lisburne Hills 84.47 5 P **P** **09 51 46.0 -1.2**
baz=194
F20K Avaraart Lake 84.49 9 IAmb IAmb 09 51 55.1
comp=Z,31nm,1.4s
F20K Avaraart Lake 84.49 9 P **P** **09 51 46.0 -1.3**
baz=204
H23K Yukon River 84.49 12 IAmb IAmb 09 51 54.3
comp=Z,29nm,1.6s
H23K Yukon River 84.49 12 P **P** **09 51 46.3 -1.1**
baz=209
RDOG Red Dog Mine 84.50 6 P **P** **09 51 46.8 -0.6**
baz=197,SNR=7.3
N31M Braeburn, Yuko 84.58 20 P **P** **09 51 46.7 -1.3**
baz=222,SNR=5.2
SRU San Rafael Swe 84.63 47 IAmb IAmb 09 51 56.5
comp=Z,13nm,1.1s
P17A Butcher Ranch, 84.63 47 IAmb IAmb 09 52 60.0
comp=Z,24nm,1.7s
E19K Redstone River 84.64 9 P **P** **09 51 46.9 -1.2**
baz=202,SNR=13
P33M Teslin, Yukon 84.65 22 P **P** **09 51 46.7 -1.8**
baz=225
NEW Newport 84.67 37 LR LR 10 21 02.1
comp=Z,631nm,21.3s,baz=228,slow=30
J26L Joseph Creek 84.71 15 P **P** **09 51 47.3 -1.3**
baz=215
HHC Hu-ho-hao-te 84.72 315 *e*P **P** **09 51 49.4 +0.1**
HHC sP pP 09 51 56.9 -0.7
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,4.4s
HHC LR LR
comp=Z,390nm,10.5s
HHC LR LR
comp=Z,280nm,10.7s
HHC LR LR
comp=Z,950nm,15.7s
R33M Jennings River 84.76 23 IAmb IAmb 09 51 49.8
comp=Z,37nm,1.4s
R33M Jennings River 84.76 23 P **P** **09 51 48.2 -0.8**
baz=227
H24K Noodor Dome 84.85 13 IAMs_20 IAMs_20 10 22 38.6
comp=Z,974nm,18.0s
H24K Noodor Dome 84.85 13 P **P** **09 51 48.6 -0.7**
baz=211
C17K DeLong Mountai 84.88 6 P **P** **09 51 48.2 -1.2**
baz=196
TCUT Toone Canyon 84.88 45 IAmb IAmb 09 51 57.9
comp=Z,28nm,1.1s
F21K Alatna River 85.01 10 IAmb IAmb 09 51 57.4
comp=Z,37nm,1.6s
F21K IAMs_20 IAMs_20 10 26 29.7
comp=Z,899nm,21.0s
F21K Alatna River 85.01 10 P **P** **09 51 48.5 -1.5**
baz=206
P18A Preston Nutter 85.04 47 IAmb IAmb 09 51 58.2
comp=Z,22nm,1.8s
M30M Minto, Yukon 85.07 19 IAmb IAmb 09 51 57.8
comp=Z,32nm,1.3s
M30M Minto, Yukon 85.07 19 P **P** **09 51 49.5 -0.9**
baz=221,SNR=16
L29M L2DM 85.08 18 P **P** **09 51 49.2 -1.3**
baz=220
PRP Porcupine Dome 85.09 14 P **P** **09 51 49.1 -1.5**
baz=213,SNR=7.3
G23K Bananza Creek 85.17 11 P **P** **09 51 49.7 -1.2**
baz=209
N32M Quiet Lake 85.23 21 P **P** **09 51 50.2 -1.1**
baz=225
C18K Utukok River 85.26 7 P **P** **09 51 49.7 -1.6**
baz=198,SNR=8.6
MAW Mawson 85.36 200 LR LR 10 26 52.1
comp=Z,785nm,19.9s,baz=106,slow=33
PV10 Paradox Valley 85.38 48 IAmb IAmb 09 52 26.1
comp=Z,18nm,1.1s
PV19 Morning Glory 85.39 48 IAmb IAmb 09 52 04.6
comp=Z,19nm,1.2s
PV20 West Nyswonger 85.42 48 IAmb IAmb 09 52 27.0
comp=Z,19nm,1.1s
PV18 Skein Mesa, Pa 85.42 48 IAmb IAmb 09 52 24.5
comp=Z,32nm,1.6s
DAWY Dawson 85.46 17 P **P** **09 51 51.1 -1.3**
baz=219,SNR=10
I26K Coal Creek Min 85.47 15 P **P** **09 51 51.1 -1.2**
baz=215
D19K Kuna River 85.49 8 IAmb IAmb 09 51 59.9
comp=Z,44nm,1.7s
D19K Kuna River 85.49 8 P **P** **09 51 51.0 -1.4**
baz=201
PV02 Paradox Valley 85.53 48 IAmb IAmb 09 52 04.6
comp=Z,41nm,1.8s
E20K Nigu River 85.54 9 P **P** **09 51 51.7 -1.0**
baz=203
KMI2 Kunming 85.54 298 P **P** **09 51 54.8 +0.9**
KMI2 S **S** **10 02 30.9 +6.3**
KMI2 pmax pmax
comp=Z,7.0nm,1.7s
KMI2 LR LR
comp=Z,900nm,20.0s
KMI2 LR LR
comp=Z,1µm,21.6s
KMI2 LR LR
comp=Z,2µm,26.9s
M31M Drury Creek, Y 85.55 20 P **P** **09 51 51.6 -1.3**
baz=224
MNTX Cornudas Mount 85.57 56 IAMs_20 IAMs_20 10 23 45.9
comp=Z,800nm,19.0s
COLD Coldfoot 85.60 11 IAmb IAmb 09 52 00.9
comp=Z,42nm,1.5s
COLD IAMs_20 IAMs_20 10 22 50.6
comp=Z,1µm,21.0s
COLD Coldfoot 85.60 11 P **P** **09 51 52.0 -0.9**
baz=209,SNR=16
G24K Hadweenzic Riv 85.67 12 P **P** **09 51 52.2 -1.1**
baz=211
AHID Auburn Hatcher 85.80 44 IAmb IAmb 09 52 21.0
comp=Z,30nm,1.6s
AHID IAMs_20 IAMs_20 10 23 42.8
comp=Z,1µm,18.0s
K29M Barlow Dome 85.81 17 P **P** **09 51 53.2 -1.1**
baz=221,SNR=11
BTO2 Baotou 85.83 314 *e*P **P** **09 51 55.0 +0.1**
BTO2 sP **pP** **09 52 02.6 -0.6**
BTO2 PP **PP** **09 55 09.3 -5.5**
BTO2 S **S** **10 02 27.6 +1.0**
BTO2 pmax pmax
comp=Z,21nm,1.0s
BTO2 pmax pmax
comp=Z,440nm,4.9s
BTO2 LR LR
comp=Z,1µm,14.2s
BTO2 LR LR
comp=Z,1µm,15.2s
BTO2 LR LR
comp=Z,3µm,21.4s
C19K Lookout Ridge 85.88 7 IAmb IAmb 09 52 04.3
comp=Z,40nm,1.6s
C19K Lookout Ridge 85.88 7 P **P** **09 51 53.2 -1.1**
baz=200
D20K Etivluk River 85.90 8 IAmb IAmb 09 52 02.9
comp=Z,41nm,1.4s
D20K IAMs_20 IAMs_20 10 23 12.4
comp=Z,1µm,22.0s
D20K Etivluk River 85.90 8 P **P** **09 51 53.4 -1.1**
baz=203
ANMO Albuquerque 85.94 52 LR LR 10 22 56.4
comp=Z,572nm,19.9s,baz=248,slow=31
DLMT Dillon 85.99 41 IAmb IAmb 09 52 21.8
comp=Z,23nm,1.5s
WTLY Watson Lake, Y 86.06 23 P **P** **09 51 54.0 -1.4**
baz=229
J29N Klondike Camp 86.08 17 P **P** **09 51 54.3 -1.2**
baz=220
I27K Kandik River 86.09 15 IAmb IAmb 09 52 03.4
comp=Z,27nm,1.4s
I27K Kandik River 86.09 15 P **P** **09 51 54.1 -1.4**

baz=217
MAYO Mayo, Yukon 86.11 18 P **P** **09 51 54.6 -0.9**
baz=222,SNR=7.4
TX31 Lajitas Ar. Si 86.11 58 IAmb IAmb 09 52 05.0
comp=Z,24nm,1.4s
E22K Anaktuvuk Pass 86.11 10 P **P** **09 51 54.0 -1.6**
baz=207,SNR=8.4
TXAR Lajitas Array 86.11 58 P **P** **09 51 56.2 -0.3**
comp=Z,1.8nm,0.9s,baz=224,slow=5.2,SNR=13
TXAR LR LR 10 22 29.2
comp=Z,1µm,20.2s,baz=249,slow=30
comp=Z,1.8nm,0.9s
TXAR Lajitas Array 86.11 58 **P** **09 51 56.6 +0.1**
SNOW Snow King Moun 86.33 43 IAmb IAmb 09 52 10.6
comp=Z,18nm,1.4s
PMSA Palmer Station 86.35 157 LR LR 10 24 59.9
comp=Z,480nm,18.6s,baz=297,slow=32
I28M Miner Creek 86.40 16 IAmb IAmb 09 52 04.1
comp=Z,40nm,1.8s
I28M Miner Creek 86.40 16 P **P** **09 51 55.7 -1.3**
baz=218,SNR=6.4
E23K Chandalar 86.44 11 IAMs_20 IAMs_20 10 23 42.5
comp=Z,915nm,19.0s
E23K Chandalar 86.44 11 P **P** **09 51 56.0 -1.2**
baz=209
MOOW Moose Ponds 86.46 43 P **P** **09 51 57.9 -0.2**
LOHW Long Hollow 86.50 43 IAmb IAmb 09 52 05.8
comp=Z,40nm,1.8s
C21K Knifeblade Rid 86.57 9 P **P** **09 51 56.6 -1.1**
baz=204
TPB01 Permian Basin 86.58 57 IAmb IAmb 09 52 15.9
comp=Z,9.5nm,1.3s
H27K Steamboat Moun 86.62 15 IAmb IAmb 09 52 05.7
comp=Z,28nm,1.4s
H27K Steamboat Moun 86.62 15 P **P** **09 51 56.6 -1.4**
baz=217,SNR=6.8
FLWY Flagg Ranch 86.64 42 IAmb IAmb 09 52 25.4
comp=Z,21nm,1.4s
D22K Ayikyak River 86.64 10 IAmb IAmb 09 52 05.9
comp=Z,31nm,1.7s
D22K Ayikyak River 86.64 10 P **P** **09 51 56.8 -1.3**
baz=206
TOAD Toad River Com 86.65 25 P **P** **09 51 57.1 -1.3**
baz=232,SNR=6.0
YHL Hebgen Lake 86.66 42 IAmb IAmb 09 52 16.9
comp=Z,19nm,1.2s
E24K Your Creek 86.66 11 IAmb IAmb 09 52 06.1
comp=Z,23nm,1.9s
E24K Your Creek 86.66 11 P **P** **09 51 57.0 -1.2**
baz=210
CD2 Chengdu 86.67 303 P **P** **09 51 59.8 +0.7**
CD2 S **S** **10 02 37.1 +2.1**
CD2 pmax pmax
comp=Z,20nm,1.7s
CD2 LR LR
comp=Z,1µm,19.7s
CD2 LR LR
comp=Z,690nm,17.8s
CD2 LR LR
comp=Z,1µm,21.6s
G26K Porcupine Rive 86.68 13 P **P** **09 51 57.1 -1.1**
baz=215
BOZ Bozeman (W) 86.70 41 IAmb IAmb 09 52 06.9
comp=Z,21nm,1.6s
J30M Hart River 86.71 17 IAmb IAmb 09 52 05.9
comp=Z,27nm,1.6s
J30M Hart River 86.71 17 P **P** **09 51 57.0 -1.7**
baz=222
I29M Ogilvie Camp, 86.76 16 IAmb IAmb 09 52 06.3
comp=Z,28nm,1.6s
I29M Ogilvie Camp, 86.76 16 P **P** **09 51 57.3 -1.4**
baz=220
CMAR Chiang Mai Arr 86.77 290 P **P** **09 51 59.5 -0.3**
comp=Z,1.6nm,0.3s,baz=108,slow=3.3,SNR=21
CMAR LR LR 10 26 29.8
comp=Z,458nm,21.9s,baz=105,slow=33
comp=Z,1.6nm,0.3s
CMAR Chiang Mai Arr 86.77 290 **P** **09 52 00.2 +0.3**
CMAR Chiang Mai Arr 86.77 290 *e*P **P** **09 52 00.9 +1.1**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
F25K Christian Rive 86.81 12 P **P** **09 51 57.6 -1.4**
baz=213
BW06 Boulder Array 86.83 44 IAmb IAmb 09 52 53.4
comp=Z,21nm,1.7s
PD31 Pinedale Array 86.83 44 IAmb IAmb 09 52 07.5
comp=Z,32nm,2.0s
PDAR Pinedale Array 86.83 44 P **P** **09 51 58.3 -1.6**
comp=Z,1.2nm,0.8s,baz=204,slow=3.3,SNR=9.3
PDAR LR LR 10 24 56.3
comp=Z,526nm,19.2s,baz=238,slow=32
comp=Z,1.2nm,0.8s
PDAR Pinedale Array 86.83 44 P **P** **09 51 58.7 -1.2**
PZH PanZhiHua 86.84 298 P **P** **09 52 01.6 +1.4**
CHTO Chiang Mai 86.88 290 **P** **09 51 59.1 -1.2**
CHTO IAmb IAmb 09 52 09.5
comp=Z,12nm,1.1s
CHTO Chiang Mai 86.88 290 P **P** **09 51 59.2 -1.2**
CHTO pmax pmax
comp=Z,12nm,1.1s
CHTO Chiang Mai 86.88 290 P **P** **09 52 00.4 +0.1**
comp=Z,8.7nm,0.8s
BMAR Burnt Mountain 86.90 13 **P** **09 51 59.1 -0.4**
D23K Nanushuk River 87.05 10 IAmb IAmb 09 54 56.9
comp=Z,7.1nm,0.6s
D23K IAMs_20 IAMs_20 10 21 34.0
comp=Z,971nm,20.0s
D23K Nanushuk River 87.05 10 P **P** **09 51 58.6 -1.4**
baz=208
YAK Yakutsk 87.05 339 LR LR 10 27 01.1
comp=Z,246nm,21.4s,baz=124,slow=33
YAK Yakutsk 87.05 339 P **P** **09 51 59.1 -1.1**
YAK IAmb IAmb 09 52 06.1
comp=Z,45nm,1.6s
YAK Yakutsk 87.05 339 *ce*P **P** **09 52 04.0 +3.9**
YAK pmax pmax
comp=Z,13nm,1.3s
I30M Mount Dempster 87.18 17 IAmb IAmb 09 52 00.6
comp=Z,34nm,1.8s
I30M Mount Dempster 87.18 17 P **P** **09 51 59.0 -1.9**
baz=222
F26K Sheenjek River 87.22 13 P **P** **09 51 59.7 -1.2**
baz=214
E25K Arctic Village 87.27 12 P **P** **09 52 00.3 -0.9**
baz=213
D24K Happy Valley 87.54 11 P **P** **09 52 01.6 -0.7**
baz=210
KOTAN Kotaneelee Air 87.91 25 P **P** **09 52 03.8 -0.6**
baz=233
G29M Pine Creek 88.03 15 P **P** **09 52 04.2 -0.6**
baz=220
C24K Franklin Bluff 88.05 10 P **P** **09 52 04.3 -0.5**
baz=210
F28M Old Crow 88.12 14 P **P** **09 52 04.1 -1.1**
baz=218
D25K Kavik River 88.13 11 P **P** **09 52 03.2 -2.1**
baz=212
H31M Peel River 88.19 17 P **P** **09 52 03.9 -1.7**
baz=224
LZH Lanzhou 88.41 308 *e*P **P** **09 52 08.6 +1.0**
LZH pP pP 09 52 16.0 +0.1
LZH S **S** **10 02 55.3 +3.5**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,390nm,4.1s
LZH LR LR
comp=Z,460nm,14.8s
LZH LR LR
comp=Z,850nm,14.5s
LZH LR LR
comp=Z,960nm,14.1s
LZDM Lanzhou Array 88.48 308 P **P** **09 52 07.8 -0.3**
comp=Z,3.8nm,0.8s,baz=90,slow=7.4,SNR=15
LZDM LR LR 10 28 46.6
comp=Z,423nm,21.9s,baz=120,slow=34
comp=Z,3.8nm,0.8s
G30M tAoh Zraii Nji 88.54 16 IAmb IAmb 09 52 17.7
comp=Z,9.9nm,1.0s
G30M tAoh Zraii Nji 88.54 16 P **P** **09 52 05.8 -1.5**
baz=222
CIT Chita 88.56 325 *e*P P 09 52 15.2 +7.5
CIT *e* 09 52 19.2
DRIO Del Rio 88.65 59 IAmb IAmb 09 52 19.2
comp=Z,24nm,1.6s
C27K Jago River 88.91 12 P **P** **09 52 07.3 -1.6**
baz=215
E28M Babbage River 88.98 14 P **P** **09 52 07.4 -1.8**

baz=219
F30M Barrier River 89.13 15 P P 09 52 08.6 -1.4
baz=222
TNCH TengChong 89.14 296 eP P 09 52 12.0 +0.8
TNCH S S 10 02 58.1 -1.0
TNCH SS SS 10 08 54.9 +1.4
TNCH pmax pmax
comp=Z,18nm,1.2s
TNCH pmax pmax
comp=Z,130nm,3.8s
TNCH LR LR
comp=Z,600nm,21.4s
TNCH LR LR
comp=Z,490nm,20.1s
TNCH LR LR
comp=Z,2μm,25.4s
D27M Malcolm River 89.16 13 P P 09 52 08.9 -1.3
baz=217
EDM Edmonton 89.19 33 IAmb IAmb 09 52 10.6
comp=Z,46nm,1.7s
E29M Blow River 89.19 14 P P 09 52 08.0 -2.3
baz=220
F31M Tsiigehtchic 89.54 16 IAmb IAmb 09 54 14.2
comp=Z,9.0nm,0.6s
F31M Tsiigehtchic 89.54 16 P P 09 52 09.7 -2.1
baz=224
CMIG Matias Romero 89.98 72 LR LR 10 24 47.3
comp=Z,469nm,20.1s,baz=262,slow=30
INK Inuvik 90.22 16 LR LR 10 27 01.2
comp=Z,266nm,20.3s,baz=230,slow=32
INK Inuvik 90.22 16 P P 09 52 13.0 -2.0
baz=224
ULN Ulaanbaatar 90.57 320 P 09 52 16.9 -0.5
ULN IAmb IAmb 09 52 25.2
comp=Z,22nm,1.4s
ULN Ulaanbaatar 90.57 320 i P P 09 52 19.5 +2.1
ULN pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 90.57 320 P P 09 52 17.3 -0.1
comp=Z,44nm,1.2s
SONM Songino Array 90.97 320 P P 09 52 18.8 -0.4
comp=Z,0.8nm,0.9s,baz=116,slow=3.4,SNR=5.9
SONM LR LR 10 29 46.8
comp=Z,301nm,20.7s,baz=110,slow=33
comp=Z,0.8nm,0.9s
SONM Songino Array 90.97 320 P P 09 52 18.7 -0.4
SONM Songino Array 90.97 320 eP P 09 52 19.6 +0.4
RSSD Black Hills 91.06 44 P P 09 52 19.1 -0.7
RSSD IAmb IAmb 09 52 27.5
comp=Z,30nm,1.6s
RSSD Black Hills 91.06 44 P P 09 52 19.1 -0.7
RSSD pmax pmax
comp=Z,30nm,1.7s
LL01 San Ignacio de 91.93 135 IAMs_20 IAMs_20 10 23 28.5
comp=Z,998nm,20.0s
MORE Moreh 92.58 294 IAMs_20 IAMs_20 10 33 41.3
comp=Z,665nm,19.0s
GTA2 Gaotai 92.59 310 eP P 09 52 34.3 +7.4
GTA2 pP sP 09 52 38.4 +0.2
GTA2 Gaotai 92.59 310 SS SS 10 09 47.8 +5.0
GTA2 pmax pmax
comp=Z,5.0nm,1.5s
GTA2 LR LR
comp=N,510nm,20.7s
GTA2 LR LR
comp=E,750nm,23.6s
GTA2 LR LR
comp=Z,1μm,24.4s
SNAA Sanae 92.76 179 P P 09 52 29.7 +2.5
comp=Z,16nm,1.2s,baz=162,slow=2.5,SNR=5.7
SNAA LR LR 10 32 58.4
comp=Z,568nm,18.2s,baz=192,slow=35
comp=Z,16nm,1.2s
SNAA Sanae 92.76 179 ceP P 09 52 29.6 +2.5
SNAA pmax pmax
comp=Z,19nm,1.2s
VNA3 Neumayer Olymp 92.96 177 ⇑P P 09 52 27.6 -0.4
comp=Z,26nm,0.8s
YKA Yellowknife Ar 93.02 25 P P 09 52 27.1 -1.1
comp=Z,0.2nm,0.7s,baz=253,slow=4.3,SNR=3.9
YKA PP PP 09 56 07.1 -4.3
comp=Z,0.4nm,1.0s,baz=241,slow=8.0,SNR=4.0
YKA LR LR 10 27 21.4
comp=Z,994nm,21.2s,baz=268,slow=31
comp=Z,0.2nm,0.7s
YKA Yellowknife Ar 93.02 25 eP P 09 52 31.4 +3.3
YKA pmax pmax
comp=Z,1.0nm,0.8s
NVL N'lazarevskaya 93.31 184 eP P 09 52 28.0 -1.5
NVL e 09 56 11.6
NVL ePPP PPP 09 58 11.7
NVL eS SKSac 10 03 01.3 -0.5
NVL ePS PS 10 04 50.3 -0.3
NVL eSS SS 10 09 52.4 +2.6
NVL eSSS SSS 10 13 32.7
NVL pmax pmax
comp=Z,39nm,1.8s
NVL MLR MLR
comp=Z,772nm,15.0s
VNA2 Neumayer--Watz 93.38 178 ⇑P P 09 52 29.2 -0.7
comp=Z,16nm,0.9s,baz=192,slow=1.9
C36M Paulatuk 93.48 17 P P 09 52 28.0 -2.1
baz=233
VNA1 Neumayer--Stat 93.61 177 ⇑P P 09 52 29.4 -1.5
comp=Z,39nm,1.2s
TIXI Tiksi 93.72 346 LR LR 10 31 54.2
comp=Z,504nm,19.4s,baz=146,slow=34
TIXI Tiksi 93.72 346 ceP P 09 52 35.4 +4.2
TIXI pmax pmax
comp=Z,5.0nm,1.0s
PLCA Paso Flores 93.88 134 LR LR 10 25 33.1
comp=Z,428nm,22.0s,baz=236,slow=30
TLY Talaya 94.03 323 ceP P 09 52 36.3 +3.2
TLY pmax pmax
comp=Z,5.0nm,1.7s
BRDH Bariadhala 94.52 292 LR LR 10 32 42.8
comp=Z,717nm,21.5s,baz=144,slow=34
A36M Sachs Harbour 94.79 15 P P 09 52 33.7 -2.4
baz=232
GO05 Hualane 95.18 128 IAMs_20 IAMs_20 10 24 16.2
comp=Z,929nm,21.0s
BO01 Tunca 96.07 128 IAMs_20 IAMs_20 10 25 51.6
comp=Z,1μm,22.0s
BO02 Sierra Bellavi 96.14 129 IAMs_20 IAMs_20 10 25 56.4
comp=Z,1μm,22.0s
MT01 Popeta 96.15 128 IAMs_20 IAMs_20 10 24 42.9
comp=Z,860nm,22.0s
BO04 La Punta 96.59 128 IAMs_20 IAMs_20 10 25 44.5
comp=Z,749nm,20.0s
VA03 San Esteban 97.13 127 IAMs_20 IAMs_20 10 26 51.8
comp=Z,702nm,20.0s
JTS Las Juntas de 97.50 81 LR LR 10 28 25.2
comp=Z,455nm,18.4s,baz=268,slow=30
ULM Lac du Bonnet 98.23 40 LR LR 10 33 36.9
comp=Z,421nm,18.3s,baz=277,slow=33
NNA Nana 99.09 105 LR LR 10 28 24.5
comp=Z,410nm,20.4s,baz=252,slow=30
ATAH Atahualpa 99.10 100 LR LR 10 27 44.9
comp=Z,1μm,21.7s,baz=258,slow=29
CFA Coronel Fontan 99.39 127 LR LR 10 28 05.3
comp=Z,138nm,21.2s,baz=342,slow=29
PALK Pallekele 100.90 275 IAMs_20 IAMs_20 10 36 04.6
comp=Z,814nm,22.0s
WMQ Urumqi 102.41 312 eP Pdif 09 53 12.8 +1.7
WMQ LR LR
comp=Z,1μm,21.9s
WMQ LR LR
comp=Z,1μm,21.9s
ZALV Zalesovo Beam 105.64 322 Pdiff Pdif 09 53 25.0 -0.1
comp=Z,1.2nm,1.0s,baz=94,slow=5.8,SNR=3.6
MKAR Makanchi Array 106.58 315 Pdiff Pdif 09 53 29.7 +0.2
comp=Z,1.8nm,1.3s,baz=76,slow=6.1,SNR=3.8
M65A Busby, Falmout 114.67 51 P PKPdf 09 57 52.3 -3.2
baz=271
CHGR Chuyangaron 115.90 306 i PKIKP PKiKP 09 58 00.3 +2.2
ARTI Arti 120.36 327 i PKIKP PKiKP 09 58 10.5 +4.4
KIRV Kirov 123.94 331 ceP PKIKP PKPdf 09 58 03.1 -10
KLMR Klimovskoe 126.82 337 eP PKIKP PKiKP 09 58 29.2 +10
KLMR pmax pmax
comp=Z,10.0nm,0.8s
UOSS Minazif 126.87 290 IAMs_20 IAMs_20 10 50 37.0
comp=Z,364nm,18.0s
BELG Belogornoye 127.69 325 i PKIKP PKiKP 09 58 21.3 +0.6
OBN Obninsk 131.72 333 i PKIKP PKiKP 09 58 30.2 +1.5
OBN e 10 00 47.4
OBN eSS SS 10 18 23.7 +3.1
OBN pmax pmax
comp=Z,6.0nm,1.0s
KIV Kislovodsk 134.29 317 i PKIKP PKiKP 09 58 36.1 +1.6
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,509nm,24.0s
KHAM Kharkiv 135.04 327 PKP PKiKP 09 58 36.4 +0.7
PLTM Poltava 136.16 328 PKP PKiKP 09 58 38.4 +0.5
AKBB Malin Array Si 137.98 332 PKP PKiKP 09 58 40.9 -0.7
KIEV Kiev 138.00 332 PKP PKiKP 09 58 40.9 -0.7
AK07 Malin Array Si 138.10 332 PKP PKPdf 09 58 40.9 +1.1
RNPP9 Sopachiv 138.87 335 PKP PKPdf 09 58 42.4 +1.2
LUBAR Lubar, Ukraine 139.20 333 PKP PKPdf 09 58 42.0 +0.1
ARPR Arapgir-MALATY 139.26 312 IAMs_20 IAMs_20 10 56 15.8
comp=Z,549nm,22.0s
KMPD K-Podol'skiy 140.77 332 PKP PKPdf 09 58 46.0 +1.2
KOLS Kolonicke sedl 142.25 336 ePKIKP PKiKP 09 58 51.1 +0.6
DPC Dobruska-Polom 143.07 343 ePKP PKPdf 09 58 50.1 +1.2
DPC Dobruska-Polom 143.07 343 ePKIKP PKPdf 09 58 50.1 +1.2
MORC Moravsky Berou 143.22 341 ePKIKP PKiKP 09 58 55.6 +3.1
BRG Berggiesshubel 143.23 345 ||ePKPf 09 58 51.5
BRG Amp 09 58 54.7
comp=Z,7.3nm,1.2s
VRAC Vranov 143.92 342 ePKIKP PKiKP 09 58 54.2 +0.3
JAVC Velka Javorina 143.97 340 ePKIKP PKiKP 09 58 55.3 +1.2
KRUC Moravsky 144.20 342 ePKIKP PKiKP 09 58 54.9 +0.5
SMOL Smolenice 144.35 340 ePKIKP PKiKP 09 58 54.6 -0.2
ZVC Zvikov 144.49 344 ePKP PKPbc 09 58 50.4 +0.5
ZVC ex x 09 58 56.5
MODS Modra-Piesok 144.53 340 ePKIKP PKPbc 09 58 50.7 +0.6
MODS e 09 58 58.0
MODS Modra-Piesok 144.53 340 ePKP PKPbc 09 58 50.7 +0.6
MODS e 09 58 58.0
MEM Membach 144.91 353 dPKP PKiKP 09 58 56.8 +1.0
KHC Kasperske Hory 144.93 344 ePKP PKPab 09 58 50.5 -0.9
KHC ex x 09 58 58.5
KHC Kasperske Hory 144.93 344 ePKIKP PKPab 09 58 50.5 -0.9
KHC e 09 58 58.5
BSTI Sart Tilman 144.98 354 dPKPdf PKPab 09 58 51.4 0.0
CKRC Cesky Krumlov 145.02 344 ePKP PKPbc 09 58 51.8 +0.1
CKRC ex x 09 58 57.7
CKRC Cesky Krumlov 145.02 344 ePKIKP PKPbc 09 58 51.8 +0.1
CKRC e 09 58 57.7
GERES GERESS Array B 145.16 344 PKP PKPbc 09 58 52.1 -0.1
comp=Z,2.2nm,0.9s,baz=66,slow=1.6,SNR=12
BHOU Houvegnez 145.16 353 dPKP PKiKP 09 58 57.6 +1.2
BCLA Clavier 145.17 354 dPKP PKiKP 09 58 58.6 +2.3
BGES Gesves 145.23 354 dPKP PKiKP 09 58 58.0 +1.5
BMRD Maredsous 145.34 355 dPKP PKPdf 09 58 54.4 +1.6
CONA Conrad Observa 145.37 341 i PKP PKPbc 09 58 53.1 +0.2
comp=Z,45nm,1.3s,SNR=7.1
RONA Rosalia, Austr 145.44 341 i PKP PKPab 09 58 53.4 +0.1
comp=Z,46nm,1.5s,SNR=8.2
RCHB Rochefort 145.44 354 dPKP PKiKP 09 58 55.4 -1.6
DOU Dourbes 145.56 355 dPKP PKiKP 09 59 00.2 +3.0
WLF Walferdange 145.82 353 dPKP PKPab 09 58 54.5 -0.1
MOA Molln 145.92 343 ePKP PKPdf 09 58 54.3 +0.4
comp=Z,36nm,1.7s
ARSA Arzberg 146.08 341 i PKP PKPdf 09 58 53.8 -0.4
comp=Z,21nm,1.6s,SNR=6.4
BIOA Bad Ischl, Aus 146.24 343 ePKP PKPab 09 58 56.1 -0.1
comp=Z,23nm,1.2s
LESA Schwarzleotal 146.74 344 ePKP PKPbc 09 58 56.4 -0.7
comp=Z,37nm,2.1s
SOKA Soboth 146.74 341 ePKP PKPbc 09 58 57.6 +0.5
comp=Z,16nm,1.2s
KBA Koelnbreinsper 146.88 343 ePKP PKPbc 09 58 58.0 +0.3
comp=Z,14nm,1.1s
OBKA Obir 147.04 341 ePKP PKPbc 09 58 58.1 +0.2
comp=Z,14nm,1.6s
WATA Walderalm 147.10 346 i PKP PKPdf 09 58 57.1 +1.0
comp=Z,33nm,1.2s,SNR=5.6
RETA Reutte 147.14 347 ePKP PKPbc 09 58 57.8 -0.4
comp=Z,27nm,1.2s
WTTA Wattenberg 147.15 345 ePKP PKPdf 09 58 57.4 +1.1
comp=Z,0.4nm,0.3s
MOTA Moosalm 147.20 346 i PKP PKPdf 09 58 56.4 +0.2
comp=Z,9.8nm,0.8s,SNR=6.0
MYKA Terra Mystica 147.20 343 ePKP PKPdf 09 58 56.0 -0.2
comp=Z,26nm,1.3s
SQTA Sankt Quirin 147.29 346 i pPKP PKPbc 09 58 59.5 +0.8
comp=Z,23nm,1.1s,SNR=5.2
ABTA Abfaltersbach 147.41 344 ePKP PKPdf 09 58 57.0 +0.5
comp=Z,16nm,1.1s
DAVA Damuels 147.52 347 epPKP PKPbc 09 59 00.5 +1.1
comp=Z,34nm,1.2s
FETA Feichten 147.59 346 ePKP PKPbc 09 58 59.3 -0.2
comp=Z,25nm,1.1s
ESDC Sonseca Array 155.92 8 PKP PKPdf 09 59 09.1 -0.5
comp=Z,0.2nm,0.4s,baz=17,slow=1.9,SNR=1.5
MD31 MD31 162.42 14 PKPab 10 00 04.9 +0.1
TORD Torodi Ar. Bea 176.95 212 PKP PKPdf 09 59 26.8 +0.4
comp=Z,6.1nm,1.1s,baz=237,slow=3.0,SNR=14
TORD PKPab PKPab 10 01 12.7 +3.3
comp=Z,4.3nm,1.2s,baz=192,slow=6.6,SNR=6.6

BJI **15** *09:45:54.0,3.˚13N×126.˚67E,h50km,mB5.1/7,mb4.6/28, Ms4.7/9,Ms7 4.4/8*
IDC **15** *09:45:57.0±2.0,3.˚38N×126.˚56E,h53km±17km,mb4.1/26, mbtmp4.4/26,ML5.3/1,Error ellipse: s-maj=26.8km s-min=7.7km az=67.0*
NEIC **15** *09:45:57.2±1.6,3.˚55N±0.˚07×126.˚75E±0.˚09,h46km±6km, mb4.7/47,Error ellipse: s-maj=13.2km s-min=8.7km az=63.0*
DJA **15** *09:45:57.1±0.3,4.˚4N±4.˚2×12.˚7E±.˚,h28km±6km,M4.8/25, mb4.8/25,mB5.4/12,MLv4.7/22,Mw(mB)4.8/12*
ISC 15 09:45:57.0±0.3,**3.˚58N**±0.˚04×**126.˚79E**±0.˚05,**h48**km,**n128,**
σ1°**60**/142,**mb4.6**/54,**MS4.6**/3,**2C,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.26**	**275**	P	**Pn**	**09 46 18.5**	**+0.3**
SGSI				S	**Sn**	**09 46 35.8**	**+1.8**
TNTI	**Ternate**	**2.85**	**168**	P	**Pn**	**09 46 39.7**	**-0.2**
TNTI	**Ternate**	**2.85**	**168**	P	**Pn**	**09 46 44.5**	**+4.5**
TNTI	**Ternate**	**2.85**	**168**	P	**Pn**	**09 46 40.4**	**+0.4**
MNI	**Manado**	**2.88**	**223**	P	**Pn**	**09 46 41.9**	**+1.5**
MNI				S	**Sn**	**09 47 17.2**	**+3.4**
DAV	**Davao City (W)**	**3.67**	**341**	Pn	**Pn**	**09 46 49.2**	**-2.1**
GTOI	**Gorontalo**	**4.77**	**232**	P	**Pn**	**09 47 08.3**	**+1.9**
GTOI				S	**Sn**	**09 48 03.4**	**+3.0**
SANI	**Sanana**	**5.65**	**188**	P	**Pn**	**09 47 18.8**	**+0.4**
SANI	**Sanana**	**5.65**	**188**	P	**Pn**	**09 47 20.1**	**+1.7**
	0.2nm31nm,0.6s						
MRSI	**Marisa**	**5.74**	**238**	P	**Pn**	**09 47 22.5**	**+2.8**
	0.4nm2μm82nm,0.5s						
SWI	**Sorong**	**6.28**	**135**	P	**Pn**	**09 47 29.1**	**+2.0**
SWI				S	**Sn**	**09 48 39.3**	**+1.6**
SIJI	**Sorong**	**6.29**	**135**	P	**Pn**	**09 47 29.0**	**+1.7**
	64nm,0.3s,baz=331,slow=19,SNR=96						
SIJI				S	**Sn**	**09 48 37.5**	**-0.4**
	12nm,0.4s,baz=184,slow=21,SNR=6.0						
SIJI	**Sorong**	**6.29**	**135**	P	**Pn**	**09 47 28.9**	**+1.7**
SIJI				S	**Sn**	**09 48 40.0**	**+2.1**
TOLI2	**Tolitoli**	**6.48**	**248**		**Pn**	**09 47 29.3**	**-0.5**
TOLI2	**Tolitoli**	**6.48**	**248**	P	**Pn**	**09 47 30.2**	**+0.4**
NLAI	**Namlea**	**6.78**	**177**	P	**Pn**	**09 47 35.8**	**+1.8**
	0.4nm1μm44nm,0.5s						
APSI	**Ampana**	**6.80**	**229**	P	**Pn**	**09 47 36.6**	**+2.4**
	0.6nm156nm,1.1s						
MPSI	**Mapaga**	**7.60**	**245**	P	**Pn**	**09 47 47.0**	**+1.8**
	0.1nm17nm,0.8s						
MPSI				S	**Sn**	**09 49 12.5**	**+2.5**
	0.1nm17nm,0.8s						
PCI	**Palu**	**8.25**	**237**	P	**Pn**	**09 47 55.2**	**+1.0**
	55nm,0.7s						
MYLDM	**Lahad Datu**	**8.41**	**281**	Pn	**Pn**	**09 47 59.8**	**+3.4**
MYLDM	**Lahad Datu**	**8.41**	**281**	P	**Pn**	**09 48 00.9**	**+4.5**
MYLDM	**Lahad Datu**	**8.41**	**281**	P	**Pn**	**09 47 57.2**	**+0.8**
	46nm,1.4s						
FAKI	**Fak Fak**	**8.46**	**140**		**Pn**	**09 47 58.1**	**+1.2**
FAKI	**Fak Fak**	**8.46**	**140**	P	**Pn**	**09 47 57.9**	**+0.9**
	41nm,0.8s						
MWPI	**Manokwari, Pap**	**8.52**	**122**	P	**Pn**	**09 47 59.3**	**+1.4**
TTSI	**Tana Toraja**	**9.58**	**227**	P	**Pn**	**09 48 14.0**	**+1.7**
	22nm,0.8s						
MMRI	**Maumere**	**12.95**	**200**	Pn	**Pn**	**09 48 58.2**	**-0.2**
MMRI	**Maumere**	**12.95**	**200**	P	**Pn**	**09 48 59.9**	**+1.4**
	58nm,1.5s						
EDFI	**Ende, Flores**	**13.26**	**203**	P	**Pn**	**09 49 03.0**	**+0.2**
	49nm,1.3s						
SBUM	**Sibu**	**14.59**	**266**	P	**Pn**	**09 49 22.9**	**+2.3**

DBNI Kabupaten Domp 14.68 215 P P 09 49 24.5 -2.5
27nm,1.2s
PLAI Plampang 15.25 216 P P 09 49 32.1 -1.3
PLAI Plampang 15.25 216 P Pn 09 49 29.4 +0.1
47nm,0.9s
TWSI Taliwang, Sumb 15.72 219 P Pn 09 49 34.6 -0.8
985nm62nm,1.3s
KLNI Mataram 15.99 222 P P 09 49 40.3 -1.3
DRS Darwin Rock St 16.42 166 P P 09 49 49.7 +3.3
KNRA Kununurra 19.23 174 P P 09 50 16.0 -1.3
TWG Pinlang 19.91 344 P P 09 50 22.6 -2.1
TWG IAmb IAmb 09 50 41.7
comp=Z,30nm,1.0s
YULB Yu-li 20.40 345 P P 09 50 27.1 -2.9
YULB IAmb IAmb 09 50 38.5
comp=Z,55nm,1.3s
FITZ Fitzroy Crossi 21.57 183 P P 09 50 40.4 -2.3
comp=Z,2.2nm,0.6s,baz=28,slow=5.0,SNR=7.5
FITZ PcP PcP 09 54 42.5 -1.1
comp=Z,2.4nm,0.9s,baz=157,slow=3.3,SNR=4.1
comp=Z,2.2nm,0.6s
YHNB Yeheng 21.61 347 P P 09 50 42.1 -1.0
YHNB IAmb IAmb 09 50 45.8
comp=Z,44nm,1.1s
WB0 Warramunga Arr 24.38 162 P P 09 51 10.2 -0.6
WB0 IAmb IAmb 09 51 11.3
comp=Z,17nm,0.7s
WRAB Tennant Creek 24.52 163 P P 09 51 10.8 -1.3
WRAB IAmb IAmb 09 51 12.8
comp=Z,14nm,0.8s
WRA Warramunga Arr 24.52 163 P P 09 51 10.7 -1.5
comp=Z,9.0nm,0.7s,baz=337,slow=11,SNR=47
WRA PcP PcP 09 54 50.3 +0.5
comp=Z,0.5nm,0.5s,baz=324,slow=2.8,SNR=2.2
WRA S S 09 55 26.9 -2.8
comp=Z,1.8nm,0.7s,baz=341,slow=19,SNR=6.2
comp=Z,9.0nm,0.7s
WRA Warramunga Arr 24.52 163 P P 09 51 10.8 -1.5
PSA00 Pilbara Seismi 25.90 195 P P 09 51 24.3 -0.4
AS31 Alice Springs 27.95 166 P P 09 51 40.9 -2.3
ASAR Alice Springs 27.95 166 P P 09 51 41.6 -1.6
comp=Z,0.8nm,0.5s,baz=350,slow=11,SNR=14
ASAR PcP PcP 09 54 58.2 +0.5
comp=Z,0.8nm,0.5s,baz=342,slow=2.3,SNR=5.4
ASAR S S 09 56 21.4 -2.7
comp=Z,0.5nm,0.8s,baz=336,slow=14,SNR=3.6
ASAR ScP ScP 09 58 34.0 -0.8
comp=Z,0.6nm,1.0s,baz=341,slow=3.3,SNR=3.4
comp=Z,0.8nm,0.5s
ASAR Alice Springs 27.95 166 P P 09 51 42.6 -0.5
NJ2 Nanjing 29.29 346 eP P 09 51 56.8 +1.9
NJ2 pmax pmax
comp=Z,5.0nm,0.7s
CTA Charters Tower 30.31 142 P P 09 52 04.0 -0.1
comp=Z,0.8nm,0.3s,baz=338,slow=6.3,SNR=2.2
comp=Z,0.8nm,0.3s
CTAO Charters Tower 30.31 142 P P 09 52 02.9 -1.2
CTAO IAmb IAmb 09 52 42.3
comp=Z,14nm,1.4s
CHTO Chiang Mai 31.15 301 P P 09 52 10.9 -0.7
CHTO IAmb IAmb 09 52 12.8
comp=Z,6.2nm,0.5s
PZH PanZhiHua 33.09 316 P P 09 52 30.6 +2.0
KSRS Korea Array 33.73 2 P P 09 52 35.2 +1.4
comp=Z,1.4nm,0.6s,baz=179,slow=9.3,SNR=5.3
comp=Z,1.4nm,0.6s
KS19 Wonju Array Si 33.78 2 P P 09 52 34.1 -0.1
FORT Forrest 34.19 178 P P 09 52 37.4 -0.5
FORT IAmb IAmb 09 52 60.0
comp=Z,6.1nm,0.8s
HNS HongShan 35.44 343 ⇑P P 09 52 50.8 +2.2
HNS pmax pmax
comp=Z,6.0nm,1.0s
BBOO Buckleboo 37.24 167 P P 09 53 03.5 -0.6
BBOO IAmb IAmb 09 53 35.9
comp=Z,7.8nm,0.9s
BJT Baijiatuau 37.53 347 P 09 53 07.9 +1.5
BJT IAmb IAmb 09 53 08.4
comp=Z,8.8nm,0.7s
STKA Stephens Creek 37.97 159 P P 09 53 09.1 -1.2
comp=Z,6.0nm,0.7s,baz=334,slow=9.0,SNR=8.2
comp=Z,6.0nm,0.7s
STKA Stephens Creek 37.97 159 P 09 53 10.1 -0.2
LZDM Lanzhou Array 38.63 329 P P 09 53 16.6 +0.4
comp=Z,6.0nm,0.3s,baz=161,slow=9.2,SNR=1.3
comp=Z,6.0nm,0.3s
HHC Hu-ho-hao-te 39.56 342 eP P 09 53 25.4 +1.8
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,250nm,5.8s
HHC LR LR
comp=Z,390nm,14.3s
HHC LR LR
comp=Z,330nm,14.3s
HHC LR LR
comp=Z,440nm,15.4s
SHL Shillong 40.01 307 P 09 53 27.0 -0.6
USRK Ussuriysk Ar. 40.71 6 P P 09 53 34.1 +1.1
comp=Z,1.2nm,0.4s,baz=175,slow=8.1,SNR=4.8
comp=Z,1.2nm,0.4s
XLT XiLinHaoTe 41.26 348 eP P 09 53 39.0 +1.4
XLT pP pP 09 53 51.0 +1.0
XLT PP PnPn 09 55 22.6 +4.2
XLT S S 09 59 44.0 -4.2
XLT pmax pmax
comp=Z,17nm,0.8s
XLT LR LR
comp=Z,530nm,14.5s
XLT LR LR
comp=Z,270nm,7.2s
ARMA Armidale 41.31 147 P P 09 53 38.7 +0.4
ARMA IAmb IAmb 09 53 41.6
comp=Z,9.7nm,1.0s
LSA Lhasa 42.58 311 P 09 53 49.3 +0.3
LSA Lhasa 42.58 311 P P 09 53 45.5 -3.6
LSA pmax pmax
comp=Z,8.0nm,0.7s
JKA Kamikawa-asahi 42.72 17 P P 09 53 50.6 +1.2
JKA IAmb IAmb 09 54 29.8
comp=Z,43nm,1.4s
HILR Hailar Array B 46.20 354 P P 09 54 18.2 +1.0
comp=Z,2.4nm,0.5s,baz=182,slow=12,SNR=4.9
comp=Z,2.4nm,0.5s
DZM Mont Dzumac 46.40 125 P P 09 54 20.4 +1.2
HEH HeiHe 46.51 1 eP P 09 54 20.6 +1.1
HEH LR LR
comp=Z,470nm,17.7s
HEH LR LR
comp=Z,410nm,19.0s
HEH LR LR
comp=Z,530nm,18.6s
SONM Songino Array 47.46 341 P P 09 54 27.5 +0.4
comp=Z,1.8nm,0.5s,baz=164,slow=8.3,SNR=14
SONM PcP PcP 09 55 57.7 +0.8
comp=Z,0.6nm,0.7s,baz=168,slow=2.7,SNR=2.1
comp=Z,1.8nm,0.5s
SONM Songino Array 47.46 341 P P 09 54 27.8 +0.7
TLY Talaya 51.69 342 P P 09 55 00.1 +1.0
WMQ Urumqi 52.88 325 eP P 09 55 12.3 +4.1
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ LR LR
comp=Z,780nm,5.9s
PETK Petropavlovsk- 55.55 22 P P 09 55 29.2 +1.8
comp=Z,3.7nm,0.8s,baz=235,slow=5.1,SNR=5.2
comp=Z,3.7nm,0.8s
PETK Petropavlovsk- 55.55 22 P P 09 55 29.0 +1.7
WUS Wushi 56.71 318 P P 09 55 36.3 +0.2
WUS IAmb IAmb 09 55 37.3
comp=Z,6.9nm,1.2s
MKAR Makanchi Array 57.71 325 P P 09 55 42.7 -0.2
comp=Z,11nm,0.5s,baz=119,slow=7.2,SNR=138
MKAR PcP PcP 09 56 36.1 +0.7
comp=Z,1.7nm,0.5s,baz=122,slow=4.6,SNR=5.1
comp=Z,11nm,0.5s
MKAR Makanchi Array 57.71 325 P 09 55 42.5 -0.4
KSH2 Kashi 58.33 315 P P 09 55 47.8 +0.3
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
NRN Naryn 58.98 317 P P 09 55 52.4 +0.2
AAK Ala-Archa 60.51 318 P P 09 56 01.0 -1.5
comp=Z,1.3nm,0.4s,baz=16,slow=21,SNR=4.7
comp=Z,1.3nm,0.4s
ZAA0 Zalesovo Array 60.75 333 P P 09 56 01.7 -2.0
ZALV Zalesovo Beam 60.75 333 P P 09 56 03.1 -0.6
comp=Z,1.6nm,0.4s,baz=117,slow=8.7,SNR=8.8

	comp=Z,1.6nm,0.4s						
LBZ	Lake Benmore	61.53	146	P	P	09 56 09.3	+0.2
KURBB	Kurchatov Arra	61.90	327	P	P	09 56 11.3	-0.2
	comp=Z,13nm,0.6s,baz=127,slow=6.2,SNR=95						
	comp=Z,13nm,0.6s						
KURK	Kurchatov	61.90	328		P	09 56 11.3	-0.2
KK31	Karatay Array	63.38	317	P	P	09 56 21.4	-0.2
KK31				IAmb	IAmb	09 56 22.8	
	comp=Z,3.5nm,0.8s						
KKAR	Karatay Array	63.38	317	P	P	09 56 21.4	-0.2
BVAR	Borovoye Array	67.48	327	P	P	09 56 47.8	-0.1
	comp=Z,4.0nm,0.6s,baz=135,slow=6.4,SNR=30						
	comp=Z,4.0nm,0.6s						
BORK	Borovoye	67.52	327	P	P	09 56 47.5	-0.6
BORK				IAmb	IAmb	09 56 50.4	
	comp=Z,8.9nm,0.7s						
TIXI	Tiksi	67.99	1	P	P	09 56 51.1	+0.4
TIXI				IAmb	IAmb	09 56 52.2	
	comp=Z,5.2nm,0.8s						
NRIK	Noril'sk	70.59	346	P	P	09 57 07.0	+0.2
	comp=Z,4.8nm,0.7s,baz=128,slow=7.1,SNR=12						
	comp=Z,4.8nm,0.7s						
NRIK	Noril'sk	70.59	346	P	P	09 57 07.6	+0.7
NRIK				IAmb	IAmb	09 57 10.5	
	comp=Z,4.5nm,0.7s						
AB31	Akbulak array	72.30	321	P	P	09 57 17.1	-0.5
AB31				IAmb	IAmb	09 57 19.3	
	comp=Z,3.3nm,0.5s						
ABKAR	Akbulak array	72.30	321	P	P	09 57 16.8	-0.7
AKTO	Aktyubinsk	73.81	322	P	P	09 57 25.6	-0.9
	comp=Z,3.6nm,0.5s,baz=108,slow=6.4,SNR=14						
	comp=Z,3.6nm,0.5s						
AKUT	Akutan	74.01	34	P	P	09 57 27.4	-0.1
ARTI	Arti	75.17	328	P	P	09 57 33.3	-0.9
	comp=Z,4.4nm,0.5s,baz=113,slow=2.7,SNR=10						
	comp=Z,4.4nm,0.5s						
RAYN	Ar Rayn	80.59	293	P	P	09 58 04.2	-0.9
RAYN				IAmb	IAmb	09 58 05.0	
	comp=Z,4.5nm,0.4s						
G19K	Purcell Mounta	81.14	24	IAmb	IAmb	09 58 23.6	
	comp=Z,8.8nm,1.4s						
ABPO	Ambohimpanom	81.31	250	P	P	09 58 08.3	-0.9
ABPO				IAmb	IAmb	09 58 22.1	
	comp=Z,9.7nm,1.1s						
E19K	Redstone River	81.35	22	IAmb	IAmb	09 58 30.3	
	comp=Z,5.5nm,1.0s						
VOI	Vohitsoka	82.06	247	P	P	09 58 12.2	-0.9
VOI				IAmb	IAmb	09 58 19.4	
	comp=Z,16nm,1.1s						
GEVA	Gevas	82.87	308	P	P	09 58 17.4	+0.4
GEVA				IAmb	IAmb	09 58 18.3	
	comp=Z,5.9nm,0.8s						
SKT	Skwentna	82.94	28	P	P	09 58 17.7	+1.0
BRLK	Bradley Lake	83.06	30	P	P	09 58 17.8	+0.5
BRLK				IAmb	IAmb	09 58 32.2	
	comp=Z,18nm,1.4s						
ILAR	Eielson Array	85.22	25	P	P	09 58 28.6	+0.4
	comp=Z,0.3nm,0.7s,baz=264,slow=5.1,SNR=6.7						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	90.16	310	P	P	09 58 52.0	-0.6
	comp=Z,1.7nm,0.8s,baz=116,slow=4.9,SNR=8.3						
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	90.16	310	P	P	09 58 51.7	-0.9
BRTR	Keskin Array B	90.16	310	*ce*PKIKP	P	09 58 52.0	-0.6
BRTR	Keskin Array B	90.16	310	pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	90.61	340	P	P	09 58 53.7	-0.2
	comp=Z,2.3nm,0.7s,baz=87,slow=6.2,SNR=8.3						
	comp=Z,2.3nm,0.7s						
ARCES	ARCESS Array B	90.61	340	P	P	09 58 53.9	-0.1
SPITS	Spitsbergen Ar	90.64	349	P	P	09 58 53.9	0.0
	comp=Z,5.6nm,1.0s,baz=91,slow=7.6,SNR=8.9						
	comp=Z,5.6nm,1.0s						
CSS	Mathiatis	90.80	305	P	P	09 58 54.7	-0.9
LODK	Lodwar	91.21	273	P	P	09 58 56.2	-1.7
FINES	FINESS Array B	91.99	332	P	P	09 58 59.2	-1.2
	comp=Z,2.5nm,0.8s,baz=100,slow=4.5,SNR=4.4						
	comp=Z,2.5nm,0.8s						
FINES	FINESS Array B	91.99	332	P	P	09 58 59.8	-0.6
AKASG	Malin Array Be	92.04	321	P	P	09 59 00.1	-0.8
	comp=Z,0.3nm,0.3s,baz=44,slow=1.4,SNR=4.4						
	comp=Z,0.3nm,0.3s						
WRGLY	Wrigley	95.60	25	P	P	09 59 16.8	-0.1
HFS	Hagfors	98.18	332	P	P	09 59 28.1	-0.6
	comp=Z,1.5nm,0.7s,baz=104,slow=4.6,SNR=1.3						
	comp=Z,1.5nm,0.7s						
SCHQ	Schefferville	120.71	9	PKP	PKPdf	10 04 42.1	-1.6
	comp=Z,2.6nm,0.9s,baz=39,slow=17,SNR=1.7						
TORD	Torodi Ar. Bea	123.02	288	PKP	PKPdf	10 04 48.3	-0.9
	comp=Z,0.6nm,0.6s,baz=201,slow=1.8,SNR=3.8						

*IDC **15** 10:12:47.1±5.7,21°.88S×176°.13W,h0km,mb4.1/6, mbtmp4.1/6,Error ellipse: s-maj=171.8km s-min=36.5km az=133.0*

ISC 15 10:13:12.1±3.8,**21°.9S**±0°.6×**176°.5W**±0°.6,**h200**km,**n7, σ1°37/7,mb3.8/6,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.57	258	P	P	10 21 12.1	-0.4
	2.0nm,0.9s,baz=91,slow=8.1,SNR=15						
	2.0nm,0.9s						
WRA	Warramunga Arr	45.80	263	P	P	10 21 13.3	-1.0
	0.9nm,0.8s,baz=96,slow=8.2,SNR=26						
	0.9nm,0.8s						
MJAR	Matsushiro Arr	72.17	323	P	P	10 24 14.4	-0.8
	0.7nm,0.6s,baz=147,slow=5.0,SNR=2.6						
	0.7nm,0.6s						
PETK	Petropavlovsk-	77.99	344	P	P	10 24 47.5	-0.5
	3.8nm,0.9s,baz=150,slow=6.2,SNR=1.4						
	3.8nm,0.9s						
USRK	Ussuriysk Ar.	80.91	325	P	P	10 25 04.7	+0.7
	3.6nm,1.0s,baz=134,slow=5.5,SNR=4.1						
	3.6nm,1.0s						
CMAR	Chiang Mai Arr	91.89	289	P	P	10 26 00.2	+2.0
	0.6nm,0.3s,baz=158,slow=3.5,SNR=4.9						
	0.6nm,0.3s						
AKASG	Malin Array Be	144.92	331	PKPbc	PKPdf	10 32 24.2	-0.9
	0.2nm,0.3s,baz=49,slow=3.5,SNR=4.3						

*SOF **15** 10:29:26.9,40°.35N±0°.01×25°.79E±0°.01,h10km±2km, MD3.7/8*
*ISK **15** 10:29:27.2,40°.39N×25°.83E,h10km, ML3.5/30*
*ATH **15** 10:29:27.6,40°.40N×25°.88E,h14km±1km,ML3.4/15, Manual Solution by N.Liadopoulou First location: 2020/02/15 10:30:55, This location: 2020/02/15 14:19:01 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*AFAD **15** 10:29:27.9,40°.39N×25°.88E,h7km±2km,ML3.4*
*THE **15** 10:29:28.1,40°.4N±0°.6×25°.8E±0°.8,h11km±1km,M3.4/9, MLh3.4/9*

ISC 15 10:29:28.0±0.8,**40°.38N**±0°.01×**25°.85E**±0°.01,**h14**km±5km, **n154,σ0°676**/199,**10C-16D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.19	168	Pg	Pg	10 29 32.3	-0.2
GADA				Sg	Sg	10 29 35.6	+0.1
GADA	Gvkgeada	0.19	168	P	Pg	10 29 32.3	-0.2
GADA				S	Sg	10 29 35.5	0.0
GOAD	anakkale-G¶	0.22	168	P	Pg	10 29 33.0	0.0
GOAD				S	Sg	10 29 36.0	-0.3
GOAD				IAML		10 29 38.0	
	comp=N,2μm,0.5s						
SMTH	Samothraki Isl	0.26	290	P	Pg	10 29 33.3	-0.3
SMTH				S	Sg	10 29 37.1	-0.3
SMTH	Samothraki Isl	0.26	290	P	Pg	10 29 33.2	-0.3
SMTH				S	Sg	10 29 37.8	+0.4
ENZZ	Sultanice-Enez	0.32	45	Pg	Pg	10 29 34.2	-0.4
ENZZ				Sg	Sg	10 29 38.8	-0.3
CAVK	Edirne/Enez-Ca	0.40	38	⇑P	Pg	10 29 35.9	-0.1
CAVK				⇓S	Sb	10 29 42.2	-0.5
CAVK	Edirne/Enez-Ca	0.40	38	P	Pg	10 29 35.7	-0.3
CAVK				S	Sg	10 29 40.7	-0.7
ECEA	Canakkale, Ece	0.42	143	P	Pg	10 29 36.6	+0.2
ECEA				S	Sg	10 29 42.5	+0.4
ECEA				IAML		10 29 47.0	
	comp=N,9μm,0.4s						
ECEA				IAML		10 29 49.0	
	comp=E,4μm,0.6s						
ENEZ	Enez	0.42	33	Pg	Pg	10 29 36.1	-0.4
ENEZ				Sg	Sg	10 29 42.6	+0.3
ENEZ	Enez	0.42	33	P	Pg	10 29 36.2	-0.3
ENEZ				S	Sb	10 29 43.2	-0.3
GELI	Tayfur-Gelibol	0.48	88	Pg	Pg	10 29 37.2	-0.3
GELI				Sg	Sg	10 29 44.1	+0.2
CNKL	anakkale-Mer	0.52	127	P	Pg	10 29 38.1	-0.1
CNKL				S	Sg	10 29 44.0	-1.2
ALN	Alexandroupoli	0.54	16	Pg	Pg	10 29 38.0	-0.6
ALN	Alexandroupoli	0.54	16	P	Pg	10 29 38.2	-0.4
ALN				S	Sb	10 29 46.6	-0.2
ALN	Alexandroupoli	0.54	16	P	Pg	10 29 37.6	-1.0
ALN				S	Sg	10 29 44.5	-1.3
BOZC	Bozcaada	0.56	164	P	Pg	10 29 38.8	-0.2
BOZC				S	Sg	10 29 45.2	-1.4
BOZC				IAML		10 29 46.0	
	comp=N,2μm,0.4s						
ERIK	Erikli-Kesan	0.58	60	Pg	Pg	10 29 38.8	-0.7
ERIK				Sg	Sb	10 29 48.0	-0.1
GOKT	Kean, EDRN	0.66	64	P	Pg	10 29 40.0	-0.8
EZN	Ezine	0.67	146	Pg	Pg	10 29 40.3	-0.7
EZN	Ezine	0.67	146	P	Pg	10 29 40.3	-0.7
EZN				S	Sb	10 29 50.3	-0.2
LPK	Lapseki	0.70	90	Pg	Pg	10 29 41.6	0.0
EZNE	Ezine-Canakkal	0.74	147	Pg	Pb	10 29 42.4	-0.3
LAPS	Lapseki, ANA	0.77	99	P	Pg	10 29 42.3	-0.7
KESN	Edirne-Kesan	0.77	55	P	Pg	10 29 42.5	-0.7
LMN1	MIRINA LIMNOU	0.79	230	P	Pb	10 29 43.4	-0.1
LMN1				S	Sb	10 29 54.5	+0.5
RDO	Rodhopi	0.80	343	Pg	Pg	10 29 42.7	-0.8
RDO	Rodhopi	0.80	343	P	Pg	10 29 43.0	-0.6
RDO				S	Sb	10 29 54.7	+0.3
RDO	Rodhopi	0.80	343	P	Pg	10 29 42.8	-0.8
RDO				S	Pg	10 29 53.5	-0.6
BAYC	CANAKKALE_Bayr	0.83	140	P	Pg	10 29 43.7	-0.6
BAYC				S	Sg	10 29 53.4	-1.8
SFL1	Soufli	0.88	23	P	Pg	10 29 44.4	-0.7
SFL1				S	Sg	10 29 55.1	-1.5
THAS	Thassos island	0.89	285	P	Pg	10 29 44.5	-0.8
THAS				S	Sb	10 29 57.5	+0.6
THAS	Thassos island	0.89	285	P	Pg	10 29 44.5	-0.8
THAS				S	Sb	10 29 57.1	+0.2
KOCA	Canakkale, Ayv	0.91	166	P	Pg	10 29 45.2	-0.4
GPNR	Gulpinar-Canak	0.95	167	Pg	Pb	10 29 46.4	+0.2
UKOP	Uzunkopru-Edir	0.96	38	Pg	Pg	10 29 46.1	-0.4
CANM	Can-anakkale	0.99	111	Pg	Pb	10 29 47.2	+0.2
BIGA	Biga-Canakkale	1.00	95	Pg	Pg	10 29 46.3	-1.1
THS1	Thassos, Thass	1.03	291	P	Pg	10 29 47.2	-0.8
THS1				S	Sb	10 30 01.5	+0.4
FKY	Sarkoy-Tekirda	1.06	73	Pg	Pg	10 29 48.0	-0.5
SART	Tekirdag	1.06	73	P	Pg	10 29 47.5	-1.0
KRBG	Karabiga-Canak	1.11	89	Pn	Pb	10 29 48.3	-0.6
YENI	Yenice-Canakka	1.16	112	Pn	Pb	10 29 49.8	0.0
SIGR	SIGRI	1.17	180	Pn	Pb	10 29 49.8	-0.2
SIGR	SIGRI	1.17	180	P	Pb	10 29 49.4	-0.5
SIGR				S	Sn	10 30 06.1	+0.5
SIGR	SIGRI	1.17	180	P	Pb	10 29 49.5	-0.5
SIGR				S	Sn	10 30 05.9	+0.3
PRK	Paraskevi	1.18	164	P	Pb	10 29 50.0	-0.2
PRK				S	Sg	10 30 06.0	-0.1
PRK	Paraskevi	1.18	164	P	Pb	10 29 50.0	-0.2
PRK				S	Sg	10 30 06.0	-0.1
GAZK	Gazikoy-TEKIRD	1.19	72	Pn	Pb	10 29 50.1	-0.2
KAVA	Kavala	1.19	302	P	Pb	10 29 49.8	-0.5
KAVA				S	Sn	10 30 06.1	0.0
KAVA	Kavala	1.19	302	P	Pb	10 29 49.9	-0.3
KAVA				S	Sn	10 30 05.9	-0.2
YAYO	Edremit-Balk	1.22	129	Pn	Pn	10 29 50.5	+0.1
AYVA	Ayvalik	1.25	149	P	Pg	10 29 51.8	-0.4
BUHA	Balikesir, Bur	1.29	133	P	Pb	10 29 52.3	+0.2
KDZ	Kurdzhali	1.31	343	Pn	Pn	10 29 50.9	-0.9
MADA	Marmara adas	1.32	80	P	Pn	10 29 51.4	-0.5
ATIT	Gnen	1.35	102	P	Pn	10 29 52.6	+0.2
MRMT	Marmara Adasi	1.35	80	Pn	Pn	10 29 52.4	-0.1
OUR	Ouranopolis	1.43	269	Pn	Pn	10 29 52.9	-0.6
OUR	Ouranopolis	1.43	269	P	Pn	10 29 52.8	-0.7
OUR	Ouranopolis	1.43	269	P	Pn	10 29 52.5	-1.0
OUR				S	Sb	10 30 12.3	0.0
GONE	Gonen-Balikesi	1.45	103	Pn	Pn	10 29 54.2	+0.5
MURA	Muratl, TEK	1.46	58	P	Pn	10 29 54.0	+0.1
BALY	Balya	1.50	115	P	Pb	10 29 55.6	-0.1
DRA2	DRAMA	1.51	302	P	Pn	10 29 54.8	+0.2
DRA2				S	Sn	10 30 13.9	-0.1
EDC	Edincik	1.54	91	Pn	Pn	10 29 55.7	+0.7
DKL	Dikili	1.54	148	Pn	Pn	10 29 55.7	+0.2
RZN	Rozhen	1.56	328	P	Pn	10 29 55.7	+0.2
RZN				S	Sb	10 30 16.8	+0.4
RZN	Rozhen	1.56	328	P	Pg	10 29 57.8	-0.2
RZN				S	Sg	10 30 16.9	-1.3
EDRB	Edirne	1.61	25	Pn	Pn	10 29 56.0	-0.1
CRLT	Corlu	1.62	62	Pn	Pn	10 29 56.1	0.0
IZMD	zmir-Dikili-	1.62	149	P	Pb	10 29 58.2	+0.4
CMHT	Manyas	1.67	102	P	Pb	10 29 57.9	-0.6
DIM	Dimitrovgrad	1.68	353	P	Pb	10 29 59.0	+0.4
DIM				S	Sg	10 30 21.6	-0.4
KIRK	Kırklareli	1.69	34	P	Pn	10 29 57.1	0.0
ZEDA	zmir-Bergama	1.70	146	P	Pb	10 29 58.4	-0.7
BLKS	Balkesir-Sus	1.70	107	P	Pn	10 29 58.3	+1.0
BAND	Balkesir-Ban	1.72	90	⇓P	Pn	10 29 57.8	+0.3
BAND				⇓S	Sb	10 30 21.8	+0.9
BAND	Balkesir-Ban	1.72	90	P	Pb	10 29 58.8	-0.6
BKES	Balkesir-Mer	1.72	111	P	Pn	10 29 58.2	-0.2
BOTS	Marmara Eregli	1.73	69	Pn	Pn	10 29 58.4	+0.7
STEP	BALIKESIR_Sava	1.75	124	P	Pn	10 29 59.1	+1.1
SUSR	Susurluk-Balik	1.76	103	Pn	Pn	10 29 58.9	+0.8
KARB	zmir-Karabur	1.77	166	P	Pb	10 29 59.5	-0.7
SKY1	Skyros Island	1.78	214	P	Pn	10 29 58.2	-0.1
PHSR	Pinarhisar	1.78	45	Pn	Pn	10 29 58.5	+0.2
SOMA	Soma-Manisa	1.79	133	Pn	Pn	10 29 59.5	+1.1
FOCM	Foa	1.80	157	Pn	Pn	10 29 59.2	+0.6
PLG	Polygyros	1.83	271	P	Pn	10 29 58.3	-0.8
SRS	Serrai	1.86	294	P	Pn	10 29 59.3	-0.3
BAGT	Foa	1.89	155	P	Pn	10 29 60.0	+0.2
SOH	Sokhos	1.95	284	P	Pn	10 30 00.3	-0.4
PLD	Plovdiv	1.95	335	P	Pg	10 30 04.8	-0.6
PLD				S	Sg	10 30 30.4	-0.3
MMB	Musomishta	1.97	307	P	Pg	10 30 05.7	-0.1
MMB				S	Sg	10 30 32.2	+0.8
AOS2	Alonissos-2	1.98	232	P	Pn	10 30 01.1	0.0
CAMT	Merkez	1.98	145	P	Pn	10 30 02.5	+1.3
CHOS	Chios island	2.00	175	P	Pn	10 30 01.4	0.0
URLA	Izmir	2.10	164	P	Pn	10 30 04.3	+1.5
HORT	Hortiatis	2.11	277	P	Pn	10 30 02.3	-0.6
JMB	Yambol	2.17	13	*e*P	Pg	10 30 09.3	-0.3
JMB				S	Sg	10 30 36.7	-1.1
KYMI	Kymi, Euboea I	2.21	218	P	Pn	10 30 03.8	-0.4
THE	Thessaloniki	2.21	277	P	Pn	10 30 05.0	+0.7
NEO	Neokhori	2.29	243	P	Pn	10 30 04.0	-1.3
KNT	Kendrikon	2.37	290	P	Pn	10 30 06.8	+0.3
KKB	Krupnik	2.52	306	P	Pn	10 30 10.5	+2.0
KKB				S	Sg	10 30 48.7	-0.3
ELND	Elena	2.55	0	⇓P	Pn	10 30 09.9	+1.0
LIT	Litokhoron	2.58	265	P	Pn	10 30 08.9	-0.6
KARY	Karystos	2.59	205	P	Pn	10 30 09.0	-0.5
VAY	Valandovo	2.66	292	*e*Pn	Pn	10 30 11.0	+0.6
VAY				*e*Sn	Sg	10 30 54.2	+0.8
GRG	Griva	2.68	283	P	Pn	10 30 11.0	+0.2
DION	Dionisos Attik	2.74	213	P	Pn	10 30 10.9	-0.7
ATAL	Atalanti	2.76	233	P	Pn	10 30 10.8	+1.0
PLNA	Plana	2.77	320	S	Sg	10 30 57.5	+0.3
SMG	Samos	2.78	164	P	Pn	10 30 12.5	+0.4
PTL	Penteli	2.79	214	P	Pn	10 30 13.0	+0.7
LKR	Lokris	2.80	233	P	Pn	10 30 11.7	-0.7
STFN	Stefani	2.84	220	P	Pn	10 30 12.7	-0.2
SZH	Strazhitsa	2.88	2	P	Pn	10 30 14.4	+0.9
SZH				S	Sg	10 30 59.8	-0.9
ATHU	Athens Univers	2.90	214	P	Pn	10 30 13.6	-0.1
VTS	Vitosha	2.97	320	S	Sg	10 31 03.7	+0.1
SILT	Sile	2.98	74	⇑P	Pn	10 30 15.3	+0.4
VLY	Voula,Athens	2.99	213	P	Pn	10 30 15.6	+0.6
PRD	Provadia	3.01	22	P	Pn	10 30 15.9	+0.6
THL	Klokotos Trika	3.06	256	P	Pn	10 30 15.6	-0.3
NEF	NEVSHA	3.07	20	*e*P	Pn	10 30 18.0	+1.9
KZN	Kozani	3.12	270	P	Pn	10 30 16.9	+0.1
BLSH	Balsha	3.13	323	P	Pg	10 30 28.2	+0.1
BLSH				S	Sg	10 31 09.5	+0.8
PLVB	Pleven	3.14	343	⇓P	Pn	10 30 18.2	+1.1
MAKR	Makrakomi, Fth	3.18	246	P	Pn	10 30 17.2	-0.3
RAZG	Razgrad	3.22	9	⇓P	Pn	10 30 18.9	+0.8
LTK	Loutraki	3.25	224	P	Pn	10 30 18.3	-0.3
ANX	Ano Chora	3.52	241	P	Pn	10 30 22.2	-0.2
TETR	Tetrakomo, Epi	3.67	255	P	Pn	10 30 24.9	+0.5
PRMD	Pramanda	3.75	258	P	Pn	10 30 25.4	-0.1
AMPL	Ampelaki	3.86	249	P	Pn	10 30 26.9	-0.1
ICOR	Ion Corvin	4.00	21	⇓P	Pn	10 30 30.7	+1.8
VLI	Veliai	4.31	213	P	Pn	10 30 33.1	-0.1
TIRR	Tirgusor	4.50	24	⇓P	Pn	10 30 37.2	+1.5
ISR	Istrita	4.76	6	⇑P	Pn	10 30 40.6	+1.2
TPGR	Topolog	4.86	22	⇑P	Pn	10 30 41.8	+1.1
CFR	Carcaliu	5.08	19	⇓P	Pn	10 30 44.9	+1.2
VOIR		5.09	354	⇓P	Pn	10 30 44.8	+0.9
MLR	Muntele Rosu	5.11	1	⇑P	Pn	10 30 45.7	+1.5
LOT	Lotru	5.29	344	⇑P	Pn	10 30 48.1	+1.4
COVR	Voineasa-Covas	5.47	3	⇑P	Pn	10 30 51.1	+2.1
GZR	Gura Zlata	5.49	337	⇓P	Pn	10 30 50.1	+0.6
PLOR	Plostina	5.50	6	⇑P	Pn	10 30 51.6	+2.1
VRI	Vrincioaia	5.52	6	⇓P	Pn	10 30 51.5	+1.8
DOPR	Dopca	5.59	357	⇓P	Pn	10 30 52.4	+1.7
ONER	Baraj Valea Uz	5.96	4	⇓P	Pn	10 30 57.7	+1.9
BZS	Buzias	6.08	331	⇓P	Pn	10 30 58.0	+0.6
TESR	Tescani	6.16	5	⇑P	Pn	10 31 00.5	+2.0
MARR	Marisel-Cluj	6.60	343	⇓P	Pn	10 31 05.8	+1.2
SORM	Soroca	7.96	12	⇑P	Pn	10 31 24.4	+1.2

*NOU **15** 10:36:37.2, 17°.33S×177°.03W,h498km,mb4.2/18, Fiji Islands Region*
*IDC **15** 10:36:49.9±3.0, 18°.28S×178°.16W,h546km±34km, mb3.6/16,mbtmp4.5/17,Error ellipse: s-maj=18.9km s-min=16.1km az=153.0*
*NEIC **15** 10:36:52.2±1.0, 18°.2S±0°.1×178°.0W±0°.1,h574km±9km, mb4.4/31,Error ellipse: s-maj=17.7km s-min=14.7km az=80.0*

ISC 15 10:36:53.8±0.4,**18°.43S**±0°.08×**178°.13W**±0°.07,**h600**km, **n196,σ1§25/199,mb4.3/30,11C-14D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.70	280	P	P	10 38 14.7	-2.7
AFI	Afiamalu	7.58	55	P	P	10 38 44.9	-4.4
NIUE	Niue	7.80	96	P	P	10 38 48.7	-2.5
NIUE	Niue	7.80	96	P	P	10 38 53.5	+2.3
GLKZ	Green Lake	10.78	179	P	P	10 39 18.0	-2.1
DZM	Mont Dzumac	14.92	253	P	P	10 39 59.0	-2.4
	3.8nm,0.6s,baz=107,slow=19,SNR=6.9						
DZM	Mont Dzumac	14.92	253	P	P	10 40 02.9	+1.5
DZM				IAmb	IAmb	10 40 21.8	
	comp=Z,14nm,1.2s						
RAR	Rarotonga	17.49	102	P	P	10 40 20.6	-4.3
OUZ	Omahuta	18.26	202	P	P	10 40 35.4	+3.8
OUZ	Omahuta	18.26	202	P	P	10 40 35.1	+3.4
GRZ	Great Barrier	18.63	196	P	P	10 40 37.3	+2.3
WCZ	Waipu Caves	18.66	199	P	P	10 40 38.7	+3.4
KUZ	Kuaotunu	19.03	195	P	P	10 40 41.8	+3.2
KUZ	Kuaotunu	19.03	195	P	P	10 40 41.9	+3.3
MBAZ	Motutapu North	19.27	197	P	P	10 40 43.9	+3.1
MKAZ	Moumakai	19.51	196	P	P	10 40 45.6	+2.7
HAZ	Te Kaha	19.58	190	P	P	10 40 43.4	-0.2
RUGZ	Raukumara Rang	19.80	190	P	P	10 40 45.6	-0.2
PUZ	Puketiti	19.82	188	P	P	10 40 46.0	+0.2
TOZ	Tahuroa Road	20.02	195	P	P	10 40 49.5	+2.0
URZ	Urewera	20.19	191	P	P	10 40 48.0	-1.0
	comp=Z,18nm,0.3s,baz=278,slow=2.4,SNR=53						
	comp=Z,18nm,0.3s						
URZ	Urewera	20.19	191	P	P	10 40 47.7	-1.3
URZ	Urewera	20.19	191	P	P	10 40 47.2	-1.8
MWZ	Matawai	20.19	190	P	P	10 40 48.0	-1.1
RAHZ	Arahi	20.83	191	P	P	10 40 53.6	-1.2
NMHZ	Naumai	21.06	191	P	P	10 40 56.8	-0.2
BKZ	Black Stump Fm	21.18	192	P	P	10 40 56.7	-1.4
BKZ	Black Stump Fm	21.18	192	P	P	10 40 56.7	-1.4
OTVZ	Oturere	21.35	193	P	P	10 40 58.2	-1.5
KWHZ	Kaweka Forest	21.44	192	P	P	10 40 59.6	-0.8
WNVZ	Wahianoa	21.52	193	P	P	10 41 00.3	-0.9
VRZ	Vera Road	21.52	195	P	P	10 41 04.4	+3.4
KAHZ	Kahuranaki	21.72	190	P	P	10 41 02.7	-0.1
PXZ	Pawanui	21.95	190	P	P	10 41 04.5	-0.3
TSZ	Takapari Road	22.15	192	P	P	10 41 05.9	-0.8
DVHZ	Dannevirke	22.34	192	P	P	10 41 07.7	-0.6
BFZ	Birch Farm	22.70	191	P	P	10 41

ASAR			PcP	**PcP**	**10 45 46.1**	**+1.1**	
	comp=Z,1.5nm,0.4s,baz=108,slow=3.5,SNR=7.5						
ASAR			S	**S**	**10 50 11.7**	**-0.7**	
	comp=Z,1.6nm,0.8s,baz=91,slow=16,SNR=12						
	comp=Z,32nm,0.6s						
MTN	**Manton Dam**	**49.05 269**	P	**P**	**10 44 47.3**	**-0.5**	
FORT	**Forrest**	**50.02 245**	P	**P**	**10 44 55.0**	**+0.3**	
FORT			IAmb	IAmb	10 45 08.0		
	comp=Z,8.4nm,1.1s						
KNRA	**Kununurra**	**50.70 265**	P	**P**	**10 44 59.5**	**-0.4**	
KNRA			IAmb	IAmb	10 44 59.8		
	comp=Z,17nm,1.3s						
PSA00	**Pilbara Seismi**	**58.03 256**	P	**P**	**10 45 51.4**	**+0.3**	
MBWA	**Marble Bar**	**58.20 256**	P	**P**	**10 45 52.5**	**+0.3**	
MORW	**Morawa**	**60.52 247**	P	**P**	**10 46 08.3**	**+0.9**	
MORW			IAmb	IAmb	10 46 34.5		
	comp=Z,31nm,1.5s						
JHJ2	**Mitsune**	**65.12 322**	P	**P**	**10 46 36.1**	**-0.7**	
JGF	**Kuroka**	**68.31 322**	P	**P**	**10 46 55.5**	**-0.9**	
JGF			IAmb	IAmb	10 47 11.3		
	comp=Z,16nm,1.5s						
MJAR	**Matsushiro Arr**	**68.48 323**	P	**P**	**10 46 56.0**	**-1.4**	
	comp=Z,4.4nm,0.6s,baz=161,slow=5.8,SNR=23						
	comp=Z,4.4nm,0.6s						
MJAR	**Matsushiro Arr**	**68.48 323**		**P**	**10 46 56.2**	**-1.1**	
MAJO	**Matsushiro**	**68.49 323**	P	**P**	**10 46 56.5**	**-0.8**	
MAJO			IAmb	IAmb	10 46 56.8		
	comp=Z,6.8nm,0.5s						
MJB9	**Matsu-Tunnel**	**68.49 323**	P	**P**	**10 46 57.8**	**+0.3**	
MJB9			IAmb	IAmb	10 46 58.0		
	comp=Z,4.4nm,0.6s						
UGM	**Wanagama**	**69.89 268**	P	**P**	**10 47 06.7**	**+0.4**	
JKA	**Kamikawa-asahi**	**71.86 331**	P	**P**	**10 47 17.9**	**+0.8**	
ASAJ	**Asahikawa**	**71.86 331**	P	**P**	**10 47 18.0**	**+0.9**	
	comp=Z,13nm,1.0s,baz=241,slow=3.3,SNR=6.1						
	comp=Z,13nm,1.0s						
YULB	**Yu-li**	**72.27 303**	P	**P**	**10 47 19.2**	**-0.7**	
YULB			IAmb	IAmb	10 47 28.4		
	comp=Z,14nm,1.0s						
PETK	**Petropavlovsk-**	**74.25 345**	P	**P**	**10 47 29.5**	**-1.0**	
	comp=Z,5.1nm,0.6s,baz=98,slow=7.4,SNR=18						
	comp=Z,5.1nm,0.6s						
PETK	**Petropavlovsk-**	**74.25 345**	P	**P**	**10 47 29.9**	**-0.6**	
KSRS	**Korea Array**	**75.27 318**	P	**P**	**10 47 37.0**	**+0.5**	
	comp=Z,1.1nm,0.6s,baz=130,slow=6.4,SNR=5.3						
	comp=Z,1.1nm,0.6s						
NVAR	**Mina Array Bea**	**79.62 44**	P	**P**	**10 48 01.1**	**+0.9**	
	comp=Z,1.5nm,0.7s,baz=224,slow=8.6,SNR=16						
	comp=Z,1.5nm,0.7s						
P18K	**Big Mountain,**	**79.78 12**	P	**P**	**10 47 59.7**	**-0.6**	
P18K			IAmb	IAmb	10 48 00.2		
	comp=Z,14nm,0.9s						
BELA	**Belgrano 2**	**81.61 173**	P	**P**	**10 48 12.1**	**+2.4**	
BELA			IAmb	IAmb	10 48 21.7		
	comp=Z,25nm,1.5s						
M19K	**Big River Lodg**	**82.27 11**	P	**P**	**10 48 12.8**	**-0.3**	
ENH	**Enshi**	**84.78 304**	P	**P**	**10 48 26.3**	**0.0**	
ENH			IAmb	IAmb	10 48 28.0		
	comp=Z,8.5nm,0.8s						
TXAR	**Lajitas Array**	**86.05 57**	P	**P**	**10 48 34.8**	**+2.4**	
	comp=Z,1.8nm,0.7s,baz=214,slow=6.1,SNR=27						
	comp=Z,1.8nm,0.7s						
ILAR	**Eielson Array**	**86.34 13**	P	**P**	**10 48 31.9**	**-1.0**	
	comp=Z,1.5nm,0.4s,baz=222,slow=5.0,SNR=45						
	comp=Z,1.5nm,0.4s						
PDAR	**Pinedale Array**	**87.55 43**	P	**P**	**10 48 40.1**	**+0.7**	
	comp=Z,1.0nm,0.6s,baz=231,slow=2.4,SNR=12						
	comp=Z,1.0nm,0.6s						
I26K	**Coal Creek Min**	**87.62 14**	P	**P**	**10 48 39.3**	**+0.4**	
CMAR	**Chiang Mai Arr**	**89.31 290**	P	**P**	**10 48 48.8**	**+1.0**	
	comp=Z,1.6nm,0.8s,baz=111,slow=3.0,SNR=11						
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**94.12 319**	P	**P**	**10 49 10.0**	**+0.6**	
	comp=Z,0.3nm,0.3s,baz=145,slow=5.3,SNR=1.9						
	comp=Z,0.3nm,0.3s						
YKA	**Yellowknife Ar**	**94.69 25**	P	**P**	**10 49 11.1**	**-0.3**	
	comp=Z,0.3nm,0.5s,baz=252,slow=4.4,SNR=6.7						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**94.69 25**	P	**P**	**10 49 11.0**	**-0.4**	
MKAR	**Makanchi Array**	**109.69 314**	PKiKP	**PKiKP**	**10 54 16.8**	**-0.6**	
	comp=Z,0.4nm,0.5s,baz=239,slow=0.8,SNR=5.2						
MKAR	**Makanchi Array**	**109.69 314**		**PKiKP**	**10 54 17.5**	**+0.1**	
KURBB	**Kurchatov Arra**	**112.44 318**	PKiKP	**PKiKP**	**10 54 22.1**	**-0.4**	
	comp=Z,0.5nm,0.6s,baz=99,slow=2.2,SNR=6.3						
BVAR	**Borovoye Array**	**117.42 321**	PKP	**PKPdf**	**10 54 32.1**	**+0.1**	
	comp=Z,1.1nm,0.4s,baz=106,slow=1.8,SNR=9.4						
ARCES	**ARCESS Array B**	**126.88 350**	PKP	**PKPdf**	**10 54 49.8**	**+0.1**	
	comp=Z,0.8nm,0.4s,baz=54,slow=1.7,SNR=8.6						
FINES	**FINESS Array B**	**133.76 344**	PKP	**PKPdf**	**10 55 03.6**	**+0.7**	
	comp=Z,3.7nm,0.8s,baz=90,slow=3.8,SNR=3.4						
HFS	**Hagfors**	**137.49 351**	PKhKP	PKPpre	10 55 00.5		
	comp=Z,0.8nm,0.4s,baz=74,slow=7.9,SNR=6.2						
AKASG	**Malin Array Be**	**141.15 332**	PKhKP	PKPpre	10 55 07.2		
	comp=Z,0.7nm,0.4s,baz=42,slow=4.1,SNR=5.4						
AKASG			PKP	**PKPdf**	**10 55 17.8**	**+1.1**	
	comp=Z,0.2nm,0.3s,baz=44,slow=3.5,SNR=4.9						
SORM	**Soroca**	**143.38 330**	⇑P	PKPab	10 55 19.2	-0.1	
BURAR	**Bucovina Array**	**145.20 332**	⇓P	**PKPab**	**10 55 26.7**	**+0.1**	
GHRR		**145.29 328**	⇓P	**PKPab**	**10 55 26.7**	**-0.1**	
BR131	**Keskin Array S**	**145.34 314**		**PKPbc**	**10 55 26.8**	**+0.8**	
BRTR	**Keskin Array B**	**145.34 314**	PKPbc	**PKPbc**	**10 55 26.1**	**+0.2**	
	comp=Z,2.6nm,0.7s,baz=134,slow=5.3,SNR=15						
BRTR	**Keskin Array B**	**145.34 314**		**PKPbc**	**10 55 26.8**	**+0.8**	
TESR	**Tescani**	**145.34 329**	⇑P	**PKPbc**	**10 55 25.6**	**0.0**	
KIRS	**Kirsehir-Merke**	**145.43 313**	⇑P	**PKPbc**	**10 55 26.9**	**+0.8**	
CFR	**Carcaliu**	**145.52 326**	⇓P	**PKPbc**	**10 55 26.9**	**+0.8**	
TPGR	**Topolog**	**145.58 326**	⇑P	**PKPbc**	**10 55 26.0**	**-0.4**	
ONER	**Baraj Valea Uz**	**145.59 329**	⇓P	**PKPbc**	**10 55 27.4**	**+1.0**	
VRI	**Vrincioaia**	**145.76 329**	⇓P	**PKPdf**	**10 55 25.0**	**0.0**	
OSTC	**Ostas**	**145.97 344**	*e*PKP	**PKPbc**	**10 55 28.4**	**+1.1**	
CHVC	**Chvalec**	**145.98 344**	*e*PKP	**PKPbc**	**10 55 27.8**	**+0.5**	
CLL	**Collm**	**146.03 347**		**PKPbc**	**10 55 28.3**	**+1.0**	
CLL	**Collm**	**146.03 347**	⇓*i*P	**PKPbc**	**10 55 27.9**	**+0.5**	
	comp=Z,17nm,0.8s						
OZUR		**146.06 330**	⇓P	**PKPbc**	**10 55 28.7**	**+1.1**	
UPC	**Upice**	**146.06 344**	*e*PKP	**PKPbc**	**10 55 28.6**	**+1.1**	
STEB	**Steborice**	**146.08 342**	*e*PKP	**PKPbc**	**10 55 28.5**	**+0.9**	
DPC	**Dobruska-Polom**	**146.12 343**	*e*PKP	**PKPbc**	**10 55 28.9**	**+1.2**	
BRG	**Berggiesshubel**	**146.24 346**	*i* P	**PKPbc**	**10 55 28.9**	**+1.0**	
BRG			Amp		10 55 29.6		
	comp=Z,5.7nm,0.7s						
DOPR	**Dopca**	**146.34 330**	⇓P	**PKiKP**	**10 55 29.9**	**-0.7**	
PVCC	**Panska Ves**	**146.41 345**	*e*PKP	**PKPbc**	**10 55 29.3**	**+0.9**	
MLR	**Muntele Rosu**	**146.42 329**	⇓P	**PKPbc**	**10 55 29.8**	**+1.0**	
HSKC	**Hora Svate Kat**	**146.60 347**	*e*PKP	**PKPbc**	**10 55 29.6**	**+0.6**	
CJR	**Cluj-Napoca**	**146.60 332**	⇑P	**PKPbc**	**10 55 30.3**	**+1.2**	
MMAI	**Mount Meron Ar**	**146.65 302**	PKPbc	**PKiKP**	**10 55 31.2**	**-0.6**	
	comp=Z,3.0nm,0.4s,baz=47,slow=6.1,SNR=6.8						
SULR		**146.83 327**	⇓P	**PKPdf**	**10 55 21.8**	**-5.0**	
MARR	**Marisel-Cluj**	**146.84 333**	⇓P	**PKPbc**	**10 55 30.6**	**+0.8**	
VOIR		**146.89 330**	⇓P	**PKiKP**	**10 55 31.8**	**-0.1**	
PRU	**Pruhonice**	**146.92 345**	*e*PKP	**PKPbc**	**10 55 30.6**	**+0.8**	
DRGR		**146.92 333**	⇑P	**PKPbc**	**10 55 30.9**	**+0.9**	
VRAC	**Vranov**	**146.99 342**	⇑P	**PKPbc**	**10 55 30.7**	**+0.7**	
JAVC	**Velka Javorina**	**147.06 341**	*e*PKP	**PKiKP**	**10 55 32.1**	**0.0**	
ARR	**Arges**	**147.14 330**	⇓P	**PKiKP**	**10 55 32.4**	**+0.1**	
KRUC	**Moravsky**	**147.27 342**	*e*PKP	**PKPbc**	**10 55 31.5**	**+0.7**	
ZVC	**Zvikov**	**147.51 345**	*e*PKP	**PKiKP**	**10 55 32.7**	**-0.2**	
KHC	**Kasperske Hory**	**147.95 345**	*e*PKP	**PKPbc**	**10 55 32.5**	**-0.1**	
GZR	**Gura Zlata**	**147.98 332**	⇑P	**PKPbc**	**10 55 32.9**	**+0.1**	
CKRC	**Cesky Krumlov**	**148.06 344**	*e*PKP	**PKPbc**	**10 55 33.7**	**+0.9**	
GERES	**GERESS Array B**	**148.19 345**	PKPbc	**PKPbc**	**10 55 33.9**	**+0.7**	
	comp=Z,3.3nm,0.6s,baz=26,slow=4.0,SNR=22						
ELND	**Elena**	**148.24 325**	⇑P	**PKPbc**	**10 55 34.2**	**+0.8**	
BZS	**Buzias**	**148.32 333**	⇓P	**PKPbc**	**10 55 34.1**	**+0.6**	
CONA	**Conrad Observa**	**148.44 342**	*e*PKP	**PKiKP**	**10 55 35.2**	**+0.2**	
	comp=Z,5.8nm,0.9s						
RONA	**Rosalia, Austr**	**148.52 341**	*e*PKP	**PKiKP**	**10 55 35.3**	**+0.2**	
	comp=Z,3.9nm,0.7s						
HERR	**Herculane**	**148.54 331**	⇑P	**PKPbc**	**10 55 34.3**	**+0.2**	
BIOA	**Bad Ischl, Aus**	**149.27 344**	*e*PKP	**PKiKP**	**10 55 37.1**	**+0.5**	
	comp=Z,4.4nm,0.6s						
BIOA			*i* PKP	**PKPab**	**10 55 43.7**	**+0.7**	
	comp=Z,4.4nm,0.6s						
LESA	**Schwarzleotal**	**149.76 345**	*e*PKP	**PKPbc**	**10 55 37.7**	**+0.6**	
	comp=Z,1.5nm,0.4s						
SOKA	**Soboth**	**149.81 342**	*e*PKP	**PKPbc**	**10 55 37.7**	**+0.5**	
	comp=Z,3.2nm,0.8s						
BOVS	**Bovan**	**149.82 331**	⇑P	**PKPbc**	**10 55 37.2**	**0.0**	
KBA	**Koelnbreinsper**	**149.91 344**	*i* PKP	**PKiKP**	**10 55 38.6**	**+0.4**	
	comp=Z,1.2nm,0.5s,SNR=5.4						
KBA			*i* PKP	**PKPab**	**10 55 47.0**	**+1.2**	
	comp=Z,4.5nm,0.6s						
WATA	**Walderalm**	**150.09 347**	*e*PKP	**PKiKP**	**10 55 39.5**	**+1.0**	
	comp=Z,3.2nm,0.6s						
RETA	**Reutte**	**150.12 348**	*e*PKP	**PKiKP**	**10 55 38.7**	**+0.3**	
	comp=Z,0.5nm,0.4s						
WTTA	**Wattenberg**	**150.15 347**	*i* PKP	**PKiKP**	**10 55 39.0**	**+0.4**	
	comp=Z,7.9nm,0.5s,SNR=9.3						
MOTA	**Moosalm**	**150.19 347**	*e*PKP	**PKiKP**	**10 55 38.9**	**+0.2**	
	comp=Z,2.1nm,0.6s						
MYKA	**Terra Mystica**	**150.25 344**	*e*PKP	**PKPbc**	**10 55 38.4**	**+0.1**	
	comp=Z,2.1nm,0.5s						
SQTA	**Sankt Quirin**	**150.28 347**	*e*PKP	**PKiKP**	**10 55 39.2**	**+0.4**	
	comp=Z,5.9nm,0.6s						
ABTA	**Abfaltersbach**	**150.43 345**	*e*PKP	**PKPbc**	**10 55 39.0**	**+0.3**	
	comp=Z,7.1nm,0.6s						
DAVA	**Damuels**	**150.48 349**	*e*PKP	**PKiKP**	**10 55 39.6**	**+0.3**	
	comp=Z,4.9nm,0.6s						
FETA	**Feichten**	**150.57 348**	*i* PKP	**PKiKP**	**10 55 40.2**	**+0.7**	
	comp=Z,5.0nm,0.7s,SNR=4.5						

UPP ***15*** *10:39:21.3±0.1, 67.86N×20.13E, h0km, ML2.5, Confirmed Induced event*
HEL ***15*** *10:39:22.7±0.3, 67.86N×20.29E, h0km, ML1.3, Suspected explosion*

ISC 15 10:39:20.9±0.8, 67.83N±0.02×20.18E±0.03, h0km, n21, σ0s71/34, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**25**	P	**Pg**	**10 39 24.0**	**+0.3**
	baz=219						
KUA				S	**Sg**	**10 39 26.0**	**+0.5**
RATU	**Laukkuluspa**	**0.22**	**270**	P	**Pg**	**10 39 25.6**	**+0.5**
KOVU	**Salmi**	**0.40**	**359**	P	**Pg**	**10 39 28.4**	**-0.1**
KOVU				S	**Sg**	**10 39 33.4**	**-0.3**
NIKU	**Nikkaluokta**	**0.43**	**276**	P	**Pg**	**10 39 29.1**	**-0.1**
NIKU				S	**Sg**	**10 39 35.1**	**+0.3**
LANU	**Lannavaara**	**0.72**	**71**	P	**Pg**	**10 39 35.0**	**+0.3**
LANU	**Lannavaara**	**0.72**	**71**	PG	**Pg**	**10 39 35.0**	**+0.3**
LANU				SG	**Sg**	**10 39 43.5**	**-0.6**
SALU	**Saltoluokta**	**0.78**	**236**	*e*P	**Pg**	**10 39 35.7**	**-0.1**
KIF	**Kilpisjarvi**	**1.21**	**11**	*e*P	**Pg**	**10 39 44.2**	**+0.2**
KIF	**Kilpisjarvi**	**1.21**	**11**	PG	**Pb**	**10 39 44.5**	**-0.1**
KIF				smax	smax	10 39 59.3	
	comp=Z,4.1nm,0.2s						
KIF				SB	**Sb**	**10 40 00.6**	**-0.1**
PAJU	**Pajala**	**1.39**	**124**	PG	**Pg**	**10 39 46.8**	**-0.8**
	baz=308						
PAJU				SN	**Sn**	**10 40 06.4**	**-0.2**
HEF	**Hetta**	**1.43**	**64**	PN	**Pn**	**10 39 47.9**	**-0.2**
	baz=248						
HEF				smax	smax	10 40 04.2	
	comp=Z,1.9nm,0.2s						
HEF				SN	**Sn**	**10 40 08.8**	**+1.2**
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	**Pg**	**10 39 49.9**	**+0.3**
	baz=328						
ERTU				SN	**Sn**	**10 40 11.0**	**+1.7**
KLF	**Kolari**	**1.57**	**110**	PG	**Pb**	**10 39 50.5**	**-0.3**
KLF				smax	smax	10 40 08.8	
	comp=Z,1.2nm,0.2s						
KLF				SN	**Sg**	**10 40 12.1**	**+0.8**
TRO	**Tromso**	**1.87**	**346**	SG	**Sg**	**10 40 20.4**	**-0.6**
KALU	**Kalix**	**2.34**	**146**	PB	**Pb**	**10 40 03.0**	**-1.0**
KALU				SG	**Sg**	**10 40 35.4**	**-0.6**
TOF	**Tornio**	**2.40**	**135**	PG	**Pb**	**10 40 04.4**	**-0.4**
TOF				smax	smax	10 40 33.4	
	comp=Z,1.0nm,0.2s						
TOF				SG	**Sb**	**10 40 36.0**	**+1.2**
RNF	**Rovaniemi**	**2.58**	**116**	PG	**Pb**	**10 40 07.1**	**-0.9**
RNF				SG	**Sb**	**10 40 39.6**	**-0.6**
ARA0	**ARCESS Array S**	**2.60**	**46**	PG	**Pb**	**10 40 06.9**	**-1.4**
ARA0				SG	**Sb**	**10 40 40.5**	**-0.2**
RAJF	**Raja-Jooseppi**	**3.11**	**74**	SG	**Sb**	**10 40 56.8**	**+1.4**
KEV	**Kevo**	**3.15**	**49**	SG	**Sb**	**10 40 56.4**	**-0.1**
MSF	**Maaselka**	**3.99**	**115**	SN	**Sn**	**10 41 11.4**	**+0.8**

SDD 15 10:41:34.3±2.4, 19.05N×67.63W, h0km±18km, MD2.8, ML2.2, MW2.3, 7C, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.76**	**139**	⇑*i*P	Pg	10 41 48.7	-0.2
AGPR				*i* S	Sg	10 41 56.1	-2.7
	comp=N,85nm,3.1s						
PCDR	**Punta Cana, DR**	**0.89**	**233**	⇑*i*P	Pg	10 41 50.1	-1.3
PCDR				IAML		10 42 12.1	
	comp=N,128nm,2.1s						
PRSN	**Puerto Rico Se**	**0.95**	**151**	*i* P	Pg	10 41 50.9	-1.6
PRSN				⇑*i*S	Sg	10 42 04.1	-0.8
CRPR	**Cabo Rojo, PR**	**1.15**	**154**	⇑*i*P	Pg	10 41 55.8	-0.6
CRPR				⇑*i*S	Sg	10 42 11.9	+0.5
	comp=N,62nm,0.9s						
CRPR				IAML		10 42 14.2	
	comp=N,42nm,0.9s						
MIDR	**Miches**	**1.34**	**267**	*i* S	Sg	10 42 16.5	-1.0
HATOM	**Hato Mayor del**	**1.68**	**261**	⇑*i*P	Pn	10 42 03.1	-1.8
HATOM				⇑*i*S	Sn	10 42 24.1	-3.1
	comp=N,19nm,1.4s						

JMA 15 10:58:53.2±0.2, 32.5N±0.7×130.6E±0.7, h10km±2km, MV0.3/8, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.16**	**77**	*e*S	Sg	10 58 58.6	-0.7
JHD	**Hondo**	**0.41**	**264**	*e*P	Pg	10 59 01.4	+0.1

IDC ***15*** *11:00:03.8±0.4, 23.83N×121.60E, h0km, mb5.1/38, mbtmp5.1/42, ML4.6/3, MS4.6/67, Error ellipse: s-maj=12.3km s-min=11.3km az=68.0*
MOS ***15*** *11:00:04.2±1.2, 23.84N×121.65E, h14km, mb5.6/81, MS5.0/13, Error ellipse: s-maj=6.5km s-min=3.7km az=116.9*
NEIC ***15*** *11:00:05.7, 23.84N×121.62E, h16km*
BJI ***15*** *11:00:05.5, 23.95N×121.49E, h10km, mB5.5/56, mb5.2/77, ML5.6/13, Ms5.6/92, Ms7.5/89*
NEIC ***15*** *11:00:05.7, 23.74N×121.51E, h16km, Moment Tensor Solution. Duration: 1s1.0 Moment tensor: Scale 10^17 Nm; Mrr0.60; Mθθ-0.31; Mϕϕ-0.29; Mrθ0.66; Mθϕ-0.54; Mϕr-0.14; Fault plane solution: M0.1.01000×10^17 NP1: ϕs197.31000°, δ39.53000°, λ36.51000°. NP2:ϕs77.59000°, δ67.75000°, λ123.55000°. Principal axes: T 1.0640, Plg54.0000°, Azm30.0000°; N -0.1096, Plg31.0000°, Azm243.0000°; P -0.9544, Plg16.0000°, Azm144.0000°;*
NEIC ***15*** *11:00:05.7±1.4, 23.84N±0.04×121.62E±0.05, h10km±1km, mb5.7/434, Mww5.3/17 Error ellipse: s-maj=7.9km s-min=7.4km az=232.0*
GCMT ***15*** *11:00:06.7±0.1, 23.79N±0.01×121.48E±0.01, h18km, MW5.3/129, Moment Tensor Solution. s77, c113; s129, c218; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.86±.03; Mθθ-0.36±.02; Mϕϕ-0.50±.02; Mrθ0.59±.04; Mθϕ-0.53±.01; Mϕr0.08±.04; Best double couple: M0.1.09300×10^17 NP1:ϕs202.00000°, δ35.00000°, λ56.00000°. NP2:ϕs62.00000°, δ61.00000°, λ112.00000°. Principal axes: T 1.1090, Plg66.0000°, Azm12.0000°; N -0.0320, Plg19.0000°, Azm231.0000°; P -1.0770, Plg14.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ASIES ***15*** *11:00:06.5, 23.84N×121.52E, h10km, Mw5.2, Fault plane solution: NP1:ϕs216.00000°, δ36.00000°, λ72.00000°. NP2:ϕs57.00000°, δ56.00000°, λ102.00000°.*
BGR ***15*** *11:00:06.1, 23.31N×122.36E, h33km, mb5.3, Ms5.1*
GFZ ***15*** *11:00:06.7, 23.83N×121.57E, h17km, MW5.2, Moment Tensor Solution. s67 Moment tensor: Mrr7.72; Mθθ-3.24; Mϕϕ-4.48; Mrθ1.98; Mθϕ-4.55; Mϕr-1.95; Fault plane solution: NP1:ϕs203.00000°, δ49.00000°, λ64.00000°. NP2:ϕs59.00000°, δ48.00000°, λ117.00000°. Principal axes: T 8.6900, Plg71.0000°, Azm43.0000°; N -0.2300, Plg19.0000°, Azm221.0000°; P -8.4500, Plg1.0000°, Azm311.0000°;*
TAP ***15*** *11:00:06.5, 23.86N×121.51E, h8km, ML5.7, C*
NIED ***15*** *11:00:06.1, 23.83N×121.55E, h9km, MW5.5, Moment Tension Solution. s3 Moment tensor: Scale 10^17Nm; Mrr0.11; Mθθ0.03; Mϕϕ-0.14; Mrθ1.67; Mθϕ-0.52; Mϕr0.55;*

Fault plane solution: M0.1.83000×10^17 NP1: ϕs174.00000°, δ15.00000°, λ11.00000°. NP2:ϕs73.00000°, δ87.00000°, λ105.00000°.
JMA ***15*** *11:00:06.1±0.1, 23.84N±0.5×12.2E±, h9km±2km, MD5.5/19, MW5.3/19, TAIWAN REGION*

ISC 15 11:00:06.5±0.5, 23.83N±0.01×121.58E±0.01, h15km±2km, n1451, σ1s42/1459, mb5.6/419, MS4.8/86, 99C-111D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.04**	**22**	⇑P	**Pg**	**11 00 09.7**	**+0.4**
TEYL				*i* S	**Sg**	**11 00 11.9**	**+0.9**
SHUL	**Shoufeng**	**0.05**	**202**	⇑*i*P	**Pg**	**11 00 09.2**	**0.0**
SHUL				*i* S	**Sg**	**11 00 11.4**	**+0.4**
TEGC	**Jichi Village**	**0.13**	**197**	⇑P	**Pg**	**11 00 10.2**	**+0.2**
TEGC				S	**Sb**	**11 00 14.0**	**+0.6**
ESL	**Shilin**	**0.14**	**263**	⇑*i*P	**Pg**	**11 00 08.7**	**-1.5**
ESL				*i* S	**Sg**	**11 00 10.3**	**-2.4**
HWA	**Hwalien**	**0.15**	**8**	⇓*i*P	**Pg**	**11 00 10.6**	**+0.3**
ETM	**Tongmen**	**0.16**	**329**	⇓*i*P	**Pg**	**11 00 09.6**	**-0.9**
ETM				S	**Sg**	**11 00 11.4**	**-1.8**
WARBT	**Fenglin Townsh**	**0.21**	**238**	⇑*i*P	**Pg**	**11 00 10.0**	**-1.3**
WARBT				S	**Sg**	**11 00 12.6**	**-2.0**
LXIB	**Xiulin Townshi**	**0.24**	**321**	⇓*i*P	**Pg**	**11 00 11.0**	**-1.0**
LXIB				*i* S	**Sg**	**11 00 14.1**	**-1.6**
TWD	**Chiawan**	**0.25**	**3**	⇓*i*P	**Pg**	**11 00 11.8**	**-0.2**
TWD				*i* S	**Sg**	**11 00 15.2**	**-0.4**
ETL	**Fush Village**	**0.33**	**7**	⇓*i*P	**Pg**	**11 00 13.0**	**-0.3**
ETL				*i* S	**Sg**	**11 00 17.5**	**-0.5**
NACB	**Ninganchiao**	**0.34**	**2**		**Pg**	**11 00 12.9**	**-0.6**
NACB				Sg	**Sg**	**11 00 17.4**	**-0.9**
NACB	**Ninganchiao**	**0.34**	**2**	P	**Pg**	**11 00 13.5**	**-0.1**
NACB	**Ninganchiao**	**0.34**	**2**	P	**Pn**	**11 00 17.9**	**+0.9**
NACB	**Ninganchiao**	**0.34**	**2**	⇓*i*P	**Pg**	**11 00 13.1**	**-0.4**
NACB				S	**Sg**	**11 00 17.2**	**-1.1**
HGSD	**Ruisui**	**0.37**	**203**	⇑*i*P	**Pg**	**11 00 14.2**	**+0.2**
ETLH	**Xiulin Townshi**	**0.39**	**346**	⇓*i*P	**Pg**	**11 00 13.7**	**-0.7**
ETLH				*e*S	**Sg**	**11 00 18.2**	**-1.5**
OWD	**Renai**	**0.39**	**288**	⇓*e*P	**Pg**	**11 00 13.5**	**-1.0**
OWD				*e*S	**Sg**	**11 00 17.8**	**-2.1**
EHYH	**Wanrong**	**0.40**	**213**	⇑*e*P	**Pg**	**11 00 13.8**	**-0.8**
EHYH				*e*S	**Sg**	**11 00 18.9**	**-1.1**
EHY	**Hungye**	**0.40**	**216**	⇑P	**Pg**	**11 00 13.7**	**-1.0**
VWDT	**VWDT**	**0.41**	**259**	⇓*i*P	**Pg**	**11 00 14.1**	**-0.7**
VWDT				*i* S	**Sg**	**11 00 18.8**	**-1.6**
WHF	**Hehuan Shan**	**0.43**	**317**	⇓*i*P	**Pg**	**11 00 14.2**	**-1.0**
WHF				*e*S	**Sg**	**11 00 19.7**	**-1.4**
WUSB	**Renai**	**0.45**	**291**	⇓*i*P	**Pg**	**11 00 14.9**	**-0.8**
WUSB				*i* S	**Sg**	**11 00 20.1**	**-1.7**
EHP	**Heping Village**	**0.50**	**17**	*e*P	**Pg**	**11 00 16.2**	**-0.2**
YULB	**Yu-li**	**0.51**	**211**		**Pg**	**11 00 15.9**	**-0.7**
YULB	**Yu-li**	**0.51**	**211**	P	**Pb**	**11 00 17.2**	**0.0**
YULB	**Yu-li**	**0.51**	**211**	⇑*i*P	**Pg**	**11 00 15.5**	**-1.1**
EAHA	**Aohua**	**0.52**	**16**	⇓*i*P	**Pg**	**11 00 16.6**	**-0.2**
EAHA				*e*S	**Sg**	**11 00 23.6**	**-0.1**
FUSS	**Fushou**	**0.52**	**323**	⇓*i*P	**Pg**	**11 00 16.1**	**-0.7**
FUSS				*e*S	**Sg**	**11 00 22.2**	**-1.6**
ECBN	**Changbin**	**0.53**	**193**	⇓*i*P	**Pb**	**11 00 17.9**	**+0.4**
TWF1	**Yuli**	**0.54**	**209**	⇑*e*P	**Pg**	**11 00 16.5**	**-0.7**
TWT	**Tachien**	**0.56**	**319**	⇓*i*P	**Pg**	**11 00 17.1**	**-0.5**
TWT				*i* S	**Sg**	**11 00 24.0**	**-1.2**
TDCB	**Techi**	**0.57**	**317**	⇓*i*P	**Pg**	**11 00 17.2**	**-0.6**
T

NJD eS Sb 11 00 38.0 -0.8
STYT Tauyuan 1.01 229 ⇑*i*P Pb 11 00 25.1 -0.7
STYT S Sb 11 00 38.2 -0.7
NMLH Miaoli 1.01 314 ⇓*i*P Pn 11 00 26.4 +0.3
NMLH eS Sg 11 00 39.5 +0.3
KSHI Guanxi Townshi 1.01 339 ⇓*i*P Pg 11 00 26.1 0.0
TPUB Ta-pu 1.02 239 Pg 11 00 26.2 -0.1
TPUB Ta-pu 1.02 239 P Pg 11 00 26.3 0.0
TPUB Ta-pu 1.02 239 S Sg 11 00 39.6 0.0
TPUB Ta-pu 1.02 239 ⇑*i*P Pb 11 00 26.0 +0.1
TPUB S Sb 11 00 38.4 -0.8
CHN4 Tsaushan 1.02 242 ⇑*e*P Pg 11 00 26.4 0.0
NTC Toucheng 1.04 12 *e*P Pb 11 00 25.9 -0.4
CHN2 Minshiung 1.06 254 *e*P Pg 11 00 27.1 +0.1
CHN2 eS Sg 11 00 41.0 +0.2
EGS 1.06 18 ⇑P Pb 11 00 26.3 -0.3
WTP Ta-pu 1.06 237 ⇑P Pb 11 00 26.6 0.0
WTP eS Sb 11 00 40.4 0.0
NJN Zhunan 1.07 323 *e*P Pg 11 00 27.5 +0.3
NJN eS Sb 11 00 40.8 +0.2
HSN1 Hsinchu 1.07 332 ⇓*i*P Pg 11 00 27.5 +0.2
HSN1 eS Sb 11 00 39.7 -1.0
SBCB Hsinchu 1.10 331 ⇓*i*P Pg 11 00 28.0 +0.2
SBCB S Sb 11 00 41.8 +0.3
TWG Pinlang 1.11 205 Pb 11 00 25.8 -1.6
TWG Pinlang 1.11 205 *e*P Pb 11 00 27.2 -0.3
TWGBT Beinan 1.11 205 P Pb 11 00 26.0 -1.4
TWGBT Beinan 1.11 205 S Sn 11 00 43.1 +0.5
TWGBT Beinan 1.11 205 *e*P Pb 11 00 24.9 -2.5
CHY Chiayi 1.11 253 *e*P Pn 11 00 27.8 +0.2
HSN Hsinchu 1.12 330 ⇓*i*P Pg 11 00 28.6 +0.5
HSN S Sg 11 00 42.6 -0.1
RLNB Erlin 1.12 273 ⇓*i*P Pb 11 00 27.7 0.0
RLNB eS Sb 11 00 42.5 +0.4
TATO Taipei 1.14 356 Pn 11 00 27.9 -0.2
TATO Taipei 1.14 356 P Pg 11 00 28.5 -0.1
TATO Taipei 1.14 356 P Pg 11 00 28.6 0.0
TATO Taipei 1.14 356 ⇑*i*P Pn 11 00 28.0 -0.1
TTN Taitung 1.14 201 *e*P Pb 11 00 28.2 +0.1
TWA Mucha 1.14 0 ⇑⇑P Pn 11 00 27.7 -0.4
TWA eS Sb 11 00 41.4 -1.3
TWK Hsinying 1.15 241 *e*P Pn 11 00 28.1 0.0
TWK S Sn 11 00 43.4 -0.4
TIPB Shuangxi 1.16 11 *e*P Pb 11 00 28.4 +0.1
CHN1 Nanshi 1.16 237 ⇑⇑P Pn 11 00 28.3 0.0
CHN1 eS Sn 11 00 43.6 -0.4
SNST Tainan City 1.17 239 *e*P Pg 11 00 30.8 +1.7
BACT New Taipei Cit 1.17 354 *e*P Pb 11 00 28.5 0.0
SGST Jiashian 1.18 231 ⇑⇑*e*P Pn 11 00 27.7 -0.9
SGST eS Sb 11 00 44.0 +0.1
NCUH Zhongli 1.19 342 *e*P Pg 11 00 29.6 +0.2
WTCT Ta-ch'eng 1.19 272 *e*P Pn 11 00 28.7 0.0
WTCT S Sn 11 00 44.6 0.0
NTY Taoyuan 1.19 348 ⇑⇑*e*P Pg 11 00 29.5 0.0
NTY eS Sn 11 00 44.6 -0.1
NHY Taipei 1.20 359 *e*P Pg 11 00 29.7 -0.1
TAP Taipei 1.21 357 *e*P Pn 11 00 28.9 0.0
TAP eS Sb 11 00 43.8 -0.7
TWB1 Santiao Chiao 1.23 17 ⇑⇑*e*P Pn 11 00 29.0 -0.3
TWB1 eS Sb 11 00 45.0 -0.2
WMLT Mailiao 1.24 269 *e*P Pn 11 00 29.2 -0.3
NWF Wu-fen Shan 1.25 8 *e*P Pg 11 00 30.3 -0.3
WFSB Wu-fen Shan 1.25 8 ⇑⇑P Pn 11 00 29.2 -0.2
WFSB S Sb 11 00 45.6 -0.1
WSF Szhu 1.26 262 *e*P Pn 11 00 29.8 +0.2
WSL Shuilin Townsh 1.28 256 *e*P Pg 11 00 30.9 -0.2
WSL eS Sg 11 00 47.9 +0.1
SXI1 Grass Mountain 1.29 12 ⇑⇑P Pn 11 00 30.0 +0.1
YM01 YM01 1.31 360 *e*P Pn 11 00 30.5 +0.1
TNOU National Taiwa 1.32 8 *e*P Pb 11 00 30.9 -0.2
ZUZH Zhuzihu 1.33 359 *e*P Pn 11 00 30.0 -0.6
ZUZH eS Sg 11 00 48.9 -0.4
NTST Danshui 1.33 355 *e*P Pg 11 00 31.9 -0.3
CHN3 Shinhua 1.35 236 ⇑⇑P Pg 11 00 32.2 -0.2
CHN3 eS Sg 11 00 51.5 +1.5
CHN8 Yiju 1.35 249 ⇑⇑P Pb 11 00 31.3 -0.2
CHN8 S Sg 11 00 49.5 -0.5
ANP Anpu 1.35 358 *e*P Pn 11 00 30.8 -0.2
ANP eS Sg 11 00 50.3 +0.1
YM08 YM08 1.35 0 ⇑⇑*e*P Pn 11 00 30.3 -0.6
ECL Taimali 1.36 205 *e*P Pn 11 00 30.6 -0.4
NWRT Kuosheng 1.37 3 *e*P Pb 11 00 31.9 0.0
SSHA Shanhua 1.37 240 *e*P Pb 11 00 31.6 -0.3
SSHA eS Sg 11 00 51.6 +0.7
SSD Sandimen 1.39 219 *e*P Pn 11 00 31.6 +0.1
SHHT Tainan City 1.39 235 *e*P Pg 11 00 33.6 +0.3
JYNG Yonagunijimaku 1.39 63 P Pb 11 00 32.1 -0.1
JYNG A A 11 00 32.1
comp=N,151nm,2.3s,comp=E,91nm,4.9s
JYNG eS Sb 11 00 50.6 +0.7
SCLT Jiali 1.43 243 *e*P Pb 11 00 32.5 -0.5
SCLT eS Sg 11 00 52.3 -0.4
TWY Chenhua 1.44 1 *e*P Pg 11 00 34.1 -0.1
YOJ Yonaguni jima 1.45 64 Pb 11 00 33.2 0.0
YOJ Yonaguni jima 1.45 64 P Pb 11 00 33.7 +0.5
YOJ Yonaguni jima 1.45 64 P Pb 11 00 33.2 0.0
YOJ Yonaguni jima 1.45 64 *e*P Pb 11 00 33.4 +0.1
YOJ A A 11 00 33.4
comp=N,117nm,2.8s,comp=E,166nm,1.7s
YOJ eS Sb 11 00 52.4 +0.8
YOJ Yonaguni jima 1.45 64 ⇑⇑P Pb 11 00 33.2 0.0
YOJ eS Sb 11 00 52.3 +0.8
TWM1 Shoushan 1.46 227 *e*P Pb 11 00 33.3 -0.2
TAI1 Yung-k'ang 1.47 238 *e*P Pb 11 00 34.0 +0.4
SGLT Jiouru 1.49 223 ⇓⇓P Pg 11 00 35.4 +0.3
SGLT eS Sg 11 00 58.0 +3.5
MASBT Mashibuluo 1.49 216 *e*P Pn 11 00 32.9 0.0
MASBT eS Sg 11 00 54.0 -0.8
TAI Tainan 1.52 237 *e*P Pb 11 00 34.5 0.0
TSPT Pingtung City 1.52 221 *e*P Pg 11 00 35.2 -0.6
EAST Anshuo 1.59 205 *e*P Pn 11 00 33.1 -1.2
TAW Tawu 1.60 203 *e*P Pn 11 00 33.6 -0.6
TAWH Dawu Township 1.62 203 *e*P Pn 11 00 32.8 -1.7
WSSB Gushan 1.69 226 *e*P Pb 11 00 36.9 -0.6
SCZT Fangliau 1.70 212 *e*P Pb 11 00 36.6 -0.9
SLIJ Shizi 1.76 204 *e*P Pn 11 00 36.1 -0.4
LAY Lan-yu 1.78 181 *e*P Pn 11 00 35.1 -1.7
LYUB Lan-yu 1.82 180 ⇓⇓*e*P Pn 11 00 35.0 -2.4
WLCH Liuqiu 1.84 217 *e*P Pb 11 00 39.8 -0.2
PCYT Pengchaiyu 1.84 14 *e*P Pb 11 00 39.3 -0.8
WDGT Dungji 1.85 253 *e*P Pn 11 00 38.2 +0.4
TWP Hsiaoliuchiu 1.86 217 *e*P Pb 11 00 39.8 -0.4
PHUB P'eng-hu 1.87 261 ⇑⇑*e*P Pn 11 00 38.1 +0.1
PHUB S Sn 11 01 01.8 +0.4
PNG Penghu 1.88 262 *e*P Pn 11 00 38.5 +0.4
PNG eS Sn 11 01 01.0 -0.6
SMST Manzhou Townsh 1.93 201 *e*P Pn 11 00 39.9 +1.1
HEN Hengchun 1.98 203 *e*P Pb 11 00 42.0 -0.2
TWK1 Hengchun 2.01 201 *e*P Pn 11 00 40.0 0.0
TWKBT Hengchun 2.01 201 *e*P Pn 11 00 39.6 -0.4
TSEB Hengchuen, Pin 2.02 198 *e*P Pn 11 00 39.9 -0.2
IRIF Iriomote-Funau 2.03 75 P Pn 11 00 40.8 +0.7
IRIF A A 11 00 40.8
comp=N,98nm,2.2s,comp=E,71nm,3.4s
IRIF eS Sn 11 01 05.9 +0.6
HATJ Hateruma jima 2.05 83 *e*P Pn 11 00 40.8 +0.4
HATJ A A 11 00 40.8
comp=N,134nm,5.3s,comp=E,136nm,2.4s
HATJ eS Sn 11 01 06.7 +0.9
VCHM Qimei 2.07 253 *e*P Pn 11 00 40.5 -0.3
JKRS Kuro-shima 2.26 79 *e*P Pn 11 00 44.1 +0.7
JKRS A A 11 00 44.1
comp=N,141nm,1.7s,comp=E,165nm,2.3s
VWUC VWUC 2.26 301 *e*P Pn 11 00 42.4 -1.0
JIJ Ishigaki jima 2.40 77 P Pn 11 00 45.6 +0.3
JIJ A A 11 00 45.6
comp=N,37nm,6.0s,comp=E,18nm,5.1s
JISG Ishigakijimahi 2.60 73 P Pn 11 00 48.5 +0.4
JISG A A 11 00 48.5
comp=N,33nm,2.3s,comp=E,21nm,4.7s
MATB Ma-tsu 2.75 328 *e*P Pn 11 00 49.5 -0.6
MSUT Lienchiang 2.77 327 *e*P Pn 11 00 50.5 +0.1
KNM Kinmen 2.94 282 *e*P Pn 11 00 54.3 +1.6
QZH2 Quanzhou 2.94 293 ⇓*i*Pn Pn 11 00 51.8 -0.9
QZH2 Sn Sn 11 01 26.3 -1.5
QZH2 smax smax
comp=E,21μm,1.3s
QZH2 smax smax
comp=E,19μm,1.2s
QZH2 LR LR
comp=E,129μm,9.5s
JTJ Tarama 2.96 74 P Pn 11 00 54.0 +0.9
JTJ A A 11 00 54.0
comp=N,66nm,2.0s,comp=E,54nm,2.2s
JTJ eS Sn 11 01 30.8 +2.4
KNMB Chin-men Tao 2.98 283 Pn 11 00 53.0 -0.4
KNMB Chin-men Tao 2.98 283 *e*P Pn 11 00 52.9 -0.4
LYJJ Jianjiangzhen 3.17 329 *e*P Pn 11 00 55.0 -0.9
MHZQ Yeshan 3.23 315 *e*P Pn 11 00 56.4 -0.5
XPSS Dashiqiu 3.33 338 ⇑⇑*e*P Pn 11 00 57.6 -0.5
JIRB Irabujima 3.42 72 *e*P Pn 11 00 59.9 +0.5
JIRB A A 11 00 59.9
comp=N,39nm,4.7s,comp=E,34nm,3.6s
AXDP Jialang 3.46 289 ⇓⇓*e*P Pn 11 00 59.4 -0.5
ZPLA Ao Xicun 3.51 272 *e*P Pn 11 00 59.6 -1.0
JIKM Ikemajima 3.52 71 *e*P Pn 11 01 02.3 +1.7
JIKM A A 11 01 02.3
comp=N,44nm,3.1s,comp=E,33nm,2.6s
JIKM eS Sn 11 01 43.8 +1.7
JMJ Miyako jima 2 3.52 73 P Pn 11 01 02.4 +1.6
JMJ Miyako jima 2 3.52 73 *e*P Pn 11 01 02.1 +1.3
JMJ2 Miyako jima3 3.54 74 *e*P Pn 11 01 02.2 +1.2
JMJ2 A A 11 01 02.2
comp=N,56nm,4.5s,comp=E,45nm,7.3s
JMJ2 eS Sn 11 01 44.2 +1.6
JOGS Gusukube 3.61 74 *e*P Pn 11 01 03.0 +1.0
JOGS A A 11 01 03.0
comp=N,76nm,2.7s,comp=E,53nm,8.0s
DSXP Dongshan 3.81 269 *e*P Pn 11 01 04.4 -0.3
SXFK Yanhouchang 4.39 306 *e*P Pn 11 01 11.9 -0.8
VDOS Pratas Island 5.47 236 *e*P Pn 11 01 27.0 -0.5
JOW Kunigami 6.75 62 Pn Pn 11 01 45.0 -0.2
comp=E,36nm,0.3s,baz=188,slow=9.6,SNR=73
JOW Sn Sn 11 03 01.8 -0.1
comp=E,2.5nm,0.3s,baz=333,slow=25,SNR=1.4
comp=E,79nm,0.3s
JOW Kunigami 6.75 62 Pn 11 01 44.8 -0.4
JOW Kunigami 6.75 62 S Sn 11 03 02.8 +0.9
HKPS Hong Kong Po S 7.02 259 Pn 11 01 48.7 -0.3
HKPS Hong Kong Po S 7.02 259 P Pn 11 01 50.5 +1.6
SSE Sheshan 7.25 357 P Pn 11 01 52.3 +0.4
SSE S Sn 11 03 16.3 +2.3
SSE smax smax
comp=E,860nm,1.4s
SSE smax smax
comp=E,960nm,1.4s
SSE LR LR
comp=E,10μm,9.8s
SSE LR LR
comp=E,8μm,10.1s
GZH2 Guangzhou 7.27 270 P Pn 11 01 52.8 +0.6
GZH2 S Sn 11 03 15.9 +1.4
GZH2 smax smax
comp=E,5μm,0.9s
GZH2 smax smax
comp=E,4μm,0.9s
MCO Taipa Grande 7.59 259 P Pn 11 01 58.0 +1.4
NJ2 Nanjing 8.54 344 ⇓P Pn 11 02 08.8 -0.8
NJ2 S Sn 11 03 40.9 -4.8
NJ2 pmax pmax
comp=E,340nm,0.8s
NJ2 smax smax
comp=E,3μm,1.1s
NJ2 smax smax
comp=E,2μm,1.2s
NJ2 LR LR
comp=E,41μm,9.0s
NJ2 LR LR
comp=E,12μm,6.4s
NJ2 LR LR
comp=E,38μm,9.2s
CNSH ChangSha 8.90 301 P Pn 11 02 12.9 -1.8
CNSH S Sn 11 03 47.5 -7.3
CNSH smax smax
comp=E,4μm,1.4s
CNSH smax smax
comp=E,4μm,1.0s
JMZ Minamidaito 2 8.98 75 Pn 11 02 13.0 -2.7
WHN Wuhan 9.28 318 ⇓P Pn 11 02 19.1 -0.7
WHN sP 11 02 23.9
WHN S Sn 11 04 06.3 +2.3
WHN LR LR
comp=E,67μm,10.5s
WHN LR LR
comp=E,60μm,8.7s
WHN LR LR
comp=E,86μm,11.9s
TGY Tagaytay City 9.70 184 Pn Pn 11 02 27.6 +1.9
comp=E,54nm,0.3s,baz=297,slow=5.0,SNR=4.8
TGY LR LR 11 06 54.5
comp=E,3μm,19.7s,baz=348,slow=42
GULI GuiLin 10.31 280 P Pn 11 02 34.3 +0.3
GULI S Sn 11 04 24.6 -4.8
GULI pmax pmax
comp=E,130nm,1.0s
GULI pmax pmax
comp=E,610nm,7.9s
GULI LR LR
comp=E,12μm,6.2s
GULI LR LR
comp=E,26μm,11.7s
GULI LR LR
comp=E,31μm,10.6s
JSU Suzuyama 10.96 44 Pn 11 02 44.7 +1.8
QIZ Qiongzhong 11.93 249 P Pn 11 02 57.5 +1.3
QIZ Qiongzhong 11.93 249 P Pn 11 02 56.8 +0.6
QIZ S Sn 11 05 09.1 0.0
QIZ pmax pmax
comp=E,41nm,2.0s
QIZ pmax pmax
comp=E,470nm,6.8s
QIZ LR LR
comp=E,7μm,14.0s
QIZ LR LR
comp=E,6μm,16.5s
QIZ LR LR
comp=E,6μm,11.1s
JNU Nakatsue 12.34 39 Pn Pn 11 03 03.8 +2.0
comp=E,1.6nm,0.3s,baz=187,slow=4.0,SNR=29
JNU LR LR 11 08 44.3
comp=E,3μm,18.8s,baz=222,slow=42
ENH Enshi 12.54 303 Pn 11 03 04.9 +0.4
ENH Enshi 12.54 303 P Pn 11 03 06.8 +2.3
JTU Tsushima 12.65 31 P Pn 11 03 07.3 +1.3
TIA Tai'an 12.93 344 P Pn 11 03 11.0 +1.2
TIA pmax pmax
comp=E,14nm,0.7s
TIA pmax pmax
comp=E,1μm,7.9s
TIA LR LR
comp=E,23μm,8.9s
TIA LR LR
comp=E,14μm,9.3s
TIA LR LR
comp=E,39μm,10.0s
LYN LuoYang 13.31 325 ⇓P Pn 11 03 17.3 +2.3
LYN pP P 11 03 19.9 -4.8
LYN PP PnPn 11 03 29.0 +6.0
LYN S Sn 11 05 49.9 +7.1
LYN pmax pmax
comp=E,49nm,1.4s
LYN pmax pmax
comp=E,1μm,6.1s
LYN LR LR
comp=E,44μm,9.3s
LYN LR LR
comp=E,16μm,10.3s
LYN LR LR
comp=E,52μm,10.0s
TJN Taejon 13.46 20 Pn 11 03 15.9 -1.2
TJN Taejon 13.46 20 P Pn 11 03 18.4 +1.3
TJN Taejon 13.46 20 P Pn 11 03 15.9 -1.2
GYA Guiyang 13.76 284 ⇓P Pn 11 03 22.5 +1.2
GYA S Sn 11 05 54.9 +0.8
GYA pmax pmax
comp=E,80nm,1.4s
GYA pmax pmax
comp=E,470nm,3.1s
GYA LR LR
comp=E,11μm,4.2s
GYA LR LR
comp=E,23μm,10.8s
GYA LR LR
comp=E,35μm,10.9s
INCN Inchon 14.28 16 Pn 11 03 28.9 +0.6
INCN Inchon 14.28 16 P Pn 11 03 29.7 +1.4
INCN Inchon 14.28 16 P Pn 11 03 28.9 +0.6
JMN Monobe 14.60 45 Pn Pn 11 03 27.8 -4.9
KSAR Wonju Array Be 14.61 20 Pn 11 03 34.7 +2.0
KSAR Wonju Array Be 14.61 20 P Pn 11 03 34.7 +2.0
KSRS Korea Array 14.63 20 Pn Pn 11 03 34.7 +1.7
comp=E,2.7nm,0.3s,baz=200,slow=13,SNR=87
KSRS LR LR 11 08 34.7
comp=E,686nm,21.6s,baz=200,slow=35
KS19 Wonju Array Si 14.65 20 Pn 11 03 32.6 -0.7
HNS HongShan 14.75 338 ⇑P Pn 11 03 33.6 -1.1
HNS S Sn 11 06 26.6 +8.7
HNS pmax pmax
comp=E,220nm,1.1s
HNS LR LR
comp=E,18μm,12.1s
HNS LR LR
comp=E,17μm,11.1s
HNS LR LR
comp=E,23μm,10.4s
DL2 Dalian 15.03 0 P P 11 03 42.1 -1.6
DL2 S S 11 06 34.0 -8.1
DL2 pmax pmax
comp=E,440nm,1.0s
DL2 pmax pmax
comp=E,760nm,8.2s
DL2 LR LR
comp=E,11μm,11.0s
DL2 LR LR
comp=E,6μm,11.5s
DL2 LR LR
comp=E,13μm,12.6s
XAN Xi'an 15.03 315 ⇓P Pn 11 03 38.9 +0.4
XAN pP pP 11 03 46.4 -1.6
XAN pmax pmax
comp=E,42nm,0.8s
XAN pmax pmax
comp=E,2μm,7.6s
XAN LR LR
comp=E,12μm,6.5s
XAN LR LR
comp=E,26μm,10.1s
XAN LR LR
comp=E,29μm,10.2s
TIY Taiyuan 15.90 333 P P 11 03 52.6 -0.9
TIY PP sP 11 04 05.1 +5.5
TIY S Sn 11 06 49.8 +3.8
TIY pmax pmax
comp=E,82nm,1.7s
TIY pmax pmax
comp=E,1μm,3.5s
TIY LR LR
comp=E,16μm,9.7s
TIY LR LR
comp=E,14μm,9.7s
TIY LR LR
comp=E,16μm,10.8s
BJI2 Beijing 16.77 345 P P 11 04 03.5 +0.4
BJI2 pmax pmax
comp=E,58nm,2.1s
BJI2 pmax pmax
comp=E,2μm,8.9s
BJI2 LR LR
comp=E,5μm,10.1s
BJI2 LR LR
comp=E,2μm,10.7s
BJI2 LR LR
comp=E,5μm,11.2s
BJT Baijiatuao 16.77 345 Pn 11 04 00.8 -0.2
BJT Baijiatuao 16.77 345 P P 11 04 02.5 -0.6
BJT Baijiatuao 16.77 345 P Pn 11 04 00.8 -0.2
BJT pmax pmax
comp=Z,125nm,1.1s
DAV Davao City (W) 17.10 166 LR LR 11 11 04.8
comp=Z,2μm,18.2s,baz=354,slow=39
KMI2 Kunming 17.20 278 ⇑⇑P Pn 11 04 05.0 -1.6
KMI2 S S 11 07 24.9 -2.1
KMI2 pmax pmax
comp=Z,61nm,1.1s
KMI2 pmax pmax
comp=Z,420nm,5.3s
KMI2 LR LR
comp=Z,5μm,8.4s
KMI2 LR LR
comp=Z,12μm,9.3s
KMI2 LR LR
comp=Z,14μm,12.6s
CD2 Chengdu 17.32 298 P P 11 04 08.8 -0.5
CD2 S Sn 11 07 17.6 -2.9
CD2 pmax pmax
comp=Z,230nm,1.0s
CD2 pmax pmax
comp=Z,1μm,3.8s
CD2 LR LR
comp=Z,25μm,7.6s
CD2 LR LR
comp=Z,39μm,9.5s
CD2 LR LR
comp=Z,46μm,8.3s
UBPT Khong Chiam 17.39 244 P P 11 04 11.8 +1.7
INU Inuyama 17.64 46 Pn 11 04 11.2 -0.5
INU Inuyama 17.64 46 P P 11 04 13.1 +0.4
JGF Kuroka 18.01 46 Pn 11 04 16.1 -0.4
JGF Kuroka 18.01 46 P P 11 04 17.1 +0.2
SNY Shenyang 18.02 5 ⇑⇑P P 11 04 17.1 +0.2
SNY pmax pmax
comp=Z,2μm,7.5s
SNY LR LR
comp=Z,10μm,11.0s
SNY LR LR
comp=Z,3μm,10.0s
SNY LR LR
comp=Z,12μm,11.6s
JSG Sagara 18.05 49 P Pn 11 04 15.8 -1.1
JSG Sagara 18.05 49 P P 11 04 18.6 +1.4
PZH PanZhiHua 18.15 283 P P 11 04 21.4 +2.8
PZH pmax pmax
comp=Z,50nm,1.3s
PZH pmax pmax
comp=Z,1μm,5.3s
PZH PanZhiHua 18.15 283 P P 11 04 19.4 +0.8
PZH S Sn 11 07 39.5 -1.4
PZH SS SnSn 11 08 04.3 +10
PZH pmax pmax
comp=Z,1μm,7.2s
PZH LR LR
comp=Z,13μm,14.7s
PZH LR LR
comp=Z,17μm,11.2s
PZH LR LR
comp=Z,19μm,12.3s
KKM Kota Kinabalu 18.42 197 P 11 04 18.2 -3.4
KKM Kota Kinabalu 18.42 197 P Pn 11 04 22.2 +0.5
KKM Kota Kinabalu 18.42 197 P Pn 11 04 23.1 +1.4
comp=Z,6μmcomp=Z,215nm,2.1s
JHJ Hachijo jima 2 18.46 56 P P 11 04 21.4 -0.4
comp=Z,9.9nm,0.3s,baz=219,slow=12,SNR=18
JHJ LR LR 11 11 38.6
comp=Z,979nm,20.6s,baz=288,slow=38
comp=Z,407nm,0.8s
JHJ2 Mitsune 18.48 56 Pn 11 04 22.3 +0.1
JHJ2 IAmb IAmb 11 04 26.3
comp=Z,502nm,0.9s
JHJ2 Mitsune 18.48 56 P Pn 11 04 23.5 +1.3
MYLDM Lahad Datu 18.78 190 P 11 04 24.5 -0.9
MYLDM Lahad Datu 18.78 190 P Pn 11 04 27.0 +1.1
MYLDM Lahad Datu 18.78 190 P Pn 11 04 26.5 +0.6
comp=Z,4μmcomp=Z,208nm,1.2s
JCJ Chichijima 18.88 76 P P 11 04 14.5 -12
comp=Z,302nm,0.9s,baz=152,slow=1.2,SNR=15
JCJ LR LR 11 10 49.8
comp=Z,1μm,21.9s,baz=250,slow=34
JCJ Chichijima 18.88 76 P 11 04 26.2 -0.3
JCJ IAmb IAmb 11 04 34.4
comp=Z,541nm,1.0s
JCJ Chichijima 18.88 76 P Pn 11 04 27.7 +0.6
HHC Hu-ho-hao-te 18.94 336 *e*P Pn 11 04 29.5 +1.7
HHC sP sP 11 04 36.4 +3.2
HHC S Sn 11 07 57.8 -1.8
HHC SS SnSn 11 08 22.4 +8.6
HHC pmax pmax
comp=Z,57nm,0.8s
HHC pmax pmax
comp=Z,3μm,4.2s
HHC LR LR
comp=Z,9μm,9.9s

HHC LR LR
comp=Z,3μm,10.0s
HHC LR LR
comp=Z,7μm,9.9s
MJB9 Matsu-Tunnel 19.12 45 P **P** **11 04 28.5 -0.6**
MAJO Matsushiro 19.12 45 **P** **11 04 27.8 -1.3**
MAJO Matsushiro 19.12 45 P **P** **11 04 28.6 -0.5**
MAJO Matsushiro 19.12 45 P **P** **11 04 27.8 -1.3**
MAJO pmax pmax
comp=Z,90nm,1.0s
MJAR Matsushiro Arr 19.12 45 P **P** **11 04 27.3 -1.8**
comp=Z,26nm,1.0s,baz=236,slow=9.9,SNR=31
MJAR LR LR 11 12 55.1
comp=Z,2μm,19.1s,baz=226,slow=40
MJAR Matsushiro Arr 19.12 45 **P** **11 04 25.9 -3.2**
BTO2 Baotou 19.52 333 *e*P **Pn** **11 04 35.0 +0.2**
BTO2 PP **PnPn** **11 04 52.5 +4.3**
BTO2 pmax pmax
comp=Z,37nm,1.2s
BTO2 pmax pmax
comp=Z,6μm,7.2s
BTO2 LR LR
comp=Z,32μm,10.2s
BTO2 LR LR
comp=Z,17μm,13.7s
BTO2 LR LR
comp=Z,47μm,10.6s
LZH Lanzhou 19.59 313 P **Pn** **11 04 36.9 +1.1**
LZH sP sP 11 04 43.4 +2.9
LZH SS **SnSn** **11 08 39.9 +10**
LZH pmax pmax
comp=Z,79nm,1.2s
LZH pmax pmax
comp=Z,3μm,4.5s
LZH LR LR
comp=Z,7μm,11.4s
LZH LR LR
comp=Z,14μm,11.7s
LZH LR LR
comp=Z,19μm,11.7s
LZDM Lanzhou Array 19.62 312 P **Pn** **11 04 36.2 -0.1**
baz=144,slow=13
LZDM LR LR 11 12 50.1
comp=Z,3μm,18.3s,baz=110,slow=39
comp=Z,157nm,1.2s
CN2 Changchun 20.17 8 ⇓P Pn 11 04 41.4 -1.0
CN2 *es*P sP 11 04 48.0 +1.7
CN2 *e*S **S** **11 08 22.5 -4.0**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,700nm,4.0s
CN2 LR LR
comp=Z,5μm,11.0s
CN2 LR LR
comp=Z,3μm,11.0s
CN2 LR LR
comp=Z,4μm,13.0s
XLT XiLinHaoTe 20.52 349 *e*P **P** **11 04 44.8 +0.4**
XLT pP pP 11 04 49.0 +0.3
XLT sP sP 11 04 52.3 +1.8
XLT PP **PnPn** **11 05 03.9 +2.0**
XLT S **S** **11 08 30.3 -3.3**
XLT sS sS 11 08 42.1 +1.7
XLT PcP **PcP** **11 08 55.3 -0.3**
XLT SS **SnSn** **11 08 58.3 +5.7**
XLT pmax pmax
comp=Z,220nm,1.2s
XLT pmax pmax
comp=Z,1μm,3.2s
XLT LR LR
comp=Z,670nm,11.1s
XLT LR LR
comp=Z,3μm,12.8s
XLT LR LR
comp=Z,9μm,11.9s
TARAI Tarakan 20.75 191 P Pn 11 04 55.5 +6.2
TNCH TengChong 21.03 278 ⇑P **P** **11 04 50.6 +0.5**
TNCH pP pP 11 04 54.3 -0.3
TNCH sP sP 11 04 57.1 +0.3
TNCH PP **PnPn** **11 05 11.8 +2.8**
TNCH S **S** **11 08 45.4 +1.2**
TNCH pmax pmax
comp=Z,340nm,1.4s
TNCH LR LR
comp=Z,5μm,6.6s
TNCH LR LR
comp=Z,15μm,10.1s
TNCH LR LR
comp=Z,17μm,10.3s
CHTO Chiang Mai 21.66 261 **P** **11 04 56.0 -0.8**
CHTO IAmb IAmb 11 05 05.7
comp=Z,384nm,1.4s
CHTO Chiang Mai 21.66 261 P **P** **11 04 58.2 +1.4**
CHTO Chiang Mai 21.66 261 P **P** **11 04 56.0 -0.8**
CHTO pmax pmax
comp=Z,384nm,1.4s
CHTO Chiang Mai 21.66 261 P **P** **11 04 58.9 +2.1**
CHTO Chiang Mai 21.66 261 P **P** **11 04 58.0 +1.2**
comp=Z,220nm,1.2s
MDJ Mudanjiang 21.74 16 P **P** **11 04 56.7 -0.7**
MDJ Mudanjiang 21.74 16 P **P** **11 04 56.8 -0.7**
MDJ pP pP 11 04 58.8 -2.7
MDJ PP **PnPn** **11 05 20.8 +2.3**
MDJ S Sn 11 09 02.5 -4.4
MDJ pmax pmax
comp=Z,160nm,1.5s
MDJ pmax pmax
comp=Z,750nm,5.8s
MDJ LR LR
comp=Z,5μm,17.9s
MDJ LR LR
comp=Z,9μm,15.8s
MDJ LR LR
comp=Z,8μm,10.3s
CM31 Chiang Mai Arr 21.77 260 P **P** **11 05 00.4 +2.4**
SNR=63
CMAR Chiang Mai Arr 21.77 260 P **P** **11 04 59.4 +1.4**
comp=Z,55nm,1.1s,baz=63,slow=8.2,SNR=162
CMAR PcP **PcP** **11 08 58.7 +0.4**
comp=Z,4.6nm,0.6s,baz=57,slow=0.6,SNR=10
CMAR LR LR 11 13 44.3
comp=Z,1μm,20.8s,baz=85,slow=38
comp=Z,55nm,1.1s
CMAR Chiang Mai Arr 21.77 260 **P** **11 04 57.8 -0.1**
CMAR Chiang Mai Arr 21.77 260 *ce*P **P** **11 05 00.0 +2.1**
CMAR pmax pmax
comp=Z,57nm,1.1s
USRK Ussuriysk Ar. 22.04 20 P **P** **11 05 00.6 +0.1**
comp=Z,67nm,0.8s,baz=205,slow=8.4,SNR=45
comp=Z,67nm,0.8s
BNX BinXian 22.36 11 ⇑P **P** **11 05 03.0 -1.0**
BNX S **S** **11 09 08.0 -1.3**
BNX pmax pmax
comp=Z,92nm,1.0s
BNX pmax pmax
comp=Z,820nm,8.0s
BNX LR LR
comp=Z,6μm,11.3s
BNX LR LR
comp=Z,3μm,8.3s
BNX LR LR
comp=Z,6μm,11.9s
MNI Manado 22.48 171 P **P** **11 05 04.9 -0.6**
comp=Z,16μmcomp=Z,119nm,0.7s
TOLI2 Tolitoli 22.60 182 P **P** **11 05 04.9 -1.9**
TOLI2 Tolitoli 22.60 182 P **P** **11 05 05.9 -0.9**
GTOI Gorontalo 23.10 176 P **P** **11 05 09.3 -2.7**
comp=Z,2μmcomp=Z,133nm,1.1s
SBUM Sibu 23.11 204 **P** **11 05 11.3 -0.8**
SBUM Sibu 23.11 204 P **P** **11 05 11.5 -0.6**
SBUM Sibu 23.11 204 P **P** **11 05 11.0 -1.1**
MRSI Marisa 23.22 179 P **P** **11 05 13.6 +0.4**
comp=Z,2μmcomp=Z,148nm,1.2s
MPSI Mapaga 23.41 184 P **P** **11 05 14.7 -0.4**
comp=Z,97nm,0.7s
LKP Lekhapani 23.46 284 IAmb IAmb 11 05 10.3
comp=Z,242nm,0.7s
LKP *e*P **P** **11 05 17.6 +2.0**
LKP *e*S **S** **11 09 25.5 -3.2**
TNTI Ternate 23.60 165 **P** **11 05 16.4 -0.6**
TNTI Ternate 23.60 165 P **P** **11 05 17.0 0.0**
TNTI Ternate 23.60 165 P **P** **11 05 16.5 -0.6**
comp=Z,2μmcomp=Z,84nm,1.1s
PASG PASIGHAT 23.96 286 *e*P **P** **11 05 20.6 +0.1**
PASG IAmb IAmb 11 05 23.7
comp=Z,262nm,1.6s
GTA2 Gaotai 24.17 315 P **P** **11 05 22.8 +0.3**
GTA2 PcP **PcP** **11 09 02.1 -1.0**
GTA2 S **S** **11 09 42.3 +2.1**
GTA2 pmax pmax
comp=Z,92nm,2.3s
GTA2 pmax pmax
comp=Z,2μm,6.2s
GTA2 LR LR
comp=Z,5μm,13.8s
GTA2 LR LR
comp=Z,8μm,12.7s
GTA2 LR LR
comp=Z,11μm,12.4s
GUMO Guam 24.26 111 LR LR 11 12 53.2
comp=Z,706nm,21.9s,baz=274,slow=32
GUMO Guam 24.26 111 P **P** **11 05 22.8 -0.5**
GUMO Guam 24.26 111 P **P** **11 05 24.6 +1.3**
GUMO Guam 24.26 111 P **P** **11 05 22.8 -0.5**
GUMO pmax pmax
comp=Z,442nm,1.0s
APSI Ampana 24.59 180 P **P** **11 05 27.6 +1.3**
comp=Z,2μmcomp=Z,241nm,0.9s
MOKO MOKOCHONG 24.62 281 *e*P **P** **11 05 27.5 +0.7**
MOKO IAML 11 05 52.1
comp=Z,43nm,1.0s
MOKO *e*S **S** **11 09 50.4 +2.6**
PCI Palu 24.65 184 P **P** **11 05 27.2 +0.4**
comp=Z,4μmcomp=Z,122nm,1.7s
LUWI Luwuk 24.75 177 P **P** **11 05 27.9 +0.2**
KOHI KOHIMA 25.00 280⇓*e*P **P** **11 05 30.6 +0.5**
KOHI IAmb IAmb 11 05 43.8
comp=Z,92nm,1.1s
KOHI *e*S **S** **11 09 55.3 +1.4**
IMP Imphal 25.19 278⇓*e*P **P** **11 05 32.0 +0.3**
IMP IAmb IAmb 11 05 34.2
comp=Z,80nm,1.2s
IMP *e*S **S** **11 09 59.2 +2.6**
ZIRO ZIRO 25.24 284 *e*P **P** **11 05 33.0 +0.7**
ZIRO IAmb IAmb 11 05 36.0
comp=Z,442nm,1.7s
ZIRO *e*S **S** **11 09 59.3 +1.6**
ITAN ITANAGAR 25.34 283 *e*P **P** **11 05 34.8 +1.7**
ITAN IAmb IAmb 11 05 40.7
comp=Z,2μm,1.7s
ITAN *e*S **S** **11 10 02.5 +3.5**
BKB Balikpapan 25.35 191 **P** **11 05 32.1 -1.1**
BKB IAmb IAmb 11 05 39.3
comp=Z,283nm,1.1s
BKB Balikpapan 25.35 191 P **P** **11 05 33.5 +0.3**
BKB Balikpapan 25.35 191 P **P** **11 05 32.6 -0.6**
comp=Z,5μmcomp=Z,258nm,1.5s
HIA Hailar 25.43 357 P **P** **11 05 34.8 +1.2**
MTKI Muara Teweh, K 25.47 196 P **P** **11 05 34.0 -0.2**
comp=Z,10μmcomp=Z,163nm,1.0s
JEM Erimo 25.51 40 P **P** **11 05 33.6 -0.8**
HILR Hailar Array B 25.72 357 P **P** **11 05 35.8 -0.5**
comp=Z,59nm,0.9s,baz=177,slow=10,SNR=49
comp=Z,59nm,0.9s
SANI Sanana 26.08 170 P **P** **11 05 38.2 -1.6**
SANI Sanana 26.08 170 P **P** **11 05 37.8 -2.0**
comp=Z,66nm,0.9s
GOMU GeErMu 26.16 304 P **P** **11 05 40.3 -0.5**
GOMU PcP **PcP** **11 09 07.3 -0.6**
GOMU S **S** **11 10 10.5 -2.0**
GOMU pmax pmax
comp=Z,74nm,1.4s
GOMU LR LR
comp=Z,6μm,8.8s
GOMU LR LR
comp=Z,5μm,9.2s
TEZP TEZPUR 26.16 282 *e*P **P** **11 05 41.4 +0.9**
TEZP IAmb IAmb 11 05 50.2
comp=Z,163nm,1.1s
TEZP *e*S **S** **11 10 13.6 +1.6**
SILR SILCHAR 26.23 278 *e*P **P** **11 05 43.8 +2.8**
SILR IAmb IAmb 11 05 47.6
comp=Z,241nm,0.3s
SILR *e*S **S** **11 10 14.3 +1.3**
SAIH SAIHA 26.31 273 *e*P **P** **11 05 41.2 -0.8**
SAIH IAmb IAmb 11 05 45.9
comp=Z,98nm,1.0s
SAIH *e*S **S** **11 10 16.6 +2.0**
MMSI Mamuju 26.49 186 P **P** **11 05 43.9 +0.4**
comp=Z,1μmcomp=Z,145nm,1.0s
ASAJ Asahikawa 26.57 35 LR LR 11 16 47.8
comp=Z,2μm,20.1s,baz=228,slow=38
ASAJ Asahikawa 26.57 35 P **P** **11 05 42.8 -1.2**
ASAJ pmax pmax
comp=Z,96nm,1.3s
JKA Kamikawa-asahi 26.57 35 **P** **11 05 42.8 -1.2**
KLR Kul'dur 26.59 15 LR LR 11 16 13.9
comp=Z,324nm,18.1s,baz=203,slow=36
KLR Kul'dur 26.59 15*ce*P **P** **11 05 43.6 -0.5**
KLR pmax pmax
comp=Z,41nm,1.0s
ULN Ulaanbaatar 26.63 338 **P** **11 05 44.4 -0.3**
ULN Ulaanbaatar 26.63 338*ce*P **P** **11 05 44.6 -0.1**
ULN pmax pmax
comp=Z,132nm,1.3s
ULN Ulaanbaatar 26.63 338 P **P** **11 05 45.2 +0.6**
ULN Ulaanbaatar 26.63 338 P **P** **11 05 43.9 -0.8**
HEH HeiHe 26.77 8 *e*P **P** **11 05 44.0 -1.7**
HEH PcP **PcP** **11 09 10.8 +2.3**
HEH S **S** **11 10 23.8 +2.8**
HEH pmax pmax
comp=Z,23nm,1.1s
HEH LR LR
comp=Z,2μm,13.4s
HEH LR LR
comp=Z,6μm,13.4s
HEH LR LR
comp=Z,9μm,12.5s
TTSI Tana Toraja 26.77 184 P **P** **11 05 45.3 -0.7**
comp=Z,72nm,0.9s
SONM Songino Array 26.83 337 P **P** **11 05 46.2 -0.3**
comp=Z,50nm,1.0s,baz=156,slow=8.6,SNR=61
SONM LR LR 11 16 59.5
comp=Z,2μm,18.4s,baz=143,slow=38
comp=Z,50nm,1.0s
SONM Songino Array 26.83 337 **P** **11 05 46.1 -0.4**
TAWA Tawang 27.00 284 *e*P **P** **11 05 47.6 -0.9**
TAWA IAmb IAmb 11 05 59.0
comp=Z,320nm,1.3s
TAWA *e*S **S** **11 10 32.3 +6.4**
SHL Shillong 27.01 280 **P** **11 05 48.5 +0.1**
SHL IAmb IAmb 11 05 56.9
comp=Z,254nm,1.1s
SHL Shillong 27.01 280 *e*P **P** **11 05 47.5 -0.9**
SHL IAmb IAmb 11 05 56.7
comp=Z,167nm,1.0s
SHL *e*S **S** **11 10 27.1 +1.3**
SHL Shillong 27.01 280 P **P** **11 05 48.5 +0.1**
SHL pmax pmax
comp=Z,254nm,1.1s
SHL Shillong 27.01 280 P **P** **11 05 48.9 +0.5**
SNR=111
GUWA GUWAHATI 27.16 281 *e*P **P** **11 05 49.6 +0.1**
GUWA IAML 11 05 54.7
comp=Z,35nm,1.9s
GUWA *e*S **S** **11 10 30.0 +2.3**
PMSI Majene 27.29 186 P **P** **11 05 50.3 -0.4**
comp=Z,1μmcomp=Z,101nm,1.3s
KULM Kulim 27.31 231 P **P** **11 05 52.8 +1.9**
KULM Kulim 27.31 231 P **P** **11 05 52.3 +1.4**
NLAI Namlea 27.44 168 P **P** **11 05 52.1 +0.1**
BRDH Bariadhala 27.51 274 LR LR 11 18 33.0
comp=Z,543nm,19.8s,baz=118,slow=40
BELO BELONIA 27.61 275⇓*e*P **P** **11 05 55.1 +1.6**
BELO IAmb IAmb 11 06 01.2
comp=Z,158nm,0.6s
BELO *e*S **S** **11 10 37.9 +3.1**
IPM Ipoh 27.62 229 P **P** **11 05 52.9 -0.8**
IPM Ipoh 27.62 229 P **P** **11 05 54.1 +0.4**
IPM Ipoh 27.62 229 P **P** **11 05 53.8 +0.1**
comp=Z,53nm,1.2s
SPSI Sidrap Palu 27.68 184 P **P** **11 05 52.4 -1.8**
comp=Z,2μmcomp=Z,44nm,1.1s
AGT Agartala 27.72 276 *e*P **P** **11 05 55.4 +0.9**
AGT IAmb IAmb 11 06 03.5
comp=Z,241nm,0.7s
AGT *e*S **S** **11 10 38.8 +2.3**
LSA Lhasa 27.74 289 P **P** **11 05 53.3 -2.0**
LSA S **S** **11 10 42.3 +4.5**
LSA LR LR
comp=Z,1μm,8.6s
LSA LR LR
comp=Z,4μm,10.8s
LSA LR LR
comp=Z,5μm,11.1s
LSA Lhasa 27.74 289 P **P** **11 05 56.9 +1.6**
KRAI Karang Ratu 27.79 165 P **P** **11 05 55.3 +0.1**
comp=Z,46nm,1.2s
MYKOM Kota Tinggi 27.84 221 P **P** **11 05 56.9 +1.3**
MYKOM Kota Tinggi 27.84 221 P **P** **11 05 55.1 -0.5**
comp=Z,45nm,1.3s
BBKI Banjar Baru 27.91 194 P **P** **11 05 55.6 -0.7**
MSAI Masohi 27.95 164 P **P** **11 05 56.3 -0.3**
comp=Z,86nm,1.1s
TPRI Tanjung Pinang 28.14 218 P **P** **11 06 02.7 +4.3**
comp=Z,86nm,1.0s
BTDF Bukit Timah Da 28.23 220 P **P** **11 06 00.6 +1.5**
BTDF Bukit Timah Da 28.23 220 P **P** **11 05 59.7 +0.6**
FAKI Fak Fak 28.55 157 **P** **11 06 01.0 -0.9**
FAKI Fak Fak 28.55 157 P **P** **11 06 00.9 -1.0**
FAKI Fak Fak 28.55 157 P **P** **11 06 01.8 -0.1**
YSS Yuzhno-Sakhali 28.64 31 **P** **11 06 01.0 -1.4**
YSS IAmb IAmb 11 06 06.2
comp=Z,236nm,1.1s
YSS Yuzhno-Sakhali 28.64 31 P **P** **11 06 00.8 -1.7**
YSS Yuzhno-Sakhali 28.64 31 *e*P **P** **11 05 58.9 -3.6**
YSS *e* 11 06 49.5
YSS *e*PPP PPP 11 07 06.6
YSS *e*S **S** **11 10 41.9 -8.7**
YSS *e*SSS SSS 11 12 32.9
YSS pmax pmax
comp=Z,600nm,3.7s
YSS pmax pmax
comp=Z,180nm,1.1s
DHUB DHUBRI 28.69 281 *e*P **P** **11 06 04.4 +1.2**
DHUB IAmb IAmb 11 06 11.0
comp=Z,337nm,2.2s
DHUB *e*S **S** **11 10 54.2 +2.3**
KAPI Kappang 28.73 184 LR LR 11 17 54.9
comp=Z,753nm,21.6s,baz=356,slow=37
KAPI Kappang 28.73 184 **P** **11 06 02.5 -1.0**
KAPI Kappang 28.73 184 P **P** **11 06 02.2 -1.3**
KAPI Kappang 28.73 184 P **P** **11 06 02.5 -1.0**
KAPI pmax pmax
comp=Z,48nm,1.3s
KAPI Kappang 28.73 184 P **P** **11 06 01.5 -2.0**
KAPI P **P** **11 06 01.5 -2.0**
KAPI Kappang 28.73 184 P **P** **11 06 00.8 -2.7**
CIT Chita 28.81 350 *e*P **P** **11 06 02.6 -1.4**
CIT *e* 11 06 58.8
CIT *e* 11 07 15.4
CIT *e* 11 09 15.0
CIT *e* 11 11 00.4
CIT pmax pmax
comp=Z,84nm,1.2s
MKS Makassar 28.95 184 P **P** **11 06 02.5 -3.0**
comp=Z,89nm,0.9s
DGPR DIGLIPUR 29.10 254 IAmb IAmb 11 05 48.0
comp=Z,133nm,1.8s
DGPR *e*P **P** **11 06 07.8 +0.9**
DGPR *e*S **S** **11 11 01.5 +3.0**
GRNR Gornyy 29.25 19⇓*i*P **P** **11 06 07.3 -0.6**
GRNR pmax pmax
comp=Z,3.0nm,0.9s
GRNR MLR MLR
comp=E,740nm,11.0s
GRNR MLR MLR
comp=N,870nm,16.0s
GRNR MLR MLR
comp=Z,2μm,11.0s
TPI Tanjungpandan 29.70 209 P **P** **11 06 11.6 -0.6**
comp=Z,1μmcomp=Z,90nm,1.1s
GTK Tadong 29.90 284 *e*P **P** **11 06 14.1 -0.1**
GTK IAmb IAmb 11 06 21.5
comp=Z,131nm,0.7s
GTK *e*S **S** **11 11 11.8 +0.6**
UGL Uglegorsk 29.91 27 *e*P **P** **11 06 16.5 +2.7**
UGL *e*S **S** **11 11 16.2 +5.6**
UGL pmax pmax
comp=Z,140nm,1.2s
UGL MLR MLR
comp=E,2μm,10.0s
UGL MLR MLR
comp=N,3μm,18.0s
UGL MLR MLR
comp=Z,16μm,9.0s
TSI Tuntungan 30.04 231 P **P** **11 06 16.6 +1.4**
comp=Z,85nm,1.1s
ZAK Zakamensk 30.09 336 *e*P **P** **11 06 13.5 -2.0**
ZAK pmax pmax
comp=Z,24nm,1.7s
ZAK pmax pmax
comp=Z,27nm,2.4s
ZEA Zeya 30.17 7 *e*P **P** **11 06 15.5 -0.5**
ZEA *e* 11 06 16.9
ZEA *e* 11 06 24.0
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA MLR MLR
comp=E,1μm,10.0s
ZEA MLR MLR
comp=N,3μm,12.0s
ZEA MLR MLR
comp=Z,4μm,12.0s
PSI Prapat 30.28 230 P **P** **11 06 18.5 +1.0**
PSI Prapat 30.28 230 P **P** **11 06 17.2 -0.3**
PSI pmax pmax
comp=Z,73nm,1.2s
PSI Prapat 30.28 230 P **P** **11 06 16.8 -0.7**
comp=Z,684nmcomp=Z,51nm,1.2s
RPSI Rantau Prapat 30.36 230 **P** **11 06 17.2 -0.8**
CAL Calcutta 30.56 274 *e*P **P** **11 06 21.6 +1.9**
CAL IAmb IAmb 11 06 25.6
comp=Z,10μm,0.1s
CAL *e*S **S** **11 11 24.3 +3.1**
SHBG Sahibganj 30.87 280 *e*P **P** **11 06 23.3 +0.8**
SHBG IAmb IAmb 11 06 30.3
comp=Z,143nm,1.2s
SHBG *e*S **S** **11 11 29.5 +3.4**
TLY Talaya 31.04 338 **P** **11 06 23.1 -0.6**
TLY Talaya 31.04 338*ce*P **P** **11 06 23.7 0.0**
TLY pmax pmax
comp=Z,27nm,1.3s
TLY Talaya 31.04 338 P **P** **11 06 23.7 0.0**
MLSI Meulaboh, Aceh 31.11 235 P **P** **11 06 26.0 +1.3**
comp=Z,98nm,0.7s
MNSI Mandailing Nat 31.29 226 P **P** **11 06 26.2 -0.1**
comp=Z,57nm,0.7s
IRK Irkutsk 31.30 339 *e*P **P** **11 06 25.1 -1.0**
IRK pmax pmax
comp=Z,133nm,1.1s
TYV Tymovskoe 31.54 26 *e*P **P** **11 06 27.4 -0.7**
TYV *e*S **S** **11 11 33.3 -2.6**
TYV pmax pmax
comp=Z,200nm,3.7s
TYV pmax pmax
comp=Z,13nm,1.2s
TYV smax smax
comp=N,200nm,5.6s
TYV smax smax
comp=E,300nm,5.6s
PPI Padang Panjang 31.72 223 P **P** **11 06 31.2 +1.2**
comp=E,53nm,0.7s
GENI Genyem 31.89 143 P **P** **11 06 33.1 +1.6**
GENI Genyem 31.89 143 P **P** **11 06 31.4 -0.1**
comp=E,139nm,1.0s
MOY Mondy 31.98 336 *e*P **P** **11 06 30.9 -1.2**
MOY *e* 11 16 56.6
MOY pmax pmax
comp=Z,37nm,1.8s
JAY Jayapura 32.13 142 LR LR 11 16 40.7
comp=Z,1μm,20.9s,baz=16,slow=31
MMRI Maumere 32.27 179 IAmb IAmb 11 06 38.7
comp=Z,88nm,0.8s
MMRI Maumere 32.27 179 P **P** **11 06 33.8 -1.1**
MMRI Maumere 32.27 179 P **P** **11 06 32.0 -2.9**
comp=Z,2μmcomp=Z,110nm,0.8s
DBNI Kabupaten Domp 32.29 186 P **P** **11 06 33.0 -2.0**
BLJI Banyuglugur 32.34 195 P **P** **11 06 35.0 -0.4**
comp=Z,51nm,0.6s
EDFI Ende, Flores 32.38 180 P **P** **11 06 33.4 -2.5**
KHKI Kahang-Kahang 32.53 191 P **P** **11 06 37.1 0.0**
comp=Z,936nmcomp=Z,78nm,0.9s

NGJI	**Ngawi**	**32.55**	**199**	P		**P**		**11 06 39.4**	**+2.2**
	comp=Z,2µmcomp=Z,78nm,0.8s								
NKL	**Nikolayevsk**	**32.66**	**21**	*e*P		**P**		**11 06 36.0**	**-1.9**
NKL				*e*S		**S**		**11 11 53.6**	**+0.3**
NKL				pmax	pmax				
	comp=N,44nm,0.9s								
NKL				pmax	pmax				
	comp=E,38nm,1.1s								
NKL				pmax	pmax				
	comp=Z,172nm,1.1s								
NKL				smax	smax				
	comp=N,172nm,5.0s								
NKL				smax	smax				
	comp=E,479nm,5.0s								
NKL				MLR	MLR				
	comp=N,5µm,11.0s								
NKL				MLR	MLR				
	comp=E,8µm,11.0s								
NKL				MLR	MLR				
	comp=Z,9µm,13.0s								
PLAI	**Plampang**	**32.67**	**187**	P		**P**		**11 06 37.5**	**-0.8**
PLAI	**Plampang**	**32.67**	**187**	P		**P**		**11 06 37.9**	**-0.4**
	comp=Z,52nm,1.2s								
TWSI	**Taliwang, Sumb**	**32.69**	**189**	P		**P**		**11 06 37.9**	**-0.6**
	comp=Z,1µmcomp=Z,59nm,1.1s								
MASI	**Maura Aman, Be**	**32.76**	**218**	P		P		11 06 46.2	+6.9
KLSI		**32.77**	**212**	P		**P**		**11 06 40.1**	**+0.9**
	comp=Z,2µmcomp=Z,102nm,1.8s								
SJI	**Sawahan**	**32.80**	**198**	P		**P**		**11 06 40.1**	**+0.5**
	comp=Z,67nm,0.9s								
SNJI	**Sawahan-Nganju**	**32.85**	**198**	P		**P**		**11 06 41.1**	**+1.0**
	comp=Z,133nm,0.9s								
MDSI	**Maura Dua**	**32.86**	**213**	P		**P**		**11 06 40.3**	**+0.2**
	comp=Z,665nmcomp=Z,51nm,0.8s								
CTJI	**Waduk Cacaban**	**32.95**	**203**	P		**P**		**11 06 41.4**	**+0.6**
	comp=Z,94nm,0.9s								
KSI	**Kapahiang**	**32.99**	**217**	P		**P**		**11 06 42.3**	**+1.0**
IGBI	**Denpasar**	**33.05**	**192**	P		**P**		**11 06 41.3**	**-0.4**
	comp=Z,112nm,1.1s								
BWNR	**Bhubaneshwar**	**33.28**	**271**	*e*P		**P**		**11 06 44.5**	**+0.7**
BWNR				IAmb		IAmb		11 06 51.2	
	comp=Z,122nm,1.3s								
BWNR				*e*S		**S**		**11 12 06.3**	**+2.5**
WBSI	**Waikabubak, Su**	**33.34**	**184**	P		**P**		**11 06 42.1**	**-2.1**
	comp=Z,51nm,0.8s								
KPJI	**Karang Pucung**	**33.35**	**203**	P		**P**		**11 06 44.6**	**+0.3**
	comp=Z,2µmcomp=Z,85nm,1.2s								
LWLI	**Liwa**	**33.38**	**213**	P		**P**		**11 06 45.8**	**+1.1**
LEM	**Lembang**	**33.38**	**206**	LR		LR		11 21 00.3	
	comp=Z,447nm,21.6s,baz=35,slow=38								
SOEI	**Soe**	**33.48**	**175**	IAmb		IAmb		11 06 58.4	
	comp=Z,63nm,0.7s								
SOEI	**Soe**	**33.48**	**175**	P		**P**		**11 06 43.3**	**-2.3**
SOEI	**Soe**	**33.48**	**175**	P		**P**		**11 06 42.3**	**-3.3**
	comp=Z,87nm,0.8s								
DBJI	**Dramaga**	**33.49**	**207**	P		**P**		**11 06 47.0**	**+1.4**
	comp=Z,126nm,1.7s								
KASI	**Kota Agung**	**33.60**	**212**	P		**P**		**11 06 47.6**	**+1.1**
	comp=Z,89nm,0.9s								
BATI	**Baumata**	**33.89**	**176**	LR		LR		11 22 42.9	
	comp=Z,421nm,20.9s,baz=347,slow=40								
BATI	**Baumata**	**33.89**	**176**	P		**P**		**11 06 45.5**	**-3.5**
	comp=Z,110nm,0.8s								
BBJI	**Bungbulang**	**33.95**	**205**	P		**P**		**11 06 49.5**	**-0.1**
BBJI	**Bungbulang**	**33.95**	**205**	P		**P**		**11 06 49.5**	**-0.1**
	comp=Z,664nmcomp=Z,43nm,0.9s								
WMQ	**Urumqi**	**34.16**	**314**	*e*P		**P**		**11 06 52.8**	**+1.6**
WMQ				pP		sP		11 06 57.6	0.0
WMQ				PcP		**PcP**		**11 09 28.8**	**+0.7**
WMQ				pmax	pmax				
	comp=Z,23nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,500nm,3.7s								
WMQ				LR	LR				
	comp=Z,5µm,11.5s								
WMQ				LR	LR				
	comp=Z,6µm,8.7s								
WMQ				LR	LR				
	comp=Z,2µm,14.9s								
JHSG	**JHARSUGUGA**	**34.85**	**274**	*e*P		**P**		**11 06 58.2**	**+0.8**
JHSG				IAmb		IAmb		11 07 04.3	
	comp=Z,158nm,1.0s								
JHSG				*e*S		**S**		**11 12 30.7**	**+2.6**
RAGD	**RAYAGADA**	**35.68**	**270**	*e*P		**P**		**11 07 05.2**	**+0.6**
RAGD				IAmb		IAmb		11 07 12.0	
	comp=Z,77nm,1.3s								
RAGD				*e*S		**S**		**11 12 43.2**	**+2.3**
MANU	**Manus Island**	**35.92**	**132**			**P**		**11 07 08.7**	**+2.1**
MANU				IAmb		IAmb		11 07 09.4	
	comp=Z,118nm,0.8s								
VIS	**Vishakhapatnam**	**36.20**	**268**	*e*P		**P**		**11 07 08.2**	**-0.7**
VIS				IAmb		IAmb		11 07 19.9	
	comp=Z,39nm,0.4s								
VIS				*e*S		**S**		**11 12 50.2**	**+1.4**
MTN	**Manton Dam**	**37.63**	**165**			**P**		**11 07 18.7**	**-2.3**
SKR	**Severo-Kuril's**	**37.83**	**36**	*e*P		P		11 07 02.5	-20
SKR				pmax	pmax				
	comp=Z,400nm,7.1s								
SKR				MLR	MLR				
	comp=Z,1µm,18.0s								
YAK	**Yakutsk**	**38.58**	**6**	P		**P**		**11 07 26.5**	**-2.1**
	comp=Z,101nm,0.9s,baz=192,slow=2.7,SNR=33								
YAK				LR		LR		11 25 51.0	
	comp=Z,1µm,18.7s,baz=184,slow=40								
	comp=Z,101nm,0.9s								
YAK	**Yakutsk**	**38.58**	**6**			**P**		**11 07 26.8**	**-1.8**
YAK				IAmb		IAmb		11 07 31.0	
	comp=Z,132nm,1.0s								
YAK	**Yakutsk**	**38.58**	**6**	*e*P		**P**		**11 07 27.4**	**-1.2**
YAK				*e*				11 08 55.6	
YAK				*e*				11 09 42.1	
YAK				*e*S		**S**		**11 13 24.0**	**0.0**
YAK				*e*				11 17 41.8	
YAK				pmax	pmax				
	comp=Z,131nm,1.0s								
YAK				pmax	pmax				
	comp=N,80nm,1.2s								
YAK				pmax	pmax				
	comp=E,25nm,1.2s								
YAK				pmax	pmax				
	comp=Z,388nm,5.8s								
YAK				smax	smax				
	comp=N,122nm,3.7s								
YAK				smax	smax				
	comp=E,99nm,4.0s								
YAK				MLR	MLR				
	comp=Z,3µm,16.0s								
YAK				MLR	MLR				
	comp=N,2µm,15.0s								
YAK				MLR	MLR				
	comp=E,1µm,15.0s								
MK31	**Makanchi Array**	**38.84**	**316**	*ce*P		**P**		**11 07 31.3**	**+0.2**
MKAR	**Makanchi Array**	**38.84**	**316**	P		**P**		**11 07 31.4**	**+0.2**
	comp=E,34nm,1.0s,baz=109,slow=10.0,SNR=112								
MKAR				PcP		**PcP**		**11 09 40.4**	**-1.7**
	comp=E,23nm,1.0s,baz=94,slow=3.5,SNR=6.9								
MKAR				LR		LR		11 24 18.5	
	comp=E,1µm,18.1s,baz=111,slow=37								
	comp=E,34nm,1.0s								
MKAR	**Makanchi Array**	**38.84**	**316**			**P**		**11 07 31.1**	**0.0**
MKAR	**Makanchi Array**	**38.84**	**316**	*ce*P		**P**		**11 07 31.3**	**+0.2**
MKAR				pmax	pmax				
	comp=Z,35nm,1.0s								
VJD	**Vijayawada**	**39.00**	**267**	*e*P		**P**		**11 07 34.5**	**+1.7**
VJD				IAmb		IAmb		11 07 48.7	
	comp=Z,81nm,1.4s								
VJD				*e*S		**S**		**11 13 35.1**	**+3.7**
MAKZ	**Makanchi**	**39.05**	**316**			**P**		**11 07 32.7**	**-0.1**
MAKZ	**Makanchi**	**39.05**	**316**	P		**P**		**11 07 32.7**	**-0.1**
MAKZ				pmax	pmax				
	comp=Z,81nm,1.1s								
SHLS	**Shalkode**	**39.57**	**310**	*e*P		**P**		**11 07 35.2**	**-2.1**
SHLS				pmax	pmax				
	comp=Z,38nm,0.9s								
SHLS	**Shalkode**	**39.57**	**310**	*e*P		**P**		**11 07 35.3**	**-2.1**
	comp=Z,38nm,0.9s								
PDGK	**Podgornoye**	**39.59**	**310**	P		**P**		**11 07 37.1**	**-0.5**
UZB	**Uzynbulak**	**39.88**	**309***c*	*i*P		**P**		**11 07 40.5**	**+0.6**
UZB	**Uzynbulak**	**39.88**	**309**⇑	*i*P		**P**		**11 07 40.6**	**+0.6**
KNRA	**Kununurra**	**39.89**	**169**			**P**		**11 07 37.9**	**-2.1**
PETK	**Petropavlovsk-**	**39.96**	**34**	P		**P**		**11 07 39.3**	**-1.0**
	comp=Z,5.8nm,0.8s,baz=189,slow=5.7,SNR=6.7								
PETK				LR		LR		11 24 57.6	
	comp=Z,566nm,18.2s,baz=223,slow=37								
	comp=Z,5.8nm,0.8s								
PRZ	**Przheval'sk**	**40.16**	**308**	P		**P**		**11 07 42.1**	**-0.2**
PRZ				pmax	pmax				
	comp=Z,74nm,1.2s								
KPKS	**Kokpek**	**40.20**	**310**	*e*P		**P**		**11 07 43.2**	**+0.7**
KPKS	**Kokpek**	**40.20**	**310**	*e*P		**P**		**11 07 43.2**	**+0.7**
SATY	**Saty**	**40.29**	**309***c*	*i*P		**P**		**11 07 43.9**	**+0.6**
SATY	**Saty**	**40.29**	**309**⇑	*i*P		**P**		**11 07 44.0**	**+0.6**
PET	**Petropavlovsk**	**40.40**	**34**	*e*P		**P**		**11 07 42.8**	**-1.1**
PET				*e*S		**S**		**11 13 49.0**	**-2.5**
PET				pmax	pmax				
	comp=Z,82nm,1.5s								
PET				MLR	MLR				
	comp=Z,1µm,15.0s								
PET				MLR	MLR				
	comp=Z,2µm,15.0s								
TARG	**Taragay, Kyrgy**	**40.42**	**307**			**P**		**11 07 44.1**	**-0.7**
TARG	**Taragay, Kyrgy**	**40.42**	**307**	P		**P**		**11 07 44.1**	**-0.7**
TARG				pmax	pmax				
	comp=Z,89nm,1.4s								
MDRS	**Chennai**	**40.51**	**262**	*e*P		**P**		**11 07 46.1**	**+0.8**
MDRS				IAmb		IAmb		11 07 51.6	
	comp=Z,316nm,2.1s								
MDRS				*e*S		**S**		**11 13 58.2**	**+4.1**
HYB	**Hyderabad**	**40.66**	**269**	*e*P		**P**		**11 07 46.4**	**-0.2**
HYB				*e*S		**S**		**11 13 57.3**	**+1.0**
ZAA0	**Zalesovo Array**	**40.74**	**327**			**P**		**11 07 45.7**	**-1.0**
ZALV	**Zalesovo Beam**	**40.74**	**327**	P		**P**		**11 07 45.8**	**-0.9**
	comp=Z,48nm,0.7s,baz=112,slow=8.1,SNR=77								
ZALV				LR		LR		11 25 01.1	
	comp=Z,687nm,18.5s,baz=122,slow=37								
	comp=Z,48nm,0.7s								
ZALV	**Zalesovo Beam**	**40.74**	**327**	P		**P**		**11 07 45.9**	**-0.8**
RABL	**Rabaul**	**40.79**	**129**	P		**P**		**11 07 47.7**	**+0.1**
RABL				IAmb		IAmb		11 07 50.8	
	comp=Z,176nm,1.0s								
TDK	**Taldyqorghan**	**40.81**	**312**	*e*P		**P**		**11 07 48.2**	**+0.8**
TDK				pmax	pmax				
	comp=Z,129nm,1.2s								
TDK	**Taldyqorghan**	**40.81**	**312**	*e*P		**P**		**11 07 48.2**	**+0.8**
	comp=Z,129nm,1.2s								
ARXS	**Arharly**	**40.99**	**311**	*e*P		**P**		**11 07 49.1**	**+0.1**
MA2	**Magadan**	**41.17**	**22**	P		**P**		**11 07 48.7**	**-1.6**
	comp=Z,17nm,1.0s,baz=194,slow=10,SNR=9.0								
MA2				PcP		**PcP**		**11 09 49.4**	**+0.2**
	comp=Z,9.3nm,0.7s,baz=150,slow=6.0,SNR=5.3								
MA2				LR		LR		11 25 24.2	
	comp=Z,726nm,18.1s,baz=226,slow=37								
	comp=Z,17nm,1.0s								
MA2	**Magadan**	**41.17**	**22**			**P**		**11 07 48.6**	**-1.6**
MA2	**Magadan**	**41.17**	**22**	P		**P**		**11 07 49.0**	**-1.2**
MA2	**Magadan**	**41.17**	**22***ce*	P		**P**		**11 07 49.8**	**-0.4**
MA2				pmax	pmax				
	comp=Z,40nm,1.3s								
MDOK	**Medeo**	**41.28**	**309**	*e*P		**P**		**11 07 52.3**	**+0.8**
MDOK	**Medeo**	**41.28**	**309**	*e*P		**P**		**11 07 52.3**	**+0.8**
TNSS	**Tian-Shan**	**41.32**	**309**	*e*P		**P**		**11 07 52.5**	**+0.3**
TNSS	**Tian-Shan**	**41.32**	**309**	*e*P		**P**		**11 07 52.6**	**+0.3**
AAA	**Alma-Ata**	**41.38**	**309**	*e*P		**P**		**11 07 52.9**	**+0.6**
AAA				pmax	pmax				
	comp=Z,48nm,1.1s								
AAA	**Alma-Ata**	**41.38**	**309**	*e*P		**P**		**11 07 52.9**	**+0.6**
	comp=Z,48nm,1.1s								
PMG	**Port Moresby**	**41.43**	**140**	LR		LR		11 24 12.1	
	comp=Z,338nm,20.5s,baz=319,slow=35								
PMG	**Port Moresby**	**41.43**	**140**			**P**		**11 07 53.1**	**+0.3**
PMG				IAmb		IAmb		11 07 55.4	
	comp=Z,151nm,0.9s								
PMG	**Port Moresby**	**41.43**	**140**	P		**P**		**11 07 54.0**	**+1.2**
PMG	**Port Moresby**	**41.43**	**140**	P		**P**		**11 07 53.1**	**+0.3**
PMG				pmax	pmax				
	comp=Z,151nm,1.0s								
PMG	**Port Moresby**	**41.43**	**140**	P		**P**		**11 07 53.6**	**+0.8**
	comp=Z,2µmcomp=Z,167nm,1.1s								
KSH2	**Kashi**	**41.66**	**303**	P		**P**		**11 07 56.1**	**+1.4**
KSH2				pP		pP		11 08 00.0	+0.7
KSH2				S		**S**		**11 14 11.8**	**+0.8**
KSH2				pmax	pmax				
	comp=Z,20nm,1.2s								
KSH2				pmax	pmax				
	comp=Z,610nm,5.7s								
KSH2				LR	LR				
	comp=Z,4µm,12.4s								
KSH2				LR	LR				
	comp=Z,3µm,13.4s								
KSH2				LR	LR				
	comp=Z,4µm,14.1s								
ULHL	**Ulahol**	**41.66**	**307**	P		**P**		**11 07 55.9**	**+1.1**
	SNR=29								
NRN	**Naryn**	**41.69**	**306**	IAmb		IAmb		11 08 01.0	
	comp=Z,87nm,1.0s								
H11N1	**WAKE ISLAND Hy**	**42.15**	**87**	T		T		11 52 56.8	
	baz=283,slow=74,SNR=419								
H11N2	**WAKE ISLAND Hy**	**42.15**	**86**	T		T		11 52 59.1	
	baz=283,slow=74,SNR=431								
H11N3	**WAKE ISLAND Hy**	**42.16**	**86**	T		T		11 52 58.0	
	baz=283,slow=74,SNR=426								
H11S3	**WAKE ISLAND Hy**	**42.27**	**88**	T		T		11 53 06.1	
	baz=284,slow=75,SNR=1083								
TKM2	**Tokmak 2**	**42.27**	**308**	P		**P**		**11 08 01.0**	**+1.3**
	SNR=56								
H11S1	**WAKE ISLAND Hy**	**42.27**	**88**	T		T		11 53 06.6	
	baz=284,slow=75,SNR=472								
H11S2	**WAKE ISLAND Hy**	**42.28**	**88**	T		T		11 53 07.3	
	baz=284,slow=75,SNR=440								
PALK	**Pallekele**	**42.49**	**254**	LR		LR		11 26 49.3	
	comp=Z,907nm,19.3s,baz=54,slow=38								
PALK	**Pallekele**	**42.49**	**254**	P		**P**		**11 08 03.7**	**+2.1**
PALK				P		**P**		**11 08 03.7**	**+2.1**
PALK	**Pallekele**	**42.49**	**254**	P		**P**		**11 08 03.7**	**+2.1**
KURK	**Kurchatov**	**42.59**	**320**			**P**		**11 08 01.5**	**-0.4**
KURK	**Kurchatov**	**42.59**	**320***ce*	P		**P**		**11 08 02.1**	**+0.2**
KURK				pmax	pmax				
	comp=Z,68nm,1.3s								
KURK	**Kurchatov**	**42.59**	**320**	P		**P**		**11 08 02.1**	**+0.2**
KURBB	**Kurchatov Arra**	**42.61**	**320**	P		**P**		**11 08 02.0**	**-0.1**
	comp=Z,19nm,0.9s,baz=115,slow=7.4,SNR=43								
KURBB				PcP		**PcP**		**11 09 53.2**	**-0.9**
	comp=Z,5.6nm,0.8s,baz=119,slow=2.1,SNR=4.3								
KURBB				LR		LR		11 27 44.9	
	comp=Z,627nm,20.9s,baz=158,slow=39								
	comp=Z,19nm,0.9s								
KURBB	**Kurchatov Arra**	**42.61**	**320**	P		**P**		**11 08 00.4**	**-1.7**
KBK	**Karagaybulak**	**42.68**	**308**	P		**P**		**11 08 04.6**	**+1.5**
	SNR=21								
CHMS	**Chumysh**	**42.89**	**308**	P		**P**		**11 08 04.4**	**-0.2**
	SNR=21								
UCH	**Uchtor**	**42.92**	**307**	P		**P**		**11 08 06.9**	**+1.5**
	SNR=44								
SALM	**Salem**	**42.93**	**261**	*e*P		**P**		**11 08 05.6**	**+0.4**
SALM				IAmb		IAmb		11 08 11.1	
	comp=Z,393nm,2.2s								
SALM				*e*S		**S**		**11 14 32.7**	**+2.7**
AAK	**Ala-Archa**	**43.01**	**308**	LR		LR		11 26 12.7	
	comp=Z,746nm,18.5s,baz=68,slow=36								
AAK	**Ala-Archa**	**43.01**	**308**	P		**P**		**11 08 10.3**	**+4.6**
	SNR=13								
AAK	**Ala-Archa**	**43.01**	**308**			**P**		**11 08 05.7**	**0.0**
AAK	**Ala-Archa**	**43.01**	**308***ce*	P		**P**		**11 08 07.2**	**+1.5**
AAK				pmax	pmax				
	comp=Z,37nm,1.3s								
AAK	**Ala-Archa**	**43.01**	**308**	P		**P**		**11 08 07.2**	**+1.5**
SGDS	**Sogindy**	**43.07**	**309**	*e*P		**P**		**11 08 06.9**	**+0.9**
COEN	**Coen**	**43.08**	**148**			**P**		**11 08 05.9**	**-0.4**
COEN				IAmb		IAmb		11 08 08.9	
	comp=Z,103nm,0.8s								
COEN	**Coen**	**43.08**	**148**	P		**P**		**11 08 07.0**	**+0.7**
USP	**Ospenovka**	**43.12**	**309**	P		**P**		**11 08 04.2**	**-2.3**
	SNR=19								
NIL	**Nilore**	**43.16**	**294**	P		**P**		**11 08 06.1**	**-0.8**
NIL	**Nilore**	**43.16**	**294**	P		**P**		**11 08 06.1**	**-0.8**
NIL				pmax	pmax				
	comp=Z,64nm,1.1s								
NIL	**Nilore**	**43.16**	**294**	P		**P**		**11 08 07.9**	**+1.0**
COCO	**West Island**	**43.21**	**217**	P		**P**		**11 08 04.1**	**-3.2**
EKS2	**Erkin-Say**	**43.53**	**307**	P		**P**		**11 08 11.0**	**+1.1**
	SNR=19								
ARSB	**Arslanbob**	**43.91**	**305**	P		**P**		**11 08 11.8**	**-1.2**
ARSB	**Arslanbob**	**43.91**	**305**	P		**P**		**11 08 11.8**	**-1.2**
ARSB				pmax	pmax				
	comp=Z,40nm,1.1s								
ALOT	**Alotau**	**44.13**	**137**	P		**P**		**11 08 15.0**	**+0.2**
SEY	**Seymchan**	**44.19**	**20**	P		**P**		**11 08 14.0**	**-0.6**
	comp=Z,15nm,0.9s,baz=225,slow=6.2,SNR=33								
SEY				PcP		**PcP**		**11 09 59.9**	**+0.7**
	comp=Z,12nm,0.8s,baz=210,slow=5.6,SNR=8.1								
SEY				LR		LR		11 27 39.2	
	comp=Z,806nm,18.8s,baz=208,slow=38								
	comp=Z,15nm,0.9s								
SEY	**Seymchan**	**44.19**	**20***ce*	P		**P**		**11 08 14.3**	**-0.3**
SEY				pmax	pmax				
	comp=Z,35nm,1.3s								
MBWA	**Marble Bar**	**44.76**	**182**			**P**		**11 08 17.8**	**-1.7**
MBWA	**Marble Bar**	**44.76**	**182**	P		**P**		**11 08 17.9**	**-1.7**
MBWA	**Marble Bar**	**44.76**	**182**	P		**P**		**11 08 15.6**	**-4.0**
PSA00	**Pilbara Seismi**	**45.16**	**182**	P		**P**		**11 08 21.1**	**-1.7**
PSA00	**Pilbara Seismi**	**45.16**	**182**	P		**P**		**11 08 21.0**	**-1.8**
PSA00				IAmb		IAmb		11 08 27.5	
	comp=Z,35nm,0.9s								
PSA00	**Pilbara Seismi**	**45.16**	**182**	P		**P**		**11 08 20.7**	**-2.1**
WRAB	**Tennant Creek**	**45.24**	**163**	P		**P**		**11 08 22.1**	**-1.4**
WRAB	**Tennant Creek**	**45.24**	**163**	P		**P**		**11 08 21.4**	**-2.1**
WRAB	**Tennant Creek**	**45.24**	**163***ce*	P		**P**		**11 08 22.2**	**-1.3**
WRAB				pmax	pmax				
	comp=Z,39nm,1.0s								
WRA	**Warramunga Arr**	**45.25**	**163**	P		**P**		**11 08 21.9**	**-1.7**
	comp=Z,29nm,0.9s,baz=343,slow=8.6,SNR=101								
WRA				S		**S**		**11 15 02.0**	**-1.4**
	comp=Z,5.3nm,1.2s,baz=334,slow=14,SNR=5.0								
	comp=Z,29nm,0.9s								
WRA	**Warramunga Arr**	**45.25**	**163**	P		**P**		**11 08 21.0**	**-2.6**
WRA	**Warramunga Arr**	**45.25**	**163**	*i* P		**P**		**11 08 21.8**	**-1.8**
WRA				pmax	pmax				
	comp=Z,30nm,0.9s								
DZA	**Taraz**	**45.35**	**307**	*e*P		**P**		**11 08 25.0**	**+0.7**
DZA				pmax	pmax				
	comp=Z,46nm,1.4s								
DZA	**Taraz**	**45.35**	**307**	*e*P		**P**		**11 08 24.1**	**-0.2**
	comp=Z,46nm,1.4s								
BRZS	**Berezniki**	**45.94**	**317**	*e*P		**P**		**11 08 29.3**	**+0.5**
BRZS	**Berezniki**	**45.94**	**317**	*e*P		**P**		**11 08 29.4**	**+0.5**
KK31	**Karatay Array**	**45.97**	**308**	P		**P**		**11 08 29.4**	**+0.3**
KK31				IAmb		IAmb		11 08 34.5	
	comp=Z,75nm,1.3s								
KK31	**Karatay Array**	**45.97**	**308**	*i* P		**P**		**11 08 29.5**	**+0.3**
KKAR	**Karatay Array**	**45.97**	**308**	P		**P**		**11 08 29.2**	**0.0**
KKAR	**Karatay Array**	**45.97**	**308**	P		**P**		**11 08 29.2**	**0.0**
IUG	**Iuzhnay**	**46.21**	**306***c*	*i*P		**P**		**11 08 31.9**	**+0.7**
IUG				pmax	pmax				
	comp=Z,35nm,1.0s								
IUG	**Iuzhnay**	**46.21**	**306**⇑	*i*P		**P**		**11 08 31.9**	**+0.7**
	comp=Z,35nm,1.0s								
BRLS	**Borolday**	**46.45**	**307**	*e*P		**P**		**11 08 34.1**	**+1.1**
BRLS				pmax	pmax				
	comp=Z,24nm,1.1s								
BRLS	**Borolday**	**46.45**	**307**	*e*P		**P**		**11 08 34.2**	**+1.1**
	comp=Z,24nm,1.1s								
CHM	**Chimkent**	**46.54**	**306**	*e*P		**P**		**11 08 34.3**	**+0.7**
CHM				pmax	pmax				
	comp=Z,64nm,1.7s								
CHM	**Chimkent**	**46.54**	**306**	*e*P		**P**		**11 08 34.4**	**+0.7**
	comp=Z,64nm,1.7s								
KBL	**Kabul**	**46.64**	**296**	P		**P**		**11 08 34.2**	**-0.6**
KBL	**Kabul**	**46.64**	**296**	P		**P**		**11 08 34.2**	**-0.6**
KBL				pmax	pmax				
	comp=Z,188nm,1.3s								
KBL	**Kabul**	**46.64**	**296**	P		**P**		**11 08 36.0**	**+1.2**
	SNR=69								
KBL				P		**P**		**11 08 36.0**	**+1.2**
	SNR=69								
MTSU	**Mount Surprise**	**47.24**	**150**	P		**P**		**11 08 40.1**	**+0.8**
QIS	**Mount Isa**	**47.49**	**157**	P		**P**		**11 08 40.7**	**-0.5**
TIXI	**Tiksi**	**48.03**	**3**	LR		LR		11 30 49.2	
	comp=Z,1µm,18.7s,baz=202,slow=38								
TIXI	**Tiksi**	**48.03**	**3**	P		**P**		**11 08 42.9**	**-1.8**
TIXI				IAmb		IAmb		11 08 45.6	
	comp=Z,111nm,0.9s								
TIXI	**Tiksi**	**48.03**	**3***ce*	P		**P**		**11 08 43.0**	**-1.8**
TIXI				pmax	pmax				
	comp=Z,162nm,1.3s								
BVAR	**Borovoye Array**	**48.18**	**321**	P		**P**		**11 08 46.0**	**-0.2**
	comp=Z,19nm,0.8s,baz=102,slow=7.7,SNR=37								
BVAR				PcP		**PcP**		**11 10 12.0**	**-1.4**
	comp=Z,22nm,0.9s,baz=94,slow=2.8,SNR=6.9								
BVAR				LR		LR		11 28 13.8	
	comp=Z,406nm,20.8s,baz=81,slow=35								
	comp=Z,19nm,0.8s								
BORK	**Borovoye**	**48.22**	**321**	P		**P**		**11 08 46.3**	**-0.3**
BORK				IAmb		IAmb		11 08 50.6	
	comp=Z,62nm,1.0s								
BORK	**Borovoye**	**48.22**	**321***ce*	P		**P**		**11 08 46.5**	**-0.1**
BORK				pmax	pmax				
	comp=Z,67nm,1.0s								
AS31	**Alice Springs**	**48.71**	**165**	P		**P**		**11 08 49.9**	**-0.7**
ASAR	**Alice Springs**	**48.71**	**165**	P		**P**		**11 08 49.6**	**-1.0**
	comp=Z,19nm,0.9s,baz=342,slow=7.1,SNR=87								
ASAR				PcP		**PcP**

JLN Jalan Bani Buh 56.84 282 P **P** **11 09 51.7 +0.8**
JLN P **P** **11 09 51.7 +0.8**
WBK Wadi Bani Khal 57.12 282 P **P** **11 09 54.1 +1.2**
DGAR Diego Garcia 57.13 243 P **P** **11 09 55.7 +2.8**
WSAR Wadi Sarin 57.27 283 P **P** **11 09 55.1 +1.1**
BIDO Bidbid 57.65 284 P **P** **11 09 58.5 +1.9**
SNR=5.8
SMDO Samad 57.83 283 P **P** **11 09 58.6 +0.6**
SMDO P **P** **11 09 58.6 +0.6**
JMDO Jabal Madar 57.96 282 P **P** **11 09 59.5 +0.7**
JMDO P **P** **11 09 59.5 +0.7**
BBOO Buckleboo 57.99 166 P **P** **11 09 58.0 -0.7**
BBOO IAmb IAmb 11 09 59.8
comp=Z,166nm,1.4s
BBOO Buckleboo 57.99 166 P **P** **11 09 57.6 -1.1**
HOQ Hoqain 58.36 284 P **P** **11 10 02.6 +1.0**
SNR=13
HOQ P **P** **11 10 02.6 +1.0**
SNR=13
MHTO MHTO 58.44 281 P **P** **11 10 02.4 +0.2**
SPIA Saint Paul Isl 58.51 36 P **P** **11 10 02.3 +0.2**
baz=266
STKA Stephens Creek 58.61 160 P **P** **11 10 02.7 -0.3**
comp=Z,24nm,0.7s,baz=338,slow=7.3,SNR=39
STKA LR LR 11 35 34.3
comp=Z,162nm,21.6s,baz=349,slow=36
comp=Z,24nm,0.7s
STKA Stephens Creek 58.61 160 P **P** **11 10 02.4 -0.6**
STKA Stephens Creek 58.61 160 P **P** **11 10 02.7 -0.3**
GAMB Gambell 58.62 29 IAmb IAmb 11 10 06.8
comp=Z,67nm,1.1s
GAMB Gambell 58.62 29 P **P** **11 10 02.7 0.0**
baz=260,SNR=18
BSY Bisya 58.67 283 P **P** **11 10 03.5 -0.3**
BSY P **P** **11 10 03.5 -0.3**
BANOM Banah 58.70 287 P **P** **11 10 04.3 +0.3**
AULRC Lightning Ridg 58.73 153 P **P** **11 10 04.2 +0.4**
SHME Shamm 58.81 287 P **P** **11 10 05.2 +0.5**
MDH Madha 58.84 286 P **P** **11 10 07.0 +2.0**
P08K Saint George I 58.85 37 P **P** **11 10 05.0 +0.6**
baz=266
TW1H Toowoomba 1 Ha 58.90 148 P **P** **11 10 06.5 +1.3**
SOHO SOHO 58.92 285 P **P** **11 10 06.4 +1.0**
SOHO P **P** **11 10 06.4 +1.0**
MASF Masafi 58.95 286 P **P** **11 10 09.1 +3.3**
MASF P **P** **11 10 09.1 +3.3**
HATD Hatta, Dubai 59.10 286 P **P** **11 10 09.4 +2.6**
HATD P **P** **11 10 09.4 +2.6**
NIKH Nikolski High 59.11 41 P **P** **11 10 07.0 +0.6**
baz=269
DQM DQM 59.12 280 P **P** **11 10 09.7 +2.8**
ASHO Ashiyiah 59.20 285 P **P** **11 10 08.6 +1.1**
SNR=10
HTT Hallett 59.29 163 P **P** **11 10 07.4 -0.4**
AUWSH Wavell State H 59.30 147 P **P** **11 10 09.0 +1.1**
UMQ Umm Al-Quwin 59.35 286 P **P** **11 10 10.9 +2.5**
NAZ Nazwa, Dubai 59.48 286 P **P** **11 10 11.1 +1.7**
SNR=6.3
NAZ P **P** **11 10 11.1 +1.7**
SNR=6.3
ALNE Al Ain 59.63 285 P **P** **11 10 13.0 +2.6**
SNR=14
CMSA Cobar Meteorol 59.70 156 P **P** **11 10 10.8 +0.3**
TNA Tin City 60.49 27 IAmb IAmb 11 10 17.2
comp=Z,44nm,1.1s
TNA Tin City 60.49 27 P **P** **11 10 15.7 +0.1**
baz=263,SNR=24
UNV Unalaska Valle 60.52 40 P **P** **11 10 14.7 -1.3**
UNV Unalaska Valle 60.52 40 P **P** **11 10 16.5 +0.5**
baz=271
AUMAR Marden Senior 60.60 164 P **P** **11 10 16.8 +0.1**
KOUNC Koumac, New Ca 60.63 133 P **P** **11 10 19.0 +1.8**
KIRV Kirov 60.72 325 *ce*P **P** **11 10 16.7 -0.5**
M11K Mekoryuk 60.82 33 P **P** **11 10 17.8 -0.1**
M11K IAmb IAmb 11 10 21.4
comp=Z,116nm,1.1s
M11K Mekoryuk 60.82 33 P **P** **11 10 18.5 +0.6**
baz=267,SNR=29
AUMBR Murray Bridge 61.00 163 P **P** **11 10 19.5 +0.2**
F14K Arctic Creek 61.14 27 P **P** **11 10 20.3 +0.3**
baz=264
ARMA Armidale 61.16 150 P **P** **11 10 20.6 -0.2**
ARMA Armidale 61.16 150 P **P** **11 10 21.9 +1.2**
SHAO Shalim 61.41 278 P **P** **11 10 20.1 -2.5**
AUPHS Peel High Scho 61.41 151 P **P** **11 10 23.3 +1.0**
ANM Nome 61.47 28 IAmb IAmb 11 10 26.1
comp=Z,70nm,0.9s
ANM Nome 61.47 28 P **P** **11 10 22.7 +0.5**
baz=266,SNR=75
K13K Kusilvak Mount 61.63 31 P **P** **11 10 24.1 +0.7**
baz=268
BELG Belogornoye 61.80 318 LR LR 11 41 29.0
comp=Z,510nm,18.6s,baz=116,slow=40
BELG Belogornoye 61.80 318 *i*P **P** **11 10 24.5 -0.2**
BELG pmax pmax
comp=Z,17nm,1.0s
C16K Lisburne Hills 61.83 24 P **P** **11 10 24.0 -0.6**
baz=264
F15K North Star Dit 61.86 27 IAmb IAmb 11 10 26.8
comp=Z,61nm,1.1s
F15K North Star Dit 61.86 27 P **P** **11 10 25.2 +0.3**
baz=266,SNR=65
MZR Muzera 61.91 284 P **P** **11 10 30.7 +4.7**
SNR=6.5
MZR P **P** **11 10 30.7 +4.7**
SNR=6.5
JRN Qarnain Island 61.96 287 P **P** **11 10 28.2 +1.9**
JRN P **P** **11 10 28.2 +1.9**
G15K Niukluk 62.06 28 P **P** **11 10 26.4 +0.1**
baz=267
DMTO DMTO 62.12 278 P **P** **11 10 29.2 +1.8**
J14K Nanvaranak Lak 62.18 30 P **P** **11 10 27.4 +0.4**
baz=268
M13K Dall Lake 62.23 33 IAmb IAmb 11 10 30.3
comp=Z,82nm,0.9s
M13K Dall Lake 62.23 33 P **P** **11 10 27.3 -0.1**
baz=270
FALS False Pass 62.30 39 P **P** **11 10 28.5 +0.5**
baz=273
L14K Kuka Creek 62.56 32 P **P** **11 10 30.1 +0.5**
baz=270,SNR=62
DOK Doka 62.58 279 P **P** **11 10 28.9 -1.6**
DOK P **P** **11 10 28.9 -1.6**
D17K Noatak River 62.62 25 P **P** **11 10 30.2 +0.3**
baz=266,SNR=77
C17K DeLong Mountai 62.65 24 P **P** **11 10 30.3 +0.1**
baz=266
RDOG Red Dog Mine 62.71 24 P **P** **11 10 30.4 -0.2**
baz=266
MAK Makhachkala 62.79 307 *e*P **P** **11 10 27.7 -3.8**
MAK *e*S **S** **11 18 55.6 -4.6**
MAK *e*SS **SS** **11 23 07.6 +2.8**
MAK pmax pmax
comp=Z,146nm,1.2s
MAK MLR MLR
comp=Z,828nm,12.0s
G16K Koyuk River 62.79 27 IAmb IAmb 11 10 35.1
comp=Z,48nm,1.0s
G16K Koyuk River 62.79 27 P **P** **11 10 31.4 +0.3**
baz=268,SNR=54
H16K Elim 62.82 28 P **P** **11 10 31.3 0.0**
baz=268,SNR=101
AKT Akhty 62.84 306 *e*P **P** **11 10 31.5 -0.6**
AKT *e* 11 11 09.5
AKT *e* 11 12 49.1
AKT *e*S **S** **11 19 02.4 +1.2**
AKT pmax pmax
comp=Z,64nm,1.1s
AKT MLR MLR
comp=Z,1µm,13.0s
RBK Rabkut 62.85 278 P **P** **11 10 32.7 +0.3**
RBK P **P** **11 10 32.7 +0.3**
M14K Bethel 62.92 32 IAmb IAmb 11 10 34.5
comp=Z,81nm,0.9s
M14K Bethel 62.92 32 P **P** **11 10 32.4 +0.4**
baz=271,SNR=22
N14K Kuskokwak Cree 63.07 33 P **P** **11 10 33.4 +0.3**
baz=271,SNR=15
E17K Hotham Inlet 63.07 25 P **P** **11 10 33.2 +0.2**
baz=268,SNR=34
K15K Wolf Creek Mou 63.11 31 P **P** **11 10 33.8 +0.4**
baz=270,SNR=45
DZM Mont Dzumac 63.13 133 P **P** **11 10 35.1 +1.0**
DZM IAmb IAmb 11 10 36.9
comp=Z,67nm,1.2s

DZM Mont Dzumac 63.13 133 P **P** **11 10 35.1 +1.0**
L15K Ungalak Mounta 63.13 31 P **P** **11 10 33.8 +0.3**
baz=271,SNR=9.1
O14K Tigyukauivet M 63.30 34 IAmb IAmb 11 10 36.3
comp=Z,43nm,1.0s
O14K Tigyukauivet M 63.30 34 P **P** **11 10 34.7 +0.1**
baz=272,SNR=10
SHMA Al-Shehemyia 63.38 288 P **P** **11 10 33.8 -1.9**
C18K Utukok River 63.38 24 IAmb IAmb 11 10 36.5
comp=Z,37nm,1.1s
C18K Utukok River 63.38 24 P **P** **11 10 35.0 -0.1**
baz=267,SNR=21
YATNC Mamie plateau, 63.42 132 P **P** **11 10 37.2 +1.3**
TRNA Turayna 63.45 287 P **P** **11 10 36.6 +0.4**
I17K Unalakleet 63.48 29 IAmb IAmb 11 10 40.3
comp=Z,98nm,1.1s
I17K Unalakleet 63.48 29 P **P** **11 10 36.6 +0.9**
baz=270,SNR=35
G17K Kiwalik Mounta 63.51 27 P **P** **11 10 36.4 +0.4**
baz=270,SNR=98
J16K Anvik River 63.53 30 P **P** **11 10 36.9 +0.8**
baz=271,SNR=20
M15K Kasigluk River 63.54 32 P **P** **11 10 36.1 -0.1**
baz=272,SNR=20
E18K Tukpahlearik C 63.56 25 IAmb IAmb 11 10 40.3
comp=Z,36nm,0.8s
E18K Tukpahlearik C 63.56 25 P **P** **11 10 36.7 +0.5**
baz=269,SNR=41
OUENC Ouen Island, N 63.63 133 P **P** **11 10 38.6 +1.3**
SAKB Bahrain 63.72 288 P **P** **11 10 38.2 +0.3**
SMRA Abu-Samra 63.79 287 P **P** **11 10 38.8 +0.3**
H17K Granite Mounta 63.82 28 IAmb IAmb 11 10 42.4
comp=Z,95nm,1.0s
H17K Granite Mounta 63.82 28 P **P** **11 10 38.5 +0.5**
baz=270
N15K Kwethluk River 63.86 33 P **P** **11 10 38.8 +0.5**
baz=273,SNR=37
F18K Selawik 63.92 26 P **P** **11 10 39.0 +0.4**
baz=270,SNR=80
SDPT Sand Point 63.96 38 P **P** **11 10 38.7 -0.3**
baz=275
C19K Lookout Ridge 63.98 23 P **P** **11 10 39.3 +0.2**
baz=269
O15K Ungalikthiuk R 64.05 34 P **P** **11 10 39.8 +0.3**
baz=273
L16K Owhat River 64.09 31 P **P** **11 10 40.2 +0.4**
baz=272,SNR=29
G18K Tagagawik 64.33 27 IAmb IAmb 11 10 45.0
comp=Z,49nm,0.9s
G18K Tagagawik 64.33 27 P **P** **11 10 41.7 +0.4**
baz=271,SNR=48
M16K Timber Creek 64.37 32 P **P** **11 10 42.5 +0.8**
baz=273,SNR=55
H18K Honhosa River 64.47 27 P **P** **11 10 42.7 +0.4**
baz=272
N16K Nishlik Lake 64.50 33 P **P** **11 10 42.9 +0.4**
baz=274,SNR=71
CHNA Chernabura Isl 64.51 39 P **P** **11 10 42.8 +0.2**
CHNA Chernabura Isl 64.51 39 P **P** **11 10 42.9 +0.3**
baz=276,SNR=8.0
D19K Kuna River 64.51 24 P **P** **11 10 42.6 +0.1**
baz=270
BRAT Ballarat 64.58 160 P **P** **11 10 43.9 +0.8**
K17K Iditarod 64.60 30 P **P** **11 10 43.7 +0.6**
baz=273,SNR=89
AUMTC Mt Clear Colle 64.61 161 P **P** **11 10 43.9 +0.5**
L17K Donlin 64.63 31 P **P** **11 10 44.1 +0.8**
baz=273,SNR=62
E19K Redstone River 64.86 25 IAmb IAmb 11 10 48.6
comp=Z,56nm,0.8s
E19K Redstone River 64.86 25 P **P** **11 10 45.0 +0.2**
baz=272,SNR=104
O16K Kokwok River B 64.90 34 IAmb IAmb 11 10 47.0
comp=Z,64nm,1.0s
O16K Kokwok River B 64.90 34 P **P** **11 10 45.5 +0.3**
baz=275,SNR=28
G19K Purcell Mounta 64.97 26 IAmb IAmb 11 10 51.8
comp=Z,57nm,1.1s
G19K Purcell Mounta 64.97 26 P **P** **11 10 45.6 +0.2**
baz=272
P16K Nushagak River 65.00 34 IAmb IAmb 11 10 47.6
comp=Z,78nm,0.9s
P16K Nushagak River 65.00 34 P **P** **11 10 46.1 +0.4**
baz=275,SNR=15
A21K Barrow 65.01 21 P **P** **11 10 45.5 -0.2**
baz=270,SNR=54
D20K Etivluk River 65.06 23 P **P** **11 10 46.0 0.0**
baz=272
M17K Holitna River 65.08 32 P **P** **11 10 47.0 +0.7**
baz=274,SNR=28
TOO Toolangi 65.09 159 P **P** **11 10 45.8 -0.8**
TOO Toolangi 65.09 159 P **P** **11 10 45.8 -0.8**
TOO pmax pmax
comp=Z,34nm,1.3s
GCSA Galena City Sc 65.12 28 P **P** **11 10 47.0 +0.5**
baz=273,SNR=30
E20K Nigu River 65.23 24 P **P** **11 10 47.4 +0.2**
baz=272
J18K Innoko River 65.27 29 IAmb IAmb 11 10 49.4
comp=Z,79nm,1.1s
J18K Innoko River 65.27 29 P **P** **11 10 47.7 +0.2**
baz=274
N17K Nushagak Hills 65.28 33 IAmb IAmb 11 10 50.0
comp=Z,79nm,1.0s
N17K Nushagak Hills 65.28 33 P **P** **11 10 48.3 +0.7**
baz=275,SNR=32
GNI Garni 65.30 305 LR LR 11 42 35.3
comp=Z,504nm,19.1s,baz=72,slow=39
GNI Garni 65.30 305 P **P** **11 10 47.5 -0.8**
GNI Garni 65.30 305 *ce*P **P** **11 10 49.1 +0.8**
GNI pmax pmax
comp=Z,67nm,1.7s
GNI Garni 65.30 305 P **P** **11 10 51.1 +2.8**
R16K Pilot Point 65.36 36 IAmb IAmb 11 10 48.7
comp=Z,85nm,0.9s
R16K Pilot Point 65.36 36 P **P** **11 10 48.6 +0.5**
baz=276,SNR=6.8
L18K Granite Mounta 65.38 31 P **P** **11 10 49.0 +0.8**
baz=275
O17K Koliganek Bris 65.39 33 P **P** **11 10 48.8 +0.5**
baz=275,SNR=17
F20K Avaraart Lake 65.46 25 IAmb IAmb 11 10 52.7
comp=Z,55nm,1.2s
F20K Avaraart Lake 65.46 25 P **P** **11 10 49.2 +0.6**
baz=273,SNR=48
VRH Novokhopyorsk 65.56 317 *e*P **P** **11 10 48.4 -1.1**
VRH pmax pmax
comp=Z,81nm,1.0s
GOF Gofitskoye 65.64 310 *ce*P **P** **11 10 51.2 +1.0**
KLMR Klimovskoe 65.65 328 *e*P **P** **11 10 48.2 -1.8**
KLMR *e* 11 11 20.0
KLMR pmax pmax
comp=Z,85nm,1.3s
C21K Knifeblade Rid 65.70 23 P **P** **11 10 50.6 +0.4**
baz=273
J19K Poorman 65.72 29 P **P** **11 10 50.9 +0.5**
baz=276,SNR=97
Q16K King Salmon 65.72 35 P **P** **11 10 50.7 +0.3**
baz=276,SNR=22
P17K Kvichak River 65.78 34 P **P** **11 10 51.3 +0.5**
baz=276,SNR=27
M18K Stony River 65.85 31 P **P** **11 10 52.2 +0.9**
baz=276,SNR=44
N18K Kilae Creek 65.90 32 IAmb IAmb 11 10 53.9
comp=Z,60nm,1.2s
N18K Kilae Creek 65.90 32 P **P** **11 10 52.6 +1.0**
baz=276,SNR=19
H20K Anotleneega Mo 65.91 27 P **P** **11 10 52.1 +0.5**
baz=275
ADZR Andozero 65.94 331 *e*P **P** **11 10 49.3 -2.5**
ADZR pmax pmax
comp=Z,95nm,1.2s
KBZ Khabaz 65.98 309 P **P** **11 10 52.6 +0.2**
comp=Z,24nm,1.0s,baz=83,slow=4.9,SNR=16
KBZ LR LR 11 41 25.9
comp=Z,465nm,19.0s,baz=13,slow=38
comp=Z,24nm,1.0s
KBZ Khabaz 65.98 309 *ce*P **P** **11 10 52.4 0.0**
KBZ pmax pmax
comp=Z,29nm,1.0s
R17L Mt. Peulik Vol 66.00 36 P **P** **11 10 51.7 -0.7**
baz=277
KIV Kislovodsk 66.09 309 P **P** **11 10 52.6 -0.6**
KIV IAmb IAmb 11 11 08.2
comp=Z,86nm,1.0s
KIV Kislovodsk 66.09 309 ‖P **P** **11 10 53.6 +0.3**
KIV Kislovodsk 66.09 309 *eP* **P** **11 10 52.4 -0.9**

KIV pmax pmax
comp=Z,70nm,1.1s
KIV MLR MLR
comp=Z,326nm,17.0s
KIV Kislovodsk 66.09 309 P **P** **11 10 53.7 +0.4**
KIV Kislovodsk 66.09 309 P **P** **11 10 53.8 +0.5**
comp=Z,1µmcomp=Z,79nm,1.3s
SHA1 Shidzhatmaz 66.15 309 *ce*P **P** **11 10 54.6 +0.8**
Q17K Contact Creek 66.17 35 P **P** **11 10 53.1 -0.4**
baz=277
L19K White Mountain 66.24 31 P **P** **11 10 54.6 +0.8**
baz=276,SNR=71
F21K Alatna River 66.33 25 P **P** **11 10 54.8 +0.5**
baz=275,SNR=38
O18K Koktuh Hills 66.33 33 P **P** **11 10 55.2 +0.8**
baz=277,SNR=26
J20K Nowinta River 66.35 28 P **P** **11 10 55.6 +1.3**
baz=276,SNR=54
P18K Big Mountain, 66.38 34 IAmb IAmb 11 10 56.3
comp=Z,99nm,1.1s
P18K Big Mountain, 66.38 34 P **P** **11 10 54.8 +0.1**
baz=277,SNR=28
G21K Allakaket 66.38 26 P **P** **11 10 55.0 +0.4**
baz=276,SNR=76
K20K Telida 66.47 29 P **P** **11 10 56.2 +0.9**
baz=276,SNR=31
ACHA Angle Creek He 66.47 35 IAmb IAmb 11 10 58.7
comp=Z,57nm,0.9s
D22K Ayikyak River 66.48 23 P **P** **11 10 55.7 +0.5**
baz=275
M19K Big River Lodg 66.48 31 P **P** **11 10 56.2 +0.8**
baz=277
N19K Bonanza Creek 66.57 32 IAmb IAmb 11 10 58.3
comp=Z,67nm,1.0s
N19K Bonanza Creek 66.57 32 P **P** **11 10 56.8 +0.8**
baz=277,SNR=26
CHIR Chirikof Islan 66.64 38 P **P** **11 10 56.7 +0.3**
baz=278
O19K Port Alsworth 66.73 33 P **P** **11 10 57.4 +0.5**
baz=278,SNR=34
H21K Melozitna Rive 66.75 27 P **P** **11 10 57.8 +0.8**
baz=276,SNR=90
E22K Anaktuvuk Pass 66.87 24 P **P** **11 10 57.9 +0.2**
baz=276,SNR=145
GEVA Gevas 66.96 303 P **P** **11 10 57.2 -1.8**
GEVA IAmb IAmb 11 11 09.8
comp=Z,33nm,1.0s
VORR Voronezh 67.04 318 *eP* **P** **11 10 56.9 -2.1**
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 67.06 319 *eP* **P** **11 10 57.8 -1.3**
LPSR pmax pmax
comp=Z,91nm,1.0s
M20K Styx River 67.08 31 P **P** **11 10 59.1 -0.1**
M20K Styx River 67.08 31 P **P** **11 10 59.9 +0.7**
baz=278
VORD Divnogorie 67.11 317 *eP* **P** **11 10 57.8 -1.7**
VORD pmax pmax
comp=Z,30nm,1.2s
VSR Storozhevoye 67.15 317 *eP* **P** **11 10 57.7 -2.0**
VSR pmax pmax
comp=Z,50nm,1.3s
I21K Tanana 67.15 27 P **P** **11 11 00.3 +0.7**
baz=277
CHUM Lake Minchumin 67.18 29 P **P** **11 11 00.8 +1.1**
baz=278,SNR=40
D23K Nanushuk River 67.19 23 P **P** **11 11 00.3 +0.6**
baz=277
Q19K Cape Douglas, 67.25 34 P **P** **11 10 59.2 -1.1**
Q19K Cape Douglas, 67.25 34 P **P** **11 10 59.4 -0.9**
baz=279,SNR=14
ERBR Yeremizino-Bor 67.30 311 *eP* **P** **11 11 00.2 -0.6**
ERBR *e**PP **pP** **11 11 05.1 -0.5**
ERBR *e* 11 13 30.7
ERBR *e*PPP PPP 11 15 05.7
ERBR *e*S **S** **11 19 55.7 +0.1**
ERBR pmax pmax
comp=Z,63nm,1.1s
MOS Moscow 67.30 322 *eP* **P** **11 10 59.2 -1.4**
MOS *e* 11 11 25.5
MOS *e* 11 13 29.7
MOS pmax pmax
comp=Z,68nm,1.3s
MOS MLR MLR
comp=Z,800nm,15.0s
H22K Ishtalitna Cre 67.31 26 P **P** **11 11 01.5 +0.9**
baz=278,SNR=95
SII Sitkinak Islan 67.33 37 P **P** **11 11 01.6 +0.8**
SII Sitkinak Islan 67.33 37 P **P** **11 11 01.2 +0.4**
baz=279
ILSW Iliamna Southw 67.34 33 IAmb IAmb 11 11 06.5
comp=Z,65nm,1.3s
LABN Labinsk 67.34 310 *eP* **P** **11 11 01.0 -0.1**
LABN *eS* **S** **11 19 55.5 -0.7**
LABN pmax pmax
comp=Z,30nm,0.8s
P19K Oil Pt 67.35 33 P **P** **11 11 00.6 -0.3**
baz=279,SNR=16
PPLA Purkeypile 67.37 30 P **P** **11 11 01.5 +0.3**
baz=278,SNR=35
RED Redoubt Volcan 67.46 32 IAmb IAmb 11 11 03.5
comp=Z,100nm,1.2s
APA Apatity 67.53 335 ‖*eP* **P** **11 11 05.1 +3.2**
APA *e* 11 11 24.4
APA pmax pmax
comp=Z,22nm,1.1s
APA MLR MLR
comp=Z,2µm,15.7s
COLD Coldfoot 67.59 25 IAmb IAmb 11 11 08.2
comp=Z,56nm,1.2s
COLD Coldfoot 67.59 25 P **P** **11 11 02.7 +0.4**
baz=278,SNR=40
GURO Guroymak-BITLI 67.69 304 IAmb IAmb 11 11 10.8
comp=Z,62nm,1.4s
SPU Mount Spurr 67.69 32 IAmb IAmb 11 11 04.5
comp=Z,98nm,1.2s
MLY Manley 67.70 27 P **P** **11 11 03.6 +0.6**
baz=279,SNR=27
E23K Chandalar 67.70 24 P **P** **11 11 03.6 +0.6**
baz=278,SNR=89
OHAK Old Harbor 67.70 36 P **P** **11 11 02.8 -0.3**
OHAK IAmb IAmb 11 11 04.3
comp=Z,75nm,1.0s
OHAK Old Harbor 67.70 36 P **P** **11 11 03.4 +0.3**
OHAK Old Harbor 67.70 36 P **P** **11 11 03.0 -0.1**
baz=280,SNR=7.2
BPAW Bear Paw Mtn. 67.73 28 P **P** **11 11 03.7 +0.5**
baz=279,SNR=8.1
G23K Bananza Creek 67.74 25 P **P** **11 11 03.8 +0.5**
baz=278,SNR=51
C24K Franklin Bluff 67.78 22 P **P** **11 11 03.2 -0.2**
C24K Franklin Bluff 67.78 22 P **P** **11 11 03.6 +0.2**
baz=278,SNR=37
SKT Skwentna 67.81 31 IAmb IAmb 11 11 04.8
comp=Z,107nm,1.2s
SKT Skwentna 67.81 31 P **P** **11 11 03.5 -0.3**
baz=279,SNR=32
D24K Happy Valley 67.82 23 P **P** **11 11 04.0 +0.3**
baz=279
KTH Kantishna Hill 67.84 29 IAmb IAmb 11 11 11.6
comp=Z,67nm,0.9s
Q20K Shuyak Island 67.94 34 P **P** **11 11 04.2 -0.4**
baz=280,SNR=9.0
KDAK Kodiak Island 67.98 35 P **P** **11 11 04.7 -0.1**
comp=Z,118nm,1.1s,baz=266,slow=4.3,SNR=31
comp=Z,118nm,1.1s
KDAK Kodiak Island 67.98 35 P **P** **11 11 04.7 -0.1**
KDAK Kodiak Island 67.98 35 P **P** **11 11 04.7 -0.1**
KDAK pmax pmax
comp=Z,215nm,1.2s
KDAK Kodiak Island 67.98 35 P **P** **11 11 04.7 -0.1**
baz=280
OBN Obninsk 68.00 322 LR LR 11 41 46.3
comp=Z,198nm,18.6s,baz=358,slow=37
OBN Obninsk 68.00 322 P **P** **11 11 04.3 -0.7**
OBN Obninsk 68.00 322 ‖*eP* **P** **11 11 04.3 -0.7**
OBN *e* 11 11 29.4
OBN *e* 11 13 30.4
OBN *e*PPP PPP 11 15 13.9
OBN *e*S **S** **11 20 11.8 +8.2**
OBN pmax pmax
comp=Z,32nm,1.1s
OBN MLR MLR
comp=Z,721nm,14.0s
H23K Yukon River 68.07 26 P **P** **11 11 06.3 +0.9**
baz=279
L22K Petersville 68.08 30 P **P** **11 11 05.0 -0.5**

VSLR **Vesoyloye** **68.08 309** *i* P **P** **11 11 05.5 -0.3**
VSLR pmax pmax
comp=Z,33nm,1.0s
E24K **Your Creek** **68.11 24** P **P** **11 11 06.2 +0.5**
baz=279
TRF **Thorofare Moun** **68.14 29** IAmb IAmb 11 11 14.2
comp=Z,45nm,0.9s
TRF **Thorofare Moun** **68.14 29** P **P** **11 11 06.2 +0.2**
baz=280,SNR=20
HOM **Homer** **68.14 33** P **P** **11 11 07.0 +1.1**
baz=280
CAPN **Captain Cook N** **68.19 32** P **P** **11 11 07.1 +1.0**
baz=280,SNR=10
I23K **Minto, Yukon-K** **68.25 27** IAmb IAmb 11 11 13.6
comp=Z,75nm,1.0s
I23K **Minto, Yukon-K** **68.25 27** P **P** **11 11 07.3 +0.9**
baz=280,SNR=41
SUA **Susitna One** **68.27 31** P **P** **11 11 06.2 -0.6**
SUA **Susitna One** **68.27 31** P **P** **11 11 06.3 -0.5**
baz=280,SNR=101
SOC **Sochi** **68.27 309** *e*P **P** **11 11 06.4 -0.6**
SOC *e* 11 13 37.1
SOC *e*S **S** **11 20 08.0 +0.7**
SOC *e*SS **SS** **11 24 32.3 +2.2**
SOC pmax pmax
comp=Z,36nm,1.0s
SOC MLR MLR
comp=Z,893nm,16.0s
CUT **Chulitna** **68.33 30** P **P** **11 11 06.7 -0.2**
baz=280,SNR=19
CNPM **China Poot** **68.37 33** IAmb IAmb 11 11 10.3
comp=Z,46nm,0.9s
NEA2 **Nenana** **68.47 28** P **P** **11 11 08.1 +0.2**
baz=280,SNR=78
KOPT **Kop Dagi** **68.51 305** IAmb IAmb 11 11 28.0
comp=Z,53nm,1.1s
M22K **Willow** **68.51 31** P **P** **11 11 07.4 -0.6**
baz=280,SNR=52
BRSE **Bradley Lake S** **68.58 33** P **P** **11 11 08.5 -0.2**
baz=281,SNR=16
D25K **Kavik River** **68.66 22** P **P** **11 11 09.2 +0.2**
baz=281
MCK **McKinley** **68.69 29** P **P** **11 11 09.2 0.0**
baz=281,SNR=51
SLKM **Skilak Lake** **68.69 32** IAmb IAmb 11 11 09.9
comp=Z,74nm,1.1s
G24K **Hadweenzic Riv** **68.74 25** IAmb IAmb 11 11 15.4
comp=Z,92nm,1.1s
G24K **Hadweenzic Riv** **68.74 25** P **P** **11 11 10.2 +0.7**
baz=281
H24K **Noodor Dome** **68.74 26** P **P** **11 11 10.3 +0.7**
baz=281,SNR=53
RAYN **Ar Rayn** **68.80 287** P **P** **11 11 10.1 -0.6**
RAYN IAmb IAmb 11 11 17.2
comp=Z,62nm,1.1s
RAYN **Ar Rayn** **68.80 287** ⇓P **P** **11 11 11.1 +0.4**
RAYN **Ar Rayn** **68.80 287** P **P** **11 11 11.1 +0.4**
RC01 **Rabbit Creek A** **68.81 31** IAmb IAmb 11 11 16.3
comp=Z,63nm,1.1s
RC01 **Rabbit Creek A** **68.81 31** P **P** **11 11 09.4 -0.6**
baz=281,SNR=17
MSVF **Nonsavu** **68.87 122** P **P** **11 11 12.9 +1.8**
MSVF IAmb IAmb 11 11 14.3
comp=Z,80nm,1.1s
MSVF **Nonsavu** **68.87 122** P **P** **11 11 12.3 +1.2**
MSVF **Nonsavu** **68.87 122** P **P** **11 11 12.9 +1.8**
MSVF pmax pmax
comp=Z,81nm,1.2s
WRH **Wood River Hil** **68.91 28** IAmb IAmb 11 11 12.9
comp=Z,77nm,1.1s
COLA **College** **68.93 27** P **P** **11 11 10.5 -0.1**
COLA IAmb IAmb 11 11 13.3
comp=Z,81nm,1.3s
COLA **College** **68.93 27** P **P** **11 11 10.8 +0.1**
COLA **College** **68.93 27** *i* P **P** **11 11 09.6 -1.1**
COLA pmax pmax
comp=Z,69nm,1.3s
COLA **College** **68.93 27** P **P** **11 11 10.6 -0.1**
baz=281
O22K **Cooper Landing** **68.94 32** P **P** **11 11 10.4 -0.4**
baz=281,SNR=21
MARD **Mardin** **68.95 303** IAmb IAmb 11 11 22.1
comp=Z,70nm,1.0s
PMR **Palmer** **69.00 31** P **P** **11 11 10.5 -0.7**
PMR **Palmer** **69.00 31** P **P** **11 11 10.8 -0.4**
baz=281,SNR=30
WAT1 **Susitna Watana** **69.03 29** P **P** **11 11 10.7 -0.8**
baz=281
GHO **Glory Hole Cre** **69.07 31** IAmb IAmb 11 11 16.4
comp=Z,92nm,1.1s
SEW **Seward** **69.14 32** P **P** **11 11 11.3 -0.7**
baz=282,SNR=35
E25K **Arctic Village** **69.18 24** IAmb IAmb 11 11 18.0
comp=Z,77nm,1.2s
E25K **Arctic Village** **69.18 24** P **P** **11 11 12.7 +0.4**
baz=282,SNR=66
F25K **Christian Rive** **69.26 24** IAmb IAmb 11 11 16.5
comp=Z,69nm,0.8s
F25K **Christian Rive** **69.26 24** P **P** **11 11 13.7 +0.9**
baz=282,SNR=104
SML **Sawmill** **69.33 31** P **P** **11 11 13.2 -0.1**
baz=282,SNR=40
KNK **Knik Glacier** **69.36 31** P **P** **11 11 13.3 -0.1**
baz=282,SNR=35
ILAR **Eielson Array** **69.36 27** P **P** **11 11 12.6 -0.8**
comp=Z,15nm,0.8s,baz=266,slow=5.2,SNR=48
comp=Z,15nm,0.8s
ILAR **Eielson Array** **69.36 27** P **P** **11 11 11.6 -1.7**
HDA **Harding Lake** **69.41 28** IAmb IAmb 11 11 17.7
comp=Z,92nm,1.2s
HDA **Harding Lake** **69.41 28** P **P** **11 11 12.7 -1.0**
baz=282,SNR=50
WAT6 **Susitna Watana** **69.44 30** P **P** **11 11 13.6 -0.6**
baz=282,SNR=46
DHY **Denali Highway** **69.50 29** IAmb IAmb 11 11 20.2
comp=Z,32nm,0.9s
DHY **Denali Highway** **69.50 29** P **P** **11 11 13.9 -0.6**
baz=282,SNR=20
C27K **Jago River** **69.51 22** P **P** **11 11 14.5 +0.2**
baz=283
ANN **Anapa** **69.60 311** *e*P **P** **11 11 14.8 -0.4**
ANN *e**PP **pP** **11 11 19.9 -0.1**
ANN *e*S **S** **11 20 26.7 +3.8**
ANN pmax pmax
comp=Z,100nm,1.1s
M23K **Glacier View** **69.62 30** P **P** **11 11 14.8 -0.3**
baz=282,SNR=23
FYU **Fort Yukon** **69.64 25** IAmb IAmb 11 11 20.4
comp=Z,82nm,1.0s
BMAR **Burnt Mountain** **69.70 24** P **P** **11 11 16.1 +0.6**
PRP **Porcupine Dome** **69.76 26** IAmb IAmb 11 11 20.9
comp=Z,57nm,1.0s
PRP **Porcupine Dome** **69.76 26** P **P** **11 11 15.9 -0.2**
baz=283,SNR=32
SCM **Sheep Creek Mo** **69.79 30** P **P** **11 11 16.4 +0.2**
baz=283,SNR=31
F26K **Sheenjek River** **69.80 24** P **P** **11 11 16.9 +0.8**
baz=283
SPITS **Spitsbergen Ar** **69.90 348** P **P** **11 11 16.4 -0.1**
comp=Z,9.8nm,0.8s,baz=83,slow=6.8,SNR=9.1
SPITS LR LR 11 44 57.5
comp=Z,540nm,18.6s,baz=58,slow=38
comp=Z,9.8nm,0.8s
ARCES **ARCESS Array B** **70.00 338** P **P** **11 11 16.6 -0.7**
comp=Z,4.7nm,0.9s,baz=59,slow=7.3,SNR=4.3
ARCES LR LR 11 45 29.6
comp=Z,584nm,19.1s,baz=104,slow=39
comp=Z,4.7nm,0.9s
J25K **Salcha River,** **70.03 27** P **P** **11 11 17.3 -0.3**
baz=283
K24K **Donnelly Dome** **70.04 28** P **P** **11 11 17.3 -0.4**
baz=283,SNR=68
G26K **Porcupine Rive** **70.11 25** P **P** **11 11 18.9 +0.9**
baz=284,SNR=81
GLI **Glacier Island** **70.12 31** P **P** **11 11 17.8 -0.3**
baz=283,SNR=13
P23K **Montague Islan** **70.17 32** P **P** **11 11 18.6 +0.1**
baz=283,SNR=10
M24K **Tolsona, Glenn** **70.26 30** P **P** **11 11 19.6 +0.6**
baz=284,SNR=20
MSEY **Mahe Island** **70.29 255** P **P** **11 11 22.9 +2.9**
MSEY P **P** **11 11 22.9 +2.9**
ARPR **Arapgir-MALATY** **70.36 305** IAmb IAmb 11 11 29.0
comp=Z,83nm,1.5s
PAX **Paxson** **70.38 29** IAmb IAmb 11 11 21.2
comp=Z,106nm,1.3s
PAX **Paxson** **70.38 29** P **P** **11 11 19.8 0.0**
baz=284,SNR=33
RIDG **Independent Ri** **70.46 28** IAmb IAmb 11 11 24.8
comp=Z,119nm,1.1s
RIDG **Independent Ri** **70.46 28** P **P** **11 11 19.7 -0.5**
baz=284,SNR=37
KLU **Klutina** **70.53 31** IAmb IAmb 11 11 25.9
comp=Z,98nm,1.1s
KLU **Klutina** **70.53 31** P **P** **11 11 20.8 +0.1**
baz=284,SNR=37
D27M **Malcolm River** **70.55 22** P **P** **11 11 21.1 +0.4**
baz=286
HARP **HAARP** **70.66 30** P **P** **11 11 21.8 +0.4**
baz=284,SNR=14
SCRK **Sand Creek** **70.77 28** IAmb IAmb 11 11 27.7
comp=Z,78nm,1.0s
SCRK **Sand Creek** **70.77 28** P **P** **11 11 21.7 -0.5**
baz=285,SNR=60
I26K **Coal Creek Min** **70.77 26** P **P** **11 11 21.7 -0.4**
baz=285
J26L **Joseph Creek** **70.81 27** IAmb IAmb 11 11 26.2
comp=Z,90nm,1.0s
J26L **Joseph Creek** **70.81 27** P **P** **11 11 21.8 -0.6**
baz=285,SNR=93
DOT **Dot Lake** **70.82 28** IAmb IAmb 11 11 26.9
comp=Z,67nm,1.0s
Q23K **Middleton Isla** **70.83 33** P **P** **11 11 22.9 +0.5**
baz=284
EYAK **Cordova Ski Ar** **70.84 32** P **P** **11 11 23.5 +1.0**
EYAK **Cordova Ski Ar** **70.84 32** P **P** **11 11 22.9 +0.5**
baz=284,SNR=11
N25K **Chitina, Valde** **71.11 30** P **P** **11 11 24.6 +0.3**
baz=285,SNR=34
MENT **Mentasta** **71.16 29** IAmb IAmb 11 11 29.3
comp=Z,82nm,1.1s
MENT **Mentasta** **71.16 29** P **P** **11 11 24.8 +0.3**
H27K **Steamboat Moun** **71.17 25** IAmb IAmb 11 11 29.8
comp=Z,126nm,1.1s
H27K **Steamboat Moun** **71.17 25** P **P** **11 11 25.4 +0.8**
baz=286
E28M **Babbage River** **71.22 23** P **P** **11 11 24.9 +0.2**
baz=287
BMRM **Bremner River** **71.28 31** IAmb IAmb 11 11 30.4
comp=Z,132nm,1.2s
BMRM **Bremner River** **71.28 31** P **P** **11 11 25.4 +0.1**
baz=285,SNR=24
L26K **Log Cabin Wild** **71.30 29** IAmb IAmb 11 11 31.6
comp=Z,97nm,1.2s
L26K **Log Cabin Wild** **71.30 29** P **P** **11 11 25.6 +0.3**
baz=286,SNR=56
I27K **Kandik River** **71.31 26** P **P** **11 11 26.1 +0.8**
baz=286
F28M **Old Crow** **71.40 24** P **P** **11 11 26.1 +0.3**
baz=287,SNR=133
M26K **Nabesna, AK** **71.62 29** P **P** **11 11 27.9 +0.5**
baz=286
KAIM **Kayak Island** **71.64 32** P **P** **11 11 27.8 +0.4**
baz=286
GAZ **Gaziantep** **71.73 303** IAmb IAmb 11 11 39.3
comp=Z,45nm,1.0s
VRDI **Verde Repeater** **71.74 30** IAmb IAmb 11 11 29.7
comp=Z,120nm,1.3s
SIM **Simferopol'** **71.84 312** *e*P **P** **11 11 28.3 -0.6**
SIM *e*S **S** **11 20 47.1 -2.0**
SIM pmax pmax
comp=Z,76nm,1.3s
SIM smax smax
comp=E,197nm,18.3s
SIM MLR MLR
comp=Z,167nm,17.2s
E29M **Blow River** **71.87 23** P **P** **11 11 28.9 +0.3**
baz=289
MCARA **McCarthy VSAT** **71.90 30** P **P** **11 11 29.4 +0.5**
baz=286,SNR=42
SUCK **Suckling Hills** **71.91 32** IAmb IAmb 11 11 44.9
comp=Z,93nm,1.2s
FINES **FINESS Array B** **71.93 330** P **P** **11 11 28.5 -0.6**
comp=Z,13nm,1.0s,baz=81,slow=4.5,SNR=15
FINES LR LR 11 46 01.0
comp=Z,1μm,19.8s,baz=76,slow=38
comp=Z,13nm,1.0s
FINES **FINESS Array B** **71.93 330** P **P** **11 11 28.6 -0.5**
L27K **Beaver Creek,** **71.95 28** P **P** **11 11 30.1 +0.8**
baz=287,SNR=108
BCAR **Beaver Creek A** **71.97 28** P **P** **11 11 29.7 +0.4**
I28M **Miner Creek** **72.03 26** P **P** **11 11 30.2 +0.5**
baz=288
CRQE **Cirque** **72.05 31** P **P** **11 11 30.0 0.0**
baz=287,SNR=41
M27K **Edge Creek, AK** **72.14 29** P **P** **11 11 30.7 +0.2**
baz=287
TGL **Tana Glacier** **72.17 31** IAmb IAmb 11 11 35.8
comp=Z,108nm,1.1s
WAX **Wasell Ridge** **72.25 31** IAmb IAmb 11 11 32.7
comp=Z,117nm,1.2s
G29M **Pine Creek** **72.30 24** P **P** **11 11 31.5 +0.3**
baz=289
ISLE **Juniper Island** **72.44 31** IAmb IAmb 11 11 42.3
comp=Z,69nm,1.1s
VSU **Vasula** **72.47 327** *ce*P **P** **11 11 32.5 +0.1**
VSU pmax pmax
comp=Z,61nm,1.7s
BVCY **Beaver Creek** **72.57 29** P **P** **11 11 33.4 +0.4**
baz=288,SNR=37
BARN **Barnard Glacie** **72.62 30** IAmb IAmb 11 11 45.3
comp=Z,163nm,1.4s
GRNC **Granite Creek** **72.68 31** IAmb IAmb 11 11 36.4
comp=Z,70nm,1.1s
DAWY **Dawson** **72.68 27** P **P** **11 11 33.7 +0.1**
baz=289,SNR=82
I29M **Ogilvie Camp,** **72.70 26** IAmb IAmb 11 11 38.8
comp=Z,124nm,1.2s
I29M **Ogilvie Camp,** **72.70 26** P **P** **11 11 33.7 0.0**
baz=289,SNR=38
NOR **Nord** **72.73 354** *i* P **P** **11 11 32.2 -1.3**
NOR IAmb IAmb 11 11 34.7
comp=Z,4.4nm,0.8s
MESA **MESA** **72.76 31** IAmb IAmb 11 11 36.2
comp=Z,89nm,1.2s
MESA **MESA** **72.76 31** P **P** **11 11 34.8 +0.5**
baz=288,SNR=6.5
CTG **Chitina Glacier** **72.80 30** P **P** **11 11 35.0 +0.5**
baz=288,SNR=58
CTGM **Chitina Glacie** **72.81 30** IAmb IAmb 11 11 40.2
comp=Z,107nm,0.9s
F30M **Barrier River** **72.88 23** P **P** **11 11 34.6 -0.1**
baz=291
G30M **tAoh Zraii Nji** **72.94 24** P **P** **11 11 34.4 -0.7**
baz=291
YUK3 **Moose Creek** **72.95 30** P **P** **11 11 35.7 +0.2**
baz=288,SNR=40
LOGN **Logan Glacier** **73.00 31** IAmb IAmb 11 11 39.7
comp=Z,97nm,1.2s
MNK **Minsk** **73.03 323** *i* P **P** **11 11 35.3 -0.4**
MNK comp=E,20nm,1.1s *i* P **P** **11 11 35.3 -0.4**
MNK comp=N,32nm,0.9s *i* P **P** **11 11 35.3 -0.4**
MNK comp=Z,50nm,1.0s,baz=72 *i* PcP **PcP** **11 11 51.6 -0.9**
MNK *i* PP **PP** **11 14 18.0 0.0**
MNK *i* PPP PPP 11 16 04.6
MNK *i* S **S** **11 21 04.0 +1.6**
MNK *i* ScS **ScS** **11 21 43.5 +0.3**
MNK *i* SS **SS** **11 25 46.3 +3.7**
MNK *i* SSS SSS 11 29 07.1
MNK *i* LQ LQ 11 39 26.9
MNK *i* LR LR 11 44 45.5
MNK *i* LRM MLR 11 45 59.5
MNK comp=N,265nm,12.0s *i* LRM MLR 11 46 26.8
MNK comp=E,384nm,16.5s *i* LRM MLR 11 46 26.8
comp=Z,564nm,14.4s
MNK **Minsk** **73.03 323** *i* P **P** **11 11 35.3 -0.4**
MNK *i* 11 11 51.6
MNK *i* 11 14 18.0
MNK *i* PPP PPP 11 16 04.6
MNK *i* S **S** **11 21 03.9 +1.6**
MNK *i* 11 21 43.5
MNK *i* SS **SS** **11 25 46.2 +3.7**
MNK pmax pmax
comp=E,20nm,1.1s
MNK pmax pmax
comp=N,32nm,0.9s
MNK pmax pmax
comp=Z,50nm,1.0s
MNK MLR MLR
comp=N,265nm,12.0s
MNK MLR MLR
comp=E,384nm,16.0s
MNK MLR MLR
comp=Z,564nm,14.0s
J29N **Klondike Camp** **73.04 26** P **P** **11 11 36.3 +0.6**
baz=290,SNR=12
AK09 **Malin Array Si** **73.36 318** P **P** **11 11 36.9 -0.9**
AKASG **Malin Array Be** **73.37 318** P **P** **11 11 36.4 -1.4**
comp=Z,11nm,0.9s,baz=62,slow=5.8,SNR=24
comp=Z,11nm,0.9s
AKASG **Malin Array Be** **73.37 318** P **P** **11 11 36.5 -1.4**
AKASG **Malin Array Be** **73.37 318** *ce*P **P** **11 11 36.4 -1.4**
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKBB **Malin Array Si** **73.37 318** IAmb IAmb 11 11 52.2
comp=Z,60nm,1.5s
AKBB **Malin Array Si** **73.37 318** *ce*P **P** **11 11 37.2 -0.7**
AKBB pmax pmax
comp=Z,44nm,1.5s
AKBB **Malin Array Si** **73.37 318** P **P** **11 11 37.1 -0.8**
KIEV **Kiev** **73.39 318** P **P** **11 11 36.4 -1.5**
KIEV **Kiev** **73.39 318** ⇓P **P** **11 11 37.0 -0.9**
KIEV **Kiev** **73.39 318** ⇓P **P** **11 11 37.0 -0.9**
KIEV **Kiev** **73.39 318** P **P** **11 11 37.0 -0.9**
comp=Z,78nm,1.3s
O28M **Mount Upton** **73.40 30** IAmb IAmb 11 11 44.1
comp=Z,79nm,1.0s
O28M **Mount Upton** **73.40 30** P **P** **11 11 38.9 +0.7**
baz=289
INK **Inuvik** **73.41 22** P **P** **11 11 37.0 -0.7**
comp=Z,92nm,0.9s,baz=303,slow=6.5,SNR=131
comp=Z,92nm,0.9s
INK **Inuvik** **73.41 22** P **P** **11 11 36.6 -1.2**
INK **Inuvik** **73.41 22** P **P** **11 11 37.0 -0.7**
baz=293,SNR=178
YUK8 **Steele Glacier** **73.42 30** P **P** **11 11 38.8 +0.5**
baz=289,SNR=27
ASF **Jabal al Asfar** **73.45 298** LR LR 11 48 31.2
comp=Z,387nm,18.5s,baz=39,slow=40
AK14 **Malin Array Si** **73.47 318** P **P** **11 11 38.0 -0.4**
I30M **Mount Dempster** **73.51 25** P **P** **11 11 38.3 -0.3**
baz=291
L29M **L29M** **73.53 28** P **P** **11 11 39.6 +1.0**
baz=290
K29M **Barlow Dome** **73.54 27** IAmb IAmb 11 11 44.3
comp=Z,97nm,1.1s
K29M **Barlow Dome** **73.54 27** P **P** **11 11 39.4 +0.7**
baz=290
PINM **Pinnacle** **73.59 31** P **P** **11 11 39.7 +0.7**
baz=289,SNR=22
M29M **Somme Creek** **73.62 29** IAmb IAmb 11 11 45.3
comp=Z,102nm,1.0s
M29M **Somme Creek** **73.62 29** P **P** **11 11 40.4 +1.1**
baz=290
KIRS **Kirsehir-Merke** **73.65 306** ⇓P **P** **11 11 39.7 -0.1**
F31M **Tsiigehtchic** **73.67 23** P **P** **11 11 38.6 -0.7**
baz=293,SNR=150
BR131 **Keskin Array S** **73.67 307** IAmb IAmb 11 11 46.9
comp=Z,79nm,1.4s
BR131 **Keskin Array S** **73.67 307** *i* P **P** **11 11 39.5 -0.6**
BR131 **Keskin Array S** **73.67 307** P **P** **11 11 40.4 +0.4**
SNR=26
BRTR **Keskin Array B** **73.67 307** P **P** **11 11 39.9 -0.2**
comp=Z,12nm,0.9s,baz=106,slow=4.4,SNR=35
BRTR LR LR 11 48 58.0
comp=Z,192nm,18.5s,baz=18,slow=40
comp=Z,12nm,0.9s
BRTR **Keskin Array B** **73.67 307** P **P** **11 11 39.4 -0.6**
BRTR **Keskin Array B** **73.67 307** *ce*P **P** **11 11 40.0 -0.1**
BRTR pmax pmax
comp=Z,12nm,0.9s
BR104 **Keskin Array S** **73.68 307** P **P** **11 11 39.9 -0.2**
comp=Z,267nmcomp=Z,29nm,1.3s
BR106 **Keskin Array S** **73.69 307** P **P** **11 11 39.9 -0.2**
comp=Z,299nmcomp=Z,33nm,1.2s
BR105 **Keskin Array S** **73.69 307** P **P** **11 11 40.0 -0.2**
comp=Z,312nmcomp=Z,35nm,1.3s
J30M **Hart River** **73.76 26** P **P** **11 11 40.0 0.0**
baz=291
YUK4 **Talbot Arm** **73.91 30** P **P** **11 11 41.7 +0.6**
baz=290,SNR=24
BCPM **Bancas Point** **73.93 31** IAmb IAmb 11 11 47.8
comp=Z,184nm,1.4s
H31M **Peel River** **74.08 25** P **P** **11 11 41.6 -0.2**
baz=293
YUK6 **Outpost Mounta** **74.18 30** P **P** **11 11 43.6 +0.8**
baz=290,SNR=26
MI28 **Mi28,Pidlybu** **74.24 319** P **P** **11 11 41.3 -1.7**
M30M **Minto, Yukon** **74.30 28** P **P** **11 11 43.9 +0.7**
baz=291,SNR=84
MAYO **Mayo, Yukon** **74.30 27** P **P** **11 11 43.7 +0.6**
baz=292,SNR=37
O29M **Mount Kennedy** **74.31 31** P **P** **11 11 44.2 +0.8**
baz=290
A36M **Sachs Harbour** **74.35 17** IAmb IAmb 11 11 46.7
comp=Z,77nm,1.0s
A36M **Sachs Harbour** **74.35 17** P **P** **11 11 42.8 -0.4**
baz=299,SNR=75
MMAI **Mount Meron Ar** **74.39 299** LR LR 11 48 58.8
comp=Z,334nm,18.3s,baz=51,slow=39
LUBAR **Lubar, Ukraine** **74.51 318** P **P** **11 11 43.8 -0.7**
HYT **Haines Junctio** **74.62 30** IAmb IAmb 11 11 51.1
comp=Z,117nm,1.2s
HYT **Haines Junctio** **74.62 30** P **P** **11 11 46.0 +0.9**
baz=291,SNR=39
SORM **Soroca** **74.71 316** P **P** **11 11 44.6 -1.1**
comp=Z,15nm,1.0s
PABE **Paberze** **74.85 324** P **P** **11 11 45.5 -0.8**
PABE IAmb IAmb 11 11 59.3
comp=Z,107nm,1.0s
P30M **Million Dollar** **75.13 31** P **P** **11 11 48.7 +0.7**
baz=292
RNPP9 **Sopachiv** **75.15 320** P **P** **11 11 47.1 -1.1**
N31M **Braeburn, Yuko** **75.15 29** IAmb IAmb 11 11 53.9
comp=Z,104nm,1.1s
N31M **Braeburn, Yuko** **75.15 29** P **P** **11 11 48.9 +0.8**
baz=292,SNR=29
RNPP2 **Kostyukhnivka** **75.17 320** P **P** **11 11 48.4 0.0**
RNPP8 **Varash** **75.19 320** P **P** **11 11 47.9 -0.5**
RNPP5 **Staryi Chortor** **75.21 320** P **P** **11 11 47.9 -0.7**
MDUB **Mudurnu** **75.22 308** P **P** **11 11 47.5 -1.5**
O30N **Mendenhall** **75.28 30** IAmb IAmb 11 11 50.9
comp=Z,57nm,1.0s
O30N **Mendenhall** **75.28 30** P **P** **11 11 49.4 +0.5**
baz=292,SNR=18
CSS **Mathiatis** **75.39 302** IAmb IAmb 11 11 58.9
comp=Z,61nm,1.2s
JURR **Jurilovca** **75.45 313** ⇓P **P** **11 11 50.8 +0.7**
M31M **Drury Creek, Y** **75.47 28** IAmb IAmb 11 11 52.4
comp=Z,56nm,0.8s
M31M **Drury Creek, Y** **75.47 28** P **P** **11 11 50.1 +0.2**
baz=294,SNR=54
TPGR **Topolog** **75.73 313** ⇑P **P** **11 11 51.2 -0.6**
KMPD **K-Podol'skiy** **75.76 317** P **P** **11 11 50.0 -1.7**
SUW **Suwalki** **75.80 323** *e*P **P** **11 11 51.5 -0.4**
SUW **Suwalki** **75.80 323** P **P** **11 11 50.8 -1.0**
SUW **Suwalki** **75.80 323** P **P** **11 11 50.8 -1.0**
CFR **Carcaliu** **75.81 313** ⇑P **P** **11 11 49.1 -3.0**
CFR **Carcaliu** **75.81 313** ⇑P **P** **11 11 49.1 -3.0**
EIL **Elat** **75.83 296** LR LR 11 51 49.3
comp=Z,306nm,18.4s,baz=89,slow=41
WHY **Whitehorse** **75.87 30** P **P** **11 11 53.2 +0.8**
baz=293,SNR=55
MFTR **Murfatlar** **75.95 312** ⇑P P 11 12 02.6 +10
C36M **Paulatuk** **76.01 19** IAmb IAmb 11 11 56.1
comp=Z,118nm,1.1s
C36M **Paulatuk** **76.01 19** P **P** **11 11 52.8 0.0**
baz=301
SKAG **Skagway** **76.14 31** IAmb IAmb 11 11 56.0
comp=Z,79nm,1.0s
SKAG **Skagway** **76.14 31** P **P** **11 11 55.1 +1.4**
SKAG **Skagway** **76.14 31** P **P** **11 11 54.4 +0.7**
baz=293,SNR=7.0
S31K **Pelican** **76.30 32** IAmb IAmb 11 12 01.4
comp=Z,120nm,1.4s
S31K **Pelican** **76.30 32** P **P** **11 11 55.4 +0.8**
baz=293
TESR **Tescani** **76.34 315** ⇓P **P** **11 11 54.4 -0.7**
KNHH **Kane Nui o Ham** **76.46 75** P **P** **11 11 58.0 +1.6**
N32M **Quiet Lake** **76.47 29** P **P** **11 11 55.9 +0.2**
baz=295,SNR=38
VRI **Vrincioaia** **76.51 314** ⇑P **P** **11 11 57.0 +0.8**
VRI **Vrincioaia** **76.51 314** ⇑P **P** **11 11 57.0 +0.8**
ONER **Baraj Valea Uz** **76.56 315** ⇑P **P** **11 11 56.6 +0.1**
PLOR **Plostina** **76.57 314** ⇑P **P** **11 11 58.7 +2.2**

PLOR Plostina 76.57 314 ⇑P P 11 11 58.7 +2.2
JOKA Jonika Flow 76.58 75 P P 11 11 59.3 +2.2
JOKA IAmb IAmb 11 11 59.4
comp=Z,112nm,1.0s
ISP Isparta 76.59 306 *ce*P P 11 11 55.9 -1.0
ISP pmax pmax
comp=Z,59nm,1.3s
DAG Danmarks Havn 76.77 351 *i*P P 11 11 56.7 -0.3
DAG IAmb IAmb 11 12 18.9
comp=Z,8.9nm,1.0s
P32M Atlin 76.84 30 IAmb IAmb 11 12 03.5
comp=Z,59nm,1.1s
P32M Atlin 76.84 30 P P 11 11 58.0 +0.2
baz=295,SNR=16
COVR Voineasa-Covas 76.86 314 ⇓P P 11 11 59.6 +1.5
BURAR Bucovina Array 76.87 316 P P 11 11 57.3 -0.9
BURAR Bucovina Array 76.87 316 ⇓P P 11 11 58.7 +0.4
BURAR Bucovina Array 76.87 316 ⇓P P 11 11 58.7 +0.4
TURR Turia 76.91 315 ⇑P P 11 11 59.7 +1.2
NEHR Nehoiu 76.95 314 ⇓P P 11 12 01.8 +3.2
P33M Teslin, Yukon 76.99 30 IAmb IAmb 11 12 01.4
comp=Z,147nm,1.4s
P33M Teslin, Yukon 76.99 30 P P 11 11 59.2 +0.5
baz=295,SNR=38
R32K Eaglecrest 77.01 32 IAmb IAmb 11 12 00.4
comp=Z,107nm,1.4s
R32K Eaglecrest 77.01 32 P P 11 11 59.4 +0.7
baz=294,SNR=9.5
OZUR 77.04 315 ⇑P P 11 12 00.1 +0.9
JIS Juneau Island 77.07 32 P P 11 12 00.4 +1.4
SIT Sitka 77.11 33 IAmb IAmb 11 12 05.3
comp=Z,136nm,1.1s
SIT Sitka 77.11 33 P P 11 12 00.5 +1.3
SIT Sitka 77.11 33 P P 11 12 00.1 +0.9
baz=294
MLR Muntele Rosu 77.16 314 LR LR 11 50 26.4
comp=Z,562nm,20.5s,baz=354,slow=39
MLR Muntele Rosu 77.16 314 ⇓P P 11 12 00.1 +0.1
MLR Muntele Rosu 77.16 314 ⇓P P 11 12 00.1 +0.1
S32K Killisnoo 77.31 33 IAmb IAmb 11 12 22.0
comp=Z,70nm,1.4s
S32K Killisnoo 77.31 33 P P 11 12 01.1 +0.8
baz=294
DOPR Dopca 77.35 315 ⇑P P 11 12 01.1 +0.2
ELL Elmali 77.42 305 IAmb IAmb 11 12 16.8
comp=Z,42nm,1.0s
BAND Balkesir-Ban 77.49 309 ⇓P P 11 12 02.8 +1.1
KWP Kalwaria Pacla 77.68 319 *eP* P 11 12 03.1 +0.5
VOIR 77.76 314 ⇓P P 11 12 06.2 +3.0
Q32M Nakina River 77.78 31 P P 11 12 03.8 +0.6
baz=296
BEL Belsk 77.95 321 *eP* P 11 12 05.3 +1.2
HFS Hagfors 78.05 331 P P 11 12 04.3 -0.2
comp=Z,4.3nm,0.7s,baz=107,slow=5.1,SNR=10.0
HFS LR LR 11 49 40.2
comp=Z,2µm,18.0s,baz=54,slow=38
comp=Z,4.3nm,0.7s
ARR Arges 78.06 314 ⇑P P 11 12 04.6 -0.3
ELND Elena 78.12 312 ⇑P P 11 12 01.6 -3.6
HUMR Humele 78.14 313 ⇓P P 11 12 05.6 +0.3
R33M Jennings River 78.19 30 IAmb IAmb 11 12 11.5
comp=Z,123nm,1.2s
R33M Jennings River 78.19 30 P P 11 12 06.1 +0.7
baz=297,SNR=35
TNR Turnu Rosu 78.19 315 ⇓P P 11 12 06.2 +0.7
TNR Turnu Rosu 78.19 315 ⇓P P 11 12 06.2 +0.7
KOLS Kolonicke sedl 78.21 318 *eP* P 11 12 05.5 -0.1
CJR Cluj-Napoca 78.23 316 ⇑P P 11 12 06.4 +0.6
CJR Cluj-Napoca 78.23 316 ⇑P P 11 12 06.4 +0.6
T33K Petersburg 78.39 33 P P 11 12 06.9 +0.6
baz=296
NC405 NORSAR Array S 78.46 332 IAmb IAmb 11 12 25.5
comp=Z,40nm,1.0s
MARR Marisel-Cluj 78.55 316 ⇑P P 11 12 07.6 0.0
LOT Lotru 78.59 315 ⇓P P 11 12 07.8 -0.1
U33K Whale Pass 78.61 33 P P 11 12 08.2 +0.6
baz=296
STHS Stebnicka Huta 78.64 319 *eP* P 11 12 10.2 +2.2
STHS pmax pmax
comp=Z,8.0nm,1.2s
STHS Stebnicka Huta 78.64 319 *eP* P 11 12 10.2 +2.2
NB2 NORSAR Subarra 78.70 332 P P 11 12 06.5 -1.6
comp=Z,6.7nm,0.8s,baz=61,slow=5.6
NOA NORSAR Array B 78.70 332 P P 11 12 06.6 -1.5
comp=Z,4.5nm,0.9s,baz=59,slow=5.6,SNR=11
NOA LR LR 11 48 49.5
comp=Z,527nm,19.0s,baz=65,slow=37
comp=Z,4.5nm,0.9s
S34M Telegraph Cree 78.78 31 IAmb IAmb 11 12 14.1
comp=Z,44nm,1.0s
S34M Telegraph Cree 78.78 31 P P 11 12 09.4 +0.9
baz=297,SNR=9.6
WTLY Watson Lake, Y 78.83 29 IAmb IAmb 11 12 14.0
comp=Z,145nm,1.1s
WTLY Watson Lake, Y 78.83 29 P P 11 12 09.1 +0.2
baz=298,SNR=41
NEEM North Greenlan 78.85 358 *i*P P 11 12 06.7 -2.3
NEEM IAmb IAmb 11 12 10.7
comp=Z,36nm,1.3s
WRAK Wrangell Islan 78.86 33 P P 11 12 09.4 +0.4
baz=296
CRAG Craig 78.89 34 P P 11 12 09.5 +0.4
baz=296
RES Resolute Bay 78.95 9 LR LR 11 50 24.8
comp=Z,254nm,19.0s,baz=2.0,slow=38
DEV Deva 78.99 315 ⇓P P 11 12 09.5 -0.4
DEV Deva 78.99 315 ⇓P P 11 12 09.5 -0.4
DBG Daneborg 79.00 350 *i*P P 11 12 13.0 +3.6
DBG IAmb IAmb 11 12 22.1
comp=Z,3.4nm,0.8s
DLBC Dease Lake 79.06 31 LR LR 11 47 48.5
comp=Z,214nm,20.6s,baz=332,slow=36
DLBC Dease Lake 79.06 31 P P 11 12 10.7 +0.6
baz=298,SNR=26
OJC Ojcow 79.18 320 *eP* P 11 12 10.9 0.0
NIE Niedzica 79.21 319 *eP* P 11 12 11.3 +0.2
GZR Gura Zlata 79.26 315 ⇑P P 11 12 11.3 -0.2
GZR Gura Zlata 79.26 315 ⇑P P 11 12 11.3 -0.2
JMIC Jan Mayen 79.26 345 LR LR 11 50 12.4
comp=Z,490nm,18.8s,baz=96,slow=38
WRGLY Wrigley 79.44 25 IAmb IAmb 11 12 14.3
comp=Z,92nm,0.9s
WRGLY Wrigley 79.44 25 P P 11 12 12.0 -0.1
baz=302
KECS Kecovo 79.47 318 *eP* P 11 12 13.8 +1.3
KECS pmax pmax
comp=Z,22nm,1.2s
KECS Kecovo 79.47 318 *eP* P 11 12 13.8 +1.3
HIZ Hauiti 79.61 140 P P 11 12 13.7 +0.5
T35M Bob Quinn 79.64 32 P P 11 12 13.1 -0.2
baz=298
HERR Herculane 79.70 314 ⇑P P 11 12 14.0 +0.2
V35K Ketchikan 79.72 34 P P 11 12 13.7 0.0
baz=297
LANS Liptovska Anna 79.81 319 *eP* P 11 12 14.0 -0.4
LANS pmax pmax
comp=Z,13nm,1.8s
LANS Liptovska Anna 79.81 319 *eP* P 11 12 14.0 -0.4
BZS Buzias 79.92 315 ⇓P P 11 12 15.8 +0.8
BZS Buzias 79.92 315 ⇓P P 11 12 15.8 +0.8
VRZ Vera Road 79.95 141 P P 11 12 15.4 +0.3
PSZ Piszkesteto 80.07 318 ⇑P P 11 12 16.1 +0.3
PSZ Piszkesteto 80.07 318 ⇑P P 11 12 16.1 +0.3
U35K Hyder 80.25 33 P P 11 12 16.7 +0.1
baz=298
STEB Steborice 80.48 320 *eP* P 11 12 19.1 +1.1
FWVZ Far West T-bar 80.50 140 P P 11 12 18.8 +0.5
WAZ Wanganui 80.51 141 P P 11 12 18.3 +0.2
OTVZ Oturere 80.51 140 P P 11 12 17.9 -0.4
TRVZ Turoa 80.53 140 P P 11 12 17.7 -0.8
WNVZ Wahianoa 80.58 140 P P 11 12 19.3 +0.6
NNZ Nelson 80.59 143 P P 11 12 17.5 -0.9
DUWZ D'Urville Isla 80.61 142 P P 11 12 17.1 -1.5
BOVS Bovan 80.66 314 ⇓P P 11 12 18.6 -0.5
MORC Moravsky Berou 80.68 320 ⇓P P 11 12 20.0 +0.9
MORC Moravsky Berou 80.68 320 ⇓P P 11 12 20.0 +0.9
MORC Moravsky Berou 80.68 320 *eP* P 11 12 18.1 -1.0
THZ Tophouse 80.70 144 P P 11 12 18.7 -0.5
URZ Urewera 80.78 139 LR LR 11 45 55.5
comp=Z,129nm,19.5s,baz=310,slow=34
URZ Urewera 80.78 139 P P 11 12 20.9 +1.4
HAZ Te Kaha 80.86 138 P P 11 12 19.2 -0.8
KOTAN Kotaneelee Air 80.87 28 P P 11 12 19.6 -0.2
baz=302
XMAS Kiritimati 80.92 92 P P 11 12 22.8 +1.9

KSP Ksiaz 80.93 322 *eP* P 11 12 20.6 +0.2
BKZ Black Stump Fm 81.00 140 P P 11 12 20.6 -0.2
JAVC Velka Javorina 81.01 320 *eP* P 11 12 21.0 +0.1
TOAD Toad River Com 81.04 29 P P 11 12 20.6 -0.2
baz=302
MWZ Matawai 81.08 139 P P 11 12 21.0 -0.2
OSTC Ostas 81.10 321 *eP* P 11 12 22.9 +1.6
OSTC Ostas 81.10 321 *eP* P 11 12 22.9 +1.6
DPC Dobruska-Polom 81.14 321 *eP* P 11 12 22.8 +1.3
DPC Dobruska-Polom 81.14 321 *eP* P 11 12 22.8 +1.3
UPC Upice 81.24 322 *eP* P 11 12 23.8 +1.8
UPC Upice 81.24 322 *eP* P 11 12 23.8 +1.8
TSZ Takapari Road 81.27 141 P P 11 12 21.2 -1.0
SMOL Smolenice 81.30 319 *eP* P 11 12 22.6 +0.2
SMOL pmax pmax
comp=Z,14nm,1.5s
OGWZ Otaki Gorge 81.32 142 P P 11 12 20.3 -2.0
TKGZ Te Karaka 81.34 139 P P 11 12 21.5 -1.0
PUZ Puketiti 81.35 138 P P 11 12 22.1 -0.5
VRAC Vranov 81.44 320 LR LR 11 49 26.9
comp=Z,289nm,21.4s,baz=3.0,slow=36
VRAC Vranov 81.44 320 ⇑P P 11 12 24.2 +1.1
VRAC Vranov 81.44 320 ⇑P P 11 12 24.2 +1.1
VRAC Vranov 81.44 320 *eP* P 11 12 22.6 -0.5
MRZ Mangatainoka R 81.45 142 P P 11 12 22.8 -0.3
MODS Modra-Piesok 81.46 319 *eP* P 11 12 24.2 +1.0
MODS pmax pmax
comp=Z,26nm,1.3s
MODS Modra-Piesok 81.46 319 *eP* P 11 12 24.2 +1.0
RIGZ Rimuhau 81.46 139 P P 11 12 22.6 -0.6
DVHZ Dannevirke 81.55 141 P P 11 12 21.8 -1.8
MORH Mrgy, Hungar 81.56 317 ⇓P P 11 12 23.5 -0.3
RUE Ruedersdorf 81.57 324 *eP* P 11 12 24.6 +0.9
comp=Z,61nm,1.2s,baz=59,slow=5.0
CNGZ Carnagh Statio 81.58 139 P P 11 12 23.7 -0.2
PRWZ Pori Road 81.60 141 P P 11 12 22.8 -1.1
GVZ Greta Valley S 81.60 145 P P 11 12 22.5 -1.3
KRUC Moravsky 81.67 320 *eP* P 11 12 23.7 -0.6
BFZ Birch Farm 81.84 141 IAmb IAmb 11 12 25.6
comp=Z,50nm,1.0s
BFZ Birch Farm 81.84 141 P P 11 12 24.1 -1.0
BRG Berggiesshubel 82.24 322 *eP* P 11 12 27.2 -0.1
BRG Amp 11 12 31.9
comp=Z,7.4nm,0.9s
PRU Pruhonice 82.32 321 *eP* P 11 12 29.5 +1.8
PRU Pruhonice 82.32 321 *eP* P 11 12 29.5 +1.8
RONA Rosalia, Austr 82.35 319 *eP* P 11 12 27.8 -0.1
comp=Z,8.2nm,1.2s
CONA Conrad Observa 82.50 319 *i*P P 11 12 28.8 0.0
comp=Z,23nm,1.5s,SNR=5.4
CLL Collm 82.55 323 *eP* P 11 12 28.0 -0.9
CLL pmax pmax
comp=Z,41nm,1.5s
CLL Collm 82.55 323 *eP* P 11 12 28.0 -0.9
comp=Z,41nm,1.5s
CLL *ex* x 11 12 40.0
CLL *i* x x 11 12 46.4
CLL *ex* x 11 28 00.0
CLL AMS AMS 11 53 00.0
comp=Z,1µm,19.1s
CLL Collm 82.55 323 *eP* P 11 12 28.2 -0.7
comp=Z,44nm,1.5s,baz=59,slow=5.0
HSKC Hora Svate Kat 82.65 322 *eP* P 11 12 30.4 +0.9
ZVC Zvikov 82.78 321 *eP* P 11 12 30.4 +0.3
SUMG Summit 82.89 354 *i*P P 11 12 32.0 +1.3
SUMG IAmb IAmb 11 12 37.6
comp=Z,5.6nm,0.6s
KOGS Kog 82.94 318 *eP* P 11 12 31.8 +0.8
FLTG Flechtingen 83.00 325 *eP* P 11 12 30.8 -0.3
comp=Z,15nm,1.1s,baz=59,slow=5.0
CKRC Cesky Krumlov 83.00 321 *eP* P 11 12 31.0 -0.3
CKRC Cesky Krumlov 83.00 321 *eP* P 11 12 31.0 -0.3
ARSA Arzberg 83.02 319 *eP* P 11 12 31.2 -0.2
comp=Z,10.0nm,1.2s
BBB Bella Bella 83.05 36 LR LR 11 48 32.3
comp=Z,107nm,20.7s,baz=16,slow=35
YKA Yellowknife Ar 83.15 23 P P 11 12 31.7 0.0
comp=Z,64nm,0.9s,baz=316,slow=5.6,SNR=372
YKA PKKPbc **PKKPbc** 11 30 50.0 -4.0
comp=Z,0.2nm,0.7s,baz=115,slow=1.9,SNR=4.9
YKA LR LR 11 54 00.5
comp=Z,323nm,18.1s,baz=95,slow=39
comp=Z,64nm,0.9s
YKA Yellowknife Ar 83.15 23 P P 11 12 31.2 -0.5
YKA Yellowknife Ar 83.15 23 *ce*P P 11 12 31.1 -0.7
YKA pmax pmax
comp=Z,65nm,0.9s
ITM Ithomi 83.16 308 IAmb IAmb 11 12 54.1
comp=Z,104nm,1.5s
NEUB Neuenburg 83.27 323 *eP* P 11 12 33.0 +0.4
comp=Z,35nm,1.1s,baz=59,slow=5.0
KHC Kasperske Hory 83.28 321 *eP* P 11 12 31.5 -1.3
KHC Kasperske Hory 83.28 321 *eP* P 11 12 31.5 -1.3
GEC2 GERESS Array S 83.34 321 *eP* P 11 12 32.6 -0.6
comp=Z,19nm,0.9s,baz=59,slow=5.0
GERES GERESS Array B 83.34 321 P P 11 12 32.7 -0.5
comp=Z,13nm,0.9s,baz=73,slow=4.6,SNR=36
comp=Z,13nm,0.9s
MOA Molln 83.49 320 *i*P P 11 12 34.1 +0.3
comp=Z,1.3nm,0.6s,SNR=6.3
SOKA Soboth 83.58 318 *i*P P 11 12 34.3 -0.2
comp=Z,24nm,1.3s,SNR=9.1
UPNV Upernavik 83.62 359 *i*P P 11 12 33.5 -0.5
UPNV IAmb IAmb 11 12 36.3
comp=Z,6.0nm,0.7s
MOX Moxa 83.64 323 *eL* L 11 54 26.2
comp=Z,739nm,18.5s
MANZ Manzenberg 83.70 322 *eP* P 11 12 35.2 +0.3
comp=Z,4.1nm,1.1s,baz=59,slow=5.0
CLZ Clausthal 83.71 324 *eP* P 11 12 34.2 -0.7
comp=Z,31nm,1.1s,baz=59,slow=5.0
ROTZ Rotzenmuhle 83.75 322 *eP* P 11 12 35.1 0.0
comp=Z,6.0nm,1.1s,baz=59,slow=5.0
BIOA Bad Ischl, Aus 83.94 320 *i*P P 11 12 34.9 -1.3
comp=Z,16nm,1.4s,SNR=6.7
OBKA Obir 83.96 318 *eP* P 11 12 35.9 -0.5
comp=Z,15nm,0.9s
ABPO Ambohimpanom 84.06 246 P P 11 12 36.9 -0.4
ABPO IAmb IAmb 11 12 39.6
comp=Z,36nm,1.1s
ABPO Ambohimpanom 84.06 246 P P 11 12 36.9 -0.4
ABPO pmax pmax
comp=Z,36nm,1.2s
LJU Ljubljana 84.19 318 *i*P P 11 12 36.6 -0.8
GRA1 Grafenberg Arr 84.34 322 IAmb IAmb 11 12 40.5
comp=Z,40nm,1.2s
GRF Grafenberg Arr 84.34 322 *eL* L 11 52 11.9
comp=Z,792nm,19.2s
CEY Cerknica 84.40 318 *i*P P 11 12 37.8 -0.7
KBA Koelnbreinsper 84.41 319 *eP* P 11 12 37.4 -1.3
comp=Z,23nm,1.4s
MYKA Terra Mystica 84.45 319 *eP* P 11 12 38.8 -0.1
comp=Z,3.7nm,0.4s
LESA Schwarzleotal 84.64 320 *i*P P 11 12 39.4 -0.4
comp=Z,26nm,1.4s,SNR=9.2
SABO M.te Sabotino 84.79 318 IAmb IAmb 11 12 41.3
comp=Z,39nm,1.4s
KIBK Kibwezi 85.03 265 P P 11 12 41.2 -1.1
KIBK IAmb IAmb 11 12 49.7
comp=Z,43nm,1.3s
KIBK Kibwezi 85.03 265 P P 11 12 44.3 +2.0
SNR=7.1
ABTA Abfaltersbach 85.07 319 *i*P P 11 12 40.7 -1.2
comp=Z,20nm,1.1s,SNR=7.2
FUR Furstenfeldbru 85.08 321 *eP* P 11 12 41.7 -0.2
comp=Z,48nm,1.0s,baz=59,slow=5.0
LODK Lodwar 85.18 272 P P 11 12 44.0 +1.0
SNR=5.2
KMBO Kilima Mbogo 85.26 267 P P 11 12 45.0 +1.4
comp=Z,7.5nm,0.3s,baz=212,slow=14,SNR=4.0
comp=Z,7.5nm,0.3s
KMBO Kilima Mbogo 85.26 267 *ce*P P 11 12 43.6 -0.1
KMBO pmax pmax
comp=Z,8.0nm,0.3s
WATA Walderalm 85.33 320 *i*P P 11 12 42.5 -0.9
comp=Z,17nm,1.1s,SNR=5.6
WTTA Wattenberg 85.33 320 *i*P P 11 12 42.6 -0.8
comp=Z,30nm,1.4s,SNR=5.9
ILON Igloolik, Nuna 85.53 8 IAmb IAmb 11 12 45.6
comp=Z,67nm,0.9s
MOTA Moosalm 85.60 320 *eP* P 11 12 44.1 -0.7
comp=Z,16nm,1.3s
SQTA Sankt Quirin 85.60 320 *eP* P 11 12 43.5 -1.2
comp=Z,25nm,1.2s
CBB Campbell River 85.65 37 IAmb IAmb 11 12 47.8
comp=Z,51nm,1.0s

RETA Reutte 85.73 321 *eP* P 11 12 44.9 -0.3
comp=Z,7.4nm,1.1s
VOI Vohitsoka 85.75 244 P P 11 12 46.6 +0.9
VOI Vohitsoka 85.75 244 P P 11 12 46.4 +0.7
ACER Acerenza 85.76 313 IAmb IAmb 11 12 56.1
comp=Z,75nm,1.3s
TIP Timpagrande 85.95 311 IAmb IAmb 11 12 48.6
comp=Z,38nm,1.2s
FETA Feichten 85.99 320 *i*P P 11 12 45.3 -1.4
comp=Z,7.3nm,0.9s,SNR=8.4
TEOL Teolo 86.27 318 IAmb IAmb 11 13 01.8
comp=Z,30nm,0.9s
DAVA Damuels 86.34 321 *eP* P 11 12 47.3 -1.1
comp=Z,2.8nm,0.7s
FUORN Ofenpass-Fuorn 86.47 320 P P 11 12 48.1 -1.1
INTR Introdacqua 86.52 315 IAmb IAmb 11 12 51.8
comp=Z,35nm,1.2s
FDMO Fiordimonte 86.55 316 IAmb IAmb 11 12 52.3
comp=Z,46nm,1.0s
CAMP Campotosto 86.59 315 IAmb IAmb 11 13 13.0
comp=Z,44nm,1.2s
DAVOX Davos/Dischmat 86.61 320 LR LR 11 55 14.2
comp=Z,647nm,18.1s,baz=26,slow=38
NRCA Norcia 86.63 316 IAmb IAmb 11 12 52.1
comp=Z,52nm,1.2s
MEM Membach 86.69 325 *dP* P 11 12 50.2 +0.5
comp=Z,12nm,1.1s
BHOU Houvegnez 86.83 325 *dP* P 11 12 49.5 -1.1
comp=Z,13nm,1.1s
BSTI Sart Tilman 86.93 325 *dP* P 11 12 50.3 -0.7
comp=Z,5.3nm,1.0s
CEL Celeste 86.97 311 IAmb IAmb 11 12 53.2
comp=Z,106nm,1.3s
CLRS Cowichan Lake 86.99 37 IAmb IAmb 11 12 56.8
comp=Z,48nm,1.0s
WLF Walferdange 87.14 324 IAmb IAmb 11 12 54.8
comp=Z,53nm,1.1s
WLF Walferdange 87.14 324 *dP* P 11 12 51.9 -0.1
comp=Z,27nm,1.0s
WLF Walferdange 87.14 324 *eP* P 11 12 51.9 -0.1
comp=Z,49nm,1.1s,baz=59,slow=5.0
BORG Borgarnes 87.16 345 LR LR 11 57 15.8
comp=Z,583nm,18.4s,baz=45,slow=39
BCLA Clavier 87.17 325 *dP* P 11 12 51.0 -1.1
comp=Z,14nm,0.9s
LLLB Lilooet 87.19 35 IAmb IAmb 11 12 55.2
comp=Z,64nm,1.0s
BGES Gesves 87.30 325 *dP* P 11 12 52.7 -0.1
RCHB Rochefort 87.36 325 *dP* P 11 12 52.0 -1.1
comp=Z,16nm,1.0s
BLKN Baker Lake 87.40 15 IAmb IAmb 11 12 54.1
comp=Z,42nm,1.0s
UCC Uccle 87.44 326 *dP* P 11 12 53.0 -0.4
comp=Z,13nm,1.0s
PGC Sidney 87.46 37 IAmb IAmb 11 12 56.4
comp=Z,50nm,0.8s
BMRD Maredsous 87.51 325 *dP* P 11 12 53.1 -0.7
comp=Z,15nm,0.9s
DOU Dourbes 87.72 325 *dP* P 11 12 54.0 -0.8
comp=Z,14nm,1.2s
EKA Eskdalemuir Ar 88.19 332 P P 11 12 57.8 +0.9
comp=Z,2.6nm,0.5s,baz=80,slow=4.3,SNR=4.8
EKA LR LR 11 57 15.0
comp=Z,2µm,20.8s,baz=20,slow=39
comp=Z,2.6nm,0.5s
GNW Green Mountain 88.41 38 IAmb IAmb 11 13 01.6
comp=Z,70nm,1.0s
RAR Rarotonga 88.64 114 LR LR 11 45 37.4
comp=Z,154nm,21.6s,baz=290,slow=31
SFJD Kangerlussuaq 89.26 357 LR LR 11 53 18.0
comp=Z,469nm,20.2s,baz=118,slow=36
BNI Bardonecchia 89.42 320 P P 11 13 02.7 -0.4
BNI Bardonecchia 89.42 320 P P 11 13 02.7 -0.4
BNI pmax pmax
comp=Z,19nm,1.1s
LON Longmire 89.44 38 IAmb IAmb 11 13 06.0
comp=Z,48nm,1.0s
LTY Liberty 89.79 37 IAmb IAmb 11 13 07.4
comp=Z,50nm,0.9s
EPH Ephrata 90.32 37 IAmb IAmb 11 13 10.0
comp=Z,121nm,1.4s
K02D Willamette Mer 90.64 42 IAmb IAmb 11 13 13.0
comp=Z,75nm,1.3s
VSL Villasalto 90.76 314 IAmb IAmb 11 13 13.0
comp=Z,43nm,1.1s
D08A Wollman Farm, 90.86 37 IAmb IAmb 11 13 12.8
comp=Z,78nm,1.1s
KSXB Camp Six Broad 90.99 43 IAmb IAmb 11 13 14.4
comp=Z,64nm,1.2s
NEW Newport 91.08 35 P P 11 13 11.3 +0.6
comp=Z,33nm,1.0s,baz=310,slow=3.4,SNR=36
comp=Z,33nm,1.0s
NEW Newport 91.08 35 IAmb IAmb 11 13 13.7
comp=Z,80nm,1.2s
E08A Dider Farm, El 91.13 37 IAmb IAmb 11 13 14.2
comp=Z,60nm,1.1s
BBOR Butler Butte 91.14 41 IAmb IAmb 11 13 14.2
comp=Z,70nm,1.3s
YBH Yreka Blue Hor 91.77 42 P P 11 13 15.1 +1.0
comp=Z,2.3nm,1.1s,baz=342,slow=1.3,SNR=29
comp=Z,2.3nm,1.1s
YBH Yreka Blue Hor 91.77 42 IAmb IAmb 11 13 17.8
comp=Z,74nm,1.3s
J05D Fort Rock, OR 91.78 41 P P 11 13 13.1 -1.1
M02C Callahan 91.87 43 IAmb IAmb 11 13 17.9
comp=Z,47nm,1.1s
G08A Pilot Rock 91.91 38 IAmb IAmb 11 13 18.1
comp=Z,32nm,1.2s
LNOR Lincton Mounta 91.93 37 IAmb IAmb 11 13 17.4
comp=Z,29nm,1.1s
N02D Trinity Center 92.20 43 IAmb IAmb 11 13 19.3
comp=Z,40nm,1.3s
I07A Izee 92.32 39 IAmb IAmb 11 13 20.1
comp=Z,63nm,1.4s
FRB Frobisher Bay 92.35 4 LR LR 11 57 42.6
comp=Z,518nm,20.3s,baz=27,slow=38
F10A Beach Ranch, E 92.45 37 IAmb IAmb 11 13 21.1
comp=Z,16nm,0.7s
FCC Fort Churchill 92.57 18 IAmb IAmb 11 13 18.8
comp=Z,39nm,0.9s
O02D Mt. Diablo Mer 92.60 44 IAmb IAmb 11 13 21.1
comp=Z,46nm,1.1s
KEST Kesra 92.77 311 P P 11 13 18.8 0.0
comp=Z,16nm,0.9s,baz=304,slow=5.1,SNR=9.2
comp=Z,16nm,0.9s
KEST Kesra 92.77 311 IAmb IAmb 11 13 43.1
comp=Z,26nm,1.1s
KEST Kesra 92.77 311 P P 11 13 19.8 +1.0
BMO Blue Mountains 93.11 38 IAmb IAmb 11 13 22.4
comp=Z,19nm,0.8s
O03E Paynes Creek 93.15 43 IAmb IAmb 11 13 31.6
comp=Z,64nm,1.4s
FFC Flin Flon 93.31 24 P P 11 13 19.9 -0.9
FFC Flin Flon 93.31 24 P P 11 13 19.9 -0.9
FFC pmax pmax
comp=Z,61nm,1.0s
J08A Circle Bar Ran 93.36 39 P P 11 13 21.0 -0.4
MNRC McLaughlin Min 93.55 45 IAmb IAmb 11 13 26.0
comp=Z,66nm,1.2s
MSO Missoula 93.66 35 IAmb IAmb 11 13 26.2
comp=Z,18nm,0.9s
ORV Oroville 93.77 44 IAmb IAmb 11 13 25.1
comp=Z,23nm,0.9s
WVOR Wild Horse Val 93.82 40 P P 11 13 23.2 -0.4
WVOR IAmb IAmb 11 13 26.7
comp=Z,40nm,1.2s
WVOR Wild Horse Val 93.82 40 P P 11 13 23.2 -0.4
WVOR pmax pmax
comp=Z,40nm,1.3s
CVS Carmenet Viney 93.84 45 IAmb IAmb 11 13 27.1
comp=Z,43nm,1.1s
AFDM Forest Hills D 94.45 44 IAmb IAmb 11 13 28.6
comp=Z,32nm,1.2s
MFID Camas Ranch 94.83 38 IAmb IAmb 11 13 30.7
comp=Z,28nm,1.2s
MPK Martis Peak 94.84 43 IAmb IAmb 11 13 31.8
comp=Z,43nm,1.0s
MHC Mount Hamilton 94.94 46 IAmb IAmb 11 13 30.6
comp=Z,28nm,1.2s
EGMT Eagleton 94.95 32 IAmb IAmb 11 13 31.7
comp=Z,19nm,1.1s
PAHR Pah Rah Range 95.00 43 IAmb IAmb 11 13 32.1
comp=Z,46nm,1.2s
PNTR Pine Nut 95.23 43 IAmb IAmb 11 13 33.0
comp=Z,27nm,1.0s
DLMT Dillon 95.33 35 IAmb IAmb 11 13 33.3
comp=Z,33nm,1.0s
CMB Columbia Colle 95.36 44 P P 11 13 29.8 -0.8

CMB					IAmb	IAmb	11 13 33.4	
	comp=Z,46nm,1.2s							
CMB	**Columbia Colle**	**95.36**	**44**		P	**P**	**11 13 29.8**	**-0.8**
CMB					pmax	pmax		
	comp=Z,46nm,1.3s							
HLID	**Hailey**	**95.53**	**37**		IAmb	IAmb	11 13 36.4	
	comp=Z,16nm,0.9s							
BBGB	**Big Mountain B**	**95.77**	**46**		IAmb	IAmb	11 13 36.9	
	comp=Z,33nm,1.0s							
PPT	**Papeete**	**95.91**	**106**		LR	LR	11 47 27.6	
	comp=Z,281nm,20.6s,baz=300,slow=30							
PMPB	**Monarch Peak**	**96.14**	**46**		IAmb	IAmb	11 13 38.6	
	comp=Z,25nm,0.9s							
YHL	**Hebgen Lake**	**96.42**	**35**		IAmb	IAmb	11 13 38.7	
	comp=Z,18nm,1.2s							
LHV	**Little Huntoon**	**96.42**	**43**		IAmb	IAmb	11 13 38.7	
	comp=Z,46nm,1.2s							
MDPB	**Devils Postpil**	**96.43**	**44**		IAmb	IAmb	11 13 38.8	
	comp=Z,21nm,1.2s							
NVAR	**Mina Array Bea**	**96.44**	**43**		P	**P**	**11 13 36.8**	**+1.0**
	comp=Z,10.0nm,0.9s,baz=292,slow=4.5,SNR=52							
NVAR					PP	**PP**	**11 17 23.9**	**-5.1**
	comp=Z,1.2nm,0.9s,baz=279,slow=5.0,SNR=3.7							
	comp=Z,10.0nm,0.9s							
PKD	**Bear Valley Ra**	**96.47**	**46**		IAmb	IAmb	11 13 39.3	
	comp=Z,33nm,1.1s							
YHB	**Horse Butte**	**96.48**	**35**		IAmb	IAmb	11 13 38.8	
	comp=Z,22nm,1.2s							
ELK	**Elko**	**96.87**	**40**		P	**P**	**11 13 38.6**	**+0.9**
	comp=Z,3.1nm,1.0s,baz=336,slow=5.2,SNR=9.0							
	comp=Z,3.1nm,1.0s							
RLMT	**Red Lodge**	**97.22**	**34**		IAmb	IAmb	11 13 45.5	
	comp=Z,32nm,1.5s							
DSP	**Deep Springs**	**97.29**	**44**		IAmb	IAmb	11 13 42.4	
	comp=Z,22nm,1.3s							
VES	**Vestal, Richgr**	**97.49**	**46**		IAmb	IAmb	11 13 42.3	
	comp=Z,46nm,1.3s							
LAO	**LASA Array**	**97.58**	**31**		IAmb	IAmb	11 13 46.7	
	comp=Z,14nm,1.1s							
ISA	**Isabella, Lake**	**97.99**	**45**		IAmb	IAmb	11 13 44.6	
	comp=Z,15nm,1.4s							
HWUT	**Hardware Ranch**	**98.40**	**37**		IAmb	IAmb	11 13 48.0	
	comp=Z,16nm,1.5s							
CLC	**China Lake**	**98.47**	**45**		IAmb	IAmb	11 13 47.0	
	comp=Z,15nm,1.2s							
S11A	**Rachel**	**98.51**	**43**		IAmb	IAmb	11 13 49.8	
	comp=Z,14nm,1.1s							
FURC	**Furnace Creek,**	**98.54**	**44**		IAmb	IAmb	11 13 47.6	
	comp=Z,24nm,1.2s							
PDAR	**Pinedale Array**	**98.70**	**35**		P	Pdif	11 13 46.7	+0.8
	comp=Z,1.0nm,0.9s,baz=80,slow=1.7,SNR=7.1							
PDAR					PP	**PP**	**11 17 45.5**	**-0.7**
	comp=Z,2.1nm,1.1s,baz=308,slow=7.3,SNR=4.4							
	comp=Z,1.0nm,0.9s							
CCCA	**Chr Cany lake**	**98.80**	**45**		IAmb	IAmb	11 13 48.8	
	comp=Z,17nm,1.1s							
GWY	**Greenwater Val**	**98.84**	**44**		IAmb	IAmb	11 13 48.9	
	comp=Z,13nm,1.3s							
ESDC	**Sonseca Array**	**98.94**	**321**		PP	**PP**	**11 17 48.3**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=67,slow=5.8,SNR=2.3							
ESDC					LR	LR	11 59 42.6	
	comp=Z,277nm,18.3s,baz=28,slow=36							
LSZ	**Lusaka**	**99.06**	**257**		P	**Pdif**	**11 13 46.3**	**-1.4**
LSZ	**Lusaka**	**99.06**	**257**		P	**Pdif**	**11 13 46.3**	**-1.4**
LSZ					pmax	pmax		
	comp=Z,12nm,1.4s							
PRN	**Pahroc Range**	**99.09**	**42**		P	**Pdif**	**11 13 47.1**	**-0.5**
ULM	**Lac du Bonnet**	**99.13**	**23**		P	**Pdif**	**11 13 46.9**	**-0.4**
	comp=Z,6.0nm,0.8s,baz=341,slow=6.4,SNR=8.3							
ULM					LR	LR	12 01 56.7	
	comp=Z,211nm,18.1s,baz=11,slow=38							
	comp=Z,6.0nm,0.8s							
SHOC	**Shoshone, Teco**	**99.27**	**44**		P	**Pdif**	**11 13 47.4**	**-0.9**
SHOC					IAmb	IAmb	11 13 50.7	
	comp=Z,12nm,1.1s							
GSC	**Goldstone, Bar**	**99.29**	**45**		IAmb	IAmb	11 13 51.6	
	comp=Z,19nm,1.2s							
PFO	**Pinyon Flats O**	**100.55**	**46**		P	**Pdif**	**11 13 54.9**	**+0.8**
	comp=Z,7.1nm,1.1s,baz=305,slow=2.5,SNR=6.6							
PFO	**Pinyon Flats O**	**100.55**	**46**			**Pdif**	**11 13 55.6**	**+1.4**
PFO	**Pinyon Flats O**	**100.55**	**46**		*i* P	**Pdif**	**11 13 55.6**	**+1.4**
TORD	**Torodi Ar. Bea**	**110.71**	**295**		PKiKP	**PKiKP**	**11 18 38.1**	**-1.5**
	comp=Z,3.1nm,1.0s,baz=22,slow=1.5,SNR=7.9							
TORD					PP	**PP**	**11 19 12.7**	**-3.4**
	comp=Z,1.6nm,1.0s,baz=63,slow=1.2,SNR=3.8							
TORD					PKKPbc	**PKKPab**	**11 29 47.5**	**-2.0**
	comp=Z,0.7nm,0.7s,baz=232,slow=6.6,SNR=3.5							
TXAR	**Lajitas Array**	**111.54**	**42**		Pdiff	**Pdif**	**11 14 46.1**	**+3.0**
	comp=Z,0.5nm,0.8s,baz=287,slow=5.1,SNR=4.1							
TXAR					PKiKP	**PKiKP**	**11 18 40.2**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=225,slow=3.2,SNR=8.8							
TXAR					PP	**PP**	**11 19 18.5**	**-2.9**
	comp=Z,3.2nm,1.0s,baz=310,slow=4.7,SNR=8.5							
NVL	**N'lazarevskaya**	**118.79**	**201**	*e*	PKiKP	**PKPdf**	**11 18 51.7**	**-1.8**
NVL				*e*			11 20 10.0	
NVL				*e*	PPP	PPP	11 22 40.8	
NVL				*e*			11 26 03.2	
NVL				*e*	PS	**PS**	**11 29 57.4**	**-2.0**
NVL				*e*	SS	SS	11 36 29.8	-0.4
NVL				*e*	SSS	SSS	11 40 53.3	
NVL					pmax	pmax		
	comp=Z,58nm,2.1s							
NVL					MLR	MLR		
	comp=Z,475nm,18.0s							
DBIC	**Dimbokro**	**119.60**	**293**		PKP	**PKPdf**	**11 18 55.4**	**-1.3**
	comp=Z,7.1nm,1.0s,baz=87,slow=1.6,SNR=6.3							
DBIC					PP	**PP**	**11 20 17.1**	**-1.7**
	comp=Z,7.4nm,1.0s,baz=96,slow=5.4,SNR=4.1							
DBIC	**Dimbokro**	**119.60**	**293**		PKPdf	**PKPdf**	**11 18 55.3**	**-1.5**
DBIC	**Dimbokro**	**119.60**	**293**		PKIKP	**PKPdf**	**11 18 55.3**	**-1.5**
VNA2	**Neumayer--Watz**	**124.67**	**198**	⇓	PKPdf	**PKPdf**	**11 19 03.1**	**-1.7**
	comp=Z,15nm,0.6s,baz=94,slow=2.2							
VNA3	**Neumayer Olymp**	**125.13**	**197**	⇓	PKPdf	**PKPdf**	**11 19 04.4**	**-1.3**
	comp=Z,19nm,0.6s							
SDV	**Santo Domingo**	**145.36**	**22**			**PKPbc**	**11 19 43.7**	**-1.1**
SDV	**Santo Domingo**	**145.36**	**22**	*eP*		**PKPbc**	**11 19 43.4**	**-1.4**
ROSC	**El Rosal**	**147.56**	**31**		PKPbc	**PKPbc**	**11 19 50.4**	**-1.2**
	comp=Z,30nm,0.8s,baz=55,slow=2.5,SNR=9.5							
OTAV	**Otavalo**	**149.17**	**42**	*eP*		**PKPdf**	**11 19 50.0**	**-1.8**
MG05	**Puerto Natales**	**150.16**	**162**			**PKPbc**	**11 19 56.5**	**-0.1**
RCBR	**Riachuelo**	**151.90**	**306**			**PKPbc**	**11 20 01.7**	**-0.2**
RCBR	**Riachuelo**	**151.90**	**306**		PKIKP	**PKPbc**	**11 20 01.7**	**-0.2**
RCBR	**Riachuelo**	**151.90**	**306**	*eP*		**PKPdf**	**11 19 55.3**	**-0.2**
EFI	**East Falkland**	**152.20**	**180**			**PKPbc**	**11 20 01.4**	**+0.1**
EFI	**East Falkland**	**152.20**	**180**		PKIKP	**PKPbc**	**11 20 01.4**	**+0.1**
PLCA	**Paso Flores**	**160.31**	**152**		PKPab	**PKPab**	**11 20 45.6**	**-0.6**
	comp=Z,4.2nm,1.0s,baz=176,slow=3.9,SNR=4.7							
BDFB	**Brasilia**	**167.26**	**308**		PKP	**PKPdf**	**11 20 11.1**	**-1.9**
	comp=Z,1.7nm,0.3s,baz=320,slow=3.1,SNR=5.0							
BDFB					PKPab	**PKPab**	**11 21 16.7**	**-0.9**
	comp=Z,13nm,0.8s,baz=53,slow=7.0,SNR=11							
BDFB	**Brasilia**	**167.26**	**308**			**PKPdf**	**11 20 13.5**	**+0.5**
BDFB						**PKPab**	**11 21 16.6**	**-1.0**
LPAZ	**La Paz**	**168.19**	**52**		PKP	**PKPdf**	**11 20 13.8**	**-0.5**
	comp=Z,5.4nm,0.9s,baz=9.1,slow=3.8,SNR=14							
LPAZ					PKPab	**PKPab**	**11 21 21.6**	**-0.7**
	comp=Z,13nm,0.9s,baz=347,slow=5.5,SNR=11							
LPAZ	**La Paz**	**168.19**	**52**			**PKPdf**	**11 20 12.5**	**-1.7**
LPAZ						**PKPab**	**11 21 22.3**	**0.0**
LPAZ	**La Paz**	**168.19**	**52**		PKIKP	**PKPdf**	**11 20 12.5**	**-1.7**
CPUP	**Villa Florida**	**177.32**	**201**		PKP	**PKPdf**	**11 20 15.8**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=54,slow=4.3,SNR=6.9							
CPUP	**Villa Florida**	**177.32**	**201**			**PKPdf**	**11 20 14.9**	**-2.1**
CPUP	**Villa Florida**	**177.32**	**201**		PKIKP	**PKPdf**	**11 20 14.9**	**-2.1**

*IDC **15** 11:00:05.7±2.1,52.7°71N×167.7°73W,h0km,mb3.7/4, mbtmp3.6/6,ML3.1/2,Error ellipse: s-maj=46.8km s-min=25.8km az=170.0*

*NEIC **15** 11:00:06.6±1.9,52.2°32N±0.0°05×167.2°82W±0.0°08,h10km±2km, mb3.6/5,ML3.2/10,ML2.7(AEIC),Error ellipse: s-maj=10.0km s-min=7.4km az=220.0*

*AEIC **15** 11:00:08.7±1.9,52.3°39N±0.0°08×167.9°91W±0.0°08,h39km±9km, Error ellipse: s-maj=11.8km s-min=7.0km az=169.0*

ISC 15 11:00:09.5±1.2,52.5°N±0.1°×167.8°6W±0.0°7,h31km,n19, σ1§14/21,mb3.5/4,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.76**	**308**		**Pn**	**11 00 24.1**	**0.0**
NIKH				Sg	**Sn**	**11 00 36.2**	**+1.7**
NIKH				IAML		11 00 37.4	
	comp=N,971nm,0.6s						
NIKH				IAML		11 00 40.4	
	comp=E,607nm,0.5s						

UNV	**Unalaska Valle**	**1.57**	**31**		Pn	**Pn**	**11 00 36.5**	**+1.3**
UNV					Sn	**Sb**	**11 00 58.2**	**+1.0**
LVA	**Lava Point**	**1.99**	**33**		Pn	**Pb**	**11 00 44.0**	**-1.0**
LVA					IAML		11 01 09.4	
	comp=E,126nm,1.3s							
LVA					IAML		11 01 14.0	
	comp=N,184nm,0.6s							
ATKA	**Atka Island**	**3.90**	**268**		Pn	**Pn**	**11 01 07.4**	**+0.3**
ATKA					IAML		11 02 57.0	
	comp=N,44nm,1.1s							
ATKA					IAML		11 03 15.3	
	comp=E,44nm,1.5s							
SDPT	**Sand Point**	**5.21**	**54**		Pn	**Pn**	**11 01 26.2**	**+1.1**
ADK	**Adak**	**5.46**	**267**		Pn	**Pn**	**11 01 28.7**	**0.0**
KDAK	**Kodiak Island**	**10.21**	**53**		Pn	**Pn**	**11 02 32.9**	**-0.8**
	comp=E,0.3nm,0.3s,baz=213,slow=4.2,SNR=9.4							
	comp=E,2.8nm,0.6s							
KDAK	**Kodiak Island**	**10.21**	**53**			**Pn**	**11 02 34.3**	**+0.7**
Q19K	**Cape Douglas,**	**10.27**	**46**		Pn	**Pn**	**11 02 35.1**	**+0.6**
ILAR	**Eielson Array**	**16.32**	**33**		Pn	**Pn**	**11 03 52.8**	**-3.3**
	baz=223,slow=13,SNR=1.7							
	comp=E,0.3nm,1.0s							
J25K	**Salcha River,**	**16.75**	**35**		P	**P**	**11 04 03.2**	**-0.3**
I30M	**Mount Dempster**	**20.38**	**39**		P	**P**	**11 04 43.6**	**+0.2**
I30M					IAmb	IAmb	11 04 53.4	
	comp=Z,4.6nm,1.4s							
PETK	**Petropavlovsk-**	**20.72**	**285**		P	**P**	**11 04 46.8**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=85,slow=15,SNR=7.9							
	comp=Z,1.9nm,0.7s							
E29M	**Blow River**	**21.36**	**31**		P	**P**	**11 04 53.5**	**-0.3**
E29M					IAmb	IAmb	11 04 54.5	
	comp=Z,1.3nm,0.8s							
H31M	**Peel River**	**21.39**	**39**		P	**P**	**11 04 53.7**	**-0.5**
INK	**Inuvik**	**22.73**	**33**		P	**P**	**11 05 06.9**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=249,slow=10,SNR=5.1							
	comp=Z,1.1nm,0.8s							
INK	**Inuvik**	**22.73**	**33**		P	**P**	**11 05 08.8**	**+0.4**
INK					IAmb	IAmb	11 05 35.0	
	comp=Z,4.7nm,1.4s							
TXAR	**Lajitas Array**	**51.82**	**90**		P	**P**	**11 09 15.4**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=281,slow=4.8,SNR=4.3							
	comp=Z,0.3nm,0.6s							
FINES	**FINESS Array B**	**65.86**	**353**		P	**P**	**11 10 51.5**	**+0.1**
	comp=Z,6.4nm,1.1s,baz=24,slow=5.3,SNR=3.3							
	comp=Z,6.4nm,1.1s							

*MOS **15** 11:04:58.9±1.2,23.6°76N×121.6°68E,h13km,mb5.0/35,Error ellipse: s-maj=7.5km s-min=5.6km az=103.6*

*IDC **15** 11:04:58.3±0.5,23.6°77N×121.6°59E,h0km,mb4.5/30, mbtmp4.5/34,ML4.0/4,Error ellipse: s-maj=15.1km s-min=10.8km az=67.0*

*NEIC **15** 11:05:00.4,23.8°82N×121.9°57E,h12km,Moment Tensor Solution. Duration: 1§4 Moment tensor: Scale 10^16^Nm; Mrr1.48; Mθθ-0.88; Mφφ-0.60; Mrθ1.47; Mrφ-1.17; Mθφ1.13; Fault plane solution: M0 2.54000×10^16^ NP1: ϕ§223.20000°,δ21.43000°,λ81.99000°. NP2:ϕ§51.80000°, δ68.79000°,λ93.13000°. Principal axes: T 2.2997, Plg66.0000°, Azm327.0000°; N 0.4270, Plg3.0000°, Azm231.0000°; P -2.7267, Plg24.0000°, Azm139.0000°;*

*ASIES **15** 11:05:00.5,23.8°85N×121.9°53E,h8km,Mw4.8,Fault plane solution: NP1:ϕ§204.00000°,δ34.00000°,λ59.00000°. NP2:ϕ§60.00000°,δ61.00000°,λ109.00000°.*

*JMA **15** 11:05:00.2±0.1,23.8°N±0.5×12.2°E±, h7km±3km, MV4.7/13, MW4.9/13, TAIWAN REGION*

*TAP **15** 11:05:00.5,23.8°85N×121.9°52E,h9km,ML5.3,B*

*BJI **15** 11:05:00.3,23.8°86N×121.9°53E,h10km,mB5.0/5,mb4.7/42, ML5.1/5,Ms4.9/4,Ms7 4.8/6*

*NEIC **15** 11:05:00.4±1.5,23.8°82N±0.0°03×121.9°58E±0.0°05,h10km±1km, mb5.2/189,Mww4.9/10,Error ellipse: s-maj=8.1km s-min=3.2km az=298.0*

*NEIC **15** 11:05:00.4,23.8°82N×121.9°57E,h12km*

*GCMT **15** 11:05:01.4±0.4,23.7°78N±0.0°03×121.9°55E±0.0°03,h27km±1km, MW5.1/71,Moment Tensor Solution. s34,c38; s71,c100; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.86±.40; Mθθ-2.11±.23; Mφφ-2.75±.26; Mrθ2.41±.38; Mθφ-2.20±.11; Mφr0.67±.39; Best double couple: M0 5.35900×10^16^ NP1:ϕ§209.00000°,δ34.00000°,λ68.00000°. NP2: ϕ§55.00000°,δ58.00000°,λ104.00000°. Principal axes: T 5.6120, Plg73.0000°, Azm0.0000°; N -0.5070, Plg12.0000°, Azm227.0000°; P -5.1050, Plg12.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 11:05:00.9±0.5,23.83N±0.01°×121.57E±0.01°,h12km±3km, n732,σ1§07/809,mb5.1/174,MS4.8/3,18C-44D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUL	**Shoufeng**	**0.04**	**184**	⇑*i*P	**Pg**	**11 05 03.3**	**+0.1**
SHUL				*i* S	**Sg**	**11 05 05.2**	**+0.4**
TEYL	**Yanliau Villag**	**0.05**	**37**	⇑*i*P	**Pg**	**11 05 03.5**	**+0.3**
TEYL				S	**Sg**	**11 05 05.5**	**+0.6**
TEGC	**Jichi Village**	**0.12**	**191**	⇑*i*P	**Pg**	**11 05 04.5**	**+0.4**
TEGC				S	**Sg**	**11 05 07.3**	**+1.1**
ESL	**Shilin**	**0.12**	**263**	⇑*i*P	**Pg**	**11 05 03.0**	**-1.0**
ESL				*i* S	**Sg**	**11 05 04.5**	**-1.9**
ETM	**Tongmen**	**0.15**	**334**	⇓*i*P	**Pg**	**11 05 03.7**	**-0.8**
ETM				*e*S	**Sg**	**11 05 05.6**	**-1.5**
HWA	**Hwalien**	**0.15**	**14**	⇓*i*P	**Pg**	**11 05 04.5**	**0.0**
HWA				*e*S	**Sg**	**11 05 07.3**	**+0.2**
WARBT	**Fenglin Townsh**	**0.20**	**236**	⇑*i*P	**Pg**	**11 05 04.5**	**-0.8**
WARBT				S	**Sg**	**11 05 06.6**	**-1.6**
EGFH	**Guangfu**	**0.20**	**219**	⇓P	**Pg**	**11 05 04.9**	**-0.5**
EGFH				*e*S	**Sg**	**11 05 07.7**	**-0.7**
LXIB	**Xiulin Townshi**	**0.24**	**324**	⇓*i*P	**Pg**	**11 05 05.1**	**-0.9**
LXIB				S	**Sg**	**11 05 08.2**	**-1.3**
TWD	**Chiawan**	**0.25**	**6**	⇓*i*P	**Pg**	**11 05 05.7**	**-0.5**
TWD				S	**Sg**	**11 05 09.1**	**-0.6**
ETL	**Fush Village**	**0.33**	**9**	⇓P	**Pg**	**11 05 07.0**	**-0.7**
ETL				*e*S	**Sg**	**11 05 12.0**	**-0.2**
NACB	**Ninganchiao**	**0.34**	**4**		**Pg**	**11 05 07.0**	**-0.8**
NACB				Sg	**Sg**	**11 05 11.6**	**-0.9**
NACB	**Ninganchiao**	**0.34**	**4**	P	**Pg**	**11 05 07.0**	**-0.8**
NACB	**Ninganchiao**	**0.34**	**4**	P	**Pn**	**11 05 12.1**	**+0.3**
NACB	**Ninganchiao**	**0.34**	**4**	⇓*i*P	**Pg**	**11 05 07.1**	**-0.8**
NACB				*i* S	**Sg**	**11 05 11.7**	**-0.9**
HGSD	**Ruisui**	**0.36**	**201**	⇑⇑P	**Pb**	**11 05 08.5**	**-0.7**
OWD	**Renai**	**0.38**	**289**	⇓*i*P	**Pg**	**11 05 07.7**	**-0.9**
OWD				S	**Sg**	**11 05 12.3**	**-1.4**
ETLH	**Xiulin Townshi**	**0.38**	**348**	⇓P	**Pg**	**11 05 07.7**	**-0.9**
ETLH				*e*S	**Sg**	**11 05 13.3**	**-0.5**
EHYH	**Wanrong**	**0.39**	**211**	⇑*i*P	**Pg**	**11 05 08.1**	**-0.6**
EHYH				S	**Sg**	**11 05 13.8**	**-0.1**
EHY	**Hungye**	**0.39**	**215**	⇑*i*P	**Pg**	**11 05 08.0**	**-0.7**
EHY				S	**Sg**	**11 05 12.9**	**-1.1**
VWDT	**VWDT**	**0.40**	**259**	⇓*i*P	**Pg**	**11 05 08.4**	**-0.4**
VWDT				*e*S	**Sg**	**11 05 12.8**	**-1.2**
WHF	**Hehuan Shan**	**0.42**	**319**	⇓*i*P	**Pg**	**11 05 08.4**	**-0.9**
WHF				S	**Sg**	**11 05 14.0**	**-1.1**
WUSB	**Renai**	**0.44**	**292**	⇓*i*P	**Pg**	**11 05 09.1**	**-0.6**
WUSB				*i* S	**Sg**	**11 05 14.6**	**-1.0**
YULB	**Yu-li**	**0.50**	**210**		**Pg**	**11 05 10.1**	**-0.6**
YULB				Sg	**Sg**	**11 05 15.9**	**-1.5**
YULB	**Yu-li**	**0.50**	**210**	P	**Pg**	**11 05 10.7**	**0.0**
YULB	**Yu-li**	**0.50**	**210**	S	**Sg**	**11 05 17.4**	**0.0**
YULB	**Yu-li**	**0.50**	**210**	⇑*i*P	**Pg**	**11 05 10.1**	**-0.6**
YULB				*e*S	**Sg**	**11 05 16.1**	**-1.3**
EHP	**Heping Village**	**0.51**	**18**	*e*P	**Pb**	**11 05 11.0**	**-0.8**
EHP				*e*S	**Sb**	**11 05 18.0**	**-1.1**
FUSS	**Fushou**	**0.51**	**325**	⇓*i*P	**Pg**	**11 05 10.4**	**-0.6**
FUSS				*e*S	**Sg**	**11 05 17.7**	**-0.1**
ECBN	**Changbin**	**0.52**	**192**	⇓*i*P	**Pb**	**11 05 12.0**	**0.0**
ECBN				*e*S	**Sb**	**11 05 20.5**	**+1.0**
EAHA	**Aohua**	**0.52**	**18**	P	**Pg**	**11 05 10.6**	**-0.6**
EAHA				S	**Sb**	**11 05 18.3**	**-1.3**
TWF1	**Yuli**	**0.54**	**208**	⇑*e*P	**Pg**	**11 05 10.9**	**-0.5**
TWF1				*e*S	**Sg**	**11 05 18.2**	**-0.2**
TWT	**Tachien**	**0.55**	**320**	⇓*i*P	**Pg**	**11 05 11.3**	**-0.5**
TWT				S	**Sg**	**11 05 18.5**	**-0.7**
SSLB	**Suanglung**	**0.56**	**266**		**Pg**	**11 05 11.2**	**-0.7**
SSLB				Sg	**Sg**	**11 05 17.4**	**-2.0**
SSLB	**Suanglung**	**0.56**	**266**	P	**Pg**	**11 05 11.2**	**-0.7**
SSLB	**Suanglung**	**0.56**	**266**	S	**Sg**	**11 05 18.1**	**-1.3**
SSLB	**Suanglung**	**0.56**	**266**	⇓*i*P	**Pg**	**11 05 11.3**	**-0.7**
SSLB				*i* S	**Sg**	**11 05 17.6**	**-1.8**
TDCB	**Techi**	**0.56**	**319**	⇓*i*P	**Pg**	**11 05 11.4**	**-0.6**
TDCB				*e*S	**Sg**	**11 05 18.0**	**-1.5**

WPL	**Puli Township**	**0.59**	**288**	⇓P		**Pg**	**11 05 11.8**	**-0.5**
WPL				*e*S		**Sg**	**11 05 18.6**	**-1.5**
SMLT	**Sun Moon Lake**	**0.61**	**275**	⇓*i*P		**Pg**	**11 05 12.4**	**-0.5**
SMLT				S		**Sg**	**11 05 19.8**	**-1.2**
ENA	**Nanau**	**0.62**	**15**	⇓*e*P		**Pg**	**11 05 12.5**	**-0.4**
ENA				S		**Sg**	**11 05 21.1**	**-0.1**
DPDB	**Guoxing**	**0.62**	**289**	⇓*i*P		**Pg**	**11 05 12.5**	**-0.5**
DPDB				*e*S		**Sg**	**11 05 20.1**	**-1.1**
NNSB	**Datong**	**0.62**	**344**	⇓*i*P		**Pg**	**11 05 12.4**	**-0.6**
NNSB				S		**Sg**	**11 05 20.4**	**-0.8**
NNS	**Nan Shan**	**0.63**	**344**	⇓*i*P		**Pg**	**11 05 12.7**	**-0.6**
NNS				S		**Sg**	**11 05 21.2**	**-0.5**
WCS	**Beigang Elemen**	**0.64**	**291**	⇓*i*P		**Pg**	**11 05 12.9**	**-0.5**
WCS				*e*S		**Sg**	**11 05 20.6**	**-1.3**
EWUT	**Wuta**	**0.64**	**17**	*e*P		**Pg**	**11 05 12.7**	**-0.7**
EWUT				*e*S		**Sb**	**11 05 22.2**	**-0.8**
CHKH	**Chenggong**	**0.65**	**194**	*e*P		**Pb**	**11 05 14.2**	**0.0**
CHKH				*e*S		**Sn**	**11 05 25.3**	**-0.9**
TYC	**Yuchr**	**0.65**	**277**	⇓P		**Pg**	**11 05 12.9**	**-0.7**
TYC				*e*S		**Sg**	**11 05 19.9**	**-2.3**
YUS	**Yu-Shan**	**0.66**	**239**	*e*P		**Pg**	**11 05 13.4**	**-0.4**
YUS				S		**Sg**	**11 05 21.3**	**-1.2**
WHYT	**Xinyi Township**	**0.67**	**259**	⇓*e*P		**Pg**	**11 05 13.2**	**-0.7**
WHYT				*e*S		**Sg**	**11 05 21.2**	**-1.4**
FULB	**Fuli**	**0.68**	**202**	*e*P		**Pb**	**11 05 14.6**	**-0.1**
LATG	**Datong**	**0.70**	**357**	⇓*i*P		**Pg**	**11 05 13.9**	**-0.7**
LATG				S		**Sg**	**11 05 23.4**	**-0.5**
WHP	**Taichung City**	**0.72**	**308**	⇓P		**Pg**	**11 05 14.4**	**-0.5**
WHP				*e*S		**Sg**	**11 05 23.7**	**-0.7**
EOS4	**EOS4**	**0.75**	**67**	*e*P		**Pb**	**11 05 15.8**	**+0.2**
EOS4				*e*S		**Sn**	**11 05 27.0**	**-1.0**
CHKT	**Chengkung**	**0.75**	**194**	*e*P		**Pb**	**11 05 15.5**	**-0.4**
CHKT				*e*S		**Sn**	**11 05 28.1**	**-0.5**
EHD	**Haiduan**	**0.75**	**206**	*e*P		**Pg**	**11 05 15.2**	**-0.3**
ALS	**Alishan**	**0.77**	**246**	*e*P		**Pb**	**11 05 15.7**	**-0.7**
ALS				S		**Sg**	**11 05 25.4**	**-0.5**
ESAO	**Su ao**	**0.79**	**19**	*e*P		**Pg**	**11 05 15.5**	**-0.6**
ECS	**Chishang**	**0.80**	**204**	*e*P		**Pb**	**11 05 16.5**	**-0.2**
ENTT	**Nioudou**	**0.81**	**360**	⇓*i*P		**Pg**	**11 05 16.0**	**-0.6**
ENTT				S		**Sb**	**11 05 27.2**	**-0.6**
WNT	**Mingjian**	**0.81**	**274**	*e*P		**Pb**	**11 05 16.9**	**0.0**
WNT				*e*S		**Sb**	**11 05 27.9**	**+0.1**
ELDTW	**Lidau**	**0.81**	**218**	⇑*i*P		**Pg**	**11 05 15.5**	**-1.2**
ELDTW				*e*S		**Sg**	**11 05 25.7**	**-1.6**
NDS	**Dongshan**	**0.81**	**10**	⇓*e*P		**Pg**	**11 05 16.0**	**-0.6**
NDS				S		**Sb**	**11 05 27.3**	**-0.7**
WNT1	**Nantou City**	**0.81**	**276**	*e*P		**Pb**	**11 05 17.1**	**+0.1**
WNT1				*e*S		**Sb**	**11 05 27.5**	**-0.5**
TWC	**Suao**	**0.82**	**18**	⇓*i*P		**Pg**	**11 05 16.1**	**-0.6**
TWC				S		**Sb**	**11 05 27.4**	**-0.7**
WWF	**Wufeng**	**0.82**	**285**	*e*P		**Pb**	**11 05 17.0**	**-0.1**
WWF				*e*S		**Sb**	**11 05 28.6**	**+0.5**
EOS3	**EOS3**	**0.82**	**56**	*e*P		**Pn**	**11 05 18.0**	**

WTCT Ta-ch'eng 1.18 272 P Pg 11 05 23.1 -0.5
WTCT S Sn 11 05 39.1 0.0
NCUH Zhongli 1.19 343 eP Pg 11 05 23.8 +0.1
NCUH eS Sn 11 05 39.9 +0.5
NCU National Centr 1.19 343 eP Pb 11 05 22.1 -1.3
NCU eS Sn 11 05 39.0 -0.5
NTY Taoyuan 1.19 348 eP Pg 11 05 23.3 -0.6
NHY Taipei 1.21 0 eP Pg 11 05 24.1 0.0
NHY eS Sn 11 05 39.5 -0.3
TAP Taipei 1.21 357 eP Pg 11 05 24.0 -0.1
TAP eS Sn 11 05 39.4 -0.5
WMLT Mailiao 1.23 269 eP Pg 11 05 23.8 -0.8
WMLT eS Sn 11 05 40.5 +0.1
TWB1 Santiao Chiao 1.24 18 eP Pg 11 05 24.3 -0.4
TWB1 S Sn 11 05 40.8 +0.1
WSF Szhu 1.25 262 eP Pg 11 05 24.2 -0.6
WSF eS Sn 11 05 41.2 +0.3
NWF Wu-fen Shan 1.25 9 eP Pn 11 05 24.0 -0.3
NWF eS Sn 11 05 41.1 -0.1
WFSB Wu-fen Shan 1.25 9 eP Pg 11 05 24.2 -0.8
WFSB eS Sn 11 05 41.0 -0.1
WSL Shuilin Townsh 1.26 256 eP Pg 11 05 24.9 -0.3
WSL eS Sn 11 05 41.8 +0.5
SXI1 Grass Mountain 1.29 13 eP Pn 11 05 24.5 -0.4
SXI1 S Sn 11 05 41.9 -0.2
YM01 YM01 1.31 0 P Pn 11 05 24.9 -0.3
YM01 eS Sg 11 05 42.6 -0.6
ZUZH Zhuzihu 1.33 359 eP Pb 11 05 25.3 -0.5
ZUZH eS Sg 11 05 43.3 -0.5
TNOU National Taiwa 1.33 8 eP Pn 11 05 25.0 -0.3
TNOU eS Sn 11 05 42.7 -0.2
CHN3 Shinhua 1.33 236 eP Pg 11 05 45.0 +1.2
CHN3 eS Sg 11 05 45.0 +1.2
CHN8 Yiju 1.33 249 eP Pg 11 05 25.9 -0.6
CHN8 eS Sg 11 05 44.5 +0.6
NTST Danshui 1.33 355 eP Pb 11 05 25.7 -0.2
NTST eS Sg 11 05 44.8 +0.8
ECL Taimali 1.35 205 eP Pn 11 05 24.5 -1.1
ANP Anpu 1.35 358 eP Pb 11 05 25.9 -0.4
ANP eS Sg 11 05 43.8 -0.8
YM08 YM08 1.35 1 eP Pn 11 05 25.4 -0.3
YM08 eS Sb 11 05 43.2 -0.3
SSHA Shanhua 1.36 240 eP Pg 11 05 26.4 -0.7
SSHA eS Sg 11 05 46.3 +1.5
NWRT Kuosheng 1.37 4 eP Pb 11 05 26.2 -0.3
SHHT Tainan City 1.38 235 eP Pg 11 05 28.1 +0.7
SSD Sandimen 1.38 219 eP Pb 11 05 26.2 -0.4
SSD eS Sg 11 05 45.9 +0.6
JYNG Yonagunijimaku 1.40 64 eP Pn 11 05 26.0 -0.3
JYNG eS Sn 11 05 41.9 -2.9
SCLT Jiali 1.42 243 eP Pg 11 05 27.2 -0.9
SCLT eS Sg 11 05 46.2 -0.4
TWY Chenhua 1.44 1 eP Pg 11 05 28.1 -0.5
TWY eS Sb 11 05 46.1 +0.1
TWM1 Shoushan 1.45 227 eP Pg 11 05 29.3 +0.5
TAI1 Yung-k'ang 1.46 238 eP Pb 11 05 27.7 -0.3
YOJ Yonaguni jima 1.46 64 Pn Pn 11 05 27.2 +0.1
YOJ Yonaguni jima 1.46 64 P Pb 11 05 27.5 -0.6
YOJ Yonaguni jima 1.46 64 S Sg 11 05 47.2 -0.8
YOJ Yonaguni jima 1.46 64 P Pn 11 05 27.2 +0.1
YOJ Yonaguni jima 1.46 64 eP Pn 11 05 27.2 +0.1
YOJ eS Sg 11 05 47.3 -0.7
YOJ Yonaguni jima 1.46 64 ⇑P Pn 11 05 27.1 +0.1
YOJ S Sg 11 05 47.7 -0.3
SGLT Jiouru 1.48 222 eP Sg 11 05 29.7 +0.4
MASBT Mashibuluo 1.48 216 P Pb 11 05 27.9 -0.5
MASBT eS Sg 11 05 47.7 -1.0
TSPT Pingtung City 1.51 221 eP Pg 11 05 30.2 +0.2
EAST Anshuo 1.58 205 eP Pn 11 05 28.9 +0.1
TAW Tawu 1.59 203 eP Pn 11 05 29.1 +0.3
TAWH Dawu Township 1.61 203 eP Pb 11 05 30.2 -0.3
WSSB Gushan 1.68 226 eP Pg 11 05 32.1 -1.1
SCZT Fangliau 1.69 211 eP Pb 11 05 31.6 -0.4
SLIU Shizi 1.75 204 eP Pn 11 05 31.6 +0.5
LAY Lan-yu 1.78 180 eP Pn 11 05 29.9 -1.6
LYUB Lan-yu 1.82 179 eP Pn 11 05 30.0 -2.1
LYUB eS Sn 11 05 52.9 -2.1
WLCH Liuqiu 1.83 217 eP Pg 11 05 35.5 -0.6
WDGT Dungji 1.84 252 eP Pn 11 05 32.5 +0.2
WDGT eS Sb 11 05 56.5 -1.0
TWP Hsiaoliuchiu 1.85 217 eP Pg 11 05 35.4 -0.9
PHUB P'eng-hu 1.85 261 eP Pn 11 05 32.9 +0.3
PHUB eS Sb 11 05 56.8 -1.1
PNG Penghu 1.86 262 eP Pn 11 05 32.9 +0.3
PNG eS Sn 11 05 56.4 +0.3
SMST Manzhou Townsh 1.92 201 eP Pb 11 05 34.6 -1.3
HEN Hengchun 1.97 203 eP Pb 11 05 37.0 +0.3
TWK1 Hengchun 2.00 201 eP Pn 11 05 35.3 +0.7
TWK1 eS Sn 11 06 00.6 +1.0
TWKBT Hengchun 2.00 200 eP Pn 11 05 35.1 +0.5
TSEB Hengchuen, Pin 2.02 198 eP Pn 11 05 35.1 +0.4
TSEB eS Sb 11 06 01.5 -1.0
IRIF Iriomote-Funau 2.04 75 eP Pn 11 05 35.0 -0.1
IRIF eS Sn 11 06 00.9 +0.4
VCHM Qimei 2.06 253 eP Pn 11 05 35.7 +0.4
VCHM eS Sb 11 06 02.1 -1.6
VWUC VWUC 2.25 301 eP Pn 11 05 37.3 -0.7
VWUC eS Sn 11 06 04.4 -1.3
JIJ Ishigaki jima 2.41 77 eP Pn 11 05 39.9 -0.4
JISG Ishigakijimahi 2.62 73 eP Pn 11 05 42.8 -0.3
JISG eS Sn 11 06 14.1 -0.6
MATB Ma-tsu 2.74 328 eP Pn 11 05 45.7 +1.0
MATB eS Sn 11 06 16.5 -1.3
KNM Kinmen 2.92 282 eP Pn 11 05 49.0 +1.8
QZH2 Quanzhou 2.92 293 Pn Pn 11 05 47.5 +0.2
QZH2 Sn Sn 11 06 20.0 -2.3
QZH2 smax smax
comp=N,5μm,1.0s
QZH2 smax smax
comp=E,3μm,0.9s
KNMB Chin-men Tao 2.97 283 Pn Pn 11 05 48.0 +0.1
KNMB Chin-men Tao 2.97 283 eP Pn 11 05 47.6 -0.3
LYJJ Jianjiangzhen 3.17 329 eP Pn 11 05 50.6 +0.1
LYJJ eS Sn 11 06 28.8 +0.5
MHZQ Yeshan 3.23 315 eP Pn 11 05 52.2 +0.8
XPSS Dashiqiu 3.33 338 eP Pn 11 05 52.4 -0.4
AXDP Jialang 3.45 289 eP Pn 11 05 54.6 +0.1
AXDP eS Sn 11 06 35.5 +0.3
ZPLA Ao Xicun 3.50 272 eP Pn 11 05 55.3 +0.2
JIKM Ikemajima 3.53 71 eS Sn 11 06 39.0 +1.7
JMJ Miyako jima 2 3.54 73 eP Pn 11 05 58.0 +2.3
DSXP Dongshan 3.79 269 eP Pn 11 06 00.4 +1.2
DSXP eS Sn 11 06 44.3 +0.5
SXFK Yanhouchang 4.38 307 eP Pn 11 06 07.3 0.0
JOW Kunigami 6.77 62 Pn Pn 11 06 39.0 -1.1
13nm,0.3s,baz=209,slow=9.9,SNR=17
JOW Sn Sn 11 07 57.9 +0.8
4.1nm,0.3s,baz=183,slow=26,SNR=1.2
27nm,0.3s
JOW Kunigami 6.77 62 Pn 11 06 38.9 -1.1
JOW Kunigami 6.77 62 P Pn 11 06 39.1 -1.1
HKPS Hong Kong Po S 7.01 259 Pn Pn 11 06 43.7 +0.3
NJ2 Nanjing 8.54 344 eP Pn 11 07 07.6 +3.3
NJ2 S Sn 11 08 36.3 -4.3
NJ2 smax smax
comp=N,600nm,0.9s
NJ2 smax smax
comp=E,350nm,0.8s
JNU Nakatsue 12.35 39 Pn Pn 11 07 59.8 +3.1
0.5nm,0.3s,baz=188,slow=12,SNR=4.3
GYA Guiyang 13.75 284 ⇓P Pn 11 08 17.5 +1.6
GYA pmax pmax
comp=Z,170nm,1.7s
KSRS Korea Array 14.63 20 Pn Pn 11 08 28.3 +0.5
0.3nm,0.3s,baz=201,slow=14,SNR=6.9
16nm,0.9s
DL2 Dalian 15.03 0 eP Pn 11 08 34.6 +1.5
DL2 eS Sn 11 11 24.5 +4.9
DL2 pmax pmax
comp=Z,160nm,1.6s
TIY Taiyuan 15.90 333 P Pn 11 08 45.3 +0.7
TIY pmax pmax
comp=Z,190nm,2.5s
BJI2 Beijing 16.77 346 P Pn 11 08 49.8 -5.9
BJI2 pmax pmax
comp=Z,49nm,1.8s
BJT Baijiatuau 16.77 346 Pn 11 08 50.9 -4.8
BJT Baijiatuau 16.77 346 P Pn 11 08 50.9 -4.8
BJT pmax pmax
comp=Z,125nm,1.7s
JGF Kuroka 18.02 46 P P 11 09 11.3 -0.5

JHJ Hachijo jima 2 18.48 56 P Pn 11 09 18.5 +1.7
comp=Z,136nm,1.1s,baz=185,slow=14,SNR=5.2
HHC Hu-ho-hao-te 18.93 336 eP Pn 11 09 23.8 +1.3
HHC pP sP 11 09 28.8 +1.9
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,970nm,7.1s
MAJO Matsushiro 19.13 45 P 11 09 23.8 -0.1
MAJO Matsushiro 19.13 45 ⇑P P 11 09 23.9 -0.1
MJB9 Matsu-Tunnel 19.13 45 P P 11 09 23.0 -0.9
MJAR Matsushiro Arr 19.14 45 P P 11 09 23.1 -0.9
comp=Z,0.1nm,0.3s,baz=225,slow=4.8,SNR=5.0
comp=Z,12nm,1.0s
MJAR Matsushiro Arr 19.14 45 P 11 09 21.8 -2.2
MJA0 Matsu Arr-Jizo 19.16 45 eP Pn 11 09 26.9 +1.7
BTO2 Baotou 19.52 333 eP Pn 11 09 30.4 +0.9
BTO2 pP sP 11 09 34.3 +1.0
BTO2 PP PnPn 11 09 48.8 +5.9
BTO2 pmax pmax
comp=Z,34nm,1.0s
LZH Lanzhou 19.58 313 eP Pn 11 09 37.8 +7.4
LZH pP sP 11 09 42.9 +8.8
LZH pmax pmax
comp=Z,34nm,1.3s
LZDM Lanzhou Array 19.61 312 P Pn 11 09 31.0 +0.1
baz=144,slow=18
comp=Z,18nm,0.9s
PSTR Posyet 20.27 20 i P P 11 09 36.5 +0.2
XLT XiLinHaoTe 20.52 349 eP Pn 11 09 42.1 +0.8
XLT pP sP 11 09 47.3 +3.1
XLT pmax pmax
comp=Z,25nm,1.1s
TNCH TengChong 21.02 278 eP P 11 09 45.8 +1.1
TNCH pmax pmax
comp=Z,41nm,1.1s
VLA Vladivostok 21.05 21 i P P 11 09 44.8 +0.2
VLA pmax pmax
comp=Z,22nm,0.9s
CHTO Chiang Mai 21.65 261 P 11 09 52.6 +1.2
CHTO Chiang Mai 21.65 261 P P 11 09 52.6 +1.2
CHTO pmax pmax
comp=Z,47nm,1.1s
MDJ Mudanjiang 21.75 16 P P 11 09 51.5 -0.7
MDJ Mudanjiang 21.75 16 P P 11 09 51.5 -0.7
MDJ pmax pmax
comp=Z,39nm,0.9s
CM31 Chiang Mai Arr 21.76 260 P P 11 09 51.2 -1.3
CMAR Chiang Mai Arr 21.76 260 P P 11 09 53.5 +1.0
comp=Z,2.2nm,0.3s,baz=60,slow=8.2,SNR=7.4
CMAR PcP PcP 11 13 52.6 -0.5
comp=Z,1.1nm,0.5s,baz=354,slow=0.7,SNR=4.1
comp=Z,2.2nm,0.3s
CMAR Chiang Mai Arr 21.76 260 P P 11 09 51.4 -1.1
CMAR Chiang Mai Arr 21.76 260 P P 11 09 51.4 -1.1
USRK Ussuriysk Ar. 22.04 20 P P 11 09 56.2 +0.8
comp=Z,8.9nm,0.7s,baz=223,slow=12,SNR=8.4
comp=Z,8.9nm,0.7s
BNX BinXian 22.37 11 ⇓P P 11 09 57.5 -1.3
BNX pmax pmax
comp=Z,7.0nm,0.8s
TOLI2 Tolitoli 22.60 182 P 11 10 00.0 -1.5
SBUM Sibu 23.10 204 P 11 10 05.1 -1.7
GTA2 Gaotai 24.16 315 P P 11 10 19.9 +2.7
GTA2 pmax pmax
comp=Z,21nm,2.5s
HIA Hailar 25.43 357 P P 11 10 28.2 -0.3
HIA Hailar 25.43 357 i P P 11 10 28.6 +0.2
HIA pmax pmax
comp=Z,27nm,1.0s
HILR Hailar Array B 25.72 357 P P 11 10 31.1 0.0
comp=Z,7.8nm,0.7s,baz=166,slow=12,SNR=6.1
comp=Z,7.8nm,0.7s
ASAJ Asahikawa 26.58 35 P P 11 10 37.5 -1.3
ASAJ pmax pmax
comp=Z,105nm,2.0s
JKA Kamikawa-asahi 26.58 35 P P 11 10 37.5 -1.4
JKA IAmb IAmb 11 10 59.6
comp=Z,105nm,2.0s
KLR Kul'dur 26.59 15 i P P 11 10 39.2 +0.3
KLR pmax pmax
comp=Z,31nm,0.9s
ULN Ulaanbaatar 26.62 338 P 11 10 39.7 +0.3
ULN Ulaanbaatar 26.62 338 i P P 11 10 39.4 0.0
ULN pmax pmax
comp=Z,21nm,0.9s
HEH HeiHe 26.77 8 eP P 11 10 42.0 +1.5
HEH pmax pmax
comp=Z,14nm,1.0s
SONM Songino Array 26.83 337 P P 11 10 41.1 -0.2
comp=Z,7.9nm,0.7s,baz=154,slow=7.3,SNR=8.3
comp=Z,7.9nm,0.7s
SONM Songino Array 26.83 337 P P 11 10 42.3 +1.1
SONM Songino Array 26.83 337 eP P 11 10 42.6 +1.3
SONM pmax pmax
comp=Z,10.0nm,0.8s
SHL Shillong 27.00 280 P P 11 10 44.7 +1.6
SHL IAmb IAmb 11 10 51.4
comp=Z,33nm,1.0s
SHL Shillong 27.00 280 P P 11 10 44.7 +1.6
SHL pmax pmax
comp=Z,33nm,1.0s
YSS Yuzhno-Sakhali 28.65 31 P P 11 10 56.1 -1.3
YSS IAmb IAmb 11 11 00.2
comp=Z,28nm,1.0s
YSS Yuzhno-Sakhali 28.65 31 i P P 11 10 57.1 -0.2
YSS pmax pmax
comp=Z,28nm,1.0s
ZEA Zeya 30.17 7 eP P 11 11 13.9 +3.1
ZEA pmax pmax
comp=E,10.0nm,1.4s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
PSI Prapat 30.27 230 P P 11 11 14.7 +2.5
TLY Talaya 31.03 338 i P P 11 11 18.6 +0.1
TLY pmax pmax
comp=Z,11nm,1.3s
GENI Genyem 31.90 143 P P 11 11 27.4 +1.0
KNGR Kungurtug, Tuv 32.60 331 i P P 11 11 32.3 0.0
WMQ Urumqi 34.15 314 eP P 11 11 48.8 +2.9
WMQ SS SS 11 19 19.3 -20
WMQ LR LR
comp=Z,700nm,14.9s
DGZ Jazzator, Alta 37.09 323 i P P 11 12 11.0 -0.2
DGZ pmax pmax
comp=Z,12nm,1.0s
YAK Yakutsk 38.58 6 P P 11 12 22.1 -1.3
YAK Yakutsk 38.58 6 eP P 11 12 23.7 +0.3
YAK e 11 14 33.4
YAK eS S 11 18 20.5 +1.4
YAK e 11 22 32.7
YAK pmax pmax
comp=Z,21nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK smax smax
comp=N,145nm,4.0s
MK31 Makanchi Array 38.84 316 i P P 11 12 25.8 0.0
MKAR Makanchi Array 38.84 316 P P 11 12 26.2 +0.3
comp=N,15nm,0.7s,baz=106,slow=9.8,SNR=15
MKAR PcP PcP 11 14 35.4 -1.5
comp=N,4.3nm,1.0s,baz=93,slow=4.9,SNR=3.5
comp=N,15nm,0.7s
MKAR Makanchi Array 38.84 316 P P 11 12 25.8 -0.1
MAKZ Makanchi 39.04 316 P P 11 12 27.9 +0.4
MAKZ Makanchi 39.04 316 P P 11 12 27.9 +0.4
MAKZ pmax pmax
comp=Z,17nm,0.7s
SHLS Shalkode 39.56 310 eP P 11 12 31.3 -0.7
SHLS Shalkode 39.56 310 eP P 11 12 31.3 -0.7
UZB Uzynbulak 39.87 309 eP P 11 12 36.5 +1.9
UZB pmax pmax
comp=Z,14nm,1.3s
UZB Uzynbulak 39.87 309 eP P 11 12 36.5 +1.9
comp=Z,14nm,1.3s
PETK Petropavlovsk- 39.97 34 P P 11 12 33.1 -2.0
comp=Z,3.6nm,0.9s,baz=229,slow=7.8,SNR=1.5
comp=Z,3.6nm,0.9s
SATY Saty 40.28 309 eP P 11 12 39.8 +1.8
SATY pmax pmax
comp=Z,2.0nm,0.1s
SATY Saty 40.28 309 eP P 11 12 39.9 +1.8
comp=Z,1.6nm,0.1s

TARG Taragay, Kyrgy 40.41 307 P P 11 12 39.8 +0.3
TARG Taragay, Kyrgy 40.41 307 P P 11 12 39.8 +0.3
TARG pmax pmax
comp=Z,19nm,1.4s
PET Petropavlovsk 40.41 34 i P P 11 12 36.2 -2.6
PET pmax pmax
comp=Z,52nm,1.1s
HYB Hyderabad 40.64 269 eP P 11 12 40.6 -0.6
HYB eS S 11 18 51.5 +0.3
ZAA0 Zalesovo Array 40.73 327 P P 11 12 40.1 -1.4
ZALV Zalesovo Beam 40.73 327 P P 11 12 40.5 -1.0
comp=Z,10nm,0.7s,baz=109,slow=7.5,SNR=14
comp=Z,10nm,0.7s
ZALV Zalesovo Beam 40.73 327 P 11 12 40.3 -1.1
ZALV Zalesovo Beam 40.73 327 i P P 11 12 40.7 -0.7
ZALV pmax pmax
comp=Z,10.0nm,0.7s
TDK Taldyqorghan 40.80 312 eP P 11 12 44.2 +2.0
TDK pmax pmax
comp=Z,10.0nm,0.8s
TDK Taldyqorghan 40.80 312 eP P 11 12 44.2 +2.0
comp=Z,10nm,0.8s
MA2 Magadan 41.18 22 i P P 11 12 45.3 +0.2
MA2 pmax pmax
comp=Z,5.0nm,1.0s
MDOK Medeo 41.27 309 eP P 11 12 47.9 +1.7
MDOK Medeo 41.27 309 eP P 11 12 47.9 +1.7
TNSS Tian-Shan 41.31 309 eP P 11 12 48.5 +1.6
TNSS Tian-Shan 41.31 309 eP P 11 12 48.5 +1.6
AAA Alma-Ata 41.38 309 eP P 11 12 49.0 +2.0
AAA pmax pmax
comp=Z,21nm,0.8s
AAA Alma-Ata 41.38 309 eP P 11 12 49.0 +2.0
comp=Z,21nm,0.8s
PMG Port Moresby 41.43 140 P P 11 12 47.3 -0.3
comp=Z,23nm,1.0s,baz=11,slow=3.7,SNR=4.6
comp=Z,23nm,1.0s
PMG Port Moresby 41.43 140 P P 11 12 47.1 -0.6
PMG IAmb IAmb 11 12 53.8
comp=Z,29nm,0.9s
PMG Port Moresby 41.43 140 i P P 11 12 48.1 +0.5
PMG pmax pmax
comp=Z,36nm,1.0s
KSH2 Kashi 41.65 303 P P 11 12 52.8 +3.4
KSH2 pmax pmax
comp=Z,13nm,1.3s
NRN Naryn 41.68 306 IAmb IAmb 11 12 56.7
comp=Z,60nm,1.7s
FITZ Fitzroy Crossi 41.86 174 P P 11 12 48.5 -2.5
comp=Z,3.3nm,0.8s,baz=15,slow=13,SNR=2.3
comp=Z,3.3nm,0.8s
KUU Kurty 41.94 310 eP P 11 12 53.6 +2.0
KUU Kurty 41.94 310 eP P 11 12 53.6 +2.0
H11N1 WAKE ISLAND Hy 42.16 87 T T 11 57 50.0
baz=283,slow=75,SNR=15
H11N2 WAKE ISLAND Hy 42.16 86 T T 11 57 51.4
baz=283,slow=75,SNR=15
H11N3 WAKE ISLAND Hy 42.17 86 T T 11 57 52.3
baz=283,slow=75,SNR=12
H11S3 WAKE ISLAND Hy 42.28 88 T T 11 57 59.9
baz=284,slow=75,SNR=41
H11S1 WAKE ISLAND Hy 42.29 88 T T 11 58 00.5
baz=284,slow=75,SNR=34
H11S2 WAKE ISLAND Hy 42.30 88 T T 11 58 06.0
baz=284,slow=75,SNR=31
KURK Kurchatov 42.59 320 P P 11 12 56.0 -0.7
KURK Kurchatov 42.59 320 i P P 11 12 57.6 +0.9
KURK pmax pmax
comp=Z,10.0nm,0.8s
KURBB Kurchatov Arra 42.60 320 P P 11 12 56.3 -0.5
comp=Z,3.5nm,0.7s,baz=113,slow=9.6,SNR=17
comp=Z,3.5nm,0.7s
COEN Coen 43.09 148 P P 11 13 01.8 +0.7
comp=Z,23nm,0.8s
COEN Coen 43.09 148 P P 11 13 00.7 -0.4
COEN Coen 43.09 148 P P 11 13 01.3 +0.2
SEY Seymchan 44.19 20 P P 11 13 08.3 -1.1
comp=Z,3.4nm,0.8s,baz=222,slow=7.5,SNR=5.4
SEY PcP PcP 11 14 53.5 -0.5
comp=Z,1.5nm,0.7s,baz=304,slow=1.5,SNR=3.9
comp=Z,3.4nm,0.8s
SEY Seymchan 44.19 20 i P P 11 13 09.0 -0.5
SEY pmax pmax
comp=Z,7.0nm,1.0s
PSAC2 Pilbara Seismi 45.15 182 P P 11 13 15.4 -2.2
comp=Z,28nm,0.8s
PSA00 Pilbara Seismi 45.16 182 P P 11 13 15.2 -2.4
PSAB3 Pilbara Seismi 45.18 182 P P 11 13 15.7 -2.0
comp=Z,28nm,1.1s
WRAB Tennant Creek 45.25 163 P P 11 13 16.9 -1.5
WRAB Tennant Creek 45.25 163 P P 11 13 16.9 -1.5
WRAB pmax pmax
comp=Z,13nm,1.1s
WRA Warramunga Arr 45.25 163 P P 11 13 16.2 -2.2
comp=Z,7.0nm,0.8s,baz=344,slow=8.6,SNR=10
comp=Z,7.0nm,0.8s
WRA Warramunga Arr 45.25 163 P 11 13 16.9 -1.5
DZA Taraz 45.34 307 eP P 11 13 20.7 +1.7
DZA Taraz 45.34 307 eP P 11 13 20.7 +1.7
KK31 Karatay Array 45.96 308 P P 11 13 24.6 +0.7
KK31 Karatay Array 45.96 308 P P 11 13 24.6 +0.7
KK31 pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 45.96 308 P P 11 13 24.0 +0.1
KKAR Karatay Array 45.96 308 P P 11 13 24.0 +0.1
IUG luzhnay 46.20 306 eP P 11 13 27.7 +1.9
IUG pmax pmax
comp=Z,14nm,1.2s
IUG luzhnay 46.20 306 eP P 11 13 27.8 +1.9
comp=Z,14nm,1.2s
BRLS Boroldaу 46.44 307 eP P 11 13 30.3 +2.6
BRLS Boroldaу 46.44 307 eP P 11 13 30.3 +2.6
CHM Chimkent 46.53 306 eP P 11 13 30.5 +2.1
CHM pmax pmax
comp=Z,9.0nm,0.8s
CHM Chimkent 46.53 306 eP P 11 13 30.5 +2.1
comp=Z,8.9nm,0.8s
CHGR Chuyangaron 46.58 301 i P P 11 13 28.7 -0.2
CHGR pmax pmax
comp=Z,18nm,1.0s
KBL Kabul 46.63 296 P P 11 13 28.6 -0.9
KBL Kabul 46.63 296 P P 11 13 28.6 -0.9
KBL pmax pmax
comp=Z,46nm,1.4s
MTSU Mount Surprise 47.25 150 P P 11 13 35.2 +1.1
comp=Z,9.8nm,0.9s
QIS Mount Isa 47.49 157 P P 11 13 36.0 0.0
comp=Z,20nm,1.0s
QIS Mount Isa 47.49 157 P P 11 13 36.2 +0.2
TIXI Tiksi 48.03 3 P 11 13 39.0 -0.6
TIXI IAmb IAmb 11 13 40.5
comp=Z,23nm,1.0s
TIXI Tiksi 48.03 3 i P P 11 13 38.5 -1.0
TIXI pmax pmax
comp=Z,22nm,1.0s
BVAR Borovoye Array 48.17 321 P P 11 13 39.6 -1.3
comp=Z,9.1nm,0.9s,baz=100,slow=9.2,SNR=14
BVAR PcP PcP 11 15 06.9 -1.3
comp=Z,3.2nm,0.6s,baz=96,slow=3.3,SNR=4.2
comp=Z,9.1nm,0.9s
BORK Borovoye 48.22 321 P 11 13 40.2 -1.1
BORK IAmb IAmb 11 13 45.6
comp=Z,14nm,0.9s
BORK Borovoye 48.22 321 i P P 11 13 41.4 +0.1
BORK pmax pmax
comp=Z,14nm,0.9s
ASAR Alice Springs 48.71 165 P P 11 13 44.0 -1.3
comp=Z,6.9nm,0.9s,baz=341,slow=6.8,SNR=13
comp=Z,6.9nm,0.9s
ASAR Alice Springs 48.71 165 P P 11 13 43.9 -1.5
NRIK Noril'sk 49.84 345 P P 11 13 53.0 -0.5
comp=Z,4.4nm,0.9s,baz=125,slow=7.4,SNR=5.5
comp=Z,4.4nm,0.9s
NRIK Noril'sk 49.84 345 i P P 11 13 53.8 +0.4
NRIK pmax pmax
comp=Z,7.0nm,1.1s
CTA Charters Tower 49.84 149 P P 11 13 54.0 -0.1
comp=Z,3.8nm,0.7s,baz=333,slow=8.5,SNR=6.9
comp=Z,3.8nm,0.7s
BILL Bilibino 51.90 20 P P 11 14 08.5 -0.5
BILL Bilibino 51.90 20 i P P 11 14 10.0 +1.0
BILL pmax pmax
comp=Z,11nm,1.0s
ABKAR Akbulak array 53.94 315 P 11 14 23.8 -0.6
ARTI Arti 55.69 323 P 11 14 36.1 -0.9
ARTI Arti 55.69 323c i P P 11 14 37.2 +0.2

ARTI 11 15 32.4
ARTI S **S** **11 22 24.9 +1.9**
ARTI SS **SS** **11 26 08.4 +0.4**
ARTI pmax pmax
comp=Z,12nm,0.9s
RMQ Roma 56.51 151 P **P** **11 14 43.7 +0.6**
BBOO Buckleboo 57.99 166 P **P** **11 14 50.2 -3.3**
comp=Z,22nm,0.9s
BBOO Buckleboo 57.99 166 P **P** **11 14 52.8 -0.7**
BBOO IAmb IAmb 11 14 57.9
comp=Z,21nm,1.0s
BBOO Buckleboo 57.99 166 P **P** **11 14 53.0 -0.5**
SPIA Saint Paul Isl 58.52 36 P **P** **11 14 56.7 -0.2**
baz=266
STKA Stephens Creek 58.61 160 P **P** **11 14 57.1 -0.7**
comp=Z,73nm,2.3s
STKA Stephens Creek 58.61 160 P **P** **11 14 56.1 -1.7**
comp=Z,5.9nm,0.6s,baz=350,slow=7.6,SNR=11
comp=Z,5.9nm,0.6s
STKA Stephens Creek 58.61 160 P **P** **11 14 57.5 -0.3**
GAMB Gambell 58.62 29 P **P** **11 14 57.8 +0.3**
baz=260
CMSA Cobar Meteorol 59.70 156 P **P** **11 15 07.8 +2.4**
comp=Z,17nm,1.4s
TNA Tin City 60.50 27 P **P** **11 15 11.3 +0.8**
baz=263
UNV Unalaska Valle 60.53 40 P **P** **11 15 10.7 -0.2**
baz=271
KIRV Kirov 60.71 325 *i* P **P** **11 15 12.3 +0.3**
M11K Mekoryuk 60.83 33 P **P** **11 15 13.2 +0.4**
baz=267
F14K Arctic Creek 61.15 27 P **P** **11 15 14.9 0.0**
baz=264
ANM Nome 61.47 28 P **P** **11 15 17.3 +0.2**
baz=266,SNR=7.2
K13K Kusilvak Mount 61.64 31 P **P** **11 15 18.5 +0.2**
baz=268
BELG Belogornoye 61.79 318 *i* P **P** **11 15 19.7 +0.3**
BELG pmax pmax
comp=Z,2.0nm,0.9s
C16K Lisburne Hills 61.83 24 P **P** **11 15 19.8 +0.3**
baz=264
F15K North Star Dit 61.87 27 IAmb IAmb 11 15 21.8
comp=Z,12nm,0.9s
F15K North Star Dit 61.87 27 P **P** **11 15 20.0 +0.2**
baz=266,SNR=10.0
G15K Niukluk 62.07 28 P **P** **11 15 21.0 -0.1**
baz=267
J14K Nanvaranak Lak 62.19 30 IAmb IAmb 11 15 24.5
J14K Nanvaranak Lak 62.19 30 P **P** **11 15 21.8 -0.1**
baz=268
M13K Dall Lake 62.24 33 P **P** **11 15 22.8 +0.5**
baz=270
L14K Kuka Creek 62.57 32 IAmb IAmb 11 15 27.5
comp=Z,18nm,0.8s
L14K Kuka Creek 62.57 32 P **P** **11 15 24.6 +0.1**
baz=270,SNR=6.8
D17K Noatak River 62.63 25 P **P** **11 15 25.4 +0.6**
baz=266,SNR=12
C17K DeLong Mountai 62.65 24 P **P** **11 15 25.9 +0.9**
baz=266
RDOG Red Dog Mine 62.72 24 P **P** **11 15 25.1 -0.3**
baz=266
G16K Koyuk River 62.80 27 P **P** **11 15 26.2 +0.2**
baz=268
H16K Elim 62.83 28 P **P** **11 15 26.3 +0.1**
baz=268,SNR=14
AKT Akhty 62.83 306 *e*P **P** **11 15 27.3 +0.5**
AKT pmax pmax
comp=Z,30nm,1.1s
M14K Bethel 62.93 32 P **P** **11 15 27.3 +0.4**
baz=271
N14K Kuskokwak Cree 63.08 33 P **P** **11 15 28.0 +0.1**
baz=271
E17K Hotham Inlet 63.08 25 P **P** **11 15 28.1 +0.2**
baz=268
K15K Wolf Creek Mou 63.12 31 P **P** **11 15 28.3 +0.1**
baz=270
L15K Ungalak Mounta 63.14 31 P **P** **11 15 28.6 +0.3**
baz=271
ARPS Mount Arapiles 63.23 162 P **P** **11 15 28.3 -0.9**
comp=Z,10nm,1.1s
O14K Tigyukauivet M 63.31 34 P **P** **11 15 29.6 +0.1**
baz=272
C18K Utukok River 63.39 24 P **P** **11 15 29.9 -0.1**
baz=267,SNR=7.4
I17K Unalakleet 63.49 29 IAmb IAmb 11 15 33.6
comp=Z,30nm,1.3s
I17K Unalakleet 63.49 29 P **P** **11 15 30.9 +0.3**
baz=270
G17K Kiwalik Mounta 63.52 27 P **P** **11 15 31.0 +0.2**
baz=269
J16K Anvik River 63.54 30 P **P** **11 15 31.1 +0.2**
baz=271
M15K Kasigluk River 63.55 32 P **P** **11 15 30.7 -0.3**
baz=272
E18K Tukpahlearik C 63.57 25 IAmb IAmb 11 15 33.0
comp=Z,9.7nm,0.8s
E18K Tukpahlearik C 63.57 25 P **P** **11 15 31.3 +0.2**
baz=268,SNR=8.0
H17K Granite Mounta 63.83 28 IAmb IAmb 11 15 35.2
comp=Z,16nm,0.9s
H17K Granite Mounta 63.83 28 P **P** **11 15 33.2 +0.4**
baz=270
N15K Kwethluk River 63.87 33 P **P** **11 15 33.5 +0.3**
N15K IAmb IAmb 11 15 35.4
comp=Z,19nm,0.9s
N15K Kwethluk River 63.87 33 P **P** **11 15 32.7 -0.5**
baz=273
F18K Selawik 63.93 26 P **P** **11 15 32.9 -0.5**
baz=270,SNR=15
SDPT Sand Point 63.97 38 P **P** **11 15 33.3 -0.5**
baz=275
C19K Lookout Ridge 63.99 23 IAmb IAmb 11 15 35.9
comp=Z,24nm,1.3s
C19K Lookout Ridge 63.99 23 P **P** **11 15 34.0 +0.1**
baz=269
O15K Ungalikthiuk R 64.06 34 IAmb IAmb 11 15 36.6
comp=Z,15nm,0.8s
O15K Ungalikthiuk R 64.06 34 P **P** **11 15 34.3 -0.2**
baz=273
L16K Owhat River 64.10 31 P **P** **11 15 34.7 0.0**
baz=272
G18K Tagagawik 64.34 27 IAmb IAmb 11 15 37.4
comp=Z,9.1nm,0.8s
G18K Tagagawik 64.34 27 P **P** **11 15 35.9 -0.3**
baz=271,SNR=7.8
M16K Timber Creek 64.38 32 IAmb IAmb 11 15 38.7
comp=Z,21nm,0.9s
M16K Timber Creek 64.38 32 P **P** **11 15 36.6 +0.1**
baz=273
H18K Honhosa River 64.48 27 IAmb IAmb 11 15 39.1
comp=Z,13nm,1.1s
H18K Honhosa River 64.48 27 P **P** **11 15 36.9 -0.2**
baz=272
N16K Nishlik Lake 64.51 33 P **P** **11 15 37.5 0.0**
baz=274
D19K Kuna River 64.52 24 P **P** **11 15 37.2 -0.2**
baz=270
CHNA Chernabura Isl 64.52 39 P **P** **11 15 37.3 -0.2**
baz=276
K17K Iditarod 64.61 30 IAmb IAmb 11 15 40.5
comp=Z,21nm,0.9s
K17K Iditarod 64.61 30 P **P** **11 15 38.1 +0.1**
baz=273
L17K Donlin 64.64 31 P **P** **11 15 38.0 -0.2**
baz=273
E19K Redstone River 64.87 25 P **P** **11 15 39.8 +0.2**
baz=272,SNR=16
O16K Kokwok River B 64.91 34 IAmb IAmb 11 15 42.0
comp=Z,14nm,0.9s
O16K Kokwok River B 64.91 34 P **P** **11 15 39.5 -0.5**
baz=274,SNR=5.7
G19K Purcell Mounta 64.97 26 IAmb IAmb 11 15 44.1
comp=Z,18nm,1.3s
G19K Purcell Mounta 64.97 26 P **P** **11 15 40.4 +0.1**
baz=272
P16K Nushagak River 65.01 34 P **P** **11 15 40.6 0.0**
baz=275
A21K Barrow 65.02 21 P **P** **11 15 40.7 +0.2**
baz=270,SNR=15
D20K Etivluk River 65.07 23 IAmb IAmb 11 15 42.7
comp=Z,19nm,0.8s
D20K Etivluk River 65.07 23 P **P** **11 15 41.1 +0.2**
baz=272
M17K Holitna River 65.09 32 P **P** **11 15 41.5 +0.3**
baz=274,SNR=6.6

GCSA Galena City Sc 65.13 28 P **P** **11 15 41.6 +0.3**
baz=273
E20K Nigu River 65.24 24 P **P** **11 15 42.3 +0.2**
baz=272
J18K Innoko River 65.28 29 P **P** **11 15 42.5 +0.1**
baz=274
N17K Nushagak Hills 65.29 33 IAmb IAmb 11 15 44.6
comp=Z,12nm,0.9s
N17K Nushagak Hills 65.29 33 P **P** **11 15 42.5 +0.1**
baz=275,SNR=5.9
R16K Pilot Point 65.37 36 P **P** **11 15 42.3 -0.6**
baz=276
L18K Granite Mounta 65.39 31 IAmb IAmb 11 15 45.7
comp=Z,12nm,0.9s
L18K Granite Mounta 65.39 31 P **P** **11 15 42.7 -0.3**
baz=274
O17K Koliganek Bris 65.40 33 P **P** **11 15 42.8 -0.4**
baz=275
F20K Avaraart Lake 65.47 25 P **P** **11 15 43.6 +0.1**
baz=273
VRH Novokhopyorsk 65.55 317 *e*P **P** **11 15 42.8 -1.5**
VRH pmax pmax
comp=Z,13nm,0.8s
KLMR Klimovskoe 65.65 328 *e*P **P** **11 15 45.0 +0.3**
KLMR pmax pmax
comp=Z,42nm,1.9s
C21K Knifeblade Rid 65.71 23 P **P** **11 15 45.1 +0.1**
baz=273
J19K Poorman 65.73 29 P **P** **11 15 45.2 0.0**
baz=275
Q16K King Salmon 65.73 35 P **P** **11 15 45.6 +0.3**
baz=276,SNR=6.0
P17K Kvichak River 65.79 34 P **P** **11 15 45.6 0.0**
baz=276,SNR=7.1
M18K Stony River 65.86 31 P **P** **11 15 46.1 0.0**
baz=276
N18K Kilae Creek 65.91 32 P **P** **11 15 46.5 0.0**
baz=276
H20K Anotleneega Mo 65.92 27 P **P** **11 15 46.3 -0.2**
baz=275
KBZ Khabaz 65.97 309 P **P** **11 15 47.5 +0.3**
comp=Z,2.6nm,0.8s,baz=126,slow=8.7,SNR=2.5
comp=Z,2.6nm,0.8s
KBZ Khabaz 65.97 309 *i* P **P** **11 15 47.2 +0.1**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
R17L Mt. Peulik Vol 66.01 36 P **P** **11 15 47.2 0.0**
baz=277
KIV Kislovodsk 66.08 309 *e*P **P** **11 15 47.2 -0.8**
KIV pmax pmax
comp=Z,16nm,1.1s
Q17K Contact Creek 66.18 35 P **P** **11 15 48.3 -0.1**
baz=277
L19K White Mountain 66.25 31 P **P** **11 15 48.5 -0.2**
baz=276
F21K Alatna River 66.33 25 P **P** **11 15 49.1 0.0**
baz=275
O18K Koktuh Hills 66.34 33 P **P** **11 15 48.9 -0.3**
baz=277,SNR=8.9
J20K Nowinta River 66.35 28 P **P** **11 15 49.0 -0.2**
baz=276
P18K Big Mountain, 66.38 34 IAmb IAmb 11 15 50.9
comp=Z,13nm,0.9s
P18K Big Mountain, 66.38 34 P **P** **11 15 48.7 -0.9**
baz=277,SNR=6.5
G21K Allakaket 66.39 26 P **P** **11 15 49.3 -0.2**
baz=275
K20K Telida 66.48 29 P **P** **11 15 49.7 -0.4**
baz=276
ACHA Angle Creek He 66.48 35 IAmb IAmb 11 15 53.7
comp=Z,17nm,0.9s
D22K Ayikyak River 66.48 23 P **P** **11 15 49.7 -0.4**
baz=275
M19K Big River Lodg 66.49 31 P **P** **11 15 50.2 -0.1**
baz=277
N19K Bonanza Creek 66.58 32 IAmb IAmb 11 15 53.2
comp=Z,14nm,0.8s
N19K Bonanza Creek 66.58 32 P **P** **11 15 50.9 0.0**
baz=277,SNR=7.8
O19K Port Alsworth 66.74 33 IAmb IAmb 11 15 54.9
comp=Z,16nm,0.8s
O19K Port Alsworth 66.74 33 P **P** **11 15 50.9 -0.8**
baz=277,SNR=7.0
H21K Melozitna Rive 66.76 27 P **P** **11 15 51.2 -0.7**
baz=276
E22K Anaktuvuk Pass 66.88 24 IAmb IAmb 11 15 55.7
comp=Z,17nm,0.8s
E22K Anaktuvuk Pass 66.88 24 P **P** **11 15 51.9 -0.7**
baz=276,SNR=19
VORR Voronezh 67.03 318 *e*P **P** **11 15 57.7 +3.9**
VORR pmax pmax
comp=Z,60nm,0.4s
LPSR Galich'ya Gora 67.05 319 *e*P **P** **11 15 54.7 +0.8**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
M20K Styx River 67.09 31 IAmb IAmb 11 15 59.5
comp=Z,20nm,1.1s
M20K Styx River 67.09 31 P **P** **11 15 53.8 -0.3**
baz=278
VORD Divnogorie 67.10 317 *e*P **P** **11 15 56.1 +1.9**
VORD pmax pmax
comp=Z,3.0nm,0.4s
VSR Storozhevoye 67.14 317 *e*P **P** **11 15 55.7 +1.2**
VSR pmax pmax
comp=Z,70nm,3.9s
I21K Tanana 67.16 27 P **P** **11 15 54.5 +0.1**
baz=277
CHUM Lake Minchumin 67.19 29 P **P** **11 15 54.8 +0.2**
baz=278
D23K Nanushuk River 67.19 23 P **P** **11 15 55.1 +0.5**
baz=277
Q19K Cape Douglas, 67.26 34 P **P** **11 15 54.7 -0.5**
baz=278
MOS Moscow 67.30 322 *e*P **P** **11 15 57.9 +2.5**
H22K Ishtalitna Cre 67.32 26 P **P** **11 15 55.4 0.0**
baz=278
SII Sitkinak Islan 67.33 37 P **P** **11 15 55.3 -0.4**
baz=279
ILSW Iliamna Southw 67.35 33 IAmb IAmb 11 16 17.2
comp=Z,13nm,0.6s
P19K Oil Pt 67.36 33 P **P** **11 15 55.3 -0.5**
baz=279
PPLA Purkeypile 67.38 30 P **P** **11 15 55.8 -0.2**
baz=278
COLD Coldfoot 67.60 25 P **P** **11 15 57.0 -0.2**
baz=278
SPU Mount Spurr 67.70 32 IAmb IAmb 11 16 00.0
comp=Z,20nm,1.0s
E23K Chandalar 67.70 24 P **P** **11 15 57.7 -0.2**
baz=278,SNR=14
MLY Manley 67.70 27 P **P** **11 15 57.6 -0.3**
baz=278
OHAK Old Harbor 67.71 36 P **P** **11 15 58.2 +0.2**
OHAK Old Harbor 67.71 36 P **P** **11 15 57.3 -0.7**
baz=280
G23K Bananza Creek 67.75 25 P **P** **11 15 57.6 -0.5**
baz=278
C24K Franklin Bluff 67.79 22 P **P** **11 15 58.2 -0.1**
baz=278,SNR=7.2
SKT Skwentna 67.82 31 IAmb IAmb 11 16 03.9
comp=Z,27nm,1.2s
SKT Skwentna 67.82 31 P **P** **11 15 58.7 0.0**
baz=279
D24K Happy Valley 67.83 23 P **P** **11 15 58.6 +0.1**
baz=278
Q20K Shuyak Island 67.95 34 P **P** **11 15 59.5 0.0**
baz=280
KDAK Kodiak Island 67.99 35 P **P** **11 15 59.5 -0.2**
baz=280
OBN Obninsk 68.00 322 *ce* P **P** **11 15 59.9 +0.1**
OBN *e* 11 18 28.9
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,532nm,20.0s
VSLR Vesyoloye 68.07 309 *i* P **P** **11 15 59.7 -0.8**
VSLR pmax pmax
comp=Z,13nm,0.8s
H23K Yukon River 68.08 26 P **P** **11 16 00.4 +0.2**
baz=279
E24K Your Creek 68.12 24 P **P** **11 16 00.6 +0.1**
baz=279
TRF Thorofare Moun 68.15 29 P **P** **11 16 01.1 +0.2**
baz=280
CAPN Captain Cook N 68.20 32 P **P** **11 16 00.8 -0.1**
baz=280
I23K Minto, Yukon-K 68.26 27 P **P** **11 16 01.5 +0.1**
baz=280

SUA Susitna One 68.28 31 P **P** **11 16 01.5 -0.1**
baz=280,SNR=19
CUT Chulitna 68.33 30 P **P** **11 16 01.6 -0.2**
baz=280
NEA2 Nenana 68.48 28 P **P** **11 16 02.6 -0.1**
baz=280,SNR=7.3
M22K Willow 68.52 31 P **P** **11 16 02.3 -0.7**
baz=280,SNR=13
BRSE Bradley Lake S 68.59 33 P **P** **11 16 03.4 -0.1**
baz=281,SNR=5.9
D25K Kavik River 68.66 22 P **P** **11 16 04.0 +0.1**
baz=281
MCK McKinley 68.69 29 P **P** **11 16 04.0 -0.1**
baz=281
SLKM Skilak Lake 68.70 32 IAmb IAmb 11 16 06.8
comp=Z,23nm,1.1s
G24K Hadweenzic Riv 68.75 25 IAmb IAmb 11 16 07.9
comp=Z,18nm,0.8s
G24K Hadweenzic Riv 68.75 25 P **P** **11 16 04.4 0.0**
baz=281
H24K Noodor Dome 68.75 26 P **P** **11 16 04.5 0.0**
baz=281
RAYN Ar Rayn 68.78 287 **P** **11 16 04.8 -0.5**
RAYN IAmb IAmb 11 16 11.7
comp=Z,11nm,1.1s
RAYN Ar Rayn 68.78 287 P **P** **11 16 04.9 -0.5**
RAYN pmax pmax
comp=Z,11nm,1.1s
RC01 Rabbit Creek A 68.82 31 IAmb IAmb 11 16 42.6
comp=Z,17nm,1.1s
RC01 Rabbit Creek A 68.82 31 P **P** **11 16 04.2 -0.8**
baz=281
MARD Mardin 68.94 303 P **P** **11 16 06.8 +0.5**
MARD IAmb IAmb 11 16 12.1
comp=Z,15nm,0.7s
O22K Cooper Landing 68.95 32 P **P** **11 16 05.3 -0.4**
baz=281
PMR Palmer 69.01 31 P **P** **11 16 05.8 -0.2**
baz=281,SNR=6.5
WAT1 Susitna Watana 69.04 29 P **P** **11 16 05.8 -0.4**
baz=281
GHO Glory Hole Cre 69.08 31 IAmb IAmb 11 16 07.9
comp=Z,16nm,0.9s
SEW Seward 69.15 32 P **P** **11 16 06.7 -0.3**
baz=282
E25K Arctic Village 69.19 24 P **P** **11 16 07.0 -0.1**
baz=282
F25K Christian Rive 69.27 24 P **P** **11 16 07.6 -0.1**
baz=282,SNR=14
SML Sawmill 69.34 30 IAmb IAmb 11 16 11.1
comp=Z,17nm,0.8s
SML Sawmill 69.34 30 P **P** **11 16 08.2 0.0**
baz=282,SNR=5.6
KNK Knik Glacier 69.36 31 P **P** **11 16 08.1 -0.2**
baz=282,SNR=8.9
ILAR Eielson Array 69.37 27 P **P** **11 16 07.6 -0.6**
comp=Z,4.6nm,0.9s,baz=299,slow=7.4,SNR=5.5
comp=Z,4.6nm,0.9s
HDA Harding Lake 69.42 28 P **P** **11 16 09.0 +0.4**
baz=282
WAT6 Susitna Watana 69.45 30 P **P** **11 16 08.7 -0.3**
baz=282
DHY Denali Highway 69.51 29 P **P** **11 16 09.1 -0.3**
baz=282
C27K Jago River 69.52 22 IAmb IAmb 11 16 13.1
comp=Z,16nm,1.0s
C27K Jago River 69.52 22 P **P** **11 16 09.0 -0.1**
baz=283
M23K Glacier View 69.63 30 P **P** **11 16 09.8 -0.1**
baz=282,SNR=7.8
BMAR Burnt Mountain 69.71 24 **P** **11 16 10.7 +0.3**
PRP Porcupine Dome 69.77 26 P **P** **11 16 10.9 0.0**
baz=283,SNR=8.1
SCM Sheep Creek Mo 69.80 30 P **P** **11 16 10.8 -0.3**
baz=283,SNR=8.5
F26K Sheenjek River 69.81 24 IAmb IAmb 11 16 15.2
comp=Z,20nm,0.9s
F26K Sheenjek River 69.81 24 P **P** **11 16 10.9 0.0**
baz=283
SPITS Spitsbergen Ar 69.90 348 P **P** **11 16 09.5 -1.8**
comp=Z,12nm,1.1s,baz=90,slow=5.4,SNR=2.0
comp=Z,12nm,1.1s
K24K Donnelly Dome 70.05 28 P **P** **11 16 12.9 +0.4**
baz=283
G26K Porcupine Rive 70.12 25 P **P** **11 16 12.9 +0.2**
baz=284
GLI Glacier Island 70.13 31 P **P** **11 16 12.9 -0.1**
baz=283
P23K Montague Islan 70.18 32 P **P** **11 16 13.3 0.0**
baz=283
M24K Tolsona, Glenn 70.27 30 P **P** **11 16 13.8 -0.2**
baz=284
PAX Paxson 70.38 29 P **P** **11 16 14.3 -0.3**
baz=284
RIDG Independent Ri 70.47 28 P **P** **11 16 14.6 -0.5**
baz=284
KLU Klutina 70.53 31 IAmb IAmb 11 16 17.8
comp=Z,19nm,1.0s
KLU Klutina 70.53 31 P **P** **11 16 15.7 +0.1**
baz=284,SNR=6.2
D27M Malcolm River 70.56 22 IAmb IAmb 11 16 19.3
comp=Z,39nm,1.4s
D27M Malcolm River 70.56 22 P **P** **11 16 15.5 -0.1**
baz=286
HARP HAARP 70.66 30 P **P** **11 16 16.1 -0.1**
baz=284
DIV Divide 70.69 31 IAmb IAmb 11 16 17.4
comp=Z,21nm,1.0s
I26K Coal Creek Min 70.78 26 IAmb IAmb 11 16 23.9
comp=Z,11nm,0.8s
I26K Coal Creek Min 70.78 26 P **P** **11 16 16.6 -0.3**
baz=285
J26L Joseph Creek 70.82 27 IAmb IAmb 11 16 17.8
comp=Z,19nm,1.0s
J26L Joseph Creek 70.82 27 P **P** **11 16 17.3 0.0**
baz=285,SNR=6.5
Q23K Middleton Isla 70.84 33 P **P** **11 16 17.0 -0.3**
baz=284
EYAK Cordova Ski Ar 70.85 32 P **P** **11 16 18.4 +1.0**
EYAK Cordova Ski Ar 70.85 32 P **P** **11 16 17.6 +0.3**
baz=284
N25K Chitina, Valde 71.12 30 P **P** **11 16 19.5 +0.4**
baz=285
MENT Mentasta 71.17 29 IAmb IAmb 11 16 23.7
comp=Z,20nm,0.9s
H27K Steamboat Moun 71.18 25 IAmb IAmb 11 16 23.7
comp=Z,39nm,1.6s
H27K Steamboat Moun 71.18 25 P **P** **11 16 19.3 -0.1**
baz=286
E28M Babbage River 71.23 23 IAmb IAmb 11 16 23.1
comp=Z,14nm,0.8s
E28M Babbage River 71.23 23 P **P** **11 16 20.6 +1.0**
baz=287
BMRM Bremner River 71.28 31 P **P** **11 16 20.6 +0.5**
baz=285,SNR=6.7
L26K Log Cabin Wild 71.31 29 P **P** **11 16 19.9 -0.2**
baz=286,SNR=5.2
I27K Kandik River 71.32 26 IAmb IAmb 11 16 24.1
comp=Z,18nm,1.0s
I27K Kandik River 71.32 26 P **P** **11 16 20.2 0.0**
baz=286,SNR=5.9
F28M Old Crow 71.41 24 IAmb IAmb 11 16 24.3
comp=Z,21nm,0.9s
F28M Old Crow 71.41 24 P **P** **11 16 21.1 +0.4**
baz=287,SNR=13
GLB Gilahina Butte 71.53 30 IAmb IAmb 11 16 26.5
comp=Z,15nm,0.9s
M26K Nabesna, AK 71.63 29 P **P** **11 16 22.5 +0.3**
baz=286
KAIM Kayak Island 71.65 32 P **P** **11 16 21.8 -0.5**
baz=286
VRDI Verde Repeater 71.75 30 **P** **11 16 23.0 -0.1**
VRDI IAmb IAmb 11 16 23.8
comp=Z,18nm,1.1s
E29M Blow River 71.87 23 P **P** **11 16 23.2 -0.2**
baz=289
MCARA McCarthy VSAT 71.91 30 IAmb IAmb 11 16 26.4
comp=Z,27nm,1.0s
MCARA McCarthy VSAT 71.91 30 P **P** **11 16 23.3 -0.5**
baz=286,SNR=7.0
FINES FINESS Array B 71.93 330 P **P** **11 16 22.9 -0.9**
comp=Z,3.7nm,0.9s,baz=56,slow=4.4,SNR=6.2
comp=Z,3.7nm,0.9s
FINES FINESS Array B 71.93 330 P **P** **11 16 23.7 -0.2**
FINES FINESS Array B 71.93 330 *e*P **P** **11 16 24.8 +0.9**
FINES pmax pmax
comp=Z,4.0nm,0.9s
L27K Beaver Creek, 71.96 28 IAmb IAmb 11 16 26.6

comp=Z,18nm,0.9s
L27K Beaver Creek, 71.96 28 P **P** 11 16 23.6 -0.5
baz=287,SNR=14
BCAR Beaver Creek A 71.98 28 P **P** 11 16 23.4 -0.8
I28M Miner Creek 72.03 26 IAmb IAmb 11 16 28.4
comp=Z,40nm,1.6s
I28M Miner Creek 72.03 26 P **P** 11 16 24.9 +0.3
baz=288
CRQE Cirque 72.06 31 P **P** 11 16 24.9 +0.1
baz=287,SNR=6.7
M27K Edge Creek, AK 72.14 29 IAmb IAmb 11 16 27.6
comp=Z,16nm,1.0s
M27K Edge Creek, AK 72.14 29 P **P** 11 16 25.4 +0.1
baz=287
BGLC Bering Glacier 72.15 32 P **P** 11 16 25.5 +0.4
baz=287
TGL Tana Glacier 72.18 31 IAmb IAmb 11 16 27.1
comp=Z,26nm,1.0s
WAX Waxell Ridge 72.26 31 IAmb IAmb 11 17 26.7
comp=Z,22nm,0.8s
G29M Pine Creek 72.31 24 P **P** 11 16 26.6 +0.5
baz=289
BVCY Beaver Creek 72.58 29 P **P** 11 16 27.9 +0.1
baz=288,SNR=7.0
DAWY Dawson 72.69 27 P **P** 11 16 28.2 -0.3
baz=289,SNR=11
I29M Ogilvie Camp, 72.71 26 P **P** 11 16 28.2 -0.3
baz=289
MESA MESA 72.77 31 P **P** 11 16 29.0 -0.2
baz=288
CTG Chitna Glacier 72.81 30 P **P** 11 16 29.3 -0.1
baz=288,SNR=12
F30M Barrier River 72.89 23 P **P** 11 16 29.8 +0.3
baz=291
G30M tAoh Zraii Nji 72.95 24 P **P** 11 16 29.9 -0.1
baz=291
YUK3 Moose Creek 72.96 30 P **P** 11 16 30.2 -0.2
baz=288,SNR=6.3
MNK Minsk 73.02 323 *i* P **P** 11 16 33.5 +2.9
comp=E,17nm,0.9s
MNK *i* P **P** 11 16 33.5 +2.9
comp=N,20nm,0.8s
MNK *i* P **P** 11 16 33.5 +2.9
comp=Z,10.0nm,0.7s,baz=73
MNK *i* PcP **PcP** 11 16 50.0 +2.6
MNK *i* PP **PP** 11 19 15.9 +3.2
MNK *i* PPP PPP 11 21 00.5
MNK *i* S **SKiKP** 11 26 01.6 -1.6
MNK *i* ScS **ScS** 11 26 41.5 +3.2
MNK *i* SS **SS** 11 30 43.4 +5.9
MNK *i* SSS SSS 11 34 04.2
MNK *i* LQ LQ 11 44 19.1
MNK *i* LR LR 11 48 35.5
MNK *i* LRM MLR 11 50 02.9
comp=E,323nm,18.1s
MNK *i* LRM MLR 11 50 06.1
comp=Z,491nm,17.2s
MNK *i* LRM MLR 11 50 10.5
comp=N,539nm,15.6s
MNK Minsk 73.02 323 *i* P **P** 11 16 33.4 +2.9
MNK *i* 11 16 49.9
MNK *i* 11 19 15.8
MNK *i* PPP PPP 11 21 00.4
MNK *i* S **SKiKP** 11 26 01.5 -1.6
MNK *i* 11 26 41.4
MNK *i* SS **SS** 11 30 43.4 +5.9
MNK pmax pmax
comp=E,17nm,0.9s
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=Z,10.0nm,0.7s
MNK MLR MLR
comp=E,323nm,18.0s
MNK MLR MLR
comp=Z,491nm,17.0s
MNK MLR MLR
comp=N,539nm,16.0s
J29N Klondike Camp 73.05 26 IAmb IAmb 11 16 32.4
comp=Z,20nm,0.8s
J29N Klondike Camp 73.05 26 P **P** 11 16 30.8 +0.2
baz=290
AKASG Malin Array Be 73.37 318 P **P** 11 16 32.6 -0.1
comp=Z,0.5nm,0.4s,baz=61,slow=6.0,SNR=4.1
comp=Z,0.5nm,0.4s
O28M Mount Upton 73.41 30 IAmb IAmb 11 16 36.0
comp=Z,15nm,1.0s
O28M Mount Upton 73.41 30 P **P** 11 16 33.4 +0.3
baz=289,SNR=5.5
INK Inuvik 73.42 22 P **P** 11 16 32.7 +0.1
comp=Z,24nm,1.0s,baz=294,slow=7.3,SNR=19
comp=Z,24nm,1.0s
INK Inuvik 73.42 22 P **P** 11 16 33.3 +0.7
baz=293,SNR=15
YUK8 Steele Glacier 73.43 30 P **P** 11 16 33.2 0.0
baz=289
I30M Mount Dempster 73.52 25 IAmb IAmb 11 16 36.6
comp=Z,33nm,1.4s
I30M Mount Dempster 73.52 25 P **P** 11 16 33.9 +0.4
baz=291
L29M L29M 73.54 28 IAmb IAmb 11 16 35.7
comp=Z,19nm,0.8s
L29M L29M 73.54 28 P **P** 11 16 33.7 +0.2
baz=290
K29M Barlow Dome 73.54 27 P **P** 11 16 33.7 +0.1
baz=290
PINM Pinnacle 73.60 31 P **P** 11 16 33.8 -0.1
baz=289,SNR=5.8
M29M Somme Creek 73.63 29 IAmb IAmb 11 16 36.7
comp=Z,19nm,1.1s
M29M Somme Creek 73.63 29 P **P** 11 16 34.4 +0.3
baz=290
BR131 Keskin Array S 73.66 307 **P** 11 16 33.8 -1.0
BR131 IAmb IAmb 11 16 42.1
comp=Z,37nm,1.9s
BR131 Keskin Array S 73.66 307 *i* P **P** 11 16 34.6 -0.2
BRTR Keskin Array B 73.66 307 P **P** 11 16 34.5 -0.4
comp=Z,2.5nm,0.7s,baz=107,slow=5.2,SNR=6.8
comp=Z,2.5nm,0.7s
BRTR Keskin Array B 73.66 307 **P** 11 16 34.7 -0.1
F31M Tsiigehtchic 73.68 23 P **P** 11 16 33.6 -0.6
baz=293,SNR=8.3
J30M Hart River 73.77 26 IAmb IAmb 11 16 57.4
comp=Z,38nm,2.0s
J30M Hart River 73.77 26 P **P** 11 16 34.8 -0.1
baz=291
YUK4 Talbot Arm 73.92 30 P **P** 11 16 35.9 -0.1
baz=290
H31M Peel River 74.09 25 IAmb IAmb 11 16 39.2
comp=Z,29nm,1.1s
H31M Peel River 74.09 25 P **P** 11 16 37.0 +0.3
baz=292
YUK6 Outpost Mounta 74.19 30 P **P** 11 16 36.6 -1.0
baz=290
M30M Minto, Yukon 74.30 28 IAmb IAmb 11 16 40.4
comp=Z,18nm,1.1s
M30M Minto, Yukon 74.30 28 P **P** 11 16 38.0 0.0
baz=291,SNR=11
MAYO Mayo, Yukon 74.31 27 P **P** 11 16 38.2 +0.2
baz=292
O29M Mount Kennedy 74.32 31 P **P** 11 16 37.7 -0.6
baz=290
A36M Sachs Harbour 74.36 17 P **P** 11 16 37.4 -0.6
A36M Sachs Harbour 74.36 17 P **P** 11 16 37.9 -0.2
baz=289,SNR=5.4
HYT Haines Junctio 74.62 30 IAmb IAmb 11 16 43.0
comp=Z,19nm,1.2s
HYT Haines Junctio 74.62 30 P **P** 11 16 39.3 -0.7
baz=291,SNR=7.2
P30M Million Dollar 75.14 31 P **P** 11 16 42.5 -0.4
baz=292
N31M Braeburn, Yuko 75.16 29 IAmb IAmb 11 16 44.9
comp=Z,14nm,0.9s
N31M Braeburn, Yuko 75.16 29 P **P** 11 16 42.6 -0.3
baz=292
O30N Mendenhall 75.29 30 P **P** 11 16 43.4 -0.3
baz=292,SNR=7.1
M31M Drury Creek, Y 75.48 28 P **P** 11 16 44.7 -0.1
baz=293
WHY Whitehorse 75.88 30 IAmb IAmb 11 16 49.0
comp=Z,25nm,1.0s
WHY Whitehorse 75.88 30 P **P** 11 16 46.8 -0.4
baz=293
C36M Paulatuk 76.02 19 IAmb IAmb 11 16 50.5
comp=Z,27nm,1.1s
C36M Paulatuk 76.02 19 P **P** 11 16 47.6 -0.1
baz=301,SNR=10

SKAG Skagway 76.15 31 P **P** 11 16 48.1 -0.5
baz=293
S31K Pelican 76.31 32 P **P** 11 16 49.1 -0.4
baz=293
N32M Quiet Lake 76.48 29 P **P** 11 16 49.4 -1.1
baz=295
P32M Atlin 76.85 30 IAmb IAmb 11 17 10.4
comp=Z,56nm,1.9s
P32M Atlin 76.85 30 P **P** 11 16 51.9 -0.7
baz=295
P33M Teslin, Yukon 77.00 30 IAmb IAmb 11 16 57.3
comp=Z,18nm,1.1s
P33M Teslin, Yukon 77.00 30 P **P** 11 16 53.0 -0.5
baz=295
R32K Eaglecrest 77.02 32 P **P** 11 16 52.5 -1.0
baz=294
SIT Sitka 77.12 33 P **P** 11 16 53.4 -0.6
baz=294
S32K Killisnoo 77.32 33 P **P** 11 16 54.9 -0.3
baz=294
Q32M Nakina River 77.79 31 P **P** 11 16 56.5 -1.6
baz=296
HFS Hagfors 78.05 331 P **P** 11 16 59.5 +0.3
comp=Z,3.4nm,0.7s,baz=56,slow=3.1,SNR=4.2
comp=Z,3.4nm,0.7s
R33M Jennings River 78.20 30 P **P** 11 16 59.8 -0.5
baz=297
U33K Whale Pass 78.62 33 P **P** 11 17 01.8 -0.6
baz=296
NB2 NORSAR Subarra 78.70 332 P **P** 11 17 01.8 -1.1
comp=Z,12nm,1.1s,baz=55,slow=6.2
NOA NORSAR Array B 78.70 332 P **P** 11 17 02.0 -0.9
comp=Z,1.8nm,0.9s,baz=58,slow=5.7,SNR=6.4
comp=Z,1.8nm,0.9s
S34M Telegraph Cree 78.79 31 P **P** 11 17 02.9 -0.6
baz=297
WTLY Watson Lake, Y 78.84 29 IAmb IAmb 11 17 11.0
comp=Z,12nm,0.8s
WTLY Watson Lake, Y 78.84 29 P **P** 11 17 03.2 -0.5
baz=298
WRAK Wrangell Islan 78.87 33 P **P** 11 17 03.6 -0.2
baz=296
CRAG Craig 78.90 34 P **P** 11 17 03.3 -0.7
baz=296
DLBC Dease Lake 79.07 31 P **P** 11 17 04.6 -0.4
baz=298
WRGLY Wrigley 79.45 25 P **P** 11 17 06.9 0.0
baz=302
T35M Bob Quinn 79.65 32 P **P** 11 17 08.0 -0.2
baz=298
V35K Ketchikan 79.73 34 P **P** 11 17 08.2 -0.3
baz=297
U35K Hyder 80.26 33 P **P** 11 17 11.2 -0.2
baz=298
KOTAN Kotaneelee Air 80.88 28 P **P** 11 17 14.0 -0.7
baz=302
TOAD Toad River Com 81.05 29 P **P** 11 17 14.8 -0.9
baz=302
YKAW3 Yellowknife Wh 83.11 23 IAmb IAmb 11 17 28.5
comp=Z,23nm,1.0s
YKA Yellowknife Ar 83.16 23 P **P** 11 17 26.3 -0.4
comp=Z,14nm,1.0s,baz=316,slow=5.7,SNR=29
comp=Z,14nm,1.0s
YKA Yellowknife Ar 83.16 23 *e*P **P** 11 17 26.2 -0.4
YKA pmax pmax
comp=Z,10.0nm,0.8s
YKAW1 Yellowknife Wh 83.21 23 IAmb IAmb 11 17 29.0
comp=Z,15nm,0.8s
GERES GERESS Array B 83.34 321 P **P** 11 17 27.6 -0.3
comp=Z,2.2nm,0.9s,baz=67,slow=4.5,SNR=6.4
comp=Z,2.2nm,0.9s
GERES GERESS Array B 83.34 321 *e*P **P** 11 17 30.5 +2.5
GERES pmax pmax
comp=Z,2.0nm,0.9s
ILON Igloolik, Nuna 85.54 8 IAmb IAmb 11 17 40.1
comp=Z,13nm,1.0s
LLLB Lillooet 87.20 35 IAmb IAmb 11 17 49.6
comp=Z,11nm,0.8s
GNW Green Mountain 88.42 38 IAmb IAmb 11 17 57.0
comp=Z,15nm,0.9s
EDM Edmonton 89.74 29 IAmb IAmb 11 18 02.0
comp=Z,9.5nm,0.9s
LTY Liberty 89.80 37 IAmb IAmb 11 18 02.3
comp=Z,8.5nm,0.9s
B08A Colville Reser 89.87 36 IAmb IAmb 11 18 02.8
comp=Z,16nm,0.9s
C09A Chrisman Ranch 90.77 36 IAmb IAmb 11 18 07.2
comp=Z,12nm,1.0s
D08A Wollman Farm, 90.88 37 IAmb IAmb 11 18 07.7
comp=Z,13nm,1.0s
HAWA Hanford 90.94 37 IAmb IAmb 11 18 08.2
comp=Z,9.7nm,0.9s
NEW Newport 91.09 35 P **P** 11 18 06.2 +0.6
comp=Z,7.1nm,0.9s,baz=298,slow=4.2,SNR=9.0
comp=Z,7.1nm,0.9s
NEW Newport 91.09 35 IAmb IAmb 11 18 09.3
comp=Z,11nm,1.1s
PINE Pine Mountain 91.67 40 IAmb IAmb 11 18 12.2
comp=Z,12nm,0.8s
L04D Klamath Falls 91.75 42 **P** 11 18 10.0 +1.1
YBH Yreka Blue Hor 91.78 42 P **P** 11 18 10.3 +1.4
comp=Z,0.3nm,1.0s,baz=300,slow=2.5,SNR=4.9
J05D Fort Rock, OR 91.79 41 IAmb IAmb 11 18 12.5
comp=Z,9.1nm,0.7s
FCC Fort Churchill 92.58 18 IAmb IAmb 11 18 14.0
comp=Z,5.4nm,0.8s
FFC Flin Flon 93.31 24 **P** 11 18 15.5 -0.1
FFC IAmb IAmb 11 18 18.1
comp=Z,11nm,1.1s
FFC Flin Flon 93.31 24 P **P** 11 18 15.5 -0.1
FFC pmax pmax
comp=Z,11nm,1.1s
ORV Oroville 93.78 44 **P** 11 18 17.6 -0.5
ORV Oroville 93.78 44 P **P** 11 18 17.6 -0.5
ORV pmax pmax
comp=Z,4.0nm,1.0s
AFDM Forest Hills D 94.46 44 **P** 11 18 23.1 +1.8
PAHR Pah Rah Range 95.01 43 IAmb IAmb 11 18 27.1
comp=Z,7.7nm,1.1s
CMB Columbia Colle 95.37 44 **P** 11 18 26.6 +1.1
CMB Columbia Colle 95.37 44 P **P** 11 18 26.6 +1.1
CMB pmax pmax
comp=Z,6.0nm,1.1s
NVAR Mina Array Bea 96.45 43 P **P** 11 18 30.7 +0.1
comp=Z,1.7nm,0.8s,baz=282,slow=4.1,SNR=6.2
comp=Z,1.7nm,0.8s
TORD Torodi Ar. Bea 110.70 295 PP **PP** 11 24 09.0 -1.8
comp=Z,0.7nm,1.0s,baz=67,slow=5.9,SNR=2.5
SDV Santo Domingo 145.37 22 **PKPbc** 11 24 38.4 -1.3
LPAZ La Paz 168.20 52 PKP **PKPdf** 11 25 08.0 -1.0
comp=Z,4.5nm,1.1s,baz=346,slow=6.5,SNR=4.6
LPAZ PKPab **PKPab** 11 26 16.2 -1.0
comp=Z,0.9nm,0.5s,baz=0.0,slow=6.1,SNR=2.0
LPAZ La Paz 168.20 52 **PKPdf** 11 25 08.5 -0.6
CPUP Villa Florida 177.31 202 PKP **PKPdf** 11 25 11.1 -0.7
comp=Z,0.7nm,0.4s,baz=151,slow=6.7,SNR=2.1

*IDC **15** 11:35:02.9±1.9, 33°.87N×141°.69E, h0km, mb3.1/2, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=32.2km s-min=24.2km az=88.0*
*JMA **15** 11:35:07.5±0.8, 34°.N±2°×14°.1E±°, h38km, MV2.9/27, FAR SE OFF BOSO PEN*
ISC 15 11:35:06.3±1.5, 33°.91N±0°.06×141°.6E±0°.1, h24km, n16, σ1s23/19, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.89**	**327**	*e*P	**Pn**	**11 35 22.2**	**-0.7**
BSO3	**Boso 3**	**1.25**	**316**	*e*P	**Pn**	**11 35 27.5**	**-0.6**
BSO4	**Boso 4**	**1.48**	**317**	*e*P	**Pb**	**11 35 32.1**	**-1.0**
JMKN	**Mikurajimanish**	**1.64**	**270**	*e*P	**Pn**	**11 35 33.3**	**-0.3**
JMKN				*e*S	**Sn**	**11 35 53.4**	**-0.6**
JHJ2	**Mitsune**	**1.66**	**242**	*e*P	**Pb**	**11 35 35.0**	**-1.2**
JHJ2				*e*S	**Sn**	**11 35 55.3**	**+0.9**
JHJ	**Hachijo jima 2**	**1.68**	**243**	Pn	**Pn**	**11 35 35.0**	**+0.8**
	29nm,0.3s,baz=120,slow=23,SNR=36						
JHJ				Sn	**Sb**	**11 35 56.5**	**-0.7**
	47nm,0.3s,baz=255,slow=24,SNR=6.8						
JMYK	**Miyake Tsubota**	**1.68**	**276**	*e*P	**Pn**	**11 35 34.3**	**+0.1**
JKUC	**kamogawauchiur**	**1.68**	**318**	*e*P	**Pn**	**11 35 33.6**	**-0.6**
KTJ3	**Kamata3**	**2.30**	**297**	*e*P	**Pn**	**11 35 41.9**	**-0.8**
JIZS	**Izushimoda**	**2.36**	**291**	*e*P	**Pn**	**11 35 43.2**	**-0.4**
JOD2	**Odawara 2**	**2.45**	**304**	*e*P	**Pn**	**11 35 44.2**	**-0.6**
MJAR	**Matsushiro Arr**	**3.80**	**315**	Pn	**Pn**	**11 36 04.0**	**+0.5**
	0.7nm,0.3s,baz=134,slow=14,SNR=14						
MJAR				Sn	**Sn**	**11 36 51.1**	**+3.7**
	0.3nm,0.3s,baz=152,slow=11,SNR=1.5						
	3.1nm,0.3s						
JCJ	**Chichijima**	**6.81**	**175**	Pn	Pn	11 36 32.0	-13
	2.6nm,0.3s,baz=278,slow=23,SNR=6.0						
ASAJ	**Asahikawa**	**10.23**	**4**	Pn	**Pn**	**11 37 30.4**	**-1.2**
	0.2nm,0.3s,baz=177,slow=5.1,SNR=1.7						
	4.3nm,0.7s						
MKAR	**Makanchi Array**	**45.94**	**305**	P	**P**	**11 43 28.4**	**+1.2**
	0.1nm,0.4s,baz=77,slow=7.6,SNR=1.4						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**53.99**	**188**	P	**P**	**11 44 28.4**	**0.0**
	0.1nm,0.3s,baz=5.4,slow=7.5,SNR=8.0						
	0.1nm,0.3s						

*IDC **15** 11:40:45.8±1.6, 0°.95N×126°.39E, h0km, mb3.7/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=118.1km s-min=19.8km az=68.0*
*DJA **15** 11:40:52.4±0.2, 1°.N±3°×12°.7E±°, h10km, M3.6/14, mB6.2/1, MLv3.6/14, Mw(mB)5.8/1*
ISC 15 11:40:51.9±1.2, 1°.1N±0°.1×126°.68E±0°.09, h39km, n9, σ2s65/9, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.77**	**116**	P	**Pn**	**11 41 08.6**	**+2.4**
MNI	**Manado**	**1.86**	**280**	P	**Pn**	**11 41 22.4**	**+1.1**
GTOI	**Gorontalo**	**3.69**	**263**	P	**Pn**	**11 41 49.7**	**+3.2**
KRAI	**Karang Ratu**	**4.72**	**159**	P	**Pn**	**11 42 02.9**	**+2.3**
FITZ	**Fitzroy Crossi**	**19.11**	**183**	P	**P**	**11 45 08.2**	**-3.4**
	0.1nm,0.3s,baz=358,slow=9.6,SNR=1.2						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**22.23**	**161**	P	**P**	**11 45 42.7**	**-2.7**
	1.0nm,0.3s,baz=339,slow=11,SNR=30						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**25.61**	**165**	P	**P**	**11 46 17.4**	**-0.4**
	0.7nm,0.3s,baz=345,slow=10,SNR=12						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**59.67**	**326**	P	**P**	**11 50 51.5**	**-0.8**
	0.2nm,0.4s,baz=128,slow=8.1,SNR=6.7						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.91**	**328**	P	**P**	**11 51 20.7**	**0.0**
	0.4nm,0.4s,baz=125,slow=6.2,SNR=6.0						
	0.4nm,0.4s						

IDC 15 12:04:10.4±1.7, 2°.94S×129°.40E, h0km, mb3.0/2, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=41.7km s-min=24.2km az=99.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.78**	**42**	Pn	Pn	12 04 55.6	-0.6
	5.2nm,0.3s,baz=198,slow=23,SNR=7.0						
SIJI				Sn	Sn	12 05 31.8	+1.3
	9.7nm,0.3s,baz=158,slow=23,SNR=10						
	24nm,0.4s						
WRA	**Warramunga Arr**	**17.57**	**164**	P	Pn	12 08 16.1	-0.8
	0.1nm,0.3s,baz=345,slow=13,SNR=8.6						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**21.06**	**168**	P	P	12 08 56.7	+0.5
	0.5nm,0.8s,baz=351,slow=10,SNR=10.0						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**64.53**	**326**	P	P	12 14 49.4	+0.1
	0.1nm,0.3s,baz=122,slow=7.0,SNR=2.0						
	0.1nm,0.3s						

*RSPR **15** 12:16:50.7, 18°.03N×66°.82W, h11km, MD2.9/5*
*NEIC **15** 12:16:50.8±1.0, 18°.01N±0°.02×66°.836W±0°.003, h10km±1km, ML2.8/35, Md2.9/5(RSPR), Error ellipse: s-maj=2.8km s-min=2.5km az=180.0*
*SDD **15** 12:16:50.2±1.6, 17°.99N×66°.82W, h20km±12km, MD3.6, ML2.7, MW3.3, Presumed earthquake*
ISC 15 12:16:49.5±1.0, 17°.98N±0°.04×66°.82W±0°.02, h18km±2km, n39, σ0s46/61, 11C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.05**	**267**		**Pg**	**12 16 53.2**	**+0.3**
GBPR					**Sg**	**12 16 55.4**	**+0.4**
GBPR	**Guanica, Bosqu**	**0.05**	**267**	⇑*i*P	**Pg**	**12 16 53.2**	**+0.3**
GBPR				*e*S	**Sg**	**12 16 55.4**	**+0.4**
MLPR	**Magueyes Islan**	**0.21**	**268**		**Pb**	**12 16 54.9**	**+0.4**
MLPR				IAML		12 16 59.3	
	2μm,0.2s						
MLPR				IAML		12 16 59.4	
	2μm,0.3s						
OBIP	**Obispado Ponce**	**0.22**	**73**		**Pg**	**12 16 55.2**	**+0.4**
OBIP					**Sg**	**12 16 58.8**	**+0.5**
OBIP	**Obispado Ponce**	**0.22**	**73**	IAML		12 16 59.1	
	comp=N,318nm,0.5s						
OBIP	**Obispado Ponce**	**0.22**	**73**	⇑*i*P	**Pg**	**12 16 55.2**	**+0.4**
OBIP				*e*S	**Sg**	**12 16 58.8**	**+0.5**
CELP	**Cerrillos**	**0.25**	**67**		**Pb**	**12 16 55.8**	**+0.4**
CELP				IAML		12 17 00.2	
	comp=N,1μm,0.3s						
CELP				IAML		12 17 01.0	
	comp=N,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.27**	**276**		**Pg**	**12 16 55.9**	**+0.3**
CRPR					**Sg**	**12 16 59.9**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.27**	**276**	IAML		12 16 60.0	
	comp=N,2μm,0.4s						
CRPR				IAML		12 17 02.0	
	comp=N,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.27**	**276**	⇑*e*Pg	**Pg**	**12 16 55.9**	**+0.3**
CRPR				⇑*e*Sg	**Sg**	**12 16 59.7**	**-0.1**
CRPR				IAML		12 16 60.0	
	comp=N,1μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.27**	**276**	⇑*e*P	**Pg**	**12 16 55.9**	**+0.3**
CRPR				*e*S	**Sg**	**12 16 59.9**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.29**	**20**		**Pg**	**12 16 56.1**	**+0.2**
UUPR				IAML		12 17 03.9	
	comp=N,2μm,0.4s						
LSP	**Las Mesas**	**0.32**	**308**		**Pg**	**12 16 56.6**	**+0.2**
LSP					**Sg**	**12 17 01.6**	**+0.5**
LSP	**Las Mesas**	**0.32**	**308**	⇓*i*P	**Pg**	**12 16 56.6**	**+0.2**
LSP				*e*S	**Sg**	**12 17 01.6**	**+0.5**
PRSN	**Puerto Rico Se**	**0.39**	**308**		**Pg**	**12 16 57.8**	**+0.2**
PRSN					**Sg**	**12 17 03.2**	**+0.1**
PRSN	**Puerto Rico Se**	**0.39**	**308**	IAML		12 17 04.0	
	comp=N,5μm,0.2s						
PRSN				IAML		12 17 06.0	
	comp=N,6μm,0.3s						
PRSN	**Puerto Rico Se**	**0.39**	**308**	⇑*e*Pg	**Pg**	**12 16 57.6**	**0.0**
PRSN				⇑*e*Sg	**Sg**	**12 17 03.2**	**+0.1**
PRSN				IAML		12 17 05.9	
	comp=N,3μm,0.3s						
PRSN	**Puerto Rico Se**	**0.39**	**308**	⇓*i*P	**Pg**	**12 16 57.8**	**+0.2**
PRSN				*e*S	**Sg**	**12 17 03.2**	**+0.1**
ECPR	**Experimental S**	**0.55**	**52**		**Pg**	**12 17 00.5**	**-0.1**
ECPR				IAML		12 17 09.6	
	comp=N,624nm,0.2s						
ECPR				IAML		12 17 10.1	
	comp=N,622nm,0.2s						
ECPR	**Experimental S**	**0.55**	**52**	⇓*i*P	**Pg**	**12 17 00.5**	**-0.1**
ECPR				*e*S	**Sg**	**12 17 07.8**	**-0.3**
AGPR	**Aguadilla, PR**	**0.56**	**331**		**Pg**	**12 17 00.6**	**-0.2**
AGPR	**Aguadilla, PR**	**0.56**	**331**	⇑*e*Pg	**Pg**	**12 17 00.5**	**-0.2**
AGPR				⇑*e*Sg	**Sg**	**12 17 07.6**	**-0.7**
AGPR				IAML		12 17 11.1	
	comp=N,356nm,0.5s						
AGPR	**Aguadilla, PR**	**0.56**	**331**	⇑*i*P	**Pg**	**12 17 00.6**	**-0.1**
AGPR				*e*S	**Sb**	**12 17 08.6**	**+0.2**
EMPR	**Esperanza - Ma**	**0.57**	**29**		**Pb**	**12 17 01.5**	**+0.6**
EMPR					**Sb**	**12 17 09.6**	**+1.0**
EMPR	**Esperanza - Ma**	**0.57**	**29**	⇑*e*P	**Pb**	**12 17 01.5**	**+0.6**
EMPR				*e*S	**Sb**	**12 17 09.6**	**+1.0**
SJG	**San Juan**	**0.66**	**78**		**Pb**	**12 17 02.2**	**-0.2**
SJG				IAML		12 17 12.5	
	comp=N,371nm,0.3s						
SJG	**San Juan**	**0.66**	**78**	⇓*e*Pg	**Pb**	**12 17 02.2**	**-0.2**
SJG				⇑*e*Sg	**Sb**	**12 17 10.8**	**-0.3**
SJG	**San Juan**	**0.66**	**78**	⇑*i*P	**Pb**	**12 17 02.3**	**-0.1**
SJG				*e*S	**Sb**	**12 17 10.8**	**-0.3**
IDE	**Isla Desecheo**	**0.74**	**303**		**Pb**	**12 17 03.6**	**-0.2**
IDE					**Sb**	**12 17 14.0**	**+0.4**
IDE	**Isla Desecheo**	**0.74**	**303**	⇑*i*P	**Pb**	**12 17 03.6**	**-0.2**
IDE				*e*S	**Sb**	**12 17 14.0**	**+0.4**
PDPR	**Patillas Dam,**	**0.76**	**87**		**Pb**	**12 17 04.3**	**0.0**
GCPR	**Guaynabo City**	**0.78**	**65**		**Pb**	**12 17 04.4**	**-0.1**
GCPR					**Sb**	**12 17 14.2**	**-0.5**
GCPR	**Guaynabo City**	**0.78**	**65**	⇓*i*P	**Pb**	**12 17 04.4**	**-0.1**
GCPR				*e*S	**Sb**	**12 17 14.2**	**-0.5**

HUMP	**Col San Antoni**	**0.94**	**80**			**Pb**	**12 17 07.2**	**-0.1**
HUMP						**Sb**	**12 17 19.4**	**-0.1**
HUMP	**Col San Antoni**	**0.94**	**80**	IAML			12 17 21.0	
	comp=N,203nm,0.2s							
HUMP				IAML			12 17 24.0	
	comp=N,190nm,0.2s							
HUMP	**Col San Antoni**	**0.94**	**80**	*eP*		**Pb**	**12 17 07.2**	**-0.1**
HUMP				*eS*		**Sb**	**12 17 19.4**	**-0.1**
PCDR	**Punta Cana, DR**	**1.57**	**290**	*eP*	g	**Pn**	**12 17 16.1**	**-0.4**
PCDR				IAML			12 18 20.7	
	comp=N,180nm,1.5s							
MIDR	**Miches**	**2.34**	**296**	*eP*	g	**Pb**	**12 17 30.5**	**-0.6**
MIDR				IAML			12 18 40.1	
	comp=N,35nm,4.3s							
HATOM	**Hato Mayor del**	**2.56**	**289**	*eP*	g	**Pb**	**12 17 33.4**	**-1.5**
HATOM				*eS*	g	**Sb**	**12 18 07.5**	**+1.4**
HATOM				IAML			12 18 22.5	
	comp=N,29nm,2.4s							

IDC 15 12:16:57.5±3.2, 15°32S×172°21W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=401.0km s-min=33.5km az=156.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**50.98**	**257**	P	P	12 26 01.3	-0.1
	0.3nm,0.4s,baz=93,slow=8.4,SNR=11						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**51.23**	**252**	P	P	12 26 03.2	-0.1
	1.3nm,0.5s,baz=86,slow=8.0,SNR=51						
	1.3nm,0.5s						
TXAR	**Lajitas Array**	**79.62**	**56**	P	P	12 29 07.1	0.0
	0.1nm,0.6s,baz=234,slow=5.6,SNR=1.5						
	0.1nm,0.6s						

*IDC **15** 12:33:36.4±1.3, 13°.52N×86°.41W, h0km, mb3.5/3, mbtmp3.5/4, ML2.7/2, MS4.1/1, Error ellipse: s-maj=46.9km s-min=19.0km az=55.0*

*CATAC **15** 12:33:40.3±0.1, 12°.1N×87°.8W±0°.9, h27km, M4.3/55, MLv4.3/55, Error ellipse: s-maj=3.1km s-min=1.2km az=29.5, confirmed*

*SNET **15** 12:33:41.8±1.1, 12°.53N×87°.73W, h68km, ML3.9, Presumed earthquake*

*NEIC **15** 12:33:43.9±1.7, 12°.45N±0°.08×87°.45W±0°.08, h76km±8km, mb4.2/9, Error ellipse: s-maj=14.8km s-min=7.4km az=47.0*

ISC 15 12:33:41.0±1.0, 12°37N±0°.04×87°75W±0°.03, h55km±10km, n102, σ0°62/154, mb3.9/6, 2C-11D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.64**	**17**	P	**Pn**	**12 33 54.3**	**0.0**
CSGN				S	**Sn**	**12 34 03.9**	**-0.1**
CRIN	**San Cristobal**	**0.76**	**64**		**Pn**	**12 33 56.2**	**+0.4**
CRIN					**Sn**	**12 34 08.2**	**+1.6**
CRIN	**San Cristobal**	**0.76**	**64**	⇓P	**Pn**	**12 33 56.2**	**+0.4**
CRIN				S	**Sn**	**12 34 07.7**	**+1.0**
CNCH	**Conchagua**	**0.91**	**355**	⇓P	**Pn**	**12 33 57.7**	**-0.1**
CNCH	**Conchagua**	**0.91**	**355**	*i* P	**Pn**	**12 33 57.8**	**-0.1**
CNCH				*eS*	**Sn**	**12 34 10.6**	**+0.4**
HERN	**Volcan Telica**	**0.93**	**75**		**Pn**	**12 33 57.5**	**-0.5**
HERN	**Volcan Telica**	**0.93**	**75**	P	**Pn**	**12 33 57.5**	**-0.5**
HERN				S	**Sn**	**12 34 10.3**	**-0.3**
LCND	**La Caada**	**0.95**	**352**	⇓P	**Pn**	**12 33 58.2**	**-0.1**
LCND	**La Caada**	**0.95**	**352**	*i* P	**Pn**	**12 33 58.2**	**-0.1**
LCND				*eS*	**Sn**	**12 34 10.9**	**0.0**
POLN	**Al Sur del Vol**	**0.96**	**73**	⇓P	**Pn**	**12 33 57.9**	**-0.4**
POLN				S	**Sn**	**12 34 11.4**	**+0.3**
CNGN	**Cerro Negro**	**1.04**	**82**		**Pn**	**12 33 58.6**	**-0.8**
CNGN					**Sn**	**12 34 11.6**	**-1.4**
CNGN	**Cerro Negro**	**1.04**	**82**	⇓P	**Pn**	**12 33 59.0**	**-0.5**
CNGN				S	**Sn**	**12 34 12.8**	**-0.2**
ILCN	**San Idelfonso**	**1.05**	**78**	P	**Pn**	**12 33 58.4**	**-1.1**
ILCN				S	**Sn**	**12 34 12.9**	**-0.3**
MACN	**El Madrono**	**1.06**	**84**	⇓P	**Pn**	**12 33 59.2**	**-0.5**
MACN				S	**Sn**	**12 34 13.4**	**-0.1**
LEVN	**Ruinas Leon Vi**	**1.11**	**88**	P	**Pn**	**12 33 59.9**	**-0.5**
LEVN				S	**Sn**	**12 34 14.8**	**+0.1**
COPN	**Copaltepe**	**1.15**	**99**	⇓P	**Pn**	**12 34 00.4**	**-0.5**
BLLM	**Bellamira**	**1.17**	**336**	*i* P	**Pn**	**12 34 01.0**	**-0.3**
CNRM	**Centro Naciona**	**1.18**	**340**	P	**Pn**	**12 34 01.2**	**0.0**
CNRM				S	**Sn**	**12 34 16.3**	**0.0**
LCY	**Lacayo**	**1.18**	**333**	*i* P	**Pn**	**12 34 01.1**	**-0.3**
RANC	**El Ranchito**	**1.19**	**334**	⇑P	**Pn**	**12 34 01.2**	**-0.3**
RANC	**El Ranchito**	**1.19**	**334**	*eP*	**Pn**	**12 34 01.3**	**-0.3**
RANC				*eS*	**Sn**	**12 34 16.1**	**-0.6**
PACA	**Pacayal**	**1.23**	**333**	P	**Pn**	**12 34 02.0**	**-0.1**
PACA				S	**Sn**	**12 34 18.3**	**+0.5**
PACA	**Pacayal**	**1.23**	**333**	*eP*	**Pn**	**12 34 02.0**	**-0.1**
PACA				*eS*	**Sn**	**12 34 17.2**	**-0.6**
MOM2	**El Cardon**	**1.24**	**87**	⇓P	**Pn**	**12 34 02.0**	**-0.1**
MOM2				S	**Sn**	**12 34 18.3**	**+0.5**
AMTN	**Mateare**	**1.30**	**96**	P	**Pn**	**12 34 03.0**	**+0.1**
AMTN				S	**Sn**	**12 34 19.2**	**0.0**
TECA	**Tecapa**	**1.34**	**327**	*i* P	**Pn**	**12 34 03.3**	**-0.4**
APYN	**Apoyeque**	**1.38**	**95**	P	**Pn**	**12 34 04.5**	**+0.5**
APYN				S	**Sn**	**12 34 21.6**	**+0.5**
ABCN	**Banco Central**	**1.43**	**100**	P	**Pn**	**12 34 05.2**	**+0.5**
ABCN				S	**Sn**	**12 34 23.0**	**+0.6**
ALLN	**Telcor Managua**	**1.46**	**98**	P	**Pn**	**12 34 05.0**	**-0.1**
ALLN				S	**Sn**	**12 34 23.6**	**+0.4**
TISN	**Laguna Tiscapa**	**1.47**	**99**	P	**Pn**	**12 34 05.1**	**-0.1**
UNAN	**Cigeo UNAN**	**1.47**	**100**	S	**Sn**	**12 34 23.0**	**-0.3**
MGAN	**Managua**	**1.49**	**98**		**Pn**	**12 34 05.0**	**-0.4**
MGAN					**Sn**	**12 34 22.3**	**-1.5**
MGAN	**Managua**	**1.49**	**98**	P	**Pn**	**12 34 05.2**	**-0.2**
MGAN				S	**Sn**	**12 34 23.9**	**+0.1**
LIMN	**Finca el Limon**	**1.52**	**63**	P	**Pn**	**12 34 06.0**	**0.0**
LIMN				S	**Sn**	**12 34 25.3**	**+0.6**
TECO	**Alcaldia de Te**	**1.54**	**319**	P	**Pn**	**12 34 05.9**	**-0.3**
TECO				S	**Sn**	**12 34 24.2**	**-0.9**
TECO	**Alcaldia de Te**	**1.54**	**319**	*eP*	**Pn**	**12 34 05.7**	**-0.5**
AERN	**Aeropuerto Man**	**1.56**	**98**	P	**Pn**	**12 34 06.0**	**-0.5**
AERN				S	**Sn**	**12 34 25.7**	**+0.1**
MAS3	**Al N del Volca**	**1.58**	**102**	P	**Pn**	**12 34 06.6**	**-0.1**
MAS3				S	**Sn**	**12 34 25.7**	**-0.4**
SABN	**Sabanita**	**1.61**	**104**	P	**Pn**	**12 34 06.1**	**-1.0**
SCLA	**Alcaldia de Sa**	**1.64**	**324**	P	**Pn**	**12 34 07.9**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.64**	**324**	*i* P	**Pn**	**12 34 07.9**	**+0.4**
SCLA				*eS*	**Sn**	**12 34 29.1**	**+0.7**
NANN	**Nandasmo**	**1.65**	**105**	⇑P	**Pn**	**12 34 08.6**	**+0.9**
NANN				S	**Sn**	**12 34 28.6**	**+0.8**
COEG	**Centro de Oper**	**1.66**	**319**	P	**Pn**	**12 34 07.6**	**-0.3**
COEG				S	**Sn**	**12 34 28.1**	**-0.1**
COEG	**Centro de Oper**	**1.66**	**319**	*eS*	**Sn**	**12 34 27.4**	**-0.8**
TGUH	**Tegucigalpa,Un**	**1.75**	**15**		**Pn**	**12 34 09.8**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.75**	**15**	P	**Pn**	**12 34 09.8**	**+0.7**
TGUH				S	**Sn**	**12 34 31.1**	**+0.8**
OCON	**Estacion meteo**	**1.77**	**44**	⇓P	**Pn**	**12 34 10.0**	**+0.7**
OCON				S	**Sn**	**12 34 31.0**	**+0.2**
PAVA	**Las Pavas**	**1.77**	**319**	P	**Pn**	**12 34 09.6**	**+0.2**
PAVA				S	**Sn**	**12 34 31.5**	**+0.6**
YUSH	**Yuscaran**	**1.81**	**29**	⇓P	**Pn**	**12 34 10.6**	**+0.6**
YUSH				S	**Sn**	**12 34 32.3**	**+0.5**
LBRS	**Las Brisas**	**1.86**	**317**	*eP*	**Pn**	**12 34 10.9**	**+0.3**
PANCS	**Alcalda de**	**1.86**	**312**	P	**Pn**	**12 34 11.0**	**+0.3**
PANCS				S	**Sn**	**12 34 33.2**	**+0.1**
MATN	**Matagalpa**	**1.87**	**72**	P	**Pn**	**12 34 09.9**	**-0.9**
MATN				S	**Sn**	**12 34 33.2**	**0.0**
LOMA	**Loma Larga**	**1.88**	**313**	*eP*	**Pn**	**12 34 11.1**	**+0.2**
LALI	**Alcalda de L**	**1.89**	**306**	P	**Pn**	**12 34 10.9**	**-0.1**
LALI				S	**Sn**	**12 34 33.5**	**-0.2**
RCFN	**Al S de San Ju**	**1.90**	**52**	P	**Pn**	**12 34 11.8**	**+0.6**
RCFN				S	**Sn**	**12 34 35.0**	**+1.0**
RCON	**San Juan de Ri**	**1.91**	**54**	P	**Pn**	**12 34 10.3**	**-1.0**
UDBS	**Universidad Do**	**1.92**	**315**	P	**Pn**	**12 34 11.6**	**+0.3**
UDBS				S	**Sn**	**12 34 35.1**	**+0.7**
IGN	**Direccin Gen**	**1.93**	**314**	P	**Pn**	**12 34 11.3**	**-0.1**
IGN				S	**Sn**	**12 34 35.2**	**+0.6**
UTEC	**Universidad Te**	**1.94**	**313**	P	**Pn**	**12 34 11.0**	**-0.7**
UTEC				S	**Sn**	**12 34 35.1**	**+0.2**
RCVN	**Varillal2**	**1.94**	**51**	P	**Pn**	**12 34 12.5**	**+0.8**
RCVN				S	**Sn**	**12 34 36.2**	**+1.0**
SEMO	**Seminario San**	**1.96**	**313**	P	**Pn**	**12 34 12.3**	**+0.4**
SEMO				S	**Sn**	**12 34 35.1**	**-0.3**
UEES	**Universidad Ev**	**1.98**	**313**	P	**Pn**	**12 34 12.5**	**+0.3**
UEES				S	**Sn**	**12 34 36.5**	**+0.6**
PMON	**Piamonte**	**2.03**	**311**	P	**Pn**	**12 34 13.3**	**+0.4**
PMON				S	**Sn**	**12 34 37.8**	**+0.6**
BOAB	**BOACO BROADBAN**	**2.04**	**87**		**Pn**	**12 34 12.5**	**-0.5**
BOAB	**BOACO BROADBAN**	**2.04**	**87**	⇓P	**Pn**	**12 34 12.6**	**-0.3**
BOAB				S	**Sn**	**12 34 37.6**	**+0.3**
ARIN	**Rivas**	**2.08**	**116**	P	**Pn**	**12 34 13.6**	**0.0**
JAYA	**Jayaque - finc**	**2.09**	**308**	P	**Pn**	**12 34 13.7**	**-0.2**
JAYA				S	**Sn**	**12 34 38.5**	**-0.3**
LLGN	**La Laguna**	**2.13**	**327**	P	**Pn**	**12 34 14.5**	**+0.2**
LLGN				S	**Sn**	**12 34 40.3**	**+0.6**
UNIC	**Universidad Ca**	**2.38**	**313**	P	**Pn**	**12 34 18.0**	**+0.3**
UNIC				S	**Sn**	**12 34 46.5**	**+0.8**
CARN	**Rivas**	**2.48**	**118**	P	**Pn**	**12 34 19.8**	**+0.9**
CARN				S	**Sn**	**12 34 48.6**	**+0.5**
NUBE	**Las Nubes**	**2.50**	**308**	S	**Sn**	**12 34 48.6**	**-0.1**
NUBE	**Las Nubes**	**2.50**	**308**	*eP*	**Pn**	**12 34 20.3**	**+0.9**
LOAL	**Lomas de Alarc**	**2.56**	**310**	S	**Sn**	**12 34 50.5**	**+0.4**
SLOZ	**Alcaldia de Sa**	**2.58**	**310**	P	**Pn**	**12 34 20.7**	**+0.3**
SARH	**Santa Rosa de**	**2.59**	**338**	P	**Pn**	**12 34 20.6**	**0.0**
SARH				S	**Sn**	**12 34 51.0**	**+0.1**
FAME	**Alcaldia de Sa**	**2.65**	**304**	P	**Pn**	**12 34 21.8**	**+0.5**
FAME				S	**Sn**	**12 34 52.1**	**-0.2**
ESQI	**Esquipulas**	**2.67**	**325**		Pn	12 34 27.0	+5.2
ESQI	**Esquipulas**	**2.67**	**325**	P	**Pn**	**12 34 21.8**	**+0.1**
ESQI				S	**Sn**	**12 34 53.7**	**+0.7**
ELI1	**Hacienda Flor**	**2.75**	**128**	P	**Pn**	**12 34 23.0**	**+0.3**
ELI1				S	**Sn**	**12 34 55.8**	**+1.0**
JUD3	**Juan Diaz 3**	**3.08**	**135**		**Pn**	**12 34 28.0**	**+0.7**
SIUN	**Universidad Ur**	**3.20**	**65**		**Pn**	**12 34 28.0**	**-0.9**
SIUN	**Universidad Ur**	**3.20**	**65**	P	**Pn**	**12 34 29.7**	**+0.9**
CMARA	**Lajas Hojancha**	**3.26**	**135**	P	**Pn**	**12 34 30.6**	**+0.8**
CMARA				S	**Sn**	**12 35 07.4**	**-0.1**
INDI	**Punta indio, G**	**3.32**	**138**	P	**Pn**	**12 34 30.8**	**+0.3**
JTS	**Las Juntas de**	**3.43**	**127**	Pn	**Pn**	**12 34 33.4**	**+1.4**
	1.6nm,0.3s,baz=282,slow=24,SNR=7.2						
JTS				Pg		12 34 39.7	
	22nm,0.3s,baz=302,slow=16,SNR=22						
JTS				Sn	**Sn**	**12 35 10.2**	**-1.4**
	8.1nm,0.3s,baz=279,slow=19,SNR=3.9						
JTS				Lg	Lg	12 35 23.8	
	18nm,0.3s,baz=9.1,slow=20,SNR=4.3						
	7.3nm,0.4s						
JTS	**Las Juntas de**	**3.43**	**127**		**Pn**	**12 34 33.3**	**+1.3**
APG	**El Apazote**	**3.72**	**315**	Pn	Pn	12 34 43.7	+7.5
	0.2nm,0.3s,baz=103,slow=16,SNR=4.1						
APG				Pg		12 34 51.6	
	0.2nm,0.3s,baz=109,slow=12,SNR=6.6						
APG				Sn	Sn	12 35 27.9	+9.0
	0.1nm,0.3s,baz=65,slow=23,SNR=2.1						
PIRO	**Carate, Puerto**	**5.86**	**132**		**Pn**	**12 35 06.2**	**+0.8**
DRIO	**Del Rio**	**20.77**	**327**		Pn	12 38 18.8	-1.6
TXAR	**Lajitas Array**	**22.45**	**321**	P	**P**	**12 38 36.3**	**+0.6**
	3.4nm,1.0s,baz=142,slow=9.0,SNR=21						
	3.4nm,1.0s						
TX31	**Lajitas Ar. Si**	**22.45**	**321**		**P**	**12 38 36.4**	**+0.7**
MNHN	**Monahans**	**23.42**	**326**		**P**	**12 38 46.0**	**+0.6**
MNHN				IAmb	IAmb	12 38 47.2	
	comp=Z,11nm,1.0s						
PV19	**Morning Glory**	**32.02**	**327**	P	**P**	**12 40 03.8**	**+1.2**
PV19				IAmb	IAmb	12 40 04.1	
	comp=Z,6.0nm,0.9s						
PD31	**Pinedale Array**	**35.71**	**332**	P	**P**	**12 40 34.0**	**-0.6**
PD31				IAmb	IAmb	12 40 43.3	
	comp=Z,1.8nm,1.1s						
PDAR	**Pinedale Array**	**35.71**	**332**	P	**P**	**12 40 34.1**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=131,slow=9.3,SNR=6.2						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**35.71**	**332**	P	**P**	**12 40 34.6**	**+0.1**
SNOW	**Snow King Moun**	**36.80**	**332**	P	**P**	**12 40 45.0**	**+1.0**
MOOW	**Moose Ponds**	**37.02**	**332**		**P**	**12 40 46.6**	**+0.9**
MOOW				IAmb	IAmb	12 40 48.2	
	comp=Z,2.5nm,0.9s						
FLWY	**Flagg Ranch**	**37.26**	**332**	P	**P**	**12 40 48.7**	**+1.0**
YKA	**Yellowknife Ar**	**53.62**	**345**	P	**P**	**12 42 54.5**	**-1.9**
	comp=Z,0.1nm,0.2s,baz=132,slow=7.8,SNR=4.7						
	comp=Z,0.1nm,0.2s						
DLBC	**Dease Lake**	**55.86**	**335**	LR	LR	13 11 36.4	
	comp=Z,163nm,19.2s,baz=23,slow=41						
CMAR	**Chiang Mai Arr**	**148.67**	**348**	PKPbc	**PKPbc**	**12 53 22.4**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=339,slow=2.9,SNR=4.0						

*NEIC **15** 12:47:49.1±1.3, 15°.0S±0°.1×167°.2E±0°.2, h79km±9km, mb4.6/18, Error ellipse: s-maj=22.9km s-min=15.2km az=75.0*

*IDC **15** 12:47:49.9±9.5, 15°.04S×167°.02E, h82km±72km, mb3.9/4, mbtmp4.4/5, ML5.0/1, Error ellipse: s-maj=137.4km s-min=51.9km az=74.0*

*NOU **15** 12:47:51.4, 15°.19S×167°.56E, h120km, mb4.6/41, Vanuatu Islands*

ISC 15 12:47:49.9±0.8, 15°07S±0°.07×167°40E±0°.09, h100km, n61, σ1°27/59, mb4.5/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.75**	**164**	P	**Pn**	**12 48 33.6**	**+1.2**
DVP	**Devils Point**	**2.75**	**164**	S	**Sn**	**12 49 05.0**	**+0.1**
DVP	**Devils Point**	**2.75**	**164**	P	**Pn**	**12 48 33.5**	**+1.2**
RTV	**Rentapao**	**2.88**	**160**	P	**Pn**	**12 48 34.2**	**+0.1**
RTV	**Rentapao**	**2.88**	**160**	S	**Sn**	**12 49 07.9**	**-0.2**
KOUNC	**Koumac, New Ca**	**6.20**	**208**	P	**Pn**	**12 49 20.5**	**+1.5**
KOUNC	**Koumac, New Ca**	**6.20**	**208**	S	**Sn**	**12 50 30.2**	**+1.6**
MARNC	**Mare, Loyalty**	**6.40**	**175**	Pn	**Pn**	**12 49 20.2**	**-1.5**
MARNC	**Mare, Loyalty**	**6.40**	**175**	P	**Pn**	**12 49 20.1**	**-1.6**
YATNC	**Mamie plateau,**	**6.97**	**184**	P	**Pn**	**12 49 29.5**	**+0.1**
YATNC	**Mamie plateau,**	**6.97**	**184**	S	**Sn**	**12 50 45.2**	**-2.0**
YATNC	**Mamie plateau,**	**6.97**	**184**	P	**Pn**	**12 49 29.9**	**+0.5**
DZM	**Mont Dzumac**	**7.02**	**187**	P	**Pn**	**12 49 30.5**	**+0.3**
	25nm,0.3s,baz=186,slow=17,SNR=162						
DZM				S	**Sn**	**12 50 48.2**	**-0.4**
	baz=313,slow=5.2						
	46nm,0.3s						
DZM	**Mont Dzumac**	**7.02**	**187**		**Pn**	**12 49 30.2**	**0.0**
DZM	**Mont Dzumac**	**7.02**	**187**	P	**Pn**	**12 49 30.5**	**+0.3**
DZM	**Mont Dzumac**	**7.02**	**187**	S	**Sn**	**12 50 48.0**	**-0.6**
DZM	**Mont Dzumac**	**7.02**	**187**	P	**Pn**	**12 49 32.2**	**+2.0**
HURO	**Huro Makira**	**7.05**	**310**	P	Pn	12 49 34.7	+4.1
ONTNC	**Ouen Toro**	**7.25**	**187**		**Pn**	**12 49 35.2**	**+1.9**
ONTNC	**Ouen Toro**	**7.25**	**187**	P	**Pn**	**12 49 35.3**	**+2.0**
ONTNC	**Ouen Toro**	**7.25**	**187**	S	**Sn**	**12 50 53.6**	**-0.5**
ONTNC	**Ouen Toro**	**7.25**	**187**	P	**Pn**	**12 49 36.2**	**+2.9**
OUENC	**Ouen Island, N**	**7.33**	**184**	P	**Pn**	**12 49 36.3**	**+2.0**
OUENC	**Ouen Island, N**	**7.33**	**184**	S	**Sn**	**12 50 55.2**	**-0.7**
OUENC	**Ouen Island, N**	**7.33**	**184**	P	**Pn**	**12 49 37.0**	**+2.7**
PINNC	**Pines Island,**	**7.50**	**180**	P	**Pn**	**12 49 37.3**	**+0.6**
NGOA	**Tingoa Renbel**	**7.95**	**295**	P	Pn	12 49 46.8	+4.0
TATA	**Tatamba Isabel**	**9.97**	**311**	P	Pn	12 50 15.9	+5.6
EIDS	**Eidsvold**	**18.41**	**234**	P	**Pn**	**12 51 59.0**	**+0.4**
EIDS				IAmb	IAmb	12 51 59.8	
	comp=Z,11nm,0.7s						
EIDS	**Eidsvold**	**18.41**	**234**	P	**Pn**	**12 51 59.0**	**+0.4**
CTA	**Charters Tower**	**20.76**	**253**	P	**P**	**12 52 21.4**	**-1.6**
	comp=Z,2.2nm,0.7s,baz=64,slow=11,SNR=1.7						
	comp=Z,2.2nm,0.7s						
ARMA	**Armidale**	**21.05**	**221**	P	**P**	**12 52 27.2**	**+1.0**
ARMA	**Armidale**	**21.05**	**221**	P	**P**	**12 52 26.0**	**-0.1**
MTSU	**Mount Surprise**	**22.33**	**259**	P	**P**	**12 52 40.3**	**+0.6**
QLP	**Quilpie**	**24.45**	**238**	P	**P**	**12 52 59.4**	**-0.2**
BKZ	**Black Stump Fm**	**25.30**	**163**	P	**P**	**12 53 05.1**	**-2.1**
CMSA	**Cobar Meteorol**	**25.73**	**227**	P	**P**	**12 53 10.4**	**-0.7**
INKA	**Innaminka**	**27.76**	**239**	P	**P**	**12 53 29.5**	**+0.1**
STKA	**Stephens Creek**	**28.87**	**230**	P	**P**	**12 53 38.9**	**-0.3**
	comp=Z,4.0nm,0.3s,baz=63,slow=8.9,SNR=20						
	comp=Z,4.0nm,0.3s						
STKA	**Stephens Creek**	**28.87**	**230**	P	**P**	**12 53 38.9**	**-0.3**
STKA				IAmb	IAmb	12 53 39.7	
	comp=Z,27nm,0.5s						
STKA	**Stephens Creek**	**28.87**	**230**	P	**P**	**12 53 38.9**	**-0.3**
HTT	**Hallett**	**31.59**	**230**	P	**P**	**12 54 03.0**	**-0.3**
WR0	**Warramunga Arr**	**31.68**	**256**	P	**P**	**12 54 03.3**	**-0.9**
WB0	**Warramunga Arr**	**31.81**	**257**	P	**P**	**12 54 04.0**	**-1.3**
WB0				IAmb	IAmb	12 54 12.2	
	comp=Z,8.1nm,1.4s						
WRAB	**Tennant Creek**	**31.86**	**256**	P	**P**	**12 54 04.4**	**-1.3**
WRA	**Warramunga Arr**	**31.87**	**256**	P	**P**	**12 54 04.1**	**-1.7**
	comp=Z,1.0nm,0.6s,baz=85,slow=8.7,SNR=13						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**31.87**	**256**	P	**P**	**12 54 04.7**	**-1.1**
AS31	**Alice Springs**	**32.67**	**250**	P	**P**	**12 54 11.5**	**-1.4**
AS31				IAmb	IAmb	12 54 12.4	
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**32.67**	**250**	P	**P**	**12 54 11.3**	**-1.5**
	comp=Z,3.7nm,0.4s,baz=76,slow=9.2,SNR=133						
	comp=Z,3.7nm,0.4s						
ASAR	**Alice Springs**	**32.67**	**250**	P	**P**	**12 54 11.1**	**-1.8**
BBOO	**Buckleboo**	**33.47**	**233**	P	**P**	**12 54 19.5**	**-0.2**
BBOO				IAmb	IAmb	12 54 19.6	
	comp=Z,9.8nm,0.7s						
BBOO	**Buckleboo**	**33.47**	**233**	P	**P**	**12 54 19.2**	**-0.5**
SAUI	**Saumlaki**	**36.03**	**277**	P	**P**	**12 54 41.2**	**-0.7**
FORT	**Forrest**	**39.23**	**240**	P	**P**	**12 55 07.9**	**-0.8**
FORT				IAmb	IAmb	12 55 48.3	
	comp=Z,6.4nm,0.9s						
SOEI	**Soe**	**42.40**	**272**	P	**P**	**12 55 34.3**	**-0.8**
SOEI				IAmb	IAmb	12 56 03.7	
	comp=Z,31nm,1.3s						
MBWA	**Marble Bar**	**45.58**	**255**	P	**P**	**12 55 59.6**	**-0.7**
MBWA				IAmb	IAmb	12 56 18.1	
	comp=Z,20nm,1.2s						
CASY	**Casey**	**63.26**	**202**	P	**P**	**12 58 09.8**	**+2.2**
GSI	**Gunungsitoli**	**70.90**	**277**	P	**P**	**12 58 56.4**	**-0.5**
QSPA	**South Pole Qui**	**74.96**	**180**		**P**	**12 59 22.3**	**+2.2**
QSPA				IAmb	IAmb	12 59 50.3	
	comp=Z,8.5nm,1.4s						
PLK4	**Peulik 4**	**78.39**	**19**	P	**P**	**12 59 40.8**	**+1.5**
F28M	**Old Crow**	**90.84**	**18**	P	**P**	**13 00 41.5**	**-0.2**
F28M				IAmb	IAmb	13 00 49.7	
	comp=Z,1.9nm,0.9s						

*KOLA **15** 12:59:26.0, 69°.59N×29°.75E, h0km, ML1.6, Error ellipse: s-maj=4.1km s-min=3.7km az=90.0, Kirkenes, Norway*

HEL 15 12:59:27.6±0.4, 70°45N×28°55E, h0km, ML1.2, Explosion, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VADS	**Vadso**	**0.43**	**140**	P	Pg	12 59 35.9	+0.1
VADS				S	Sg	12 59 43.1	+1.6
KEV	**Kevo**	**0.88**	**218**	PG	Pg	12 59 43.3	-1.0
	baz=42						
KEV				SB	Sg	12 59 55.8	+0.1
ARA0	**ARCESS Array S**	**1.40**	**230**	PG	Pg	12 59 52.8	-1.5
	baz=61						
ARA0				SN	Sn	13 00 13.9	+0.6
ARCES	**ARCESS Array B**	**1.40**	**230**	P	Pg	12 59 52.6	-1.7
ARCES				S	Sg	13 00 11.8	-0.5
RAJF	**Raja-Jooseppi**	**1.99**	**183**	PG	Pn	13 00 03.4	+0.9
RAJF				SG	Sn	13 00 28.5	+0.6
KTK1	**Kautokeino**	**2.35**	**234**	PG	Pn	13 00 09.0	+1.6
KTK1				SG	Sb	13 00 40.2	0.0
HEF	**Hetta**	**2.68**	**222**	PG	Pb	13 00 15.0	-1.4
	baz=43						
HEF				smax	smax	13 00 46.6	
	comp=Z,0.7nm,0.2s						
HEF				SG	Sb	13 00 48.7	-1.1
APA0	**Apatity Array**	**3.27**	**149**	S	Sn	13 00 33.8	-26
LANU	**Lannavaara**	**3.36**	**227**	PN	Pn	13 00 21.6	+0.4

*JMA **15** 13:18:58.9±0.1, 23°.9N±0°.3×12°.2E±°, h4km, MV2.8/11, TAIWAN REGION*

*TAP **15** 13:18:58.9, 23°.87N×121°.54E, h8km, ML3.5, C*

ISC 15 13:18:59.2±0.8, 23°86N±0°.01×121°58E±0°.02, h12km±4km, n144, σ0°68/230, 1C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.02**	**78**	P	**Pg**	**13 19 01.4**	**+0.1**
TEYL				*i* S	**Sg**	**13 19 03.4**	**+0.6**
SHUL	**Shoufeng**	**0.08**	**191**	⇑*i* P	**Pg**	**13 19 01.7**	**-0.1**
SHUL				S	**Sg**	**13 19 04.

YHNB	**Yeheng**	**0.82**	**347**	S	**Sg**	**13 19 25.8**	**-0.2**
YHNB	**Yeheng**	**0.82**	**347**	ǁP	**Pb**	**13 19 15.1**	**-0.4**
YHNB				S	**Sg**	**13 19 25.0**	**-1.0**
ECS	**Chishang**	**0.83**	**203**	*e*P	**Pb**	**13 19 16.4**	**+0.8**
NSK	**Sanguang**	**0.83**	**346**	ǁP	**Pg**	**13 19 15.2**	**-0.1**
NSK				S	**Sg**	**13 19 25.4**	**-0.9**
ELDTW	**Lidau**	**0.85**	**218**	*e*P	**Pg**	**13 19 14.2**	**-1.4**
ELDTW				*e*S	**Sg**	**13 19 26.4**	**-0.3**
TWE	**Neicheng**	**0.86**	**5**	*i* P	**Pb**	**13 19 15.8**	**-0.2**
TWE				S	**Sb**	**13 19 27.5**	**0.0**
CHN5	**Tsauling**	**0.87**	**252**	*e*P	**Pb**	**13 19 16.4**	**+0.2**
CHN5				*e*S	**Sn**	**13 19 29.4**	**-0.5**
NFF	**Wufeng Townshi**	**0.87**	**331**	*i* P	**Pb**	**13 19 16.2**	**-0.2**
NFF				*e*S	**Sg**	**13 19 26.8**	**-0.7**
TCU	**Taichung**	**0.87**	**289**	*e*P	**Pb**	**13 19 17.1**	**-0.1**
TWQ1	**Liyutan**	**0.88**	**303**	*e*P	**Pn**	**13 19 17.5**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.89**	**1**	P	**Pg**	**13 19 16.3**	**-0.1**
FUSB				S	**Sg**	**13 19 27.9**	**-0.2**
NWLT	**Wulai**	**0.91**	**356**	P	**Pg**	**13 19 16.6**	**-0.3**
NWLT				*e*S	**Sg**	**13 19 28.0**	**-0.8**
NSY	**Sanyi**	**0.93**	**307**	*e*P	**Pn**	**13 19 18.1**	**+0.1**
NSTT	**Nanjuang**	**0.93**	**325**	P	**Pb**	**13 19 17.5**	**+0.3**
NSTT				*e*S	**Sb**	**13 19 29.4**	**-0.1**
LIOB	**Emei**	**0.93**	**327**	*e*P	**Pb**	**13 19 17.6**	**+0.3**
LIOB				*e*S	**Sb**	**13 19 29.8**	**+0.1**
WGK	**Gukeng**	**0.95**	**259**	P	**Pn**	**13 19 18.6**	**+0.3**
WGK				S	**Sn**	**13 19 31.6**	**-0.2**
WCHH	**Zhanghua**	**0.96**	**283**	P	**Pn**	**13 19 18.3**	**-0.1**
WCHH				*e*S	**Sn**	**13 19 31.8**	**-0.2**
WDLH	**Douliu**	**0.97**	**260**	*e*P	**Pn**	**13 19 18.5**	**-0.1**
WDLH				*e*S	**Sn**	**13 19 32.3**	**0.0**
KSHI	**Guanxi Townshi**	**0.98**	**338**	*e*P	**Pn**	**13 19 18.8**	**+0.3**
KSHI				*e*S	**Sb**	**13 19 31.8**	**+0.8**
NMLH	**Miaoli**	**0.98**	**313**	*e*P	**Pn**	**13 19 19.4**	**+0.6**
NMLH				*e*S	**Sb**	**13 19 32.2**	**+1.1**
WCKO	**Fanlu**	**0.99**	**245**	*e*P	**Pb**	**13 19 18.7**	**+0.4**
WCKO				*e*S	**Sb**	**13 19 31.8**	**+0.6**
STYH	**Taoyuan**	**1.01**	**227**	*e*P	**Pb**	**13 19 18.5**	**-0.1**
EGS		**1.03**	**18**	*e*P	**Pb**	**13 19 19.2**	**+0.3**
TPUB	**Ta-pu**	**1.04**	**237**	P	**Pb**	**13 19 19.4**	**+0.3**
TPUB	**Ta-pu**	**1.04**	**237**	P	**Pb**	**13 19 19.4**	**+0.3**
TPUB				*e*S	**Sb**	**13 19 32.9**	**+0.3**
CHN2	**Minshiung**	**1.06**	**252**	*e*P	**Pn**	**13 19 20.6**	**+0.7**
SBCB	**Hsinchu**	**1.07**	**330**	*e*P	**Pn**	**13 19 21.0**	**+0.9**
WTP	**Ta-pu**	**1.08**	**235**	*e*P	**Pb**	**13 19 20.1**	**+0.3**
WTP				*e*S	**Sb**	**13 19 34.7**	**+0.8**
HSN	**Hsinchu**	**1.09**	**329**	*e*P	**Pn**	**13 19 20.9**	**+0.7**
HSN				*i* S	**Sn**	**13 19 36.1**	**+0.9**
NHDH	**Xindian Distri**	**1.09**	**357**	*e*P	**Pg**	**13 19 19.7**	**-0.6**
NHDH				*e*S	**Sg**	**13 19 33.9**	**-0.7**
WRL	**Guolierlin Hig**	**1.10**	**272**	P	**Pn**	**13 19 20.5**	**0.0**
WRL				*e*S	**Sn**	**13 19 35.5**	**-0.1**
TATO	**Taipei**	**1.11**	**356**	P	**Pb**	**13 19 20.6**	**+0.3**
TWA	**Mucha**	**1.11**	**0**	*e*P	**Pn**	**13 19 21.0**	**+0.4**
TWA				*e*S	**Sb**	**13 19 34.9**	**+0.1**
CHY	**Chiayi**	**1.12**	**251**	*e*P	**Pn**	**13 19 20.9**	**+0.3**
CHY				S	**Sn**	**13 19 36.7**	**+0.7**
TIPB	**Shuangxi**	**1.13**	**11**	*e*P	**Pg**	**13 19 20.2**	**-0.7**
TIPB				*e*S	**Sg**	**13 19 35.0**	**-0.5**
TWG	**Pinlang**	**1.14**	**204**	*e*P	**Pg**	**13 19 20.4**	**-0.7**
TWGBT	**Beinan**	**1.14**	**204**	P	**Pg**	**13 19 20.5**	**-0.7**
TWGBT	**Beinan**	**1.14**	**204**	P	**Pg**	**13 19 20.4**	**-0.7**
NCUH	**Zhongli**	**1.16**	**342**	*e*P	**Pn**	**13 19 22.1**	**+0.9**
NCU	**National Centr**	**1.16**	**342**	*e*P	**Pg**	**13 19 20.3**	**-1.2**
NCU				*e*S	**Sn**	**13 19 37.1**	**+0.2**
TWK	**Hsinying**	**1.16**	**239**	P	**Pn**	**13 19 21.8**	**+0.4**
TWK				*e*S	**Sn**	**13 19 37.9**	**+0.7**
CHN1	**Nanshi**	**1.18**	**235**	*e*P	**Pn**	**13 19 22.1**	**+0.6**
CHN1				*e*S	**Sn**	**13 19 39.0**	**+1.6**
SNST	**Tainan City**	**1.18**	**237**	*e*P	**Pn**	**13 19 23.7**	**+2.2**
WTCT	**Ta-ch'eng**	**1.19**	**270**	*e*P	**Pg**	**13 19 21.5**	**-0.6**
WTCT				*e*S	**Sn**	**13 19 38.6**	**+1.0**
TWB1	**Santiao Chiao**	**1.20**	**18**	*e*P	**Pn**	**13 19 22.1**	**+0.3**
TWB1				S	**Sg**	**13 19 37.3**	**-0.6**
SGST	**Jiashian**	**1.20**	**230**	P	**Pg**	**13 19 21.7**	**-0.6**
SGST				S	**Sn**	**13 19 39.2**	**+1.1**
NWF	**Wu-fen Shan**	**1.22**	**9**	*e*P	**Pn**	**13 19 23.1**	**+1.0**
NWF				*e*S	**Sn**	**13 19 38.9**	**+0.4**
WFSB	**Wu-fen Shan**	**1.22**	**9**	*e*P	**Pn**	**13 19 22.9**	**+0.9**
WFSB				*e*S	**Sn**	**13 19 39.1**	**+0.7**
SXI1	**Grass Mountain**	**1.25**	**12**	*e*P	**Pg**	**13 19 22.8**	**-0.5**
WSF	**Szhu**	**1.26**	**260**	*e*P	**Pg**	**13 19 24.2**	**+0.7**
YM01	**YM01**	**1.28**	**360**	P	**Pg**	**13 19 23.6**	**-0.2**
YM01				S	**Sn**	**13 19 41.6**	**+1.7**
WSL	**Shuilin Townsh**	**1.28**	**255**	*e*P	**Pg**	**13 19 18.8**	**0.0**
WSL				*e*S	**Sn**	**13 19 42.3**	**+2.2**
TNOU	**National Taiwa**	**1.29**	**8**	*e*P	**Pg**	**13 19 24.4**	**+0.3**
ZUZH	**Zhuzihu**	**1.29**	**359**	*e*P	**Pg**	**13 19 23.9**	**-0.2**
NTST	**Danshui**	**1.30**	**355**	*e*P	**Pg**	**13 19 24.4**	**+0.2**
NTST				*e*S	**Sn**	**13 19 42.1**	**+1.7**
YM08	**YM08**	**1.32**	**0**	*e*P	**Pg**	**13 19 24.3**	**-0.2**
CHN8	**Yiju**	**1.36**	**248**	*e*P	**Pn**	**13 19 24.3**	**+0.4**
CHN8				*e*S	**Sn**	**13 19 44.6**	**+2.7**
ECL	**Taimali**	**1.39**	**205**	*e*P	**Pn**	**13 19 23.5**	**-0.9**
TWY	**Chenhua**	**1.41**	**1**	*e*P	**Pg**	**13 19 26.9**	**+0.6**
SSD	**Sandimen**	**1.41**	**218**	*e*P	**Pn**	**13 19 25.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.44**	**65**	P	**Pn**	**13 19 24.9**	**-0.2**
YOJ	**Yonaguni jima**	**1.44**	**65**	*e*P	**Pn**	**13 19 24.9**	**-0.2**
YOJ	**Yonaguni jima**	**1.44**	**65**	P	**Pn**	**13 19 24.8**	**-0.2**
YOJ				S	**Sg**	**13 19 45.4**	**-0.1**
TWM1	**Shoushan**	**1.48**	**226**	*e*P	**Pg**	**13 19 29.3**	**+1.6**
MASBT	**Mashibuluo**	**1.52**	**215**	*e*P	**Pn**	**13 19 26.2**	**0.0**
MASBT				*e*S	**Sg**	**13 19 48.8**	**+0.6**
TSCK	**Chigu Township**	**1.54**	**243**	*e*P	**Pn**	**13 19 26.9**	**-0.3**
TSCK				*e*S	**Sg**	**13 19 49.3**	**+0.4**
EAST	**Anshuo**	**1.62**	**205**	*e*P	**Pn**	**13 19 27.6**	**-0.1**
SLIU	**Shizi**	**1.79**	**204**	*e*P	**Pb**	**13 19 32.2**	**+0.3**
LAY	**Lan-yu**	**1.82**	**181**	*e*P	**Pn**	**13 19 27.9**	**-2.5**
WDGT	**Dungji**	**1.86**	**252**	*e*P	**Pn**	**13 19 31.2**	**+0.4**
WDGT				*e*S	**Sb**	**13 19 56.4**	**0.0**
PHUB	**P'eng-hu**	**1.87**	**260**	*e*P	**Pn**	**13 19 31.7**	**+0.7**
PHUB				*e*S	**Sb**	**13 19 56.1**	**-0.6**
PNG	**Penghu**	**1.88**	**261**	P	**Pn**	**13 19 31.8**	**+0.7**
PNG				S	**Sn**	**13 19 55.6**	**+0.9**
SMST	**Manzhou Townsh**	**1.96**	**201**	*e*P	**Pb**	**13 19 34.3**	**-0.5**
IRIF	**Iriomote-Funau**	**2.02**	**76**	*e*P	**Pn**	**13 19 33.9**	**+0.8**
VCHM	**Qimei**	**2.08**	**252**	*e*P	**Pn**	**13 19 34.7**	**+0.9**
VCHM				*e*S	**Sb**	**13 20 01.7**	**-0.9**
VWUC	**VWUC**	**2.24**	**300**	*e*P	**Pn**	**13 19 35.9**	**-0.2**
JKRS	**Kuro-shima**	**2.25**	**80**	*e*P	**Pn**	**13 19 37.1**	**+0.8**
JIJ	**Ishigaki jima**	**2.40**	**78**	P	**Pn**	**13 19 37.6**	**+0.6**
JIJ				*e*S	**Sn**	**13 20 07.1**	**-0.4**
JISG	**Ishigakijimahi**	**2.60**	**73**	*e*P	**Sn**	**13 19 40.2**	**-0.8**
JISG				*e*S	**Sn**	**13 20 12.0**	**-0.4**
MATB	**Ma-tsu**	**2.72**	**327**	*e*P	**Pn**	**13 19 42.2**	**-0.4**
KNMB	**Chin-men Tao**	**2.97**	**282**	*e*P	**Pn**	**13 19 46.0**	**-0.2**
LYJJ	**Jianjiangzhen**	**3.14**	**329**	*e*P	**Pn**	**13 19 48.0**	**-0.5**
MHZQ	**Yeshan**	**3.21**	**314**	*e*P	**Pn**	**13 19 49.7**	**+0.3**
MHZQ				*e*S	**Sn**	**13 20 28.7**	**+1.1**
XPSS	**Dashiqiu**	**3.30**	**338**	*e*P	**Pn**	**13 19 50.3**	**-0.4**
AXDP	**Jialang**	**3.45**	**288**	*e*P	**Pn**	**13 19 52.5**	**-0.2**
ZPLA	**Ao Xicun**	**3.50**	**272**	*e*P	**Pn**	**13 19 53.7**	**+0.2**
DSXP	**Dongshan**	**3.81**	**268**	*e*P	**Pn**	**13 19 58.0**	**+0.4**
SXFK	**Yanhouchang**	**4.37**	**306**	*e*P	**Pn**	**13 20 05.2**	**-0.2**

*TAP **15** 13:31:08.2,24˚.80N×119˚.79E, h25km, ML3.7, B*
ISC 15 13:31:08.5±1.2,**24˚.80N**±0˚.02×**119˚.82E**±0˚.02,**h21**km±4km,
n119,σ0°73/176,1C-7D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VWUC	**VWUC**	**0.39**	**299**	ǁ*i*P	**Pb**	**13 31 16.1**	**-0.5**
VWUC				*i* S	**Sb**	**13 31 21.4**	**-0.7**
NMLH	**Miaoli**	**0.92**	**106**	P	**Pn**	**13 31 25.8**	**-0.4**
NMLH				*e*S	**Sb**	**13 31 38.2**	**+0.7**
NSY	**Sanyi**	**0.94**	**114**	P	**Pb**	**13 31 26.4**	**+0.4**
NSY				*e*S	**Sb**	**13 31 38.8**	**+0.7**
NJN	**Zhunan**	**0.96**	**97**	*e*P	**Pn**	**13 31 25.9**	**-0.8**
NJN				*e*S	**Sn**	**13 31 39.6**	**-0.1**
TWQ1	**Liyutan**	**0.98**	**117**	ǁ*i*P	**Pn**	**13 31 26.6**	**-0.3**
TWQ1				*e*S	**Sb**	**13 31 39.5**	**+0.3**
WCH1	**Changhua City**	**0.98**	**137**	*e*P	**Pb**	**13 31 26.8**	**0.0**
WCHH	**Zhanghua**	**0.98**	**137**	*e*P	**Pn**	**13 31 26.4**	**-0.6**
WCHH				*e*S	**Sb**	**13 31 39.8**	**+0.5**
TCU	**Taichung**	**1.01**	**130**	*e*P	**Pb**	**13 31 27.3**	**0.0**
TCU				*e*S	**Sn**	**13 31 41.1**	**+0.1**
WTCT	**Ta-ch'eng**	**1.02**	**156**	*e*P	**Pn**	**13 31 26.9**	**-0.7**
WTCT				*e*S	**Sb**	**13 31 40.6**	**+0.2**
WRL	**Guolierlin Hig**	**1.03**	**150**	*e*P	**Pn**	**13 31 26.8**	**-0.8**
WRL				*e*S	**Sb**	**13 31 40.3**	**-0.4**
RLNB	**Erlin**	**1.03**	**151**	*e*P	**Pn**	**13 31 27.1**	**-0.6**
RLNB				*e*S	**Sb**	**13 31 40.8**	**+0.2**
HSN	**Hsinchu**	**1.04**	**90**	*e*P	**Pb**	**13 31 29.7**	**+1.9**
HSN				*e*S	**Sn**	**13 31 42.4**	**+0.6**
SBCB	**Hsinchu**	**1.06**	**90**	*e*P	**Pb**	**13 31 28.1**	**0.0**
SBCB				*e*S	**Sb**	**13 31 42.1**	**+0.6**
NSTT	**Nanjuang**	**1.08**	**99**	*i* P	**Pn**	**13 31 28.3**	**-0.1**
NSTT				S	**Sn**	**13 31 42.1**	**-0.7**
HSN1	**Hsinchu**	**1.09**	**91**	*e*P	**Pn**	**13 31 28.1**	**-0.4**
LIOB	**Emei**	**1.10**	**98**	*e*P	**Pn**	**13 31 28.3**	**-0.3**
LIOB				*e*S	**Sn**	**13 31 42.5**	**-0.7**
WWF	**Wufeng**	**1.10**	**133**	*e*P	**Pn**	**13 31 28.1**	**-0.6**
WWF				*e*S	**Sn**	**13 31 42.6**	**-0.5**
WHP	**Taichung City**	**1.15**	**117**	*e*P	**Pn**	**13 31 28.6**	**-0.8**
NJD	**Zhudong**	**1.15**	**93**	*e*P	**Pn**	**13 31 28.8**	**-0.6**
NJD				*e*S	**Sn**	**13 31 44.5**	**0.0**
WNT1	**Nantou City**	**1.18**	**138**	*e*P	**Pn**	**13 31 29.2**	**-0.7**
WNT1				*e*S	**Sn**	**13 31 44.9**	**-0.4**
NFF	**Wufeng Townshi**	**1.19**	**98**	*e*P	**Pn**	**13 31 29.6**	**-0.3**
NFF				*e*S	**Sn**	**13 31 44.6**	**-0.9**
WNT	**Mingjian**	**1.21**	**139**	*e*P	**Pn**	**13 31 29.3**	**-0.8**
WNT				*e*S	**Sn**	**13 31 45.4**	**-0.4**
WSF	**Szhu**	**1.21**	**162**	*e*P	**Pn**	**13 31 29.6**	**-0.6**
WSF				*e*S	**Sb**	**13 31 46.1**	**+0.1**
KSHI	**Guanxi Townshi**	**1.23**	**91**	*e*P	**Pn**	**13 31 30.6**	**+0.1**
KSHI				*e*S	**Sb**	**13 31 46.7**	**+0.2**
WCS	**Beigang Elemen**	**1.24**	**126**	*e*P	**Pn**	**13 31 30.0**	**-0.5**
NCU	**National Centr**	**1.25**	**82**	*e*P	**Pn**	**13 31 30.6**	**-0.2**
NCU				*e*S	**Sn**	**13 31 46.4**	**-0.6**
PNG	**Penghu**	**1.25**	**191**	*e*P	**Pn**	**13 31 29.9**	**-0.8**
PNG				*e*S	**Sn**	**13 31 46.4**	**-0.5**
WDLH	**Douliu**	**1.28**	**149**	*e*P	**Pn**	**13 31 30.0**	**-1.2**
WDLH				*e*S	**Sn**	**13 31 47.1**	**-0.6**
WGK	**Gukeng**	**1.30**	**148**	*e*P	**Pn**	**13 31 31.1**	**-0.3**
WPL	**Puli Township**	**1.30**	**127**	*e*P	**Pn**	**13 31 29.9**	**-1.5**
TYC	**Yuchr**	**1.30**	**133**	*e*P	**Pn**	**13 31 30.8**	**-0.6**
PHUB	**P'eng-hu**	**1.30**	**190**	P	**Pn**	**13 31 30.6**	**-0.8**
PHUB				*e*S	**Sn**	**13 31 46.9**	**-1.2**
KNM	**Kinmen**	**1.32**	**254**	*e*P	**Pb**	**13 31 34.4**	**+1.8**
KNM				*e*S	**Sb**	**13 31 52.3**	**+3.3**
WSL	**Shuilin Townsh**	**1.32**	**164**	*e*P	**Pn**	**13 31 31.8**	**+0.1**
WSL				*e*S	**Sb**	**13 31 49.9**	**+0.7**
TDCB	**Techi**	**1.33**	**114**	ǁP	**Pn**	**13 31 31.5**	**-0.5**
SMLT	**Sun Moon Lake**	**1.34**	**133**	P	**Pn**	**13 31 31.4**	**-0.6**
KNMB	**Chin-men Tao**	**1.35**	**256**	ǁ*e*P	**Pb**	**13 31 32.4**	**-0.6**
KNMB				*e*S	**Sb**	**13 31 49.3**	**-0.5**
TWT	**Tachien**	**1.35**	**114**	*e*P	**Pn**	**13 31 31.4**	**-0.9**
TWT				*e*S	**Sn**	**13 31 48.0**	**-1.5**
MATB	**Ma-tsu**	**1.35**	**5**	P	**Pb**	**13 31 32.4**	**-0.7**
MATB				*e*S	**Sb**	**13 31 49.9**	**-0.1**
MSUT	**Lienchiang**	**1.37**	**4**	*e*P	**Pb**	**13 31 32.8**	**-0.6**
MSUT				*e*S	**Sb**	**13 31 50.3**	**-0.1**
CHN2	**Minshiung**	**1.40**	**155**	*e*P	**Pn**	**13 31 31.8**	**-1.0**
CHN2				*e*S	**Sn**	**13 31 50.7**	**+0.2**
NSK	**Sanguang**	**1.40**	**95**	*e*P	**Pn**	**13 31 32.5**	**-0.4**
FUSS	**Fushou**	**1.41**	**113**	*e*P	**Pn**	**13 31 32.4**	**-0.7**
CHY	**Chiayi**	**1.41**	**157**	*e*P	**Pn**	**13 31 32.3**	**-0.6**
CHY				*e*S	**Sb**	**13 31 51.7**	**+0.2**
YHNB	**Yeheng**	**1.42**	**95**	P	**Pn**	**13 31 33.0**	**-0.1**
YHNB	**Yeheng**	**1.42**	**95**	ǁ*i*P	**Pn**	**13 31 32.8**	**-0.3**
YHNB				*e*S	**Sn**	**13 31 50.0**	**-1.2**
WUSB	**Renai**	**1.43**	**124**	ǁ*i*P	**Pn**	**13 31 33.0**	**-0.3**
CHN5	**Tsauling**	**1.43**	**147**	*e*P	**Pn**	**13 31 32.6**	**-0.7**
CHN5				*e*S	**Sn**	**13 31 51.6**	**+0.1**
SSLB	**Suanglung**	**1.44**	**134**	P	**Pn**	**13 31 32.7**	**-0.7**
SSLB	**Suanglung**	**1.44**	**134**	ǁP	**Pn**	**13 31 32.6**	**-0.9**
WHYT	**Xinyi Township**	**1.45**	**139**	*e*P	**Pn**	**13 31 32.4**	**-1.1**
NNS	**Nan Shan**	**1.46**	**104**	*e*P	**Pn**	**13 31 33.4**	**-0.2**
NNS				*e*S	**Sn**	**13 31 50.7**	**-1.5**
NNSB	**Datong**	**1.47**	**104**	*e*P	**Pn**	**13 31 33.3**	**-0.5**
NNSH	**Datong**	**1.47**	**104**	*e*P	**Pn**	**13 31 33.0**	**-0.8**
WHF	**Hehuan Shan**	**1.47**	**116**	*e*P	**Pn**	**13 31 34.2**	**+0.1**
MHZQ	**Yeshan**	**1.48**	**331**	*e*P	**Pb**	**13 31 35.4**	**+0.1**
CHN8	**Yiju**	**1.49**	**166**	*e*P	**Pn**	**13 31 34.2**	**+0.2**
OWD	**Renai**	**1.49**	**124**	ǁ*e*P	**Pn**	**13 31 34.0**	**-0.2**
TATO	**Taipei**	**1.52**	**83**	P	**Pb**	**13 31 38.8**	**+2.8**
TATO	**Taipei**	**1.52**	**83**	*e*P	**Pb**	**13 31 37.1**	**+1.0**
NWLT	**Wulai**	**1.53**	**90**	*e*P	**Pn**	**13 31 34.4**	**-0.2**
WCKO	**Fanlu**	**1.53**	**152**	*e*P	**Pn**	**13 31 33.0**	**-1.6**
WCKO				*e*S	**Sb**	**13 31 54.5**	**-0.7**
WDGT	**Dungji**	**1.54**	**186**	*e*P	**Pn**	**13 31 34.8**	**+0.1**
WDGT				*e*S	**Sn**	**13 31 53.8**	**-0.3**
ALS	**Alishan**	**1.57**	**145**	*e*P	**Pn**	**13 31 34.8**	**-0.6**
ALS				*e*S	**Sn**	**13 31 54.4**	**-0.3**
LATG	**Datong**	**1.57**	**99**	*e*P	**Pn**	**13 31 35.3**	**0.0**
LATG				*e*S	**Sn**	**13 31 54.1**	**-1.0**
ANP	**Anpu**	**1.59**	**76**	*e*P	**Pn**	**13 31 35.4**	**-0.1**
VWDT	**VWDT**	**1.59**	**131**	P	**Pn**	**13 31 35.4**	**0.0**
ENTT	**Nioudou**	**1.59**	**95**	*e*P	**Pn**	**13 31 35.5**	**0.0**
CHN4	**Tsaushan**	**1.60**	**154**	*e*P	**Pn**	**13 31 35.3**	**-0.3**
CHN4				*e*S	**Sn**	**13 31 56.1**	**+0.4**
FUSB	**Fushanzhiwuyua**	**1.60**	**91**	*e*P	**Pn**	**13 31 35.3**	**-0.3**
FUSB				*e*S	**Sn**	**13 31 55.4**	**-0.4**
ZUZH	**Zhuzihu**	**1.60**	**77**	*e*P	**Pn**	**13 31 35.8**	**+0.1**
ZUZH				*e*S	**Sn**	**13 31 54.8**	**-0.9**
TWA	**Mucha**	**1.61**	**83**	*e*P	**Pb**	**13 31 37.2**	**-0.3**
VCHM	**Qimei**	**1.62**	**193**	*e*P	**Pn**	**13 31 35.9**	**+0.1**
VCHM				*e*S	**Sn**	**13 31 55.7**	**-0.4**
YM01	**YM01**	**1.62**	**77**	*e*P	**Pn**	**13 31 36.1**	**+0.2**
YM01				*e*S	**Sn**	**13 31 55.4**	**-0.8**
TWK	**Hsinying**	**1.64**	**158**	*e*P	**Pn**	**13 31 36.1**	**-0.1**
TWK				*e*S	**Sb**	**13 31 58.2**	**+0.2**
LXIB	**Xiulin Townshi**	**1.65**	**118**	*e*P	**Pn**	**13 31 35.8**	**-0.5**
YM08	**YM08**	**1.65**	**76**	*e*P	**Pn**	**13 31 35.5**	**-0.8**
SCLT	**Jiali**	**1.65**	**168**	*e*P	**Pn**	**13 31 36.2**	**-0.1**
SCLT				*e*S	**Sn**	**13 31 57.0**	**+0.1**
TPUB	**Ta-pu**	**1.67**	**154**	P	**Pn**	**13 31 36.3**	**-0.2**
TPUB	**Ta-pu**	**1.67**	**154**	S	**Sn**	**13 31 57.9**	**+0.7**
TPUB	**Ta-pu**	**1.67**	**154**	*e*P	**Pn**	**13 31 36.0**	**-0.5**
TPUB				*e*S	**Sn**	**13 31 56.8**	**-0.4**
TWE	**Neicheng**	**1.68**	**92**	*e*P	**Pn**	**13 31 37.2**	**+0.6**
TWY	**Chenhua**	**1.68**	**73**	*e*P	**Pn**	**13 31 37.0**	**+0.4**
TWY				*e*S	**Sn**	**13 31 57.5**	**-0.1**
AXDP	**Jialang**	**1.69**	**274**	*e*P	**Pn**	**13 31 36.7**	**0.0**
SNST	**Tainan City**	**1.69**	**158**	*e*P	**Pb**	**13 31 38.2**	**-0.7**
WTP	**Ta-pu**	**1.71**	**155**	*e*P	**Pn**	**13 31 36.7**	**-0.4**
WTP				*e*S	**Sn**	**13 31 56.9**	**-1.4**
SSHA	**Shanhua**	**1.71**	**165**	*e*P	**Pn**	**13 31 37.0**	**-0.1**
NACB	**Ninganchiao**	**1.73**	**111**	P	**Pn**	**13 31 37.6**	**+0.6**
NACB	**Ninganchiao**	**1.73**	**111**	*e*P	**Pn**	**13 31 37.5**	**+0.1**
CHN1	**Nanshi**	**1.73**	**158**	*e*P	**Pn**	**13 31 37.2**	**-0.2**
CHN1				*e*S	**Sn**	**13 31 58.2**	**-0.7**
LYJJ	**Jianjiangzhen**	**1.74**	**358**	*e*P	**Pb**	**13 31 38.2**	**-1.6**
ESL	**Shilin**	**1.77**	**123**	*e*P	**Pn**	**13 31 37.8**	**-0.1**
CHN3	**Shinhua**	**1.79**	**164**	*e*P	**Pn**	**13 31 38.3**	**+0.2**
WARBT	**Fenglin Townsh**	**1.79**	**127**	P	**Pn**	**13 31 38.1**	**-0.1**
TIPB	**Shuangxi**	**1.83**	**84**	*e*P	**Pn**	**13 31 38.2**	**-0.5**
STYT	**Tauyuan**	**1.84**	**152**	*e*P	**Pn**	**13 31 38.6**	**-0.3**
STYH	**Taoyuan**	**1.84**	**152**	*e*P	**Pn**	**13 31 38.7**	**-0.2**
STYH				*e*S	**Sn**	**13 32 02.1**	**+0.6**
SGST	**Jiashian**	**1.85**	**158**	*e*P	**Pn**	**13 31 38.0**	**-1.0**
SGST				*e*S	**Sn**	**13 32 00.7**	**-1.0**
EHY	**Hungye**	**1.88**	**133**	*e*P	**Pn**	**13 31 39.9**	**+0.5**
SHUL	**Shoufeng**	**1.88**	**122**	*e*P	**Pn**	**13 31 39.0**	**-0.4**
SXI1	**Grass Mountain**	**1.89**	**81**	*e*P	**Pn**	**13 31 39.5**	**0.0**
EHYH	**Wanrong**	**1.90**	**133**	*e*P	**Pn**	**13 31 39.9**	**+0.2**
EHYH				*e*S	**Sn**	**13 32 02.0**	**-1.1**
ELDTW	**Lidau**	**1.94**	**145**	*e*P	**Pn**	**13 31 40.3**	**-0.1**
YULB	**Yu-li**	**1.94**	**136**	P	**Pn**	**13 31 41.4**	**+1.1**
YULB	**Yu-li**	**1.94**	**136**	*e*P	**Pn**	**13 31 40.6**	**+0.3**
YULB				*e*S	**Sn**	**13 32 03.6**	**-0.4**
HGSD	**Ruisui**	**1.96**	**131**	P	**Pn**	**13 31 41.2**	**+0.7**
TWF1	**Yuli**	**1.97**	**137**	*e*P	**Pn**	**13 31 41.4**	**+0.7**
TWF1				*e*S	**Sn**	**13 32 04.5**	**-0.3**
TWB1	**Santiao Chiao**	**1.98**	**84**	*e*P	**Pn**	**13 31 41.3**	**+0.6**
TWM1	**Shoushan**	**2.04**	**164**	*e*P	**Pn**	**13 31 42.5**	**+0.8**
ZPLA	**Ao Xicun**	**2.08**	**246**	*e*P	**Pn**	**13 31 41.9**	**-0.3**
FULB	**Fuli**	**2.09**	**140**	*e*P	**Pn**	**13 31 43.6**	**+1.4**
XPSS	**Dashiqiu**	**2.15**	**9**	*e*P	**Pn**	**13 31 43.7**	**+0.6**
SSD	**Sandimen**	**2.17**	**160**	*e*P	**Pn**	**13 31 43.9**	**+0.5**
TWG	**Pinlang**	**2.28**	**150**	*e*P	**Pn**	**13 31 44.9**	**0.0**
TWGBT	**Beinan**	**2.29**	**149**	P	**Pn**	**13 31 45.6**	**+0.6**
TWGBT	**Beinan**	**2.29**	**149**	*e*P	**Pn**	**13 31 44.9**	**0.0**
MASBT	**Mashibuluo**	**2.30**	**161**	*e*P	**Pn**	**13 31 45.2**	**0.0**
MASBT				*e*S	**Sn**	**13 32 12.2**	**-0.7**
DSXP	**Dongshan**	**2.44**	**244**	*e*P	**Pn**	**13 31 46.7**	**-0.4**
SXFK	**Yanhouchang**	**2.53**	**309**	*e*P	**Pn**	**13 31 49.8**	**+1.5**

*ISK **15** 13:31:17.9, 36˚.52N×35˚.74E, h6km, ML2.4/10*
*AFAD **15** 13:31:19.0, 36˚.53N×35˚.85E, h5km±3km, ML2.5*
*GII **15** 13:31:20.6±0.0, 36˚.448N±0˚.008×35˚.549E±0˚.002, h0km, Mws2.5, confirmed*
ISC 15 13:31:19.1±1.0,**36˚.55N**±0˚.02×**35˚.76E**±0˚.03,**h8**km±9km,
n35,σ0°76/49,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASUZ	**Hatay-Arsuz**	**0.25**	**176**	P	**Pg**	**13 31 24.4**	**+0.3**
ASUZ				S	**Sg**	**13 31 28.1**	**+0.6**
YURE	**YUREGIR**	**0.30**	**340**	P	**Pb**	**13 31 26.3**	**-0.4**
TAHT	**Tahtakopru-Hat**	**0.38**	**116**	Pg	**Pg**	**13 31 25.9**	**-0.6**
TAHT				Sg	**Sg**	**13 31 32.1**	**+0.5**
CEYT	**Cey

VSHL	**Vashlovani**	**3.34**	**293**		P		**Pn**	**13 50 39.4**	**+1.6**
ZKTA	**Zakatala**	**3.35**	**300**		Pn		**Pn**	**13 50 40.2**	**+2.2**
ZKTA					Sn		**Sb**	**13 51 21.7**	**-4.2**
DDFL	**Dedoflistskaro**	**3.61**	**295**		P		**Pn**	**13 50 44.1**	**+2.4**
ORD	**Ordubad**	**3.63**	**254**		Pn		**Pn**	**13 50 42.8**	**+0.8**
ORD					Sn		**Sn**	**13 51 24.5**	**+0.3**
GDB	**GEDABAY**	**3.68**	**283**		Pn		**Pn**	**13 50 42.1**	**-0.6**
GDB					Sn		**Sn**	**13 51 28.6**	**+3.1**
LGD	**Lagodekhi**	**3.69**	**301**		P		**Pn**	**13 50 44.5**	**+1.8**
MAK	**Makhachkala**	**3.70**	**324**	⇑	iPN		**Pn**	**13 50 45.2**	**+2.4**
MAK					eS		**Sn**	**13 51 28.6**	**+2.9**
MAK					pmax		pmax				
	comp=Z,180nm,0.3s										
MAK					smax		smax				
	comp=N,928nm,0.6s										
MAK					smax		smax				
	comp=N,1μm,0.5s										
MAK					MLR		MLR				
	comp=Z,5μm,14.0s										
HNZR	**Khunzah**	**3.81**	**313**	*e*	PN		**Pn**	**13 50 46.7**	**+2.2**
SBZ	**Shahbuz**	**3.85**	**262**		Pn		**Pn**	**13 50 46.2**	**+1.3**
SBZ					Sn		**Sn**	**13 51 32.7**	**+3.1**
UNCR	**Uncukul**	**3.87**	**315**	*e*	PN		**Pn**	**13 50 47.6**	**+2.4**
KRNR	**Karanay**	**3.89**	**318**	*e*	PN		**Pn**	**13 50 47.8**	**+2.3**
NAX	**Nakhchivan**	**3.94**	**259**		PN		**Pn**	**13 50 48.0**	**+1.8**
NAX	**Nakhchivan**	**3.94**	**259**		Pn		**Pn**	**13 50 47.9**	**+1.7**
NAX					Sn		**Sn**	**13 51 33.4**	**+1.6**
QZX	**Qazax, Azerbai**	**4.03**	**287**		Pn		**Pn**	**13 50 47.9**	**+0.5**
QZX					Sn		**Sn**	**13 51 35.8**	**+1.8**
DGRG	**David-gareji**	**4.14**	**292**		P		**Pn**	**13 50 49.7**	**+0.9**
BTLR	**Botlikh**	**4.16**	**311**	*i*	PN		**Pn**	**13 50 47.3**	**-1.9**
DLMR	**Dylym**	**4.21**	**318**	*e*	PN		**Pn**	**13 50 52.4**	**+2.6**
HYR	**Heyderabad**	**4.34**	**268**		Pn		**Pn**	**13 50 52.8**	**+1.1**
HYR					Sn		**Sn**	**13 51 43.0**	**+1.3**
DVE	**Vedeno**	**4.40**	**313**	*i*	PN		**Pn**	**13 50 52.3**	**-0.2**
DVE					MLR		MLR				
	comp=Z,242nm,2.0s										
GNI	**Garni**	**4.40**	**274**		Pn		**Pn**	**13 50 53.9**	**+1.3**
	comp=Z,5.2nm,0.3s,baz=20,slow=4.3,SNR=15										
	comp=Z,30nm,0.6s										
GNI	**Garni**	**4.40**	**274**	*ce*	PN		**Pn**	**13 50 53.5**	**+0.9**
GNI					pmax		pmax				
	comp=Z,34nm,0.7s										
GNI	**Garni**	**4.40**	**274**		Pn		**Pn**	**13 50 53.8**	**+1.2**
TBLG	**Delisi**	**4.68**	**293**		P		**Pb**	**13 51 05.1**	**-3.2**
CHRG	**Chargali**	**4.79**	**301**		P		**Pn**	**13 50 58.4**	**+0.5**
SHTL	**Shatili**	**4.80**	**305**		P		**Pn**	**13 50 59.5**	**+1.4**
TRLG	**Trialeti**	**5.08**	**290**		P		**Pn**	**13 51 02.1**	**+0.2**
ALIG	**Mtskhetisjvari**	**5.57**	**294**		P		**Pn**	**13 51 08.6**	**0.0**
GARIG	**Gari**	**5.88**	**298**		P		**Pn**	**13 51 14.4**	**+1.6**
NCK	**Nalchik**	**6.22**	**306**	*i*	P		**Pn**	**13 51 15.8**	**-1.6**
NCK					MLR		MLR				
	comp=Z,1μm,13.0s										
KBZ	**Khabaz**	**6.77**	**306**		Pn		**Pn**	**13 51 26.3**	**+1.4**
	comp=Z,3.4nm,0.4s,baz=123,slow=6.9,SNR=16										
KBZ	**Khabaz**	**6.77**	**306**	*i*	P		**Pn**	**13 51 23.4**	**-1.5**
PYA1	**Pyatigorsk**	**6.83**	**309**	*i*	P		**Pn**	**13 51 24.0**	**-1.8**
SHA1	**Shidzhatmaz**	**6.93**	**305**	*i*	P		**Pn**	**13 51 25.6**	**-1.7**
KVAR	**Kislovodsk Arr**	**7.01**	**307**		Pn		**Pn**	**13 51 28.2**	**-0.2**
	baz=119,slow=14										
KVAR					Sn		**Sn**	**13 52 42.8**	**-4.7**
	baz=103,slow=9.7										
	comp=Z,4.0nm,0.4s										
KIV	**Kislovodsk**	**7.02**	**307**				**Pn**	**13 51 28.4**	**0.0**
KIV	**Kislovodsk**	**7.02**	**307**	⇑	P		**Pn**	**13 51 30.4**	**+2.0**
KIV	**Kislovodsk**	**7.02**	**307**	*e*	P		**Pn**	**13 51 26.3**	**-2.1**
KIV					eS		**Sn**	**13 52 44.4**	**-3.2**
KIV					pmax		pmax				
	comp=Z,21nm,1.0s										
KIV					MLR		MLR				
	comp=Z,517nm,10.0s										
KIV	**Kislovodsk**	**7.02**	**307**		Pn		**Pn**	**13 51 26.9**	**-1.5**
	comp=Z,0.2nmcomp=Z,44nm,0.8s										
DOMR	**Dombai**	**7.40**	**299**	*i*	P		**Pn**	**13 51 32.5**	**-1.2**
DOMR				*i*	S		**Sn**	**13 52 55.5**	**-1.6**
DOMR					pmax		pmax				
	comp=Z,8.0nm,0.3s										
DOMR					smax		smax				
	comp=Z,18nm,1.1s										
DOMR					MLR		MLR				
	comp=Z,381nm,11.0s										
ARXR	**Arkhyz**	**7.74**	**300**	*i*	P		**Pn**	**13 51 37.1**	**-1.3**
ARXR					MLR		MLR				
	comp=Z,486nm,11.0s										
MARD	**Mardin**	**8.05**	**254**				**Pn**	**13 51 45.8**	**+3.2**
LABN	**Labinsk**	**8.58**	**306**	*e*	P		**Pn**	**13 51 48.4**	**-1.4**
LABN					eS		**Sn**	**13 53 23.0**	**-2.9**
LABN					pmax		pmax				
	comp=Z,19nm,0.7s										
GUZR	**Guzeripl'**	**8.68**	**301**	*i*	P		**Pn**	**13 51 50.0**	**-1.2**
GUZR					MLR		MLR				
	comp=Z,6μm,11.0s										
SOC	**Sochi**	**8.80**	**297**	*e*	P		**Pn**	**13 51 50.1**	**-2.6**
SOC				*e*				13 53 27.0			
SOC					MLR		MLR				
	comp=Z,2μm,18.0s										
ERBR	**Yeremizino-Bor**	**9.29**	**311**	*e*	P		**Pn**	**13 51 57.8**	**-1.7**
ERBR					eS		**Sn**	**13 53 41.4**	**-1.9**
ERBR					pmax		pmax				
	comp=Z,8.0nm,0.7s										
AB31	**Akbulak array**	**11.43**	**33**				**Pn**	**13 52 27.9**	**-0.9**
AB31	**Akbulak array**	**11.43**	**33**	⇑	P		**Pn**	**13 52 28.1**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=208,slow=13,SNR=58										
AB31				⇓	S		**Sn**	**13 54 33.5**	**-2.4**
	comp=Z,13nm,0.8s,baz=201,slow=22,SNR=4.3										
AB31	**Akbulak array**	**11.43**	**33**		P		**Pn**	**13 52 28.1**	**-0.7**
AB31					S		**Sn**	**13 54 33.4**	**-2.4**
ABKAR	**Akbulak array**	**11.43**	**33**				**Pn**	**13 52 30.2**	**+1.4**
AKTO	**Aktyubinsk**	**11.70**	**24**		Pn		**Pn**	**13 52 31.3**	**-1.1**
	comp=Z,2.5nm,0.3s,baz=208,slow=11,SNR=19										
AKTO					Sn		**Sn**	**13 54 34.0**	**-8.3**
	comp=Z,0.3nm,0.3s,baz=184,slow=13,SNR=2.1										
AKTO					LR		LR	13 58 32.6			
	comp=Z,1μm,18.6s,baz=170,slow=45										
	comp=Z,11nm,0.6s										
AKTO	**Aktyubinsk**	**11.70**	**24**	⇓	P		**Pn**	**13 52 30.9**	**-1.5**
	comp=Z,13nm,0.8s										
AKTO				⇑	S		**Sn**	**13 54 34.6**	**-7.6**
	comp=Z,35nm,1.1s										
AKTO	**Aktyubinsk**	**11.70**	**24**		P		**Pn**	**13 52 30.9**	**-1.5**
AKTO					S		**Sn**	**13 54 34.6**	**-7.6**
BELG	**Belogornoye**	**12.54**	**352**		Pn		**Pn**	**13 52 42.3**	**-1.7**
	comp=Z,5.2nm,0.3s,baz=328,slow=1.3,SNR=15										
BELG					Sn		**Sn**	**13 54 57.0**	**-5.9**
	comp=Z,5.0nm,0.3s,baz=144,slow=20,SNR=8.4										
	comp=Z,39nm,0.6s										
BELG	**Belogornoye**	**12.54**	**352**	*i*	P		**Pn**	**13 52 40.9**	**-3.0**
BELG					MLR		MLR				
	comp=Z,61nm,9.0s										
VRH	**Novokhopyorsk**	**12.75**	**334**	*e*	P		**Pn**	**13 52 45.8**	**-1.0**
VRH					pmax		pmax				
	comp=Z,18nm,0.7s										
BR131	**Keskin Array S**	**12.95**	**274**				**Pn**	**13 52 51.9**	**+2.3**
BR131	**Keskin Array S**	**12.95**	**274**	*i*	P		**Pn**	**13 52 50.3**	**+0.6**
BRTR	**Keskin Array B**	**12.95**	**274**		Pn		**Pn**	**13 52 51.8**	**+2.1**
	comp=Z,1.9nm,0.8s,baz=97,slow=10,SNR=8.6										
BRTR	**Keskin Array B**	**12.95**	**274**	*ce*	P		**Pn**	**13 52 52.0**	**+2.3**
BRTR					pmax		pmax				
	comp=Z,2.0nm,0.8s										
BR104	**Keskin Array S**	**12.95**	**274**		Pn		**Pn**	**13 52 50.1**	**+0.4**
	comp=Z,5.2nm,0.9s										
BR106	**Keskin Array S**	**12.96**	**274**		Pn		**Pn**	**13 52 51.7**	**+1.8**
	comp=Z,3.9nm,0.8s										
VORD	**Divnogorie**	**13.46**	**328**	*e*	P		**Pn**	**13 52 54.1**	**-2.4**
VORD					pmax		pmax				
	comp=Z,10.0nm,0.6s										
ASF	**Jabal al Asfar**	**13.47**	**239**		LR		LR	13 58 56.3			
	comp=Z,448nm,21.7s,baz=40,slow=41										
VSR	**Storozhevoye**	**13.70**	**329**	*e*	P		**Pn**	**13 52 56.8**	**-3.0**
VSR					pmax		pmax				
	comp=Z,10.0nm,0.6s										
VORR	**Voronezh**	**14.04**	**330**	*e*	P		Pn	13 52 58.4	-6.0		
VORR					pmax		pmax				
	comp=Z,80nm,0.4s										
CHM	**Chimkent**	**14.59**	**75**	*e*	P		**P**	**13 53 15.5**	**-2.7**
CHM	**Chimkent**	**14.59**	**75**	*e*	P		**P**	**13 53 15.6**	**-2.7**
BRLS	**Boroldaу**	**14.81**	**72**	*e*	P		**Pn**	**13 53 16.6**	**+1.6**
BRLS	**Boroldaу**	**14.81**	**72**	*e*	P		**Pn**	**13 53 16.7**	**+1.6**
LPSR	**Galich'ya Gora**	**14.89**	**332**	*e*	P		**Pn**	**13 53 12.1**	**-3.8**
LPSR					pmax		pmax				
	comp=Z,40nm,0.7s										
IUG	**Iuzhnay**	**14.90**	**75**	*e*	P		**P**	**13 53 19.8**	**-2.0**
IUG	**Iuzhnay**	**14.90**	**75**	*e*	P		**P**	**13 53 19.9**	**-2.0**
KK31	**Karatay Array**	**15.31**	**72**				**Pn**	**13 53 20.4**	**-1.2**
KK31					lAmb		lAmb	13 53 34.9			
	comp=Z,16nm,0.7s										
KK31	**Karatay Array**	**15.31**	**72**	⇓	P		**P**	**13 53 25.6**	**-0.6**
	comp=Z,9.7nm,0.6s										
KK31				⇓	S		**Sn**	**13 56 08.1**	**-2.5**
	comp=Z,15nm,1.2s,baz=274,slow=23,SNR=5.1										
KK31	**Karatay Array**	**15.31**	**72**		P		**Pn**	**13 53 20.5**	**-1.2**
KK31					pmax		pmax				
	comp=Z,16nm,0.7s										
KKAR	**Karatay Array**	**15.31**	**72**				**Pn**	**13 53 20.3**	**-1.3**
KKAR	**Karatay Array**	**15.31**	**72**		P		**Pn**	**13 53 20.3**	**-1.3**
BTK	**Batken**	**15.58**	**83**				**Pn**	**13 53 22.0**	**-3.3**
BTK	**Batken**	**15.58**	**83**		P		**Pn**	**13 53 22.0**	**-3.3**
BTK					pmax		pmax				
	comp=Z,20nm,0.8s										
DZA	**Taraz**	**15.89**	**73**	*e*	P		**P**	**13 53 32.4**	**-0.4**
DZA	**Taraz**	**15.89**	**73**	*e*	P		**P**	**13 53 32.4**	**-0.4**
ARK	**Arkit**	**16.34**	**77**		P		**Pn**	**13 53 33.2**	**-1.8**
EIL	**Elat**	**16.37**	**236**		LR		LR	14 01 06.2			
	comp=Z,628nm,18.6s,baz=60,slow=42										
DRK	**Karamyk**	**16.41**	**85**				**Pn**	**13 53 37.1**	**+1.1**
DRK	**Karamyk**	**16.41**	**85**		P		**Pn**	**13 53 37.2**	**+1.1**
DRK					pmax		pmax				
	comp=Z,49nm,0.3s										
TLCR		**16.75**	**295**	⇑	P		**Pn**	**13 53 40.8**	**+0.7**
TLCR		**16.75**	**295**	⇑	P		**Pn**	**13 53 40.8**	**+0.7**
TIRR	**Tirgusor**	**16.92**	**292**	⇓	P		**P**	**13 53 43.2**	**-0.9**
TIRR	**Tirgusor**	**16.92**	**292**	⇓	P		**P**	**13 53 43.2**	**-0.9**
RAYN	**Ar Rayn**	**16.96**	**196**				**Pn**	**13 53 40.7**	**-2.2**
RAYN	**Ar Rayn**	**16.96**	**196**	⇑	P		**Pn**	**13 53 41.0**	**-1.9**
TPGR	**Topolog**	**16.98**	**294**	⇓	P		**Pn**	**13 53 43.8**	**+0.9**
ARTI	**Arti**	**17.20**	**15**		P		**Pn**	**13 53 43.0**	**-2.6**
	comp=Z,9.8nm,0.4s,baz=204,slow=9.4,SNR=19										
ARTI					LR		LR	14 02 55.9			
	comp=Z,540nm,18.5s,baz=204,slow=46										
ARTI	**Arti**	**17.20**	**15**				**Pn**	**13 53 43.0**	**-2.6**
ARTI					lAmb		lAmb	13 54 04.2			
	comp=Z,36nm,0.6s										
ARTI	**Arti**	**17.20**	**15**		P		**Pn**	**13 53 45.4**	**-0.2**
ARTI					S		**Sn**	**13 56 55.5**	**-0.6**
CFR	**Carcaliu**	**17.23**	**295**	⇑	P		**Pn**	**13 53 46.7**	**+0.7**
CFR	**Carcaliu**	**17.23**	**295**	⇑	P		**Pn**	**13 53 46.7**	**+0.7**
ICOR	**Ion Corvin**	**17.32**	**291**	⇓	P		**P**	**13 53 48.4**	**-0.1**
EKS2	**Erkin-Say**	**17.69**	**74**		P		**Pn**	**13 53 52.2**	**+0.3**
	SNR=8.8										
OBN	**Obninsk**	**17.74**	**333**		P		**Pn**	**13 53 49.4**	**-2.9**
	comp=Z,11nm,0.3s,baz=100,slow=21,SNR=5.3										
OBN					LR		LR	14 02 17.5			
	comp=Z,905nm,18.1s,baz=104,slow=43										
	comp=Z,28nm,0.3s										
OBN	**Obninsk**	**17.74**	**333**		Pn		**Pn**	**13 53 48.8**	**-3.5**
OBN	**Obninsk**	**17.74**	**333**	⇑	P		**Pn**	**13 53 50.5**	**-1.7**
OBN	**Obninsk**	**17.74**	**333**	⇑	eP		**Pn**	**13 53 47.7**	**-4.6**
OBN					pmax		pmax				
	comp=Z,62nm,1.3s										
OBN					MLR		MLR				
	comp=Z,678nm,9.0s										
SORM	**Soroca**	**17.81**	**304**	⇑	P		**Pn**	**13 53 51.0**	**-2.3**
SORM	**Soroca**	**17.81**	**304**	⇑	P		**Pn**	**13 53 51.0**	**-2.3**
MOS	**Moscow**	**17.90**	**336**	*e*	P		**Pn**	**13 53 51.6**	**-2.6**
MOS				*e*	S		**Sn**	**13 57 09.4**	**-3.6**
MOS					pmax		pmax				
	comp=Z,46nm,0.8s										
MOS					MLR		MLR				
	comp=Z,900nm,15.0s										
SVE	**Sverdlovsk**	**18.10**	**18**	*e*	P		**P**	**13 54 01.5**	**+4.5**
SVE					pmax		pmax				
	comp=E,23nm,0.7s										
SVE					MLR		MLR				
	comp=E,2μm,18.0s										
ARLS	**Aral**	**18.10**	**76**		P		**P**	**13 53 59.0**	**+1.7**
AAK	**Ala-Archa**	**18.22**	**74**		P		**P**	**13 53 59.5**	**+0.9**
	comp=E,0.6nm,0.3s,baz=231,slow=6.9,SNR=13										
AAK					LR		LR	14 02 01.4			
	comp=E,545nm,21.0s,baz=284,slow=40										
	comp=E,4.3nm,0.7s										
AAK	**Ala-Archa**	**18.22**	**74**		P		**P**	**13 53 59.5**	**+0.9**
	SNR=10										
AAK	**Ala-Archa**	**18.22**	**74**	⇓	P		**P**	**13 53 59.1**	**+0.5**
	comp=E,143nm,1.3s										
AAK	**Ala-Archa**	**18.22**	**74**	*i*	P		**Pn**	**13 53 57.8**	**-0.7**
AAK					pmax		pmax				
	comp=Z,11nm,0.9s										
AAK					MLR		MLR				
	comp=Z,803nm,16.0s										
USP	**Ospenovka**	**18.23**	**72**		P		**P**	**13 54 00.2**	**+1.6**
	SNR=5.8										
UCH	**Uchtor**	**18.23**	**75**		P		**P**	**13 54 02.9**	**+3.8**
	SNR=6.0										
AKASG	**Malin Array Be**	**18.30**	**313**		P		**Pn**	**13 53 56.5**	**-2.8**
	comp=Z,5.9nm,0.3s,baz=124,slow=10,SNR=43										
	comp=Z,10nm,0.6s										
AKASG	**Malin Array Be**	**18.30**	**313**		P		**Pn**	**13 53 56.1**	**-3.1**
AKASG	**Malin Array Be**	**18.30**	**313**	*i*	P		**Pn**	**13 53 56.5**	**-2.8**
AKASG					pmax		pmax				
	comp=Z,18nm,0.6s										
AKBB	**Malin Array Si**	**18.30**	**313**				**Pn**	**13 53 56.7**	**-2.6**
AKBB					lAmb		lAmb	13 54 00.5			
	comp=Z,38nm,0.7s										
AKBB	**Malin Array Si**	**18.30**	**313**	*ce*	P		**Pn**	**13 53 56.0**	**-3.3**
AKBB					pmax		pmax				
	comp=Z,25nm,0.9s										
AKBB					MLR		MLR				
	comp=Z,478nm,9.0s										
KIEV	**Kiev**	**18.31**	**313**				**Pn**	**13 53 56.9**	**-2.4**
KIEV					lAmb		lAmb	13 54 00.5			
	comp=Z,34nm,0.6s										
KIEV	**Kiev**	**18.31**	**313**	⇑	P		**Pn**	**13 53 57.8**	**-1.5**
KIEV	**Kiev**	**18.31**	**313**	⇑	P		**Pn**	**13 53 57.8**	**-1.5**
VRI	**Vrincioaia**	**18.32**	**296**	⇑	P		**Pn**	**13 53 59.0**	**-0.5**
VRI	**Vrincioaia**	**18.32**	**296**	⇑	P		**Pn**	**13 53 59.0**	**-0.5**
ISR	**Istrita**	**18.33**	**294**	⇑	P		**Pn**	**13 54 00.1**	**+0.4**
ISR	**Istrita**	**18.33**	**294**	⇑	P		**Pn**	**13 54 00.1**	**+0.4**
PLOR	**Plostina**	**18.37**	**296**	⇑	P		**P**	**13 53 59.2**	**-0.9**
PLOR	**Plostina**	**18.37**	**296**	⇑	P		**P**	**13 53 59.2**	**-0.9**
AK22	**Malin Array Si**	**18.42**	**313**		pP		pP	13 54 05.0	-1.5
TESR	**Tescani**	**18.50**	**298**	⇓	P		**P**	**13 54 00.6**	**-0.9**
BRZS	**Berezniki**	**18.54**	**50**	*e*	P		**Pn**	**13 54 03.9**	**+1.8**
BRZS	**Berezniki**	**18.54**	**50**	*e*	P		**Pn**	**13 54 03.9**	**+1.8**
KBK	**Karagaybulak**	**18.55**	**74**		P		**Pn**	**13 54 03.8**	**+1.2**
	SNR=12										
KIRV	**Kirov**	**18.61**	**358**		P		**P**	**13 54 00.9**	**-1.6**
	comp=Z,59nm,0.5s,baz=180,slow=6.2,SNR=20										
KIRV	**Kirov**	**18.61**	**358**	*ce*	P		**P**	**13 53 59.3**	**-3.2**
ONER	**Baraj Valea Uz**	**18.63**	**298**	⇑	P		**P**	**13 54 02.9**	**-0.1**
ELND	**Elena**	**18.65**	**287**	⇑	P		**P**	**13 54 03.2**	**0.0**
COVR	**Voineasa-Covas**	**18.68**	**296**	⇓	P		**P**	**13 54 03.3**	**-0.1**
BORK	**Borovoye**	**18.80**	**39**				**P**	**13 54 03.8**	**-0.9**
BORK	**Borovoye**	**18.80**	**39**	*ce*	P		**P**	**13 54 04.5**	**-0.2**
BORK					pmax		pmax				
	comp=Z,21nm,0.7s										
BORK					MLR		MLR				
	comp=Z,1μm,13.0s										
MLR	**Muntele Rosu**	**18.80**	**295**		P		**P**	**13 54 04.4**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=152,slow=2.0,SNR=11										
	comp=Z,5.1nm,0.7s										
MLR	**Muntele Rosu**	**18.80**	**295**	⇑	P		**Pn**	**13 54 05.7**	**+0.2**
MLR	**Muntele Rosu**	**18.80**	**295**	⇑	P		**Pn**	**13 54 05.7**	**+0.2**
BVA0	**Borovoye Array**	**18.82**	**40**	⇑	P		**Pn**	**13 54 05.5**	**-0.1**
	comp=Z,9.2nm,0.7s										
BVA0	**Borovoye Array**	**18.82**	**40**		P		**Pn**	**13 54 05.4**	**-0.1**
BVAR	**Borovoye Array**	**18.82**	**40**		P		**Pn**	**13 54 05.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=231,slow=9.4,SNR=31										
BVAR					LR		LR	14 02 55.9			
	comp=Z,1μm,18.7s,baz=232,slow=42										
	comp=Z,9.9nm,0.7s										
LUBAR	**Lubar, Ukraine**	**18.82**	**309**		P		**P**	**13 54 03.1**	**-1.9**
TURR	**Turia**	**18.84**	**297**	⇓	P		**Pn**	**13 54 05.6**	**-0.3**
MI30	**MI30,Zelenitsa**	**18.91**	**312**		P		**P**	**13 54 04.2**	**-1.8**
	comp=Z,49nm,0.8s										
MI29	**MI29, Kamyanyy**	**18.97**	**311**		P		**P**	**13 54 04.9**	**-1.7**
	comp=Z,273nm,0.7s										
OZUR		**19.00**	**297**	⇓	P		**P**	**13 54 06.8**	**-0.3**
TKM2	**Tokmak 2**	**19.03**	**73**		P		**Pn**	**13 54 08.9**	**+0.6**
	SNR=23										
KMPD	**K-Podol'skiy**	**19.14**	**304**		P		**P**	**13 54 06.5**	**-2.0**
KMPD					P		**P**	**13 54 06.5**	**-2.0**
DOPR	**Dopca**	**19.26**	**296**	⇑	P		**P**	**13 54 09.9**	**+0.1**
NIL	**Nilore**	**19.28**	**102**				**Pn**	**13 54 12.4**	**+1.1**
NIL					lAmb		lAmb	13 54 20.5			
	comp=Z,30nm,0.8s										
NIL	**Nilore**	**19.28**	**102**		P		**Pn**	**13 54 12.4**	**+1.1**
NIL					pmax		pmax				
	comp=Z,30nm,0.8s										
BOOM	**Boomskoye usch**	**19.29**	**74**		lAmb		lAmb	13 54 33.2			
	comp=Z,40nm,1.4s										
KSH2	**Kashi**	**19.34**	**84**		P		**Pn**	**13 54 12.6**	**+0.4**
KSH2					pmax		pmax				
	comp=Z,6.0nm,0.7s										
KSH2					LR		LR				
	comp=Z,710nm,17.9s										
KSH2					LR		LR				
	comp=Z,920nm,13.7s										
KSH2					LR		LR				
	comp=Z,770nm,16.5s										
HORU	**Horodok**	**19.37**	**306**		P		**P**	**13 54 08.7**	**-2.4**
HORU	**Horodok**	**19.37**	**306**		P		**P**	**13 54 09.1**	**-1.9**
NRN	**Naryn**	**19.38**	**77**		lAmb		lAmb	13 54 32.5			
	comp=Z,37nm,1.5s										
MTUR	**Matau**	**19.38**	**294**	⇓	P		**Pn**	**13 54 12.0**	**-0.5**
MTUR	**Matau**	**19.38**	**294**	⇓	P		**Pn**	**13 54 12.0**	**-0.5**
VOIR		**19.42**	**295**	⇑	P		**P**	**13 54 11.9**	**+0.2**
VOIR		**19.42**	**295**	⇑	P		**P**	**13 54 11.9**	**+0.2**
VOIR		**19.42**	**295**		P		**P**	**13 54 11.8**	**+0.2**
	comp=Z,16nm,0.8s										
ULHL	**Ulahol**	**19.52**	**75**		P		**Pn**	**13 54 14.9**	**+0.6**
	SNR=7.5										
PLVB	**Pleven**	**19.58**	**288**	⇓	P		**P**	**13 54 14.0**	**+0.7**
BURAR	**Bucovina Array**	**19.70**	**301**				**P**	**13 54 13.4**	**-1.3**
BURAR					lAmb		lAmb	13 54 26.3			
	comp=Z,17nm,0.5s										
BURAR	**Bucovina Array**	**19.70**	**301**	⇑	P		**P**	**13 54 14.1**	**-0.6**
BURAR	**Bucovina Array**	**19.70**	**301**	⇑	P		**P**	**13 54 14.1**	**-0.6**
BUR08	**Bucovina Ar. S**	**19.71**	**301**				**P**	**13 54 12.8**	**-2.1**
KSV	**Kosov**	**19.97**	**303**		P		**P**	**13 54 15.2**	**-2.3**
TNR	**Turnu Rosu**	**19.99**	**295**	⇓	P		**P**	**13 54 17.9**	**+0.1**
TNR	**Turnu Rosu**	**19.99**	**295**	⇓	P		**P**	**13 54 17.9**	**+0.1**
AAA	**Alma-Ata**	**20.00**	**72**	*e*	P		**Pn**	**13 54 21.1**	**+1.3**
AAA	**Alma-Ata**	**20.00**	**72**	*e*	P		**Pn**	**13 54 21.2**	**+1.4**
TNSS	**Tian-Shan**	**20.02**	**73**	*e*	P		Pn	13 54 21.1	+0.7
TNSS	**Tian-Shan**	**20.02**	**73**	*e*	P		Pn	13 54 21.2	+0.8
MDOK	**Medeo**	**20.09**	**72**	*e*	P		Pn	13 54 22.3	+1.3
MDOK	**Medeo**	**20.09**	**72**	*e*	P		Pn	13 54 22.4	+1.4
LOT	**Lotru**	**20.31**	**294**	⇓	P		**P**	**13 54 21.4**	**-0.1**
STNU	**Starunia**	**20.43**	**304**		P		**P**	**13 54 21.2**	**-1.4**
RNPP5	**Staryi Chortor**	**20.44**	**311**		P		**P**	**

OJC	Ojcow	23.78 306	eP		P		13 54 57.9	+0.1	
OJC	Ojcow	23.78 306			P		13 54 57.0	-0.8	
OJC	Ojcow	23.78 306	P		P		13 54 57.0	-0.8	
OJC	Ojcow	23.78 306	P		P		13 54 57.1	-0.7	
	comp=Z,20nm,0.9s								
VSU	Vasula	23.89 328	ceP		P		13 54 56.3	-2.5	
VSU			pmax	pmax					
	comp=Z,50nm,0.9s								
VSU			MLR	MLR					
	comp=Z,717nm,6.0s								
VSU	Vasula	23.89 328	eP		P		13 54 56.9	-1.9	
MORH	Mrgy, Hungar	23.95 296	⇓P		P		13 54 58.7	-0.7	
MK31	Makanchi Array	23.97 63	⇑P		P		13 55 00.8	+1.1	
	comp=Z,14nm,0.8s,baz=260,slow=8.1,SNR=72								
MK31	Makanchi Array	23.97 63	ceP		P		13 54 59.1	-0.6	
MKAR	Makanchi Array	23.97 63	P		P		13 55 00.9	+1.2	
	comp=Z,5.4nm,0.7s,baz=264,slow=7.8,SNR=72								
MKAR			LR		LR		14 05 32.6		
	comp=Z,397nm,18.9s,baz=268,slow=39								
	comp=Z,5.4nm,0.7s								
MKAR	Makanchi Array	23.97 63			P		13 55 00.5	+0.8	
MKAR	Makanchi Array	23.97 63	P		P		13 55 00.5	+0.8	
PBUR	Paburge	24.68 320	eP		P		13 55 05.7	-0.3	
MPLH	Magyarpolny	24.78 298	P		P		13 55 07.0	0.0	
	comp=Z,33nm,0.4s								
ARBE	Arbavere	24.82 330	eP		P		13 55 07.3	+0.1	
MAUC	Maruska	24.86 303	eP		P		13 55 08.7	+0.9	
JAVC	Velka Javorina	24.88 302	eP		P		13 55 09.1	+1.1	
STEB	Steborice	25.00 304	eP		P		13 55 08.8	-0.2	
MODS	Modra-Piesok	25.07 301	eP		P		13 55 10.9	+1.2	
MODS	Modra-Piesok	25.07 301	eP		P		13 55 10.9	+1.2	
MORC	Moravsky Berou	25.11 304	⇑P		P		13 55 09.8	-0.3	
MORC	Moravsky Berou	25.11 304	⇑P		P		13 55 09.8	-0.3	
MORC	Moravsky Berou	25.11 304	eP		P		13 55 10.2	+0.1	
MTSE	Matsula	25.25 327	eP		P		13 55 11.3	+0.2	
VRAC	Vranov	25.65 303	P		P		13 55 15.7	+0.8	
	comp=Z,2.8nm,0.6s,baz=109,slow=10,SNR=5.1								
VRAC			LR		LR		14 08 20.8		
	comp=Z,307nm,20.6s,baz=72,slow=44								
	comp=Z,2.8nm,0.6s								
VRAC	Vranov	25.65 303	eP		P		13 55 16.1	+1.2	
JOF	Joensuu	25.66 340	eP		P		13 55 14.5	-0.3	
RONA	Rosalia, Austr	25.66 299	iP		P		13 55 15.5	+0.4	
	comp=Z,5.7nm,0.9s								
KRUC	Moravsky	25.74 302	eP		P		13 55 16.7	+1.0	
ZSN	Zaisan	25.78 62	eP		P		13 55 19.4	+3.3	
ZSN	Zaisan	25.78 62	eP		P		13 55 19.5	+3.3	
MEF	Metsahovi	25.94 330	eP		P		13 55 17.1	-0.3	
CONA	Conrad Observa	25.97 299	eP		P		13 55 18.6	+0.6	
	comp=Z,6.7nm,1.6s								
DPC	Dobruska-Polom	25.99 305	eP		P		13 55 20.0	+2.0	
DPC	Dobruska-Polom	25.99 305	eP		P		13 55 20.0	+2.0	
DPC	Dobruska-Polom	25.99 305	P		P		13 55 18.4	+0.4	
	comp=Z,20nm,0.8s								
OSTC	Ostas	26.09 305	eP		P		13 55 20.3	+1.4	
OSTC	Ostas	26.09 305	eP		P		13 55 20.3	+1.4	
KSP	Ksiaz	26.10 306	eP		P		13 55 21.3	+2.3	
FIA1	FINESS Array S	26.15 333			P		13 55 19.6	+0.4	
FINES	FINESS Array B	26.15 333	P		P		13 55 18.9	-0.3	
	comp=Z,41nm,0.7s,baz=141,slow=9.6,SNR=84								
FINES	FINESS Array B	26.15 333			P		13 55 18.4	-0.8	
FINES	FINESS Array B	26.15 333	ceP		P		13 55 18.8	-0.4	
FINES			pmax	pmax					
	comp=Z,41nm,0.7s								
ARSA	Arzberg	26.15 298			P		13 55 19.0	-0.5	
ARSA	Arzberg	26.15 298	iP		P		13 55 19.7	+0.2	
	comp=Z,6.9nm,0.8s								
CHVC	Chvalec	26.20 305	eP		P		13 55 20.7	+0.8	
CHVC	Chvalec	26.20 305	eP		P		13 55 20.7	+0.8	
UPC	Upice	26.21 305	eP		P		13 55 21.3	+1.3	
UPC	Upice	26.21 305	eP		P		13 55 21.3	+1.3	
OBKA	Obir	26.79 296	eP		P		13 55 25.5	+0.1	
	comp=Z,4.7nm,0.6s,SNR=7.5								
ZALV	Zalesovo Beam	26.95 47	P		P		13 55 27.5	+0.9	
	comp=Z,0.8nm,0.3s,baz=263,slow=8.8,SNR=6.7								
ZALV			LR		LR		14 07 46.6		
	comp=Z,729nm,18.8s,baz=253,slow=40								
	comp=Z,0.8nm,0.3s								
ZALV	Zalesovo Beam	26.95 47			P		13 55 26.9	+0.3	
ZALV	Zalesovo Beam	26.95 47	P		P		13 55 26.9	+0.3	
SUF	Sumiainen	27.02 335	eP		P		13 55 26.5	-0.6	
MOA	Molln	27.04 299	iP		P		13 55 27.8	+0.3	
	comp=Z,8.1nm,1.2s								
KEF	Keuruu	27.06 334	eP		P		13 55 27.0	-0.5	
PRU	Pruhonice	27.07 304	eP		P		13 55 30.0	+2.3	
PRU	Pruhonice	27.07 304	eP		P		13 55 30.0	+2.3	
CKRC	Cesky Krumlov	27.08 301	eP		P		13 55 28.5	+0.6	
CKRC	Cesky Krumlov	27.08 301	eP		P		13 55 28.5	+0.6	
PVCC	Panska Ves	27.13 305	eP		P		13 55 28.6	+0.4	
PVCC	Panska Ves	27.13 305	eP		P		13 55 28.6	+0.4	
MYKA	Terra Mystica	27.42 296	iP		P		13 55 30.6	-0.4	
	comp=Z,4.1nm,1.0s								
BIOA	Bad Ischl, Aus	27.45 299	eP		P		13 55 31.5	+0.3	
	comp=Z,3.7nm,0.7s								
RAF	Rauma	27.46 330	eP		P		13 55 29.2	-1.9	
PRED	Cave del Predi	27.47 296	P		P		13 55 30.0	-1.4	
GERES	GERESS Array B	27.48 301	P		P		13 55 31.3	-0.2	
	comp=Z,3.6nm,0.8s,baz=99,slow=8.2,SNR=16								
GERES			LR		LR		14 08 56.2		
	comp=Z,245nm,18.8s,baz=24,slow=42								
	comp=Z,3.6nm,0.8s								
BRG	Berggiesshubel	27.57 305	eP		P		13 55 35.9	+3.7	
BRG			Amp				13 55 38.8		
	comp=Z,3.4nm,0.8s								
KHC	Kasperske Hory	27.59 302	eP		P		13 55 35.0	+2.5	
KHC	Kasperske Hory	27.59 302	eP		P		13 55 35.0	+2.5	
KBA	Koelnbreinsper	27.63 297	iP		P		13 55 33.3	+0.3	
	comp=Z,9.2nm,0.7s,SNR=11								
AAL	Aland	27.69 327	eP		P		13 55 32.3	-0.9	
WMQ	Urumqi	27.80 70	eP		P		13 55 37.3	+2.9	
WMQ			pmax	pmax					
	comp=Z,14nm,0.9s								
WMQ			LR		LR				
	comp=Z,270nm,18.9s								
LESA	Schwarzleotal	28.09 298	eP		P		13 55 36.9	-0.1	
	comp=Z,16nm,0.6s,SNR=18								
ABTA	Abfaltersbach	28.20 296	iP		P		13 55 37.8	-0.2	
	comp=Z,5.8nm,1.2s								
CLL	Collm	28.23 306	P		P		13 55 37.3	-0.7	
CLL			IAmb		IAmb		13 56 06.2		
	comp=Z,11nm,1.2s								
CLL	Collm	28.23 306	eP		P		13 55 38.0	0.0	
CLL			e				13 55 41.0		
CLL	Collm	28.23 306	eP		P		13 55 38.0	0.0	
CLL			ex		x		13 55 41.0		
CLL			ex		x		13 56 05.0		
VAF	Ylistaro	28.41 333	eP		P		13 55 39.0	-0.4	
WTTA	Wattenberg	28.80 298	eP		P		13 55 43.0	-0.5	
	comp=Z,16nm,0.7s,SNR=10								
WATA	Walderalm	28.84 298	iP		P		13 55 42.9	-0.9	
	comp=Z,5.9nm,0.8s								
SQTA	Sankt Quirin	29.09 297	iP		P		13 55 45.0	-0.9	
	comp=Z,5.6nm,0.6s								
ATD	Arta Tunnel	29.16 195	LR		LR		14 09 02.0		
	comp=Z,9.9nm,18.4s,baz=16,slow=40								
MOTA	Moosalm	29.16 298	iP		P		13 55 45.6	-1.0	
	comp=Z,6.2nm,0.6s								
APA	Apatity	29.18 347	⇓eP		P		13 55 38.2	-8.1	
APA			pmax	pmax					
	comp=Z,9.0nm,1.1s								
APA			MLR	MLR					
	comp=Z,2μm,18.8s								
LVZ	Lovozero	29.27 348	P		P		13 55 47.1	0.0	
LVZ	Lovozero	29.27 348	P		P		13 55 47.2	0.0	
LVZ			pmax	pmax					
	comp=Z,18nm,0.9s								
OSSC	Osservatorio P	29.29 290	IAmb		IAmb		13 55 49.2		
	comp=Z,10nm,0.8s								
RETA	Reutte	29.39 298	eP		P		13 55 47.5	-1.1	
	comp=Z,6.0nm,1.2s								
FETA	Feichten	29.42 297	eP		P		13 55 48.1	-0.8	
	comp=Z,7.6nm,0.9s,SNR=7.8								
FUORN	Ofenpass-Fuorn	29.75 296	IAmb		IAmb		13 56 01.7		
	comp=Z,17nm,1.5s								
DAVA	Damuels	30.00 298	iP		P		13 55 52.9	-1.1	
	comp=Z,8.2nm,0.8s								
DAVOX	Davos/Dischmat	30.01 297	P		P		13 55 53.9	-0.3	
	comp=Z,7.3nm,0.7s,baz=90,slow=7.9,SNR=20								
DAVOX			LR		LR		14 10 36.4		
	comp=Z,650nm,20.2s,baz=74,slow=42								
	comp=Z,7.3nm,0.7s								
TUE	Stuetta	30.39 296			P		13 55 56.9	-0.6	
TUE			IAmb		IAmb		13 55 58.9		
	comp=Z,5.8nm,0.8s								
HFS	Hagfors	30.43 324	P		P		13 55 57.3	-0.2	
	comp=Z,21nm,0.8s,baz=115,slow=8.9,SNR=36								
HFS			LR		LR		14 09 52.7		
	comp=Z,698nm,18.6s,baz=72,slow=40								
	comp=Z,21nm,0.8s								
NC602	NORSAR Array S	31.65 324	eP		P		13 56 07.8	-0.5	
NB2	NORSAR Subarra	31.92 324	P		P		13 56 09.7	-0.9	
	comp=Z,4.6nm,0.6s,baz=112,slow=8.6								
NB2	NORSAR Subarra	31.92 324	AMP		P		13 56 09.7	-0.9	
	comp=Z,4.6nm,0.6s								
NB2			P		P		13 56 09.7	-0.9	
NOA	NORSAR Array B	31.92 324	P		P		13 56 09.4	-1.2	
	comp=Z,3.1nm,0.9s,baz=114,slow=8.1,SNR=16								
	comp=Z,3.1nm,0.9s								
KONO	Kongsberg	32.16 321	eP		P		13 56 11.7	-1.0	
BNI	Bardonecchia	32.37 294	IAmb		IAmb		13 56 16.1		
	comp=Z,6.9nm,0.7s								
ARA0	ARCESS Array S	32.40 344	eP		P		13 56 15.2	+0.5	
ARCES	ARCESS Array B	32.40 344	P		P		13 56 14.8	+0.1	
	comp=Z,2.7nm,0.5s,baz=140,slow=9.1,SNR=21								
	comp=Z,2.7nm,0.5s								
WLF	Walferdange	32.46 302	dP		P		13 56 16.2	+0.7	
	comp=Z,9.7nm,1.0s								
BTNL	Ternell	32.49 304	dP		P		13 56 17.7	+1.9	
	comp=Z,12nm,1.0s								
KTK1	Kautokeino	32.50 342	eP		P		13 56 15.7	+0.1	
KEST	Kesra	32.54 276	P		P		13 56 17.4	+0.9	
	comp=Z,7.0nm,1.0s,baz=339,slow=7.2,SNR=4.6								
	comp=Z,7.0nm,1.0s								
MEM	Membach	32.57 304	dP		P		13 56 17.4	+1.0	
	comp=Z,9.7nm,1.0s								
LEIR	Leirfjorden	33.55 333	eP		P		13 56 25.4	+0.7	
FAUS	Fauske	33.56 336	eP		P		13 56 25.0	+0.2	
JETT	Jettan, Norway	33.59 341	eP		P		13 56 25.3	+0.2	
ODD1	Odda	33.67 321	eP		P		13 56 27.2	+1.2	
STOK	Stokkvaagen	33.70 334	eP		P		13 56 27.0	+1.0	
KONS	Konsvik	33.76 334	eP		P		13 56 27.4	+0.9	
VAGH	Vaagaholmen	33.83 334	eP		P		13 56 28.4	+1.3	
STEI	Steigen	33.91 337	eP		P		13 56 28.1	+0.3	
TRO	Tromso	34.01 341	eP		P		13 56 28.9	+0.2	
LOF	Lofoten	34.54 337	eP		P		13 56 33.7	+0.3	
NRIK	Norii'sk	35.30 22	LR		LR		14 14 32.2		
	comp=Z,390nm,19.4s,baz=230,slow=42								
SHL	Shillong	37.33 100			P		13 56 58.3	+0.4	
SHL	Shillong	37.33 100	P		P		13 56 58.3	+0.4	
SHL			pmax	pmax					
	comp=Z,13nm,0.7s								
GTA2	Gaotai	37.50 74	eP		P		13 57 01.4	+2.2	
GTA2			pP	pP			13 57 06.4	+0.7	
GTA2			pmax	pmax					
	comp=Z,3.0nm,1.2s								
GTA2			LR	LR					
	comp=Z,280nm,14.2s								
GTA2			LR	LR					
	comp=Z,410nm,13.8s								
GTA2			LR	LR					
	comp=Z,470nm,16.4s								
EKA	Eskdalemuir Ar	38.21 312	P		P		13 57 04.6	-0.3	
	comp=Z,6.9nm,0.6s,baz=98,slow=8.1,SNR=16								
EKA			LR		LR		14 12 60.0		
	comp=Z,263nm,20.9s,baz=21,slow=37								
	comp=Z,6.9nm,0.6s								
HOPEN	Hopen	38.26 351	eP		P		13 57 04.9	-0.1	
BRDH	Bariadhala	38.78 104	LR		LR		14 17 03.4		
	comp=Z,248nm,21.2s,baz=2.0,slow=42								
SONM	Songino Array	40.25 60	P		P		13 57 22.9	+0.8	
	comp=Z,0.8nm,0.6s,baz=270,slow=9.6,SNR=7.1								
SONM			LR		LR		14 17 12.6		
	comp=Z,265nm,18.4s,baz=308,slow=41								
	comp=Z,0.8nm,0.6s								
SONM	Songino Array	40.25 60	P		P		13 57 22.7	+0.5	
SONM	Songino Array	40.25 60	P		P		13 57 22.7	+0.5	
SONM			pmax	pmax					
	comp=Z,1.0nm,1.0s								
ULN	Ulaanbaatar	40.68 60			P		13 57 26.5	+0.8	
ULN			IAmb		IAmb		13 57 46.4		
	comp=Z,9.1nm,1.1s								
ULN	Ulaanbaatar	40.68 60	ceP		P		13 57 26.6	+0.8	
ULN			pmax	pmax					
	comp=Z,13nm,2.5s								
ULN			MLR	MLR					
	comp=Z,203nm,9.0s								
SPA0	Spitsbergen Ar	40.74 350	eP		P		13 57 26.9	+1.2	
SPITS	Spitsbergen Ar	40.74 350	P		P		13 57 26.6	+0.9	
	comp=Z,11nm,0.7s,baz=138,slow=11,SNR=33								
	comp=Z,11nm,0.7s								
ESDC	Sonseca Array	41.24 288	P		P		13 57 29.4	-0.9	
	comp=Z,5.4nm,0.6s,baz=61,slow=8.6,SNR=47								
ESDC			LR		LR		14 18 14.3		
	comp=Z,357nm,18.1s,baz=5.5,slow=42								
	comp=Z,5.4nm,0.6s								
ESDC	Sonseca Array	41.24 288	P		P		13 57 29.0	-1.4	
LZDM	Lanzhou Array	41.63 78	P		P		13 57 35.7	+1.9	
	comp=Z,0.4nm,0.3s,baz=293,slow=7.7,SNR=4.6								
	comp=Z,0.4nm,0.3s								
LZH	Lanzhou	41.69 78	eP		P		13 57 35.8	+1.6	
LZH			pP	pP			13 57 41.5	+0.8	
LZH			pmax	pmax					
	comp=Z,7.0nm,1.2s								
LZH			LR	LR					
	comp=Z,280nm,14.1s								
LZH			LR	LR					
	comp=Z,290nm,12.7s								
LZH			LR	LR					
	comp=Z,440nm,14.1s								
PBRG	Braganca	42.59 292	eP		P		13 57 45.8	+4.4	
PCBR	Castelo Branco	43.75 289	eP		P		13 57 50.4	-0.3	
PVIS	Viseu	43.76 291	eP		P		13 57 51.3	+0.5	
PMRV	Marv??o	43.83 289	eP		P		13 57 52.0	+0.6	
PBAR	Barrancos	44.01 287	eP		P		13 57 52.0	-0.8	
PESTR	Estremoz	44.17 288	P		P		13 57 53.3	-0.7	
PESTR	Estremoz	44.17 288	eP		P		13 57 53.6	-0.4	
MBAR	Mbarara	44.26 209	LR		LR		14 18 20.7		
	comp=Z,228nm,18.2s,baz=26,slow=39								
PMTG	Montargil	44.56 289	eP		P		13 57 57.1	-0.1	
PBEJ	Beja	44.67 287	eP		P		13 57 59.2	+1.1	
PVAQ	Vaqueiros	44.79 286	eP		P		13 57 58.9	-0.1	
HHC	Hu-ho-hao-te	45.66 68	eP		P		13 58 07.3	+1.3	
HHC			pmax	pmax					
	comp=Z,5.0nm,0.6s								
HHC			pmax	pmax					
	comp=Z,240nm,4.9s								
KMI2	Kunming	45.84 92	P		P		13 58 09.5	+1.7	
KMI2			pmax	pmax					
	comp=Z,6.0nm,0.8s								
KMI2			LR	LR					
	comp=Z,220nm,22.3s								
KMI2			LR	LR					
	comp=Z,160nm,21.6s								
CHTO	Chiang Mai	46.55 102	P		P		13 58 12.7	-0.5	
CHTO	Chiang Mai	46.55 102	P		P		13 58 12.7	-0.5	
CHTO			pmax	pmax					
	comp=Z,4.0nm,0.8s								
CMAR	Chiang Mai Arr	46.77 103	P		P		13 58 16.4	+1.5	
	comp=Z,2.9nm,0.9s,baz=302,slow=8.2,SNR=15								
CMAR			LR		LR		14 23 06.5		
	comp=Z,111nm,20.8s,baz=290,slow=43								
	comp=Z,2.9nm,0.9s								
CMAR	Chiang Mai Arr	46.77 103	P		P		13 58 15.6	+0.7	
BORG	Borgarnes	47.05 326	LR		LR		14 18 02.4		
	comp=Z,515nm,19.0s,baz=89,slow=36								
TIXI	Tiksi	48.98 24	LR		LR		14 23 43.0		
	comp=Z,431nm,20.3s,baz=306,slow=42								
TORD	Torodi Ar. Bea	50.38 252	P		P		13 58 41.7	-1.0	
	comp=Z,0.5nm,0.4s,baz=31,slow=2.9,SNR=7.2								
	comp=Z,0.5nm,0.4s								
YAK	Yakutsk	50.76 37	LR		LR		14 23 33.9		
	comp=Z,849nm,18.2s,baz=278,slow=40								
TIA	Tai'an	51.47 72	P		P		13 58 47.3	-3.4	
TIA			pmax	pmax					
	comp=Z,7.0nm,0.6s								
HEH	HeiHe	52.95 52	eP		P		13 59 02.4	+0.9	
NJ2	Nanjing	54.65 75	eP		P		13 59 15.3	+1.2	
NJ2			pmax	pmax					
	comp=Z,9.0nm,0.6s								
KLR	Kul'dur	55.95 51	LR		LR		14 25 17.5		
	comp=Z,52nm,18.4s,baz=341,slow=38								
PSI	Prapat	57.32 117	P		P		13 59 33.4	-0.1	
PSI			pmax	pmax					
	comp=Z,7.0nm,0.9s								
RPSI	Rantau Prapat	57.39 117	P		P		13 59 33.4	-0.5	
RPSI			IAmb		IAmb		14 00 01.5		
	comp=Z,6.5nm,0.9s								
SFJD	Kangerlussuaq	57.95 333	LR		LR		14 27 11.2		
	comp=Z,382nm,19.4s,baz=129,slow=39								
OPO	Ambohidratompo	58.35 184	LR		LR		14 26 39.6		
	comp=Z,181nm,20.2s,baz=174,slow=38								
KSRS	Korea Array	58.62 65	P		P		13 59 43.0	+0.8	
	comp=Z,1.3nm,0.7s,baz=292,slow=6.3,SNR=4.2								
	comp=Z,1.3nm,0.7s								
BILL	Bilibino	62.12 23	iP		P		14 00 06.6	+0.9	
BILL			pmax	pmax					
	comp=Z,2.0nm,1.0s								
BILL			MLR	MLR					
	comp=Z,220nm,19.0s								
JNU	Nakatsue	62.89 68	LR		LR		14 30 42.5		
	comp=Z,165nm,18.4s,baz=358,slow=39								
JOW	Kunigami	64.37 76	LR		LR		14 33 19.1		
	comp=Z,146nm,18.6s,baz=72,slow=40								
FRB	Frobisher Bay	65.93 335	P		P		14 00 30.9	+0.2	
	comp=Z,6.8nm,0.8s,baz=49,slow=7.1,SNR=11								
FRB			LR		LR		14 28 49.5		
	comp=Z,392nm,18.6s,baz=92,slow=36								
	comp=Z,6.8nm,0.8s								
FRB	Frobisher Bay	65.93 335	P		P		14 00 31.0	+0.2	
MJAR	Matsushiro Arr	66.16 62	LR		LR		14 31 59.7		
	comp=Z,198nm,19.0s,baz=323,slow=38								
TSUM	Tsumeb	66.41 214	P		P		14 00 35.7	+1.2	
	comp=Z,0.6nm,0.4s,baz=148,slow=22,SNR=1.6								
	comp=Z,0.6nm,0.4s								
A36M	Sachs Harbour	68.27 359			P		14 00 45.8	+0.2	
LBTB	Lobatse	68.72 204	P		P		14 00 50.6	+1.6	
	comp=Z,2.7nm,0.7s,baz=287,slow=22,SNR=4.2								
	comp=Z,2.7nm,0.7s								
LBTB	Lobatse	68.72 204	P		P		14 00 49.8	+0.8	
LBTB			IAmb		IAmb		14 00 52.1		
	comp=Z,2.7nm,0.7s								
LBTB	Lobatse	68.72 204	P		P		14 00 49.8	+0.8	
LBTB			pmax	pmax					
	comp=Z,3.0nm,0.7s								
C18K	Utukok River	69.12 12			P		14 00 51.8	+0.9	
C18K			IAmb		IAmb		14 01 16.8		
	comp=Z,5.3nm,0.8s								
D19K	Kuna River	69.72 11	P		P		14 00 56.6	+1.9	
D19K			IAmb		IAmb		14 01 13.5		
	comp=Z,5.8nm,1.1s								
LEM	Lembang	70.23 118	LR		LR		14 34 46.4		
	comp=Z,70nm,20.4s,baz=298,slow=38								
D25K	Kavik River	70.28 6	IAmb		IAmb		14 01 28.8		
	comp=Z,11nm,1.4s								
E19K	Redstone River	70.81 11	IAmb		IAmb		14 01 26.7		
	comp=Z,4.9nm,0.8s								
F21K	Alatna River	71.55 10	IAmb		IAmb		14 01 27.4		
	comp=Z,4.6nm,0.9s								
G19K	Purcell Mounta	72.06 11	IAmb		IAmb		14 01 45.0		
	comp=Z,8.2nm,1.5s								
BOSA	Boshof	72.19 203	P		P		14 01 10.9	+0.7	
	comp=Z,2.1nm,0.7s,baz=14,slow=6.2,SNR=4.9								
	comp=Z,2.1nm,0.7s								
H21K	Melozitna Rive	73.12 10	IAmb		IAmb		14 01 22.5		
	comp=Z,9.7nm,1.3s								
J14K	Nanvaranak Lak	74.01 16	IAmb		IAmb		14 01 26.3		
	comp=Z,4.3nm,0.9s								
ILAR	Eielson Array	74.67 8	P		P		14 01 25.3	+1.1	
	comp=Z,0.6nm,0.9s,baz=338,slow=5.5,SNR=4.8								
ILAR			LR		LR		14 38 53.6		
	comp=Z,138nm,20.7s,baz=7.5,slow=40								
	comp=Z,0.6nm,0.9s								
I30M	Mount Dempster	74.97 3	IAmb		IAmb		14 02 01.4		
	comp=Z,6.6nm,1.0s								
SHEM	Shemya Is, Ala	75.54 32	LR		LR		14 38 51.2		
	comp=Z,226nm,18.9s,baz=294,slow=39								
SKT	Skwentna	76.81 10			P		14 01 37.4	+0.8	
SKT			IAmb		IAmb		14 02 18.5		
	comp=Z,11nm,1.4s								
SUR	Sutherland	77.09 205	LR		LR		14 38 59.4		
	comp=Z,181nm,19.0s,baz=14,slow=38								
YKA	Yellowknife Ar	77.14 353	P		P		14 01 38.6	+0.2	
	comp=Z,0.9nm,0.7s,baz=5.8,slow=6.6,SNR=21								
	comp=Z,0.9nm,0.7s								
KDAK	Kodiak Island	80.67 12	LR		LR		14 44 45.3		
	comp=Z,148nm,18.6s,baz=354,slow=41								
ULM	Lac du Bonnet	85.39 339	LR		LR		14 42 47.0		
	comp=Z,250nm,18.4s,baz=14,slow=37								
NEW	Newport	91.42 352	LR		LR		14 47 25.5		
	comp=Z,221nm,19.7s,baz=34,slow=38								
SJG	San Juan	97.44 301	LR		LR		14 43 28.3		
	comp=Z,71nm,21.1s,baz=316,slow=33								
NVL	N'lazarevskaya	113.91 193	iP	PKIKP	PKiKP		14 08 23.8	+1.0	
NVL			e				14 09 17.7		
NVL			ePPP	PPP			14 11 41.8		
NVL			e				14 15 36.0		
NVL			ePS	PS			14 18 55.2	+1.4	
NVL			eSS	SS			14 25 09.1	+3.8	
NVL			eSSS	SSS			14 29 23.0		
NVL			pmax	pmax					
	comp=Z,21nm,1.3s								
NVL			MLR	MLR					
	comp=Z,626nm,23.0s								

IDC ***15*** *13:53:20.4±1.0, 55.˚25N×34.˚92W, h0km, mb3.4/8, mbtmp3.4/8, MS4.2/3, Error ellipse: s-maj=41.5km s-min=17.9

PFO	Pinyon Flats O	58.50	285	P	P	14 03 19.1	+0.2
PFO				IAmb	IAmb	14 03 25.6	
	comp=Z,4.5nm,1.0s						
MKAR	Makanchi Array	65.53	42	P	P	14 04 06.7	+0.9
ASAR	Alice Springs	147.48	19	PKPbc	PKPbc	14 13 06.2	-0.3
	comp=Z,1.2nm,0.8s,baz=350,slow=2.1,SNR=12						
ASAR	Alice Springs	147.48	19		PKPbc	14 13 06.0	-0.6

*IDC **15** 13:56:17.7±1.9,21°.74N×143°.22E,h214km±17km, mb3.5/18,mbtmp4.1/20,Error ellipse: s-maj=14.6km s-min=11.2km az=85.0*
*JMA **15** 13:56:27.5±0.2,22°.№1°×14°.4E±°,h317km,MV4.3/37, MARIANA ISLANDS REGION*
ISC 15 13:56:26.4±0.7,21°.77N±0°.07×143°.1E±0°.1,h300km,n38, σ1♀43/44,mb3.8/19,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	4.92	350	P	Pn	13 57 44.4	+1.4
JHH2				eS	S	13 58 44.7	+0.2
CBIJ	Chichi jima	5.37	351	P	Pn	13 57 49.3	+1.1
CBIJ				S	S	13 58 53.4	-0.7
JCJ	Chichijima	5.37	351	P	Pn	13 57 36.6	-12
	90nm,0.3s,baz=273,slow=22,SNR=30						
JCJ				S	S	13 58 41.0	-13
	49nm,0.3s,baz=148,slow=23,SNR=4.4						
JHJ2	Mitsune	11.68	346	eP	Pn	13 59 05.6	+0.6
JMKN	Mikurajimanish	12.48	346	eP	Pn	13 59 15.7	+1.1
BSO1	Boso 1	12.98	352	eP	P	13 59 22.4	+1.9
BSO3	Boso 3	13.19	350	eP	P	13 59 24.7	+1.6
JTNC	Tanabenakahech	13.72	333	eP	Pn	13 59 32.3	+2.7
JIE	Ise	13.79	337	P	Pn	13 59 32.4	+2.0
JOD2	Odawara 2	13.91	346	eP	Pn	13 59 32.8	+0.9
JOD2				eS	S	14 02 00.9	-3.9
JNY	Yasuok	14.31	342	eP	Pn	13 59 38.1	+1.5
JTO	Tosashimizu	14.36	322	eP	Pn	13 59 40.6	+3.5
JAO	Obara	14.40	340	eP	Pn	13 59 39.5	+1.7
JRY	Ryogami san	14.67	346	eP	Pn	13 59 41.5	+0.6
JRY				eS	S	14 02 18.9	-1.5
MJAR	Matsushiro Arr	15.33	345	P	P	13 59 45.0	-2.1
	0.7nm,0.6s,baz=171,slow=11,SNR=16						
JMK	Ichinoseki	17.21	355	eP	Pn	14 00 10.4	-0.1
KSRS	Korea Array	20.43	323	P	P	14 00 39.9	-1.7
	2.8nm,0.6s,baz=147,slow=9.1,SNR=15						
	2.8nm,0.6s						
HILR	Hailar Array B	33.34	332	P	P	14 02 35.9	-0.8
	2.6nm,0.7s,baz=134,slow=12,SNR=2.7						
	2.6nm,0.7s						
LZDM	Lanzhou Array	37.06	301	P	P	14 03 08.8	-0.1
	3.0nm,0.5s,baz=134,slow=8.5,SNR=13						
	3.0nm,0.5s						
SONM	Songino Array	39.26	320	P	P	14 03 25.8	-0.8
	0.3nm,0.4s,baz=134,slow=7.3,SNR=3.9						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	41.53	274	P	P	14 03 45.9	+0.5
	0.9nm,0.5s,baz=87,slow=6.6,SNR=11						
	0.9nm,0.5s						
WRA	Warramunga Arr	42.34	192	P	P	14 03 50.7	-1.1
	0.5nm,0.3s,baz=13,slow=9.2,SNR=21						
WRA				pP	pP	14 04 30.4	-22
	0.6nm,0.5s,baz=12,slow=8.6,SNR=6.1						
	0.5nm,0.3s						
ASAR	Alice Springs	46.05	192	P	P	14 04 19.9	-1.0
	0.2nm,0.3s,baz=12,slow=6.6,SNR=15						
	0.2nm,0.3s						
ZALV	Zalesovo Beam	54.13	322	P	P	14 05 21.4	+0.6
	1.4nm,0.7s,baz=90,slow=7.4,SNR=5.5						
ZALV				PcP	PcP	14 06 20.9	-0.5
	1.5nm,0.4s,baz=112,slow=3.5,SNR=7.5						
	1.4nm,0.7s						
MKAR	Makanchi Array	54.62	313	P	P	14 05 25.0	+0.5
	1.1nm,0.6s,baz=93,slow=8.4,SNR=12						
MKAR				PcP	PcP	14 06 23.5	+0.1
	0.9nm,0.6s,baz=80,slow=5.0,SNR=6.3						
	1.1nm,0.6s						
KURBB	Kurchatov Arra	57.44	317	P	P	14 05 44.5	+0.2
	3.3nm,0.6s,baz=93,slow=7.6,SNR=26						
	3.3nm,0.6s						
ILAR	Eielson Array	62.00	27	P	P	14 06 15.0	+0.1
	1.0nm,0.7s,baz=260,slow=5.4,SNR=12						
	1.0nm,0.7s						
BVAR	Borovoye Array	62.59	319	P	P	14 06 19.6	+0.5
	5.4nm,0.4s,baz=96,slow=7.9,SNR=66						
BVAR				PcP	PcP	14 06 54.8	-0.3
	1.2nm,0.6s,baz=104,slow=6.3,SNR=4.1						
	5.4nm,0.4s						
YKA	Yellowknife Ar	76.41	28	P	P	14 07 43.9	+1.0
	1.0nm,0.7s,baz=295,slow=6.2,SNR=15						
	1.0nm,0.7s						
ARCES	ARCESS Array B	78.84	341	P	P	14 07 57.2	+1.1
	2.4nm,0.5s,baz=75,slow=7.8,SNR=14						
	2.4nm,0.5s						
KBZ	Khabaz	82.29	314	P	P	14 08 15.5	+0.7
	3.8nm,0.8s,baz=105,slow=3.4,SNR=6.9						
	3.8nm,0.8s						
FINES	FINESS Array B	83.10	334	P	P	14 08 18.1	-0.5
	3.1nm,0.5s,baz=64,slow=4.4,SNR=32						
	3.1nm,0.5s						
NVAR	Mina Array Bea	83.13	51	P	P	14 08 20.5	+0.9
	1.0nm,0.7s,baz=278,slow=5.8,SNR=9.6						
	1.0nm,0.7s						
JMIC	Jan Mayen	85.40	351	P	P	14 08 27.1	-2.8
	642nm,0.7s,baz=206,slow=22,SNR=9.8						
PDAR	Pinedale Array	87.37	45	P	P	14 08 40.6	+0.2
	0.2nm,0.5s,baz=169,slow=1.3,SNR=4.1						
	0.2nm,0.5s						
HFS	Hagfors	88.64	337	P	P	14 08 44.4	-1.2
	1.3nm,0.6s,baz=100,slow=1.7,SNR=9.1						
PLCA	Paso Flores	145.84	131	PKPbc	PKPbc	14 15 31.4	+0.5
	1.4nm,0.6s,baz=247,slow=3.0,SNR=6.9						
LPAZ	La Paz	149.98	85	PKPbc	PKPbc	14 15 44.0	+1.0
	1.2nm,0.5s,baz=283,slow=1.9,SNR=7.2						

*IDC **15** 14:13:23.0±1.6,9°.85N×92°.93E,h0km,mb3.5/7, mbtmp3.4/8,ML3.4/1,Error ellipse: s-maj=62.0km s-min=19.1km az=61.0*
ISC 15 14:13:29.4±1.4,9°.9N±0°.2×93°.1E±0°.2,h43km,n9,σ0♀47/9, mb3.6/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.21	33	Pn	Pn	14 15 53.7	+0.3
	0.1nm,0.3s,baz=224,slow=15,SNR=4.6						
	0.3nm,0.3s						
MKAR	Makanchi Array	37.86	348	P	P	14 20 41.9	-0.3
	0.4nm,0.7s,baz=168,slow=8.1,SNR=5.7						
	0.4nm,0.7s						
SONM	Songino Array	39.42	14	P	P	14 20 55.1	-0.2
	0.1nm,0.4s,baz=196,slow=4.1,SNR=1.6						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	42.31	346	P	P	14 21 19.3	+0.4
	0.3nm,0.7s,baz=163,slow=7.6,SNR=4.2						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	44.39	353	P	P	14 21 35.1	-0.6
	0.8nm,0.5s,baz=173,slow=9.2,SNR=6.0						
	0.8nm,0.5s						
BVAR	Borovoye Array	46.71	341	P	P	14 21 54.5	+0.5
	0.4nm,0.5s,baz=117,slow=8.5,SNR=3.7						
	0.4nm,0.5s						
WRA	Warramunga Arr	50.32	126	P	P	14 22 21.9	-0.4
	0.4nm,0.5s,baz=304,slow=8.7,SNR=10						
	0.4nm,0.5s						
ASAR	Alice Springs	52.05	131	P	P	14 22 35.6	+0.5
	0.6nm,0.7s,baz=306,slow=6.6,SNR=9.6						
	0.6nm,0.7s						
SPITS	Spitsbergen Ar	77.62	348	P	P	14 25 20.5	-0.2
	5.2nm,0.9s,baz=106,slow=8.1,SNR=5.4						

*IDC **15** 14:15:53.4±2.0,9°.79N×92°.85E,h0km,mb3.4/5, mbtmp3.4/6,ML3.2/1,Error ellipse: s-maj=74.3km s-min=22.4km az=62.0*
ISC 15 14:15:59.7±1.8,9°.9N±0°.2×93°.0E±0°.3,h43km,n6,σ0♀94/6, mb3.6/5,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.27	33	Pn	Pn	14 18 24.4	-0.1
	baz=222,slow=12,SNR=4.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	37.88	348	P	P	14 23 13.3	+0.7
	0.3nm,0.6s,baz=169,slow=6.8,SNR=4.1						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	42.32	346	P	P	14 23 48.1	-1.2
	0.1nm,0.3s,baz=159,slow=7.9,SNR=1.7						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	44.41	353	P	P	14 24 06.8	+0.7
	0.3nm,0.3s,baz=175,slow=7.8,SNR=5.4						
	0.3nm,0.3s						
WRA	Warramunga Arr	50.35	126	P	P	14 24 52.5	-0.3
	0.7nm,0.9s,baz=305,slow=8.5,SNR=5.7						
	0.7nm,0.9s						
ASAR	Alice Springs	52.07	130	P	P	14 25 06.0	+0.3
	1.0nm,1.0s,baz=316,slow=8.2,SNR=4.8						
	1.0nm,1.0s						

*NOU **15** 14:16:11.3,38°.11S×175°.56E,h267km,MLv3.8/18,North Island, New Zealand*
*WEL **15** 14:16:13.0±0.7,38°.5S±°×17°.6E±°,h265km±6km,M3.2/50, ML2.2/6,MLv3.2/50,Error ellipse: s-maj=6.4km s-min=6.3km az=127.3*
ISC 15 14:16:08.4±2.0,38°.09S±0°.07×175°.71E±0°.06, h299km±12km,n133,σ1♀45/140,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLZ	Tolley Road	0.28	209	P	Pn	14 16 48.2	+1.7
TOZ	Tahuroa Road	0.39	336	P	Pn	14 16 47.9	+1.1
KUTZ	Kaahu Road	0.41	167	P	Pn	14 16 48.1	+1.4
WATZ	Wairara	0.62	178	P	Pn	14 16 49.1	+1.8
KATZ	Kakaramea	0.89	181	P	Pn	14 16 49.7	+1.4
RITZ	Rihia Road	0.90	172	P	Pn	14 16 49.9	+1.7
MRHZ	Matea Rd	0.93	143	P	Pn	14 16 49.5	+1.1
NTVZ	North Tongarir	1.01	181	P	Pn	14 16 50.6	+1.8
TMVZ	Te Maari	1.03	180	P	Pn	14 16 50.6	+1.8
TMVZ				S	S	14 17 20.1	-0.9
WTVZ	West Tongariro	1.03	185	P	Pn	14 16 50.5	+1.6
ETVZ	East Tongariro	1.05	180	P	Pn	14 16 50.7	+1.7
ETVZ				S	S	14 17 20.5	-0.7
MKAZ	Moumakai	1.07	336	P	Pn	14 16 50.1	+1.0
OTVZ	Oturere	1.07	182	P	Pn	14 16 50.7	+1.6
NGZ	Ngauruhoe	1.09	184	P	Pn	14 16 50.9	+1.7
SNVZ	South Ngauruho	1.10	183	P	Pn	14 16 51.2	+1.9
COVZ	Chateau Observ	1.10	187	P	Pn	14 16 51.0	+1.7
URZ	Urewera	1.12	99	P	Pn	14 16 50.0	+0.8
URZ	Urewera	1.12	99	S	S	14 17 18.8	-2.9
URZ	Urewera	1.12	99	P	Pn	14 16 49.5	+0.3
URZ				S	S	14 17 18.4	-3.2
RTZ	Ruatahuna	1.13	118	P	Pn	14 16 50.3	+1.0
RTZ				S	S	14 17 20.2	-1.8
FWVZ	Far West T-bar	1.17	186	P	Pn	14 16 51.4	+1.6
MTHZ	Maungataniwha	1.17	131	P	Pn	14 16 50.9	+1.3
MTHZ				S	S	14 17 20.0	-2.3
TUVZ	Tukino	1.18	182	P	Pn	14 16 51.5	+1.8
MAVZ	Matarangi	1.18	185	P	Pn	14 16 51.7	+1.8
WHVZ	Whangaehu Hut	1.20	184	P	Pn	14 16 51.6	+1.7
TRVZ	Turoa	1.22	186	P	Pn	14 16 51.6	+1.6
BKZ	Black Stump Fm	1.24	150	P	Pn	14 16 51.0	+1.1
BKZ	Black Stump Fm	1.24	150	S	S	14 17 21.2	-1.7
BKZ	Black Stump Fm	1.24	150	P	Pn	14 16 51.2	+1.3
BKZ				S	S	14 17 21.5	-1.4
WNVZ	Wahianoa	1.24	184	P	Pn	14 16 51.8	+1.4
VRZ	Vera Road	1.27	215	P	Pn	14 16 52.2	+2.2
ETAZ	East Tamaki Re	1.29	331	P	Pn	14 16 51.2	+1.0
MTVZ	Mangateitei	1.31	188	P	Pn	14 16 52.2	+1.9
MOVZ	Moawhango	1.32	178	P	Pn	14 16 51.8	+1.4
NMHZ	Naumai	1.33	140	P	Pn	14 16 52.7	+2.3
AWAZ	Awhitu Peninsu	1.33	320	P	Pn	14 16 51.8	+1.3
KUZ	Kuaotunu	1.34	1	P	Pn	14 16 50.7	+0.1
RAHZ	Arahi	1.36	128	P	Pn	14 16 52.4	+1.8
WIAZ	Waiheke Island	1.37	340	P	Pn	14 16 51.6	+0.9
RAGZ	Rawiri	1.41	107	P	Pn	14 16 52.3	+1.4
RAGZ				S	S	14 17 22.7	-2.0
KWHZ	Kaweka Forest	1.45	157	P	Pn	14 16 53.2	+2.0
MWZ	Matawai	1.46	100	P	Pn	14 16 52.1	+0.9
SNGZ	Shannon Statio	1.46	119	P	Pn	14 16 52.7	+1.5
WTAZ	Waiatarua	1.46	322	P	Pn	14 16 52.9	+1.6
ARHZ	Aropaoanui	1.55	140	P	Pn	14 16 53.8	+2.1
WHHZ	Waihua	1.55	130	P	Pn	14 16 53.6	+1.9
MCHZ	McNeill Hill	1.56	151	P	Pn	14 16 54.1	+2.3
RUGZ	Raukumara Rang	1.56	86	P	Pn	14 16 51.7	-0.3
DREZ	Durham Road	1.61	227	P	Pn	14 16 54.8	+2.7
KRHZ	Kereru	1.64	162	P	Pn	14 16 54.0	+1.7
HAZ	Te Kaha	1.68	79	P	Pn	14 16 52.4	-0.2
TKGZ	Te Karaka	1.72	102	P	Pn	14 16 54.2	+1.3
RIGZ	Rimuhau	1.73	112	P	Pn	14 16 54.5	+1.5
WAZ	Wanganui	1.76	198	P	Pn	14 16 55.1	+2.0
TWGZ	Tauwhareparae	1.80	94	P	Pn	14 16 54.9	+1.4
KNZ	Kokohu	1.80	122	P	Pn	14 16 54.9	+1.4
NBEZ	Newall Road No	1.86	230	P	Pn	14 16 57.0	+3.1
PKGZ	Pakihiroa	1.89	84	P	Pn	14 16 54.4	+0.1
KAHZ	Kahuranaki	1.93	152	P	Pn	14 16 56.7	+2.1
TSZ	Takapari Road	1.98	174	P	Pn	14 16 56.5	+1.6
CNGZ	Carnagh Statio	2.01	102	P	Pn	14 16 56.5	+1.4
PUZ	Puketiti	2.01	90	P	Pn	14 16 55.9	+0.7
MHNZ	Mahia Peninsul	2.02	122	P	Pn	14 16 56.5	+1.7
WPHZ	Whaipukurau	2.05	164	P	Pn	14 16 57.3	+1.8
MXZ	Matakaoa Point	2.12	76	P	Pn	14 16 56.8	+0.7
MXZ	Matakaoa Point	2.12	76	S	S	14 17 34.2	+0.1
MXZ	Matakaoa Point	2.12	76	P	Pn	14 16 56.8	+0.7
OHWZ	Ohakea	2.14	188	P	Pn	14 16 58.5	+2.4
PXZ	Pawanui	2.14	155	P	Pn	14 16 57.9	+1.8
WMGZ	Waiomatatini S	2.16	84	P	Pn	14 16 57.1	+0.8
DVHZ	Dannevirke	2.24	171	P	Pn	14 16 58.4	+1.4
PRHZ	Porangahau	2.29	162	P	Pn	14 16 59.2	+1.8
POWZ	Post Office Ro	2.30	179	P	Pn	14 16 59.4	+1.9
WCZ	Waipu Caves	2.41	333	P	Pn	14 16 59.4	+0.9
PRWZ	Porí Road	2.47	175	P	Pn	14 17 00.7	+1.7
MRZ	Mangatainoka R	2.57	182	P	Pn	14 17 01.2	+1.3
BFZ	Birch Farm	2.62	171	P	Pn	14 17 01.8	+1.4
BFZ	Birch Farm	2.62	171	S	S	14 17 41.0	-0.9
BFZ	Birch Farm	2.62	171	P	Pn	14 17 02.0	+1.6
TIWZ	Tintock	2.69	177	P	Pn	14 17 02.7	+1.7
OGWZ	Otaki Gorge	2.76	188	P	Pn	14 17 03.0	+1.4
HOWZ	Holdsworth Sta	2.81	183	P	Pn	14 17 03.3	+1.2
KIW	Kapiti Island	2.84	192	P	Pn	14 17 03.6	+1.2
TMWZ	Te Maipa	3.02	177	P	Pn	14 17 05.9	+1.7
DUWZ	D'Urville Isla	3.04	206	P	Pn	14 17 05.5	+1.1
CAW	Cannon Point	3.06	189	P	Pn	14 17 05.6	+1.1
MTW	Mount Morrison	3.07	183	P	Pn	14 17 06.0	+1.4
WEL	Wellington	3.27	192	P	Pn	14 17 08.5	+1.7
PAWZ	Paruwai Farm	3.30	184	P	Pn	14 17 07.9	+0.9
TRWZ	Traveller	3.31	180	P	Pn	14 17 08.6	+1.5
TCW	Tory Channel	3.31	199	P	Pn	14 17 08.3	+1.3
SNZO	South Karori	3.31	193	P	Pn	14 17 08.3	+1.2
SNZO	South Karori	3.31	193	S	S	14 17 53.0	-1.0
OUZ	Omahuta	3.33	329	P	Pn	14 17 08.1	+0.6
OUZ	Omahuta	3.33	329	P	Pn	14 17 08.2	+0.8
MSWZ	Moikau Station	3.34	186	P	Pn	14 17 08.3	+0.9
TUWZ	Tuamarina	3.60	202	P	Pn	14 17 12.3	+2.2
NNZ	Nelson	3.60	209	P	Pn	14 17 11.0	+0.9
TKAZ	Takaka Hill	3.63	215	P	Pn	14 17 11.3	+0.8
QRZ	Quartz Range	3.68	221	P	Pn	14 17 11.4	+0.4
QRZ	Quartz Range	3.68	221	P	S	14 17 59.4	-1.6
QRZ	Quartz Range	3.68	221	P	Pn	14 17 11.4	+0.4
BSWZ	Blackbirch Sta	3.89	201	P	Pn	14 17 14.9	+1.7
MRNZ	Matariki Terra	4.01	214	P	Pn	14 17 15.1	+0.5
THZ	Tophouse	4.25	210	P	Pn	14 17 18.1	+0.7
KHZ	Kahutara	4.63	200	P	Pn	14 17 22.4	+0.9
KHZ	Kahutara	4.63	200	S	S	14 18 19.4	-0.7
KHZ	Kahutara	4.63	200	P	Pn	14 17 22.6	+1.2
DSZ	Denniston Nort	4.72	218	P	Pn	14 17 23.1	+0.4
GVZ	Greta Valley S	5.28	202	P	Pn	14 17 29.8	+0.8
LTZ	Lake Taylor	5.37	208	P	Pn	14 17 30.9	+0.8
AMCZ	Amberley	5.59	204	P	Pn	14 17 33.5	+0.9
INZ	Inchbonnie	5.66	214	P	Pn	14 17 33.8	+0.3
OXZ	Oxford	5.93	207	P	Pn	14 17 37.0	+0.3
OKCZ	Okains Bay	5.97	199	P	Pn	14 17 38.5	+1.3
MOZ	McQueen's Vall	6.07	201	P	Pn	14 17 38.5	+0.1
AKCZ	Akaroa Harbour	6.15	199	P	Pn	14 17 40.6	+1.2
RACZ	Rakaia	6.25	204	P	Pn	14 17 41.0	+0.5
WVZ	Waitaha Valley	6.25	216	P	Pn	14 17 41.0	+0.5
MHCZ	Mount Hutt	6.28	209	P	Pn	14 17 41.1	+0.2
WACZ	Wakanui South	6.54	205	P	Pn	14 17 45.0	+1.0
RPZ	Rata Peaks	6.63	211	P	Pn	14 17 46.1	+0.9
RPZ	Rata Peaks	6.63	211	S	S	14 19 02.7	-0.6
RPZ	Rata Peaks	6.63	211	P	Pn	14 17 45.7	+0.5
ARCZ	Arundel	6.78	209	P	Pn	14 17 47.3	+0.3
FOZ	Fox Glacier	7.04	218	P	Pn	14 17 50.6	+0.5
TMZ	Timaru	7.22	208	P	Pn	14 17 53.1	+0.8
ODZ	Otahua Downs	7.92	207	P	Pn	14 18 02.4	+1.6
ODZ	Otahua Downs	7.92	207	P	Pn	14 18 02.6	+1.8
JCZ	Jackson Bay	7.94	219	P	Pn	14 18 02.5	+1.3
WKZ	Wanaka	8.40	215	P	Pn	14 18 06.4	-0.3
MSZ	Milford Sound	8.80	219	P	Pn	14 18 12.6	+1.0
WHZ	Wether Hill Ro	9.70	214	P	Pn	14 18 23.0	+0.3

*NEIC **15** 14:35:50.5±0.9,19°.07N±0°.05×67°.62W±0°.06,h13km±6km, ML3.3/37,Md3.6/6(RSPR),Error ellipse: s-maj=11.3km s-min=2.1km az=50.0*
*SDD **15** 14:35:53.6±2.5,18°.96N×67°.67W,h0km±14km,MD3.7, ML3.4,MW3.2,Presumed earthquake*
*RSPR **15** 14:35:54.8,18°.95N×67°.67W,h29km±22km,MD3.6/6*
ISC 15 14:35:52.6±1.4,18°.96N±0°.06×67°.64W±0°.03,h19km±3km, n43,σ0♀79/71,19C-6D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	Isla Desecheo	0.59	164		Pg	14 36 03.8	-0.5
IDE					Sb	14 36 12.8	+0.6
IDE	Isla Desecheo	0.59	164	↓eP	Pg	14 36 03.8	-0.5
IDE				eS	Sb	14 36 12.8	+0.6
AGPR	Aguadilla, PR	0.70	134		Pb	14 36 05.5	-0.7
AGPR				IAML		14 36 16.9	
	1μm,0.2s						
AGPR				IAML		14 36 16.9	
	1μm,0.4s						
AGPR	Aguadilla, PR	0.70	134	↓↑iP	Pb	14 36 05.6	-0.6
AGPR				↑iS	Sg	14 36 16.2	+0.4
	comp=N,1μm,0.2s						
AGPR				IAML		14 36 17.8	
	comp=N,1μm,0.2s						
AGPR	Aguadilla, PR	0.70	134	↓eP	Pb	14 36 05.7	-0.5
AGPR				eS	Sg	14 36 16.1	+0.4
PCDR	Punta Cana, DR	0.83	238	↑iP	Pb	14 36 08.3	-0.1
PCDR				↑iS	Sb	14 36 19.1	+0.1
PCDR				IAML		14 36 21.9	
	comp=N,624nm,0.7s						
PRSN	Puerto Rico Se	0.87	147		Pb	14 36 08.9	-0.3
PRSN					Sg	14 36 21.3	+0.1
PRSN	Puerto Rico Se	0.87	147	↑iP	Pb	14 36 08.7	-0.5
PRSN				↑iS	Sn	14 36 21.9	-0.2
	comp=N,1μm,0.3s						
PRSN				IAML		14 36 32.5	
	comp=N,1μm,0.3s						
PRSN	Puerto Rico Se	0.87	147	↑iP	Pb	14 36 08.9	-0.3
PRSN				eS	Sg	14 36 21.3	+0.1
LSP	Las Mesas	0.94	146		Pb	14 36 09.9	-0.4
LSP					Sg	14 36 23.5	+0.2
LSP	Las Mesas	0.94	146	↓iP	Pb	14 36 09.9	-0.4
LSP				eS	Sg	14 36 23.5	+0.2
CRPR	Cabo Rojo, PR	1.07	152		Pb	14 36 12.4	-0.1
CRPR	Cabo Rojo, PR	1.07	152	IAML		14 36 31.7	
	comp=N,563nm,0.5s						
CRPR				IAML		14 36 33.2	
	comp=N,864nm,0.5s						
CRPR	Cabo Rojo, PR	1.07	152	↑iP	Pg	14 36 13.7	+0.3
CRPR				↑iS	Sg	14 36 29.0	+1.5
CRPR				IAML		14 36 33.1	
	comp=N,851nm,0.5s						
CRPR	Cabo Rojo, PR	1.07	152	↑eP	Pb	14 36 12.4	-0.1
HIDR	Higuey Centro	1.08	251	↑iP	Pb	14 36 10.8	-1.8
HIDR				↑iS	Sb	14 36 25.1	-1.4
	comp=N,896nm,0.2s						
HIDR				IAML		14 36 25.8	
	comp=N,897nm,0.2s						
HIDR	Higuey Centro	1.08	251	↑eP	Pb	14 36 10.9	-1.8
HIDR				eS	Sb	14 36 25.0	-1.4
UPR	Utuado, UPR, P	1.12	128		Pn	14 36 13.2	-1.1
MLPR	Magueyes Islan	1.13	150		Pn	14 36 12.7	-0.8
MLPR				IAML		14 36 32.8	
	comp=N,594nm,0.4s						
MLPR				IAML		14 36 33.7	
	comp=N,468nm,0.4s						
EMPR	Esperanza - Ma	1.16	114		Pn	14 36 13.1	-0.7
EMPR					Sn	14 36 29.6	+0.5
EMPR	Esperanza - Ma	1.16	114	↑iP	Pn	14 36 13.1	-0.7
EMPR				eS	Sn	14 36 29.6	+0.5
GBPR	Guanica, Bosqu	1.22	143		Pn	14 36 14.5	-0.1
GBPR					Sn	14 36 31.3	+0.8
GBPR	Guanica, Bosqu	1.22	143	↑iP	Pn	14 36 14.5	-0.1
GBPR				eS	Sn	14 36 31.3	+0.8
MIDR	Miches	1.33	271	↑iP	Pn	14 36 15.6	-0.6
MIDR				↑iS	Sg	14 36 34.9	-0.9
MIDR				IAML		14 36 36.8	
	comp=N,521nm,0.3s						
CELP	Cerrillos	1.34	131		Pn	14 36 15.7	-0.6
CELP				IAML		14 36 38.8	
	comp=N,499nm,0.3s						
OBIP	Obispado Ponce	1.34	133		Pn	14 36 15.6	-0.7
OBIP					Sn	14 36 33.2	-0.4
OBIP	Obispado Ponce	1.34	133

	8.0nm,0.2s							
MTBS	**Maitube**	**0.39**	**302**	*e*P		**Pb**	**14 39 34.7**	**+0.2**
	8.0nm,0.1s							
MTBS				*e*S		**Sb**	**14 39 41.0**	**+0.6**
	8.0nm,0.2s							
KST	**Kastek**	**0.69**	**280**	P		**Pg**	**14 39 39.9**	**+0.5**
	1.1nm,0.1s							
KST				S		**Sb**	**14 39 50.3**	**+1.5**
	7.1nm,0.3s							
KST	**Kastek**	**0.69**	**280**	*e*P		**Pg**	**14 39 39.9**	**+0.5**
	1.1nm,0.1s							
KST				*e*S		**Sb**	**14 39 50.3**	**+1.5**
	7.1nm,0.3s							
KTBS	**Karatobe**	**0.80**	**349**	P		**Pg**	**14 39 40.8**	**-0.7**
	2.5nm,0.2s							
KTBS				S		**Sg**	**14 39 50.7**	**-1.4**
	0.3nm,0.3s							
KTBS	**Karatobe**	**0.80**	**349**	*e*P		**Pg**	**14 39 40.8**	**-0.7**
	2.5nm,0.2s							
KTBS				*e*S		**Sg**	**14 39 51.3**	**-0.8**
	0.2nm,0.2s							
BOOM	**Boomskoye usch**	**0.82**	**238**⇑	*e*P		**Pg**	**14 39 41.5**	**-0.4**
BOOM			⇑	*e*S		**Sg**	**14 39 52.8**	**+0.1**
ULHL	**Ulahol**	**0.83**	**215**⇑	*e*P		**Pg**	**14 39 41.3**	**-0.7**
ULHL			⇑	*e*S		**Sg**	**14 39 52.5**	**-0.4**
DGS	**Degeres**	**0.88**	**292**	P		**Pb**	**14 39 43.2**	**+0.5**
	1.5nm,0.1s							
DGS				S		**Sg**	**14 39 55.6**	**+1.1**
	6.0nm,0.1s							
DGS	**Degeres**	**0.88**	**292**	*e*P		**Pb**	**14 39 43.0**	**+0.3**
	1.5nm,0.1s							
DGS				*e*S		**Sg**	**14 39 55.6**	**+1.1**
	6.0nm,0.1s							
TKM2	**Tokmak 2**	**0.95**	**270**⇓	*e*P		**Pb**	**14 39 43.5**	**-0.5**
TKM2			⇓	*e*S		**Sb**	**14 39 56.9**	**+0.5**
SATY	**Saty**	**1.12**	**83**	P		**Pb**	**14 39 46.0**	**-1.0**
	0.6nm,0.1s							
SATY				S		**Sb**	**14 39 59.8**	**-1.5**
	11nm,0.1s							
KRBS	**Karabastau**	**1.17**	**312**	P		**Pb**	**14 39 48.4**	**+0.6**
	0.8nm,0.1s							
KRBS				S		**Sg**	**14 40 04.5**	**+0.6**
	2.8nm,0.2s							
KRBS	**Karabastau**	**1.17**	**312**	*e*P		**Pn**	**14 39 47.6**	**0.0**
KRBS				*e*S		**Sb**	**14 40 03.3**	**+0.5**
KRBS	**Karabastau**	**1.17**	**312**	*e*P		**Pn**	**14 39 47.6**	**0.0**
	1.6nm,0.1s							
KRBS				*e*S		**Sb**	**14 40 03.3**	**+0.5**
	2.8nm,0.2s							
TARG	**Taragay, Kyrgy**	**1.37**	**150**⇑	*e*P		**Pn**	**14 39 49.7**	**-1.0**
TARG			⇑	*e*S		**Sb**	**14 40 07.8**	**-1.0**
KPKS	**Kokpek**	**1.42**	**67**	P		**Pb**	**14 39 51.5**	**-0.5**
	0.2nm,0.1s							
KPKS				S		**Sb**	**14 40 09.8**	**-0.2**
	0.9nm,0.2s							
KPKS	**Kokpek**	**1.42**	**67**	*e*P		**Pb**	**14 39 51.5**	**-0.5**
	0.2nm,0.1s							
KPKS				*e*S		**Sb**	**14 40 09.8**	**-0.2**
	0.9nm,0.2s							
UZB	**Uzynbulak**	**1.58**	**81**	P		**Pb**	**14 39 53.6**	**-1.2**
	2.3nm,0.3s							
UZB				S		**Sb**	**14 40 13.4**	**-1.1**
	5.3nm,0.3s							
UZB	**Uzynbulak**	**1.58**	**81**	*e*P		**Pb**	**14 39 53.6**	**-1.2**
UZB				*e*S		**Sb**	**14 40 13.5**	**-1.1**
UZB	**Uzynbulak**	**1.58**	**81**	*e*P		**Pb**	**14 39 53.6**	**-1.2**
	2.3nm,0.3s							
UZB				*e*S		**Sb**	**14 40 13.4**	**-1.1**
	5.3nm,0.3s							
SHLS	**Shalkode**	**1.90**	**82**	Pg		**Pg**	**14 40 05.9**	**+3.5**
	1.4nm,0.5s							
SHLS				Lg		Lg	14 40 34.7	
	4.9nm,1.0s							
SHLS	**Shalkode**	**1.90**	**82**	*e*P		**Pg**	**14 40 05.9**	**+3.5**
	1.4nm,0.5s							
SHLS				*e*S		**Sg**	**14 40 34.7**	**+7.5**
	4.9nm,1.0s							
MAKZ	**Makanchi**	**5.31**	**41**	⇑Pn		Pn	14 40 29.8	-15
	1.1nm,0.5s							
MAKZ				⇑Sn		**Sn**	**14 41 42.8**	**-2.4**
	0.4nm,0.3s							
MAKZ				⇑Lg		Lg	14 42 10.4	
	1.3nm,0.8s							

IDC 15 14:44:36.6±1.5, 5°09N×124°64E, h0km, mb3.6/3, mbtmp3.7/4, Error ellipse: s-maj=59.9km s-min=23.5km az=80.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.18**	**25**	Pn	Pn	14 45 14.2	0.0
	126nm,0.4s,baz=248,slow=19,SNR=1.2						
DAV				Sn	Sn	14 45 38.8	-3.1
	35nm,0.3s,baz=244,slow=21,SNR=6.3						
WRA	**Warramunga Arr**	**26.64**	**159**	P	P	14 50 16.9	-0.4
	0.6nm,0.5s,baz=338,slow=10,SNR=12						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**29.98**	**163**	P	P	14 50 47.4	+0.4
	0.5nm,0.4s,baz=342,slow=7.3,SNR=13						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**55.26**	**326**	P	P	14 54 11.6	-0.1
	0.2nm,0.7s,baz=119,slow=8.4,SNR=2.4						
	0.2nm,0.7s						

IDC 15 14:45:01.2±4.0, 6°03S×148°46E, h0km, mb3.4/1, mbtmp3.5/3, ML2.8/2, Error ellipse: s-maj=112.9km s-min=44.1km az=104.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.60**	**201**	Pn	Pn	14 45 59.5	+1.2
	7.4nm,0.3s,baz=47,slow=5.5,SNR=33						
PMG				Sn	Sn	14 46 38.8	-2.7
	6.7nm,0.3s,baz=24,slow=20,SNR=9.7						
	22nm,0.4s						
WRA	**Warramunga Arr**	**19.48**	**223**	P	P	14 49 29.7	-0.2
	0.1nm,0.3s,baz=52,slow=11,SNR=10						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**22.45**	**217**	P	P	14 50 01.9	-0.1
	1.0nm,0.6s,baz=46,slow=9.3,SNR=33						
	1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**146.50**	**285**	PKPbc	PKPdf	15 04 44.5	+0.3
	0.2nm,0.5s,baz=90,slow=6.2,SNR=1.9						

TAP 15 15:08:35.5, 24°20N×121°71E, h20km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.09**	**245**	*i* P	Pg	15 08 39.7	+0.3
ETL				*i* S	Sg	15 08 42.7	+0.8
NACB	**Ninganchiao**	**0.11**	**258**	*i* P	Pg	15 08 39.9	+0.4
NACB				*i* S	Sg	15 08 43.0	+0.8
EHP	**Heping Village**	**0.12**	**14**	*e*P	Pg	15 08 40.1	+0.5
EHP				*e*S	Sg	15 08 43.3	+0.9
EAHA	**Aohua**	**0.14**	**12**	*e*P	Pg	15 08 40.1	+0.3
TWD	**Chiawan**	**0.15**	**222**	P	Pg	15 08 40.3	+0.3
TWD				S	Sg	15 08 43.8	+0.8
ENA	**Nanau**	**0.23**	**7**	*e*P	Pg	15 08 41.7	+0.6
ENA				S	Sg	15 08 45.9	+0.9
ETM	**Tongmen**	**0.30**	**221**	*e*P	Pb	15 08 42.3	0.0
ETM				*e*S	Sg	15 08 47.4	+0.6
ETM	**Tongmen**	**0.30**	**221**	*e*P	Pb	15 08 42.3	0.0
LXIB	**Xiulin Townshi**	**0.32**	**237**	P	Pb	15 08 43.1	+0.4
LXIB				S	Sg	15 08 49.0	+1.5
LATG	**Datong**	**0.38**	**334**	P	Pb	15 08 43.9	+0.3
LATG				S	Sb	15 08 49.8	+0.7
NNSB	**Datong**	**0.38**	**308**	*e*P	Pb	15 08 44.1	+0.5
NNSB				S	Sb	15 08 50.3	+1.1
NNSH	**Datong**	**0.38**	**308**	*e*P	Pb	15 08 43.9	+0.3
NNSH				*e*S	Sb	15 08 49.8	+0.6
NDS	**Dongshan**	**0.44**	**1**	*e*P	Pb	15 08 45.4	+0.9
NDS				*e*S	Sb	15 08 51.7	+1.0
ENTT	**Nioudou**	**0.46**	**344**	*e*P	Pb	15 08 45.9	+0.9
ENTT				*e*S	Sb	15 08 52.8	+1.3
WARBT	**Fenglin Townsh**	**0.56**	**212**	*e*P	Pg	15 08 47.5	+0.8
WARBT				*e*S	Sg	15 08 55.1	+0.8

TAP 15 15:08:37.6, 23°83N×121°45E, h12km±1km, ML0.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.03**	**220**	*i* P	Pg	15 08 40.4	+0.6
ESL				*i* S	Sg	15 08 41.9	+0.6
SHUL	**Shoufeng**	**0.11**	**114**	P	Pb	15 08 41.2	-0.4
SHUL				S	Sg	15 08 43.2	+0.4
WARBT	**Fenglin Townsh**	**0.13**	**207**	*i* P	Pb	15 08 41.7	-0.3
WARBT				*i* S	Sg	15 08 44.3	+1.1
OWD	**Renai**	**0.28**	**296**	*e*P	Pg	15 08 43.6	+0.2
OWD				*e*S	Sb	15 08 48.3	-1.0

*MEX **15** 15:18:40.3±0.5, 15°.44N×92°.52W, h153km±3km, MD4.3*
*GCG **15** 15:18:41.1±0.5, 15°.42N×92°.29W, h141km±15km, MD3.8, Presumed earthquake*

ISC 15 15:18:37.3±1.6, 15°.45N±0°.06×92°.50W±0°.05, h161km±9km, n29, σ1°62/43, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAVE	**Pavencul**	**0.40**	**130**	*e*P	**Pn**	**15 19 00.4**	**+0.6**
PAVE				*e*S	**Sn**	**15 19 16.3**	**-0.6**
PATR	**El Naranjo**	**0.42**	**143**	*e*P	**Pn**	**15 19 00.1**	**+0.2**
PATR				*e*S	**Sn**	**15 19 16.3**	**-0.8**
CHUJ	**Union Juarez**	**0.52**	**134**	*e*P	**Pn**	**15 19 00.7**	**+0.4**
CHUJ				*e*S	**Sn**	**15 19 17.2**	**-0.6**
THIG		**0.59**	**158**	*e*P	**Pn**	**15 19 01.5**	**+1.1**
THIG				*e*S	**Sn**	**15 19 18.7**	**+0.7**
SMCA	**Catarina**	**0.72**	**146**	*i* P	**Pn**	**15 19 02.0**	**+0.8**
PCIG		**0.74**	**290**	*i* P	**Pn**	**15 19 01.9**	**+0.7**
PCIG				*e*S	**Sn**	**15 19 19.0**	**-0.5**
CCIG	**Comitan**	**0.89**	**23**	*e*P	**Pn**	**15 19 03.7**	**+1.2**
CCIG				*e*S	**Sn**	**15 19 21.2**	**-0.7**
HUEH	**Huehuetenango**	**0.97**	**98**	*i* P	**Pn**	**15 19 03.9**	**+0.8**
HUEH				*i* S	**Sn**	**15 19 22.4**	**-0.4**
RTAL	**Retalhuleu**	**1.21**	**140**	*e*P	**Pn**	**15 19 07.0**	**+2.1**
RTAL				*e*S	**Sn**	**15 19 27.9**	**+1.9**
QUIS	**Sacapulas**	**1.36**	**97**	*e*P	**Pn**	**15 19 07.3**	**+0.8**
TGIG		**1.45**	**336**	*e*P	**Pn**	**15 19 08.1**	**+0.8**
TGIG				*e*S	**Sn**	**15 19 28.4**	**-2.0**
STG2	**El Palmar, Qui**	**1.48**	**133**	*i* P	**Pn**	**15 19 05.1**	**-2.6**
STG8	**El Palmar, Qui**	**1.49**	**132**	*i* P	**Pn**	**15 19 05.4**	**-2.5**
STG5	**El Palmar, Qui**	**1.52**	**133**	*i* P	**Pn**	**15 19 05.9**	**-2.2**
CARR	**Arriaga**	**1.57**	**300**	*e*P	**Pn**	**15 19 09.4**	**+0.9**
CARR				*e*S	**Sn**	**15 19 32.0**	**-0.4**
APG	**El Apazote**	**2.01**	**103**	*i* P	**Pn**	**15 19 14.5**	**+1.0**
APG				*i* S	**Sn**	**15 19 40.7**	**-0.6**
UXUV	**UXUV**	**2.44**	**320**	*e*P	**Pn**	**15 19 18.8**	**+0.6**
UXUV				*e*S	**Sn**	**15 19 46.5**	**-3.5**
CMIG	**Matias Romero**	**2.81**	**306**	*e*P	**Pn**	**15 19 23.5**	**+0.7**
CMIG				*e*S	**Sn**	**15 19 55.8**	**-2.2**
PETF	**Flores**	**2.92**	**60**	*e*P	**Pn**	**15 19 24.6**	**+0.6**
HUIG	**Huatulco**	**3.49**	**276**	*e*P	**Pn**	**15 19 31.1**	**-0.3**
HUIG				*e*S	Sn	15 20 07.7	-5.6
NEUV	**Arroyo Zacate**	**3.88**	**306**	*e*P	**Pn**	**15 19 36.7**	**+0.3**
NEUV				*e*S	Sn	15 20 14.3	-8.1
VHO	**Vista Hermosa**	**4.38**	**292**	*e*P	**Pn**	**15 19 45.0**	**+2.1**
VHO				*e*S	**Sn**	**15 20 31.0**	**-3.1**
PEIG	**Puerto Escondi**	**4.51**	**278**	*e*P	**Pn**	**15 19 44.8**	**+0.2**
PEIG				*e*S	Sn	15 20 30.4	-6.6
YOIG	**Yosondua**	**5.05**	**287**	*e*P	**Pn**	**15 19 53.8**	**+2.0**
YOIG				*e*S	Sn	15 20 45.9	-4.1
TOIG	**Toxpalan**	**5.10**	**302**	*e*P	**Pn**	**15 19 54.1**	**+1.7**
TOIG				*e*S	Sn	15 20 41.5	-10
TXIG	**Tlaxiaco**	**5.37**	**290**	*e*P	**Pn**	**15 19 58.6**	**+2.6**
TXIG				*e*S	Sn	15 20 52.6	-5.0
PNIG	**Pinotepa**	**5.50**	**281**	*e*P	**Pn**	**15 19 58.4**	**+0.9**
PNIG				*e*S	Sn	15 20 56.2	-4.0
HLIG	**Huajuapan de L**	**5.61**	**296**	*e*P	**Pn**	**15 20 01.7**	**+2.5**
HLIG				*e*S	Sn	15 20 59.0	-4.2
FTIG	**Fresnillo de T**	**5.93**	**295**	*i* P	**Pn**	**15 20 06.3**	**+3.0**
FTIG				*i* S	Sn	15 21 05.8	-4.9

*IDC **15** 15:28:40.3±4.8, 4°72S×102°98E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=260.7km s-min=28.3km az=51.0*
*DJA **15** 15:28:42.9±0.4, 5°S±6°×10°2E±°, h24km±8km, M3.5/13, MLv3.5/13*

ISC 15 15:28:43.1±1.2, 5°4S±0°.1×102°42E±0°.06, h32km±8km, n17, σ0°88/12, mb3.4/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**0.14**	**283**	P	**Pn**	**15 28 49.1**	**0.0**
EGSI				S	**Sb**	**15 28 53.6**	**+0.5**
MNAI	**Manna**	**1.15**	**28**	P	**Pb**	**15 29 03.6**	**-0.8**
LWLI	**Liwa**	**1.67**	**77**	P	**Pn**	**15 29 10.1**	**-0.1**
MDSI	**Maura Dua**	**1.97**	**63**	P	**Pn**	**15 29 14.5**	**+0.3**
KASI	**Kota Agung**	**2.07**	**94**	P	**Pn**	**15 29 15.8**	**+0.2**
MASI	**Maura Aman, Be**	**2.23**	**355**	P	**Pn**	**15 29 19.2**	**+1.3**
KLSI		**2.40**	**73**	P	**Pn**	**15 29 20.8**	**+0.6**
H08S2	**Diego Garcia H**	**29.81**	**264**	T	T	16 05 39.1	
	baz=87,slow=76,SNR=7.4						
H08S3	**Diego Garcia H**	**29.82**	**264**	T	T	16 05 43.1	
	baz=87,slow=76,SNR=14						
H08S1	**Diego Garcia H**	**29.83**	**264**	T	T	16 05 38.6	
	baz=87,slow=76,SNR=4.3						
WRA	**Warramunga Arr**	**34.24**	**118**	P	**P**	**15 35 27.4**	**+1.1**
	0.5nm,1.0s,baz=296,slow=8.2,SNR=2.1						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**35.34**	**124**	P	**P**	**15 35 36.2**	**+0.4**
	0.2nm,0.6s,baz=298,slow=8.1,SNR=4.4						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**54.93**	**343**	P	**P**	**15 38 09.6**	**-1.3**
	0.2nm,0.4s,baz=151,slow=9.4,SNR=8.5						
	0.2nm,0.4s						
H04N2	**CROZET ISLANDS**	**59.60**	**219**	T	T	16 43 09.8	
	baz=63,slow=74,SNR=19						
H04N1	**CROZET ISLANDS**	**59.61**	**219**	T	T	16 43 07.4	
	baz=63,slow=74,SNR=21						
H04N3	**CROZET ISLANDS**	**59.61**	**219**	T	T	16 43 06.8	
	baz=63,slow=74,SNR=22						
TXAR	**Lajitas Array**	**145.72**	**43**	PKP	**PKPdf**	**15 48 19.5**	**+0.3**
	0.4nm,0.9s,baz=345,slow=5.1,SNR=3.6						

RSNC 15 15:32:14.1±0.0, 5°N±1°×7°4W±°, h148km±2km, M2.9, ML2.5, MLv3.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.53**	**319**	P	Pn	15 32 35.1	-0.4
SPBC				S	Sn	15 32 51.1	-0.7
SPBC	**San Pablo de B**	**0.53**	**319**	P	Pn	15 32 35.2	-0.3
SPBC				S	Sn	15 32 51.1	-0.7
CHIC	**Chingaza**	**0.62**	**181**	P	Pn	15 32 36.2	-0.2
CHIC				S	Sn	15 32 52.8	-0.5
CHIC	**Chingaza**	**0.62**	**181**	P	Pn	15 32 36.2	-0.2
CHIC				S	Sn	15 32 52.7	-0.6
ROSC	**El Rosal**	**0.72**	**236**	P	Pn	15 32 37.8	+0.8
ROSC				S	Sn	15 32 55.3	+0.9
ROSC	**El Rosal**	**0.72**	**236**	P	Pn	15 32 37.8	+0.8
ROSC				S	Sn	15 32 55.1	+0.7
CVER	**Cruz Verde, Cu**	**0.81**	**206**	P	Pn	15 32 38.1	+0.4
CVER				S	Sn	15 32 55.3	-0.4
CVER	**Cruz Verde, Cu**	**0.81**	**206**	P	Pn	15 32 38.0	+0.3
CVER				S	Sn	15 32 56.8	+1.1
RUSC	**La Rusia**	**0.90**	**45**	P	Pn	15 32 38.4	0.0
RUSC				S	Sn	15 32 57.2	-0.3
RUSC	**La Rusia**	**0.90**	**45**	P	Pn	15 32 38.3	-0.1
RUSC				S	Sn	15 32 56.8	-0.1
VILC	**Villavicencio,**	**1.13**	**179**	P	Pn	15 32 39.6	-0.4
VILC				S	Sn	15 32 59.8	0.0
NORC	**Norcasia**	**1.19**	**285**	P	Pn	15 32 39.7	-0.7
NORC				S	Sn	15 32 59.3	-1.2
NORC	**Norcasia**	**1.19**	**285**	P	Pn	15 32 39.7	-0.7
NORC				S	Sn	15 32 59.5	-1.0
BARC	**Barichara**	**1.44**	**22**	P	Pn	15 32 42.4	-0.7
BARC				S	Sn	15 33 04.5	-0.8
BARC	**Barichara**	**1.44**	**22**	P	Pn	15 32 42.4	-0.7
BARC				S	Sn	15 33 04.4	-0.9
PTBC	**PUERTO BERRIO,**	**1.48**	**330**	P	Pn	15 32 41.7	-1.6
PTBC				S	Sn	15 33 04.3	-1.4
PTBC	**PUERTO BERRIO,**	**1.48**	**330**	P	Pn	15 32 41.9	-1.4
PTBC				S	Sn	15 33 04.4	-1.3
RECRC	**Villamaria, Ca**	**1.65**	**260**	P	Pn	15 32 45.4	-0.3
RECRC				S	Sn	15 33 10.1	+0.3
BRJC	**Barrancabermej**	**1.71**	**359**	P	Pn	15 32 45.3	-0.6
BRJC				S	Sn	15 33 10.9	+0.7
BRJC	**Barrancabermej**	**1.71**	**359**	P	Pn	15 32 45.6	-0.3
BRJC				S	Sn	15 33 10.8	+0.6
ANIL	**Santa Ana**	**1.84**	**246**	P	Pn	15 32 47.2	-0.4
ANIL				S	Sn	15 33 12.6	-0.6
PTGC	**Puerto Gaitan,**	**1.89**	**123**	P	Pn	15 32 47.4	-0.5
PTGC				S	Sn	15 33 12.6	-1.2
PRAC	**Prado**	**1.92**	**217**	P	Pn	15 32 47.9	-0.3
PRAC				S	Sn	15 33 14.0	-0.4
ORTC	**Ortega, Tolima**	**2.02**	**229**	P	Pn	15 32 48.7	-0.7
ORTC				S	Sn	15 33 15.5	-1.1
HELC	**Santa Helena**	**2.03**	**298**	P	Pn	15 32 49.5	-0.3
HELC				S	Sn	15 33 15.6	-1.6
URMC	**La Uribe, Meta**	**2.10**	**198**	P	Pn	15 32 50.4	0.0
URMC				S	Sn	15 33 18.7	+0.5
PAMC	**Pamplona, Colo**	**2.31**	**26**	P	Pn	15 32 52.8	-0.5
PAMC				S	Sn	15 33 23.5	+0.1
PAMC	**Pamplona, Colo**	**2.31**	**26**	P	Pn	15 32 52.9	-0.4
PAMC				S	Sn	15 33 23.3	-0.1
CBOC	**Ciudad Bolivar**	**2.36**	**285**	P	Pn	15 32 53.4	-0.2
CBOC				S	Sn	15 33 23.9	-0.1
YOTC	**Yotoco, Valle**	**2.90**	**244**	P	Pn	15 32 59.8	-0.5
OCAC	**Ocana**	**3.00**	**8**	P	Pn	15 33 00.8	-0.7
OCAC				S	Sn	15 33 37.4	-0.8
OCAC	**Ocana**	**3.00**	**8**	P	Pn	15 33 00.9	-0.6
OCAC				S	Sn	15 33 37.2	-1.0
DBBC	**Dabeiba**	**3.04**	**305**	P	Pn	15 33 01.4	-0.5
DBBC				S	Sn	15 33 37.9	-1.0
UREC	**San Jos de Ur**	**3.07**	**324**	P	Pn	15 32 59.3	-3.0
UREC				S	Sn	15 33 35.6	-4.0
MACC	**Macarena, Meta**	**3.09**	**182**	P	Pn	15 33 01.0	-1.6
GARC	**Garzon, Huila**	**3.52**	**210**	P	Pn	15 33 07.5	-0.8
GARC				S	Sn	15 33 49.3	-1.0
APAC	**Apartado, Choc**	**3.87**	**313**	P	Pn	15 33 12.1	-0.6
APAC				S	Sn	15 33 58.2	0.0
SJCC	**San Jacinto, C**	**4.84**	**343**	P	Pn	15 33 21.9	-3.5
SJCC				S	Sn	15 34 14.9	-6.1
CRJC	**Cerrejon, Guaj**	**5.79**	**8**	P	Pn	15 33 37.4	-0.8
CRJC				S	Sn	15 34 37.4	-6.4

*BJI **15** 15:36:36.3, 1°.05N×126°.41E, h10km, mB5.6/28, mb5.4/83, Ms4.9/62, Ms7 4.8/66*
*MOS **15** 15:36:40.9±1.0, 1°.48N×126°.29E, h16km, mb5.8/64, MS4.6/21, Error ellipse: s-maj=7.5km s-min=4.1km az=115.6*
*NEIC **15** 15:36:41.4, 1°.61N×126°.61E, h30km*
*NEIC **15** 15:36:41.4, 1°.71N×126°.41E, h30km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^17^Nm; Mrr1.22; Mθθ0.73; Mϕϕ -1.95; Mrθ0.52; Mθϕ0.17; Mϕr0.19; Fault plane solution: M0 1.81000×10^17^ NP1: ϕs147.50000°, δ50.88000°, λ45.95000°. NP2: ϕs24.39000°, δ56.11000°, λ130.52000°. Principal axes: T 1.5735, Plg57.0000°, Azm352.0000°; N 0.4003, Plg33.0000°, Azm179.0000°; P -1.9738, Plg3.0000°, Azm87.0000°;*
*IDC **15** 15:36:43.2±1.5, 1°.42N×126°.24E, h17km±8km, mb5.3/38, mbtmp5.3/42, ML4.8/4, MS4.5/37 Error ellipse: s-maj=13.8km s-min=8.8km az=80.0*
*NEIC **15** 15:36:44.9±2.6, 1°.61N±0°.05×126°.65E±0°.05, h35km±1km, mb5.5/245, Mww5.4/19, Error ellipse: s-maj=9.7km s-min=8.0km az=230.0*
*DJA **15** 15:36:47.3±0.1, 2°N±1°×12°6E±°, h53km±1km, M5.2/192, mB5.8/141, mb5.5/192, MLv5.7/43, Mw5.5/122, Mw(mB)5.3/141, MwMwp5.2/90, Mwp5.4/90*
*GCMT **15** 15:36:48.4±0.1, 1°.67N±0°.01×126°.37E±0°.01, h28km, MW5.5/133, Moment Tensor Solution. s130,c220; s133,c221; Duration: 1s4 Moment tensor: Scale 10^17^ Nm; Mrr1.09±.03; Mθθ1.07±.02; Mϕϕ -2.16±.03; Mrθ1.44±.05; Mθϕ-0.16±.02; Mϕr0.58±.05; Best double couple: M0 2.42800×10^17^ NP1: ϕs148.00000°, δ48.00000°, λ28.00000°. NP2: ϕs39.00000°, δ70.00000°, λ135.00000°. Principal axes: T 2.5400, Plg46.0000°, Azm355.0000°; N -0.2240, Plg41.0000°, Azm200.0000°; P -2.3160, Plg13.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 15:36:44.9±0.3, 1°51N±0°.02×126°39E±0°.03, h28km±2km, h29km: pP-P, n1132, σ1°54/1183, mb5.5/258, MS4.6/75, 68C-25D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**127**		**Pn**	**15 37 04.5**	**-1.5**
TNTI					**Sn**	**15 37 17.0**	**-4.5**
TNTI	**Ternate**	**1.22**	**127**	P	**Pn**	**15 37 05.6**	**-0.4**
TNTI	**Ternate**	**1.22**	**127**	P	**Pn**	**15 37 04.5**	**-1.5**
MNI	**Manado**	**1.55**	**268**	P	**Pn**	**15 37 12.1**	**+1.4**
MNI				S	**Sb**	**15 37 33.6**	**+1.3**
SGSI	**Sangihe**	**2.33**	**338**	P	**Pn**	**15 37 23.1**	**+1.7**
SGSI				S	**Sb**	**15 37 52.4**	**-2.3**
GTOI	**Gorontalo**	**3.49**	**256**	P	**Pn**	**15 37 40.6**	**+3.3**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**15 37 39.8**	**+1.6**
SANI	**Sanana**	**3.56**	**187**	S	**Sn**	**15 38 20.9**	**+1.6**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**15 37 39.8**	**+1.2**
SANI				S	**Sn**	**15 38 24.4**	**+5.1**
LUWI	**Luwuk**	**4.42**	**235**		**Pn**	**15 37 52.4**	**+2.3**
LUWI	**Luwuk**	**4.42**	**235**	P	**Pn**	**15 37 52.8**	**+2.7**
LUWI	**Luwuk**	**4.42**	**235**	S	**Sn**	**15 38 42.0**	**+1.4**
LUWI	**Luwuk**	**4.42**	**235**	P	**Pn**	**15 37 53.8**	**+3.7**
LUWI				S	**Sb**	**15 38 51.6**	**-3.1**
MRSI	**Marisa**	**4.57**	**257**	P	**Pn**	**15 37 54.9**	**+2.8**
NLAI	**Namlea**	**4.77**	**171**	P	**Pn**	**15 37 56.4**	**+1.5**
NLAI				S	**Sn**	**15 38 52.6**	**+3.4**
KRAI	**Karang Rat

KAPI Kappang 9.27 226 Pn **Pn** 15 38 58.6 +1.8
10nm,0.3s,baz=34,slow=13,SNR=49
KAPI Sn **Sn** 15 40 38.0 -2.3
baz=56,slow=8.5
KAPI Kappang 9.27 226 Pn 15 38 58.9 +2.2
KAPI Kappang 9.27 226 P **Pn** 15 38 59.2 +2.4
KAPI Kappang 9.27 226 S **Sn** 15 40 42.5 +2.3
KAPI Kappang 9.27 226 *i* P **Pn** 15 38 58.2 +1.4
KAPI Kappang 9.27 226 P **Pn** 15 38 59.7 +2.9
KAPI P **Pn** 15 38 59.7 +2.9
KAPI S **Sn** 15 40 45.9 +5.6
KAPI S **Sn** 15 40 45.9 +5.6
KAPI Kappang 9.27 226 P **Pn** 15 38 59.0 +2.2
MKS Makassar 9.61 226 P **Pn** 15 39 03.9 +2.4
4µm351nm,0.9s
BSSI Bau Bau, Buton 9.62 218 P **Pn** 15 39 04.0 +2.5
6µm3µm233nm,0.6s
BKB Balikpapan 9.88 254 P **Pn** 15 39 08.3 +3.1
3µm163nm,0.8s
BAKI Biak 10.08 105 P **Pn** 15 39 08.6 +0.8
SRPI Serui, Papua 10.40 109 P **Pn** 15 39 12.5 +0.2
5µm5µm305nm,1.2s
SAUI Saumlaki 10.62 153 P **Pn** 15 39 17.3 +2.0
SAUI Saumlaki 10.62 153 P **Pn** 15 39 17.1 +1.8
5µm5µm211nm,1.0s
MMRI Maumere 10.89 202 Pn 15 39 21.2 +2.2
MMRI Maumere 10.89 202 P **Pn** 15 39 20.7 +1.7
MMRI Maumere 10.89 202 P **Pn** 15 39 21.6 +2.6
4µm2µm137nm,1.3s
KKM Kota Kinabalu 11.11 294 Pn 15 39 26.5 +4.4
KKM Kota Kinabalu 11.11 294 P **Pn** 15 39 25.1 +3.0
KKM Kota Kinabalu 11.11 294 P **Pn** 15 39 25.2 +3.1
4µm192nm,0.7s
EDFI Ende, Flores 11.21 205 P **Pn** 15 39 26.3 +2.8
4µm111nm,0.8s
SOEI Soe 11.39 191 Pn 15 39 31.4 +5.6
SOEI Soe 11.39 191 P **Pn** 15 39 28.7 +2.8
SOEI Soe 11.39 191 S **Sn** 15 41 34.4 +2.1
SOEI Soe 11.39 191 P Pn 15 39 30.6 +4.7
6µm6µm556nm,0.9s
MTKI Muara Teweh, K 11.75 258 P **Pn** 15 39 33.3 +2.5
BATI Baumata 11.95 193 Pn **Pn** 15 39 37.2 +3.7
3.6nm,0.3s,baz=101,slow=5.0,SNR=18
BATI LR LR 15 45 14.7
comp=Z,3µm,21.8s,baz=12,slow=43
BATI Baumata 11.95 193 P **Pn** 15 39 37.9 +4.4
4µm3µm228nm,1.1s
BBKI Banjar Baru 12.56 247 P **Pn** 15 39 45.2 +3.4
8µm132nm,0.9s
WSI Waingapu 12.65 209 P **Pn** 15 39 47.3 +4.2
4µm4µm202nm,0.9s
DBNI Kabupaten Domp 12.80 219 P **Pn** 15 39 49.4 +4.3
70nm,0.7s
BASI Baing, Sumba 13.01 206 P **Pn** 15 39 50.5 +2.5
5µm4µm247nm,0.9s
WBSI Waikabubak, Su 13.09 212 P **Pn** 15 39 52.0 +2.9
4µm2µm169nm,0.9s
PLAI Plampang 13.38 220 P **Pn** 15 39 56.4 +3.3
PLAI Plampang 13.38 220 P Pn 15 39 57.7 +4.6
TGY Tagaytay City 13.63 337 Pn **P** 15 40 02.2 -2.9
14nm,0.3s,baz=112,slow=13,SNR=3.2
TGY LR LR 15 45 49.8
comp=Z,2µm,20.2s,baz=179,slow=40
TWSI Taliwang, Sumb 13.91 223 P Pn 15 40 04.8 +4.5
4µm3µm442nm,0.8s
SBUM Sibu 14.20 274 Pn 15 40 05.8 +1.6
SBUM Sibu 14.20 274 P **Pn** 15 40 06.2 +2.0
SBUM Sibu 14.20 274 P **Pn** 15 40 07.7 +3.5
116nm,0.8s
GENI Genyem 14.36 106 P **Pn** 15 40 07.2 +0.7
GENI Genyem 14.36 106 P **Pn** 15 40 08.3 +1.8
7µm5µm386nm,1.7s
DRS Darwin Rock St 14.55 162 P **Pn** 15 40 10.5 +1.5
KHKI Kahang-Kahang 14.55 227 P **Pn** 15 40 12.0 +2.9
4µm3µm285nm,0.9s
JAY Jayapura 14.86 106 Pn **Pn** 15 40 14.7 +1.4
2.4nm,0.3s,baz=57,slow=22,SNR=3.7
42nm,1.0s
JAY Jayapura 14.86 106 P **Pn** 15 40 14.3 +1.1
2µm141nm,1.2s
MTN Manton Dam 15.01 162 P **Pn** 15 40 15.3 +0.1
comp=Z,91nm,1.1s
MTN Manton Dam 15.01 162 Pn 15 40 13.7 -1.5
KMMI Kalianget 15.03 235 P **Pn** 15 40 18.2 +2.7
comp=Z,5µmcomp=Z,4µmcomp=Z,284nm,0.8s
DNP Denpasar 15.05 228 P **Pn** 15 40 18.9 +3.1
RTBI Rangdo, Negare 15.11 229 P **Pn** 15 40 18.7 +2.1
comp=Z,3µmcomp=Z,3µmcomp=Z,425nm,0.9s
IGBI Denpasar 15.19 227 P **P** 15 40 20.9 -1.5
ABJI Asem Bagus 15.25 233 P **Pn** 15 40 20.8 +2.4
comp=Z,4µmcomp=Z,3µmcomp=Z,116nm,0.8s
KDU Kakadu 15.34 157 P **Pn** 15 40 22.1 +2.5
comp=Z,162nm,1.2s
JAGI Jajag, Banyuwa 15.72 231 P **P** 15 40 27.4 -0.9
JAGI Jajag, Banyuwa 15.72 231 P **Pn** 15 40 26.5 +2.0
comp=Z,4µmcomp=Z,3µmcomp=Z,252nm,1.0s
BLJI Banyuglugur 15.73 234 P **P** 15 40 28.7 +0.3
comp=Z,3µmcomp=Z,256nm,1.0s
SZP Santa 16.98 340 P **P** 15 40 42.1 -0.1
MMPI Merauke 17.11 126 P **P** 15 40 45.5 +1.8
KNRA Kununurra 17.23 172 P **Pn** 15 40 43.6 -0.1
comp=Z,215nm,0.9s
KNRA Kununurra 17.23 172 Pn **Pn** 15 40 40.4 -3.3
SJI Sawahan 17.24 238 P **P** 15 40 46.1 +0.9
comp=Z,2µmcomp=Z,110nm,0.7s
SNJI Sawahan-Nganju 17.27 238 P **P** 15 40 45.7 +0.1
comp=Z,4µmcomp=Z,2µmcomp=Z,110nm,0.7s
NGJI Ngawi 17.31 239 P **Pn** 15 40 45.5 +0.8
comp=Z,146nm,0.9s
PCJI Pacitan 17.97 237 P **P** 15 40 54.1 +0.9
comp=Z,3µmcomp=Z,4µmcomp=Z,247nm,1.2s
SMRI Semarang 18.05 242 P **P** 15 40 56.1 +2.0
SMRI Semarang 18.05 242 P **P** 15 40 57.2 +3.1
comp=Z,132nm,0.9s
UGM Wanagama 18.39 239 P **Pn** 15 41 00.4 +2.4
UGM Wanagama 18.39 239 P **Pn** 15 41 00.0 +2.0
comp=Z,3µmcomp=Z,106nm,0.9s
YOGI Yogyakarta 18.54 240 P **P** 15 40 59.5 0.0
comp=Z,3µmcomp=Z,348nm,1.1s
CTJI Waduk Cacaban 19.14 244 P **P** 15 41 06.6 +0.5
comp=Z,120nm,0.8s
TPI Tanjungpandan 19.21 257 P **P** 15 41 06.6 -0.2
FITZ Fitzroy Crossi 19.50 182 P **P** 15 41 08.9 -1.0
comp=Z,4.6nm,0.3s,baz=18,slow=11,SNR=66
FITZ S **S** 15 44 42.3 -6.5
comp=Z,10nm,0.8s,baz=347,slow=23,SNR=1.8
FITZ LR LR 15 49 46.7
comp=Z,1µm,21.4s,baz=11,slow=40
comp=Z,15nm,0.4s
KPJI Karang Pucung 19.51 243 P **P** 15 41 10.0 -0.1
comp=Z,4µmcomp=Z,233nm,0.9s
LEM Lembang 20.49 246 P **P** 15 41 19.2 -1.8
comp=Z,32nm,0.8s,baz=46,slow=7.8,SNR=5.4
comp=Z,32nm,0.8s
PPBI Pangkal Pinang 20.58 260 P **P** 15 41 22.8 +1.0
BBJI Bungbulang 20.71 244 P **P** 15 41 20.1 -3.2
BBJI Bungbulang 20.71 244 P **P** 15 41 22.6 -0.7
BBJI Bungbulang 20.71 244 S **S** 15 45 14.3 +0.8
BBJI Bungbulang 20.71 244 P **P** 15 41 24.2 +0.9
DBJI Dramaga 21.18 248 P **P** 15 41 28.6 +0.3
TWGBT Beinan 21.80 347 P **P** 15 41 33.0 -1.9
TWG Pinlang 21.81 347 P **P** 15 41 33.6 -3.3
TWG IAmb IAmb 15 41 36.4
comp=Z,169nm,0.7s
TPRI Tanjung Pinang 21.87 269 P **P** 15 41 36.8 +1.1
GUMO Guam 21.87 56 P **P** 15 41 36.3 +0.6
comp=Z,218nm,0.8s,baz=172,slow=16,SNR=4.2
GUMO LR LR 15 49 01.9
comp=Z,1µm,21.2s,baz=230,slow=34
comp=Z,218nm,0.8s
DSRI Dabo 21.90 265 P **P** 15 41 37.5 +1.4
BLSI Bandar Lampung 22.20 252 P **P** 15 41 41.3 +2.0
comp=Z,147nm,0.4s
YULB Yu-li 22.31 348 P **P** 15 41 35.8 -4.5
YULB IAmb IAmb 15 41 44.4
comp=Z,164nm,1.0s
YULB Yu-li 22.31 348 P **P** 15 41 37.9 -2.4
TPUB Ta-pu 22.38 346 P **P** 15 41 38.3 -2.7
TPUB Ta-pu 22.38 346 P **P** 15 41 38.9 -2.1
KLI Kotabumi 22.43 253 P **P** 15 41 37.3 -4.4
comp=Z,3µmcomp=Z,176nm,0.4s
KLSI 22.50 254 P **P** 15 41 41.5 -1.0
comp=Z,105nm,1.1s
MYKOM Kota Tinggi 22.54 271 P **P** 15 41 41.8 -1.1
MYKOM IAmb IAmb 15 41 46.1
comp=Z,139nm,0.9s

MYKOM Kota Tinggi 22.54 271 P **P** 15 41 42.9 0.0
MYKOM Kota Tinggi 22.54 271 P **P** 15 41 43.8 +0.9
comp=Z,2µmcomp=Z,210nm,1.1s
WB0 Warramunga Arr 22.55 160 P **P** 15 41 41.6 -1.3
BTDF Bukit Timah Da 22.61 270 P **P** 15 41 43.5 -0.2
BTDF Bukit Timah Da 22.61 270 P **P** 15 41 44.4 +0.7
comp=Z,126nm,1.3s
COEN Coen 22.64 133 P **P** 15 41 41.7 -2.2
COEN Coen 22.64 133 P **P** 15 41 42.1 -1.9
WRAB Tennant Creek 22.69 160 P **P** 15 41 43.2 -1.2
WRAB IAmb IAmb 15 41 50.5
comp=Z,411nm,1.2s
WRAB Tennant Creek 22.69 160 P **P** 15 41 42.9 -1.5
WRAB Tennant Creek 22.69 160 P **P** 15 41 43.2 -1.2
WRAB pmax pmax
comp=Z,411nm,1.2s
WRA Warramunga Arr 22.70 160 P **P** 15 41 42.6 -1.9
comp=Z,142nm,0.6s,baz=338,slow=11,SNR=347
WRA S **S** 15 45 43.6 -7.7
comp=Z,18nm,0.8s,baz=340,slow=16,SNR=9.7
WRA LR LR 15 51 22.4
comp=Z,1µm,19.4s,baz=329,slow=39
WRA PKiKP **PKiKP** 15 53 21.2 -0.5
comp=Z,0.3nm,0.8s,baz=339,slow=0.7,SNR=1.3
WRA P3KPbc 16 15 12.7
comp=Z,1.0nm,0.8s,baz=169,slow=4.2,SNR=5.4
comp=Z,142nm,0.6s
WRA Warramunga Arr 22.70 160 P **P** 15 41 43.0 -1.5
WRA Warramunga Arr 22.70 160 P **P** 15 41 43.0 -1.5
WRA pmax pmax
comp=Z,20nm,0.6s
SSLB Suanglung 22.77 347 IAmb IAmb 15 41 53.8
comp=Z,186nm,0.7s
SSLB Suanglung 22.77 347 P **P** 15 41 42.6 -2.6
KASI Kota Agung 22.96 252 P **P** 15 41 46.9 -0.4
comp=Z,2µmcomp=Z,128nm,0.9s
JMBI JAMBI 22.96 262 P **P** 15 41 48.3 +1.0
comp=Z,400nm,0.9s
MDSI Maura Dua 22.98 255 P **P** 15 41 45.7 -1.8
comp=Z,69nm,0.8s
NACB Ninganchiao 23.01 349 P **P** 15 41 44.1 -3.5
NACB Ninganchiao 23.01 349 P **P** 15 41 48.2 +0.5
YOJ Yonaguni jima 23.05 352 P **P** 15 41 42.6 -5.5
YOJ IAmb IAmb 15 41 51.4
comp=Z,304nm,0.9s
YOJ Yonaguni jima 23.05 352 P **P** 15 41 48.4 +0.3
YOJ Yonaguni jima 23.05 352 P **P** 15 41 42.6 -5.5
YOJ pmax pmax
comp=Z,304nm,0.9s
JMJ Miyako jima 2 23.20 357 P **P** 15 41 49.7 +0.1
LWLI Liwa 23.23 254 P **P** 15 41 54.6 +4.4
comp=Z,3µmcomp=Z,282nm,0.7s
PMG Port Moresby 23.35 118 LR LR 15 53 27.2
comp=Z,2µm,19.0s,baz=318,slow=43
PMG Port Moresby 23.35 118 P **P** 15 41 51.1 -0.2
PMG Port Moresby 23.35 118 P **P** 15 41 51.2 -0.1
PMG Port Moresby 23.35 118*ce* P **P** 15 41 51.9 +0.6
PMG pmax pmax
comp=Z,136nm,1.7s
PMG Port Moresby 23.35 118 P **P** 15 41 50.7 -0.6
comp=Z,76nm,0.7s
MBWA Marble Bar 23.45 196 P **P** 15 41 50.0 -2.1
MBWA Marble Bar 23.45 196 P **P** 15 41 51.1 -1.0
MBWA Marble Bar 23.45 196 P **P** 15 41 50.9 -1.2
MBWA P **P** 15 41 50.9 -1.2
YHNB Yeheng 23.53 349 P **P** 15 41 50.3 -2.7
YHNB IAmb IAmb 15 42 00.5
comp=Z,180nm,1.0s
YHNB Yeheng 23.53 349 P **P** 15 41 52.0 -1.0
XMI Christmas Isla 23.78 240 P **P** 15 41 55.2 -0.2
QIZ Qiongzhong 23.80 318 P **P** 15 41 54.0 -1.5
QIZ IAmb IAmb 15 42 03.3
comp=Z,180nm,1.3s
QIZ Qiongzhong 23.80 318 P **P** 15 41 54.6 -0.9
QIZ Qiongzhong 23.80 318 P **P** 15 41 54.8 -0.7
QIZ S **S** 15 46 12.3 +2.7
QIZ sS **pS** 15 46 17.6 -0.7
QIZ pmax pmax
comp=Z,84nm,1.1s
QIZ LR LR
comp=Z,2µm,16.5s
QIZ LR LR
comp=Z,2µm,15.8s
QIZ LR LR
comp=Z,2µm,19.2s
TATO Taipei 23.81 349 P **P** 15 41 53.9 -1.6
TATO Taipei 23.81 349 P **P** 15 41 54.4 -1.1
PSA00 Pilbara Seismi 23.81 195 P **P** 15 41 54.6 -1.0
PSA00 Pilbara Seismi 23.81 195 P **P** 15 41 54.6 -1.0
PSA00 Pilbara Seismi 23.81 195 P **P** 15 41 55.2 -0.4
HKPS Hong Kong Po S 23.84 331 P **P** 15 41 53.5 -2.4
HKPS IAmb IAmb 15 41 57.2
comp=Z,160nm,1.1s
HKPS Hong Kong Po S 23.84 331 P **P** 15 41 55.9 0.0
KNMB Chin-men Tao 24.10 342 IAmb IAmb 15 42 00.2
comp=Z,131nm,0.9s
MNAI Manna 24.13 256 P **P** 15 41 57.1 -1.6
MNAI IAmb IAmb 15 42 22.1
comp=Z,300nm,1.0s
KSI Kapahiang 24.33 258 P **P** 15 42 02.1 +1.5
comp=Z,2µmcomp=Z,5µmcomp=Z,133nm,0.6s
QZH2 Quanzhou 24.49 343 ⇑*i*P **P** 15 42 00.5 -1.3
QZH2 S **S** 15 46 16.6 -3.9
QZH2 pmax pmax
comp=Z,170nm,1.4s
QZH2 pmax pmax
comp=Z,470nm,4.8s
QZH2 LR LR
comp=Z,1µm,26.5s
QZH2 LR LR
comp=Z,1µm,17.9s
QZH2 LR LR
comp=Z,3µm,27.9s
MASI Maura Aman, Be 24.58 259 P **P** 15 42 02.4 -0.5
JMZ Minamidaito 2 24.62 10 P **P** 15 41 58.3 -4.7
UBPT Khong Chiam 24.77 305 P **P** 15 42 04.1 -0.4
EGSI Enggano, Bengk 25.03 254 P **P** 15 42 07.1 +0.2
comp=Z,85nm,0.9s
KRJI Kerinci 25.18 262 P **P** 15 42 08.7 +0.3
GZH2 Guangzhou 25.24 332 P **P** 15 42 08.0 -0.6
GZH2 S **S** 15 46 37.1 +4.5
GZH2 pmax pmax
comp=Z,250nm,0.9s
GZH2 LR LR
comp=Z,2µm,17.4s
GZH2 LR LR
comp=Z,2µm,21.7s
GZH2 LR LR
comp=Z,2µm,16.0s
JOW Kunigami 25.25 4 P **P** 15 42 10.3 +1.6
comp=Z,399nm,0.9s,baz=196,slow=7.7,SNR=66
JOW LR LR 15 54 25.2
comp=Z,645nm,18.2s,baz=154,slow=42
comp=Z,399nm,0.9s
BKNI Bangkinang 25.38 268 P **P** 15 42 10.8 +0.8
BKNI Bangkinang 25.38 268 P **P** 15 42 12.9 +2.9
comp=Z,232nm,1.3s
QIS Mount Isa 25.46 150 P **P** 15 42 10.4 -0.3
IPM Ipoh 25.50 277 P **P** 15 42 11.1 -0.1
IPM Ipoh 25.50 277 P **P** 15 42 11.0 -0.1
comp=Z,2µmcomp=Z,66nm,1.1s
KULM Kulim 25.97 279 P **P** 15 42 14.8 -0.6
KULM Kulim 25.97 279 P **P** 15 42 15.0 -0.4
KULM Kulim 25.97 279 P **P** 15 42 15.3 -0.1
PDSI Padang 26.04 265 P **P** 15 42 16.0 -0.1
comp=Z,92nm,0.7s
PPI Padang Panjang 26.07 266 P **P** 15 42 16.3 0.0
comp=Z,2µmcomp=Z,1µmcomp=Z,56nm,1.1s
ASAR Alice Springs 26.07 164 P **P** 15 42 15.6 -0.7
comp=Z,37nm,0.7s,baz=344,slow=7.6,SNR=261
ASAR PcP **PcP** 15 45 43.9 +0.1
comp=Z,8.0nm,0.6s,baz=340,slow=3.2,SNR=5.6
ASAR S **S** 15 46 43.7 -2.1
comp=Z,10nm,0.8s,baz=350,slow=22,SNR=4.2
ASAR ScP **ScP** 15 49 22.5 +0.8
comp=Z,7.9nm,1.0s,baz=349,slow=3.1,SNR=5.8
ASAR ScS **ScS** 15 53 08.4 -3.2
comp=Z,1.8nm,1.0s,baz=355,slow=2.8,SNR=4.7
ASAR PKiKP **PKiKP** 15 53 23.2 -0.3
comp=Z,1.3nm,1.0s,baz=337,slow=1.6,SNR=3.0
ASAR P3KPbc 16 14 59.1
comp=Z,0.6nm,0.9s,baz=152,slow=4.7,SNR=4.6
comp=Z,37nm,0.7s
ASAR Alice Springs 26.07 164 P **P** 15 42 15.0 -1.2
AUALC St Philip's Co 26.08 164 P **P** 15 42 15.5 -0.8

MTSU Mount Surprise 26.31 139 P **P** 15 42 18.7 +0.2
GIRL Giralia 26.77 206 P **P** 15 42 20.6 -1.9
GIRL IAmb IAmb 15 42 26.0
comp=Z,154nm,1.2s
MNSI Mandailing Nat 26.82 269 P **P** 15 42 23.8 +0.7
comp=Z,60nm,0.6s
RPSI Rantau Prapat 27.48 273 IAmb IAmb 15 42 30.2
comp=Z,105nm,1.2s
PSI Prapat 27.48 273 P **P** 15 42 28.3 -0.9
PSI Prapat 27.48 273 P **P** 15 42 28.7 -0.5
comp=Z,862nmcomp=Z,74nm,0.9s
KCSI Kotacane, Aceh 28.66 275 P **P** 15 42 38.6 -1.0
GSI Gunungsitoli 28.81 270 P **P** 15 42 39.6 -1.2
GSI IAmb IAmb 15 42 43.8
comp=Z,152nm,1.2s
GSI Gunungsitoli 28.81 270 P **P** 15 42 39.7 -1.2
GSI Gunungsitoli 28.81 270 P **P** 15 42 39.7 -1.2
comp=Z,2µmcomp=Z,108nm,0.9s
MEEK Meekatharra 28.97 194 P **P** 15 42 41.7 -0.5
CTA Charters Tower 28.98 139 P **P** 15 42 43.1 +0.7
CTAO Charters Tower 28.98 139 P **P** 15 42 41.0 -1.4
CTAO Charters Tower 28.98 139 P **P** 15 42 43.3 +0.9
CTAO Charters Tower 28.98 139 P **P** 15 42 41.0 -1.4
CTAO pmax pmax
comp=Z,79nm,1.1s
TPTI 29.24 274 P **P** 15 42 43.4 -1.3
comp=Z,38nm,1.0s
JCJ Chichijima 29.61 29 P P 15 42 33.7 -14
comp=Z,260nm,0.9s,baz=256,slow=10,SNR=9.0
JCJ Chichijima 29.61 29 P **P** 15 42 44.2 -3.6
JCJ Chichijima 29.61 29 P **P** 15 42 47.1 -0.8
LHMI Lhok Sumawe 29.62 278 P **P** 15 42 45.6 -2.5
LHMI IAmb IAmb 15 42 54.8
comp=Z,243nm,1.7s
JSU Suzuyama 30.08 7 P **P** 15 42 52.3 +0.3
WHN Wuhan 31.06 340 ⇑P **P** 15 43 00.8 +0.3
WHN LR LR
comp=Z,4µm,18.6s
NJ2 Nanjing 31.20 348 ⇑P **P** 15 43 02.0 +0.2
NJ2 sP **pP** 15 43 09.4 -0.3
NJ2 pmax pmax
comp=Z,34nm,0.8s
GYA Guiyang 31.23 324 ⇓P **P** 15 43 02.8 +0.5
GYA S **S** 15 48 05.8 -1.4
GYA pmax pmax
comp=Z,98nm,0.8s
GYA pmax pmax
comp=Z,210nm,3.1s
GYA LR LR
comp=Z,1µm,14.6s
GYA LR LR
comp=Z,690nm,18.2s
GYA LR LR
comp=Z,910nm,18.4s
JNU Nakatsue 31.73 7 P **P** 15 43 06.8 +0.2
comp=Z,119nm,0.8s,baz=188,slow=6.1,SNR=57
JNU LR LR 16 01 03.4
comp=Z,214nm,18.0s,baz=170,slow=46
comp=Z,119nm,0.8s
CM31 Chiang Mai Arr 31.76 304 P **P** 15 43 07.1 +0.1
SNR=13
CM31 P **P** 15 43 07.1 +0.1
SNR=13
CMAR Chiang Mai Arr 31.76 304 P **P** 15 43 07.2 +0.2
comp=Z,11nm,1.0s,baz=124,slow=7.3,SNR=83
CMAR PcP **PcP** 15 45 58.1 0.0
comp=Z,9.7nm,1.0s,baz=121,slow=3.5,SNR=10
CMAR S **S** 15 48 13.9 -1.5
comp=Z,0.5nm,0.6s,baz=77,slow=5.6,SNR=1.0
CMAR ScP **ScP** 15 49 41.9 +2.1
comp=Z,1.2nm,0.9s,baz=173,slow=2.6,SNR=4.3
CMAR P3KPbc 16 14 39.3
comp=Z,0.4nm,0.5s,baz=294,slow=3.9,SNR=1.6
comp=Z,11nm,1.0s
CMAR Chiang Mai Arr 31.76 304 P **P** 15 43 06.5 -0.5
CMAR PcP **PcP** 15 45 59.1 +0.9
CHTO Chiang Mai 31.93 304 P **P** 15 43 08.1 -0.4
CHTO PcP **PcP** 15 45 59.4 +0.8
CHTO Chiang Mai 31.93 304 P **P** 15 43 07.9 -0.6
CHTO Chiang Mai 31.93 304 P **P** 15 43 08.3 -0.1
CHTO Chiang Mai 31.93 304 P **P** 15 43 08.1 -0.4
comp=Z,38nm,0.8s
CHTO Chiang Mai 31.93 304 P **P** 15 43 08.0 -0.4
CHTO pP **pwP** 15 43 17.9 -0.6
MORW Morawa 31.98 197 P **P** 15 43 08.5 -0.2
FORT Forrest 32.15 177 IAmb IAmb 15 43 15.7
comp=Z,35nm,0.7s
INKA Innaminka 32.19 156 P **P** 15 43 09.5 -1.0
KMI2 Kunming 32.76 318 ⇑P **P** 15 43 16.3 +0.4
KMI2 S **S** 15 48 27.6 -3.7
KMI2 pmax pmax
comp=Z,41nm,1.1s
KMI2 LR LR
comp=Z,1µm,21.8s
KMI2 LR LR
comp=Z,790nm,22.7s
KMI2 LR LR
comp=Z,2µm,18.5s
ENH Enshi 32.80 332 P **P** 15 43 14.8 -1.2
ENH Enshi 32.80 332 P **P** 15 43 15.4 -0.6
ENH pP **sP** 15 43 25.2 -2.0
ENH sP **pP** 15 43 29.6 +5.7
QLP Quilpie 32.81 150 P **P** 15 43 15.3 -0.7
JMN Monobe 32.81 12 P **P** 15 43 16.9 +0.9
BLDU Ballidu 33.25 195 P **P** 15 43 19.7 -0.1
JHJ Hachijo jima 2 33.87 20 LR LR 15 56 05.0
comp=Z,551nm,21.8s,baz=203,slow=34
KLBR Kellerberrin 33.92 193 P **P** 15 43 25.3 -0.4
AUNRC North Rockhamp 34.09 138 P **P** 15 43 27.4 +0.2
PZH PanZhiHua 34.34 318 P **P** 15 43 28.8 -0.7
PZH S **S** 15 48 52.3 -3.2
PZH pmax pmax
comp=Z,240nm,6.7s
PZH LR LR
comp=Z,830nm,21.8s
PZH LR LR
comp=Z,940nm,21.6s
PZH LR LR
comp=Z,1µm,20.8s
TJN Taejon 34.71 1 P **P** 15 43 33.7 +1.3
JSG Sagara 34.78 17 P **P** 15 43 34.2 +1.1
GD1S Gladstone Soft 34.86 138 P **P** 15 43 35.3 +1.5
AUKUL Kulin High Sch 34.87 192 P **P** 15 43 34.2 +0.3
INU Inuyama 35.09 15 P **P** 15 43 35.6 -0.2
INU Inuyama 35.09 15 P **P** 15 43 36.0 +0.3
INU Inuyama 35.09 15 P **P** 15 43 36.2 +0.5
NWAO Narrogin (SRO) 35.33 193 P **P** 15 43 35.9 -1.9
NWAO IAmb IAmb 15 43 41.8
comp=Z,30nm,0.7s
NWAO Narrogin (SRO) 35.33 193 P **P** 15 43 38.1 +0.3
NWAO Narrogin (SRO) 35.33 193 P **P** 15 43 35.9 -1.9
NWAO pmax pmax
comp=Z,30nm,0.7s
NWAO Narrogin (SRO) 35.33 193 P **P** 15 43 37.7 -0.1
BBOO Buckleboo 35.33 166 IAmb IAmb 15 43 41.6
comp=Z,55nm,0.8s
BBOO Buckleboo 35.33 166 P **P** 15 43 37.6 -0.3
LYN LuoYang 35.35 340 ⇑P **P** 15 43 37.3 -0.7
LYN pmax pmax
comp=Z,40nm,1.3s
LYN LR LR
comp=Z,1µm,17.5s
LYN LR LR
comp=Z,2µm,22.0s
LYN LR LR
comp=Z,2µm,24.4s
JGF Kuroka 35.42 16 P **P** 15 43 38.6 0.0
TIA Tai'an 35.59 347 P **P** 15 43 39.3 -0.7
TIA pmax pmax
comp=Z,52nm,0.8s
TNCH TengChong 35.65 313 ⇑P **P** 15 43 40.6 -0.3
TNCH PP **PnPn** 15 44 59.4 -1.4
TNCH S **S** 15 49 14.0 -1.9
TNCH SS **SnSn** 15 51 37.6 -0.7
TNCH pmax pmax
comp=Z,130nm,1.4s
TNCH pmax pmax
comp=Z,370nm,3.2s
TNCH LR LR
comp=Z,410nm,17.1s
TNCH LR LR
comp=Z,860nm,25.2s
TNCH LR LR
comp=Z,1µm,22.7s
KSAR Wonju Array Be 35.79 2 P **P** 15 43 40.5 -1.2

KSAR **Wonju Array Be** 35.79 2 P **P** **15 43 40.5 -1.2**
KSRS **Korea Array** 35.80 2 P **P** **15 43 42.8 +1.0**
comp=Z,21nm,0.9s,baz=179,slow=9.4,SNR=49
KSRS PcP **PcP** **15 46 10.3 +1.2**
comp=Z,7.9nm,0.8s,baz=182,slow=2.7,SNR=7.8
KSRS LR LR 16 00 57.3
comp=Z,311nm,19.0s,baz=190,slow=40
comp=Z,21nm,0.9s
EIDS **Eidsvold** 35.85 140 P **P** **15 43 41.4 -1.0**
EIDS IAmb IAmb 15 43 46.8
comp=Z,68nm,1.0s
EIDS **Eidsvold** 35.85 140 P **P** **15 43 41.1 -1.3**
STKA **Stephens Creek** 36.20 158 P **P** **15 43 45.0 -0.2**
comp=Z,34nm,0.6s,baz=330,slow=8.6,SNR=56
STKA LR LR 16 01 46.7
comp=Z,608nm,19.0s,baz=331,slow=42
comp=Z,34nm,0.6s
STKA **Stephens Creek** 36.20 158 P **P** **15 43 45.0 -0.2**
STKA **Stephens Creek** 36.20 158 P **P** **15 43 45.1 -0.2**
CD2 **Chengdu** 36.26 326 P **P** **15 43 45.1 -0.8**
CD2 S **S** **15 49 18.8 -6.0**
CD2 sS sS 15 49 38.4 +0.5
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 pmax pmax
comp=Z,440nm,4.3s
CD2 LR LR
comp=Z,1μm,15.2s
CD2 LR LR
comp=Z,2μm,16.5s
CD2 LR LR
comp=Z,1μm,17.8s
XAN **Xi'an** 36.26 335 ⇑P **P** **15 43 44.8 -1.0**
XAN pP pP 15 43 50.5 -3.3
XAN S **S** **15 49 18.8 -5.9**
XAN pmax pmax
comp=Z,140nm,0.7s
XAN pmax pmax
comp=Z,620nm,4.4s
XAN LR LR
comp=Z,2μm,17.9s
XAN LR LR
comp=Z,790nm,17.6s
XAN LR LR
comp=Z,2μm,22.0s
XAN **Xi'an** 36.26 335 P **P** **15 43 44.4 -1.4**
MJAR **Matsushiro Arr** 36.54 16 P **P** **15 43 47.4 -0.7**
comp=Z,59nm,0.9s,baz=183,slow=9.4,SNR=142
MJAR PcP **PcP** **15 46 12.4 +1.0**
comp=Z,10nm,0.8s,baz=182,slow=2.6,SNR=6.6
MJAR S **S** **15 49 30.6 +1.7**
comp=Z,0.9nm,0.8s,baz=180,slow=16,SNR=2.3
MJAR ScP **ScP** **15 49 55.7 -0.6**
comp=Z,4.6nm,1.0s,baz=205,slow=4.3,SNR=6.2
comp=Z,59nm,0.9s
MAJO **Matsushiro** 36.54 16 P **P** **15 43 47.2 -0.9**
MAJO IAmb IAmb 15 43 50.6
comp=Z,116nm,1.1s
MAJO **Matsushiro** 36.54 16 P **P** **15 43 47.8 -0.4**
MAJO **Matsushiro** 36.54 16*c* *i*P **P** **15 43 46.5 -1.7**
MAJO pmax pmax
comp=Z,86nm,1.0s
MAJO **Matsushiro** 36.54 16 P **P** **15 43 47.5 -0.7**
MJB9 **Matsu-Tunnel** 36.54 16 IAmb IAmb 15 43 51.6
comp=Z,112nm,1.1s
HTT **Hallett** 36.70 162 P **P** **15 43 51.1 +1.4**
AULRC **Lightning Ridg** 37.05 148 P **P** **15 43 51.9 -0.7**
HNS **HongShan** 37.31 345 ⇑P **P** **15 43 54.1 -0.5**
HNS S **S** **15 49 44.3 +3.8**
HNS pmax pmax
comp=Z,74nm,1.0s
HNS LR LR
comp=Z,580nm,17.5s
HNS LR LR
comp=Z,790nm,20.6s
HNS LR LR
comp=Z,1μm,23.5s
DL2 **Dalian** 37.48 354 P **P** **15 43 55.8 -0.2**
DL2 S **S** **15 49 44.4 +1.4**
DL2 pmax pmax
comp=Z,470nm,0.9s
DL2 pmax pmax
comp=Z,500nm,4.3s
DL2 LR LR
comp=Z,1μm,21.4s
DL2 LR LR
comp=Z,2μm,23.5s
DL2 LR LR
comp=Z,700nm,25.5s
CMSA **Cobar Meteorol** 37.63 152 P **P** **15 43 57.9 +0.4**
TW1H **Toowoomba 1 Ha** 37.94 141 P **P** **15 44 00.9 +0.6**
AUMAR **Marden Senior** 37.98 164 P **P** **15 44 02.0 +1.6**
TIY **Taiyuan** 38.25 342 P **P** **15 44 02.3 -0.4**
TIY pmax pmax
comp=Z,45nm,0.9s
TIY pmax pmax
comp=Z,310nm,4.9s
TIY LR LR
comp=Z,820nm,24.5s
TIY LR LR
comp=Z,650nm,16.4s
TIY LR LR
comp=Z,1μm,27.5s
AUMBR **Murray Bridge** 38.40 163 P **P** **15 44 04.9 +1.0**
AUWSH **Wavell State H** 38.52 140 P **P** **15 44 05.2 +0.2**
GC1S **Gold Coast 1 S** 39.34 141 P **P** **15 44 12.3 +0.4**
BJI2 **Beijing** 39.45 348 P **P** **15 44 12.3 -0.3**
BJI2 S **S** **15 50 13.8 +1.0**
BJI2 pmax pmax
comp=Z,34nm,0.9s
BJI2 LR LR
comp=Z,200nm,18.9s
BJI2 LR LR
comp=Z,320nm,22.9s
BJI2 LR LR
comp=Z,340nm,21.0s
BJT **Baijiatuau** 39.45 348 IAmb IAmb 15 44 13.7
comp=Z,56nm,0.9s
BJT **Baijiatuau** 39.45 348 P **P** **15 44 12.6 0.0**
BJT **Baijiatuau** 39.45 348 P **P** **15 44 12.5 -0.1**
AUDCS **Dubbo College** 39.61 150 P **P** **15 44 14.5 +0.4**
ARMA **Armidale** 39.83 145 P **P** **15 44 16.8 +0.7**
AUPHS **Peel High Scho** 39.92 146 P **P** **15 44 17.5 +0.7**
LZDM **Lanzhou Array** 40.23 331 P **P** **15 44 19.4 -0.1**
comp=Z,20nm,1.0s,baz=163,slow=11,SNR=42
LZDM PcP **PcP** **15 46 23.8 +0.4**
comp=Z,15nm,1.0s,baz=141,slow=5.5,SNR=3.7
LZDM ScP **ScP** **15 50 09.8 -0.9**
comp=Z,0.9nm,0.5s,baz=128,slow=4.4,SNR=3.7
comp=Z,20nm,1.0s
LZH **Lanzhou** 40.26 331 *e*P **P** **15 44 19.8 +0.1**
LZH pP pP 15 44 25.4 -2.2
LZH PP **PP** **15 45 54.0 +1.4**
LZH ScP **ScP** **15 50 13.8 +3.1**
LZH S **S** **15 50 23.0 -2.4**
LZH sS sS 15 50 42.3 +3.7
LZH pmax pmax
comp=Z,86nm,1.2s
LZH pmax pmax
comp=Z,390nm,4.1s
LZH LR LR
comp=Z,1μm,14.5s
LZH LR LR
comp=Z,1μm,14.8s
LZH LR LR
comp=Z,2μm,14.8s
SHL **Shillong** 40.95 309 P **P** **15 44 24.5 -1.1**
SHL IAmb IAmb 15 44 26.5
comp=Z,90nm,0.6s
SHL **Shillong** 40.95 309 P **P** **15 44 24.5 -1.1**
SHL pmax pmax
comp=Z,90nm,0.6s
SHL **Shillong** 40.95 309 P **P** **15 44 24.8 -0.8**
SNR=42
PSTR **Posyet** 41.15 5*d* *i*P **P** **15 44 28.3 +1.6**
PSTR pmax pmax
comp=Z,6.0nm,0.8s
HHC **Hu-ho-hao-te** 41.40 343 *e*P **P** **15 44 29.0 +0.1**
HHC pP pP 15 44 34.1 -2.9
HHC sP sP 15 44 39.9 -0.3
HHC PP **PnPn** **15 46 13.3 +3.6**
HHC S **S** **15 50 42.8 +0.6**
HHC sS pS 15 50 52.5 +1.0
HHC pmax pmax
comp=Z,34nm,0.8s
HHC pmax pmax
comp=Z,210nm,4.1s
HHC LR LR
comp=Z,380nm,13.5s
HHC LR LR
comp=Z,440nm,13.1s
HHC LR LR
comp=Z,710nm,15.5s
VLA **Vladivostok** 41.72 6*d* *i*P **P** **15 44 32.8 +1.5**
VLA pmax pmax
comp=Z,116nm,1.0s
BTO2 **Baotou** 41.83 341 *e*P **P** **15 44 31.6 -0.8**
BTO2 sP **pP** **15 44 38.1 -2.4**
BTO2 PP **PnPn** **15 46 12.3 -2.3**
BTO2 S **S** **15 50 50.5 +2.0**
BTO2 pmax pmax
comp=Z,19nm,0.8s
BTO2 pmax pmax
comp=Z,1μm,7.3s
BTO2 LR LR
comp=Z,1μm,20.6s
BTO2 LR LR
comp=Z,1μm,14.5s
BTO2 LR LR
comp=Z,2μm,18.9s
BRAT **Ballarat** 42.12 159 P **P** **15 44 35.7 +1.0**
CN2 **Changchun** 42.12 359 *e*P **P** **15 44 35.8 +1.2**
CN2 pmax pmax
comp=Z,20nm,0.8s
AUMTS **Mt Stromlo** 42.30 152 P **P** **15 44 37.2 +0.9**
CAN **Canberra** 42.30 152 P **P** **15 44 34.1 -2.2**
CAN IAmb IAmb 15 44 43.0
comp=Z,86nm,1.1s
CAN **Canberra** 42.30 152 P **P** **15 44 37.2 +0.9**
CAN **Canberra** 42.30 152 P **P** **15 44 34.1 -2.2**
CAN pmax pmax
comp=Z,86nm,1.1s
CAN **Canberra** 42.30 152 P **P** **15 44 37.0 +0.7**
CAN pP **pP** **15 44 46.0 +1.6**
AUDAR **Daramalan Coll** 42.31 152 P **P** **15 44 37.8 +1.5**
AUMHS **Melrose High S** 42.37 152 P **P** **15 44 38.1 +1.2**
TOO **Toolangi** 42.72 157 P **P** **15 44 38.2 -1.4**
TOO **Toolangi** 42.72 157 P **P** **15 44 38.2 -1.4**
TOO pmax pmax
comp=Z,60nm,1.7s
USRK **Ussuriysk Ar.** 42.80 6 P **P** **15 44 41.1 +1.0**
comp=Z,117nm,1.0s,baz=192,slow=6.9,SNR=87
USRK PcP **PcP** **15 46 30.6 -0.5**
comp=Z,6.5nm,0.8s,baz=208,slow=5.6,SNR=1.6
USRK ScP **ScP** **15 50 21.3 +0.9**
comp=Z,3.0nm,0.7s,baz=197,slow=2.4,SNR=2.7
comp=Z,117nm,1.0s
H11S3 **WAKE ISLAND Hy** 42.96 64 T T 16 31 53.3
baz=252,slow=74,SNR=28
H11S2 **WAKE ISLAND Hy** 42.98 64 T T 16 31 53.4
baz=252,slow=74,SNR=19
H11S1 **WAKE ISLAND Hy** 42.98 64 T T 16 31 52.2
baz=252,slow=74,SNR=4.7
MDJ **Mudanjiang** 43.02 3 P **P** **15 44 41.0 -0.9**
MDJ IAmb IAmb 15 44 44.2
comp=Z,115nm,0.9s
MDJ **Mudanjiang** 43.02 3 P **P** **15 44 42.3 +0.4**
MDJ **Mudanjiang** 43.02 3 P **P** **15 44 43.0 +1.1**
MDJ PP **PP** **15 46 22.1 -0.1**
MDJ S **S** **15 51 09.3 +3.5**
MDJ pmax pmax
comp=Z,160nm,0.8s
MDJ LR LR
comp=Z,790nm,22.9s
MDJ LR LR
comp=Z,660nm,22.7s
MDJ LR LR
comp=Z,1μm,21.5s
MDJ **Mudanjiang** 43.02 3 P **P** **15 44 42.8 +0.9**
MDJ pP **sP** **15 44 53.0 -0.2**
AUSMG **Snowy Mountain** 43.03 153 P **P** **15 44 43.9 +1.7**
JEM **Erimo** 43.06 18 P **P** **15 44 42.5 +0.3**
XLT **XiLinHaoTe** 43.20 349 *e*P **P** **15 44 43.6 +0.1**
XLT pP pP 15 44 48.0 -3.6
XLT sP sP 15 44 49.8 -5.0
XLT S **S** **15 51 07.3 -1.3**
XLT pmax pmax
comp=Z,140nm,1.0s
XLT pmax pmax
comp=Z,540nm,2.8s
XLT LR LR
comp=Z,630nm,15.3s
XLT LR LR
comp=Z,790nm,20.8s
LSA **Lhasa** 43.68 313 IAmb IAmb 15 44 49.7
comp=Z,64nm,1.0s
LSA **Lhasa** 43.68 313 P **P** **15 44 44.4 -3.7**
LSA pmax pmax
comp=Z,61nm,1.0s
LSA **Lhasa** 43.68 313 P **P** **15 44 48.4 +0.3**
MILA **Mila** 43.80 153 P **P** **15 44 49.6 +1.2**
BNX **BinXian** 44.06 1 ⇑P **P** **15 44 49.9 -0.4**
BNX S **S** **15 51 21.5 +0.6**
BNX pmax pmax
comp=Z,73nm,0.9s
BNX pmax pmax
comp=Z,560nm,6.6s
BNX LR LR
comp=Z,520nm,19.8s
BNX LR LR
comp=Z,520nm,18.6s
BNX LR LR
comp=Z,780nm,18.2s
TEY **Ternei** 44.28 10⇑ *e*P **P** **15 44 53.0 +1.0**
TEY pmax pmax
comp=N,90nm,0.8s
TEY pmax pmax
comp=Z,140nm,0.8s
ASAJ **Asahikawa** 44.80 17 P **P** **15 44 58.0 +1.7**
comp=Z,147nm,1.0s,baz=228,slow=10.0,SNR=48
ASAJ LR LR 16 04 32.7
comp=Z,508nm,20.4s,baz=219,slow=37
comp=Z,147nm,1.0s
JKA **Kamikawa-asahi** 44.80 17 P **P** **15 44 54.0 -2.3**
GTA2 **Gaotai** 44.92 331 P **P** **15 44 56.9 -0.6**
GTA2 PcP **PcP** **15 46 40.1 +1.4**
GTA2 ScP **ScP** **15 50 31.3 +1.9**
GTA2 ScS **SS** **15 54 55.3 -0.8**
GTA2 pmax pmax
comp=Z,40nm,1.1s
GTA2 LR LR
comp=Z,1μm,20.4s
GTA2 LR LR
comp=Z,980nm,19.3s
GTA2 LR LR
comp=Z,2μm,18.5s
GOMU **GeErMu** 45.23 323 P **P** **15 44 58.3 -2.0**
GOMU pmax pmax
comp=Z,42nm,1.5s
DZM **Mont Dzumac** 45.57 123 IAmb IAmb 15 45 08.6
comp=Z,47nm,0.9s
DZM **Mont Dzumac** 45.57 123 P **P** **15 45 02.1 -0.7**
YUK **Yuzh-Kuril'sk** 45.74 20 *i*P **P** **15 45 04.0 +0.3**
PALK **Pallekele** 45.89 279 LR LR 16 06 21.7
comp=Z,2μm,20.4s,baz=94,slow=39
PALK **Pallekele** 45.89 279 P **P** **15 45 05.3 -0.2**
PALK **Pallekele** 45.89 279 *i*P **P** **15 45 06.0 +0.6**
PALK **Pallekele** 45.89 279 P **P** **15 45 05.5 0.0**
PALK **Pallekele** 45.89 279 P **P** **15 45 06.0 +0.6**
YATNC **Mamie plateau,** 45.94 123 P **P** **15 45 06.5 +0.9**
YSS **Yuzhno-Sakhali** 47.46 15 P **P** **15 45 14.5 -2.6**
YSS **Yuzhno-Sakhali** 47.46 15 P **P** **15 45 17.1 -0.1**
YSS **Yuzhno-Sakhali** 47.46 15*c* *e*P **P** **15 45 17.0 -0.1**
YSS pmax pmax
comp=Z,133nm,1.3s
YSS MLR MLR
comp=Z,591nm,21.0s
YSS **Yuzhno-Sakhali** 47.46 15 P **P** **15 45 17.9 +0.8**
YSS pP **sP** **15 45 27.5 -0.9**
MOO **Moorlands** 47.61 159 P **P** **15 45 18.4 0.0**
KLR **Kul'dur** 47.77 5*c* *e*P **P** **15 45 19.8 +0.3**
KLR pmax pmax
comp=Z,37nm,1.7s
KLR MLR MLR
comp=Z,556nm,20.0s
HIA **Hailar** 47.92 354 P **P** **15 45 21.4 +0.7**
HILR **Hailar Array B** 48.21 354 P **P** **15 45 23.9 +1.0**
comp=Z,34nm,0.6s,baz=176,slow=10,SNR=51
HILR PcP **PcP** **15 46 50.7 +0.8**
comp=Z,11nm,0.7s,baz=154,slow=5.5,SNR=3.8
HILR ScP **ScP** **15 50 43.5 +0.8**
comp=Z,4.0nm,0.8s,baz=114,slow=3.7,SNR=3.5
HILR S **S** **15 52 20.3 -0.2**
comp=Z,0.7nm,0.4s,baz=175,slow=20,SNR=1.7
comp=Z,34nm,0.6s
HEH **HeiHe** 48.58 1 *e*P **P** **15 45 25.8 +0.1**
HEH pP **pP** **15 45 28.9 -5.0**
HEH S **S** **15 52 29.0 +3.5**
HEH pmax pmax
comp=Z,170nm,1.0s
HEH pmax pmax
comp=Z,1μm,4.9s
HEH LR LR
comp=Z,660nm,21.2s
HEH LR LR
comp=Z,340nm,20.7s
HEH LR LR
comp=Z,1μm,22.7s
ULN **Ulaanbaatar** 49.12 343 P **P** **15 45 28.2 -2.0**
ULN IAmb IAmb 15 45 32.7
comp=Z,38nm,0.7s
ULN **Ulaanbaatar** 49.12 343*c* *e*P **P** **15 45 29.9 -0.2**
ULN pmax pmax
comp=Z,46nm,0.8s
ULN **Ulaanbaatar** 49.12 343 P **P** **15 45 30.6 +0.4**
ULN **Ulaanbaatar** 49.12 343 P **P** **15 45 30.0 -0.2**
ULN **Ulaanbaatar** 49.12 343 P **P** **15 45 30.5 +0.4**
UGL **Uglegorsk** 49.27 14*c* *i*P **P** **15 45 31.9 +0.9**
UGL *e*S **S** **15 52 40.2 +4.9**
UGL pmax pmax
comp=Z,700nm,1.4s
UGL pmax pmax
comp=Z,300nm,1.0s
UGL smax smax
comp=E,3μm,20.0s
UGL smax smax
comp=N,3μm,18.0s
SONM **Songino Array** 49.29 342 P **P** **15 45 31.4 0.0**
comp=N,23nm,0.6s,baz=153,slow=8.2,SNR=113
SONM PcP **PcP** **15 46 54.3 +0.3**
comp=N,7.8nm,0.9s,baz=163,slow=2.6,SNR=1.4
SONM PP **PP** **15 47 26.5 +1.0**
comp=N,8.1nm,1.1s,baz=174,slow=5.8,SNR=1.9
SONM ScP **ScP** **15 50 47.4 -0.1**
comp=N,0.8nm,0.8s,baz=180,slow=5.8,SNR=2.0
SONM LR LR 16 08 21.5
comp=N,428nm,21.2s,baz=153,slow=38
comp=N,23nm,0.6s
SONM **Songino Array** 49.29 342 P **P** **15 45 30.9 -0.6**
HYB **Hyderabad** 49.58 292 *e*P **P** **15 45 33.9 -0.2**
HYB *e*sP **sP** **15 45 48.8 +3.3**
HYB *e*PcP **PcP** **15 46 54.5 -1.0**
HYB *e*PP **PP** **15 47 28.9 +0.3**
HYB *e*S **S** **15 52 41.2 +0.4**
GRNR **Gornyy** 49.81 8⇑ *i*P **P** **15 45 36.3 +1.1**
GRNR pmax pmax
comp=N,40nm,1.0s
GRNR pmax pmax
comp=Z,70nm,0.9s
GRNR MLR MLR
comp=E,220nm,22.0s
GRNR MLR MLR
comp=N,80nm,16.0s
GRNR MLR MLR
comp=Z,270nm,20.0s
TYV **Tymovskoe** 51.07 13 *e*P **P** **15 45 45.8 +1.1**
TYV *e*S **S** **15 52 59.6 -0.8**
TYV pmax pmax
comp=Z,39nm,0.9s
TYV pmax pmax
comp=Z,400nm,4.3s
TYV smax smax
comp=N,400nm,5.7s
TYV smax smax
comp=E,400nm,5.7s
CIT **Chita** 51.48 350 *e*P **P** **15 45 48.4 +0.6**
CIT *e* 15 47 08.4
CIT *e* 15 47 41.4
CIT *e* 15 48 45.6
CIT pmax pmax
comp=Z,686nm,1.4s
ZEA **Zeya** 52.06 1 *e*P P 15 45 42.1 -10
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,40nm,1.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
ZAK **Zakamensk** 52.51 342 *e*P **P** **15 45 54.8 -0.7**
ZAK *e* 15 47 05.8
ZAK pmax pmax
comp=Z,27nm,1.8s
ZAK pmax pmax
comp=Z,22nm,1.7s
TLY **Talaya** 53.53 343 P **P** **15 46 02.8 -0.2**
TLY IAmb IAmb 15 46 13.8
comp=Z,31nm,0.8s
TLY **Talaya** 53.53 343*c* *e*P **P** **15 46 03.3 +0.3**
TLY pmax pmax
comp=Z,33nm,1.0s
TLY MLR MLR
comp=Z,809nm,22.0s
TLY **Talaya** 53.53 343 P **P** **15 46 04.0 +1.0**
FUNA **Funafuti** 53.57 102 P **P** **15 46 05.0 +1.2**
IRK **Irkutsk** 53.84 343 *e*P **P** **15 46 05.1 -0.1**
IRK pmax pmax
comp=Z,168nm,2.0s
MSVF **Nonsavu** 54.33 113 P **P** **15 46 11.0 +1.6**
MOY **Mondy** 54.35 341 *e*P **P** **15 46 09.4 +0.3**
MOY pmax pmax
comp=Z,136nm,1.8s
WMQ **Urumqi** 54.36 326 *e*P **P** **15 46 08.8 -0.4**
WMQ pmax pmax
comp=Z,32nm,0.9s
WMQ LR LR
comp=Z,1μm,24.1s
WMQ LR LR
comp=Z,1μm,20.3s
WMQ LR LR
comp=Z,950nm,17.9s
WMQ **Urumqi** 54.36 326 P **P** **15 46 09.0 -0.2**
KNGR **Kungurtug, Tuv** 54.70 338 *i*P **P** **15 46 11.8 +0.2**
KNGR pmax pmax
comp=Z,19nm,1.0s
KNGR MLR MLR
comp=Z,341nm,17.0s
DGTI **Dogotuki** 55.54 111 P **P** **15 46 18.8 +0.7**
OUZ **Omahuta** 57.24 134 P **P** **15 46 30.3 +0.4**
PEA0B **Petropavlovsk-** 57.60 22*c* *e*P **P** **15 46 32.1 -0.1**
PETK **Petropavlovsk-** 57.60 22 P **P** **15 46 33.3 +1.1**
comp=Z,37nm,0.8s,baz=181,slow=4.7,SNR=45
PETK LR LR 16 08 27.6
comp=Z,159nm,20.3s,baz=220,slow=33
comp=Z,37nm,0.8s
PET **Petropavlovsk** 57.90 22 *e*P **P** **15 46 33.9 -0.3**
PET *e*S **S** **15 54 31.7 -0.5**
PET pmax pmax
comp=Z,100nm,1.4s
PET pmax pmax
comp=Z,500nm,12.0s
PET **Petropavlovsk** 57.90 22 P **P** **15 46 35.1 +0.9**
comp=Z,89nm,1.6s
WUS **Wushi** 58.00 319 IAmb IAmb 15 46 37.4
comp=Z,76nm,1.0s
WUS **Wushi** 58.00 319 P **P** **15 46 35.0 -0.5**
WUS pP **pP** **15 46 44.8 +1.2**
WCZ **Waipu Caves** 58.12 135 P **P** **15 46 36.2 0.0**
ZSN **Zaisan** 58.19 328*c* *i*P **P** **15 46 35.9 -0.5**
ZSN *e*S **S** **15 54 38.5 +2.2**
ZSN **Zaisan** 58.19 328⇑ *i*P **P** **15 46 36.0 -0.5**
ZSN *e*S **S** **15 54 38.6 +2.2**
DGZ **Jazzator, Alta** 58.36 331*c* *i*P **P** **15 46 37.6 -0.2**
DGZ pmax pmax
comp=Z,39nm,1.0s
DGZ MLR MLR
comp=Z,669nm,20.0s
SHLS **Shalkode** 58.85 321*c* *i*P **P** **15 46 38.7 -2.5**
SHLS pmax pmax
comp=Z,63nm,1.0s
SHLS **Shalkode** 58.85 321⇑ *i*P **P** **15 46 38.7 -2.5**
comp=Z,62nm,1.0s
NIL **Nilore** 59.03 309 P **P** **15 46 41.4 -1.2**
NIL **Nilore** 59.03 309 P **P** **15 46 41.4 -1.2**
NIL pmax pmax
comp=Z,104nm,1.2s
JCZ **Jackson Bay** 59.07 145 P **P** **15 46 44.4 +1.7**
UZB **Uzynbulak** 59.12 321*c* *i*P **P** **15 46 42.4 -0.7**

UZB pmax pmax
comp=Z,42nm,1.4s
UZB Uzynbulak 59.12 321⇑ *i*P **P 15 46 42.5 -0.7**
comp=Z,42nm,1.4s
PRZ Przheval'sk 59.17 320 P **P 15 46 42.8 -0.8**
PRZ Przheval'sk 59.17 320 P **P 15 46 42.8 -0.8**
PRZ pmax pmax
comp=Z,114nm,0.9s
TARG Taragay, Kyrgy 59.19 319 P **P 15 46 41.5 -2.5**
TARG Taragay, Kyrgy 59.19 319 P **P 15 46 41.5 -2.5**
TARG pmax pmax
comp=Z,104nm,1.3s
MK31 Makanchi Array 59.19 326*ce*P **P 15 46 42.8 -0.6**
MKAR Makanchi Array 59.19 326 P **P 15 46 43.0 -0.5**
comp=Z,21nm,0.5s,baz=122,slow=8.2,SNR=331
MKAR ScP **ScP 15 51 32.5 +1.8**
comp=Z,1.1nm,0.8s,baz=122,slow=5.4,SNR=1.6
MKAR S **S 15 54 46.9 -2.5**
comp=Z,0.5nm,0.8s,baz=300,slow=8.3,SNR=5.5
MKAR LR LR 16 12 41.5
comp=Z,1μm,21.5s,baz=107,slow=36
MKAR PKPPKP **P'P'df 16 16 14.9 -1.4**
comp=Z,0.8nm,0.8s,baz=268,slow=4.4,SNR=4.4
MKAR P4KPbc 16 23 45.8
comp=Z,0.6nm,0.7s,baz=116,slow=5.0,SNR=7.7
comp=Z,21nm,0.5s
MKAR Makanchi Array 59.19 326 P **P 15 46 43.0 -0.5**
MAKZ Makanchi 59.37 326 P **P 15 46 43.6 -1.1**
MAKZ IAmb IAmb 15 46 46.4
comp=Z,87nm,1.1s
MAKZ Makanchi 59.37 326 P **P 15 46 44.2 -0.5**
QRZ Quartz Range 59.42 141 P **P 15 46 45.5 +0.4**
SATY Saty 59.46 321*c i*P **P 15 46 44.8 -0.7**
SATY pmax pmax
comp=Z,57nm,0.9s
SATY Saty 59.46 321⇑ *i*P **P 15 46 44.9 -0.7**
comp=Z,57nm,0.9s
KUZ Kuaotunu 59.49 135 P **P 15 46 45.7 +0.1**
KPKS Kokpek 59.49 321 *e*P **P 15 46 44.9 -0.8**
KPKS Kokpek 59.49 321 *e*P **P 15 46 44.1 -1.6**
KSH2 Kashi 59.51 316 P **P 15 46 45.3 -0.6**
KSH2 S **S 15 54 50.8 -3.2**
KSH2 pmax pmax
comp=Z,57nm,1.1s
KSH2 LR LR
comp=Z,540nm,10.6s
KSH2 LR LR
comp=Z,600nm,13.7s
KSH2 LR LR
comp=Z,1μm,8.2s
MLZ Mavora Lakes 59.51 147 P **P 15 46 44.7 -0.9**
WKZ Wanaka 59.66 146 P **P 15 46 45.6 -1.1**
WHZ Wether Hill Ro 59.75 148 P **P 15 46 46.2 -1.1**
TOZ Tahuroa Road 59.80 136 P **P 15 46 48.0 +0.2**
INZ Inchbonnie 59.82 143 P **P 15 46 46.9 -0.9**
INZ IAmb IAmb 15 46 53.5
comp=Z,38nm,0.9s
INZ Inchbonnie 59.82 143 P **P 15 46 45.8 -2.0**
MRNZ Matariki Terra 59.88 141 P **P 15 46 47.9 -0.3**
LBZ Lake Benmore 60.05 145 P **P 15 46 48.2 -1.2**
TLZ Tolley Road 60.12 137 P **P 15 46 49.8 -0.2**
RPZ Rata Peaks 60.16 144 LR LR 16 14 00.2
comp=Z,574nm,22.0s,baz=24,slow=37
THZ Tophouse 60.17 141 P **P 15 46 49.8 -0.5**
NNZ Nelson 60.18 141 P **P 15 46 50.1 -0.1**
NRN Naryn 60.24 318 P **P 15 46 50.0 -1.0**
NRN IAmb IAmb 15 46 53.2
comp=Z,36nm,0.9s
NRN Naryn 60.24 318 P **P 15 46 50.1 -1.0**
NRN pmax pmax
comp=Z,36nm,0.9s
LTZ Lake Taylor 60.35 143 P **P 15 46 51.3 -0.2**
MDOK Medeo 60.37 320 *e*P **P 15 46 51.1 -0.7**
MDOK Medeo 60.37 320 *e*P **P 15 46 51.1 -0.7**
TNSS Tian-Shan 60.38 320 *e*P **P 15 46 51.1 -1.0**
TNSS Tian-Shan 60.38 320 *e*P **P 15 46 51.1 -1.0**
YAK Yakutsk 60.43 2 P **P 15 46 51.8 +0.3**
comp=Z,147nm,0.8s,baz=228,slow=1.1,SNR=106
YAK S **S 15 55 05.7 +1.0**
comp=Z,5.1nm,0.5s,baz=315,slow=23,SNR=10
YAK LR LR 16 14 11.0
comp=Z,183nm,21.7s,baz=171,slow=37
comp=Z,147nm,0.8s
YAK Yakutsk 60.43 2 P **P 15 46 50.7 -0.8**
YAK Yakutsk 60.43 2*c i*P **P 15 46 51.7 +0.1**
YAK *e* 15 47 37.3
YAK *e* 15 49 06.2
YAK *e*S **S 15 55 07.3 +2.7**
YAK *e* 15 56 39.7
YAK *e*SS **SS 15 59 10.2 +7.3**
YAK pmax pmax
comp=Z,268nm,1.1s
YAK pmax pmax
comp=N,95nm,1.2s
YAK pmax pmax
comp=E,26nm,1.3s
YAK pmax pmax
comp=Z,316nm,3.7s
YAK pmax pmax
comp=N,156nm,2.8s
YAK smax smax
comp=N,356nm,2.9s
YAK smax smax
comp=E,161nm,2.8s
YAK MLR MLR
comp=Z,539nm,23.0s
YAK MLR MLR
comp=N,231nm,27.0s
YAK MLR MLR
comp=E,460nm,20.0s
WATZ Wairara 60.44 137 P **P 15 46 52.7 +0.5**
ULHL Ulahol 60.45 319 P **P 15 46 52.7 +0.2**
SNR=21
TDK Taldyqorghan 60.46 323 *e*P **P 15 46 51.7 -0.5**
TDK pmax pmax
comp=Z,45nm,0.8s
TDK Taldyqorghan 60.46 323 *e*P **P 15 46 51.7 -0.5**
comp=Z,45nm,0.8s
WAZ Wanganui 60.46 138 P **P 15 46 52.8 +0.5**
AAA Alma-Ata 60.48 320 *e*P **P 15 46 51.9 -0.5**
AAA pmax pmax
comp=Z,70nm,1.0s
AAA Alma-Ata 60.48 320 *e*P **P 15 46 52.0 -0.5**
comp=Z,70nm,1.0s
OXZ Oxford 60.52 143 IAmb IAmb 15 46 56.6
comp=Z,104nm,1.5s
OXZ Oxford 60.52 143 P **P 15 46 51.3 -1.3**
FWVZ Far West T-bar 60.59 138 P **P 15 46 54.3 +0.9**
OMRZ Omania 60.59 136 P **P 15 46 53.5 +0.3**
NTVZ North Tongarir 60.59 137 P **P 15 46 54.1 +0.8**
OTVZ Oturere 60.62 137 P **P 15 46 53.4 -0.1**
TMVZ Te Maari 60.62 137 P **P 15 46 54.3 +0.8**
ETVZ East Tongariro 60.63 137 P **P 15 46 54.5 +0.9**
TUWZ Tuamarina 60.65 140 P **P 15 46 52.7 -0.8**
WNVZ Wahianoa 60.65 138 P **P 15 46 53.9 +0.1**
RITZ Rihia Road 60.66 137 P **P 15 46 54.2 +0.5**
TCW Tory Channel 60.75 140 P **P 15 46 53.1 -1.1**
BOOM Boomskoye usch 60.77 319 IAmb IAmb 15 46 57.1
comp=Z,77nm,1.3s
MOVZ Moawhango 60.80 138 P **P 15 46 54.3 -0.4**
GVZ Greta Valley S 60.92 142 P **P 15 46 55.2 -0.1**
KHZ Kahutara 60.93 142 P **P 15 46 54.4 -0.9**
MA2 Magadan 60.93 14 P **P 15 46 56.4 +1.4**
comp=Z,76nm,0.9s,baz=197,slow=6.5,SNR=62
MA2 LR LR 16 18 54.7
comp=Z,91nm,18.0s,baz=220,slow=42
comp=Z,76nm,0.9s
MA2 Magadan 60.93 14 P **P 15 46 54.5 -0.6**
MA2 Magadan 60.93 14 P **P 15 46 56.3 +1.2**
MA2 Magadan 60.93 14*ce*P **P 15 46 56.2 +1.2**
MA2 pmax pmax
comp=Z,109nm,1.0s
MA2 MLR MLR
comp=Z,426nm,23.0s
MA2 Magadan 60.93 14 P **P 15 46 56.0 +0.9**
comp=Z,2μmcomp=Z,159nm,1.1s
MRHZ Matea Rd 60.97 137 P **P 15 46 55.3 -0.5**
SNZO South Karori 61.07 140 P **P 15 46 56.1 -0.3**
MQZ McQueen's Vall 61.10 143 P **P 15 46 56.5 0.0**
OGWZ Otaki Gorge 61.12 139 P **P 15 46 55.5 -1.3**
URZ Urewera 61.17 136 LR LR 16 13 40.4
comp=Z,405nm,21.9s,baz=312,slow=36
URZ Urewera 61.17 136 P **P 15 46 55.2 -1.9**
BKZ Black Stump Fm 61.18 137 P **P 15 46 56.1 -1.0**
BKZ IAmb IAmb 15 47 12.6
comp=Z,68nm,1.2s
BKZ Black Stump Fm 61.18 137 P **P 15 46 56.2 -1.0**
BKZ Black Stump Fm 61.18 137 P **P 15 46 56.2 -1.0**
TKM2 Tokmak 2 61.19 319 P **P 15 46 57.0 -0.5**
SNR=70
CAW Cannon Point 61.20 140 P **P 15 46 55.7 -1.6**
BHW Baring Head 61.23 140 IAmb IAmb 15 47 03.2
comp=Z,31nm,0.8s
BHW Baring Head 61.23 140 P **P 15 46 55.4 -2.1**
RTZ Ruatahuna 61.25 136 P **P 15 46 56.7 -1.1**
RTZ Ruatahuna 61.25 136 P **P 15 46 56.7 -1.1**
KWHZ Kaweka Forest 61.26 137 P **P 15 46 57.4 -0.4**
TSZ Takapari Road 61.26 138 P **P 15 46 56.6 -1.1**
POWZ Post Office Ro 61.30 139 P **P 15 46 56.9 -1.0**
MRZ Mangatainoka R 61.31 139 P **P 15 46 56.4 -1.6**
MRZ IAmb IAmb 15 47 04.2
comp=Z,28nm,0.7s
MRZ Mangatainoka R 61.31 139 P **P 15 46 56.0 -2.0**
KRHZ Kereru 61.33 138 P **P 15 46 57.4 -0.8**
HOWZ Holdsworth Sta 61.39 139 P **P 15 46 57.2 -1.3**
HAZ Te Kaha 61.41 135 P **P 15 46 58.0 -0.7**
MCHZ McNeill Hill 61.45 137 P **P 15 46 58.9 -0.1**
RAHZ Arahi 61.47 137 P **P 15 46 58.8 -0.4**
MSWZ Moikau Station 61.48 140 P **P 15 46 56.8 -2.3**
KBK Kaxgaybulak 61.49 319 P **P 15 46 59.5 0.0**
SNR=27
RAGZ Rawiri 61.50 136 P **P 15 46 58.4 -1.0**
MWZ Matawai 61.50 136 P **P 15 46 58.8 -0.6**
MTW Mount Morrison 61.51 139 P **P 15 46 57.9 -1.4**
PRWZ Pori Road 61.51 139 P **P 15 46 58.0 -1.4**
DVHZ Dannevirke 61.52 138 P **P 15 46 57.5 -1.9**
PAWZ Paruwai Farm 61.58 140 P **P 15 46 58.7 -1.1**
SNGZ Shannon Statio 61.58 136 P **P 15 46 59.5 -0.4**
WPHZ Waipukurau 61.58 138 P **P 15 46 59.2 -0.7**
UCH Uchtor 61.59 318 P **P 15 47 00.6 +0.1**
SNR=100
KAHZ Kahuranaki 61.74 138 P **P 15 47 00.9 -0.2**
TRWZ Traveller 61.75 140 P **P 15 47 00.5 -0.5**
BFZ Birch Farm 61.76 139 P **P 15 47 00.5 -0.6**
TKGZ Te Karaka 61.77 136 P **P 15 47 01.4 +0.2**
CHMS Chumysh 61.78 319 P **P 15 47 00.6 -0.7**
SNR=22
AAK Ala-Archa 61.78 319 P P 15 46 56.1 -5.3
SNR=6.0
AAK Ala-Archa 61.78 319 P **P 15 47 00.4 -1.0**
AAK IAmb IAmb 15 47 08.9
comp=Z,30nm,1.1s
AAK Ala-Archa 61.78 319 *i* P **P 15 47 01.3 -0.1**
SNR=8.3
AAK Ala-Archa 61.78 319*ce*P **P 15 47 01.6 +0.2**
AAK pmax pmax
comp=Z,53nm,1.7s
AAK Ala-Archa 61.78 319 P **P 15 47 01.4 -0.1**
PUZ Puketiti 61.89 135 P **P 15 47 02.5 +0.5**
SGDS Sogindy 62.06 320 *e*P **P 15 47 02.7 -0.5**
USP Ospenovka 62.06 319 P **P 15 47 02.6 -0.5**
SNR=89
EKS2 Erkin-Say 62.27 319 P **P 15 47 04.6 0.0**
SNR=33
ZAA0 Zalesovo Array 62.41 334 P **P 15 47 03.7 -1.5**
ZAA0 IAmb IAmb 15 47 14.5
comp=Z,49nm,1.0s
ZALV Zalesovo Beam 62.41 334 P **P 15 47 04.1 -1.1**
comp=Z,7.6nm,0.4s,baz=125,slow=6.7,SNR=64
ZALV S **S 15 55 24.9 -5.3**
comp=Z,0.2nm,0.3s,baz=144,slow=12,SNR=1.4
ZALV PKPPKP **P'P'df 16 16 10.3 -0.5**
comp=Z,3.9nm,1.1s,baz=325,slow=2.3,SNR=8.2
ZALV PKP2bc **P'P'bc 16 16 17.9 -0.6**
comp=Z,1.7nm,0.8s,baz=278,slow=2.5,SNR=4.4
comp=Z,7.6nm,0.4s
ZALV Zalesovo Beam 62.41 334 P **P 15 47 03.3 -1.9**
KBL Kabul 62.62 308 P **P 15 47 05.0 -2.2**
KBL Kabul 62.62 308 P **P 15 47 05.0 -2.2**
KBL pmax pmax
comp=Z,85nm,0.9s
KBL Kabul 62.62 308 P **P 15 47 06.0 -1.2**
SNR=43
BTK Batken 63.23 315 P **P 15 47 09.6 -1.4**
BTK Batken 63.23 315 P **P 15 47 09.6 -1.4**
BTK pmax pmax
comp=Z,169nm,1.5s
KURBB Kurchatov Arra 63.43 328 P **P 15 47 11.4 -0.6**
comp=Z,68nm,0.6s,baz=128,slow=6.1,SNR=521
KURBB PP **PP 15 49 32.1 +0.4**
comp=Z,7.8nm,1.2s,baz=132,slow=9.1,SNR=4.1
KURBB S **S 15 55 39.4 -3.6**
comp=Z,0.2nm,0.3s,baz=137,slow=14,SNR=4.6
KURBB LR LR 16 15 44.7
comp=Z,338nm,20.9s,baz=150,slow=37
KURBB PKPPKP **P'P'df 16 16 09.3 -0.1**
comp=Z,0.6nm,0.3s,baz=286,slow=3.7,SNR=5.7
KURBB PKP2ab **P'P'ab 16 16 21.3 -1.1**
comp=Z,1.4nm,0.2s,baz=308,slow=4.2,SNR=7.0
comp=Z,68nm,0.6s
KURK Kurchatov 63.43 328 P **P 15 47 10.7 -1.3**
KURK Kurchatov 63.43 328*ce*P **P 15 47 11.4 -0.6**
KURK pmax pmax
comp=Z,138nm,0.7s
KURK MLR MLR
comp=Z,353nm,21.0s
KURK Kurchatov 63.43 328 P **P 15 47 11.7 -0.3**
KURK Kurchatov 63.43 328 P **P 15 47 11.5 -0.6**
KURK PcP **PcP 15 47 47.5 -1.2**
DZA Taraz 63.99 318 *e*P **P 15 47 15.4 -0.5**
DZA Taraz 63.99 318 *e*P **P 15 47 15.4 -0.5**
SEY Seymchan 64.26 13 P **P 15 47 18.6 +1.3**
comp=Z,63nm,1.2s,baz=176,slow=7.7,SNR=6.1
SEY LR LR 16 15 36.0
comp=Z,134nm,20.8s,baz=178,slow=36
SEY PKP2bc **P'P'bc 16 16 13.0 -0.1**
comp=Z,1.9nm,0.8s,baz=63,slow=5.9,SNR=4.0
comp=Z,63nm,1.2s
SEY Seymchan 64.26 13*ce*P **P 15 47 18.5 +1.3**
SEY pmax pmax
comp=Z,163nm,1.7s
SEY MLR MLR
comp=Z,214nm,18.0s
IUG Iuzhnay 64.58 317*c i*P **P 15 47 19.3 -0.6**
IUG pmax pmax
comp=Z,48nm,1.1s
IUG Iuzhnay 64.58 317⇑ *i*P **P 15 47 19.3 -0.6**
comp=Z,48nm,1.1s
KK31 Karatay Array 64.63 318 P **P 15 47 18.8 -1.3**
KK31 IAmb IAmb 15 47 22.3
comp=Z,62nm,1.2s
KK31 Karatay Array 64.63 318 P **P 15 47 18.8 -1.3**
KK31 pmax pmax
comp=Z,62nm,1.3s
KKAR Karatay Array 64.63 318 P **P 15 47 19.1 -1.0**
KKAR Karatay Array 64.63 318 P **P 15 47 19.1 -1.0**
CHM Chimkent 64.94 317 *e*P **P 15 47 21.5 -0.6**
CHM Chimkent 64.94 317 *e*P **P 15 47 21.6 -0.6**
BRLS Boroldav 65.06 318 *e*P **P 15 47 22.3 -0.5**
BRLS Boroldav 65.06 318 *e*P **P 15 47 22.4 -0.5**
BRZS Berezniki 66.31 325 *e*P **P 15 47 30.4 -0.4**
BRZS Berezniki 66.31 325 *e*P **P 15 47 30.5 -0.4**
HRA Herat 67.97 307 P **P 15 47 39.8 -2.1**
HRA IAmb IAmb 15 47 44.7
comp=Z,46nm,1.5s
JLN Jalan Bani Buh 68.15 293 P **P 15 47 42.5 -0.5**
WBK Wadi Bani Khal 68.61 294 P **P 15 47 44.4 -1.6**
BVAR Borovoye Array 69.00 328 P **P 15 47 47.2 -0.4**
comp=Z,22nm,0.6s,baz=126,slow=7.5,SNR=120
BVAR S **S 15 56 46.0 -4.7**
comp=Z,1.2nm,0.6s,baz=240,slow=39,SNR=1.2
BVAR PKPPKP **P'P'df 16 15 59.6 -0.5**
comp=Z,0.7nm,0.8s,baz=335,slow=4.1,SNR=3.9
BVAR LR LR 16 18 34.8
comp=Z,564nm,21.7s,baz=128,slow=36
comp=Z,22nm,0.6s
WSAR Wadi Sarin 69.01 294 P **P 15 47 46.9 -1.5**
BORK Borovoye 69.04 328 P **P 15 47 47.4 -0.6**
BORK Borovoye 69.04 328*ce*P **P 15 47 47.3 -0.6**
BORK pmax pmax
comp=Z,119nm,1.3s
BORK MLR MLR
comp=Z,519nm,21.0s
MHTO MHTO 69.34 292 P **P 15 47 48.9 -1.5**
SNR=7.4
JMDO Jabal Madar 69.38 293 P **P 15 47 49.2 -1.5**
SNR=6.0
BIDO Bidbid 69.50 294 P **P 15 47 49.9 -1.5**
SMDO Samad 69.52 294 P **P 15 47 50.6 -1.0**
DQM DQM 69.63 291 P **P 15 47 52.6 +0.3**
SNR=9.2
TIXI Tiksi 70.06 1 LR LR 16 17 01.3
comp=Z,365nm,22.0s,baz=196,slow=34
TIXI Tiksi 70.06 1 P **P 15 47 52.8 -1.1**
TIXI IAmb IAmb 15 47 55.4
comp=Z,119nm,1.4s
TIXI Tiksi 70.06 1 P **P 15 47 53.5 -0.3**
BSY Bisya 70.25 294 P **P 15 47 54.8 -1.3**
HOQ Hoqain 70.25 294 P **P 15 47 55.9 -0.2**
SOHO SOHO 71.03 295 P **P 15 48 00.9 +0.1**
SHAO SOHO 71.03 295 P **P 15 48 00.4 -0.3**
SHAO Shalim 71.25 288 P **P 15 48 02.5 +0.3**
SHAO Shalim 71.25 288 P **P 15 48 02.8 +0.6**
UOSS Minazif 71.43 296 P **P 15 48 03.0 -0.2**
BANOM Banah 71.47 297 P **P 15 48 03.7 +0.3**
BANOM Banah 71.47 297 P **P 15 48 04.0 +0.6**
HATD Hatta, Dubai 71.48 296 P **P 15 48 02.2 -1.3**
HATD Hatta, Dubai 71.48 296 P **P 15 48 03.4 0.0**
MSFE Esma-Masafi 71.52 296 P **P 15 48 04.5 +0.8**
MASF Masafi 71.52 296 P **P 15 48 05.1 +1.4**
ASHO Ashiyiah 71.53 295 P **P 15 48 03.9 +0.1**
SHME Shamm 71.62 297 P **P 15 48 04.2 -0.1**
ALNE Al Ain 71.73 295 *i* P **P 15 48 03.9 -1.1**
SNR=12
ALNE Al Ain 71.73 295 P **P 15 48 04.0 -1.0**
SNR=9.5
BILL Bilibino 71.78 15*ce*P **P 15 48 04.3 -0.1**
BILL pmax pmax
comp=Z,42nm,1.7s
BILL MLR MLR
comp=Z,533nm,21.0s
DMTO DMTO 71.87 288 P **P 15 48 06.2 +0.2**
NAZ Nazwa, Dubai 71.92 296 P **P 15 48 04.9 -1.2**
NAZ Nazwa, Dubai 71.92 296 P **P 15 48 05.9 -0.2**
FAQ Al Faqa, Dubai 71.95 295 P **P 15 48 05.8 -0.5**
FAQ Al Faqa, Dubai 71.95 295 P **P 15 48 06.3 -0.1**
UMQ Umm Al Quwin 71.98 296 P **P 15 48 06.0 -0.5**
UMZA Um Al Zommool 72.12 293 P **P 15 48 07.6 +0.3**
ASUD Al Ashush, Dub 72.18 295 *i* P **P 15 48 08.5 +0.9**
SNR=5.8
ASUD Al Ashush, Dub 72.18 295 P **P 15 48 08.9 +1.2**
AJN Ajban 72.48 295 P **P 15 48 08.4 -1.1**
NRIK Noril'sk 72.50 347 P **P 15 48 09.0 +0.4**
comp=Z,54nm,0.6s,baz=133,slow=6.1,SNR=152
NRIK S **S 15 57 28.8 -2.0**
comp=Z,0.8nm,0.3s,baz=4.5,slow=21,SNR=14
NRIK LR LR 16 22 04.9
comp=Z,635nm,21.7s,baz=140,slow=38
comp=Z,54nm,0.6s
NRIK Noril'sk 72.50 347 IAmb IAmb 15 48 10.2
comp=Z,78nm,0.8s
NRIK Noril'sk 72.50 347*c i*P **P 15 48 08.9 +0.2**
NRIK pmax pmax
comp=Z,77nm,0.9s
NRIK MLR MLR
comp=Z,758nm,22.0s
RBK Rabkut 72.57 288 P **P 15 48 10.4 +0.2**
DOK Doka 72.72 289 P **P 15 48 12.0 +1.0**
SNR=5.8
MZWR Madinat Zayed 73.40 294 P **P 15 48 14.2 -0.7**
ABTO Aybut 73.42 288 P **P 15 48 14.7 -0.6**
AB31 Akbulak array 73.66 321 P **P 15 48 15.2 -0.7**
AB31 IAmb IAmb 15 48 25.7
comp=Z,38nm,0.9s
ABKAR Akbulak array 73.66 321 P **P 15 48 14.8 -1.1**
MZR Muzera 73.69 293 *i* P **P 15 48 15.8 -0.8**
SNR=21
MZR Muzera 73.69 293 P **P 15 48 16.0 -0.7**
NIKH Nikolski High 73.82 35 P **P 15 48 15.5 -1.3**
baz=250
GHWR Ruwais 74.33 294 P **P 15 48 20.3 0.0**
JRN Qarnain Island 74.45 295 P **P 15 48 20.3 -0.8**
SPIA Saint Paul Isl 74.57 30 P **P 15 48 20.3 -0.8**
baz=248
P08K Saint George I 74.72 31 P **P 15 48 21.5 -0.4**
baz=249
AKTO Aktyubinsk 75.19 322 LR LR 16 23 03.7
comp=Z,778nm,21.2s,baz=66,slow=37
SLWR Sila 75.42 294 P **P 15 48 26.2 -0.5**
UNV Unalaska Valle 75.43 34 P **P 15 48 25.3 -0.8**
baz=252
SVE Sverdlovsk 75.67 329 *e*P **P 15 48 27.6 +0.2**
SVE pmax pmax
comp=E,75nm,1.1s
TRNA Turayna 75.91 295 P **P 15 48 29.0 -0.4**
KIP Kipapa 76.04 68*ce*P **P 15 48 29.3 -1.0**
KIP pmax pmax
comp=Z,152nm,1.7s
GAMB Gambell 76.55 24 P **P 15 48 31.8 -0.4**
GAMB IAmb IAmb 15 48 34.9
comp=Z,86nm,1.2s
GAMB Gambell 76.55 24 P **P 15 48 31.6 -0.7**
baz=245
SAKB Bahrain 76.63 296 P **P 15 48 33.8 +0.3**
ARTI Arti 76.71 328 P **P 15 48 32.0 -1.3**
ARTI Arti 76.71 328*c i*P **P 15 48 32.5 -0.9**
ARTI 15 51 20.7
ARTI S **S 15 58 20.2 +1.8**
ARTI pmax pmax
comp=Z,212nm,1.4s
ARTI Arti 76.71 328 P **P 15 48 32.3 -1.1**
FALS False Pass 77.45 34 P **P 15 48 37.2 -0.4**
baz=254
M11K Mekoryuk 77.68 28 P **P 15 48 38.6 0.0**
baz=251
POHA Pohakuloa 78.27 70 P **P 15 48 43.9 +0.8**
TNA Tin City 78.75 23 P **P 15 48 44.7 +0.2**
baz=248
K13K Kusilvak Mount 78.88 27 P **P 15 48 45.0 -0.3**
baz=252
M13K Dall Lake 79.03 28 P **P 15 48 46.2 0.0**
baz=253
SDPT Sand Point 79.22 34 P **P 15 48 48.0 +0.7**
SDPT Sand Point 79.22 34 P **P 15 48 46.8 -0.5**
baz=257
F14K Arctic Creek 79.34 23 P **P 15 48 48.4 +0.6**
baz=250
ANM Nome 79.42 24 P **P 15 48 49.0 +0.8**
baz=251
L14K Kuka Creek 79.61 28 P **P 15 48 50.7 +1.4**
baz=254
J14K Nanvaranak Lak 79.62 26 IAmb IAmb 15 48 52.2
comp=Z,49nm,1.2s
J14K Nanvaranak Lak 79.62 26 P **P 15 48 50.3 +1.0**
baz=253
N14K Kuskokwak Cree 79.70 29 P **P 15 48 50.8 +1.0**
baz=255
O14K Tigyukauivet M 79.74 30 IAmb IAmb 15 48 52.5
comp=Z,78nm,1.2s
O14K Tigyukauivet M 79.74 30 P **P 15 48 50.5 +0.5**
baz=255
M14K Bethel 79.79 28 P **P 15 48 51.5 +1.3**
baz=254,SNR=20
F15K North Star Dit 80.08 23 IAmb IAmb 15 48 54.7
comp=Z,66nm,1.3s
F15K North Star Dit 80.08 23 P **P 15 48 53.1 +1.3**
baz=251
G15K Niukluk 80.10 24 P **P 15 48 52.4 +0.5**
baz=252
OPO Ambohidratompo 80.25 251 P **P 15 48 53.0 -0.9**
comp=Z,3.7nm,1.0s,baz=88,slow=22,SNR=3.5
comp=Z,3.7nm,1.0s
L15K Ungalak Mounta 80.25 27 P **P 15 48 53.2 +0.5**
baz=255
M15K Kasigluk River 80.38 28 P **P 15 48 54.5 +1.0**
baz=256,SNR=10.0
K15K Wolf Creek Mou 80.39 27 IAmb IAmb 15 48 56.7
comp=Z,124nm,1.2s
K15K Wolf Creek Mou 80.39 27 P **P 15 48 54.8 +1.3**
baz=255
O15K Ungalikthiuk R 80.44 30 P **P 15 48 54.5 +0.7**
baz=257
AKT Akhty 80.51 312 *e*P **P 15 48 54.7 -0.1**
AKT *e* 15 49 01.6
AKT *e* 15 51 59.3
AKT *e*PPP PPP 15 53 52.5
AKT *e*S **S 15 59 02.3 +2.4**
AKT pmax pmax
comp=Z,65nm,1.0s
N15K Kwethluk River 80.53 29 P **P 15 48 55.4 +1.1**
baz=256
C16K Lisburne Hills 80.67 21 IAmb IAmb 15 48 58.2
comp=Z,113nm,1.2s
C16K Lisburne Hills 80.67 21 P **P 15 48 56.3 +1.4**
baz=250

H16K **Elim** 80.73 24 P P 15 48 56.4 +1.1
baz=254
G16K **Koyuk River** 80.89 24 IAmb IAmb 15 48 58.9
comp=Z,48nm,1.1s
G16K **Koyuk River** 80.89 24 P P 15 48 57.4 +1.3
baz=253
VOI **Vohitsoka** 80.92 248 P P 15 48 56.3 -1.0
VOI IAmb IAmb 15 49 04.2
comp=Z,38nm,0.8s
RAYN **Ar Rayn** 81.05 293 P P 15 48 56.4 -1.5
RAYN IAmb IAmb 15 49 00.3
comp=Z,46nm,0.9s
RAYN **Ar Rayn** 81.05 293 *i* P P 15 48 57.2 -0.7
SNR=57
RAYN **Ar Rayn** 81.05 293 P P 15 48 56.4 -1.5
RAYN pmax pmax
comp=Z,46nm,0.9s
RAYN **Ar Rayn** 81.05 293 P P 15 48 57.9 -0.1
RAYN **Ar Rayn** 81.05 293 P P 15 48 57.0 -0.9
RAYN PcP PcP 15 49 04.2 -0.1
J16K **Anvik River** 81.06 26 P P 15 48 59.0 +1.8
baz=255
I17K **Unalakleet** 81.18 25 P P 15 48 59.3 +1.7
baz=255,SNR=14
L16K **Owhat River** 81.19 28 IAmb IAmb 15 49 00.6
comp=Z,74nm,1.2s
L16K **Owhat River** 81.19 28 P P 15 48 58.7 +0.9
baz=256
N16K **Nishlik Lake** 81.25 29 P P 15 48 59.4 +1.2
baz=257
R16K **Pilot Point** 81.26 32 P P 15 48 58.8 +0.6
baz=259
M16K **Timber Creek** 81.28 28 P P 15 48 59.5 +1.2
baz=257
VNDA **Vanda** 81.28 173 P P 15 48 57.7 -0.3
comp=Z,20nm,0.8s,baz=320,slow=6.4,SNR=11
VNDA LR LR 16 24 24.8
comp=Z,251nm,21.2s,baz=340,slow=35
comp=Z,20nm,0.8s
VNDA **Vanda** 81.28 173 P P 15 48 59.9 +1.9
D17K **Noatak River** 81.30 21 P P 15 48 59.8 +1.6
baz=252
P16K **Nushagak River** 81.33 30 P P 15 48 59.6 +1.1
baz=258
O16K **Kokwok River B** 81.39 30 P P 15 49 00.1 +1.2
baz=258
RDOG **Red Dog Mine** 81.47 21 P P 15 49 00.3 +1.1
baz=252
C17K **DeLong Mountai** 81.50 21 P P 15 49 00.4 +1.1
baz=252
MAW **Mawson** 81.57 200 LR LR 16 21 26.4
comp=Z,332nm,20.3s,baz=58,slow=33
E17K **Hotham Inlet** 81.58 22 P P 15 49 01.2 +1.4
baz=254
G17K **Kiwalik Mounta** 81.61 24 P P 15 49 01.5 +1.6
baz=255
F17K **Baldwin Pennin** 81.62 23 P P 15 49 01.4 +1.4
baz=254
J17K **VABM Dome** 81.76 26 IAmb IAmb 15 49 07.3
comp=Z,142nm,1.4s
J17K **VABM Dome** 81.76 26 P P 15 49 02.4 +1.6
baz=257
H17K **Granite Mounta** 81.77 24 P P 15 49 02.4 +1.5
baz=256
L17K **Donlin** 81.83 27 P P 15 49 02.3 +1.1
baz=258
R17L **Mt. Peulik Vol** 81.91 32 P P 15 49 02.0 +0.2
baz=260
O17K **Koliganek Bris** 81.92 30 P P 15 49 02.9 +1.2
baz=259
KIRV **Kirov** 81.94 329 *ce* P P 15 49 01.6 -0.2
K17K **Iditarod** 81.95 27 P P 15 49 02.8 +1.0
baz=257
BELG **Belogornoye** 81.95 323 *c i* P P 15 49 01.3 -0.7
BELG pmax pmax
comp=Z,44nm,0.9s
BELG MLR MLR
comp=Z,40nm,14.0s
CHIR **Chirikof Islan** 82.01 34 P P 15 49 02.6 +0.3
baz=261
N17K **Nushagak Hills** 82.02 29 P P 15 49 03.9 +1.6
baz=259
M17K **Holitna River** 82.08 28 P P 15 49 03.5 +1.0
baz=258,SNR=9.2
E18K **Tukpahlearik C** 82.13 22 IAmb IAmb 15 49 05.9
comp=Z,117nm,1.2s
E18K **Tukpahlearik C** 82.13 22 P P 15 49 04.4 +1.7
baz=255
P17K **Kvichak River** 82.15 30 P P 15 49 03.7 +0.8
baz=260
C18K **Utukok River** 82.25 21 IAmb IAmb 15 49 06.1
comp=Z,165nm,1.7s
C18K **Utukok River** 82.25 21 P P 15 49 04.7 +1.3
baz=254
Q17K **Contact Creek** 82.27 31 P P 15 49 03.5 -0.2
baz=260
F18K **Selawik** 82.28 23 P P 15 49 04.7 +1.3
baz=256
H18K **Honhosa River** 82.46 24 P P 15 49 05.7 +1.3
baz=257
G18K **Tagagawik** 82.51 24 IAmb IAmb 15 49 07.3
comp=Z,92nm,1.3s
G18K **Tagagawik** 82.51 24 P P 15 49 06.0 +1.3
baz=257
L18K **Granite Mounta** 82.58 27 P P 15 49 06.4 +1.2
baz=259
GNI **Garni** 82.64 310 P P 15 49 05.8 -0.4
GNI IAmb IAmb 15 49 23.1
comp=Z,53nm,0.8s
GNI **Garni** 82.64 310 P P 15 49 06.9 +0.8
GNI **Garni** 82.64 310 *ce* P P 15 49 06.2 0.0
GNI pmax pmax
comp=Z,120nm,1.7s
GNI **Garni** 82.64 310 P P 15 49 07.3 +1.2
N18K **Kilae Creek** 82.68 29 P P 15 49 06.6 +0.9
baz=260
P18K **Big Mountain,** 82.79 30 P P 15 49 06.3 -0.1
baz=261
J18K **Innoko River** 82.81 26 IAmb IAmb 15 49 08.9
comp=Z,111nm,1.2s
J18K **Innoko River** 82.81 26 P P 15 49 07.2 +0.9
baz=259
M18K **Stony River** 82.85 28 P P 15 49 07.4 +0.8
baz=260
O18K **Koktuh Hills** 82.88 30 P P 15 49 07.6 +0.9
baz=261
SII **Sitkinak Islan** 82.92 33 P P 15 49 07.7 +0.6
baz=262
C19K **Lookout Ridge** 82.93 20 P P 15 49 08.7 +1.8
baz=255
GCSA **Galena City Sc** 82.99 25 P P 15 49 08.7 +1.5
baz=258,SNR=62
F19K **Shaleruckik Mo** 83.06 23 IAmb IAmb 15 49 10.0
comp=Z,126nm,1.6s
F19K **Shaleruckik Mo** 83.06 23 P P 15 49 08.6 +1.0
baz=257
G19K **Purcell Mounta** 83.19 23 P P 15 49 09.9 +1.6
baz=258
D19K **Kuna River** 83.30 21 P P 15 49 10.4 +1.6
baz=257
O19K **Port Alsworth** 83.37 30 P P 15 49 09.9 +0.7
baz=261
ATD **Arta Tunnel** 83.38 281 P P 15 49 11.2 +0.8
comp=Z,2.5nm,1.0s,baz=110,slow=2.6,SNR=9.7
ATD **Arta Tunnel** 83.38 281 IAmb IAmb 15 49 12.8
comp=Z,47nm,0.9s
ATD **Arta Tunnel** 83.38 281 P P 15 49 12.1 +1.8
N19K **Bonanza Creek** 83.38 29 P P 15 49 10.9 +1.5
baz=261,SNR=10.0
J19K **Poorman** 83.39 26 P P 15 49 10.7 +1.5
baz=260
E19K **Redstone River** 83.40 22 P P 15 49 10.8 +1.4
baz=258
L19K **White Mountain** 83.42 28 P P 15 49 10.7 +1.1
baz=261
OHAK **Old Harbor** 83.49 33 P P 15 49 11.0 +1.1
baz=263
Q19K **Cape Douglas,** 83.53 31 P P 15 49 10.7 +0.6
baz=262
M19K **Big River Lodg** 83.59 28 P P 15 49 12.0 +1.6
baz=261
NCK **Nalchik** 83.73 313 *c i* P P 15 49 10.8 -0.7
NCK pmax pmax
comp=Z,66nm,1.0s
NCK MLR MLR
comp=Z,216nm,15.0s
P19K **Oil Pt** 83.84 30 P P 15 49 12.6 +0.9
baz=262

D20K **Etivluk River** 83.89 21 P P 15 49 13.1 +1.3
baz=258
F20K **Avaraart Lake** 83.90 23 P P 15 49 13.3 +1.5
baz=259
ILSW **Iliamna Southw** 83.92 30 IAmb IAmb 15 49 13.2
comp=Z,55nm,1.2s
KDAK **Kodiak Island** 83.94 32 P P 15 49 13.0 +0.8
baz=263
E20K **Nigu River** 83.95 21 P P 15 49 13.2 +1.0
baz=259
H20K **Anotleneega Mo** 83.96 24 P P 15 49 13.6 +1.4
baz=260
K20K **Telida** 83.96 26 P P 15 49 13.7 +1.4
baz=261
J20K **Nowinta River** 84.06 26 P P 15 49 13.8 +1.1
baz=261
Q20K **Shuyak Island** 84.14 31 P P 15 49 14.1 +1.0
baz=263
M20K **Styx River** 84.18 28 P P 15 49 14.5 +1.0
baz=262
GOF **Gofitskoye** 84.23 315 *ce* P P 15 49 14.2 +0.2
KBZ **Khabaz** 84.26 314 P P 15 49 14.2 +0.1
comp=Z,31nm,0.8s,baz=103,slow=3.8,SNR=41
comp=Z,31nm,0.8s
A21K **Barrow** 84.42 18 P P 15 49 15.8 +1.4
baz=258
KIV **Kislovodsk** 84.42 314 P P 15 49 13.0 -2.2
KIV **Kislovodsk** 84.42 314 ⇓P P 15 49 14.8 -0.3
KIV **Kislovodsk** 84.42 314 *i* P P 15 49 15.5 +0.3
SNR=15
KIV **Kislovodsk** 84.42 314 *e* P P 15 49 15.2 +0.1
KIV *e* 15 59 37.9
KIV pmax pmax
comp=Z,58nm,1.0s
KIV pmax pmax
comp=Z,101nm,4.0s
KIV MLR MLR
comp=Z,283nm,20.0s
KIV **Kislovodsk** 84.42 314 P P 15 49 15.6 +0.5
SHA1 **Shidzhatmaz** 84.43 314 *ce* P P 15 49 14.5 -0.9
SPU **Mount Spurr** 84.61 29 IAmb IAmb 15 49 17.6
comp=Z,54nm,1.2s
C21K **Knifeblade Rid** 84.62 21 P P 15 49 16.6 +1.1
baz=260
HOM **Homer** 84.64 30 P P 15 49 16.8 +1.1
baz=264
G21K **Allakaket** 84.68 23 IAmb IAmb 15 49 35.9
comp=Z,46nm,1.3s
G21K **Allakaket** 84.68 23 P P 15 49 16.9 +1.1
baz=261,SNR=27
PPLA **Purkeypile** 84.75 27 IAmb IAmb 15 50 20.8
comp=Z,80nm,1.6s
PPLA **Purkeypile** 84.75 27 P P 15 49 16.9 +0.5
baz=263
STLK **Strandline Lak** 84.75 28 IAmb IAmb 15 49 17.4
comp=Z,39nm,1.4s
F21K **Alatna River** 84.79 23 P P 15 49 17.1 +0.7
baz=261
CHUM **Lake Minchumin** 84.81 26 P P 15 49 17.5 +1.0
baz=263
H21K **Melozitna Rive** 84.84 24 IAmb IAmb 15 49 22.7
comp=Z,51nm,1.4s
H21K **Melozitna Rive** 84.84 24 P P 15 49 17.4 +0.8
baz=262,SNR=20
SKT **Skwentna** 84.94 28 P P 15 49 17.3 +0.1
baz=264,SNR=12
CAPN **Captain Cook N** 85.00 29 P P 15 49 18.4 +0.9
baz=264
BRSE **Bradley Lake S** 85.10 30 P P 15 49 18.1 0.0
baz=264
I21K **Tanana** 85.12 25 P P 15 49 18.9 +0.9
baz=263
SUA **Susitna One** 85.26 29 P P 15 49 18.9 -0.1
baz=264
D22K **Ayikyak River** 85.33 21 IAmb IAmb 15 50 02.0
comp=Z,46nm,1.4s
D22K **Ayikyak River** 85.33 21 P P 15 49 20.1 +1.1
baz=262
L22K **Petersville** 85.36 27 IAmb IAmb 15 49 38.2
comp=Z,33nm,1.0s
KTH **Kantishna Hill** 85.39 26 IAmb IAmb 15 50 07.8
comp=Z,50nm,1.7s
BPAW **Bear Paw Mtn.** 85.42 26 P P 15 49 20.1 +0.5
baz=264
H22K **Ishtalitna Cre** 85.45 24 P P 15 49 20.5 +0.8
baz=263,SNR=12
VRH **Novokhopyorsk** 85.49 321 *e* P P 15 49 19.5 -0.6
VRH pmax pmax
comp=Z,244nm,1.0s
E22K **Anaktuvuk Pass** 85.55 22 P P 15 49 21.0 +0.8
baz=263
CUT **Chulitna** 85.58 28 P P 15 49 20.1 -0.3
baz=265
M22K **Willow** 85.59 28 P P 15 49 20.6 +0.1
baz=265
MLY **Manley** 85.62 25 P P 15 49 20.9 +0.2
baz=264
TRF **Thorofare Moun** 85.66 27 IAmb IAmb 15 50 27.1
comp=Z,31nm,1.3s
TRF **Thorofare Moun** 85.66 27 P P 15 49 20.8 -0.2
baz=265
O22K **Cooper Landing** 85.67 30 P P 15 49 21.2 +0.3
baz=265
RC01 **Rabbit Creek A** 85.72 29 P P 15 49 21.2 +0.1
baz=265
SEW **Seward** 85.78 30 P P 15 49 22.0 +0.7
baz=266
LABN **Labinsk** 85.86 314 *e* P P 15 49 22.1 -0.1
LABN *e**PP PcP 15 49 25.7 +0.8
LABN *e*PPP PPP 15 54 35.1
LABN *e*S SKSac 15 59 46.9 +0.7
LABN pmax pmax
comp=Z,138nm,1.0s
PMR **Palmer** 86.05 28 P P 15 49 23.4 +0.7
PMR **Palmer** 86.05 28 P P 15 49 23.3 +0.6
baz=266,SNR=9.3
D23K **Nanushuk River** 86.06 21 P P 15 49 23.2 +0.5
baz=264
COLD **Coldfoot** 86.06 23 IAmb IAmb 15 49 27.1
comp=Z,22nm,0.8s
COLD **Coldfoot** 86.06 23 P P 15 49 22.6 -0.1
baz=264
ERBR **Yeremizino-Bor** 86.07 316 *c i* P P 15 49 23.1 -0.1
ERBR *i**PP PcP 15 49 26.7 +0.9
ERBR *e*S SKSac 15 59 47.6 +0.2
ERBR pmax pmax
comp=Z,248nm,1.0s
G23K **Bananza Creek** 86.08 23 IAmb IAmb 15 49 29.3
comp=Z,25nm,1.1s
G23K **Bananza Creek** 86.08 23 P P 15 49 23.6 +0.7
baz=265
GHO **Glory Hole Cre** 86.16 28 IAmb IAmb 15 49 55.8
comp=Z,28nm,0.9s
H23K **Yukon River** 86.19 24 P P 15 49 22.8 -0.6
baz=265
I23K **Minto, Yukon-K** 86.22 25 P P 15 49 23.2 -0.2
baz=265
MCK **McKinley** 86.29 26 P P 15 49 23.6 -0.4
baz=266
NEA2 **Nenana** 86.30 25 P P 15 49 23.5 -0.4
baz=266
VSLR **Vesyoloye** 86.32 313 *i* P P 15 49 24.8 +0.3
KNK **Knik Glacier** 86.36 29 P P 15 49 24.8 +0.5
baz=266,SNR=8.5
E23K **Chandalar** 86.36 22 IAmb IAmb 15 49 30.7
comp=Z,34nm,0.9s
E23K **Chandalar** 86.36 22 P P 15 49 24.5 +0.3
baz=265
WAT1 **Susitna Watana** 86.40 27 P P 15 49 24.5 -0.1
baz=266
SML **Sawmill** 86.44 28 IAmb IAmb 15 49 50.6
comp=Z,49nm,1.0s
SML **Sawmill** 86.44 28 P P 15 49 25.2 +0.4
baz=266,SNR=12
SOC **Sochi** 86.56 313 *c i* P P 15 49 24.7 -0.9
SOC *e* 15 52 44.8
SOC *e*PPP PPP 15 54 38.7
SOC *e*S SKSac 15 59 50.5 0.0
SOC *e*SS SS 16 05 39.7 -1.9
SOC pmax pmax
comp=Z,100nm,0.9s
M23K **Glacier View** 86.73 28 P P 15 49 26.7 +0.6
baz=267
D24K **Happy Valley** 86.74 21 IAmb IAmb 15 49 29.9
comp=Z,29nm,0.8s
D24K **Happy Valley** 86.74 21 P P 15 49 27.1 +1.1
baz=266

WAT6 **Susitna Watana** 86.76 28 P P 15 49 26.9 +0.4
baz=267,SNR=5.8
E24K **Your Creek** 86.78 22 P P 15 49 26.8 +0.5
baz=266
P23K **Montague Islan** 86.80 30 P P 15 49 26.5 0.0
baz=267
C24K **Franklin Bluff** 86.82 20 IAmb IAmb 15 49 32.5
comp=Z,32nm,1.0s
C24K **Franklin Bluff** 86.82 20 P P 15 49 27.0 +0.7
baz=266
COLA **College** 86.84 25 P P 15 49 26.5 0.0
COLA **College** 86.84 25 P P 15 49 27.4 +0.9
baz=267
H24K **Noodor Dome** 86.88 24 P P 15 49 27.0 +0.2
baz=267,SNR=9.5
SCM **Sheep Creek Mo** 86.92 28 P P 15 49 27.0 -0.2
baz=267,SNR=6.8
DHY **Denali Highway** 86.95 27 P P 15 49 27.5 +0.1
baz=267
GLI **Glacier Island** 86.99 29 P P 15 49 27.6 +0.2
baz=268
VORD **Divnogorie** 87.01 321 *e* P P 15 49 26.2 -1.4
VORD pmax pmax
comp=Z,220nm,1.6s
VORR **Voronezh** 87.08 321 *e* P P 15 49 26.0 -2.0
VORR pmax pmax
comp=Z,150nm,0.6s
G24K **Hadweenzic Riv** 87.09 23 P P 15 49 27.5 -0.3
baz=267
VSR **Storozhevoye** 87.09 321 *e* P P 15 49 26.4 -1.7
VSR pmax pmax
comp=Z,110nm,1.0s
KLMR **Klimovskoe** 87.17 331 *e* P P 15 49 29.0 +0.8
KLMR pmax pmax
comp=Z,97nm,0.9s
HDA **Harding Lake** 87.20 26 P P 15 49 27.9 -0.4
baz=268
ILAR **Eielson Array** 87.24 25 P P 15 49 27.2 -1.3
comp=Z,2.5nm,0.6s,baz=258,slow=4.8,SNR=19
ILAR PP PP 15 52 49.5 -3.0
comp=Z,3.1nm,1.2s,baz=257,slow=6.2,SNR=4.4
ILAR PKKP PKKPdf 16 07 15.2 -0.5
comp=Z,1.1nm,1.2s,baz=81,slow=2.8,SNR=4.1
comp=Z,2.5nm,0.6s
ILAR **Eielson Array** 87.24 25 P P 15 49 24.6 -3.9
LPSR **Galich'ya Gora** 87.27 322 *e* P P 15 49 28.1 -0.8
LPSR pmax pmax
comp=Z,170nm,1.0s
Q23K **Middleton Isla** 87.31 31 P P 15 49 29.1 +0.2
baz=268
M24K **Tolsona, Glenn** 87.47 28 IAmb IAmb 15 49 32.8
comp=Z,52nm,1.1s
M24K **Tolsona, Glenn** 87.47 28 P P 15 49 29.5 -0.3
baz=268,SNR=7.9
KLU **Klutina** 87.58 29 P P 15 49 30.4 0.0
baz=269
D25K **Kavik River** 87.62 21 P P 15 49 30.4 +0.1
baz=268
EYAK **Cordova Ski Ar** 87.64 30 P P 15 49 31.1 +0.6
baz=269
DIV **Divide** 87.64 29 IAmb IAmb 15 49 34.0
comp=Z,38nm,1.1s
K24K **Donnelly Dome** 87.70 26 IAmb IAmb 15 49 48.9
comp=Z,18nm,0.8s
K24K **Donnelly Dome** 87.70 26 P P 15 49 31.1 +0.3
baz=269
PAX **Paxson** 87.82 27 P P 15 49 31.4 -0.1
baz=269,SNR=9.6
ADZR **Andozero** 87.82 334 *e* P P 15 49 29.2 -2.1
ADZR S SKSac 15 59 57.4 +0.1
ADZR pmax pmax
comp=Z,36nm,0.8s
F25K **Christian Rive** 87.84 23 P P 15 49 31.8 +0.4
baz=269
PRP **Porcupine Dome** 87.84 25 P P 15 49 31.7 +0.1
baz=269
E25K **Arctic Village** 87.88 22 IAmb IAmb 15 49 37.6
comp=Z,39nm,1.2s
E25K **Arctic Village** 87.88 22 P P 15 49 31.5 0.0
baz=269
J25K **Salcha River,** 87.89 26 IAmb IAmb 15 49 32.0
comp=Z,45nm,2.0s
J25K **Salcha River,** 87.89 26 P P 15 49 31.7 -0.1
baz=269
HARP **HAARP** 87.95 28 P P 15 49 32.3 +0.2
baz=269,SNR=5.2
FYU **Fort Yukon** 87.98 24 IAmb IAmb 15 49 35.4
comp=Z,48nm,1.3s
MOS **Moscow** 88.07 326 *e* P P 15 49 31.2 -1.4
MOS *e* 15 52 57.1
MOS *e*S SKSac 15 59 56.9 -2.3
MOS pmax pmax
comp=Z,88nm,0.8s
MOS pmax pmax
comp=N,53nm,0.9s
RIDG **Independent Ri** 88.11 26 IAmb IAmb 15 49 34.9
comp=Z,23nm,1.0s
RIDG **Independent Ri** 88.11 26 P P 15 49 32.5 -0.3
baz=269,SNR=8.7
BMRM **Bremner River** 88.21 29 P P 15 49 33.5 +0.2
baz=270
ANN **Anapa** 88.21 315 *e* P P 15 49 32.8 -0.7
ANN *e**PP PcP 15 49 36.1 +0.8
ANN *e*S SKSac 16 00 00.3 -0.2
ANN pmax pmax
comp=Z,180nm,1.0s
N25K **Chitina, Valde** 88.21 29 P P 15 49 33.5 +0.1
baz=270
BMAR **Burnt Mountain** 88.24 23 P P 15 49 32.8 -0.6
KAIM **Kayak Island** 88.30 30 P P 15 49 33.8 +0.1
baz=270
KIBK **Kibwezi** 88.41 268 P P 15 49 38.3 +3.0
SNR=6.0
F26K **Sheenjek River** 88.41 22 IAmb IAmb 15 49 39.5
comp=Z,41nm,1.9s
F26K **Sheenjek River** 88.41 22 P P 15 49 34.4 +0.3
baz=270
SCRK **Sand Creek** 88.49 26 P P 15 49 34.6 -0.1
baz=270
G26K **Porcupine Rive** 88.56 23 P P 15 49 34.2 -0.5
baz=270
C27K **Jago River** 88.56 21 IAmb IAmb 15 49 40.6
comp=Z,22nm,0.8s
C27K **Jago River** 88.56 21 P P 15 49 35.6 +0.8
baz=270
MENT **Mentasta** 88.62 27 P P 15 49 36.0 +0.8
J26L **Joseph Creek** 88.67 26 P P 15 49 35.6 +0.1
baz=271
OBN **Obninsk** 88.67 325 LR LR 16 31 57.9
comp=Z,403nm,21.7s,baz=324,slow=37
OBN **Obninsk** 88.67 325 P P 15 49 33.7 -1.8
OBN **Obninsk** 88.67 325 ⇑P P 15 49 34.4 -1.1
OBN **Obninsk** 88.67 325 *ce* P P 15 49 34.1 -1.4
OBN *e* 15 53 05.2
OBN pmax pmax
comp=Z,76nm,1.2s
OBN MLR MLR
comp=Z,683nm,23.0s
L26K **Log Cabin Wild** 88.79 27 P P 15 49 36.2 +0.2
baz=271
I26K **Coal Creek Min** 88.83 25 P P 15 49 36.3 +0.2
baz=271
CRQE **Cirque** 88.95 29 P P 15 49 37.2 +0.3
baz=271
KHAM **Kharkiv** 88.95 320 P P 15 49 36.8 -0.2
M26K **Nabesna, AK** 88.96 28 P P 15 49 37.3 +0.5
baz=271
MCARA **McCarthy VSAT** 88.97 29 P P 15 49 37.7 +0.9
baz=271
TOKA **Tokat** 88.97 310 IAmb IAmb 15 49 41.9
comp=Z,35nm,0.9s
TGL **Tana Glacier** 89.08 29 IAmb IAmb 15 49 48.5
comp=Z,29nm,1.3s
LVZ **Lovozero** 89.27 338 *i* P P 15 49 37.4 -0.8
LVZ pmax pmax
comp=Z,18nm,0.9s
LVZ MLR MLR
comp=Z,224nm,12.0s
I27K **Kandik River** 89.47 25 IAmb IAmb 15 50 04.7
comp=Z,18nm,0.8s
I27K **Kandik River** 89.47 25 P P 15 49 40.0 +0.8
baz=272
H27K **Steamboat Moun** 89.47 24 IAmb IAmb 15 49 42.3
comp=Z,27nm,1.4s
H27K **Steamboat Moun** 89.47 24 P P 15 49 39.8 +0.6
baz=272
L27K **Beaver Creek,** 89.48 27 IAmb IAmb 15 49 41.2

comp=Z,26nm,1.4s
L27K Beaver Creek, 89.48 27 P P 15 49 40.1 +0.9
baz=272,SNR=10
M27K Edge Creek, AK 89.48 28 P P 15 49 39.9 +0.5
baz=272
BNN Bunyan 89.49 309 IAmb IAmb 15 49 44.2
comp=Z,31nm,1.2s
BCAR Beaver Creek A 89.50 27 P P 15 49 38.3 -1.1
BARN Barnard Glacie 89.64 29 IAmb IAmb 15 49 42.3
comp=Z,38nm,1.3s
APA Apatity 89.76 337 ⇓ *e*P P **15 49 37.3 -3.1**
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,2μm,6.3s
CTG Chitna Glacier 89.80 29 P P 15 49 41.4 +0.5
baz=273
CTGM Chitina Glacie 89.80 29 IAmb IAmb 15 49 52.3
comp=Z,26nm,1.1s
BVCY Beaver Creek 89.95 28 P P 15 49 41.9 +0.4
baz=273
MMAI Mount Meron Ar 90.02 303 P P 15 49 40.8 -1.7
comp=Z,65nm,1.2s,baz=73,slow=6.3,SNR=14
comp=Z,65nm,1.2s
F28M Old Crow 90.05 22 P P 15 49 42.2 +0.5
baz=274
E28M Babbage River 90.10 21 IAmb IAmb 15 49 46.4
comp=Z,23nm,1.0s
E28M Babbage River 90.10 21 P P 15 49 42.6 +0.6
baz=274
I28M Miner Creek 90.17 25 IAmb IAmb 15 49 46.9
comp=Z,65nm,1.6s
I28M Miner Creek 90.17 25 P P 15 49 42.9 +0.4
baz=274
YUK3 Moose Creek 90.18 28 P P 15 49 42.9 +0.2
baz=273
O28M Mount Upton 90.37 29 P P 15 49 43.8 0.0
baz=274
PINM Pinnacle 90.39 30 P P 15 49 43.8 +0.3
baz=274
DAWY Dawson 90.51 26 IAmb IAmb 15 49 55.8
comp=Z,29nm,1.5s
DAWY Dawson 90.51 26 P P 15 49 44.0 0.0
baz=274,SNR=8.9
EIL Elat 90.52 300 LR LR 16 35 01.3
comp=Z,596nm,20.1s,baz=94,slow=39
YUK8 Steele Glacier 90.54 29 P P 15 49 44.7 +0.2
baz=274
SIM Simferopol' 90.56 315 *e*P **P 15 49 44.3 -0.3**
SIM *e*S **S 16 00 38.9 +0.5**
SIM pmax pmax
comp=Z,81nm,0.8s
SIM smax smax
comp=E,215nm,22.9s
SIM MLR MLR
comp=Z,98nm,15.8s
E29M Blow River 90.72 22 P P 15 49 45.1 +0.3
baz=276
G29M Pine Creek 90.82 23 IAmb IAmb 15 49 46.9
comp=Z,82nm,1.7s
G29M Pine Creek 90.82 23 P P 15 49 45.7 +0.3
baz=276
I29M Ogilvie Camp, 90.86 25 IAmb IAmb 15 49 47.0
comp=Z,29nm,1.4s
I29M Ogilvie Camp, 90.86 25 P P 15 49 45.9 +0.3
baz=275
LODK Lodwar 90.94 273 P P 15 49 48.3 +1.2
KIRS Kirsehir-Merke 90.98 309 ⇓ P **P 15 49 45.9 -0.9**
J29N Klondike Camp 90.98 26 P P 15 49 46.5 +0.3
baz=275
M29M Somme Creek 91.06 28 IAmb IAmb 15 49 49.0
comp=Z,23nm,1.3s
M29M Somme Creek 91.06 28 P P 15 49 47.0 +0.3
baz=275
YUK4 Talbot Arm 91.08 29 P P 15 49 47.4 +0.4
baz=275
L29M L29M 91.15 27 IAmb IAmb 15 49 49.5
comp=Z,46nm,1.2s
L29M L29M 91.15 27 P P 15 49 47.5 +0.5
baz=275
BR104 Keskin Array S 91.17 310 P P 15 49 46.6 -1.2
comp=Z,102nmcomp=Z,13nm,1.0s
BR104 pP **PcP 15 49 50.5 +1.8**
comp=Z,102nmcomp=Z,13nm,1.0s
BR131 Keskin Array S 91.17 310 *i* P **P 15 49 46.8 -1.0**
BR131 Keskin Array S 91.17 310 P P 15 49 47.2 -0.5
SNR=6.5
BRTR Keskin Array B 91.17 310 P P 15 49 47.0 -0.8
comp=Z,6.9nm,0.7s,baz=122,slow=5.0,SNR=32
BRTR PP **PP 15 53 25.3 +0.5**
comp=Z,1.3nm,0.8s,baz=88,slow=7.5,SNR=3.3
BRTR LR LR 16 38 11.1
comp=Z,99nm,18.2s,baz=58,slow=40
comp=Z,6.9nm,0.7s
BRTR Keskin Array B 91.17 310 P P 15 49 45.4 -2.3
BRTR Keskin Array B 91.17 310 *i* P **P 15 49 47.0 -0.8**
BRTR pmax pmax
comp=Z,7.0nm,0.7s
BR106 Keskin Array S 91.19 310 P P 15 49 46.6 -1.2
comp=Z,89nmcomp=Z,12nm,0.9s
O29M Mount Kennedy 91.20 30 P P 15 49 47.3 -0.1
baz=275
YUK6 Outpost Mounta 91.25 29 P P 15 49 47.4 -0.4
baz=275
K29M Barlow Dome 91.35 26 IAmb IAmb 15 49 50.8
comp=Z,31nm,1.4s
K29M Barlow Dome 91.35 26 P P 15 49 47.8 -0.3
baz=276
QSPA South Pole Qui 91.43 180 P P 15 49 48.1 -0.2
comp=Z,6.3nm,0.7s,baz=312,slow=2.3,SNR=6.7
comp=Z,6.3nm,0.7s
QSPA South Pole Qui 91.43 180 P P 15 49 48.4 +0.1
QSPA IAmb IAmb 15 50 06.8
comp=Z,58nm,1.8s
G30M tAoh Zraii Nji 91.52 23 IAmb IAmb 15 49 49.5
comp=Z,56nm,1.7s
G30M tAoh Zraii Nji 91.52 23 P P 15 49 48.5 -0.2
baz=277
CIDE Kastamonu/Cide 91.58 312 ⇑ P **P 15 49 48.9 -0.5**
F30M Barrier River 91.60 22 IAmb IAmb 15 49 50.4
comp=Z,66nm,1.6s
F30M Barrier River 91.60 22 P P 15 49 48.9 -0.1
baz=278
HYT Haines Junctio 91.68 29 P P 15 49 49.4 -0.3
baz=276
I30M Mount Dempster 91.68 25 P P 15 49 49.4 -0.1
baz=277
J30M Hart River 91.78 25 IAmb IAmb 15 49 52.0
comp=Z,25nm,1.4s
J30M Hart River 91.78 25 P P 15 49 50.4 +0.4
baz=277
M30M Minto, Yukon 91.82 27 IAmb IAmb 15 49 52.5
comp=Z,48nm,1.6s
M30M Minto, Yukon 91.82 27 P P 15 49 50.7 +0.6
baz=277,SNR=11
P30M Million Dollar 92.03 30 P P 15 49 51.4 +0.3
baz=276
INK Inuvik 92.34 21 IAmb IAmb 15 49 56.6
comp=Z,23nm,1.1s
INK Inuvik 92.34 21 P P 15 49 52.2 -0.1
baz=280,SNR=14
O30N Mendenhall 92.37 29 P P 15 49 52.8 0.0
baz=277
ARA0 ARCESS Array S 92.41 340 *e*P **P 15 49 51.8 -0.9**
ARCES ARCESS Array B 92.41 340 P P 15 49 51.9 -0.8
ARCES PKKPbc **PKKPdf 16 07 08.2 +1.5**
comp=Z,2.7nm,0.8s,baz=268,slow=2.7,SNR=4.3
ARCES LR LR 16 35 15.9
comp=Z,364nm,20.3s,baz=228,slow=38
comp=Z,22nm,0.8s
ARCES ARCESS Array B 92.41 340 P P 15 49 51.3 -1.3
ARCES IAmb IAmb 15 49 52.3
comp=Z,35nm,1.0s
F31M Tsiigehtchic 92.41 22 IAmb IAmb 15 51 41.6
comp=Z,32nm,0.8s
F31M Tsiigehtchic 92.41 22 P P 15 49 52.2 -0.4
baz=280,SNR=16
N31M Braeburn, Yuko 92.43 28 IAmb IAmb 15 49 55.2
comp=Z,55nm,1.4s
N31M Braeburn, Yuko 92.43 28 P P 15 49 52.8 -0.1
baz=278
H31M Peel River 92.44 24 IAmb IAmb 15 49 53.5
comp=Z,24nm,1.4s
H31M Peel River 92.44 24 P P 15 49 52.6 -0.4
baz=279,SNR=5.7
SPITS Spitsbergen Ar 92.58 349 P P 15 49 52.7 -0.6
comp=Z,7.2nm,0.8s,baz=74,slow=6.2,SNR=10
comp=Z,7.2nm,0.8s
S31K Pelican 92.65 32 P P 15 49 54.4 +0.4
baz=277
HAMF Hammerfest 92.79 341 *e*P **P 15 49 54.1 -0.2**
SKAG Skagway 92.93 30 P P 15 49 55.9 +0.7
baz=278
WHY Whitehorse 92.98 29 P P 15 49 56.4 +0.7
baz=278
M31M Drury Creek, Y 92.98 28 IAmb IAmb 15 49 57.2
comp=Z,32nm,1.4s
M31M Drury Creek, Y 92.98 28 P P 15 49 56.0 +0.5
baz=279,SNR=7.7
SIT Sitka 93.26 33 P P 15 49 57.6 +0.8
baz=278
KTK1 Kautokeino 93.30 339 *e*P **P 15 49 55.7 -1.1**
AK09 Malin Array Si 93.36 321 P P 15 49 56.4 -1.0
AK09 pP **PcP 15 50 00.1 +2.1**
AK10 Malin Array Si 93.39 321 P P 15 49 56.5 -1.0
AK10 pP **PcP 15 50 00.2 +2.1**
AKASG Malin Array Be 93.39 321 P P 15 49 56.2 -1.3
comp=Z,10nm,0.8s,baz=73,slow=4.3,SNR=13
AKASG PP **PP 15 53 41.5 -0.2**
comp=Z,0.3nm,0.3s,baz=74,slow=8.1,SNR=1.3
AKASG LR LR 16 35 18.0
comp=Z,260nm,20.9s,baz=14,slow=38
comp=Z,10nm,0.8s
AKASG Malin Array Be 93.39 321 *i* P **P 15 49 56.2 -1.3**
AKASG pmax pmax
comp=Z,11nm,0.8s
AKBB Malin Array Si 93.39 321 IAmb IAmb 15 50 00.9
comp=Z,15nm,0.8s
AKBB Malin Array Si 93.39 321 *ce*P **P 15 49 56.3 -1.3**
AKBB pmax pmax
comp=Z,16nm,0.9s
KIEV Kiev 93.40 321 P P 15 49 55.6 -2.0
KIEV IAmb IAmb 15 50 00.9
comp=Z,13nm,0.8s
KIEV Kiev 93.40 321 ⇓ **P 15 49 56.8 -0.9**
KIEV Kiev 93.40 321 P P 15 49 56.5 -1.1
KIEV Kiev 93.40 321 P P 15 49 56.7 -0.9
KIEV Kiev 93.40 321 P P 15 49 56.6 -1.1
comp=Z,77nm,1.1s
KIEV pP **PcP 15 50 00.1 +1.9**
comp=Z,77nm,1.1s
PURM Purcari 93.41 317 ⇑ P **P 15 49 57.1 -0.7**
FARO Faro, Yukon 93.46 27 P P 15 49 58.5 +0.8
baz=280,SNR=29
R32K Eaglecrest 93.51 32 P P 15 49 58.3 +0.3
baz=278
JIS Juneau Island 93.58 32 P P 15 49 59.5 +1.3
S32K Kilisnoo 93.60 32 P P 15 49 59.0 +0.6
baz=278
FINES FINESS Array B 93.62 332 P P 15 49 56.6 -1.7
comp=Z,7.3nm,0.8s,baz=127,slow=2.2,SNR=16
FINES LR LR 16 34 19.4
comp=Z,638nm,19.3s,baz=322,slow=37
comp=Z,7.3nm,0.8s
P32M Atlin 93.72 30 P P 15 49 59.4 +0.4
baz=279
MNK Minsk 93.73 325 *i* P **P 15 49 59.0 0.0**
comp=E,24nm,0.7s
MNK *i* P **P 15 49 59.0 0.0**
comp=N,22nm,0.9s
MNK *i* P **P 15 49 59.0 0.0**
comp=Z,33nm,0.7s,baz=82
MNK *i* PP **PP 15 53 44.2 0.0**
MNK *i* PPP PPP 15 55 44.7
MNK *i* S **SKSac 16 00 33.4 +1.7**
MNK *i* SS **SS 16 07 28.7 +4.0**
MNK *i* SSS SSS 16 11 09.6
MNK *i* LQ LQ 16 26 22.1
MNK *i* LR LR 16 31 55.5
MNK *i* LRM MLR 16 33 50.7
comp=Z,378nm,12.1s
MNK *i* LRM MLR 16 33 53.2
comp=E,194nm,11.8s
MNK *i* LRM MLR 16 33 58.9
comp=N,190nm,12.3s
MNK Minsk 93.73 325 *i* P **P 15 49 59.0 0.0**
MNK *i* 15 53 44.2
MNK *i* PPP PPP 15 55 44.7
MNK *i* S **SKSac 16 00 33.4 +1.7**
MNK *i* SS **SS 16 07 28.6 +4.0**
MNK *i* SSS SSS 16 11 09.5
MNK pmax pmax
comp=E,24nm,0.7s
MNK pmax pmax
comp=N,22nm,0.9s
MNK pmax pmax
comp=Z,33nm,0.7s
MNK MLR MLR
comp=Z,378nm,12.0s
MNK MLR MLR
comp=E,194nm,12.0s
MNK MLR MLR
comp=N,190nm,12.0s
N32M Quiet Lake 93.77 29 P P 15 49 59.5 +0.3
baz=280,SNR=14
P33M Teslin, Yukon 94.06 29 P P 15 50 00.6 0.0
baz=280
JETT Jettan, Norway 94.14 340 *e*P **P 15 49 59.7 -1.0**
A36M Sachs Harbour 94.19 17 P P 15 50 01.7 +0.9
baz=288,SNR=10
SORM Soroca 94.26 318 ⇓ P **P 15 50 00.8 -0.8**
SORM Soroca 94.26 318 P P 15 50 00.7 -0.9
LUBAR Lubar, Ukraine 94.42 320 P P 15 50 01.2 -1.1
Q32M Nakina River 94.56 31 P P 15 50 03.6 +0.5
baz=280
TRO Tromso 94.62 340 *e*P **P 15 50 01.4 -1.4**
TIRR Tirgusor 94.66 315 ⇓ P **P 15 50 03.1 -0.4**
TIRR Tirgusor 94.66 315 P P 15 50 03.1 -0.4
VLDR Vladesti 94.72 316 ⇑ P **P 15 50 03.8 0.0**
CFR Carcaliu 94.77 315 ⇓ P **P 15 50 03.6 -0.4**
CFR Carcaliu 94.77 315 P P 15 50 03.6 -0.4
WRAK Wrangell Islan 94.98 33 P P 15 50 05.3 +0.6
baz=280
R33M Jennings River 95.13 30 IAmb IAmb 15 50 07.8
comp=Z,31nm,1.4s
R33M Jennings River 95.13 30 P P 15 50 06.1 +0.5
baz=282
MANT Manisa 95.21 309 IAmb IAmb 15 50 09.9
comp=Z,20nm,1.1s
S34M Telegraph Cree 95.35 32 P P 15 50 06.7 +0.3
baz=281
PANC Panciu 95.37 316 ⇓ P **P 15 50 07.3 +0.5**
RNPP9 Sopashiv 95.38 322 P P 15 50 06.6 -0.1
C36M Paulatuk 95.41 20 IAmb IAmb 15 50 09.9
comp=Z,34nm,1.1s
C36M Paulatuk 95.41 20 P P 15 50 06.8 +0.4
baz=289
RNPP8 Varash 95.41 322 P P 15 50 06.7 -0.1
KMPD K-Podol'skiy 95.45 319 P P 15 50 05.9 -1.2
KMPD pP **PcP 15 50 09.7 +2.4**
V35K Ketchikan 95.58 34 P P 15 50 07.8 +0.4
baz=281
TESR Tescani 95.62 317 ⇑ P **P 15 50 07.3 -0.7**
VRI Vrincioaia 95.66 316 ⇓ P **P 15 50 08.3 +0.2**
VRI Vrincioaia 95.66 316 P P 15 50 08.3 +0.2
GIRR Girov 95.66 317 ⇓ P **P 15 50 07.8 -0.3**
MBAR Mbarara 95.67 270 P P 15 50 07.9 -1.1
comp=Z,2.6nm,0.2s,baz=94,slow=13,SNR=4.2
comp=Z,2.6nm,0.2s
PLOR Plostina 95.71 316 ⇑ P **P 15 50 08.3 -0.1**
PLOR Plostina 95.71 316 P P 15 50 08.3 -0.1
PRAR RASCA 95.78 318 ⇑ P **P 15 50 08.3 -0.3**
DLBC Dease Lake 95.81 31 P P 15 50 09.0 +0.4
baz=282
ONER Baraj Valea Uz 95.82 317 ⇓ P **P 15 50 09.1 +0.2**
T35M Bob Quinn 96.00 32 P P 15 50 10.1 +0.6
baz=282
NEHR Nehoiu 96.02 316 ⇑ P **P 15 50 09.8 0.0**
COVR Voineasa-Covas 96.02 316 ⇓ P **P 15 50 09.2 -0.6**
WTLY Watson Lake, Y 96.05 29 P P 15 50 10.4 +0.8
baz=284
LOZB Loznitsa 96.10 314 ⇓ P **P 15 50 09.2 -1.0**
TURR Turia 96.12 316 ⇓ P **P 15 50 09.8 -0.4**
MLR Muntele Rosu 96.25 316 LR LR 16 39 10.9
comp=Z,450nm,20.5s,baz=40,slow=39
MLR Muntele Rosu 96.25 316 IAmb IAmb 15 50 11.6
comp=Z,17nm,0.9s
MLR Muntele Rosu 96.25 316 ⇑ P **P 15 50 10.7 -0.4**
MLR Muntele Rosu 96.25 316 P P 15 50 10.6 -0.4
BURAR Bucovina Array 96.42 318 P P 15 50 10.4 -1.3
BURAR Bucovina Array 96.42 318 ⇑ P **P 15 50 11.6 -0.1**
BURAR Bucovina Array 96.42 318 P P 15 50 11.5 -0.1
STEI Steigen 96.44 339 *e*P **P 15 50 09.8 -1.4**
SUW Suwalki 96.53 325 P P 15 50 07.6 -4.3
SUW Suwalki 96.53 325 P P 15 50 07.6 -4.3
DOPR Dopca 96.57 316 ⇓ P **P 15 50 12.2 -0.1**
FAUS Fauske 96.61 339 *e*P **P 15 50 10.2 -1.7**
ELND Elena 96.68 313 ⇓ P **P 15 50 12.5 -0.3**
VOIR 96.89 316 ⇑ P **P 15 50 13.4 -0.5**
VOIR 96.89 316 P P 15 50 13.3 -0.5
MDB Medias 97.23 317 ⇓ P **P 15 50 15.2 0.0**
MDB Medias 97.23 317 P P 15 50 15.2 0.0
MOR8 Moi Rana 97.35 338 *e*P **P 15 50 12.7 -2.6**
BMR Baia Mare 97.56 318 ⇓ P Pdif 15 50 17.1 +0.4
BMR Baia Mare 97.56 318 P P Pdif 15 50 17.1 +0.4
WRGLY Wrigley 97.62 25 P P Pdif 15 50 17.0 +0.4
baz=289
CJR Cluj-Napoca 97.67 317 ⇓ P Pdif 15 50 17.7 +0.4
CJR Cluj-Napoca 97.67 317 P P Pdif 15 50 17.7 +0.4
LOT Lotru 97.77 316 ⇓ P **P 15 50 17.7 -0.2**
MARR Marisel-Cluj 98.00 317 ⇓ P Pdif 15 50 19.0 +0.1
TOAD Toad River Com 98.13 30 P P Pdif 15 50 19.4 +0.3
baz=286
DRGR 98.25 318 ⇑ P **P 15 50 19.1 -0.9**
DRGR 98.25 318 P P 15 50 19.0 -0.9
BBB Bella Bella 98.27 37 LR LR 16 26 46.4
comp=Z,262nm,22.0s,baz=273,slow=30
LSZ Lusaka 98.31 255 P P 15 50 19.7 -1.2
comp=Z,1.4nm,0.4s,baz=104,slow=4.6,SNR=6.0
LSZ PP **PP 15 54 20.4 -0.7**
comp=Z,0.8nm,0.3s,baz=79,slow=10,SNR=3.4
comp=Z,1.4nm,0.4s
KOTAN Kotaneelee Air 98.33 28 P P Pdif 15 50 20.6 +0.7
baz=288
GZR Gura Zlata 98.47 316 ⇑ P **P 15 50 20.9 -0.1**
GZR Gura Zlata 98.47 316 P P 15 50 20.8 -0.1
STHS Stebnicka Huta 98.67 320 *i* P Pdif 15 50 23.4 +1.7
STHS Stebnicka Huta 98.67 320 *e*PDIFF Pdif 15 50 23.4 +1.7
HERR Herculane 98.82 316 ⇑ P **P 15 50 21.5 -0.9**
BZS Buzias 99.23 317 ⇑ P **Pdif 15 50 23.0 -1.3**
BZS Buzias 99.23 317 P P Pdif 15 50 22.9 -1.3
NVL N'lazarevskaya 99.34 198 *e*P **Pdif 15 50 22.8 -1.3**
NVL *e* 15 54 26.3
NVL *e*PPP PPP 15 56 32.7
NVL *e*S **SKSac 16 01 01.3 +1.0**
NVL *e*PS **PS 16 03 24.4 +0.1**
NVL *e*SSS SSS 16 12 35.9
NVL pmax pmax
comp=Z,24nm,1.5s
NVL MLR MLR
comp=Z,436nm,18.0s
KECS Kecovo 99.37 320 *i* P **Pdif 15 50 25.6 +0.8**
KECS Kecovo 99.37 320 *e*PDIFF **Pdif 15 50 25.6 +0.8**
BOVS Bovan 99.56 315 ⇑ P **Pdif 15 50 25.4 -0.3**
HFS Hagfors 99.81 332 P Pdif 15 50 25.3 -1.2
comp=Z,5.1nm,0.9s,baz=127,slow=3.9,SNR=8.1
comp=Z,5.1nm,0.9s
BOSA Boshof 100.50 241 P Pdif 15 50 27.8 -2.6
comp=Z,2.5nm,0.9s,baz=175,slow=6.1,SNR=3.6
BOSA PKiKP **PKiKP 15 54 56.9 -0.2**
comp=Z,0.9nm,0.6s,baz=0.0,slow=2.0,SNR=1.5
NB2 NORSAR Subarra100.61 333 P Pdif 15 50 28.2 -1.9
comp=Z,7.5nm,0.9s,baz=69,slow=4.4
NB2 NORSAR Subarra100.61 333 P Pdif 15 50 28.2 -1.9
NB2 AMP 15 50 28.2
comp=Z,7.5nm,0.9s
NOA NORSAR Array B 100.61 333 P Pdif 15 50 28.2 -1.9
comp=Z,3.7nm,0.8s,baz=69,slow=4.5,SNR=11
STEB Steborice 100.74 321 *e*PDIFF **Pdif 15 50 33.1 +2.3**
MORC Moravsky Berou 100.92 321 ⇓ P **Pdif 15 50 30.2 -1.5**
MORC Moravsky Berou 100.92 321 P Pdif 15 50 30.2 -1.5
MORC Moravsky Berou 100.92 321 *e*PDIFF **Pdif 15 50 31.3 -0.4**
JAVC Velka Javorina 101.09 320 *e*PDIFF **Pdif 15 50 32.2 -0.3**
MORH Mrgy, Hungar 101.12 318 ⇑ P **Pdif 15 50 32.0 -0.6**
DPC Dobruska-Polom 101.52 322 *e*PDIFF **Pdif 15 50 34.5 +0.1**
OSTC Ostas 101.53 322 *e*PDIFF **Pdif 15 50 39.3 +4.9**
OSTC Ostas 101.53 322 *i* P **Pdif 15 50 39.3 +4.9**
VRAC Vranov 101.65 321 *e*PDIFF **Pdif 15 50 34.3 -0.6**
YKA Yellowknife Ar 101.65 24 P Pdif 15 50 35.1 +0.5
comp=Z,1.6nm,0.9s,baz=300,slow=5.4,SNR=12
YKA PP **PP 15 54 46.8 +2.2**
comp=Z,4.0nm,1.2s,baz=296,slow=7.1,SNR=6.3
YKA PKiKP **PKiKP 15 54 58.7 +0.7**
comp=Z,0.6nm,0.6s,baz=307,slow=2.1,SNR=7.0
YKA PKKPbc **PKKPbc 16 06 40.9 -3.0**
comp=Z,0.5nm,0.8s,baz=109,slow=2.1,SNR=6.2
KRUC Moravsky 101.84 321 *e*PDIFF **Pdif 15 50 34.8 -1.0**
RONA Rosalia, Austr 102.28 320 *e*Pdiff **Pdif 15 50 38.2 +0.4**
comp=Z,1.8nm,0.6s
CONA Conrad Observa 102.50 320 *ep*Pdiff **Pdif 15 50 40.3 +1.4**
comp=Z,4.2nm,1.3s
CONA *e*PKiKP **PKiKP 15 55 00.2 +0.1**
comp=Z,6.6nm,1.1s
ARSA Arzberg 102.91 319 *ep*Pdiff **Pdif 15 50 43.3 +2.7**
comp=Z,4.9nm,1.1s
CLL Collm 103.22 324 *e*P **Pdif 15 50 41.0 -0.8**
CLL Collm 103.22 324 *e*Pdif **Pdif 15 50 41.0 -0.8**
CLL *e*PP **PKiKP 15 54 59.0 -2.2**
CKRC Cesky Krumlov 103.23 321 *e*PDIFF **Pdif 15 50 43.5 +1.5**
CKRC Cesky Krumlov 103.23 321 *i* P **Pdif 15 50 43.5 +1.5**
SOKA Soboth 103.40 319 *ep*Pdiff **Pdif 15 50 44.1 +1.3**
comp=Z,4.0nm,1.7s
SOKA *e*PKiKP **PKiKP 15 55 01.4 -0.4**
comp=Z,7.1nm,1.3s
MOA Molln 103.55 320 *ep*Pdiff **Pdif 15 50 44.0 +0.6**
comp=Z,14nm,1.3s
GERES GERESS Array B 103.60 321 Pdiff **Pdif 15 50 42.5 -1.2**
comp=Z,2.9nm,1.1s,baz=104,slow=1.7,SNR=8.4
GERES PKiKP **PP 15 55 00.8 +0.9**
comp=Z,1.5nm,1.0s,baz=168,slow=0.9,SNR=4.4
OBKA Obir 103.77 319 *e*Pdiff **Pdif 15 50 42.4 -2.1**
comp=Z,5.6nm,1.2s
BIOA Bad Ischl, Aus 104.00 320 *i* Pdiff **Pdif 15 50 45.8 +0.3**
comp=Z,3.5nm,0.8s
BIOA *ep*PKiKP **PKiKP 15 55 04.5 +1.7**
comp=Z,7.5nm,1.3s
MYKA Terra Mystica 104.33 319 *e*PKiKP **PKiKP 15 55 01.4 -2.1**
comp=Z,9.0nm,1.7s
ABTA Abfaltersbach 105.03 319 *ep*Pdiff **Pdif 15 50 50.7 +0.6**
comp=Z,6.4nm,1.3s
ABTA *ep*PKiKP **PKiKP 15 55 07.5 +2.7**
comp=Z,13nm,2.7s
WTTA Wattenberg 105.43 320 *i* Pdiff **Pdif 15 50 51.8 -0.2**
comp=Z,6.5nm,1.0s
WTTA *ep*PKiKP **PKiKP 15 55 07.2 +1.6**
comp=Z,8.8nm,1.1s
WATA Walderalm 105.44 320 *ep*Pdiff **Pdif 15 50 54.3 +2.3**
comp=Z,6.1nm,1.1s
SQTA Sankt Quirin 105.72 320 *e*Pdiff **Pdif 15 50 52.8 -0.4**
comp=Z,7.1nm,1.3s
MOTA Moosalm 105.74 320 *e*Pdiff **Pdif 15 50 53.3 -0.1**
comp=Z,6.5nm,1.0s
MOTA pPKiKP **PKiKP 15 55 09.2 +3.0**
comp=Z,15nm,1.5s
MOTA *i* PP **PP 15 55 13.8 -2.1**
comp=Z,6.1nm,1.2s
RETA Reutte 105.91 321 *e*PP **PP 15 55 16.6 -0.4**
comp=Z,9.0nm,1.1s
FETA Feichten 106.09 320 *e*Pdiff **Pdif 15 50 52.7 -2.2**
comp=Z,6.7nm,1.2s
FETA *e*PKiKP **PKiKP 15 55 05.7 -1.1**
comp=Z,6.3nm,1.2s
FETA *e*PP **PP 15 55 15.7 -2.8**
comp=Z,4.7nm,1.1s
NVAR Mina Array Bea 108.63 49 Pdiff Pdif 15 51 08.4 +1.9
comp=Z,1.2nm,0.8s,baz=287,slow=3.6,SNR=3.9
NVAR PKiKP **PKiKP 15 55 12.4 +0.5**
comp=Z,0.4nm,0.5s,baz=331,slow=3.8,SNR=2.1
NVAR PP **PP 15 55 37.0 -0.5**
comp=Z,2.6nm,0.9s,baz=293,slow=6.9,SNR=3.7
NVAR PKKP **PKKPab 16 06 35.1 +0.4**
comp=Z,1.0nm,0.8s,baz=66,slow=3.9,SNR=4.3
PDAR Pinedale Array 113.23 42 PKiKP PKiKP 15 55 20.8 +0.2
comp=Z,0.8nm,0.7s,baz=189,slow=0.8,SNR=7.6
PDAR PKKPbc **PKKPbc 16 06 05.3 -2.0**
comp=Z,0.8nm,0.8s,baz=112,slow=4.8,SNR=8.0
PDAR PKKPab **PKKPab 16 06 13.3 -0.9**
comp=Z,0.9nm,0.6s,baz=96,slow=3.1,SNR=6.7
PMSA Palmer Station 116.42 175 PKP PKiKP 15 55 24.5 -1.1
comp=Z,46nm,0.6s,baz=180,slow=2.0,SNR=21
ULM Lac du Bonnet 117.06 29 PKP PKPdf 15 55 27.1 -0.2
comp=Z,7.2nm,0.8s,baz=300,slow=3.1,SNR=10
ESDC Sonseca Array 118.88 318 PKP PKPdf 15 55 30.6 -0.6
comp=Z,0.7nm,0.9s,baz=319,slow=0.9,SNR=3.3
ESDC PKKPbc **PKKPbc 16 05 46.2 -1.0**
comp=Z,1.0nm,0.9s,baz=247,slow=3.6,SNR=4.4
SCHQ Schefferville 122.80 9 PKP PKiKP 15 55 38.4 -0.1
comp=Z,13nm,0.8s,baz=23,slow=1.2,SNR=16

TXAR	**Lajitas Array**	**123.21**	**53**	PKP	**PKiKP**	**15 55 40.2**	**+0.1**		
	comp=Z,3.3nm,0.8s,baz=234,slow=1.2,SNR=36								
TXAR				PKKPbc	**PKKPab**	**16 05 29.9**	**-0.7**		
	comp=Z,0.4nm,0.7s,baz=134,slow=5.4,SNR=4.4								
TORD	**Torodi Ar. Bea**	**123.26**	**287**	PKP	**PKPdf**	**15 55 40.0**	**-0.2**		
	comp=Z,7.1nm,0.8s,baz=229,slow=2.5,SNR=31								
TORD				PKKPbc	**PKKPab**	**16 05 30.3**	**-0.1**		
	comp=Z,4.1nm,0.8s,baz=252,slow=7.9,SNR=20								
DBIC	**Dimbokro**	**130.67**	**280**	PKP	**PKiKP**	**15 55 55.1**	**-0.1**		
	comp=Z,5.2nm,0.9s,baz=16,slow=1.8,SNR=4.2								
DBIC				SKPbc	**SKPab**	**15 59 17.2**	**+0.6**		
	comp=Z,14nm,0.9s,baz=19,slow=1.1,SNR=8.1								
PLCA	**Paso Flores**	**138.04**	**161**	PKP	**PKPdf**	**15 56 06.0**	**-1.6**		
	comp=Z,18nm,1.2s,baz=285,slow=2.4,SNR=7.4								
PLCA				SKPbc	**SKPbc**	**15 59 41.9**	**+1.9**		
	comp=Z,2.9nm,0.7s,baz=233,slow=5.2,SNR=4.5								
TRQA	**Tornquist**	**142.82**	**169**	PKPdf	**PKPdf**	**15 56 11.5**	**-4.8**		
TRQA	**Tornquist**	**142.82**	**169**	PKiKP	**PKPdf**	**15 56 11.5**	**-4.8**		
MT13	**San Alfonso**	**144.33**	**156**		PKPbc	15 56 18.1	+0.7		
LCO	**Las Campanas**	**148.16**	**151**		**PKPbc**	**15 56 29.1**	**-0.1**		
LCO	**Las Campanas**	**148.16**	**151**	PKP2	**PKPbc**	**15 56 29.1**	**-0.1**		
GO03	**Copiapo**	**149.56**	**150**		**PKPbc**	**15 56 32.7**	**+0.1**		
GTBY	**Guantanamo Bay**	**150.02**	**44**		**PKiKP**	**15 56 34.5**	**-0.2**		
CPUP	**Villa Florida**	**155.06**	**172**	PKP	**PKPdf**	**15 56 36.5**	**+0.5**		
	comp=Z,3.5nm,0.8s,baz=182,slow=4.9,SNR=4.0								
CPUP				PKPbc	**pPKPdf**	**15 56 45.4**	**+0.2**		
	comp=Z,16nm,1.1s,baz=235,slow=2.4,SNR=9.3								
ROSC	**El Rosal**	**158.37**	**73**	PKP	**PKPdf**	**15 56 42.0**	**+0.8**		
	comp=Z,12nm,0.4s,baz=106,slow=15,SNR=2.6								
ROSC				PKPab	**PKPab**	**15 57 17.4**	**+1.7**		
	comp=Z,28nm,0.7s,baz=133,slow=7.5,SNR=7.5								
ROSC	**El Rosal**	**158.37**	**73**	PKIKP	**PKPdf**	**15 56 42.0**	**+0.8**		
LPAZ	**La Paz**	**159.50**	**137**	PKP	**PKPdf**	**15 56 43.1**	**+0.4**		
	comp=Z,8.7nm,1.0s,baz=10,slow=1.9,SNR=11								
BDFB	**Brasilia**	**164.91**	**201**	PKP	**PKPdf**	**15 56 47.6**	**+0.1**		
	comp=Z,4.9nm,0.9s,baz=58,slow=2.4,SNR=5.3								

*IDC **15** 15:39:58.5±1.0, 1°.33N×126°.15E, h0km, mb4.3/13, mbtmp4.3/13, MS4.4/10, Error ellipse: s-maj=42.8km s-min=20.1km az=76.0*

ISC 15 15:40:05.6±1.1, 1°.3N±0°.2×126°.3E±0°.3, h54km, n22, σ1°.04/13, mb4.2/13, MS4.5/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**22.57**	**160**	P		**P**	**15 45 02.2**	**+0.6**
	6.0nm,0.5s,baz=338,slow=10,SNR=2.7 6.0nm,0.5s							
ASAR	**Alice Springs**	**25.92**	**164**	P		**P**	**15 45 32.2**	**-0.8**
	1.8nm,0.5s,baz=342,slow=11,SNR=1.3 1.8nm,0.5s							
KSRS	**Korea Array**	**36.00**	**2**	P		**P**	**15 47 02.3**	**+0.8**
	1.0nm,0.6s,baz=179,slow=9.6,SNR=1.3 1.0nm,0.6s							
MJAR	**Matsushiro Arr**	**36.76**	**16**	P		**P**	**15 47 06.1**	**-2.0**
	1.9nm,0.7s,baz=185,slow=9.1,SNR=2.1 1.9nm,0.7s							
LZDM	**Lanzhou Array**	**40.32**	**331**	LR		LR	16 06 41.9	
	comp=Z,556nm,18.7s,baz=115,slow=40							
ASAJ	**Asahikawa**	**45.03**	**17**	P		**P**	**15 48 16.1**	**+0.2**
	11nm,1.0s,baz=246,slow=10.0,SNR=2.4 11nm,1.0s							
HILR	**Hailar Array B**	**48.38**	**354**	P		**P**	**15 48 43.1**	**+1.0**
	2.1nm,0.5s,baz=175,slow=11,SNR=2.7							
HILR				LR		LR	16 10 35.9	
	comp=Z,376nm,19.7s,baz=90,slow=38 2.1nm,0.5s							
SONM	**Songino Array**	**49.43**	**342**	P		**P**	**15 48 50.6**	**+0.2**
	1.9nm,0.7s,baz=161,slow=8.2,SNR=2.1 1.9nm,0.7s							
PETK	**Petropavlovsk-**	**57.84**	**22**	P		**P**	**15 49 52.0**	**+0.3**
	2.0nm,0.5s,baz=180,slow=5.3,SNR=8.3 2.0nm,0.5s							
MKAR	**Makanchi Array**	**59.27**	**326**	P		**P**	**15 50 01.1**	**-0.6**
	2.4nm,0.5s,baz=124,slow=8.0,SNR=7.2 2.4nm,0.5s							
AAK	**Ala-Archa**	**61.83**	**319**	LR		LR	16 19 48.5	
	comp=Z,370nm,22.0s,baz=100,slow=39							
ZALV	**Zalesovo Beam**	**62.52**	**334**	P		**P**	**15 50 22.1**	**-1.5**
	0.8nm,0.5s,baz=118,slow=6.3,SNR=1.4 0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**63.51**	**328**	P		**P**	**15 50 29.9**	**-0.4**
	3.5nm,0.5s,baz=129,slow=5.8,SNR=4.3 3.5nm,0.5s							
SHEM	**Shemya Is, Ala**	**64.78**	**30**	LR		LR	16 14 39.0	
	comp=Z,195nm,19.8s,baz=270,slow=32							
BVAR	**Borovoye Array**	**69.08**	**328**	P		**P**	**15 51 06.9**	**+1.0**
	1.4nm,0.5s,baz=116,slow=6.6,SNR=2.2 1.4nm,0.5s							
NRIK	**Noril'sk**	**72.65**	**347**	P		**P**	**15 51 27.5**	**+0.3**
	5.0nm,0.7s,baz=129,slow=6.5,SNR=2.3 5.0nm,0.7s							
KDAK	**Kodiak Island**	**84.18**	**32**	LR		LR	16 22 56.1	
	comp=Z,292nm,21.7s,baz=243,slow=31							
KVAR	**Kislovodsk Arr**	**84.44**	**314**	LR		LR	16 36 09.5	
	comp=Z,177nm,18.9s,baz=254,slow=40							
ILAR	**Eielson Array**	**87.48**	**25**	LR		LR	16 26 06.0	
	comp=Z,129nm,21.6s,baz=268,slow=32							
QSPA	**South Pole Qui**	**91.23**	**180**	LR		LR	16 34 39.7	
	comp=Z,446nm,20.6s,baz=348,slow=36							
INK	**Inuvik**	**92.57**	**21**	LR		LR	16 34 08.3	
	comp=Z,145nm,21.9s,baz=322,slow=35							
MBAR	**Mbarara**	**95.52**	**270**	LR		LR	16 32 32.1	
	comp=Z,277nm,20.8s,baz=80,slow=33							

*RSNC **15** 15:51:56.2±0.0, 4°.N±1°.×7°.7W±°, h128km±2km, M3.6, mB4.9, ML3.2, MLv3.9, Mw(mB)4.2*
*CATAC **15** 15:51:57.8±1.1, 4°.N±5°.×7°.7W±°, h104km±11km, M4.1/5, mb4.1/2, mB4.4/1, MLv4.2/5, Mw(mB)3.5/1, Error ellipse: s-maj=13.7km s-min=8.7km az=53.9, confirmed*

ISC 15 15:51:55.9±1.3, 3°.87N±0°.03×76°.56W±0°.03, h127km±8km, n47, σ0°.88/81, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOTC	**Yotoco, Valle**	**0.24**	**61**	P		**Pn**	**15 52 13.9**	**+0.3**
YOTC				S		**Sn**	**15 52 27.7**	**+0.7**
JAMC	**Jamundi, Valle**	**0.66**	**190**	P		**Pn**	**15 52 16.2**	**+0.3**
JAMC				S		**Sn**	**15 52 31.9**	**+0.9**
ANIL	**Santa Ana**	**1.31**	**62**	P		**Pn**	**15 52 21.0**	**-0.9**
ANIL				S		**Sn**	**15 52 40.6**	**-1.1**
ORTC	**Ortega, Tolima**	**1.31**	**88**	P		**Pn**	**15 52 21.6**	**-0.1**
ORTC				S		**Sn**	**15 52 40.8**	**-0.5**
POPC	**Popayan, Colom**	**1.32**	**185**	P		**Pn**	**15 52 21.9**	**-0.2**
POPC				S		**Sn**	**15 52 41.5**	**-0.4**
PIZC	**Pizarro, Choco**	**1.35**	**324**	P		**Pn**	**15 52 23.4**	**+1.3**
PIZC				S		**Sn**	**15 52 43.2**	**+1.1**
NIZA	**Niza - Manizal**	**1.60**	**42**	P		**Pn**	**15 52 24.9**	**-0.4**
NIZA				S		**Sn**	**15 52 46.9**	**-0.7**
RECRC	**Villamaria, Ca**	**1.62**	**48**	P		**Pn**	**15 52 25.4**	**-0.3**
RECRC				S		**Sn**	**15 52 47.8**	**-0.6**
PRAC	**Prado**	**1.68**	**95**	P		**Pn**	**15 52 26.0**	**+0.3**
PRAC				S		**Sn**	**15 52 48.7**	**+0.1**
PRAC	**Prado**	**1.68**	**95**	P		**Pn**	**15 52 26.1**	**+0.3**
PRAC				S		**Sn**	**15 52 48.7**	**+0.1**
GR1C	**Gorgona, Isla**	**1.82**	**242**	P		**Pn**	**15 52 26.9**	**-0.6**
GR1C				S		**Sn**	**15 52 51.2**	**-0.5**
BBAC	**Balboa, Cauca**	**1.96**	**201**	P		**Pn**	**15 52 29.5**	**+0.1**
BBAC				S		**Sn**	**15 52 55.7**	**+0.7**
GARC	**Garzon, Huila**	**1.98**	**147**	P		**Pn**	**15 52 29.6**	**-0.1**
GARC				S		**Sn**	**15 52 55.0**	**-0.5**
CBOC	**Ciudad Bolivar**	**2.06**	**15**	P		**Pn**	**15 52 30.7**	**+0.1**
CBOC				S		**Sn**	**15 52 58.1**	**+1.0**
URMC	**La Uribe, Meta**	**2.26**	**106**	P		**Pn**	**15 52 32.9**	**-0.1**
URMC				S		**Sn**	**15 52 59.7**	**-1.7**
CRUC	**La Cruz**	**2.32**	**190**	P		**Pn**	**15 52 34.4**	**+0.4**
CRUC				S		**Sn**	**15 53 03.0**	**-0.2**
NORC	**Norcasia**	**2.38**	**45**	P		**Pn**	**15 52 34.2**	**-0.3**
NORC				S		**Sn**	**15 53 03.8**	**-0.4**
ROSC	**El Rosal**	**2.43**	**66**	P		**Pn**	**15 52 36.6**	**+1.2**
ROSC				S		**Sn**	**15 53 07.9**	**+2.1**
FLOC	**Florencia**	**2.44**	**158**	P		**Pn**	**15 52 35.3**	**0.0**
FLOC				S		**Sn**	**15 53 05.1**	**-0.4**
SOLC	**Bahia Solano**	**2.49**	**340**	P		**Pn**	**15 52 36.4**	**+0.5**
SOLC				S		**Sn**	**15 53 06.5**	**-0.1**
HELC	**Santa Helena**	**2.53**	**24**	P		**Pn**	**15 52 36.9**	**+0.2**
HELC				S		**Sn**	**15 53 07.1**	**-0.8**
HELC	**Santa Helena**	**2.53**	**24**	P		**Pn**	**15 52 36.6**	**0.0**
HELC				S		**Sn**	**15 53 08.2**	**+0.3**
CVER	**Cruz Verde, Cu**	**2.56**	**75**	P		**Pn**	**15 52 38.0**	**+0.8**
CVER				S		**Sn**	**15 53 08.2**	**-0.7**
GCUF	**Volcan Galeras**	**2.74**	**197**	P		**Pn**	**15 52 39.4**	**-0.1**
GCUF				S		**Sn**	**15 53 12.0**	**-1.0**
VILC	**Villavicencio,**	**2.87**	**85**	P		**Pn**	**15 52 41.7**	**+0.9**
VILC				S		**Sn**	**15 53 15.2**	**-0.2**
CHIC	**Chingaza**	**2.92**	**75**	P		**Pn**	**15 52 42.2**	**+0.5**
CHIC				S		**Sn**	**15 53 16.3**	**-0.7**
SPBC	**San Pablo de B**	**3.05**	**54**	P		**Pn**	**15 52 43.2**	**+0.1**
DBBC	**Dabeiba**	**3.15**	**6**	P		**Pn**	**15 52 45.4**	**+1.0**
DBBC				S		**Sn**	**15 53 23.0**	**+1.1**
MACC	**Macarena, Meta**	**3.20**	**122**	P		**Pn**	**15 52 45.0**	**0.0**
MACC				S		**Sn**	**15 53 24.3**	**+1.3**
PTBC	**PUERTO BERRIO,**	**3.38**	**38**	P		**Pn**	**15 52 47.2**	**-0.2**
PTBC				S		**Sn**	**15 53 25.4**	**-1.9**
PTAC	**Punta Ardita,**	**3.49**	**339**	P		**Pn**	**15 52 48.9**	**+0.1**
PTAC				S		**Sn**	**15 53 27.4**	**-2.4**
CUSE	**Cuicocha Este**	**3.99**	**208**	P		**Pn**	**15 52 55.9**	**+0.1**
CUSE				S		**Sn**	**15 53 42.0**	**-0.2**
UREC	**San Jos de Ur**	**3.99**	**15**	P		**Pn**	**15 52 56.3**	**+0.8**
UREC				S		**Sn**	**15 53 42.7**	**+0.9**
RUSC	**La Rusia**	**4.00**	**60**	P		**Pn**	**15 52 56.4**	**+0.4**
RUSC				S		**Sn**	**15 53 44.1**	**+1.4**
RUSC	**La Rusia**	**4.00**	**60**	P		**Pn**	**15 52 57.0**	**+0.9**
RUSC				S		**Sn**	**15 53 44.8**	**+2.1**
OTAV	**Otavalo**	**4.07**	**208**	P		**Pn**	**15 52 56.1**	**-0.9**
BRJC	**Barrancabermej**	**4.17**	**42**	P		**Pn**	**15 52 57.3**	**-0.5**
PAC1	**Pacto, Paraso**	**4.21**	**212**	P		**Pn**	**15 52 56.5**	**-2.1**
BARC	**Barichara**	**4.32**	**51**	P		**Pn**	**15 53 00.3**	**+0.3**
CAP2	**Capurgana**	**4.82**	**351**	S		**Sn**	**15 53 59.9**	**-1.6**
PAMC	**Pamplona, Colo**	**5.16**	**48**	P		**Pn**	**15 53 10.9**	**-0.7**
OCAC	**Ocana**	**5.41**	**36**	P		**Pn**	**15 53 13.9**	**-0.7**
SJCC	**San Jacinto, C**	**6.14**	**13**	P		**Pn**	**15 53 24.1**	**-0.3**
SJCC	**San Jacinto, C**	**6.14**	**13**	P		**Pn**	**15 53 24.5**	**+0.1**
BCIP	**Isla Barro Col**	**6.19**	**328**	P		**Pn**	**15 53 25.9**	**+0.9**
SDV	**Santo Domingo**	**7.71**	**49**	P		**Pn**	**15 53 45.0**	**-0.7**
CRJC	**Cerrejon, Guaj**	**7.99**	**27**	P		**Pn**	**15 53 47.6**	**-1.7**

*IDC **15** 15:55:30.7±0.9, 59°.80S×26°.38W, h0km, mb4.1/3, mbtmp4.1/4, ML4.6/1, Error ellipse: s-maj=44.9km s-min=34.3km az=40.0*
*NEIC **15** 15:55:31.5±2.3, 60°.38S±0°.06×27°.0W±0°.4, h10km±2km, mb4.4/17, Error ellipse: s-maj=30.2km s-min=9.2km az=83.0*

ISC 15 15:55:32.2±0.7, 60°.4S±0°.1×26°.8W±0°.2, h19km, n42, σ1°.64/36, mb4.5/11, 4C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNA1	**Neumayer--Stat**	**12.77**	**151**	⇑P		**P**	**15 58 40.4**	**-2.9**
	comp=Z,64nm,0.5s							
VNA3	**Neumayer Olymp**	**12.88**	**155**	⇓P		**P**	**15 58 41.7**	**-3.0**
	comp=Z,17nm,0.3s							
VNA3				⇑S		**Sn**	**16 00 56.5**	**-0.2**
	comp=E,3.3nm,0.2s							
VNA2	**Neumayer--Watz**	**13.17**	**151**	⇑P		**P**	**15 58 44.5**	**-3.3**
	comp=Z,7.6nm,0.3s,baz=307,slow=16							
VNA2				⇓S		**Sn**	**16 01 03.2**	**-0.3**
	comp=E,3.6nm,0.3s,baz=300,slow=18							
SNAA	**Sanae**	**14.77**	**150**	⇑P		**P**	**15 59 06.9**	**+1.2**
	comp=Z,109nm,0.2s							
SNAA	**Sanae**	**14.77**	**150**	Pn		**P**	**15 59 06.3**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=321,slow=18,SNR=15							
SNAA				Sn		**Sn**	**16 01 42.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=266,slow=6.1,SNR=4.9 comp=Z,6.2nm,0.4s							
SNAA	**Sanae**	**14.77**	**150**	P		**P**	**15 59 07.3**	**+1.6**
EFI	**East Falkland**	**19.37**	**283**	P		**P**	**15 59 54.9**	**-1.6**
MG02	**Cerro Sombrero**	**24.22**	**269**	P		**P**	**16 00 48.2**	**+0.9**
GO08	**Villa O'Higgin**	**28.57**	**274**	P		**P**	**16 01 25.5**	**-1.1**
TRQA	**Tornquist**	**31.45**	**299**	P		**P**	**16 01 51.1**	**-1.1**
PLCA	**Paso Flores**	**33.22**	**286**	P		**P**	**16 02 09.1**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=121,slow=12,SNR=3.2 comp=Z,1.4nm,0.6s							
PLCA	**Paso Flores**	**33.22**	**286**	P		**P**	**16 02 08.7**	**+1.0**
PLTB	**Pedras Altas**	**33.67**	**316**	P		**P**	**16 02 12.3**	**+0.6**
PLTB				IAmb	IAmb		16 02 13.6	
	comp=Z,2.2nm,0.7s							
GO05	**Hualane**	**38.45**	**291**	P		**P**	**16 02 51.0**	**-1.6**
MT09	**Talagante**	**39.04**	**293**	P		**P**	**16 02 56.4**	**-1.2**
MT09				IAmb	IAmb		16 03 18.8	
	comp=Z,10nm,1.0s							
MT02	**Curacav**	**39.54**	**293**	P		**P**	**16 03 01.3**	**-0.3**
MT02				IAmb	IAmb		16 03 08.2	
	comp=Z,7.7nm,0.9s							
CO04	**Los Peladeros**	**40.48**	**294**	P		**P**	**16 03 11.0**	**+1.2**
CO04				IAmb	IAmb		16 03 34.3	
	comp=Z,9.9nm,0.9s							
AC05	**El Transito**	**42.91**	**297**	P		**P**	**16 03 30.3**	**+0.8**
AC05				IAmb	IAmb		16 03 46.9	
	comp=Z,9.3nm,0.9s							
H04S2	**CROZET ISLANDS**	**45.71**	**110**	T		T	16 53 17.2	
	baz=223							
H04S3	**CROZET ISLANDS**	**45.72**	**110**	T		T	16 53 17.2	
	baz=223							
H04S1	**CROZET ISLANDS**	**45.73**	**110**	T		T	16 53 15.4	
	baz=223,SNR=9.4							
GO02	**Mina Guanaco**	**45.80**	**301**			**P**	**16 03 50.9**	**-2.0**
GO02				IAmb	IAmb		16 03 54.7	
	comp=Z,4.5nm,0.8s							
PB14	**IPOC Station P**	**46.62**	**300**	P		**P**	**16 03 58.7**	**-0.7**
PB05	**IPOC Station P**	**48.10**	**302**	P		**P**	**16 04 11.2**	**+0.6**
PB03	**IPOC Station P**	**48.62**	**303**	P		**P**	**16 04 14.9**	**+0.2**
PB03				IAmb	IAmb		16 04 27.5	
	comp=Z,7.2nm,0.6s							
PB09	**IPOC Station P**	**48.63**	**303**	P		**P**	**16 04 13.5**	**-1.3**
PB08	**IPOC Station P**	**50.08**	**304**	P		**P**	**16 04 24.2**	**-1.9**
PB08				IAmb	IAmb		16 04 35.1	
	comp=Z,3.8nm,0.7s							
GO01	**Chusmiza**	**50.52**	**305**	P		**P**	**16 04 28.6**	**-0.9**
GO01				IAmb	IAmb		16 04 33.7	
	comp=Z,2.3nm,0.8s							
H10S2	**ASCENSION HYDR**	**52.11**	**15**	T		T	17 00 15.5	
	baz=187,slow=74,SNR=8.6							
H10S3	**ASCENSION HYDR**	**52.11**	**15**	T		T	17 00 16.8	
	baz=33,slow=74,SNR=4.3							
H10N1	**ASCENSION HYDR**	**53.23**	**15**	T		T	17 01 40.4	
	baz=187							
H10N3	**ASCENSION HYDR**	**53.23**	**15**	T		T	17 01 41.4	
	baz=187,slow=74							
H10N2	**ASCENSION HYDR**	**53.24**	**15**	T		T	17 01 41.3	
	baz=187,slow=74							
TORD	**Torodi Ar. Bea**	**76.74**	**28**	P		**P**	**16 07 20.1**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=193,slow=5.7,SNR=6.0 comp=Z,0.4nm,0.3s							
ASAR	**Alice Springs**	**94.78**	**162**	P		**P**	**16 08 55.9**	**+3.4**
	comp=Z,0.5nm,0.7s,baz=188,slow=4.7,SNR=9.0 comp=Z,0.5nm,0.7s							
ASAR	**Alice Springs**	**94.78**	**162**	P		**P**	**16 08 53.6**	**+1.1**
PDAR	**Pinedale Array**	**122.78**	**300**	PKP		**PKiKP**	**16 14 29.3**	**+3.0**
	comp=Z,0.1nm,0.4s,baz=33,slow=0.7,SNR=1.4							
CMAR	**Chiang Mai Arr**	**123.25**	**113**	PKP		**PKiKP**	**16 14 29.4**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=236,slow=1.8,SNR=2.2							
YKA	**Yellowknife Ar**	**139.46**	**314**	PKP		**PKiKP**	**16 14 58.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=131,slow=1.5,SNR=2.1							
ZALV	**Zalesovo Beam**	**143.90**	**69**	PKhKP	PKPpre		16 15 00.8	
	comp=Z,0.4nm,0.4s,baz=240,slow=3.8,SNR=2.6							
SONM	**Songino Array**	**150.49**	**94**	PKPbc		**PKiKP**	**16 15 22.4**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=219,slow=3.1,SNR=12							
ILAR	**Eielson Array**	**153.00**	**305**	PKPbc		**PKPbc**	**16 15 26.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=122,slow=1.4,SNR=7.7							

MEX 15 16:10:13.3±0.7, 17°.96N×98°.26W, h54km±4km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FTIG	**Fresnillo de T**	**0.13**	**112**	*e*P		Pn	16 10 20.1	-1.8
FTIG				*e*S		Sn	16 10 26.1	-1.9
HMTT	**Tlapaneco**	**0.33**	**242**	*i* P		Pn	16 10 21.1	-2.1
HMTT				*i* S		Sn	16 10 28.0	-2.3
HLIG	**Huajuapan de L**	**0.45**	**106**	*e*P		Pn	16 10 23.1	-1.4
HLIG				*e*S		Sn	16 10 31.1	-1.4
MGIG	**Malinaltepec**	**0.80**	**207**	*e*P		Pn	16 10 26.7	-2.1
MGIG				*e*S		Sn	16 10 38.5	-1.5
TXIG	**Tlaxiaco**	**0.84**	**146**	*e*P		Pn	16 10 28.0	-1.3
TXIG				*e*S		Sn	16 10 40.2	-0.8
TPIG	**Tehuac#an**	**0.97**	**61**	*e*P		Pn	16 10 29.8	-1.1
TPIG				*e*S		Sn	16 10 43.4	-0.4
TOIG	**Toxpalan**	**1.14**	**83**	*e*P		Pn	16 10 32.2	-0.9
TOIG				*e*S		Sn	16 10 44.6	-3.3
PPM	**Popocatepetl**	**1.16**	**342**	*e*P		Pn	16 10 32.8	-1.0
PPM				*e*S		Sn	16 10 47.6	-1.3
YAIG	**Yautepec**	**1.19**	**320**	*e*P		Pn	16 10 32.4	-1.4
YAIG				*e*S		Sn	16 10 47.2	-1.8
PLIG	**Platanillo**	**1.26**	**290**	*e*P		Pn	16 10 33.6	-1.1
PLIG				*e*S		Sn	16 10 48.1	-2.6
YOIG	**Yosondua**	**1.29**	**148**	*e*P		Pn	16 10 34.4	-0.8
YOIG				*e*S		Sn	16 10 50.7	-0.9
MEIG	**Mezcala**	**1.30**	**269**	*e*P		Pn	16 10 33.6	-1.6
MEIG				*e*S		Sn	16 10 49.5	-2.1
CRIG	**Cruz Grande**	**1.47**	**215**	*e*P		Pn	16 10 34.4	-3.1
CRIG				*e*S		Sn	16 10 54.6	-1.1
PNIG	**Pinotepa**	**1.56**	**175**	*e*P		Pn	16 10 36.6	-2.2
PNIG				*e*S		Sn	16 10 54.6	-3.3
DAIG	**Los Arroyos**	**1.62**	**235**	*e*P		Pn	16 10 36.9	-2.7
DAIG				*e*S		Sn	16 10 58.6	-0.8
VHO	**Vista Hermosa**	**1.70**	**121**	*e*S		Sn	16 11 01.9	+0.4
ARIG	**Puente Sto Nin**	**2.02**	**280**	*e*P		Pn	16 10 43.5	-1.4
ARIG				*e*S		Sn	16 11 06.0	-3.0
CAIG	**El Cayaco**	**2.12**	**245**	*e*P		Pn	16 10 43.3	-3.0
CAIG				*e*S		Sn	16 11 08.6	-3.0
PEIG	**Puerto Escondi**	**2.22**	**151**	*e*P		Pn	16 10 47.5	-0.2
PEIG				*e*S		Sn	16 11 11.4	-2.5
NEUV	**Arroyo Zacate**	**2.35**	**96**	*e*P		Pn	16 10 48.4	-1.1
NEUV				*e*S		Sn	16 11 14.3	-2.8
HUIG	**Huatulco**	**2.99**	**136**	*e*S		Sn	16 11 34.4	+1.4
CMIG	**Matias Romero**	**3.33**	**104**	*e*S		Sn	16 11 36.3	-5.0

*IDC **15** 16:50:41.8±0.5, 2°.83N×127°.51E, h0km, mb4.3/19, mbtmp4.3/22, ML4.2/3, MS3.6/10, Error ellipse: s-maj=27.9km s-min=10.8km az=71.0*
*BJI **15** 16:50:42.8, 2°.78N×126°.96E, h7km, mB5.2/7, mb4.4/35, Ms4.7/3, Ms7 4.4/2*
*DJA **15** 16:50:46.7±0.3, 3°.N±2°.×12°.7E±°, h10km, M4.5/25, mB5.1/9, mb4.7/13, MLv4.5/25, Mw(mB)4.4/9*
*NEIC **15** 16:50:47.3±2.4, 2°.86N±0°.09×127°.1E±0°.1, h35km±2km, mb4.7/22, Error ellipse: s-maj=22.1km s-min=12.9km az=239.0*

ISC 15 16:50:48.3±0.4, 2°.83N±0°.06×127°.40E±0°.08, h49km, n92, σ1°.38/84, mb4.6/38, MS3.6/9, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**2.04**	**181**			**Pn**	**16 51 20.6**	**+0.3**
TNTI	**Ternate**	**2.04**	**181**	P		**Pn**	**16 51 20.8**	**+0.5**
SGSI	**Sangihe**	**2.06**	**294**	P		**Pn**	**16 51 19.6**	**-0.8**
MNI	**Manado**	**2.91**	**242**	P		**Pn**	**16 51 33.2**	**+1.1**
DAV	**Davao City (W)**	**4.59**	**337**	Pn		**Pn**	**16 51 55.0**	**-0.1**
	40nm,0.3s,baz=68,slow=14,SNR=1.4							
DAV				LR		LR	16 54 04.7	
	comp=Z,518nm,18.9s,baz=263,slow=44 139nm,0.3s							
GTOI	**Gorontalo**	**4.90**	**244**	P		**Pn**	**16 52 01.6**	**+2.1**
SANI	**Sanana**	**5.05**	**196**	P		**Pn**	**16 52 01.1**	**-0.4**
SWI	**Sorong**	**5.32**	**134**	P		**Pn**	**16 52 07.1**	**+1.8**
	0.3nm88nm,0.8s							
SIJI	**Sorong**	**5.33**	**134**	Pn		**Pn**	**16 52 02.6**	**-2.8**
	5.7nm,0.3s,baz=165,slow=21,SNR=19							
SIJI				Sn		**Sn**	**16 53 03.9**	**-1.7**
	baz=335,slow=23							
SIJI				LR		LR	16 54 16.2	
	comp=Z,554nm,21.0s,baz=246,slow=41 6.7nm,0.7s							
SIJI	**Sorong**	**5.33**	**134**	P		**Pn**	**16

LZDM	**Lanzhou Array**	**39.59**	**329**	P		**P**		**16 58 15.3**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=119,slow=9.0,SNR=4.3								
	comp=Z,0.3nm,0.3s								
ARMA	**Armidale**	**40.35**	**147**	P		**P**		**16 58 21.8**	**+0.3**
ARMA				IAmb		IAmb		16 58 44.0	
	comp=Z,24nm,1.4s								
HHC	**Hu-ho-hao-te**	**40.46**	**341**	*eP*		**P**		**16 58 23.5**	**+1.2**
HHC				pmax		pmax			
	comp=Z,10.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,73nm,4.9s								
USRK	**Ussuriysk Ar.**	**41.40**	**5**	P		**P**		**16 58 29.4**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=166,slow=8.3,SNR=3.3								
	comp=Z,1.6nm,0.6s								
H11S3	**WAKE ISLAND Hy**	**41.49**	**65**	T		T		17 42 55.3	
	baz=253,slow=74								
H11S2	**WAKE ISLAND Hy**	**41.50**	**65**	T		T		17 42 56.8	
	baz=253,slow=74								
H11S1	**WAKE ISLAND Hy**	**41.50**	**65**	T		T		17 42 56.3	
	baz=253								
H11N1	**WAKE ISLAND Hy**	**42.04**	**63**	T		T		17 43 42.8	
	baz=250								
H11N2	**WAKE ISLAND Hy**	**42.05**	**63**	T		T		17 43 43.4	
	baz=250								
H11N3	**WAKE ISLAND Hy**	**42.06**	**63**	T		T		17 43 42.8	
	baz=250								
XLT	**XiLinHaoTe**	**42.11**	**348**	*eP*		**P**		**16 58 37.8**	**+2.0**
XLT				pP		pP		16 58 42.3	-5.8
XLT				pmax		pmax			
	comp=Z,12nm,0.9s								
LSA	**Lhasa**	**43.53**	**312**	P		**P**		**16 58 45.4**	**-2.6**
LSA	**Lhasa**	**43.53**	**312**	P		**P**		**16 58 44.4**	**-3.6**
LSA				pmax		pmax			
	comp=Z,6.0nm,0.8s								
GTA2	**Gaotai**	**44.29**	**329**	*eP*		**P**		**16 58 54.0**	**+0.5**
GTA2				sP		pP		16 59 05.8	-0.2
GTA2				pmax		pmax			
	comp=Z,2.0nm,1.1s								
KLR	**Kul'dur**	**46.38**	**4**	LR		LR		17 20 23.0	
	comp=Z,25nm,19.8s,baz=320,slow=38								
HILR	**Hailar Array B**	**47.01**	**353**	P		**P**		**16 59 16.1**	**+1.4**
	comp=Z,1.1nm,0.4s,baz=166,slow=7.4,SNR=1.8								
	comp=Z,1.1nm,0.4s								
ULN	**Ulaanbaatar**	**48.18**	**342**	P		**P**		**16 59 24.3**	**+0.3**
ULN				IAmb		IAmb		16 59 26.6	
	comp=Z,13nm,1.1s								
SONM	**Songino Array**	**48.36**	**341**	P		**P**		**16 59 26.9**	**+1.6**
	comp=Z,4.0nm,1.0s,baz=160,slow=7.0,SNR=22								
	comp=Z,4.0nm,1.0s								
SONM	**Songino Array**	**48.36**	**341**	P		**P**		**16 59 24.9**	**-0.4**
SONM				IAmb		IAmb		16 59 27.8	
	comp=Z,12nm,1.3s								
WMQ	**Urumqi**	**53.84**	**325**	*eP*		**P**		**17 00 08.3**	**+1.8**
WMQ				LR		LR			
	comp=Z,600nm,11.5s								
WUS	**Wushi**	**57.68**	**318**	P		**P**		**17 00 33.2**	**-0.9**
MKAR	**Makanchi Array**	**58.67**	**325**	P		**P**		**17 00 41.4**	**+0.6**
	comp=Z,3.2nm,0.5s,baz=119,slow=7.8,SNR=102								
MKAR				LR		LR		17 25 17.9	
	comp=Z,163nm,20.4s,baz=315,slow=35								
	comp=Z,3.2nm,0.5s								
MKAR	**Makanchi Array**	**58.67**	**325**	P		**P**		**17 00 40.8**	**0.0**
MAKZ	**Makanchi**	**58.86**	**325**	P		**P**		**17 00 40.6**	**-1.5**
MAKZ				IAmb		IAmb		17 00 44.7	
	comp=Z,4.3nm,0.7s								
TARG	**Taragay, Kyrgy**	**58.86**	**318**	P		**P**		**17 00 42.6**	**-0.2**
ZAA0	**Zalesovo Array**	**61.69**	**333**	P		**P**		**17 00 58.6**	**-2.6**
ZAA0				IAmb		IAmb		17 01 02.5	
	comp=Z,6.6nm,1.0s								
ZALV	**Zalesovo Beam**	**61.69**	**333**	P		**P**		**17 01 01.5**	**+0.3**
	comp=Z,3.9nm,0.9s,baz=116,slow=6.8,SNR=17								
	comp=Z,3.9nm,0.9s								
ZALV	**Zalesovo Beam**	**61.69**	**333**	P		**P**		**17 01 00.5**	**-0.8**
KURBB	**Kurchatov Arra**	**62.85**	**327**	P		**P**		**17 01 10.2**	**+1.1**
	comp=Z,7.1nm,0.8s,baz=125,slow=6.2,SNR=62								
	comp=Z,7.1nm,0.8s								
KURK	**Kurchatov**	**62.85**	**327**	P		**P**		**17 01 09.0**	**-0.1**
BVAR	**Borovoye Array**	**68.44**	**327**	P		**P**		**17 01 45.6**	**+0.5**
	comp=Z,1.3nm,0.5s								
	comp=Z,1.3nm,0.5s								
BORK	**Borovoye**	**68.48**	**327**	P		**P**		**17 01 43.5**	**-1.8**
NRIK	**Noril'sk**	**71.46**	**346**	P		**P**		**17 02 03.9**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=133,slow=6.6,SNR=7.1								
	comp=Z,1.8nm,0.6s								
AB31	**Akbulak array**	**73.27**	**321**	P		**P**		**17 02 13.3**	**-1.2**
AB31				IAmb		IAmb		17 02 16.0	
	comp=Z,4.7nm,0.8s								
ABKAR	**Akbulak array**	**73.27**	**321**	P		**P**		**17 02 14.4**	**-0.1**
RAYN	**Ar Rayn**	**81.45**	**293**	P		**P**		**17 02 59.8**	**-1.1**
RAYN				IAmb		IAmb		17 03 02.4	
	comp=Z,7.8nm,0.8s								
E19K	**Redstone River**	**81.81**	**22**	P		**P**		**17 03 03.3**	**+1.5**
E19K				IAmb		IAmb		17 03 19.7	
	comp=Z,4.4nm,0.9s								
KDAK	**Kodiak Island**	**82.29**	**32**	P		**P**		**17 03 04.3**	**-0.2**
KBZ	**Khabaz**	**84.08**	**313**	LR		LR		17 46 54.9	
	comp=Z,274nm,18.2s,baz=318,slow=40								
BRTR	**Keskin Array B**	**91.11**	**310**	P		**P**		**17 03 48.9**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=130,slow=6.7,SNR=5.8								
	comp=Z,1.0nm,0.8s								
FINES	**FINESS Array B**	**92.94**	**332**	P		**P**		**17 03 56.5**	**+0.5**
	comp=Z,8.3nm,1.1s,baz=68,slow=5.9,SNR=3.4								
	comp=Z,8.3nm,1.1s								
AKASG	**Malin Array Be**	**93.01**	**321**	P		**P**		**17 03 58.2**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=66,slow=4.5,SNR=2.1								
	comp=Z,0.3nm,0.4s								
TORD	**Torodi Ar. Bea**	**123.83**	**288**	PKP		**PKiKP**		**17 09 42.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=260,slow=1.3,SNR=2.8								
CFA	**Coronel Fontan**	**147.81**	**154**	PKPbc		**PKPbc**		**17 10 27.5**	**-1.1**
	comp=Z,2.6nm,0.9s,baz=221,slow=4.1,SNR=6.2								

*SOME **15** 17:03:27.8, 39.°85N×77.°17E, h10km*
*NNC **15** 17:03:29.0±1.8, 39.°87N×77.°10E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=11.8km s-min=9.5km az=0.0*
*KRNET **15** 17:03:31.7±0.1, 39.°99N×77.°10E, h16km, mb3.4*

ISC 15 17:03:30.3±2.0, 39.°96N±0.°07×77.°05E±0.°04, h10km±16km, n41, σ1°65/65, 16C-16D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.54**	**316**	⇑*eP*	**Pb**	**17 04 00.6**	**+1.5**
JNKS				⇑*eS*	**Sg**	17 04 21.7	+1.9
NRN	**Naryn**	**1.68**	**332**	⇑*eP*	**Pg**	**17 04 03.0**	**+0.5**
NRN				⇑*eS*	**Sg**	17 04 25.7	+1.5
TARG	**Taragay, Kyrgy**	**1.86**	**18**	⇑*eP*	**Pb**	**17 04 05.7**	**+1.0**
TARG				⇑*eS*	**Sg**	17 04 30.4	+0.2
KDJ	**Kajisay**	**2.17**	**3**	⇑*eP*	**Pb**	**17 04 10.7**	**+0.9**
KDJ				⇑*eS*	**Sg**	17 04 39.7	-0.4
ULHL	**Ulahol**	**2.37**	**345**	P	**Pg**	**17 04 15.4**	**-0.2**
	SNR=22						
ULHL	**Ulahol**	**2.37**	**345**	⇑*eP*	**Pb**	**17 04 13.6**	**+0.5**
ULHL				⇑*eS*	**Sb**	17 04 44.2	+1.7
BOOM	**Boomskoye usch**	**2.67**	**342**	⇓*eP*	**Pb**	**17 04 17.8**	**-0.4**
BOOM				⇓*eS*	**Sb**	17 04 51.3	+0.3
PRZ	**Przheval'sk**	**2.72**	**22**	⇑*eP*	**Pb**	**17 04 18.4**	**-0.8**
PRZ				⇑*eS*	**Sb**	17 04 52.6	-0.1
SFK	**Sufi-Kurgan**	**2.72**	**272**	⇑*eP*	**Pb**	**17 04 19.5**	**+0.3**
SFK				⇑*eS*	**Sb**	17 04 54.3	+1.5
ARLS	**Aral**	**2.81**	**314**	⇓*eP*	**Pb**	**17 04 19.9**	**-0.7**
ARLS				⇓*eS*	**Sb**	17 04 55.1	0.0
ANVS	**Anan'yevo**	**2.86**	**9**	⇓*eP*	**Pb**	**17 04 19.7**	**-1.9**
ANVS				⇓*eS*	**Sb**	17 04 55.5	-1.2
UCH	**Uchtor**	**2.97**	**321**	P	**Pb**	**17 04 23.7**	**+0.2**
	SNR=14						
UCH	**Uchtor**	**2.97**	**321**	⇓*eP*	**Pb**	**17 04 22.5**	**-1.0**
UCH				⇓*eS*	**Sb**	**17 04 59.5**	**-0.5**
TNSS	**Tian-Shan**	**3.08**	**359**	Pg	**Pb**	**17 04 27.0**	**+1.6**
	3.3nm,0.4s						
TNSS				Lg	Lg	17 05 08.9	
	6.0nm,0.4s						
TNSS	**Tian-Shan**	**3.08**	**359**	*eP*	**Pb**	**17 04 27.0**	**+1.6**
	3.3nm,0.4s						
TNSS				*eS*	**Sg**	**17 05 09.1**	**-0.1**
	6.0nm,0.4s						
KBK	**Karagaybulak**	**3.13**	**330**	⇓*eP*	**Pb**	**17 04 24.4**	**-1.7**
KBK				⇓*eS*	**Sb**	**17 05 02.7**	**-1.6**
TKM2	**Tokmak 2**	**3.15**	**340**	P	**Pb**	**17 04 25.9**	**-0.7**
	SNR=8.4						
TKM2	**Tokmak 2**	**3.15**	**340**	⇓*eP*	**Pb**	**17 04 24.6**	**-2.0**
TKM2				⇓*eS*	**Sb**	**17 05 03.2**	**-2.0**
KST	**Kastek**	**3.19**	**346**	Pg	**Pb**	**17 04 29.3**	**+2.2**
	8.2nm,0.7s						
KST				Lg	Lg	17 05 13.1	
	22nm,0.5s						
KST	**Kastek**	**3.19**	**346**	*eP*	**Pb**	**17 04 29.3**	**+2.2**
	8.2nm,0.7s						
KST				*eS*	**Sg**	**17 05 13.1**	**+0.4**
	22nm,0.5s						
MDOK	**Medeo**	**3.20**	**0**	Pg	**Pb**	**17 04 29.2**	**+1.8**
	9.0nm,0.5s						
MDOK				Lg	Lg	17 05 13.1	
	24nm,0.6s						
MTBS	**Maitube**	**3.20**	**352**	Pg	**Pb**	**17 04 29.6**	**+2.3**
	0.9nm,0.2s						
MTBS				Lg	Lg	17 05 13.8	
	9.9nm,0.5s						
MTBS	**Maitube**	**3.20**	**352**	*eP*	**Pb**	**17 04 29.6**	**+2.3**
	0.9nm,0.2s						
MTBS				*eS*	**Sg**	**17 05 13.8**	**+0.6**
	9.9nm,0.5s						
SATY	**Saty**	**3.26**	**18**	Pg	**Pb**	**17 04 30.5**	**+2.1**
	13nm,1.0s						
SATY				Lg	Lg	17 05 15.1	
	21nm,0.5s						
KOTS	**Kotyrbulak**	**3.27**	**1**	Pg	**Pb**	**17 04 31.2**	**+2.6**
	8.5nm,0.3s						
KOTS				Lg	Lg	17 05 16.5	
	64nm,0.6s						
KOTS	**Kotyrbulak**	**3.27**	**1**	*eP*	**Pb**	**17 04 31.3**	**+2.7**
	8.5nm,0.3s						
KOTS				*eS*	**Sg**	**17 05 16.5**	**+1.1**
	64nm,0.6s						
AAK	**Ala-Archa**	**3.30**	**325**	P	**Pb**	**17 04 28.4**	**-0.5**
	SNR=5.8						
AAK	**Ala-Archa**	**3.30**	**325**	⇑Pg	**Pb**	**17 04 28.3**	**-0.7**
	2.0nm,0.5s						
AAK				⇑Lg	Lg	17 05 17.2	
	3.5nm,0.5s						
AAK	**Ala-Archa**	**3.30**	**325**	⇓*eP*	**Pb**	**17 04 26.8**	**-2.2**
AAK				⇓*eS*	**Sb**	**17 05 06.9**	**-2.3**
DGS	**Degeres**	**3.42**	**344**	Pg	**Pb**	**17 04 34.0**	**+3.0**
	14nm,0.6s						
DGS				Lg	Lg	17 05 21.1	
	16nm,0.5s						
DGS	**Degeres**	**3.42**	**344**	*eP*	**Pb**	**17 04 34.0**	**+3.0**
	14nm,0.6s						
DGS				*eS*	**Sg**	**17 05 21.1**	**+1.0**
	16nm,0.5s						
UZB	**Uzynbulak**	**3.52**	**24**	Pg	**Pb**	**17 04 34.9**	**+2.2**
	4.6nm,0.2s						
UZB				Lg	Lg	17 05 22.4	
	9.5nm,0.5s						
UZB	**Uzynbulak**	**3.52**	**24**	*eP*	**Pb**	**17 04 34.5**	**+1.8**
	4.6nm,0.2s						
UZB				*eS*	**Sg**	**17 05 22.4**	**-0.8**
	9.5nm,0.5s						
EKS2	**Erkin-Say**	**3.66**	**319**	P	**Pb**	**17 04 33.8**	**-1.3**
	SNR=9.7						
SHLS	**Shalkode**	**3.67**	**29**	Pg	**Pg**	**17 04 38.7**	**-1.9**
	2.7nm,0.5s						
SHLS				Lg	Lg	17 05 28.9	
	32nm,0.6s						
SHLS	**Shalkode**	**3.67**	**29**	*eP*	**Pg**	**17 04 38.6**	**-2.1**
	2.7nm,0.5s						
SHLS				*eS*	**Sg**	**17 05 29.3**	**+1.0**
	32nm,0.6s						
KPKS	**Kokpek**	**3.71**	**19**	*eP*	**Pb**	**17 04 37.9**	**+1.8**
	0.4nm,0.2s						
KPKS				*eS*	**Sg**	**17 05 28.0**	**-1.5**
	10nm,0.4s						
KTBS	**Karatobe**	**3.76**	**356**	Pg	**Pb**	**17 04 39.4**	**+2.6**
	5.5nm,0.4s						
KTBS				Lg	Lg	17 05 31.2	
	0.2nm,0.4s						
KTBS	**Karatobe**	**3.76**	**356**	*eP*	**Pb**	**17 04 39.4**	**+2.6**
	5.5nm,0.4s						
KTBS				*eS*	**Sg**	**17 05 30.5**	**-0.6**
	0.2nm,0.4s						
PDGK	**Podgornoye**	**3.83**	**28**	⇓Pg	**Pb**	**17 04 40.0**	**+1.9**
	5.7nm,0.8s						
PDGK				⇓Lg	Lg	17 05 32.0	
	15nm,0.8s						
MRKS	**Merke**	**4.00**	**315**	*eP*	**Pb**	**17 04 43.1**	**+2.2**
	1.2nm,0.2s						
MRKS				*eS*	**Sg**	**17 05 37.1**	**-1.7**
	6.2nm,0.4s						

*IDC **15** 17:05:34.1±1.2, 36.°92N×135.°23E, h356km±15km, mb2.7/4, mbtmp3.4/8, Error ellipse: s-maj=24.4km s-min=20.1km az=79.0*
*JMA **15** 17:05:34.5±0.2, 37.°1N±0.°8×13.°5E±.°, h353km±1km, MV2.7/11, SEA OF JAPAN*

ISC 15 17:05:34.3±0.9, 37.°0N±0.°1×135.°2E±0.°1, h350km, n11, σ1°30/12, mb2.8/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**1.73**	**175**	*eP*	**Pn**	**17 06 25.1**	**+1.2**
JWT				*eS*	**S**	**17 07 04.5**	**+0.9**
MAT	**Matsushiro**	**2.44**	**100**	*eP*	**Pn**	**17 06 30.1**	**+1.3**
MJAR	**Matsushiro Arr**	**2.44**	**100**	P	**Pn**	**17 06 30.1**	**+1.2**
	3.6nm,0.8s,baz=271,slow=9.6,SNR=16						
JIE	**Ise**	**2.88**	**155**	P	**Pn**	**17 06 33.9**	**+1.3**
KSRS	**Korea Array**	**5.85**	**277**	P	**Pn**	**17 07 04.1**	**+0.9**
	1.7nm,1.0s,baz=101,slow=12,SNR=1.3						
USRK	**Ussuriysk Ar.**	**7.59**	**342**	P	**Pn**	**17 07 23.9**	**+0.5**
	2.3nm,0.5s,baz=150,slow=12,SNR=4.4						
ASAJ	**Asahikawa**	**9.04**	**36**	P	**Pn**	**17 07 39.8**	**-0.8**
	2.2nm,0.3s,baz=219,slow=12,SNR=26						
KURBB	**Kurchatov Arra**	**42.10**	**307**	P	**P**	**17 12 52.6**	**-0.4**
	0.2nm,0.3s,baz=94,slow=7.9,SNR=1.9						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**52.15**	**32**	P	**P**	**17 14 10.1**	**+0.6**
	0.5nm,1.0s,baz=292,slow=7.6,SNR=1.4						
	0.5nm,1.0s						
WRA	**Warramunga Arr**	**56.65**	**181**	P	**P**	**17 14 40.3**	**-1.9**
	0.2nm,0.3s,baz=7.6,slow=7.3,SNR=2.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**60.37**	**181**	P	**P**	**17 15 05.9**	**-1.6**
	0.4nm,1.0s,baz=1.3,slow=7.6,SNR=1.7						
	0.4nm,1.0s						

*IDC **15** 17:06:47.6±2.2, 10.°69S×115.°11E, h0km, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=106.8km s-min=13.4km az=42.0*
*DJA **15** 17:06:53.8±1.0, 11.°5S±11.°×11.°4E±.°, h21km±17km, M4.0/18, MLv4.0/18*

ISC 15 17:06:49.6±1.1, 11.°55S±0.°08×114.°07E±0.°07, h35km, n17, σ1°89/23, mb3.2/4, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.91**	**21**	P	**Pn**	**17 07 35.1**	**+1.6**
IGBI				S	**Sn**	**17 08 06.1**	**-1.1**
JAGI	**Jajag, Banyuwa**	**3.06**	**1**	P	**Pn**	**17 07 34.9**	**-0.6**
JAGI				S	**Sn**	**17 08 08.8**	**-2.1**
DNP	**Denpasar**	**3.06**	**22**	P	**Pn**	**17 07 37.6**	**+2.0**
DNP				S	**Sn**	**17 08 09.0**	**-2.0**
RTBI	**Rangdo, Negare**	**3.18**	**16**	P	**Pn**	**17 07 37.9**	**+0.6**
RTBI				S	**Sn**	**17 08 13.6**	**-0.5**
KHKI	**Kahang-Kahang**	**3.50**	**26**	P	**Pn**	**17 07 45.5**	**+3.9**
ABJI	**Asem Bagus**	**3.73**	**2**	P	**Pn**	**17 07 46.3**	**+1.5**
BLJI	**Banyuglugur**	**3.81**	**353**	P	**Pn**	**17 07 46.3**	**+0.5**
TWSI	**Taliwang, Sumb**	**3.93**	**45**	P	**Pn**	**17 07 48.8**	**+1.3**
SNJI	**Sawahan-Nganju**	**4.38**	**328**	P	**Pn**	**17 07 54.4**	**+0.5**
PCJI	**Pacitan**	**4.39**	**319**	P	**Pn**	**17 07 54.9**	**+1.1**
SJI	**Sawahan**	**4.42**	**329**	P	**Pn**	**17 07 55.2**	**+0.9**
KMMI	**Kalianget**	**4.47**	**359**	P	**Pn**	**17 07 55.5**	**+0.6**
UGM	**Wanagama**	**5.03**	**316**	P	**Pn**	**17 08 03.5**	**+0.8**
WRA	**Warramunga Arr**	**21.20**	**116**	P	**P**	**17 11 30.7**	**-1.7**
	0.3nm,0.7s,baz=288,slow=12,SNR=8.8						
WRA				S	**S**	**17 15 21.3**	**-5.0**
	0.6nm,0.8s,baz=294,slow=24,SNR=3.2						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**22.38**	**125**	P	**P**	**17 11 46.1**	**+1.0**
	0.7nm,0.7s,baz=298,slow=9.3,SNR=16						
ASAR				S	**S**	**17 15 50.1**	**+1.0**
	0.6nm,0.9s,baz=301,slow=24,SNR=3.3						
	0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**33.34**	**333**	P	**P**	**17 13 25.4**	**+0.8**
	0.1nm,0.3s,baz=155,slow=8.1,SNR=4.3						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**64.67**	**336**	P	**P**	**17 17 24.4**	**+0.5**
	0.6nm,0.5s,baz=147,slow=7.3,SNR=9.3						
	0.6nm,0.5s						

MEX 15 17:09:34.1±0.6, 16.°48N×95.°06W, h19km±14km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.63**	**16**	*i* P	**Pb**	17 09 43.8	-2.6
CMIG				*eS*	Sb	17 09 51.8	-3.0
UXUV	**UXUV**	**1.21**	**46**	*eP*	Pn	17 09 55.0	-1.0
UXUV				*eS*	Sb	17 10 09.6	-2.0
HUIG	**Huatulco**	**1.23**	**235**	*eP*	Pn	17 09 54.4	-2.0
HUIG				*eS*	Sb	17 10 10.6	-1.8
NEUV	**Arroyo Zacate**	**1.41**	**330**	*eP*	Pn	17 09 58.0	-0.8
NEUV				*eS*	Sn	17 10 15.0	-1.9
TOIG	**Toxpalan**	**2.50**	**310**	*eS*	Sn	17 10 43.6	-0.3

*CATAC **15** 17:10:18.9±0.5, 9.°N±2.°×8.°4W±.°, h10km±4km, M4.0/4, MLv4.0/4, Error ellipse: s-maj=7.9km s-min=4.7km az=71.3, confirmed*
*UPA **15** 17:10:18.4±1.6, 8.°96N×84.°02W, h10km±8km, MW4.1, Presumed earthquake*
*UCR **15** 17:10:18.8±0.7, 8.°99N×83.°95W, h15km±5km, MW4.3, Presumed earthquake*

ISC 15 17:10:17.2±1.1, 8.°94N±0.°03×84.°01W±0.°03, h14km±9km, n94, σ0°81/116, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCHAL	**Ojochal**	**0.39**	**67**	P	**Pg**	**17 10 25.4**	**+0.2**
OCHAL				S	**Sg**	**17 10 30.8**	**+0.2**
EDPE	**Pejibaye, P**	**0.49**	**64**	*eP*	**Pg**	**17 10 26.8**	**-0.1**
EDPE				*eS*	**Sg**	**17 10 33.1**	**-0.3**
QUEP	**Quepos**	**0.51**	**343**	*eP*	**Pb**	**17 10 28.1**	**+0.1**
QUEP				*eS*	**Sb**	**17 10 35.6**	**+0.5**
SVQ2	**Quepos**	**0.51**	**343**	*eP*	**Pb**	**17 10 28.1**	**+0.1**
SVQ2				*eS*	**Sb**	**17 10 35.8**	**+0.6**
PANP	**Palmar Norte**	**0.55**	**88**	*eP*	**Pg**	**17 10 28.1**	**+0.1**
BUS1	**Rivas**	**0.66**	**23**	*eP*	**Pg**	**17 10 30.0**	**-0.3**
PIEC	**Cerro El Cedra**	**0.68**	**5**	*eP*	**Pg**	**17 10 30.6**	**0.0**
PICV	**PH. Pirrs**	**0.70**	**345**	*eP*	**Pb**	**17 10 31.4**	**+0.1**
BURE	**Buenos Aires**	**0.70**	**71**	*eP*	**Pb**	**17 10 30.8**	**-0.6**
RAZU	**San Marcos de**	**0.71**	**359**	*eP*	**Pg**	**17 10 31.2**	**0.0**
PITB	**Pirrs, San**	**0.71**	**359**	*eP*	**Pg**	**17 10 31.4**	**+0.2**
PTJ1	**Puerto Jimnez**	**0.81**	**120**	P	**Pn**	**17 10 34.2**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.81**	**120**	*eP*	**Pn**	**17 10 34.5**	**+0.2**
DRK0	**Durika**	**0.82**	**67**	P	**Pb**	**17 10 31.2**	**-2.2**
DRK0				S	**Sb**	**17 10 41.5**	**-3.0**
DRK0	**Durika**	**0.82**	**67**	*eP*	**Pb**	**17 10 31.2**	**-2.2**
DRK0	**Durika**	**0.82**	**67**	*eP*	**Pb**	**17 10 31.0**	**-2.4**
EDP2	**Potrero Grande**	**0.83**	**85**	*eP*	**Pb**	**17 10 33.1**	**-0.4**
PIRO	**Carate, Puerto**	**0.86**	**129**	P	**Pn**	**17 10 34.7**	**-0.2**
PIRO				S	**Sn**	**17 10 46.5**	**-0.7**
PIRO	**Carate, Puerto**	**0.86**	**129**	*eP*	**Pn**	**17 10 34.8**	**-0.1**
PIRO	**Carate, Puerto**	**0.86**	**129**	*eP*	**Pn**	**17 10 34.6**	**-0.3**
ACOS	**Acosta**	**0.86**	**350**	*eP*	**Pb**	**17 10 33.8**	**-0.2**
ACOS				*eS*	**Sb**	**17 10 45.6**	**+0.1**
EDAD	**Golfito**	**0.89**	**109**	*eP*	**Pb**	**17 10 34.4**	**+0.1**
REPA	**Paraso**	**0.89**	**9**	*eP*	**Pb**	**17 10 34.3**	**-0.3**
BITO	**Garabito Jaco**	**0.90**	**318**	*eP*	**Pn**	**17 10 35.6**	**+0.1**
TAGO	**Cartago**	**0.92**	**5**	*eP*	**Pb**	**17 10 34.9**	**-0.3**
AMPA	**Desamparados**	**0.95**	**357**	*eP*	**Pb**	**17 10 35.0**	**-0.5**
TRIO	**Tres Ros**	**0.95**	**1**	*eP*	**Pb**	**17 10 35.1**	**-0.6**
LUJA	**Lujan**	**0.98**	**357**	*eP*	**Pb**	**17 10 35.7**	**-0.4**
PCAYA	**Pacayas**	**0.99**	**12**	*eP*	**Pb**	**17 10 35.9**	**-0.4**
SJS3	**Mercedes San J**	**0.99**	**358**	*eP*	**Pb**	**17 10 36.1**	**-0.2**
ECI	**Escuela Centro**	**0.99**	**358**	*eP*	**Pb**	**17 10 36.0**	**-0.3**
SJS	**Escuela Geolog**	**0.99**	**358**	*eP*	**Pb**	**17 10 36.0**	**-0.3**
SANTA	**Santa Ana**	**1.00**	**350**	*eP*	**Pb**	**17 10 35.8**	**-0.6**
LUPE	**Guadalupe**	**1.00**	**358**	*eP*	**Pb**	**17 10 36.3**	**-0.2**
TURIB	**Turrialba**	**1.01**	**19**	*eP*	**Pb**	**17 10 35.6**	**-1.0**
CORON	**Coronado**	**1.02**	**1**	*eP*	**Pb**	**17 10 36.8**	**-0.1**
RAFA	**San Farael, Vo**	**1.03**	**11**	*eP*	**Pb**	**17 10 36.8**	**-0.2**
BELE	**Belen**	**1.04**	**350**	*eP*	**Pb**	**17 10 36.8**	**-0.3**
VERB	**Verbena**	**1.04**	**17**	*eP*	**Pb**	**17 10 36.7**	**-0.4**
VICA	**Volcano Irazu**	**1.05**	**9**	*eP*	**Pb**	**17 10 36.8**	**-0.6**
HEME	**Heredia, Merce**	**1.05**	**353**	*eP*	**Pg**	**17 10 38.2**	**+0.6**
HDC	**Heredia**	**1.05**	**355**	*eP*	**Pb**	**17 10 37.1**	**-0.3**
TRB2	**Turrubares**	**1.05**	**336**	*eP

LODU1	**El Espartillar**	**0.84**	**71**	*i* P	Pg	17 12 54.9	+0.3
LODU1				*e*S	Sg	17 13 01.8	-3.7
LODU1				IAML		17 13 04.6	
	comp=Z,77nm,1.8s						
PODR	**Polo**	**0.98**	**85**⇑	*i* P	Pg	17 12 56.0	-1.2
PODR				*i* S	Sg	17 13 09.1	-0.9
PODR				IAML		17 13 13.8	
	comp=N,107nm,1.6s						
PODR	**Polo**	**0.98**	**85**	*i* P	Pg	17 12 57.7	+0.4
PODR				*e*S	Sg	17 13 08.6	-1.5
SDDR	**Presa de Saban**	**1.32**	**47**⇑	*i* S	Sg	17 13 19.2	-1.7
SDDR				IAML		17 13 34.8	
	comp=N,19nm,4.5s						
REDR	**Restauracion**	**1.39**	**39**	*i* P	Pn	17 13 03.5	-1.3
REDR			⇑	*i* S	Sg	17 13 18.5	-4.5
REDR				IAML		17 14 05.2	
	comp=N,26nm,2.9s						

PDG ***15*** *17:20:02.9±0.2, 43°.13N×17°.47E, h10km, ML2.8/12, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
BEO ***15*** *17:20:02.9±0.5, 43°.16N×17°.45E, h3km±4km, ML2.6/12*
PRU ***15*** *17:20:04.3, 43°.39N×18°.14E, h1km*
VIE ***15*** *17:20:07.7±0.7, 43°.38N×17°.32E, h10km, mb2.7/13, ml2.4/11, Error ellipse: s-maj=8.5km s-min=5.5km az=49.0 70 km ESE of Split*

ISC 15 17:20:03.8±1.8, 43°.24N±0°.03×17°.49E±0°.03, h3km±13km, n50, σ1s15/73, 12C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.40**	**157**	*e*Pg	Pg	17 20 08.6	-2.9
STON				*e*Sg	**Sg**	**17 20 14.3**	**-2.3**
BRY	**Bratogost**	**0.84**	**113**	*e*Pg	Pg	17 20 17.9	-2.1
BRY				*i* Sg	**Sg**	**17 20 30.9**	**0.0**
UPM	**Unac-Piva**	**1.04**	**91**⇑	*i* Pg	Pg	17 20 22.3	-1.4
UPM				*i* Sg	**Sg**	**17 20 39.3**	**+2.1**
HCY	**Herceg Novi**	**1.08**	**137**	*e*Pg	Pg	17 20 21.9	-2.7
HCY				*i* Sg	**Sg**	**17 20 37.6**	**-1.0**
NKME	**Niksic**	**1.17**	**113**	*e*Pg	Pg	17 20 24.5	-1.8
NKME				*i* Sg	**Sg**	**17 20 42.5**	**+1.0**
CEME	**Cevo**	**1.26**	**123**⇓	*i* Pg	Pg	17 20 24.8	-3.1
CEME				*i* Sg	**Sg**	**17 20 43.3**	**-0.9**
PLE	**Pljevlja**	**1.39**	**86**	*e*Pg	Pg	17 20 29.7	-0.8
PLE				*e*Sg	**Sg**	**17 20 50.1**	**+1.6**
BUM	**Brajici-Budva**	**1.40**	**132**	*e*Pg	Pg	17 20 27.4	-3.2
BUM				*i* Sg	**Sg**	**17 20 47.8**	**-0.9**
BLY	**Banja Luka**	**1.53**	**352**	⇓P	**Pn**	**17 20 32.9**	**+0.9**
BLY				⇑S	**Sn**	**17 20 54.5**	**+2.2**
BLY	**Banja Luka**	**1.53**	**352**	*e*Pg	**Pn**	**17 20 33.4**	**+1.4**
BLY				*e*Sg	**Sn**	**17 20 54.4**	**+2.0**
BBLS	**Lazi&#263i**	**1.53**	**65**	*e*Pn	**Pn**	**17 20 31.9**	**-0.2**
BBLS				*e*Sn	**Sg**	**17 20 53.3**	**+0.3**
KOME	**Kolasin**	**1.54**	**104**⇑	*i* Pg	Pn	17 20 31.7	-0.5
KOME				*i* Sg	**Sg**	**17 20 53.2**	**0.0**
DRME	**Dracevica, Mon**	**1.63**	**129**⇑	*i* Pn	Pn	17 20 31.6	-1.9
DRME				*i* Sn	**Sn**	**17 20 54.4**	**-0.6**
IVA	**Berane**	**1.80**	**101**⇑	*i* Pn	**Pn**	**17 20 35.5**	**-0.4**
IVA				*i* Sn	**Sn**	**17 21 00.4**	**+1.1**
SJES	**Sjenica**	**1.82**	**88**	*e*Pn	**Pn**	**17 20 36.5**	**+0.4**
SJES				*e*Sn	**Sn**	**17 20 58.3**	**-1.4**
ULC	**Ulcinj**	**1.82**	**134**	*e*Pn	Pn	17 20 34.5	-1.5
ULC				*i* Sn	**Sn**	**17 20 59.9**	**+0.3**
PVY	**Plav**	**1.93**	**109**	*e*Pn	Pn	17 20 37.0	-0.6
PVY				*e*Sn	**Sn**	**17 21 03.8**	**+1.4**
IVAS	**Ivanjica**	**1.97**	**79**	*e*Pn	Pn	17 20 37.6	-0.6
IVAS				*e*Sn	**Sn**	**17 21 03.4**	**0.0**
DIVS	**Divibare**	**2.01**	**64**	*e*Pn	Pn	17 20 37.7	-1.0
DIVS				*e*Sn	**Sn**	**17 21 03.8**	**-0.6**
TRUS	**Trudelj**	**2.33**	**64**	*e*Pn	**Pn**	**17 20 42.9**	**-0.2**
TRUS				*e*Sn	**Sn**	**17 21 13.5**	**+1.2**
GRUS	**Gruza**	**2.43**	**73**	*e*Pn	Pn	17 20 43.9	-0.6
GRUS				*e*Sn	**Sn**	**17 21 15.1**	**+0.3**
GOCS	**Kraljevo Serbi**	**2.49**	**81**	*e*Pn	Pn	17 20 44.8	-0.5
GOCS				*e*Sn	**Sn**	**17 21 16.1**	**-0.1**
FRGS	**Fruska Gora**	**2.54**	**40**	*e*Pn	Pn	17 20 45.0	-1.0
FRGS				*e*Sn	**Sn**	**17 21 18.1**	**+0.6**
AVAS	**Avala Beograd**	**2.63**	**55**	*e*Pn	Pn	17 20 46.2	-0.9
AVAS				*e*Sn	**Sn**	**17 21 20.1**	**+0.6**
MATE	**Matera**	**2.65**	**193**	⇓P	**Pn**	**17 20 49.3**	**+1.8**
MATE				⇑S	**Sn**	**17 21 22.5**	**+2.4**
SELS	**Selova**	**2.65**	**89**	*e*Pn	**Pn**	**17 20 47.5**	**0.0**
SELS				*e*Sn	**Sn**	**17 21 20.2**	**0.0**
MORH	**Mrgy, Hungar**	**3.09**	**15**	⇑P	**Pn**	**17 20 53.2**	**-0.2**
BOVS	**Bovan**	**3.10**	**81**	⇑P	**Pn**	**17 20 53.3**	**-0.3**
BOVS				⇑S	**Sn**	**17 21 30.1**	**-1.0**
BARS	**Barje**	**3.20**	**96**	*e*Pn	**Pn**	**17 20 54.6**	**-0.4**
BARS				*e*Sn	**Sn**	**17 21 32.9**	**-0.8**
ZAGS	**Zajecar**	**3.50**	**79**	*e*Pn	**Pn**	**17 20 58.9**	**-0.2**
ZAGS				*e*Sn	**Sn**	**17 21 40.9**	**-0.1**
ZAPS	**Zavoj**	**3.76**	**88**	*e*Pn	**Pn**	**17 21 02.8**	**+0.1**
ZAPS				*e*Sn	**Sn**	**17 21 46.3**	**-1.2**
BZS	**Buzias**	**3.79**	**50**	⇓P	Pn	17 21 02.6	-0.6
BZS				⇑S	**Sn**	**17 21 47.6**	**-0.7**
BLKB	**Belogradchik**	**3.80**	**82**	⇓S	**Sn**	**17 21 47.3**	**-1.2**
SOKA	**Soboth**	**3.86**	**334**	*i* Pn	**Pn**	**17 21 04.4**	**+0.3**
	1.4nm,0.2s,SNR=12						
SOKA				*e*Sn	**Sn**	**17 21 48.4**	**-1.5**
	1.9nm,0.4s						
OBKA	**Obir**	**3.88**	**328**	*i* Pn	**Pn**	**17 21 05.3**	**+0.9**
	0.4nm,0.2s						
OBKA				*e*Sn	**Sn**	**17 21 51.2**	**+0.6**
	2.2nm,0.3s						
ARSA	**Arzberg**	**4.25**	**342**	*i* Pn	**Pn**	**17 21 09.9**	**+0.5**
	3.0nm,0.3s,SNR=7.6						
ARSA				*i* Sn	**Sn**	**17 21 59.2**	**-0.3**
	0.7nm,0.2s						
GZR	**Gura Zlata**	**4.36**	**59**	⇑P	**Pn**	**17 21 10.9**	**-0.1**
GZR				⇓S	**Sn**	**17 22 01.4**	**-1.0**
RONA	**Rosalia, Austr**	**4.54**	**350**	*i* Pn	**Pn**	**17 21 13.9**	**+0.4**
	2.3nm,0.3s,SNR=4.2						
RONA				*i* Sn	**Sn**	**17 22 05.9**	**-0.9**
	1.4nm,0.3s						
CONA	**Conrad Observa**	**4.83**	**347**	*i* Pn	**Pn**	**17 21 18.0**	**+0.5**
	2.0nm,0.4s,SNR=5.7						
CONA				*i* Sn	**Sn**	**17 22 13.0**	**-0.9**
	1.9nm,0.3s						
ABTA	**Abfaltersbach**	**4.98**	**317**	*i* Pn	**Pn**	**17 21 20.3**	**+0.8**
	0.3nm,0.2s						
ABTA				*i* Sn	**Sn**	**17 22 16.9**	**-0.6**
	2.7nm,0.6s						
PSZ	**Piszkesteto**	**4.98**	**19**	⇑P	Pn	17 21 19.1	-0.4
MOA	**Molln**	**5.14**	**335**	*i* Pn	**Pn**	**17 21 22.9**	**+1.3**
	1.4nm,0.2s,SNR=4.0						
MOA				*i* Sn	**Sn**	**17 22 21.7**	**+0.3**
	1.0nm,0.2s						
MODS	**Modra-Piesok**	**5.14**	**358**	*e*PN	**Pn**	**17 21 22.2**	**+0.5**
MODS				*e*SN	**Sn**	**17 22 20.4**	**-1.1**
BIOA	**Bad Ischl, Aus**	**5.21**	**330**	*i* Pn	**Pn**	**17 21 23.5**	**+0.8**
	0.5nm,0.1s						
LESA	**Schwarzleotal**	**5.39**	**323**	*i* Pn	**Pn**	**17 21 25.3**	**+0.1**
	1.1nm,0.4s						
LESA				*i* Sn	**Sn**	**17 22 24.4**	**-3.3**
	0.9nm,0.3s						
WTTA	**Wattenberg**	**5.77**	**316**	*i* Pn	**Pn**	**17 21 30.6**	**+0.2**
	0.5nm,0.2s						
WTTA				*i* Sn	**Sn**	**17 22 34.9**	**-2.3**
	2.3nm,0.5s						
WATA	**Walderalm**	**5.84**	**317**	*i* Pn	**Pn**	**17 21 32.3**	**+0.8**
	0.9nm,0.2s						
WATA				*i* Sn	**Sn**	**17 22 35.9**	**-3.1**
	1.5nm,0.3s						
CKRC	**Cesky Krumlov**	**6.00**	**339**	*e*SN	**Sn**	**17 22 42.1**	**-0.7**
MOTA	**Moosalm**	**6.09**	**315**	*i* Pn	**Pn**	**17 21 34.8**	**-0.1**
	1.2nm,0.4s						
RETA	**Reutte**	**6.36**	**314**	*i* Sn	**Sn**	**17 22 50.8**	**-0.9**
	1.3nm,0.4s						

IDC ***15*** *17:46:52.4±0.5, 1°.48N×126°.27E, h0km, mb4.1/20, mbtmp4.1/22, ML3.9/2, MS3.1/3, Error ellipse: s-maj=27.4km s-min=11.4km az=71.0*
DJA ***15*** *17:46:58.2±0.2, 2°.N±2°×12°.7E±°, h10km, M4.4/24, mB5.0/5, mb4.5/9, MLv4.3/24, Mw(mB)4.3/5*
NEIC ***15*** *17:46:59.6±2.1, 1°.57N±0°.07×126°.58E±0°.06, h47km±6km, mb4.5/56, Error ellipse: s-maj=12.1km s-min=7.3km az=213.0*

ISC 15 17:46:59.0±0.3, 1°.58N±0°.05×126°.53E±0°.05, h47km, n120, σ1s33/115, mb4.4/47, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**			**1.16 134**		**Pn**	**17 47 19.2**	**+0.4**
TNTI					Sn	**Sn**	**17 47 33.5**	**+0.1**
TNTI	**Ternate**			**1.16 134**	P	**Pn**	**17 47 19.7**	**+0.9**
TNTI	**Ternate**			**1.16 134**	S	**Sn**	**17 47 34.6**	**+1.2**
TNTI	**Ternate**			**1.16 134**	P	**Pn**	**17 47 19.4**	**+0.6**
TNTI					S	**Sn**	**17 47 34.3**	**+0.9**
MNI	**Manado**			**1.70 266**	P	**Pn**	**17 47 28.7**	**+2.5**
SGSI	**Sangihe**			**2.32 334**	P	**Pn**	**17 47 35.8**	**+1.0**
GTOI	**Gorontalo**			**3.64 255**	P	Pn	17 47 57.7	+4.8
SANI	**Sanana**			**3.64 189**	P	**Pn**	**17 47 54.6**	**+1.7**
SANI	**Sanana**			**3.64 189**	P	**Pn**	**17 47 54.4**	**+1.5**
LUWI	**Luwuk**			**4.57 235**		**Pn**	**17 48 08.9**	**+3.2**
LUWI	**Luwuk**			**4.57 235**	P	Pn	17 48 11.2	+5.5
LUWI	**Luwuk**			**4.57 235**	P	Pn	17 48 10.8	+5.1
MRSI	**Marisa**			**4.72 257**	P	**Pn**	**17 48 11.3**	**+3.6**
NLAI	**Namlea**			**4.82 173**	P	**Pn**	**17 48 11.8**	**+2.8**
KRAI	**Karang Ratu**			**5.21 159**	P	**Pn**	**17 48 18.2**	**+3.8**
	0.2nm36nm,0.9s							
SIJI	**Sorong**			**5.32 117**	Pn	**Pn**	**17 48 16.6**	**+0.7**
	1.8nm,0.3s,baz=299,slow=19,SNR=4.4 7.7nm,0.5s							
MSAI	**Masohi**			**5.45 154**	P	**Pn**	**17 48 20.2**	**+2.5**
	0.2nm45nm,0.6s							
DAV	**Davao City (W)**			**5.54 350**	LR	LR	17 50 40.8	
	comp=Z,206nm,21.4s,baz=328,slow=41							
TOLI2	**Tolitoli**			**5.77 265**		**Pn**	**17 48 24.1**	**+2.0**
TOLI2					Sn	**Sn**	**17 49 26.7**	**-0.4**
TOLI2	**Tolitoli**			**5.77 265**	P	**Pn**	**17 48 24.4**	**+2.3**
KDI	**Kendari**			**6.75 215**	P	**Pn**	**17 48 38.8**	**+3.3**
MPSI	**Mapaga**			**6.75 260**	P	Pn	17 48 41.2	+5.7
	0.1nm15nm,0.8s							
FAKI	**Fak Fak**			**7.25 128**	Pn	**Pn**	**17 48 41.1**	**-1.4**
FAKI	**Fak Fak**			**7.25 128**	P	**Pn**	**17 48 46.1**	**+3.6**
TTSI	**Tana Toraja**			**8.13 236**	P	**Pn**	**17 48 57.2**	**+2.7**
MYLDM	**Lahad Datu**			**8.78 294**	Pn	**Pn**	**17 49 05.5**	**+2.0**
MYLDM	**Lahad Datu**			**8.78 294**	P	Pn	17 49 08.6	+5.2
KKM	**Kota Kinabalu**			**11.21 294**	Pn	**Pn**	**17 49 38.8**	**+2.0**
KKM	**Kota Kinabalu**			**11.21 294**	P	Pn	17 49 42.0	+5.2
SOEI	**Soe**			**11.48 191**	Pn	**Pn**	**17 49 39.1**	**-1.4**
SBUM	**Sibu**			**14.33 274**		**Pn**	**17 50 20.0**	**+0.7**
MTN	**Manton Dam**			**15.04 162**	Pn	**Pn**	**17 50 28.4**	**-0.1**
JAGI	**Jajag, Banyuwa**			**15.87 231**	P	**P**	**17 50 41.7**	**-0.7**
KNRA	**Kununurra**			**17.28 173**	P	**P**	**17 50 58.0**	**0.0**
FITZ	**Fitzroy Crossi**			**19.57 183**	P	**P**	**17 51 22.3**	**-0.8**
	0.5nm,0.3s,baz=8.0,slow=9.5,SNR=12 4.4nm,0.6s							
LEM	**Lembang**			**20.64 246**	LR	LR	18 01 07.6	
	comp=Z,57nm,21.3s,baz=356,slow=42							
YULB	**Yu-li**			**22.27 347**	P	**P**	**17 51 50.9**	**-1.4**
YULB					IAmb	IAmb	17 51 51.8	
	comp=Z,23nm,1.3s							
TPUB	**Ta-pu**			**22.34 346**	P	**P**	**17 51 52.1**	**-0.9**
WB0	**Warramunga Arr**			**22.57 160**	P	**P**	**17 51 54.9**	**-0.6**
COEN	**Coen**			**22.59 134**	P	**P**	**17 51 54.1**	**-1.6**
COEN					IAmb	IAmb	17 52 24.1	
	comp=Z,21nm,1.4s							
COEN	**Coen**			**22.59 134**	P	**P**	**17 51 56.6**	**+0.9**
WRAB	**Tennant Creek**			**22.71 161**	P	**P**	**17 51 55.9**	**-1.1**
WRAB	**Tennant Creek**			**22.71 161**	P	**P**	**17 51 56.5**	**-0.5**
WRA	**Warramunga Arr**			**22.71 161**	P	**P**	**17 51 56.4**	**-0.7**
	comp=Z,31nm,0.6s,baz=337,slow=10,SNR=112							
WRA					PcP	**PcP**	**17 55 48.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=326,slow=1.8,SNR=3.3							
SSLB	**Suanglung**			**22.73 347**	P	**P**	**17 51 55.7**	**-1.5**
SSLB					IAmb	IAmb	17 52 23.2	
	comp=Z,23nm,1.2s							
PMG	**Port Moresby**			**23.26 118**	P	**P**	**17 52 02.8**	**+0.2**
PMG					IAmb	IAmb	17 52 09.1	
	comp=Z,17nm,1.0s							
MBWA	**Marble Bar**			**23.56 196**	P	**P**	**17 52 05.2**	**-0.1**
MBWA					IAmb	IAmb	17 52 40.0	
	comp=Z,23nm,1.3s							
QIZ	**Qiongzhong**			**23.84 318**	P	**P**	**17 52 07.6**	**-0.4**
QIZ					IAmb	IAmb	17 52 21.1	
	comp=Z,21nm,1.2s							
PSA00	**Pilbara Seismi**			**23.92 196**	P	**P**	**17 52 07.2**	**-1.5**
QIS	**Mount Isa**			**25.45 150**	P	**P**	**17 52 23.7**	**+0.9**
AS31	**Alice Springs**			**26.09 164**		**P**	**17 52 28.5**	**-0.1**
AS31					IAmb	IAmb	17 52 32.7	
	comp=Z,5.4nm,0.6s							
ASAR	**Alice Springs**			**26.10 164**	P	**P**	**17 52 28.5**	**-0.1**
	comp=Z,10nm,0.7s,baz=342,slow=8.4,SNR=89							
ASAR					PcP	**PcP**	**17 55 55.6**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=343,slow=2.4,SNR=2.6 comp=Z,10nm,0.7s							
ASAR	**Alice Springs**			**26.10 164**		**P**	**17 52 29.2**	**+0.6**
MTSU	**Mount Surprise**			**26.27 139**	P	**P**	**17 52 32.1**	**+1.9**
CTAO	**Charters Tower**			**28.94 139**	P	**P**	**17 52 53.6**	**-0.5**
CTAO					IAmb	IAmb	17 53 22.9	
	comp=Z,15nm,1.4s							
GSI	**Gunungsitoli**			**28.95 270**	P	**P**	**17 52 52.3**	**-1.9**
GSI					IAmb	IAmb	17 53 33.0	
	comp=Z,9.5nm,0.8s							
CMAR	**Chiang Mai Arr**			**31.84 304**	P	**P**	**17 53 17.7**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=116,slow=9.2,SNR=4.1 comp=Z,0.2nm,0.5s							
MORW	**Morawa**			**32.09 197**	P	**P**	**17 53 20.7**	**-1.0**
INKA	**Innaminka**			**32.20 156**	P	**P**	**17 53 21.8**	**-0.9**
FORT	**Forrest**			**32.21 178**	P	**P**	**17 53 23.2**	**+0.5**
ENH	**Enshi**			**32.81 332**	P	**P**	**17 53 27.6**	**-0.5**
BBOO	**Buckleboo**			**35.37 166**	P	**P**	**17 53 49.9**	**-0.3**
KSRS	**Korea Array**			**35.73 2**	P	**P**	**17 53 53.3**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=182,slow=9.5,SNR=5.1							
KSRS					LR	LR	18 08 51.0	
	comp=Z,22nm,20.6s,baz=355,slow=37 comp=Z,0.6nm,0.5s							
STKA	**Stephens Creek**			**36.21 158**	P	**P**	**17 53 55.8**	**-1.6**
	comp=Z,3.3nm,0.7s,baz=339,slow=13,SNR=6.9 comp=Z,3.3nm,0.7s							
STKA	**Stephens Creek**			**36.21 158**	P	**P**	**17 53 57.2**	**-0.2**
MAJO	**Matsushiro**			**36.43 16**	P	**P**	**17 53 58.5**	**-0.8**
MAJO					IAmb	IAmb	17 54 23.0	
	comp=Z,11nm,1.5s							
MJAR	**Matsushiro Arr**			**36.43 16**	P	**P**	**17 53 59.2**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=182,slow=9.0,SNR=7.1 comp=Z,1.1nm,0.5s							
MJB9	**Matsu-Tunnel**			**36.43 16**	P	**P**	**17 53 58.3**	**-1.0**
MJB9					IAmb	IAmb	17 54 24.0	
	comp=Z,10nm,1.5s							
ARMA	**Armidale**			**39.81 145**	P	**P**	**17 54 27.4**	**-0.5**
ARMA					IAmb	IAmb	17 54 45.0	
	comp=Z,14nm,1.2s							
LZDM	**Lanzhou Array**			**40.23 331**	P	**P**	**17 54 32.2**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=155,slow=10,SNR=1.9 comp=Z,0.5nm,0.4s							
XLT	**XiLinHaoTe**			**43.16 349**	*e*P	P	17 55 01.0	+5.9
XLT					pP	pP	17 55 06.1	-1.4
XLT					pmax	pmax		
	comp=Z,4.0nm,1.0s							
ASAJ	**Asahikawa**			**44.70 16**	P	**P**	**17 55 08.7**	**+1.4**
	comp=Z,4.3nm,0.9s,baz=218,slow=12,SNR=1.7 comp=Z,4.3nm,0.9s							
JKA	**Kamikawa-asahi**			**44.70 16**	P	**P**	**17 55 07.6**	**+0.3**
HILR	**Hailar Array B**			**48.15 354**	P	**P**	**17 55 36.6**	**+2.1**
	comp=Z,1.1nm,0.4s,baz=167,slow=9.3,SNR=2.3 comp=Z,1.1nm,0.4s							
SONM	**Songino Array**			**49.27 342**	P	**P**	**17 55 44.0**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=148,slow=8.5,SNR=3.6 comp=Z,0.6nm,0.4s							
SONM	**Songino Array**			**49.27 342**	IAmb	IAmb	17 55 52.8	
	comp=Z,2.5nm,1.4s							
PETK	**Petropavlovsk-**			**57.49 22**	P	**P**	**17 56 45.6**	**+2.4**
	comp=Z,2.3nm,0.8s,baz=219,slow=6.5,SNR=1.3 comp=Z,2.3nm,0.8s							
PETK	**Petropavlovsk-**			**57.49 22**	P	**P**	**17 56 43.6**	**+0.4**
WUS	**Wushi**			**58.04 319**	P	**P**	**17 56 47.6**	**+0.1**
WUS					IAmb	IAmb	17 57 04.0	
	comp=Z,2.8nm,1.1s							
MKAR	**Makanchi Array**			**59.21 326**	P	**P**	**17 56 54.9**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=122,slow=8.5,SNR=62 comp=Z,1.5nm,0.4s							
TARG	**Taragay, Kyrgy**			**59.22 319**	P	**P**	**17 56 56.2**	**+0.1**
TARG					IAmb	IAmb	17 57 36.3	
	comp=Z,2.3nm,0.8s							
MAKZ	**Makanchi**			**59.39 326**		**P**	**17 56 55.9**	**-0.8**
MAKZ					IAmb	IAmb	17 57 02.5	
	comp=Z,6.5nm,1.5s							
KDJ	**Kajisay**			**59.83 319**	P	**P**	**17 56 59.4**	**-0.5**
KDJ					IAmb	IAmb	17 57 39.2	
	comp=Z,4.9nm,1.1s							
LBZ	**Lake Benmore**			**60.03 145**	P	**P**	**17 57 00.6**	**-0.5**
OXZ	**Oxford**			**60.49 143**	P	**P**	**17 57 04.6**	**+0.3**
TUWZ	**Tuamarina**			**60.61 141**	P	**P**	**17 57 05.3**	**+0.2**
SNZO	**South Karori**			**61.04 140**	P	**P**	**17 57 08.0**	**+0.1**
BKZ	**Black Stump Fm**			**61.13 137**	P	**P**	**17 57 08.1**	**-0.7**
RTZ	**Ruatahuna**			**61.20 136**	P	**P**	**17 57 08.8**	**-0.5**
AAK	**Ala-Archa**			**61.82 319**	P	**P**	**17 57 12.6**	**-0.9**
AAK					IAmb	IAmb	17 57 25.2	
	comp=Z,3.1nm,1.4s							
ARSB	**Arslanbob**			**62.27 317**	P	**P**	**17 57 16.0**	**-0.5**
ARSB					IAmb	IAmb	17 57 55.6	
	comp=Z,3.3nm,1.2s							
ZAA0	**Zalesovo Array**			**62.41 334**	P	**P**	**17 57 15.8**	**-1.2**
ZALV	**Zalesovo Beam**			**62.41 334**	P	**P**	**17 57 15.5**	**-1.5**
	comp=Z,1.1nm,0.4s,baz=135,slow=7.5,SNR=9.4 comp=Z,1.1nm,0.4s							
KURBB	**Kurchatov Arra**			**63.44 328**	P	**P**	**17 57 23.3**	**-0.6**
	comp=Z,2.4nm,0.5s,baz=126,slow=6.1,SNR=70 comp=Z,2.4nm,0.5s							
KURK	**Kurchatov**			**63.45 328**		**P**	**17 57 23.3**	**-0.7**
BVAR	**Borovoye Array**			**69.01 328**	P	**P**	**17 57 59.0**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=123,slow=7.6,SNR=11 comp=Z,0.9nm,0.5s							
BORK	**Borovoye**			**69.06 328**	P	**P**	**17 57 59.0**	**-0.9**
NRIK	**Noril'sk**			**72.46 346**	P	**P**	**17 58 20.7**	**+0.4**
	comp=Z,1.0nm,0.2s,baz=131,slow=3.6,SNR=2.7 comp=Z,1.0nm,0.2s							
NRIK	**Noril'sk**			**72.46 346**	P	**P**	**17 58 20.3**	**+0.1**
NRIK					IAmb	IAmb	17 58 25.6	
	comp=Z,4.9nm,1.2s							
AB31	**Akbulak array**			**73.69 321**	P	**P**	**17 58 27.1**	**-0.8**
ABKAR	**Akbulak array**			**73.69 321**	P	**P**	**17 58 26.9**	**-1.0**
XMAS	**Kiritimati**			**75.98 88**	P	**P**	**17 58 41.7**	**-0.1**
ARTI	**Arti**			**76.72 328**	P	**P**	**17 58 44.0**	**-1.2**
ARTI					IAmb	IAmb	17 58 45.2	
	comp=Z,4.4nm,0.5s							
J16K	**Anvik River**			**80.94 26**	P	**P**	**17 59 09.7**	**+1.5**
J16K					IAmb	IAmb	17 59 13.4	
	comp=Z,5.5nm,1.4s							
L16K	**Owhat River**			**81.06 28**	P	**P**	**17 59 10.2**	**+1.4**
L16K					IAmb	IAmb	17 59 52.4	
	comp=Z,3.9nm,1.1s							
VNDA	**Vanda**			**81.33 173**	P	**P**	**17 59 10.0**	**0.0**
	comp=Z,6.9nm,1.0s,baz=317,slow=9.0,SNR=2.2 comp=Z,6.9nm,1.0s							
VNDA	**Vanda**			**81.33 173**	P	**P**	**17 59 10.0**	**0.0**
C19K	**Lookout Ridge**			**82.81 20**	P	**P**	**17 59 19.1**	**+1.1**
N19K	**Bonanza Creek**			**83.25 29**	P	**P**	**17 59 21.7**	**+1.2**
N19K					IAmb	IAmb	17 59 50.0	
	comp=Z,6.7nm,1.2s							
E19K	**Redstone River**			**83.29 22**	P	**P**	**17 59 21.5**	**+1.1**
E19K					IAmb	IAmb	17 59 26.0	
	comp=Z,5.0nm,1.1s							
GEVA	**Gevas**			**83.90 308**	P	**P**	**17 59 25.5**	**+1.0**
GEVA					IAmb	IAmb	17 59 26.0	
	comp=Z,5.0nm,0.7s							
KBZ	**Khabaz**			**84.31 314**	P	**P**	**17 59 26.1**	**0.0**
	comp=Z,0.8nm,0.5s,baz=96,slow=10,SNR=2.0 comp=Z,0.8nm,0.5s							
SUA	**Susitna One**			**85.14 29**	P	**P**	**17 59 31.5**	**+1.4**
SUA					IAmb	IAmb	18 00 04.2	
	comp=Z,3.6nm,1.1s							
SLKM	**Skilak Lake**			**85.30 30**	P	**P**	**17 59 31.1**	**+0.3**
ILAR	**Eielson Array**			**87.12 25**	P	**P**	**17 59 40.7**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=270,slow=5.6,SNR=1.2 comp=Z,0.1nm,0.6s							
BRTR	**Keskin Array B**			**91.23 310**	P	**P**	**17 59 59.0**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=72,slow=4.7,SNR=2.0 comp=Z,0.4nm,0.7s							
ARCES	**ARCESS Array B**			**92.39 340**	P	**P**	**18 00 04.9**	**+0.7**
	comp=Z,3.2nm,0.9s,baz=76,slow=4.0,SNR=2.1

WHYT	**Xinyi Township**	**0.64**	**257**	*e*P	Pn	18 25 03.2	-0.5
WHYT				*e*S	Sb	18 25 12.2	+1.4
LATG	**Datong**	**0.69**	**360**	*e*P	Pb	18 25 03.7	+0.8
YHNB	**Yeheng**	**0.83**	**350**	*e*P	Pn	18 25 06.6	+0.1
YHNB				*e*S	Sb	18 25 17.7	+1.0

TAP 15 18:24:51.2, 23°09N×121°46E, h6km±1km, ML1.8, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.09**	**275**	⇓*i*P	Pg	18 24 53.6	+0.5
CHKT				*i* S	Sg	18 24 55.2	+0.7
CHKH	**Chenggong**	**0.12**	**330**	P	Pg	18 24 54.5	+0.8
CHKH				*i* S	Sg	18 24 56.7	+1.4
FULB	**Fuli**	**0.18**	**305**	*i* P	Pg	18 24 55.7	+0.8
FULB				*i* S	Sg	18 24 59.0	+1.6
ECS	**Chishang**	**0.22**	**271**	P	Pg	18 24 57.2	+1.7
ECS				*e*S	Sg	18 25 02.1	+3.6
ECBN	**Changbin**	**0.22**	**358**	P	Pg	18 24 56.4	+0.8
ECBN				S	Sg	18 25 01.3	+2.7
TWF1	**Yuli**	**0.30**	**330**	*i* P	Pb	18 24 58.0	-0.9
TWF1				*i* S	Sb	18 25 03.8	-0.3
YULB	**Yu-li**	**0.33**	**334**	P	Pb	18 24 58.9	-0.7
YULB				*e*S	Sb	18 25 03.8	-1.4
YULB	**Yu-li**	**0.33**	**334**	*e*P	Pb	18 24 58.9	-0.7
HGSD	**Ruisui**	**0.40**	**356**	*e*P	Pg	18 24 59.2	+0.2
EHYH	**Wanrong**	**0.41**	**345**	*e*P	Pb	18 25 00.6	-0.3
TWGBT	**Beinan**	**0.44**	**232**	*e*P	Pb	18 25 00.7	-0.7
TWGBT				*e*S	Sb	18 25 08.2	-0.1
TWG	**Pinlang**	**0.45**	**233**	P	Pb	18 25 01.0	-0.4
TWG				S	Sb	18 25 08.5	+0.1
STYH	**Taoyuan**	**0.63**	**277**	*e*P	Pb	18 25 04.1	-0.5
ECL	**Taimali**	**0.68**	**223**	*e*P	Pb	18 25 05.1	-0.3
ALS	**Alishan**	**0.73**	**305**	*e*P	Pb	18 25 05.9	-0.5
TPUB	**Ta-pu**	**0.79**	**285**	*e*P	Pb	18 25 07.3	0.0
WTP	**Ta-pu**	**0.79**	**281**	*e*P	Pn	18 25 08.2	-0.7

*IDC **15** 18:29:56.5±1.9, 35°.61N×70°.31E, h0km, mb4.2/4, mbtmp4.1/7, ML3.5/3, MS4.0/1, Error ellipse: s-maj=36.3km s-min=32.8km az=83.0*

*NNC **15** 18:30:18.2±3.6, 36°.66N×70°.56E, h152km±39km, mb3.3, mpv3.9, Error ellipse: s-maj=29.7km s-min=17.1km az=27.0*

ISC 15 18:30:16.4±1.4, 36°.5N±0°.1×70°.6E±0°.1, h150km, n16, σ1°56/19, mb4.1/3, 8C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.57**	**359**	⇓P	**Pn**	**18 31 50.6**	**-0.1**
	9.4nm,0.5s,baz=182,slow=13,SNR=60						
KK31				⇑S	**Sn**	**18 33 04.1**	**-0.5**
	7.7nm,0.4s,baz=180,slow=21,SNR=8.6						
AAK	**Ala-Archa**	**6.80**	**25**	⇓P	**Pn**	**18 31 53.9**	**0.0**
	1.5nm,0.4s						
AAK				⇑S	**Sn**	**18 33 10.1**	**-0.1**
	18nm,0.8s						
PDGK	**Podgornoye**	**9.62**	**42**	⇑P	**Pn**	**18 32 31.0**	**-0.4**
	4.4nm,0.8s						
MK31	**Makanchi Array**	**13.46**	**37**	⇓P	**Pn**	**18 33 21.4**	**+0.1**
	1.2nm,0.5s,baz=225,slow=12,SNR=32						
MKAR	**Makanchi Array**	**13.46**	**37**	Pn	**Pn**	**18 33 21.7**	**+0.4**
	0.6nm,0.3s,baz=216,slow=13,SNR=23						
	1.4nm,0.6s						
AB31	**Akbulak array**	**14.91**	**332**	⇑P	**Pn**	**18 33 40.6**	**+1.0**
	2.8nm,0.3s,baz=146,slow=10,SNR=180						
AB31				⇑S	**Sn**	**18 36 24.2**	**-0.9**
	1.1nm,0.6s,baz=154,slow=23,SNR=4.9						
KURBB	**Kurchatov Arra**	**15.20**	**20**	Pn	**Pn**	**18 33 43.0**	**-0.1**
	0.2nm,0.3s,baz=207,slow=10,SNR=7.5						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**15.20**	**20**	⇑P	**Pn**	**18 33 43.6**	**+0.5**
	2.7nm,0.7s						
BVA0	**Borovoye Array**	**16.50**	**360**	⇓P	**P**	**18 34 00.7**	**+1.7**
	2.2nm,1.1s						
BVAR	**Borovoye Array**	**16.50**	**360**	P	**P**	**18 34 00.0**	**+1.0**
	0.1nm,0.3s,baz=168,slow=11,SNR=9.3						
	1.7nm,0.5s						
AKTO	**Aktyubinsk**	**16.61**	**331**	⇑P	**Pn**	**18 34 01.7**	**+1.4**
	4.0nm,0.8s						
AKTO				⇑S	**S**	**18 37 00.5**	**-4.2**
	2.2nm,1.1s						
ZALV	**Zalesovo Beam**	**20.02**	**25**	P	**P**	**18 34 38.9**	**+1.5**
	16nm,0.4s,baz=221,slow=11,SNR=86						
	16nm,0.4s						
FINES	**FINESS Array B**	**37.29**	**326**	P	**P**	**18 37 14.9**	**+1.4**
	3.9nm,1.0s,baz=118,slow=18,SNR=1.7						
	3.9nm,1.0s						
HFS	**Hagfors**	**42.86**	**322**	P	**P**	**18 38 00.9**	**+1.5**
	6.5nm,1.1s,baz=90,slow=13,SNR=2.0						
	6.5nm,1.1s						
MA2	**Magadan**	**54.53**	**38**	LR	LR	19 03 56.3	
	comp=Z,132nm,18.2s,baz=8.5,slow=37						
WRA	**Warramunga Arr**	**82.27**	**122**	P	**P**	**18 42 18.8**	**-2.5**
	0.4nm,1.0s,baz=317,slow=5.0,SNR=1.5						
	0.4nm,1.0s						

MEX 15 18:33:27.3±0.8, 17°.40N×97°.24W, h70km±6km, MD3.9, 1C, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXIG	**Tlaxiaco**	**0.52**	**254**	*e*P	Pn	18 33 39.2	-1.5
TXIG				*e*S	Sn	18 33 48.4	-2.1
VHO	**Vista Hermosa**	**0.58**	**124**	*e*P	Pn	18 33 39.5	-1.7
VHO				*e*S	Sn	18 33 49.5	-1.9
OXBJ	**Oaxaca**	**0.59**	**124**	*i* P	Pn	18 33 46.8	+5.5
OXBJ				*i* S	Sn	18 33 57.1	+5.5
OXLC	**Oaxaca**	**0.61**	**123**	*i* P	Pn	18 33 39.1	-2.4
OXLC				*i* S	Sn	18 33 49.0	-3.0
YOIG	**Yosondua**	**0.61**	**209**	*e*P	Pn	18 33 40.3	-1.3
YOIG				*e*S	Sn	18 33 50.8	-1.3
HLIG	**Huajuapan de L**	**0.69**	**309**	*e*P	Pn	18 33 40.9	-1.4
HLIG				*e*S	Sn	18 33 51.7	-1.7
TOIG	**Toxpalan**	**0.71**	**13**	*e*P	Pn	18 33 40.9	-1.6
TOIG				*e*S	Sn	18 33 51.6	-2.1
FTIG	**Fresnillo de T**	**0.99**	**301**	*e*P	Pn	18 33 44.9	-0.9
FTIG				*e*S	Sn	18 33 58.5	-1.1
PNIG	**Pinotepa**	**1.31**	**220**	*e*P	Pn	18 33 47.5	-2.4
PNIG				*e*S	Sn	18 34 05.1	-1.6
MGIG	**Malinaltepec**	**1.34**	**263**	*e*P	Pn	18 33 49.4	-1.0
MGIG				*e*S	Sn	18 34 06.4	-1.3
PEIG	**Puerto Escondi**	**1.39**	**176**	*e*P	Pn	18 33 50.1	-0.8
PEIG				*e*S	Sn	18 34 07.1	-1.6
NEUV	**Arroyo Zacate**	**1.41**	**77**	*e*P	Pn	18 33 50.3	-0.8
NEUV				*e*S	Sn	18 34 08.0	-0.9
CRIG	**Cruz Grande**	**1.92**	**250**	*e*P	Pn	18 33 57.5	-0.5
CRIG				*e*S	Sn	18 34 18.9	-2.4
HUIG	**Huatulco**	**1.95**	**146**	*e*P	Pn	18 33 58.0	-0.3
HUIG				*e*S	Sn	18 34 18.5	-3.4
JAUV	**Jalcomulco**	**2.00**	**12**	*e*P	Pn	18 33 57.5	-1.5
JAUV				*e*S	Sn	18 34 21.4	-1.8
CMIG	**Matias Romero**	**2.27**	**97**	*e*P	Pn	18 34 01.5	-1.1
CMIG				⇑*e*S	Sn	18 34 27.6	-2.1
MEIG	**Mezcala**	**2.33**	**283**	*e*P	Pn	18 34 03.6	+0.1
MEIG				*e*S	Sn	18 34 29.4	-1.8
DAIG	**Los Arroyos**	**2.33**	**261**	*e*S	Sn	18 34 28.1	-3.1
PLIG	**Platanillo**	**2.37**	**295**	*e*P	Pn	18 34 04.4	+0.3
PLIG				*e*S	Sn	18 34 30.4	-1.8
UXUV	**UXUV**	**2.96**	**91**	*e*P	Pn	18 34 10.6	-1.3
UXUV				*e*S	Sn	18 34 42.1	-4.2
ARIG	**Puente Sto Nin**	**3.09**	**287**	*e*P	Pn	18 34 13.4	-0.3
ARIG				*e*S	Sn	18 34 47.2	-2.4

*NEIC **15** 18:43:46.7±2.3, 6°.98S±0°.09×129°.19E±0°.04, h167km±11km, mb4.2/4, Error ellipse: s-maj=13.6km s-min=5.8km az=173.0*

*IDC **15** 18:43:48.1±5.4, 6°.92S×129°.55E, h169km±67km, mb3.5/4, mbtmp3.9/7, Error ellipse: s-maj=121.0km s-min=18.7km az=83.0*

ISC 15 18:43:45.9±0.6, 7°.03S±0°.05×129°.21E±0°.06, h167km, n23, σ2°33/30, mb3.7/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.27**	**115**		**Pn**	**18 44 27.7**	**+2.5**
SAUI					**Sn**	**18 44 57.1**	**+1.5**
FAKI	**Fak Fak**	**5.08**	**37**	Pn	**Pn**	**18 45 00.1**	**-0.6**
FAKI					**Sn**	**18 45 55.5**	**-3.8**
SOEI	**Soe**	**5.59**	**241**		**Pn**	**18 45 09.4**	**+1.9**
SOEI					**Sn**	**18 46 11.3**	**-0.1**
MTN	**Manton Dam**	**6.08**	**162**		**Pn**	**18 45 15.5**	**+1.7**
MTN					**Sn**	**18 46 20.5**	**-2.3**
SIJI	**Sorong**	**6.46**	**19**	P	**Pn**	**18 45 18.8**	**-0.1**
	4.5nm,0.3s,baz=198,slow=20,SNR=19						
SIJI				S	**Sn**	**18 46 29.7**	**-2.2**
	7.6nm,0.7s,baz=233,slow=20,SNR=2.0						
KNRA	**Kununurra**	**8.60**	**183**	Pn	**Pn**	**18 45 47.5**	**+0.2**
KNRA				Sn	**Sn**	**18 47 16.8**	**-6.5**
KAPI	**Kappang**	**9.62**	**282**	Pn	**Pn**	**18 45 59.6**	**-1.0**
WB0	**Warramunga Arr**	**13.62**	**159**	Pn	**Pn**	**18 46 51.7**	**-0.7**
WRA	**Warramunga Arr**	**13.76**	**159**	P	**Pn**	**18 46 54.4**	**+0.2**
	1.1nm,0.4s,baz=343,slow=13,SNR=34						
WRA				S	Sn	18 49 17.2	-10
	3.2nm,0.7s,baz=335,slow=22,SNR=11						
COEN	**Coen**	**15.35**	**118**	P	**P**	**18 47 16.3**	**+1.4**
COEN				IAmb	IAmb	18 47 37.4	
	comp=Z,23nm,1.4s						
PSA00	**Pilbara Seismi**	**17.05**	**211**	P	**P**	**18 47 33.5**	**-0.2**
PSA00				IAmb	IAmb	18 47 40.0	
	comp=Z,25nm,1.4s						
PSA00	**Pilbara Seismi**	**17.05**	**211**	P	**P**	**18 47 34.0**	**+0.3**
AS31	**Alice Springs**	**17.14**	**165**	P	**P**	**18 47 36.2**	**+1.6**
AS31				IAmb	IAmb	18 48 08.6	
	comp=Z,1.3nm,1.1s						
ASAR	**Alice Springs**	**17.14**	**165**	P	**Pn**	**18 47 38.7**	**+3.0**
	comp=Z,0.5nm,0.4s,baz=342,slow=11,SNR=17						
ASAR				S	**S**	**18 50 40.8**	**-4.1**
	comp=Z,0.7nm,0.6s,baz=325,slow=15,SNR=6.8						
ASAR	**Alice Springs**	**17.14**	**165**	P	**P**	**18 47 35.8**	**+1.2**
FUNA	**Funafuti**	**49.52**	**95**	P	**P**	**18 52 19.2**	**-0.9**
MKAR	**Makanchi Array**	**67.83**	**327**	P	**P**	**18 54 28.6**	**+2.7**
	comp=Z,1.1nm,0.4s,baz=117,slow=7.7,SNR=33						
	comp=Z,1.1nm,0.4s						
MKAR	**Makanchi Array**	**67.83**	**327**	P	**P**	**18 54 28.2**	**+2.3**
ZALV	**Zalesovo Beam**	**71.27**	**334**	P	**P**	**18 54 48.7**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=140,slow=7.0,SNR=2.6						
	comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**71.27**	**334**	P	**P**	**18 54 48.5**	**+1.6**
KURBB	**Kurchatov Arra**	**72.13**	**329**	P	**P**	**18 54 54.8**	**+2.8**
	comp=Z,1.2nm,0.6s,baz=131,slow=5.1,SNR=15						
	comp=Z,1.2nm,0.6s						
BVAR	**Borovoye Array**	**77.67**	**328**	P	**P**	**18 55 25.9**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=116,slow=6.6,SNR=2.5						
	comp=Z,0.3nm,0.5s						
ABKAR	**Akbulak array**	**82.05**	**322**	P	**P**	**18 55 47.6**	**+0.2**

*IDC **15** 18:52:45.4±0.6, 40°.84N×145°.08E, h0km, mb4.2/30, mbtmp4.2/37, ML3.7/6, MS3.1/7, Error ellipse: s-maj=14.4km s-min=11.5km az=112.0*

*MOS **15** 18:52:45.0±0.9, 40°.87N×145°.09E, h12km, mb4.8/28, Error ellipse: s-maj=8.8km s-min=5.0km az=102.5*

*NIED **15** 18:52:47.0, 40°.92N×145°.23E, h64km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=1.60; $M_{\theta\theta}$0.30; $M_{\phi\phi}$1.30; $M_{r\theta}$-0.15; $M_{\theta\phi}$0.35; $M_{\phi r}$-0.78; Fault plane solution: $M_0$1.70000×10^{15} NP1: ϕ_s200.00000°, δ31.00000°, λ-86.00000°. NP2:ϕ_s15.00000°, δ59.00000°, λ-93.00000°.*

*JMA **15** 18:52:47.0±0.2, 40°.9N±0°.9×14°.5E±°, h64km±2km, MV4.6/40, FAR SE OFF HOKKAIDO*

*NEIC **15** 18:52:47.2±1.6, 40°.88N±0°.06×145°.0E±0°.1, h10km±1km, mb4.5/87, Error ellipse: s-maj=14.8km s-min=10.6km az=94.0*

*BJI **15** 18:52:47.4, 40°.95N×144°.99E, h23km, mB4.8/7, mb4.5/41, Ms4.2/3, Ms7 4.0/3*

ISC 15 18:52:45.3±1.8, 40°.87N±0°.04×145°.13E±0°.05, h2km±11km, n263, σ1°63/283, mb4.5/112, MS4.2/3, 13C-3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.88**	**308**	P	**Pn**	**18 53 18.1**	**-0.3**
JEM				*e*S	**Sn**	**18 53 39.6**	**-3.0**
JTHR	**Tokachihiroo**	**1.98**	**316**	P	**Pn**	**18 53 19.4**	**-0.4**
JTHR				*e*S	**Sn**	**18 53 41.8**	**-3.3**
JAK	**Akkeshi**	**2.15**	**351**	P	**Pn**	**18 53 20.7**	**-1.4**
JAK				*e*S	**Sn**	**18 53 44.9**	**-4.4**
JCH	**Churui**	**2.19**	**323**	P	**Pn**	**18 53 22.1**	**-0.6**
JCH				*e*S	**Sn**	**18 53 45.8**	**-4.5**
JKHN	**Kushirohamanak**	**2.21**	**1**	P	**Pn**	**18 53 21.8**	**-1.1**
JKHN				*e*S	**Sn**	**18 53 47.1**	**-3.8**
JOB	**Onbets**	**2.25**	**335**	*e*P	**Pn**	**18 53 22.8**	**-0.7**
JOB				*e*S	**Sn**	**18 53 48.9**	**-3.0**
JNBK	**Urakawa-nobuka**	**2.27**	**309**	*e*P	**Pn**	**18 53 24.2**	**+0.3**
JNBK				A	A	18 53 24.2	
	comp=N,4.0nm,0.5s,comp=E,3.0nm,2.4s						
NEM2	**Nemuro 2**	**2.53**	**10**	*e*P	**Pn**	**18 53 25.8**	**-1.6**
NEM2				*e*S	**Sn**	**18 53 53.7**	**-5.1**
NMR	**Nemuro--Hokkai**	**2.54**	**10**	⇓*i*P	**Pn**	**18 53 25.9**	**-1.5**
NMR				*e*S	**Sn**	**18 53 54.7**	**-4.2**
JAR	**Ashorobuto**	**2.63**	**338**	*e*P	**Pn**	**18 53 27.2**	**-1.5**
JAR				*e*S	**Sn**	**18 53 57.4**	**-3.8**
JNK	**Nakash**	**2.73**	**354**	P	**Pn**	**18 53 28.3**	**-1.8**
JNK				*e*S	**Sn**	**18 53 58.0**	**-5.7**
JANG	**Nango**	**2.80**	**261**	*i* P	**Pn**	**18 53 30.2**	**-0.9**
JANG				S	**Sn**	**18 54 00.5**	**-4.9**
JBT2	**Biratori 2**	**2.81**	**314**	P	**Pn**	**18 53 31.9**	**+0.6**
GLVR	**Golovnino**	**2.88**	**6**	*e*P	**Pn**	**18 53 31.1**	**-1.1**
GLVR				*e*S	**Sn**	**18 54 03.3**	**-4.1**
GLVR				pmax	pmax		
	comp=Z,219nm,0.1s						
GLVR				smax	smax		
	comp=N,773nm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.4s						
JFR	**Furan**	**2.97**	**321**	P	**Pn**	**18 53 32.9**	**-0.6**
JFR				S	**Sn**	**18 54 04.4**	**-5.3**
JIAM	**Iburiatsuma**	**2.97**	**307**	P	**Pn**	**18 53 35.6**	**+2.1**
JIAM				*e*S	**Sn**	**18 54 09.8**	**+0.1**
JRA	**Rausu**	**3.06**	**360**	P	**Pn**	**18 53 33.2**	**-1.5**
JRA				S	**Sn**	**18 54 07.4**	**-4.5**
JTM	**Tenmabayashi**	**3.09**	**270**	P	**Pn**	**18 53 34.9**	**-0.1**
JTM				S	**Sn**	**18 54 08.1**	**-4.4**
JOT	**Ohata**	**3.13**	**281**	P	**Pn**	**18 53 35.4**	**-0.2**
JOT				S	**Sn**	**18 54 09.7**	**-3.8**
YUK	**Yuzh-Kuril'sk**	**3.21**	**9**	*c i*P	**Pn**	**18 53 35.4**	**-1.3**
YUK				*e*S	**Sn**	**18 54 11.6**	**-3.8**
YUK				pmax	pmax		
	comp=Z,380nm,0.2s						
YUK				pmax	pmax		
	comp=E,74nm,0.1s						
YUK				smax	smax		
	comp=N,553nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.4s						
JTKR	**Abashiri--Toko**	**3.23**	**344**	*i* P	**Pn**	**18 53 36.6**	**-0.4**
JTKR				S	**Sn**	**18 54 12.7**	**-3.2**
RUSJ	**Misakicho**	**3.23**	**1**	⇑*i*P	**Pn**	**18 53 36.4**	**-0.6**
RUSJ				*e*S	**Sn**	**18 54 12.5**	**-3.6**
JOM	**Ohasama**	**3.26**	**246**	*i* P	**Pn**	**18 53 37.0**	**-0.4**
JOM				S	**Sn**	**18 54 12.1**	**-4.6**
JEW	**Eniwo**	**3.38**	**307**	P	**Pn**	**18 53 40.1**	**+1.0**
JEW				*e*S	**Sn**	**18 54 18.1**	**-1.7**
JKA	**Kamikawa-asahi**	**3.75**	**331**		**Pn**	**18 53 43.8**	**-0.3**
JKA				Sn	**Sn**	**18 54 25.2**	**-3.6**
ASAJ	**Asahikawa**	**3.75**	**331**	Pn	**Pn**	**18 53 45.1**	**+1.0**
	comp=E,7.2nm,0.3s,baz=202,slow=18,SNR=166						
ASAJ				Sn	**Sn**	**18 54 28.6**	**-0.1**
	comp=E,14nm,0.3s,baz=77,slow=31,SNR=9.7						
ASAJ				LR	LR	18 55 18.9	
	comp=E,272nm,21.3s,baz=62,slow=41						
	comp=E,19nm,0.3s						
KUR	**Kuril'sk**	**4.80**	**24**	*e*P	**Pn**	**18 53 56.9**	**-1.6**
KUR				*i* S	**Sn**	**18 54 48.1**	**-6.5**
KUR				pmax	pmax		
	comp=Z,109nm,0.4s						
KUR				smax	smax		
	comp=N,553nm,0.2s						
KUR				smax	smax		
	comp=E,371nm,0.2s						
YSS	**Yuzhno-Sakhali**	**6.32**	**345**	Pn	**Pn**	**18 54 19.5**	**+0.2**
YSS	**Yuzhno-Sakhali**	**6.32**	**345**	*e*P	**Pn**	**18 54 19.6**	**+0.2**
YSS				*e*S	**Sn**	**18 55 27.9**	**-4.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YSS				smax	smax		
	comp=N,10.0nm,0.5s						
YSS				smax	smax		
	comp=E,10.0nm,0.5s						

MJAR	**Matsushiro Arr**	**6.93**	**234**	Pn	**Pn**	**18 54 27.9**	**0.0**
	comp=E,0.4nm,0.3s,baz=36,slow=12,SNR=50						
MJAR				Sn	**Sn**	**18 55 46.5**	**-0.8**
	comp=E,0.3nm,0.3s,baz=76,slow=23,SNR=4.3						
MJAR				LR	LR	18 56 31.0	
	comp=E,64nm,21.2s,baz=3.5,slow=33						
	comp=E,4.1nm,0.5s						
MJAR	**Matsushiro Arr**	**6.93**	**234**		**Pn**	**18 54 28.2**	**+0.3**
MJB9	**Matsu-Tunnel**	**6.93**	**234**		**Pn**	**18 54 29.0**	**+1.1**
MAJO	**Matsushiro**	**6.93**	**234**		**Pn**	**18 54 28.4**	**+0.5**
MAJO	**Matsushiro**	**6.93**	**234**	*i* P	**Pn**	**18 54 28.1**	**+0.2**
TEY	**Ternei**	**7.51**	**306**	*e*P	**Pn**	**18 54 38.5**	**+2.7**
JGF	**Kuroka**	**8.07**	**232**		**Pn**	**18 54 44.4**	**+0.9**
JSG	**Sagara**	**8.28**	**224**	Pn	**Pn**	**18 54 46.5**	**+0.2**
INU	**Inuyama**	**8.44**	**232**		**Pn**	**18 54 48.1**	**-0.5**
JHJ2	**Mitsune**	**8.83**	**210**	Pn	**Pn**	**18 54 50.3**	**-3.7**
JHJ	**Hachijo jima 2**	**8.84**	**211**	Pn	**Pn**	**18 54 51.6**	**-2.5**
	comp=E,7.5nm,0.3s,baz=49,slow=20,SNR=9.4						
JHJ				Sn	Sn	18 56 24.1	-10
	comp=E,20nm,0.3s,baz=45,slow=20,SNR=8.1						
JHJ				LR	LR	18 58 07.3	
	comp=E,105nm,21.4s,baz=12,slow=37						
	comp=E,19nm,0.3s						
TYV	**Tymovskoe**	**10.14**	**351**	*e*P	Pn	18 55 21.7	+10
TYV				pmax	pmax		
	comp=Z,100nm,2.8s						
TYV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**10.26**	**293**	Pn	**Pn**	**18 55 12.4**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=97,slow=12,SNR=5.6						
	comp=Z,5.6nm,0.6s						
JMN	**Monobe**	**11.45**	**235**	Pn	Pn	18 55 25.3	-4.5
KLR	**Kul'dur**	**12.61**	**316**	LR	LR	19 01 15.7	
	comp=Z,20nm,18.3s,baz=348,slow=40						
KLR	**Kul'dur**	**12.61**	**316**	*i* P	**Pn**	**18 55 46.4**	**+0.8**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
JNU	**Nakatsue**	**13.76**	**240**	LR	LR	19 01 07.0	
	comp=Z,169nm,18.0s,baz=358,slow=37						
KSRS	**Korea Array**	**13.78**	**261**	Pn	**Pn**	**18 56 02.5**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=68,slow=14,SNR=2.2						
KSRS				LR	LR	19 01 04.9	
	comp=Z,90nm,18.6s,baz=5.0,slow=36						
	comp=Z,1.6nm,0.8s						
BNX	**BinXian**	**13.79**	**297**	⇓P	**Pn**	**18 56 01.0**	**-0.7**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PETK	**Petropavlovsk-**	**14.91**	**31**	Pn	Pn	18 56 12.2	-4.9
	comp=Z,0.3nm,0.3s,baz=159,slow=9.1,SNR=5.4						
ZEA	**Zeya**	**17.62**	**323**	*e*P	**Pn**	**18 56 51.5**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MA2	**Magadan**	**19.06**	**9**	P	**Pn**	**18 57 10.8**	**+1.5**
	comp=Z,3.4nm,0.5s,baz=188,slow=12,SNR=8.2						
MA2	**Magadan**	**19.06**	**9**	IAmb	IAmb	18 57 18.2	
	comp=Z,12nm,1.3s						
MA2	**Magadan**	**19.06**	**9**	P	**Pn**	**18 57 10.8**	**+1.5**
MA2				pmax	pmax		
	comp=Z,12nm,1.3s						
HILR	**Hailar Array B**	**19.80**	**305**	P	**P**	**18 57 15.6**	**-1.3**
	baz=110,slow=10						
	comp=Z,2.6nm,0.5s						
XLT	**XiLinHaoTe**	**21.62**	**288**	*e*P	**P**	**18 57 37.3**	**+0.6**
XLT				pP	pwP	18 57 45.6	+2.3
XLT				PP	**PnPn**	**18 58 00.0**	**+3.0**
XLT				pmax	pmax		
	comp=Z,17nm,0.7s						
SEY	**Seymchan**	**22.51**	**9**	P	**P**	**18 57 45.1**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=204,slow=12,SNR=8.5						
	comp=Z,2.4nm,0.6s						
SEY	**Seymchan**	**22.51**	**9**	*i* P	**P**	**18 57 46.2**	**+0.2**
SEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NJ2	**Nanjing**	**22.83**	**256**	*e*P	**P**	**18 57 48.5**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YAK	**Yakutsk**	**23.15**	**341**	P	**P**	**18 57 52.3**	**-0.3**
	comp=Z,6.9nm,0.3s,baz=133,slow=3.9,SNR=6.1						
	comp=Z,6.9nm,0.3s						
YAK	**Yakutsk**	**23.15**	**341**	*ce*P	**P**	**18 57 53.1**	**+0.4**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HNS	**HongShan**	**23.80**	**272**	⇑P	**P**	**18 58 00.0**	**+0.7**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**25.30**	**281**	*e*P	**P**	**18 58 12.0**	**-1.3**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,32nm,3.8s						
SSLB	**Suanglung**	**26.47**	**237**	P	**P**	**18 58 21.9**	**-2.0**
LYN	**LuoYang**	**26.50**	**267**	P	**P**	**18 58 25.0**	**+1.0**
LYN				pmax	pmax		
	comp=Z,15nm,1.4s						
YULB	**Yu-li**	**26.54**	**236**	P	**P**	**18 58 23.0**	**-1.5**
ULN	**Ulaanbaatar**	**27.89**	**297**		**P**	**18 58 35.5**	**-1.1**
ULN				IAmb

O15K					IAmb	IAmb	19 00 11.0		
	comp=Z,21nm,1.4s								
L16K	**Owhat River**	**38.89**	**39**		P	**P**	**19 00 13.2**	**+1.4**	
L16K					IAmb	IAmb	19 00 46.1		
	comp=Z,11nm,1.4s								
GOMU	**GeErMu**	**39.20**	**280**		P	**P**	**19 00 15.1**	**-0.1**	
GOMU					pmax	pmax			
	comp=Z,13nm,0.8s								
O16K	**Kokwok River B**	**39.41**	**42**		P	**P**	**19 00 18.1**	**+1.9**	
M17K	**Holitna River**	**39.84**	**39**		P	**P**	**19 00 21.3**	**+1.6**	
M17K					IAmb	IAmb	19 00 26.2		
	comp=Z,12nm,1.1s								
D19K	**Kuna River**	**40.60**	**28**		IAmb	IAmb	19 00 32.1		
	comp=Z,7.2nm,0.9s								
DGZ	**Jazzator, Alta**	**40.64**	**303**	*i*	P	**P**	**19 00 24.8**	**-1.9**	
DGZ					pmax	pmax			
	comp=Z,10.0nm,0.9s								
O18K	**Koktuh Hills**	**40.88**	**42**		P	**P**	**19 00 30.8**	**+2.4**	
NRIK	**Noril'sk**	**41.09**	**333**		P	**P**	**19 00 30.8**	**+0.8**	
	comp=Z,1.2nm,0.3s,baz=94,slow=7.2,SNR=4.0								
	comp=Z,1.2nm,0.3s								
NRIK	**Noril'sk**	**41.09**	**333**		P	**P**	**19 00 30.1**	**+0.1**	
NRIK	**Noril'sk**	**41.09**	**333**	*i*	P	**P**	**19 00 29.9**	**-0.1**	
NRIK					pmax	pmax			
	comp=Z,3.0nm,1.0s								
D20K	**Etivluk River**	**41.19**	**28**		IAmb	IAmb	19 00 33.7		
	comp=Z,7.9nm,0.9s								
ZAA0	**Zalesovo Array**	**41.60**	**309**			**P**	**19 00 33.8**	**-0.6**	
ZALV	**Zalesovo Beam**	**41.60**	**309**		P	**P**	**19 00 34.9**	**+0.5**	
	comp=Z,2.8nm,0.5s,baz=93,slow=7.6,SNR=16								
ZALV					PcP	**PcP**	**19 02 32.0**	**+0.6**	
	comp=Z,2.6nm,0.6s,baz=88,slow=3.2,SNR=8.7								
	comp=Z,2.8nm,0.5s								
ZALV	**Zalesovo Beam**	**41.60**	**309**			**P**	**19 00 33.9**	**-0.5**	
ZALV						**PcP**	**19 02 31.8**	**+0.4**	
ZALV	**Zalesovo Beam**	**41.60**	**309**	*i*	P	**P**	**19 00 35.4**	**+1.0**	
ZALV					pmax	pmax			
	comp=Z,3.0nm,0.5s								
F21K	**Alatna River**	**42.11**	**31**		P	**P**	**19 00 39.9**	**+1.4**	
D22K	**Ayikyak River**	**42.63**	**28**		P	**P**	**19 00 44.3**	**+1.7**	
D22K					IAmb	IAmb	19 00 45.6		
	comp=Z,6.6nm,0.8s								
E22K	**Anaktuvuk Pass**	**42.85**	**29**			**P**	**19 00 46.6**	**+2.1**	
E22K					IAmb	IAmb	19 00 47.6		
	comp=Z,9.7nm,0.8s								
D23K	**Nanushuk River**	**43.35**	**28**		IAmb	IAmb	19 00 51.9		
	comp=Z,18nm,1.4s								
H23K	**Yukon River**	**43.58**	**33**		P	**P**	**19 00 52.9**	**+2.6**	
E23K	**Chandalar**	**43.66**	**30**			**P**	**19 00 53.1**	**+1.9**	
E23K					IAmb	IAmb	19 00 54.3		
	comp=Z,8.9nm,1.0s								
MK31	**Makanchi Array**	**44.65**	**300**		P	**P**	**19 00 58.7**	**-0.5**	
MK31	**Makanchi Array**	**44.65**	**300**	*ce*	P	**P**	**19 00 59.4**	**+0.2**	
MKAR	**Makanchi Array**	**44.65**	**300**		P	**P**	**19 00 59.4**	**+0.2**	
	comp=Z,2.0nm,0.7s,baz=84,slow=9.5,SNR=24								
MKAR					PcP	**PcP**	**19 02 42.0**	**+0.2**	
	comp=Z,0.5nm,0.8s,baz=85,slow=3.3,SNR=1.8								
	comp=Z,2.0nm,0.7s								
MKAR	**Makanchi Array**	**44.65**	**300**			**PcP**	**19 02 42.0**	**+0.2**	
MKAR	**Makanchi Array**	**44.65**	**300**		P	**P**	**19 00 58.8**	**-0.4**	
MKAR	**Makanchi Array**	**44.65**	**300**	*i*	P	**P**	**19 00 59.7**	**+0.5**	
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.6s								
IL31		**44.70**	**34**		P	**P**	**19 01 00.1**	**+0.8**	
ILAR	**Eielson Array**	**44.70**	**34**		P	**P**	**19 00 59.8**	**+0.5**	
	comp=Z,1.8nm,0.8s,baz=260,slow=6.5,SNR=24								
	comp=Z,1.8nm,0.8s								
ILAR	**Eielson Array**	**44.70**	**34**		P	**P**	**19 01 00.1**	**+0.8**	
CHTO	**Chiang Mai**	**45.07**	**255**		P	**P**	**19 01 01.2**	**-1.6**	
CHTO	**Chiang Mai**	**45.07**	**255**		P	**P**	**19 01 01.2**	**-1.6**	
CHTO					pmax	pmax			
	comp=Z,4.0nm,1.0s								
F25K	**Christian River**	**45.16**	**30**			**P**	**19 01 04.5**	**+1.5**	
E25K	**Arctic Village**	**45.19**	**30**		P	**P**	**19 01 04.8**	**+1.6**	
CMAR	**Chiang Mai Arr**	**45.30**	**255**		P	**P**	**19 01 05.2**	**+0.6**	
	comp=Z,0.5nm,0.5s,baz=48,slow=7.6,SNR=6.2								
	comp=Z,0.5nm,0.5s								
CMAR	**Chiang Mai Arr**	**45.30**	**255**	*ce*	P	**P**	**19 01 05.9**	**+1.3**	
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.6s								
BMAR	**Burnt Mountain**	**45.57**	**31**		P	**P**	**19 01 08.3**	**+2.0**	
F26K	**Sheenjek River**	**45.73**	**30**		IAmb	IAmb	19 01 12.9		
	comp=Z,4.1nm,0.9s								
C27K	**Jago River**	**45.86**	**28**		IAmb	IAmb	19 01 13.7		
	comp=Z,3.8nm,0.8s								
KURK	**Kurchatov**	**45.95**	**306**			**P**	**19 01 09.3**	**-0.1**	
KURK	**Kurchatov**	**45.95**	**306**		P	**P**	**19 01 10.4**	**+1.0**	
KURK							19 02 46.7		
KURBB	**Kurchatov Arra**	**46.03**	**306**		P	**P**	**19 01 10.4**	**+0.3**	
	comp=Z,10nm,0.7s,baz=76,slow=8.8,SNR=69								
KURBB					PcP	**PcP**	**19 02 46.7**	**+0.2**	
	comp=Z,1.2nm,0.9s,baz=89,slow=3.1,SNR=3.1								
	comp=Z,10nm,0.7s								
L26K	**Log Cabin Wild**	**46.39**	**37**		IAmb	IAmb	19 01 15.9		
	comp=Z,5.9nm,1.0s								
M26K	**Nabesna, AK**	**46.63**	**38**		IAmb	IAmb	19 01 20.4		
	comp=Z,5.5nm,1.1s								
WAX	**Waxell Ridge**	**46.98**	**40**		P	**P**	**19 01 18.8**	**+1.3**	
I28M	**Miner Creek**	**47.58**	**33**		IAmb	IAmb	19 01 25.0		
	comp=Z,3.2nm,0.9s								
E29M	**Blow River**	**48.02**	**29**		IAmb	IAmb	19 01 29.1		
	comp=Z,5.4nm,1.0s								
WUS	**Wushi**	**48.60**	**293**		IAmb	IAmb	19 01 31.9		
	comp=Z,5.1nm,0.8s								
G30M	**tAoh Zraii Nji**	**48.85**	**31**		P	**P**	**19 01 33.5**	**+1.7**	
G30M					IAmb	IAmb	19 01 44.9		
	comp=Z,5.9nm,1.3s								
F30M	**Barrier River**	**48.92**	**30**		IAmb	IAmb	19 01 36.5		
	comp=Z,8.5nm,1.1s								
I30M	**Mount Dempster**	**49.09**	**33**		IAmb	IAmb	19 01 38.8		
	comp=Z,5.3nm,0.9s								
HYT	**Haines Junctio**	**49.49**	**39**			**P**	**19 01 39.2**	**+2.2**	
HYT					IAmb	IAmb	19 01 40.5		
	comp=Z,7.6nm,0.9s								
BVAR	**Borovoye Array**	**50.21**	**311**		P	**P**	**19 01 43.1**	**+0.8**	
	comp=Z,3.9nm,0.6s,baz=70,slow=7.4,SNR=27								
	comp=Z,3.9nm,0.6s								
BORK	**Borovoye**	**50.24**	**311**			**P**	**19 01 43.1**	**+0.5**	
BORK					IAmb	IAmb	19 01 44.1		
	comp=Z,4.1nm,0.8s								
BORK	**Borovoye**	**50.24**	**311**	*ce*	P	**P**	**19 01 43.5**	**+0.9**	
BORK					pmax	pmax			
	comp=Z,3.0nm,0.6s								
BOOM	**Boomskoye usch**	**50.36**	**296**		P	**P**	**19 01 43.1**	**-0.8**	
BOOM	**Boomskoye usch**	**50.36**	**296**		P	**P**	**19 01 43.1**	**-0.8**	
BOOM					pmax	pmax			
	comp=Z,17nm,1.1s								
MMPY	**Sheldon Lake,**	**51.90**	**36**		P	**P**	**19 01 55.7**	**+0.7**	
MMPY					IAmb	IAmb	19 02 25.2		
	comp=Z,13nm,1.5s								
ARSB	**Arslanbob**	**52.85**	**296**		P	**P**	**19 02 01.8**	**-0.7**	
ARSB					IAmb	IAmb	19 02 04.2		
	comp=Z,6.8nm,0.8s								
ARSB	**Arslanbob**	**52.85**	**296**		P	**P**	**19 02 01.8**	**-0.7**	
ARSB					pmax	pmax			
	comp=Z,7.0nm,0.8s								
KKAR	**Karatay Array**	**53.77**	**299**		P	**P**	**19 02 08.7**	**-0.3**	
KKAR	**Karatay Array**	**53.77**	**299**		P	**P**	**19 02 08.7**	**-0.3**	
BATI	**Baumata**	**54.55**	**206**		P	**P**	**19 02 13.8**	**-1.2**	
	comp=Z,6.8nm,0.5s,baz=11,slow=5.2,SNR=1.5								
	comp=Z,6.8nm,0.5s								
MTN	**Manton Dam**	**54.99**	**197**		P	**P**	**19 02 18.2**	**+0.1**	
ARTI	**Arti**	**55.55**	**318**			**P**	**19 02 21.4**	**-0.3**	
ARTI	**Arti**	**55.55**	**318**	*d*	P	**P**	**19 02 22.4**	**+0.6**	
ARTI							19 03 17.6		
ARTI					S	**S**	**19 10 08.6**	**+0.8**	
ARTI					SS	**SS**	**19 13 47.2**	**-4.8**	
ARTI					pmax	pmax			
	comp=Z,8.0nm,0.8s								
CHGR	**Chuyangaron**	**56.67**	**295**			**P**	**19 02 29.7**	**-0.5**	
CHGR	**Chuyangaron**	**56.67**	**295**	*i*	P	**P**	**19 02 30.4**	**+0.2**	
CHGR					pmax	pmax			
	comp=Z,12nm,0.8s								
SPITS	**Spitsbergen Ar**	**57.32**	**349**		P	**P**	**19 02 34.5**	**+0.5**	
	comp=Z,9.5nm,1.0s,baz=79,slow=8.8,SNR=15								
	comp=Z,9.5nm,1.0s								
AB31	**Akbulak array**	**57.72**	**309**			**P**	**19 02 37.5**	**+0.2**	
AB31					IAmb	IAmb	19 02 38.3		
	comp=Z,3.9nm,0.7s								
ABKAR	**Akbulak array**	**57.72**	**309**		P	**P**	**19 02 37.4**	**+0.2**	
RES	**Resolute Bay**	**58.15**	**16**		P	**P**	**19 02 40.7**	**+0.8**	
RES					IAmb	IAmb	19 02 46.7		
	comp=Z,4.6nm,0.6s								
RES	**Resolute Bay**	**58.15**	**16**		P	**P**	**19 02 40.7**	**+0.8**	
RES					pmax	pmax			
	comp=Z,5.0nm,0.6s								

KNRA	**Kununurra**	**58.28**	**199**		P	**P**	**19 02 39.6**	**-1.8**	
YKA	**Yellowknife Ar**	**59.03**	**32**		P	**P**	**19 02 47.0**	**+0.8**	
	comp=Z,0.7nm,0.8s,baz=305,slow=7.2,SNR=9.4								
	comp=Z,0.7nm,0.8s								
YKA	**Yellowknife Ar**	**59.03**	**32**		P	**P**	**19 02 45.8**	**-0.4**	
CTAO	**Charters Tower**	**60.66**	**179**		P	**P**	**19 02 56.9**	**-0.9**	
CTAO	**Charters Tower**	**60.66**	**179**		P	**P**	**19 02 56.9**	**-0.9**	
CTAO					pmax	pmax			
	comp=Z,13nm,1.3s								
WRA	**Warramunga Arr**	**61.33**	**192**		P	**P**	**19 03 02.1**	**-0.2**	
	comp=Z,4.1nm,0.8s,baz=8.5,slow=6.7,SNR=34								
	comp=Z,4.1nm,0.8s								
FITZ	**Fitzroy Crossi**	**61.40**	**201**		P	**P**	**19 03 03.5**	**+0.7**	
	comp=Z,5.9nm,0.8s,baz=69,slow=2.6,SNR=5.9								
	comp=Z,5.9nm,0.8s								
BELG	**Belogornoye**	**62.98**	**317**	*i*	P	**P**	**19 03 14.1**	**+1.0**	
BELG					pmax	pmax			
	comp=Z,1.0nm,0.9s								
ASAR	**Alice Springs**	**65.05**	**191**		P	**P**	**19 03 27.1**	**+0.1**	
	comp=Z,1.4nm,0.6s,baz=15,slow=6.6,SNR=4.3								
	comp=Z,1.4nm,0.6s								
ASAR	**Alice Springs**	**65.05**	**191**		P	**P**	**19 03 26.0**	**-1.0**	
K05A	**Summer Lake**	**66.30**	**53**		P	**P**	**19 03 36.0**	**+0.6**	
K05A					IAmb	IAmb	19 03 40.7		
	comp=Z,3.4nm,1.1s								
VRH	**Novokhopyorsk**	**66.67**	**318**	*e*	P	**P**	**19 03 36.5**	**-0.8**	
VRH					pmax	pmax			
	comp=Z,9.0nm,0.6s								
OBN	**Obninsk**	**66.75**	**324**	*e*	P	**P**	**19 03 36.5**	**-1.2**	
OBN				*e*			19 06 03.7		
OBN				*e*	S	S	19 12 56.1	+26	
OBN					pmax	pmax			
	comp=Z,6.0nm,1.0s								
FIA1	**FINESS Array S**	**66.75**	**333**		P	**P**	**19 03 37.6**	**0.0**	
FINES	**FINESS Array B**	**66.75**	**333**		P	**P**	**19 03 37.9**	**+0.3**	
	comp=Z,4.3nm,0.8s,baz=52,slow=6.3,SNR=16								
	comp=Z,4.3nm,0.8s								
FINES	**FINESS Array B**	**66.75**	**333**		P	**P**	**19 03 37.8**	**+0.1**	
FINES	**FINESS Array B**	**66.75**	**333**	*ce*	P	**P**	**19 03 38.2**	**+0.6**	
FINES					pmax	pmax			
	comp=Z,4.0nm,0.8s								
SUMG	**Summit**	**66.83**	**1**		P	**P**	**19 03 38.9**	**+0.5**	
SUMG	**Summit**	**66.83**	**1**		P	**P**	**19 03 38.9**	**+0.5**	
LPSR	**Galich'ya Gora**	**67.20**	**321**	*e*	P	**P**	**19 03 40.9**	**+0.3**	
LPSR					pmax	pmax			
	comp=Z,9.0nm,0.6s								
VORR	**Voronezh**	**67.64**	**320**	*e*	P	**P**	**19 03 43.8**	**+0.4**	
VORR					pmax	pmax			
	comp=Z,30nm,0.3s								
VSR	**Storozhevoye**	**67.94**	**319**	*e*	P	**P**	**19 03 45.1**	**-0.2**	
VSR					pmax	pmax			
	comp=Z,8.0nm,0.6s								
VORD	**Divnogorie**	**68.03**	**319**	*e*	P	**P**	**19 03 44.2**	**-1.7**	
VORD					pmax	pmax			
	comp=Z,3.0nm,0.4s								
INKA	**Innaminka**	**68.39**	**184**		P	**P**	**19 03 47.5**	**-0.7**	
INKA					IAmb	IAmb	19 03 53.3		
	comp=Z,4.2nm,1.5s								
FCC	**Fort Churchill**	**69.26**	**29**		P	**P**	**19 03 53.5**	**+0.1**	
FCC	**Fort Churchill**	**69.26**	**29**		P	**P**	**19 03 53.5**	**+0.1**	
FCC					pmax	pmax			
	comp=Z,9.0nm,1.5s								
DLMT	**Dillon**	**69.59**	**47**		P	**P**	**19 03 56.0**	**0.0**	
DLMT					IAmb	IAmb	19 04 36.0		
	comp=Z,3.9nm,1.1s								
BOZ	**Bozeman (W)**	**69.98**	**47**		P	**P**	**19 03 59.6**	**+1.2**	
BOZ	**Bozeman (W)**	**69.98**	**47**		P	**P**	**19 03 59.6**	**+1.2**	
BOZ					pmax	pmax			
	comp=Z,2.0nm,0.7s								
PMPB	**Monarch Peak**	**70.12**	**59**		P	**P**	**19 04 00.5**	**+1.2**	
NVAR	**Mina Array Bea**	**70.40**	**56**		P	**P**	**19 04 02.7**	**+1.5**	
	comp=Z,0.4nm,0.5s,baz=307,slow=7.9,SNR=2.3								
	comp=Z,0.4nm,0.5s								
KIV	**Kislovodsk**	**70.56**	**312**			**P**	**19 04 01.6**	**-0.2**	
KIV	**Kislovodsk**	**70.56**	**312**	*e*	P	**P**	**19 04 01.8**	**0.0**	
KIV					pmax	pmax			
	comp=Z,16nm,1.0s								
KIV	**Kislovodsk**	**70.56**	**312**		pP	pP	19 04 09.0	+8.3	
	comp=Z,16nm,1.1s								
KBZ	**Khabaz**	**70.58**	**311**		P	**P**	**19 04 03.2**	**+1.4**	
	comp=Z,6.6nm,0.8s,baz=92,slow=3.3,SNR=12								
	comp=Z,6.6nm,0.8s								
KBZ	**Khabaz**	**70.58**	**311**	*ce*	P	**P**	**19 04 02.5**	**+0.7**	
KBZ					pmax	pmax			
	comp=Z,8.0nm,0.9s								
MNK	**Minsk**	**70.92**	**327**	*i*	P	**P**	**19 04 04.1**	**+0.4**	
	comp=E,23nm,0.8s								
MNK					*i* P	**P**	**19 04 04.1**	**+0.4**	
	comp=N,9.0nm,0.7s								
MNK					*i* P	**P**	**19 04 04.1**	**+0.4**	
	comp=Z,11nm,0.7s,baz=46								
MNK					*i* PcP	**PcP**	**19 04 24.3**	**+0.1**	
MNK					*i* PP	**PP**	**19 06 41.1**	**+1.0**	
MNK					*i* PPP	PPP	19 08 23.9		
MNK					*i* S	**S**	**19 13 20.6**	**+0.8**	
MNK					*i* ScS	**ScS**	**19 14 08.0**	**-0.3**	
MNK					*i* SS	**SS**	**19 17 54.3**	**+3.1**	
MNK					*i* SSS	SSS	19 21 13.2		
MNK					*i* LQ	LQ	19 31 21.5		
MNK					*i* LR	LR	19 34 54.2		
MNK	**Minsk**	**70.92**	**327**	*i*	P	**P**	**19 04 04.1**	**+0.4**	
MNK				*i*			19 04 24.2		
MNK				*i*			19 06 41.0		
MNK				*i*	PPP	PPP	19 08 23.9		
MNK				*i*	S	**S**	**19 13 20.5**	**+0.8**	
MNK				*i*			19 14 07.9		
MNK				*i*	SS	**SS**	**19 17 54.3**	**+3.1**	
MNK					pmax	pmax			
	comp=Z,11nm,0.7s								
MNK					pmax	pmax			
	comp=E,23nm,0.8s								
MNK					pmax	pmax			
	comp=N,9.0nm,0.7s								
MNK					MLR	MLR			
	comp=N,198nm,11.0s								
MNK					MLR	MLR			
	comp=E,230nm,12.0s								
MNK					MLR	MLR			
	comp=Z,213nm,11.0s								
NC405	**NORSAR Array S**	**71.53**	**338**		P	**P**	**19 04 06.1**	**-1.2**	
NB201	**NORSAR Array S**	**71.70**	**338**		P	**P**	**19 04 07.6**	**-0.8**	
NB2	**NORSAR Subarra**	**71.73**	**338**		P	**P**	**19 04 09.0**	**+0.4**	
	comp=Z,1.7nm,0.7s,baz=32,slow=6.9								
NOA	**NORSAR Array B**	**71.73**	**338**		P	**P**	**19 04 08.9**	**+0.4**	
	comp=Z,1.6nm,0.7s,baz=36,slow=6.1,SNR=5.2								
	comp=Z,1.6nm,0.7s								
HFS	**Hagfors**	**71.75**	**337**		P	**P**	**19 04 08.8**	**+0.2**	
	comp=Z,3.0nm,0.8s,baz=50,slow=7.9,SNR=6.6								
	comp=Z,3.0nm,0.8s								
PDAR	**Pinedale Array**	**72.93**	**48**		P	**P**	**19 04 17.1**	**+0.8**	
	comp=Z,0.4nm,0.6s,baz=239,slow=3.7,SNR=6.1								
	comp=Z,0.4nm,0.6s								
PDAR	**Pinedale Array**	**72.93**	**48**		P	**P**	**19 04 16.6**	**+0.4**	
AK03	**Malin Array Si**	**72.98**	**323**		P	**P**	**19 04 16.2**	**+0.1**	
AKASG	**Malin Array Be**	**73.00**	**323**		P	**P**	**19 04 16.4**	**+0.1**	
	comp=Z,5.8nm,0.7s,baz=43,slow=6.1,SNR=15								
	comp=Z,5.8nm,0.7s								
AKASG	**Malin Array Be**	**73.00**	**323**		IAmb	IAmb	19 04 25.3		
	comp=Z,4.2nm,1.2s								
AKASG	**Malin Array Be**	**73.00**	**323**	*ce*	P	**P**	**19 04 16.3**	**+0.1**	
AKASG					pmax	pmax			
	comp=Z,4.0nm,0.6s								
AKBB	**Malin Array Si**	**73.00**	**323**		P	**P**	**19 04 15.6**	**-0.7**	
AKBB	**Malin Array Si**	**73.00**	**323**	*ce*	P	**P**	**19 04 17.1**	**+0.9**	
AKBB	**Malin Array Si**	**73.00**	**323**		P	**P**	**19 04 16.3**	**+0.1**	
AK01	**Malin Array Si**	**73.01**	**323**		P	**P**	**19 04 16.5**	**+0.2**	
AK04	**Malin Array Si**	**73.01**	**323**		P	**P**	**19 04 16.5**	**+0.2**	
KIEV	**Kiev**	**73.01**	**323**		P	**P**	**19 04 15.6**	**-0.7**	
KIEV					IAmb	IAmb	19 04 17.3		
	comp=Z,4.6nm,0.8s								
KIEV	**Kiev**	**73.01**	**323**		P	**P**	**19 04 15.6**	**-0.7**	
KIEV					pmax	pmax			
	comp=Z,5.0nm,0.8s								
KIEV	**Kiev**	**73.01**	**323**		P	**P**	**19 04 16.1**	**-0.2**	
	comp=Z,42nm,0.8s								
MI28	**Mi28,Pidlybu**	**73.54**	**324**		P	**P**	**19 04 18.4**	**-1.0**	
RNPP8	**Varash**	**74.04**	**325**		P	**P**	**19 04 22.6**	**+0.3**	
RNPP1	**Kostyukhnivka**	**74.07**	**325**		P	**P**	**19 04 21.6**	**-0.9**	
LUBAR	**Lubar, Ukraine**	**74.22**	**323**		P	**P**	**19 04 23.2**	**-0.2**	
GURO	**Guroymak-BITLI**	**74.35**	**308**		P	**P**	**19 04 23.4**	**-1.2**	
SORM	**Soroca**	**75.22**	**322**		P	**P**	**19 04 29.1**	**-0.2**	
KMPD	**K-Podol'skiy**	**75.79**	**323**		P	**P**	**19 04 32.0**	**-0.5**	
LVV	**L'vov**	**75.94**	**325**		P	**P**	**19 04 33.2**	**-0.2**	
PV10	**Paradox Valley**	**76.09**	**51**		P	**P**	**19 04 35.5**	**+0.7**	
PV10					IAmb	IAmb	19 04 37.5		
	comp=Z,5.2nm,0.8s								
PV19	**Morning Glory**	**76.16**	**51**		P	**P**	**19 04 35.8**	**+0.6**	
BUR08	**Bucovina Ar. S**	**77.04**	**323**		P	**P**	**19 04 39.8**	**0.0**	
BUR08					IAmb	IAmb	19 04 41.5		
	comp=Z,4.4nm,0.7s								
BURAR	**Bucovina Array**	**77.05**	**323**		P	**P**	**19 04 40.0**	**+0.1**	
BURAR					IAmb	IAmb	19 04 41.7		
	comp=Z,3.6nm,0.7s								
LANS	**Liptovska Anna**	**78.39**	**327**	*eP*		**P**	**19 04 50.0**	**+2.8**	
LANS					pmax	pmax			
	comp=Z,4.0nm,1.3s								
LANS	**Liptovska Anna**	**78.39**	**327**	*eP*		**P**	**19 04 50.0**	**+2.8**	
BRTR	**Keskin Array B**	**78.43**	**313**		P	**P**	**19 04 48.6**	**+0.9**	
	comp=Z,1.2nm,0.8s,baz=62,slow=3.4,SNR=6.0								
	comp=Z,1.2nm,0.8s								
BRTR	**Keskin Array B**	**78.43**	**313**		P	**P**	**19 04 46.7**	**-1.0**	
CLL	**Collm**	**79.16**	**332**	*eP*		**P**	**19 04 52.0**	**+0.7**	
CLL	**Collm**	**79.16**	**332**	*eP*		**P**	**19 04 52.0**	**+0.7**	
MODS	**Modra-Piesok**	**79.89**	**328**	*eP*		**P**	**19 04 56.0**	**+0.6**	
MODS	**Modra-Piesok**	**79.89**	**328**	*eP*		**P**	**19 04 56.0**	**+0.6**	
EKA	**Eskdalemuir Ar**	**80.43**	**342**		P	**P**	**19 04 58.4**	**+0.3**	
	comp=Z,0.5nm,0.4s,baz=17,slow=6.3,SNR=1.5								
	comp=Z,0.5nm,0.4s								
CONA	**Conrad Observa**	**80.82**	**328**	*eP*		**P**	**19 05 01.0**	**+0.5**	
	comp=Z,3.0nm,1.0s								
SCHQ	**Schefferville**	**80.82**	**18**		P	**P**	**19 05 00.9**	**+0.6**	
	comp=Z,1.3nm,0.8s,baz=70,slow=6.8,SNR=1.2								
	comp=Z,1.3nm,0.8s								
SCHQ	**Schefferville**	**80.82**	**18**		P	**P**	**19 05 00.3**	**0.0**	
RONA	**Rosalia, Austr**	**80.83**	**328**	*eP*		**P**	**19 05 02.2**	**+1.7**	
	comp=Z,3.7nm,0.7s								
GERES	**GERESS Array B**	**80.92**	**330**		P	**P**	**19 05 00.8**	**-0.2**	
	comp=Z,0.7nm,0.6s,baz=27,slow=6.1,SNR=5.4								
	comp=Z,0.7nm,0.6s								
BIOA	**Bad Ischl, Aus**	**81.89**	**329**	*i*	P	**P**	**19 05 07.4**	**+1.3**	
	comp=Z,9.5nm,1.5s								
MMAI	**Mount Meron Ar**	**82.05**	**307**		P	**P**	**19 05 08.1**	**+0.9**	
	comp=Z,3.0nm,0.8s,baz=22,slow=8.1,SNR=1.4								
	comp=Z,3.0nm,0.8s								
SOKA	**Soboth**	**82.16**	**328**	*eP*		**P**	**19 05 08.7**	**+1.0**	
	comp=Z,4.2nm,0.7s,SNR=7.8								
LESA	**Schwarzleotal**	**82.48**	**330**	*i*	PcP	**P**	**19 05 10.4**	**+1.1**	
	comp=Z,5.3nm,0.9s								
OBKA	**Obir**	**82.49**	**328**	*eP*		**P**	**19 05 09.8**	**+0.4**	
	comp=Z,5.3nm,1.0s,SNR=4.7								
KBA	**Koelnbreinsper**	**82.50**	**329**	*i*	PcP	**P**	**19 05 10.9**	**+1.3**	
	comp=Z,9.9nm,1.2s								
WATA	**Walderalm**	**82.97**	**330**	*i*	PcP	**P**	**19 05 13.4**	**+1.5**	
	comp=Z,3.9nm,0.7s								
WTTA	**Wattenberg**	**83.01**	**330**	*i*	PcP	**P**	**19 05 13.3**	**+1.1**	
	comp=Z,11nm,1.7s								
ABTA	**Abfaltersbach**	**83.10**	**329**	*i*	P	**P**	**19 05 12.8**	**+0.2**	
	comp=Z,5.5nm,1.1s								
MOTA	**Moosalm**	**83.14**	**330**	*i*	PcP	**P**	**19 05 13.7**	**+0.9**	
	comp=Z,4.6nm,0.8s								
RETA	**Reutte**	**83.15**	**331**	*i*	PcP	**P**	**19 05 13.9**	**+1.1**	
	comp=Z,7.6nm,1.3s								
SQTA	**Sankt Quirin**	**83.20**	**330**	*i*	PcP	**P**	**19 05 14.1**	**+1.0**	
	comp=Z,3.1nm,0.8s								
STAL	**STALIGIAL**	**83.43**	**329**		P	**P**	**19 05 13.3**	**-0.

0.5nm,0.6s,baz=79,slow=9.0,SNR=6.1
0.5nm,0.6s
ASAR Alice Springs 32.59 242 P **P** 19 13 30.6 -1.9
0.3nm,0.8s,baz=64,slow=10,SNR=11
0.3nm,0.8s
LEM Lemband 56.81 268 LR LR 19 42 28.1
comp=Z,123nm,20.6s,baz=310,slow=37
SONM Songino Array 77.48 324 P **P** 19 18 55.9 -0.2
0.2nm,0.3s,baz=121,slow=6.9,SNR=1.6
0.2nm,0.3s
ILAR Eielson Array 82.84 19 P **P** 19 19 24.4 -0.1
0.2nm,0.8s,baz=210,slow=5.5,SNR=4.0
0.2nm,0.8s

*IDC **15** 19:16:30.0±0.8,23˚.85N×121˚.74E, h0km,mb3.5/11, mbtmp3.5/14,ML3.5/2,Error ellipse: s-maj=23.1km s-min=15.9km az=65.0*
*JMA **15** 19:16:32.8±0.1,23˚.8N±0˚.5×12˚.2E±˚, h4km,MV3.3/12, TAIWAN REGION*
*TAP **15** 19:16:33.0,23˚.84N×121˚.52E, h9km, ML4.3,B*
*ASIES **15** 19:16:33.5,23˚.84N×121˚.54E, h8km, Mw3.8, Fault plane solution: NP1:φs307.00000°,δ28.00000°,λ-152.00000°. NP2:φs191.00000°,δ77.00000°,λ-65.00000°.*
ISC 15 19:16:33.3±0.6,23˚.82N±0˚.01×121˚.58E±0˚.01,h14km±3km, n175,σ1°§13/280,mb3.6/11,15C-27D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHUL	**Shoufeng**	**0.04**	**208**	⇓	*i*P		**Pg**	**19 16 35.6**	**-0.3**
SHUL					*i*S		**Sg**	**19 16 37.5**	**-0.1**
TEYL	**Yanliau Villag**	**0.05**	**17**	⇓	*i*P		**Pg**	**19 16 36.1**	**+0.2**
TEYL					S		**Sg**	**19 16 38.8**	**+1.1**
TEGC	**Jichi Village**	**0.12**	**199**	⇓	*i*P		**Pg**	**19 16 36.8**	**+0.1**
TEGC					*e*S		**Sg**	**19 16 39.9**	**+0.9**
ESL	**Shilin**	**0.14**	**266**	⇓	*i*P		**Pg**	**19 16 35.5**	**-1.4**
ESL					*i*S		**Sg**	**19 16 37.0**	**-2.4**
HWA	**Hwalien**	**0.15**	**7**	⇓	*i*P		**Pg**	**19 16 37.2**	**0.0**
HWA					*e*S		**Sg**	**19 16 40.2**	**+0.4**
ETM	**Tongmen**	**0.16**	**329**	⇓	*i*P		**Pg**	**19 16 36.3**	**-1.0**
ETM					S		**Sg**	**19 16 38.3**	**-1.8**
WARBT	**Fenglin Townsh**	**0.21**	**240**	⇓	*i*P		**Pg**	**19 16 36.9**	**-1.2**
WARBT					S		**Sg**	**19 16 39.3**	**-1.9**
EGFH	**Guangfu**	**0.21**	**223**		*e*P		**Pg**	**19 16 37.3**	**-0.7**
EGFH					*e*S		**Sg**	**19 16 40.0**	**-1.2**
LXIB	**Xiulin Townshi**	**0.25**	**322**	⇓	*i*P		**Pg**	**19 16 37.8**	**-1.0**
LXIB					*i*S		**Sg**	**19 16 40.9**	**-1.6**
TWD	**Chiawan**	**0.26**	**3**	⇓	*i*P		**Pg**	**19 16 38.4**	**-0.4**
TWD					S		**Sg**	**19 16 41.8**	**-0.7**
ETL	**Fush Village**	**0.34**	**6**	⇓	P		**Pg**	**19 16 39.7**	**-0.5**
ETL					S		**Sg**	**19 16 43.9**	**-1.0**
NACB	**Ninganchiao**	**0.35**	**2**		P		**Pg**	**19 16 39.4**	**-1.0**
NACB	**Ninganchiao**	**0.35**	**2**		P		**Pn**	**19 16 44.7**	**+0.7**
NACB	**Ninganchiao**	**0.35**	**2**	⇓	*i*P		**Pg**	**19 16 39.8**	**-0.7**
NACB					S		**Sg**	**19 16 44.2**	**-1.0**
HGSD	**Ruisui**	**0.36**	**204**		P		**Pg**	**19 16 40.9**	**+0.2**
ETLH	**Xiulin Townshi**	**0.39**	**346**	⇓	*i*P		**Pg**	**19 16 40.4**	**-0.9**
ETLH					*e*S		**Sg**	**19 16 45.6**	**-1.1**
EHYH	**Wanrong**	**0.40**	**214**		*e*P		**Pg**	**19 16 40.6**	**-0.7**
EHYH					*e*S		**Sg**	**19 16 45.9**	**-0.8**
OWD	**Renai**	**0.40**	**289**		P		**Pg**	**19 16 40.3**	**-1.0**
OWD					S		**Sg**	**19 16 45.3**	**-1.5**
EHY	**Hungye**	**0.40**	**217**	⇑	*i*P		**Pg**	**19 16 40.4**	**-0.9**
EHY					*e*S		**Sg**	**19 16 45.6**	**-1.1**
VWDT	**VWDT**	**0.41**	**260**	⇑	*i*P		**Pg**	**19 16 41.0**	**-0.6**
VWDT					S		**Sg**	**19 16 46.4**	**-0.8**
WHF	**Hehuan Shan**	**0.43**	**318**	⇓	*i*P		**Pg**	**19 16 41.1**	**-1.0**
WHF					S		**Sg**	**19 16 46.5**	**-1.6**
WUSB	**Renai**	**0.46**	**291**	⇓	*i*P		**Pg**	**19 16 41.7**	**-0.7**
WUSB					S		**Sg**	**19 16 47.5**	**-1.2**
YULB	**Yu-li**	**0.50**	**212**		P		**Pg**	**19 16 42.9**	**-0.4**
YULB	**Yu-li**	**0.50**	**212**		S		**Sg**	**19 16 49.0**	**-1.0**
YULB	**Yu-li**	**0.50**	**212**	⇑	*i*P		**Pg**	**19 16 42.5**	**-0.8**
YULB					S		**Sg**	**19 16 49.0**	**-1.0**
ECBN	**Changbin**	**0.52**	**194**		*e*P		**Pb**	**19 16 44.2**	**0.0**
EAHA	**Aohua**	**0.52**	**16**	⇓	P		**Pg**	**19 16 43.1**	**-0.5**
EAHA					*e*S		**Sb**	**19 16 52.0**	**+0.2**
FUSS	**Fushou**	**0.52**	**324**	⇓	P		**Pg**	**19 16 43.0**	**-0.7**
FUSS					S		**Sg**	**19 16 49.9**	**-0.9**
TWF1	**Yuli**	**0.54**	**209**	⇑	*i*P		**Pg**	**19 16 43.2**	**-0.7**
TWF1					*e*S		**Sg**	**19 16 50.4**	**-0.8**
TWT	**Tachien**	**0.57**	**319**	⇓	*i*P		**Pg**	**19 16 44.1**	**-0.5**
TWT					S		**Sg**	**19 16 51.0**	**-1.1**
SSLB	**Suanglung**	**0.58**	**267**		P		**Pg**	**19 16 43.9**	**-0.8**
SSLB	**Suanglung**	**0.58**	**267**		S		**Sg**	**19 16 51.2**	**-1.2**
SSLB	**Suanglung**	**0.58**	**267**	⇑	*i*P		**Pg**	**19 16 43.8**	**-0.8**
SSLB					S		**Sg**	**19 16 50.6**	**-1.8**
TDCB	**Techi**	**0.58**	**318**	⇓	*i*P		**Pg**	**19 16 44.1**	**-0.7**
TDCB					S		**Sg**	**19 16 51.2**	**-1.2**
NNSB	**Datong**	**0.63**	**343**	⇓	*i*P		**Pg**	**19 16 45.1**	**-0.5**
NNSB					S		**Sg**	**19 16 52.5**	**-1.5**
SMLT	**Sun Moon Lake**	**0.63**	**275**	⇑	*i*P		**Pg**	**19 16 44.9**	**-0.7**
SMLT					S		**Sg**	**19 16 53.1**	**-0.9**
EWUT	**Wuta**	**0.64**	**16**	⇓	*i*P		**Pg**	**19 16 45.5**	**-0.5**
EWUT					*e*S		**Sb**	**19 16 54.2**	**-1.0**
NNS	**Nan Shan**	**0.64**	**343**	⇓	*i*P		**Pg**	**19 16 45.4**	**-0.6**
NNS					S		**Sg**	**19 16 53.2**	**-1.3**
CHKH	**Chenggong**	**0.65**	**195**		*e*P		**Pg**	**19 16 46.3**	**+0.2**
CHKH					*e*S		**Sn**	**19 16 58.1**	**-0.1**
TYC	**Yuchr**	**0.67**	**277**	⇑	*i*P		**Pg**	**19 16 45.5**	**-0.9**
TYC					S		**Sg**	**19 16 54.1**	**-1.2**
FULB	**Fuli**	**0.68**	**203**		*e*P		**Pg**	**19 16 46.5**	**-0.1**
WHYT	**Xinyi Township**	**0.68**	**259**		*e*P		**Pg**	**19 16 45.9**	**-0.7**
WHYT					*e*S		**Sg**	**19 16 54.6**	**-1.1**
LATG	**Datong**	**0.71**	**356**		P		**Pg**	**19 16 46.5**	**-0.7**
LATG					*e*S		**Sg**	**19 16 56.2**	**-0.4**
EOS4	**EOS4**	**0.73**	**66**		*e*P		**Pb**	**19 16 48.2**	**+0.5**
EOS4					*e*S		**Sn**	**19 16 59.9**	**+0.2**
CHKT	**Chengkung**	**0.75**	**196**	⇓	P		**Pg**	**19 16 47.9**	**+0.1**
CHKT					*e*S		**Sn**	**19 17 00.8**	**+0.1**
ALS	**Alishan**	**0.78**	**247**	⇑	P		**Pg**	**19 16 48.1**	**-0.5**
ALS					*e*S		**Sg**	**19 16 58.3**	**-0.6**
ECS	**Chishang**	**0.80**	**205**		*e*P		**Pb**	**19 16 49.2**	**+0.2**
ENTT	**Nioudou**	**0.81**	**359**	⇓	*i*P		**Pg**	**19 16 48.7**	**-0.5**
ENTT					*e*S		**Sg**	**19 16 59.2**	**-0.6**
NDS	**Dongshan**	**0.81**	**8**		P		**Pg**	**19 16 48.7**	**-0.5**
NDS					*e*S		**Sg**	**19 16 59.1**	**-0.8**
TWC	**Suao**	**0.82**	**17**	⇓	P		**Pb**	**19 16 48.8**	**-0.5**
TWC					*e*S		**Sb**	**19 16 59.7**	**-0.5**
ELDTW	**Lidau**	**0.82**	**220**	⇑	P		**Pg**	**19 16 47.7**	**-1.6**
ELDTW					*e*S		**Sg**	**19 16 58.5**	**-1.5**
WNT	**Mingjian**	**0.83**	**274**		P		**Pb**	**19 16 49.7**	**+0.2**
WNT					*e*S		**Sb**	**19 17 01.2**	**+0.8**
EOS2	**EOS2**	**0.84**	**45**		*e*P		**Pn**	**19 16 51.4**	**+0.8**
CHN5	**Tsauling**	**0.86**	**255**	⇑	P		**Pg**	**19 16 50.0**	**0.0**
CHN5					S		**Sb**	**19 17 03.0**	**+1.5**
YHNB	**Yeheng**	**0.86**	**347**		P		**Pb**	**19 16 49.8**	**-0.4**
YHNB	**Yeheng**	**0.86**	**347**		S		**Sb**	**19 17 01.5**	**-0.1**
YHNB	**Yeheng**	**0.86**	**347**	⇓	P		**Pb**	**19 16 49.7**	**-0.4**
YHNB					*e*S		**Sb**	**19 17 01.0**	**-0.7**
NSK	**Sanguang**	**0.87**	**346**	⇓	*i*P		**Pb**	**19 16 49.8**	**-0.5**
NSK					S		**Sg**	**19 17 00.6**	**-1.1**
TCU	**Taichung**	**0.89**	**291**		*e*P		**Pn**	**19 16 51.3**	**-0.2**
TCU					*e*S		**Sn**	**19 17 03.8**	**-0.4**
TWE	**Neicheng**	**0.90**	**5**	⇓	P		**Pb**	**19 16 50.2**	**-0.4**
TWE					*e*S		**Sb**	**19 17 02.6**	**+0.1**
TWQ1	**Liyutan**	**0.91**	**305**		*e*P		**Pn**	**19 16 51.4**	**-0.3**
TWQ1					*e*S		**Sb**	**19 17 02.9**	**+0.1**
NFF	**Wufeng Townshi**	**0.91**	**332**		*e*P		**Pg**	**19 16 50.4**	**-0.5**
NFF					*e*S		**Sg**	**19 17 01.5**	**-1.4**
FUSB	**Fushanzhiwuyua**	**0.93**	**0**		P		**Pb**	**19 16 50.9**	**-0.5**
FUSB					*e*S		**Sb**	**19 17 03.1**	**-0.5**
WGK	**Gukeng**	**0.95**	**262**	⇑	P		**Pb**	**19 16 51.9**	**+0.4**
WGK					*e*S		**Sb**	**19 17 05.2**	**+1.3**
ILA	**Ilan**	**0.95**	**9**		*e*P		**Pg**	**19 16 50.1**	**-1.6**
NWLT	**Wulai**	**0.95**	**356**		P		**Pb**	**19 16 51.3**	**-0.4**
NWLT					*e*S		**Sg**	**19 17 02.9**	**-1.3**
NSY	**Sanyi**	**0.95**	**308**		*e*P		**Pn**	**19 16 52.5**	**+0.1**
NSY					*e*S		**Sn**	**19 17 05.9**	**+0.1**
NSTT	**Nanjuang**	**0.96**	**327**		P		**Pb**	**19 16 51.6**	**-0.2**
NSTT					S		**Sg**	**19 17 03.8**	**-0.8**
WDL	**Douliou City**	**0.96**	**264**		P		**Pn**	**19 16 52.5**	**0.0**
WDL					S		**Sn**	**19 17 06.4**	**+0.5**
LIOB	**Emei**	**0.97**	**328**		*e*P		**Pb**	**19 16 51.8**	**-0.1**
LIOB					*e*S		**Sg**	**19 17 03.7**	**-1.1**
WDLH	**Douliu**	**0.97**	**262**		P		**Pb**	**19 16 52.2**	**+0.3**
WDLH					*e*S		**Sb**	**19 17 05.8**	**+1.3**
WCHH	**Zhanghua**	**0.97**	**285**		*e*P		**Pb**	**19 16 52.0**	**0.0**
WCHH					*e*S		**Sn**	**19 17 06.2**	**0.0**
WCKO	**Fanlu**	**0.98**	**247**		*e*P		**Pg**	**19 16 52.1**	**-0.1**
WCKO					*e*S		**Sg**	**19 17 05.0**	**0.0**
WCH1	**Changhua City**	**0.98**	**285**		*e*P		**Pb**	**19 16 52.3**	**+0.2**
WCH1					*e*S		**Sn**	**19 17 06.8**	**+0.4**
STYH	**Taoyuan**	**0.99**	**229**		*e*P		**Pg**	**19 16 51.9**	**-0.5**
STYH					*e*S		**Sg**	**19 17 04.8**	**-0.5**
NMLH	**Miaoli**	**1.01**	**315**		*e*P		**Pn**	**19 16 53.5**	**+0.3**
NMLH					*e*S		**Sb**	**19 17 06.4**	**+0.5**
KSHI	**Guanxi Townshi**	**1.02**	**339**	⇑	P		**Pn**	**19 16 53.3**	**+0.1**
KSHI					*e*S		**Sb**	**19 17 06.6**	**+0.5**
TPUB	**Ta-pu**	**1.02**	**239**		P		**Pg**	**19 16 52.8**	**-0.3**
TPUB	**Ta-pu**	**1.02**	**239**		S		**Sb**	**19 17 06.6**	**+0.5**
TPUB	**Ta-pu**	**1.02**	**239**		P		**Pg**	**19 16 52.7**	**-0.3**
TPUB					*e*S		**Sb**	**19 17 07.4**	**+1.3**
WTP	**Ta-pu**	**1.06**	**237**	⇑	P		**Pg**	**19 16 53.5**	**-0.3**
WTP					S		**Sn**	**19 17 09.1**	**+0.6**
EGS		**1.06**	**17**		*e*P		**Pn**	**19 16 53.8**	**0.0**
TWG	**Pinlang**	**1.10**	**205**		*e*P		**Pg**	**19 16 52.3**	**-2.4**
TWGBT	**Beinan**	**1.10**	**205**		P		**Pg**	**19 16 52.2**	**-2.4**
TWGBT	**Beinan**	**1.10**	**205**		S		**Sg**	**19 17 08.7**	**-0.3**
TWGBT	**Beinan**	**1.10**	**205**		*e*P		**Pg**	**19 16 52.1**	**-2.6**
SBCB	**Hsinchu**	**1.11**	**331**		*e*P		**Pn**	**19 16 55.3**	**+0.9**
SBCB					*e*S		**Sn**	**19 17 10.3**	**+0.8**
CHY	**Chiayi**	**1.11**	**253**		*e*P		**Pg**	**19 16 54.5**	**-0.3**
CHY					*e*S		**Sn**	**19 17 10.3**	**+0.7**
HSN	**Hsinchu**	**1.12**	**330**		*e*P		**Pn**	**19 16 55.3**	**+0.6**
HSN					*e*S		**Sn**	**19 17 11.3**	**+1.4**
TATO	**Taipei**	**1.15**	**356**		P		**Pn**	**19 16 55.4**	**+0.4**
TATO	**Taipei**	**1.15**	**356**		S		**Sn**	**19 17 10.4**	**-0.2**
TWK	**Hsinying**	**1.15**	**241**		P		**Pg**	**19 16 55.1**	**-0.4**
TWK					*e*S		**Sb**	**19 17 10.8**	**+0.9**
TWA	**Mucha**	**1.15**	**360**		*e*P		**Pn**	**19 16 55.2**	**+0.2**
TWA					*e*S		**Sb**	**19 17 10.9**	**+0.7**
CHN1	**Nanshi**	**1.16**	**237**	⇑	P		**Pg**	**19 16 55.2**	**-0.4**
CHN1					*e*S		**Sn**	**19 17 11.6**	**+0.8**
TIPB	**Shuangxi**	**1.16**	**11**		*e*P		**Pb**	**19 16 55.1**	**-0.2**
TIPB					*e*S		**Sg**	**19 17 09.7**	**-1.3**
SGST	**Jiashian**	**1.18**	**231**		P		**Pb**	**19 16 54.7**	**-0.8**
SGST					*e*S		**Sb**	**19 17 11.6**	**+0.9**
WTCT	**Ta-ch'eng**	**1.19**	**272**	⇑	P		**Pb**	**19 16 55.6**	**-0.1**
WTCT					S		**Sn**	**19 17 12.1**	**+0.5**
NCUH	**Zhongli**	**1.20**	**342**		*e*P		**Pn**	**19 16 56.4**	**+0.7**
NCUH					*e*S		**Sn**	**19 17 13.2**	**+1.5**
NCU	**National Centr**	**1.20**	**342**		*e*P		**Pb**	**19 16 54.9**	**-0.9**
NCU					*e*S		**Sn**	**19 17 12.1**	**+0.4**
NHY	**Taipei**	**1.21**	**359**		*e*S		**Sn**	**19 17 12.6**	**+0.5**
TAP	**Taipei**	**1.21**	**357**		*e*P		**Pn**	**19 16 56.5**	**+0.6**
TAP					*e*S		**Sn**	**19 17 11.9**	**-0.2**
TWB1	**Santiao Chiao**	**1.23**	**17**		*e*P		**Pg**	**19 16 56.7**	**-0.4**
TWB1					*e*S		**Sn**	**19 17 12.7**	**0.0**
NWF	**Wu-fen Shan**	**1.25**	**8**		*e*P		**Pg**	**19 16 57.1**	**-0.4**
NWF					*e*S		**Sg**	**19 17 13.1**	**-0.8**
WFSB	**Wu-fen Shan**	**1.25**	**8**		*e*P		**Pg**	**19 16 58.1**	**+0.6**
WFSB					*e*S		**Sn**	**19 17 13.5**	**+0.3**
WSF	**Szhu**	**1.26**	**262**		*e*P		**Pn**	**19 16 56.7**	**+0.1**
WSF					*e*S		**Sn**	**19 17 14.1**	**+0.8**
WSL	**Shuilin Townsh**	**1.28**	**257**		*e*P		**Pn**	**19 16 56.9**	**+0.2**
WSL					*e*S		**Sn**	**19 17 15.2**	**+1.5**
SXI1	**Grass Mountain**	**1.29**	**12**		*e*P		**Pg**	**19 16 57.5**	**-0.8**
SXI1					*e*S		**Sn**	**19 17 15.0**	**+0.7**
YM01	**YM01**	**1.32**	**359**		*e*P		**Pg**	**19 16 58.4**	**-0.3**
YM01					*e*S		**Sn**	**19 17 15.9**	**+1.1**
TNOU	**National Taiwa**	**1.33**	**7**		*e*P		**Pg**	**19 16 58.5**	**-0.5**
TNOU					*e*S		**Sn**	**19 17 15.5**	**+0.4**
ZUZH	**Zhuzihu**	**1.33**	**358**		*e*P		**Pn**	**19 16 57.3**	**-0.3**
ZUZH					*e*S		**Sn**	**19 17 16.2**	**+1.0**
NTST	**Danshui**	**1.34**	**355**		*e*P		**Pg**	**19 16 58.2**	**-0.9**
NTST					*e*S		**Sg**	**19 17 17.3**	**+0.8**
CHN3	**Shinhua**	**1.34**	**237**		*e*P		**Pg**	**19 16 59.3**	**+0.1**
CHN8	**Yiju**	**1.35**	**250**		*e*P		**Pn**	**19 16 58.0**	**+0.2**
CHN8					*e*S		**Sg**	**19 17 17.4**	**+0.7**
ANP	**Anpu**	**1.36**	**358**		*e*P		**Pb**	**19 16 58.6**	**0.0**
ANP					*e*S		**Sg**	**19 17 17.5**	**+0.4**
YM08	**YM08**	**1.36**	**0**		P		**Pn**	**19 16 57.9**	**0.0**
YM08					*e*S		**Sg**	**19 17 18.3**	**+1.2**
SSHA	**Shanhua**	**1.37**	**240**		*e*P		**Pn**	**19 16 58.4**	**+0.3**
SSHA					*e*S		**Sg**	**19 17 19.1**	**+1.5**
SSD	**Sandimen**	**1.39**	**219**		*e*P		**Pn**	**19 16 58.1**	**-0.1**
SSD					*e*S		**Sg**	**19 17 18.1**	**+0.1**
SHHT	**Tainan City**	**1.39**	**235**		*e*P		**Pg**	**19 17 00.5**	**+0.5**
JYNG	**Yonagunijimaku**	**1.39**	**63**		*e*P		**Pn**	**19 16 58.8**	**+0.5**
JYNG					*e*S		**Sg**	**19 17 18.0**	**-0.2**
SCLT	**Jiali**	**1.43**	**243**		*e*P		**Pn**	**19 16 59.6**	**+0.8**
SCLT					*e*S		**Sg**	**19 17 19.2**	**-0.2**
YOJ	**Yonaguni jima**	**1.45**	**64**		P		**Pb**	**19 16 59.7**	**-0.4**
YOJ	**Yonaguni jima**	**1.45**	**64**		*e*P		**Pn**	**19 16 59.6**	**+0.4**
YOJ					*e*S		**Sb**	**19 17 18.9**	**+0.4**
YOJ	**Yonaguni jima**	**1.45**	**64**		P		**Pn**	**19 16 59.3**	**+0.2**
YOJ					*e*S		**Sg**	**19 17 19.6**	**-0.5**
TWM1	**Shoushan**	**1.46**	**227**		*e*P		**Pg**	**19 17 01.6**	**+0.2**
SGLT	**Jiouru**	**1.49**	**223**		*e*P		**Pb**	**19 17 01.1**	**+0.4**
MASBT	**Mashibuluo**	**1.49**	**216**		P		**Pn**	**19 16 59.1**	**-0.6**
TSCK	**Chigu Township**	**1.53**	**244**		P		**Pn**	**19 17 00.4**	**+0.2**
TSCK					*e*S		**Sb**	**19 17 21.2**	**+0.5**
EAST	**Anshuo**	**1.59**	**205**		*e*P		**Pn**	**19 16 59.7**	**-1.3**
SCZT	**Fangliau**	**1.70**	**212**		*e*P		**Pn**	**19 17 02.8**	**+0.3**
LAY	**Lan-yu**	**1.78**	**181**		*e*P		**Pn**	**19 17 01.2**	**-2.5**
LYUB	**Lan-yu**	**1.81**	**180**		*e*P		**Pn**	**19 17 01.4**	**-2.7**
WDGT	**Dungji**	**1.85**	**253**		*e*P		**Pn**	**19 17 04.4**	**-0.3**
WDGT					*e*S		**Sn**	**19 17 29.0**	**+1.1**
PHUB	**P'eng-hu**	**1.87**	**261**		P		**Pn**	**19 17 04.9**	**0.0**
PHUB					S		**Sn**	**19 17 29.7**	**+1.4**
PNG	**Penghu**	**1.88**	**263**		*e*P		**Pn**	**19 17 05.2**	**+0.2**
PNG					*e*S		**Sn**	**19 17 29.6**	**+1.1**
SMST	**Manzhou Townsh**	**1.92**	**201**		*e*P		**Pn**	**19 17 05.6**	**0.0**
TWKBT	**Hengchun**	**2.00**	**201**		*e*P		**Pn**	**19 17 06.1**	**-0.7**
IRIF	**Iriomote-Funau**	**2.03**	**75**		*e*P		**Pn**	**19 17 08.3**	**+1.2**
IRIF					*e*S		**Sn**	**19 17 34.0**	**+1.8**
HATJ	**Hateruma jima**	**2.04**	**83**		*e*P		**Pn**	**19 17 07.4**	**+0.1**
HATJ					*e*S		**Sn**	**19 17 33.3**	**+0.7**
VCHM	**Qimei**	**2.07**	**253**		*e*P		**Pn**	**19 17 09.3**	**+1.6**
VCHM					*e*S		**Sn**	**19 17 34.2**	**+1.0**
JKRS	**Kuro-shima**	**2.25**	**79**		*e*P		**Pn**	**19 17 11.1**	**+0.9**
JKRS					*e*S		**Sn**	**19 17 39.6**	**+1.8**
VWUC	**VWUC**	**2.27**	**301**		*e*P		**Pn**	**19 17 09.0**	**-1.4**
JIJ	**Ishigaki jima**	**2.40**	**77**		*e*P		**Pn**	**19 17 12.1**	**-0.2**
JIJ					*e*S		**Sn**	**19 17 40.6**	**-0.8**
JISG	**Ishigakijimahi**	**2.60**	**72**		*e*P		**Pn**	**19 17 14.2**	**-0.8**
JISG					*e*S		**Sn**	**19 17 46.7**	**+0.3**
MATB	**Ma-tsu**	**2.75**	**328**		*e*P		**Pn**	**19 17 17.9**	**+0.8**
MATB					*e*S		**Sn**	**19 17 48.1**	**-0.8**
KNM	**Kinmen**	**2.94**	**282**		*e*P		**Pn**	**19 17 20.9**	**+1.3**
KNMB	**Chin-men Tao**	**2.99**	**283**		*e*P		**Pn**	**19 17 19.9**	**-0.4**
MHZQ	**Yeshan**	**3.24**	**315**		*e*P		**Pn**	**19 17 23.5**	**-0.3**
XPSS	**Dashiqiu**	**3.34**	**338**		*e*P		**Pn**	**19 17 25.0**	**-0.2**
AXDP	**Jialang**	**3.46**	**289**		*e*P		**Pn**	**19 17 26.8**	**-0.1**
ZPLA	**Ao Xicun**	**3.51**	**272**		P		**Pn**	**19 17 27.5**	**0.0**
DSXP	**Dongshan**	**3.81**	**269**		P		**Pn**	**19 17 31.6**	**-0.1**
DSXP					*e*S		**Sn**	**19 18 17.8**	**+1.5**
SXFK	**Yanhouchang**	**4.39**	**306**		*e*P		**Pn**	**19 17 39.6**	**-0.1**
SXFK					*e*S		**Sn**	**19 18 28.7**	**-2.0**
JOW	**Kunigami**	**6.75**	**62**		Pn		**Pn**	**19 18 10.2**	**-1.9**
	1.7nm,0.3s,baz=172,slow=18,SNR=5.4								
	5.2nm,0.3s								
KSRS	**Korea Array**	**14.63**	**20**		Pn		**Pn**	**19 20 02.6**	**+2.7**
	0.2nm,0.3s,baz=201,slow=11,SNR=6.3								
MJAR	**Matsushiro Arr**	**19.13**	**45**		P		**P**	**19 20 54.5**	**-1.5**
	0.4nm,0.7s,baz=236,slow=11,SNR=1.4								
BTO2	**Baotou**	**19.53**	**333**		*e*P		**Pn**	**19 21 03.6**	**+1.8**
BTO2					S		**S**	**19 24 47.0**	**+6.2**
BTO2					pmax	pmax			
	comp=Z,3.0nm,0.7s								
BTO2					pmax	pmax			
	comp=Z,430nm,5.3s								
BTO2					LR	LR			
	comp=N,2μm,20.6s								
BTO2					LR	LR			
	comp=E,5μm,14.9s								
BTO2					LR	LR			
	comp=Z,910nm,19.3s								
LZDM	**Lanzhou Array**	**19.63**	**312**		P		**P**	**19 21 02.8**	**+0.9**
	baz=154,slow=10								
	comp=Z,0.2nm,0.4s								
XLT	**XiLinHaoTe**	**20.53**	**349**		*e*P		Pn	19 21 17.5	+3.9
XLT					pP		sP	19 21 21.5	+4.3
XLT					PP		**PnPn**	**19 21 37.8**	**+8.9**
XLT					S		**S**	**19 25 00.4**	**-0.3**
XLT					pmax	pmax			
	comp=Z,4.0nm,1.0s								
XLT					LR	LR			
	comp=N,50nm,9.4s								
XLT					LR	LR			
	comp=E,750nm,12.3s								
XLT					LR	LR			
	comp=Z,350nm,7.7s								
CMAR	**Chiang Mai Arr**	**21.77**	**260**		P		**P**	**19 21 25.5**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=70,slow=7.8,SNR=4.4								
	comp=Z,0.3nm,0.6s								
SONM	**Songino Array**	**26.84**	**337**		P		**P**	**19 22 12.8**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=166,slow=11,SNR=3.0								
	comp=Z,0.5nm,0.7s								
MKAR	**Makanchi Array**	**38.85**	**316**		P		**P**	**19 23 57.6**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=113,slow=9.3,SNR=5.5								
	comp=Z,0.3nm,0.7s								
ZALV	**Zalesovo Beam**	**40.74**	**327**		P		**P**	**19 24 12.2**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=98,slow=11,SNR=4.1								
	comp=Z,0.7nm,0.6s								
H11N1	**WAKE ISLAND Hy**	**42.14**	**87**		T		T	20 09 42.9	
	baz=283,slow=75,SNR=10								
H11N2	**WAKE ISLAND Hy**	**42.14**	**86**		T		T	20 09 24.4	
	baz=283,slow=75,SNR=14								
H11N3	**WAKE ISLAND Hy**	**42.16**	**86**		T		T	20 09 29.2	
	baz=283,slow=75,SNR=16								
H11S3	**WAKE ISLAND Hy**	**42.26**	**88**		T		T	20 09 31.2	
	baz=284,slow=74,SNR=41								
H11S1	**WAKE ISLAND Hy**	**42.27**	**88**		T		T	20 09 31.9	
	baz=284,slow=74,SNR=26								
H11S2	**WAKE ISLAND Hy**	**42.28**	**88**		T		T	20 09 30.0	
	baz=284,slow=74,SNR=13								
KURBB	**Kurchatov Arra**	**42.62**	**320**		P		**P**	**19 24 28.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=104,slow=5.9

DPDB	**Guoxing**	**0.66**	**288**	⇑*iP*	**Pg**	**19 20 25.9**	**-1.1**
DPDB				S	**Sg**	**19 20 34.2**	**-1.7**
CHKH	**Chenggong**	**0.66**	**198**	⇓*eP*	**Pb**	**19 20 27.1**	**-0.1**
CHKH				*eS*	**Sn**	**19 20 38.4**	**-0.5**
WCS	**Beigang Elemen**	**0.68**	**290**	⇑*iP*	**Pg**	**19 20 26.3**	**-1.1**
WCS				*eS*	**Sg**	**19 20 34.2**	**-2.3**
FULB	**Fuli**	**0.69**	**205**	*eP*	**Pb**	**19 20 27.3**	**-0.4**
YUS	**Yu-Shan**	**0.69**	**241**	⇑*eP*	**Pg**	**19 20 26.9**	**-0.8**
YUS				*eS*	**Sg**	**19 20 35.7**	**-1.3**
TYC	**Yuchr**	**0.70**	**276**	⇑*iP*	**Pg**	**19 20 26.3**	**-1.3**
TYC				*eS*	**Sg**	**19 20 34.2**	**-2.6**
EOS4	**EOS4**	**0.71**	**65**	*eP*	**Pn**	**19 20 28.9**	**-0.1**
EOS4				*eS*	**Sn**	**19 20 40.9**	**+1.5**
LATG	**Datong**	**0.71**	**354**	⇓*iP*	**Pb**	**19 20 27.2**	**-0.9**
LATG				*eS*	**Sg**	**19 20 36.6**	**-0.8**
WHYT	**Xinyi Township**	**0.71**	**260**	⇑*P*	**Pg**	**19 20 26.7**	**-1.2**
WHYT				*eS*	**Sg**	**19 20 35.9**	**-1.4**
WHP	**Taichung City**	**0.76**	**306**	⇑*iP*	**Pg**	**19 20 27.9**	**-0.9**
WHP				*eS*	**Sg**	**19 20 37.2**	**-1.7**
CHKT	**Chengkung**	**0.76**	**198**	⇓*P*	**Pb**	**19 20 28.8**	**-0.1**
CHKT				*eS*	**Sn**	**19 20 41.4**	**+0.2**
ESAO	**Su ao**	**0.78**	**16**	*eP*	**Pb**	**19 20 28.9**	**-0.2**
EOS3	**EOS3**	**0.79**	**54**	*eP*	**Pn**	**19 20 30.5**	**+0.2**
ALS	**Alishan**	**0.81**	**247**	⇑*P*	**Pg**	**19 20 28.9**	**-0.9**
TWC	**Suao**	**0.81**	**15**	⇓*iP*	**Pb**	**19 20 29.6**	**-0.1**
TWC				*eS*	**Sb**	**19 20 40.2**	**-0.1**
NDS	**Dongshan**	**0.81**	**7**	⇓*P*	**Pb**	**19 20 29.4**	**-0.3**
NDS				S	**Sb**	**19 20 40.2**	**-0.2**
ENTT	**Nioudou**	**0.81**	**357**	⇓*iP*	**Pb**	**19 20 29.4**	**-0.3**
ENTT				*eS*	**Sb**	**19 20 40.1**	**-0.4**
ECS	**Chishang**	**0.81**	**207**	*eP*	**Pb**	**19 20 29.2**	**-0.6**
EOS2	**EOS2**	**0.82**	**44**	*eP*	**Pn**	**19 20 31.6**	**+0.8**
ELDTW	**Lidau**	**0.84**	**221**	⇑*P*	**Pg**	**19 20 28.4**	**-1.9**
WNT	**Mingjian**	**0.85**	**274**	⇑*P*	**Pb**	**19 20 30.3**	**-0.2**
WNT				*eS*	**Sb**	**19 20 41.7**	**0.0**
WNT1	**Nantou City**	**0.86**	**276**	⇑*eP*	**Pb**	**19 20 30.4**	**-0.1**
WNT1				*eS*	**Sb**	**19 20 42.2**	**+0.4**
WWF	**Wufeng**	**0.86**	**285**	⇑*eP*	**Pb**	**19 20 30.5**	**-0.2**
WWF				*eS*	**Sb**	**19 20 42.3**	**+0.3**
YHNB	**Yeheng**	**0.87**	**345**		**Pb**	**19 20 30.3**	**-0.4**
YHNB				Sg	**Sg**	**19 20 40.9**	**-1.4**
YHNB	**Yeheng**	**0.87**	**345**	P	**Pb**	**19 20 30.5**	**-0.2**
YHNB	**Yeheng**	**0.87**	**345**	S	**Sb**	**19 20 41.8**	**-0.4**
YHNB	**Yeheng**	**0.87**	**345**	⇓*P*	**Pb**	**19 20 30.4**	**-0.4**
YHNB				*eS*	**Sg**	**19 20 41.1**	**-1.2**
NSK	**Sanguang**	**0.88**	**345**	⇓*P*	**Pb**	**19 20 30.5**	**-0.4**
NSK				*eS*	**Sg**	**19 20 41.3**	**-1.3**
CHN5	**Tsauling**	**0.89**	**255**	⇑*iP*	**Pb**	**19 20 30.8**	**-0.3**
CHN5				*eS*	**Sb**	**19 20 43.2**	**+0.5**
TWE	**Neicheng**	**0.89**	**3**	⇓*P*	**Pb**	**19 20 31.0**	**-0.1**
TWE				*eS*	**Sb**	**19 20 43.4**	**+0.7**
TCU	**Taichung**	**0.92**	**291**	*eP*	**Pb**	**19 20 31.4**	**-0.1**
TCU				*eS*	**Sb**	**19 20 44.1**	**+0.6**
NFF	**Wufeng Townshi**	**0.92**	**331**	P	**Pb**	**19 20 31.4**	**-0.3**
NFF				*eS*	**Sg**	**19 20 42.1**	**-1.9**
TWQ1	**Liyutan**	**0.93**	**304**	⇑*P*	**Pb**	**19 20 31.6**	**-0.2**
FUSB	**Fushanzhiwuyua**	**0.93**	**358**	⇓*iP*	**Pb**	**19 20 31.7**	**-0.1**
FUSB				S	**Sb**	**19 20 43.5**	**-0.5**
ILA	**Ilan**	**0.94**	**7**	*eP*	**Pg**	**19 20 30.7**	**-1.6**
NWLT	**Wulai**	**0.95**	**354**	⇓*iP*	**Pb**	**19 20 31.9**	**-0.2**
NWLT				*eS*	**Sg**	**19 20 43.5**	**-1.5**
WYL	**Yuanlin Townsh**	**0.96**	**278**	⇑*eP*	**Pb**	**19 20 32.3**	**+0.1**
WYL				*eS*	**Sg**	**19 20 44.5**	**-0.6**
WGK	**Gukeng**	**0.97**	**262**	⇑*P*	**Pb**	**19 20 32.7**	**+0.2**
WGK				*eS*	**Sn**	**19 20 46.4**	**-0.1**
NSY	**Sanyi**	**0.98**	**307**	*eP*	**Pb**	**19 20 32.2**	**-0.3**
NSY				*eS*	**Sb**	**19 20 45.8**	**+0.6**
NSTT	**Nanjuang**	**0.98**	**325**	⇓*P*	**Pb**	**19 20 32.4**	**-0.2**
NSTT				*eS*	**Sg**	**19 20 44.3**	**-1.4**
LIOB	**Emei**	**0.98**	**326**	*eP*	**Pb**	**19 20 32.6**	**0.0**
LIOB				*eS*	**Sg**	**19 20 44.4**	**-1.5**
WDL	**Douliou City**	**0.99**	**264**	⇑*eP*	**Pb**	**19 20 32.6**	**-0.2**
WDL				*eS*	**Sn**	**19 20 47.1**	**+0.2**
WDLH	**Douliu**	**1.00**	**262**	⇑*eP*	**Pn**	**19 20 33.1**	**-0.2**
WDLH				*eS*	**Sn**	**19 20 47.3**	**+0.2**
WCHH	**Zhanghua**	**1.00**	**285**	⇑*P*	**Pb**	**19 20 33.0**	**+0.1**
WCHH				*eS*	**Sb**	**19 20 46.5**	**+0.6**
WCKO	**Fanlu**	**1.00**	**248**	⇑*P*	**Pg**	**19 20 32.7**	**-0.7**
WCKO				*eS*	**Sb**	**19 20 46.5**	**+0.5**
WCH1	**Changhua City**	**1.01**	**284**	⇑*eP*	**Pn**	**19 20 33.3**	**-0.2**
STYH	**Taoyuan**	**1.01**	**230**	⇑*eP*	**Pg**	**19 20 32.3**	**-1.2**
STYH				*eS*	**Sg**	**19 20 45.6**	**-1.2**
NJD	**Zhudong**	**1.02**	**332**	*eP*	**Pb**	**19 20 33.2**	**-0.1**
KSHI	**Guanxi Townshi**	**1.03**	**337**	⇓*P*	**Pn**	**19 20 33.7**	**0.0**
KSHI				*eS*	**Sb**	**19 20 47.3**	**+0.6**
STYT	**Tauyuan**	**1.03**	**230**	⇑*iP*	**Pg**	**19 20 32.6**	**-1.3**
STYT				S	**Sb**	**19 20 47.3**	**+0.5**
NMLH	**Miaoli**	**1.03**	**313**	*eP*	**Pn**	**19 20 33.9**	**+0.1**
NMLH				*eS*	**Sb**	**19 20 46.9**	**+0.1**
TPUB	**Ta-pu**	**1.04**	**240**		**Pg**	**19 20 33.4**	**-0.8**
TPUB					**Sb**	**19 20 47.8**	**+0.6**
TPUB	**Ta-pu**	**1.04**	**240**	P	**Pb**	**19 20 33.7**	**0.0**
TPUB	**Ta-pu**	**1.04**	**240**	⇑*iP*	**Pb**	**19 20 33.6**	**-0.1**
TPUB				*eS*	**Sg**	**19 20 47.1**	**-0.8**
CHN4	**Tsaushan**	**1.05**	**243**	⇑*eP*	**Pb**	**19 20 33.8**	**0.0**
EGS		**1.05**	**16**	⇓*P*	**Pn**	**19 20 34.5**	**+0.3**
CHN2	**Minshiung**	**1.08**	**255**	⇑*P*	**Pn**	**19 20 34.5**	**0.0**
CHN2				*eS*	**Sn**	**19 20 49.6**	**+0.4**
WTP	**Ta-pu**	**1.08**	**238**	⇑*P*	**Pb**	**19 20 34.2**	**-0.2**
WTP				*eS*	**Sb**	**19 20 48.8**	**+0.4**
NJN	**Zhunan**	**1.09**	**322**	*eP*	**Pn**	**19 20 35.1**	**+0.5**
HSN1	**Hsinchu**	**1.09**	**330**	*eP*	**Pn**	**19 20 35.1**	**+0.5**
HSN1				*eS*	**Sb**	**19 20 48.9**	**+0.3**
TWGBT	**Beinan**	**1.12**	**206**	P	**Pb**	**19 20 34.8**	**-0.2**
TWGBT	**Beinan**	**1.12**	**206**	*eP*	**Pg**	**19 20 32.3**	**-3.3**
TWG	**Pinlang**	**1.12**	**207**		**Pg**	**19 20 32.7**	**-2.9**
TWG	**Pinlang**	**1.12**	**207**	*eP*	**Pg**	**19 20 33.0**	**-2.6**
SBCB	**Hsinchu**	**1.12**	**329**	⇑*eP*	**Pn**	**19 20 36.1**	**+1.1**
SBCB				*eS*	**Sn**	**19 20 50.4**	**+0.2**
NHDH	**Xindian Distri**	**1.13**	**356**	*eP*	**Pn**	**19 20 35.4**	**+0.2**
NHDH				*eS*	**Sb**	**19 20 49.9**	**+0.1**
HSN	**Hsinchu**	**1.14**	**329**	*eP*	**Pn**	**19 20 36.3**	**+1.0**
HSN				*eS*	**Sn**	**19 20 51.1**	**+0.6**
CHY	**Chiayi**	**1.14**	**254**	⇑*eP*	**Pb**	**19 20 35.2**	**-0.2**
CHY				*eS*	**Sb**	**19 20 50.4**	**+0.5**
TATO	**Taipei**	**1.15**	**354**		**Pn**	**19 20 35.7**	**+0.2**
TATO				Sg	**Sg**	**19 20 50.0**	**-1.3**
TATO	**Taipei**	**1.15**	**354**	P	**Pn**	**19 20 35.9**	**+0.5**
TATO	**Taipei**	**1.15**	**354**	P	**Pn**	**19 20 35.6**	**+0.2**
TATO				*eS*	**Sb**	**19 20 50.3**	**+0.1**
TWA	**Mucha**	**1.15**	**359**	*eP*	**Pn**	**19 20 35.5**	**+0.1**
TWA				*eS*	**Sg**	**19 20 49.4**	**-1.8**
RLNB	**Erlin**	**1.15**	**273**	⇑*P*	**Pb**	**19 20 35.3**	**-0.2**
RLNB				*eS*	**Sg**	**19 20 50.4**	**-0.9**
TTN	**Taitung**	**1.15**	**202**	*eP*	**Pg**	**19 20 35.3**	**-0.9**
TIPB	**Shuangxi**	**1.16**	**10**	⇓*P*	**Pn**	**19 20 35.6**	**0.0**
TIPB				*eS*	**Sg**	**19 20 50.1**	**-1.3**
TWK	**Hsinying**	**1.17**	**242**	⇑*P*	**Pb**	**19 20 35.8**	**-0.2**
TWK				S	**Sb**	**19 20 51.6**	**+0.6**
BACT	**New Taipei Cit**	**1.18**	**352**	*eP*	**Pn**	**19 20 36.6**	**+0.8**
CHN1	**Nanshi**	**1.18**	**238**	⇑*P*	**Pn**	**19 20 36.0**	**0.0**
CHN1				*eS*	**Sn**	**19 20 52.9**	**+1.1**
SNST	**Tainan City**	**1.19**	**240**	⇑*eP*	**Pg**	**19 20 37.8**	**+0.9**
SNST				*eS*	**Sn**	**19 20 54.1**	**+2.2**
NCUH	**Zhongli**	**1.20**	**341**	*eP*	**Pg**	**19 20 37.2**	**0.0**
NCUH				*eS*	**Sn**	**19 20 54.0**	**+1.8**
NTY	**Taoyuan**	**1.20**	**346**	*eP*	**Pg**	**19 20 36.9**	**-0.3**
SGST	**Jiashian**	**1.20**	**232**	⇑*eP*	**Pb**	**19 20 35.2**	**-1.2**
SGST				*eS*	**Sn**	**19 20 52.8**	**+0.6**
NHY	**Taipei**	**1.21**	**358**	*eP*	**Pg**	**19 20 37.0**	**-0.3**
TAP	**Taipei**	**1.21**	**355**	*eP*	**Pg**	**19 20 36.9**	**-0.5**
TAP				*eS*	**Sg**	**19 20 52.1**	**-1.0**
WTCT	**Ta-ch'eng**	**1.22**	**272**	⇑*P*	**Pn**	**19 20 36.3**	**-0.2**
WTCT				S	**Sb**	**19 20 52.3**	**0.0**
TWB1	**Santiao Chiao**	**1.23**	**16**	*eP*	**Pg**	**19 20 37.2**	**-0.4**
TWB1				*eS*	**Sn**	**19 20 53.9**	**+1.2**
NWF	**Wu-fen Shan**	**1.25**	**7**	*eP*	**Pg**	**19 20 37.6**	**-0.5**
NWF				*eS*	**Sn**	**19 20 54.1**	**+0.7**
WFSB	**Wu-fen Shan**	**1.25**	**7**	*eP*	**Pg**	**19 20 37.7**	**-0.4**
WMLT	**Mailiao**	**1.27**	**269**	*eP*	**Pn**	**19 20 37.3**	**+0.2**
WMLT				*eS*	**Sn**	**19 20 54.9**	**+1.0**
SXI1	**Grass Mountain**	**1.28**	**11**	⇓*P*	**Pg**	**19 20 38.0**	**-0.8**
WSF	**Szhu**	**1.29**	**262**	*eP*	**Pn**	**19 20 37.4**	**0.0**
WSF				*eS*	**Sn**	**19 20 55.2**	**+0.9**
WSL	**Shuilin Townsh**	**1.31**	**257**	⇑*P*	**Pb**	**19 20 38.0**	**-0.2**
WSL				*eS*	**Sg**	**19 20 56.1**	**-0.1**
YM01	**YM01**	**1.31**	**358**	*eP*	**Pg**	**19 20 38.5**	**-0.9**
YM01				*eS*	**Sn**	**19 20 56.0**	**+1.0**
TNOU	**National Taiwa**	**1.32**	**6**	*eP*	**Pg**	**19 20 39.3**	**-0.3**
TNOU				*eS*	**Sg**	**19 20 56.0**	**-0.9**
ZUZH	**Zhuzihu**	**1.33**	**357**	*eP*	**Pb**	**19 20 38.1**	**-0.6**
ZUZH				*eS*	**Sb**	**19 20 55.4**	**-0.1**
NTST	**Danshui**	**1.34**	**354**	*eP*	**Pg**	**19 20 39.9**	**+0.1**
NTST				*eS*	**Sg**	**19 20 57.9**	**+0.6**
YM08	**YM08**	**1.35**	**359**	*eP*	**Pn**	**19 20 38.1**	**-0.2**
ANP	**Anpu**	**1.36**	**356**	*eP*	**Pg**	**19 20 39.0**	**-1.1**
ANP				*eS*	**Sg**	**19 20 57.0**	**-0.8**
JYNG	**Yonagunijimaku**	**1.36**	**63**	P	**Pb**	**19 20 38.8**	**-0.4**
JYNG				A	A	19 20 38.8	
	comp=N,22nm,5.8s,comp=E,19nm,7.5s						
JYNG				*eS*	**Sg**	**19 20 57.5**	**-0.6**
ECL	**Taimali**	**1.37**	**207**	*eP*	**Pn**	**19 20 36.4**	**-2.0**
CHN3	**Shinhua**	**1.37**	**237**	*eP*	**Pg**	**19 20 39.6**	**-0.7**
CHN3				*eS*	**Sg**	**19 20 58.9**	**+0.7**
NWRT	**Kuosheng**	**1.37**	**2**	*eP*	**Pb**	**19 20 39.0**	**-0.2**
CHN8	**Yiju**	**1.37**	**250**	⇑*eP*	**Pn**	**19 20 38.8**	**+0.3**
CHN8				*eS*	**Sb**	**19 20 57.0**	**+0.4**
SSHA	**Shanhua**	**1.40**	**241**	*eP*	**Pg**	**19 20 39.9**	**-1.0**
SSHA				*eS*	**Sg**	**19 20 59.2**	**0.0**
SSD	**Sandimen**	**1.41**	**220**	*eP*	**Pn**	**19 20 39.0**	**+0.1**
SHHT	**Tainan City**	**1.41**	**236**	*eP*	**Pg**	**19 20 40.7**	**-0.5**
YOJ	**Yonaguni jima**	**1.42**	**63**		**Pb**	**19 20 39.8**	**-0.4**
YOJ				Sn	**Sg**	**19 20 58.6**	**-1.4**
YOJ	**Yonaguni jima**	**1.42**	**63**	P	**Pg**	**19 20 40.3**	**-1.1**
YOJ	**Yonaguni jima**	**1.42**	**63**	P	**Pg**	**19 20 39.9**	**-1.5**
YOJ				A	A	19 20 39.9	
	comp=N,23nm,6.7s,comp=E,21nm,2.4s						
YOJ				*eS*	**Sg**	**19 20 58.8**	**-1.2**
YOJ	**Yonaguni jima**	**1.42**	**63**	⇓*P*	**Pg**	**19 20 39.9**	**-1.5**
TWY	**Chenhua**	**1.44**	**359**	*eP*	**Pg**	**19 20 41.0**	**-0.7**
SCLT	**Jiali**	**1.46**	**244**	*eP*	**Pb**	**19 20 40.6**	**-0.2**
SCLT				*eS*	**Sg**	**19 21 00.4**	**-0.6**
TWM1	**Shoushan**	**1.48**	**228**	⇑*P*	**Pg**	**19 20 42.1**	**-0.4**
TAI1	**Yung-k'ang**	**1.50**	**239**	*eP*	**Pb**	**19 20 41.5**	**+0.1**
SGLT	**Jiouru**	**1.51**	**224**	*eP*	**Pg**	**19 20 42.3**	**-0.7**
MASBT	**Mashibuluo**	**1.51**	**217**	*eP*	**Pn**	**19 20 39.8**	**-0.6**
MASBT				*eS*	**Sg**	**19 21 02.0**	**-0.7**
TSPT	**Pingtung City**	**1.54**	**222**	*eP*	**Pg**	**19 20 42.9**	**-0.7**
TAI	**Tainan**	**1.54**	**238**	*eP*	**Pb**	**19 20 41.5**	**-0.7**
TSCK	**Chigu Township**	**1.56**	**245**	*eP*	**Pb**	**19 20 41.8**	**-0.6**
EAST	**Anshuo**	**1.60**	**206**	*eP*	**Pn**	**19 20 40.3**	**-1.3**
TAW	**Tawu**	**1.60**	**204**	*eP*	**Pn**	**19 20 40.4**	**-1.3**
TAWH	**Dawu Township**	**1.62**	**204**	*eP*	**Pn**	**19 20 42.3**	**+0.4**
SCZT	**Fangliau**	**1.71**	**213**	*eP*	**Pn**	**19 20 43.6**	**+0.4**
SCZT				*eS*	**Sb**	**19 21 06.6**	**+0.2**
WSSB	**Gushan**	**1.71**	**227**	*eP*	**Pb**	**19 20 45.0**	**-0.2**
SLIU	**Shizi**	**1.77**	**205**	*eP*	**Pn**	**19 20 44.7**	**+0.7**
LAY	**Lan-yu**	**1.78**	**182**	*eP*	**Pn**	**19 20 42.1**	**-2.0**
LYUB	**Lan-yu**	**1.82**	**181**	*eP*	**Pn**	**19 20 42.3**	**-2.3**
PCYT	**Pengchaiyu**	**1.84**	**13**	*eP*	**Pb**	**19 20 46.6**	**-0.8**
WLCH	**Liuqiu**	**1.86**	**218**	*eP*	**Pb**	**19 20 47.8**	**+0.2**
TWP	**Hsiaoliuchiu**	**1.87**	**218**	*eP*	**Pb**	**19 20 47.8**	**0.0**
WDGT	**Dungji**	**1.88**	**253**	*eP*	**Pn**	**19 20 45.4**	**0.0**
WDGT				*eS*	**Sn**	**19 21 09.5**	**+0.6**
PHUB	**P'eng-hu**	**1.90**	**261**	⇑*iP*	**Pn**	**19 20 45.7**	**-0.1**
PHUB				S	**Sn**	**19 21 10.1**	**+0.8**
PNG	**Penghu**	**1.91**	**263**	⇑*P*	**Pn**	**19 20 46.1**	**+0.2**
PNG				S	**Sn**	**19 21 09.5**	**-0.1**
SMST	**Manzhou Townsh**	**1.94**	**202**	*eP*	**Pn**	**19 20 47.0**	**+0.8**
HEN	**Hengchun**	**1.98**	**204**	*eP*	**Pb**	**19 20 48.8**	**-0.9**
IRIF	**Iriomote-Funau**	**2.00**	**75**	*eP*	**Pn**	**19 20 47.5**	**+0.4**
IRIF				A	A	19 20 47.5	
	comp=N,13nm,5.5s,comp=E,11nm,4.5s						
HATJ	**Hateruma jima**	**2.02**	**83**	A	A	19 21 13.7	
	comp=N,29nm,4.6s,comp=E,26nm,3.0s						
HATJ				*eS*	**Sb**	**19 21 13.7**	**-1.4**
TWK1	**Hengchun**	**2.02**	**202**	*eP*	**Pn**	**19 20 47.7**	**+0.3**
TWKBT	**Hengchun**	**2.02**	**202**	*eP*	**Pn**	**19 20 47.4**	**0.0**
TSEB	**Hengchuen, Pin**	**2.03**	**199**	*eP*	**Pn**	**19 20 48.7**	**+1.2**
VCHM	**Qimei**	**2.10**	**253**	*eP*	**Pn**	**19 20 49.2**	**+0.8**
VCHM				*eS*	**Sn**	**19 21 15.9**	**+1.6**
JKRS	**Kuro-shima**	**2.23**	**79**	*eP*	**Pb**	**19 20 51.9**	**-2.0**
JKRS				A	A	19 20 51.9	
	comp=N,24nm,3.2s,comp=E,27nm,3.6s						
VWUC	**VWUC**	**2.29**	**301**	⇑*P*	**Pn**	**19 20 50.1**	**-1.0**
JIJ	**Ishigaki jima**	**2.37**	**76**	P	**Pn**	**19 20 52.7**	**+0.4**
JIJ				A	A	19 20 52.7	
	comp=N,8.0nm,7.0s,comp=E,4.0nm,2.8s						
JIJ				*eS*	**Sn**	**19 21 21.6**	**+0.5**
JISG	**Ishigakijimahi**	**2.58**	**72**	P	**Pn**	**19 20 55.5**	**+0.5**
JISG				*eS*	**Sn**	**19 21 28.2**	**+2.2**
MATB	**Ma-tsu**	**2.77**	**327**	*eP*	**Pn**	**19 20 57.6**	**-0.1**
JTJ	**Tarama**	**2.93**	**73**	*eP*	**Pn**	**19 21 01.1**	**+1.1**
JTJ				*eS*	**Sn**	**19 21 36.5**	**+1.6**
KNM	**Kinmen**	**2.96**	**282**	⇑*eP*	**Pn**	**19 21 01.8**	**+1.4**
QZH2	**Quanzhou**	**2.97**	**293**	⇑*iPn*	**Pn**	**19 20 58.9**	**-1.5**
QZH2				Sn	**Sg**	**19 21 47.0**	**-2.4**
QZH2				smax	smax		
	comp=E,3μm,1.4s						
QZH2				smax	smax		
	comp=E,2μm,1.3s						
KNMB	**Chin-men Tao**	**3.02**	**283**		**Pn**	**19 21 00.4**	**-0.7**
KNMB	**Chin-men Tao**	**3.02**	**283**	⇑*eP*	**Pn**	**19 21 00.7**	**-0.4**
LYJJ	**Jianjiangzhen**	**3.19**	**329**	*eP*	**Pn**	**19 21 03.6**	**+0.1**
MHZQ	**Yeshan**	**3.26**	**315**	*eP*	**Pn**	**19 21 04.2**	**-0.3**
XPSS	**Dashiqiu**	**3.35**	**338**	*eP*	**Pn**	**19 21 05.2**	**-0.4**
JIRB	**Irabujima**	**3.40**	**72**	*eP*	**Pn**	**19 21 07.7**	**+1.4**
JIKM	**Ikemajima**	**3.49**	**71**	*eS*	**Sn**	**19 21 50.8**	**+2.2**
AXDP	**Jialang**	**3.49**	**289**	*eP*	**Pn**	**19 21 07.5**	**-0.1**
JMJ	**Miyako jima 2**	**3.50**	**73**	P	**Pn**	**19 21 10.0**	**+2.3**
JMJ	**Miyako jima 2**	**3.50**	**73**	*eP*	**Pn**	**19 21 10.8**	**+3.1**
JMJ2	**Miyako jima3**	**3.51**	**74**	*eP*	**Pn**	**19 21 09.7**	**+1.8**
JMJ2				*eS*	**Sn**	**19 21 50.9**	**+1.8**
ZPLA	**Ao Xicun**	**3.54**	**272**	⇑*eP*	**Pn**	**19 21 08.2**	**-0.1**
JOGS	**Gusukube**	**3.58**	**74**	*eP*	**Pn**	**19 21 10.6**	**+1.7**
DSXP	**Dongshan**	**3.84**	**269**	*eP*	**Pn**	**19 21 12.3**	**-0.2**
SXFK	**Yanhouchang**	**4.42**	**306**	*eP*	**Pn**	**19 21 20.6**	**+0.2**
JOW	**Kunigami**	**6.73**	**62**	Pn	**Pn**	**19 21 51.9**	**-0.3**
	comp=E,8.1nm,0.3s,baz=150,slow=12,SNR=14						
JOW				Sn	**Sn**	**19 23 08.7**	**+0.1**
	comp=E,1.8nm,0.3s,baz=242,slow=26,SNR=1.4						
	comp=E,17nm,0.3s						
JOW	**Kunigami**	**6.73**	**62**	Pn	**Pn**	**19 21 51.6**	**-0.5**
JOW	**Kunigami**	**6.73**	**62**	P	**Pn**	**19 21 52.2**	**0.0**
HKPS	**Hong Kong Po S**	**7.05**	**259**	Pn	**Pn**	**19 21 56.4**	**-0.2**
HKPS	**Hong Kong Po S**	**7.05**	**259**	P	**Pn**	**19 21 56.9**	**+0.3**
SSE	**Sheshan**	**7.25**	**357**	Pn	**Pn**	**19 21 59.5**	**+0.2**
SSE				Sn	**Sn**	**19 23 24.4**	**+3.1**
SSE				smax	smax		
	comp=E,110nm,1.1s						
SSE				smax	smax		
	comp=E,140nm,1.3s						
SSE				LR	LR		
	comp=E,2μm,9.3s						
SSE				LR	LR		
	comp=E,880nm,9.6s						
GZH2	**Guangzhou**	**7.30**	**270**	Pn	**Pn**	**19 22 00.3**	**+0.3**
GZH2				Sn	**Sn**	**19 23 24.3**	**+1.8**
GZH2				smax	smax		
	comp=E,1μm,1.3s						
GZH2				smax	smax		
	comp=E,640nm,0.9s						
NJ2	**Nanjing**	**8.55**	**344**	⇑*P*	**Pn**	**19 22 17.8**	**+0.7**
NJ2				S	**Sn**	**19 23 49.8**	**-3.5**
NJ2				pmax	pmax		
	comp=E,36nm,0.8s						
NJ2				smax	smax		
	comp=E,380nm,1.1s						
NJ2				smax	smax		
	comp=E,240nm,1.4s						
NJ2				LR	LR		
	comp=E,8μm,9.7s						
NJ2				LR	LR		
	comp=E,8μm,8.5s						
TGY	**Tagaytay City**	**9.69**	**184**	LR	LR	19 26 13.9	
	comp=E,769nm,21.3s,baz=340,slow=38						
QIZ	**Qiongzhong**	**11.96**	**249**	Pn	**Pn**	**19 23 04.2**	**+0.3**
QIZ	**Qiongzhong**	**11.96**	**249**	P	**Pn**	**19 23 04.8**	**+0.9**
QIZ	**Qiongzhong**	**11.96**	**249**	P	**Pn**	**19 23 03.0**	**-0.9**
QIZ				S	**Sn**	**19 25 17.4**	**+0.4**
QIZ				LR	LR		
	comp=E,2μm,19.2s						
QIZ				LR	LR		
	comp=E,1μm,14.6s						
QIZ				LR	LR		
	comp=E,2μm,14.6s						
JNU	**Nakatsue**	**12.33**	**39**	Pn	**Pn**	**19 23 09.2**	**+0.3**
	comp=E,0.2nm,0.3s,baz=224,slow=20,SNR=1.4						
JNU				LR	LR	19 28 31.7	
	comp=E,547nm,19.1s,baz=224,slow=41						
	comp=E,1.7nm,0.6s						
ENH	**Enshi**	**12.56**	**303**		**Pn**	**19 23 11.6**	**-0.6**
TIA	**Tai'an**	**12.94**	**344**	P	**Pn**	**19 23 21.8**	**+4.6**
TIA				pmax	pmax		
	comp=E,9.0nm,0.6s						
TIA				LR	LR		
	comp=E,5μm,9.3s						
TIA				LR	LR		
	comp=E,2μm,8.2s						
TIA				LR	LR		
	comp=E,8μm,8.2s						
GYA	**Guiyang**	**13.79**	**284**	⇓*P*	**Pn**	**19 23 30.8**	**+1.7**
GYA				S	**Sn**	**19 26 02.4**	**+0.3**
GYA				pmax	pmax		
	comp=E,56nm,1.2s						
GYA				pmax	pmax		
	comp=E,180nm,3.1s						
GYA				LR	LR		
	comp=E,3μm,7.8s						
GYA				LR	LR		
	comp=E,9μm,11.5s						
GYA				LR	LR		
	comp=E,12μm,11.1s						
KSAR	**Wonju Array Be**	**14.60**	**20**	Pn	**Pn**	**19 23 40.4**	**+0.4**
KSRS	**Korea Array**	**14.62**	**20**	Pn	**P**	**19 23 45.6**	**-0.9**
	comp=E,0.6nm,0.3s,baz=197,slow=12,SNR=15						
KSRS				LR	LR	19 29 54.6	
	comp=E,592nm,19.2s,baz=200,slow=40						
HNS	**HongShan**	**14.77**	**338**	⇓*P*	**Pn**	**19 23 43.3**	**+1.1**
HNS				S	**S**	**19 26 36.8**	**-7.2**
HNS				pmax	pmax		
	comp=E,23nm,2.3s						
HNS				LR	LR		
	comp=E,2μm,11.8s						
HNS				LR	LR		
	comp=E,5μm,11.2s						
DL2	**Dalian**	**15.03**	**0**	P	**Pn**	**19 23 41.3**	**-4.5**
DL2				S	**Sn**	**19 26 22.3**	**-10**
DL2				pmax	pmax		
	comp=Z,48nm,1.5s						
DL2				pmax	pmax		
	comp=Z,230nm,6.1s						
DL2				LR	LR		
	comp=N,2μm,12.8s						
DL2				LR	LR		
	comp=E,2μm,10.4s						
DL2				LR	LR		
	comp=Z,3μm,12

XLT pmax pmax
comp=Z,14nm,1.4s
XLT pmax pmax
comp=Z,130nm,5.1s
XLT LR LR
comp=Z,140nm,11.5s
XLT LR LR
comp=Z,1µm,12.3s
XLT LR LR
comp=Z,2µm,11.5s
TNCH TengChong 21.06 278 P **P** **19 25 00.1 +2.4**
TNCH S **S** **19 28 47.5 -4.4**
TNCH pmax pmax
comp=Z,28nm,1.5s
TNCH pmax pmax
comp=Z,420nm,3.7s
TNCH LR LR
comp=Z,2µm,6.5s
TNCH LR LR
comp=Z,5µm,9.7s
TNCH LR LR
comp=Z,7µm,10.1s
CHTO Chiang Mai 21.69 261 **P** **19 25 03.2 -1.1**
CHTO Chiang Mai 21.69 261 P **P** **19 25 07.3 +2.9**
MDJ Mudanjiang 21.74 16 P **P** **19 25 04.5 -0.1**
MDJ Mudanjiang 21.74 16 P **P** **19 25 07.8 +3.2**
MDJ PP **PnPn** **19 25 27.6 +1.8**
MDJ S **S** **19 29 06.1 +1.5**
MDJ pmax pmax
comp=Z,16nm,1.6s
MDJ LR LR
comp=Z,1µm,15.2s
MDJ LR LR
comp=Z,3µm,15.8s
MDJ LR LR
comp=Z,2µm,19.3s
CM31 Chiang Mai Arr 21.80 260 P **P** **19 25 04.2 -1.4**
CMAR Chiang Mai Arr 21.80 260 P **P** **19 25 07.8 +2.3**
comp=Z,4.1nm,0.9s,baz=64,slow=8.1,SNR=24
CMAR PcP **PcP** **19 29 07.1 +1.5**
comp=Z,0.8nm,0.7s,baz=357,slow=1.0,SNR=6.4
CMAR LR LR 19 33 55.7
comp=Z,465nm,21.4s,baz=75,slow=38
comp=Z,4.1nm,0.9s
CMAR Chiang Mai Arr 21.80 260 P **P** **19 25 05.3 -0.2**
USRK Ussuriysk Ar. 22.03 20 P **P** **19 25 09.4 +1.7**
comp=Z,2.5nm,0.7s,baz=230,slow=11,SNR=2.2
comp=Z,2.5nm,0.7s
BNX BinXian 22.36 11 ⇑P **P** **19 25 12.0 +0.7**
BNX pmax pmax
comp=Z,5.0nm,1.4s
TOLI2 Tolitoli 22.59 182 **P** **19 25 10.8 -3.2**
TOLI2 IAmb IAmb 19 25 15.8
comp=Z,39nm,1.1s
SBUM Sibu 23.11 205 P **P** **19 25 17.8 -1.7**
SBUM Sibu 23.11 205 P **P** **19 25 20.3 +0.9**
MRSI Marisa 23.21 179 P **P** **19 25 25.0 +4.6**
comp=Z,41nm,1.5s
MPSI Mapaga 23.41 184 P **P** **19 25 23.8 +1.4**
TNTI Ternate 23.59 165 P **P** **19 25 23.0 -1.2**
TNTI IAmb IAmb 19 25 40.9
comp=Z,58nm,1.2s
GTA2 Gaotai 24.19 315 *e*P **P** **19 25 31.1 +1.2**
GTA2 PcP **PcP** **19 29 11.8 +1.4**
GTA2 sS sS 19 30 00.3 +4.1
GTA2 pmax pmax
comp=Z,12nm,2.3s
GTA2 LR LR
comp=Z,1µm,12.7s
GTA2 LR LR
comp=Z,3µm,12.0s
GUMO Guam 24.23 111 LR LR 19 33 12.2
comp=Z,308nm,20.5s,baz=328,slow=32
APSI Ampana 24.59 180 P **P** **19 25 35.3 +1.8**
comp=Z,838nmcomp=Z,58nm,1.2s
PCI Palu 24.64 184 P **P** **19 25 35.4 +1.3**
comp=Z,1µmcomp=Z,59nm,1.3s
LUWI Luwuk 24.75 177 P **P** **19 25 33.6 -1.3**
LUWI Luwuk 24.75 177 P **P** **19 25 40.6 +5.7**
comp=Z,1µmcomp=Z,106nm,1.2s
HIA Hailar 25.43 357 P **P** **19 25 40.6 -0.3**
HILR Hailar Array B 25.72 357 P **P** **19 25 44.4 +0.8**
comp=Z,6.7nm,1.0s,baz=188,slow=10.0,SNR=5.2
comp=Z,6.7nm,1.0s
SANI Sanana 26.07 170 P **P** **19 25 50.4 +3.4**
comp=Z,17nm,1.0s
GOMU GeErMu 26.19 304 P **P** **19 25 47.8 -0.5**
GOMU S **S** **19 30 18.8 -1.3**
GOMU pmax pmax
comp=Z,10.0nm,1.3s
GOMU LR LR
comp=Z,1µm,9.0s
SIJI Sorong 26.28 158 LR LR 19 34 44.5
comp=Z,101nm,21.1s,baz=136,slow=33
MMSI Mamuju 26.49 186 P **P** **19 25 55.3 +4.5**
comp=Z,49nm,1.0s
ASAJ Asahikawa 26.55 35 P **P** **19 25 50.6 -0.5**
comp=Z,1.6nm,0.5s,baz=217,slow=11,SNR=8.0
ASAJ LR LR 19 38 21.2
comp=Z,278nm,18.3s,baz=244,slow=41
comp=Z,1.6nm,0.5s
JKA Kamikawa-asahi 26.55 35 P **P** **19 25 50.5 -0.6**
KLR Kul'dur 26.58 15 LR LR 19 36 25.9
comp=Z,123nm,19.4s,baz=200,slow=37
ULN Ulaanbaatar 26.64 338 P **P** **19 25 51.6 -0.5**
ULN Ulaanbaatar 26.64 338 P **P** **19 25 54.7 +2.6**
comp=Z,57nm,1.7s
HEH HeiHe 26.77 8 *e*P **P** **19 25 55.6 +2.7**
HEH pmax pmax
comp=Z,13nm,1.2s
HEH LR LR
comp=Z,650nm,13.9s
HEH LR LR
comp=Z,920nm,13.0s
HEH LR LR
comp=Z,2µm,12.7s
SONM Songino Array 26.85 337 P **P** **19 25 54.2 +0.3**
comp=Z,4.1nm,0.9s,baz=158,slow=8.6,SNR=16
SONM LR LR 19 37 00.7
comp=Z,641nm,18.9s,baz=142,slow=38
comp=Z,4.1nm,0.9s
SONM Songino Array 26.85 337 P **P** **19 25 53.7 -0.2**
SONM IAmb IAmb 19 26 00.5
comp=Z,34nm,1.8s
SHL Shillong 27.04 280 P **P** **19 25 55.2 -0.8**
SHL IAmb IAmb 19 26 01.7
comp=Z,74nm,1.6s
NLAI Namlea 27.43 168 P **P** **19 26 02.8 +3.6**
comp=Z,753nmcomp=Z,61nm,1.1s
BRDH Bariadhala 27.54 274 LR LR 19 38 31.6
comp=Z,283nm,20.1s,baz=188,slow=40
IPM Ipoh 27.64 229 P **P** **19 26 00.1 -1.1**
IPM IAmb IAmb 19 26 08.8
comp=Z,21nm,1.3s
IPM Ipoh 27.64 229 P **P** **19 26 08.1 +6.9**
LSA Lhasa 27.77 289 P **P** **19 26 02.7 -0.1**
LSA IAmb IAmb 19 26 14.4
comp=Z,57nm,1.9s
LSA Lhasa 27.77 289 P **P** **19 26 01.3 -1.5**
LSA pmax pmax
comp=Z,2.0nm,0.9s
LSA LR LR
comp=Z,440nm,8.6s
LSA LR LR
comp=Z,1µm,10.1s
LSA LR LR
comp=Z,1µm,11.1s
BBKI Banjar Baru 27.91 195 P **P** **19 26 05.9 +2.3**
comp=Z,43nm,1.4s
KAPI Kappang 28.72 184 LR LR 19 38 12.2
comp=Z,135nm,20.2s,baz=356,slow=38
KAPI Kappang 28.72 184 P **P** **19 26 09.1 -1.7**
KAPI Kappang 28.72 184 P **P** **19 26 10.5 -0.2**
TPI Tanjungpandan 29.71 209 P **P** **19 26 22.7 +3.1**
comp=Z,16nm,1.1s
PSI Prapat 30.30 230 P P 19 26 31.9 +7.0
RPSI Rantau Prapat 30.38 230 P **P** **19 26 24.8 -0.7**
RPSI IAmb IAmb 19 26 34.0
comp=Z,15nm,1.3s
JAY Jayapura 32.10 142 LR LR 19 37 10.7
comp=Z,268nm,21.0s,baz=312,slow=32
MMRI Maumere 32.27 179 P **P** **19 26 40.1 -2.0**
MMRI Maumere 32.27 179 P **P** **19 26 42.2 +0.1**
comp=Z,46nm,1.2s
EDFI Ende, Flores 32.38 180 P **P** **19 26 41.7 -1.5**
KHKI Kahang-Kahang 32.53 191 P **P** **19 26 47.5 +3.2**
comp=Z,34nm,1.1s

KLSI 32.78 212 P **P** **19 26 50.1 +3.5**
comp=Z,25nm,1.0s
SJI Sawahan 32.81 198 P **P** **19 26 49.0 +2.1**
comp=Z,30nm,0.9s
SNJI Sawahan-Nganju 32.86 198 P **P** **19 26 49.4 +2.0**
comp=Z,35nm,0.9s
MDSI Maura Dua 32.88 213 P **P** **19 26 51.3 +3.9**
comp=Z,22nm,1.1s
CTJI Waduk Cacaban 32.96 203 P P 19 26 58.0 +10
KPJI Karang Pucung 33.35 203 P P 19 27 01.1 +10
LWLI Liwa 33.39 213 P **P** **19 26 55.4 +3.3**
SOEI Soe 33.48 175 P **P** **19 26 51.1 -1.7**
SOEI IAmb IAmb 19 27 19.6
comp=Z,18nm,0.9s
KASI Kota Agung 33.61 212 P P 19 27 02.9 +9.0
BATI Baumata 33.88 176 LR LR 19 44 15.6
comp=Z,87nm,18.3s,baz=348,slow=43
BATI Baumata 33.88 176 P **P** **19 26 55.0 -1.2**
comp=Z,28nm,0.9s
WMQ Urumqi 34.19 314 *e*P P 19 27 03.8 +5.1
WMQ pmax pmax
comp=Z,13nm,1.3s
WMQ LR LR
comp=Z,1µm,9.7s
WMQ LR LR
comp=Z,1µm,10.7s
WMQ LR LR
comp=Z,410nm,11.3s
MTN Manton Dam 37.62 165 P **P** **19 27 25.9 -2.3**
MTN IAmb IAmb 19 27 27.4
comp=Z,41nm,1.4s
YAK Yakutsk 38.58 6 P **P** **19 27 35.2 -0.7**
comp=Z,3.7nm,0.4s,baz=110,slow=18,SNR=5.5
YAK LR LR 19 45 13.5
comp=Z,425nm,18.2s,baz=163,slow=39
comp=Z,3.7nm,0.4s
YAK Yakutsk 38.58 6 P **P** **19 27 34.7 -1.1**
MKAR Makanchi Array 38.87 316 P **P** **19 27 38.9 +0.3**
comp=Z,2.3nm,0.7s,baz=104,slow=10,SNR=15
MKAR PcP **PcP** **19 29 49.5 +0.1**
comp=Z,2.2nm,0.9s,baz=97,slow=2.8,SNR=4.4
MKAR ScP **ScP** **19 33 37.7 +0.5**
comp=Z,0.6nm,0.9s,baz=117,slow=1.6,SNR=4.8
MKAR LR LR 19 44 54.9
comp=Z,410nm,19.5s,baz=96,slow=38
comp=Z,2.3nm,0.7s
MKAR Makanchi Array 38.87 316 P **P** **19 27 38.4 -0.2**
MKAR **PcP** **19 29 48.9 -0.5**
MAKZ Makanchi 39.07 316 P **P** **19 27 40.2 0.0**
WUS Wushi 39.29 307 P **P** **19 27 41.8 -0.5**
WUS IAmb IAmb 19 28 03.6
comp=Z,44nm,2.0s
PETK Petropavlovsk- 39.94 34 LR LR 19 46 16.1
comp=Z,223nm,18.2s,baz=213,slow=39
TARG Taragay, Kyrgy 40.44 307 **P** **19 27 51.7 -0.5**
TARG IAmb IAmb 19 28 12.5
comp=Z,36nm,1.9s
ZAA0 Zalesovo Array 40.76 327 **P** **19 27 53.8 -0.3**
ZALV Zalesovo Beam 40.76 327 P **P** **19 27 54.2 0.0**
comp=Z,1.1nm,0.4s,baz=106,slow=8.6,SNR=12
ZALV PcP **PcP** **19 29 54.5 -0.7**
comp=Z,0.6nm,0.6s,baz=150,slow=3.2,SNR=1.5
ZALV LR LR 19 44 42.4
comp=Z,274nm,20.1s,baz=334,slow=36
comp=Z,1.1nm,0.4s
ZALV Zalesovo Beam 40.76 327 P **P** **19 27 53.4 -0.8**
MA2 Magadan 41.16 22 LR LR 19 45 27.4
comp=Z,203nm,18.4s,baz=258,slow=37
PMG Port Moresby 41.40 140 P **P** **19 27 57.9 -2.0**
PMG Port Moresby 41.40 140 P **P** **19 28 02.1 +2.2**
comp=Z,44nm,1.2s
KSH2 Kashi 41.69 303 P **P** **19 28 03.8 +1.6**
KSH2 pmax pmax
comp=Z,4.0nm,1.0s
KSH2 LR LR
comp=Z,970nm,12.4s
KSH2 LR LR
comp=Z,990nm,12.0s
KSH2 LR LR
comp=Z,1µm,16.1s
NRN Naryn 41.71 306 P **P** **19 28 02.5 -0.1**
H11N1 WAKE ISLAND Hy 42.12 87 T T 20 13 25.9
baz=283,slow=74,SNR=69
H11N2 WAKE ISLAND Hy 42.12 86 T T 20 13 08.9
baz=283,slow=74,SNR=62
H11N3 WAKE ISLAND Hy 42.13 87 T T 20 13 07.5
baz=283,slow=74,SNR=81
H11S3 WAKE ISLAND Hy 42.23 88 T T 20 13 11.9
baz=284,slow=74,SNR=374
H11S1 WAKE ISLAND Hy 42.24 88 T T 20 13 12.5
baz=284,slow=74,SNR=201
H11S2 WAKE ISLAND Hy 42.25 88 T T 20 13 13.1
baz=284,slow=74,SNR=154
PALK Pallekele 42.52 254 LR LR 19 48 46.6
comp=Z,116nm,18.2s,baz=30,slow=40
KURK Kurchatov 42.62 320 P **P** **19 28 08.9 -0.5**
KURBB Kurchatov Arra 42.63 320 P **P** **19 28 10.2 +0.6**
comp=Z,3.6nm,1.0s,baz=112,slow=7.5,SNR=8.3
comp=Z,3.6nm,1.0s
FRU1 Bishkek 42.97 308 P **P** **19 28 11.6 -0.9**
AAK Ala-Archa 43.03 308 LR LR 19 48 27.3
comp=Z,388nm,21.2s,baz=70,slow=39
AAK Ala-Archa 43.03 308 P **P** **19 28 11.6 -1.5**
COEN Coen 43.06 148 P **P** **19 28 12.5 -0.9**
COEN IAmb IAmb 19 28 15.5
comp=Z,31nm,1.1s
NIL Nilore 43.19 294 P **P** **19 28 12.6 -1.7**
ARSB Arslanbob 43.94 305 P **P** **19 28 19.9 -0.6**
ARSB IAmb IAmb 19 28 53.8
comp=Z,21nm,1.7s
SEY Seymchan 44.18 20 LR LR 19 46 21.1
comp=Z,239nm,21.8s,baz=158,slow=36
WB0 Warramunga Arr 45.09 163 P **P** **19 28 28.4 -1.1**
WB0 IAmb IAmb 19 28 29.6
comp=Z,14nm,0.9s
PSA00 Pilbara Seismi 45.16 182 P **P** **19 28 28.4 -1.7**
PSA00 Pilbara Seismi 45.16 182 P **P** **19 28 28.2 -1.9**
PSA00 IAmb IAmb 19 28 29.6
comp=Z,12nm,0.9s
WRA Warramunga Arr 45.24 163 P **P** **19 28 29.9 -0.8**
comp=Z,9.6nm,0.9s,baz=344,slow=8.7,SNR=72
WRA PcP **PcP** **19 30 11.0 +0.2**
comp=Z,0.9nm,0.9s,baz=332,slow=2.3,SNR=2.4
comp=Z,9.6nm,0.9s
BTK Batken 45.43 303 P **P** **19 28 31.5 -0.8**
BTK IAmb IAmb 19 28 41.0
comp=Z,23nm,1.7s
KKAR Karatay Array 46.00 308 P **P** **19 28 34.9 -1.8**
CHGR Chuyangaron 46.62 301 P **P** **19 28 39.4 -2.3**
CHGR IAmb IAmb 19 28 53.9
comp=Z,22nm,1.3s
KBL Kabul 46.67 296 P **P** **19 28 41.1 -1.2**
KBL IAmb IAmb 19 28 50.9
comp=Z,23nm,1.2s
TIXI Tiksi 48.03 3 LR LR 19 51 08.7
comp=Z,571nm,18.7s,baz=212,slow=39
TIXI Tiksi 48.03 3 P **P** **19 28 50.5 -1.5**
TIXI IAmb IAmb 19 29 01.1
comp=Z,22nm,1.4s
BVAR Borovoye Array 48.20 321 P **P** **19 28 55.4 +1.8**
comp=Z,1.7nm,0.6s,baz=88,slow=7.6,SNR=12
BVAR PcP **PcP** **19 30 20.6 -0.1**
comp=Z,2.6nm,0.8s,baz=104,slow=3.1,SNR=6.0
BVAR LR LR 19 51 10.2
comp=Z,244nm,19.5s,baz=328,slow=38
comp=Z,1.7nm,0.6s
BORK Borovoye 48.24 321 P **P** **19 28 53.4 -0.6**
BORK IAmb IAmb 19 29 09.9
comp=Z,14nm,1.2s
AS31 Alice Springs 48.69 165 **P** **19 28 56.5 -1.2**
ASAR Alice Springs 48.70 165 P **P** **19 28 57.2 -0.5**
comp=Z,7.8nm,0.9s,baz=342,slow=6.8,SNR=57
ASAR PcP **PcP** **19 30 22.5 -0.4**
comp=Z,0.4nm,0.7s,baz=341,slow=3.3,SNR=1.5
ASAR LR LR 19 50 48.0
comp=Z,80nm,19.0s,baz=350,slow=38
comp=Z,7.8nm,0.9s
ASAR Alice Springs 48.70 165 P **P** **19 28 55.6 -2.1**
SHEM Shemya Is, Ala 48.85 40 LR LR 19 48 39.4
comp=Z,67nm,21.5s,baz=346,slow=35
CTA Charters Tower 49.82 149 LR LR 19 48 08.9
comp=Z,149nm,21.9s,baz=358,slow=34
CTAO Charters Tower 49.82 149 P **P** **19 29 05.5 -0.8**
CTAO IAmb IAmb 19 29 08.8
comp=Z,23nm,1.3s
NRIK Noril'sk 49.85 345 P **P** **19 29 06.2 +0.2**
comp=Z,0.7nm,0.4s,baz=161,slow=5.2,SNR=3.9

NRIK LR LR 19 52 21.2
comp=Z,719nm,18.1s,baz=310,slow=39
comp=Z,0.7nm,0.4s
NRIK Noril'sk 49.85 345 P **P** **19 29 05.6 -0.4**
HNR Honiara 49.96 127 LR LR 19 48 29.6
comp=Z,5.4nm,20.8s,baz=44,slow=34
BILL Bilibino 51.89 20 P **P** **19 29 21.3 -0.1**
HRA Herat 52.29 296 P **P** **19 29 23.2 -2.0**
AB31 Akbulak array 53.97 315 P **P** **19 29 36.4 -0.7**
AB31 IAmb IAmb 19 29 45.7
comp=Z,7.7nm,0.9s
AB31 PcP **PcP** **19 30 40.5 -1.7**
ABKAR Akbulak array 53.97 315 P **P** **19 29 36.6 -0.4**
ABKAR PcP **PcP** **19 30 40.9 -1.4**
AKTO Aktyubinsk 55.30 316 LR LR 19 53 16.5
comp=Z,228nm,18.6s,baz=30,slow=36
ARTI Arti 55.72 323 LR LR 19 54 53.3
comp=Z,403nm,20.5s,baz=310,slow=37
ARTI Arti 55.72 323 P **P** **19 29 49.3 -0.3**
ARTI IAmb IAmb 19 29 55.3
comp=Z,5.8nm,0.6s
BBOO Buckleboo 57.98 166 P **P** **19 30 05.0 -0.9**
STKA Stephens Creek 58.59 160 P **P** **19 30 10.0 -0.1**
comp=Z,7.8nm,0.9s,baz=325,slow=7.8,SNR=11
STKA LR LR 19 56 51.6
comp=Z,57nm,20.5s,baz=21,slow=38
comp=Z,7.8nm,0.9s
STKA Stephens Creek 58.59 160 **P** **19 30 09.7 -0.5**
TNA Tin City 60.48 27 **P** **19 30 23.2 +0.4**
TNA IAmb IAmb 19 30 38.6
comp=Z,15nm,1.4s
TNA Tin City 60.48 27 P **P** **19 30 22.3 -0.5**
baz=263
UNV Unalaska Valle 60.51 40 P **P** **19 30 23.6 +0.5**
baz=271
KIRV Kirov 60.74 325 LR LR 19 59 24.1
comp=Z,452nm,19.0s,baz=297,slow=39
M11K Mekoryuk 60.80 33 P **P** **19 30 25.2 +0.1**
baz=267
F14K Arctic Creek 61.13 27 P **P** **19 30 27.8 +0.5**
baz=264
ANM Nome 61.45 28 **P** **19 30 29.8 +0.4**
ANM IAmb IAmb 19 30 37.7
comp=Z,22nm,1.4s
ANM Nome 61.45 28 P **P** **19 30 29.5 0.0**
baz=266
K13K Kusilvak Mount 61.62 31 P **P** **19 30 29.2 -1.4**
baz=268
C16K Lisburne Hills 61.82 24 P **P** **19 30 30.7 -1.1**
baz=264
F15K North Star Dit 61.85 27 **P** **19 30 32.7 +0.6**
F15K IAmb IAmb 19 30 40.1
comp=Z,13nm,1.2s
F15K North Star Dit 61.85 27 P **P** **19 30 32.7 +0.6**
baz=266,SNR=8.4
G15K Niukluk 62.05 28 P **P** **19 30 33.9 +0.4**
baz=267
J14K Nanvaranak Lak 62.17 30 P **P** **19 30 35.3 +1.1**
baz=268
M13K Dall Lake 62.22 33 P **P** **19 30 34.5 -0.1**
baz=270
L14K Kuka Creek 62.55 32 P **P** **19 30 36.8 0.0**
baz=270
D17K Noatak River 62.62 25 P **P** **19 30 37.6 +0.4**
baz=266,SNR=15
C17K DeLong Mountai 62.64 24 P **P** **19 30 37.7 +0.4**
baz=266
RDOG Red Dog Mine 62.70 24 P **P** **19 30 36.5 -1.3**
baz=266
G16K Koyuk River 62.78 27 P **P** **19 30 39.3 +1.0**
baz=268
H16K Elim 62.81 28 P **P** **19 30 38.9 +0.4**
baz=268
M14K Bethel 62.90 32 P **P** **19 30 39.1 -0.1**
baz=271
N14K Kuskokwak Cree 63.05 33 P **P** **19 30 40.0 -0.2**
baz=271
E17K Hotham Inlet 63.06 25 P **P** **19 30 39.6 -0.6**
baz=268
K15K Wolf Creek Mou 63.10 31 P **P** **19 30 41.2 +0.7**
K15K IAmb IAmb 19 30 48.9
comp=Z,18nm,1.2s
K15K Wolf Creek Mou 63.10 31 P **P** **19 30 40.2 -0.3**
baz=270
DZM Mont Dzumac 63.10 133 LR LR 19 53 23.0
comp=Z,100nm,21.1s,baz=3.5,slow=32
L15K Ungalak Mounta 63.12 31 P **P** **19 30 40.6 0.0**
baz=271
O14K Tigyukauivet M 63.29 34 P **P** **19 30 40.2 -1.5**
baz=272
C18K Utukok River 63.38 24 P **P** **19 30 42.9 +0.6**
C18K IAmb IAmb 19 31 22.8
comp=Z,22nm,1.8s
C18K Utukok River 63.38 24 P **P** **19 30 40.7 -1.6**
baz=267
I17K Unalakleet 63.47 29 P **P** **19 30 41.6 -1.3**
baz=270
G17K Kiwalik Mounta 63.50 27 P **P** **19 30 42.5 -0.6**
baz=269
J16K Anvik River 63.52 30 P **P** **19 30 42.2 -1.1**
baz=271
E18K Tukpahlearik C 63.55 25 P **P** **19 30 41.2 -2.3**
baz=268
H17K Granite Mounta 63.81 28 P **P** **19 30 44.9 -0.3**
baz=270
N15K Kwethluk River 63.85 33 **P** **19 30 46.1 +0.6**
N15K Kwethluk River 63.85 33 P **P** **19 30 44.9 -0.6**
baz=273
F18K Selawik 63.91 26 P **P** **19 30 47.4 +1.6**
baz=270,SNR=12
SDPT Sand Point 63.94 38 P **P** **19 30 45.5 -0.7**
baz=275
C19K Lookout Ridge 63.97 23 **P** **19 30 46.7 +0.5**
C19K IAmb IAmb 19 30 49.9
comp=Z,12nm,1.4s
C19K Lookout Ridge 63.97 23 P **P** **19 30 44.8 -1.4**
baz=269
L16K Owhat River 64.08 31 P **P** **19 30 45.5 -1.5**
baz=272
J17K VABM Dome 64.20 29 P **P** **19 30 46.6 -1.2**
baz=272
G18K Tagagawik 64.32 27 P **P** **19 30 46.2 -2.3**
baz=271
M16K Timber Creek 64.36 32 P **P** **19 30 47.4 -1.5**
baz=273
H18K Honhosa River 64.46 27 P **P** **19 30 49.5 0.0**
baz=272
N16K Nishlik Lake 64.49 33 P **P** **19 30 49.4 -0.4**
baz=274
D19K Kuna River 64.50 24 P **P** **19 30 49.1 -0.6**
baz=270,SNR=10
K17K Iditarod 64.58 30 P **P** **19 30 49.1 -1.2**
baz=273
L17K Donlin 64.62 31 P **P** **19 30 49.9 -0.6**
baz=273
F19K Shaleruckik Mo 64.66 26 P **P** **19 30 49.9 -0.8**
baz=271
E19K Redstone River 64.85 25 P **P** **19 30 50.0 -2.0**
baz=272,SNR=9.2
O16K Kokwok River B 64.89 34 P **P** **19 30 50.2 -2.1**
baz=274
G19K Purcell Mounta 64.95 26 P **P** **19 30 53.5 +0.8**
G19K Purcell Mounta 64.95 26 P **P** **19 30 52.4 -0.3**
baz=272
P16K Nushagak River 64.99 34 P **P** **19 30 51.2 -1.7**
baz=275
A21K Barrow 65.01 21 P **P** **19 30 51.5 -1.3**
baz=270,SNR=6.5
D20K Etivluk River 65.05 23 P **P** **19 30 51.6 -1.7**
baz=272
M17K Holitna River 65.07 32 P **P** **19 30 52.0 -1.5**
baz=274
TOO Toolangi 65.07 159 P **P** **19 30 53.8 0.0**
TOO IAmb IAmb 19 30 59.2
comp=Z,18nm,1.5s
GCSA Galena City Sc 65.11 28 P **P** **19 30 52.7 -0.9**
baz=273
E20K Nigu River 65.22 24 P **P** **19 30 52.9 -1.5**
baz=272
J18K Innoko River 65.26 29 P **P** **19 30 52.9 -1.8**
baz=274
N17K Nushagak Hills 65.26 33 P **P** **19 30 53.8 -0.9**
baz=275
GNI Garni 65.33 305 LR LR 20 03 35.3
comp=Z,148nm,18.8s,baz=337,slow=40
L18K Granite Mounta 65.36 31 P **P** **19 30 54.5 -0.9**
baz=274

O17K **Koliganek Bris** 65.38 33 P P 19 30 53.7 -1.8
baz=275
F20K **Avaraart Lake** 65.45 25 P P 19 30 56.2 +0.4
baz=273
J19K **Poorman** 65.71 29 P P 19 30 57.2 -0.3
baz=275
Q16K **King Salmon** 65.71 35 P P 19 30 57.7 +0.1
baz=276
P17K **Kvichak River** 65.77 34 P P 19 30 56.8 -1.2
baz=276
M18K **Stony River** 65.84 31 P P 19 30 56.6 -1.8
baz=276
N18K **Kilae Creek** 65.89 32 P P 19 30 57.8 -1.0
baz=276
H20K **Anotleneega Mo** 65.90 27 P P 19 30 57.6 -1.2
baz=275
R17L **Mt. Peulik Vol** 65.98 36 P P 19 30 58.2 -1.3
baz=277
KBZ **Khabaz** 66.01 309 P P 19 31 00.9 +1.1
comp=Z,5.0nm,1.1s,baz=101,slow=5.2,SNR=4.6
comp=Z,5.0nm,1.1s
KIV **Kislovodsk** 66.12 309 P P 19 31 00.6 -0.1
Q17K **Contact Creek** 66.16 35 P P 19 30 58.7 -2.0
baz=277
L19K **White Mountain** 66.22 31 P P 19 30 59.4 -1.6
baz=276
F21K **Alatna River** 66.32 25 P P 19 31 00.6 -0.9
baz=275
O18K **Koktuh Hills** 66.32 33 P P 19 31 01.5 -0.1
baz=277
P18K **Big Mountain,** 66.36 34 P P 19 31 00.9 -1.0
baz=277
G21K **Allakaket** 66.37 26 P P 19 31 01.5 -0.3
baz=275
D22K **Ayikyak River** 66.47 23 P P 19 31 01.5 -0.9
baz=275
N19K **Bonanza Creek** 66.56 32 P P 19 31 02.1 -1.1
baz=277
O19K **Port Alsworth** 66.72 33 P P 19 31 03.1 -0.9
baz=277
H21K **Melozitna Rive** 66.75 27 P P 19 31 03.6 -0.6
baz=276
E22K **Anaktuvuk Pass** 66.86 24 P P 19 31 04.3 -0.6
baz=276,SNR=11
GEVA **Gevas** 66.99 303 P P 19 31 06.3 -0.2
GEVA IAmb IAmb 19 31 14.8
comp=Z,8.9nm,1.0s
M20K **Styx River** 67.07 31 P P 19 31 05.3 -1.1
baz=278
I21K **Tanana** 67.14 27 P P 19 31 05.2 -1.5
baz=277
D23K **Nanushuk River** 67.18 23 P P 19 31 05.7 -1.2
baz=277
Q19K **Cape Duglas,** 67.23 34 P P 19 31 06.1 -1.3
baz=278
H22K **Ishtalitna Cre** 67.30 26 P P 19 31 06.8 -0.9
baz=278
P19K **Oil Pt** 67.33 33 P P 19 31 06.5 -1.6
baz=279
PPLA **Purkeypile** 67.36 30 P P 19 31 06.6 -1.7
baz=278
COLD **Coldfoot** 67.58 25 P P 19 31 08.3 -1.2
baz=278
SPCR **Spurr Chakacha** 67.60 32 P P 19 31 09.3 -0.5
baz=279
MLY **Manley** 67.69 27 P P 19 31 09.2 -1.0
baz=278
E23K **Chandalar** 67.69 24 P P 19 31 09.3 -1.0
baz=278
GURO **Guroymak-BITLI** 67.72 304 P P 19 31 11.2 +0.1
GURO IAmb IAmb 19 31 26.3
comp=Z,5.9nm,1.1s
G23K **Bananza Creek** 67.73 25 P P 19 31 08.6 -1.8
baz=278
SKT **Skwentna** 67.80 31 P P 19 31 11.7 +0.7
SKT IAmb IAmb 19 31 22.9
comp=Z,12nm,1.2s
SKT **Skwentna** 67.80 31 P P 19 31 10.0 -1.0
baz=279
D24K **Happy Valley** 67.81 23 P P 19 31 09.5 -1.4
baz=278
KTH **Kantishna Hill** 67.83 29 P P 19 31 11.7 +0.5
KTH IAmb IAmb 19 31 13.6
comp=Z,13nm,1.1s
Q20K **Shuyak Island** 67.93 34 P P 19 31 10.7 -1.1
baz=280
H23K **Yukon River** 68.06 26 P P 19 31 11.9 -0.7
baz=279,SNR=13
E24K **Your Creek** 68.11 24 P P 19 31 12.8 -0.1
baz=279
TRF **Thorofare Moun** 68.13 29 P P 19 31 12.9 -0.3
baz=280
HOM **Homer** 68.13 33 P P 19 31 12.0 -1.0
baz=280
CAPN **Captain Cook N** 68.18 32 P P 19 31 13.5 +0.2
baz=280
I23K **Minto, Yukon-K** 68.24 27 P P 19 31 13.0 -0.6
baz=280
SUA **Susitna One** 68.25 31 P P 19 31 14.6 +0.6
SUA **Susitna One** 68.25 31 P P 19 31 12.5 -1.4
baz=280,SNR=9.7
CUT **Chulitna** 68.31 30 P P 19 31 12.9 -1.2
baz=280
NEA2 **Nenana** 68.46 28 P P 19 31 15.0 -0.1
baz=280,SNR=11
KOPT **Kop Dagi** 68.54 305 P P 19 31 15.4 -0.9
KOPT IAmb IAmb 19 31 32.5
comp=Z,15nm,1.2s
BRSE **Bradley Lake S** 68.56 33 P P 19 31 15.4 -0.4
baz=281
D25K **Kavik River** 68.65 22 P P 19 31 15.5 -0.7
baz=281
MCK **McKinley** 68.67 29 P P 19 31 15.1 -1.3
baz=281,SNR=7.0
G24K **Hadweenzic Riv** 68.73 25 P P 19 31 15.5 -1.2
baz=281
H24K **Noodor Dome** 68.73 26 P P 19 31 15.5 -1.3
baz=281
RC01 **Rabbit Creek A** 68.80 31 P P 19 31 16.5 -0.7
baz=281
RAYN **Ar Rayn** 68.83 287 P P 19 31 17.4 -0.7
RAYN IAmb IAmb 19 31 27.2
comp=Z,7.1nm,1.1s
O22K **Cooper Landing** 68.92 32 P P 19 31 17.6 -0.4
baz=281
MARD **Mardin** 68.98 303 P P 19 31 18.9 -0.1
MARD IAmb IAmb 19 31 29.3
comp=Z,13nm,1.0s
PMR **Palmer** 68.99 31 P P 19 31 17.7 -0.6
baz=281
WAT1 **Susitna Watana** 69.02 29 P P 19 31 18.5 -0.1
baz=281
SEW **Seward** 69.13 32 P P 19 31 19.2 -0.1
baz=282
E25K **Arctic Village** 69.17 24 P P 19 31 19.7 +0.2
baz=282
F25K **Christian Rive** 69.25 24 P P 19 31 19.9 -0.1
baz=282
SML **Sawmill** 69.32 31 P P 19 31 20.1 -0.5
baz=282
KNK **Knik Glacier** 69.34 31 P P 19 31 20.2 -0.4
KNK **Knik Glacier** 69.34 31 P P 19 31 20.2 -0.4
baz=282,SNR=5.1
ILAR **Eielson Array** 69.35 27 P P 19 31 20.6 0.0
comp=Z,0.8nm,0.6s,baz=291,slow=5.3,SNR=12
comp=Z,0.8nm,0.6s
HDA **Harding Lake** 69.40 28 P P 19 31 20.8 -0.1
baz=282,SNR=7.2
WAT6 **Susitna Watana** 69.43 30 P P 19 31 20.4 -0.9
baz=282,SNR=7.7
DHY **Denali Highway** 69.49 29 P P 19 31 20.8 -0.9
baz=282
C27K **Jago River** 69.50 22 P P 19 31 18.5 -3.0
baz=283
M23K **Glacier View** 69.61 30 P P 19 31 21.1 -1.1
baz=282
BMAR **Burnt Mountain** 69.69 24 P P 19 31 23.4 +0.7
PRP **Porcupine Dome** 69.75 26 P P 19 31 22.7 -0.5
baz=283,SNR=6.1
SCM **Sheep Creek Mo** 69.78 30 P P 19 31 22.6 -0.8
baz=283,SNR=6.4
F26K **Sheenjek River** 69.79 24 P P 19 31 22.9 -0.4
baz=283
SPITS **Spitsbergen Ar** 69.92 348 P P 19 31 26.1 +2.2
comp=Z,14nm,1.2s,baz=61,slow=15,SNR=1.6
comp=Z,14nm,1.2s
J25K **Salcha River,** 70.02 27 P P 19 31 24.0 -0.8
baz=283

K24K **Donnelly Dome** 70.03 28 P P 19 31 23.2 -1.6
baz=283,SNR=8.8
G26K **Porcupine Rive** 70.10 25 P P 19 31 24.8 -0.3
baz=284
GLI **Glacier Island** 70.11 31 P P 19 31 25.5 +0.2
baz=283
P23K **Montague Islan** 70.16 32 P P 19 31 25.2 -0.4
baz=283
M24K **Tolsona, Glenn** 70.25 30 P P 19 31 25.8 -0.5
baz=284
PAX **Paxson** 70.36 29 P P 19 31 26.7 -0.2
baz=284
RIDG **Independent Ri** 70.45 28 P P 19 31 27.3 -0.2
baz=284,SNR=6.6
KLU **Klutina** 70.51 31 P P 19 31 27.4 -0.5
baz=284
D27M **Malcolm River** 70.54 22 P P 19 31 27.2 -0.7
baz=286
E27K **Coleen River** 70.60 23 P P 19 31 28.5 +0.2
baz=285
HARP **HAARP** 70.64 30 P P 19 31 29.2 +0.7
baz=284
SCRK **Sand Creek** 70.76 28 P 19 31 29.5 +0.1
SCRK **Sand Creek** 70.76 28 P P 19 31 29.7 +0.3
baz=285,SNR=9.2
I26K **Coal Creek Min** 70.76 26 P P 19 31 28.9 -0.4
baz=285
J26L **Joseph Creek** 70.80 27 P P 19 31 29.7 +0.1
baz=285
DOT **Dot Lake** 70.81 28 P P 19 31 29.2 -0.4
DOT IAmb IAmb 19 31 31.2
comp=Z,9.9nm,1.0s
EYAK **Cordova Ski Ar** 70.83 32 P P 19 31 30.4 +0.8
baz=284
N25K **Chitina, Valde** 71.10 30 P P 19 31 31.5 0.0
baz=285
H27K **Steamboat Moun** 71.16 25 P P 19 31 31.0 -0.7
baz=286
E28M **Babbage River** 71.22 23 P P 19 31 30.7 -1.3
baz=287
BMRM **Bremner River** 71.26 31 P P 19 31 30.7 -1.7
baz=285
L26K **Log Cabin Wild** 71.29 29 P P 19 31 32.0 -0.5
baz=286,SNR=6.7
I27K **Kandik River** 71.30 26 P P 19 31 32.4 -0.2
baz=286
F28M **Old Crow** 71.39 24 P P 19 31 32.9 -0.1
baz=287,SNR=20
M26K **Nabesna, AK** 71.61 29 P P 19 31 35.1 +0.6
baz=286
VRDI **Verde Repeater** 71.73 31 P P 19 31 35.5 +0.1
VRDI IAmb IAmb 19 31 46.3
comp=Z,22nm,1.4s
BERG **Berg Lake** 71.85 31 P P 19 31 36.7 +0.8
E29M **Blow River** 71.86 23 P P 19 31 36.6 +0.8
baz=289
MCARA **McCarthy VSAT** 71.89 30 P P 19 31 36.7 +0.6
MCARA **McCarthy VSAT** 71.89 30 P P 19 31 35.6 -0.5
baz=286,SNR=5.9
L27K **Beaver Creek,** 71.94 28 P 19 31 37.6 +1.2
L27K **Beaver Creek,** 71.94 28 P P 19 31 35.1 -1.4
baz=287
FINES **FINESS Array B** 71.95 330 P P 19 31 36.6 +0.1
comp=Z,4.8nm,1.0s,baz=62,slow=4.5,SNR=6.9
comp=Z,4.8nm,1.0s
FINES **FINESS Array B** 71.95 330 P P 19 31 36.4 0.0
BCAR **Beaver Creek A** 71.96 28 P P 19 31 37.4 +0.8
CRQM **Cirque** 72.01 31 P P 19 31 37.1 0.0
I28M **Miner Creek** 72.02 26 P 19 31 37.9 +0.9
I28M **Miner Creek** 72.02 26 P P 19 31 37.0 +0.1
baz=288
CRQE **Cirque** 72.03 31 P P 19 31 36.8 -0.3
baz=287
M27K **Edge Creek, AK** 72.13 29 P P 19 31 38.0 +0.3
M27K IAmb IAmb 19 31 40.1
comp=Z,6.2nm,1.0s
M27K **Edge Creek, AK** 72.13 29 P P 19 31 38.0 +0.3
baz=287
G29M **Pine Creek** 72.29 24 P P 19 31 38.8 +0.3
G29M **Pine Creek** 72.29 24 P P 19 31 39.5 +1.0
baz=289,SNR=7.9
BVCY **Beaver Creek** 72.56 29 P P 19 31 40.2 +0.1
baz=288,SNR=6.4
DAWY **Dawson** 72.67 27 P P 19 31 41.1 +0.3
DAWY **Dawson** 72.67 27 P P 19 31 40.9 +0.1
baz=289,SNR=17
I29M **Ogilvie Camp,** 72.69 26 P 19 31 41.5 +0.7
I29M IAmb IAmb 19 34 17.8
comp=Z,8.3nm,0.8s
I29M **Ogilvie Camp,** 72.69 26 P P 19 31 41.3 +0.4
baz=289,SNR=7.9
MESA **MESA** 72.75 31 P P 19 31 37.8 -3.7
baz=288
CTG **Chitna Glacier** 72.79 30 P P 19 31 40.4 -1.2
baz=288,SNR=5.8
CTGM **Chitina Glacie** 72.79 30 P 19 31 42.6 +0.9
CTGM IAmb IAmb 19 31 44.3
comp=Z,16nm,1.0s
F30M **Barrier River** 72.87 23 P P 19 31 41.8 -0.1
baz=291
G30M **tAoh Zraii Nji** 72.94 24 P P 19 31 41.9 -0.5
baz=291
YUK3 **Moose Creek** 72.94 30 P P 19 31 41.9 -0.7
baz=288,SNR=7.1
LOGN **Logan Glacier** 72.99 31 P P 19 31 43.2 +0.3
O28M **Mount Upton** 73.39 30 P P 19 31 45.1 -0.3
baz=289
AKASG **Malin Array Be** 73.40 318 P P 19 31 45.5 +0.2
comp=Z,1.1nm,0.7s,baz=65,slow=4.3,SNR=5.1
comp=Z,1.1nm,0.7s
AKASG **Malin Array Be** 73.40 318 P P 19 31 45.5 +0.2
INK **Inuvik** 73.41 22 P P 19 31 45.2 +0.2
comp=Z,15nm,1.1s,baz=292,slow=7.7,SNR=19
comp=Z,15nm,1.1s
INK **Inuvik** 73.41 22 P 19 31 45.1 +0.2
INK IAmb IAmb 19 31 47.2
comp=Z,18nm,1.1s
INK **Inuvik** 73.41 22 P P 19 31 45.2 +0.2
baz=293,SNR=15
YUK8 **Steele Glacier** 73.41 30 P P 19 31 44.4 -1.1
baz=289
ASF **Jabal al Asfar** 73.48 298 LR LR 20 08 52.9
comp=Z,214nm,20.9s,baz=36,slow=40
I30M **Mount Dempster** 73.50 25 P P 19 31 45.5 -0.3
baz=291,SNR=22
L29M **L29M** 73.52 28 P P 19 31 45.9 +0.1
baz=290
K29M **Barlow Dome** 73.53 27 P P 19 31 45.6 -0.3
baz=290
PINM **Pinnacle** 73.58 31 P P 19 31 46.6 +0.3
baz=289
M29M **Somme Creek** 73.61 29 P P 19 31 44.7 -1.8
baz=290
F31M **Tsiigehtchic** 73.66 23 P P 19 31 47.0 +0.5
baz=293,SNR=16
BR131 **Keskin Array S** 73.70 307 P P 19 31 47.1 -0.3
BR131 IAmb IAmb 19 31 57.0
comp=Z,16nm,1.4s
BRTR **Keskin Array B** 73.70 307 P P 19 31 46.8 -0.6
comp=Z,3.1nm,1.1s,baz=129,slow=4.9,SNR=8.4
BRTR LR LR 20 07 39.0
comp=Z,144nm,18.4s,baz=327,slow=39
comp=Z,3.1nm,1.1s
BRTR **Keskin Array B** 73.70 307 P P 19 31 47.1 -0.3
J30M **Hart River** 73.75 26 P P 19 31 46.7 -0.6
baz=291
YUK4 **Talbot Arm** 73.90 30 P P 19 31 47.4 -1.0
baz=290
H31M **Peel River** 74.07 25 P P 19 31 47.1 -1.9
baz=292
YUK6 **Outpost Mounta** 74.17 30 P P 19 31 49.7 -0.2
baz=290
M30M **Minto, Yukon** 74.28 28 P P 19 31 50.7 +0.3
baz=291,SNR=15
O29M **Mount Kennedy** 74.30 31 P P 19 31 49.9 -0.7
baz=290
A36M **Sachs Harbour** 74.35 17 P 19 31 50.0 -0.4
A36M IAmb IAmb 19 31 51.5
comp=Z,10nm,1.2s
A36M **Sachs Harbour** 74.35 17 P P 19 31 50.1 -0.4
baz=299
N30M **Aishikik Lake** 74.56 29 P P 19 31 51.4 -0.6
baz=291
HYT **Haines Junctio** 74.61 30 P 19 31 53.5 +1.1
HYT IAmb IAmb 19 31 55.8
comp=Z,24nm,1.2s
HYT **Haines Junctio** 74.61 30 P P 19 31 53.4 +1.1
baz=291,SNR=8.7
P30M **Million Dollar** 75.11 31 P P 19 31 55.5 +0.3
baz=292
N31M **Braeburn, Yuko** 75.14 29 P 19 31 55.3 +0.1
N31M **Braeburn, Yuko** 75.14 29 P P 19 31 55.3 +0.1
baz=292,SNR=5.3
O30N **Mendenhall** 75.27 30 P P 19 31 55.8 -0.3
baz=292,SNR=5.9
M31M **Drury Creek, Y** 75.46 28 P P 19 31 56.3 -0.8
baz=293,SNR=6.6
WHY **Whitehorse** 75.86 30 P 19 31 60.0 +0.4
WHY **Whitehorse** 75.86 30 P P 19 31 58.6 -1.0
baz=293,SNR=8.2
EIL **Elat** 75.86 296 LR LR 20 11 13.6
comp=Z,149nm,19.1s,baz=1.0,slow=40
C36M **Paulatuk** 76.01 19 P P 19 32 00.1 +0.1
baz=301,SNR=7.8
SKAG **Skagway** 76.13 31 P P 19 32 00.4 -0.5
baz=293
S31K **Pelican** 76.28 32 P P 19 32 01.6 -0.2
baz=293
N32M **Quiet Lake** 76.46 29 P P 19 32 01.7 -1.2
baz=295
MMPY **Sheldon Lake,** 76.61 27 P P 19 32 03.1 -0.6
baz=296
P32M **Atlin** 76.83 30 P P 19 32 05.0 0.0
P32M IAmb IAmb 19 32 07.7
comp=Z,23nm,1.2s
P32M **Atlin** 76.83 30 P P 19 32 04.4 -0.6
baz=295
P33M **Teslin, Yukon** 76.98 30 P P 19 32 06.1 +0.2
baz=295,SNR=6.6
R32K **Eaglecrest** 76.99 32 P P 19 32 05.0 -0.8
baz=294
SIT **Sitka** 77.09 33 P P 19 32 06.7 +0.4
baz=294
S32K **Killisnoo** 77.30 33 P P 19 32 07.0 -0.5
baz=294
Q32M **Nakina River** 77.77 31 P P 19 32 07.3 -3.2
baz=296
HFS **Hagfors** 78.07 331 P P 19 32 12.7 +0.9
comp=Z,6.0nm,1.1s,baz=73,slow=4.8,SNR=4.4
HFS LR LR 20 09 41.4
comp=Z,600nm,20.7s,baz=346,slow=38
comp=Z,6.0nm,1.1s
R33M **Jennings River** 78.18 30 P P 19 32 11.6 -1.0
baz=297
TGTN **Hyland Airport** 78.37 27 P P 19 32 13.2 -0.3
baz=299,SNR=8.7
U33K **Whale Pass** 78.59 33 P P 19 32 12.5 -2.3
baz=296
NOA **NORSAR Array B** 78.72 332 P P 19 32 16.9 +1.4
comp=Z,0.9nm,0.8s,baz=79,slow=5.5,SNR=2.4
NOA LR LR 20 08 16.7
comp=Z,256nm,18.2s,baz=280,slow=37
comp=Z,0.9nm,0.8s
S34M **Telegraph Cree** 78.77 31 P P 19 32 15.5 -0.3
baz=297
WTLY **Watson Lake, Y** 78.82 29 P P 19 32 15.7 -0.3
baz=298,SNR=5.2
WRAK **Wrangell Islan** 78.85 33 P P 19 32 14.4 -1.7
baz=296
CRAG **Craig** 78.88 34 P P 19 32 14.9 -1.4
baz=296
DLBC **Dease Lake** 79.05 31 P P 19 32 19.0 +1.6
comp=Z,15nm,1.2s,baz=287,slow=6.9,SNR=8.4
comp=Z,15nm,1.2s
DLBC **Dease Lake** 79.05 31 P P 19 32 15.8 -1.6
baz=298,SNR=5.8
T35M **Bob Quinn** 79.62 32 P P 19 32 19.5 -1.0
baz=298
V35K **Ketchikan** 79.71 34 P P 19 32 20.9 0.0
baz=297
LANS **Liptovska Anna** 79.84 319 eP P 19 32 26.0 +4.2
KOTAN **Kotaneelee Air** 80.86 28 P P 19 32 26.4 -0.6
baz=302
TOAD **Toad River Com** 81.03 29 P P 19 32 27.6 -0.4
baz=302,SNR=7.6
RPZ **Rata Peaks** 81.07 146 LR LR 20 08 00.9
comp=Z,68nm,19.0s,baz=100,slow=35
VRAC **Vranov** 81.47 320 LR LR 20 09 08.8
comp=Z,279nm,21.1s,baz=350,slow=36
CLL **Collm** 82.57 323 eP P 19 32 37.0 +0.8
CLL ePP PP 19 35 48.0 +2.8
YKA **Yellowknife Ar** 83.14 23 P P 19 32 38.8 -0.2
comp=Z,6.1nm,0.9s,baz=314,slow=5.9,SNR=68
comp=Z,6.1nm,0.9s
YKA **Yellowknife Ar** 83.14 23 P P 19 32 38.1 -0.8
GERES **GERESS Array B** 83.37 321 P P 19 32 41.5 +0.9
comp=Z,1.3nm,1.0s,baz=46,slow=5.8,SNR=4.7
comp=Z,1.3nm,1.0s
BMRD **Maredsous** 87.53 325 dP P 19 33 00.1 -1.1
MXC **Moxie City** 90.38 37 P P 19 33 14.7 0.0
NEW **Newport** 91.07 35 P 19 33 18.0 +0.1
J04A **Umpqua Nationa** 91.26 41 P P 19 33 19.5 +0.4
FRB **Frobisher Bay** 92.36 5 LR LR 20 18 47.0
comp=Z,385nm,18.1s,baz=102,slow=38
ORV **Oroville** 93.75 44 P P 19 33 29.6 -0.8
ORV IAmb IAmb 19 33 37.1
comp=Z,7.3nm,1.2s
AFDM **Forest Hills D** 94.43 44 P P 19 33 33.1 -0.5
NVAR **Mina Array Bea** 96.42 43 P P 19 33 44.7 +1.8
comp=Z,1.1nm,0.9s,baz=293,slow=4.2,SNR=5.7
comp=Z,1.1nm,0.9s
DSP **Deep Springs** 97.27 44 P P 19 33 45.6 -0.8

IDC 15 19:39:35.8±1.1, 14°05.05N×123°46.46E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=80.1km s-min=20.9km az=66.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	28.12	324	P	P	19 45 29.1	-0.8
	0.7nm,0.3s,baz=151,slow=10,SNR=4.7						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	35.43	162	P	P	19 46 32.8	-1.1
	0.7nm,0.4s,baz=338,slow=10,SNR=25						
	0.7nm,0.4s						
ASAR	**Alice Springs**	38.85	165	P	P	19 47 04.3	+1.4
	0.3nm,0.4s,baz=341,slow=7.3,SNR=5.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	47.38	322	P	P	19 48 12.8	+1.0
	0.2nm,0.5s,baz=106,slow=8.8,SNR=6.5						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	91.42	23	P	P	19 52 42.9	-0.8
	0.1nm,0.5s,baz=302,slow=5.9,SNR=4.6						
	0.1nm,0.5s						

IDC ***15*** *19:42:28.4±0.8, 55°.64N×165°.94E, h0km, mb3.7/13, mbtmp3.7/16, ML3.8/3, MS3.9/1, Error ellipse: s-maj=27.8km s-min=14.0km az=158.0*
KRSC ***15*** *19:42:29.6±1.4, 55°.53N×165°.88E, h35km±13km, Ml4.0*
ISC 15 19:42:31.2±0.6, 55°.63N±0°.05×165°.94E±0°.07, h20km, n46, σ1°.09/51, mb3.7/13, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	0.42	177	eP	Pb	19 42 38.3	-1.7
BKI				eS	Sb	19 42 44.5	-1.3
KBTR	**Krutoberegovo**	1.85	290	eP	Pn	19 42 59.7	-2.1
KBG	**Krutoberegovo**	1.92	290	eP	Pn	19 43 01.1	-1.7
KBG				eS	Sn	19 43 24.5	-1.8
SMKR	**Semkarok**	2.68	293	eP	Pn	19 43 14.0	+0.8
KLY	**Klyuchi**	3.05	285	eP	Pn	19 43 17.2	-1.0
KLY				eS	Sn	19 43 53.6	-0.5
KIRR	**Kirishev**	3.18	278	eP	Pn	19 43 20.9	+0.8
TUMD	**Tumrok D**	3.19	265	eP	Pn	19 43 21.9	+1.7
KMNR	**Kamenistaya**	3.23	275	eP	Pn	19 43 22.0	+1.2
KOZ	**Kozyrevsk**	3.45	280	eP	Pn	19 43 25.2	+1.5
KII	**Karymskiy**	4.08	250	eP	Pn	19 43 33.1	+0.7
ESO	**Esso**	4.10	277	eP	Pn	19 43 33.4	+0.7
SPN	**Mys Shipunski**	4.29	236	eP	Pn	19 43 35.0	-0.2
SPN				eS	Sn	19 44 22.1	-2.4
NLC	**Nalytchevo**	4.57	240	eS	Sn	19 44 30.9	-0.6
SDLR	**Sedlovina**	4.74	243	eP	Pn	19 43 42.3	+0.7
SMAR	**Somma**	4.79	243	eP	Pn	19 43 43.1	+0.7
KRER	**Koryakskii**	4.79	244	eP	Pn	19 43 43.4	+1.0
UGLR	**Uglovaya**	4.81	243	eP	Pn	19 43 43.3	+0.8
KRX	**Arik**	4.82	245	eP	Pn	19 43 43.6	+0.9
AVH	**Avacha**	4.82	244	eP	Pn	19 43 43.7	+1.1
KOK	**Koryaka**	4.86	244	eP	Pn	19 43 44.2	+1.0
DALK	**Dalny**	4.94	241	eP	Pn	19 43 44.6	+0.4
DALK				eS	Sn	19 44 39.7	-1.0
PET	**Petropavlovsk**	5.00	242	eP	Pn	19 43 45.6	+0.6

PET				eS		Sn	19 44 41.9	-0.2
GNL	Ganaly	5.03	251	eP		Pn	19 43 46.8	+1.3
PETK	Petropavlovsk-	5.44	246	Pn		Pn	19 43 51.9	+0.8
	1.9nm,0.3s,baz=67,slow=18,SNR=47							
PETK				Sn		Sn	19 44 53.9	+0.9
	1.1nm,0.3s,baz=83,slow=12,SNR=4.2							
	3.2nm,0.4s							
MTVR	Mutnovka	5.55	239	eP		Pn	19 43 53.0	+0.4
MTVR				eS		Sn	19 44 54.9	-1.0
GRL	Gorelyy	5.56	240	eP		Pn	19 43 54.4	+1.5
ASAK	Asacha	5.74	239	eP		Pn	19 43 56.5	+1.1
ASAK				eS		Sn	19 45 01.8	+1.2
ASAJ	Asahikawa	18.84	242	P		Pn	19 46 50.9	+0.6
	0.3nm,0.3s,baz=68,slow=17,SNR=4.9							
	4.2nm,0.7s							
YAK	Yakutsk	19.62	304	P		P	19 46 56.4	-1.5
	1.1nm,0.3s,baz=77,slow=9.4,SNR=2.9							
	3.8nm,0.4s							
ILAR	Eielson Array	24.58	49	P		P	19 47 49.1	-0.4
	1.1nm,1.0s,baz=258,slow=8.4,SNR=8.2							
	1.1nm,1.0s							
MJAR	Matsushiro Arr	26.80	236	P		P	19 48 10.4	+0.6
	0.7nm,0.8s,baz=17,slow=9.5,SNR=8.1							
	0.7nm,0.8s							
KSRS	Korea Array	31.31	251	P		P	19 48 50.4	+0.6
	1.6nm,0.8s,baz=74,slow=13,SNR=2.0							
	1.6nm,0.8s							
DLBC	Dease Lake	33.79	58	LR		LR	20 02 08.0	
	comp=Z,183nm,19.8s,baz=356,slow=35							
H11N2	WAKE ISLAND Hy	35.84	178	T		T	20 27 04.3	
	baz=359,slow=76,SNR=16							
H11N3	WAKE ISLAND Hy	35.86	178	T		T	20 27 11.7	
	baz=359,slow=76,SNR=16							
H11N1	WAKE ISLAND Hy	35.86	178	T		T	20 27 12.2	
	baz=359,slow=76,SNR=19							
SONM	Songino Array	36.65	283	P		P	19 49 37.5	+1.3
	0.8nm,0.7s,baz=63,slow=8.5,SNR=4.7							
	0.8nm,0.7s							
YKA	Yellowknife Ar	38.96	47	P		P	19 49 55.2	-0.1
	0.3nm,0.8s,baz=304,slow=9.1,SNR=4.7							
	0.3nm,0.8s							
KURBB	Kurchatov Arra	49.36	303	P		P	19 51 19.1	+0.4
	2.0nm,0.2s,baz=54,slow=7.6,SNR=5.0							
	2.0nm,0.2s							
MKAR	Makanchi Array	50.09	297	P		P	19 51 24.8	+0.4
	0.6nm,0.7s,baz=51,slow=8.6,SNR=12							
	0.6nm,0.7s							
BVAR	Borovoye Array	51.45	310	P		P	19 51 34.6	0.0
	0.3nm,0.3s,baz=52,slow=7.7,SNR=6.8							
	0.3nm,0.3s							
PDAR	Pinedale Array	53.33	66	P		P	19 51 49.8	+0.9
	0.2nm,0.7s,baz=311,slow=9.1,SNR=2.7							
	0.2nm,0.7s							
FINES	FINESS Array B	59.07	339	P		P	19 52 29.7	+0.4
	1.3nm,0.9s,baz=61,slow=11,SNR=0.9							
	1.3nm,0.9s							
CMAR	Chiang Mai Arr	61.99	262	P		P	19 52 49.4	-0.4
	0.2nm,0.3s,baz=21,slow=7.9,SNR=4.7							
	0.2nm,0.3s							
TXAR	Lajitas Array	66.55	72	P		P	19 53 20.7	+1.0
	0.7nm,0.8s,baz=299,slow=4.6,SNR=7.0							
	0.7nm,0.8s							
ASAR	Alice Springs	83.56	209	P		P	19 54 56.7	-0.9
	0.3nm,0.6s,baz=1.6,slow=6.1,SNR=2.9							
	0.3nm,0.6s							

*IDC **15** 19:54:41.6±1.4, 14.˝19S×73.˝65W, h82km±13km, mb3.5/3, mbtmp4.1/10, MS3.8/1, Error ellipse: s-maj=31.1km s-min=9.3km az=34.0*

ISC 15 19:54:41.8±0.8, 14°2S±0.˝1×73°66W±0.˝10, h85km, n19, σ0s89/19, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NNA	Nana	3.79	305	P			Pn	19 55 38.3	+0.2
	211nm,0.3s,baz=138,slow=11,SNR=54								
NNA				S			Sn	19 56 21.9	+0.2
	167nm,0.3s,baz=115,slow=14,SNR=8.9								
LPAZ	La Paz	5.73	112	P			Pn	19 56 06.4	+1.4
	35nm,0.5s,baz=294,slow=8.8,SNR=94								
LPAZ				S			Sn	19 57 10.1	+0.5
	3.5nm,0.4s,baz=300,slow=14,SNR=7.2								
ATAH	Atahualpa	8.41	326	P			Pn	19 56 40.9	-0.5
	4.0nm,0.3s,baz=146,slow=3.9,SNR=9.9								
ATAH				S			Sn	19 58 15.6	+0.6
	4.7nm,0.5s,baz=225,slow=19,SNR=1.4								
SIV	San Ignacio	12.29	100	P			Pn	19 57 31.7	-2.0
	3.0nm,0.4s,baz=280,slow=11,SNR=16								
SIV				S			Sn	19 59 50.4	+1.5
	0.7nm,0.5s,baz=4.3,slow=22,SNR=1.1								
CFA	Coronel Fontan	18.04	165	P			Pn	19 58 46.8	-0.2
	2.5nm,0.6s,baz=348,slow=12,SNR=8.7								
ROSC	El Rosal	18.91	358	P			Pn	19 58 58.5	+0.7
	5.1nm,0.4s,baz=209,slow=19,SNR=5.0								
CPUP	Villa Florida	19.48	131	P			P	19 59 01.4	-0.7
	2.5nm,0.7s,baz=311,slow=11,SNR=11								
H03N1	Juan Fernandez	19.76	193	T			T	20 18 14.5	
	baz=14,slow=74,SNR=112								
H03N2	Juan Fernandez	19.76	193	T			T	20 18 06.3	
	baz=14,slow=74,SNR=115								
H03N3	Juan Fernandez	19.77	193	T			T	20 17 58.4	
	baz=14,slow=74,SNR=152								
JTS	Las Juntas de	26.77	335	LR			LR	20 10 19.1	
	comp=Z,208nm,21.1s,baz=8.1,slow=35								
TORD	Torodi Ar. Bea	79.40	73	P			P	20 06 38.4	-0.9
	1.7nm,0.8s,baz=248,slow=9.2,SNR=9.2								
	1.7nm,0.8s								
YKA	Yellowknife Ar	82.85	342	P			P	20 06 56.0	-0.5
	0.2nm,0.6s,baz=142,slow=3.9,SNR=5.8								
	0.2nm,0.6s								
ESDC	Sonseca Array	83.98	47	P			P	20 07 03.1	+0.2
	0.6nm,0.8s,baz=260,slow=5.2,SNR=5.0								
	0.6nm,0.8s								
ASAR	Alice Springs	133.72	216	PKP			PKPdf	20 13 49.8	+0.1
	0.3nm,0.7s,baz=170,slow=1.9,SNR=2.0								
ZALV	Zalesovo Beam	136.86	18	PKP			PKPdf	20 13 55.4	+0.9
	1.1nm,0.7s,baz=336,slow=3.3,SNR=6.0								
KURBB	Kurchatov Arra	137.24	26	PKP			PKPdf	20 13 55.4	+0.1
	0.5nm,0.3s,baz=308,slow=2.2,SNR=1.6								
MKAR	Makanchi Array	141.76	27	PKP			PKPdf	20 14 03.6	-0.1
	0.2nm,0.6s,baz=325,slow=2.3,SNR=2.1								
SONM	Songino Array	146.45	360	PKPbc			PKPbc	20 14 13.8	+0.4
	1.6nm,0.6s,baz=324,slow=1.8,SNR=14								

*RSPR **15** 20:02:38.9, 18.˝01N×66.˝80W, h16km, MD2.3/11*
*NEIC **15** 20:02:38.8±1.8, 17.˝99N±0.˝03×66.˝762W±0.˝008, h10km±1km, ML2.6/35, Md2.3/11(RSPR), Error ellipse: s-maj=4.9km s-min=2.4km az=170.0*
*SDD **15** 20:02:38.8±2.5, 18.˝02N×66.˝78W, h20km±25km, MD3.5, ML2.5, MW3.2, Presumed earthquake*

ISC 15 20:02:38.4±0.9, 18°01N±0.˝04×66°78W±0.˝02, h19km±2km, n37, σ0s54/67, 8C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.10	251				Pg	20 02 42.2	0.0
GBPR							Sg	20 02 44.6	-0.3
GBPR	Guanica, Bosqu	0.10	251	⇑	iP		Pg	20 02 42.2	0.0
GBPR				eS			Sg	20 02 44.6	-0.3
OBIP	Obispado Ponce	0.17	78	Pg			Pg	20 02 43.2	+0.1
OBIP							Sg	20 02 46.4	+0.2
OBIP	Obispado Ponce	0.17	78	⇓	iP		Pg	20 02 43.2	+0.1
OBIP				eS			Sg	20 02 46.3	+0.1
CELP	Cerrillos	0.20	71				Pg	20 02 43.8	+0.2
CELP						Sg	Sg	20 02 47.2	+0.2
CELP					IAML			20 02 47.5	
	2μm,0.4s								
UUPR	Utuado, UPR, P	0.25	13				Pb	20 02 43.8	-0.3
UUPR						Sg	Sb	20 02 47.7	-0.2
MLPR	Magueyes Islan	0.25	261				Pb	20 02 44.1	-0.1
MLPR						Sg	Sb	20 02 48.1	+0.1
MLPR					IAML			20 02 48.3	
	595nm,0.4s								
CRPR	Cabo Rojo, PR	0.31	270	Pg			Pg	20 02 44.9	-0.3
CRPR				Sg			Sg	20 02 49.6	-0.4
CRPR					IAML			20 02 50.6	
	471nm,0.2s								
CRPR					IAML			20 02 52.9	
	482nm,0.2s								
CRPR	Cabo Rojo, PR	0.31	270	⇑	ePg		Pg	20 02 45.0	-0.3
CRPR				⇑	eSg		Sg	20 02 49.2	-0.7
CRPR					IAML			20 02 51.6	
	comp=N,416nm,0.1s								
CRPR	Cabo Rojo, PR	0.31	270	⇑	iP		Pg	20 02 45.0	-0.3
CRPR				eS			Sg	20 02 49.5	-0.5
LSP	Las Mesas	0.34	300				Pg	20 02 45.4	-0.2
LSP							Sg	20 02 50.4	-0.2
LSP	Las Mesas	0.34	300	⇑	iP		Pg	20 02 45.4	-0.2
LSP				eS			Sg	20 02 50.4	-0.2
PRSN	Puerto Rico Se	0.40	301	Pg			Pg	20 02 46.4	-0.4
PRSN				Sg			Sg	20 02 52.1	-0.5
PRSN	Puerto Rico Se	0.40	301	⇑	ePg		Pg	20 02 46.2	-0.6
PRSN				⇑	eSg		Sg	20 02 52.0	-0.6
PRSN					IAML			20 02 58.0	
	comp=N,757nm,0.3s								
PRSN	Puerto Rico Se	0.40	301	⇑	iP		Pg	20 02 46.2	-0.6
PRSN				eS			Sg	20 02 52.0	-0.5
ECPR	Experimental S	0.50	52				Pg	20 02 48.3	-0.3
ECPR					Sg		Sg	20 02 55.6	+0.1
ECPR					IAML			20 02 56.5	
	comp=N,451nm,0.2s								
ECPR					IAML			20 02 58.8	
	comp=N,573nm,0.2s								
ECPR	Experimental S	0.50	52	⇓	iP		Pg	20 02 48.3	-0.3
ECPR				eS			Sg	20 02 55.2	-0.3
EMPR	Esperanza - Ma	0.52	27				Pb	20 02 49.1	+0.2
EMPR							Sb	20 02 56.3	+0.2
EMPR	Esperanza - Ma	0.52	27	⇓	iP		Pb	20 02 49.1	+0.2
EMPR				eS			Sb	20 02 56.3	+0.2
AGPR	Aguadilla, PR	0.55	325				Pb	20 02 48.9	-0.5
AGPR				Sg			Sb	20 02 56.8	-0.1
AGPR	Aguadilla, PR	0.55	325	⇑	ePg		Pb	20 02 48.9	-0.5
AGPR				⇑	eSg		Sb	20 02 56.2	-0.7
AGPR					IAML			20 03 06.4	
	comp=N,162nm,0.3s								
AGPR	Aguadilla, PR	0.55	325	⇑	iP		Pb	20 02 48.9	-0.5
AGPR				eS			Sb	20 02 56.6	-0.3
SJG	San Juan	0.61	80				Pb	20 02 50.0	-0.3
SJG					Sg		Sb	20 02 58.2	-0.2
SJG					IAML			20 03 00.8	
	comp=N,311nm,0.3s								
SJG	San Juan	0.61	80	ePg			Pb	20 02 49.9	-0.3
SJG				⇑	eSg		Sb	20 02 58.0	-0.4
SJG	San Juan	0.61	80	⇑	iP		Pb	20 02 50.0	-0.3
SJG				eS			Sb	20 02 58.0	-0.4
PDPR	Patillas Dam,	0.72	89				Pb	20 02 52.0	-0.3
GCPR	Guaynabo City	0.73	66				Pb	20 02 52.0	-0.3
GCPR							Sb	20 03 01.4	-0.6
GCPR	Guaynabo City	0.73	66	⇑	iP		Pb	20 02 52.1	-0.3
GCPR				eS			Sb	20 03 01.4	-0.6
IDE	Isla Desecheo	0.76	300				Pb	20 02 52.4	-0.6
IDE							Sb	20 03 02.2	-0.7
IDE	Isla Desecheo	0.76	300	⇑	iP		Pb	20 02 52.4	-0.6
IDE				eS			Sb	20 03 02.2	-0.7
HUMP	Col San Antoni	0.90	81				Sb	20 03 05.7	-1.1
HUMP	Col San Antoni	0.90	81				Pb	20 02 54.5	-0.7
HUMP					IAML			20 03 11.6	
	comp=N,153nm,0.2s								
HUMP					IAML			20 03 12.4	
	comp=N,124nm,0.2s								
HUMP	Col San Antoni	0.90	81	⇑	iP		Pb	20 02 54.6	-0.7
HUMP				eS			Sb	20 03 05.7	-1.1
CUPR	Culebra, Puert	1.46	78	Pn			Pn	20 03 03.9	+0.3
MIDR	Miches	2.36	295	⇑	ePg		Pb	20 03 21.0	+0.7
MIDR					IAML			20 04 09.7	
	comp=N,31nm,1.5s								
DR12	Loma Pena Alta	2.59	288	Pn			Pn	20 03 20.7	+1.5
HATOM	Hato Mayor del	2.59	288	ePg			Pn	20 03 21.0	+1.8
HATOM					IAML			20 04 00.6	
	comp=N,28nm,2.0s								

*JMA **15** 20:13:47.2±0.1, 23.˝8N±0.˝2×121.˝6E±0.˝7, h1km±1km, MV3.3/9, TAIWAN REGION*
*TAP **15** 20:13:47.9, 23.˝83N×121.˝55E, h9km, ML4.0, B*
*IDC **15** 20:13:47.7±1.9, 23.˝21N×120.˝82E, h0km, mb3.3/6, mbtmp3.3/6, Error ellipse: s-maj=157.1km s-min=21.0km az=64.0*

ISC 15 20:13:48.6±0.7, 23°81N±0.˝01×121°56E±0.˝02, h12km±4km, n172, σ0s93/273, mb3.3/6, 11C-38D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHUL	Shoufeng	0.02	180	⇑	iP		Pg	20 13 50.1	-0.6
SHUL					S		Sg	20 13 51.9	-0.2
TEYL	Yanliau Villag	0.07	29	⇑	iP		Pg	20 13 50.9	-0.2
TEYL					S		Sg	20 13 53.4	+0.5
TEGC	Jichi Village	0.10	192	⇓	P		Pg	20 13 51.3	-0.1
TEGC					S		Sg	20 13 54.2	+0.7
ESL	Shilin	0.12	273	⇓	iP		Pg	20 13 50.7	-1.0
ESL					? S		Sg	20 13 52.4	-1.6
ETM	Tongmen	0.17	338	⇓	iP		Pg	20 13 51.5	-1.0
ETM					S		Sg	20 13 54.9	-1.3
HWA	Hwalien	0.17	13	⇓	iP		Pg	20 13 52.1	-0.4
HWA					S		Sg	20 13 55.7	+0.4
WARBT	Fenglin Townsh	0.18	241	⇓	iP		Pg	20 13 52.0	-0.7
WARBT					S		Sg	20 13 54.8	-0.8
EGFH	Guangfu	0.19	222	P			Pg	20 13 52.1	-0.6
EGFH					S		Sg	20 13 55.2	-0.4
LXIB	Xiulin Townshi	0.25	327	⇓	iP		Pg	20 13 53.0	-0.9
LXIB					S		Sg	20 13 56.5	-1.1
TWD	Chiawan	0.27	6	⇓	iP		Pg	20 13 53.4	-0.8
TWD				eS			Sg	20 13 57.4	-0.6
HGSD	Ruisui	0.34	202	⇓	iP		Pb	20 13 55.8	-0.8
ETL	Fush Village	0.35	9	⇓	P		Pg	20 13 54.8	-1.0
ETL				eS			Sg	20 13 59.9	-0.6
NACB	Ninganchiao	0.36	5	P			Pg	20 13 54.7	-1.2
NACB	Ninganchiao	0.36	5	S			Sg	20 14 00.0	-0.8
NACB	Ninganchiao	0.36	5	⇓	iP		Pg	20 13 54.8	-1.1
NACB				eS			Sg	20 13 59.7	-1.1
EHYH	Wanrong	0.37	213	⇓	P		Pg	20 13 55.5	-0.5
EHYH				eS			Sb	20 14 01.6	-1.3
EHY	Hungye	0.37	216	⇓	iP		Pg	20 13 55.4	-0.6
EHY				eS			Sg	20 14 00.8	-0.3
OWD	Renai	0.38	292	⇓	P		Pg	20 13 55.6	-0.7
OWD				eS			Sg	20 14 00.8	-0.7
VWDT	VWDT	0.39	262	eP			Pb	20 13 56.2	-1.3
VWDT				S			Sg	20 14 01.0	-0.6
ETLH	Xiulin Townshi	0.40	349	⇓	P		Pg	20 13 55.6	-1.1
ETLH				eS			Sg	20 14 01.4	-0.7
WHF	Hehuan Shan	0.43	321	⇓	iP		Pg	20 13 56.4	-0.8
WHF				eS			Sg	20 14 02.0	-1.2
WUSB	Renai	0.45	294	⇓	iP		Pg	20 13 57.1	-0.4
WUSB				eS			Sg	20 14 02.9	-0.5
YULB	Yu-li	0.48	210	P			Pg	20 13 56.7	-1.3
YULB	Yu-li	0.48	210	S			Pg	20 14 04.4	0.0
YULB	Yu-li	0.48	210	⇓	P		Pg	20 13 57.5	-0.5
YULB				eS			Sb	20 14 04.7	-1.4
ECBN	Changbin	0.50	192	eP			Pb	20 13 58.6	-0.7
ECBN				S			Sb	20 14 07.0	+0.4
TWF1	Yuli	0.52	208	⇑	iP		Pg	20 13 58.2	-0.5
TWF1				eS			Sb	20 14 06.0	-1.1
FUSS	Fushou	0.53	326	⇓	P		Pg	20 13 58.4	-0.6
FUSS				eS			Sg	20 14 05.4	-0.6
EAHA	Aohua	0.54	17	eP			Pg	20 13 58.4	-0.8
EAHA				eS			Sg	20 14 06.8	+0.3
SSLB	Suanglung	0.56	268	P			Pb	20 13 59.3	-1.0
SSLB	Suanglung	0.56	268	S			Sg	20 14 06.3	-0.6
SSLB	Suanglung	0.56	268	P			Pb	20 13 59.1	-1.2
SSLB				eS			Sg	20 14 06.1	-0.8
TWT	Tachien	0.57	321	⇓	iP		Pg	20 13 59.4	-0.4
TWT				eS			Sg	20 14 06.8	-0.5
TDCB	Techi	0.58	320	⇓	P		Pg	20 13 59.4	-0.5
TDCB					? S		Sg	20 14 06.6	-1.0
WPL	Puli Township	0.59	290		P		Pb	20 13 59.8	-1.0
WPL					S		Sg	20 14 07.6	-0.3
SMLT	Sun Moon Lake	0.61	277	⇓	P		Pb	20 14 00.2	-1.1
SMLT				eS			Sg	20 14 08.1	-0.6
DPDB	Guoxing	0.62	291	⇓	P		Pb	20 14 00.5	-1.0
DPDB				eS			Sb	20 14 09.1	-1.2
CHKH	Chenggong	0.63	194	eP			Pb	20 14 01.2	-0.4
CHKH				eS			Sb	20 14 11.3	+0.9
ENA	Nanau	0.64	15	⇓	eP		Pg	20 14 00.3	-0.8
ENA				eS			Sb	20 14 10.4	-0.2
NNSB	Datong	0.64	345	⇓	iP		Pg	20 14 00.3	-0.8
NNSB				eS			Sg	20 14 08.3	-1.2
YUS	Yu-Shan	0.64	241	eP			Pb	20 14 01.2	-0.9
YUS				eS			Sb	20 14 09.9	-1.3
NNS	Nan Shan	0.65	345	⇓	iP		Pg	20 14 00.5	-0.8
NNS				eS			Sg	20 14 08.8	-1.1
TYC	Yuchr	0.65	279	⇓	iP		Pg	20 14 00.7	-0.6
TYC				eS			Sg	20 14 09.3	-0.6
FULB	Fuli	0.66	202	eP			Pb	20 14 01.7	-0.3
WHYT	Xinyi Township	0.66	260	eP			Pb	20 14 01.5	-0.6
WHYT				eS			Sb	20 14 10.1	-1.2
EWUT	Wuta	0.66	17	⇓	iP		Pg	20 14 00.6	-0.9
LATG	Datong	0.72	357	⇓	iP		Pg	20 14 01.6	-1.0
LATG						eS	Sg	20 14 12.0	-0.2
CHKT	Chengkung	0.73	194	eP			Pg	20 14 02.0	-0.7
CHKT						eS	Sb	20 14 15.0	+1.9
WHP	Taichung City	0.73	310	eP			Pb	20 14 02.4	-0.9
WHP						eS	Sg	20 14 12.2	-0.3
ALS	Alishan	0.76	247	eP			Pb	20 14 03.2	-0.6
EOS4	EOS4	0.76	66	eP			Pg	20 14 03.0	-0.2
EOS4						eS	Sb	20 14 13.9	+0.2
ELDTW	Lidau	0.80	219	eP			Pg	20 14 02.6	-1.4
ELDTW						eS	Sg	20 14 13.9	-0.5
ESAO	Su ao	0.81	19	eP			Pg	20 14 03.1	-1.1
WNT	Mingjian	0.81	275	⇑	P		Pb	20 14 05.1	+0.5
WNT						eS	Sb	20 14 16.5	+1.1
ENTT	Nioudou	0.83	0	⇓	P		Pg	20 14 03.9	-0.8
ENTT						eS	Sg	20 14 15.2	-0.3
NDS	Dongshan	0.83	10	eP			Pg	20 14 03.8	-0.9
NDS						eS	Sg	20 14 15.1	-0.5
CHN5	Tsauling	0.84	256	⇑	iP		Pb	20 14 05.2	0.0
CHN5						eS	Sb	20 14 17.7	+1.3
EOS3	EOS3	0.84	55	eP			Pb	20 14 04.7	-0.3
TWC	Suao	0.84	18	⇓	P		Pg	20 14 03.9	-0.9
TWC						eS	Sg	20 14 15.8	0.0
YHNB	Yeheng	0.87	349	P			Pg	20 14 05.0	-0.5
YHNB	Yeheng	0.87	349	S			Sg	20 14 17.2	-0.3
YHNB	Yeheng	0.87	349	⇓	iP		Pg	20 14 05.0	-0.5
YHNB						eS	Sb	20 14 17.2	-0.3
TCU	Taichung	0.88	293	eP			Pb	20 14 06.1	+0.3
NSK	Sanguang	0.88	348	⇓	iP		Pg	20 14 05.0	-0.7
NSK						eS	Sg	20 14 16.2	-1.0
TWQ1	Liyutan	0.90	307	eP			Pb	20 14 06.0	-0.2
TWQ1						eS	Sb	20 14 18.3	+0.2
WYL	Yuanlin Townsh	0.91	280	eP			Pb	20 14 06.2	-0.1
TWE	Neicheng	0.91	6	⇓	P		Pg	20 14 05.3	-0.9
TWE						eS	Sg	20 14 18.1	-0.1
NFF	Wufeng Townshi	0.92	334	eP			Pb	20 14 05.9	-0.6
NFF						eS	Sg	20 14 17.4	-0.8
WGK	Gukeng	0.93	263	⇑	P		Pb	20 14 07.0	+0.4
WDL	Douliou City	0.94	265	eP			Pn	20 14 07.5	-0.1
WDL						eS	Sn	20 14 20.7	-0.3
WDLH	Douliu	0.95	263	eP			Pb	20 14 07.3	+0.4
WDLH						eS	Sn	20 14 21.5	+0.3
FUSB	Fushanzhiwuyua	0.95	1	⇓	P		Pg	20 14 06.0	-0.9
FUSB						eS	Sg	20 14 18.6	-0.7
NSY	Sanyi	0.95	310	eP			Pb	20 14 07.5	+0.4
NSY						eS	Sb	20 14 20.6	+1.0
WCKO	Fanlu	0.95	247	⇑	eP		Pb	20 14 07.0	0.0
WCKO						eS	Sb	20 14 20.3	+0.7
WCHH	Zhanghua	0.96	287	eP			Pn	20 14 07.2	-0.2
WCHH						eS	Sn	20 14 21.7	+0.2
STYH	Taoyuan	0.96	229	eP			Pb	20 14 06.7	-0.5
STYH						eS	Sb	20 14 19.8	0.0
NSTT	Nanjuang	0.97	328	⇓	P		Pb	20 14 06.9	-0.4
NSTT						eS	Sg	20 14 18.9	-1.0
NWLT	Wulai	0.97	357	⇓	P		Pg	20 14 06.3	-1.0
NWLT						eS	Sg	20 14 17.9	-2.0
WCH1	Changhua City	0.97	286	eP			Pg	20 14 05.6	-1.6
LIOB	Emei	0.97	329	eP			Pb	20 14 07.1	-0.3
LIOB						eS	Sg	20 14 19.7	-0.4
STYT	Tauyuan	0.98	229	⇑	P		Pg	20 14 06.7	-0.8
STYT						eS	Sb	20 14 20.3	-0.1
TPUB	Ta-pu	0.99	240	P			Pb	20 14 08.0	+0.2
TPUB	Ta-pu	0.99	240	S			Sb	20 14 21.0	+0.1
TPUB	Ta-pu	0.99	240	⇑	P		Pb	20 14 07.7	-0.1
TPUB						S	Sb	20 14 21.1	+0.3
CHU2	Tsaushan	1.00	243	⇑	eP		Pb	20 14 08.1	+0.1
NMLH	Miaoli	1.01	316	eP			Pn	20 14 08.7	0.0
NMLH						eS	Sb	20 14 22.6	+1.2
NJD	Zhudong	1.02	335	eP			Pb	20 14 07.7	-0.5
NJD						eS	Sb	20 14 21.9	+0.3
KSHI	Guanxi Townshi	1.03	340	eP			Pb	20 14 08.3	0.0
KSHI						eS	Sb	20 14 22.1	+0.3
CHN2	Minshiung	1.03	255	eP		

LYUB	Lan-yu	1.80	179	*e*P		Pn	20	14	18.3 -1.2
WDGT	Dungji	1.83	253	*e*P		Pn	20	14	19.4 -0.5
WDGT				*e*S		Sn	20	14	44.0 +1.0
PHUB	P'eng-hu	1.85	261	*e*P		Pn	20	14	20.0 -0.1
PHUB				*e*S		Sn	20	14	44.8 +1.3
PNG	Penghu	1.86	263	*e*P		Pn	20	14	20.4 +0.2
PNG				*e*S		Sn	20	14	44.0 +0.4
SMST	Manzhou Townsh	1.90	201	*e*P		Pn	20	14	20.1 -0.8
HEN	Hengchun	1.95	203	*e*P		Pn	20	14	22.4 +0.9
TWK1	Hengchun	1.98	201	*e*P		Pn	20	14	22.6 +0.6
TWKBT	Hengchun	1.98	201	*e*P		Pn	20	14	22.3 +0.3
VCHM	Qimei	2.05	253	*e*P		Pn	20	14	22.4 -0.4
IRIF	Iriomote-Funau	2.05	75	*e*P		Pn	20	14	22.0 -0.8
VWUC	VWUC	2.26	302	*e*P		Pn	20	14	24.7 -1.1
VWUC				*e*S		Sn	20	14	51.8 -1.8
JISG	Ishigakijimahi	2.63	72	P		Pn	20	14	30.0 -0.8
MATB	Ma-tsu	2.76	328	*e*P		Pn	20	14	32.9 +0.2
KNM	Kinmen	2.92	283	*e*P		Pn	20	14	36.4 +1.5
KNMB	Chin-men Tao	2.97	283	*e*P		Pn	20	14	35.0 -0.6
LYJJ	Jianjiangzhen	3.18	329	*e*P		Pn	20	14	38.1 -0.4
MHZQ	Yeshan	3.24	315	*e*P		Pn	20	14	39.5 +0.3
XPSS	Dashiqiu	3.35	339	*e*P		Pn	20	14	40.2 -0.6
AXDP	Jialang	3.45	289	*e*P		Pn	20	14	41.8 -0.4
ZPLA	Ao Xicun	3.49	273	*e*P		Pn	20	14	42.4 -0.4
DSXP	Dongshan	3.79	269	*e*P		Pn	20	14	47.3 +0.4
SXFK	Yanhouchang	4.39	307	*e*P		Pn	20	14	54.7 -0.4
SONM	Songino Array	26.85	337	P		P	20	19	32.4 +3.3
	0.4nm,0.7s,baz=151,slow=9.5,SNR=2.8 0.4nm,0.7s								
MKAR	Makanchi Array	38.85	316	P		P	20	21	14.2 +0.6
	0.2nm,0.6s,baz=116,slow=10,SNR=4.6 0.2nm,0.6s								
KURBB	Kurchatov Arra	42.62	320	P		P	20	21	45.0 +0.3
	0.3nm,0.8s,baz=111,slow=8.4,SNR=2.0 0.3nm,0.8s								
WRA	Warramunga Arr	45.23	163	P		P	20	22	04.1 -1.8
	0.7nm,1.0s,baz=343,slow=8.0,SNR=2.9 0.7nm,1.0s								
BVAR	Borovoye Array	48.18	321	P		P	20	22	31.0 +2.3
	0.3nm,0.5s,baz=132,slow=8.0,SNR=2.2 0.3nm,0.5s								
ASAR	Alice Springs	48.69	165	P		P	20	22	30.6 -2.4
	0.1nm,0.3s,baz=341,slow=6.9,SNR=5.6 0.1nm,0.3s								

IDC ***15*** *20:28:19.5±0.7,29˚.44N×104˚.69E,h0km,mb3.9/18, mbtmp3.9/21,ML3.9/3,MS3.8/20,Error ellipse: s-maj=20.3km s-min=14.4km az=54.0*

BJI ***15*** *20:28:20.3,29˚.48N×104˚.50E,h10km,mB4.7/3,mb4.1/29, ML4.4/23,Ms4.5/32,Ms7 4.4/35*

NEIC ***15*** *20:28:21.6±1.6,29˚.43N±0˚.07×104˚.64E±0˚.08,h10km±1km, mb4.5/27,Error ellipse: s-maj=12.5km s-min=11.4km az=100.0*

ISC 15 20:28:21.6±0.4,29˚.49N±0˚.03×104˚.59E±0˚.04,h10km,n104, σ1§96/112,mb4.3/35,MS3.7/19,3C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.59**	**333**	⇓Pg		**Pn**	**20 28 49.3**	**-0.6**
CD2				Sg		**Sn**	**20 29 10.0**	**-0.6**
CD2				smax		smax		
	comp=N,2μm,0.5s							
CD2				smax		smax		
	comp=E,3μm,0.7s							
GYA	**Guiyang**	**3.53**	**148**	⇑Pn		**Pn**	**20 29 16.5**	**-0.1**
GYA				Sn		**Sn**	**20 29 59.4**	**+0.9**
GYA				smax		smax		
	comp=N,3μm,0.8s							
GYA				smax		smax		
	comp=E,3μm,0.8s							
GYA				LR		LR		
	comp=N,3μm,3.8s							
PZH	**PanZhiHua**	**3.90**	**221**	Pn		**Pn**	**20 29 23.8**	**+2.2**
PZH				Sn		**Sn**	**20 30 01.1**	**-6.4**
PZH				Sg		**Sb**	**20 30 21.6**	**+3.9**
PZH				smax		smax		
	comp=N,660nm,1.5s							
PZH				smax		smax		
	comp=E,810nm,1.6s							
PZH				LR		LR		
	comp=N,3μm,4.6s							
PZH				LR		LR		
	comp=E,3μm,4.7s							
PZH				LR		LR		
	comp=Z,5μm,4.8s							
ENH	**Enshi**	**4.33**	**78**			**Pn**	**20 29 28.7**	**+1.2**
KMI2	**Kunming**	**4.62**	**201**	⇑Pn		**Pn**	**20 29 32.5**	**+0.8**
KMI2				Sn		**Sn**	**20 30 25.4**	**-0.2**
KMI2				Sg		**Sg**	**20 30 48.9**	**-1.2**
KMI2				smax		smax		
	comp=N,380nm,1.3s							
KMI2				smax		smax		
	comp=E,400nm,1.7s							
KMI2				LR		LR		
	comp=Z,3μm,6.3s							
XAN	**Xi'an**	**5.85**	**38**	Pn		**Pn**	**20 29 51.8**	**+3.4**
XAN				Pg		**Pb**	**20 30 07.0**	**+3.3**
XAN				Sn		**Sb**	**20 31 07.8**	**-6.1**
XAN				Sg		**Sg**	**20 31 25.8**	**-3.6**
XAN				smax		smax		
	comp=N,580nm,1.4s							
XAN				smax		smax		
	comp=E,530nm,1.4s							
XAN				LR		LR		
	comp=Z,3μm,4.0s							
LZDM	**Lanzhou Array**	**6.50**	**354**	Pn		**Pn**	**20 29 58.4**	**+0.9**
	baz=140,slow=29							
LZDM				Sn		**Sn**	**20 31 14.3**	**+2.4**
	baz=133,slow=13 7.5nm,0.3s							
LZH	**Lanzhou**	**6.61**	**355**	Pn		**Pn**	**20 30 01.0**	**+2.0**
LZH				Sn		**Sn**	**20 31 15.0**	**+0.5**
LZH				Sg		**Sg**	**20 31 47.4**	**-6.5**
LZH				smax		smax		
	comp=N,110nm,1.4s							
LZH				smax		smax		
	comp=E,170nm,1.4s							
LZH				LR		LR		
	comp=N,1μm,10.7s							
LZH				LR		LR		
	comp=E,2μm,10.3s							
LZH				LR		LR		
	comp=Z,1μm,11.0s							
GULI	**GuiLin**	**6.62**	**128**	Pn		**Pn**	**20 29 59.0**	**0.0**
GULI				Sn		**Sn**	**20 31 13.8**	**-0.7**
GULI				smax		smax		
	comp=N,490nm,1.6s							
GULI				smax		smax		
	comp=E,380nm,1.1s							
TNCH	**TengChong**	**6.99**	**232**	Pn		**Pn**	**20 30 05.3**	**+1.0**
TNCH				Sg		**Sg**	**20 32 02.8**	**-3.3**
TNCH				smax		smax		
	comp=N,880nm,1.7s							
TNCH				smax		smax		
	comp=E,690nm,1.8s							
TNCH				LR		LR		
	comp=Z,4μm,10.6s							
CNSH	**ChangSha**	**7.43**	**98**	Pn		**Pn**	**20 30 10.4**	**+0.3**
CNSH				Sn		**Sn**	**20 31 37.3**	**+2.8**
CNSH				smax		smax		
	comp=N,290nm,0.8s							
CNSH				smax		smax		
	comp=E,260nm,0.6s							
LYN	**LuoYang**	**8.38**	**51**	P		**Pn**	**20 30 20.4**	**-2.7**
LYN				S		**Sn**	**20 31 57.9**	**+0.1**
LYN				pmax		pmax		
	comp=Z,14nm,1.1s							
LYN				smax		smax		
	comp=N,160nm,1.5s							
LYN				smax		smax		
	comp=E,160nm,1.5s							
LYN				LR		LR		
	comp=N,940nm,4.5s							
LYN				LR		LR		
	comp=E,3μm,11.0s							
LYN				LR		LR		
	comp=Z,3μm,12.7s							
WHN	**Wuhan**	**8.53**	**80**	P		**Pn**	**20 30 26.3**	**+1.1**
WHN				S		**Sn**	**20 32 02.1**	**+0.6**
WHN				LR		LR		
	comp=Z,7μm,6.1s							
WHN				LR		LR		
	comp=Z,5μm,6.4s							
WHN				LR		LR		
	comp=Z,7μm,11.5s							
GZH2	**Guangzhou**	**9.98**	**124**	P		**Pn**	**20 30 44.8**	**-0.3**
GZH2				S		**Sn**	**20 32 38.5**	**+1.4**
GZH2				LR		LR		
	comp=Z,4μm,8.7s							
MORE	**Moreh**	**10.57**	**243**			**Pn**	**20 30 53.9**	**+0.7**
GTA2	**Gaotai**	**10.74**	**340**	*e*P		**Pn**	**20 30 57.1**	**+1.5**
GTA2				pP			20 31 00.5	
GTA2				pmax		pmax		
	comp=Z,2.0nm,1.5s							
GTA2				LR		LR		
	comp=Z,980nm,9.5s							
GTA2				LR		LR		
	comp=Z,1μm,12.0s							
GTA2				LR		LR		
	comp=Z,990nm,13.8s							
QIZ	**Qiongzhong**	**11.46**	**154**	Pn		**Pn**	**20 31 04.7**	**-0.7**
QIZ	**Qiongzhong**	**11.46**	**154**	P		**Pn**	**20 31 04.9**	**-0.5**
QIZ				S		**Sn**	**20 33 12.5**	**-1.0**
QIZ				LR		LR		
	comp=Z,740nm,10.0s							
QIZ				LR		LR		
	comp=Z,2μm,14.2s							
QIZ				LR		LR		
	comp=Z,920nm,7.6s							
HNS	**HongShan**	**11.56**	**44**	*e*P		**Pn**	**20 31 09.6**	**+3.0**
HNS				S		Sn	20 33 25.3	+10
HNS				LR		LR		
	comp=Z,610nm,7.8s							
HNS				LR		LR		
	comp=Z,870nm,9.6s							
HNS				LR		LR		
	comp=Z,760nm,13.5s							
LSA	**Lhasa**	**11.70**	**274**			**Pn**	**20 31 09.9**	**+0.8**
LSA	**Lhasa**	**11.70**	**274**	P		**Pn**	**20 31 06.3**	**-2.8**
LSA				LR		LR		
	comp=Z,350nm,9.3s							
LSA				LR		LR		
	comp=Z,860nm,9.7s							
LSA				LR		LR		
	comp=Z,1μm,9.7s							
CHTO	**Chiang Mai**	**11.80**	**207**			**Pn**	**20 31 09.7**	**-0.5**
SHL	**Shillong**	**11.93**	**254**	Pn		**Pn**	**20 31 12.9**	**+0.9**
BTO2	**Baotou**	**12.03**	**20**	*e*P		**Pn**	**20 31 12.0**	**-1.3**
BTO2				S		**Sn**	**20 33 27.9**	**+0.3**
BTO2				pmax		pmax		
	comp=Z,8.0nm,0.7s							
BTO2				LR		LR		
	comp=Z,1μm,7.6s							
BTO2				LR		LR		
	comp=Z,2μm,13.2s							
CM31	**Chiang Mai Arr**	**12.13**	**206**	Pn		**Pn**	**20 31 15.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**12.13**	**206**	Pn		**Pn**	**20 31 15.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=16,slow=12,SNR=10							
CMAR				Lg		Lg	20 34 50.5	
	comp=Z,0.2nm,0.3s,baz=20,slow=29,SNR=6.0							
CMAR				LR		LR	20 36 23.1	
	comp=Z,289nm,19.4s,baz=30,slow=40 comp=Z,1.2nm,0.8s							
TIA	**Tai'an**	**12.48**	**54**	P		**Pn**	**20 31 20.1**	**+0.7**
TIA				pmax		pmax		
	comp=Z,16nm,1.4s							
TIA				LR		LR		
	comp=Z,1μm,5.8s							
TIA				LR		LR		
	comp=Z,1μm,6.9s							
TIA				LR		LR		
	comp=Z,2μm,10.6s							
NJ2	**Nanjing**	**12.53**	**75**	*e*P		**Pn**	**20 31 20.8**	**+0.8**
NJ2				pmax		pmax		
	comp=Z,7.0nm,1.1s							
NJ2				LR		LR		
	comp=Z,970nm,6.6s							
NJ2				LR		LR		
	comp=Z,1μm,6.2s							
NJ2				LR		LR		
	comp=Z,1μm,8.5s							
HHC	**Hu-ho-hao-te**	**12.69**	**25**	*e*P		**Pn**	**20 31 25.4**	**+3.2**
HHC				pmax		pmax		
	comp=Z,2.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,80nm,4.3s							
HHC				LR		LR		
	comp=Z,260nm,6.2s							
HHC				LR		LR		
	comp=Z,770nm,6.1s							
HHC				LR		LR		
	comp=Z,480nm,7.6s							
BRDH	**Bariadhala**	**13.46**	**243**	LR		LR	20 37 42.0	
	comp=Z,322nm,21.3s,baz=24,slow=42							
BJT	**Baijiatuan**	**14.16**	**39**	Pn		**Pn**	**20 31 42.4**	**+0.2**
DL2	**Dalian**	**16.92**	**52**	P		Pn	20 32 07.0	-11
DL2				S		Sn	20 35 08.4	-18
DL2				pmax		pmax		
	comp=Z,70nm,1.9s							
DL2				pmax		pmax		
	comp=Z,760nm,6.9s							
DL2				LR		LR		
	comp=N,2μm,19.8s							
DL2				LR		LR		
	comp=E,1μm,22.0s							
DL2				LR		LR		
	comp=Z,950nm,23.3s							
XLT	**XiLinHaoTe**	**17.06**	**29**	*e*P		**P**	**20 32 24.8**	**+2.8**
XLT				sP		sP	20 32 33.6	+7.3
XLT				PP		**PnPn**	**20 32 39.0**	**+9.0**
XLT				S		**S**	**20 35 36.0**	**-3.8**
XLT				sS		sS	20 35 41.1	-3.3
XLT				pmax		pmax		
	comp=Z,6.0nm,1.3s							
XLT				LR		LR		
	comp=Z,540nm,8.5s							
XLT				LR		LR		
	comp=Z,490nm,11.5s							
SONM	**Songino Array**	**18.37**	**4**	P		**Pn**	**20 32 37.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=184,slow=8.6,SNR=6.6 comp=Z,0.8nm,0.8s							
SONM	**Songino Array**	**18.37**	**4**	P		**Pn**	**20 32 37.9**	**+1.4**
ULN	**Ulaanbaatar**	**18.45**	**5**	P		**Pn**	**20 32 38.5**	**+1.0**
WMQ	**Urumqi**	**19.65**	**321**	*e*P		**Pn**	**20 32 54.3**	**+2.3**
KSAR	**Wonju Array Be**	**20.96**	**62**	P		**P**	**20 33 04.1**	**-0.6**
KSRS	**Korea Array**	**20.99**	**62**	P		**P**	**20 33 04.3**	**-0.8**
	comp=Z,7.4nm,1.1s,baz=243,slow=8.4,SNR=8.0							
KSRS				LR		LR	20 42 11.6	
	comp=Z,368nm,19.6s,baz=250,slow=40 comp=Z,7.4nm,1.1s							
JOW	**Kunigami**	**21.04**	**91**	LR		LR	20 41 58.8	
	comp=Z,296nm,19.5s,baz=194,slow=39							
JNU	**Nakatsue**	**22.73**	**74**	LR		LR	20 42 19.6	
	comp=Z,173nm,19.1s,baz=356,slow=37							
HIA	**Hailar**	**22.88**	**26**	P		**P**	**20 33 24.9**	**-0.3**
HILR	**Hailar Array B**	**23.12**	**26**	P		**P**	**20 33 27.1**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=203,slow=11,SNR=2.1 comp=Z,0.4nm,0.3s							
WUS	**Wushi**	**23.68**	**306**			**P**	**20 33 34.3**	**+0.7**
WUS				IAmb		IAmb	20 34 16.2	
	comp=Z,6.7nm,0.9s							
BNX	**BinXian**	**24.16**	**42**	⇑P		**P**	**20 33 37.4**	**-0.5**
BNX				pmax		pmax		
	comp=Z,14nm,1.5s							
KULM	**Kulim**	**24.35**	**190**	P		**P**	**20 33 39.0**	**-0.9**
MKAR	**Makanchi Array**	**24.48**	**321**	P		**P**	**20 33 40.5**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=120,slow=10,SNR=20							
MKAR				LR		LR	20 43 39.6	
	comp=Z,239nm,19.0s,baz=288,slow=37 comp=Z,1.2nm,0.4s							
MKAR	**Makanchi Array**	**24.48**	**321**			**P**	**20 33 40.3**	**-0.6**
MAKZ	**Makanchi**	**24.67**	**321**	P		**P**	**20 33 42.3**	**-0.2**
MAKZ				IAmb		IAmb	20 33 44.2	
	comp=Z,14nm,1.5s							
PRZ	**Przheval'sk**	**24.73**	**309**	P		**P**	**20 33 44.5**	**+1.2**
IPM	**Ipoh**	**25.10**	**188**			**P**	**20 33 44.7**	**-1.9**
IPM				IAmb		IAmb	20 33 49.7	
	comp=Z,7.8nm,0.8s							
KSH2	**Kashi**	**25.74**	**300**	P		**P**	**20 33 53.1**	**+0.6**
KSH2				pmax		pmax		
	comp=Z,9.0nm,1.4s							
KSH2				LR		LR		
	comp=Z,650nm,8.9s							
KSH2				LR		LR		
	comp=Z,640nm,11.7s							
KSH2				LR		LR		
	comp=Z,440nm,10.7s							
NRN	**Naryn**	**26.04**	**305**	P		**P**	**20 33 55.0**	**-0.4**
NRN				IAmb		IAmb	20 33 59.2	
	comp=Z,15nm,1.4s							
USRK	**Ussuriysk Ar.**	**26.24**	**48**	P		**P**	**20 33 57.0**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=222,slow=4.2,SNR=1.9 comp=Z,1.5nm,0.6s							
HEH	**HeiHe**	**26.95**	**33**	*e*P		**P**	**20 34 03.4**	**+0.3**
HEH				pmax		pmax		
	comp=Z,3.0nm,0.8s							
NIL	**Nilore**	**26.97**	**287**	P		**P**	**20 34 03.0**	**-0.5**
NIL				IAmb		IAmb	20 34 20.0	
	comp=Z,10.0nm,1.1s							
AAK	**Ala-Archa**	**27.48**	**307**	LR		LR	20 47 10.8	
	comp=Z,279nm,19.4s,baz=20,slow=41							
ZALV	**Zalesovo Beam**	**28.36**	**335**	P		**P**	**20 34 15.6**	**0.0**
	comp=Z,0.6nm,0.5s,baz=130,slow=8.5,SNR=4.4							
ZALV				LR		LR	20 46 50.0	
	comp=Z,170nm,18.6s,baz=312,slow=39 comp=Z,0.6nm,0.5s							
ZALV	**Zalesovo Beam**	**28.36**	**335**	P		**P**	**20 34 15.1**	**-0.5**
KLR	**Kul'dur**	**28.56**	**39**	LR		LR	20 46 57.7	
	comp=Z,48nm,19.9s,baz=281,slow=39							
KURBB	**Kurchatov Arra**	**28.79**	**324**	P		**P**	**20 34 18.5**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=126,slow=9.8,SNR=12 comp=Z,1.1nm,0.6s							
KURK	**Kurchatov**	**28.80**	**325**	P		**P**	**20 34 20.1**	**+0.5**
MJAR	**Matsushiro Arr**	**28.95**	**67**	P		**P**	**20 34 18.7**	**-2.5**
	comp=Z,2.2nm,1.1s,baz=261,slow=7.6,SNR=4.6							
MJAR				LR		LR	20 46 44.1	
	comp=Z,99nm,18.6s,baz=288,slow=38 comp=Z,2.2nm,1.1s							
JHJ	**Hachijo jima 2**	**30.20**	**74**	LR		LR	20 47 55.8	
	comp=Z,140nm,19.1s,baz=84,slow=39							
PALK	**Pallekele**	**31.52**	**230**	LR		LR	20 48 57.4	
	comp=Z,124nm,20.6s,baz=358,slow=39							
JCJ	**Chichijima**	**33.10**	**85**	LR		LR	20 48 14.4	
	comp=Z,75nm,21.6s,baz=204,slow=36							
BVAR	**Borovoye Array**	**34.32**	**323**	P		**P**	**20 35 08.8**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=116,slow=8.9,SNR=4.1							
BVAR				LR		LR	20 51 42.4	
	comp=Z,223nm,18.7s,baz=308,slow=41 comp=Z,0.3nm,0.5s							
AB31	**Akbulak array**	**39.07**	**313**	P		**P**	**20 35 49.7**	**+1.1**
ABKAR	**Akbulak array**	**39.07**	**313**	P		**P**	**20 35 49.2**	**+0.6**
SIJI	**Sorong**	**39.50**	**135**	LR		LR	20 51 06.7	
	comp=Z,108nm,20.8s,baz=175,slow=35							
NRIK	**Noril'sk**	**41.09**	**351**	P		**P**	**20 36 06.7**	**+1.5**
	comp=Z,4.0nm,1.0s,baz=119,slow=5.1,SNR=6.8 comp=Z,4.0nm,1.0s							
NRIK	**Noril'sk**	**41.09**	**351**			**P**	**20 36 05.9**	**+0.8**
NRIK				IAmb		IAmb	20 36 07.8	
	comp=Z,11nm,1.4s							
MA2	**Magadan**	**43.22**	**32**	LR		LR	20 55 34.7	
	comp=Z,133nm,19.2s,baz=352,slow=38							
BATI	**Baumata**	**43.54**	**152**	LR		LR	20 55 40.8	
	comp=Z,55nm,18.1s,baz=316,slow=38							
WRAB	**Tennant Creek**	**56.90**	**146**	P		**P**	**20 38 05.6**	**-1.4**
WRAB				IAmb		IAmb	20 38 43.1	
	comp=Z,4.3nm,0.8s							
WRA	**Warramunga Arr**	**56.90**	**146**	P		**P**	**20 38 05.5**	**-1.5**
	comp=Z,3.4nm,1.0s,baz=337,slow=7.9,SNR=12 comp=Z,3.4nm,1.0s							
BRTR	**Keskin Array B**	**57.91**	**301**	P		**P**	**20 38 15.1**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=125,slow=9.0,SNR=2.1							
BRTR				LR		LR	21 08 13.9	
	comp=Z,195nm,21.0s,baz=308,slow=41 comp=Z,0.3nm,0.6s							
AKASG	**Malin Array Be**	**58.80**	**314**	P		**P**	**20 38 20.7**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=69,slow=6.9,SNR=2.6 comp=Z,0.4nm,0.5s							
FINES	**FINESS Array B**	**59.14**	**327**	P		**P**	**20 38 21.9**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=86,slow=12,SNR=7.5 comp=Z,2.5nm,0.9s							
FINES	**FINESS Array B**	**59.14**	**327**	P		**P**	**20 38 22.1**	**-0.1**
NACGM	**Naroch**	**59.59**	**319**	*e*P		**P**	**20 38 28.2**	**+2.8**
	comp=Z,13nm,1.0s,baz=81							
AS31	**Alice Springs**	**59.90**	**149**	P		**P**	**20 38 26.5**	**-1.3**
ASAR	**Alice Springs**	**59.90**	**149**	P		**P**	**20 38 27.1**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=332,slow=6.6,SNR=25 comp=Z,1.6nm,0.7s							
ASAR	**Alice Springs**	**59.90**	**149**	P		**P**	**20 38 26.7**	**-1.2**
MLR	**Muntele Rosu**	**62.04**	**309**	P		**P**	**20 38 43.1**	**+0.7**
C16K	**Lisburne Hills**	**62.99**	**25**	P		**P**	**20 38 48.1**	**0.0**
CTA	**Charters Tower**	**63.58**	**136**	LR		LR	21 08 13.0	
	comp=Z,40nm,18.1s,baz=20,slow=38							
CTAO	**Charters Tower**	**63.58**	**136**	P		**P**	**20 38 50.9**	**-1.8**
F15K	**North Star Dit**	**63.83**	**27**	P		**P**	**20 38 53.4**	**-0.4**
F15K				IAmb		IAmb	20 39 03.4	
	comp=Z,3.6nm,1.2s							
C19K	**Lookout Ridge**	**64.83**	**23**	P		**P**	**20 39 00.1**	**-0.2**
C19K				IAmb		IAmb	20 39 11.0	
	comp=Z,3.3nm,1.1s							
G16K	**Koyuk River**	**64.83**	**28**	P		**P**	**20 38 59.2**	**-1.1**
G16K				IAmb		IAmb	20 39 03.8	
	comp=Z,4.1nm,1.1s							
HFS	**Hagfors**	**65.34**	**327**	P		**P**	**20 39 03.1**	**-0.7**
	comp=Z,4.8nm,1.1s,baz=66,slow=3.6,SNR=4.5 comp=Z,4.8nm,1.1s							
NOA	**NORSAR Array B**	**66.25**	**328**	P		**P**	**20 39 09.7**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=89,slow=4.0,SNR=1.8 comp=Z,1.4nm,0.9s							
D22K	**Ayikyak River**	**67.25**	**23**	P		**P**	**20 39 15.3**	**-0.5**
D22K				IAmb		IAmb	20 39 55.5	
	comp=Z,2.9nm,0.8s							
D23K	**Nanushuk River**	**67.87**	**22**	P		**P**	**20 39 20.1**	**+0.3**
GERES	**GERESS Array B**	**68.98**	**315**	LR		LR	21 09 56.5	
	comp=Z,413nm,20.5s,baz=350,slow=36							
E24K	**Your Creek**	**68.99**	**23**	P		**P**	**20 39 26.5**	**-0.4**
E24K				IAmb		IAmb	20 39 29.3	
	comp=Z,3.5nm,1.0s							
BMAR	**Burnt Mountain**	**70.61**	**22**	P		**P**	**20 39 36.9**	**0.0**
ILAR	**Eielson Array**	**71.11**	**25**	P		**P**	**20 39 38.8**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=306,slow=3.0,SNR=5.8 comp=Z,0.5nm,0.7s							
ILAR	**Eielson Array**	**71.11**	**25**	P		**P**	**20 39 39.2**	**-0.7**
PRP	**Porcupine Dome**	**71.24**	**24**			**P**	**20 39 40.7**	**-0.1**
PRP				IAmb		IAmb	20 39 44.7	
	comp=Z,3.9nm,0.8s							
J26L	**Joseph Creek**	**72.48**	**25**			**P**	**20 39 46.9**	**-1.3**
J26L				IAmb		IAmb	20 39 50.7	
	comp=Z,3.9nm,0.8s							
INK	**Inuvik**	**73.54**	**19**	P		**P**	**20 39 54.0**	**-0.2**
INK				IAmb		IAmb	20 39 57.0	
	comp=Z,5.0nm,1.2s							
YKA	**Yellowknife Ar**	**83.11**	**17**	P		**P**	**20 40 46.6**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=324,slow=5.5,SNR=5.5 comp=Z,0.4nm,0.8s							

IDC 15 20:32:03.0±59.0,19˚.69S×177˚.71W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=1074.0km s-min=167.5km az=82.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.39**	**243**	P		P	20 39 26.5	+0.2
	0.6nm,0.5s,baz=92,slow=15,SNR=1.4 0.6nm,0.5s							
ASAR	**Alice Springs**	**44.98**	**256**	P		P	20 40 20.5	+0.1
	2.4nm,0.5s,baz=95,slow=7.9,SNR=28 2.4nm,0.5s							
WRA	**Warramunga

GNL Ganaly 4.63 16 *eP* Pn 20 41 44.0 +3.2

*IDC **15** 20:50:02.8±1.0,23°.84N×121°.77E,h0km,mb3.4/8, mbtmp3.4/9,MS2.5/1, Error ellipse: s-maj=30.0km s-min=22.3km az=70.0*
*JMA **15** 20:50:04.4±0.1,23°.8N±0°.3×12°2E±°, h5km,MV3.1/14, TAIWAN REGION*
*TAP **15** 20:50:04.8,23°.83N×121°.54E,h8km,ML4.0,B*
ISC 15 20:50:04.9±0.7,**23°.82N**±0°.01×**121°.62E**±0°.02,**h13**km±4km, **n177,**σ0**92**/287,**mb3.4**/8,**1C-11D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.05**	**334**	*i* P	**Pg**	**20 50 07.8**	**+0.4**
SHUL	**Shoufeng**	**0.07**	**241**	||iP	**Pg**	**20 50 07.1**	**-0.4**
SHUL				*i* S	**Sg**	**20 50 09.0**	**-0.2**
TEGC	**Jichi Village**	**0.13**	**215**	*i* P	**Pg**	**20 50 08.3**	**+0.1**
HWA	**Hwalien**	**0.16**	**354**	*i* P	**Pg**	**20 50 09.0**	**+0.4**
HWA				*e*S	**Sg**	**20 50 11.3**	**0.0**
ESL	**Shilin**	**0.17**	**268**	*i* P	**Pg**	**20 50 07.5**	**-1.4**
ETM	**Tongmen**	**0.19**	**321**	*i* P	**Pg**	**20 50 08.3**	**-0.8**
EGFH	**Guangfu**	**0.23**	**230**	*i* P	**Pg**	**20 50 09.2**	**-0.7**
EGFH				S	**Sg**	**20 50 12.2**	**-1.1**
WARBT	**Fenglin Townsh**	**0.24**	**245**	||iP	**Pg**	**20 50 08.9**	**-1.1**
WARBT				*i* S	**Sg**	**20 50 11.7**	**-1.8**
TWD	**Chiawan**	**0.26**	**354**	*i* P	**Pg**	**20 50 10.3**	**-0.1**
TWD				S	**Sg**	**20 50 14.2**	**+0.2**
LXIB	**Xiulin Townshi**	**0.28**	**316**	||iP	**Pg**	**20 50 09.9**	**-0.9**
LXIB				S	**Sg**	**20 50 13.3**	**-1.4**
ETL	**Fush Village**	**0.34**	**360**	P	**Pg**	**20 50 11.6**	**-0.2**
ETL				*e*S	**Sb**	**20 50 18.5**	**+0.3**
NACB	**Ninganchiao**	**0.35**	**356**	P	**Pg**	**20 50 11.7**	**-0.4**
NACB	**Ninganchiao**	**0.35**	**356**	P	**Pn**	**20 50 17.0**	**+1.2**
NACB	**Ninganchiao**	**0.35**	**356**	||iP	**Pg**	**20 50 11.7**	**-0.4**
NACB				S	**Sg**	**20 50 16.8**	**-0.1**
HGSD	**Ruisui**	**0.37**	**210**	*i* P	**Pb**	**20 50 13.1**	**-0.3**
HGSD				*e*S	**Sb**	**20 50 20.5**	**+1.4**
ETLH	**Xiulin Townshi**	**0.41**	**341**	P	**Pg**	**20 50 12.5**	**-0.5**
ETLH				S	**Sg**	**20 50 18.1**	**-0.5**
EHYH	**Wanrong**	**0.41**	**218**	*e*P	**Pg**	**20 50 12.6**	**-0.5**
EHYH				*e*S	**Sg**	**20 50 19.0**	**+0.4**
EHY	**Hungye**	**0.42**	**222**	P	**Pg**	**20 50 12.4**	**-0.8**
EHY				S	**Sg**	**20 50 18.2**	**-0.6**
OWD	**Renai**	**0.43**	**288**	||iP	**Pg**	**20 50 12.5**	**-1.0**
OWD				*e*S	**Sg**	**20 50 17.8**	**-1.6**
VWDT	**VWDT**	**0.45**	**262**	||iP	**Pg**	**20 50 13.1**	**-0.7**
VWDT				*e*S	**Sg**	**20 50 19.0**	**-0.8**
WHF	**Hehuan Shan**	**0.46**	**315**	*i* P	**Pg**	**20 50 13.3**	**-0.8**
WHF				S	**Sg**	**20 50 18.7**	**-1.7**
WUSB	**Renai**	**0.49**	**290**	||iP	**Pg**	**20 50 14.0**	**-0.7**
WUSB				*e*S	**Sg**	**20 50 20.6**	**-0.7**
EAHA	**Aohua**	**0.52**	**12**	*e*P	**Pb**	**20 50 15.4**	**-0.5**
EAHA				S	**Sb**	**20 50 24.0**	**+0.7**
YULB	**Yu-li**	**0.52**	**215**	P	**Pg**	**20 50 14.1**	**-1.0**
YULB	**Yu-li**	**0.52**	**215**	S	**Sg**	**20 50 20.1**	**-1.9**
YULB	**Yu-li**	**0.52**	**215**	P	**Pg**	**20 50 14.4**	**-0.7**
YULB				S	**Sg**	**20 50 21.2**	**-0.8**
ECBN	**Changbin**	**0.53**	**198**	P	**Pb**	**20 50 15.7**	**-0.3**
ECBN				S	**Sb**	**20 50 24.3**	**+0.8**
FUSS	**Fushou**	**0.55**	**321**	P	**Pg**	**20 50 15.3**	**-0.5**
FUSS				S	**Sg**	**20 50 22.5**	**-0.6**
TWF1	**Yuli**	**0.55**	**213**	P	**Pg**	**20 50 15.1**	**-0.6**
TWF1				S	**Sg**	**20 50 22.8**	**-0.2**
TWT	**Tachien**	**0.60**	**317**	||iP	**Pg**	**20 50 16.3**	**-0.3**
TWT				S	**Sg**	**20 50 23.1**	**-1.4**
TDCB	**Techi**	**0.61**	**316**	||iP	**Pg**	**20 50 16.3**	**-0.5**
TDCB				S	**Sg**	**20 50 23.5**	**-1.4**
SSLB	**Suanglung**	**0.61**	**267**	S	**Sg**	**20 50 15.7**	**-1.2**
SSLB	**Suanglung**	**0.61**	**267**	S	**Sg**	**20 50 23.3**	**-1.7**
SSLB	**Suanglung**	**0.61**	**267**	||iP	**Sg**	**20 50 16.0**	**-0.9**
SSLB				S	**Sg**	**20 50 23.3**	**-1.7**
EWUT	**Wuta**	**0.64**	**13**	P	**Pb**	**20 50 17.4**	**-0.5**
EWUT				*e*S	**Sb**	**20 50 27.2**	**+0.4**
NNSB	**Datong**	**0.65**	**340**	||iP	**Pg**	**20 50 17.2**	**-0.3**
NNSB				*i* S	**Sg**	**20 50 25.1**	**-1.0**
CHKH	**Chenggong**	**0.66**	**199**	*e*P	**Pb**	**20 50 18.6**	**+0.4**
CHKH				S	**Sb**	**20 50 28.6**	**+1.3**
NNS	**Nan Shan**	**0.66**	**340**	*i* P	**Pg**	**20 50 17.5**	**-0.3**
NNS				*e*S	**Sg**	**20 50 25.2**	**-1.3**
SMLT	**Sun Moon Lake**	**0.67**	**276**	*i* P	**Pg**	**20 50 17.2**	**-0.7**
SMLT				S	**Sg**	**20 50 25.4**	**-1.3**
FULB	**Fuli**	**0.69**	**206**	*e*P	**Pb**	**20 50 19.6**	**+0.8**
FULB				*e*S	**Sb**	**20 50 30.2**	**+2.0**
WCS	**Beigang Elemen**	**0.69**	**290**	P	**Pg**	**20 50 17.8**	**-0.6**
WCS				*e*S	**Sg**	**20 50 26.6**	**-0.9**
EOS4	**EOS4**	**0.70**	**65**	P	**Pn**	**20 50 19.6**	**+0.6**
EOS4				S	**Sn**	**20 50 31.0**	**+0.2**
WHYT	**Xinyi Township**	**0.72**	**260**	P	**Pg**	**20 50 18.1**	**-0.7**
WHYT				S	**Sg**	**20 50 27.6**	**-0.7**
LATG	**Datong**	**0.72**	**353**	P	**Pg**	**20 50 18.5**	**-0.4**
LATG				S	**Sb**	**20 50 28.4**	**-0.8**
CHKT	**Chengkung**	**0.76**	**198**	*e*P	**Pg**	**20 50 19.5**	**0.0**
CHKT				*e*S	**Sb**	**20 50 30.6**	**+0.5**
WHP	**Taichung City**	**0.77**	**307**	P	**Pg**	**20 50 19.4**	**-0.4**
WHP				*e*S	**Sg**	**20 50 29.6**	**-0.3**
EOS3	**EOS3**	**0.79**	**54**	P	**Pn**	**20 50 21.4**	**-0.2**
EOS3				S	**Sn**	**20 50 34.0**	**+0.9**
ECS	**Chishang**	**0.81**	**207**	*e*P	**Pb**	**20 50 21.5**	**+0.7**
ALS	**Alishan**	**0.81**	**248**	P	**Pg**	**20 50 20.2**	**-0.4**
ALS				S	**Sg**	**20 50 30.6**	**-0.7**
TWC	**Suao**	**0.81**	**15**	P	**Pb**	**20 50 20.8**	**-0.1**
TWC				S	**Sb**	**20 50 31.3**	**-0.5**
EOS2	**EOS2**	**0.81**	**43**	*e*P	**Pb**	**20 50 22.4**	**+0.4**
NDS	**Dongshan**	**0.81**	**6**	P	**Pb**	**20 50 20.6**	**-0.3**
NDS				*e*S	**Sb**	**20 50 31.5**	**-0.3**
ENTT	**Nioudou**	**0.82**	**356**	P	**Pb**	**20 50 20.8**	**-0.3**
ENTT				*e*S	**Sb**	**20 50 32.0**	**0.0**
ELDTW	**Lidau**	**0.84**	**222**	P	**Pg**	**20 50 19.6**	**-1.5**
ELDTW				S	**Sg**	**20 50 30.7**	**-1.5**
WNT	**Mingjian**	**0.86**	**274**	*e*P	**Pb**	**20 50 22.1**	**+0.4**
WNT				*e*S	**Sb**	**20 50 34.1**	**+0.9**
YHNB	**Yeheng**	**0.88**	**345**	P	**Pb**	**20 50 21.8**	**-0.2**
YHNB	**Yeheng**	**0.88**	**345**	S	**Sb**	**20 50 33.7**	**0.0**
YHNB	**Yeheng**	**0.88**	**345**	||iP	**Pb**	**20 50 21.8**	**-0.2**
YHNB				S	**Sg**	**20 50 32.0**	**-1.3**
NSK	**Sanguang**	**0.89**	**344**	*i* P	**Pb**	**20 50 22.0**	**-0.2**
NSK				S	**Sg**	**20 50 32.8**	**-0.9**
CHN5	**Tsauling**	**0.90**	**256**	*e*P	**Pb**	**20 50 22.3**	**0.0**
CHN5				*e*S	**Sb**	**20 50 35.1**	**+0.9**
TWE	**Neicheng**	**0.90**	**2**	P	**Pb**	**20 50 22.2**	**-0.2**
TWE				S	**Sb**	**20 50 34.8**	**+0.5**
TCU	**Taichung**	**0.93**	**291**	*e*P	**Pn**	**20 50 23.4**	**-0.2**
TCU				*e*S	**Sb**	**20 50 36.3**	**+1.2**
NFF	**Wufeng Townshi**	**0.93**	**330**	*i* P	**Pb**	**20 50 22.8**	**-0.1**
NFF				S	**Sg**	**20 50 34.1**	**-1.0**
FUSB	**Fushanzhiwuyua**	**0.94**	**358**	P	**Pb**	**20 50 22.8**	**-0.3**
FUSB				S	**Sb**	**20 50 35.6**	**+0.1**
TWQ1	**Liyutan**	**0.94**	**304**	*e*P	**Pb**	**20 50 23.5**	**+0.4**
TWQ1				S	**Sb**	**20 50 35.7**	**+0.2**
ILA	**Ilan**	**0.95**	**7**	*e*P	**Pg**	**20 50 22.3**	**-0.9**
ILA				*e*S	**Sn**	**20 50 37.1**	**-0.3**
NWLT	**Wulai**	**0.96**	**353**	P	**Pb**	**20 50 23.1**	**-0.3**
NWLT				*e*S	**Sg**	**20 50 35.2**	**-0.8**
WGK	**Gukeng**	**0.98**	**262**	P	**Pb**	**20 50 24.0**	**+0.2**
WGK				S	**Sn**	**20 50 38.5**	**+0.3**
NSY	**Sanyi**	**0.99**	**307**	*e*P	**Pn**	**20 50 25.0**	**+0.5**
NSTT	**Nanjuang**	**0.99**	**325**	P	**Pb**	**20 50 23.9**	**0.0**
NSTT				S	**Sg**	**20 50 36.2**	**-0.7**
LIOB	**Emei**	**0.99**	**326**	||iP	**Pb**	**20 50 24.5**	**-0.1**
LIOB				S	**Sb**	**20 50 36.9**	**-0.2**
WDL	**Douliou City**	**1.00**	**264**	P	**Pb**	**20 50 24.4**	**+0.4**
WDL				S	**Sn**	**20 50 39.1**	**+0.5**
WDLH	**Douliu**	**1.00**	**263**	*i* P	**Pb**	**20 50 24.5**	**+0.3**
WDLH				S	**Sn**	**20 50 38.9**	**+0.2**
WCHH	**Zhanghua**	**1.01**	**285**	P	**Pn**	**20 50 24.6**	**-0.1**
WCHH				*e*S	**Sn**	**20 50 39.4**	**+0.5**
WCKO	**Fanlu**	**1.01**	**248**	P	**Pb**	**20 50 24.5**	**+0.3**
WCKO				*e*S	**Sb**	**20 50 37.3**	**-0.2**
STYH	**Taoyuan**	**1.01**	**231**	*e*P	**Pg**	**20 50 23.5**	**-0.9**
STYH				S	**Sg**	**20 50 37.2**	**-0.4**
WCH1	**Changhua City**	**1.02**	**285**	*e*P	**Pb**	**20 50 24.6**	**+0.2**
WCH1				*e*S	**Sn**	**20 50 39.6**	**+0.5**
KSHI	**Guanxi Townshi**	**1.04**	**337**	*e*P	**Pn**	**20 50 25.7**	**+0.5**
KSHI				*e*S	**Sn**	**20 50 39.7**	**+0.1**
NMLH	**Miaoli**	**1.04**	**313**	*i* P	**Pn**	**20 50 25.8**	**+0.5**
NMLH				*e*S	**Sn**	**20 50 40.1**	**+0.3**
TPUB	**Ta-pu**	**1.05**	**241**	*e*P	**Pg**	**20 50 24.7**	**-0.4**
TPUB				S	**Sg**	**20 50 38.5**	**-0.3**
EGS		**1.06**	**15**	*e*P	**Pn**	**20 50 26.1**	**+0.7**
WTP	**Ta-pu**	**1.09**	**239**	P	**Pg**	**20 50 25.3**	**-0.5**
WTP				S	**Sb**	**20 50 40.1**	**+0.3**
CHN2	**Minshiung**	**1.09**	**255**	*e*P	**Pn**	**20 50 26.0**	**+0.1**
CHN2				S	**Sn**	**20 50 41.6**	**+0.8**
TWGBT	**Beinan**	**1.11**	**207**	*e*P	**Pg**	**20 50 23.6**	**-2.8**
TWGBT				*e*S	**Sb**	**20 50 41.0**	**+0.5**
TWG	**Pinlang**	**1.12**	**207**	*e*P	**Pg**	**20 50 25.0**	**-1.4**
TWG				*e*S	**Sg**	**20 50 40.3**	**-0.6**
SBCB	**Hsinchu**	**1.13**	**329**	*e*P	**Pn**	**20 50 27.6**	**+1.1**
SBCB				*e*S	**Sb**	**20 50 41.5**	**+0.6**
NHDH	**Xindian Distri**	**1.14**	**355**	*e*P	**Pn**	**20 50 26.9**	**+0.2**
NHDH				*e*S	**Sn**	**20 50 42.7**	**+0.6**
CHY	**Chiayi**	**1.15**	**254**	P	**Pb**	**20 50 26.5**	**0.0**
CHY				*e*S	**Sn**	**20 50 43.3**	**+1.1**
HSN	**Hsinchu**	**1.15**	**329**	*e*P	**Pn**	**20 50 27.9**	**+1.3**
HSN				*e*S	**Sn**	**20 50 43.6**	**+1.4**
TTN	**Taitung**	**1.15**	**203**	*e*P	**Pg**	**20 50 26.4**	**-0.5**
TTN				*e*S	**Sn**	**20 50 43.0**	**+0.8**
TWA	**Mucha**	**1.16**	**358**	P	**Pn**	**20 50 27.0**	**+0.1**
TWA				S	**Sn**	**20 50 43.0**	**+0.4**
TATO	**Taipei**	**1.16**	**354**	P	**Pb**	**20 50 26.8**	**0.0**
TIPB	**Shuangxi**	**1.16**	**9**	*e*P	**Pb**	**20 50 26.9**	**0.0**
TIPB				*e*S	**Sn**	**20 50 43.1**	**+0.3**
TWK	**Hsinying**	**1.18**	**242**	*i* P	**Pb**	**20 50 27.2**	**0.0**
TWK				*e*S	**Sb**	**20 50 43.1**	**+0.7**
CHN1	**Nanshi**	**1.19**	**238**	*i* P	**Pb**	**20 50 27.4**	**+0.1**
CHN1				*e*S	**Sn**	**20 50 44.5**	**+1.2**
SNST	**Tainan City**	**1.19**	**240**	*e*P	**Pn**	**20 50 29.2**	**+1.9**
SNST				*e*S	**Sn**	**20 50 46.0**	**+2.6**
SGST	**Jiashian**	**1.21**	**233**	*e*P	**Pg**	**20 50 27.0**	**-1.1**
SGST				S	**Sb**	**20 50 43.9**	**+0.8**
NCUH	**Zhongli**	**1.21**	**341**	*e*P	**Pn**	**20 50 28.6**	**+1.1**
NCUH				S	**Sn**	**20 50 46.6**	**+2.7**
NCU	**National Centr**	**1.21**	**341**	*e*P	**Pg**	**20 50 26.5**	**-1.7**
NCU				*e*S	**Sn**	**20 50 44.0**	**0.0**
TWB1	**Santiao Chiao**	**1.23**	**16**	*e*P	**Pn**	**20 50 28.9**	**+1.1**
TWB1				*e*S	**Sn**	**20 50 46.1**	**+1.8**
WTCT	**Ta-ch'eng**	**1.23**	**272**	*e*P	**Pg**	**20 50 27.6**	**-0.9**
WTCT				*i* S	**Sn**	**20 50 45.0**	**+0.7**
NWF	**Wu-fen Shan**	**1.25**	**7**	*e*P	**Pn**	**20 50 29.4**	**+1.2**
NWF				*e*S	**Sn**	**20 50 45.7**	**+0.7**
WFSB	**Wu-fen Shan**	**1.25**	**7**	*e*P	**Pn**	**20 50 29.2**	**+1.1**
WFSB				*e*S	**Sn**	**20 50 45.9**	**+1.0**
SXI1	**Grass Mountain**	**1.29**	**10**	*e*P	**Pb**	**20 50 29.5**	**+0.4**
SXI1				*e*S	**Sn**	**20 50 47.8**	**+1.8**
WSF	**Szhu**	**1.30**	**262**	*e*P	**Pn**	**20 50 29.0**	**+0.3**
WSF				*e*S	**Sn**	**20 50 46.7**	**+0.7**
WSL	**Shuilin Townsh**	**1.31**	**257**	*e*P	**Pn**	**20 50 29.2**	**+0.3**
WSL				*e*S	**Sn**	**20 50 46.9**	**+1.7**
YM01	**YM01**	**1.32**	**358**	*e*P	**Pg**	**20 50 29.9**	**-0.4**
YM01				*e*S	**Sn**	**20 50 47.6**	**+0.9**
TNOU	**National Taiwa**	**1.33**	**6**	*e*P	**Pg**	**20 50 29.8**	**-0.7**
ZUZH	**Zhuzihu**	**1.34**	**357**	*e*P	**Pg**	**20 50 29.9**	**-0.7**
ZUZH				*e*S	**Sn**	**20 50 48.5**	**+1.4**
NTST	**Danshui**	**1.35**	**353**	*e*P	**Pg**	**20 50 30.1**	**-0.8**
NTST				*e*S	**Sn**	**20 50 49.2**	**+2.0**
JYNG	**Yonagunijimaku**	**1.36**	**62**	*e*S	**Sn**	**20 50 48.9**	**+1.3**
YM08	**YM08**	**1.36**	**359**	*e*P	**Pn**	**20 50 29.3**	**-0.4**
ECL	**Taimali**	**1.36**	**207**	*e*P	**Pn**	**20 50 28.3**	**-1.3**
ECL				*e*S	**Sb**	**20 50 46.5**	**-1.2**
ANP	**Anpu**	**1.36**	**356**	P	**Pg**	**20 50 30.6**	**-0.6**
ANP				*e*S	**Sn**	**20 50 49.5**	**+1.7**
CHN3	**Shinhua**	**1.37**	**238**	*e*P	**Pg**	**20 50 31.4**	**+0.1**
CHN3				*e*S	**Sn**	**20 50 52.0**	**+4.2**
CHN8	**Yiju**	**1.38**	**250**	*e*P	**Pn**	**20 50 29.9**	**+0.1**
CHN8				*e*S	**Sn**	**20 50 49.7**	**+1.7**
SSHA	**Shanhua**	**1.40**	**241**	*e*P	**Pg**	**20 50 31.6**	**-0.3**
SSHA				*e*S	**Sn**	**20 50 51.8**	**+3.3**
SSD	**Sandimen**	**1.41**	**221**	*e*P	**Pn**	**20 50 30.9**	**+0.7**
SSD				*e*S	**Sg**	**20 50 50.0**	**-0.1**
SHHT	**Tainan City**	**1.42**	**236**	*e*P	**Pg**	**20 50 32.2**	**+0.1**
YOJ	**Yonaguni jima**	**1.42**	**63**	P	**Pn**	**20 50 30.7**	**+0.3**
YOJ	**Yonaguni jima**	**1.42**	**63**	*e*P	**Pn**	**20 50 30.8**	**+0.4**
YOJ				*e*S	**Sn**	**20 50 50.1**	**+1.1**
YOJ	**Yonaguni jima**	**1.42**	**63**	P	**Pn**	**20 50 30.9**	**+0.4**
YOJ				S	**Sg**	**20 50 50.2**	**-0.5**
SCLT	**Jiali**	**1.46**	**244**	*e*P	**Pg**	**20 50 32.3**	**-0.6**
SCLT				*e*S	**Sg**	**20 50 52.7**	**+0.7**
TWM1	**Shoushan**	**1.48**	**228**	*e*P	**Pg**	**20 50 34.1**	**+0.7**
SGLT	**Jiouru**	**1.51**	**224**	*e*P	**Pn**	**20 50 32.1**	**+0.5**
MASBT	**Mashibuluo**	**1.51**	**217**	*e*P	**Pn**	**20 50 32.1**	**+0.5**
MASBT				*e*S	**Sb**	**20 50 52.5**	**+0.7**
TSCK	**Chigu Township**	**1.56**	**245**	P	**Pn**	**20 50 32.5**	**+0.2**
TSCK				*e*S	**Sb**	**20 50 53.6**	**+0.3**
EAST	**Anshuo**	**1.60**	**207**	*e*P	**Pn**	**20 50 31.9**	**-1.0**
TAW	**Tawu**	**1.60**	**205**	*e*P	**Pn**	**20 50 33.6**	**+0.7**
SCZT	**Fangliau**	**1.71**	**213**	*e*P	**Pb**	**20 50 36.0**	**-0.2**
WSSB	**Gushan**	**1.72**	**227**	*e*P	**Pb**	**20 50 35.9**	**-0.4**
SLIU	**Shizi**	**1.77**	**206**	*e*P	**Pn**	**20 50 35.9**	**+0.7**
SLIU				*e*S	**Sn**	**20 50 58.2**	**+0.6**
LAY	**Lan-yu**	**1.77**	**182**	*e*P	**Pn**	**20 50 33.0**	**-2.4**
LYUB	**Lan-yu**	**1.81**	**181**	*e*P	**Pn**	**20 50 32.7**	**-3.0**
TWP	**Hsiaoliuchiu**	**1.87**	**219**	*e*P	**Pb**	**20 50 38.5**	**-0.4**
WDGT	**Dungji**	**1.89**	**253**	*e*P	**Pn**	**20 50 36.6**	**-0.2**
WDGT				*e*S	**Sn**	**20 51 00.9**	**+0.4**
PHUB	**P'eng-hu**	**1.91**	**261**	P	**Pn**	**20 50 37.1**	**0.0**
PHUB				S	**Sn**	**20 51 01.6**	**+0.6**
PNG	**Penghu**	**1.91**	**263**	P	**Pn**	**20 50 37.1**	**-0.1**
PNG				*e*S	**Sn**	**20 51 01.1**	**-0.1**
SMST	**Manzhou Townsh**	**1.93**	**202**	*e*P	**Pn**	**20 50 37.7**	**+0.2**
SMST				*e*S	**Sn**	**20 51 01.3**	**-0.3**
HEN	**Hengchun**	**1.98**	**205**	*e*P	**Pb**	**20 50 40.5**	**-0.3**
IRIF	**Iriomote-Funau**	**1.99**	**75**	*e*P	**Pn**	**20 50 38.2**	**-0.4**
IRIF				*e*S	**Sn**	**20 51 04.0**	**+0.9**
HATJ	**Hateruma jima**	**2.01**	**83**	*e*S	**Sn**	**20 51 03.8**	**+0.3**
TWK1	**Hengchun**	**2.01**	**202**	*e*P	**Pb**	**20 50 41.3**	**0.0**
TWK1				*e*S	**Sn**	**20 51 03.8**	**+0.2**
TWKBT	**Hengchun**	**2.01**	**202**	*e*P	**Pn**	**20 50 39.1**	**+0.6**
TSEB	**Hengchuen, Pin**	**2.02**	**199**	*e*P	**Pn**	**20 50 40.0**	**+1.3**
TSEB				*e*S	**Sb**	**20 51 06.7**	**+0.1**
VCHM	**Qimei**	**2.10**	**254**	*e*P	**Pn**	**20 50 40.0**	**+0.2**
VCHM				S	**Sn**	**20 51 06.8**	**+0.9**
JKRS	**Kuro-shima**	**2.22**	**79**	*e*P	**Pn**	**20 50 42.3**	**+0.9**
JKRS				*e*S	**Sn**	**20 51 10.0**	**+1.2**
VWUC	**VWUC**	**2.30**	**301**	P	**Pn**	**20 50 41.3**	**-1.2**
JIJ	**Ishigaki jima**	**2.37**	**76**	*e*P	**Pn**	**20 50 43.1**	**-0.3**
JIJ				*e*S	**Sn**	**20 51 12.4**	**0.0**
JISG	**Ishigakijimahi**	**2.57**	**72**	*e*P	**Pn**	**20 50 46.3**	**+0.1**
JISG				*e*S	**Sn**	**20 51 17.1**	**-0.3**
MATB	**Ma-tsu**	**2.78**	**327**	*e*P	**Pn**	**20 50 48.7**	**-0.4**
JTJ	**Tarama**	**2.93**	**73**	*e*S	**Sn**	**20 51 26.2**	**0.0**
KNM	**Kinmen**	**2.98**	**282**	*e*P	**Pn**	**20 50 52.8**	**+1.0**
KNM				*e*S	**Sn**	**20 51 29.7**	**+2.3**
KNMB	**Chin-men Tao**	**3.02**	**283**	*e*P	**Pn**	**20 50 51.4**	**-1.1**
KNMB				*e*S	**Sn**	**20 51 28.4**	**-0.3**
LYJJ	**Jianjiangzhen**	**3.20**	**329**	*e*P	**Pn**	**20 50 55.4**	**+0.4**
MHZQ	**Yeshan**	**3.27**	**315**	*e*P	**Pn**	**20 50 55.8**	**-0.1**
XPSS	**Dashiqiu**	**3.36**	**338**	*e*P	**Pn**	**20 50 56.7**	**-0.4**
AXDP	**Jialang**	**3.50**	**289**	*e*P	**Pn**	**20 50 59.0**	**-0.1**
ZPLA	**Ao Xicun**	**3.55**	**273**	*e*P	**Pn**	**20 50 59.1**	**-0.6**
DSXP	**Dongshan**	**3.85**	**269**	*e*P	**Pn**	**20 51 04.1**	**+0.3**
SXFK	**Yanhouchang**	**4.43**	**306**	*e*P	**Pn**	**20 51 11.2**	**-0.6**
KSRS	**Korea Array**	**14.62**	**20**	LR	LR	20 59 29.5	
	comp=Z,21nm,21.7s,baz=335,slow=39						
LZDM	**Lanzhou Array**	**19.66**	**312**	P	**Pn**	**20 54 36.3**	**+1.0**
	0.3nm,0.4s,baz=107,slow=9.2,SNR=1.3						
CMAR	**Chiang Mai Arr**	**21.81**	**260**	P	**P**	**20 54 58.6**	**+1.6**
	0.2nm,0.4s,baz=58,slow=8.4,SNR=4.9						
	0.2nm,0.4s						
SONM	**Songino Array**	**26.86**	**337**	P	**P**	**20 55 43.8**	**-1.5**
	0.4nm,0.8s,baz=150,slow=6.8,SNR=4.1						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**38.88**	**316**	P	**P**	**20 57 30.2**	**+0.1**
	0.4nm,0.7s,baz=108,slow=12,SNR=4.2						
	0.4nm,0.7s						
H11N1	**WAKE ISLAND Hy 42.11**	**87**		T	T	21 43 08.6	
	baz=283,slow=74,SNR=6.7						
H11N2	**WAKE ISLAND Hy 42.11**	**86**		T	T	21 43 00.1	
	baz=283,slow=74,SNR=9.9						
H11N3	**WAKE ISLAND Hy 42.12**	**86**		T	T	21 43 00.0	
	baz=283,slow=74,SNR=7.7						
H11S3	**WAKE ISLAND Hy 42.23**	**88**		T	T	21 43 01.5	
	baz=284,slow=74,SNR=21						
H11S1	**WAKE ISLAND Hy 42.23**	**88**		T	T	21 43 02.2	
	baz=284,slow=74,SNR=14						
H11S2	**WAKE ISLAND Hy 42.24**	**88**		T	T	21 43 02.9	
	baz=284,slow=74,SNR=9.2						
WRA	**Warramunga Arr**	**45.23**	**163**	P	**P**	**20 58 21.4**	**-0.7**
	0.2nm,0.6s,baz=343,slow=8.2,SNR=1.8						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**48.69**	**165**	P	**P**	**20 58 48.7**	**-0.4**
	0.2nm,0.4s,baz=340,slow=8.2,SNR=1.9						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**69.35**	**27**	P	**P**	**21 01 11.7**	**-0.3**
	0.3nm,0.6s,baz=290,slow=6.0,SNR=4.3						
	0.3nm,0.6s						
INK	**Inuvik**	**73.41**	**22**	P	**P**	**21 01 36.5**	**+0.1**
	1.6nm,1.0s,baz=270,slow=5.1,SNR=3.1						
	1.6nm,1.0s						
YKA	**Yellowknife Ar**	**83.15**	**23**	P	**P**	**21 02 30.6**	**+0.2**
	0.6nm,1.0s,baz=310,slow=5.7,SNR=5.1						
	0.6nm,1.0s						

*NEIC **15** 21:14:29.8±1.1,49°.38N±0°.04×116°.80W±0°.04,h10km±2km, ML3.2/48, ML3.5/12(BUT), Error ellipse: s-maj=6.5km s-min=4.5km az=19.0*
*BUT **15** 21:14:30.1±0.8,49°.47N±0°.03×116°.74W±0°.03,h12km±8km, Error ellipse: s-maj=5.6km s-min=1.1km az=208.0*
*PGC **15** 21:14:31.2,49°.44N×116°.76W,h0km,ML3.2/11,39km east of Nelson, Bc British Columbia, Canada Mining explosion.*
ISC 15 21:14:30.2±0.7,**49°.40N**±0°.03×**116°.68W**±0°.02,**h0**km,**n71,** σ1**39**/96,**British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEW	**Newport**	**1.18**	**195**		**Pg**	**21 14 52.5**	**-0.2**
NEW				Sg	**Sg**	**21 15 08.3**	**+0.4**
NEW				IAML		21 15 11.1	
	568nm,0.6s						
NEW				IAML		21 15 11.5	
	403nm,0.3s						
LDM	**Libby Dam**	**1.31**	**136**		**Pb**	**21 14 55.4**	**-0.3**
LDM					**Sg**	**21 15 11.5**	**-0.6**
C09A	**Chrisman Ranch**	**1.92**	**214**		**Pn**	**21 15 03.3**	**-0.8**
C09A	**Chrisman Ranch**	**1.92**	**214**	Pn	**Pn**	**21 15 03.4**	**-0.8**
C09A				Pg	**Pb**	**21 15 05.3**	**-0.8**
C09A				Sg	**Sb**	**21 15 30.8**	**+0.1**
PNT	**Penticton**	**1.92**	**269**		**Pn**	**21 15 02.4**	**-1.8**
PNT					**Sn**	**21 15 26.8**	**-2.4**
PNT	**Penticton**	**1.92**	**269**	Pn	**Pn**	**21 15 02.4**	**-1.8**
PNT				Pg	**Pb**	**21 15 05.0**	**-1.1**
PNT				Sg	**S

SHB				Sg	Sb	21 16 52.9	+2.4	
BRLDA	Berland Lookou	4.72	355	Sg	Sb	21 16 54.8	+3.6	
SYMB	Survey Mountai	4.76	263	Sg	Sb	21 16 54.4	+1.9	
NLLB	Nanaimo Lost L	4.79	271	Sg	Sb	21 16 55.1	+2.1	
EGMT	Eagleton	4.79	104		Pn	21 15 43.3	-0.3	
LCCM	Lewis and Clar	4.82	136		Pn	21 15 44.2	0.0	
TXDB	Texada	5.06	276	Sg	Sb	21 17 03.8	+2.8	
BOZ	Bozeman (W)	5.12	136	Pn	Pn	21 15 47.6	-0.7	
BOZ				IAML		21 17 18.4		
	comp=N,18nm,2.7s							
MCMT	McKenzie Canyo	5.27	149		Pn	21 15 50.3	-0.1	

*IDC **15** 21:16:17.1±1.1, 14°.21N×146°.97E, h0km, mb3.9/13, mbtmp3.9/14, ML4.0/1, MS3.0/1, Error ellipse: s-maj=27.6km s-min=18.1km az=106.0*
*NEIC **15** 21:16:19.0±1.2, 14°.17N±0°.07×146°.99E±0°.07, h10km±1km, mb4.3/10, Error ellipse: s-maj=14.0km s-min=9.1km az=227.0*
ISC 15 21:16:21.5±0.7, 14°.1N±0°.1×147°.04E±0°.08, h35km, n31, σ0s91/32, mb4.1/18, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.17	257	Pn	Pn	21 16 54.2	-0.9
	51nm,0.3s,baz=135,slow=8.7,SNR=9.5						
GUMO				Sn	Sn	21 17 21.3	+0.5
	60nm,0.3s,baz=5.4,slow=22,SNR=5.7						
	108nm,0.3s						
GUMO	Guam	2.17	257		Pn	21 16 54.3	-0.8
GUMO				Sn	Sn	21 17 20.5	-0.4
PATS	Pohnpei	13.22	122	Pn	Pn	21 19 25.4	-1.5
JGF	Kuroka	23.11	340	P	P	21 21 24.1	-0.4
JGF				IAmb	IAmb	21 21 32.3	
	comp=Z,21nm,1.3s						
MJAR	Matsushiro Arr	23.71	342	P	P	21 21 28.5	-1.8
	comp=Z,0.8nm,0.6s,baz=167,slow=9.9,SNR=5.3						
	comp=Z,0.8nm,0.6s						
KSRS	Korea Array	28.82	327	P	P	21 22 16.1	-0.4
	comp=Z,1.2nm,0.7s,baz=138,slow=9.0,SNR=4.7						
KSRS				LR	LR	21 31 09.3	
	comp=Z,33nm,20.1s,baz=335,slow=31						
	comp=Z,1.2nm,0.7s						
WB0	Warramunga Arr	35.88	201	P	P	21 23 19.3	+0.9
WB0				IAmb	IAmb	21 23 58.0	
	comp=Z,7.2nm,1.2s						
WRA	Warramunga Arr	36.06	201	P	P	21 23 21.3	+1.3
	comp=Z,1.6nm,0.9s,baz=19,slow=8.9,SNR=5.8						
	comp=Z,1.6nm,0.9s						
ASAR	Alice Springs	39.67	199	P	P	21 23 51.5	+1.1
	comp=Z,0.3nm,0.7s,baz=21,slow=11,SNR=5.7						
	comp=Z,0.3nm,0.7s						
LZDM	Lanzhou Array	44.44	307	P	P	21 24 29.5	-0.2
	comp=Z,0.4nm,0.3s,baz=133,slow=8.3,SNR=4.1						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	46.27	282	P	P	21 24 44.5	+0.5
	comp=Z,0.5nm,0.4s,baz=79,slow=6.7,SNR=5.7						
	comp=Z,0.5nm,0.4s						
ULN	Ulaanbaatar	47.19	324	P	P	21 24 49.7	-1.3
SONM	Songino Array	47.56	324	P	P	21 24 54.4	+0.6
	comp=Z,0.5nm,0.5s,baz=131,slow=6.2,SNR=6.3						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	47.56	324	P	P	21 24 53.7	-0.1
SONM				IAmb	IAmb	21 25 26.3	
	comp=Z,3.1nm,1.5s						
LSA	Lhasa	53.65	297	P	P	21 25 40.8	+0.3
LSA				IAmb	IAmb	21 25 42.9	
	comp=Z,2.2nm,0.7s						
N17K	Nushagak Hills	61.30	28	P	P	21 26 34.7	+1.5
ZAA0	Zalesovo Array	62.45	324	P	P	21 26 40.9	-0.2
ZAA0				IAmb	IAmb	21 26 44.4	
	comp=Z,2.2nm,0.9s						
ZALV	Zalesovo Beam	62.45	324	P	P	21 26 40.7	-0.4
	comp=Z,1.2nm,0.7s,baz=85,slow=4.6,SNR=6.5						
	comp=Z,1.2nm,0.7s						
ZALV	Zalesovo Beam	62.45	324	P	P	21 26 40.9	-0.2
MKAR	Makanchi Array	62.60	316	P	P	21 26 42.2	-0.1
	comp=Z,0.5nm,0.4s,baz=82,slow=8.0,SNR=1.6						
	comp=Z,0.5nm,0.4s						
N19K	Bonanza Creek	62.63	28	P	P	21 26 44.3	+1.9
KURBB	Kurchatov Arra	65.61	319	P	P	21 27 01.8	-0.1
	comp=Z,4.0nm,0.6s,baz=98,slow=7.1,SNR=28						
	comp=Z,4.0nm,0.6s						
ILAR	Eielson Array	67.21	25	P	P	21 27 12.9	+1.0
	comp=Z,0.3nm,0.5s,baz=254,slow=5.8,SNR=8.9						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	68.82	23	P	P	21 27 23.6	+1.5
BVAR	Borovoye Array	70.84	322	P	P	21 27 35.2	+0.5
	comp=Z,1.5nm,0.5s,baz=103,slow=6.6,SNR=9.9						
	comp=Z,1.5nm,0.5s						
BORK	Borovoye	70.88	322	P	P	21 27 35.0	+0.1
BORK				IAmb	IAmb	21 27 36.1	
	comp=Z,1.8nm,0.7s						
AB31	Akbulak array	77.58	318	P	P	21 28 14.2	+0.1
ABKAR	Akbulak array	77.58	318	P	P	21 28 14.0	-0.1
SPITS	Spitsbergen Ar	83.89	351	LR	LR	22 07 20.7	
	comp=Z,633nm,20.9s,baz=282,slow=37						
FINES	FINESS Array B	91.58	336	P	P	21 29 24.2	-0.3
	comp=Z,1.7nm,0.6s,baz=76,slow=4.7,SNR=12						
	comp=Z,1.7nm,0.6s						
FINES	FINESS Array B	91.58	336	P	P	21 29 23.9	-0.6

*IDC **15** 21:23:39.0±0.7, 25°.05N×109°.77W, h0km, mb4.0/9, mbtmp4.1/16, ML3.6/7, MS4.3/56, Error ellipse: s-maj=16.8km s-min=11.5km az=89.0*
*NEIC **15** 21:23:41.2±1.7, 25°.06N±0°.05×109°.66W±0°.08, h10km±1km, mb4.6/46, Error ellipse: s-maj=12.4km s-min=8.1km az=289.0*
*MEX **15** 21:23:42.7±0.3, 25°.17N×109°.76W, h15km, MD4.6*
*GCMT **15** 21:23:46.2±0.2, 25°.25N±0°.01×109°.79W±0°.01, h16km, MW5.1/118, Moment Tensor Solution. s55,c67; s118,c186; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.55±.13; Mθθ=-5.44±.12; Mφφ=5.99±.14; Mrθ=-0.20±.32; Mθφ=0.85±.11; Mrφ=0.66±.32; Best double couple: M=5.81500×10^16 NP1:φ=49.00000°, δ=84.00000°, λ=2.00000°. NP2:φ=319.00000°, δ=88.00000°, λ=174.00000°. Principal axes: T 6.1150, Plg6.0000°, Azm274.0000°; N -0.5960, Plg84.0000°, Azm122.0000°; P -5.5160, Plg3.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 21:23:40.4±2.6, 25°.16N±0°.04×109°.76W±0°.04, h6km±17km, n210, σ1s60/178, mb4.5/25, MS4.4/52, 1C, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSIG	Topolobambo	0.78	56	eP	Pb	21 23 55.0	-1.4
TSIG				eS	Sb	21 24 05.2	-2.1
LPIG	La Paz	1.16	206	Pn	Pn	21 24 01.4	-1.8
	520nm,0.3s,baz=12,slow=3.5,SNR=156						
LPIG				Sn	Sb	21 24 15.6	-2.6
	794nm,0.3s,baz=285,slow=23,SNR=5.7						
LPIG	La Paz	1.16	206	eP	Pn	21 24 01.0	-2.2
LPIG				eS	Sb	21 24 17.4	-0.8
SLBS	Sierra La Lagu	1.47	187		Pn	21 24 06.2	-1.4
SLBS	Sierra La Lagu	1.47	187	eP	Pn	21 24 05.3	-2.3
CSIG	Choix	2.08	36	eP	Pn	21 24 13.8	-2.0
CSIG				eS	Sn	21 24 36.9	-5.2
SSIG	Sanalona	2.40	97	eP	Pn	21 24 18.3	-1.9
SSIG				eS	Sn	21 24 51.6	+1.8
GUYB	Guaymas	2.91	340	eP	Pn	21 24 24.2	-3.0
GUYB				eS	Sn	21 24 55.2	-7.3
SRIG	Santa Rosalia	3.10	315	eP	Pn	21 24 27.8	-2.1
SRIG				eS	Sn	21 25 08.5	+1.2
MAIG	Mazatlaan	3.62	122	eP	Pn	21 24 38.9	+2.0
MAIG				eP	Pb	21 24 42.1	-2.6
MAIG				⇑eS	Sb	21 25 31.8	+2.9
PDIG	Papasquiaro	3.95	91	eP	Pn	21 24 42.2	+0.4
PDIG				eS	Sn	21 25 28.1	-0.5
HSIG		3.99	345	eP	Pn	21 24 40.2	-2.0
HPIG		4.08	63		Pn	21 24 42.9	-0.6
HPIG		4.08	63	eP	Pn	21 24 43.0	-0.6
HPIG				eS	Sn	21 25 28.7	-3.1
BCIG	La Boquilla	4.56	58	eP	Pn	21 24 56.3	+6.2
BCIG				eS	Sn	21 25 40.1	-3.5
BAHB	Baha de los	5.08	319	eP	Pn	21 24 56.2	-0.8
BAHB				eS	Sn	21 25 50.1	-5.8
NZIG	Nacozari, Sono	5.20	2	eP	Pn	21 24 56.3	-2.6
NZIG				eS	Sn	21 26 03.4	+4.1
CGIG		5.42	16	eP	Pn	21 25 02.8	+0.8
CGIG				eS	Sn	21 26 04.3	-0.5
319A	Douglas	6.21	4		Pn	21 25 12.2	-0.6
ANIG	Ahuacatlan	6.32	129	eP	Pn	21 25 16.4	+2.2
ANIG				eS	Sn	21 26 26.6	-0.2
TX31	Lajitas Ar. Si	6.83	51		Pn	21 25 19.9	-1.3
TXAR	Lajitas Array	6.83	51	Pn	Pn	21 25 20.1	-1.1
	1.3nm,0.3s,baz=228,slow=13,SNR=21						
TXAR				Sn	Sn	21 26 36.7	-2.7
	2.9nm,0.3s,baz=214,slow=20,SNR=5.2						
TXAR				Lg	Lg	21 27 16.5	
	6.0nm,0.3s,baz=229,slow=28,SNR=6.2						
TXAR				LR	LR	21 27 49.1	
	comp=Z,656nm,20.1s,baz=232,slow=36						
	2.3nm,0.5s						
TXAR	Lajitas Array	6.83	51		Pn	21 25 19.9	-1.3
VHRN	Van Horn	7.02	36		Pn	21 25 24.3	+0.4
CJM	Chamela	7.12	141	eP	Pn	21 25 27.2	+2.0
PIX	Pinacate	7.17	334		Pn	21 25 26.0	+0.3
EPT	El Paso	7.18	23		Pn	21 25 27.0	+0.9
TUC	Tucson	7.18	353		Pn	21 25 25.7	-0.3
TUC	Tucson	7.18	353	eP	Pn	21 25 24.9	-1.2
TUC				eS	Sn	21 26 43.9	-4.2
214A	Organ Pipe Nat	7.29	339		Pn	21 25 27.2	-0.3
SFX	San Felipe	7.39	324		Pn	21 25 30.9	+2.1
DUN6	Lazy B Ranch	7.39	4		Pn	21 25 29.2	+0.2
ALPN	Alpine	7.51	45		Pn	21 25 30.1	-0.4
121A	Cookes Peak, D	7.55	13		Pn	21 25 30.8	-0.4
MNTX	Cornudas Mount	7.57	30		Pn	21 25 30.3	-1.0
SPIG	San Pedro Mart	7.74	321	eP	Pn	21 25 35.2	+1.3
TPB01	Permian Basin	7.81	41		Pn	21 25 34.7	0.0
MCIG	Muzquiz	7.89	68	eP	Pn	21 25 35.7	0.0
MCIG				eS	Sn	21 27 04.2	-1.2
TPB05	Hovey Rd	8.08	43		Pn	21 25 38.1	-0.2
PECS	Pecos	8.08	39		Pn	21 25 38.3	0.0
SAND	Sanderson	8.29	53	Pn	Pn	21 25 41.2	0.0
113A	Mohawk Valley,	8.36	336		Pn	21 25 45.5	+3.4
TPB11	China Draw	8.42	35	Pn	Pn	21 25 43.4	+0.4
GDL2	Guadalupe Moun	8.46	33		Pn	21 25 44.5	+0.8
TPB06	Permian Basin	8.65	40	Pn	Pn	21 25 47.0	+0.8
MNHN	Monahans	8.71	43	Pn	Pn	21 25 48.4	+1.3
ESJX	Sierra Juarez	8.73	323		Pn	21 25 49.3	+2.0
CLNB	Carlsbad	8.76	35	Pn	Pn	21 25 49.5	+1.8
GLA	Glamis	9.03	332		Pn	21 25 53.4	+2.1
SBM	South Baldy	9.07	14		Pn	21 25 52.7	+0.5
Y22A	Socorro	9.08	15	Pn	Pn	21 25 54.0	+1.8
CRNM	Carthage	9.15	16		Pn	21 25 53.4	+0.3
DRIO	Del Rio	9.17	60		Pn	21 25 52.3	-0.9
Y14A	Wickenburg	9.20	343		Pn	21 25 54.8	+1.1
YUH	Yuha Desert	9.21	326		Pn	21 25 55.3	+1.4
LENM	Lemitar	9.30	14		Pn	21 25 55.7	+0.6
X18A	Snowflake	9.34	359		Pn	21 25 57.0	+1.2
X16A	Lo Mia Camp, P	9.35	351		Pn	21 25 57.5	+1.7
ODSA	Odessa	9.39	41	Pn	Pn	21 25 56.4	0.0
BLYC	Blythe	9.52	335		Pn	21 25 58.9	+0.9
OZNA	Ozona	9.54	51		Pn	21 25 58.9	+0.5
833A	Chaparral WMA,	9.78	69		Pn	21 26 00.8	-0.8
128A	Castleberry Fa	9.79	39		Pn	21 26 01.8	0.0
BC3	Big Chuckawall	9.82	331		Pn	21 26 03.8	+1.1
W18A	Petrified Fore	9.93	0		Pn	21 26 05.7	+1.9
BORC	Borrego Spring	9.96	326		Pn	21 26 05.8	+1.8
DPP	Dos Picos Cty	10.03	323		Pn	21 26 06.8	+1.8
IRM	Iron Mountain	10.12	334		Pn	21 26 08.0	+1.7
SGCY	Sterling City	10.14	46		Pn	21 26 06.9	+0.3
HBVL	Hebbronville	10.14	77		Pn	21 26 04.9	-1.7
ANMO	Albuquerque	10.16	16	Pn	Pn	21 26 08.4	+1.4
	0.1nm,0.3s,baz=198,slow=12,SNR=28						
ANMO				Lg	Lg	21 29 02.7	
	0.1nm,0.3s,baz=83,slow=22,SNR=3.8						
ANMO				LR	LR	21 30 26.3	
	comp=Z,3μm,19.4s,baz=184,slow=40						
	14nm,1.0s						
ANMO	Albuquerque	10.16	16		Pn	21 26 09.2	+2.1
PFO	Pinyon Flats O	10.25	327	Pn	Pn	21 26 09.7	+1.5
	0.1nm,0.3s,baz=159,slow=11,SNR=7.4						
	5.8nm,0.9s						
PFO	Pinyon Flats O	10.25	327		Pn	21 26 11.2	+3.0
HNDO	Hondo	10.28	63		Pn	21 26 09.2	+0.7
JCT	Junction City	10.28	57	Pn	Pn	21 26 07.9	-0.7
DNR	Dunn Ranch,Anz	10.30	326		Pn	21 26 10.4	+1.5
WUAZ	Wupatki	10.42	353		Pn	21 26 12.7	+2.2
MSTX	Muleshoe	10.68	33		Pn	21 26 15.1	+1.1
BRDY	Brady	11.28	55		Pn	21 26 22.0	-0.2
V12A	Nelson	11.41	339		Pn	21 26 26.4	+2.3
AMTX	Amarillo	11.95	34	Pn	Pn	21 26 31.2	-0.1
MVCO	Mesa Verde	12.06	5		Pn	21 26 34.6	+1.6
KNB	Kanab	12.11	348		Pn	21 26 36.0	+2.3
SHPR	Sheep Range	12.22	339		Pn	21 26 37.8	+2.6
T25A	Trinidad	12.79	20		Pn	21 26 44.7	+1.7
TPNV	Topopah Spring	13.00	336	Pn	Pn	21 26 48.4	+2.6
SDCO	Great Sand Dun	13.06	15		Pn	21 26 48.4	+1.7
WMOK	Wichita Mounta	13.47	42		Pn	21 26 51.7	-0.4
MDPB	Devils Postpil	14.76	330		Pn	21 27 12.1	+2.2
NLU	North Lily Min	14.88	353		Pn	21 27 12.3	+0.8
O20A	White River Ci	14.99	4		Pn	21 27 14.1	+1.1
ISCO	Idaho Springs	15.01	12		Pn	21 27 13.7	+0.3
NVAR	Mina Array Bea	15.09	333	Pn	Pn	21 27 16.9	+2.6
	baz=146,slow=12,SNR=25						
	5.5nm,1.1s						
DUG	Dugway, Tooele	15.21	351		Pn	21 27 16.9	+0.9
DUG				IAmb	IAmb	21 27 25.4	
	comp=Z,40nm,1.2s						
DEOK	Depew	15.60	44		Pn	21 27 20.6	-0.3
DEOK				IAmb	IAmb	21 27 35.1	
	comp=Z,33nm,1.0s						
CMB	Columbia Colle	15.70	327		Pn	21 27 22.7	+0.5
BGU	Big Grassy Mou	15.96	351		Pn	21 27 26.2	+0.5
CMIG	Matias Romero	16.02	117	Pn	Pn	21 27 26.5	+0.1
	comp=Z,0.2nm,0.3s,baz=312,slow=7.6,SNR=3.8						
CMIG				LR	LR	21 33 37.5	
	comp=Z,2μm,18.3s,baz=286,slow=38						
	comp=Z,1.5nm,0.5s						
CBKS	Cedar Bluff	16.03	29		Pn	21 27 25.6	-1.0
CBKS				IAmb	IAmb	21 27 41.3	
	comp=Z,52nm,0.9s						
ELK	Elko	16.21	345	Pn	Pn	21 27 30.1	+1.2
	comp=Z,0.1nm,0.3s,baz=164,slow=9.8,SNR=17						
ELK				LR	LR	21 33 44.6	
	comp=Z,1μm,19.5s,baz=172,slow=37						
	comp=Z,8.1nm,1.2s						
ELK	Elko	16.21	345		Pn	21 27 30.7	+1.8
ELK				IAmb	IAmb	21 27 36.3	
	comp=Z,45nm,1.4s						
HWUT	Hardware Ranch	16.48	355		Pn	21 27 34.0	+1.6
HWUT				IAmb	IAmb	21 27 39.2	
	comp=Z,46nm,1.2s						
HHAR	Hobbs	17.52	47		Pn	21 27 44.9	-0.5
PD31	Pinedale Array	17.57	0		Pn	21 27 46.7	+0.6
PD31				IAmb	IAmb	21 27 48.8	
	comp=Z,35nm,1.2s						
PDAR	Pinedale Array	17.57	0	P	Pn	21 27 47.4	+1.3
	comp=Z,0.1nm,0.3s,baz=171,slow=10,SNR=53						
PDAR				LR	LR	21 34 41.6	
	comp=Z,1μm,20.4s,baz=172,slow=38						
	comp=Z,10nm,1.0s						
PDAR	Pinedale Array	17.57	0	Pn	Pn	21 27 46.5	+0.4
AHID	Auburn Hatcher	17.60	357	P	Pn	21 27 47.8	+1.3
LOHW	Long Hollow	18.43	358		P	21 27 57.3	+0.6
HLID	Hailey	18.75	349	P	Pn	21 28 01.3	+0.7
YPP	Pitchstone Pla	19.09	358	P	P	21 28 05.0	+1.0
LCAR	Lake Charles	19.32	51	P	P	21 28 07.4	+1.1
QLMT	Earthquake Lak	19.68	356	P	Pn	21 28 13.3	+1.5
YBH	Yreka Blue Hor	19.71	330	P	P	21 28 11.6	+1.0
	comp=Z,0.1nm,0.9s,baz=40,slow=3.5,SNR=3.5						
YBH				LR	LR	21 34 47.0	
	comp=Z,50nm,20.5s,baz=280,slow=34						
MCMT	McKenzie Canyo	19.79	353	P	Pn	21 28 13.5	+0.4
CCM	Cathedral Cave	20.30	46	P	P	21 28 16.7	-0.3
CCM				IAmb	IAmb	21 28 31.9	
	comp=Z,30nm,1.4s						
J05D	Fort Rock, OR	20.39	335	P	P	21 28 18.9	+0.9
J05D				IAmb	IAmb	21 28 25.1	
	comp=Z,55nm,1.5s						
BOZ	Bozeman (W)	20.45	356	P	Pn	21 28 20.9	+0.1
I07A	Izee	20.49	340	P	P	21 28 18.9	-0.2
P40A	Paris	20.66	42		P	21 28 21.5	+0.6
APG	El Apazote	20.72	116	P	P	21 28 21.0	-0.9
	comp=Z,0.2nm,0.4s,baz=289,slow=22,SNR=1.4						
APG				LR	LR	21 36 45.9	
	comp=Z,90nm,20.2s,baz=287,slow=38						
FVM	French Village	20.80	47	P	P	21 28 23.8	+1.4
FVM				IAmb	IAmb	21 28 37.8	
	comp=Z,30nm,1.2s						
SUSD	Miller	21.15	22		P	21 28 27.2	+1.1
ECSD	EROS Data Cent	21.42	27		P	21 28 30.0	+1.0
ECSD				IAmb	IAmb	21 28 38.7	
	comp=Z,35nm,1.4s						
LAO	LASA Array	21.67	7		P	21 28 32.7	+0.9
WVT	Waverly	21.76	55	P	P	21 28 32.6	-0.1
WVT				IAmb	IAmb	21 28 45.4	
	comp=Z,40nm,1.3s						
MSO	Missoula	21.89	352		P	21 28 35.4	+1.2
MSO				IAmb	IAmb	21 28 44.2	
	comp=Z,21nm,1.1s						
USIN	University of	22.68	50	P	P	21 28 42.8	+0.2
NEW	Newport	23.79	348	P	P	21 28 54.5	+0.7
	comp=Z,6.7nm,0.9s,baz=167,slow=11,SNR=9.8						
NEW				LR	LR	21 38 55.7	
	comp=Z,578nm,21.1s,baz=176,slow=38						
	comp=Z,6.7nm,0.9s						
NEW	Newport	23.79	348		P	21 28 54.4	+0.7
CPCT	Cooper Cave	24.02	59		P	21 28 56.1	0.0
CPCT				IAmb	IAmb	21 29 17.5	
	comp=Z,22nm,1.1s						
B08A	Colville Reser	24.36	344		P	21 28 59.3	+0.2
B08A				IAmb	IAmb	21 29 18.1	
	comp=Z,24nm,1.4s						
TKL	Tuckaleechee C	24.66	59	LR	LR	21 39 14.8	
	comp=Z,887nm,21.9s,baz=254,slow=38						
ULM	Lac du Bonnet	27.26	20	LR	LR	21 40 29.8	
	comp=Z,392nm,19.5s,baz=198,slow=37						
JTS	Las Juntas de	27.80	118	LR	LR	21 40 37.3	
	comp=Z,582nm,20.1s,baz=229,slow=37						
BBB	Bella Bella	30.38	337	LR	LR	21 41 47.9	
	comp=Z,767nm,18.7s,baz=163,slow=36						
SADO	Sadowa	31.54	44	LR	LR	21 42 21.0	
	comp=Z,975nm,19.1s,baz=288,slow=36						
FCC	Fort Churchill	35.36	14		P	21 30 36.5	0.0
FCC				IAmb	IAmb	21 30 46.4	
	comp=Z,12nm,1.2s						
DLBC	Dease Lake	36.23	342	LR	LR	21 46 12.9	
	comp=Z,647nm,19.4s,baz=140,slow=37						
YKA	Yellowknife Ar	37.47	356	P	P	21 30 55.2	+0.8
	comp=Z,1.6nm,1.0s,baz=179,slow=7.6,SNR=22						
YKA				LR	LR	21 46 52.8	
	comp=Z,1μm,20.0s,baz=144,slow=37						
	comp=Z,1.6nm,1.0s						
ROSC	El Rosal	39.54	115	LR	LR	21 49 47.0	
	comp=Z,448nm,21.2s,baz=306,slow=40						
SDV	Santo Domingo	40.57	107	LR	LR	21 49 14.2	
	comp=Z,525nm,21.5s,baz=312,slow=38						
SJG	San Juan	41.00	91	LR		21 50 01.6	
	comp=Z,349nm,20.5s,baz=318,slow=39						
SCHQ	Schefferville	43.22	35	LR	LR	21 49 11.0	
	comp=Z,625nm,19.6s,baz=274,slow=35						
ATAH	Atahualpa	44.29	132	LR	LR	21 48 48.6	
	comp=Z,156nm,19.4s,baz=326,slow=34						
KDAK	Kodiak Island	44.52	329	LR	LR	21 46 48.5	
	comp=Z,403nm,21.0s,baz=110,slow=31						
INK	Inuvik	45.51	348	LR	LR	21 50 36.2	
	comp=Z,748nm,19.4s,baz=196,slow=36						
ILAR	Eielson Array	46.24	339	P	P	21 32 06.7	+0.5
	comp=Z,0.7nm,0.8s,baz=153,slow=7.4,SNR=11						
ILAR				LR	LR	21 51 25.7	
	comp=Z,372nm,18.8s,baz=102,slow=36						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	46.24	339	P	P	21 32 07.8	+1.7
TRF	Thorofare Moun	46.59	336		P	21 32 10.0	+0.9
E27K	Coleen River	47.17	344	P	P	21 32 14.7	+1.3
CZSB	Cruzeiro do Su	48.68	127	P	P	21 32 24.0	-1.7
NNA	Nana	48.91	135	LR	LR	21 49 54.4	
	comp=Z,107nm,19.8s,baz=342,slow=32						
RES	Resolute Bay	50.18	5	LR	LR	21 54 14.9	
	comp=Z,423nm,18.2s,baz=188,slow=36						
RES	Resolute Bay	50.18	5		P	21 32 36.5	0.0
RES				IAmb	IAmb	21 32 53.8	
	comp=Z,5.5nm,0.9s						
POIN	Pond Inlet	50.67	12		P	21 32 40.5	+0.4
POIN				IAmb	IAmb	21 32 58.9	
	comp=Z,14nm,1.4s						
RPN	Rapa Nui	51.98	180	LR	LR	21 49 44.6	
	comp=Z,369nm,20.6s,baz=24,slow=30						
BOAV	Boa Vista	52.50	107	P	P	21 32 53.8	-0.8
BOAV				IAmb	IAmb	21 33 25.2	
	comp=Z,10nm,1.3s						
ANM	Nome	52.97	333		P	21 32 59.2	+1.8
ANM				IAmb	IAmb	21 33 15.3	
	comp=Z,5.6nm,1.3s						
RDOG	Red Dog Mine	53.41	338	P	P	21 33 01.7	+1.0
RKT	Rikitea	53.86	209	eLR	LR	21 48 38.4	
	comp=Z,1μm,25.0s						
NUUG	Nuugaatsiaq	55.95	19	iP	P	21 33 20.6	+1.6
NUUG				IAmb	IAmb	21 33 26.4	
	comp=Z,6.9nm,0.9s						
PPT	Papeete	57.51	226	LR	LR	21 53 12.1	
	comp=Z,54nm,19.7s,baz=28,slow=31						
PPT2	Papeete2	57.53	226	eLR	LR	21 50 13.3	
	comp=Z,240nm,24.2s						
PPT2				eLR	LR	21 50 15.7	
	comp=Z,202nm,28.0s						
MDP	Montagnes des	58.16	100	LR	LR	22 02 45.8	
	comp=

comp=Z,0.7nm,0.4s
NRIK Noril'sk 84.94 354 P P 21 36 15.8 -0.2
ESDC Sonseca Array 85.50 48 LR LR 22 12 43.2
comp=Z,211nm,18.1s,baz=306,slow=34
FINES FINESS Array B 86.65 20 P P 21 36 24.3 -0.4
comp=Z,0.8nm,0.7s,baz=245,slow=4.0,SNR=4.3
comp=Z,0.8nm,0.7s
MDT Midelt 88.36 54 LR LR 22 15 24.2
comp=Z,237nm,19.0s,baz=28,slow=35
GERES GERESS Array B 90.73 33 LR LR 22 18 29.3
comp=Z,417nm,19.1s,baz=332,slow=36
MJAR Matsushiro Arr 91.33 312 LR LR 22 12 08.0
comp=Z,171nm,19.4s,baz=20,slow=32
VRAC Vranov 91.83 32 LR LR 22 17 16.3
comp=Z,295nm,19.3s,baz=342,slow=35
URZ Urewera 93.08 229 LR LR 22 09 28.5
comp=Z,111nm,21.1s,baz=54,slow=30
JCJ Chichijima 93.38 302 LR LR 22 10 16.4
comp=Z,199nm,21.7s,baz=81,slow=30
DZM Mont Dzumac 93.85 248 eLR LR 22 06 59.5
comp=Z,377nm,24.7s
HNR Honiara 94.21 262 LR LR 22 11 31.1
comp=Z,16nm,19.9s,baz=148,slow=30
AKASG Malin Array Be 96.23 25 LR LR 22 20 21.5
comp=Z,273nm,20.8s,baz=331,slow=35
KSRS Korea Array 97.45 317 LR LR 22 13 55.5
comp=Z,53nm,21.7s,baz=355,slow=31
GUMO Guam 97.76 289 LR LR 22 12 01.4
comp=Z,146nm,19.7s,baz=85,slow=30
ARTI Arti 98.16 7 LR LR 22 25 15.0
comp=Z,351nm,20.2s,baz=326,slow=38
JNU Nakatsue 98.22 312 LR LR 22 16 25.5
comp=Z,126nm,18.7s,baz=2.5,slow=32
RPZ Rata Peaks 99.67 226 LR LR 22 15 00.5
comp=Z,72nm,18.2s,baz=129,slow=31
WMQ Urumqi 109.52 347 Pdif Pdif 21 38 10.3 +1.2
WMQ LR LR
comp=Z,280nm,24.3s
PZH PanZhiHua 120.32 327 PKP PKPdf 21 42 32.6 -0.7
ASAR Alice Springs 122.51 257 PKP PKPdf 21 42 36.2 -1.2
comp=Z,0.7nm,0.9s,baz=83,slow=2.2,SNR=4.5

*NEIC **15** 21:41:39.1±1.1, 19°.10N±0°.04×67°.26W±0°.02, h10km±2km, ML2.6/39, Md3.0/7(RSPR), Error ellipse: s-maj=6.6km s-min=3.3km az=12.0*
*SDD **15** 21:41:40.2±2.2, 19°.16N×67°.25W, h4km±11km, MD3.1, ML2.5, MW2.6, Presumed earthquake*
*RSPR **15** 21:41:41.2, 19°.20N×67°.38W, h24km±33km, MD3.0/7*
ISC 15 21:41:40.7±1.7, 19°.09N±0°.07×67°.28W±0°.03, h17km±9km, n42, σ1°03/70, 18C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.64	165	Op		Pg	21 41 52.6	-0.7
AGPR						Sg	21 42 00.0	-1.8
AGPR				IAML			21 42 06.3	
	238nm,0.5s							
AGPR				IAML			21 42 08.4	
	266nm,0.3s							
AGPR	Aguadilla, PR	0.64	165	⇑*i*	P	Pg	21 41 53.0	-0.3
AGPR				*i*	S	Sg	21 42 03.1	+1.3
	comp=N,227nm,0.5s							
AGPR				IAML			21 42 10.2	
	comp=N,227nm,0.5s							
AGPR	Aguadilla, PR	0.64	165	⇓*i*	P	Pg	21 41 53.5	+0.2
AGPR				*e*	S	Sb	21 42 03.7	+1.7
IDE	Isla Desecheo	0.72	195			Pg	21 41 54.7	-0.2
IDE						Sg	21 42 06.0	+1.6
IDE	Isla Desecheo	0.72	195	⇓*i*	P	Pg	21 41 54.7	-0.2
IDE				*e*	S	Sg	21 42 06.0	+1.6
PRSN	Puerto Rico Se	0.88	171			Pg	21 41 56.7	-1.1
PRSN				Sn		Sg	21 42 10.2	+0.9
PRSN	Puerto Rico Se	0.88	171	⇑*i*	P	Pg	21 41 56.0	-1.7
PRSN				⇑*i*	S	Sb	21 42 11.1	+2.3
	comp=N,630nm,0.2s							
PRSN				IAML			21 42 14.1	
	comp=N,630nm,0.2s							
PRSN	Puerto Rico Se	0.88	171	⇓*e*	P	Pg	21 41 56.9	-0.9
PRSN				*e*	S	Sg	21 42 09.7	+0.4
LSP	Las Mesas	0.93	168			Pg	21 41 57.7	-1.0
LSP						Sg	21 42 12.2	+1.2
LSP	Las Mesas	0.93	168	⇑*e*	P	Pg	21 41 57.7	-1.0
LSP				*e*	S	Sg	21 42 12.2	+1.2
EMPR	Esperanza - Ma	0.94	130			Pb	21 41 59.3	+0.8
EMPR						Sb	21 42 12.2	+1.5
EMPR	Esperanza - Ma	0.94	130	⇑*e*	P	Pb	21 41 59.3	+0.8
EMPR				*e*	S	Sb	21 42 12.2	+1.5
UUPR	Utuado, UPR, P	0.99	147			Pg	21 41 59.2	-0.7
CRPR	Cabo Rojo, PR	1.09	171			Pb	21 42 00.4	-0.7
CRPR						Sb	21 42 19.9	+0.9
CRPR	Cabo Rojo, PR	1.09	171			Pb	21 41 59.8	-1.3
CRPR						Sb	21 42 15.1	+0.1
CRPR				IAML			21 42 16.9	
	comp=N,86nm,0.7s							
CRPR				IAML			21 42 20.0	
	comp=N,156nm,0.4s							
CRPR	Cabo Rojo, PR	1.09	171	⇑*i*	P	Pb	21 41 59.2	-1.8
CRPR				⇑*i*	S	Sb	21 42 15.7	+0.7
CRPR				IAML			21 42 19.9	
	comp=N,145nm,0.5s							
CRPR	Cabo Rojo, PR	1.09	171	⇓*e*	P	Pb	21 42 00.4	-0.7
CRPR				*e*	S	Sb	21 42 15.9	+0.9
MLPR	Magueyes Islan	1.13	168	Pn		Pb	21 42 00.5	-1.4
ECPR	Experimental S	1.16	131			Pb	21 42 01.2	-1.2
ECPR				IAML			21 42 23.7	
	comp=N,293nm,0.2s							
ECPR	Experimental S	1.16	131	⇑*i*	P	Pb	21 42 02.0	-0.3
ECPR				*e*	S	Sb	21 42 17.5	+0.4
GBPR	Guanica, Bosqu	1.17	161			Pn	21 42 02.5	+0.2
GBPR	Guanica, Bosqu	1.17	161	⇓*e*	P	Pn	21 42 02.5	+0.2
PCDR	Punta Cana, DR	1.19	241	*i*	P	Pn	21 42 01.9	-0.6
PCDR				⇑*i*	S	Sb	21 42 18.6	+0.8
PCDR				IAML			21 42 52.3	
	comp=N,170nm,2.4s							
CELP	Cerrillos	1.21	146			Pn	21 42 01.6	-1.2
CELP				IAML			21 42 19.6	
	comp=N,101nm,0.3s							
CELP				IAML			21 42 21.7	
	comp=N,120nm,0.2s							
OBIP	Obispado Ponce	1.22	148			Pn	21 42 01.9	-1.1
OBIP						Sb	21 42 18.2	-0.7
OBIP	Obispado Ponce	1.22	148	⇑*e*	P	Pn	21 42 02.0	-1.0
OBIP				*e*	S	Sb	21 42 19.1	+0.2
GCPR	Guaynabo City	1.38	124	Pn		Pn	21 42 04.3	-0.8
GCPR						Sn	21 42 22.2	-0.8
GCPR	Guaynabo City	1.38	124	*e*	S	Sn	21 42 21.9	-1.1
HIDR	Higuey Centro	1.44	250	⇑*i*	P	Pn	21 42 04.6	-1.4
HIDR				⇑*i*	S	Sn	21 42 23.9	-0.8
HIDR				IAML			21 42 33.2	
	comp=N,103nm,0.2s							
SJG	San Juan	1.45	132			Pn	21 42 06.0	-0.1
SJG				IAML			21 42 32.0	
	comp=N,67nm,0.3s							
SJG	San Juan	1.45	132	⇑*i*	P	Pn	21 42 06.0	-0.1
SJG				*i*	S	Sn	21 42 24.3	-0.4
SJG	San Juan	1.45	132	⇑*e*	P	Pn	21 42 06.0	-0.1
SJG				*e*	S	Sn	21 42 24.4	-0.4
PDPR	Patillas Dam,	1.60	131	Pn		Pn	21 42 08.0	-0.2
PDPR				IAML			21 42 35.1	
	comp=N,59nm,0.1s							
PDPR				IAML			21 42 35.9	
	comp=N,48nm,0.1s							
HUMP	Col San Antoni	1.65	124			Pn	21 42 08.8	-0.2
HUMP						Sn	21 42 31.7	+1.9
HUMP	Col San Antoni	1.65	124	Pn		Pn	21 42 08.4	-0.5
HUMP				IAML			21 42 41.0	
	comp=N,45nm,0.2s							
HUMP				IAML			21 42 41.2	
	comp=N,54nm,0.2s							
HUMP	Col San Antoni	1.65	124	⇓*i*	P	Pn	21 42 08.8	-0.2
HUMP				*e*	S	Sn	21 42 31.7	+1.9
MIDR	Miches	1.67	267	⇑*i*	P	Pn	21 42 08.6	-0.6
MIDR				⇑*i*	S	Sn	21 42 30.2	-0.1
MIDR				IAML			21 42 35.3	
	comp=N,19nm,0.8s							
MIDR				IAML			21 43 16.0	
	comp=N,27nm,1.8s							
DR12	Loma Pena Alta	2.01	262	Pn		Pn	21 42 13.5	-0.4
HATOM	Hato Mayor del	2.01	262	⇑*i*	P	Pn	21 42 14.4	+0.5
HATOM				⇑*i*	S	Sn	21 42 39.6	+1.0
HATOM				IAML			21 42 47.2	
	comp=N,33nm,1.4s							
CUPR	Culebra, Puert	2.05	112	Pn		Pn	21 42 13.2	-1.2
SDDR	Presa de Saban	3.79	269			Pn	21 42 38.0	-0.4
SDDR	Presa de Saban	3.79	269	⇑*eP*		Pn	21 42 39.4	+1.0

*AZER **15** 21:45:40.8, 38°.17N×48°.25E, h2km, ml4.7*
*TEH **15** 21:45:41.6, 38°.12N×48°.10E, h6km±27km, ML4.4, Presumed earthquake*
*MOS **15** 21:45:41.8±1.7, 38°.19N×48°.27E, h10km, mb4.6/13, Error ellipse: s-maj=5.6km s-min=3.9km az=107.5*
*IDC **15** 21:45:41.7±1.1, 38°.14N×48°.14E, h0km, mb4.1/20, mbtmp4.2/30, ML4.2/7, MS3.6/6, Error ellipse: s-maj=21.6km s-min=9.7km az=9.0*
*THR **15** 21:45:42.0±0.0, 38°.16N×48°.12E, h10km±6km, ML4.6, Presumed earthquake*
*NEIC **15** 21:45:43.1±1.9, 38°.14N±0°.07×48°.35E±0°.09, h10km±1km, mb4.3/41, Error ellipse: s-maj=11.9km s-min=11.6km az=73.0*
*NNC **15** 21:45:51.5±10.0, 38°.78N×48°.34E, h23km±78km, mb4.3, Error ellipse: s-maj=73.3km s-min=37.4km az=91.0*
ISC 15 21:45:42.2±0.7, 38°.12N±0°.02×48°.11E±0°.02, h9km±4km, n324, σ2°.21/372, mb4.3/62, MS3.8/3, 13C-7D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ISRB	Sarab	0.46	230	Pg		Pg	21 45 50.5	-0.7
LRK	Lerik	0.55	19	P		Pg	21 45 52.7	-0.3
LRK				S		Sb	21 46 01.3	-1.0
GAS1	Astara - Iran	0.63	65	Pg		Pg	21 45 54.0	-0.5
ASTR	Astara	0.69	51	P		Pg	21 45 55.4	-0.2
ASTR				S		Sb	21 46 05.8	-0.4
GRMI	Germi	0.71	346	Pg		Pg	21 45 55.3	-0.7
LKRN	Lenkeran, Azer	0.79	42	PG		Pg	21 45 57.0	-0.4
LKRN	Lenkeran, Azer	0.79	42	P		Pg	21 45 57.1	-0.4
LKRN				S		Sb	21 46 08.7	-0.2
YRD	Yardimli	0.80	7	P		Pg	21 45 57.3	-0.4
YRD				S		Sb	21 46 09.5	0.0
IHRS	Heris	0.86	283	Pg		Pg	21 45 57.8	-1.1
IHRS				Sg		Sg	21 46 09.7	-0.5
CSN1	Caspian	0.96	125	Pg		Pg	21 45 59.5	-1.1
CSN1				Sg		Sb	21 46 13.3	-0.5
IHSH	Hashtrud	1.06	220	Pg		Pg	21 46 01.1	-1.5
GLBA	Clilabad	1.14	11	P		Pn	21 46 04.3	-0.1
GLBA				S		Sn	21 46 21.9	+1.6
QRD	Qoradiz	1.47	335	Pn		Pb	21 46 09.5	-0.3
QRD				Sn		Sg	21 46 33.6	+3.9
ZNJK	Zanjan	1.52	162	Pg		Pn	21 46 09.7	-0.2
ZNJK	Zanjan	1.52	162	*e*Pn		Pn	21 46 09.1	-0.8
ZNJK				IAML			21 47 16.4	
	comp=Z,3.4nm,1.0s							
ITBZ	Tabriz	1.55	275	Pg		Pn	21 46 10.1	-0.1
BLQ	Beylaqan	1.65	345	Pn		Pb	21 46 12.8	-0.1
BLQ				Sn		Sg	21 46 36.4	+0.9
IAZR	Azarshahr	1.74	256	Pg		Pb	21 46 14.1	-0.5
SAAT	Saatly	1.75	8	Pn		Pg	21 46 14.8	-1.1
SAAT				Sn		Sg	21 46 40.1	+1.4
ORD	Ordubad	1.84	297	Pn		Pb	21 46 15.4	-0.9
ORD				Sn		Sg	21 46 43.5	+2.0
GIDE	GILAN DEYLAMAN	1.86	129	*e*Pn		Pn	21 46 15.0	+0.4
GIDE				IAML			21 46 44.3	
	comp=Z,15μm,1.0s							
JIR1	Jirandeh	1.95	136	Pn		Pb	21 46 16.6	-1.5
ALIB	&Aumlli-Bayram	1.96	21	Pg		Pg	21 46 19.2	-0.7
ALIB				Sn		Sg	21 46 46.9	+1.6
ISHB	Shabestar	1.97	275	Pn		Pb	21 46 17.9	-0.6
IMRD	Marand	1.98	288	Pn		Pb	21 46 18.1	-0.5
AGDM	Agdam	2.13	339	Pn		Pb	21 46 19.9	-1.2
AGDM				Sn		Sg	21 46 50.1	-0.7
KDMR	Kurdemir	2.25	1	Pn		Pb	21 46 21.7	-1.4
KDMR				Sn		Sg	21 46 53.1	-1.6
BRDA	Brd	2.26	342	Pn		Pb	21 46 22.5	-0.7
BRDA				Sg		Sg	21 46 54.6	-0.2
NAX	Nakhchivan	2.30	298	PN		Pb	21 46 23.3	-0.7
NAX	Nakhchivan	2.30	298	Pn		Pb	21 46 23.7	-0.3
NAX				Sn		Sg	21 46 57.1	+0.9
MAHB	Mahabad	2.34	235	Pn		Pb	21 46 23.1	-1.7
SBZ	Shahbuz	2.37	303	Pn		Pb	21 46 24.7	-0.5
SBZ				Sn		Sg	21 46 57.5	-1.0
IGZV	Ghazvin	2.41	135	Pn		Pn	21 46 23.4	+1.2
GBS	Qobustan	2.50	15	Pn		Pb	21 46 25.4	-1.9
GBS				Sn		Sb	21 46 58.3	+0.2
GOBA	Gobu	2.60	28	Pg		Pb	21 46 26.6	-2.5
GOBA				Sg		Sb	21 46 58.9	-2.3
IML	Ismayilli	2.67	1	Pn		Pb	21 46 27.4	+1.9
IML				Sn		Sb	21 47 04.0	+0.9
QABG	Abgarm-Qazvin	2.68	153	Pn		Pn	21 46 27.6	+1.8
PQL	Pirkuli	2.69	8	Pg		Pb	21 46 28.9	-1.7
PQL				Sn		Sb	21 47 03.9	0.0
MNGR	Mingechevir, A	2.76	344	PN		Pb	21 46 29.3	-2.5
MNGR	Mingechevir, A	2.76	344	Pn		Pb	21 46 29.4	-2.5
MNGR				Sn		Sb	21 47 05.7	-0.1
ATGJ	Altiaghaj	2.81	13	Pn		Pb	21 46 32.3	-0.4
ATGJ				Sn		Sb	21 47 06.8	-0.5
QBL	Gabala	2.83	356	Pn		Pn	21 46 29.3	+1.6
QBL				Sn		Sb	21 47 07.2	-0.5
NDR	Nardaran	2.85	30	Pn		Pn	21 46 29.9	+2.0
NDR				Sn		Sb	21 47 05.7	-2.7
SRSL	SARDASHT	2.86	229	*e*Pn		Pb	21 46 30.5	-3.2
SRSL				IAML			21 47 21.5	
	comp=Z,750nm,1.0s							
GANJ	Ganja	2.88	332	PN		Pn	21 46 30.1	+1.8
GANJ	Ganja	2.88	332	Pn		Pn	21 46 29.9	+1.6
GANJ				Sn		Sb	21 47 07.7	-1.4
HYR	Heyderabad	3.00	303	Pg		Pb	21 46 35.0	-0.9
HYR				Sg		Sg	21 47 17.4	-1.2
SIZA	Siyzn	3.01	11	Pg		Pb	21 46 34.5	-1.6
XNQ	Khinaliq	3.05	0	Pn		Pn	21 46 32.2	+1.4
XNQ				Sn		Sb	21 47 13.1	-1.1
THKV	Tehran--Karaj	3.12	134	*e*Pn		Pn	21 46 34.1	+2.2
THKV				IAML			21 47 22.3	
	comp=Z,2μm,1.0s							
SEKA	Sheki	3.16	347	PN		Pn	21 46 33.8	+1.5
SEKA	Sheki	3.16	347	Pn		Pn	21 46 33.9	+1.5
SEKA				Sn		Sb	21 47 14.4	-3.0
GDB	GEDABAY	3.17	326	Pn		Pn	21 46 35.0	+2.4
GDB				Sn		Sb	21 47 16.8	-1.0
QUBA	Quba, Azerbaij	3.24	5	Pg		Pn	21 46 36.2	+2.8
QUBA				Sg		Sb	21 47 21.1	+1.5
IALM	Almabolaq	3.25	179	Pn		Pn	21 46 35.9	+2.1
CHTH	Charan	3.27	132	*e*Pn		Pn	21 46 36.1	+2.1
CHTH				IAML			21 47 31.7	
	comp=Z,600nm,1.0s							
SNQR	Sonqor, Kerman	3.28	187	Pn		Pn	21 46 36.0	+1.9
GNI	Garni	3.31	309	Pn		Pb	21 46 39.1	-2.1
	comp=Z,26nm,0.3s,baz=145,slow=1.2,SNR=82							
	comp=Z,392nm,0.7s							
GNI	Garni	3.31	309			Pb	21 46 38.1	-3.2
GNI	Garni	3.31	309	P		Pb	21 46 39.3	-2.0
GNI	Garni	3.31	309	P		Pb	21 46 40.8	-0.5
AKT	Akhty	3.37	355	⇓*i*	PN	Pn	21 46 36.8	+1.6
AKT				*e*			21 46 44.3	
AKT				*e*S		Sn	21 47 13.8	-1.5
AKT				*e*			21 47 27.6	
AKT				pmax	pmax			
	comp=Z,209nm,0.7s							
AKT				smax	smax			
	comp=N,522nm,0.4s							
AKT				smax	smax			
	comp=E,569nm,0.4s							
AKT				smax	smax			
	comp=E,693nm,0.5s							
QSAR	Qusar	3.39	2	Pn		Pb	21 46 38.9	-3.7
QSAR				Sn		Sb	21 47 20.1	-3.8
HAKT	HAKKARI	3.53	262	Pn		Pb	21 46 40.9	-4.2
HAKT				Sn		Sb	21 47 28.1	0.0
IGDI	IGDIR	3.59	300	Pg		Pb	21 46 43.6	-2.4
IGDI				Sg		Sg	21 47 37.1	-0.6
QZX	Qazax, Azerbai	3.62	325	Pn		Pn	21 46 41.2	+2.7
QZX				Sg		Sg	21 47 34.8	-3.6
IDHR	Dehrash	3.69	203	Pn		Pn	21 46 41.9	+2.3
ZKTA	Zakatala	3.69	342	Pn		Pn	21 46 41.8	+2.2
ZKTA				Sn		Sb	21 47 28.4	-4.2
ASAO	Ashtian	3.89	156	*e*Pn		Pn	21 46 44.7	+2.3
ASAO				IAML			21 47 57.9	
	comp=Z,500nm,1.0s							
KCHF	Cheshme Sefid,	3.94	193	Pn		Pn	21 46 45.3	+2.2
DAMV	Damavand	3.97	128	*e*Pn		Pn	21 46 46.6	+3.0
DAMV				IAML			21 48 19.3	
	comp=Z,3.5nm,1.0s							
GEVA	Gevas	3.98	274	Pn		Pn	21 46 47.2	+3.5
GHVR	GHOM	4.45	144	*e*Pn		Pn	21 46 52.3	+2.3
GHVR				IAML			21 48 18.1	
	comp=Z,530nm,1.0s							
KHMZ	Khomeyn	4.62	161	*e*Pn		Pn	21 46 55.7	+3.2
KHMZ				IAML			21 48 22.9	
	comp=Z,220nm,1.0s							
MAK	Makhachkala	4.86	355	*e*PN		Pn	21 46 59.1	+3.6
MAK				*e*S		Sn	21 47 57.9	+6.1
MAK				pmax	pmax			
	comp=Z,218nm,0.6s							
MAK				smax	smax			
	comp=E,932nm,0.6s							
MAK				smax	smax			
	comp=E,1μm,0.5s							
MAK				MLR	MLR			
	comp=Z,1μm,9.0s							
GTMR	Gotvand	5.70	171	*e*Pn		Pn	21 47 09.3	+2.2
GTMR				IAML			21 48 59.6	
	comp=Z,130nm,1.0s							
MARD	Mardin	5.87	264	Pn		Pn	21 47 12.4	+2.8
KOPT	Kop Dagi	6.22	290			Pn	21 47 18.2	+3.7
MRVT	Maraveh tapeh	6.33	92	*e*Pn		Pn	21 47 15.4	-0.4
MRVT				IAML			21 48 37.3	
	comp=Z,160nm,1.0s							
NCK	Nalchik	6.37	329	*i* P		Pn	21 47 20.6	+4.3
NASN	Na'in	6.55	143	*e*Pn		Pn	21 47 21.9	+2.8
NASN				IAML			21 49 28.8	
	comp=Z,58nm,1.0s							
SHRO	Shahrood	6.67	106	*e*Pn		Pn	21 47 22.9	+2.4
SHRO				IAML			21 49 15.4	
	comp=Z,2.8nm,1.0s							
KBZ	Khabaz	6.85	326	Pn		Pn	21 47 25.9	+3.1
	comp=Z,2.8nm,0.8s,baz=138,slow=7.9,SNR=9.6							
KBZ				LR	LR		21 50 42.6	
	comp=Z,371nm,21.1s,baz=186,slow=44							
KBZ	Khabaz	6.85	326	*i* P		Pn	21 47 23.7	+0.8
KVAR	Kislovodsk Arr	7.12	327	Pn		Pn	21 47 30.5	+3.8
	baz=139,slow=11							
	comp=Z,3.8nm,0.8s							
KIV	Kislovodsk	7.12	327			Pn	21 47 28.4	+1.7
KIV	Kislovodsk	7.12	327	*e*P		Pn	21 47 30.0	+3.3
KIV				*e*S		Sn	21 48 47.4	-0.5
KIV				pmax	pmax			
	comp=Z,24nm,1.0s							
KIV				MLR	MLR			
	comp=Z,105nm,10.0s							
KIV	Kislovodsk	7.12	327	P		Pn	21 47 32.4	+5.6
YZKH	Yazd	7.79	135	*e*Pn		Pn	21 47 39.6	+3.6
YZKH				IAML			21 49 13.6	
	comp=Z,27nm,1.0s							
GOF	Gofitskoye	7.90	333	*ce*P		Pb	21 47 55.2	-4.1
VSLR	Vesyoloye	8.12	314	*i* P		Pn	21 47 42.9	+2.6
SOC	Sochi	8.38	313	*e*P		Pn	21 47 47.3	+3.5
SOC				*e*			21 49 18.6	
SOC				pmax	pmax			
	comp=Z,45nm,0.9s							
SOC				MLR	MLR			
	comp=Z,349nm,11.0s							
TABS	Tabas	8.56	119	*e*Pn		Pn	21 47 49.5	+3.0
TABS				IAML_BB			21 48 01.7	
	comp=Z,750nm,1.0s							
TOKA	Tokat	9.29	287	Pn		Pn	21 48 00.6	+4.1
ASF	Jabal al Asfar	10.93	240	Pn		Pn	21 48 24.3	+5.4
	baz=107,slow=7.6,SNR=4.1							
ASF				LR	LR		21 53 05.5	
	comp=Z,274nm,21.8s,baz=34,slow=40							
BR131	Keskin Array S	11.39	283			Pn	21 48 28.7	+3.4
BR131	Keskin Array S	11.39	283	*i* P		Pn	21 48 28.0	+2.8
BRTR	Keskin Array B	11.39	283	Pn		Pn	21 48 30.9	+5.7
	comp=Z,4.1nm,0.9s,baz=107,slow=12,SNR=17							
BRTR	Keskin Array B	11.39	283			Pn	21 48 29.4	+4.1
BRTR	Keskin Array B	11.39	283	P		Pn	21 48 31.0	+5.8
SAKB	Bahrain	12.28	170	P		Pn	21 48 37.3	0.0
SHMA	Al-Shehemyia	12.46	168	P		Pn	21 48 39.2	-0.6
SHMA				S		Sn	21 50 55.1	-3.7
SMRA	Abu-Samra	13.53	169	P		Pn	21 48 51.3	-3.2
SMRA				S		Sn	21 51 20.1	-4.9
TRNA	Turayna	13.60	168	P		Pn	21 48 53.8	-1.6
	SNR=6.6							
TRNA				S		Sn	21 51 22.5	-4.2
EIL	Elat	13.79	236	LR	LR		21 55 05.3	
	comp=Z,376nm,20.2s,baz=39,slow=41							
VRH	Novokhopyorsk	13.84	343	*e*P		Pn	21 48 57.3	-1.2
VRH				pmax	pmax			
	comp=Z,22nm,0.8s							
BANOM	Banah	14.00	148	P		Pn	21 49 01.6	+0.7
BANOM				P		Pn	21 49 01.6	+0.7
AB31	Akbulak array	14.02	34			Pn	21 48 58.0	-2.9
AB31	Akbulak array	14.02	34	⇑P		Pn	21 48 59.9	-1.1
	comp=Z,3.7nm,0.5s,baz=220,slow=13							
AB31				⇑S		Sn	21 51 27.5	-9.2
	comp=Z,22nm,0.8s,baz=222,slow=23							
AB31	Akbulak array	14.02	34	P		Pn	21 48 59.9	-1.1
AB31				S		Sn	21 51 27.5	-9.2
ABKAR	Akbulak array	14.02	34			Pn	21 48 58.1	-2.9
AKTO	Aktyubinsk	14.19	27	Pn		Pn	21 49 01.0	-2.3
	comp=Z,2.4nm,0.3s,baz=197,slow=11,SNR=14							
	comp=Z,9.2nm,0.6s							
AKTO	Aktyubinsk	14.19	27	⇓P		Pn	21 48 59.4	-3.9
	comp=Z,14nm,0.6s							
AKTO				⇓S		Sn	21 51 33.2	-7.7
	comp=Z,11nm,0.5s							
BELG	Belogornoye	14.28	359	Pn		Pn	21 49 02.6	-1.9
	comp=Z,3.6nm,0.3s,baz=275,slow=0.6,SNR=13							
BELG				LR	LR		21 56 39.3	
	comp=Z,400nm,18.8s,baz=319,slow=46							
	comp=Z,32nm,0.5s							
BELG	Belogornoye	14.28	359	*i* P		Pn	21 49 02.1	-2.4
VORD	Divnogorie	14.28	337	*e*P		Pn	21 49 03.3	-1.3
VORD				pmax	pmax			
	comp=Z,8.0nm,0.8s							
MASF	Masafi	14.43	149	P		Pn	21 49 06.7	-0.1
MASF				S		Sn	21 51 47.5	+0.6
VSR	Storozhevoye	14.54	337	*e*P		Pn	21 49 06.3	-1.8
VSR			

KKAR	**Karatay Array**	**17.70**	**67**			**Pn**		**21 49 46.5**	**-2.5**
KKAR	**Karatay Array**	**17.70**	**67**	P		**Pn**		**21 49 46.5**	**-2.5**
BTK	**Batken**	**17.73**	**77**			**Pn**		**21 49 47.5**	**-1.9**
BTK	**Batken**	**17.73**	**77**	P		**Pn**		**21 49 47.5**	**-1.9**
BTK				pmax	pmax				
	comp=E,9.0nm,0.8s								
JMDO	**Jabal Madar**	**17.90**	**148**	P		**P**		**21 49 52.0**	**-0.1**
TRKS	**Terek-Say**	**18.00**	**72**	P		**P**		**21 49 55.4**	**+2.0**
MLR	**Muntele Rosu**	**18.06**	**301**	P		**P**		**21 49 53.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=205,slow=3.0,SNR=8.4								
	comp=Z,2.1nm,1.0s								
MLR	**Muntele Rosu**	**18.06**	**301**			**P**		**21 49 54.9**	**+1.0**
MLR	**Muntele Rosu**	**18.06**	**301**	P		**P**		**21 49 54.9**	**+1.0**
MLR				pmax	pmax				
	comp=Z,14nm,1.2s								
AKASG	**Malin Array Be**	**18.38**	**319**	P		**Pn**		**21 49 56.7**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=130,slow=10,SNR=12								
	comp=Z,2.1nm,0.5s								
AKASG	**Malin Array Be**	**18.38**	**319**	P		**P**		**21 49 57.1**	**-0.1**
AKASG	**Malin Array Be**	**18.38**	**319**	*ce*P		**P**		**21 49 57.7**	**+0.5**
AKASG				pmax	pmax				
	comp=Z,3.0nm,0.7s								
AKBB	**Malin Array Si**	**18.38**	**319**			**P**		**21 49 57.2**	**0.0**
AKBB	**Malin Array Si**	**18.38**	**319**	*ce*P		**P**		**21 49 57.8**	**+0.6**
AKBB				pmax	pmax				
	comp=Z,8.0nm,1.0s								
KIEV	**Kiev**	**18.38**	**319**	P		**P**		**21 49 57.4**	**+0.1**
KIEV	**Kiev**	**18.38**	**319**	P		**P**		**21 49 57.4**	**+0.1**
KIEV				pmax	pmax				
	comp=Z,9.0nm,1.0s								
AK11	**Malin Array Si**	**18.39**	**319**	P		**P**		**21 50 03.4**	**+6.0**
AK18	**Malin Array Si**	**18.47**	**319**	P		**Pn**		**21 50 03.4**	**+5.1**
AK22	**Malin Array Si**	**18.49**	**319**	P		**Pn**		**21 50 02.6**	**+4.0**
AK19	**Malin Array Si**	**18.50**	**319**	P		**Pn**		**21 50 04.2**	**+5.5**
DRK	**Karamyk**	**18.51**	**78**			**P**		**21 49 56.5**	**-2.6**
DRK				IAmb	IAmb			21 50 14.1	
	comp=Z,16nm,0.6s								
DRK	**Karamyk**	**18.51**	**78**	P		**P**		**21 49 56.5**	**-2.6**
DRK				pmax	pmax				
	comp=Z,16nm,0.6s								
AK20	**Malin Array Si**	**18.51**	**319**	P		**Pn**		**21 50 04.5**	**+5.7**
ARK	**Arkit**	**18.63**	**71**	P		**Pn**		**21 50 00.6**	**+0.1**
JLN	**Jalan Bani Buh**	**18.65**	**145**	P		**Pn**		**21 50 01.1**	**+0.3**
OBN	**Obninsk**	**18.71**	**339**	P		**P**		**21 50 00.3**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=116,slow=22,SNR=6.0								
	comp=Z,31nm,0.9s								
OBN	**Obninsk**	**18.71**	**339**	P		**P**		**21 49 59.8**	**-1.0**
OBN	**Obninsk**	**18.71**	**339**	*de*P		**P**		**21 50 00.3**	**-0.5**
OBN				pmax	pmax				
	comp=Z,26nm,0.9s								
OBN				MLR	MLR				
	comp=Z,308nm,12.0s								
LUBAR	**Lubar, Ukraine**	**18.73**	**316**	P		**Pn**		**21 50 05.6**	**+4.1**
MI29	**MI29, Kamyanyy**	**18.94**	**317**	P		**Pn**		**21 50 08.7**	**+4.6**
	comp=Z,101nm,1.2s								
MI30	**MI30,Zelenitsa**	**18.94**	**318**	P		**Pn**		**21 50 09.1**	**+5.0**
	comp=Z,29nm,0.8s								
MOS	**Moscow**	**18.98**	**342**	*e*P		**Pn**		**21 50 03.9**	**-0.6**
MOS				*e*S		Sn		21 53 25.2	-12
MOS				pmax	pmax				
	comp=Z,24nm,0.7s								
MHTO	**MHTO**	**19.09**	**151**	P		**P**		**21 50 05.1**	**-0.1**
MHTO				P		**P**		**21 50 05.1**	**-0.1**
BURAR	**Bucovina Array**	**19.22**	**307**			**Pn**		**21 50 07.8**	**+0.3**
BUR08	**Bucovina Ar. S**	**19.24**	**307**			**Pn**		**21 50 07.6**	**-0.1**
MI28	**Mi28,Pidlybu**	**19.32**	**318**	P		**Pn**		**21 50 12.5**	**+3.9**
ARSB	**Arslanbob**	**19.38**	**73**	P		**P**		**21 50 06.8**	**-1.7**
ARSB				IAmb	IAmb			21 50 29.3	
	comp=Z,13nm,0.9s								
ARSB	**Arslanbob**	**19.38**	**73**	P		**P**		**21 50 06.8**	**-1.7**
ARSB				pmax	pmax				
	comp=Z,13nm,0.9s								
ARTI	**Arti**	**19.52**	**17**	P		**P**		**21 50 09.5**	**-0.2**
	comp=Z,35nm,0.6s,baz=211,slow=8.4,SNR=46								
ARTI	**Arti**	**19.52**	**17**			**P**		**21 50 09.0**	**-0.7**
ARTI	**Arti**	**19.52**	**17**	*d i*P		**P**		**21 50 09.5**	**-0.2**
ARTI				S		**Sn**		**21 53 43.8**	**-6.1**
ARTI				pmax	pmax				
	comp=Z,118nm,1.4s								
DOK	**Doka**	**20.13**	**163**	P		**P**		**21 50 16.6**	**-0.1**
DOK				P		**P**		**21 50 16.6**	**-0.1**
SVE	**Sverdlovsk**	**20.48**	**20**	*e*P		Pn		21 50 22.8	+0.5
SVE				*e*S		**S**		**21 54 02.4**	**-6.9**
SVE				pmax	pmax				
	comp=E,25nm,0.6s								
KIRV	**Kirov**	**20.50**	**2**	P		Pn		21 50 21.4	-1.0
	comp=E,29nm,0.7s,baz=201,slow=3.9,SNR=7.0								
	comp=E,29nm,0.7s								
RNPP1	**Kostyukhnivka**	**20.56**	**317**	P		Pn		21 50 26.6	+3.4
AAK	**Ala-Archa**	**20.56**	**69**	P		**P**		**21 50 22.0**	**+0.6**
	comp=E,3.0nm,0.6s,baz=269,slow=4.4,SNR=19								
	comp=E,3.0nm,0.6s								
AAK	**Ala-Archa**	**20.56**	**69**			**P**		**21 50 20.8**	**-0.6**
AAK				IAmb	IAmb			21 50 33.4	
	comp=Z,10nm,1.0s								
AAK	**Ala-Archa**	**20.56**	**69**	⇑P		Pn		21 50 24.3	+0.7
	comp=Z,9.7nm,1.0s								
AAK	**Ala-Archa**	**20.56**	**69**	*ce*P		Pn		21 50 23.2	-0.4
AAK				pmax	pmax				
	comp=Z,7.0nm,0.8s								
FRU1	**Bishkek**	**20.68**	**69**	P		**P**		**21 50 21.2**	**-1.2**
FRU1				IAmb	IAmb			21 50 30.2	
	comp=Z,15nm,0.7s								
FRU1	**Bishkek**	**20.68**	**69**	P		**P**		**21 50 21.3**	**-1.2**
FRU1				pmax	pmax				
	comp=Z,15nm,0.7s								
NIL	**Nilore**	**20.83**	**95**			**P**		**21 50 23.6**	**-0.6**
NIL				IAmb	IAmb			21 50 56.2	
	comp=Z,17nm,1.1s								
NIL	**Nilore**	**20.83**	**95**	P		**P**		**21 50 23.6**	**-0.6**
NIL				pmax	pmax				
	comp=Z,17nm,1.1s								
SHAO	**Shalim**	**21.08**	**160**	P		**P**		**21 50 26.4**	**-0.5**
ABTO	**Aybut**	**21.18**	**166**	P		**P**		**21 50 27.7**	**-0.5**
	SNR=16								
DMTO	**DMTO**	**21.19**	**162**	P		**P**		**21 50 30.4**	**+2.2**
RBK	**Rabkut**	**21.23**	**164**	P		**P**		**21 50 28.0**	**-0.6**
RBK				P		**P**		**21 50 28.0**	**-0.6**
HOLU	**Holmets**	**21.32**	**307**	P		**P**		**21 50 33.0**	**+3.8**
MNK	**Minsk**	**21.41**	**326**	*i* P		**P**		**21 50 30.1**	**0.0**
	comp=E,26nm,1.1s								
MNK				*i* P		**P**		**21 50 30.1**	**0.0**
	comp=N,22nm,1.2s								
MNK				*i* P		**P**		**21 50 30.1**	**0.0**
	comp=Z,19nm,1.0s,baz=131								
MNK				*i* pP		sP		21 50 43.3	+8.7
MNK				*i* PP		**PnPn**		**21 50 51.7**	**+1.6**
MNK				*i* S		**S**		**21 54 22.7**	**-5.0**
MNK				*i* sS		Sn		21 54 44.9	+10
MNK				*i* SS		**SnSn**		**21 54 49.6**	**-0.8**
MNK				*i* LR		LR		21 57 39.2	
MNK				*i* LRM		MLR		21 58 45.0	
	comp=N,226nm,13.9s								
MNK				*i* LRM		MLR		21 59 28.7	
	comp=Z,484nm,18.5s								
MNK				*i* LRM		MLR		22 00 21.9	
	comp=E,329nm,15.5s								
MNK	**Minsk**	**21.41**	**326**	*i* P		**P**		**21 50 30.1**	**0.0**
MNK				*i*				21 50 51.6	
MNK				*i* S		**S**		**21 54 22.7**	**-5.0**
MNK				pmax	pmax				
	comp=Z,19nm,1.0s								
MNK				pmax	pmax				
	comp=N,22nm,1.2s								
MNK				pmax	pmax				
	comp=E,26nm,1.1s								
MNK				MLR	MLR				
	comp=N,226nm,14.0s								
MNK				MLR	MLR				
	comp=Z,484nm,19.0s								
MNK				MLR	MLR				
	comp=E,329nm,16.0s								
BORK	**Borovoye**	**21.42**	**39**			**P**		**21 50 30.1**	**-0.3**
BORK				IAmb	IAmb			21 50 40.2	
	comp=Z,19nm,0.8s								
BORK	**Borovoye**	**21.42**	**39**	*ce*P		**P**		**21 50 31.7**	**+1.4**
BORK				pmax	pmax				
	comp=Z,25nm,1.0s								
BVA0	**Borovoye Array**	**21.44**	**39**	⇓P		**P**		**21 50 30.5**	**-0.1**
	comp=Z,22nm,1.1s								
BVA0	**Borovoye Array**	**21.44**	**39**	P		**P**		**21 50 30.5**	**-0.1**
BVAR	**Borovoye Array**	**21.44**	**39**	P		**P**		**21 50 31.5**	**+0.9**
	comp=Z,13nm,0.5s,baz=232,slow=7.3,SNR=45								
	comp=Z,13nm,0.5s								
KSH2	**Kashi**	**21.45**	**79**	P		**P**		**21 50 32.9**	**+2.0**
KSH2				pmax	pmax				
	comp=Z,2.0nm,1.0s								
KOLS	**Kolonicke sedl**	**21.52**	**308**	*e*P		**P**		**21 50 36.4**	**+4.9**
BOOM	**Boomskoye usch**	**21.62**	**70**			**P**		**21 50 31.8**	**-1.1**
BOOM				IAmb	IAmb			21 50 40.7	
	comp=Z,16nm,0.9s								
BOOM	**Boomskoye usch**	**21.62**	**70**	P		**P**		**21 50 31.8**	**-1.1**
BOOM				pmax	pmax				
	comp=Z,16nm,0.9s								
NRN	**Naryn**	**21.65**	**72**			**P**		**21 50 31.5**	**-1.8**
NRN				IAmb	IAmb			21 50 45.9	
	comp=Z,7.8nm,0.9s								
NRN	**Naryn**	**21.65**	**72**	P		**P**		**21 50 31.5**	**-1.8**
NRN				pmax	pmax				
	comp=Z,8.0nm,0.9s								
NACGM	**Naroch**	**22.15**	**326**	*e*P		**P**		**21 50 42.3**	**+4.1**
	comp=Z,33nm,0.8s,baz=130								
PSZ	**Piszkesteto**	**22.72**	**305**	P		**P**		**21 50 46.9**	**+2.5**
PSZ				IAmb	IAmb			21 51 12.1	
	comp=Z,7.6nm,1.1s								
PSZ	**Piszkesteto**	**22.72**	**305**	P		**P**		**21 50 46.9**	**+2.5**
PSZ				pmax	pmax				
	comp=Z,8.0nm,1.1s								
NIE	**Niedzica**	**22.91**	**308**	P		**P**		**21 50 51.7**	**+5.4**
	comp=Z,6.6nm,1.1s								
SUW	**Suwalki**	**23.31**	**321**	P		**P**		**21 50 51.2**	**+0.9**
SUW	**Suwalki**	**23.31**	**321**	P		**P**		**21 50 51.2**	**+0.9**
OJC	**Ojcow**	**23.48**	**310**	P		**P**		**21 50 52.0**	**-0.1**
OJC	**Ojcow**	**23.48**	**310**	P		**P**		**21 50 52.0**	**-0.1**
WUS	**Wushi**	**24.08**	**73**			**P**		**21 50 56.9**	**-1.2**
WUS				IAmb	IAmb			21 51 35.7	
	comp=Z,10nm,1.2s								
MODS	**Modra-Piesok**	**24.53**	**305**	*e*P		P		21 51 12.9	+11
MODS	**Modra-Piesok**	**24.53**	**305**	*e*PN		P		21 51 12.9	+11
ZST	**Bratislava**	**24.61**	**304**	*e*P		**P**		**21 51 05.0**	**+2.3**
ZST	**Bratislava**	**24.61**	**304**	*e*P		**P**		**21 51 05.0**	**+2.3**
STEB	**Steborice**	**24.63**	**308**	*e*P		**P**		**21 51 06.6**	**+3.7**
KURBB	**Kurchatov Arra**	**24.89**	**50**	P		**P**		**21 51 06.5**	**+1.3**
	comp=Z,5.2nm,1.1s,baz=255,slow=9.5,SNR=15								
	comp=Z,5.2nm,1.1s								
KURBB	**Kurchatov Arra**	**24.89**	**50**	⇑P		**P**		**21 51 08.3**	**+3.1**
	comp=Z,6.2nm,0.8s								
KURBB	**Kurchatov Arra**	**24.89**	**50**	P		**P**		**21 51 08.3**	**+3.1**
KURK	**Kurchatov**	**24.97**	**50**			**P**		**21 51 04.6**	**-1.3**
KURK				IAmb	IAmb			21 51 34.0	
	comp=Z,13nm,1.0s								
KURK	**Kurchatov**	**24.97**	**50**	⇓P		**P**		**21 51 08.3**	**+2.4**
	comp=Z,4.9nm,1.2s								
KURK	**Kurchatov**	**24.97**	**50**	*ce*P		**P**		**21 51 07.9**	**+1.9**
KURK				pmax	pmax				
	comp=Z,14nm,1.3s								
RONA	**Rosalia, Austr**	**25.04**	**303**	*e*pP		pP		21 51 10.4	+0.6
	comp=Z,5.3nm,0.9s								
VRAC	**Vranov**	**25.20**	**307**	*e*P		**P**		**21 51 09.7**	**+1.7**
KRUC	**Moravsky**	**25.26**	**306**	*e*P		**P**		**21 51 10.3**	**+1.7**
CONA	**Conrad Observa**	**25.37**	**303**	*i* P		**P**		**21 51 12.8**	**+3.1**
	comp=Z,9.8nm,2.0s								
ARSA	**Arzberg**	**25.48**	**301**	*e*P		**P**		**21 51 13.5**	**+2.8**
	comp=Z,7.4nm,1.5s								
DPC	**Dobruska-Polom**	**25.64**	**309**	P		**P**		**21 51 16.3**	**+4.2**
	comp=Z,7.2nm,1.5s								
SOKA	**Soboth**	**25.73**	**300**	*e*P		**P**		**21 51 16.0**	**+3.0**
	comp=Z,8.5nm,1.1s,SNR=10								
CHVC	**Chvalec**	**25.87**	**309**	*e*P		**P**		**21 51 18.0**	**+3.8**
CHVC	**Chvalec**	**25.87**	**309**	*e*P		**P**		**21 51 18.0**	**+3.8**
OBKA	**Obir**	**26.04**	**300**	*e*P		**P**		**21 51 18.7**	**+2.8**
	comp=Z,5.9nm,1.3s								
MAKZ	**Makanchi**	**26.28**	**60**			**P**		**21 51 17.4**	**-0.6**
MAKZ				IAmb	IAmb			21 51 26.8	
	comp=Z,8.8nm,0.8s								
MAKZ	**Makanchi**	**26.28**	**60**	⇑P		**P**		**21 51 20.2**	**+2.3**
	comp=Z,12nm,1.1s								
MAKZ	**Makanchi**	**26.28**	**60**	P		**P**		**21 51 17.4**	**-0.6**
MAKZ				pmax	pmax				
	comp=Z,9.0nm,0.9s								
MK31	**Makanchi Array**	**26.49**	**60**	P		**P**		**21 51 21.7**	**+1.8**
	comp=Z,7.9nm,0.7s,baz=274,slow=5.4,SNR=93								
MK31	**Makanchi Array**	**26.49**	**60**	*ce*P		**P**		**21 51 23.1**	**+3.2**
MKAR	**Makanchi Array**	**26.49**	**60**	P		**P**		**21 51 21.9**	**+2.1**
	comp=Z,6.2nm,0.8s,baz=262,slow=8.5,SNR=30								
	comp=Z,6.2nm,0.8s								
MKAR	**Makanchi Array**	**26.49**	**60**			**P**		**21 51 19.3**	**-0.6**
MKAR	**Makanchi Array**	**26.49**	**60**	P		**P**		**21 51 22.0**	**+2.1**
CKRC	**Cesky Krumlov**	**26.55**	**305**	*e*P		**P**		**21 51 21.8**	**+1.4**
CKRC	**Cesky Krumlov**	**26.55**	**305**	*e*P		**P**		**21 51 21.8**	**+1.4**
NRCA	**Norcia**	**26.91**	**291**	P		**P**		**21 51 25.6**	**+1.9**
NRCA				IAmb	IAmb			21 52 06.0	
	comp=Z,6.3nm,1.2s								
GEC2	**GERESS Array S**	**26.95**	**305**			**P**		**21 51 25.3**	**+1.2**
GEC2				IAmb	IAmb			21 51 36.8	
	comp=Z,6.1nm,1.0s								
GERES	**GERESS Array B**	**26.95**	**305**	P		**P**		**21 51 24.4**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=90,slow=6.7,SNR=13								
	comp=Z,2.1nm,0.8s								
GERES	**GERESS Array B**	**26.95**	**305**	*e*P		**P**		**21 51 25.6**	**+1.5**
GERES				pmax	pmax				
	comp=Z,2.0nm,0.8s								
FIA1	**FINESS Array S**	**27.07**	**337**	P		**P**		**21 51 26.0**	**+1.2**
FINES	**FINESS Array B**	**27.07**	**337**	P		**P**		**21 51 25.4**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=147,slow=12,SNR=10								
	comp=Z,1.7nm,0.5s								
FINES	**FINESS Array B**	**27.07**	**337**	P		**P**		**21 51 25.2**	**+0.3**
FINES	**FINESS Array B**	**27.07**	**337**	*e*P		**P**		**21 51 27.7**	**+2.9**
FINES				pmax	pmax				
	comp=Z,7.0nm,0.8s								
LESA	**Schwarzleotal**	**27.42**	**301**	*e*P		**P**		**21 51 32.3**	**+4.1**
	comp=Z,3.6nm,1.1s								
ABTA	**Abfaltersbach**	**27.46**	**300**	*i* P		**P**		**21 51 29.4**	**+0.8**
	comp=Z,0.5nm,0.5s								
ABTA				*e*P		**sP**		**21 51 32.1**	**-1.1**
	comp=Z,4.1nm,1.2s								
CLL	**Collm**	**27.92**	**310**			**P**		**21 51 34.1**	**+1.5**
CLL	**Collm**	**27.92**	**310**	*i* P		**P**		**21 51 34.4**	**+1.8**
CLL				pmax	pmax				
	comp=Z,12nm,0.8s								
CLL	**Collm**	**27.92**	**310**	P		**P**		**21 51 36.9**	**+4.3**
	comp=Z,18nm,0.9s								
CLL	**Collm**	**27.92**	**310**	*i* P		**P**		**21 51 34.4**	**+1.8**
	comp=Z,12nm,0.8s								
WTTA	**Wattenberg**	**28.10**	**301**	*i* P		**P**		**21 51 35.3**	**+0.8**
	comp=Z,3.5nm,0.7s								
WATA	**Walderalm**	**28.15**	**301**	*i* P		**P**		**21 51 35.1**	**+0.3**
	comp=Z,6.0nm,0.9s								
SQTA	**Sankt Quirin**	**28.39**	**301**	*i* P		**P**		**21 51 37.3**	**+0.3**
	comp=Z,2.9nm,0.6s								
MOTA	**Moosalm**	**28.47**	**301**	*e*P		**P**		**21 51 38.0**	**+0.3**
	comp=Z,3.6nm,0.8s								
FETA	**Feichten**	**28.70**	**300**	*e*P		**P**		**21 51 40.2**	**+0.4**
	comp=Z,3.4nm,0.6s,SNR=4.4								
RETA	**Reutte**	**28.72**	**301**	*e*P		**P**		**21 51 40.3**	**+0.5**
	comp=Z,4.9nm,1.3s								
FUORN	**Ofenpass-Fuorn**	**28.99**	**299**	P		**P**		**21 51 43.7**	**+1.2**
FUORN				IAmb	IAmb			21 51 54.6	
	comp=Z,4.2nm,0.8s								
DAVA	**Damuels**	**29.30**	**301**	*e*P		**P**		**21 51 45.3**	**+0.2**
	comp=Z,3.4nm,0.5s								
ZALV	**Zalesovo Beam**	**29.59**	**46**	P		**P**		**21 51 49.4**	**+2.0**
	comp=Z,1.4nm,0.7s,baz=267,slow=10,SNR=7.9								
	comp=Z,1.4nm,0.7s								
ZALV	**Zalesovo Beam**	**29.59**	**46**	P		**P**		**21 51 47.1**	**-0.2**
TUE	**Stuetta**	**29.62**	**299**	P		**P**		**21 51 49.1**	**+1.1**
TUE				IAmb	IAmb			21 52 05.2	
	comp=Z,3.9nm,0.9s								
VSL	**Villasalto**	**30.06**	**285**	P		**P**		**21 51 54.2**	**+2.5**
WMQ	**Urumqi**	**30.21**	**66**	*e*P		**P**		**21 51 54.8**	**+1.7**
DGZ	**Jazzator, Alta**	**30.26**	**55**	*i* P		**P**		**21 51 55.7**	**+2.1**
DGZ				pmax	pmax				
	comp=Z,3.0nm,1.1s								
FURI	**Furi**	**30.32**	**199**	LR		LR		22 04 12.3	
	comp=Z,92nm,19.2s,baz=10,slow=37								
HFS	**Hagfors**	**30.92**	**327**	P		**P**		**21 51 59.2**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=139,slow=7.9,SNR=6.6								
	comp=Z,4.0nm,0.8s								
SENIN	**Lac Senin/Sane**	**31.03**	**299**	P		**P**		**21 52 01.3**	**+0.8**
SENIN				IAmb	IAmb			21 52 37.3	
	comp=Z,9.9nm,1.4s								
BNI	**Bardonecchia**	**31.48**	**296**	P		**P**		**21 52 05.7**	**+1.3**
BNI	**Bardonecchia**	**31.48**	**296**	P		**P**		**21 52 05.7**	**+1.3**
BNI				pmax	pmax				
	comp=Z,13nm,1.2s								
NC405	**NORSAR Array S**	**32.25**	**327**	P		**P**		**21 52 11.3**	**+0.5**
NB2	**NORSAR Subarra**	**32.43**	**327**	P		**P**		**21 52 12.1**	**-0.3**
	comp=Z,13nm,1.2s,baz=118,slow=8.6								
NOA	**NORSAR Array B**	**32.43**	**327**			**P**		**21 52 12.3**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=118,slow=8.2,SNR=5.5								
	comp=Z,1.4nm,0.8s								
NOA	**NORSAR Array B**	**32.43**	**327**	*e*P		**P**		**21 52 12.3**	**-0.1**
NOA				pmax	pmax				
	comp=Z,2.0nm,0.7s								
ARCES	**ARCESS Array B**	**33.74**	**346**	P		**P**		**21 52 23.2**	**-0.5**
	comp=Z,2.1nm,1.0s,baz=134,slow=8.7,SNR=4.6								
	comp=Z,2.1nm,1.0s								
CEST	**Esterri de Car**	**35.63**	**292**	P		**P**		**21 52 42.1**	**+1.6**
CEST				IAmb	IAmb			21 53 13.4	
	comp=Z,9.2nm,1.2s								
NRIK	**Noril'sk**	**37.73**	**22**	*i* P		**P**		**21 53 00.0**	**+2.1**
NRIK				pmax	pmax				
	comp=Z,2.0nm,1.3s								
EKA	**Eskdalemuir Ar**	**38.14**	**314**	P		**P**		**21 53 01.9**	**+0.3**
	comp=Z,4.9nm,0.8s,baz=93,slow=10,SNR=5.8								
	comp=Z,4.9nm,0.8s								
EKA	**Eskdalemuir Ar**	**38.14**	**314**	P		**P**		**21 53 02.2**	**+0.6**
EKA				pmax	pmax				
	comp=Z,12nm,1.3s								
TAM	**Tamanrasset**	**39.41**	**260**	P		**P**		**21 53 13.8**	**+1.1**
TAM	**Tamanrasset**	**39.41**	**260**	P		**P**		**21 53 13.8**	**+1.1**
TAM				pmax	pmax				
	comp=Z,25nm,0.2s								
GTA2	**Gaotai**	**39.82**	**71**	*e*P		**P**		**21 53 20.1**	**+4.1**
GTA2				pmax	pmax				
	comp=Z,5.0nm,1.5s								
ESDC	**Sonseca Array**	**40.09**	**289**	P		**P**		**21 53 17.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=71,slow=8.5,SNR=5.9								
	comp=Z,0.6nm,0.7s								
MBAR	**Mbarara**	**41.73**	**207**	LR		LR		22 12 01.0	
	comp=Z,116nm,20.1s,baz=338,slow=38								
SPITS	**Spitsbergen Ar**	**42.28**	**351**	P		**P**		**21 53 36.3**	**+0.7**
	comp=Z,11nm,1.0s,baz=130,slow=10,SNR=8.6								
	comp=Z,11nm,1.0s								
SONM	**Songino Array**	**42.81**	**58**	P		**P**		**21 53 41.2**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=254,slow=5.2,SNR=2.9								
	comp=Z,0.4nm,0.8s								
ULN	**Ulaanbaatar**	**43.24**	**57**	P		**P**		**21 53 42.9**	**-1.1**
ULN				IAmb	IAmb			21 53 58.5	
	comp=Z,6.9nm,1.2s								
LZDM	**Lanzhou Array**	**43.86**	**75**	P		**P**		**21 53 50.2**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=316,slow=8.1,SNR=1.4								
	comp=Z,0.3nm,0.3s								
LZH	**Lanzhou**	**43.93**	**75**	*e*P		**P**		**21 53 53.1**	**+3.4**
LZH				pP		sP		21 53 59.5	+5.3
LZH				pmax	pmax				
	comp=Z,6.0nm,1.2s								
CMAR	**Chiang Mai Arr**	**48.22**	**99**	P		**P**		**21 54 23.1**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=299,slow=8.4,SNR=11								
	comp=Z,1.1nm,0.6s								
CMAR	**Chiang Mai Arr**	**48.22**	**99**	P		**P**		**21 54 22.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**48.22**	**99**	*e*P		**P**		**21 54 24.2**	**+0.7**
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.6s								
TIXI	**Tiksi**	**51.45**	**24**	P		**P**		**21 54 46.7**	**-0.6**
	comp=Z,3.2nm,0.3s,baz=103,slow=4.2,SNR=3.2								
	comp=Z,3.2nm,0.3s								
GRTLG	**Ghanzi**	**64.34**	**208**	P		**P**		**21 56 18.7**	**+0.2**
GRTLG				IAmb	IAmb			21 56 25.8	
	comp=Z,2.5nm,0.9s								
LBTB	**Lobatse**	**66.26**	**202**	P		**P**		**21 56 30.7**	**-0.2**
LBTB	**Lobatse**	**66.26**	**202**	P		**P**		**21 56 30.7**	**-0.2**
LBTB				pmax	pmax				
	comp=Z,11nm,1.2s								
BOSA	**Boshof**	**69.75**	**201**	P		**P**		**21 56 55.1**	**+2.3**
BOSA	**Boshof**	**69.75**	**201**	P		**P**		**21 56 55.1**	**+2.3**
BOSA				pmax	pmax				
	comp=Z,10.0nm,1.4s		

	comp=E,4µm,0.6s							
YEDI	**Yedisu-Bingol**	**0.40**	**88**	Pg	**Pg**	**21 53 46.4**	**+0.4**
YEDI				Sg	**Sb**	**21 53 53.0**	**-1.2**
TNCL	**Tunceli-Merkez**	**0.48**	**231**	P	**Pb**	**21 53 48.0**	**-1.1**
TNCL				IAML		21 53 55.0	
	comp=N,5µm,0.5s						
TNCL				S	**Sb**	**21 53 55.6**	**-0.8**
TNCL				IAML		21 54 00.0	
	comp=E,5µm,0.5s						
BNGB	**Bingl**	**0.67**	**130**	Pg	**Pg**	**21 53 50.7**	**-0.3**
BNGB				Sg	**Sb**	**21 54 01.6**	**-0.1**
KOPT	**Kop Dagi**	**0.70**	**31**	P	**Pb**	**21 53 52.2**	**-0.6**
KOPT				S	**Sn**	**21 54 04.9**	**-1.0**
KOPT				IAML		21 54 07.0	
	comp=N,1µm,0.7s						
KOPT				IAML		21 54 12.0	
	comp=E,1µm,0.6s						
KOVA	**Elazig, Kovanc**	**0.74**	**193**	P	**Pb**	**21 53 52.6**	**-0.7**
KOVA				S	**Sb**	**21 54 03.8**	**+0.2**
KOVA				IAML		21 54 04.0	
	comp=N,1µm,0.3s						
KOVA				IAML		21 54 04.0	
	comp=E,2µm,0.6s						
MAYK		**0.74**	**159**	P	**Pb**	**21 53 52.8**	**-0.6**
MAYK				S	**Sb**	**21 54 03.9**	**+0.2**
MAYK				IAML		21 54 07.0	
	comp=N,2µm,0.3s						
KARO	**Karliova-Bingo**	**0.80**	**98**	Pg	**Pb**	**21 53 54.0**	**-0.6**
KARO				Sg	**Sb**	**21 54 06.1**	**+0.4**
MCKZ	**Bingol**	**0.87**	**250**	P	**Pb**	**21 53 55.2**	**-0.4**
MCKZ				S	**Sb**	**21 54 07.9**	**+0.3**
MCKZ				IAML		21 54 10.0	
	comp=N,1µm,0.4s						
MCKZ				IAML		21 54 10.0	
	comp=E,1µm,0.4s						
SLHN	**Bingol, Solhan**	**0.91**	**121**	P	**Pb**	**21 53 55.9**	**-0.4**
SLHN				S	**Sn**	**21 54 10.9**	**+0.1**
SLHN				IAML		21 54 18.0	
	comp=N,1µm,0.5s						
SLHN				IAML		21 54 18.0	
	comp=E,2µm,0.7s						
KELT	**Kelkit**	**0.94**	**321**	P	**Pg**	**21 53 56.1**	**0.0**
KELT				S	**Sn**	**21 54 12.5**	**+0.9**
KELT				IAML		21 54 13.0	
	comp=N,516nm,0.3s						
KELT				IAML		21 54 16.0	
	comp=E,561nm,0.6s						
ELZ	**Elazig**	**0.97**	**221**	P	**Pb**	**21 53 56.9**	**-0.5**
ELZ				S	**Sb**	**21 54 11.1**	**+0.7**
ELZ				IAML		21 54 13.0	
	comp=N,1µm,0.4s						
ELZ				IAML		21 54 14.0	
	comp=E,3µm,0.6s						
BAYT	**Aydıntepe-Bayb**	**0.97**	**5**	Pg	**Pg**	**21 53 57.0**	**+0.2**
BAYT				Sg	**Sn**	**21 54 12.2**	**-0.4**
MDNT	**Maden**	**1.06**	**195**	P	**Pg**	**21 53 58.2**	**-0.4**
MDNT				S	**Sn**	**21 54 14.9**	**+0.2**
MDNT				IAML		21 54 17.0	
	comp=E,239nm,0.6s						
MDNT				IAML		21 54 24.0	
	comp=N,296nm,0.9s						
EDAM	**Erzurum-Paland**	**1.07**	**63**	Pg	**Pb**	**21 53 58.9**	**-0.2**
GUMT	**Gumushane**	**1.12**	**338**	Pn	**Pn**	**21 54 00.2**	**-0.1**
ESIJ	**Sivrice-Elazig**	**1.12**	**210**	Pn	**Pb**	**21 53 59.9**	**0.0**
ILIC	**ilic-Erzincan**	**1.13**	**272**	Pn	**Pn**	**21 54 00.1**	**-0.4**
VRTB	**Varto-Mus**	**1.14**	**103**	Pn	**Pb**	**21 54 00.3**	**0.0**
SVRC	**Sivrice-ELAZID**	**1.19**	**208**	Pn	**Pb**	**21 54 00.9**	**-0.1**
ELZG	**Elazig**	**1.23**	**222**	P	**Pg**	**21 54 01.3**	**-0.4**
ELZG				S	**Sn**	**21 54 20.0**	**+1.1**
ELZG				IAML		21 54 24.0	
	comp=N,996nm,0.7s						
ELZG				IAML		21 54 24.0	
	comp=E,2µm,0.5s						
MBOZ		**1.23**	**301**	P	**Pg**	**21 54 01.2**	**-0.6**
MBOZ				S	**Sn**	**21 54 21.0**	**+2.1**
MBOZ				IAML		21 54 29.0	
	comp=E,339nm,0.7s						
ESGZ	**Sivrice-Elazig**	**1.24**	**217**	Pn	**Pn**	**21 54 02.4**	**+0.3**
CNGT	**ngs**	**1.33**	**205**	P	**Pg**	**21 54 03.5**	**-0.2**
CNGT				IAML		21 54 29.0	
	comp=E,349nm,0.9s						
CNGT				IAML		21 54 30.0	
	comp=N,252nm,1.6s						
MDYL	**Doganyol-Malat**	**1.35**	**215**	Pn	**Pg**	**21 54 04.3**	**+0.3**
ARPR	**Arapgir-MALATY**	**1.35**	**256**	Pn	**Pg**	**21 54 04.3**	**+0.2**
DYBB	**Diyarbakir**	**1.47**	**176**	Pn	**Pg**	**21 54 06.3**	**0.0**
CHOM	**Cayeli-Rize**	**1.76**	**18**	Pn	**Pb**	**21 54 10.5**	**-0.3**
GURO	**Guroymak-BITLI**	**1.79**	**118**	Pn	**Pb**	**21 54 10.6**	**-0.8**
SENK	**Senkaya-Erzuru**	**2.12**	**57**	Pn	**Pn**	**21 54 15.5**	**+1.3**

*SOME **15** 21:57:06.3, 38.°92N × 76.°97E, h15km*
*NNC **15** 21:57:08.6±1.4, 39.°04N × 77.°05E, h0km, mb3.2, mpv3.0,*
Error ellipse: s-maj=11.7km s-min=9.3km az=86.0

KRNET 15 21:57:37.5±0.1, 39.°99N × 77.°23E, h30km, mb2.7, 8C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.62**	**312**	⇑*i*P	Pb	21 58 07.9	+1.0
JNKS				⇑*i*S	Sb	21 58 30.1	+3.1
NRN	**Naryn**	**1.72**	**328**	⇓*i*P	Pb	21 58 09.8	+1.1
NRN				⇓*i*S	Sb	21 58 33.2	+3.2
TARG	**Taragay, Kyrgy**	**1.79**	**14**	⇓*i*P	Pb	21 58 10.8	+0.8
TARG				⇓*i*S	Sb	21 58 35.2	+3.0
KDJ	**Kajisay**	**2.14**	**359**	⇓*e*P	Pb	21 58 17.0	+1.3
KDJ				⇓*e*S	Sb	21 58 45.6	+3.7
BOOM	**Boomskoye usch**	**2.68**	**339**	⇑*i*P	Pb	21 58 23.9	-1.0
BOOM				⇑*i*S	Sb	21 58 57.9	+0.4
SALK	**Salom-Alik**	**2.75**	**290**	⇑*i*P	Pb	21 58 24.9	-1.2
SALK				⇑*i*S	Sb	21 58 59.5	+0.1
ANVS	**Anan'yevo**	**2.81**	**7**	⇑*e*P	Pb	21 58 25.9	-1.3
ANVS				⇑*e*S	Sb	21 59 01.5	+0.3
ARLS	**Aral**	**2.89**	**311**	⇓*e*P	Pb	21 58 27.3	-1.1
ARLS				⇓*e*S	Sb	21 59 02.9	-0.5
UCH	**Uchtor**	**3.04**	**318**	⇓*e*P	Pb	21 58 29.1	-2.0
UCH				⇓*i*S	Sb	21 59 06.8	-1.1
TNSS	**Tian-Shan** 0.1nm,0.0s	**3.05**	**356**	Pg	Pn	21 58 21.3	-2.8
TNSS				Lg	Lg	21 59 16.0	
TNSS	**Tian-Shan** 0.1nm,0.2s 4.1nm,1.0s	**3.05**	**356**	*e*P	Pn	21 58 21.8	-2.3
TNSS				*e*S	Sb	21 59 16.1	+7.7
MDOK	**Medeo** 1.2nm,0.4s 17nm,0.6s	**3.17**	**358**	Pg	Pn	21 58 23.8	-1.7
MDOK				Lg	Lg	21 59 19.9	
SATY	**Saty** 0.5nm,0.1s 5.1nm,0.1s	**3.19**	**16**	Pg	Pn	21 58 23.6	-2.1
SATY				Lg	Lg	21 59 19.5	
KST	**Kastek**	**3.20**	**343**	*e*P	Pn	21 58 24.8	-1.0
KST				*e*S	Sb	21 59 21.0	+8.8
MTBS	**Maitube** 0.3nm,0.1s	**3.20**	**349**	Pg	Pn	21 58 22.8	-3.0
MTBS				Lg	Lg	21 59 17.8	
MTBS	**Maitube** 1.4nm,0.1s 0.3nm,0.1s	**3.20**	**349**	*e*P	Pn	21 58 22.8	-3.0
MTBS				*e*S	Sb	21 59 17.8	+5.6
KOTS	**Kotyrbulak** 1.4nm,0.1s 1.0nm,0.6s	**3.24**	**359**	Pg	Pn	21 58 25.1	-1.4
KOTS				Lg	Lg	21 59 22.2	
KOTS	**Kotyrbulak** 21nm,0.7s 0.7nm,0.2s	**3.24**	**359**	*e*P	Pn	21 58 25.3	-1.2
KOTS				*e*S	Sb	21 59 22.2	+8.6
DGS	**Degeres** 0.5nm,0.2s	**3.43**	**342**	Pg	Pn	21 58 28.1	-0.9
DGS				Lg	Lg	21 59 27.7	
DGS	**Degeres** 3.7nm,0.5s 0.5nm,0.4s	**3.43**	**342**	*e*P	Pn	21 58 28.5	-0.5
DGS				*e*S	Sb	21 59 27.7	+8.8
UZB	**Uzynbulak** 4.0nm,0.6s 2.3nm,0.1s	**3.43**	**23**	Pg	Pn	21 58 28.1	-0.9
UZB				Lg	Lg	21 59 27.2	
UZB	**Uzynbulak** 3.7nm,0.7s 2.3nm,0.1s	**3.43**	**23**	*e*P	Pn	21 58 28.1	-0.9
UZB				*e*S	Sb	21 59 27.2	+8.2
SHLS	**Shalkode** 3.7nm,0.7s 0.8nm,0.2s	**3.58**	**27**	Pg	Pn	21 58 34.1	+3.0
SHLS				Lg	Lg	21 59 36.7	
SHLS	**Shalkode** 5.8nm,0.6s 0.8nm,0.2s	**3.58**	**27**	*e*P	Pn	21 58 33.8	+2.7
SHLS				*e*S	Sb	21 59 36.7	+13
KTBS	**Karatobe** 5.8nm,0.6s 0.6nm,0.7s	**3.74**	**354**	Pg	Pn	21 58 33.8	+0.5
KTBS				Lg	Lg	21 59 36.5	
KTBS	**Karatobe** 0.3nm,0.2s 0.6nm,0.7s	**3.74**	**354**	*e*P	Pn	21 58 33.8	+0.5
KTBS				*e*S	Sb	21 59 36.7	+8.8
	0.3nm,0.2s						

*NAO **15** 22:05:58.0, 37.°91N × 24.°48E, h10km, MB3.3*
*IDC **15** 22:06:05.7±1.0, 38.°39N × 21.°76E, h0km, mb3.7/13,*
mbtmp3.6/17, ML3.7/3, Error ellipse: s-maj=17.8km
s-min=17.2km az=109.0
*THE **15** 22:06:06.7, 38.°3N±0.°4 × 21.°8E±0.°6, h9km±1km, M3.5/12,*
ML3.5/12
*ATH **15** 22:06:06.7, 38.°36N × 21.°80E, h8km, ML3.4/30, Manual*
Solution by A.Moschou First location: 2020/02/15
22:06:56, This location: 2020/02/15 22:40:48 ML
Amplitudes are expressed in micrometers, All distances
are expressed in degrees Latitude uncertainty: 0 km;
Longitude uncertainty: 0 km

ISC 15 22:06:07.0±0.7, 38.°36N±0.°01 × 21.°80E±0.°01, h8km±3km, n123, σ0°78/185, mb3.6/11, 7C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOA	**Rio**	**0.06**	**188**	P	**Pg**	**22 06 08.5**	**-0.3**
RIOA				S	**Sg**	**22 06 10.1**	**-0.1**
MALA	**Malamata, Dori**	**0.07**	**56**	P	**Pg**	**22 06 08.5**	**-0.4**
MALA				S	**Sg**	**22 06 10.4**	**0.0**
UPR	**University Cam**	**0.07**	**190**	P	**Pg**	**22 06 08.7**	**-0.3**
UPR				S	**Sg**	**22 06 10.5**	**+0.1**
UPR	**University Cam**	**0.07**	**190**	P	**Pg**	**22 06 08.7**	**-0.3**
UPR				S	**Sg**	**22 06 10.5**	**+0.1**
AGRP	**Agrapidokambos**	**0.07**	**303**	P	**Pg**	**22 06 08.5**	**-0.5**
AGRP				S	**Sg**	**22 06 10.0**	**-0.6**
PATC	**Patra C**	**0.09**	**201**	P	**Pg**	**22 06 09.0**	**-0.2**
PATC				S	**Sg**	**22 06 11.1**	**+0.2**
EFP	**Efpalio**	**0.11**	**49**	P	**Pg**	**22 06 09.4**	**-0.1**
EFP				S	**Sg**	**22 06 11.6**	**+0.3**
EFP	**Efpalio**	**0.11**	**49**	P	**Pg**	**22 06 09.2**	**-0.4**
EFP				S	**Sg**	**22 06 11.2**	**-0.1**
ZIRI	**Ziria, Aigiali**	**0.12**	**114**	P	**Pg**	**22 06 09.7**	**-0.1**
ZIRI				S	**Sg**	**22 06 11.6**	**-0.2**
MG00	**Magoula, Dorid**	**0.13**	**62**	P	**Pg**	**22 06 09.7**	**-0.1**
MG00				S	**Sg**	**22 06 11.7**	**-0.1**
PATG	**Patra B**	**0.13**	**207**	P	**Pg**	**22 06 09.8**	**0.0**
PATG				S	**Sg**	**22 06 11.5**	**-0.3**
SERG	**Sergoula**	**0.21**	**74**	P	**Pg**	**22 06 11.1**	**-0.1**
SERG				S	**Sg**	**22 06 13.6**	**-0.6**
SERG	**Sergoula**	**0.21**	**74**	P	**Pg**	**22 06 11.1**	**-0.1**
SERG				S	**Sg**	**22 06 14.4**	**+0.2**
TRIZ	**Trizonia**	**0.21**	**87**	P	**Pg**	**22 06 11.2**	**-0.1**
AGEO	**AgiosGiorgios,**	**0.23**	**114**	P	**Pg**	**22 06 11.4**	**-0.1**
AGEO				S	**Sg**	**22 06 14.3**	**-0.3**
ANX	**Ano Chora**	**0.26**	**21**	P	**Pg**	**22 06 12.1**	**0.0**
ANX				S	**Sg**	**22 06 16.5**	**+0.9**
ANX	**Ano Chora**	**0.26**	**21**	P	**Pg**	**22 06 11.9**	**-0.2**
ANX				S	**Sg**	**22 06 15.9**	**+0.3**
KALE	**Kalithea**	**0.27**	**82**	P	**Pg**	**22 06 12.1**	**-0.3**
KALE				S	**Sg**	**22 06 15.4**	**-0.6**
KALE	**Kalithea**	**0.27**	**82**	P	**Pg**	**22 06 12.1**	**-0.3**
KALE				S	**Sg**	**22 06 16.0**	**0.0**
TEME	**Temeni, Aigial**	**0.28**	**116**	P	**Pg**	**22 06 12.4**	**-0.1**
TEME				S	**Sg**	**22 06 16.0**	**-0.2**
MSL1	**Messolongi**	**0.30**	**273**	P	**Pg**	**22 06 12.8**	**0.0**
PVO	**Paravola**	**0.34**	**320**	P	**Pg**	**22 06 13.5**	**-0.2**
PVO				S	**Sb**	**22 06 19.5**	**-1.3**
PVO	**Paravola**	**0.34**	**320**	P	**Pg**	**22 06 13.5**	**-0.2**
PVO				S	**Sg**	**22 06 18.2**	**+0.1**
AXS	**Araxos**	**0.37**	**245**	P	**Pg**	**22 06 14.0**	**-0.2**
AXS				S	**Sg**	**22 06 19.8**	**+0.7**
AXS	**Araxos**	**0.37**	**245**	P	**Pg**	**22 06 14.0**	**-0.2**
AXS				S	**Sg**	**22 06 19.4**	**+0.3**
RLS	**Riolos of Patr**	**0.40**	**222**	P	**Pg**	**22 06 14.6**	**-0.1**
RLS				S	**Sg**	**22 06 21.0**	**+1.1**
RLS	**Riolos of Patr**	**0.40**	**222**	P	**Pg**	**22 06 14.4**	**-0.3**
RLS				S	**Sg**	**22 06 20.1**	**+0.1**
KLV1	**Kalavrita**	**0.40**	**143**	P	**Pg**	**22 06 14.3**	**-0.5**
KLV1				S	**Sg**	**22 06 19.6**	**-0.5**
DRO	**Drossia**	**0.41**	**190**	P	**Pg**	**22 06 14.5**	**-0.4**
DRO				S	**Sg**	**22 06 20.8**	**+0.5**
DRO	**Drossia**	**0.41**	**190**	P	**Pg**	**22 06 14.4**	**-0.6**
DRO				S	**Sg**	**22 06 20.3**	**-0.1**
KLV	**Kalavryta, Ach**	**0.41**	**138**	P	**Pg**	**22 06 14.5**	**-0.6**
KLV				S	**Sg**	**22 06 19.9**	**-0.7**
KLV	**Kalavryta, Ach**	**0.41**	**138**	P	**Pg**	**22 06 14.3**	**-0.7**
KLV				S	**Sg**	**22 06 20.5**	**-0.1**
DLFA	**Delphi**	**0.56**	**77**	P	**Pg**	**22 06 16.9**	**-0.9**
EVR	**Evrytania**	**0.56**	**1**	P	**Pg**	**22 06 17.5**	**-0.4**
EVR				S	**Sb**	**22 06 26.9**	**-0.4**
EVR	**Evrytania**	**0.56**	**1**	P	**Pg**	**22 06 17.4**	**-0.4**
EVR				S	**Sb**	**22 06 26.1**	**-1.1**
AST1	**Astakos**	**0.59**	**289**	P	**Pg**	**22 06 18.1**	**-0.2**
AST1				S	**Sb**	**22 06 27.6**	**-0.4**
LCHA	**Lechaina**	**0.59**	**226**	P	**Pg**	**22 06 18.3**	**-0.2**
GUR	**Goura**	**0.60**	**134**	P	**Pg**	**22 06 17.5**	**-1.1**
GUR				S	**Sg**	**22 06 26.1**	**-0.3**
GUR	**Goura**	**0.60**	**134**	P	**Pg**	**22 06 17.5**	**-1.1**
GUR				S	**Sg**	**22 06 26.3**	**-0.1**
CLEM	**Kyllini,Ilia,G**	**0.70**	**229**	P	**Pg**	**22 06 20.8**	**+0.3**
MAKR	**Makrakomi, Fth**	**0.71**	**21**	P	**Pg**	**22 06 20.3**	**-0.3**
MAKR				S	**Sb**	**22 06 31.1**	**-0.3**
MAKR	**Makrakomi, Fth**	**0.71**	**21**	P	**Pg**	**22 06 20.3**	**-0.3**
MAKR				S	**Sg**	**22 06 29.9**	**+0.1**
AMPL	**Ampelaki**	**0.73**	**321**	P	**Pg**	**22 06 20.3**	**-0.7**
AMPL				S	**Sb**	**22 06 31.5**	**-0.5**
AXAR	**Agios Charalam**	**0.79**	**58**	P	**Pg**	**22 06 21.1**	**-1.0**
AXAR				S	**Sb**	**22 06 33.0**	**-0.7**
AMT	**Artemida-Makis**	**0.82**	**185**	P	**Pg**	**22 06 22.1**	**-0.8**
AMT				S	**Sb**	**22 06 34.3**	**-0.5**
RTZL	**Ratzakli, Kefa**	**0.86**	**251**	P	**Pg**	**22 06 23.2**	**-0.3**
RTZL				S	**Sb**	**22 06 35.5**	**-0.2**
ZARO	**Zacharo**	**0.88**	**188**	P	**Pg**	**22 06 23.6**	**-0.2**
ZARO				S	**Sg**	**22 06 35.5**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.94**	**293**	P	**Pg**	**22 06 24.1**	**-0.9**
EVGI	**Lefkada island**	**0.94**	**287**	P	**Pg**	**22 06 24.3**	**-0.7**
KYPS	**Kipseli, Zakin**	**0.94**	**236**	P	**Pg**	**22 06 24.8**	**-0.2**
KYPS				S	**Sb**	**22 06 38.1**	**0.0**
VLS	**Valsamata**	**0.97**	**260**	P	**Pg**	**22 06 24.5**	**-1.1**
VLS				S	**Sb**	**22 06 38.9**	**-0.1**
LTK	**Loutraki**	**0.98**	**110**	P	**Pg**	**22 06 25.2**	**-0.5**
LTK				S	**Sb**	**22 06 39.3**	**+0.1**
FSK	**Fiskardo**	**0.98**	**276**	P	**Pg**	**22 06 24.9**	**-0.9**
FSK				S	**Sb**	**22 06 38.9**	**-0.3**
LKR	**Lokris**	**0.98**	**72**	P	**Pg**	**22 06 25.0**	**-0.9**
LKR				S	**Sn**	**22 06 40.3**	**-0.8**
LKD2	**Lefkada island**	**1.00**	**296**	P	**Pg**	**22 06 25.3**	**-0.8**
LKD2				S	**Sb**	**22 06 39.8**	**+0.1**
LTHK	**Lithakia**	**1.00**	**230**	P	**Pg**	**22 06 25.1**	**-1.0**
LTHK				S	**Sn**	**22 06 40.5**	**-1.0**
ORTH	**Orthonies,Zaky**	**1.01**	**240**	P	**Pg**	**22 06 26.1**	**-0.2**
ORTH				S	**Sb**	**22 06 40.1**	**+0.1**
ART2	**Arta**	**1.01**	**322**	P	**Pg**	**22 06 26.4**	**0.0**
TSLK	**Tsoukalades, L**	**1.01**	**298**	P	**Pg**	**22 06 25.9**	**-0.5**
ATAL	**Atalanti**	**1.01**	**70**	P	**Pg**	**22 06 25.6**	**-0.9**
ATAL				S	**Sb**	**22 06 40.3**	**+0.1**
DRAG	**Dragano-Lefkad**	**1.02**	**289**	P	**Pg**	**22 06 25.6**	**-0.9**
KFL1	**Kefalonia,Entr**	**1.04**	**260**	P	**Pg**	**22 06 25.9**	**-1.1**
KFL1				S	**Sb**	**22 06 40.6**	**-0.4**
ARG2	**Argostoli**	**1.05**	**261**	P	**Pg**	**22 06 25.4**	**-1.7**
ARG2				S	**Sb**	**22 06 41.6**	**+0.4**
TETR	**Tetrakomo, Epi**	**1.07**	**338**	P	**Pg**	**22 06 27.1**	**-0.5**
AIDA	**Aidipsos**	**1.10**	**63**	P	**Pb**	**22 06 28.1**	**0.0**
DMLN	**Damoulianata-K**	**1.13**	**265**	P	**Pg**	**22 06 27.5**	**-1.1**
DMLN				S	**Sn**	**22 06 44.5**	**-0.3**
VIL2	**Platees**	**1.16**	**97**	P	**Pn**	**22 06 29.6**	**+0.1**
VIL2				S	**Sn**	**22 06 47.1**	**+1.5**
ITM	**Ithomi**	**1.18**	**175**	P	**Pb**	**22 06 28.4**	**-1.1**
ITM				S	**Sn**	**22 06 45.7**	**-0.2**
THL	**Klokotos Trika**	**1.22**	**8**	P	**Pb**	**22 06 29.7**	**-0.6**
THL				S	**Sn**	**22 06 46.8**	**-0.1**
PRMD	**Pramanda**	**1.29**	**335**	P	**Pg**	**22 06 31.7**	**-0.2**
MAGU	**Magoula**	**1.38**	**101**	P	**Pn**	**22 06 32.1**	**-0.3**
MAGU				S	**Sg**	**22 06 51.5**	**+0.2**
STFN	**Stefani**	**1.38**	**97**	P	**Pn**	**22 06 32.5**	**-0.1**
STFN				S	**Sg**	**22 06 51.3**	**-0.1**
MET2	**Kameni Chora,**	**1.42**	**121**	P	**Pn**	**22 06 32.6**	**-0.4**
MET5	**Makryloggos,Me**	**1.43**	**120**	P	**Pn**	**22 06 33.1**	**-0.1**
MET5				S	**Sg**	**22 06 53.2**	**+0.2**
NEO	**Neokhori**	**1.46**	**49**	P	**Pn**	**22 06 33.4**	**-0.2**
NEO				S	**Sn**	**22 06 52.8**	**-0.2**
MET1	**Methana Town,**	**1.47**	**121**	P	**Pb**	**22 06 34.3**	**-0.2**
MET1				S	**Sn**	**22 06 53.0**	**-0.1**
JAN	**Janina**	**1.50**	**331**	P	**Pn**	**22 06 34.4**	**+0.3**
ATH	**Athens Observa**	**1.56**	**104**	P	**Pn**	**22 06 35.2**	**+0.3**
ATH				S	**Sn**	**22 06 55.3**	**0.0**
KPRO	**Kipourio**	**1.63**	**348**	P	**Pn**	**22 06 36.5**	**+0.4**
IGT	**Igoumenitsa**	**1.64**	**316**	P	**Pn**	**22 06 36.5**	**+0.5**
VLY	**Voula,Athens**	**1.65**	**107**	P	**Pn**	**22 06 36.4**	**+0.2**
VLY				S	**Sn**	**22 06 57.8**	**+0.2**
PTL	**Penteli**	**1.65**	**100**	P	**Pn**	**22 06 36.0**	**-0.3**
PTL				S	**Sn**	**22 06 57.8**	**+0.1**
DION	**Dionisos Attik**	**1.70**	**99**	P	**Pn**	**22 06 37.0**	**0.0**
AOS2	**Alonissos-2**	**1.78**	**63**	P	**Pn**	**22 06 37.4**	**-0.6**
LIT	**Litokhoron**	**1.82**	**17**	P	**Pn**	**22 06 38.3**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.82**	**81**	P	**Pn**	**22 06 38.3**	**-0.3**
VLI	**Veliai**	**1.87**	**151**	P	**Pn**	**22 06 39.7**	**+0.5**
PENT	**Pentalofos**	**1.91**	**345**	P	**Pn**	**22 06 39.8**	**0.0**
KZN	**Kozani**	**1.95**	**359**	P	**Pn**	**22 06 40.1**	**-0.3**
KEK	**Kerkira**	**2.07**	**312**	P	**Pn**	**22 06 42.2**	**+0.3**
PLG	**Polygyros**	**2.38**	**32**	P	**Pn**	**22 06 46.0**	**-0.4**
HORT	**Hortiatis**	**2.45**	**24**	P	**Pn**	**22 06 47.1**	**-0.3**
OHR	**Ohrid**	**2.86**	**345**	*i* Pn	**Pb**	**22 06 57.1**	**-1.2**
VAY	**Valandovo**	**3.02**	**11**	*i* Pn	**Pn**	**22 06 54.5**	**-0.5**
IDI	**Anoyia** 6.7nm,0.3s,baz=250,slow=6.6,SNR=7.5	**3.94**	**140**	Pn	**Pn**	**22 07 10.0**	**+2.2**
IDI				Sn	**Sn**	**22 07 55.3**	**+1.2**
	3.1nm,0.3s,baz=179,slow=20,SNR=1.8						
PDG	**Podgorica**	**4.51**	**335**	⇑P	Pn	22 07 20.4	+4.9
BOVS	**Bovan**	**5.28**	**359**	⇑P	**Pn**	**22 07 29.8**	**+3.8**
ELND	**Elena**	**5.52**	**33**	⇑P	**Pn**	**22 07 29.7**	**+0.3**
GZR	**Gura Zlata**	**7.07**	**6**	⇑P	Pn	22 07 58.9	+8.1
ARR	**Arges**	**7.32**	**16**	⇓P	**Pn**	**22 07 54.4**	**+0.3**
VOIR		**7.48**	**18**	⇑P	**Pn**	**22 07 57.0**	**+0.7**
MLR	**Muntele Rosu** 0.4nm,0.3s,baz=341,slow=3.3,SNR=12 2.0nm,0.6s	**7.77**	**22**	Pn	**Pn**	**22 08 02.1**	**+1.7**
MLR	**Muntele Rosu**	**7.77**	**22**	⇑P	Pn	22 08 05.6	+5.3
NEHR	**Nehoiu**	**7.82**	**24**	⇑P	Pn	22 08 07.3	+6.3
PLOR	**Plostina**	**8.31**	**24**	⇓P	**Pn**	**22 08 08.6**	**+0.9**
VRI	**Vrincioaia**	**8.35**	**24**	⇓P	**Pn**	**22 08 12.1**	**+3.9**
BRTR	**Keskin Array B** 0.3nm,0.3s,baz=260,slow=12,SNR=18 0.8nm,0.4s	**9.31**	**78**	Pn	**Pn**	**22 08 23.8**	**+2.2**
AKASG	**Malin Array Be** 0.6nm,0.3s,baz=210,slow=8.0,SNR=4.3 0.1nm,0.3s	**13.42**	**21**	Pn	**Pn**	**22 09 18.1**	**+0.6**
BRG	**Berggiesshubel**	**13.70**	**339**	*e*P	**Pn**	**22 09 24.7**	**+3.4**
BRG	comp=Z,4.4nm,1.2s			Amp		22 09 26.5	
ESDC	**Sonseca Array** comp=Z,0.9nm,0.7s,baz=73,slow=11,SNR=9.2 comp=Z,0.9nm,0.7s	**20.05**	**282**	P	**P**	**22 10 41.1**	**+0.7**
HFS	**Hagfors** comp=Z,1.1nm,0.4s,baz=156,slow=11,SNR=9.5 comp=Z,1.1nm,0.4s	**22.40**	**349**	P	**P**	**22 11 04.2**	**-1.3**
FINES	**FINESS Array B** comp=Z,2.6nm,0.7s,baz=190,slow=7.4,SNR=9.3 comp=Z,2.6nm,0.7s	**23.27**	**5**	P	**P**	**22 11 12.5**	**-2.1**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=154,slow=10	**23.66**	**347**	P	**P**	**22 11 17.3**	**-1.2**
NOA	**NORSAR Array B** comp=Z,0.7nm,0.7s,baz=154,slow=9.4,SNR=4.6 comp=Z,0.7nm,0.7s	**23.66**	**347**	P	**P**	**22 11 17.7**	**-0.8**
EKA	**Eskdalemuir Ar** comp=Z,5.1nm,0.9s,baz=116,slow=11,SNR=4.6 comp=Z,5.1nm,0.9s	**23.88**	**323**	P	**P**	**22 11 19.9**	**-0.7**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.4s,baz=21,slow=4.4,SNR=5.4 comp=Z,0.3nm,0.4s	**30.81**	**221**	P	**P**	**22 12 23.0**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,1.8nm,0.9s,baz=195,slow=8.8,SNR=5.1 comp=Z,1.8nm,0.9s	**31.30**	**3**	P	**P**	**22 12 26.6**	**-0.5**
BVAR	**Borovoye Array** comp=Z,0.2nm,0.5s,baz=303,slow=8.0,SNR=2.2 comp=Z,0.2nm,0.5s	**36.23**	**50**	P	**P**	**22 13 09.3**	**-0.8**
KURBB	**Kurchatov Arra** comp=Z,0.7nm,0.6s,baz=278,slow=8.8,SNR=4.7 comp=Z,0.7nm,0.6s	**41.31**	**54**	P	**P**	**22 13 52.8**	**0.0**
MKAR	**Makanchi Array** comp=Z,1.6nm,0.5

RAGZ	**Rawiri**	**5.57**	**208**	P	Pn	22 49 15.0 +0.5
RIGZ	**Rimuhau**	**5.63**	**205**	P	Pn	22 49 15.4 +0.3
RIGZ				S	Sn	22 50 19.6 -0.4
WCZ	**Waipu Caves**	**5.78**	**245**	P	Pn	22 49 17.1 0.0
PRGZ	**Paritu Road**	**5.78**	**203**	P	Pn	22 49 18.7 +1.6
PRGZ				S	Sn	22 50 23.3 -0.3
SNGZ	**Shannon Statio**	**5.85**	**207**	P	Pn	22 49 18.8 +0.8
SNGZ				S	Sn	22 50 24.2 -1.0
RTZ	**Ruatahuna**	**5.85**	**211**	P	Pn	22 49 17.4 -0.7
RTZ				S	Sn	22 50 26.2 +0.8
KNZ	**Kokohu**	**5.94**	**204**	P	Pn	22 49 19.3 +0.1
RAHZ	**Arahi**	**6.07**	**208**	P	Pn	22 49 20.9 0.0
MTHZ	**Maungataniwha**	**6.11**	**210**	P	Pn	22 49 22.0 +0.6
ARHZ	**Aropaoanui**	**6.40**	**207**	P	Pn	22 49 25.5 +0.4

CATAC ***15*** *22:48:09.0±1.0, 14°N±5°×9°2W±°, h1km, M3.6/5, MLv3.6/5, Error ellipse: s-maj=14.4km s-min=5.1km az=46.0, confirmed*

GCG ***15*** *22:48:12.8±0.7, 14°.17N×91°.50W, h60km±12km, MD3.6, ML3.4, Presumed earthquake*

ISC 15 22:48:11.0±2.2, 13°.9N±0°.1×91°.7W±0°.1, h69km±18km**, n21, σ2s00/28, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.57**	**36**	*i* P	**Pn**	**22 48 25.3**	**+0.8**
STG5				*i* S	**Sn**	**22 48 34.5**	**+0.1**
RTAL	**Retalhuleu**	**0.58**	**360**	P	**Pn**	**22 48 24.4**	**-0.2**
RTAL				S	**Sn**	**22 48 31.9**	**-2.6**
STG2	**El Palmar, Qui**	**0.58**	**32**	*i* P	**Pn**	**22 48 26.0**	**+1.3**
STG2				*i* S	**Sn**	**22 48 36.0**	**+1.3**
STG8	**El Palmar, Qui**	**0.60**	**33**	*i* P	**Pn**	**22 48 26.3**	**+1.3**
STG8				*i* S	**Sn**	**22 48 36.7**	**+1.4**
STG8				IAML		22 48 39.2	
	comp=E,2μm,0.1s						
SOKI	**Kika Raxquin**	**0.92**	**18**	*i* P	**Pn**	**22 48 28.1**	**-0.8**
ESSG	**Sabana Grande**	**0.94**	**62**	*i* P	**Pn**	**22 48 27.0**	**-1.8**
SMCA	**Catarina**	**0.98**	**338**	*i* P	**Pn**	**22 48 29.4**	**+0.2**
SMCA				*i* S	**Sn**	**22 48 42.2**	**-0.6**
FG16	**Alotenango, Sa**	**1.19**	**74**	*i* P	**Pn**	**22 48 27.8**	**-4.2**
PCG5	**San Vicente Pa**	**1.30**	**78**	*i* P	**Pn**	**22 48 29.9**	**-3.6**
QUIS	**Sacapulas**	**1.46**	**23**	IAML		22 48 55.9	
	comp=E,400nm,0.4s						
APG	**El Apazote**	**1.59**	**48**	*i* P	**Pn**	**22 48 36.6**	**-0.8**
FAME	**Alcaldia de Sa**	**1.63**	**93**	P	**Pn**	**22 48 36.4**	**-1.3**
FAME				S	**Sn**	**22 48 54.9**	**-2.9**
NUBE	**Las Nubes**	**1.86**	**91**	P	**Pn**	**22 48 40.4**	**-0.5**
NUBE				S	**Sn**	**22 49 05.2**	**+1.8**
NUBE	**Las Nubes**	**1.86**	**91**	*i* P	**Pn**	**22 48 40.1**	**-0.7**
CEVE	**Cerro Verde**	**2.01**	**93**	S	**Sn**	**22 49 08.2**	**+0.9**
JAYA	**Jayaque - finc**	**2.20**	**97**	P	**Pn**	**22 48 46.5**	**+1.1**
JAYA				S	**Sn**	**22 49 10.9**	**-0.8**
IGN	**Direccin Gen**	**2.46**	**95**	S	**Sn**	**22 49 20.4**	**+2.4**
COEG	**Centro de Oper**	**2.75**	**96**	S	**Sn**	**22 49 27.4**	**+2.4**
SARH	**Santa Rosa de**	**2.96**	**73**	S	**Sn**	**22 49 33.0**	**+2.8**
CNRM	**Centro Naciona**	**3.45**	**97**	S	**Sn**	**22 49 45.1**	**+3.0**
CRIN	**San Cristobal**	**4.68**	**105**	P	**Pn**	**22 49 18.3**	**-0.9**

BJI ***15*** *23:00:22.6, 3°.61S×131°.74E, h16km, mB5.7/56, mb5.7/94, Ms5.2/88, Ms7 5.1/86*

IDC ***15*** *23:00:24.9±0.3, 3°.32S×131°.48E, h0km, mb5.7/33, mbtmp5.7/39, ML4.8/4, MS5.0/61, Error ellipse: s-maj=14.7km s-min=8.7km az=75.0*

MOS ***15*** *23:00:25.8±0.9, 3°.28S×131°.48E, h17km, mb6.1/82, MS5.1/24, Error ellipse: s-maj=6.9km s-min=4.1km az=118.8*

GFZ ***15*** *23:00:26.8, 3°.35S×131°.46E, h25km, MW5.6, Moment Tensor Solution. s72 Moment tensor: Mrr=2.53; Mθθ=2.04; Mφφ=0.49; Mrθ=1.17; Mrφ=-1.27; Mθφ=-0.02; Fault plane solution: NP1:φs131.00000°, δ36.00000°, λ-69.00000°. NP2:φs288.00000°, δ57.00000°, λ-103.00000°. Principal axes: T 2.9600, Plg11.0000°, Azm27.0000°; N -0.1100, Plg11.0000°, Azm295.0000°; P -2.8400, Plg74.0000°, Azm160.0000°;*

NEIC ***15*** *23:00:27.3, 3°.34S×131°.49E, h26km*

NEIC ***15*** *23:00:27.3, 3°.54S×131°.19E, h26km, Moment Tensor Solution. Duration: 2s9 Moment tensor: Scale 10^17Nm; Mrr=2.41; Mθθ=1.91; Mφφ=0.50; Mrθ=-0.52; Mrφ=-1.32; Mθφ=0.69; Fault plane solution: M0=2.71000×10^17 NP1: φs292.47000°, δ36.89000°, λ-103.15000°. NP2: φs128.75000°, δ54.23000°, λ-80.31000°. Principal axes: T 2.8262, Plg9.0000°, Azm212.0000°; N -0.2468, Plg8.0000°, Azm303.0000°; P -2.5794, Plg78.0000°, Azm74.0000°;*

NEIC ***15*** *23:00:27.3±2.0, 3°.35S±0°.04×131°.48E±0°.04, h10km±1km, mb6.0/185, Ms_20 5.3/166, Mww5.6/37 Error ellipse: s-maj=7.4km s-min=6.6km az=221.0*

ISC-PP ***15*** *23:00:27, 3°.35S×131°.48E, h26km, Mwppsm6.0, Moment Tensor Solution. s49 Moment tensor: Scale 10^18Nm; Mrr=0.15±.13; Mθθ=0.44±.20; Mφφ=0.59±.15; Mrθ=0.07±.22; Mθφ=0.16±.16; Mrφ=0.43±.12; Fault plane solution: M0=1.48000×10^18 NP1:φs335.90000°, δ85.20000°, λ196.00000°. NP2:φs244.60000°, δ74.10000°, λ-5.00000°.*

PTWC ***15*** *23:00:29, 3°.40S×131°.50E, h16km, Mwp5.8/14, PAPUA REGION, INDONESIA*

DJA ***15*** *23:00:30.3±0.1, 3°.5S±1°×13°2E±°, h41km±1km, M5.6/211, mB6.1/182, mb5.8/211, MLv6.0/35, Mw5.6/99, Mw(mB)5.8/182, MwMwp5.3/90, Mwp5.5/90*

GCMT ***15*** *23:00:31.2±0.1, 3°.45S±0°.01×131°.44E±0°.01, h22km, MW5.6/151, Moment Tensor Solution. s144, c243; s151, c296; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr=2.50±.04; Mθθ=2.03±.03; Mφφ=0.46±.03; Mrθ=-1.06±.05; Mrφ=-1.44±.02; Mθφ=1.15±.06; Best double couple: M0=3.12100×10^17 NP1:φs290.00000°, δ31.00000°, λ-107.00000°. NP2:φs130.00000°, δ60.00000°, λ-80.00000°. Principal axes: T 3.2800, Plg15.0000°, Azm213.0000°; N -0.3190, Plg9.0000°, Azm305.0000°; P -2.9610, Plg73.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 23:00:29.4±0.4, 3°.38S±0°.03×131°.45E±0°.03, h32km±2km**, n1509, σ1s37/1592, mb5.9/244, MS5.2/185, 39C-64D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**0.92**	**60**	P	**Pn**	**23 00 46.4**	**+0.2**
FAKI				Sn	**Sn**	**23 00 57.4**	**-0.9**
FAKI	**Fak Fak**	**0.92**	**60**	P	**Pb**	**23 00 46.7**	**-0.3**
FAKI	**Fak Fak**	**0.92**	**60**	S	**Sb**	**23 00 58.7**	**-0.2**
FAKI	**Fak Fak**	**0.92**	**60**	P	**Pn**	**23 00 46.5**	**+0.3**
FAKI	**Fak Fak**	**0.92**	**60**	P	**Pn**	**23 00 46.3**	**+0.2**
BNDI	**Bandanaira**	**1.91**	**233**	P	**Pn**	**23 01 01.6**	**+1.8**
BNDI	**Bandanaira**	**1.91**	**233**	S	**Sn**	**23 01 23.5**	**+0.7**
BNDI	**Bandanaira**	**1.91**	**233**	P	**Pn**	**23 01 01.6**	**+1.8**
BNDI				S	**Sb**	**23 01 25.4**	**-1.8**
KMPI	**Kaimana, Papua**	**2.27**	**97**	P	**Pn**	**23 01 05.5**	**+0.8**
KMPI				S	**Sn**	**23 01 26.1**	**-5.6**
SIJI	**Sorong**	**2.50**	**356**	Pn	**Pn**	**23 01 07.3**	**-0.6**
	142nm,0.3s,baz=194,slow=8.8,SNR=144						
SIJI				Sn	**Sn**	**23 01 35.2**	**-2.1**
	2μm,0.3s,baz=230,slow=22,SNR=10						
SIJI				LR	LR	23 02 37.3	
	comp=Z,76μm,19.3s,baz=210,slow=54						
	681nm,0.3s						
SIJI	**Sorong**	**2.50**	**356**	P	**Pn**	**23 01 07.0**	**-0.9**
SWI	**Sorong**	**2.50**	**356**	P	**Pn**	**23 01 07.4**	**-0.5**
MSAI	**Masohi**	**2.51**	**271**	P	**Pn**	**23 01 09.9**	**+1.8**
KRAI	**Karang Ratu**	**3.05**	**271**	P	**Pn**	**23 01 17.5**	**+2.1**
AAI	**Ambon**	**3.26**	**264**	P	**Pn**	**23 01 20.4**	**+2.1**
RKPI	**Ransiki, Papua**	**3.30**	**56**	P	**Pn**	**23 01 19.4**	**+0.5**
MWPI	**Manokwari, Pap**	**3.55**	**47**	P	**Pn**	**23 01 24.2**	**+1.8**
NLAI	**Namlea**	**4.34**	**272**	P	**Pn**	**23 01 36.4**	**+3.2**
SAUI	**Saumlaki**	**4.58**	**182**		**Pn**	**23 01 35.2**	**-1.2**
SAUI	**Saumlaki**	**4.58**	**182**	P	**Pn**	**23 01 37.9**	**+1.4**
SAUI	**Saumlaki**	**4.58**	**182**	S	**Sn**	**23 02 29.7**	**+1.1**
SAUI	**Saumlaki**	**4.58**	**182**	P	**Pn**	**23 01 36.2**	**-0.3**
SAUI	**Saumlaki**	**4.58**	**182**	P	**Pn**	**23 01 37.3**	**+0.8**
SRPI	**Serui, Papua**	**5.02**	**73**	P	**Pn**	**23 01 42.1**	**-0.4**
BAKI	**Biak**	**5.14**	**65**	P	**Pn**	**23 01 45.0**	**+0.8**
SANI	**Sanana**	**5.61**	**283**	P	**Pn**	**23 01 50.8**	**+0.1**
SANI	**Sanana**	**5.61**	**283**	P	**Pn**	**23 01 50.1**	**-0.6**
	11nm15μm12μm698nm,0.6s						

TNTI	**Ternate**	**5.80**	**315**		**Pn**	**23 01 53.7**	**+0.4**
TNTI	**Ternate**	**5.80**	**315**	P	**Pn**	**23 01 54.7**	**+1.4**
TNTI	**Ternate**	**5.80**	**315**	P	**Pn**	**23 01 54.2**	**+0.9**
TNTI	**Ternate**	**5.80**	**315**	P	**Pn**	**23 01 54.1**	**+0.8**
GAMI	**Galela, Maluku**	**6.34**	**325**	P	**Pn**	**23 02 03.0**	**+2.3**
	3.7nm9μm927nm,1.0s						
MNI	**Manado**	**8.16**	**306**	P	**Pn**	**23 02 27.1**	**+1.4**
	2.6nm8μm8μm521nm,0.5s						
GENI	**Genyem**	**8.74**	**85**	P	**Pn**	**23 02 34.2**	**+0.4**
GENI	**Genyem**	**8.74**	**85**	S	**Sn**	**23 04 12.9**	**+1.6**
GENI	**Genyem**	**8.74**	**85**	P	**Pn**	**23 02 35.2**	**+1.5**
GENI	**Genyem**	**8.74**	**85**	P	**Pn**	**23 02 35.3**	**+1.5**
	5.2nm19μm13μm1μm,1.9s						
LUWI	**Luwuk**	**8.97**	**285**		**Pn**	**23 02 36.7**	**-0.2**
LUWI	**Luwuk**	**8.97**	**285**	P	**Pn**	**23 02 36.9**	**0.0**
LUWI	**Luwuk**	**8.97**	**285**	S	**Sn**	**23 04 17.8**	**+0.9**
LUWI	**Luwuk**	**8.97**	**285**	P	**Pn**	**23 02 37.3**	**+0.4**
	13μm10μm806nm,1.1s						
DRS	**Darwin Rock St**	**9.01**	**183**	P	**Pn**	**23 02 35.6**	**-1.8**
SGSI	**Sangihe**	**9.18**	**320**	P	**Pn**	**23 02 39.5**	**-0.2**
	8μm17μm819nm,0.7s						
JAY	**Jayapura**	**9.29**	**85**	Pn	**Pn**	**23 02 40.9**	**-0.3**
	4.5nm,0.3s,baz=276,slow=5.7,SNR=15						
JAY				Sn	**Sn**	**23 04 23.8**	**-0.9**
	2.0nm,0.3s,baz=84,slow=16,SNR=4.1						
	148nm,0.9s						
JAY	**Jayapura**	**9.29**	**85**	P	**Pn**	**23 02 41.9**	**+0.7**
JAY	**Jayapura**	**9.29**	**85**	P	**Pn**	**23 02 40.9**	**-0.3**
	317nm,0.8s						
KDU	**Kakadu**	**9.30**	**174**	P	**Pn**	**23 02 39.4**	**-2.0**
	comp=Z,305nm,0.8s,comp=Z,0.0nm						
MTN	**Manton Dam**	**9.41**	**182**	P	**Pn**	**23 02 40.9**	**-2.0**
	comp=Z,2μm,0.9s,comp=Z,0.0nm						
MTN	**Manton Dam**	**9.41**	**182**		**Pn**	**23 02 41.0**	**-1.9**
MTN	**Manton Dam**	**9.41**	**182**	P	**Pn**	**23 02 41.5**	**-1.4**
SOEI	**Soe**	**9.54**	**228**	Pn	**Pn**	**23 02 46.9**	**+2.2**
SOEI	**Soe**	**9.54**	**228**	P	**Pn**	**23 02 46.2**	**+1.5**
SOEI	**Soe**	**9.54**	**228**	P	**Pn**	**23 02 47.4**	**+2.7**
SOEI	**Soe**	**9.54**	**228**	P	**Pn**	**23 02 47.2**	**+2.5**
KKSI	**Kolaka, Sulawe**	**9.80**	**265**	P	**Pn**	**23 02 50.3**	**+2.0**
	comp=Z,13μmcomp=Z,4μmcomp=Z,357nm,0.8s						
APSI	**Ampana**	**10.09**	**284**	P	**Pn**	**23 02 52.8**	**+0.6**
MMPI	**Merauke**	**10.22**	**120**	P	**Pn**	**23 02 52.9**	**-1.1**
	comp=Z,626nm,0.5s						
MRSI	**Isa**	**10.24**	**292**	P	**Pn**	**23 02 52.7**	**-1.6**
	comp=Z,7μmcomp=Z,5μmcomp=Z,519nm,1.1s						
BATI	**Baumata**	**10.28**	**228**	Pn	**Pn**	**23 02 56.5**	**+1.7**
	comp=Z,959nm,0.7s,baz=107,slow=2.9,SNR=134						
BATI				LR	LR	23 06 26.6	
	comp=Z,9μm,21.9s,baz=66,slow=35						
BATI	**Baumata**	**10.28**	**228**	P	**Pn**	**23 02 56.3**	**+1.5**
MMRI	**Maumere**	**10.54**	**240**		**Pn**	**23 03 00.4**	**+2.1**
MMRI	**Maumere**	**10.54**	**240**	P	**Pn**	**23 02 58.7**	**+0.3**
MMRI	**Maumere**	**10.54**	**240**	P	**Pn**	**23 03 01.5**	**+3.1**
MMRI	**Maumere**	**10.54**	**240**	P	**Pn**	**23 03 00.5**	**+2.1**
	comp=Z,14μmcomp=Z,1μm,1.3s						
EDFI	**Ende, Flores**	**11.07**	**241**	P	**Pn**	**23 03 07.3**	**+1.6**
	comp=Z,15μmcomp=Z,8μmcomp=Z,401nm,1.9s						
BSSI	**Bau Bau, Buton**	**11.26**	**255**	P	**Pn**	**23 03 10.6**	**+2.4**
	comp=Z,18μmcomp=Z,903nm,1.4s						
I39PW	**PALAU INFRASON**	**11.27**	**16**	I	I	00 02 09.2	
	baz=196,slow=316,SNR=2.0						
TOLI2	**Tolitoli**	**11.55**	**293**		**Pn**	**23 03 12.0**	**-0.2**
TOLI2	**Tolitoli**	**11.55**	**293**	P	**Pn**	**23 03 12.2**	**-0.1**
TOLI2	**Tolitoli**	**11.55**	**293**	S	**Sn**	**23 05 19.3**	**-1.0**
TTSI	**Tana Toraja**	**11.61**	**271**	P	**Pn**	**23 03 14.5**	**+1.4**
	comp=Z,12μmcomp=Z,6μmcomp=Z,230nm,1.0s						
SPSI	**Sidrap Palu**	**11.67**	**267**	P	**Pn**	**23 03 16.3**	**+2.5**
	comp=Z,13μmcomp=Z,7μmcomp=Z,324nm,1.6s						
KAPI	**Kappang**	**11.78**	**262**	Pn	**Pn**	**23 03 17.0**	**+1.7**
	comp=Z,4.9nm,0.3s,baz=85,slow=10,SNR=42						
KAPI				LR	LR	23 08 09.9	
	comp=Z,8μm,18.5s,baz=84,slow=39						
	comp=Z,68nm,0.9s						
KAPI	**Kappang**	**11.78**	**262**		**Pn**	**23 03 17.0**	**+1.7**
KAPI	**Kappang**	**11.78**	**262**	P	**Pn**	**23 03 15.8**	**+0.5**
KAPI	**Kappang**	**11.78**	**262**	*i* P	**Pn**	**23 03 15.9**	**+0.6**
KAPI	**Kappang**	**11.78**	**262**	P	**Pn**	**23 03 18.8**	**+3.5**
KAPI	**Kappang**	**11.78**	**262**	P	**Pn**	**23 03 17.9**	**+2.6**
KAPI	**Kappang**	**11.78**	**262**	P	**Pn**	**23 03 16.8**	**+1.5**
	comp=Z,8μmcomp=Z,5μmcomp=Z,188nm,0.7s						
PCI	**Palu**	**11.86**	**282**	P	**Pn**	**23 03 19.8**	**+3.4**
	comp=Z,6μmcomp=Z,662nm,1.1s						
DAV	**Davao City (W)**	**11.92**	**331**	Pn	**Pn**	**23 03 17.1**	**-0.1**
	comp=Z,24nm,0.3s,baz=69,slow=15,SNR=5.3						
DAV				LR	LR	23 08 41.4	
	comp=Z,22μm,21.4s,baz=144,slow=42						
	comp=Z,70nm,0.3s						
DAV	**Davao City (W)**	**11.92**	**331**	Pn	**Pn**	**23 03 18.2**	**+0.9**
DAV	**Davao City (W)**	**11.92**	**331**	P	**Pn**	**23 03 17.4**	**+0.2**
DAV	**Davao City (W)**	**11.92**	**331**	P	**Pn**	**23 03 17.9**	**+0.7**
	comp=Z,11μmcomp=Z,8μmcomp=Z,474nm,0.9s						
MKS	**Makassar**	**12.08**	**261**	P	**Pn**	**23 03 21.7**	**+2.2**
	comp=Z,12μmcomp=Z,596nm,1.5s						
MPSI	**Mapaga**	**12.12**	**288**	P	**Pn**	**23 03 21.1**	**+1.1**
	comp=Z,9μmcomp=Z,211nm,1.2s						
KNRA	**Kununurra**	**12.50**	**192**		**Pn**	**23 03 20.6**	**-4.6**
PMSI	**Majene**	**12.51**	**269**	P	**Pn**	**23 03 28.5**	**+3.1**
	comp=Z,11μmcomp=Z,6μmcomp=Z,266nm,1.1s						
MMSI	**Mamuju**	**12.54**	**273**	P	**Pn**	**23 03 26.7**	**+1.0**
WSI	**Waingapu**	**12.71**	**240**	P	**Pn**	**23 03 29.0**	**+0.9**
	comp=Z,14μmcomp=Z,860nm,1.2s						
BASI	**Baing, Sumba**	**12.75**	**237**	P	**Pn**	**23 03 31.7**	**+3.1**
	comp=Z,14μmcomp=Z,634nm,1.2s						
WBSI	**Waikabubak, Su**	**13.49**	**242**	P	**Pn**	**23 03 39.1**	**+0.3**
	comp=Z,13μmcomp=Z,7μmcomp=Z,349nm,1.9s						
DBNI	**Kabupaten Domp**	**14.02**	**248**	P	**Pn**	**23 03 46.8**	**+0.9**
	comp=Z,7μmcomp=Z,6μmcomp=Z,295nm,1.1s						
PLAI	**Plampang**	**14.63**	**248**	P	**Pn**	**23 03 54.3**	**+0.1**
PLAI	**Plampang**	**14.63**	**248**	P	**Pn**	**23 03 53.9**	**-0.3**
	comp=Z,11μmcomp=Z,9μmcomp=Z,707nm,1.0s						
BKB	**Balikpapan**	**14.69**	**278**		**Pn**	**23 03 54.8**	**-0.2**
BKB	**Balikpapan**	**14.69**	**278**	P	**Pn**	**23 03 55.4**	**+0.3**
BKB	**Balikpapan**	**14.69**	**278**	P	**Pn**	**23 03 56.9**	**+1.8**
	comp=Z,6μmcomp=Z,7μmcomp=Z,715nm,1.2s						
COEN	**Coen**	**15.64**	**133**	P	**Pn**	**23 04 04.7**	**-3.0**
	comp=Z,647nm,0.9s,comp=Z,0.0nm						
COEN	**Coen**	**15.64**	**133**		**Pn**	**23 04 04.4**	**-3.3**
COEN				IAmb	IAmb	23 04 12.8	
	comp=Z,523nm,0.9s						
COEN	**Coen**	**15.64**	**133**	P	**Pn**	**23 04 04.8**	**-2.8**
FITZ	**Fitzroy Crossi**	**15.70**	**201**	Pn	**Pn**	**23 04 01.9**	**-6.4**
	comp=Z,7.9nm,0.3s,baz=37,slow=12,SNR=84						
FITZ				Sn	Sn	23 06 46.0	-15
	comp=Z,22nm,0.3s,baz=110,slow=9.1,SNR=3.7						
FITZ				LR	LR	23 11 05.0	
	comp=Z,7μm,21.7s,baz=25,slow=41						
MANU	**Manus Island**	**15.96**	**86**		**Pn**	**23 04 11.0**	**-0.8**
MANU				IAmb	IAmb	23 04 18.8	
	comp=Z,1μm,1.1s						
KHKI	**Kahang-Kahang**	**16.51**	**252**	P	**Pn**	**23 04 19.8**	**+1.0**
	comp=Z,10μmcomp=Z,317nm,0.6s						
BBKI	**Banjar Baru**	**16.57**	**269**	P	**P**	**23 04 22.1**	**+0.2**
	comp=Z,6μmcomp=Z,13μmcomp=Z,944nm,1.2s						
WRAB	**Tennant Creek**	**16.70**	**170**	P	**Pn**	**23 04 18.5**	**-2.6**
WRAB	**Tennant Creek**	**16.70**	**170**	*ce*P	**Pn**	**23 04 17.3**	**-3.8**
WRAB				pmax	pmax		
	comp=Z,41nm,0.8s						
WRA	**Warramunga Arr**	**16.70**	**170**	Pn	**Pn**	**23 04 15.2**	**-6.0**
	comp=Z,7.2nm,0.3s,baz=346,slow=14,SNR=59						
WRA				Sn	Sn	23 07 10.4	-16
	comp=Z,22nm,0.3s,baz=357,slow=21,SNR=18						
MTKI	**Muara Teweh, K**	**16.71**	**278**	P	**P**	**23 04 25.8**	**+2.4**
	comp=Z,6μmcomp=Z,16μmcomp=Z,849nm,2.0s						
PMG	**Port Moresby**	**16.72**	**112**	Pn	**Pn**	**23 04 19.3**	**-2.2**
	comp=Z,721nm,1.1s,baz=296,slow=11,SNR=70						
PMG				LR	LR	23 13 13.6	
	comp=Z,8μm,18.6s,baz=290,slow=46						
PMG	**Port Moresby**	**16.72**	**112**		**Pn**	**23 04 19.2**	**-2.2**
PMG				IAmb	IAmb	23 04 24.8	
	comp=Z,2μm,1.4s						
PMG	**Port Moresby**	**16.72**	**112**	P	**Pn**	**23 04 21.8**	**+0.3**
PMG	**Port Moresby**	**16.72**	**112**	P	**Pn**	**23 04 21.7**	**+0.3**
PMG	**Port Moresby**	**16.72**	**112**	*i* P	**Pn**	**23 04 19.8**	**-1.6**
PMG				pmax	pmax		
	comp=Z,870nm,1.2s						
PMG	**Port Moresby**	**16.72**	**112**	P	**Pn**	**23 04 21.6**	**+0.2**
	comp=Z,4μmcomp=Z,11μmcomp=Z,926nm,1.2s						
DNP	**Denpasar**	**16.98**	**251**	P	**Pn**	**23 04 25.0**	**+0.3**
	comp=Z,647nm,0.9s						
IGBI	**Denpasar**	**17.08**	**251**	P	**Pn**	**23 04 26.5**	**+0.6**
	comp=Z,8μmcomp=Z,7μmcomp=Z,334nm,0.5s						
RTBI	**Rangdo, Negare**	**17.17**	**252**	P	**Pn**	**23 04 27.7**	**+0.6**
	comp=Z,10μmcomp=Z,8μmcomp=Z,389nm,0.8s						
ABJI	**Asem Bagus**	**17.68**	**255**	P	**P**	**23 04 34.7**	**+0.6**
	comp=Z,12μmcomp=Z,558nm,1.0s						

KKM	**Kota Kinabalu**	**17.86**	**302**	P	**Pn**	**23 04 35.8**	**+0.1**
KKM				IAmb	IAmb	23 04 40.3	
	comp=Z,938nm,1.1s						
KKM	**Kota Kinabalu**	**17.86**	**302**	P	**P**	**23 04 36.0**	**-0.2**
KKM	**Kota Kinabalu**	**17.86**	**302**	P	**P**	**23 04 36.2**	**0.0**
	comp=Z,6μmcomp=Z,9μmcomp=Z,876nm,1.2s						
JAGI	**Jajag, Banyuwa**	**17.93**	**253**	Pn	**Pn**	**23 04 33.8**	**-2.6**
JAGI	**Jajag, Banyuwa**	**17.93**	**253**	P	**Pn**	**23 04 35.5**	**-0.9**
JAGI	**Jajag, Banyuwa**	**17.93**	**253**	P	**Pn**	**23 04 35.5**	**-0.9**
	comp=Z,7μmcomp=Z,5μmcomp=Z,255nm,0.7s						
BLJI	**Banyuglugur**	**18.29**	**256**	P	**Pn**	**23 04 41.2**	**+0.4**
	comp=Z,10μmcomp=Z,9μmcomp=Z,371nm,1.1s						
QIS	**Mount Isa**	**18.84**	**156**	P	**P**	**23 04 44.8**	**-2.0**
MTSU	**Mount Surprise**	**19.34**	**140**	P	**Pn**	**23 04 53.4**	**-0.2**
SJI	**Sawahan**	**20.05**	**257**	P	Pn	23 05 01.3	-0.9
	comp=Z,6μmcomp=Z,353nm,0.8s						
SBUM	**Sibu**	**20.07**	**287**	P	Pn	23 05 01.5	-0.8
SBUM	**Sibu**	**20.07**	**287**	P	**P**	**23 05 01.3**	**+1.0**
SBUM	**Sibu**	**20.07**	**287**	P	Pn	23 05 02.8	+0.5
SNJI	**Sawahan-Nganju**	**20.07**	**257**	P	**P**	**23 05 00.1**	**-0.4**
	comp=Z,4μmcomp=Z,5μmcomp=Z,277nm,1.0s						
TGY	**Tagaytay City**	**20.25**	**329**	P	**P**	**23 05 01.0**	**-1.4**
	comp=Z,83nm,0.3s,baz=315,slow=2.8,SNR=10						
TGY				LR	LR	23 14 02.5	
	comp=Z,3μm,20.3s,baz=166,slow=40						
	comp=Z,83nm,0.3s						
TGY	**Tagaytay City**	**20.25**	**329**	P	**P**	**23 05 01.0**	**-1.4**
NGJI	**Ngawi**	**20.28**	**258**	P	Pn	23 05 05.4	+0.6
	comp=Z,8μmcomp=Z,363nm,1.2s						
AS31	**Alice Springs**	**20.31**	**173**	P	**P**	**23 05 02.7**	**-0.2**
ASAR	**Alice Springs**	**20.31**	**173**	P	**P**	**23 05 02.5**	**-0.4**
	comp=Z,310nm,0.7s,baz=353,slow=10,SNR=1403						
ASAR				S	S	23 08 34.3	-15
	comp=Z,81nm,1.0s,baz=346,slow=20,SNR=4.2						
ASAR				P3KPbc		23 39 09.5	
	comp=Z,1.4nm,1.1s,baz=149,slow=3.3,SNR=4.2						
	comp=Z,310nm,0.7s						
ASAR	**Alice Springs**	**20.31**	**173**	P	**P**	**23 05 01.9**	**-1.0**
AUALC	**St Philip's Co**	**20.33**	**174**	P	**P**	**23 05 03.6**	**+0.5**
RABL	**Rabaul**	**20.69**	**93**	P	**P**	**23 05 07.4**	**+0.3**
PCJI	**Pacitan**	**20.72**	**256**	P	**P**	**23 05 06.8**	**-0.6**
	comp=Z,167nm,0.8s						
MBWA	**Marble Bar**	**21.03**	**212**	P	**P**	**23 05 08.0**	**-2.7**
MBWA				IAmb	IAmb	23 05 10.6	
	comp=Z,743nm,1.6s						
MBWA	**Marble Bar**	**21.03**	**212**	P	**P**	**23 05 08.8**	**-1.9**
MBWA	**Marble Bar**	**21.03**	**212**	P	**P**	**23 05 09.1**	**-1.6**
SMRI	**Semarang**	**21.23**	**259**	P	**P**	**23 05 11.4**	**-1.5**
SMRI				IAMs_20	IAMs_20	23 14 24.4	
	comp=Z,13μm,20.0s						
SMRI	**Semarang**	**21.23**	**259**	P	**P**	**23 05 13.9**	**+1.0**
SMRI	**Semarang**	**21.23**	**259**	P	**P**	**23 05 13.4**	**+0.5**
	comp=Z,6μmcomp=Z,300nm,1.2s						
UGM	**Wanagama**	**21.30**	**257**	P	**P**	**23 05 12.6**	**-1.1**
UGM	**Wanagama**	**21.30**	**

EGSI Enggano, Bengk 29.15 265 P P 23 06 27.9 0.0
comp=Z,152nm,1.1s
MASI Maura Aman, Be 29.16 270 P P 23 06 30.0 +1.9
MORW Morawa 29.45 208 P P 23 06 29.2 -1.1
MORW IAmb IAmb 23 06 30.8
comp=Z,303nm,1.6s
MORW Morawa 29.45 208 P P 23 06 29.3 -1.1
NGOA Tingoa Renbel 29.49 108 P P 23 06 31.0 +0.1
YHNB Yeheng 29.55 341 P P 23 06 31.0 -0.4
YHNB Yeheng 29.55 341 P P 23 06 32.1 +0.7
BBOO Buckleboo 29.60 172 P P 23 06 31.9 +0.2
BBOO Buckleboo 29.60 172 P P 23 06 31.9 +0.2
STKA Stephens Creek 29.91 163 P P 23 06 34.4 -0.2
comp=Z,76nm,1.0s,baz=336,slow=9.2,SNR=74
STKA LR LR 23 19 59.9
comp=Z,8μm,19.5s,baz=332,slow=39
comp=Z,76nm,1.0s
STKA Stephens Creek 29.91 163 P P 23 06 34.1 -0.4
STKA Stephens Creek 29.91 163 P P 23 06 34.9 +0.4
KRJI Kerinci 29.98 272 P P 23 06 36.9 +1.5
JOW Kunigami 30.19 354 P P 23 06 36.8 -0.1
comp=Z,107nm,0.9s,baz=170,slow=8.2,SNR=13
JOW LR LR 23 18 40.7
comp=Z,6μm,20.3s,baz=149,slow=36
comp=Z,107nm,0.9s
JOW Kunigami 30.19 354 P P 23 06 37.1 +0.1
JOW IAmb IAmb 23 06 52.6
comp=Z,476nm,1.3s
JOW Kunigami 30.19 354 P P 23 06 37.3 +0.3
AULRC Lightning Ridg 30.29 151 P P 23 06 37.5 -0.4
KNMB Chin-men Tao 30.45 336 P P 23 06 38.8 -0.5
KNMB IAmb IAmb 23 06 40.6
comp=Z,174nm,1.3s
BLDU Ballidu 30.46 206 P P 23 06 39.0 -0.4
BKNI Bangkinang 30.61 276 P P 23 06 41.6 +0.7
BKNI Bangkinang 30.61 276 P P 23 06 42.3 +1.4
BKNI Bangkinang 30.61 276 P P 23 06 42.7 +1.8
HTT Hallett 30.70 168 P P 23 06 42.0 +0.5
QIZ Qiongzhong 30.78 317 P 23 06 42.7 +0.3
QIZ Qiongzhong 30.78 317 P P 23 06 43.7 +1.4
QIZ Qiongzhong 30.78 317 P P 23 06 43.0 +0.7
QIZ S S 23 11 47.3 +3.5
QIZ pmax pmax
comp=Z,68nm,0.8s
QIZ LR LR
comp=Z,1μm,17.2s
QIZ LR LR
comp=Z,1μm,19.9s
QIZ LR LR
comp=Z,2μm,20.6s
QZH2 Quanzhou 30.80 337 P P 23 06 41.4 -0.9
QZH2 S S 23 11 41.9 -1.9
QZH2 pmax pmax
comp=Z,200nm,1.4s
QZH2 LR LR
comp=Z,1μm,14.1s
QZH2 LR LR
comp=Z,2μm,16.2s
QZH2 LR LR
comp=Z,3μm,17.6s
KLBR Kellerberrin 30.88 203 P P 23 06 41.8 -1.3
TW1H Toowoomba 1 Ha 31.01 143 P P 23 06 45.2 +0.8
PDSI Padang 31.06 274 P P 23 06 44.8 -0.1
comp=Z,2μmcomp=Z,3μmcomp=Z,158nm,1.1s
CMSA Cobar Meteorol 31.06 156 P P 23 06 45.2 +0.6
PPI Padang Panjang 31.16 275 P P 23 06 46.6 +0.8
IPM Ipoh 31.38 284 P P 23 06 48.3 +0.5
IPM IAmb IAmb 23 06 50.3
comp=Z,136nm,0.8s
IPM Ipoh 31.38 284 P P 23 06 48.6 +0.9
IPM Ipoh 31.38 284 P P 23 06 48.9 +1.2
comp=Z,2μmcomp=Z,220nm,1.2s
AUWSH Wavell State H 31.57 141 P P 23 06 48.8 -0.3
AUKUL Kulin High Sch 31.70 202 P P 23 06 49.1 -1.1
UBPT Khong Chiam 31.70 306 P P 23 06 50.9 +0.4
MUN Mundaring 31.85 205 P P 23 06 51.0 -0.6
KULM Kulim 31.94 286 P P 23 06 52.3 -0.3
KULM IAmb IAmb 23 07 12.1
comp=Z,399nm,1.8s
KULM Kulim 31.94 286 P P 23 06 54.1 +1.4
KULM Kulim 31.94 286 P P 23 06 53.6 +0.9
comp=Z,1μmcomp=Z,96nm,1.3s
GZH2 Guangzhou 31.97 328 P P 23 06 53.5 +0.8
GZH2 S S 23 12 07.0 +4.7
GZH2 pmax pmax
comp=Z,240nm,1.1s
GZH2 LR LR
comp=Z,3μm,17.6s
GZH2 LR LR
comp=Z,2μm,16.3s
GZH2 LR LR
comp=Z,4μm,28.1s
JCJ Chichijima 32.02 18 LR LR 23 17 19.4
comp=Z,4μm,19.5s,baz=210,slow=32
JCJ Chichijima 32.02 18 P P 23 06 50.8 -2.3
JCJ IAmb IAmb 23 07 16.0
comp=Z,154nm,0.9s
JCJ Chichijima 32.02 18 P P 23 06 53.1 0.0
AUMAR Marden Senior 32.06 169 P P 23 06 54.7 +1.3
GHSS Government Hou 32.08 169 P P 23 06 55.3 +1.8
MNSI Mandalling Nat 32.12 277 P P 23 06 54.6 +0.4
comp=Z,175nm,1.2s
NWAO Narrogin (SRO) 32.27 203 LR LR 23 22 11.6
comp=Z,3μm,19.3s,baz=37,slow=40
NWAO Narrogin (SRO) 32.27 203 P P 23 06 53.9 -1.4
NWAO IAmb IAmb 23 06 56.1
comp=Z,106nm,0.9s
NWAO Narrogin (SRO) 32.27 203 P P 23 06 54.6 -0.7
NWAO Narrogin (SRO) 32.27 203 P P 23 06 53.9 -1.4
NWAO pmax pmax
comp=Z,106nm,0.9s
NWAO MLR MLR
comp=Z,4μm,20.0s
NWAO Narrogin (SRO) 32.27 203 P P 23 06 54.9 -0.4
NWAO S S 23 12 02.1 -4.6
AUMBR Murray Bridge 32.42 168 P P 23 06 57.6 +1.0
AUDCS Dubbo College 32.93 153 P P 23 07 01.6 +0.6
AUHAR St Anne's Scho 32.95 204 P P 23 07 01.5 +0.3
ARMA Armidale 32.98 147 P P 23 07 01.1 -0.5
ARMA Armidale 32.98 147 P P 23 07 02.2 +0.6
RPSI Rantau Prapat 33.06 280 P P 23 07 02.2 -0.3
RPSI IAmb IAmb 23 07 04.0
comp=Z,124nm,1.0s
PSI Prapat 33.08 280 P P 23 07 02.5 -0.2
PSI Prapat 33.08 280 P P 23 07 02.2 -0.6
PSI pmax pmax
comp=Z,124nm,1.0s
PSI MLR MLR
comp=Z,2μm,20.0s
PSI Prapat 33.08 280 P P 23 07 02.6 -0.2
comp=Z,1μmcomp=Z,127nm,1.3s
AUPHS Peel High Scho 33.12 148 P P 23 07 03.1 +0.4
TSI Tuntungan 33.56 281 P P 23 07 07.8 +1.0
comp=Z,3μmcomp=Z,3μmcomp=Z,164nm,1.4s
AUALB St Joseph's Co 33.88 200 P P 23 07 09.7 +0.4
GSI Gunungsitoli 34.17 277 P P 23 07 11.3 -0.8
GSI IAmb IAmb 23 07 12.7
comp=Z,232nm,1.0s
GSI Gunungsitoli 34.17 277 P P 23 07 11.0 -1.1
GSI Gunungsitoli 34.17 277 P P 23 07 11.4 -0.8
comp=Z,3μmcomp=Z,268nm,1.1s
KCSI Kotacane, Aceh 34.34 281 P P 23 07 12.9 -0.7
JSU Suzuyama 34.70 359 P P 23 07 16.1 -0.4
JSU IAmb IAmb 23 07 33.0
comp=Z,420nm,1.4s
JSU Suzuyama 34.70 359 P P 23 07 16.4 -0.1
TPTI 34.88 281 P P 23 07 17.6 -0.6
GULI GuiLin 35.08 325 P P 23 07 19.5 -0.3
GULI S S 23 12 47.4 -3.0
GULI pmax pmax
comp=Z,80nm,1.2s
GULI pmax pmax
comp=Z,410nm,3.8s
GULI LR LR
comp=Z,2μm,23.5s
GULI LR LR
comp=Z,2μm,20.8s
GULI LR LR
comp=Z,4μm,23.9s
SYDH Sydney Hard Ro 35.19 151 P P 23 07 22.3 +1.7
MGBR Mount Gambier 35.19 167 P P 23 07 21.7 +1.1
MGBR IAmb IAmb 23 07 40.9
comp=Z,212nm,1.2s
H01W3 Cape Leeuwin H 35.23 205 P P 23 07 22.2 +1.5
baz=50,slow=4.9,SNR=6.2

H01W1 Cape Leeuwin H 35.23 205 P P 23 07 21.8 +1.1
baz=50,slow=4.9,SNR=3.4
H01W2 Cape Leeuwin H 35.24 205 P P 23 07 22.1 +1.3
baz=50,slow=4.9,SNR=3.2
AUKHS Kincumber High 35.25 150 P P 23 07 23.1 +2.0
LHMI Lhok Sumawe 35.51 284 P P 23 07 23.7 0.0
LHMI IAmb IAmb 23 07 46.4
comp=Z,331nm,1.1s
SSE Sheshan 35.65 345 P P 23 07 25.3 +0.7
SSE S S 23 13 02.3 +3.3
SSE pmax pmax
comp=Z,66nm,1.0s
SSE pmax pmax
comp=Z,610nm,4.5s
SSE LR LR
comp=Z,1μm,21.6s
SSE LR LR
comp=Z,780nm,21.5s
AUDAR Daramalan Coll 35.70 155 P P 23 07 26.2 +1.1
AUMTS Mt Stromlo 35.71 155 P P 23 07 26.0 +0.9
CAN Canberra 35.71 155 P P 23 07 25.0 -0.1
CAN IAmb IAmb 23 07 29.4
comp=Z,167nm,1.2s
CAN IAMs_20 IAMs_20 23 23 17.7
comp=Z,5μm,21.0s
CAN Canberra 35.71 155 P P 23 07 26.0 +0.9
CAN Canberra 35.71 155 P P 23 07 25.0 -0.1
CAN pmax pmax
comp=Z,167nm,1.2s
CAN MLR MLR
comp=Z,5μm,21.0s
WOLH Wollongong Har 35.78 152 P P 23 07 27.3 +1.6
AUMHS Melrose High S 35.78 155 P P 23 07 26.5 +0.8
MLSI Meulaboh, Aceh 35.83 282 P P 23 07 26.0 -0.4
BRAT Ballarat 35.89 163 P P 23 07 28.0 +1.5
AUMTC Mt Clear Colle 35.93 163 P P 23 07 28.4 +1.5
CNSH ChangSha 36.08 332 P P 23 07 29.4 +1.0
CNSH S S 23 13 14.9 +9.1
CNSH pmax pmax
comp=Z,95nm,1.1s
CNSH LR LR
comp=Z,2μm,22.9s
CNSH LR LR
comp=Z,2μm,23.3s
CNSH LR LR
comp=Z,2μm,25.1s
KOUNC Koumac, New Ca 36.25 121 P P 23 07 30.2 +0.3
JNU Nakatsue 36.30 359 P P 23 07 29.8 -0.5
comp=Z,200nm,1.0s,baz=190,slow=3.4,SNR=43
JNU LR LR 23 20 54.9
comp=Z,3μm,21.9s,baz=162,slow=34
comp=Z,200nm,1.0s
TOO Toolangi 36.39 161 P P 23 07 31.8 +0.9
TOO Toolangi 36.39 161 P P 23 07 31.8 +0.9
TOO pmax pmax
comp=Z,76nm,1.2s
AUSMG Snowy Mountain 36.49 156 P P 23 07 32.7 +0.8
JMN Monobe 36.98 3 P P 23 07 35.9 -0.1
JMN IAmb IAmb 23 07 38.2
comp=Z,470nm,1.5s
JMN Monobe 36.98 3 P P 23 07 35.7 -0.3
JHJ Hachijo jima 2 37.15 12 LR LR 23 20 05.8
comp=Z,7μm,21.3s,baz=114,slow=32
NJ2 Nanjing 37.21 342 ⇓P P 23 07 38.4 +0.5
NJ2 S S 23 13 23.1 +0.3
NJ2 pmax pmax
comp=Z,77nm,1.1s
NJ2 pmax pmax
comp=Z,870nm,4.5s
NJ2 LR LR
comp=Z,2μm,20.4s
NJ2 LR LR
comp=Z,760nm,17.5s
NJ2 LR LR
comp=Z,2μm,20.4s
WHN Wuhan 37.48 335 ⇓P P 23 07 41.3 +1.1
WHN sP pP 23 07 49.9 +0.6
WHN PcP PcP 23 09 59.5 +1.2
WHN S S 23 13 28.5 +1.6
WHN pmax pmax
comp=Z,770nm,1.1s
WHN LR LR
comp=Z,7μm,20.1s
WHN LR LR
comp=Z,6μm,18.2s
WHN LR LR
comp=Z,11μm,21.7s
JTU Tsushima 37.75 357 P P 23 07 43.2 +0.8
GYA Guiyang 38.13 323 ⇓P P 23 07 46.5 +0.5
GYA sP pP 23 07 54.9 -0.2
GYA PcP PcP 23 10 01.9 +1.3
GYA S S 23 13 35.0 -2.3
GYA pmax pmax
comp=Z,120nm,1.0s
GYA pmax pmax
comp=Z,760nm,6.6s
GYA LR LR
comp=Z,1μm,15.8s
GYA LR LR
comp=Z,930nm,25.6s
GYA LR LR
comp=Z,2μm,25.0s
CM31 Chiang Mai Arr 38.67 305 P P 23 07 51.6 +1.1
CM31 IAmb IAmb 23 07 53.4
comp=Z,273nm,1.1s
CM31 Chiang Mai Arr 38.67 305 P P 23 07 52.1 +1.6
SNR=91
CMAR Chiang Mai Arr 38.67 305 P P 23 07 51.1 +0.7
comp=Z,100nm,1.1s,baz=130,slow=6.7,SNR=311
CMAR PcP PcP 23 10 03.6 +1.3
comp=Z,17nm,0.9s,baz=156,slow=2.1,SNR=5.6
CMAR LR LR 23 27 16.5
comp=Z,958nm,18.7s,baz=120,slow=42
comp=Z,100nm,1.1s
CMAR Chiang Mai Arr 38.67 305 P P 23 07 51.2 +0.7
CMAR PcP PcP 23 10 03.2 +1.0
CMAR Chiang Mai Arr 38.67 305 *ce*P P 23 07 51.7 +1.2
CMAR pmax pmax
comp=Z,102nm,1.0s
DZM Mont Dzumac 38.70 122 *e*P P 23 07 50.4 -0.4
comp=Z,346nm,1.4s
DZM *e*PP PP 23 09 19.3 -0.5
DZM comp=Z,322nm,23.9s *e*S S 23 13 45.1 -0.9
DZM comp=Z,534nm,28.8s *e*SS SS 23 16 37.8 +0.5
DZM comp=Z,768nm,26.6s *e*LR LR 23 18 29.1
comp=Z,3μm,23.8s
DZM Mont Dzumac 38.70 122 P P 23 07 50.2 -0.6
DZM IAmb IAmb 23 08 08.1
comp=Z,373nm,1.6s
DZM Mont Dzumac 38.70 122 P P 23 07 51.2 +0.4
ONTNC Ouen Toro 38.80 122 P P 23 07 50.5 -1.0
ONTNC Ouen Toro 38.80 122 P P 23 07 52.2 +0.6
CHTO Chiang Mai 38.85 306 P P 23 07 53.0 +1.0
CHTO IAmb IAmb 23 07 54.6
comp=Z,361nm,1.2s
CHTO Chiang Mai 38.85 306 P P 23 07 52.7 +0.7
CHTO Chiang Mai 38.85 306 P P 23 07 53.0 +1.0
CHTO pmax pmax
comp=Z,361nm,1.3s
CHTO Chiang Mai 38.85 306 P P 23 07 53.3 +1.3
CHTO S S 23 13 49.9 +1.7
CHTO Chiang Mai 38.85 306 P P 23 07 52.7 +0.7
comp=Z,3μmcomp=Z,246nm,1.4s
INU Inuyama 38.88 7 P P 23 07 50.8 -1.1
INU Inuyama 38.88 7 P P 23 07 51.2 -0.7
YATNC Mamie plateau, 39.08 121 P P 23 07 54.7 +0.8
JGF Kuroka 39.17 8 P P 23 07 53.6 -0.8
JGF Kuroka 39.17 8 P P 23 07 53.4 -1.0
ENH Enshi 39.50 329 P P 23 07 56.6 -0.7
ENH Enshi 39.50 329 P P 23 07 57.3 0.0
AUBRN Burnie High Sc 39.68 163 P P 23 07 59.8 +1.2
TJN Taejon 39.73 355 P P 23 07 58.3 -0.7
TJN Taejon 39.73 355 P P 23 07 59.0 0.0
TJN Taejon 39.73 355 P P 23 07 58.3 -0.7
TJN pmax pmax
comp=Z,1μm,1.2s
KMI2 Kunming 39.75 317 ⇓P P 23 08 00.9 +1.3
KMI2 sP sP 23 08 13.3 +0.7
KMI2 PcP PcP 23 10 07.9 +2.1
KMI2 S S 23 13 57.9 -4.0
KMI2 sS sS 23 14 19.8 +2.8
KMI2 pmax pmax
comp=Z,190nm,1.4s
KMI2 pmax pmax
comp=Z,1.0nm,2.6s
KMI2 LR LR
comp=Z,1μm,20.3s
KMI2 LR LR
comp=Z,830nm,27.0s
KMI2 LR LR
comp=Z,2μm,24.2s
PINNC Pines Island, 39.77 122 P P 23 07 58.7 -0.9
PINNC IAmb IAmb 23 08 24.6
comp=Z,738nm,2.0s
MARNC Mare, Loyalty 39.84 120 P P 23 07 59.6 -0.5
MARNC IAmb IAmb 23 08 15.2
comp=Z,335nm,1.1s
MARNC Mare, Loyalty 39.84 120 P P 23 08 01.3 +1.1
MAJO Matsushiro 40.21 8 P P 23 08 01.3 -1.8
MAJO Matsushiro 40.21 8 IAMs_20 IAMs_20 23 21 36.5
comp=Z,5μm,22.0s
MAJO Matsushiro 40.21 8 P P 23 08 00.9 -2.2
MAJO Matsushiro 40.21 8*d* *i*P P 23 08 01.1 -2.0
MAJO pmax pmax
comp=Z,39nm,0.7s
MJAR Matsushiro Arr 40.21 8 P P 23 08 01.0 -2.1
comp=Z,34nm,0.9s,baz=188,slow=9.2,SNR=82
MJAR PcP PcP 23 10 07.2 +0.5
comp=Z,43nm,0.9s,baz=184,slow=3.1,SNR=15
MJAR LR LR 23 21 59.8
comp=Z,5μm,22.0s,baz=200,slow=32
comp=Z,34nm,0.9s
MJAR Matsushiro Arr 40.21 8 P P 23 08 01.0 -2.1
MJAR PcP 23 10 07.1 +0.3
MJAR Matsushiro Arr 40.21 8 P P 23 08 01.0 -2.1
MJAR 23 10 07.1
MJAR pmax pmax
comp=Z,54nm,0.9s
MJB9 Matsu-Tunnel 40.22 8 P P 23 08 02.1 -1.0
GLAD Gladstone 40.30 161 P P 23 08 04.2 +0.5
CORO Coronation Par 40.45 162 P P 23 08 06.5 +1.6
KSAR Wonju Array Be 40.75 356 P P 23 08 07.0 -0.4
KSAR Wonju Array Be 40.75 356 P P 23 08 07.0 -0.4
KSRS Korea Array 40.76 356 P P 23 08 06.5 -0.9
comp=Z,15nm,0.7s,baz=175,slow=9.1,SNR=48
KSRS PcP PcP 23 10 09.2 +0.8
comp=Z,28nm,1.0s,baz=181,slow=4.0,SNR=13
KSRS LR LR 23 24 50.0
comp=Z,3μm,20.4s,baz=175,slow=36
comp=Z,15nm,0.7s
KS19 Wonju Array Si 40.81 356 P P 23 08 07.5 -0.4
INCN Inchon 40.90 354 P P 23 08 09.4 +0.7
PBA Port Blair 41.28 292 P P 23 08 10.9 -1.3
PBA Port Blair 41.28 292 P P 23 08 12.9 +0.7
PZH PanZhiHua 41.32 318 ⇓P P 23 08 12.8 +0.3
PZH S S 23 14 24.8 -0.3
PZH pmax pmax
comp=Z,100nm,1.3s
PZH pmax pmax
comp=Z,340nm,5.4s
PZH LR LR
comp=Z,900nm,21.2s
PZH LR LR
comp=Z,1μm,19.6s
PZH LR LR
comp=Z,2μm,19.8s
MOO Moorlands 41.36 162 P P 23 08 14.1 +1.6
TIA Tai'an 41.60 342 P P 23 08 14.3 -0.2
TIA pmax pmax
comp=Z,150nm,0.9s
TIA pmax pmax
comp=Z,700nm,3.8s
TIA LR LR
comp=Z,1μm,17.2s
TIA LR LR
comp=Z,530nm,17.2s
TIA LR LR
comp=Z,2μm,15.8s
DGPR DIGLIPUR 41.62 294 *e*P P 23 08 09.2 -5.7
DGPR IAmb IAmb 23 08 17.6
comp=Z,164nm,0.5s
LYN LuoYang 41.74 336 ⇓P P 23 08 15.9 +0.2
LYN PP PP 23 09 52.3 -0.3
LYN S S 23 14 34.9 +4.1
LYN pmax pmax
comp=Z,150nm,1.2s
LYN pmax pmax
comp=Z,390nm,3.8s
LYN LR LR
comp=Z,3μm,22.0s
LYN LR LR
comp=Z,1μm,19.9s
LYN LR LR
comp=Z,4μm,24.0s
TAU Tasmania Unive 41.83 162 P P 23 08 15.8 -0.4
TAU Tasmania Unive 41.83 162 P P 23 08 16.9 +0.7
TAU Tasmania Unive 41.83 162 P P 23 08 15.9 -0.4
TAU pmax pmax
comp=Z,89nm,1.1s
TNCH TengChong 42.65 313 ⇓P P 23 08 24.0 +0.5
TNCH PcP PcP 23 10 15.8 +0.6
TNCH S S 23 14 45.8 +0.9
TNCH SS SS 23 17 52.5 -3.5
TNCH pmax pmax
comp=Z,150nm,1.8s
TNCH pmax pmax
comp=Z,330nm,3.9s
TNCH LR LR
comp=Z,520nm,17.2s
TNCH LR LR
comp=Z,370nm,11.3s
TNCH LR LR
comp=Z,1μm,21.9s
XAN Xi'an 42.85 332 ⇓P P 23 08 24.5 -0.3
XAN pP pP 23 08 30.5 -3.5
XAN S S 23 14 43.8 -3.5
XAN SS SS 23 17 58.5 -1.0
XAN pmax pmax
comp=Z,280nm,1.1s
XAN pmax pmax
comp=Z,1μm,5.3s
XAN LR LR
comp=Z,1μm,17.5s
XAN LR LR
comp=Z,2μm,20.4s
XAN LR LR
comp=Z,3μm,23.4s
DL2 Dalian 43.04 349 P P 23 08 24.9 -1.2
DL2 S S 23 14 49.1 -0.7
DL2 pmax pmax
comp=Z,180nm,1.2s
DL2 pmax pmax
comp=Z,640nm,10.6s
DL2 LR LR
comp=Z,2μm,20.2s
DL2 LR LR
comp=Z,2μm,20.3s
DL2 LR LR
comp=Z,3μm,23.0s
CD2 Chengdu 43.13 324 ⇓P P 23 08 26.9 -0.2
CD2 sP pP 23 08 35.4 -0.9
CD2 S S 23 14 52.6 +1.1
CD2 sS sS 23 15 10.1 +3.4
CD2 pmax pmax
comp=Z,200nm,1.5s
CD2 pmax pmax
comp=Z,1μm,4.1s
CD2 LR LR
comp=Z,3μm,22.9s
CD2 LR LR
comp=Z,3μm,20.3s
CD2 LR LR
comp=Z,4μm,23.5s
HNS HongShan 43.45 341 ⇓P P 23 08 29.6 +0.1
HNS PP PcP 23 10 16.8 -0.6
HNS S S 23 14 57.8 +1.9
HNS pmax pmax
comp=Z,160nm,1.4s
HNS LR LR
comp=Z,1μm,19.1s
HNS LR LR
comp=Z,1μm,21.2s
HNS LR LR
comp=Z,2μm,19.1s
TIY Taiyuan 44.53 338 P P 23 08 38.5 +0.2
TIY pP pP 23 08 46.3 -1.3
TIY S S 23 15 14.3 +2.5
TIY pmax pmax

TIY comp=Z,91nm,1.1s pmax pmax
TIY comp=Z,190nm,3.8s LR LR
TIY comp=Z,1μm,14.6s LR LR
TIY comp=Z,550nm,13.0s LR LR
TIY comp=Z,1μm,21.1s LR LR
BJI2 Beijing 45.41 343 P **P** **23 08 45.6 +0.5**
BJI2 PcP **PcP** **23 10 25.5 +1.4**
BJI2 S **S** **23 15 22.5 -1.8**
BJI2 pmax pmax
BJI2 comp=Z,160nm,1.0s LR LR
BJI2 comp=Z,540nm,23.0s LR LR
BJI2 comp=Z,290nm,17.4s LR LR
BJI2 comp=Z,850nm,22.3s LR LR
BJT Baijiatuau 45.41 343 **P** **23 08 45.4 +0.3**
BJT IAmb IAmb 23 08 46.8
BJT comp=Z,380nm,1.1s
BJT Baijiatuau 45.41 343 P **P** **23 08 45.5 +0.3**
BJT Baijiatuau 45.41 343 P **P** **23 08 45.4 +0.3**
BJT pmax pmax
BJT comp=Z,380nm,1.1s
SAIH SAIHA 45.52 306 *e*P **P** **23 08 42.0 -4.5**
SAIH IAmb IAmb 23 08 47.8
SAIH comp=Z,190nm,0.8s
SAIH *e*S **S** **23 15 24.0 -2.7**
SNY Shenyang 45.56 352 ⇓P **P** **23 08 46.3 +0.1**
SNY S **S** **23 15 24.6 -1.8**
SNY pmax pmax
SNY comp=Z,75nm,1.0s pmax pmax
SNY comp=Z,550nm,3.6s LR LR
SNY comp=Z,940nm,24.3s LR LR
SNY comp=Z,1μm,18.4s LR LR
SNY comp=Z,2μm,20.0s LR LR
PSTR Posyet 45.82 359 *d* *i*P **P** **23 08 48.6 +0.3**
IMP Imphal 45.96 310 *e*P P 23 08 43.3 -6.5
IMP IAmb IAmb 23 08 50.2
IMP comp=Z,192nm,1.2s
IMP *e*S **S** **23 15 31.3 -1.6**
VLA Vladivostok 46.28 0 *i* P **P** **23 08 52.6 +0.7**
VLA pmax pmax
VLA comp=Z,97nm,1.2s
KOHI KOHIMA 46.31 311 *e*P **P** **23 08 48.4 -4.3**
KOHI IAmb IAmb 23 08 53.0
KOHI comp=Z,189nm,2.0s
KOHI *e*S **S** **23 15 38.0 -0.1**
MOKO MOKOCHONG 46.34 312 *e*P P 23 08 48.0 -4.9
MOKO IAmb IAmb 23 08 53.9
MOKO comp=Z,196nm,1.2s
JORH JORHAT 46.77 312 *e*P **P** **23 08 51.9 -4.2**
JORH IAmb IAmb 23 08 57.0
JORH comp=Z,114nm,1.0s
LZDM Lanzhou Array 46.95 329 P **P** **23 08 58.0 +0.2**
LZDM comp=Z,69nm,1.0s,baz=144,slow=10,SNR=124 PcP **PcP** **23 10 31.1 +1.1**
LZDM comp=Z,29nm,0.8s,baz=194,slow=4.1,SNR=5.3 LR LR 23 30 43.1
LZDM comp=Z,2μm,19.8s,baz=120,slow=39
comp=Z,69nm,1.0s
LZH Lanzhou 46.98 329 P **P** **23 08 58.8 +1.0**
LZH sP pP 23 09 05.0 -2.1
LZH PcP **PcP** **23 10 31.6 +1.7**
LZH PcS **PcS** **23 14 26.3 +1.2**
LZH S **S** **23 15 48.8 +1.5**
LZH ScS **ScS** **23 18 49.4 -0.8**
LZH pmax pmax
LZH comp=Z,230nm,1.3s pmax pmax
LZH comp=Z,1μm,5.4s LR LR
LZH comp=Z,1μm,15.2s LR LR
LZH comp=Z,1μm,15.2s LR LR
LZH comp=Z,2μm,15.5s
CN2 Changchun 47.27 354 ⇓P **P** **23 08 59.3 -0.4**
CN2 *e*sP pP 23 09 06.0 -2.9
CN2 *e*S **S** **23 15 52.6 +1.7**
CN2 pmax pmax
CN2 comp=Z,30nm,0.9s pmax pmax
CN2 comp=Z,500nm,6.0s LR LR
CN2 comp=Z,300nm,12.0s LR LR
CN2 comp=Z,500nm,12.0s LR LR
CN2 comp=Z,600nm,13.0s
USRK Ussuriysk Ar. 47.37 1 P **P** **23 09 00.6 +0.2**
USRK comp=Z,43nm,0.6s,baz=180,slow=7.7,SNR=65 PP **PP** **23 10 54.4 +2.4**
USRK comp=Z,18nm,1.1s,baz=160,slow=6.1,SNR=4.1
comp=Z,43nm,0.6s
ITAN ITANAGAR 47.38 312 *e*P **P** **23 08 57.8 -3.1**
ITAN IAmb IAmb 23 09 02.5
ITAN comp=Z,290nm,1.5s
ITAN *e*S **S** **23 15 53.3 +0.2**
ZIRO ZIRO 47.50 313 *e*P **P** **23 08 57.9 -4.1**
ZIRO IAmb IAmb 23 09 03.0
ZIRO comp=Z,292nm,1.9s
ZIRO *e*S **S** **23 15 53.5 -1.6**
AGT Agartala 47.59 307 *e*P **P** **23 08 59.0 -3.5**
AGT IAmb IAmb 23 09 04.8
AGT comp=Z,296nm,1.4s
AGT *e*S **S** **23 15 55.4 -0.7**
HHC Hu-ho-hao-te 47.62 340 ⇓ *i*P **P** **23 09 03.4 +0.8**
HHC sP pP 23 09 11.9 -0.1
HHC S **S** **23 15 56.9 +0.7**
HHC sS sS 23 16 16.4 +4.8
HHC SS **SS** **23 19 20.3 -4.5**
HHC pmax pmax
HHC comp=Z,130nm,1.1s pmax pmax
HHC comp=Z,540nm,5.3s LR LR
HHC comp=Z,810nm,14.0s LR LR
HHC comp=Z,860nm,14.4s LR LR
HHC comp=Z,700nm,14.4s
FUNA Funafuti 47.74 98 P **P** **23 09 03.2 -0.6**
FUNA IAmb IAmb 23 09 05.9
FUNA comp=Z,242nm,1.0s
TEZP TEZPUR 47.79 311 *e*P P 23 08 58.6 -5.4
TEZP IAmb IAmb 23 09 04.4
TEZP comp=Z,140nm,1.9s
TEZP *e*S **S** **23 15 57.9 -0.9**
MDJ Mudanjiang 47.81 358 **P** **23 09 03.7 -0.1**
MDJ IAmb IAmb 23 09 05.4
MDJ comp=Z,183nm,1.1s
MDJ Mudanjiang 47.81 358 P **P** **23 09 03.7 -0.1**
MDJ Mudanjiang 47.81 358 P **P** **23 09 04.4 +0.6**
MDJ PP **PP** **23 10 56.9 +0.9**
MDJ S **S** **23 16 04.8 +6.3**
MDJ pmax pmax
MDJ comp=Z,180nm,1.1s LR LR
MDJ comp=Z,2μm,20.7s LR LR
MDJ comp=Z,940nm,23.5s LR LR
MDJ comp=Z,3μm,21.3s
MSVF Nonsavu 47.83 111 P **P** **23 09 04.5 0.0**
MSVF IAmb IAmb 23 09 07.6
MSVF comp=Z,267nm,1.2s
MSVF Nonsavu 47.83 111 P **P** **23 09 06.0 +1.4**
MSVF Nonsavu 47.83 111 P **P** **23 09 04.6 0.0**
MSVF pmax pmax
MSVF comp=Z,267nm,1.3s
SHL Shillong 47.93 309 P **P** **23 09 05.1 -0.3**
SHL IAmb IAmb 23 09 06.5
SHL comp=Z,226nm,1.1s
SHL Shillong 47.93 309 *e*P P 23 09 00.2 -5.2
SHL IAmb IAmb 23 09 06.2
SHL comp=Z,200nm,0.6s
SHL *e*S **S** **23 15 57.5 -3.8**
SHL Shillong 47.93 309 P **P** **23 09 05.1 -0.3**
SHL pmax pmax
SHL comp=Z,226nm,1.1s
SHL Shillong 47.93 309 P **P** **23 09 05.7 +0.3**
BTO2 Baotou 48.14 338 *e*P **P** **23 09 06.3 -0.3**
BTO2 sP **sP** **23 09 20.0 +0.3**
BTO2 PP **PP** **23 10 57.8 -1.4**
BTO2 S **S** **23 16 04.4 +0.8**
BTO2 pmax pmax
BTO2 comp=Z,96nm,1.0s pmax pmax
BTO2 comp=Z,2μm,7.3s LR LR
BTO2 comp=Z,2μm,15.4s LR LR
BTO2 comp=Z,1μm,17.9s LR LR
BTO2 comp=Z,3μm,21.5s
ASAJ Asahikawa 48.33 11 P **P** **23 09 08.4 +0.6**
ASAJ comp=Z,46nm,1.0s,baz=235,slow=15,SNR=20 LR LR 23 28 13.6
ASAJ comp=Z,2μm,21.3s,baz=198,slow=35
comp=Z,46nm,1.0s
ASAJ Asahikawa 48.33 11 P **P** **23 09 07.7 -0.2**
ASAJ pmax pmax
ASAJ comp=Z,183nm,1.4s
JKA Kamikawa-asahi 48.33 11 P **P** **23 09 07.7 -0.2**
JKA IAmb IAmb 23 09 25.4
JKA comp=Z,183nm,1.4s
GUWA GUWAHATI 48.40 310 *e*P **P** **23 09 08.7 -0.1**
GUWA IAmb IAmb 23 09 09.7
GUWA comp=Z,124nm,1.8s
GUWA *e*S **S** **23 16 02.9 -4.7**
TEY Ternei 48.42 5 *e*P **P** **23 09 06.4 -2.1**
TAWA Tawang 49.01 311 *e*P **P** **23 09 09.9 -4.0**
TAWA IAmb IAmb 23 09 17.4
TAWA comp=Z,114nm,1.5s
TAWA *e*S **S** **23 16 14.4 -2.4**
BNX BinXian 49.03 356 ⇓P **P** **23 09 12.4 -0.9**
BNX sP **sP** **23 09 27.3 +1.0**
BNX S **S** **23 16 14.8 -1.0**
BNX pmax pmax
BNX comp=Z,92nm,1.1s pmax pmax
BNX comp=Z,610nm,8.1s LR LR
BNX comp=Z,2μm,19.7s LR LR
BNX comp=Z,1μm,19.2s LR LR
BNX comp=Z,3μm,21.7s
XLT XiLinHaoTe 49.05 345 *e*P **P** **23 09 13.4 -0.2**
XLT pP pP 23 09 23.1 +0.1
XLT PP **PP** **23 11 05.6 -1.8**
XLT S **S** **23 16 14.1 -2.2**
XLT pmax pmax
XLT comp=Z,91nm,2.0s pmax pmax
XLT comp=Z,200nm,3.7s LR LR
XLT comp=Z,1μm,18.7s LR LR
XLT comp=Z,2μm,20.0s
DGTI Dogotuki 49.14 109 P **P** **23 09 15.5 +0.8**
TAVE Taveuni 49.55 109 P **P** **23 09 19.3 +1.6**
DHUB DHUBRI 49.63 309 *e*P **P** **23 09 13.9 -4.2**
DHUB IAmb IAmb 23 09 19.1
DHUB comp=Z,98nm,1.3s
DHUB *e*S **S** **23 16 24.0 -0.8**
OUZ Omahuta 50.24 134 IAMs_20 IAMs_20 23 29 07.0
OUZ Omahuta 50.24 134 P **P** **23 09 24.2 +1.5**
LSA Lhasa 50.68 313 P **P** **23 09 27.5 +0.8**
LSA IAmb IAmb 23 09 29.2
LSA comp=Z,171nm,1.1s
LSA Lhasa 50.68 313 P **P** **23 09 24.0 -2.7**
LSA S **S** **23 16 32.9 -7.4**
LSA pmax pmax
LSA comp=Z,140nm,1.1s LR LR
LSA comp=Z,590nm,18.0s LR LR
LSA comp=Z,390nm,18.0s LR LR
LSA comp=Z,490nm,19.4s
LSA Lhasa 50.68 313 P **P** **23 09 27.8 +1.1**
LSA Lhasa 50.68 313 P **P** **23 09 27.5 +0.8**
LSA pmax pmax
LSA comp=Z,171nm,1.1s
LKBA Tubou, Lakemba 50.85 111 P **P** **23 09 28.2 +0.6**
YSS Yuzhno-Sakhali 51.10 10 P **P** **23 09 28.3 -0.6**
YSS IAmb IAmb 23 09 29.9
YSS comp=Z,169nm,1.2s IAMs_20 IAMs_20 23 29 37.7
YSS comp=Z,3μm,20.0s
YSS Yuzhno-Sakhali 51.10 10 P **P** **23 09 28.7 -0.2**
YSS Yuzhno-Sakhali 51.10 10κ*e*P **P** **23 09 28.5 -0.4**
YSS *e* 23 10 45.3
YSS *e*S **S** **23 16 46.4 +1.9**
YSS pmax pmax
YSS comp=Z,80nm,0.9s pmax pmax
YSS comp=Z,500nm,4.4s pmax pmax
YSS comp=N,200nm,4.2s MLR MLR
YSS comp=Z,2μm,19.0s MLR MLR
YSS comp=N,1μm,21.0s MLR MLR
YSS comp=E,1μm,17.0s
WCZ Waipu Caves 51.12 135 P **P** **23 09 30.7 +1.3**
GTK Tadong 51.35 309 *e*P P 23 09 26.2 -5.2
GTK IAmb IAmb 23 09 32.8
GTK comp=Z,152nm,1.4s
GTK *e*S **S** **23 16 46.2 -2.8**
GTA2 Gaotai 51.66 329 P **P** **23 09 34.1 +0.6**
GTA2 pP pP 23 09 39.9 -3.0
GTA2 PcP **PcP** **23 10 48.6 +1.8**
GTA2 sS sS 23 17 10.0 +1.7
GTA2 ScS **ScS** **23 19 20.8 -0.9**
GTA2 pmax pmax
GTA2 comp=Z,140nm,2.1s pmax pmax
GTA2 comp=Z,1μm,6.5s LR LR
GTA2 comp=Z,2μm,18.9s LR LR
GTA2 comp=Z,1μm,19.3s LR LR
GTA2 comp=Z,3μm,19.6s
PALK Pallekele 51.73 282 LR LR 23 34 01.3
PALK Pallekele 51.73 282 P **P** **23 09 34.4 0.0**
PALK IAmb IAmb 23 09 36.2
PALK comp=Z,266nm,1.4s
PALK Pallekele 51.73 282 *i* P **P** **23 09 34.6 +0.2**
PALK Pallekele 51.73 282 *i* P **P** **23 09 34.9 +0.6**
PALK pmax pmax
PALK comp=Z,148nm,1.2s
PALK Pallekele 51.73 282 P **P** **23 09 35.0 +0.6**
PALK S **S** **23 16 52.5 -2.0**
PALK Pallekele 51.73 282 P **P** **23 09 34.9 +0.6**
VIS Vishakhapatnam 51.86 296 *e*P P 23 09 29.4 -5.7
VIS IAmb IAmb 23 09 37.0
VIS comp=Z,297nm,1.8s
VIS *e*S **S** **23 16 54.8 -1.2**
GOMU GeErMu 52.15 322 P **P** **23 09 34.9 -2.6**
GOMU sP pP 23 09 45.0 -1.9
GOMU PcP **PcP** **23 10 50.5 +1.5**
GOMU S **S** **23 17 06.5 +6.3**
GOMU pmax pmax
GOMU comp=Z,42nm,1.3s LR LR
GOMU comp=Z,1μm,17.9s LR LR
GOMU comp=Z,1μm,16.9s
JCZ Jackson Bay 52.22 146 P **P** **23 09 38.0 +0.5**
RAGD RAYAGADA 52.26 297 *e*P **P** **23 09 33.9 -4.3**
RAGD IAmb IAmb 23 09 39.8
RAGD comp=Z,94nm,0.8s
RAGD *e*S **S** **23 17 01.7 +0.2**
KLR Kul'dur 52.40 0 LR LR 23 30 29.8
KLR comp=Z,267nm,21.7s,baz=168,slow=34
KLR Kul'dur 52.40 0*c**e*P **P** **23 09 38.7 +0.1**
KLR pmax pmax
KLR comp=Z,42nm,1.7s
QRZ Quartz Range 52.47 141 P **P** **23 09 39.8 +0.4**
QRZ IAmb IAmb 23 09 41.6
QRZ comp=Z,229nm,0.9s
QRZ IAMs_20 IAMs_20 23 31 36.1
QRZ comp=Z,5μm,21.0s
QRZ Quartz Range 52.47 141 P **P** **23 09 40.7 +1.3**
KUZ Kuaotunu 52.48 135 P **P** **23 09 40.4 +0.9**
KUZ Kuaotunu 52.48 135 P **P** **23 09 40.2 +0.7**
HIZ Hauiti 52.76 137 P **P** **23 09 41.9 +0.4**
HIZ IAmb IAmb 23 09 44.2
HIZ comp=Z,294nm,1.1s
HIZ Hauiti 52.76 137 P **P** **23 09 42.6 +1.1**
TOZ Tahuroa Road 52.81 136 P **P** **23 09 43.5 +1.7**
MRNZ Matariki Terra 52.94 142 P **P** **23 09 42.7 -0.1**
WHZ Wether Hill Ro 52.96 149 P **P** **23 09 44.3 +1.5**
UGL Uglegorsk 53.05 9 ⇓ *i*P **P** **23 09 43.8 +0.4**
UGL *e*S **S** **23 17 14.0 +2.8**
UGL *e*SS **SS** **23 20 48.0 -3.0**
UGL pmax pmax
UGL comp=Z,200nm,1.2s smax smax
UGL comp=N,4μm,21.0s smax smax
UGL comp=E,2μm,21.0s MLR MLR
UGL comp=E,1μm,21.0s MLR MLR
UGL comp=N,2μm,20.0s MLR MLR
UGL comp=Z,2μm,14.0s
LBZ Lake Benmore 53.20 146 P **P** **23 09 45.2 +0.5**
NNZ Nelson 53.23 141 P **P** **23 09 44.8 -0.1**
THZ Tophouse 53.23 142 IAMs_20 IAMs_20 23 31 57.6
THZ Tophouse 53.23 142 P **P** **23 09 45.4 +0.4**
RPZ Rata Peaks 53.27 145 IAMs_20 IAMs_20 23 33 36.7
comp=Z,4μm,19.0s
DUWZ D'Urville Isla 53.34 140 P **P** **23 09 46.9 +1.1**
HIA Hailar 53.41 350 P **P** **23 09 46.1 0.0**
HIA Hailar 53.41 350 IAMs_20 IAMs_20 23 31 01.1
comp=Z,3μm,22.0s
HIA Hailar 53.41 350 P **P** **23 09 46.8 +0.7**
HIA Hailar 53.41 350 *d* *i*P **P** **23 09 46.2 +0.1**
HIA pmax pmax
HIA comp=Z,43nm,1.1s
LTZ Lake Taylor 53.43 143 P **P** **23 09 48.5 +2.1**
HEH HeiHe 53.53 357 *e*P **P** **23 09 46.1 -0.8**
HEH sP **pP** **23 09 54.1 -2.3**
HEH S **S** **23 17 11.4 -6.3**
HEH pmax pmax
HEH comp=Z,190nm,1.5s pmax pmax
HEH comp=Z,470nm,3.8s LR LR
HEH comp=Z,1μm,21.3s LR LR
HEH comp=Z,1μm,18.0s LR LR
HEH comp=Z,3μm,21.5s
WTVZ West Tongariro 53.55 138 P **P** **23 09 49.2 +1.7**
OMRZ Omania 53.59 136 P **P** **23 09 49.6 +1.9**
FWVZ Far West T-bar 53.60 138 P **P** **23 09 49.3 +1.3**
NTVZ North Tongarir 53.60 138 P **P** **23 09 49.4 +1.5**
OXZ Oxford 53.62 144 IAMs_20 IAMs_20 23 32 54.7
comp=Z,4μm,20.0s
OXZ Oxford 53.62 144 P **P** **23 09 49.0 +1.3**
SNVZ South Ngauruho 53.62 138 P **P** **23 09 49.7 +1.6**
OTVZ Oturere 53.63 138 P **P** **23 09 49.9 +1.8**
TMVZ Te Maari 53.63 138 P **P** **23 09 49.7 +1.6**
ETVZ East Tongariro 53.65 138 P **P** **23 09 50.1 +1.9**
WNVZ Wahianoa 53.67 138 P **P** **23 09 49.8 +1.4**
HILR Hailar Array B 53.69 351 P **P** **23 09 48.5 +0.4**
comp=Z,60nm,0.9s,baz=158,slow=12,SNR=56
HILR PcP **PcP** **23 10 54.4 +0.3**
comp=Z,29nm,0.9s,baz=145,slow=8.3,SNR=4.0
HILR LR LR 23 31 54.8
comp=Z,3μm,21.9s,baz=120,slow=35
comp=Z,60nm,0.9s
TUWZ Tuamarina 53.70 141 P **P** **23 09 49.3 +1.0**
TCW Tory Channel 53.79 141 P **P** **23 09 49.1 +0.1**
MOVZ Moawhango 53.81 138 P **P** **23 09 49.9 +0.6**
ODZ Otahua Downs 53.86 146 P **P** **23 09 50.9 +1.4**
VJD Vijayawada 53.93 293 *e*P **P** **23 09 46.4 -4.0**
VJD IAmb IAmb 23 09 58.2
VJD comp=Z,95nm,1.3s
VJD *e*S **S** **23 17 22.7 -1.6**
KHZ Kahutara 53.99 142 P **P** **23 09 50.3 -0.2**
GVZ Greta Valley S 54.00 143 P **P** **23 09 51.5 +0.9**
GRNR Gornyy 54.10 4 ⇓ *i*P **P** **23 09 51.5 +0.4**
GRNR pmax pmax
GRNR comp=N,10.0nm,1.2s pmax pmax
GRNR comp=Z,30nm,1.1s MLR MLR
GRNR comp=E,720nm,16.0s MLR MLR
GRNR comp=N,470nm,19.0s MLR MLR
GRNR comp=Z,800nm,15.0s
SNZO South Karori 54.11 140 P **P** **23 09 50.2 -1.1**
SNZO IAmb IAmb 23 09 51.5
SNZO comp=Z,180nm,1.0s
SNZO South Karori 54.11 140 P **P** **23 09 51.0 -0.4**
OGWZ Otaki Gorge 54.15 140 P **P** **23 09 51.7 0.0**
URZ Urewera 54.18 136 LR LR 23 34 08.1
comp=Z,2μm,19.2s,baz=306,slow=37
URZ Urewera 54.18 136 P **P** **23 09 51.4 -0.5**
BKZ Black Stump Fm 54.19 137 P **P** **23 09 51.7 -0.4**
BKZ Black Stump Fm 54.19 137 P **P** **23 09 52.4 +0.3**
RTZ Ruatahuna 54.26 136 IAMs_20 IAMs_20 23 34 27.3
comp=Z,2μm,20.0s
RTZ Ruatahuna 54.26 136 P **P** **23 09 53.0 +0.4**
KWHZ Kaweka Forest 54.27 138 P **P** **23 09 53.4 +0.8**
BHW Baring Head 54.27 140 IAMs_20 IAMs_20 23 32 19.7
comp=Z,4μm,22.0s
TSZ Takapari Road 54.28 138 P **P** **23 09 52.9 +0.2**
MRZ Mangatainoka R 54.34 139 IAMs_20 IAMs_20 23 33 38.4
comp=Z,4μm,20.0s
MRZ Mangatainoka R 54.34 139 P **P** **23 09 52.7 -0.4**
KRHZ Kereru 54.34 138 P **P** **23 09 53.5 +0.4**
NMHZ Naumai 54.37 137 P **P** **23 09 54.7 +1.3**
HAZ Te Kaha 54.41 135 P **P** **23 09 54.6 +1.0**
HOWZ Holdsworth Sta 54.42 140 P **P** **23 09 53.2 -0.4**
RAHZ Arahi 54.47 137 P **P** **23 09 54.9 +0.8**
RAGZ Rawiri 54.50 136 P **P** **23 09 55.2 +0.8**
MWZ Matawai 54.50 136 P **P** **23 09 54.5 +0.2**
SNGZ Shannon Statio 54.58 136 P **P** **23 09 55.5 +0.6**
MXZ Matakaoa Point 54.69 135 IAMs_20 IAMs_20 23 33 14.9
comp=Z,4μm,21.0s
BFZ Birch Farm 54.78 139 P **P** **23 09 55.8 -0.5**
BFZ IAmb IAmb 23 09 58.1
BFZ comp=Z,113nm,0.8s IAMs_20 IAMs_20 23 32 01.2
BFZ comp=Z,4μm,21.0s
BFZ Birch Farm 54.78 139 P **P** **23 09 56.0 -0.3**
BFZ Birch Farm 54.78 139 P **P** **23 09 55.4 -0.9**
TYV Tymovskoe 54.88 9 *e*P **P** **23 09 57.4 +0.7**
TYV *e*S **S** **23 17 39.5 +3.6**
TYV pmax pmax
TYV comp=Z,800nm,3.3s pmax pmax
TYV comp=Z,87nm,1.2s smax smax
TYV comp=N,600nm,8.5s smax smax
TYV comp=E,400nm,8.5s
PUZ Puketiti 54.89 135 P **P** **23 09 57.3 +0.2**
KNZ Kokohu 54.92 137 P **P** **23 09 57.3 0.0**
SALM Salem 55.05 287 *e*P P 23 09 53.7 -5.0
SALM IAmb IAmb 23 10 00.1
SALM comp=Z,96nm,1.3s
SALM *e*S **S** **23 17 38.4 -1.1**
ULN Ulaanbaatar 55.32 340 P **P** **23 10 01.3 +1.1**
ULN Ulaanbaatar 55.32 340 P **P** **23 10 01.3 +1.1**
ULN pmax pmax
ULN comp=Z,439nm,1.4s MLR MLR
ULN comp=Z,1μm,20.0s
ULN Ulaanbaatar 55.32 340 P **P** **23 10 01.5 +1.3**
ULN Ulaanbaatar 55.32 340 P **P** **23 10 00.9 +0.7**

SONM Songino Array 55.52 340 P **P** **23 10 02.5 +0.9**
comp=Z,84nm,1.1s,baz=161,slow=5.4,SNR=227
SONM PcP **PcP** **23 11 01.4 +0.1**
comp=Z,24nm,0.9s,baz=141,slow=4.8,SNR=5.3
SONM LR LR 23 35 14.4
comp=Z,1μm,21.9s,baz=171,slow=38
SONM PKPPKP **P'P'df** **23 40 05.6 +1.4**
comp=Z,1.0nm,1.0s,baz=219,slow=1.9,SNR=4.1
SONM P4KPbc 23 47 17.0
comp=Z,0.7nm,1.0s,baz=163,slow=5.7,SNR=4.0
comp=Z,84nm,1.1s
SONM Songino Array 55.52 340 P **P** **23 10 02.0 +0.4**
SONM IAmb IAmb 23 10 04.2
comp=Z,280nm,1.4s
HYB Hyderabad 56.11 293 *e*P **P** **23 10 06.3 0.0**
HYB *e*PP **PP** **23 12 12.0 +0.4**
AFI Afiamalu 56.97 104 P **P** **23 10 12.1 -0.3**
AFI Afiamalu 56.97 104 P **P** **23 10 14.2 +1.7**
AFI Afiamalu 56.97 104 P **P** **23 10 12.1 -0.3**
AFI pmax pmax
comp=Z,483nm,1.3s
ZEA Zeya 57.02 357 *e*P **P** **23 10 12.1 +0.1**
ZEA *e* 23 18 26.3
ZEA pmax pmax
comp=Z,300nm,1.8s
ZEA pmax pmax
comp=N,30nm,1.4s
ZEA pmax pmax
comp=Z,70nm,1.5s
ZEA MLR MLR
comp=N,700nm,20.0s
ZEA MLR MLR
comp=Z,1μm,18.0s
CIT Chita 57.25 347 *e*P **P** **23 10 14.4 +0.7**
CIT *e* 23 10 23.6
CIT *e* 23 11 09.4
CIT *e*S **S** **23 18 09.2 +1.7**
CIT pmax pmax
comp=Z,500nm,2.0s
MIDW Midway 58.35 54 P **P** **23 10 21.2 -0.7**
KAAM Kaadhehdhoo 58.55 273 P **P** **23 10 22.9 -0.6**
KAAM IAmb IAmb 23 10 51.9
comp=Z,180nm,1.1s
KAAM Kaadhehdhoo 58.55 273 P **P** **23 10 25.0 +1.5**
ZAK Zakamensk 58.77 339 *e*P **P** **23 10 24.4 -0.1**
ZAK pmax pmax
comp=Z,182nm,2.0s
DGAR Diego Garcia 58.83 263 P **P** **23 10 26.1 +0.6**
DGAR Diego Garcia 58.83 263 P **P** **23 10 26.1 +0.6**
DGAR pmax pmax
comp=Z,304nm,0.7s
BHPL Bhopal 58.90 300 *e*P **P** **23 10 22.0 -3.8**
BHPL IAmb IAmb 23 10 26.9
comp=Z,91nm,1.0s
HMDM Hanimaadhoo 59.03 280 P **P** **23 10 27.2 +0.4**
HMDM IAmb IAmb 23 10 56.2
comp=Z,180nm,1.3s
HMDM IAMs_20 IAMs_20 23 37 46.1
comp=Z,2μm,21.0s
TLY Talaya 59.73 340 P **P** **23 10 31.4 +0.4**
TLY Talaya 59.73 340 *ce*P **P** **23 10 32.1 +1.0**
TLY pmax pmax
comp=Z,123nm,1.7s
TLY Talaya 59.73 340 P **P** **23 10 32.3 +1.3**
TLY S **S** **23 18 40.8 +1.0**
IRK Irkutsk 60.01 341 *e*P **P** **23 10 33.4 +0.5**
IRK *e*S **S** **23 18 45.4 +2.1**
IRK pmax pmax
comp=N,393nm,2.0s
PEA0B Petropavlovsk- 60.46 18 P **P** **23 10 36.4 +0.5**
PEA0B Petropavlovsk- 60.46 18 P **P** **23 10 36.4 +0.5**
PEA0B pmax pmax
comp=Z,267nm,1.2s
PETK Petropavlovsk- 60.46 18 P **P** **23 10 36.4 +0.5**
comp=Z,89nm,0.9s,baz=189,slow=4.5,SNR=45
PETK LR LR 23 33 46.7
comp=Z,859nm,22.0s,baz=194,slow=33
comp=Z,89nm,0.9s
PETK Petropavlovsk- 60.46 18 P **P** **23 10 36.1 +0.2**
MOY Mondy 60.65 339 *e*P **P** **23 10 38.4 +1.0**
MOY pmax pmax
comp=Z,387nm,2.3s
PET Petropavlovsk 60.68 18 P **P** **23 10 36.8 -0.6**
PET IAmb IAmb 23 10 39.1
comp=Z,236nm,1.2s
PET Petropavlovsk 60.68 18 P **P** **23 10 36.3 -1.1**
PET Petropavlovsk 60.68 18 *e*P **P** **23 10 37.5 +0.1**
PET *e*S **S** **23 18 53.6 +1.8**
PET pmax pmax
comp=Z,193nm,1.1s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,800nm,17.0s
CTZ Chatham Island 60.89 139 P **P** **23 10 39.8 +0.7**
CTZ IAmb IAmb 23 10 40.9
comp=Z,110nm,0.9s
CTZ Chatham Island 60.89 139 P **P** **23 10 39.9 +0.7**
CTZ Chatham Island 60.89 139 P **P** **23 10 39.9 +0.7**
KNGR Kungurtug, Tuv 61.14 336 *d*iP **P** **23 10 41.9 +1.1**
KNGR pmax pmax
comp=Z,87nm,1.5s
WMQ Urumqi 61.21 325 *e*P **P** **23 10 42.8 +1.4**
WMQ pmax pmax
comp=Z,470nm,1.3s
WMQ pmax pmax
comp=Z,1μm,3.6s
WMQ LR LR
comp=Z,1μm,24.2s
WMQ LR LR
comp=Z,1μm,17.3s
WMQ LR LR
comp=Z,1μm,21.3s
JOHN Johnston Islan 61.60 69 P **P** **23 10 44.1 -0.2**
SMLA Simla 61.98 308 *e*P **P** **23 10 43.2 -3.5**
SMLA IAmb IAmb 23 10 48.3
comp=Z,99nm,1.4s
SMLA *e*S **S** **23 19 07.7 -1.5**
DHRM DHARAMSHALA 63.11 309 *e*P P 23 10 49.5 -5.0
DHRM IAmb IAmb 23 10 55.2
comp=Z,98nm,1.9s
DHRM *e*S **S** **23 19 22.2 -1.6**
CASY Casey 64.48 189 P **P** **23 11 03.1 +0.5**
CASY Casey 64.48 189 IAMs_20 IAMs_20 23 36 47.6
comp=Z,3μm,22.0s
MA2 Magadan 64.59 11 LR LR 23 37 43.8
comp=Z,944nm,21.7s,baz=204,slow=35
MA2 Magadan 64.59 11 P **P** **23 11 03.5 +0.1**
MA2 IAmb IAmb 23 11 05.3
comp=Z,156nm,1.1s
MA2 Magadan 64.59 11 P **P** **23 11 03.6 +0.2**
MA2 Magadan 64.59 11 *ce*P **P** **23 11 03.6 +0.2**
MA2 pmax pmax
comp=Z,120nm,1.1s
MA2 Magadan 64.59 11 P **P** **23 11 03.7 +0.3**
comp=Z,2μmcomp=Z,166nm,1.4s
WUS Wushi 64.97 319 **P** **23 11 07.4 +0.9**
ZSN Zaisan 64.99 327 *d*iP **P** **23 11 07.3 +1.0**
ZSN *e*S **S** **23 19 50.7 +4.5**
ZSN pmax pmax
comp=Z,66nm,1.3s
ZSN Zaisan 64.99 327 ⇓*i*P **P** **23 11 07.3 +1.0**
comp=Z,66nm,1.3s
ZSN *e*S **S** **23 19 50.8 +4.5**
DGZ Jazzator, Alta 65.06 330 *d*iP **P** **23 11 07.7 +0.8**
DGZ pmax pmax
comp=Z,170nm,1.3s
DGZ MLR MLR
comp=Z,1μm,21.0s
YAK Yakutsk 65.24 359 P **P** **23 11 07.8 +0.3**
comp=Z,273nm,0.9s,baz=147,slow=0.2,SNR=165
YAK LR LR 23 38 50.6
comp=Z,1μm,21.5s,baz=160,slow=35
comp=Z,273nm,0.9s
YAK Yakutsk 65.24 359 P **P** **23 11 07.9 +0.4**
YAK Yakutsk 65.24 359 IAMs_20 IAMs_20 23 39 13.7
comp=Z,2μm,20.0s
YAK Yakutsk 65.24 359 *ce*P **P** **23 11 07.8 +0.3**
YAK pmax pmax
comp=Z,452nm,1.0s
SHLS Shalkode 65.79 321 *d*iP **P** **23 11 10.9 -0.8**
SHLS *e*S **S** **23 19 57.2 +0.8**
SHLS pmax pmax
comp=Z,100nm,1.3s
SHLS Shalkode 65.79 321 ⇓*i*P **P** **23 11 11.0 -0.8**
comp=Z,100nm,1.3s
SHLS *e*S **S** **23 19 57.2 +0.8**
NIL Nilore 66.01 309 P **P** **23 11 13.2 0.0**
NIL IAmb IAmb 23 11 14.9
comp=Z,210nm,1.4s
NIL Nilore 66.01 309 P **P** **23 11 13.2 0.0**
NIL pmax pmax
comp=Z,211nm,1.4s
MK31 Makanchi Array 66.04 325 *ce*P **P** **23 11 13.8 +0.7**
MKAR Makanchi Array 66.04 325 P **P** **23 11 14.1 +1.0**
comp=Z,180nm,1.0s,baz=123,slow=7.4,SNR=621
MKAR PKPPKP **P'P'df** **23 39 51.1 +2.7**
comp=Z,2.4nm,1.0s,baz=307,slow=2.4,SNR=6.6
MKAR LR LR 23 42 53.7
comp=Z,1μm,19.5s,baz=110,slow=39
MKAR P4KPbc 23 47 59.4
comp=Z,0.8nm,0.9s,baz=134,slow=5.2,SNR=6.9
comp=Z,180nm,1.0s
MKAR Makanchi Array 66.04 325 P **P** **23 11 13.8 +0.6**
UZB Uzunbulak 66.07 321 *d*iP **P** **23 11 14.4 +0.9**
UZB pmax pmax
comp=Z,139nm,1.2s
UZB Uzunbulak 66.07 321 ⇓*i*P **P** **23 11 14.4 +0.9**
comp=Z,139nm,1.2s
PRZ Przheval'sk 66.14 320 P **P** **23 11 15.4 +1.4**
PRZ Przheval'sk 66.14 320 P **P** **23 11 15.4 +1.4**
PRZ pmax pmax
comp=Z,496nm,1.1s
TARG Taragay, Kyrgy 66.16 319 P **P** **23 11 15.5 +1.0**
TARG IAmb IAmb 23 11 26.8
comp=Z,178nm,1.1s
TARG Taragay, Kyrgy 66.16 319 P **P** **23 11 15.5 +1.0**
TARG pmax pmax
comp=Z,179nm,1.1s
MAKZ Makanchi 66.23 325 P **P** **23 11 14.8 +0.4**
MAKZ Makanchi 66.23 325 ⇑P **P** **23 11 14.9 +0.6**
SATY Saty 66.41 320 *d*iP **P** **23 11 16.7 +1.0**
SATY *e*S **S** **23 20 07.8 +3.8**
SATY pmax pmax
comp=Z,99nm,0.9s
SATY Saty 66.41 320 ⇓*i*P **P** **23 11 16.7 +1.0**
comp=Z,100nm,0.9s
SATY *e*S **S** **23 20 07.8 +3.8**
SHEM Shemya Is, Ala 66.42 27 LR LR 23 37 53.9
comp=Z,803nm,20.3s,baz=250,slow=34
KSH2 Kashi 66.51 315 P **P** **23 11 17.4 +1.0**
KSH2 pP pP 23 11 23.4 -2.7
KSH2 S **S** **23 20 01.9 -3.4**
KSH2 pmax pmax
comp=Z,170nm,1.1s
KSH2 pmax pmax
comp=Z,750nm,6.2s
KSH2 LR LR
comp=Z,700nm,13.4s
KSH2 LR LR
comp=Z,780nm,10.3s
KSH2 LR LR
comp=Z,1μm,21.6s
NRN Naryn 67.22 318 P **P** **23 11 21.9 +0.8**
NRN IAmb IAmb 23 11 23.2
comp=Z,159nm,1.0s
NRN Naryn 67.22 318 P **P** **23 11 22.0 +0.8**
NRN pmax pmax
comp=Z,159nm,1.0s
MDOK Medeo 67.33 320 *e*P **P** **23 11 22.7 +1.1**
MDOK *e*S **S** **23 20 19.0 +3.9**
MDOK Medeo 67.33 320 *e*P **P** **23 11 22.8 +1.1**
MDOK *e*S **S** **23 20 19.0 +3.9**
TNSS Tian-Shan 67.34 320 *e*P **P** **23 11 23.0 +1.0**
TNSS Tian-Shan 67.34 320 *e*P **P** **23 11 23.0 +1.0**
TDK Taldyqorghan 67.38 322 *d*iP **P** **23 11 22.7 +1.0**
TDK Taldyqorghan 67.38 322 ⇓*i*P **P** **23 11 22.8 +1.0**
ULHL Ulahol 67.43 319 P **P** **23 11 23.8 +1.5**
SNR=8.1
AAA Alma-Ata 67.44 320 *e*P **P** **23 11 23.3 +1.1**
AAA Alma-Ata 67.44 320 *e*P **P** **23 11 23.4 +1.1**
BOOM Boomskoye usch 67.74 319 P **P** **23 11 25.1 +0.9**
BOOM Boomskoye usch 67.74 319 P **P** **23 11 25.1 +0.9**
BOOM pmax pmax
comp=Z,295nm,1.1s
SEY Seymchan 68.01 10 LR LR 23 39 31.5
comp=Z,1μm,21.1s,baz=177,slow=34
SEY Seymchan 68.01 10 *ce*P **P** **23 11 26.0 +0.8**
SEY pmax pmax
comp=Z,451nm,1.3s
TKM2 Tokmak 2 68.16 319 P **P** **23 11 27.4 +0.5**
SNR=191
ROCAM **Rodrigues Isla 68.24 250** P **P** **23 11 28.1 +0.6**
KBK Karagaybulak 68.47 319 P **P** **23 11 30.1 +1.3**
SNR=80
UCH Uchtor 68.57 318 P **P** **23 11 31.4 +1.6**
SNR=172
FRU1 Bishkek 68.75 319 P **P** **23 11 31.4 +1.0**
FRU1 IAmb IAmb 23 11 32.8
comp=Z,104nm,1.1s
FRU1 Bishkek 68.75 319 P **P** **23 11 31.4 +1.0**
CHMS Chumysh 68.75 319 P **P** **23 11 31.3 +0.9**
SNR=85
AAK Ala-Archa 68.76 318 LR LR 23 44 39.8
comp=Z,891nm,21.1s,baz=104,slow=39
AAK Ala-Archa 68.76 318 P **P** **23 11 32.1 +1.4**
SNR=136
AAK Ala-Archa 68.76 318 P **P** **23 11 31.7 +1.0**
AAK IAmb IAmb 23 11 33.3
comp=Z,206nm,1.1s
AAK Ala-Archa 68.76 318 *i*P **P** **23 11 32.0 +1.4**
SNR=144
AAK Ala-Archa 68.76 318 *de*P **P** **23 11 31.8 +1.2**
AAK pmax pmax
comp=Z,133nm,1.1s
AAK Ala-Archa 68.76 318 P **P** **23 11 32.0 +1.4**
RAR Rarotonga 69.01 111 LR LR 23 42 53.8
comp=Z,352nm,18.6s,baz=274,slow=37
ZAA0 Zalesovo Array 69.02 333 P **P** **23 11 31.5 -0.2**
ZALV Zalesovo Beam 69.02 333 P **P** **23 11 31.6 -0.2**
comp=Z,92nm,1.0s,baz=108,slow=4.8,SNR=274
ZALV PKPPKP **P'P'df** **23 39 44.1 +1.3**
comp=Z,4.8nm,1.0s,baz=308,slow=3.6,SNR=8.0
ZALV LR LR 23 44 31.8
comp=Z,544nm,19.5s,baz=128,slow=38
ZALV P4KPbc 23 48 11.0
comp=Z,0.7nm,0.8s,baz=114,slow=1.8,SNR=4.6
comp=Z,92nm,1.0s
ZALV Zalesovo Beam 69.02 333 P **P** **23 11 31.5 -0.3**
ZALV Zalesovo Beam 69.02 333 *i*P **P** **23 11 31.6 -0.2**
ZALV pmax pmax
comp=Z,94nm,1.0s
SGDS Sogindy 69.03 319 *e*P **P** **23 11 33.0 +0.8**
USP Osgenovka 69.04 319 P **P** **23 11 32.9 +0.8**
SNR=243
ARSB Arslanbob 69.22 317 P **P** **23 11 34.3 +0.8**
ARSB Arslanbob 69.22 317 P **P** **23 11 34.3 +0.8**
ARSB pmax pmax
comp=Z,452nm,1.1s
EKS2 Erkin-Say 69.25 318 P **P** **23 11 35.1 +1.6**
SNR=123
DRK Karamyk 69.31 314 P **P** **23 11 35.2 +1.0**
DRK Karamyk 69.31 314 P **P** **23 11 35.2 +1.0**
DRK pmax pmax
comp=Z,227nm,1.1s
KBL Kabul 69.59 309 P **P** **23 11 35.9 -0.1**
KBL IAmb IAmb 23 11 37.5
comp=Z,93nm,1.0s
KBL Kabul 69.59 309 P **P** **23 11 35.9 -0.1**
KBL pmax pmax
comp=Z,93nm,1.0s
KBL Kabul 69.59 309 P **P** **23 11 36.3 +0.3**
SNR=47
KBL S **S** **23 20 40.6 -1.9**
KIWB Kanaga Island 70.10 31 P **P** **23 11 38.9 +0.4**
KURBB **Kurchatov Arra 70.22 327** P **P** **23 11 39.9 +0.7**
comp=Z,375nm,1.0s,baz=124,slow=5.5,SNR=1396
KURBB PKPPKP **P'P'df** **23 39 40.5 -0.6**
comp=Z,4.4nm,1.0s,baz=293,slow=3.6,SNR=11
comp=Z,375nm,1.0s
BTK Batken 70.23 315 P **P** **23 11 40.2 +0.6**
BTK Batken 70.23 315 P **P** **23 11 40.2 +0.6**
BTK pmax pmax
comp=Z,509nm,1.6s
KURK Kurchatov 70.23 327 P **P** **23 11 40.0 +0.7**
KURK Kurchatov 70.23 327 *de*P **P** **23 11 39.8 +0.6**
KURK pmax pmax
comp=Z,889nm,1.3s
KURK Kurchatov 70.23 327 P **P** **23 11 40.2 +0.9**
KURK S **S** **23 20 48.4 -0.4**
ADK Adak 70.36 31 P **P** **23 11 40.4 +0.4**
ADK Adak 70.36 31 P **P** **23 11 40.7 +0.7**
ADK Adak 70.36 31 P **P** **23 11 40.4 +0.4**
ADK pmax pmax
comp=Z,492nm,1.5s
CHGR Chuyangaron 70.91 313 P **P** **23 11 44.1 +0.3**
CHGR Chuyangaron 70.91 313 P **P** **23 11 44.1 +0.3**
CHGR pmax pmax
comp=Z,371nm,1.2s
DZA Taraz 70.98 318 *e*P **P** **23 11 45.0 +0.9**
DZA pmax pmax
comp=Z,99nm,1.0s
DZA Taraz 70.98 318 *e*P **P** **23 11 45.0 +0.9**
comp=Z,99nm,1.0s
XMAS Kiritimati 71.28 87 P **P** **23 11 47.3 +0.9**
XMAS Kiritimati 71.28 87 P **P** **23 11 48.8 +2.4**
IUG Iuzhnay 71.57 317 *d*iP **P** **23 11 48.8 +1.0**
IUG pmax pmax
comp=Z,82nm,1.0s
IUG Iuzhnay 71.57 317 ⇓*i*P **P** **23 11 48.8 +1.0**
comp=Z,82nm,1.0s
KK31 Karatay Array 71.62 318 P **P** **23 11 48.1 +0.2**
KK31 Karatay Array 71.62 318 P **P** **23 11 48.1 +0.2**
KK31 pmax pmax
comp=Z,313nm,1.1s
KKAR Karatay Array 71.62 318 P **P** **23 11 48.6 +0.7**
KKAR Karatay Array 71.62 318 P **P** **23 11 48.6 +0.7**
ATKA Atka Island 71.83 32 P **P** **23 11 49.1 +0.1**
ATKA Atka Island 71.83 32 P **P** **23 11 49.0 +0.1**
CHM Chimkent 71.93 317 *d*iP **P** **23 11 51.0 +1.2**
CHM pmax pmax
comp=Z,101nm,0.8s
CHM Chimkent 71.93 317 ⇓*i*P **P** **23 11 51.0 +1.2**
comp=Z,101nm,0.8s
HON Honolulu 73.22 67 P **P** **23 11 58.3 +0.5**
HON Honolulu 73.22 67 P **P** **23 11 58.3 +0.5**
HON pmax pmax
comp=Z,1μm,1.0s
KIP Kipapa 73.22 67 P **P** **23 11 58.9 +1.0**
KIP Kipapa 73.22 67 P **P** **23 11 59.8 +1.9**
KIP Kipapa 73.22 67 *c*iP **P** **23 12 00.1 +2.2**
NGCH Negor - Chabah 73.78 297 P **P** **23 12 02.1 +1.1**
JLN Jalan Bani Buh 74.72 294 P **P** **23 12 07.7 +1.1**
SNR=14
JLN S **S** **23 21 40.7 -0.5**
TIXI Tiksi 74.91 359 LR LR 23 44 56.9
comp=Z,2μm,21.5s,baz=180,slow=36
TIXI Tiksi 74.91 359 P **P** **23 12 06.1 -0.6**
TIXI IAmb IAmb 23 12 22.8
comp=Z,304nm,1.6s
TIXI Tiksi 74.91 359 *ce*P **P** **23 12 05.7 -1.0**
TIXI pmax pmax
comp=Z,77nm,1.3s
HRA Herat 74.92 307 P **P** **23 12 08.3 +0.5**
HRA IAmb IAmb 23 12 09.9
comp=Z,157nm,1.2s
MHA Mahukona 74.96 68 P **P** **23 12 09.2 +1.2**
MHA Mahukona 74.96 68 P **P** **23 12 09.2 +1.2**
NIKH Nikolski High 75.05 33 P **P** **23 12 08.0 +0.1**
NIKH Nikolski High 75.05 33 P **P** **23 12 08.4 +0.5**
baz=243
HPAH Hawaii Prepara 75.12 68 P **P** **23 12 09.1 0.0**
HPAH IAmb IAmb 23 12 11.6
comp=Z,249nm,1.0s
WBK Wadi Bani Khal 75.20 294 P **P** **23 12 10.7 +1.2**
SNR=16
WBK S **S** **23 21 45.9 -0.8**
POHA Pohakuloa 75.23 69 P **P** **23 12 10.6 +0.7**
POHA Pohakuloa 75.23 69 P **P** **23 12 11.5 +1.6**
BILL Bilibino 75.28 13 P **P** **23 12 08.7 -0.2**
BILL IAMs_20 IAMs_20 23 42 22.7
comp=Z,1μm,21.0s
BILL Bilibino 75.28 13 *ce*P **P** **23 12 08.5 -0.5**
BILL pmax pmax
comp=Z,19nm,1.1s
BILL MLR MLR
comp=Z,807nm,20.0s
MLH Mauna Loa 75.33 69 P **P** **23 12 11.1 +0.6**
PWH Poliokeawe Pal 75.45 69 P **P** **23 12 11.2 +0.3**
RER Riviere de l'E 75.45 249 P **P** **23 12 12.1 +1.1**
KNHH Kane Nui o Ham 75.51 69 P **P** **23 12 11.9 +0.5**
WSAR Wadi Sarin 75.62 295 P **P** **23 12 13.0 +1.2**
SNR=16
HIL Hilo 75.64 69 P **P** **23 12 12.8 +0.9**
HIL IAmb IAmb 23 12 15.2
comp=Z,440nm,1.2s
MSEY Mahe Island 75.76 266 P **P** **23 12 13.7 +0.8**
MSEY IAmb IAmb 23 12 33.5
comp=Z,170nm,1.4s
MSEY Mahe Island 75.76 266 IAMs_20 IAMs_20 23 42 56.4
comp=Z,2μm,21.0s
MSEY Mahe Island 75.76 266 P **P** **23 12 13.6 +0.8**
MSEY Mahe Island 75.76 266 P **P** **23 12 13.7 +0.8**
MSEY pmax pmax
comp=Z,171nm,1.5s
MSEY MLR MLR
comp=Z,2μm,21.0s
MSEY Mahe Island 75.76 266 P **P** **23 12 14.9 +2.1**
BVAR Borovoye Array 75.81 327 P **P** **23 12 12.6 +0.3**
comp=Z,273nm,0.9s,baz=116,slow=6.8,SNR=668
BVAR LR LR 23 48 23.5
comp=Z,536nm,20.0s,baz=109,slow=38
comp=Z,273nm,0.9s
MHTO MHTO 75.85 292 P **P** **23 12 14.1 +0.9**
SNR=33
MHTO S **S** **23 21 53.1 -0.7**
VNDA Vanda 75.85 173 P **P** **23 12 13.2 +1.0**
comp=Z,38nm,0.9s,baz=307,slow=6.5,SNR=18
VNDA LR LR 23 45 28.7
comp=Z,1μm,19.9s,baz=332,slow=36
comp=Z,38nm,0.9s
VNDA Vanda 75.85 173 P **P** **23 12 13.0 +0.9**
BORK Borovoye 75.86 327 P **P** **23 12 13.1 +0.5**
BORK Borovoye 75.86 327 *ce*P **P** **23 12 13.2 +0.7**
BORK pmax pmax
comp=Z,665nm,1.3s
JMDO Jabal Madar 75.95 294 P **P** **23 12 14.8 +1.1**
SNR=31
JMDO S **S** **23 21 53.8 -1.2**
DQM DQM 76.08 291 P **P** **23 12 15.6 +1.1**
SNR=12
DQM S **S** **23 21 55.2 -1.2**
SMDO Samad 76.12 295 P **P** **23 12 15.9 +1.1**
SNR=16
BIDO Bidbid 76.12 295 P **P** **23 12 16.3 +1.6**
SNR=39
SPIA Saint Paul Isl 76.32 28 P **P** **23 12 15.9 +0.9**
baz=241
P08K Saint George I 76.38 29 P **P** **23 12 16.3 +0.9**
baz=242
UNV Unalaska Valle 76.70 33 P **P** **23 12 17.9 +0.7**
UNV IAmb IAmb 23 12 19.0
comp=Z,244nm,1.2s
UNV Unalaska Valle 76.70 33 P **P** **23 12 17.9 +0.7**
UNV Unalaska Valle 76.70 33 P **P** **23 12 17.9 +0.7**
baz=245,SNR=9.0
SBA Scott Base 76.72 173 P **P** **23 12 18.6 +1.6**
SBA Scott Base 76.72 173 P **P** **23 12 18.6 +1.6**
SBA pmax pmax
comp=Z,584nm,1.8s
BSY Bisya 76.84 294 P **P** **23 12 20.1 +1.3**
SNR=18
HOQ Hoqain 76.87 295 P **P** **23 12 20.6 +1.6**
SNR=46
HOQ S **S** **23 22 05.4 +0.3**
AKUT Akutan 77.21 32 P **P** **23 12 21.4 +1.3**
SHAO Shalim 77.60 289 *i*P **P** **23 12 23.7 +0.6**
SNR=11
SHAO Shalim 77.60 289 P **P** **23 12 24.3 +1.2**
SNR=9.8
SOHO SOHO 77.67 295 *i*P **P** **23 12 24.2 +0.8**
SNR=103
SOHO SOHO 77.67 295 P **P** **23 12 24.5 +1.2**
SOHO S **S** **23 22 13.0 -0.6**
MDH Madha 78.07 297 *i*P **P** **23 12 25.1 -0.5**
SNR=11
MDH Madha 78.07 297 P **P** **23 12 28.0 +2.4**
SNR=8.0
MDH S **S** **23 22 16.4 -1.4**
UOSS Minazif 78.09 296 P **P** **23 12 25.9 +0.2**
UOSS IAmb IAmb 23 12 27.5
comp=Z,140nm,1.1s
UOSS Minazif 78.09 296 *i*P **P** **23 12 26.0 +0.2**
SNR=39
UOSS Minazif 78.09 296 P **P** **23 12 26.9 +1.1**

UOSS S **S** **23 22 17.0 -1.2**
HATD Hatta, Dubai **78.14 296** *i* P **P** **23 12 26.9 +0.9**
SNR=57
HATD Hatta, Dubai **78.14 296** P **P** **23 12 27.6 +1.6**
SNR=39
HATD S **S** **23 22 18.8 +0.1**
BANOM Banah **78.17 297** *i* P **P** **23 12 27.1 +0.9**
SNR=54
BANOM Banah **78.17 297** P **P** **23 12 28.0 +1.8**
ASHO Ashiyiah **78.18 296** *i* P **P** **23 12 27.2 +0.9**
SNR=44
ASHO Ashiyiah **78.18 296** P **P** **23 12 27.8 +1.5**
SNR=33
MSFE Esma-Masafi **78.20 297** *i* P **P** **23 12 27.3 +0.9**
SNR=75
DMTO DMTO **78.20 289** P **P** **23 12 27.4 +1.0**
SNR=8.0
MASF Masafi **78.20 297** P **P** **23 12 28.2 +1.8**
SNR=34
MASF S **S** **23 22 18.8 -0.7**
SHME Shamm **78.33 297** *i* P **P** **23 12 28.0 +1.0**
SNR=12
SHME Shamm **78.33 297** P **P** **23 12 28.8 +1.8**
SNR=16
SHME S **S** **23 22 20.7 0.0**
ALNE Al Ain **78.36 295** *i* P **P** **23 12 28.3 +1.1**
SNR=83
ALNE Al Ain **78.36 295** P **P** **23 12 28.3 +1.1**
SNR=56
ALNE S **S** **23 22 20.0 -1.1**
NRIK Noril'sk **78.43 345** P **P** **23 12 27.1 +0.5**
comp=Z,86nm,1.0s,baz=132,slow=5.6,SNR=141
NRIK LR LR 23 47 21.2
comp=Z,3µm,21.3s,baz=134,slow=36
comp=Z,86nm,1.0s
NRIK Noril'sk **78.43 345** P **P** **23 12 26.9 +0.3**
NRIK IAmb IAmb 23 12 28.6
comp=Z,292nm,1.3s
NRIK Noril'sk **78.43 345** *d* P **P** **23 12 27.1 +0.5**
NRIK pmax pmax
comp=Z,158nm,1.2s
PPT Papeete **78.48 107** P **P** **23 12 29.4 +1.4**
comp=Z,236nm,0.9s,baz=310,slow=5.0,SNR=14
PPT LR LR 23 45 18.4
comp=Z,569nm,21.2s,baz=272,slow=34
comp=Z,236nm,0.9s
PPT2 Papeete2 **78.48 107** *e* PKP1 **P** **23 12 27.5 -0.6**
comp=Z,174nm,23.8s
PPT2 *e* S **S** **23 22 18.1 -4.7**
comp=Z,232nm,26.5s
PPT2 *e* SS **SS** **23 27 27.7 +1.1**
comp=Z,658nm,29.2s
PPT2 *e* LQ LQ 23 33 26.4
comp=Z,2µm,36.0s
PPT2 *e* LR LR 23 36 52.3
comp=Z,1µm,22.5s
PPT2 *e* LR LR 23 36 57.1
comp=Z,1µm,34.5s
PPTF Pamatai, Papee **78.50 107** P **P** **23 12 29.0 +0.8**
PPTF IAmb IAmb 23 12 34.2
comp=Z,238nm,0.9s
PPTF Pamatai, Papee **78.50 107** P **P** **23 12 30.3 +2.1**
NAZ Nazwa, Dubai **78.59 296** *i* P **P** **23 12 29.3 +0.8**
SNR=29
NAZ Nazwa, Dubai **78.59 296** P **P** **23 12 29.7 +1.2**
SNR=26
NAZ S **S** **23 22 22.9 -0.6**
FAQ Al Faqa, Dubai **78.61 296** *i* P **P** **23 12 29.4 +0.8**
SNR=18
FAQ Al Faqa, Dubai **78.61 296** P **P** **23 12 29.7 +1.1**
SNR=33
FAQ S **S** **23 22 23.0 -0.7**
TBI Tubuai **78.66 113** *e* P **P** **23 12 33.3 +4.4**
comp=Z,715nm,25.0s
TBI *e* S **S** **23 22 21.8 -2.5**
comp=Z,893nm,39.0s
TBI *e* SS **SS** **23 27 34.6 +5.7**
comp=Z,2µm,30.8s
TBI *e* LQ LQ 23 33 29.6
comp=Z,4µm,36.2s
TBI *e* LR LR 23 37 02.9
comp=Z,3µm,26.8s
TBI *e* LR LR 23 37 03.2
comp=Z,7µm,24.8s
UMQ Umm Al-Quwin **78.67 297** *i* P **P** **23 12 30.6 +1.8**
SNR=5.9
UMQ Umm Al-Quwin **78.67 297** P **P** **23 12 30.7 +1.8**
SNR=7.2
UMZA Um Al Zommool **78.69 294** P **P** **23 12 29.9 +0.8**
UMZA S **S** **23 22 23.0 -1.6**
FALS False Pass **78.76 32** IAMs_20 IAMs_20 23 41 12.3
comp=Z,2µm,21.0s
FALS False Pass **78.76 32** P **P** **23 12 29.4 +0.7**
FALS False Pass **78.76 32** P **P** **23 12 29.3 +0.7**
baz=247,SNR=7.9
MAW Mawson **78.83 201** P **P** **23 12 30.2 +1.3**
comp=Z,65nm,0.9s,baz=70,slow=6.5,SNR=9.6
MAW LR LR 23 46 38.4
comp=Z,1µm,19.8s,baz=68,slow=35
comp=Z,65nm,0.9s
ASUD Al Ashush, Dub **78.83 296** *i* P **P** **23 12 31.1 +1.3**
SNR=30
ASUD Al Ashush, Dub **78.83 296** P **P** **23 12 31.6 +1.8**
SNR=22
ASUD S **S** **23 22 27.0 +0.9**
RBK Rabkut **78.88 288** P **P** **23 12 31.4 +1.1**
SNR=15
GAMB Gambell **79.04 22** P **P** **23 12 31.0 +1.0**
baz=238
DOK Doka **79.09 290** P **P** **23 12 31.9 +0.5**
SNR=32
AJN Ajban **79.13 296** *i* P **P** **23 12 31.9 +0.5**
SNR=26
AJN Ajban **79.13 296** P **P** **23 12 32.8 +1.4**
SNR=20
M11K Mekoryuk **79.67 27** P **P** **23 12 35.0 +1.5**
baz=244
MZWR Madinat Zayed **80.01 295** P **P** **23 12 37.0 +0.7**
MZWR S **S** **23 22 36.5 -2.0**
MZR Muzera **80.27 294** *i* P **P** **23 12 38.5 +0.8**
SNR=58
SDPT Sand Point **80.51 32** P **P** **23 12 38.5 +0.3**
SDPT Sand Point **80.51 32** P **P** **23 12 38.8 +0.6**
SDPT Sand Point **80.51 32** P **P** **23 12 38.5 +0.3**
baz=250,SNR=13
AB31 Akbulak array **80.60 321** P **P** **23 12 39.0 +0.2**
AB31 IAmb IAmb 23 12 40.4
comp=Z,106nm,1.1s
ABKAR Akbulak array **80.60 321** P **P** **23 12 39.0 +0.1**
CHNA Chernabura Isl **80.82 33** P **P** **23 12 41.1 +1.2**
CHNA Chernabura Isl **80.82 33** P **P** **23 12 40.1 +0.2**
baz=251
GHWR Ruwais **80.95 295** P **P** **23 12 42.6 +1.4**
M13K Dall Lake **80.97 27** P **P** **23 12 42.2 +1.6**
baz=246,SNR=15
K13K Kusilvak Mount **81.02 25** IAMs_20 IAMs_20 23 43 41.8
comp=Z,1µm,21.0s
K13K Kusilvak Mount **81.02 25** P **P** **23 12 42.0 +1.2**
baz=245
JRN Qarnain Island **81.10 296** S **S** **23 22 48.0 -2.0**
TNA Tin City **81.35 22** P **P** **23 12 42.8 +0.4**
TNA Tin City **81.35 22** P **P** **23 12 43.3 +0.8**
baz=242
O14K Tigyukauivet M **81.50 29** P **P** **23 12 44.2 +0.8**
baz=248,SNR=30
N14K Kuskokwak Cree **81.55 28** P **P** **23 12 44.4 +0.8**
baz=248,SNR=24
L14K Kuka Creek **81.64 26** P **P** **23 12 45.3 +1.2**
baz=247
M14K Bethel **81.73 27** P **P** **23 12 45.8 +1.1**
baz=248,SNR=37
J14K Nanvaranak Lak **81.82 25** IAMs_20 IAMs_20 23 45 09.0
comp=Z,1µm,21.0s
J14K Nanvaranak Lak **81.82 25** P **P** **23 12 46.3 +1.3**
baz=246
ANM Nome **81.85 23** P **P** **23 12 45.7 +0.5**
ANM Nome **81.85 23** P **P** **23 12 45.7 +0.5**
ANM pmax pmax
comp=Z,49nm,1.2s
ANM Nome **81.85 23** P **P** **23 12 46.4 +1.2**
baz=244
F14K Arctic Creek **81.89 22** P **P** **23 12 46.7 +1.3**
baz=243
AKTO Aktyubinsk **82.12 322** LR LR 23 53 17.3
comp=Z,1µm,20.9s,baz=69,slow=39
O15K Ungalikthiuk R **82.17 29** P **P** **23 12 47.8 +0.8**
baz=250
M15K Kasigluk River **82.29 27** P **P** **23 12 48.5 +0.9**
baz=249,SNR=31
L15K Ungalak Mounta **82.30 26** P **P** **23 12 48.3 +0.7**
baz=248
N15K Kwethluk River **82.38 28** P **P** **23 12 49.2 +1.1**
baz=250,SNR=31
SVE Sverdlovsk **82.44 328** *de* P **P** **23 12 49.4 +0.9**
SVE pmax pmax
comp=E,92nm,1.6s
K15K Wolf Creek Mou **82.51 26** P **P** **23 12 49.9 +1.2**
baz=248
TRNA Turayna **82.55 295** P **P** **23 12 50.8 +1.1**
SNR=12
TRNA S **S** **23 23 03.1 -1.8**
G15K Niukluk **82.55 23** P **P** **23 12 49.5 +0.6**
baz=245
F15K North Star Dit **82.62 22** P **P** **23 12 50.3 +1.1**
baz=245,SNR=92
R16K Pilot Point **82.76 31** IAMs_20 IAMs_20 23 46 10.1
comp=Z,1µm,20.0s
R16K Pilot Point **82.76 31** P **P** **23 12 50.2 +0.1**
baz=252
SMRA Abu-Samra **82.90 295** P **P** **23 12 52.5 +0.9**
SNR=14
SHMA Al-Shehemyia **82.91 296** P **P** **23 12 52.6 +1.0**
SNR=7.5
P16K Nushagak River **83.01 29** P **P** **23 12 52.3 +0.9**
baz=251,SNR=69
N16K Nishlik Lake **83.11 28** P **P** **23 12 53.2 +1.4**
baz=251,SNR=52
H16K Elim **83.11 23** P **P** **23 12 52.5 +0.8**
baz=247,SNR=88
O16K Kokwok River B **83.14 29** P **P** **23 12 52.7 +0.7**
baz=251
L16K Owhat River **83.20 27** IAMs_20 IAMs_20 23 44 45.6
comp=Z,1µm,20.0s
L16K Owhat River **83.20 27** P **P** **23 12 53.2 +0.9**
baz=250,SNR=60
M16K Timber Creek **83.20 27** P **P** **23 12 53.5 +1.2**
baz=250,SNR=60
J16K Anvik River **83.27 25** P **P** **23 12 54.0 +1.3**
baz=249
CHIR Chirikof Islan **83.28 33** P **P** **23 12 53.8 +1.0**
baz=254
SAKB Bahrain **83.31 297** P **P** **23 12 54.7 +1.1**
R17L Mt. Peulik Vol **83.40 31** P **P** **23 12 53.7 +0.3**
baz=253,SNR=24
PLK4 Peulik 4 **83.41 31** IAMs_20 IAMs_20 23 44 14.1
comp=Z,2µm,22.0s
ABPO Ambohimpanom **83.45 251** P **P** **23 12 55.1 +0.4**
ABPO IAmb IAmb 23 13 14.8
comp=Z,195nm,1.8s
ABPO Ambohimpanom **83.45 251** P **P** **23 12 55.1 +0.4**
ABPO pmax pmax
comp=Z,195nm,1.8s
ABPO MLR MLR
comp=Z,900nm,22.0s
I17K Unalakleet **83.45 24** IAMs_20 IAMs_20 23 51 07.1
comp=Z,1µm,20.0s
I17K Unalakleet **83.45 24** P **P** **23 12 55.1 +1.6**
baz=248,SNR=37
C16K Lisburne Hills **83.50 20** P **P** **23 12 54.4 +0.7**
baz=244
ARTI Arti **83.50 328** P **P** **23 12 53.9 -0.1**
ARTI Arti **83.50 328** *d* P **P** **23 12 53.8 -0.1**
ARTI 23 16 03.9
ARTI S **S** **23 23 15.2 +1.8**
ARTI SS **SS** **23 28 38.0 -1.8**
ARTI pmax pmax
comp=Z,355nm,1.3s
Q16K King Salmon **83.56 30** P **P** **23 12 53.6 -0.5**
baz=253,SNR=7.8
FOMA Nahampoana Res **83.57 245** P **P** **23 12 56.1 +1.1**
FOMA IAmb IAmb 23 12 57.8
comp=Z,70nm,0.9s
O17K Koliganek Bris **83.68 29** P **P** **23 12 55.8 +1.0**
baz=252,SNR=53
VOI Vohitsoka **83.79 248** P **P** **23 12 57.0 +0.6**
VOI IAmb IAmb 23 13 17.3
comp=Z,129nm,1.2s
P17K Kvichak River **83.82 30** P **P** **23 12 55.6 +0.1**
baz=253,SNR=14
Q17K Contact Creek **83.83 30** P **P** **23 12 55.1 -0.6**
baz=253
N17K Nushagak Hills **83.87 28** P **P** **23 12 57.2 +1.5**
baz=252,SNR=22
L17K Donlin **83.87 26** P **P** **23 12 57.3 +1.6**
baz=251
M17K Holitna River **84.02 27** P **P** **23 12 58.0 +1.5**
baz=252,SNR=25
D17K Noatak River **84.03 20** P **P** **23 12 57.7 +1.3**
baz=246,SNR=196
K17K Iditarod **84.06 26** P **P** **23 12 58.0 +1.3**
baz=251,SNR=77
G17K Kiwalik Mounta **84.06 23** P **P** **23 12 57.9 +1.3**
baz=248
H17K Granite Mounta **84.15 24** P **P** **23 12 58.4 +1.3**
baz=249
E17K Hotham Inlet **84.22 21** P **P** **23 12 58.5 +1.1**
baz=247
RDOG Red Dog Mine **84.23 20** P **P** **23 12 58.5 +1.0**
baz=246,SNR=13
SII Sitkinak Islan **84.25 32** P **P** **23 12 58.9 +1.1**
SII Sitkinak Islan **84.25 32** P **P** **23 12 58.8 +1.0**
baz=255
C17K DeLong Mountai **84.31 20** P **P** **23 12 58.8 +0.9**
baz=246
P18K Big Mountain, **84.47 30** IAMs_20 IAMs_20 23 54 40.3
comp=Z,1µm,19.0s
P18K Big Mountain, **84.47 30** P **P** **23 12 58.6 -0.3**
baz=254,SNR=12
N18K Kilae Creek **84.52 28** IAMs_20 IAMs_20 23 47 43.6
comp=Z,995nm,20.0s
N18K Kilae Creek **84.52 28** P **P** **23 13 00.3 +1.2**
baz=253
L18K Granite Mounta **84.61 27** P **P** **23 13 00.8 +1.3**
baz=252
O18K Koktuh Hills **84.61 29** P **P** **23 13 00.1 +0.5**
baz=254,SNR=14
M18K Stony River **84.79 27** P **P** **23 13 01.7 +1.4**
baz=253
E18K Tukpahlearik C **84.80 21** P **P** **23 13 01.3 +1.0**
baz=248
H18K Honhosa River **84.84 24** P **P** **23 13 01.3 +0.7**
baz=250
F18K Selawik **84.84 22** P **P** **23 13 01.0 +0.5**
baz=249
OHAK Old Harbor **84.89 32** P **P** **23 13 01.7 +0.8**
OHAK Old Harbor **84.89 32** P **P** **23 13 01.8 +0.8**
baz=256,SNR=12
G18K Tagagawik **84.98 23** P **P** **23 13 01.8 +0.5**
baz=250
J18K Innoko River **84.98 25** P **P** **23 13 02.1 +0.7**
baz=252
C18K Utukok River **85.05 20** IAMs_20 IAMs_20 23 47 28.2
comp=Z,1µm,20.0s
C18K Utukok River **85.05 20** P **P** **23 13 02.2 +0.5**
baz=248
O19K Port Alsworth **85.14 29** P **P** **23 13 02.2 +0.1**
baz=255
Q19K Cape Douglas, **85.14 30** IAMs_20 IAMs_20 23 46 53.9
comp=Z,2µm,21.0s
Q19K Cape Douglas, **85.14 30** P **P** **23 13 01.7 -0.5**
baz=255,SNR=8.6
N19K Bonanza Creek **85.22 28** P **P** **23 13 03.9 +1.2**
baz=254,SNR=70
GCSA Galena City Sc **85.31 24** P **P** **23 13 03.7 +0.9**
baz=252,SNR=46
KDAK Kodiak Island **85.40 31** LR LR 23 48 28.9
comp=Z,948nm,19.6s,baz=237,slow=34
KDAK Kodiak Island **85.40 31** P **P** **23 13 04.0 +0.5**
KDAK IAmb IAmb 23 13 05.5
comp=Z,198nm,1.4s
KDAK Kodiak Island **85.40 31** IAMs_20 IAMs_20 23 48 46.9
comp=Z,2µm,20.0s
KDAK Kodiak Island **85.40 31** P **P** **23 13 04.0 +0.5**
KDAK pmax pmax
comp=Z,198nm,1.4s
KDAK MLR MLR
comp=Z,2µm,20.0s
KDAK Kodiak Island **85.40 31** P **P** **23 13 04.0 +0.5**
baz=256
L19K White Mountain **85.42 27** IAMs_20 IAMs_20 23 45 44.4
comp=Z,1µm,22.0s
L19K White Mountain **85.42 27** P **P** **23 13 04.7 +1.0**
baz=254,SNR=78
P19K Oil Pt **85.53 30** P **P** **23 13 03.8 -0.4**
baz=256,SNR=6.3
J19K Poorman **85.61 25** P **P** **23 13 05.3 +0.9**
baz=253,SNR=69
F19K Shaleruckik Mo **85.63 22** P **P** **23 13 04.5 0.0**
F19K IAmb IAmb 23 13 20.6
comp=Z,141nm,1.7s
F19K Shaleruckik Mo **85.63 22** P **P** **23 13 04.6 +0.2**
baz=251
G19K Purcell Mounta **85.67 23** P **P** **23 13 05.0 +0.3**
baz=252
Q20K Shuyak Island **85.69 31** P **P** **23 13 04.9 0.0**
baz=256
C19K Lookout Ridge **85.76 20** P **P** **23 13 06.0 +0.9**
baz=249
E19K Redstone River **86.03 21** P **P** **23 13 06.9 +0.4**
baz=251
D19K Kuna River **86.05 20** P **P** **23 13 06.9 +0.3**
baz=250
K20K Telida **86.09 26** IAMs_20 IAMs_20 23 49 29.0
comp=Z,897nm,19.0s
K20K Telida **86.09 26** P **P** **23 13 07.9 +1.0**
baz=255
M20K Styx River **86.13 27** P **P** **23 13 08.0 +0.8**
baz=256,SNR=61
HOM Homer **86.31 30** P **P** **23 13 07.9 0.0**
baz=257
H20K Anotleneega Mo **86.34 24** P **P** **23 13 08.4 +0.3**
baz=254
SPCR Spurr Chakacha **86.39 28** P **P** **23 13 08.2 -0.3**
baz=256,SNR=18
F20K Avaraart Lake **86.46 22** P **P** **23 13 09.0 +0.5**
baz=253,SNR=14
CNPM China Poot **86.48 30** IAMs_20 IAMs_20 23 48 09.4
comp=Z,1µm,21.0s
QSPA South Pole Qui **86.57 180** P **P** **23 13 09.8 +0.5**
comp=Z,63nm,1.0s,baz=334,slow=1.8,SNR=41
QSPA LR LR 23 52 21.6
comp=Z,923nm,21.2s,baz=352,slow=36
comp=Z,63nm,1.0s
QSPA South Pole Qui **86.57 180** P **P** **23 13 09.7 +0.3**
QSPA IAmb IAmb 23 13 11.1
comp=Z,187nm,1.4s
D20K Etivluk River **86.64 20** P **P** **23 13 09.6 +0.1**
baz=252
E20K Nigu River **86.65 21** P **P** **23 13 09.8 +0.1**
baz=252
BRSE Bradley Lake S **86.78 30** P **P** **23 13 10.3 0.0**
baz=258,SNR=10
CAPN Captain Cook N **86.80 29** P **P** **23 13 11.4 +1.0**
baz=257,SNR=8.9
PPLA Purkeypile **86.80 26** P **P** **23 13 10.3 -0.3**
PPLA Purkeypile **86.80 26** P **P** **23 13 10.7 +0.1**
baz=256,SNR=34
SKT Skwentna **86.89 27** P **P** **23 13 09.9 -0.9**
baz=257,SNR=39
CHUM Lake Minchumin **86.98 25** P **P** **23 13 11.8 +0.6**
baz=256
SUA Susitna One **87.14 28** P **P** **23 13 11.6 -0.5**
baz=258,SNR=45
G21K Allakaket **87.16 23** P **P** **23 13 11.9 -0.1**
baz=255
H21K Melozitna Rive **87.21 24** P **P** **23 13 12.7 +0.3**
baz=256
F21K Alatna River **87.35 22** P **P** **23 13 12.8 -0.2**
baz=255
L22K Petersville **87.36 27** IAMs_20 IAMs_20 23 47 07.4
comp=Z,1µm,22.0s
O22K Cooper Landing **87.42 29** P **P** **23 13 13.4 0.0**
baz=259,SNR=11
I21K Tanana **87.43 24** P **P** **23 13 13.7 +0.3**
baz=256,SNR=17
A21K Barrow **87.46 18** P **P** **23 13 13.4 +0.1**
baz=252,SNR=12
SEW Seward **87.48 29** P **P** **23 13 13.7 0.0**
baz=259,SNR=16
M22K Willow **87.49 28** P **P** **23 13 13.3 -0.4**
baz=258,SNR=19
E21K Killik River **87.50 21** P **P** **23 13 13.6 0.0**
baz=254
AKT Akhty **87.51 312** *e* P **P** **23 13 15.1 +0.7**
AKT *e* 23 16 34.8
AKT S **SKSac** **23 23 41.0 +0.8**
AKT pmax pmax
comp=Z,110nm,1.0s
AKT MLR MLR
comp=Z,458nm,9.0s
SYO Syowa Base **87.54 201** ‖ *i* P **P** **23 13 13.6 -0.2**
RC01 Rabbit Creek A **87.54 28** P **P** **23 13 14.0 0.0**
baz=258,SNR=26
CUT Chulitna **87.56 27** P **P** **23 13 13.5 -0.5**
baz=258,SNR=15
B21K Ikpikpuk River **87.60 20** P **P** **23 13 14.2 +0.1**
baz=254
BPAW Bear Paw Mtn. **87.60 25** P **P** **23 13 14.2 0.0**
baz=257,SNR=10
RAYN Ar Rayn **87.61 294** P **P** **23 13 15.6 +0.4**
RAYN Ar Rayn **87.61 294** IAMs_20 IAMs_20 23 56 30.9
comp=Z,1µm,20.0s
RAYN Ar Rayn **87.61 294** *i* P **P** **23 13 15.6 +0.4**
SNR=184
RAYN Ar Rayn **87.61 294** ⇑ P **P** **23 13 16.4 +1.2**
RAYN Ar Rayn **87.61 294** P **P** **23 13 16.5 +1.2**
TRF Thorofare Moun **87.77 26** IAMs_20 IAMs_20 23 50 34.2
comp=Z,1µm,20.0s
TRF Thorofare Moun **87.77 26** P **P** **23 13 14.7 -0.5**
baz=258,SNR=18
H22K Ishtalitna Cre **87.84 24** P **P** **23 13 15.6 +0.2**
baz=257
MAK Makhachkala **87.84 313** *d* P P 23 13 10.0 -5.8
MAK *e* 23 23 34.5
MAK pmax pmax
comp=Z,644nm,1.4s
A22K Sinclair Lake **87.87 18** P **P** **23 13 15.6 +0.3**
baz=253
MLY Manley **87.91 25** IAMs_20 IAMs_20 23 46 01.9
comp=Z,1µm,22.0s
MLY Manley **87.91 25** P **P** **23 13 15.6 -0.1**
baz=258,SNR=21
TAOE Nuku Hiva Isla **87.92 99** *e* LR LR 23 41 15.5
comp=Z,907nm,26.8s
PMR Palmer **87.92 28** P **P** **23 13 15.0 -0.8**
PMR Palmer **87.92 28** P **P** **23 13 15.6 -0.1**
baz=259,SNR=21
GHO Glory Hole Cre **88.06 28** IAMs_20 IAMs_20 23 46 22.9
comp=Z,1µm,18.0s
D22K Ayikyak River **88.06 21** P **P** **23 13 16.6 +0.3**
baz=256
B22K Teshekpuk Lake **88.19 19** P **P** **23 13 16.8 -0.1**
baz=255,SNR=37
E22K Anaktuvuk Pass **88.19 21** P **P** **23 13 17.3 +0.2**
baz=256,SNR=24
KNK Knik Glacier **88.21 28** IAMs_20 IAMs_20 23 47 50.0
comp=Z,1µm,21.0s
KNK Knik Glacier **88.21 28** P **P** **23 13 17.4 +0.2**
baz=260,SNR=5.5
SML Sawmill **88.34 28** IAMs_20 IAMs_20 23 51 48.4
comp=Z,938nm,20.0s
SML Sawmill **88.34 28** P **P** **23 13 17.8 0.0**
baz=260,SNR=8.5
MCK McKinley **88.42 26** P **P** **23 13 17.5 -0.6**
baz=259,SNR=27
WAT1 Susitna Watana **88.42 27** P **P** **23 13 17.8 -0.4**
baz=260
P23K Montague Islan **88.48 30** P **P** **23 13 17.6 -0.8**
baz=261,SNR=8.2
I23K Minto, Yukon-K **88.51 25** P **P** **23 13 18.6 +0.2**
baz=259,SNR=45
NEA2 Nenana **88.52 25** P **P** **23 13 18.1 -0.4**
baz=259,SNR=8.0
G23K Bananza Creek **88.55 23** P **P** **23 13 19.1 +0.4**
baz=258,SNR=21
H23K Yukon River **88.56 24** P **P** **23 13 19.1 +0.3**
baz=259
COLD Coldfoot **88.59 22** P **P** **23 13 19.0 +0.1**
COLD IAMs_20 IAMs_20 23 46 23.9
comp=Z,1µm,22.0s
COLD Coldfoot **88.59 22** P **P** **23 13 19.2 +0.3**
baz=258,SNR=26
M23K Glacier View **88.62 28** P **P** **23 13 18.9 -0.2**
baz=260
KIRV Kirov **88.70 329** LR LR 23 57 29.1
comp=Z,677nm,19.8s,baz=112,slow=39
KIRV Kirov **88.70 329** *ce* P **P** **23 13 18.5 -1.0**
WAT6 Susitna Watana **88.75 27** P **P** **23 13 19.7 -0.2**
baz=260,SNR=12
GLI Glacier Island **88.77 29** IAMs_20 IAMs_20 23 53 47.9
comp=Z,887nm,20.0s
GLI Glacier Island **88.77 29** P **P** **23 13 19.9 +0.1**
baz=261

D23K **Nanushuk River** 88.79 21 P P 23 13 20.4 +0.7
baz=257
SCM **Sheep Creek Mo** 88.81 28 IAMs_20 IAMs_20 23 46 12.9
comp=Z,1μm,20.0s
SCM **Sheep Creek Mo** 88.81 28 P P 23 13 20.0 -0.1
baz=261
BELG **Belogornoye** 88.88 322 *i* P P 23 13 19.3 -1.1
BELG pmax pmax
comp=Z,13nm,1.1s
Q23K **Middleton Isla** 88.92 30 P P 23 13 20.6 +0.1
baz=262
E23K **Chandalar** 88.98 22 P P 23 13 21.4 +0.6
baz=258
HIN **Hinchinbrook I** 88.98 29 IAMs_20 IAMs_20 23 51 48.5
comp=Z,1μm,20.0s
DHY **Denali Highway** 88.99 27 P P 23 13 20.9 -0.1
baz=261,SNR=25
COLA **College** 89.09 25 P P 23 13 20.3 -0.9
COLA **College** 89.09 25 ⇑P P 23 13 21.3 +0.1
COLA **College** 89.09 25 P P 23 13 21.2 +0.1
baz=260
H24K **Noodor Dome** 89.24 24 P P 23 13 22.2 +0.2
baz=260,SNR=25
ATD **Arta Tunnel** 89.30 282 LR LR 23 52 42.7
comp=Z,24nm,19.6s,baz=80,slow=35
ATD **Arta Tunnel** 89.30 282 P P 23 13 23.6 +0.3
ATD IAmb IAmb 23 13 27.0
comp=Z,104nm,1.3s
EYAK **Cordova Ski Ar** 89.37 29 IAMs_20 IAMs_20 23 52 11.9
comp=Z,1μm,20.0s
EYAK **Cordova Ski Ar** 89.37 29 P P 23 13 23.0 +0.4
baz=262
M24K **Tolsona, Glenn** 89.39 28 P P 23 13 23.0 +0.2
baz=262
HDA **Harding Lake** 89.39 25 P P 23 13 21.2 -1.4
baz=261
E24K **Your Creek** 89.40 22 P P 23 13 22.7 0.0
baz=260
KLU **Klutina** 89.42 28 P P 23 13 23.0 +0.1
baz=262
ILAR **Eielson Array** 89.48 25 P P 23 13 21.7 -1.3
comp=Z,25nm,1.2s,baz=262,slow=4.2,SNR=44
ILAR PKKPbc **PKKPbc** 23 30 59.1 -1.7
comp=Z,1.5nm,0.9s,baz=53,slow=1.1,SNR=9.3
ILAR LR LR 23 49 26.4
comp=Z,325nm,20.9s,baz=256,slow=33
comp=Z,25nm,1.2s
ILAR **Eielson Array** 89.48 25 P P 23 13 21.3 -1.8
D24K **Happy Valley** 89.48 21 P P 23 13 23.3 +0.4
baz=259
G24K **Hadweenzic Riv** 89.55 23 P P 23 13 23.5 +0.1
baz=260
C24K **Franklin Bluff** 89.63 20 IAMs_20 IAMs_20 23 47 50.2
comp=Z,1μm,22.0s
C24K **Franklin Bluff** 89.63 20 P P 23 13 23.6 0.0
baz=259
GNI **Garni** 89.63 310 LR LR 00 00 24.3
comp=Z,357nm,19.5s,baz=76,slow=40
GNI **Garni** 89.63 310 P P 23 13 25.0 +0.4
GNI **Garni** 89.63 310 P P 23 13 25.7 +1.2
GNI **Garni** 89.63 310 *ce* P P 23 13 25.5 +0.9
GNI pmax pmax
comp=Z,30nm,1.2s
GNI **Garni** 89.63 310 P P 23 13 26.0 +1.5
K24K **Donnelly Dome** 89.81 26 P P 23 13 24.2 -0.5
baz=262,SNR=8.7
PAX **Paxson** 89.84 27 P P 23 13 25.0 +0.1
baz=262,SNR=12
RAGM **Ragged Mountai** 89.88 30 IAMs_20 IAMs_20 23 49 31.3
comp=Z,1μm,21.0s
HARP **HAARP** 89.90 28 P P 23 13 25.3 +0.2
baz=263
KAIM **Kayak Island** 89.95 30 P P 23 13 25.6 +0.2
baz=263
BMRM **Bremner River** 89.99 29 IAMs_20 IAMs_20 23 54 33.0
comp=Z,994nm,20.0s
BMRM **Bremner River** 89.99 29 P P 23 13 25.8 +0.2
baz=263,SNR=5.1
N25K **Chitina, Valde** 90.07 28 IAMs_20 IAMs_20 23 52 18.1
comp=Z,979nm,20.0s
N25K **Chitina, Valde** 90.07 28 P P 23 13 26.3 +0.3
baz=263
J25K **Salcha River,** 90.10 25 P P 23 13 25.1 -0.9
baz=262
PRP **Porcupine Dome** 90.16 24 P P 23 13 26.0 -0.4
baz=262
RIDG **Independent Ri** 90.22 26 P P 23 13 26.1 -0.5
baz=263,SNR=18
D25K **Kavik River** 90.37 21 P P 23 13 26.9 -0.3
baz=262,SNR=11
F25K **Christian Rive** 90.39 22 P P 23 13 27.9 +0.6
baz=262,SNR=24
GLB **Gilahina Butte** 90.42 29 IAMs_20 IAMs_20 23 49 36.5
comp=Z,1μm,18.0s
E25K **Arctic Village** 90.49 22 P P 23 13 28.0 +0.2
baz=262,SNR=26
BGLC **Bering Glacier** 90.54 30 P P 23 13 29.3 +1.2
baz=264
VRDI **Verde Repeater** 90.57 29 IAMs_20 IAMs_20 23 49 25.5
comp=Z,961nm,20.0s
SCRK **Sand Creek** 90.62 26 P P 23 13 27.9 -0.7
SCRK **Sand Creek** 90.62 26 P P 23 13 28.2 -0.4
baz=264,SNR=18
MENT **Mentasta** 90.63 27 P P 23 13 28.8 +0.3
CRQE **Cirque** 90.70 29 P P 23 13 29.1 0.0
baz=264,SNR=9.6
NCK **Nalchik** 90.74 313 *d* iP P 23 13 29.0 -0.5
NCK pmax pmax
comp=Z,26nm,1.0s
BMAR **Burnt Mountain** 90.78 23 P P 23 13 29.7 +0.5
WAX **Waxell Ridge** 90.79 30 IAMs_20 IAMs_20 23 55 44.2
comp=Z,1μm,20.0s
MCARA **McCarthy VSAT** 90.79 29 IAMs_20 IAMs_20 23 49 09.4
comp=Z,938nm,20.0s
MCARA **McCarthy VSAT** 90.79 29 P P 23 13 29.6 +0.3
baz=264
GEVA **Gevas** 90.80 308 P P 23 13 30.5 +0.4
GEVA IAmb IAmb 23 13 32.6
comp=Z,128nm,1.0s
L26K **Log Cabin Wild** 90.81 27 P P 23 13 29.6 +0.3
baz=264,SNR=10
TGL **Tana Glacier** 90.83 29 IAMs_20 IAMs_20 23 48 58.3
comp=Z,1μm,21.0s
J26L **Joseph Creek** 90.86 26 P P 23 13 29.5 -0.2
baz=264,SNR=37
M26K **Nabesna, AK** 90.90 28 P P 23 13 30.1 +0.3
baz=264
KARS **Kars** 90.93 310 P P 23 13 31.3 +0.7
KARS IAmb IAmb 23 13 33.1
comp=Z,104nm,1.2s
KARS **Kars** 90.93 310 P P 23 13 31.3 +0.7
KARS pmax pmax
comp=Z,104nm,1.2s
C26K **Camden Bay** 90.96 20 P P 23 13 30.4 +0.6
baz=263,SNR=16
F26K **Sheenjek River** 90.97 22 P P 23 13 30.6 +0.6
baz=264
G26K **Porcupine Rive** 91.03 23 P P 23 13 31.0 +0.7
baz=264
I26K **Coal Creek Min** 91.12 25 P P 23 13 30.5 -0.2
baz=264
MESA **MESA** 91.21 30 IAMs_20 IAMs_20 23 50 59.5
comp=Z,2μm,20.0s
MESA **MESA** 91.21 30 P P 23 13 31.7 +0.2
baz=265
GOF **Gofitskoye** 91.23 315 *ce* P P 23 13 32.0 +0.3
KBZ **Khabaz** 91.26 314 P P 23 13 31.3 -0.5
comp=Z,9.8nm,1.0s,baz=159,slow=2.1,SNR=12
KBZ PKKPbc **PKKPbc** 23 30 56.3 +0.8
comp=Z,2.6nm,0.9s,baz=260,slow=5.7,SNR=4.2
KBZ LR LR 23 59 59.7
comp=Z,243nm,19.1s,baz=68,slow=39
comp=Z,9.8nm,1.0s
KBZ **Khabaz** 91.26 314 *i* P P 23 13 30.2 -1.6
KBZ pmax pmax
comp=Z,12nm,1.0s
C27K **Jago River** 91.34 20 P P 23 13 32.1 +0.4
baz=264,SNR=13
KVAR **Kislovodsk Arr** 91.42 314 LR LR 23 59 13.2
comp=Z,253nm,19.0s,baz=254,slow=39
M27K **Edge Creek, AK** 91.42 28 P P 23 13 32.5 +0.2
baz=265
BARN **Barnard Glacie** 91.42 29 P P 23 13 32.5 0.0
BARN IAMs_20 IAMs_20 23 49 45.0
comp=Z,928nm,19.0s
KIV **Kislovodsk** 91.42 314 P P 23 13 31.3 -1.4
KIV **Kislovodsk** 91.42 314 P P 23 13 32.6 -0.2
KIV **Kislovodsk** 91.42 314 *eP* P 23 13 31.8 -0.9
KIV *e* 23 17 08.4
KIV *e* 23 24 04.0
KIV pmax pmax
comp=Z,14nm,1.1s
KIV pmax pmax
comp=Z,135nm,4.0s
KIV MLR MLR
comp=Z,291nm,20.0s
KIV **Kislovodsk** 91.42 314 P P 23 13 32.2 -0.5
comp=Z,20nm,1.4s
SHA1 **Shidzhatmaz** 91.43 314 *ce* P P 23 13 32.5 -0.5
L27K **Beaver Creek,** 91.50 27 P P 23 13 33.2 +0.6
baz=266
BCAR **Beaver Creek A** 91.52 27 P P 23 13 32.8 +0.1
CTG **Chitna Glacier** 91.57 29 P P 23 13 33.9 +0.8
baz=266,SNR=10
GURO **Guroymak-BITLI** 91.62 308 P P 23 13 34.1 +0.3
GURO IAmb IAmb 23 13 36.4
comp=Z,109nm,1.1s
TABL **Table Mountain** 91.63 30 IAMs_20 IAMs_20 23 48 31.5
comp=Z,2μm,22.0s
I27K **Kandik River** 91.78 25 P P 23 13 34.4 +0.6
baz=266,SNR=46
H27K **Steamboat Moun** 91.86 24 P P 23 13 34.8 +0.6
baz=266
BVCY **Beaver Creek** 91.90 28 P P 23 13 34.8 +0.3
baz=266,SNR=15
E27K **Coleen River** 91.98 22 P P 23 13 34.8 +0.1
baz=266
YUK3 **Moose Creek** 92.05 28 P P 23 13 35.9 +0.5
baz=267,SNR=12
PINM **Pinnacle** 92.05 30 P P 23 13 34.5 -0.8
baz=267
O28M **Mount Upton** 92.12 29 IAMs_20 IAMs_20 23 52 05.5
comp=Z,941nm,20.0s
O28M **Mount Upton** 92.12 29 P P 23 13 35.3 -0.5
baz=267
D27M **Malcolm River** 92.28 21 P P 23 13 36.2 +0.1
baz=266
YUK8 **Steele Glacier** 92.35 29 P P 23 13 36.8 -0.1
baz=267,SNR=6.0
VRH **Novokhopyorsk** 92.43 321 *eP* P 23 13 34.5 -2.6
VRH pmax pmax
comp=Z,36nm,1.1s
I28M **Miner Creek** 92.47 25 P P 23 13 37.4 +0.3
baz=267
MARD **Mardin** 92.56 307 P P 23 13 38.2 0.0
MARD IAmb IAmb 23 13 40.0
comp=Z,98nm,1.6s
F28M **Old Crow** 92.59 23 P P 23 13 37.6 +0.1
baz=268,SNR=34
DAWY **Dawson** 92.64 26 P P 23 13 37.9 0.0
DAWY IAmb IAmb 23 13 54.7
comp=Z,80nm,1.0s
DAWY **Dawson** 92.64 26 P P 23 13 38.0 +0.1
baz=268
E28M **Babbage River** 92.76 22 P P 23 13 38.3 0.0
baz=268
LABN **Labinsk** 92.86 314 *eP* P 23 13 38.3 -0.9
LABN pmax pmax
comp=Z,23nm,0.8s
KOPT **Kop Dagi** 92.88 310 P P 23 13 39.7 -0.1
KOPT IAmb IAmb 23 13 43.1
comp=Z,117nm,1.3s
YUK4 **Talbot Arm** 92.89 29 P P 23 13 39.6 +0.3
baz=268,SNR=9.8
O29M **Mount Kennedy** 92.90 30 IAMs_20 IAMs_20 23 51 28.1
comp=Z,1μm,19.0s
O29M **Mount Kennedy** 92.90 30 P P 23 13 39.5 +0.3
baz=268
M29M **Somme Creek** 93.01 28 P P 23 13 40.3 +0.6
baz=268
YUK6 **Outpost Mounta** 93.02 29 P P 23 13 39.9 0.0
baz=268
ERBR **Yeremizino-Bor** 93.07 315 *eP* P 23 13 38.9 -1.2
ERBR *eS* **SKSac** 23 24 11.8 -0.2
ERBR pmax pmax
comp=Z,33nm,1.1s
I29M **Ogilvie Camp,** 93.15 25 P P 23 13 40.2 +0.1
baz=269
J29N **Klondike Camp** 93.17 26 P P 23 13 40.6 +0.3
baz=269
FURI **Furi** 93.25 279 LR LR 23 56 45.1
comp=Z,507nm,19.1s,baz=94,slow=36
FURI **Furi** 93.25 279 P P 23 13 41.9 -0.2
FURI IAmb IAmb 23 14 17.0
comp=Z,97nm,1.9s
FURI **Furi** 93.25 279 IAMs_20 IAMs_20 23 57 40.0
comp=Z,884nm,21.0s
KIBK **Kibwezi** 93.25 267 P P 23 13 42.0 +0.2
KIBK IAmb IAmb 23 13 44.4
comp=Z,50nm,1.1s
KIBK IAMs_20 IAMs_20 23 51 37.2
comp=Z,1μm,20.0s
KIBK **Kibwezi** 93.25 267 P P 23 13 43.3 +1.5
SNR=9.8
G29M **Pine Creek** 93.29 23 P P 23 13 40.3 -0.5
baz=269
VSLR **Vesyoloye** 93.33 313 *i* P P 23 13 41.0 -0.4
VSLR pmax pmax
comp=Z,47nm,1.0s
E29M **Blow River** 93.36 22 P P 23 13 40.3 -0.7
baz=269
HYT **Haines Junctio** 93.44 29 P P 23 13 41.2 -0.5
HYT **Haines Junctio** 93.44 29 P P 23 13 41.2 -0.5
baz=269
K29M **Barlow Dome** 93.47 26 P P 23 13 41.9 +0.2
baz=269
SOC **Sochi** 93.56 313 *eP* P 23 13 40.3 -2.2
SOC *e* 23 17 25.4
SOC *e*PPP PPP 23 19 32.1
SOC *e*S **SKSac** 23 24 13.0 -1.8
SOC *e*SS **SS** 23 31 10.9 +4.2
SOC *e*SSS SSS 23 34 52.4
SOC pmax pmax
comp=Z,15nm,0.9s
SOC MLR MLR
comp=Z,268nm,10.0s
P30M **Million Dollar** 93.70 30 P P 23 13 42.8 -0.1
baz=270
M30M **Minto, Yukon** 93.79 28 P P 23 13 43.3 +0.2
baz=270,SNR=13
KLMR **Klimovskoe** 93.87 331 *eP* P 23 13 41.3 -2.2
KLMR *e* 23 17 25.8
KLMR pmax pmax
comp=Z,200nm,1.4s
VORD **Divnogorie** 93.96 321 *eP* P 23 13 41.9 -2.2
VORD pmax pmax
comp=Z,50nm,1.1s
I30M **Mount Dempster** 93.96 25 P P 23 13 43.7 -0.3
baz=270,SNR=23
J30M **Hart River** 93.99 26 P P 23 13 44.3 +0.1
baz=270,SNR=38
G30M **tAoh Zraii Nji** 94.00 23 P P 23 13 43.0 -1.0
baz=271,SNR=33
VORR **Voronezh** 94.02 321 *eP* P 23 13 42.1 -2.3
VORR pmax pmax
comp=Z,70nm,0.6s
VSR **Storozhevoye** 94.04 321 *eP* P 23 13 42.1 -2.4
VSR pmax pmax
comp=Z,40nm,1.0s
S31K **Pelican** 94.08 32 P P 23 13 43.6 -0.9
baz=270
KMBO **Kilima Mbogo** 94.12 269 P P 23 13 46.4 +0.4
comp=Z,17nm,0.5s,baz=108,slow=3.9,SNR=8.5
KMBO LR LR 23 52 42.7
comp=Z,2μm,21.3s,baz=114,slow=33
KMBO **Kilima Mbogo** 94.12 269 *i* P P 23 13 47.3 +1.3
KMBO pmax pmax
comp=Z,17nm,0.5s
O30N **Mendenhall** 94.13 29 P P 23 13 44.5 -0.3
baz=270
F30M **Barrier River** 94.16 23 P P 23 13 44.2 -0.5
baz=271,SNR=21
MAYO **Mayo, Yukon** 94.19 27 P P 23 13 45.2 +0.2
baz=271
LPSR **Galich'ya Gora** 94.19 322 *eP* P 23 13 43.4 -1.7
LPSR pmax pmax
comp=Z,110nm,1.1s
N31M **Braeburn, Yuko** 94.27 29 IAMs_20 IAMs_20 23 54 19.4
comp=Z,1μm,21.0s
N31M **Braeburn, Yuko** 94.27 29 P P 23 13 45.3 -0.1
baz=271
ARPR **Arapgir-MALATY** 94.53 309 P P 23 13 46.9 -0.3
ARPR IAmb IAmb 23 13 49.6
comp=Z,75nm,1.5s
SKAG **Skagway** 94.53 31 P P 23 13 46.3 -0.3
baz=271
SIT **Sitka** 94.57 33 P P 23 13 46.4 -0.4
baz=271
WHY **Whitehorse** 94.73 30 P P 23 13 47.5 -0.1
WHY IAmb IAmb 23 14 08.7
comp=Z,121nm,1.8s
WHY **Whitehorse** 94.73 30 P P 23 13 47.3 -0.3
baz=272
H31M **Peel River** 94.79 24 P P 23 13 47.3 -0.4
baz=272
M31M **Drury Creek, Y** 94.92 28 P P 23 13 47.9 -0.4
baz=272,SNR=6.2
MOS **Moscow** 94.93 326 *eP* P 23 13 45.0 -3.4
MOS *eS* S 23 24 50.4 -10
MOS pmax pmax
comp=Z,99nm,1.3s
MOS MLR MLR
comp=Z,800nm,20.0s
F31M **Tsiigehtchic** 94.95 23 P P 23 13 47.4 -0.9
baz=273,SNR=24
R32K **Eaglecrest** 94.98 32 P P 23 13 48.3 -0.4
baz=272
INK **Inuvik** 94.98 22 LR LR 23 53 42.6
comp=Z,346nm,21.1s,baz=256,slow=34
INK **Inuvik** 94.98 22 P P 23 13 47.4 -1.0
INK IAmb IAmb 23 13 49.0
comp=Z,92nm,1.4s
INK **Inuvik** 94.98 22 P P 23 13 47.4 -1.0
INK pmax pmax
comp=Z,92nm,1.4s
INK **Inuvik** 94.98 22 P P 23 13 47.7 -0.7
baz=273,SNR=32
ANN **Anapa** 95.21 315 *eP* P 23 13 48.3 -1.7
ANN pmax pmax
comp=Z,60nm,1.0s
P32M **Atlin** 95.35 31 P P 23 13 50.0 -0.4
baz=272
OBN **Obninsk** 95.55 325 P P 23 13 49.8 -1.5
OBN IAmb IAmb 23 13 50.8
comp=Z,98nm,1.2s
OBN **Obninsk** 95.55 325 ⇓P P 23 13 50.2 -1.1
OBN **Obninsk** 95.55 325 *d* iP P 23 13 49.7 -1.5
OBN *e* 23 17 37.0
OBN *eS* **S** 23 24 57.3 -8.4
OBN pmax pmax
comp=Z,63nm,1.2s
OBN **Obninsk** 95.55 325 P P 23 13 49.7 -1.5
comp=Z,69nm,1.6s
N32M **Quiet Lake** 95.59 29 P P 23 13 51.4 0.0
baz=273
ASF **Jabal al Asfar** 95.63 302 LR LR 00 04 41.4
comp=Z,404nm,18.4s,baz=79,slow=40
LVZ **Lovozero** 95.67 338 P P 23 13 49.8 -1.9
LVZ IAmb IAmb 23 13 51.5
comp=Z,101nm,1.1s
LVZ **Lovozero** 95.67 338 *ce* P P 23 13 50.6 -1.1
LVZ pmax pmax
comp=Z,140nm,1.3s
P33M **Teslin, Yukon** 95.77 30 P P 23 13 52.3 -0.1
baz=273
KHAM **Kharkiv** 95.92 320 P P 23 13 51.4 -1.8
Q32M **Nakina River** 96.12 31 P P 23 13 54.2 +0.1
baz=274
APA **Apatity** 96.18 338 ⇓ *i* P P 23 13 51.6 -2.3
APA *i* 23 17 47.2
APA *i* S **S** 23 25 05.7 -5.1
APA *e*PS **PS** 23 26 36.9 +2.7
APA pmax pmax
comp=Z,47nm,1.2s
APA MLR MLR
comp=Z,2μm,25.1s
NVL **N'lazarevskaya** 96.22 197 *eP* P 23 13 54.5 +0.5
NVL *e* 23 17 47.4
NVL *e*PPP PPP 23 19 50.3
NVL *eS* **SKSac** 23 24 30.9 +2.9
NVL *e*PS **PS** 23 26 35.2 +0.8
NVL *e*SS **SS** 23 31 47.2 +4.5
NVL *e*SSS SSS 23 35 31.3
NVL pmax pmax
comp=Z,42nm,1.6s
NVL MLR MLR
comp=Z,2μm,20.0s
WRAK **Wrangell Islan** 96.24 34 P P 23 13 55.1 +0.7
baz=273
LODK **Lodwar** 96.26 273 P P 23 13 55.5 -0.1
LODK **Lodwar** 96.26 273 P P 23 13 57.0 +1.5
MMPY **Sheldon Lake,** 96.34 27 P P 23 13 55.4 +0.5
baz=275
BNN **Bunyan** 96.47 309 P P 23 13 55.4 -0.6
V35K **Ketchikan** 96.72 35 P P 23 13 56.6 0.0
baz=274
R33M **Jennings River** 96.76 31 P P 23 13 56.9 0.0
baz=275
GHAJ **Ghor Haditha** 96.76 301 P P 23 13 55.8 -1.5
GHAJ IAmb IAmb 23 13 59.2
comp=Z,34nm,1.1s
GHAJ IAMs_20 IAMs_20 00 04 33.3
comp=Z,1μm,20.0s
S34M **Telegraph Cree** 96.80 32 P P 23 13 56.9 -0.1
baz=274
MMAI **Mount Meron Ar** 96.89 303 P P 23 13 57.9 -0.1
comp=Z,15nm,1.0s,baz=46,slow=11,SNR=6.2
MMAI LR LR 00 05 30.3
comp=Z,504nm,18.4s,baz=93,slow=40
comp=Z,15nm,1.0s
EIL **Elat** 97.30 299 LR LR 00 02 55.1
comp=Z,730nm,20.9s,baz=92,slow=38
A36M **Sachs Harbour** 97.30 18 P P 23 13 58.1 -0.8
A36M IAmb IAmb 23 13 59.7
comp=Z,45nm,1.1s
A36M **Sachs Harbour** 97.30 18 P P 23 13 58.4 -0.4
baz=282
DLBC **Dease Lake** 97.33 32 LR LR 23 52 38.6
comp=Z,846nm,21.6s,baz=273,slow=32
DLBC **Dease Lake** 97.33 32 P P 23 13 59.1 -0.4
baz=276
T35M **Bob Quinn** 97.35 33 P P 23 13 59.2 -0.3
baz=275
SIM **Simferopol'** 97.56 315 *eP* P 23 13 59.3 -1.4
SIM *e* 23 17 59.9
SIM *eS* **S** 23 25 19.0 -4.6
SIM pmax pmax
comp=Z,35nm,1.0s
SIM pmax pmax
comp=Z,104nm,13.4s
SIM smax smax
comp=N,149nm,17.8s
SIM MLR MLR
comp=Z,224nm,16.3s
WTLY **Watson Lake, Y** 97.78 30 P P 23 14 01.4 0.0
baz=277
TGTN **Hyland Airport** 97.86 28 P Pdif 23 14 01.8 0.0
baz=277
KIRS **Kirsehir-Merke** 97.96 309 ⇑P P 23 14 02.4 -0.4
BR104 **Keskin Array S** 98.15 309 P P 23 14 02.6 -1.1
comp=Z,49nmcomp=Z,4.9nm,1.0s
BR131 **Keskin Array S** 98.15 309 P P 23 14 01.9 -1.8
BR131 **Keskin Array S** 98.15 309 *i* P Pdif 23 14 04.0 +0.3
BR131 **Keskin Array S** 98.15 309 P P 23 14 03.4 -0.3
BRTR **Keskin Array B** 98.15 309 P P 23 14 02.3 -1.4
comp=Z,2.6nm,0.8s,baz=135,slow=5.0,SNR=12
BRTR PP **PP** 23 18 03.4 +0.2
comp=Z,4.8nm,1.1s,baz=99,slow=7.6,SNR=4.0
BRTR PKKPbc **PKKPbc** 23 30 37.6 +0.4
comp=Z,1.3nm,1.0s,baz=195,slow=2.8,SNR=4.1
BRTR LR LR 00 06 47.8
comp=Z,223nm,18.1s,baz=88,slow=41
comp=Z,2.6nm,0.8s
BRTR **Keskin Array B** 98.15 309 P P 23 14 01.4 -2.2
BRTR **Keskin Array B** 98.15 309 *ce* P P 23 14 02.9 -0.8
BRTR pmax pmax
comp=Z,3.0nm,0.9s
C36M **Paulatuk** 98.24 20 P P 23 14 01.5 -1.7
C36M **Paulatuk** 98.24 20 P P 23 14 02.5 -0.6
baz=282
SPITS **Spitsbergen Ar** 98.31 349 P P 23 14 02.1 -1.2
comp=Z,20nm,0.9s,baz=108,slow=8.0,SNR=6.2
SPITS LR LR 00 01 04.7
comp=Z,1μm,20.9s,baz=43,slow=37
comp=Z,20nm,0.9s
BELA **Belgrano 2** 98.49 183 P P 23 14 03.5 -0.7
BELA IAmb IAmb 23 14 05.5
comp=Z,52nm,1.5s
ARA0 **ARCESS Array S** 98.70 340 *eP* P 23 14 04.8 -0.5
ARCES **ARCESS Array B** 98.70 340 P P 23 14 04.5 -0.8

comp=Z,58nm,0.9s,baz=66,slow=5.9,SNR=50
ARCES LR LR 00 04 20.1
comp=Z,1µm,20.7s,baz=66,slow=39
comp=Z,58nm,0.9s
ARCES ARCESS Array B 98.70 340 P **P** **23 14 04.2 -1.0**
HAMF Hammerfest 99.02 341 *eP* **Pdif** **23 14 05.8 -0.9**
BBB Bella Bella 99.06 38 LR LR 23 51 46.0
comp=Z,1µm,22.0s,baz=260,slow=31
SNAA Sanae 99.50 193 P **Pdif** **23 14 08.4 -0.5**
comp=Z,8.2nm,1.0s,baz=67,slow=1.2,SNR=5.4
SNAA PKKPbc **PKKPbc** **23 30 31.4 -3.0**
comp=Z,6.2nm,1.0s,baz=293,slow=3.4,SNR=5.3
SNAA LR LR 00 00 48.7
comp=Z,1µm,19.3s,baz=119,slow=36
comp=Z,8.2nm,1.0s
SNAA Sanae 99.50 193 P **Pdif** **23 14 08.4 -0.5**
SNAA Sanae 99.50 193 *ceP* **Pdif** **23 14 09.5 +0.6**
SNAA pmax pmax
comp=Z,12nm,1.1s
KTK1 Kautokeino 99.61 340 *eP* **Pdif** **23 14 07.8 -1.5**
TOAD Toad River Com 99.76 31 P **Pdif** **23 14 09.9 -0.3**
baz=280
KOTAN Kotaneelee Air 100.12 29 P **Pdif** **23 14 12.1 +0.3**
baz=281
FINES FINESS Array B 100.28 332 P **Pdif** **23 14 11.6 -0.8**
comp=Z,42nm,1.2s,baz=90,slow=1.9,SNR=13
FINES PKIKP **PKiKP** **23 18 39.7 +0.3**
comp=Z,6.3nm,1.0s,baz=297,slow=1.3,SNR=3.3
AK09 Malin Array Si 100.32 321 P **Pdif** **23 14 11.3 -1.5**
AK08 Malin Array Si 100.33 321 P **Pdif** **23 14 11.2 -1.7**
AK10 Malin Array Si 100.34 321 P **Pdif** **23 14 11.2 -1.7**
AKASG Malin Array Be 100.34 321 P **Pdif** **23 14 11.6 -1.4**
comp=Z,2.6nm,0.8s,baz=70,slow=4.4,SNR=12
AKASG PP **PP** **23 18 21.0 +1.7**
comp=Z,8.0nm,1.2s,baz=74,slow=7.1,SNR=4.1
AKASG Malin Array Be 100.34 321 **Pdif** **23 14 11.1 -1.9**
AKASG Malin Array Be 100.34 321 *iP* **Pdif** **23 14 11.1 -1.9**
AKBB Malin Array Si 100.34 321 *iP* **Pdif** **23 14 12.2 -0.8**
AKBB pmax pmax
comp=Z,6.0nm,1.1s
AKBB Malin Array Si 100.34 321 P **Pdif** **23 14 11.3 -1.7**
AK01 Malin Array Si 100.35 321 P **Pdif** **23 14 11.3 -1.7**
KIEV Kiev 100.35 321 P **Pdif** **23 14 11.7 -1.3**
KIEV Kiev 100.35 321 P **Pdif** **23 14 11.3 -1.7**
comp=Z,44nm,1.2s
AK05 Malin Array Si 100.37 321 P **Pdif** **23 14 11.2 -1.9**
AK07 Malin Array Si 100.38 321 P **Pdif** **23 14 11.7 -1.4**
AK11 Malin Array Si 100.38 321 P **Pdif** **23 14 11.5 -1.6**
PURM Purcari 100.41 317 ⇓P **Pdif** **23 14 13.4 +0.1**
JETT Jettan, Norway 100.41 341 *eP* **Pdif** **23 14 12.2 -0.7**
NOR Nord 100.52 355 *iP* **Pdif** **23 14 11.3 -1.8**
MNK Minsk 100.61 325 *i* LR LR 00 00 54.9
MNK *iP* **Pdif** **23 14 13.6 -0.5**
comp=E,18nm,1.3s
MNK *iP* **Pdif** **23 14 13.6 -0.5**
comp=N,20nm,0.9s
MNK *iP* **Pdif** **23 14 13.6 -0.5**
comp=Z,41nm,1.0s,baz=81
MNK *i* PP **PP** **23 18 21.0 -0.2**
MNK *i* PPP PPP 23 20 28.9
MNK *i* S **SKSac** **23 24 52.7 +1.9**
MNK *i* PS **PS** **23 27 23.2 +0.5**
MNK *i* SS **SS** **23 32 49.9 +4.5**
MNK *i* SSS SSS 23 36 40.8
MNK *i* LQ LQ 23 53 45.8
MNK Minsk 100.61 325 *iP* **Pdif** **23 14 13.5 -0.5**
MNK *i* 23 18 21.0
MNK *i* PPP PPP 23 20 28.8
MNK *i* S **SKSac** **23 24 52.6 +1.9**
MNK *i* PS **PS** **23 27 23.1 +0.5**
MNK *i* SS **SS** **23 32 49.9 +4.5**
MNK *i* SSS SSS 23 36 40.8
MNK pmax pmax
comp=E,18nm,1.3s
MNK pmax pmax
comp=Z,41nm,1.0s
MNK pmax pmax
comp=N,20nm,0.9s
MNK MLR MLR
comp=Z,824nm,21.0s
MNK MLR MLR
comp=N,775nm,19.0s
MNK MLR MLR
comp=E,521nm,22.0s
MBAR Mbarara 100.65 269 IAMs_20 IAMs_20 23 55 46.3
comp=Z,996nm,21.0s
MBAR Mbarara 100.65 269 P **Pdif** **23 14 16.8 +1.3**
SORM Soroca 101.24 318 ⇓P **Pdif** **23 14 16.1 -0.9**
SORM Soroca 101.24 318 ⇓P **Pdif** **23 14 16.1 -0.9**
SORM Soroca 101.24 318 P **Pdif** **23 14 15.3 -1.7**
comp=Z,12nm,1.3s
LUBAR Lubar, Ukraine 101.38 320 P **Pdif** **23 14 15.7 -1.9**
VLDR Vladesti 101.72 316 ⇓P **Pdif** **23 14 18.7 -0.5**
CFR Carcaliu 101.77 315 ⇑P **Pdif** **23 14 19.3 -0.1**
CFR Carcaliu 101.77 315 ⇑P **Pdif** **23 14 19.3 -0.1**
LSZ Lusaka 101.87 254 P **Pdif** **23 14 21.6 +0.9**
comp=Z,12nm,1.1s,baz=108,slow=4.5,SNR=15
LSZ PKiKP **PKiKP** **23 18 45.3 +1.4**
comp=Z,5.6nm,1.0s,baz=75,slow=2.5,SNR=4.6
LSZ Lusaka 101.87 254 IAMs_20 IAMs_20 23 58 40.6
comp=Z,996nm,20.0s
LSZ Lusaka 101.87 254 P **Pdif** **23 14 21.5 +0.9**
RNPP9 Sopachiv 102.31 322 P **Pdif** **23 14 21.0 -0.7**
RNPP5 Staryi Chortor 102.35 322 P **Pdif** **23 14 21.1 -0.8**
KMPD K-Podol'skiy 102.43 319 P **Pdif** **23 14 20.6 -1.7**
ODBI Odobesti 102.44 316 ⇑P **Pdif** **23 14 22.8 +0.4**
BOSA Boshof 102.52 240 P **Pdif** **23 14 24.3 +0.9**
comp=Z,15nm,0.9s,baz=112,slow=3.6,SNR=23
BOSA PKKPbc **PKKPbc** **23 30 23.9 -0.4**
comp=Z,3.8nm,0.9s,baz=347,slow=3.7,SNR=4.6
TESR Tescani 102.61 317 ⇑P **Pdif** **23 14 23.3 +0.1**
TESR Tescani 102.61 317 P **Pdif** **23 14 22.6 -0.6**
GIRR Girov 102.65 317 ⇑P **Pdif** **23 14 22.9 -0.4**
VRI Vrincioaia 102.66 316 ⇑P **Pdif** **23 14 23.7 +0.3**
VRI Vrincioaia 102.66 316 ⇑P **Pdif** **23 14 23.7 +0.3**
PLOR Plostina 102.71 316 ⇓P **Pdif** **23 14 24.2 +0.5**
PLOR Plostina 102.71 316 ⇓P **Pdif** **23 14 24.2 +0.5**
STEI Steigen 102.75 340 *eP* **Pdif** **23 14 22.4 -0.9**
ONER Baraj Valea Uz 102.82 317 ⇑P **Pdif** **23 14 24.6 +0.5**
LBTB Lobatse 102.87 244 P **Pdif** **23 14 25.9 +1.0**
comp=Z,6.3nm,1.0s,baz=151,slow=4.8,SNR=5.3
LBTB Lobatse 102.87 244 P **Pdif** **23 14 26.0 +1.0**
FAUS Fauske 102.95 339 *eP* **Pdif** **23 14 23.2 -1.0**
NEHR Nehoiu 103.02 316 ⇓P **Pdif** **23 14 25.3 +0.3**
TURR Turia 103.12 316 ⇑P **Pdif** **23 14 25.3 -0.2**
MLR Muntele Rosu 103.25 316 ⇑P **Pdif** **23 14 26.2 0.0**
MLR Muntele Rosu 103.25 316 ⇑P **Pdif** **23 14 26.2 0.0**
BURAR Bucovina Array 103.41 318 ⇑P **Pdif** **23 14 27.0 +0.2**
BURAR Bucovina Array 103.41 318 ⇑P **Pdif** **23 14 27.0 +0.2**
SUW Suwalki 103.41 325 *eP* **Pdif** **23 14 25.8 -0.7**
DOPR Dopca 103.56 316 ⇓P **Pdif** **23 14 27.2 -0.3**
YKA Yellowknife Ar 103.89 26 Pdiff **Pdif** **23 14 28.0 -0.5**
comp=Z,2.1nm,1.0s,baz=293,slow=5.4,SNR=23
YKA PKiKP **PKiKP** **23 18 46.1 +0.1**
comp=Z,3.2nm,0.8s,baz=299,slow=2.6,SNR=19
YKA PKKPbc **PKKPbc** **23 30 19.1 -2.2**
comp=Z,1.2nm,0.8s,baz=94,slow=2.4,SNR=12
YBH Yreka Blue Hor 104.05 48 Pdiff **Pdif** **23 14 29.8 0.0**
comp=Z,0.2nm,0.9s,baz=264,slow=3.4,SNR=5.0
ARR Arges 104.19 316 ⇓P **Pdif** **23 14 29.7 -0.6**
LEIR Leirfjorden 104.26 338 *eP* **Pdif** **23 14 29.2 -0.9**
KWP Kalwaria Pacla 104.65 320 *eP* **Pdif** **23 14 31.6 -0.6**
LOT Lotru 104.77 316 ⇓P **Pdif** **23 14 32.5 -0.5**
DAG Danmarks Havn 104.85 353 *iP* **Pdif** **23 14 31.0 -1.5**
DAG Danmarks Havn 104.85 353 *iP* **PP** **23 18 51.0 -1.3**
MARR Marisel-Cluj 104.98 317 ⇓P **Pdif** **23 14 33.4 -0.5**
KOLS Kolonicke sedl 105.08 320 *iP* **Pdif** **23 14 34.6 +0.5**
DRGR 105.24 318 ⇓P **Pdif** **23 14 33.8 -1.2**
DRGR 105.24 318 ⇓P **Pdif** **23 14 33.8 -1.2**
BEL Belsk 105.33 323 *eP* **Pdif** **23 14 36.2 +1.1**
NEEM North Greenlan 105.98 1 *iP* **PKiKP** **23 18 49.4 -0.5**
CMB Columbia Colle 106.36 51 IAMs_20 IAMs_20 00 02 22.2
comp=Z,1µm,20.0s
HFS Hagfors 106.46 332 Pdiff **Pdif** **23 14 38.6 -1.4**
comp=Z,23nm,1.0s,baz=320,slow=3.9,SNR=12
LANS Liptovska Anna 106.83 320 *e*PDIFF **Pdif** **23 14 42.4 +0.5**
NB2 NORSAR Subarra107.20 334 P **Pdif** **23 14 42.3 -1.0**
comp=Z,4.2nm,0.8s,baz=65,slow=4.6
NB2 NORSAR Subarra107.20 334 P **Pdif** **23 14 42.3 -1.0**
NB2 AMP 23 14 42.3
comp=Z,4.2nm,0.8s
NOA NORSAR Array B 107.20 334 Pdiff **Pdif** **23 14 42.3 -1.0**
comp=Z,13nm,1.0s,baz=66,slow=4.5,SNR=15
MORC Moravsky Berou 107.87 321 *e*PKIKP **PKiKP** **23 18 54.0 +0.2**

NVAR Mina Array Bea 107.92 51 Pdiff **Pdif** **23 14 46.8 -0.4**
comp=Z,1.9nm,0.9s,baz=276,slow=2.8,SNR=9.6
NVAR PKiKP **PKiKP** **23 18 55.7 +1.2**
comp=Z,4.0nm,0.9s,baz=262,slow=3.4,SNR=7.2
NVAR PKKPbc **PKKPbc** **23 30 09.5 +1.1**
comp=Z,1.4nm,0.8s,baz=134,slow=3.4,SNR=5.4
TIN Tinemaha, Big 108.21 52 IAMs_20 IAMs_20 23 56 58.2
comp=Z,1µm,19.0s
MODS Modra-Piesok 108.43 320 *i* P **Pdif** **23 14 49.4 +0.4**
MODS Modra-Piesok 108.43 320 *e*PDIFF **Pdif** **23 14 49.4 +0.4**
DPC Dobruska-Polom 108.45 322 *e*PKP **PKiKP** **23 18 54.1 -0.8**
VRAC Vranov 108.59 321 ⇑P **Pdif** **23 14 49.9 +0.2**
VRAC Vranov 108.59 321 ⇑P **Pdif** **23 14 49.9 +0.2**
KRUC Moravsky 108.79 321 *e*PKiKP **PKiKP** **23 18 55.0 -0.5**
RONA Rosalia, Austr 109.25 320 *e*PKiKP **PKiKP** **23 18 59.1 +2.7**
comp=Z,8.1nm,1.1s
RONA *e*PP **PP** **23 19 26.3 +0.8**
comp=Z,16nm,1.3s
CONA Conrad Observa 109.47 320 *i* PKiKP **PKiKP** **23 18 56.2 -0.8**
comp=Z,8.0nm,1.5s
CONA *e*PP **PP** **23 19 28.2 +1.1**
comp=Z,20nm,1.3s
BRG Berggiesshubel 109.72 323 ⇓*e*Pif 23 14 55.1
BRG Amp 23 14 56.1
comp=Z,17nm,1.2s
ELK Elko 109.77 48 Pdiff **Pdif** **23 14 55.6 +0.2**
comp=Z,1.9nm,1.0s,baz=327,slow=4.1,SNR=3.2
ELK PKKPbc **PKKPbc** **23 30 03.8 +1.1**
comp=Z,0.6nm,0.4s,baz=26,slow=3.3,SNR=4.1
ARSA Arzberg 109.89 319 *e*PKKP 23 29 59.7
comp=Z,5.2nm,1.4s
CLL Collm 110.12 324 *eP* **Pdif** **23 14 57.0 +0.6**
CLL *i* 23 18 58.4
CLL pmax pmax
comp=Z,38nm,1.8s
CLL Collm 110.12 324 *e*Pdif **Pdif** **23 14 57.0 +0.6**
CLL *i* PKiKP **PKiKP** **23 18 58.4 +0.5**
CLL *ex* x 23 19 14.0
CLL *i* PP **PP** **23 19 29.8 -1.8**
CLL *e*Sdif Sdif 23 27 24.0 +16
CLL *i* PKKP **PKKPdf** **23 30 14.7 -3.4**
comp=Z,38nm,1.8s
CKRC Cesky Krumlov 110.17 321 *e*PKP **PKiKP** **23 18 57.9 -0.3**
CKRC Cesky Krumlov 110.17 321 *e*PKIKP **PKiKP** **23 18 57.9 -0.3**
GOLS Golise 110.18 318 *i* PKPdf **PKiKP** **23 18 58.8 +0.5**
GOLS *e*PP **PP** **23 19 34.2 +1.9**
DLMT Dillon 110.46 43 IAMs_20 IAMs_20 23 55 40.5
comp=Z,1µm,21.0s
KHC Kasperske Hory 110.53 322 *e*PKP **PKiKP** **23 19 04.5 +5.7**
KHC Kasperske Hory 110.53 322 *e*PKIKP **PKiKP** **23 19 04.5 +5.7**
GERES GERESS Array B 110.54 321 Pdiff **Pdif** **23 14 56.8 -1.7**
comp=Z,1.1nm,0.9s,baz=91,slow=10,SNR=6.5
GERES PKiKP **PKiKP** **23 18 59.5 +0.6**
comp=Z,1.8nm,0.9s,baz=80,slow=1.5,SNR=5.0
GERES PP **PP** **23 19 34.6 -0.3**
comp=Z,2.3nm,0.9s,baz=109,slow=7.6,SNR=4.8
GERES PKKPbc **PKKPab** **23 30 05.5 -4.0**
comp=Z,1.1nm,0.9s,baz=225,slow=1.3,SNR=4.3
BOJS Bojanci 110.58 318 *i* PKPdf **PKiKP** **23 18 58.4 -0.5**
SUMG Summit 110.60 357 *iP* **PKiKP** **23 18 59.0 +0.2**
OBKA Obir 110.75 319 *e*PKKP 23 29 56.2
comp=Z,9.0nm,1.9s
WIN Windhoek 110.98 244 IAMs_20 IAMs_20 00 03 02.8
comp=Z,980nm,20.0s
BC3 Big Chuckawall 111.04 55 IAMs_20 IAMs_20 23 57 12.3
comp=Z,1µm,21.0s
PMSA Palmer Station 111.06 173 *eP* **Pdif** **23 15 00.6 +0.3**
TSUM Tsumeb 111.25 248 IAMs_20 IAMs_20 00 00 01.9
comp=Z,924nm,22.0s
MYKA Terra Mystica 111.30 319 *e*PP **PP** **23 19 40.6 +0.2**
comp=Z,7.5nm,1.0s
KBA Koelnbreinsper 111.35 320 *e*PKiKP **PKiKP** **23 18 59.9 -0.7**
comp=Z,8.9nm,1.3s
LESA Schwarzleotal 111.67 320 *i* PKiKP **PKiKP** **23 19 00.5 -0.6**
comp=Z,8.2nm,1.1s
ABTA Abfaltersbach 112.00 320 *e*PKiKP **PKiKP** **23 19 01.4 -0.3**
comp=Z,8.7nm,1.0s
ABTA *e*PKKP **PKKPbc** **23 29 53.2 -2.1**
comp=Z,7.1nm,1.1s
WTTA Wattenberg 112.39 320 *e*PKiKP **PKiKP** **23 19 02.6 0.0**
comp=Z,26nm,1.6s
WATA Walderalm 112.40 320 *e*PKiKP **PKiKP** **23 19 02.6 0.0**
comp=Z,13nm,1.1s
WATA *i* PP **PP** **23 19 48.4 +0.2**
comp=Z,21nm,1.8s
SQTA Sankt Quirin 112.67 320 *e*PKiKP **PKiKP** **23 19 03.2 +0.1**
comp=Z,8.8nm,0.9s
MOTA Moosalm 112.70 320 *i* PKiKP **PKiKP** **23 19 03.2 +0.1**
comp=Z,8.5nm,0.9s
MOTA *e*PKKP **PKKPbc** **23 29 48.4 -4.7**
comp=Z,9.4nm,1.4s
RETA Reutte 112.86 321 *e*PKiKP **PKiKP** **23 19 03.6 +0.2**
comp=Z,9.6nm,1.4s
RETA *e*PKKP **PKKPbc** **23 29 48.8 -3.7**
comp=Z,13nm,1.8s
FETA Feichten 113.05 320 *e*PKiKP **PKiKP** **23 19 04.2 +0.3**
comp=Z,12nm,1.4s
FETA *e*PKKP **PKKPbc** **23 29 50.4 -1.5**
comp=Z,6.3nm,1.1s
PDAR Pinedale Array 113.33 45 PKiKP **PKiKP** **23 19 04.9 +0.3**
comp=Z,3.3nm,0.8s,baz=199,slow=1.2,SNR=16
PDAR PP **PP** **23 19 59.4 +4.2**
comp=Z,4.1nm,1.1s,baz=290,slow=5.4,SNR=4.3
PDAR PKKPbc **PKKPbc** **23 29 50.4 -0.6**
comp=Z,3.6nm,0.8s,baz=114,slow=5.7,SNR=18
DAVA Damuels 113.49 321 *e*PKiKP **PKiKP** **23 19 04.9 +0.2**
comp=Z,21nm,1.6s
DAVA *i* PP **PP** **23 19 55.4 -0.7**
comp=Z,28nm,1.3s
MEM Membach 114.45 325 *d*PKiKP PKPdf 23 19 06.8 +0.6
HAYD Hayden 115.67 46 **PKPdf** **23 19 09.5 +0.3**
MVCO Mesa Verde 115.75 50 **PKPdf** **23 19 09.8 +0.4**
BNI Bardonecchia 116.41 319 **PKPdf** **23 19 10.2 -0.1**
BNI Bardonecchia 116.41 319 PKiKP **PKPdf** **23 19 10.3 -0.1**
VSL Villasalto 116.56 313 PKPdf **PKPdf** **23 19 10.1 -0.6**
RSSD Black Hills 116.62 42 **PKPdf** **23 19 10.1 -0.8**
RSSD Black Hills 116.62 42 PKiKP **PKPdf** **23 19 10.1 -0.8**
EKA Eskdalemuir Ar 116.65 333 PKP **PKPdf** **23 19 09.9 -0.4**
comp=Z,2.6nm,0.8s,baz=19,slow=2.8,SNR=4.3
EKA PP **PP** **23 20 23.4 +5.7**
comp=Z,2.8nm,0.8s,baz=61,slow=6.8,SNR=3.5
EKA PKKPbc **PKKPbc** **23 29 39.5 -0.1**
comp=Z,3.3nm,0.8s,baz=298,slow=1.8,SNR=4.3
ISCO Idaho Springs 117.10 47 **PKPdf** **23 19 11.9 -0.2**
ISCO Idaho Springs 117.10 47 PKiKP **PKPdf** **23 19 11.9 -0.2**
E28A Huff 117.71 38 **PKPdf** **23 19 12.6 -0.1**
KEST Kesra 117.75 309 PKP **PKPdf** **23 19 12.1 -1.0**
comp=Z,7.6nm,1.0s,baz=146,slow=0.9,SNR=7.2
KEST PP **PP** **23 20 26.3 0.0**
comp=Z,21nm,1.2s,baz=134,slow=5.0,SNR=5.2
KEST Kesra 117.75 309 **PKPdf** **23 19 13.1 -0.1**
ANMO Albuquerque 117.98 52 **PKiKP** **23 19 14.1 +0.3**
ANMO Albuquerque 117.98 52 PKiKP **PKiKP** **23 19 14.1 +0.3**
ULM Lac du Bonnet 118.64 33 PKP **PKPdf** **23 19 13.7 -0.6**
comp=Z,22nm,0.8s,baz=326,slow=2.5,SNR=35
ULM PKKPbc **PKKPab** **23 29 33.2 -0.3**
comp=Z,8.2nm,1.0s,baz=137,slow=3.5,SNR=7.9
T25A Trinidad 118.88 49 IAMs_20 IAMs_20 23 57 36.3
comp=Z,577nm,20.0s
MNTX Cornudas Mount 119.75 55 **PKiKP** **23 19 17.7 +0.6**
HPIG 120.68 61 **PKPdf** **23 19 19.0 -0.1**
EDA Edea 121.42 272 IAMs_20 IAMs_20 00 12 22.6
comp=Z,694nm,19.0s
ECSD EROS Data Cent 121.60 39 **PKPdf** **23 19 19.8 -0.4**
CBKS Cedar Bluff 121.69 46 **PKPdf** **23 19 20.6 0.0**
CBKS Cedar Bluff 121.69 46 PKiKP **PKPdf** **23 19 20.6 0.0**
TXAR Lajitas Array 121.81 57 PKP **PKPdf** **23 19 21.1 -0.1**
comp=Z,15nm,0.9s,baz=250,slow=1.2,SNR=89
TXAR PP **PP** **23 20 57.1 +2.6**
comp=Z,2.7nm,1.0s,baz=318,slow=6.6,SNR=3.5
TXAR PKKPbc **PKKPab** **23 29 20.7 +0.5**
comp=Z,4.0nm,1.1s,baz=123,slow=6.1,SNR=12
TXAR Lajitas Array 121.81 57 **PKiKP** **23 19 21.6 +0.3**
NRS Narsarsuaq 122.31 358 *i* P **PKPdf** **23 19 19.8 -1.1**
IVI Ivigtut 122.31 360 *i* P **PKPdf** **23 19 19.5 -1.4**
KUQ Kuujjuaa 123.23 12 **PKPdf** **23 19 22.8 -0.1**
KSU1 Kansas State U 123.78 44 **PKPdf** **23 19 24.4 -0.2**
CROK Carrier 123.90 48 **PKiKP** **23 19 25.1 0.0**
TAM Tamanrasset 124.27 295 **PKiKP** **23 19 26.3 -0.1**
TAM Tamanrasset 124.27 295 PKiKP **PKiKP** **23 19 26.3 -0.1**
JCT Junction City 124.68 55 **PKPdf** **23 19 26.6 +0.1**
JCT Junction City 124.68 55 PKiKP **PKPdf** **23 19 26.7 +0.1**
ESDC Sonseca Array 125.87 318 PKP **PKiKP** **23 19 29.4 +0.4**
comp=Z,7.0nm,1.2s,baz=49,slow=2.3,SNR=12
ESDC PP **PP** **23 21 24.4 +3.2**
comp=Z,6.6nm,1.0s,baz=58,slow=5.7,SNR=7.6
ESDC Sonseca Array 125.87 318 **PKiKP** **23 19 28.9 -0.1**
JFWS Jewell Farm 125.97 37 **PKPdf** **23 19 27.9 -0.7**
JFWS Jewell Farm 125.97 37 PKIKP **PKPdf** **23 19 27.9 -0.7**
PBRG Braganca 126.52 322 *e*PKPdf **PKiKP** **23 19 30.4 +0.2**
SCHQ Schefferville 126.59 13 PKP **PKPdf** **23 19 29.6 +0.2**
comp=Z,34nm,1.0s,baz=2.1,slow=2.3,SNR=15
JRQG Juriquilla Cam 126.68 67 PKPdf **PKiKP** **23 19 31.6 +0.2**
MVO Moncorvo 127.06 321 *e*PKPdf **PKiKP** **23 19 32.3 +0.9**
PCAB Cabril 127.37 322 *e*PKPdf **PKiKP** **23 19 32.6 +0.7**
POLO Lamas de Olo 127.42 322 *e*PKPdf **PKiKP** **23 19 32.9 +0.8**
POLO *etx* tx 23 19 48.9
PVRL Vila Real 127.42 322 *e*PKPdf **PKiKP** **23 19 33.0 +1.0**
PVRL *etx* tx 23 19 46.9
MTE Manteigas 127.81 321 *e*PKPdf **PKiKP** **23 19 33.2 +0.4**
MTE *etx* tx 23 19 48.4
PVIS Viseu 127.85 321 *e*PKPdf **PKiKP** **23 19 33.9 +1.0**
HDIL Hopedale 127.89 39 **PKPdf** **23 19 32.1 -0.2**
CCM Cathedral Cave 127.97 43 **PKPdf** **23 19 32.3 -0.3**
CCM Cathedral Cave 127.97 43 PKIKP **PKPdf** **23 19 32.3 -0.3**
PTO Porto 128.05 322 *e*PKPdf **PKiKP** **23 19 34.6 +1.4**
PCBR Castelo Branco 128.08 320 *e*PKPdf **PKiKP** **23 19 34.1 +0.8**
PCBR *etx* tx 23 19 50.9
PMRV Marv??o 128.25 320 *e*PKPdf **PKiKP** **23 19 34.5 +0.8**
PCAS Casmilo, Conde 128.61 321 *e*PKPdf **PKPdf** **23 19 34.0 +0.3**
PSARD Sardoal 128.65 320 *e*PKPdf **PKiKP** **23 19 34.5 0.0**
PESTR Estremoz 128.69 319 *e*PKPdf **PKiKP** **23 19 35.3 +0.7**
PBAR Barrancos 128.69 318 *e*PKPdf **PKiKP** **23 19 35.3 +0.7**
PBAR *etx* tx 23 19 52.1
VLDQ Val d'Or 128.99 25 **PKPdf** **23 19 33.3 -0.9**
PMTG Montargil 128.99 320 *e*PKPdf **PKiKP** **23 19 35.4 +0.2**
PARRA Arraiolos 129.01 319 *e*PKPdf **PKiKP** **23 19 35.7 +0.5**
LL02 Futaleuf 129.10 158 **PKPdf** **23 19 34.4 -0.2**
EVO Evora 129.15 319 *e*PKPdf **PKiKP** **23 19 37.0 +1.5**
PBEJ Beja 129.32 318 *e*PKPdf **PKiKP** **23 19 37.2 +1.4**
PBEJ *etx* tx 23 19 53.5
MOE Montemor 129.37 319 *e*PKPdf **PKiKP** **23 19 37.0 +1.0**
TORD Torodi Ar. Bea 129.43 284 PKP **PKPdf** **23 19 35.8 -0.2**
comp=Z,12nm,0.8s,baz=206,slow=1.6,SNR=40
TORD PP **PP** **23 21 49.5 +3.8**
comp=Z,20nm,1.3s,baz=69,slow=4.8,SNR=7.2
PVAQ Vaqueiros 129.56 318 *e*PKPdf **PKiKP** **23 19 37.2 +0.8**
MD01 Midelt array s 129.65 311 **PKPdf** **23 19 36.2 +0.1**
MD31 MD31 129.65 311 **PKPdf** **23 19 36.3 +0.2**
PCVE Castro Verde 129.65 318 *e*PKPdf **PKiKP** **23 19 37.9 +1.4**
PCVE *etx* tx 23 19 54.1
MESJ Messejana 129.66 318 PKPdf **PKiKP** **23 19 36.4 -0.1**
MESJ Messejana 129.66 318 *e*PKPdf **PKiKP** **23 19 38.1 +1.5**
MESJ Messejana 129.66 318 PKIKP **PKiKP** **23 19 36.4 -0.1**
PBDV Barranco-do-Ve 129.79 317 *e*PKPdf **PKiKP** **23 19 38.3 +1.5**
AAM Ann Arbor 130.18 34 **PKPdf** **23 19 36.4 -0.2**
AAM Ann Arbor 130.18 34 PKIKP **PKPdf** **23 19 36.4 -0.2**
MORF Marmelete 130.24 318 *e*PKPdf **PKiKP** **23 19 39.0 +1.2**
SADO Sadowa 130.78 29 **PKPdf** **23 19 37.7 0.0**
WCI Wyandotte Cave 131.13 40 **PKPdf** **23 19 38.3 -0.3**
WCI Wyandotte Cave 131.13 40 PKIKP **PKPdf** **23 19 38.3 -0.3**
WVT Waverly 131.30 43 **PKPdf** **23 19 38.4 -0.6**
WVT Waverly 131.30 43 PKIKP **PKPdf** **23 19 38.4 -0.6**
LDAQ Lac Daran 131.48 20 **PKPdf** **23 19 38.7 -0.3**
PLCA Paso Flores 131.71 158 PKP **PKPdf** **23 19 40.0 +0.3**
comp=Z,3.7nm,0.8s,baz=179,slow=3.7,SNR=11
PLCA Paso Flores 131.71 158 **PKPdf** **23 19 39.7 0.0**
PLCA Paso Flores 131.71 158 PKIKP **PKPdf** **23 19 39.7 0.0**
PLCA Paso Flores 131.71 158 *eP* **PKiKP** **23 19 40.8 +0.1**
ACSO Alum Creek Sta 131.92 36 **PKPdf** **23 19 39.8 -0.2**
MNTQ Montreal, Queb 132.65 24 **PKPdf** **23 19 40.7 -0.5**
LRAL Lakeview Retre 133.51 46 **PKPdf** **23 19 43.4 +0.2**
CPCT Cooper Cave 133.91 42 **PKPdf** **23 19 43.3 -0.6**
MCWV Mont Chateau 134.09 34 **PKPdf** **23 19 44.0 -0.2**
BINY Binghamton 134.23 29 **PKPdf** **23 19 44.3 -0.1**
TKL Tuckaleechee C 134.28 41 **PKPdf** **23 19 44.6 0.0**
TKL Tuckaleechee C 134.28 41 PKIKP **PKPdf** **23 19 44.6 0.0**
SSPA Standing Stone 134.45 31 **PKPdf** **23 19 44.4 -0.3**
BI02 San Fabin de 134.88 154 IAMs_20 IAMs_20 00 25 40.6
comp=Z,619nm,22.0s
DBIC Dimbokro 136.36 276 PKP **PKPdf** **23 19 49.1 +0.1**
comp=Z,30nm,1.0s,baz=113,slow=1.9,SNR=13
DBIC Dimbokro 136.36 276 PKPdf **PKPdf** **23 19 48.8 -0.3**
CBN Corbin Frederi 136.48 33 **PKPdf** **23 19 48.6 +0.1**
GBN Guysborough 136.62 13 PKPdf **PKPdf** **23 19 48.9 +0.3**
TRQA Tornquist 136.94 164 **PKPdf** **23 19 49.4 -0.1**
TRQA Tornquist 136.94 164 PKIKP **PKPdf** **23 19 49.4 -0.1**
PETF Flores 137.28 69 PKPdf **PKPdf** **23 19 51.0 +0.4**
MT02 Curacav 137.76 151 IAMs_20 IAMs_20 00 22 46.2
comp=Z,718nm,21.0s
TGUH Tegucigalpa,Un 140.35 72 PKPdf **PKPdf** **23 19 56.1 -0.4**
CFA Coronel Fontan 140.49 153 PKhKP PKPpre 23 19 51.8
comp=Z,3.7nm,0.7s,baz=261,slow=4.4,SNR=12
JUD3 Juan Diaz 3 142.69 78 **PKPdf** **23 19 58.3 -2.4**
GO03 Copiapo 142.78 147 **PKPdf** **23 19 58.2 -2.3**
JTS Las Juntas de 143.24 77 PKPbc 23 19 59.3 +0.7
JTS Las Juntas de 143.24 77 IAMs_20 IAMs_20 00 23 23.4
comp=Z,754nm,19.0s
JTS Las Juntas de 143.24 77 PKIKP PKPbc 23 19 59.3 +0.7
JTS MLR MLR
comp=Z,800nm,19.0s
AC01 Pan de Azucar 143.71 145 PKPbc 23 20 00.8 +1.2
AC02 Maricunga 143.98 148 **PKPdf** **23 20 02.3 -0.9**
ASCN Ascension 144.09 252 PKPdf **PKPdf** **23 20 02.5 -0.5**
HDC Heredia 144.10 78 *eP* PKPbc 23 20 01.1 -0.2
H10N1 ASCENSION HYDR144.22 252 PKP **PKPdf** **23 20 03.7 +0.8**
baz=135,slow=5.2,SNR=5.0
H10N2 ASCENSION HYDR144.24 252 PKP **PKPdf** **23 20 04.3 +1.4**
baz=135,slow=5.2,SNR=2.8
H10N3 ASCENSION HYDR144.25 252 PKP **PKPdf** **23 20 03.5 +0.5**
baz=135,slow=5.2,SNR=3.7
PSAL Palomas, Salto 144.66 167 *eP* **PKPdf** **23 20 03.6 0.0**
PLTB Pedras Altas 144.72 173 PKPbc 23 20 02.9 +0.3
PLTB Pedras Altas 144.72 173 *eP* **PKPdf** **23 20 03.2 -0.5**
PB14 IPOC Station P 144.99 144 PKPdf **PKPdf** **23 20 04.9 +0.2**
CPSB Cacapava Do Su 146.08 172 *eP* **PKPdf** **23 20 05.6 -0.4**
PB05 IPOC Station P 146.44 142 **PKPdf** **23 20 07.3 +0.3**
CNLB Canela 147.42 176 *eP* **PKPdf** **23 20 08.1 -0.4**
PB07 IPOC Station P 147.47 141 **PKPdf** **23 20 09.4 +0.5**
NNA Nana 148.00 119 PKPbc **PKPbc** **23 20 11.4 -1.5**
comp=Z,201nm,1.1s,baz=266,slow=5.0,SNR=28
NNA Nana 148.00 119 **PKPdf** **23 20 10.9 +1.2**
NNA Nana 148.00 119 *c*/*i* PKP2 **PKPbc** **23 20 11.7 -1.1**
NNA pmax pmax
comp=Z,717nm,1.7s
MTDJ Mount Denham 148.02 60 *i* P **PKPbc** **23 20 13.1 +0.3**
TA01 Diego Aracena 148.12 139 IAMs_20 IAMs_20 00 07 40.9
comp=Z,694nm,19.0s
CHIV Chivirico 148.21 57 PKPdf **PKPdf** **23 20 09.3 -0.5**
PB01 IPOC Station P 148.22 141 **PKPdf** **23 20 10.1 +0.1**
ATAH Atahualpa 148.44 109 PKP **PKPdf** **23 20 12.6 +1.6**
comp=Z,138nm,1.0s,baz=325,slow=1.5,SNR=33
ATAH PKPbc **PKPab** **23 20 17.0 -0.8**
comp=Z,138nm,1.0s,baz=284,slow=2.3,SNR=38
STH Stony Hill 148.71 60 ⇓*i*P **PKPbc** **23

LDASE	**Londrina, Braz**	**153.28**	**175**	*eP*		**PKPdf**	**23 20 18.5**	**+0.8**
PARB	**Paraibuna**	**153.29**	**186**	*eP*		**PKPdf**	**23 20 16.8**	**-0.9**
MURT	**Porto Murtinho**	**153.59**	**161**	*eP*		**PKPdf**	**23 20 19.3**	**+1.2**
TRCB	**Terra Rica**	**153.68**	**171**		PKPdf	**PKPdf**	**23 20 18.4**	**+0.2**
TRCB					PKPbc	**PKiKP**	**23 20 26.3**	**+0.1**
TRCB	**Terra Rica**	**153.68**	**171**	*eP*		**PKPdf**	**23 20 17.9**	**-0.4**
VAO	**Valinhos**	**153.74**	**183**		PKPdf	**PKPdf**	**23 20 18.6**	**+0.2**
VAO	**Valinhos**	**153.74**	**183**	*eP*		**PKPdf**	**23 20 18.2**	**-0.2**
DUB01	**Friburgo-RJ**	**153.99**	**193**	*eP*		**PKPdf**	**23 20 18.8**	**0.0**
ROSC	**El Rosal**	**154.26**	**86**	PKP		**PKPdf**	**23 20 20.8**	**+1.0**
	comp=Z,17nm,0.7s,baz=29,slow=2.4,SNR=7.3							
ROSC					PKPbc	**PKiKP**	**23 20 28.5**	**+0.4**
	comp=Z,42nm,0.8s,baz=102,slow=7.3,SNR=14							
ROSC	**El Rosal**	**154.26**	**86**	PKPdf		**PKPdf**	**23 20 19.8**	**0.0**
ROSC	**El Rosal**	**154.26**	**86**	PKIKP		**PKPdf**	**23 20 19.8**	**0.0**
RCLB	**Rio Claro- Sao**	**154.34**	**182**	*eP*		**PKPdf**	**23 20 20.3**	**+1.0**
DR12	**Loma Pena Alta**	**154.51**	**52**	PKPdf		**PKPdf**	**23 20 19.0**	**-0.6**
BDQN	**Bodoquena, MS**	**154.99**	**162**	*eP*		**PKPdf**	**23 20 20.0**	**-0.1**
AQDB	**Aquidauana**	**155.28**	**164**	PKPdf		**PKPdf**	**23 20 20.4**	**-0.1**
AQDB	**Aquidauana**	**155.28**	**164**	*eP*		**PKPdf**	**23 20 19.2**	**-1.3**
BSCB	**Bom Sucesso**	**155.49**	**189**	*eP*		**PKPdf**	**23 20 19.5**	**-1.4**
BB19B	**Bebedouro**	**155.71**	**180**	*eP*		**PKPdf**	**23 20 20.0**	**-1.1**
RIB01	**Linhares ES**	**156.06**	**199**	*eP*		**PKPdf**	**23 20 20.3**	**-1.3**
BSFB	**Barra de Sao F**	**156.66**	**199**	*eP*		**PKPdf**	**23 20 21.4**	**-1.0**
SJMB	**Sao Joao De Ma**	**156.89**	**198**	*eP*		**PKPdf**	**23 20 22.8**	**+0.1**
ITRB	**Iturama**	**156.99**	**176**	*eP*		**PKPdf**	**23 20 23.6**	**+0.8**
OBIP	**Obispado Ponce**	**157.08**	**49**	PKPdf		**PKPdf**	**23 20 22.6**	**-0.3**
SIV	**San Ignacio**	**157.12**	**148**	PKP		**PKPdf**	**23 20 24.3**	**+1.2**
	comp=Z,12nm,0.9s,baz=198,slow=1.4,SNR=45							
SIV					PKPab	**PKPab**	**23 20 54.0**	**+0.6**
	comp=Z,45nm,1.0s,baz=205,slow=5.6,SNR=3.0							
SJG	**San Juan**	**157.38**	**48**	PKPab		**PKPab**	**23 20 54.7**	**+0.1**
	comp=Z,44nm,1.0s,baz=339,slow=4.9,SNR=4.2							
SDV	**Santo Domingo**	**157.38**	**75**			**PKPdf**	**23 20 23.1**	**-0.6**
SDV					IAMs_20	IAMs_20	00 41 24.6	
	comp=Z,778nm,21.0s							
SDV	**Santo Domingo**	**157.38**	**75**	*eP*		**PKPdf**	**23 20 23.3**	**-0.4**
DIAM	**Diamantina, MG**	**157.93**	**192**	*eP*		**PKPdf**	**23 20 24.1**	**0.0**
PMNB	**Patos De Minas**	**158.12**	**185**	*eP*		**PKPdf**	**23 20 24.7**	**+0.4**
PP1B	**Ponte de Pedra**	**158.24**	**164**	*eP*		**PKPdf**	**23 20 24.7**	**+0.3**
GUA01	**Guaratinga, BA**	**158.36**	**203**	*eP*		**PKPdf**	**23 20 24.7**	**+0.2**
PTLB	**Pontes e Lacer**	**158.56**	**151**	PKPdf		**PKPdf**	**23 20 24.9**	**+0.1**
PTLB	**Pontes e Lacer**	**158.56**	**151**	*eP*		**PKPdf**	**23 20 25.0**	**+0.2**
IPMB	**Ipameri, GO**	**158.77**	**181**	*eP*		**PKPdf**	**23 20 25.2**	**+0.2**
CMC01	**Camacan, BA**	**159.34**	**205**	*eP*		**PKPdf**	**23 20 26.9**	**+1.2**
SALV	**Santo Antonio**	**159.58**	**160**	*eP*		**PKPdf**	**23 20 26.3**	**+0.4**
NBIT	**Itapeh - BA**	**159.69**	**206**	*eP*		**PKPdf**	**23 20 26.3**	**+0.2**
VILB	**Vilhena**	**160.08**	**145**	PKPdf		**PKPdf**	**23 20 27.3**	**+0.7**
VILB	**Vilhena**	**160.08**	**145**	*eP*		**PKPdf**	**23 20 27.2**	**+0.5**
ARAG	**Araguaiana, MT**	**160.77**	**170**	*eP*		**PKPdf**	**23 20 28.6**	**+1.2**
BDFB	**Brasilia**	**161.10**	**182**	PKP		**PKPdf**	**23 20 28.8**	**+1.0**
	comp=Z,22nm,1.1s,baz=90,slow=0.7,SNR=24							
BDFB					PKPab	**PKPab**	**23 21 11.6**	**+0.9**
	comp=Z,34nm,1.2s,baz=196,slow=1.5,SNR=6.3							
BDFB	**Brasilia**	**161.10**	**182**	PKPdf		**PKPdf**	**23 20 27.9**	**+0.1**
BDFB	**Brasilia**	**161.10**	**182**	PKIKP		**PKPdf**	**23 20 27.9**	**+0.1**
JANB	**Januaria**	**161.21**	**193**	*eP*		**PKPdf**	**23 20 27.7**	**-0.1**
TEFE	**Tefe**	**162.53**	**113**	*eP*		**PKPdf**	**23 20 29.9**	**+0.7**
PDRB	**Porto dos Gac**	**163.03**	**151**	*eP*		**PKPdf**	**23 20 28.6**	**-1.2**
NBPV	**Pedro Velho**	**163.57**	**234**	*eP*		**PKPdf**	**23 20 31.3**	**+1.1**
SDBA	**SAO DESIDERIO**	**163.90**	**193**	*eP*		**PKPdf**	**23 20 30.5**	**-0.1**
CLDB	**Colider**	**164.11**	**153**	*eP*		**PKPdf**	**23 20 31.0**	**+0.3**
RCBR	**Riachuelo**	**164.40**	**234**	*eP*		**PKPdf**	**23 20 31.0**	**0.0**
SNDB	**Serra Nova Dou**	**164.51**	**170**	*eP*		**PKPdf**	**23 20 31.3**	**+0.2**
NBPA	**Parau_RN**	**165.41**	**232**	*eP*		**PKPdf**	**23 20 31.9**	**0.0**
MACA	**Manacapuru-AM**	**166.25**	**118**	PKPdf		**PKPdf**	**23 20 31.4**	**-1.1**
NPGB	**Novo Progresso**	**167.62**	**147**	*eP*		**PKPdf**	**23 20 33.2**	**-0.3**
SMTB	**Santa Maria do**	**167.80**	**185**	*eP*		**PKPdf**	**23 20 33.8**	**+0.1**
BOAV	**Boa Vista**	**168.01**	**94**	PKPdf		**PKPdf**	**23 20 33.4**	**-0.4**
BOAV	**Boa Vista**	**168.01**	**94**	*eP*		**PKPdf**	**23 20 34.3**	**+0.5**
ITTB	**Itaituba**	**169.48**	**137**	*eP*		**PKPdf**	**23 20 34.6**	**-0.2**
NBPS	**Pedro II - PI**	**169.51**	**223**	*eP*		**PKPdf**	**23 20 33.8**	**-1.1**
PRPB	**Parauapebas**	**170.43**	**172**	*eP*		**PKPdf**	**23 20 34.9**	**-0.5**

*RSNC **15** 23:00:34.0±0.0, 10°N±1°×7°8W±°, h22km±3km, M2.6, ML2.5*
*UPA **15** 23:00:36.6±1.2, 9°.62N×78°.05W, h24km±13km, ML3.9,*
MW3.7, Presumed earthquake

ISC 15 23:00:32.1±2.9, 9.77N±0°.07×77.86W±0°.04, h24km±23km, n14, σ1§88/23, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TOTI	**Torti**	**0.94**	**208**	*eP*		Pn	23 00 49.4	-0.5
TOTI				AMP			23 00 49.6	
	comp=Z,5μm,0.1s							
TOTI				*eS*		**Sb**	**23 01 00.5**	**-1.4**
CNTA3	**Canitas, Panam**	**1.15**	**242**	*eP*		Pn	23 00 52.6	0.0
CNTA3				*eS*		**Sn**	**23 01 05.6**	**-2.0**
UPD2	**Meteti**	**1.22**	**187**	*eP*		**Pn**	**23 00 56.9**	**+3.2**
UPD2				*eS*		**Sn**	**23 01 08.6**	**-0.8**
CAPC	**Capurgana**	**1.23**	**156**	P		Pn	23 00 53.4	-0.4
CAPC				S		**Sn**	**23 01 08.2**	**-1.5**
CHPO	**Chepo, Panama**	**1.37**	**245**	*eP*		**Pn**	**23 01 00.2**	**+4.5**
CHPO				*eS*		**Sn**	**23 01 10.7**	**-2.4**
FRIJ	**El Hiral**	**1.92**	**254**	*eP*		**Pn**	**23 01 03.8**	**+0.5**
FRIJ				*eS*		**Sn**	**23 01 24.7**	**-1.9**
GAMB1	**Gamboa**	**1.93**	**251**	*eP*		**Pn**	**23 01 04.8**	**+1.3**
GAMB1				*eS*		**Sn**	**23 01 26.0**	**-1.0**
BCIP	**Isla Barro Col**	**2.04**	**253**	P		**Pn**	**23 01 05.9**	**+0.7**
BCIP				S		**Sn**	**23 01 28.6**	**-1.0**
BCIP	**Isla Barro Col**	**2.04**	**253**	*eP*		**Pn**	**23 01 05.8**	**+0.9**
BCIP				AMP			23 01 07.6	
	comp=Z,1μm,0.1s							
BCIP				*eS*		**Sn**	**23 01 28.7**	**-0.9**
ZANG	**Zanguenga, Cho**	**2.13**	**248**	*eP*		**Pn**	**23 01 07.9**	**+1.6**
ZANG				*eS*		**Sn**	**23 01 31.0**	**-1.0**
APAC	**Apartado, Choc**	**2.25**	**146**	P		Pn	23 01 07.4	-0.4
APAC				S		**Sn**	**23 01 35.3**	**+0.5**
PTAC	**Punta Ardita,**	**2.60**	**179**	P		Pn	23 01 12.4	-0.3
PTAC				S		**Sn**	**23 01 42.2**	**-1.4**
SJCC	**San Jacinto, C**	**2.65**	**87**	P		**Pn**	**23 01 14.8**	**+1.4**
SJCC				S		**Sn**	**23 01 44.2**	**-0.6**
UREC	**San Jos de Ur**	**3.05**	**131**	P		**Pn**	**23 01 18.7**	**-0.2**
UREC				S		**Sn**	**23 01 52.7**	**-2.0**

*IGIL **15** 23:01:16.5, 37°.45N×17°.38W, h11km, ML2.7*
*MDD **15** 23:01:17.4±1.1, 37°.60N×17°.11W, h0km, Mb4.5/10,*
M_mb3.9/6, Error ellipse: s-maj=10.6km s-min=8.3km
az=0.0
*INMG **15** 23:01:21.0±2.2, 37°.58N×17°.40W, h17km±999km, ML2.7,*
Error ellipse: s-maj=15.9km s-min=15.9km az=0.0,
#DIST_RANGE: REGIONAL #IPMA_REGION:
Madeira-Tore
*CNRM **15** 23:01:33.3, 37°.38N×15°.80W, h30km*

ISC 15 23:01:17.3±2.6, 37°.53N±0°.07×16°.9W±0°.1, h10km, n51, σ2§87/86, 9C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PMOZ	**Porto Moniz, M**	**4.70**	**183**	*eS*		**Sn**	**23 03 16.7**	**-6.4**
PMAR	**Madeira**	**4.79**	**180**	*eS*		**Sn**	**23 03 18.5**	**-6.9**
PMAR				*i* IAML			23 03 22.8	
PMAR				*i* IAML			23 03 22.9	
PMAR				*i* IAML			23 03 24.2	
PMAFR	**Mafra**	**6.14**	**74**	Pn		**Pn**	**23 02 49.6**	**+1.4**
PMAFR				Sn		**Sn**	**23 03 58.5**	**+0.1**
PMAFR	**Mafra**	**6.14**	**74**	*eP*		**Pn**	**23 02 50.7**	**+2.6**
PMAFR				*eS*		**Sn**	**23 03 58.7**	**+0.3**
PFVI	**Vila Bisbo**	**6.42**	**91**	Pn		**Pn**	**23 02 54.0**	**+2.0**
PFVI	**Vila Bisbo**	**6.42**	**91**	*eS*		**Sn**	**23 04 05.1**	**-0.3**
PTEO	**Sao Teotonio**	**6.48**	**87**	*eS*		**Sn**	**23 04 06.0**	**-0.6**
PTEO				*i* IAML			23 04 09.4	
MORF	**Marmelete**	**6.55**	**89**	*eP*		**Pn**	**23 02 55.5**	**+1.8**
MORF				*eS*		**Sn**	**23 04 07.9**	**-0.6**
MORF				IAML			23 04 10.4	
	comp=N,6.8nm,0.3s							
MORF	**Marmelete**	**6.55**	**89**	*eP*		**Pn**	**23 02 55.8**	**+2.1**
MORF				*eS*		**Sn**	**23 04 08.7**	**+0.2**
MORF				*i* IAML			23 04 13.4	
PSBE	**So Bento**	**6.64**	**70**	*eP*		**Pn**	**23 02 57.3**	**+2.4**
PSBE				*eS*		**Sn**	**23 04 10.7**	**+0.1**
MOE	**Montemor**	**6.80**	**79**	*eP*		**Pn**	**23 03 00.7**	**+3.5**
MOE				*eS*		**Sn**	**23 04 14.2**	**-0.5**
MOE				*i* IAML			23 04 18.3	
MESJ	**Messejana**	**6.87**	**85**	*eP*		**Pn**	**23 03 02.0**	**+3.9**
MESJ				*eS*		**Sn**	**23 04 16.2**	**-0.2**
MESJ				*i* IAML			23 04 20.1	
MESJ				*i* IAML			23 04 21.0	
PMTG	**Montargil**	**6.97**	**75**	*eP*		**Pn**	**23 03 02.0**	**+2.5**
PMTG				*eS*		**Sn**	**23 04 18.9**	**0.0**
PMTG				*i* IAML			23 04 20.4	
PMTG				*i* IAML			23 04 20.6	
PMTG				*i* IAML			23 04 24.1	
PCAS	**Casmilo, Conde**	**7.01**	**66**	*eP*		**Pn**	**23 03 01.5**	**+1.5**
PCAS				*eS*		**Sn**	**23 04 18.1**	**-1.7**
PCAS				*i* IAML			23 04 22.1	
PCVE	**Castro Verde**	**7.02**	**86**	Pn		**Pn**	**23 03 02.5**	**+2.4**
PCVE				Sn		**Sn**	**23 04 18.9**	**-1.0**
PCVE	**Castro Verde**	**7.02**	**86**	*eP*		**Pn**	**23 03 03.5**	**+3.4**
PCVE				*eS*		**Sn**	**23 04 20.0**	**+0.1**
PCVE				*i* IAML			23 04 23.8	
PCVE				*i* IAML			23 04 24.2	
EVO	**Evora**	**7.07**	**79**	Sn		**Sn**	**23 04 20.2**	**-0.9**
EVO	**Evora**	**7.07**	**79**	*eS*		**Sn**	**23 04 20.7**	**-0.5**
PARRA	**Arraiolos**	**7.08**	**77**	*eP*		**Pn**	**23 03 04.1**	**+3.2**
PARRA				*eS*		**Sn**	**23 04 20.4**	**-1.1**
PARRA				*i* IAML			23 04 24.2	
PARRA				*i* IAML			23 04 25.6	
PARRA				*i* IAML			23 04 28.1	
PBDV	**Barranco-do-Ve**	**7.12**	**90**	Pn		**Pn**	**23 03 04.3**	**+2.6**
PBDV				Sn		**Sn**	**23 04 21.6**	**-1.1**
PBDV	**Barranco-do-Ve**	**7.12**	**90**	*eP*		**Pn**	**23 03 03.9**	**+2.2**
PBDV				*eS*		**Sn**	**23 04 21.9**	**-0.8**
PSARD	**Sardoal**	**7.13**	**70**	*eP*		**Pn**	**23 03 04.5**	**+2.8**
PSARD				*eS*		**Sn**	**23 04 22.3**	**-0.5**
PBEJ	**Beja**	**7.15**	**83**	*eS*		**Sn**	**23 04 22.7**	**-0.6**
PVAQ	**Vaqueiros**	**7.28**	**88**	*eP*		**Pn**	**23 03 07.0**	**+3.2**
PVAQ				*eS*		**Sn**	**23 04 26.0**	**-0.5**
PVAQ				*i* IAML			23 04 30.3	
PVAQ				*i* IAML			23 04 30.7	
PVAQ				*i* IAML			23 04 32.2	
PVAQ	**Vaqueiros**	**7.28**	**88**	P		**Pn**	**23 03 05.2**	**+1.5**
PVAQ				S		**Sn**	**23 04 20.0**	**-6.5**
PESTR	**Estremoz**	**7.43**	**77**	*eS*		**Sn**	**23 04 29.4**	**-0.8**
PESTR	**Estremoz**	**7.43**	**77**	P		**Pn**	**23 03 06.3**	**+0.5**
PESTR				S		**Sn**	**23 04 24.9**	**-5.3**
EGRO	**El Granado**	**7.46**	**87**	Pn		**Pn**	**23 03 09.6**	**+3.4**
EGRO				Sn		**Sn**	**23 04 29.4**	**-1.4**
EGRO	**El Granado**	**7.46**	**87**	Pn		**Pn**	**23 03 09.6**	**+3.4**
EGRO				⇑*i*Vmb_VC			23 03 11.1	
	comp=N,124nm,SNR=1.5							
EGRO				Sn		**Sn**	**23 04 29.6**	**-1.3**
EXAYA	**Ayamonte**	**7.54**	**89**	Sn		**Sn**	**23 04 34.1**	**+1.2**
PMRV	**Marv??o**	**7.68**	**73**	*eP*		**Pn**	**23 03 11.5**	**+2.4**
PMRV				*eS*		**Sn**	**23 04 34.4**	**-1.8**
PCBR	**Castelo Branco**	**7.70**	**70**	*eS*		**Sn**	**23 04 36.2**	**-0.6**
PBAR	**Barrancos**	**7.81**	**82**	Pn		**Pn**	**23 03 14.2**	**+3.2**
PBAR				Sn		**Sn**	**23 04 37.3**	**-2.1**
PBAR	**Barrancos**	**7.81**	**82**	*eP*		**Pn**	**23 03 13.9**	**+2.9**
PBAR				*eS*		**Sn**	**23 04 38.9**	**-0.5**
EBAD	**Badajoz**	**7.87**	**78**	Pn		**Pn**	**23 03 14.1**	**+2.3**
EBAD				Sn		**Sn**	**23 04 38.9**	**-2.0**
EBAD	**Badajoz**	**7.87**	**78**	Pn		**Pn**	**23 03 14.4**	**+2.6**
EBAD				⇑*i*Vmb_VC			23 03 16.3	
	comp=N,115nm,SNR=1.1							
EBAD				Sn		**Sn**	**23 04 38.6**	**-2.3**
PGAV	**Gavieira, Arco**	**7.97**	**54**	*eP*		**Pn**	**23 03 13.7**	**+0.4**
PGAV				*eS*		**Sn**	**23 04 38.3**	**-5.3**
PCAB	**Cabril**	**8.00**	**56**	*eP*		**Pn**	**23 03 16.1**	**+2.5**
POLO	**Lamas de Olo**	**8.00**	**59**	*eP*		**Pn**	**23 03 15.3**	**+1.6**
POLO				*eS*		**Sn**	**23 04 41.7**	**-2.7**
ELOB	**Lobios**	**8.06**	**55**	Pn		**Pn**	**23 03 15.2**	**+0.8**
ELOB				⇑*i*Vmb_VC			23 03 16.2	
	comp=N,355nm,SNR=1.1							
ELOB				Sn		**Sn**	**23 04 41.2**	**-4.4**
EMIN	**Mina Concepcio**	**8.10**	**85**	Pn		**Pn**	**23 03 17.9**	**+2.9**
EMIN				Sn		**Sn**	**23 04 43.7**	**-2.8**
EMIN	**Mina Concepcio**	**8.10**	**85**	Pn		**Pn**	**23 03 17.8**	**+2.9**
EMIN				⇑*i*Vmb_VC			23 03 21.6	
	comp=N,105nm,SNR=1.3							
EMIN				Sn		**Sn**	**23 04 46.2**	**-0.3**
STS	**Santiago**	**8.32**	**47**	Pn		**Pn**	**23 03 18.8**	**+0.9**
EAGO	**Agolada(Pontev**	**8.54**	**49**	Pn		**Pn**	**23 03 21.3**	**+0.3**
EAGO				⇑*i*Vmb_VC			23 03 24.1	
	comp=N,314nm,SNR=1.0							
EAGO				Sn		**Sn**	**23 04 50.5**	**-7.0**
EPLA	**Plasencia**	**8.80**	**70**	⇑*i*Vmb_VC			23 03 30.0	
	comp=N,142nm,SNR=1.2							
EPLA				Sn		**Sn**	**23 05 01.4**	**-2.4**
ECAL	**Calabor**	**8.96**	**57**	⇑*i*Vmb_VC			23 03 31.4	
	comp=N,230nm,SNR=1.1							
ECAL				Sn		**Sn**	**23 05 05.3**	**-2.6**
ECAB	**El Cabril**	**9.08**	**83**	Pn		**Pn**	**23 03 31.0**	**+2.5**
ECAB				⇑*i*Vmb_VC			23 03 33.6	
	comp=N,64nm,SNR=0.8							
ECAB				Sn		**Sn**	**23 05 07.4**	**-3.4**
EADA	**Adamuz**	**9.75**	**82**	Pn		**Pn**	**23 03 40.1**	**+2.5**
EADA				⇑*i*Vmb_VC			23 03 41.4	
	comp=N,97nm,SNR=0.9							
EADA				Sn		**Sn**	**23 05 24.5**	**-2.7**
OUZM	**OUZ**	**10.66**	**125**	P		**Pn**	**23 03 54.4**	**+4.2**
OUZM				Sn		**Sn**	**23 05 43.2**	**-6.5**
MD31	**MD31**	**10.95**	**112**	P		**Pn**	**23 03 57.1**	**+3.0**
MD31				Sn		**Sn**	**23 05 49.3**	**-7.3**
MDT	**Midelt**	**11.08**	**111**	P		**Pn**	**23 03 58.4**	**+2.4**
MDT				Sn		Sn	23 05 50.7	-9.3

ATH 15 23:12:25.0, 38°.08N×23°.42E, h12km±1km, ML1.3/2,
Manual Solution by A.Moschou First location:
2020/02/15 23:13:24, This location: 2020/02/15 23:17:34
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude
uncertainty: 0 km; Longitude uncertainty: 0 km, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAGU	**Magoula**	**0.07**	**94**	P	Pg	23 12 27.7	+0.2
MAGU				S	Sg	23 12 29.1	-0.4
ELFA	**Athens-Elefsin**	**0.10**	**112**	P	Pg	23 12 28.2	+0.4
ELFA				S	Sg	23 12 29.9	-0.1
STFN	**Stefani**	**0.14**	**47**	P	Pg	23 12 28.6	+0.2
STFN				S	Sg	23 12 30.9	+0.1
VIL2	**Platees**	**0.17**	**317**	P	Pg	23 12 28.2	-0.8
VIL2				S	Sg	23 12 30.6	-1.2
ACHAR	**Athens-Acharne**	**0.26**	**92**	P	Pg	23 12 29.4	-1.0
ACHAR				S	Sg	23 12 34.1	+0.2
ATHU	**Athens Univers**	**0.31**	**112**	P	Pg	23 12 31.5	+0.2
ATHU				S	Sg	23 12 35.7	+0.1
VLY	**Voula,Athens**	**0.38**	**128**	P	Pg	23 12 32.5	0.0
VLY				S	Sg	23 12 37.2	-0.4

*IDC **15** 23:58:23.0±1.3, 49°.93S×7°.21W, h0km, mb4.1/5,*
mbtmp4.2/5, MS4.1/9, Error ellipse: s-maj=47.9km
s-min=24.5km az=59.0
*NEIC **15** 23:58:24.8±1.4, 50°.1S±0°.1×7°.2W±0°.2, h10km±1km,*
mb4.7/14, Error ellipse: s-maj=23.2km s-min=19.9km
az=27.0

ISC 15 23:58:24.3±0.7, 50°.0S±0°.1×7°.2W±0°.1, h10km, n38, σ0§87/25, mb4.5/13, MS4.1/9, 4C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**20.73**	**181**	⇑P		Pn	00 03 11.9	+5.1
	comp=Z,20nm,0.8s							
VNA2	**Neumayer--Watz**	**21.00**	**180**	⇑P		Pn	00 03 13.3	+3.2
	comp=Z,6.9nm,0.9s,baz=351,slow=14							
VNA3	**Neumayer Olymp**	**21.35**	**182**	⇑P		**P**	**00 03 13.0**	**+1.8**
	comp=Z,5.5nm,1.0s							
SNAA	**Sanae**	**21.84**	**176**	⇑P		**P**	**00 03 17.6**	**+1.1**
	comp=Z,12nm,0.2s							
SNAA	**Sanae**	**21.84**	**176**	P		**P**	**00 03 18.0**	**+1.4**
	comp=Z,8.2nm,0.9s,baz=340,slow=9.2,SNR=5.7							
	comp=Z,8.2nm,0.9s							
SNAA	**Sanae**	**21.84**	**176**	P		**P**	**00 03 14.9**	**-1.7**
SUR	**Sutherland**	**27.24**	**60**	LR		LR	00 12 56.3	
	comp=Z,429nm,19.1s,baz=166,slow=32							
BELA	**Belgrano 2**	**29.80**	**191**	P		**P**	**00 04 30.0**	**-0.8**
BOSA	**Boshof**	**32.59**	**61**	LR		LR	00 16 01.9	
	comp=Z,318nm,18.5s,baz=194,slow=32							
KOOLE	**Kule**	**34.45**	**49**	P		**P**	**00 05 12.0**	**-0.3**
KOOLE						IAmb	IAmb	00 05 20.6
	comp=Z,13nm,1.1s							
KGCAE	**Kacgae**	**35.56**	**51**	P		**P**	**00 05 21.7**	**-0.1**
KGCAE						IAmb	IAmb	00 05 35.8
	comp=Z,26nm,1.2s							
LBTB	**Lobatse**	**35.58**	**58**	LR		LR	00 17 33.7	
	comp=Z,312nm,19.9s,baz=194,slow=32							
TSUM	**Tsumeb**	**36.55**	**42**	LR		LR	00 16 53.8	
	comp=Z,330nm,21.7s,baz=160,slow=30							
KHWEE	**KHWEE**	**37.98**	**55**	P		**P**	**00 05 42.9**	**+0.5**
KHWEE						IAmb	IAmb	00 05 55.6
	comp=Z,15nm,1.1s							
QSPA	**South Pole Qui**	**40.26**	**180**	P		**P**	**00 06 01.6**	**+0.6**
	comp=Z,16nm,1.0s,baz=219,slow=6.0,SNR=11							
	comp=Z,16nm,1.0s							
QSPA	**South Pole Qui**	**40.26**	**180**	P		**P**	**00 06 00.6**	**-0.4**
QSPA						IAmb	IAmb	00 06 03.8
	comp=Z,19nm,1.0s							
H10S2	**ASCENSION HYDR**	**41.38**	**349**	T		T	00 50 46.4	
	baz=48,slow=74,SNR=9.6							
H10S3	**ASCENSION HYDR**	**41.38**	**349**	T		T	00 50 41.6	
	baz=172,slow=74,SNR=9.3							
CPUP	**Villa Florida**	**44.89**	**283**	P		**P**	**00 06 39.8**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=116,slow=9.2,SNR=4.2							
	comp=Z,1.4nm,0.8s							
CPUP	**Villa Florida**	**44.89**	**283**	P		**P**	**00 06 38.0**	**-1.0**
LSZ	**Lusaka**	**44.96**	**52**	LR		LR	00 24 22.7	
	comp=Z,202nm,18.1s,baz=164,slow=35							
LSZ	**Lusaka**	**44.96**	**52**	P		**P**	**00 06 40.2**	**+0.6**
LSZ						IAmb	IAmb	00 06 52.5
	comp=Z,7.2nm,1.2s							
BDFB	**Brasilia**	**47.52**	**301**	P		**P**	**00 07 00.4**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=257,slow=3.9,SNR=3.3							
	comp=Z,1.8nm,0.8s							
BO02	**Sierra Bellavi**	**47.90**	**263**	P		**P**	**00 07 02.2**	**-0.4**
BO02						IAmb	IAmb	00 07 06.2
	comp=Z,7.8nm,1.1s							
MT09	**Talagante**	**48.68**	**264**	P		**P**	**00 07 08.1**	**-0.6**
MT01	**Popeta**	**48.79**	**264**	P		**P**	**00 07 09.8**	**+0.4**
MT02	**Curacav**	**49.10**	**265**	P		**P**	**00 07 11.7**	**-0.1**
VNDA	**Vanda**	**52.57**	**177**	LR		LR	00 28 10.8	
	comp=Z,117nm,21.6s,baz=174,slow=34							
GO01	**Chusmiza**	**57.23**	**278**	P		**P**	**00 08 12.8**	**+0.5**
GO01						IAmb	IAmb	00 08 20.8
	comp=Z,4.5nm,1.0s							
PB16	**IPOC Station P**	**58.41**	**279**	P		**P**	**00 08 21.6**	**+0.9**
PB16						IAmb	IAmb	00 08 41.7
	comp=Z,5.6nm,1.1s							
MBAR	**Mbarara**	**58.88**	**46**	LR		LR	00 30 44.7	
	comp=Z,224nm,20.5s,baz=226,slow=33							
LPAZ	**La Paz**	**59.05**	**282**	P		**P**	**00 08 25.1**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=137,slow=5.8,SNR=4.1							
	comp=Z,0.9nm,0.7s							
FURI	**Furi**	**70.95**	**49**	LR		LR	00 38 47.6	
	comp=Z,145nm,20.3s,baz=336,slow=34							
PALK	**Pallekele**	**94.18**	**84**	LR		LR	00 44 13.3	
	comp=Z,137nm,21.2s,baz=331,slow

comp=Z,887nm,18.4s,baz=23,slow=44
PETK Petropavlovsk- 3.96 230 Pn Pn 00 00 54.5 +2.1
PETK Petropavlovsk- 3.96 230 PN **Pn 00 00 54.5 +2.1**
KRMR Karymshinskiy 3.98 225 PN **Pn 00 00 55.1 +2.5**
KRMR Karymshinskiy 3.98 225 *eP* **Pn 00 00 55.2 +2.5**
GRL Gorelyy 4.22 222 PN **Pn 00 00 58.1 +2.1**
GRL Gorelyy 4.22 222 *eP* **Pn 00 00 58.1 +2.1**
MTVR Mutnovka 4.24 221 PN **Pn 00 00 58.6 +2.4**
MTVR Mutnovka 4.24 221 *eP* **Pn 00 00 58.7 +2.4**
APC Apacha 4.33 231 PN **Pn 00 01 01.3 +4.0**
APC Apacha 4.33 231 *eP* **Pn 00 01 01.4 +4.0**
KDTR Khodutka, Kamc 4.82 217 PN **Pn 00 01 07.2 +3.0**
KDTR Khodutka, Kamc 4.82 217 *eP* **Pn 00 01 07.2 +3.0**
TILK Tilichiki 5.04 20 PN **Pn 00 01 08.4 +1.4**
TILK Tilichiki 5.04 20 *eP* **Pn 00 01 08.5 +1.4**
MA2 Magadan 7.47 306 Pn **Pn 00 01 42.2 +1.7**
comp=Z,0.2nm,0.3s,baz=111,slow=9.4,SNR=4.2
comp=Z,3.4nm,0.8s
MA2 Magadan 7.47 306 Pn 00 01 40.8 +0.3
MA2 Magadan 7.47 306 *i* PN **Pn 00 01 42.6 +2.1**
SEY Seymchan 8.92 328 *i* PN **Pn 00 02 01.9 +1.6**
BILL Bilibino 12.44 6 Pn 00 02 49.9 +1.5
BILL Bilibino 12.44 6 *ce* PN **Pn 00 02 51.4 +3.0**
BILL pmax pmax
comp=Z,8.0nm,1.7s
BILL MLR MLR
comp=Z,188nm,15.0s
ATKA Atka Island 14.01 95 Pn Pn 00 03 11.1 +1.2
YSS Yuzhno-Sakhali 15.23 243 *eP* **P 00 03 29.7 -1.8**
YSS MLR MLR
comp=Z,300nm,14.0s
M11K Mekoryuk 16.97 61 Pn **P 00 03 50.4 -0.2**
JKA Kamikawa-asahi 17.35 236 Pn 00 03 54.5 +0.9
JKA IAmb IAmb 00 04 02.9
comp=Z,21nm,0.8s
ASAJ Asahikawa 17.35 236 P **P 00 03 55.3 +0.3**
comp=Z,1.8nm,0.3s,baz=70,slow=12,SNR=17
ASAJ LR LR 00 10 39.9
comp=Z,212nm,18.8s,baz=8.5,slow=38
comp=Z,9.9nm,0.5s
ASAJ Asahikawa 17.35 236 P **Pn 00 03 54.5 +0.8**
ASAJ pmax pmax
comp=Z,21nm,0.8s
UNV Unalaska Valle 17.76 83 P **P 00 03 59.6 +0.1**
UNV IAmb IAmb 00 04 05.8
comp=Z,45nm,1.2s
ANM Nome 17.96 48 P **P 00 04 02.2 +0.6**
ANM Nome 17.96 48 P **P 00 04 02.2 +0.6**
ANM pmax pmax
comp=Z,8.0nm,1.4s
YAK Yakutsk 18.04 304 *i* P **P 00 04 03.1 +0.6**
YAK pmax pmax
comp=Z,5.0nm,0.9s
F15K North Star Dit 18.56 44 Pn 00 04 11.1 +2.6
C16K Lisburne Hills 19.23 37 Pn 00 04 16.5 +0.1
KLR Kul'dur 19.84 264 LR LR 00 11 56.6
comp=Z,45nm,20.5s,baz=89,slow=37
KLR Kul'dur 19.84 264 *i* P **Pn 00 04 26.3 +2.4**
KLR pmax pmax
comp=Z,4.0nm,1.3s
N15K Kwethluk River 20.02 62 Pn 00 04 25.6 -0.3
N15K IAmb IAmb 00 04 31.2
comp=Z,27nm,1.1s
O15K Ungalikthiuk R 20.24 65 P 00 04 27.2 +0.6
O15K IAmb IAmb 00 04 36.9
comp=Z,16nm,1.0s
L16K Owhat River 20.27 57 P 00 04 27.5 +0.7
M16K Timber Creek 20.53 59 P **P 00 04 30.8 +1.1**
C19K Utukok River 20.79 37 P 00 04 32.8 +0.3
K17K Iditarod 20.83 55 P 00 04 33.5 +0.5
O16K Kokwok River B 21.07 63 P **P 00 04 35.9 +0.3**
TIXI Tiksi 21.39 331 P **P 00 04 39.3 +0.4**
comp=Z,29nm,0.8s,baz=118,slow=10.0,SNR=13
comp=Z,29nm,0.8s
TIXI Tiksi 21.39 331 P 00 04 39.3 +0.4
TIXI IAmb IAmb 00 04 43.1
comp=Z,26nm,0.7s
TIXI Tiksi 21.39 331 *ce* P **P 00 04 40.0 +1.1**
TIXI pmax pmax
comp=Z,39nm,1.0s
C19K Lookout Ridge 21.49 37 P **P 00 04 40.9 +0.8**
J18K Innoko River 21.57 53 P 00 04 42.6 +1.6
J19K Poorman 22.08 51 P 00 04 47.1 +0.7
F21K Alatna River 23.26 43 P **P 00 04 59.0 +0.1**
VLA Vladivostok 23.49 250 *i* P **P 00 05 03.7 +2.5**
VLA pmax pmax
comp=Z,40nm,0.8s
B22K Teshekpuk Lake 23.91 35 P **P 00 05 05.0 -0.1**
B22K IAmb IAmb 00 05 10.7
comp=Z,15nm,1.1s
H22K Ishtalitna Cre 23.98 47 P **P 00 05 06.3 +0.5**
KDAK Kodiak Island 24.23 67 P **P 00 05 07.8 -0.4**
KDAK IAmb IAmb 00 05 14.2
comp=Z,32nm,1.4s
KDAK Kodiak Island 24.23 67 P **P 00 05 07.8 -0.4**
KDAK pmax pmax
comp=Z,33nm,1.4s
SUA Susitna One 24.45 57 P **P 00 05 10.5 +0.3**
SUA IAmb IAmb 00 05 16.1
comp=Z,8.2nm,0.8s
TRF Thorofare Moun 24.46 53 P 00 05 10.4 -0.1
TRF IAmb IAmb 00 05 16.6
comp=Z,8.9nm,0.9s
CNPM China Poot 24.53 62 P **P 00 05 11.6 +0.6**
CNPM IAmb IAmb 00 05 43.8
comp=Z,38nm,1.4s
I23K Minto, Yukon-K 24.80 48 P **P 00 05 13.8 +0.5**
I23K IAmb IAmb 00 05 24.1
comp=Z,18nm,1.3s
RND Reindeer 25.11 52 P 00 05 15.5 -0.7
RND IAmb IAmb 00 05 26.2
comp=Z,10nm,1.1s
RND Reindeer 25.11 52 P **P 00 05 15.5 -0.7**
RND pmax pmax
comp=Z,10.0nm,1.1s
WRH Wood River Hil 25.37 50 P 00 05 18.6 +0.2
WRH IAmb IAmb 00 05 37.5
comp=Z,11nm,1.2s
MAJO Matsushiro 25.42 231 P **P 00 05 18.8 -0.3**
MAJO IAmb IAmb 00 05 25.1
comp=Z,19nm,0.8s
MAJO Matsushiro 25.42 231 P **P 00 05 18.8 -0.3**
MAJO pmax pmax
comp=Z,19nm,0.8s
MJAR Matsushiro Arr 25.42 231 P **P 00 05 19.2 +0.1**
comp=Z,6.8nm,0.9s,baz=24,slow=7.7,SNR=13
MJAR LR LR 00 14 59.5
comp=Z,180nm,21.3s,baz=14,slow=36
comp=Z,6.8nm,0.9s
MJAR Matsushiro Arr 25.42 231 P 00 05 19.2 +0.1
MJAR Matsushiro Arr 25.42 231 P **P 00 05 19.2 +0.1**
MJAR pmax pmax
comp=Z,5.0nm,1.0s
CCB Clear Creek Bu 25.48 50 P 00 05 19.6 +0.2
ILAR Eielson Array 25.87 49 P **P 00 05 21.5 -1.5**
comp=Z,0.9nm,0.6s,baz=269,slow=9.5,SNR=18
comp=Z,0.9nm,0.6s
ILAR Eielson Array 25.87 49 P **P 00 05 23.4 +0.4**
ILAR Eielson Array 25.87 49 P **P 00 05 23.4 +0.4**
SCM Sheep Creek Mo 26.00 56 P **P 00 05 24.8 +0.5**
SCM IAmb IAmb 00 05 30.8
comp=Z,13nm,0.9s
SCM Sheep Creek Mo 26.00 56 P **P 00 05 24.8 +0.5**
SCM pmax pmax
comp=Z,13nm,0.9s
D25K Kavik River 26.13 39 P 00 05 25.6 +0.1
D25K IAmb IAmb 00 05 29.4
comp=Z,7.0nm,0.6s
E25K Arctic Village 26.35 42 P 00 05 27.3 0.0
JGF Kuroka 26.58 231 P **P 00 05 29.1 -0.7**
JGF IAmb IAmb 00 05 38.1
comp=Z,18nm,1.0s
BMAR Burnt Mountain 26.72 43 P 00 05 31.2 +0.5
C27K Jago River 27.09 38 P **P 00 05 34.2 +0.2**
BCAR Beaver Creek A 28.32 52 P **P 00 05 45.7 +0.6**
F28M Old Crow 28.52 43 P 00 05 46.9 +0.2
E28M Babbage River 28.59 40 P **P 00 05 45.9 -1.4**
INK Inuvik 30.82 41 P 00 06 07.3 +0.3
INK IAmb IAmb 00 06 26.7
comp=Z,9.5nm,1.4s
INK Inuvik 30.82 41 P **P 00 06 07.4 +0.3**
INK pmax pmax
comp=Z,10.0nm,1.5s
A36M Sachs Harbour 33.04 33 P 00 06 27.3 +0.8
C36M Paulatuk 33.98 37 P 00 06 34.8 +0.1
C36M IAmb IAmb 00 06 41.0
comp=Z,6.3nm,1.0s
NRIK Noril'sk 34.66 323 P **P 00 06 39.1 -1.5**
comp=Z,1.3nm,0.8s,baz=79,slow=13,SNR=3.6
comp=Z,1.3nm,0.8s
NRIK Noril'sk 34.66 323 *i* P **P 00 06 41.5 +0.9**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 34.85 281 P **P 00 06 42.5 -0.1**
comp=Z,0.4nm,0.4s,baz=46,slow=5.7,SNR=4.4
comp=Z,0.4nm,0.4s
DLBC Dease Lake 35.25 57 LR LR 00 19 58.3
comp=Z,237nm,21.1s,baz=330,slow=34
H11N2 WAKE ISLAND Hy 36.10 173 T T 00 45 25.9
baz=356,slow=76,SNR=2129
H11N3 WAKE ISLAND Hy 36.12 173 T T 00 45 23.6
baz=356,slow=76,SNR=330
H11N1 WAKE ISLAND Hy 36.12 173 T T 00 45 23.6
baz=356,slow=76,SNR=1569
YKA Yellowknife Ar 40.17 46 P **P 00 07 27.0 -0.3**
comp=Z,1.7nm,0.8s,baz=302,slow=8.9,SNR=17
comp=Z,1.7nm,0.8s
YKA Yellowknife Ar 40.17 46 P **P 00 07 27.8 +0.4**
YKA Yellowknife Ar 40.17 46 *eP* **P 00 07 28.2 +0.9**
YKA pmax pmax
comp=Z,1.0nm,0.7s
RES Resolute Bay 40.27 24 P 00 07 28.3 +0.3
RES IAmb IAmb 00 07 31.0
comp=Z,6.9nm,1.4s
RES Resolute Bay 40.27 24 P **P 00 07 28.3 +0.3**
RES pmax pmax
comp=Z,7.0nm,1.4s
GTA2 Gaotai 43.85 276 *eP* **P 00 07 58.8 +1.0**
GTA2 pP sP 00 08 03.9 +2.1
GTA2 pmax pmax
comp=Z,2.0nm,1.1s
DGZ Jazzator, Alta 43.91 295 *i* P **P 00 07 59.1 +0.9**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
KBS Kingsbay 44.44 352 *i* P **P 00 08 05.1 +3.1**
SPITS Spitsbergen Ar 44.76 351 P **P 00 08 05.0 +0.6**
comp=Z,19nm,0.6s,baz=64,slow=9.8,SNR=49
SPITS Spitsbergen Ar 44.76 351 P **P 00 08 04.5 0.0**
SPITS pmax pmax
comp=Z,42nm,0.9s
SPB2 Spitsbergen Ar 44.76 351 P 00 08 04.5 0.0
NEEM North Greenlan 45.40 10 *i* P **P 00 08 07.5 -2.5**
NEEM IAmb IAmb 00 08 11.2
comp=Z,14nm,1.0s
BLKN Baker Lake 46.02 36 P **P 00 08 14.8 +0.2**
BLKN IAmb IAmb 00 08 20.7
comp=Z,13nm,1.1s
ILON Igloolik, Nuna 46.74 26 P 00 08 20.1 -0.1
ILON IAmb IAmb 00 08 21.5
comp=Z,4.5nm,0.9s
KURK Kurchatov 47.66 301 P 00 08 25.8 -1.7
KURK IAmb IAmb 00 08 34.2
comp=Z,4.7nm,1.1s
KURK Kurchatov 47.66 301 *ce* P **P 00 08 30.5 +2.9**
KURK pmax pmax
comp=Z,3.0nm,1.0s
DAG Danmarks Havn 47.73 0 *i* P **P 00 08 26.2 -1.6**
DAG IAmb IAmb 00 08 28.8
comp=Z,2.2nm,0.7s
KURBB Kurchatov Arra 47.76 301 P **P 00 08 26.4 -2.0**
comp=Z,0.9nm,0.5s,baz=54,slow=7.9,SNR=16
comp=Z,0.9nm,0.5s
MK31 Makanchi Array 48.41 295 *i* P **P 00 08 35.5 +2.0**
MKAR Makanchi Array 48.41 295 P **P 00 08 31.1 -2.4**
comp=Z,0.5nm,0.6s,baz=58,slow=7.0,SNR=8.2
comp=Z,0.5nm,0.6s
MKAR Makanchi Array 48.41 295 P P 00 08 31.2 -2.3
MKAR Makanchi Array 48.41 295 P P 00 08 31.2 -2.3
MAKZ Makanchi 48.56 295 P P 00 08 32.8 -1.9
MAKZ Makanchi 48.56 295 P P 00 08 32.8 -1.9
MAKZ pmax pmax
comp=Z,3.0nm,1.3s
L04D Klamath Falls 48.61 73 P P 00 08 35.1 -0.1
UPNV Upernavik 48.97 14 *i* P **P 00 08 35.9 -1.5**
UPNV IAmb IAmb 00 08 38.5
comp=Z,7.3nm,0.7s
BVAR Borovoye Array 49.95 308 P P 00 08 43.3 -1.9
comp=Z,0.8nm,0.5s,baz=53,slow=7.6,SNR=5.9
comp=Z,0.8nm,0.5s
BORK Borovoye 49.97 308 *ce* P **P 00 08 47.5 +2.2**
BORK pmax pmax
comp=Z,4.0nm,1.0s
NIAQ Niaqornat 51.11 15 *i* P **P 00 08 53.1 -0.6**
SUMG Summit 51.11 8 P P 00 08 54.1 -0.1
SUMG Summit 51.11 8 P P 00 08 54.1 -0.1
SUMG Summit 51.11 8 *i* P **P 00 08 52.9 -1.2**
SUMG IAmb IAmb 00 08 55.0
comp=Z,3.2nm,0.8s
ARCES ARCESS Array B 51.23 342 P P 00 08 53.6 -1.0
comp=Z,6.2nm,1.1s,baz=24,slow=9.3,SNR=4.9
comp=Z,6.2nm,1.1s
ARCES ARCESS Array B 51.23 342 P P 00 08 54.3 -0.3
ARCES ARCESS Array B 51.23 342 *eP* **P 00 08 55.9 +1.3**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARTI Arti 52.58 317 *d i* P **P 00 09 06.5 +1.6**
ARTI 00 10 13.3
ARTI 00 11 01.3
ARTI S **S 00 16 30.6 -0.8**
ARTI SS **SS 00 20 06.2 -2.6**
ARTI pmax pmax
comp=Z,15nm,2.3s
FLWY Flagg Ranch 53.40 64 P P 00 09 12.8 +1.5
FLWY IAmb IAmb 00 09 23.5
comp=Z,8.1nm,1.4s
NVAR Mina Array Bea 53.44 74 P **P 00 09 13.0 +1.2**
comp=Z,2.6nm,0.7s,baz=299,slow=7.7,SNR=14
comp=Z,2.6nm,0.7s
KIRV Kirov 54.16 324 *ce* P **P 00 09 16.6 +0.2**
FRB Frobisher Bay 54.44 25 LR LR 00 33 01.0
comp=Z,363nm,19.7s,baz=88,slow=37
PD31 Pinedale Array 54.92 64 P **P 00 09 23.2 +0.8**
PD31 IAmb IAmb 00 09 24.7
comp=Z,4.0nm,0.9s
PDAR Pinedale Array 54.92 64 P **P 00 09 23.6 +1.2**
comp=Z,2.2nm,0.8s,baz=334,slow=2.5,SNR=17
comp=Z,2.2nm,0.8s
PDAR Pinedale Array 54.92 64 P P 00 09 23.4 +0.9
CWC Cottonwood Cre 55.01 75 P 00 09 24.6 +1.4
CWC IAmb IAmb 00 09 25.4
comp=Z,3.4nm,0.8s
AAK Ala-Archa 55.28 296 P P 00 09 23.8 -1.2
AAK IAmb IAmb 00 09 30.2
comp=Z,4.1nm,1.0s
AAK Ala-Archa 55.28 296 *ce* P **P 00 09 28.1 +3.1**
AAK pmax pmax
comp=Z,4.0nm,1.3s
KLMR Klimovskoe 55.41 330 *eP* **P 00 09 24.5 -0.9**
KLMR pmax pmax
comp=Z,14nm,1.2s
CLC China Lake 55.74 75 P P 00 09 29.4 +1.2
CLC IAmb IAmb 00 09 30.8
comp=Z,6.0nm,0.9s
CLC China Lake 55.74 75 P **P 00 09 29.4 +1.2**
CLC pmax pmax
comp=Z,6.0nm,0.9s
ULM Lac du Bonnet 55.89 49 P **P 00 09 29.1 +0.1**
comp=Z,3.3nm,0.7s,baz=311,slow=4.6,SNR=6.7
comp=Z,3.3nm,0.7s
ULM Lac du Bonnet 55.89 49 P P 00 09 29.7 +0.7
ULM IAmb IAmb 00 09 35.3
comp=Z,6.5nm,0.9s
ULM Lac du Bonnet 55.89 49 *eP* **P 00 09 29.7 +0.7**
ULM pmax pmax
comp=Z,5.0nm,0.5s
LRMC Laurel Mtn Rad 55.94 76 P P 00 09 30.9 +1.1
LRMC IAmb IAmb 00 09 32.1
comp=Z,5.2nm,0.8s
RSSD Black Hills 56.68 59 P P 00 09 35.5 +0.5
RSSD IAmb IAmb 00 09 36.4
comp=Z,3.9nm,0.8s
RSSD Black Hills 56.68 59 P **P 00 09 35.5 +0.5**
RSSD pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 56.94 299 P P 00 09 36.7 +0.1
KKAR Karatay Array 56.94 299 P **P 00 09 36.7 +0.1**
AB31 Akbulak array 57.24 311 P 00 09 37.0 -1.6
AB31 IAmb IAmb 00 09 41.0
comp=Z,6.2nm,1.5s
ABKAR Akbulak array 57.24 311 P 00 09 36.6 -2.0
HMU Henry Mountain 57.85 69 P P 00 09 44.8 +1.4
PMD Palm Desert 58.02 76 P P 00 09 44.9 +0.5
PMD IAmb IAmb 00 09 46.2
comp=Z,4.1nm,0.8s
FIA1 FINESS Array S 58.27 337 P P 00 09 44.7 -1.0
FINES FINESS Array B 58.27 337 P P 00 09 45.5 -0.2
comp=Z,1.8nm,0.5s,baz=31,slow=7.5,SNR=17
comp=Z,1.8nm,0.5s
FINES FINESS Array B 58.27 337 P P 00 09 44.9 -0.8
W13A Hualapai Mount 58.29 73 P P 00 09 47.0 +0.4
W13A IAmb IAmb 00 09 49.0
comp=Z,3.9nm,0.9s
PV10 Paradox Valley 58.41 67 P P 00 09 48.6 +1.3
PV22 Blue Mesa, Par 58.43 67 P P 00 09 48.4 +0.9
ISCO Idaho Springs 59.11 64 P 00 09 52.6 +0.4
ISCO Idaho Springs 59.11 64 P P 00 09 52.7 +0.4
ISCO pmax pmax
comp=Z,7.0nm,0.9s
KUQ Kuujjuuaa 59.28 29 P P 00 09 51.9 -0.8
MVCO Mesa Verde 59.57 68 P P 00 09 56.6 +1.2
MVCO IAmb IAmb 00 09 57.8
comp=Z,3.9nm,0.9s
BELG Belogornoye 59.68 320 *i* P **P 00 09 55.3 -0.3**
BELG pmax pmax
comp=Z,1.0nm,1.0s
X16A Lo Mia Camp, P 60.12 72 P P 00 10 00.2 +1.0
X16A IAmb IAmb 00 10 02.2
comp=Z,4.8nm,0.8s
ECSD EROS Data Cent 60.49 55 P P 00 10 01.8 +0.4
ECSD IAmb IAmb 00 10 07.4
comp=Z,3.5nm,0.8s
CHGR Chuyangaron 60.95 297 P P 00 10 02.9 -1.7
CHGR Chuyangaron 60.95 297 *i* P **P 00 10 07.2 +2.5**
CHGR pmax pmax
comp=Z,8.0nm,0.9s
OBN Obninsk 61.09 328 *i* P **P 00 10 07.8 +2.7**
OBN pmax pmax
comp=Z,7.0nm,1.1s
OBN MLR MLR
comp=Z,241nm,12.0s
NC204 NORSAR Array S 61.24 345 P P 00 10 05.8 -0.4
NB2 NORSAR Subarra 61.40 345 P P 00 10 06.7 -0.6
comp=Z,0.8nm,0.5s,baz=19,slow=6.9
NOA NORSAR Array B 61.40 345 P P 00 10 05.5 -1.8
comp=Z,1.0nm,0.6s,baz=18,slow=6.8,SNR=4.4
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 61.40 345 *eP* P 00 10 11.7 +4.5
NOA pmax pmax
comp=Z,1.0nm,0.5s
HFS Hagfors 61.87 343 P P 00 10 09.2 -1.2
comp=Z,1.1nm,0.5s,baz=321,slow=1.9,SNR=7.1
comp=Z,1.1nm,0.5s
ANMO Albuquerque 62.37 68 P 00 10 14.7 +0.3
ANMO IAmb IAmb 00 10 16.9
comp=Z,2.9nm,0.7s
ANMO Albuquerque 62.37 68 *ce* P **P 00 10 15.7 +1.3**
ANMO pmax pmax
comp=Z,3.0nm,0.9s
SCHQ Schefferville 62.57 30 P P 00 10 15.2 0.0
comp=Z,5.0nm,0.7s,baz=349,slow=7.4,SNR=11
comp=Z,5.0nm,0.7s
SCHQ Schefferville 62.57 30 P P 00 10 14.8 -0.4
VLDQ Val d'Or 64.92 40 P 00 10 28.9 -1.9
MNTX Cornudas Mount 65.45 69 P 00 10 34.9 +0.4
MNTX IAmb IAmb 00 10 37.3
comp=Z,9.8nm,1.1s
VHRN Van Horn 66.37 70 P 00 10 41.4 +0.8
VHRN IAmb IAmb 00 10 43.1
comp=Z,9.7nm,1.3s
WMOK Wichita Mounta 66.47 63 P P 00 10 41.2 +0.2
WMOK IAmb IAmb 00 10 42.9
comp=Z,8.8nm,1.0s
WMOK Wichita Mounta 66.47 63 P P 00 10 41.2 +0.2
WMOK pmax pmax
comp=Z,9.0nm,1.0s
AKASG Malin Array Be 67.10 330 P P 00 10 43.8 -0.9
comp=Z,1.5nm,0.6s,baz=30,slow=6.2,SNR=4.9
AKASG LR LR 00 45 34.1
comp=Z,406nm,18.5s,baz=339,slow=41
comp=Z,1.5nm,0.6s
AKBB Malin Array Si 67.10 330 *i* P **P 00 10 47.2 +2.5**
AKBB pmax pmax
comp=Z,4.0nm,1.1s
LDAQ Lac Daran 67.21 36 P P 00 10 45.0 -0.6
HHAR Hobbs 67.62 58 P P 00 10 48.0 -0.3
HHAR IAmb IAmb 00 10 48.6
comp=Z,6.1nm,0.8s
LMQ La Malbaie 67.87 36 P P 00 10 49.3 -0.4
TX31 Lajitas Ar. Si 68.22 70 P 00 10 53.2 +0.9
TX31 IAmb IAmb 00 10 55.4
comp=Z,3.9nm,0.8s
TXAR Lajitas Array 68.22 70 P P 00 10 53.8 +1.5
comp=Z,2.8nm,0.6s,baz=299,slow=4.2,SNR=32
comp=Z,2.8nm,0.6s
TXAR Lajitas Array 68.22 70 P 00 10 53.3 +1.1
TXAR Lajitas Array 68.22 70 P P 00 10 53.3 +1.1
KBZ Khabaz 68.64 318 P P 00 10 55.3 +0.8
comp=Z,2.4nm,0.9s,baz=242,slow=5.2,SNR=4.0
comp=Z,2.4nm,0.9s
KBZ Khabaz 68.64 318 *i* P **P 00 10 54.8 +0.3**
KBZ pmax pmax
comp=Z,3.0nm,1.0s
EKA Eskdalemuir Ar 68.67 351 P P 00 10 55.0 +0.5
comp=Z,6.0nm,1.1s,baz=19,slow=5.3,SNR=3.5
comp=Z,6.0nm,1.1s
E62A Clayton Lake 68.95 36 P P 00 10 56.3 -0.2
BATG Bathurst New B 69.48 33 P P 00 10 59.6 -0.1
GNI Garni 70.95 314 *ce* P **P 00 11 10.8 +1.8**
GNI pmax pmax
comp=Z,19nm,2.5s
BUR08 Bucovina Ar. S 70.99 331 P 00 11 08.4 -0.7
BURAR Bucovina Array 71.01 331 P P 00 11 08.3 -0.9
GGN Saint George 71.15 35 P P 00 11 09.7 -0.3
GERES GERESS Array B 72.60 339 P P 00 11 17.9 -0.9
comp=Z,0.4nm,0.5s,baz=39,slow=8.6,SNR=4.1
comp=Z,0.4nm,0.5s
MLR Muntele Rosu 72.75 330 P P 00 11 19.5 -0.2
MLR IAmb IAmb 00 11 27.8
comp=Z,3.9nm,0.9s
MLR Muntele Rosu 72.75 330 P P 00 11 19.5 -0.2
MLR pmax pmax
comp=Z,4.0nm,0.9s
DAVOX Davos/Dischmat 75.31 341 P P 00 11 34.9 +0.2
comp=Z,1.3nm,0.8s,baz=336,slow=20,SNR=2.6
comp=Z,1.3nm,0.8s
BRTR Keskin Array B 75.51 322 P P 00 11 34.8 -1.2
comp=Z,1.3nm,0.9s,baz=51,slow=2.8,SNR=6.4
comp=Z,1.3nm,0.9s
BRTR Keskin Array B 75.51 322 P P 00 11 34.5 -1.5
BRTR Keskin Array B 75.51 322 *eP* **P 00 11 35.8 -0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
TUE Stuetta 75.71 341 P P 00 11 36.8 -0.3
TUE IAmb IAmb 00 12 10.6
comp=Z,8.0nm,1.2s
MURB Monte Urbino 78.17 338 P P 00 11 51.2 +0.4
FDMO Fiordimonte 78.27 338 P P 00 11 50.8 -0.6
FDMO IAmb IAmb 00 12 09.3
comp=Z,12nm,1.4s
NRCA Norcia 78.46 338 P 00 11 52.3 -0.1
NRCA IAmb IAmb 00 11 55.3
comp=Z,6.6nm,0.9s
WB0 Warramunga Arr 78.97 207 P P 00 11 55.3 +0.1
WB0 IAmb IAmb 00 12 25.2
comp=Z,12nm,1.4s
WRA Warramunga Arr 79.16 207 P P 00 11 56.0 -0.2
comp=Z,1.2nm,0.9s,baz=13,slow=5.7,SNR=5.4
comp=Z,1.2nm,0.9s
AS31 Alice Springs 82.83 206 P 00 12 14.3 -1.5
ASAR Alice Springs 82.83 206 P P 00 12 16.8 +1.0
comp=Z,1.7nm,0.9s,baz=19,slow=5.4,SNR=5.9
comp=Z,1.7nm,0.9s
ASAR Alice Springs 82.83 206 P P 00 12 14.8 -1.0
ASAR Alice Springs 82.83 206 P P 00 12 14.8 -1.0
ESDC Sonseca Array 84.26 350 P P 00 12 23.6 +0.4
comp=Z,2.0nm,1.1s,baz=9.6,slow=4.9,SNR=4.9
comp=Z,2.0nm,1.1s
ESDC Sonseca Array 84.26 350 P P 00 12 22.8 -0.5
RAYN Ar Rayn 84.84 305 P P 00 12 24.8 -1.6
RAYN IAmb IAmb 00 12 31.0
comp=Z,2.5nm,0.7s
RAYN Ar Rayn 84.84 305 P P 00 12 24.8 -1.6
RAYN pmax pmax
comp=Z,3.0nm,0.7s
KEST Kesra 86.08 339 P P 00 12 31.8 -0.7
comp=Z,2.7nm,1.0s,baz=176,slow=0.6,SNR=4.3

comp=Z,2.7nm,1.0s
KEST Kesra 86.08 339 P P 00 12 31.2 -1.2
STKA Stephens Creek 89.14 198 P P 00 12 47.7 +1.0
comp=Z,2.7nm,0.8s,baz=338,slow=11,SNR=3.3
comp=Z,2.7nm,0.8s
QSPA South Pole Qui 145.51 180 PKPbc PKPdf 00 19 27.7 -0.6
comp=Z,4.4nm,0.6s,baz=335,slow=0.8,SNR=5.7
QSPA South Pole Qui 145.51 180 PKPdf 00 19 27.5 -0.8

IDC 16 00:01:52.7±3.2, 31°.58S×178°.37W, h0km, mb3.4/2, mbtmp3.5/3, ML3.3/1, MS3.8/1, Error ellipse: s-maj=73.4km s-min=47.2km az=114.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.63	208	Pn	Pn	00 03 44.8	-0.2
	0.5nm,0.3s,baz=278,slow=4.9,SNR=8.9						
URZ				Sn	Sn	00 05 05.0	-7.2
	3.0nm,0.3s,baz=235,slow=22,SNR=12						
	4.6nm,0.7s						
ASAR	Alice Springs	42.74	268	P	P	00 09 52.0	0.0
	0.2nm,0.3s,baz=107,slow=7.2,SNR=9.8						
	0.2nm,0.3s						
WRA	Warramunga Arr	43.84	274	P	P	00 10 00.5	-0.3
	0.2nm,0.3s,baz=114,slow=7.5,SNR=5.4						
	0.2nm,0.3s						
RPN	Rapa Nui	59.43	105	LR	LR	00 32 32.4	
	comp=Z,85nm,21.7s,baz=132,slow=31						
FINES	FINESS Array B	146.14	339	PKPbc	PKPdf	00 21 33.3	+0.2
	4.9nm,1.0s,baz=51,slow=4.4,SNR=3.8						

DNK 16 00:02:47.1±2.6, 80°.70N×2°.65W, h36km±41km, ML1.6, Presumed earthquake

BER 16 00:02:46.7±2.2, 80°.69N×3°.10W, h10km, Mw3.1, ML1.6(DNK), Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	Nord	2.29	300	eP	Pn	00 03 22.0	-2.4
NOR	Nord	2.29	300	i P	Pn	00 03 22.0	-2.4
NOR				IAML		00 03 52.6	
	comp=Z,5.3nm,1.1s						
KBS	Kingsbay	3.20	116	eP	Pn	00 03 34.4	-2.5
KBS				IAML		00 03 36.3	
	comp=Z,5.6nm,0.7s						
KBS	Kingsbay	3.20	116	i P	Pn	00 03 34.8	-2.1
KBS				i S	Sn	00 04 06.1	-8.9
BRBB	Barentsburg B	4.11	120	eP	Pn	00 03 48.6	-0.8
BRBA	Barentsburg A	4.14	121	eP	Pn	00 03 49.5	-0.3
SPA0	Spitsbergen Ar	4.36	115	eP	Pn	00 03 50.8	-2.1
SPA0				eS	Sn	00 04 37.1	-6.5
SPA0				IAML		00 04 38.4	
	comp=Z,3.7nm,0.8s						
DAG	Danmarks Havn	4.96	226	eP	Pn	00 04 00.1	-0.9
DAG				eS	Sn	00 04 51.7	-6.6
DAG	Danmarks Havn	4.96	226	i P	Pn	00 03 59.0	-2.0
DAG				i S	Sn	00 04 52.6	-5.7
DAG				IAML		00 04 54.8	
	comp=Z,3.1nm,0.6s						
HSPB	Hornsund (broa	5.14	126	eP	Pn	00 04 02.3	-1.3

IDC 16 00:03:16.6±1.8, 15°.24S×173°.38W, h0km, mb3.7/6, mbtmp3.7/6, MS4.0/2, Error ellipse: s-maj=116.3km s-min=23.0km az=151.0

ISC 16 00:03:21.2±1.9, 15°.25S±0°.7×173°.4W±0°.4, h30km, n9, σ0§68/7, mb3.9/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	20.23	247	LR	LR	00 14 31.1	
	comp=Z,118nm,21.0s,baz=166,slow=33						
WRA	Warramunga Arr	49.85	257	P	P	00 12 12.4	+0.3
	0.2nm,0.5s,baz=97,slow=7.0,SNR=4.8						
	0.2nm,0.5s						
ASAR	Alice Springs	50.13	252	P	P	00 12 13.8	-0.4
	0.4nm,0.3s,baz=87,slow=7.8,SNR=12						
	0.4nm,0.3s						
NVAR	Mina Array Bea	74.22	42	P	P	00 14 56.0	+0.3
	0.8nm,0.7s,baz=236,slow=8.7,SNR=6.0						
	0.8nm,0.7s						
TXAR	Lajitas Array	80.54	56	P	P	00 15 31.5	+0.4
	1.4nm,1.1s,baz=243,slow=5.5,SNR=7.4						
	1.4nm,1.1s						
PDAR	Pinedale Array	82.16	42	P	P	00 15 38.8	-0.8
	1.1nm,0.9s,baz=250,slow=3.0,SNR=7.6						
	1nm,0.9s						
ILAR	Eielson Array	82.28	11	P	P	00 15 39.0	-0.4
	0.3nm,0.8s,baz=235,slow=7.4,SNR=5.5						
	0.3nm,0.8s						
ATAH	Atahualpa	92.98	98	LR	LR	00 50 48.6	
	comp=Z,230nm,20.3s,baz=76,slow=31						
BRTR	Keskin Array B	145.99	321	PKPbc	PKPab	00 22 59.8	+0.7
	1.2nm,0.8s,baz=72,slow=4.0,SNR=6.2						

WEL 16 00:15:40.0±1.1, 32°S±15'×17°9E±1°6, h397km±37km, mB4.3/8, ML4.2/12, MLv4.3/10, Mw(mB)3.4/8, Error ellipse: s-maj=24.7km s-min=14.7km az=47.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.39	190	P	Pn	00 17 06.2	+0.5
MXZ				S	S	00 18 15.4	-0.2
WMGZ	Waiomatatini S	5.63	189	P	Pn	00 17 09.5	+1.2
WMGZ				S	S	00 18 21.3	+1.0
WCZ	Waipu Caves	5.63	228	S	S	00 18 20.6	+0.1
HAZ	Te Kaha	5.67	194	P	Pn	00 17 07.3	-1.5
HAZ				S	S	00 18 21.5	+0.4
PKGZ	Pakihiroa	5.72	191	P	Pn	00 17 09.7	+0.4
PKGZ				S	S	00 18 18.9	-3.4
OUZ	Omahuta	5.73	237	P	Pn	00 17 09.9	+0.4
RUGZ	Raukumara Rang	5.89	194	P	Pn	00 17 09.9	-1.4
PUZ	Puketiti	5.89	189	P	Pn	00 17 11.9	+0.6
PUZ				S	S	00 18 24.9	-0.8
TWGZ	Tauwhareparae	6.04	191	P	Pn	00 17 13.9	+1.0
TWGZ				S	S	00 18 30.3	+1.7
MWZ	Matawai	6.28	194	P	Pn	00 17 12.6	-2.8
MWZ				S	S	00 18 34.7	+1.3
CNGZ	Carnagh Statio	6.31	189	P	Pn	00 17 15.5	-0.2
TKGZ	Te Karaka	6.32	192	P	Pn	00 17 15.5	-0.3
TKGZ				S	S	00 18 34.2	+0.2
RAGZ	Rawiri	6.46	195	P	Pn	00 17 18.0	+0.5
RIGZ	Rimuhau	6.59	192	P	Pn	00 17 18.4	-0.5
RIGZ				S	S	00 18 38.8	-1.0
SNGZ	Shannon Statio	6.75	194	P	P	00 17 21.4	+0.1
SNGZ				S	S	00 18 43.3	+0.4
ALRZ	Allen Road	6.80	201	P	P	00 17 21.9	0.0
RAHZ	Arahi	6.93	196	P	Pn	00 17 22.8	+0.1
MRHZ	Matea Rd	7.03	200	P	Pn	00 17 23.8	0.0

IDC 16 00:21:20.4±1.1, 7°.40N×127°.20E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=25.9km s-min=24.9km az=2.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.64	259	Pn	Pg	00 21 52.1	+0.2
	51nm,0.3s,baz=107,slow=6.2,SNR=7.6						
DAV				Sn	Sn	00 22 11.9	-0.4
	130nm,0.3s,baz=9.9,slow=23,SNR=3.5						
ASAR	Alice Springs	31.56	168	P	P	00 27 44.5	-0.4
	0.2nm,0.4s,baz=340,slow=7.5,SNR=8.0						
ASAR				PcP	PcP	00 30 37.2	-0.4
	0.3nm,0.4s,baz=350,slow=2.4,SNR=6.9						
	0.2nm,0.4s						
MKAR	Makanchi Array	54.86	324	P	P	00 30 51.5	-1.1
	0.4nm,0.6s,baz=126,slow=8.1,SNR=6.4						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	58.95	326	P	P	00 31 21.5	0.0
	0.3nm,0.6s,baz=122,slow=7.8,SNR=5.2						
	0.3nm,0.6s						
ILAR	Eielson Array	81.61	26	P	P	00 33 40.8	+0.7
	0.3nm,0.5s,baz=248,slow=5.1,SNR=9.4						
	0.3nm,0.5s						

IDC 16 00:25:35.7±2.2, 35°.76N×22°.18E, h55km±29km, mb3.5/8, mbtmp3.7/11, ML1.9/3, MS4.0/2, Error ellipse: s-maj=54.7km s-min=14.3km az=10.0

ATH 16 00:25:36.0, 35°.87N×22°.39E, h9km±3km, ML3.4/7, Manual Solution by A.Moschou First location: 2020/02/16 00:26:49, This location: 2020/02/16 02:07:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km

THE 16 00:25:56.8, 37°N±10"×2"E±", h23km±13km, M2.5/11, ML2.5/11

ISC 16 00:25:32.6±1.9, 35°.78N±0°.05×22°.21E±0°.06, h13km±11km, n45, σ2§45/48, mb3.9/8, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHA	Kythira Island	0.84	55	P	Pg	00 25 49.0	+0.2
ANKY	Antikythira Is	0.89	84	P	Pg	00 25 50.3	+0.6
ANKY				S	Sg	00 26 00.1	-1.3
NPS1	Neapolis Lacon	1.00	43	P	Pb	00 25 52.8	+1.0
NPS1				S	Sg	00 26 03.0	-2.0
VLI	Veliai	1.10	32	P	Pg	00 25 54.1	+0.3
VLI				S	Sb	00 26 07.4	-0.4
KNDR	Palaiochora Ch	1.27	115	P	Pb	00 25 58.3	+1.9
KNDR				S	Sn	00 26 15.2	+2.1
ITM	Ithomi	1.41	351	P	Pn	00 25 59.7	+1.6
ITM				S	Sn	00 26 19.5	+2.9
IMMV	Iera Moni Meta	1.48	102	P	Pn	00 26 00.3	+1.4
IMMV				S	Sb	00 26 19.0	+0.4
VLX	Vlachokerasia	1.59	5	P	Pn	00 26 03.1	+2.6
VLX				S	Sn	00 26 08.0	-13
MET5	Makryloggos,Me	2.05	26	P	Pn	00 26 08.3	+1.5
GUR	Goura	2.15	3	P	Pn	00 26 11.4	+3.2
IDI	Anoyia	2.24	102	P	Pn	00 26 10.7	+1.3
	7.4nm,0.3s,baz=298,slow=16,SNR=13						
	8.2nm,0.5s						
IDI	Anoyia	2.24	102	P	Pb	00 26 13.1	+0.2
KLV	Kalavryta, Ach	2.26	359	P	Pn	00 26 13.5	+3.9
KLV	Kalavryta, Ach	2.26	359	P	Pn	00 26 13.1	+3.4
RLS	Riolos of Patr	2.35	345	P	Pn	00 26 13.8	+3.0
VLY	Voula,Athens	2.42	31	P	Pb	00 26 15.6	-0.5
VLY	Voula,Athens	2.42	31	P	Pn	00 26 14.7	+2.8
MAGU	Magoula	2.52	24	P	Pn	00 26 15.8	+2.7
MAGU	Magoula	2.52	24	P	Pn	00 26 16.1	+2.9
STFN	Stefani	2.62	24	P	Pn	00 26 17.0	+2.4
PTL	Penteli	2.62	30	P	Pn	00 26 18.1	+3.5
PTL				S	Sn	00 26 34.6	-12
PTL	Penteli	2.62	30	P	Pn	00 26 16.3	+1.7
SERG	Sergoula	2.63	357	P	Pn	00 26 18.5	+3.7
EFP	Efpalio	2.65	355	P	Pn	00 26 19.0	+3.9
EFP	Efpalio	2.65	355	P	Pn	00 26 18.9	+3.9
DION	Dionisos Attik	2.67	31	P	Pn	00 26 18.7	+3.3
DION				S	Sn	00 26 36.3	-11
DION	Dionisos Attik	2.67	31	P	Pn	00 26 16.0	+0.6
LKR	Lokris	2.93	12	P	Pn	00 26 20.7	+1.9
LKR	Lokris	2.93	12	P	Pn	00 26 20.8	+1.9
AXAR	Agios Charalam	3.00	7	P	Pn	00 26 23.0	+3.1
EVR	Evrytania	3.15	354	P	Pn	00 26 25.9	+4.0
EVR	Evrytania	3.15	354	P	Pn	00 26 25.9	+4.0
LIT	Litokhoron	4.32	3	P	Pn	00 26 40.4	+2.5
VAE	Valguarnera	6.50	287	P	Pn	00 27 07.8	-0.1
	0.5nm,0.3s,baz=53,slow=10,SNR=1.8						
VAE				S	Sn	00 28 22.7	+0.8
	5.2nm,0.7s,baz=170,slow=18,SNR=1.6						
	6.1nm,0.6s						
BRTR	Keskin Array B	9.87	63	P	Pn	00 27 56.6	+2.4
	0.1nm,0.3s,baz=232,slow=12,SNR=3.6						
	0.6nm,0.8s						
ESDC	Sonseca Array	21.04	288	P	P	00 30 15.6	-0.6
	0.9nm,0.8s,baz=93,slow=11,SNR=5.5						
	0.9nm,0.8s						
OBN	Obninsk	21.72	23	LR	LR	00 38 38.3	
	comp=Z,233nm,18.7s,baz=260,slow=36						
HFS	Hagfors	24.98	350	P	P	00 30 53.7	-2.0
	1.9nm,0.6s,baz=159,slow=12,SNR=11						
	1.9nm,0.6s						
FINES	FINESS Array B	25.80	4	P	P	00 31 01.6	-1.5
	4.5nm,1.0s,baz=176,slow=11,SNR=4.3						
	4.5nm,1.0s						
EKA	Eskdalemuir Ar	26.16	326	P	P	00 31 05.2	-1.3
	1.8nm,0.6s,baz=120,slow=10.0,SNR=3.5						
	1.8nm,0.6s						
ARCES	ARCESS Array B	33.86	2	P	P	00 32 12.8	-1.6
	2.1nm,0.8s,baz=187,slow=8.6,SNR=5.1						
	2.1nm,0.8s						
KURBB	Kurchatov Arra	42.61	52	P	P	00 33 26.5	-1.8
	0.2nm,0.5s,baz=282,slow=9.3,SNR=2.3						
	0.2nm,0.5s						
MKAR	Makanchi Array	45.44	57	P	P	00 33 49.2	-1.9
	0.9nm,0.3s,baz=270,slow=8.0,SNR=38						
	0.9nm,0.3s						
ZALV	Zalesovo Beam	46.32	47	P	P	00 33 55.3	-2.6
	0.3nm,0.4s,baz=263,slow=12,SNR=2.9						
	0.3nm,0.4s						
SUR	Sutherland	67.82	181	LR	LR	01 10 20.5	
	comp=Z,170nm,18.3s,baz=313,slow=40						

IDC 16 00:47:40.1±2.7, 7°.00S×129°.76E, h90km±29km, mb3.6/4, mbtmp4.1/8, Error ellipse: s-maj=50.0km s-min=18.2km az=81.0

ISC 16 00:47:42.0±0.8, 6°.87S±0°.06×129°.88E±0°.06, h104km, n21, σ1§91/22, mb3.8/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.79	128	P	Pn	00 48 14.6	+2.6
SAUI	Saumlaki	1.79	128	S	Sn	00 48 34.5	-0.4
FAKI	Fak Fak	4.58	31	P	Pn	00 48 49.6	+0.5
FAKI	Fak Fak	4.58	31	S	Sn	00 49 41.3	0.0
DRS	Darwin Rock St	5.61	170	P	Pn	00 49 02.7	-0.4
DRS	Darwin Rock St	5.61	170	S	Sn	00 50 05.4	-0.9
SIJI	Sorong	6.12	13	P	Pn	00 49 10.6	+0.6
	9.0nm,0.3s,baz=58,slow=23,SNR=31						
SIJI				S	Sn	00 50 16.6	-2.2
	10nm,0.2s,baz=97,slow=24,SNR=6.2						
SOEI	Soe	6.25	242	P	Pn	00 49 14.1	+2.2
SOEI	Soe	6.25	242	S	Sn	00 50 22.6	+0.6
BATI	Baumata	6.99	241	P	Pn	00 49 22.8	+1.0
	18nm,0.4s,baz=94,slow=8.1,SNR=3.7						
BATI				S	Sn	00 50 36.0	-3.7
	27nm,0.4s,baz=57,slow=23,SNR=6.2						
FITZ	Fitzroy Crossi	11.90	200	P	Pn	00 50 23.8	-4.5
	2.4nm,0.2s,baz=18,slow=12,SNR=34						
FITZ				S	Sn	00 52 26.7	-13
	9.6nm,0.4s,baz=120,slow=22,SNR=10.0						
WRA	Warramunga Arr	13.69	162	P	Pn	00 50 48.5	-3.4
	2.0nm,0.6s,baz=343,slow=10,SNR=24						
WRA				S	Sn	00 53 10.6	-12
	7.8nm,0.4s,baz=357,slow=22,SNR=15						
COEN	Coen	14.84	119	P	Pn	00 51 06.6	-0.1
QIS	Mount Isa	16.55	146	P	Pn	00 51 26.7	-1.3
ASAR	Alice Springs	17.14	167	P	Pn	00 51 34.0	-1.3
	2.1nm,0.4s,baz=342,slow=9.1,SNR=48						
ASAR				S	Sn	00 54 33.1	-13
	0.9nm,0.4s,baz=326,slow=14,SNR=7.5						
BBOO	Buckleboo	26.44	168	P	P	00 53 11.5	+2.3
STKA	Stephens Creek	27.18	158	P	P	00 53 15.0	-0.8
	1.6nm,0.3s,baz=333,slow=9.2,SNR=4.7						
	1.6nm,0.3s						
HTT	Hallett	27.73	164	P	P	00 53 24.6	+3.8
MKAR	Makanchi Array	68.06	327	P	P	00 58 30.7	+0.3
	0.6nm,0.4s,baz=115,slow=8.1,SNR=34						
	0.6nm,0.4s						
ZALV	Zalesovo Beam	71.42	334	P	P	00 58 50.1	-0.7
	0.3nm,0.3s,baz=140,slow=4.9,SNR=3.2						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	72.34	329	P	P	00 58 56.3	-0.1
	0.3nm,0.4s,baz=124,slow=5.0,SNR=9.3						
	0.3nm,0.4s						

IDC 16 01:24:36.4±9.9, 4°.52S×142°.16E, h0km, mb3.7/2, mbtmp3.7/3, ML3.6/1, MS3.7/1, Error ellipse: s-maj=364.0km s-min=31.9km az=93.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.11	206	P	Pn	01 28 35.6	-1.6
	0.2nm,0.3s,baz=31,slow=12,SNR=8.6						
	0.8nm,0.6s						
ASAR	Alice Springs	20.63	202	P	P	01 29 18.4	+0.7
	3.1nm,0.7s,baz=24,slow=11,SNR=25						
	3.1nm,0.7s						
JOW	Kunigami	33.94	337	LR	LR	01 44 29.4	
	comp=Z,140nm,20.4s,baz=338,slow=35						
MKAR	Makanchi Array	73.32	322	P	P	01 36 10.1	0.0
	0.2nm,0.3s,baz=102,slow=6.9,SNR=7.9						
	0.2nm,0.3s						

SCB 16 01:39:15.2±1.2, 21°.42S×66°.65W, h226km±8km, ML3.6/3, Error ellipse: s-maj=4.5km s-min=3.9km az=1.0

ISC 16 01:39:16.1±1.3, 21°.40S±0°.06×66°.66W±0°.06, h219km, n20, σ0§67/28, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	Mochara	0.97	81	Pg	Pn	01 39 48.4	+0.2
MOCB				Sg	S	01 40 12.8	-0.2
MOCB				IAML		01 40 15.7	
	122nm,0.3s						
YJA	Yavi	1.32	126	Pg	Pn	01 39 51.1	+0.6
GO01	Chusmiza	2.93	306	Pg	Pn	01 40 07.4	+0.9
PB03	IPOC Station P	2.95	257	eP	Pn	01 40 06.5	+0.1
PB03				i S	S	01 40 45.2	-0.2
PB03				IAML		01 40 46.8	
	comp=E,90nm,0.1s						
PB06	IPOC Station P	3.00	244	eP	Pn	01 40 08.3	+1.4
PB06				i S	S	01 40 46.9	+0.4
PB06				IAML		01 40 48.5	
	comp=E,73nm,0.1s						
PB06	IPOC Station P	3.00	244	Pg	Pn	01 40 07.4	+0.5
PB02	IPOC Station P	3.02	271	eP	Pn	01 40 07.6	+0.6
PB02				i S	S	01 40 46.3	-0.4
PB02				IAML		01 40 47.3	
	comp=N,162nm,0.4s						
PB02	IPOC Station P	3.02	271	Pg	Pn	01 40 07.3	+0.3
PB02				Sg	S	01 40 46.3	-0.4
PB02				IAML		01 40 49.0	
	comp=N,112nm,0.2s						
HMBC	Humberstone	3.22	290	eP	Pn	01 40 08.6	-0.8
HMBC				i S	S	01 40 49.7	-1.2
HMBC				IAML		01 40 51.4	
	comp=E,141nm,0.2s						
PB11	IPOC Station P	3.24	300	Pg	Pn	01 40 10.0	+0.2
PB11				Sg	S	01 40 50.9	-0.7
PB11				IAML		01 40 53.3	
	comp=E,196nm,0.2s						
SOET	ToroToro	3.36	14	Pg	Pn	01 40 11.0	-0.4
PB16	IPOC Station P	4.06	318	eP	Pn	01 40 20.5	+0.6
PB16				i S	S	01 41 10.7	+0.9
PB16	IPOC Station P	4.06	318	Pg	Pn	01 40 20.2	+0.3
GO02	Mina Guanaco	4.61	215	Pg	Pn	01 40 25.9	-0.5
BBOJ	La Paz, Jacaqu	4.63	342	Pg	Pn	01 40 28.0	+1.0
SOEJ	Jacaque	4.63	342	Pg	Pn	01 40 27.7	+0.7
PB14	IPOC Station P	4.71	226	Pg	Pn	01 40 27.3	-0.4
BBOE	La Paz, Chanca	4.73	344	Pg	Pn	01 40 27.9	-0.3
BBOD	La Paz, Gloria	5.08	339	Pg	Pn	01 40 33.0	+0.4
LPAZ	La Paz	5.27	344	Pg	Pn	01 40 34.3	-0.8

IDC 16 02:50:46.2±3.6, 49°.58S×115°.72E, h0km, mb3.8/3, mbtmp3.8/3, MS3.4/2, Error ellipse: s-maj=129.8km s-min=68.7km az=130.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.71	355	T	T	03 09 39.5	
	baz=172,slow=71,SNR=43						
H01W1	Cape Leeuwin H	14.72	355	T	T	03 09 39.4	
	baz=172,slow=71,SNR=28						
H01W3	Cape Leeuwin H	14.73	355	T	T	03 09 40.0	
	baz=172,slow=71,SNR=34						
STKA	Stephens Creek	26.20	57	P	P	02 56 22.0	-0.5
	2.2nm,0.7s,baz=193,slow=9.0,SNR=4.6						
STKA				LR	LR	03 05 41.5	
	comp=Z,92nm,19.5s,baz=15,slow=34						
	2.2nm,0.7s						
ASAR	Alice Springs	29.54	35	P	P	02 56 53.0	+0.7
	0.5nm,0.7s,baz=212,slow=7.4,SNR=6.7						
ASAR				LR	LR	03 08 49.7	
	comp=Z,52nm,18.1s,baz=144,slow=37						
	0.5nm,0.7s						
WRA	Warramunga Arr	33.10	33	P	P	02 57 23.4	-0.3
	0.7nm,0.7s,baz=202,slow=9.3,SNR=4.2						
	0.7nm,0.7s						
YKA	Yellowknife Ar	149.92	45	PKPbc	PKPbc	03 10 36.6	-0.4
	0.3nm,0.8s,baz=288,slow=2.8,SNR=4.6						

IDC 16 03:22:58.0±2.0, 1°.94N×124°.99E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=218.9km s-min=24.8km az=64.0

DJA 16 03:23:21.0±0.6, 1°.4"×12°.5E±", h201km±8km, M3.9/10, mb4.0/6, MLv3.8/10, Mw(mB)4.0/1

ISC 16 03:23:20.7±1.2, 1°.39N±0°.07×124°.51E±0°.06, h200km, n15, σ0§96/15, mb3.3/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	0.34	81	P	Pn	03 23 48.4	+1.0
GTOI	Gorontalo	1.67	243	P	Pn	03 23 56.9	+0.9
SGSI	Sangihe	2.50	24	P	Pn	03 24 04.6	-0.1
MRSI	Marisa	2.72	251	P	Pn	03 24 07.9	+0.7
TNTI	Ternate	2.92	102	P	Pn	03 24 10.6	+1.1
LUWI	Luwuk	2.97	216	P	Pn	03 24 10.2	+0.1
GAMI	Galela, Maluku	3.31	82	P	Pn	03 24 14.6	+0.5
APSI	Ampana	3.66	231	P	Pn	03 24 19.3	+1.0
SANI	Sanana	3.72	157	P	Pn	03 24 17.8	-1.3
NLAI	Namlea	5.28	151	P	Pn	03 24 38.4	-0.3
KRAI	Karang Ratu	6.08	140	P	Pn	03 24 49.7	+0.6
	17nm,0.6s						
MSAI	Masohi	6.45	137	P	Pn	03 24 55.5	+1.6
WRA	Warramunga Arr	23.29	156	P	P	03 28 11.1	+0.2
	0.8nm,0.3s,baz=336,slow=10,SNR=18						
	0.8nm,0.3s						
ASAR	Alice Springs	26.53	160	P	P	03 28 40.5	+0.3
	0.2nm,0.3s,baz=336,slow=11,SNR=9.0						
	0.2nm,0.3s						
MKAR	Makanchi Array	58.25	327	P	P	03 32 53.1	-1.2
	0.1nm,0.3s,baz=130,slow=6.4,SNR=6.6						
	0.1nm,0.3s						

SJA 16 03:47:47.5±0.6, 30°.95S×65°.19W, h179km±3km, ML3.8, MW3.7

IDC 16 03:47:47.7±1.2, 30°.85S×65°.29W, h169km±12km, mb3.4/5, mbtmp3.9/10, MS3.5/1, Error ellipse: s-maj=24.2km s-min=14.8km az=155.0

NEIC 16 03:47:48.7±1.3, 30°.91S±0°.04×65°.3W±0°.1, h184km±10km, mb4.2/15, Error ellipse: s-maj=13.5km s-min=2.5km az=110.0

VAO 16 03:47:56.7±2.4, 30°.41S×65°.01W, h222km±15km, mb3.9, Presumed earthquake

ISC 16 03:47:48.1±0.6, 30°.90S±0°.05×65°.25W±0°.05, h180km±6km, n110, σ1§19/126, mb4.1/10, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCA	Tanti	0.71	128	eP	Pn	03 48 17.4	+3.4
TCA				eS	Sn	03 48 32.4	-1.6
ACHE	Chepes	1.24	257	eP	Pn	03 48 19.8	+1.9
MRA	San Martin	1.57	195	eP	Pn	03 48 23.4	+2.6
MRA				eS	Sn	03 48 43.0	-3.3
MRA				IAML		03 48 49.1	
	comp=Z,358nm,0.9s						
AVFE	Valle Fertil	1.91	277	eP	Pn	03 48 25.3	+1.0

SJA IAML 03 49 15.7
comp=Z,153nm,0.3s
ZON Zonda 3.01 257 Pn 03 48 37.3 +0.5
ZON Zonda 3.01 257 *e*P **Pn 03 48 37.4 +0.5**
ZON *e*S **Sn 03 49 14.2 -0.7**
ZON IAML 03 49 15.7
comp=Z,253nm,0.5s
ACCO Cerro Coronel 3.30 274 *e*P **Pn 03 48 41.2 +0.5**
ACCO *e*S **Sn 03 49 22.6 +0.8**
VCA Vinchina 3.35 309 *e*P **Pn 03 48 43.1 +1.9**
VCA *e*S **Sn 03 49 23.1 +0.4**
VCA IAML 03 49 24.8
comp=Z,47nm,0.4s
ACDV Cuesta del Vie 3.42 281 *e*P **Pn 03 48 43.2 +1.2**
ACDV IAML 03 49 27.7
comp=Z,85nm,1.0s
ASAL Salagasta 3.49 240 *e*P **Pn 03 48 43.3 +0.5**
ASAL *e*S **Sn 03 49 24.6 -1.0**
RTLS Leoncito 3.58 254 *e*P **Pn 03 48 44.8 +0.6**
RTLS *e*S **Sn 03 49 28.2 +0.4**
RTLS IAML 03 49 30.1
comp=Z,206nm,0.5s
AROD Rodeo 3.72 280 *e*P **Pn 03 48 47.1 +1.1**
AROD *e*S **Sn 03 49 29.5 -1.5**
AHML Horco Molle 4.10 359 *e*P **Pn 03 48 50.4 -0.2**
AHML *e*S **Sn 03 49 36.7 -2.7**
AHML IAML 03 49 38.7
comp=Z,35nm,0.5s
CO01 Juntas del Tor 4.28 281 Pn 03 48 54.3 +1.2
CO01 Juntas del Tor 4.28 281 *e*P **Pn 03 48 54.5 +1.5**
CO01 *e*S **Sn 03 49 43.2 -0.6**
CO01 IAML 03 49 47.4
comp=Z,52nm,0.8s
CO03 El Pedregal 4.68 269 Pn **Pn 03 48 58.0 +0.1**
CO03 El Pedregal 4.68 269 *e*P **Pn 03 48 58.6 +0.7**
CO03 *e*S **Sn 03 49 51.5 -1.2**
CO03 IAML 03 49 56.2
comp=Z,68nm,0.5s
RFA San Rafael 4.72 214 *e*P **Pn 03 48 58.7 +0.3**
RFA IAML 03 49 56.4
comp=Z,49nm,0.7s
MT08 Bocatoma Ro 4.77 237 Pn 03 48 59.9 +0.6
MT08 Bocatoma Ro 4.77 237 *e*P **Pn 03 48 60.0 +0.6**
MT08 *e*S **Sn 03 49 55.4 +0.2**
MT08 IAML 03 49 57.7
comp=Z,50nm,0.3s
FSA Cafayete 4.81 352 *e*P **Pn 03 49 00.8 +1.0**
FSA *e*S Sn 03 49 41.5 -15
AC05 El Transito 4.82 294 Pn **Pn 03 49 00.8 +0.9**
AC05 El Transito 4.82 294 *e*S **Pn 03 49 58.2 +2.0**
GO04 Tololo Observa 4.84 277 Pn **Pn 03 49 00.3 +0.1**
VA03 San Esteban 4.88 246 Pn 03 49 01.2 +0.7
CO02 Combarbal 4.95 265 Pn 03 49 01.7 +0.2
CO02 Combarbal 4.95 265 *e*P **Pn 03 49 01.6 +0.2**
CO02 IAML 03 50 00.1
comp=Z,123nm,0.5s
CO04 Los Peladeros 5.02 255 Pn 03 49 02.4 -0.2
LCO Las Campanas 5.09 290 Pn **Pn 03 49 03.2 -0.2**
LCO Las Campanas 5.09 290 *e*P **Pn 03 49 04.0 +0.5**
LCO IAML 03 50 39.4
comp=Z,39nm,2.5s
MT13 San Alfonso 5.12 235 Pn 03 49 04.4 +0.7
PEL Peldehue 5.13 243 Pn **Pn 03 49 03.3 -0.4**
MT16 COHEN 5.13 239 Pn 03 49 04.1 -0.3
MT03 Universidad Ad 5.16 239 Pn 03 49 04.2 +0.1
MT03 Universidad Ad 5.16 239 *e*P **Pn 03 49 04.6 +0.5**
MT03 IAML 03 50 09.3
comp=Z,78nm,0.7s
CO05 La Serena 5.26 279 Pn 03 49 04.7 -0.7
MT05 Renca 5.28 240 Pn **Pn 03 49 05.1 -0.6**
MT05 Renca 5.28 240 IAML 03 50 10.5
comp=Z,70nm,0.2s
AC02 Maricunga 5.29 319 Pn **Pn 03 49 07.4 +1.2**
VA06 Catapilco 5.41 251 Pn 03 49 06.2 -1.1
BO04 La Punta 5.48 234 Pn 03 49 08.2 -0.1
CO06 Fray Jorge 5.50 271 Pn **Pn 03 49 06.4 -2.1**
MT02 Curacav 5.53 243 Pn **Pn 03 49 07.1 -1.7**
MT09 Talagante 5.64 238 Pn **Pn 03 49 08.9 -1.6**
AC04 Llanos de Chal 5.74 296 Pn **Pn 03 49 11.7 0.0**
BO02 Sierra Bellavi 6.06 229 Pn 03 49 15.4 -0.5
CPUP Villa Florida 8.31 59 P **Pn 03 49 45.6 +0.1**
comp=Z,5.8nm,0.8s,baz=232,slow=13,SNR=19
CPUP Villa Florida 8.31 59 Pn 03 49 45.9 +0.4
PB06 IPOC Station P 9.03 334 Pn 03 49 55.0 -0.1
PB03 IPOC Station P 9.69 334 Pn 03 50 02.6 -1.2
GO06 Curarrehue 10.05 209 Pn **Pn 03 50 06.8 -1.4**
PLCA Paso Flores 10.71 202 P **Pn 03 50 17.0 +0.2**
comp=Z,3.5nm,0.9s,baz=11,slow=12,SNR=12
MURT Porto Murtinho 11.47 38 *e*P **Pn 03 50 28.1 +1.3**
AMBA Amambai (Brazi 12.11 51 *e*P **P 03 50 37.1 -3.2**
BDQN Bodoquena, MS 12.91 38 *e*P **Pn 03 50 45.8 +0.6**
PB16 IPOC Station P 13.09 342 Pn 03 50 47.2 -0.8
PTGB Pitanga 13.19 65 *e*P **P 03 50 50.7 -1.6**
AQDB Aquidauana 13.47 42 P 03 50 53.3 -2.1
AQDB Aquidauana 13.47 42 *e*P **P 03 50 53.1 -2.3**
LDASE Londrina, Braz 14.62 63 *e*P **P 03 51 07.9 -0.3**
LPAZ La Paz 14.78 349 P **P 03 51 09.9 -0.6**
comp=Z,4.6nm,0.8s,baz=165,slow=7.5,SNR=17
LPAZ S **S 03 53 55.6 -0.8**
comp=Z,2.4nm,0.9s,baz=22,slow=18,SNR=9.0
LPAZ La Paz 14.78 349 P **Pn 03 51 09.3 +0.2**
LPAZ La Paz 14.78 349 *e*P **P 03 51 10.0 -0.6**
SIV San Ignacio 15.32 15 P **Pn 03 51 14.3 -0.9**
comp=Z,2.1nm,0.6s,baz=197,slow=12,SNR=10.0
FRTB Fartura 15.85 65 *e*P **P 03 51 23.9 +2.1**
PP1B Ponte de Pedra 16.25 38 *e*P **Pn 03 51 27.3 +0.8**
PTLB Pontes e Lacer 16.37 21 P **Pn 03 51 28.3 +0.5**
PTLB IAmb IAmb 03 51 30.8
comp=Z,5.8nm,0.8s
PTLB Pontes e Lacer 16.37 21 *e*P **Pn 03 51 28.3 +0.5**
SALV Santo Antonio 17.30 32 *e*P **P 03 51 35.8 -1.9**
SPB Sao Paulo 17.42 70 *e*P **Pn 03 51 41.7 +1.3**
ITRB Iturama 17.46 54 *e*P **Pn 03 51 41.0 +0.1**
BB19B Bebedouro 17.92 61 *e*P **Pn 03 51 45.5 -0.9**
RCLB Rio Claro- Sao 17.93 66 *e*P **Pn 03 51 46.4 -0.1**
VAO Valinhos 18.08 69 P **Pn 03 51 48.4 +0.1**
VAO IAmb IAmb 03 51 49.1
comp=Z,11nm,0.8s
VAO Valinhos 18.08 69 *e*P **Pn 03 51 48.5 +0.3**
PARB Paraibuna 19.01 71 *e*P **Pn 03 51 58.3 -0.8**
PMNB Patos De Minas 21.02 59 *e*P **P 03 52 18.3 +0.4**
BDFB Brasilia 21.89 50 P **P 03 52 26.2 -0.9**
comp=Z,4.9nm,0.6s,baz=220,slow=11,SNR=10.0
comp=Z,4.9nm,0.6s
BDFB Brasilia 21.89 50 P **P 03 52 26.2 -0.9**
BDFB IAmb IAmb 03 52 27.4
comp=Z,7.7nm,1.1s
RCBR Riachuelo 37.16 54 LR LR 04 11 47.7
comp=Z,71nm,18.4s,baz=53,slow=39
TEIG Tepich 55.44 334 P **P 03 57 03.5 -0.5**
BRAL Brewton 65.10 339 P **P 03 58 08.9 -0.5**
HBVL Hebbronville 65.89 327 P **P 03 58 14.4 -0.1**
HBVL IAmb IAmb 03 58 17.1
comp=Z,11nm,1.4s
SAND Sanderson 69.94 326 P **P 03 58 39.8 -0.1**
SAND IAmb IAmb 03 58 42.3
comp=Z,2.2nm,1.0s
TXAR Lajitas Array 70.18 325 P **P 03 58 41.8 +0.4**
comp=Z,0.4nm,0.6s,baz=152,slow=6.1,SNR=7.4
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 70.18 325 P **P 03 58 41.3 -0.1**
TX31 Lajitas Ar. Si 70.18 325 P **P 03 58 41.8 +0.4**
APMT Aspermont 71.88 330 P **P 03 58 51.5 +0.1**
APMT IAmb IAmb 03 58 52.2
comp=Z,2.6nm,0.6s
S39A Bolivar 73.11 337 P **P 03 58 58.4 -0.1**
S39A IAmb IAmb 03 59 03.9
comp=Z,7.8nm,1.5s
P40A Paris 74.37 339 P **P 03 59 05.4 -0.4**
ANMO Albuquerque 76.12 326 P **P 03 59 16.9 +0.7**
comp=Z,1.2nm,0.8s,baz=144,slow=9.7,SNR=6.0
comp=Z,1.2nm,0.8s
ANMO Albuquerque 76.12 326 P **P 03 59 16.2 0.0**
TORD Torodi Ar. Bea 77.73 67 P **P 03 59 27.2 +1.8**
comp=Z,0.5nm,0.7s,baz=289,slow=4.3,SNR=4.2
comp=Z,0.5nm,0.7s
SDCO Great Sand Dun 77.96 328 P **P 03 59 26.1 -0.5**
PDAR Pinedale Array 83.84 329 P **P 03 59 57.5 0.0**
comp=Z,0.5nm,0.7s,baz=127,slow=7.2,SNR=6.0
comp=Z,0.5nm,0.7s
PDAR Pinedale Array 83.84 329 P **P 03 59 57.1 -0.4**
HLID Hailey 86.69 327 P **P 04 00 12.3 +0.8**
HLID IAmb IAmb 04 00 13.7
comp=Z,2.9nm,1.1s
PLID Pearl Lake 88.59 327 P **P 04 00 21.9 +1.3**
PLID IAmb IAmb 04 00 22.2
comp=Z,3.8nm,1.0s
ZALV Zalesovo Beam 148.48 34 PKPbc **PKiKP 04 07 13.4 -1.0**
comp=Z,0.7nm,0.6s,baz=294,slow=7.4,SNR=4.1
ZALV Zalesovo Beam 148.48 34 PKiKP 04 07 13.5 -0.8
MKAR Makanchi Array 150.41 48 PKPbc **PKiKP 04 07 19.0 +0.3**
comp=Z,0.9nm,0.7s,baz=279,slow=2.8,SNR=5.2
MKAR Makanchi Array 150.41 48 PKPbc **PKiKP 04 07 18.8 +0.1**
PZH PanZhiHua 167.77 108 PKP **PKPdf 04 07 32.4 -0.9**
HHC Hu-ho-hao-te 169.74 14 *e*P **PKPdf 04 07 39.1 +5.0**

IDC 16 03:54:36.6±3.6, 30.65S×177.50W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=78.8km s-min=33.9km az=117.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.44**	**345**	Pn	Pg	03 55 04.2	0.0
	74nm,0.3s,baz=270,slow=20,SNR=1.9						
RAO				Sn	Sg	03 55 17.3	-5.4
	348nm,0.3s,baz=53,slow=22,SNR=11						
STKA	**Stephens Creek**	**34.84**	**257**	P	P	04 01 29.2	-0.3
	2.2nm,0.6s,baz=111,slow=3.8,SNR=5.2						
	2.2nm,0.6s						
ASAR	**Alice Springs**	**43.52**	**267**	P	P	04 02 42.2	0.0
	0.3nm,0.7s,baz=102,slow=7.4,SNR=4.6						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**44.53**	**272**	P	P	04 02 50.3	-0.1
	0.8nm,0.7s,baz=111,slow=7.8,SNR=6.4						
	0.8nm,0.7s						
FINES	**FINESS Array B**	**145.52**	**340**	PKPbc	PKPdf	04 14 15.1	-0.9
	1.5nm,0.8s,baz=27,slow=2.1,SNR=5.5						

IDC 16 04:03:56.2±2.2, 1.96N×126.26E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=190.8km s-min=26.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.16**	**160**	P	P	04 09 03.9	-0.7
	0.5nm,0.7s,baz=339,slow=11,SNR=4.7						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**26.54**	**164**	P	P	04 09 36.7	+0.8
	0.1nm,0.4s,baz=344,slow=7.7,SNR=4.5						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**58.74**	**326**	P	P	04 13 55.9	-0.2
	0.1nm,0.4s,baz=127,slow=6.5,SNR=5.8						
	0.1nm,0.4s						

*MEX **16** 04:10:19.3±0.8, 13.52N×93.07W, h14km±40km, MD4.3*
*NEIC **16** 04:10:21.0±2.7, 13.87N±0.06×93.02W±0.05, h10km±2km, mb4.3/44, Md4.3/72(MEX), Error ellipse: s-maj=11.0km s-min=7.8km az=187.0*
*IDC **16** 04:10:21.3±3.0, 13.94N×92.72W, h0km, mb3.8/5, mbtmp3.8/7, ML3.5/3, MS2.0/1, Error ellipse: s-maj=74.4km s-min=22.5km az=24.0*
*GCG **16** 04:10:22.2±2.0, 13.62N×92.74W, h28km±171km, MD4.0, ML4.2, Presumed earthquake*
*CATAC **16** 04:10:24.7±0.9, 14°N±4°×9°3W±°, h6km±6km, M4.1/10, MLv4.1/10, Error ellipse: s-maj=12.8km s-min=8.7km az=88.6, confirmed*

ISC 16 04:10:17.4±1.8, 13.70N±0.05×92.94W±0.03, h1km±10km, n152, σ1.79/165, mb4.3/16, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.37**	**28**		**Pn**	**04 10 43.6**	**0.0**
THIG					**Sn**	**04 11 03.0**	**+0.7**
THIG		**1.37**	**28**	*e*P	**Pn**	**04 10 43.6**	**0.0**
THIG				*e*S	**Sn**	**04 11 03.0**	**+0.7**
SMCA	**Catarina**	**1.42**	**36**	*i* P	**Pn**	**04 10 44.8**	**+0.4**
RTAL	**Retalhuleu**	**1.46**	**56**		**Pg**	**04 10 45.6**	**+0.3**
RTAL				Sn	**Sn**	**04 11 04.9**	**+0.3**
RTAL	**Retalhuleu**	**1.46**	**56**	*e*P	**Pb**	**04 10 45.3**	**0.0**
RTAL				*e*S	**Sn**	**04 11 04.2**	**-0.4**
RTAL	**Retalhuleu**	**1.46**	**56**	P	**Pg**	**04 10 45.7**	**+0.4**
RTAL				S	**Sb**	**04 11 00.6**	**-3.9**
PATR	**El Naranjo**	**1.56**	**26**		**Pn**	**04 10 46.0**	**-0.6**
PATR					**Sg**	**04 11 07.5**	**-0.2**
PATR	**El Naranjo**	**1.56**	**26**	*e*P	**Pn**	**04 10 46.0**	**-0.6**
PATR				*e*S	**Sg**	**04 11 07.5**	**-0.2**
CHUJ	**Union Juarez**	**1.60**	**30**	*e*P	**Pn**	**04 10 46.9**	**-0.2**
CHUJ				*e*S	**Sg**	**04 11 08.6**	**-0.3**
PAVE	**Pavencul**	**1.66**	**26**		**Pn**	**04 10 47.6**	**-0.2**
PAVE					**Sb**	**04 11 09.4**	**-0.9**
PAVE	**Pavencul**	**1.66**	**26**	*e*P	**Pn**	**04 10 47.6**	**-0.2**
PAVE				*e*S	**Sb**	**04 11 09.4**	**-0.9**
STG2	**El Palmar, Qui**	**1.68**	**64**	*e*P	**Pn**	**04 10 47.5**	**-0.7**
STG5	**El Palmar, Qui**	**1.69**	**65**	*i* P	**Pn**	**04 10 47.3**	**-0.9**
STG8	**El Palmar, Qui**	**1.71**	**64**	*i* P	**Pn**	**04 10 48.2**	**-0.4**
STG8				*i* S	**Sb**	**04 11 09.1**	**-2.9**
STG8				IAML		04 11 12.0	
	comp=E,3μm,0.3s						
PCIG		**2.01**	**352**		**Pn**	**04 10 51.7**	**-0.7**
PCIG					**Sn**	**04 11 14.8**	**-3.4**
PCIG		**2.01**	**352**	*i* P	**Pn**	**04 10 51.7**	**-0.7**
PCIG				*e*S	**Sn**	**04 11 14.8**	**-3.4**
HUEH	**Huehuetenango**	**2.13**	**41**		**Pb**	**04 10 56.3**	**-0.6**
HUEH	**Huehuetenango**	**2.13**	**41**	*e*P	**Pn**	**04 10 55.7**	**+1.4**
HUEH				*e*S	**Sg**	**04 11 23.4**	**-2.4**
HUEH	**Huehuetenango**	**2.13**	**41**	P	**Pb**	**04 10 56.5**	**-0.4**
HUEH				S	**Sb**	**04 11 20.9**	**-3.0**
HUEH	**Huehuetenango**	**2.13**	**41**	*i* P	**Pb**	**04 10 56.3**	**-0.6**
HUEH				*i* S	**Sg**	**04 11 23.9**	**-1.8**
HUEH				IAML		04 11 37.0	
	comp=N,2μm,0.6s						
ESSG	**Sabana Grande**	**2.16**	**71**	IAML		04 11 21.2	
	comp=N,2μm,0.3s						
PCG5	**San Vicente Pa**	**2.54**	**78**	*i* S	**Sn**	**04 11 23.7**	**-7.9**
CCIG	**Comitan**	**2.68**	**17**		**Pn**	**04 11 04.9**	**+3.0**
CCIG					**Sb**	**04 11 38.3**	**-1.5**
CCIG	**Comitan**	**2.68**	**17**	*e*P	**Pn**	**04 11 04.9**	**+3.0**
CCIG				*e*S	**Sb**	**04 11 38.3**	**-1.5**
CARR	**Arriaga**	**2.70**	**340**	*e*P	**Pn**	**04 11 01.9**	**-0.1**
CARR				*e*S	**Sn**	**04 11 31.8**	**-3.5**
APG	**El Apazote**	**2.73**	**61**	Pn	**Pn**	**04 11 04.0**	**+1.5**
	comp=N,1.2nm,0.3s,baz=191,slow=12,SNR=78						
APG				Sn	**Sb**	**04 11 39.1**	**-2.1**
	comp=N,3.8nm,0.3s,baz=130,slow=10,SNR=12						
APG	**El Apazote**	**2.73**	**61**	*i* P	**Pn**	**04 11 04.2**	**+1.6**
FAME	**Alcaldia de Sa**	**2.84**	**87**	P	**Pn**	**04 11 05.7**	**+1.7**
FAME				S	**Sn**	**04 11 35.6**	**-3.3**
TGIG		**3.06**	**357**		**Pn**	**04 11 08.2**	**+1.2**
TGIG					**Sn**	**04 11 42.9**	**-1.5**
TGIG		**3.06**	**357**	*e*P	**Pn**	**04 11 08.2**	**+1.2**
TGIG				*e*S	**Sn**	**04 11 42.9**	**-1.5**
NUBE	**Las Nubes**	**3.08**	**86**	P	**Pn**	**04 11 07.6**	**+0.3**
NUBE				S	**Sn**	**04 11 41.8**	**-3.0**
NUBE	**Las Nubes**	**3.08**	**86**	*i* P	**Pn**	**04 11 07.4**	**+0.1**
LOAL	**Lomas de Alarc**	**3.08**	**84**	P	**Pn**	**04 11 08.7**	**+1.4**
SLOZ	**Alcaldia de Sa**	**3.08**	**84**	P	**Pn**	**04 11 08.5**	**+1.2**
SLOZ				S	**Sn**	**04 11 42.8**	**-2.0**
JAYA	**Jayaque - finc**	**3.39**	**90**	P	**Pn**	**04 11 11.9**	**+0.3**
JAYA				S	**Sn**	**04 11 50.4**	**-2.2**
PMON	**Piamonte**	**3.52**	**89**	P	**Pn**	**04 11 15.2**	**+1.8**
MTO3	**Montecristo**	**3.54**	**78**		**Pn**	**04 11 14.3**	**+0.6**
MTO3	**Montecristo**	**3.54**	**78**	P	**Pn**	**04 11 14.7**	**+0.9**
MTO3	**Montecristo**	**3.54**	**78**	*i* P	**Pn**	**04 11 14.1**	**+0.4**
ESQI	**Esquipulas**	**3.59**	**76**		**Pn**	**04 11 15.3**	**+0.9**
ESQI	**Esquipulas**	**3.59**	**76**	P	**Pn**	**04 11 15.3**	**+0.9**
HUIG	**Huatulco**	**3.69**	**304**		Pn	04 11 13.4	-2.2
HUIG	**Huatulco**	**3.69**	**304**	*e*P	Pn	04 11 13.4	-2.2
HUIG				*i* S	Sn	04 11 49.8	-10
UXUV	**UXUV**	**3.78**	**342**		**Pn**	**04 11 17.1**	**+0.3**
UXUV					**Sn**	**04 12 00.2**	**-1.8**
UXUV	**UXUV**	**3.78**	**342**	*e*P	**Pn**	**04 11 17.1**	**+0.3**
UXUV				*e*S	**Sn**	**04 12 00.2**	**-1.8**
CMIG	**Matias Romero**	**3.86**	**331**	Pn	**Pn**	**04 11 18.4**	**+0.5**
	comp=N,6.9nm,0.3s,baz=164,slow=12,SNR=138						
CMIG				Sn	**Sn**	**04 11 59.0**	**-4.9**
	comp=N,16nm,0.3s,baz=25,slow=20,SNR=12						
CMIG				LR	LR	04 12 12.7	
	comp=N,23nm,20.8s,baz=123,slow=30						
	comp=N,17nm,0.3s						
CMIG	**Matias Romero**	**3.86**	**331**		**Pn**	**04 11 17.6**	**-0.3**
CMIG					**Sn**	**04 11 59.2**	**-4.7**
CMIG	**Matias Romero**	**3.86**	**331**	*e*P	**Pn**	**04 11 17.6**	**-0.3**
CMIG				*e*S	**Sn**	**04 11 59.2**	**-4.7**
SCLA	**Alcaldia de Sa**	**4.09**	**89**	P	**Pn**	**04 11 22.6**	**+1.4**
PETF	**Flores**	**4.36**	**42**		**Pn**	**04 11 26.8**	**+2.0**
PETF	**Flores**	**4.36**	**42**	*i* P	**Pn**	**04 11 26.4**	**+1.5**
PETF				*e*S	**Sn**	**04 12 18.8**	**+2.5**
PETF	**Flores**	**4.36**	**42**	P	**Pn**	**04 11 27.0**	**+2.2**
PETF	**Flores**	**4.36**	**42**	*i* P	**Pn**	**04 11 26.7**	**+2.0**
PEIG	**Puerto Escondi**	**4.67**	**300**		Pn	04 11 27.4	-1.7
PEIG	**Puerto Escondi**	**4.67**	**300**	*e*P	Pn	04 11 27.4	-1.7
PEIG				*e*S	Sn	04 12 13.9	-10
NEUV	**Arroyo Zacate**	**4.85**	**326**		Pn	04 11 29.5	-2.0
NEUV					**Sn**	**04 12 23.6**	**-4.8**
NEUV	**Arroyo Zacate**	**4.85**	**326**	*e*P	Pn	04 11 29.5	-2.0
NEUV				*e*S	**Sn**	**04 12 23.6**	**-4.8**
OXIG	**Oaxaca**	**4.96**	**313**		**Pn**	**04 11 33.8**	**+0.5**
VHO	**Vista Hermosa**	**4.96**	**313**	*e*P	**Pn**	**04 11 33.8**	**+0.5**
VHO				*e*S	Sn	04 12 25.1	-6.4
PMUV	**Sontecomapan**	**5.25**	**337**		Pn	04 11 35.0	-2.2
PMUV	**Sontecomapan**	**5.25**	**337**	*e*P	Pn	04 11 35.0	-2.2
YOIG	**Yosondua**	**5.44**	**306**		**Pn**	**04 11 39.9**	**-0.1**
YOIG	**Yosondua**	**5.44**	**306**	*e*P	**Pn**	**04 11 39.9**	**-0.1**
YOIG				*e*S	Sn	04 12 35.6	-7.8
SCIG	**Sabancuy**	**5.50**	**18**		**Pn**	**04 11 41.1**	**+0.6**
SCIG					**Sn**	**04 12 44.3**	**-0.1**
SCIG	**Sabancuy**	**5.50**	**18**	*e*P	**Pn**	**04 11 41.1**	**+0.6**
SCIG				*e*S	**Sn**	**04 12 44.3**	**-0.1**
PNIG	**Pinotepa**	**5.68**	**299**		Pn	04 11 42.4	-0.7
PNIG	**Pinotepa**	**5.68**	**299**	*e*P	Pn	04 11 42.4	-0.7
PNIG				*e*S	Sn	04 12 37.7	-11
TXIG	**Tlaxiaco**	**5.84**	**308**		**Pn**	**04 11 46.2**	**+0.8**
TXIG	**Tlaxiaco**	**5.84**	**308**	*e*P	**Pn**	**04 11 46.2**	**+0.8**
TXIG				*e*S	Sn	04 12 46.7	-6.6
TOIG	**Toxpalan**	**5.90**	**318**		**Pn**	**04 11 47.7**	**+1.5**
TOIG	**Toxpalan**	**5.90**	**318**	*e*P	**Pn**	**04 11 47.7**	**+1.5**
TOIG				*e*S	Sn	04 12 49.1	-5.4
HLIG	**Huajuapan de L**	**6.23**	**312**		Pn	04 11 49.4	-1.3
HLIG	**Huajuapan de L**	**6.23**	**312**	*e*P	Pn	04 11 49.4	-1.3
HLIG				*e*S	Sn	04 12 54.9	-7.7
TPIG	**Tehuac#an**	**6.33**	**318**		Pn	04 11 50.4	-1.7
TPIG	**Tehuac#an**	**6.33**	**318**	*e*P	Pn	04 11 50.4	-1.7
TPIG				*e*S	Sn	04 12 59.1	-6.0
MGIG	**Malinaltepec**	**6.52**	**303**		**Pn**	**04 11 55.5**	**+0.9**
MGIG	**Malinaltepec**	**6.52**	**303**	*e*P	**Pn**	**04 11 55.5**	**+0.9**
MGIG				*e*S	Sn	04 13 01.7	-8.1
FTIG	**Fresnillo de T**	**6.52**	**311**		**Pn**	**04 11 56.9**	**+2.3**
FTIG	**Fresnillo de T**	**6.52**	**311**	*e*P	**Pn**	**04 11 56.9**	**+2.3**
FTIG				*e*S	Sn	04 13 01.5	-8.2
CRIG	**Cruz Grande**	**6.70**	**298**		Pn	04 11 56.6	-0.4
CRIG	**Cruz Grande**	**6.70**	**298**	*e*P	Pn	04 11 56.6	-0.4
CRIG				*e*S	Sn	04 13 00.2	-14
JAUV	**Jalcomulco**	**6.74**	**327**		Pn	04 11 55.8	-1.9
JAUV	**Jalcomulco**	**6.74**	**327**	*e*P	Pn	04 11 55.8	-1.9
JAUV				*e*S	Sn	04 13 06.8	-8.3
DAIG	**Los Arroyos**	**7.27**	**298**		Pn	04 12 03.4	-1.4
DAIG	**Los Arroyos**	**7.27**	**298**	*e*P	Pn	04 12 03.4	-1.4
DAIG				*e*S	Sn	04 13 17.2	-11
PPM	**Popocatepetl**	**7.63**	**315**	*e*P	**Pn**	**04 12 13.6**	**+3.4**
MEIG	**Mezcala**	**7.68**	**304**	*e*P	Pn	04 12 07.8	-2.8
MEIG				*e*S	Sn	04 13 30.7	-7.6
YAIG	**Yautepec**	**7.81**	**312**		**Pn**	**04 12 14.0**	**+1.7**
YAIG	**Yautepec**	**7.81**	**312**	*e*P	**Pn**	**04 12 14.0**	**+1.7**
YAIG				*e*S	Sn	04 13 31.9	-10
CAIG	**El Cayaco**	**7.81**	**296**		**Pn**	**04 12 12.4**	**+0.1**
CAIG	**El Cayaco**	**7.81**	**296**	*e*P	**Pn**	**04 12 12.4**	**+0.1**
CAIG				*e*S	Sn	04 13 26.6	-15
CXUV	**Coxquihui**	**7.82**	**326**		**Pn**	**04 12 11.2**	**-1.2**
CXUV	**Coxquihui**	**7.82**	**326**	*e*P	**Pn**	**04 12 11.2**	**-1.2**
CXUV				*e*S	Sn	04 13 36.1	-5.7
PLIG	**Platanillo**	**7.85**	**307**		**Pn**	**04 12 14.6**	**+1.8**
PLIG	**Platanillo**	**7.85**	**307**	*e*P	**Pn**	**04 12 14.6**	**+1.8**
PLIG				*e*S	Sn	04 13 30.6	-12
TEIG	**Tepich**	**7.87**	**34**		**Pn**	**04 12 13.5**	**+0.4**
SOR	**Soroa**	**13.06**	**45**	Pn	**Pn**	**04 13 24.2**	**0.0**
HBVL	**Hebbronville**	**14.34**	**339**		**Pn**	**04 13 42.3**	**+0.7**
833A	**Chaparral WMA,**	**15.74**	**339**		**Pn**	**04 14 01.6**	**+1.1**
833A				IAmb	IAmb	04 14 08.2	
	comp=Z,14nm,1.0s						
HNDO	**Hondo**	**16.81**	**341**	P	**Pn**	**04 14 17.0**	**+2.8**
HNDO				IAmb	IAmb	04 14 19.2	
	comp=Z,9.0nm,0.7s						
DRIO	**Del Rio**	**17.19**	**337**		**Pn**	**04 14 19.2**	**+0.3**
JCT	**Junction City**	**17.86**	**340**	P	**Pn**	**04 14 27.7**	**+0.5**
SAND	**Sanderson**	**18.27**	**334**		**Pn**	**04 14 33.0**	**+0.7**
BRDY	**Brady**	**18.37**	**343**		**Pn**	**04 14 33.9**	**+0.3**
TXAR	**Lajitas Array**	**18.46**	**329**	P	**P**	**04 14 37.7**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=149,slow=13,SNR=17						
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**18.46**	**329**	P	**P**	**04 14 35.9**	**+1.1**
TX31	**Lajitas Ar. Si**	**18.46**	**329**	P	**P**	**04 14 36.1**	**+1.3**
OZNA	**Ozona**	**18.72**	**338**		**P**	**04 14 38.8**	**+1.2**
SGCY	**Sterling City**	**19.62**	**339**		**P**	**04 14 48.9**	**+1.5**
PLPT	**Palo Pinto**	**19.65**	**346**	P	**P**	**04 14 48.6**	**+0.9**
PLPT				IAmb	IAmb	04 14 55.8	
	comp=Z,10.0nm,0.9s						
MNHN	**Monahans**	**19.74**	**334**		**P**	**04 14 49.1**	**+0.3**
ABTX	**Abilene, Hawle**	**19.81**	**343**		**P**	**04 14 49.9**	**+0.5**
ABTX				IAmb	IAmb	04 14 52.0	
	comp=Z,16nm,0.8s						
LRAL	**Lakeview Retre**	**20.00**	**15**	P	**P**	**04 14 51.8**	**+0.3**
VHRN	**Van Horn**	**20.30**	**329**		**P**	**04 14 55.4**	**+0.4**
ODSA	**Odessa**	**20.34**	**336**		**P**	**04 14 54.8**	**-0.4**
ODSA				IAmb	IAmb	04 15 00.5	
	comp=Z,10nm,0.8s			

	comp=Z,1.4nm,0.7s						
YKA	**Yellowknife Ar**	**51.11**	**347**	P	**P**	**04 19 22.1**	**+0.7**
INK	**Inuvik**	**60.47**	**344**	P	**P**	**04 20 30.8**	**+2.3**
A36M	**Sachs Harbour**	**61.36**	**349**	P	**P**	**04 20 35.3**	**+0.7**
A36M				IAmb	IAmb	04 21 11.6	
	comp=Z,3.5nm,1.1s						
F28M	**Old Crow**	**61.86**	**341**	P	**P**	**04 20 39.8**	**+1.8**
ILAR	**Eielson Array**	**62.76**	**337**	P	**P**	**04 20 48.4**	**+4.3**
	comp=Z,1.8nm,1.0s,baz=118,slow=4.8,SNR=15						
	comp=Z,1.8nm,1.0s						
RND	**Reindeer**	**62.91**	**335**	P	**P**	**04 20 47.0**	**+1.8**
BMAR	**Burnt Mountain**	**63.26**	**340**	P	**P**	**04 20 49.4**	**+2.0**
PPLA	**Purkeypile**	**64.10**	**334**	P	**P**	**04 20 54.8**	**+1.6**
O18K	**Koktuh Hills**	**64.44**	**330**	P	**P**	**04 20 57.0**	**+1.7**
HHC	**Hu-ho-hao-te**	**121.17**	**338**	*e*P	**PKPdf**	**04 29 09.4**	**-3.2**
PZH	**PanZhiHua**	**137.56**	**340**	PKP	**PKPdf**	**04 29 44.0**	**-0.1**

NOU ***16*** *04:11:25.2, 37.70S × 174.17E, h245km, MLv3.7/5, North Island, New Zealand*

WEL 16 04:11:52.2±0.4, 39.3°S±3.1° × 177.8°E±1.2°, h22km±3km, M3.1/19, ML3.2/20, MLv3.1/19, Error ellipse: s-maj=4.3km s-min=3.7km az=148.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	**Mahia Peninsul**	**0.11**	**100**	P	Pb	04 11 57.6	+0.9
MHGZ				S	Sb	04 12 02.5	+2.8
KNZ	**Kokohu**	**0.14**	**326**	P	Pb	04 11 57.2	+0.3
KNZ				S	Sb	04 12 01.2	+1.2
PRGZ	**Paritu Road**	**0.23**	**23**	P	Pb	04 11 58.8	+0.8
PRGZ				S	Sb	04 12 04.6	+2.6
WHHZ	**Waihua**	**0.42**	**278**	P	Pb	04 12 01.9	+0.9
WHHZ				S	Sn	04 12 10.0	0.0
RIGZ	**Rimuhau**	**0.43**	**359**	P	Pb	04 12 02.0	+0.9
RIGZ				S	Sn	04 12 09.8	-0.4
SNGZ	**Shannon Statio**	**0.49**	**316**	P	Pb	04 12 02.9	+0.8
SNGZ				S	Sn	04 12 11.2	-0.4
RAHZ	**Arahi**	**0.58**	**292**	P	Pn	04 12 04.4	-0.7
RAHZ				S	Sn	04 12 14.0	+0.1
ARHZ	**Aropaoanui**	**0.61**	**258**	P	Pn	04 12 05.2	-0.4
RAGZ	**Rawiri**	**0.70**	**336**	P	Pb	04 12 06.1	+0.4
RAGZ				S	Sn	04 12 17.2	+0.4
TKGZ	**Te Karaka**	**0.70**	**5**	P	Pn	04 12 06.2	-0.4
TKGZ				S	Sn	04 12 17.6	+0.8
CNGZ	**Carnagh Statio**	**0.73**	**28**	P	Pn	04 12 07.1	-0.1
CKHZ	**Cape Kidnapper**	**0.75**	**226**	P	Pb	04 12 06.8	+0.3
NMHZ	**Naumai**	**0.75**	**273**	P	Pn	04 12 07.3	-0.2
NMHZ				S	Sn	04 12 19.3	+1.0
MTHZ	**Maungataniwha**	**0.78**	**291**	P	Pb	04 12 07.4	+0.3
RTZ	**Ruatahuna**	**0.81**	**310**	P	Pb	04 12 07.8	+0.3
MWZ	**Matawai**	**0.82**	**347**	P	Pb	04 12 07.9	+0.1
MCHZ	**McNeill Hill**	**0.89**	**249**	P	Pn	04 12 09.3	-0.1
KAHZ	**Kahuranaki**	**0.95**	**226**	P	Pb	04 12 09.9	-0.3
TWGZ	**Tauwhareparae**	**0.97**	**10**	P	Pb	04 12 10.3	-0.1
BKZ	**Black Stump Fm**	**0.99**	**268**	P	Pb	04 12 10.3	-0.5
BKZ	**Black Stump Fm**	**0.99**	**268**	P	Pb	04 12 10.4	-0.3
URZ	**Urewera**	**1.01**	**329**	P	Pb	04 12 11.1	0.0
URZ	**Urewera**	**1.01**	**329**	P	Pn	04 12 10.7	-0.3
MUGZ	**Murupara**	**1.02**	**310**	P	Pb	04 12 11.2	0.0
KWHZ	**Kaweka Forest**	**1.08**	**254**	P	Pn	04 12 11.8	-0.4
MRHZ	**Matea Rd**	**1.10**	**285**	P	Pn	04 12 12.3	+0.1
PXZ	**Pawanui**	**1.14**	**218**	P	Pn	04 12 11.6	-1.2
RUGZ	**Raukumara Rang**	**1.17**	**356**	P	Pn	04 12 12.4	-0.9
KRHZ	**Kereru**	**1.20**	**244**	P	Pn	04 12 13.0	-0.6
ALRZ	**Allen Road**	**1.25**	**297**	P	Pb	04 12 15.9	+0.7
PKGZ	**Pakihiroa**	**1.29**	**11**	P	Pn	04 12 14.1	-0.8
TARZ	**Mount Tarawera**	**1.34**	**312**	P	Pn	04 12 16.0	+0.4
HAZ	**Te Kaha**	**1.38**	**0**	P	Pn	04 12 15.5	-0.5
WPRZ	**Whakapapatarin**	**1.40**	**296**	P	Pb	04 12 17.6	0.0
WMGZ	**Waiomatatini S**	**1.41**	**21**	P	Pn	04 12 15.4	-1.1
HLRZ	**Highlands Stat**	**1.42**	**308**	P	Pb	04 12 18.9	+0.9
PRHZ	**Porangahau**	**1.43**	**217**	P	Pn	04 12 15.3	-1.5
ETVZ	**East Tongariro**	**1.60**	**269**	P	Pb	04 12 20.4	-0.8
TMVZ	**Te Maari**	**1.61**	**270**	P	Pn	04 12 19.6	+0.2
MXZ	**Matakaoa Point**	**1.62**	**15**	P	Pn	04 12 20.4	+0.9
NTVZ	**North Tongarir**	**1.63**	**271**	P	Pn	04 12 20.2	+0.5
DVHZ	**Dannevirke**	**1.70**	**226**	P	Pn	04 12 12.0	-8.5
BFZ	**Birch Farm**	**1.94**	**217**	P	Pn	04 12 21.6	-2.2
BFZ	**Birch Farm**	**1.94**	**217**	P	Pn	04 12 21.5	-2.2
POWZ	**Post Office Ro**	**1.99**	**230**	P	Pn	04 12 23.5	-1.0
MRZ	**Mangatainoka R**	**2.27**	**227**	P	Pn	04 12 20.8	-7.6
CTZ	**Chatham Island**	**6.24**	**139**	P	Pn	04 13 21.2	-1.6
CTZ				S	Sn	04 14 26.8	-6.6

IDC ***16*** *04:17:38.8±1.9, 17.80S × 174.46W, h0km, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=56.4km s-min=30.5km az=126.0*

NEIC ***16*** *04:17:50.4±0.8, 18.0S±0.1 × 174.58W±0.9, h81km±12km, mb4.6/9, Error ellipse: s-maj=17.3km s-min=9.0km az=142.0*

ISC 16 04:17:53.3±0.8, 18.0S±0.1 × 174.3W±0.1, h132km, n17, σ1s37/17, mb4.4/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.32**	**105**		**Pn**	**04 18 56.8**	**-0.6**
AFI	**Afiamalu**	**4.77**	**32**	Pn	**Pn**	**04 19 01.4**	**-2.1**
URZ	**Urewera**	**21.51**	**199**	P	**P**	**04 22 31.3**	**-0.3**
	5.5nm,0.5s,baz=22,slow=2.4,SNR=5.9						
	5.5nm,0.5s						
RTZ	**Ruatahuna**	**21.87**	**198**	P	**P**	**04 22 34.0**	**-1.6**
RTZ				IAmb	IAmb	04 22 47.3	
	comp=Z,46nm,1.3s						
BKZ	**Black Stump Fm**	**22.53**	**199**	P	**P**	**04 22 41.1**	**-1.1**
BKZ				IAmb	IAmb	04 22 49.3	
	comp=Z,41nm,1.4s						
PMG	**Port Moresby**	**38.30**	**278**	P	**P**	**04 25 00.5**	**-0.8**
BBOO	**Buckleboo**	**46.75**	**242**	P	**P**	**04 26 09.3**	**-0.1**
BBOO				IAmb	IAmb	04 26 29.4	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**48.38**	**259**	P	**P**	**04 26 22.1**	**-0.1**
WB0				IAmb	IAmb	04 26 25.8	
	comp=Z,8.3nm,1.1s						
WRA	**Warramunga Arr**	**48.41**	**259**	P	**P**	**04 26 22.5**	**0.0**
	comp=Z,1.1nm,0.5s,baz=97,slow=8.5,SNR=16						
	comp=Z,1.1nm,0.5s						
AS31	**Alice Springs**	**48.48**	**254**	P	**P**	**04 26 23.2**	**+0.2**
ASAR	**Alice Springs**	**48.48**	**254**	P	**P**	**04 26 23.1**	**+0.1**
	comp=Z,7.6nm,0.6s,baz=91,slow=8.3,SNR=118						
	comp=Z,7.6nm,0.6s						
ASAR	**Alice Springs**	**48.48**	**254**	P	**P**	**04 26 22.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**56.82**	**260**	P	**P**	**04 27 25.2**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=119,slow=13,SNR=4.9						
	comp=Z,0.6nm,0.3s						
SOEI	**Soe**	**59.94**	**269**	P	**P**	**04 27 46.4**	**+0.2**
P18K	**Big Mountain,**	**78.70**	**10**	P	**P**	**04 29 42.5**	**+1.9**
P18K				IAmb	IAmb	04 29 45.0	
	comp=Z,10nm,1.4s						
K15K	**Wolf Creek Mou**	**80.69**	**6**	P	**P**	**04 29 54.4**	**+3.3**
ILAR	**Eielson Array**	**85.18**	**11**	P	**P**	**04 30 15.5**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=224,slow=5.8,SNR=12						
	comp=Z,0.3nm,0.5s						

IDC ***16*** *04:36:49.0±6.2, 34.47N × 23.51E, h0km, mb3.7/5, mbtmp3.7/6, ML2.5/1, MS3.7/1, Error ellipse: s-maj=118.6km s-min=40.8km az=24.0*

ATH ***16*** *04:36:58.6, 34.82N × 23.70E, h13km±3km, ML2.8/5, Manual Solution by S.Liakopoulos First location: 2020/02/16 04:38:22, This location: 2020/02/16 06:28:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*

THE ***16*** *04:37:01.8, 35°N±4°×2°4E±1°, h11km±3km, M2.7/6, MLh2.7/6*

ISC 16 04:36:57.7±1.8, 34.79N±0.08 × 23.70E±0.06, h18km±9km, n22, σ1s54/26, mb3.8/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.32**	**80**	P	**Pg**	**04 37 05.3**	**+0.6**
GVD				S	**Sg**	**04 37 08.1**	**-1.4**
GVD	**Gavdhos**	**0.32**	**80**	P	**Pg**	**04 37 05.3**	**+0.6**
GVD				S	**Sb**	**04 37 11.0**	**+1.1**
KNDR	**Palaiochora Ch**	**0.45**	**352**	P	**Pg**	**04 37 06.9**	**-0.1**
KNDR				S	**Sg**	**04 37 11.7**	**-1.5**
IMMV	**Iera Moni Meta**	**0.71**	**19**	P	**Pb**	**04 37 12.8**	**+1.2**
IMMV				S	**Sb**	**04 37 21.3**	**+0.2**
IMMV	**Iera Moni Meta**	**0.71**	**19**	P	**Pg**	**04 37 11.9**	**+0.2**
IMMV				S	**Sg**	**04 37 21.1**	**-0.1**
VAM	**Vamos**	**0.74**	**33**	P	**Pg**	**04 37 12.7**	**+0.4**
VAM				S	**Sg**	**04 37 21.1**	**-1.1**
VAM	**Vamos**	**0.74**	**33**	P	**Pg**	**04 37 12.3**	**0.0**
IDI	**Anoyia**	**1.10**	**62**	P	**Pg**	**04 37 18.8**	**-0.3**
IDI				S	**Sg**	**04 37 32.0**	**-1.4**
IDI	**Anoyia**	**1.10**	**62**	P	**Pg**	**04 37 19.2**	**+0.2**
ANKY	**Antikythira Is**	**1.13**	**343**	P	**Pb**	**04 37 19.5**	**+0.8**
KTHA	**Kythira Island**	**1.56**	**341**	P	**Pn**	**04 37 26.8**	**+2.3**
NPS	**Neapolis**	**1.64**	**73**	P	**Pn**	**04 37 27.1**	**+1.4**
NPS	**Neapolis**	**1.64**	**73**	P	**Pn**	**04 37 26.9**	**+1.2**
VLI	**Veliai**	**2.03**	**342**	P	**Pb**	**04 37 34.6**	**+0.6**
VLI				S	**Sb**	**04 38 00.7**	**+1.8**
VLI	**Veliai**	**2.03**	**342**	P	**Pn**	**04 37 32.4**	**+1.4**
BRTR	**Keskin Array B**	**9.33**	**55**	Pn	**Pn**	**04 39 12.3**	**+0.9**
	baz=238,slow=16,SNR=4.1						
	0.9nm,0.9s						
HFS	**Hagfors**	**26.19**	**349**	P	**P**	**04 42 28.3**	**-2.7**
	1.2nm,0.5s,baz=146,slow=9.0,SNR=4.1						
	1.2nm,0.5s						
FINES	**FINESS Array B**	**26.72**	**3**	P	**P**	**04 42 31.5**	**-4.3**
	3.8nm,1.0s,baz=180,slow=8.6,SNR=2.1						
	3.8nm,1.0s						
KURBB	**Kurchatov Arra**	**42.29**	**51**	P	P	04 44 46.8	-3.2
	0.3nm,0.5s,baz=276,slow=8.3,SNR=2.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**44.98**	**56**	P	P	04 45 07.5	-4.3
	0.4nm,0.3s,baz=267,slow=7.5,SNR=22						
	0.4nm,0.3s						
LBTB	**Lobatse**	**59.50**	**178**	LR	LR	05 13 54.8	
	comp=Z,57nm,18.2s,baz=354,slow=38						
SONM	**Songino Array**	**60.65**	**50**	P	P	04 47 04.7	-3.0
	0.2nm,0.5s,baz=276,slow=7.7,SNR=2.2						
	0.2nm,0.5s						

IDC ***16*** *05:47:60.0±3.8, 1.04S × 99.21E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=167.4km s-min=21.8km az=56.0*

DJA ***16*** *05:48:06.0±0.3, 1°S±3° × 9°9E±1°, h10km, M3.8/21, MLv3.8/21*

ISC 16 05:48:02.7±0.9, 0.94S±0.06 × 99.33E±0.05, h10km, n20, σ1s25/14, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.45**	**212**	P	**Pn**	**05 48 16.8**	**+1.5**
PDSI	**Padang**	**1.13**	**88**	P	**Pn**	**05 48 26.9**	**+2.2**
PPI	**Padang Panjang**	**1.17**	**66**	P	**Pn**	**05 48 26.9**	**+1.7**
PBSI	**Pulau Batu**	**1.37**	**310**	P	**Pb**	**05 48 28.8**	**+0.3**
MNSI	**Mandailing Nat**	**1.75**	**8**	P	**Pb**	**05 48 34.5**	**-0.4**
BKNI	**Bangkinang**	**2.12**	**54**	P	**Pb**	**05 48 41.4**	**0.0**
KRJI	**Kerinci**	**2.42**	**118**	P	**Pb**	**05 48 46.4**	**0.0**
GSI	**Gunungsitoli**	**2.84**	**322**	P	**Pn**	**05 48 50.1**	**+1.9**
H08S2	**Diego Garcia H**	**27.56**	**255**	T	T	06 21 41.7	
	baz=78						
H08S3	**Diego Garcia H**	**27.57**	**255**	T	T	06 21 44.8	
	baz=78,SNR=17						
H08S1	**Diego Carcia H**	**27.58**	**255**	T	T	06 21 46.4	
	baz=78						
WRA	**Warramunga Arr**	**39.10**	**121**	P	**P**	**05 55 29.3**	**-1.3**
	0.3nm,0.5s,baz=303,slow=9.0,SNR=12						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**40.41**	**127**	P	**P**	**05 55 41.1**	**-0.4**
	0.4nm,0.4s,baz=303,slow=7.8,SNR=10						
	0.4nm,0.4s						
SONM	**Songino Array**	**48.97**	**6**	P	**P**	**05 56 49.0**	**-0.6**
	0.4nm,0.4s,baz=187,slow=7.3,SNR=2.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**49.84**	**345**	P	**P**	**05 56 55.3**	**-0.7**
	0.4nm,0.5s,baz=162,slow=9.0,SNR=5.9						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**56.02**	**350**	P	**P**	**05 57 41.0**	**-0.5**
	0.8nm,0.5s,baz=163,slow=5.6,SNR=4.3						
	0.8nm,0.5s						
H04N2	**CROZET ISLANDS**	**61.25**	**216**	T	T	07 04 05.8	
	baz=56,slow=75,SNR=28						
H04N1	**CROZET ISLANDS**	**61.26**	**216**	T	T	07 04 04.0	
	baz=56,slow=75,SNR=32						
H04N3	**CROZET ISLANDS**	**61.27**	**216**	T	T	07 04 02.5	
	baz=56,slow=75,SNR=30						
TXAR	**Lajitas Array**	**144.26**	**36**	PKP	**PKPab**	**06 07 37.4**	**-0.4**
	0.2nm,0.5s,baz=262,slow=1.3,SNR=6.0						

KRSC 16 05:51:01.5±0.6, 54.93N × 164.57E, h46km±16km, Ml3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.85**	**70**	*e*P	Pn	05 51 17.7	+0.6
BKI				*e*S	Sn	05 51 29.0	+0.5
KBTR	**Krutoberegovo**	**1.62**	**323**	*e*P	Pn	05 51 29.4	+1.8
KBTR				*e*S	Sn	05 51 49.3	+2.0
MKZ	**Mys Kozlova**	**1.69**	**258**	*e*P	Pn	05 51 30.9	+2.4
MKZ				*e*S	Sn	05 51 51.4	+2.6
SDLR	**Sedlovina**	**3.73**	**246**	*e*P	Pn	05 52 00.2	+3.6
SDLR				*e*S	Sn	05 52 42.9	+3.6
SMAR	**Somma**	**3.78**	**246**	*e*P	Pn	05 52 01.3	+3.9
SMAR				*e*S	Sn	05 52 43.6	+2.9
KRER	**Koryakskii**	**3.79**	**247**	*e*P	Pn	05 52 01.9	+4.4
KRER				*e*S	Sn	05 52 44.3	+3.4
UGLR	**Uglovaya**	**3.80**	**245**	*e*P	Pn	05 52 02.2	+4.8
AVH	**Avacha**	**3.82**	**247**	*e*P	Pn	05 52 02.4	+4.7
AVH				*e*S	Sn	05 52 45.4	+4.0
KRX	**Arik**	**3.82**	**248**	*e*P	Pn	05 52 02.2	+4.4
KRX				*e*S	Sn	05 52 44.9	+3.4
KOK	**Koryaka**	**3.86**	**247**	*e*P	Pn	05 52 02.9	+4.6
KOK				*e*S	Sn	05 52 46.6	+4.2
GNL	**Ganaly**	**4.07**	**255**	*e*P	Pn	05 52 06.4	+5.2
KRMR	**Karymshinskiy**	**4.35**	**244**	*e*P	Pn	05 52 09.6	+4.6
KRMR				*e*S	Sn	05 52 58.1	+3.8
MTVR	**Mutnovka**	**4.51**	**240**	*e*P	Pn	05 52 11.3	+4.0
ASAK	**Asacha**	**4.71**	**240**	*e*P	Pn	05 52 14.1	+4.0

IDC ***16*** *06:01:22.2±3.0, 57.87S × 23.52W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=102.5km s-min=46.7km az=1.0*

ISC 16 06:01:24.8±1.0, 57.9S±0.2 × 23.6W±0.3, h16km, n8, σ0s49/8, 3C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**14.38**	**159**	⇑P	**Pn**	**06 04 47.8**	**+0.6**
	comp=Z,1.1nm,0.2s						
VNA3	**Neumayer Olymp**	**14.63**	**162**	⇑P	**Pn**	**06 04 50.8**	**+0.1**
	comp=Z,3.7nm,0.5s						
VNA2	**Neumayer--Watz**	**14.77**	**159**	⇑P	**Pn**	**06 04 52.0**	**-0.7**
	comp=Z,1.9nm,0.2s,baz=326,slow=13						
CPUP	**Villa Florida**	**39.50**	**308**	P	**P**	**06 08 54.0**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=155,slow=13,SNR=4.7						
	comp=Z,1.6nm,0.8s						
LPAZ	**La Paz**	**53.04**	**303**	P	**P**	**06 10 42.1**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=199,slow=7.8,SNR=8.1						
	comp=Z,1.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.75**	**26**	P	**P**	**06 12 58.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=207,slow=8.5,SNR=3.5						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**138.85**	**315**	PKP	**PKPdf**	**06 20 48.5**	**0.0**
	comp=Z,0.3nm,0.8s,baz=116,slow=1.7,SNR=4.4						
ILAR	**Eielson Array**	**152.80**	**308**	PKPbc	**PKiKP**	**06 21 19.2**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=127,slow=1.7,SNR=8.3						

IDC ***16*** *06:28:40.5±2.1, 3.62N × 126.37E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=130.2km s-min=27.8km az=69.0*

DJA ***16*** *06:28:48.5±0.9, 4°N±9° × 12°7E±1°, h40km±24km, M3.9/13, mb3.9/4, MLv4.0/13*

ISC 16 06:28:47.4±1.4, 3.6N±0.1 × 126.56E±0.09, h53km, n11, σ0s56/12, mb3.3/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.03**	**276**	P	**Pn**	**06 29 06.1**	**+0.4**
SGSI				S	**Sn**	**06 29 19.1**	**0.0**
GAMI	**Galela, Maluku**	**2.13**	**145**	P	**Pn**	**06 29 21.0**	**+0.5**
MNI	**Manado**	**2.73**	**219**	P	**Pn**	**06 29 28.6**	**-0.3**
GTOI	**Gorontalo**	**4.60**	**231**	P	**Pn**	**06 29 54.5**	**+0.1**
MRSI	**Marisa**	**5.55**	**236**	P	**Pn**	**06 30 08.3**	**+0.8**
	0.1nm26nm,0.5s						
SANI	**Sanana**	**5.63**	**186**	P	**Pn**	**06 30 08.3**	**-0.2**
	0.1nm8.0nm,1.0s						
MPSI	**Mapaga**	**7.40**	**244**	P	**Pn**	**06 30 33.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**21.57**	**182**	P	**P**	**06 33 32.3**	**-0.3**
	0.8nm,0.6s,baz=24,slow=12,SNR=1.1						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**24.60**	**162**	P	**P**	**06 34 03.2**	**+0.3**
	0.6nm,0.5s,baz=341,slow=9.9,SNR=12						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**28.02**	**166**	P	**P**	**06 34 34.5**	**+0.9**
	0.2nm,0.3s,baz=345,slow=11,SNR=5.6						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**57.58**	**325**	P	**P**	**06 38 31.0**	**-0.8**
	0.1nm,0.5s,baz=134,slow=6.2,SNR=1.9						
	0.1nm,0.5s						

IDC ***16*** *06:28:51.7±1.2, 14.82S × 75.89W, h0km, mb3.8/5, mbtmp3.8/8, ML3.5/3, MS3.3/5, Error ellipse: s-maj=39.3km s-min=18.5km az=58.0*

ISC 16 06:28:56.1±1.0, 14.9S±0.1 × 76.0W±0.2, h29km, n23, σ1s78/13, mb3.5/3, MS3.5/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.05**	**343**	Pn	**Pn**	**06 29 40.6**	**-1.9**
	21nm,0.3s,baz=132,slow=12,SNR=29						
NNA				Sn	**Sn**	**06 30 17.8**	**-0.2**
	103nm,0.3s,baz=282,slow=10.0,SNR=7.5						
	37nm,0.3s						
LPAZ	**La Paz**	**7.65**	**101**	Pn	**Pn**	**06 30 49.2**	**+3.0**
	1.7nm,0.3s,baz=299,slow=7.9,SNR=32						
LPAZ				LR	LR	06 33 56.9	
	comp=Z,164nm,19.5s,baz=288,slow=40						
ATAH	**Athualpa**	**8.11**	**343**	Pn	**Pn**	**06 30 52.7**	**+0.4**
	0.5nm,0.3s,baz=346,slow=4.2,SNR=2.4						
ATAH				Sn	**Sn**	**06 32 26.6**	**+3.4**
	1.4nm,0.3s,baz=102,slow=14,SNR=1.7						
ATAH				LR	LR	06 33 44.2	
	comp=Z,50nm,20.0s,baz=195,slow=36						
SIV	**San Ignacio**	**14.38**	**96**	Pn	**Pn**	**06 32 15.6**	**-2.3**
	baz=278,slow=11,SNR=5.6						
	0.6nm,0.4s						
CFA	**Coronel Fontan**	**18.04**	**158**	P	**P**	**06 33 05.6**	**+0.6**
	0.1nm,0.3s,baz=334,slow=11,SNR=5.2						
	1.2nm,0.6s						
H03N1	**Juan Fernandez**	**18.63**	**188**	T	T	06 52 22.6	
	baz=8.7,slow=74,SNR=1147						
H03N2	**Juan Fernandez**	**18.63**	**188**	T	T	06 52 23.4	
	baz=8.7,slow=74,SNR=558						
H03N3	**Juan Fernandez**	**18.64**	**188**	T	T	06 52 21.3	
	baz=8.7,slow=74,SNR=1106						
CPUP	**Villa Florida**	**20.77**	**126**	P	**P**	**06 33 35.0**	**+0.3**
	2.3nm,1.0s,baz=317,slow=13,SNR=5.6						
	2.3nm,1.0s						
SDV	**Santo Domingo**	**24.24**	**13**	LR	LR	06 44 42.6	
	comp=Z,145nm,19.9s,baz=50,slow=39						
PLCA	**Paso Flores**	**26.14**	**171**	P	**P**	**06 34 28.1**	**+0.3**
	0.8nm,0.7s,baz=349,slow=8.6,SNR=3.4						
	0.8nm,0.7s						
BDFB	**Brasilia**	**26.95**	**95**	P	**P**	**06 34 34.6**	**-0.9**
	1.3nm,0.7s,baz=270,slow=13,SNR=3.6						
	1.3nm,0.7s						
MDP	**Montagnes des**	**30.49**	**51**	LR	LR	06 47 03.0	
	comp=Z,59nm,18.5s,baz=328,slow=36						
RPN	**Rapa Nui**	**33.33**	**243**	LR	LR	06 45 15.8	
	comp=Z,93nm,19.2s,baz=82,slow=29						
TXAR	**Lajitas Array**	**51.50**	**329**	P	**P**	**06 37 58.8**	**-0.6**
	0.4nm,0.8s,baz=148,slow=8.2,SNR=4.9						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.74**	**74**	P	**P**	**06 41 12.7**	**0.0**
	3.0nm,0.8s,baz=242,slow=9.0,SNR=13						
	3.0nm,0.8s						
H11N3	**WAKE ISLAND Hyl**	**20.08**	**284**	T	T	08 58 56.7	
	baz=96,slow=74,SNR=96						
H11N2	**WAKE ISLAND Hyl**	**20.10**	**284**	T	T	08 58 57.7	
	baz=96,slow=74,SNR=161						
H11N1	**WAKE ISLAND Hyl**	**20.10**	**284**	T	T	08 58 58.0	
	baz=96,slow=74,SNR=89						
H11S2	**WAKE ISLAND Hyl**	**20.14**	**283**	T	T	08 59 00.2	
	baz=97,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hyl**	**20.15**	**283**	T	T	08 59 01.2	
	baz=97,slow=75,SNR=48						
H11S3	**WAKE ISLAND Hyl**	**20.16**	**283**	T	T	08 59 02.0	
	baz=97,slow=75,SNR=46						
SONM	**Songino Array**	**147.13**	**357**	PKPbc	**PKPbc**	**06 48 35.9**	**-0.7**
	0.7nm,0.5s,baz=336,slow=2.3,SNR=4.7						

NNC ***16*** *06:59:16.5±1.1, 51.90N × 74.30E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=27.3km s-min=7.3km az=27.0, Suspected Mining explosion.*

IDC ***16*** *06:59:20.4±1.0, 51.92N × 74.45E, h0km, mbtmp2.7/3, ML2.0/3, Error ellipse: s-maj=32.9km s-min=7.7km az=28.0*

**ISC 16 06:59:19.7±1.1, 51

STG2	**El Palmar, Qui**	**1.38**	**297**	*e*P	**Pg**	07 00 59.2	**-0.8**
STG2				*e*S	**Sg**	07 01 19.8	**+1.9**

KRSC 16 07:19:38.0±0.7, 54°.97N×164°.52E, h42km±20km, MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.86**	**74**	*e*P	Pn	07 19 54.5	+0.8
BKI				*e*S	Sn	07 20 05.3	+0.2
KBTR	**Krutoberegovo**	**1.57**	**323**	*e*P	Pn	07 20 05.5	+2.1
MKZ	**Mys Kozlova**	**1.67**	**257**	*e*P	Pn	07 20 07.5	+2.8
MKZ				*e*S	Sn	07 20 27.7	+2.8
KII	**Karymskiy**	**3.10**	**254**	*e*S	Sn	07 21 03.3	+3.0
ESO	**Esso**	**3.45**	**288**	*e*P	Pn	07 20 32.8	+3.7
NLC	**Nalytchevo**	**3.54**	**242**	*e*S	Sn	07 21 13.4	+2.4
SDLR	**Sedlovina**	**3.73**	**245**	*e*P	Pn	07 20 38.0	+4.9
SMAR	**Somma**	**3.78**	**245**	*e*P	Pn	07 20 38.6	+4.7
KRER	**Koryakskii**	**3.79**	**246**	*e*P	Pn	07 20 38.3	+4.4
UGLR	**Uglovaya**	**3.79**	**245**	*e*P	Pn	07 20 38.8	+4.9
AVH	**Avacha**	**3.81**	**246**	*e*P	Pn	07 20 38.6	+4.5
KRX	**Arik**	**3.81**	**247**	*e*P	Pn	07 20 38.6	+4.3
KOK	**Koryaka**	**3.85**	**246**	*e*P	Pn	07 20 39.1	+4.4
KRMR	**Karymshinskiy**	**4.35**	**243**	*e*P	Pn	07 20 45.6	+4.2
KRMR				*e*S	Sn	07 21 33.9	+3.1
MTVR	**Mutnovka**	**4.51**	**239**	*e*P	Pn	07 20 47.9	+4.0
GRL	**Gorelyy**	**4.53**	**240**	*e*P	Pn	07 20 48.2	+4.1
ASAK	**Asacha**	**4.71**	**239**	*e*P	Pn	07 20 51.7	+5.2

IDC ***16*** *07:35:30.8±0.4, 49°.40N×155°.52E, h0km, mb5.0/35, mbtmp5.0/39, ML5.5/3, MS4.4/85, Error ellipse: s-maj=10.8km s-min=9.5km az=114.0*

BJI ***16*** *07:35:33.5, 49°.24N×156°.02E, h49km, mB5.3/33, mb5.1/83, Ms4.9/67, Ms7 4.7/67*

KRSC ***16*** *07:35:34.9±2.1, 49°.19N×155°.77E, h69km±23km, Mc5.0, Ml5.6, Felt [III] at cape Vasilyeva, Severo-Kurilsk.*

BGR ***16*** *07:35:34.4, 48°.56N×154°.96E, h33km, mb5.1, Ms4.8*

NEIC ***16*** *07:35:37.8±1.4, 49°.41N±0°.08×155°.5E±0°.1, h50km±4km, mb5.3/610, Mww5.2/23, Error ellipse: s-maj=14.1km s-min=9.4km az=133.0*

MOS ***16*** *07:35:38.0±1.1, 49°.35N×155°.57E, h69km, mb5.3/48, MS4.2/8, Error ellipse: s-maj=5.6km s-min=2.8km az=81.7*

MOS Felt (II) at Severo-Kuril'sk.

GCMT ***16*** *07:35:39.0±0.2, 49°.18N±0°.01×155°.89E±0°.01, h46km, MW5.2/129, Moment Tensor Solution. s110,c167; s129,c216; Duration: 1ŧ0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.77±.02; $M_{\theta\theta}$-0.22±.01; $M_{\phi\phi}$-0.54±.01; $M_{r\theta}$0.02±.01; $M_{\theta\phi}$-0.45±.01; $M_{\phi r}$0.30±.01; Best double couple: $M_0$0.87000×10^{17} NP1:ϕ_s227.00000°, δ38.00000°, λ109.00000°. NP2:ϕ_s24.00000°, δ55.00000°, λ76.00000°. Principal axes: T 0.8380, Plg75.0000°, Azm250.0000°; N 0.0630, Plg11.0000°, Azm32.0000°; P -0.9020, Plg9.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *07:35:39.1, 49°.42N×155°.53E, h50km*

NEIC ***16*** *07:35:39.1, 48°.72N×156°.45E, h50km, Moment Tensor Solution. Duration: 1ŧ7 Moment tensor: Scale 10^{16}Nm; M_{rr}6.96; $M_{\theta\theta}$-3.69; $M_{\phi\phi}$-3.27; $M_{r\theta}$0.37; $M_{\theta\phi}$-4.40; $M_{\phi r}$1.93; Fault plane solution: $M_0$7.72000×10^{16} NP1: ϕ_s236.58000°, δ39.82000°, λ105.59000°. NP2: ϕ_s36.61000°, δ51.92000°, λ77.37000°. Principal axes: T 7.3293, Plg78.0000°, Azm257.0000°; N 0.7305, Plg10.0000°, Azm44.0000°; P -8.0598, Plg6.0000°, Azm136.0000°;*

ISC 16 07:35:38.5±0.3, 49°.32N±0°.04×155°.60E±0°.03, h59km±2km, h59km:pP-P,n1360,cŧ25/1183,mb5.2/469,MS4.6/104, 51C-52D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.40**	**13**	⇓*i*P	**Pn**	**07 36 00.8**	**-1.1**
SKR				*i*S	**Sn**	**07 36 18.0**	**-1.4**
SKR				pmax	pmax		
	comp=Z,11μm,0.7s						
SKR				smax	smax		
	comp=E,101μm,0.4s						
SKR				smax	smax		
	comp=N,100μm,0.5s						
SKR	**Severo-Kuril's**	**1.40**	**13**	*i*P	**Pn**	**07 36 01.2**	**-0.7**
SKR				*e*S	**Sn**	**07 36 19.0**	**-0.4**
PAU	**Pauzhetka**	**2.28**	**19**	PN	**Pn**	**07 36 13.6**	**-0.2**
PAU				S	**Sn**	**07 36 40.5**	**-0.2**
PAU	**Pauzhetka**	**2.28**	**19**	*e*P	**Pn**	**07 36 13.6**	**-0.2**
PAU				*e*S	**Sn**	**07 36 40.5**	**-0.2**
KDTR	**Khodutka, Kamc**	**2.95**	**31**	PN	**Pn**	**07 36 21.9**	**-0.9**
KDTR				S	**Sn**	**07 36 55.3**	**-1.7**
KDTR	**Khodutka, Kamc**	**2.95**	**31**	*e*P	**Pn**	**07 36 21.9**	**-0.9**
KDTR				*e*S	**Sn**	**07 36 55.4**	**-1.7**
ASAK	**Asacha**	**3.40**	**25**	PN	**Pn**	**07 36 29.7**	**+0.7**
ASAK	**Asacha**	**3.40**	**25**	*e*P	**Pn**	**07 36 29.7**	**+0.7**
MTVR	**Mutnovka**	**3.56**	**26**	PN	**Pn**	**07 36 31.3**	**-0.1**
MTVR	**Mutnovka**	**3.56**	**26**	*e*P	**Pn**	**07 36 31.4**	**-0.1**
GRL	**Gorelyy**	**3.59**	**25**	PN	**Pn**	**07 36 32.4**	**+0.6**
GRL	**Gorelyy**	**3.59**	**25**	*e*P	**Pn**	**07 36 32.5**	**+0.6**
RUS	**Russkaya**	**3.62**	**29**	PN	**Pn**	**07 36 31.0**	**-1.0**
RUS	**Russkaya**	**3.62**	**29**	*e*P	**Pn**	**07 36 31.1**	**-1.0**
APC	**Apacha**	**3.74**	**15**	PN	**Pn**	**07 36 35.8**	**+2.1**
APC	**Apacha**	**3.74**	**15**	*e*P	**Pn**	**07 36 35.8**	**+2.1**
KRMR	**Karymshinskiy**	**3.86**	**23**	PN	**Pn**	**07 36 36.5**	**+1.2**
KRMR	**Karymshinskiy**	**3.86**	**23**	*e*P	**Pn**	**07 36 36.6**	**+1.2**
PEA0B	**Petropavlovsk-**	**4.02**	**18**		**Pn**	**07 36 38.3**	**+0.9**
PEA0B	**Petropavlovsk-**	**4.02**	**18**	*de*PN	**Pn**	**07 36 38.6**	**+1.1**
PETK	**Petropavlovsk-**	**4.02**	**18**	Pn	**Pn**	**07 36 38.9**	**+1.4**
	comp=N,27nm,0.3s,baz=199,slow=13,SNR=567						
PETK				LR	LR	07 38 29.3	
	comp=N,8μm,20.6s,baz=201,slow=45						
PETK	**Petropavlovsk-**	**4.02**	**18**		**Pn**	**07 36 38.3**	**+0.8**
PET	**Petropavlovsk**	**4.18**	**26**		**Pn**	**07 36 40.3**	**+0.7**
PET	**Petropavlovsk**	**4.18**	**26**	P	**Pn**	**07 36 40.3**	**+0.7**
PET	**Petropavlovsk**	**4.18**	**26**	S	**Sn**	**07 37 30.2**	**+3.1**
PET	**Petropavlovsk**	**4.18**	**26**	*e*PN	**Pn**	**07 36 40.3**	**+0.7**
PET				*e*S	**Sn**	**07 37 29.5**	**+2.4**
PET				pmax	pmax		
	comp=Z,328nm,0.6s						
PET				smax	smax		
	comp=N,3μm,0.7s						
PET				smax	smax		
	comp=E,3μm,0.8s						
PET				MLR	MLR		
	comp=Z,4μm,16.0s						
PET				MLR	MLR		
	comp=Z,4μm,11.0s						
PET	**Petropavlovsk**	**4.18**	**26**	Pn	**Pn**	**07 36 38.6**	**-1.0**
PET	**Petropavlovsk**	**4.18**	**26**	*e*P	**Pn**	**07 36 39.9**	**+0.3**
PET				*e*S	**Sn**	**07 37 27.2**	**+0.1**
INSR	**Institute**	**4.20**	**26**	PN	**Pn**	**07 36 41.3**	**+1.4**
INSR	**Institute**	**4.20**	**26**	*e*P	**Pn**	**07 36 41.4**	**+1.4**
DALK	**Dalny**	**4.21**	**27**	PN	**Pn**	**07 36 40.5**	**+0.4**
DALK				S	**Sn**	**07 37 28.0**	**+0.1**
DALK	**Dalny**	**4.21**	**27**	*e*P	**Pn**	**07 36 40.5**	**+0.4**
DALK				*e*S	**Sn**	**07 37 28.1**	**+0.1**
UGLR	**Uglovaya**	**4.39**	**26**	PN	**Pn**	**07 36 44.0**	**+1.4**
UGLR	**Uglovaya**	**4.39**	**26**	*e*P	Sn	07 37 47.8	+15
UGLR	**Uglovaya**	**4.39**	**26**	*e*P	**Pn**	**07 36 44.0**	**+1.4**
KOK	**Koryaka**	**4.41**	**24**	PN	**Pn**	**07 36 44.6**	**+1.7**
KOK	**Koryaka**	**4.41**	**24**	*e*P	**Pn**	**07 36 44.7**	**+1.7**
AVH	**Avacha**	**4.41**	**25**	PN	**Pn**	**07 36 44.6**	**+1.7**
AVH	**Avacha**	**4.41**	**25**	*e*P	**Pn**	**07 36 44.6**	**+1.7**
SMAR	**Somma**	**4.43**	**26**	PN	**Pn**	**07 36 45.0**	**+1.7**
SMAR	**Somma**	**4.43**	**26**	*e*P	**Pn**	**07 36 45.0**	**+1.7**
KRER	**Koryakskii**	**4.45**	**25**	PN	**Pn**	**07 36 44.7**	**+1.1**
KRER	**Koryakskii**	**4.45**	**25**	*e*P	**Pn**	**07 36 44.8**	**+1.1**
SDLR	**Sedlovina**	**4.47**	**26**	PN	**Pn**	**07 36 44.2**	**+0.5**
SDLR	**Sedlovina**	**4.47**	**26**	*e*P	**Pn**	**07 36 44.2**	**+0.5**
KRX	**Arik**	**4.47**	**24**	PN	**Pn**	**07 36 45.2**	**+1.4**
KRX	**Arik**	**4.47**	**24**	*e*P	**Pn**	**07 36 45.3**	**+1.4**
NLC	**Nalytchevo**	**4.52**	**30**	PN	**Pn**	**07 36 43.5**	**-0.7**
NLC	**Nalytchevo**	**4.52**	**30**	*e*P	**Pn**	**07 36 43.6**	**-0.7**
GNL	**Ganaly**	**4.62**	**18**	PN	**Pn**	**07 36 48.0**	**+2.2**
GNL	**Ganaly**	**4.62**	**18**	*e*P	**Pn**	**07 36 48.1**	**+2.2**
SPN	**Mys Shipunski**	**4.69**	**35**	PN	**Pn**	**07 36 46.5**	**-0.2**
SPN	**Mys Shipunski**	**4.69**	**35**	*e*P	**Pn**	**07 36 46.5**	**-0.2**
KII	**Karymskiy**	**5.29**	**25**	PN	**Pn**	**07 36 57.6**	**+2.6**
KII	**Karymskiy**	**5.29**	**25**	*e*P	**Pn**	**07 36 57.6**	**+2.6**
MKZ	**Mys Kozlova**	**6.47**	**33**	PN	**Pn**	**07 37 09.7**	**-1.2**
MKZ	**Mys Kozlova**	**6.47**	**33**	*e*P	**Pn**	**07 37 09.7**	**-1.2**
TUMD	**Tumrok D**	**6.58**	**25**	PN	**Pn**	**07 37 14.9**	**+2.3**
TUMD	**Tumrok D**	**6.58**	**25**	*e*P	**Pn**	**07 37 14.9**	**+2.3**
KUR	**Kuril'sk**	**6.66**	**235**	*c i*PN	**Pn**	**07 37 13.5**	**-0.2**
KUR				pmax	pmax		
	comp=Z,5μm,1.3s						
KUR	**Kuril'sk**	**6.66**	**235**	*e*P	**Pn**	**07 37 13.2**	**-0.5**
KUR				*e*S	**Sn**	**07 38 24.9**	**-3.2**
ESO	**Esso**	**6.88**	**15**	PN	**Pn**	**07 37 18.9**	**+2.3**
ESO	**Esso**	**6.88**	**15**	*e*P	**Pn**	**07 37 19.0**	**+2.3**
KMNR	**Kamenistaya**	**7.04**	**22**	PN	**Pn**	**07 37 20.7**	**+1.9**
KMNR	**Kamenistaya**	**7.04**	**22**	*e*P	**Pn**	**07 37 20.8**	**+1.9**
KOZ	**Kozyrevsk**	**7.23**	**19**	PN	**Pn**	**07 37 24.4**	**+3.0**
KOZ	**Kozyrevsk**	**7.23**	**19**	*e*P	**Pn**	**07 37 24.5**	**+3.0**
SRDR	**Sredinnyy**	**7.44**	**18**	PN	**Pn**	**07 37 26.8**	**+2.5**
SRDR	**Sredinnyy**	**7.44**	**18**	*e*P	**Pn**	**07 37 26.8**	**+2.5**
KLY	**Klyuchi**	**7.64**	**22**	PN	**Pn**	**07 37 29.2**	**+2.2**
KLY	**Klyuchi**	**7.64**	**22**	*e*P	**Pn**	**07 37 29.2**	**+2.2**
SMKR	**Semkarok**	**8.09**	**24**	PN	**Pn**	**07 37 35.2**	**+2.0**
SMKR	**Semkarok**	**8.09**	**24**	*e*P	**Pn**	**07 37 35.2**	**+2.0**
KBTR	**Krutoberegovo**	**8.17**	**30**	PN	**Pn**	**07 37 33.7**	**-0.5**
KBTR	**Krutoberegovo**	**8.17**	**30**	*e*P	**Pn**	**07 37 33.8**	**-0.5**
KBG	**Krutoberegovo**	**8.17**	**29**	PN	**Pn**	**07 37 34.6**	**+0.4**
KBG	**Krutoberegovo**	**8.17**	**29**	*e*P	**Pn**	**07 37 34.7**	**+0.4**
TYV	**Tymovskoe**	**8.47**	**285**	*e*PN	**Pn**	**07 37 42.4**	**+4.0**
TYV				*e*S	Sn	07 39 21.9	+9.5
TYV				pmax	pmax		
	comp=Z,1μm,2.8s						
TYV				pmax	pmax		
	comp=Z,279nm,1.1s						
TYV				smax	smax		
	comp=N,50nm,1.6s						
TYV				smax	smax		
	comp=E,51nm,1.6s						
TYV				smax	smax		
	comp=N,400nm,3.4s						
TYV				MLR	MLR		
	comp=Z,4μm,20.0s						
TYV				MLR	MLR		
	comp=E,4μm,19.0s						
YUK	**Yuzh-Kuril'sk**	**8.53**	**235**	*c i*PN	**Pn**	**07 37 38.8**	**-0.4**
YUK				pmax	pmax		
	comp=Z,4μm,0.5s						
YUK				pmax	pmax		
	comp=N,2μm,0.4s						
YUK				pmax	pmax		
	comp=E,2μm,0.3s						
YUK				MLR	MLR		
	comp=Z,6μm,19.0s						
YUK				MLR	MLR		
	comp=N,5μm,20.0s						
YUK				MLR	MLR		
	comp=E,2μm,12.0s						
YUK	**Yuzh-Kuril'sk**	**8.53**	**235**	*e*P	**Pn**	**07 37 38.9**	**-0.3**
TIGL	**Tigil**	**8.65**	**11**	PN	**Pn**	**07 37 44.2**	**+3.4**
TIGL	**Tigil**	**8.65**	**11**	*e*P	**Pn**	**07 37 44.3**	**+3.4**
BKI	**Bering**	**8.66**	**43**	PN	**Pn**	**07 37 38.3**	**-2.7**
BKI	**Bering**	**8.66**	**43**	*e*P	**Pn**	**07 37 38.4**	**-2.7**
RUSJ	**Misakicho**	**8.82**	**238**	*e*PN	**Pn**	**07 37 44.1**	**+0.9**
RUSJ				*e*S	**Sn**	**07 39 23.6**	**+2.6**
UGL	**Uglegorsk**	**8.87**	**274**	⇓*e*PN	**Pn**	**07 37 47.8**	**+3.9**
UGL				*e*S	**Sn**	**07 39 24.2**	**+2.0**
UGL				pmax	pmax		
	comp=Z,912nm,1.0s						
UGL				smax	smax		
	comp=E,113nm,0.4s						
UGL				smax	smax		
	comp=N,308nm,0.8s						
GLVR	**Golovnino**	**8.91**	**235**	*e*PN	**Pn**	**07 37 43.5**	**-1.0**
GLVR				pmax	pmax		
	comp=N,1μm,0.5s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.5s						
GLVR				pmax	pmax		
	comp=E,457nm,0.4s						
YSS	**Yuzhno-Sakhali**	**8.91**	**259**		**Pn**	**07 37 47.2**	**+2.7**
YSS	**Yuzhno-Sakhali**	**8.91**	**259**	P	**Pn**	**07 37 47.0**	**+2.5**
YSS	**Yuzhno-Sakhali**	**8.91**	**259**	S	**Sn**	**07 39 25.0**	**+1.7**
YSS	**Yuzhno-Sakhali**	**8.91**	**259**	*e*PN	**Pn**	**07 37 46.6**	**+2.1**
YSS				pmax	pmax		
	comp=Z,380nm,0.7s						
YSS				pmax	pmax		
	comp=N,270nm,0.9s						
YSS				pmax	pmax		
	comp=E,490nm,1.0s						
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS				MLR	MLR		
	comp=E,1μm,18.0s						
YSS	**Yuzhno-Sakhali**	**8.91**	**259**	*e*P	**Pn**	**07 37 47.0**	**+2.5**
OKH	**Okha**	**8.97**	**303**	*d i*PN	**Pn**	**07 37 41.0**	**-4.2**
OKH				pmax	pmax		
	comp=Z,300nm,12.4s						
OKH				MLR	MLR		
	comp=E,1μm,16.0s						
OKH				MLR	MLR		
	comp=N,2μm,14.0s						
OKH				MLR	MLR		
	comp=Z,800nm,16.0s						
NMR	**Nemuro--Hokkai**	**9.05**	**233**	⇓*i*PN	**Pn**	**07 37 43.5**	**-2.9**
PALN	**Palana**	**10.11**	**13**	PN	**Pn**	**07 38 01.9**	**+1.1**
PALN	**Palana**	**10.11**	**13**	*e*P	**Pn**	**07 38 01.9**	**+1.1**
JKA	**Kamikawa-asahi**	**10.33**	**245**		**Pn**	**07 38 06.4**	**+2.6**
ASAJ	**Asahikawa**	**10.33**	**245**	Pn	**Pn**	**07 38 06.7**	**+2.8**
	comp=Z,48nm,0.3s,baz=72,slow=13,SNR=375						
ASAJ				LR	LR	07 41 36.0	
	comp=Z,3μm,21.5s,baz=24,slow=35						
ASAJ	**Asahikawa**	**10.33**	**245**	PN	**Pn**	**07 38 06.4**	**+2.5**
MA2	**Magadan**	**10.65**	**347**	Pn	**Pn**	**07 38 08.9**	**+0.7**
	comp=Z,11nm,0.3s,baz=159,slow=9.3,SNR=159						
MA2				Sn	**Sn**	**07 40 02.9**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=158,slow=19,SNR=1.2						
MA2				LR	LR	07 42 34.6	
	comp=Z,2μm,19.9s,baz=178,slow=40						
	comp=Z,112nm,0.6s						
MA2	**Magadan**	**10.65**	**347**	P	**Pn**	**07 38 09.4**	**+1.2**
MA2	**Magadan**	**10.65**	**347**	*c i*PN	**Pn**	**07 38 09.1**	**+0.9**
MA2	**Magadan**	**10.65**	**347**	*e*P	**Pn**	**07 38 08.8**	**+0.7**
OSSR	**Ossora**	**10.85**	**21**	PN	**Pn**	**07 38 12.2**	**+1.3**
OSSR	**Ossora**	**10.85**	**21**	*e*P	**Pn**	**07 38 12.2**	**+1.3**
JEM	**Erimo**	**11.36**	**235**	P	**Pn**	**07 38 16.4**	**-1.4**
JEM	**Erimo**	**11.36**	**235**	S	**Sn**	**07 40 21.4**	**-1.6**
SHEM	**Shemya Is, Ala**	**12.13**	**67**	Pn	**Pn**	**07 38 25.7**	**-2.7**
	comp=Z,22nm,0.3s,baz=170,slow=1.7,SNR=12						
SHEM				Sn	Sn	07 40 30.7	-11
	comp=Z,23nm,0.3s,baz=274,slow=22,SNR=14						
SHEM				LR	LR	07 42 42.8	
	comp=Z,1μm,21.7s,baz=278,slow=36						
	comp=Z,148nm,0.6s						
SMY	**Shemya**	**12.13**	**67**		**Pn**	**07 38 25.2**	**-3.1**
SMY	**Shemya**	**12.13**	**67**	P	**Pn**	**07 38 26.2**	**-2.1**
SMY	**Shemya**	**12.13**	**67**	PN	**Pn**	**07 38 25.7**	**-2.6**
GRNR	**Gornyy**	**12.42**	**284**	⇓*i*PN	**Pn**	**07 38 36.3**	**+4.0**
GRNR				pmax	pmax		
	comp=E,50nm,0.4s						
GRNR				pmax	pmax		
	comp=Z,50nm,0.5s						
GRNR				MLR	MLR		
	comp=N,890nm,18.0s						
GRNR				MLR	MLR		
	comp=E,1μm,18.0s						
GRNR				MLR	MLR		
	comp=Z,2μm,19.0s						
TILK	**Tilichiki**	**12.67**	**24**	PN	**Pn**	**07 38 36.3**	**+0.7**
TILK	**Tilichiki**	**12.67**	**24**	*e*P	**Pn**	**07 38 36.4**	**+0.7**
TEY	**Ternei**	**13.61**	**259**	*e*P	**Pn**	**07 38 52.0**	**+3.5**
SEY	**Seymchan**	**13.76**	**354**	Pn	**Pn**	**07 38 51.8**	**+1.4**
	comp=Z,2.9nm,0.3s,baz=163,slow=11,SNR=44						
SEY				LR	LR	07 45 12.9	
	comp=Z,2μm,18.5s,baz=166,slow=43						
	comp=Z,8.2nm,0.3s						
SEY	**Seymchan**	**13.76**	**354**	⇑*e*P	**Pn**	**07 38 50.8**	**+0.4**
SEY				pmax	pmax		
	comp=Z,204nm,1.7s						
KMSK	**Kamenskaya**	**14.43**	**20**	P	**Pn**	**07 38 58.1**	**-1.1**
KMSK	**Kamenskaya**	**14.43**	**20**	*e*P	**Pn**	**07 38 58.2**	**-1.1**
AMKA	**Amchitka**	**15.25**	**73**	P	**Pn**	**07 39 07.9**	**-2.1**
KLR	**Kul'dur**	**15.56**	**279**	LR	LR	07 45 33.8	
	comp=Z,717nm,20.0s,baz=85,slow=39						
KLR	**Kul'dur**	**15.56**	**279**	*ce*P	**P**	**07 39 16.3**	**-0.9**
KLR				pmax	pmax		
	comp=Z,24nm,1.3s						
USRK	**Ussuriysk Ar.**	**16.94**	**261**	Pn	**Pn**	**07 39 31.4**	**0.0**
	comp=Z,3.9nm,0.3s,baz=63,slow=12,SNR=38						
KIWB	**Kanaga Island**	**17.45**	**71**	P	**Pn**	**07 39 35.9**	**-1.7**
VLA	**Vladivostok**	**17.51**	**258**	⇑*e*P	**Pn**	**07 39 37.4**	**-0.9**
ADK	**Adak**	**17.73**	**71**		**Pn**	**07 39 39.6**	**-1.5**
ADK	**Adak**	**17.73**	**71**	P	**Pn**	**07 39 39.6**	**-1.5**
ADK				pmax	pmax		
	comp=Z,60nm,1.2s						
MJB9	**Matsu-Tunnel**	**17.98**	**231**	P	**P**	**07 39 41.9**	**-2.2**
MJB9				IAmb	IAmb	07 39 49.6	
	comp=Z,140nm,0.8s						
MAJO	**Matsushiro**	**17.98**	**231**	P	**P**	**07 39 41.3**	**-2.8**
MAJO				IAmb	IAmb	07 39 48.6	
	comp=Z,143nm,0.7s						
MAJO	**Matsushiro**	**17.98**	**231**	P	**P**	**07 39 42.2**	**-1.9**
MAJO	**Matsushiro**	**17.98**	**231**	*d i*P	**P**	**07 39 41.3**	**-2.8**
MAJO				pmax	pmax		
	comp=Z,48nm,0.9s						
MJAR	**Matsushiro Arr**	**17.98**	**231**	P	**P**	**07 39 42.2**	**-1.9**
	comp=Z,38nm,0.7s,baz=27,slow=11,SNR=57						
MJAR				PcP	**PcP**	**07 44 16.6**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=82,slow=1.0,SNR=4.2						
ZEA	**Zeya**	**18.12**	**295**	*e*P	**Pn**	**07 39 46.5**	**+0.7**
ZEA				*e*S	Sn	07 42 55.3	-12
ZEA				pmax	pmax		
	comp=E,400nm,4.9s						
ZEA				pmax	pmax		
	comp=Z,600nm,5.3s						
ZEA				pmax	pmax		
	comp=E,50nm,0.9s						
ZEA				pmax	pmax		
	comp=N,20nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.1s						
ZEA				smax	smax		
	comp=N,500nm,15.1s						
ZEA				MLR	MLR		
	comp=E,600nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,11.0s						
HEH	**HeiHe**	**18.19**	**284**	*e*P	**Pn**	**07 39 47.6**	**+1.0**
HEH				pP	**pP**	**07 39 58.9**	**-0.1**
HEH				S	**Sn**	**07 43 08.4**	**-0.3**
HEH				pmax	pmax		
	comp=Z,430nm,1.1s						
HEH				pmax	pmax		
	comp=Z,780nm,4.4s						
HEH				LR	LR		
	comp=Z,630nm,15.5s						
HEH				LR	LR		
	comp=Z,2μm,18.8s						
HEH				LR	LR		
	comp=Z,3μm,18.7s						
MDJ	**Mudanjiang**	**18.32**	**265**	P	**Pn**	**07 39 48.8**	**+0.5**
MDJ	**Mudanjiang**	**18.32**	**265**	P	**P**	**07 39 47.3**	**-0.5**
MDJ				PP	**PnPn**	**07 40 02.0**	**+0.9**
MDJ				S	**S**	**07 43 17.3**	**+3.6**
MDJ				pmax	pmax		
	comp=Z,63nm,1.2s						
MDJ				LR	LR		
	comp=Z,2μm,15.7s						
MDJ				LR	LR		
	comp=Z,2μm,17.4s						
MDJ				LR	LR		
	comp=Z,3μm,20.3s						
PSTR	**Posyet**	**18.43**	**258**	⇑*e*P	**Pn**	**07 39 50.2**	**+0.6**
JGF	**Kuroka**	**19.14**	**231**	P	**P**	**07 39 56.2**	**-0.6**
JGF				IAmb	IAmb	07 40 04.1	
	comp=Z,156nm,1.1s						
JGF	**Kuroka**	**19.14**	**231**	P	**P**	**07 39 56.5**	**-0.4**
YAK	**Yakutsk**	**19.21**	**321**	P	**P**	**07 39 57.6**	**+0.3**
	comp=Z,148nm,0.8s,baz=106,slow=5.8,SNR=15						
YAK				LR	LR	07 47 23.7	
	comp=Z,2μm,20.3s,baz=119,slow=37						
YAK	**Yakutsk**	**19.21**	**321**	P	**Pn**	**07 39 58.0**	**-0.7**
YAK				IAmb	IAmb	07 40 03.6	
	comp=Z,159nm,0.8s						
YAK	**Yakutsk**	**19.21**	**321**	*e*P	**P**	**07 39 56.9**	**-0.3**
YAK				*e*S	**S**	**07 43 32.1**	**+0.6**
YAK				pmax	pmax		
	comp=Z,182nm,0.9s						
YAK				pmax	pmax		
	comp=E,57nm,1.2s						
YAK				pmax	pmax		
	comp=N,40nm,1.3s						
YAK				smax	smax		
	comp=E,300nm,1.8s						
YAK				smax	smax		
	comp=N,228nm,0.9s						
YAK				MLR	MLR		
	comp=Z,2μm,19.0s						
YAK				MLR	MLR		
	comp=N,540nm,17.0s						
YAK				MLR	MLR		
	comp=E,594nm,15.0s						
BNX	**BinXian**	**19.32**	**270**	⇑P	**P**	**07 39 57.5**	**-1.2**
BNX				sP	**pP**	**07 40 12.4**	**+0.9**
BNX				S	**S**	**07 43 34.6**	**+0.5**
BNX				pmax	pmax		
	comp=E,51nm,0.8s						
BNX				pmax	pmax		
	comp=E,460nm,6.5s						
BNX				LR	LR		
	comp=E,1μm,19.1s						
BNX				LR	LR		
	comp=E,2μm,22.2s						
BNX				LR	LR		
	comp=E,2μm,17.7s						
JSG	**Sagara**	**19.47**	**228**	P	**P**	**07 39 59.8**	**-0.5**
JSG	**Sagara**	**19.47**	**228**	P	**Pn**	**07 40 02.3**	**+0.3**
INU	**Inuyama**	**19.52**	**231**	P	**P**	**07 40

TJN Taejon 24.25 248 P P 07 40 51.0 +1.2
TJN Taejon 24.25 248 P P 07 40 51.4 +1.6
TJN Taejon 24.25 248 P P 07 40 51.0 +1.2
TJN pmax pmax
comp=Z,511nm,1.0s
M11K Mekoryuk 24.25 48 P P 07 40 48.6 -1.0
M11K Mekoryuk 24.25 48 P P 07 40 49.8 +0.2
baz=260
JTU Tsushima 24.31 242 P P 07 40 51.1 +0.8
JCJ Chichijima 24.49 210 LR LR 07 52 07.8
comp=Z,106nm,18.6s,baz=86,slow=41
JCJ Chichijima 24.49 210 P P 07 40 52.5 +0.5
TNA Tin City 24.97 36 P P 07 40 56.1 +0.1
TNA IAmb IAmb 07 41 10.4
comp=Z,106nm,1.0s
TNA Tin City 24.97 36 P P 07 40 56.9 +0.8
baz=247,SNR=56
K13K Kusilvak Mount 25.28 45 P P 07 40 59.8 +0.9
baz=259,SNR=13
FALS False Pass 25.50 62 P P 07 41 01.9 +0.9
baz=275
TIXI Tiksi 25.53 341 LR LR 07 52 09.8
comp=Z,757nm,18.2s,baz=150,slow=39
TIXI Tiksi 25.53 341 P P 07 40 59.6 -1.4
TIXI IAmb IAmb 07 41 19.4
comp=Z,80nm,1.0s
TIXI Tiksi 25.53 341⇓ eP P 07 40 59.4 -1.7
TIXI pmax pmax
comp=Z,39nm,1.0s
F14K Arctic Creek 25.55 37 P P 07 41 02.7 +1.3
baz=250
ANM Nome 25.63 39 IAmb IAmb 07 41 29.1
comp=Z,94nm,1.1s
ANM Nome 25.63 39 P P 07 41 03.5 +1.4
baz=252,SNR=44
M13K Dall Lake 25.66 49 P P 07 41 04.1 +1.8
baz=263,SNR=6.1
J14K Nanvaranak Lak 25.95 43 P P 07 41 06.0 +1.0
baz=258,SNR=18
JSU Suzuyama 25.95 236 IAmb IAmb 07 41 09.4
comp=Z,164nm,1.3s
JSU Suzuyama 25.95 236 P P 07 41 06.0 +0.7
L14K Kuka Creek 26.10 47 P P 07 41 07.9 +1.6
baz=262,SNR=11
F15K North Star Dit 26.29 37 P P 07 41 09.4 +1.4
baz=251,SNR=29
G15K Niukluk 26.31 38 P P 07 41 09.4 +1.2
baz=253
DL2 Dalian 26.32 260 P P 07 41 08.4 -0.1
DL2 pP pP 07 41 22.5 -0.4
DL2 eS S 07 45 36.4 -0.6
DL2 pmax pmax
comp=Z,85nm,1.3s
DL2 LR LR
comp=Z,1μm,20.8s
DL2 LR LR
comp=Z,1μm,20.9s
DL2 LR LR
comp=Z,1μm,23.2s
M14K Bethel 26.38 48 P P 07 41 09.6 +0.8
baz=264,SNR=5.6
N14K Kuskokwak Cree 26.43 50 P P 07 41 10.3 +0.9
baz=266
CIT Chita 26.52 292 eP pP 07 41 26.4 +1.7
CIT e 07 41 58.0
CIT e 07 42 09.4
CIT e 07 44 33.6
CIT pmax pmax
comp=Z,88nm,1.9s
O14K Tigyukauivet M 26.61 52 P P 07 41 11.8 +0.9
baz=268
L15K Ungalak Mounta 26.72 46 P P 07 41 13.0 +1.0
baz=262
K15K Wolf Creek Mou 26.79 45 P P 07 41 13.6 +1.0
baz=261,SNR=16
H16K Elim 26.95 40 P P 07 41 14.6 +0.6
baz=256,SNR=40
M15K Kasigluk River 26.99 48 P P 07 41 15.1 +0.7
baz=265,SNR=8.7
C16K Lisburne Hills 27.00 31 P P 07 41 14.6 +0.2
baz=245,SNR=50
G16K Koyuk River 27.10 38 P P 07 41 15.2 -0.1
baz=254
SDPT Sand Point 27.14 60 P P 07 41 16.4 +0.6
baz=276
N15K Kwethluk River 27.25 50 P P 07 41 17.7 +1.0
baz=267,SNR=5.9
O15K Ungalikthiuk R 27.34 52 P P 07 41 18.4 +0.9
baz=269,SNR=6.7
J16K Anvik River 27.37 43 P P 07 41 18.9 +1.1
baz=260,SNR=18
I17K Unalakleet 27.44 42 P P 07 41 19.5 +1.2
baz=259
XLT XiLinHaoTe 27.45 274 eP P 07 41 18.1 -0.7
XLT pP pP 07 41 31.3 -2.0
XLT pmax pmax
comp=Z,42nm,1.2s
XLT pmax pmax
comp=Z,330nm,6.6s
XLT LR LR
comp=Z,120nm,17.8s
XLT LR LR
comp=Z,1μm,21.5s
XLT LR LR
comp=Z,1μm,20.2s
D17K Noatak River 27.56 33 P P 07 41 20.1 +0.7
baz=249,SNR=34
L16K Owhat River 27.68 46 P P 07 41 20.6 +0.1
L16K Owhat River 27.68 46 P P 07 41 21.3 +0.8
baz=264,SNR=6.0
RDOG Red Dog Mine 27.75 32 P P 07 41 21.9 +0.7
baz=249,SNR=10
E17K Hotham Inlet 27.81 35 P P 07 41 22.7 +1.1
baz=252,SNR=106
C17K DeLong Mountai 27.82 31 P P 07 41 22.4 +0.7
baz=248,SNR=27
G17K Kiwalik Mounta 27.82 38 P P 07 41 22.7 +1.0
baz=256,SNR=42
F17K Baldwin Pennin 27.83 36 P P 07 41 22.9 +1.1
baz=254
M16K Timber Creek 27.86 48 P P 07 41 23.3 +1.1
baz=266,SNR=7.0
N16K Nishlik Lake 27.92 49 P P 07 41 23.6 +0.8
baz=267
H17K Granite Mounta 27.99 39 P P 07 41 24.4 +1.1
baz=258,SNR=30
O16K Kokwok River B 28.24 51 P P 07 41 26.1 +0.6
baz=270
L17K Donlin 28.27 46 P P 07 41 27.2 +1.4
baz=265,SNR=10
P16K Nushagak River 28.29 52 P P 07 41 27.3 +1.4
baz=271,SNR=6.6
K17K Iditarod 28.33 44 P P 07 41 27.7 +1.4
baz=264,SNR=14
E18K Tukpahlearik C 28.37 34 P P 07 41 27.6 +1.0
baz=253,SNR=6.8
F18K Selawik 28.49 36 P P 07 41 29.0 +1.3
baz=255,SNR=40
C18K Utukok River 28.56 32 P P 07 41 28.8 +0.4
baz=250,SNR=38
R16K Pilot Point 28.56 55 P P 07 41 29.0 +0.6
baz=274
M17K Holitna River 28.62 47 P P 07 41 30.4 +1.4
baz=267,SNR=16
H18K Honhosa River 28.68 39 P P 07 41 30.4 +0.9
baz=259,SNR=27
N17K Nushagak Hills 28.71 49 P P 07 41 30.9 +1.2
baz=269,SNR=7.3
G18K Tagagawik 28.71 38 P P 07 41 30.5 +0.7
baz=258,SNR=33
O17K Koliganek Bris 28.75 51 P P 07 41 31.1 +1.1
baz=270,SNR=10
Q16K King Salmon 28.99 53 P P 07 41 33.0 +0.8
baz=273
P17K Kvichak River 29.09 52 P P 07 41 34.0 +1.0
baz=272
J18K Innoko River 29.13 43 P P 07 41 34.0 +0.6
baz=264,SNR=12
GCSA Galena City Sc 29.23 40 P P 07 41 34.8 +0.5
baz=261,SNR=6.7
BJI2 Beijing 29.25 267 P P 07 41 34.0 -0.7
BJI2 pmax pmax
comp=Z,9.0nm,1.2s
BJI2 LR LR
comp=Z,430nm,19.6s
BJI2 LR LR
comp=Z,210nm,24.1s
BJI2 LR LR
comp=Z,580nm,23.6s
C19K Lookout Ridge 29.26 31 P P 07 41 35.3 +0.7
baz=251,SNR=27
F19K Shaleruckik Mo 29.27 36 P P 07 41 34.9 +0.2
baz=257
N18K Kilae Creek 29.35 49 P P 07 41 36.7 +1.2
baz=270,SNR=11
G19K Purcell Mounta 29.39 38 P P 07 41 36.1 +0.4
baz=259
M18K Stony River 29.40 47 P P 07 41 36.8 +1.0
baz=268,SNR=10
Q17K Contact Creek 29.42 54 P P 07 41 37.0 +0.8
baz=274
D19K Kuna River 29.58 33 P P 07 41 37.8 +0.4
baz=254
E19K Redstone River 29.63 35 P P 07 41 38.6 +0.9
baz=256,SNR=46
J19K Poorman 29.68 42 P P 07 41 38.7 +0.4
baz=264,SNR=26
O18K Koktuh Hills 29.70 50 P P 07 41 39.3 +0.8
baz=272
P18K Big Mountain, 29.70 51 P P 07 41 39.5 +1.0
baz=272,SNR=9.5
ACHA Angle Creek He 29.72 54 P P 07 41 38.6 -0.1
CHIR Chirikof Islan 29.82 59 P P 07 41 40.9 +1.3
baz=278
L19K White Mountain 29.89 46 P P 07 41 41.2 +1.0
baz=268
N19K Bonanza Creek 30.04 49 P P 07 41 42.8 +1.2
baz=271,SNR=7.9
F20K Avaraart Lake 30.11 36 P P 07 41 42.6 +0.6
baz=259,SNR=18
O19K Port Alsworth 30.13 50 P P 07 41 43.1 +0.8
baz=272
D20K Etivluk River 30.17 33 P P 07 41 43.4 +0.8
baz=255
H20K Anotleneega Mo 30.18 39 P P 07 41 43.4 +0.7
baz=262
E20K Nigu River 30.21 34 P P 07 41 43.7 +0.7
baz=256
K20K Telida 30.31 43 P P 07 41 44.8 +0.9
baz=267,SNR=13
SII Sitkinak Islan 30.51 57 P P 07 41 45.7 0.0
baz=278
Q19K Cape Douglas, 30.54 52 P P 07 41 46.5 +0.5
baz=274
M20K Styx River 30.69 46 P P 07 41 48.4 +1.0
baz=270
P19K Oil Pt 30.70 51 P P 07 41 48.6 +1.2
baz=274
TIA Tai'an 30.79 259 P P 07 41 46.5 -1.9
TIA pmax pmax
comp=Z,25nm,1.3s
TIA pmax pmax
comp=Z,530nm,4.4s
JOW Kunigami 30.80 233 LR LR 07 55 40.0
comp=Z,344nm,19.0s,baz=330,slow=39
H11N2 WAKE ISLAND Hy 30.88 159 T T 08 14 26.6
baz=352,slow=75
G21K Allakaket 30.88 37 P P 07 41 49.8 +0.9
baz=262,SNR=36
H11N1 WAKE ISLAND Hy 30.89 159 T T 08 14 38.6
baz=352,slow=75
H11N3 WAKE ISLAND Hy 30.89 159 T T 08 14 45.1
baz=352,slow=75
OHAK Old Harbor 30.91 56 P P 07 41 48.9 -0.2
OHAK Old Harbor 30.91 56 P P 07 41 49.0 -0.1
baz=278
C21K Knifeblade Rid 30.93 32 P P 07 41 50.0 +0.8
baz=256
A21K Barrow 30.96 28 P P 07 41 49.8 +0.4
baz=251,SNR=17
F21K Alatna River 31.00 36 P P 07 41 50.7 +0.7
baz=261,SNR=14
H21K Melozitna Rive 31.05 39 P P 07 41 51.1 +0.7
baz=264
CHUM Lake Minchumin 31.12 42 P P 07 41 52.1 +1.2
baz=267
SPCR Spurr Chakacha 31.14 48 P P 07 41 52.5 +1.2
baz=272,SNR=7.1
PPLA Purkeypile 31.14 44 P P 07 41 51.9 +0.6
baz=269
KDAK Kodiak Island 31.21 54 c iP P 07 41 51.9 +0.1
KDAK pmax pmax
comp=Z,49nm,0.9s
KDAK Kodiak Island 31.21 54 P P 07 41 52.3 +0.4
baz=277
Q20K Shuyak Island 31.22 53 P P 07 41 52.5 +0.6
baz=276
SYI Shuyak Island 31.22 53 IAmb IAmb 07 41 53.0
comp=Z,28nm,0.8s
I21K Tanana 31.35 40 P P 07 41 54.3 +1.3
baz=266,SNR=13
SKT Skwentna 31.45 46 P P 07 41 55.0 +1.1
baz=271,SNR=10
HOM Homer 31.51 51 P P 07 41 55.5 +1.1
baz=275
D22K Ayikyak River 31.60 33 P P 07 41 56.0 +0.8
baz=259
HNS HongShan 31.65 263 ⇑P P 07 41 55.5 -0.4
HNS pmax pmax
comp=Z,89nm,1.2s
HNS LR LR
comp=Z,690nm,19.1s
HNS LR LR
comp=Z,700nm,20.7s
HNS LR LR
comp=Z,1μm,22.9s
H22K Ishtalitna Cre 31.66 39 P P 07 41 56.7 +0.9
baz=265,SNR=28
CAPN Captain Cook N 31.68 48 P P 07 41 57.3 +1.4
baz=274
ULN Ulaanbaatar 31.71 286 P P 07 41 56.0 -0.5
ULN Ulaanbaatar 31.71 286⇓ eP P 07 41 56.5 0.0
ULN pmax pmax
comp=Z,10.0nm,1.3s
ULN Ulaanbaatar 31.71 286 P P 07 41 56.7 +0.2
ULN P P 07 41 56.7 +0.2
ULN Ulaanbaatar 31.71 286 P P 07 41 55.4 -1.1
ULN Ulaanbaatar 31.71 286 PcP PcP 07 44 48.0 +1.2
BPAW Bear Paw Mtn. 31.72 42 P P 07 41 56.1 -0.2
BPAW IAmb IAmb 07 41 58.3
comp=Z,31nm,0.8s
BPAW Bear Paw Mtn. 31.72 42 P P 07 41 57.3 +1.0
baz=268
CNPM China Poot 31.73 51 IAmb IAmb 07 41 58.7
comp=Z,30nm,0.7s
E22K Anaktuvuk Pass 31.78 34 P P 07 41 57.7 +0.9
baz=261,SNR=122
SUA Susitna One 31.84 47 P P 07 41 57.6 +0.1
baz=273,SNR=7.3
HHC Hu-ho-hao-te 31.84 272 ⇓ iP P 07 41 57.1 -0.6
HHC pmax pmax
comp=Z,28nm,1.4s
HHC pmax pmax
comp=Z,280nm,6.4s
HHC LR LR
comp=Z,980nm,19.8s
HHC LR LR
comp=Z,940nm,19.8s
HHC LR LR
comp=Z,1μm,21.6s
MLY Manley 31.87 40 P P 07 41 58.8 +1.2
baz=267,SNR=11
BRSE Bradley Lake S 31.96 50 P P 07 41 59.8 +1.3
baz=276
TRF Thorofare Moun 32.01 43 IAmb IAmb 07 42 00.9
comp=Z,26nm,0.8s
TRF Thorofare Moun 32.01 43 P P 07 41 59.9 +0.9
baz=270,SNR=21
H11S1 WAKE ISLAND Hy 32.01 160 T T 08 15 42.0
baz=346,slow=76,SNR=6418
H11S3 WAKE ISLAND Hy 32.02 160 T T 08 15 43.7
baz=346,slow=76,SNR=7289
CUT Chulitna 32.03 45 IAmb IAmb 07 42 00.2
comp=Z,47nm,0.9s
CUT Chulitna 32.03 45 P P 07 41 59.0 +0.1
baz=272,SNR=6.9
H11S2 WAKE ISLAND Hy 32.03 160 T T 08 15 43.4
baz=346,slow=76,SNR=4957
M22K Willow 32.12 47 IAmb IAmb 07 42 17.2
comp=Z,26nm,0.9s
M22K Willow 32.12 47 P P 07 41 59.2 -0.5
baz=273
SONM Songino Array 32.13 286 P P 07 41 59.6 -0.7
comp=Z,3.4nm,0.8s,baz=73,slow=7.7,SNR=17
SONM PcP PcP 07 44 48.1 +0.2
comp=Z,8.6nm,0.9s,baz=89,slow=1.6,SNR=11
SONM LR LR 07 56 29.2
comp=Z,1μm,18.4s,baz=82,slow=39
comp=Z,3.4nm,0.8s
SONM Songino Array 32.13 286 P P 07 41 59.3 -0.9
SLKM Skilak Lake 32.15 49 P P 07 42 00.4 +0.2
COLD Coldfoot 32.27 36 IAmb IAmb 07 42 02.8
comp=Z,40nm,0.8s
COLD Coldfoot 32.27 36 P P 07 42 01.9 +0.9
baz=264,SNR=53
G23K Bananza Creek 32.28 37 P P 07 42 01.9 +0.7
baz=265,SNR=17
D23K Nanushuk River 32.33 33 P P 07 42 02.4 +0.8
baz=261
RC01 Rabbit Creek A 32.35 48 P P 07 42 02.6 +0.9
baz=274,SNR=5.3
NJ2 Nanjing 32.37 252 ⇑P P 07 42 02.3 0.0
NJ2 pmax pmax
comp=Z,23nm,1.2s
NJ2 LR LR
comp=Z,1μm,11.4s
NJ2 LR LR
comp=Z,1μm,11.8s
NJ2 LR LR
comp=Z,1μm,19.9s
O22K Cooper Landing 32.40 49 IAmb IAmb 07 42 29.9
comp=Z,52nm,0.8s
O22K Cooper Landing 32.40 49 P P 07 42 01.8 -0.4
baz=275
H23K Yukon River 32.41 39 P P 07 42 03.4 +1.1
baz=267
I23K Minto, Yukon-K 32.45 40 IAmb IAmb 07 42 04.8
comp=Z,118nm,1.8s
I23K Minto, Yukon-K 32.45 40 P P 07 42 03.6 +1.0
baz=268,SNR=24
NEA2 Nenana 32.56 41 IAmb IAmb 07 42 06.7
comp=Z,44nm,0.7s
NEA2 Nenana 32.56 41 P P 07 42 04.6 +0.9
baz=269,SNR=25
TLY Talaya 32.56 294⇓ eP P 07 42 03.6 -0.2
TLY pmax pmax
comp=Z,52nm,1.3s
TLY Talaya 32.56 294 P P 07 42 04.4 +0.6
TLY P P 07 42 04.4 +0.6
SEW Seward 32.57 50 IAmb IAmb 07 42 24.1
comp=Z,28nm,0.9s
SEW Seward 32.57 50 P P 07 42 02.7 -1.0
baz=276
E23K Chandalar 32.59 35 P P 07 42 04.7 +0.8
baz=263,SNR=88
PMR Palmer 32.60 47 IAmb IAmb 07 42 13.5
comp=Z,73nm,1.8s
PMR Palmer 32.60 47 P P 07 42 04.9 +0.9
baz=274
MCK McKinley 32.62 43 IAmb IAmb 07 42 05.8
comp=Z,50nm,0.9s
MCK McKinley 32.62 43 P P 07 42 04.7 +0.6
baz=271,SNR=35
GHO Glory Hole Cre 32.69 46 IAmb IAmb 07 42 27.3
comp=Z,31nm,0.9s
WAT1 Susitna Watana 32.81 45 P P 07 42 05.7 -0.1
baz=272
KNK Knik Glacier 32.94 47 P P 07 42 07.3 +0.3
baz=275,SNR=19
TIY Taiyuan 32.95 266 P P 07 42 08.3 +0.9
TIY pmax pmax
comp=Z,41nm,0.5s
SML Sawmill 32.97 46 P P 07 42 07.9 +0.6
baz=274,SNR=28
WRH Wood River Hil 32.99 41 IAmb IAmb 07 42 10.0
comp=Z,51nm,1.0s
BTO2 Baotou 32.99 273 eP P 07 42 06.9 -0.9
BTO2 sP pP 07 42 24.3 +1.8
BTO2 S S 07 47 22.1 +0.1
BTO2 pmax pmax
comp=Z,46nm,1.2s
BTO2 pmax pmax
comp=Z,830nm,6.3s
BTO2 LR LR
comp=Z,2μm,19.1s
BTO2 LR LR
comp=Z,3μm,14.7s
BTO2 LR LR
comp=Z,4μm,13.8s
E24K Your Creek 33.01 35 P P 07 42 08.8 +1.2
baz=264
D24K Happy Valley 33.02 33 P P 07 42 08.3 +0.8
baz=262
COLA College 33.09 41 P P 07 42 09.0 +0.8
COLA College 33.09 41 P P 07 42 09.0 +0.8
COLA College 33.09 41 c iP P 07 42 08.9 +0.8
COLA pmax pmax
comp=Z,94nm,0.9s
COLA College 33.09 41 P P 07 42 09.4 +1.2
baz=270
COLA College 33.09 41 P P 07 42 09.1 +1.0
COLA pP pP 07 42 19.8 -3.1
H24K Noodor Dome 33.10 39 IAmb IAmb 07 42 10.7
comp=Z,119nm,1.8s
H24K Noodor Dome 33.10 39 P P 07 42 09.7 +1.4
baz=268,SNR=31
CCB Clear Creek Bu 33.11 41 IAmb IAmb 07 42 10.2
comp=Z,41nm,0.9s
ZAK Zakamensk 33.18 292 eP P 07 42 08.3 -1.0
ZAK pmax pmax
comp=Z,16nm,1.1s
WAT6 Susitna Watana 33.20 45 P P 07 42 09.5 +0.1
baz=274,SNR=6.1
M23K Glacier View 33.26 46 P P 07 42 10.1 +0.4
baz=275,SNR=9.3
G24K Hadweenzic Riv 33.30 37 P P 07 42 11.4 +1.3
baz=267,SNR=75
DHY Denali Highway 33.34 44 IAmb IAmb 07 42 12.0
comp=Z,49nm,1.1s
DHY Denali Highway 33.34 44 P P 07 42 10.9 +0.3
baz=273,SNR=20
SCM Sheep Creek Mo 33.44 46 P P 07 42 11.9 +0.4
baz=275,SNR=12
HDA Harding Lake 33.48 42 P P 07 42 12.2 +0.5
baz=271,SNR=34
ILAR Eielson Array 33.50 41 P P 07 42 11.6 -0.3
comp=Z,21nm,0.8s,baz=256,slow=7.7,SNR=238
ILAR P3KPbc 08 13 21.5
comp=Z,0.7nm,0.8s,baz=95,slow=2.7,SNR=7.1
comp=Z,21nm,0.8s
ILAR Eielson Array 33.50 41 P P 07 42 12.0 +0.2
ILAR Eielson Array 33.50 41 P P 07 42 12.0 +0.2
P23K Montague Islan 33.60 50 P P 07 42 13.3 +0.6
baz=278
GLI Glacier Island 33.65 48 P P 07 42 13.1 0.0
baz=277
D25K Kavik River 33.90 33 P P 07 42 16.2 +0.9
baz=264
M24K Tolsona, Glenn 33.96 46 IAmb IAmb 07 43 01.5
comp=Z,47nm,0.9s
M24K Tolsona, Glenn 33.96 46 P P 07 42 17.3 +1.4
baz=276,SNR=6.9
K24K Donnelly Dome 34.02 43 P P 07 42 16.4 0.0
baz=273,SNR=38
F25K Christian Rive 34.05 36 P P 07 42 18.1 +1.5
baz=268,SNR=34
PRP Porcupine Dome 34.07 40 P P 07 42 18.2 +1.3
baz=271,SNR=85
E25K Arctic Village 34.10 35 IAmb IAmb 07 42 19.5
comp=Z,30nm,0.8s
E25K Arctic Village 34.10 35 P P 07 42 18.6 +1.5
baz=267,SNR=23
MOY Mondy 34.14 295 eP P 07 42 18.0 +0.3
MOY pmax pmax
comp=Z,24nm,1.5s
KLU Klutina 34.14 47 IAmb IAmb 07 42 34.1
comp=Z,47nm,1.1s
KLU Klutina 34.14 47 P P 07 42 18.3 +0.8
baz=277,SNR=10
J25K Salcha River, 34.16 41 P P 07 42 17.3 -0.3
J25K IAmb IAmb 07 42 19.1
comp=Z,36nm,0.7s
J25K Salcha River, 34.16 41 P P 07 42 17.2 -0.3
baz=272,SNR=49
PAX Paxson 34.21 44 P P 07 42 18.6 +0.5
baz=275,SNR=14
Q23K Middleton Isla 34.21 50 P P 07 42 18.7 +0.7
baz=279
DIV Divide 34.26 47 IAmb IAmb 07 42 20.2
comp=Z,36nm,0.8s
EYAK Cordova Ski Ar 34.34 48 P P 07 42 20.0 +0.9
EYAK Cordova Ski Ar 34.34 48 P P 07 42 19.8 +0.7

baz=278
HARP **HAARP** 34.41 45 P P 07 42 20.5 +0.8
baz=276,SNR=7.4
RIDG **Independent Ri** 34.44 43 P P 07 42 19.9 0.0
baz=274,SNR=33
BMAR **Burnt Mountain** 34.45 36 P P 07 42 20.0 -0.1
C26K **Camden Bay** 34.47 32 P P 07 42 21.3 +1.2
baz=265
F26K **Sheenjek River** 34.63 36 P P 07 42 23.1 +1.6
baz=269,SNR=41
N25K **Chitina, Valde** 34.76 46 IAmb IAmb 07 42 39.5
comp=Z,22nm,0.8s
N25K **Chitina, Valde** 34.76 46 P P 07 42 23.4 +0.5
baz=278,SNR=7.5
G26K **Porcupine Rive** 34.76 37 P P 07 42 24.5 +1.8
baz=270,SNR=91
DOT **Dot Lake** 34.79 43 IAmb IAmb 07 42 24.5
comp=Z,25nm,0.7s
SCRK **Sand Creek** 34.80 42 IAmb IAmb 07 42 24.9
comp=Z,52nm,1.0s
SCRK **Sand Creek** 34.80 42 P P 07 42 23.2 0.0
baz=275,SNR=51
LYN **LuoYang** 34.81 261 P P 07 42 22.8 -0.7
LYN pP pP 07 42 32.8 -5.4
LYN PcP PcP 07 44 56.6 +1.1
LYN pmax pmax
comp=Z,42nm,1.3s
LYN LR LR
comp=Z,1µm,18.8s
LYN LR LR
comp=Z,890nm,12.4s
LYN LR LR
comp=Z,1µm,22.7s
BMRM **Bremner River** 34.84 48 P P 07 42 24.1 +0.6
baz=278,SNR=7.8
C27K **Jago River** 34.87 32 P P 07 42 24.7 +1.2
baz=267,SNR=59
RAGM **Ragged Mountai** 34.90 49 IAmb IAmb 07 42 41.1
comp=Z,55nm,1.1s
J26L **Joseph Creek** 34.94 41 P P 07 42 24.6 +0.2
baz=274,SNR=12
I26K **Coal Creek Min** 35.07 40 P P 07 42 25.6 +0.3
baz=273
KAIM **Kayak Island** 35.10 49 P P 07 42 26.9 +1.2
baz=280
L26K **Log Cabin Wild** 35.17 44 P P 07 42 27.5 +1.2
baz=276,SNR=14
VRDI **Verde Repeater** 35.36 47 IAmb IAmb 07 42 30.2
comp=Z,22nm,1.0s
M26K **Nabesna, AK** 35.41 45 P P 07 42 29.7 +1.3
baz=278
MCARA **McCarthy VSAT** 35.54 47 IAmb IAmb 07 42 48.6
comp=Z,46nm,1.2s
MCARA **McCarthy VSAT** 35.54 47 P P 07 42 30.5 +1.1
baz=279
CRQE **Cirque** 35.61 48 P P 07 42 31.3 +1.1
baz=280,SNR=14
H27K **Steamboat Moun** 35.69 38 P P 07 42 32.6 +1.9
baz=274,SNR=48
I27K **Kandik River** 35.69 39 P P 07 42 31.9 +1.2
baz=274,SNR=12
TGL **Tana Glacier** 35.73 48 IAmb IAmb 07 42 48.3
comp=Z,34nm,0.8s
D27M **Malcolm River** 35.82 33 P P 07 42 33.0 +1.2
baz=270
L27K **Beaver Creek,** 35.85 44 P P 07 42 34.0 +1.8
baz=278,SNR=84
BCAR **Beaver Creek A** 35.87 44 P P 07 42 33.6 +1.3
M27K **Edge Creek, AK** 35.93 45 IAmb IAmb 07 42 50.4
comp=Z,47nm,0.9s
M27K **Edge Creek, AK** 35.93 45 P P 07 42 34.5 +1.5
baz=279,SNR=22
WHN **Wuhan** 36.22 254 ⇑P P 07 42 35.1 -0.4
WHN pP pP 07 42 48.3 -2.0
WHN PcP PcP 07 45 00.8 +1.1
WHN pmax pmax
comp=Z,180nm,0.7s
F28M **Old Crow** 36.26 36 P P 07 42 36.9 +1.4
baz=273,SNR=67
MESA **MESA** 36.27 49 P P 07 42 37.3 +1.4
baz=282
E28M **Babbage River** 36.35 34 P P 07 42 37.5 +1.2
baz=272
BVCY **Beaver Creek** 36.39 45 P P 07 42 38.0 +1.3
baz=279,SNR=15
I28M **Miner Creek** 36.40 39 P P 07 42 38.0 +1.1
baz=276
CTG **Chitna Glacier** 36.41 47 P P 07 42 38.3 +1.2
baz=281,SNR=22
KNGR **Kungurtug, Tuv** 36.56 295 ⇑*i*P P 07 42 38.9 +0.5
KNGR pmax pmax
comp=Z,18nm,1.1s
TABL **Table Mountain** 36.61 48 IAmb IAmb 07 42 57.8
comp=Z,50nm,1.0s
YUK3 **Moose Creek** 36.68 46 P P 07 42 40.5 +1.0
baz=280,SNR=12
GUMO **Guam** 36.71 198 LR LR 07 54 40.3
comp=Z,395nm,19.9s,baz=28,slow=31
DAWY **Dawson** 36.80 42 P P 07 42 41.0 +0.8
DAWY **Dawson** 36.80 42 P P 07 42 41.1 +0.9
baz=278,SNR=14
E29M **Blow River** 36.96 34 P P 07 42 43.2 +1.7
baz=274
O28M **Mount Upton** 37.00 47 P P 07 42 43.3 +1.1
baz=282,SNR=13
G29M **Pine Creek** 37.03 37 P P 07 42 44.2 +2.1
baz=276,SNR=24
I29M **Ogilvie Camp,** 37.09 39 IAmb IAmb 07 42 44.8
comp=Z,45nm,0.9s
I29M **Ogilvie Camp,** 37.09 39 P P 07 42 43.8 +1.2
baz=277,SNR=24
YUK8 **Steele Glacier** 37.10 46 P P 07 42 44.0 +1.0
baz=282,SNR=6.8
PINM **Pinnacle** 37.12 48 P P 07 42 44.0 +1.0
baz=283,SNR=5.9
J29N **Klondike Camp** 37.25 41 P P 07 42 45.4 +1.3
baz=279
XAN **Xi'an** 37.43 264 ⇓P P 07 42 45.1 -0.8
XAN pP pP 07 42 56.8 -3.9
XAN PcP PcP 07 45 04.3 +0.9
XAN S S 07 48 30.3 +0.3
XAN pmax pmax
comp=Z,23nm,1.2s
XAN pmax pmax
comp=Z,440nm,5.5s
XAN LR LR
comp=Z,2µm,19.4s
XAN LR LR
comp=Z,1µm,18.2s
XAN LR LR
comp=Z,1µm,20.8s
XAN **Xi'an** 37.43 264 PcP PcP 07 45 04.4 +1.0
BCPM **Bancas Point** 37.45 48 IAmb IAmb 07 42 47.8
comp=Z,41nm,0.8s
NRIK **Noril'sk** 37.46 327 P P 07 42 44.1 -1.6
comp=Z,2.7nm,0.4s,baz=84,slow=7.2,SNR=6.3
NRIK PcP PcP 07 45 03.8 +1.0
comp=Z,7.4nm,0.6s,baz=98,slow=4.9,SNR=4.4
NRIK LR LR 07 59 43.9
comp=Z,840nm,18.6s,baz=72,slow=39
comp=Z,2.7nm,0.4s
NRIK **Noril'sk** 37.46 327 P P 07 42 44.1 -1.6
NRIK **Noril'sk** 37.46 327 *de*P P 07 42 44.5 -1.2
NRIK pmax pmax
comp=Z,6.0nm,0.9s
M29M **Somme Creek** 37.48 44 P P 07 42 47.6 +1.5
baz=281,SNR=18
YUK4 **Talbot Arm** 37.62 46 P P 07 42 48.8 +1.4
baz=282,SNR=5.7
K29M **Barlow Dome** 37.65 42 P P 07 42 48.7 +1.2
baz=280,SNR=15
G30M **tAoh Zrali Nji** 37.73 37 P P 07 42 49.2 +1.2
baz=277,SNR=37
F30M **Barrier River** 37.82 36 P P 07 42 50.7 +1.9
baz=277,SNR=39
YUK6 **Outpost Mounta** 37.84 47 P P 07 42 50.5 +1.2
baz=283
O29M **Mount Kennedy** 37.89 48 P P 07 42 50.9 +1.3
baz=284
I30M **Mount Dempster** 37.91 39 P P 07 42 50.9 +1.2
baz=279
J30M **Hart River** 38.04 41 P P 07 42 51.9 +1.2
baz=280
M30M **Minto, Yukon** 38.22 44 P P 07 42 53.8 +1.6
baz=282,SNR=7.2
HYT **Haines Junctio** 38.28 47 P P 07 42 54.4 +1.5
HYT IAmb IAmb 07 43 10.0
comp=Z,61nm,1.1s
HYT **Haines Junctio** 38.28 47 P P 07 42 54.4 +1.5
baz=284,SNR=13
MAYO **Mayo, Yukon** 38.41 42 P P 07 42 55.6 +1.8
baz=282,SNR=14
INK **Inuvik** 38.58 34 IAmb IAmb 07 42 57.5
comp=Z,46nm,0.8s
INK **Inuvik** 38.58 34 P P 07 42 56.5 +1.4
baz=278,SNR=50
F31M **Tsiigehtchic** 38.62 36 IAmb IAmb 07 42 57.7
comp=Z,60nm,0.9s
F31M **Tsiigehtchic** 38.62 36 P P 07 42 56.8 +1.3
baz=279,SNR=34
H31M **Peel River** 38.65 38 P P 07 42 57.0 +1.2
baz=280
P30M **Million Dollar** 38.71 48 P P 07 42 58.2 +1.8
baz=285
CNSH **ChangSha** 38.74 253 P P 07 42 57.0 +0.1
CNSH pmax pmax
comp=Z,250nm,1.1s
N31M **Braeburn, Yuko** 38.93 45 IAmb IAmb 07 43 16.4
comp=Z,32nm,0.9s
N31M **Braeburn, Yuko** 38.93 45 P P 07 43 00.2 +2.0
baz=284,SNR=5.8
O30N **Mendenhall** 38.96 46 IAmb IAmb 07 43 01.4
comp=Z,29nm,0.8s
O30N **Mendenhall** 38.96 46 P P 07 43 00.1 +1.6
baz=285,SNR=17
M31M **Drury Creek, Y** 39.39 44 IAmb IAmb 07 43 20.6
comp=Z,37nm,1.1s
M31M **Drury Creek, Y** 39.39 44 P P 07 43 03.9 +1.9
baz=284,SNR=15
ENH **Enshi** 39.49 259 P P 07 43 02.4 -0.8
ENH **Enshi** 39.49 259 P P 07 43 02.8 -0.4
ENH PcP PcP 07 45 10.7 +0.8
LZH **Lanzhou** 39.51 270 *e*P P 07 43 03.3 -0.2
LZH pP pP 07 43 17.6 -0.8
LZH sP sP 07 43 26.3 +1.1
LZH PcP PcP 07 45 11.6 +1.6
LZH pmax pmax
comp=Z,110nm,1.3s
LZH LR LR
comp=Z,1µm,14.1s
LZH LR LR
comp=Z,830nm,14.1s
LZH LR LR
comp=Z,1µm,14.5s
WHY **Whitehorse** 39.56 46 IAmb IAmb 07 43 21.7
comp=Z,66nm,1.0s
WHY **Whitehorse** 39.56 46 P P 07 43 05.4 +1.9
baz=286,SNR=9.9
LZDM **Lanzhou Array** 39.68 270 P P 07 43 05.2 +0.1
comp=Z,34nm,0.8s,baz=55,slow=5.6,SNR=66
LZDM PcP PcP 07 45 12.1 +1.3
comp=Z,12nm,0.7s,baz=45,slow=2.2,SNR=5.3
LZDM LR LR 08 00 01.2
comp=Z,793nm,21.4s,baz=35,slow=37
comp=Z,34nm,0.8s
S31K **Pelican** 39.69 51 P P 07 43 06.0 +1.6
baz=288
SKAG **Skagway** 39.69 48 P P 07 43 06.5 +2.1
baz=287
FARO **Faro, Yukon** 39.86 44 P P 07 43 07.6 +1.7
baz=285,SNR=8.6
GTA2 **Gaotai** 40.25 278 P P 07 43 09.9 +0.4
GTA2 pP pP 07 43 25.1 +0.7
GTA2 PcP PcP 07 45 13.0 +0.7
GTA2 pmax pmax
comp=Z,46nm,1.0s
GTA2 pmax pmax
comp=Z,160nm,10.2s
GTA2 LR LR
comp=Z,660nm,16.0s
GTA2 LR LR
comp=Z,2µm,17.4s
GTA2 LR LR
comp=Z,2µm,17.5s
N32M **Quiet Lake** 40.27 45 P P 07 43 10.5 +1.2
baz=287
P32M **Atlin** 40.43 48 P P 07 43 12.5 +1.8
baz=288
SIT **Sitka** 40.44 52 P P 07 43 12.2 +1.5
baz=290
R32K **Eaglecrest** 40.45 50 P P 07 43 12.7 +1.9
baz=289
P33M **Teslin, Yukon** 40.67 47 IAmb IAmb 07 43 31.4
comp=Z,43nm,1.1s
P33M **Teslin, Yukon** 40.67 47 P P 07 43 14.7 +2.0
baz=288,SNR=14
S32K **Killisnoo** 40.69 51 P P 07 43 14.6 +1.9
baz=290
A36M **Sachs Harbour** 40.80 28 P P 07 43 14.7 +1.3
A36M **Sachs Harbour** 40.80 28 P P 07 43 14.9 +1.4
baz=281,SNR=150
Q32M **Nakina River** 41.34 48 P P 07 43 20.2 +1.9
baz=290
C36M **Paulatuk** 41.75 32 P P 07 43 22.5 +1.2
C36M **Paulatuk** 41.75 32 P P 07 43 22.6 +1.2
baz=284,SNR=116
R33M **Jennings River** 41.82 47 P P 07 43 24.9 +2.6
baz=290,SNR=13
U33K **Whale Pass** 41.92 53 P P 07 43 25.1 +2.3
baz=292
CRAG **Craig** 42.16 53 P P 07 43 27.0 +2.2
baz=293
WRAK **Wrangell Islan** 42.20 52 P P 07 43 27.1 +2.0
baz=292
S34M **Telegraph Cree** 42.27 49 P P 07 43 27.8 +2.1
baz=292,SNR=5.8
ZAA0 **Zalesovo Array** 42.50 304 P P 07 43 26.8 -0.8
ZALV **Zalesovo Beam** 42.50 304 P P 07 43 26.0 -1.6
comp=Z,2.6nm,0.5s,baz=62,slow=7.2,SNR=14
ZALV PcP PcP 07 45 19.6 +0.4
comp=Z,38nm,0.9s,baz=79,slow=3.2,SNR=29
ZALV LR LR 08 01 48.8
comp=Z,766nm,19.0s,baz=60,slow=37
comp=Z,2.6nm,0.5s
ZALV **Zalesovo Beam** 42.50 304 P P 07 43 26.4 -1.2
ZALV **Zalesovo Beam** 42.50 304 P P 07 43 26.4 -1.2
WTLY **Watson Lake, Y** 42.61 46 P P 07 43 30.4 +2.0
baz=291,SNR=12
DLBC **Dease Lake** 42.62 48 LR LR 08 03 29.8
comp=Z,380nm,19.2s,baz=292,slow=39
DLBC **Dease Lake** 42.62 48 P P 07 43 31.0 +2.4
baz=292,SNR=9.4
CD2 **Chengdu** 42.78 264 P P 07 43 30.3 +0.1
CD2 S S 07 49 50.4 +0.5
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 LR LR
comp=Z,860nm,16.7s
CD2 LR LR
comp=Z,900nm,21.0s
DGZ **Jazzator, Alta** 42.85 298 ⇑*e*P P 07 43 30.0 -0.7
DGZ pmax pmax
comp=Z,13nm,0.9s
T35M **Bob Quinn** 43.06 50 IAmb IAmb 07 43 36.4
comp=Z,43nm,0.8s
T35M **Bob Quinn** 43.06 50 P P 07 43 35.0 +2.9
baz=293,SNR=15
U35K **Hyder** 43.60 52 P P 07 43 38.8 +2.4
baz=294
WRGLY **Wrigley** 43.87 40 P P 07 43 39.3 +0.7
WRGLY IAmb IAmb 07 43 53.5
comp=Z,47nm,1.1s
WRGLY **Wrigley** 43.87 40 P P 07 43 40.6 +2.1
baz=291,SNR=6.9
GYA **Guiyang** 43.91 257 ⇓P P 07 43 39.8 +0.3
GYA pmax pmax
comp=Z,56nm,1.2s
TOAD **Toad River Com** 44.77 46 P P 07 43 47.7 +1.9
baz=294,SNR=24
TGY **Tagaytay City** 45.15 231 LR LR 08 04 37.2
comp=Z,128nm,18.7s,baz=182,slow=39
GOMU **GeErMu** 45.34 277 P P 07 43 50.4 -0.6
GOMU PcP PcP 07 45 30.8 +1.1
GOMU pmax pmax
comp=Z,22nm,0.9s
GOMU LR LR
comp=Z,610nm,13.6s
GOMU LR LR
comp=Z,590nm,14.2s
GOMU LR LR
comp=Z,1µm,13.8s
ZSN **Zaisan** 45.42 296 *e*P P 07 43 50.9 -0.2
ZSN **Zaisan** 45.42 296 *e*P P 07 43 51.0 -0.2
WMQ **Urumqi** 45.58 290 *e*P P 07 43 54.5 +2.0
WMQ LR LR
comp=Z,410nm,24.3s
BBB **Bella Bella** 46.26 56 LR LR 08 03 12.2
comp=Z,181nm,21.0s,baz=288,slow=36
PZH **PanZhiHua** 47.04 261 P P 07 44 04.0 -0.2
PZH PcP PcP 07 45 36.6 +1.1
PZH PcS PcS 07 49 30.8 -0.1
PZH S S 07 50 54.8 +3.0
PZH pmax pmax
comp=Z,20nm,1.5s
PZH pmax pmax
comp=Z,150nm,4.1s
PZH LR LR
comp=Z,320nm,18.2s
PZH LR LR
comp=Z,530nm,19.4s
PZH LR LR
comp=Z,450nm,15.3s
MK31 **Makanchi Array** 47.27 296 *ce*P P 07 44 04.1 -1.5
MKAR **Makanchi Array** 47.27 296 P P 07 44 04.5 -1.1
comp=Z,8.2nm,0.7s,baz=63,slow=6.8,SNR=83
MKAR PcP PcP 07 45 36.2 +0.3
comp=Z,14nm,0.9s,baz=46,slow=5.2,SNR=7.7
MKAR LR LR 08 05 18.3
comp=Z,2µm,18.6s,baz=34,slow=38
comp=Z,8.2nm,0.7s
MKAR **Makanchi Array** 47.27 296 P P 07 44 04.1 -1.5
KMI2 **Kunming** 47.34 259 ⇑P P 07 44 07.0 +0.4
KMI2 pP pP 07 44 25.0 +3.1
KMI2 PcP PcP 07 45 38.0 +1.3
KMI2 S S 07 50 52.4 -3.8
KMI2 pmax pmax
comp=Z,49nm,1.2s
KMI2 LR LR
comp=Z,310nm,16.6s
KMI2 LR LR
comp=Z,430nm,18.5s
KMI2 LR LR
comp=Z,500nm,22.3s
KURK **Kurchatov** 47.36 303 P P 07 44 05.3 -0.9
KURK IAmb IAmb 07 44 07.8
comp=Z,36nm,0.8s
KURK **Kurchatov** 47.36 303 P P 07 44 05.6 -0.6
KURK 07 45 37.0
KURK **Kurchatov** 47.36 303 P P 07 44 05.2 -0.9
KURK **Kurchatov** 47.36 303 P P 07 44 04.8 -1.3
KURK x x 07 44 19.9
KURK PcP PcP 07 45 36.5 +0.5
QIZ **Qiongzhong** 47.39 247 P P 07 44 06.5 -0.4
QIZ **Qiongzhong** 47.39 247 P P 07 44 08.6 +1.8
QIZ **Qiongzhong** 47.39 247 P P 07 44 07.8 +1.0
QIZ S S 07 51 00.6 +4.0
QIZ LR LR
comp=Z,500nm,15.1s
QIZ LR LR
comp=Z,590nm,16.9s
QIZ LR LR
comp=Z,560nm,12.2s
MAKZ **Makanchi** 47.45 297 P P 07 44 05.5 -1.5
MAKZ **Makanchi** 47.45 297 P P 07 44 06.9 -0.1
KURBB **Kurchatov Arra** 47.45 303 P P 07 44 05.6 -1.3
comp=Z,38nm,0.9s,baz=64,slow=8.0,SNR=86
KURBB PcP PcP 07 45 37.0 +0.6
comp=Z,29nm,0.8s,baz=64,slow=3.3,SNR=19
KURBB LR LR 08 05 12.7
comp=Z,580nm,19.0s,baz=40,slow=38
comp=Z,38nm,0.9s
KURBB **Kurchatov Arra** 47.45 303 P P 07 44 06.3 -0.6
YKAW3 **Yellowknife Wh** 47.83 39 IAmb IAmb 07 44 31.4
comp=Z,19nm,0.9s
RES **Resolute Bay** 47.86 20 LR LR 08 05 51.9
comp=Z,410nm,21.2s,baz=344,slow=38
RES **Resolute Bay** 47.86 20 P P 07 44 10.0 +0.2
RES **Resolute Bay** 47.86 20 P P 07 44 10.0 +0.2
RES pmax pmax
comp=Z,13nm,0.7s
YKA **Yellowknife Ar** 47.87 39 P P 07 44 10.5 +0.5
comp=Z,7.8nm,0.7s,baz=302,slow=8.3,SNR=94
YKA PcP PcP 07 45 38.6 +1.0
comp=Z,4.3nm,1.0s,baz=305,slow=4.6,SNR=4.2
YKA LR LR 08 04 54.4
comp=Z,220nm,21.7s,baz=298,slow=37
comp=Z,7.8nm,0.7s
YKA **Yellowknife Ar** 47.87 39 P P 07 44 11.0 +1.0
YKA **Yellowknife Ar** 47.87 39 P P 07 44 11.0 +1.0
DAV **Davao City (W)** 49.10 221 LR LR 08 04 32.2
comp=Z,106nm,21.4s,baz=6.0,slow=36
DAV **Davao City (W)** 49.10 221 P P 07 44 18.3 -1.7
TNCH **TengChong** 50.15 263 P P 07 44 29.4 +1.2
TNCH pP pP 07 44 44.8 +1.3
TNCH pmax pmax
comp=Z,73nm,1.1s
TNCH pmax pmax
comp=Z,230nm,3.7s
SPITS **Spitsbergen Ar** 50.38 350 P P 07 44 28.0 -1.0
comp=Z,8.9nm,0.8s,baz=49,slow=6.7,SNR=15
SPITS PcP PcP 07 45 47.8 +1.2
comp=Z,7.4nm,0.6s,baz=33,slow=5.5,SNR=5.2
SPITS LR LR 08 07 13.3
comp=Z,504nm,18.6s,baz=318,slow=38
comp=Z,8.9nm,0.8s
LLLB **Lillooet** 50.42 55 IAmb IAmb 07 44 45.8
comp=Z,19nm,1.0s
TDK **Taldyqorghan** 50.52 296 *e*P P 07 44 30.4 -0.1
TDK pmax pmax
comp=Z,15nm,0.7s
TDK **Taldyqorghan** 50.52 296 *e*P P 07 44 30.4 -0.1
comp=Z,14nm,0.7s
BVA0 **Borovoye Array** 50.53 309 P P 07 44 29.4 -1.1
BVAR **Borovoye Array** 50.53 309 P P 07 44 29.3 -1.2
comp=Z,12nm,0.8s,baz=61,slow=7.4,SNR=30
BVAR PcP PcP 07 45 48.4 +0.8
comp=Z,24nm,0.8s,baz=64,slow=3.4,SNR=12
BVAR LR LR 08 07 29.1
comp=Z,874nm,18.3s,baz=65,slow=38
comp=Z,12nm,0.8s
BORK **Borovoye** 50.56 309 P P 07 44 29.7 -1.0
BORK x x 07 44 44.3
BORK PcP PcP 07 45 48.1 +0.5
SHLS **Shalkode** 50.94 294 *e*P P 07 44 31.7 -2.2
SHLS **Shalkode** 50.94 294 *e*P P 07 44 31.7 -2.2
BRZS **Berezniki** 50.98 304 *e*P P 07 44 33.8 -0.1
BRZS **Berezniki** 50.98 304 *e*P P 07 44 33.8 -0.1
UZB **Uzynbulak** 51.21 294 *e*P P 07 44 35.5 -0.4
UZB **Uzynbulak** 51.21 294 *e*P P 07 44 35.6 -0.4
KPKS **Kokpek** 51.23 295 *e*P P 07 44 35.9 -0.1
KPKS **Kokpek** 51.23 295 *e*P P 07 44 36.0 -0.1
TULEG **Thule** 51.27 12 IAmb IAmb 07 44 48.5
comp=Z,30nm,1.1s
TULEG **Thule** 51.27 12 *i*P P 07 44 33.0 -2.7
TULEG IAmb IAmb 07 44 36.3
comp=Z,17nm,0.7s
SATY **Saty** 51.63 294 *e*P P 07 44 38.7 -0.3
SATY **Saty** 51.63 294 *e*P P 07 44 38.7 -0.3
LSA **Lhasa** 51.81 273 P P 07 44 38.0 -2.9
LSA pmax pmax
comp=Z,16nm,0.8s
LSA **Lhasa** 51.81 273 P P 07 44 42.2 +1.3
LSA **Lhasa** 51.81 273 P P 07 44 42.4 +1.5
LSA P P 07 44 42.4 +1.5
WUS **Wushi** 52.24 292 PcP PcP 07 45 55.3 +1.0
MDOK **Medeo** 52.38 295 *e*P P 07 44 44.4 -0.2
MDOK **Medeo** 52.38 295 *e*P P 07 44 44.4 -0.2
NEEM **North Greenlan** 52.41 7 *i*P P 07 44 42.1 -2.4
NEEM IAmb IAmb 07 44 44.6
comp=Z,42nm,0.9s
AAA **Alma-Ata** 52.43 295 *e*P P 07 44 44.6 -0.3
AAA pmax pmax
comp=Z,11nm,0.4s
AAA **Alma-Ata** 52.43 295 *e*P P 07 44 44.6 -0.3
comp=Z,11nm,0.4s
TNSS **Tian-Shan** 52.51 295 *e*P P 07 44 45.3 -0.6
TNSS **Tian-Shan** 52.51 295 *e*P P 07 44 45.3 -0.6
GAMI **Galela, Maluku** 52.95 216 P P 07 44 47.9 -1.0
B08A **Colville Reser** 53.06 56 IAmb IAmb 07 44 51.4
comp=Z,22nm,0.9s
SVE **Sverdlovsk** 53.09 317 *e*P P 07 44 50.0 +0.6
JAY **Jayapura** 53.22 199 LR LR 08 04 21.7
comp=Z,185nm,22.0s,baz=359,slow=32
EPH **Ephrata** 53.50 57 IAmb IAmb 07 44 54.2
comp=Z,17nm,1.0s
HOOD **Mount Hood Mea** 53.54 60 IAmb IAmb 07 45 09.0
comp=Z,29nm,0.9s
MXC **Moxie City** 53.57 59 IAmb IAmb 07 45 09.6
comp=Z,52nm,1.9s
SGDS **Sogindy** 53.63 297 *e*P P 07 44 53.6 -0.1

WAH2	Wahluke Slope	53.87	58	IAmb	IAmb	07 45 11.6					
	comp=Z,49nm,1.8s										
MYLDM	Lahad Datu	54.01	228	P	P	07 44 56.7	0.0				
MYLDM	Lahad Datu	54.01	228	P	P	07 44 57.7	+1.0				
	comp=Z,40nm,1.1s										
SHL	Shillong	54.11	268	P	P	07 44 57.1	-0.4				
SHL	Shillong	54.11	268	P	P	07 44 57.1	-0.4				
SHL				pmax	pmax						
	comp=Z,68nm,0.8s										
SHL	Shillong	54.11	268	P	P	07 44 58.0	+0.5				
	SNR=23										
DAG	Danmarks Havn	54.13	358	*i* P	P	07 44 56.0	-0.8				
DAG				IAmb	IAmb	07 44 58.4					
	comp=Z,3.3nm,0.8s										
F07A	Phinny Hill Vi	54.18	59	IAmb	IAmb	07 45 13.5					
	comp=Z,23nm,0.9s										
AAK	Ala-Archa	54.20	296	LR	LR	08 09 18.5					
	comp=Z,1µm,19.5s,baz=46,slow=38										
SWI	Sorong	54.21	211	P	P	07 44 57.5	-0.6				
	comp=Z,59nm,1.5s										
SIJI	Sorong	54.22	211	LR	LR	08 04 06.5					
	comp=Z,145nm,21.7s,baz=116,slow=32										
SIJI	Sorong	54.22	211	P	P	07 44 58.1	0.0				
NEW	Newport	54.31	55	LR	LR	08 08 44.2					
	comp=Z,136nm,18.1s,baz=294,slow=37										
NEW	Newport	54.31	55	IAmb	IAmb	07 45 00.5					
	comp=Z,26nm,1.3s										
CHTO	Chiang Mai	54.33	257	P	P	07 45 00.3	+1.3				
CHTO	Chiang Mai	54.33	257	P	P	07 44 59.8	+0.8				
CHTO	Chiang Mai	54.33	257	P	P	07 45 00.4	+1.3				
CHTO	Chiang Mai	54.33	257	P	P	07 45 00.3	+1.3				
CHTO				P	P	07 45 00.3	+1.3				
CHTO	Chiang Mai	54.33	257	P	P	07 44 59.5	+0.5				
ARTI	Arti	54.36	317	P	P	07 44 57.7	-1.0				
	comp=Z,36nm,1.0s,baz=35,slow=3.5,SNR=32										
ARTI				PcP	PcP	07 46 01.8	-0.1				
	comp=Z,19nm,0.6s,baz=24,slow=3.2,SNR=7.9										
ARTI				LR	LR	08 10 12.4					
	comp=Z,546nm,18.0s,baz=30,slow=38										
	comp=Z,36nm,1.0s										
ARTI	Arti	54.36	317	P	P	07 44 58.1	-0.6				
ARTI	Arti	54.36	317	*c i* P	P	07 44 57.5	-1.2				
ARTI				*PP	pP	07 45 12.1	-2.0				
ARTI						07 46 01.5					
ARTI				S	S	07 52 29.6	-2.5				
ARTI				pmax	pmax						
	comp=Z,74nm,1.4s										
ARTI	Arti	54.36	317	P	P	07 44 57.4	-1.2				
ARTI				pP	pP	07 45 09.8	-4.4				
ARTI				PcP	PcP	07 46 02.2	+0.3				
KULLO	Kullorsuaq	54.44	10	*i* P	P	07 44 57.6	-1.5				
KULLO				IAmb	IAmb	07 44 59.1					
	comp=Z,55nm,1.1s										
CM31	Chiang Mai Arr	54.60	257	P	P	07 45 02.1	+1.2				
CM31	Chiang Mai Arr	54.60	257	P	P	07 45 02.5	+1.6				
	SNR=62										
CMAR	Chiang Mai Arr	54.60	257	P	P	07 45 02.5	+1.5				
	comp=Z,135nm,0.9s,baz=30,slow=7.3,SNR=340										
CMAR				PcP	PcP	07 46 04.7	+1.3				
	comp=Z,20nm,0.7s,baz=20,slow=2.9,SNR=8.2										
CMAR				LR	LR	08 09 25.0					
	comp=Z,306nm,20.2s,baz=55,slow=37										
E09A	Wood Farm, Sta	54.80	57	IAmb	IAmb	07 45 04.1					
	comp=Z,18nm,0.8s										
PINE	Pine Mountain	54.87	62	IAmb	IAmb	07 45 19.5					
	comp=Z,24nm,1.0s										
YBH	Yreka Blue Hor	55.09	65	LR	LR	08 05 17.0					
	comp=Z,11nm,21.3s,baz=289,slow=32										
YBH	Yreka Blue Hor	55.09	65	IAmb	IAmb	07 45 21.1					
	comp=Z,22nm,0.9s										
K04D	Chiloquin, OR	55.11	63	IAmb	IAmb	07 45 26.4					
	comp=Z,30nm,0.8s										
M02C	Callahan	55.21	65	IAmb	IAmb	07 45 29.7					
	comp=Z,27nm,1.1s										
K05A	Summer Lake	55.55	63	IAmb	IAmb	07 45 24.6					
	comp=Z,39nm,0.9s										
N02D	Trinity Center	55.56	65	IAmb	IAmb	07 45 26.0					
	comp=Z,20nm,0.8s										
APA	Apatity	55.63	337	*eP*	P	07 45 06.0	-1.7				
APA				pmax	pmax						
	comp=Z,6.0nm,1.3s										
APA				MLR	MLR						
	comp=Z,2µm,8.1s										
KSH2	Kashi	55.70	292	P	P	07 45 09.8	+0.9				
KSH2				PcP	PcP	07 46 09.6	+2.0				
KSH2				pmax	pmax						
	comp=Z,12nm,1.1s										
KSH2				LR	LR						
	comp=Z,850nm,12.7s										
KSH2				LR	LR						
	comp=Z,830nm,14.4s										
KSH2				LR	LR						
	comp=Z,890nm,17.2s										
M03C	McCloud	55.72	65	IAmb	IAmb	07 45 38.7					
	comp=Z,30nm,1.0s										
FAKI	Fak Fak	55.83	209	P	P	07 45 09.6	-0.1				
FAKI				IAmb	IAmb	07 45 23.9					
	comp=Z,36nm,0.9s										
FAKI	Fak Fak	55.83	209	P	P	07 45 09.7	0.0				
DZA	Taraz	55.89	298	*eP*	P	07 45 09.8	-0.2				
DZA	Taraz	55.89	298	*eP*	P	07 45 09.8	-0.2				
ARSB	Arslanbob	55.89	296	IAmb	IAmb	07 46 10.1					
	comp=Z,37nm,1.4s										
ARCES	ARCESS Array B	55.97	341	P	P	07 45 09.5	-0.6				
	comp=Z,9.3nm,0.9s,baz=35,slow=7.1,SNR=9.3										
ARCES				PcP	PcP	07 46 08.4	+0.5				
	comp=Z,3.0nm,0.6s,baz=44,slow=5.6,SNR=5.1										
ARCES				LR	LR	08 12 38.8					
	comp=Z,740nm,19.8s,baz=24,slow=40										
	comp=Z,9.3nm,0.9s										
ARCES	ARCESS Array B	55.97	341	P	P	07 45 09.1	-1.0				
ARCES				IAmb	IAmb	07 46 32.1					
	comp=Z,69nm,1.9s										
UPNV	Upernavik	56.21	11	*i* P	P	07 45 09.6	-2.2				
UPNV				IAmb	IAmb	07 45 12.2					
	comp=Z,18nm,1.1s										
KK31	Karatay Array	56.23	299	P	P	07 45 11.8	-0.6				
KK31	Karatay Array	56.23	299	P	P	07 45 11.8	-0.6				
KK31				pmax	pmax						
	comp=Z,14nm,0.9s										
KKAR	Karatay Array	56.23	299	P	P	07 45 11.3	-1.1				
KKAR	Karatay Array	56.23	299	P	P	07 45 11.3	-1.1				
BRDH	Bariadhala	56.28	266	LR	LR	08 10 30.2					
	comp=Z,500nm,21.1s,baz=3.0,slow=37										
HATC	Hat Creek Radi	56.40	65	IAmb	IAmb	07 45 30.6					
	comp=Z,31nm,0.8s										
O03E	Paynes Creek	56.52	65	P	P	07 45 14.8	+0.2				
TOLI2	Tolitoli	56.52	223	P	P	07 45 14.7	0.0				
TOLI2	Tolitoli	56.52	223	P	P	07 45 14.4	-0.3				
J08A	Circle Bar Ran	56.55	61	IAmb	IAmb	07 45 31.3					
	comp=Z,20nm,0.9s										
MRSI	Marisa	56.57	222	P	P	07 45 14.7	-0.4				
KIRV	Kirov	56.73	323	P	P	07 45 15.0	-0.6				
	comp=Z,15nm,0.4s,baz=42,slow=3.9,SNR=6.3										
KIRV				LR	LR	08 12 11.5					
	comp=Z,481nm,20.7s,baz=32,slow=39										
	comp=Z,15nm,0.4s										
KIRV	Kirov	56.73	323↑	*eP*	P	07 45 14.4	-1.2				
PLID	Pearl Lake	56.86	58	P	P	07 45 18.0	+0.9				
PLID				IAmb	IAmb	07 45 19.5					
	comp=Z,33nm,0.8s										
MSO	Missoula	56.89	55	IAmb	IAmb	07 45 19.5					
	comp=Z,30nm,1.1s										
WVOR	Wild Horse Val	57.03	62	IAmb	IAmb	07 45 34.7					
	comp=Z,27nm,0.9s										
IUG	luzhnay	57.10	298	*eP*	P	07 45 18.6	-0.1				
IUG				pmax	pmax						
	comp=Z,13nm,0.6s										
IUG	luzhnay	57.10	298	*eP*	P	07 45 18.6	-0.1				
	comp=Z,13nm,0.6s										
SANI	Sanana	57.20	216	P	P	07 45 17.7	-1.8				
	comp=Z,45nm,1.4s										
CHM	Chimkent	57.24	298	*eP*	P	07 45 19.5	-0.1				
CHM	Chimkent	57.24	298	*eP*	P	07 45 19.5	-0.1				
KRAI	Karang Ratu	57.49	213	P	P	07 45 22.4	+0.9				
FFC	Flin Flon	57.70	42	P	P	07 45 23.9	+1.4				
FFC				x	x	07 45 42.4					
FFC				PcP	PcP	07 46 15.3	+0.4				
BTK	Batken	57.97	296	IAmb	IAmb	07 45 28.3					
	comp=Z,33nm,1.0s										
SUMG	Summit	58.01	5	*i* P	P	07 45 24.0	-1.0				
SUMG				IAmb	IAmb	07 45 27.4					
	comp=Z,40nm,1.0s										
AB31	Akbulak array	58.06	310	P	P	07 45 24.9	-0.3				
AB31				IAmb	IAmb	07 45 27.2					
	comp=Z,22nm,0.7s										
AB31	Akbulak array	58.06	310	*i* P	P	07 45 24.2	-1.0				
ABKAR	Akbulak array	58.06	310	P	P	07 45 24.4	-0.9				
FCC	Fort Churchill	58.20	35	P	P	07 45 26.6	+0.6				
FCC				IAmb	IAmb	07 45 27.5					
	comp=Z,21nm,0.7s										
FCC	Fort Churchill	58.20	35	P	P	07 45 26.6	+0.6				
FCC				pmax	pmax						
	comp=Z,21nm,0.7s										
AKTO	Aktyubinsk	58.26	312	LR	LR	08 13 16.8					
	comp=Z,479nm,18.9s,baz=65,slow=39										
AKTO	Aktyubinsk	58.26	312	P	P	07 45 25.4	-1.2				
PAHR	Pah Rah Range	58.33	65	IAmb	IAmb	07 45 43.3					
	comp=Z,16nm,0.9s										
NIAQ	Niaqornat	58.36	11	*i* P	P	07 45 26.3	-0.6				
NIAQ				IAmb	IAmb	07 45 31.9					
	comp=Z,2.4nm,0.5s										
DLMT	Dillon	58.55	56	IAmb	IAmb	07 45 32.4					
	comp=Z,15nm,0.8s										
SAATT	Saattut	58.58	10	*i* P	P	07 45 26.9	-1.5				
SAATT				IAmb	IAmb	07 45 28.8					
	comp=Z,55nm,1.0s										
HNR	Honiara	58.62	175	LR	LR	08 08 29.6					
	comp=Z,15nm,20.6s,baz=84,slow=34										
HLID	Hailey	58.71	58	IAmb	IAmb	07 45 32.9					
	comp=Z,37nm,1.6s										
KLMR	Klimovskoe	58.77	329	*eP*	P	07 45 27.2	-2.7				
KLMR				pmax	pmax						
	comp=Z,30nm,1.1s										
BOZ	Bozeman (W)	58.92	55	IAmb	IAmb	07 45 34.1					
	comp=Z,28nm,0.8s										
PMG	Port Moresby	58.94	190	LR	LR	08 06 18.6					
	comp=Z,186nm,22.0s,baz=320,slow=31										
SBUM	Sibu	59.52	233	P	P	07 45 36.3	+0.7				
SBUM				IAmb	IAmb	07 45 39.8					
	comp=Z,31nm,1.6s										
SBUM	Sibu	59.52	233	P	P	07 45 36.4	+0.7				
NVAR	Mina Array Bea	59.80	65	P	P	07 45 38.8	+1.1				
	comp=Z,6.8nm,0.7s,baz=291,slow=7.3,SNR=62										
NVAR				LR	LR	08 07 57.4					
	comp=Z,143nm,21.5s,baz=300,slow=32										
	comp=Z,6.8nm,0.7s										
GDH	Godhavn	59.81	12	*i* P	P	07 45 35.2	-1.8				
GDH				IAmb	IAmb	07 45 38.8					
	comp=Z,8.5nm,0.9s										
CHGR	Chuyangaron	59.85	295	P	P	07 45 36.8	-1.1				
CHGR	Chuyangaron	59.85	295	*d i* P	P	07 45 37.5	-0.4				
CHGR				pmax	pmax						
	comp=Z,88nm,1.0s										
MDPB	Devils Postpil	59.85	66	P	P	07 45 37.2	-0.9				
MDPB				IAmb	IAmb	07 45 55.2					
	comp=Z,15nm,1.0s										
YHH	Holmes Hill	59.86	55	P	P	07 45 39.8	+1.7				
YMR	Madison River	59.88	55	P	P	07 45 40.5	+2.3				
YMR				IAmb	IAmb	07 45 41.1					
	comp=Z,22nm,0.8s										
YNR	Norris Junctio	60.00	55	IAmb	IAmb	07 46 08.2					
	comp=Z,27nm,1.0s										
ELK	Elko	60.07	61	IAmb	IAmb	07 45 55.9					
	comp=Z,14nm,0.8s										
YFT	Old Faithful	60.09	56	IAmb	IAmb	07 45 43.7					
	comp=Z,26nm,0.8s										
ILULI	Ilulissat	60.15	11	P	P	07 45 38.6	-0.7				
ILULI	Ilulissat	60.15	11	P	P	07 45 38.6	-0.7				
ILULI				pmax	pmax						
	comp=Z,43nm,0.9s										
ILULI	Ilulissat	60.15	11	*i* P	P	07 45 37.1	-2.3				
ILULI				IAmb	IAmb	07 45 40.0					
	comp=Z,57nm,1.1s										
YNE	Yellowstone No	60.17	55	IAmb	IAmb	07 45 42.9					
	comp=Z,27nm,0.8s										
YPP	Pitchstone Pla	60.23	56	IAmb	IAmb	07 45 45.4					
	comp=Z,19nm,1.2s										
YMP	Mirror Lake Pl	60.27	55	IAmb	IAmb	07 46 03.7					
	comp=Z,34nm,1.1s										
FLWY	Flagg Ranch	60.41	56	IAmb	IAmb	07 46 01.9					
	comp=Z,18nm,0.8s										
RLMT	Red Lodge	60.49	54	P	P	07 45 42.6	+0.3				
DSP	Deep Springs	60.69	66	IAmb	IAmb	07 46 00.6					
	comp=Z,20nm,0.9s										
LOHW	Long Hollow	60.77	56	IAmb	IAmb	07 45 47.7					
	comp=Z,37nm,1.2s										
SNOW	Snow King Moun	60.79	56	IAmb	IAmb	07 45 47.9					
	comp=Z,46nm,1.4s										
VES	Vestal, Richgr	61.03	68	IAmb	IAmb	07 46 01.1					
	comp=Z,20nm,0.9s										
AHID	Auburn Hatcher	61.06	57	IAmb	IAmb	07 45 49.0					
	comp=Z,39nm,1.6s										
SPUT	South Promonto	61.28	59	IAmb	IAmb	07 46 04.2					
	comp=Z,20nm,0.9s										
KSM	Kuching	61.35	234	P	P	07 45 46.9	-1.3				
SPSI	Sidrap Palu	61.49	222	P	P	07 45 47.2	-1.9				
	comp=Z,29nm,0.9s										
HWUT	Hardware Ranch	61.58	58	IAmb	IAmb	07 46 08.1					
	comp=Z,14nm,0.9s										
BELG	Belogornoye	61.72	319	LR	LR	08 13 29.4					
	comp=Z,518nm,21.2s,baz=49,slow=37										
BELG	Belogornoye	61.72	319	*de* P	P	07 45 49.7	-0.5				
BELG				pmax	pmax						
	comp=Z,10.0nm,1.0s										
DUG	Dugway, Tooele	61.82	60	IAmb	IAmb	07 46 07.7					
	comp=Z,30nm,0.9s										
WCT	Wildcat Mounta	61.88	65	IAmb	IAmb	07 46 09.1					
	comp=Z,17nm,1.0s										
BW06	Boulder Array	61.90	56	IAmb	IAmb	07 45 54.4					
	comp=Z,30nm,0.9s										
PD31	Pinedale Array	61.90	56	IAmb	IAmb	07 45 54.4					
	comp=Z,30nm,0.9s										
PDAR	Pinedale Array	61.90	56	P	P	07 45 52.7	+0.8				
	comp=Z,18nm,0.9s,baz=314,slow=2.3,SNR=137										
	comp=Z,18nm,0.9s										
PDAR	Pinedale Array	61.90	56	P	P	07 45 52.9	+1.0				
CLC	China Lake	61.95	67	IAmb	IAmb	07 46 08.3					
	comp=Z,21nm,0.9s										
TCUT	Toone Canyon	61.99	59	IAmb	IAmb	07 46 10.8					
	comp=Z,13nm,0.9s										
TPNV	Topopah Spring	61.99	65	IAmb	IAmb	07 46 09.1					
	comp=Z,24nm,0.9s										
FRB	Frobisher Bay	62.06	21	LR	LR	08 14 30.5					
	comp=Z,422nm,19.8s,baz=343,slow=38										
TPO	Tropico Hills	62.20	68	IAmb	IAmb	07 46 11.4					
	comp=Z,32nm,1.0s										
GWY	Greenwater Val	62.26	66	IAmb	IAmb	07 46 10.1					
	comp=Z,21nm,0.9s										
QSM	Queen of Sheba	62.29	66	IAmb	IAmb	07 46 10.2					
	comp=Z,23nm,1.0s										
SFJD	Kangerlussuaq	62.31	11	LR	LR	08 16 36.7					
	comp=Z,339nm,18.0s,baz=3.0,slow=40										
SFJD	Kangerlussuaq	62.31	11	P	P	07 45 53.7	-0.2				
SFJD				IAmb	IAmb	07 45 58.0					
	comp=Z,18nm,0.9s										
SFJD	Kangerlussuaq	62.31	11	P	P	07 45 53.7	-0.2				
SFJD				pmax	pmax						
	comp=Z,18nm,1.0s										
SFJD	Kangerlussuaq	62.31	11	*i* P	P	07 45 52.8	-1.1				
SFJD				IAmb	IAmb	07 45 54.8					
	comp=Z,19nm,0.7s										
PRN	Pahroc Range	62.40	64	IAmb	IAmb	07 47 58.0					
	comp=Z,17nm,0.8s										
FIA1	FINESS Array S	62.41	335	P	P	07 45 53.6	-1.1				
FINES	FINESS Array B	62.41	335	P	P	07 45 53.4	-1.3				
	comp=Z,6.2nm,0.6s,baz=32,slow=7.4,SNR=60										
FINES				LR	LR	08 15 56.8					
	comp=Z,1µm,18.5s,baz=36,slow=39										
	comp=Z,6.2nm,0.6s										
FINES	FINESS Array B	62.41	335	P	P	07 45 53.5	-1.2				
FINES	FINESS Array B	62.41	335	P	P	07 45 53.5	-1.2				
KAPI	Kappang	62.44	221	LR	LR	08 13 06.5					
	comp=Z,54nm,21.5s,baz=33,slow=36										
KAPI	Kappang	62.44	221	P	P	07 45 56.8	+1.4				
MPU	Maple Canyon	62.61	60	IAmb	IAmb	07 46 13.0					
	comp=Z,21nm,0.8s										
KBL	Kabul	62.66	292	P	P	07 45 55.8	-1.3				
KBL	Kabul	62.66	292	P	P	07 45 55.8	-1.3				
KBL				pmax	pmax						
	comp=Z,65nm,0.5s										
KBL	Kabul	62.66	292	P	P	07 45 57.1	0.0				
	SNR=8.9										
SHOC	Shoshone, Teco	62.69	66	IAmb	IAmb	07 46 20.2					
	comp=Z,28nm,1.1s										
MWC	Mount Wilson	62.74	68	IAmb	IAmb	07 46 13.7					
	comp=Z,26nm,1.0s										
BSUT	Blindstream Ca	62.74	59	IAmb	IAmb	07 46 17.0					
	comp=Z,12nm,0.8s										
GSC	Goldstone, Bar	62.77	67	IAmb	IAmb	07 46 14.3					
	comp=Z,20nm,0.9s										
BFSC	Mount Baldy Ra	62.98	68	IAmb	IAmb	07 46 14.6					
	comp=Z,12nm,0.8s										
TCRU	Three Creeks R	63.10	61	IAmb	IAmb	07 46 21.4					
	comp=Z,14nm,0.8s										
MOS	Moscow	63.26	326	*eP*	P	07 45 59.5	-0.9				
MOS				*e*		07 46 41.8					
CCUT	Cedar City	63.29	63	IAmb	IAmb	07 46 17.5					
	comp=Z,19nm,0.8s										
BBKI	Banjar Baru	63.30	227	P	P	07 45 58.9	-2.3				
MTPC	Mountain Pass	63.40	66	IAmb	IAmb	07 46 18.8					
	comp=Z,17nm,1.0s										
SZCU	Shurtz Canyon	63.41	63	IAmb	IAmb	07 46 18.1					
	comp=Z,14nm,0.9s										
P17A	Butcher Ranch,	63.48	60	IAmb	IAmb	07 46 18.7					
	comp=Z,17nm,0.8s										
ULM	Lac du Bonnet	63.49	43	P	P	07 46 01.6	-0.4				
	comp=Z,10.0nm,0.9s,baz=314,slow=6.4,SNR=12										
ULM				LR	LR	08 14 40.3					
	comp=Z,221nm,21.9s,baz=324,slow=37										
	comp=Z,10.0nm,0.9s										
ULM	Lac du Bonnet	63.49	43	IAmb	IAmb	07 46 03.5					
	comp=Z,20nm,1.2s										
ULM	Lac du Bonnet	63.49	43↑	*i* P	P	07 46 02.3	+0.3				
ELS	Elsinore Mount	63.52	69	IAmb	IAmb	07 46 18.1					
	comp=Z,14nm,0.8s										
Q16A	Castle Valley	63.62	60	IAmb	IAmb	07 46 19.6					
	comp=Z,17nm,0.9s										
PBA	Port Blair	63.63	257	P	P	07 46 04.5	+1.1				
MTPU	Mount Pierson	63.63	62	IAmb	IAmb	07 46 20.3					
	comp=Z,20nm,0.8s										
P18A	Preston Nutter	63.65	59	IAmb	IAmb	07 46 43.1					
	comp=Z,25nm,1.3s										
KULM	Kulim	63.68	245	P	P	07 46 03.7	0.0				
KULM	Kulim	63.68	245	P	P	07 46 02.7	-1.0				
	comp=Z,790nmcomp=Z,80nm,1.1s										
LCMT	Little Creek M	63.72	63	IAmb	IAmb	07 46 20.4					
	comp=Z,31nm,0.8s										
E28A	Huff	63.86	48	IAmb	IAmb	07 46 06.7					
	comp=Z,26nm,0.7s										
RSSD	Black Hills	63.91	52	P	P	07 46 06.2	+1.0				
RSSD	Black Hills	63.91	52	P	P	07 46 06.2	+1.0				
RSSD				pmax	pmax						
	comp=Z,51nm,0.8s										
COEN	Coen	63.95	193	P	P	07 46 05.8	+0.4				
COEN				IAmb	IAmb	07 47 22.5					
	comp=Z,48nm,1.4s										
KNB	Kanab	63.97	63	IAmb	IAmb	07 46 22.7					
	comp=Z,36nm,0.9s										
IPM	Ipoh	64.10	245	P	P	07 46 05.9	-0.6				
	comp=Z,55nm,1.1s										
OBN	Obninsk	64.12	326	LR	LR	08 15 39.9					
	comp=Z,432nm,19.3s,baz=2.5,slow=38										
OBN	Obninsk	64.12	326	*i* P	P	07 46 01.1	-5.0				
OBN				*i*		07 46 19.5					
OBN				*i*		07 46 39.8					
OBN				*i*		07 48 24.7					
OBN				pmax	pmax						
	comp=Z,36nm,1.3s										
PFO	Pinyon Flats O	64.13	68	LR	LR	08 08 53.4					
	comp=Z,295nm,21.7s,baz=304,slow=31										
O20A	White River Ci	64.42	58	IAmb	IAmb	07 46 26.5					
	comp=Z,46nm,1.5s										
IRM	Iron Mountain	64.55	67	IAmb	IAmb	07 46 26.1					
	comp=Z,30nm,1.1s										
MYKOM	Kota Tinggi	64.64	240	P	P	07 46 10.7	+0.7				
	comp=Z,58nm,1.3s										
MMRI	Maumere	64.69	217	P	P	07 46 09.7	-0.5				
MMRI	Maumere	64.69	217	P	P	07 46 09.2	-1.0				
EPLO	Experimental L	64.86	42	IAmb	IAmb	07 46 12.4					
	comp=Z,38nm,1.2s										
SOEI	Soe	64.94	214	P	P	07 46 11.2	-0.8				
SOEI	Soe	64.94	214	P	P	07 46 09.6	-2.4				
	comp=Z,55nm,1.1s										
TPRI	Tanjung Pinang	64.97	239	P	P	07 46 12.9	+0.7				
EDFI	Ende, Flores	65.01	217	P	P	07 46 11.0	-1.4				
KDU	Kakadu	65.03	205	P	P	07 46 12.4	+0.1				
	comp=Z,9.3nm,0.9s										
BTD

KHKI **Kahang-Kahang** 67.25 224 P P 07 46 25.1 -1.6
comp=Z,797nmcomp=Z,58nm,1.2s
X18A **Snowflake** 67.37 63 IAmb IAmb 07 46 44.0
comp=Z,16nm,0.9s
BKNI **Bangkinang** 67.44 242 P P 07 46 28.2 +0.2
BKNI **Bangkinang** 67.44 242 P P 07 46 28.9 +0.9
214A **Organ Pipe Nat** 67.49 67 IAmb IAmb 07 46 45.7
comp=Z,20nm,1.0s
MNK **Minsk** 67.62 330 *i* P P 07 46 28.7 +0.1
comp=E,25nm,0.8s
MNK *i* P P 07 46 28.7 +0.1
comp=N,17nm,0.8s
MNK *i* P P 07 46 28.7 +0.1
comp=Z,46nm,0.7s,baz=35
MNK *i* pP sP 07 46 49.4 -1.8
MNK *i* sP PcP 07 46 58.5 +3.2
MNK *i* PP PP 07 48 56.8 -0.8
MNK *i* PPP PPP 07 50 33.8
MNK *i* S S 07 55 16.1 -4.6
MNK *i* PS PnS 07 55 34.1 -16
MNK *i* sS sS 07 55 52.0 +4.5
MNK *i* SS SS 07 59 36.9 -4.4
MNK *i* SSS SSS 08 02 50.0
MNK *i* LQ LQ 08 10 55.8
MNK *i* LR LR 08 14 48.0
MNK *i* LRM MLR 08 17 32.9
comp=N,345nm,16.8s
MNK *i* LRM MLR 08 17 33.6
comp=E,804nm,17.2s
MNK *i* LRM MLR 08 17 35.5
comp=Z,421nm,15.6s
MNK **Minsk** 67.62 330 *i* P P 07 46 28.6 +0.1
MNK *i* *PP sP 07 46 49.3 -1.8
MNK *i* 07 46 56.4
MNK *i* *SP PcP 07 46 58.4 +3.2
MNK *i* 07 48 56.8
MNK *i* PPP PPP 07 50 33.8
MNK *i* S S 07 55 16.1 -4.6
MNK *i* *SS sS 07 55 52.0 +4.5
MNK *i* SS SS 07 59 36.9 -4.4
MNK pmax pmax
comp=Z,46nm,0.7s
MNK pmax pmax
comp=E,25nm,0.8s
MNK pmax pmax
comp=N,17nm,0.8s
MNK MLR MLR
comp=N,345nm,17.0s
MNK MLR MLR
comp=E,804nm,17.0s
MNK MLR MLR
comp=Z,421nm,16.0s
MNSI **Mandailing Nat** 67.91 243 P P 07 46 30.2 -0.7
ECSD **EROS Data Cent** 67.91 48 IAmb IAmb 07 46 32.1
comp=Z,28nm,0.8s
PABE **Paberze** 68.00 333 P P 07 46 30.0 -1.0
E38A **The Farm, Brul** 68.12 43 IAmb IAmb 07 46 32.6
comp=Z,29nm,1.0s
IVI **Ivigtut** 68.18 12 P P 07 46 32.3 +0.3
IVI **Ivigtut** 68.18 12 *i* P P 07 46 30.4 -1.5
KSCO **Kaye Shedlock'** 68.28 55 IAmb IAmb 07 46 51.6
comp=Z,24nm,1.0s
PPI **Padang Panjang** 68.45 242 P P 07 46 33.3 -1.0
comp=Z,2µmcomp=Z,31nm,0.5s
TUC **Tucson** 68.45 65 P P 07 46 34.2 -0.1
TUC **Tucson** 68.45 65 P P 07 46 34.2 -0.1
TUC pmax pmax
comp=Z,10.0nm,0.9s
SJI **Sawahan** 68.49 228 P P 07 46 33.1 -1.5
comp=Z,62nm,1.3s
SNJI **Sawahan-Nganju** 68.53 228 P P 07 46 34.3 -0.7
comp=Z,45nm,1.5s
HYB **Hyderabad** 68.59 272 *e*P P 07 46 35.5 +0.2
HYB *es*P sP 07 46 55.1 -2.8
HYB *e*PcP PcP 07 46 59.9 -0.1
HYB *e*S S 07 55 34.3 +0.9
SPMN **Marine on St.** 68.60 45 IAmb IAmb 07 46 36.4
comp=Z,26nm,1.0s
T25A **Trinidad** 68.66 58 IAmb IAmb 07 46 51.7
comp=Z,20nm,0.9s
GSI **Gunungsitoli** 68.69 246 P P 07 46 35.9 +0.1
PDSI **Padang** 68.78 242 P P 07 46 35.4 -1.0
comp=Z,6µmcomp=Z,44nm,0.8s
KNRA **Kununurra** 68.94 208 P P 07 46 37.9 +0.7
comp=Z,45nm,2.3s
KNRA **Kununurra** 68.94 208 P P 07 46 37.8 +0.6
ANMO **Albuquerque** 69.09 61 LR LR 08 16 17.4
comp=Z,139nm,20.2s,baz=340,slow=35
ANMO **Albuquerque** 69.09 61 P P 07 46 39.2 +0.8
ANMO **Albuquerque** 69.09 61 *c* *i* P P 07 46 39.4 +1.0
ANMO pmax pmax
comp=Z,10.0nm,0.9s
ANMO **Albuquerque** 69.09 61 P P 07 46 39.8 +1.4
ANMO pP pP 07 46 52.3 -2.1
KRJI **Kerinci** 69.17 240 P P 07 46 38.5 -0.4
GOF **Gofitskoye** 69.17 316 *ce*P P 07 46 40.6 +2.1
DUN6 **Lazy B Ranch** 69.28 64 IAmb IAmb 07 46 55.8
comp=Z,40nm,0.8s
L34A **Svendsen Farm,** 69.34 49 IAmb IAmb 07 46 40.6
comp=Z,44nm,0.9s
KLSI 69.50 236 P P 07 46 40.3 -0.5
KPJI **Karang Pucung** 69.54 230 P P 07 46 40.7 -0.3
MASI **Maura Aman, Be** 69.59 239 P P 07 46 41.2 -0.2
CTA **Charters Tower** 69.59 189 LR LR 08 12 22.0
comp=Z,86nm,21.7s,baz=20,slow=32
AKT **Akhty** 69.63 310 *e*P P 07 46 40.5 -1.0
AKT *e* 07 49 11.5
AKT *e*S S 07 55 42.5 -2.7
AKT pmax pmax
comp=Z,69nm,1.2s
AKT MLR MLR
comp=Z,1µm,23.0s
MDSI **Maura Dua** 69.63 236 P P 07 46 40.5 -1.1
comp=Z,43nm,1.0s
LEM **Lembang** 69.78 232 LR LR 08 20 12.8
comp=Z,56nm,19.1s,baz=348,slow=38
ERBR **Yeremizino-Bor** 69.82 317 *e*P P 07 46 42.0 -0.5
ERBR *e**PP pP 07 47 00.3 +1.7
ERBR pmax pmax
comp=Z,66nm,0.9s
SISI **Saibi** 69.91 243 P P 07 46 42.2 -1.1
CBKS **Cedar Bluff** 69.96 54 IAmb IAmb 07 46 44.5
comp=Z,27nm,0.8s
DBJI **Dramaga** 70.00 233 P P 07 46 42.0 -1.9
319A **Douglas** 70.01 65 IAmb IAmb 07 47 01.2
comp=Z,46nm,0.9s
LWLI **Liwa** 70.14 236 P P 07 46 43.5 -1.4
KIV **Kislovodsk** 70.18 315 *e*P P 07 46 45.0 +0.2
KIV pmax pmax
comp=Z,32nm,1.0s
KIV MLR MLR
comp=Z,274nm,17.0s
KIV **Kislovodsk** 70.18 315 P P 07 46 47.3 +2.5
KBZ **Khabaz** 70.26 315 P P 07 46 45.0 -0.1
comp=Z,34nm,0.9s,baz=71,slow=1.1,SNR=37
KBZ LR LR 08 20 39.5
comp=Z,467nm,18.6s,baz=16,slow=39
comp=Z,34nm,0.9s
KBZ **Khabaz** 70.26 315 *de*P P 07 46 46.4 +1.3
KBZ pmax pmax
comp=Z,40nm,0.9s
SCHQ **Schefferville** 70.28 25 P P 07 46 44.9 -0.3
comp=Z,31nm,0.9s,baz=352,slow=5.9,SNR=35
SCHQ LR LR 08 22 34.5
comp=Z,293nm,18.2s,baz=13,slow=40
comp=Z,31nm,0.9s
SCHQ **Schefferville** 70.28 25 IAmb IAmb 07 46 46.7
comp=Z,34nm,0.9s
AK03 **Malin Array Si** 70.30 327 P P 07 46 43.7 -1.6
AKASG **Malin Array Be** 70.32 327 P P 07 46 44.2 -1.2
comp=Z,6.3nm,0.4s,baz=34,slow=6.3,SNR=36
AKASG LR LR 08 19 27.7
comp=Z,643nm,20.7s,baz=22,slow=38
comp=Z,6.3nm,0.4s
AKASG **Malin Array Be** 70.32 327 P P 07 46 44.7 -0.7
AKASG **Malin Array Be** 70.32 327 P P 07 46 44.7 -0.7
AKASG pmax pmax
comp=Z,13nm,1.4s
AKBB **Malin Array Si** 70.32 327 *de*P P 07 46 44.3 -1.1
AKBB **Malin Array Si** 70.32 327 P P 07 46 44.1 -1.3
AK04 **Malin Array Si** 70.32 327 P P 07 46 43.9 -1.5
AK21 **Malin Array Si** 70.32 327 P P 07 46 43.9 -1.5
AK22 **Malin Array Si** 70.32 327 P P 07 46 44.0 -1.4
KIEV **Kiev** 70.33 327 P P 07 46 44.0 -1.4
KIEV **Kiev** 70.33 327 ⇑P P 07 46 44.2 -1.2
SNR=10
KIEV **Kiev** 70.33 327 P P 07 46 44.3 -1.2
KIEV **Kiev** 70.33 327 P P 07 46 44.1 -1.4
comp=Z,71nm,0.7s
AK01 **Malin Array Si** 70.33 327 P P 07 46 44.0 -1.5
SHA1 **Shidzhatmaz** 70.36 315 *de*P P 07 46 47.3 +1.2
LABN **Labinsk** 70.55 317 *e*P P 07 46 48.2 +1.3
LABN *e**PP pP 07 47 03.3 +0.3
LABN *eS* S 07 55 58.6 +3.0
LABN pmax pmax
comp=Z,42nm,0.8s
I40A **Norwalk** 70.63 45 IAmb IAmb 07 46 48.1
comp=Z,24nm,1.0s
RNPP9 **Sopachiv** 70.87 329 P P 07 46 47.9 -0.8
RNPP8 **Varash** 70.95 329 P P 07 46 48.1 -1.1
QIS **Mount Isa** 71.01 196 P P 07 46 49.5 -0.3
comp=Z,15nm,1.3s
RNPP5 **Staryi Chortor** 71.03 329 P P 07 46 48.5 -1.2
KSU1 **Kansas State U** 71.37 51 IAmb IAmb 07 46 52.3
comp=Z,25nm,0.7s
WRAB **Tennant Creek** 71.49 201 P P 07 46 52.2 -0.5
WRA **Warramunga Arr** 71.50 201 P P 07 46 52.3 -0.5
comp=Z,12nm,0.7s,baz=12,slow=5.8,SNR=55
comp=Z,12nm,0.7s
DZM **Mont Dzumac** 71.72 169 IAmb IAmb 07 46 57.9
comp=Z,34nm,1.1s
DZM **Mont Dzumac** 71.72 169 P P 07 46 53.6 -0.6
N38A **Joes South For** 71.77 48 IAmb IAmb 07 46 55.5
comp=Z,30nm,0.9s
VSLR **Vesyoloye** 71.78 316 *de*P P 07 46 55.2 +0.8
VSLR pmax pmax
comp=Z,96nm,1.0s
SOC **Sochi** 71.83 317 *e*P P 07 46 54.5 -0.1
SOC *e* 07 49 36.3
SOC *e*PPP PPP 07 51 20.9
SOC *eS* S 07 56 10.3 -0.1
SOC *eSS* SS 08 00 44.7 -1.8
SOC *e*SSS SSS 08 04 01.3
SOC pmax pmax
comp=Z,26nm,1.0s
SOC MLR MLR
comp=Z,310nm,10.0s
ANN **Anapa** 71.87 319 *e*P P 07 46 54.0 -0.9
ANN *e**PP PcP 07 47 12.4 -1.0
ANN *eS* S 07 56 12.0 +1.1
ANN *eSS* SS 08 00 49.1 +2.0
ANN pmax pmax
comp=Z,29nm,0.8s
MSTX **Muleshoe** 71.88 59 IAmb IAmb 07 47 13.4
comp=Z,33nm,1.0s
GNI **Garni** 72.12 311 LR LR 08 21 48.3
comp=Z,370nm,19.2s,baz=42,slow=39
GNI **Garni** 72.12 311 P P 07 46 56.1 -0.6
GNI IAmb IAmb 07 47 24.9
comp=Z,45nm,1.2s
GNI **Garni** 72.12 311 P P 07 46 58.2 +1.5
GNI **Garni** 72.12 311 *de*P P 07 46 58.2 +1.5
GNI pmax pmax
comp=Z,38nm,1.4s
GNI **Garni** 72.12 311 P P 07 46 57.4 +0.7
GNI P P 07 46 57.4 +0.7
BEL **Belsk** 72.13 332 *e*P P 07 46 56.2 -0.1
ELIS **Ellis County** 72.17 55 IAmb IAmb 07 46 58.6
comp=Z,39nm,0.8s
FITZ **Fitzroy Crossi** 72.20 210 LR LR 08 16 54.5
comp=Z,55nm,22.0s,baz=30,slow=34
OK038 **West end E0370** 72.22 55 P P 07 46 57.0 -0.2
OK038 IAmb IAmb 07 47 12.9
comp=Z,32nm,0.9s
P38A **Dawn** 72.52 49 IAmb IAmb 07 47 00.1
comp=Z,34nm,0.8s
L42A **Oliver, Polo** 72.53 45 IAmb IAmb 07 47 21.6
comp=Z,62nm,1.4s
CROK **Carrier** 72.61 54 IAmb IAmb 07 47 00.8
comp=Z,92nm,1.7s
VLDQ **Val d'Or** 72.68 34 IAmb IAmb 07 46 59.6
comp=Z,32nm,1.1s
SORM **Soroca** 72.78 326 ⇑P P 07 46 59.6 -0.6
SORM **Soroca** 72.78 326 P P 07 46 59.6 -0.6
SORM **Soroca** 72.78 326 P P 07 46 58.7 -1.5
comp=Z,19nm,0.8s
VHRN **Van Horn** 72.96 63 IAmb IAmb 07 47 17.9
comp=Z,19nm,0.8s
128A **Castleberry Fa** 73.04 60 IAmb IAmb 07 47 18.0
comp=Z,18nm,0.8s
T35A **Sooner Cattle** 73.07 53 IAmb IAmb 07 47 03.2
comp=Z,74nm,2.0s
KMPD **K-Podol'skiy** 73.09 327 P P 07 47 01.0 -1.1
KMPD P P 07 47 01.0 -1.1
POST **Post** 73.26 59 IAmb IAmb 07 47 05.4
comp=Z,34nm,1.0s
P40A **Paris** 73.32 48 IAmb IAmb 07 47 05.0
comp=Z,42nm,1.0s
ODSA **Odessa** 73.37 60 IAmb IAmb 07 47 19.9
comp=Z,27nm,0.8s
129A **Stewart Farms,** 73.38 59 IAmb IAmb 07 47 21.6
comp=Z,10nm,1.0s
OK029 **Liberty Lake** 73.42 54 IAmb IAmb 07 47 05.8
comp=Z,28nm,0.7s
WMOK **Wichita Mounta** 73.51 56 IAmb IAmb 07 47 22.4
comp=Z,35nm,1.0s
QUOK **Quay** 73.53 54 IAmb IAmb 07 47 20.7
comp=Z,31nm,1.1s
SN07 **Snyder 07** 73.58 58 IAmb IAmb 07 47 20.9
comp=Z,26nm,0.8s
OK052 **Battle Ridge R** 73.62 54 IAmb IAmb 07 47 06.9
comp=Z,35nm,0.7s
TPB05 **Hovey Rd** 73.82 61 IAmb IAmb 07 47 22.8
comp=Z,14nm,0.8s
MNHN **Monahans** 73.83 61 IAmb IAmb 07 47 22.6
comp=Z,29nm,0.7s
APMT **Aspermont** 73.83 58 IAmb IAmb 07 47 22.3
comp=Z,44nm,0.8s
HDIL **Hopedale** 73.84 46 IAmb IAmb 07 47 08.0
comp=Z,47nm,0.9s
OJC **Ojcow** 73.85 332 *e*P P 07 47 06.4 -0.1
229A **Bryant Ranch,** 73.91 60 IAmb IAmb 07 47 23.7
comp=Z,24nm,0.9s
NGCH **Negor - Chabah** 73.98 290 P P 07 47 08.5 +0.9
STHS **Stebnicka Huta** 74.11 331 *e*P P 07 47 08.5 +0.4
STHS **Stebnicka Huta** 74.11 331 *e*P P 07 47 08.5 +0.4
R40A **Maddies Statio** 74.18 49 IAmb IAmb 07 47 09.6
comp=Z,26nm,0.8s
KOLS **Kolonicke sedl** 74.19 330 *e*P P 07 47 08.9 +0.3
KOLS pmax pmax
comp=Z,24nm,0.7s
EKA **Eskdalemuir Ar** 74.21 348 P P 07 47 08.3 -0.2
comp=Z,2.0nm,0.4s,baz=19,slow=5.1,SNR=14
EKA LR LR 08 25 24.0
comp=Z,265nm,18.0s,baz=2.5,slow=40
comp=Z,2.0nm,0.4s
KSP **Ksiaz** 74.32 335 *e*P P 07 47 09.3 0.0
BURAR **Bucovina Array** 74.34 328 P P 07 47 09.3 -0.3
BURAR **Bucovina Array** 74.34 328 ⇑P P 07 47 09.5 0.0
BURAR **Bucovina Array** 74.34 328 P P 07 47 09.5 0.0
NIE **Niedzica** 74.40 332 *e*P P 07 47 11.3 +1.5
RLO **Rose Lookout** 74.42 52 IAmb IAmb 07 47 10.9
comp=Z,21nm,0.8s
P43A **Skaggs, Pawnee** 74.46 47 IAmb IAmb 07 47 25.2
comp=Z,49nm,1.5s
EIDS **Eidsvold** 74.46 184 P P 07 47 11.7 +1.5
comp=Z,18nm,1.4s
EIDS **Eidsvold** 74.46 184 P P 07 47 10.9 +0.8
U38A **Gravette** 74.54 52 IAmb IAmb 07 47 11.8
comp=Z,75nm,1.9s
OSTC **Ostas** 74.60 334 *e*P P 07 47 11.0 +0.1
OSTC **Ostas** 74.60 334 *e*P P 07 47 11.0 +0.1
LPIG **La Paz** 74.67 71 LR LR 08 17 37.4
comp=Z,62nm,18.5s,baz=326,slow=34
PALK **Pallekele** 74.68 263 LR LR 08 21 26.2
comp=Z,93nm,22.0s,baz=14,slow=37
PALK **Pallekele** 74.68 263 P P 07 47 12.9 +1.0
PALK pP PcP 07 47 24.7 -1.2
UPC **Upice** 74.70 335 *e*P P 07 47 11.8 +0.3
UPC **Upice** 74.70 335 *e*P P 07 47 11.8 +0.3
STEB **Steborice** 74.71 333 *e*P P 07 47 11.6 +0.1
DPC **Dobruska-Polom** 74.76 334 *e*P P 07 47 12.4 +0.5
DPC **Dobruska-Polom** 74.76 334 *e*P P 07 47 12.4 +0.5
TESR **Tescani** 74.77 326 ⇑P P 07 47 11.8 -0.1
CLL **Collm** 74.79 337 *i* P P 07 47 12.1 +0.2
CLL pmax pmax
comp=Z,18nm,0.9s
CLL MLR MLR
comp=Z,600nm,18.5s
comp=Z,18nm,0.9s
CLL **Collm** 74.79 337 *i* P P 07 47 12.1 +0.2
CLL AMS AMS 08 26 00.0
comp=Z,600nm,18.5s
TX31 **Lajitas Ar. Si** 74.80 63 IAmb IAmb 07 47 28.6
comp=Z,34nm,0.8s
TXAR **Lajitas Array** 74.80 63 P P 07 47 13.4 +0.9
comp=Z,18nm,0.9s,baz=298,slow=4.3,SNR=145
comp=Z,18nm,0.9s
VLDR **Vladesti** 74.80 325 ⇓P P 07 47 13.5 +1.4
SADO **Sadowa** 74.83 37 LR LR 08 21 44.0
comp=Z,290nm,19.9s,baz=336,slow=37
CCM **Cathedral Cave** 74.86 49 P P 07 47 12.2 -0.4
CCM **Cathedral Cave** 74.86 49 P P 07 47 12.2 -0.4
CCM pmax pmax
comp=Z,19nm,0.9s
BMR **Baia Mare** 74.88 329 ⇓P P 07 47 13.4 +0.8
BMR **Baia Mare** 74.88 329 P P 07 47 13.3 +0.8
HHAR **Hobbs** 74.89 52 IAmb IAmb 07 47 13.8
comp=Z,79nm,1.7s
LANS **Liptovska Anna** 74.89 332 *e*P P 07 47 14.0 +1.3
LANS pmax pmax
comp=Z,16nm,0.7s
LANS **Liptovska Anna** 74.89 332 *e*P P 07 47 14.0 +1.3
MORC **Moravsky Berou** 74.92 333 IAmb IAmb 07 47 14.3
comp=Z,18nm,0.7s
MORC **Moravsky Berou** 74.92 333 ⇓P P 07 47 13.3 +0.5
MORC **Moravsky Berou** 74.92 333 P P 07 47 13.2 +0.5
MORC **Moravsky Berou** 74.92 333 *e*P P 07 47 13.3 +0.5
LOOK **Love County** 74.94 55 IAmb IAmb 07 47 30.6
comp=Z,43nm,1.0s
BRG **Berggiesshubel** 74.94 336 *e*P P 07 47 13.1 +0.3
BRG Amp 07 47 13.8
comp=Z,5.4nm,0.9s
BRG pP PcP 07 47 20.9 -5.6
BRG Amp 07 47 21.5
comp=Z,4.7nm,0.7s
SCTR **Scanteiesti** 74.98 325 ⇑P P 07 47 14.5 +1.3
ONER **Baraj Valea Uz** 75.01 326 ⇑P P 07 47 13.7 +0.4
IDGL **Inch Island, C** 75.02 350 P P 07 47 13.9 +0.7
TLCR 75.08 324 ⇑P P 07 47 14.9 +1.2
TLCR 75.08 324 P P 07 47 14.9 +1.2
PVCC **Panska Ves** 75.08 335 *e*P P 07 47 14.3 +0.6
PVCC **Panska Ves** 75.08 335 *e*P P 07 47 14.3 +0.6
KECS **Kecovo** 75.16 331 *e*P P 07 47 14.8 +0.6
KECS pmax pmax
comp=Z,13nm,0.6s
KECS **Kecovo** 75.16 331 *e*P P 07 47 14.8 +0.6
IZVR **Izvoarele** 75.17 325 ⇓P P 07 47 14.7 +0.5
SCHL **Schela** 75.19 325 ⇓P P 07 47 15.2 +0.9
AS31 **Alice Springs** 75.19 201 P P 07 47 15.2 +0.7
ASAR **Alice Springs** 75.19 201 P P 07 47 14.9 +0.5
comp=Z,9.3nm,0.7s,baz=14,slow=5.4,SNR=121
ASAR LR LR 08 17 54.0
comp=Z,128nm,21.9s,baz=1.5,slow=34
comp=Z,9.3nm,0.7s
ASAR **Alice Springs** 75.19 201 P P 07 47 14.5 0.0
ASAR **Alice Springs** 75.19 201 P P 07 47 14.5 0.0
MAUC **Maruska** 75.20 333 *e*P P 07 47 15.2 +0.8
Q44A **Meyer Farm, Va** 75.28 47 IAmb IAmb 07 47 16.3
comp=Z,60nm,1.3s
HSKC **Hora Svate Kat** 75.32 336 *e*P P 07 47 15.5 +0.5
FVM **French Village** 75.32 48 IAmb IAmb 07 47 16.5
comp=Z,19nm,0.7s
PLOR **Plostina** 75.33 326 ⇓P P 07 47 15.4 +0.2
PLOR **Plostina** 75.33 326 P P 07 47 15.4 +0.2
TRQ **Mont Tremblant** 75.33 33 IAmb IAmb 07 47 39.3
comp=Z,22nm,0.9s
CFR **Carcaliu** 75.34 325 ⇓P P 07 47 15.8 +0.6
CFR **Carcaliu** 75.34 325 P P 07 47 15.8 +0.6
Z35A **Perchaven, San** 75.40 56 IAmb IAmb 07 47 17.0
comp=Z,26nm,1.0s
COVR **Voineasa-Covas** 75.50 326 ⇑P P 07 47 17.3 +1.1
TPGR **Topolog** 75.51 324 ⇑P P 07 47 17.0 +0.8
P46A **Rosedale** 75.56 45 IAmb IAmb 07 47 30.1
comp=Z,37nm,1.1s
PRU **Pruhonice** 75.58 335 *e*P P 07 47 17.2 +0.7
PRU **Pruhonice** 75.58 335 *e*P P 07 47 17.2 +0.7
VRAC **Vranov** 75.61 334 LR LR 08 23 59.5
comp=Z,1µm,19.4s,baz=10,slow=38
VRAC **Vranov** 75.61 334 ⇑P P 07 47 17.4 +0.6
VRAC **Vranov** 75.61 334 P P 07 47 17.3 +0.6
VRAC **Vranov** 75.61 334 *e*P P 07 47 17.2 +0.4
LMQ **La Malbaie** 75.64 30 IAmb IAmb 07 47 18.4
comp=Z,32nm,1.2s
CJR **Cluj-Napoca** 75.68 328 ⇑P P 07 47 18.3 +1.1
CJR **Cluj-Napoca** 75.68 328 P P 07 47 18.3 +1.1
DOPR **Dopca** 75.69 327 ⇑P P 07 47 17.6 +0.3
JAVC **Velka Javorina** 75.70 333 *e*P P 07 47 18.4 +1.1
MOX **Moxa** 75.75 337 *e*P P 07 47 17.5 0.0
baz=24,slow=5.6
MOX *eL* L 08 26 39.6
comp=Z,392nm,21.1s
PLN **Plauen** 75.76 337 *e*P P 07 47 17.7 +0.2
comp=Z,3.2nm,1.0s,baz=24,slow=5.6
TIRR **Tirgusor** 75.84 324 ⇑P P 07 47 19.5 +1.3
TIRR **Tirgusor** 75.84 324 P P 07 47 19.4 +1.3
OLIL **Olney** 75.85 46 IAmb IAmb 07 47 33.6
comp=Z,31nm,1.1s
PSZ **Piszkesteto** 75.85 331 ⇑P P 07 47 17.3 -1.0
PSZ **Piszkesteto** 75.85 331 P P 07 47 17.2 -1.0
MARR **Marisel-Cluj** 75.87 328 ⇓P P 07 47 18.9 +0.5
KRUC **Moravsky** 75.89 334 *e*P P 07 47 18.6 +0.3
MLR **Muntele Rosu** 75.89 326 LR LR 08 24 02.6
comp=Z,643nm,18.8s,baz=39,slow=38
MLR **Muntele Rosu** 75.89 326 IAmb IAmb 07 47 21.6
comp=Z,25nm,0.7s
MLR **Muntele Rosu** 75.89 326 ⇓P P 07 47 19.3 +0.7
MLR **Muntele Rosu** 75.89 326 P P 07 47 19.2 +0.7
MLR **Muntele Rosu** 75.89 326 P P 07 47 18.3 -0.3
comp=Z,36nm,0.7s
MDB **Medias** 75.90 327 ⇓P P 07 47 19.1 +0.7
MDB **Medias** 75.90 327 P P 07 47 19.1 +0.7
DRGR 75.91 329 ⇑P P 07 47 19.3 +0.7
DRGR 75.91 329 P P 07 47 18.6 0.0
TREC **Trest** 75.94 334 *e*P P 07 47 18.7 +0.1
TREC **Trest** 75.94 334 *e*P P 07 47 18.7 +0.1
O48B **Farmland** 75.99 43 IAmb IAmb 07 47 32.5
comp=Z,36nm,1.1s
ISR **Istrita** 75.99 325 ⇑P P 07 47 18.9 -0.1
ISR **Istrita** 75.99 325 P P 07 47 18.9 -0.1
ISR **Istrita** 75.99 325 P P 07 47 19.0 -0.1
comp=Z,45nm,0.8s
ARPR **Arapgir-MALATY** 76.02 315 IAmb IAmb 07 47 22.7
comp=Z,33nm,0.9s
SMOL **Smolenice** 76.08 333 *e*P P 07 47 21.0 +1.6
SMOL pmax pmax
comp=Z,10.0nm,0.8s
FCAR **Ozark Folk Cen** 76.12 51 IAmb IAmb 07 47 20.6
comp=Z,23nm,0.7s
S44A **Carbondale** 76.12 48 IAmb IAmb 07 47 21.2
comp=Z,22nm,0.8s
SIUC **Southern Illin** 76.12 48 IAmb IAmb 07 47 21.2
comp=Z,78nm,1.5s
ZVC **Zvikov** 76.17 335 *e*P P 07 47 20.3 +0.4
QLP **Quilpie** 76.24 190 P P 07 47 21.3 +0.9
comp=Z,57nm,1.1s
MODS **Modra-Piesok** 76.25 333 *e*P P 07 47 21.4 +1.0
MODS pmax pmax
comp=Z,47nm,1.4s
MODS **Modra-Piesok** 76.25 333 *e*P P 07 47 21.4 +1.0
VOIR 76.26 327 ⇑P P 07 47 21.9 +1.3
VOIR 76.26 327 P P 07 47 21.0 +0.4
VOIR 76.26 327 P P 07 47 20.5 -0.1
comp=Z,28nm,0.8s
PBMO **Poplar Bluff** 76.27 49 IAmb IAmb 07 47 22.4
comp=Z,66nm,1.6s
MNTQ **Montreal, Queb** 76.29 33 IAmb IAmb 07 47 21.6
comp=Z,23nm,1.0s
ROTZ **Rotzenmuhle** 76.41 337 *e*P P 07 47 21.5 +0.3
comp=Z,2.4nm,0.8s,baz=24,slow=5.6
SRO **Srobarova** 76.44 332 *e*P P 07 47 22.6 +1.2
SRO pmax pmax
comp=Z,17nm,0.7s
SRO **Srobarova** 76.44 332 *e*P P 07 47 22.6 +1.2
LCAR **Lake Charles** 76.46 50 IAmb IAmb 07 47 23.1
comp=Z,50nm,1.9s
SULR 76.47 325 ⇑P P 07 47 22.6 +0.9
ARR **Arges** 76.47 327 ⇓P P 07 47 23.0 +1.3
DRIO **Del Rio** 76.49 61 IAmb IAmb 07 47 24.0
comp=Z,32nm,1.1s
BANOM **Banah** 76.50 294 *i* P P 07 47 23.0 +0.9
SNR=14
BANOM **Banah** 76.50 294 P P 07 47 23.0 +0.9

BANOM P P 07 47 23.0 +0.9
SHME Shamm 76.50 294 *i* P P 07 47 22.7 +0.6
SNR=6.1
SHME Shamm 76.50 294 P P 07 47 22.9 +0.8
SHME P P 07 47 22.9 +0.8
WHAR Wooly Hollow 76.50 51 IAmb IAmb 07 47 23.3
comp=Z,51nm,1.3s
ILGA Ilgaz 76.51 319 IAmb IAmb 07 47 25.6
comp=Z,32nm,0.7s
P48A Milroy 76.51 44 IAmb IAmb 07 47 23.7
comp=Z,77nm,1.6s
KHC Kasperske Hory 76.62 335 *e*P P 07 47 23.0 +0.5
KHC *es*P **sP** 07 47 44.0 -1.3
KHC Kasperske Hory 76.62 335 *e*P P 07 47 23.0 +0.5
KHC *e* 07 47 44.0
Z38A Mt. Pleasant 76.67 54 IAmb IAmb 07 47 38.5
comp=Z,33nm,0.9s
DSB Dublin 76.68 349 P P 07 47 23.3 +0.6
CKRC Cesky Krumlov 76.70 335 *e*P P 07 47 23.6 +0.6
CKRC Cesky Krumlov 76.70 335 *e*P P 07 47 23.6 +0.6
E62A Clayton Lake 76.72 30 IAmb IAmb 07 47 24.4
comp=Z,22nm,0.8s
GRA1 Grafenberg Arr 76.73 337 P P 07 47 22.9 -0.2
GRA1 IAmb IAmb 07 47 24.8
comp=Z,27nm,0.8s
GRF Grafenberg Arr 76.73 337 P P 07 47 22.9 -0.2
GRF pmax pmax
comp=Z,27nm,0.8s
GRF Grafenberg Arr 76.73 337 *e*P P 07 47 23.8 +0.8
comp=Z,27nm,0.8s,baz=24,slow=5.6
GRF *e*L L 08 21 41.1
comp=Z,645nm,20.6s
WET Wettzell 76.80 336 *e*P P 07 47 23.9 +0.4
comp=Z,16nm,0.8s,baz=24,slow=5.6
X40A Basin Creek Fa 76.85 52 IAmb IAmb 07 47 25.5
comp=Z,25nm,1.3s
GEC2 GERESS Array S 76.85 335 *e*P P 07 47 23.8 0.0
comp=Z,10nm,0.7s,baz=24,slow=5.6
GERES GERESS Array B 76.85 335 P P 07 47 24.0 +0.2
comp=Z,8.0nm,0.6s,baz=31,slow=6.2,SNR=57
GERES LR LR 08 25 08.6
comp=Z,1μm,19.8s,baz=22,slow=39
comp=Z,8.0nm,0.6s
IGLA Glengowla, Co 76.85 351 P P 07 47 24.0 +0.4
TNS Taunus Mts 76.91 339 *e*P P 07 47 24.8 +0.7
comp=Z,31nm,0.7s,baz=24,slow=5.6
T45A Paducah 76.95 48 IAmb IAmb 07 47 26.1
comp=Z,37nm,0.8s
MDH Madha 76.96 294 P P 07 47 24.6 -0.1
MDH Madha 76.96 294 P P 07 47 25.1 +0.3
MASF Masafi 76.99 294 P P 07 47 25.8 +0.8
MSFE Esma-Masafi 77.00 294 P P 07 47 25.9 +0.8
CONA Conrad Observa 77.07 334 *i* P P 07 47 26.3 +1.2
comp=Z,14nm,0.7s,SNR=9.9
WSAR Wadi Sarin 77.08 290 P P 07 47 26.4 +0.9
MBWA Marble Bar 77.08 214 P P 07 47 26.1 +0.9
comp=Z,42nm,1.4s
MBWA Marble Bar 77.08 214 P P 07 47 25.0 -0.2
MBWA IAmb IAmb 07 47 26.7
comp=Z,38nm,1.1s
MBWA Marble Bar 77.08 214 P P 07 47 25.6 +0.4
WCI Wyandotte Cave 77.10 45 P P 07 47 25.3 0.0
WCI Wyandotte Cave 77.10 45 P P 07 47 25.3 0.0
WCI pmax pmax
comp=Z,37nm,0.8s
WCI Wyandotte Cave 77.10 45 P P 07 47 25.9 +0.6
WCI pP **PcP** 07 47 37.8 +1.8
MEM Membach 77.10 341 *d*P P 07 47 24.8 -0.3
comp=Z,28nm,0.8s
GZR Gura Zlata 77.11 328 ⇑P P 07 47 25.5 +0.2
GZR Gura Zlata 77.11 328 P P 07 47 25.4 +0.1
RONA Rosalia, Austr 77.15 333 *i* P P 07 47 26.8 +1.4
comp=Z,8.8nm,0.8s,SNR=8.1
BSTI Sart Tilman 77.22 341 *d*P P 07 47 26.4 +0.6
comp=Z,8.0nm,0.9s
MPLH Magyarpolny 77.25 332 P P 07 47 25.9 -0.1
comp=Z,112nm,1.0s
UOSS Minazif 77.28 293 P P 07 47 26.9 +0.4
UOSS P P 07 47 26.9 +0.4
BZS Buzias 77.31 329 ⇓P P 07 47 26.6 +0.2
BZS Buzias 77.31 329 P P 07 47 26.3 -0.1
COPA Copaceanca 77.32 326 ⇑P P 07 47 26.2 -0.2
RAZG Razgrad 77.33 325 ⇑P P 07 47 27.0 +0.5
WBK Wadi Bani Khal 77.34 290 P P 07 47 26.1 -0.8
BHOU Houvegnez 77.34 341 *d*P P 07 47 27.0 +0.5
comp=Z,20nm,0.8s
BNN Bunyan 77.36 316 IAmb IAmb 07 47 30.0
comp=Z,22nm,0.9s
PSAC2 Pilbara Seismi 77.39 214 P P 07 47 27.5 +0.5
comp=Z,30nm,1.4s
PSAC1 Pilbara Seismi 77.40 214 P P 07 47 27.4 +0.5
comp=Z,29nm,1.3s,comp=Z,0.0nm
JLN Jalan Bani Buh 77.41 289 P P 07 47 28.9 +1.6
JLN P P 07 47 28.9 +1.6
HATD Hatta, Dubai 77.42 293 *i* P P 07 47 28.1 +0.8
SNR=8.3
HATD Hatta, Dubai 77.42 293 P P 07 47 28.2 +0.8
SNR=5.4
HATD P P 07 47 28.2 +0.8
SNR=5.4
PSA00 Pilbara Seismi 77.42 214 P P 07 47 27.1 0.0
comp=Z,30nm,1.5s
PSA00 Pilbara Seismi 77.42 214 P P 07 47 27.1 0.0
PSA00 IAmb IAmb 07 47 27.9
comp=Z,23nm,1.0s
PSA00 Pilbara Seismi 77.42 214 IAmb IAmb 07 47 28.0
comp=Z,24nm,1.0s
BCLA Clavier 77.43 341 *d*P P 07 47 26.9 -0.1
comp=Z,47nm,1.0s
BCLA *d*PP **PP** 07 50 21.8 +0.5
PSAB3 Pilbara Seismi 77.43 214 P P 07 47 27.6 +0.4
comp=Z,43nm,1.4s
BGES Gesves 77.51 341 *d*P P 07 47 27.9 +0.5
comp=Z,19nm,0.9s
P51A Williamsport 77.55 43 IAmb IAmb 07 47 28.7
comp=Z,22nm,1.1s
ASHO Ashiyiah 77.56 293 *i* P P 07 47 29.0 +0.8
SNR=15
ASHO Ashiyiah 77.56 293 P P 07 47 28.5 +0.3
SNR=6.1
SMDO Samad 77.57 291 P P 07 47 29.0 +0.7
SMDO P P 07 47 29.0 +0.7
R49A Shelbyville 77.57 45 IAmb IAmb 07 47 30.0
comp=Z,40nm,1.6s
NAZ Nazwa, Dubai 77.58 294 P P 07 47 28.5 +0.3
NAZ Nazwa, Dubai 77.58 294 P P 07 47 29.0 +0.8
NAZ P P 07 47 29.0 +0.8
IWEX Carrickbyrne, 77.58 349 P P 07 47 28.2 +0.5
MOA Molln 77.60 334 *i* P P 07 47 28.7 +0.7
comp=Z,8.0nm,0.6s
VT1 Waterbury 77.61 33 IAmb IAmb 07 47 29.6
comp=Z,26nm,1.0s
HOQ Hoqain 77.63 292 P P 07 47 29.4 +0.9
HOQ P P 07 47 29.4 +0.9
BR131 Keskin Array S 77.63 318 IAmb IAmb 07 47 30.8
comp=Z,25nm,1.1s
BR131 Keskin Array S 77.63 318 P P 07 47 29.7 +1.2
SNR=8.8
BRTR Keskin Array B 77.63 318 P P 07 47 28.8 +0.3
comp=Z,12nm,1.0s,baz=52,slow=2.6,SNR=40
BRTR LR LR 08 26 32.1
comp=Z,237nm,18.7s,baz=12,slow=40
comp=Z,12nm,1.0s
BRTR Keskin Array B 77.63 318 P P 07 47 28.0 -0.5
BRTR Keskin Array B 77.63 318 P P 07 47 28.0 -0.5
BR106 Keskin Array S 77.63 318 P P 07 47 28.3 -0.2
comp=Z,140nmcomp=Z,17nm,1.1s
BR104 Keskin Array S 77.64 318 P P 07 47 28.4 -0.1
comp=Z,158nmcomp=Z,20nm,1.1s
BR105 Keskin Array S 77.65 318 P P 07 47 28.4 -0.2
comp=Z,172nmcomp=Z,21nm,1.1s
BMRD Maredsous 77.65 341 *d*P P 07 47 28.8 +0.6
comp=Z,23nm,0.9s
HERR Herculane 77.68 328 ⇑P P 07 47 28.0 -0.4
SOHO SOHO 77.69 293 P P 07 47 29.3 +0.5
SOHO SOHO 77.69 293 P P 07 47 29.8 +1.0
SOHO P P 07 47 29.8 +1.0
RCHB Rochefort 77.70 341 *d*P P 07 47 28.8 +0.4
comp=Z,14nm,0.9s
T47A Sharon Grove 77.72 47 IAmb IAmb 07 47 30.7
comp=Z,30nm,1.1s
MORH Mrgy, Hungar 77.76 331 ⇓P P 07 47 28.9 0.0
MORH Mrgy, Hungar 77.76 331 P P 07 47 28.6 -0.2
comp=Z,14nm,2.7s
RMGR Halanga-Turnu 77.77 328 ⇓P P 07 47 29.4 +0.4

ARSA Arzberg 77.78 333 *i* P P 07 47 29.9 +0.9
comp=Z,4.7nm,0.6s,SNR=6.8
FAQ Al Faqa, Dubai 77.80 294 P P 07 47 29.9 +0.4
FAQ Al Faqa, Dubai 77.80 294 P P 07 47 30.5 +1.0
Q51A Peebles 77.80 43 IAmb IAmb 07 47 30.6
comp=Z,16nm,0.8s
CCAR Cane Creek 77.84 52 IAmb IAmb 07 47 31.6
comp=Z,31nm,0.9s
DOU Dourbes 77.89 341 *d*P P 07 47 29.1 -0.4
comp=Z,11nm,1.0s
DOU *d*PP **PP** 07 50 24.9 -0.1
BIOA Bad Ischl, Aus 77.92 335 *i* P P 07 47 30.6 +0.8
comp=Z,14nm,0.7s,SNR=6.6
WRKA Warakurna 77.93 205 P P 07 47 30.9 +1.0
comp=Z,22nm,1.0s
WLF Walferdange 77.96 340 *d*P P 07 47 30.6 +0.7
KIRS Kirsehir-Merke 78.00 317 ⇑P P 07 47 31.2 +0.7
ASUD Al Ashush, Dub 78.05 294 P P 07 47 31.1 +0.3
ASUD Al Ashush, Dub 78.05 294 P P 07 47 31.7 +0.9
ASUD P P 07 47 31.7 +0.9
JMDO Jabal Madar 78.05 290 P P 07 47 31.0 +0.1
JMDO P P 07 47 31.0 +0.1
WVT Waverly 78.05 48 P P 07 47 31.3 +0.6
WVT Waverly 78.05 48 P P 07 47 31.3 +0.6
WVT pmax pmax
comp=Z,11nm,0.8s
STU Stuttgart 78.08 338 *e*P P 07 47 31.0 +0.4
comp=Z,48nm,0.9s,baz=24,slow=5.6
GAZ Gaziantep 78.09 314 IAmb IAmb 07 47 33.5
comp=Z,56nm,1.4s
PLVB Pleven 78.19 326 ⇓P P 07 47 31.2 -0.1
ALNE Al Ain 78.22 293 P P 07 47 32.8 +1.0
SNR=5.1
ALNE P P 07 47 32.8 +1.0
SNR=5.1
AJN Ajban 78.30 294 P P 07 47 32.7 +0.5
AJN P P 07 47 32.7 +0.5
BSY Bisya 78.32 291 P P 07 47 33.4 +1.0
BSY P P 07 47 33.4 +1.0
LESA Schwarzleotal 78.43 335 *e*P P 07 47 33.7 +1.0
comp=Z,18nm,0.7s,SNR=11
SOKA Soboth 78.44 333 *i* P P 07 47 33.3 +0.5
comp=Z,26nm,0.7s,SNR=15
PERS Pernice 78.45 333 *i* P P 07 47 33.3 +0.5
GROS Grobnik 78.50 333 *i* P P 07 47 33.2 +0.2
KBA Koelnbreinsper 78.56 335 *i* P P 07 47 34.7 +1.2
comp=Z,94nm,0.7s,SNR=52
OXF Oxford 78.57 50 IAmb IAmb 07 47 48.9
comp=Z,48nm,1.1s
L59A Walton 78.60 36 IAmb IAmb 07 47 35.3
comp=Z,26nm,1.1s
BFO Black Forest 78.71 338 *e*P P 07 47 34.3 +0.2
comp=Z,16nm,0.8s,baz=24,slow=5.6
OBKA Obir 78.73 334 *i* P P 07 47 34.9 +0.5
comp=Z,21nm,0.7s,SNR=13
T50A Nancy 78.75 45 IAmb IAmb 07 47 35.6
comp=Z,19nm,0.8s
HKT Hockley 78.77 57 P P 07 47 34.1 -0.5
HKT Hockley 78.77 57 P P 07 47 34.1 -0.5
HKT pmax pmax
comp=Z,10.0nm,1.0s
WATA Walderalm 78.81 336 *i* P P 07 47 35.4 +0.6
comp=Z,26nm,0.8s,SNR=22
WTTA Wattenberg 78.86 336 *i* P P 07 47 36.1 +0.9
comp=Z,41nm,0.8s,SNR=17
RETA Reutte 78.88 337 *i* P P 07 47 35.7 +0.6
comp=Z,11nm,0.8s
MYKA Terra Mystica 78.88 334 *i* P P 07 47 35.4 +0.3
comp=Z,15nm,0.8s,SNR=9.1
MOTA Moosalm 78.92 336 *i* P P 07 47 36.0 +0.5
comp=Z,32nm,0.9s,SNR=13
Q54A Coxs Mills 78.94 41 IAmb IAmb 07 47 51.1
comp=Z,44nm,1.4s
143A Sons Landing, 78.98 52 IAmb IAmb 07 47 52.5
comp=Z,59nm,1.3s
SQTA Sankt Quirin 79.01 336 *i* P P 07 47 36.6 +0.7
comp=Z,30nm,0.8s,SNR=14
BOVS Bovan 79.02 328 ⇓P P 07 47 35.7 -0.2
PRED Cave del Predi 79.08 334 IAmb IAmb 07 47 36.9
comp=Z,27nm,0.7s
ECH Echery 79.09 339 IAmb IAmb 07 47 37.5
comp=Z,25nm,0.9s
ABTA Altertsbach 79.09 335 *i* P P 07 47 36.6 +0.3
comp=Z,25nm,1.2s,SNR=8.6
N58A Sunbury 79.10 38 IAmb IAmb 07 47 52.6
comp=Z,42nm,1.5s
MHTO MHTO 79.16 289 P P 07 47 38.0 +1.0
SNR=22
MHTO P P 07 47 38.0 +1.0
SNR=22
JRN Qarnain Island 79.28 296 P P 07 47 37.6 0.0
JRN P P 07 47 37.6 0.0
DAVA Damuels 79.29 337 *i* P P 07 47 37.9 +0.3
comp=Z,18nm,0.9s,SNR=5.3
FETA Feichten 79.32 336 *i* P P 07 47 38.2 +0.5
comp=Z,21nm,0.8s,SNR=11
HBVL Hebbronville 79.39 61 IAmb IAmb 07 47 55.5
comp=Z,30nm,0.8s
BOJS Bojanci 79.44 333 *i* P P 07 47 38.2 +0.1
ARMA Armidale 79.46 183 P P 07 47 40.3 +2.0
comp=Z,35nm,1.1s
ARMA Armidale 79.46 183 P P 07 47 39.1 +0.8
ARMA IAmb IAmb 07 47 40.8
comp=Z,31nm,0.9s
STAL STALIGIAL 79.48 335 IAmb IAmb 07 47 38.6
comp=Z,18nm,0.7s
BLY Banja Luka 79.53 331 ⇓P P 07 47 38.5 -0.1
MZWR Madinat Zayed 79.56 294 P P 07 47 40.0 +0.9
MZWR P P 07 47 40.0 +0.9
UMZA Um Al Zommool 79.58 293 P P 07 47 40.2 +0.9
KNDS Knezji Dol 79.67 333 *e*P P 07 47 39.1 -0.4
SHMA Al-Shehemyia 79.69 298 P P 07 47 40.7 +0.9
TRI Trieste 79.69 334 IAmb IAmb 07 47 38.6
comp=Z,25nm,0.6s
SWET Sewanee 79.70 47 IAmb IAmb 07 47 40.4
comp=Z,29nm,0.8s
DAVOX Davos/Dischmat 79.76 337 LR LR 08 27 53.6
comp=Z,500nm,18.2s,baz=10,slow=39
FUORN Ofenpass-Fuorn 79.81 337 P P 07 47 40.7 +0.3
FUORN IAmb IAmb 07 47 42.5
comp=Z,24nm,0.8s
R55A Marlinton 79.83 41 IAmb IAmb 07 47 42.1
comp=Z,22nm,0.9s
SAKB Bahrain 79.84 298 P P 07 47 41.6 +1.0
HMDM Hanimaadhoo 79.96 269 P P 07 47 42.4 +1.1
CTI Castel Tesino 79.97 335 IAmb IAmb 07 47 48.5
comp=Z,21nm,0.7s
GHWR Ruwais 80.01 295 P P 07 47 42.6 +1.0
COCO West Island 80.03 238 P P 07 47 42.9 +1.3
TUE Stuetta 80.19 337 P P 07 47 42.4 0.0
TUE Stuetta 80.19 337 P P 07 47 42.1 -0.3
comp=Z,295nm,0.8s
DQM DQM 80.22 289 P P 07 47 43.8 +1.0
Z47A Carrollton 80.28 50 IAmb IAmb 07 47 44.3
comp=Z,28nm,0.9s
TKL Tuckaleechee C 80.36 45 LR LR 08 24 16.0
comp=Z,238nm,20.5s,baz=342,slow=36
MZR Muzera 80.38 294 *i* P P 07 47 43.8 +0.2
SNR=40
MZR Muzera 80.38 294 P P 07 47 43.8 +0.2
SNR=14
TRNA Turayna 80.40 297 P P 07 47 43.8 +0.1
EZN Ezine 80.60 323 P P 07 47 44.4 0.0
comp=Z,44nm,1.2s
SMRA Abu-Samra 80.62 297 P P 07 47 44.9 +0.1
RAR Rarotonga 80.65 138 LR LR 08 14 46.7
comp=Z,171nm,21.3s,baz=310,slow=29
SENIN Lac Senin/Sane 80.80 338 IAmb IAmb 07 47 48.3
comp=Z,23nm,0.8s
CMSA Cobar Meteorol 80.98 189 P P 07 47 47.6 +1.3
comp=Z,36nm,1.0s
CMSA Cobar Meteorol 80.98 189 P P 07 47 47.0 +0.7
CSS Mathiatis 81.70 315 P P 07 47 50.4 0.0
comp=Z,50nm,1.0s
RAO Raoul Island 81.71 157 LR LR 08 18 36.7
comp=Z,462nm,19.8s,baz=123,slow=32
STKA Stephens Creek 81.79 192 P P 07 47 51.0 +0.4
comp=Z,7.4nm,0.9s,baz=2.5,slow=9.5,SNR=11
STKA LR LR 08 22 34.1
comp=Z,174nm,21.4s,baz=23,slow=34
comp=Z,7.4nm,0.9s
STKA Stephens Creek 81.79 192 P P 07 47 50.3 -0.3
STKA Stephens Creek 81.79 192 P P 07 47 51.4 +0.8
STKA Stephens Creek 81.79 192 P P 07 47 50.3 -0.3
STKA pmax pmax
comp=Z,71nm,1.2s

BNI Bardonecchia 82.18 338 IAmb IAmb 07 47 55.0
comp=Z,23nm,0.8s
ASF Jabal al Asfar 82.29 311 LR LR 08 28 42.0
comp=Z,245nm,20.1s,baz=24,slow=39
MMAI Mount Meron Ar 82.33 313 P P 07 47 54.7 +0.9
comp=Z,24nm,0.5s,baz=22,slow=12,SNR=40
MMAI LR LR 08 29 57.8
comp=Z,151nm,18.3s,baz=16,slow=40
comp=Z,24nm,0.5s
V58A Windy Hill, Pi 82.35 42 IAmb IAmb 07 47 55.0
comp=Z,20nm,1.0s
PPT Papeete 82.37 128 LR LR 08 19 59.1
comp=Z,94nm,20.2s,baz=347,slow=32
OSSC Osservatorio P 82.41 335 IAmb IAmb 07 47 55.1
comp=Z,32nm,0.8s
SSB Saint Sauveur 82.46 340 IAmb IAmb 07 47 56.1
comp=Z,29nm,0.7s
SSB Saint Sauveur 82.46 340 P P 07 47 55.2 +0.9
SHAO Shalim 82.84 289 *i* P P 07 47 57.4 +0.8
SNR=7.5
SHAO Shalim 82.84 289 P P 07 47 57.7 +1.1
SHAO P P 07 47 57.7 +1.1
AQU L'Aquila 82.86 333 P P 07 47 56.2 -0.2
comp=Z,57nm,1.1s
CESX Cesi 82.87 333 IAmb IAmb 07 47 59.4
comp=Z,34nm,1.2s
INTR Introdacqua 83.02 332 IAmb IAmb 07 48 00.8
comp=Z,38nm,1.0s
X58A Rowland 83.30 43 IAmb IAmb 07 48 00.3
comp=Z,26nm,0.8s
DOK Doka 83.31 291 P P 07 47 59.4 +0.4
SNR=23
DOK P P 07 47 59.4 +0.4
SNR=23
MATE Matera 83.37 330 ⇑P P 07 47 59.2 +0.2
FORT Forrest 83.44 204 P P 07 48 00.3 +1.1
comp=Z,83nm,0.7s
FORT Forrest 83.44 204 P P 07 47 59.0 -0.2
DMTO DMTO 83.49 289 P P 07 48 00.3 +0.4
SNR=6.0
DMTO P P 07 48 00.3 +0.4
SNR=6.0
BBOO Buckleboo 83.60 196 P P 07 47 59.8 -0.2
BBOO IAmb IAmb 07 48 01.0
comp=Z,24nm,0.9s
BBOO Buckleboo 83.60 196 P P 07 48 00.2 +0.2
PAOL Paolisi 83.71 331 IAmb IAmb 07 48 01.4
comp=Z,21nm,1.1s
HTT Hallett 83.71 194 P P 07 48 00.9 +0.3
comp=Z,6.7nm,1.8s
HTT Hallett 83.71 194 P P 07 48 00.7 +0.1
RBK Rabkut 84.11 290 P P 07 48 03.7 +0.5
SNR=9.9
RBK P P 07 48 03.7 +0.5
SNR=9.9
CUC Castrocucco 84.25 330 IAmb IAmb 07 48 03.8
comp=Z,26nm,1.3s
RAYN Ar Rayn 84.62 300 P P 07 48 06.3 +0.6
RAYN Ar Rayn 84.62 300 P P 07 48 06.1 +0.3
TIP Timpagrande 84.67 329 ⇑P P 07 48 05.9 +0.2
TIP Timpagrande 84.67 329 P P 07 48 05.6 -0.2
ABTO Aybut 84.78 290 P P 07 48 06.9 +0.3
SNR=13
ABTO P P 07 48 06.9 +0.3
SNR=13
EIL Elat 85.29 311 LR LR 08 29 31.4
comp=Z,281nm,20.9s,baz=7.5,slow=38
MORW Morawa 85.64 214 IAmb IAmb 07 48 11.2
comp=Z,31nm,1.1s
CEST Esterri de Car 85.73 341 IAmb IAmb 07 48 16.8
comp=Z,38nm,1.4s
CEL Celeste 85.79 329 P P 07 48 11.3 0.0
BLDU Ballidu 86.80 213 P P 07 48 16.3 +0.3
VAE Valguarnera 86.99 330 LR LR 08 33 26.3
comp=Z,438nm,19.5s,baz=30,slow=40
KLBR Kellerberrin 87.32 212 P P 07 48 18.9 +0.4
PBRG Braganca 87.94 347 *e*P P 07 48 21.5 -0.2
PBRG *i* IAmb IAmb 07 48 23.8
comp=Z,87nm,1.6s
PBRG *e*pP **sP** 07 48 49.7 +4.9
PGAV Gavieira, Arco 88.00 348 *e*P P 07 48 21.5 -0.5
PGAV *i* IAmb IAmb 07 48 24.0
comp=Z,108nm,1.8s
TOZ Tahuroa Road 88.45 164 IAmb IAmb 07 48 27.1
comp=Z,18nm,0.9s
POLO Lamas de Olo 88.51 348 *e*P P 07 48 23.9 -0.6
POLO *i* IAmb IAmb 07 48 41.7
comp=Z,33nm,1.6s
PVRL Vila Real 88.60 348 *e*P P 07 48 24.7 -0.1
PVRL *i* IAmb IAmb 07 48 26.5
comp=Z,66nm,1.9s
PVRL *e*pP **pP** 07 48 43.1 +1.6
MVO Moncorvo 88.61 347 *e*P P 07 48 24.7 -0.2
MVO *i* IAmb IAmb 07 48 26.5
comp=Z,75nm,1.6s
MVO *e*pP **pP** 07 48 38.3 -3.3
NWAO Narrogin (SRO) 88.72 211 LR LR 08 26 06.6
comp=Z,86nm,22.0s,baz=48,slow=34
NWAO Narrogin (SRO) 88.72 211 P P 07 48 25.4 +0.3
NWAO Narrogin (SRO) 88.72 211 P P 07 48 25.4 +0.3
NWAO pmax pmax
comp=Z,53nm,1.1s
NWAO Narrogin (SRO) 88.72 211 P P 07 48 25.6 +0.5
PVIS Viseu 89.17 348 *e*P P 07 48 27.5 -0.1
URZ Urewera 89.26 163 LR LR 08 20 29.2
comp=Z,212nm,20.6s,baz=1.0,slow=30
CMIG Matias Romero 89.32 64 LR LR 08 25 03.0
comp=Z,107nm,21.6s,baz=336,slow=33
MTE Manteigas 89.43 347 *e*P P 07 48 26.5 -2.2
MTE *i* IAmb IAmb 07 48 29.2
comp=Z,68nm,1.7s
ESDC Sonseca Array 89.56 344 P P 07 48 28.7 -0.7
comp=Z,6.8nm,0.8s,baz=2.5,slow=3.7,SNR=40
ESDC LR LR 08 33 59.9
comp=Z,544nm,19.9s,baz=22,slow=39
comp=Z,6.8nm,0.8s
ESDC Sonseca Array 89.56 344 P P 07 48 29.1 -0.3
PAB San Pablo 89.76 345 P P 07 48 29.5 -0.8
PAB San Pablo 89.76 345 P P 07 48 29.5 -0.8
PAB pmax pmax
comp=Z,65nm,2.0s
PCBR Castelo Branco 89.97 347 *e*P P 07 48 30.9 -0.3
PCBR *i* IAmb IAmb 07 48 32.7
comp=Z,25nm,1.7s
KEST Kesra 90.17 333 P P 07 48 32.8 +0.4
comp=Z,29nm,0.9s,baz=8.7,slow=1.2,SNR=33
KEST LR LR 08 32 42.2
comp=Z,766nm,21.4s,baz=25,slow=38
comp=Z,29nm,0.9s
KEST Kesra 90.17 333 P P 07 48 33.5 +1.1
PESTR Estremoz 90.94 347 *e*P P 07 48 34.6 -1.2
PESTR *i* IAmb IAmb 07 48 39.9
comp=Z,20nm,1.9s
PCVE Castro Verde 92.22 347 *e*P P 07 48 40.1 -1.6
PCVE *i* IAmb IAmb 07 49 04.2
comp=Z,27nm,1.8s
PVAQ Vaqueiros 92.39 347 *e*P P 07 48 46.7 +4.2
PVAQ *i* IAmb IAmb 07 48 49.5
comp=Z,32nm,1.5s
PBDV Barranco-do-Ve 92.58 347 *e*P P 07 48 40.9 -2.5
PBDV *i* IAmb IAmb 07 48 54.3
comp=Z,30nm,1.7s
RPZ Rata Peaks 93.64 169 LR LR 08 26 45.4
comp=Z,292nm,20.0s,baz=68,slow=33
ATD Arta Tunnel 95.62 295 LR LR 08 37 55.9
comp=Z,18nm,18.8s,baz=24,slow=39
MDT Midelt 96.35 343 LR LR 08 39 06.3
comp=Z,141nm,18.8s,baz=40,slow=40
TORD Torodi Ar. Bea 113.67 332 PKiKP **PKiKP** 07 54 10.4 0.0
comp=Z,1.0nm,0.8s,baz=280,slow=0.8,SNR=4.2
DBIC Dimbokro 121.69 337 PKP **PKPdf** 07 54 25.8 -0.1
comp=Z,4.8nm,0.7s,baz=8.7,slow=4.0,SNR=5.3
LSZ Lusaka 125.57 290 **PKiKP** 07 54 34.2 +0.5
LSZ Lusaka 125.57 290 PKiKP **PKiKP** 07 54 34.2 +0.5
ITTB Itaituba 127.92 41 *e*P **PKiKP** 07 54 38.7 +0.4
TMAB Tom-Au,PA,Br 129.03 31 *e*P **PKiKP** 07 54 41.4 +0.8
KSANE Kasane 129.36 290 **PKiKP** 07 54 41.6 +0.5
LPAZ La Paz 131.67 63 PKP **PKPdf** 07 54 45.2 -0.3
comp=Z,1.8nm,0.8s,baz=18,slow=10.0,SNR=6.9
LPAZ La Paz 131.67 63 **PKiKP** 07 54 46.3 -0.2
LPAZ La Paz 131.67 63 *e*P **PKiKP** 07 54 46.1 -0.4
PRPB Parauapebas 131.94 35 *e*P **PKiKP** 07 54 46.8 +0.3
LBTB Lobatse 134.40 283 **PKiKP** 07 54 50.7 -0.5
LBTB Lobatse 134.40 283 PKiKP **PKiKP** 07 54 50.7 -0.5
SIV San Ignacio 135.38 55 PKhKP PKPpre 07 54 38.4
comp=Z,1.3nm,1.0s,baz=320,slow=4.2,SNR=5.3

SIV				PKP		**PKPdf**	**07 54 51.8**	**0.0**
	comp=Z,1.5nm,0.7s,baz=338,slow=2.5,SNR=7.8							
H03N2	**Juan Fernandez**	**137.07**	**89**	T		T	10 28 06.7	
	baz=311,slow=77,SNR=1018							
H03N1	**Juan Fernandez**	**137.09**	**89**	T		T	10 28 08.8	
	baz=311,slow=77,SNR=1263							
H03N3	**Juan Fernandez**	**137.09**	**89**	T		T	10 28 08.6	
	baz=311,slow=77,SNR=1246							
BOSA	**Boshof**	**137.12**	**280**	PKhKP		PKPpre	07 54 47.0	
	comp=Z,2.1nm,0.8s,baz=199,slow=2.2,SNR=3.6							
BOSA				PKP		**PKiKP**	**07 54 56.4**	**-0.2**
	comp=Z,4.7nm,0.9s,baz=39,slow=2.1,SNR=5.3							
SALV	**Santo Antonio**	**138.06**	**48**	*eP*		**PKiKP**	**07 54 57.8**	**-0.9**
AC02	**Maricunga**	**139.02**	**74**			**PKiKP**	**07 55 00.7**	**-0.4**
QSPA	**South Pole Qui**	**139.06**	**180**	PKhKP		PKPpre	07 54 48.0	
	comp=Z,2.3nm,0.4s,baz=0.4,slow=1.1,SNR=4.0							
QSPA				PKP		**PKiKP**	**07 54 58.8**	**-0.5**
	comp=Z,11nm,0.7s,baz=350,slow=0.4,SNR=10							
SDBA	**SAO DESIDERIO**	**139.48**	**32**	*eP*		**PKPdf**	**07 55 00.5**	**+1.0**
BDFB	**Brasilia**	**141.28**	**38**	PKhKP		PKPpre	07 54 56.5	
	comp=Z,2.4nm,0.8s,baz=286,slow=8.2,SNR=5.6							
BDFB				PKP		**PKPdf**	**07 55 03.9**	**+1.2**
	comp=Z,3.3nm,0.9s,baz=277,slow=9.9,SNR=5.6							
BDFB	**Brasilia**	**141.28**	**38**			PKPpre	07 54 57.9	
BDFB	**Brasilia**	**141.28**	**38**	PKIKP		**PKPdf**	**07 54 57.9**	**-4.8**
AQDB	**Aquidauana**	**141.92**	**52**			**PKPdf**	**07 55 01.8**	**-1.8**
AMBA	**Amambai (Brazi**	**144.31**	**54**	*eP*		**PKPdf**	**07 55 07.5**	**-0.3**
PMNB	**Patos De Minas**	**144.53**	**38**	*eP*		**PKPdf**	**07 55 08.1**	**-0.3**
DIAM	**Diamantina, MG**	**145.37**	**33**	*eP*		**PKPab**	**07 55 10.2**	**+0.1**
TRCB	**Terra Rica**	**145.42**	**50**	*eP*		**PKPab**	**07 55 10.8**	**+0.8**
CPUP	**Villa Florida**	**145.74**	**60**	PKPbc		**PKPdf**	**07 55 10.2**	**+0.1**
	comp=Z,21nm,1.1s,baz=335,slow=4.0,SNR=38							
CPUP	**Villa Florida**	**145.74**	**60**	*eP*		**PKPab**	**07 55 10.9**	**-0.1**
BB19B	**Bebedouro**	**145.89**	**43**	*eP*		**PKPbc**	**07 55 11.4**	**+0.2**
SJMB	**Sao Joao De Ma**	**146.60**	**30**	*eP*		**PKPbc**	**07 55 13.0**	**-0.3**
LDASE	**Londrina, Braz**	**146.67**	**49**	*eP*		**PKPbc**	**07 55 13.0**	**-0.5**
PLCA	**Paso Flores**	**146.72**	**93**	PKPbc		**PKPbc**	**07 55 13.2**	**-0.1**
	comp=Z,12nm,0.9s,baz=286,slow=3.0,SNR=19							
PLCA	**Paso Flores**	**146.72**	**93**			**PKPab**	**07 55 13.9**	**-0.6**
PLCA	**Paso Flores**	**146.72**	**93**	*eP*		**PKPbc**	**07 55 13.6**	**+0.4**
PTGB	**Pitanga**	**147.30**	**51**	*eP*		**PKPbc**	**07 55 14.9**	**-0.4**
FRTB	**Fartura**	**147.38**	**46**	*eP*		**PKPdf**	**07 55 14.1**	**+1.1**
RIB01	**Linhares ES**	**147.42**	**29**	*eP*		**PKPdf**	**07 55 14.3**	**+1.2**
VAO	**Valinhos**	**148.28**	**42**			**PKiKP**	**07 55 18.9**	**-0.7**
ELIB	**Princess Elisa**	**148.84**	**206**	*d*PKPdf		**PKPdf**	**07 55 14.1**	**0.0**
ELIB				*d*PKP		**PKPbc**	**07 55 18.1**	**+0.1**
ITAB	**Concordia**	**149.31**	**54**			**PKPdf**	**07 55 15.5**	**-0.4**
ITAB				PKPbc		**PKiKP**	**07 55 21.3**	**-0.2**
TRQA	**Tornquist**	**150.87**	**82**			**PKiKP**	**07 55 24.4**	**0.0**
TRQA	**Tornquist**	**150.87**	**82**	PKIKP		**PKiKP**	**07 55 24.4**	**0.0**
CPSB	**Cacapava Do Su**	**151.05**	**60**	*eP*		**PKPdf**	**07 55 19.7**	**+1.0**
NVL	**N'lazarevskaya**	**152.67**	**205**	*e*PKIKP		**PKPdf**	**07 55 21.0**	**+1.2**
NVL				*e*			07 59 10.4	
NVL				*e*			08 02 24.2	
NVL				*e*PPP		PPP	08 02 38.9	
NVL				*e*SS		SS	08 18 41.0	+3.7
NVL				*e*SSS		SSS	08 24 29.2	
NVL				pmax		pmax		
	comp=Z,74nm,1.8s							
SNAA	**Sanae**	**155.49**	**196**	⇑P		**PKPab**	**07 55 50.6**	**+0.7**
	comp=Z,620nm,1.0s							
SNAA	**Sanae**	**155.49**	**196**			**PKPab**	**07 55 50.4**	**+0.4**
SNAA	**Sanae**	**155.49**	**196**	PKP2		**PKPab**	**07 55 50.4**	**+0.4**
VNA2	**Neumayer--Watz**	**156.91**	**194**	⇑P		**PKPab**	**07 55 56.5**	**+0.5**
	comp=Z,10.0nm,0.8s,baz=148,slow=1.1							
VNA3	**Neumayer Olymp**	**156.96**	**192**	⇑P		**PKPab**	**07 55 54.5**	**-1.8**
	comp=Z,15nm,0.8s							
VNA1	**Neumayer--Stat**	**157.29**	**194**	⇑P		**PKPab**	**07 55 58.3**	**+0.7**
	comp=Z,32nm,1.4s							

NNC ***16*** *07:45:03.8±1.5, 42°.18N×73°.38E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=12.1km s-min=5.2km az=5.0*
SOME ***16*** *07:45:03.7, 42°.20N×73°.33E, h5km*
KNET ***16*** *07:45:06.0±0.4, 42°.23N×73°.47E, h16km±1km, ml1.9, Error ellipse: s-maj=2.7km s-min=1.8km az=64.0*

ISC 16 07:45:03.9±1.4, 42°23N±0'.06×73°34E±0'.03, h5km±13km, n17, σ0°62/30, 8C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**0.52**	**351**	P	**Pb**	**07 45 15.3**	**-0.3**
	9.1nm,0.1s						
MRKS				S	**Sb**	**07 45 23.1**	**-0.5**
	87nm,0.3s						
MRKS	**Merke**	**0.52**	**351**	*eP*	**Pb**	**07 45 15.3**	**-0.3**
	9.1nm,0.1s						
MRKS				*eS*	**Sb**	**07 45 23.1**	**-0.5**
	87nm,0.3s						
EKS2	**Erkin-Say**	**0.54**	**37**	⇓P	**Pb**	**07 45 15.8**	**-0.2**
	2.6nm,0.1s,SNR=17						
EKS2				⇑S	**Sb**	**07 45 23.9**	**-0.3**
	7.8nm,0.1s						
UCH	**Uchtor**	**0.88**	**90**	⇓P	**Pb**	**07 45 21.2**	**-0.6**
	4.4nm,0.2s,SNR=17						
UCH				⇓S	**Sb**	**07 45 33.3**	**-0.7**
	18nm,0.2s						
AAK	**Ala-Archa**	**0.95**	**64**	⇓P	**Pb**	**07 45 22.9**	**0.0**
	1.8nm,0.1s,SNR=7.4						
AAK				⇑S	**Sb**	**07 45 35.9**	**0.0**
	3.9nm,0.2s						
AAK	**Ala-Archa**	**0.95**	**64**	⇑P	**Pg**	**07 45 21.6**	**-0.5**
	6.6nm,0.8s						
AAK				⇓S	**Sb**	**07 45 35.0**	**-1.0**
	11nm,1.3s						
CHMS	**Chumysh**	**1.30**	**53**	⇑P	**Pb**	**07 45 28.9**	**+0.1**
	1.7nm,0.1s,SNR=5.1						
CHMS				⇓S	**Sn**	**07 45 46.9**	**+0.4**
	2.5nm,0.1s						
USP	**Ospenovka**	**1.35**	**39**	⇑P	**Pg**	**07 45 30.0**	**+0.3**
	3.0nm,0.1s,SNR=21						
USP				⇑S	**Sn**	**07 45 48.2**	**+0.4**
	4.2nm,0.1s						
TKM2	**Tokmak 2**	**1.81**	**67**	⇓P	**Pg**	**07 45 38.2**	**-0.4**
	1.8nm,0.1s,SNR=11						
TKM2				⇑S	**Sg**	**07 46 01.8**	**-0.2**
	5.4nm,0.2s						
DGS	**Degeres**	**2.06**	**60**	Pg	**Pg**	**07 45 43.4**	**0.0**
	3.0nm,0.4s						
DGS				Lg	Lg	07 46 11.4	
	6.2nm,0.5s						
DGS	**Degeres**	**2.06**	**60**	*eP*	**Pg**	**07 45 43.4**	**0.0**
	3.0nm,0.4s						
DGS				*eS*	**Sg**	**07 46 11.4**	**+1.3**
	6.2nm,0.5s						
KST	**Kastek**	**2.10**	**66**	Pg	**Pg**	**07 45 44.3**	**+0.1**
KST				Lg	Lg	07 46 12.8	
KST	**Kastek**	**2.10**	**66**	*eP*	**Pg**	**07 45 44.3**	**+0.1**
	4.6nm,0.3s						
KST				*eS*	**Sg**	**07 46 12.7**	**+1.3**
	16nm,0.6s						
KRBS	**Karabastau**	**2.26**	**49**	Pg	**Pb**	**07 45 45.8**	**+0.6**
	3.4nm,0.2s						
KRBS				Lg	Lg	07 46 15.7	
	2.3nm,0.4s						
KRBS	**Karabastau**	**2.26**	**49**	*eP*	**Pb**	**07 45 45.8**	**+0.6**
	3.4nm,0.2s						
KRBS				*eS*	**Sg**	**07 46 15.7**	**-0.7**
	2.3nm,0.4s						
KK31	**Karatay Array**	**2.26**	**294**	⇑Pg	**Pb**	**07 45 45.2**	**0.0**
	0.7nm,0.3s,baz=131,slow=16,SNR=20						
KK31				⇓Lg	Lg	07 46 17.6	
	1.1nm,0.2s,baz=115,slow=26,SNR=7.5						
IUG	**luzhnay**	**2.46**	**269**	*eP*	**Pb**	**07 45 49.7**	**+1.1**
	30nm,0.2s						
IUG				*eS*	**Sg**	**07 46 22.0**	**-0.8**
	26nm,0.5s						

UPP ***16*** *07:47:30.3±0.1, 67°.85N×20°.22E, h0km, ML2.6, Confirmed Induced event*
HEL ***16*** *07:47:31.6±0.2, 67°.86N×20°.26E, h0km, ML1.3, Explosion*

ISC 16 07:47:30.0±0.8, 67°81N±0'.03×20°30E±0'.02, h0km, n26, σ1°12/41, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**5**	P	**Pg**	**07 47 32.8**	**0.0**
	baz=221						
KUA				S	**Sg**	**07 47 34.6**	**-0.1**
RATU	**Laukkuluspa**	**0.27**	**274**	P	**Pg**	**07 47 35.0**	**-0.1**
RATU				S	**Sg**	**07 47 38.3**	**-0.3**
NIKU	**Nikkaluokta**	**0.48**	**278**	P	**Pg**	**07 47 39.0**	**-0.2**
NIKU				S	**Sg**	**07 47 45.2**	**-0.3**
LANU	**Lannavaara**	**0.69**	**69**	P	**Pg**	**07 47 43.5**	**+0.4**
LANU				S	**Sg**	**07 47 52.9**	**+1.0**
LANU	**Lannavaara**	**0.69**	**69**	*eP*	**Pg**	**07 47 43.6**	**+0.6**
LANU				*eS*	**Sg**	**07 47 52.1**	**+0.2**
MASU	**Masugnsbyn**	**0.74**	**118**	P	**Pb**	**07 47 45.1**	**-0.6**
SALU	**Saltoluokta**	**0.81**	**239**	*eP*	**Pg**	**07 47 44.5**	**-0.9**
KIF	**Kilpisjarvi**	**1.22**	**9**	*eP*	**Pb**	**07 47 53.7**	**-0.2**
KIF	**Kilpisjarvi**	**1.22**	**9**	*e*PN	**Pn**	**07 47 55.2**	**+1.0**
KIF				smax	smax	07 48 06.2	
	comp=Z,3.2nm,0.2s						
KIF				*e*SB	**Sg**	**07 48 09.2**	**+0.2**
PAJU	**Pajala**	**1.34**	**125**	P	**Pb**	**07 47 56.0**	**0.0**
PAJU	**Pajala**	**1.34**	**125**	*eP*	**Pb**	**07 47 55.7**	**-0.3**
PAJU				*eS*	**Sn**	**07 48 14.2**	**-0.3**
HEF	**Hetta**	**1.40**	**63**	*e*PG	**Pb**	**07 47 56.8**	**-0.1**
HEF				smax	smax	07 48 10.1	
	comp=Z,2.3nm,0.2s						
HEF				*eS*	**Sb**	**07 48 15.1**	**-0.1**
ERTU	**Ertsjaerv**	**1.46**	**149**	*e*PN	**Pb**	**07 48 01.4**	**+3.5**
ERTU				*eS*	**Sn**	**07 48 18.6**	**+1.3**
KLF	**Kolari**	**1.52**	**111**	*eP*	**Pg**	**07 47 59.3**	**+0.2**
KLF				smax	smax	07 48 17.6	
	comp=Z,1.9nm,0.2s						
KLF				*e*SB	**Sn**	**07 48 20.0**	**+1.2**
KTK1	**Kautokeino**	**1.63**	**41**	*e*PG	**Pb**	**07 48 00.5**	**-0.3**
KTK1				*eS*	**Sn**	**07 48 21.0**	**-0.5**
TRO	**Tromso**	**1.90**	**345**	*e*SN	**Sb**	**07 48 28.9**	**-0.8**
TOF	**Tornio**	**2.35**	**136**	*eP*	**Pb**	**07 48 12.5**	**-0.6**
TOF				smax	smax	07 48 44.0	
	comp=Z,1.0nm,0.2s						
TOF				*e*SB	**Sg**	**07 48 44.6**	**-0.8**
SGF	**Sodankyl**	**2.41**	**96**	*eP*	**Pb**	**07 48 12.4**	**-1.7**
SGF				*eS*	**Sb**	**07 48 44.3**	**0.0**
RNF	**Rovaniemi**	**2.53**	**116**	*e*PB	**Pb**	**07 48 15.3**	**-0.9**
RNF				*e*SB	**Sb**	**07 48 48.6**	**+0.8**
ARA0	**ARCESS Array S**	**2.58**	**45**	*e*PB	**Pb**	**07 48 15.5**	**-1.5**
ARA0				*eS*	**Sn**	**07 48 46.5**	**+1.6**
RAJF	**Raja-Jooseppi**	**3.07**	**74**	*e*SB	**Sb**	**07 49 03.5**	**+0.1**
KEV	**Kevo**	**3.13**	**48**	*e*SB	**Sb**	**07 49 04.0**	**-1.0**
RANF	**Ranua**	**3.13**	**122**	*e*SG	**Sg**	**07 49 07.8**	**-2.5**
KU2	**Taivalkoski**	**3.78**	**120**	*e*SG	**Sg**	**07 49 28.3**	**-3.0**
KU6	**Riekki**	**4.18**	**111**	*e*SG	**Sg**	**07 49 42.9**	**-1.1**
KU1	**Kurvinen**	**4.31**	**117**	*e*PB	**Pb**	**07 48 46.5**	**0.0**

RSPR ***16*** *08:04:00.5, 17°.85N×66°.84W, h6km, MD2.9/6*
NEIC ***16*** *08:04:00.0±0.9, 17°.81N±0'.01×66°.84W±0'.01, h10km±2km, ML2.9/35, Md2.9/6(RSPR), Error ellipse: s-maj=3.4km s-min=2.5km az=30.0*
SDD ***16*** *08:04:01.5±1.4, 17°.89N×66°.82W, h17km±15km, MD3.6, ML2.9, MW3.1, Presumed earthquake*

ISC 16 08:03:60.0±1.1, 17°86N±0'.06×66°82W±0'.02, h16km±6km, n38, σ0°44/57, 9C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.12**	**334**		**Pg**	**08 04 03.6**	**-0.1**
GBPR					**Sg**	**08 04 05.6**	**-0.5**
GBPR	**Guanica, Bosqu**	**0.12**	**334**	⇓*i*P	**Pg**	**08 04 03.6**	**-0.1**
GBPR				*eS*	**Sg**	**08 04 05.6**	**-0.5**
MLPR	**Magueyes Islan**	**0.24**	**296**		**Pg**	**08 04 05.5**	**+0.2**
MLPR				Sg	**Sg**	**08 04 09.2**	**+0.3**
MLPR				IAML		08 04 10.3	
	2μm,0.3s						
MLPR				IAML		08 04 10.4	
	2μm,0.2s						
OBIP	**Obispado Ponce**	**0.27**	**49**		**Pb**	**08 04 06.6**	**+0.1**
OBIP	**Obispado Ponce**	**0.27**	**49**	⇓*i*P	**Pb**	**08 04 06.6**	**+0.1**
OBIP				*eS*	**Sb**	**08 04 11.2**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.31**	**297**		**Pg**	**08 04 06.7**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.31**	**297**	⇑*e*Pg	**Pg**	**08 04 06.8**	**+0.3**
CRPR				⇑*e*Sg	**Sg**	**08 04 11.6**	**+0.6**
CRPR				IAML		08 04 12.1	
	comp=N,4μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.31**	**297**	⇑*i*P	**Pg**	**08 04 06.8**	**+0.3**
CRPR				*eS*	**Sg**	**08 04 11.7**	**+0.7**
CELP	**Cerrillos**	**0.31**	**48**		**Pb**	**08 04 07.4**	**+0.2**
CELP				IAML		08 04 13.9	
	comp=N,494nm,0.3s						
LSP	**Las Mesas**	**0.40**	**321**		**Pg**	**08 04 08.5**	**+0.4**
LSP					**Sb**	**08 04 15.0**	**+0.4**
LSP	**Las Mesas**	**0.40**	**321**	⇓*i*P	**Pg**	**08 04 08.5**	**+0.4**
LSP				*eS*	**Sb**	**08 04 15.0**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.40**	**14**		**Pb**	**08 04 08.6**	**-0.1**
PRSN	**Puerto Rico Se**	**0.47**	**319**		**Pg**	**08 04 09.6**	**+0.2**
PRSN				IAML		08 04 17.9	
	comp=N,1μm,0.2s						
PRSN				IAML		08 04 19.6	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.47**	**319**		**Sb**	**08 04 16.9**	**+0.4**
PRSN	**Puerto Rico Se**	**0.47**	**319**	⇑*e*Pg	**Pg**	**08 04 09.6**	**+0.2**
PRSN				⇑*e*Sg	**Sg**	**08 04 15.7**	**0.0**
PRSN				IAML		08 04 21.6	
	comp=N,984nm,0.2s						
PRSN	**Puerto Rico Se**	**0.47**	**319**	⇑*i*P	**Pg**	**08 04 09.6**	**+0.2**
PRSN				*eS*	**Sb**	**08 04 16.9**	**+0.4**
ECPR	**Experimental S**	**0.63**	**44**		**Pb**	**08 04 12.8**	**+0.2**
ECPR				IAML		08 04 24.3	
	comp=N,784nm,0.2s						
ECPR				IAML		08 04 25.1	
	comp=N,510nm,0.2s						
ECPR	**Experimental S**	**0.63**	**44**	⇓*i*P	**Pb**	**08 04 12.8**	**+0.1**
ECPR				*eS*	**Sb**	**08 04 21.7**	**+0.5**
AGPR	**Aguadilla, PR**	**0.66**	**335**		**Pg**	**08 04 13.0**	**+0.1**
AGPR				IAML		08 04 23.0	
	comp=N,639nm,0.5s						
AGPR				IAML		08 04 23.0	
	comp=N,371nm,0.3s						
AGPR	**Aguadilla, PR**	**0.66**	**335**	⇑*e*Pg	**Pg**	**08 04 13.1**	**+0.1**
AGPR				*e*Sg	**Sg**	**08 04 21.5**	**-0.3**
AGPR				IAML		08 04 22.9	
	comp=N,565nm,0.2s						
AGPR	**Aguadilla, PR**	**0.66**	**335**	⇑*i*P	**Pb**	**08 04 13.1**	**-0.1**
AGPR				*eS*	**Sb**	**08 04 22.7**	**+0.6**
SJG	**San Juan**	**0.69**	**69**		**Pb**	**08 04 13.8**	**+0.2**
SJG	**San Juan**	**0.69**	**69**	⇓*e*Pg	**Pb**	**08 04 13.8**	**+0.2**
SJG				⇑*e*Sg	**Sb**	**08 04 22.4**	**-0.4**
SJG	**San Juan**	**0.69**	**69**	⇓*i*P	**Pb**	**08 04 13.9**	**+0.3**
SJG				*eS*	**Sb**	**08 04 23.7**	**+0.9**
PDPR	**Patillas Dam,**	**0.78**	**78**		**Pb**	**08 04 15.5**	**+0.4**
IDE	**Isla Desecheo**	**0.81**	**310**		**Pg**	**08 04 15.4**	**-0.4**
IDE					**Sb**	**08 04 26.9**	**+0.5**
IDE	**Isla Desecheo**	**0.81**	**310**	⇓*e*P	**Pg**	**08 04 15.4**	**-0.4**
IDE				*eS*	**Sb**	**08 04 26.9**	**+0.5**
GCPR	**Guaynabo City**	**0.83**	**58**		**Pb**	**08 04 16.4**	**+0.4**
GCPR	**Guaynabo City**	**0.83**	**58**		**Sb**	**08 04 27.3**	**+0.3**
GCPR	**Guaynabo City**	**0.83**	**58**	⇓*e*P	**Pb**	**08 04 16.2**	**+0.1**
GCPR				*eS*	**Sb**	**08 04 27.3**	**+0.3**
HUMP	**Col San Antoni**	**0.97**	**73**		**Pg**	**08 04 18.6**	**-0.1**
HUMP				IAML		08 04 36.6	
	comp=N,164nm,0.3s						
HUMP				IAML		08 04 37.9	
	comp=N,125nm,0.2s						
HUMP	**Col San Antoni**	**0.97**	**73**		**Sn**	**08 04 31.6**	**-0.7**
HUMP	**Col San Antoni**	**0.97**	**73**	⇓*e*P	**Pb**	**08 04 18.5**	**+0.2**
HUMP				*eS*	**Sn**	**08 04 31.6**	**-0.7**
CUPR	**Culebra, Puert**	**1.53**	**73**	Pn	**Pb**	**08 04 28.3**	**+0.4**
PCDR	**Punta Cana, DR**	**1.62**	**294**	*e*Pg	**Pb**	**08 04 29.6**	**+0.1**
PCDR				IAML		08 04 52.8	
	comp=N,217nm,1.9s						
MIDR	**Miches**	**2.39**	**298**	⇑*e*Pg	**Pb**	**08 04 43.3**	**+0.7**
MIDR				IAML		08 05 38.8	
	comp=N,26nm,2.4s						
DR12	**Loma Pena Alta**	**2.60**	**291**	Pn	**Pn**	**08 04 41.2**	**-0.2**
HATOM	**Hato Mayor del**	**2.60**	**291**	⇑*e*Pg	**Pb**	**08 04 44.7**	**-1.5**
HATOM				IAML		08 05 54.5	
	comp=N,28nm,3.0s						

IDC 16 08:13:50.4±1.5, 3°.57S×130°.83E, h0km, mb3.5/3, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=73.6km s-min=24.1km az=81.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.72**	**9**	Pn	Pn	08 14 35.3	-0.1
	2.6nm,0.3s,baz=192,slow=19,SNR=10						
SIJI				Sn	Sn	08 14 58.4	-11
	9.9nm,0.3s,baz=191,slow=22,SNR=16						
	6.6nm,0.3s						
WRA	**Warramunga Arr**	**16.63**	**168**	Pn	Pn	08 17 43.7	-1.4
	0.1nm,0.3s,baz=349,slow=11,SNR=2.2						
WRA				Sn	Sn	08 20 35.3	-15

	0.1nm,0.3s,baz=251,slow=28,SNR=1.9							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**20.20**	**172**	P		P	08 18 27.5	+0.5
	1.0nm,0.5s,baz=353,slow=11,SNR=21							
	1.0nm,0.5s							
MKAR	**Makanchi Array**	**65.85**	**326**	P		P	08 24 38.1	+0.3
	0.2nm,0.7s,baz=116,slow=6.6,SNR=2.0							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**70.05**	**328**	P		P	08 25 04.0	-0.2
	0.4nm,0.3s,baz=130,slow=6.0,SNR=4.4							
	0.4nm,0.3s							

ISK ***16*** *08:16:15.5, 38°.03N×38°.28E, h9km, ML2.5/10*
AFAD ***16*** *08:16:16.7, 38°.10N×38°.21E, h7km±2km, ML2.3*

ISC 16 08:16:16.1±1.1, 38°05N±0'.03×38°24E±0'.03, h7km±11km, n17, σ0°62/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAYA	**Malatya/Merkez**	**0.31**	**28**	P	**Pg**	**08 16 22.7**	**+0.5**
MAYA				S	**Sg**	**08 16 26.8**	**+0.4**
MAYA				IAML		08 16 29.0	
	comp=E,729nm,0.5s						
MAYA				IAML		08 16 30.0	
	comp=N,485nm,0.3s						
AKCD	**Akcadag**	**0.35**	**314**	P	**Pg**	**08 16 22.9**	**-0.1**
AKCD				S	**Sg**	**08 16 27.2**	**-0.5**
KAHTU	**Kahta**	**0.38**	**130**	P	**Pb**	**08 16 25.6**	**+0.4**
KAHTU				S	**Sb**	**08 16 31.9**	**+0.5**
KAHTU				IAML		08 16 32.0	
	comp=N,287nm,0.7s						
KAHTU				IAML		08 16 32.0	
	comp=E,194nm,0.1s						
NARI	**Adyaman-Kaht**	**0.44**	**112**	P	**Pb**	**08 16 26.8**	**+0.5**
NARI				S	**Sb**	**08 16 32.8**	**-0.3**
MDYL	**Doganyol-Malat**	**0.68**	**67**	Pg	**Pg**	**08 16 29.1**	**-0.1**
MDYL				Sg	**Sg**	**08 16 38.7**	**+0.6**
ELZG	**Elazig**	**0.74**	**52**	P	**Pg**	**08 16 30.4**	**+0.2**
ELZG				S	**Sg**	**08 16 40.1**	**+0.3**
ELZG				IAML		08 16 41.0	
	comp=E,261nm,0.2s						
ELZG				IAML		08 16 44.0	
	comp=N,154nm,0.6s						
ESGZ	**Sivrice-Elazig**	**0.75**	**59**	Pg	**Pg**	**08 16 30.2**	**-0.3**
ESGZ				Sg	**Sg**	**08 16 40.9**	**+0.6**
URFA	**Urfa**	**0.76**	**143**	Pg	**Pg**	**08 16 29.3**	**-1.4**
URFA				Sg	**Sg**	**08 16 40.6**	**0.0**
CNGT	**ngs**	**0.85**	**79**	P	**Pb**	**08 16 33.5**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.90**	**68**	Pg	**Pg**	**08 16 33.1**	**-0.3**
SVRC				Sg	**Sb**	**08 16 45.7**	**-0.7**
ARPR	**Arapgir-MALATY**	**1.04**	**4**	Pg	**Pg**	**08 16 35.6**	**-0.6**
KHMN	**Narli-Kahraman**	**1.08**	**233**	Pn	**Pg**	**08 16 37.1**	**+0.2**
KMRS	**Kahramanmaras**	**1.19**	**243**	Pn	**Pn**	**08 16 39.3**	**0.0**
KMRS				Sn	**Sn**	**08 16 56.5**	**+0.7**
GAZ	**Gaziantep**	**1.20**	**223**	Pn	**Pb**	**08 16 39.1**	**-0.1**
MCKZ	**Bingol**	**1.21**	**28**	P	**Pg**	**08 16 37.6**	**-1.8**
MCKZ				S	**Sb**	**08 16 55.2**	**-0.2**
ILIC	**ilic-Erzincan**	**1.42**	**10**	Pn	**Pn**	**08 16 42.2**	**-0.3**
ERZN	**Erzincan**	**1.92**	**37**	Pn	**Pn**	**08 16 49.4**	**0.0**

IDC ***16*** *08:30:36.5±0.9, 6°.15S×107°.02E, h284km±6km, mb3.4/8, mbtmp4.1/8, Error ellipse: s-maj=63.5km s-min=11.6km az=53.0*
DJA ***16*** *08:30:36.1±0.7, 6°.S±7°×107°.7E±°, h294km±9km, M3.5/33, MLv3.5/33*

ISC 16 08:30:37.6±0.8, 6°18S±0'.10×107°22E±0'.08, h300km, n26, σ1°83/28, mb3.7/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNG	**Tangerang**	**0.57**	**271**	P	**Pn**	**08 31 15.1**	**-1.3**
TNG				P	**Pn**	**08 31 15.1**	**-1.3**
DBJI	**Dramaga**	**0.60**	**231**	P	**Pn**	**08 31 15.2**	**-1.3**
LEM	**Lembang**	**0.76**	**148**	P	**Pn**	**08 31 15.6**	**-1.5**
	53nm,0.5s,baz=317,slow=19,SNR=9.0						
LEM				S	**S**	**08 31 45.6**	**-3.0**
	113nm,0.9s,baz=311,slow=20,SNR=6.1						
LEM	**Lembang**	**0.76**	**148**	P	**Pn**	**08 31 15.7**	**-1.5**
SKJI	**Sukabumi**	**1.05**	**219**	P	**Pn**	**08 31 15.8**	**-2.4**
**B

*NEIC **16** 08:45:49.8±0.7, 17°.774N×0°.009×66°.88W±0°.01, h10km±2km, ML2.8/35, Md2.9/6(RSPR), Error ellipse: s-maj=3.1km s-min=2.1km az=354.0*
*OSPL **16** 08:45:50.5±0.5, 17°.82N×66°.89W, h22km±4km, ML2.2, Presumed earthquake*
*RSPR **16** 08:45:50.7, 17°.83N×66°.88W, h7km, MD2.9/6*
*SDD **16** 08:45:50.7±2.5, 17°.76N×66°.92W, h15km±37km, MD3.5, ML2.9, MW3.0, Presumed earthquake*

ISC 16 08:45:47.9±1.6, 17.72N±0.08×66.91W±0.02, h14km±9km, n42, σ0°.44/65, 11C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.25**	**6**		**Pb**	**08 45 54.0**	**-0.2**
GBPR					**Sg**	**08 45 56.6**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.25**	**6**	⇓*iP*	**Pb**	**08 45 54.0**	**-0.2**
GBPR				*eS*	**Sg**	**08 45 56.6**	**-0.4**
MLPR	**Magueyes Islan**	**0.28**	**332**		**Pb**	**08 45 55.0**	**+0.3**
MLPR				Sg	**Sb**	**08 45 59.1**	**-0.2**
MLPR				IAML		08 45 59.5	
	1μm,0.2s						
MLPR				IAML		08 46 00.0	
	1μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.34**	**326**		**Pb**	**08 45 56.4**	**+0.6**
CRPR				Sg	**Sb**	**08 46 00.8**	**-0.3**
CRPR				IAML		08 46 02.2	
	2μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.34**	**326**	⇑*ePg*	**Pb**	**08 45 56.4**	**+0.6**
CRPR				⇑*eSg*	**Sb**	**08 46 00.8**	**-0.3**
CRPR				IAML		08 46 01.2	
	comp=N,3μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.34**	**326**	⇑*iP*	**Pb**	**08 45 56.5**	**+0.7**
CRPR				*eS*	**Sb**	**08 46 00.8**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.34**	**326**	*iP*	**Pb**	**08 45 56.4**	**+0.6**
CRPR				*eS*	**Sb**	**08 46 00.8**	**-0.3**
CRPR				IAML		08 46 01.6	
	comp=Z,2μm,0.2s						
OBIP	**Obispado Ponce**	**0.43**	**42**		**Pb**	**08 45 57.2**	**0.0**
OBIP	**Obispado Ponce**	**0.43**	**42**		**Sg**	**08 46 02.8**	**+0.6**
OBIP	**Obispado Ponce**	**0.43**	**42**	⇓*iP*	**Pb**	**08 45 57.3**	**0.0**
OBIP				*eS*	**Sg**	**08 46 02.8**	**+0.6**
OBIP	**Obispado Ponce**	**0.43**	**42**	*iP*	**Pb**	**08 45 57.3**	**0.0**
OBIP				*eS*	**Sg**	**08 46 02.9**	**+0.6**
OBIP				IAML		08 46 03.6	
	comp=Z,240nm,0.2s						
CELP	**Cerrillos**	**0.47**	**42**		**Pb**	**08 45 58.0**	**+0.1**
CELP				IAML		08 46 05.0	
	comp=Z,702nm,0.4s						
CELP				IAML		08 46 05.9	
	comp=Z,531nm,0.2s						
LSP	**Las Mesas**	**0.48**	**339**		**Pb**	**08 45 58.6**	**+0.4**
LSP					**Sg**	**08 46 04.5**	**+0.6**
LSP	**Las Mesas**	**0.48**	**339**	⇓*iP*	**Pb**	**08 45 58.6**	**+0.4**
LSP				*eS*	**Sg**	**08 46 04.5**	**+0.6**
PRSN	**Puerto Rico Se**	**0.54**	**335**		**Pb**	**08 45 59.5**	**+0.4**
PRSN	**Puerto Rico Se**	**0.54**	**335**		**Sg**	**08 46 06.4**	**+0.6**
PRSN	**Puerto Rico Se**	**0.54**	**335**	⇑*ePg*	**Pb**	**08 45 59.6**	**+0.4**
PRSN				⇑*eSg*	**Sg**	**08 46 06.4**	**+0.6**
PRSN				IAML		08 46 10.7	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.54**	**335**	⇑*iP*	**Pb**	**08 45 59.6**	**+0.4**
PRSN				*eS*	**Sg**	**08 46 06.4**	**+0.6**
UUPR	**Utuado, UPR, P**	**0.56**	**18**		**Pb**	**08 45 59.4**	**-0.1**
AGPR	**Aguadilla, PR**	**0.77**	**345**		**Pb**	**08 46 03.3**	**+0.3**
AGPR				IAML		08 46 14.0	
	comp=N,494nm,0.5s						
AGPR	**Aguadilla, PR**	**0.77**	**345**	⇑*ePg*	**Pb**	**08 46 03.3**	**+0.3**
AGPR				⇑*eSg*	**Sg**	**08 46 13.1**	**+0.2**
AGPR				IAML		08 46 13.8	
	comp=N,761nm,0.2s						
AGPR	**Aguadilla, PR**	**0.77**	**345**	⇑*iP*	**Pb**	**08 46 03.3**	**+0.3**
AGPR				*eS*	**Sg**	**08 46 12.8**	**0.0**
ECPR	**Experimental S**	**0.79**	**41**		**Pb**	**08 46 03.4**	**0.0**
ECPR				IAML		08 46 15.3	
	comp=N,756nm,0.2s						
ECPR	**Experimental S**	**0.79**	**41**	⇓*iP*	**Pb**	**08 46 03.4**	**0.0**
ECPR				*eS*	**Sg**	**08 46 13.7**	**+0.2**
SJG	**San Juan**	**0.82**	**62**		**Pb**	**08 46 04.4**	**+0.5**
SJG	**San Juan**	**0.82**	**62**	⇓*ePg*	**Pb**	**08 46 04.3**	**+0.5**
SJG				*eSg*	**Sn**	**08 46 16.4**	**-0.5**
SJG	**San Juan**	**0.82**	**62**	⇓*iP*	**Pb**	**08 46 04.4**	**+0.5**
SJG				*eS*	**Sb**	**08 46 15.3**	**+0.6**
SJG	**San Juan**	**0.82**	**62**	*iP*	**Pn**	**08 46 04.5**	**-0.5**
SJG				*eS*	**Sg**	**08 46 14.1**	**-0.4**
SJG				IAML		08 46 19.8	
	comp=Z,99nm,0.2s						
IDE	**Isla Desecheo**	**0.85**	**321**		**Pn**	**08 46 05.2**	**-0.3**
IDE					**Sb**	**08 46 16.2**	**+0.4**
IDE	**Isla Desecheo**	**0.85**	**321**	⇑*eP*	**Pn**	**08 46 05.2**	**-0.3**
IDE				*eS*	**Sb**	**08 46 16.2**	**+0.4**
PDPR	**Patillas Dam,**	**0.89**	**71**		**Pn**	**08 46 06.0**	**0.0**
GCPR	**Guaynabo City**	**0.98**	**53**		**Pn**	**08 46 07.2**	**0.0**
GCPR	**Guaynabo City**	**0.98**	**53**		**Sb**	**08 46 19.1**	**-0.3**
GCPR	**Guaynabo City**	**0.98**	**53**	⇑*eP*	**Pg**	**08 46 06.8**	**+0.1**
GCPR				*eS*	**Sb**	**08 46 19.1**	**-0.3**
HUMP	**Col San Antoni**	**1.09**	**67**		**Pg**	**08 46 09.2**	**+0.3**
HUMP				IAML		08 46 28.3	
	comp=Z,157nm,0.3s						
HUMP	**Col San Antoni**	**1.09**	**67**		**Sb**	**08 46 22.7**	**+0.1**
HUMP	**Col San Antoni**	**1.09**	**67**	⇑*eP*	**Pg**	**08 46 09.0**	**+0.1**
HUMP				*eS*	**Sb**	**08 46 22.7**	**+0.1**
PCDR	**Punta Cana, DR**	**1.61**	**300**	⇑*ePg*	**Pg**	**08 46 18.2**	**-0.6**
PCDR				IAML		08 47 14.6	
	comp=N,169nm,1.3s						
CUPR	**Culebra, Puert**	**1.65**	**69**	Pn	**Pg**	**08 46 19.0**	**-0.6**
MIDR	**Miches**	**2.39**	**302**	⇑*ePg*	**Pg**	**08 46 33.4**	**-0.4**
MIDR				IAML		08 47 36.1	
	comp=N,33nm,2.3s						
DR12	**Loma Pena Alta**	**2.58**	**295**	Pn	**Pn**	**08 46 30.4**	**+1.1**
HATOM	**Hato Mayor del**	**2.58**	**295**	*ePg*	**Pb**	**08 46 33.0**	**-1.0**
HATOM				IAML		08 47 23.2	
	comp=N,22nm,2.6s						

IDC 16 09:00:33.7±2.3, 6.79S×129.20E, h0km, mb3.2/1, mbtmp3.2/4, ML3.4/3, Error ellipse: s-maj=84.1km s-min=30.0km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.77**	**197**	Pn	Pn	09 03 25.1	+2.2
	0.2nm,0.3s,baz=18,slow=12,SNR=8.9						
FITZ				Sn	Sn	09 05 25.1	-10
	0.5nm,0.3s,baz=63,slow=2.3,SNR=8.1						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**13.99**	**160**	Pn	Pn	09 03 51.6	-1.8
	0.2nm,0.3s,baz=336,slow=14,SNR=12						
WRA				Sn	Sn	09 06 12.8	-17
	0.4nm,0.3s,baz=339,slow=22,SNR=14						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**17.38**	**165**	P	Pn	09 04 37.3	-0.5
	0.1nm,0.3s,baz=344,slow=9.4,SNR=6.7						
ASAR				S	Sn	09 07 36.6	-15
	0.1nm,0.3s,baz=349,slow=24,SNR=4.1						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**67.62**	**327**	P	P	09 11 32.3	-0.1
	0.1nm,0.3s,baz=111,slow=7.9,SNR=2.0						
	0.1nm,0.3s						

SDD 16 09:04:50.4±2.3, 19.20N×67.58W, h2km±40km, MD3.0, ML2.6, MW2.9, 13C, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.85**	**148**	*iP*	Pg	09 05 04.2	-2.6
AGPR				⇑*iS*	Sg	09 05 14.9	-3.0
AGPR	**Aguadilla, PR**	**0.85**	**148**	*iP*	Pg	09 05 04.8	-1.9
AGPR				IAML		09 05 16.6	
	comp=N,100nm,0.1s						
PCDR	**Punta Cana, DR**	**1.02**	**228**	⇑*iP*	Pg	09 05 06.1	-3.9
PCDR				*iS*	Sg	09 05 18.0	-5.2
PCDR				IAML		09 05 22.4	
	comp=N,56nm,0.3s						
PCDR	**Punta Cana, DR**	**1.02**	**228**	*iP*	Pg	09 05 10.0	0.0
PCDR				IAML		09 05 53.7	
	comp=N,172nm,2.3s						
PRSN	**Puerto Rico Se**	**1.06**	**157**	⇑*iP*	Pg	09 05 07.4	-3.4
PRSN				⇑*iS*	Sg	09 05 19.2	-5.3
PRSN				IAML		09 05 32.0	
	comp=N,135nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.27**	**159**	*iP*	Pg	09 05 11.4	-3.3
CRPR				⇑*iS*	Sg	09 05 28.8	-2.4
CRPR	**Cabo Rojo, PR**	**1.27**	**159**	*iP*	Pg	09 05 12.3	-2.4
CRPR				IAML		09 05 32.2	
	comp=N,96nm,0.5s						
MIDR	**Miches**	**1.40**	**261**	⇑*iP*	Pn	09 05 14.5	-2.5
MIDR				⇑*iS*	Sg	09 05 33.8	-1.7
MIDR				IAML		09 05 34.4	
	comp=N,38nm,1.0s						
MIDR				IAML		09 05 54.0	
	comp=N,36nm,3.1s						
MIDR	**Miches**	**1.40**	**261**	IAML		09 05 36.4	
	comp=N,43nm,0.2s						
SMDR	**Samana, DR**	**1.52**	**274**	⇑*iP*	Pn	09 05 14.9	-3.7
SMDR				⇑*iS*	Sn	09 05 34.3	-4.7
SMDR				IAML		09 05 46.1	
	comp=N,53nm,0.7s						
SMDR	**Samana, DR**	**1.52**	**274**	*iP*	Pn	09 05 16.2	-2.4
SJG	**San Juan**	**1.74**	**128**	⇑*iP*	Pn	09 05 19.2	-2.5
SJG				⇑*iS*	Sn	09 05 40.0	-4.4
SJG	**San Juan**	**1.74**	**128**	*iP*	Pn	09 05 21.2	-0.5
HATOM	**Hato Mayor del**	**1.75**	**257**	⇑*iP*	Pn	09 05 18.5	-3.4
HATOM				⇑*iS*	Sn	09 05 39.7	-5.1
HATOM				IAML		09 05 46.3	
	comp=N,20nm,1.3s						
HATOM	**Hato Mayor del**	**1.75**	**257**	*iP*	Pn	09 05 19.7	-2.1
HATOM				IAML		09 05 44.2	
	comp=N,18nm,0.2s						
DR08	**Loma La Naviza**	**2.32**	**265**	*iP*	Pn	09 05 28.2	-1.5
DR08				IAML		09 06 05.2	
	comp=N,657nm,0.2s						

*GCG **16** 09:21:15.7±1.1, 13°.94N×90°.34W, h102km±16km, MD3.5, ML3.4, MW3.2, Presumed earthquake*
*CATAC **16** 09:21:16.1±0.6, 14°.8±°×9°.0W±°, h82km±5km, M2.9/9, MLv2.9/9, Error ellipse: s-maj=19.4km s-min=4.7km az=21.0, confirmed*
*SNET **16** 09:21:16.2±1.5, 13°.96N×90°.24W, h104km, ML2.6, Presumed earthquake*

ISC 16 09:21:17.3±2.0, 13.90N±0.09×90.26W±0.04, h104km±14km, n33, σ1°84/42, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.24**	**103**	P	**Pn**	**09 21 30.3**	**-1.8**
ESSJ	**San Jos, E**	**0.41**	**216**	*iP*	**Pn**	**09 21 32.3**	**-0.7**
FG16	**Alotenango, Sa**	**0.45**	**327**	*iP*	**Pn**	**09 21 33.9**	**+0.4**
NUBE	**Las Nubes**	**0.46**	**89**	P	**Pn**	**09 21 32.1**	**-1.4**
NUBE	**Las Nubes**	**0.46**	**89**	*eP*	**Pn**	**09 21 32.3**	**-1.2**
NUBE				*eS*	**Sn**	**09 21 44.6**	**-0.9**
NUBE	**Las Nubes**	**0.46**	**89**	*eP*	**Pn**	**09 21 32.0**	**-1.5**
LOAL	**Lomas de Alarc**	**0.47**	**77**	P	**Pn**	**09 21 32.3**	**-1.1**
SLOZ	**Alcaldia de Sa**	**0.47**	**74**	P	**Pn**	**09 21 32.0**	**-1.4**
SLOZ	**Alcaldia de Sa**	**0.47**	**74**	*eP*	**Pn**	**09 21 31.9**	**-1.6**
SLOZ				*eS*	**Sn**	**09 21 45.5**	**0.0**
RTR	**El Retiro**	**0.59**	**90**	*eP*	**Pn**	**09 21 33.4**	**-1.0**
SBLS	**San Blas**	**0.62**	**95**	*eP*	**Pn**	**09 21 33.6**	**-1.1**
UNIC	**Universidad Ca**	**0.69**	**83**	*eP*	**Pn**	**09 21 33.6**	**-1.5**
JAYA	**Jayaque - finc**	**0.82**	**107**	P	**Pn**	**09 21 35.7**	**-0.7**
JAYA	**Jayaque - finc**	**0.82**	**107**	*eP*	**Pn**	**09 21 35.1**	**-1.3**
JAYA				*eS*	**Sn**	**09 21 51.0**	**+0.2**
JAYA	**Jayaque - finc**	**0.82**	**107**	*eP*	**Pn**	**09 21 35.3**	**-1.1**
PMON	**Piamonte**	**0.93**	**101**	P	**Pn**	**09 21 37.1**	**-0.3**
PMON				*S*	**Sn**	**09 21 55.4**	**+2.8**
PMON	**Piamonte**	**0.93**	**101**	*eP*	**Pn**	**09 21 36.4**	**-1.1**
PMON				*eS*	**Sn**	**09 21 54.1**	**+1.5**
LALI	**Alcalda de L**	**0.99**	**114**	⇓*eP*	**Pn**	**09 21 37.3**	**-0.7**
MTO3	**Montecristo**	**1.00**	**60**	*eP*	**Pn**	**09 21 37.0**	**-1.3**
MTO3	**Montecristo**	**1.00**	**60**	*iP*	**Pn**	**09 21 37.1**	**-1.2**
UEES	**Universidad Ev**	**1.00**	**100**	P	**Pn**	**09 21 40.3**	**+2.1**
UEES				S	**Sn**	**09 21 55.0**	**+1.1**
UDBS	**Universidad Do**	**1.08**	**99**	S	**Sn**	**09 21 55.5**	**+0.1**
ESQI	**Esquipulas**	**1.10**	**53**	P	**Pn**	**09 21 38.6**	**-0.7**
ESQI	**Esquipulas**	**1.10**	**53**	*eP*	**Pn**	**09 21 38.7**	**-0.9**
ZAFR2	**Estanzuela, Za**	**1.11**	**52**	*iP*	**Pn**	**09 21 40.0**	**+0.7**
APG	**El Apazote**	**1.12**	**350**	*iP*	**Pn**	**09 21 38.2**	**-1.4**
STG5	**El Palmar, Qui**	**1.18**	**296**	*iP*	**Pn**	**09 21 41.4**	**+1.3**
STG5				*iS*	**Sn**	**09 22 00.9**	**+3.6**
STG8	**El Palmar, Qui**	**1.20**	**298**	IAML		09 22 06.1	
	comp=N,390nm,0.2s						
STG2	**El Palmar, Qui**	**1.21**	**296**	*iP*	**Pn**	**09 21 41.8**	**+1.2**
STG2				*iS*	**Sn**	**09 22 03.6**	**+5.5**
COEG	**Centro de Oper**	**1.36**	**101**	P	**Pn**	**09 21 41.7**	**-0.5**
COEG				S	**Sn**	**09 22 02.5**	**+1.4**
RTAL	**Retalhuleu**	**1.53**	**294**	P	**Pn**	**09 21 41.2**	**-2.9**
RTAL				S	**Sn**	**09 22 00.1**	**-4.4**
SARH	**Santa Rosa de**	**1.69**	**59**	P	**Pn**	**09 21 46.0**	**-0.2**
SMCA	**Catarina**	**2.01**	**299**	*iP*	**Pn**	**09 21 47.9**	**-2.2**

IDC 16 09:35:30.0±4.7, 3.99S×147.54E, h128km±48km, mb3.5/8, mbtmp3.9/9, MS3.1/8, Error ellipse: s-maj=44.3km s-min=29.0km az=112.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.39**	**184**	P	Pn	09 36 48.7	+0.2
	16nm,0.7s,baz=39,slow=9.7,SNR=6.6						
HNR	**Honiara**	**13.46**	**114**	LR	LR	09 43 17.8	
	comp=Z,11nm,20.1s,baz=26,slow=35						
CTA	**Charters Tower**	**16.05**	**184**	LR	LR	09 45 36.4	
	comp=Z,53nm,20.4s,baz=40,slow=38						
WRA	**Warramunga Arr**	**20.42**	**218**	P	P	09 39 56.9	-0.4
	9.1nm,0.8s,baz=38,slow=10,SNR=15						
	9.1nm,0.8s						
ASAR	**Alice Springs**	**23.58**	**213**	P	P	09 40 29.5	+0.2
	2.8nm,0.8s,baz=45,slow=7.6,SNR=30						
ASAR				LR	LR	09 50 19.8	
	comp=Z,99nm,18.0s,baz=66,slow=38						
	2.8nm,0.8s						
DAV	**Davao City (W)**	**24.52**	**297**	LR	LR	09 50 50.7	
	comp=Z,80nm,18.4s,baz=22,slow=38						
FITZ	**Fitzroy Crossi**	**25.61**	**235**	LR	LR	09 50 51.6	
	comp=Z,77nm,20.5s,baz=62,slow=36						
KAPI	**Kappang**	**27.72**	**267**	LR	LR	09 53 30.6	
	comp=Z,25nm,18.7s,baz=68,slow=39						
STKA	**Stephens Creek**	**28.30**	**191**	LR	LR	09 52 08.9	
	comp=Z,97nm,20.6s,baz=28,slow=35						
KSRS	**Korea Array**	**45.09**	**338**	LR	LR	09 59 30.4	
	comp=Z,28nm,21.0s,baz=350,slow=32						
CMAR	**Chiang Mai Arr**	**52.80**	**297**	P	P	09 44 32.5	-0.2
	0.7nm,0.4s,baz=116,slow=5.7,SNR=12						
	0.7nm,0.4s						
LZDM	**Lanzhou Array**	**57.09**	**318**	P	P	09 45 03.2	-0.4
	0.3nm,0.3s,baz=126,slow=9.3,SNR=1.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**76.30**	**320**	P	P	09 47 05.5	+0.5
	1.6nm,0.9s,baz=108,slow=7.8,SNR=8.2						
	1.6nm,0.9s						
KURBB	**Kurchatov Arra**	**79.96**	**323**	P	P	09 47 25.9	+1.0
	0.3nm,0.5s,baz=105,slow=6.9,SNR=1.7						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**83.43**	**23**	P	P	09 47 42.8	-0.2
	0.5nm,0.8s,baz=236,slow=5.1,SNR=4.6						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**85.47**	**324**	P	P	09 47 52.7	-0.7
	1.3nm,0.6s,baz=100,slow=7.7,SNR=9.0						
	1.3nm,0.6s						

SDD 16 09:41:44.7±1.7, 18.96N×67.62W, h20km±70km, MD3.4, ML2.3, MW2.9, 13C, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.69**	**135**	*iP*	Pb	09 41 56.8	-1.3
AGPR				*iS*	Sb	09 42 06.7	-0.4
AGPR				IAML		09 42 07.4	
	comp=E,462nm,0.2s						
AGPR				IAML		09 42 07.5	
	comp=N,233nm,0.2s						
AGPR	**Aguadilla, PR**	**0.69**	**135**	⇑*ePg*	Pb	09 41 56.8	-1.3
AGPR				⇑*eSg*	Sb	09 42 06.6	-0.5
AGPR				IAML		09 42 07.5	
	comp=N,233nm,0.2s						
PCDR	**Punta Cana, DR**	**0.85**	**238**	*ePg*	Pb	09 41 59.3	-1.4
PCDR				IAML		09 42 12.1	
	comp=N,167nm,2.2s						
PCDR				IAML		09 42 13.2	
	comp=N,161nm,2.0s						
PCDR	**Punta Cana, DR**	**0.85**	**238**	⇑*ePg*	Pb	09 41 59.2	-1.6
PCDR				IAML		09 42 12.2	
	comp=N,167nm,2.2s						
PRSN	**Puerto Rico Se**	**0.87**	**149**	⇑*ePg*	Pb	09 42 00.2	-0.8
PRSN				*eSg*	Sb	09 42 12.5	+0.3
PRSN				IAML		09 42 15.3	
	comp=N,141nm,0.2s						
PRSN				IAML		09 42 19.9	
	comp=E,94nm,0.2s						
PRSN	**Puerto Rico Se**	**0.87**	**149**	⇑*ePg*	Pb	09 42 00.3	-0.8
PRSN				⇑*eSg*	Sb	09 42 10.1	-2.1
PRSN				IAML		09 42 15.4	
	comp=N,141nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.07**	**153**	*iP*	Pb	09 42 02.7	-1.7
CRPR				*eSg*	Sn	09 42 20.5	+1.7
CRPR				⇑*eSg*	Sb	09 42 21.1	+3.1
CRPR				IAML		09 42 22.1	
	comp=E,69nm,0.6s						
CRPR				IAML		09 42 22.3	
	comp=N,49nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.07**	**153**	⇑*ePg*	Pb	09 42 02.4	-2.1
CRPR				⇑*eSg*	Sb	09 42 18.3	+0.3
CRPR				IAML		09 42 22.3	
	comp=N,49nm,0.2s						
MIDR	**Miches**	**1.35**	**271**	⇑*ePg*	Pn	09 42 08.7	+0.2
MIDR				IAML		09 42 34.8	
	comp=N,32nm,2.1s						
SMDR	**Samana, DR**	**1.52**	**283**	*eSg*	Sb	09 42 30.9	-0.1
SJG	**San Juan**	**1.63**	**121**	⇑*ePg*	Pb	09 42 13.8	-0.3
SJG				*eSg*	Sn	09 42 33.3	+0.6
HATOM	**Hato Mayor del**	**1.68**	**264**	⇑*ePg*	Pb	09 42 14.0	-0.9
HATOM				⇑*eSg*	Sb	09 42 37.9	+2.3
HATOM				IAML		09 42 41.2	
	comp=E,23nm,2.7s						
HATOM				IAML		09 42 48.2	
	comp=N,22nm,2.5s						
HATOM	**Hato Mayor del**	**1.68**	**264**	*ePg*	Pb	09 42 14.0	-0.9
HATOM				IAML		09 42 48.2	
	comp=N,22nm,2.5s						

*JMA **16** 09:48:44.9±0.7, 44°N±4°×14°8E±°, h0km, MV3.6/17, SE OFF ETOROFU*
*SKHL **16** 09:48:45.4±0.2, 44°.50N×148°.50E, h37km±7km, mb4.6/3*

ISC 16 09:48:43.3±3.1, 44.43N±0.08×148.4E±0.2, h10km, n14, σ1°30/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.88**	**337**	*eP*	**Pg**	**09 48 59.8**	**-0.4**
KUR				AMB	AMB	09 49 00.8	
	250nm,0.3s						
KUR				*eS*	**Sg**	**09 49 10.5**	**-1.1**
KUR				A	A	09 49 12.9	
	800nm,0.2s						
KUR				A	A	09 49 12.9	
	610nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.83**	**258**	*eP*	**Pn**	**09 49 15.5**	**+0.7**
YUK				AMB	AMB	09 49 17.3	
	70nm,0.1s						
YUK				*eS*	**Sn**	**09 49 37.9**	**-0.2**
YUK				A	A	09 49 43.2	
	280nm,0.3s						
YUK				A	A	09 49 43.2	
	170nm,0.3s						
GLVR	**Golovnino**	**2.15**	**252**	*eP*	**Pn**	**09 49 20.0**	**+0.8**
GLVR				AMB	AMB	09 49 22.7	
	40nm,0.1s						
GLVR				*eS*	**Sb**	**09 49 48.1**	**-1.0**
GLVR				A	A	09 49 51.8	
	390nm,0.4s						
GLVR				A	A	09 49 51.8	
	310nm,0.4s						
NEM2	**Nemuro 2**	**2.17**	**242**	*eP*	**Pn**	**09 49 19.3**	**-0.1**
NEM2				*eS*	**Sn**	**09 49 44.5**	**-1.7**
NMR	**Nemuro--Hokkai**	**2.17**	**242**	*eP*	**Pn**	**09 49 19.2**	**-0.3**
NMR				*eS*	**Sn**	**09 49 44.6**	**-1.8**
JRA	**Rausu**	**2.38**	**259**	*eP*	**Pn**	**09 49 24.0**	**+1.8**
JNSB	**Nemuroshibetsu**	**2.50**	**256**	*eP*	**Pn**	**09 49 25.6**	**+1.7**
JKHN	**Kushirohamanak**	**2.67**	**241**	*eS*	**Sn**	**09 49 58.0**	**-0.8**
JNK	**Nakash**	**2.75**	**253**	*eP*	**Pn**	**09 49 28.9**	**+1.4**
AKK	**Akkeshi**	**2.91**	**242**	*eP*	**Pn**	**09 49 30.4**	**+0.8**
JAK	**Akkeshi**	**3.01**	**243**	*eP*	**Pn**	**09 49 31.4**	**+0.4**
JAR	**Ashorobuto**	**3.50**	**253**	*eP*	**Pn**	**09 49 40.2**	**+2.4**
JAR				*eS*	**Sn**	**09 50 20.7**	**+1.5**
JOB	**Onbets**	**3.62**	**247**	*eS*	**Sn**	**09 50 22.4**	**+0.4**
JCH	**Churui**	**4.06**	**245**	*eP*	**Pn**	**09 49 47.2**	**+1.8**
JCH				*eS*	**Sn**	**09 50 33.2**	**+0.3**

*PDG **16** 09:58:10.8±0.3, 39°.41N×17°.08E, h22km, ML3.2/12, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*
*ROM **16** 09:58:11.1±0.1, 39°.385N±0°.007×17°.15E±0°.01, h18km±1km, ML3.0/87, Error ellipse: s-maj=0.7km s-min=0.7km az=296.0*
*THE **16** 09:58:15.3, 39°N±8°×1°8E±°, h0km, M3.3/11, MLh3.3/11*

ISC 16 09:58:11.4±1.0, 39.40N±0.02×17.11E±0.03, h18km±4km, n68, σ0°83/91, 7C-7D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADO	**San Nicola del**	**0.15**	**221**	⇑*iP*	**Pg**	**09 58 15.9**	**+0.2**
LADO				*S*	**Sg**	**09 58 19.4**	**+0.8**
LADO				AML	AML		
	comp=E,1745μm,1.5s						
LADO				AML	AML		
	comp=N,1330μm,0.7s						
PIPA	**Pietrapaola**	**0.24**	**291**	⇓*iP*	**Pb**	**09 58 17.5**	**+0.4**
PIPA				*S*	**Sb**	**09 58 22.3**	**+1.3**
PIPA				AML	AML		
	comp=E,10305μm,1.2s						
PIPA				AML	AML		
	comp=E,9

SERS AML AML
comp=N,2195μm,1.4s
SERS AML AML
comp=E,2185μm,1.4s
SERS AML AML
comp=E,2185μm,0.6s
SERS AML AML
comp=N,2195μm,0.6s
SPS2 Spezzano della 0.60 260 P **Pg** **09 58 23.0 -0.4**
SPS2 AML AML
comp=N,620μm,1.4s
SPS2 AML AML
comp=N,620μm,0.6s
SPS2 AML AML
comp=E,826μm,1.1s
TDS Terranova Siba 0.65 294 ⇓P **Pb** **09 58 23.7 -0.5**
TDS S **Sb** **09 58 33.7 +0.8**
TDS AML AML
comp=N,617μm,0.6s
TDS AML AML
comp=E,511μm,0.4s
CAR1 CAROLEI 0.71 258 P **Pb** **09 58 24.7 -0.6**
CAR1 AML AML
comp=E,1660μm,0.6s
CAR1 AML AML
comp=N,1240μm,0.7s
CAR1 AML AML
comp=N,1170μm,0.8s
CAR1 AML AML
comp=E,1705μm,0.6s
CAR1 AML AML
comp=E,1665μm,0.5s
SALB San Lorenzo Be 0.76 309 P **Pb** **09 58 25.3 -0.8**
SALB AML AML
comp=E,950μm,1.1s
SALB AML AML
comp=N,770μm,1.6s
GRI Girifalco 0.79 223 P **Pb** **09 58 26.2 -0.4**
GRI AML AML
comp=E,1182μm,0.9s
GRI AML AML
comp=N,1055μm,0.6s
GRI AML AML
comp=E,1182μm,1.1s
ORI Oriolo Calabro 0.83 323 P **Pb** **09 58 26.9 -0.6**
ORI AML AML
comp=E,3240μm,0.3s
ORI AML AML
comp=N,2835μm,0.4s
ORI AML AML
comp=E,3240μm,1.7s
ORI AML AML
comp=N,2835μm,1.6s
CET2 Cetraro 0.90 279 P **Pb** **09 58 28.0 -0.6**
CET2 AML AML
comp=E,820μm,0.7s
CET2 AML AML
comp=N,2535μm,0.6s
CET2 AML AML
comp=E,819μm,0.7s
MMN Mormanno 0.99 300 P **Pg** **09 58 31.2 +0.5**
GRIS Grisolia 1.03 290 P **Pb** **09 58 30.2 -0.5**
PLAC Placanica 1.08 209 P **Pn** **09 58 31.7 0.0**
PLAC AML AML
comp=N,440μm,1.1s
PLAC AML AML
comp=E,476μm,1.1s
PLAC AML AML
comp=N,440μm,1.1s
PLAC AML AML
comp=N,574μm,0.6s
PLAC AML AML
comp=E,476μm,0.9s
PLAC AML AML
comp=E,562μm,0.6s
PLAC AML AML
comp=N,440μm,0.9s
CRAC Craco 1.09 332 P **Pg** **09 58 32.7 0.0**
CRAC AML AML
comp=N,2015μm,1.0s
CRAC AML AML
comp=E,1770μm,1.5s
CRAC AML AML
comp=N,2015μm,1.0s
CRAC AML AML
comp=E,1770μm,0.5s
TAR1 Taranto 1.13 7 P **Pn** **09 58 32.2 -0.2**
TAR1 S **Sg** **09 58 48.5 +0.3**
TAR1 AML AML
comp=E,1112μm,0.8s
TAR1 AML AML
comp=E,1112μm,1.2s
TAR1 AML AML
comp=N,1880μm,0.7s
CUC Castrocucco 1.16 301 AML AML
comp=N,702μm,1.2s
CUC AML AML
comp=E,834μm,0.5s
CUC AML AML
comp=N,732μm,0.8s
CUC AML AML
comp=E,834μm,0.5s
CUC AML AML
comp=N,732μm,0.8s
CUC AML AML
comp=E,848μm,0.5s
CUC AML AML
comp=N,702μm,0.8s
CUC AML AML
comp=E,848μm,1.5s
CUC AML AML
comp=E,834μm,1.5s
CUC AML AML
comp=N,732μm,1.2s
SIRI Monte Sirino - 1.23 310 P **Pn** **09 58 34.0 +0.1**
SIRI AML AML
comp=E,528μm,0.5s
SIRI AML AML
comp=E,526μm,0.5s
SIRI AML AML
comp=E,526μm,1.5s
SIRI AML AML
comp=N,454μm,0.4s
SIRI AML AML
comp=E,528μm,1.5s
SIRI AML AML
comp=N,444μm,0.4s
JOPP Joppolo 1.24 231 P **Pb** **09 58 34.7 +0.4**
SCTE Santa Cesarea 1.25 57 P **Pb** **09 58 34.0 -0.4**
SCTE AML AML
comp=E,1240μm,0.8s
SCTE AML AML
comp=N,772μm,0.9s
MATE Matera 1.29 346 P **Pb** **09 58 34.9 -0.2**
MIGL Miglionico 1.31 337 P **Pn** **09 58 34.7 -0.1**
MIGL AML AML
comp=E,1730μm,1.6s
MIGL AML AML
comp=N,1840μm,1.6s
MIGL AML AML
comp=N,1840μm,0.4s
MIGL AML AML
comp=E,1730μm,0.4s
MESG Mesagne 1.32 25 P **Pn** **09 58 34.8 -0.1**
MCEL Monticello 1.36 313 P **Pn** **09 58 36.1 +0.4**
MCEL AML AML
comp=E,361μm,0.6s
MCEL AML AML
comp=E,368μm,0.6s
MCEL AML AML
comp=N,478μm,0.8s
MCEL AML AML
comp=N,468μm,0.8s
MCEL AML AML
comp=E,367μm,0.6s
MCEL AML AML
comp=E,361μm,1.4s
MCEL AML AML
comp=E,367μm,1.4s
PTRP Pietrapertosa 1.38 325 P **Pb** **09 58 37.5 +0.8**
PTRP AML AML
comp=E,721μm,0.8s
PTRP AML AML
comp=N,791μm,1.3s
PTRP AML AML
comp=N,791μm,0.7s
PTRP AML AML
comp=E,721μm,1.2s
NOCI Noci 1.39 359 P **Pn** **09 58 36.0 0.0**
NOCI AML AML
comp=E,710μm,0.2s
NOCI AML AML
comp=N,794μm,0.5s
MGR Morigerati 1.41 302 P **Pb** **09 58 37.4 +0.3**
MGR AML AML
comp=N,276μm,1.5s
MGR AML AML
comp=E,250μm,0.5s
MGR AML AML
comp=N,276μm,0.5s
MGR AML AML
comp=E,250μm,1.5s
CEL Celeste 1.48 220 P **Pn** **09 58 36.9 -0.4**
CEL AML AML
comp=N,285μm,1.4s
CEL AML AML
comp=N,268μm,0.8s
CEL AML AML
comp=E,216μm,1.0s
CEL AML AML
comp=N,285μm,0.6s
CEL AML AML
comp=N,268μm,1.2s
CEL AML AML
comp=E,216μm,1.0s
CEL AML AML
comp=E,238μm,1.6s
BULG Bulgheria - Ca 1.50 298 P **Pb** **09 58 39.1 +0.4**
BULG AML AML
comp=E,221μm,1.2s
BULG AML AML
comp=N,307μm,0.5s
BULG AML AML
comp=N,314μm,0.5s
BULG AML AML
comp=E,222μm,1.2s
BULG AML AML
comp=E,209μm,1.2s
BULG AML AML
comp=E,209μm,0.8s
BULG AML AML
comp=E,222μm,0.8s
BULG AML AML
comp=N,307μm,1.5s
BULG AML AML
comp=N,314μm,1.5s
SLCN Sala Consilina 1.50 312 P **Pb** **09 58 39.5 +0.6**
SLCN AML AML
comp=E,671μm,0.8s
SLCN AML AML
comp=E,576μm,0.8s
SLCN AML AML
comp=N,640μm,0.6s
SLCN AML AML
comp=N,504μm,0.5s
SLCN AML AML
comp=E,576μm,1.2s
SLCN AML AML
comp=E,671μm,1.2s
SLCN AML AML
comp=N,504μm,1.5s
SLCN AML AML
comp=N,640μm,1.4s
AMUR Altamura 1.56 346 P **Pn** **09 58 38.7 +0.4**
AMUR AML AML
comp=N,470μm,1.4s
AMUR AML AML
comp=E,414μm,0.9s
AMUR AML AML
comp=N,470μm,0.6s
SOI Samo 1.56 212 P **Pb** **09 58 38.9 -0.9**
SOI AML AML
comp=N,162μm,1.1s
SOI AML AML
comp=E,234μm,0.8s
SOI AML AML
comp=N,162μm,1.1s
ACER Acerenza 1.65 328 P **Pn** **09 58 39.4 -0.2**
ACER AML AML
comp=E,976μm,0.6s
ACER AML AML
comp=N,796μm,0.6s
ACER AML AML
comp=E,1004μm,0.6s
ACER AML AML
comp=N,813μm,0.6s
ACER AML AML
comp=N,796μm,1.4s
ACER AML AML
comp=N,813μm,1.4s
CMPR Campora 1.66 304 P **Pb** **09 58 41.2 -0.4**
CMPR AML AML
comp=E,134μm,1.4s
CMPR AML AML
comp=E,134μm,0.6s
CMPR AML AML
comp=N,182μm,0.8s
MRVN Minervino Murg 1.80 338 P **Pn** **09 58 42.1 +0.5**
MRVN AML AML
comp=N,202μm,0.9s
MRVN AML AML
comp=N,202μm,1.1s
MRVN AML AML
comp=E,318μm,0.5s
AIO Antillo 2.04 226 P **Pn** **09 58 46.0 +1.0**
AIO AML AML
comp=E,89μm,1.4s
AIO AML AML
comp=N,91μm,1.2s
MUCR Ucria 2.21 233 P **Pn** **09 58 48.6 +1.3**
MUCR AML AML
comp=E,106μm,1.2s
MUCR AML AML
comp=E,106μm,0.8s
MUCR AML AML
comp=N,122μm,1.5s
MSAG Monte S. Angel 2.48 339 P **Pn** **09 58 51.8 +0.7**
MSAG AML AML
comp=E,71μm,1.2s
MSAG AML AML
comp=N,182μm,1.5s
MSAG AML AML
comp=N,182μm,0.5s
IGT Igoumenitsa 2.50 86 P **Pn** **09 58 51.6 +0.4**
IGT S **Sn** **09 59 20.7 -0.6**
HLNI Lentini 2.70 221 P **Pn** **09 58 53.5 -0.4**
DRAG Dragano-Lefkad 2.79 104 P **Pn** **09 58 55.9 +0.6**
TSLK Tsoukalades, L 2.82 101 P **Pn** **09 58 56.3 +0.7**
LKD2 Lefkada island 2.83 101 P **Pn** **09 58 56.1 +0.3**
LKD2 S **Sn** **09 59 28.3 -1.1**
EVGI Lefkada island 2.87 105 P **Pn** **09 58 57.7 +1.3**
NYDR Nydri-Lefkada 2.88 103 P **Pn** **09 58 56.7 +0.3**
ULC Ulcinj 3.03 32 *e*Pn **Pn** **09 58 57.8 -0.8**
ULC *i* Sn **Sn** **09 59 35.1 +0.6**
PRMD Pramanda 3.09 86 P **Pn** **09 59 00.9 +1.5**
PRMD S **Sn** **09 59 34.7 -1.3**
NEST Nestorio 3.20 70 P **Pn** **09 59 03.3 +2.4**
BUM Brajici-Budva 3.20 24 ⇓*i*Pn **Pn** **09 59 00.8 -0.1**
BUM *i* Sn **Sn** **09 59 38.5 -0.1**
DRME Dracevica, Mon 3.20 29 ⇓*i*Pn **Pn** **09 59 00.5 -0.3**
DRME *i* Sn **Sn** **09 59 38.2 -0.3**
HCY Herceg Novi 3.22 19 ⇓*i*Pn **Pn** **09 59 00.8 -0.3**
HCY *i* Sn **Sn** **09 59 38.5 -0.6**
TETR Tetrakomo, Epi 3.23 90 P **Pn** **09 59 02.3 +1.0**
TETR S **Sn** **09 59 37.9 -1.5**
KPRO Kipourio 3.33 79 P **Pn** **09 59 03.6 +0.9**
CEME Cevo 3.43 23 ⇑*i*Pn **Pn** **09 59 03.8 -0.3**
CEME *i* Sn **Sn** **09 59 44.5 +0.2**
PDG Podgorica 3.44 28 ⇑*i*Pn **Pn** **09 59 02.4 -1.7**
PDG *i* Sn **Sn** **09 59 44.6 +0.2**
PVO Paravola 3.53 101 P **Pn** **09 59 05.8 +0.4**
NKME Niksic 3.64 22 *e*Pn **Pn** **09 59 06.9 -0.1**
NKME *e*Sn **Sn** **09 59 48.5 -1.0**
BRY Bratogost 3.66 17 ⇑*i*Pn **Pn** **09 59 06.8 -0.5**
BRY *i* Sn **Sn** **09 59 49.6 -0.5**
THL Klokotos Trika 3.80 86 P **Pn** **09 59 10.0 +0.9**
ANX Ano Chora 3.84 101 P **Pn** **09 59 11.4 +1.8**
PVY Plav 3.85 33 *e*Pn **Pn** **09 59 09.6 -0.3**
PVY *i* Sn **Sn** **09 59 54.2 -0.6**
KOME Kolasin 3.90 27 ⇓*i*Pn **Pn** **09 59 10.5 0.0**
KOME *e*Sn **Sn** **09 59 54.8 -1.1**
MAKR Makrakomi, Fth 3.92 94 P **Pn** **09 59 13.5 +2.7**
UPM Unac-Piva 4.04 19 ⇑*i*Pn **Pn** **09 59 12.5 0.0**
UPM *i* Sn **Sn** **09 59 59.0 -0.4**
IVA Berane 4.06 30 *e*Pn **Pn** **09 59 13.0 +0.3**
IVA *e*Sn **Sn** **09 59 58.8 -1.0**
AMT Artemida-Makis 4.07 116 P **Pn** **09 59 12.5 -0.2**
OBKA Obir 7.35 346 *i* Pn **Pn** **09 59 58.7 +0.8**
OBKA comp=N,1.2nm,0.4s *e*Sn **Sn** **10 01 18.4 -2.5**
comp=N,2.9nm,0.6s

AFAD ***16*** *10:02:50.3,34.87N×27.70E,h8km±4km,ML2.8*
ISK ***16*** *10:02:50.3,34.95N×27.86E,h6km,ML3.1/12*
ATH ***16*** *10:02:52.9,35.13N×27.83E,h13km±5km,ML2.9/4, Manual Solution by A.Papageorgiou First location: 2020/02/16 10:04:44, This location: 2021/11/16 06:31:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 2 km*

ISC 16 10:02:50.9±1.6,35.00N±0.06×27.83E±0.04,h3km±11km, n34,σ0s93/47,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KARP	**Karpathos**	**0.77**	**315**	P		**Pg**	**10 03 05.4**	**-0.3**
KARP				S		**Sg**	**10 03 16.0**	**+0.3**
KARP	**Karpathos**	**0.77**	**315**	P		**Pb**	**10 03 06.4**	**-0.6**
KARP				S		**Sg**	**10 03 15.9**	**+0.3**
ARG	**Arkhangelos**	**1.24**	**11**	Pn		**Pg**	**10 03 15.4**	**+0.7**
ARG				Sn		**Sn**	**10 03 33.4**	**+1.1**
ARG	**Arkhangelos**	**1.24**	**11**	P		**Pg**	**10 03 15.4**	**+0.7**
ARG				S		**Sn**	**10 03 33.8**	**+1.4**
ARG	**Arkhangelos**	**1.24**	**11**	P		**Pn**	**10 03 14.2**	**-1.0**
ARG				S		**Sb**	**10 03 28.3**	**-3.0**
ZKR	**Zakros**	**1.32**	**275**	P		**Pg**	**10 03 17.1**	**+0.9**
ZKR				S		**Sn**	**10 03 34.4**	**-0.1**
YAZI	**Mula-Dat§a-**	**1.71**	**350**	P		**Pb**	**10 03 22.3**	**-0.6**
YAZI				S		**Sb**	**10 03 45.3**	**+0.5**
DAT	**Datca**	**1.74**	**353**	Pn		**Pn**	**10 03 22.3**	**+0.2**
DAT				Sn		**Sb**	**10 03 46.3**	**+0.5**
DAT	**Datca**	**1.74**	**353**	P		**Pn**	**10 03 22.5**	**+0.4**
DAT				S		**Sb**	**10 03 45.9**	**+0.1**
TURN	**Turunc**	**1.81**	**11**	Pn		**Pn**	**10 03 23.4**	**+0.5**
IZZE	**Mula-Seydike**	**1.83**	**38**	P		**Pn**	**10 03 23.1**	**-0.1**
IZZE				IAML			10 03 52.0	
	comp=E,80nm,0.5s							
IZZE				IAML			10 03 58.0	
	comp=N,76nm,0.6s							
NPS	**Neapolis**	**1.83**	**279**	P		**Pn**	**10 03 22.1**	**-1.2**
NPS	**Neapolis**	**1.83**	**279**	P		**Pb**	**10 03 24.4**	**-0.7**
KSL	**Kastellorizon**	**1.84**	**51**	P		**Pb**	**10 03 24.3**	**-0.8**
KSL	**Kastellorizon**	**1.84**	**51**	P		**Pb**	**10 03 24.1**	**-1.0**
AKAS	**Kas**	**1.90**	**49**	Pn		**Pn**	**10 03 24.3**	**-0.1**
FETY	**Fethiye**	**1.93**	**32**	P		Pn	10 03 16.2	-8.4
DALY	**Dalyan (Mula)**	**1.94**	**20**	Pn		**Pn**	**10 03 25.1**	**+0.4**
SABU	**Mula-Dalaman**	**2.04**	**27**	P		**Pn**	**10 03 26.4**	**+0.2**
BDRM	**Kayabasi**	**2.08**	**352**	P		**Pn**	**10 03 27.5**	**+0.7**
BDRM				S		**Sn**	**10 03 54.1**	**+0.9**
BDRM				IAML			10 04 10.0	
	comp=E,63nm,0.9s							
YER	**Yerkesik**	**2.16**	**10**	Pn		**Pn**	**10 03 28.8**	**+0.9**
MLSB	**Milas**	**2.29**	**359**	Pn		**Pn**	**10 03 30.3**	**+0.7**
KNIK	**Mula-Seydike**	**2.33**	**37**	P		**Pn**	**10 03 31.4**	**+1.2**
KNIK				S		**Sb**	**10 04 01.9**	**-0.8**
IDI	**Anoyia**	**2.42**	**278**	P		**Pn**	**10 03 32.2**	**+0.8**
ELL	**Elmali**	**2.43**	**43**	Pn		**Pn**	**10 03 31.9**	**+0.3**
DNZT	**Denizli-Tavas-**	**2.47**	**23**	P		**Pn**	**10 03 33.2**	**+1.0**
DNZT				S		**Sb**	**10 04 06.4**	**-0.6**
TAVA	**DENIZLI_Tavas**	**2.61**	**19**	P		**Pn**	**10 03 34.3**	**+0.1**
TAVA				S		**Sg**	**10 04 15.1**	**+0.3**
TAVA				IAML			10 04 26.0	
	comp=N,62nm,0.7s							
TAVA				IAML			10 04 26.0	
	comp=E,42nm,1.1s							
AYDN	**Tasoluk**	**2.66**	**1**	P		**Pn**	**10 03 34.8**	**+0.1**
AYDN				S		**Sn**	**10 04 07.7**	**+0.2**
AYDN				IAML			10 04 23.0	
	comp=N,51nm,1.1s							
AYDN				IAML			10 04 23.0	
	comp=E,53nm,0.7s							
APMY	**Acipayam-Deniz**	**2.74**	**25**	Pn		**Pn**	**10 03 35.9**	**0.0**
ESEN	**Aydn-Nazilli**	**2.83**	**8**	P		**Pb**	**10 03 39.2**	**-2.7**
KORT	**Korkueli**	**2.86**	**45**	Pn		**Pn**	**10 03 38.1**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**2.94**	**1**	Pn		**Pn**	**10 03 39.6**	**+0.9**
GAZI	**Gazipasa**	**3.86**	**70**	Pn		**Pn**	**10 03 51.8**	**+0.6**
SEYD	**Seydisehir-KON**	**4.04**	**52**	Pn		**Pn**	**10 03 54.7**	**+1.0**

IDC 16 10:20:45.5±2.8,4.13S×126.75E,h0km,mb3.3/2, mbtmp3.4/3,ML3.5/1,Error ellipse: s-maj=357.1km s-min=29.5km az=65.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.37**	**155**	P		Pn	10 24 50.0	+0.5
	0.2nm,0.3s,baz=332,slow=12,SNR=11							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**20.61**	**161**	P		P	10 25 26.3	-0.2
	0.6nm,0.3s,baz=346,slow=11,SNR=24							
	0.6nm,0.3s							
MKAR	**Makanchi Array**	**64.08**	**328**	P		P	10 31 21.5	0.0
	0.1nm,0.3s,baz=113,slow=7.1,SNR=2.0							
	0.1nm,0.3s							

SDD 16 10:36:28.9±2.2,19.04N×67.63W,h0km±12km,MD2.7, ML2.2,MW2.3,11C,Presumed earthquake,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.75**	**139**	*i* P		Pg	10 36 41.9	-1.4
AGPR				*i* S		Sg	10 36 52.2	-0.8
AGPR				IAML			10 37 08.5	
	comp=N,78nm,2.9s							
AGPR	**Aguadilla, PR**	**0.75**	**139**	⇑*i*P		Pg	10 36 41.2	-2.2
AGPR				⇑*i*S		Sg	10 36 52.2	-0.8
	comp=N,61nm,0.5s							
AGPR				IAML			10 37 01.1	
	comp=N,61nm,0.5s							
PCDR	**Punta Cana, DR**	**0.88**	**234**	⇑*i*P		Pg	10 36 45.7	-0.1
PCDR				⇑*i*S		Sg	10 36 55.2	-2.1
PCDR				IAML			10 37 23.3	
	comp=N,232nm,1.7s							
PRSN	**Puerto Rico Se**	**0.94**	**151**	*i* P		Pg	10 36 44.7	-2.2
PRSN				*i* S		Sg	10 36 56.5	-2.6
PRSN				IAML			10 37 04.9	
	comp=N,69nm,0.2s							
PRSN	**Puerto Rico Se**	**0.94**	**151**	⇑*i*P		Pg	10 36 45.9	-1.0
PRSN				⇑*i*S		Sg	10 36 59.4	+0.3
	comp=N,62nm,0.3s							
PRSN				IAML			10 37 06.0	
	comp=N,62nm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.14**	**154**	*i* P		Pg	10 36 49.8	-1.0
CRPR				*i* S		Sg	10 37 03.7	-1.8
CRPR				IAML			10 37 09.3	
	comp=N,37nm,0.5s							
CRPR	**Cabo Rojo, PR**	**1.14**	**154**	⇑*i*S		Sg	10 37 05.9	+0.3
CRPR				IAML			10 37 09.3	
	comp=N,37nm,0.5s							
MIDR	**Miches**	**1.34**	**268**	*i* P		Pg	10 36 52.1	-2.6
MIDR				*i* S		Sg	10 37 11.0	-1.2
MIDR				IAML			10 37 12.9	
	comp=N,24nm,1.1s							
MIDR	**Miches**	**1.34**	**268**	⇑*i*P		Pg	10 36 52.5	-2.2
MIDR				⇑*i*S		Sg	10 37 10.3	-1.9
MIDR				IAML			10 37 57.8	
	comp=N,29nm,3.6s							
HATOM	**Hato Mayor del**	**1.68**	**262**	*i* P		Pn	10 36 58.1	-1.4
HATOM				*i* S		Sn	10 37 17.0	-4.8
HATOM				IAML			10 37 29.9	
	comp=N,22nm,3.6s							
HATOM	**Hato Mayor del**	**1.68**	**262**	⇑*i*P		Pn	10 36 58.5	-1.1
HATOM				⇑*i*S		Sn	10 37 19.1	-2.7
HATOM				IAML			10 37 29.9	
	comp=N,22nm,3.6s							
SJG	**San Juan**	**1.68**	**123**	*i* P		Pn	10 36 58.7	-0.8
SJG				*i* S		Sn	10 37 16.2	-5.6
SJG	**San Juan**	**1.68**	**123**	⇑*i*S		Sn	10 37 18.3	-3.4

ISK ***16*** *10:40:03.4,38.30N×38.89E,h5km,ML3.1/14*

*AFAD **16** 10:40:03.8, 38°.30N×38°.89E, h7km±3km, MW3.2*
ISC 16 10:40:04.0±0.9, 38°.31N±0°.03×38°.89E±0°.03, h8km±8km, n24, σ0°.57/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MDYL	**Doganyol-Malat**	**0.12**	**88**	Op		ISC		
MDYL				Pg		**Pg**	**10 40 06.4**	**-0.3**
ESGZ	**Sivrice-Elazig**	**0.18**	**48**	Sg		**Sg**	**10 40 08.3**	**-0.3**
ESGZ				Pg		**Pg**	**10 40 07.8**	**0.0**
ELZG	**Elazig**	**0.20**	**21**	Sg		**Sg**	**10 40 10.6**	**+0.2**
ELZG				P		**Pg**	**10 40 08.6**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.33**	**78**	S		**Sg**	**10 40 11.7**	**+0.6**
SVRC				Pg		**Pg**	**10 40 10.2**	**-0.4**
CNGT	**ngs**	**0.33**	**106**	Sg		**Sg**	**10 40 15.7**	**+0.6**
CNGT				P		**Pg**	**10 40 10.5**	**-0.1**
ESIJ	**Sivrice-Elazig**	**0.36**	**67**	S		**Sg**	**10 40 15.2**	**+0.1**
ESIJ				Pg		**Pg**	**10 40 11.1**	**0.0**
MAYA	**Malatya/Merkez**	**0.37**	**273**	Sg		**Sg**	**10 40 16.8**	**+1.0**
MAYA				P		**Pg**	**10 40 11.5**	**+0.2**
NARI	**Adyaman-Kaht**	**0.44**	**194**	S		**Sg**	**10 40 16.9**	**+0.8**
NARI				P		**Pb**	**10 40 12.9**	**-1.1**
ELZ	**Elazig**	**0.45**	**33**	S		**Sg**	**10 40 18.9**	**+0.6**
ELZ				P		**Pb**	**10 40 13.3**	**-1.0**
MDNT	**Maden**	**0.63**	**82**	S		**Sg**	**10 40 18.8**	**0.0**
MCKZ	**Bingol**	**0.81**	**5**	P		**Pg**	**10 40 15.9**	**-0.2**
MCKZ				S		**Sg**	**10 40 19.2**	**-0.4**
KOVA	**Elazig, Kovanc**	**0.82**	**61**	P		**Pg**	**10 40 30.5**	**+0.2**
ARPR	**Arapgir-MALATY**	**0.90**	**331**	Pg		**Pg**	**10 40 19.2**	**-0.7**
DYBB	**Diyarbakir**	**1.05**	**109**	Pg		**Pb**	**10 40 21.2**	**-0.1**
ILIC	**ilic-Erzincan**	**1.17**	**348**	Pg		**Pg**	**10 40 24.4**	**0.0**
ERZN	**Erzincan**	**1.43**	**27**	Pn		**Pn**	**10 40 25.7**	**-0.8**
BNGB	**Bingl**	**1.56**	**63**	Pn		**Pb**	**10 40 30.5**	**+0.1**
KHMN	**Narli-Kahraman**	**1.65**	**237**	Pn		**Pn**	**10 40 33.5**	**+0.2**
YEDI	**Yedisu-Bingol**	**1.71**	**48**	Pn		**Pn**	**10 40 34.8**	**+0.5**
GAZ	**Gaziantep**	**1.75**	**230**	Pn		**Pn**	**10 40 34.9**	**+0.2**
KMRS	**Kahramanmaras**	**1.77**	**244**	Pn		**Pn**	**10 40 35.2**	**+0.3**
KARO	**Karliova-Bingo**	**1.96**	**59**	Pn		**Pn**	**10 40 38.4**	**+0.7**
BAYT	**Aydintepe-Bayb**	**2.30**	**25**	Pn		**Pn**	**10 40 43.2**	**+0.9**
GURO	**Guroymak-BITLI**	**2.48**	**83**	Pn		**Pn**	**10 40 45.7**	**+0.9**

*UPP **16** 10:43:11.6±0.0, 67°.64N×21°.03E, h0km, ML2.7, Suspected explosion*
*HEL **16** 10:43:11.7±0.3, 67°.64N×20°.89E, h0km, ML1.1, Suspected explosion*
ISC 16 10:43:10.7±0.8, 67°.64N±0°.02×21°.15E±0°.03, h0km, n25, σ0°.92/36, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.37**	**119**	P		**Pb**	**10 43 19.5**	**-0.7**
MASU				S		**Sb**	**10 43 25.4**	**-1.1**
KUA	**Kurravaara**	**0.44**	**316**	P		**Pg**	**10 43 19.4**	**+0.2**
KUA				S		**Sg**	**10 43 25.3**	**+0.4**
LANU	**Lannavaara**	**0.52**	**37**	P		**Pb**	**10 43 22.1**	**-0.7**
LANU	**Lannavaara**	**0.52**	**37**	PG		**Pb**	**10 43 22.0**	**-0.7**
LANU				SG		**Sb**	**10 43 30.5**	**-0.4**
DUNU	**Dundret**	**0.57**	**204**	P		**Pg**	**10 43 22.1**	**+0.6**
DUNU				S		**Sg**	**10 43 29.6**	**+0.8**
RATU	**Laukkuluspa**	**0.62**	**288**	P		**Pg**	**10 43 22.5**	**-0.1**
RATU				S		**Sg**	**10 43 30.5**	**-0.2**
NIKU	**Nikkaluokta**	**0.84**	**287**	P		**Pg**	**10 43 26.5**	**-0.2**
PAJU	**Pajala**	**0.98**	**128**	P		**Pb**	**10 43 30.7**	**+0.2**
PAJU	**Pajala** baz=305	**0.98**	**128**	PG		**Pb**	**10 43 30.8**	**+0.2**
PAJU				SB		**Sb**	**10 43 44.9**	**+1.0**
SALU	**Saltoluokta**	**1.05**	**257**	*eP*		**Pg**	**10 43 30.3**	**-0.5**
SALU	**Saltoluokta**	**1.05**	**257**	P		**Pg**	**10 43 30.0**	**-0.8**
KLF	**Kolari**	**1.16**	**109**	PB		**Pn**	**10 43 34.7**	**+0.6**
KLF	comp=Z,0.8nm,0.2s			smax	smax		10 43 49.5	
ERTU	**Ertsjaerv**	**1.16**	**159**	P		**Pb**	**10 43 33.4**	**-0.2**
ERTU	**Ertsjaerv** baz=335	**1.16**	**159**	PG		**Pb**	**10 43 33.4**	**-0.2**
ERTU				SB		**Sn**	**10 43 50.1**	**-0.6**
HEF	**Hetta**	**1.22**	**49**	*eP*		**Pb**	**10 43 34.5**	**-0.1**
HEF	**Hetta** baz=235	**1.22**	**49**	PG		**Pb**	**10 43 34.5**	**-0.1**
HEF	comp=Z,1.0nm,0.2s			smax	smax		10 43 50.9	
KIF	**Kilpisjarvi**	**1.38**	**355**	PG		**Pb**	**10 43 37.2**	**-0.1**
KIF	comp=Z,2.4nm,0.2s			smax	smax		10 43 54.2	
KIF				SN		**Sn**	**10 43 57.5**	**+1.5**
HARU	**Harads**	**1.48**	**183**	P		**Pn**	**10 43 38.7**	**+0.2**
KTK1	**Kautokeino**	**1.58**	**28**	PG		**Pg**	**10 43 41.3**	**+0.3**
KTK1				SN		**Sg**	**10 44 04.5**	**+3.0**
TOF	**Tornio**	**2.00**	**140**	PG		**Pg**	**10 43 48.8**	**-0.3**
TOF	comp=Z,0.6nm,0.2s			smax	smax		10 44 13.4	
TOF				SG		**Sg**	**10 44 15.8**	**+0.8**
RNF	**Rovaniemi**	**2.16**	**116**	SG		**Sg**	**10 44 21.0**	**+0.9**
AR0	**ARCESS Array S**	**2.49**	**38**	PB		**Pb**	**10 43 55.9**	**-0.3**
ARA0				SG		**Sg**	**10 44 30.4**	**-0.1**
RANF	**Ranua**	**2.76**	**124**	SG		**Sg**	**10 44 38.8**	**-0.5**
RAJF	**Raja-Jooseppi**	**2.82**	**69**	SG		**Sg**	**10 44 39.6**	**-1.5**
KEV	**Kevo**	**3.02**	**42**	SB		**Sb**	**10 44 40.2**	**-2.3**

*MOS **16** 10:47:10.9, 42°.51N×46°.28E, h9km, MPVA3.4*
*NORS **16** 10:47:11.0, 42°.49N×46°.25E, h8km, MPVA3.6*
*AZER **16** 10:47:15.6, 42°.22N×46°.17E, h14km, ml2.0*
ISC 16 10:47:13.1±1.0, 42°.51N±0°.02×46°.27E±0°.03, h6km±10km, n23, σ0°.90/46, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.16**	**346**	*i* Pg		**Pg**	**10 47 16.2**	**-0.2**
BTLR				eSg		**Sg**	**10 47 19.0**	**+0.4**
XNZR	**Khunzakh**	**0.32**	**83**	ePg		**Pg**	**10 47 19.9**	**+0.5**
XNZR				eSg		**Sg**	**10 47 25.3**	**+1.6**
TLTR	**Tlyarata**	**0.40**	**172**	ePg		**Pg**	**10 47 20.8**	**-0.1**
TLTR				eSg		**Sg**	**10 47 26.5**	**+0.3**
UNCR	**Uncukul**	**0.44**	**61**	ePg		**Pg**	**10 47 21.3**	**-0.3**
UNCR				eSg		**Sg**	**10 47 27.7**	**+0.5**
DVE	**Vedeno**	**0.46**	**346**	ePg		**Pb**	**10 47 23.5**	**-0.3**
DVE				eSg		**Sb**	**10 47 30.1**	**-0.9**
GNBR	**Gunib**	**0.52**	**103**	ePg		**Pg**	**10 47 22.9**	**-0.3**
GNBR				eSg		**Sg**	**10 47 30.6**	**+0.6**
ARKR	**Arakani**	**0.54**	**79**	ePg		**Pg**	**10 47 22.9**	**-0.6**
ARKR				eSg		**Sg**	**10 47 30.7**	**+0.2**
KRNR	**Karanay**	**0.57**	**55**	ePg		**Pg**	**10 47 23.6**	**-0.4**
KRNR				eSg		**Sg**	**10 47 31.4**	**0.0**
DLMR	**Dylym**	**0.62**	**25**	ePg		**Pg**	**10 47 23.9**	**-1.1**
DLMR				eSg		**Sg**	**10 47 32.5**	**-0.6**
DBC	**Dubki**	**0.66**	**38**	ePg		**Pg**	**10 47 25.2**	**-0.5**
DBC				eSg		**Sg**	**10 47 34.5**	**+0.2**
BUJR	**Buynaksk**	**0.69**	**62**	ePg		**Pg**	**10 47 26.3**	**-0.1**
BUJR				eSg		**Sg**	**10 47 36.1**	**+0.7**
KMKR	**Kumukh**	**0.72**	**121**	ePg		**Pg**	**10 47 26.9**	**0.0**
KMKR				eSg		**Sg**	**10 47 37.2**	**+1.0**
GROC	**Groznyy**	**0.78**	**333**	ePg		**Pb**	**10 47 29.4**	**+0.3**
GROC				eSg		**Sb**	**10 47 39.8**	**-0.2**
ZKTA	**Zakatala**	**0.90**	**163**	P		**Pg**	**10 47 29.5**	**-1.0**
ZKTA				S		**Sg**	**10 47 42.5**	**+0.3**
SGKR	**Sergokala**	**1.02**	**92**	ePg		**Pg**	**10 47 31.9**	**-0.9**
SGKR				eSg		**Sg**	**10 47 46.2**	**+0.1**
URKR	**Urkarakh**	**1.06**	**108**	ePg		**Pg**	**10 47 32.2**	**-1.2**
URKR				eSg		**Sg**	**10 47 47.1**	**-0.2**
KMGR	**Komgaron**	**1.18**	**298**	ePg		**Pg**	**10 47 35.2**	**-0.4**
KMGR				eSg		**Sb**	**10 47 52.4**	**+1.0**
VLKR	**Vladikavkaz**	**1.29**	**295**	ePg		**Pn**	**10 47 39.4**	**+1.5**
VLKR				eSg		**Sb**	**10 47 56.0**	**+1.2**
AKT	**Akhty**	**1.49**	**133**	ePg		**Pn**	**10 47 39.0**	**-1.6**
AKT				eSg		**Sg**	**10 47 59.2**	**-1.8**
LACR	**Lac**	**1.49**	**283**	ePg		**Pn**	**10 47 39.1**	**-1.5**
LACR				eSg		**Sg**	**10 47 58.7**	**-2.4**
GDB	**GEDABAY**	**1.82**	**193**	P		**Pn**	**10 47 45.9**	**+0.7**
GDB				S		**Sn**	**10 48 08.6**	**-0.2**
XNQ	**Khinaliq**	**1.93**	**133**	P		**Pg**	**10 47 50.3**	**+0.2**
XNQ				S		**Sg**	**10 48 15.3**	**+0.2**
DIGR	**Digorskoe uzhe**	**2.02**	**282**	ePg		**Pn**	**10 47 48.9**	**+0.9**
DIGR				eSg		**Sn**	**10 48 15.0**	**+1.3**

*SOME **16** 11:11:19.7, 39°.98N×77°.03E, h10km*
*NNC **16** 11:11:21.4±1.2, 40°.03N×77°.10E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=8.3km s-min=5.4km az=171.0*
*KRNET **16** 11:11:21.4±0.1, 40°.06N×77°.05E, h18km, mb3.5*

ISC 16 11:11:23.2±1.5, 40°.09N±0°.07×77°.02E±0°.04, h10km, n46, σ1°.61/72, 20C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.44**	**313**	⇑*eP*		**Pn**	**11 11 48.5**	**-1.0**
JNKS				⇑*eS*		**Sn**	**11 12 08.3**	**-0.3**
NRN	**Naryn**	**1.55**	**330**	⇑*eP*		**Pn**	**11 11 50.8**	**-0.4**
NRN				⇑*eS*		**Sn**	**11 12 12.3**	**+0.7**
TARG	**Taragay, Kyrgy**	**1.74**	**20**	⇓*eP*		**Pn**	**11 11 53.9**	**0.0**
TARG				⇓*eS*		**Sb**	**11 12 17.7**	**0.0**
KDJ	**Kajisay**	**2.04**	**3**	⇑*eP*		**Pn**	**11 11 58.6**	**+0.8**
KDJ				⇑*eS*		**Sb**	**11 12 25.7**	**-0.4**
ULHL	**Ulahol**	**2.23**	**345**	⇓*eP*		**Pn**	**11 12 01.3**	**+0.8**
ULHL				⇓*eS*		**Sb**	**11 12 30.6**	**-1.0**
BOOM	**Boomskoye usch**	**2.54**	**342**	⇑*eP*		**Pn**	**11 12 05.6**	**+1.0**
BOOM				⇑*eS*		**Sn**	**11 12 37.8**	**+2.2**
SALK	**Salom-Alik**	**2.57**	**289**	⇓*eP*		**Pn**	**11 12 05.9**	**+0.9**
SALK				⇓*eS*		**Sn**	**11 12 38.4**	**+2.0**
PRZ	**Przheval'sk**	**2.61**	**23**	⇑*eP*		**Pn**	**11 12 06.5**	**+0.9**
PRZ				⇑*eS*		**Sn**	**11 12 39.6**	**+2.2**
SFK	**Sufi-Kurgan**	**2.70**	**270**	⇑*eP*		**Pn**	**11 12 07.6**	**+0.7**
SFK				⇑*eS*		**Sn**	**11 12 41.4**	**+1.6**
ARLS	**Aral**	**2.71**	**312**	⇑*eP*		**Pn**	**11 12 07.9**	**+1.0**
ARLS				⇑*eS*		**Sn**	**11 12 41.9**	**+2.1**
ANVS	**Anan'yevo**	**2.74**	**10**	⇑*eP*		**Pn**	**11 12 08.6**	**+1.2**
ANVS				⇑*eS*		**Sn**	**11 12 42.6**	**+2.0**
UCH	**Uchtor**	**2.86**	**319**	⇓*eP*		**Pn**	**11 12 10.1**	**+0.8**
UCH				⇓*eS*		**Sn**	**11 12 45.8**	**+1.9**
IZV	**Izvestkoviy** 3.7nm,0.1s	**2.96**	**354**	Pg		**Pb**	**11 12 16.9**	**+0.8**
IZV	41nm,0.4s			Lg		Lg	11 12 58.8	
IZV	**Izvestkoviy** 3.7nm,0.1s	**2.96**	**354**	*eP*		**Pb**	**11 12 16.9**	**+0.8**
IZV	41nm,0.4s			*eS*		**Sg**	**11 12 58.8**	**+0.5**
TKM2	**Tokmak 2**	**3.03**	**340**	⇓*eP*		**Pn**	**11 12 12.4**	**+1.0**
TKM2				⇓*eS*		**Sn**	**11 12 49.6**	**+1.8**
KST	**Kastek** 11nm,0.7s	**3.06**	**345**	Pg		**Pb**	**11 12 19.0**	**+1.2**
KST	58nm,0.6s			Lg		Lg	11 13 02.1	
KST	**Kastek** 11nm,0.7s	**3.06**	**345**	*eP*		**Pb**	**11 12 18.9**	**+1.2**
KST	58nm,0.6s			*eS*		**Sg**	**11 13 02.0**	**+0.6**
MDOK	**Medeo** 5.1nm,0.3s	**3.07**	**0**	Pg		**Pb**	**11 12 19.0**	**+0.9**
MDOK	51nm,0.9s			Lg		Lg	11 13 01.7	
KOTS	**Kotyrbulak** 7.3nm,0.3s	**3.15**	**1**	Pg		**Pb**	**11 12 20.5**	**+1.2**
KOTS	112nm,1.0s			Lg		Lg	11 13 04.9	
KOTS	**Kotyrbulak** 7.3nm,0.3s	**3.15**	**1**	*eP*		**Pb**	**11 12 20.5**	**+1.2**
KOTS	112nm,1.0s			*eS*		**Sg**	**11 13 04.9**	**+0.7**
SATY	**Saty** 10nm,0.5s	**3.15**	**19**	Pg		**Pb**	**11 12 19.7**	**+0.4**
SATY	58nm,0.4s			Lg		Lg	11 13 03.3	
AAK	**Ala-Archa** 5.7nm,0.7s	**3.18**	**324**	⇑Pg		**Pb**	**11 12 19.8**	**-0.1**
AAK	22nm,0.8s			⇑Lg		Lg	11 13 06.0	
AAK	**Ala-Archa**	**3.18**	**324**	⇓*eP*		**Pn**	**11 12 14.4**	**+1.0**
AAK				⇓*eS*		**Sn**	**11 12 53.2**	**+1.7**
DGS	**Degeres** 18nm,0.6s	**3.29**	**344**	Pg		**Pb**	**11 12 22.9**	**+1.2**
DGS	45nm,0.6s			Lg		Lg	11 13 09.2	
DGS	**Degeres** 18nm,0.6s	**3.29**	**344**	*eP*		**Pb**	**11 12 22.9**	**+1.2**
DGS	45nm,0.6s			*eS*		**Sg**	**11 13 09.2**	**+0.4**
UZB	**Uzynbulak** 3.8nm,0.3s	**3.40**	**25**	Pg		**Pb**	**11 12 23.5**	**-0.2**
UZB	25nm,0.7s			Lg		Lg	11 13 09.9	
UZB	**Uzynbulak** 3.8nm,0.3s	**3.40**	**25**	*eP*		**Pb**	**11 12 23.5**	**-0.2**
UZB	25nm,0.7s			*eS*		**Sg**	**11 13 09.8**	**-2.7**
KURS	**Kuram** 6.6nm,0.7s	**3.50**	**14**	Pg		**Pb**	**11 12 26.4**	**+1.0**
KURS	34nm,1.0s			Lg		Lg	11 13 14.1	
KPKS	**Kokpek** 0.4nm,0.1s	**3.60**	**20**	Pg		**Pb**	**11 12 27.3**	**+0.4**
KPKS	20nm,0.6s			Lg		Lg	11 13 16.1	
KPKS	**Kokpek** 0.4nm,0.1s	**3.60**	**20**	*eP*		**Pb**	**11 12 27.3**	**+0.4**
KPKS	20nm,0.6s			*eS*		**Sg**	**11 13 16.1**	**-2.6**
KTBS	**Karatobe** 3.1nm,0.4s	**3.63**	**356**	Pg		**Pb**	**11 12 27.8**	**+0.3**
KTBS	0.4nm,0.3s			Lg		Lg	11 13 17.1	
KTBS	**Karatobe** 3.1nm,0.4s	**3.63**	**356**	*eP*		**Pb**	**11 12 27.8**	**+0.3**
KTBS	0.4nm,0.3s			*eS*		**Sg**	**11 13 17.1**	**-2.7**
PDGK	**Podgornoye** 11nm,0.8s	**3.73**	**29**	⇑Pg		**Pg**	**11 12 32.8**	**-1.8**
PDGK	32nm,0.7s			⇑Lg		Lg	11 13 18.8	
KRBS	**Karabastau** 9.4nm,0.6s	**3.74**	**345**	Pg		**Pb**	**11 12 30.8**	**+1.4**
KRBS	6.0nm,0.7s			Lg		Lg	11 13 22.7	
KRBS	**Karabastau** 9.4nm,0.6s	**3.74**	**345**	*eP*		**Pb**	**11 12 30.8**	**+1.4**
KRBS	6.0nm,0.7s			*eS*		**Sg**	**11 13 22.8**	**-0.6**
SGDS	**Sogindy**	**3.81**	**333**	Pg		**Pb**	**11 12 32.3**	**+1.8**
SGDS				Lg		Lg	11 13 24.9	
MRKS	**Merke** 3.6nm,0.4s	**3.90**	**314**	Pg		**Pb**	**11 12 34.1**	**+2.0**
MRKS	14nm,0.7s			Lg		Lg	11 13 28.1	
MRKS	**Merke** 3.6nm,0.4s	**3.90**	**314**	*eP*		**Pb**	**11 12 34.1**	**+2.0**
MRKS	14nm,0.7s			*eS*		**Sg**	**11 13 28.1**	**-0.3**
ARXS	**Arharly** 3.4nm,0.4s	**4.17**	**8**	Pg		**Pb**	**11 12 37.9**	**+1.2**
ARXS	26nm,0.7s			Lg		Lg	11 13 34.8	
ARXS	**Arharly** 3.4nm,0.4s	**4.17**	**8**	*eP*		**Pb**	**11 12 37.9**	**+1.2**
ARXS	26nm,0.7s			*eS*		**Sg**	**11 13 34.8**	**-2.1**
KTMS	**Ketmen**	**4.18**	**35**	Pg		**Pb**	**11 12 36.3**	**-0.6**
KTMS				Lg		Lg	11 13 31.5	
KTMS	**Ketmen**	**4.18**	**35**	*eP*		**Pb**	**11 12 36.3**	**-0.6**
KTMS				*eS*		**Sb**	**11 13 31.5**	**+4.1**
KNOS	**Konyrlen** 2.0nm,0.6s	**4.56**	**20**	Pg		**Pb**	**11 12 45.5**	**+2.1**
KNOS	10nm,0.9s			Lg		Lg	11 13 47.4	
BTLS	**Baital** 2.9nm,0.5s	**5.42**	**337**	Pg		**Pb**	**11 12 59.9**	**+2.0**
BTLS	5.9nm,0.5s			Lg		Lg	11 14 12.2	
BTLS	**Baital** 2.9nm,0.5s	**5.42**	**337**	*eP*		**Pb**	**11 12 59.9**	**+2.0**
BTLS	5.9nm,0.5s			*eS*		**Sg**	**11 14 12.2**	**-4.8**
KK31	**Karatay Array** 4.5nm,0.8s,baz=124,slow=16,SNR=9.9	**5.74**	**304**	⇓Pg		**Pg**	**11 13 08.6**	**-4.4**
KK31	13nm,1.2s,baz=120,slow=28,SNR=5.1			⇓Lg		Lg	11 14 24.2	

WEL 16 11:11:32.4±1.6, 34°.5×29°.×17°.8W±3°.2, h12km, M3.9/6, ML3.8/13, MLv3.9/6, Error ellipse: s-maj=54.4km s-min=13.7km az=132.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PKGZ	**Pakihiroa**	**4.37**	**219**	P		**Pn**	**11 12 39.1**	**+0.4**
PUZ	**Puketiti**	**4.45**	**215**	P		**Pn**	**11 12 40.2**	**+0.5**
HAZ	**Te Kaha**	**4.45**	**222**	P		**Pn**	**11 12 39.8**	**+0.1**
HAZ				S		**Sn**	**11 13 32.7**	**+1.3**
WIZ	**White Island**	**4.64**	**228**	P		**Pn**	**11 12 44.0**	**+1.7**
RUGZ	**Raukumara Rang**	**4.66**	**221**	P		**Pn**	**11 12 41.8**	**-0.9**
RUGZ				S		**Sn**	**11 13 36.7**	**-0.1**
TWGZ	**Tauwhareparae**	**4.66**	**217**	P		**Pn**	**11 12 43.0**	**+0.3**
CNGZ	**Carnagh Statio**	**4.80**	**213**	P		**Pn**	**11 12 45.6**	**+1.0**
TKGZ	**Te Karaka**	**4.93**	**216**	P		**Pn**	**11 12 45.4**	**-1.0**
TKGZ				S		**Sn**	**11 13 44.8**	**+1.4**
MWZ	**Matawai**	**5.01**	**219**	P		**Pn**	**11 12 46.4**	**-1.1**
URZ	**Urewera**	**5.18**	**222**	P		**Pn**	**11 12 47.9**	**-1.8**
RIGZ	**Rimuhau**	**5.18**	**215**	P		**Pn**	**11 12 49.6**	**-0.3**
PRGZ	**Paritu Road**	**5.30**	**212**	P		**Pn**	**11 12 51.8**	**+0.3**
SNGZ	**Shannon Statio**	**5.45**	**217**	P		**Pn**	**11 12 53.2**	**-0.3**
MHGZ	**Mahia Peninsul**	**5.49**	**211**	P		**Pn**	**11 12 53.6**	**-0.4**
RAHZ	**Arahi**	**5.68**	**218**	P		**Pn**	**11 12 57.3**	**+0.7**

*NEIC **16** 11:15:58.9±1.0, 17°.82N±0°.02×66°.89W±0°.01, h10km±1km, ML2.7/35, Md3.2/6(RSPR), Error ellipse: s-maj=4.2km s-min=2.7km az=8.0*
*RSPR **16** 11:15:59.4, 17°.85N×66°.89W, h10km, MD3.2/6*
*SDD **16** 11:16:00.2±2.1, 17°.86N×66°.90W, h20km±16km, MD3.5, ML2.7, MW3.0, Presumed earthquake*
ISC 16 11:15:57.4±1.3, 17.77N±0°.06×66.91W±0°.02, h18km±3km, n39, σ0°.50/57, 13C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.20**	**8**	Op		ISC		
GBPR						**Pg**	**11 16 02.5**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.20**	**8**	⇓*iP*		**Pg**	**11 16 05.0**	**-0.5**
GBPR				*eS*		**Sb**	**11 16 02.5**	**+0.1**
MLPR	**Magueyes Islan**	**0.23**	**327**			**Pg**	**11 16 05.0**	**-0.5**
MLPR	2μm,0.4s			IAML			11 16 03.5	**+0.7**
MLPR	2μm,0.2s			IAML			11 16 07.0	
CRPR	**Cabo Rojo, PR**	**0.30**	**321**			**Pb**	**11 16 07.2**	
CRPR	1μm,0.3s			IAML			**11 16 04.7**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.30**	**321**	⇑*ePg*		**Pb**	11 16 09.2	
CRPR				⇑*eSg*		**Sb**	**11 16 04.8**	**+0.5**
CRPR	comp=N,1μm,0.2s			IAML			**11 16 08.9**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.30**	**321**	⇑*iP*		**Pb**	11 16 09.5	
CRPR				*eS*		**Sb**	**11 16 04.8**	**+0.5**
OBIP	**Obispado Ponce**	**0.39**	**47**			**Pg**	**11 16 08.9**	**+0.1**
OBIP	**Obispado Ponce**	**0.39**	**47**			**Sg**	**11 16 05.8**	**+0.2**
OBIP	**Obispado Ponce**	**0.39**	**47**	⇓*eP*		**Pb**	**11 16 11.2**	**+0.1**
OBIP				*eS*		**Sg**	**11 16 06.0**	**+0.1**
LSP	**Las Mesas**	**0.43**	**337**			**Pb**	**11 16 11.2**	**+0.1**
LSP						**Sb**	**11 16 06.8**	**+0.2**
LSP	**Las Mesas**	**0.43**	**337**	⇑*iP*		**Pb**	**11 16 12.8**	**+0.1**
LSP				*eS*		**Sb**	**11 16 06.8**	**+0.2**
CELP	**Cerrillos**	**0.43**	**46**			**Pb**	**11 16 12.8**	**+0.1**
CELP	comp=N,764nm,0.3s			IAML			**11 16 06.6**	**+0.1**
CELP	comp=N,483nm,0.2s			IAML			11 16 12.7	
PRSN	**Puerto Rico Se**	**0.49**	**333**			**Pg**	11 16 12.9	
PRSN	**Puerto Rico Se**	**0.49**	**333**			**Sg**	**11 16 07.6**	**+0.3**
PRSN	**Puerto Rico Se**	**0.49**	**333**	⇑*ePg*		**Pg**	**11 16 14.0**	**0.0**
PRSN				⇑*eSg*		**Sg**	**11 16 07.6**	**+0.3**
PRSN	comp=N,1μm,0.3s			IAML			**11 16 13.6**	**-0.5**
PRSN	**Puerto Rico Se**	**0.49**	**333**	⇓*iP*		**Pg**	11 16 19.3	
PRSN				*eS*		**Sg**	**11 16 07.8**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.51**	**21**			**Pb**	**11 16 14.0**	**0.0**
AGPR	**Aguadilla, PR**	**0.72**	**345**			**Pb**	**11 16 07.2**	**-0.5**
AGPR	comp=N,403nm,0.3s			IAML			**11 16 11.3**	**0.0**
AGPR	comp=N,259nm,0.2s			IAML			11 16 20.5	
AGPR	**Aguadilla, PR**	**0.72**	**345**	⇑*ePg*		**Pb**	11 16 21.0	
AGPR				⇑*eSg*		**Sb**	**11 16 11.3**	**0.0**
AGPR	comp=N,327nm,0.2s			IAML			**11 16 20.4**	**-0.4**
AGPR	**Aguadilla, PR**	**0.72**	**345**	⇑*iP*		**Pb**	11 16 20.5	
AGPR				*eS*		**Sb**	**11 16 11.3**	**0.0**
ECPR	**Experimental S**	**0.75**	**44**			**Pb**	**11 16 20.4**	**-0.4**
ECPR				IAML			**11 16 11.6**	**-0.3**
ECPR	comp=N,318nm,0.2s			IAML			11 16 23.1	
ECPR	comp=N,362nm,0.2s			IAML			11 16 24.0	
ECPR	**Experimental S**	**0.75**	**44**	⇑*eP*		**Pb**	**11 16 11.6**	**-0.3**
ECPR				*eS*		**Sb**	**11 16 21.4**	**-0.4**
SJG	**San Juan**	**0.80**	**65**			**Pg**	**11 16 13.2**	**+0.2**
SJG	**San Juan**	**0.80**	**65**	⇑*ePg*		**Pg**	**11 16 13.1**	**+0.1**
SJG				*eSg*		**Sg**	**11 16 24.2**	**+0.6**
SJG	**San Juan**	**0.80**	**65**	⇑*eP*		**Pg**	**11 16 13.1**	**+0.1**
SJG				*eS*		**Sg**	**11 16 24.0**	**+0.4**
IDE	**Isla Desecheo**	**0.81**	**319**			**Pg**	**11 16 13.4**	**+0.1**
IDE						**Sg**	**11 16 24.2**	**+0.2**
IDE	**Isla Desecheo**	**0.81**	**319**	⇑*iP*		**Pg**	**11 16 13.4**	**+0.1**
IDE				*eS*		**Sg**	**11 16 24.2**	**+0.2**
PDPR	**Patillas Dam,**	**0.88**	**74**			**Pn**	**11 16 14.8**	**0.0**
GCPR	**Guaynabo City**	**0.95**	**56**			**Pn**	**11 16 15.9**	**+0.1**
GCPR	**Guaynabo City**	**0.95**	**56**			**Sb**	**11

JCJ Chichijima 1.61 196 Pn Pn 11 18 27.6 -14
comp=E,37nm,0.3s,baz=295,slow=23,SNR=20
JCJ Sn Sn 11 18 46.5 -15
comp=E,152nm,0.3s,baz=40,slow=20,SNR=13
JCJ Chichijima 1.61 196 Pn Pn 11 18 40.3 -1.0
JHH2 Haha-jima-NKT2 2.06 193 A A 11 18 46.1
comp=N,21nm,4.5s,comp=E,35nm,6.5s
JHJ2 Mitsune 5.08 332 Pn **Pn 11 19 27.9 -1.1**
JHJ Hachijo jima 2 5.10 331 Pn **Pn 11 19 27.4 -1.9**
comp=E,8.9nm,0.3s,baz=185,slow=12,SNR=1.5
JHJ Sn **Sn 11 20 24.3 -3.1**
comp=E,38nm,0.3s,baz=79,slow=24,SNR=5.2
comp=E,137nm,0.7s
BSO1 Boso 1 6.16 347 *e*P **Pn 11 19 42.7 -0.6**
BSO1 *e*S **Sn 11 20 50.7 -1.9**
BSO3 Boso 3 6.41 344 *e*P **Pn 11 19 45.6 -1.3**
BSO4 Boso 4 6.63 343 *e*P **Pn 11 19 49.3 -0.8**
JOD2 Odawara 2 7.26 336 *e*P **Pn 11 19 59.5 +0.5**
INU Inuyama 8.23 326 Pn **Pn 11 20 12.5 +0.3**
JGF Kuroka 8.27 328 Pn **Pn 11 20 12.9 +0.1**
MJAR Matsushiro Arr 8.72 336 Pn **Pn 11 20 17.9 -1.2**
comp=E,1.2nm,0.3s,baz=149,slow=7.7,SNR=67
MJAR Sn **Sn 11 21 57.1 +0.5**
comp=E,0.4nm,0.3s,baz=325,slow=16,SNR=4.2
MJAR LR LR 11 23 26.7
comp=E,714nm,19.0s,baz=140,slow=36
comp=E,13nm,0.5s
MAJO Matsushiro 8.73 336 **Pn 11 20 18.9 -0.2**
MAJO Matsushiro 8.73 336⇑ *i*P **Pn 11 20 18.8 -0.2**
MJB9 Matsu-Tunnel 8.73 336 **Pn 11 20 19.1 0.0**
JNU Nakatsue 11.08 297 LR LR 11 24 40.9
comp=E,866nm,21.0s,baz=120,slow=35
JOW Kunigami 12.89 265 LR LR 11 25 40.3
comp=E,553nm,20.8s,baz=132,slow=35
KSRS Korea Array 15.16 309 Pn **Pn 11 21 48.1 +1.2**
comp=E,0.8nm,0.3s,baz=115,slow=12,SNR=15
KSRS LR LR 11 27 38.0
comp=E,446nm,19.1s,baz=120,slow=37
comp=E,3.0nm,0.6s
KSAR Wonju Array Be 15.18 309 Pn **Pn 11 21 45.8 -1.3**
KSAR Wonju Array Be 15.18 309 P **Pn 11 21 45.8 -1.3**
ASAJ Asahikawa 15.43 360 Pn **Pn 11 21 48.6 -1.8**
comp=E,0.9nm,0.3s,baz=235,slow=17,SNR=9.5
ASAJ LR LR 11 28 57.6
comp=E,516nm,21.1s,baz=256,slow=42
comp=E,2.9nm,0.4s
INCN Inchon 16.07 307 Pn **Pn 11 21 58.0 -0.7**
INCN Inchon 16.07 307 P **Pn 11 21 58.0 -0.7**
INCN pmax pmax
comp=Z,89nm,1.4s
PSTR Posyet 16.96 329*d* *i*P **P 11 22 11.9 +0.3**
USRK Ussuriysk Ar. 17.72 334 P **Pn 11 22 17.2 -2.1**
comp=Z,0.6nm,0.3s,baz=143,slow=12,SNR=12
comp=Z,5.8nm,0.7s
YSS Yuzhno-Sakhali 18.27 0 *e*P **Pn 11 22 23.0 -3.1**
YSS *e*S **Sn 11 25 40.0 -9.3**
YSS MLR MLR
comp=Z,400nm,15.0s
YSS MLR MLR
comp=E,400nm,16.0s
MDJ Mudanjiang 19.05 330 P **P 11 22 35.9 +1.2**
MDJ sP pP 11 22 39.5 -0.5
MDJ S **S 11 26 11.8 +2.6**
MDJ pmax pmax
comp=E,42nm,2.1s
MDJ LR LR
comp=E,2μm,4.2s
MDJ LR LR
comp=E,880nm,6.7s
MDJ LR LR
comp=E,930nm,6.1s
YULB Yu-li 19.91 260 P **P 11 22 44.5 +0.2**
YULB IAmb IAmb 11 22 48.9
comp=Z,132nm,1.5s
SSLB Suanglung 20.08 261 **P 11 22 45.8 -0.4**
SSLB IAmb IAmb 11 22 55.2
comp=Z,74nm,0.8s
TPUB Ta-pu 20.52 260 P **P 11 22 51.0 +0.1**
TPUB IAmb IAmb 11 22 59.0
comp=Z,85nm,1.2s
BNX BinXian 20.89 329⇓ P **P 11 22 55.1 +0.4**
BNX S **S 11 26 46.5 +0.1**
BNX pmax pmax
comp=Z,58nm,1.8s
BNX LR LR
comp=Z,640nm,15.6s
BNX LR LR
comp=Z,1μm,19.1s
BNX LR LR
comp=Z,560nm,14.9s
TYV Tymovskoe 22.18 360 *e*P **P 11 23 14.1 +5.5**
TYV pmax pmax
comp=Z,7.0nm,1.0s
TYV pmax pmax
comp=Z,300nm,5.3s
KLR Kul'dur 22.20 341⇑ *e*P **P 11 23 08.8 +0.1**
KLR pmax pmax
comp=Z,6.0nm,0.6s
GRNR Gornyy 22.59 350⇓ *i*P **P 11 23 16.6 +3.6**
GRNR pmax pmax
comp=Z,4.0nm,1.0s
H11N2 WAKE ISLAND Hy 23.77 107 T T 11 48 33.3
baz=297,slow=74,SNR=23
H11N1 WAKE ISLAND Hy 23.77 107 T T 11 48 27.1
baz=297,slow=74,SNR=20
H11N3 WAKE ISLAND Hy 23.78 107 T T 11 48 38.5
baz=297,slow=74,SNR=26
HEH HeiHe 24.49 336 *e*P **P 11 23 31.6 +0.1**
HEH sP **pP 11 23 35.9 -1.4**
HEH pmax pmax
comp=Z,23nm,1.1s
HEH pmax pmax
comp=Z,400nm,4.5s
HEH LR LR
comp=Z,440nm,10.4s
HEH LR LR
comp=Z,640nm,12.1s
HEH LR LR
comp=Z,780nm,17.2s
WHN Wuhan 24.69 281 P **P 11 23 34.1 +0.6**
WHN pP **pP 11 23 37.0 -2.6**
WHN pmax pmax
comp=Z,220nm,1.6s
TGY Tagaytay City 24.83 239 LR LR 11 32 13.7
comp=Z,240nm,20.5s,baz=219,slow=34
HNS HongShan 24.96 298⇓ P **P 11 23 35.9 +0.1**
HNS S **S 11 27 57.8 -0.2**
HNS LR LR
comp=Z,730nm,14.3s
HNS LR LR
comp=Z,650nm,16.7s
XLT XiLinHaoTe 26.15 313 *e*P **P 11 23 45.4 -1.3**
XLT S **S 11 28 25.3 +8.3**
XLT pmax pmax
comp=Z,12nm,1.6s
XLT pmax pmax
comp=Z,180nm,5.1s
XLT LR LR
comp=Z,53nm,15.6s
XLT LR LR
comp=Z,430nm,9.7s
XLT LR LR
comp=Z,300nm,10.4s
PETK Petropavlovsk- 26.83 20 LR LR 11 35 25.8
comp=Z,185nm,19.5s,baz=208,slow=38
DAV Davao City (W) 26.87 220 LR LR 11 32 35.8
comp=Z,328nm,21.6s,baz=54,slow=32
HIA Hailar 27.05 326 **P 11 23 54.6 0.0**
HIA IAmb IAmb 11 23 59.2
comp=Z,68nm,1.8s
HIA Hailar 27.05 326 P **P 11 23 54.7 0.0**
HIA pmax pmax
comp=Z,68nm,1.8s
HILR Hailar Array B 27.24 326 P **P 11 23 57.7 +1.3**
comp=Z,7.8nm,0.6s,baz=134,slow=13,SNR=11
comp=Z,7.8nm,0.6s
ZEA Zeya 27.50 340 *e*P **P 11 23 59.4 +0.8**
ZEA pmax pmax
comp=Z,20nm,0.9s
HHC Hu-ho-hao-te 28.17 304 *e*P **P 11 24 06.5 +1.6**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,210nm,5.9s
HHC LR LR
comp=Z,240nm,12.7s
HHC LR LR
comp=Z,510nm,14.4s
HHC LR LR
comp=Z,620nm,15.3s
XAN Xi'an 29.25 289 P **P 11 24 12.9 -1.6**
XAN pmax pmax
comp=Z,20nm,1.3s
XAN LR LR
comp=Z,520nm,17.0s
XAN LR LR
comp=Z,800nm,15.8s
BTO2 Baotou 29.38 303 *e*P **P 11 24 17.3 +1.6**
BTO2 S **S 11 29 13.3 +5.2**
BTO2 pmax pmax
comp=Z,400nm,7.1s
BTO2 LR LR
comp=Z,900nm,5.8s
BTO2 LR LR
comp=Z,1μm,13.6s
BTO2 LR LR
comp=Z,2μm,12.6s
SIJI Sorong 31.33 202 LR LR 11 34 37.5
comp=Z,338nm,21.8s,baz=48,slow=32
MA2 Magadan 31.41 8⇓ *e*P **P 11 24 33.7 +0.5**
MA2 pmax pmax
comp=Z,5.0nm,1.2s
GYA Guiyang 31.94 275⇓ P **P 11 24 40.6 +2.2**
GYA pmax pmax
comp=Z,11nm,0.9s
SHEM Shemya Is, Ala 33.40 35 LR LR 11 39 05.2
comp=Z,121nm,18.3s,baz=298,slow=38
LZH Lanzhou 33.47 293 *e*P **P 11 24 50.8 -1.0**
LZH sP pP 11 24 57.3 -0.7
LZH pmax pmax
comp=Z,9.0nm,1.2s
LZH LR LR
comp=Z,460nm,12.7s
LZH LR LR
comp=Z,590nm,13.4s
ULN Ulaanbaatar 33.52 315 **P 11 24 52.1 0.0**
ULN IAmb IAmb 11 24 55.8
comp=Z,32nm,1.6s
ULN Ulaanbaatar 33.52 315⇓ *e*P **P 11 24 52.9 +0.8**
ULN pmax pmax
comp=Z,15nm,1.3s
LZDM Lanzhou Array 33.58 293 P **P 11 24 51.8 -1.1**
comp=Z,0.8nm,0.3s,baz=120,slow=8.5,SNR=5.9
LZDM LR LR 11 37 50.9
comp=Z,258nm,21.3s,baz=155,slow=35
comp=Z,0.8nm,0.3s
KKM Kota Kinabalu 33.66 233 P **P 11 24 53.3 -0.2**
CD2 Chengdu 33.75 284 P **P 11 24 52.6 -1.6**
SONM Songino Array 33.92 314 P **P 11 24 55.2 -0.4**
comp=Z,2.8nm,0.5s,baz=126,slow=8.6,SNR=21
SONM PcP **PcP 11 27 33.0 -0.6**
comp=Z,0.3nm,0.4s,baz=130,slow=6.3,SNR=1.9
SONM LR LR 11 39 31.6
comp=Z,419nm,18.1s,baz=104,slow=38
comp=Z,2.8nm,0.5s
SONM Songino Array 33.92 314 **P 11 24 56.0 +0.4**
SONM IAmb IAmb 11 24 59.3
comp=Z,32nm,1.8s
SONM Songino Array 33.92 314 P **P 11 24 56.0 +0.4**
SONM pmax pmax
comp=Z,32nm,1.8s
YAK Yakutsk 34.47 349 *e*P **P 11 24 59.4 -0.5**
YAK pmax pmax
comp=Z,8.0nm,1.3s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.3s
SEY Seymchan 34.87 8⇑ *e*P **P 11 25 03.1 -0.2**
SEY pmax pmax
comp=Z,3.0nm,0.9s
PZH PanZhiHua 36.23 277 P **P 11 25 14.5 -1.2**
PZH pmax pmax
comp=Z,20nm,1.1s
ZAK Zakamensk 36.76 317 *e*P **P 11 25 19.8 -0.1**
ZAK pmax pmax
comp=Z,37nm,2.1s
GTA2 Gaotai 36.86 299 *e*P **P 11 25 18.9 -2.0**
GTA2 pmax pmax
comp=Z,7.0nm,1.5s
IRK Irkutsk 36.91 320 *e*P **P 11 25 20.4 -0.6**
IRK pmax pmax
comp=Z,68nm,2.4s
TLY Talaya 37.03 319*ce*P **P 11 25 23.4 +1.3**
TLY pmax pmax
comp=Z,86nm,2.5s
MOY Mondy 38.56 318 *e*P **P 11 25 35.4 +0.3**
MOY pmax pmax
comp=Z,56nm,3.0s
TNCH TengChong 39.41 275 P **P 11 25 42.5 -0.1**
TNCH pmax pmax
comp=Z,41nm,1.2s
TNCH pmax pmax
comp=Z,310nm,2.9s
KAPI Kappang 40.10 217 LR LR 11 40 32.3
comp=Z,107nm,21.8s,baz=24,slow=34
KNGR Kungurtug, Tuv 40.32 316⇓ *i*P **P 11 25 50.6 +0.8**
KNGR pmax pmax
comp=Z,15nm,1.6s
GOMU GeErMu 40.77 293 P **P 11 25 52.3 -1.7**
GOMU PcP **PcP 11 27 53.9 -1.1**
GOMU pmax pmax
comp=Z,10.0nm,1.1s
CHTO Chiang Mai 41.03 266 **P 11 25 55.2 -0.7**
CHTO Chiang Mai 41.03 266 P **P 11 25 55.2 -0.7**
CHTO pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 41.17 266 P **P 11 25 56.3 -0.7**
comp=Z,1.4nm,0.7s,baz=50,slow=8.5,SNR=13
CMAR LR LR 11 44 01.9
comp=Z,141nm,20.2s,baz=80,slow=38
comp=Z,1.4nm,0.7s
CMAR Chiang Mai Arr 41.17 266 P **P 11 25 56.4 -0.6**
CMAR Chiang Mai Arr 41.17 266 *i* P **P 11 25 56.7 -0.3**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
BILL Bilibino 41.84 13 P **P 11 26 02.6 +0.6**
BILL IAmb IAmb 11 26 15.3
comp=Z,43nm,1.9s
BILL Bilibino 41.84 13⇑ *e*P **P 11 26 02.9 +0.9**
BILL pmax pmax
comp=Z,6.0nm,1.3s
MTN Manton Dam 42.74 197 P **P 11 26 08.6 -1.2**
MTN IAmb IAmb 11 26 13.4
comp=Z,43nm,1.4s
BATI Baumata 42.78 208 LR LR 11 42 21.7
comp=Z,150nm,20.5s,baz=355,slow=34
NIKH Nikolski High 42.91 42 P **P 11 26 10.7 -0.2**
baz=255
SPIA Saint Paul Isl 43.44 35 P **P 11 26 15.5 +0.5**
baz=249
P08K Saint George I 43.60 36 P **P 11 26 16.5 +0.2**
baz=251
TIXI Tiksi 43.72 354 P **P 11 26 16.7 -0.4**
TIXI Tiksi 43.72 354⇑ *e*P **P 11 26 16.5 -0.5**
TIXI pmax pmax
comp=Z,14nm,2.5s
UNV Unalaska Valle 44.49 41 P **P 11 26 24.0 +0.5**
baz=256
SHL Shillong 45.05 279 P **P 11 26 27.4 -1.2**
SHL IAmb IAmb 11 26 40.2
comp=Z,34nm,1.4s
SHL Shillong 45.05 279 P **P 11 26 27.4 -1.2**
SHL pmax pmax
comp=Z,34nm,1.4s
GAMB Gambell 45.53 26 P **P 11 26 32.1 +0.4**
baz=242
MYKOM Kota Tinggi 45.65 241 P **P 11 26 33.1 0.0**
MYKOM IAmb IAmb 11 26 46.5
comp=Z,14nm,0.9s
WMQ Urumqi 46.05 305 *e*P **P 11 26 36.9 +0.8**
WMQ sP sP 11 26 47.3 +2.6
WMQ pmax pmax
comp=Z,14nm,1.1s
KNRA Kununurra 46.08 199 P **P 11 26 36.1 -0.3**
BRDH Bariadhala 46.11 275 LR LR 11 48 56.8
comp=Z,188nm,18.2s,baz=229,slow=40
FALS False Pass 46.48 40 P **P 11 26 40.1 +0.9**
baz=258
M11K Mekoryuk 46.52 32 P **P 11 26 39.4 0.0**
baz=250
DGZ Jazzator, Alta 46.53 313*ce*P **P 11 26 40.4 +0.5**
DGZ pmax pmax
comp=Z,49nm,1.6s
K13K Kusilvak Mount 47.74 31 P **P 11 26 49.2 +0.2**
baz=251
TNA Tin City 47.80 25 P **P 11 26 50.5 +1.2**
baz=244
M13K Dall Lake 47.88 33 P **P 11 26 50.3 +0.3**
baz=253
SDPT Sand Point 48.23 40 P **P 11 26 54.0 +1.1**
baz=260
F14K Arctic Creek 48.36 26 P **P 11 26 55.2 +1.5**
baz=246
ANM Nome 48.38 27 P **P 11 26 55.1 +1.2**
ANM IAmb IAmb 11 26 57.2
comp=Z,16nm,1.3s
ANM Nome 48.38 27 P **P 11 26 55.1 +1.2**
ANM pmax pmax
comp=Z,16nm,1.3s
ANM Nome 48.38 27 P **P 11 26 55.3 +1.4**
baz=248,SNR=6.8
L14K Kuka Creek 48.46 32 P **P 11 26 55.3 +0.8**
baz=253
J14K Nanvaranak Lak 48.50 30 P **P 11 26 55.9 +1.1**
baz=251
N14K Kuskokwak Cree 48.55 34 P **P 11 26 55.9 +0.7**
baz=255
O14K Tigyukauivet M 48.59 35 P **P 11 26 56.6 +1.0**
baz=256
ZAA0 Zalesovo Array 48.62 318 P **P 11 26 56.3 +0.4**
ZALV Zalesovo Beam 48.62 318 P **P 11 26 56.1 +0.2**
comp=Z,5.9nm,0.5s,baz=90,slow=8.4,SNR=34
ZALV PcP **PcP 11 28 19.8 -1.4**
comp=Z,1.4nm,0.5s,baz=100,slow=3.0,SNR=2.7
ZALV LR LR 11 47 18.3
comp=Z,236nm,19.6s,baz=87,slow=36
comp=Z,5.9nm,0.5s
ZALV Zalesovo Beam 48.62 318 P **P 11 26 55.5 -0.4**
M14K Bethel 48.63 33 P **P 11 26 57.2 +1.4**
baz=254
CHNA Chernabura Isl 48.65 41 P **P 11 26 56.9 +0.8**
baz=262
WB0 Warramunga Arr 48.80 190 P **P 11 26 56.2 -1.4**
LEM Lembang 48.85 229 LR LR 11 47 37.8
comp=Z,68nm,21.8s,baz=334,slow=36
PSI Prapat 48.92 246 P **P 11 26 59.5 +0.7**
PSI pmax pmax
comp=Z,17nm,0.9s
WRA Warramunga Arr 48.98 190 P **P 11 26 57.7 -1.2**
comp=Z,17nm,0.8s,baz=13,slow=8.4,SNR=50
comp=Z,17nm,0.8s
WRA Warramunga Arr 48.98 190 P **P 11 26 57.0 -2.0**
WRA Warramunga Arr 48.98 190 *i* P **P 11 26 58.0 -1.0**
WRA pmax pmax
comp=Z,19nm,0.8s
RPSI Rantau Prapat 48.98 246 P **P 11 26 59.5 +0.4**
RPSI IAmb IAmb 11 27 54.5
comp=Z,16nm,0.9s
G15K Niukluk 49.07 27 P **P 11 27 00.3 +1.1**
baz=249
F15K North Star Dit 49.10 26 P **P 11 27 00.4 +1.0**
baz=248
L15K Ungalak Mounta 49.10 31 P **P 11 27 00.3 +0.8**
baz=254
M15K Kasigluk River 49.22 33 P **P 11 27 01.2 +0.8**
baz=256
K15K Wolf Creek Mou 49.26 31 P **P 11 27 01.7 +1.0**
baz=254
O15K Ungalikthiuk R 49.30 35 P **P 11 27 02.1 +1.1**
baz=258
FITZ Fitzroy Crossi 49.31 202 LR LR 11 50 34.9
comp=Z,57nm,18.2s,baz=26,slow=40
N15K Kwethluk River 49.38 34 P **P 11 27 02.8 +1.2**
baz=257
H16K Elim 49.67 28 P **P 11 27 04.9 +1.2**
baz=251,SNR=6.1
MK31 Makanchi Array 49.84 309*ce*P **P 11 27 05.0 -0.4**
MKAR Makanchi Array 49.84 309 P **P 11 27 05.0 -0.4**
comp=Z,1.9nm,0.5s,baz=88,slow=7.3,SNR=32
MKAR PcP **PcP 11 28 25.7 0.0**
comp=Z,0.9nm,0.6s,baz=66,slow=7.1,SNR=1.8
MKAR LR LR 11 49 29.5
comp=Z,255nm,18.2s,baz=67,slow=38
comp=Z,1.9nm,0.5s
MKAR Makanchi Array 49.84 309 P **P 11 27 05.4 0.0**
MKAR Makanchi Array 49.84 309 P **P 11 27 05.4 0.0**
G16K Koyuk River 49.87 27 P **P 11 27 06.5 +1.2**
baz=250
C16K Lisburne Hills 49.89 23 P **P 11 27 06.6 +1.3**
baz=245
J16K Anvik River 49.94 30 P **P 11 27 06.8 +0.9**
baz=254
L16K Owhat River 50.04 32 P **P 11 27 07.6 +1.0**
baz=256
MAKZ Makanchi 50.06 309 P **P 11 27 07.1 +0.1**
MAKZ Makanchi 50.06 309 P **P 11 27 07.1 +0.1**
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
I17K Unalakleet 50.08 29 P **P 11 27 07.8 +1.0**
baz=253
N16K Nishlik Lake 50.09 33 P **P 11 27 07.9 +0.8**
baz=258
M16K Timber Creek 50.12 33 P **P 11 27 07.9 +0.6**
baz=257
R16K Pilot Point 50.17 37 P **P 11 27 08.1 +0.5**
baz=261
P16K Nushagak River 50.20 35 P **P 11 27 08.6 +0.7**
P16K IAmb IAmb 11 27 10.9
comp=Z,28nm,1.1s
P16K Nushagak River 50.20 35 P **P 11 27 08.8 +0.9**
baz=260
O16K Kokwok River B 50.25 35 P **P 11 27 09.1 +0.8**
baz=259
D17K Noatak River 50.43 24 P **P 11 27 11.0 +1.5**
baz=248,SNR=8.7
G17K Kiwalik Mounta 50.58 27 P **P 11 27 12.1 +1.4**
baz=252
RDOG Red Dog Mine 50.63 23 P **P 11 27 12.5 +1.4**
baz=248
E17K Hotham Inlet 50.66 25 P **P 11 27 12.6 +1.3**
baz=249,SNR=6.2
L17K Donlin 50.68 31 P **P 11 27 12.7 +1.2**
baz=257
C17K DeLong Mountai 50.70 23 P **P 11 27 12.9 +1.3**
baz=247
H17K Granite Mounta 50.71 28 P **P 11 27 13.4 +1.7**
baz=253
O17K Koliganek Bris 50.78 35 P **P 11 27 13.4 +1.2**
baz=260
K17K Iditarod 50.81 31 P **P 11 27 14.2 +1.8**
baz=256
Q16K King Salmon 50.82 36 P **P 11 27 13.7 +1.2**
baz=261
R17L Mt. Peulik Vol 50.83 37 P **P 11 27 13.5 +0.8**
baz=262
N17K Nushagak Hills 50.87 34 P **P 11 27 14.5 +1.6**
baz=259
M17K Holitna River 50.92 32 P **P 11 27 14.9 +1.6**
baz=258
P17K Kvichak River 51.01 35 P **P 11 27 15.0 +1.0**
P17K Kvichak River 51.01 35 P **P 11 27 15.3 +1.3**
baz=261
E18K Tukpahlearik C 51.22 24 P **P 11 27 17.0 +1.5**
baz=250
F18K Selawik 51.31 26 P **P 11 27 17.3 +1.2**
baz=252,SNR=6.7
H18K Honhosa River 51.40 28 P **P 11 27 18.0 +1.1**
baz=254
C18K Utukok River 51.44 23 P **P 11 27 18.4 +1.3**
baz=249
G18K Tagagawik 51.49 27 P **P 11 27 18.9 +1.4**
baz=254
N18K Kilae Creek 51.53 34 P **P 11 27 19.1 +1.2**
baz=260
P18K Big Mountain, 51.66 35 P **P 11 27 19.7 +0.8**
baz=262
J18K Innoko River 51.69 30 P **P 11 27 20.2 +1.2**
baz=257
M18K Stony River 51.70 32 P **P 11 27 20.4 +1.3**
baz=260
O18K Koktuh Hills 51.73 35 P **P 11 27 20.4 +1.0**
O18K IAmb IAmb 11 27 32.8
comp=Z,37nm,1.4s
O18K Koktuh Hills 51.73 35 P **P 11 27 20.0 +0.5**
baz=262
SII Sitkinak Islan 51.89 39 P **P 11 27 21.6 +0.9**
baz=265
GCSA Galena City Sc 51.91 28 P **P 11 27 21.9 +1.3**
baz=256

F19K **Shaleruckik Mo** 52.09 26 P P 11 27 23.3 +1.3
baz=254
C19K **Lookout Ridge** 52.15 23 P P 11 27 23.1 +0.7
baz=250
G19K **Purcell Mounta** 52.17 27 P P 11 27 24.2 +1.6
baz=255
O19K **Port Alsworth** 52.22 34 P P 11 27 24.0 +1.0
baz=262
KURK **Kurchatov** 52.23 314 P P 11 27 23.0 -0.2
KURK **Kurchatov** 52.23 314 P P 11 27 23.4 +0.2
N19K **Bonanza Creek** 52.23 33 P P 11 27 23.8 +0.5
baz=262
L19K **White Mountain** 52.27 32 P P 11 27 24.4 +1.0
baz=260
J19K **Poorman** 52.27 29 P P 11 27 23.9 +0.5
J19K **Poorman** 52.27 29 P P 11 27 24.5 +1.1
baz=258
KURBB **Kurchatov Arra** 52.28 314 P P 11 27 23.4 -0.3
comp=Z,13nm,0.5s,baz=92,slow=8.4,SNR=230
KURBB LR LR 11 49 06.8
comp=Z,206nm,21.4s,baz=166,slow=36
comp=Z,13nm,0.5s
Q19K **Cape Douglas,** 52.41 36 P P 11 27 25.5 +1.0
baz=264
OHAK **Old Harbor** 52.44 38 P P 11 27 25.6 +1.0
baz=265
D19K **Kuna River** 52.46 24 P P 11 27 26.2 +1.5
baz=252
E19K **Redstone River** 52.47 25 P P 11 27 26.1 +1.3
baz=254
AS31 **Alice Springs** 52.70 190 P P 11 27 25.9 -1.1
ASAR **Alice Springs** 52.70 190 P P 11 27 25.8 -1.2
comp=Z,1.3nm,0.4s,baz=4.3,slow=6.3,SNR=21
ASAR LR LR 11 48 21.2
comp=Z,151nm,21.9s,baz=356,slow=34
comp=Z,1.3nm,0.4s
ASAR **Alice Springs** 52.70 190 P 11 27 26.7 -0.3
ASAR **Alice Springs** 52.70 190 P P 11 27 26.7 -0.3
P19K **Oil Pt** 52.70 35 P P 11 27 27.5 +0.8
baz=264
K20K **Telida** 52.83 30 P P 11 27 27.9 +0.3
baz=260
KDAK **Kodiak Island** 52.86 37 LR LR 11 49 20.7
comp=Z,275nm,20.1s,baz=228,slow=35
KDAK **Kodiak Island** 52.86 37 P P 11 27 28.7 +1.0
baz=266
H20K **Anotleneega Mo** 52.90 28 P P 11 27 29.0 +1.0
baz=258
F20K **Avaraart Lake** 52.93 26 P P 11 27 29.2 +1.1
baz=256
Q20K **Shuyak Island** 53.03 36 P P 11 27 28.8 -0.2
baz=265
M20K **Styx River** 53.03 32 P P 11 27 30.1 +1.0
baz=262
D20K **Etivluk River** 53.05 23 P P 11 27 30.0 +0.9
baz=254
E20K **Nigu River** 53.07 24 P P 11 27 30.6 +1.3
baz=254
SPCR **Spurr Chakacha** 53.38 33 P P 11 27 32.7 +1.0
baz=263
HOM **Homer** 53.50 35 P P 11 27 33.1 +0.6
baz=265
PPLA **Purkeypile** 53.60 31 P P 11 27 34.3 +1.0
baz=262
G21K **Allakaket** 53.67 27 P P 11 27 35.1 +1.4
baz=258
CHUM **Lake Minchumin** 53.69 30 P P 11 27 34.8 +1.0
baz=261
H21K **Melozitna Rive** 53.78 28 P P 11 27 35.5 +1.1
baz=260
SKT **Skwentna** 53.79 32 P P 11 27 35.0 +0.4
baz=263
C21K **Knifeblade Rid** 53.81 23 P P 11 27 36.1 +1.5
baz=255
F21K **Alatna River** 53.82 26 P P 11 27 36.3 +1.5
baz=258
A21K **Barrow** 53.83 20 P P 11 27 36.3 +1.6
baz=252
CAPN **Captain Cook N** 53.85 34 P P 11 27 35.6 +0.7
baz=265
I21K **Tanana** 54.04 28 P P 11 27 37.1 +0.7
baz=261
SUA **Susitna One** 54.11 33 P P 11 27 37.2 +0.2
baz=264
BPAW **Bear Paw Mtn.** 54.30 30 P P 11 27 39.1 +0.8
baz=262
H22K **Ishtalitna Cre** 54.40 27 P P 11 27 39.7 +0.7
baz=261
CUT **Chulitna** 54.43 32 P P 11 27 39.9 +0.7
baz=264
M22K **Willow** 54.43 33 P P 11 27 39.9 +0.7
baz=265
D22K **Ayikyak River** 54.48 24 P P 11 27 40.6 +1.1
baz=257
O22K **Cooper Landing** 54.52 34 P P 11 27 40.3 +0.4
baz=266
TRF **Thorofare Moun** 54.53 31 P P 11 27 40.7 +0.6
baz=264
MLY **Manley** 54.53 29 P P 11 27 41.2 +1.2
baz=262
RC01 **Rabbit Creek A** 54.56 33 P P 11 27 41.1 +0.8
baz=266
PSA00 **Pilbara Seismi** 54.58 206 P P 11 27 40.2 -0.5
PSA00 IAmb IAmb 11 27 41.9
comp=Z,24nm,1.6s
E22K **Anaktuvuk Pass** 54.63 25 P 11 27 41.5 +0.8
E22K IAmb IAmb 11 27 54.8
comp=Z,33nm,1.7s
E22K **Anaktuvuk Pass** 54.63 25 P P 11 27 42.0 +1.3
baz=259,SNR=9.2
SEW **Seward** 54.64 35 P P 11 27 41.1 +0.4
baz=267
PMR **Palmer** 54.89 33 P P 11 27 43.3 +0.8
baz=266
G23K **Bananza Creek** 55.07 27 P P 11 27 44.9 +1.0
baz=261
COLD **Coldfoot** 55.08 26 P P 11 27 44.9 +1.1
baz=261
I23K **Minto, Yukon-K** 55.13 29 P P 11 27 45.1 +0.8
baz=263
H23K **Yukon River** 55.14 28 P P 11 27 45.5 +1.1
baz=262
MCK **McKinley** 55.16 30 P P 11 27 44.9 +0.4
MCK IAmb IAmb 11 27 46.5
comp=Z,18nm,1.3s
MCK **McKinley** 55.16 30 P P 11 27 44.9 +0.4
MCK pmax pmax
comp=Z,18nm,1.3s
MCK **McKinley** 55.16 30 P P 11 27 45.4 +0.8
baz=264
NEA2 **Nenana** 55.19 29 P P 11 27 45.3 +0.6
baz=264
KNK **Knik Glacier** 55.20 33 P P 11 27 45.7 +0.8
baz=267
D23K **Nanushuk River** 55.20 24 P P 11 27 46.2 +1.4
baz=259
WAT1 **Susitna Watana** 55.26 31 P P 11 27 46.0 +0.7
baz=266
SML **Sawmill** 55.28 33 P P 11 27 46.7 +1.2
baz=266
E23K **Chandalar** 55.43 25 P P 11 27 47.8 +1.3
baz=261
KSH2 **Kashi** 55.55 300 P P 11 27 48.4 +0.5
KSH2 pP pP 11 27 54.0 -0.2
KSH2 sP pwP 11 28 00.8 +0.3
KSH2 pmax pmax
comp=Z,6.0nm,0.5s
M23K **Glacier View** 55.57 33 P P 11 27 48.5 +0.9
baz=267
WAT6 **Susitna Watana** 55.61 32 P P 11 27 48.7 +0.8
baz=266
P23K **Montague Islan** 55.66 35 P P 11 27 49.2 +1.0
baz=268
COLA **College** 55.74 29⇑ *e*P P 11 27 48.6 0.0
COLA pmax pmax
comp=Z,2.0nm,0.9s
COLA **College** 55.74 29 P P 11 27 49.7 +1.1
baz=265
AAK **Ala-Archa** 55.75 304 LR LR 11 52 47.8
comp=Z,202nm,19.6s,baz=56,slow=37
SCM **Sheep Creek Mo** 55.76 33 P P 11 27 49.9 +1.0
baz=267
DHY **Denali Highway** 55.81 31 P P 11 27 50.4 +1.0
baz=266
H24K **Noodor Dome** 55.82 28 P P 11 27 50.1 +0.9
baz=264
E24K **Your Creek** 55.85 25 P P 11 27 50.4 +0.9
baz=262

D24K **Happy Valley** 55.89 24 P P 11 27 51.4 +1.7
baz=261
C24K **Franklin Bluff** 56.03 23 P P 11 27 51.9 +1.3
baz=261
G24K **Hadweenzic Riv** 56.07 27 P P 11 27 52.5 +1.5
baz=264
HDA **Harding Lake** 56.09 30 P P 11 27 52.3 +1.1
baz=266
ILAR **Eielson Array** 56.14 29 P P 11 27 51.1 -0.4
comp=Z,1.9nm,0.8s,baz=259,slow=6.6,SNR=22
ILAR LR LR 11 51 09.3
comp=Z,124nm,19.7s,baz=266,slow=35
comp=Z,1.9nm,0.8s
Q23K **Middleton Isla** 56.19 36 P P 11 27 52.6 +0.8
baz=270
KLU **Klutina** 56.42 33 P P 11 27 54.6 +0.9
baz=269
EYAK **Cordova Ski Ar** 56.49 34 P P 11 27 55.7 +1.6
baz=270
K24K **Donnelly Dome** 56.56 30 P P 11 27 55.9 +1.3
baz=267
PAX **Paxson** 56.67 31 P P 11 27 56.6 +1.2
baz=268
PRP **Porcupine Dome** 56.77 28 P P 11 27 56.7 +0.6
baz=266
D25K **Kavik River** 56.78 24 P P 11 27 57.1 +1.0
baz=263
HARP **HAARP** 56.80 32 P P 11 27 56.5 +0.2
baz=269
F25K **Christian Rive** 56.87 26 P P 11 27 58.1 +1.3
baz=265
E25K **Arctic Village** 56.95 25 P P 11 27 58.0 +0.7
E25K IAmb IAmb 11 28 01.3
comp=Z,25nm,1.5s
E25K **Arctic Village** 56.95 25 P P 11 27 58.6 +1.4
baz=265,SNR=8.2
RIDG **Independent Ri** 56.98 30 P P 11 27 58.7 +1.1
baz=268
BMRM **Bremner River** 57.05 34 P P 11 27 59.2 +1.1
baz=270
N25K **Chitina, Valde** 57.06 33 P P 11 27 59.4 +1.2
baz=270
KAIM **Kayak Island** 57.16 35 P P 11 28 00.3 +1.5
baz=271
BVAR **Borooye Array** 57.21 317 P P 11 27 59.4 +0.1
comp=Z,9.0nm,0.5s,baz=90,slow=7.2,SNR=43
BVAR LR LR 11 53 19.0
comp=Z,300nm,19.2s,baz=37,slow=37
comp=Z,9.0nm,0.5s
BMAR **Burnt Mountain** 57.27 26 P P 11 28 00.4 +0.8
C26K **Camden Bay** 57.35 23 P P 11 28 01.8 +1.8
baz=264
SCRK **Sand Creek** 57.36 30 P P 11 28 01.2 +0.8
baz=269
F26K **Sheenjek River** 57.45 26 P P 11 28 01.7 +0.9
baz=266
G26K **Porcupine Rive** 57.55 27 P P 11 28 02.6 +1.2
baz=267
J26L **Joseph Creek** 57.56 29 P P 11 28 01.9 +0.2
J26L **Joseph Creek** 57.56 29 P P 11 28 02.4 +0.7
baz=269,SNR=7.0
L26K **Log Cabin Wild** 57.64 31 P P 11 28 02.7 +0.5
L26K **Log Cabin Wild** 57.64 31 P P 11 28 03.1 +0.9
baz=270
BGLC **Bering Glacier** 57.73 35 P P 11 28 04.2 +1.4
baz=272
C27K **Jago River** 57.74 23 P P 11 28 04.5 +1.6
baz=266
I26K **Coal Creek Min** 57.75 29 P P 11 28 04.0 +1.1
baz=269
CRQE **Cirque** 57.80 34 P P 11 28 04.7 +1.2
baz=272
M26K **Nabesna, AK** 57.81 32 P P 11 28 05.1 +1.6
baz=271
MCARA **McCarthy VSAT** 57.81 33 P P 11 28 04.9 +1.5
baz=271
M27K **Edge Creek, AK** 58.33 32 P P 11 28 08.4 +1.2
baz=272
L27K **Beaver Creek,** 58.33 31 P P 11 28 08.2 +1.1
baz=271
MESA **MESA** 58.39 35 P P 11 28 08.8 +1.1
baz=273
I27K **Kandik River** 58.39 28 P P 11 28 08.7 +1.2
baz=270
H27K **Steamboat Moun** 58.43 27 P P 11 28 09.2 +1.5
baz=270
KK31 **Karatay Array** 58.55 305 P P 11 28 09.0 +0.1
KK31 **Karatay Array** 58.55 305 P P 11 28 09.0 +0.1
KK31 pmax pmax
comp=Z,20nm,0.6s
KKAR **Karatay Array** 58.55 305 P P 11 28 08.6 -0.3
KKAR **Karatay Array** 58.55 305 P P 11 28 08.6 -0.3
CTG **Chitna Glacier** 58.65 34 P P 11 28 10.8 +1.4
baz=273
D27M **Malcolm River** 58.69 24 P P 11 28 11.2 +1.6
baz=268
BVCY **Beaver Creek** 58.80 32 P P 11 28 11.7 +1.3
baz=273
YUK3 **Moose Creek** 59.02 33 P P 11 28 13.1 +1.0
baz=273
F28M **Old Crow** 59.08 26 P P 11 28 13.0 +0.7
baz=270,SNR=5.4
I28M **Miner Creek** 59.09 28 P P 11 28 13.5 +1.1
baz=272
E28M **Babbage River** 59.20 25 P P 11 28 14.7 +1.7
baz=270
O28M **Mount Upton** 59.22 34 P P 11 28 14.5 +0.9
baz=274
PINM **Pinnacle** 59.24 35 P P 11 28 15.0 +1.5
baz=275
DAWY **Dawson** 59.38 30 P P 11 28 15.6 +1.2
baz=272
YUK8 **Steele Glacier** 59.39 33 P P 11 28 15.5 +0.8
baz=274
HYB **Hyderabad** 59.47 274 *e*P P 11 28 16.1 +0.5
HYB *e*S S 11 36 27.0 +3.1
I29M **Ogilvie Camp,** 59.78 28 P P 11 28 18.1 +1.0
baz=273
E29M **Blow River** 59.81 25 P P 11 28 18.4 +1.2
baz=272
G29M **Pine Creek** 59.82 27 P P 11 28 18.4 +1.1
baz=272
J29N **Klondike Camp** 59.87 29 P P 11 28 18.6 +0.8
J29N IAmb IAmb 11 28 50.9
comp=Z,16nm,1.4s
J29N **Klondike Camp** 59.87 29 P P 11 28 19.1 +1.3
baz=274
M29M **Somme Creek** 59.91 32 P P 11 28 19.1 +1.0
baz=275
YUK4 **Talbot Arm** 59.92 33 P P 11 28 19.4 +1.1
baz=275
O29M **Mount Kennedy** 60.06 34 P P 11 28 20.6 +1.4
baz=276
YUK6 **Outpost Mounta** 60.10 34 P P 11 28 20.7 +1.1
baz=276
STKA **Stephens Creek** 60.20 181 P P 11 28 19.9 -0.3
comp=Z,1.8nm,0.8s,baz=6.3,slow=9.2,SNR=3.6
comp=Z,1.8nm,0.8s
K29M **Barlow Dome** 60.22 30 P P 11 28 20.9 +0.6
baz=275
G30M **tAoh Zraii Nji** 60.52 27 P P 11 28 23.5 +1.4
baz=274
HYT **Haines Junctio** 60.53 34 P P 11 28 23.5 +1.1
baz=276
CHGR **Chuyangaron** 60.54 300 P P 11 28 22.9 0.0
CHGR **Chuyangaron** 60.54 300 *ce*P P 11 28 22.8 0.0
CHGR pmax pmax
comp=Z,31nm,0.6s
I30M **Mount Dempster** 60.60 29 P P 11 28 24.1 +1.3
baz=275
F30M **Bear River** 60.65 26 P P 11 28 24.6 +1.7
baz=274
M30M **Minto, Yukon** 60.67 32 P P 11 28 24.4 +1.2
baz=276
J30M **Hart River** 60.68 29 P P 11 28 24.5 +1.1
baz=275
P30M **Million Dollar** 60.88 34 P P 11 28 25.8 +1.1
baz=277
MAYO **Mayo, Yukon** 60.97 30 P P 11 28 25.6 +0.4
baz=276
O30N **Mendenhall** 61.22 34 P P 11 28 27.7 +0.7
baz=278
N31M **Braeburn, Yuko** 61.28 33 P P 11 28 28.2 +0.8
baz=278
H31M **Peel River** 61.38 28 P P 11 28 28.9 +0.9
baz=276
INK **Inuvik** 61.43 25 LR LR 11 53 00.7
comp=Z,72nm,21.8s,baz=342,slow=34

INK **Inuvik** 61.43 25 P P 11 28 28.9 +0.7
INK IAmb IAmb 11 28 32.4
comp=Z,13nm,1.3s
INK **Inuvik** 61.43 25 P P 11 28 28.9 +0.7
INK pmax pmax
comp=Z,13nm,1.3s
INK **Inuvik** 61.43 25 P P 11 28 29.1 +0.9
baz=276
F31M **Tsiigehtchic** 61.44 26 P P 11 28 29.4 +1.1
baz=276
S31K **Pelican** 61.56 37 P P 11 28 30.3 +1.1
baz=279
SKAG **Skagway** 61.79 35 P P 11 28 31.7 +1.0
baz=279
WHY **Whitehorse** 61.83 34 P P 11 28 32.1 +0.9
baz=279
M31M **Drury Creek, Y** 61.83 32 P P 11 28 32.1 +1.1
baz=278
SIT **Sitka** 62.20 38 P P 11 28 34.6 +1.1
baz=280
FARO **Faro, Yukon** 62.31 32 P P 11 28 35.0 +0.7
baz=279
R32K **Eaglecrest** 62.41 36 P P 11 28 36.5 +1.6
baz=280
S32K **Killisnoo** 62.52 37 P P 11 28 36.3 +0.6
baz=281
P32M **Atlin** 62.58 35 P P 11 28 36.8 +0.6
baz=280
N32M **Quiet Lake** 62.61 33 P P 11 28 36.8 +0.4
baz=280
P33M **Teslin, Yukon** 62.91 34 P P 11 28 39.0 +0.6
baz=281
Q32M **Nakina River** 63.43 35 P P 11 28 42.8 +0.8
baz=282
T33K **Petersburg** 63.52 38 P P 11 28 42.8 +0.5
baz=282
U33K **Whale Pass** 63.58 38 P P 11 28 43.4 +0.7
baz=282
ARTI **Arti** 63.58 322⇑ *i*P P 11 28 42.6 -0.2
ARTI pmax pmax
comp=Z,18nm,1.5s
A36M **Sachs Harbour** 63.67 20 P P 11 28 44.1 +0.9
baz=282,SNR=5.7
CRAG **Craig** 63.72 39 P P 11 28 44.4 +0.7
baz=283
WRAK **Wrangell Islan** 63.93 38 P P 11 28 45.5 +0.5
baz=283
R33M **Jennings River** 63.99 35 P P 11 28 45.6 -0.1
baz=283
S34M **Telegraph Cree** 64.24 36 P P 11 28 47.0 -0.1
baz=283
AB31 **Akbulak array** 64.34 314 P P 11 28 47.9 0.0
ABKAR **Akbulak array** 64.34 314 P P 11 28 47.6 -0.2
V35K **Ketchikan** 64.59 39 P P 11 28 49.6 +0.2
baz=284
C36M **Paulatuk** 64.64 23 P P 11 28 50.4 +0.9
C36M IAmb IAmb 11 28 51.8
comp=Z,8.4nm,0.9s
C36M **Paulatuk** 64.64 23 P P 11 28 50.0 +0.6
baz=284,SNR=9.4
DLBC **Dease Lake** 64.69 36 LR LR 11 55 01.1
comp=Z,190nm,21.0s,baz=301,slow=34
DLBC **Dease Lake** 64.69 36 P P 11 28 50.6 +0.4
baz=284
WTLY **Watson Lake, Y** 64.90 34 P P 11 28 52.3 +0.9
baz=284
T35M **Bob Quinn** 64.92 37 P P 11 28 52.0 +0.4
baz=284
AKTO **Aktyubinsk** 65.23 315 LR LR 11 56 33.8
comp=Z,242nm,19.1s,baz=78,slow=35
U35K **Hyder** 65.31 38 P P 11 28 54.5 +0.5
baz=285
TOAD **Toad River Com** 66.99 34 P P 11 29 06.4 +1.5
baz=287
KOTAN **Kotaneelee Air** 67.17 33 P P 11 29 07.3 +1.3
baz=288
BBB **Bella Bella** 67.45 42 LR LR 11 53 33.5
comp=Z,95nm,21.1s,baz=20,slow=32
SPITS **Spitsbergen Ar** 68.94 350 P P 11 29 18.2 +1.4
comp=Z,5.5nm,0.9s,baz=35,slow=5.3,SNR=5.1
comp=Z,5.5nm,0.9s
YKA **Yellowknife Ar** 70.57 29 P P 11 29 26.8 -0.3
comp=Z,2.5nm,1.0s,baz=296,slow=6.6,SNR=18
comp=Z,2.5nm,1.0s
YKA **Yellowknife Ar** 70.57 29 *i*P P 11 29 28.2 +1.2
YKA pmax pmax
comp=Z,1.0nm,0.8s
BELG **Belogornoye** 70.77 320‖ *e*P P 11 29 28.4 0.0
BELG pmax pmax
comp=Z,4.0nm,1.1s
ARCES **ARCESS Array B** 72.22 341 P P 11 29 37.7 +0.8
comp=Z,4.3nm,0.9s,baz=59,slow=7.2,SNR=4.8
ARCES LR LR 12 06 39.8
comp=Z,234nm,18.6s,baz=342,slow=40
comp=Z,4.3nm,0.9s
RAR **Rarotonga** 74.42 125 LR LR 11 56 55.9
comp=Z,212nm,19.5s,baz=298,slow=31
YBH **Yreka Blue Hor** 74.72 51 LR LR 11 57 10.8
comp=Z,12nm,20.6s,baz=306,slow=31
NEW **Newport** 75.46 43 LR LR 11 58 04.9
comp=Z,147nm,21.1s,baz=50,slow=32
RPZ **Rata Peaks** 76.57 159 LR LR 12 00 10.2
comp=Z,104nm,21.1s,baz=58,slow=33
FINES **FINESS Array B** 76.75 334 P P 11 30 03.0 -0.4
comp=Z,2.3nm,0.5s,baz=59,slow=4.7,SNR=23
comp=Z,2.3nm,0.5s
FINES **FINESS Array B** 76.75 334 *i*P P 11 30 02.4 -0.9
FINES pmax pmax
comp=Z,2.0nm,0.5s
KBZ **Khabaz** 77.28 313 P P 11 30 06.6 0.0
comp=Z,5.9nm,0.8s,baz=80,slow=6.1,SNR=12
KBZ LR LR 12 07 58.8
comp=Z,203nm,18.1s,baz=2.5,slow=39
comp=Z,5.9nm,0.8s
KBZ **Khabaz** 77.28 313 *ce*P P 11 30 07.4 +0.8
KBZ pmax pmax
comp=Z,25nm,2.2s
KIV **Kislovodsk** 77.31 313 *e*P P 11 30 05.3 -1.7
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,169nm,19.0s
GNI **Garni** 77.69 309 LR LR 12 05 41.5
comp=Z,122nm,19.7s,baz=356,slow=37
GNI **Garni** 77.69 309⇑ *e*P P 11 30 09.9 +0.6
GNI pmax pmax
comp=Z,4.0nm,1.1s
NVAR **Mina Array Bea** 79.21 52 P P 11 30 17.8 0.0
comp=Z,3.4nm,1.1s,baz=280,slow=6.2,SNR=12
NVAR LR LR 12 01 09.4
comp=Z,138nm,19.8s,baz=307,slow=32
comp=Z,3.4nm,1.1s
PPT **Papeete** 79.95 116 LR LR 12 00 19.5
comp=Z,61nm,18.9s,baz=314,slow=32
QSM **Queen of Sheba** 81.39 54 P P 11 30 28.9 -0.4
AKASG **Malin Array Be** 81.63 324 P P 11 30 30.1 -0.1
comp=Z,1.0nm,0.4s,baz=52,slow=5.7,SNR=4.6
AKASG LR LR 12 09 11.2
comp=Z,358nm,18.5s,baz=341,slow=38
comp=Z,1.0nm,0.4s
AKASG **Malin Array Be** 81.63 324 *i*P P 11 30 30.2 0.0
AKASG pmax pmax
comp=Z,1.0nm,0.5s
HFS **Hagfors** 82.17 337 P P 11 30 32.3 -0.6
comp=Z,2.1nm,0.5s,baz=57,slow=4.0,SNR=11
comp=Z,2.1nm,0.5s
NB2 **NORSAR Subarra** 82.33 338 P P 11 30 33.0 -0.8
comp=Z,10nm,0.8s,baz=42,slow=5.3
NOA **NORSAR Array B** 82.33 338 P P 11 30 32.9 -0.8
comp=Z,1.6nm,0.5s,baz=42,slow=5.2,SNR=8.7
NOA LR LR 12 11 50.1
comp=Z,114nm,18.9s,baz=285,slow=39
comp=Z,1.6nm,0.5s
PDAR **Pinedale Array** 82.80 45 P P 11 30 37.2 +0.4
comp=Z,0.4nm,0.6s,baz=305,slow=2.4,SNR=5.5
PDAR LR LR 12 02 28.1
comp=Z,100nm,22.0s,baz=3.5,slow=32
comp=Z,0.4nm,0.6s
KNB **Kanab** 83.69 51 P P 11 30 42.1 +0.6
KNB IAmb IAmb 11 30 44.4
comp=Z,14nm,1.4s
KNB **Kanab** 83.69 51 P P 11 30 42.1 +0.6
KNB pmax pmax
comp=Z,14nm,1.4s
GAZ **Gaziantep** 84.28 309 P 11 30 45.0 +0.7
BRTR **Keskin Array B** 85.27 313 P P 11 30 49.7 +0.3
comp=Z,1.9nm,0.8s,baz=42,slow=6.7,SNR=8.4
comp=Z,1.9nm,0.8s

BRTR	**Keskin Array B**	**85.27**	**313**			**P**		**11 30 49.3**	**-0.1**
BRTR	**Keskin Array B**	**85.27**	**313**	*i*	P	**P**		**11 30 50.0**	**+0.6**
BRTR					pmax	pmax			
	comp=Z,2.0nm,0.8s								
ULM	**Lac du Bonnet**	**85.90**	**33**		LR	LR		12 13 25.8	
	comp=Z,93nm,18.0s,baz=15,slow=39								
ANMO	**Albuquerque**	**89.14**	**50**		LR	LR		12 08 18.3	
	comp=Z,131nm,18.9s,baz=10,slow=34								
LPIG	**La Paz**	**92.36**	**61**		LR	LR		12 06 41.9	
	comp=Z,111nm,19.6s,baz=356,slow=32								
SCHQ	**Schefferville**	**93.06**	**17**		LR	LR		12 17 55.9	
	comp=Z,125nm,19.0s,baz=83,slow=38								
TXAR	**Lajitas Array**	**94.32**	**53**		P	**P**		**11 31 33.0**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=300,slow=2.5,SNR=8.6								
TXAR					LR	LR		12 09 38.3	
	comp=Z,120nm,19.7s,baz=30,slow=33								
	comp=Z,0.5nm,0.7s								
TXAR	**Lajitas Array**	**94.32**	**53**		P	**P**		**11 31 33.0**	**+0.7**
M65A	**Busby, Falmout**	**103.64**	**25**		P	**Pdif**		**11 32 14.3**	**+0.6**
	baz=330								
TORD	**Torodi Ar. Bea**	**123.88**	**312**		PKP	**PKPdf**		**11 37 10.2**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=26,slow=2.1,SNR=2.2								
NVL	**N'lazarevskaya**	**129.84**	**199**	*e*	PKIKP	PKiKP		11 37 31.5	+10
NVL					pmax	pmax			
	comp=Z,65nm,2.1s								
LPAZ	**La Paz**	**149.08**	**73**		PKPbc	**PKPbc**		**11 38 02.2**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=301,slow=5.9,SNR=11								
PLCA	**Paso Flores**	**150.31**	**123**		PKPbc	**PKPbc**		**11 38 03.5**	**-0.1**
	comp=Z,3.1nm,1.0s,baz=236,slow=3.6,SNR=4.2								

*IDC **16** 11:25:11.2±5.9,35°58.N×135°94.E,h312km±151km, mb2.8/3,mbtmp3.4/4,Error ellipse: s-maj=300.9km s-min=23.4km az=58.0*
*JMA **16** 11:25:12.9±0.3,34°N±1°×137°.9E±0°.7,h312km±3km, MV2.9/49,ENSYUNADA*
ISC 16 11:25:15.3±1.1,34°.6N±0°.1×137°.90E±0°.09,h300km,n19, σ0§91/20,mb2.9/3,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNY	**Yasuok**	**0.79**	**358**	*eP*	**Pn**	**11 25 54.4**	**-0.5**
JAO	**Obara**	**0.88**	**323**	*eP*	**Pn**	**11 25 54.5**	**-0.7**
JIE	**Ise**	**1.00**	**260**	*eP*	**Pn**	**11 25 54.7**	**-1.0**
JEG	**Eigenji**	**1.37**	**295**	*eP*	**Pn**	**11 25 57.0**	**-0.6**
JKN2	**Miekihoku**	**1.38**	**257**	*eP*	**Pn**	**11 25 56.5**	**-1.2**
JYTA	**Yamagatataniai**	**1.40**	**317**	*eP*	**Pn**	**11 25 57.2**	**-0.6**
JWY	**Kouya**	**1.94**	**260**	*eP*	**Pn**	**11 26 00.7**	**-1.0**
MJAR	**Matsushiro Arr**	**1.99**	**7**	*eP*	**Pn**	**11 26 00.6**	**-1.3**
	3.2nm,0.3s,baz=234,slow=16,SNR=52						
MJAR				*eS*	**S**	**11 26 38.6**	**-0.5**
	1.6nm,0.7s,baz=350,slow=26,SNR=1.7						
MAT	**Matsushiro**	**1.99**	**7**	*eP*	**Pn**	**11 26 01.7**	**-0.2**
MAT				*eS*	**S**	**11 26 39.9**	**+0.8**
BSO4	**Boso 4**	**2.05**	**77**	*eS*	**S**	**11 26 38.7**	**-1.1**
JKG	**Kaga**	**2.13**	**324**	*eP*	**Pn**	**11 26 02.7**	**-0.4**
JWT	**Wachi**	**2.17**	**290**	*eP*	**Pn**	**11 26 02.7**	**-0.8**
JAG	**Ashikaga**	**2.25**	**34**	P	**Pn**	**11 26 03.4**	**-0.7**
JYT	**Yasato**	**2.50**	**48**	P	**Pn**	**11 26 05.4**	**-0.9**
JHO	**Hitachi**	**2.98**	**46**	*eP*	**Pn**	**11 26 10.1**	**-0.7**
JFK	**Kawauchi**	**3.69**	**40**	*eP*	**Pn**	**11 26 17.9**	**-0.3**
MKAR	**Makanchi Array**	**43.06**	**304**	P	P	11 32 25.2	-21
	0.5nm,0.7s,baz=78,slow=6.6,SNR=5.4						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**54.31**	**184**	P	**P**	**11 34 12.2**	**+0.9**
	0.2nm,0.3s,baz=1.5,slow=7.5,SNR=5.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**58.03**	**184**	P	**P**	**11 34 38.9**	**+1.4**
	0.1nm,0.3s,baz=3.7,slow=6.9,SNR=6.4						
	0.1nm,0.3s						

*SJA **16** 11:41:45.5±0.6,25°.82S×69°.10W,h116km±3km,ML3.4, MW3.5*
*GUC **16** 11:41:46.0±0.7,25°.82S×69°.14W,h121km±4km,ML3.5*
ISC 16 11:41:45.6±1.3,25°.82S±0°.03×69°.09W±0°.04, h122km±10km,n35,σ1§19/56,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.79**	**325**	*eP*	**Pn**	**11 42 06.2**	**-0.1**
GO02				*i* S	**Sn**	**11 42 21.5**	**-0.3**
GO02	**Mina Guanaco**	**0.79**	**325**	*eP*	**Pn**	**11 42 06.5**	**+0.2**
GO02				*eS*	**Sn**	**11 42 21.6**	**-0.2**
AC02	**Maricunga**	**1.02**	**182**	*eP*	**Pn**	**11 42 08.7**	**+0.2**
AC02				*i* S	**Sn**	**11 42 25.2**	**-0.6**
AC02				IAML		11 42 25.9	
	comp=E,1μm,0.3s						
AC02	**Maricunga**	**1.02**	**182**	*eP*	**Pn**	**11 42 08.7**	**+0.2**
AC02				*eS*	**Sn**	**11 42 25.9**	**0.0**
AC02				IAML		11 42 27.8	
	comp=Z,514nm,0.4s						
AC01	**Pan de Azucar**	**1.40**	**256**	*eP*	**Pn**	**11 42 11.9**	**-0.1**
AC01				*i* S	**Sn**	**11 42 31.6**	**-0.5**
AC01				IAML		11 42 38.0	
	comp=E,403nm,0.1s						
AC01	**Pan de Azucar**	**1.40**	**256**	*eP*	**Pn**	**11 42 12.4**	**+0.3**
AC01				*eS*	**Sn**	**11 42 33.7**	**+1.5**
AC01				IAML		11 42 37.0	
	comp=Z,178nm,0.4s						
PB14	**IPOC Station P**	**1.68**	**315**	*eP*	**Pn**	**11 42 16.3**	**+0.6**
PB14				*i* S	**Sn**	**11 42 37.8**	**-0.6**
PB14				IAML		11 42 43.3	
	comp=E,234nm,0.2s						
PB14	**IPOC Station P**	**1.68**	**315**	*eP*	**Pn**	**11 42 16.2**	**+0.6**
PB14				*eS*	**Sn**	**11 42 39.9**	**+1.4**
PB14				IAML		11 42 44.4	
	comp=Z,290nm,0.4s						
GO03	**Copiapo**	**2.05**	**210**	*eP*	**Pn**	**11 42 19.9**	**+0.1**
GO03				*i* S	**Sn**	**11 42 45.8**	**-0.2**
GO03				IAML		11 42 47.5	
	comp=N,306nm,0.3s						
GO03	**Copiapo**	**2.05**	**210**	*eP*	**Pn**	**11 42 20.3**	**+0.5**
GO03				*eS*	**Sn**	**11 42 46.0**	**0.0**
GO03				IAML		11 42 50.8	
	comp=Z,237nm,0.2s						
TINO	**Tinogasta**	**2.62**	**149**	*eP*	**Pn**	**11 42 28.0**	**+0.8**
PB10	**IPOC Station P**	**2.65**	**329**	*eP*	**Pn**	**11 42 28.1**	**+0.6**
PB10	**IPOC Station P**	**2.65**	**329**	*eP*	**Pn**	**11 42 28.2**	**+0.7**
PB10				*eS*	**Sn**	**11 42 55.6**	**-4.1**
PB10				IAML		11 43 09.8	
	comp=Z,112nm,0.3s						
FSA	**Cafayete**	**2.81**	**97**	*eP*	**Pn**	**11 42 30.6**	**+0.9**
SALTA		**2.95**	**58**	*eP*	**Pn**	**11 42 32.9**	**+1.0**
SALTA				*eP*		11 42 33.0	
SALTA				*eP*		11 42 33.7	
SALTA				*eS*	**Sn**	**11 43 08.4**	**+1.0**
SALTA				IAML		11 43 14.5	
	comp=Z,36nm,0.9s						
AC04	**Llanos de Chal**	**2.97**	**216**	*eP*	**Pn**	**11 42 31.4**	**-0.1**
AC04				*eS*	Sn	11 42 55.3	-12
AC04				IAML		11 43 18.8	
	comp=Z,123nm,1.4s						
AF01	**San Pedro de A**	**2.97**	**16**	*eP*	**Pn**	**11 42 34.2**	**+2.3**
AF01				*eS*	**Sn**	**11 43 03.9**	**-3.6**
AF01				IAML		11 43 31.1	
	comp=Z,252nm,0.4s						
VCA	**Vinchina**	**3.01**	**165**	*eP*	**Pn**	**11 42 29.5**	**-2.8**
VCA				*eS*	**Sn**	**11 43 06.1**	**-2.2**
VCA				IAML		11 43 13.1	
	comp=Z,37nm,1.8s						
PB05	**IPOC Station P**	**3.12**	**341**	*eP*	**Pn**	**11 42 34.0**	**+0.3**
PB05				*eS*	**Sn**	**11 43 10.6**	**-0.2**
PB05				IAML		11 43 22.7	
	comp=Z,97nm,0.5s						
PB06	**IPOC Station P**	**3.13**	**352**	*eP*	**Pn**	**11 42 34.3**	**+0.5**
PB06				*i* S	**Sn**	**11 43 11.1**	**+0.1**
PB06				IAML		11 43 35.2	
	comp=E,113nm,0.6s						
PB06	**IPOC Station P**	**3.13**	**352**	*eP*	**Pn**	**11 42 34.8**	**+0.9**
PB06				*eS*	Sn	11 42 56.8	-14
PB06				IAML		11 43 04.9	
	comp=Z,91nm,1.0s						
AC05	**El Transito**	**3.19**	**199**	*eP*	**Pn**	**11 42 35.1**	**+0.5**
AC05				*i* S	**Sn**	**11 43 12.6**	**+0.2**
AC05				IAML		11 43 14.4	
	comp=E,135nm,0.3s						
AC05	**El Transito**	**3.19**	**199**	*eP*	**Pn**	**11 42 35.4**	**+0.8**
AC05				*eS*	**Sn**	**11 43 13.4**	**+1.1**
AC05				IAML		11 43 40.3	
	comp=Z,68nm,0.5s						
LCO	**Las Campanas**	**3.49**	**204**	*eP*	**Pn**	**11 42 38.2**	**-0.5**
LCO				*eS*	**Sn**	**11 43 20.6**	**+0.9**
LCO				IAML		11 43 24.8	
	comp=Z,161nm,0.2s						
AHML	**Horco Molle**	**3.50**	**107**	*eP*	**Pn**	**11 42 38.4**	**-0.3**
PB03	**IPOC Station P**	**3.80**	**351**	*eP*	**Pn**	**11 42 42.9**	**+0.1**
PB03				*eS*	Sn	11 43 41.7	+15
PB03				IAML		11 43 41.7	
	comp=Z,69nm,0.3s						
PB09	**IPOC Station P**	**4.00**	**358**	*eP*	**Pn**	**11 42 46.5**	**+1.0**
PB09	**IPOC Station P**	**4.00**	**358**	*eP*	**Pn**	**11 42 46.5**	**+1.0**
PB09				*eS*	Sn	11 43 13.8	-18
PB09				IAML		11 43 59.5	
	comp=Z,66nm,0.6s						
ACLC	**CERRO LA CRUZ**	**4.06**	**153**	*eP*	**Pn**	**11 42 47.2**	**+1.0**
ACLC				*eS*	**Sn**	**11 43 32.7**	**-0.5**
PB07	**IPOC Station P**	**4.14**	**350**	*eP*	**Pn**	**11 42 46.7**	**-0.6**
ACDV	**Cuesta del Vie**	**4.34**	**180**	*eP*	**Pn**	**11 42 51.5**	**+1.7**
ACDV				*eS*	Sn	11 43 25.7	-14
PB02	**IPOC Station P**	**4.54**	**350**	*eP*	**Pn**	**11 42 52.0**	**-0.5**
PB02				IAML		11 44 22.7	
	comp=Z,76nm,0.3s						
ACCO	**Cerro Coronel**	**4.75**	**180**	*eP*	**Pn**	**11 42 56.7**	**+1.1**
AVFE	**Valle Fertil**	**5.04**	**164**	*eP*	Pn	11 42 54.7	-4.4
AVFE				*eS*	**Sn**	**11 43 55.5**	**-0.9**
CO03	**El Pedregal**	**5.20**	**195**	*eP*	**Pn**	**11 43 00.8**	**-0.6**
CO03				*eS*	**Sn**	**11 43 59.3**	**-1.0**
CO03				IAML		11 44 43.4	
	comp=Z,34nm,0.8s						

*IDC **16** 11:49:55.3±0.7,34°.17S×179°.21W,h0km,mb4.6/5, mbtmp4.6/7,ML4.5/2,MS3.2/4,Error ellipse: s-maj=22.8km s-min=17.3km az=161.0*
*NEIC **16** 11:49:56.7±1.2,34°.24S±0°.09×178°.9W±0°.2,h10km±1km, mb4.6/11,Error ellipse: s-maj=28.2km s-min=8.3km az=119.0*
*WEL **16** 11:49:56.3±0.8,34°S±6°×17°8W±1°,h33km,M4.8/19, mB5.3/8,ML4.8/18,MLv4.9/19,Mw(mB)4.7/8,Error ellipse: s-maj=18.1km s-min=4.1km az=112.1*
*NOU **16** 11:50:02.8,34°.75S×178°.72W,h77km,mb4.7/14,South of Kermadec Islands*
ISC 16 11:49:57.8±0.6,34°.38S±0°.06×178°.48W±0°.08,h35km,n82, σ1§63/96,mb4.6/14,MS3.4/4,2C,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.11**	**218**		**Pn**	**11 50 57.9**	**-0.1**
MXZ	**Matakaoa Point**	**4.11**	**218**	P	**Pn**	**11 50 57.4**	**-0.6**
MXZ	**Matakaoa Point**	**4.11**	**218**	P	**Pn**	**11 50 57.6**	**-0.4**
MXZ				S	**Sn**	**11 51 45.6**	**+0.8**
WMGZ	**Waiomatatini S**	**4.25**	**215**	P	**Pn**	**11 51 02.0**	**+1.9**
WMGZ				S	**Sn**	**11 51 50.7**	**+2.2**
PKGZ	**Pakihiroa**	**4.46**	**218**	P	**Pn**	**11 51 02.9**	**0.0**
PKGZ				S	**Sn**	**11 51 54.9**	**+1.5**
HAZ	**Te Kaha**	**4.53**	**221**	P	**Pn**	**11 51 04.3**	**+0.5**
HAZ				S	**Sn**	**11 51 57.7**	**+2.5**
PUZ	**Puketiti**	**4.53**	**215**	P	**Pn**	**11 51 03.7**	**-0.2**
PUZ				S	**Sn**	**11 51 56.0**	**+0.7**
WIZ	**White Island**	**4.71**	**227**	P	**Pn**	**11 51 07.9**	**+1.5**
RUGZ	**Raukumara Rang**	**4.74**	**220**	P	**Pn**	**11 51 06.7**	**-0.1**
RUGZ				S	**Sn**	**11 52 01.8**	**+1.2**
TWGZ	**Tauwhareparae**	**4.75**	**216**	P	**Pn**	**11 51 06.6**	**-0.2**
TWGZ				S	**Sn**	**11 52 03.1**	**+2.5**
CNGZ	**Carnagh Statio**	**4.89**	**212**	P	**Pn**	**11 51 08.7**	**0.0**
CNGZ				S	**Sn**	**11 52 08.0**	**+3.9**
TKGZ	**Te Karaka**	**5.02**	**215**	P	**Pn**	**11 51 11.0**	**+0.5**
TKGZ				S	**Sn**	**11 52 07.6**	**+0.3**
MWZ	**Matawai**	**5.09**	**218**	P	**Pn**	**11 51 10.9**	**-0.7**
MWZ				S	**Sn**	**11 52 10.0**	**+0.7**
GLKZ	**Green Lake**	**5.13**	**5**	P	**Pn**	**11 51 09.5**	**-2.6**
GLKZ				S	**Sn**	**11 52 05.3**	**-4.7**
RAO	**Raoul Island**	**5.14**	**5**	Pn	**Pn**	**11 51 12.1**	**-0.1**
MYRZ	**Mayor Island**	**5.17**	**235**	P	**Pn**	**11 51 14.5**	**+1.8**
URZ	**Urewera**	**5.26**	**221**	Pn	**Pn**	**11 51 12.6**	**-1.3**
	19nm,0.3s,baz=274,slow=3.4,SNR=213						
URZ				Sn	**Sn**	**11 52 11.4**	**-1.8**
	19nm,0.3s,baz=218,slow=22,SNR=8.2						
	87nm,0.3s						
URZ	**Urewera**	**5.26**	**221**	P	**Pn**	**11 51 13.6**	**-0.2**
URZ	**Urewera**	**5.26**	**221**	P	**Pn**	**11 51 12.7**	**-1.2**
RIGZ	**Rimuhau**	**5.27**	**214**	P	**Pn**	**11 51 13.5**	**-0.5**
RAGZ	**Rawiri**	**5.27**	**218**	P	**Pn**	**11 51 15.4**	**+1.2**
RAGZ				S	**Sn**	**11 52 13.9**	**+0.2**
KUZ	**Kuaotunu**	**5.28**	**242**	P	**Pn**	**11 51 14.8**	**+0.6**
KUZ	**Kuaotunu**	**5.28**	**242**	P	**Pn**	**11 51 14.4**	**+0.2**
OPRZ	**Ohinepanea**	**5.30**	**228**	P	**Pn**	**11 51 14.9**	**+0.5**
PRGZ	**Paritu Road**	**5.39**	**212**	P	**Pn**	**11 51 15.2**	**-0.5**
TGRZ	**Tauranga**	**5.41**	**230**	P	**Pn**	**11 51 16.2**	**+0.2**
RTZ	**Ruatahuna**	**5.59**	**220**		**Pn**	**11 51 17.4**	**-1.0**
MUGZ	**Murupara**	**5.60**	**222**	P	**Pn**	**11 51 18.3**	**-0.3**
TOZ	**Tahuroa Road**	**5.91**	**234**		**Pn**	**11 51 21.5**	**-1.3**
WCZ	**Waipu Caves**	**6.08**	**253**	P	**Pn**	**11 51 25.6**	**+0.4**
BKZ	**Black Stump Fm**	**6.25**	**219**		**Pn**	**11 51 26.9**	**-0.6**
BKZ	**Black Stump Fm**	**6.25**	**219**	P	**Pn**	**11 51 26.3**	**-1.2**
BKZ	**Black Stump Fm**	**6.25**	**219**	P	**Pn**	**11 51 26.9**	**-0.6**
BKZ				S	**Sn**	**11 52 35.4**	**-2.3**
OUZ	**Omahuta**	**6.57**	**260**	P	**Pn**	**11 51 32.3**	**+0.4**
OUZ	**Omahuta**	**6.57**	**260**	P	**Pn**	**11 51 32.2**	**+0.3**
HIZ	**Hauiti**	**6.77**	**231**	P	**Pn**	**11 51 34.2**	**-0.4**
BFZ	**Birch Farm**	**7.55**	**212**	P	**Pn**	**11 51 44.5**	**-0.9**
BFZ	**Birch Farm**	**7.55**	**212**	S	**Sn**	**11 53 04.5**	**-5.3**
CTZ	**Chatham Island**	**9.45**	**172**	P	**Pn**	**11 52 11.6**	**+0.3**
CTZ	**Chatham Island**	**9.45**	**172**	S	**Sn**	**11 52 52.6**	**-3.7**
KHZ	**Kahutara**	**10.17**	**216**	P	**Pn**	**11 52 21.1**	**-0.1**
RPZ	**Rata Peaks**	**12.36**	**218**	Pn	**Pn**	**11 52 49.4**	**-1.8**
	3.4nm,0.3s,baz=19,slow=1.8,SNR=6.5						
	11nm,0.5s						
RPZ	**Rata Peaks**	**12.36**	**218**	P	**Pn**	**11 52 50.2**	**-1.0**
ODZ	**Otahua Downs**	**13.53**	**215**	P	**Pn**	**11 53 05.0**	**-2.1**
JCZ	**Jackson Bay**	**13.81**	**222**	P	**Pn**	**11 53 10.2**	**-0.8**
AFI	**Afiamalu**	**21.27**	**18**	P	**P**	**11 54 42.0**	**+0.8**
EIDS	**Eidsvold**	**27.80**	**281**	P	**P**	**11 55 43.8**	**+0.1**
EIDS				IAmb	IAmb	11 55 47.0	
	comp=Z,7.5nm,1.1s						
HNR	**Honiara**	**31.75**	**316**	LR	LR	12 06 45.9	
	comp=Z,5.0nm,18.6s,baz=60,slow=32						
CTA	**Charters Tower**	**34.25**	**285**	LR	LR	12 09 42.5	
	comp=Z,48nm,19.6s,baz=26,slow=35						
CTAO	**Charters Tower**	**34.25**	**285**	P	**P**	**11 56 40.4**	**-0.1**
CTAO				IAmb	IAmb	11 57 00.1	
	comp=Z,7.6nm,0.8s						
INKA	**Innaminka**	**35.37**	**269**	P	**P**	**11 56 50.0**	**-0.1**
INKA				IAmb	IAmb	11 56 52.5	
	comp=Z,3.4nm,0.8s						
AS31	**Alice Springs**	**42.65**	**271**	P	**P**	**11 57 50.0**	**-1.2**
ASAR	**Alice Springs**	**42.65**	**271**	P	**P**	**11 57 50.2**	**-0.9**
	comp=Z,4.2nm,0.6s,baz=117,slow=7.7,SNR=86						
ASAR				PcP	**PcP**	**11 59 43.3**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=106,slow=3.8,SNR=6.8						
ASAR				S	**S**	**12 04 08.7**	**-3.3**
	comp=Z,0.7nm,0.8s,baz=116,slow=15,SNR=7.0						
	comp=Z,4.2nm,0.6s						
ASAR	**Alice Springs**	**42.65**	**271**	P	**P**	**11 57 49.2**	**-1.9**
WRAB	**Tennant Creek**	**43.99**	**277**	P	**P**	**11 58 01.2**	**-0.8**
WRAB				IAmb	IAmb	11 58 02.0	
	comp=Z,9.3nm,0.8s						
WRA	**Warramunga Arr**	**43.99**	**277**	P	**P**	**11 58 00.8**	**-1.2**
	comp=Z,5.7nm,0.6s,baz=118,slow=7.6,SNR=73						
WRA				PcP	**PcP**	**11 59 47.6**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=115,slow=3.0,SNR=3.0						
WRA				S	**S**	**12 04 29.1**	**-2.7**
	comp=Z,0.3nm,0.7s,baz=122,slow=19,SNR=1.9						
	comp=Z,5.7nm,0.6s						
WRA	**Warramunga Arr**	**43.99**	**277**	P	**P**	**11 58 00.9**	**-1.0**
WB0	**Warramunga Arr**	**44.04**	**277**	P	**P**	**11 58 01.1**	**-1.2**
WB0				IAmb	IAmb	11 58 02.9	
	comp=Z,13nm,1.0s						
VNDA	**Vanda**	**44.10**	**186**	LR	LR	12 12 12.9	
	comp=Z,72nm,18.1s,baz=325,slow=30						
MBWA	**Marble Bar**	**55.49**	**267**	P	**P**	**11 59 27.6**	**-1.8**
MBWA				IAmb	IAmb	11 59 30.8	
	comp=Z,21nm,1.4s						
QSPA	**South Pole Qui**	**55.74**	**180**	P	P	11 59 35.7	+5.0
	comp=Z,3.8nm,0.7s,baz=41,slow=7.1,SNR=4.6						
	comp=Z,3.8nm,0.7s						
BELA	**Belgrano 2**	**65.91**	**172**	P	P	12 00 45.9	+6.4
BELA				IAmb	IAmb	12 01 12.9	
	comp=Z,7.5nm,1.1s						
MAW	**Mawson**	**68.45**	**201**	LR	LR	12 31 57.1	
	comp=Z,51nm,18.1s,baz=90,slow=37						
VNA3	**Neumayer Olymp**	**74.37**	**176**	⇑P	**P**	**12 01 29.6**	**-1.8**
	comp=Z,5.0nm,0.9s						
VNA2	**Neumayer--Watz**	**74.80**	**177**	⇑P	**P**	**12 01 32.0**	**-1.9**
	comp=Z,2.2nm,0.7s,baz=191,slow=4.9						
KSRS	**Korea Array**	**87.12**	**320**	P	**P**	**12 02 41.2**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=142,slow=5.6,SNR=1.3						
	comp=Z,1.2nm,0.9s						
PEA0B	**Petropavlovsk-**	**89.56**	**346**	P	**P**	**12 02 53.0**	**+2.0**
PETK	**Petropavlovsk-**	**89.56**	**346**	P	**P**	**12 02 53.7**	**+2.7**
	comp=Z,12nm,0.8s,baz=114,slow=6.2,SNR=20						
	comp=Z,12nm,0.8s						
PETK	**Petropavlovsk-**	**89.56**	**346**	P	**P**	**12 02 53.3**	**+2.3**
MKAR	**Makanchi Array**	**119.97**	**308**	PKP	**PKiKP**	**12 08 45.1**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=125,slow=1.5,SNR=6.7						
ZALV	**Zalesovo Beam**	**120.70**	**317**	PKP	**PKiKP**	**12 08 46.7**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=140,slow=1.1,SNR=2.3						
KURBB	**Kurchatov Arra**	**123.49**	**312**	PKP	**PKiKP**	**12 08 52.1**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=113,slow=2.1,SNR=12						
BVAR	**Borovoye Array**	**128.91**	**314**	PKP	**PKiKP**	**12 09 03.9**	**+2.1**
	comp=Z,1.4nm,0.9s,baz=76,slow=0.6,SNR=5.7						
ARCES	**ARCESS Array B**	**142.37**	**346**	PKhKP	PKPpre	12 09 24.8	
	comp=Z,2.1nm,0.7s,baz=60,slow=2.2,SNR=3.6						
FINES	**FINESS Array B**	**148.70**	**337**	PKPbc	**PKiKP**	**12 09 42.5**	**+0.6**
	comp=Z,10nm,0.8s,baz=45,slow=3.4,SNR=48						
MMAI	**Mount Meron Ar**	**151.85**	**277**	PKPbc	**PKiKP**	**12 09 50.9**	**+1.4**
	comp=Z,1.6nm,0.4s,baz=116,slow=3.4,SNR=3.7						
NB2	**NORSAR Subarra**	**152.60**	**350**	PKP	**PKiKP**	**12 09 52.2**	**+2.2**
	comp=Z,3.7nm,0.9s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**152.60**	**350**	PKPbc	**PKiKP**	**12 09 51.8**	**+1.7**
	comp=Z,2.2nm,0.6s,baz=13,slow=4.1,SNR=6.7						
NOA				PKPab	**sPKPbc**	**12 10 01.9**	**-0.1**
	comp=Z,4.2nm,0.9s,baz=25,slow=2.7,SNR=7.5						
HFS	**Hagfors**	**153.04**	**347**	PKPbc	**PKiKP**	**12 09 52.8**	**+1.9**
	comp=Z,5.2nm,0.8s,baz=54,slow=7.3,SNR=4.7						
HFS				PKPab	**PKPab**	**12 10 02.4**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=38,slow=5.4,SNR=11						
BRTR	**Keskin Array B**	**153.91**	**291**	PKPbc	**PKiKP**	**12 09 54.5**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=96,slow=1.4,SNR=9.2						
BRTR				PKPab	**sPKPbc**	**12 10 05.5**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=106,slow=3.6,SNR=5.2						
AKASG	**Malin Array Be**	**154.09**	**317**	PKPbc	**PKiKP**	**12 09 54.6**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=71,slow=2.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**158.86**	**180**	PKPab	**PKPab**	**12 10 31.9**	**+3.6**
	comp=Z,0.4nm,0.6s,baz=163,slow=3.5,SNR=3.6						

*IDC **16** 12:06:31.3±1.5,25°.00N×109°.54W,h0km,mb3.1/1, mbtmp3.4/7,ML3.4/6,Error ellipse: s-maj=30.6km s-min=9.9km az=121.0*
*MEX **16** 12:06:34.9±0.3,25°.24N×109°.82W,h10km,MD4.3*
ISC 16 12:06:32.5±2.2,25°.16N±0°.05×109°.81W±0°.04, h15km±17km,n20,σ2§35/29,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.82**	**58**	*i* P	**Pb**	**12 06 48.0**	**-0.4**
TSIG				*eS*	**Sb**	**12 06 57.5**	**-1.8**
LPIG	**La Paz**	**1.15**	**203**	Pg	**Pb**	**12 06 54.4**	**+0.4**
	34nm,0.3s,baz=81,slow=0.4,SNR=16						
LPIG				Lg	Lg	12 07 07.0	
	165nm,0.3s,baz=175,slow=7.9,SNR=9.3						
LPIG	**La Paz**	**1.15**	**203**	*eP*	**Pb**	**12 06 54.1**	**+0.1**
LPIG				*eS*	**Sg**	**12 07 08.3**	**-1.4**
SLBS	**Sierra La Lagu**	**1.48**	**185**	*eP*	**Pn**	**12 06 59.1**	**+0.5**
CSIG	**Choix**	**2.11**	**38**	*eP*	**Pn**	**12 07 06.7**	**-0.5**
CSIG				*eS*	**Sn**	**12 07 30.5**	**-2.6**
SSIG	**Sanalona**	**2.45**	**97**	*eP*	**Pn**	**12 07 11.4**	**-0.5**
SSIG				*eS*	**Sn**	**12 07 40.7**	**-0.8**
GUYB	**Guaymas**	**2.89**	**341**	*eP*	**Pn**	**12 07 17.1**	**-0.9**
GUYB				*eS*	**Sn**	**12 07 48.5**	**-3.8**
HSIG		**3.97**	**345**	*eP*	**

*OMAN **16** 12:21:55.5±0.1,26°.81N×55°.90E,h10km,mb4.1/6, ml3.6/22,Error ellipse: s-maj=1.3km s-min=0.6km az=20.0*
*MOS **16** 12:21:59.9±0.9,27°.40N×55°.85E,h72km,mb4.4/6,Error ellipse: s-maj=10.4km s-min=7.0km az=90.8*
*IDC **16** 12:22:03.8±5.4,27°.30N×55°.75E,h103km±47km,mb3.6/20, mbtmp4.0/25,Error ellipse: s-maj=29.8km s-min=13.2km az=169.0*

ISC 16 12:21:52.7±1.4,**27°.05N**±0°.02×**55°.86E**±0°.03,**h13**km±9km, **n153**,σ1§19/171,**mb4.1**/38,**5C-3D**,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.44**	**38**	Pg	**Pb**	**12 22 02.4**	**-0.1**
GENO				Sg	**Sb**	**12 22 10.0**	**+0.9**
IBND	**Bandar-abas**	**0.72**	**57**	Pg	**Pn**	**12 22 07.9**	**-0.6**
IBND				Sg	**Sn**	**12 22 18.9**	**-0.6**
SHME	**Shamm**	**1.03**	**166**	*e*P	**Pn**	**12 22 13.4**	**+0.6**
	SNR=208						
SHME				S	**Sn**	**12 22 27.6**	**+0.6**
SHME	**Shamm**	**1.03**	**166**	P	**Pn**	**12 22 13.4**	**+0.6**
	SNR=208						
SHME				S	**Sn**	**12 22 28.2**	**+1.2**
BANOM	**Banah**	**1.19**	**161**	*e*P	**Pg**	**12 22 16.1**	**+0.4**
	SNR=1125						
BANOM	**Banah**	**1.19**	**161**	P	**Pg**	**12 22 16.3**	**+0.7**
LAR1	**LAR**	**1.46**	**295**	Pg	**Pg**	**12 22 20.9**	**+0.1**
UMQ	**Umm Al-Quwin**	**1.53**	**187**	*e*P	**Pg**	**12 22 22.0**	**-0.2**
	SNR=11						
MASF	**Masafi**	**1.69**	**171**	P	**Pb**	**12 22 23.9**	**+0.1**
	SNR=104						
MASF				S	**Sb**	**12 22 45.7**	**+0.7**
MSFE	**Esma-Masafi**	**1.71**	**171**	*e*P	**Pb**	**12 22 24.1**	**+0.2**
	SNR=105						
MDH	**Madha**	**1.79**	**167**	*e*P	**Pn**	**12 22 24.2**	**+0.9**
	SNR=87						
MDH	**Madha**	**1.79**	**167**	P	**Pb**	**12 22 24.5**	**-0.9**
	SNR=13						
KHNJ	**Kahnooj**	**1.86**	**61**	Pn	**Pb**	**12 22 25.8**	**-0.8**
NAZ	**Nazwa, Dubai**	**2.06**	**185**	*e*P	**Pb**	**12 22 29.4**	**-0.6**
	SNR=17						
NAZ	**Nazwa, Dubai**	**2.06**	**185**	P	**Pb**	**12 22 29.1**	**-0.9**
NAZ				S	**Sb**	**12 22 55.0**	**-0.5**
UOSS	**Minazif**	**2.12**	**172**		**Pn**	**12 22 29.1**	**+1.3**
UOSS	**Minazif**	**2.12**	**172**	Pn	**Pn**	**12 22 29.0**	**+1.1**
HATD	**Hatta, Dubai**	**2.23**	**174**	*e*P	**Pn**	**12 22 31.1**	**+1.7**
	SNR=47						
HATD	**Hatta, Dubai**	**2.23**	**174**	P	**Pb**	**12 22 31.5**	**-1.4**
FAQ	**Al Faqa, Dubai**	**2.31**	**186**	*e*P	**Pb**	**12 22 32.7**	**-1.6**
	SNR=15						
FAQ	**Al Faqa, Dubai**	**2.31**	**186**	P	**Pb**	**12 22 32.6**	**-1.6**
	SNR=15						
KHL1	**Khalili_Fars**	**2.35**	**285**	Pn	**Pn**	**12 22 32.9**	**+1.8**
ASHO	**Ashiyiah**	**2.36**	**176**	*e*P	**Pb**	**12 22 33.4**	**-1.7**
	SNR=87						
ASHO	**Ashiyiah**	**2.36**	**176**	P	**Pb**	**12 22 33.5**	**-1.6**
	SNR=87						
ASUD	**Al Ashush, Dub**	**2.46**	**191**	*e*P	**Pb**	**12 22 34.7**	**-2.1**
	SNR=13						
ASUD	**Al Ashush, Dub**	**2.46**	**191**	P	**Pb**	**12 22 35.3**	**-1.5**
	SNR=12						
JHRM	**Jahrom**	**2.49**	**306**	Pn	**Pb**	**12 22 35.3**	**-2.1**
AJN	**Ajban**	**2.60**	**198**	P	**Pn**	**12 22 36.6**	**+2.2**
AJN				S	**Sn**	**12 23 08.4**	**+2.5**
NGRK	**Negar Kerman**	**2.69**	**16**	Pn	**Pb**	**12 22 38.6**	**-2.4**
SOHO	**SOHO**	**2.97**	**168**	*e*P	**Pn**	**12 22 39.5**	**0.0**
	SNR=19						
SOHO	**SOHO**	**2.97**	**168**	P	**Pn**	**12 22 39.4**	**0.0**
ALNE	**Al Ain**	**2.98**	**182**	*i* P	**Pn**	**12 22 41.7**	**+2.0**
	SNR=12						
ALNE	**Al Ain**	**2.98**	**182**	P	**Pn**	**12 22 39.7**	**0.0**
KHGB	**Koh Gabri**	**3.36**	**9**	Pn	**Pn**	**12 22 47.9**	**+2.9**
HOQ	**Hoqain**	**3.69**	**159**	P	**Pn**	**12 22 49.4**	**-0.2**
HOQ	**Hoqain**	**3.69**	**159**	Pn	**Pn**	**12 22 49.3**	**-0.2**
MZWR	**Madinat Zayed**	**3.73**	**209**	P	**Pn**	**12 22 50.7**	**+0.6**
MZWR				S	**Sn**	**12 23 34.1**	**+0.2**
BIDO	**Bidbid**	**4.07**	**149**	P	**Pn**	**12 22 55.2**	**+0.5**
BIDO				S	**Sn**	**12 23 40.0**	**-2.2**
DSBU	**Dashti - Bushe**	**4.29**	**289**	Pn	**Pn**	**12 22 59.1**	**+1.5**
UMZA	**Um Al Zommool**	**4.37**	**189**	P	**Pn**	**12 22 59.3**	**+0.6**
UMZA				S	**Sn**	**12 23 48.2**	**-1.2**
CHBR	**Chabahar**	**4.39**	**108**	Pn	**Pn**	**12 23 00.6**	**+1.5**
SMDO	**Samad**	**4.44**	**153**	P	**Pn**	**12 23 01.5**	**+1.6**
	SNR=17						
BSY	**Bisya**	**4.46**	**164**	P	**Pn**	**12 23 01.5**	**+1.5**
IMEH	**Mehriz**	**4.46**	**346**	Pn	**Pn**	**12 23 02.8**	**+2.5**
IBAF	**Bafgh**	**4.53**	**357**	Pn	**Pn**	**12 23 03.4**	**+2.3**
WSAR	**Wadi Sarin**	**4.55**	**146**	P	**Pn**	**12 23 02.5**	**+1.2**
WSAR				S	**Sn**	**12 23 52.1**	**-1.9**
WSAR				S	**Sn**	**12 23 52.7**	**-1.3**
SHMA	**Al-Shehemyia**	**4.55**	**256**	P	**Pn**	**12 23 03.0**	**+1.8**
	SNR=12						
SHMA				S	**Sn**	**12 23 55.5**	**+1.5**
	SNR=8.4						
MZR	**Muzera**	**4.57**	**209**	P	**Pn**	**12 23 02.8**	**+1.1**
MZR	**Muzera**	**4.57**	**209**	P	**Pn**	**12 23 02.7**	**+1.1**
	SNR=5.7						
TRNA	**Turayna**	**4.78**	**242**	P	**Pn**	**12 23 05.5**	**+1.1**
	SNR=6.4						
TRNA				S	**Sn**	**12 23 59.0**	**-0.7**
	SNR=9.3						
TAFT	**Taft - Yazd**	**4.88**	**343**	Pn	**Pn**	**12 23 08.9**	**+2.8**
SAKB	**Bahrain**	**4.89**	**259**	P	**Pn**	**12 23 08.8**	**+3.0**
SAKB				P	**Pn**	**12 23 08.9**	**+3.0**
SAKB				P	**Pn**	**12 23 09.0**	**+3.0**
NGCH	**Negor - Chabah**	**5.03**	**108**	P	**Pn**	**12 23 09.5**	**+1.7**
NGCH				S	**Sn**	**12 24 04.9**	**-0.8**
JMDO	**Jabal Madar**	**5.09**	**156**	P	**Pn**	**12 23 09.9**	**+1.2**
	SNR=47						
SMRA	**Abu-Samra**	**5.09**	**244**	P	**Pn**	**12 23 11.0**	**+2.4**
WBK	**Wadi Bani Khal**	**5.25**	**147**	P	**Pn**	**12 23 11.5**	**+0.7**
	SNR=17						
WBK	**Wadi Bani Khal**	**5.25**	**147**	Pn	**Pn**	**12 23 11.7**	**+0.8**
IRAM	**Ramesheh**	**5.63**	**328**	Pn	**Pn**	**12 23 18.8**	**+2.5**
SRVN	**Saravan**	**5.83**	**85**	Pn	**Pn**	**12 23 21.2**	**+2.2**
JLN	**Jalan Bani Buh**	**5.85**	**146**	P	**Pn**	**12 23 19.3**	**+0.2**
MHTO	**MHTO**	**6.34**	**162**	P	**Pn**	**12 23 26.3**	**+0.5**
DOK	**Doka**	**8.54**	**191**	P	**Pn**	**12 23 55.8**	**-0.4**
SHAO	**Shalim**	**8.99**	**181**	*i* P	**Pn**	**12 24 01.4**	**-0.9**
	SNR=27						
SHAO	**Shalim**	**8.99**	**181**	P	**Pn**	**12 24 01.4**	**-0.9**
	SNR=27						
DMTO	**DMTO**	**9.33**	**185**	P	**Pn**	**12 24 06.4**	**-0.6**
ABTO	**Aybut**	**9.94**	**194**	P	**Pn**	**12 24 14.5**	**-0.8**
RAYN	**Ar Rayn**	**10.01**	**252**	Pn	**Pn**	**12 24 15.1**	**-1.2**
RAYN	**Ar Rayn**	**10.01**	**252**	P	**Pn**	**12 24 15.1**	**-1.2**
GEVA	**Gevas**	**15.55**	**319**		**Pn**	**12 25 30.4**	**-1.4**
GEVA				IAmb	IAmb	12 25 36.0	
	comp=Z,4.4nm,0.6s						
GNI	**Garni**	**16.00**	**328**	P	**P**	**12 25 40.7**	**-0.3**
	comp=Z,12nm,0.6s,baz=239,slow=3.2,SNR=7.8						
GNI	**Garni**	**16.00**	**328**	Pn	**Pn**	**12 25 36.8**	**-0.7**
GNI				IAmb	IAmb	12 25 44.0	
	comp=Z,14nm,0.8s						
CHGR	**Chuyangaron**	**16.06**	**41**	Pn	**Pn**	**12 25 38.9**	**+0.6**
CHGR	**Chuyangaron**	**16.06**	**41**	P	**Pn**	**12 25 38.9**	**+0.6**
CHGR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GURO	**Guroymak-BITLI**	**16.31**	**318**	Pn	**Pn**	**12 25 41.5**	**-0.1**
ASF	**Jabal al Asfar**	**17.26**	**292**	P	**P**	**12 25 56.2**	**+1.2**
	comp=Z,3.1nm,0.5s,baz=94,slow=8.4,SNR=5.2						
EIL	**Elat**	**18.59**	**283**	P	**Pn**	**12 26 11.4**	**+1.6**
	comp=Z,6.5nm,1.0s,baz=168,slow=8.4,SNR=2.4						
MMAI	**Mount Meron Ar**	**18.67**	**293**	P	**Pn**	**12 26 11.2**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=103,slow=13,SNR=2.2						
ARPR	**Arapgir-MALATY**	**18.93**	**314**	P	**P**	**12 26 12.5**	**-1.0**
ARPR				IAmb	IAmb	12 26 36.6	
	comp=Z,12nm,1.0s						
NEUR	**Neytrino**	**19.39**	**330**⇑	*e*P	**Pn**	**12 26 20.4**	**+0.8**
NEUR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KBZ	**Khabaz**	**19.67**	**331**	P	**Pn**	**12 26 23.7**	**+0.9**
	comp=Z,13nm,0.9s,baz=159,slow=6.4,SNR=17						
KBZ	**Khabaz**	**19.67**	**331**⇓	*e*P	**P**	**12 26 18.7**	**-2.6**
KBZ				pmax	pmax		
	comp=Z,19nm,0.9s						
SHA1	**Shidzhatmaz**	**19.78**	**331**	*ce*P	**P**	**12 26 22.5**	**-0.3**
KIV	**Kislovodsk**	**19.95**	**331**	*e*P	**Pn**	**12 26 26.0**	**-0.1**
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
KK31	**Karatay Array**	**19.96**	**33**		**P**	**12 26 24.7**	**+0.2**
KK31	**Karatay Array**	**19.96**	**33**	P	**P**	**12 26 24.7**	**+0.2**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**19.96**	**33**	P	**P**	**12 26 24.7**	**+0.2**
KKAR	**Karatay Array**	**19.96**	**33**		**P**	**12 26 24.7**	**+0.2**
BNN	**Bunyan**	**20.46**	**310**		**P**	**12 26 29.5**	**-0.7**
BNN				IAmb	IAmb	12 26 34.8	
	comp=Z,7.3nm,1.0s						
SOC	**Sochi**	**21.05**	**326**	*e*P	**P**	**12 26 36.3**	**0.0**
SOC				*e*PPP	PPP	12 27 03.0	
SOC				*e*SS	**SnSn**	**12 30 52.6**	**+1.0**
SOC				*e*SSS	SSS	12 31 06.3	
SOC				MLR	MLR		
	comp=Z,556nm,11.0s						
AAK	**Ala-Archa**	**21.73**	**40**	P	**P**	**12 26 46.0**	**+2.1**
	comp=Z,3.5nm,0.8s,baz=249,slow=14,SNR=7.0						
	comp=Z,3.5nm,0.8s						
NRN	**Naryn**	**21.90**	**44**		**P**	**12 26 45.6**	**-0.3**
NRN				IAmb	IAmb	12 26 52.2	
	comp=Z,8.0nm,1.2s						
NRN	**Naryn**	**21.90**	**44**	P	**P**	**12 26 45.6**	**-0.3**
NRN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BR131	**Keskin Array S**	**22.38**	**310**		**P**	**12 26 50.3**	**-0.6**
BR131				IAmb	IAmb	12 26 57.0	
	comp=Z,5.6nm,0.6s						
BR131	**Keskin Array S**	**22.38**	**310**	*de*P	**P**	**12 26 51.4**	**+0.6**
BRTR	**Keskin Array B**	**22.38**	**310**	P	**P**	**12 26 51.5**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=135,slow=12,SNR=16						
	comp=Z,2.1nm,0.5s						
BRTR	**Keskin Array B**	**22.38**	**310**		**P**	**12 26 50.3**	**-0.6**
AB31	**Akbulak array**	**22.39**	**7**		**P**	**12 26 50.3**	**-0.4**
AB31				IAmb	IAmb	12 27 02.7	
	comp=Z,5.8nm,1.3s						
ABKAR	**Akbulak array**	**22.39**	**7**	P	**P**	**12 26 50.2**	**-0.5**
BVAR	**Bovoye Array**	**28.11**	**19**	P	**P**	**12 27 43.6**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=200,slow=7.0,SNR=13						
	comp=Z,1.8nm,0.5s						
MAKZ	**Makanchi**	**28.50**	**39**	P	**P**	**12 27 47.7**	**0.0**
MAKZ	**Makanchi**	**28.50**	**39**	P	**P**	**12 27 47.7**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MK31	**Makanchi Array**	**28.67**	**40**⇓	*e*P	**P**	**12 27 49.7**	**+0.5**
MKAR	**Makanchi Array**	**28.67**	**40**	P	**P**	**12 27 49.4**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=225,slow=8.1,SNR=19						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**28.67**	**40**	P	**P**	**12 27 49.0**	**-0.1**
KURBB	**Kurchatov Arra**	**29.20**	**30**	P	**P**	**12 27 53.5**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=230,slow=8.3,SNR=5.2						
	comp=Z,0.4nm,0.6s						
KURK	**Kurchatov**	**29.31**	**30**	P	**P**	**12 27 53.5**	**-1.2**
MLR	**Muntele Rosu**	**30.09**	**316**	P	**P**	**12 28 02.0**	**+0.1**
MLR	**Muntele Rosu**	**30.09**	**316**	P	**P**	**12 28 02.0**	**+0.1**
MLR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
AKASG	**Malin Array Be**	**31.12**	**327**	P	**P**	**12 28 09.1**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=136,slow=8.8,SNR=5.8						
	comp=Z,0.6nm,0.4s						
AKASG	**Malin Array Be**	**31.12**	**327**	*i* P	**P**	**12 28 10.1**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BURAR	**Bucovina Array**	**31.55**	**319**	P	**P**	**12 28 14.8**	**+0.1**
KIRV	**Kirov**	**31.84**	**354**⇑	*e*P	**P**	**12 28 18.0**	**+1.0**
ZALV	**Zalesovo Beam**	**34.30**	**31**	P	**P**	**12 28 38.1**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=241,slow=9.5,SNR=12						
	comp=Z,1.5nm,0.3s						
ZALV	**Zalesovo Beam**	**34.30**	**31**	P	**P**	**12 28 38.5**	**0.0**
ZALV	**Zalesovo Beam**	**34.30**	**31**	*i* P	**P**	**12 28 38.7**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KLMR	**Klimovskoe**	**35.57**	**346**	*e*P	**P**	**12 28 49.9**	**+0.5**
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
OJC	**Ojcow**	**35.92**	**320**	P	**P**	**12 28 52.9**	**+0.3**
OJC	**Ojcow**	**35.92**	**320**	P	**P**	**12 28 52.9**	**+0.3**
CAMP	**Campotosto**	**37.72**	**305**	P	**P**	**12 29 08.6**	**+0.4**
CAMP				IAmb	IAmb	12 29 11.3	
	comp=Z,5.7nm,1.0s						
NRCA	**Norcia**	**37.98**	**306**	P	**P**	**12 29 10.7**	**+0.3**
NRCA				IAmb	IAmb	12 29 13.8	
	comp=Z,3.8nm,0.9s						
FDMO	**Fiordimonte**	**38.04**	**306**	P	**P**	**12 29 10.7**	**0.0**
FDMO				IAmb	IAmb	12 29 21.9	
	comp=Z,9.3nm,1.4s						
KBA	**Koelnbreinsper**	**38.79**	**312**	*e*P	**P**	**12 29 16.8**	**-0.3**
	comp=Z,0.5nm,0.3s						
GERES	**GERESS Array B**	**39.08**	**315**	P	**P**	**12 29 17.8**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=91,slow=7.2,SNR=7.3						
	comp=Z,0.6nm,0.4s						
ABTA	**Abfaltersbach**	**39.25**	**312**	*e*P	**P**	**12 29 20.6**	**-0.3**
	comp=Z,1.2nm,0.5s						
LESA	**Schwarzleotal**	**39.32**	**313**	*e*P	**P**	**12 29 20.9**	**-0.6**
	comp=Z,1.4nm,0.3s						
BRG	**Berggiesshubel**	**39.61**	**318**	P	**PKiKP**	**12 38 43.0**	**+0.7**
BRG				Amp		12 38 44.3	
	comp=Z,40nm,0.7s						
FINES	**FINESS Array B**	**39.77**	**338**	P	**P**	**12 29 23.7**	**-1.2**
	comp=Z,4.3nm,0.7s,baz=146,slow=10.0,SNR=21						
	comp=Z,4.3nm,0.7s						
FINES	**FINESS Array B**	**39.77**	**338**	P	**P**	**12 29 24.4**	**-0.5**
FINES	**FINESS Array B**	**39.77**	**338**	*i* P	**P**	**12 29 25.0**	**+0.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WTTA	**Wattenberg**	**39.96**	**312**	*i* P	**P**	**12 29 26.3**	**-0.7**
	comp=Z,1.7nm,0.3s						
WATA	**Walderalm**	**40.02**	**312**	*i* P	**P**	**12 29 26.5**	**-0.9**
	comp=Z,2.0nm,0.3s						
SQTA	**Sankt Quirin**	**40.23**	**312**	*i* P	**P**	**12 29 28.3**	**-0.9**
	comp=Z,2.8nm,0.3s						
MOTA	**Moosalm**	**40.33**	**312**	*i* P	**P**	**12 29 28.9**	**-1.1**
	comp=Z,1.9nm,0.2s						
VSL	**Villasalto**	**40.38**	**300**	P	**P**	**12 29 31.7**	**+1.3**
FETA	**Feichten**	**40.50**	**312**	*i* P	**P**	**12 29 30.8**	**-0.6**
	comp=Z,1.6nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**40.73**	**311**	P	**P**	**12 29 33.0**	**-0.4**
FUORN				IAmb	IAmb	12 29 37.7	
	comp=Z,8.7nm,1.3s						
DAVA	**Damuels**	**41.13**	**312**	*i* P	**P**	**12 29 35.7**	**-0.9**
	comp=Z,11nm,0.3s						
SENIN	**Lac Senin/Sane**	**42.69**	**310**	P	**P**	**12 29 48.2**	**-1.2**
HFS	**Hagfors**	**43.74**	**331**	P	**P**	**12 29 57.1**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=126,slow=7.5,SNR=12						
	comp=Z,2.6nm,0.5s						
SONM	**Songino Array**	**44.26**	**48**	P	**P**	**12 30 02.4**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=262,slow=10.0,SNR=2.8						
	comp=Z,0.4nm,0.8s						
NC405	**NORSAR Array S**	**45.07**	**331**	P	**P**	**12 30 07.0**	**-1.2**
NOA	**NORSAR Array B**	**45.25**	**331**	P	**P**	**12 30 08.4**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=119,slow=8.1,SNR=3.5						
	comp=Z,0.9nm,0.7s						
ARCES	**ARCESS Array B**	**46.04**	**346**	P	**P**	**12 30 15.2**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=143,slow=8.5,SNR=4.2						
	comp=Z,2.2nm,0.9s						
CEST	**Esterri de Car**	**46.65**	**304**	P	**P**	**12 30 20.7**	**-0.3**
ESDC	**Sonseca Array**	**50.68**	**300**	P	**P**	**12 30 51.5**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=74,slow=6.6,SNR=8.8						
	comp=Z,0.6nm,0.5s						
EKA	**Eskdalemuir Ar**	**50.69**	**321**	P	**P**	**12 30 50.3**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=97,slow=7.2,SNR=3.5						
	comp=Z,0.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**52.35**	**266**	P	**P**	**12 31 04.3**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=62,slow=7.8,SNR=7.2						
	comp=Z,0.5nm,0.3s						
SPITS	**Spitsbergen Ar**	**54.23**	**351**	P	**P**	**12 31 17.1**	**-0.5**
	comp=Z,5.4nm,0.8s,baz=123,slow=5.3,SNR=2.0						
	comp=Z,5.4nm,0.8s						
TIXI	**Tiksi**	**59.23**	**21**⇑	*e*P	**P**	**12 31 53.7**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KLR	**Kul'dur**	**61.04**	**47**⇑	*e*P	**P**	**12 32 06.2**	**+0.2**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	**Matsushiro Arr**	**68.66**	**59**	P	**P**	**12 32 56.5**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=312,slow=7.3,SNR=2.6						
	comp=Z,1.3nm,0.8s						
ILAR	**Eielson Array**	**86.78**	**10**	P	**P**	**12 34 35.5**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=322,slow=4.5,SNR=5.4						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**90.64**	**116**	P	**P**	**12 34 56.9**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=296,slow=5.3,SNR=3.1						
	comp=Z,0.4nm,0.9s						

*THR **16** 12:24:52.8±0.0,27°.03N×55°.82E,h15km±6km,ML4.4, Presumed earthquake*
*NEIC **16** 12:24:53.2±1.8,27°.15N±0°.07×55°.82E±0°.09,h10km±1km, mb4.6/51,Error ellipse: s-maj=13.9km s-min=12.0km az=97.0*
*DSN **16** 12:24:53.8±0.5,27°.05N×55°.94E,h10km,mb5.4/3, ML4.1/17,Error ellipse: s-maj=11.8km s-min=4.1km az=77.0*
*TEH **16** 12:24:53.0,26°.97N×55°.87E,h15km±23km,ML4.4, Presumed earthquake*
*MOS **16** 12:24:55.7±1.1,27°.27N×55°.80E,h37km,mb4.8/43,Error ellipse: s-maj=6.0km s-min=4.2km az=91.2*
*IDC **16** 12:24:58.3±4.2,27°.14N×55°.80E,h52km±37km,mb4.0/29, mbtmp4.3/33,ML4.3/5,Error ellipse: s-maj=17.8km s-min=10.7km az=171.0*

ISC 16 12:24:53.3±0.3,**27°.09N**±0°.03×**55°.82E**±0°.03,**h14**km,**n306**, σ1§15/306,**mb4.5**/107,**22C-14D**,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.44**	**45**	*e*Pg	**Pg**	**12 25 02.6**	**+0.4**
BNDS				*i* S	**Sb**	**12 25 09.6**	**0.0**
BNDS				IAML		12 25 28.8	
	comp=Z,16μm,1.0s						
GENO	**Geno**	**0.44**	**45**	Pg	**Pg**	**12 25 02.5**	**+0.2**
IBND	**Bandar-abas**	**0.73**	**60**	Pg	**Pg**	**12 25 07.6**	**0.0**
IBND				Sg	**Sn**	**12 25 19.6**	**-0.7**
SHME	**Shamm**	**1.07**	**164**	*e*P	**Pb**	**12 25 13.5**	**-0.2**
	SNR=33						
SHME				S	**Sb**	**12 25 27.5**	**-0.1**
BANOM	**Banah**	**1.24**	**160**	*e*P	**Pn**	**12 25 16.3**	**+0.1**
	SNR=44						
BANOM				S	**Sb**	**12 25 32.5**	**+0.2**
LAR1	**LAR**	**1.41**	**295**	Pg	**Pg**	**12 25 21.1**	**+0.6**
UMQ	**Umm Al-Quwin**	**1.56**	**185**	*e*P	**Pb**	**12 25 22.3**	**+0.3**
	SNR=21						
MSFE	**Esma-Masafi**	**1.75**	**170**	*e*P	**Pb**	**12 25 24.4**	**-0.9**
	SNR=78						
MDH	**Madha**	**1.83**	**166**	*e*P	**Pn**	**12 25 24.6**	**+0.2**
	SNR=30						
KHNJ	**Kahnooj**	**1.88**	**62**	Pn	**Pn**	**12 25 26.0**	**+0.9**
NAZ	**Nazwa, Dubai**	**2.10**	**184**	*e*P	**Pn**	**12 25 29.5**	**+1.5**
	SNR=14						
UOSS	**Minazif**	**2.16**	**171**	Pn	**Pn**	**12 25 30.3**	**+1.4**
UOSS	**Minazif**	**2.16**	**171**	Pn	**Pn**	**12 25 29.2**	**+0.2**
HATD	**Hatta, Dubai**	**2.27**	**173**	*e*P	**Pn**	**12 25 31.3**	**+0.8**
	SNR=33						
KHL1	**Khalili_Fars**	**2.31**	**284**	Pn	**Pb**	**12 25 33.7**	**-1.1**
FAQ	**Al Faqa, Dubai**	**2.34**	**185**	*e*P	**Pn**	**12 25 32.7**	**+1.3**
	SNR=12						
ASHO	**Ashiyiah**	**2.40**	**175**	*e*P	**Pn**	**12 25 33.5**	**+1.2**
	SNR=22						
JHRM	**Jahrom**	**2.44**	**306**	Pn	**Pb**	**12 25 35.5**	**-1.5**
ASUD	**Al Ashush, Dub**	**2.49**	**190**	*e*P	**Pn**	**12 25 35.4**	**+2.0**
	SNR=22						
AJN	**Ajban**	**2.62**	**197**	*e*P	**Pn**	**12 25 36.5**	**+1.3**
	SNR=7.3						
NGRK	**Negar Kerman**	**2.67**	**17**	Pn	**Pn**	**12 25 38.5**	**+2.2**
SOHO	**SOHO**	**3.01**	**167**	*e*P	**Pn**	**12 25 39.4**	**-1.2**
	SNR=14						
ALNE	**Al Ain**	**3.02**	**181**	*e*P	**Pn**	**12 25 41.7**	**+1.0**
	SNR=6.7						
KHGB	**Koh Gabri**	**3.33**	**10**	Pn	**Pn**	**12 25 48.3**	**+3.1**
HOQ	**Hoqain**	**3.74**	**159**	Pn	**Pn**	**12 25 49.5**	**-1.2**
SHI	**Shiraz**	**3.87**	**312**	Pn	**Pn**	**12 25 54.9**	**+2.4**
DSBU	**Dashti - Bushe**	**4.24**	**288**	Pn	**Pn**	**12 26 00.0**	**+2.5**
IMEH	**Mehriz**	**4.42**	**346**	Pn	**Pn**	**12 26 03.2**	**+3.1**
CHBR	**Chabahar**	**4.44**	**109**	Pn	**Pn**	**12 26 00.3**	**+0.3**
CHBR	**Chabahar**	**4.44**	**109**	*e*Pn	**Pn**	**12 26 01.0**	**+0.7**
CHBR				IAML		12 27 32.4	
	comp=Z,170nm,1.0s						
IBAF	**Bafgh**	**4.49**	**357**	Pn	**Pn**	**12 26 03.8**	**+2.7**
TAFT	**Taft - Yazd**	**4.84**	**343**	Pn	**Pn**	**12 26 09.2**	**+3.2**
ZHDN	**Zahedan**	**4.97**	**61**	Pn	**Pn**	**12 26 09.2**	**+1.5**
NGCH	**Negor - Chabah**	**5.08**	**109**	Pn	**Pn**	**12 26 09.2**	**+0.2**
WBK	**Wadi Bani Khal**	**5.30**	**147**	Pn	**Pn**

comp=Z,21nm,0.9s
BNN Bunyan 20.41 310 P P 12 29 30.9 +0.8
BNN lAmb lAmb 12 29 36.7
comp=Z,24nm,0.9s
GOF Gofitskoye 20.65 334 *ce*P P Pn 12 29 34.3 -0.5
VSLR Vesyoloye 20.75 326 *ce*P P 12 29 34.1 +0.5
VSLR pmax pmax
comp=Z,56nm,1.0s
SOC Sochi 21.00 326 *e*P P 12 29 34.4 -1.9
SOC *e* 12 29 51.0
SOC *e*PPP PPP 12 30 04.3
SOC *e*S S 12 33 28.8 -0.9
SOC *e*SS SnSn 12 33 51.6 +0.7
SOC *e*SSS SSS 12 34 03.4
SOC pmax pmax
comp=Z,62nm,1.0s
AAK Ala-Archa 21.73 40 P P 12 29 44.7 +0.3
comp=Z,7.0nm,0.6s,baz=209,slow=5.7,SNR=19
comp=Z,7.0nm,0.6s
AAK Ala-Archa 21.73 40 P P 12 29 45.1 +0.7
AAK Ala-Archa 21.73 40 *ce*P P 12 29 44.6 +0.2
AAK pmax pmax
comp=Z,11nm,1.0s
KIRS Kirsehir-Merke 21.87 309 ⇓P P 12 29 48.0 +2.2
NRN Naryn 21.90 44 P P 12 29 45.5 -0.9
NRN lAmb lAmb 12 29 47.9
comp=Z,33nm,1.0s
NRN Naryn 21.90 44 P P 12 29 45.5 -0.9
NRN pmax pmax
comp=Z,33nm,1.0s
BR131 Keskin Array S 22.33 310 P P 12 29 51.3 +0.5
BR131 lAmb lAmb 12 30 00.5
comp=Z,28nm,1.1s
BR131 Keskin Array S 22.33 310 ⇓ *e*P P 12 29 50.9 +0.1
BRTR Keskin Array B 22.33 310 P P 12 29 51.9 +1.1
comp=Z,12nm,0.9s,baz=128,slow=13,SNR=32
comp=Z,12nm,0.9s
BRTR Keskin Array B 22.33 310 P P 12 29 50.4 -0.4
AB31 Akbulak array 22.36 7 P 12 29 50.2 -0.7
AB31 lAmb lAmb 12 29 54.2
comp=Z,14nm,0.8s
ABKAR Akbulak array 22.36 7 P P 12 29 49.8 -1.1
ILGA Ilgaz 22.92 313 P P 12 29 55.4 -1.7
ILGA lAmb lAmb 12 30 19.0
comp=Z,32nm,1.4s
ANN Anapa 23.02 325 *e*P P 12 29 57.7 -0.1
ANN pmax pmax
comp=Z,61nm,1.4s
TNSS Tian-Shan 23.40 42 *e*P P 12 30 02.6 +0.4
TNSS Tian-Shan 23.40 42 *e*P P 12 30 02.6 +0.4
AAA Alma-Ata 23.48 41 *e*P P 12 30 03.5 +0.8
AAA pmax pmax
comp=Z,32nm,1.2s
AAA Alma-Ata 23.48 41 *e*P P 12 30 03.5 +0.8
comp=Z,32nm,1.2s
MDOK Medeo 23.54 42 *e*P P 12 30 03.9 +0.7
MDOK Medeo 23.54 42 *e*P P 12 30 04.0 +0.7
ELL Elmali 23.95 300 P P 12 30 07.5 +0.2
ELL lAmb lAmb 12 30 16.6
comp=Z,17nm,0.8s
ELL Elmali 23.95 300 P P 12 30 07.5 +0.2
ELL pmax pmax
comp=Z,17nm,0.8s
SATY Saty 24.29 43 *e*P P 12 30 11.0 +0.6
SATY pmax pmax
comp=Z,15nm,1.0s
SATY Saty 24.29 43 *e*P P 12 30 11.1 +0.6
comp=Z,15nm,1.0s
MDUB Mudurnu 24.34 310 P P 12 30 09.5 -1.3
KPKS Kokpek 24.69 43 *e*P P 12 30 14.6 +0.6
KPKS Kokpek 24.69 43 *e*P P 12 30 14.6 +0.6
UZB Uzynbulak 24.72 44 *c i*P P 12 30 15.0 +0.7
UZB pmax pmax
comp=Z,7.0nm,0.6s
UZB Uzynbulak 24.72 44 ⇑ *i*P P 12 30 15.1 +0.7
comp=Z,7.1nm,0.6s
SHLS Shalkode 25.00 44 *c i*P P 12 30 19.9 +3.1
SHLS pmax pmax
comp=Z,10.0nm,0.6s
SHLS Shalkode 25.00 44 ⇑ *i*P P 12 30 19.9 +3.1
comp=Z,10nm,0.6s
TDK Taldyqorghan 25.42 39 *e*P P 12 30 21.3 +0.8
TDK Taldyqorghan 25.42 39 *e*P P 12 30 21.3 +0.8
BELG Belogornoye 26.01 349 ⇓ *e*P P 12 30 25.8 +0.1
BELG pmax pmax
comp=Z,5.0nm,0.8s
BRZS Berezniki 26.27 25 *e*P P 12 30 28.8 +0.7
BRZS Berezniki 26.27 25 *e*P P 12 30 28.9 +0.7
VRH Novokhopyorsk 26.36 340 *e*P P 12 30 28.7 -0.1
VRH pmax pmax
comp=Z,20nm,0.5s
VORD Divnogorie 26.96 337 *e*P P 12 30 33.5 -0.8
VORD pmax pmax
comp=Z,5.0nm,0.4s
VSR Storozhevoye 27.21 337 *e*P P 12 30 35.9 -0.6
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 27.57 337 *e*P P 12 30 38.1 -1.7
VORR pmax pmax
comp=Z,40nm,0.4s
BVAR Borovoye Array 28.09 19 P P 12 30 44.6 +0.2
comp=Z,10nm,0.7s,baz=206,slow=7.3,SNR=43
BVAR PcP PcP 12 33 57.7 -0.9
comp=Z,0.6nm,0.4s,baz=214,slow=2.6,SNR=4.2
comp=Z,10nm,0.7s
LPSR Galich'ya Gora 28.45 338 *e*P P 12 30 36.7 -11
LPSR pmax pmax
comp=Z,20nm,1.3s
MAKZ Makanchi 28.50 39 P P 12 30 46.8 -1.4
MAKZ Makanchi 28.50 39 P P 12 30 46.8 -1.4
MAKZ pmax pmax
comp=Z,7.0nm,1.3s
MK31 Makanchi Array 28.67 40 *ce*P P 12 30 49.7 0.0
MKAR Makanchi Array 28.67 40 P P 12 30 49.9 +0.2
comp=Z,1.1nm,0.4s,baz=225,slow=8.1,SNR=39
comp=Z,1.1nm,0.4s
MKAR Makanchi Array 28.67 40 P P 12 30 48.6 -1.1
KURBB Kurchatov Arra 29.19 30 P P 12 30 54.7 +0.5
comp=Z,2.4nm,0.8s,baz=229,slow=8.6,SNR=21
comp=Z,2.4nm,0.8s
KURK Kurchatov 29.30 30 P P 12 30 54.7 -0.4
SEM Semipalatinsk 29.84 32 *e*P P 12 31 00.7 +0.5
SEM Semipalatinsk 29.84 32 *e*P P 12 31 00.7 +0.5
MLR Muntele Rosu 30.04 316 P P 12 31 03.2 +1.3
MLR lAmb lAmb 12 31 05.6
comp=Z,9.1nm,1.1s
MLR Muntele Rosu 30.04 316 ⇓P P 12 31 05.3 +3.3
MLR Muntele Rosu 30.04 316 P P 12 31 03.3 +1.3
MLR pmax pmax
comp=Z,9.0nm,1.1s
COVR Voineasa-Covas 30.04 316 ⇓P P 12 31 03.5 +1.6
DOPR Dopca 30.60 316 ⇓P P 12 31 07.5 +0.7
WMQ Urumqi 30.62 49 *e*P P 12 31 08.3 +1.2
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ LR LR
comp=Z,330nm,19.3s
AKASG Malin Array Be 31.07 327 P P 12 31 10.4 -0.4
comp=Z,4.5nm,0.6s,baz=136,slow=8.3,SNR=15
comp=Z,4.5nm,0.6s
AKASG Malin Array Be 31.07 327 *i*P P 12 31 10.3 -0.6
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 31.07 327 P P 12 31 09.4 -1.5
AKBB lAmb lAmb 12 31 11.2
comp=Z,11nm,0.8s
AKBB Malin Array Si 31.07 327 ⇑ *e*P P 12 31 10.4 -0.5
KIEV Kiev 31.08 327 P P 12 31 09.7 -1.2
KIEV lAmb lAmb 12 31 11.2
comp=Z,9.4nm,0.8s
KIEV Kiev 31.08 327 P P 12 31 10.4 -0.5
KIEV Kiev 31.08 327 P P 12 31 09.7 -1.2
KIEV pmax pmax
comp=Z,9.0nm,0.9s
OBN Obninsk 31.32 339 *e*P P 12 31 11.3 -1.6
OBN *i* 12 32 17.7
OBN pmax pmax
comp=Z,13nm,1.0s
BURAR Bucovina Array 31.49 319 P P 12 31 14.5 -0.3
BURAR Bucovina Array 31.49 319 ⇓P P 12 31 15.3 +0.6
KIRV Kirov 31.80 354 ⇑ *e*P P 12 31 17.8 +0.7
MARR Marisel-Cluj 32.32 316 ⇓P P 12 31 23.1 +1.0
DRGR 32.63 316 ⇓P P 12 31 25.3 +0.7
BZS Buzias 32.84 313 ⇑P P 12 31 26.9 +0.4
DGZ Jazzator, Alta 33.13 39 ⇑ *e*P P 12 31 29.2 +0.1
DGZ pmax pmax
comp=Z,3.0nm,0.6s
KOLS Kolonicke sedl 33.85 319 *e*P P 12 31 36.7 +1.4
KOLS pmax pmax
comp=Z,33nm,1.0s
ZAA0 Zalesovo Array 34.28 31 P P 12 31 37.5 -1.4
ZALV Zalesovo Beam 34.28 31 P P 12 31 38.6 -0.3
comp=Z,8.1nm,0.5s,baz=240,slow=9.2,SNR=34
comp=Z,8.1nm,0.5s
ZALV Zalesovo Beam 34.28 31 P P 12 31 37.8 -1.2
ZALV Zalesovo Beam 34.28 31 *i*P P 12 31 38.5 -0.4
ZALV pmax pmax
comp=Z,8.0nm,0.5s
PSZ Piszkesteto 34.84 316 P P 12 31 43.4 -0.5
PSZ Piszkesteto 34.84 316 P P 12 31 43.4 -0.5
PSZ pmax pmax
comp=Z,5.0nm,0.9s
CUC Castrocucco 35.45 302 P P 12 31 49.5 +0.2
KLMR Klimovskoe 35.53 346 *e*P P 12 31 48.0 -1.5
KLMR *e* 12 33 06.2
KLMR pmax pmax
comp=Z,35nm,1.3s
LANS Liptovska Anna 35.60 318 *e*P P 12 31 51.6 +1.2
LANS pmax pmax
comp=Z,9.0nm,0.8s
LANS Liptovska Anna 35.60 318 *e*P P 12 31 51.6 +1.2
OJC Ojcow 35.87 320 P P 12 31 52.8 +0.1
OJC Ojcow 35.87 320 P P 12 31 52.8 +0.1
PABE Paberze 36.55 330 P P 12 31 57.4 -1.0
MAUC Maruska 36.67 318 *e*P P 12 32 00.3 +0.7
GCIS Gornji Cirnik 36.88 311 *i*P P 12 32 01.9 +0.6
STEB Steborice 36.93 318 *e*P P 12 32 01.8 +0.1
MORC Moravsky Berou 37.01 318 P P 12 32 01.3 -1.1
MORC lAmb lAmb 12 32 03.3
comp=Z,8.3nm,0.8s
MORC Moravsky Berou 37.01 318 P P 12 32 01.3 -1.1
MORC pmax pmax
comp=Z,8.0nm,0.8s
MORC Moravsky Berou 37.01 318 *e*P P 12 32 02.4 0.0
RONA Rosalia, Austr 37.01 314 *e*P P 12 32 02.4 -0.1
comp=Z,1.5nm,0.4s
INTR Introdacqua 37.21 305 P P 12 32 04.9 +0.6
INTR lAmb lAmb 12 32 06.4
comp=Z,9.8nm,0.9s
CONA Conrad Observa 37.36 315 *e*P P 12 32 05.5 -0.1
comp=Z,2.0nm,0.8s
VRAC Vranov 37.40 317 *e*P P 12 32 05.9 +0.2
KRUC Moravsky 37.43 317 *e*P P 12 32 05.8 -0.2
CAMP Campotosto 37.66 305 P P 12 32 08.8 +0.6
CAMP lAmb lAmb 12 32 11.2
comp=Z,18nm,1.1s
GBAS Gorenja Brezov 37.70 311 *e*P P 12 32 08.8 +0.5
JAVS Javornik 37.94 311 *i*P P 12 32 10.4 -0.1
DPC Dobruska-Polom 37.95 319 *e*P P 12 32 10.6 +0.1
DPC Dobruska-Polom 37.95 319 *e*P P 12 32 10.6 +0.1
TREC Trest 38.07 317 *e*P P 12 32 12.2 +0.8
TREC Trest 38.07 317 *e*P P 12 32 12.2 +0.8
OSTC Ostas 38.10 319 *e*P P 12 32 11.7 +0.1
OSTC Ostas 38.10 319 *e*P P 12 32 11.7 +0.1
CHVC Chvalec 38.20 319 *e*P P 12 32 12.8 +0.3
CHVC Chvalec 38.20 319 *e*P P 12 32 12.8 +0.3
CESX Cesi 38.28 305 P P 12 32 13.1 -0.1
CESX lAmb lAmb 12 32 14.7
comp=Z,10nm,0.9s
MOA Molln 38.36 314 *e*P P 12 32 13.9 0.0
comp=Z,2.4nm,0.5s
GTA2 Gaotai 38.40 60 *e*P P 12 32 15.6 +1.1
GTA2 pP pP 12 32 19.1 +0.2
GTA2 pmax pmax
comp=Z,7.0nm,1.1s
MURB Monte Urbino 38.43 306 P P 12 32 13.6 -1.1
MURB lAmb lAmb 12 32 22.8
comp=Z,13nm,0.9s
CKRC Cesky Krumlov 38.63 315 *e*P P 12 32 16.2 0.0
CKRC Cesky Krumlov 38.63 315 *e*P P 12 32 16.2 0.0
BIOA Bad Ischl, Aus 38.72 314 *i*P P 12 32 16.9 0.0
comp=Z,3.4nm,0.5s
KBA Koelnbreinsper 38.73 312 *e*P P 12 32 17.2 0.0
comp=Z,3.7nm,0.6s,SNR=9.0
ZVC Zvikov 38.91 316 *e*P P 12 32 18.6 +0.1
STAL STALIGIAL 38.94 311 P P 12 32 18.1 -0.8
STAL lAmb lAmb 12 32 19.8
comp=Z,10nm,1.1s
GERES GERESS Array B 39.02 315 P P 12 32 19.2 -0.3
comp=Z,1.5nm,0.6s,baz=99,slow=7.7,SNR=9.7
comp=Z,1.5nm,0.6s
KHC Kasperske Hory 39.19 316 *e*P P 12 32 20.5 -0.4
KHC Kasperske Hory 39.19 316 *e*P P 12 32 20.5 -0.4
ABTA Abfaltersbach 39.20 312 *e*P P 12 32 20.9 -0.1
comp=Z,2.9nm,0.5s
LESA Schwarzleotal 39.27 313 *e*P P 12 32 21.1 -0.4
comp=Z,3.6nm,0.4s,SNR=5.5
KNGR Kungurtug, Tuv 39.35 42 ⇑ *e*P P 12 32 23.1 +0.8
KNGR pmax pmax
comp=Z,3.0nm,0.7s
BRG Berggiesshubel 39.56 318 *i*P P 12 32 23.9 +0.1
BRG Amp 12 32 24.6
comp=Z,7.0nm,0.8s
BRG Berggiesshubel 39.56 318 P P 12 32 29.7 +5.9
BRG Amp 12 32 30.0
comp=Z,5.3nm,0.9s
FINES FINESS Array B 39.72 338 P P 12 32 24.9 -0.2
comp=Z,3.8nm,0.5s,baz=142,slow=10,SNR=29
comp=Z,3.8nm,0.5s
FINES FINESS Array B 39.72 338 P P 12 32 25.0 0.0
ZCCA Zocca 39.73 308 P P 12 32 26.8 +1.3
HSKC Hora Svate Kat 39.77 318 *e*P P 12 32 25.5 -0.1
WTTA Wattenberg 39.91 312 *e*P P 12 32 26.6 -0.4
comp=Z,3.7nm,0.4s,SNR=11
WATA Walderalm 39.97 312 *e*P P 12 32 26.6 -0.9
comp=Z,3.4nm,0.4s,SNR=5.4
SQTA Sankt Quirin 40.18 312 *e*P P 12 32 28.7 -0.5
comp=Z,10nm,0.4s,SNR=20
CLL Collm 40.26 319 *i*P P 12 32 30.2 +0.5
CLL pmax pmax
comp=Z,10.0nm,0.8s
CLL Collm 40.26 319 *i*P P 12 32 30.2 +0.5
comp=Z,10.0nm,0.8s
MOTA Moosalm 40.28 312 *i*P P 12 32 29.1 -1.0
comp=Z,6.6nm,0.6s,SNR=6.9
KEST Kesra 40.28 294 P P 12 32 31.4 +1.3
comp=Z,4.4nm,1.0s,baz=139,slow=9.3,SNR=4.3
comp=Z,4.4nm,1.0s
VSL Villasalto 40.33 300 P P 12 32 31.6 +1.1
VSL lAmb lAmb 12 32 39.5
comp=Z,13nm,0.9s
FETA Feichten 40.45 312 *e*P P 12 32 31.2 -0.4
comp=Z,2.5nm,0.4s,SNR=24
CMAR Chiang Mai Arr 40.52 93 P P 12 32 33.2 +1.0
comp=Z,0.4nm,0.3s,baz=277,slow=9.2,SNR=4.5
comp=Z,0.4nm,0.3s
RETA Reute 40.54 312 *e*P P 12 32 31.0 -1.1
comp=Z,3.1nm,0.5s
FUORN Ofenpass-Fuorn 40.67 311 P P 12 32 33.8 +0.3
DAVA Damuels 41.08 312 *e*P P 12 32 36.2 -0.5
comp=Z,23nm,0.4s,SNR=12
TUE Stuetta 41.26 311 P P 12 32 37.5 -0.7
TUE lAmb lAmb 12 32 45.7
comp=Z,8.2nm,0.7s
LZDM Lanzhou Array 41.41 65 P P 12 32 39.6 -0.2
comp=Z,0.9nm,0.4s,baz=272,slow=8.5,SNR=7.0
comp=Z,0.9nm,0.4s
LZH Lanzhou 41.53 65 *e*P P 12 32 41.6 +1.0
LZH pmax pmax
comp=Z,14nm,1.2s
SENIN Lac Senin/Sane 42.63 310 P P 12 32 48.9 -0.6
SENIN lAmb lAmb 12 33 25.0
comp=Z,16nm,1.5s
BNI Bardonecchia 42.87 308 P P 12 32 50.8 -0.5
BNI lAmb lAmb 12 33 03.5
comp=Z,20nm,1.3s
BNI Bardonecchia 42.87 308 P P 12 32 50.8 -0.5
BNI pmax pmax
comp=Z,20nm,1.3s
HFS Hagfors 43.69 331 P P 12 32 57.4 -0.2
comp=Z,3.7nm,0.5s,baz=132,slow=8.4,SNR=17
comp=Z,3.7nm,0.5s
SONM Songino Array 44.26 48 P P 12 33 02.9 +0.4
comp=Z,1.3nm,0.7s,baz=257,slow=9.0,SNR=7.7
comp=Z,1.3nm,0.7s
ULN Ulaanbaatar 44.70 48 P P 12 33 07.0 +1.0
ULN Ulaanbaatar 44.70 48 ⇑ *e*P P 12 33 06.2 +0.1
ULN pmax pmax
comp=Z,9.0nm,2.5s
NC405 NORSAR Array S 45.02 331 P P 12 33 08.1 -0.2
NB2 NORSAR Subarra 45.20 331 P P 12 33 08.7 -1.0
comp=Z,0.8nm,0.6s,baz=118,slow=8.6
NOA NORSAR Array B 45.20 331 P P 12 33 09.0 -0.7
comp=Z,3.4nm,0.8s,baz=118,slow=7.9,SNR=8.6
comp=Z,3.4nm,0.8s
NOA NORSAR Array B 45.20 331 P P 12 33 09.0 -0.7
ARCES ARCESS Array B 46.00 346 P P 12 33 15.8 0.0
comp=Z,2.8nm,0.8s,baz=156,slow=9.1,SNR=8.3
comp=Z,2.8nm,0.8s
ARCES ARCESS Array B 46.00 346 P P 12 33 16.5 +0.7
ARCES ARCESS Array B 46.00 346 P P 12 33 16.5 +0.7
ARCES pmax pmax
comp=Z,30nm,1.5s
HHC Hu-ho-hao-te 47.48 58 *e*P P 12 33 29.1 +1.1
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,270nm,6.6s
HHC LR LR
comp=N,700nm,20.8s
HHC LR LR
comp=E,880nm,17.1s
HHC LR LR
comp=Z,900nm,17.1s
ESDC Sonseca Array 50.63 300 P P 12 33 52.0 -0.1
comp=Z,2.0nm,0.8s,baz=66,slow=7.3,SNR=13
comp=Z,2.0nm,0.8s
EKA Eskdalemuir Ar 50.64 321 P P 12 33 51.2 -0.6
comp=Z,0.5nm,0.3s,baz=101,slow=7.4,SNR=4.6
comp=Z,0.5nm,0.3s
PAB San Pablo 50.94 300 P P 12 33 53.8 -0.7
PAB lAmb lAmb 12 34 01.1
comp=Z,7.1nm,0.8s
PAB San Pablo 50.94 300 P P 12 33 53.8 -0.7
PAB pmax pmax
comp=Z,7.0nm,0.8s
MD01 Midelt array s 52.18 292 P P 12 34 04.3 +0.4
MD31 MD31 52.18 292 P P 12 34 04.7 +0.8
MD31 lAmb lAmb 12 34 11.8
comp=Z,4.7nm,0.8s
TORD Torodi Ar. Bea 52.32 266 P P 12 34 04.4 -0.6
comp=Z,2.0nm,0.7s,baz=72,slow=2.6,SNR=13
comp=Z,2.0nm,0.7s
MVO Moncorvo 52.83 303 *e*P P 12 34 14.2 +5.7
MVO *i* lAmb lAmb 12 34 16.1
comp=Z,52nm,1.7s
PBAR Barrancos 53.18 299 *e*P P 12 34 10.8 -0.2
PBAR *ep*P P 12 34 16.3 +5.2
PBAR *i* lAmb lAmb 12 34 33.3
comp=Z,23nm,1.9s
HILR Hailar Array B 53.21 47 P P 12 34 10.9 -0.3
comp=Z,0.9nm,0.4s,baz=268,slow=7.9,SNR=2.6
comp=Z,0.9nm,0.4s
PMRV Marv??o 53.29 300 *ep*P P 12 34 16.8 +4.9
PCBR Castelo Branco 53.31 301 *ep*P P 12 34 17.8 +5.8
POLO Lamas de Olo 53.38 303 *ep*P P 12 34 17.5 +4.8
POLO *i* lAmb lAmb 12 34 18.3
comp=Z,40nm,1.6s
PVIS Viseu 53.53 302 *e*P P 12 34 14.4 +0.8
PVIS *ep*P P 12 34 20.6 +6.9
PSARD Sardoal 53.86 301 *e*P P 12 34 16.4 +0.3
PSARD *ep*P P 12 34 20.8 +4.7
PSARD *i* lAmb lAmb 12 34 27.1
comp=Z,36nm,2.1s
EVO Evora 53.89 299 *e*P P 12 34 16.6 +0.4
EVO *ep*P P 12 34 21.9 +5.6
EVO *i* lAmb lAmb 12 34 25.7
comp=Z,27nm,2.2s
PCAS Casmilo, Conde 54.06 301 *ep*P P 12 34 22.4 +4.9
PCAS *i* lAmb lAmb 12 34 24.0
comp=Z,57nm,1.6s
SPITS Spitsbergen Ar 54.19 351 P P 12 34 17.9 +0.1
comp=Z,6.8nm,1.0s,baz=127,slow=9.6,SNR=9.4
comp=Z,6.8nm,1.0s
SPITS Spitsbergen Ar 54.19 351 P P 12 34 18.0 +0.1
NJ2 Nanjing 54.37 69 *e*P P 12 34 20.4 +0.5
NJ2 pmax pmax
comp=Z,13nm,1.1s
PFVI Vila Bisbo 54.74 298 *e*P P 12 34 19.7 -2.8
PFVI *ep*P P 12 34 28.1 +5.7
PFVI *i* lAmb lAmb 12 34 28.4
comp=Z,43nm,1.0s
HEH HeiHe 58.13 46 *e*P P 12 34 45.9 -0.5
HEH pmax pmax
comp=Z,6.0nm,0.7s
BNX BinXian 58.63 51 ⇓P P 12 34 49.8 -0.2
BNX pmax pmax
comp=Z,9.0nm,0.7s
YAK Yakutsk 58.92 32 ⇑ *e*P P 12 34 50.3 -1.4
YAK pmax pmax
comp=Z,6.0nm,0.7s
TIXI Tiksi 59.21 21 P P 12 34 53.6 0.0
TIXI lAmb lAmb 12 34 55.0
comp=Z,9.1nm,1.4s
TIXI Tiksi 59.21 21 ⇑ *e*P P 12 34 53.0 -0.5
TIXI pmax pmax
comp=Z,14nm,2.5s
KSRS Korea Array 60.51 60 P P 12 35 02.5 -0.6
comp=Z,3.0nm,0.6s,baz=277,slow=7.3,SNR=11
comp=Z,3.0nm,0.6s
DBIC Dimbokro 60.92 262 P P 12 35 05.2 -1.0
comp=Z,1.2nm,0.4s,baz=78,slow=9.2,SNR=4.1
comp=Z,1.2nm,0.4s
KLR Kul'dur 61.05 47 *de*P P 12 35 06.3 -0.3
KLR pmax pmax
comp=Z,6.0nm,0.9s
USRK Ussuriysk Ar. 62.10 52 P P 12 35 12.9 -0.8
comp=Z,1.7nm,0.6s,baz=305,slow=10,SNR=2.9
comp=Z,1.7nm,0.6s
BOSA Boshof 62.67 210 P P 12 35 19.2 +1.5
comp=Z,1.9nm,0.7s,baz=30,slow=5.5,SNR=6.4
comp=Z,1.9nm,0.7s
SUMG Summit 65.68 341 P P 12 35 37.8 +0.5
SUMG Summit 65.68 341 P P 12 35 37.8 +0.5
SUMG pmax pmax
comp=Z,27nm,1.5s
YSS Yuzhno-Sakhali 68.74 47 *de*P P 12 35 56.1 -0.6
YSS pmax pmax
comp=Z,33nm,2.5s
SEY Seymchan 69.14 29 ⇑ *e*P P 12 35 58.9 0.0
SEY pmax pmax
comp=Z,7.0nm,1.7s
BILL Bilibino 72.39 22 ⇓ *e*P P 12 36 19.0 +0.4
BILL pmax pmax
comp=Z,3.0nm,0.9s
A36M Sachs Harbour 81.19 0 P P 12 37 08.1 -0.1
E22K Anaktuvuk Pass 82.87 10 P P 12 37 17.1 0.0
E22K lAmb lAmb 12 37 28.4
comp=Z,7.1nm,1.4s
COLD Coldfoot 83.95 10 P P 12 37 23.3 +0.6
BMAR Burnt Mountain 84.53 8 P P 12 37 26.3 +0.7
H21K Melozitna Rive 84.96 11 P P 12 37 28.4 +0.6
H21K lAmb lAmb 12 37 29.2
comp=Z,5.7nm,1.0s
H22K Ishtalitna Cre 84.99 11 P P 12 37 28.1 +0.2
F31M Tsiigehtchic 85.49 4 P P 12 37 30.3 -0.1
I23K Minto, Yukon-K 86.01 10 P P 12 37 33.2 +0.2
I23K lAmb lAmb 12 37 39.3
comp=Z,4.3nm,0.9s
COLA College 86.51 10 ⇓ *e*P P 12 37 35.6 +0.2
COLA pmax pmax
comp=Z,2.0nm,0.9s
I26K Coal Creek Min 86.74 8 P P 12 37 36.7 0.0
I26K lAmb lAmb 12 37 37.7
comp=Z,4.2nm,0.8s
ILAR Eielson Array 86.75 10 P P 12 37 36.0 -0.7
comp=Z,1.8nm,0.7s,baz=319,slow=4.3,SNR=27
comp=Z,1.8nm,0.7s
ILAR Eielson Array 86.75 10 P P 12 37 36.0 -0.7
WRA Warramunga Arr 89.23 113 P P 12 37 49.5 +0.2
comp=Z,0.9nm,0.9s,baz=314,slow=4.0,SNR=8.6
comp=Z,0.9nm,0.9s
WRA Warramunga Arr 89.23 113 *i*P P 12 37 52.4 +3.1
WRA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 90.40 356 P P 12 37 53.4 -0.6
comp=Z,0.7nm,0.9s,baz=359,slow=5.5,SNR=9.6
comp=Z,0.7nm,0.9s
ASAR Alice Springs 90.69 116 P P 12 37 55.3 -0.7
comp=Z,0.4nm,0.8s,baz=297,slow=5.2,SNR=6.5
comp=Z,0.4nm,0.8s
TXAR Lajitas Array 120.56 339 PKP PKPdf 12 43 44.6 -0.6
comp=Z,0.2nm,0.7s,baz=117,slow=0.5,SNR=2.7

BJI **16** *12:30:43.7, 27°27'N × 55°33'E, h19km, mB5.6/45, mb5.5/87,*

Ms5.2/80,Ms7 5.0/79
MOS ***16*** *12:30:45.0±0.8,27.°12N×55.°80E,h8km,mb5.9/81, MS4.9/35,Error ellipse: s-maj=4.4km s-min=3.0km az=105.2*
THR ***16*** *12:30:46.8±0.0,27.°00N×55.°91E,h15km±6km,ML5.7, Presumed earthquake*
TEH ***16*** *12:30:46.8,26.°98N×55.°85E,h17km±16km,ML5.8, Presumed earthquake*
DSN ***16*** *12:30:46.6±2.4,27.°09N×55.°85E,h7km±11km,ML5.2/20, Error ellipse: s-maj=17.0km s-min=7.1km az=37.0*
NEIC ***16*** *12:30:47.4,27.°10N×55.°77E,h20km*
NEIC ***16*** *12:30:47.1±1.7,27.°13N±0.°06×55.°77E±0.°07,h9km±3km, mb5.8/154,Ms_20 5.2/86,Mww5.1/11,Error ellipse: s-maj=9.6km s-min=8.5km az=91.0*
NEIC ***16*** *12:30:47.4,26.°90N×55.°55E,h20km,Moment Tensor Solution. Duration: 1ŝ7 Moment tensor: Scale 10¹⁶Nm; Mrr3.95; Mθθ-3.36; Mϕϕ-0.60; Mrθ4.73; Mrϕ-1.22; Mθϕ-0.92; Fault plane solution: M₀6.19000×10¹⁶ NP1: ϕs234.35000°,δ23.24000°,λ54.45000°. NP2:ϕs92.22000°, δ71.28000°,λ104.02000°. Principal axes: T 6.5355, Plg61.0000°, Azm23.0000°; N -0.7610, Plg13.0000°, Azm268.0000°; P -5.7745, Plg25.0000°, Azm171.0000°;*
GFZ ***16*** *12:30:47.5,27.°12N×55.°81E,h18km,MW5.2,Moment Tensor Solution. s114 Moment tensor: Mrr7.01; Mθθ-4.90; Mϕϕ-2.11; Mrθ4.63; Mrϕ2.71; Mθϕ0.20; Fault plane solution: NP1:ϕs105.00000°,δ62.00000°, λ75.00000°. NP2:ϕs314.00000°,δ32.00000°,λ116.00000°. Principal axes: T 8.7000, Plg69.0000°, Azm343.0000°; N -1.0800, Plg13.0000°, Azm112.0000°; P -7.6300, Plg16.0000°, Azm206.0000°;*
OMAN ***16*** *12:30:48.2±0.0,26.°94N×55.°86E,h10km,mb5.3/19, ml5.3/26,ms5.4/4,Mwp5.4/20 Error ellipse: s-maj=0.5km s-min=0.4km az=248.0*
IDC ***16*** *12:30:48.4±1.5,27.°05N×55.°82E,h22km±8km,mb5.5/40, mbtmp5.6/44,ML5.7/4,MS4.8/71,Error ellipse: s-maj=12.4km s-min=8.8km az=1.0*
GCMT ***16*** *12:30:49.1±0.2,26.°75N±0.°01×55.°70E±0.°01,h27km, MW5.3/130,Moment Tensor Solution. s100,c140; s130,c212; Duration: 1ŝ1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.59±.02; Mθθ-0.71±.01; Mϕϕ0.11±.01; Mrθ0.78±.03; Mθϕ-0.19±.01; Mrϕ0.06±.03; Best double couple: M₀1.03200×10¹⁷ NP1:ϕs247.00000°,δ21.00000°, λ74.00000°. NP2:ϕs85.00000°,δ70.00000°,λ96.00000°. Principal axes: T 0.9580, Plg65.0000°, Azm5.0000°; N 0.1500, Plg6.0000°, Azm263.0000°; P -1.1060, Plg25.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***16*** *12:31:03.7,27.°27N×53.°34E,h33km,mb5.5,Ms4.7*

ISC 16 12:30:47.4±0.3,27.°07N±0.°02×55.°80E±0.°02,h16km±1km, h16km:pP-P,n1456,σ1ŝ25/1630,mb5.7/353,MS5.0/157, 74C-85D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.47**	**45**	*e*Pg		**Pg**	**12 30 56.5**	**-0.4**
BNDS				*e*Sg		**Sg**	**12 31 03.6**	**+0.4**
BNDS				IAML			12 31 07.3	
	comp=Z,400μm,1.0s							
GENO	**Geno**	**0.47**	**45**	Pg		**Pg**	**12 30 56.7**	**-0.2**
IBND	**Bandar-abas**	**0.76**	**60**	Pg		**Pg**	**12 31 02.1**	**-0.2**
IBND				Sg		**Sb**	**12 31 13.2**	**+0.7**
SHME	**Shamm**	**1.06**	**163**	*e*P		**Pb**	**12 31 07.3**	**-0.2**
	SNR=591							
SHME				S		**Sn**	**12 31 22.2**	**+0.1**
SHME	**Shamm**	**1.06**	**163**	P		**Pb**	**12 31 07.2**	**-0.2**
	SNR=1049							
SHME				P		**Pb**	**12 31 07.2**	**-0.2**
	SNR=1049							
SHME				S		**Sn**	**12 31 22.1**	**-0.1**
SHME				S		**Sn**	**12 31 22.1**	**-0.1**
BANOM	**Banah**	**1.23**	**158**	*e*P		**Pn**	**12 31 10.0**	**0.0**
	SNR=1402							
BANOM				S		**Sg**	**12 31 27.0**	**-0.2**
BANOM	**Banah**	**1.23**	**158**	P		**Pb**	**12 31 10.2**	**-0.1**
BANOM				P		**Pb**	**12 31 10.2**	**-0.1**
BANOM				S		**Sb**	**12 31 24.1**	**-1.9**
BANOM				S		**Sb**	**12 31 24.1**	**-1.9**
LAR1	**LAR**	**1.40**	**296**	Pg		**Pg**	**12 31 14.7**	**+0.3**
UMQ	**Umm Al-Quwin**	**1.54**	**185**	*e*P		**Pb**	**12 31 16.3**	**+0.6**
	SNR=32							
UMQ	**Umm Al-Quwin**	**1.54**	**185**	P		**Pg**	**12 31 17.1**	**-0.1**
	SNR=32							
UMQ				P		**Pg**	**12 31 17.1**	**-0.1**
	SNR=32							
UMQ				S		**Sn**	**12 31 32.4**	**-1.7**
UMQ				S		**Sn**	**12 31 32.4**	**-1.7**
MASF	**Masafi**	**1.72**	**169**	P		**Pb**	**12 31 18.3**	**-0.5**
	SNR=193							
MASF				P		**Pb**	**12 31 18.3**	**-0.5**
	SNR=193							
MASF				S		**Sn**	**12 31 36.5**	**-2.1**
MASF				S		**Sn**	**12 31 36.5**	**-2.1**
MSFE	**Esma-Masafi**	**1.74**	**169**	*e*P		**Pn**	**12 31 17.8**	**+0.8**
	SNR=193							
MDH	**Madha**	**1.82**	**166**	*e*P		**Pn**	**12 31 18.5**	**+0.3**
	SNR=851							
MDH	**Madha**	**1.82**	**166**	P		**Pn**	**12 31 19.0**	**+0.8**
	SNR=63							
MDH				P		**Pn**	**12 31 19.0**	**+0.8**
	SNR=63							
MDH				S		**Sn**	**12 31 40.6**	**-0.3**
MDH				S		**Sn**	**12 31 40.6**	**-0.3**
KHNJ	**Kahnooj**	**1.91**	**62**	Pn		**Pn**	**12 31 19.7**	**+0.3**
NAZ	**Nazwa, Dubai**	**2.08**	**183**	*e*P		**Pb**	**12 31 23.4**	**-1.4**
	SNR=163							
NAZ	**Nazwa, Dubai**	**2.08**	**183**	P		**Pb**	**12 31 23.8**	**-1.0**
	SNR=12							
NAZ				P		**Pb**	**12 31 23.8**	**-1.0**
	SNR=12							
NAZ				S		**Sn**	**12 31 47.1**	**-0.2**
NAZ				S		**Sn**	**12 31 47.1**	**-0.2**
UOSS	**Minazif**	**2.15**	**170**			**Pn**	**12 31 22.9**	**+0.3**
UOSS	**Minazif**	**2.15**	**170**	P		**Pn**	**12 31 23.2**	**+0.5**
UOSS				S		**Sn**	**12 31 49.2**	**+0.2**
UOSS	**Minazif**	**2.15**	**170**	Pn		**Pn**	**12 31 22.7**	**+0.1**
HATD	**Hatta, Dubai**	**2.26**	**172**	*e*P		**Pn**	**12 31 25.0**	**+0.9**
	SNR=270							
HATD	**Hatta, Dubai**	**2.26**	**172**	P		**Pn**	**12 31 25.3**	**+1.2**
	SNR=500							
HATD				P		**Pn**	**12 31 25.3**	**+1.2**
	SNR=500							
HATD				S		**Sn**	**12 31 49.8**	**-1.9**
HATD				S		**Sn**	**12 31 49.8**	**-1.9**
KHL1	**Khalili_Fars**	**2.29**	**285**	Pn		**Pb**	**12 31 26.6**	**-1.9**
FAQ	**Al Faqa, Dubai**	**2.32**	**185**	*e*P		**Pn**	**12 31 26.7**	**+1.6**
	SNR=82							
FAQ	**Al Faqa, Dubai**	**2.32**	**185**	P		**Pn**	**12 31 26.9**	**+1.9**
	SNR=82							
FAQ				S		**Sn**	**12 31 54.1**	**+0.8**
LMD1	**Lamerd**	**2.36**	**277**	Pn		**Pn**	**12 31 27.6**	**+2.0**
LMD1	**Lamerd**	**2.36**	**277**	*e*Pn		**Pb**	**12 31 28.6**	**-1.0**
LMD1				IAML			12 32 34.2	
	comp=Z,45μm,1.0s							
ASHO	**Ashiyiah**	**2.39**	**174**	*e*P		**Pn**	**12 31 27.2**	**+1.2**
	SNR=276							
ASHO	**Ashiyiah**	**2.39**	**174**	P		**Pn**	**12 31 26.9**	**+0.9**
	SNR=184							
ASHO				S		**Sn**	**12 31 57.0**	**+2.0**
JHRM	**Jahrom**	**2.43**	**306**	Pn		**Pb**	**12 31 29.3**	**-1.6**
ASUD	**Al Ashush, Dub**	**2.47**	**190**	*e*P		**Pn**	**12 31 28.9**	**+1.8**
	SNR=66							
ASUD	**Al Ashush, Dub**	**2.47**	**190**	P		**Pb**	**12 31 29.5**	**-2.0**
	SNR=66							
ASUD				P		**Pb**	**12 31 29.5**	**-2.0**
	SNR=66							
ASUD				S		**Sn**	**12 31 58.7**	**+1.8**
ASUD				S		**Sn**	**12 31 58.7**	**+1.8**
AJN	**Ajban**	**2.60**	**196**	*e*P		**Pn**	**12 31 30.6**	**+1.7**
	SNR=78							
AJN	**Ajban**	**2.60**	**196**	P		**Pn**	**12 31 30.9**	**+2.0**
	SNR=54							
AJN				P		**Pn**	**12 31 30.9**	**+2.0**
	SNR=54							
AJN				S		**Sn**	**12 32 02.5**	**+2.3**
AJN				S		**Sn**	**12 32 02.5**	**+2.3**
NGRK	**Negar Kerman**	**2.69**	**18**	Pn		**Pn**	**12 31 32.4**	**+2.0**
SOHO	**SOHO**	**3.00**	**167**	*i* P		**Pn**	**12 31 33.1**	**-1.2**
	SNR=34							
SOHO	**SOHO**	**3.00**	**167**	P		**Pn**	**12 31 33.9**	**-0.4**
SOHO				P		**Pn**	**12 31 33.9**	**-0.4**
SOHO				S		**Sn**	**12 32 07.3**	**-2.6**
SOHO				S		**Sn**	**12 32 07.3**	**-2.6**
ALNE	**Al Ain**	**3.00**	**181**	*i* P		**Pn**	**12 31 35.2**	**+0.8**
	SNR=68							
ALNE	**Al Ain**	**3.00**	**181**	P		**Pn**	**12 31 33.6**	**-0.8**
	SNR=32							
ALNE				S		**Sn**	**12 32 11.5**	**+1.4**
KHGB	**Koh Gabri**	**3.34**	**10**	Pn		**Pn**	**12 31 41.8**	**+2.5**
JRN	**Qarnain Island**	**3.40**	**232**	P		**Pn**	**12 31 41.4**	**+1.6**
	SNR=23							
JRN				S		**Sn**	**12 32 22.1**	**+2.4**
MZWR	**Madinat Zayed**	**3.73**	**208**	P		**Pn**	**12 31 45.7**	**+1.4**
MZWR				S		**Sn**	**12 32 29.3**	**+1.5**
HOQ	**Hoqain**	**3.73**	**158**	P		**Pn**	**12 31 43.3**	**-1.2**
	SNR=36							
HOQ				P		**Pn**	**12 31 43.3**	**-1.2**
	SNR=36							
HOQ				S		**Sn**	**12 32 28.2**	**+0.1**
HOQ				S		**Sn**	**12 32 28.2**	**+0.1**
HOQ	**Hoqain**	**3.73**	**158**	Pn		**Pn**	**12 31 43.4**	**-1.2**
SHI	**Shiraz**	**3.87**	**312**	Pn		**Pn**	**12 31 48.6**	**+2.2**
GHWR	**Ruwais**	**4.07**	**221**	P		**Pn**	**12 31 49.6**	**+0.6**
GHWR				P		**Pn**	**12 31 49.6**	**+0.6**
GHWR				S		**Sn**	**12 32 36.9**	**+0.6**
GHWR				S		**Sn**	**12 32 36.9**	**+0.6**
BIDO	**Bidbid**	**4.12**	**149**	P		**Pn**	**12 31 49.2**	**-0.5**
	SNR=43							
BIDO				S		**Sn**	**12 32 37.2**	**-0.4**
UMZA	**Um Al Zommool**	**4.38**	**188**	P		**Pn**	**12 31 54.0**	**+0.7**
UMZA				P		**Pn**	**12 31 54.0**	**+0.7**
IMEH	**Mehriz**	**4.43**	**347**	Pn		**Pn**	**12 31 56.7**	**+2.5**
CHBR	**Chabahar**	**4.45**	**108**	Pn		**Pn**	**12 31 54.6**	**+0.2**
CHBR	**Chabahar**	**4.45**	**108**	*e*Pn		**Pn**	**12 31 54.3**	**0.0**
CHBR				IAML			12 33 55.3	
	comp=Z,2μm,1.0s							
SMDO	**Samad**	**4.49**	**152**	P		**Pn**	**12 31 55.2**	**+0.3**
	SNR=74							
SMDO				P		**Pn**	**12 31 55.2**	**+0.3**
	SNR=74							
SMDO				S		**Sn**	**12 32 46.3**	**-0.5**
SMDO				S		**Sn**	**12 32 46.3**	**-0.5**
SMDO				S		**Sn**	**12 32 46.5**	**-0.4**
SMDO				S		**Sn**	**12 32 46.5**	**-0.4**
BSY	**Bisya**	**4.49**	**163**	P		**Pn**	**12 31 56.0**	**+1.1**
	SNR=65							
BSY				P		**Pn**	**12 31 56.0**	**+1.1**
	SNR=65							
BSY				S		**Sn**	**12 32 47.6**	**+0.7**
BSY				S		**Sn**	**12 32 47.6**	**+0.7**
SHMA	**Al-Shehemyia**	**4.50**	**255**	P		**Pn**	**12 31 56.9**	**+1.9**
	SNR=91							
SHMA				S		**Sn**	**12 32 48.5**	**+1.5**
SHMA				S		**Sn**	**12 32 48.9**	**+2.0**
	SNR=9.4							
IBAF	**Bafgh**	**4.51**	**357**	Pn		**Pn**	**12 31 57.3**	**+2.1**
MZR	**Muzera**	**4.56**	**208**	*i* P		**Pn**	**12 31 56.4**	**+0.6**
	SNR=8.4							
MZR	**Muzera**	**4.56**	**208**	P		**Pn**	**12 31 56.5**	**+0.6**
	SNR=45							
MZR				P		**Pn**	**12 31 56.5**	**+0.6**
	SNR=45							
MZR				S		**Sn**	**12 32 48.6**	**-0.1**
MZR				S		**Sn**	**12 32 48.6**	**-0.1**
WSAR	**Wadi Sarin**	**4.60**	**145**	LR		LR	12 34 29.4	
	comp=Z,60nm,21.5s,baz=340,slow=48							
WSAR	**Wadi Sarin**	**4.60**	**145**	P		**Pn**	**12 31 56.3**	**0.0**
WSAR				S		**Sn**	**12 32 47.3**	**-2.2**
TRNA	**Turayna**	**4.74**	**242**	P		**Pn**	**12 31 59.8**	**+1.5**
	SNR=61							
TRNA				S		**Sn**	**12 32 53.3**	**+0.3**
	SNR=7.1							
SLWR	**Sila**	**4.76**	**232**	P		**Pn**	**12 31 59.4**	**+0.8**
SAKB	**Bahrain**	**4.84**	**258**	P		**Pn**	**12 32 01.9**	**+2.3**
SAKB				S		**Sn**	**12 32 56.2**	**+0.9**
TAFT	**Taft - Yazd**	**4.85**	**343**	Pn		**Pn**	**12 32 02.6**	**+2.6**
ZHDN	**Zahedan**	**4.99**	**61**	Pn		**Pn**	**12 32 03.3**	**+1.4**
SHBH2	**SHBH2**	**5.03**	**235**	P		**Pn**	**12 32 02.8**	**+0.6**
SHBH2				S		**Sn**	**12 32 59.7**	**-0.3**
SMRA	**Abu-Samra**	**5.04**	**244**	P		**Pn**	**12 32 04.4**	**+2.0**
	SNR=132							
SMRA				S		**Sn**	**12 33 01.0**	**+0.6**
	SNR=8.5							
NGCH	**Negor - Chabah**	**5.09**	**108**	P		**Pn**	**12 32 04.0**	**+0.9**
	SNR=34							
NGCH				S		**Sn**	**12 33 00.7**	**-0.9**
NGCH	**Negor - Chabah**	**5.09**	**108**	Pn		**Pn**	**12 32 03.1**	**0.0**
JMDO	**Jabal Madar**	**5.13**	**155**	P		**Pn**	**12 32 04.1**	**+0.4**
	SNR=127							
JMDO				P		**Pn**	**12 32 04.1**	**+0.4**
	SNR=127							
JMDO				S		**Sn**	**12 33 00.8**	**-1.8**
JMDO				S		**Sn**	**12 33 00.8**	**-1.8**
SLWS		**5.16**	**245**	P		**Pn**	**12 32 05.5**	**+1.4**
SHBH1	**SHBH1**	**5.21**	**228**	S		**Sn**	**12 33 03.2**	**-1.2**
SHBH1				P		**Pn**	**12 32 04.2**	**-0.4**
WBK	**Wadi Bani Khal**	**5.29**	**146**	P		**Pn**	**12 32 05.4**	**-0.5**
	SNR=196							
WBK				P		**Pn**	**12 32 05.4**	**-0.5**
	SNR=196							
WBK				S		**Sn**	**12 33 02.8**	**-3.9**
WBK				S		**Sn**	**12 33 02.8**	**-3.9**
WBK	**Wadi Bani Khal**	**5.29**	**146**	Pn		**Pn**	**12 32 05.5**	**-0.5**
KLNJ	**Kolanjah**	**5.38**	**318**	*e*Pn		**Pn**	**12 32 08.9**	**+1.5**
KLNJ				IAML			12 33 50.3	
	comp=Z,4μm,1.0s							
BTHS		**5.39**	**237**	P		**Pn**	**12 32 07.7**	**+0.4**
YZKH	**Yazd**	**5.40**	**349**	*e*Pn		**Pn**	**12 32 09.9**	**+2.4**
YZKH				IAML			12 33 15.3	
	comp=Z,3μm,1.0s							
HOFOF	**Al Hofuf**	**5.55**	**254**	P		**Pn**	**12 32 10.9**	**+1.5**
IRAM	**Rameseh**	**5.58**	**329**	Pn		**Pn**	**12 32 12.7**	**+2.7**
BSRN	**Basiran**	**5.67**	**30**	*e*Pn		**Pn**	**12 32 12.3**	**+1.1**
BSRN				IAML			12 34 12.0	
	comp=Z,2μm,1.0s							
SHOFU	**Shofu**	**5.80**	**250**	P		**Pn**	**12 32 14.0**	**+1.1**
SRVN	**Saravan**	**5.88**	**85**	Pn		**Pn**	**12 32 14.8**	**+0.7**
SRVN	**Saravan**	**5.88**	**85**	*e*Pn		**Pn**	**12 32 15.3**	**+1.1**
SRVN				IAML			12 34 37.8	
	comp=Z,630nm,1.0s							
JLN	**Jalan Bani Buh**	**5.90**	**145**	P		**Pn**	**12 32 13.3**	**-0.9**
	SNR=16							
JLN				S		**Sn**	**12 33 18.4**	**-3.2**
NHFOF	**Ain Dar Gosp**	**6.04**	**257**	P		**Pn**	**12 32 17.6**	**+1.4**
ARIRA	**AirJ**	**6.24**	**264**	P		**Pn**	**12 32 20.8**	**+1.9**
NASN	**Na'in**	**6.27**	**336**	*e*Pn		**Pn**	**12 32 21.3**	**+1.7**
NASN				IAML			12 33 35.5	
	comp=Z,1μm,1.0s							
MHTO	**MHTO**	**6.37**	**161**	P		**Pn**	**12 32 20.5**	**-0.3**
MHTO				P		**Pn**	**12 32 20.5**	**-0.3**
MHTO				S		**Sn**	**12 33 31.4**	**-1.9**
MHTO				S		**Sn**	**12 33 31.4**	**-1.9**
WANAN	**Al Wanan**	**6.53**	**270**	P		**Pn**	**12 32 23.8**	**+0.9**
TABS	**Tabas**	**6.65**	**10**	*e*Pn		**Pn**	**12 32 27.3**	**+2.6**
TABS				IAML			12 33 48.1	
	comp=Z,2.5nm,1.0s							
KFJS2	**Khafji**	**6.68**	**283**	P		**Pn**	**12 32 25.9**	**+1.0**
SMAN	**Sihmah**	**6.98**	**264**	P		Pg	12 33 14.3	+13
DQM	**DQM**	**7.29**	**167**	P		**Pn**	**12 32 33.0**	**-0.4**
	SNR=12							
SHRT	**Shahrakht**	**7.62**	**30**	*e*Pn		**Pn**	**12 32 40.4**	**+2.6**
SHRT				IAML			12 35 07.6	
	comp=Z,720nm,1.0s							
GHVR	**GHOM**	**8.34**	**333**	*e*Pn		**Pn**	**12 32 49.8**	**+2.0**
DOK	**Doka**	**8.55**	**191**	P		**Pn**	**12 32 51.1**	**+0.4**
RQBS	**RQBS**	**8.76**	**274**	P		**Pn**	**12 32 53.4**	**-0.2**
SHRO	**Shahrood**	**8.89**	**1**	*e*Pn		**Pn**	**12 32 57.0**	**+1.6**
ASAO	**Ashtian**	**8.95**	**328**	*e*Pn		**Pn**	**12 32 57.9**	**+1.6**
SHAO	**Shalim**	**9.01**	**181**	*i* P		**Pn**	**12 32 55.4**	**-1.6**
	SNR=90							
SHAO	**Shalim**	**9.01**	**181**	P		**Pn**	**12 32 55.9**	**-1.1**
	SNR=124							
SHAO				P		**Pn**	**12 32 55.9**	**-1.1**
	SNR=124							
DAMV	**Damavand**	**9.14**	**340**	*e*Pn		**Pn**	**12 33 01.6**	**+2.7**
HRA	**Herat**	**9.16**	**36**			**Pn**	**12 32 59.9**	**+0.8**
DMTO	**DMTO**	**9.34**	**185**	P		**Pn**	**12 33 01.0**	**-0.5**
RBK	**Rabkut**	**9.64**	**189**	P		**Pn**	**12 33 05.6**	**0.0**
	SNR=19							
CHTH	**Charan**	**9.67**	**337**	*e*Pn		**Pn**	**12 33 08.0**	**+1.8**
THKV	**Tehran--Karaj**	**9.76**	**336**	*e*Pn		**Pn**	**12 33 09.6**	**+2.2**
ABTO	**Aybut**	**9.94**	**194**	P		**Pn**	**12 33 08.8**	**-1.0**
	SNR=46							
RAYN	**Ar Rayn**	**9.96**	**251**	Pn		**Pn**	**12 33 08.5**	**-1.6**
RAYN	**Ar Rayn**	**9.96**	**251**	P		**Pn**	**12 33 08.5**	**-1.6**
RAYN	**Ar Rayn**	**9.96**	**251**	P		**Pn**	**12 33 09.4**	**-0.7**
MRVT	**Maraveh tapeh**	**10.56**	**1**	*e*Pn		**Pn**	**12 33 20.1**	**+1.9**
SNGE	**Sanandaj**	**10.78**	**320**	*e*Pn		**Pn**	**12 33 25.2**	**+3.8**
GIDE	**GILAN DEYLAMAN1**	**11.02**	**335**	*e*Pn		**Pn**	**12 33 27.0**	**+2.4**
BHUJ	**Bhuj**	**13.11**	**104**	*e*P		**Pn**	**12 33 53.9**	**+0.8**
BHUJ				IAmb		IAmb	12 34 02.2	
	comp=Z,90nm,0.4s							
BHUJ				*e*S		**Sn**	**12 36 10.4**	**-8.2**
KBL	**Kabul**	**13.59**	**54**			**Pn**	**12 34 01.4**	**+1.6**
KBL	**Kabul**	**13.59**	**54**	P		**Pn**	**12 34 01.4**	**+1.6**
KBL	**Kabul**	**13.59**	**54**	P		**Pn**	**12 34 02.3**	**+2.5**
GEVA	**Gevas**	**15.49**	**320**	Pn		**Pn**	**12 34 24.8**	**-0.7**
GEVA				IAmb		IAmb	12 34 37.4	
	comp=Z,322nm,0.7s							
BKNR	**BIKANER**	**15.54**	**82**	*e*P		**Pn**	**12 34 27.8**	**+1.8**
BKNR				IAmb		IAmb	12 34 45.7	
	comp=Z,21nm,0.5s							
BKNR				*e*S		**Sn**	**12 37 23.5**	**+5.8**
AKT	**Akhty**	**15.83**	**337**	*e*P		**Pn**	**12 34 29.9**	**+0.1**
AKT				*e*S		**Sn**	**12 37 27.3**	**+2.3**
AKT				pmax		pmax		
	comp=Z,673nm,0.9s							
AKT				MLR		MLR		
	comp=Z,3μm,14.0s							
GNI	**Garni**	**15.95**	**328**	Pn		**P**	**12 34 34.4**	**-0.4**
	comp=Z,76nm,0.3s,baz=164,slow=3.3,SNR=16							
	comp=Z,1μm,0.9s							
GNI	**Garni**	**15.95**	**328**			**Pn**	**12 34 32.6**	**+1.3**
GNI	**Garni**	**15.95**	**328**	P		**P**	**12 34 35.3**	**+0.5**
GNI				P		**P**	**12 34 35.3**	**+0.5**
CHGR	**Chuyangaron**	**16.09**	**41**	Pn		**Pn**	**12 34 31.8**	**-1.2**
CHGR	**Chuyangaron**	**16.09**	**41**	P		**Pn**	**12 34 31.8**	**-1.2**
CHGR				pmax		pmax		
	comp=Z,180nm,0.7s							
GURO	**Guroymak-BITLI**	**16.25**	**318**	Pn		**Pn**	**12 34 33.9**	**-1.4**
MARD	**Mardin**	**16.29**	**313**			**Pn**	**12 34 32.7**	**-3.0**
NIL	**Nilore**	**16.42**	**62**	P		**Pn**	**12 34 36.3**	**-1.0**
NIL	**Nilore**	**16.42**	**62**	P		**Pn**	**12 34 36.3**	**-1.0**
NIL				pmax		pmax		
	comp=Z,197nm,1.0s							
AJM	**Ajmer**	**16.84**	**88**	*e*P		**P**	**12 34 44.3**	**-0.3**
AJM				IAmb		IAmb	12 34 57.7	
	comp=Z,90nm,0.5s							
AJM				*e*S		**Sn**	**12 37 52.0**	**+2.5**
ASF	**Jabal al Asfar**	**17.20**	**292**	P		**Pn**	**12 34 47.2**	**0.0**
	comp=Z,25nm,0.3s,baz=89,slow=7.9,SNR=55							
ASF				S		Sn	12 37 44.6	-14
	comp=Z,63nm,0.7s,baz=109,slow=20,SNR=2.9							
ASF				LR		LR	12 43 20.8	
	comp=Z,4μm,18.5s,baz=98,slow=44							
	comp=Z,301nm,0.7s							
MAK	**Makhachkala**	**17.23**	**339**	*c i*P		**Pn**	**12 34 46.0**	**-1.4**
MAK				*e*S		**Sn**	**12 37 56.8**	**-1.9**
MAK				pmax		pmax		
	comp=Z,5μm,1.3s							
MAK				MLR		MLR		
	comp=Z,3μm,10.0s							
JMU	**Jammu**	**17.44**	**66**	*e*P		**P**	**12 34 52.1**	**+0.7**
JMU				IAmb		IAmb	12 34 58.1	
	comp=Z,56nm,1.0s							
JMU				*e*S		**Sn**	**12 38 07.3**	**+3.3**
SRNI	**Srinagar**	**17.77**	**62**	*e*P		**P**	**12 34 57.1**	**+1.9**
SRNI				IAmb		IAmb	12 35 09.6	
	comp=Z,86nm,0.4s							
SRNI				*e*S		**S**	**12 38 16.0**	**-3.1**
BTK	**Batken**	**17.98**	**40**	Pn		**Pn**	**12 34 55.8**	**-1.0**
BTK	**Batken**	**17.98**	**40**	P		**Pn**	**12 34 55.8**	**-1.0**
BTK				pmax		pmax		
	comp=Z,549nm,1.3s							
KOPT	**Kop Dagi**	**18.11**	**319**			**P**	**12 34 58.9**	**0.0**
THN	**Thein Dam**	**18.13**	**68**	*e*P		**P**	**12 35 00.1**	**+1.2**
THN				IAmb		IAmb	12 35 11.5	
	comp=Z,91nm,0.2s							
THN				*e*S		**S**	**12 38 25.4**	**-0.8**
FKH	**Fakeheh**	**18.13**	**298**	*e*P		**P**	**12 34 58.9**	**-0.1**
GHAJ	**Ghor Haditha**	**18.16**	**288**	P		**Pn**	**12 34 58.9**	**0.0**
GHAJ				IAmb		IAmb	12 35 03.6	
	comp=Z,567nm,1.1s							
RCY	**Rachaya**	**18.38**	**295**	*e*P		**Pn**	**12 35 02.2**	**+0.4**
BEIL	**Beino**	**18.40**	**299**	*e*P		**P**	**12 35 01.9**	**-0.1**
ZAHL	**Zahle**	**18.44**	**296**	*e*P		**Pn**	**12 35 03.4**	**+0.9**
BHK	**Bhakra**	**18.47**	**72**	*e*P		**Pn**	**12 35 09.4**	**+6.6**
BHK				IAmb		IAmb	12 35 14.9	
	comp=Z,75nm,0.9s							
BHK				*e*S		S	12 38 44.2	+11
EIL	**Elat**	**18.53**	**283**	P		**Pn**	**12 35 04.4**	**+0.9**
	comp=Z,4.9nm,0.3s,baz=76,slow=4.0,SNR=29							
EIL				S		**Sn**	**12 38 19.9**	**-10**
	comp=Z,54nm,0.7s,baz=101,slow=14,SNR=1.5							
EIL				LR		LR	12 43 58.4	
	comp=Z,5μm,20.2s,baz=94,slow=43							
	comp=Z,199nm,1.0s							
TSSA	**Tissa**	**18.54**	**67**	||*e*P	**Pn**	**12 35 04.8**	**+1.0**

ALCI eS **Sn** **12 39 00.9 +1.5**
SHA1 Shidzhatmaz 19.74 331⇑ eP **P** **12 35 17.1 +0.4**
DDI Dehra Dun 19.79 75 eP **Pn** **12 35 18.2 -0.6**
DDI IAmb IAmb 12 35 32.1
comp=Z,90nm,0.2s
DDI eS **Sn** **12 39 04.4 +3.6**
KVAR Kislovodsk Arr 19.90 331 LR LR 12 44 49.1
comp=Z,2μm,19.1s,slow=42
KIV Kislovodsk 19.90 331 P **Pn** **12 35 20.0 0.0**
KIV Kislovodsk 19.90 331 eP **P** **12 35 17.6 -0.7**
KIV eS **S** **12 39 00.3 -1.5**
KIV pmax pmax
comp=Z,3μm,1.1s
KIV MLR MLR
comp=Z,802nm,14.0s
KIV Kislovodsk 19.90 331 P **Pn** **12 35 20.6 +0.6**
KIV S **Sn** **12 39 08.8 +5.5**
BHPL Bhopal 19.94 96 eP **Pn** **12 35 19.9 -0.7**
BHPL IAmb IAmb 12 35 41.5
comp=Z,249nm,0.8s
BHPL eS **Sn** **12 39 06.8 +2.2**
KK31 Karatay Array 19.97 33 P **P** **12 35 18.2 -0.8**
KK31 IAmb IAmb 12 35 23.0
comp=Z,636nm,1.4s
KK31 Karatay Array 19.97 33 P **P** **12 35 18.7 -0.3**
KKAR Karatay Array 19.97 33 **P** **12 35 19.1 +0.1**
KKAR Karatay Array 19.97 33 P **P** **12 35 19.1 +0.1**
KLP Kalpa 20.07 72 eP Pn 12 35 22.1 -0.2
KLP IAmb IAmb 12 35 23.4
comp=Z,168nm,0.2s
KLP eS Sn 12 39 09.0 +1.0
DZA Taraz 20.22 35 eP **P** **12 35 21.9 +0.2**
DZA pmax pmax
comp=Z,294nm,0.9s
DZA Taraz 20.22 35 eP **P** **12 35 22.0 +0.2**
comp=Z,294nm,0.9s
AKL Akola 20.40 104 eP Pn 12 35 25.7 -0.2
AKL IAmb IAmb 12 35 36.6
comp=Z,152nm,0.3s
AKL eS Sn 12 39 15.1 -0.5
BNN Bunyan 20.40 310 P **P** **12 35 24.2 +0.3**
BNN IAmb IAmb 12 35 31.0
comp=Z,496nm,0.8s
KSH2 Kashi 20.42 49 P **P** **12 35 22.5 -1.6**
KSH2 sP sP 12 35 37.9 +7.1
KSH2 S **S** **12 39 10.3 -2.1**
KSH2 pmax pmax
comp=Z,240nm,0.8s
KSH2 LR LR
comp=Z,4μm,15.1s
KSH2 LR LR
comp=Z,5μm,15.8s
KSH2 LR LR
comp=Z,6μm,16.1s
JHNI Jhansi 20.52 89 eP Pn 12 35 27.8 +0.4
JHNI IAmb IAmb 12 36 06.3
JHNI eS Sn 12 39 18.3 -0.3
GOF Gofitskoye 20.65 334*c* iP Pn 12 35 27.9 -0.8
VSLR Vesyoloye 20.75 326*c* iP Pn 12 35 29.3 -0.6
VSLR pmax pmax
comp=Z,872nm,1.0s
TOKA Tokat 20.75 314 P **P** **12 35 28.2 +0.6**
TOKA IAmb IAmb 12 35 32.0
comp=Z,570nm,1.1s
CSS Mathiatis 20.77 298 **P** **12 35 28.1 +0.3**
CSS IAmb IAmb 12 35 33.0
comp=Z,278nm,0.6s
LATR Latur 20.95 110 eP **P** **12 35 31.0 +1.1**
LATR IAmb IAmb 12 35 40.6
comp=Z,498nm,1.0s
LATR eS Sn 12 39 27.6 -1.4
SOC Sochi 21.00 326*c* iP **P** **12 35 29.9 -0.2**
SOC ePPP PPP 12 35 55.1
SOC eS **S** **12 39 24.5 +1.0**
SOC eSS **SnSn** **12 39 45.5 +0.8**
SOC eSSS SSS 12 39 59.9
SOC pmax pmax
comp=Z,1μm,0.7s
SOC MLR MLR
comp=Z,5μm,14.0s
JOSI Joshimath 21.10 75 eP **P** **12 35 33.7 +2.1**
JOSI IAmb IAmb 12 35 35.1
comp=Z,387nm,1.1s
JOSI eS **S** **12 39 29.1 +3.0**
LABN Labinsk 21.31 329 eP **P** **12 35 34.7 +1.2**
LABN eS Sn 12 39 34.2 -2.9
LABN pmax pmax
comp=Z,1μm,0.9s
LABN MLR MLR
comp=Z,3μm,13.0s
LABN MLR MLR
comp=E,7μm,12.0s
EKS2 Erkin-Say 21.37 39 P **P** **12 35 35.1 +0.8**
SNR=179
UCH Uchtor 21.51 41 P **P** **12 35 36.4 +0.3**
SNR=63
AAK Ala-Archa 21.76 40 P **P** **12 35 39.2 +0.7**
comp=E,187nm,0.7s,baz=222,slow=5.3,SNR=152
AAK ScP **ScP** **12 43 14.1 -1.3**
comp=E,10nm,0.9s,baz=255,slow=2.9,SNR=4.9
AAK LR LR 12 45 24.8
comp=E,5μm,18.8s,baz=239,slow=40
comp=E,187nm,0.7s
AAK Ala-Archa 21.76 40 P **P** **12 35 38.8 +0.3**
SNR=105
KIRS Kirsehir-Merke 21.86 309 ⇓P **P** **12 35 41.5 +1.9**
NRN Naryn 21.93 44 P **P** **12 35 40.3 -0.2**
NRN IAmb IAmb 12 35 42.5
comp=Z,357nm,0.9s
NRN Naryn 21.93 44 P **P** **12 35 40.3 -0.2**
NRN pmax pmax
comp=Z,357nm,0.9s
FRU1 Bishkek 21.94 39 P **P** **12 35 40.8 +0.4**
FRU1 IAmb IAmb 12 35 57.3
comp=Z,196nm,0.8s
FRU1 Bishkek 21.94 39 P **P** **12 35 40.8 +0.4**
FRU1 pmax pmax
comp=Z,196nm,0.8s
KBK Karagaybulak 22.03 40 P **P** **12 35 42.6 +1.2**
SNR=90
CHMS Chumysh 22.13 39 P **P** **12 35 45.8 +3.4**
SNR=124
USP Ospenovka 22.16 38 P **P** **12 35 42.6 -0.1**
SNR=93
ERBR Yeremizino-Bor 22.25 331 eP **P** **12 35 43.8 +0.3**
ERBR *e* 12 36 05.7
BR131 Keskin Array S 22.32 310 P **P** **12 35 44.5 -0.1**
BR131 Keskin Array S 22.32 310*c* iP **P** **12 35 45.0 +0.4**
BR131 Keskin Array S 22.32 310 P **P** **12 35 45.9 +1.3**
SNR=28
BR131 S **S** **12 39 53.2 +3.6**
BRTR Keskin Array B 22.32 310 P **P** **12 35 45.3 +0.7**
comp=Z,218nm,0.7s,baz=132,slow=12,SNR=565
BRTR ScP **ScP** **12 43 15.9 -0.9**
comp=Z,4.9nm,0.7s,baz=141,slow=5.7,SNR=7.9
BRTR LR LR 12 47 22.5
comp=Z,4μm,18.9s,baz=114,slow=44
comp=Z,218nm,0.7s
BRTR Keskin Array B 22.32 310 P **P** **12 35 44.8 +0.2**
SGDS Sogindy 22.36 38 eP **P** **12 35 45.3 +0.4**
AB31 Akbulak array 22.38 7 P **P** **12 35 43.6 -1.3**
AB31 Akbulak array 22.38 7 eP **P** **12 35 45.0 +0.1**
ABKAR Akbulak array 22.38 7 P **P** **12 35 44.6 -0.3**
BOOM Boomskoye usch 22.51 42 P **P** **12 35 47.1 +0.6**
BOOM Boomskoye usch 22.51 42 P **P** **12 35 47.1 +0.6**
BOOM pmax pmax
comp=Z,207nm,1.0s
TKM2 Tokmak 2 22.57 40 P **P** **12 35 47.4 +0.2**
SNR=58
ILGA Ilgaz 22.92 313 P **P** **12 35 51.2 +0.2**
ILGA IAmb IAmb 12 36 15.1
comp=Z,226nm,0.8s
ANN Anapa 23.02 325*d* iP **P** **12 35 52.3 +0.6**
ANN *e**PP **pP** **12 35 55.8 -0.6**
ANN eS **S** **12 40 03.6 +1.9**
ANN pmax pmax
comp=Z,478nm,0.9s
ANN MLR MLR
comp=E,2μm,16.0s
ANN MLR MLR
comp=Z,4μm,15.0s
ANN MLR MLR
comp=N,3μm,15.0s
KDJ Kajisay 23.05 44 P **P** **12 35 53.5 +1.2**
KDJ Kajisay 23.05 44 P **P** **12 35 53.5 +1.2**
KDJ pmax pmax
comp=Z,557nm,0.9s
HYB Hyderabad 23.12 110 eP **P** **12 35 54.0 +1.0**
HYB IVmB_BB 12 36 00.0
comp=Z,567nm,1.3s
HYB eS **S** **12 40 07.1 +3.2**
HYB IVMs_BB IVMs_BB 12 46 25.3
comp=Z,691nm,16.5s
BZK Bozkurt 23.21 315 P **P** **12 35 54.0 +0.3**
BZK IAmb IAmb 12 35 57.1
comp=Z,277nm,0.6s
BZK Bozkurt 23.21 315 ⇓P **P** **12 35 54.5 +0.9**
TARG Taragay, Kyrgy 23.22 45 P **P** **12 35 55.0 +0.7**
TARG IAmb IAmb 12 35 58.0
comp=Z,408nm,1.3s
TARG Taragay, Kyrgy 23.22 45 P **P** **12 35 55.0 +0.7**
TARG pmax pmax
comp=Z,408nm,1.3s
AKTO Aktyubinsk 23.39 4 P **P** **12 35 55.6 +0.2**
comp=Z,237nm,0.7s,baz=189,slow=8.3,SNR=212
comp=Z,237nm,0.7s
TNSS Tian-Shan 23.43 42 eP **P** **12 35 56.3 0.0**
TNSS Tian-Shan 23.43 42 eP **P** **12 35 56.3 0.0**
AAA Alma-Ata 23.51 41 eP **P** **12 35 57.0 +0.3**
AAA pmax pmax
comp=Z,438nm,1.2s
AAA MLR MLR
comp=Z,4μm,12.0s
AAA Alma-Ata 23.51 41 eP **P** **12 35 57.0 +0.3**
comp=Z,438nm,1.2s
AAA LR LR 12 45 59.6
comp=Z,4μm,11.9s
MDOK Medeo 23.56 42 eP **P** **12 35 57.5 +0.2**
MDOK eS **S** **12 40 12.6 +1.6**
MDOK Medeo 23.56 42 eP **P** **12 35 57.6 +0.2**
MDOK eS **S** **12 40 12.6 +1.6**
MDOK LR LR 12 46 00.2
ISP Isparta 23.80 303 P **P** **12 36 00.5 +0.8**
ISP IAmb IAmb 12 36 10.5
comp=Z,232nm,0.9s
ISP Isparta 23.80 303*c* iP **P** **12 36 01.0 +1.3**
ISP pmax pmax
comp=Z,446nm,2.5s
ISP Isparta 23.80 303 eP **P** **12 36 00.8 +1.2**
CIDE Kastamonu/Cide 23.84 314 ⇓P **P** **12 36 01.5 +1.7**
WUS Wushi 23.87 48 P **P** **12 35 59.6 -0.7**
WUS IAmb IAmb 12 36 03.4
comp=Z,292nm,1.2s
ELL Elmali 23.94 300 P **P** **12 36 02.2 +1.2**
ELL Elmali 23.94 300 P **P** **12 36 02.2 +1.2**
ELL pmax pmax
comp=Z,396nm,1.0s
PRZ Przheval'sk 24.00 44 P **P** **12 36 03.0 +1.4**
PRZ IAmb IAmb 12 36 05.3
comp=Z,154nm,0.8s
PRZ Przheval'sk 24.00 44 P **P** **12 36 03.0 +1.4**
PRZ pmax pmax
comp=Z,155nm,0.8s
AKAS Kas 24.04 299 P **P** **12 36 02.3 +0.4**
AKAS IAmb IAmb 12 36 11.1
comp=Z,245nm,0.8s
FURI Furi 24.27 225 LR LR 12 47 12.4
comp=Z,4μm,19.6s,baz=36,slow=40
FURI Furi 24.27 225 IAMs_20 IAMs_20 12 47 10.4
comp=Z,8μm,18.0s
SATY Saty 24.32 43*c* iP **P** **12 36 04.7 +0.2**
SATY Saty 24.32 43⇑ iP **P** **12 36 04.7 +0.2**
MDUB Mudurnu 24.33 310 P **P** **12 36 05.3 +0.7**
KPKS Kokpek 24.71 43 eP **P** **12 36 08.1 +0.1**
KPKS Kokpek 24.71 43 eP **P** **12 36 08.1 +0.1**
UZB Uzynbulak 24.74 44*c* iP **P** **12 36 08.5 +0.2**
UZB pmax pmax
comp=Z,140nm,0.7s
UZB Uzynbulak 24.74 44⇑ iP **P** **12 36 08.6 +0.2**
comp=Z,140nm,0.7s
SIM Simferopol' 24.89 321*d* iP **P** **12 36 09.9 +0.4**
SIM eS **S** **12 40 33.0 +1.0**
SIM pmax pmax
comp=Z,602nm,0.8s
SIM MLR MLR
comp=Z,1μm,15.9s
SHLS Shalkode 25.02 44*c* iP **P** **12 36 13.3 +2.5**
SHLS pmax pmax
comp=Z,154nm,0.6s
SHLS Shalkode 25.02 44⇑ iP **P** **12 36 13.4 +2.5**
comp=Z,154nm,0.6s
PDGK Podgornoye 25.13 44 P **P** **12 36 11.4 -0.4**
ARG Arkhangelos 25.19 298 P **P** **12 36 12.8 +0.5**
ARG IAmb IAmb 12 36 24.5
comp=Z,228nm,1.0s
ARG Arkhangelos 25.19 298 P **P** **12 36 12.8 +0.5**
ARG pmax pmax
comp=Z,228nm,1.0s
TDK Taldyqorghan 25.44 39*c* iP **P** **12 36 14.8 +0.3**
TDK pmax pmax
comp=Z,186nm,1.3s
TDK MLR MLR
comp=Z,2μm,16.0s
TDK Taldyqorghan 25.44 39⇑ iP **P** **12 36 14.8 +0.3**
comp=Z,186nm,1.3s
TDK LR LR 12 47 08.9
comp=Z,2μm,16.1s
MANT Manisa 25.48 303 P **P** **12 36 15.6 +0.4**
MANT IAmb IAmb 12 36 19.1
comp=Z,184nm,1.0s
SILT Sile 25.69 310 ⇑P **P** **12 36 17.4 +0.6**
KARP Karpathos 25.82 296 P **P** **12 36 19.1 +1.1**
KARP Karpathos 25.82 296 P **P** **12 36 19.3 +1.3**
comp=Z,602nm,0.9s
KARP 25.82 296 eP **P** **12 36 19.4 +1.3**
BELG Belogornoye 26.03 349 P **P** **12 36 20.2 +0.5**
comp=Z,699nm,0.9s,baz=48,slow=5.8,SNR=4.1
comp=Z,699nm,0.9s
KLYT Kilyos 26.14 310 P **P** **12 36 21.2 +0.3**
comp=Z,2μmcomp=Z,298nm,1.0s
BRZS Berezniki 26.29 25 eP **P** **12 36 22.5 +0.4**
BRZS Berezniki 26.29 25 eP **P** **12 36 22.6 +0.4**
VRH Novokhopyorsk 26.36 340 eP **P** **12 36 22.7 0.0**
VRH pmax pmax
comp=Z,308nm,0.8s
BAND Balkesir-Ban 26.45 307 ⇓P **P** **12 36 24.7 +1.0**
VORD Divnogorie 26.96 337 eP **P** **12 36 27.4 -0.7**
VORD pmax pmax
comp=Z,50nm,0.4s
VSR Storozhevoye 27.22 337 eP **P** **12 36 30.5 +0.1**
VSR pmax pmax
comp=Z,60nm,0.5s
KHAM Kharkiv 27.37 332 P **P** **12 36 32.4 +0.5**
EZN Ezine 27.55 305 P **P** **12 36 35.2 +1.6**
EZN Ezine 27.55 305 P **P** **12 36 34.7 +1.1**
MANR Mangalia 27.58 314 ⇓P **P** **12 36 34.9 +1.1**
VORR Voronezh 27.58 337 eP **P** **12 36 34.1 +0.4**
VORR pmax pmax
comp=Z,320nm,0.4s
IDI Anoyia 27.60 295 P **P** **12 36 34.9 +0.7**
comp=Z,65nm,0.6s,baz=89,slow=7.0,SNR=27
IDI LR LR 12 51 35.0
comp=Z,1μm,21.9s,baz=104,slow=45
comp=Z,65nm,0.6s
IDI Anoyia 27.60 295 P **P** **12 36 33.4 -0.8**
IDI Anoyia 27.60 295 P **P** **12 36 35.1 +1.0**
IDI IAmb IAmb 12 36 49.9
comp=Z,90nm,0.8s
NE56 Odesa 27.73 321 P **P** **12 36 34.5 -0.5**
PSN Preselentsi 27.79 314 eP **P** **12 36 37.3 +1.6**
JURR Jurilovca 27.86 316 ⇓P **P** **12 36 36.6 +0.3**
CAVK Edirne/Enez-Ca 27.95 307 ⇑P **P** **12 36 38.3 +1.2**
TIRR Tirgusor 28.00 315 P **P** **12 36 37.1 -0.5**
TIRR IAmb IAmb 12 36 39.1
comp=Z,108nm,0.9s
TIRR Tirgusor 28.00 315 ⇑P **P** **12 36 37.4 -0.1**
TIRR Tirgusor 28.00 315 P **P** **12 36 38.8 +1.3**
TIRR Tirgusor 28.00 315 P **P** **12 36 37.6 +0.1**
comp=Z,142nm,1.1s
PRD Provadia 28.05 312 eP **P** **12 36 39.5 +1.5**
ALN Alexandroupoli 28.11 307 P **P** **12 36 39.0 +0.5**
ALN Alexandroupoli 28.11 307 P **P** **12 36 39.0 +0.5**
ALN pmax pmax
comp=Z,69nm,0.9s
BORK Borovoye 28.11 19 P **P** **12 36 38.1 -0.4**
BORK IAmb IAmb 12 36 39.9
comp=Z,249nm,1.1s
BORK Borovoye 28.11 19 P **P** **12 36 38.1 -0.4**
BORK pmax pmax
comp=Z,249nm,1.1s
BORK MLR MLR
comp=Z,8μm,18.0s
BVA0 Borovoye Array 28.11 19 P **P** **12 36 38.6 +0.1**
BVAR Borovoye Array 28.11 19 P **P** **12 36 38.7 +0.2**
comp=Z,195nm,0.8s,baz=202,slow=7.7,SNR=553
BVAR PcP **PcP** **12 39 52.4 0.0**
comp=Z,21nm,0.4s,baz=214,slow=2.3,SNR=24
BVAR ScP **ScP** **12 43 31.4 -1.4**
comp=Z,4.2nm,0.6s,baz=202,slow=3.0,SNR=5.7
BVAR P3KPbc 13 09 04.3
comp=Z,1.3nm,0.7s,baz=46,slow=4.3,SNR=8.0
comp=Z,195nm,0.8s
TLCR 28.12 317 ⇑P **P** **12 36 39.0 +0.4**
NEF NEVSHA 28.18 312 eP **P** **12 36 40.4 +1.2**
TPGR Topolog 28.19 316 ⇓P **P** **12 36 39.5 +0.3**
PURM Purcari 28.22 320 ⇓P **P** **12 36 40.0 +0.5**
PURM Purcari 28.22 320 P **P** **12 36 39.5 +0.1**
comp=Z,352nm,0.8s
ICOR Ion Corvin 28.22 314 ⇑P **P** **12 36 40.6 +1.1**
JMB Yambol 28.36 310 eP **P** **12 36 43.0 +2.2**
LPSR Galich'ya Gora 28.46 338 eP **P** **12 36 41.7 +0.2**
LPSR pmax pmax
comp=Z,125nm,0.8s
MAKZ Makanchi 28.52 39 P **P** **12 36 42.2 0.0**
MAKZ Makanchi 28.52 39 P **P** **12 36 42.2 0.0**
MAKZ pmax pmax
comp=Z,89nm,1.0s
MAKZ MLR MLR
comp=Z,3μm,19.0s
CFR Carcaliu 28.53 317 ⇓P **P** **12 36 42.7 +0.5**
CFR Carcaliu 28.53 317 P **P** **12 36 42.7 +0.5**
RDO Rodhopi 28.55 307 P **P** **12 36 42.8 +0.3**
RDO IAmb IAmb 12 36 44.6
comp=Z,110nm,0.8s
LOZB Loznitsa 28.68 312 ⇓P **P** **12 36 44.8 +1.2**
MK31 Makanchi Array 28.69 40 *i* P **P** **12 36 43.8 +0.1**
MK31 pmax pmax
comp=Z,35nm,0.7s
MKAR Makanchi Array 28.69 40 P **P** **12 36 43.7 0.0**
comp=Z,20nm,0.6s,baz=225,slow=7.5,SNR=296
MKAR PcP **PcP** **12 39 53.9 -0.1**
comp=Z,3.8nm,0.6s,baz=224,slow=2.3,SNR=4.6
MKAR ScP **ScP** **12 43 33.2 -1.5**
comp=Z,5.3nm,0.9s,baz=259,slow=2.5,SNR=6.0
MKAR LR LR 12 49 47.2
comp=Z,2μm,19.7s,baz=232,slow=40
MKAR P3KPbc 13 09 01.0
comp=Z,0.6nm,0.9s,baz=57,slow=5.2,SNR=4.9
comp=Z,20nm,0.6s
MKAR Makanchi Array 28.69 40 P **P** **12 36 43.1 -0.6**
CICN Ciocanesti 28.76 314 ⇑P **P** **12 36 45.1 +0.9**
TATR Tatarca 28.79 317 ⇓P **P** **12 36 45.5 +1.0**
RAZG Razgrad 28.82 312 ⇓P **P** **12 36 46.0 +1.1**
DIM Dimitrovgrad 28.84 309 eP **P** **12 36 46.5 +1.4**
SCTR Scanteiesti 28.86 317 ⇑P **P** **12 36 46.0 +0.8**
NEGRR Negrea 28.86 317 ⇓P **P** **12 36 45.9 +0.7**
VLDR Vladesti 28.90 318 ⇓P **P** **12 36 46.6 +1.1**
ELND Elena 28.98 311 ⇓P **P** **12 36 46.8 +0.5**
LEHL Lehliu 29.01 314 ⇓P **P** **12 36 48.1 +1.5**
SZH Strazhitsa 29.04 312 eP **P** **12 36 48.1 +1.2**
VARL Varlezi 29.07 318 ⇓P **P** **12 36 48.2 +1.2**
KIS Kishinev 29.08 320 P **P** **12 36 46.8 -0.3**
comp=Z,3μmcomp=Z,136nm,0.7s
LEOM Leova 29.13 319 P **P** **12 36 47.8 +0.3**
BAL3X Bal3x, Balta 29.18 322 P **P** **12 36 47.4 -0.6**
KURBB Kurchatov Arra 29.21 30 P **P** **12 36 48.1 -0.2**
comp=Z,51nm,0.9s,baz=230,slow=8.6,SNR=276
KURBB ScP **ScP** **12 43 35.3 -1.0**
comp=Z,8.9nm,1.0s,baz=229,slow=4.0,SNR=9.7
KURBB PKiKP **PKiKP** **12 47 28.0 -0.8**
comp=Z,0.6nm,0.7s,baz=200,slow=0.8,SNR=4.3
KURBB LR LR 12 49 41.1
comp=Z,1μm,20.1s,baz=206,slow=39
KURBB P3KPbc 13 08 58.0
comp=Z,0.4nm,0.7s,baz=47,slow=4.3,SNR=6.1
comp=Z,51nm,0.9s
RZN Rozhen 29.30 308 eP **P** **12 36 50.9 +1.5**
KURK Kurchatov 29.32 30 P **P** **12 36 49.6 +0.4**
KURK Kurchatov 29.32 30 IAMs_20 IAMs_20 12 49 60.0
comp=Z,4μm,21.0s
KURK Kurchatov 29.32 30 P **P** **12 36 49.6 +0.4**
KURK pmax pmax
comp=Z,64nm,1.0s
KURK MLR MLR
comp=Z,4μm,21.0s
ARTI Arti 29.35 3 P **P** **12 36 49.9 +0.5**
comp=Z,38nm,0.7s,baz=185,slow=5.8,SNR=27
ARTI LR LR 12 50 12.4
comp=Z,3μm,20.5s,baz=186,slow=40
comp=Z,38nm,0.7s
ARTI Arti 29.35 3 P **P** **12 36 49.3 -0.1**
ARTI IAmb IAmb 12 37 21.0
comp=Z,88nm,0.5s
ARTI Arti 29.35 3*c* iP **P** **12 36 50.0 +0.6**
ARTI 12 37 38.7
ARTI 12 39 50.5
ARTI S **S** **12 41 46.1 +3.9**
ARTI SS **SnSn** **12 43 13.5 +4.9**
ARTI pmax pmax
comp=Z,39nm,0.7s
ARTI MLR MLR
comp=Z,3μm,15.0s
BIR Birlad 29.39 318 ⇑P **P** **12 36 50.4 +0.6**
BIR Birlad 29.39 318 P **P** **12 36 51.2 +1.4**
GHRR 29.41 318 P **P** **12 36 50.9 +0.8**
PLD Plovdiv 29.46 309 eP **P** **12 36 51.9 +1.4**
SULR 29.47 314 ⇓P **P** **12 36 51.5 +1.0**
PANC Panciu 29.47 317 ⇑P **P** **12 36 51.6 +1.0**
ODBI Odobesti 29.48 317 ⇑P **P** **12 36 52.1 +1.4**
VASR Vaslui 29.48 319 ⇓P **P** **12 36 51.7 +1.0**
PVL Pavlikeni 29.53 311 eP **P** **12 36 52.6 +1.5**
VRI Vrincioaia 29.73 317 ⇓P **P** **12 36 53.9 +0.9**
VRI Vrincioaia 29.73 317 P **P** **12 36 53.8 +0.9**
VRI Vrincioaia 29.73 317 P **P** **12 36 54.0 +1.1**
comp=Z,104nm,1.0s
PLOR Plostina 29.77 317 ⇑P **P** **12 36 54.7 +1.4**
PLOR Plostina 29.77 317 P **P** **12 36 54.6 +1.4**
NEHR Nehoiu 29.78 316 ⇑P **P** **12 36 55.2 +1.8**
SEM Semipalatinsk 29.86 32 eP **P** **12 36 54.4 +0.2**
SEM MLR MLR
comp=Z,1μm,11.0s
SEM Semipalatinsk 29.86 32 eP **P** **12 36 54.5 +0.2**
SEM LR LR 12 50 10.0
comp=Z,1μm,11.4s
MALK Mahakanadarawa 29.90 124 P **P** **12 36 55.8 +1.1**
COPA Copaceanca 29.90 313 ⇓P **P** **12 36 56.1 +1.6**
SVE Sverdlovsk 29.94 5 eP **P** **12 36 55.1 +0.5**
SVE pmax pmax
comp=N,91nm,1.1s
SVE MLR MLR
comp=N,4μm,14.0s
MMB Musomishta 29.96 307 eP **P** **12 36 56.8 +1.8**
SORM Soroca 29.98 322 P **P** **12 36 54.5 -0.6**
comp=N,117nm,1.1s
PGB Panagyurishte 29.98 309 eP **P** **12 36 57.1 +1.9**
PLVB Pleven 30.00 311 ⇑P **P** **12 36 56.3 +0.9**
MLR Muntele Rosu 30.03 316 P **P** **12 36 57.1 +1.3**
comp=N,109nm,0.8s,baz=114,slow=4.3,SNR=72
MLR ScP **ScP** **12 43 38.1 -1.1**
comp=N,16nm,0.9s,baz=103,slow=2.5,SNR=5.6
comp=N,109nm,0.8s
MLR Muntele Rosu 30.03 316 P **P** **12 36 56.5 +0.7**
MLR IAmb IAmb 12 37 00.1
comp=Z,230nm,1.1s
MLR Muntele Rosu 30.03 316 ⇑P **P** **12 36 57.1 +1.3**
COVR Voineasa-Covas 30.04 316 ⇓P **P** **12 36 57.3 +1.6**
TESR Tescani 30.09 318 ⇑P **P** **12 36 56.5 +0.4**
TESR Tescani 30.09 318 P **P** **12 36 56.1 0.0**
comp=Z,308nm,0.8s
ONER Baraj Valea Uz 30.16 317 ⇑P **P** **12 36 58.0 +1.3**
HUMR Humele 30.22 313 ⇑P **P** **12 36 58.7 +1.5**
TURR Turia 30.25 317 ⇑P **P** **12 36 58.9 +1.3**
OZUR 30.41 317 ⇓P **P** **12 36 59.3 +0.3**
LIT Litokhoron 30.45 304 P **P** **12 36 59.7 +0.3**
LIT IAmb IAmb 12 37 00.9
comp=Z,74nm,0.8s
LIT Litokhoron 30.45 304 P **P** **12 36 59.7 +0.3**
LIT pmax pmax
comp=Z,74nm,0.8s
MTUR Matau 30.47 315 ⇓P **P** **12 37 00.5 +0.9**
MTUR Matau 30.47 315 P **P** **12 37 00.5 +0.9**
PLNA Plana 30.49 309 eP **P** **12 37 01.1 +1.3**
KKB Krupnik 30.49 307 eP **P** **12 37 01.1 +1.4**
ZSN Zaisan 30.52 40 eP **P** **12 37 00.2 +0.3**

ZSN Zaisan 30.52 40 *e*P P **12 37 00.2 +0.3**
VOIR 30.57 315 ⇑P P **12 37 01.4 +0.9**
VOIR 30.57 315 P P **12 37 01.3 +0.9**
VOIR 30.57 315 P P **12 37 00.8 +0.4**
comp=Z,2µmcomp=Z,198nm,1.3s
LODK Lodwar 30.58 223 P P **12 37 02.5 +1.8**
LODK IAMs_20 IAMs_20 12 51 15.6
comp=Z,4µm,18.0s
LODK Lodwar 30.58 223 P P **12 37 03.3 +2.6**
MPEP Malo Peshtene 30.58 310 *e*P P **12 37 01.4 +0.9**
DOPR Dopca 30.60 316 ⇓P P **12 37 01.4 +0.7**
WMQ Urumqi 30.65 49 *e*P P **12 37 01.8 +0.6**
WMQ sP sP 12 37 14.5 +6.5
WMQ S S **12 42 05.6 +2.6**
WMQ pmax pmax
comp=Z,91nm,1.3s
WMQ pmax pmax
comp=Z,610nm,5.3s
WMQ LR LR
comp=Z,2µm,12.9s
WMQ LR LR
comp=Z,3µm,16.5s
WMQ LR LR
comp=Z,3µm,17.3s
VTS Vitosha 30.67 309 *e*P P **12 37 03.0 +1.5**
VAY Valandovo 30.73 306 *i*P P **12 37 02.8 +1.0**
PALK Pallekele 30.77 125 LR LR 12 49 49.7
comp=Z,1µm,19.8s,baz=318,slow=37
PRAR RASCA 30.77 319 ⇓P P **12 37 02.5 +0.4**
ARR Arges 30.80 315 ⇑P P **12 37 03.4 +0.9**
JOSR Joseni 30.87 317 ⇓P P **12 37 04.0 +1.0**
AK07 Malin Array Si 30.99 326 P P **12 37 03.2 -0.8**
AK09 Malin Array Si 30.99 326 P P **12 37 03.4 -0.6**
AK10 Malin Array Si 31.00 326 P P **12 37 03.6 -0.4**
AK10 pP **pP 12 37 06.8 -2.1**
AK06 Malin Array Si 31.02 326 P P **12 37 03.7 -0.5**
AK08 Malin Array Si 31.02 326 P P **12 37 03.8 -0.4**
AK05 Malin Array Si 31.03 326 P P **12 37 03.9 -0.5**
AK02 Malin Array Si 31.06 326 P P **12 37 04.1 -0.5**
AK12 Malin Array Si 31.07 326 P P **12 37 04.4 -0.3**
AK01 Malin Array Si 31.07 327 P P **12 37 04.4 -0.3**
AKASG Malin Array Be 31.08 327 P P **12 37 04.3 -0.4**
comp=Z,118nm,0.7s,baz=133,slow=8.1,SNR=16
AKASG ScP **ScP 12 43 41.0 -1.3**
comp=Z,7.1nm,1.0s,baz=104,slow=2.1,SNR=9.3
comp=Z,118nm,0.7s
AKBB Malin Array Si 31.08 327*d* *i*P P **12 37 04.3 -0.4**
KIEV Kiev 31.08 327 P P **12 37 04.2 -0.5**
KIEV Kiev 31.08 327 ⇑P P **12 37 05.0 +0.2**
KIEV Kiev 31.08 327 P P **12 37 04.9 +0.2**
LSA Lhasa 31.14 77 P P **12 37 07.0 +0.9**
LSA Lhasa 31.14 77 P P **12 37 04.4 -1.7**
LSA S S **12 42 08.0 -3.7**
LSA pmax pmax
comp=Z,78nm,0.9s
LSA LR LR
comp=Z,790nm,15.1s
LSA LR LR
comp=Z,1µm,19.0s
LSA LR LR
comp=Z,2µm,19.8s
LSA Lhasa 31.14 77 P P **12 37 07.0 +0.9**
LSA pmax pmax
comp=Z,59nm,0.8s
LSA MLR MLR
comp=Z,500nm,19.0s
TNR Turnu Rosu 31.15 315 ⇓P P **12 37 05.9 +0.4**
TNR Turnu Rosu 31.15 315 P P **12 37 05.9 +0.4**
KMPD K-Podol'skiy 31.27 321 P P **12 37 05.8 -0.7**
KMPD P P **12 37 05.8 -0.7**
MDB Medias 31.30 316 ⇓P P **12 37 08.5 +1.6**
MDB Medias 31.30 316 P P **12 37 08.4 +1.6**
OBN Obninsk 31.33 339 P P **12 37 07.9 +1.1**
comp=Z,308nm,0.5s,baz=108,slow=0.9,SNR=42
OBN LR LR 12 51 60.0
comp=Z,2µm,18.0s,baz=97,slow=41
comp=Z,308nm,0.5s
OBN Obninsk 31.33 339 P P **12 37 06.8 0.0**
OBN Obninsk 31.33 339*c* *i*P P **12 37 07.3 +0.5**
OBN *i* 12 38 05.9
OBN *i*S S **12 42 04.3 -8.8**
OBN pmax pmax
comp=Z,574nm,1.3s
OBN MLR MLR
comp=Z,1µm,17.0s
LUBAR Lubar, Ukraine 31.34 324 P P **12 37 06.7 -0.4**
LOT Lotru 31.39 314 ⇑P P **12 37 07.9 +0.2**
SRE Strehaia 31.44 313 ⇑P P **12 37 09.3 +1.2**
SRE Strehaia 31.44 313 P P **12 37 09.2 +1.2**
BURAR Bucovina Array 31.49 319 P P **12 37 08.3 -0.3**
BURAR IAmb IAmb 12 37 10.2
comp=Z,62nm,0.6s
BURAR Bucovina Array 31.49 319 ⇑P P **12 37 09.1 +0.5**
BURAR Bucovina Array 31.49 319 P P **12 37 09.1 +0.5**
BUR08 Bucovina Ar. S 31.52 319 P P **12 37 08.8 0.0**
MOS Moscow 31.52 340 *e*P P **12 37 08.7 +0.2**
MOS *e*PPP PPP 12 38 22.1
MOS pmax pmax
comp=Z,157nm,0.7s
MOS pmax pmax
comp=N,93nm,0.8s
MOS MLR MLR
comp=Z,800nm,17.0s
MI29 MI29, Kamyanyy 31.59 325 P P **12 37 09.1 -0.1**
comp=Z,1µm,1.0s
MI30 MI30,Zelenitsa 31.62 326 P P **12 37 08.9 -0.6**
comp=Z,406nm,0.9s
HORU Horodok 31.64 322 P P **12 37 09.4 -0.4**
SKO Skopje 31.73 307 *i*P P **12 37 11.5 +0.8**
KIRV Kirov 31.81 354 P P **12 37 12.1 +1.0**
comp=Z,304nm,0.7s,baz=166,slow=2.8,SNR=86
KIRV LR LR 12 52 33.5
comp=Z,1µm,20.3s,baz=155,slow=41
comp=Z,304nm,0.7s
KIRV Kirov 31.81 354*d* *i*P P **12 37 11.7 +0.6**
OHR Ohrid 31.96 305 *i*P P **12 37 13.7 +1.0**
MI28 MI28,Pidlybu 31.99 326 P P **12 37 11.4 -1.4**
GZR Gura Zlata 32.00 314 ⇑P P **12 37 13.2 +0.2**
GZR Gura Zlata 32.00 314 P P **12 37 13.2 +0.2**
HERR Herculane 32.04 312 ⇑P P **12 37 13.4 +0.1**
CJR Cluj-Napoca 32.04 316 ⇓P P **12 37 15.1 +1.7**
CJR Cluj-Napoca 32.04 316 P P **12 37 15.0 +1.7**
BOVS Bovan 32.07 310 ⇑P P **12 37 13.8 +0.2**
DEV Deva 32.12 314 ⇑P P **12 37 14.1 0.0**
DEV Deva 32.12 314 P P **12 37 14.0 0.0**
SHL Shillong 32.31 84 P P **12 37 16.1 0.0**
SHL Shillong 32.31 84 P P **12 37 16.1 0.0**
SHL pmax pmax
comp=Z,28nm,1.0s
SHL Shillong 32.31 84 P P **12 37 17.2 +1.1**
SNR=6.7
MARR Marisel-Cluj 32.32 316 ⇓P P **12 37 16.8 +1.0**
KEK Kerkira 32.38 302 P P **12 37 16.6 +0.2**
KEK IAmb IAmb 12 37 17.2
comp=Z,89nm,0.8s
BMR Baia Mare 32.54 318 ⇑P P **12 37 18.9 +1.2**
BMR Baia Mare 32.54 318 P P **12 37 18.8 +1.2**
DRGR 32.62 316 ⇓P P **12 37 19.2 +0.7**
DRGR 32.62 316 P P **12 37 19.2 +0.7**
MESR Meseseni 32.63 317 ⇑P P **12 37 19.2 +0.8**
BZS Buzias 32.84 313 ⇓P P **12 37 20.8 +0.4**
BZS Buzias 32.84 313 P P **12 37 20.7 +0.4**
PVY Plav 32.96 307 ⇑*i*P P **12 37 20.9 -0.7**
TRSU Trosnyk 33.06 318 P P **12 37 23.3 +1.2**
TRSU pP **pP 12 37 26.9 -0.2**
BANR Banloc 33.07 313 ⇓P P **12 37 23.9 +1.6**
RNPP5 Staryi Chortor 33.07 325 P P **12 37 21.8 -0.5**
IVA Berane 33.09 308 ⇓*i*P P **12 37 21.8 -0.8**
RNPP2 Kostyukhnivka 33.13 325 P P **12 37 22.8 +0.1**
BRIU Brid 33.13 319 P P **12 37 23.3 +0.5**
RNPP8 Varash 33.15 325 P P **12 37 23.0 +0.1**
RNPP9 Sopachiv 33.18 325 P P **12 37 22.9 -0.3**
KMBO Kilima Mbogo 33.24 215 *i*P P **12 37 26.7 +2.3**
KMBO pmax pmax
comp=Z,13nm,0.6s
LVV L'vov 33.29 322 P P **12 37 24.0 -0.2**
ULC Ulcinj 33.30 306 ⇓*i*P P **12 37 23.8 -0.7**
BERU Beregovo 33.31 318 P P **12 37 24.8 +0.5**
BORR Bors 33.33 316 ⇓P P **12 37 25.3 +0.8**
KOME Kolasin 33.35 308 ⇑*i*P P **12 37 24.8 -0.1**
SHIU Shidnytsya 33.36 320 P P **12 37 25.2 +0.3**
LTVH Ltavrtes, Hu 33.38 316 ⇓P P **12 37 26.5 +1.5**
DRME Dracevica, Mon 33.41 306 ⇓*i*P P **12 37 24.8 -0.5**

PDG Podgorica 33.42 307 P P **12 37 25.0 -0.4**
PDG IAmb IAmb 12 37 25.9
comp=Z,75nm,0.8s
PDG IAMs_20 IAMs_20 12 53 17.4
comp=Z,4µm,18.0s
PDG Podgorica 33.42 307 ⇓P P **12 37 25.1 -0.4**
PDG Podgorica 33.42 307 ⇑P P **12 37 24.9 -0.4**
PLE Pljevlja 33.57 308 ⇓*i*P P **12 37 26.8 -0.1**
BUM Brajici-Budva 33.64 306 ⇓*i*P P **12 37 27.1 -0.3**
CEME Cevo 33.69 307 ⇑*i*P P **12 37 27.1 -0.7**
NKME Niksic 33.72 307 ⇓*i*P P **12 37 27.4 -0.7**
KOLS Kolonicke sedl 33.85 319 *e*P P **12 37 30.1 +1.0**
KOLS pmax pmax
comp=Z,724nm,1.0s
UPM Unac-Piva 33.88 308 ⇓*i*P P **12 37 28.8 -0.8**
KIBK Kibwezi 33.88 213 P P **12 37 30.8 +1.1**
KIBK Kibwezi 33.88 213 P P **12 37 31.4 +1.6**
KIBK Kibwezi 33.88 213 P P **12 37 32.2 +2.5**
SNR=22
KWP Kalwaria Pacla 33.94 321 *e*P P **12 37 30.2 +0.4**
HCY Herceg Novi 33.97 307 ⇓*i*P P **12 37 29.4 -0.8**
BRY Bratogost 34.05 307 ⇓*i*P P **12 37 30.1 -1.0**
MNK Minsk 34.18 331 *i*P P **12 37 32.2 +0.4**
comp=E,59nm,0.6s
MNK *i*P P **12 37 32.2 +0.4**
comp=N,104nm,0.6s
MNK *i*P P **12 37 32.2 +0.4**
comp=Z,111nm,0.4s,baz=132
MNK *i*PP PP **12 38 45.7 -3.6**
MNK *i*PPP PPP 12 38 57.1
MNK *i*S S **12 42 58.8 +1.3**
MNK *i*SS SnSn **12 45 07.3 +1.3**
MNK *i*LQ LQ 12 48 50.3
MNK *i*LR LR 12 51 51.0
MNK *i*LRM MLR 12 53 34.8
comp=N,692nm,12.9s
MNK *i*LRM MLR 12 53 40.5
comp=Z,901nm,11.7s
MNK Minsk 34.18 331 *i*P P **12 37 32.2 +0.4**
MNK *i* 12 38 45.6
MNK *i* 12 40 09.4
MNK *i*S S **12 42 58.8 +1.3**
MNK *i*SS SnSn **12 45 07.2 +1.3**
MNK pmax pmax
comp=Z,111nm,0.4s
MNK pmax pmax
comp=N,104nm,0.6s
MNK pmax pmax
comp=E,59nm,0.6s
MNK MLR MLR
comp=N,692nm,13.0s
MNK MLR MLR
comp=Z,901nm,12.0s
MNK MLR MLR
comp=E,704nm,12.0s
GOMU GeErMu 34.25 65 P P **12 37 33.9 +0.7**
GOMU S S **12 43 01.0 +1.1**
GOMU pmax pmax
comp=E,61nm,1.0s
GOMU LR LR
comp=E,2µm,18.1s
GOMU LR LR
comp=E,1µm,16.2s
GOMU LR LR
comp=E,2µm,17.1s
ZAA0 Zalesovo Array 34.31 31 P P **12 37 32.6 -0.3**
ZALV Zalesovo Beam 34.31 31 P P **12 37 33.1 +0.1**
comp=E,130nm,0.5s,baz=240,slow=9.0,SNR=524
ZALV PcP **PcP 12 40 08.4 -0.4**
comp=E,11nm,0.5s,baz=242,slow=3.9,SNR=4.1
ZALV ScP **ScP 12 43 51.4 -2.0**
comp=E,5.7nm,0.8s,baz=240,slow=4.1,SNR=4.2
ZALV LR LR 12 53 26.1
comp=E,4µm,18.1s,baz=228,slow=40
comp=E,130nm,0.5s
ZALV Zalesovo Beam 34.31 31 *i*P P **12 37 32.0 -1.0**
ZALV pmax pmax
comp=Z,133nm,0.5s
TIP Timpagrande 34.60 300 P P **12 37 36.3 +0.5**
TIP Timpagrande 34.60 300 ⇑P P **12 37 36.6 +0.8**
STHS Stebnicka Huta 34.67 319 *e*P P **12 37 37.5 +1.3**
STHS Stebnicka Huta 34.67 319 *e*P P **12 37 37.5 +1.3**
KECS Kecovo 34.71 318 *e*P P **12 37 38.0 +1.5**
KECS pmax pmax
comp=Z,280nm,0.9s
KECS Kecovo 34.71 318 *e*P P **12 37 38.0 +1.5**
MORE Moreh 34.73 86 IAMs_20 IAMs_20 12 53 09.7
comp=Z,870nm,20.0s
PSZ Piszkesteto 34.84 316 P P **12 37 37.4 -0.3**
PSZ IAmb IAmb 12 37 39.6
comp=Z,110nm,0.8s
PSZ Piszkesteto 34.84 316 ⇓P P **12 37 38.1 +0.3**
PSZ Piszkesteto 34.84 316 P P **12 37 38.0 +0.3**
PSZ Piszkesteto 34.84 316 *e*P P **12 37 38.3 +0.6**
MATE Matera 34.88 303 ⇓P P **12 37 38.5 +0.3**
MATE Matera 34.88 303 *e*P P **12 37 35.9 -2.2**
NACGM Naroch 34.93 331 *e*P P **12 37 38.9 +0.6**
MORH Mrgy, Hungar 34.99 313 ⇓P P **12 37 39.4 +0.4**
CEL Celeste 35.15 299 P P **12 37 41.2 +0.7**
CEL IAmb IAmb 12 37 50.3
comp=Z,67nm,0.8s
NIE Niedzica 35.23 319 *e*P P **12 37 42.3 +1.3**
CUC Castrocucco 35.44 302 P P **12 37 44.1 +1.0**
BLY Banja Luka 35.51 310 ⇓P P **12 37 44.3 +0.8**
KLMR Klimovskoe 35.54 346 *e*P P **12 37 42.8 -0.7**
KLMR *e* 12 39 02.5
KLMR S S **12 43 20.2 +2.0**
KLMR SS SnSn **12 45 38.5 -0.1**
KLMR pmax pmax
comp=Z,399nm,1.1s
LANS Liptovska Anna 35.60 318 *e*P P **12 37 45.1 +0.8**
LANS pmax pmax
comp=Z,181nm,0.8s
LANS Liptovska Anna 35.60 318 *e*P P **12 37 45.1 +0.8**
SRO Srobarova 35.78 315 *e*P P **12 37 46.4 +0.7**
SRO pmax pmax
comp=Z,219nm,1.0s
SRO Srobarova 35.78 315 *e*P P **12 37 46.4 +0.7**
OJC Ojcow 35.87 320 *e*P P **12 37 47.1 +0.6**
SUW Suwalki 36.03 327 *e*P P **12 37 47.8 0.0**
SUW Suwalki 36.03 327 P P **12 37 47.5 -0.3**
SUW Suwalki 36.03 327 P P **12 37 47.5 -0.3**
SUW Suwalki 36.03 327 *e*P P **12 37 48.0 +0.2**
BEL Belsk 36.08 323 *e*P P **12 37 48.6 +0.4**
R9F13 Warsaw-Wawer 36.09 324 *i*P P **12 37 49.3 +1.0**
R9F13 *e*S S **12 43 27.7 +0.8**
VAE Valguarnera 36.24 297 P P **12 37 52.7 +2.8**
comp=Z,108nm,0.9s,baz=83,slow=5.3,SNR=40
VAE LR LR 12 57 08.7
comp=Z,638nm,18.2s,baz=86,slow=44
RAFF Raffo Rosso 36.27 297 P P **12 37 51.7 +1.6**
RAFF IAmb IAmb 12 37 53.3
comp=Z,155nm,1.0s
PAOL Paolisi 36.55 303 P P **12 37 52.8 +0.3**
PAOL IAmb IAmb 12 37 54.7
comp=Z,126nm,0.9s
PABE Paberze 36.55 330 P P **12 37 51.9 -0.3**
PABE Paberze 36.55 330 *e*P P **12 37 52.5 +0.2**
JAVC Velka Javorina 36.57 317 *e*P P **12 37 54.1 +1.5**
MBAR Mbarara 36.59 225 LR LR 12 54 51.9
comp=Z,5µm,18.7s,baz=41,slow=40
SMOL Smolenice 36.59 316 *e*P P **12 37 53.3 +0.6**
SMOL pmax pmax
comp=Z,61nm,1.2s
MODS Modra-Piesok 36.63 316 *e*P P **12 37 53.4 +0.4**
MODS pmax pmax
comp=Z,244nm,1.2s
MODS Modra-Piesok 36.63 316 *e*P P **12 37 53.4 +0.4**
MAUC Maruska 36.67 318 *e*P P **12 37 53.7 +0.3**
OKC Ostrava-Krasne 36.67 319 *e*P P **12 37 53.5 +0.2**
OKC Ostrava-Krasne 36.67 319 *e*P P **12 37 53.5 +0.2**
ZST Bratislava 36.67 316 *e*P P **12 37 54.2 +0.8**
ZST pmax pmax
comp=Z,18nm,0.9s
ZST Bratislava 36.67 316 *e*P P **12 37 54.2 +0.8**
GCIS Gornji Cirnik 36.88 311 *e*P P **12 37 55.5 +0.4**
GCIS *e*S S **12 43 40.0 +0.8**
STEB Steborice 36.93 319 *e*P P **12 37 55.6 0.0**
MORC Moravsky Berou 37.00 318 P P **12 37 56.4 +0.1**
MORC Moravsky Berou 37.00 318 ⇓P P **12 37 56.2 0.0**
MORC Moravsky Berou 37.00 318 P P **12 37 56.4 +0.1**
MORC pmax pmax
comp=Z,196nm,0.7s
MORC Moravsky Berou 37.00 318 *e*P P **12 37 56.0 -0.2**

RONA Rosalia, Austr 37.01 314 *i*P P **12 37 56.4 +0.1**
comp=Z,55nm,0.5s,SNR=39
RONA *e*ScP **ScP 12 44 03.0 -0.4**
comp=Z,16nm,1.7s
PUL Pulkovo 37.09 339*ce*P P **12 37 57.5 +0.8**
PUL pmax pmax
comp=Z,321nm,0.6s
INTR Introdacqua 37.20 305 P P **12 37 58.4 +0.3**
INTR IAmb IAmb 12 38 00.8
comp=Z,195nm,0.8s
ARSA Arzberg 37.36 313 *e*P P **12 37 59.5 +0.2**
comp=Z,22nm,0.5s,SNR=27
ARSA *e*ScP **ScP 12 44 04.7 -0.1**
comp=Z,4.8nm,0.7s,SNR=4.4
ARSA Arzberg 37.36 313 S **ScP 12 44 04.7 -0.1**
comp=Z,4.8nm,0.7s,SNR=4.4
CONA Conrad Observa 37.36 315 *e*P P **12 37 59.2 -0.1**
comp=Z,15nm,0.6s,SNR=26
CONA *e*ScP **ScP 12 44 03.9 -1.0**
comp=Z,12nm,2.0s
VSU Vasula 37.37 335*de*P P **12 37 57.9 -1.2**
VSU pmax pmax
comp=Z,222nm,0.9s
VSU Vasula 37.37 335 *e*P P **12 37 58.2 -0.9**
VRAC Vranov 37.39 317 P P **12 38 00.4 +0.8**
comp=Z,184nm,0.7s,baz=107,slow=8.4,SNR=247
VRAC LR LR 12 57 51.5
comp=Z,2µm,18.5s,baz=118,slow=43
comp=Z,184nm,0.7s
VRAC Vranov 37.39 317 ⇓P P **12 38 00.2 +0.7**
VRAC Vranov 37.39 317 *e*P P **12 37 59.4 -0.1**
KRUC Moravsky 37.42 317 *e*P P **12 37 59.7 -0.1**
SOKA Soboth 37.51 312 *e*P P **12 38 00.7 +0.1**
comp=Z,20nm,0.6s,SNR=21
SOKA *e*ScP **ScP 12 44 05.4 0.0**
comp=Z,8.2nm,0.8s
AQU L'Aquila 37.63 305 P P **12 38 01.3 -0.4**
AQU L'Aquila 37.63 305 P P **12 38 02.5 +0.8**
comp=Z,2µmcomp=Z,191nm,1.0s
GBAS Gorenja Brezov 37.69 311 *i*P P **12 38 02.3 +0.2**
OBKA Obir 37.78 312 *i*P P **12 38 03.1 +0.2**
comp=Z,46nm,0.8s,SNR=22
PBUR Paburge 37.79 329 *e*P P **12 38 02.8 0.0**
GUMA Gualdo di Mace 37.81 306 P P **12 38 03.5 +0.3**
PBA Port Blair 37.91 107 P P **12 38 03.3 -1.0**
JAVS Javornik 37.94 311 *i*P P **12 38 04.1 -0.2**
DPC Dobruska-Polom 37.95 319 *e*P P **12 38 04.4 +0.1**
DPC Dobruska-Polom 37.95 319 *e*P P **12 38 04.4 +0.1**
DPC Dobruska-Polom 37.95 319 P P **12 38 04.3 0.0**
comp=Z,212nm,0.8s
TREC Trest 38.06 317 *e*P P **12 38 06.1 +0.9**
TREC AMS AMS 12 57 30.0
comp=Z,3µm,17.9s
TREC Trest 38.06 317 *e*P P **12 38 06.1 +0.9**
TREC MLR MLR
comp=Z,3µm,17.9s
OSTC Ostas 38.09 319 *e*P P **12 38 05.5 0.0**
OSTC Ostas 38.09 319 *e*P P **12 38 05.5 0.0**
KSP Ksiaz 38.16 319 *e*P P **12 38 06.3 +0.3**
KSP Ksiaz 38.16 319 P P **12 38 06.1 +0.1**
comp=Z,209nm,0.9s
UPC Upice 38.20 319 *e*P P **12 38 06.4 +0.1**
UPC Upice 38.20 319 *e*P P **12 38 06.4 +0.1**
CHVC Chvalec 38.20 319 *e*P P **12 38 06.4 0.0**
CHVC Chvalec 38.20 319 *e*P P **12 38 06.4 0.0**
SABO M.te Sabotino 38.27 311 P P **12 38 06.5 -0.5**
SABO IAmb IAmb 12 38 08.1
comp=Z,163nm,0.7s
CESX Cesi 38.27 305 P P **12 38 07.2 +0.2**
CESX IAmb IAmb 12 38 09.1
comp=Z,202nm,0.9s
TNCH TengChong 38.30 83 P P **12 38 09.9 +2.2**
TNCH S S **12 44 03.5 +1.8**
TNCH SS SnSn **12 46 41.5 -5.2**
TNCH pmax pmax
comp=Z,110nm,0.9s
TNCH pmax pmax
comp=Z,420nm,3.0s
TNCH LR LR
comp=Z,690nm,15.1s
TNCH LR LR
comp=Z,760nm,12.3s
TNCH LR LR
comp=Z,2µm,16.9s
ARBE Arbavere 38.33 336 *e*P P **12 38 07.4 +0.2**
MOA Molln 38.35 314 *i*P P **12 38 07.2 -0.5**
comp=Z,67nm,0.6s,SNR=41
MOA *e*S S **12 44 01.7 +0.1**
comp=Z,9.2nm,1.4s
MYKA Terra Mystica 38.41 312 *e*P P **12 38 08.3 +0.1**
comp=Z,56nm,0.7s,SNR=25
GTA2 Gaotai 38.43 60 P P **12 38 09.0 +0.5**
GTA2 pP pP 12 38 13.9 +0.4
GTA2 pmax pmax
comp=Z,130nm,1.1s
GTA2 LR LR
comp=Z,2µm,14.5s
GTA2 LR LR
comp=Z,2µm,13.8s
GTA2 LR LR
comp=Z,1µm,14.2s
ADZR Andozero 38.57 348*c* *i*P P **12 38 10.0 +0.8**
ADZR pmax pmax
comp=Z,287nm,0.6s
SLIT Slitere, Latvi 38.59 332 *e*P P **12 38 09.6 +0.1**
CKRC Cesky Krumlov 38.63 315 *e*P P **12 38 09.9 -0.1**
CKRC Cesky Krumlov 38.63 315 *e*P P **12 38 09.9 -0.1**
MTSE Matsula 38.66 334 *e*P P **12 38 10.2 +0.2**
GKP Gorka Klasztor 38.67 323 *e*P P **12 38 10.4 +0.2**
BIOA Bad Ischl, Aus 38.71 314 *i*P P **12 38 10.6 -0.1**
comp=Z,71nm,0.5s,SNR=52
KBA Koelnbreinsper 38.73 312 *i*P P **12 38 10.8 -0.2**
comp=Z,73nm,0.6s,SNR=77
KBA *e*ScP **ScP 12 44 11.3 +1.1**
comp=Z,5.3nm,1.1s
PRU Pruhonice 38.88 317 *e*P P **12 38 11.7 -0.3**
PRU Pruhonice 38.88 317 *e*P P **12 38 11.7 -0.3**
ZVC Zvikov 38.91 316 *e*P P **12 38 12.5 +0.2**
PRA Prague 38.98 317 *e*P P **12 38 13.4 +0.6**
PRA Prague 38.98 317 *e*P P **12 38 13.4 +0.6**
GEC2 GERESS Array S 39.02 315 *e*P P **12 38 12.9 -0.4**
comp=Z,106nm,1.1s,baz=109,slow=8.3
GERES GERESS Array B 39.02 315 P P **12 38 12.9 -0.4**
comp=Z,34nm,0.4s,baz=101,slow=7.4,SNR=270
GERES ScP **ScP 12 44 09.8 -1.3**
comp=Z,3.7nm,0.9s,baz=145,slow=2.8,SNR=4.9
GERES LR LR 12 56 46.6
comp=Z,953nm,19.7s,baz=116,slow=40
comp=Z,34nm,0.4s
KHC Kasperske Hory 39.19 316 *e*P P **12 38 14.0 -0.7**
KHC *ex* x 12 38 33.5
KHC Kasperske Hory 39.19 316 *e*P P **12 38 14.0 -0.7**
ABTA Abfaltersbach 39.19 312 *i*P P **12 38 14.7 -0.1**
comp=Z,86nm,0.7s,SNR=59
ABTA *e*ScP **ScP 12 44 11.0 -0.8**
comp=Z,6.6nm,1.4s
LESA Schwarzleotal 39.26 313 *i*P P **12 38 14.8 -0.5**
comp=Z,117nm,0.5s,SNR=57
LESA *e*ScP **ScP 12 44 11.3 -0.8**
comp=Z,12nm,1.4s
JOF Joensuu 39.30 343 *e*P P **12 38 15.8 +0.6**
RICC Richard 39.34 318 *e*P P **12 38 16.4 +0.5**
KNGR Kungurtug, Tuv 39.38 42*c* *i*P P **12 38 17.6 +1.3**
KNGR pmax pmax
comp=Z,81nm,0.8s
TEOL Teolo 39.44 309 P P **12 38 16.4 -0.4**
TEOL IAmb IAmb 12 38 18.0
comp=Z,168nm,0.7s
MEF Metsahovi 39.45 336 *e*P P **12 38 16.8 +0.2**
BRG Berggiesshubel 39.55 318 *e*P P **12 38 17.8 +0.1**
comp=Z,192nm,0.7s,baz=109,slow=8.3
BRG Berggiesshubel 39.55 318 ⇓*i*P P **12 38 17.6 0.0**
BRG Amp 12 38 19.1
comp=Z,133nm,0.7s
CTI Castel Tesino 39.61 310 P P **12 38 18.1 -0.2**
CTI Castel Tesino 39.61 310 P P **12 38 18.1 -0.2**
CTI pmax pmax
comp=Z,246nm,0.6s
WET Wettzell 39.63 315 *e*P P **12 38 17.6 -0.7**
comp=Z,62nm,0.6s,baz=109,slow=8.3
ZCCA Zocca 39.73 308 P P **12 38 20.6 +1.4**
ZCCA IAmb IAmb 12 38 28.7
comp=Z,259nm,0.8s
FINES FINESS Array B 39.73 338 P P **12 38 19.1 +0.1**
comp=Z,125nm,0.5s,baz=140,slow=9.8,SNR=786

FINES PP **PP** **12 39 51.7 +1.6**
comp=Z,72nm,1.0s,baz=140,slow=9.7,SNR=5.2
FINES LR LR 12 58 02.7
comp=Z,1µm,18.2s,baz=168,slow=41
comp=Z,125nm,0.5s
FINES FINESS Array B 39.73 338 P **P** **12 38 18.3 -0.6**
FINES FINESS Array B 39.73 338 *i* P **P** **12 38 18.7 -0.2**
FINES pmax pmax
comp=Z,126nm,0.5s
HSKC Hora Svate Kat 39.77 318 *eP* **P** **12 38 19.2 -0.2**
WTTA Wattenberg 39.90 312 *eP* **P** **12 38 20.2 -0.6**
comp=Z,277nm,0.5s,SNR=118
WTTA ScP **ScP** **12 44 14.8 +0.1**
comp=Z,8.3nm,1.1s,SNR=7.3
WTTA Wattenberg 39.90 312 S **ScP** **12 44 14.8 +0.1**
comp=Z,8.3nm,1.1s,SNR=7.3
WATA Walderalm 39.96 312 *eP* **P** **12 38 20.3 -1.0**
comp=Z,165nm,0.6s,SNR=83
WATA *e*ScP **ScP** **12 44 14.2 -0.7**
comp=Z,8.8nm,1.4s
VLC Villacollemand 40.11 307 P **P** **12 38 21.3 -1.1**
SQTA Sankt Quirin 40.18 312 *i* P **P** **12 38 22.3 -0.7**
comp=Z,411nm,0.5s,SNR=126
SQTA *e*ScP **ScP** **12 44 15.3 -0.3**
comp=Z,10nm,1.2s
ROTZ Rotzenmuhle 40.24 316 *eP* **P** **12 38 23.2 -0.2**
comp=Z,36nm,0.9s,baz=109,slow=8.3
RUE Ruedersdorf 40.24 321 *eP* **P** **12 38 23.9 +0.6**
RUE Ruedersdorf 40.24 321 *eP* **P** **12 38 23.7 +0.5**
comp=Z,152nm,0.7s,baz=109,slow=8.3
CLL Collm 40.26 319 P **P** **12 38 23.7 +0.3**
CLL lAmb lAmb 12 38 25.1
comp=Z,164nm,0.8s
CLL Collm 40.26 319 *i* P **P** **12 38 23.8 +0.3**
CLL *e*S **S** **12 44 34.0 +3.9**
CLL pmax pmax
comp=Z,173nm,0.8s
CLL Collm 40.26 319 P **P** **12 38 23.6 +0.1**
comp=Z,224nm,0.9s
CLL Collm 40.26 319 *i* P **P** **12 38 23.8 +0.3**
comp=Z,173nm,0.8s
CLL *i* x x 12 38 31.7
CLL *e*PP **PP** **12 39 55.0 -1.1**
CLL *e*x x 12 40 06.0
CLL *e*S **S** **12 44 34.0 +3.9**
CLL *e*PKPPKPd **P'P'df** **13 10 46.0 -5.6**
CLL Collm 40.26 319 *eP* **P** **12 38 23.8 +0.3**
comp=Z,157nm,0.8s,baz=109,slow=8.3
PRMA PARMA 40.27 308 P **P** **12 38 24.6 +0.9**
KEST Kesra 40.27 294 P **P** **12 38 25.7 +1.8**
comp=Z,61nm,0.8s,baz=136,slow=3.8,SNR=84
KEST LR LR 12 59 16.2
comp=Z,883nm,19.6s,baz=59,slow=42
comp=Z,61nm,0.8s
KEST Kesra 40.27 294 P **P** **12 38 26.0 +2.1**
KEST P **P** **12 38 26.0 +2.1**
SNR=42
MOTA Moosalm 40.27 312 *eP* **P** **12 38 22.7 -1.1**
comp=Z,246nm,0.6s,SNR=66
MOTA *e*ScP **ScP** **12 44 15.5 -0.6**
comp=Z,15nm,1.0s,SNR=4.5
MOTA Moosalm 40.27 312 S **ScP** **12 44 15.5 -0.6**
comp=Z,15nm,1.0s,SNR=4.5
MANZ Manzenberg 40.37 316 *eP* **P** **12 38 24.6 +0.1**
comp=Z,15nm,0.9s,baz=109,slow=8.3
FUR Furstenfeldbru 40.37 314 *eP* **P** **12 38 24.0 -0.5**
comp=Z,191nm,0.6s,baz=109,slow=8.3
CHTO Chiang Mai 40.42 92 P **P** **12 38 26.2 +1.0**
CHTO P **P** **12 38 26.2 +1.0**
CHTO Chiang Mai 40.42 92 P **P** **12 38 25.3 +0.1**
FETA Feichten 40.45 312 *eP* **P** **12 38 24.7 -0.6**
comp=Z,255nm,0.5s,SNR=109
FETA ScP **ScP** **12 44 16.3 -0.5**
comp=Z,12nm,1.0s,SNR=4.6
FETA Feichten 40.45 312 S **ScP** **12 44 16.3 -0.5**
comp=Z,12nm,1.0s,SNR=4.6
PLN Plauen 40.49 317 *eP* **P** **12 38 25.3 -0.1**
comp=Z,14nm,1.0s,baz=109,slow=8.3
RETA Reutte 40.53 312 *i* P **P** **12 38 24.8 -1.1**
comp=Z,129nm,0.6s,SNR=33
RETA *e*ScP **ScP** **12 44 16.8 -0.2**
comp=Z,20nm,1.2s
CM31 Chiang Mai Arr 40.54 93 P **P** **12 38 27.2 +1.0**
SNR=6.6
CMAR Chiang Mai Arr 40.54 93 P **P** **12 38 27.4 +1.1**
comp=Z,4.6nm,0.7s,baz=285,slow=9.6,SNR=28
CMAR PcP **PcP** **12 40 29.1 +0.5**
comp=Z,4.6nm,0.8s,baz=292,slow=4.9,SNR=4.5
CMAR ScP **ScP** **12 44 16.6 -0.8**
comp=Z,3.3nm,0.9s,baz=286,slow=4.6,SNR=5.7
CMAR LR LR 12 57 58.0
comp=Z,715nm,20.9s,baz=290,slow=40
CMAR Chiang Mai Arr 40.54 93 P **P** **12 38 27.5 +1.3**
SUF Sumiainen 40.64 340 *eP* **P** **12 38 26.8 +0.3**
KEF Keuruu 40.65 338 *eP* **P** **12 38 26.8 +0.2**
SBV Sambava 40.69 189 P **P** **12 38 28.9 +1.6**
SNR=5.4
BSD Bornholm Skovb 40.73 325 *i* P **P** **12 38 26.8 -0.5**
BSD lAmb lAmb 12 38 27.1
comp=Z,394nm,0.6s
BSD Bornholm Skovb 40.73 325 *eP* **P** **12 38 26.6 -0.7**
GRF Grafenberg Arr 40.83 316 *eP* **P** **12 38 28.2 0.0**
comp=Z,246nm,0.8s,baz=109,slow=8.3
GRF *e*L L 12 59 11.2
comp=Z,2µm,18.6s
BLEU Blekinge 40.83 327 *i* P **P** **12 38 28.1 0.0**
PZH PanZhiHua 40.84 80 P **P** **12 38 30.3 +1.5**
PZH PP **PnPn** **12 40 08.1 +1.0**
PZH S **S** **12 44 38.5 -1.1**
PZH ScS **ScS** **12 48 31.5 -2.4**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,300nm,5.7s
PZH LR LR
comp=Z,560nm,18.4s
PZH LR LR
comp=Z,500nm,12.2s
PZH LR LR
comp=Z,630nm,14.3s
MOX Moxa 40.87 317 *eP* **P** **12 38 28.5 -0.1**
comp=Z,60nm,1.0s,baz=109,slow=8.3
MOX *e*L L 12 58 09.6
comp=Z,710nm,19.3s
NEUB Neuenburg 40.95 318 *eP* **P** **12 38 29.8 +0.6**
comp=Z,154nm,0.6s,baz=109,slow=8.3
RAF Rauma 40.96 335 *eP* **P** **12 38 27.8 -1.3**
DAVOX Davos/Dischmat 40.96 311 P **P** **12 38 29.4 -0.2**
comp=Z,230nm,0.6s,baz=95,slow=5.8,SNR=428
DAVOX LR LR 12 59 13.2
comp=Z,2µm,20.1s,baz=88,slow=42
comp=Z,230nm,0.6s
CBOGS Bougous 41.01 296 P **P** **12 38 31.5 +1.6**
UBR Ueberruh 41.01 313 *eP* **P** **12 38 29.1 -0.8**
comp=Z,381nm,0.8s,baz=109,slow=8.3
DAVA Damuels 41.07 312 *i* P **P** **12 38 29.8 -0.6**
comp=Z,781nm,0.5s,SNR=135
DAVA *e*S **S** **12 44 40.8 -1.8**
comp=Z,12nm,1.0s
AAL Aland 41.10 334 *eP* **P** **12 38 29.9 -0.4**
TUE Stuetta 41.26 311 P **P** **12 38 31.9 -0.2**
comp=Z,645nm,0.8s
LZDM Lanzhou Array 41.44 65 P **P** **12 38 34.9 +1.0**
comp=Z,44nm,0.8s,baz=255,slow=10,SNR=99
LZDM ScP **ScP** **12 44 20.4 -0.8**
comp=Z,0.4nm,0.3s,baz=268,slow=5.2,SNR=3.7
LZDM LR LR 12 59 20.1
comp=Z,2µm,19.6s,baz=25,slow=41
comp=Z,44nm,0.8s
LZH Lanzhou 41.55 65 *eP* **P** **12 38 35.5 +0.9**
LZH sP sP 12 38 45.6 +4.0
LZH ScP **ScP** **12 44 20.8 -0.6**
LZH S **S** **12 44 48.9 -1.2**
LZH pmax pmax
comp=Z,130nm,1.3s
LZH pmax pmax
comp=Z,270nm,4.8s
LZH LR LR
comp=Z,2µm,12.7s
LZH LR LR
comp=Z,2µm,13.4s
LZH LR LR
comp=Z,3µm,13.1s
FLTG Flechtingen 41.64 320 *eP* **P** **12 38 35.1 +0.3**
baz=109,slow=8.3
CRHA Rehia 41.65 294 P **P** **12 38 36.6 +1.3**
LUNU Lund 41.71 325 *i* P **P** **12 38 35.3 0.0**

MOY Mondy 41.80 42 *eP* **P** **12 38 36.7 +0.4**
MOY pmax pmax
comp=Z,80nm,1.6s
CMAH Djebel Manchou 41.81 296 P **P** **12 38 37.5 +0.9**
CNGR Negrine 41.82 292 P **P** **12 38 38.8 +2.2**
GORT1 Trebel 41.83 321 *eP* **P** **12 38 37.1 +0.8**
baz=109,slow=8.3
STU Stuttgart 41.86 314 *eP* **P** **12 38 36.6 -0.1**
DEL Delary 41.86 326 *i* P **P** **12 38 36.4 -0.2**
CD2 Chengdu 41.88 73 P **P** **12 38 37.8 +0.7**
CD2 S **S** **12 45 00.8 +6.1**
CD2 pmax pmax
comp=Z,120nm,0.8s
CD2 LR LR
comp=Z,3µm,19.6s
CD2 LR LR
comp=Z,2µm,17.6s
CD2 LR LR
comp=Z,2µm,15.2s
UBBA Unterbreizbach 41.90 317 *eP* **P** **12 38 37.4 +0.5**
comp=Z,39nm,0.7s,baz=109,slow=8.3
ASSE Asse, Remlinge 41.90 319 *eP* **P** **12 38 37.0 +0.1**
baz=109,slow=8.3
CLZ Clausthal 41.99 319 *eP* **P** **12 38 38.3 +0.5**
baz=109,slow=8.3
VAF Ylistaro 41.99 338 *eP* **P** **12 38 37.8 +0.3**
KMI2 Kunming 42.01 82 P **P** **12 38 39.9 +1.3**
KMI2 S **S** **12 44 57.8 +0.6**
KMI2 SS **SS** **12 48 04.8 +0.4**
KMI2 pmax pmax
comp=Z,56nm,0.8s
KMI2 pmax pmax
comp=Z,260nm,4.3s
KMI2 LR LR
comp=Z,600nm,22.2s
KMI2 LR LR
comp=Z,610nm,16.9s
KMI2 LR LR
comp=Z,800nm,21.3s
CBBAR Babar 42.05 293 P **P** **12 38 40.9 +2.3**
CBST Bordj Sabath 42.08 295 P **P** **12 38 40.0 +1.3**
BJUU Bjuv 42.11 325 *i* P **P** **12 38 38.7 +0.1**
COP Copenhagen 42.25 325 *i* P **P** **12 38 40.8 +1.1**
COP lAmb lAmb 12 38 41.5
comp=Z,663nm,0.7s
BFO Black Forest 42.32 313 P **P** **12 38 40.0 -0.5**
BFO Black Forest 42.32 313 P **P** **12 38 40.0 -0.5**
BFO pmax pmax
comp=Z,46nm,0.7s
CSGS Sigus 42.40 295 P **P** **12 38 43.1 +1.7**
CTGD Timgad 42.57 294 P **P** **12 38 43.9 +1.1**
CASM Ain Smara 42.57 295 P **P** **12 38 43.9 +1.1**
SENIN Lac Senin/Sane 42.63 310 P **P** **12 38 42.5 -0.7**
SENIN lAmb lAmb 12 38 44.2
comp=Z,118nm,0.5s
CTEI Djebel Teioual 42.65 295 P **P** **12 38 44.8 +1.3**
FABU Falkenberg 42.67 327 *i* P **P** **12 38 43.3 +0.2**
TNS Taunus Mts 42.69 316 *eP* **P** **12 38 44.0 +0.4**
comp=Z,58nm,0.8s,baz=109,slow=8.3
CBOS Bilal Ibnou Ra 42.69 296 P **P** **12 38 44.8 +1.1**
CBHR Beni Haroun da 42.74 296 P **P** **12 38 45.2 +1.2**
COAT Oued Athmania 42.74 295 P **P** **12 38 44.8 +0.7**
APA Apatity 42.74 348 ⇓ *i* P **P** **12 38 42.9 -0.7**
APA *i* 12 40 28.9
APA *i* S **S** **12 45 04.8 -1.7**
APA pmax pmax
comp=Z,132nm,0.9s
APA MLR MLR
comp=Z,5µm,13.8s
LVZ Lovozero 42.80 348 P **P** **12 38 43.7 -0.4**
LVZ lAmb lAmb 12 38 59.1
comp=Z,134nm,1.2s
LVZ Lovozero 42.80 348 *d* *i* P **P** **12 38 44.9 +0.8**
LVZ pmax pmax
comp=Z,30nm,0.5s
LVZ MLR MLR
comp=Z,2µm,17.0s
ZAK Zakamensk 42.82 44 *eP* **P** **12 38 44.4 -0.2**
ZAK pmax pmax
comp=Z,49nm,1.6s
RETH Rethem/Aller, 42.86 320 *eP* **P** **12 38 45.5 +0.8**
baz=109,slow=8.3
BNI Bardonecchia 42.86 308 P **P** **12 38 44.0 -1.0**
BNI lAmb lAmb 12 38 45.6
comp=Z,124nm,0.8s
BNI Bardonecchia 42.86 308 P **P** **12 38 44.1 -1.0**
BNI pmax pmax
comp=Z,124nm,0.8s
BORU Boraas 42.93 327 *i* P **P** **12 38 45.0 -0.2**
KASTN Kahler Asten 42.97 317 *eP* **P** **12 38 46.3 +0.6**
comp=Z,72nm,0.7s,baz=109,slow=8.3
CJSR Ain Djasser 43.03 295 P **P** **12 38 48.2 +1.7**
DFRA Djebel Bou Aff 43.05 296 P **P** **12 38 49.5 +2.7**
ECH Echery 43.06 313 P **P** **12 38 46.2 -0.4**
ECH lAmb lAmb 12 38 47.2
comp=Z,157nm,0.9s
ECH Echery 43.06 313 P **P** **12 38 46.2 -0.4**
ECH pmax pmax
comp=Z,157nm,0.9s
ONAU Onsala 43.23 327 *i* P **P** **12 38 47.4 -0.4**
TLY Talaya 43.38 42 P **P** **12 38 49.6 +0.6**
TLY Talaya 43.38 42 *c* *i* P **P** **12 38 50.3 +1.3**
TLY pmax pmax
comp=Z,62nm,2.5s
TLY Talaya 43.38 42 P **P** **12 38 50.7 +1.7**
SET Setif 43.45 295 P **P** **12 38 49.0 -1.0**
CAZD Ain Tagrout 43.65 295 P **P** **12 38 52.5 +1.0**
TJOU Tjoern 43.65 328 *i* P **P** **12 38 51.9 +0.8**
IBBN Ibbenburen 43.67 319 *eP* **P** **12 38 52.4 +1.1**
baz=109,slow=8.3
HFS Hagfors 43.70 331 P **P** **12 38 51.1 -0.3**
comp=Z,98nm,0.5s,baz=128,slow=9.7,SNR=352
HFS PP **PP** **12 40 30.4 -2.7**
comp=Z,59nm,0.8s,baz=114,slow=15,SNR=4.1
comp=Z,98nm,0.5s
BUG Bochum--Univer 43.73 317 *eP* **P** **12 38 52.4 +0.6**
baz=109,slow=8.3
IRK Irkutsk 43.91 42 *eP* **P** **12 38 51.1 -2.2**
IRK pmax pmax
comp=Z,79nm,2.9s
WLF Walferdange 44.01 315 P **P** **12 38 53.6 -0.5**
WLF Walferdange 44.01 315 P **P** **12 38 53.9 -0.2**
WLF lAmb lAmb 12 38 55.3
comp=Z,148nm,0.8s
WLF Walferdange 44.01 315 P **P** **12 38 53.9 -0.2**
WLF pmax pmax
comp=Z,149nm,0.8s
WLF Walferdange 44.01 315 *dP* **P** **12 38 53.9 -0.2**
comp=Z,125nm,0.8s
WLF Walferdange 44.01 315 *eP* **P** **12 38 54.0 -0.2**
comp=Z,103nm,0.7s,baz=109,slow=8.3
CTCHA Tamokra 44.05 295 P **P** **12 38 54.7 +0.1**
BTNL Ternell 44.22 316 *dP* **P** **12 38 56.6 +0.8**
comp=Z,97nm,0.9s
MUD Monsted U'grnd 44.23 325 *i* P **P** **12 38 56.8 +1.0**
MUD lAmb lAmb 12 38 57.5
comp=Z,161nm,0.8s
BHOU Houvegnez 44.25 315 *dP* **P** **12 38 57.1 +1.1**
comp=Z,48nm,0.0s
MAHO Mahon 44.28 300 P **P** **12 38 56.4 0.0**
MAHO Mahon 44.28 300 P **P** **12 38 56.3 0.0**
MAHO lAmb lAmb 12 38 58.2
comp=Z,197nm,1.0s
SONM Songino Array 44.29 48 P **P** **12 38 57.1 +0.6**
comp=Z,26nm,0.8s,baz=263,slow=9.5,SNR=132
SONM LR LR 12 59 47.0
comp=Z,4µm,19.9s,baz=263,slow=39
comp=Z,26nm,0.8s
MEM Membach 44.30 316 *dP* **P** **12 38 56.8 +0.4**
comp=Z,107nm,1.0s
MEM *d*PcP **PcP** **12 40 40.8 +0.3**
STRU Stroemstad 44.30 329 *i* P **P** **12 38 55.4 -0.9**
SSB Saint Sauveur 44.39 308 P **P** **12 38 56.5 -0.8**
SSB lAmb lAmb 12 38 57.8
comp=Z,91nm,0.8s
SSB Saint Sauveur 44.39 308 P **P** **12 38 56.5 -0.8**
SSB pmax pmax
comp=Z,91nm,0.8s
ATKB Taksebt 44.46 296 P **P** **12 38 58.5 +0.6**
ABSD Ouled Sidi Bra 44.47 294 P **P** **12 38 57.7 -0.4**
BEBN Eben Emael 44.55 316 *dP* **P** **12 38 59.0 +0.7**
comp=Z,159nm,0.8s
BEBN *d*PcP **PP** **12 40 41.9 -0.4**
BSTI Sart Tilman 44.57 316 *dP* **P** **12 38 59.8 +1.3**
comp=Z,17nm,0.9s

AKET Djebel Ketaf 44.69 295 P **P** **12 39 01.1 +1.2**
RCHB Rochefort 44.69 315 *dP* **P** **12 38 59.8 +0.2**
comp=Z,84nm,0.9s
BCLA Clavier 44.70 315 *dP* **P** **12 39 00.1 +0.5**
ULN Ulaanbaatar 44.73 48 P **P** **12 39 00.5 +0.4**
ULN Ulaanbaatar 44.73 48 P **P** **12 39 00.5 +0.4**
ULN pmax pmax
comp=Z,37nm,0.8s
ULN MLR MLR
comp=Z,3µm,19.0s
ULN Ulaanbaatar 44.73 48 P **P** **12 39 00.7 +0.6**
ULN P **P** **12 39 00.7 +0.6**
ULN Ulaanbaatar 44.73 48 P **P** **12 39 00.5 +0.4**
comp=Z,3µmcomp=Z,252nm,1.5s
BGES Gesves 44.83 315 *dP* **P** **12 39 01.3 +0.7**
comp=Z,124nm,1.1s
MLSI Meulaboh, Aceh 44.88 113 P **P** **12 38 59.8 -1.7**
comp=Z,61nm,1.2s
OSL Oslo 44.92 330 *eP* **P** **12 39 01.4 +0.3**
NC602 NORSAR Array S 44.92 331 *eP* **P** **12 39 01.1 -0.2**
BMRD Maredsous 45.01 315 *dP* **P** **12 39 02.8 +0.7**
comp=Z,108nm,0.8s
DOU Dourbes 45.08 315 *dP* **P** **12 39 02.9 +0.2**
comp=Z,174nm,0.9s
DOU *d*PP **PP** **12 40 48.1 +0.2**
GYA Guiyang 45.16 79 ⇓ P **P** **12 39 04.9 +1.1**
GYA S **S** **12 45 42.9 -0.2**
GYA pmax pmax
comp=Z,29nm,1.0s
GYA pmax pmax
comp=Z,360nm,4.5s
GYA LR LR
comp=Z,620nm,13.7s
GYA LR LR
comp=Z,530nm,18.3s
GYA LR LR
comp=Z,450nm,15.1s
NB2 NORSAR Subarra 45.21 331 P **P** **12 39 02.6 -1.0**
comp=Z,20nm,0.6s,baz=118,slow=8.6
NB2 NORSAR Subarra 45.21 331 AMP **P** **12 39 02.6 -1.0**
comp=Z,20nm,0.6s
NB2 P **P** **12 39 02.6 -1.0**
NOA NORSAR Array B 45.21 331 P **P** **12 39 02.6 -1.0**
comp=Z,77nm,0.8s,baz=117,slow=7.9,SNR=197
NOA PP **PP** **12 40 46.8 -2.4**
comp=Z,32nm,1.0s,baz=117,slow=9.1,SNR=6.3
comp=Z,77nm,0.8s
HOMB Homborsund 45.26 327 *eP* **P** **12 39 04.3 +0.4**
HOMB Homborsund 45.26 327 *i* P **P** **12 39 04.3 +0.4**
KONO Kongsberg 45.30 329 P **P** **12 39 03.7 -0.5**
KONO lAmb lAmb 12 39 05.0
comp=Z,80nm,0.8s
KONO Kongsberg 45.30 329 *eP* **P** **12 39 04.3 0.0**
KONO Kongsberg 45.30 329 *de* P **P** **12 39 04.4 +0.2**
KONO pmax pmax
comp=Z,79nm,0.9s
ABA Alger-Bouzarea 45.33 296 P **P** **12 39 05.0 +0.2**
ABRIN Birine 45.33 294 P **P** **12 39 05.0 0.0**
UCC Uccle 45.37 316 P **P** **12 39 05.1 +0.2**
UCC lAmb lAmb 12 39 06.7
comp=Z,150nm,1.1s
UCC Uccle 45.37 316 P **P** **12 39 05.1 +0.2**
UCC pmax pmax
comp=Z,150nm,1.1s
UCC Uccle 45.37 316 *dP* **P** **12 39 05.5 +0.6**
ETOS Mallorca 45.40 300 P **P** **12 39 05.9 +0.5**
ACHR Chrea 45.47 296 P **P** **12 39 07.6 +1.4**
TAM Tamanrasset 45.55 276 P **P** **12 39 07.5 +0.6**
TAM Tamanrasset 45.55 276 P **P** **12 39 07.5 +0.6**
TAM pmax pmax
comp=Z,200nm,0.7s
TAM MLR MLR
comp=Z,1µm,20.0s
VADS Vadso 45.69 348 *eP* **P** **12 39 07.6 +0.4**
AFDJ Sidi Ladjel 45.80 294 P **P** **12 39 08.9 +0.2**
XAN Xi'an 45.85 68 P **P** **12 39 08.9 -0.2**
XAN pP sP 12 39 19.3 +3.3
XAN S **S** **12 45 50.4 -2.3**
XAN pmax pmax
comp=Z,100nm,0.8s
XAN pmax pmax
comp=Z,360nm,4.3s
XAN LR LR
comp=Z,1µm,16.8s
XAN LR LR
comp=Z,2µm,16.0s
XAN LR LR
comp=Z,2µm,16.3s
KEV Kevo 45.86 346 P **P** **12 39 08.8 +0.3**
KEV Kevo 45.86 346 P **P** **12 39 08.8 +0.3**
KEV pmax pmax
comp=Z,200nm,0.7s
SNART Snartemo 45.92 327 *eP* **P** **12 39 09.8 +0.6**
SNART Snartemo 45.92 327 *i* P **P** **12 39 08.8 -0.4**
ABKD Sidi Amar 45.92 296 P **P** **12 39 10.1 +0.5**
CORI Orista 45.99 303 P **P** **12 39 10.6 +0.6**
CORI lAmb lAmb 12 39 18.7
comp=Z,78nm,0.8s
ARA0 ARCESS Array S 46.01 346 *eP* **P** **12 39 10.6 +0.9**
ARCES ARCESS Array B 46.01 346 P **P** **12 39 10.4 +0.7**
comp=Z,55nm,0.8s,baz=146,slow=8.4,SNR=128
ARCES PP **PP** **12 40 54.0 -3.5**
comp=Z,18nm,0.7s,baz=140,slow=7.7,SNR=3.8
ARCES LR LR 13 03 43.7
comp=Z,797nm,18.1s,baz=116,slow=43
comp=Z,55nm,0.8s
ARCES ARCESS Array B 46.01 346 P **P** **12 39 09.9 +0.2**
EDDR Deurdeur 46.04 295 P **P** **12 39 11.0 +0.4**
EZEK Zmalet El Emir 46.07 293 P **P** **12 39 11.4 +0.6**
EHRZ Djelida 46.11 295 P **P** **12 39 11.9 +0.8**
KTK1 Kautokeino 46.13 344 *eP* **P** **12 39 10.7 0.0**
OPO Ambohidratompo 46.13 191 LR LR 12 56 54.0
comp=Z,2µm,19.9s,baz=175,slow=34
BTO2 Baotou 46.23 58 *eP* **P** **12 39 11.6 -0.5**
BTO2 sP **sP** **12 39 18.6 -0.5**
BTO2 PP **PP** **12 41 00.5 0.0**
BTO2 S **S** **12 45 55.8 -2.4**
BTO2 pmax pmax
comp=Z,220nm,0.7s
BTO2 pmax pmax
comp=Z,680nm,4.8s
BTO2 LR LR
comp=Z,2µm,11.9s
BTO2 LR LR
comp=Z,4µm,15.3s
BTO2 LR LR
comp=Z,7µm,16.8s
CLF Chambon-Foret 46.27 312 P **P** **12 39 12.0 -0.1**
CLF lAmb lAmb 12 39 14.9
comp=Z,89nm,0.9s
SKAR Skarslia 46.32 330 *eP* **P** **12 39 12.8 +0.5**
KCSI Kotacane, Aceh 46.42 113 P **P** **12 39 12.1 -1.6**
EBNH Beni Haoua 46.53 296 P **P** **12 39 14.9 +0.6**
EIBI Ibiza 46.55 299 P **P** **12 39 14.0 -0.5**
ABPO Ambohimpanom 46.56 191 lAMs_20 lAMs_20 12 56 29.0
comp=Z,3µm,20.0s
EBNR Beni Rached 46.57 295 P **P** **12 39 17.0 +2.3**
DOMB Dombas 46.59 332 *eP* **P** **12 39 14.8 +0.3**
NSS Namsos 46.66 336 *eP* **P** **12 39 14.9 0.0**
EADEB Ain Deheb 46.68 293 P **P** **12 39 16.6 +1.0**
BLS5 Blasjo 46.68 328 *eP* **P** **12 39 16.3 +1.1**
MOR8 Moi Rana 46.72 338 *eP* **P** **12 39 15.2 -0.2**
ODD1 Odda 46.78 328 *eP* **P** **12 39 17.2 +1.2**
ENH Enshi 46.85 73 P **P** **12 39 17.6 +0.6**
EANR `Ain N'Sour 46.95 295 P **P** **12 39 18.7 +1.0**
LEIR Leirfjorden 47.13 338 *eP* **P** **12 39 18.1 -0.4**
FAUS Fauske 47.18 340 *eP* **P** **12 39 19.4 +0.4**
KMY Karmoy 47.19 327 *eP* **P** **12 39 19.4 +0.4**
JETT Jettan, Norway 47.22 344 *eP* **P** **12 39 19.7 +0.5**
HAMF Hammerfest 47.27 346 *eP* **P** **12 39 20.4 +0.8**
EKMS Oued Kramis 47.28 296 P **P** **12 39 20.9 +0.7**
STOK Stokkvaagen 47.28 338 *eP* **P** **12 39 19.7 0.0**
KONS Konsvik 47.35 338 *eP* **P** **12 39 20.6 +0.4**
VAGH Vaagaholmen 47.43 339 *eP* **P** **12 39 21.4 +0.6**
MOL Molde 47.45 332 *eP* **P** **12 39 21.6 +0.5**
HYA Hoyanger 47.47 330 *eP* **P** **12 39 21.8 +0.6**
HHC Hu-ho-hao-te 47.51 58 ⇑ *i* P **P** **12 39 23.5 +1.5**
HHC sS sS 12 46 27.1 +2.5
HHC pmax pmax
comp=Z,79nm,0.9s
HHC pmax pmax
comp=Z,270nm,5.1s
HHC LR LR
comp=Z,740nm,17.1s

HHC LR LR
comp=Z,880nm,15.3s
HHC LR LR
comp=Z,900nm,15.7s
AKN Aaknes 47.52 331 *eP* **P 12 39 22.7 +1.0**
STEI Steigen 47.53 341 *eP* **P 12 39 21.9 +0.3**
GSI Gunungsitoli 47.55 115 P P **12 39 23.4 +0.9**
GSI Gunungsitoli 47.55 115 P P **12 39 21.0 -1.5**
comp=Z,28nm,0.9s
BER Bergen 47.56 329 *eP* **P 12 39 22.6 +0.6**
TRO Tromso 47.64 343 *eP* **P 12 39 22.3 -0.1**
ASK Askoy 47.66 329 *eP* **P 12 39 23.4 +0.7**
ELMS Elmsett, Ipswi 47.68 317 *eP* **P 12 39 23.4 +0.4**
PSI Prapat 47.78 113 P P **12 39 25.9 +1.5**
OFRG Douar Fergoug 47.85 295 P P **12 39 24.8 +0.2**
ODJA Bouhanifia 48.02 294 P P **12 39 27.3 +1.3**
LOF Lofoten 48.17 340 *eP* **P 12 39 26.0 -0.5**
ECHE Chera 48.32 300 P P **12 39 28.8 +0.5**
TIY Taiyuan 48.34 62 P P **12 39 29.3 +0.8**
TIY S **S 12 46 28.3 +0.1**
TIY pmax pmax
comp=Z,78nm,0.7s
TIY pmax pmax
comp=Z,230nm,4.2s
TIY LR LR
comp=Z,660nm,12.3s
TIY LR LR
comp=Z,840nm,14.5s
TIY LR LR
comp=Z,1µm,15.5s
CART Cartagena 48.48 297 P P **12 39 29.3 -0.1**
CART Cartagena 48.48 297 P P **12 39 28.8 -0.7**
CART IAmb IAmb 12 39 37.1
comp=Z,73nm,0.8s
IPM Ipoh 48.61 109 P P **12 39 29.6 -1.1**
comp=Z,24nm,0.9s
EMUR La Murta 48.65 298 P P **12 39 29.8 -1.1**
GULI GuiLin 48.68 79 P P **12 39 32.3 +1.1**
GULI S **S 12 46 29.8 -3.3**
GULI pmax pmax
comp=Z,63nm,1.0s
GULI LR LR
comp=Z,700nm,16.4s
GULI LR LR
comp=Z,570nm,16.4s
GULI LR LR
comp=Z,670nm,16.4s
LYN LuoYang 48.70 67⇑ *i*P **P 12 39 32.3 +1.1**
LYN sP sP 12 39 45.0 +6.8
LYN PP **PP 12 41 28.5 +4.3**
LYN S **S 12 46 38.3 +5.1**
LYN pmax pmax
comp=Z,170nm,0.8s
LYN LR LR
comp=Z,1µm,14.5s
LYN LR LR
comp=Z,2µm,14.7s
LYN LR LR
comp=Z,3µm,16.2s
ETOB Tobarra 48.83 299 P P **12 39 32.8 +0.6**
OSBL Sidi Abdelli 48.86 294 P P **12 39 33.8 +1.4**
WOL Wolverton 48.92 316 *eP* P **12 39 32.9 +0.3**
OLHC Oulhaca 49.06 294 P P **12 39 35.5 +1.5**
GDLE Glaisdale, N Y 49.15 320 *eP* P **12 39 34.2 -0.1**
GDLE IAmb IAmb 12 39 36.1
comp=Z,142nm,1.1s
CWF Charnwood Fore 49.17 318 *eP* **P 12 39 34.2 -0.3**
OBBL Beni Bahdel 49.20 294 P P **12 39 35.9 +0.8**
JSA Saint Aubin 49.31 313 *eP* **P 12 39 35.2 -0.4**
JSA IAmb IAmb 12 39 37.2
comp=Z,126nm,0.9s
EDA Edea 49.33 250 IAMs_20 IAMs_20 13 02 22.4
comp=Z,2µm,18.0s
MNSI Mandailing Nat 49.46 114 P P **12 39 35.7 -1.5**
comp=Z,20nm,0.5s
VOI Vohitsoka 49.46 191 P P **12 39 37.7 +0.5**
VOI IAmb IAmb 12 39 48.5
comp=Z,167nm,1.2s
VOI IAMs_20 IAMs_20 12 57 57.5
comp=Z,3µm,21.0s
VOI Vohitsoka 49.46 191 P P **12 39 38.4 +1.2**
CIT Chita 49.47 43 *eP* P **12 39 37.6 +0.7**
CIT *e* 12 39 43.0
CIT *e* 12 41 02.4
CIT pmax pmax
comp=Z,144nm,1.5s
ENIJ Nijar 49.50 297 P P **12 39 36.8 -0.6**
LBWR Ladybower, Pea 49.52 318 *eP* P **12 39 36.7 -0.4**
LBWR IAmb IAmb 12 39 38.7
comp=Z,109nm,0.6s
HPK Haverah Park 49.54 319 *eP* **P 12 39 37.1 -0.2**
HPK IAmb IAmb 12 39 38.9
comp=Z,58nm,0.6s
STRD Stroud 49.56 316 *eP* **P 12 39 37.2 -0.4**
STRD IAmb IAmb 12 39 39.1
comp=Z,188nm,0.7s
STNC Stoke 49.76 318 *eP* **P 12 39 39.4 +0.4**
EDMD Edmundbyers 49.88 320 *eP* **P 12 39 39.8 -0.1**
EDMD IAmb IAmb 12 39 40.9
comp=Z,147nm,0.6s
LSZ Lusaka 49.91 216 LR LR 13 01 57.0
comp=Z,1µm,18.1s,baz=30,slow=37
LSZ Lusaka 49.91 216 P P **12 39 41.3 +0.6**
LSZ Lusaka 49.91 216 IAMs_20 IAMs_20 13 04 31.1
comp=Z,2µm,18.0s
LSZ Lusaka 49.91 216 P P **12 39 41.3 +0.6**
LSZ pmax pmax
comp=Z,23nm,1.1s
LSZ MLR MLR
comp=Z,2µm,18.0s
MONM Monmouth 49.97 316 *eP* **P 12 39 40.2 -0.4**
MONM IAmb IAmb 12 39 41.3
comp=Z,161nm,0.6s
UCM Universidad Co 50.02 301 P P **12 39 41.4 +0.1**
QIZ Qiongzhong 50.06 87 P P **12 39 44.7 +2.9**
QIZ Qiongzhong 50.06 87 P P **12 39 41.6 -0.2**
QIZ S **S 12 46 52.5 -0.1**
QIZ LR LR
comp=Z,510nm,15.7s
QIZ LR LR
comp=Z,1µm,18.6s
QIZ LR LR
comp=Z,1µm,18.6s
HLM1 Long Mynd 50.09 317 *eP* **P 12 39 41.4 -0.2**
HLM1 IAmb IAmb 12 39 42.9
comp=Z,95nm,0.7s
MCH1 Michaelchurch 50.10 316 *eP* **P 12 39 41.2 -0.4**
MCH1 IAmb IAmb 12 39 42.4
comp=Z,231nm,0.6s
HNS HongShan 50.17 63⇑P **P 12 39 43.0 +0.6**
HNS PP **PP 12 41 43.8 +6.2**
HNS S **S 12 46 56.1 +2.4**
HNS pmax pmax
comp=Z,35nm,1.2s
HNS LR LR
comp=Z,630nm,17.5s
HNS LR LR
comp=Z,810nm,13.7s
HNS LR LR
comp=Z,800nm,14.3s
CNSH ChangSha 50.22 75 P P **12 39 43.6 +0.7**
CNSH S **S 12 46 56.1 +1.5**
CNSH pmax pmax
comp=Z,180nm,0.9s
CNSH LR LR
comp=Z,990nm,18.1s
CNSH LR LR
comp=Z,610nm,11.3s
CNSH LR LR
comp=Z,810nm,15.6s
WMELI Melilla 50.30 295 P P **12 39 43.7 +0.4**
FOEL Foel Wylfa 50.33 318 *eP* **P 12 39 43.5 +0.2**
FOEL IAmb IAmb 12 39 44.6
comp=Z,117nm,0.7s
KESW Keswick, Cumbr 50.49 320 *eP* **P 12 39 44.9 +0.4**
KESW IAmb IAmb 12 39 46.1
comp=Z,104nm,0.7s
DRUM Mains of Drumt 50.53 323 *eP* **P 12 39 44.6 -0.2**
DRUM IAmb IAmb 12 39 46.1
comp=Z,118nm,0.9s
ESDC Sonseca Array 50.62 300 P **P 12 39 45.7 -0.2**
comp=Z,34nm,0.7s,baz=70,slow=7.2,SNR=262
ESDC ScP **ScP 12 44 58.5 -0.4**
comp=Z,4.3nm,1.0s,baz=63,slow=3.9,SNR=5.2
ESDC LR LR 13 03 52.9
comp=Z,522nm,18.9s,baz=61,slow=39
comp=Z,34nm,0.7s
EKA Eskdalemuir Ar 50.64 321 P **P 12 39 45.3 -0.3**
comp=Z,8.1nm,0.3s,baz=98,slow=7.3,SNR=84
EKA LR LR 13 04 54.7
comp=Z,758nm,20.4s,baz=64,slow=40
comp=Z,8.1nm,0.3s
ESK Eskdalemuir 50.66 321 *eP* **P 12 39 45.3 -0.5**
ESK IAmb IAmb 12 39 46.5
comp=Z,18nm,0.7s
EDI Edinburgh 50.74 321 *eP* **P 12 39 46.2 -0.2**
EDI IAmb IAmb 12 39 48.1
comp=Z,62nm,0.7s
XLT XiLinHaoTe 50.78 54 *eP* **P 12 39 48.4 +1.4**
XLT pP sP 12 39 53.5 -0.5
XLT S **S 12 46 54.8 -7.4**
XLT pmax pmax
comp=Z,100nm,0.9s
XLT pmax pmax
comp=Z,300nm,3.6s
XLT LR LR
comp=Z,1µm,16.0s
XLT LR LR
comp=Z,1µm,20.5s
PPI Padang Panjang 50.85 115 P **P 12 39 47.8 0.0**
comp=Z,34nm,1.2s
PAB San Pablo 50.93 300 P **P 12 39 47.8 -0.4**
PAB IAmb IAmb 12 39 49.6
comp=Z,174nm,1.2s
PAB San Pablo 50.93 300 P **P 12 39 47.8 -0.4**
PAB pmax pmax
comp=Z,174nm,1.2s
WHN Wuhan 50.93 71⇑P **P 12 39 49.1 +0.9**
WHN pP **pP 12 39 51.9 -1.4**
WHN sP **sP 12 39 55.1 -0.1**
WHN pmax pmax
comp=Z,82nm,0.8s
HTL Hartland 50.94 315 *eP* **P 12 39 48.2 +0.2**
HTL IAmb IAmb 12 39 49.3
comp=Z,101nm,1.0s
WME Myndd Eilian 51.05 318 *eP* **P 12 39 49.1 +0.4**
BJT Baijiatuau 51.06 59 IAMs_20 IAMs_20 13 03 56.3
comp=Z,2µm,19.0s
BJT Baijiatuau 51.06 59 P **P 12 39 49.5 +0.4**
BJI2 Beijing 51.06 59 P **P 12 39 49.9 +0.8**
BJI2 PcP **PcP 12 41 05.8 +0.9**
BJI2 ScS ScS 12 49 37.8 -1.5
BJI2 pmax pmax
comp=Z,19nm,0.7s
BJI2 LR LR
comp=Z,370nm,18.4s
BJI2 LR LR
comp=Z,740nm,18.0s
BJI2 LR LR
comp=Z,900nm,18.0s
MCD Coleburn Disti 51.07 324 *eP* **P 12 39 48.6 -0.3**
MCD IAmb IAmb 12 39 50.2
comp=Z,82nm,0.9s
WLF1 Llynfaes 51.09 318 *eP* **P 12 39 48.5 -0.6**
WLF1 IAmb IAmb 12 39 51.0
comp=Z,97nm,0.6s
BJO1 Bjornoya 51.10 348 *eP* **P 12 39 48.8 0.0**
PDSI Padang 51.17 116 P **P 12 39 49.7 -0.5**
comp=Z,25nm,0.8s
NEWG New Galloway 51.21 320 *eP* **P 12 39 49.6 -0.3**
EMAL Malaga-Limoner 51.29 297 P **P 12 39 50.2 -0.6**
IOMK Kirk Michael 51.30 319 *eP* **P 12 39 50.9 +0.3**
IOMK IAmb IAmb 12 39 51.4
comp=Z,17nm,0.5s
INVG Invergeldie, C 51.30 322 *eP* **P 12 39 50.2 -0.4**
INVG IAmb IAmb 12 39 52.2
comp=Z,74nm,0.8s
CCA1 Carnmenellis 51.36 314 *eP* **P 12 39 51.3 +0.1**
CCA1 IAmb IAmb 12 39 52.2
comp=Z,65nm,0.8s
GAL1 Galloway 51.45 320 *eP* **P 12 39 51.7 -0.1**
GAL1 IAmb IAmb 12 39 52.8
comp=Z,70nm,0.7s
BIGH Upper Bighouse 51.58 325 *eP* **P 12 39 51.2 -1.4**
BIGH IAmb IAmb 12 39 53.4
comp=Z,45nm,0.9s
HOPEN Hopen 51.69 351 *eP* **P 12 39 54.4 +1.2**
LAWE Loch Awe, Argy 52.02 322 *eP* **P 12 39 55.8 -0.2**
LAWE IAmb IAmb 12 39 57.4
comp=Z,84nm,1.0s
MDT Midelt 52.05 292 LR LR 13 07 02.4
comp=Z,882nm,18.8s,baz=96,slow=42
MD01 Midelt array s 52.17 292 P **P 12 39 57.7 +0.1**
TIA Tai'an 52.25 64 P **P 12 39 58.3 +0.3**
TIA pmax pmax
comp=Z,89nm,0.9s
TIA pmax pmax
comp=Z,780nm,6.7s
TIA LR LR
comp=Z,2µm,16.6s
TIA LR LR
comp=Z,2µm,16.5s
DSB Dublin 52.27 318 P **P 12 39 55.9 -2.0**
DSB Dublin 52.27 318 P **P 12 39 58.2 +0.3**
CLGH Cloghs, Cushen 52.28 320 *eP* **P 12 39 57.7 -0.3**
TOA0 Torodi Ar. Sit 52.30 266 P **P 12 39 58.7 +0.1**
SNR=7.1
TORD Torodi Ar. Bea 52.30 266 P **P 12 39 58.0 -0.7**
comp=Z,26nm,0.6s,baz=61,slow=9.2,SNR=139
comp=Z,26nm,0.6s
TORD Torodi Ar. Bea 52.30 266 P **P 12 39 57.9 -0.7**
ILTH Belurgan, Co L 52.31 319 P **P 12 39 58.0 -0.1**
IFR Ifrane 52.35 293 P **P 12 39 58.6 -0.4**
MYKOM Kota Tinggi 52.42 110 P **P 12 39 59.0 -0.6**
comp=Z,20nm,0.8s
IWEX Carrickbyrne, 52.45 317 P **P 12 39 59.6 +0.4**
PBRG Braganca 52.55 303 *eP* **P 12 40 01.0 +0.8**
PBRG *i* IAmb IAmb 12 40 02.5
comp=Z,83nm,1.5s
PBRG *ep*P **pP 12 40 06.1 +0.8**
CNIL Conil 52.64 296 P **P 12 40 00.2 -0.7**
SFS San Fernando 52.75 297 P **P 12 40 01.0 -0.7**
MVO Moncorvo 52.82 303 *eP* **P 12 40 02.4 +0.1**
MVO *ep*P **pP 12 40 08.3 +0.9**
MVO *i* IAmb IAmb 12 40 10.4
comp=Z,174nm,0.8s
IDGL Inch Island, C 53.08 320 P **P 12 40 04.2 +0.4**
PBAR Barrancos 53.17 299 *eP* **P 12 40 04.3 -0.5**
PBAR *ep*P **sP 12 40 11.2 -0.6**
PBAR *i* IAmb IAmb 12 40 12.3
comp=Z,137nm,0.8s
HIA Hailar 53.23 47 P **P 12 40 05.6 +0.5**
HIA Hailar 53.23 47 IAMs_20 IAMs_20 13 04 53.0
comp=Z,2µm,19.0s
HIA Hailar 53.23 47 P **P 12 40 05.6 +0.5**
HIA Hailar 53.23 47 P **P 12 40 05.6 +0.5**
HIA pmax pmax
comp=Z,87nm,1.3s
HIA MLR MLR
comp=Z,2µm,19.0s
HILR Hailar Array B 53.24 47 P **P 12 40 05.8 +0.6**
comp=Z,22nm,0.5s,baz=258,slow=7.0,SNR=39
HILR LR LR 13 05 25.9
comp=Z,2µm,19.0s,baz=125,slow=39
comp=Z,22nm,0.5s
PMRV Marv??o 53.28 300 *eP* **P 12 40 05.5 -0.1**
PMRV *ep*P **pP 12 40 11.6 +0.9**
PMRV *i* IAmb IAmb 12 40 13.3
comp=Z,103nm,0.9s
MTE Manteigas 53.29 302 *eP* **P 12 40 06.5 +0.8**
MTE *i* IAmb IAmb 12 40 08.3
comp=Z,128nm,1.5s
MTE Manteigas 53.29 302 *eP* **P 12 40 06.0 +0.3**
PCBR Castelo Branco 53.30 301 *eP* **P 12 40 05.4 -0.3**
PCBR *i* IAmb IAmb 12 40 08.0
comp=Z,144nm,1.2s
PCBR *ep*P **sP 12 40 12.2 -0.6**
PVRL Vila Real 53.33 303 *eP* **P 12 40 06.3 +0.3**
PVRL *ep*P **sP 12 40 12.9 -0.1**
PVRL *i* IAmb IAmb 12 40 17.6
comp=Z,152nm,1.4s
POLO Lamas de Olo 53.38 303 *eP* **P 12 40 06.7 +0.3**
POLO *i* IAmb IAmb 12 40 18.1
comp=Z,90nm,1.8s
HSPB Hornsund (broa 53.49 350 *eP* **P 12 40 07.7 +1.1**
PESTR Estremoz 53.51 300 *eP* **P 12 40 07.0 -0.4**
PESTR *ep*P **pP 12 40 12.1 -0.3**
PESTR *i* IAmb IAmb 12 40 14.7
comp=Z,66nm,0.9s
PCAB Cabril 53.52 303 *eP* **P 12 40 08.2 +0.8**
PCAB *ep*P **pP 12 40 13.0 +0.5**
PCAB *i* IAmb IAmb 12 40 15.3
comp=Z,116nm,1.0s
PVIS Viseu 53.52 302 *eP* **P 12 40 08.1 +0.7**
PVIS *ep*P **sP 12 40 14.7 +0.3**
KSANE Kasane 53.60 217 *i* P **P 12 40 09.2 +1.0**
PGAV Gavieira, Arco 53.67 304 *eP* **P 12 40 09.7 +1.1**
PGAV *i* IAmb IAmb 12 40 19.8
comp=Z,218nm,1.5s
PVAQ Vaqueiros 53.81 298 *eP* **P 12 40 09.3 -0.2**
PVAQ *i* IAmb IAmb 12 40 15.8
comp=Z,56nm,1.7s
BLWY Bulawayo 53.82 212 *i* P **P 12 40 10.7 +0.8**
PBEJ Beja 53.84 299 *eP* **P 12 40 09.6 -0.1**
PBEJ *ep*P **pP 12 40 13.9 -0.9**
PBEJ *i* IAmb IAmb 12 40 17.3
comp=Z,72nm,0.9s
PSARD Sardoal 53.85 301 *eP* **P 12 40 09.9 +0.1**
PSARD *ep*P **pP 12 40 15.0 0.0**
PSARD *i* IAmb IAmb 12 40 18.1
comp=Z,181nm,0.9s
PARRA Arraiolos 53.86 300 *eP* **P 12 40 09.3 -0.5**
PARRA *i* IAmb IAmb 12 40 11.8
comp=Z,47nm,1.6s
EVO Evora 53.88 299 P **P 12 40 10.0 -0.1**
EVO Evora 53.88 299 *eP* **P 12 40 09.9 -0.1**
EVO *i* IAmb IAmb 12 40 12.0
comp=Z,104nm,1.6s
EVO *ep*P **pP 12 40 16.0 +0.9**
PMTG Montargil 53.97 300 *eP* **P 12 40 10.3 -0.3**
PMTG *ep*P **sP 12 40 18.6 +0.9**
PMTG *i* IAmb IAmb 12 40 33.9
comp=Z,60nm,1.6s
PBDV Barranco-do-Ve 54.00 298 *eP* **P 12 40 10.6 -0.3**
PBDV *i* IAmb IAmb 12 40 20.2
comp=Z,66nm,1.9s
PTO Porto 54.01 303 *eP* **P 12 40 12.0 +1.1**
PTO *i* IAmb IAmb 12 40 12.9
comp=Z,172nm,1.2s
PTO *ep*P **sP 12 40 17.2 -0.7**
PCVE Castro Verde 54.03 298 *eP* **P 12 40 10.8 -0.3**
PCVE *i* IAmb IAmb 12 40 13.4
comp=Z,61nm,1.6s
PCVE *ep*P **pP 12 40 14.9 -1.3**
PCAS Casmilo, Conde 54.06 301 *eP* **P 12 40 12.0 +0.7**
PCAS *ep*P **sP 12 40 18.7 +0.4**
PCAS *i* IAmb IAmb 12 40 23.2
comp=Z,136nm,1.6s
IGLA Glengowla, Co 54.08 318 P **P 12 40 11.3 +0.2**
IGLA Glengowla, Co 54.08 318 *eP* **P 12 40 11.1 0.0**
MESJ Messejana 54.14 299 *eP* **P 12 40 12.2 +0.3**
MESJ IAmb IAmb 12 40 13.4
comp=Z,64nm,1.4s
MESJ Messejana 54.14 299 *eP* **P 12 40 11.4 -0.5**
MESJ *i* IAmb IAmb 12 40 13.8
comp=Z,56nm,1.5s
MESJ Messejana 54.14 299 *eP* **P 12 40 12.2 +0.3**
MOE Montemor 54.14 299 *eP* **P 12 40 12.7 +0.7**
MOE *i* IAmb IAmb 12 40 23.3
comp=Z,97nm,1.7s
SPA0 Spitsbergen Ar 54.20 351 *eP* **P 12 40 12.4 +0.7**
SPITS Spitsbergen Ar 54.20 351 P **P 12 40 12.6 +0.9**
comp=Z,36nm,0.5s,baz=121,slow=11,SNR=157
SPITS LR LR 13 07 26.4
comp=Z,838nm,18.4s,baz=141,slow=40
comp=Z,36nm,0.5s
AVE Averroes 54.27 293 P **P 12 40 13.1 +0.1**
DSRI Dabo 54.28 112 P **P 12 40 11.8 -1.4**
comp=Z,2µmcomp=Z,21nm,0.8s
PSBE So Bento 54.35 301 *eP* **P 12 40 14.1 +0.6**
PSBE *ep*P **sP 12 40 20.5 0.0**
PSBE *i* IAmb IAmb 12 40 22.2
comp=Z,180nm,1.0s
NJ2 Nanjing 54.40 69⇑P **P 12 40 14.5 +0.6**
NJ2 pmax pmax
comp=Z,49nm,1.0s
MORF Marmelete 54.56 298 *eP* **P 12 40 15.3 +0.3**
MORF IAmb IAmb 12 40 16.0
comp=Z,43nm,1.3s
MORF Marmelete 54.56 298 *eP* **P 12 40 15.3 +0.3**
MORF *i* IAmb IAmb 12 40 43.1
comp=Z,54nm,1.3s
MORF Marmelete 54.56 298 *eP* **P 12 40 15.3 +0.3**
VAL Valentia 54.57 316 P **P 12 40 14.9 +0.1**
PTEO Sao Teotonio 54.58 298 *eP* **P 12 40 16.2 +1.1**
PTEO *i* IAmb IAmb 12 40 17.1
comp=Z,102nm,1.7s
PTEO *ep*P **sP 12 40 22.7 +0.6**
TIO Tiouine 54.64 290 P **P 12 40 14.5 -1.4**
PFVI Vila Bisbo 54.73 298 *eP* **P 12 40 16.5 +0.3**
PFVI *ep*P **sP 12 40 23.0 -0.2**
PFVI *i* IAmb IAmb 12 40 24.0
comp=Z,180nm,0.8s
LIS Lisbon 54.74 300 *eP* **P 12 40 16.7 +0.5**
LIS IAmb IAmb 12 40 17.9
comp=Z,232nm,1.3s
LIS Lisbon 54.74 300 *eP* **P 12 40 17.8 +1.5**
LIS *ep*P **sP 12 40 23.5 +0.2**
LIS *i* IAmb IAmb 12 40 33.4
comp=Z,170nm,1.1s
LIS Lisbon 54.74 300 *eP* **P 12 40 16.7 +0.5**
PMAFR Mafra 54.80 300 *eP* **P 12 40 17.6 +0.9**
PMAFR *ep*P **sP 12 40 23.6 -0.2**
PMAFR *i* IAmb IAmb 12 40 33.8
comp=Z,165nm,2.0s
MUSN Musina, Limpop 55.11 210 *i* P **P 12 40 20.0 +0.9**
BROLN Tlhalogang 55.25 213 *i* P **P 12 40 19.9 -0.3**
KBS Kingsbay 55.36 351 *eP* **P 12 40 20.3 +0.2**
KBS Kingsbay 55.36 351 *i* P **P 12 40 19.2 -0.9**
DL2 Dalian 55.39 60 P **P 12 40 21.3 +0.4**
DL2 *e*S **S 12 48 04.9 0.0**
DL2 pmax pmax
comp=Z,94nm,1.1s
DL2 LR LR
comp=Z,1µm,17.8s
DL2 LR LR
comp=Z,2µm,17.6s
DL2 LR LR
comp=Z,2µm,16.1s
MDSI Maura Dua 56.27 116 P **P 12 40 27.0 -0.5**
comp=Z,23nm,0.9s
JMIC Jan Mayen 56.33 339 LR LR 13 07 49.1
comp=Z,521nm,18.5s,baz=94,slow=39
SNY Shenyang 56.44 56⇓P **P 12 40 28.5 +0.1**
SNY S **S 12 48 21.8 +3.0**
SNY pmax pmax
comp=Z,68nm,0.9s
SNY pmax pmax
comp=Z,610nm,4.8s
SNY LR LR
comp=Z,600nm,11.6s
SNY LR LR
comp=Z,1µm,10.7s
SNY LR LR
comp=Z,1µm,12.8s
LWLI Liwa 56.49 117 P **P 12 40 28.0 -1.3**
SSE Sheshan 56.55 69 P **P 12 40 28.9 -0.5**
SSE S **S 12 48 23.3 +2.7**
SSE pmax pmax
comp=Z,21nm,0.9s
SSE pmax pmax
comp=Z,340nm,4.3s
SSE LR LR
comp=Z,700nm,15.3s
SSE LR LR
comp=Z,460nm,16.0s
KLSI 56.83 116 P **P 12 40 31.8 +0.2**
comp=Z,38nm,0.8s
KHWEE KHWEE 56.90 214 P **P 12 40 31.6 -0.4**
KHWEE KHWEE 56.90 214 *i* P **P 12 40 30.9 -1.0**
KASI Kota Agung 57.14 117 P **P 12 40 32.1 -1.6**
comp=Z,44nm,1.1s
CN2 Changchun 57.54 54⇓P **P 12 40 36.1 -0.1**
CN2 *e*sP sP 12 40 43.0 -0.3
CN2 *e*S **S 12 48 30.8 -2.5**
CN2 pmax pmax
comp=Z,110nm,0.9s
CN2 pmax pmax
comp=Z,700nm,4.0s
CN2 LR LR
comp=Z,600nm,13.0s
CN2 LR LR
comp=Z,600nm,13.0s
CN2 LR LR
comp=Z,800nm,14.0s

ZEA	**Zeya**	**57.81**	**42**	*e*P		**P**		**12 40 38.7**	**+0.7**
ZEA				pmax		pmax				
	comp=N,20nm,0.7s									
ZEA				pmax		pmax				
	comp=E,30nm,0.9s									
ZEA				pmax		pmax				
	comp=Z,70nm,0.9s									
ZEA				MLR		MLR				
	comp=E,700nm,13.0s									
ZEA				MLR		MLR				
	comp=N,300nm,16.0s									
ZEA				MLR		MLR				
	comp=Z,1μm,18.0s									
LPHEP	**Lephephe**	**57.89**	**213**	*i* P		**P**		**12 40 39.0**	**+0.1**
HEH	**HeiHe**	**58.15**	**46**	*e*P		**P**		**12 40 39.8**	**-0.6**
HEH				pmax		pmax				
	comp=Z,140nm,0.8s									
HEH				LR		LR				
	comp=Z,2μm,16.1s									
HEH				LR		LR				
	comp=Z,2μm,15.4s									
HEH				LR		LR				
	comp=Z,3μm,17.9s									
SSLB	**Suanglung**	**58.35**	**78**	P		**P**		**12 40 43.8**	**+1.5**
SSLB				IAmb		IAmb		12 40 45.7		
	comp=Z,68nm,0.8s									
YHNB	**Yeheng**	**58.45**	**76**	P		**P**		**12 40 44.7**	**+1.8**
TATO	**Taipei**	**58.45**	**76**	P		**P**		**12 40 42.9**	**0.0**
GRTLG	**Ghanzi**	**58.64**	**218**	*i* P		**P**		**12 40 42.9**	**-1.3**
BNX	**BinXian**	**58.66**	**51**	⇑P		**P**		**12 40 44.0**	**0.0**
BNX				S		**S**		**12 48 48.8**	**+1.0**
BNX				pmax		pmax				
	comp=Z,140nm,0.8s									
BNX				pmax		pmax				
	comp=Z,340nm,6.3s									
BNX				LR		LR				
	comp=Z,1μm,10.5s									
BNX				LR		LR				
	comp=Z,1μm,16.2s									
BNX				LR		LR				
	comp=Z,1μm,19.7s									
NACB	**Ninganchiao**	**58.79**	**77**	P		**P**		**12 40 45.3**	**+0.1**
NACB				IAmb		IAmb		12 40 50.4		
	comp=Z,60nm,1.0s									
YAK	**Yakutsk**	**58.94**	**32**	LR		LR		13 08 43.0		
	comp=Z,2μm,18.8s,baz=264,slow=39									
YAK	**Yakutsk**	**58.94**	**32**	P		**P**		**12 40 45.3**	**-0.4**
YAK				IAmb		IAmb		12 40 45.8		
	comp=Z,109nm,1.1s									
YAK	**Yakutsk**	**58.94**	**32**	*e*P		**P**		**12 40 43.4**	**-2.3**
YAK				*e**PP		**pP**		**12 40 49.1**	**-1.7**
YAK				*e*				12 41 32.6		
YAK				*e*				12 42 53.6		
YAK				*e*S		**S**		**12 48 49.8**	**-1.2**
YAK				*e*				12 50 30.2		
YAK				*e*SS		**SS**		**12 52 44.2**	**0.0**
YAK				pmax		pmax				
	comp=Z,50nm,0.8s									
YAK				pmax		pmax				
	comp=N,5.0nm,1.1s									
YAK				pmax		pmax				
	comp=E,47nm,1.2s									
YAK				pmax		pmax				
	comp=Z,120nm,2.8s									
YAK				pmax		pmax				
	comp=N,86nm,2.5s									
YAK				pmax		pmax				
	comp=E,53nm,1.2s									
YAK				smax		smax				
	comp=E,104nm,2.3s									
YAK				smax		smax				
	comp=N,47nm,2.2s									
YAK				MLR		MLR				
	comp=Z,2μm,15.0s									
YAK				MLR		MLR				
	comp=E,2μm,17.0s									
TSUM	**Tsumeb**	**59.06**	**223**	LR		LR		13 08 36.6		
	comp=E,3μm,19.5s,baz=35,slow=38									
TSUM	**Tsumeb**	**59.06**	**223**	*i* P		**P**		**12 40 48.7**	**+1.5**
SBUM	**Sibu**	**59.21**	**104**	P		**P**		**12 40 47.9**	**-0.4**
SBUM	**Sibu**	**59.21**	**104**	P		**P**		**12 40 47.0**	**-1.2**
TIXI	**Tiksi**	**59.23**	**21**	LR		LR		13 09 49.4		
	comp=E,2μm,18.3s,baz=285,slow=40									
TIXI	**Tiksi**	**59.23**	**21**	P		**P**		**12 40 47.5**	**-0.1**
TIXI				IAmb		IAmb		12 40 49.4		
	comp=Z,113nm,1.3s									
TIXI				IAMs_20		IAMs_20		13 09 21.3		
	comp=Z,2μm,18.0s									
TIXI	**Tiksi**	**59.23**	**21**⇑	*e*P		**P**		**12 40 47.2**	**-0.3**
TIXI				pmax		pmax				
	comp=Z,101nm,1.3s									
TIXI				MLR		MLR				
	comp=Z,2μm,17.0s									
KGCAE	**Kacgae**	**59.31**	**216**	*i* P		**P**		**12 40 46.5**	**-2.4**
LBTB	**Lobatse**	**59.41**	**212**	LR		LR		13 06 47.1		
	comp=E,861nm,18.6s,baz=30,slow=36									
LBTB	**Lobatse**	**59.41**	**212**	P		**P**		**12 40 49.2**	**-0.3**
LBTB				IAmb		IAmb		12 41 10.4		
	comp=Z,44nm,0.8s									
LBTB	**Lobatse**	**59.41**	**212**	P		**P**		**12 40 49.2**	**-0.3**
LBTB				pmax		pmax				
	comp=Z,44nm,0.9s									
LBTB	**Lobatse**	**59.41**	**212**	*i* P		**P**		**12 40 50.5**	**+1.0**
INCN	**Inchon**	**59.52**	**61**	P		**P**		**12 40 50.2**	**0.0**
INCN				IAmb		IAmb		12 40 51.2		
	comp=Z,117nm,1.1s									
INCN	**Inchon**	**59.52**	**61**	P		**P**		**12 40 50.2**	**0.0**
INCN				pmax		pmax				
	comp=Z,117nm,1.2s									
INCN	**Inchon**	**59.52**	**61**	P		**P**		**12 40 50.3**	**0.0**
DAG	**Danmarks Havn**	**60.29**	**345**	*i* P		**P**		**12 40 55.2**	**+0.4**
DAG				IAmb		IAmb		12 40 55.8		
	comp=Z,80nm,0.8s									
TJN	**Taejon**	**60.34**	**62**	P		**P**		**12 40 54.6**	**-1.1**
MDJ	**Mudanjiang**	**60.36**	**52**	P		**P**		**12 40 54.8**	**-0.9**
MDJ	**Mudanjiang**	**60.36**	**52**	P		**P**		**12 40 55.3**	**-0.5**
MDJ				PP		**PP**		**12 43 12.3**	**+3.7**
MDJ				pmax		pmax				
	comp=Z,33nm,0.8s									
MDJ				LR		LR				
	comp=Z,1μm,14.8s									
MDJ				LR		LR				
	comp=Z,2μm,16.1s									
MDJ				LR		LR				
	comp=Z,3μm,18.8s									
DBG	**Daneborg**	**60.38**	**342**	*i* P		**P**		**12 40 56.3**	**+0.9**
DBG				IAmb		IAmb		12 40 57.4		
	comp=Z,72nm,1.0s									
BORG	**Borgarnes**	**60.39**	**331**	LR		LR		13 11 56.4		
	comp=Z,548nm,18.9s,baz=97,slow=41									
LEM	**Lembang**	**60.41**	**116**	LR		LR		13 08 42.9		
	comp=Z,351nm,20.0s,baz=324,slow=38									
MAKGR	**Makgori**	**60.47**	**212**	*i* P		**P**		**12 40 56.5**	**-0.2**
KS19	**Wonju Array Si**	**60.48**	**60**	P		**P**		**12 40 56.1**	**-0.6**
KS19				IAmb		IAmb		12 40 57.8		
	comp=Z,81nm,0.9s									
KSAR	**Wonju Array Be**	**60.51**	**60**	P		**P**		**12 40 56.6**	**-0.3**
KSAR	**Wonju Array Be**	**60.51**	**60**	P		**P**		**12 40 56.6**	**-0.3**
KSRS	**Korea Array**	**60.53**	**60**	P		**P**		**12 40 56.4**	**-0.7**
	comp=Z,39nm,0.6s,baz=278,slow=6.8,SNR=123									
KSRS				LR		LR		13 10 46.6		
	comp=Z,819nm,19.2s,baz=280,slow=40									
	comp=Z,39nm,0.6s									
SCO	**Scoresbysund**	**60.66**	**338**	*i* P		**P**		**12 40 58.4**	**+1.0**
SCO				IAmb		IAmb		12 40 59.5		
	comp=Z,14nm,0.7s									
NOR	**Nord**	**60.84**	**351**	*i* P		**P**		**12 40 58.9**	**+0.4**
NOR				IAmb		IAmb		12 40 59.6		
	comp=Z,205nm,1.8s									
DBIC	**Dimbokro**	**60.90**	**262**	P		**P**		**12 40 59.4**	**-0.5**
DBIC				LR		LR		13 08 21.8		
	comp=Z,27nm,0.6s,baz=81,slow=7.9,SNR=33									
	comp=Z,911nm,18.2s,baz=70,slow=37									
	comp=Z,27nm,0.6s									
DBIC	**Dimbokro**	**60.90**	**262**	P		**P**		**12 40 58.9**	**-1.0**
DBIC				IAmb		IAmb		12 41 08.4		
	comp=Z,54nm,0.8s									
KLR	**Kul'dur**	**61.07**	**47**	LR		LR		13 09 39.2		
	comp=Z,366nm,21.7s,baz=292,slow=38									
KLR	**Kul'dur**	**61.07**	**47**	*c i*P		**P**		**12 41 00.2**	**-0.3**
KLR				pmax		pmax				
	comp=Z,110nm,0.9s									
KLR				MLR		MLR				
	comp=Z,1μm,20.0s									
PSTR	**Posyet**	**61.59**	**54**	*de*P		**P**		**12 41 04.9**	**+0.8**
TGY	**Tagaytay City**	**61.75**	**88**	LR		LR		13 10 59.8		
	comp=Z,762nm,21.1s,baz=290,slow=39									
WIN	**Windhoek**	**61.93**	**221**	P		**P**		**12 41 07.7**	**+0.8**
WIN	**Windhoek**	**61.93**	**221**	P		**P**		**12 41 07.7**	**+0.8**
WIN				pmax		pmax				
	comp=Z,26nm,1.4s									
WIN				MLR		MLR				
	comp=Z,2μm,18.0s									
USRK	**Ussuriysk Ar.**	**62.12**	**52**	P		**P**		**12 41 07.3**	**-0.4**
	comp=Z,30nm,0.7s,baz=276,slow=6.5,SNR=56									
	comp=Z,30nm,0.7s									
PMAR	**Madeira**	**62.17**	**294**	*e*P		**P**		**12 41 09.7**	**+1.3**
PMAR				*i* IAmb		IAmb		12 41 23.3		
	comp=Z,228nm,1.2s									
VLA	**Vladivostok**	**62.27**	**53**	*d i*P		**P**		**12 41 08.7**	**0.0**
VLA				pmax		pmax				
	comp=Z,84nm,0.8s									
PMOZ	**Porto Moniz, M**	**62.37**	**295**	*e*P		**P**		**12 41 11.3**	**+1.6**
PMOZ				*i* IAmb		IAmb		12 41 24.5		
	comp=Z,184nm,0.8s									
JTU	**Tsushima**	**62.40**	**63**	P		**P**		**12 41 10.8**	**+1.1**
BOSA	**Boshof**	**62.64**	**210**	P		**P**		**12 41 11.3**	**-0.1**
	comp=Z,7.9nm,0.6s,baz=33,slow=7.1,SNR=20									
BOSA				LR		LR		13 11 53.1		
	comp=Z,1μm,18.7s,baz=26,slow=39									
	comp=Z,7.9nm,0.6s									
BOSA	**Boshof**	**62.64**	**210**	P		**P**		**12 41 10.8**	**-0.6**
BOSA	**Boshof**	**62.64**	**210**	*i* P		**P**		**12 41 11.3**	**-0.1**
MYLDM	**Lahad Datu**	**63.39**	**98**	P		**P**		**12 41 17.3**	**+0.7**
MYLDM	**Lahad Datu**	**63.39**	**98**	P		**P**		**12 41 19.7**	**+3.1**
MYLDM	**Lahad Datu**	**63.39**	**98**	P		**P**		**12 41 17.5**	**+0.9**
	comp=Z,43nm,1.5s									
JOW	**Kunigami**	**63.70**	**72**	LR		LR		13 12 21.9		
	comp=Z,520nm,20.9s,baz=294,slow=39									
GRNR	**Gornyy**	**63.77**	**44**	*e*P		**P**		**12 41 15.3**	**-3.3**
GRNR				MLR		MLR				
	comp=E,820nm,15.0s									
GRNR				MLR		MLR				
	comp=N,580nm,14.0s									
GRNR				MLR		MLR				
	comp=Z,1μm,15.0s									
JNU	**Nakatsue**	**63.97**	**64**	LR		LR		13 12 58.2		
	comp=Z,760nm,19.0s,baz=292,slow=40									
SJI	**Sawahan**	**64.28**	**114**	P		**P**		**12 41 21.2**	**-1.3**
SUMG	**Summit**	**65.69**	**341**	P		**P**		**12 41 31.6**	**+0.4**
SUMG	**Summit**	**65.69**	**341**	P		**P**		**12 41 31.6**	**+0.4**
SUMG	**Summit**	**65.69**	**341**	P		**P**		**12 41 31.7**	**+0.5**
SUMG				pmax		pmax				
	comp=Z,164nm,0.8s									
SUMG	**Summit**	**65.69**	**341**	*i* P		**P**		**12 41 32.2**	**+1.0**
SUMG				IAmb		IAmb		12 41 33.2		
	comp=Z,170nm,0.8s									
GMJI	**Gumukmas**	**65.95**	**114**	P		**P**		**12 41 31.6**	**-1.6**
	comp=Z,41nm,1.0s									
GRHM	**Grahamstown, E**	**66.21**	**207**	P		**P**		**12 41 34.7**	**+0.2**
GRHM				IAmb		IAmb		12 41 55.2		
	comp=Z,48nm,0.9s									
JAGI	**Jajag, Banyuwa**	**66.64**	**113**	P		**P**		**12 41 35.9**	**-1.8**
	comp=Z,59nm,1.0s									
MPSI	**Mapaga**	**66.91**	**102**	P		**P**		**12 41 40.2**	**+0.7**
	comp=Z,24nm,1.2s									
ANGG	**Ammassalik, Gr**	**67.07**	**333**	P		**P**		**12 41 40.3**	**+0.7**
ANGG				IAmb		IAmb		12 41 40.9		
	comp=Z,45nm,0.7s									
ANGG	**Ammassalik, Gr**	**67.07**	**333**	*i* P		**P**		**12 41 40.9**	**+1.3**
ANGG				IAmb		IAmb		12 41 42.8		
	comp=Z,73nm,1.7s									
NEEM	**North Greenlan**	**67.35**	**347**	*i* P		**P**		**12 41 42.0**	**+0.4**
NEEM				IAmb		IAmb		12 41 43.1		
	comp=Z,235nm,1.1s									
MMSI	**Mamuju**	**67.56**	**105**	P		**P**		**12 41 42.0**	**-1.6**
	comp=Z,780nmcomp=Z,46nm,0.8s									
TYV	**Tymovskoe**	**67.59**	**43**	*e*P		**P**		**12 41 43.3**	**+0.1**
TYV				pmax		pmax				
	comp=Z,300nm,2.1s									
TYV				pmax		pmax				
	comp=Z,70nm,0.9s									
UGL	**Uglegorsk**	**67.71**	**45**	*e*P		**P**		**12 41 43.9**	**-0.1**
UGL				*e*				12 41 50.5		
UGL				*e*S		**S**		**12 50 37.7**	**-3.2**
UGL				pmax		pmax				
	comp=Z,120nm,1.3s									
UGL				MLR		MLR				
	comp=E,2μm,16.0s									
UGL				MLR		MLR				
	comp=N,2μm,14.0s									
UGL				MLR		MLR				
	comp=Z,2μm,16.0s									
KHKI	**Kahang-Kahang**	**67.77**	**112**	P		**P**		**12 41 43.5**	**-1.4**
SUR	**Sutherland**	**67.86**	**212**	LR		LR		13 11 14.5		
	comp=E,858nm,20.6s,baz=26,slow=36									
SUR	**Sutherland**	**67.86**	**212**	IAMs_20		IAMs_20		13 10 21.8		
	comp=Z,1μm,22.0s									
SUR	**Sutherland**	**67.86**	**212**	P		**P**		**12 41 47.0**	**+1.7**
INU	**Inuyama**	**68.16**	**60**	P		**P**		**12 41 46.5**	**-0.6**
INU				IAmb		IAmb		12 41 47.7		
	comp=Z,45nm,0.8s									
INU	**Inuyama**	**68.16**	**60**	P		**P**		**12 41 47.6**	**+0.5**
MBO	**M'Bour**	**68.41**	**276**	P		**P**		**12 41 48.5**	**-0.4**
MRSI	**Marisa**	**68.63**	**101**	P		**P**		**12 41 49.8**	**-0.5**
	comp=Z,40nm,1.0s									
MJB9	**Matsu-Tunnel**	**68.70**	**59**	P		**P**		**12 41 49.8**	**-0.7**
MAJO	**Matsushiro**	**68.70**	**59**	P		**P**		**12 41 50.4**	**-0.1**
MAJO	**Matsushiro**	**68.70**	**59**	*de*P		**P**		**12 41 50.1**	**-0.4**
MAJO				pmax		pmax				
	comp=Z,30nm,1.0s									
MJAR	**Matsushiro Arr**	**68.70**	**59**	P		**P**		**12 41 50.4**	**-0.1**
	comp=Z,7.1nm,0.8s,baz=282,slow=5.8,SNR=16									
MJAR				LR		LR		13 15 40.8		
	comp=Z,450nm,19.4s,baz=291,slow=39									
	comp=Z,7.1nm,0.8s									
MJAR	**Matsushiro Arr**	**68.70**	**59**	P		**P**		**12 41 50.6**	**+0.1**
MJAR	**Matsushiro Arr**	**68.70**	**59**	P		**P**		**12 41 50.6**	**+0.1**
MJAR				pmax		pmax				
	comp=Z,10.0nm,1.1s									
YSS	**Yuzhno-Sakhali**	**68.76**	**47**	P		**P**		**12 41 50.4**	**-0.2**
YSS				IAMs_20		IAMs_20		13 15 09.1		
	comp=Z,1μm,19.0s									
YSS	**Yuzhno-Sakhali**	**68.76**	**47**	P		**P**		**12 41 50.8**	**+0.2**
YSS	**Yuzhno-Sakhali**	**68.76**	**47**	*e*P		**P**		**12 41 49.7**	**-0.9**
YSS				*e*				12 42 14.8		
YSS				*e*				12 44 18.2		
YSS				*e*S		**S**		**12 50 52.3**	**-1.2**
YSS				*e*				12 51 44.6		
YSS				*e*SS		**SS**		**12 55 17.0**	**-0.9**
YSS				pmax		pmax				
	comp=Z,300nm,4.1s									
YSS				pmax		pmax				
	comp=Z,150nm,0.8s									
YSS				smax		smax				
	comp=N,300nm,6.5s									
YSS				smax		smax				
	comp=E,200nm,2.6s									
YSS				MLR		MLR				
	comp=Z,900nm,17.0s									
YSS				MLR		MLR				
	comp=N,500nm,14.0s									
YSS				MLR		MLR				
	comp=E,500nm,14.0s									
TWSI	**Taliwang, Sumb**	**69.03**	**112**	P		**P**		**12 41 50.9**	**-1.8**
	comp=E,2μmcomp=E,52nm,0.9s									
SEY	**Seymchan**	**69.16**	**29**⇑	*i*P		**P**		**12 41 53.4**	**+0.6**
SEY				pmax		pmax				
	comp=Z,122nm,1.1s									
SEY				MLR		MLR				
	comp=Z,3μm,17.0s									
KAPI	**Kappang**	**69.47**	**107**	LR		LR		13 16 16.5		
	comp=Z,222nm,18.6s,baz=296,slow=39									
MA2	**Magadan**	**69.49**	**33**	LR		LR		13 15 57.8		
	comp=Z,605nm,19.1s,baz=292,slow=39									
MA2	**Magadan**	**69.49**	**33**	P		**P**		**12 41 54.7**	**-0.3**
MA2				IAmb		IAmb		12 41 56.0		
	comp=Z,62nm,0.9s									
MA2				IAMs_20		IAMs_20		13 14 58.3		
	comp=Z,1μm,19.0s									
MA2	**Magadan**	**69.49**	**33**	*ce*P		**P**		**12 41 54.8**	**-0.1**
MA2				pmax		pmax				
	comp=Z,52nm,0.9s									
ASAJ	**Asahikawa**	**69.52**	**50**	LR		LR		13 15 47.4		
	comp=Z,658nm,18.6s,baz=301,slow=39									
ASAJ	**Asahikawa**	**69.52**	**50**	P		**P**		**12 41 55.1**	**-0.3**
ASAJ				pmax		pmax				
	comp=Z,25nm,0.8s									
JKA	**Kamikawa-asahi**	**69.52**	**50**	P		**P**		**12 41 55.0**	**-0.4**
PLAI	**Plampang**	**69.82**	**112**	P		**P**		**12 41 59.4**	**+1.8**
PLAI	**Plampang**	**69.82**	**112**	P		**P**		**12 41 57.6**	**0.0**
	comp=Z,43nm,0.8s									
KULLO	**Kullorsuaq**	**69.95**	**345**	*i* P		**P**		**12 41 57.6**	**+0.1**
KULLO				IAmb		IAmb		12 41 58.7		
	comp=Z,121nm,0.9s									
DBNI	**Kabupaten Domp**	**70.09**	**111**	P		**P**		**12 41 56.2**	**-3.1**
SAATT	**Saattut**	**70.19**	**340**	*i* P		**P**		**12 41 59.2**	**+0.2**
SAATT				IAmb		IAmb		12 42 00.3		
	comp=Z,139nm,0.9s									
NUUG	**Nuugaatsiaq**	**70.33**	**341**	*i* P		**P**		**12 42 00.2**	**+0.3**
NUUG				IAmb		IAmb		12 42 01.4		
	comp=Z,38nm,0.8s									
UPNV	**Upernavik**	**70.55**	**343**	*i* P		**P**		**12 42 01.5**	**+0.3**
UPNV				IAmb		IAmb		12 42 02.7		
	comp=Z,95nm,0.8s									
SAQQ	**Saqqaq**	**70.63**	**340**	*i* P		**P**		**12 42 02.3**	**+0.6**
SAQQ				IAmb		IAmb		12 42 03.0		
	comp=Z,107nm,0.9s									
ILULI	**Ilulissat**	**70.71**	**339**	P		**P**		**12 42 02.4**	**+0.2**
ILULI	**Ilulissat**	**70.71**	**339**	P		**P**		**12 42 02.4**	**+0.2**
ILULI				pmax		pmax				
	comp=Z,167nm,1.5s									
ILULI	**Ilulissat**	**70.71**	**339**	*i* P		**P**		**12 42 02.7**	**+0.5**
ILULI				IAmb		IAmb		12 42 04.0		
	comp=Z,30nm,0.9s									
NIAQ	**Niaqornat**	**70.80**	**341**	*i* P		**P**		**12 42 03.1**	**+0.4**
NIAQ				IAmb		IAmb		12 42 04.2		
	comp=Z,61nm,1.0s									
TULEG	**Thule**	**71.25**	**348**	P		**P**		**12 42 05.2**	**-0.2**
TULEG	**Thule**	**71.25**	**348**	*i* P		**P**		**12 42 03.7**	**-1.7**
TULEG				IAmb		IAmb		12 42 06.2		
	comp=Z,142nm,0.8s									
GDH	**Godhavn**	**71.47**	**339**	*i* P		**P**		**12 42 05.3**	**-1.5**
GDH				IAmb		IAmb		12 42 08.4		
	comp=Z,66nm,1.0s									
SFJD	**Kangerlussuaq**	**71.51**	**337**	LR		LR		13 15 26.2		
	comp=Z,577nm,20.1s,baz=62,slow=37									
SFJD	**Kangerlussuaq**	**71.51**	**337**	P		**P**		**12 42 06.7**	**-0.4**
SFJD				IAmb		IAmb		12 42 08.4		
	comp=Z,79nm,1.1s									
SFJD	**Kangerlussuaq**	**71.51**	**337**	P		**P**		**12 42 06.7**	**-0.4**
SFJD				pmax		pmax				
	comp=Z,79nm,1.2s									
SFJD	**Kangerlussuaq**	**71.51**	**337**	*i* P		**P**		**12 42 07.5**	**+0.4**
SFJD				IAmb		IAmb		12 42 08.3		
	comp=Z,46nm,0.9s									
WBSI	**Waikabubak, Su**	**71.60**	**111**	P		**P**		**12 42 05.5**	**-3.0**
	comp=Z,862nmcomp=Z,85nm,1.3s									
NRS	**Narsarsuaq**	**71.83**	**330**	*i* P		**P**		**12 42 09.0**	**-0.1**
NRS				IAmb		IAmb		12 42 09.8		
	comp=Z,57nm,0.7s									
WSI	**Waingapu**	**72.36**	**111**	P		**P**		**12 42 09.9**	**-3.2**
BILL	**Bilibino**	**72.41**	**22**	P		**P**		**12 42 13.0**	**+0.5**
BILL				IAmb		IAmb		12 42 14.6		
	comp=Z,64nm,0.9s									
BILL	**Bilibino**	**72.41**	**22**	IAMs_20		IAMs_20		13 18 15.1		
	comp=Z,1μm,19.0s									
BILL	**Bilibino**	**72.41**	**22**	*c i*P		**P**		**12 42 13.3**	**+0.8**
BILL				pmax		pmax				
	comp=Z,67nm,1.0s									
BILL				MLR		MLR				
	comp=Z,1μm,16.0s									
IVI	**Ivigtut**	**73.03**	**331**	*i* P		**P**		**12 42 16.3**	**+0.1**
IVI	**Ivigtut**	**73.03**	**331**	IAmb		IAmb		12 42 17.4		
	comp=Z,64nm,1.0s									
EDFI	**Ende, Flores**	**73.05**	**109**	P		**P**		**12 42 14.0**	**-3.3**
	comp=Z,45nm,0.8s									
NUUK	**Nuuk**	**73.18**	**334**	*i* P		**P**		**12 42 17.1**	**0.0**
NUUK	**Nuuk**	**73.18**	**334**	IAmb		IAmb		12 42 17.7		
	comp=Z,64nm,0.7s									
SANI	**Sanana**	**73.39**	**101**	P		**P**		**12 42 18.4**	**-0.7**
SANI	**Sanana**	**73.39**	**101**	P		**P**		**12 42 18.2**	**-1.0**
	comp=Z,49nm,1.1s									
MMRI	**Maumere**	**73.45**	**109**	P		**P**		**12 42 17.3**	**-2.2**
	comp=Z,73nm,0.9s									
JCJ	**Chichijima**	**75.22**	**67**	LR		LR		13 18 58.0		
	comp=Z,338nm,20.6s,baz=102,slow=38									
BATI	**Baumata**	**75.46**	**110**	LR		LR		13 19 52.8		
	comp=Z,363nm,20.0s,baz=324,slow=39									
BATI	**Baumata**	**75.46**	**110**	P		**P**		**12 42 31.5**	**+0.2**
PETK	**Petropavlovsk-**	**75.50**	**38**	P		**P**		**12 42 29.2**	**-1.7**
	comp=Z,14nm,0.9s,baz=187,slow=0.6,SNR=8.8									
PETK				LR		LR		13 18 54.5		
	comp=Z,1μm,18.6s,baz=290,slow=38									
	comp=Z,14nm,0.9s									
SOEI	**Soe**	**75.74**	**109**	P		**P**		**12 42 33.1**	**+0.1**
SOEI	**Soe**	**75.74**	**109**	P		**P**		**12 42 33.0**	**+0.1**
PET	**Petropavlovsk**	**76.06**	**37**	*e*P		**P**		**12 42 34.0**	**0.0**
PET				*e*S		**S**		**12 52 13.7**	**-3.0**
PET				MLR		MLR				
	comp=Z,1μm,15.0s									
PET				MLR		MLR				
	comp=Z,900nm,19.0s									
KRAI	**Karang Ratu**	**76.10**	**101**	P		**P**		**12 42 33.4**	**-1.5**
	comp=Z,5μmcomp=Z,65nm,1.1s									
AAI	**Ambon**	**76.10**	**102**	P		**P**		**12 42 34.8**	**-0.1**
	comp=Z,92nm,1.2s									
RES	**Resolute Bay**	**76.72**	**352**	LR		LR		13 21 49.4		
	comp=Z,994nm,19.1s,baz=13,slow=40									
SWI	**Sorong**	**77.47**	**97**	P		**P**		**12 42 40.1**	**-2.5**
	comp=Z,73nm,1.0s

D23K **Nanushuk River** 82.30 9 P P 12 43 08.4 +0.5
baz=336
D24K **Happy Valley** 82.39 9 P P 12 43 08.8 +0.5
baz=338
F15K **North Star Dit** 82.45 16 P P 12 43 09.3 +0.5
baz=324
KNRA **Kununurra** 82.53 112 P P 12 43 10.4 +0.5
KNRA IAmb IAmb 12 43 20.1
comp=Z,34nm,0.8s
D25K **Kavik River** 82.54 8 P P 12 43 09.9 +0.7
baz=340
C27K **Jago River** 82.55 7 P P 12 43 09.8 +0.6
baz=343
E19K **Redstone River** 82.56 12 P P 12 43 08.9 -0.4
E19K IAMs_20 IAMs_20 13 26 25.6
comp=Z,1µm,21.0s
E19K **Redstone River** 82.56 12 P P 12 43 09.4 +0.1
baz=331
F18K **Selawik** 82.83 14 P P 12 43 10.9 +0.3
baz=329,SNR=116
E22K **Anaktuvuk Pass** 82.89 10 IAMs_20 IAMs_20 13 25 34.2
comp=Z,1µm,19.0s
E22K **Anaktuvuk Pass** 82.89 10 P P 12 43 11.5 +0.4
baz=336,SNR=88
F19K **Shaleruckik Mo** 83.00 13 P P 12 43 11.4 -0.1
baz=330
KLBR **Kellerberrin** 83.01 131 P P 12 43 16.5 +4.4
GUMO **Guam** 83.12 78 LR LR 13 24 07.2
comp=Z,140nm,20.4s,baz=48,slow=38
G15K **Niukluk** 83.18 16 P P 12 43 12.8 +0.3
baz=325
D27M **Malcolm River** 83.19 6 P P 12 43 13.2 +0.6
baz=345
ANM **Nome** 83.20 17 P P 12 43 13.3 +0.7
baz=324,SNR=67
F20K **Avaraart Lake** 83.20 12 P P 12 43 11.9 -0.7
F20K IAmb IAmb 12 43 13.8
comp=Z,75nm,0.8s
F20K IAMs_20 IAMs_20 13 27 27.6
comp=Z,681nm,19.0s
F20K **Avaraart Lake** 83.20 12 P P 12 43 12.8 +0.2
baz=332
G16K **Koyuk River** 83.25 15 P P 12 43 13.2 +0.4
G16K IAMs_20 IAMs_20 13 27 20.0
comp=Z,1000nm,19.0s
G16K **Koyuk River** 83.25 15 P P 12 43 13.5 +0.7
baz=326
KUQ **Kuujjuuaa** 83.25 334 P P 12 43 12.9 -0.1
E23K **Chandalar** 83.29 9 IAMs_20 IAMs_20 13 27 38.8
comp=Z,903nm,19.0s
E23K **Chandalar** 83.29 9 P P 12 43 13.7 +0.6
baz=337,SNR=140
E24K **Your Creek** 83.44 9 IAMs_20 IAMs_20 13 24 58.6
comp=Z,935nm,20.0s
E24K **Your Creek** 83.44 9 P P 12 43 14.5 +0.6
baz=336
F21K **Alatna River** 83.45 11 IAMs_20 IAMs_20 13 27 24.0
comp=Z,1µm,20.0s
F21K **Alatna River** 83.45 11 P P 12 43 14.0 +0.1
baz=334
NWAO **Narrogin (SRO)** 83.47 132 P P 12 43 13.7 -0.8
NWAO **Narrogin (SRO)** 83.47 132 P P 12 43 13.8 -0.6
G17K **Kiwalik Mounta** 83.55 14 P P 12 43 14.7 +0.2
baz=328,SNR=91
DRLN **Deer Lake** 83.63 323 P P 12 43 14.7 -0.5
DRLN IAmb IAmb 12 43 23.0
comp=Z,62nm,0.9s
G18K **Tagagawik** 83.64 14 P P 12 43 15.0 +0.1
baz=330,SNR=63
G19K **Purcell Mounta** 83.74 13 P P 12 43 15.1 -0.3
G19K **Purcell Mounta** 83.74 13 P P 12 43 15.5 +0.1
baz=331
E25K **Arctic Village** 83.77 8 P P 12 43 16.1 +0.5
baz=341
C36M **Paulatuk** 83.86 360 P P 12 43 15.5 -0.4
baz=0.2,SNR=102
H16K **Elim** 83.91 15 P P 12 43 16.4 +0.2
baz=327,SNR=91
E28M **Babbage River** 83.94 6 P P 12 43 17.0 +0.6
baz=346
COLD **Coldfoot** 83.97 10 IAMs_20 IAMs_20 13 26 08.8
comp=Z,984nm,19.0s
COLD **Coldfoot** 83.97 10 P P 12 43 17.1 +0.5
baz=337,SNR=168
G21K **Allakaket** 84.08 11 IAMs_20 IAMs_20 13 28 13.7
comp=Z,677nm,18.0s
G21K **Allakaket** 84.08 11 P P 12 43 17.3 +0.2
baz=334
SHEM **Shemya Is, Ala** 84.13 33 LR LR 13 24 21.2
comp=Z,517nm,19.8s,baz=287,slow=38
H17K **Granite Mounta** 84.19 14 IAMs_20 IAMs_20 13 24 16.8
comp=Z,823nm,21.0s
H17K **Granite Mounta** 84.19 14 P P 12 43 17.7 0.0
baz=329,SNR=100
F25K **Christian Rive** 84.27 8 P P 12 43 18.9 +0.8
baz=341,SNR=47
E29M **Blow River** 84.29 5 P P 12 43 18.8 +0.6
baz=348
H18K **Honhosa River** 84.34 14 P P 12 43 18.9 +0.3
baz=330
F26K **Sheenjek River** 84.35 8 P P 12 43 19.0 +0.4
baz=342
G23K **Bananza Creek** 84.48 10 IAMs_20 IAMs_20 13 26 44.2
comp=Z,1µm,21.0s
G23K **Bananza Creek** 84.48 10 P P 12 43 19.3 +0.1
baz=337
INK **Inuvik** 84.66 3 P P 12 43 20.3 +0.3
baz=352,SNR=48
H20K **Anotleneega Mo** 84.75 12 P P 12 43 20.9 +0.3
baz=333
SCHQ **Schefferville** 84.78 331 P P 12 43 20.4 -0.5
comp=Z,26nm,0.7s,baz=45,slow=4.3,SNR=54
SCHQ LR LR 13 22 27.0
comp=Z,285nm,21.6s,baz=55,slow=36
comp=Z,26nm,0.7s
G24K **Hadweenzic Riv** 84.86 9 IAMs_20 IAMs_20 13 26 03.4
comp=Z,821nm,20.0s
G24K **Hadweenzic Riv** 84.86 9 P P 12 43 21.7 +0.6
baz=339
F28M **Old Crow** 84.88 6 P P 12 43 21.3 +0.1
baz=346,SNR=87
I17K **Unalakleet** 84.91 15 P P 12 43 22.2 +0.9
baz=328,SNR=17
H21K **Melozitna Rive** 84.98 11 IAMs_20 IAMs_20 13 25 59.5
comp=Z,775nm,21.0s
H21K **Melozitna Rive** 84.98 11 P P 12 43 22.3 +0.6
baz=335,SNR=94
GCSA **Galena City Sc** 85.01 13 P P 12 43 22.4 +0.6
baz=331,SNR=70
H22K **Ishtalitna Cre** 85.01 11 IAMs_20 IAMs_20 13 28 45.3
comp=Z,1µm,20.0s
H22K **Ishtalitna Cre** 85.01 11 P P 12 43 22.6 +0.7
baz=336,SNR=186
G26K **Porcupine Rive** 85.11 8 P P 12 43 23.0 +0.7
baz=343,SNR=44
J14K **Nanvaranak Lak** 85.15 17 IAMs_20 IAMs_20 13 28 51.3
comp=Z,1µm,19.0s
J14K **Nanvaranak Lak** 85.15 17 P P 12 43 23.2 +0.7
baz=326
F30M **Barrier River** 85.21 4 P P 12 43 22.9 +0.1
F30M **Barrier River** 85.21 4 P P 12 43 23.5 +0.7
baz=350
FYU **Fort Yukon** 85.29 8 P P 12 43 23.6 +0.4
H23K **Yukon River** 85.37 10 P P 12 43 24.4 +0.7
baz=338
J16K **Anvik River** 85.44 16 P P 12 43 24.7 +0.6
baz=328,SNR=127
F31M **Tsiigehtchic** 85.51 4 P P 12 43 24.7 +0.5
baz=352,SNR=98
K13K **Kusilvak Mount** 85.53 18 IAMs_20 IAMs_20 13 26 25.3
comp=Z,1µm,19.0s
K13K **Kusilvak Mount** 85.53 18 P P 12 43 24.9 +0.5
baz=325
I21K **Tanana** 85.56 11 P P 12 43 25.3 +0.8
baz=335
H24K **Noodor Dome** 85.62 10 P P 12 43 25.5 +0.6
baz=339,SNR=52
G29M **Pine Creek** 85.73 5 P P 12 43 25.4 -0.1
baz=348
G30M **tAoh Zraii Nji** 85.80 5 P P 12 43 26.1 +0.2
baz=349
MLY **Manley** 85.91 11 IAMs_20 IAMs_20 13 24 59.1
comp=Z,795nm,18.0s
MLY **Manley** 85.91 11 P P 12 43 26.9 +0.4
baz=336,SNR=55
J19K **Poorman** 85.94 13 P P 12 43 27.2 +0.7
baz=332
I23K **Minto, Yukon-K** 86.03 10 P P 12 43 27.3 +0.4
baz=338,SNR=66
H27K **Steamboat Moun** 86.06 7 P P 12 43 27.4 +0.3
baz=345,SNR=126
K15K **Wolf Creek Mou** 86.06 17 P P 12 43 28.1 +1.0
baz=327,SNR=29
GENI **Genyem** 86.16 95 P P 12 43 28.8 +0.4
J18K **Innoko River** 86.17 14 P P 12 43 27.9 +0.3
baz=331,SNR=53
PRP **Porcupine Dome** 86.25 9 P P 12 43 28.3 +0.1
baz=341,SNR=117
M11K **Mekoryuk** 86.34 19 P P 12 43 29.1 +0.6
baz=323
K17K **Iditarod** 86.47 15 P P 12 43 29.5 +0.3
K17K **Iditarod** 86.47 15 P P 12 43 29.6 +0.5
baz=330
COLA **College** 86.53 10 P P 12 43 29.2 -0.1
COLA **College** 86.53 10*c* *i*P P 12 43 29.3 -0.1
COLA pmax pmax
comp=Z,48nm,0.9s
COLA **College** 86.53 10 P P 12 43 29.5 +0.2
baz=339
L14K **Kuka Creek** 86.55 17 P P 12 43 29.8 +0.3
baz=326
L15K **Ungalak Mounta** 86.59 17 P P 12 43 30.2 +0.5
baz=327,SNR=22
NEA2 **Nenana** 86.59 10 P P 12 43 29.4 -0.3
baz=338,SNR=23
I27K **Kandik River** 86.65 7 P P 12 43 30.4 +0.4
baz=345
CHUM **Lake Minchumin** 86.68 12 P P 12 43 30.7 +0.6
baz=335,SNR=144
BPAW **Bear Paw Mtn.** 86.73 11 IAMs_20 IAMs_20 13 25 27.7
comp=Z,1µm,20.0s
BPAW **Bear Paw Mtn.** 86.73 11 P P 12 43 30.7 +0.3
baz=336,SNR=34
CCB **Clear Creek Bu** 86.75 10 IAMs_20 IAMs_20 13 29 32.1
comp=Z,1µm,20.0s
I26K **Coal Creek Min** 86.76 8 P P 12 43 31.1 +0.6
baz=343,SNR=58
ILAR **Eielson Array** 86.77 10 P P 12 43 29.6 -1.0
comp=Z,32nm,0.7s,baz=321,slow=4.2,SNR=394
ILAR PP PP 12 46 50.9 -1.3
comp=Z,6.2nm,0.9s,baz=337,slow=7.0,SNR=6.1
ILAR PKKPbc PKKPbc 13 01 24.4 -1.7
comp=Z,0.7nm,0.7s,baz=190,slow=2.1,SNR=10.0
ILAR PKPPKP P'P'df 13 09 29.8 -7.4
comp=Z,0.4nm,0.9s,baz=141,slow=2.7,SNR=4.3
ILAR LR LR 13 29 31.8
comp=Z,605nm,18.6s,baz=326,slow=41
comp=Z,32nm,0.7s
K20K **Telida** 86.82 13 P P 12 43 31.3 +0.4
baz=334
I28M **Miner Creek** 86.98 7 P P 12 43 31.7 0.0
baz=346
L17K **Donlin** 86.98 15 P P 12 43 31.9 +0.3
baz=330,SNR=46
L16K **Owhat River** 87.06 16 P P 12 43 32.6 +0.5
baz=329,SNR=62
HDA **Harding Lake** 87.10 10 P P 12 43 31.2 -1.0
baz=340,SNR=53
J25K **Salcha River,** 87.13 9 P P 12 43 32.3 -0.1
baz=341,SNR=103
M13K **Dall Lake** 87.14 18 P P 12 43 33.2 +0.8
baz=331,SNR=16
I29M **Ogilvie Camp,** 87.22 6 P P 12 43 32.9 +0.1
baz=348,SNR=61
KTH **Kantishna Hill** 87.24 12 IAMs_20 IAMs_20 13 25 07.3
comp=Z,924nm,22.0s
M14K **Bethel** 87.24 18 P P 12 43 33.3 +0.4
baz=327,SNR=38
MCK **McKinley** 87.42 11 P P 12 43 33.6 -0.2
baz=338,SNR=84
TRF **Thorofare Moun** 87.45 11 P P 12 43 33.7 -0.4
baz=337,SNR=32
J26L **Joseph Creek** 87.48 8 P P 12 43 34.2 +0.1
baz=343
I30M **Mount Dempster** 87.52 5 P P 12 43 34.6 +0.2
baz=349
PPLA **Purkeypile** 87.61 12 P P 12 43 34.9 0.0
baz=335,SNR=31
M15K **Kasigluk River** 87.63 17 P P 12 43 35.2 +0.4
baz=328
L19K **White Mountain** 87.71 14 P P 12 43 35.6 +0.3
baz=333,SNR=35
RND **Reindeer** 87.74 11 P P 12 43 34.1 -1.3
RND IAmb IAmb 12 43 45.1
comp=Z,56nm,1.0s
RND **Reindeer** 87.74 11 P P 12 43 34.1 -1.3
RND pmax pmax
comp=Z,56nm,1.0s
M16K **Timber Creek** 87.78 16 P P 12 43 35.9 +0.4
baz=330,SNR=42
M17K **Holitna River** 87.82 15 P P 12 43 36.1 +0.4
baz=331
K24K **Donnelly Dome** 87.84 9 P P 12 43 36.0 +0.2
baz=341,SNR=20
SCRK **Sand Creek** 87.93 9 P P 12 43 35.7 -0.7
SCRK **Sand Creek** 87.93 9 P P 12 43 36.5 +0.1
baz=342,SNR=125
N14K **Kuskokwak Cree** 88.01 18 P P 12 43 37.1 +0.5
baz=327,SNR=22
RIDG **Independent Ri** 88.04 9 P P 12 43 36.7 -0.1
baz=342,SNR=16
M18K **Stony River** 88.11 15 P P 12 43 37.7 +0.6
baz=332
J29N **Klondike Camp** 88.12 6 P P 12 43 37.7 +0.5
baz=348,SNR=47
J30M **Hart River** 88.17 5 P P 12 43 37.9 +0.4
baz=349
N15K **Kwethluk River** 88.23 17 P P 12 43 38.2 +0.5
baz=329,SNR=12
DHY **Denali Highway** 88.29 10 P P 12 43 37.9 -0.2
baz=340,SNR=17
N16K **Nishlik Lake** 88.31 16 P P 12 43 38.4 +0.3
baz=330
WAT1 **Susitna Watana** 88.33 11 P P 12 43 37.9 -0.2
baz=338
M20K **Styx River** 88.34 13 P P 12 43 38.2 -0.1
baz=334
DAWY **Dawson** 88.39 7 P P 12 43 38.6 +0.2
baz=347,SNR=63
CUT **Chulitna** 88.42 12 P P 12 43 38.0 -0.5
baz=337,SNR=26
SKT **Skwentna** 88.57 13 P P 12 43 38.8 -0.5
baz=336,SNR=53
N17K **Nushagak Hills** 88.65 16 P P 12 43 39.8 +0.2
baz=331
PAX **Paxson** 88.68 10 P P 12 43 39.9 0.0
baz=341,SNR=10
WAT6 **Susitna Watana** 88.69 11 P P 12 43 40.0 -0.1
baz=339,SNR=26
O14K **Tigyukauivet M** 88.69 18 P P 12 43 40.2 +0.3
baz=328,SNR=16
K29M **Barlow Dome** 88.78 6 P P 12 43 40.6 +0.2
baz=348,SNR=73
N18K **Kilae Creek** 88.82 15 P P 12 43 41.2 +0.7
baz=332
L26K **Log Cabin Wild** 88.93 9 P P 12 43 41.3 +0.4
baz=343,SNR=16
N19K **Bonanza Creek** 89.02 14 P P 12 43 41.9 +0.4
baz=333
M22K **Willow** 89.05 12 P P 12 43 41.4 -0.1
baz=337,SNR=38
L27K **Beaver Creek,** 89.09 8 P P 12 43 42.4 +0.7
baz=344
O15K **Ungalikthiuk R** 89.15 17 P P 12 43 42.4 +0.3
baz=329,SNR=14
MAYO **Mayo, Yukon** 89.17 5 P P 12 43 42.5 +0.4
baz=350,SNR=8.7
SUA **Susitna One** 89.20 12 P P 12 43 42.5 +0.1
baz=337,SNR=119
SPU **Mount Spurr** 89.20 13 P P 12 43 41.4 -0.9
WB0 **Warramunga Arr** 89.20 113 P P 12 43 43.4 +0.5
O16K **Kokwok River B** 89.24 16 P P 12 43 42.2 -0.3
O16K **Kokwok River B** 89.24 16 P P 12 43 43.0 +0.6
baz=330,SNR=14
WRA **Warramunga Arr** 89.25 113 P P 12 43 42.0 -1.1
comp=Z,4.6nm,0.9s,baz=313,slow=3.9,SNR=30
WRA PKKPbc PKKPbc 13 01 18.3 -1.2
comp=Z,0.3nm,0.5s,baz=108,slow=3.1,SNR=7.7
comp=Z,4.6nm,0.9s
WRA **Warramunga Arr** 89.25 113 P P 12 43 42.7 -0.4
WRA **Warramunga Arr** 89.25 113 *i* P P 12 43 41.5 -1.6
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRAB **Tennant Creek** 89.25 113 P P 12 43 44.7 +1.6
HARP **HAARP** 89.27 10 P P 12 43 43.2 +0.6
baz=342,SNR=7.8
SML **Sawmill** 89.32 11 P P 12 43 43.0 +0.1
baz=339,SNR=8.7
O17K **Koliganek Bris** 89.33 16 P P 12 43 43.4 +0.5
baz=331,SNR=15
PMR **Palmer** 89.38 12 P P 12 43 43.2 +0.2
PMR **Palmer** 89.38 12 P P 12 43 43.2 +0.2
baz=338,SNR=12
M24K **Tolsona, Glenn** 89.39 10 P P 12 43 43.5 +0.3
baz=341,SNR=12
M23K **Glacier View** 89.43 11 P P 12 43 43.5 +0.1
baz=339,SNR=6.8
SCM **Sheep Creek Mo** 89.46 11 P P 12 43 43.4 -0.1
baz=340,SNR=8.2
M26K **Nabesna, AK** 89.57 9 P P 12 43 44.5 +0.4
baz=343
O19K **Port Alsworth** 89.61 15 P P 12 43 44.2 +0.1
baz=334,SNR=7.4
KNK **Knik Glacier** 89.66 11 P P 12 43 44.8 +0.3
baz=339,SNR=6.2
O18K **Koktuh Hills** 89.71 15 P P 12 43 45.1 +0.4
baz=333,SNR=16
RC01 **Rabbit Creek A** 89.73 12 P P 12 43 44.6 -0.1
RC01 **Rabbit Creek A** 89.73 12 P P 12 43 45.0 +0.3
baz=338,SNR=32
CAPN **Captain Cook N** 89.76 13 P P 12 43 45.3 +0.5
baz=336,SNR=6.5
P16K **Nushagak River** 89.76 17 P P 12 43 45.2 +0.4
baz=330,SNR=22
M27K **Edge Creek, AK** 89.76 8 P P 12 43 45.2 +0.2
baz=344
BVCY **Beaver Creek** 89.83 8 P P 12 43 45.7 +0.5
baz=345,SNR=14
P17K **Kvichak River** 90.00 16 P P 12 43 46.3 +0.3
baz=332,SNR=27
WRGLY **Wrigley** 90.01 360 P P 12 43 46.4 +0.5
baz=0.7
KLU **Kluting** 90.01 10 P P 12 43 46.5 +0.4
baz=341,SNR=6.7
M29M **Somme Creek** 90.07 7 P P 12 43 46.5 +0.1
baz=347,SNR=21
M30M **Minto, Yukon** 90.10 6 P P 12 43 46.7 +0.2
baz=349,SNR=8.4
N25K **Chitina, Valde** 90.11 10 P P 12 43 46.6 0.0
baz=342
P18K **Big Mountain,** 90.12 15 P P 12 43 46.6 0.0
baz=333
O22K **Cooper Landing** 90.30 12 P P 12 43 47.9 +0.5
baz=338,SNR=20
P19K **Oil Pt** 90.34 14 P P 12 43 47.5 -0.2
baz=334
GLI **Glacier Island** 90.40 11 IAMs_20 IAMs_20 13 32 18.7
comp=Z,884nm,18.0s
GLI **Glacier Island** 90.40 11 P P 12 43 47.7 -0.1
baz=340
Q16K **King Simon** 90.41 16 P P 12 43 48.2 +0.3
baz=332,SNR=20
YKA **Yellowknife Ar** 90.42 356 P P 12 43 47.9 0.0
comp=Z,8.9nm,0.8s,baz=359,slow=5.6,SNR=131
YKA PP PP 12 47 19.7 -1.7
comp=Z,7.0nm,1.1s,baz=4.9,slow=6.9,SNR=5.1
YKA PKKPbc PKKPbc 13 01 16.8 -0.3
comp=Z,1.0nm,0.9s,baz=204,slow=2.5,SNR=11
YKA PKPPKP P'P'df 13 09 25.5 -4.8
comp=Z,0.1nm,0.5s,baz=204,slow=1.5,SNR=4.3
YKA LR LR 13 28 54.8
comp=Z,611nm,21.4s,baz=20,slow=38
comp=Z,8.9nm,0.8s
YKA **Yellowknife Ar** 90.42 356 *i* P P 12 43 48.4 +0.5
YKA pmax pmax
comp=Z,10.0nm,0.8s
YUK3 **Moose Creek** 90.50 8 P P 12 43 48.8 +0.2
baz=346,SNR=17
MCARA **McCarthy VSAT** 90.55 9 P P 12 43 48.8 +0.2
baz=343
M31M **Drury Creek, Y** 90.66 5 P P 12 43 49.4 +0.3
baz=351,SNR=12
HOM **Homer** 90.67 14 P P 12 43 49.2 0.0
baz=336
ASAR **Alice Springs** 90.70 116 P P 12 43 49.1 -0.7
comp=Z,2.1nm,1.0s,baz=305,slow=4.8,SNR=32
ASAR PKKPbc PKKPbc 13 01 16.1 +0.2
comp=Z,0.6nm,0.8s,baz=106,slow=4.7,SNR=5.7
ASAR LR LR 13 26 45.4
comp=Z,121nm,19.0s,baz=276,slow=37
SEW **Seward** 90.70 12 P P 12 43 49.2 0.0
SEW IAmb IAmb 12 43 57.6
comp=Z,62nm,0.9s
SEW **Seward** 90.70 12 P P 12 43 49.5 +0.3
baz=338,SNR=8.9
FARO **Faro, Yukon** 90.71 4 P P 12 43 49.7 +0.4
baz=352,SNR=11
BMRM **Bremner River** 90.72 10 P P 12 43 49.4 0.0
baz=342,SNR=9.6
BRLK **Bradley Lake** 90.73 13 P P 12 43 49.0 -0.4
BRLK IAmb IAmb 12 43 57.7
comp=Z,66nm,0.9s
BRSE **Bradley Lake S** 90.78 13 P P 12 43 49.9 +0.3
baz=337
CNPM **China Poot** 90.88 13 P P 12 43 49.7 -0.5
CNPM IAmb IAmb 12 43 58.4
comp=Z,56nm,1.0s
FCC **Fort Churchill** 90.89 345 P P 12 43 50.1 0.0
FCC **Fort Churchill** 90.89 345 P P 12 43 50.1 0.0
FCC pmax pmax
comp=Z,26nm,1.0s
Q19K **Cape Douglas,** 90.90 15 P P 12 43 50.0 -0.3
baz=334
EYAK **Cordova Ski Ar** 90.94 10 P P 12 43 50.9 +0.6
EYAK IAmb IAmb 12 43 59.3
comp=Z,46nm,0.9s
EYAK **Cordova Ski Ar** 90.94 10 P P 12 43 51.1 +0.8
EYAK **Cordova Ski Ar** 90.94 10 P P 12 43 50.9 +0.6
baz=341,SNR=5.4
Q17K **Contact Creek** 90.96 16 P P 12 43 49.7 -1.0
baz=332
YUK8 **Steele Glacier** 91.06 7 P P 12 43 51.4 +0.2
baz=346
YUK4 **Talbot Arm** 91.12 7 P P 12 43 51.3 -0.2
baz=347,SNR=28
R16K **Pilot Point** 91.14 17 P P 12 43 51.7 +0.3
baz=331
CRQE **Cirque** 91.14 9 P P 12 43 51.6 +0.1
baz=343
CTG **Chitna Glacier** 91.17 8 P P 12 43 52.2 +0.5
baz=345,SNR=12
P23K **Montague Islan** 91.17 11 P P 12 43 51.7 +0.3
baz=340
N31M **Braeburn, Yuko** 91.26 6 P P 12 43 51.9 0.0
baz=350,SNR=7.6
NIKH **Nikolski High** 91.32 25 P P 12 43 52.4 +0.2
baz=321
R17L **Mt. Peulik Vol** 91.40 17 P P 12 43 52.1 -0.5
baz=332
Q20K **Shuyak Island** 91.47 14 P P 12 43 52.7 -0.1
baz=335
UNV **Unalaska Valle** 91.50 24 P P 12 43 53.3 +0.3
baz=323
O28M **Mount Upton** 91.51 8 P P 12 43 53.3 -0.1
baz=346,SNR=8.3
YUK6 **Outpost Mounta** 91.55 7 P P 12 43 53.2 -0.2
baz=348,SNR=5.3
FALS **False Pass** 91.73 21 P P 12 43 54.2 +0.2
baz=326
KAIM **Kayak Island** 91.74 10 P P 12 43 54.0 -0.1
baz=342
HYT **Haines Junctio** 91.75 6 P P 12 43 54.4 +0.1
baz=348,SNR=21
N32M **Quiet Lake** 91.80 4 P P 12 43 54.4 0.0
baz=352
MESA **MESA** 91.86 9 P P 12 43 54.8 -0.1
baz=344
Q23K **Middleton Isla** 91.89 11 P P 12 43 55.1 +0.3
baz=340
O30N **Mendenhall** 91.94 6 P P 12 43 55.2 +0.1
baz=350,SNR=8.5
O29M **Mount Kennedy** 92.15 7 P P 12 43 55.8 -0.4
baz=347
WHY **Whitehorse** 92.15 5 P P 12 43 55.4 -0.7
WHY **Whitehorse** 92.15 5 P P 12 43 55.9 -0.2
baz=351
PINM **Pinnacle** 92.16 8 P P 12 43 56.0 -0.2
baz=346
KDAK **Kodiak Island** 92.18 15 LR LR 13 32 50.9
comp=Z,870nm,18.1s,baz=338,slow=40
KDAK **Kodiak Island** 92.18 15 P P 12 43 56.0 -0.2
KDAK **Kodiak Island** 92.18 15*d* *i*P P 12 43 56.7 +0.6
KDAK pmax pmax
comp=Z,69nm,1.0s

KDAK	**Kodiak Island**	**92.18**	**15**	P		**P**	**12 43 56.3**	**+0.2**
	baz=335							
SDPT	**Sand Point**	**92.23**	**20**	P		**P**	**12 43 56.5**	**0.0**
	baz=328							
P30M	**Million Dollar**	**92.50**	**6**	P		**P**	**12 43 58.0**	**+0.3**
	baz=349							
OHAK	**Old Harbor**	**92.52**	**15**	P		**P**	**12 43 58.0**	**+0.3**
	baz=334							
P33M	**Teslin, Yukon**	**92.75**	**4**	P		**P**	**12 43 59.0**	**+0.2**
	baz=352,SNR=12							
SII	**Sitkinak Islan**	**92.90**	**16**	P		**P**	**12 43 59.8**	**+0.2**
	baz=334							
WTLY	**Watson Lake, Y**	**93.06**	**2**	P		**P**	**12 44 00.2**	**0.0**
WTLY				IAmb		IAmb	12 44 09.2	
	comp=Z,21nm,0.9s							
WTLY	**Watson Lake, Y**	**93.06**	**2**	P		**P**	**12 44 00.8**	**+0.6**
	baz=356,SNR=11							
KOTAN	**Kotaneelee Air**	**93.12**	**360**	P		**P**	**12 44 01.1**	**+0.7**
	baz=0.2							
CHIR	**Chirikof Islan**	**93.19**	**17**	P		**P**	**12 44 01.5**	**+0.6**
	baz=332							
SKAG	**Skagway**	**93.30**	**6**	P		**P**	**12 44 01.9**	**+0.7**
	baz=350							
P32M	**Atlin**	**93.30**	**5**	P		**P**	**12 44 01.9**	**+0.5**
	baz=352							
R33M	**Jennings River**	**93.68**	**3**	P		**P**	**12 44 03.3**	**+0.1**
	baz=354							
Q32M	**Nakina River**	**94.03**	**4**	P		**P**	**12 44 04.7**	**-0.2**
	baz=353							
TOAD	**Toad River Com**	**94.40**	**1**	P		**P**	**12 44 06.7**	**+0.3**
	baz=359,SNR=18							
R32K	**Eaglecrest**	**94.54**	**5**	P		**P**	**12 44 07.4**	**+0.3**
	baz=351							
DLBC	**Dease Lake**	**94.68**	**3**	LR		LR	13 30 53.7	
	comp=Z,226nm,20.2s,baz=307,slow=38							
DLBC	**Dease Lake**	**94.68**	**3**	P		**P**	**12 44 08.2**	**+0.5**
	baz=355,SNR=8.3							
S34M	**Telegraph Cree**	**95.14**	**4**	P		**P**	**12 44 10.2**	**+0.4**
	baz=354							
S32K	**Killisnoo**	**95.34**	**6**	P		**P**	**12 44 10.8**	**+0.1**
	baz=351							
SIT	**Sitka**	**95.68**	**6**	P		**P**	**12 44 12.3**	**+0.1**
	baz=350							
T35M	**Bob Quinn**	**96.12**	**3**	P		**P**	**12 44 14.4**	**+0.1**
	baz=355							
WRAK	**Wrangell Islan**	**96.55**	**5**	P		**P**	**12 44 15.9**	**-0.2**
	baz=353							
U33K	**Whale Pass**	**96.80**	**5**	P		**P**	**12 44 17.1**	**-0.2**
	baz=352							
CRAG	**Craig**	**97.44**	**5**	P		**P**	**12 44 20.0**	**-0.2**
	baz=352							
SADO	**Sadowa**	**97.52**	**329**	LR		LR	13 30 56.4	
	comp=Z,255nm,20.2s,baz=67,slow=37							
V35K	**Ketchikan**	**97.69**	**4**	P		**P**	**12 44 21.3**	**0.0**
	baz=353							
ULM	**Lac du Bonnet**	**99.02**	**342**	P		**Pdif**	**12 44 26.4**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=62,slow=5.2,SNR=6.6							
ULM				LR		LR	13 34 57.2	
	comp=Z,335nm,18.4s,baz=20,slow=39							
	comp=Z,2.8nm,0.7s							
ULM	**Lac du Bonnet**	**99.02**	**342**	⇑ *iP*		**Pdif**	**12 44 26.9**	**-0.6**
CTA	**Charters Tower**	**99.28**	**108**	LR		LR	13 34 04.9	
	comp=Z,90nm,19.4s,baz=270,slow=38							
VNA2	**Neumayer--Watz**	**107.18**	**198**	⇓P		PKiKP	12 49 20.1	+8.2
	comp=Z,5.5nm,0.8s,baz=43,slow=2.8							
VNA3	**Neumayer Olymp**	**107.97**	**198**	P		**PKiKP**	**12 49 18.6**	**+5.2**
PDAR	**Pinedale Array**	**109.21**	**349**	PKiKP		**PKiKP**	**12 49 16.4**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=72,slow=3.5,SNR=15							
PDAR				PP		**PP**	**12 49 41.2**	**-3.4**
	comp=Z,2.3nm,0.8s,baz=354,slow=5.1,SNR=5.1							
PDAR				PKKPbc		**PKKPbc**	**13 00 26.5**	**+2.6**
	comp=Z,0.5nm,0.6s,baz=162,slow=6.0,SNR=6.3							
NVAR	**Mina Array Bea**	**114.61**	**355**	PKP		PKPdf	12 49 28.6	+1.1
	comp=Z,1.8nm,0.5s,baz=355,slow=3.6,SNR=30							
NVAR				PKKPbc		**PKKPbc**	**13 00 10.3**	**+4.2**
	comp=Z,0.6nm,0.8s,baz=211,slow=3.2,SNR=5.2							
QSPA	**South Pole Qui**	**116.92**	**180**	PKP		**PKiKP**	**12 49 31.5**	**+0.8**
	comp=Z,12nm,0.8s,baz=242,slow=1.5,SNR=6.2							
QSPA				PKKPbc		**PKKPbc**	**13 00 02.3**	**+3.4**
	comp=Z,2.9nm,0.7s,baz=120,slow=0.8,SNR=4.9							
DZM	**Mont Dzumac**	**117.44**	**102**	eLR		LR	13 25 02.1	
	comp=Z,152nm,23.5s							
IRM	**Iron Mountain**	**118.50**	**351**	IAMs_20		IAMs_20	13 29 45.9	
	comp=Z,680nm,21.0s							
TXAR	**Lajitas Array**	**120.56**	**339**	PKP		**PKPdf**	**12 49 38.9**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=154,slow=1.1,SNR=35							
TXAR				PKKPbc		**PKKPab**	**12 59 46.7**	**-1.5**
	comp=Z,0.6nm,1.0s,baz=238,slow=4.0,SNR=3.5							
CPUP	**Villa Florida**	**120.93**	**254**	PKP		**PKPdf**	**12 49 38.9**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=74,slow=4.2,SNR=8.3							
LPAZ	**La Paz**	**127.17**	**270**	PKP		**PKiKP**	**12 49 52.8**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=83,slow=1.9,SNR=9.0							
LPAZ	**La Paz**	**127.17**	**270**	*e*P		**PKiKP**	**12 49 52.8**	**-0.2**
OTAV	**Otavalo**	**128.34**	**294**	*e*P		**PKiKP**	**12 49 55.5**	**+0.1**
PLCA	**Paso Flores**	**134.10**	**238**	PKP		**PKiKP**	**12 50 05.4**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=204,slow=3.8,SNR=3.2							
PLCA				SKPbc		**SKPbc**	**12 53 32.3**	**-0.7**
	comp=Z,5.5nm,0.9s,baz=107,slow=4.9,SNR=5.6							
PLCA	**Paso Flores**	**134.10**	**238**	*e*P		**PKiKP**	**12 50 06.9**	**+1.2**
PPT2	**Papeete2**	**154.75**	**73**	*e*PP		PP	12 54 29.8	-10
	comp=Z,76nm,24.2s							
PPT2				eLR		LR	13 42 25.1	
	comp=Z,252nm,23.2s							
PPT2				eLR		LR	13 42 35.8	
	comp=Z,214nm,24.5s							
TAOE	**Nuku Hiva Isla**	**156.42**	**43**	eLR		LR	13 43 13.1	
	comp=Z,585nm,22.5s							
TBI	**Tubuai**	**156.86**	**86**	*e*SS		SS	13 14 39.1	-5.4
	comp=Z,2μm,31.0s							
TBI				eLR		LR	13 43 21.8	
	comp=Z,994nm,26.2s							
RKT	**Rikitea**	**169.48**	**70**	eLR		LR	13 49 12.2	
	comp=Z,2μm,33.0s							

*AZER **16** 12:32:52.1,40°.28N×48°.75E,h2km,ml3.8*
*TEH **16** 12:32:55.0,40°.29N×48°.81E,h23km±17km,ML3.9,*
Presumed earthquake

ISC 16 12:32:55.7±1.0,40°.25N±0°.02×48°.78E±0°.02,h13km±8km, n61,σ1§37/95,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBS	**Qobustan**	**0.32**	**24**	Pg	**Pg**	**12 33 00.9**	**-1.4**
GBS	**Qobustan**	**0.32**	**24**	P	**Pg**	**12 33 00.8**	**-1.4**
GBS				S	**Sb**	**12 33 08.4**	**+0.1**
ALIB	**&Aumlli-Bayram**	**0.34**	**148**	Pg	**Pg**	**12 33 02.8**	**+0.2**
ALIB	**&Aumlli-Bayram**	**0.34**	**148**	P	**Pg**	**12 33 02.8**	**+0.2**
ALIB				S	**Sn**	**12 33 12.2**	**-0.8**
KDMR	**Kurdemir**	**0.47**	**286**	Pg	**Pg**	**12 33 05.2**	**+0.2**
KDMR	**Kurdemir**	**0.47**	**286**	P	**Pg**	**12 33 05.1**	**+0.1**
KDMR				S	**Sn**	**12 33 15.3**	**-1.0**
SAAT	**Saatly**	**0.47**	**215**	Pg	**Pb**	**12 33 05.6**	**-0.2**
SAAT	**Saatly**	**0.47**	**215**	P	**Pb**	**12 33 05.6**	**-0.2**
SAAT				S	**Sn**	**12 33 15.4**	**-0.8**
PQL	**Pirkuli**	**0.56**	**346**	Pg	**Pg**	**12 33 05.5**	**-1.2**
PQL	**Pirkuli**	**0.56**	**346**	P	**Pg**	**12 33 05.5**	**-1.2**
PQL				S	**Sb**	**12 33 16.4**	**+0.9**
ATGJ	**Altiaghaj**	**0.63**	**11**	P	**Pg**	**12 33 06.7**	**-1.3**
ATGJ				S	**Sn**	**12 33 18.8**	**-1.6**
IML	**Ismayilli**	**0.71**	**321**	Pg	**Pg**	**12 33 08.2**	**-1.3**
IML	**Ismayilli**	**0.71**	**321**	P	**Pg**	**12 33 08.2**	**-1.3**
IML				S	**Sb**	**12 33 20.5**	**+0.8**
GOBA	**Gobu**	**0.75**	**78**	P	**Pb**	**12 33 10.8**	**+0.2**
GOBA				S	**Sn**	**12 33 24.7**	**+1.5**
SIZA	**Siyzn**	**0.83**	**6**	Pg	**Pb**	**12 33 10.6**	**-1.5**
SIZA	**Siyzn**	**0.83**	**6**	P	**Pb**	**12 33 10.6**	**-1.5**
SIZA				S	**Sn**	**12 33 25.2**	**-0.3**
NDR	**Nardaran**	**0.98**	**70**	Pg	**Pb**	**12 33 14.3**	**-0.3**
NDR	**Nardaran**	**0.98**	**70**	P	**Pb**	**12 33 14.4**	**-0.3**
NDR				S	**Sn**	**12 33 31.0**	**+2.0**
QBL	**Gabala**	**1.00**	**315**	Pg	**Pb**	**12 33 13.0**	**-1.9**
QBL	**Gabala**	**1.00**	**315**	P	**Pb**	**12 33 12.8**	**-2.1**
QBL				S	**Sn**	**12 33 31.9**	**+2.4**
XNQ	**Khinaliq**	**1.04**	**333**	P	**Pb**	**12 33 13.5**	**-2.3**
XNQ				S	**Sn**	**12 33 31.8**	**+0.9**
GLBA	**Clilabad**	**1.04**	**196**	P	**Pb**	**12 33 14.4**	**-1.3**
GLBA				S	**Sn**	**12 33 33.2**	**+2.7**
GALA	**Gala**	**1.07**	**81**	P	**Pg**	**12 33 16.6**	**+0.3**
GALA				S	**Sn**	**12 33 31.6**	**+0.6**
BLQ	**Beylaqan**	**1.07**	**241**	P	**Pb**	**12 33 15.0**	**-1.2**
BLQ				S	**Sn**	**12 33 32.3**	**+1.2**
QUBA	**Quba, Azerbaij**	**1.13**	**349**	P	**Pb**	**12 33 16.2**	**-0.9**
QUBA				S	**Sg**	**12 33 34.5**	**+2.3**
BRDA	**Brd**	**1.22**	**271**	P	**Pn**	**12 33 18.1**	**-0.4**
BRDA				S	**Sg**	**12 33 40.8**	**+5.7**
AGDM	**Agdam**	**1.28**	**264**	P	**Pn**	**12 33 18.5**	**-0.9**
AGDM				S	**Sg**	**12 33 39.1**	**+2.0**
QSAR	**Qusar**	**1.32**	**343**	P	**Pn**	**12 33 19.5**	**-0.5**
QSAR				S	**Sg**	**12 33 39.9**	**+1.4**
QRD	**Qoradiz**	**1.37**	**235**	Pn	**Pn**	**12 33 19.2**	**-1.3**
QRD				Sn	**Sg**	**12 33 39.7**	**-0.1**
MNGR	**Mingechevir, A**	**1.39**	**293**	Pn	**Pn**	**12 33 20.2**	**-0.6**
MNGR				Sn	**Sg**	**12 33 41.5**	**+0.9**
YRD	**Yardimli**	**1.39**	**197**	Pn	**Pn**	**12 33 19.3**	**-1.7**
YRD				Sn	**Sg**	**12 33 41.2**	**+0.6**
LKRN	**Lenkeran, Azer**	**1.53**	**180**	Pg	**Pn**	**12 33 20.5**	**-2.3**
LKRN				Sg	**Sb**	**12 33 43.3**	**0.0**
SEKA	**Sheki**	**1.54**	**309**	Pn	**Pn**	**12 33 21.5**	**-1.4**
SEKA				Sn	**Sb**	**12 33 44.0**	**+0.5**
LRK	**Lerik**	**1.64**	**192**	Pg	**Pn**	**12 33 22.4**	**-2.0**
LRK				Sn	**Sg**	**12 33 48.1**	**-0.4**
ASTR	**Astara**	**1.68**	**180**	Pg	**Pn**	**12 33 22.4**	**-2.4**
ASTR				Sg	**Sb**	**12 33 47.0**	**-0.6**
GAS1	**Astara - Iran**	**1.86**	**178**	Pn	**Pn**	**12 33 27.2**	**-0.1**
GANJ	**Ganja**	**1.91**	**283**	Pn	**Pn**	**12 33 27.1**	**-1.0**
GANJ				Sn	**Sb**	**12 33 53.7**	**-0.6**
VSHL	**Vashlovani**	**2.06**	**299**	P	**Pn**	**12 33 31.1**	**+1.1**
ZKTA	**Zakatala**	**2.14**	**311**	Pn	**Pn**	**12 33 32.0**	**+0.8**
ZKTA				Sn	**Sb**	**12 34 02.5**	**+1.6**
DDFL	**Dedoflistskaro**	**2.34**	**302**	P	**Pb**	**12 33 37.0**	**-0.8**
IHRS	**Heris**	**2.35**	**215**	Pn	**Pn**	**12 33 34.3**	**+0.1**
GDB	**GEDABAY**	**2.35**	**283**	Pg	**Pn**	**12 33 33.5**	**-0.7**
GDB				Sg	**Sb**	**12 34 05.9**	**-1.2**
LGD	**Lagodekhi**	**2.49**	**310**	P	**Pn**	**12 33 37.3**	**+1.4**
ORD	**Ordubad**	**2.52**	**239**	Pg	**Pn**	**12 33 36.6**	**+0.2**
ORD				Sg	**Sb**	**12 34 13.0**	**+1.2**
SBZ	**Shahbuz**	**2.62**	**252**	Pg	**Pn**	**12 33 39.0**	**+1.1**
SBZ				Sg	**Sb**	**12 34 14.5**	**-0.3**
QZX	**Qazax, Azerbai**	**2.71**	**288**	Pg	**Pn**	**12 33 39.6**	**+0.6**
QZX				Sg	**Sb**	**12 34 17.8**	**+0.5**
NAX	**Nakhchivan**	**2.75**	**248**	Pg	**Pn**	**12 33 42.0**	**+2.4**
NAX				Sg	**Sb**	**12 34 18.9**	**+0.5**
IMRD	**Marand**	**2.83**	**238**	Pn	**Pn**	**12 33 41.1**	**+0.3**
DGRG	**David-gareji**	**2.85**	**296**	P	**Pn**	**12 33 41.9**	**+1.0**
ITBZ	**Tabriz**	**2.86**	**226**	Pn	**Pn**	**12 33 41.3**	**+0.1**
HYR	**Heyderabad**	**3.06**	**261**	Pg	**Pb**	**12 33 48.6**	**-1.4**
HYR				Sg	**Sg**	**12 34 31.1**	**-2.9**
ISHB	**Shabestar**	**3.14**	**232**	Pn	**Pn**	**12 33 45.0**	**-0.1**
IHSH	**Hashtrud**	**3.17**	**202**	Pn	**Pn**	**12 33 45.0**	**-0.5**
MAKU	**Maku**	**3.27**	**256**	Pn	**Pn**	**12 33 47.1**	**+0.2**
IAZR	**Azarshahr**	**3.37**	**221**	Pn	**Pn**	**12 33 48.8**	**+0.6**
CHRG	**Chargali**	**3.57**	**307**	P	**Pn**	**12 33 50.9**	**-0.1**
SHTL	**Shatili**	**3.63**	**313**	P	**Pn**	**12 33 53.1**	**+1.3**
GUDG	**Gudauri**	**3.92**	**306**	P	**Pn**	**12 33 56.5**	**+0.7**
AKH	**Akhalkalaki**	**4.17**	**288**	P	**Pn**	**12 34 01.2**	**+2.0**
ALIG	**Mtskhetisjvari**	**4.29**	**297**	P	**Pn**	**12 34 00.9**	**+0.1**
GARIG	**Gari**	**4.63**	**302**	P	**Pn**	**12 34 06.2**	**+0.8**

JMA 16 12:40:25.2±0.1,41°.5N±0°.9×142°.4E±0°.7,h51km,E OFF AOMORI PREF,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.79**	**45**	*e*P	Pn	12 40 40.1	+0.1
JEM				*e*S	Sn	12 40 51.0	+0.1
JOT	**Ohata**	**1.03**	**266**	*e*S	Sn	12 40 56.7	0.0
JTM	**Tenmabayashi**	**1.22**	**237**	*e*P	Pn	12 40 46.4	+0.5
JTM				*e*S	Sn	12 41 01.7	+0.4
JANG	**Nango**	**1.28**	**212**	*e*S	Sn	12 41 02.0	-0.8
JNB	**Noboribetsu**	**1.44**	**315**	*e*S	Sn	12 41 06.1	-0.5

*DNK **16** 12:45:08.7±1.8,78°.49N×7°.17E,h28km±19km,ML1.4,*
Presumed earthquake
*BER **16** 12:45:09.8±1.8,78°.49N×7°.03E,h23km±18km,Mw3.2,*
ML1.4(DNK),Confirmed Earthquake

ISC 16 12:45:05.1±1.0,78°.4N±0°.1×6°.84E±0°.05,h14km,n8, σ2§00/15,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.16**	**58**	*e*P	**Pn**	**12 45 28.4**	**+1.6**
KBS				*e*S	**Sn**	**12 45 40.2**	**-2.2**
KBS				IAML		12 45 45.3	
	comp=Z,58nm,0.5s						
KBS	**Kingsbay**	**1.16**	**58**	*i* P	**Pn**	**12 45 28.5**	**+1.6**
KBS				*i* S	**Sn**	**12 45 40.3**	**-2.2**
BRBB	**Barentsburg B**	**1.53**	**96**	*e*P	**Pb**	**12 45 33.0**	**-0.2**
BRBA	**Barentsburg A**	**1.54**	**98**	*e*P	**Pb**	**12 45 33.2**	**-0.2**
BRBA				*e*S	**Sb**	**12 45 53.0**	**+0.3**
SPA0	**Spitsbergen Ar**	**1.96**	**91**	*e*P	**Pb**	**12 45 39.9**	**-0.5**
SPA0				*e*S	**Sn**	**12 46 01.7**	**-0.3**
SPA0				IAML		12 46 14.6	
	comp=Z,18nm,0.7s						
DAG	**Danmarks Havn**	**5.70**	**267**	*e*P	**Pn**	**12 46 32.2**	**+3.1**
DAG				*e*S	**Sn**	**12 47 31.6**	**-2.6**
DAG	**Danmarks Havn**	**5.70**	**267**	*i* P	**Pn**	**12 46 31.0**	**+1.9**
DAG				*i* S	**Sn**	**12 47 33.1**	**-1.1**
DAG				IAML		12 47 34.1	
	comp=Z,3.5nm,0.5s						
DBG	**Daneborg**	**7.51**	**251**	*e*P	**Pn**	**12 46 55.1**	**+1.1**
DBG				*i* P	Pb	12 47 03.1	-12
DBG				*i* S	**Sn**	**12 48 15.5**	**-3.2**
DBG				IAML		12 48 17.8	
	comp=Z,0.4nm,0.3s						

RSNC 16 13:02:49.3±0.0,7°N±2°×7°.5W±°,h4km±3km,M3.2,mb4.0, ML2.9,MLv3.7,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UREC	**San Jos de Ur**	**0.63**	**336**	P	Pg	13 02 59.6	-1.9
UREC				S	Sg	13 03 09.0	-0.8
MEDEC	**Medelln, Ant**	**0.94**	**200**	P	Pg	13 03 01.4	-6.0
MEDEC				S	Sg	13 03 13.2	-6.5
DBBC	**Dabeiba**	**0.94**	**261**	P	Pg	13 03 04.4	-3.1
DBBC				S	Sg	13 03 20.0	+0.3
PTBC	**PUERTO BERRIO,**	**1.02**	**128**	P	Pg	13 03 04.2	-4.7
PTBC				S	Sg	13 03 16.6	-5.6
APAC	**Apartado, Choc**	**1.49**	**299**	P	Pn	13 03 16.1	-0.7
CBOC	**Ciudad Bolivar**	**1.49**	**210**	P	Pn	13 03 12.0	-5.1
CBOC				S	Sb	13 03 31.2	-5.9
BRJC	**Barrancabermej**	**1.53**	**97**	P	Pn	13 03 14.0	-3.4
BRJC				S	Sn	13 03 33.7	-4.0
NORC	**Norcasia**	**1.65**	**166**	P	Pn	13 03 14.0	-5.1
NORC				S	Sn	13 03 33.3	-7.4
SPBC	**San Pablo de B**	**1.92**	**142**	P	Pn	13 03 19.7	-3.2
SPBC				S	Sn	13 03 43.5	-4.1
NIZA	**Niza - Manizal**	**2.11**	**185**	P	Pn	13 03 23.2	-2.4
BARC	**Barichara**	**2.15**	**105**	P	Pn	13 03 24.2	-2.0
BARC				S	Sn	13 03 51.3	-2.2
RECRC	**Villamaria, Ca**	**2.20**	**182**	P	Pn	13 03 24.8	-2.3
RECRC				S	Sn	13 03 51.5	-3.5
OCAC	**Ocana**	**2.21**	**61**	P	Pn	13 03 26.0	-0.9
OCAC				S	Sn	13 03 54.6	-0.1
ROSC	**El Rosal**	**2.50**	**158**	P	Pn	13 03 30.2	-0.9
ROSC				S	Sn	13 04 00.7	-1.6
RUSC	**La Rusia**	**2.52**	**120**	P	Pn	13 03 29.5	-1.9
RUSC				S	Sn	13 03 59.5	-3.3
PTAC	**Punta Ardita,**	**2.52**	**270**	P	Pn	13 03 30.3	-0.7
PTAC				S	Sb	13 04 05.0	-1.5
PAMC	**Pamplona, Colo**	**2.56**	**86**	P	Pn	13 03 31.4	-0.6
PAMC				S	Sn	13 04 03.6	-0.2
ANIL	**Santa Ana**	**2.67**	**183**	P	Pn	13 03 32.7	-0.6
ANIL				S	Sb	13 04 12.2	+1.2
SJCC	**San Jacinto, C**	**2.71**	**2**	P	Pb	13 03 36.9	-1.5
SJCC				S	Sg	13 04 19.3	-0.2
CVER	**Cruz Verde, Cu**	**2.89**	**156**	P	Pn	13 03 36.6	+0.1
CVER				S	Sn	13 04 13.9	+1.9
CHIC	**Chingaza**	**2.95**	**149**	P	Pn	13 03 36.6	-0.8
CHIC				S	Sn	13 04 13.3	-0.2
ORTC	**Ortega, Tolima**	**3.24**	**180**	P	Pn	13 03 41.1	+0.1
ORTC				S	Sn	13 04 23.3	+3.2
YOTC	**Yotoco, Valle**	**3.34**	**199**	P	Pn	13 03 42.1	-0.4
YOTC				S	Sn	13 04 25.1	+2.4
VILC	**Villavicencio,**	**3.42**	**153**	P	Pn	13 03 44.2	+0.6
VILC				S	Sn	13 04 27.7	+3.1
PRAC	**Prado**	**3.46**	**174**	P	Pn	13 03 43.8	-0.2
PRAC				S	Sb	13 04 29.7	-3.8
URMC	**La Uribe, Meta**	**4.00**	**167**	P	Pn	13 03 53.9	+2.4
URMC				S	Sn	13 04 42.9	+4.1
JAMC	**Jamundi, Valle**	**4.17**	**200**	P	Pn	13 03 54.2	+0.2
CRJC	**Cerrejon, Guaj**	**4.49**	**31**	P	Pn	13 04 01.0	+2.7
CRJC				S	Sn	13 04 54.6	+3.5
SDV	**Santo Domingo**	**4.90**	**69**	P	Pn	13 04 04.9	+0.9
SDV				S	Sn	13 05 02.7	+1.5
URIC	**Uribia, Colomb**	**5.54**	**35**	P	Pn	13 04 13.7	+1.0

IDC 16 13:14:45.1±2.1,3°.73N×124°.24E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=308.8km s-min=22.2km az=64.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.54**	**158**	P	P	13 20 15.9	+0.2
	0.3nm,0.3s,baz=336,slow=9.5,SNR=7.4						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**28.82**	**161**	P	P	13 20 45.0	-0.2
	0.2nm,0.8s,baz=344,slow=6.9,SNR=5.8						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**56.16**	**326**	P	P	13 24 26.9	+0.3
	0.4nm,0.6s,baz=133,slow=7.4,SNR=7.7						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**60.41**	**328**	P	P	13 24 55.8	-0.5
	0.2nm,0.4s,baz=134,slow=6.6,SNR=3.5						
	0.2nm,0.4s						

*NEIC **16** 13:16:09.0±0.8,22°.79S±0°.06×174°.32W±0°.07,h10km±2km, mb4.4/8,Error ellipse: s-maj=14.5km s-min=6.1km az=47.0*
*IDC **16** 13:16:14.0±1.5,22°.23S×175°.45W,h0km,mb4.0/8, mbtmp4.0/8,Error ellipse: s-maj=77.6km s-min=24.5km az=155.0*

ISC 16 13:16:13.6±0.9,22°.9S±0°.1×175°.0W±0°.2,h10km,n22, σ1§68/23,mb4.2/12,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.09**	**52**	Pn	Pn	13 17 31.9	-12
NIUE				Sn	Sn	13 18 28.1	-25
RAO	**Raoul Island**	**6.84**	**202**	Pn	**Pn**	**13 17 54.0**	**0.0**
MSVF	**Nonsavu**	**8.29**	**307**	Pn	**Pn**	**13 18 15.9**	**+1.9**
EIDS	**Eidsvold**	**30.99**	**259**	P	**P**	**13 22 32.5**	**+1.1**
EIDS				IAmb	IAmb	13 22 37.8	
	comp=Z,7.7nm,1.2s						
CTAO	**Charters Tower**	**36.07**	**267**	P	**P**	**13 23 16.1**	**+0.4**
CTAO				IAmb	IAmb	13 23 27.0	
	comp=Z,8.4nm,1.2s						
AS31	**Alice Springs**	**46.71**	**258**	P	**P**	**13 24 42.7**	**-0.5**
AS31				IAmb	IAmb	13 24 44.2	
	comp=Z,1.8nm,1.2s						
ASAR	**Alice Springs**	**46.71**	**258**	P	**P**	**13 24 43.0**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=98,slow=7.5,SNR=32						
ASAR				PcP	**PcP**	**13 26 17.2**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=99,slow=3.7,SNR=4.1						
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**46.71**	**258**	P	**P**	**13 24 42.5**	**-0.6**
WB0	**Warramunga Arr**	**47.04**	**264**	P	**P**	**13 24 45.3**	**-0.5**
WB0				IAmb	IAmb	13 24 47.0	
	comp=Z,6.5nm,1.2s						
WRA	**Warramunga Arr**	**47.05**	**264**	P	**P**	**13 24 45.0**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=95,slow=11,SNR=28						
WRA				PcP	**PcP**	**13 26 18.5**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=102,slow=3.1,SNR=2.7						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**47.05**	**264**	P	**P**	**13 24 45.1**	**-0.8**
KNRA	**Kununurra**	**53.29**	**267**	P	**P**	**13 25 33.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**55.48**	**263**	P	**P**	**13 25 49.0**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=105,slow=12,SNR=2.3						
	comp=Z,2.0nm,0.9s						
MJAR	**Matsushiro Arr**	**73.78**	**322**	P	**P**	**13 27 45.1**	**-3.1**
	comp=Z,2.2nm,1.0s,baz=153,slow=5.1,SNR=2.5						
	comp=Z,2.2nm,1.0s						
MJAR	**Matsushiro Arr**	**73.78**	**322**	P	**P**	**13 27 44.5**	**-3.7**
MJAR				IAmb	IAmb	13 27 54.4	
	comp=Z,6.9nm,1.4s						
MAJO	**Matsushiro**	**73.79**	**322**	P	**P**	**13 27 44.7**	**-3.6**
TXAR	**Lajitas Array**	**86.05**	**56**	P	**P**	**13 28 57.0**	**+2.1**
	comp=Z,0.5nm,1.

*NEIC **16** 13:27:33.6±0.8,41.80N±0.04×126.01W±0.10,h10km±2km, ML2.9/59,ML3.4/43(NCEDC),Error ellipse: s-maj=12.7km s-min=6.3km az=283.0*
*NCEDC **16** 13:27:35.1±1.4,41.81N±0.05×126.17W±0.06,h23km±2km, Error ellipse: s-maj=10.5km s-min=4.8km az=320.0*
*IDC **16** 13:27:36.1±2.8,41.66N×125.81W,h0km,mb2.9/2, mbtmp3.0/4, ML2.4/3, Error ellipse: s-maj=35.4km s-min=25.6km az=41.0*

ISC 16 13:27:35.4±1.7, 41.78N±0.05×126.0W±0.1, h11km, n47, σ1§63/39, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.39**	**71**	Pn		**Pn**		**13 27 58.6**	**-2.1**
KBO				IAML				13 28 25.4	
	comp=E,152nm,1.8s								
KBO				IAML				13 28 33.2	
	comp=N,132nm,1.6s								
KBO	**Bosley Butte**	**1.39**	**71**			**Sn**		**13 28 17.4**	**-1.7**
SIGP	**Signal Peak, C**	**1.44**	**86**			**Pn**		**13 27 59.8**	**-1.7**
SIGP						**Sn**		**13 28 19.3**	**-1.1**
KSXB	**Camp Six Broad**	**1.58**	**88**			**Pn**		**13 28 01.8**	**-1.7**
KSXB				IAML				13 28 27.3	
	comp=N,67nm,1.0s								
KSXB	**Camp Six Broad**	**1.58**	**88**			**Sn**		**13 28 22.1**	**-1.9**
KRMB	**Red Mountain**	**1.58**	**99**			**Pn**		**13 28 01.8**	**-1.7**
JCC	**Jacoby Creek,**	**1.77**	**122**			**Pn**		**13 28 04.1**	**-1.8**
JCC				IAML				13 28 27.2	
	comp=E,55nm,0.7s								
JCC	**Jacoby Creek,**	**1.77**	**122**			**Sn**		**13 28 27.0**	**-1.3**
KCTM	**Capetown**	**1.81**	**136**			**Pn**		**13 28 05.0**	**-1.6**
L02F	**Cave Junction**	**1.84**	**79**			**Pn**		**13 28 05.1**	**-1.8**
PETL	**Petrolia**	**1.95**	**140**			**Pn**		**13 28 06.0**	**-2.3**
K02D	**Willamette Mer**	**1.95**	**61**			**Pn**		**13 28 06.3**	**-2.3**
KMPM	**Mount Pierce**	**1.97**	**133**			**Pn**		**13 28 07.0**	**-1.7**
DMOR	**Dinsmores, CA**	**2.03**	**121**			**Pn**		**13 28 08.4**	**-1.3**
BRIC	**Briceland Vine**	**2.30**	**136**			**Pn**		**13 28 12.2**	**-1.1**
KMRM	**Mail Ridge**	**2.33**	**131**			**Pn**		**13 28 12.7**	**-1.1**
KMRM				IAML				13 28 46.7	
	comp=N,98nm,0.8s								
M02C	**Callahan**	**2.39**	**98**			**Pn**		**13 28 13.8**	**-0.7**
YBH	**Yreka Blue Hor**	**2.46**	**90**	Pn		**Pn**		**13 28 15.4**	**-0.1**
	comp=N,0.5nm,0.3s,baz=288,slow=4.8,SNR=91								
YBH				Sn		**Sn**		**13 28 45.9**	**+0.3**
	comp=N,0.1nm,0.3s,baz=199,slow=18,SNR=1.3								
YBH	**Yreka Blue Hor**	**2.46**	**90**			**Pn**		**13 28 15.3**	**-0.2**
N02D	**Trinity Center**	**2.60**	**107**			**Pn**		**13 28 16.2**	**-1.3**
N02D				IAML				13 28 59.4	
	comp=E,32nm,0.6s								
N02D				IAML				13 28 59.4	
	comp=N,32nm,0.5s								
BBOR	**Butler Butte**	**2.69**	**65**			**Pn**		**13 28 17.6**	**-1.3**
BBOR				IAML				13 28 41.6	
	comp=E,28nm,1.9s								
BBOR				IAML				13 28 55.9	
	comp=N,33nm,2.0s								
I03D	**Drain, OR**	**2.73**	**45**			**Pn**		**13 28 16.7**	**-2.4**
I03D				IAML				13 28 48.8	
	comp=E,48nm,2.5s								
I03D				IAML				13 28 51.5	
	comp=N,47nm,2.2s								
KCPM	**Cahto Peak**	**2.78**	**138**			**Pn**		**13 28 18.2**	**-1.8**
KCPM				IAML				13 29 01.5	
	comp=N,63nm,1.3s								
L04D	**Klamath Falls**	**2.78**	**80**			**Pn**		**13 28 19.9**	**-0.1**
L04D				IAML				13 28 37.2	
	comp=E,39nm,2.5s								
L04D				IAML				13 29 06.2	
	comp=N,38nm,2.4s								
O02D	**Mt. Diablo Mer**	**2.91**	**122**			**Pn**		**13 28 20.9**	**-0.8**
O02D				IAML				13 29 06.2	
	comp=N,22nm,2.0s								
DCMP	**DeCamp, Califo**	**3.07**	**138**			**Pn**		**13 28 22.2**	**-1.6**
J04A	**Umpqua Nationa**	**3.22**	**62**			**Pn**		**13 28 25.3**	**-0.8**
I04A	**Tendick Farm,**	**3.31**	**51**	IAML				13 29 08.8	
	comp=E,42nm,1.2s								
I04A				IAML				13 29 10.4	
	comp=N,26nm,0.8s								
O03E	**Paynes Creek**	**3.50**	**114**			**Pn**		**13 28 29.3**	**-0.5**
O03E				IAML				13 28 56.1	
	comp=N,19nm,4.2s								
O03E				IAML				13 29 17.0	
	comp=E,28nm,0.9s								
J05D	**Fort Rock, OR**	**3.82**	**65**			**Pn**		**13 28 33.6**	**-0.8**
J05D				IAML				13 29 06.0	
	comp=E,32nm,3.6s								
J05D				IAML				13 31 07.3	
	comp=N,26nm,4.3s								
K05A	**Summer Lake**	**3.90**	**74**	IAML				13 29 37.9	
	comp=E,23nm,3.2s								
K05A				IAML				13 30 09.0	
	comp=N,28nm,4.3s								
H04A	**Detroit Lake**	**4.02**	**43**			**Pn**		**13 28 35.5**	**-1.4**
ORV	**Oroville**	**4.08**	**122**	IAML				13 29 28.5	
	comp=E,12nm,0.6s								
ORV				IAML				13 29 31.7	
	comp=N,11nm,0.7s								
PINE	**Pine Mountain**	**4.23**	**60**	IAML				13 29 22.1	
	comp=E,22nm,5.0s								
PINE				IAML				13 29 47.7	
	comp=N,20nm,5.0s								
AFDM	**Forest Hills D**	**4.77**	**125**			**Pn**		**13 28 45.5**	**-1.7**
AFDM				IAML				13 30 06.1	
	comp=E,5.6nm,4.1s								
AFDM				IAML				13 30 22.9	
	comp=N,7.6nm,4.0s								
LON	**Longmire**	**5.80**	**30**			**Pn**		**13 29 00.2**	**-1.2**
GNW	**Green Mountain**	**6.21**	**20**			**Pn**		**13 29 04.8**	**-2.1**
NVAR	**Mina Array Bea**	**6.78**	**117**	Pn		**Pn**		**13 29 15.3**	**+0.3**
	comp=N,0.2nm,0.3s,baz=292,slow=14,SNR=5.1								
	comp=N,0.4nm,0.5s								
ELK	**Elko**	**8.17**	**94**	Pn		**Pn**		**13 29 35.9**	**+1.8**
	baz=286,slow=12,SNR=6.2								
	comp=N,1.1nm,0.8s								
YKA	**Yellowknife Ar**	**21.82**	**14**	P		**P**		**13 32 30.9**	**+3.6**
	comp=N,0.6nm,0.9s,baz=210,slow=12,SNR=7.3								
	comp=N,0.6nm,0.9s								
TXAR	**Lajitas Array**	**21.93**	**117**	P		**P**		**13 32 30.1**	**+1.2**
	comp=N,0.4nm,0.8s,baz=309,slow=11,SNR=3.9								
	comp=N,0.4nm,0.8s								
H11N3	**WAKE ISLAND Hy**	**60.21**	**270**	T		T		14 42 50.7	
	baz=52,slow=75,SNR=10								
H11N2	**WAKE ISLAND Hy**	**60.21**	**271**	T		T		14 42 50.8	
	baz=52,slow=75,SNR=6.7								
H11N1	**WAKE ISLAND Hy**	**60.23**	**270**	T		T		14 42 51.9	
	baz=52,slow=75,SNR=8.7								
H11S1	**WAKE ISLAND Hy**	**61.10**	**270**	T		T		14 43 54.9	
	baz=52,slow=75,SNR=11								
H11S2	**WAKE ISLAND Hy**	**61.11**	**270**	T		T		14 43 55.3	
	baz=52,slow=75,SNR=8.8								
H11S3	**WAKE ISLAND Hy**	**61.12**	**270**	T		T		14 43 54.5	
	baz=52,slow=75,SNR=6.9								

*IDC **16** 13:33:21.9±1.1,29.29N×104.57E,h0km,mb3.5/4, mbtmp3.4/6,ML3.8/2, Error ellipse: s-maj=65.9km s-min=18.2km az=65.0*
*NEIC **16** 13:33:24.4±0.6,29.45N±0.09×104.7E±0.1,h10km±1km, mb4.2/10, Error ellipse: s-maj=18.1km s-min=14.5km az=256.0*

ISC 16 13:33:24.1±0.6, 29.45N±0.06×104.89E±0.08, h10km, n22, σ1§44/27, mb3.9/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	**4.05**	**224**	Pn		**Pn**		**13 34 25.9**	**-0.4**
PZH				Pg		**Pb**		**13 34 35.0**	**-0.6**
PZH				Sg		**Sb**		**13 35 26.3**	**+1.6**
PZH				smax		smax			
	comp=N,30nm,0.8s								
PZH				smax		smax			
	comp=E,30nm,0.9s								
ENH	**Enshi**	**4.07**	**77**			**Pn**		**13 34 29.7**	**+3.2**
XAN	**Xi'an**	**5.72**	**36**	Pn		**Pn**		**13 34 51.3**	**+2.2**
XAN				Pg		**Pg**		**13 35 10.6**	**-3.0**
XAN				Sn		**Sn**		**13 35 56.3**	**+1.5**
XAN				Sg		**Sg**		**13 36 26.4**	**-1.3**
XAN				smax		smax			
	comp=N,110nm,1.0s								
XAN				smax		smax			
	comp=E,79nm,0.7s								
XAN				LR		LR			
	comp=N,640nm,5.0s								
XAN				LR		LR			
	comp=E,310nm,5.3s								
XAN				LR		LR			
	comp=Z,360nm,7.4s								
LZDM	**Lanzhou Array**	**6.56**	**351**	Pn		**Pn**		**13 35 01.6**	**+0.6**
	baz=171,slow=12								
LZDM				Sn		**Sn**		**13 36 18.6**	**+2.5**
	baz=157,slow=19								
	comp=Z,1.2nm,0.3s								
CMAR	**Chiang Mai Arr**	**12.22**	**208**	Pn		**Pn**		**13 36 17.8**	**-0.5**
SONM	**Songino Array**	**18.39**	**3**	P		**Pn**		**13 37 41.0**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=181,slow=12,SNR=2.7								
	comp=Z,0.3nm,0.4s								
SONM	**Songino Array**	**18.39**	**3**	P		**P**		**13 37 39.1**	**-0.2**
MKAR	**Makanchi Array**	**24.68**	**321**	P		**P**		**13 38 44.0**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=118,slow=11,SNR=6.7								
	comp=Z,0.2nm,0.5s								
MAKZ	**Makanchi**	**24.86**	**320**	P		**P**		**13 38 45.7**	**-1.1**
MAKZ				IAmb		IAmb		13 39 11.3	
	comp=Z,1.1nm,1.1s								
KURBB	**Kurchatov Arra**	**28.97**	**324**	P		**P**		**13 39 22.5**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=125,slow=9.8,SNR=6.5								
	comp=Z,0.3nm,0.6s								
KURK	**Kurchatov**	**28.98**	**324**	P		**P**		**13 39 22.5**	**-1.2**
KURK	**Kurchatov**	**28.98**	**324**	IAmb		IAmb		13 39 38.3	
	comp=Z,4.7nm,1.5s								
TOLI2	**Tolitoli**	**31.99**	**149**	P		**P**		**13 39 50.7**	**0.0**
TOLI2				IAmb		IAmb		13 40 07.3	
	comp=Z,23nm,1.5s								
MBWA	**Marble Bar**	**52.31**	**162**	P		**P**		**13 42 36.0**	**0.0**
BILL	**Bilibino**	**52.38**	**25**	P		**P**		**13 42 37.1**	**+1.0**
BILL				IAmb		IAmb		13 42 51.4	
	comp=Z,3.7nm,1.5s								
WRA	**Warramunga Arr**	**56.73**	**146**	P		**P**		**13 43 07.5**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=336,slow=8.0,SNR=4.9								
	comp=Z,0.6nm,0.7s								
WRA	**Warramunga Arr**	**56.73**	**146**	P		**P**		**13 43 08.1**	**-0.2**
COEN	**Coen**	**56.81**	**134**	P		**P**		**13 43 09.2**	**+0.3**
AS31	**Alice Springs**	**59.73**	**149**	P		**P**		**13 43 29.1**	**-0.1**
AS31				IAmb		IAmb		13 43 32.3	
	comp=Z,1.1nm,1.1s								
ASAR	**Alice Springs**	**59.73**	**149**	P		**P**		**13 43 28.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=328,slow=6.9,SNR=13								
	comp=Z,0.4nm,0.5s								
O15K	**Ungalikthiuk R**	**67.79**	**34**	P		**P**		**13 44 20.9**	**-1.1**
O15K				IAmb		IAmb		13 44 58.0	
	comp=Z,9.9nm,1.4s								
BMAR	**Burnt Mountain**	**70.54**	**23**	P		**P**		**13 44 39.6**	**+0.7**

*JMA **16** 13:46:20.5±0.1,44.1N±0.6×145.1E±0.5,h5km±2km, MV2.7/20,SHIRETOKO PENINSULA REG*
JMA Felt I J1 at SHIRETOKO PENINSULA REG .
*SKHL **16** 13:46:20.4±0.3,44.30N×145.30E,h39km±8km,mb3.9/2*

ISC 16 13:46:18.2±2.0, 44.17N±0.09×145.22E±0.06, h16km±9km, n10, σ0§48/15, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JRA	**Rausu**	**0.24**	**197**	*i* P		**Pg**		**13 46 23.7**	**+0.2**
JRA				S		**Sg**		**13 46 26.4**	**-0.8**
JNSB	**Nemuroshibetsu**	**0.42**	**202**	*i* P		**Pb**		**13 46 27.4**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**0.48**	**106**	*e*P		**Pn**		**13 46 30.3**	**0.0**
YUK				AMB		AMB		13 46 31.5	
	70nm,0.5s								
YUK				*e*S		**Sn**		**13 46 37.7**	**-0.7**
YUK				A		A		13 46 38.5	
	510nm,0.4s								
YUK				A		A		13 46 38.5	
	460nm,0.4s								
JNK	**Nakash**	**0.69**	**212**	*i* P		**Pg**		**13 46 31.7**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.88**	**155**	*e*P		**Pn**		**13 46 35.9**	**+0.1**
NMR				*e*S		**Sg**		**13 46 47.4**	**+0.6**
NEM2	**Nemuro 2**	**0.89**	**155**	*i* P		**Pn**		**13 46 36.0**	**0.0**
NEM2				S		**Sg**		**13 46 47.5**	**+0.4**
JTKR	**Abashiri--Tokо**	**0.97**	**259**	P		**Pn**		**13 46 37.3**	**+0.3**
JKHN	**Kushirohamanak**	**1.08**	**182**	P		**Pg**		**13 46 39.0**	**-0.1**
JKHN				S		**Sb**		**13 46 52.9**	**+0.5**
AKK	**Akkeshi**	**1.18**	**194**	*e*P		**Pn**		**13 46 39.8**	**-0.2**
AKK				*e*S		**Sb**		**13 46 54.6**	**-0.6**
SHO	**Shikotan**	**1.20**	**104**	*e*P		Pg		13 46 52.5	+11
SHO				AMB		AMB		13 46 54.5	
	70nm,0.3s								
SHO				*e*S		Sg		13 47 09.4	+12
SHO				A		A		13 47 12.4	
	210nm,0.3s								
SHO				A		A		13 47 12.4	
	270nm,0.3s								

*SJA **16** 13:51:22.0±0.7,30.97S×69.22W,h118km±4km,ML4.0, MW4.0*
*NEIC **16** 13:51:22.6±1.5,30.98S±0.06×69.3W±0.1,h120km±10km, ML4.2/64,ML4.2(GUC),Error ellipse: s-maj=12.6km s-min=9.2km az=83.0*
*GUC **16** 13:51:23.1±0.7,30.99S×69.57W,h142km±7km,ML4.2*
*IDC **16** 13:51:23.4±1.8,31.08S×69.21W,h117km±15km,mb3.0/2, mbtmp3.7/5, Error ellipse: s-maj=38.4km s-min=21.0km az=104.0*

ISC 16 13:51:22.8±0.7, 30.98S±0.03×69.25W±0.03, h120km±5km, n121, σ1§43/160, 6C-10D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACCO	**Cerro Coronel**	**0.42**	**23**	*e*P		**Pn**		**13 51 40.6**	**-0.2**
ZON	**Zonda**	**0.75**	**139**	Pn		**Pn**		**13 51 42.2**	**-0.5**
ZON				Sn		**Sn**		**13 51 56.7**	**-1.0**
ZON				IAML				13 51 57.4	
	comp=N,4μm,0.6s								
ZON				IAML				13 51 57.7	
	comp=E,4μm,0.5s								
ZON	**Zonda**	**0.75**	**139**	*e*P		**Pn**		**13 51 41.5**	**-1.1**
ZON				IAML				13 51 57.9	
	comp=Z,3μm,0.7s								
RTLL	**Cerro Villicun**	**0.75**	**118**	*e*P		**Pn**		**13 51 41.3**	**-1.4**
RTLL				IAML				13 51 57.2	
	comp=Z,6μm,0.5s								
SJA	**San Juan**	**0.81**	**133**	*e*P		**Pn**		**13 51 43.1**	**0.0**
SJA				*e*S		**Sn**		**13 52 00.4**	**+1.9**
SJA				IAML				13 52 02.0	
	comp=Z,2μm,0.6s								
ACDV	**Cuesta del Vie**	**0.81**	**8**	*e*P		**Pn**		**13 51 43.3**	**0.0**
ACDV				IAML				13 52 01.7	
	comp=Z,2μm,0.2s								
RTLS	**Leoncito**	**0.82**	**183**	*e*P		**Pn**		**13 51 43.6**	**+0.1**
RTLS				IAML				13 52 00.6	
	comp=Z,2μm,0.3s								
AROD	**Rodeo**	**0.83**	**347**	*e*P		**Pn**		**13 51 44.0**	**+0.3**
CFA	**Coronel Fontan**	**1.07**	**126**	P		**Pn**		**13 51 45.3**	**-0.3**
	comp=Z,483nm,0.5s,baz=312,slow=10,SNR=2518								
CFA				S		**Sn**		**13 52 01.7**	**-1.2**
	comp=Z,2μm,0.4s,baz=149,slow=20,SNR=53								
CFA	**Coronel Fontan**	**1.07**	**126**	*e*P		**Pn**		**13 51 45.3**	**-0.3**
CFA				*e*S		**Sn**		**13 52 01.9**	**-0.9**
CFA				IAML				13 52 03.1	
	comp=Z,4μm,0.3s								
CO01	**Juntas del Tor**	**1.23**	**324**			**Pn**		**13 51 48.7**	**+1.2**
CO01				IAML				13 52 08.4	
	comp=E,2μm,0.5s								
CO01				IAML				13 52 09.3	
	comp=N,2μm,0.6s								
CO01	**Juntas del Tor**	**1.23**	**324**	⇑*i*P		**Pn**		**13 51 48.8**	**+1.2**
CO01				*i* S		**Sn**		**13 52 07.3**	**+1.1**
CO01	**Juntas del Tor**	**1.23**	**324**	*e*P		**Pn**		**13 51 43.4**	**-4.1**
CO01				*e*S		**Sn**		**13 52 07.8**	**+1.5**
CO01				IAML				13 52 09.9	
	comp=Z,1μm,0.4s								
CO03	**El Pedregal**	**1.24**	**276**			**Pn**		**13 51 47.7**	**+0.3**
CO03				IAML				13 52 08.0	
	comp=N,5μm,0.4s								
CO03				IAML				13 52 08.2	
	comp=E,6μm,0.5s								
CO03	**El Pedregal**	**1.24**	**276**	⇓*i*P		**Pn**		**13 51 48.0**	**+0.6**
CO03				*i* S		**Sn**		**13 52 06.3**	**+0.2**
CO03				IAML				13 52 08.2	
	comp=E,4μm,0.6s								
CO03	**El Pedregal**	**1.24**	**276**	*e*P		**Pn**		**13 51 47.2**	**-0.2**
CO03				IAML				13 52 11.8	
	comp=Z,1μm,0.5s								
CO02	**Combarbal**	**1.52**	**261**			**Pn**		**13 51 50.8**	**+0.2**
CO02	**Combarbal**	**1.52**	**261**	⇓*i*P		**Pn**		**13 51 50.9**	**+0.3**
CO02				*i* S		**Sn**		**13 52 11.5**	**-0.1**
CO02				IAML				13 52 13.2	
	comp=E,6μm,0.3s								
CO02	**Combarbal**	**1.52**	**261**	*e*P		**Pn**		**13 51 50.7**	**+0.2**
CO02				*e*S		**Sn**		**13 52 12.3**	**+0.7**
CO02				IAML				13 52 13.1	
	comp=Z,2μm,0.5s								
GO04	**Tololo Observa**	**1.56**	**301**			**Pn**		**13 51 51.2**	**+0.1**
GO04	**Tololo Observa**	**1.56**	**301**	⇑*i*P		**Pn**		**13 51 51.3**	**+0.1**
GO04				*i* S		**Sn**		**13 52 12.1**	**-0.5**
GO04				IAML				13 52 14.6	
	comp=E,7μm,0.5s								
GO04	**Tololo Observa**	**1.56**	**301**	*e*P		**Pn**		**13 51 50.8**	**-0.4**
GO04				IAML				13 52 15.4	
	comp=Z,4μm,0.5s								
AVFE	**Valle Fertil**	**1.58**	**79**	*e*P		**Pn**		**13 51 50.9**	**-0.3**
AVFE				*e*S		**Sn**		**13 52 12.4**	**-0.4**
AVFE				IAML				13 52 13.0	
	comp=Z,3μm,0.4s								
ASAL	**Salagasta**	**1.65**	**168**	*e*P		**Pn**		**13 51 52.9**	**+0.8**
CO04	**Los Peladeros**	**1.81**	**234**			**Pn**		**13 51 54.1**	**-0.1**
CO04				IAML				13 52 19.7	
	comp=E,2μm,0.5s								
CO04				IAML				13 52 19.8	
	comp=N,2μm,0.7s								
CO04	**Los Peladeros**	**1.81**	**234**	⇓*i*P		**Pn**		**13 51 54.1**	**-0.1**
CO04				*i* S		**Sn**		**13 52 18.2**	**0.0**
CO05	**La Serena**	**2.01**	**301**	*i* P		**Pn**		**13 51 55.9**	**-0.5**
CO05	**La Serena**	**2.01**	**301**	*i* P		**Pn**		**13 51 55.6**	**-0.8**
CO05				*i* S		**Sn**		**13 52 20.5**	**-1.6**
CO06	**Fray Jorge**	**2.07**	**278**			**Pn**		**13 51 56.2**	**-0.9**
CO06				IAML				13 52 21.4	
	comp=N,2μm,0.4s								
CO06				IAML				13 52 27.1	
	comp=E,997nm,0.4s								
CO06	**Fray Jorge**	**2.07**	**278**	⇓*i*P		**Pn**		**13 51 56.2**	**-0.9**
CO06				*i* S		**Sn**		**13 52 20.7**	**-2.7**
VA03	**San Esteban**	**2.10**	**211**			**Pn**		**13 51 57.2**	**-0.4**
VA03	**San Esteban**	**2.10**	**211**	*i* P		**Pn**		**13 51 58.0**	**+0.5**
VA03				*i* S		**Sn**		**13 52 24.7**	**+0.6**
VA03				IAML				13 52 26.5	
	comp=N,2μm,0.5s								
VA03	**San Esteban**	**2.10**	**211**	*e*P		**Pn**		**13 51 58.5**	**+1.0**
VA03				*e*S		**Sn**		**13 52 20.2**	**-3.9**
VA03				IAML				13 52 34.4	
	comp=Z,868nm,0.6s								
ACHE	**Chepes**	**2.23**	**95**	*e*P		**Pn**		**13 51 59.1**	**-0.2**
AC05	**El Transito**	**2.31**	**337**			**Pn**		**13 52 01.2**	**+0.9**
AC05				IAML				13 52 31.8	
	comp=N,1μm,0.3s								
AC05				IAML				13 52 35.1	
	comp=E,1μm,0.4s								
AC05	**El Transito**	**2.31**	**337**	⇑*i*P		**Pn**		**13 52 01.4**	**+1.0**
AC05				*i* S		**Sn**		**13 52 28.9**	**-0.2**
AC05				IAML				13 52 32.0	
	comp=N,1μm,0.3s								
AC05	**El Transito**	**2.31**	**337**	*e*P		**Pn**		**13 52 00.7**	**+0.4**
AC05				*e*S		**Sn**		**13 52 30.3**	**+1.2**
AC05				IAML				13 52 31.8	
	comp=Z,475nm,0.3s								
LCO	**Las Campanas**	**2.33**	**327**			**Pn**		**13 52 00.5**	**-0.2**
LCO				IAML				13 52 30.8	
	comp=Z,952nm,0.4s								
LCO				IAML				13 52 31.4	
	comp=Z,1μm,0.5s								
LCO	**Las Campanas**	**2.33**	**327**	⇑*i*P		**Pn**		**13 52 00.5**	**-0.2**
LCO	**Las Campanas**	**2.33**	**327**	*e*P		**Pn**		**13 52 00.8**	**+0.1**
LCO				*e*S		**Sn**		**13 52 29.8**	**+0.1**
LCO				IAML				13 52 31.7	
	comp=Z,2μm,0.5s								
VA06	**Catapilco**	**2.35**	**227**			**Pn**		**13 51 59.9**	**-0.8**
VA06				IAML				13 52 32.0	
	comp=N,814nm,0.4s								
VA06				IAML				13 52 33.6	
	comp=E,1μm,0.5s								
VA06	**Catapilco**	**2.35**	**227**	⇓*i*P		**Pn**		**13 51 59.8**	**-0.8**
VA06				*i* S		**Sn**		**13 52 27.7**	**-2.0**
VA06				IAML				13 52 33.6	
	comp=E,975nm,0.3s								
VCA	**Vinchina**	**2.41**	**22**	*e*P		**Pn**		**13 52 01.6**	**0.0**
VCA				IAML				13 52 36.9	
	comp=Z,3μm,0.3s								
PEL	**Peldehue**	**2.48**	**209**			**Pn**		**13 52 02.4**	**0.0**
PEL	**Peldehue**	**2.48**	**209**	⇓*i*P		**Pn**		**13 52 02.5**	**+0.2**
PEL				*i* S		**Sn**		**13 52 31.5**	**-1.2**
PEL				IAML				13 52 34.3	
	comp=E,502nm,0.5s								
PEL	**Peldehue**	**2.48**	**209**	*e*P		**Pn**		**13 52 02.9**	**+0.5**
PEL				*e*S		**Sn**		**13 52 33.5**	**+0.8**
PEL				IAML				13 52 51.2	
	comp=Z,328nm,0.8s								
ACLC	**CERRO LA CRUZ**	**2.52**	**53**	*e*P		**Pn**		**13 52 02.7**	**-0.3**
ACLC				*e*S		**Sn**		**13 52 33.0**	**-0.9**
ACLC				IAML				13 52 37.5	
	comp=Z,509nm,0.3s								
MT04	**Ro Olivares**	**2.53**	**197**	*e*P		**Pn**		**13 52 04.0**	**+0.8**
MT04	**Ro Olivares**	**2.53**	**197**	*e*P		**Pn**		**13 52 05.0**	**+1.8**
MT04				*e*S		**Sn**		**13 52 40.3**	**+6.0**
MT04				IAML				13 52 44.0	
	comp=Z,258nm,0.3s								
MT10	**Hacienda Santa**	**2.54**	**205**	⇓*i*P		**Pn**		**13 52 04.1**	**+0.9**
MT10				*i* S		**Sn**		**13 52 35.3**	**+1.2**
MT08	**Bocatoma Ro**	**2.54**	**195**			**Pn**		**13 52 02.9**	**-0.4**
MT08	**Bocatoma Ro**	**2.54**	**195**	*i* P		**Pn**		**13 52 04.5**	**+1.2**
MT08				*i* S		**Sn**		**13 52 36.2**	**+1.7**
MT08				IAML				13 52 43.2	
	comp=N,478nm,0.8s								
MT08	**Bocatoma Ro**	**2.54**	**195**	*e*P		**P

MT12				*i* S		**Sn**	13 52 41.0	-2.9
MT12				IAML			13 52 47.6	
	comp=E,997nm,0.5s							
LMEL	**Las Melosas**	**2.97**	**195**	*e*P		**Pn**	**13 52 09.7**	**+0.8**
LMEL				*e*S		**Sn**	**13 52 45.6**	**+1.2**
LMEL				IAML			13 52 51.3	
	comp=N,406nm,0.1s							
MT09	**Talagante**	**3.15**	**207**	IAML			13 52 49.6	
	comp=E,704nm,0.5s							
MT09				IAML			13 52 50.0	
	comp=N,726nm,0.6s							
MT09	**Talagante**	**3.15**	**207**	⇓*i*P		**Pn**	**13 52 10.1**	**-1.1**
MT09				*i* S		**Sn**	**13 52 47.3**	**-1.3**
MT09				IAML			13 52 50.4	
	comp=E,671nm,0.5s							
AC04	**Llanos de Chal**	**3.19**	**330**			**Pn**	**13 52 10.5**	**-1.0**
AC04				IAML			13 52 52.4	
	comp=E,522nm,0.5s							
AC04				IAML			13 52 52.6	
	comp=N,384nm,0.5s							
AC04	**Llanos de Chal**	**3.19**	**330**	⇑*e*P		**Pn**	**13 52 10.7**	**-0.8**
AC04	**Llanos de Chal**	**3.19**	**330**	*e*P		**Pn**	**13 52 11.1**	**-0.5**
AC04				*e*S		Sn	13 52 37.9	-11
AC04				IAML			13 52 43.4	
	comp=Z,298nm,0.5s							
BO04	**La Punta**	**3.21**	**201**	IAML			13 52 51.3	
	comp=E,533nm,0.6s							
BO04	**La Punta**	**3.21**	**201**	*i* P		**Pn**	**13 52 11.8**	**-0.2**
TINO	**Tinogasta**	**3.25**	**27**	*e*P		**Pn**	**13 52 13.5**	**+0.9**
MT01	**Popeta**	**3.34**	**210**	IAML			13 52 52.6	
	comp=E,332nm,0.6s							
MT01	**Popeta**	**3.34**	**210**	⇓*i*P		**Pn**	**13 52 12.1**	**-1.4**
MT01				*i* S		**Sn**	**13 52 49.6**	**-3.1**
MT01	**Popeta**	**3.34**	**210**	*e*P		**Pn**	**13 52 12.4**	**-1.1**
MT01				IAML			13 52 54.2	
	comp=Z,175nm,0.8s							
VA05	**Santo Domingo**	**3.34**	**216**			**Pn**	**13 52 11.7**	**-1.8**
VA05				IAML			13 52 58.0	
	comp=N,320nm,0.5s							
VA05				IAML			13 53 03.9	
	comp=E,516nm,0.5s							
VA05	**Santo Domingo**	**3.34**	**216**	*e*P		**Pn**	**13 52 11.8**	**-1.6**
MRA	**San Martin**	**3.34**	**116**	*e*P		**Pn**	**13 52 13.6**	**0.0**
MRA				*e*S		Sn	13 52 41.2	-12
MRA				IAML			13 52 52.6	
	comp=Z,748nm,0.7s							
GO03	**Copiapo**	**3.48**	**345**			**Pn**	**13 52 14.6**	**-0.9**
GO03				IAML			13 52 56.0	
	comp=N,593nm,0.4s							
GO03				IAML			13 52 56.3	
	comp=E,437nm,0.5s							
GO03	**Copiapo**	**3.48**	**345**	⇑*i*P		**Pn**	**13 52 15.1**	**-0.4**
GO03				*i* S		**Sn**	**13 52 54.0**	**-2.2**
GO03	**Copiapo**	**3.48**	**345**	*e*P		**Pn**	**13 52 15.6**	**+0.1**
GO03				*e*S		**Sn**	**13 52 55.7**	**-0.5**
GO03				IAML			13 52 56.6	
	comp=Z,300nm,0.2s							
BO01	**Tunca**	**3.74**	**204**	*e*P		**Pn**	**13 52 17.3**	**-1.5**
BO01	**Tunca**	**3.74**	**204**	*e*P		**Pn**	**13 52 17.3**	**-1.5**
BO01				IAML			13 53 01.9	
	comp=Z,114nm,0.8s							
RFA	**San Rafael**	**3.84**	**170**	*e*P		Pn	13 52 14.7	-5.6
RFA				IAML			13 53 05.4	
	comp=Z,115nm,0.5s							
TCA	**Tanti**	**4.01**	**96**	*e*P		**Pn**	**13 52 21.7**	**-0.8**
TCA				IAML			13 53 26.0	
	comp=Z,249nm,0.5s							
BO02	**Sierra Bellavi**	**4.02**	**198**			**Pn**	**13 52 21.8**	**-0.8**
BO02				IAML			13 53 12.3	
	comp=N,334nm,0.3s							
BO02				IAML			13 53 18.0	
	comp=E,294nm,0.6s							
BO02	**Sierra Bellavi**	**4.02**	**198**	*e*P		**Pn**	**13 52 22.1**	**-0.5**
AC02	**Maricunga**	**4.13**	**2**			**Pn**	**13 52 24.2**	**-0.3**
AC02				IAML			13 53 15.6	
	comp=E,311nm,0.7s							
AC02				IAML			13 53 16.1	
	comp=N,291nm,0.6s							
AC01	**Pan de Azucar**	**4.96**	**346**			**Pn**	**13 52 34.2**	**-1.0**
AC01				IAML			13 53 40.1	
	comp=E,168nm,0.8s							
AC01	**Pan de Azucar**	**4.96**	**346**	*e*P		**Pn**	**13 52 34.1**	**-1.1**
AC01				IAML			13 53 37.7	
	comp=Z,96nm,0.6s							
ML02	**Panimavida**	**5.10**	**200**	IAML			13 53 32.3	
	comp=N,188nm,0.7s							
GO02	**Mina Guanaco**	**5.80**	**357**			**Pn**	**13 52 45.4**	**-1.5**
BI02	**San Fabin de**	**5.92**	**196**			**Pn**	**13 52 46.3**	**-1.8**
TRQA	**Tornquist**	**9.26**	**142**			**Pn**	**13 53 31.7**	**-1.6**
PLCA	**Paso Flores**	**9.79**	**186**	P		**Pn**	**13 53 38.9**	**-1.5**
	comp=N,2.0nm,0.9s,baz=345,slow=17,SNR=3.1							
PLCA				S		**Sn**	**13 55 26.5**	**-2.0**
	comp=N,2.5nm,0.8s,baz=136,slow=6.8,SNR=2.6							
CPUP	**Villa Florida**	**11.45**	**69**	P		**Pn**	**13 53 59.6**	**-3.1**
	comp=N,1.2nm,0.4s,baz=259,slow=14,SNR=6.5							
CPUP				S		**Sn**	**13 56 11.5**	**+2.8**
	comp=N,3.3nm,0.5s,baz=349,slow=15,SNR=2.8							
PB12	**IPOC Station P**	**12.35**	**355**			**Pn**	**13 54 16.5**	**+1.9**
PB16	**IPOC Station P**	**12.59**	**359**			**Pn**	**13 54 19.3**	**+1.0**
LPAZ	**La Paz**	**14.66**	**4**	P		**Pn**	**13 54 46.0**	**+1.0**
	comp=N,7.7nm,0.8s,baz=163,slow=10,SNR=22							
LPAZ	**La Paz**	**14.66**	**4**	P		**Pn**	**13 54 43.8**	**-1.2**
SIV	**San Ignacio**	**16.69**	**28**	P		**Pn**	**13 55 09.6**	**0.0**
	comp=N,3.0nm,0.7s,baz=191,slow=9.3,SNR=16							
TXAR	**Lajitas Array**	**68.34**	**328**	P		**P**	**14 02 13.2**	**+1.9**
	comp=N,0.2nm,0.8s,baz=124,slow=6.0,SNR=3.4							
	comp=N,0.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**80.95**	**69**	P		**P**	**14 03 25.3**	**+1.0**
	comp=N,0.3nm,0.6s,baz=252,slow=7.4,SNR=4.2							
	comp=N,0.3nm,0.6s							
ASAR	**Alice Springs**	**121.31**	**205**	PKP		**PKPdf**	**14 10 02.2**	**-0.1**
	comp=N,0.4nm,1.0s,baz=146,slow=1.6,SNR=2.0							
WRA	**Warramunga Arr**	**124.53**	**207**	PKP		**PKiKP**	**14 10 09.3**	**+0.4**
	comp=N,0.2nm,0.4s,baz=156,slow=1.9,SNR=6.2							
KURBB	**Kurchatov Arra**	**149.06**	**41**	PKPbc		**PKPbc**	**14 10 56.3**	**-0.1**
	comp=N,0.1nm,0.3s,baz=292,slow=2.5,SNR=2.0							
ZALV	**Zalesovo Beam**	**150.42**	**32**	PKPbc		**PKiKP**	**14 11 01.1**	**+0.8**
	comp=N,1.5nm,0.6s,baz=298,slow=3.4,SNR=9.2							
MKAR	**Makanchi Array**	**152.99**	**46**	PKPbc		**PKiKP**	**14 11 06.6**	**+0.7**
	comp=N,0.5nm,0.8s,baz=359,slow=3.0,SNR=5.1							
HHC	**Hu-ho-hao-te**	**170.13**	**356**	*e*P		**PKPdf**	**14 11 17.5**	**+1.2**
PZH	**PanZhiHua**	**170.93**	**117**	PKP		**PKPdf**	**14 11 15.3**	**-1.9**

UPP **16** *14:05:21.9±0.3, 67.85N×20.22E, h0km±2km, ML2.6, Confirmed Induced event*
HEL **16** *14:05:22.2±0.5, 67.91N×20.08E, h0km, ML1.0, Explosion*
ISC 16 14:05:22.3±0.9, 67.84N±0.03×20.23E±0.03, h0km, n16, σ0s79/23, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**19**	P		**Pg**	**14 05 24.2**	**-0.4**
KUA				S		**Sg**	**14 05 26.0**	**-0.3**
RATU	**Laukkuluspa**	**0.24**	**267**	P		**Pg**	**14 05 26.5**	**-0.3**
RATU				S		**Sg**	**14 05 29.9**	**0.0**
KOVU	**Salmi**	**0.39**	**356**	P		**Pg**	**14 05 29.0**	**-0.7**
	baz=175							
NIKU	**Nikkaluokta**	**0.45**	**275**	P		**Pg**	**14 05 30.4**	**-0.5**
NIKU				S		**Sg**	**14 05 36.6**	**-0.1**
LANU	**Lannavaara**	**0.70**	**72**	PG		**Pg**	**14 05 35.0**	**-0.6**
	baz=266							
LANU				SG		**Sg**	**14 05 45.0**	**+0.2**
SALU	**Saltoluokta**	**0.80**	**236**	P		**Pg**	**14 05 37.1**	**-0.5**
KIF	**Kilpisjarvi**	**1.19**	**10**	PN		**Pb**	**14 05 45.4**	**-0.3**
KIF				smax		smax	14 05 57.7	
	comp=Z,1.3nm,0.2s							
KIF				SN		**Sg**	**14 06 00.4**	**-0.2**
PAJU	**Pajala**	**1.38**	**125**	P		**Pg**	**14 05 47.3**	**-1.4**
HEF	**Hetta**	**1.41**	**64**	PN		**Pn**	**14 05 48.7**	**-0.4**
HEF				smax		smax	14 06 05.2	
	comp=Z,0.8nm,0.2s							
HEF				SN		**Sn**	**14 06 11.0**	**+2.6**
ERTU	**Ertsjaerv**	**1.50**	**148**	PG		**Pn**	**14 05 50.6**	**+0.2**
	baz=323							
ERTU				SG		**Sn**	**14 06 10.8**	**+0.3**
KLF	**Kolari**	**1.56**	**111**	smax		smax	14 06 11.2	
	comp=Z,0.7nm,0.2s							
KLF				SG		**Sg**	**14 06 12.9**	**+0.7**
KTK1	**Kautokeino**	**1.62**	**42**	PN		**Pn**	**14 05 51.9**	**-0.2**
TOF	**Tornio**	**2.39**	**136**	smax		smax	14 06 35.5	
	comp=Z,0.4nm,0.2s							
TOF				SB		**Sb**	**14 06 37.0**	**+0.9**
RNF	**Rovaniemi**	**2.57**	**116**	SB		**Sb**	**14 06 41.3**	**+0.1**
ARA0	**ARCESS Array S**	**2.58**	**46**	SG		**Sb**	**14 06 41.6**	**+0.2**
OLKF	**Oulanka, Finla**	**3.90**	**109**	SG		**Sg**	**14 07 26.6**	**-0.7**

IDC **16** *14:10:28.8±2.1, 26.95N×55.98E, h0km, mb3.7/12, mbtmp3.7/13, ML3.5/1, MS3.3/1, Error ellipse: s-maj=47.7km s-min=20.6km az=165.0*
DSN **16** *14:10:31.8±1.6, 27.06N×55.84E, h3km±7km, ML3.3/16, Error ellipse: s-maj=10.6km s-min=6.5km az=40.0*
TEH **16** *14:10:31.8, 26.97N×55.89E, h16km±25km, ML3.5, Presumed earthquake*
OMAN **16** *14:10:32.3±0.1, 27.06N×55.99E, h10km, mb3.7/5, ml3.4/22, Error ellipse: s-maj=1.4km s-min=1.1km az=23.0*
ISC 16 14:10:32.0±1.1, 27.02N±0.03×55.89E±0.04, h16km±8km, n73, σ1s53/92, mb3.6/11, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GENO	**Geno**	**0.46**	**34**	Pg		**Pg**	**14 10 41.1**	**-0.1**
IBND	**Bandar-abas**	**0.72**	**53**	Pg		**Pg**	**14 10 46.8**	**+0.7**
SHME	**Shamm**	**0.99**	**167**	*e*P		**Pn**	**14 10 52.2**	**+0.9**
	SNR=166							
SHME				S		**Sn**	**14 11 06.7**	**+1.8**
SHME	**Shamm**	**0.99**	**167**	P		**Pn**	**14 10 52.2**	**+0.9**
	SNR=166							
SHME				P		**Pn**	**14 10 52.2**	**+0.9**
	SNR=166							
SHME				S		**Sn**	**14 11 07.1**	**+2.2**
BANOM	**Banah**	**1.15**	**161**	*e*P		**Pg**	**14 10 55.0**	**+0.8**
	SNR=570							
BANOM				S		**Sg**	**14 11 11.5**	**+2.3**
BANOM	**Banah**	**1.15**	**161**	P		**Pg**	**14 10 55.0**	**+0.8**
BANOM				P		**Pn**	**14 10 55.1**	**+1.6**
BANOM				S		**Sg**	**14 11 11.3**	**+2.1**
LAR1	**LAR**	**1.50**	**296**	Pg		**Pg**	**14 11 00.5**	**-0.3**
UMQ	**Umm Al-Quwin**	**1.50**	**188**	P		**Pg**	**14 11 01.4**	**+0.5**
MASF	**Masafi**	**1.66**	**171**	P		**Pg**	**14 11 03.0**	**-0.9**
	SNR=71							
MASF				S		**Sg**	**14 11 24.4**	**-1.0**
MSFE	**Esma-Masafi**	**1.67**	**172**	*e*P		**Pg**	**14 11 02.6**	**-1.5**
	SNR=71							
MDH	**Madha**	**1.75**	**168**	*e*P		**Pb**	**14 11 03.1**	**-0.7**
	SNR=10							
MDH	**Madha**	**1.75**	**168**	P		**Pb**	**14 11 03.2**	**-0.5**
	SNR=10							
MDH				S		**Sg**	**14 11 27.1**	**-1.3**
KHNJ	**Kahnooj**	**1.86**	**60**	Pn		**Pn**	**14 11 04.4**	**+1.1**
NAZ	**Nazwa, Dubai**	**2.03**	**186**	P		**Pb**	**14 11 08.4**	**-0.2**
UOSS	**Minazif**	**2.08**	**172**	P		**Pb**	**14 11 08.5**	**-0.9**
UOSS	**Minazif**	**2.08**	**172**	P		**Pb**	**14 11 08.4**	**-1.0**
UOSS				S		**Sb**	**14 11 34.5**	**-0.6**
UOSS	**Minazif**	**2.08**	**172**	Pn		**Pb**	**14 11 07.4**	**-2.1**
HATD	**Hatta, Dubai**	**2.19**	**174**	*e*P		**Pb**	**14 11 10.0**	**-1.3**
	SNR=27							
HATD	**Hatta, Dubai**	**2.19**	**174**	P		**Pb**	**14 11 10.2**	**-1.2**
	SNR=27							
HATD				S		**Sb**	**14 11 37.7**	**-0.6**
FAQ	**Al Faqa, Dubai**	**2.28**	**187**	P		**Pb**	**14 11 11.4**	**-1.4**
FAQ	**Al Faqa, Dubai**	**2.28**	**187**	P		**Pb**	**14 11 11.6**	**-1.2**
	SNR=5.1							
ASHO	**Ashiyiah**	**2.33**	**176**	*e*P		**Pb**	**14 11 11.9**	**-1.7**
	SNR=32							
ASHO	**Ashiyiah**	**2.33**	**176**	P		**Pb**	**14 11 12.3**	**-1.4**
	SNR=32							
ASHO				S		**Sb**	**14 11 40.8**	**-1.4**
ASUD	**Al Ashush, Dub**	**2.43**	**192**	*e*P		**Pb**	**14 11 13.9**	**-1.6**
	SNR=11							
ASUD	**Al Ashush, Dub**	**2.43**	**192**	P		**Pb**	**14 11 14.3**	**-1.0**
	SNR=11							
ASUD				P		**Pb**	**14 11 14.4**	**-1.0**
	SNR=11							
AJN	**Ajban**	**2.58**	**199**	P		**Pb**	**14 11 16.1**	**-1.7**
NGRK	**Negar Kerman**	**2.72**	**16**	Pn		**Pn**	**14 11 17.5**	**+2.1**
SOHO	**SOHO**	**2.93**	**168**	P		**Pn**	**14 11 18.3**	**+0.4**
SOHO				P		**Pn**	**14 11 18.4**	**+0.4**
ALNE	**Al Ain**	**2.95**	**182**	P		**Pb**	**14 11 20.5**	**-3.8**
ALNE	**Al Ain**	**2.95**	**182**	P		**Pb**	**14 11 20.5**	**-3.8**
KHGB	**Koh Gabri**	**3.38**	**9**	Pn		**Pn**	**14 11 26.7**	**+2.3**
HOQ	**Hoqain**	**3.66**	**159**	P		**Pn**	**14 11 28.3**	**+0.3**
	SNR=6.1							
HOQ				S		**Sn**	**14 12 13.2**	**+2.4**
HOQ	**Hoqain**	**3.66**	**159**	Pn		**Pn**	**14 11 28.2**	**+0.3**
MZWR	**Madinat Zayed**	**3.72**	**210**	P		**Pn**	**14 11 30.8**	**+2.0**
MZWR				S		**Sn**	**14 12 13.9**	**+1.7**
ZRDN	**Zarand Kerman**	**3.98**	**8**	Pn		**Pn**	**14 11 35.2**	**+2.6**
BIDO	**Bidbid**	**4.03**	**149**	P		**Pn**	**14 11 33.7**	**+0.6**
BIDO				S		**Sn**	**14 12 19.7**	**-0.3**
UMZA	**Um Al Zommool**	**4.34**	**189**	P		**Pn**	**14 11 38.9**	**+1.7**
SMDO	**Samad**	**4.40**	**153**	P		**Pn**	**14 11 39.9**	**+1.6**
	SNR=21							
SMDO				S		**Sn**	**14 12 31.7**	**+2.4**
BSY	**Bisya**	**4.42**	**164**	P		**Pn**	**14 11 40.3**	**+1.8**
IMEH	**Mehriz**	**4.50**	**346**	Pn		**Pn**	**14 11 42.3**	**+2.5**
WSAR	**Wadi Sarin**	**4.51**	**146**	P		**Pn**	**14 11 41.3**	**+1.6**
	SNR=25							
WSAR				S		**Sn**	**14 12 32.0**	**+0.2**
MZR	**Muzera**	**4.56**	**209**	P		**Pn**	**14 11 41.5**	**+1.2**
MZR	**Muzera**	**4.56**	**209**	P		**Pn**	**14 11 43.2**	**+2.8**
IBAF	**Bafgh**	**4.56**	**357**	Pn		**Pn**	**14 11 42.4**	**+1.8**
TAFT	**Taft - Yazd**	**4.92**	**343**	Pn		**Pn**	**14 11 47.9**	**+2.3**
NGCH	**Negor - Chabah**	**5.00**	**108**	P		**Pn**	**14 11 47.7**	**+1.4**
NGCH				S		**Sn**	**14 12 44.5**	**+0.7**
NGCH	**Negor - Chabah**	**5.00**	**108**	Pn		**Pn**	**14 11 48.0**	**+1.7**
JMDO	**Jabal Madar**	**5.05**	**156**	P		**Pn**	**14 11 48.9**	**+1.8**
JMDO				S		**Sn**	**14 12 47.7**	**+2.5**
WBK	**Wadi Bani Khal**	**5.21**	**147**	P		**Pn**	**14 11 50.4**	**+1.1**
	SNR=35							
WBK	**Wadi Bani Khal**	**5.21**	**147**	Pn		**Pn**	**14 11 50.5**	**+1.2**
IRAM	**Ramesheh**	**5.67**	**328**	Pn		**Pn**	**14 11 57.7**	**+1.9**
JLN	**Jalan Bani Buh**	**5.81**	**146**	P		**Pn**	**14 11 58.4**	**+0.8**
SRVN	**Saravan**	**5.81**	**85**	Pn		**Pn**	**14 11 59.6**	**+1.9**
MHTO	**MHTO**	**6.30**	**162**	P		**Pn**	**14 12 05.4**	**+1.1**
DOK	**Doka**	**8.52**	**191**	P		**Pn**	**14 12 35.5**	**+0.8**
	SNR=7.3							
SHAO	**Shalim**	**8.96**	**182**	*i* P		**Pn**	**14 12 43.0**	**+2.2**
	SNR=6.5							
SHAO	**Shalim**	**8.96**	**182**	P		**Pn**	**14 12 42.7**	**+1.9**
	SNR=16							
DMTO	**DMTO**	**9.30**	**186**	P		**Pn**	**14 12 46.3**	**+0.8**
RBK	**Rabkut**	**9.60**	**190**	P		**Pn**	**14 12 51.4**	**+1.8**
ASF	**Jabal al Asfar**	**17.29**	**292**	LR		LR	14 22 36.0	
	comp=Z,102nm,20.5s,baz=13,slow=42							
KBZ	**Khabaz**	**19.71**	**331**	P		**Pn**	**14 15 02.1**	**-0.1**
	0.1nm,0.3s,baz=126,slow=7.1,SNR=6.8							
	3.9nm,0.8s							
AAK	**Ala-Archa**	**21.75**	**39**	P		**P**	**14 15 23.0**	**+0.1**
	1.9nm,0.7s,baz=229,slow=13,SNR=5.4							
	1.9nm,0.7s							
BRTR	**Keskin Array B**	**22.42**	**310**	P		**P**	**14 15 30.4**	**+0.3**
	1.4nm,0.9s,baz=138,slow=9.7,SNR=5.9							
	1.4nm,0.9s							
BVAR	**Borovoye Array**	**28.14**	**19**	P		**P**	**14 16 22.7**	**-0.6**
	0.7nm,0.4s,baz=205,slow=6.6,SNR=4.4							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**28.68**	**40**	P		**P**	**14 16 27.6**	**-0.6**
	0.2nm,0.5s,baz=225,slow=9.1,SNR=6.5							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**34.31**	**30**	P		**P**	**14 17 16.7**	**-0.9**
	1.0nm,0.5s,baz=236,slow=9.4,SNR=4.8							
	1.0nm,0.5s							
FINES	**FINESS Array B**	**39.81**	**338**	P		**P**	**14 18 03.2**	**-0.9**
	4.2nm,1.0s,baz=148,slow=11,SNR=4.5							
	4.2nm,1.0s							
HFS	**Hagfors**	**43.78**	**331**	P		**P**	**14 18 35.7**	**-1.0**
	8.3nm,1.1s,baz=126,slow=14,SNR=1.8							
	8.3nm,1.1s							
SONM	**Songino Array**	**44.26**	**48**	P		**P**	**14 18 39.9**	**-1.0**
	0.2nm,0.6s,baz=266,slow=8.2,SNR=2.2							
	0.2nm,0.6s							
NOA	**NORSAR Array B**	**45.29**	**331**	P		**P**	**14 18 49.0**	**+0.2**
	0.8nm,0.8s,baz=148,slow=5.9,SNR=1.7							
	0.8nm,0.8s							
ESDC	**Sonseca Array**	**50.72**	**300**	P		**P**	**14 19 32.1**	**+1.0**
	0.6nm,0.9s,baz=86,slow=6.6,SNR=2.2							
	0.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**52.37**	**266**	P		**P**	**14 19 43.5**	**-0.3**
	0.3nm,0.6s,baz=64,slow=5.0,SNR=5.5							
	0.3nm,0.6s							
ILAR	**Eielson Array**	**86.81**	**10**	P		**P**	**14 23 14.6**	**-0.7**
	0.2nm,0.6s,baz=330,slow=6.2,SNR=2.2							
	0.2nm,0.6s							

UPP **16** *14:10:43.1±0.1, 67.85N×20.21E, h0km, ML2.5, Confirmed Induced event*

HEL **16** *14:10:44.2±0.2, 67.84N×20.21E, h0km, ML0.9, Suspected explosion*
ISC 16 14:10:43.5±1.0, 67.83N±0.03×20.22E±0.03, h0km, n14, σ0s68/22, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**19**	P		**Pg**	**14 10 45.6**	**-0.5**
KUA				S		**Sg**	**14 10 47.3**	**-0.5**
RATU	**Laukkuluspa**	**0.24**	**269**	P		**Pg**	**14 10 47.8**	**-0.3**
RATU				S		**Sg**	**14 10 51.0**	**-0.1**
KOVU	**Salmi**	**0.40**	**357**	P		**Pg**	**14 10 50.4**	**-0.7**
KOVU				S		**Sg**	**14 10 55.6**	**-0.7**
NIKU	**Nikkaluokta**	**0.45**	**276**	P		**Pg**	**14 10 51.6**	**-0.5**
NIKU				S		**Sg**	**14 10 57.8**	**-0.1**
LANU	**Lannavaara**	**0.71**	**71**	SG		**Sg**	**14 11 05.8**	**-0.3**
SALU	**Saltoluokta**	**0.80**	**236**	P		**Pg**	**14 10 58.2**	**-0.5**
KIF	**Kilpisjarvi**	**1.20**	**10**	PN		**Pn**	**14 11 08.6**	**+1.1**
KIF				smax		smax	14 11 21.5	
	comp=Z,1.2nm,0.2s							
KIF				SG		**Sg**	**14 11 21.8**	**-0.3**
PAJU	**Pajala**	**1.38**	**125**	P		**Pg**	**14 11 08.7**	**-1.2**
HEF	**Hetta**	**1.42**	**64**	PG		**Pn**	**14 11 09.8**	**-0.7**
	baz=247							
HEF				smax		smax	14 11 26.7	
	comp=Z,0.6nm,0.2s							
HEF				SB		**Sg**	**14 11 28.4**	**-0.5**
ERTU	**Ertsjaerv**	**1.49**	**148**	PN		**Pn**	**14 11 11.9**	**+0.4**
ERTU				SN		**Sb**	**14 11 31.8**	**+0.3**
KLF	**Kolari**	**1.56**	**111**	smax		smax	14 11 31.1	
	comp=Z,0.4nm,0.2s							
KLF				SN		**Sg**	**14 11 34.0**	**+0.6**
KTK1	**Kautokeino**	**1.63**	**42**	PG		**Pg**	**14 11 15.0**	**+0.3**
KTK1				SN		**Sg**	**14 11 36.8**	**+1.0**
TOF	**Tornio**	**2.38**	**135**	smax		smax	14 11 54.9	
	comp=Z,0.4nm,0.2s							
TOF				SG		**Sb**	**14 11 58.4**	**+1.3**
RNF	**Rovaniemi**	**2.56**	**116**	SG		**Sb**	**14 12 02.5**	**+0.1**

NNC **16** *14:14:20.8±0.7, 42.80N×78.47E, h0km, mb3.0, mpv2.4, Error ellipse: s-maj=5.8km s-min=2.3km az=176.0*
SOME **16** *14:14:22.6, 42.88N×78.47E, h10km*
KRNET **16** *14:14:24.0±0.1, 42.81N×78.37E, h13km, mb2.2*
ISC 16 14:14:21.4±1.2, 42.84N±0.03×78.49E±0.04, h12km±10km, n13, σ0s56/26, 12C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SATY	**Saty**	**0.23**	**344**	P		**Pb**	**14 14 27.4**	**-0.3**
	1.1nm,0.1s							
SATY				S		**Sg**	**14 14 30.8**	**+1.0**
	84nm,0.1s							
PRZ	**Przheval'sk**	**0.36**	**191**	⇑*e*P		**Pb**	**14 14 30.3**	**+0.4**
PRZ				⇑*e*S		**Sb**	**14 14 34.7**	**-0.9**
UZB	**Uzynbulak**	**0.50**	**51**	P		**Pb**	**14 14 31.8**	**-0.5**
	4.4nm,0.1s							
UZB				S		**Sg**	**14 14 38.4**	**+0.5**
	13nm,0.1s							
UZB	**Uzynbulak**	**0.50**	**51**	*e*P		**Pb**	**14 14 31.8**	**-0.5**
	4.4nm,0.1s							
UZB				*e*S		**Sg**	**14 14 38.4**	**+0.5**
	13nm,0.1s							
KPKS	**Kokpek**	**0.65**	**12**	P		**Pb**	**14 14 34.4**	**-0.4**
	0.1nm,0.1s							
KPKS				S		**Sg**	**14 14 42.7**	**+0.2**
	4.8nm,0.2s							
KPKS	**Kokpek**	**0.65**	**12**	*e*P		**Pb**	**14 14 34.4**	**-0.4**
	0.1nm,0.1s							
KPKS				*e*S		**Sg**	**14 14 42.7**	**+0.2**
	4.8nm,0.2s							
PDGK	**Podgornoye**	**0.88**	**56**	⇑P		**Pb**	**14 14 38.5**	**-0.3**
	6.4nm,1.5s							
PDGK				⇑S		**Sb**	**14 14 50.9**	**+0.4**
	3.9nm,1.1s							
KNDC	**Almaty**	**1.18**	**289**	⇑P		**Pg**	**14 14 43.1**	**-1.1**
	12nm,0.3s							
KNDC				⇑S		**Sb**	**14 14 59.3**	**+0.1**
	27nm,0.6s							
KDJ	**Kajisay**	**1.20**	**235**	⇑*e*P		**Pn**	**14 14 44.7**	**+0.4**
KDJ				⇑*e*S		**Sn**	**14 14 59.8**	**-0.8**
TARG	**Taragay, Kyrgy**	**1.22**	**205**	⇑*e*P		**Pn**

PHP					AML	AML	14 34 50.6	
	0.7nm,0.6s							
DRME	**Dracevica, Mon**	**0.77**	**337**	⇓*i*	*P*g	**Pg**	**14 34 37.8**	**-1.0**
DRME				*i*	Sg	**Sb**	**14 34 49.3**	**-0.4**
DRME	**Dracevica, Mon**	**0.77**	**337**	*eP*	**Pg**	**Pg**	**14 34 37.9**	**-0.9**
BUM	**Brajici-Budva**	**0.97**	**328**	⇑*i*	*P*g	**Pg**	**14 34 42.0**	**-0.7**
BUM				*i*	Sg	**Sn**	**14 34 56.6**	**-0.6**
PDG	**Podgorica**	**0.98**	**346**	P		**Pb**	**14 34 42.8**	**-0.1**
PDG				S		**Sb**	**14 34 55.9**	**+0.1**
PDG	**Podgorica**	**0.98**	**346**	⇓*i*	*P*g	**Pg**	**14 34 41.9**	**-1.0**
PDG				*i*	Sg	**Sb**	**14 34 56.3**	**+0.4**
PDG	**Podgorica**	**0.98**	**346**	*eP*	**g**	**Pg**	**14 34 42.5**	**-0.4**
PDG				*eS*	**g**	**Sn**	**14 34 59.3**	**+1.9**
OHR	**Ohrid**	**0.99**	**111**	*i*	*P*g	**Pg**	**14 34 41.3**	**-1.7**
OHR				*i*	Sg	**Sn**	**14 34 57.8**	**+0.2**
PVY	**Plav**	**1.15**	**14**	⇓*i*	*P*g	**Pb**	**14 34 45.1**	**-0.8**
PVY				*i*	Sg	**Sn**	**14 35 02.4**	**+0.6**
PVY	**Plav**	**1.15**	**14**	*eP*	**g**	**Pn**	**14 34 46.9**	**+0.9**
CEME	**Cevo**	**1.18**	**335**	⇓*i*	*P*g	**Pb**	**14 34 45.5**	**-0.8**
CEME				*i*	Sg	**Sn**	**14 35 03.7**	**+1.3**
KBN	**Korca**	**1.25**	**133**	P		**Pn**	**14 34 47.2**	**-0.1**
KBN				S		**Sn**	**14 35 04.4**	**+0.3**
KBN				AML		AML	14 35 08.8	
	0.5nm,0.5s							
HCY	**Herceg Novi**	**1.27**	**321**	⇓*i*	*P*g	**Pg**	**14 34 48.0**	**-0.2**
HCY				*i*	Sg	**Sg**	**14 35 06.5**	**+1.8**
NKME	**Niksic**	**1.37**	**340**	⇓*i*	*P*g	**Pb**	**14 34 49.1**	**-0.5**
NKME				*i*	Sg	**Sg**	**14 35 09.4**	**+1.3**
KOME	**Kolasin**	**1.38**	**358**	⇑*i*	*P*g	**Pb**	**14 34 49.2**	**-0.5**
KOME				*i*	Sg	**Sg**	**14 35 09.2**	**+1.0**
BEY	**Berane**	**1.42**	**9**	*eP*	**g**	**Pn**	**14 34 49.2**	**-0.4**
IVA	**Berane**	**1.42**	**9**	⇑*i*	*P*g	**Pn**	**14 34 49.4**	**-0.2**
IVA				*i*	Sg	**Sg**	**14 35 11.0**	**+1.5**
SKO	**Skopje**	**1.48**	**70**	*i*	*P*g	**Pg**	**14 34 52.1**	**-0.2**
SKO				*i*	Sg	**Sg**	**14 35 12.8**	**+1.4**
BRY	**Bratogost**	**1.62**	**332**	⇑*i*	*P*n	**Pb**	**14 34 53.4**	**-0.5**
BRY				*i*	Sn	**Sg**	**14 35 16.8**	**+0.7**
SRN	**Sarande**	**1.62**	**169**	P		**Pb**	**14 34 53.9**	**+0.1**
SRN				S		**Sg**	**14 35 16.4**	**+0.2**
SRN				AML		AML	14 35 20.3	
	0.1nm,0.6s							
UPM	**Unac-Piva**	**1.80**	**344**	⇑*i*	*P*n	**Pn**	**14 34 55.7**	**+0.8**
UPM				*i*	Sn	**Sg**	**14 35 20.7**	**-1.1**
SJES	**Sjenica**	**1.81**	**9**	*eP*	**g**	**Pn**	**14 34 57.1**	**+0.1**
PLE	**Pljevlja**	**1.86**	**356**	*eP*	**g**	**Pn**	**14 34 55.9**	**+0.2**
PLE				*i*	Sn	**Sg**	**14 35 22.2**	**-1.5**
STON	**Ston**	**1.98**	**316**	*eP*	**g**	**Pn**	**14 34 57.7**	**+0.5**
IGT	**Igoumenitsa**	**2.02**	**163**	*eP*	**g**	**Pn**	**14 34 58.0**	**+0.1**
SELS	**Selova**	**2.08**	**33**	*eP*	**g**	**Pn**	**14 34 59.4**	**+0.7**
BARS	**Barje**	**2.13**	**50**	*eP*	**g**	**Pn**	**14 35 00.0**	**+0.6**
IVAS	**Ivanjica**	**2.14**	**11**	*eP*	**g**	**Pn**	**14 35 00.1**	**+0.5**
GOCS	**Kraljevo Serbi**	**2.29**	**24**	*eP*	**g**	**Pn**	**14 35 02.6**	**+0.9**
BOSS	**Bosilegrad**	**2.39**	**64**	*eP*	**g**	**Pn**	**14 35 02.2**	**-0.7**
BBLS	**Lazi&#263i**	**2.39**	**357**	*eP*	**g**	**Pb**	**14 35 05.3**	**-1.7**
GRUS	**Gruza**	**2.55**	**19**	*eP*	**g**	**Pn**	**14 35 05.6**	**+0.5**
BOVS	**Bovan**	**2.67**	**35**	*eP*	**g**	**Pn**	**14 35 07.9**	**+1.2**
ZAPS	**Zavoj**	**2.89**	**51**	*eP*	**g**	**Pn**	**14 35 11.2**	**+1.4**
ZAGS	**Zajecar**	**3.05**	**39**	*eP*	**g**	**Pn**	**14 35 12.5**	**+0.6**

NEIC **16** *14:35:37.5±2.1,22°.52S±0°.09×174°.69W±0°.07, h10km±1km, mb4.9/69, Error ellipse: s-maj=16.2km s-min=9.6km az=337.0*

IDC **16** *14:35:40.2±1.1,22°.64S×175°.24W, h0km, mb4.5/14, mbtmp4.4/14, MS3.7/8, Error ellipse: s-maj=47.9km s-min=17.4km az=156.0*

ISC 16 14:35:39.8±0.6, 22°.71S±0°.09×175°.1W±0°.1, h10km, n116, σ1§65/93, mb4.8/44, MS3.5/8, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NIUE	**Niue**	**6.04**	**54**	Pn		Pn	14 37 00.1	-9.2
NIUE						Sn	14 37 57.7	-21
RAO	**Raoul Island**	**6.99**	**201**	Pn		**Pn**	**14 37 22.8**	**+0.6**
MSVF	**Nonsavu**	**8.11**	**306**			**Pn**	**14 37 39.6**	**+1.9**
AFI	**Afiamalu**	**9.31**	**20**	Pn		Pn	14 37 47.3	-6.9
RAR	**Rarotonga**	**14.31**	**87**	LR		LR	14 44 46.3	
	comp=Z,208nm,18.0s,baz=273,slow=38							
RAR	**Rarotonga**	**14.31**	**87**	Pn		Pn	14 38 53.4	-9.2
ONTNC	**Ouen Toro**	**17.04**	**268**	Pn		**Pn**	**14 39 36.0**	**-2.4**
DZM	**Mont Dzumac**	**17.07**	**269**	*e*LR		LR	14 43 53.8	
	106nm,21.6s							
DZM	**Mont Dzumac**	**17.07**	**269**	P		**Pn**	**14 39 36.0**	**-2.8**
RTZ	**Ruatahuna**	**17.24**	**201**	P		**P**	**14 39 42.6**	**+0.3**
BKZ	**Black Stump Fm**	**17.90**	**202**			**P**	**14 39 50.4**	**+0.8**
TBI	**Tubuai**	**23.61**	**97**	*e*LR		LR	14 46 09.1	
	534nm,25.8s							
RPZ	**Rata Peaks**	**23.87**	**205**	LR		LR	14 49 53.0	
	comp=Z,149nm,19.8s,baz=89,slow=36							
PPT2	**Papeete2**	**24.49**	**83**	*e*LR		LR	14 46 25.6	
	153nm,23.0s							
PPT2				*e*LR		LR	14 46 35.2	
	155nm,23.2s							
PPT	**Papeete**	**24.50**	**83**	LR		LR	14 49 02.6	
	comp=Z,88nm,18.1s,baz=264,slow=33							
HNR	**Honiara**	**27.30**	**295**	LR		LR	14 51 40.2	
	comp=Z,4.8nm,19.0s,baz=153,slow=35							
ARMA	**Armidale**	**30.64**	**248**	P		**P**	**14 41 55.3**	**+0.7**
ARMA				IAmb		IAmb	14 41 58.9	
	comp=Z,9.5nm,0.9s							
EIDS	**Eidsvold**	**30.94**	**258**	P		**P**	**14 41 56.8**	**-0.4**
EIDS				IAmb		IAmb	14 42 55.4	
	comp=Z,46nm,1.9s							
CAN	**Canberra**	**33.63**	**240**	P		**P**	**14 42 21.1**	**+0.4**
CTA	**Charters Tower**	**36.00**	**267**	P		**P**	**14 42 42.6**	**+1.3**
	comp=Z,3.6nm,0.7s,baz=102,slow=11,SNR=7.3							
CTA				LR		LR	14 54 50.5	
	comp=Z,53nm,18.9s,baz=94,slow=32							
	comp=Z,3.6nm,0.7s							
CTAO	**Charters Tower**	**36.00**	**267**	P		**P**	**14 42 40.6**	**-0.7**
CTAO				IAmb		IAmb	14 43 40.6	
	comp=Z,12nm,1.1s							
PMG	**Port Moresby**	**38.47**	**284**	P		**P**	**14 43 03.1**	**+0.8**
	comp=Z,12nm,1.0s,baz=54,slow=7.6,SNR=4.7							
	comp=Z,12nm,1.0s							
PMG	**Port Moresby**	**38.47**	**284**	P		**P**	**14 43 03.6**	**+1.4**
STKA	**Stephens Creek**	**39.33**	**247**	P		**P**	**14 43 11.2**	**+1.8**
	comp=Z,3.4nm,0.9s,baz=90,slow=8.8,SNR=5.1							
STKA				LR		LR	14 58 07.3	
	comp=Z,80nm,18.6s,baz=29,slow=34							
	comp=Z,3.4nm,0.9s							
STKA	**Stephens Creek**	**39.33**	**247**	P		**P**	**14 43 09.5**	**+0.1**
INKA	**Innaminka**	**40.09**	**253**	P		**P**	**14 43 16.2**	**+0.5**
BBOO	**Buckleboo**	**44.04**	**246**	P		**P**	**14 43 48.4**	**+0.5**
BBOO				IAmb		IAmb	14 45 31.7	
	comp=Z,29nm,1.6s							
ASAR	**Alice Springs**	**46.67**	**258**	P		**P**	**14 44 09.9**	**+1.0**
	comp=Z,7.5nm,0.9s,baz=90,slow=8.4,SNR=38							
ASAR				LR		LR	15 02 42.8	
	comp=Z,74nm,18.8s,baz=108,slow=35							
	comp=Z,7.5nm,0.9s							
WB0	**Warramunga Arr**	**46.98**	**264**	P		**P**	**14 44 11.7**	**+0.3**
WRAB	**Tennant Creek**	**46.98**	**263**	P		**P**	**14 44 11.2**	**-0.2**
WRA	**Warramunga Arr**	**46.99**	**263**	P		**P**	**14 44 11.8**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=101,slow=8.4,SNR=13							
	comp=Z,3.0nm,0.7s							
WRA	**Warramunga Arr**	**46.99**	**263**			**P**	**14 44 11.7**	**+0.2**
VNDA	**Vanda**	**55.98**	**186**	P		**P**	**14 45 18.8**	**+0.9**
SOEI	**Soe**	**59.26**	**272**	P		**P**	**14 45 40.8**	**-1.4**
BATI	**Baumata**	**59.66**	**271**	LR		LR	15 12 24.8	
	comp=Z,107nm,18.5s,baz=142,slow=37							
MJAR	**Matsushiro Arr**	**73.58**	**322**	P		**P**	**14 47 14.4**	**+1.1**
	comp=Z,3.1nm,0.7s,baz=152,slow=6.2,SNR=10							
	comp=Z,3.1nm,0.7s							
MJAR	**Matsushiro Arr**	**73.58**	**322**	P		**P**	**14 47 13.4**	**+0.2**
MJAR				IAmb		IAmb	14 48 33.8	
	comp=Z,30nm,2.0s							
KMRM	**Mail Ridge**	**78.80**	**38**	P		**P**	**14 47 42.0**	**-0.9**
PEA0B	**Petropavlovsk-**	**79.11**	**344**	P		**P**	**14 47 40.5**	**-3.7**
PETK	**Petropavlovsk-**	**79.11**	**344**	P		**P**	**14 47 45.8**	**+1.6**
	comp=Z,5.1nm,0.7s,baz=123,slow=5.5,SNR=7.8							
	comp=Z,5.1nm,0.7s							
DSP	**Deep Springs**	**80.38**	**43**	P		**P**	**14 47 49.1**	**-2.3**
LHV	**Little Huntoon**	**80.59**	**42**	P		**P**	**14 47 52.1**	**-0.5**
LHV				IAmb		IAmb	14 47 58.2	
	comp=Z,9.7nm,1.2s							
NVAR	**Mina Array Bea**	**80.83**	**42**	P		**P**	**14 47 57.6**	**+3.4**
	comp=Z,4.3nm,0.9s,baz=227,slow=10,SNR=11							
	comp=Z,4.3nm,0.9s							
PRN	**Pahroc Range**	**82.25**	**44**			**P**	**14 48 01.9**	**+0.2**
PRN				IAmb		IAmb	14 48 07.3	
	comp=Z,6.3nm,1.1s							
USRK	**Ussuriysk Ar.**	**82.30**	**325**	P		**P**	**14 48 04.1**	**+2.6**
	comp=Z,6.5nm,0.9s,baz=162,slow=3.8,SNR=6.2							
	comp=Z,6.5nm,0.9s							
X16A	**Lo Mia Camp, P**	**82.96**	**48**	P		**P**	**14 48 00.7**	**-4.7**
WVOR	**Wild Horse Val**	**83.14**	**38**	P		**P**	**14 48 05.2**	**-0.9**
WVOR				IAmb		IAmb	14 50 05.0	
	comp=Z,7.3nm,1.1s							
LCMT	**Little Creek M**	**83.20**	**45**	P		P	14 48 00.9	-5.7
CCUT	**Cedar City**	**83.43**	**45**			**P**	**14 48 08.6**	**+0.7**
CCUT				IAmb		IAmb	14 48 13.6	
	comp=Z,5.6nm,1.1s							
SZCU	**Shurtz Canyon**	**83.63**	**45**	P		**P**	**14 48 08.4**	**-0.5**
SZCU				IAmb		IAmb	14 48 14.4	
	comp=Z,11nm,1.3s							
ELK	**Elko**	**84.11**	**41**			**P**	**14 48 07.2**	**-4.1**
O19K	**Port Alsworth**	**84.33**	**10**	IAmb		IAmb	14 48 16.4	
	comp=Z,11nm,1.0s							
L14K	**Kuka Creek**	**84.35**	**6**	P		**P**	**14 48 11.9**	**+0.2**
L14K				IAmb		IAmb	14 48 15.3	
	comp=Z,8.1nm,0.9s							
L16K	**Owhat River**	**85.06**	**7**			**P**	**14 48 17.3**	**+2.0**
L16K				IAmb		IAmb	14 48 22.1	
	comp=Z,10nm,1.1s							
HAWA	**Hanford**	**85.17**	**35**	P		**P**	**14 48 16.1**	**0.0**
HAWA				IAmb		IAmb	14 48 22.2	
	comp=Z,10nm,1.2s							
SLKM	**Skilak Lake**	**85.36**	**12**	P		**P**	**14 48 15.9**	**-1.0**
K15K	**Wolf Creek Mou**	**85.40**	**6**	P		**P**	**14 48 12.7**	**-4.2**
M19K	**Big River Lodg**	**85.94**	**10**	P		**P**	**14 48 19.6**	**-0.1**
STLK	**Strandline Lak**	**85.98**	**11**	P		**P**	**14 48 19.8**	**-0.2**
STLK				IAmb		IAmb	14 49 47.4	
	comp=Z,15nm,1.6s							
TX31	**Lajitas Ar. Si**	**86.01**	**56**	IAmb		IAmb	14 48 48.8	
	comp=Z,5.3nm,0.6s							
TXAR	**Lajitas Array**	**86.01**	**56**	P		**P**	**14 48 24.8**	**+3.9**
	comp=Z,2.6nm,1.0s,baz=201,slow=6.7,SNR=16							
	comp=Z,2.6nm,1.0s							
SRU	**San Rafael Swe**	**86.15**	**45**	P		**P**	**14 48 22.5**	**+1.0**
SRU				IAmb		IAmb	14 48 26.5	
	comp=Z,5.1nm,1.1s							
J16K	**Anvik River**	**86.47**	**7**	P		**P**	**14 48 21.9**	**-0.4**
J16K				IAmb		IAmb	14 48 28.4	
	comp=Z,12nm,1.1s							
ANMO	**Albuquerque**	**86.72**	**50**	LR		LR	15 21 34.6	
	comp=Z,99nm,18.1s,baz=48,slow=32							
ANMO	**Albuquerque**	**86.72**	**50**	P		**P**	**14 48 23.8**	**-0.6**
ANMO	**Albuquerque**	**86.72**	**50**			**P**	**14 48 23.7**	**-0.7**
ANMO				IAmb		IAmb	14 48 29.9	
	comp=Z,3.3nm,1.0s							
GDL2	**Guadalupe Moun**	**86.87**	**53**	P		**P**	**14 48 25.8**	**+0.6**
J18K	**Innoko River**	**87.10**	**8**	IAmb		IAmb	14 48 31.1	
	comp=Z,6.2nm,1.0s							
RPSI	**Rantau Prapat**	**87.31**	**274**	P		**P**	**14 48 24.4**	**-3.1**
RPSI				IAmb		IAmb	14 48 29.8	
	comp=Z,11nm,1.1s							
J19K	**Poorman**	**87.75**	**8**	P		**P**	**14 48 28.4**	**0.0**
J19K				IAmb		IAmb	14 49 19.0	
	comp=Z,17nm,1.8s							
PDAR	**Pinedale Array**	**88.75**	**42**	P		**P**	**14 48 35.5**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=236,slow=2.7,SNR=6.7							
	comp=Z,0.8nm,0.8s							
M27K	**Edge Creek, AK**	**88.81**	**15**			**P**	**14 48 31.9**	**-1.8**
MENT	**Mentasta**	**88.90**	**14**	IAmb		IAmb	14 48 35.9	
	comp=Z,4.7nm,0.8s							
ENH	**Enshi**	**89.50**	**303**	P		**P**	**14 48 36.2**	**-1.3**
CCB	**Clear Creek Bu**	**89.61**	**11**			**P**	**14 48 32.7**	**-4.5**
CCB				IAmb		IAmb	14 48 43.2	
	comp=Z,7.7nm,1.2s							
G19K	**Purcell Mounta**	**89.63**	**7**	IAmb		IAmb	14 48 43.0	
	comp=Z,5.3nm,1.1s							
ILAR	**Eielson Array**	**89.89**	**12**	P		**P**	**14 48 38.7**	**+0.2**
	comp=Z,1.7nm,1.0s,baz=216,slow=5.0,SNR=8.0							
	comp=Z,1.7nm,1.0s							
J25K	**Salcha River,**	**90.04**	**12**	P		**P**	**14 48 40.4**	**+1.1**
J25K				IAmb		IAmb	14 48 44.7	
	comp=Z,3.7nm,0.9s							
F19K	**Shaleruckik Mo**	**90.22**	**7**	P		**P**	**14 48 41.0**	**+1.0**
F19K				IAmb		IAmb	14 48 45.8	
	comp=Z,6.5nm,1.0s							
J26L	**Joseph Creek**	**90.31**	**13**	IAmb		IAmb	14 48 47.2	
	comp=Z,9.6nm,0.9s							
F20K	**Avaraart Lake**	**90.66**	**7**	P		**P**	**14 48 43.5**	**+1.5**
PRP	**Porcupine Dome**	**90.82**	**12**	IAmb		IAmb	14 48 50.9	
	comp=Z,10.0nm,1.4s							
E19K	**Redstone River**	**90.88**	**7**	IAmb		IAmb	14 48 49.3	
	comp=Z,6.6nm,0.9s							
K29M	**Barlow Dome**	**91.13**	**16**	IAmb		IAmb	14 48 51.6	
	comp=Z,7.5nm,1.1s							
XAN	**Xi'an**	**91.60**	**306**	P		**P**	**14 48 50.0**	**+2.7**
XAN				pmax		pmax		
	comp=Z,18nm,0.8s							
CM31	**Chiang Mai Arr**	**93.37**	**288**	P		**P**	**14 48 54.7**	**-1.1**
CM31				IAmb		IAmb	14 49 03.6	
	comp=Z,7.1nm,1.0s							
CMAR	**Chiang Mai Arr**	**93.37**	**288**	P		**P**	**14 48 59.0**	**+3.3**
	comp=Z,3.6nm,0.9s,baz=132,slow=3.0,SNR=23							
	comp=Z,3.6nm,0.9s							
CHTO	**Chiang Mai**	**93.51**	**289**			**P**	**14 48 54.2**	**-2.2**
CHTO				IAmb		IAmb	14 49 00.1	
	comp=Z,3.9nm,0.8s							
YKA	**Yellowknife Ar**	**97.41**	**24**	P		Pdif	14 49 13.8	+0.7
	comp=Z,0.5nm,0.8s,baz=245,slow=4.7,SNR=5.4							
	comp=Z,0.5nm,0.8s							
MKAR	**Makanchi Array**	**114.66**	**312**	PKP		**PKiKP**	**14 54 20.2**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=176,slow=0.9,SNR=4.9							
KURK	**Kurchatov**	**117.44**	**317**			**PKPdf**	**14 54 25.1**	**-0.5**
KURBB	**Kurchatov Arra**	**117.49**	**316**	PKP		**PKPdf**	**14 54 25.1**	**-0.6**
	comp=Z,0.2nm,0.2s,baz=93,slow=1.7,SNR=5.8							
AK03	**Malin Array Si**	**146.21**	**332**	PKP		**PKPab**	**14 55 20.5**	**-0.5**
AKASG	**Malin Array Be**	**146.23**	**332**	PKPbc		**PKPab**	**14 55 20.7**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=41,slow=4.0,SNR=14							
AKASG	**Malin Array Be**	**146.23**	**332**			**PKPdf**	**14 55 18.4**	**-0.9**
AKBB	**Malin Array Si**	**146.23**	**332**	PKPdf		**PKPdf**	**14 55 16.6**	**-2.6**
AKBB	**Malin Array Si**	**146.23**	**332**	PKP		**PKPab**	**14 55 20.5**	**-0.5**
AK04	**Malin Array Si**	**146.24**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.5**
KIEV	**Kiev**	**146.24**	**332**	PKPdf		**PKPdf**	**14 55 16.4**	**-2.8**
KIEV	**Kiev**	**146.24**	**332**	PKP		**PKPab**	**14 55 20.5**	**-0.6**
AK01	**Malin Array Si**	**146.24**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.5**
AK22	**Malin Array Si**	**146.25**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.5**
AK21	**Malin Array Si**	**146.25**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.5**
AK08	**Malin Array Si**	**146.26**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.6**
AK09	**Malin Array Si**	**146.27**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.6**
AK02	**Malin Array Si**	**146.27**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.6**
AK11	**Malin Array Si**	**146.27**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.6**
AK18	**Malin Array Si**	**146.28**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.6**
AK20	**Malin Array Si**	**146.29**	**332**	PKP		**PKPab**	**14 55 20.6**	**-0.7**
AK05	**Malin Array Si**	**146.30**	**332**	PKP		**PKPab**	**14 55 20.7**	**-0.6**
MI28	**Mi28,Pidlybu**	**146.72**	**333**	PKP		**PKPab**	**14 55 22.4**	**-0.5**
LUBAR	**Lubar, Ukraine**	**147.44**	**332**	PKP		**PKPbc**	**14 55 24.3**	**+0.5**
SORM	**Soroca**	**148.47**	**329**	PKP		**PKPbc**	**14 55 26.1**	**-0.5**
KMPD	**K-Podol'skiy**	**149.02**	**332**	PKP		**PKPbc**	**14 55 27.0**	**-1.0**
BRTR	**Keskin Array B**	**150.31**	**312**	PKPbc		**PKiKP**	**14 55 32.5**	**0.0**
	comp=Z,1.6nm,0.7s,baz=134,slow=3.6,SNR=10							
MMAI	**Mount Meron Ar**	**151.23**	**298**	PKPbc		**PKiKP**	**14 55 35.4**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=48,slow=2.1,SNR=2.2							

NEIC **16** *14:39:31.6±0.6, 6°.28S±0°.07×130°.6E±0°.1, h130km±11km, mb4.1/10, Error ellipse: s-maj=17.6km s-min=10.4km az=86.0*

DJA **16** *14:39:32.2±0.3, 6°S±2°×13°1E±°, h153km±8km, M4.4/22, mB5.0/8, mb4.3/12, MLv4.6/22, Mw(mB)4.2/8*

IDC **16** *14:39:32.1±2.2, 6°.21S×130°.48E, h130km±22km, mb3.5/7, mbtmp4.0/10, Error ellipse: s-maj=29.8km s-min=16.4km az=68.0*

ISC 16 14:39:31.9±0.5, 6°.29S±0°.05×130°.55E±0°.07, h150km, n64, σ1§81/63, mb3.9/11, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SAUI	**Saumlaki**	**1.84**	**156**	Pn		**Pn**	**14 40 03.3**	**-1.9**
SAUI	**Saumlaki**	**1.84**	**156**	P		**Pn**	**14 40 09.0**	**+3.8**
SAUI	**Saumlaki**	**1.84**	**156**	P		**Pn**	**14 40 05.7**	**+0.5**
BNDI	**Bandanaira**	**1.87**	**340**	P		**Pn**	**14 40 06.5**	**+0.9**
BNDI	**Bandanaira**	**1.87**	**340**	P		**Pn**	**14 40 06.0**	**+0.4**
MSAI	**Masohi**	**3.34**	**331**	P		**Pn**	**14 40 23.7**	**0.0**
KRAI	**Karang Ratu**	**3.65**	**324**	P		**Pn**	**14 40 28.9**	**+1.2**
FAKI	**Fak Fak**	**3.75**	**27**			**Pn**	**14 40 27.7**	**-1.3**
FAKI	**Fak Fak**	**3.75**	**27**	P		**Pn**	**14 40 27.6**	**-1.3**
FAKI	**Fak Fak**	**3.75**	**27**	P		**Pn**	**14 40 27.7**	**-1.3**
KMPI	**Kaimana, Papua**	**4.09**	**50**	P		**Pn**	**14 40 32.9**	**-0.4**
SIJI	**Sorong**	**5.43**	**8**	P		**Pn**	**14 40 49.8**	**-1.4**
	11nm,0.2s,baz=227,slow=23,SNR=28							
SIJI				S		Sn	14 41 39.7	-13
	18nm,0.4s,baz=9.2,slow=23,SNR=5.2							
SIJI	**Sorong**	**5.43**	**8**	P		**Pn**	**14 40 49.7**	**-1.4**
SWI	**Sorong**	**5.44**	**8**	P		**Pn**	**14 40 49.9**	**-1.3**
	0.9nm4µm22nm,0.8s							
RKPI	**Ransiki, Papua**	**5.97**	**37**	P		**Pn**	**14 40 58.7**	**+0.4**
	84nm,0.5s							
DRS	**Darwin Rock St**	**6.11**	**177**	P		**Pn**	**14 41 00.2**	**+0.1**
SANI	**Sanana**	**6.20**	**313**	P		**Pn**	**14 41 02.2**	**+0.9**
MWPI	**Manokwari, Pap**	**6.36**	**33**	P		**Pn**	**14 41 04.7**	**+1.2**
	0.6nm115nm,1.0s							
MTN	**Manton Dam**	**6.54**	**175**			**Pn**	**14 41 05.1**	**-0.7**
SOEI	**Soe**	**7.11**	**241**			**Pn**	**14 41 13.6**	**+0.1**
SOEI	**Soe**	**7.11**	**241**	P		**Pn**	**14 41 14.3**	**+0.7**
SOEI	**Soe**	**7.11**	**241**	P		**Pn**	**14 41 13.5**	**-0.1**
	0.2nm30nm,0.6s							
BAKI	**Biak**	**7.51**	**48**	P		**Pn**	**14 41 21.1**	**+2.3**
BATI	**Baumata**	**7.85**	**240**	P		**Pn**	**14 41 23.4**	**0.0**
	24nm,0.4s,baz=268,slow=3.2,SNR=25							
BATI				S		Sn	14 42 41.5	-9.4
	31nm,0.3s,baz=96,slow=20,SNR=9.3							
BATI	**Baumata**	**7.85**	**240**	P		**Pn**	**14 41 22.9**	**-0.4**
	0.3nm1µm27nm,0.5s							
EDFI	**Ende, Flores**	**9.12**	**254**	P		**Pn**	**14 41 41.7**	**+1.3**
KNRA	**Kununurra**	**9.49**	**190**			**Pn**	**14 41 43.4**	**-1.8**
TOLI2	**Tolitoli**	**12.21**	**307**	P		**Pn**	**14 42 20.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**12.68**	**202**	P		**Pn**	**14 42 23.6**	**-3.4**
	3.3nm,0.3s,baz=22,slow=11,SNR=49							
FITZ				S		Sn	14 44 36.5	-11
	14nm,0.4s,baz=77,slow=16,SNR=13							
PLAI	**Plampang**	**12.91**	**258**	P		**Pn**	**14 42 28.9**	**-1.2**
WB0	**Warramunga Arr**	**13.91**	**165**	Pn		**Pn**	**14 42 40.9**	**-1.8**
WRAB	**Tennant Creek**	**14.05**	**165**	Pn		**Pn**	**14 42 42.9**	**-1.7**
WRA	**Warramunga Arr**	**14.06**	**165**	P		**Pn**	**14 42 41.5**	**-3.2**
	0.7nm,0.4s,baz=343,slow=14,SNR=37							
WRA				S		Sn	14 45 09.6	-11
	3.1nm,0.5s,baz=338,slow=22,SNR=9.7							
WRA	**Warramunga Arr**	**14.06**	**165**			**Pn**	**14 42 40.9**	**-3.8**
COEN	**Coen**	**14.57**	**122**	Pn		**Pn**	**14 42 51.0**	**-0.1**
COEN	**Coen**	**14.57**	**122**	P		**P**	**14 42 53.3**	**-0.2**
JAGI	**Jajag, Banyuwa**	**16.41**	**261**	Pn		**Pn**	**14 43 11.7**	**-2.0**
JAGI				IAmb		IAmb	14 43 27.6	
	comp=Z,14nm,1.1s							
JAGI	**Jajag, Banyuwa**	**16.41**	**261**	P		**P**	**14 43 14

comp=Z,14nm,1.4s
WRA Warramunga Arr 49.26 257 P **P** **15 41 26.4 -0.5**
comp=Z,1.7nm,0.5s,baz=90,slow=7.6,SNR=46
comp=Z,1.7nm,0.5s
WRA Warramunga Arr 49.26 257 P **P** **15 41 25.9 -1.1**
AS31 Alice Springs 49.55 252 **P** **15 41 29.0 -0.2**
AS31 IAmb IAmb 15 41 29.6
comp=Z,4.4nm,0.7s
ASAR Alice Springs 49.56 252 P **P** **15 41 28.6 -0.5**
comp=Z,13nm,0.4s,baz=89,slow=7.7,SNR=574
comp=Z,13nm,0.4s
ASAR Alice Springs 49.56 252 **P** **15 41 28.8 -0.3**
MTN Manton Dam 53.11 265 P **P** **15 41 55.5 -0.3**
SIJI Sorong 55.80 279 P **P** **15 42 15.7 +0.3**
comp=Z,17nm,0.6s,baz=60,slow=8.1,SNR=11
comp=Z,17nm,0.6s
NIKH Nikolski High 68.08 3 P **P** **15 43 36.6 -0.2**
PEA0B Petropavlovsk- 72.29 343 P **P** **15 44 02.5 -0.1**
PETK Petropavlovsk- 72.29 343 P **P** **15 44 02.4 -0.2**
comp=Z,5.8nm,0.7s,baz=108,slow=8.2,SNR=12
comp=Z,5.8nm,0.7s
UGM Wanagama 73.95 266 P **P** **15 44 12.7 -0.6**
PLK4 Peulik 4 74.07 10 P **P** **15 44 12.9 -0.2**
NVAR Mina Array Bea 74.64 42 P **P** **15 44 17.2 +0.2**
comp=Z,1.1nm,0.7s,baz=218,slow=9.9,SNR=6.3
comp=Z,1.1nm,0.7s
P16K Nushagak River 75.16 9 P **P** **15 44 19.1 -0.1**
P17K Kvichak River 75.55 9 P **P** **15 44 21.0 -0.5**
M13K Dall Lake 75.88 5 P **P** **15 44 23.9 +0.5**
P18K Big Mountain, 75.93 10 **P** **15 44 22.9 -0.9**
P18K IAmb IAmb 15 44 23.8
comp=Z,11nm,0.9s
M14K Bethel 76.35 6 **P** **15 44 25.8 -0.2**
ILSW Iliamna Southw 76.85 11 P **P** **15 44 28.1 -0.9**
M17K Holitna River 77.52 8 P **P** **15 44 32.6 +0.1**
M17K IAmb IAmb 15 44 34.2
comp=Z,8.6nm,1.0s
L16K Owhat River 77.56 7 P **P** **15 44 33.0 +0.2**
L16K IAmb IAmb 15 44 34.9
comp=Z,6.9nm,1.1s
K15K Wolf Creek Mou 77.91 6 **P** **15 44 34.8 0.0**
K15K IAmb IAmb 15 44 37.0
comp=Z,20nm,1.4s
SUA Susitna One 78.66 11 P **P** **15 44 38.7 -0.4**
SUA IAmb IAmb 15 44 42.5
comp=Z,7.1nm,0.9s
WAX Waxell Ridge 79.49 15 P **P** **15 44 43.6 0.0**
NJ2 Nanjing 79.56 307 *e*P **P** **15 44 46.1 +1.6**
NJ2 pmax pmax
comp=Z,10.0nm,1.5s
J18K Innoko River 79.60 8 **P** **15 44 44.1 +0.1**
GRNC Granite Creek 80.01 15 P **P** **15 44 46.3 -0.2**
GRNC IAmb IAmb 15 45 09.4
comp=Z,21nm,1.4s
J19K Poorman 80.26 8 P **P** **15 44 47.7 +0.2**
CTGM Chitina Glacie 80.32 16 P **P** **15 44 47.7 -0.4**
CTGM IAmb IAmb 15 45 23.5
comp=Z,11nm,1.3s
BNX BinXian 80.42 323 ⇓P **P** **15 44 48.8 0.0**
BNX pmax pmax
comp=Z,6.0nm,1.4s
TNA Tin City 80.69 3 **P** **15 44 50.1 +0.3**
TNA IAmb IAmb 15 44 50.9
comp=Z,7.4nm,0.8s
TXAR Lajitas Array 81.05 56 P **P** **15 44 52.8 +0.1**
comp=Z,0.2nm,0.7s,baz=241,slow=4.9,SNR=2.6
comp=Z,0.2nm,0.7s
MCK McKinley 81.09 11 **P** **15 44 51.4 -0.6**
MCK IAmb IAmb 15 44 52.8
comp=Z,8.0nm,0.9s
M26K Nabesna, AK 81.14 14 P **P** **15 44 52.1 -0.3**
M26K IAmb IAmb 15 44 53.6
comp=Z,11nm,1.2s
O30N Mendenhall 81.61 18 P **P** **15 44 55.1 +0.2**
O30N IAmb IAmb 15 45 17.2
comp=Z,7.9nm,1.3s
G18K Tagagawik 81.72 6 P **P** **15 44 55.1 -0.2**
WRH Wood River Hil 81.92 11 **P** **15 44 55.9 -0.4**
WRH IAmb IAmb 15 44 56.6
comp=Z,11nm,1.1s
CCB Clear Creek Bu 82.13 11 P **P** **15 44 56.7 -0.7**
ILAR Eielson Array 82.41 11 P **P** **15 44 57.8 -1.2**
comp=Z,0.9nm,0.6s,baz=214,slow=5.6,SNR=26
comp=Z,0.9nm,0.6s
J25K Salcha River 82.57 12 IAmb IAmb 15 45 00.3
comp=Z,6.4nm,1.2s
PD31 Pinedale Array 82.57 42 P **P** **15 44 59.2 -1.3**
PDAR Pinedale Array 82.57 42 P **P** **15 44 59.5 -1.1**
comp=Z,0.8nm,0.7s,baz=216,slow=2.7,SNR=9.3
comp=Z,0.8nm,0.7s
PRP Porcupine Dome 83.34 12 **P** **15 45 03.4 -0.5**
PRP IAmb IAmb 15 45 04.6
comp=Z,5.4nm,0.9s
E19K Redstone River 83.38 6 IAmb IAmb 15 45 05.0
comp=Z,5.6nm,0.9s
DAWY Dawson 83.42 15 IAmb IAmb 15 45 06.2
comp=Z,9.5nm,1.5s
J29N Klondike Camp 84.03 15 IAmb IAmb 15 45 08.9
comp=Z,9.3nm,1.2s
BELA Belgrano 2 84.24 172 P **P** **15 45 08.2 -0.1**
D19K Kuna River 84.29 6 IAmb IAmb 15 45 09.2
comp=Z,4.0nm,0.8s
E22K Anaktuvuk Pass 84.69 8 **P** **15 45 10.1 -0.5**
E22K IAmb IAmb 15 45 11.5
comp=Z,4.2nm,0.8s
C19K Lookout Ridge 84.75 5 IAmb IAmb 15 45 11.8
comp=Z,6.1nm,0.8s
G26K Porcupine Rive 84.94 11 IAmb IAmb 15 45 13.1
comp=Z,9.3nm,1.1s
I30M Mount Dempster 85.12 15 P **P** **15 45 12.4 -0.5**
BMAR Burnt Mountain 85.22 11 P **P** **15 45 13.5 +0.2**
E25K Arctic Village 85.65 10 IAmb IAmb 15 45 16.6
comp=Z,4.4nm,0.9s
F31M Tsiigehtchic 87.54 14 IAmb IAmb 15 45 23.6
comp=Z,6.0nm,0.8s
INK Inuvik 88.27 14 P **P** **15 45 26.9 -1.1**
HHC Hu-ho-hao-te 88.45 313 *e*P **P** **15 45 32.0 +2.4**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,280nm,6.6s
YKA Yellowknife Ar 90.20 24 P **P** **15 45 36.4 -0.7**
comp=Z,0.3nm,0.6s,baz=245,slow=4.9,SNR=5.6
comp=Z,0.3nm,0.6s
PZH PanZhiHua 91.63 297 P **P** **15 45 45.8 +1.0**
CMAR Chiang Mai Arr 91.96 288 P **P** **15 45 46.7 +0.3**
comp=Z,0.6nm,0.6s,baz=92,slow=2.6,SNR=6.8
comp=Z,0.6nm,0.6s
VNA3 Neumayer Olymp 93.07 175 ⇓PcP **P** **15 45 48.9 -1.7**
VNA1 Neumayer--Stat 93.76 175 ⇓PcP **P** **15 45 49.7 -3.9**
SONM Songino Array 94.30 318 P **P** **15 45 57.3 +0.6**
comp=Z,0.2nm,0.4s,baz=108,slow=3.2,SNR=1.7
comp=Z,0.2nm,0.4s
BRTR Keskin Array B 145.63 321 PKPbc **PKPdf** **15 52 14.7 -1.0**
comp=Z,1.2nm,0.6s,baz=96,slow=2.5,SNR=9.7
MODS Modra-Piesok 145.66 347 *e*PKP **PKPab** **15 52 15.9 -0.1**
MODS *e* 16 10 19.8
MODS *e* 16 27 16.2
GERES GERESS Array B 145.89 351 PKPbc **PKPdf** **15 52 15.3 -0.4**
comp=Z,0.3nm,0.5s,baz=67,slow=3.5,SNR=4.9

*IDC **16** 15:34:53.1±2.2, 15°.15S×173°.89W, h0km, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=93.4km s-min=26.7km az=141.0*
*NEIC **16** 15:35:06.6±0.6, 15°.2S±0°.1×173°.9W±0°.1, h107km±9km, mb4.5/11, Error ellipse: s-maj=22.7km s-min=9.5km az=142.0*
ISC 16 15:35:02.9±0.6, 15°.21S±0°.08×174°.07W±0°.08, h73km, n23, σ1°35/26, mb4.5/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.57**	**60**	Pn	**Pn**	**15 35 45.0**	**+2.6**
AFI				Sn	**Sn**	**15 36 13.0**	**+0.3**
NIUE	**Niue**	**5.52**	**135**	Pn	**Pn**	**15 36 25.5**	**+2.9**
NIUE	**Niue**	**5.52**	**135**	P	**Pn**	**15 36 25.2**	**+2.6**
NIUE				S	**Sn**	**15 37 21.7**	**-3.0**
CTAO	**Charters Tower**	**38.06**	**257**	P	**P**	**15 42 15.4**	**+0.7**
CTAO				IAmb	IAmb	15 42 18.0	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**49.22**	**257**	P	**P**	**15 43 44.5**	**+0.1**
WB0				IAmb	IAmb	15 43 50.1	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**49.25**	**257**	P	**P**	**15 43 45.0**	**+0.4**
WRAB				IAmb	IAmb	15 43 49.7	
	comp=Z,6.9nm,1.2s						
WRA	**Warramunga Arr**	**49.26**	**257**	P	**P**	**15 43 45.3**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=90,slow=7.2,SNR=18						
	comp=Z,1.6nm,0.5s						
WRA	**Warramunga Arr**	**49.26**	**257**	P	**P**	**15 43 44.5**	**-0.1**
AS31	**Alice Springs**	**49.55**	**252**	P	**P**	**15 43 47.5**	**+0.6**
AS31				IAmb	IAmb	15 43 48.4	
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**49.55**	**252**	P	**P**	**15 43 47.4**	**+0.4**
	comp=Z,14nm,0.6s,baz=90,slow=7.6,SNR=36						
ASAR				PcP	**PcP**	**15 45 08.6**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=97,slow=3.8,SNR=1.1						
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**49.55**	**252**	P	**P**	**15 43 47.2**	**+0.3**
MTN	**Manton Dam**	**53.10**	**265**	P	**P**	**15 44 13.8**	**+0.3**
PETK	**Petropavlovsk-**	**72.26**	**343**	P	**P**	**15 46 20.4**	**+0.2**
	comp=Z,6.7nm,1.1s,baz=143,slow=9.9,SNR=4.3						
	comp=Z,6.7nm,1.1s						
O02D	**Mt. Diablo Mer**	**72.84**	**39**	P	**P**	**15 46 22.1**	**-1.9**
O02D				IAmb	IAmb	15 46 44.4	
	comp=Z,8.1nm,1.4s						
P18K	**Big Mountain,**	**75.91**	**10**	P	**P**	**15 46 41.1**	**-0.3**
P18K				IAmb	IAmb	15 47 10.5	
	comp=Z,16nm,1.4s						
L14K	**Kuka Creek**	**76.83**	**6**	P	**P**	**15 46 46.5**	**+0.1**
L14K				IAmb	IAmb	15 46 55.6	
	comp=Z,14nm,1.4s						
ILAR	**Eielson Array**	**82.39**	**11**	P	**P**	**15 47 15.4**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=228,slow=6.2,SNR=5.8						
	comp=Z,0.4nm,0.8s						
PDAR	**Pinedale Array**	**82.56**	**42**	P	**P**	**15 47 17.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=207,slow=3.0,SNR=3.8						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**82.56**	**42**	P	**P**	**15 47 16.8**	**-1.5**
BILL	**Bilibino**	**84.24**	**353**	P	**P**	**15 47 25.4**	**-0.6**
A36M	**Sachs Harbour**	**92.87**	**14**	P	**P**	**15 48 07.1**	**0.0**
BRTR	**Keskin Array B**	**145.60**	**321**	PKPbc	**PKPbc**	**15 54 33.4**	**-0.3**
	comp=Z,6.6nm,0.7s,baz=129,slow=2.3,SNR=3.4						
BRTR	**Keskin Array B**	**145.60**	**321**		**PKPdf**	**15 54 33.1**	**-0.2**

IDC 16 15:46:33.6±5.2, 6°.30S×147°.79E, h0km, mb3.4/2, mbtmp3.4/4, ML2.7/2, Error ellipse: s-maj=74.3km s-min=58.8km az=80.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.15**	**191**	Pn	Pn	15 47 26.1	+1.6
	8.9nm,0.3s,baz=14,slow=9.8,SNR=41						
PMG				Sn	Sn	15 48 03.0	+0.2
	6.6nm,0.3s,baz=21,slow=13,SNR=8.8						
	49nm,0.5s						
WRA	**Warramunga Arr**	**18.83**	**223**	P	P	15 50 55.0	-0.2
	0.1nm,0.3s,baz=48,slow=11,SNR=12						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.83**	**216**	P	P	15 51 27.3	-0.5
	0.3nm,0.4s,baz=52,slow=9.1,SNR=30						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**26.10**	**192**	P	P	15 52 09.0	-0.2
	1.0nm,0.7s,baz=29,slow=10,SNR=2.9						
	1.0nm,0.7s						

*NEIC **16** 15:51:28.7±1.3, 15°.62S±0°.08×177°.48W±0°.10, h407km±6km, mb4.5/184, Error ellipse: s-maj=13.9km s-min=11.7km az=88.0*
*IDC **16** 15:51:30.1±2.9, 15°.58S×177°.67W, h419km±30km, mb3.7/16, mbtmp4.5/16, Error ellipse: s-maj=20.8km s-min=11.0km az=145.0*
ISC 16 15:51:27.4±0.5, 15°.67S±0°.10×177°.52W±0°.10, h400km, n374, σ0°68/292, mb4.5/104, 17C-7D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.72**	**244**	Pn	Pn	15 52 51.8	+5.2
AFI	**Afiamalu**	**5.82**	**73**		**Pn**	**15 52 58.2**	**0.0**
FUNA	**Funafuti**	**7.79**	**335**		**P**	**15 53 21.0**	**+0.4**
MXZ	**Matakaoa Point**	**22.12**	**189**	P	**P**	**15 55 52.0**	**+0.9**
TOZ	**Tahuroa Road**	**22.83**	**194**	P	**P**	**15 55 58.8**	**+1.4**
TOZ				IAmb	IAmb	15 56 03.2	
	comp=Z,23nm,1.4s						
RTZ	**Ruatahuna**	**23.37**	**191**	P	**P**	**15 56 01.2**	**-1.2**
RTZ				IAmb	IAmb	15 56 44.6	
	comp=Z,17nm,1.0s						
BKZ	**Black Stump Fm**	**23.99**	**192**	P	**P**	**15 56 05.1**	**-2.9**
BKZ				IAmb	IAmb	15 56 10.9	
	comp=Z,17nm,1.2s						
MRZ	**Mangatainoka R**	**25.62**	**192**	P	**P**	**15 56 22.1**	**-0.4**
MRZ				IAmb	IAmb	15 56 52.6	
	comp=Z,31nm,1.2s						
CTA	**Charters Tower**	**34.71**	**257**	P	**P**	**15 57 43.8**	**+1.9**
	comp=Z,4.6nm,0.8s,baz=57,slow=7.1,SNR=5.9						
	comp=Z,4.6nm,0.8s						
STKA	**Stephens Creek**	**40.48**	**239**	P	**P**	**15 58 29.0**	**-0.4**
	comp=Z,2.0nm,0.3s,baz=94,slow=8.6,SNR=10						
	comp=Z,2.0nm,0.3s						
STKA	**Stephens Creek**	**40.48**	**239**	P	**P**	**15 58 29.5**	**+0.1**
STKA				IAmb	IAmb	15 58 32.5	
	comp=Z,20nm,0.8s						
BBOO	**Buckleboo**	**45.26**	**239**	P	**P**	**15 59 07.5**	**+0.3**
WRA	**Warramunga Arr**	**45.92**	**257**	P	**P**	**15 59 12.2**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=88,slow=6.6,SNR=69						
	comp=Z,1.5nm,0.5s						
AS31	**Alice Springs**	**46.25**	**252**		**P**	**15 59 15.6**	**+0.5**
ASAR	**Alice Springs**	**46.25**	**252**	P	**P**	**15 59 15.4**	**+0.3**
	comp=Z,25nm,0.7s,baz=86,slow=7.2,SNR=410						
ASAR				S	**S**	**16 05 29.8**	**-1.5**
	comp=Z,1.2nm,1.0s,baz=95,slow=13,SNR=6.6						
	comp=Z,25nm,0.7s						
FORT	**Forrest**	**51.76**	**243**	P	**P**	**15 59 56.0**	**-0.1**
FORT				IAmb	IAmb	15 59 56.9	
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**66.65**	**322**	P	**P**	**16 01 35.8**	**-0.9**
	comp=Z,5.0nm,0.9s,baz=150,slow=5.7,SNR=11						
	comp=Z,5.0nm,0.9s						
MJAR	**Matsushiro Arr**	**66.65**	**322**	IAmb	IAmb	16 01 39.6	
	comp=Z,6.0nm,1.3s						
PETK	**Petropavlovsk-**	**71.75**	**345**	P	**P**	**16 02 07.7**	**+0.4**
	comp=Z,8.9nm,0.8s,baz=106,slow=9.4,SNR=15						
	comp=Z,8.9nm,0.8s						
CHNA	**Chernabura Isl**	**71.86**	**11**	P	**P**	**16 02 07.0**	**-0.8**
	baz=198						
SDPT	**Sand Point**	**72.20**	**10**	P	**P**	**16 02 08.9**	**-0.9**
	baz=197						
CHIR	**Chirikof Islan**	**73.57**	**13**	P	**P**	**16 02 16.9**	**-0.8**
	baz=202						
KSRS	**Korea Array**	**73.62**	**317**	P	**P**	**16 02 19.2**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=122,slow=6.7,SNR=2.8						
	comp=Z,1.8nm,0.8s						
QSPA	**South Pole Qui**	**74.38**	**180**	P	**P**	**16 02 24.1**	**+1.6**
	comp=Z,11nm,1.1s,baz=23,slow=2.9,SNR=7.7						
	comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**74.38**	**180**	P	**P**	**16 02 23.8**	**+1.3**
QSPA				IAmb	IAmb	16 02 25.3	
	comp=Z,11nm,0.9s						
SII	**Sitkinak Islan**	**74.56**	**13**	P	**P**	**16 02 22.9**	**-0.5**
	baz=203						
R16K	**Pilot Point**	**74.82**	**11**	P	**P**	**16 02 24.6**	**-0.2**
	baz=200						
R17L	**Mt. Peulik Vol**	**75.11**	**12**	P	**P**	**16 02 26.5**	**0.0**
	baz=201						
OHAK	**Old Harbor**	**75.37**	**13**	P	**P**	**16 02 28.0**	**+0.1**
	baz=204						
Q17K	**Contact Creek**	**75.79**	**12**	P	**P**	**16 02 29.9**	**-0.5**
	baz=201,SNR=8.8						
O14K	**Tigyukauivet M**	**75.82**	**9**	P	**P**	**16 02 30.6**	**+0.2**
	baz=196						
O15K	**Ungalikthiuk R**	**75.96**	**9**	P	**P**	**16 02 31.1**	**-0.1**
	baz=198						
Q16K	**King Salmon**	**76.03**	**11**	P	**P**	**16 02 31.3**	**-0.3**
	baz=201						
KDAK	**Kodiak Island**	**76.03**	**13**	P	**P**	**16 02 31.5**	**-0.2**
	baz=205						
P16K	**Nushagak River**	**76.13**	**10**	P	**P**	**16 02 32.0**	**-0.1**
	baz=199						
MDPB	**Devils Postpil**	**76.28**	**44**	IAmb	IAmb	16 02 36.0	
	comp=Z,9.5nm,0.8s						
CWC	**Cottonwood Cre**	**76.33**	**46**	IAmb	IAmb	16 02 36.2	
	comp=Z,11nm,1.4s						
M11K	**Mekoryuk**	**76.34**	**6**	P	**P**	**16 02 33.4**	**+0.2**
	baz=191						
CLC	**China Lake**	**76.34**	**46**	IAmb	IAmb	16 02 36.2	
	comp=Z,6.9nm,1.0s						
N14K	**Kuskokwak Cree**	**76.41**	**8**	P	**P**	**16 02 33.4**	**-0.3**
	baz=196						
P17K	**Kvichak River**	**76.56**	**11**	P	**P**	**16 02 34.3**	**-0.2**
	baz=201,SNR=6.9						
O16K	**Kokwok River B**	**76.64**	**10**	P	**P**	**16 02 34.6**	**-0.3**
	baz=199						
M13K	**Dall Lake**	**76.67**	**7**	P	**P**	**16 02 35.2**	**+0.1**
	baz=194						
Q20K	**Shuyak Island**	**76.83**	**13**	P	**P**	**16 02 36.4**	**+0.4**
	baz=205						
Q19K	**Cape Douglas,**	**76.85**	**12**	P	**P**	**16 02 36.2**	**0.0**
	baz=204						
N15K	**Kwethluk River**	**76.87**	**9**	P	**P**	**16 02 36.3**	**0.0**
	baz=197						
P18K	**Big Mountain,**	**76.97**	**11**	P	**P**	**16 02 37.0**	**+0.2**
	baz=202,SNR=13						
O17K	**Koliganek Bris**	**76.98**	**10**	P	**P**	**16 02 36.8**	**0.0**
	baz=200,SNR=5.8						
LHV	**Little Huntoon**	**77.00**	**44**	IAmb	IAmb	16 02 40.2	
	comp=Z,14nm,1.0s						
M14K	**Bethel**	**77.17**	**8**	P	**P**	**16 02 38.2**	**+0.4**
	baz=195,SNR=5.0						
FURC	**Furnace Creek,**	**77.19**	**46**	IAmb	IAmb	16 02 40.8	
	comp=Z,13nm,1.1s						
PAHR	**Pah Rah Range**	**77.20**	**42**	IAmb	IAmb	16 02 40.9	
	comp=Z,8.5nm,0.9s						
NVAR	**Mina Array Bea**	**77.22**	**44**	P	**P**	**16 02 40.2**	**+1.2**
	comp=Z,5.8nm,0.7s,baz=227,slow=8.9,SNR=34						
	comp=Z,5.8nm,0.7s						
M15K	**Kasigluk River**	**77.29**	**8**	P	**P**	**16 02 38.6**	**+0.1**
	baz=197						
DANC	**Danby, Needles**	**77.33**	**48**	IAmb	IAmb	16 02 41.9	
	comp=Z,7.9nm,0.9s						
N16K	**Nishlik Lake**	**77.37**	**9**	P	**P**	**16 02 39.3**	**+0.3**
	baz=198						
O18K	**Koktuh Hills**	**77.40**	**11**	P	**P**	**16 02 39.5**	**+0.3**
	baz=202,SNR=12						
P19K	**Oil Pt**	**77.60**	**12**	P	**P**	**16 02 40.2**	**-0.1**
	baz=204						
L14K	**Kuka Creek**	**77.66**	**7**	P	**P**	**16 02 40.8**	**+0.3**
	baz=195						
N17K	**Nushagak Hills**	**77.68**	**10**	P	**P**	**16 02 41.0**	**+0.3**
	baz=200						
TPNV	**Topopah Spring**	**77.86**	**46**	IAmb	IAmb	16 02 44.6	
	comp=Z,9.6nm,0.8s						
M16K	**Timber Creek**	**77.86**	**9**	P	**P**	**16 02 41.9**	**+0.3**
	baz=198,SNR=8.5						
O19K	**Port Alsworth**	**77.89**	**12**	P	**P**	**16 02 41.8**	**0.0**
	baz=203,SNR=8.1						
214A	**Organ Pipe Nat**	**77.96**	**52**	IAmb	IAmb	16 02 45.6	
	comp=Z,8.6nm,1.2s						
K13K	**Kusilvak Mount**	**78.01**	**6**	IAmb	IAmb	16 02 45.0	
	comp=Z,15nm,1.4s						
K13K	**Kusilvak Mount**	**78.01**	**6**	P	**P**	**16 02 42.3**	**-0.1**
	baz=193						
N18K	**Kilae Creek**	**78.05**	**11**	P	**P**	**16 02 43.1**	**+0.4**
	baz=201						
L15K	**Ungalak Mounta**	**78.13**	**8**	P	**P**	**16 02 43.3**	**+0.2**
	baz=196						
BRSE	**Bradley Lake S**	**78.22**	**13**	P	**P**	**16 02 43.9**	**+0.2**
	baz=206						
RED	**Redoubt Volcan**	**78.40**	**12**	IAmb	IAmb	16 02 45.7	
	comp=Z,9.2nm,0.8s						
N19K	**Bonanza Creek**	**78.43**	**11**	P	**P**	**16 02 44.6**	**-0.3**
N19K				IAmb	IAmb	16 02 45.5	
	comp=Z,8.5nm,1.0s						
N19K	**Bonanza Creek**	**78.43**	**11**	P	**P**	**16 02 44.3**	**-0.5**
	baz=203						
L16K	**Owhat River**	**78.44**	**9**	IAmb	IAmb	16 02 46.9	
	comp=Z,12nm,1.4s						
L16K	**Owhat River**	**78.44**	**9**	P	**P**	**16 02 45.0**	**+0.2**
	baz=198						
M17K	**Holitna River**	**78.46**	**10**	P	**P**	**16 02 45.2**	**+0.3**
	baz=200						
K15K	**Wolf Creek Mou**	**78.72**	**8**	P	**P**	**16 02 46.5**	**+0.3**
	baz=196,SNR=7.7						
Y14A	**Wickenburg**	**78.73**	**50**	IAmb	IAmb	16 02 49.5	
	comp=Z,8.4nm,1.3s						
M18K	**Stony River**	**78.81**	**10**	P	**P**	**16 02 47.1**	**+0.3**
	baz=201						
SEW	**Seward**	**78.84**	**14**	P	**P**	**16 02 47.3**	**+0.4**
	baz=207						
PRN	**Pahroc Range**	**78.92**	**46**	IAmb	IAmb	16 02 50.8	
	comp=Z,10nm,1.0s						
J14K	**Nanvaranak Lak**	**78.93**	**6**	P	**P**	**16 02 47.4**	**0.0**
	baz=194						
Q23K	**Middleton Isla**	**79.01**	**16**	P	**P**	**16 02 47.7**	**-0.2**
	baz=210						
L17K	**Donlin**	**79.02**	**9**	P	**P**	**16 02 48.7**	**+0.8**
	baz=199,SNR=8.9						
O22K	**Cooper Landing**	**79.11**	**14**	P	**P**	**16 02 48.6**	**+0.2**
	baz=207						
WVOR	**Wild Horse Val**	**79.15**	**40**	IAmb	IAmb	16 02 51.4	
	comp=Z,7.4nm,0.9s						
SPCR	**Spurr Chakacha**	**79.23**	**12**	P	**P**	**16 02 49.1**	**0.0**
	baz=205						
GAMB	**Gambell**	**79.32**	**3**	P	**P**	**16 02 50.3**	**+0.9**
	baz=186						
M19K	**Big River Lodg**	**79.45**	**11**	P	**P**	**16 02 50.6**	**+0.3**
	baz=203						
K17K	**Iditarod**	**79.57**	**9**	P	**P**	**16 02 51.3**	**+0.5**
	baz=199,SNR=8.4						
STLK	**Strandline Lak**	**79.58**	**12**	IAmb	IAmb	16 02 51.0	
	comp=Z,5.3nm,0.8s						
L19K	**White Mountain**	**79.63**	**11**	P	**P**	**16 02 51.5**	**+0.3**
	baz=202						
RC01	**Rabbit Creek A**	**79.65**	**13**	P	**P**	**16 02 51.8**	**+0.5**
	baz=207						
M20K	**Styx River**	**79.67**	**11**	P	**P**	**16 02 51.5**	**0.0**
	baz=204						
J08A	**Circle Bar Ran**	**79.76**	**39**	IAmb	IAmb	16 02 54.5	
	comp=Z,9.4nm,1.0s						
SUA	**Susitna One**	**79.77**	**13**	P	**P**	**16 02 52.0**	**-0.1**
	baz=206,SNR=7.3						
J16K	**Anvik River**	**79.80**	**8**	P	**P**	**16 02 52.2**	**+0.2**
	baz=196						
SKT	**Skwentna**	**80.08**	**12**	P	**P**	**16 02 53.9**	**+0.4**
	baz=205						
GLI	**Glacier Island**	**80.08**	**15**	P	**P**	**16 02 53.9**	**+0.3**
	baz=210						
EYAK	**Cordova Ski Ar**	**80.13**	**15**	P	**P**	**16 02 53.9**	**+0.1**
	baz=211						
M22K	**Willow**	**80.16**	**13**	P	**P**	**16 02 54.2**	**+0.3**
	baz=207,SNR=5.7						
KNK	**Knik Glacier**	**80.23**	**14**	P	**P**	**16 02 54.6**	**+0.3**
	baz=208						
PMR	**Palmer**	**80.24**	**13**	P	**P**	**16 02 54.4**	**0.0**
	baz=208						
U15A	**North Rim**	**80.39**	**48**	IAmb	IAmb	16 02 58.9	
	comp=Z,7.7nm,1.0s						
J18K	**Innoko River**	**80.52**	**9**	P	**P**	**16 02 56.4**	**+0.6**
	baz=200,SNR=14						
ANM	**Nome**	**80.52**	**5**	IAmb	IAmb	16 02 57.7	
	comp=Z,7.0nm,1.0s						
ANM	**Nome**	**80.52**	**5**	P	**P**	**16 02 56.3**	**+0.4**
	baz=192,SNR=5.1						
G08A	**Pilot Rock**	**80.52**	**38**	IAmb	IAmb	16 02 59.1	
	comp=Z,12nm,1.1s						
DIV	**Divide**	**80.62**	**15**	IAmb	IAmb	16 02 57.8	
	comp=Z,16nm,1.1s						
CUT	**Chulitna**	**80.72**	**12**	P	**P**	**16 02 57.2**	**+0.3**
	baz=206,SNR=6.7						
PPLA	**Purkeypile**	**80.78**	**11**	P	**P**	**16 02 57.1**	**-0.3**
	baz=205						
BMRM	**Bremner River**	**80.78**	**16**	P	**P**	**16 02 57.5**	**+0.1**
	baz=212						
HAWA	**Hanford**	**80.81**	**36**	IAmb	IAmb	16 02 59.8	
	comp=Z,10nm,0.9s						
MESA	**MESA**	**80.84**	**

F14K	Arctic Creek baz=191	81.34	5	P	P	16 03 01.0	+0.9
M24K	Tolsona, Glenn baz=210	81.37	14	P	P	16 03 00.7	+0.3
WAT6	Susitna Watana baz=209	81.42	13	P	P	16 03 00.7	-0.1
MFID	Camas Ranch comp=Z,7.9nm,1.1s	81.42	40	IAmb	IAmb	16 03 03.3	
WAT1	Susitna Watana baz=208	81.46	13	P	P	16 03 00.9	+0.1
H17K	Granite Mounta comp=Z,7.2nm,1.1s	81.47	7	IAmb	IAmb	16 03 02.4	
H17K	Granite Mounta baz=197	81.47	7	P	P	16 03 01.6	+0.9
D08A	Wollman Farm, comp=Z,5.1nm,0.8s	81.53	36	IAmb	IAmb	16 03 02.8	
MCARA	McCarthy VSAT baz=213	81.55	16	P	P	16 03 01.7	+0.4
TRF	Thorofare Moun comp=Z,8.3nm,0.8s	81.65	12	IAmb	IAmb	16 03 02.3	
TRF	Thorofare Moun baz=206,SNR=6.1	81.65	12	P	P	16 03 01.6	-0.3
CHUM	Lake Minchumin baz=204	81.66	11	P	P	16 03 01.3	-0.4
CTG	Chitna Glacier baz=215	81.66	17	P	P	16 03 01.4	-0.6
GCSA	Galena City Sc baz=200,SNR=5.2	81.70	9	P	P	16 03 02.4	+0.5
F15K	North Star Dit baz=192	81.71	5	P	P	16 03 02.4	+0.5
O28M	Mount Upton baz=216	81.83	17	P	P	16 03 02.9	-0.2
HARP	HAARP baz=211	81.86	15	P	P	16 03 03.4	+0.5
H18K	Honhosa River baz=195	81.88	8	P	P	16 03 02.9	0.0
RND	Reindeer comp=Z,10nm,0.7s	81.91	13	IAmb	IAmb	16 03 04.2	
F10A	Beach Ranch, E comp=Z,8.5nm,0.8s	81.92	38	IAmb	IAmb	16 03 05.1	
G17K	Kiwalik Mounta baz=196,SNR=10.0	81.92	7	P	P	16 03 03.5	+0.4
O29M	Mount Kennedy baz=218	81.93	18	P	P	16 03 03.7	+0.3
DHY	Denali Highway baz=209	81.94	13	P	P	16 03 03.7	+0.3
121A	Cookes Peak, D comp=Z,5.2nm,0.8s	82.05	53	IAmb	IAmb	16 03 07.7	
MCK	McKinley comp=Z,12nm,0.9s	82.18	12	IAmb	IAmb	16 03 05.3	
MCK	McKinley baz=208,SNR=5.7	82.18	12	P	P	16 03 04.6	+0.2
P30M	Million Dollar baz=213	82.29	19	P	P	16 03 05.6	+0.4
YUK8	Steele Glacier baz=216	82.37	17	P	P	16 03 06.3	+0.5
HLID	Hailey comp=Z,9.4nm,0.8s	82.39	41	IAmb	IAmb	16 03 08.6	
M26K	Nabesna, AK comp=Z,16nm,1.2s	82.41	15	IAmb	IAmb	16 03 07.6	
M26K	Nabesna, AK baz=213	82.41	15	P	P	16 03 06.1	+0.4
G18K	Tagagawik	82.55	8		P	16 03 06.8	+0.5
G18K	comp=Z,7.7nm,0.8s			IAmb	IAmb	16 03 07.0	
G18K	Tagagawik baz=198,SNR=9.4	82.55	8	P	P	16 03 06.6	+0.3
SPUT	South Promonto comp=Z,7.5nm,0.9s	82.56	44	IAmb	IAmb	16 03 09.3	
YUK3	Moose Creek baz=216,SNR=6.3	82.57	17	P	P	16 03 06.7	-0.1
HVU	Hansel Valley comp=Z,10nm,0.9s	82.57	43	IAmb	IAmb	16 03 09.3	
M27K	Edge Creek, AK baz=214,SNR=6.1	82.66	16	P	P	16 03 07.6	+0.5
S34M	Telegraph Cree baz=225	82.66	23	P	P	16 03 07.5	+0.5
HYT	Haines Junctio baz=219	82.67	19	P	P	16 03 07.1	-0.1
MENT	Mentasta comp=Z,6.2nm,0.9s	82.68	15	IAmb	IAmb	16 03 08.5	
H20K	Anotleneega Mo baz=202	82.71	9	P	P	16 03 07.5	+0.4
YUK4	Talbot Arm baz=218	82.74	18	P	P	16 03 08.3	+0.7
CTU	Camp Tracy comp=Z,7.1nm,1.0s	82.74	44	IAmb	IAmb	16 03 10.5	
L26K	Log Cabin Wild comp=Z,7.0nm,1.0s	82.84	15	IAmb	IAmb	16 03 09.3	
L26K	Log Cabin Wild baz=213,SNR=5.3	82.84	15	P	P	16 03 08.4	+0.6
SRU	San Rafael Swe comp=Z,12nm,0.8s	82.86	46	IAmb	IAmb	16 03 10.8	
I21K	Tanana comp=Z,12nm,0.9s	82.90	11	IAmb	IAmb	16 03 09.2	
I21K	Tanana baz=205	82.90	11	P	P	16 03 08.2	+0.2
NEA2	Nenana baz=208	82.92	12	P	P	16 03 07.9	-0.3
K24K	Donnelly Dome baz=211,SNR=6.1	82.93	14	P	P	16 03 08.5	+0.2
P32M	Atlin baz=222	82.96	21	P	P	16 03 08.6	+0.1
BVCY	Beaver Creek baz=215,SNR=5.3	82.98	16	P	P	16 03 08.4	-0.2
MLY	Manley comp=Z,9.7nm,1.0s	82.99	11	IAmb	IAmb	16 03 09.0	
MLY	Manley baz=206,SNR=7.3	82.99	11	P	P	16 03 08.3	-0.3
G19K	Purcell Mounta comp=Z,12nm,0.8s	82.99	8	IAmb	IAmb	16 03 10.1	
G19K	Purcell Mounta baz=200	82.99	8	P	P	16 03 09.5	+1.0
Q32M	Nakina River baz=224	83.00	22	P	P	16 03 08.8	-0.2
O30N	Mendenhall baz=220	83.07	19	P	P	16 03 09.3	+0.2
RIDG	Independent Ri baz=212,SNR=5.2	83.09	14	P	P	16 03 09.6	+0.5
F18K	Selawik baz=197,SNR=5.1	83.10	7	P	P	16 03 09.6	+0.6
H21K	Melozitna Rive comp=Z,9.3nm,1.0s	83.19	10	IAmb	IAmb	16 03 12.2	
H21K	Melozitna Rive baz=204,SNR=9.4	83.19	10	P	P	16 03 10.3	+0.7
HDA	Harding Lake baz=210,SNR=14	83.19	13	P	P	16 03 09.7	+0.1
Y22A	Socorro comp=Z,4.9nm,0.8s	83.25	52	IAmb	IAmb	16 03 13.3	
L27K	Beaver Creek, baz=214	83.26	16	P	P	16 03 10.6	+0.6
E17K	Hotham Inlet baz=195,SNR=12	83.32	6	P	P	16 03 10.8	+0.7
I23K	Minto, Yukon-K baz=207	83.36	12	P	P	16 03 10.9	+0.5
WHY	Whitehorse baz=221	83.37	20	P	P	16 03 11.1	+0.4
COLA	College baz=209	83.41	12	P	P	16 03 10.6	0.0
DLBC	Dease Lake baz=226	83.45	23	P	P	16 03 11.5	+0.4
SCRK	Sand Creek	83.49	14		P	16 03 11.8	+0.6
SCRK	comp=Z,7.9nm,0.8s			IAmb	IAmb	16 03 12.4	
SCRK	Sand Creek baz=212,SNR=8.1	83.49	14	P	P	16 03 11.6	+0.4
ILAR	Eielson Array comp=Z,9.5nm,0.9s,baz=226,slow=5.9,SNR=63 comp=Z,9.5nm,0.9s	83.53	13	P	P	16 03 10.8	-0.4
ILAR	Eielson Array	83.53	13		P	16 03 11.0	-0.2
F19K	Shaleruckik Mo	83.56	8	P	P	16 03 11.8	+0.4
F19K	comp=Z,9.1nm,0.8s			IAmb	IAmb	16 03 12.5	
F19K	Shaleruckik Mo baz=199	83.56	8	P	P	16 03 12.0	+0.7
VHRN	Van Horn comp=Z,5.4nm,0.8s	83.56	56	IAmb	IAmb	16 03 15.2	
PV18	Skein Mesa, Pa comp=Z,9.3nm,0.9s	83.61	48	IAmb	IAmb	16 03 14.6	
PV23	Carpenter Ridg comp=Z,12nm,0.9s	83.63	47	IAmb	IAmb	16 03 14.8	
PV16	Nyswonger Mesa comp=Z,14nm,1.5s	83.64	47	IAmb	IAmb	16 03 14.8	
PV13	Radium Mtn., P comp=Z,8.9nm,1.0s	83.64	48	IAmb	IAmb	16 03 17.0	
H22K	Ishtalitna Cre comp=Z,13nm,0.9s	83.66	10	IAmb	IAmb	16 03 13.2	
H22K	Ishtalitna Cre	83.66	10	P	P	16 03 12.4	+0.5
	baz=205						
PV11	David Mesa, Pa comp=Z,9.9nm,1.2s	83.66	48	IAmb	IAmb	16 03 16.6	
M29M	Somme Creek comp=Z,9.7nm,1.1s	83.67	17	IAmb	IAmb	16 03 13.5	
M29M	Somme Creek baz=218	83.67	17	P	P	16 03 12.5	+0.3
PV21	Cone Mtn., Par comp=Z,6.3nm,1.0s	83.70	47	IAmb	IAmb	16 03 14.8	
N31M	Braeburn, Yuko baz=220	83.72	19	P	P	16 03 12.5	+0.2
J25K	Salcha River, baz=211	83.72	13	P	P	16 03 12.4	+0.1
P33M	Teslin, Yukon baz=223	83.72	21	P	P	16 03 12.6	+0.2
R33M	Jennings River comp=Z,11nm,1.1s	83.78	22	IAmb	IAmb	16 03 14.9	
R33M	Jennings River baz=225	83.78	22	P	P	16 03 12.9	+0.1
E18K	Tukpahlearik C comp=Z,7.4nm,0.8s	83.78	6	IAmb	IAmb	16 03 14.0	
E18K	Tukpahlearik C baz=196,SNR=6.8	83.78	6	P	P	16 03 13.5	+1.0
D17K	Noatak River baz=194,SNR=8.2	83.80	5	P	P	16 03 13.4	+0.9
G21K	Allakaket comp=Z,9.5nm,0.8s	83.87	9	IAmb	IAmb	16 03 14.4	
G21K	Allakaket baz=203,SNR=11	83.87	9	P	P	16 03 14.0	+1.0
H23K	Yukon River baz=207	83.93	11	P	P	16 03 13.5	+0.3
J26L	Joseph Creek baz=213	84.03	14	P	P	16 03 14.6	+0.7
F20K	Avaraart Lake comp=Z,7.8nm,1.0s	84.03	8	IAmb	IAmb	16 03 15.2	
F20K	Avaraart Lake baz=201	84.03	8	P	P	16 03 15.0	+1.2
TX31	Lajitas Ar. Si comp=Z,6.2nm,0.9s	84.08	57	IAmb	IAmb	16 03 17.7	
TXAR	Lajitas Array comp=Z,4.4nm,0.8s,baz=222,slow=6.5,SNR=46 comp=Z,4.4nm,0.8s	84.08	57	P	P	16 03 17.3	+2.4
AHID	Auburn Hatcher comp=Z,12nm,1.4s	84.13	43	IAmb	IAmb	16 03 17.3	
RDOG	Red Dog Mine baz=194	84.16	5	P	P	16 03 15.1	+0.8
C16K	Lisburne Hills baz=192	84.17	5	P	P	16 03 15.6	+1.2
E19K	Redstone River comp=Z,7.1nm,0.8s	84.22	8	IAmb	IAmb	16 03 16.1	
E19K	Redstone River baz=200	84.22	8	P	P	16 03 15.8	+1.2
M30M	Minto, Yukon comp=Z,10.0nm,0.8s	84.25	18	IAmb	IAmb	16 03 16.2	
M30M	Minto, Yukon baz=219,SNR=6.9	84.25	18	P	P	16 03 15.3	+0.3
H24K	Noodor Dome baz=209	84.26	12	P	P	16 03 15.4	+0.4
N32M	Quiet Lake baz=223	84.32	20	P	P	16 03 15.4	0.0
DLMT	Dillon comp=Z,13nm,1.1s	84.40	40	IAmb	IAmb	16 03 18.4	
PRP	Porcupine Dome comp=Z,8.7nm,1.1s	84.46	13	IAmb	IAmb	16 03 17.7	
PRP	Porcupine Dome baz=211,SNR=7.5	84.46	13	P	P	16 03 16.1	0.0
F21K	Alatna River comp=Z,4.8nm,0.7s	84.53	9	IAmb	IAmb	16 03 17.4	
F21K	Alatna River baz=203	84.53	9	P	P	16 03 16.8	+0.6
C17K	DeLong Mountai baz=194	84.55	5	P	P	16 03 17.1	+0.8
G23K	Bananza Creek comp=Z,5.4nm,0.9s	84.63	11	IAmb	IAmb	16 03 18.3	
G23K	Bananza Creek baz=206	84.63	11	P	P	16 03 17.2	+0.4
M31M	Drury Creek, Y baz=221	84.69	19	P	P	16 03 17.4	+0.3
DAWY	Dawson comp=Z,6.5nm,0.8s	84.71	16	IAmb	IAmb	16 03 18.6	
DAWY	Dawson baz=217,SNR=8.1	84.71	16	P	P	16 03 17.6	+0.4
I26K	Coal Creek Min comp=Z,9.7nm,1.1s	84.81	14	IAmb	IAmb	16 03 19.1	
I26K	Coal Creek Min baz=213	84.81	14	P	P	16 03 18.4	+0.8
MOOW	Moose Ponds	84.81	42		P	16 03 18.3	-0.2
C18K	Utukok River baz=196	84.90	6	P	P	16 03 19.0	+0.9
FARO	Faro, Yukon baz=222	85.04	19	P	P	16 03 18.5	-0.4
K29M	Barlow Dome comp=Z,7.4nm,1.1s	85.04	17	IAmb	IAmb	16 03 21.1	
K29M	Barlow Dome baz=218	85.04	17	P	P	16 03 19.1	+0.1
COLD	Coldfoot baz=206,SNR=6.2	85.07	10	P	P	16 03 19.8	+0.9
WTLY	Watson Lake, Y baz=226	85.07	22	P	P	16 03 19.4	+0.4
D19K	Kuna River baz=199	85.09	7	P	P	16 03 19.3	+0.3
E20K	Nigu River baz=200	85.11	8	P	P	16 03 20.0	+0.9
BW06	Boulder Array comp=Z,10nm,1.5s	85.14	43	IAmb	IAmb	16 03 21.6	
PDAR	Pinedale Array comp=Z,1.4nm,0.7s,baz=219,slow=3.6,SNR=13 comp=Z,1.4nm,0.7s	85.14	43	P	P	16 03 20.8	+0.7
PDAR	Pinedale Array	85.14	43		P	16 03 20.5	+0.4
HILR	Hailar Array B comp=Z,3.8nm,0.7s,baz=126,slow=7.7,SNR=7.3 comp=Z,3.8nm,0.7s	85.20	324	P	P	16 03 20.6	+0.6
H17A	Grant Village comp=Z,9.2nm,1.1s	85.22	41	IAmb	IAmb	16 03 23.7	
MAYO	Mayo, Yukon baz=220,SNR=8.5	85.30	17	P	P	16 03 20.7	+0.6
J29N	Klondike Camp comp=Z,7.4nm,0.8s	85.33	16	IAmb	IAmb	16 03 22.1	
J29N	Klondike Camp baz=218	85.33	16	P	P	16 03 21.0	+0.7
I27K	Kandik River baz=214	85.41	14	P	P	16 03 20.8	+0.2
D20K	Etivluk River baz=200	85.48	8	P	P	16 03 21.4	+0.5
C19K	Lookout Ridge baz=197	85.51	6	P	P	16 03 21.5	+0.5
TOAD	Toad River Com baz=230	85.58	24	P	P	16 03 22.0	+0.4
E22K	Anaktuvuk Pass baz=205	85.62	9	P	P	16 03 22.2	+0.6
I28M	Miner Creek baz=216	85.69	15	P	P	16 03 22.2	+0.2
E23K	Chandalar baz=207	85.91	10	P	P	16 03 23.7	+0.6
J30M	Hart River baz=219	85.94	17	P	P	16 03 23.8	+0.5
H27K	Steamboat Moun baz=214	85.95	14	P	P	16 03 23.8	+0.5
G26K	Porcupine Rive baz=212	86.06	13	P	P	16 03 24.5	+0.8
E24K	Your Creek baz=208	86.12	11	P	P	16 03 24.2	+0.2
C21K	Knifeblade Rid baz=202	86.14	8	P	P	16 03 24.5	+0.5
D22K	Ayikyak River comp=Z,5.3nm,0.7s	86.17	9	IAmb	IAmb	16 03 25.2	
D22K	Ayikyak River baz=204	86.17	9	P	P	16 03 24.7	+0.5
F25K	Christian Rive baz=211	86.23	12	P	P	16 03 25.0	+0.4
I30M	Mount Dempster comp=Z,8.5nm,1.5s	86.42	16	IAmb	IAmb	16 03 28.1	
I30M	Mount Dempster baz=219	86.42	16	P	P	16 03 26.1	+0.5
D23K	Nanushuk River comp=Z,6.5nm,0.9s	86.56	9	IAmb	IAmb	16 03 27.6	
D23K	Nanushuk River baz=206	86.56	9	P	P	16 03 27.0	+0.9
DRIO	Del Rio comp=Z,8.7nm,0.9s	86.60	58	IAmb	IAmb	16 03 29.6	
F26K	Sheenjek River baz=212	86.61	12	P	P	16 03 26.8	+0.5
E25K	Arctic Village baz=211	86.70	11	P	P	16 03 27.5	+0.8
KOTAN	Kotaneelee Air baz=231	86.86	24	P	P	16 03 27.7	0.0
G29M	Pine Creek baz=218	87.33	15	P	P	16 03 30.3	+0.5
F28M	Old Crow	87.46	14	P	P	16 03 30.3	-0.1
	baz=216						
C24K	Franklin Bluff baz=208	87.55	10	P	P	16 03 30.4	-0.2
D25K	Kavik River baz=210	87.59	11	P	P	16 03 31.0	0.0
G30M	tAoh Zraii Nji comp=Z,5.7nm,0.9s	87.83	15	IAmb	IAmb	16 03 32.8	
G30M	tAoh Zraii Nji baz=220	87.83	15	P	P	16 03 32.2	+0.1
A21K	Barrow baz=200	87.94	7	P	P	16 03 33.0	+0.5
C27K	Jago River baz=212	88.34	11	P	P	16 03 34.8	+0.4
E28M	Babbage River baz=216	88.34	13	P	P	16 03 34.9	+0.4
C26K	Camden Bay baz=211	88.37	11	P	P	16 03 35.2	+0.7
F30M	Barrier River baz=220	88.42	15	P	P	16 03 35.8	+1.0
E29M	Blow River baz=218	88.53	14	P	P	16 03 35.9	+0.5
D27M	Malcolm River comp=Z,8.2nm,1.5s	88.56	12	IAmb	IAmb	16 03 39.4	
D27M	Malcolm River baz=215	88.56	12	P	P	16 03 36.0	+0.5
F31M	Tsiigehtchic comp=Z,6.0nm,0.9s	88.81	15	IAmb	IAmb	16 03 36.8	
F31M	Tsiigehtchic baz=222	88.81	15	P	P	16 03 36.9	+0.3
CMAR	Chiang Mai Arr comp=Z,0.2nm,0.4s,baz=111,slow=3.0,SNR=4.2 comp=Z,0.2nm,0.4s	88.94	289	P	P	16 03 40.3	+1.9
WRGLY	Wrigley baz=231	89.04	22	P	P	16 03 38.1	+0.3
YKA	Yellowknife Ar comp=Z,0.9nm,0.8s,baz=257,slow=4.8,SNR=20 comp=Z,0.9nm,0.8s	91.95	24	P	P	16 03 51.4	+0.1
YKA	Yellowknife Ar	91.95	24	P	P	16 03 51.9	+0.6
SONM	Songino Array comp=Z,0.5nm,0.6s,baz=134,slow=6.0,SNR=3.8 comp=Z,0.5nm,0.6s	92.42	319	P	P	16 03 54.3	+0.3
SONM	Songino Array	92.42	319	P	P	16 03 53.1	-0.9
C36M	Paulatuk comp=Z,7.6nm,1.1s	92.72	17	IAmb	IAmb	16 03 55.3	
C36M	Paulatuk baz=231	92.72	17	P	P	16 03 54.7	0.0
A36M	Sachs Harbour baz=230	94.11	14	P	P	16 04 01.2	+0.2
BVAR	Borovoye Array comp=Z,0.5nm,0.5s,baz=86,slow=2.0,SNR=2.7	115.64	322	PKP	PKiKP	16 09 22.3	-0.4
CXM	Morne La Croix	118.80	82		PKPdf	16 09 27.1	-2.9
ARCES	ARCESS Array B comp=Z,3.9nm,0.9s,baz=316,slow=3.3,SNR=5.2	124.27	350	PKP	PKPdf	16 09 37.9	-0.9
ARCES	ARCESS Array B	124.27	350		PKiKP	16 09 38.9	-0.2
ONER	Baraj Valea Uz	143.48	332	⇑P	PKPdf	16 10 14.6	-0.7
CFR	Carcaliu	143.50	329	⇑P	PKPbc	16 10 13.2	-0.2
UPC	Upice	143.57	345	*e*PKP	PKPdf	16 10 13.7	-1.5
TPGR	Topolog	143.59	328	⇑P	PKPdf	16 10 14.7	-0.8
STEB	Steborice	143.64	343	*e*PKP	PKPdf	16 10 14.1	-1.3
PLOR	Plostina	143.73	331	⇑P	PKPdf	16 10 14.6	-1.1
BR131	Keskin Array S	143.77	318		PKPdf	16 10 15.5	-0.6
BRTR	Keskin Array B comp=Z,9.1nm,0.8s,baz=83,slow=2.2,SNR=46	143.77	318	PKP	PKPdf	16 10 15.2	-0.9
BRTR	Keskin Array B	143.77	318		PKPdf	16 10 15.4	-0.7
MORC	Moravsky Berou	143.84	343	⇑P	PKPbc	16 10 14.4	0.0
MORC	Moravsky Berou	143.84	343	*e*PKP	PKPdf	16 10 14.5	-1.3
TIRR	Tirgusor	143.87	328	⇑P	PKPdf	16 10 15.6	-0.3
KIRS	Kirsehir-Merke	143.90	316	⇓P	PKPdf	16 10 15.5	-0.7
COVR	Voineasa-Covas	143.94	331	⇓P	PKPdf	16 10 15.2	-0.9
OZUR		143.94	332	⇑P	PKPdf	16 10 15.8	-0.2
MAUC	Maruska	144.13	343	*e*PKP	PKPdf	16 10 16.3	0.0
DOPR	Dopca	144.22	332	⇑P	PKPdf	16 10 17.0	+0.5
ISR	Istrita	144.32	330	⇑P	PKPdf	16 10 16.0	-0.8
MLR	Muntele Rosu	144.32	331	⇓P	PKPdf	16 10 17.2	+0.3
PRU	Pruhonice	144.40	347	*e*PKP	PKPdf	16 10 16.6	-0.1
VRAC	Vranov	144.53	344	⇑P	PKPdf	16 10 17.0	+0.1
VRAC	Vranov	144.53	344	*e*PKP	PKPdf	16 10 16.7	-0.3
MARR	Marisel-Cluj	144.62	335	⇑P	PKPab	16 10 17.4	0.0
JAVC	Velka Javorina	144.64	343	*e*PKP	PKiKP	16 10 18.6	-2.5
DRGR		144.69	336	⇑P	PKPab	16 10 17.4	-0.2
PSZ	Piszkesteto	144.77	340	⇓P	PKPab	16 10 17.5	-0.3
VOIR		144.78	332	⇑P	PKiKP	16 10 19.0	-2.5
KRUC	Moravsky	144.80	344	*e*PKP	PKPab	16 10 17.6	-0.2
ARR	Arges	145.02	332	⇑P	PKPab	16 10 19.6	+0.8
DEV	Deva	145.35	335	⇓P	PKPbc	16 10 18.3	-1.0
KHC	Kasperske Hory	145.41	347	*e*PKP	PKPbc	16 10 19.0	-0.4
CKRC	Cesky Krumlov	145.54	346	*e*PKP	PKPab	16 10 20.3	-0.4
MMAI	Mount Meron Ar comp=Z,2.1nm,0.6s,baz=54,slow=8.4,SNR=4.4	145.58	306	PKPbc	PKPab	16 10 21.1	-0.3
GERES	GERESS Array B comp=Z,1.7nm,0.6s,baz=22,slow=4.3,SNR=12	145.66	347	PKPbc	PKPab	16 10 20.6	-0.6
GZR	Gura Zlata	145.80	334	⇑P	PKPbc	16 10 20.5	-0.2
CONA	Conrad Observa comp=Z,4.3nm,0.7s	145.99	344	*i* PKP	PKPab	16 10 21.8	-0.7
RONA	Rosalia, Austr comp=Z,7.5nm,1.0s	146.08	343	*i* PKP	PKPab	16 10 21.9	-0.9
BZS	Buzias	146.09	336	⇑P	PKPbc	16 10 20.6	-0.8
HERR	Herculane	146.36	334	⇓P	PKPab	16 10 22.6	-1.4
MOA	Molln comp=Z,2.6nm,0.6s,SNR=5.5	146.46	346	*e*PKP	PKPab	16 10 22.7	-1.6
PLVB	Pleven	146.53	330	⇓P	PKPbc	16 10 22.7	-0.1
MORH	Mrgy, Hungar	146.68	339	⇑P	PKPbc	16 10 22.5	-0.5
ARSA	Arzberg comp=Z,1.2nm,0.5s	146.70	344	*e*PKP	PKPab	16 10 23.8	-1.5
BIOA	Bad Ischl, Aus comp=Z,6.0nm,1.3s	146.76	346	*e*PKP	PKPbc	16 10 23.2	0.0
LESA	Schwarzleotal comp=Z,0.9nm,0.5s	147.22	347	*e*PKP	PKPbc	16 10 23.7	-0.9
RETA	Reutte comp=Z,5.0nm,0.9s	147.54	350	*e*PKP	PKPbc	16 10 25.5	+0.1
WTTA	Wattenberg comp=Z,3.4nm,0.6s	147.59	348	*e*PKP	PKPbc	16 10 25.8	+0.1
OBKA	Obir comp=Z,2.4nm,1.1s	147.64	344	*e*PKP	PKPbc	16 10 25.1	-0.6
SQTA	Sankt Quirin comp=Z,8.0nm,1.1s	147.71	349	*e*PKP	PKiKP	16 10 26.3	-1.3
MYKA	Terra Mystica comp=Z,2.7nm,0.6s	147.76	346	*e*PKP	PKPbc	16 10 25.1	-0.8
DAVA	Damuels comp=Z,15nm,1.2s	147.88	351	*e*PKP	PKiKP	16 10 26.8	-1.2
ABTA	Abfaltersbach comp=Z,4.1nm,0.7s,SNR=6.2	147.90	347	*e*PKP	PKPbc	16 10 26.0	-0.4
PRED	Cave del Predi	147.95	345		PKPab	16 10 30.1	-0.2
FETA	Feichten comp=Z,1.7nm,0.7s	147.99	349	*e*PKP	PKiKP	16 10 27.0	-1.2
STAL	STALIGIAL	148.32	346		PKPbc	16 10 27.4	0.0
TUE	Stuetta	148.76	351		PKiKP	16 10 28.7	-1.2

IDC ***16*** *16:16:28.0±1.0,20°.23S×66°.49E,h0km,mb4.0/13, mbtmp4.0/13,MS3.5/5,Error ellipse: s-maj=33.1km s-min=19.5km az=26.0*

NEIC ***16*** *16:16:30.1±1.2,20°.2S±0°.2×66°.4E±0°.1,h10km±1km, mb4.6/19,Error ellipse: s-maj=25.7km s-min=15.8km az=184.0*

ISC 16 16:16:30.3±0.8,20°.2S±0°.2×66°.45E±0°.09,h16km,n54, σ0°68/43,mb4.4/20,MS3.5/5,Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCAM	Rodrigues Isla	2.93	279	Pn	Pn	16 17 15.1	-1.2
RER	Riviere de l'E	10.06	263	Pn	Pn	16 18 53.9	-0.4
H08S1	Diego Garcia H baz=204,slow=75	13.80	26	T	T	16 33 41.8	
H08S2	Diego Garcia H baz=204,slow=75	13.81	26	T	T	16 33 43.3	
H08S3	Diego Garcia H baz=204,slow=75	13.82	26	T	T	16 33 42.7	
H04N2	CROZET ISLANDS baz=31,slow=75	28.53	202	T	T	16 52 28.7	
H04N1	CROZET ISLANDS baz=31,slow=75	28.53	202	T	T	16 52 29.8	
H04N3	CROZET ISLANDS baz=31,slow=75	28.55	202	T	T	16 52 29.1	
PALK	Pallekele	30.71	29	LR	LR	16 31 33.5	
PALK	Pallekele comp=Z,102nm,19.6s,baz=324,slow=30	30.71	29	P	P	16 22 44.5	-0.3
PALK	comp=Z,17nm,1.4s			IAmb	IAmb	16 23 25.8	
LSZ	Lusaka comp=Z,77nm,18.2s,baz=118,slow=33	36.71	271	LR	LR	16 36 38.9	
LBTB	Lobatse comp=Z,66nm,18.1s,baz=40,slow=32	37.91	255	LR	LR	16 36 43.4	
SUR	Sutherland comp=Z,64nm,18.0s,baz=58,slow=35	42.38	244	LR	LR	16 41 02.7	

MORW	**Morawa**	**45.65**	**111**	P	**P**	**16 24 50.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**49.93**	**42**	P	**P**	**16 25 24.6**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=235,slow=8.0,SNR=13						
CMAR				LR	LR	16 44 39.9	
	comp=Z,30nm,18.9s,baz=215,slow=34						
	comp=Z,1.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**49.93**	**42**	P	**P**	**16 25 21.9**	**-1.8**
MMAI	**Mount Meron Ar**	**60.69**	**330**	P	**P**	**16 26 42.4**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=153,slow=9.7,SNR=2.0						
	comp=Z,0.3nm,0.3s						
ARSB	**Arslanbob**	**61.54**	**6**	P	**P**	**16 26 46.8**	**+0.1**
ARSB				IAmb	IAmb	16 26 53.5	
	comp=Z,6.2nm,1.3s						
ASAR	**Alice Springs**	**62.14**	**107**	P	**P**	**16 26 51.4**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=269,slow=5.9,SNR=18						
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**62.14**	**107**	P	**P**	**16 26 51.1**	**-0.1**
AS31	**Alice Springs**	**62.14**	**107**	P	**P**	**16 26 51.4**	**+0.1**
GEVA	**Gevas**	**62.24**	**339**	P	**P**	**16 26 51.6**	**+0.1**
GEVA				IAmb	IAmb	16 27 31.7	
	comp=Z,4.7nm,1.4s						
AAK	**Ala-Archa**	**62.99**	**7**	P	**P**	**16 26 57.0**	**+0.5**
KKAR	**Karatay Array**	**63.12**	**3**	P	**P**	**16 26 57.1**	**-0.1**
WRA	**Warramunga Arr**	**63.32**	**103**	P	**P**	**16 26 58.7**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=251,slow=6.9,SNR=8.9						
	comp=Z,2.1nm,0.9s						
WRAB	**Tennant Creek**	**63.33**	**103**	P	**P**	**16 26 59.1**	**0.0**
WRAB				IAmb	IAmb	16 27 00.9	
	comp=Z,8.1nm,1.2s						
BR131	**Keskin Array S**	**67.05**	**333**	P	**P**	**16 27 23.5**	**+0.5**
BR131				IAmb	IAmb	16 27 34.0	
	comp=Z,8.1nm,1.4s						
BRTR	**Keskin Array B**	**67.05**	**333**	P	**P**	**16 27 23.9**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=157,slow=7.3,SNR=12						
	comp=Z,1.7nm,0.7s						
BRTR	**Keskin Array B**	**67.05**	**333**	P	**P**	**16 27 23.2**	**+0.3**
GTA2	**Gaotai**	**67.07**	**27**	*eP*	**P**	**16 27 23.6**	**+0.6**
GTA2				pP	pP	16 27 26.4	-0.9
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**67.21**	**342**	P	**P**	**16 27 23.0**	**-0.7**
	comp=Z,1.9nm,0.9s,baz=119,slow=4.6,SNR=3.7						
	comp=Z,1.9nm,0.9s						
MKAR	**Makanchi Array**	**68.22**	**12**	P	**P**	**16 27 29.9**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=190,slow=6.2,SNR=9.1						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**68.22**	**12**	P	**P**	**16 27 29.3**	**-0.8**
AB31	**Akbulak array**	**69.41**	**355**	P	**P**	**16 27 37.1**	**-0.2**
AB31				IAmb	IAmb	16 27 38.3	
	comp=Z,2.5nm,0.8s						
ABKAR	**Akbulak array**	**69.41**	**355**	P	**P**	**16 27 37.1**	**-0.2**
KURBB	**Kurchatov Arra**	**71.34**	**8**	P	**P**	**16 27 49.0**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=203,slow=6.7,SNR=7.0						
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**71.44**	**8**	P	**P**	**16 27 49.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**71.79**	**292**	P	**P**	**16 27 52.4**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=179,slow=3.7,SNR=4.2						
	comp=Z,1.0nm,0.9s						
DBIC	**Dimbokro**	**74.97**	**283**	P	**P**	**16 28 12.5**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=128,slow=8.9,SNR=3.6						
	comp=Z,2.3nm,0.8s						
DBIC	**Dimbokro**	**74.97**	**283**	P	**P**	**16 28 11.9**	**+0.5**
DBIC				IAmb	IAmb	16 28 21.2	
	comp=Z,9.9nm,1.4s						
MLR	**Muntele Rosu**	**75.05**	**332**	P	**P**	**16 28 11.4**	**+0.1**
MLR				IAmb	IAmb	16 28 13.1	
	comp=Z,4.3nm,1.0s						
ZALV	**Zalesovo Beam**	**75.55**	**11**	P	**P**	**16 28 13.6**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=204,slow=4.5,SNR=8.3						
	comp=Z,2.0nm,0.7s						
CUC	**Castrocucco**	**76.26**	**322**	P	**P**	**16 28 17.8**	**-0.5**
CUC				IAmb	IAmb	16 28 37.2	
	comp=Z,8.2nm,1.2s						
SONM	**Songino Array**	**76.64**	**26**	P	**P**	**16 28 20.9**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=226,slow=5.7,SNR=6.6						
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**76.64**	**26**	P	**P**	**16 28 19.7**	**-0.6**
AKASG	**Malin Array Be**	**77.86**	**337**	P	**P**	**16 28 27.0**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=137,slow=4.6,SNR=10.0						
	comp=Z,1.6nm,0.6s						
AKASG	**Malin Array Be**	**77.86**	**337**	IAmb	IAmb	16 29 07.4	
	comp=Z,6.0nm,1.4s						
AKBB	**Malin Array Si**	**77.86**	**337**	P	**P**	**16 28 27.0**	**0.0**
KIEV	**Kiev**	**77.86**	**337**	P	**P**	**16 28 27.1**	**+0.1**
WLF	**Walferdange**	**87.64**	**326**	P	**P**	**16 29 18.8**	**+1.0**
ILAR	**Eielson Array**	**130.30**	**18**	PKP	**PKPdf**	**16 35 39.1**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=286,slow=3.7,SNR=3.1						
YKA	**Yellowknife Ar**	**137.76**	**1**	PKP	**PKPdf**	**16 35 53.1**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=342,slow=3.0,SNR=4.6						
ULM	**Lac du Bonnet**	**146.92**	**339**	PKPbc	**PKPbc**	**16 36 11.0**	**-0.9**
	comp=Z,5.1nm,0.7s,baz=24,slow=3.8,SNR=11						
TXAR	**Lajitas Array**	**167.25**	**317**	PKPab	**PKPab**	**16 37 42.5**	**+1.7**
	comp=Z,1.1nm,0.9s,baz=43,slow=3.5,SNR=8.8						

DJA 16 16:29:18.9±0.5,**8°S**±8°×**11°6E**±°,**h11**km±5km,**M3.6**/16,
mb3.8/**1**,**MLv3.6**/16,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.56**	**268**	P	Pb	16 29 30.8	+0.1
TWSI	**Taliwang, Sumb**	**0.80**	**119**	P	Pg	16 29 34.5	+0.1
DNP	**Denpasar**	**1.00**	**251**	P	Pg	16 29 38.1	-0.1
IGBI	**Denpasar**	**1.11**	**245**	P	Pb	16 29 39.8	-0.4
RTBI	**Rangdo, Negare**	**1.22**	**265**	P	Pn	16 29 41.0	-0.9
PLAI	**Plampang**	**1.66**	**107**	P	Pn	16 29 48.7	+0.7
ABJI	**Asem Bagus**	**1.99**	**286**	P	Pn	16 29 52.9	+0.3
JAGI	**Jajag, Banyuwa**	**2.00**	**266**	P	Pn	16 29 51.3	-1.4
DBNI	**Kabupaten Domp**	**2.12**	**94**	P	Pn	16 29 54.3	-0.1
GMJI	**Gumukmas**	**2.70**	**271**	P	Pn	16 30 01.5	-0.8
WBSI	**Waikabubak, Su**	**3.43**	**112**	P	Pn	16 30 13.1	+0.7
SNJI	**Sawahan-Nganju**	**4.40**	**277**	P	Pn	16 30 26.8	+0.9
BSSI	**Bau Bau, Buton**	**4.81**	**63**	P	Pn	16 30 30.1	-1.3
PCJI	**Pacitan**	**4.94**	**271**	P	Pn	16 30 32.5	-0.7
EDFI	**Ende, Flores**	**5.47**	**95**	P	Pn	16 30 40.9	+0.3

*IDC **16** 16:36:09.5±0.8,31°.77S×57°.87E,h0km,mb4.2/13,*
mbtmp4.1/14,ML3.3/1,Error ellipse: s-maj=29.9km
s-min=19.2km az=48.0
*NEIC **16** 16:36:11.4±0.8,31°.7S±0°.1×57°.8E±0°.1,h10km±1km,*
mb4.6/15,Error ellipse: s-maj=17.8km s-min=16.4km
az=180.0

ISC 16 16:36:11.9±0.6,**31°68S**±0°.10×**57°.8E**±0°.1,**h17**km,**n50,**
σ1§**14**/40,**mb4.5**/19,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**10.64**	**350**	Pn	**Pn**	**16 38 40.4**	**-3.3**
FOMA	**Nahampoana Res**	**11.63**	**302**	Pn	**Pn**	**16 38 54.4**	**-2.8**
VOI	**Vohitsoka**	**13.82**	**312**	Pn	**Pn**	**16 39 24.8**	**-2.4**
H04N2	**CROZET ISLANDS**	**15.19**	**196**	T	T	16 55 10.9	
	baz=21,slow=75,SNR=20						
H04N1	**CROZET ISLANDS**	**15.19**	**196**	T	T	16 55 05.7	
	baz=21,slow=75,SNR=26						
H04N3	**CROZET ISLANDS**	**15.21**	**196**	T	T	16 55 07.3	
	baz=21,slow=75,SNR=24						
ABPO	**Ambohimpanom**	**15.80**	**320**	Pn	**Pn**	**16 39 54.3**	**+0.4**
OPO	**Ambohidratompo**	**16.19**	**321**	Pn	**Pn**	**16 39 58.3**	**-0.6**
	baz=153,slow=22,SNR=1.4						
OPO				Sn	Sn	16 42 47.2	-11
	0.1nm,0.3s,baz=271,slow=23,SNR=4.8						
	0.7nm,0.6s						
PAF	**Port-aux-Franc**	**19.97**	**156**	P	**Pn**	**16 40 43.4**	**-1.5**
H08S1	**Diego Carcia H**	**27.55**	**33**	T	T	17 10 24.0	
	baz=207,slow=76						
H08S2	**Diego Garcia H**	**27.56**	**33**	T	T	17 10 29.6	
	baz=207,slow=76						
H08S3	**Diego Garcia H**	**27.57**	**33**	T	T	17 10 27.6	
	baz=207,slow=76						
SUR	**Sutherland**	**31.27**	**259**	P	**P**	**16 42 31.1**	**0.0**
SUR				IAmb	IAmb	16 42 35.6	
	comp=Z,34nm,1.4s						
HMDM	**Hanimaadhoo**	**40.96**	**24**	P	**P**	**16 43 53.7**	**-0.2**
H01W2	**Cape Leeuwin H**	**46.68**	**110**	T	T	17 34 32.7	
	baz=257,slow=75,SNR=27						
H01W3	**Cape Leeuwin H**	**46.68**	**110**	T	T	17 34 35.5	
	baz=257,slow=75,SNR=21						
H01W1	**Cape Leeuwin H**	**46.70**	**110**	T	T	17 34 34.0	
	baz=257,slow=75,SNR=19						
UGM	**Wanagama**	**54.34**	**76**	P	**P**	**16 45 36.9**	**-1.0**
QSPA	**South Pole Qui**	**58.49**	**180**	P	**P**	**16 46 07.2**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=257,slow=3.0,SNR=5.4						
	comp=Z,3.8nm,0.6s						
QSPA	**South Pole Qui**	**58.49**	**180**	P	**P**	**16 46 07.0**	**+0.1**
QSPA				IAmb	IAmb	16 46 07.4	
	comp=Z,12nm,1.3s						
CMAR	**Chiang Mai Arr**	**63.58**	**44**	P	**P**	**16 46 42.5**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=228,slow=7.3,SNR=14						
	comp=Z,2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**63.58**	**44**	P	**P**	**16 46 41.7**	**-0.2**
ASAR	**Alice Springs**	**66.65**	**104**	P	**P**	**16 47 01.9**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=237,slow=6.0,SNR=40						
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**66.65**	**104**	P	**P**	**16 47 01.6**	**-0.5**
AS31	**Alice Springs**	**66.65**	**104**	P	**P**	**16 47 01.6**	**-0.5**
WRA	**Warramunga Arr**	**68.66**	**101**	P	**P**	**16 47 14.1**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=240,slow=5.6,SNR=11						
	comp=Z,2.3nm,0.9s						
STKA	**Stephens Creek**	**69.33**	**115**	P	**P**	**16 47 18.7**	**0.0**
	comp=Z,2.3nm,0.7s,baz=295,slow=5.2,SNR=4.5						
	comp=Z,2.3nm,0.7s						
STKA	**Stephens Creek**	**69.33**	**115**	P	**P**	**16 47 18.8**	**0.0**
TORD	**Torodi Ar. Bea**	**69.81**	**301**	P	**P**	**16 47 23.2**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=184,slow=7.7,SNR=7.4						
	comp=Z,1.4nm,0.9s						
BRTR	**Keskin Array B**	**74.50**	**341**	P	**P**	**16 47 50.4**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=177,slow=7.4,SNR=7.5						
	comp=Z,1.2nm,0.8s						
BRTR	**Keskin Array B**	**74.50**	**341**	P	**P**	**16 47 50.2**	**+0.7**
BR131	**Keskin Array S**	**74.50**	**341**	P	**P**	**16 47 50.4**	**+0.9**
KK31	**Karatay Array**	**75.33**	**10**	P	**P**	**16 47 54.5**	**+0.5**
KK31				IAmb	IAmb	16 47 58.1	
	comp=Z,6.4nm,1.3s						
KKAR	**Karatay Array**	**75.33**	**10**	P	**P**	**16 47 54.6**	**+0.6**
AB31	**Akbulak array**	**80.60**	**1**	P	**P**	**16 48 24.0**	**+0.9**
AB31				IAmb	IAmb	16 48 32.0	
	comp=Z,6.6nm,1.4s						
ABKAR	**Akbulak array**	**80.60**	**1**	P	**P**	**16 48 23.5**	**+0.4**
GTA2	**Gaotai**	**80.82**	**32**	*eP*	**P**	**16 48 25.5**	**+0.8**
GTA2				pP	pP	16 48 27.8	-1.5
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	**Makanchi**	**81.12**	**17**	P	**P**	**16 48 27.2**	**+1.2**
MAKZ				IAmb	IAmb	16 48 31.2	
	comp=Z,3.1nm,1.0s						
MKAR	**Makanchi Array**	**81.18**	**17**	P	**P**	**16 48 28.2**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=225,slow=6.7,SNR=6.7						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**81.18**	**17**	P	**P**	**16 48 27.2**	**+0.8**
KURBB	**Kurchatov Arra**	**83.97**	**13**	P	**P**	**16 48 41.6**	**+0.8**
	comp=Z,1.3nm,0.2s,baz=207,slow=5.6,SNR=9.1						
	comp=Z,1.3nm,0.2s						
KURK	**Kurchatov**	**84.08**	**13**	P	**P**	**16 48 41.9**	**+0.6**
BVAR	**Borovoye Array**	**85.06**	**8**	P	**P**	**16 48 47.4**	**+1.1**
	comp=Z,3.2nm,0.8s,baz=178,slow=5.5,SNR=14						
	comp=Z,3.2nm,0.8s						
BORK	**Borovoye**	**85.07**	**8**	P	**P**	**16 48 47.0**	**+0.8**
BORK				IAmb	IAmb	16 48 56.0	
	comp=Z,4.6nm,1.0s						
AKASG	**Malin Array Be**	**85.83**	**342**	P	**P**	**16 48 51.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=170,slow=4.5,SNR=4.4						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**88.43**	**16**	P	**P**	**16 49 03.1**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=194,slow=2.4,SNR=4.7						
	comp=Z,0.9nm,0.7s						
SONM	**Songino Array**	**90.36**	**30**	P	**P**	**16 49 11.9**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=197,slow=4.5,SNR=3.0						
	comp=Z,0.6nm,0.9s						
ULN	**Ulaanbaatar**	**90.67**	**31**	P	**P**	**16 49 12.9**	**-0.6**
ULN				IAmb	IAmb	16 49 16.3	
	comp=Z,1.4nm,0.8s						
ILAR	**Eielson Array**	**143.53**	**18**	PKP	PKPbc	16 55 43.2	+1.0
	comp=Z,0.7nm,1.0s,baz=0.0,slow=0.9,SNR=4.2						
ULM	**Lac du Bonnet**	**153.03**	**321**	PKPbc	**PKPbc**	**16 56 06.7**	**-1.4**
	comp=Z,3.3nm,0.9s,baz=54,slow=2.6,SNR=5.0						

*ISK **16** 16:40:32.0,38°.28N×38°.75E,h3km,ML3.6/18*
*AFAD **16** 16:40:32.7,38°.29N×38°.74E,h12km±1km,MW3.7*
*IDC **16** 16:40:33.2±1.6,38°.29N×38°.72E,h0km,mb3.7/2,*
mbtmp3.4/4,ML3.2/2,Error ellipse: s-maj=23.2km
s-min=16.7km az=6.0
*NEIC **16** 16:40:33.3±1.0,38°.26N±0°.04×38°.69E±0°.05,h7km±6km,*
mb4.0/4,Error ellipse: s-maj=6.1km s-min=5.1km
az=131.0

ISC 16 16:40:33.1±1.0,**38°29N**±0°.02×**38°74E**±0°.02,**h5**km±7km,
n83,σ0§**73**/111,**mb3.9**/4,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDYL	**Doganyol-Malat**	**0.24**	**84**	Pg	**Pg**	**16 40 37.7**	**-0.1**
MDYL				Sg	**Sg**	**16 40 41.7**	**+0.7**
MAYA	**Malatya/Merkez**	**0.25**	**278**	P	**Pg**	**16 40 38.3**	**+0.4**
MAYA				IAML		16 40 42.0	
	comp=E,2μm,0.2s						
MAYA				S	**Sg**	**16 40 42.2**	**+1.0**
MAYA				IAML		16 40 43.0	
	comp=N,2μm,0.6s						
ELZG	**Elazig**	**0.28**	**43**	P	**Pg**	**16 40 39.0**	**+0.3**
ELZG				IAML		16 40 43.0	
	comp=E,3μm,0.4s						
ELZG				IAML		16 40 43.0	
	comp=E,1μm,0.2s						
ELZG				IAML		16 40 43.0	
	comp=N,2μm,0.4s						
ELZG				S	**Sg**	**16 40 43.1**	**+0.6**
ESGZ	**Sivrice-Elazig**	**0.29**	**61**	Pg	**Pg**	**16 40 38.7**	**-0.1**
ESGZ				Sg	**Sg**	**16 40 43.1**	**+0.4**
NARI	**Adyaman-Kaht**	**0.41**	**177**	P	**Pg**	**16 40 40.7**	**-0.3**
CNGT	**ngs**	**0.45**	**100**	P	**Pg**	**16 40 41.1**	**-0.7**
SVRC	**Sivrice-ELAZID**	**0.46**	**79**	Pg	**Pg**	**16 40 41.3**	**-0.6**
SVRC				Sg	**Sg**	**16 40 48.6**	**+0.7**
ESIJ	**Sivrice-Elazig**	**0.48**	**71**	Pg	**Pg**	**16 40 42.1**	**-0.2**
ESIJ				Sg	**Sg**	**16 40 49.5**	**+0.9**
KAHTU	**Kahta**	**0.49**	**192**	P	**Pg**	**16 40 42.6**	**0.0**
ELZ	**Elazig**	**0.54**	**43**	P	**Pg**	**16 40 43.4**	**-0.2**
ELZ				S	**Sg**	**16 40 50.6**	**0.0**
ELZ				IAML		16 40 51.0	
	comp=N,4μm,0.4s						
ELZ				IAML		16 40 52.0	
	comp=E,4μm,0.3s						
AZEY	**Adyaman-Merk**	**0.61**	**219**	P	**Pg**	**16 40 45.3**	**+0.5**
AKCD	**Akcadag**	**0.64**	**271**	P	**Pg**	**16 40 45.3**	**-0.1**
HANM	**anlurfa/Hi**	**0.72**	**171**	P	**Pg**	**16 40 46.9**	**0.0**
HANM				S	**Sg**	**16 40 56.1**	**-0.1**
HANM				IAML		16 41 02.0	
	comp=N,2μm,0.4s						
MDNT	**Maden**	**0.75**	**82**	P	**Pg**	**16 40 46.9**	**-0.6**
HEKM	**Malatya_Hekimh**	**0.85**	**314**	P	**Pg**	**16 40 49.1**	**-0.2**
HEKM				S	**Sg**	**16 41 01.3**	**+0.9**
HEKM				IAML		16 41 02.0	
	comp=N,5μm,0.4s						
MCKZ	**Bingol**	**0.85**	**13**	P	**Pg**	**16 40 48.7**	**-0.7**
MCKZ				S	**Sg**	**16 41 00.8**	**+0.4**
MCKZ				IAML		16 41 02.0	
	comp=N,1μm,0.2s						
MCKZ				IAML		16 41 03.0	
	comp=E,2μm,0.4s						
ARPR	**Arapgir-MALATY**	**0.86**	**339**		**Pg**	**16 40 49.3**	**-0.3**
ARPR	**Arapgir-MALATY**	**0.86**	**339**	Pg	**Pg**	**16 40 49.5**	**-0.1**
ARPR				Sg	**Sb**	**16 41 02.7**	**+0.2**
ATAB	**Bozova**	**0.89**	**203**	P	**Pg**	**16 40 50.4**	**+0.3**
KOVA	**Elazig, Kovanc**	**0.94**	**64**	P	**Pg**	**16 40 50.7**	**-0.5**
AKCA	**Adyaman/G¶ll**	**0.96**	**239**	P	**Pg**	**16 40 51.5**	**-0.1**
AKCA				S	**Sg**	**16 41 04.6**	**+0.5**
AKCA				IAML		16 41 12.0	
	comp=N,2μm,0.5s						
TNCL	**Tunceli-Merkez**	**1.04**	**37**	P	**Pg**	**16 40 52.0**	**-1.0**
TNCL				S	**Sg**	**16 41 06.2**	**-0.3**
TNCL				IAML		16 41 11.0	
	comp=E,2μm,0.5s						
SANL	**SANLIURFA_Merk**	**1.14**	**170**	P	**Pg**	**16 40 54.7**	**-0.2**
SANL				S	**Sg**	**16 41 09.3**	**-0.2**
SANL				IAML		16 41 11.0	
	comp=N,2μm,0.4s						
DIYA	**Diyarbakir**	**1.15**	**108**	P	**Pg**	**16 40 55.1**	**-0.1**
DIYA				S	**Sb**	**16 41 10.8**	**0.0**
DIYA				IAML		16 41 12.0	
	comp=N,921nm,0.7s						
DYBB	**Diyarbakir**	**1.16**	**106**	Pn	**Pg**	**16 40 54.8**	**-0.5**
DYBB				Sn	**Sb**	**16 41 11.2**	**+0.3**
MDIV		**1.16**	**333**	P	**Pg**	**16 40 54.5**	**-0.9**
MDIV				S	**Sg**	**16 41 09.6**	**-0.9**
MDIV				IAML		16 41 12.0	
	comp=N,464nm,0.8s						
MIMR	**Divri**	**1.16**	**333**	P	Pn	16 41 03.5	+7.4
MIMR				S	Sn	16 41 24.9	+12
MIMR				IAML		16 41 31.0	
	comp=N,537nm,0.7s						
ILIC	**ilic-Erzincan**	**1.17**	**354**	Pn	**Pg**	**16 40 54.8**	**-0.7**
GZT	**Gaziantep**	**1.32**	**225**	P	**Pg**	**16 40 58.5**	**+0.2**
GZT				S	**Sb**	**16 41 15.2**	**-0.4**
GZT				IAML		16 41 19.0	
	comp=E,1μm,0.6s						
MAYK		**1.35**	**70**	P	**Pg**	**16 40 59.0**	**0.0**
SURC	**SANLIURFA_SURC**	**1.41**	**184**	P	**Pn**	**16 40 58.4**	**-1.0**
SURC				S	**Sg**	**16 41 18.6**	**+0.1**
SURC				IAML		16 41 20.0	
	comp=N,982nm,0.6s						
NZIP	**Nizip/Gaziante**	**1.50**	**214**	P	**Pn**	**16 41 00.5**	**-0.3**
NZIP				S	**Sn**	**16 41 20.6**	**-0.2**
NZIP				IAML		16 41 23.0	
	comp=E,1μm,0.5s						
ERZN	**Erzincan**	**1.51**	**30**	Pn	**Pn**	**16 41 00.3**	**-0.5**
KHMN	**Narli-Kahraman**	**1.54**	**235**	Pn	**Pn**	**16 41 00.9**	**-0.3**
KHMN	**Narli-Kahraman**	**1.54**	**235**	P	**Pn**	**16 41 00.6**	**-0.6**
KHMN				P	**Pb**	**16 41 01.5**	**-0.6**
EUZM	**Uzumlu**	**1.60**	**28**	P	**Pn**	**16 41 02.4**	**+0.2**
EUZM				S	**Sb**	**16 41 24.2**	**+0.4**
EUZM				IAML		16 41 27.0	
	comp=N,386nm,0.5s						
GAZ	**Gaziantep**	**1.65**	**228**		**Pn**	**16 41 01.4**	**-1.3**
GAZ	**Gaziantep**	**1.65**	**228**	Pn	**Pn**	**16 41 03.2**	**+0.5**
KMRS	**Kahramanmaras**	**1.65**	**242**	Pn	**Pn**	**16 41 02.2**	**-0.5**
BNGB	**Bingl**	**1.68**	**65**	Pn	**Pn**	**16 41 03.3**	**+0.1**
MBOZ		**1.76**	**358**	P	**Pn**	**16 41 05.1**	**+0.7**
YEDI	**Yedisu-Bingol**	**1.82**	**50**	Pn	**Pn**	**16 41 05.2**	**0.0**
SARI	**SarD1z-Kayseri**	**1.83**	**274**	Pn	**Pn**	**16 41 05.9**	**+0.6**
CUAYA	**Sivas-Altinyay**	**1.83**	**303**	P	**Pn**	**16 41 06.1**	**+0.8**
CUAYA				S	**Sb**	**16 41 30.3**	**-0.3**
CUAYA				IAML		16 41 37.0	
	comp=N,384nm,0.7s						
MARD	**Mardin**	**1.89**	**120**		**Pn**	**16 41 05.7**	**-0.4**
MARD	**Mardin**	**1.89**	**120**	P	**Pn**	**16 41 05.5**	**-0.7**
MARD				S	**Sn**	**16 41 30.7**	**+0.3**
KELT	**Kelkit**	**1.90**	**12**	P	**Pb**	**16 41 07.3**	**-1.0**
SLHN	**Bingol, Solhan**	**1.91**	**69**	P	**Pn**	**16 41 07.3**	**+0.8**
SUSE	**Susehri**	**1.96**	**348**	P	**Pb**	**16 41 08.9**	**-0.4**
SCER	**sogukcermik**	**2.01**	**322**	P	**Pb**	**16 41 09.8**	**-0.3**
SCER				S	**Sb**	**16 41 36.3**	**+0.9**
SCER				IAML		16 41 40.0	
	comp=E,518nm,0.7s						
SCER				IAML		16 41 41.0	
	comp=N,412nm,0.9s						
KUZU	**Kuzuini**	**2.01**	**222**	P	**Pb**	**16 41 09.6**	**-0.5**
KUZU				S	**Sg**	**16 41 36.6**	**-1.1**
KUZU				IAML		16 41 44.0	
	comp=N,2μm,0.4s						
BTMN	**Batman**	**2.04**	**100**	P	**Pn**	**16 41 07.6**	**-0.5**
BTMN				S	**Sb**	**16 41 35.2**	**-1.1**
ALUC	**Giresun/Alucra**	**2.05**	**1**	P	**Pb**	**16 41 09.7**	**-1.2**
KARO	**Karliova-Bingo**	**2.07**	**60**	Pn	**Pn**	**16 41 09.0**	**-0.3**
SVSK	**Karacayir**	**2.11**	**321**	Pn	**Pn**	**16 41 09.8**	**+0.8**
KOPT	**Kop Dagi**	**2.20**	**38**		**Pn**	**16 41 11.1**	**+0.5**
KOPT	**Kop Dagi**	**2.20**	**38**	P	**Pb**	**16 41 12.0**	**-1.5**
MIDY	**Mardin/Midyat-**	**2.29**	**112**	P	**Pn**	**16 41 12.9**	**+1.4**
MIDY				S	**Sn**	**16 41 40.6**	**+0.5**
MIDY				IAML		16 41 52.0	
	comp=N,694nm,0.6s						
VRTB	**Varto-Mus**	**2.30**	**67**	Pn	**Pn**	**16 41 12.0**	**+0.2**
VRTB	**Varto-Mus**	**2.30**	**67**	P	**Pb**	**16 41 15.4**	**+0.3**
BNN	**Bunyan**	**2.33**	**285**		**Pn**	**16 41 11.8**	**-0.5**
BAYT	**Aydintepe-Bayb**	**2.37**	**27**	Pn	**Pn**	**16 41 13.7**	**+1.0**
GURO	**Guroymak-BITLI**	**2.60**	**83**		**Pn**	**16 41 15.4**	**-0.5**
GURO	**Guroymak-BITLI**	**2.60**	**83**	Pn	**Pn**	**16 41 15.8**	**-0.1**
TOKA	**Tokat**	**2.68**	**320**		**Pn**	**16 41 17.1**	**+0.2**
GEVA	**Gevas**	**3.40**	**88**		**Pn**	**16 41 27.3**	**+0.4**
BRTR	**Keskin Array B**	**4.22**	**291**	Pn	**Pn**	**16 41 39.8**	**+1.6

CMAR	**Chiang Mai Arr**	**66.50**	**45**	P	**P**	**16 58 03.1**	**+0.3**
ASAR	**Alice Springs**	**67.67**	**104**	P	**P**	**16 58 11.2**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=232,slow=5.8,SNR=11						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**69.68**	**303**	P	**P**	**16 58 22.7**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=180,slow=7.4,SNR=6.8						
	comp=Z,1.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**69.68**	**303**	P	**P**	**16 58 22.4**	**-0.5**
TORD				IAmb	IAmb	17 00 21.6	
	comp=Z,8.2nm,1.9s						
STKA	**Stephens Creek**	**69.79**	**115**	P	**P**	**16 58 23.4**	**0.0**
WRA	**Warramunga Arr**	**69.84**	**101**	P	**P**	**16 58 24.4**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=227,slow=6.4,SNR=6.8						
	comp=Z,1.5nm,0.9s						
DBIC	**Dimbokro**	**70.18**	**293**	P	**P**	**16 58 27.2**	**+1.2**
	comp=Z,3.8nm,0.9s,baz=137,slow=3.2,SNR=4.2						
DBIC				LR	LR	17 26 20.7	
	comp=Z,120nm,19.1s,baz=12,slow=34						
	comp=Z,3.8nm,0.9s						
DBIC	**Dimbokro**	**70.18**	**293**	P	**P**	**16 58 26.3**	**+0.4**
DBIC				IAmb	IAmb	16 58 35.1	
	comp=Z,18nm,1.5s						
CHGR	**Chuyangaron**	**73.48**	**11**	P	**P**	**16 58 46.6**	**+1.2**
CHGR				IAmb	IAmb	16 58 48.1	
	comp=Z,18nm,1.2s						
BRTR	**Keskin Array B**	**76.30**	**343**	P	**P**	**16 59 01.9**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=168,slow=6.3,SNR=4.3						
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**76.30**	**343**	P	**P**	**16 59 01.6**	**-0.1**
KK31	**Karatay Array**	**78.04**	**11**	P	**P**	**16 59 11.9**	**+0.6**
KKAR	**Karatay Array**	**78.04**	**11**	P	**P**	**16 59 12.1**	**+0.9**
AAK	**Ala-Archa**	**78.30**	**14**	P	**P**	**16 59 14.4**	**+1.5**
AAK				IAmb	IAmb	16 59 23.8	
	comp=Z,5.2nm,1.1s						
ABKAR	**Akbulak array**	**83.11**	**3**	P	**P**	**16 59 38.5**	**+0.3**
MAKZ	**Makanchi**	**83.95**	**18**	P	**P**	**16 59 43.5**	**+0.8**
MAKZ				IAmb	IAmb	16 59 52.8	
	comp=Z,3.9nm,1.0s						
MKAR	**Makanchi Array**	**84.02**	**18**	P	**P**	**16 59 43.8**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=177,slow=4.4,SNR=5.7						
	comp=Z,0.8nm,0.9s						
MKAR	**Makanchi Array**	**84.02**	**18**	P	**P**	**16 59 42.9**	**-0.2**
KURBB	**Kurchatov Arra**	**86.75**	**14**	P	**P**	**16 59 57.4**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=212,slow=5.5,SNR=4.7						
	comp=Z,0.5nm,0.7s						
KURK	**Kurchatov**	**86.86**	**14**	P	**P**	**16 59 58.5**	**+1.4**
KIEV	**Kiev**	**87.67**	**343**	P	**P**	**17 00 02.0**	**+1.0**
KIEV				IAmb	IAmb	17 00 33.1	
	comp=Z,20nm,1.8s						
AKASG	**Malin Array Be**	**87.68**	**343**	P	**P**	**17 00 00.2**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=181,slow=4.6,SNR=4.1						
	comp=Z,0.6nm,0.5s						
AKBB	**Malin Array Si**	**87.68**	**343**	P	**P**	**17 00 02.0**	**+1.0**
BVAR	**Borovoye Array**	**87.72**	**9**	P	**P**	**17 00 01.8**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=186,slow=4.5,SNR=5.4						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**146.37**	**17**	PKPbc	**PKPdf**	**17 06 52.0**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=304,slow=3.7,SNR=14						
YKA	**Yellowknife Ar**	**150.98**	**351**	PKPbc	**PKPbc**	**17 07 05.2**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=354,slow=3.0,SNR=14						

WEL 16 16:49:28.6±1.3, 32°S±9.7′×17°9E±1.7′, h12 km, M3.9/4, mB4.5/2, ML4.0/8, MLv3.9/4, Mw(mB)3.7/2, Error ellipse: s-maj=24.9km s-min=4.6km az=117.3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.82**	**53**	P	Pn	16 50 26.6	-0.6
GLKZ				S	Sn	16 51 13.4	+1.3
HAZ	**Te Kaha**	**6.17**	**186**	P	Pn	16 51 00.9	+1.4
HAZ				S	Sn	16 52 14.1	+4.0
WMGZ	**Waiomatatini S**	**6.20**	**181**	P	Pn	16 51 00.9	+0.9
RUGZ	**Raukumara Rang**	**6.39**	**186**	P	Pn	16 51 03.8	+1.1
RUGZ				S	Sn	16 52 16.6	+1.0
PUZ	**Puketiti**	**6.46**	**182**	P	Pn	16 51 03.1	-0.4
PUZ				S	Sn	16 52 15.3	-1.9
URZ	**Urewera**	**6.75**	**190**	S	Sn	16 52 24.9	+0.7
MWZ	**Matawai**	**6.77**	**187**	P	Pn	16 51 07.7	-0.1
MWZ				S	Sn	16 52 26.9	+2.1
TKGZ	**Te Karaka**	**6.85**	**185**	P	Pn	16 51 07.7	-1.1
CNGZ	**Carnagh Statio**	**6.87**	**182**	P	Pn	16 51 08.4	-0.7
MUGZ	**Murupara**	**7.02**	**192**	P	Pn	16 51 13.2	+2.1
SNGZ	**Shannon Statio**	**7.23**	**188**	P	Pn	16 51 13.5	-0.7
SNGZ				S	Sn	16 52 37.0	+0.8
MTHZ	**Maungataniwha**	**7.37**	**191**	P	Pn	16 51 15.2	-0.8
MTHZ				S	Sn	16 52 40.3	+0.7
BKZ	**Black Stump Fm**	**7.74**	**192**	P	Pn	16 51 19.3	-1.8
BKZ				S	Sn	16 52 48.7	+0.1

*PGC **16** 16:53:25.3±5.8, 62.91N×123.69W, h4km±1km, ML3.8/9, 40km south of Wrigley, Nt Nw Territories - Nunavut, Canada*
*IDC **16** 16:53:25.4±0.9, 63.13N×123.55W, h0km, mb3.4/3, mbtmp3.4/6, ML2.7/3, Error ellipse: s-maj=29.1km s-min=9.2km az=13.0*
*ANF **16** 16:53:25.1±0.3, 62.96N×123.74W, h12km±4km, Error ellipse: s-maj=3.7km s-min=1.6km az=70.0*
ISC 16 16:53:25.0±0.6, 62.98N±0.04×123.59W±0.03, h10 km, n127, σ2≥18/153, mb3.1/3, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRGLY	**Wrigley**	**0.26**	**14**	P	**Pg**	**16 53 31.0**	**+0.9**
	baz=206						
WRGLY				S	**Sg**	**16 53 36.1**	**+2.5**
	baz=206						
NAHA	**Nahanni Butte**	**1.96**	**177**	Pn	**Pn**	**16 53 57.5**	**-0.7**
KOTAN	**Kotaneelee Air**	**2.87**	**185**	P	**Pn**	**16 54 10.2**	**-0.6**
	baz=2.9						
KOTAN				Sb	**Sb**	**16 54 54.7**	**+3.3**
	baz=2.9						
KOTAN	**Kotaneelee Air**	**2.87**	**185**	Pn	**Pn**	**16 54 10.3**	**-0.4**
WTLY	**Watson Lake, Y**	**3.81**	**223**	P	**Pn**	**16 54 22.6**	**-1.0**
	baz=38						
WTLY				Sb	**Sb**	**16 55 19.4**	**+1.1**
	baz=38						
WTLY	**Watson Lake, Y**	**3.81**	**223**	Pn	**Pn**	**16 54 22.4**	**-1.2**
YKAW3	**Yellowknife Wh**	**4.15**	**92**	Pn	**Pn**	**16 54 29.1**	**+0.9**
YKAW3				Pg	Pb	16 54 43.1	+5.1
YKAW3				Sg	**Sg**	**16 55 37.1**	**-1.0**
YKA	**Yellowknife Ar**	**4.16**	**93**	Pn	**Pn**	**16 54 27.7**	**-0.8**
	0.7nm,0.3s,baz=280,slow=14,SNR=32						
YKA				Pg	**Pb**	**16 54 41.0**	**+2.8**
	5.9nm,0.3s,baz=278,slow=17,SNR=41						
YKA				Sn	**Sn**	**16 55 18.1**	**+1.0**
	3.8nm,0.3s,baz=278,slow=23,SNR=4.9						
YKA				Lg	Lg	16 55 30.2	
	3.6nm,0.3s,baz=295,slow=27,SNR=5.1						
	0.9nm,0.4s						
FNSB	**Fort Nelson**	**4.21**	**174**	Pn	**Pn**	**16 54 29.9**	**+0.8**
YKAW1	**Yellowknife Wh**	**4.22**	**93**	Pg	**Pg**	**16 54 44.8**	**-0.9**
YKAW1				Sg	**Sg**	**16 55 39.4**	**-0.9**
TOAD	**Toad River Com**	**4.22**	**192**	P	**Pn**	**16 54 28.6**	**-0.7**
	baz=9.4						
TOAD				S	**Sn**	**16 55 17.7**	**-1.0**
	baz=9.4						
FARO	**Faro, Yukon**	**4.57**	**265**	P	**Pn**	**16 54 31.7**	**-2.4**
	baz=76						
FARO				Sb	**Sb**	**16 55 41.7**	**+1.4**
	baz=76						
FARO	**Faro, Yukon**	**4.57**	**265**	Pn	**Pn**	**16 54 34.3**	**+0.2**
FARO				Sg	**Sb**	**16 55 44.6**	**+4.4**
N32M	**Quiet Lake**	**4.83**	**252**	P	**Pn**	**16 54 35.6**	**-2.0**
	baz=64						
N32M				Sb	**Sb**	**16 55 47.3**	**-0.3**
	baz=64						
N32M	**Quiet Lake**	**4.83**	**252**	Pn	**Pn**	**16 54 35.9**	**-1.7**
M31M	**Drury Creek, Y**	**5.05**	**266**	P	**Pn**	**16 54 38.7**	**-2.0**
	baz=76						
M31M				Sb	**Sb**	**16 55 56.1**	**+2.1**
	baz=76						
R33M	**Jennings River**	**5.07**	**228**	P	**Pn**	**16 54 40.3**	**-0.7**
	baz=41						
R33M				S	**Sn**	**16 55 36.8**	**-2.8**
	baz=41						
R33M	**Jennings River**	**5.07**	**228**	Pn	**Pn**	**16 54 40.6**	**-0.3**
P33M	**Teslin, Yukon**	**5.21**	**242**	P	**Pn**	**16 54 41.2**	**-1.7**
	baz=54,SNR=28						
P33M				S	**Sn**	**16 55 39.8**	**-3.2**
	baz=54						
P33M	**Teslin, Yukon**	**5.21**	**242**	Pn	**Pn**	**16 54 41.3**	**-1.6**
P33M				Sg	**Sb**	**16 56 02.4**	**+3.8**
NBC5	**NorthernBC 5**	**5.50**	**175**	Pn	**Pn**	**16 54 45.4**	**-1.4**
NBC5				Sn	**Sn**	**16 55 46.7**	**-3.4**
DLBC	**Dease Lake**	**5.54**	**218**	P	**Pn**	**16 54 46.8**	**-0.7**
	baz=32						
DLBC				S	**Sn**	**16 55 50.5**	**-0.8**
	baz=32						
DLBC	**Dease Lake**	**5.54**	**218**	Pn	**Pn**	**16 54 46.5**	**-1.0**
MAYO	**Mayo, Yukon**	**5.58**	**282**	Sb	**Sb**	**16 56 11.1**	**+1.7**
	baz=91						
WHY	**Whitehorse**	**5.83**	**252**	P	**Pn**	**16 54 49.2**	**-2.3**
	baz=62,SNR=12						
WHY	**Whitehorse**	**5.83**	**252**	Pn	**Pn**	**16 54 49.6**	**-1.9**
WHY				Sg	**Sb**	**16 56 23.6**	**+7.0**
Q32M	**Nakina River**	**5.84**	**230**	P	**Pn**	**16 54 50.4**	**-1.3**
	baz=42						
Q32M				Sb	**Sb**	**16 56 21.2**	**+4.3**
	baz=42						
Q32M	**Nakina River**	**5.84**	**230**	Pn	**Pn**	**16 54 49.3**	**-2.3**
J30M	**Hart River**	**5.87**	**291**	P	**Pn**	**16 54 51.2**	**-0.8**
	baz=100						
J30M	**Hart River**	**5.87**	**291**	Pn	**Pn**	**16 54 52.0**	**0.0**
N31M	**Braeburn, Yuko**	**5.89**	**261**	P	**Pn**	**16 54 51.3**	**-0.9**
	baz=70						
P32M	**Atlin**	**5.95**	**240**	P	**Pn**	**16 54 51.3**	**-1.7**
	baz=51,SNR=12						
P32M				S	**Sn**	**16 55 58.7**	**-2.4**
	baz=51						
P32M	**Atlin**	**5.95**	**240**	Pn	**Pn**	**16 54 52.0**	**-1.0**
KUKN	**Kugluktuk,NWT**	**6.01**	**32**	Pn	**Pn**	**16 54 54.8**	**+0.9**
I30M	**Mount Dempster**	**6.04**	**298**	P	**Pn**	**16 54 52.5**	**-1.8**
	baz=106						
I30M				S	**Sn**	**16 55 56.0**	**-7.3**
	baz=106						
I30M	**Mount Dempster**	**6.04**	**298**	Pn	**Pn**	**16 54 54.5**	**+0.3**
M30M	**Minto, Yukon**	**6.07**	**272**	P	**Pn**	**16 54 52.3**	**-2.4**
	baz=80						
M30M	**Minto, Yukon**	**6.07**	**272**	Pn	**Pn**	**16 54 52.5**	**-2.3**
F31M	**Tsiigehtchic**	**6.18**	**321**	P	**Pn**	**16 54 55.0**	**-1.1**
	baz=132						
F31M				S	**Sn**	**16 56 03.5**	**-3.2**
	baz=132						
F31M	**Tsiigehtchic**	**6.18**	**321**	Pn	**Pn**	**16 54 55.0**	**-1.1**
S34M	**Telegraph Cree**	**6.30**	**220**	P	**Pn**	**16 54 57.9**	**+0.1**
	baz=33						
S34M	**Telegraph Cree**	**6.30**	**220**	Pn	**Pn**	**16 54 57.5**	**-0.3**
O30N	**Mendenhall**	**6.31**	**255**	P	**Pn**	**16 54 56.2**	**-1.8**
	baz=64						
K29M	**Barlow Dome**	**6.31**	**284**	Pn	**Pn**	**16 54 57.2**	**-0.8**
C36M	**Paulatuk**	**6.40**	**358**	P	**Pn**	**16 54 57.9**	**-1.1**
	baz=179						
C36M	**Paulatuk**	**6.40**	**358**	Pn	**Pn**	**16 54 57.7**	**-1.3**
NBC8	**Simpson Ranch**	**6.46**	**174**	Pn	**Pn**	**16 54 58.2**	**-1.8**
G30M	**tAoh Zraii Nji**	**6.69**	**312**	P	**Pn**	**16 55 01.8**	**-1.4**
	baz=122						
G30M	**tAoh Zraii Nji**	**6.69**	**312**	Pn	**Pn**	**16 55 01.5**	**-1.6**
INK	**Inuvik**	**6.73**	**327**	P	**Pn**	**16 55 02.1**	**-1.6**
	baz=138						
INK	**Inuvik**	**6.73**	**327**	Pn	**Pn**	**16 55 02.7**	**-1.0**
I29M	**Ogilvie Camp,**	**6.86**	**297**	P	**Pn**	**16 55 03.3**	**-2.1**
	baz=104						
M29M	**Somme Creek**	**6.86**	**272**	P	**Pn**	**16 55 04.0**	**-1.6**
	baz=79						
M29M	**Somme Creek**	**6.86**	**272**	Pn	**Pn**	**16 55 03.6**	**-2.0**
T35M	**Bob Quinn**	**6.88**	**212**	Pn	**Pn**	**16 55 07.1**	**+1.4**
F30M	**Barrier River**	**6.90**	**318**	P	**Pn**	**16 55 04.3**	**-1.6**
	baz=127						
F30M	**Barrier River**	**6.90**	**318**	Pn	**Pn**	**16 55 04.8**	**-1.1**
HYT	**Haines Junctio**	**6.92**	**258**	P	**Pn**	**16 55 05.4**	**-1.0**
	baz=66,SNR=13						
HYT	**Haines Junctio**	**6.92**	**258**	Pn	**Pn**	**16 55 05.0**	**-1.3**
YUK5	**Granite Creek**	**6.96**	**261**	Pn	**Pn**	**16 55 05.4**	**-1.5**
P30M	**Million Dollar**	**7.00**	**252**	P	**Pn**	**16 55 06.7**	**-0.7**
	baz=60						
P30M	**Million Dollar**	**7.00**	**252**	Pn	**Pn**	**16 55 06.0**	**-1.4**
DAWY	**Dawson**	**7.15**	**286**	P	**Pn**	**16 55 08.6**	**-0.8**
	baz=92						
YUK4	**Talbot Arm**	**7.24**	**264**	P	**Pn**	**16 55 07.7**	**-3.1**
	baz=71,SNR=14						
YUK4	**Talbot Arm**	**7.24**	**264**	Pn	**Pn**	**16 55 08.0**	**-2.8**
YUK4				Sg	**Sb**	**16 57 04.7**	**+7.7**
YUK6	**Outpost Mounta**	**7.25**	**260**	P	**Pn**	**16 55 09.7**	**-1.4**
	baz=67,SNR=25						
YUK6	**Outpost Mounta**	**7.25**	**260**	Pn	**Pn**	**16 55 09.4**	**-1.7**
G29M	**Pine Creek**	**7.28**	**309**	P	**Pn**	**16 55 09.0**	**-2.2**
	baz=116						
G29M	**Pine Creek**	**7.28**	**309**	Pn	**Pn**	**16 55 09.8**	**-1.4**
YUK7	**Dusty Glacier**	**7.33**	**257**	Pn	**Pn**	**16 55 11.8**	**-0.2**
BRWY	**Burwash Landin**	**7.40**	**264**	Pn	**Pn**	**16 55 11.3**	**-1.7**
NBC4	**NorthernBC 4**	**7.47**	**167**	Sn	**Sn**	**16 56 32.6**	**-6.0**
I28M	**Miner Creek**	**7.54**	**296**	P	**Pn**	**16 55 13.2**	**-1.6**
	baz=102						
I28M	**Miner Creek**	**7.54**	**296**	Pn	**Pn**	**16 55 13.8**	**-1.1**
O29M	**Mount Kennedy**	**7.62**	**256**	Pn	**Pn**	**16 55 15.6**	**-0.4**
BVCY	**Beaver Creek**	**7.96**	**274**	P	**Pn**	**16 55 18.8**	**-1.8**
	baz=78						
BVCY	**Beaver Creek**	**7.96**	**274**	Pn	**Pn**	**16 55 18.3**	**-2.2**
E29M	**Blow River**	**8.00**	**319**	Sn	**Sn**	**16 56 46.8**	**-4.7**
F28M	**Old Crow**	**8.23**	**311**	P	**Pn**	**16 55 22.7**	**-1.6**
	baz=117						
F28M	**Old Crow**	**8.23**	**311**	Pn	**Pn**	**16 55 23.6**	**-0.7**
I27K	**Kandik River**	**8.26**	**296**	P	**Pn**	**16 55 23.5**	**-1.2**
	baz=101						
STPRA	**Salt Prairie L**	**8.34**	**148**	Pn	**Pn**	**16 55 24.2**	**-1.6**
STPRA				Sn	**Sn**	**16 56 53.4**	**-6.6**
H27K	**Steamboat Moun**	**8.36**	**301**	P	**Pn**	**16 55 24.6**	**-1.4**
	baz=105						
H27K	**Steamboat Moun**	**8.36**	**301**	Pn	**Pn**	**16 55 24.5**	**-1.5**
FSJB	**Fort St James**	**8.56**	**183**	Pn	**Pn**	**16 55 26.5**	**-2.3**
E28M	**Babbage River**	**8.62**	**318**	P	**Pn**	**16 55 29.0**	**-0.6**
	baz=124						
E28M	**Babbage River**	**8.62**	**318**	Pn	**Pn**	**16 55 29.6**	**0.0**
E28M				Sn	**Sn**	**16 57 01.2**	**-5.6**
M26K	**Nabesna, AK**	**8.94**	**275**	P	**Pn**	**16 55 33.4**	**-0.5**
	baz=78						
J26L	**Joseph Creek**	**8.97**	**289**	P	**Pn**	**16 55 33.5**	**-1.0**
	baz=91						
A36M	**Sachs Harbour**	**9.07**	**357**	P	**Pn**	**16 55 35.9**	**+0.2**
	baz=176						
A36M	**Sachs Harbour**	**9.07**	**357**	Pn	**Pn**	**16 55 36.4**	**+0.7**
SCRK	**Sand Creek**	**9.17**	**285**	P	**Pn**	**16 55 36.2**	**-1.1**
	baz=87						
D27M	**Malcolm River**	**9.41**	**319**	P	**Pn**	**16 55 40.1**	**-0.2**
	baz=124						
D27M	**Malcolm River**	**9.41**	**319**	Pn	**Pn**	**16 55 40.2**	**-0.2**
F26K	**Sheenjek River**	**9.77**	**308**	P	**Pn**	**16 55 44.9**	**-0.4**
	baz=110						
F26K	**Sheenjek River**	**9.77**	**308**	Pn	**Pn**	**16 55 45.4**	**0.0**
PRP	**Porcupine Dome**	**9.86**	**295**	P	**Pn**	**16 55 45.1**	**-1.6**
	baz=95						
PAX	**Paxson**	**9.95**	**280**	P	**Pn**	**16 55 48.3**	**+0.4**
	baz=80						
F25K	**Christian Rive**	**10.29**	**306**	P	**Pn**	**16 55 51.8**	**-0.6**
	baz=107						
F25K	**Christian Rive**	**10.29**	**306**	Pn	**Pn**	**16 55 51.4**	**-1.0**
ILAR	**Eielson Array**	**10.41**	**290**	Pn	**Pn**	**16 55 53.3**	**-0.7**
	0.1nm,0.3s,baz=96,slow=10,SNR=17						
ILAR				Lg	Lg	16 58 52.4	
	0.1nm,0.3s,baz=94,slow=25,SNR=5.3						
	1.2nm,0.9s						
E25K	**Arctic Village**	**10.42**	**309**	P	**Pn**	**16 55 54.0**	**-0.2**
	baz=110						
E25K	**Arctic Village**	**10.42**	**309**	Pn	**Pn**	**16 55 54.0**	**-0.2**
C27K	**Jago River**	**10.44**	**318**	P	**Pn**	**16 55 53.9**	**-0.5**
	baz=120						
C27K	**Jago River**	**10.44**	**318**	Pn	**Pn**	**16 55 54.2**	**-0.2**
C27K				Sn	**Sn**	**16 57 47.2**	**-4.0**
HDA	**Harding Lake**	**10.44**	**288**	P	**Pn**	**16 55 54.8**	**+0.2**
	baz=88						
KLU	**Klutina**	**10.51**	**272**	P	**Pn**	**16 55 52.5**	**-3.0**
	baz=72						
H24K	**Noodor Dome**	**10.85**	**296**	P	**Pn**	**16 55 59.4**	**-0.8**
	baz=94						
C26K	**Camden Bay**	**10.94**	**319**	Pn	**Pn**	**16 56 00.7**	**-0.6**
D25K	**Kavik River**	**11.14**	**315**	P	**Pn**	**16 56 02.9**	**-1.1**
	baz=114						
D25K	**Kavik River**	**11.14**	**315**	Pn	**Pn**	**16 56 03.2**	**-0.8**
E24K	**Your Creek**	**11.46**	**307**	P	**Pn**	**16 56 07.3**	**-1.1**
	baz=105						
E23K	**Chandalar**	**11.86**	**307**	P	**Pn**	**16 56 13.3**	**-0.7**
	baz=103						
COLD	**Coldfoot**	**11.93**	**302**	P	**Pn**	**16 56 13.6**	**-1.2**
	baz=99						
D23K	**Nanushuk River**	**12.47**	**310**	P	**Pn**	**16 56 19.5**	**-2.7**
	baz=106						
I21K	**Tanana**	**12.56**	**293**	P	**Pn**	**16 56 22.6**	**-0.9**
	baz=87						
E22K	**Anaktuvuk Pass**	**12.69**	**306**	P	**Pn**	**16 56 24.4**	**-0.8**
	baz=101						
G21K	**Allakaket**	**13.17**	**299**	P	**Pn**	**16 56 28.6**	**-3.1**
	baz=92						
F21K	**Alatna River**	**13.20**	**302**	P	**Pn**	**16 56 32.1**	**-0.1**
	baz=95						
K20K	**Telida**	**13.71**	**285**	P	**Pn**	**16 56 37.6**	**-1.4**
	baz=78						
H20K	**Anotleneega Mo**	**13.75**	**294**	P	**Pn**	**16 56 38.5**	**-1.2**
	baz=86						
J19K	**Poorman**	**14.26**	**288**	P	**Pn**	**16 56 45.1**	**-1.5**
	baz=80						
RES	**Resolute Bay**	**15.40**	**29**	Pn	**Pn**	**16 56 58.1**	**-3.7**
ULM	**Lac du Bonnet**	**19.67**	**117**	P	**P**	**16 57 55.7**	**+2.0**
	0.2nm,0.3s,baz=318,slow=13,SNR=3.7						
ULM				Lg	Lg	17 03 31.3	
	0.1nm,0.3s,baz=227,slow=20,SNR=4.3						
	1.4nm,0.5s						
PDAR	**Pinedale Array**	**21.85**	**151**	P	**P**	**16 58 20.9**	**+3.2**
	0.5nm,0.7s,baz=332,slow=11,SNR=5.6						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**36.05**	**150**	P	**P**	**17 00 29.4**	**+3.1**
	0.2nm,0.7s,baz=354,slow=8.0,SNR=3.8						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**53.79**	**18**	P	**P**	**17 02 47.4**	**+0.5**
	2.8nm,1.0s,baz=354,slow=8.7,SNR=3.5						
	2.8nm,1.0s						

*IDC **16** 16:55:25.6±2.5, 1.81N×127.34E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=220.1km s-min=24.4km az=67.0*
*DJA **16** 16:55:41.4±0.6, 2.7N±4.7×12.7E±1.7, h122km±9km, M3.8/16, mB4.9/2, mb3.9/2, MLv3.8/16, Mw(mB)4.1/2*
ISC 16 16:55:39.6±1.3, 1.59N±0.09×127.2E±0.1, h103 km, n11, σ2≥71/11, mb3.0/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.84**	**166**	P	Pn	**16 56 02.6**	**+3.9**
MNI	**Manado**	**2.33**	**266**	P	Pn	**16 56 19.4**	**+2.7**
SGSI	**Sangihe**	**2.65**	**322**	P	Pn	**16 56 22.8**	**+2.0**
SANI	**Sanana**	**3.80**	**198**	P	Pn	**16 56 36.5**	**+0.2**
GTOI	**Gorontalo**	**4.26**	**257**	P	Pn	**16 56 44.7**	**+2.3**
NLAI	**Namlea**	**4.80**	**181**	P	Pn	**16 56 50.6**	**+0.9**
KRAI	**Karang Ratu**	**5.03**	**166**	P	Pn	**16 56 55.6**	**+2.8**
AAI	**Ambon**	**5.34**	**169**	P	Pn	**16 56 58.8**	**+1.7**
WRA	**Warramunga Arr**	**22.53**	**162**	P	**P**	**17 00 27.8**	**-3.4**
	0.3nm,0.4s,baz=341,slow=11,SNR=16						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**25.95**	**166**	P	**P**	**17 01 02.5**	**-0.2**
	0.1nm,0.4s,baz=339,slow=9.9,SNR=8.6						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.55**	**326**	P	**P**	**17 05 30.5**	**-1.9**
	0.1nm,0.3s,baz=116,slow=7.1,SNR=8.8						
	0.1nm,0.3s						

*RSPR **16** 16:56:51.7, 17.94N×66.83W, h13km, MD3.0/8*
*NEIC **16** 16:56:52.2±1.0, 18.00N±0.02×66.821W±0.006, h10km±1km, ML2.8/33, Md3.0/8(RSPR), Error ellipse: s-maj=3.7km s-min=2.0km az=186.0*
*SDD **16** 16:56:52.1±1.1, 18.02N×66.83W, h20km±12km, MD3.5, ML2.7, MW3.0, Presumed earthquake*
ISC 16 16:56:51.4±0.9, 17.97N±0.05×66.81W±0.02, h16 km±6km, n38, σ0≥60/59, 12C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.06**	**272**		**Pg**	**16 56 54.4**	**-0.1**
GBPR					**Sg**	**16 56 56.4**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.06**	**272**	⇑*iP*	**Pg**	**16 56 54.4**	**-0.1**
GBPR				*eS*	**Sg**	**16 56 56.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.21**	**71**	Pg	**Pg**	**16 56 56.6**	**+0.2**
OBIP	**Obispado Ponce**	**0.21**	**71**	⇑*iP*	**Pg**	**16 56 56.6**	**+0.2**
OBIP				*eS*	**Sb**	**16 57 00.5**	**0.0**
MLPR	**Magueyes Islan**	**0.22**	**269**		**Pg**	**16 56 56.2**	**-0.3**
MLPR				IAML		16 57 00.0	
	1μm,0.6s						
MLPR				IAML		16 57 00.6	
	2μm,0.3s						
CELP	**Cerrillos**	**0.25**	**66**	Pg	**Pg**	**16 56 57.1**	**+0.2**
CELP				IAML		16 57 01.7	
	867nm,0.3s						
CELP				IAML		16 57 01.9	
	1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.28**	**277**		**Pg**	**16 56 57.3**	**-0.2**
CRPR				IAML		16 57 01.9	
	981nm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.28**	**277**	⇑*ePg*	**Pg**	**16 56 57.3**	**-0.2**
CRPR			

baz=282,slow=75,SNR=13
H03N3 Juan Fernandez 33.65 115 T T 17 48 32.7
baz=282,slow=75,SNR=16
H03N1 Juan Fernandez 33.65 115 T T 17 48 35.0
baz=282,slow=75,SNR=11
ATAH Atahuaipa 39.34 72 LR LR 17 25 42.3
comp=Z,130nm,19.7s,baz=281,slow=29
RAR Rarotonga 40.70 264 LR LR 17 27 17.7
comp=Z,75nm,19.6s,baz=350,slow=31
PLCA Paso Flores 41.41 125 LR LR 17 26 54.0
comp=Z,105nm,20.0s,baz=265,slow=30
LPAZ La Paz 45.14 90 P **P** **17 14 44.8 +0.2**
1.1nm,0.7s,baz=269,slow=18,SNR=9.3
LPAZ LR LR 17 29 10.3
comp=Z,64nm,20.1s,baz=14,slow=30
1.1nm,0.7s
CMIG Matias Romero 45.22 29 LR LR 17 30 06.6
comp=Z,83nm,18.2s,baz=354,slow=32
TXAR Lajitas Array 53.84 13 P **P** **17 15 49.9 -0.1**
0.1nm,0.5s,baz=208,slow=4.8,SNR=2.7
0.1nm,0.5s
SDV Santo Domingo 54.59 59 LR LR 17 33 59.0
comp=Z,81nm,20.2s,baz=66,slow=30
NVAR Mina Array Bea 61.70 358 P **P** **17 16 45.5 +0.2**
0.8nm,0.7s,baz=189,slow=6.2,SNR=2.3
0.8nm,0.7s
VNDA Vanda 65.54 194 LR LR 17 40 27.8
comp=Z,97nm,18.5s,baz=296,slow=31
PDAR Pinedale Array 66.22 5 P **P** **17 17 14.2 -0.8**
0.3nm,0.7s,baz=211,slow=6.3,SNR=2.8
0.3nm,0.7s
MDP Montagnes des 67.73 74 LR LR 17 43 12.0
comp=Z,79nm,18.8s,baz=337,slow=33
YKA Yellowknife Ar 85.75 1 P **P** **17 19 06.8 +1.2**
0.6nm,0.8s,baz=183,slow=4.3,SNR=6.5
0.6nm,0.8s
H11S2 WAKE ISLAND Hy 86.45 292 T T 18 54 48.3
baz=116,slow=75,SNR=30
H11S1 WAKE ISLAND Hy 86.46 292 T T 18 54 57.1
baz=116,slow=75,SNR=28
H11S3 WAKE ISLAND Hy 86.47 292 T T 18 54 54.6
baz=116,slow=75,SNR=20
H11N3 WAKE ISLAND Hy 86.81 293 T T 18 55 20.5
baz=117,slow=76,SNR=12
H11N1 WAKE ISLAND Hy 86.83 293 T T 18 55 18.4
baz=117,slow=76,SNR=6.5
H11N2 WAKE ISLAND Hy 86.83 293 T T 18 55 21.8
baz=117,slow=76,SNR=22
CTA Charters Tower 89.14 249 LR LR 17 53 02.7
comp=Z,26nm,19.4s,baz=42,slow=31
ZALV Zalesovo Beam 145.94 338 PKPbc **PKPdf** **17 26 05.5 -0.1**
1.1nm,0.7s,baz=28,slow=6.7,SNR=6.1
CMAR Chiang Mai Arr 147.31 268 PKPbc **PKPbc** **17 26 11.9 +0.6**
0.3nm,0.3s,baz=50,slow=2.1,SNR=4.9
BRTR Keskin Array B 149.51 51 PKPbc **PKPbc** **17 26 16.5 -0.1**
1.7nm,1.0s,baz=207,slow=2.5,SNR=3.6
BVAR Borovoye Array 150.20 353 PKPbc **PKPbc** **17 26 16.9 -0.8**
0.4nm,0.5s,baz=18,slow=1.6,SNR=4.3
KURBB Kurchatov Arra 150.79 341 PKPbc **PKiKP** **17 26 19.5 -0.3**
1.3nm,0.7s,baz=17,slow=1.9,SNR=4.5
MKAR Makanchi Array 152.66 332 PKPbc **PKPbc** **17 26 23.2 -0.5**
0.7nm,0.6s,baz=50,slow=1.7,SNR=5.7

*IDC **16** 17:09:01.1±0.8, 11°.93N×143°.05E, h0km, mb4.0/15, mbtmp4.0/16, ML4.0/1, MS3.2/1, Error ellipse: s-maj=23.9km s-min=17.0km az=117.0*
ISC 16 17:09:05.8±0.9, 11°.9N±0°.1×143°.0E±0°.1, h31km, n22, σ1§01/17, mb4.0/15, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.45**	**46**	Pn	**Pn**	**17 09 43.3**	**-0.4**
	31nm,0.3s,baz=345,slow=23,SNR=11						
GUMO				Sn	**Sn**	**17 10 13.7**	**+1.1**
	54nm,0.3s,baz=180,slow=23,SNR=9.7						
GUMO				LR	LR	17 10 51.2	
	comp=Z,450nm,19.2s,baz=284,slow=45						
	151nm,0.7s						
H11S3	**WAKE ISLAND Hy 23.73**	**71**		T	T	17 38 55.2	
	baz=257,slow=75,SNR=7.7						
H11S1	**WAKE ISLAND Hy 23.74**	**71**		T	T	17 38 49.2	
	baz=257,slow=75,SNR=6.7						
H11S2	**WAKE ISLAND Hy 23.74**	**71**		T	T	17 38 58.0	
	baz=257,slow=75,SNR=5.7						
H11N1	**WAKE ISLAND Hy 24.21**	**68**		T	T	17 39 30.6	
	baz=255,slow=75,SNR=9.0						
H11N2	**WAKE ISLAND Hy 24.22**	**68**		T	T	17 39 31.4	
	baz=255,slow=75,SNR=10.0						
H11N3	**WAKE ISLAND Hy 24.23**	**68**		T	T	17 39 34.3	
	baz=255,slow=75,SNR=11						
MJAR	**Matsushiro Arr**	**24.92**	**351**	P	**P**	**17 14 27.2**	**+1.0**
	2.3nm,0.9s,baz=154,slow=8.4,SNR=3.2						
	2.3nm,0.9s						
WRA	**Warramunga Arr**	**32.78**	**195**	P	**P**	**17 15 36.0**	**-0.3**
	1.9nm,0.9s,baz=17,slow=9.0,SNR=6.8						
	1.9nm,0.9s						
ASAR	**Alice Springs**	**36.46**	**194**	P	**P**	**17 16 08.2**	**+0.1**
	0.9nm,0.9s,baz=23,slow=12,SNR=7.9						
	0.9nm,0.9s						
PETK	**Petropavlovsk-**	**42.75**	**13**	P	**P**	**17 16 58.6**	**-1.6**
	5.1nm,0.9s,baz=256,slow=6.0,SNR=3.8						
	5.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**42.97**	**284**	P	**P**	**17 17 03.7**	**+1.1**
	1.1nm,0.9s,baz=88,slow=6.2,SNR=7.7						
	1.1nm,0.9s						
SONM	**Songino Array**	**47.12**	**327**	P	**P**	**17 17 36.0**	**+0.8**
	0.3nm,0.5s,baz=148,slow=7.5,SNR=2.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**61.48**	**317**	P	**P**	**17 19 19.4**	**-0.2**
	1.2nm,1.0s,baz=101,slow=6.3,SNR=4.4						
	1.2nm,1.0s						
ZALV	**Zalesovo Beam**	**61.97**	**325**	P	**P**	**17 19 21.2**	**-1.6**
	0.4nm,0.4s,baz=114,slow=7.1,SNR=4.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**64.77**	**321**	P	**P**	**17 19 40.8**	**-0.6**
	1.5nm,0.2s,baz=106,slow=7.0,SNR=4.3						
	1.5nm,0.2s						
BVAR	**Borovoye Array**	**70.15**	**322**	P	**P**	**17 20 15.7**	**+0.3**
	0.8nm,0.4s,baz=104,slow=8.0,SNR=8.7						
	0.8nm,0.4s						
ILAR	**Eielson Array**	**70.85**	**25**	P	**P**	**17 20 18.4**	**-1.0**
	0.7nm,0.6s,baz=250,slow=5.9,SNR=15						
	0.7nm,0.6s						
YKA	**Yellowknife Ar**	**85.17**	**27**	P	**P**	**17 21 39.3**	**+0.4**
	0.3nm,0.5s,baz=295,slow=6.1,SNR=4.6						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**88.13**	**342**	P	**P**	**17 21 53.4**	**+0.1**
	1.1nm,0.7s,baz=58,slow=5.7,SNR=6.6						
	1.1nm,0.7s						
NVAR	**Mina Array Bea**	**89.36**	**51**	P	**P**	**17 22 01.4**	**+1.4**
	1.6nm,0.7s,baz=272,slow=6.7,SNR=7.7						
	1.6nm,0.7s						
FINES	**FINESS Array B**	**91.93**	**335**	P	**P**	**17 22 10.0**	**-1.1**
	6.2nm,1.0s,baz=57,slow=5.1,SNR=5.1						
	6.2nm,1.0s						

*IDC **16** 17:10:21.0±1.2, 12°.49N×142°.63E, h0km, mb4.1/6, mbtmp4.1/7, Error ellipse: s-maj=41.1km s-min=30.4km az=124.0*
ISC 16 17:10:25.0±1.0, 12°.5N±0°.2×142°.7E±0°.1, h27km, n7, σ0§88/8, mb4.0/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.42**	**62**	Pn	**Pn**	**17 11 02.4**	**-0.3**
	71nm,0.5s,baz=74,slow=19,SNR=0.8						
GUMO				Sn	**Sn**	**17 11 31.7**	**+0.2**
	4.1nm,0.3s,baz=9.1,slow=23,SNR=0.9						
ASAR	**Alice Springs**	**36.91**	**193**	P	**P**	**17 17 31.7**	**-0.1**
	0.4nm,0.8s,baz=18,slow=10,SNR=1.8						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**69.49**	**322**	P	**P**	**17 21 30.2**	**-0.9**
	0.5nm,0.5s,baz=93,slow=7.4,SNR=1.9						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**70.50**	**25**	P	**P**	**17 21 36.6**	**-0.4**
	0.6nm,0.6s,baz=249,slow=6.0,SNR=4.8						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**87.49**	**342**	P	**P**	**17 23 11.6**	**+1.6**
	4.4nm,0.9s,baz=58,slow=5.7,SNR=3.6						
	4.4nm,0.9s						
NVAR	**Mina Array Bea**	**89.29**	**51**	P	**P**	**17 23 19.8**	**+0.3**
	0.8nm,0.6s,baz=307,slow=3.5,SNR=3.7						
	0.8nm,0.6s						
FINES	**FINESS Array B**	**91.27**	**335**	P	**P**	**17 23 28.0**	**+0.2**
	5.4nm,1.1s,baz=35,slow=5.1,SNR=2.0						
	5.4nm,1.1s						

*IDC **16** 17:13:57.1±2.0, 34°.57N×78°.17E, h0km, mb3.5/4, mbtmp3.6/9, ML3.0/4, Error ellipse: s-maj=45.2km s-min=23.4km az=51.0*
*NNC **16** 17:13:59.1±4.3, 34°.72N×77°.70E, h0km, mb3.8, Error ellipse: s-maj=37.0km s-min=25.0km az=170.0*
ISC 16 17:13:58.0±1.5, 34°.5N±0°.1×77°.9E±0°.1, h10km, n12, σ1§58/15, mb3.5/4, 3C-2D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**8.54**	**343**	Pn	**Pn**	**17 16 03.9**	**+2.0**
	0.1nm,0.3s,baz=180,slow=17,SNR=2.0						
AAK				Lg	Lg	17 18 26.0	
	0.2nm,0.3s,baz=47,slow=19,SNR=2.9						
	0.3nm,0.3s						
KK31	**Karatay Array**	**10.34**	**328**	⇑P	**Pn**	**17 16 25.6**	**-0.7**
	0.4nm,0.3s,baz=139,slow=12,SNR=6.3						
KK31				⇑S	**Sn**	**17 18 19.2**	**-3.1**
	0.9nm,0.5s,baz=145,slow=22,SNR=3.9						
MAKZ	**Makanchi**	**12.66**	**13**	⇓P	**Pn**	**17 16 57.4**	**-0.7**
	3.1nm,1.2s						
MAKZ				⇓S	**Sn**	**17 19 21.7**	**+2.7**
	2.3nm,1.6s						
MK31	**Makanchi Array**	**12.70**	**14**	P	**Pn**	**17 16 58.9**	**+0.2**
	1.7nm,0.9s,baz=182,slow=9.2,SNR=15						
MK31				⇑S	**Sn**	**17 19 19.4**	**-0.7**
	2.4nm,1.0s,baz=189,slow=15,SNR=4.2						
MKAR	**Makanchi Array**	**12.70**	**14**	Pn	**Pn**	**17 16 59.1**	**+0.4**
	0.2nm,0.3s,baz=195,slow=13,SNR=10.0						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**16.10**	**1**	Pn	**Pn**	**17 17 43.5**	**-0.9**
	1.6nm,0.2s,baz=188,slow=11,SNR=1.0						
BVAR	**Borovoye Array**	**19.27**	**346**	P	**P**	**17 18 23.2**	**+0.6**
	0.1nm,0.3s,baz=157,slow=12,SNR=8.4						
	0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**20.03**	**12**	P	**P**	**17 18 30.4**	**-0.4**
	0.2nm,0.3s,baz=209,slow=11,SNR=4.2						
	0.7nm,0.6s						
AKTO	**Aktyubinsk**	**21.54**	**324**	P	**P**	**17 18 48.5**	**+1.2**
	0.8nm,0.3s,baz=110,slow=12,SNR=1.5						
	0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**24.61**	**125**	P	**P**	**17 19 17.8**	**-0.8**
	0.4nm,0.7s,baz=308,slow=9.3,SNR=4.3						
	0.4nm,0.7s						
SONM	**Songino Array**	**25.06**	**49**	P	**P**	**17 19 21.4**	**-1.2**
	0.4nm,0.5s,baz=250,slow=11,SNR=2.8						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**42.29**	**326**	P	**P**	**17 21 53.1**	**+1.7**
	3.1nm,0.9s,baz=110,slow=8.7,SNR=4.0						
	3.1nm,0.9s						

*IDC **16** 17:18:46.2±3.2, 34°.41N×78°.16E, h0km, mb3.1/3, mbtmp3.4/7, ML3.1/4, Error ellipse: s-maj=68.5km s-min=24.4km az=65.0*
*NDI **16** 17:18:55.0±1.7, 34°.76N×77°.57E, h70km±14km, ML3.6, MW3.6*
ISC 16 17:18:53.7±0.9, 34°.77N±0°.05×77°.67E±0°.07, h35km, n14, σ1§57/20, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALCI	**Alchi Leh**	**0.68**	**216**	*e*P	**Pn**	**17 19 09.8**	**+2.6**
ALCI				IAML		17 19 10.0	
	comp=N,1μm,0.3s						
ALCI				IAML		17 19 10.1	
	comp=E,872nm,0.1s						
ALCI				*e*S	**Sn**	**17 19 19.3**	**+2.5**
TSSA	**Tissa**	**2.30**	**214**	*e*P	**Pn**	**17 19 30.5**	**+1.2**
TSSA				*e*S	**Sn**	**17 19 56.6**	**+0.1**
TSSA				IAML		17 20 02.8	
	comp=E,334nm,0.9s						
TSSA				IAML		17 20 04.8	
	comp=N,424nm,0.5s						
SRNI	**Srinagar**	**2.47**	**254**	*e*P	**Pn**	**17 19 32.1**	**+0.5**
SRNI				*e*S	**Sn**	**17 19 59.4**	**-1.4**
SRNI				IAML		17 20 15.6	
	comp=E,1μm,0.5s						
SRNI				IAML		17 20 16.9	
	comp=N,630nm,0.7s						
DHRM	**DHARAMSHALA**	**2.76**	**205**	*e*P	**Pn**	**17 19 34.7**	**-0.9**
DHRM				*e*S	**Sn**	**17 20 05.6**	**-2.3**
DHRM				IAML		17 20 15.0	
	comp=E,193nm,0.8s						
DHRM				IAML		17 20 15.1	
	comp=N,202nm,0.3s						
JMU	**Jammu**	**3.08**	**231**	*e*P	**Pn**	**17 19 40.1**	**+0.2**
JMU				*e*S	**Sn**	**17 20 13.9**	**-1.7**
JMU				IAML		17 20 28.2	
	comp=N,164nm,0.7s						
JMU				IAML		17 20 28.5	
	comp=E,187nm,0.9s						
KLP	**Kalpa**	**3.26**	**171**	*e*P	**Pn**	**17 19 43.6**	**+1.0**
KLP				*e*S	**Sn**	**17 20 19.4**	**-1.0**
KLP				IAML		17 20 22.6	
	comp=E,370nm,0.9s						
KLP				IAML		17 20 26.6	
	comp=N,452nm,1.0s						
SMLA	**Simla**	**3.65**	**187**	*e*P	**Pn**	**17 19 49.2**	**+1.5**
SMLA				*e*S	**Sn**	**17 20 28.5**	**-1.1**
SMLA				IAML		17 20 38.7	
	comp=N,369nm,0.8s						
SMLA				IAML		17 20 40.5	
	comp=E,483nm,0.7s						
AAK	**Ala-Archa**	**8.24**	**343**	Pn	Pn	17 20 57.0	+6.1
	comp=E,0.2nm,0.3s,baz=170,slow=12,SNR=2.0						
AAK				Lg	Lg	17 23 17.1	
	comp=E,0.1nm,0.3s,baz=348,slow=20,SNR=2.5						
	comp=E,0.6nm,0.3s						
MKAR	**Makanchi Array**	**12.51**	**15**	Pn	**Pn**	**17 21 49.6**	**+0.4**
	comp=E,0.1nm,0.3s,baz=195,slow=13,SNR=6.9						
MKAR				Sn	**Sn**	**17 24 08.8**	**+1.5**
	baz=196,slow=24,SNR=1.3						
MKAR				Lg	Lg	17 25 28.4	
	baz=194,slow=28,SNR=1.0						
	comp=E,0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**15.86**	**2**	Pn	**Pn**	**17 22 34.9**	**+0.7**
	comp=E,0.1nm,0.3s,baz=198,slow=8.7,SNR=1.7						
	comp=E,1.1nm,0.2s						
BVAR	**Borovoye Array**	**18.97**	**346**	Pn	**Pn**	**17 23 13.7**	**+0.9**
	comp=E,0.1nm,0.3s,baz=162,slow=13,SNR=8.4						
	comp=E,1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**19.83**	**13**	P	**P**	**17 23 19.3**	**-1.8**
	comp=E,0.3nm,0.3s,baz=197,slow=9.0,SNR=2.2						
	comp=E,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**24.93**	**125**	P	P	17 24 05.8	-7.9
	comp=E,0.2nm,0.6s,baz=322,slow=8.6,SNR=4.0						
	comp=E,0.2nm,0.6s						
SONM	**Songino Array**	**25.06**	**50**	P	**P**	**17 24 12.9**	**-1.8**
	comp=E,0.3nm,0.5s,baz=238,slow=11,SNR=3.8						
	comp=E,0.3nm,0.5s						

*KRNET **16** 17:20:10.8±0.1, 41°.63N×78°.81E, mb2.3*
*SOME **16** 17:20:10.5, 41°.40N×78°.43E, h10km*
*NNC **16** 17:20:11.6±2.0, 41°.40N×78°.64E, h0km, mb3.4, mpv2.9, Error ellipse: s-maj=14.4km s-min=9.3km az=162.0*
ISC 16 17:20:11.5±2.4, 41°.44N±0°.09×78°.59E±0°.07, h2km±16km, n9, σ0§79/18, 6C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.66**	**296**	⇓*e*P	**Pb**	**17 20 25.4**	**-0.5**
TARG				⇓*e*S	**Sb**	**17 20 36.0**	**+0.3**
KDJ	**Kajisay**	**1.26**	**304**	⇑*e*P	**Pg**	**17 20 35.3**	**-0.4**
KDJ				⇑*e*S	**Sb**	**17 20 53.2**	**+0.3**
SATY	**Saty**	**1.63**	**355**	P	**Pb**	**17 20 42.4**	**+0.1**
SATY				S	**Sg**	**17 21 05.2**	**+1.4**
UZB	**Uzynbulak**	**1.74**	**10**	P	**Pb**	**17 20 43.8**	**-0.4**
	2.0nm,0.1s						
UZB				S	**Sg**	**17 21 07.6**	**+0.3**
	4.1nm,0.2s						
UZB	**Uzynbulak**	**1.74**	**10**	*e*P	**Pb**	**17 20 43.8**	**-0.4**
	2.0nm,0.1s						
UZB				*e*S	**Sg**	**17 21 07.6**	**+0.3**
	4.1nm,0.2s						
PDGK	**Podgornoye**	**2.00**	**19**	⇑Pn	**Pn**	**17 20 47.0**	**+0.6**
	2.0nm,0.5s						
PDGK				⇑Sn	**Sb**	**17 21 13.3**	**-0.8**
	6.6nm,0.8s						
KPKS	**Kokpek**	**2.03**	**2**	*e*P	**Pg**	**17 20 49.8**	**-0.5**
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	**17 21 18.0**	**+1.3**
	4.2nm,0.3s						
KNDC	**Almaty**	**2.15**	**326**	⇑Pn	**Pb**	**17 20 49.6**	**-1.6**
	7.8nm,0.3s						
KNDC				⇑Sn	**Sb**	**17 21 18.1**	**-0.1**
	12nm,0.3s						
JNKS	**Jany-Kuch**	**2.27**	**261**	⇓*e*P	**Pb**	**17 20 53.5**	**+0.2**
JNKS				⇓*e*S	**Sg**	**17 21 24.5**	**+0.1**

IDC 16 17:21:48.9±1.5, 28°.38N×105°.00E, h0km, mb3.3/3, mbtmp3.3/5, ML3.6/2, MS3.7/1, Error ellipse: s-maj=78.0km s-min=19.7km az=71.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**7.63**	**352**	Pn	Pn	17 23 40.7	-1.0
	baz=173,slow=14						
LZDM				Lg	Lg	17 25 51.9	
	baz=173,slow=26						
	1.0nm,0.4s						
SONM	**Songino Array**	**19.45**	**3**	P	P	17 26 17.5	+0.3
	0.1nm,0.3s,baz=185,slow=11,SNR=4.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**25.57**	**322**	P	P	17 27 19.7	+0.2
	0.3nm,0.6s,baz=128,slow=9.1,SNR=2.0						
	0.3nm,0.6s						
AAK	**Ala-Archa**	**28.43**	**308**	LR	LR	17 39 59.2	
	comp=Z,152nm,20.5s,baz=343,slow=38						
WRA	**Warramunga Arr**	**55.79**	**146**	P	P	17 31 27.3	-0.6
	0.4nm,0.9s,baz=321,slow=8.8,SNR=2.2						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**58.77**	**149**	P	P	17 31 49.4	+0.3
	0.3nm,0.7s,baz=335,slow=8.1,SNR=5.0						
	0.3nm,0.7s						

*NEIC **16** 17:21:43.4±2.4, 13°.8N±0°.2×53°.0E±0°.2, h10km±2km, mb4.3/22, Error ellipse: s-maj=30.6km s-min=26.7km az=224.0*
*IDC **16** 17:21:47.0±1.0, 14°.21N×53°.50E, h0km, mb4.0/21, mbtmp4.0/21, MS3.7/13, Error ellipse: s-maj=23.9km s-min=16.3km az=11.0*
*OMAN **16** 17:21:56.1±1.7, 14°.85N×53°.78E, h10km, mb2.9/3, ml3.4/5, Error ellipse: s-maj=13.8km s-min=12.1km az=134.0*
ISC 16 17:21:49.7±0.8, 14°.49N±0°.09×53°.58E±0°.08, h10km, n77, σ1§67/65, mb4.1/33, MS3.5/13, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABTO	**Aybut**	**2.86**	**355**	P	**Pn**	**17 22 36.5**	**+0.9**
ABTO				S	**Sn**	**17 23 09.6**	**-0.5**
RBK	**Rabkut**	**3.06**	**11**	P	**Pn**	**17 22 39.9**	**+1.7**
	SNR=6.8						
RBK				S	**Sn**	**17 23 14.3**	**-0.7**
DMTO	**DMTO**	**3.47**	**22**	P	**Pn**	**17 22 45.6**	**+1.7**
	SNR=7.4						
DMTO				S	**Sn**	**17 23 23.5**	**-1.5**
SHAO	**Shalim**	**4.03**	**29**	P	**Pn**	**17 22 53.3**	**+1.8**
	SNR=6.0						
SHAO				S	**Sn**	**17 23 37.5**	**-1.3**
DOK	**Doka**	**4.14**	**7**	P	**Pn**	**17 22 54.8**	**+1.7**
	SNR=5.2						
DOK				S	**Sn**	**17 23 40.7**	**-0.9**
MHTO	**MHTO**	**7.70**	**32**	P	**Pn**	**17 23 43.0**	**+1.1**
MHTO				S	**Sn**	**17 25 07.5**	**-1.7**
MZR	**Muzera**	**8.47**	**359**	P	**Pn**	**17 23 53.8**	**+1.3**
BSY	**Bisya**	**8.90**	**22**	P	**Pn**	**17 24 00.5**	**+2.0**
BSY				S	**Sn**	**17 25 34.3**	**-4.6**
JMDO	**Jabal Madar**	**8.94**	**28**	P	**Pn**	**17 24 00.7**	**+1.7**
JMDO				S	**Sn**	**17 25 35.4**	**-4.4**
SMDO	**Samad**	**9.52**	**26**	P	**Pn**	**17 24 08.3**	**+1.3**
ATD	**Arta Tunnel**	**10.86**	**256**	LR	LR	17 27 39.2	
	comp=Z,8.4nm,20.7s,baz=72,slow=33						
HRA	**Herat**	**21.30**	**20**	P	**P**	**17 26 38.6**	**+1.7**
HRA				IAmb	IAmb	17 26 44.9	
	comp=Z,8.9nm,1.0s						
EIL	**Elat**	**22.89**	**314**	LR	LR	17 35 48.8	
	comp=Z,98nm,19.5s,baz=56,slow=36						
ASF	**Jabal al Asfar**	**23.28**	**322**	LR	LR	17 36 06.7	
	comp=Z,121nm,19.1s,baz=205,slow=37						
KBL	**Kabul**	**24.36**	**32**	P	**P**	**17 27 08.6**	**+0.2**
KBL				IAmb	IAmb	17 27 13.3	
	comp=Z,5.0nm,0.9s						
MMAI	**Mount Meron Ar**	**24.77**	**321**	LR	LR	17 37 24.5	
	comp=Z,139nm,18.6s,baz=124,slow=38						
GEVA	**Gevas**	**25.49**	**341**	P	**P**	**17 27 16.2**	**-2.2**
GEVA				IAmb	IAmb	17 27 29.3	
	comp=Z,6.6nm,0.9s						
GNI	**Garni**	**26.71**	**345**	LR	LR	17 38 56.9	
	comp=Z,122nm,18.1s,baz=176,slow=38						
GNI	**Garni**	**26.71**	**345**	P	**P**	**17 27 26.1**	**-3.4**
GNI				IAmb	IAmb	17 27 46.9	
	comp=Z,22nm,1.4s						
PALK	**Pallekele**	**27.56**	**102**	LR	LR	17 36 04.0	
	comp=Z,59nm,18.6s,baz=6.0,slow=31						
KOPT	**Kop Dagi**	**27.90**	**338**	P	**P**	**17 27 40.1**	**-0.2**
KOPT				IAmb	IAmb	17 27 45.5	
	comp=Z,13nm,1.3s						
BTK	**Batken**	**29.61**	**27**	P	**P**	**17 27 57.9**	**+2.6**
BTK				IAmb	IAmb	17 28 01.5	
	comp=Z,4.1nm,0.8s						
KBZ	**Khabaz**	**30.54**	**345**	P	**P**	**17 28 02.5**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=123,slow=8.9,SNR=4.6						
	comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**30.63**	**329**	P	**P**	**17 28 06.1**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=155,slow=7.2,SNR=2.6						
BRTR				LR	LR	17 42 25.0	
	comp=Z,84nm,20.6s,baz=332,slow=40						
	comp=Z,0.4nm,0.7s						
KSH2	**Kashi**	**31.27**	**34**	P	**P**	**17 28 12.4**	**+2.4**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KK31	**Karatay Array**	**32.01**	**24**	P	**P**	**17 28 15.0**	**-1.4**
KK31				IAmb	IAmb	17 28 19.6	
	comp=Z,4.6nm,1.5s						
KKAR	**Karatay Array**	**32.01**	**24**	P	**P**	**17 28 15.8**	**-0.6**
AAK	**Ala-Archa**	**33.34**	**29**	P	**P**	**17 28 29.5**	**+1.3**
	comp=Z,2.0nm,0.9s,baz=216,slow=4.3,SNR=5.3						
	comp=Z,2.0nm,0.9s						
AAK	**Ala-Archa**	**33.34**	**29**	P	**P**	**17 28 27.9**	**-0.2**
AAK				IAmb	IAmb	17 28 32.5	
	comp=Z,2.3nm,0.9s						
OPO	**Ambohidratompo**	**33.45**	**191**	LR	LR	17 40 09.2	
	comp=Z,56nm,19.7s,baz=172,slow=33						
AB31	**Akbulak array**	**35.06**	**7**	P	**P**	**17 28 43.6**	**+0.8**
AB31				IAmb	IAmb	17 28 50.9	
	comp=Z,3.0nm,0.8s						
ABKAR	**Akbulak array**	**35.06**	**7**	P	**P**	**17 28 44.2**	**+1.4**
AKTO	**Aktyubinsk**	**36.03**	**5**	P	**P**	**17 28 52.9**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=196,slow=10,SNR=5.7						
	comp=Z,0.8nm,0.3s						
LSA	**Lhasa**	**37.77**	**60**	P	**P**	**17 29 05.0**	**-1.8**

	comp=Z,162nm,19.7s,baz=331,slow=42							
KEST	**Kesra**	**44.83**	**306**	P		**P**	**17 30 05.5**	**+1.2**
	comp=Z,3.7nm,0.9s,baz=60,slow=1.6,SNR=5.6							
	comp=Z,3.7nm,0.9s							
MURB	**Monte Urbino**	**45.30**	**318**	P		P	17 30 01.6	-6.3
TRI	**Trieste**	**45.68**	**321**			P	17 30 03.9	-6.8
ZAA0	**Zalesovo Array**	**46.37**	**25**			**P**	**17 30 15.9**	**-0.1**
ZALV	**Zalesovo Beam**	**46.37**	**25**	P		**P**	**17 30 16.4**	**+0.4**
	comp=Z,4.8nm,0.6s,baz=236,slow=7.7,SNR=28							
	comp=Z,4.8nm,0.6s							
ZALV	**Zalesovo Beam**	**46.37**	**25**			**P**	**17 30 16.1**	**+0.1**
PZH	**PanZhiHua**	**46.43**	**67**	P		P	**17 30 18.3**	**+1.2**
FUORN	**Ofenpass-Fuorn**	**48.25**	**321**	P		P	17 30 25.8	-5.4
DAVOX	**Davos/Dischmat**	**48.56**	**321**	LR		LR	17 52 26.7	
	comp=Z,211nm,19.5s,baz=331,slow=38							
LZDM	**Lanzhou Array**	**49.52**	**55**	P		**P**	**17 30 41.1**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=242,slow=11,SNR=4.3							
	comp=Z,0.5nm,0.3s							
TORD	**Torodi Ar. Bea**	**50.31**	**275**	P		**P**	**17 30 45.7**	**-1.4**
	comp=Z,1.8nm,1.1s,baz=106,slow=3.1,SNR=4.6							
	comp=Z,1.8nm,1.1s							
FINES	**FINESS Array B**	**50.89**	**343**	P		**P**	**17 30 51.1**	**+0.4**
	comp=Z,6.5nm,1.0s,baz=150,slow=7.9,SNR=9.5							
	comp=Z,6.5nm,1.0s							
FINES	**FINESS Array B**	**50.89**	**343**	P		**P**	**17 30 47.9**	**-2.8**
SONM	**Songino Array**	**54.68**	**41**	P		**P**	**17 31 20.6**	**+1.4**
	comp=Z,1.6nm,0.9s,baz=237,slow=10,SNR=9.4							
	comp=Z,1.6nm,0.9s							
MDT	**Midelt**	**55.66**	**300**	P		**P**	**17 31 26.1**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=106,slow=6.6,SNR=3.7							
	comp=Z,1.6nm,1.0s							
ESDC	**Sonseca Array**	**55.99**	**308**	P		**P**	**17 31 27.5**	**-1.3**
	comp=Z,2.4nm,1.0s,baz=87,slow=6.4,SNR=8.6							
	comp=Z,2.4nm,1.0s							
SUR	**Sutherland**	**56.17**	**213**	LR		LR	17 55 12.6	
	comp=Z,50nm,18.9s,baz=8.5,slow=36							
HHC	**Hu-ho-hao-te**	**56.53**	**50**	*eP*		**P**	**17 31 35.8**	**+3.2**
HHC				pmax	pmax			
	comp=Z,3.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,220nm,5.5s							
ARCES	**ARCESS Array B**	**57.77**	**349**	P		**P**	**17 31 40.8**	**+0.1**
	comp=Z,4.0nm,1.0s,baz=141,slow=7.8,SNR=7.4							
	comp=Z,4.0nm,1.0s							
H01W3	**Cape Leeuwin H**	**75.53**	**132**	T		T	18 56 02.2	
	baz=300							
H01W2	**Cape Leeuwin H**	**75.54**	**132**	T		T	18 56 03.0	
	baz=300							
H01W1	**Cape Leeuwin H**	**75.55**	**132**	T		T	18 56 07.4	
	baz=300							
SEY	**Seymchan**	**81.18**	**27**	P		**P**	**17 34 05.6**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=265,slow=7.0,SNR=5.4							
	comp=Z,1.3nm,0.7s							
WRA	**Warramunga Arr**	**86.44**	**112**	P		**P**	**17 34 31.4**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=294,slow=3.7,SNR=6.4							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**87.13**	**115**	P		**P**	**17 34 35.2**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=292,slow=5.0,SNR=12							
	comp=Z,0.6nm,0.6s							
STKA	**Stephens Creek**	**95.86**	**121**	LR		LR	18 12 40.2	
	comp=Z,54nm,19.1s,baz=345,slow=32							

AZER ***16*** *17:51:27.9,38.˚74N×48.˚62E,h9km,ml3.3*
TIF ***16*** *17:51:28.1,38.˚69N×48.˚69E,h29km*
TEH ***16*** *17:51:28.9,38.˚67N×48.˚71E,h26km±12km,ML3.5, Presumed earthquake*

ISC 16 17:51:29.5±0.9,38.˚67N±0.˚02×48.˚66E±0.˚02,h18km±3km, n62,σ1§09/97,2C-1D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKRN	**Lenkeran, Azer**	**0.10**	**65**	Pg	**Pg**	**17 51 33.2**	**0.0**
LKRN	**Lenkeran, Azer**	**0.10**	**65**	P	**Pg**	**17 51 33.2**	**0.0**
LKRN				S	**Sg**	**17 51 36.4**	**+0.7**
ASTR	**Astara**	**0.15**	**135**	Pg	**Pg**	**17 51 34.0**	**+0.3**
ASTR	**Astara**	**0.15**	**135**	P	**Pg**	**17 51 34.0**	**+0.3**
ASTR				S	**Sg**	**17 51 38.2**	**+1.6**
LRK	**Lerik**	**0.25**	**265**	Pg	**Pb**	**17 51 35.7**	**+0.3**
LRK	**Lerik**	**0.25**	**265**	P	**Pb**	**17 51 35.7**	**+0.3**
LRK				S	**Sg**	**17 51 40.7**	**+1.4**
GAS1	**Astara - Iran**	**0.31**	**153**	Pg	**Pg**	**17 51 36.2**	**0.0**
GAS1				Sg	**Sb**	**17 51 41.9**	**+0.6**
YRD	**Yardimli**	**0.41**	**308**	Pg	**Pg**	**17 51 37.6**	**-0.4**
YRD	**Yardimli**	**0.41**	**308**	P	**Pg**	**17 51 37.6**	**-0.4**
YRD				S	**Sg**	**17 51 44.1**	**+0.3**
GLBA	**Clilabad**	**0.61**	**340**	Pg	**Pb**	**17 51 40.6**	**-1.0**
GLBA	**Clilabad**	**0.61**	**340**	P	**Pb**	**17 51 40.7**	**-1.0**
GLBA				S	**Sb**	**17 51 50.3**	**+0.5**
ISRB	**Sarab**	**1.15**	**223**	Pg	**Pn**	**17 51 50.5**	**-0.3**
ISRB				Sg	**Sg**	**17 52 06.8**	**0.0**
CSN1	**Caspian**	**1.15**	**162**	Pg	**Pn**	**17 51 49.9**	**-0.8**
SAAT	**Saatly**	**1.21**	**351**	Pg	**Pn**	**17 51 51.3**	**-0.1**
SAAT	**Saatly**	**1.21**	**351**	P	**Pn**	**17 51 51.3**	**-0.1**
SAAT				S	**Sg**	**17 52 08.8**	**+0.2**
QRD	**Qoradiz**	**1.31**	**308**	P	**Pn**	**17 51 52.1**	**-0.7**
QRD				S	**Sn**	**17 52 09.8**	**-0.1**
IHRS	**Heris**	**1.31**	**255**	Pg	**Pn**	**17 51 53.0**	**-0.1**
ALIB	**&Aumlli-Bayram**	**1.32**	**12**	Pg	**Pn**	**17 51 53.6**	**+0.7**
ALIB	**&Aumlli-Bayram**	**1.32**	**12**	P	**Pn**	**17 51 53.7**	**+0.7**
ALIB				S	**Sb**	**17 52 11.1**	**+0.9**
BLQ	**Beylaqan**	**1.36**	**321**	P	**Pn**	**17 51 52.5**	**-1.0**
BLQ				S	**Sn**	**17 52 10.9**	**-0.1**
KDMR	**Kurdemir**	**1.75**	**348**	Pg	**Pn**	**17 51 58.6**	**-0.3**
KDMR	**Kurdemir**	**1.75**	**348**	Pn	**Pn**	**17 51 58.9**	**+0.1**
KDMR				Sn	**Sb**	**17 52 22.6**	**0.0**
IHSH	**Hashtrud**	**1.75**	**219**	Pg	**Pn**	**17 51 60.0**	**+0.7**
AGDM	**Agdam**	**1.88**	**321**	Pn	**Pn**	**17 52 00.7**	**0.0**
AGDM				Sn	**Sb**	**17 52 25.6**	**-0.7**
GBS	**Qobustan**	**1.88**	**7**	Pn	**Pb**	**17 52 04.3**	**+1.0**
GBS				Sg	**Sb**	**17 52 28.4**	**+1.9**
BRDA	**Brd**	**1.96**	**325**	Pn	**Pn**	**17 52 02.4**	**+0.5**
BRDA				Sg	**Sb**	**17 52 30.2**	**+1.4**
ZNJK	**Zanjan**	**1.99**	**179**	Pn	**Pn**	**17 52 02.5**	**0.0**
ITBZ	**Tabriz**	**2.02**	**258**	Pn	**Pn**	**17 52 03.3**	**+0.5**
ORD	**Ordubad**	**2.10**	**278**	Pn	**Pn**	**17 52 04.5**	**+0.8**
ORD				Sn	**Sb**	**17 52 32.8**	**0.0**
PQL	**Pirkuli**	**2.12**	**359**	Pn	**Pn**	**17 52 04.0**	**-0.2**
PQL				Sn	**Sb**	**17 52 33.7**	**+0.2**
IML	**Ismayilli**	**2.15**	**350**	Pn	**Pn**	**17 52 05.0**	**+0.5**
IML				Sn	**Sb**	**17 52 34.6**	**+0.2**
ATGJ	**Altiaghaj**	**2.20**	**6**	Pn	**Pb**	**17 52 09.3**	**+0.5**
ATGJ				Sn	**Sb**	**17 52 35.0**	**-0.9**
IMRD	**Marand**	**2.31**	**272**	Pn	**Pn**	**17 52 08.1**	**+1.3**
IAZR	**Azarshahr**	**2.33**	**246**	Pn	**Pn**	**17 52 08.4**	**+1.2**
QBL	**Gabala**	**2.36**	**345**	Pn	**Pn**	**17 52 07.4**	**0.0**
QBL				Sn	**Sn**	**17 52 36.5**	**+0.5**
SIZA	**Siyzn**	**2.41**	**4**	Pn	**Pn**	**17 52 09.3**	**+1.1**
SIZA				Sn	**Sb**	**17 52 40.9**	**-1.0**
ISHB	**Shabestar**	**2.42**	**262**	Pn	**Pn**	**17 52 08.7**	**+0.4**
MNGR	**Mingechevir, A**	**2.43**	**331**	Pn	**Pn**	**17 52 09.1**	**+0.9**
MNGR				Sn	**Sb**	**17 52 40.4**	**-1.8**
NAX	**Nakhchivan**	**2.52**	**283**	Pn	**Pb**	**17 52 12.6**	**-1.6**
NAX				Sn	**Sb**	**17 52 43.6**	**-1.2**
SBZ	**Shahbuz**	**2.52**	**288**	Pn	**Pn**	**17 52 10.5**	**+0.8**
SBZ				Sg	**Sb**	**17 52 46.1**	**+1.0**
XNQ	**Khinaliq**	**2.53**	**351**	Pn	**Pn**	**17 52 09.2**	**-0.7**
XNQ				Sn	**Sn**	**17 52 41.9**	**+1.5**
IGZV	**Ghazvin**	**2.59**	**151**	Pn	**Pn**	**17 52 10.1**	**-0.7**
GANJ	**Ganja**	**2.68**	**318**	Pn	**Pn**	**17 52 11.1**	**-0.6**
GANJ				Sn	**Sn**	**17 52 42.7**	**-1.0**
QUBA	**Quba, Azerbaij**	**2.69**	**357**	Pn	**Pn**	**17 52 12.1**	**+0.3**
QUBA				Sn	**Sn**	**17 52 46.0**	**+2.0**
SEKA	**Sheki**	**2.78**	**337**	Pn	**Pn**	**17 52 12.7**	**-0.4**
SEKA				Sn	**Sn**	**17 52 47.0**	**+0.8**
QSAR	**Qusar**	**2.86**	**354**	Pg	**Pb**	**17 52 18.1**	**-1.9**
QSAR				Sg	**Sb**	**17 52 56.0**	**+1.3**
GDB	**GEDABAY**	**3.04**	**313**	Pn	**Pn**	**17 52 17.0**	**+0.2**
GDB				Sn	**Sn**	**17 52 53.5**	**+0.7**
VSHL	**Vashlovani**	**3.09**	**327**	P	**Pn**	**17 52 18.2**	**+0.7**
VSHL				S	**Sn**	**17 52 54.5**	**+0.5**
HYR	**Heyderabad**	**3.14**	**291**	Pg	**Pb**	**17 52 23.1**	**-1.7**
HYR				Sg	**Sb**	**17 53 06.3**	**+3.6**
MAKU	**Maku**	**3.17**	**284**	Pn	**Pn**	**17 52 19.7**	**+1.0**
MZPU	**Pul - Mazandar**	**3.21**	**133**	Pn	**Pn**	**17 52 18.3**	**-0.9**
ZKTA	**Zakatala**	**3.35**	**333**	Pn	**Pn**	**17 52 22.0**	**+1.0**
ZKTA				Sn	**Sn**	**17 53 02.1**	**+1.8**
DDFL	**Dedoflistskaro**	**3.39**	**326**	P	**Pn**	**17 52 23.7**	**+2.1**
QZX	**Qazax, Azerbai**	**3.48**	**314**	Pg	**Pb**	**17 52 28.0**	**-2.5**
QZX				Sg	**Sb**	**17 53 12.2**	**-0.2**
LGD	**Lagodekhi**	**3.67**	**330**	P	**Pn**	**17 52 25.7**	**+0.4**
DGRG	**David-gareji**	**3.75**	**319**	P	**Pn**	**17 52 27.9**	**+1.4**
IPRN	**Peran**	**3.80**	**128**	Pn	**Pn**	**17 52 26.4**	**-0.8**
CHRG	**Chargali**	**4.63**	**323**	P	**Pn**	**17 52 38.7**	**0.0**
CHRG				S	**Sn**	**17 53 29.6**	**-2.5**
IGLO	**Ghaloghah**	**4.64**	**116**	Pn	**Pn**	**17 52 38.0**	**-0.8**
SHTL	**Shatili**	**4.79**	**327**	P	**Pn**	**17 52 41.2**	**+0.3**
AB31	**Akbulak array**	**13.33**	**34**	P	**Pn**	**17 54 34.6**	**-3.0**
	0.2nm,0.4s,baz=214,slow=13,SNR=4.8							
AB31				⇑S	Sn	17 56 49.1	-16	
	1.0nm,0.7s,baz=212,slow=24,SNR=7.8							
AKTO	**Aktyubinsk**	**13.51**	**26**	⇓P	**Pn**	**17 54 42.1**	**+2.0**	
	3.4nm,1.2s							
AKTO				⇑S	Sn	17 56 58.8	-11	
	5.1nm,1.6s							

NSSP ***16*** *18:02:11.7,38.˚45N×44.˚57E,h10km,Ms4.6*
GII ***16*** *18:02:12.9±0.0,38.˚41N×44.˚57E,h0km,confirmed*
BJI ***16*** *18:02:13.0,38.˚40N×44.˚50E,h10km,mB5.1/6,mb4.6/43*
THR ***16*** *18:02:13.5±0.0,38.˚55N×44.˚44E,h10km±10km,ML4.5, Presumed earthquake*
TEH ***16*** *18:02:13.8,38.˚46N×44.˚53E,h5km±73km,ML4.4, Presumed earthquake*
IDC ***16*** *18:02:13.5±0.5,38.˚45N×44.˚38E,h0km,mb4.3/31, mbtmp4.3/42,ML4.1/8,MS3.7/24,Error ellipse: s-maj=8.9km s-min=7.1km az=131.0*
ISK ***16*** *18:02:13.9,38.˚39N×44.˚44E,h5km,ML4.7/12*
MOS ***16*** *18:02:14.3±1.2,38.˚44N×44.˚44E,h12km,mb4.8/27,Error ellipse: s-maj=5.2km s-min=3.6km az=94.2*
DSN ***16*** *18:02:14.8±4.7,38.˚33N×43.˚96E,h22km±46km,mb4.8/13, Error ellipse: s-maj=17.7km s-min=7.4km az=71.0*
NEIC ***16*** *18:02:15.4±2.2,38.˚52N±0.˚05×44.˚39E±0.˚05,h10km±1km, mb4.7/102,Error ellipse: s-maj=7.8km s-min=6.9km az=357.0*
AFAD ***16*** *18:02:15.0,38.˚42N×44.˚37E,h7km±4km,MW4.6*
AZER ***16*** *18:02:16.0,38.˚48N×44.˚54E,h2km,ml4.7*
MCSM ***16*** *18:02:16.4±0.4,38.˚N±7.˚×4.˚5E±.˚,h10km,mb4.5,mB4.4, MLv4.9,Mw(mB)3.6*

ISC 16 18:02:14.4±0.8,38.˚46N±0.˚02×44.˚47E±0.˚01,h4km±5km, n561,σ1§49/592,mb4.6/118,MS3.8/22,55C-44D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**299**	P	**Pg**	**18 02 23.0**	**+0.4**
TVAN	**Van**	**0.83**	**275**	P	**Pg**	**18 02 29.1**	**-1.4**
VANB	**Van**	**0.86**	**279**	Pg	**Pg**	**18 02 30.9**	**0.0**
VANB				Sg	**Sb**	**18 02 43.0**	**-0.8**
VANB	**Van**	**0.86**	**279**	Pg	**Pb**	**18 02 31.1**	**-0.8**
VMUR	**Van-Muradiye**	**0.88**	**307**	P	**Pb**	**18 02 32.1**	**-0.3**
VMUR				S	**Sb**	**18 02 43.7**	**-0.9**
VMUR				IAML		18 02 55.0	
	comp=E,9μm,0.8s						
VMUR	**Van-Muradiye**	**0.88**	**307**	Pg	**Pb**	**18 02 32.1**	**-0.3**
YOVA	**Hakkari_Yksek**	**0.88**	**189**	P	**Pg**	**18 02 31.5**	**+0.2**
YOVA				S	**Sg**	**18 02 43.4**	**+0.6**
YOVA				IAML		18 02 51.0	
	comp=N,1μm,0.5s						
YOVA	**Hakkari_Yksek**	**0.88**	**189**	Pg	**Pg**	**18 02 31.5**	**+0.2**
MAKU	**Maku**	**0.91**	**11**	Pg	**Pg**	**18 02 30.7**	**-1.3**
MAKU				Sg	**Sg**	**18 02 44.1**	**+0.3**
ISHB	**Shabestar**	**0.92**	**101**	Pg	**Pg**	**18 02 30.0**	**-2.1**
IMRD	**Marand**	**1.00**	**75**	Pg	**Pg**	**18 02 32.0**	**-1.6**
ERCV	**ERCIS-VAN**	**1.04**	**303**	Pg	**Pn**	**18 02 35.5**	**-0.6**
ERCV				Sg	**Sn**	**18 02 51.2**	**0.0**
ERCV	**ERCIS-VAN**	**1.04**	**303**	P	**Pn**	**18 02 35.4**	**-0.6**
NAX	**Nakhchivan**	**1.07**	**48**	PG	**Pg**	**18 02 34.1**	**-0.9**
NAX	**Nakhchivan**	**1.07**	**48**	P	**Pg**	**18 02 34.1**	**-0.9**
NAX				S	**Sb**	**18 02 50.1**	**+0.1**
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**18 02 34.3**	**-0.9**
HAKT				S	**Sn**	**18 02 51.6**	**-0.5**
HAKT				IAML		18 03 01.0	
	comp=N,8μm,0.4s						
HAKT	**HAKKARI**	**1.08**	**214**	Pg	**Pg**	**18 02 34.3**	**-0.9**
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**18 02 34.2**	**-0.9**
HAKT				S	**Sn**	**18 02 52.7**	**+0.5**
GEVA	**Gevas**	**1.12**	**263**	Pn	**Pg**	**18 02 33.2**	**-2.6**
GEVA				Sn	**Sn**	**18 02 52.2**	**-0.7**
GEVA	**Gevas**	**1.12**	**263**	P	**Pg**	**18 02 33.8**	**-2.1**
GEVA				S	**Sb**	**18 02 50.8**	**-0.5**
GEVA				IAML		18 02 55.0	
	comp=N,1μm,0.4s						
AKDM	**Akdamar-Van**	**1.18**	**264**	Pn	**Pg**	**18 02 35.8**	**-1.2**
AKDM				Sn	**Sn**	**18 02 53.7**	**-0.7**
DYDN	**Diyadin**	**1.24**	**331**	P	**Pb**	**18 02 38.4**	**-0.2**
DYDN				S	**Sb**	**18 02 54.7**	**-0.3**
DYDN				IAML		18 03 00.0	
	comp=N,7μm,0.6s						
DYDN	**Diyadin**	**1.24**	**331**	Pg	**Pb**	**18 02 38.4**	**-0.2**
SBZ	**Shahbuz**	**1.26**	**42**	P	**Pg**	**18 02 37.3**	**-1.4**
SBZ				S	**Sn**	**18 02 57.5**	**+1.0**
ORD	**Ordubad**	**1.28**	**68**	P	**Pg**	**18 02 37.7**	**-1.3**
ORD				S	**Sg**	**18 02 56.0**	**+0.3**
HYR	**Heyderabad**	**1.29**	**13**	P	**Pg**	**18 02 38.0**	**-1.2**
HYR				S	**Sn**	**18 02 58.7**	**+1.6**
ITBZ	**Tabriz**	**1.34**	**99**	Pg	**Pn**	**18 02 37.5**	**-2.6**
CUKT	**Cukurca**	**1.39**	**210**	Pn	**Pn**	**18 02 40.1**	**-0.7**
CUKT	**Cukurca**	**1.39**	**210**	P	**Pg**	**18 02 41.2**	**+0.1**
CUKT				S	**Sn**	**18 03 00.7**	**+1.2**
CUKT				IAML		18 03 07.0	
	comp=N,2μm,1.2s						
CUKT	**Cukurca**	**1.39**	**210**	Pg	**Pn**	**18 02 40.0**	**-0.7**
ADCV	**BITLIS_Adilcev**	**1.41**	**285**	P	**Pn**	**18 02 40.4**	**-0.7**
ADCV				S	**Sn**	**18 03 01.8**	**+1.7**
ADCV				IAML		18 03 07.0	
	comp=N,5μm,0.9s						
ADCV	**BITLIS_Adilcev**	**1.41**	**285**	Pg	**Pn**	**18 02 40.3**	**-0.7**
IAZR	**Azarshahr**	**1.43**	**123**	Pg	**Pn**	**18 02 40.0**	**-1.4**
IGDI	**IGDIR**	**1.44**	**348**	P	**Pn**	**18 02 40.9**	**-0.5**
IGDI				S	**Sb**	**18 02 57.7**	**-2.9**
IGDI				IAML		18 03 05.0	
	comp=N,4μm,1.1s						
IGDI	**IGDIR**	**1.44**	**348**	Pg	**Pn**	**18 02 40.9**	**-0.5**
IGDI	**IGDIR**	**1.44**	**348**	P	**Pb**	**18 02 41.6**	**-0.3**
IGDI				S	**Sn**	**18 03 02.3**	**+1.5**
VAYK	**Vayk**	**1.44**	**31**	*i* P	**Pn**	**18 02 40.2**	**-1.3**
VAYK				*i* S	**Sb**	**18 02 58.7**	**-2.0**
ALVK	**Alvank**	**1.55**	**71**	*e*P	**Pn**	**18 02 41.5**	**-1.3**
ALVK				*e*S	**Sn**	**18 03 01.4**	**-2.1**
AGRB	**Hanur-Agry**	**1.60**	**315**	Pn	**Pb**	**18 02 44.2**	**-0.5**
AGRB				Sn	**Sg**	**18 03 07.3**	**+1.4**
AGRB	**Hanur-Agry**	**1.60**	**315**	Pg	**Pn**	**18 02 43.7**	**0.0**
PERV	**Siirt/Pervari-**	**1.60**	**252**	P	**Pb**	**18 02 43.9**	**-0.7**
PERV				S	**Sg**	**18 03 08.4**	**+2.6**
PERV				IAML		18 03 17.0	
	comp=E,2μm,0.5s						
DORK	**Agr/Tutak/Do**	**1.61**	**306**	P	**Pb**	**18 02 44.2**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.65**	**295**	Pn	**Pb**	**18 02 45.2**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.66**	**324**	P	**Pb**	**18 02 45.0**	**-0.7**
GNI	**Garni**	**1.70**		Pg	**Pg**	**18 02 46.7**	**-0.3**
	250nm,0.3s,baz=235,slow=2.2,SNR=804						
GNI				Lg	Lg	18 03 09.0	
	150nm,0.3s,baz=159,slow=15,SNR=6.2						
GNI				LR	LR	18 03 15.3	
	comp=Z,418nm,18.3s,baz=176,slow=36						
GNI	**Garni**	**1.70**	**7**		**Pn**	**18 02 44.7**	**-0.4**
GNI	**Garni**	**1.70**	**7**	Pn	**Pb**	**18 02 46.5**	**+0.1**
GNI				Sn	**Sg**	**18 03 11.1**	**+2.0**
GNI	**Garni**	**1.70**	**7**	⇑*i* P	**Pb**	**18 02 46.0**	**-0.4**
GNI				⇑*i* S	**Sg**	**18 03 08.6**	**-0.5**
GNI	**Garni**	**1.70**	**7**	P	**Pn**	**18 02 45.3**	**+0.2**
GNI	**Garni**	**1.70**	**7**	PN	**Pn**	**18 02 44.7**	**-0.4**
GNI	**Garni**	**1.70**	**7**	P	**Pb**	**18 02 46.4**	**0.0**
GNI				S	**Sg**	**18 03 10.5**	**+1.4**
GNI	**Garni**	**1.70**	**7**	Pn	**Pb**	**18 02 46.0**	**-0.4**
GNI	**Garni**	**1.70**	**7**	Pg	**Pn**	**18 02 45.2**	**+0.2**
METS	**Metsamor**	**1.71**	**350**	*e*P	**Pn**	**18 02 45.5**	**+0.3**
METS				*e*S	**Sg**	**18 03 09.3**	**-0.2**
VNNZ	**Vanand**	**1.72**	**343**	*e*P	**Pb**	**18 02 46.5**	**-0.1**
VNNZ				*e*S	**Sg**	**18 03 12.0**	**+2.4**
GRS	**Goris**	**1.79**	**54**	⇓*i* P	**Pn**	**18 02 45.0**	**-1.2**
GRS				⇑*i* S	**Sg**	**18 03 12.0**	**+0.1**
EGVZ	**Egvard**	**1.79**	**64**	*e*P	**Pn**	**18 02 45.9**	**-0.3**
EGVZ				*e*S	**Sb**	**18 03 10.4**	**-0.4**
ARUZ	**Aruch**	**1.84**	**351**	*e*P	**Pn**	**18 02 47.6**	**+0.6**
ARUZ				*e*S	**Sg**	**18 03 13.7**	**-0.1**
BLIS	**Bitlis-Merkez**	**1.85**	**269**	P	**Pb**	**18 02 47.8**	**-1.1**
BLIS	**Bitlis-Merkez**	**1.85**	**269**	Pn	**Pb**	**18 02 47.7**	**-1.1**
KAPZ	**Kaputan**	**1.87**	**5**	*e*P	**Pn**	**18 02 48.0**	**+0.7**
KAPZ				*e*S	**Sg**	**18 03 14.4**	**-0.1**
SIRN	**Sırnak**	**1.89**	**240**	P	**Pg**	**18 02 50.0**	**-0.6**
SIRN				S	**Sg**	**18 03 17.3**	**+2.2**
SIRN				IAML		18 03 25.0	
	comp=E,7μm,0.7s						
SIRN	**Sırnak**	**1.89**	**240**	Pn	**Pg**	**18 02 50.0**	**-0.6**
GURO	**Guroymak-BITLI**	**1.91**	**273**		**Pn**	**18 02 47.5**	**-0.5**
GURO	**Guroymak-BITLI**	**1.91**	**273**	Pn	**Pn**	**18 02 48.2**	**+0.3**
AMBZ	**Amberd**	**1.93**	**355**	*e*P	**Pn**	**18 02 49.0**	**+0.7**
AMBZ				*e*S	**Sg**	**18 03 16.5**	**0.0**
AYRK	**Ayrk**	**1.94**	**31**	*e*P	**Pn**	**18 02 48.9**	**+0.4**
AYRK				*e*S	**Sb**	**18 03 15.3**	**0.0**
MAHB	**Mahabad**	**1.96**	**149**	Pn	**Pb**	**18 02 49.6**	**-1.1**
IHRS	**Heris**	**2.03**	**93**	Pn	**Pn**	**18 02 49.9**	**+0.2**
SRTM	**Siirt_Merkez**	**2.06**	**258**	P	**Pb**	**18 02 52.8**	**+0.3**
SRTM				S	**Sg**	**18 03 19.7**	**-0.8**
SRTM				IAML		18 03 31.0	
	comp=N,9μm,0.9s						
DIGO	**Kars**	**2.13**	**337**	P	**Pb**	**18 02 52.2**	**-1.5**
EAK	**Akyaka**	**2.32**	**344**	P	**Pb**	**18 02 56.3**	**-0.6**
MUSM	**Mu-Merkez**	**2.33**	**277**	P	**Pb**	**18 02 56.6**	**-0.5**
SRSL	**SARDASHT**	**2.37**	**161**	*e*Pn	**Pb**	**18 02 56.3**	**-1.5**
SRSL				IAML		18 03 40.8	
	comp=Z,2μm,1.0s						
KARS	**Kars**	**2.42**	**334**		**Pn**	**18 02 56.2**	**+1.3**
KARS	**Kars**	**2.42**	**334**	Pn	**Pb**	**18 02 56.8**	**-1.8**
KARS	**Kars**	**2.42**	**334**	PN	**Pn**	**18 02 56.2**	**+1.3**
BOZK	**Kars-Merkez-Bo**	**2.42**	**332**	P	**Pb**	**18 02 57.7**	**-1.0**
QRD	**Qoradiz**	**2.44**	**65**	P	**Pn**	**18 02 56.2**	**+1.2**
QRD				S	**Sn**	**18 03 26.2**	**+0.9**
VRTB	**Varto-Mus**	**2.45**	**287**	Pn	**Pn**	**18 02 56.8**	**+1.4**
VRTB	**Varto-Mus**	**2.45**	**287**	P	**Pb**	**18 02 59.1**	**-0.1**
GDB	**GEDABAY**	**2.47**	**23**	P	**Pn**	**18 02 56.5**	**+0.9**
GDB				S	**Sb**	**18 03 29.4**	**-0.9**
IHSH	**Hashtrud**	**2.49**	**117**	Pn	**Pn**	**18 02 56.9**	**+0.8**
LSVT	**Lusahovit**	**2.52**	**13**	*e*P	**Pn**	**18 02 57.6**	**+1.4**
LSVT				*e*S	**Sb**	**18 03 31.7**	**+0.1**
HOMI	**Horasan**	**2.54**	**309**	P	**Pb**	**18 03 01.6**	**+0.8**
BTMN	**Batman**	**2.58**	**258**	P	**Pn**	**18 02 58.0**	**+0.9**
SRTK	**Saratovka**	**2.61**	**358**	*e*P	**Pb**	**18 03 01.3**	**-0.5**
SRTK				*e*S	**Sg**	**18 03 40.2**	**+2.0**
GANJ	**Ganja**	**2.61**	**33**	PN	**Pn**	**18 02 58.3**	**+0.9**
GANJ	**Ganja**	**2.61**	**33**	P	**Pn**	**18 02 58.4**	**+0.9**
GANJ				S	**Sb**	**18 03 32.1**	**-2.2**
AGDM	**Agdam**	**2.63**	**50**	P	**Pb**	**18 02 58.2**	**+0.5**
AGDM				S	**Sn**	**18 03 30.8**	**+0.8**
SENK	**Senkaya-Erzuru**	**2.66**	**323**	Pn	**Pb**	**18 03 00.3**	**-2.5**
QZX	**Qazax, Azerbai**	**2.69**	**15**	P	**Pn**	**18 02 59.7**	**+1.2**
QZX				S	**Sb**	**18 03 34.6**	**-1.9**
BLQ	**Beylaqan**	**2.72**	**61**	P	**Pn**	**18 03 00.1**	**+1.2**
BL

KIV Kislovodsk 5.65 347 P Pn 18 03 44.0 +4.7
GAZ Gaziantep 5.89 260 Pn **Pn** **18 03 41.8 -0.7**
ASAO Ashtian 5.94 129 *e*Pn **Pn** **18 03 46.4 +3.0**
ASAO IAML 18 06 00.3
comp=Z,92nm,1.0s
SOC Sochi 6.25 326 *e*P **Pn** **18 03 49.1 +1.7**
SOC *e* 18 05 01.8
SOC pmax pmax
comp=Z,17nm,0.8s
SOC MLR MLR
comp=Z,605nm,12.0s
BEIL Beino 7.73 242 *e*P **Pn** **18 04 09.5 +1.7**
ZAHL Zahle 8.32 239 *e*P **Pn** **18 04 19.4 +3.5**
BHL Bhannes 8.45 240 *e*P **Pn** **18 04 20.2 +2.5**
BR131 Keskin Array S 8.52 282 **Pn** **18 04 18.2 -0.4**
BR131 Keskin Array S 8.52 282 P **Pn** **18 04 18.3 -0.4**
BR131 Keskin Array S 8.52 282 P **Pn** **18 04 22.3 +3.7**
BRTR Keskin Array B 8.52 282 Pn **Pn** **18 04 21.2 +2.5**
comp=Z,1.6nm,0.8s,baz=104,slow=12,SNR=26
BRTR Lg Lg 18 06 43.1
baz=126,slow=27,SNR=1.4
BRTR LR LR 18 07 34.2
comp=Z,348nm,20.4s,baz=96,slow=38
BR105 Keskin Array S 8.53 282 Pn **Pn** **18 04 21.7 +2.8**
comp=Z,92nmcomp=Z,10nm,1.1s
RCY Rachaya 8.57 237 *e*P **Pn** **18 04 21.1 +1.7**
DQRL Deir Qamar 8.62 239 *e*P **Pn** **18 04 24.4 +4.3**
QRWL Qaraoun 8.64 238 *e*P **Pn** **18 04 22.9 +2.6**
ILGA Ilgaz 8.68 291 Pn **Pn** **18 04 19.1 -1.8**
ASF Jabal al Asfar 8.81 227 Pn **Pn** **18 04 22.6 -0.1**
comp=Z,2.0nm,0.3s,baz=17,slow=6.4,SNR=13
ASF Lg Lg 18 06 51.2
comp=Z,1.4nm,0.3s,baz=77,slow=21,SNR=2.5
comp=Z,4.8nm,0.3s
GEM Giv'at Ha'Em 8.86 236 P **Pn** **18 04 23.2 -0.1**
KSHT Keshet 8.91 235 P **Pn** **18 04 23.6 -0.3**
MMA0B Mount Meron ar 9.15 236 P **Pn** **18 04 26.9 -0.4**
MMAI Mount Meron Ar 9.15 236 Pn **Pn** **18 04 27.9 +0.6**
comp=Z,2.5nm,0.3s,baz=58,slow=17,SNR=11
MMAI Lg Lg 18 07 00.8
comp=Z,0.8nm,0.3s,baz=57,slow=27,SNR=2.4
comp=Z,2.7nm,0.4s
MRVT Maraveh tapeh 9.20 91 *e*Pn **Pn** **18 04 28.0 0.0**
BLGI Bet Lehem HaGe 9.47 236 P **Pn** **18 04 31.1 -0.4**
MMLI Mount Malkishu 9.51 234 P **Pn** **18 04 31.9 -0.3**
HMDT Nahal Hemdat 9.57 232 P **Pn** **18 04 32.5 -0.5**
OFRI `Ofer 9.67 236 P **Pn** **18 04 34.0 -0.5**
SLTI Sal'it 9.88 234 P **Pn** **18 04 36.8 -0.4**
DSI Dead Sea 10.13 230 P **Pn** **18 04 39.8 -0.9**
MSBI Mazada 10.33 229 P **Pn** **18 04 42.7 -0.6**
YTIR Yattir 10.44 230 P **Pn** **18 04 44.6 -0.4**
ZFRI Zfri 10.99 227 P **Pn** **18 04 51.7 -0.7**
KZIT Kziot 11.20 231 P **Pn** **18 04 54.6 -0.6**
PRNI Paran 11.24 227 P **Pn** **18 04 55.2 -0.7**
HRFI Mount Harif 11.46 226 P **Pn** **18 04 58.1 -0.8**
KRMI Paran Flat 11.57 227 P **Pn** **18 04 59.8 -0.7**
MBRI Mt Berech 11.71 225 P **Pn** **18 05 02.2 -0.2**
EIL Elat 11.79 225 Pn **Pn** **18 05 04.2 +0.8**
comp=Z,0.5nm,0.3s,baz=22,slow=13,SNR=4.3
EIL Lg Lg 18 08 24.1
comp=Z,0.2nm,0.3s,baz=29,slow=16,SNR=2.9
comp=Z,5.3nm,0.9s
VRH Novokhopyorsk 12.89 352 *e*P **Pn** **18 05 19.5 +1.2**
VRH pmax pmax
comp=Z,22nm,1.5s
VORD Divnogorie 13.03 345 *e*P **Pn** **18 05 21.2 +1.0**
VORD pmax pmax
comp=Z,30nm,0.5s
JURR Jurilovca 13.25 303 ⇓P **P** **18 05 30.8 -2.5**
VSR Storozhevoye 13.29 345 *e*P **Pn** **18 05 24.9 +1.1**
VSR pmax pmax
comp=Z,50nm,3.2s
TIRR Tirgusor 13.44 302 ⇑P **P** **18 05 32.3 -3.1**
TIRR Tirgusor 13.44 302 ⇑P **P** **18 05 32.3 -3.1**
TLCR 13.46 305 ⇓P **P** **18 05 34.9 -0.7**
TLCR 13.46 305 ⇓P **P** **18 05 34.9 -0.7**
TPGR Topolog 13.58 303 ⇓P **P** **18 05 37.7 +0.7**
SHRT Shahrakht 13.67 106 *e*Pn **Pn** **18 05 32.7 +3.6**
VORR Voronezh 13.72 346 *e*P **Pn** **18 05 29.8 +0.2**
VORR pmax pmax
comp=Z,24nm,1.4s
CFR Carcaliu 13.89 304 ⇑P **P** **18 05 41.3 +0.9**
CFR Carcaliu 13.89 304 ⇑P **P** **18 05 41.3 +0.9**
BELG Belogornoye 14.11 8 Pn **Pn** **18 05 35.0 +0.1**
comp=Z,0.3nm,0.3s,baz=193,slow=0.8,SNR=11
BELG LR LR 18 12 21.1
comp=Z,176nm,21.8s,baz=285,slow=43
comp=Z,43nm,1.1s
BELG Belogornoye 14.11 8*c*e**P** **Pn** **18 05 35.4 +0.5**
BELG pmax pmax
comp=Z,9.0nm,1.1s
CICN Ciocanesti 14.29 299 ⇑P **P** **18 05 46.3 +1.5**
LPSR Galich'ya Gora 14.66 347 *e*P **Pn** **18 05 43.1 +0.7**
LPSR pmax pmax
comp=Z,45nm,1.3s
SMRA Abu-Samra 14.70 157 P **Pn** **18 05 45.4 +2.2**
GHRR 14.72 307 ⇓P **P** **18 05 51.3 +1.7**
ELND Elena 14.79 293 ⇓P **P** **18 05 51.2 +0.8**
PANC Panciu 14.81 306 ⇑P **P** **18 05 52.2 +1.7**
ODBI Odobesti 14.82 305 ⇓P **P** **18 05 52.7 +2.0**
TRNA Turayna 14.83 155 P **Pn** **18 05 45.4 +0.5**
TRNA S **Sn** **18 08 30.8 +1.1**
RAYN Ar Rayn 14.92 176 **Pn** **18 05 41.5 -4.7**
RAYN Ar Rayn 14.92 176 P **Pn** **18 05 41.6 -4.5**
RAYN Ar Rayn 14.92 176 ⇓P **Pn** **18 05 42.1 -4.1**
ISR Istrita 14.92 302 ⇓P **P** **18 05 49.2 -2.7**
ISR Istrita 14.92 302 ⇓P **P** **18 05 49.2 -2.7**
ISR Istrita 14.92 302 P **Pn** **18 05 48.3 +2.2**
comp=Z,33nm,1.4s
VRI Vrincioaia 15.07 305 ⇑P **P** **18 05 55.5 +1.9**
VRI Vrincioaia 15.07 305 ⇑P **P** **18 05 55.5 +1.9**
VRI Vrincioaia 15.07 305 P **Pn** **18 05 50.4 +2.2**
comp=Z,21nm,1.3s
PLOR Plostina 15.12 305 ⇓P **P** **18 05 55.0 +0.9**
PLOR Plostina 15.12 305 ⇓P **P** **18 05 55.0 +0.9**
SORM Soroca 15.18 315 ⇑P **P** **18 05 54.5 -0.2**
SORM Soroca 15.18 315 ⇑P **P** **18 05 54.5 -0.2**
SORM Soroca 15.18 315 P **Pn** **18 05 51.6 +2.2**
comp=Z,29nm,1.1s
NEHR Nehoiu 15.19 303 ⇓P **P** **18 05 57.3 +2.4**
JRN Qarnain Island 15.24 150 P **P** **18 05 53.8 -1.7**
AKTO Aktyubinsk 15.36 34 Pn **Pn** **18 05 51.3 -0.6**
comp=Z,0.4nm,0.3s,baz=219,slow=13,SNR=12
AKTO LR LR 18 12 33.9
comp=Z,260nm,21.1s,baz=300,slow=40
comp=Z,12nm,0.8s
TESR Tescani 15.39 307 ⇑P **P** **18 05 55.3 -1.8**
TESR Tescani 15.39 307 P **Pn** **18 05 54.2 +1.9**
comp=Z,43nm,1.0s
COVR Voineasa-Covas 15.40 304 ⇓P **P** **18 05 59.8 +2.6**
MLR Muntele Rosu 15.45 303 Pn **Pn** **18 05 52.7 -0.4**
comp=Z,0.3nm,0.3s,baz=90,slow=9.9,SNR=9.1
comp=Z,0.6nm,0.4s
MLR Muntele Rosu 15.45 303 ⇑P **P** **18 05 58.7 +0.9**
MLR Muntele Rosu 15.45 303 P **P** **18 05 56.6 -1.2**
comp=Z,22nm,1.2s
ONER Baraj Valea Uz 15.48 306 ⇑P **P** **18 05 58.7 +0.6**
AB31 Akbulak array 15.49 41 **Pn** **18 05 51.9 -1.7**
ABKAR Akbulak array 15.49 41 **Pn** **18 05 51.1 -2.6**
TURR Turia 15.61 305 ⇓P **P** **18 06 01.7 +2.2**
GIRR Girov 15.67 309 ⇑P **P** **18 06 01.6 +1.4**
OZUR 15.77 305 ⇓P **P** **18 06 02.7 +1.4**
PLVB Pleven 15.78 294 ⇓P **Pn** **18 05 56.3 -1.1**
SHME Shamm 15.81 138 P **P** **18 06 01.0 -0.9**
SHME S **Sn** **18 08 57.4 +3.8**
BOSR Bodos 15.84 305 ⇑P **Pn** **18 05 58.8 +0.6**
MTUR Matau 15.94 301 ⇑P **P** **18 06 05.3 +2.0**
MTUR Matau 15.94 301 ⇑P **P** **18 06 05.3 +2.0**
DOPR Dopca 15.98 304 ⇑P **P** **18 06 05.8 +2.1**
IDI Anoyia 15.98 265 Pn **Pn** **18 05 58.5 -1.6**
comp=Z,12nm,0.9s,baz=69,slow=14,SNR=1.5
BANOM Banah 16.00 138 *i*P **Pn** **18 06 01.9 +1.5**
SNR=5.8
BANOM Banah 16.00 138 P **P** **18 06 03.3 -0.6**
VOIR 16.02 302 ⇓P **P** **18 06 07.1 +2.9**
VOIR 16.02 302 ⇓P **P** **18 06 07.1 +2.9**
VOIR 16.02 302 P **P** **18 06 02.6 -1.6**
comp=Z,61nm,1.4s
PRAR RASCA 16.02 310 ⇓P **P** **18 06 05.4 +1.3**
VLAD Vladila 16.06 297 ⇑P **Pn** **18 06 01.6 +0.6**
GHWR Ruwais 16.13 151 P **P** **18 06 06.0 +0.7**
ARR Arges 16.28 301 ⇑P **P** **18 06 10.9 +4.0**
AKASG Malin Array Be 16.32 323 Pn **Pn** **18 06 03.1 -1.2**
comp=Z,0.8nm,0.3s,baz=133,slow=12,SNR=17
comp=Z,12nm,1.1s
AKBB Malin Array Si 16.32 323*d*e**P** **P** **18 06 05.6 -1.7**
AKBB Malin Array Si 16.32 323 P **Pn** **18 06 04.9 +0.6**
KIEV Kiev 16.32 323 **Pn** **18 06 04.6 +0.2**
KIEV Kiev 16.32 323 ⇑P **Pn** **18 06 05.6 +1.3**
KIEV Kiev 16.32 323 P **Pn** **18 06 01.8 -2.5**
KIEV Kiev 16.32 323 ⇑P **Pn** **18 06 05.6 +1.3**
KIEV Kiev 16.32 323 P **Pn** **18 06 05.1 +0.8**
comp=Z,87nm,1.6s
AK14 Malin Array Si 16.33 323 P **Pn** **18 06 05.0 +0.6**
AK11 Malin Array Si 16.33 323 P **Pn** **18 06 05.1 +0.7**
MASF Masafi 16.38 139 P **P** **18 06 07.8 -0.4**
MSFE Esma-Masafi 16.39 139 P **Pn** **18 06 05.4 +0.1**
AK18 Malin Array Si 16.41 323 P **Pn** **18 06 05.6 +0.2**
NAZ Nazwa, Dubai 16.44 142 P **P** **18 06 09.0 +0.2**
KMPD K-Podol'skiy 16.47 314 P **P** **18 06 08.1 -0.9**
KMPD P **pP** **18 06 08.5 -2.3**
AJN Ajban 16.49 144 P **P** **18 06 09.8 +0.5**
MDH Madha 16.51 139 P **P** **18 06 09.5 -0.1**
ASUD Al Ashush, Dub 16.59 143 P **P** **18 06 11.6 +1.1**
MDB Medias 16.70 304 ⇑P **P** **18 06 15.1 +3.5**
MDB Medias 16.70 304 ⇑P **P** **18 06 15.1 +3.5**
BURAR Bucovina Array 16.75 309 P **P** **18 06 11.7 -0.5**
BURAR IAmb IAmb 18 06 15.0
comp=Z,31nm,0.6s
BURAR Bucovina Array 16.75 309 ⇓P **P** **18 06 14.1 +1.9**
BURAR Bucovina Array 16.75 309 ⇓P **P** **18 06 14.1 +1.9**
UOSS Minazif 16.75 140 P **P** **18 06 12.4 +0.1**
UOSS Minazif 16.75 140 P **P** **18 06 12.6 +0.3**
UOSS P **P** **18 06 12.6 +0.3**
BUR08 Bucovina Ar. S 16.77 309 **P** **18 06 13.3 +0.8**
HATD Hatta, Dubai 16.81 141 *i*P **Pn** **18 06 11.6 +0.8**
SNR=13
HATD Hatta, Dubai 16.81 141 P **P** **18 06 13.4 +0.5**
SNR=12
LOT Lotru 16.88 301 ⇓P **P** **18 06 15.2 +1.4**
ASHO Ashiyiah 16.89 141 *i*P **Pn** **18 06 12.3 +0.5**
SNR=19
ASHO Ashiyiah 16.89 141 P **P** **18 06 14.9 +1.0**
SNR=13
ASHO P **P** **18 06 14.9 +1.0**
SNR=13
SRE Strehaia 17.05 298 ⇓P **Pn** **18 06 14.1 +0.4**
SRE Strehaia 17.05 298 ⇓P **Pn** **18 06 14.1 +0.4**
KSV Kosov 17.16 311 P **P** **18 06 16.7 0.0**
MZR Muzera 17.23 151 *i*P **Pn** **18 06 15.3 -0.7**
SNR=13
MZR Muzera 17.23 151 P **P** **18 06 19.4 +1.8**
SNR=6.6
ALNE Al Ain 17.28 143 *i*P **Pn** **18 06 16.5 -0.1**
SNR=6.7
ALNE Al Ain 17.28 143 P **P** **18 06 17.8 -0.3**
SNR=5.0
ALNE S **S** **18 09 38.0 -0.4**
CJR Cluj-Napoca 17.41 305 ⇑P **P** **18 06 22.1 +2.6**
CJR Cluj-Napoca 17.41 305 ⇑P **P** **18 06 22.1 +2.6**
OBN Obninsk 17.50 345 P **Pn** **18 06 17.7 -1.4**
comp=Z,2.1nm,0.3s,baz=187,slow=13,SNR=4.8
comp=Z,10nm,0.4s
OBN Obninsk 17.50 345 Pn **Pn** **18 06 17.6 -1.4**
OBN IAmb IAmb 18 06 19.9
comp=Z,80nm,1.4s
OBN Obninsk 17.50 345 ⇓P Pn 18 06 05.0 -14
OBN Obninsk 17.50 345*d*i**P** **Pn** **18 06 18.4 -0.7**
OBN pmax pmax
comp=Z,29nm,1.0s
GZR Gura Zlata 17.54 300 ⇓P **P** **18 06 22.3 +1.4**
GZR Gura Zlata 17.54 300 ⇓P **P** **18 06 22.3 +1.4**
RAKU Rahkiv 17.57 309 P **P** **18 06 23.0 +1.8**
SOHO SOHO 17.59 141 P **P** **18 06 23.0 +1.4**
SOHO P **P** **18 06 23.0 +1.4**
HERR Herculane 17.65 298 ⇑P **P** **18 06 23.0 +0.9**
STNU Starunia 17.68 312 P **P** **18 06 23.2 +0.8**
MARR Marisel-Cluj 17.70 304 ⇑P **P** **18 06 25.9 +3.1**
BMR Baia Mare 17.83 308 ⇑P **P** **18 06 26.4 +2.3**
BMR Baia Mare 17.83 308 ⇑P **P** **18 06 26.4 +2.3**
ITM Ithomi 17.85 273 P **P** **18 06 24.1 -0.3**
MOS Moscow 17.89 347 *e*P **Pn** **18 06 22.1 -1.8**
MOS pmax pmax
comp=Z,100nm,1.3s
MOS pmax pmax
comp=N,80nm,0.8s
BOVS Bovan 17.91 294 ⇓P **P** **18 06 25.3 +0.3**
MESR Meseseni 17.98 306 ⇓P **P** **18 06 28.7 +3.0**
DRGR 18.00 305 ⇑P **P** **18 06 27.7 +1.6**
DRGR 18.00 305 ⇑P **P** **18 06 27.7 +1.6**
UMZA Um Al Zommool 18.17 147 P **P** **18 06 28.8 +0.8**
RNPP8 Varash 18.36 321 P **P** **18 06 31.2 +1.3**
BZS Buzias 18.38 300 ⇑P **P** **18 06 29.9 -0.3**
BZS Buzias 18.38 300 ⇑P **P** **18 06 29.9 -0.3**
RNPP9 Sopachiv 18.39 321 P **P** **18 06 31.6 +1.4**
BRIU Brid 18.39 309 P **P** **18 06 31.8 +1.5**
HOQ Hoqain 18.44 140 P **Pn** **18 06 32.6 +1.7**
HOQ P **Pn** **18 06 32.6 +1.7**
LVV L'vov 18.48 314 P **Pn** **18 06 32.6 +1.3**
BERU Beregovo 18.58 309 P **Pn** **18 06 33.9 +1.4**
MUKU Mukachevo 18.64 309 P **Pn** **18 06 34.8 +1.6**
HOLU Holmets 18.86 309 P **Pn** **18 06 36.2 +0.4**
BIDO Bidbid 18.91 138 P **Pn** **18 06 37.9 +1.2**
BSY Bisya 19.09 142 P **Pn** **18 06 38.8 0.0**
SNR=8.2
KOLS Kolonicke sedl 19.09 310 *e*P **Pn** **18 06 39.4 +0.7**
SMDO Samad 19.25 139 P **Pn** **18 06 41.0 +0.1**
SNR=7.0
SMDO P **Pn** **18 06 41.0 +0.1**
SNR=7.0
WSAR Wadi Sarin 19.41 137 P **Pn** **18 06 42.8 +0.2**
MNK Minsk 19.61 330 *i*P **Pn** **18 06 45.0 +0.1**
comp=E,14nm,0.8s
MNK *i*P **Pn** **18 06 45.0 +0.1**
comp=N,16nm,0.8s
MNK *i*P **Pn** **18 06 45.0 +0.1**
comp=Z,13nm,0.8s,baz=137
MNK *i*pP sP 18 06 57.9 +12
MNK *i*sP pP 18 07 05.9 +21
MNK *i*S **Sn** **18 10 22.2 -3.1**
MNK *i*sS **pS** **18 10 39.5 +3.0**
MNK Minsk 19.61 330 *i*P **Pn** **18 06 45.0 +0.1**
MNK *i*S **Sn** **18 10 22.1 -3.1**
MNK pmax pmax
comp=E,14nm,0.8s
MNK pmax pmax
comp=N,16nm,0.8s
MNK pmax pmax
comp=Z,13nm,0.8s
JMDO Jabal Madar 19.85 140 P **Pn** **18 06 47.2 -0.8**
STHS Stebnicka Huta 19.91 311 *e*P **Pn** **18 06 47.7 -0.8**
STHS Stebnicka Huta 19.91 311 *e*P **Pn** **18 06 47.7 -0.8**
WBK Wadi Bani Khal 20.10 138 P **Pn** 18 06 51.0 +0.1
WBK P **Pn** 18 06 51.0 +0.1
KBL Kabul 20.12 94 P **P** **18 06 49.7 +0.2**
SNR=7.2
PSZ Piszkesteto 20.18 306 ⇑P **Pn** 18 06 51.6 -0.3
PSZ Piszkesteto 20.18 306 ⇑P **Pn** 18 06 51.6 -0.2
ARTI Arti 20.19 23 P **P** **18 06 49.8 0.0**
comp=Z,36nm,0.9s,baz=216,slow=10,SNR=34
ARTI LR LR 18 17 23.9
comp=Z,189nm,19.5s,baz=217,slow=45
comp=Z,36nm,0.9s
ARTI Arti 20.19 23 **P** **18 06 50.0 +0.1**
ARTI Arti 20.19 23*c*i**P** Pn 18 06 51.2 -0.5
ARTI pmax pmax
comp=Z,46nm,1.0s
KK31 Karatay Array 20.23 68 **P** **18 06 51.0 +0.6**
KK31 IAmb IAmb 18 06 59.9
comp=Z,25nm,0.8s
KK31 Karatay Array 20.23 68 P **P** **18 06 51.0 +0.6**
KK31 pmax pmax
comp=Z,25nm,0.9s
KKAR Karatay Array 20.23 68 **P** **18 06 50.9 +0.5**
KKAR Karatay Array 20.23 68 P **P** **18 06 50.9 +0.5**
KIRV Kirov 20.39 7 P **P** **18 06 51.7 -0.3**
comp=Z,20nm,0.9s,baz=206,slow=12,SNR=8.4
comp=Z,20nm,0.9s
KIRV Kirov 20.39 7*de*P **P** **18 06 52.3 +0.3**
NIE Niedzica 20.47 310 *e*P **P** **18 06 52.2 -0.8**
NIE Niedzica 20.47 310 P Pn 18 06 54.4 -0.8
comp=Z,20nm,1.3s
MORH Mrgy, Hungar 20.54 300 ⇑P Pn 18 06 54.8 -1.1
MORH Mrgy, Hungar 20.54 300 P Pn 18 06 54.8 -1.1
comp=Z,12nm,2.1s
TRKS Terek-Say 20.64 73 P Pn 18 06 56.6 -0.7

JLN Jalan Bani Buh 20.71 137 P **P** **18 06 56.3 +0.6**
JLN P **P** **18 06 56.3 +0.6**
MHTO MHTO 20.95 142 P **P** **18 06 58.5 +0.2**
SNR=8.0
OJC Ojcow 21.09 312 *e*P **P** **18 07 03.1 +3.4**
ARK Arkit 21.25 72 P **P** **18 07 03.5 +1.9**
SVE Sverdlovsk 21.26 25 *e*P **P** **18 07 03.1 +1.6**
SVE pmax pmax
comp=N,37nm,1.0s
BEL Belsk 21.27 317 *e*P **P** **18 07 05.1 +3.5**
SUW Suwalki 21.29 324 *e*P **P** **18 07 01.4 -0.4**
MATE Matera 21.48 285 ⇓P **P** **18 07 09.5 +5.5**
DOK Doka 21.49 154 P **P** **18 07 04.0 -0.1**
SNR=7.3
MPLH Magyarpolny 21.50 303 P **P** **18 07 05.3 +1.2**
comp=N,47nm,1.1s
TIP Timpagrande 21.57 281 P **P** **18 07 03.2 -1.8**
TIP Timpagrande 21.57 281 ⇑P **P** **18 07 05.4 +0.4**
DQM DQM 21.66 145 P **P** **18 07 05.5 -0.6**
JAVC Velka Javorina 21.89 307 *e*P **P** **18 07 12.1 +3.7**
OHH Osh 21.92 76 P **P** **18 07 07.7 -1.0**
SMOL Smolenice 21.94 306 *e*P **P** **18 07 11.3 +2.5**
MODS Modra-Piesok 21.99 306 *e*P **P** **18 07 12.3 +2.9**
MODS Modra-Piesok 21.99 306 *e*PN **P** **18 07 12.3 +2.9**
STEB Steborice 22.19 310 *e*P **P** **18 07 13.8 +2.3**
MORC Moravsky Berou 22.27 309 ⇑P **P** **18 07 11.3 -1.1**
MORC Moravsky Berou 22.27 309 ⇑P **P** **18 07 11.3 -1.1**
MORC Moravsky Berou 22.27 309 *e*P **P** **18 07 17.6 +5.2**
CEL Celeste 22.37 278 P **P** **18 07 13.2 -0.4**
RBK Rabkut 22.55 155 P **P** **18 07 15.0 -0.6**
SNR=9.9
SHAO Shalim 22.57 151 *i*P **P** **18 07 13.9 -1.9**
SNR=6.8
SHAO Shalim 22.57 151 P **P** **18 07 15.5 -0.3**
EKS2 Erkin-Say 22.60 70 P **P** **18 07 17.8 +1.6**
SNR=17
DMTO DMTO 22.61 153 P **P** **18 07 15.6 -0.6**
KLMR Klimovskoe 22.63 354 *e*P **P** **18 07 16.0 -0.1**
KLMR pmax pmax
comp=Z,44nm,1.4s
VRAC Vranov 22.70 308 ⇓P **P** **18 07 17.4 +0.4**
VRAC Vranov 22.70 308 ⇓P **P** **18 07 17.4 +0.4**
VRAC Vranov 22.70 308 *e*P **P** **18 07 17.7 +0.7**
KRUC Moravsky 22.75 307 *e*P **P** **18 07 18.6 +1.1**
CONA Conrad Observa 22.79 304 *e*P **P** **18 07 19.3 +1.3**
comp=Z,10.0nm,1.1s,SNR=4.1
ARSA Arzberg 22.86 302 *e*P **P** **18 07 20.3 +1.6**
comp=Z,3.9nm,1.0s
BORK Borovoye 23.03 42 **P** **18 07 21.1 +0.8**
BORK IAmb IAmb 18 07 37.9
comp=Z,14nm,0.8s
BORK Borovoye 23.03 42*de*P **P** **18 07 21.7 +1.4**
BORK pmax pmax
comp=Z,36nm,1.3s
BVAR Borovoye Array 23.05 42 P **P** **18 07 21.2 +0.6**
comp=Z,13nm,0.9s,baz=243,slow=6.5,SNR=36
comp=Z,13nm,0.9s
AAK Ala-Archa 23.13 70 LR LR 18 19 12.3
comp=Z,179nm,20.5s,baz=295,slow=44
AAK Ala-Archa 23.13 70 P **P** **18 07 23.9 +2.2**
SNR=18
AAK Ala-Archa 23.13 70 **P** **18 07 21.3 -0.5**
AAK IAmb IAmb 18 07 31.8
comp=Z,31nm,1.3s
AAK Ala-Archa 23.13 70 *i*P **P** **18 07 21.9 +0.1**
SNR=24
AAK Ala-Archa 23.13 70*ce*P **P** **18 07 23.5 +1.8**
AAK pmax pmax
comp=Z,26nm,1.7s
AAK Ala-Archa 23.13 70 P **P** **18 07 22.9 +1.1**
CHMS Chumysh 23.33 69 P **P** **18 07 25.0 +1.4**
SNR=21
OBKA Obir 23.38 300 *e*P **P** **18 07 25.5 +1.4**
comp=Z,7.1nm,1.5s
KSP Ksiaz 23.40 311 *e*P **P** **18 07 24.6 +0.5**
KBK Karagaybulak 23.47 70 P **P** **18 07 26.7 +1.6**
SNR=26
NIL Nilore 23.71 93 P **P** **18 07 27.6 +0.2**
MOA Molln 23.82 303 *e*P **P** **18 07 28.8 +0.5**
comp=Z,10nm,1.3s,SNR=4.8
TKM2 Tokmak 2 23.95 69 P **P** **18 07 31.9 +2.1**
SNR=12
SABO M.te Sabotino 23.95 298 P **P** **18 07 27.3 -2.4**
SABO IAmb IAmb 18 07 32.6
comp=Z,42nm,1.4s
CKRC Cesky Krumlov 24.01 305 *e*P **P** **18 07 31.3 +1.1**
CKRC Cesky Krumlov 24.01 305 *e*P **P** **18 07 31.3 +1.1**
KSH2 Kashi 24.19 79 P **P** **18 07 34.9 +2.8**
KSH2 pmax pmax
comp=Z,11nm,0.8s
BIOA Bad Ischl, Aus 24.20 302 *e*P **P** **18 07 32.3 +0.3**
comp=Z,16nm,1.8s
BOOM Boomskoye usch 24.20 70 IAmb IAmb 18 07 38.9
comp=Z,14nm,0.8s
ZVC Zvikov 24.24 307 *e*P **P** **18 07 32.8 +0.5**
KBA Koelnbreinsper 24.29 301 *e*P **P** **18 07 33.2 +0.3**
comp=Z,11nm,1.2s
NRN Naryn 24.29 73 IAmb IAmb 18 07 37.5
comp=Z,22nm,0.9s
PVCC Panska Ves 24.33 309 *e*P **P** **18 07 33.1 +0.1**
PVCC Panska Ves 24.33 309 *e*P **P** **18 07 33.1 +0.1**
GERES GERESS Array B 24.41 305 P **P** **18 07 33.9 0.0**
comp=Z,1.9nm,0.6s,baz=93,slow=9.5,SNR=12
GERES LR LR 18 18 19.8
comp=Z,194nm,18.2s,baz=298,slow=40
comp=Z,1.9nm,0.6s
ULHL Ulahol 24.43 71 P **P** **18 07 35.7 +1.4**
SNR=7.5
CESX Cesi 24.51 290 IAmb IAmb 18 07 36.2
comp=Z,16nm,1.1s
KHC Kasperske Hory 24.55 306 *e*P **P** **18 07 34.0 -1.2**
KHC Kasperske Hory 24.55 306 *e*P **P** **18 07 34.0 -1.2**
LESA Schwarzleotal 24.79 301 *e*P **P** **18 07 37.2 -0.2**
comp=Z,2.6nm,0.6s
ABTA Abfaltersbach 24.80 300 *e*P **P** **18 07 37.5 0.0**
comp=Z,7.6nm,1.3s
BRG Berggiesshubel 24.81 310 *e*P **P** **18 07 38.6 +1.2**
BRG Amp 18 07 42.3
comp=Z,4.0nm,0.9s
WTTA Wattenberg 25.47 301 *e*P **P** **18 07 43.4 -0.2**
comp=Z,8.9nm,1.1s
CLL Collm 25.51 310 *e*P **P** **18 07 45.0 +1.3**
CLL *e* 18 07 48.0
CLL Collm 25.51 310 *e*P **P** **18 07 45.0 +1.3**
CLL *ex* x 18 07 48.0
CLL *ex* x 18 07 52.0
CLL *e*PPPP 18 08 35.0
WATA Walderalm 25.52 301 *e*P **P** **18 07 43.6 -0.4**
comp=Z,2.6nm,0.6s
TARG Taragay, Kyrgy 25.62 72 IAmb IAmb 18 08 02.5
comp=Z,9.5nm,0.8s
FINES FINESS Array B 25.69 340 P **P** **18 07 45.0 -0.2**
comp=Z,2.5nm,0.5s,baz=187,slow=7.7,SNR=16
comp=Z,2.5nm,0.5s
SQTA Sankt Quirin 25.75 301 *e*P **P** **18 07 45.7 -0.5**
comp=Z,5.3nm,0.5s,SNR=6.6
MOTA Moosalm 25.84 301 *e*P **P** **18 07 46.3 -0.6**
comp=Z,7.1nm,1.1s
FETA Feichten 26.05 300 *e*P **P** **18 07 48.2 -0.7**
comp=Z,4.5nm,0.6s,SNR=7.8
DAVOX Davos/Dischmat 25.60 299 LR LR 18 19 19.3
comp=Z,407nm,18.0s,baz=9.5,slow=39
DAVA Damuels 26.66 301 *e*P **P** **18 07 53.9 -0.5**
comp=Z,3.3nm,0.5s
KURBB Kurchatov Arra 26.91 52 P **P** **18 07 57.3 +1.0**
comp=Z,15nm,1.1s,baz=264,slow=9.0,SNR=55
KURBB LR LR 18 20 36.0
comp=Z,239nm,19.9s,baz=178,slow=41
comp=Z,15nm,1.1s
TUE Stuetta 26.94 299 IAmb IAmb 18 08 38.1
comp=Z,20nm,1.4s
KURK Kurchatov 26.98 52 **P** **18 07 57.2 +0.1**
KURK IAmb IAmb 18 08 00.6
comp=Z,23nm,1.1s
KURK Kurchatov 26.98 52*ce*P **P** **18 07 58.1 +1.0**
KURK pmax pmax
comp=Z,39nm,1.3s
KURK Kurchatov 26.98 52 P **P** **18 07 58.2 +1.1**
VSL Villasalto 27.20 283 P **P** **18 07 56.8 -2.4**
KEST Kesra 28.05 275 P **P** **18 08 06.5 -0.3**
comp=Z,14nm,1.0s,baz=352,slow=3.2,SNR=17
comp=Z,14nm,1.0s
KEST Kesra 28.05 275 **P** **18 08 05.1 -1.8**
KEST IAmb IAmb 18 08 08.9
comp=Z,17nm,1.0s

KEST	Kesra	28.05	275	P		P		18 08 08.2	+1.4
SENIN	Lac Senin/Sane	28.35	298	P		P		18 08 07.4	-2.2
SENIN				IAmb		IAmb		18 08 38.7	
	comp=Z,22nm,1.5s								
MAKZ	Makanchi	28.61	61			P		18 08 12.2	+0.5
MAKZ				IAmb		IAmb		18 08 13.8	
	comp=E,6.1nm,0.7s								
MAKZ	Makanchi	28.61	61	P		P		18 08 12.2	+0.5
MAKZ				pmax		pmax			
	comp=Z,6.0nm,0.7s								
MK31	Makanchi Array	28.82	61	*de*P		P		18 08 14.1	+0.5
MKAR	Makanchi Array	28.82	61	P		P		18 08 15.0	+1.4
	comp=E,6.1nm,0.7s,baz=267,slow=6.6,SNR=76								
MKAR				LR		LR		18 21 44.3	
	comp=E,188nm,21.5s,baz=304,slow=40								
	comp=Z,6.1nm,0.7s								
MKAR	Makanchi Array	28.82	61			P		18 08 13.2	-0.4
HFS	Hagfors	29.09	328	P		P		18 08 15.2	-0.6
	comp=E,8.2nm,0.9s,baz=119,slow=8.6,SNR=5.9								
	comp=E,8.2nm,0.9s								
NOA	NORSAR Array B	30.61	328	P		P		18 08 27.7	-1.6
	comp=Z,1.0nm,0.8s,baz=126,slow=8.6,SNR=4.5								
NOA				LR		LR		18 22 11.6	
	comp=Z,203nm,19.4s,baz=5.0,slow=39								
	comp=Z,1.0nm,0.8s								
ZALV	Zalesovo Beam	31.43	47	P		P		18 08 37.1	+0.6
	comp=Z,3.4nm,0.7s,baz=266,slow=8.7,SNR=17								
ZALV				LR		LR		18 22 43.8	
	comp=E,186nm,20.7s,baz=292,slow=39								
	comp=Z,3.4nm,0.7s								
ZALV	Zalesovo Beam	31.43	47	P		P		18 08 36.5	-0.1
DGZ	Jazzator, Alta	32.42	56⇑	*e*P		P		18 08 46.7	+1.2
DGZ				pmax		pmax			
	comp=Z,25nm,1.4s								
WMQ	Urumqi	32.71	67	*e*P		P		18 08 50.8	+2.8
WMQ				pmax		pmax			
	comp=E,17nm,0.9s								
EKA	Eskdalemuir Ar	35.84	314	P		P		18 09 13.8	-1.1
	comp=Z,4.6nm,0.7s,baz=107,slow=7.7,SNR=6.1								
	comp=Z,4.6nm,0.7s								
ESDC	Sonseca Array	37.26	287	P		P		18 09 26.2	-1.1
	comp=E,6.6nm,1.0s,baz=66,slow=8.8,SNR=30								
	comp=Z,6.6nm,1.0s								
ESDC	Sonseca Array	37.26	287			P		18 09 24.8	-2.5
KNGR	Kungurtug, Tuv	38.91	54	*d i*P		P		18 09 43.2	+2.0
KNGR				pmax		pmax			
	comp=Z,34nm,1.2s								
LSA	Lhasa	39.29	88	P		P		18 09 46.4	+1.4
LSA	Lhasa	39.29	88	P		P		18 09 42.4	-2.6
LSA				pmax		pmax			
	comp=Z,3.0nm,0.7s								
LSA	Lhasa	39.29	88	P		P		18 09 46.4	+1.4
LSA				pmax		pmax			
	comp=E,6.0nm,0.8s								
LSA	Lhasa	39.29	88	P		P		18 09 46.3	+1.4
GOMU	GeErMu	39.70	77	P		P		18 09 47.3	-0.9
GOMU				pmax		pmax			
	comp=Z,5.0nm,1.2s								
MBAR	Mbarara	40.88	201	LR		LR		18 25 37.8	
	comp=Z,27nm,20.8s,baz=28,slow=34								
MOY	Mondy	41.04	52	*e*P		P		18 10 00.8	+2.0
MOY				pmax		pmax			
	comp=Z,24nm,1.8s								
SPITS	Spitsbergen Ar	41.51	352	P		P		18 10 02.4	+0.3
	comp=Z,9.3nm,1.0s,baz=160,slow=8.8,SNR=5.1								
	comp=Z,9.3nm,1.0s								
GTA2	Gaotai	42.42	71	*e*P		P		18 10 11.4	+1.1
GTA2				pP		sP		18 10 15.4	+2.3
GTA2				pmax		pmax			
	comp=Z,3.0nm,0.9s								
ZAK	Zakamensk	42.60	54	*e*P		P		18 10 13.0	+1.4
ZAK				pmax		pmax			
	comp=Z,7.0nm,1.3s								
TLY	Talaya	42.68	52	*ce*P		P		18 10 14.6	+2.5
TLY				pmax		pmax			
	comp=Z,9.0nm,1.3s								
IRK	Irkutsk	43.01	51	*e*P		P		18 10 14.8	0.0
IRK				pmax		pmax			
	comp=Z,43nm,3.5s								
SONM	Songino Array	45.04	57	P		P		18 10 30.6	-0.6
	comp=Z,0.7nm,0.6s,baz=278,slow=8.9,SNR=7.0								
SONM				LR		LR		18 31 48.2	
	comp=Z,114nm,20.2s,baz=304,slow=39								
	comp=Z,0.7nm,0.6s								
SONM	Songino Array	45.04	57	*e*P		P		18 10 32.0	+0.7
SONM				pmax		pmax			
	comp=E,1.0nm,0.6s								
PALK	Pallekele	45.08	124	LR		LR		18 32 04.9	
	comp=Z,7.3nm,18.7s,baz=336,slow=40								
TORD	Torodi Ar. Bea	45.46	248	P		P		18 10 32.8	-2.0
	comp=E,5.5nm,1.2s,baz=7.6,slow=4.4,SNR=7.5								
	comp=Z,5.5nm,1.2s								
ULN	Ulaanbaatar	45.47	57	P		P		18 10 35.6	+0.9
ULN	Ulaanbaatar	45.47	57⇑	*e*P		P		18 10 35.6	+0.9
ULN				pmax		pmax			
	comp=Z,20nm,1.3s								
LZDM	Lanzhou Array	46.53	74	P		P		18 10 44.0	+0.5
	comp=Z,0.5nm,0.3s,baz=287,slow=10,SNR=7.9								
	comp=Z,0.5nm,0.3s								
LZH	Lanzhou	46.59	74	*e*P		P		18 10 45.3	+1.5
LZH				pP		sP		18 10 54.6	+8.0
LZH				pmax		pmax			
	comp=E,13nm,1.3s								
PZH	PanZhiHua	49.06	86	P		P		18 11 04.8	+1.8
PZH				pmax		pmax			
	comp=Z,10.0nm,1.0s								
KMI2	Kunming	50.52	87	P		P		18 11 15.0	+0.8
KMI2				pmax		pmax			
	comp=Z,14nm,1.3s								
HHC	Hu-ho-hao-te	50.55	65	*e*P		P		18 11 13.8	-0.3
HHC				pmax		pmax			
	comp=Z,3.0nm,0.7s								
HHC				pmax		pmax			
	comp=Z,140nm,4.7s								
CMAR	Chiang Mai Arr	51.10	97	P		P		18 11 18.3	-0.1
	comp=Z,3.3nm,0.7s,baz=298,slow=8.3,SNR=22								
CMAR				LR		LR		18 36 11.6	
	comp=Z,50nm,19.4s,baz=290,slow=40								
	comp=Z,3.3nm,0.7s								
XAN	Xi'an	51.23	74	P		P		18 11 21.5	+2.3
XAN				pmax		pmax			
	comp=Z,21nm,1.0s								
TIXI	Tiksi	52.28	23	LR		LR		18 36 52.3	
	comp=Z,145nm,19.7s,baz=314,slow=40								
TIXI	Tiksi	52.28	23⇓	*e*P		P		18 11 27.3	+0.9
TIXI				pmax		pmax			
	comp=E,16nm,1.7s								
HILR	Hailar Array B	53.13	52	P		P		18 11 33.4	+0.2
	comp=Z,0.7nm,0.4s,baz=278,slow=10,SNR=5.4								
	comp=Z,0.7nm,0.4s								
LYN	LuoYang	53.67	72	*e*P		P		18 11 39.8	+2.5
DBIC	Dimbokro	54.57	248	P		P		18 11 42.3	-1.7
	comp=Z,4.5nm,0.8s,baz=64,slow=7.2,SNR=6.8								
DBIC				LR		LR		18 37 02.6	
	comp=Z,123nm,18.9s,baz=24,slow=38								
	comp=Z,4.5nm,0.8s								
YAK	Yakutsk	54.75	35	LR		LR		18 40 15.6	
	comp=Z,122nm,18.7s,baz=296,slow=42								
YAK	Yakutsk	54.75	35	*e*P		P		18 11 45.5	+0.8
YAK				pmax		pmax			
	comp=Z,8.0nm,1.0s								
YAK				pmax		pmax			
	comp=E,4.0nm,1.1s								
LSZ	Lusaka	55.59	199	P		P		18 11 51.5	+0.2
	comp=E,1.7nm,0.7s,baz=25,slow=5.2,SNR=4.8								
LSZ				LR		LR		18 36 18.4	
	comp=E,76nm,20.4s,baz=15,slow=37								
	comp=E,1.7nm,0.7s								
HEH	HeiHe	57.53	49	*e*P		P		18 12 06.4	+1.6
HEH				pmax		pmax			
	comp=E,13nm,1.4s								
NJ2	Nanjing	59.57	72	*e*P		P		18 12 19.3	+0.1
NJ2				pmax		pmax			
	comp=E,8.0nm,1.0s								
KLR	Kul'dur	60.52	49	LR		LR		18 43 25.4	
	comp=E,24nm,18.6s,baz=326,slow=41								
KLR	Kul'dur	60.52	49⇑	*i*P		P		18 12 26.3	+0.8
KLR				pmax		pmax			
	comp=Z,3.0nm,1.1s								
GSI	Gunungsitoli	60.98	114	P		P		18 12 30.7	+1.6
POIN	Pond Inlet	62.28	343			P		18 12 36.2	-0.9
POIN				IAmb		IAmb		18 12 38.2	
	comp=Z,3.6nm,0.8s								
TSUM	Tsumeb	62.66	209	LR		LR		18 41 36.7	
	comp=Z,103nm,18.8s,baz=319,slow=38								
USRK	Ussuriysk Ar.	62.95	54	P		P		18 12 42.8	+0.8
	comp=Z,2.4nm,0.6s,baz=246,slow=8.1,SNR=5.2								
	comp=Z,2.4nm,0.6s								
KSRS	Korea Array	63.49	62	P		P		18 12 45.7	0.0
	comp=Z,2.0nm,0.6s,baz=289,slow=7.2,SNR=7.9								
	comp=Z,2.0nm,0.6s								
KSRS	Korea Array	63.49	62	*e*P		P		18 12 47.8	+2.1
KSRS				pmax		pmax			
	comp=E,2.0nm,0.6s								
SEY	Seymchan	63.88	29⇓	*i*P		P		18 12 48.8	+1.0
SEY				pmax		pmax			
	comp=Z,28nm,1.4s								
MA2	Magadan	65.10	33	P		P		18 12 58.9	+3.0
MA2	Magadan	65.10	33⇑	*e*P		P		18 12 58.1	+2.2
MA2				pmax		pmax			
	comp=Z,13nm,1.2s								
BILL	Bilibino	65.27	21⇓	*e*P		P		18 12 59.5	+2.6
BILL				pmax		pmax			
	comp=Z,5.0nm,1.1s								
ILON	Igloolik, Nuna	65.51	342			P		18 12 57.8	-0.6
ILON				IAmb		IAmb		18 12 59.0	
	comp=E,6.5nm,0.8s								
TYV	Tymovskoe	65.90	43	*e*P		P		18 13 03.4	+2.2
TYV				pmax		pmax			
	comp=Z,6.0nm,1.6s								
TYV				pmax		pmax			
	comp=Z,300nm,5.1s								
YSS	Yuzhno-Sakhali	68.06	47	*e*P		P		18 13 16.2	+1.2
YSS				pmax		pmax			
	comp=Z,10.0nm,1.2s								
BOSA	Boshof	69.10	198	P		P		18 13 20.8	-0.9
	comp=Z,2.2nm,0.7s,baz=32,slow=6.3,SNR=7.9								
	comp=Z,2.2nm,0.7s								
ASAJ	Asahikawa	69.53	50	LR		LR		18 48 48.4	
	comp=Z,90nm,19.3s,baz=343,slow=40								
A36M	Sachs Harbour	69.61	357	P		P		18 13 22.2	-2.0
SCHQ	Schefferville	70.11	325	P		P		18 13 26.6	-1.0
	comp=Z,1.9nm,0.6s,baz=30,slow=8.1,SNR=5.4								
	comp=Z,1.9nm,0.6s								
SCHQ	Schefferville	70.11	325	IAmb		IAmb		18 13 37.1	
	comp=Z,13nm,1.4s								
MJAR	Matsushiro Arr	70.98	58	P		P		18 13 32.4	-0.8
	comp=Z,7.5nm,1.2s,baz=306,slow=6.4,SNR=4.1								
MJAR				LR		LR		18 46 35.7	
	comp=Z,63nm,20.1s,baz=352,slow=38								
	comp=Z,7.5nm,1.2s								
MJA0	Matsu Arr-Jizo	71.00	58	*e*P		P		18 13 35.5	+2.1
MJA0				pmax		pmax			
	comp=Z,4.0nm,1.1s								
C19K	Lookout Ridge	71.28	9	P		P		18 13 33.6	-0.9
D20K	Etiviuk River	71.99	8	IAmb		IAmb		18 13 42.3	
	comp=Z,15nm,1.5s								
PETK	Petropavlovsk-	72.09	36	P		P		18 13 39.7	0.0
	comp=Z,3.5nm,0.9s,baz=181,slow=7.0,SNR=6.7								
	comp=Z,3.5nm,0.9s								
C36M	Paulatuk	72.17	356	IAmb		IAmb		18 13 39.9	
	comp=Z,5.9nm,0.6s								
D22K	Ayikyak River	72.22	6	IAmb		IAmb		18 13 41.1	
	comp=Z,4.6nm,0.8s								
D23K	Nanushuk River	72.30	6	IAmb		IAmb		18 13 44.2	
	comp=Z,4.4nm,0.9s								
E22K	Anaktuvuk Pass	73.02	6	IAmb		IAmb		18 13 48.6	
	comp=Z,7.3nm,1.2s								
E28M	Babbage River	73.21	2	IAmb		IAmb		18 13 49.4	
	comp=Z,7.5nm,1.1s								
E24K	Your Creek	73.34	5	IAmb		IAmb		18 13 50.3	
	comp=Z,6.8nm,1.3s								
E25K	Arctic Village	73.47	4	IAmb		IAmb		18 13 50.9	
	comp=Z,5.7nm,1.1s								
F19K	Shaleruckik Mo	73.66	9	IAmb		IAmb		18 13 51.2	
	comp=Z,15nm,1.3s								
F20K	Avaraart Lake	73.69	8	IAmb		IAmb		18 13 52.7	
	comp=Z,9.6nm,1.4s								
F21K	Alatna River	73.76	7	IAmb		IAmb		18 13 52.8	
	comp=Z,7.0nm,1.1s								
JHJ	Hachijo jima 2	73.99	60	LR		LR		18 48 29.4	
	comp=Z,1μm,20.6s,baz=96,slow=38								
F30M	Barrier River	74.25	0	IAmb		IAmb		18 13 52.6	
	comp=Z,5.4nm,0.8s								
F31M	Tsiigehtchic	74.42	359	IAmb		IAmb		18 13 53.0	
	comp=Z,5.8nm,0.6s								
G18K	Tagagawik	74.44	10	IAmb		IAmb		18 13 56.8	
	comp=Z,8.8nm,1.2s								
G21K	Allakaket	74.44	7	IAmb		IAmb		18 13 56.9	
	comp=Z,8.1nm,1.2s								
ANM	None	74.66	13	IAmb		IAmb		18 13 58.0	
	comp=Z,15nm,1.2s								
G29M	Pine Creek	74.94	1	IAmb		IAmb		18 13 59.0	
	comp=Z,9.3nm,1.0s								
H17K	Granite Mounta	75.18	10	IAmb		IAmb		18 14 00.4	
	comp=Z,11nm,1.4s								
H22K	Ishtalitna Cre	75.25	7	IAmb		IAmb		18 14 02.0	
	comp=Z,8.0nm,1.2s								
H27K	Steamboat Moun	75.54	3	IAmb		IAmb		18 14 06.4	
	comp=Z,9.5nm,1.3s								
MLY	Manley	76.16	7	IAmb		IAmb		18 14 07.2	
	comp=Z,6.9nm,1.2s								
I28M	Miner Creek	76.37	2	IAmb		IAmb		18 14 04.5	
	comp=Z,4.2nm,0.7s								
I29M	Ogilvie Camp,	76.49	1	IAmb		IAmb		18 14 07.0	
	comp=Z,7.3nm,1.1s								
COLA	College	76.55	5	P		P		18 14 07.5	+2.1
J16K	Anvik River	76.64	11	IAmb		IAmb		18 14 09.9	
	comp=Z,8.8nm,1.2s								
ILAR	Eielson Array	76.72	5	P		P		18 14 06.1	-0.3
	comp=Z,0.9nm,0.9s,baz=326,slow=5.3,SNR=7.7								
	comp=Z,0.9nm,0.9s								
CCB	Clear Creek Bu	76.78	5	IAmb		IAmb		18 14 09.2	
	comp=Z,8.5nm,1.3s								
FCC	Fort Churchill	77.18	339	P		P		18 14 07.7	-1.3
FCC				IAmb		IAmb		18 14 13.0	
	comp=Z,9.5nm,1.4s								
FCC	Fort Churchill	77.18	339	P		P		18 14 07.7	-1.3
FCC				pmax		pmax			
	comp=Z,10.0nm,1.4s								
KTH	Kantishna Hill	77.59	7	IAmb		IAmb		18 14 14.0	
	comp=Z,7.5nm,1.0s								
MCK	McKinley	77.59	6	IAmb		IAmb		18 14 11.7	
	comp=Z,15nm,1.4s								
K24K	Donnelly Dome	77.75	5	P		P		18 14 10.3	-1.9
YKAW3	Yellowknife Wh	77.92	350			P		18 14 11.9	-1.2
YKAW3				IAmb		IAmb		18 14 16.5	
	comp=Z,6.3nm,1.1s								
YKA	Yellowknife Ar	77.99	350	P		P		18 14 12.9	-0.5
	comp=Z,1.2nm,0.9s,baz=9.2,slow=6.1,SNR=14								
	comp=Z,1.2nm,0.9s								
YKA	Yellowknife Ar	77.99	350	P		P		18 14 13.0	-0.5
L16K	Owhat River	78.30	11	IAmb		IAmb		18 14 18.1	
	comp=Z,9.0nm,1.3s								
MENT	Mentasta	78.73	4	IAmb		IAmb		18 14 20.4	
	comp=Z,5.9nm,0.8s								
SKT	Skwentna	79.07	8	IAmb		IAmb		18 14 19.9	
	comp=Z,4.7nm,0.7s								
N19K	Bonanza Creek	79.87	9	IAmb		IAmb		18 14 27.5	
	comp=Z,12nm,1.0s								
KLU	Klutina	80.04	5	P		P		18 14 25.0	+0.1
KLU				IAmb		IAmb		18 14 27.8	
	comp=Z,11nm,0.9s								
FFC	Flin Flon	82.82	341	P		P		18 14 39.1	-0.6
FFC	Flin Flon	82.82	341	P		P		18 14 39.1	-0.6
FFC				pmax		pmax			
	comp=Z,3.0nm,0.7s								
ULM	Lac du Bonnet	85.02	336	P		P		18 14 49.9	-1.1
	comp=Z,1.5nm,0.7s,baz=18,slow=4.2,SNR=3.2								
	comp=Z,1.5nm,0.7s								
BATI	Baumata	87.95	105	P		P		18 15 04.9	-1.0
	comp=E,11nm,0.6s,baz=277,slow=6.2,SNR=4.6								
	comp=Z,11nm,0.6s								
E28A	Huff	89.78	337	P		P		18 15 13.6	-0.5
NVL	N'lazarevskaya	111.43	191	*i* PKIKP		PKiKP		18 20 48.7	+0.1
NVL				*e*				18 21 29.0	
NVL				*e*PPP		PPP		18 23 49.7	
NVL				*e*				18 28 01.9	
NVL				*e*PS		PS		18 31 01.2	0.0
NVL				*e*SS		SS		18 37 05.6	+1.3
NVL				*e*SSS		SSS		18 41 14.6	
NVL				pmax		pmax			
	comp=Z,19nm,1.3s								
NVL				MLR		MLR			
	comp=Z,508nm,18.0s								

IDC ***16*** *18:07:04.5±0.6,6°.38N×125°.86E,h107km±5km,mb3.5/7, mbtmp4.0/9,Error ellipse: s-maj=39.7km s-min=12.5km az=73.0*
DJA ***16*** *18:07:06.6±2.9,6°N±25°×12°6E±°,h69km±77km,M4.6/7, mB5.1/2,mb4.7/6,MLv4.5/7,Mw(mB)4.4/2*
ISC 16 18:07:04.1±0.7,**6°.35N**±0°.08×**126°.0E**±0°.1,**h97**km,**n16,**
σ1§46/18,mb3.7/8,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.85	327	P		Pn	18 07 24.4	+1.7
	629nm,0.3s,baz=153,slow=4.5,SNR=39							
DAV				S		Sn	18 07 37.8	+1.0
	1μm,0.3s,baz=298,slow=23,SNR=16							
DAV	Davao City (W)	0.85	327	P		Pn	18 07 24.4	+1.7
TNTI	Ternate	5.69	167	P		Pn	18 08 27.4	+1.2
	0.2nm35nm,0.8s							
GTOI	Gorontalo	6.43	208	P		Pn	18 08 36.9	+0.6
	0.2nm44nm,0.7s							
MRSI	Marisa	7.12	215	P		Pn	18 08 48.0	+2.3
SANI	Sanana	8.34	180	P		Pn	18 09 00.8	-1.5
SIJI	Sorong	8.86	144	P		Pn	18 09 11.5	+2.1
	6.1nm,0.3s,baz=336,slow=19,SNR=5.3							
BATI	Baumata	16.61	188	P		Pn	18 10 52.8	+1.5
	11nm,0.4s,baz=46,slow=1.7,SNR=8.5							
WRA	Warramunga Arr	27.37	163	P		P	18 12 39.9	-0.5
	0.8nm,0.4s,baz=337,slow=9.7,SNR=24							
	0.8nm,0.4s							
ASAR	Alice Springs	30.80	166	P		P	18 13 10.7	-0.2
	3.4nm,0.6s,baz=342,slow=7.0,SNR=79							
ASAR				PcP		PcP	18 16 05.3	-0.8
	0.4nm,0.7s,baz=343,slow=2.3,SNR=4.2							
	3.4nm,0.6s							
STKA	Stephens Creek	40.80	160	P		P	18 14 36.5	+0.4
	2.4nm,0.5s,baz=345,slow=8.7,SNR=8.9							
	2.4nm,0.5s							
PETK	Petropavlovsk-	53.29	23	P		P	18 16 13.1	+0.2
	1.4nm,0.7s,baz=224,slow=10,SNR=3.6							
	1.4nm,0.7s							
MKAR	Makanchi Array	55.04	325	P		P	18 16 24.3	-1.4
	0.2nm,0.4s,baz=111,slow=6.5,SNR=4.9							
	0.2nm,0.4s							
KURBB	Kurchatov Arra	59.19	327	P		P	18 16 53.2	-1.6
	0.1nm,0.6s,baz=129,slow=7.4,SNR=1.4							
BVAR	Borovoye Array	64.77	327	P		P	18 17 30.4	-1.8
	0.2nm,0.5s,baz=120,slow=5.5,SNR=1.5							
	0.2nm,0.5s							
ILAR	Eielson Array	83.05	26	P		P	18 19 18.0	-0.6
	0.5nm,0.5s,baz=240,slow=5.1,SNR=13							
	0.5nm,0.5s							

IDC ***16*** *18:11:47.4±1.4,2°.39N×126°.63E,h0km,mb3.5/5, mbtmp3.5/5,Error ellipse: s-maj=116.2km s-min=19.7km az=69.0*
DJA ***16*** *18:11:52.5±0.4,3°N±5°×12°7E±°,h10km,M3.4/7,mb3.4/1, MLv3.4/7*
ISC 16 18:11:54.8±1.3,**2°.4N**±0°.1×**126°.7E**±0°.3,**h55**km,**n7,**σ0§**90/8,**
mb3.6/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.77	157	P		Pn	18 12 23.7	+0.5
SANI	Sanana	4.49	189	P		Pn	18 13 00.5	+0.2
FITZ	Fitzroy Crossi	20.41	183	P		P	18 16 27.7	+0.3
	1.1nm,0.5s,baz=22,slow=9.5,SNR=1.5							
	1.1nm,0.5s							
WRA	Warramunga Arr	23.46	162	P		P	18 16 58.3	-1.3
	1.4nm,0.6s,baz=339,slow=11,SNR=20							
	1.4nm,0.6s							
ASAR	Alice Springs	26.86	165	P		P	18 17 29.4	-1.1
	0.4nm,0.7s,baz=341,slow=8.9,SNR=8.4							
ASAR				PcP		PcP	18 20 52.9	+0.8
	0.2nm,0.6s,baz=345,slow=1.8,SNR=4.2							
	0.4nm,0.7s							
MKAR	Makanchi Array	58.60	326	P		P	18 21 46.3	+0.1
	0.2nm,0.4s,baz=122,slow=7.6,SNR=4.1							
	0.2nm,0.4s							
KURBB	Kurchatov Arra	62.81	328	P		P	18 22 14.4	-0.3
	0.3nm,0.5s,baz=129,slow=6.4,SNR=9.8							
	0.3nm,0.5s							

MDD ***16*** *18:18:49.5±1.0,42°.85N×9°.81W,h7km±3km,mb_Lg3.0/12, Error ellipse: s-maj=6.9km s-min=4.8km az=130.0*
INMG ***16*** *18:18:50.9±1.6,42°.88N×9°.78W,h12km±4km,ML2.2,Error ellipse: s-maj=6.5km s-min=3.3km az=100.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Costa da Galiza (ESP)*
ISC 16 18:18:48.0±2.2,**42°.82N**±0°.05×**9°.88W**±0°.08,**h18**km±6km,
n33,σ1§**69/72,Spain**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
EMAZ	Mazaricos	0.68	79	Pg		Pb	18 19 01.6	+0.3
EMAZ				Sg		Sb	18 19 09.9	-0.4
EMAZ				*i* IVmb_Lg			18 19 11.4	
STS	Santiago	0.98	86	Pg		Pn	18 19 07.4	+0.5
STS				Sg		Sb	18 19 19.1	+0.1
EZAM	Zamans	1.10	127	Pg		Pb	18 19 08.3	-0.3
EZAM				Sg		Sg	18 19 23.8	0.0
EZAM				*i* IVmb_Lg			18 19 26.6	
EAGO	Agolada(Pontev	1.32	90	Pg		Pg	18 19 13.2	-0.3
EAGO				Sg		Sn	18 19 29.0	+0.3
EAGO				*i* IVmb_Lg			18 19 31.3	
PGAV	Gavieira, Arco	1.47	125	*e*Pn		Pn	18 19 15.9	+1.3
PGAV				*e*Pg		Pg	18 19 16.6	+0.3
PGAV				*e*Sn		Sn	18 19 32.4	0.0
PGAV				*e*Sg		Sg	18 19 35.9	+0.5
PGAV				*i* IAML			18 19 36.8	
PGAV				*i* IAML			18 19 37.0	
PGAV				*i* IAML			18 19 38.4	
ELOB	Lobios	1.65	125	Pn		Pb	18 19 18.4	+0.5
ELOB				Sn		Sb	18 19 39.8	+1.4
ELOB				*i* IVmb_Lg			18 19 43.0	
PCAB	Cabril	1.77	128	*e*Pn		P

PSARD	**Sardoal**	**3.47**	**157**	*e*Pn	**Pn**	**18 19 44.1**	**+3.1**
PSARD				*e*Sn	**Sn**	**18 20 20.1**	**-1.5**
PSARD				*e*Sg	**Sg**	**18 20 41.8**	**+2.5**
PSARD				*i* IAML		18 20 45.6	
PSARD				*i* IAML		18 20 48.0	
PSARD				*i* IAML		18 20 50.4	
PCBR	**Castelo Branco**	**3.48**	**148**	*e*Sn	**Sn**	**18 20 16.4**	**-5.6**
PCBR				*e*Sg	**Sg**	**18 20 37.9**	**-1.9**
PCBR				*i* IAML		18 20 46.4	
PCBR				*i* IAML		18 20 46.6	
PCBR				*i* IAML		18 20 48.6	
PMRV	**Marv??o**	**3.87**	**150**	*e*Sg	**Sg**	**18 20 52.0**	**-0.4**
PMTG	**Montargil**	**3.95**	**161**	*e*Pn	**Pn**	**18 19 48.8**	**+1.1**
PMTG				*e*Sn	**Sn**	**18 20 30.8**	**-2.8**
EPLA	**Plasencia**	**3.96**	**133**	Pn	**Pn**	**18 19 49.5**	**+1.6**
EPLA				Sn	**Sn**	**18 20 33.3**	**-0.8**
EPLA				*i* IVmb_Lg		18 20 34.0	
PARRA	**Arraiolos**	**4.24**	**160**	*e*Sn	**Sn**	**18 20 36.9**	**-3.7**
PARRA				*e*Sg	**Sg**	**18 21 07.3**	**+3.4**
PESTR	**Estremoz**	**4.31**	**155**	*e*Sn	**Sn**	**18 20 42.0**	**-0.5**
PESTR				*e*Sg	**Sg**	**18 21 07.5**	**+1.1**
MOE	**Montemor**	**4.45**	**164**	*e*Pn	**Pn**	**18 19 55.2**	**+0.7**
MOE				*e*Sn	**Sn**	**18 20 43.8**	**-2.0**
EBAD	**Badajoz**	**4.60**	**151**	Pn	**Pn**	**18 19 59.2**	**+2.5**
EBAD				Sn	**Sn**	**18 20 48.6**	**-1.1**
EBAD				*i* IVmb_Lg		18 20 49.5	
CIBOR	**Castaar de Ib**	**4.62**	**132**	Pn	**Pn**	**18 19 59.5**	**+2.4**
CIBOR				Sn	**Sn**	**18 20 50.2**	**-0.1**
ELAN	**Lanestosa**	**4.74**	**83**	Pn	**Pn**	**18 19 58.8**	**+0.1**
ELAN				*i* IVmb_Lg		18 20 49.4	
ELAN				Sn	**Sn**	**18 20 55.5**	**+2.2**
GUD	**Guadarrama**	**4.80**	**115**	Pn	**Pn**	**18 20 00.4**	**+0.8**
GUD				*i* IVmb_Lg		18 20 52.2	
GUD				Sn	**Sn**	**18 20 52.6**	**-2.3**
PBAR	**Barrancos**	**5.12**	**154**	*e*Sn	**Sn**	**18 21 01.0**	**-1.4**
PVAQ	**Vaqueiros**	**5.66**	**162**	*e*Pn	**Pn**	**18 20 13.1**	**+2.0**
PVAQ				*e*Sn	**Sn**	**18 21 11.7**	**-4.0**

*AZER **16** 18:34:50.6, 38.°45N×44.°39E, h14km, ml2.6*
*AFAD **16** 18:34:51.6, 38.°45N×44.°36E, h14km±1km, ML2.2*
ISC 16 18:34:50.9±1.2, 38.°46N±0.°03×44.°41E±0.°03, h11km±10km, n28, σ0s62/49, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.39**	**301**	P	**Pg**	**18 34 58.9**	**+0.3**
TVAN	**Van**	**0.79**	**275**	P	**Pg**	**18 35 06.1**	**-0.1**
VMUR	**Van-Muradiye**	**0.84**	**309**	P	**Pb**	**18 35 07.8**	**+0.1**
VMUR				S	**Sn**	**18 35 21.7**	**+0.4**
YOVA	**Hakkari_Yksek**	**0.88**	**186**	P	**Pb**	**18 35 08.4**	**+0.2**
HAKT	**HAKKARI**	**1.06**	**212**	P	**Pn**	**18 35 11.5**	**-0.4**
HAKT				S	**Sn**	**18 35 27.8**	**+1.0**
HAKT				IAML		18 35 29.0	
	comp=N,58nm,0.5s						
HAKT	**HAKKARI**	**1.06**	**212**	P	**Pg**	**18 35 11.2**	**-0.1**
HAKT				S	**Sn**	**18 35 28.2**	**+1.5**
GEVA	**Gevas**	**1.07**	**262**	P	**Pb**	**18 35 10.1**	**-1.5**
GEVA				S	**Sn**	**18 35 26.6**	**-0.4**
GEVA				IAML		18 35 34.0	
	comp=E,56nm,0.4s						
NAX	**Nakhchivan**	**1.11**	**50**	P	**Pb**	**18 35 11.0**	**-1.1**
NAX				S	**Sn**	**18 35 28.4**	**+0.7**
DYDN	**Diyadin**	**1.22**	**333**	P	**Pb**	**18 35 14.1**	**-0.1**
SBZ	**Shahbuz**	**1.29**	**43**	P	**Pn**	**18 35 14.2**	**-0.8**
SBZ				S	**Sg**	**18 35 33.4**	**+0.9**
HYR	**Heyderabad**	**1.30**	**15**	P	**Pn**	**18 35 14.6**	**-0.5**
HYR				S	**Sg**	**18 35 33.4**	**+0.6**
ORD	**Ordubad**	**1.32**	**69**	P	**Pn**	**18 35 14.5**	**-0.8**
ORD				S	**Sn**	**18 35 33.4**	**+0.3**
IGDI	**IGDIR**	**1.43**	**350**	P	**Pg**	**18 35 18.5**	**+0.1**
IGDI	**IGDIR**	**1.43**	**350**	P	**Pn**	**18 35 16.4**	**-0.4**
IGDI				S	**Sb**	**18 35 35.9**	**+0.1**
PERV	**Siirt/Pervari-**	**1.56**	**251**	P	**Pg**	**18 35 22.0**	**+1.1**
KOTA	**Agri, Merkez-K**	**1.64**	**325**	P	**Pg**	**18 35 22.7**	**+0.4**
SRTM	**Siirt_Merkez**	**2.02**	**257**	P	**Pb**	**18 35 27.8**	**+0.2**
SRTM				S	**Sg**	**18 35 54.8**	**-0.9**
SRTM				IAML		18 36 06.0	
	comp=N,33nm,0.8s						
QRD	**Qoradiz**	**2.48**	**65**	P	**Pn**	**18 35 30.8**	**-0.4**
QRD				S	**Sn**	**18 36 01.8**	**+0.4**
GDB	**GEDABAY**	**2.48**	**24**	P	**Pn**	**18 35 31.2**	**-0.2**
GDB				S	**Sn**	**18 36 02.4**	**+0.6**
GANJ	**Ganja**	**2.63**	**33**	P	**Pn**	**18 35 33.2**	**-0.2**
GANJ				S	**Sn**	**18 36 06.2**	**+0.8**
AGDM	**Agdam**	**2.66**	**51**	P	**Pn**	**18 35 33.3**	**-0.5**
AGDM				S	**Sn**	**18 36 06.5**	**+0.5**
QZX	**Qazax, Azerbai**	**2.70**	**16**	P	**Pn**	**18 35 33.6**	**-0.6**
QZX				S	**Sn**	**18 36 07.0**	**+0.1**
BLQ	**Beylaqan**	**2.75**	**62**	P	**Pn**	**18 35 34.7**	**-0.3**
BLQ				S	**Sn**	**18 36 08.6**	**+0.4**
BRDA	**Brd**	**2.80**	**49**	P	**Pn**	**18 35 35.2**	**-0.3**
BRDA				S	**Sn**	**18 36 10.1**	**+0.7**
YRD	**Yardimli**	**3.03**	**80**	P	**Pn**	**18 35 38.3**	**-0.6**
YRD				S	**Sn**	**18 36 15.3**	**0.0**
LRK	**Lerik**	**3.08**	**85**	P	**Pn**	**18 35 39.2**	**-0.5**
LRK				S	**Sn**	**18 36 16.8**	**+0.1**
MNGR	**Mingechevir, A**	**3.10**	**41**	P	**Pn**	**18 35 39.4**	**-0.3**
MNGR				S	**Sn**	**18 36 17.1**	**+0.4**
GLBA	**Clilabad**	**3.20**	**75**	P	**Pn**	**18 35 40.7**	**-0.4**
GLBA				S	**Sn**	**18 36 19.7**	**+0.4**

*NSSP **16** 18:37:43.9, 38.°45N×44.°53E, h10km, Ms3.5*
*TEH **16** 18:37:46.0, 38.°49N×44.°57E, h8km±58km, ML2.9, Presumed earthquake*
*AZER **16** 18:37:46.0, 38.°43N×44.°48E, h4km, ml3.5*
*AFAD **16** 18:37:46.2, 38.°46N×44.°48E, h6km±4km, ML3.3*
*ISK **16** 18:37:46.3, 38.°38N×44.°50E, h2km, ML3.6/10*
ISC 16 18:37:47.1±0.7, 38.°41N±0.°02×44.°49E±0.°02, h10km, n91, σ1s01/147, 3C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**303**	P	**Pg**	**18 37 55.3**	**-1.0**
OZAP				S	**Sg**	**18 38 02.0**	**-0.5**
OZAP				IAML		18 38 07.0	
	comp=E,4μm,0.6s						
YOVA	**Hakkari_Yksek**	**0.83**	**191**	P	**Pn**	**18 38 03.9**	**-1.2**
YOVA				IAML		18 38 22.0	
	comp=E,436nm,0.6s						
TVAN	**Van**	**0.86**	**278**	P	**Pg**	**18 38 01.9**	**-1.8**
TVAN				IAML		18 38 25.0	
	comp=N,1μm,0.4s						
TVAN				IAML		18 38 29.0	
	comp=E,1μm,0.5s						
VANB	**Van**	**0.88**	**283**	Pg	**Pg**	**18 38 03.8**	**-0.4**
VANB				Sg	**Sb**	**18 38 16.9**	**+0.4**
ISHB	**Shabestar**	**0.90**	**98**	Pg	**Pg**	**18 38 02.7**	**-1.7**
VMUR	**Van-Muradiye**	**0.92**	**309**	P	**Pg**	**18 38 03.5**	**-1.5**
VMUR				S	**Sg**	**18 38 16.7**	**-0.3**
VMUR				IAML		18 38 19.0	
	comp=E,917nm,0.5s						
VMUR				IAML		18 38 19.0	
	comp=N,1μm,0.4s						
MAKU	**Maku**	**0.96**	**9**	Pg	**Pg**	**18 38 02.8**	**-2.8**
IMRD	**Marand**	**1.00**	**72**	Pg	**Pg**	**18 38 04.4**	**-2.0**
HAKT	**HAKKARI**	**1.05**	**216**	P	**Pn**	**18 38 07.3**	**-0.8**
HAKT				IAML		18 38 35.0	
	comp=E,708nm,0.7s						
HAKT	**HAKKARI**	**1.05**	**216**	P	**Pg**	**18 38 06.7**	**-0.6**
HAKT				S	**Sn**	**18 38 21.6**	**-1.4**
ERCV	**ERCIS-VAN**	**1.09**	**305**	Pn	**Pn**	**18 38 08.7**	**+0.1**
NAX	**Nakhchivan**	**1.10**	**45**	P	**Pb**	**18 38 06.4**	**-1.8**
NAX				S	**Sb**	**18 38 23.1**	**+0.5**
GEVA	**Gevas**	**1.13**	**266**	P	**Pg**	**18 38 06.7**	**-2.1**
GEVA				S	**Sb**	**18 38 23.7**	**+0.1**
GEVA				IAML		18 38 32.0	
	comp=N,1μm,0.4s						
AKDM	**Akdamar-Van**	**1.19**	**267**	Pn	**Pb**	**18 38 08.1**	**-1.8**
ORD	**Ordubad**	**1.29**	**66**	P	**Pn**	**18 38 09.9**	**-1.3**
ORD				S	**Sg**	**18 38 29.7**	**+1.1**
SBZ	**Shahbuz**	**1.29**	**40**	P	**Pn**	**18 38 10.0**	**-1.4**
SBZ				S	**Sg**	**18 38 30.5**	**+1.8**
DYDN	**Diyadin**	**1.29**	**331**	P	**Pn**	**18 38 10.0**	**-1.5**
DYDN				S	**Sb**	**18 38 26.3**	**-2.2**
ITBZ	**Tabriz**	**1.32**	**97**	Pg	**Pn**	**18 38 10.3**	**-1.5**
HYR	**Heyderabad**	**1.34**	**12**	P	**Pn**	**18 38 10.6**	**-1.4**
HYR				S	**Sg**	**18 38 32.0**	**+1.7**
CUKT	**Cukurca**	**1.35**	**211**	Pn	**Pg**	**18 38 12.8**	**-0.3**
CUKT				Sn	**Sg**	**18 38 31.8**	**+1.2**
CUKT	**Cukurca**	**1.35**	**211**	P	**Pg**	**18 38 13.7**	**+0.6**
CUKT				IAML		18 38 39.0	
	comp=N,1μm,0.8s						
CUKT				IAML		18 38 44.0	
	comp=E,1μm,0.6s						
IAZR	**Azarshahr**	**1.38**	**121**	Pg	**Pb**	**18 38 13.1**	**-0.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**287**	P	**Pn**	**18 38 13.4**	**0.0**
ADCV				S	**Sg**	**18 38 34.4**	**+0.9**
ADCV				IAML		18 38 37.0	
	comp=E,454nm,0.6s						
VAYK	**Vayk**	**1.48**	**29**	*i* P	**Pn**	**18 38 12.8**	**-1.1**
VAYK				*i* S	**Sn**	**18 38 33.1**	**-0.3**
IGDI	**IGDIR**	**1.49**	**348**	P	**Pn**	**18 38 13.9**	**-0.2**
IGDI				S	**Sn**	**18 38 33.5**	**-0.2**
IGDI				IAML		18 38 37.0	
	comp=E,403nm,0.9s						
IGDI				IAML		18 38 37.0	
	comp=N,237nm,0.8s						
IGDI	**IGDIR**	**1.49**	**348**	P	**Pn**	**18 38 13.7**	**-0.4**
IGDI				S	**Sn**	**18 38 33.7**	**0.0**
ALVK	**Alvank**	**1.55**	**69**	*e*P	**Pn**	**18 38 14.4**	**-0.5**
ALVK				*e*S	**Sb**	**18 38 35.8**	**+0.1**
PERV	**Siirt/Pervari-**	**1.60**	**254**	P	**Pg**	**18 38 15.5**	**+0.6**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pn**	**18 38 16.9**	**+0.6**
DORK	**Agr/Tutak/Do**	**1.65**	**307**	P	**Pn**	**18 38 16.1**	**-0.2**
DORK				IAML		18 38 42.0	
	comp=E,183nm,0.8s						
DORK				IAML		18 38 43.0	
	comp=N,319nm,0.6s						
MLAZ	**Malazgirt-MUS**	**1.68**	**296**	Pn	**Pb**	**18 38 18.1**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.71**	**325**	P	**Pn**	**18 38 17.4**	**+0.2**
GNI	**Garni**	**1.75**	**6**	Pn	**Pb**	**18 38 18.9**	**-0.6**
GNI	**Garni**	**1.75**	**6**	⇑*i*P	**Pn**	**18 38 18.7**	**+1.0**
GNI				⇑*i*S	**Sg**	**18 38 44.9**	**+1.5**
VNNZ	**Vanand**	**1.77**	**343**	*e*P	**Pb**	**18 38 20.3**	**+0.6**
VNNZ				*e*S	**Sg**	**18 38 46.9**	**+2.9**
EGVZ	**Egvard**	**1.80**	**62**	*e*P	**Pn**	**18 38 18.4**	**0.0**
EGVZ				*e*S	**Sn**	**18 38 42.3**	**+1.0**
GRS	**Goris**	**1.81**	**52**	⇓*i*P	**Pn**	**18 38 18.0**	**-0.4**
GRS				⇑*i*S	**Sb**	**18 38 44.0**	**+0.9**
BLIS	**Bitlis-Merkez**	**1.86**	**271**	P	**Pg**	**18 38 22.4**	**-0.5**
SIRN	**Sirnak**	**1.88**	**242**	P	**Pg**	**18 38 22.5**	**-0.6**
SIRN				IAML		18 38 57.0	
	comp=E,590nm,0.6s						
SIRN				IAML		18 38 58.0	
	comp=N,335nm,0.7s						
ARUZ	**Aruch**	**1.90**	**351**	*e*P	**Pb**	**18 38 21.7**	**-0.3**
ARUZ				*e*S	**Sg**	**18 38 48.3**	**+0.1**
MAHB	**Mahabad**	**1.90**	**149**	Pn	**Pg**	**18 38 23.3**	**-0.3**
KAPZ	**Kaputan**	**1.92**	**5**	*e*P	**Pg**	**18 38 21.9**	**-0.4**
KAPZ				*e*S	**Sg**	**18 38 49.5**	**+0.6**
GURO	**Guroymak-BITLI**	**1.93**	**275**	Pn	**Pb**	**18 38 21.5**	**-1.0**
AYRK	**Ayrk**	**1.98**	**30**	*e*P	**Pn**	**18 38 22.1**	**+1.1**
AYRK				*e*S	**Sb**	**18 38 49.3**	**+1.0**
AMBZ	**Amberd**	**1.99**	**355**	*e*P	**Pb**	**18 38 22.7**	**-0.8**
AMBZ				*e*S	**Sg**	**18 38 50.2**	**-0.8**
IHRS	**Heris**	**2.01**	**92**	Pn	**Pb**	**18 38 23.0**	**-0.9**
SRTM	**Siirt_Merkez**	**2.06**	**259**	P	**Pb**	**18 38 24.2**	**-0.6**
SRTM				IAML		18 39 00.0	
	comp=E,365nm,0.9s						
SRTM				IAML		18 39 04.0	
	comp=N,633nm,0.8s						
DIGO	**Kars**	**2.18**	**337**	P	**Pb**	**18 38 27.0**	**+0.1**
DIGO				IAML		18 39 08.0	
	comp=E,158nm,0.6s						
DIGO				IAML		18 39 10.0	
	comp=N,181nm,1.0s						
MUSM	**Mu-Merkez**	**2.35**	**279**	P	**Pb**	**18 38 28.9**	**-0.9**
EAK	**Akyaka**	**2.38**	**344**	P	**Pb**	**18 38 30.8**	**+0.7**
QRD	**Qoradiz**	**2.45**	**64**	P	**Pn**	**18 38 27.0**	**-0.1**
QRD				S	**Sn**	**18 38 57.8**	**+0.7**
IHSH	**Hashtrud**	**2.46**	**116**	Pn	**Pb**	**18 38 32.1**	**+0.6**
KARS	**Kars**	**2.47**	**334**	Pn	**Pn**	**18 38 29.3**	**+1.7**
BOZK	**Kars-Merkez-Bo**	**2.47**	**332**	P	**Pb**	**18 38 31.2**	**-0.6**
GDB	**GEDABAY**	**2.51**	**23**	P	**Pn**	**18 38 27.6**	**-0.5**
GDB				S	**Sn**	**18 38 59.4**	**+0.5**
LSVT	**Lusahovit**	**2.56**	**12**	*e*P	**Pn**	**18 38 30.1**	**+1.3**
LSVT				*e*S	**Sb**	**18 39 05.2**	**+0.3**
ISRB	**Sarab**	**2.57**	**102**	Pn	**Pn**	**18 38 29.9**	**+0.9**
BTMN	**Batman**	**2.59**	**260**	P	**Pb**	**18 38 31.5**	**-2.2**
BTMN				IAML		18 39 17.0	
	comp=E,234nm,0.7s						
BTMN				IAML		18 39 20.0	
	comp=N,196nm,0.7s						
MIDY	**Mardin/Midyat-**	**2.64**	**249**	P	**Pb**	**18 38 32.4**	**-2.1**
MIDY				IAML		18 39 23.0	
	comp=N,114nm,0.8s						
GANJ	**Ganja**	**2.65**	**32**	P	**Pn**	**18 38 29.7**	**-0.2**
GANJ				S	**Sn**	**18 39 02.8**	**+0.7**
AGDM	**Agdam**	**2.65**	**49**	P	**Pn**	**18 38 29.5**	**-0.5**
AGDM				S	**Sn**	**18 39 02.9**	**+0.7**
SRTK	**Saratovka**	**2.66**	**357**	*e*P	**Pb**	**18 38 34.1**	**-0.8**
SRTK				*e*S	**Sb**	**18 39 10.0**	**+2.3**
SENK	**Senkaya-Erzuru**	**2.71**	**323**	Pn	**Pn**	**18 38 32.9**	**+1.9**
BLQ	**Beylaqan**	**2.73**	**60**	P	**Pn**	**18 38 31.0**	**0.0**
BLQ				S	**Sn**	**18 39 04.7**	**+0.7**
QZX	**Qazax, Azerbai**	**2.73**	**14**	P	**Pn**	**18 38 30.2**	**-0.9**
QZX				S	**Sn**	**18 39 04.8**	**+0.6**
BRDA	**Brd**	**2.79**	**48**	P	**Pn**	**18 38 31.3**	**-0.5**
BRDA				S	**Sn**	**18 39 06.1**	**+0.5**
KARO	**Karliova-Bingo**	**2.83**	**290**	Pn	**Pn**	**18 38 34.6**	**+2.0**
YRD	**Yardimli**	**2.98**	**79**	P	**Pn**	**18 38 34.5**	**-0.1**
YRD				S	**Sn**	**18 39 11.1**	**+0.5**
LRK	**Lerik**	**3.03**	**84**	P	**Pn**	**18 38 35.5**	**+0.3**
LRK				S	**Sn**	**18 39 12.3**	**+0.5**
BNGB	**Bingl**	**3.04**	**282**	Pn	**Pn**	**18 38 37.5**	**+2.2**
MNGR	**Mingechevir, A**	**3.10**	**40**	P	**Pn**	**18 38 35.7**	**-0.4**
MNGR				S	**Sn**	**18 39 13.9**	**+0.8**
GLBA	**Clilabad**	**3.16**	**74**	P	**Pn**	**18 38 36.9**	**0.0**
GLBA				S	**Sn**	**18 39 15.5**	**+0.8**
LKRN	**Lenkeran, Azer**	**3.38**	**84**	P	**Pn**	**18 38 39.6**	**-0.3**
LKRN				S	**Sn**	**18 39 21.0**	**+1.0**
ASTR	**Astara**	**3.38**	**86**	P	**Pn**	**18 38 40.3**	**+0.4**
ASTR				S	**Sn**	**18 39 20.9**	**+0.8**
SAAT	**Saatly**	**3.39**	**63**	P	**Pn**	**18 38 39.5**	**-0.5**
SAAT				S	**Sn**	**18 39 20.7**	**+0.5**
KDMR	**Kurdemir**	**3.47**	**54**	P	**Pn**	**18 38 40.9**	**-0.3**
KDMR				S	**Sn**	**18 39 23.3**	**+0.9**
SEKA	**Sheki**	**3.49**	**36**	P	**Pn**	**18 38 42.5**	**+1.0**
SEKA				S	**Sn**	**18 39 24.7**	**+1.8**
ZKTA	**Zakatala**	**3.62**	**26**	P	**Pn**	**18 38 42.9**	**-0.4**
ZKTA				S	**Sn**	**18 39 26.9**	**+0.8**
QBL	**Gabala**	**3.62**	**44**	P	**Pn**	**18 38 43.4**	**+0.1**
QBL				S	**Sn**	**18 39 26.7**	**+0.6**
IML	**Ismayilli**	**3.72**	**49**	P	**Pn**	**18 38 44.2**	**-0.5**
IML				S	**Sn**	**18 39 29.3**	**+0.8**
ALIB	**&Aumlli-Bayram**	**3.84**	**65**	P	**Pn**	**18 38 45.8**	**-0.4**
ALIB				S	**Sn**	**18 39 32.2**	**+0.9**
XNQ	**Khinaliq**	**3.94**	**44**	P	**Pn**	**18 38 47.3**	**-0.6**
XNQ				S	**Sn**	**18 39 34.9**	**+0.6**
PQL	**Pirkuli**	**3.96**	**52**	P	**Pn**	**18 38 47.6**	**-0.5**
PQL				S	**Sn**	**18 39 35.5**	**+0.7**
GBS	**Qobustan**	**4.05**	**57**	P	**Pn**	**18 38 48.7**	**-0.5**
GBS				S	**Sn**	**18 39 37.5**	**+0.7**
ATGJ	**Altiaghaj**	**4.22**	**53**	P	**Pn**	**18 38 51.1**	**-0.5**
ATGJ				S	**Sn**	**18 39 41.7**	**+0.8**
QSAR	**Qusar**	**4.25**	**42**	P	**Pn**	**18 38 51.4**	**-0.5**
QSAR				S	**Sn**	**18 39 42.3**	**+0.7**
QUBA	**Quba, Azerbaij**	**4.26**	**45**	P	**Pn**	**18 38 51.6**	**-0.4**
QUBA				S	**Sn**	**18 39 42.7**	**+0.8**
SIZA	**Siyzn**	**4.32**	**51**	P	**Pn**	**18 38 52.5**	**-0.5**
SIZA				S	**Sn**	**18 39 44.1**	**+0.7**
GOBA	**Gobu**	**4.52**	**62**	P	**Pn**	**18 38 55.3**	**-0.3**
GOBA				S	**Sn**	**18 39 55.2**	**+0.9**
NDR	**Nardaran**	**4.78**	**61**	P	**Pn**	**18 38 58.7**	**-0.4**
NDR				S	**Sn**	**18 39 55.3**	**+0.8**
GALA	**Gala**	**4.82**	**64**	P	**Pn**	**18 38 59.4**	**-0.3**
GALA				S	**Sn**	**18 39 56.5**	**+0.9**

GUC 16 18:50:51.9±0.7, 20.°33S×69.°05W, h110km±10km, ML2.5, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO01	**Chusmiza**	**0.67**	**348**	*i* P	Pn	18 51 10.3	-0.4
GO01				*i* S	Sn	18 51 24.5	-0.1
HMBC	**Humberstone**	**0.79**	**274**	⇑*i*P	Pn	18 51 10.5	-0.7
HMBC				*i* S	Sn	18 51 24.9	-0.8
HMBC				IAML		18 51 27.8	
	comp=N,140nm,0.3s						
PB11	**IPOC Station P**	**0.81**	**314**	*i* P	Pn	18 51 11.0	-0.4
PB11				*i* S	Sn	18 51 25.7	-0.3
PB11				IAML		18 51 26.9	
	comp=E,367nm,0.2s						
PB02	**IPOC Station P**	**1.27**	**219**	⇑*i*P	Pn	18 51 15.8	-0.3
PB02				*i* S	Sn	18 51 34.1	-0.3
PB02				IAML		18 51 35.5	
	comp=E,143nm,0.2s						
PB07	**IPOC Station P**	**1.60**	**209**	*i* P	Pn	18 51 19.2	-0.9
PB07				*i* S	Sn	18 51 40.5	-1.0
PB07				IAML		18 51 40.8	
	comp=N,42nm,0.2s						

GUC 16 18:50:53.3±0.3, 23.°78S×67.°05W, h230km±7km, ML3.9, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB06	**IPOC Station P**	**2.56**	**294**	⇑*i*P	Pn	18 51 40.7	+0.7
PB06				*i* S	S	18 52 16.2	-0.2
PB06				IAML		18 52 17.0	
	comp=N,226nm,0.2s						
PB03	**IPOC Station P**	**3.04**	**304**	*i* P	Pn	18 51 45.6	+0.5
PB03				*i* S	S	18 52 25.5	-0.3
PB05	**IPOC Station P**	**3.05**	**287**	⇓*i*P	Pn	18 51 45.5	+0.2
PB05				*i* S	S	18 52 24.8	-1.1
PB10	**IPOC Station P**	**3.23**	**274**	*i* S	S	18 52 28.4	-1.0
PB10	**IPOC Station P**	**3.23**	**274**	*i* P	Pn	18 51 47.3	+0.2
PB10				*i* S	S	18 52 28.3	-1.1
PB10	**IPOC Station P**	**3.23**	**274**	⇑*i*P	Pn	18 51 47.6	+0.5
PB07	**IPOC Station P**	**3.33**	**307**	*i* P	Pn	18 51 48.7	+0.2
PB07				*i* S	S	18 52 30.6	-1.2
PB02	**IPOC Station P**	**3.60**	**312**	*e*P	Pn	18 51 51.8	+0.2
PB02				*e*S	S	18 52 35.2	-2.2
TA01	**Diego Aracena**	**4.32**	**317**	*i* S	S	18 52 51.7	-1.2
HMBC	**Humberstone**	**4.37**	**322**	*i* S	S	18 52 53.5	-0.8
GO01	**Chusmiza**	**4.55**	**334**	*e*S	S	18 52 58.4	-0.6
PB11	**IPOC Station P**	**4.68**	**328**	*i* S	S	18 53 00.4	-0.8
PB16	**IPOC Station P**	**5.89**	**337**	*e*S	S	18 53 28.8	-0.5
PB12	**IPOC Station P**	**5.99**	**329**	*e*S	S	18 53 28.2	-2.6

*IDC **16** 19:05:35.5±16.0, 37.°13N×71.°91E, h280km±151km, mb2.8/1, mbtmp3.3/5, Error ellipse: s-maj=139.8km s-min=66.7km az=56.0*
ISC 16 19:05:21.5±1.9, 36.°8N±0.°1×71.°8E±0.°2, h142km, n7, σ1s31/9, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.17**	**19**	⇑Pn	**Pn**	**19 06 50.2**	**-0.3**
	0.1nm,0.3s						
AAK				⇑Sn	**Sn**	**19 07 59.5**	**-0.5**
	1.3nm,0.6s						
KK31	**Karatay Array**	**6.35**	**352**	⇓Pn	**Pn**	**19 06 52.0**	**-0.7**
	0.7nm,0.2s,baz=181,slow=13,SNR=34						
KK31				⇑Sn	**Sn**	**19 08 03.4**	**-0.7**
	2.6nm,0.5s,baz=178,slow=24,SNR=5.1						
MKAR	**Makanchi Array**	**12.66**	**35**	P	**P**	**19 08 22.9**	**+0.7**
	0.1nm,0.3s,baz=213,slow=10,SNR=4.3						
KURBB	**Kurchatov Arra**	**14.62**	**17**	P	**P**	**19 08 44.9**	**+1.1**
	0.3nm,0.4s,baz=207,slow=11,SNR=2.4						
BVAR	**Borovoye Array**	**16.23**	**357**	P	**P**	**19 09 04.0**	**+2.4**
	0.2nm,0.5s,baz=163,slow=10,SNR=1.8						
ZALV	**Zalesovo Beam**	**19.36**	**24**	P	**Pn**	**19 09 37.3**	**-1.1**
	0.9nm,0.3s,baz=221,slow=10,SNR=5.8						
WRA	**Warramunga Arr**	**81.63**	**122**	P	**P**	**19 17 23.2**	**-0.6**
	0.3nm,0.7s,baz=317,slow=4.7,SNR=1.6						
	0.3nm,0.7s						

IDC 16 20:21:05.4±1.4, 13.°89N×121.°68E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=56.9km s-min=21.7km az=60.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.30**	**285**	P	P	20 26 05.1	+0.4
	1.5nm,0.9s,baz=96,slow=8.9,SNR=12						
	1.5nm,0.9s						
WRA	**Warramunga Arr**	**35.85**	**159**	P	P	20 28 08.7	+1.6
	0.7nm,0.8s,baz=335,slow=9.6,SNR=4.7					

OBIP	Obispado Ponce	1.37	134			Sn	20	30	24.6 0.0
OBIP	Obispado Ponce	1.37	134⇑	*i*P		Pn	20	30	06.4 +0.1
OBIP				*e*S		Sn	20	30	24.6 0.0
ECPR	Experimental S	1.39	120			Pn	20	30	06.2 -0.5
ECPR	Experimental S	1.39	120⇑	*i*P		Pn	20	30	06.6 0.0
ECPR				*e*S		Sb	20	30	24.8 -0.3
SMDR	Samana, DR	1.49	281			Pg	20	30	09.7 -0.1
SMDR						Sg	20	30	30.6 +1.4
SMDR	Samana, DR	1.49	281⇓	*e*Pg		Pb	20	30	09.6 +0.6
SMDR				⇑*e*Sg		Sg	20	30	29.3 0.0
SMDR				IAML			20	30	33.1
	comp=N,87nm,1.4s								
GCPR	Guaynabo City	1.63	115			Pn	20	30	10.4 +0.5
GCPR						Sn	20	30	29.7 -1.3
GCPR	Guaynabo City	1.63	115⇓	*i*P		Pn	20	30	10.4 +0.5
GCPR				*e*S		Sn	20	30	29.7 -1.3
DR12	Loma Pena Alta	1.67	263	Pn		Pb	20	30	12.6 +0.6
HATOM	Hato Mayor del	1.67	263⇑	*e*Pg		Pg	20	30	13.1 -0.1
HATOM				IAML			20	30	40.4
	comp=N,71nm,0.3s								
SJG	San Juan	1.67	122			Pn	20	30	10.4 0.0
SJG	San Juan	1.67	122	IAML			20	30	37.9
	comp=N,122nm,0.3s								
SJG				IAML			20	30	39.1
	comp=N,111nm,0.3s								
SJG	San Juan	1.67	122⇑	*e*Pg		Pn	20	30	10.8 +0.4
SJG			⇑	*e*Sg		Sb	20	30	33.0 -0.1
SJG	San Juan	1.67	122⇓	*i*P		Pn	20	30	10.9 +0.5
SJG				*e*S		Sn	20	30	32.3 +0.3
PDPR	Patillas Dam,	1.82	123	Pn		Pn	20	30	12.7 +0.1
PDPR				IAML			20	30	41.9
	comp=N,103nm,0.2s								
HUMP	Col San Antoni	1.90	117			Pn	20	30	13.8 +0.1
HUMP	Col San Antoni	1.90	117			Sn	20	30	37.6 -0.1
HUMP	Col San Antoni	1.90	117⇓	*e*P		Pn	20	30	14.4 +0.7
HUMP				*e*S		Sn	20	30	37.6 -0.1
SDDR	Presa de Saban	3.46	270			Pb	20	30	39.8 -2.7
SDDR	Presa de Saban	3.46	270	IAML			20	31	34.2
	comp=N,31nm,0.5s								
SDDR				IAML			20	31	34.3
	comp=N,32nm,0.9s								

*NEIC **16** 20:48:14.2±2.1, 17°.42S±0°.09×174°.0W±0°.1, h50km±8km, mb4.7/41, Error ellipse: s-maj=18.5km s-min=12.9km az=85.0*

*IDC **16** 20:48:20.2±0.8, 17°.47S×174°.14W, h90km±5km, mb4.0/8, mbtmp4.3/9, MS3.5/6, Error ellipse: s-maj=28.8km s-min=15.4km az=129.0*

*NOU **16** 20:48:22.3, 18°.16S×173°.63W, h43km, mb4.7/9, Tonga Islands*

ISC 16 20:48:13.0±0.4, 17°.56S±0°.07×174°.07W±0°.06, h35km, n102, σ2s11/83, mb4.8/31, MS3.8/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIUE	Niue	4.22	112	Pn		Pn	20 49 16.2	+1.4
NIUE	Niue	4.22	112	P		Pn	20 49 16.2	+1.4
NIUE	Niue	4.22	112	S		Sn	20 49 58.0	-4.9
AFI	Afiamalu	4.25	32			Pn	20 49 14.0	-1.3
MSVF	Nonsavu	7.51	267	P		Pn	20 50 14.9	+15
RAR	Rarotonga	13.97	107	P		Pn	20 51 28.8	+0.3
	16nm,0.5s,baz=253,slow=6.9,SNR=8.1							
RAR				S		Sn	20 53 47.6	-15
	8.2nm,0.4s,baz=271,slow=18,SNR=1.4							
RAR				LR		LR	20 56 07.3	
	comp=Z,41nm,18.1s,baz=276,slow=33							
RAR	Rarotonga	13.97	107	Pn		Pn	20 51 26.9	-1.6
DZM	Mont Dzumac	18.87	253	P		Pn	20 52 32.8	+1.6
	8.0nm,1.1s,baz=106,slow=20,SNR=3.6							
DZM				LR		LR	20 58 47.9	
	comp=Z,136nm,21.9s,baz=14,slow=33							
DZM	Mont Dzumac	18.87	253	P		P	20 52 27.8	-2.6
OUZ	Omahuta	20.74	210	P		Pn	20 52 55.7	+2.6
MXZ	Matakaoa Point	21.03	197	P		P	20 52 57.8	+4.1
URZ	Urewera	22.02	199	P		P	20 53 07.0	+2.7
	12nm,0.4s,baz=345,slow=2.4,SNR=23							
URZ				S		S	20 56 59.9	-5.4
	4.7nm,0.7s,baz=11,slow=16,SNR=5.7							
	12nm,0.4s							
URZ	Urewera	22.02	199	P		P	20 53 07.6	+3.3
TOZ	Tahuroa Road	22.09	202	P		P	20 53 07.3	+2.2
RTZ	Ruatahuna	22.39	199	P		P	20 53 09.2	+0.8
BKZ	Black Stump Fm	23.05	199	P		P	20 53 16.8	+1.6
BKZ				IAmb		IAmb	20 53 21.6	
	comp=Z,54nm,1.5s							
BKZ	Black Stump Fm	23.05	199	P		P	20 53 20.0	+4.8
PPT	Papeete	23.35	94	LR		LR	21 02 10.3	
	comp=Z,42nm,18.1s,baz=90,slow=35							
BFZ	Birch Farm	24.51	198	P		P	20 53 27.9	-1.2
MRZ	Mangatainoka R	24.70	199	P		P	20 53 29.8	-0.9
MRZ				IAmb		IAmb	20 53 56.8	
	comp=Z,44nm,1.3s							
MSWZ	Moikau Station	25.49	199	P		P	20 53 36.4	-1.5
TCW	Tory Channel	25.62	201	P		P	20 53 38.4	-0.6
QRZ	Quartz Range	25.91	204	P		P	20 53 40.9	-0.8
QRZ	Quartz Range	25.91	204	P		P	20 53 46.9	+5.2
TUWZ	Tuamarina	25.92	201	P		P	20 53 41.8	-0.1
THZ	Tophouse	26.58	202	P		P	20 53 49.6	+1.8
EIDS	Eidsvold	33.27	250	P		P	20 54 47.8	+0.5
EIDS				IAmb		IAmb	20 55 13.8	
	comp=Z,14nm,1.4s							
ARMA	Armidale	33.71	241	P		P	20 54 52.4	+1.2
ARMA				IAmb		IAmb	20 54 54.5	
	comp=Z,5.5nm,0.7s							
CTAO	Charters Tower	37.58	260	P		P	20 55 23.9	-0.5
H11S2	WAKE ISLAND Hy	40.50	331	T		T	21 39 20.5	
	baz=145,slow=74							
H11S3	WAKE ISLAND Hy	40.52	331	T		T	21 39 21.5	
	baz=145							
H11S1	WAKE ISLAND Hy	40.52	331	T		T	21 39 21.8	
	baz=145,slow=74							
TOO	Toolangi	40.63	232	P		P	20 55 49.6	-0.1
COEN	Coen	41.24	269	P		P	20 55 55.3	+0.3
COEN				IAmb		IAmb	20 55 57.6	
	comp=Z,29nm,1.3s							
H11N3	WAKE ISLAND Hy	41.48	332	T		T	21 40 27.3	
	baz=149							
H11N1	WAKE ISLAND Hy	41.49	332	T		T	21 39 55.1	
	baz=149							
H11N2	WAKE ISLAND Hy	41.50	332	T		T	21 39 57.5	
	baz=149							
STKA	Stephens Creek	42.43	242	P		P	20 56 05.8	+1.3
	comp=Z,4.9nm,0.5s,baz=88,slow=9.0,SNR=14							
	comp=Z,4.9nm,0.5s							
STKA	Stephens Creek	42.43	242			P	20 56 04.9	+0.4
INKA	Innaminka	42.71	248			P	20 56 07.6	+0.8
BBOO	Buckleboo	47.20	241	P		P	20 56 42.4	-0.1
WB0	Warramunga Arr	48.73	259			P	20 56 54.8	+0.3
WB0				IAmb		IAmb	20 56 55.3	
	comp=Z,8.7nm,0.9s							
WRAB	Tennant Creek	48.75	259	P		P	20 56 54.5	-0.2
WRAB				IAmb		IAmb	20 56 55.5	
	comp=Z,6.5nm,0.7s							
WRA	Warramunga Arr	48.76	259	P		P	20 56 55.0	+0.3
	comp=Z,4.0nm,0.5s,baz=98,slow=7.1,SNR=120							
	comp=Z,4.0nm,0.5s							
WRA	Warramunga Arr	48.76	259			P	20 56 54.5	-0.2
AS31	Alice Springs	48.86	254			P	20 56 56.4	+0.8
ASAR	Alice Springs	48.86	254	P		P	20 56 56.4	+0.8
	comp=Z,65nm,0.6s,baz=89,slow=8.3,SNR=911							
ASAR				pP		sP	20 57 20.2	+11
	comp=Z,7.7nm,0.7s,baz=86,slow=7.7,SNR=2.0							
ASAR				PcP		PcP	20 58 20.4	+0.6
	comp=Z,1.0nm,0.6s,baz=88,slow=4.9,SNR=1.1							
ASAR				S		S	21 03 49.6	-7.4
	comp=Z,0.7nm,1.0s,baz=93,slow=14,SNR=4.3							
ASAR				LR		LR	21 17 10.3	
	comp=Z,46nm,18.1s,baz=294,slow=35							
ASAR	Alice Springs	48.86	254			P	20 56 55.8	+0.3
MBWA	Marble Bar	62.16	255	P		P	20 58 29.9	-1.3
MORW	Morawa	64.40	246	P		P	20 58 45.0	-0.9
CASY	Casey	68.19	205	P		P	20 59 09.5	0.0
CASY				IAmb		IAmb	20 59 31.4	
	comp=Z,14nm,1.1s							
QSPA	South Pole Qui	72.50	180	P		P	20 59 37.9	+1.9
	comp=Z,3.2nm,0.7s,baz=8.4,slow=2.1,SNR=4.9							
	comp=Z,3.2nm,0.7s							
PEA0B	Petropavlovsk-	74.48	343	P		P	20 59 46.1	-1.5
PETK	Petropavlovsk-	74.48	343	P		P	20 59 47.1	-0.5
	comp=Z,5.2nm,0.7s,baz=160,slow=5.3,SNR=8.5							
	comp=Z,5.2nm,0.7s							
PETK	Petropavlovsk-	74.48	343	P		P	20 59 46.0	-1.6
ELK	Elko	79.62	41	LR		LR	21 28 45.8	
	comp=Z,94nm,19.9s,baz=16,slow=30							
J16K	Anvik River	81.26	6	P		P	21 00 24.2	-0.9
J16K				IAmb		IAmb	21 00 27.7	
	comp=Z,12nm,1.4s							
TXAR	Lajitas Array	82.34	56	pP		pP	21 00 56.5	+14
	comp=Z,0.9nm,1.0s,baz=255,slow=4.9,SNR=4.5							
RND	Reindeer	83.07	11	P		P	21 00 34.1	-0.5
RND				IAmb		IAmb	21 00 35.9	
	comp=Z,7.0nm,0.8s							
MCK	McKinley	83.35	11			P	21 00 34.5	-1.5
MCK				IAmb		IAmb	21 00 36.9	
	comp=Z,7.1nm,0.8s							
PDAR	Pinedale Array	84.29	42	P		P	21 00 43.5	+1.9
	comp=Z,0.2nm,0.5s,baz=231,slow=4.1,SNR=3.5							
PDAR				pP		sP	21 01 05.0	+8.9
	comp=Z,0.5nm,0.8s,baz=194,slow=5.4,SNR=4.0							
	comp=Z,0.2nm,0.5s							
HDA	Harding Lake	84.33	11	P		P	21 00 39.4	-1.5
HDA				IAmb		IAmb	21 00 42.0	
	comp=Z,6.9nm,0.8s							
CCB	Clear Creek Bu	84.39	11	IAmb		IAmb	21 00 41.6	
	comp=Z,8.4nm,0.9s							
H21K	Melozitna Rive	84.51	9	P		P	21 00 40.4	-1.4
H03S2	Juan Fernandez	84.55	124	T		T	22 33 54.7	
	baz=250,slow=75,SNR=14							
H03S1	Juan Fernandez	84.57	124	T		T	22 33 50.9	
	baz=250,slow=75,SNR=14							
H03S3	Juan Fernandez	84.57	124	T		T	22 33 51.7	
	baz=250,slow=75,SNR=9.6							
ILAR	Eielson Array	84.67	11	P		P	21 00 42.0	-0.6
	comp=Z,1.5nm,0.7s,baz=237,slow=6.4,SNR=28							
ILAR				pP		sP	21 01 08.1	+11
	comp=Z,0.5nm,0.6s,baz=237,slow=5.8,SNR=2.6							
	comp=Z,1.5nm,0.7s							
ILAR	Eielson Array	84.67	11	P		P	21 00 42.2	-0.4
F19K	Shaleruckik Mo	85.01	6	IAmb		IAmb	21 00 45.5	
	comp=Z,5.1nm,0.8s							
J26L	Joseph Creek	85.09	13	IAmb		IAmb	21 00 46.9	
	comp=Z,4.4nm,0.8s							
CMIG	Matias Romero	85.21	71	LR		LR	21 30 41.8	
	comp=Z,72nm,18.6s,baz=1.0,slow=30							
G21K	Allakaket	85.22	8	IAmb		IAmb	21 00 46.8	
	comp=Z,4.1nm,0.8s							
PRP	Porcupine Dome	85.60	12	IAmb		IAmb	21 00 48.4	
	comp=Z,6.6nm,0.9s							
E19K	Redstone River	85.67	6	IAmb		IAmb	21 00 49.0	
	comp=Z,5.7nm,0.9s							
E22K	Anaktuvuk Pass	86.98	8	IAmb		IAmb	21 00 56.0	
	comp=Z,8.4nm,1.3s							
G26K	Porcupine Rive	87.20	11	IAmb		IAmb	21 00 57.2	
	comp=Z,5.1nm,0.8s							
CMAR	Chiang Mai Arr	92.68	288	P		P	21 01 23.6	+1.7
	comp=Z,0.3nm,0.4s,baz=112,slow=3.9,SNR=5.4							
	comp=Z,0.3nm,0.4s							
A36M	Sachs Harbour	95.14	14	IAmb		IAmb	21 01 33.9	
	comp=Z,3.4nm,0.8s							
BVAR	Borovoye Array	119.17	321	PKP		PKPdf	21 06 58.0	-0.1
	comp=Z,1.5nm,0.6s,baz=76,slow=0.6,SNR=12							
ARCES	ARCESS Array B	126.64	352	PKP		PKPdf	21 07 11.7	-0.3
	comp=Z,1.6nm,0.7s,baz=354,slow=0.9,SNR=4.4							
CLL	Collm	145.86	352	*i* P		PKPab	21 07 48.8	-0.1
	comp=Z,14nm,0.8s							
PVCC	Panska Ves	146.38	350	*e*PKP		PKPab	21 07 51.2	+0.3
MAUC	Maruska	146.84	346	*e*PKP		PKPab	21 07 52.5	-0.3
BRTR	Keskin Array B	147.37	318	PKPbc		PKPbc	21 07 53.8	+0.3
	comp=Z,2.1nm,0.7s,baz=122,slow=3.0,SNR=12							
BRTR				pPKPbc		sPKPab	21 08 18.1	+7.7
	comp=Z,0.8nm,0.7s,baz=123,slow=2.8,SNR=2.3							
BRTR	Keskin Array B	147.37	318			PKPbc	21 07 54.1	+0.6
KHC	Kasperske Hory	147.90	351	*e*PKP		PKPbc	21 07 54.0	-0.5
CKRC	Cesky Krumlov	148.08	350	*e*PKP		PKPbc	21 07 55.5	+0.6
GERES	GERESS Array B	148.16	350	PKPbc		PKPbc	21 07 55.4	+0.2
	comp=Z,2.0nm,0.7s,baz=20,slow=4.3,SNR=9.9							
GERES				pPKPbc		sPKPab	21 08 18.7	+5.9
	comp=Z,0.8nm,0.8s,baz=132,slow=2.0,SNR=2.7							
CONA	Conrad Observa	148.63	347	*e*PKP		PKiKP	21 07 57.5	-0.5
	comp=Z,5.5nm,0.7s,SNR=5.9							
RONA	Rosalia, Austr	148.75	346	*i* PKP		PKiKP	21 07 57.6	-0.5
	comp=Z,5.1nm,0.8s							
MOA	Molln	149.02	349	*e*PKP		PKiKP	21 07 58.0	-0.7
	comp=Z,2.9nm,0.7s							
BIOA	Bad Ischl, Aus	149.29	350	*e*PKP		PKiKP	21 07 58.5	-0.7
	comp=Z,2.1nm,0.6s							
ARSA	Arzberg	149.35	347	*i* PKP		PKPbc	21 07 58.5	+0.3
	comp=Z,6.3nm,1.5s							
MMAI	Mount Meron Ar	149.36	306	PKPbc		PKiKP	21 07 59.5	-0.4
	comp=Z,3.6nm,0.7s,baz=42,slow=4.5,SNR=3.7							
LESA	Schwarzleotal	149.70	351	*e*PKP		PKiKP	21 07 59.7	-0.5
	comp=Z,7.9nm,1.3s							
WATA	Walderalm	149.94	352	*i* PKP		PKPbc	21 08 00.1	+0.3
	comp=Z,4.4nm,0.7s							
MOTA	Moosalm	149.99	353	*e*PKP		PKiKP	21 08 00.5	-0.4
	comp=Z,7.9nm,1.0s							
WTTA	Wattenberg	150.00	352	*e*PKP		PKPbc	21 08 00.3	+0.3
	comp=Z,3.1nm,0.5s							
SQTA	Sankt Quirin	150.10	353	*e*PKP		PKiKP	21 08 00.6	-0.5
	comp=Z,6.1nm,0.9s							
FETA	Feichten	150.35	353	*e*PKP		PKiKP	21 08 01.5	-0.1
	comp=Z,5.5nm,0.9s							
ABTA	Abfaltersbach	150.38	351	*e*PKP		PKPbc	21 08 00.7	-0.1
	comp=Z,7.2nm,0.7s							

IDC 16 21:03:23.9±1.9, 2°.42N×127°.62E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=161.2km s-min=22.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.18	164	P		P	21 08 32.4	0.0
	1.1nm,0.5s,baz=343,slow=10,SNR=15							
	1.1nm,0.5s							
ASAR	Alice Springs	26.64	167	P		P	21 09 03.8	-0.7
	0.2nm,0.6s,baz=349,slow=9.8,SNR=1.7							
	0.2nm,0.6s							
MKAR	Makanchi Array	59.13	325	P		P	21 13 27.1	+0.6
	0.2nm,0.4s,baz=129,slow=6.9,SNR=5.8							
	0.2nm,0.4s							
KURBB	Kurchatov Arra	63.32	327	P		P	21 13 54.3	-0.3
	0.2nm,0.5s,baz=108,slow=5.9,SNR=2.5							
	0.2nm,0.5s							

*MDD **16** 21:09:39.5±0.4, 36°.56N×7°.64W, h14km±3km, mb_Lg3.0/38, Error ellipse: s-maj=3.1km s-min=2.3km az=44.0*

*CNRM **16** 21:09:39.4, 36°.47N×7°.52W, h35km, ML3.0*

*IGIL **16** 21:09:40.0, 36°.55N×7°.66W, h17km, ML1.5*

*SFS **16** 21:09:40.2, 36°.50N×7°.66W, h31km, mb3.7/4, ML3.1/17, ML2.9/24, MLv2.3/24*

*INMG **16** 21:09:40.3±1.7, 36°.55N×7°.65W, h17km±3km, ML2.0, Error ellipse: s-maj=3.0km s-min=2.4km az=62.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*

ISC 16 21:09:37.8±1.1, 36°.46N±0°.02×7°.60W±0°.02, h27km±12km, n92, σ1s80/172, 1C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EXAYA	Ayamonte	0.78	11	Pg		Pn	21 09 53.5	+0.5
EXAYA				Sg		Sb	21 10 00.7	-2.3
PBDV	Barranco-do-Ve	0.83	341	Pn		Pn	21 09 53.9	+0.1
PBDV	Barranco-do-Ve	0.83	341	*i*P		Pn	21 09 53.9	+0.1
PBDV				*e*S		Sb	21 10 03.5	-0.9
PBDV				*i* IAML			21 10 04.6	
PBDV				*i* IAML			21 10 04.6	
PBDV				*i* IAML			21 10 08.7	
PVAQ	Vaqueiros	0.95	354⇓	*i*P		Pn	21 09 55.6	+0.3
PVAQ				*e*S		Sb	21 10 07.0	-0.9
PVAQ				*i* IAML			21 10 07.3	
PVAQ				*i* IAML			21 10 14.1	
PVAQ				*i* IAML			21 10 15.7	
PVAQ	Vaqueiros	0.95	354	P		Pn	21 09 55.7	+0.3
PVAQ				S		Sn	21 10 08.9	+0.8
EXHU	Huelva	0.97	33	Pg		Pb	21 09 56.2	+0.2
EXHU				Sg		Sb	21 10 07.5	-1.1
EGRO	El Granado	1.08	5	Pn		Pb	21 09 57.7	-0.1
EGRO				Sn		Sb	21 10 10.6	-0.9
EGRO	El Granado	1.08	5	Pg		Pb	21 09 57.7	-0.1
EGRO				Sg		Sb	21 10 10.1	-1.4
EGRO				*i* IVmb_Lg			21 10 14.7	
PFVI	Vila Bisbo	1.20	305	Pn		Pn	21 09 59.0	+0.2
PFVI	Vila Bisbo	1.20	305	*e*P		Pn	21 09 59.1	+0.2
PFVI				*e*S		Sn	21 10 12.5	-1.6
PFVI				*i* IAML			21 10 20.9	
PFVI				*i* IAML			21 10 23.5	
PFVI				*i* IAML			21 10 23.9	
PFVI	Vila Bisbo	1.20	305	P		Pn	21 09 59.0	+0.2
PFVI				S		Sb	21 10 16.0	+1.2
MORF	Marmelete	1.20	315	*e*P		Pn	21 09 58.8	0.0
MORF	Marmelete	1.20	315⇑	*e*P		Pn	21 09 58.9	0.0
MORF				*e*S		Sb	21 10 15.2	+0.3
MORF				*i* IAML			21 10 20.1	
MORF				*i* IAML			21 10 23.2	
MORF				*i* IAML			21 10 23.2	
PCVE	Castro Verde	1.23	343	Pn		Pb	21 09 59.7	-0.6
PCVE				Sn		Sn	21 10 13.5	-1.4
PCVE	Castro Verde	1.23	343	*e*P		Pb	21 09 59.7	-0.6
PCVE				*e*S		Sn	21 10 13.6	-1.3
PCVE				*i* IAML			21 10 14.0	
PCVE				*i* IAML			21 10 14.3	
PCVE				*i* IAML			21 10 14.4	
PTEO	Sao Teotonio	1.41	321	*e*P		Pn	21 10 02.1	+0.4
PTEO				*e*S		Sn	21 10 18.5	-1.0
PTEO				*i* IAML			21 10 19.7	
PTEO				*i* IAML			21 10 27.6	
PTEO				*i* IAML			21 10 35.2	
ESPR	Espera	1.46	73	Pn		Pb	21 10 04.4	+0.2
ESPR				Sn		Sb	21 10 22.0	-0.4
ESPR	Espera	1.46	73	Pn		Pb	21 10 04.4	+0.2
ESPR				Sn		Sb	21 10 22.2	-0.1
ESPR				*i* IVmb_Lg			21 10 23.7	
MESJ	Messejana	1.47	340	*e*P		Pn	21 10 02.8	+0.3
MESJ				*e*S		Sn	21 10 19.1	-1.7
MESJ				IAML			21 10 20.6	
	comp=N,5.5nm,0.1s							
MESJ	Messejana	1.47	340	*e*P		Pn	21 10 02.9	+0.3
MESJ				*e*S		Sn	21 10 19.2	-1.6
MESJ				*i* IAML			21 10 28.8	
MESJ				*i* IAML			21 10 34.0	
MESJ				*i* IAML			21 10 34.4	
EMIN	Mina Concepcio	1.50	29	Pn		Pn	21 10 03.5	+0.6
EMIN	Mina Concepcio	1.50	29	Pn		Pn	21 10 03.6	+0.6
EMIN				Sn		Sn	21 10 20.5	-1.2
EMIN				*i* IVmb_Lg			21 10 26.5	
PBEJ	Beja	1.58	352	*e*Pn		Pn	21 10 04.6	+0.5
PBEJ				*i* IAML			21 10 32.4	
PBEJ				*i* IAML			21 10 32.4	
PBEJ				*i* IAML			21 10 38.6	
EJIF	Jimena Fronter	1.71	90	Pn		Pb	21 10 08.9	+0.3
EJIF				Sn		Sb	21 10 29.8	0.0
PBAR	Barrancos	1.77	14	Pn		Pn	21 10 07.2	+0.5
PBAR	Barrancos	1.77	14	*e*Pn		Pn	21 10 07.4	+0.7
PBAR				*e*Sn		Sn	21 10 27.4	-0.9
PBAR				*i* IAML			21 10 33.5	
PBAR				*i* IAML			21 10 34.7	
PBAR				*i* IAML			21 10 34.5	
CEU	Ceuta	1.88	107	Sn		Sb	21 10 34.5	0.0
SMIR	Smir Dam	1.95	113	P		Pn	21 10 09.7	+0.6
SMIR				S		Sn	21 10 32.4	-0.5
E1302	La Puebla de C	2.00	70	Pn		Pb	21 10 12.6	-1.0
E1302				Sn		Sn	21 10 35.8	+1.6
E1302				*i* IVmb_Lg			21 10 38.4	
EVO	Evora	2.10	351	Pn		Pn	21 10 11.7	+0.5
EVO				Sn		Sn	21 10 35.4	-1.1
EVO	Evora	2.10	351	*e*Pn		Pn	21 10 11.7	+0.5
EVO				*e*Pg		Pb	21 10 18.0	+2.9
EVO				*e*Sn		Sn	21 10 35.6	-0.8
EVO				*i* IAML			21 10 37.6	
EVO				*i* IAML			21 10 37.6	
EVO				*i* IAML			21 10 39.1	
MOE	Montemor	2.15	344	*e*Pn		Pn	21 10 12.0	+0.7
MOE				*e*Sn		Sn	21 10 36.4	-1.2
MOE				*i* IAML			21 10 38.6	
MOE				*i* IAML			21 10 38.7	
MOE				*e*Sg		Sb	21 10 47.3	+5.1
MOE				*i* IAML			21 10 51.0	
EBAD	Badajoz	2.34	11	Pn		Pn	21 10 14.6	+0.1
EBAD	Badajoz	2.34	11	Pn		Pn	21 10 15.3	+0.7
EBAD				Sn		Sn	21 10 41.4	-1.0
EBAD				*i* IVmb_Lg			21 10 47.5	
ECAB	El Cabril	2.37	46	Pn		Pn	21 10 15.8	+0.9
ECAB	El Cabril	2.37	46	Pn		Pn	21 10 16.2	+1.2
ECAB				Sn		Sn	21 10 40.9	-2.4
ECAB				*i* IVmb_Lg			21 10 47.0	
PARRA	Arraiolos	2.38	352	*e*Pn		Pn	21 10 15.5	+0.4
PARRA				*e*Sn		Sn	21 10 42.4	-1.0
PARRA				*i* IAML			21 10 43.2	
PARRA				*i* IAML			21 10 44.1	
PARRA				*i* IAML			21 10 44.5	
PESTR	Estremoz	2.41	0	Pn		Pn	21 10 15.7	+0.2
PESTR				Sn		Sn	21 10 42.6	-1.4
PESTR	Estremoz	2.41	0	*e*Pn		Pn	21 10 15.9	+0.5
PESTR				*e*Sn		Sn	21 10 42.8	-1.2
PESTR				*i* IAML			21 10 44.6	
PESTR				*i* IAML			21

PSIM	**Granatula de C**	**3.85**	**51**	Pn	**Pn**	**21 10 36.8**	**+1.4**
PSIM				Sn	**Sn**	**21 11 16.6**	**-3.3**
EQES	**Quesada**	**3.86**	**68**	Pn	**Pn**	**21 10 37.1**	**+1.6**
EQES				Sn	**Sn**	**21 11 19.7**	**-0.3**
EQES				*i* IVmb_Lg		21 11 34.8	
SRHM	**Skhour des Reh**	**3.98**	**184**	P	**Pn**	**21 10 39.6**	**+2.4**
SRHM				S	**Sb**	**21 11 30.6**	**-4.5**
PAB	**San Pablo**	**4.01**	**39**	Pn	**Pn**	**21 10 38.8**	**+1.2**
PAB				Sn	**Sn**	**21 11 19.6**	**-4.1**
PAB				*i* IVmb_Lg		21 11 23.2	
PVIS	**Viseu**	**4.26**	**357**	*e*Pn	**Pn**	**21 10 41.5**	**+0.5**
PVIS				*e*Sn	**Sn**	**21 11 28.0**	**-1.8**
MD31	**MD31**	**4.28**	**146**	P	**Pn**	**21 10 43.3**	**+2.1**
MD31				S	**Sn**	**21 11 30.7**	**+0.4**
ESDC	**Sonseca Array**	**4.30**	**41**	Pn	**Pn**	**21 10 42.5**	**+1.0**
ESDC				Sn	**Sn**	**21 11 27.8**	**-3.2**
ESDC				*i* IVmb_Lg		21 11 33.8	
MDT	**Midelt**	**4.39**	**145**	P	**Pn**	**21 10 44.7**	**+1.9**
JBK	**JBK**	**4.62**	**116**	P	**Pn**	**21 10 45.3**	**-0.8**
JBK				S	**Sn**	**21 11 36.3**	**-2.7**
MVO	**Moncorvo**	**4.72**	**5**	*e*Pn	**Pn**	**21 10 47.7**	**+0.4**
MVO				*e*Sn	**Sn**	**21 11 37.9**	**-3.4**
MVO				*i* IAML		21 11 38.8	
MVO				*i* IAML		21 11 38.9	
MVO				*i* IAML		21 11 40.0	
TISM	**Timmit**	**4.82**	**168**	P	**Pn**	**21 10 48.6**	**0.0**
TISM				S	**Sn**	**21 11 45.1**	**+1.5**
POLO	**Lamas de Olo**	**4.91**	**358**	*e*Pn	**Pn**	**21 10 50.3**	**+0.3**
POLO				*e*Sn	**Sn**	**21 11 44.1**	**-1.9**
POLO				*i* IAML		21 11 44.9	
GUD	**Guadarrama**	**4.97**	**32**	Pn	**Pn**	**21 10 51.8**	**+0.9**
GUD				Sn	**Sn**	**21 11 44.1**	**-3.5**
GUD				*i* IVmb_Lg		21 11 48.2	
UCM	**Universidad Co**	**5.14**	**40**	Pn	**Pn**	**21 10 54.7**	**+1.6**
UCM				Sn	**Sn**	**21 11 47.4**	**-4.2**
EMUR	**La Murta**	**5.26**	**73**	Sn	**Sn**	**21 11 52.3**	**-2.2**
EMUR	**La Murta**	**5.26**	**73**	Pn	**Pn**	**21 10 57.0**	**+2.2**
EMUR				Sn	**Sn**	**21 11 53.2**	**-1.3**
EMUR				*i* IVmb_Lg		21 12 17.8	
ETOB	**Tobarra**	**5.28**	**64**	Pn	**Pn**	**21 10 55.8**	**+0.8**
ETOB				Sn	**Sn**	**21 11 52.6**	**-2.4**
ETOB	**Tobarra**	**5.28**	**64**	Pn	**Pn**	**21 10 55.7**	**+0.7**
ETOB				Sn	**Sn**	**21 11 52.4**	**-2.6**
ETOB				*i* IVmb_Lg		21 11 56.7	
PBRG	**Braganca**	**5.38**	**7**	*e*Pn	**Pn**	**21 10 56.7**	**+0.3**
PBRG				*e*Sn	**Sn**	**21 11 54.5**	**-3.0**
ELOB	**Lobios**	**5.42**	**356**	Pn	**Pn**	**21 10 57.2**	**+0.3**
ELOB				Sn	**Sn**	**21 11 55.0**	**-3.4**
ELOB				*i* IVmb_Lg		21 12 08.6	
ECAL	**Calabor**	**5.52**	**7**	Pn	**Pn**	**21 10 58.7**	**+0.4**
ECAL	**Calabor**	**5.52**	**7**	Pn	**Pn**	**21 10 58.9**	**+0.7**
ECAL				Sn	**Sn**	**21 11 57.4**	**-3.4**
ECAL				*i* IVmb_Lg		21 12 16.0	
TIO	**Tiouine**	**5.52**	**177**	Pn	**Pn**	**21 11 00.6**	**+2.1**
TIO				Sn	**Sn**	**21 11 58.9**	**-2.2**
TIO	**Tiouine**	**5.52**	**177**	P	**Pn**	**21 11 00.4**	**+2.0**
TIO				S	**Sn**	**21 12 03.6**	**+2.4**
PGAV	**Gavieira, Arco**	**5.53**	**355**	*e*Pn	**Pn**	**21 10 59.0**	**+0.6**
OUZM	**OUZ**	**5.58**	**173**	P	**Pn**	**21 11 01.5**	**+2.3**
OUZM				S	**Sn**	**21 12 06.0**	**+3.6**
EVIV	**Cofrentes, Val**	**5.84**	**59**	Pn	**Pn**	**21 11 04.4**	**+1.7**
EVIV				Sn	**Sn**	**21 12 06.9**	**-1.9**
EVIV				*i* IVmb_Lg		21 12 46.4	
TZRR	**Tazzarine**	**5.90**	**163**	P	**Pn**	**21 11 04.4**	**+0.8**
TZRR				S	**Sn**	**21 12 12.6**	**+2.2**
ECHE	**Chera**	**6.10**	**57**	Pn	**Pn**	**21 11 07.6**	**+1.5**
ECHE				Sn	**Sn**	**21 12 12.3**	**-2.7**
ECHE				*i* IVmb_Lg		21 13 00.5	
ETOR	**Torete**	**6.15**	**43**	Pn	**Pn**	**21 11 08.1**	**+1.2**
ETOR				Sn	**Sn**	**21 12 12.8**	**-3.6**
ETOR				*i* IVmb_Lg		21 12 17.8	

IDC **16** *21:15:28.3±1.7,6.°71S×129.°92E,h152km±19km,mb3.1/2, mbtmp3.8/7,Error ellipse: s-maj=32.9km s-min=13.2km az=94.0*

ISC 16 21:15:27.5±0.9,**6.°84S**±0.°06×**129.°9E**±0.°1,**h150**km,**n7,** σ3°**10**/12,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.08**	**13**	P	**Pn**	**21 16 56.1**	**+0.7**
	20nm,0.2s,baz=223,slow=22,SNR=34						
SIJI				S	**Sn**	**21 18 00.9**	**-3.2**
	6.9nm,0.3s,baz=139,slow=23,SNR=10						
BATI	**Baumata**	**7.01**	**241**	P	**Pn**	**21 17 10.1**	**+2.2**
	16nm,0.4s,baz=103,slow=22,SNR=2.3						
BATI				S	**Sn**	**21 18 24.6**	**-1.9**
	16nm,0.3s,baz=97,slow=21,SNR=6.7						
FITZ	**Fitzroy Crossi**	**11.94**	**200**	P	**Pn**	**21 18 14.6**	**+1.6**
	0.9nm,0.3s,baz=28,slow=11,SNR=16						
FITZ				S	**Sn**	**21 20 18.9**	**-6.2**
	1.4nm,0.3s,baz=54,slow=13,SNR=1.9						
WRA	**Warramunga Arr**	**13.73**	**162**	P	**Pn**	**21 18 37.3**	**+1.3**
	0.4nm,0.5s,baz=339,slow=12,SNR=13						
WRA				S	**Sn**	**21 21 04.8**	**-3.4**
	0.8nm,0.3s,baz=329,slow=21,SNR=8.6						
ASAR	**Alice Springs**	**17.17**	**167**	P	**Pn**	**21 19 21.2**	**+2.7**
	0.6nm,0.3s,baz=348,slow=11,SNR=18						
ASAR				S	**S**	**21 22 31.6**	**+2.3**
	0.4nm,0.6s,baz=356,slow=22,SNR=2.1						
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**21 26 10.9**	**+0.2**
	0.4nm,0.4s,baz=117,slow=7.9,SNR=12						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**72.31**	**329**	P	**P**	**21 26 36.2**	**-0.5**
	0.2nm,0.5s,baz=129,slow=5.0,SNR=4.2						
	0.2nm,0.5s						

SKHL **16** *21:51:03.5±0.9,46.°30N×146.°70E,h306km±11km,mb4.5/7, msha4.7/4*

IDC **16** *21:51:04.8±9.5,46.°60N×146.°30E,h325km±96km,mb3.0/8, mbtmp3.7/8,Error ellipse: s-maj=27.9km s-min=20.2km az=166.0*

ISC 16 21:51:01.9±0.7,**46.°34N**±0.°07×**146.°59E**±0.°09,**h300**km,**n19,** σ1°**71**/24,**mb3.2/8,Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.42**	**140**	*e*P	**Pn**	**21 51 44.9**	**+0.3**
KUR				AMB	AMB	21 51 45.2	
	30nm,0.5s						
KUR				*e*S	**S**	**21 52 18.0**	**-0.5**
KUR				A	A	21 52 19.3	
	30nm,0.4s						
KUR				A	A	21 52 19.3	
	40nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.36**	**193**	*e*P	**Pn**	**21 51 53.4**	**+1.7**
YUK				AMB	AMB	21 51 54.8	
	150nm,0.6s						
YUK				*e*S	**S**	**21 52 32.3**	**+0.9**
YUK				A	A	21 52 36.7	
	180nm,0.7s						
YUK				A	A	21 52 36.7	
	230nm,0.7s						
SHO	**Shikotan**	**2.47**	**176**	*e*P	Pn	21 52 04.4	+12
SHO				AMB	AMB	21 52 04.9	
	110nm,0.2s						
SHO				*e*S	S	21 52 43.5	+10
SHO				A	A	21 52 45.5	
	70nm,0.4s						
SHO				A	A	21 52 45.5	
	80nm,0.4s						
YSS	**Yuzhno-Sakhali**	**2.71**	**285**	*e*P	**Pn**	**21 51 56.5**	**+1.7**
YSS				AMB	AMB	21 51 57.1	
	30nm,0.5s						
YSS				*e*S	**S**	**21 52 38.3**	**+1.3**
YSS				A	A	21 52 39.3	
	20nm,0.6s						
YSS				A	A	21 52 39.3	
	20nm,0.6s						
NMR	**Nemuro--Hokkai**	**3.03**	**192**	*e*P	**Pn**	**21 51 59.5**	**+1.5**
NMR				*e*S	**S**	**21 52 42.9**	**+0.1**
AKK	**Akkeshi**	**3.54**	**201**	*e*P	**Pn**	**21 52 04.9**	**+1.6**
AKK				*e*S	**S**	**21 52 51.7**	**-0.6**
TYV	**Tymovskoe**	**5.23**	**332**	*e*P	**Pn**	**21 52 20.9**	**-1.0**
TYV				AMB	AMB	21 52 24.6	
	20nm,0.6s						
NKL	**Nikolayevsk**	**7.82**	**333**	*e*P	**Pn**	**21 52 56.4**	**+3.4**
PAU	**Pauzhetka**	**8.47**	**49**	*e*P	**Pn**	**21 53 03.8**	**+2.8**
ILAR	**Eielson Array**	**39.67**	**38**	P	**P**	**21 58 05.0**	**0.0**
	0.2nm,0.6s,baz=269,slow=7.8,SNR=6.0						
	0.2nm,0.6s						

MKAR	**Makanchi Array**	**43.08**	**295**	P	**P**	**21 58 31.5**	**-1.3**
	0.4nm,0.5s,baz=68,slow=6.9,SNR=9.8						
MKAR				PcP	**PcP**	**22 00 16.6**	**-0.1**
	0.2nm,0.7s,baz=46,slow=4.2,SNR=1.7						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**43.88**	**302**	P	**P**	**21 58 37.2**	**-1.8**
	0.6nm,0.5s,baz=74,slow=8.6,SNR=8.5						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**62.40**	**332**	P	**P**	**22 00 50.5**	**-2.3**
	1.3nm,0.5s,baz=44,slow=8.0,SNR=10.0						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**66.89**	**193**	P	**P**	**22 01 23.4**	**+1.2**
	0.5nm,0.9s,baz=20,slow=5.7,SNR=3.2						
	0.5nm,0.9s						
NB2	**NORSAR Subarra**	**67.05**	**338**	P	**P**	**22 01 20.9**	**-1.9**
	comp=Z,0.2nm,0.4s,baz=26,slow=6.5						
NB2	**NORSAR Subarra**	**67.05**	**338**	P	**P**	**22 01 20.9**	**-1.9**
NB2				AMP		22 01 20.9	
	comp=Z,0.2nm,0.4s						
NOA	**NORSAR Array B**	**67.05**	**338**	P	**P**	**22 01 20.9**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=29,slow=6.5,SNR=2.2						
	comp=Z,0.8nm,0.6s						
HFS	**Hagfors**	**67.16**	**337**	P	**P**	**22 01 21.4**	**-2.0**
	comp=Z,1.7nm,0.4s,baz=58,slow=5.6,SNR=1.7						
	comp=Z,1.7nm,0.4s						
PDAR	**Pinedale Array**	**68.55**	**50**	P	**P**	**22 01 33.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=59,slow=0.9,SNR=5.3						
	comp=Z,0.2nm,0.5s						

MDD **16** *21:56:51.9±0.7,32.°50N×4.°26W,h0km,Mb4.8/12, M_mb4.3/12,Error ellipse: s-maj=7.0km s-min=3.8km az=132.0*

CNRM **16** *21:56:51.8,32.°60N×4.°16W,h3km,ML5.3*

IDC **16** *21:56:52.0±0.5,32.°66N×4.°17W,h0km,mb4.0/19, mbtmp4.1/23,ML3.6/3,MS3.8/16,Error ellipse: s-maj=12.0km s-min=6.2km az=20.0*

IGIL **16** *21:56:52.8,32.°50N×4.°26W,h11km,ML4.7*

NEIC **16** *21:56:53.3±1.5,32.°68N±0.°06×4.°24W±0.°03,h10km±1km, mb4.3/22,Error ellipse: s-maj=10.2km s-min=4.3km az=13.0*

CRAAG **16** *21:56:54.1,32.°72N×4.°29W,Mb4.5,Maroc*

MED_RC **16** *21:56:54.0±0.6,32.°68N×4.°19W,h10km,MW4.5/20, Moment Tensor Solution.Mantle waves: s20,c26; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr-0.07±.36; Mθθ-2.90±.26; Mϕϕ2.97±.28; Mrθ-1.64±1.08; Mθϕ-4.75±.31; Mϕr2.75±.74; Best double couple: M06.30000×10^15 NP1:ϕs19.00000°,δ72.00000°, λ17.00000°. NP2:ϕs283.00000°,δ74.00000°,λ162.00000°. Principal axes: T 7.0600, Plg24.0000°, Azm241.0000°; N -1.5100, Plg66.0000°, Azm64.0000°; P -5.5500, Plg1.0000°, Azm331.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

INMG **16** *21:56:55.4±2.2,32.°91N×4.°29W,h2km,ML4.4 Error ellipse: s-maj=6.9km s-min=5.5km az=95.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

ISC 16 21:56:52.6±1.1,**32.°68N**±0.°02×**4.°25W**±0.°02,**h9**km±7km, **n267,** σ2°**11**/359,**mb4.3**/28,**MS3.9**/14,**11C-4D,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**0.33**	**293**	Pg	**Pb**	**21 57 00.1**	**-0.7**
	3μm,0.3s,baz=119,slow=15						
MDT				Lg	Lg	21 57 04.9	
MDT				LR	LR	21 57 06.3	
	comp=Z,443nm,19.6s,baz=310,slow=36						
MDT	**Midelt**	**0.33**	**293**	P	**Pb**	**21 57 00.2**	**-0.6**
MDT				S	**Sb**	**21 57 06.6**	**+0.4**
MD31	**MD31**	**0.47**	**293**	Pg	**Pb**	**21 57 02.5**	**-0.6**
MD31	**MD31**	**0.47**	**293**	P	**Pb**	**21 57 02.3**	**-0.8**
MD31				S	**Sb**	**21 57 12.1**	**+1.9**
MD01	**Midelt array s**	**0.47**	**293**		**Pb**	**21 57 02.5**	**-0.7**
MD01				Sg	**Sg**	**21 57 09.0**	**+1.0**
CZD	**Col de Zad**	**0.75**	**298**	P	**Pb**	**21 57 08.4**	**+0.2**
CZD				S	**Sn**	**21 57 21.8**	**+0.4**
IFR	**Ifrane**	**1.11**	**319**	Pg	**Pn**	**21 57 15.4**	**+0.8**
IFR				Sg	**Sn**	**21 57 29.7**	**-0.5**
LCRM	**LCR**	**1.12**	**333**	P	**Pb**	**21 57 14.2**	**-0.2**
LCRM				S	**Sb**	**21 57 29.7**	**+0.6**
GOLM	**Goulmima**	**1.15**	**212**	P	**Pg**	**21 57 14.1**	**-0.6**
GOLM				S	**Sn**	**21 57 31.4**	**+0.5**
ARF	**Arif**	**1.25**	**179**	P	**Pb**	**21 57 14.6**	**-1.8**
ARF				P	**Pb**	**21 57 14.7**	**-1.8**
ARF				S	**Sg**	**21 57 30.9**	**-1.8**
SICH	**Sidi Chahed**	**1.68**	**328**	P	**Pb**	**21 57 23.7**	**0.0**
SICH				S	**Sg**	**21 57 48.3**	**+1.7**
AKLM	**AKL**	**1.85**	**10**	P	**Pb**	**21 57 26.1**	**-0.6**
AKLM				S	**Sg**	**21 57 53.8**	**+1.7**
TISM	**Timmit**	**2.09**	**243**	P	**Pn**	**21 57 28.5**	**+0.6**
TISM				S	**Sb**	**21 57 56.4**	**-0.5**
JBK	**JBK**	**2.16**	**40**	P	**Pn**	**21 57 28.0**	**-1.1**
JBK				S	**Sn**	**21 57 56.1**	**0.0**
TZRR	**Tazzarine**	**2.20**	**211**	P	**Pn**	**21 57 29.3**	**-0.2**
TZRR				S	**Sn**	**21 57 58.1**	**+1.2**
PALE	**Palemas**	**2.54**	**6**	P	**Pn**	**21 57 35.4**	**+1.3**
PALE				S	**Sb**	**21 58 08.9**	**-0.9**
RTC	**Rabat Centre**	**2.54**	**301**	Pn	**Pn**	**21 57 35.3**	**+1.2**
RTC				Sn	**Sn**	**21 58 05.6**	**+0.4**
RTC	**Rabat Centre**	**2.54**	**301**	P	**Pn**	**21 57 35.7**	**+1.6**
RTC				S	**Sb**	**21 58 09.8**	**0.0**
RSA	**Sarsar**	**2.56**	**330**	P	**Pn**	**21 57 36.4**	**+2.1**
RSA				S	**Sb**	**21 58 09.4**	**-0.9**
CHEFC	**Chefchaouen**	**2.58**	**340**	P	**Pb**	**21 57 37.1**	**-2.1**
CHEFC				S	**Sb**	**21 58 10.7**	**-0.4**
FIGM	**Figuig**	**2.58**	**101**	P	**Pn**	**21 57 33.8**	**-1.0**
FIGM				S	**Sn**	**21 58 05.8**	**-0.6**
TAF	**Taforalt**	**2.62**	**35**	P	**Pn**	**21 57 35.7**	**+0.5**
TAF				S	**Sn**	**21 58 09.4**	**+2.2**
AVE	**Averroes**	**2.73**	**284**	Pn	**Pn**	**21 57 37.6**	**+0.9**
AVE				Sn	**Sn**	**21 58 07.4**	**-2.4**
AVE	**Averroes**	**2.73**	**284**		**Pn**	**21 57 37.6**	**+0.9**
AVE	**Averroes**	**2.73**	**284**	P	**Pn**	**21 57 37.8**	**+1.1**
AVE				P	**Pn**	**21 57 37.9**	**+1.1**
OUZM	**OUZ**	**2.78**	**231**	P	**Pn**	**21 57 38.3**	**+0.9**
OUZM				S	**Sb**	**21 58 17.6**	**+0.9**
ZGR	**Zagora**	**2.81**	**205**	P	**Pn**	**21 57 37.6**	**-0.3**
ZGR				S	**Sn**	**21 58 12.7**	**+0.7**
WMELI	**Melilla**	**2.84**	**22**	Pn	**Pn**	**21 57 37.9**	**-0.3**
WMELI				Pg	**Pg**	**21 57 47.1**	**0.0**
WMELI				Sg	**Sg**	**21 58 24.4**	**+0.5**
OBBL	**Beni Bahdel**	**3.05**	**48**	P	**Pn**	**21 57 42.0**	**+0.9**
SRHM	**Skhour des Reh**	**3.09**	**267**	P	**Pn**	**21 57 43.0**	**+1.3**
SRHM				S	**Sb**	**21 58 24.2**	**-1.5**
TIO	**Tiouine**	**3.11**	**237**	Pn	**Pn**	**21 57 42.4**	**+0.4**
TIO				Pg	**Pb**	**21 57 47.9**	**-0.3**
TIO				Sg	**Sb**	**21 58 27.2**	**+1.0**
TIO	**Tiouine**	**3.11**	**237**	P	**Pn**	**21 57 42.6**	**+0.6**
TIO				S	**Sn**	**21 58 21.8**	**+2.5**
SMIR	**Smir Dam**	**3.14**	**343**	P	**Pn**	**21 57 43.9**	**+1.6**
SMIR				S	**Sn**	**21 58 22.9**	**+3.1**
CEU	**Ceuta**	**3.34**	**344**	Pn	**Pn**	**21 57 46.2**	**+1.1**
ECEU	**Ceuta**	**3.34**	**344**	Pn	**Pn**	**21 57 46.8**	**+1.8**
ECEU	**Ceuta**	**3.34**	**344**	Pn	**Pn**	**21 57 47.2**	**+2.2**
ECEU						21 57 51.1	
	2μm,SNR=16						
ECEU				Sn	**Sb**	**21 58 30.9**	**-1.9**
CPS	**Cap Spartel**	**3.39**	**336**	P	**Pn**	**21 57 47.6**	**+1.9**
CPS				S	**Sb**	**21 58 30.2**	**-3.9**
OUK	**Oukaimeden**	**3.41**	**245**	P	**Pn**	**21 57 46.7**	**+0.3**
OUK				S	**Sn**	**21 58 30.7**	**+3.1**
OLHC	**Oulhaca**	**3.47**	**42**	P	**Pn**	**21 57 46.3**	**-0.7**
EJIF	**Jimena Fronter**	**3.89**	**345**	Pn	**Pn**	**21 57 54.5**	**+1.9**
EJIF				Sn	**Sn**	**21 58 40.8**	**+2.3**
CNIL	**Conil**	**3.97**	**338**	Pn	**Pn**	**21 57 55.4**	**+1.7**
EMAL	**Malaga-Limoner**	**4.07**	**358**	Pn	**Pn**	**21 57 55.9**	**+0.8**
EMAL				Sn	**Sn**	**21 58 42.0**	**-0.9**
SFS	**San Fernando**	**4.11**	**337**	Pn	**Pn**	**21 57 56.6**	**+1.1**
SFS				Sn	**Sn**	**21 58 44.4**	**+0.7**
SFS	**San Fernando**	**4.11**	**337**	Pn	**Pn**	**21 57 56.5**	**+0.9**
SFS	**San Fernando**	**4.11**	**337**	P	**Pn**	**21 57 57.1**	**+1.6**
SFS				S	**Sn**	**21 58 47.5**	**+3.8**
TTIG	**Tnine Tigouga,**	**4.16**	**240**	P	**Pn**	**21 57 57.3**	**+0.8**
TTIG				S	**Sn**	**21 58 47.9**	**+2.5**
ELGU	**Los Guajares,**	**4.21**	**7**	Pn	**Pn**	**21 57 57.0**	**0.0**
ELGU	**Los Guajares,**	**4.21**	**7**	Pn	**Pn**	**21 57 57.1**	**0.0**
ELGU						21 58 04.0	
	626nm,SNR=7.7						
ELGU				Sn	**Sn**	**21 58 48.7**	**+2.4**

ODJA	**Bouhanifia**	**4.31**	**51**	P	**Pn**	**21 58 00.0**	**+1.6**
USTO	**Oran**	**4.32**	**44**	P	**Pb**	**21 58 08.0**	**-0.7**
ESPR	**Espera**	**4.38**	**343**	Pn	**Pn**	**21 58 00.2**	**+0.8**
ESPR				Sn	**Sn**	**21 58 49.6**	**-0.9**
ESPR	**Espera**	**4.38**	**343**	Pn	**Pn**	**21 57 60.0**	**+0.6**
ESPR				⇑*i*Vmb_VC		21 58 02.0	
	1μm,SNR=11						
ESPR				Sn	**Sn**	**21 58 49.6**	**-0.9**
EGOR	**Sierra Gorda,**	**4.42**	**1**	Pn	**Pn**	**21 58 00.9**	**+0.9**
EGOR	**Sierra Gorda,**	**4.42**	**1**	Pn	**Pn**	**21 58 00.5**	**+0.5**
EGOR				⇑*i*Vmb_VC		21 58 09.7	
	447nm,SNR=6.0						
EGOR				Sn	**Sn**	**21 58 55.0**	**+3.3**
E1302	**La Puebla de C**	**4.51**	**350**	Pn	**Pn**	**21 58 02.7**	**+1.5**
E1302				⇑*i*Vmb_VC		21 58 11.0	
	2μm,SNR=16						
E1302				Sn	**Sn**	**21 58 55.5**	**+1.6**
OFRG	**Douar Fergoug**	**4.54**	**50**	P	**Pn**	**21 58 02.2**	**+0.6**
EQTA	**Presa de Quent**	**4.56**	**8**	Pn	**Pn**	**21 58 03.9**	**+2.0**
ENIJ	**Nijar**	**4.59**	**21**	Pn	**Pn**	**21 58 02.6**	**+0.3**
ENIJ	**Nijar**	**4.59**	**21**	Pn	**Pn**	**21 58 02.7**	**+0.3**
ENIJ				⇑*i*Vmb_VC		21 58 10.6	
	838nm,SNR=9.2						
ENIJ				Sn	**Sn**	**21 58 58.0**	**+2.1**
OJBR	**Djebel Berber**	**4.78**	**52**	P	**Pn**	**21 58 06.0**	**+1.1**
ARNO	**Arenosillo**	**4.86**	**336**	Pn	**Pn**	**21 58 05.0**	**-0.9**
ARNO				Sn	**Sn**	**21 59 01.1**	**-1.2**
ESMB	**Sidi M'hamed B**	**4.93**	**53**	P	**Pn**	**21 58 07.4**	**+0.4**
EQES	**Quesada**	**5.20**	**10**	Pn	**Pn**	**21 58 13.0**	**+2.3**
EQES				⇑*i*Vmb_VC		21 58 20.7	
	838nm,SNR=6.0						
EQES				Sn	**Sn**	**21 59 17.5**	**+6.6**
CGR	**Cap Guir**	**5.22**	**248**	P	**Pn**	**21 58 11.9**	**+0.9**
EADEB	**Ain Deheb**	**5.30**	**64**	P	**Pn**	**21 58 12.1**	**0.0**
E0802	**Ubeda,Jaen**	**5.38**	**7**	Pn	**Pn**	**21 58 16.0**	**+2.8**
E0802				Sn	**Sn**	**21 59 18.4**	**+3.2**
EKMS	**Oued Kramis**	**5.42**	**47**	P	**Pn**	**21 58 12.9**	**-0.8**
EMIN	**Mina Concepcio**	**5.45**	**339**	Pn	**Pn**	**21 58 13.6**	**-0.4**
EMIN				Sn	**Sn**	**21 59 13.6**	**-3.3**
EMIN	**Mina Concepcio**	**5.45**	**339**	Pn	**Pn**	**21 58 12.9**	**-1.1**
EMIN				⇑*i*Vmb_VC		21 58 18.4	
	973nm,SNR=9.4						
EMIN				Sn	**Sn**	**21 59 13.2**	**-3.6**
PBDV	**Barranco-do-Ve**	**5.46**	**327**	Pn	**Pn**	**21 58 13.8**	**-0.5**
PBDV				Sn	**Sn**	**21 59 13.3**	**-4.0**
PBDV	**Barranco-do-Ve**	**5.46**	**327**	*e*Pn	**Pn**	**21 58 14.0**	**-0.3**
PBDV				*e*Sn	**Sn**	**21 59 13.6**	**-3.6**
PBDV				*i* IAML		21 59 17.6	
PBDV				*i* IAML		21 59 19.9	
PBDV				*i* IAML		21 59 20.8	
ECAB	**El Cabril**	**5.46**	**350**	Pn	**Pn**	**21 58 14.5**	**+0.2**
ECAB				Sn	**Sn**	**21 59 14.3**	**-3.0**
EADA	**Adamuz**	**5.48**	**357**	Pn	**Pn**	**21 58 15.4**	**+0.9**
EADA				Sn	**Sn**	**21 59 16.2**	**-1.4**
EANR	**'Ain N'Sour**	**5.49**	**52**	P	**Pn**	**21 58 15.7**	**+1.0**
PVAQ	**Vaqueiros**	**5.50**	**330**	Pn	**Pn**	**21 58 14.1**	**-0.7**
PVAQ	**Vaqueiros**	**5.50**	**330**	*e*Pn	**Pn**	**21 58 14.5**	**-0.3**
PVAQ				*e*Sn	**Sn**	**21 59 14.0**	**-4.2**
PVAQ				*i* IAML		21 59 17.3	
PVAQ				*i* IAML		21 59 17.5	
PVAQ				*i* IAML		21 59 17.5	
PVAQ	**Vaqueiros**	**5.50**	**330**	P	**Pn**	**21 58 15.6**	**+0.8**
PVAQ				S	**Sn**	**21 59 19.3**	**+1.1**
EGRO	**El Granado**	**5.52**	**332**	Pn	**Pn**	**21 58 14.6**	**-0.4**
EGRO				Sn	**Sn**	**21 59 15.2**	**-3.4**
CART	**Cartagena**	**5.57**	**28**	Pn	**Pn**	**21 58 15.6**	**0.0**
CART				Sn	**Sn**	**21 59 17.3**	**-2.5**
CART	**Cartagena**	**5.57**	**28**	Pn	**Pn**	**21 58 14.9**	**-0.8**
CART	**Cartagena**	**5.57**	**28**	P	**Pn**	**21 58 15.9**	**+0.2**
EMUR	**La Murta**	**5.70**	**25**	Pn	**Pn**	**21 58 17.9**	**+0.4**
PFVI	**Vila Bisbo**	**5.82**	**321**	Pn	**Pn**	**21 58 18.8**	**-0.4**
PFVI				Sn	**Sn**	**21 59 22.2**	**-3.8**
PFVI	**Vila Bisbo**	**5.82**	**321**	*e*Pn	**Pn**	**21 58 19.2**	**+0.1**
PFVI				*e*Sn	**Sn**	**21 59 22.1**	**-3.9**
PFVI				*i* IAML		21 59 28.5	
PFVI				*i* IAML		21 59 30.3	
PFVI				*i* IAML		21 59 34.6	
PFVI	**Vila Bisbo**	**5.82**	**321**	P	**Pn**	**21 58 19.4**	**+0.3**
PFVI				S	**Sn**	**21 59 29.5**	**+3.5**
PCVE	**Castro Verde**	**5.83**	**329**	Pn	**Pn**	**21 58 18.9**	**-0.4**
PC

PARRA *i* IAML 21 59 51.2
ACHR Chrea 6.96 56 P **Pn** **21 58 35.4 +0.4**
ESDC Sonseca Array 6.98 2 Pn **Pn** **21 58 35.3 +0.2**
comp=N,0.4nm,0.3s,baz=185,slow=13,SNR=33
ESDC Sn **Sn** **21 59 52.3 -2.4**
comp=N,1.8nm,0.3s,baz=183,slow=23,SNR=4.3
ESDC LR LR 22 01 24.2
comp=N,304nm,19.4s,baz=204,slow=39
comp=N,5.6nm,0.6s
ESDC Sonseca Array 6.98 2 Pn **Pn** **21 58 36.4 +1.3**
ESBB Sonseca Array 6.98 2 Pn **Pn** **21 58 35.0 -0.2**
ADOR Douera 7.11 54 P **Pn** **21 58 37.6 +0.5**
PMTG Montargil 7.14 334 *e*Pn **Pn** **21 58 37.0 -0.3**
PMTG *e*Sn **Sn** **21 59 54.9 -3.7**
PMTG *i* IAML 21 59 59.2
PMTG *i* IAML 21 59 59.8
PMTG *i* IAML 22 00 14.0
PMRV Marv??o 7.20 340 *e*P **Pn** **21 58 38.2 +0.2**
PMRV *e*S **Sn** **21 59 54.9 -5.1**
PMRV *i* IAML 22 00 04.1
PMRV *i* IAML 22 00 10.2
LIS Lisbon 7.22 328 *e*Pn **Pn** **21 58 38.6 +0.3**
LIS *e*Sn **Sn** **21 59 57.5 -3.0**
LIS *i* IAML 22 00 00.4
LIS *i* IAML 22 00 08.4
LIS *i* IAML 22 00 14.8
ABA Alger-Bouzarea 7.26 54 P **Pn** **21 58 38.4 -0.6**
ECHE Chera 7.38 20 Pn **Pn** **21 58 42.6 +1.9**
AKED El Kharrouba 7.45 56 P **Pn** **21 58 40.9 -0.6**
PMAFR Mafra 7.48 328 Pn **Pn** **21 58 41.8 -0.1**
PMAFR Mafra 7.48 328 *e*Pn **Pn** **21 58 41.9 -0.1**
PMAFR *e*Sn **Sn** **22 00 03.9 -2.9**
AKET Djebel Ketaf 7.51 61 P **Pn** **21 58 43.3 +0.8**
ABSD Ouled Sidi Bra 7.53 66 P **Pn** **21 58 44.8 +2.2**
AFRS Ain Fares 7.53 72 P **Pn** **21 58 42.3 -0.4**
PSARD Sardoal 7.59 336 *e*Pn **Pn** **21 58 43.5 0.0**
PSARD *e*Sn **Sn** **22 00 05.0 -4.8**
PCBR Castelo Branco 7.60 341 *e*Pn **Pn** **21 58 43.8 +0.1**
PCBR *e*Sn **Sn** **22 00 04.2 -5.7**
UCM Universidad Co 7.65 6 Pn **Pn** **21 58 45.5 +1.2**
PSBE So Bento 7.75 333 *e*Pn **Pn** **21 58 45.8 +0.1**
PSBE *e*Sn **Sn** **22 00 08.2 -5.3**
EIBI Ibiza 7.79 34 Pn **Pn** **21 58 47.3 +1.2**
ATKB Taksebt 7.96 58 P **Pn** **21 58 48.7 +0.2**
PCAS Casmilo, Conde 8.11 336 *e*Pn **Pn** **21 58 50.6 0.0**
PCAS *e*Sn **Sn** **22 00 17.9 -4.5**
MTE Manteigas 8.14 342 Pn **Pn** **21 58 51.0 -0.1**
MTE Manteigas 8.14 342 *e*Pn **Pn** **21 58 51.5 +0.4**
MTE *e*Sn **Sn** **22 00 17.8 -5.5**
CTCHA Tamokra 8.23 61 P **Pn** **21 58 53.4 +1.1**
CAZD Ain Tagrout 8.51 63 P **Pn** **21 58 57.8 +1.6**
PVIS Viseu 8.53 341 *e*Pn **Pn** **21 58 56.3 -0.1**
PVIS *e*Sn **Sn** **22 00 26.6 -6.3**
MVO Moncorvo 8.75 346 *e*Pn **Pn** **21 58 59.3 -0.2**
MVO *e*Sn **Sn** **22 00 32.4 -5.9**
CJSR Ain Djasser 9.01 67 P **Pn** **21 59 03.6 +0.5**
PVRL Vila Real 9.01 343 *e*Pn **Pn** **21 59 03.2 +0.2**
PVRL *e*Sn **Sn** **22 00 38.3 -6.3**
ETOS Mallorca 9.08 37 Pn **Pn** **21 59 05.6 +1.6**
POLO Lamas de Olo 9.12 343 *e*Pn **Pn** **21 59 04.9 +0.3**
POLO *e*Sn **Sn** **22 00 42.0 -5.5**
PTO Porto 9.13 339 *e*Pn **Pn** **21 59 04.8 +0.2**
PTO *e*Sn **Sn** **22 00 41.1 -6.3**
PBRG Braganca 9.32 348 *e*Pn **Pn** **21 59 07.2 0.0**
PBRG *e*Sn **Sn** **22 00 45.3 -6.8**
COAT Oued Athmania 9.39 65 P **Pn** **21 59 08.5 +0.3**
CTEI Djebel Teioual 9.43 66 P **Pn** **21 59 08.9 +0.1**
ECAL Calabor 9.45 349 Pn **Pn** **21 59 09.8 +0.7**
ECAL Sn **Sn** **22 00 47.4 -8.1**
PCAB Cabril 9.50 343 *e*Pn **Pn** **21 59 09.8 +0.1**
PCAB *e*Sn **Sn** **22 00 50.3 -6.3**
PGAV Gavieira, Arco 9.80 342 *e*Pn **Pn** **21 59 14.0 +0.1**
PGAV *e*Sn **Sn** **22 00 57.5 -6.6**
PMPS Porto Santo 10.17 275 *e*P **Pn** **21 59 19.5 +0.6**
PMPST Porto Santo, M 10.17 275 *e*P **Pn** **21 59 21.2 +2.3**
PMPST *e*S **Sn** **22 01 05.9 -7.2**
CORI Orista 10.54 27 Pn **Pn** **21 59 26.3 +2.4**
FUL Funchal 10.66 273 *e*P **Pn** **21 59 26.3 +0.7**
FUL *e*S **Sn** **22 01 18.6 -6.4**
PMAR Madeira 10.67 274 *e*P **Pn** **21 59 26.8 +0.9**
PMAR *e*S **Sn** **22 01 18.3 -7.4**
PMAR *i* IAML 22 01 33.0
PMAR *i* IAML 22 01 35.6
PMAR *i* IAML 22 01 38.1
PMAR Madeira 10.67 274 P **Pn** **21 59 26.2 +0.3**
CEST Esterri de Car 10.81 22 Pn **Pn** **21 59 31.4 +3.7**
PMOZ Porto Moniz, M 10.91 274 Pn **Pn** **21 59 29.5 +0.5**
PMOZ Porto Moniz, M 10.91 274 Pn **Pn** **21 59 29.9 +0.8**
PMOZ Porto Moniz, M 10.91 274 *e*P **Pn** **21 59 32.2 +3.1**
PMOZ *e*S **Sn** **22 01 26.6 -4.7**
KEST Kesra 11.66 71 Pn **Pn** **21 59 39.6 +0.3**
comp=N,0.8nm,0.3s,baz=304,slow=1.4,SNR=21
KEST Sn **Sn** **22 01 46.8 -2.8**
comp=N,0.1nm,0.3s,baz=81,slow=22,SNR=1.2
KEST LR LR 22 05 00.5
comp=N,376nm,20.2s,baz=262,slow=42
comp=N,9.0nm,0.7s
KEST Kesra 11.66 71 Pn **Pn** **21 59 40.8 +1.5**
VSL Villasalto 12.94 54 Pn **Pn** **21 59 57.1 +0.4**
TAM Tamanrasset 13.10 136 Pn **Pn** **21 59 56.0 -3.1**
RAFF Raffo Rosso 15.91 68 P **P** **22 00 38.9 -1.6**
RAFF IAmb IAmb 22 00 43.1
comp=Z,23nm,1.0s
VAE Valguarnera 16.00 67 Pn **Pn** **22 00 37.8 -0.2**
comp=Z,2.2nm,0.6s,baz=335,slow=15,SNR=1.2
MURB Monte Urbino 16.89 47 P **P** **22 00 52.0 +0.6**
MURB IAmb IAmb 22 01 02.1
comp=Z,26nm,1.1s
NRCA Norcia 17.03 49 P **P** **22 00 52.6 -0.4**
INTR Introdacqua 17.15 52 P **Pn** **22 00 53.3 +0.7**
TEOL Teolo 17.66 40 P **P** **22 00 59.7 0.0**
DAVOX Davos/Dischmat 17.74 33 P **P** **22 01 02.4 +1.5**
comp=Z,0.1nm,0.3s,baz=285,slow=11,SNR=8.3
comp=Z,4.6nm,0.9s
DAVA Damuels 18.12 32 Pn **P** **22 01 05.5 +0.5**
comp=Z,5.0nm,0.6s
FETA Feichten 18.32 34 *e*Pn **P** **22 01 08.0 +0.8**
comp=Z,4.7nm,0.7s
RETA Reutte 18.67 33 *e*P **Pn** **22 01 12.0 +0.7**
comp=Z,4.7nm,0.7s
SQTA Sankt Quirin 18.69 35 *e*P **Pn** **22 01 11.7 +0.1**
comp=Z,7.1nm,0.8s
MOTA Moosalm 18.73 34 *e*P **P** **22 01 11.8 +0.1**
comp=Z,14nm,1.3s
WTTA Wattenberg 18.93 35 *e*P **Pn** **22 01 14.5 +0.1**
comp=Z,16nm,1.6s
WATA Walderalm 18.95 35 *e*P **P** **22 01 14.3 +0.2**
comp=Z,8.8nm,1.0s
ABTA Abfaltersbach 19.01 37 *e*P **Pn** **22 01 15.7 +0.3**
comp=Z,9.6nm,1.2s
MYKA Terra Mystica 19.52 39 *e*P **Pn** **22 01 21.5 -0.1**
comp=Z,6.0nm,0.9s
LESA Schwarzleotal 19.55 36 *e*P **P** **22 01 20.7 +0.1**
comp=Z,2.8nm,0.9s
KBA Koelnbreinsper 19.66 38 *e*P **Pn** **22 01 23.0 -0.3**
comp=Z,5.8nm,0.9s
OBKA Obir 19.94 41 *e*P **Pn** **22 01 26.2 -0.4**
comp=Z,4.7nm,0.8s
TORD Torodi Ar. Bea 20.19 163 P **P** **22 01 26.5 -1.2**
comp=Z,19nm,0.9s,baz=323,slow=11,SNR=88
TORD S Sn 22 05 18.4 +1.3
comp=Z,3.2nm,0.7s,baz=328,slow=21,SNR=2.6
TORD Lg Lg 22 07 27.1
comp=Z,0.3nm,0.3s,baz=348,slow=34,SNR=3.7
comp=Z,19nm,0.9s
TORD Torodi Ar. Bea 20.19 163 P **P** **22 01 26.7 -1.1**
TORD IAmb IAmb 22 01 28.0
comp=Z,14nm,1.1s
MOA Molln 20.63 37 *e*P **P** **22 01 32.8 +0.5**
comp=Z,6.2nm,0.9s
ARSA Arzberg 20.92 40 P **P** **22 01 36.4 +0.9**
ARSA IAmb IAmb 22 02 13.1
comp=Z,12nm,1.2s
ARSA Arzberg 20.92 40 *e*P **P** **22 01 35.8 +0.3**
comp=Z,2.4nm,0.7s
PDG Podgorica 20.96 56 P **P** **22 01 36.0 +0.1**
PDG IAmb IAmb 22 01 52.8
comp=Z,20nm,1.2s
GEC2 GERESS Array S 21.02 35 P **P** **22 01 36.3 -0.3**
GEC2 IAmb IAmb 22 02 05.9
comp=Z,11nm,0.8s
GERES GERESS Array B 21.02 35 P **P** **22 01 36.3 -0.3**
comp=Z,7.6nm,1.0s,baz=219,slow=12,SNR=16
GERES LR LR 22 10 39.0
comp=Z,318nm,18.1s,baz=281,slow=39
comp=Z,7.6nm,1.0s
KHC Kasperske Hory 21.16 34 *e*P P 22 01 27.5 -11
KHC *ex* x 22 01 55.5
CKRC Cesky Krumlov 21.30 35 *e*P **P** **22 01 40.0 +0.5**
CONA Conrad Observa 21.52 39 *e*P **P** **22 01 42.0 0.0**
comp=Z,4.9nm,1.0s
RONA Rosalia, Austr 21.61 40 *e*P **P** **22 01 43.7 +0.8**
comp=Z,4.9nm,0.8s
ZVC Zvikov 21.66 34 *e*P **P** **22 01 45.9 +2.5**
TREC Trest 22.19 36 *e*P **P** **22 01 50.0 +0.9**
PRU Pruhonice 22.21 33 *e*P **P** **22 01 50.3 +1.0**
ZST Bratislava 22.34 40 *e*P **P** **22 01 51.9 +1.2**
CLL Collm 22.50 29 *e*P **P** **22 01 53.0 +0.7**
comp=Z,17nm,1.3s
CLL *ex* x 22 02 16.0
KRUC Moravsky 22.50 37 *e*P **P** **22 01 52.1 -0.3**
MODS Modra-Piesok 22.54 40 *e*P **P** **22 01 52.8 -0.1**
BRG Berggiesshubel 22.57 31 *i* P **P** **22 01 54.8 +1.7**
BRG Amp 22 01 59.7
comp=Z,12nm,1.0s
VRAC Vranov 22.75 37 P **P** **22 01 54.8 -0.3**
comp=Z,11nm,0.9s,baz=243,slow=11,SNR=8.1
comp=Z,11nm,0.9s
VRAC Vranov 22.75 37 *e*P **P** **22 01 54.8 -0.3**
UPC Upice 23.25 34 *e*P **P** **22 02 01.4 +1.2**
MORC Moravsky Berou 23.53 37 P **P** **22 02 03.4 +0.3**
MORC IAmb IAmb 22 02 08.2
comp=Z,13nm,1.1s
MORC Moravsky Berou 23.53 37 *e*P **P** **22 02 03.1 0.0**
STHS Stebnicka Huta 25.30 41 *e*P **P** **22 02 22.0 +2.6**
DBIC Dimbokro 25.89 181 P **P** **22 02 24.3 -0.7**
comp=Z,4.0nm,0.8s,baz=350,slow=11,SNR=5.9
DBIC LR LR 22 13 13.8
comp=Z,113nm,18.7s,baz=22,slow=38
comp=Z,4.0nm,0.8s
DBIC Dimbokro 25.89 181 P **P** **22 02 24.5 -0.4**
MLR Muntele Rosu 26.53 52 P **P** **22 02 30.9 +0.2**
MLR IAmb IAmb 22 03 10.1
comp=Z,12nm,1.3s
BURAR Bucovina Array 26.81 48 P **P** **22 02 33.7 +0.5**
NOA NORSAR Array B 30.11 15 LR LR 22 14 58.1
comp=Z,134nm,20.2s,baz=225,slow=36
BRTR Keskin Array B 31.20 66 P **P** **22 03 14.2 +1.9**
comp=Z,0.4nm,0.6s,baz=282,slow=6.6,SNR=2.3
BRTR LR LR 22 15 57.0
comp=Z,96nm,20.3s,baz=300,slow=37
comp=Z,0.4nm,0.6s
BRTR Keskin Array B 31.20 66 P **P** **22 03 12.7 +0.4**
FINES FINESS Array B 34.81 25 P **P** **22 03 43.0 -0.4**
comp=Z,8.2nm,1.1s,baz=230,slow=8.6,SNR=5.6
comp=Z,8.2nm,1.1s
FINES FINESS Array B 34.81 25 P **P** **22 03 42.0 -1.4**
KBZ Khabaz 38.19 59 P **P** **22 04 13.7 +1.2**
comp=Z,1.3nm,0.8s,baz=227,slow=6.9,SNR=6.1
comp=Z,1.3nm,0.8s
ARCES ARCESS Array B 40.48 16 LR LR 22 20 08.0
comp=Z,161nm,21.8s,baz=254,slow=34
SCHQ Schefferville 48.47 317 P **P** **22 05 36.5 +1.1**
comp=Z,1.2nm,0.4s,baz=116,slow=5.9,SNR=5.6
comp=Z,1.2nm,0.4s
SCHQ Schefferville 48.47 317 P **P** **22 05 36.4 +0.9**
ARTI Arti 48.53 41 P **P** **22 05 35.5 -0.3**
AB31 Akbulak array 49.72 51 P **P** **22 05 45.2 +0.2**
AB31 IAmb IAmb 22 05 50.0
comp=Z,3.5nm,1.2s
ABKAR Akbulak array 49.72 51 P **P** **22 05 44.9 -0.1**
MDP Montagnes des 52.76 249 LR LR 22 25 24.3
comp=Z,246nm,20.0s,baz=182,slow=32
BVAR Borovoye Array 55.72 45 P **P** **22 06 29.5 +0.1**
comp=Z,0.9nm,0.8s,baz=284,slow=5.8,SNR=2.4
comp=Z,0.9nm,0.8s
KK31 Karatay Array 58.11 56 P **P** **22 06 48.4 +1.9**
KK31 IAmb IAmb 22 07 31.0
comp=Z,3.0nm,1.1s
KKAR Karatay Array 58.11 56 **P** **22 06 48.2 +1.6**
KURBB Kurchatov Arra 61.20 46 P **P** **22 07 08.2 +0.6**
comp=Z,4.5nm,0.7s,baz=292,slow=7.8,SNR=24
comp=Z,4.5nm,0.7s
KURK Kurchatov 61.22 46 P **P** **22 07 08.0 +0.3**
KSH2 Kashi 63.01 59 P **P** **22 07 21.9 +1.7**
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
BDFB Brasilia 63.72 228 LR LR 22 31 11.9
comp=Z,106nm,21.6s,baz=95,slow=32
ZAA0 Zalesovo Array 63.79 41 P **P** **22 07 24.9 0.0**
ZAA0 IAmb IAmb 22 07 42.5
comp=Z,1.7nm,0.8s
ZALV Zalesovo Beam 63.79 41 P **P** **22 07 24.9 -0.1**
comp=Z,1.5nm,0.7s,baz=297,slow=6.0,SNR=8.1
comp=Z,1.5nm,0.7s
MAKZ Makanchi 64.61 49 P **P** **22 07 30.9 +0.5**
MAKZ IAmb IAmb 22 07 34.9
comp=Z,3.3nm,0.8s
MKAR Makanchi Array 64.82 49 P **P** **22 07 32.1 +0.3**
comp=Z,2.6nm,0.7s,baz=286,slow=5.7,SNR=19
comp=Z,2.6nm,0.7s
MKAR Makanchi Array 64.82 49 P **P** **22 07 31.9 +0.1**
BOSA Boshof 67.09 152 P **P** **22 07 45.9 -0.8**
comp=Z,3.6nm,1.0s,baz=342,slow=6.0,SNR=5.5
comp=Z,3.6nm,1.0s
BOSA Boshof 67.09 152 P **P** **22 07 46.2 -0.4**
YKA Yellowknife Ar 70.14 332 P **P** **22 08 06.5 +1.4**
comp=Z,0.5nm,0.6s,baz=54,slow=6.2,SNR=9.2
comp=Z,0.5nm,0.6s
YKA Yellowknife Ar 70.14 332 P **P** **22 08 05.5 +0.3**
TIXI Tiksi 70.90 14 LR LR 22 44 19.2
comp=Z,102nm,19.5s,baz=353,slow=40
CPUP Villa Florida 77.44 227 LR LR 22 41 40.2
comp=Z,62nm,19.2s,baz=68,slow=35
LPAZ La Paz 78.07 242 LR LR 22 42 02.8
comp=Z,35nm,19.3s,baz=40,slow=35
PDAR Pinedale Array 78.49 314 P **P** **22 08 55.0 +0.5**
comp=Z,0.7nm,0.7s,baz=41,slow=4.7,SNR=7.7
comp=Z,0.7nm,0.7s
PDAR Pinedale Array 78.49 314 P **P** **22 08 54.4 -0.1**
ILAR Eielson Array 78.56 345 P **P** **22 08 56.6 +2.4**
comp=Z,2.0nm,0.8s,baz=21,slow=3.9,SNR=4.3
comp=Z,2.0nm,0.8s
ILAR Eielson Array 78.56 345 P **P** **22 08 55.5 +1.3**
SONM Songino Array 78.65 40 P **P** **22 08 55.8 +0.7**
comp=Z,0.6nm,0.7s,baz=287,slow=6.0,SNR=5.2
SONM LR LR 22 44 26.3
comp=Z,112nm,18.9s,baz=354,slow=36
comp=Z,0.6nm,0.7s
SONM Songino Array 78.65 40 P **P** **22 08 55.2 0.0**
TXAR Lajitas Array 81.87 300 P **P** **22 09 14.7 +1.9**
comp=Z,0.3nm,0.8s,baz=72,slow=6.1,SNR=2.0
comp=Z,0.3nm,0.8s
TXAR Lajitas Array 81.87 300 P **P** **22 09 13.8 +1.0**
MA2 Magadan 85.78 12 LR LR 22 52 57.0
comp=Z,53nm,18.3s,baz=337,slow=39
CMAR Chiang Mai Arr 90.78 68 P **P** **22 09 58.3 +1.6**
comp=Z,0.6nm,0.3s,baz=316,slow=2.2,SNR=4.2
CMAR LR LR 22 56 30.3
comp=Z,30nm,18.9s,baz=5.0,slow=39
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 90.78 68 P **P** **22 09 56.6 -0.1**
PLCA Paso Flores 95.27 224 LR LR 22 51 59.8
comp=Z,79nm,19.4s,baz=40,slow=35
ASAR Alice Springs 142.23 87 PKP **PKPdf** **22 16 27.0 +1.0**
comp=Z,0.3nm,0.9s,baz=310,slow=2.8,SNR=1.7
ASAR Alice Springs 142.23 87 PKPdf **PKPdf** **22 16 25.7 -0.2**
STKA Stephens Creek 151.18 98 PKPbc **PKiKP** **22 16 47.3 +0.2**
comp=Z,2.4nm,0.7s,baz=315,slow=5.7,SNR=4.1

*MEX **16** 21:58:10.7±0.7, 14.94N×92.83W, h88km±8km, MD3.9*
*GCG **16** 21:58:12.5±1.5, 14.87N×92.75W, h65km±24km, MD3.9, ML3.9, Presumed earthquake*
ISC 16 21:58:06.7±1.6, **14.69N**±0.09×**92.93W**±0.06, **h89**km±13km, **n21**, **σ2961/37**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THIG		**0.68**	**72**	*e*P		**Pn**	**21 58 23.9**	**+1.1**
THIG				*e*S		**Sn**	**21 58 35.0**	**+0.1**
PATR	**El Naranjo**	**0.80**	**58**	*e*P		**Pn**	**21 58 24.8**	**+0.5**
PATR				*e*S		**Sn**	**21 58 35.8**	**-1.6**
SMCA	**Catarina**	**0.84**	**79**	*i* P		**Pn**	**21 58 26.3**	**+1.8**
SMCA				*i* S		**Sn**	**21 58 37.4**	**-0.5**
SMCA				IAML			21 58 38.4	
	comp=E,2μm,0.2s							
PAVE	**Pavencul**	**0.88**	**56**	*e*P		**Pn**	**21 58 26.0**	**+0.8**
PAVE				*e*S		**Sn**	**21 58 37.9**	**-1.2**
CHUJ	**Union Juarez**	**0.89**	**63**	*e*P		**Pn**	**21 58 26.2**	**+0.9**
CHUJ				*e*S		**Sn**	**21 58 38.0**	**-1.2**
PCIG		**1.04**	**345**	*e*P		**Pn**	**21 58 27.6**	**+0.8**
PCIG				*e*S		**Sn**	**21 58 40.0**	**-1.8**
RTAL	**Retalhuleu**	**1.21**	**98**	*e*P		**Pn**	**21 58 30.9**	**+2.2**
RTAL				*e*S		**Sn**	**21 58 46.7**	**+1.4**
SOKI	**Kika Raxquin**	**1.48**	**85**	*i* P		**Pn**	**21 58 37.3**	**+4.7**
HUEH	**Huehuetenango**	**1.51**	**66**	*e*P		**Pn**	**21 58 35.5**	**+2.7**
HUEH				*e*S		**Sn**	**21 58 53.7**	**+1.3**
HUEH	**Huehuetenango**	**1.51**	**66**	*i* P		**Pn**	**21 58 35.3**	**+2.6**
HUEH				*e*S		**Sn**	**21 58 54.0**	**+1.5**
HUEH				IAML			21 59 01.1	
	comp=E,1μm,0.4s							
STG2	**El Palmar, Qui**	**1.53**	**99**	*i* P		**Pn**	**21 58 32.3**	**-0.5**
STG2				*e*S		**Sn**	**21 58 47.6**	**-5.0**
STG8	**El Palmar, Qui**	**1.55**	**99**	*i* P		**Pn**	**21 58 33.1**	**-0.1**
STG8				*i* S		**Sn**	**21 58 48.4**	**-4.8**
STG8				IAML			21 58 53.0	
	comp=E,4μm,0.2s							
STG5	**El Palmar, Qui**	**1.56**	**100**	*i* P		**Pn**	**21 58 33.1**	**-0.1**
STG5				*i* S		**Sn**	**21 58 49.1**	**-4.2**
CCIG	**Comitan**	**1.76**	**26**	*e*P		**Pn**	**21 58 37.4**	**+1.5**
CARR	**Arriaga**	**1.81**	**329**	*e*P		**Pn**	**21 58 39.0**	**+2.6**
CARR				*e*S		**Sn**	**21 58 59.3**	**+0.3**
TGIG		**2.08**	**355**	*e*P		**Pn**	**21 58 40.3**	**+0.3**
TGIG				*e*S		**Sn**	**21 58 58.1**	**-7.2**
UXUV	**UXUV**	**2.86**	**336**	*e*P		**Pn**	**21 58 52.3**	**+2.0**
UXUV				*e*S		**Sn**	**21 59 20.3**	**-3.6**
CMIG	**Matias Romero**	**3.04**	**322**	*e*P		**Pn**	**21 58 55.2**	**+2.5**
PETF	**Flores**	**3.69**	**53**	*e*P		**Pn**	**21 59 03.0**	**+1.6**
NEUV	**Arroyo Zacate**	**4.08**	**318**	*e*P		**Pn**	**21 59 08.7**	**+1.9**
NEUV				*e*S		**Sn**	**21 59 51.2**	**-2.1**
TOIG	**Toxpalan**	**5.21**	**311**	*e*P		Pn	21 59 30.0	+7.7
TOIG				*e*S		**Sn**	**22 00 20.7**	**-0.5**

*HEL **16** 22:05:26.8±0.2, 67.83N×20.18E, h0km, ML1.1, Suspected explosion*
*UPP **16** 22:05:26.5±0.0, 67.85N×20.21E, h0km, ML2.6, Confirmed Induced event*
ISC 16 22:05:26.4±0.8, **67.83N**±0.02×**20.24E**±0.02, **h0km**, **n21**, **σ0888/34**, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**16**	P		**Pg**	**22 05 29.0**	**+0.2**
KUA				S		**Sg**	**22 05 30.7**	**+0.3**
RATU	**Laukkuluspa**	**0.25**	**268**	P		**Pg**	**22 05 31.2**	**+0.2**
RATU				S		**Sg**	**22 05 34.5**	**+0.3**
NIKU	**Nikkaluokta**	**0.46**	**275**	P		**Pg**	**22 05 35.1**	**0.0**
NIKU				S		**Sg**	**22 05 41.5**	**+0.4**
LANU	**Lannavaara**	**0.70**	**71**	P		**Pg**	**22 05 39.8**	**+0.1**
LANU				S		**Sg**	**22 05 49.3**	**+0.7**
LANU	**Lannavaara**	**0.70**	**71**	PG		**Pg**	**22 05 39.9**	**+0.2**
LANU				SG		**Sg**	**22 05 49.3**	**+0.7**
DUNU	**Dundret**	**0.73**	**170**	P		**Pg**	**22 05 40.5**	**+0.2**
MASU	**Masugnsbyn**	**0.77**	**119**	P		**Pg**	**22 05 41.4**	**+0.3**
SALU	**Saltoluokta**	**0.81**	**236**	P		**Pg**	**22 05 41.6**	**-0.1**
KIF	**Kilpisjarvi** baz=194	**1.20**	**10**	PG		**Pg**	**22 05 49.3**	**+0.1**
KIF				smax		smax	22 06 04.4	
	comp=Z,2.6nm,0.2s							
KIF				SG		**Sg**	**22 06 05.0**	**+0.3**
PAJU	**Pajala**	**1.37**	**125**	P		**Pg**	**22 05 52.0**	**-0.6**
HEF	**Hetta** baz=248	**1.40**	**64**	PG		**Pn**	**22 05 52.5**	**-0.7**
HEF				smax		smax	22 06 09.8	
	comp=Z,1.2nm,0.2s							
HEF				SB		**Sg**	**22 06 10.9**	**-0.5**
ERTU	**Ertsjaerv**	**1.49**	**149**	P		**Pn**	**22 05 54.3**	**0.0**
ERTU	**Ertsjaerv** baz=326	**1.49**	**149**	PN		**Pb**	**22 05 54.8**	**-0.1**
ERTU				SN		**Sn**	**22 06 15.7**	**+1.2**
KLF	**Kolari**	**1.55**	**111**	PN		**Pn**	**22 05 55.4**	**+0.2**
KLF				smax		smax	22 06 14.0	
	comp=Z,0.8nm,0.2s							
KLF				SN		**Sg**	**22 06 17.0**	**+1.0**
KTK1	**Kautokeino**	**1.62**	**42**	PG		**Pn**	**22 05 56.5**	**+0.3**
KTK1				SN		**Sg**	**22 06 20.1**	**+1.8**
HARU	**Harads**	**1.70**	**170**	P		**Pn**	**22 05 57.8**	**+0.6**
TRO	**Tromso**	**1.87**	**346**	SG		**Sb**	**22 06 24.8**	**-0.4**
TOF	**Tornio**	**2.38**	**136**	PG		**Pb**	**22 06 08.8**	**-1.2**
TOF				smax		smax	22 06 37.8	
	comp=Z,0.4nm,0.2s							
TOF				SG		**Sg**	**22 06 41.7**	**-1.1**
RNF	**Rovaniemi**	**2.56**	**116**	PB		**Pb**	**22 06 11.6**	**-1.5**
RNF				SG		**Sb**	**22 06 45.4**	**+0.3**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB		**Pb**	**22 06 11.5**	**-1.8**
ARA0				SB		**Sb**	**22 06 44.3**	**-1.1**
KEV	**Kevo**	**3.12**	**49**	SB		**Sn**	**22 06 57.1**	**+2.4**

*VAO **16** 22:05:32.9±0.3, 21.91S×68.71W, h10km, mb5.3, Presumed earthquake*
*MOS **16** 22:05:43.8±1.2, 21.97S×68.41W, h105km, mb5.4/14, Error ellipse: s-maj=12.5km s-min=6.6km az=104.3*
*SJA **16** 22:05:43.7±1.9, 21.90S×68.60W, h125km, ML5.4, MW5.1*
*GFZ **16** 22:05:44.3, 21.97S×68.43W, h106km, MW5.2, Moment Tensor Solution. s57 Moment tensor: Mrr=6.47; Mθθ=2.79; Mφφ=9.25; Mrθ=2.19; Mrφ=-0.32; Mθφ=-3.21; Fault plane solution: NP1:φs201.00000°, δ38.00000°, λ-54.00000°. NP2:φs339.00000°, δ60.00000°, λ-114.00000°. Principal axes: T 9.9300, Plg12.0000°, Azm87.0000°; N -1.9800, Plg21.0000°, Azm352.0000°; P -7.9500, Plg66.0000°, Azm203.0000°;*
*NEIC **16** 22:05:44.5, 21.93S×68.48W, h100km*
*NEIC **16** 22:05:44.5, 22.03S×68.69W, h100km, Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10^16Nm; Mrr=4.97; Mθθ=1.96; Mφφ=6.93; Mrθ=2.63; Mrφ=-0.83; Mθφ=-2.93; Fault plane solution: M0 7.38000×10^16 NP1: φs200.54000°, δ36.96000°, λ-47.85000°. NP2: φs331.98000°, δ63.52000°, λ-116.79000°. Principal axes: T 7.8184, Plg14.0000°, Azm81.0000°; N -0.9827, Plg24.0000°, Azm345.0000°; P -6.8356, Plg62.0000°, Azm200.0000°;*
*NEIC **16** 22:05:44.3±1.6, 21.93S±0.04×68.47W±0.05, h104km±3km, mb5.3/513, Mwr5.2/39, Mww5.2/32, Mww5.3(GUC) Error ellipse: s-maj=7.5km s-min=5.9km az=67.0, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr=4.29; Mθθ=2.10; Mφφ=6.38; Mrθ=1.28; Mrφ=0.21; Mθφ=-5.04; Fault plane solution: M0 7.67000×10^16 NP1: φs202.79000°, δ26.25000°, λ-57.14000°. NP2: φs347.02000°, δ68.19000°, λ-104.98000°. Principal axes: T 8.3933, Plg22.0000°, Azm88.0000°; N -1.7494, Plg14.0000°, Azm353.0000°; P -6.6439, Plg64.0000°, Azm233.0000°;*
*GUC **16** 22:05:45.9±0.7, 21.92S×68.69W, h122km±6km, ML5.4*
*IDC **16** 22:05:45.9±0.4, 21.89S×68.33W, h117km±2km, mb4.6/19, mbtmp4.9/24, MS4.1/26, Error ellipse: s-maj=13.5km s-min=9.7km az=57.0*
*NEIC **16** 22:05:45, 21.95S×68.49W, h104km*
*GCMT **16** 22:05:48.3±0.2, 21.79S±0.01×68.51W±0.01, h132km±1km, MW5.2/131, Moment Tensor Solution. s86,c98; s131,c199; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.71±.01; Mθθ=0.20±.02; Mφφ=0.90±.02; Mrθ=0.11±.01; Mrφ=0.16±.02; Mθφ=-0.41±.02; Best double couple: M0=0.92400×10^17 NP1:φs178.00000°, δ31.00000°, λ-81.00000°. NP2:φs348.00000°, δ59.00000°, λ-95.00000°. Principal axes: T 1.0320, Plg14.0000°, Azm81.0000°; N -0.2160, Plg4.0000°, Azm350.0000°; P -0.8160, Plg76.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 22:05:44.7±0.3, **21.91S**±0.03×**68.55W**±0.03, **h111**km±2km, **h111**km:**pP-P**, **n647**, **σ1948/484**, **mb5.2**/280, **26C-18D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.65**	**279**			**Pn**	**22 06 03.6**	**+0.6**
PB09						Sn	**22 06 15.6**	**-1.1**
AF01	**San Pedro de A**	**1.09**	**162**			**Pn**	**22 06 08.5**	**+1.2**
AF01						Sn	**22 06 22.0**	**-2.4**
AF01	**San Pedro de A**	**1.09**	**162**	*i* P		**Pn**	**22 06 08.2**	**+0.9**
AF01	**San Pedro de A**	**1.09**	**

AF01 IAML 22 06 43.2
comp=Z,52µm,0.9s
PB03 IPOC Station P 1.13 263 Pn 22 06 07.9 +0.4
PB03 Sn **Sn 22 06 24.7 0.0**
PB03 IPOC Station P 1.13 263⇑ *iP* **Pn 22 06 07.6 +0.1**
PB03 *i* S **Sn 22 06 24.6 -0.1**
PB03 IPOC Station P 1.13 263 *eP* **Pn 22 06 07.6 +0.1**
PB03 *eS* **Sn 22 06 25.5 +0.8**
PB03 IAML 22 06 27.2
comp=Z,27µm,0.3s
PB06 IPOC Station P 1.24 230 Pn 22 06 08.8 +0.1
PB06 IPOC Station P 1.24 230⇑ *iP* **Pn 22 06 09.2 +0.4**
PB06 *i* S **Sn 22 06 27.1 +0.2**
PB06 IAML 22 06 28.5
comp=E,88µm,0.6s
PB06 IPOC Station P 1.24 230 *eP* **Pn 22 06 08.4 -0.3**
PB06 *eS* **Sn 22 06 28.6 +1.8**
PB06 IAML 22 06 33.4
comp=Z,30µm,0.7s
PB07 IPOC Station P 1.26 278 Pn 22 06 09.3 +0.4
PB07 IPOC Station P 1.26 278⇑ *iP* **Pn 22 06 09.3 +0.4**
PB07 *i* S **Sn 22 06 26.3 -0.9**
PB07 IAML 22 06 32.8
comp=E,63µm,0.5s
PB07 IPOC Station P 1.26 278 *eP* **Pn 22 06 08.6 -0.4**
PB07 *eS* **Sn 22 06 29.3 +2.0**
PB07 IAML 22 06 40.8
comp=Z,32µm,0.4s
PB02 IPOC Station P 1.38 295 Pn 22 06 10.6 +0.2
PB02 IPOC Station P 1.38 295⇑ *iP* **Pn 22 06 10.6 +0.2**
PB02 *i* S **Sn 22 06 29.3 -0.4**
PB02 IAML 22 06 30.7
comp=N,55µm,0.5s
PB02 IPOC Station P 1.38 295 *eP* **Pn 22 06 10.6 +0.2**
PB02 *eS* **Sn 22 06 31.3 +1.6**
PB02 IAML 22 06 37.0
comp=Z,65µm,0.4s
PB05 IPOC Station P 1.80 238 Pn 22 06 15.3 0.0
PB05 IPOC Station P 1.80 238⇑ *iP* **Pn 22 06 15.1 -0.3**
PB05 *i* S **Sn 22 06 37.5 -1.2**
PB05 IAML 22 06 44.9
comp=E,34µm,0.5s
PB05 IPOC Station P 1.80 238 *eP* **Pn 22 06 15.1 -0.3**
PB05 *eS* **Sn 22 06 34.0 -4.6**
PB05 IAML 22 06 44.7
comp=Z,17µm,0.6s
PX03 IPOC Station P 1.81 326⇑ *eP* **Pn 22 06 15.4 0.0**
TA01 Diego Aracena 2.02 311 Pn 22 06 18.0 -0.1
TA01 Diego Aracena 2.02 311⇑ *iP* **Pn 22 06 17.9 -0.1**
TA01 *i* S **Sn 22 06 42.2 -1.3**
TA01 IAML 22 06 51.0
comp=N,37µm,0.6s
TA01 Diego Aracena 2.02 311 *eP* **Pn 22 06 17.3 -0.8**
TA01 *eS* **Sn 22 06 43.6 0.0**
TA01 IAML 22 06 49.0
comp=Z,25µm,0.6s
HMBC Humberstone 2.05 322 Pn 22 06 18.8 +0.3
HMBC Humberstone 2.05 322⇑ *iP* **Pn 22 06 18.6 +0.1**
HMBC *i* S **Sn 22 06 43.8 -0.5**
HMBC Humberstone 2.05 322 *eP* **Pn 22 06 18.4 0.0**
HMBC *eS* **Sn 22 06 43.8 -0.5**
HMBC IAML 22 06 48.4
comp=Z,36µm,0.4s
TA02 Huaiquique 2.20 317⇑ *iP* **Pn 22 06 19.9 -0.4**
TA02 *i* S **Sn 22 06 46.3 -1.2**
TA02 IAML 22 06 58.6
comp=E,35µm,0.4s
TA02 Huaiquique 2.20 317 *eP* **Pn 22 06 19.8 -0.5**
TA02 *eS* **Sn 22 06 47.9 +0.4**
TA02 IAML 22 06 57.3
comp=Z,22µm,0.6s
GO01 Chusmiza 2.31 345 Pn 22 06 23.2 +1.1
GO01 Chusmiza 2.31 345⇑ *iP* **Pn 22 06 23.4 +1.3**
GO01 IAML 22 06 55.1
comp=N,17µm,0.5s
GO01 Chusmiza 2.31 345 *eP* **Pn 22 06 23.7 +1.6**
GO01 *eS* **Sn 22 06 52.7 +1.9**
GO01 IAML 22 06 59.1
comp=Z,9µm,0.6s
PB11 IPOC Station P 2.37 334 Pn 22 06 23.0 +0.3
PB11 IPOC Station P 2.37 334⇑ *iP* **Pn 22 06 22.9 +0.2**
PB11 *i* S **Sn 22 06 49.3 -2.5**
PB11 IPOC Station P 2.37 334 *eP* **Pn 22 06 23.0 +0.3**
PB11 *eS* **Sn 22 06 53.9 +2.1**
PB11 IAML 22 06 58.9
comp=Z,18µm,0.4s
PB10 IPOC Station P 2.45 229 Pn 22 06 25.2 +1.7
PB10 IPOC Station P 2.45 229⇓ *eP* **Pn 22 06 21.3 -2.2**
PB10 IAML 22 07 06.8
comp=E,13µm,0.6s
PB10 IPOC Station P 2.45 229 *eP* Pn 22 06 17.0 -6.5
PB10 *eS* Sn 22 07 01.8 +8.5
PB10 IAML 22 07 02.8
comp=Z,9µm,0.8s
SALTA 3.08 139⇑ *eP* **Pn 22 06 34.5 +2.3**
SALTA 3.08 139 *eP* **Pn 22 06 34.8 +2.6**
HJA Humahuaca 3.18 115 *eP* **Pn 22 06 36.3 +2.8**
PB14 IPOC Station P 3.20 212 Pn 22 06 32.4 -1.3
PB14 IPOC Station P 3.20 212 IAML 22 07 21.4
comp=E,7µm,0.4s
PB14 IPOC Station P 3.20 212 *eP* Pn 22 06 27.0 -6.7
PB14 *eS* Sn 22 07 21.3 +10
PB14 IAML 22 07 34.5
comp=Z,6µm,0.9s
GO02 Mina Guanaco 3.38 196 Pn 22 06 35.1 -1.0
GO02 Mina Guanaco 3.38 196⇑ *eP* **Pn 22 06 35.4 -0.7**
GO02 Mina Guanaco 3.38 196 *eP* Pn 22 06 30.0 -6.0
GO02 *eS* **Sn 22 07 16.8 +1.1**
GO02 IAML 22 07 57.5
comp=Z,6µm,0.7s
PB16 IPOC Station P 3.67 346 Pn 22 06 40.6 +0.5
PB16 IPOC Station P 3.67 346 *eP* **Pn 22 06 41.1 +0.9**
PB16 IPOC Station P 3.67 346 *eP* **Pn 22 06 40.8 +0.6**
PB16 *eS* Sn 22 07 05.5 -17
PB16 IAML 22 07 52.2
comp=Z,4µm,0.8s
PB12 IPOC Station P 3.68 333 Pn 22 06 38.4 -1.5
PB12 IPOC Station P 3.68 333⇑ *iP* **Pn 22 06 38.3 -1.5**
PB12 IPOC Station P 3.68 333 *eP* **Pn 22 06 38.4 -1.5**
PB12 *eS* **Sn 22 07 16.5 -6.0**
PB12 IAML 22 07 47.7
comp=Z,8µm,0.6s
AP01 Chacalluta 3.90 334 Pn 22 06 41.8 -1.0
AP01 Chacalluta 3.90 334 *i* P **Pn 22 06 41.3 -1.4**
AP01 Chacalluta 3.90 334 *eP* **Pn 22 06 41.6 -1.1**
AP01 *eS* **Sn 22 07 30.3 +2.6**
AP01 IAML 22 07 56.6
comp=Z,10µm,0.9s
AZAP Zapla 3.95 126 *eP* **Pn 22 06 45.3 +1.7**
SLA San Lorenzo 3.96 136⇑ *eP* **Pn 22 06 46.2 +2.5**
SLA San Lorenzo 3.96 136 *eP* **Pn 22 06 47.0 +3.3**
PB18 Visviri 4.38 348 Pn 22 06 50.8 +1.1
AC01 Pan de Azucar 4.62 204 Pn 22 06 50.2 -2.3
AC01 Pan de Azucar 4.62 204 *eP* Pn 22 06 45.0 -7.4
AC01 *eS* **Sn 22 07 47.0 +2.0**
AC01 IAML 22 08 02.3
comp=Z,3µm,0.6s
FSA Cafayete 4.80 151 *eP* Pn 22 06 51.5 -3.5
AC02 Maricunga 4.94 186 Pn 22 06 56.6 -0.6
AC02 Maricunga 4.94 186 *eP* **Pn 22 06 56.1 -1.1**
AC02 *eS* Sn 22 07 28.5 -25
AC02 IAML 22 08 48.3
comp=Z,2µm,1.2s
LPAZ La Paz 5.60 4 P Pn 22 07 07.8 +1.4
comp=Z,79nm,0.5s,baz=173,slow=7.6,SNR=156
LPAZ S Sn 22 08 00.7 -9.0
comp=Z,379nm,0.8s,baz=193,slow=10,SNR=10
LPAZ La Paz 5.60 4 Pn 22 07 07.9 +1.6
LPAZ La Paz 5.60 4 P Pn 22 07 07.9 +1.6
LPAZ La Paz 5.60 4 P Pn 22 07 08.0 +1.7
comp=Z,6µmcomp=Z,207nm,0.7s
GO03 Copiapo 5.87 195 Pn 22 07 06.3 -3.0
AC04 Llanos de Chal 6.68 200 Pn 22 07 15.7 -4.5
AC05 El Transito 7.08 192 Pn 22 07 22.4 -3.3
LCO Las Campanas 7.34 195 Pn 22 07 24.9 -4.5
LCO Las Campanas 7.34 195 *eP* **Pn 22 07 25.3 -4.1**
CO01 Juntas del Tor 8.16 189 Pn 22 07 37.4 -3.1
CO05 La Serena 8.34 196 Pn 22 07 37.4 -5.3
CO03 El Pedregal 9.10 192 Pn 22 07 48.3 -4.9
CO06 Fray Jorge 9.16 197 Pn 22 07 47.4 -6.5
SIV San Ignacio 9.20 52 P Pn 22 07 51.8 -2.7
comp=Z,266nm,0.6s,baz=235,slow=11,SNR=715
SIV S Sn 22 09 28.1 -8.2
comp=Z,67nm,0.8s,baz=136,slow=24,SNR=4.9
CO02 Combarbal 9.52 193 Pn 22 07 53.3 -5.5
ZON Zonda 9.60 181 Pn 22 07 58.2 -1.7
ZON Zonda 9.60 181 P **Pn 22 07 58.2 -1.7**
CFA Coronel Fontan 9.66 178 P **Pn 22 07 57.0 -3.8**
comp=Z,38nm,0.9s,baz=357,slow=13,SNR=77
CFA S Sn 22 09 38.8 -8.7
comp=Z,14nm,0.6s,baz=296,slow=16,SNR=1.1
CFA LR LR 22 12 52.4
comp=Z,413nm,20.3s,baz=4.0,slow=44
MURT Porto Murtinho 10.17 91 *eP* Pn 22 08 03.2 -4.3
CO04 Los Peladeros 10.33 192 Pn 22 08 03.9 -6.1
VA06 Catapilco 10.89 192 Pn 22 08 14.0 -3.3
VA03 San Esteban 10.96 189 Pn 22 08 13.5 -4.8
PTLB Pontes e Lacer 10.99 56 Pn 22 08 15.3 -3.5
PTLB Pontes e Lacer 10.99 56 *eP* Pn 22 08 11.8 -6.9
BDQN Bodoquena, MS 11.10 85 *eP* Pn 22 08 16.6 -3.6
CPUP Villa Florida 11.15 115 P Pn 22 08 17.9 -3.0
comp=Z,28nm,0.8s,baz=296,slow=13,SNR=59
CPUP LR LR 22 13 29.2
comp=Z,1µm,18.5s,baz=274,slow=42
CPUP Villa Florida 11.15 115 Pn 22 08 18.0 -2.8
CPUP Villa Florida 11.15 115 P Pn 22 08 18.0 -2.8
PEL Peldehue 11.35 189 Pn 22 08 22.5 -1.1
PEL Peldehue 11.35 189 P **Pn 22 08 22.5 -1.1**
MT02 Curacav 11.54 191 Pn 22 08 21.2 -4.8
MT08 Bocatoma Ro 11.57 186 Pn 22 08 22.8 -3.8
MT05 Renca 11.61 189 Pn 22 08 26.5 -0.5
MT16 CCHEN 11.61 188 Pn 22 08 26.6 -0.4
MT03 Universidad Ad 11.67 188 Pn 22 08 27.7 -0.2
MT13 San Alfonso 11.89 187 Pn 22 08 28.2 -2.6
VA05 Santo Domingo 12.02 192 Pn 22 08 29.8 -2.5
MT09 Talagante 12.02 190 Pn 22 08 30.9 -1.6
AQDB Aquidauana 12.07 86 *eP* Pn 22 08 27.5 -5.6
MT01 Popeta 12.15 191 Pn 22 08 33.0 -1.1
NNA Nana 12.65 320 P **Pn 22 08 40.7 -0.2**
comp=Z,62nm,0.8s,baz=173,slow=16,SNR=3.8
NNA S **Sn 22 10 54.7 -5.5**
comp=Z,14nm,0.4s,baz=258,slow=12,SNR=2.2
NNA LR LR 22 14 07.8
comp=Z,327nm,20.1s,baz=170,slow=39
NNA Nana 12.65 320 P **P 22 08 49.9 +2.2**
comp=Z,105nm,0.9s
PSAL Palomas, Salto 13.39 135 *eP* Pn 22 08 46.4 -3.8
SALV Santo Antonio 13.55 66 *eP* Pn 22 08 48.9 -3.6
PP1B Ponte de Pedra 13.56 74 *eP* Pn 22 08 48.5 -4.2
CZSB Cruzeiro do Su 14.65 344 *eP* Pn 22 09 01.4 -5.3
CZSB Cruzeiro do Su 14.65 344 P **P 22 09 10.2 +0.3**
comp=Z,1µmcomp=Z,99nm,0.9s
TRCB Terra Rica 14.75 96 *eP* Pn 22 09 05.4 -2.5
C2SB Chapadao do Su 15.06 81 *eP* **Pn 22 09 08.8 -3.0**
PDRB Porto dos Gac 15.25 50 *eP* **Pn 22 09 10.8 -3.4**
BI05 Punta Hualpn 15.33 194 Pn **Pn 22 09 13.0 -2.0**
ITAB Concordia 15.84 113 P **Pn 22 09 19.8 -1.7**
ITAB Concordia 15.84 113 *eP* **Pn 22 09 20.2 -1.3**
CPSB Cacapava Do Su 15.98 125 *eP* **Pn 22 09 20.6 -2.5**
LDASE Londrina, Braz 16.16 99 *eP* **Pn 22 09 23.8 -1.7**
CLDB Colider 16.42 50 *eP* **Pn 22 09 25.5 -3.2**
PLTB Pedras Altas 16.54 130 Pn **Pn 22 09 27.8 -2.4**
PLTB Pedras Altas 16.54 130 *eP* **Pn 22 09 26.7 -3.5**
TRQA Tornquist 17.06 162 P 22 09 34.7 -1.7
TRQA Tornquist 17.06 162 P **P 22 09 34.7 -1.7**
ITRB Iturama 17.15 86 *eP* **P 22 09 36.0 -1.5**
ATAH Atahualpa 17.49 326 P **Pn 22 09 44.1 +1.9**
comp=Z,10nm,0.8s,baz=202,slow=9.3,SNR=7.7
ATAH S **S 22 12 57.6 -0.8**
comp=Z,3.5nm,0.7s,baz=166,slow=22,SNR=1.4
CNLB Canela 17.57 118 *eP* **P 22 09 39.5 -2.6**
FRTB Fartura 17.59 98 *eP* **P 22 09 41.3 -1.1**
GO06 Curarrehue 17.80 187 P P 22 09 44.1 -0.5
LR04 Corral 18.39 192 P P 22 09 51.2 +0.2
LR05 Currie 18.50 188 P P 22 09 52.4 +0.2
BB19B Bebedouro 18.65 91 *eP* **P 22 09 53.5 -0.5**
TEFE Tefe 18.68 12 *eP* **P 22 09 53.3 -1.0**
PLCA Paso Flores 18.85 185 P **P 22 09 55.5 -0.5**
comp=Z,38nm,0.9s,baz=6.6,slow=13,SNR=47
PLCA Paso Flores 18.85 185 P **P 22 09 54.7 -1.3**
PLCA Paso Flores 18.85 185 *eP* **P 22 09 56.1 +0.1**
PLCA Paso Flores 18.85 185 *eP* **P 22 09 54.4 -1.7**
SNDB Serra Nova Dou 19.21 62 *eP* **P 22 09 58.9 -1.3**
RCLB Rio Claro- Sao 19.47 95 *eP* **P 22 10 01.4 -1.6**
NPGB Novo Progresso 19.50 43 *eP* **P 22 10 01.3 -2.1**
IPMB Ipameri, GO 19.51 82 *eP* **P 22 10 02.1 -1.3**
SPB Sao Paulo 19.55 99 *eP* **P 22 10 02.3 -1.4**
PET01 Itanhaem-SP 19.71 101 *eP* **P 22 10 04.1 -1.4**
LL05 Los Muermos 19.88 191 P **P 22 10 05.9 -1.3**
VAO Valinhos 19.98 97 P **P 22 10 06.7 -1.7**
VAO Valinhos 19.98 97 *eP* **P 22 10 06.8 -1.7**
MACA Manacapuru-AM 20.14 23 P P 22 10 08.0 -2.2
MACA Manacapuru-AM 20.14 23 *eP* **P 22 10 08.1 -2.1**
BDFB Brasilia 20.41 76 P **P 22 10 11.0 -2.2**
comp=Z,44nm,1.0s,baz=249,slow=13,SNR=43
comp=Z,44nm,1.0s
BDFB Brasilia 20.41 76 P P 22 10 11.0 -2.2
MCRA Macar, Loja 20.65 326 P P 22 10 17.0 +1.3
LL01 San Ignacio de 20.67 188 P P 22 10 15.4 -0.2
PMNB Patos De Minas 21.01 85 *eP* **P 22 10 17.6 -2.1**
PARB Paraibuna 21.21 98 *eP* **P 22 10 18.7 -3.0**
LL07 Hotel Espejo d 21.27 190 P P 22 10 20.1 -1.9
LL02 Futaleuf 21.40 187 P P 22 10 21.9 -1.6
SGC2 Sao Gabriel da 21.68 4 P **P 22 10 25.8 -0.8**
comp=Z,1µmcomp=Z,135nm,0.7s
COHC Cochancay 21.95 330 P P 22 10 30.1 +0.6
COHC Cochancay 21.95 330 P P 22 10 34.0 +4.5
comp=Z,28nmcomp=Z,0.7nm,0.9s
BSCB Bom Sucesso 22.14 92 *eP* **P 22 10 28.2 -3.4**
AY01 Puyuhuapi 22.71 188 P P 22 10 35.3 -1.7
PTLC Puerto Leguiza 22.77 344 P P 22 10 37.2 -0.8
SLOR San Lorenzo - 23.17 334 P P 22 10 42.1 -0.2
PPLP Puerto Lpez 23.48 328 P **P 22 10 48.6 +4.0**
comp=Z,46nm,0.8s
CASC Dorado de Casc 23.53 337 P **P 22 10 47.7 +2.5**
comp=Z,3µmcomp=Z,173nm,1.5s
DIAM Diamantina, MG 23.63 86 *eP* **P 22 10 43.9 -2.1**
COYC Coyhaique 23.78 186 P P 22 10 45.8 -1.2
BONI La Bonita 23.89 337 P **P 22 10 50.6 +2.0**
comp=Z,2µmcomp=Z,176nm,1.1s
JANB Jaruaria 23.95 78 *eP* **P 22 10 47.0 -2.0**
SMTB Santa Maria do 23.97 60 *eP* **P 22 10 47.7 -1.3**
OTAV Otavalo 24.04 335 P P 22 10 51.3 +1.2
OTAV Otavalo 24.04 335 *eP* **P 22 10 52.6 +2.5**
OTAV Otavalo 24.04 335 *eP* **P 22 10 48.1 -2.0**
OTAV Otavalo 24.04 335 P **P 22 10 52.2 +2.1**
comp=Z,1µmcomp=Z,21nm,0.8s
PAC1 Pacto, Paraso 24.20 334 P **P 22 10 53.8 +2.6**
comp=Z,2µmcomp=Z,44nm,1.0s
DUB01 Friburgo-RJ 24.26 95 *eP* **P 22 10 51.8 +0.1**
FLOC Florencia 24.36 343 P **P 22 10 53.7 +1.2**
comp=Z,2µmcomp=Z,60nm,0.8s
MACC Macarena, Meta 24.46 347 P P 22 11 00.5 +7.1
GCUF Volcan Galeras 24.54 338 P P 22 11 00.6 +5.8
GARC Garzon, Huila 24.89 343 P P 22 10 59.3 +1.7
comp=Z,951nmcomp=Z,78nm,1.1s
CAM01 Campos-RJ 24.95 95 *eP* **P 22 10 57.1 -0.8**
BBAC Balboa, Cauca 25.25 339 P P 22 11 03.0 +2.1
comp=Z,3µmcomp=Z,159nm,1.4s
BOAV Boa Vista 25.39 19 P **P 22 11 01.4 -0.5**
BOAV IAmb IAmb 22 11 03.4
comp=Z,60nm,0.8s
BOAV Boa Vista 25.39 19 *eP* **P 22 11 02.6 +0.7**
BOAV Boa Vista 25.39 19 P **P 22 11 02.1 +0.2**
comp=Z,774nmcomp=Z,87nm,1.3s
AY03 Cochrane 25.50 186 P P 22 11 02.3 -0.2
POPC Popayan, Colom 25.56 341 P P 22 11 05.2 +1.5
comp=Z,1µmcomp=Z,107nm,1.4s
URMC La Uribe, Meta 25.64 346 P P 22 11 04.8 +0.6
comp=Z,36nm,0.9s
SJMB Sao Joao De Ma 25.85 88 *eP* **P 22 11 04.3 -1.7**
JAMC Jamundi, Valle 26.20 341 P P 22 11 10.9 +1.4
comp=Z,815nmcomp=Z,38nm,1.2s
PRAC Prado 26.21 346 P P 22 11 09.5 +0.2
comp=Z,1µmcomp=Z,39nm,1.8s
VILC Villavicencio, 26.34 348 P P 22 11 11.7 +1.1
comp=Z,402nmcomp=Z,47nm,1.0s
RIB01 Linhares ES 26.46 90 *eP* **P 22 11 09.9 -1.6**
ORTC Ortega, Tolima 26.48 345 P P 22 11 12.8 +1.0
comp=Z,2µmcomp=Z,180nm,1.1s
YOTC Yotoco, Valle 26.84 343 P P 22 11 15.8 +0.7
comp=Z,600nmcomp=Z,34nm,1.0s
CHIC Chingaza 26.86 348 P P 22 11 15.9 +0.4
ROSC El Rosal 27.18 347 P P 22 11 19.1 +0.7
comp=Z,9.3nm,0.6s,baz=69,slow=7.2,SNR=5.3
ROSC LR LR 22 23 21.7
comp=Z,402nm,20.5s,baz=216,slow=39
comp=Z,9.3nm,0.6s
ROSC El Rosal 27.18 347 P P 22 11 18.4 +0.1
GUA01 Guaratinga, BA 27.62 84 *eP* **P 22 11 20.5 -1.5**
RUSC La Rusia 27.98 350 P P 22 11 26.1 +0.4
comp=Z,1µmcomp=Z,103nm,1.1s
CMC01 Camacan, BA 28.24 82 *eP* **P 22 11 25.5 -1.9**
NBIT Itapeh - BA 28.45 81 *eP* **P 22 11 28.4 -0.9**
HELC Santa Helena 28.75 345 P P 22 11 32.0 -0.4
comp=Z,734nmcomp=Z,60nm,1.1s
PTBC PUERTO BERRIO, 28.86 348 P P 22 11 30.9 -2.0
PAMC Pamplona, Colo 29.35 352 P P 22 11 37.1 -0.7
comp=Z,258nmcomp=Z,31nm,0.8s
MG05 Puerto Natales 29.88 185 IAmb IAmb 22 11 43.1
comp=Z,80nm,1.0s
OCAC Ocana 30.32 351 P P 22 11 43.5 -2.5
SDV Santo Domingo 30.67 356 LR LR 22 25 41.5
comp=Z,238nm,19.1s,baz=191,slow=39
SDV Santo Domingo 30.67 356 P P 22 11 48.3 -0.9
SDV Santo Domingo 30.67 356 *eP* **P 22 11 47.6 -1.5**
SDV Santo Domingo 30.67 356 P P 22 11 48.4 -0.7
comp=Z,30nm,1.0s
EFI East Falkland 30.81 167⇑ *eP* **P 22 11 49.9 +0.1**
EFI pmax pmax
comp=Z,54nm,1.1s
NBPS Pedro II - PI 31.51 60 *eP* **P 22 11 55.1 -1.4**
SJCC San Jacinto, C 32.27 348 P P 22 12 01.8 -1.2
NBPA Parau_RN 34.38 67 *eP* **P 22 12 20.0 -1.3**
RCBR Riachuelo 35.38 68 P P 22 12 28.4 -1.6
RCBR Riachuelo 35.38 68 P P 22 12 28.4 -1.6
RCBR pmax pmax
comp=Z,58nm,0.9s
RCBR Riachuelo 35.38 68 *eP* **P 22 12 29.3 -0.7**
RCBR Riachuelo 35.38 68 P P 22 12 28.4 -1.6
RCBR pP **pP 22 12 55.8 -0.5**
NBPV Pedro Velho 35.62 69 *eP* **P 22 12 31.6 -0.4**
OBIP Obispado Ponce 39.75 3 P P 22 13 06.0 -0.6
OBIP IAmb IAmb 22 13 36.0
comp=Z,24nm,0.7s
CELP Cerrillos 39.78 3 P P 22 13 06.0 -0.9
SJG San Juan 39.84 4 P P 22 13 05.5 -1.9
SJG pP **pP 22 13 32.7 -1.4**
TGUH Tegucigalpa,Un 40.18 331 P P 22 13 10.6 +0.1
TGUH IAmb IAmb 22 13 13.0
comp=Z,46nm,1.1s
HOPE Hope Point 40.36 151 P P 22 13 11.1 -0.3
HOPE Hope Point 40.36 151 P P 22 13 11.1 -0.3
HOPE pmax pmax
comp=Z,102nm,1.1s
HOPE Hope Point 40.36 151 P P 22 13 13.2 +1.9
HOPE pP **pP 22 13 40.7 +2.9**
MTO3 Montecristo 41.45 329 IAmb IAmb 22 13 23.8
comp=Z,40nm,1.0s
APG El Apazote 42.51 328 P P 22 13 30.9 +1.3
comp=Z,3.0nm,0.9s,baz=160,slow=10,SNR=21
comp=Z,3.0nm,0.9s
PMSA Palmer Station 42.95 177 LR LR 22 33 24.7
comp=Z,260nm,18.3s,baz=334,slow=39
PETF Flores 43.87 330 IAmb IAmb 22 13 43.0
comp=Z,59nm,1.2s
CAIB Caibarien 45.40 346 IAmb IAmb 22 13 54.8
comp=Z,115nm,1.1s
TEIG Tepich 46.10 334 P P 22 13 57.8 -0.1
CMIG Matias Romero 46.56 324 P P 22 14 02.8 +1.4
comp=Z,18nm,0.9s,baz=144,slow=6.0,SNR=20
comp=Z,18nm,0.9s
DWPF Disney Wildern 51.26 345 P P 22 14 38.0 +0.8
RGRS Roger Stewart 55.63 348 IAmb IAmb 22 16 05.9
comp=Z,428nm,1.6s
HBVL Hebbronville 56.74 328 IAmb IAmb 22 15 47.0
comp=Z,24nm,1.0s
GOGA Godfrey 56.82 345 IAmb IAmb 22 16 00.6
comp=Z,70nm,1.8s
JSC Jenkinsville 57.17 347 IAmb IAmb 22 16 04.8
comp=Z,28nm,1.0s
Y52A Lilburn 57.40 345 IAmb IAmb 22 15 22.4
comp=Z,43nm,1.4s
W57A Gilead 57.78 349 IAmb IAmb 22 16 09.7
comp=Z,29nm,0.9s
PAULI Pauline 57.80 347 IAmb IAmb 22 16 09.4
comp=Z,26nm,1.1s
HKT Hockley 57.86 332 P P 22 15 25.0 +0.2
HKT Hockley 57.86 332 *d* *iP* **P 22 15 25.8 +1.0**
HKT pmax pmax
comp=Z,15nm,1.1s
Z47A Carrollton 57.88 341 IAmb IAmb 22 16 08.6
comp=Z,27nm,1.1s
KMSC Kings Mountain 58.02 348 IAmb IAmb 22 15 27.7
comp=Z,38nm,1.2s
BG3 Lake Jocassee 58.21 346 IAmb IAmb 22 15 28.9
comp=Z,29nm,1.2s
BELA Belgrano 2 58.30 172 P P 22 15 27.6 +0.2
V53A Saluda 58.84 346 IAmb IAmb 22 16 15.3
comp=Z,26nm,1.1s
CPCT Cooper Cave 59.02 345 IAmb IAmb 22 15 34.7
comp=Z,32nm,1.2s
TKL Tuckaleechee C 59.04 346 LR LR 22 43 49.5
comp=Z,124nm,18.2s,baz=124,slow=39
HNDO Hondo 59.08 329 IAmb IAmb 22 15 35.5
comp=Z,32nm,1.0s
T59A Double "B" Far 59.17 352 IAmb IAmb 22 15 35.4
comp=Z,30nm,1.1s
VNA3 Neumayer Olymp 59.59 161⇓ P **P 22 15 37.0 +0.6**
comp=Z,22nm,1.0s
VNA1 Neunayer--Stat 59.79 160⇓ P **P 22 15 38.7 +0.9**
comp=Z,31nm,1.0s
TZTN Tazewell 59.84 346 IAmb IAmb 22 16 25.8
comp=Z,21nm,1.1s
CLTN Cedars of Leba 60.09 343 IAmb IAmb 22 15 41.2
comp=Z,25nm,1.1s
JCT Junction City 60.12 329 IAmb IAmb 22 15 42.3
comp=Z,31nm,0.9s
VNA2 Neumayer--Watz 60.16 161⇓ P **P 22 15 41.0 +0.7**
comp=Z,27nm,1.0s,baz=291,slow=6.7
R58B Mineral 60.19 352 IAmb IAmb 22 15 42.7
comp=Z,40nm,1.2s
U49A Red Boiling Sp 60.34 344 IAmb IAmb 22 16 26.0
comp=Z,19nm,0.9s
HPIG 60.40 322 IAmb IAmb 22 15 45.4
comp=Z,24nm,1.1s
BRDY Brady 60.42 330 P P 22 15 42.5 -0.1
BRDY IAmb IAmb 22 15 44.1
comp=Z,33nm,1.3s
WVT Waverly 60.54 342 P P 22 15 42.5 -0.7
WVT Waverly 60.54 342 P P 22 15 42.5 -0.7
WVT pmax pmax
comp=Z,46nm,1.1s
WVT Waverly 60.54 342 P P 22 15 42.6 -0.7
WVT pP **pP 22 16 11.8 +0.3**
SLBS Sierra La Lagu 60.63 316 P P 22 15 44.9 +0.7
SLBS IAmb IAmb 22 15 47.9
comp=Z,40nm,1.1s
UALR University of 60.73 338 IAmb IAmb 22 15 45.8
comp=Z,25nm,1.1s
SAND Sanderson 60.84 327 IAmb IAmb 22 15 47.8
comp=Z,46nm,1.1s
OZNA Ozona 61.13 328 IAmb IAmb 22 15 49.1
comp=Z,29nm,1.1s
TXAR Lajitas Array 61.15 325 P P 22 15 48.4 +0.7
comp=Z,4.4nm,1.0s,baz=138,slow=9.5,SNR=33
TXAR pP **pP 22 16 15.8 -0.3**
comp=Z,4.4nm,1.0s,baz=130,slow=6.5,SNR=7.4
comp=Z,4.4nm,1.0s
TXAR Lajitas Array 61.15 325 P P 22 15 47.5 -0.2
TXAR **pP 22 16 14.3 -1.7**
FW06 Azle 61.20 332 IAmb IAmb 22 15 49.9
comp=Z,60nm,1.6s
PLPT Palo Pinto 61.40 332 IAmb IAmb 22 15 50.9
comp=Z,34nm,1.2s
LCAR Lake Charles 61.50 339 IAmb IAmb 22 15 50.5
comp=Z,25nm,1.1s
Q54A Coxs Mills 61.65 349 IAmb IAmb 22 16 36.3
comp=Z,23nm,0.8s
R50A Paris 61.68 346 IAmb IAmb 22 16 35.3
comp=Z,46nm,1.3s
P57A Homestead Farm 61.71 352 IAmb IAmb 22 16 36.1
comp=Z,30nm,1.0s
SNAA Sanae 61.79 161⇓ P **P 22 15 51.9 +0.6**
comp=Z,616nm,1.1s
SNAA Sanae 61.79 161 P **P 22 15 51.1 -0.3**
comp=Z,38nm,1.1s,baz=283,slow=4.8,SNR=21
comp=Z,38nm,1.1s
SNAA Sanae 61.79 161 P **P 22 15 51.2 -0.1**
SNAA Sanae 61.79 161 *de* P **P 22 15 51.5 +0.1**
SNAA pmax pmax
comp=Z,54nm,1.0s

Q52A	**Bidwell**	**61.90**	**348**	IAmb	IAmb	22 16 37.1	
	comp=Z,24nm,0.9s						
PBMO	**Poplar Bluff**	**61.92**	**340**	IAmb	IAmb	22 15 53.5	
	comp=Z,32nm,1.1s						
SGCY	**Sterling City**	**61.94**	**329**	IAmb	IAmb	22 15 55.3	
	comp=Z,38nm,1.3s						
WCI	**Wyandotte Cave**	**62.10**	**344**	P	**P**	**22 15 53.1**	**-0.6**
WCI	**Wyandotte Cave**	**62.10**	**344**	P	**P**	**22 15 53.1**	**-0.6**
WCI				pmax	pmax		
	comp=Z,74nm,1.4s						
WCI	**Wyandotte Cave**	**62.10**	**344**	P	**P**	**22 15 53.0**	**-0.7**
WCI				pP	**pP**	**22 16 22.9**	**+0.7**
CGM3	**Cape Girardeau**	**62.16**	**341**	IAmb	IAmb	22 15 55.1	
	comp=Z,47nm,1.2s						
Q51A	**Peebles**	**62.18**	**347**	IAmb	IAmb	22 16 39.3	
	comp=Z,18nm,0.8s						
USIN	**University of**	**62.21**	**343**	IAmb	IAmb	22 16 38.1	
	comp=Z,34nm,0.9s						
TPB05	**Hovey Rd**	**62.23**	**326**	IAmb	IAmb	22 15 57.1	
	comp=Z,28nm,1.0s						
PAGS	**Pennsylvania G**	**62.28**	**353**	IAmb	IAmb	22 16 41.0	
	comp=Z,28nm,1.0s						
229A	**Bryant Ranch,**	**62.32**	**328**	IAmb	IAmb	22 15 57.0	
	comp=Z,20nm,1.0s						
S44A	**Carbondale**	**62.40**	**342**	IAmb	IAmb	22 16 40.0	
	comp=Z,52nm,1.2s						
TPB01	**Permian Basin**	**62.49**	**326**	IAmb	IAmb	22 15 59.0	
	comp=Z,36nm,1.0s						
BBTS	**Babate**	**62.62**	**59**	P	**P**	**22 15 55.9**	**-1.7**
	comp=Z,56nm,1.1s,baz=174,slow=2.1,SNR=6.4						
	comp=Z,56nm,1.1s						
X34A	**Smith Ranch, M**	**62.71**	**333**	IAmb	IAmb	22 16 00.5	
	comp=Z,46nm,1.2s						
O54A	**Avella**	**62.74**	**350**	IAmb	IAmb	22 16 43.2	
	comp=Z,24nm,0.8s						
TPB06	**Permian Basin**	**62.76**	**327**	IAmb	IAmb	22 16 00.4	
	comp=Z,36nm,1.0s						
SN07	**Snyder 07**	**62.80**	**330**	IAmb	IAmb	22 16 00.1	
	comp=Z,50nm,1.3s						
ODSA	**Odessa**	**62.81**	**328**	IAmb	IAmb	22 16 00.2	
	comp=Z,50nm,1.3s						
SSPA	**Standing Stone**	**62.82**	**352**	P	**P**	**22 15 58.9**	**+0.4**
SSPA				IAmb	IAmb	22 16 43.3	
	comp=Z,67nm,1.6s						
SSPA	**Standing Stone**	**62.82**	**352**	P	**P**	**22 15 59.2**	**+0.7**
MGMO	**Mountain Grove**	**62.86**	**339**	IAmb	IAmb	22 16 43.3	
	comp=Z,93nm,1.9s						
N58A	**Sunbury**	**62.88**	**353**	IAmb	IAmb	22 16 00.8	
	comp=Z,36nm,1.1s						
O52A	**Adamsville**	**62.93**	**349**	IAmb	IAmb	22 16 44.1	
	comp=Z,31nm,0.9s						
VHRN	**Van Horn**	**63.00**	**325**	IAmb	IAmb	22 16 02.2	
	comp=Z,51nm,1.1s						
OLIL	**Olney**	**63.05**	**343**	IAmb	IAmb	22 16 43.7	
	comp=Z,37nm,1.1s						
P48A	**Milroy**	**63.05**	**345**	IAmb	IAmb	22 16 43.7	
	comp=Z,32nm,1.2s						
128A	**Castleberry Fa**	**63.18**	**328**	IAmb	IAmb	22 16 33.2	
	comp=Z,9.0nm,0.9s						
DEOK	**Depew**	**63.24**	**335**	IAmb	IAmb	22 16 02.8	
	comp=Z,58nm,1.2s						
ACSO	**Alum Creek Sta**	**63.27**	**348**	IAmb	IAmb	22 16 46.6	
	comp=Z,50nm,1.0s						
CCM	**Cathedral Cave**	**63.34**	**340**	P	**P**	**22 16 01.7**	**-0.3**
CCM				IAmb	IAmb	22 16 03.0	
	comp=Z,34nm,1.1s						
CCM	**Cathedral Cave**	**63.34**	**340**	P	**P**	**22 16 01.7**	**-0.3**
CCM				pmax	pmax		
	comp=Z,34nm,1.1s						
CCM	**Cathedral Cave**	**63.34**	**340**	P	**P**	**22 16 01.7**	**-0.3**
M57A	**Sunshine Farm,**	**63.42**	**353**	IAmb	IAmb	22 16 57.8	
	comp=Z,36nm,1.2s						
PAMR	**Moraine State**	**63.44**	**350**	IAmb	IAmb	22 16 49.0	
	comp=Z,48nm,1.0s						
Q44A	**Meyer Farm, Va**	**63.46**	**342**	IAmb	IAmb	22 16 46.3	
	comp=Z,54nm,1.1s						
OK052	**Battle Ridge R**	**63.49**	**335**	IAmb	IAmb	22 16 04.4	
	comp=Z,43nm,1.1s						
KSPA	**Keystone Colle**	**63.49**	**354**	IAmb	IAmb	22 16 59.0	
	comp=Z,89nm,1.9s						
O49A	**Covington**	**63.50**	**347**	IAmb	IAmb	22 16 47.8	
	comp=Z,34nm,1.1s						
OK029	**Liberty Lake**	**63.58**	**334**	IAmb	IAmb	22 16 46.5	
	comp=Z,24nm,0.8s						
QUOK	**Quay**	**63.61**	**335**	IAmb	IAmb	22 16 05.3	
	comp=Z,45nm,1.2s						
P46A	**Rosedale**	**63.64**	**344**	IAmb	IAmb	22 16 47.6	
	comp=Z,47nm,1.2s						
R40A	**Maddies Statio**	**63.89**	**339**	IAmb	IAmb	22 16 49.8	
	comp=Z,70nm,1.7s						
OK048	**Pawnee Station**	**63.91**	**335**	IAmb	IAmb	22 16 49.3	
	comp=Z,37nm,0.9s						
MNTX	**Cornudas Mount**	**63.92**	**325**	IAmb	IAmb	22 16 07.4	
	comp=Z,28nm,1.1s						
PAOC	**Oil Creek Stat**	**63.94**	**351**	IAmb	IAmb	22 16 51.9	
	comp=Z,42nm,0.9s						
L59A	**Walton**	**64.06**	**355**	IAmb	IAmb	22 16 52.8	
	comp=Z,35nm,0.9s						
BINY	**Binghamton**	**64.15**	**354**	IAmb	IAmb	22 16 09.3	
	comp=Z,46nm,1.1s						
SMWD	**Samnorwood**	**64.18**	**331**	IAmb	IAmb	22 16 09.8	
	comp=Z,61nm,1.2s						
L56A	**Greenwood**	**64.26**	**353**	IAmb	IAmb	22 16 09.7	
	comp=Z,37nm,1.2s						
SFIN	**Lafayette**	**64.33**	**344**	IAmb	IAmb	22 16 52.6	
	comp=Z,71nm,1.4s						
CROK	**Carrier**	**64.41**	**334**	IAmb	IAmb	22 16 10.4	
	comp=Z,27nm,0.9s						
N47A	**Urbana**	**64.47**	**346**	IAmb	IAmb	22 16 53.9	
	comp=Z,45nm,1.0s						
ELIS	**Ellis County**	**64.63**	**333**	IAmb	IAmb	22 16 13.1	
	comp=Z,41nm,1.3s						
K57A	**Scipio Center**	**64.73**	**354**	IAmb	IAmb	22 16 12.4	
	comp=Z,41nm,1.1s						
KAN01	**Argonia South**	**64.88**	**334**	IAmb	IAmb	22 16 13.8	
	comp=Z,49nm,1.2s						
P40A	**Paris**	**64.94**	**340**	IAmb	IAmb	22 16 56.8	
	comp=Z,52nm,1.3s						
KAN08	**Anthony NE Sta**	**65.03**	**334**	IAmb	IAmb	22 16 56.7	
	comp=Z,25nm,0.7s						
HDIL	**Hopedale**	**65.07**	**343**	IAmb	IAmb	22 16 57.0	
	comp=Z,53nm,1.2s						
J59A	**Piesco**	**65.28**	**355**	IAmb	IAmb	22 16 17.1	
	comp=Z,43nm,1.1s						
N41A	**Harden Midland**	**65.66**	**342**	IAmb	IAmb	22 17 01.0	
	comp=Z,44nm,1.2s						
NCB	**Newcomb**	**65.76**	**356**	IAmb	IAmb	22 17 06.1	
	comp=Z,42nm,1.5s						
R32A	**Long Quarter,**	**66.35**	**334**	IAmb	IAmb	22 16 23.3	
	comp=Z,50nm,1.2s						
RTBA	**Rita Blanca**	**66.42**	**330**	IAmb	IAmb	22 16 24.2	
	comp=Z,53nm,1.8s						
Y22A	**Socorro**	**66.50**	**326**	IAmb	IAmb	22 16 25.8	
	comp=Z,38nm,1.2s						
FRNY	**Flat Rock**	**66.58**	**356**	IAmb	IAmb	22 16 55.2	
	comp=Z,62nm,1.9s						
G62A	**West of Eustis**	**66.82**	**358**	IAmb	IAmb	22 16 27.3	
	comp=Z,41nm,1.0s						
K43A	**Burlington**	**66.83**	**344**	IAmb	IAmb	22 16 56.1	
	comp=Z,24nm,0.7s						
WBO	**Williamsburg**	**66.86**	**355**	IAmb	IAmb	22 16 26.4	
	comp=Z,33nm,1.3s						
L40A	**Anamosa**	**67.02**	**342**	IAmb	IAmb	22 17 10.0	
	comp=Z,64nm,1.3s						
ANMO	**Albuquerque**	**67.02**	**327**	P	**P**	**22 16 26.0**	**-0.1**
ANMO				IAmb	IAmb	22 16 28.9	
	comp=Z,36nm,1.1s						
ANMO	**Albuquerque**	**67.02**	**327**	*d* *i* P	**P**	**22 16 27.7**	**+1.6**
ANMO				pmax	pmax		
	comp=Z,65nm,1.7s						
ANMO	**Albuquerque**	**67.02**	**327**	P	**P**	**22 16 27.6**	**+1.5**
SADO	**Sadowa**	**67.05**	**352**	LR	LR	22 49 17.8	
	comp=Z,108nm,18.1s,baz=132,slow=39						
TUC	**Tucson**	**67.36**	**322**	P	**P**	**22 16 29.2**	**+1.1**
TUC				IAmb	IAmb	22 16 31.3	
	comp=Z,62nm,1.4s						
TUC	**Tucson**	**67.36**	**322**	P	**P**	**22 16 29.2**	**+1.1**
TUC				pmax	pmax		
	comp=Z,62nm,1.4s						
TUC	**Tucson**	**67.36**	**322**	P	**P**	**22 16 29.9**	**+1.8**
JFWS	**Jewell Farm**	**67.53**	**343**	IAmb	IAmb	22 17 13.5	
	comp=Z,32nm,1.1s						
BUKO	**Buck Lake**	**67.75**	**352**	IAmb	IAmb	22 17 14.7	
	comp=Z,46nm,1.3s						
T25A	**Trinidad**	**67.76**	**330**	IAmb	IAmb	22 16 33.6	
	comp=Z,40nm,1.3s						
TRQ	**Mont Tremblant**	**68.02**	**356**	IAmb	IAmb	22 16 33.5	
	comp=Z,45nm,1.2s						
QSPA	**South Pole Qui**	**68.29**	**180**	P	**P**	**22 16 34.3**	**+0.7**
	comp=Z,60nm,1.0s,baz=148,slow=2.6,SNR=37						
QSPA				LR	LR	22 47 21.1	
	comp=Z,43nm,19.7s,baz=170,slow=36						
	comp=Z,60nm,1.0s						
QSPA	**South Pole Qui**	**68.29**	**180**	P	**P**	**22 16 34.1**	**+0.5**
QSPA	**South Pole Qui**	**68.29**	**180**	P	**P**	**22 16 34.8**	**+1.2**
PIX	**Pinacate**	**68.39**	**320**	IAmb	IAmb	22 16 37.6	
	comp=Z,49nm,1.2s						
KSCO	**Kaye Shedlock'**	**68.49**	**332**	IAmb	IAmb	22 16 37.6	
	comp=Z,65nm,1.2s						
DBIC	**Dimbokro**	**68.53**	**73**	P	**P**	**22 16 35.2**	**-0.5**
DBIC				LR	LR	22 47 24.1	
	comp=Z,119nm,18.1s,baz=315,slow=37						
	comp=Z,43nm,0.7s						
DBIC	**Dimbokro**	**68.53**	**73**	P	**P**	**22 16 35.3**	**-0.5**
DBIC	**Dimbokro**	**68.53**	**73**	P	**P**	**22 16 35.3**	**-0.5**
DBIC				pmax	pmax		
	comp=Z,40nm,0.7s						
DBIC	**Dimbokro**	**68.53**	**73**	P	**P**	**22 16 35.5**	**-0.3**
X18A	**Snowflake**	**68.54**	**324**	IAmb	IAmb	22 16 39.0	
	comp=Z,36nm,1.2s						
L34A	**Svendsen Farm,**	**68.57**	**338**	IAmb	IAmb	22 17 32.7	
	comp=Z,33nm,0.7s						
D62A	**Allapoint, All**	**68.67**	**360**	IAmb	IAmb	22 16 37.8	
	comp=Z,61nm,1.3s						
SDCO	**Great Sand Dun**	**68.77**	**329**	IAmb	IAmb	22 16 40.0	
	comp=Z,63nm,1.2s						
SFX	**San Felipe**	**68.88**	**318**	P	**P**	**22 16 37.9**	**+0.4**
SFX				IAmb	IAmb	22 16 40.7	
	comp=Z,45nm,1.0s						
X16A	**Lo Mia Camp, P**	**69.28**	**323**	IAmb	IAmb	22 16 43.7	
	comp=Z,45nm,1.0s						
I37A	**Lemond, Waseca**	**69.44**	**341**	IAmb	IAmb	22 17 24.9	
	comp=Z,49nm,1.4s						
Q24A	**Divide**	**69.58**	**330**	IAmb	IAmb	22 16 44.8	
	comp=Z,58nm,1.1s						
LDAQ	**Lac Daran**	**69.59**	**358**	IAmb	IAmb	22 16 43.4	
	comp=Z,38nm,1.1s						
Y14A	**Wickenburg**	**69.82**	**322**	IAmb	IAmb	22 16 46.6	
	comp=Z,38nm,1.1s						
ELIB	**Princess Elisa**	**69.95**	**161**	*d* P	**P**	**22 16 44.6**	**+0.8**
VLDQ	**Val d'Or**	**70.15**	**354**	IAmb	IAmb	22 16 46.7	
	comp=Z,43nm,1.2s						
PV01	**Paradox Valley**	**70.57**	**327**	IAmb	IAmb	22 16 51.3	
	comp=Z,52nm,1.1s						
BLYC	**Blythe**	**70.57**	**321**	IAmb	IAmb	22 16 51.4	
	comp=Z,68nm,1.1s						
PV13	**Radium Mtn., P**	**70.71**	**327**	IAmb	IAmb	22 16 51.9	
	comp=Z,57nm,1.1s						
PV05	**Paradox Valley**	**70.79**	**327**	IAmb	IAmb	22 16 52.2	
	comp=Z,55nm,1.1s						
PV18	**Skein Mesa, Pa**	**70.82**	**327**	IAmb	IAmb	22 16 52.4	
	comp=Z,70nm,1.2s						
PV11	**David Mesa, Pa**	**70.85**	**327**	IAmb	IAmb	22 16 52.7	
	comp=Z,49nm,1.4s						
CBX	**Cerro Bola**	**70.87**	**318**	IAmb	IAmb	22 16 53.4	
	comp=Z,50nm,1.0s						
PV19	**Morning Glory**	**70.91**	**327**	IAmb	IAmb	22 16 53.0	
	comp=Z,70nm,1.3s						
PV20	**West Nyswonger**	**70.93**	**327**	IAmb	IAmb	22 16 53.0	
	comp=Z,49nm,1.2s						
PV14	**Lion Creek, Pa**	**70.98**	**327**	IAmb	IAmb	22 16 53.4	
	comp=Z,37nm,1.1s						
PV22	**Blue Mesa, Pa**	**70.98**	**328**	IAmb	IAmb	22 16 53.5	
	comp=Z,63nm,1.1s						
PV10	**Paradox Valley**	**70.99**	**327**	IAmb	IAmb	22 16 53.0	
	comp=Z,68nm,1.1s						
PV23	**Carpenter Ridg**	**71.03**	**327**	IAmb	IAmb	22 16 53.8	
	comp=Z,51nm,1.0s						
BC3	**Big Chuckawall**	**71.06**	**320**	P	**P**	**22 16 53.2**	**+2.2**
BC3				IAmb	IAmb	22 16 54.3	
	comp=Z,58nm,1.1s						
PV21	**Cone Mtn., Par**	**71.10**	**327**	IAmb	IAmb	22 16 54.2	
	comp=Z,36nm,1.1s						
BAR	**Barrett**	**71.13**	**318**	IAmb	IAmb	22 16 54.6	
	comp=Z,38nm,1.0s						
IRM	**Iron Mountain**	**71.23**	**320**	IAmb	IAmb	22 16 55.3	
	comp=Z,58nm,1.2s						
U15A	**North Rim**	**71.23**	**324**	IAmb	IAmb	22 16 55.9	
	comp=Z,68nm,1.1s						
PFO	**Pinyon Flats O**	**71.64**	**319**	LR	LR	22 44 52.3	
	comp=Z,109nm,19.2s,baz=46,slow=33						
PFO	**Pinyon Flats O**	**71.64**	**319**	*d* *i* P	**P**	**22 16 56.4**	**+1.9**
PFO				pmax	pmax		
	comp=Z,34nm,1.0s						
DNR	**Dunn Ranch,Anz**	**71.71**	**319**	IAmb	IAmb	22 16 58.5	
	comp=Z,46nm,1.0s						
V12A	**Nelson**	**72.16**	**322**	IAmb	IAmb	22 17 00.7	
	comp=Z,42nm,1.0s						
LCMT	**Little Creek M**	**72.18**	**324**	IAmb	IAmb	22 17 01.1	
	comp=Z,39nm,1.0s						
ELS	**Elsinore Mount**	**72.25**	**319**	IAmb	IAmb	22 17 01.4	
	comp=Z,37nm,1.1s						
MTPU	**Mount Pierson**	**72.36**	**325**	IAmb	IAmb	22 17 02.1	
	comp=Z,31nm,0.9s						
Q16A	**Castle Valley**	**72.48**	**326**	IAmb	IAmb	22 17 03.5	
	comp=Z,58nm,1.1s						
SZCU	**Shurtz Canyon**	**72.52**	**324**	IAmb	IAmb	22 17 03.3	
	comp=Z,55nm,1.4s						
BFSC	**Mount Baldy Ra**	**72.79**	**319**	IAmb	IAmb	22 17 04.5	
	comp=Z,43nm,1.1s						
TCRU	**Three Creeks R**	**72.92**	**325**	IAmb	IAmb	22 17 05.6	
	comp=Z,34nm,0.9s						
RDMU	**Red Mountain**	**72.94**	**328**	IAmb	IAmb	22 17 04.9	
	comp=Z,53nm,1.1s						
GSC	**Goldstone, Bar**	**73.00**	**320**	IAmb	IAmb	22 17 06.0	
	comp=Z,49nm,1.3s						
MWC	**Mount Wilson**	**73.02**	**319**	IAmb	IAmb	22 17 06.0	
	comp=Z,41nm,1.1s						
PASC	**Pasadena Art C**	**73.07**	**319**	IAmb	IAmb	22 17 06.1	
	comp=Z,45nm,1.1s						
RSSD	**Black Hills**	**73.31**	**334**	P	**P**	**22 17 04.8**	**+0.5**
RSSD	**Black Hills**	**73.31**	**334**	P	**P**	**22 17 04.8**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,14nm,1.1s						
QSM	**Queen of Sheba**	**73.50**	**321**	IAmb	IAmb	22 17 08.3	
	comp=Z,37nm,1.1s						
BSUT	**Blindstream Ca**	**73.50**	**328**	IAmb	IAmb	22 17 08.8	
	comp=Z,53nm,1.0s						
GWY	**Greenwater Val**	**73.53**	**321**	IAmb	IAmb	22 17 08.7	
	comp=Z,48nm,1.1s						
MPU	**Maple Canyon**	**73.54**	**327**	IAmb	IAmb	22 17 08.8	
	comp=Z,52nm,1.1s						
TPO	**Tropico Hills**	**73.57**	**319**	IAmb	IAmb	22 17 08.7	
	comp=Z,52nm,1.3s						
PSUT	**Pine Spring**	**73.61**	**324**	IAmb	IAmb	22 17 09.6	
	comp=Z,41nm,1.0s						
TPNV	**Topopah Spring**	**73.82**	**322**	IAmb	IAmb	22 17 11.1	
	comp=Z,50nm,1.1s						
FURC	**Furnace Creek,**	**73.84**	**321**	IAmb	IAmb	22 17 10.8	
	comp=Z,66nm,1.0s						
WCT	**Wildcat Mounta**	**73.93**	**322**	IAmb	IAmb	22 17 11.7	
	comp=Z,50nm,1.1s						
S11A	**Rachel**	**74.02**	**323**	IAmb	IAmb	22 17 12.5	
	comp=Z,42nm,1.2s						
ISA	**Isabella, Lake**	**74.25**	**320**	IAmb	IAmb	22 17 13.2	
	comp=Z,45nm,1.0s						
DUG	**Dugway, Tooele**	**74.28**	**326**	IAmb	IAmb	22 17 13.2	
	comp=Z,53nm,1.1s						
PDAR	**Pinedale Array**	**74.63**	**330**	P	**P**	**22 17 12.8**	**+0.7**
	comp=Z,6.3nm,0.9s,baz=127,slow=5.0,SNR=40						
PDAR				pP	**pP**	**22 17 40.5**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=142,slow=7.3,SNR=2.6						
PDAR				LR	LR	22 54 26.4	
	comp=Z,84nm,18.7s,baz=42,slow=39						
	comp=Z,6.3nm,0.9s						
PDAR	**Pinedale Array**	**74.63**	**330**	P	**P**	**22 17 12.0**	**-0.1**
PDAR					**pP**	**22 17 39.3**	**-2.1**
HWUT	**Hardware Ranch**	**74.70**	**328**	IAmb	IAmb	22 17 15.0	
	comp=Z,47nm,1.1s						
SPUT	**South Promonto**	**74.92**	**327**	IAmb	IAmb	22 17 16.5	
	comp=Z,61nm,1.1s						
BGU	**Big Grassy Mou**	**74.93**	**327**	IAmb	IAmb	22 17 16.5	
	comp=Z,41nm,1.2s						
HVU	**Hansel Valley**	**75.43**	**327**	IAmb	IAmb	22 17 19.2	
	comp=Z,43nm,1.0s						
SNOW	**Snow King Moun**	**75.72**	**330**	IAmb	IAmb	22 17 21.2	
	comp=Z,39nm,0.9s						
LOHW	**Long Hollow**	**75.77**	**330**	IAmb	IAmb	22 17 21.4	
	comp=Z,37nm,1.1s						
ULM	**Lac du Bonnet**	**75.80**	**342**	P	**P**	**22 17 18.1**	**-0.2**
	comp=Z,3.3nm,0.4s,baz=130,slow=5.1,SNR=12						
ULM				LR	LR	22 53 25.0	
	comp=Z,83nm,18.3s,baz=36,slow=38						
	comp=Z,3.3nm,0.4s						
MOOW	**Moose Ponds**	**75.94**	**330**	IAmb	IAmb	22 17 22.3	
	comp=Z,78nm,1.9s						
LHV	**Little Huntoon**	**76.01**	**322**	IAmb	IAmb	22 17 23.4	
	comp=Z,34nm,1.0s						
NVAR	**Mina Array Bea**	**76.02**	**322**	P	**P**	**22 17 22.0**	**+1.9**
	comp=Z,16nm,0.9s,baz=150,slow=6.7,SNR=45						
	comp=Z,16nm,0.9s						
HULI	**Fort Hunter Li**	**76.16**	**318**	P	**P**	**22 17 21.9**	**+1.2**
LAO	**LASA Array**	**76.29**	**334**	IAmb	IAmb	22 17 23.7	
	comp=Z,37nm,1.1s						
RLMT	**Red Lodge**	**76.33**	**332**	IAmb	IAmb	22 17 24.6	
	comp=Z,52nm,1.2s						
BBGB	**Big Mountain B**	**76.41**	**319**	IAmb	IAmb	22 17 28.6	
	comp=Z,36nm,0.9s						
YMP	**Mirror Lake Pl**	**76.43**	**331**	IAmb	IAmb	22 17 43.4	
	comp=Z,38nm,1.0s						
SCHQ	**Schefferville**	**76.44**	**1**	P	**P**	**22 17 22.3**	**+0.5**
	comp=Z,6.6nm,1.0s,baz=171,slow=9.5,SNR=4.4						
	comp=Z,6.6nm,1.0s						
SCHQ	**Schefferville**	**76.44**	**1**	P	**P**	**22 17 21.4**	**-0.4**
VNDA	**Vanda**	**76.51**	**190**	P	**P**	**22 17 23.9**	**+1.8**
	comp=Z,9.1nm,0.9s,baz=170,slow=3.0,SNR=6.3						
VNDA				LR	LR	22 52 27.6	
	comp=Z,41nm,18.2s,baz=247,slow=37						
	comp=Z,9.1nm,0.9s						
YHB	**Horse Butte**	**76.91**	**330**	IAmb	IAmb	22 17 28.4	
	comp=Z,44nm,1.0s						
YHL	**Hebgen Lake**	**76.98**	**330**	IAmb	IAmb	22 17 29.1	
	comp=Z,66nm,1.3s						
TORD	**Torodi Ar. Bea**	**77.18**	**70**	P	**P**	**22 17 26.1**	**-0.7**
	comp=Z,23nm,0.7s,baz=259,slow=4.9,SNR=58						
TORD				pP	**pP**	**22 17 55.8**	**-0.8**
	comp=Z,62nm,1.1s,baz=242,slow=7.9,SNR=10						
	comp=Z,23nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.18**	**70**	P	**P**	**22 17 25.8**	**-1.0**
TORD					**pP**	**22 17 56.4**	**-0.2**
TORD				IAmb	IAmb	22 17 58.4	
	comp=Z,38nm,1.0s						
PNTR	**Pine Nut**	**77.21**	**322**	IAmb	IAmb	22 17 30.2	
	comp=Z,47nm,1.0s						
HLID	**Hailey**	**77.56**	**328**	IAmb	IAmb	22 17 32.0	
	comp=Z,66nm,1.0s						
MPK	**Martis Peak**	**77.60**	**322**	IAmb	IAmb	22 17 32.5	
	comp=Z,59nm,1.0s						
DLMT	**Dillon**	**78.02**	**330**	IAmb	IAmb	22 17 34.2	
	comp=Z,56nm,1.2s						
WIN	**Windhoek**	**78.07**	**110**	P	**P**	**22 17 32.3**	**+0.3**
WIN	**Windhoek**	**78.07**	**110**	P	**P**	**22 17 32.3**	**+0.3**
WIN				pmax	pmax		
	comp=Z,11nm,0.9s						
SUR	**Sutherland**	**78.08**	**120**	LR	LR	22 49 23.3	
	comp=Z,63nm,19.5s,baz=286,slow=34						
MFID	**Camas Ranch**	**78.17**	**327**	IAmb	IAmb	22 17 35.2	
	comp=Z,71nm,1.3s						
CVS	**Carmenet Viney**	**78.41**	**320**	IAmb	IAmb	22 17 35.9	
	comp=Z,50nm,1.0s						
SUTB	**Sutter Butte**	**78.58**	**321**	IAmb	IAmb	22 17 36.7	
	comp=Z,61nm,1.4s						
EGMT	**Eagleton**	**78.81**	**333**	IAmb	IAmb	22 17 37.5	
	comp=Z,41nm,1.1s						
O03E	**Paynes Creek**	**79.28**	**321**	IAmb	IAmb	22 17 39.8	
	comp=Z,51nm,1.1s						
PLID	**Pearl Lake**	**79.45**	**328**	IAmb	IAmb	22 17 41.7	
	comp=Z,62nm,1.0s						
J08A	**Circle Bar Ran**	**79.50**	**325**	IAmb	IAmb	22 17 42.2	
	comp=Z,91nm,1.6s						
TSUM	**Tsumeb**	**79.60**	**107**	LR	LR	22 50 46.8	
	comp=Z,97nm,18.8s,baz=62,slow=34						
TSUM	**Tsumeb**	**79.60**	**107**	P	**P**	**22 17 40.2**	**-0.2**
KUQ	**Kuujjuuaa**	**79.71**	**0**	P	**P**	**22 17 40.5**	**+0.8**
KCPM	**Cahto Peak**	**79.94**	**320**	IAmb	IAmb	22 17 44.4	
	comp=Z,41nm,1.0s						
BMO	**Blue Mountains**	**79.94**	**327**	IAmb	IAmb	22 17 44.3	
	comp=Z,57nm,1.1s						
M03C	**McCloud**	**80.10**	**322**	IAmb	IAmb	22 17 44.5	
	comp=Z,60nm,1.1s						
KMRM	**Mail Ridge**	**80.35**	**320**	IAmb	IAmb	22 17 47.0	
	comp=Z,70nm,1.2s						
I07A	**Izee**	**80.54**	**325**	IAmb	IAmb	22 17 47.9	
	comp=Z,47nm,1.1s						
KMPM	**Mount Pierce**	**80.72**	**320**	IAmb	IAmb	22 17 48.9	
	comp=Z,59nm,1.0s						
K04D	**Chiloquin, OR**	**80.78**	**323**	P	**P**	**22 17 46.6**	**+0.6**
L04D	**Klamath Falls**	**80.82**	**323**	P	**P**	**22 17 45.9**	**-0.4**
L04D				IAmb	IAmb	22 17 48.4	
	comp=Z,44nm,1.1s						
J05D	**Fort Rock, OR**	**80.93**	**324**	P	**P**	**22 17 46.3**	**-0.5**
J05D				IAmb	IAmb	22 17 49.8	
	comp=Z,62nm,1.1s						
PINE	**Pine Mountain**	**81.11**	**325**	P	**P**	**22 17 47.4**	**-0.5**
J04A	**Umpqua Nationa**	**81.38**	**324**	P	**P**	**22 17 49.4**	**+0.1**
KSXB	**Camp Six Broad**	**81.47**	**322**	IAmb	IAmb	22 17 52.7	
	comp=Z,47nm,1.1s						
L02F	**Cave Junction**	**81.48**	**322**	P	**P**	**22 17 50.2**	**+0.6**
L02F				IAmb	IAmb	22 17 52.4	
	comp=Z,38nm,1.

PARRA	**Arraiolos**	**82.78**	**43**	*e*P		**P**		**22 17 57.6**	**+1.1**
PARRA				*i* IAmb		IAmb		22 17 59.4	
	comp=Z,61nm,1.4s								
PARRA				*e*pP		**pP**		**22 18 28.9**	**+2.5**
PMTG	**Montargil**	**82.81**	**43**	*e*P		**P**		**22 17 58.1**	**+1.5**
PMTG				*i* IAmb		IAmb		22 18 01.9	
	comp=Z,87nm,2.0s								
EPH	**Ephrata**	**82.82**	**328**	P		**P**		**22 17 57.8**	**+1.3**
EPH				IAmb		IAmb		22 17 59.4	
	comp=Z,37nm,1.2s								
COR	**Corvallis**	**82.91**	**324**	P		**P**		**22 17 59.4**	**+2.4**
COR	**Corvallis**	**82.91**	**324**	P		**P**		**22 17 59.4**	**+2.4**
COR				pmax		pmax			
	comp=Z,111nm,1.2s								
COR	**Corvallis**	**82.91**	**324**	P		**P**		**22 17 59.1**	**+2.2**
COR				pP		**pP**		**22 18 28.9**	**+2.1**
BOSA	**Boshof**	**82.96**	**118**	P		**P**		**22 17 58.1**	**+0.2**
	comp=Z,26nm,1.0s,baz=261,slow=3.6,SNR=19								
BOSA				pP		**pP**		**22 18 27.3**	**-0.4**
	comp=Z,12nm,0.9s,baz=247,slow=6.6,SNR=4.1								
	comp=Z,26nm,1.0s								
BOSA	**Boshof**	**82.96**	**118**	P		**P**		**22 17 57.1**	**-0.9**
BOSA				IAmb		IAmb		22 17 59.8	
	comp=Z,29nm,1.0s								
BOSA				pP		**pP**		**22 18 24.0**	**-3.7**
PBAR	**Barrancos**	**83.06**	**44**	*e*P		**P**		**22 17 58.1**	**+0.2**
PBAR				*i* IAmb		IAmb		22 18 01.7	
	comp=Z,56nm,1.8s								
PESTR	**Estremoz**	**83.10**	**43**	*e*P		**P**		**22 18 00.7**	**+2.5**
LTY	**Liberty**	**83.29**	**327**	P		**P**		**22 17 59.2**	**+0.1**
LTY				IAmb		IAmb		22 18 01.3	
	comp=Z,33nm,1.1s								
LON	**Longmire**	**83.53**	**326**	P		**P**		**22 18 00.8**	**+0.5**
LON	**Longmire**	**83.53**	**326**	P		**P**		**22 18 00.8**	**+0.5**
LON				pmax		pmax			
	comp=Z,22nm,1.5s								
MAW	**Mawson**	**83.85**	**163**	LR		LR		22 55 20.7	
	comp=Z,73nm,19.5s,baz=160,slow=36								
EDM	**Edmonton**	**84.27**	**335**	P		**P**		**22 18 03.1**	**-0.6**
EDM	**Edmonton**	**84.27**	**335**	P		**P**		**22 18 03.2**	**-0.6**
EDM				pmax		pmax			
	comp=Z,53nm,0.9s								
LBTB	**Lobatse**	**84.54**	**115**	LR		LR		22 54 40.7	
	comp=Z,88nm,18.2s,baz=250,slow=35								
LBTB	**Lobatse**	**84.54**	**115**	P		**P**		**22 18 05.7**	**-0.4**
LBTB				IAmb		IAmb		22 18 08.7	
	comp=Z,27nm,1.0s								
LBTB	**Lobatse**	**84.54**	**115**	P		**P**		**22 18 05.7**	**-0.4**
LBTB				pmax		pmax			
	comp=Z,27nm,1.0s								
LBTB	**Lobatse**	**84.54**	**115**	P		**P**		**22 18 06.7**	**+0.6**
LBTB				pP		**pP**		**22 18 36.9**	**+0.8**
TAM	**Tamanrasset**	**84.70**	**63**	P		**P**		**22 18 07.1**	**+0.3**
TAM				pP		**pP**		**22 18 34.3**	**-2.5**
TAM				IAmb		IAmb		22 18 39.6	
	comp=Z,34nm,1.2s								
TAM	**Tamanrasset**	**84.70**	**63**	P		**P**		**22 18 07.1**	**+0.3**
TAM				*PP		**pP**		**22 18 34.3**	**-2.5**
TAM				pmax		pmax			
	comp=Z,34nm,1.2s								
MVO	**Moncorvo**	**84.77**	**42**	*e*pP		pP		22 18 34.7	-2.0
PBRG	**Braganca**	**85.31**	**41**	*e*pP		pP		22 18 40.6	+1.3
KHWEE	**KHWEE**	**85.54**	**112**	P		**P**		**22 18 09.6**	**-1.5**
KHWEE				IAmb		IAmb		22 18 43.9	
	comp=Z,41nm,1.1s								
ESDC	**Sonseca Array**	**85.89**	**44**	P		**P**		**22 18 13.0**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=234,slow=4.8,SNR=9.3								
ESDC				pP		**pP**		**22 18 42.6**	**+0.3**
	comp=Z,7.5nm,1.1s,baz=243,slow=5.0,SNR=7.9								
ESDC				LR		LR		22 53 24.9	
	comp=Z,154nm,18.9s,baz=341,slow=33								
	comp=Z,2.3nm,0.9s								
ESDC	**Sonseca Array**	**85.89**	**44**	P		**P**		**22 18 11.7**	**-0.5**
ESDC				P		**pP**		**22 18 43.0**	**+0.7**
LLLB	**Lillooet**	**86.13**	**329**	P		**P**		**22 18 13.6**	**+0.4**
LLLB				IAmb		IAmb		22 18 14.8	
	comp=Z,43nm,1.2s								
KSANE	**Kasane**	**86.82**	**108**	P		**P**		**22 18 16.9**	**-0.5**
KSANE				IAmb		IAmb		22 18 20.2	
	comp=Z,20nm,0.9s								
CBB	**Campbell River**	**87.46**	**327**	P		**P**		**22 18 19.2**	**-0.3**
CBB				IAmb		IAmb		22 18 52.5	
	comp=Z,22nm,1.0s								
BLKN	**Baker Lake**	**88.56**	**348**	P		**P**		**22 18 24.3**	**0.0**
BLKN				IAmb		IAmb		22 18 25.7	
	comp=Z,28nm,1.3s								
LSZ	**Lusaka**	**90.46**	**107**	LR		LR		22 57 22.8	
	comp=Z,183nm,18.6s,baz=293,slow=34								
ILON	**Igloolik, Nuna**	**91.52**	**355**	P		**P**		**22 18 38.4**	**+0.3**
ILON				IAmb		IAmb		22 18 40.5	
	comp=Z,34nm,1.7s								
YKA	**Yellowknife Ar**	**91.68**	**340**	P		**P**		**22 18 39.6**	**+0.7**
	comp=Z,12nm,0.9s,baz=140,slow=3.7,SNR=105								
YKA				pP		**pP**		**22 19 10.3**	**+1.2**
	comp=Z,9.8nm,0.8s,baz=141,slow=3.7,SNR=10								
YKA				LR		LR		23 03 26.7	
	comp=Z,118nm,18.1s,baz=54,slow=38								
	comp=Z,12nm,0.9s								
YKA	**Yellowknife Ar**	**91.68**	**340**	P		**P**		**22 18 39.4**	**+0.5**
CASY	**Casey**	**92.09**	**180**	P		**P**		**22 18 40.9**	**-0.1**
KEST	**Kesra**	**93.28**	**53**	P		**P**		**22 18 48.5**	**+1.4**
	comp=Z,2.5nm,0.8s,baz=324,slow=6.1,SNR=4.6								
KEST				pP		**pP**		**22 19 16.9**	**-0.6**
	comp=Z,5.0nm,1.0s,baz=309,slow=2.5,SNR=3.3								
	comp=Z,2.5nm,0.8s								
KEST	**Kesra**	**93.28**	**53**	P		**P**		**22 18 46.8**	**-0.3**
POIN	**Pond Inlet**	**94.58**	**357**	IAmb		IAmb		22 18 54.1	
	comp=Z,13nm,1.1s								
DLBC	**Dease Lake**	**94.72**	**332**	LR		LR		23 05 16.7	
	comp=Z,55nm,21.4s,baz=31,slow=38								
RES	**Resolute Bay**	**97.84**	**353**	LR		LR		23 07 09.2	
	comp=Z,173nm,18.4s,baz=337,slow=38								
DAVOX	**Davos/Dischmat**	**98.13**	**43**	LR		LR		23 02 28.7	
	comp=Z,301nm,18.7s,baz=278,slow=35								
MBAR	**Mbarara**	**98.39**	**94**	LR		LR		23 03 47.2	
	comp=Z,74nm,18.1s,baz=294,slow=36								
BRTR	**Keskin Array B**	**112.79**	**55**	PKiKP		**PKiKP**		**22 24 08.6**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=178,slow=3.3,SNR=6.0								
BRTR				PP		**PP**		**22 24 54.0**	**-4.4**
	comp=Z,2.1nm,1.0s,baz=220,slow=3.7,SNR=7.8								
KLMR	**Klimovskoe**	**117.67**	**32**	*e*PKIKP		**PKPdf**		**22 24 16.7**	**-0.5**
KLMR				*e*				22 24 44.7	
KLMR				pmax		pmax			
	comp=Z,23nm,1.5s								
SOC	**Sochi**	**117.80**	**51**	*i* PKIKP		**PKiKP**		**22 24 20.3**	**+2.3**
SOC				*e*				22 24 49.2	
SOC				*e*				22 25 37.3	
SOC				*e*PPP		PPP		22 28 04.6	
SOC				*e*				22 31 04.1	
SOC				*e*PS		**PKKPdf**		**22 35 12.7**	**+4.3**
SOC				*e*SS		SS		22 41 33.2	-4.6
SOC				*e*SSS		SSS		22 46 00.4	
KIV	**Kislovodsk**	**119.97**	**51**	*e*PKIKP		**PKPdf**		**22 24 21.9**	**-0.4**
KIV				pmax		pmax			
	comp=Z,5.0nm,1.0s								
KBZ	**Khabaz**	**120.11**	**51**	PKP		**PKPdf**		**22 24 22.4**	**0.0**
	comp=Z,6.4nm,1.0s,baz=233,slow=3.6,SNR=8.6								
KBZ	**Khabaz**	**120.11**	**51**	⇑*i*PKIKP		**PKiKP**		**22 24 23.3**	**+0.8**
BILL	**Bilibino**	**123.02**	**338**	⇑*i*PKIKP		**PKiKP**		**22 24 28.3**	**+0.7**
BILL				pmax		pmax			
	comp=Z,15nm,2.5s								
ARTI	**Arti**	**128.22**	**34**	*i* PKIKP		**PKiKP**		**22 24 38.6**	**+0.4**
ARTI								22 26 42.2	
ARTI								22 31 40.1	
ARTI				SP		SP		22 36 47.1	+10
TIXI	**Tiksi**	**129.24**	**353**	⇓*i*PKIKP		**PKPdf**		**22 24 39.1**	**0.0**
TIXI				pmax		pmax			
	comp=Z,7.0nm,1.3s								
ASAR	**Alice Springs**	**129.71**	**207**	PKP		**PKPdf**		**22 24 41.7**	**+0.1**
	comp=Z,11nm,1.0s,baz=150,slow=2.4,SNR=39								
ASAR				pPKP		**pPKPdf**		**22 25 13.2**	**+0.3**
	comp=Z,3.6nm,0.7s,baz=138,slow=2.1,SNR=5.8								
NRIK	**Noril'sk**	**130.40**	**11**	PKP		**PKiKP**		**22 24 41.9**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=137,slow=5.7,SNR=4.9								
SEY	**Seymchan**	**130.60**	**337**	⇑*i*PKIKP		**PKiKP**		**22 24 43.5**	**+0.7**
SEY				pmax		pmax			
	comp=Z,22nm,1.3s								
WRA	**Warramunga Arr**	**132.77**	**210**	PKP		**PKPdf**		**22 24 47.6**	**+0.2**
	comp=Z,7.5nm,1.0s,baz=155,slow=1.9,SNR=25								
WRA				pPKP		**pPKPdf**		**22 25 19.2**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=154,slow=1.9,SNR=6.1								
WRAB	**Tennant Creek**	**132.78**	**210**	⇑*i*PKIKP		**PKiKP**		**22 24 48.5**	**-0.1**
WRAB				pmax		pmax			
	comp=Z,12nm,1.0s								
PETK	**Petropavlovsk-**	**133.09**	**323**	PKP		**PKiKP**		**22 24 48.0**	**-0.1**
	comp=Z,6.1nm,1.0s,baz=181,slow=5.8,SNR=3.5								
PETK				pPKP		**pPKPdf**		**22 25 18.2**	**-0.1**
	comp=Z,5.5nm,0.9s,baz=61,slow=5.0,SNR=3.0								
MA2	**Magadan**	**133.23**	**334**	*d i*PKIKP		**PKiKP**		**22 24 48.8**	**+0.6**
MA2				pmax		pmax			
	comp=Z,12nm,1.7s								
BORK	**Borovoye**	**135.89**	**35**	⇑*i*PKIKP		**PKiKP**		**22 24 54.0**	**+0.2**
BVAR	**Borovoye Array**	**135.94**	**35**	PKP		**PKPdf**		**22 24 52.8**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=327,slow=2.4,SNR=11								
BVAR				pPKP		**pPKPdf**		**22 25 25.2**	**+1.3**
	comp=Z,3.8nm,0.9s,baz=298,slow=3.1,SNR=5.7								
BVAR				SKPbc		**SKPbc**		**22 28 12.8**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=336,slow=3.2,SNR=5.2								
YAK	**Yakutsk**	**137.99**	**347**	*e*PKIKP		**PKiKP**		**22 24 57.0**	**-0.8**
YAK				*e*				22 25 24.5	
YAK				*e*				22 27 46.9	
YAK				*e*SS		SS		22 45 51.2	+5.5
YAK				pmax		pmax			
	comp=Z,18nm,1.1s								
YAK				pmax		pmax			
	comp=N,3.0nm,1.4s								
YAK				pmax		pmax			
	comp=E,3.0nm,1.1s								
YAK				pmax		pmax			
	comp=Z,205nm,4.6s								
YAK				pmax		pmax			
	comp=N,141nm,3.2s								
YAK				pmax		pmax			
	comp=E,173nm,3.1s								
BRZS	**Berezniki**	**138.65**	**38**	*e*PKIKP		**PKPdf**		**22 24 58.1**	**+0.7**
BRZS	**Berezniki**	**138.65**	**38**	*e*PKP		**PKPdf**		**22 24 58.2**	**+0.7**
CHM	**Chimkent**	**139.63**	**50**	*e*PKIKP		**PKPdf**		**22 24 59.9**	**+0.4**
CHM	**Chimkent**	**139.63**	**50**	*e*PKP		**PKPdf**		**22 24 59.9**	**+0.4**
IUG	**luzhnay**	**139.98**	**50**	*e*PKIKP		**PKPdf**		**22 25 00.5**	**+0.3**
IUG				*e*				22 27 58.2	
IUG	**luzhnay**	**139.98**	**50**	*e*PKP		**PKPdf**		**22 25 00.5**	**+0.3**
IUG				*e*PP		**PP**		**22 27 58.2**	**0.0**
DZA	**Taraz**	**140.66**	**48**	*e*PKIKP		**PKPdf**		**22 25 01.8**	**+0.5**
DZA	**Taraz**	**140.66**	**48**	*e*PKP		**PKPdf**		**22 25 01.9**	**+0.5**
KURK	**Kurchatov**	**141.48**	**34**	⇓*e*PKIKP		**PKPdf**		**22 25 00.9**	**-1.6**
KURK				pmax		pmax			
	comp=Z,13nm,1.7s								
KURBB	**Kurchatov Arra**	**141.49**	**34**	PKP		**PKPdf**		**22 25 00.2**	**-2.3**
	comp=Z,3.5nm,1.0s,baz=307,slow=3.0,SNR=7.2								
KURBB				pPKP		**pPKPdf**		**22 25 33.0**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=304,slow=2.9,SNR=3.0								
ZALV	**Zalesovo Beam**	**142.17**	**26**	PKhKP		PKPpre		22 24 59.9	
	comp=Z,4.6nm,0.6s,baz=294,slow=2.0,SNR=22								
ZALV				PKP		**PKPdf**		**22 25 03.9**	**+0.3**
	comp=Z,9.4nm,0.9s,baz=319,slow=1.9,SNR=14								
ZALV				pPKP		pPKPdf		22 25 36.2	+1.0
	comp=Z,9.1nm,0.7s,baz=317,slow=2.6,SNR=8.0								
SEM	**Semipalatinsk**	**142.50**	**33**	*e*PKIKP		**PKPdf**		**22 25 04.9**	**+0.3**
SEM	**Semipalatinsk**	**142.50**	**33**	*e*PKP		**PKPdf**		**22 25 05.0**	**+0.3**
AAK	**Ala-Archa**	**142.93**	**47**	⇓*e*PKIKP				22 25 02.9	
AAK				pmax		pmax			
	comp=Z,6.0nm,1.0s								
AAA	**Alma-Ata**	**144.33**	**45**	*e*PKIKP		**PKPdf**		**22 25 07.9**	**0.0**
AAA	**Alma-Ata**	**144.33**	**45**	*e*PKP		**PKPdf**		**22 25 08.0**	**0.0**
TNSS	**Tian-Shan**	**144.42**	**46**	*e*PKIKP		**PKPdf**		**22 25 08.3**	**-0.2**
TNSS	**Tian-Shan**	**144.42**	**46**	*e*PKP		**PKPdf**		**22 25 08.3**	**-0.2**
MDOK	**Medeo**	**144.44**	**45**	*e*PKIKP		**PKPdf**		**22 25 08.2**	**0.0**
MDOK	**Medeo**	**144.44**	**45**	*e*PKP		**PKPdf**		**22 25 08.2**	**0.0**
TDK	**Taldyqorghan**	**144.46**	**42**	*e*PKIKP		**PKPdf**		**22 25 07.9**	**-0.1**
TDK	**Taldyqorghan**	**144.46**	**42**	*e*PKP		**PKPdf**		**22 25 08.0**	**-0.1**
YSS	**Yuzhno-Sakhali**	**144.47**	**322**	*e*PKIKP		**PKPdf**		**22 25 08.0**	**+0.1**
YSS				pmax		pmax			
	comp=Z,30nm,1.2s								
KSH2	**Kashi**	**144.91**	**52**	PKP		**PKPdf**		**22 25 09.3**	**+0.2**
KSH2				sPKP		sPKPdf		22 25 41.3	-11
GRNR	**Gornyy**	**145.20**	**332**	⇓*i*PKIKP		**PKPdf**		**22 25 10.5**	**+1.4**
GRNR				pmax		pmax			
	comp=Z,60nm,1.2s								
SATY	**Saty**	**145.38**	**45**	*e*PKIKP		**PKPdf**		**22 25 09.7**	**-0.1**
SATY	**Saty**	**145.38**	**45**	*e*PKP		**PKPdf**		**22 25 09.7**	**-0.1**
UZB	**Uzynbulak**	**145.74**	**44**	*e*PKIKP		**PKPdf**		**22 25 10.4**	**0.0**
UZB				*e*				22 28 32.7	
UZB	**Uzynbulak**	**145.74**	**44**	*e*PKP		**PKPdf**		**22 25 10.5**	**0.0**
UZB				*e*PP		**PP**		**22 28 32.8**	**+0.1**
MK31	**Makanchi Array**	**145.76**	**37**	*d i*PKP2		**PKPbc**		**22 25 11.0**	**+0.2**
MKAR	**Makanchi Array**	**145.76**	**37**	PKPbc		**PKPbc**		**22 25 11.1**	**+0.3**
	comp=Z,15nm,0.9s,baz=330,slow=2.3,SNR=68								
MKAR				pPKPbc		**pPKPdf**		**22 25 43.2**	**+1.4**
	comp=Z,12nm,0.7s,baz=331,slow=2.7,SNR=8.2								
SHLS	**Shalkode**	**146.01**	**44**	*e*PKIKP		**PKPbc**		**22 25 11.6**	**-0.2**
SHLS				*e*				22 28 36.2	
SHLS	**Shalkode**	**146.01**	**44**	*e*PKP		**PKPbc**		**22 25 11.7**	**-0.2**
SHLS				*e*PP		**PP**		**22 28 36.2**	**+1.9**
ZEA	**Zeya**	**146.02**	**343**	*e*PKP2		**PKPbc**		**22 25 11.3**	**0.0**
ZEA				pmax		pmax			
	comp=Z,30nm,1.3s								
DGZ	**Jazzator, Alta**	**146.40**	**29**	⇑*e*PKIKP		**PKPdf**		**22 25 11.6**	**+0.3**
ZSN	**Zaisan**	**146.73**	**34**	*e*PKIKP		**PKPdf**		**22 25 12.1**	**+0.3**
ZSN	**Zaisan**	**146.73**	**34**	*e*PKP		**PKPdf**		**22 25 12.1**	**+0.3**
KLR	**Kul'dur**	**148.33**	**334**	⇓*e*PKIKP		**PKPdf**		**22 25 14.1**	**-0.2**
HEH	**HeiHe**	**149.04**	**340**	*e*P		**PKPdf**		**22 25 16.0**	**+0.5**
HEH				pmax		pmax			
	comp=Z,33nm,1.3s								
MOY	**Mondy**	**149.20**	**13**	*e*PKP2		**PKPab**		**22 25 23.2**	**-1.7**
IRK	**Irkutsk**	**149.21**	**9**	*e*PKHKP		PKPpre		22 25 16.7	
IRK				pmax		pmax			
	comp=Z,60nm,2.2s								
KNGR	**Kungurtug, Tuv**	**149.34**	**18**	⇑*e*PKHKP		PKPpre		22 25 17.4	
TLY	**Talaya**	**149.67**	**10**	⇑*e*PKHKP		PKPpre		22 25 18.6	
TLY				pmax		pmax			
	comp=Z,21nm,1.3s								
CIT	**Chita**	**149.90**	**357**	*e*PKP2		**PKiKP**		**22 25 23.2**	**+0.5**
WMQ	**Urumqi**	**150.59**	**36**	*e*PKPbc		**PKPdf**		**22 25 18.5**	**+0.3**
ZAK	**Zakamensk**	**150.86**	**11**	*e*PKIKP		**PKPdf**		**22 25 19.6**	**+1.1**
ZAK				pmax		pmax			
	comp=Z,20nm,1.6s								
HILR	**Hailar Array B**	**151.63**	**349**	PKPbc		**PKiKP**		**22 25 26.7**	**+0.4**
	comp=Z,15nm,0.8s,baz=111,slow=3.3,SNR=15								
HILR				pPKPbc		**pPKPbc**		**22 25 57.7**	**+0.5**
	comp=Z,9.3nm,0.6s,baz=67,slow=1.9,SNR=7.3								
USRK	**Ussuriysk Ar.**	**152.03**	**327**	PKPbc		**PKiKP**		**22 25 27.5**	**+0.2**
	comp=Z,26nm,1.1s,baz=62,slow=2.5,SNR=12								
USRK				pPKPbc		**pPKPbc**		**22 25 59.5**	**+1.3**
	comp=Z,15nm,0.9s,baz=317,slow=1.6,SNR=6.7								
MJAR	**Matsushiro Arr**	**152.59**	**308**	PKPbc		**PKiKP**		**22 25 28.9**	**+0.2**
	comp=Z,13nm,1.0s,baz=79,slow=1.9,SNR=15								
MJAR				pPKPbc		**pPKPbc**		**22 26 00.1**	**+0.4**
	comp=Z,12nm,0.9s,baz=104,slow=0.9,SNR=5.3								
BNX	**BinXian**	**152.89**	**335**	⇓P		**PKPdf**		**22 25 22.0**	**+0.5**
BNX				pmax		pmax			
	comp=Z,16nm,1.5s								
SONM	**Songino Array**	**153.81**	**8**	PKP		**PKPdf**		**22 25 23.8**	**+0.8**
	comp=Z,4.1nm,1.0s,baz=63,slow=1.9,SNR=21								
SONM				PKPbc		**PKiKP**		**22 25 31.2**	**+0.2**
	comp=Z,4.9nm,1.1s,baz=330,slow=1.4,SNR=13								
CN2	**Changchun**	**155.27**	**335**	*e*P		**PKPdf**		**22 25 25.5**	**+0.6**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.8s								
KSRS	**Korea Array**	**158.96**	**321**	PKP		**PKPdf**		**22 25 30.3**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=54,slow=6.2,SNR=8.1								
KSRS				PKPab		**pPKPdf**		**22 26 03.7**	**+2.5**
	comp=Z,7.6nm,1.0s,baz=51,slow=4.4,SNR=6.4								
KSRS				pPKPab		**pPKPab**		**22 26 38.6**	**+1.5**
	comp=Z,4.3nm,0.8s,baz=53,slow=4.5,SNR=4.2								
GOMU	**GeErMu**	**159.69**	**42**	PKP		**PKPdf**		**22 25 32.1**	**+0.9**
GTA2	**Gaotai**	**159.83**	**27**	PKP		**PKPdf**		**22 25 32.0**	**+1.1**
GTA2				pPKP		pPKPdf		22 26 05.3	+2.9
LSA	**Lhasa**	**160.16**	**63**	P		**PKPdf**		**22 25 29.4**	**-2.6**
LSA				pmax		pmax			
	comp=Z,7.0nm,1.3s								
HHC	**Hu-ho-hao-te**	**161.11**	**360**	⇑*i*PKP		**PKPdf**		**22 25 34.6**	**+2.3**
BTO2	**Baotou**	**161.17**	**4**	*e*PKPbc		**PKPdf**		**22 25 34.4**	**+2.0**
BTO2				sPKP		sPKPdf		22 26 06.6	-9.1
BTO2				*e*PKPab		**PKPab**		**22 26 20.8**	**+4.6**
BTO2				pmax		pmax			
	comp=Z,38nm,1.0s								
BTO2				pmax		pmax			
	comp=Z,830nm,6.5s								
HNS	**HongShan**	**164.31**	**350**	⇑PKP		**PKPdf**		**22 25 36.9**	**+1.6**
HNS				PKPab		**PKPab**		**22 26 30.5**	**+0.7**
LZH	**Lanzhou**	**164.39**	**23**	*e*PKP		**PKPdf**		**22 25 38.0**	**+2.3**
LZH				sPKP		sPKPdf		22 26 11.8	-7.2
LZH				PKP		**PKPab**		**22 26 32.0**	**+1.5**
LZDM	**Lanzhou Array**	**164.45**	**24**	PKP		**PKPdf**		**22 25 35.7**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=256,slow=6.0,SNR=5.6								
LZDM				PKPab		**PKPab**		**22 26 29.2**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=267,slow=5.3,SNR=4.8								
XAN	**Xi'an**	**167.71**	**10**	PKP		**PKPdf**		**22 25 39.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**167.76**	**104**	PKP		**PKPdf**		**22 25 38.6**	**0.0**
	comp=Z,1.1nm,0.4s,baz=256,slow=1.8,SNR=20								
CMAR				pPKP		**pPKPdf**		**22 26 11.7**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=187,slow=0.8,SNR=1.9								
CMAR				PKPab		**PKPab**		**22 26 44.8**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=256,slow=4.6,SNR=4.7								
CMAR				pPKPab		**pPKPab**		**22 27 17.2**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=249,slow=5.4,SNR=2.5								
CMAR				PP		**PP**		**22 30 34.2**	**-0.8**
	comp=Z,2.4nm,0.3s,baz=248,slow=3.0,SNR=4.7								
NJ2	**Nanjing**	**167.94**	**328**	*e*P		**PKPdf**		**22 25 38.9**	**+0.6**
NJ2				pmax		pmax			
	comp=Z,4.0nm,1.2s								
CD2	**Chengdu**	**168.69**	**36**	PKP		**PKPdf**		**22 25 38.5**	**-0.5**
PZH	**PanZhiHua**	**170.03**	**61**	PKP		**PKPdf**		**22 25 40.5**	**+0.5**

IDC ***16*** *22:06:39.4±1.4, 32°.63N×4°.20W, h0km, mb3.3/5, mbtmp3.4/7, ML3.4/2, Error ellipse: s-maj=30.1km s-min=7.5km az=18.0*

CNRM ***16*** *22:06:39.6, 32°.56N×4°.26W, h2km, ML4.2*

MDD ***16*** *22:06:40.3±0.7, 32°.60N×4°.34W, h0km, Mb3.6/18, M_mb2.9/14, Error ellipse: s-maj=5.6km s-min=4.7km az=167.0*

INMG ***16*** *22:06:40.0±1.3, 32°.73N×4°.14W, h6km, ML3.3, Error ellipse: s-maj=10.4km s-min=5.2km az=76.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

IGIL ***16*** *22:06:40.2, 32°.60N×4°.34W, h0km, ML3.2*

ISC 16 22:06:40.9±1.0, 32°.63N±0°.03×4°.32W±0°.03, h16km±7km, n108, σ2827/185, mb3.4/4, 15C, Morocco

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**0.31**	**308**	Pg	Pg	**Pg**	**22 06 47.1**	**-0.4**
	272nm,0.3s,baz=120,slow=14,SNR=5670							
MDT				Lg	Lg		22 06 52.4	
	1µm,0.3s,baz=272,slow=14,SNR=60							
MDT	**Midelt**	**0.31**	**308**	P		**Pg**	**22 06 46.8**	**-0.7**
MDT				S		**Sg**	**22 06 52.5**	**+0.5**
MD31	**MD31**	**0.45**	**303**	P		**Pg**	**22 06 49.6**	**-0.3**
MD31				S		**Sg**	**22 06 56.5**	**+0.5**
CZD	**Col de Zad**	**0.73**	**304**	P		**Pg**	**22 06 55.5**	**+0.2**
CZD				S		**Sg**	**22 07 06.3**	**+1.2**
GOLM	**Goulmima**	**1.06**	**211**	P		**Pg**	**22 07 00.7**	**-0.8**
GOLM				S		**Sn**	**22 07 17.1**	**+1.3**
IFR	**Ifrane**	**1.12**	**323**	Pg		**Pg**	**22 07 02.3**	**-0.3**
IFR				Sg		**Sg**	**22 07 17.5**	**+0.2**
LCRM	**LCR

EGRO					⇑*i*Vmb_VC			22 08 02.7		
	427nm,SNR=36									
EGRO					Sn		**Sn**	**22 09 02.7**	**-3.4**	
CART	**Cartagena**	**5.65**	**28**		Pn		**Pn**	**22 08 04.4**	**+0.3**	
EMUR	**La Murta**	**5.78**	**25**		Pn		**Pn**	**22 08 05.6**	**-0.5**	
EMUR	**La Murta**	**5.78**	**25**		Pn		**Pn**	**22 08 05.6**	**-0.5**	
EMUR					⇑*i*Vmb_VC			22 08 06.8		
	42nm,SNR=5.8									
PFVI	**Vila Bisbo**	**5.83**	**322**		Pn		**Pn**	**22 08 05.8**	**-0.8**	
PFVI					Sn		**Sn**	**22 09 09.7**	**-3.4**	
PFVI	**Vila Bisbo**	**5.83**	**322**		*e*Pn		**Pn**	**22 08 05.8**	**-0.8**	
PFVI					*e*Sn		**Sn**	**22 09 11.7**	**-1.4**	
PFVI					*i* IAML			22 09 20.6		
PFVI					*i* IAML			22 09 24.1		
PFVI					*i* IAML			22 09 32.5		
PCVE	**Castro Verde**	**5.85**	**330**		*e*Pn		**Pn**	**22 08 06.7**	**-0.3**	
PCVE					*e*Sn		**Sn**	**22 09 10.5**	**-3.2**	
PCVE					*i* IAML			22 09 15.2		
PCVE					*i* IAML			22 09 17.8		
PCVE					*i* IAML			22 09 23.6		
MORF	**Marmelete**	**5.87**	**324**		*e*P		**Pn**	**22 08 06.2**	**-1.1**	
MORF	**Marmelete**	**5.87**	**324**		*e*Pn		**Pn**	**22 08 06.1**	**-1.2**	
MORF					*e*Sn		**Sn**	**22 09 12.9**	**-1.3**	
MORF					*i* IAML			22 09 16.0		
MORF					*i* IAML			22 09 20.6		
MORF					*i* IAML			22 09 23.2		
PBAR	**Barrancos**	**5.97**	**339**		Pn		**Pn**	**22 08 07.4**	**-1.2**	
PBAR					Sn		**Sn**	**22 09 12.4**	**-4.1**	
PBAR	**Barrancos**	**5.97**	**339**		*e*Pn		**Pn**	**22 08 07.4**	**-1.2**	
PBAR					*e*Sn		**Sn**	**22 09 13.1**	**-3.5**	
PBAR					*i* IAML			22 09 20.0		
PBAR					*i* IAML			22 09 20.1		
PBAR					*i* IAML			22 09 21.0		
PTEO	**Sao Teotonio**	**6.10**	**325**		*e*Pn		**Pn**	**22 08 09.6**	**-0.7**	
PTEO					*e*Sn		**Sn**	**22 09 17.6**	**-2.1**	
PTEO					*i* IAML			22 09 19.0		
PTEO					*i* IAML			22 09 22.7		
PTEO					*i* IAML			22 09 25.8		
MESJ	**Messejana**	**6.11**	**330**		*e*P		**Pn**	**22 08 09.3**	**-1.1**	
MESJ					*e*S		**Sn**	**22 09 14.6**	**-5.3**	
MESJ					IAML			22 09 20.2		
	comp=N,28nm,0.6s									
MESJ	**Messejana**	**6.11**	**330**		*e*Pn		**Pn**	**22 08 09.6**	**-0.9**	
MESJ					*e*Sn		**Sn**	**22 09 17.3**	**-2.7**	
MESJ					*i* IAML			22 09 21.9		
MESJ					*i* IAML			22 09 21.9		
MESJ					*i* IAML			22 09 24.5		
PBEJ	**Beja**	**6.12**	**333**		*e*Pn		**Pn**	**22 08 09.8**	**-0.9**	
PBEJ					*e*Sn		**Sn**	**22 09 17.8**	**-2.5**	
PBEJ					*i* IAML			22 09 20.0		
PBEJ					*i* IAML			22 09 20.5		
PBEJ					*i* IAML			22 09 22.8		
ETOB	**Tobarra**	**6.42**	**20**		Pn		**Pn**	**22 08 16.5**	**+1.8**	
ETOB	**Tobarra**	**6.42**	**20**		Pn		**Pn**	**22 08 16.3**	**+1.6**	
ETOB					⇑*i*Vmb_VC			22 08 18.4		
	comp=N,24nm,SNR=3.5									
EBAD	**Badajoz**	**6.50**	**341**		Pn		**Pn**	**22 08 14.6**	**-1.2**	
EBAD					Sn		**Sn**	**22 09 23.9**	**-5.8**	
EBAD	**Badajoz**	**6.50**	**341**		Pn		**Pn**	**22 08 14.9**	**-0.9**	
EBAD					⇑*i*Vmb_VC			22 08 15.1		
	comp=N,52nm,SNR=6.9									
EBAD					Sn		**Sn**	**22 09 27.1**	**-2.5**	
EVO	**Evora**	**6.62**	**334**		Pn		**Pn**	**22 08 16.6**	**-0.9**	
EVO					Sn		**Sn**	**22 09 27.8**	**-4.8**	
EVO	**Evora**	**6.62**	**334**		*e*Pn		**Pn**	**22 08 16.9**	**-0.6**	
EVO					*e*Sn		**Sn**	**22 09 29.4**	**-3.2**	
EVO					*i* IAML			22 09 35.2		
EVO					*i* IAML			22 09 38.3		
EVO					*i* IAML			22 09 38.6		
MOE	**Montemor**	**6.74**	**332**		*e*Pn		**Pn**	**22 08 18.1**	**-1.0**	
MOE					*e*Sn		**Sn**	**22 09 32.3**	**-3.3**	
MOE					*i* IAML			22 09 35.8		
MOE					*i* IAML			22 09 41.3		
MOE					*i* IAML			22 09 46.1		
PESTR	**Estremoz**	**6.77**	**338**		Pn		**Pn**	**22 08 18.8**	**-0.8**	
PESTR					Sn		**Sn**	**22 09 31.3**	**-5.1**	
PESTR	**Estremoz**	**6.77**	**338**		*e*Pn		**Pn**	**22 08 19.0**	**-0.6**	
PESTR					*e*Sn		**Sn**	**22 09 33.2**	**-3.2**	
PESTR					*i* IAML			22 09 39.6		
PESTR					*i* IAML			22 09 40.7		
PESTR					*i* IAML			22 09 43.6		
PARRA	**Arraiolos**	**6.88**	**335**		*e*Pn		**Pn**	**22 08 20.3**	**-0.8**	
PARRA					*e*Sn		**Sn**	**22 09 35.4**	**-3.6**	
PARRA					*i* IAML			22 09 37.6		
PARRA					*i* IAML			22 09 41.7		
PARRA					*i* IAML			22 09 47.8		
ESDC	**Sonseca Array**	**7.04**	**2**		Pn		**Pn**	**22 08 22.3**	**-1.0**	
	comp=N,0.2nm,0.3s,baz=188,slow=12,SNR=8.5									
ESDC					Sn		**Sn**	**22 09 37.0**	**-6.1**	
	baz=188,slow=23									
	comp=N,0.9nm,0.8s									
CIBOR	**Castaar de Ib**	**7.05**	**353**		Pn		**Pn**	**22 08 22.8**	**-0.7**	
CIBOR					Sn		**Sn**	**22 09 40.4**	**-3.0**	
PMTG	**Montargil**	**7.17**	**335**		*e*Pn		**Pn**	**22 08 24.1**	**-1.0**	
PMTG					*e*Sn		**Sn**	**22 09 42.4**	**-3.7**	
PMRV	**Marv??o**	**7.23**	**341**		*e*Pn		**Pn**	**22 08 25.2**	**-0.7**	
PMRV					*e*Sn		**Sn**	**22 09 44.8**	**-3.0**	
PMAFR	**Mafra**	**7.50**	**329**		Pn		**Pn**	**22 08 29.1**	**-0.4**	
PMAFR					Sn		**Sn**	**22 09 49.6**	**-4.6**	
PMAFR	**Mafra**	**7.50**	**329**		*e*Pn		**Pn**	**22 08 30.6**	**+1.0**	
PMAFR					*e*Sn		**Sn**	**22 09 51.4**	**-2.7**	
EPLA	**Plasencia**	**7.56**	**350**		Pn		**Pn**	**22 08 29.5**	**-1.0**	
EPLA					⇑*i*Vmb_VC			22 08 30.9		
	comp=N,50nm,SNR=7.5									
EPLA					Sn		**Sn**	**22 09 51.4**	**-4.4**	
PSARD	**Sardoal**	**7.62**	**337**		*e*Pn		**Pn**	**22 08 30.5**	**-0.8**	
PSARD					*e*Sn		**Sn**	**22 09 54.3**	**-3.1**	
PCBR	**Castelo Branco**	**7.64**	**341**		*e*Pn		**Pn**	**22 08 30.6**	**-0.8**	
PCBR					*e*Sn		**Sn**	**22 09 54.2**	**-3.6**	
PSBE	**So Bento**	**7.77**	**333**		*e*Pn		**Pn**	**22 08 32.8**	**-0.5**	
PSBE					*e*Sn		**Sn**	**22 09 56.6**	**-4.4**	
EIBI	**Ibiza**	**7.87**	**34**		Pn		**Pn**	**22 08 36.5**	**+1.8**	
EIBI					Sn		**Sn**	**22 10 02.5**	**-0.8**	
EIBI	**Ibiza**	**7.87**	**34**		Pn		**Pn**	**22 08 36.5**	**+1.8**	
EIBI					⇑*i*Vmb_VC			22 08 37.7		
	comp=N,41nm,SNR=1.7									
PCAS	**Casmilo, Conde**	**8.14**	**337**		*e*Pn		**Pn**	**22 08 37.9**	**-0.5**	
PCAS					*e*Sn		**Sn**	**22 10 06.5**	**-3.7**	
MTE	**Manteigas**	**8.18**	**342**		*e*Pn		**Pn**	**22 08 38.5**	**-0.5**	
MTE					*e*Sn		**Sn**	**22 10 07.4**	**-3.8**	
PVIS	**Viseu**	**8.57**	**341**		*e*Pn		**Pn**	**22 08 43.9**	**-0.4**	
MVO	**Moncorvo**	**8.79**	**346**		*e*Pn		**Pn**	**22 08 47.0**	**-0.4**	
MVO					*e*Sn		**Sn**	**22 10 20.8**	**-5.5**	
PVRL	**Vila Real**	**9.05**	**343**		*e*Pn		**Pn**	**22 08 50.2**	**-0.7**	
PVRL					*e*Sn		**Sn**	**22 10 26.9**	**-5.6**	
ETOS	**Mallorca**	**9.16**	**37**		Pn		**Pn**	**22 08 54.3**	**+1.9**	
POLO	**Lamas de Olo**	**9.16**	**343**		*e*Pn		**Pn**	**22 08 51.8**	**-0.7**	
POLO					*e*Sn		Sn	22 10 29.1	-6.2	
PBRG	**Braganca**	**9.37**	**349**		*e*Pn		**Pn**	**22 08 54.5**	**-0.6**	
ECAL	**Calabor**	**9.50**	**349**		Pn		**Pn**	**22 08 58.1**	**+1.1**	
ECAL					Sn		**Sn**	**22 10 40.3**	**-3.2**	
PGAV	**Gavieira, Arco**	**9.84**	**342**		*e*Pn		**Pn**	**22 09 01.2**	**-0.5**	
KEST	**Kesra**	**11.73**	**71**		Pn		**Pn**	**22 09 26.9**	**-0.8**	
	comp=N,0.3nm,0.3s,baz=328,slow=2.5,SNR=5.8									
	comp=N,1.5nm,0.6s									
TORD	**Torodi Ar. Bea**	**20.15**	**163**		P		**P**	**22 11 14.2**	**-0.4**	
	comp=N,1.9nm,0.7s,baz=350,slow=14,SNR=4.2									
	comp=N,1.9nm,0.7s									
GERES	**GERESS Array B**	**21.10**	**35**		P		**P**	**22 11 23.8**	**-0.9**	
	comp=N,0.5nm,0.6s,baz=239,slow=17,SNR=2.0									
	comp=N,0.5nm,0.6s									
BRTR	**Keskin Array B**	**31.27**	**66**		P		**P**	**22 13 01.5**	**+1.3**	
	comp=N,0.3nm,0.8s,baz=270,slow=7.9,SNR=1.5									
	comp=N,0.3nm,0.8s									
KURBB	**Kurchatov Arra**	**61.28**	**46**		P		**P**	**22 16 56.7**	**+1.4**	
	comp=N,0.4nm,0.7s,baz=293,slow=7.6,SNR=4.1									
	comp=N,0.4nm,0.7s									
MKAR	**Makanchi Array**	**64.90**	**49**		P		**P**	**22 17 19.4**	**0.0**	
	comp=N,0.3nm,0.7s,baz=284,slow=6.6,SNR=4.7									
	comp=N,0.3nm,0.7s									

UCR 16 22:09:18.8±0.6, 9°36N×84°50W, h22km±6km, MW3.6, Presumed earthquake, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PICV	**PH. Pirrs**	**0.40**	**48**	*e*P	Pb	22 09 27.1	-0.2
PIEC	**Cerro El Cedra**	**0.59**	**64**	*e*P	Pb	22 09 30.4	-0.4
PIEC				*e*S	Sb	22 09 39.7	+0.8
BUS1	**Rivas**	**0.77**	**75**	*e*P	Pb	22 09 32.8	-0.9
JCR1	**Jicaral**	**0.78**	**309**	*e*P	Pb	22 09 33.7	0.0
VICA	**Volcano Irazu**	**0.90**	**46**	*e*P	Pb	22 09 35.3	-0.7
RAFA	**San Farael, Vo**	**0.90**	**48**	*e*P	Pb	22 09 35.3	-0.7
RAFA	**San Farael, Vo**	**0.90**	**48**	*e*P	Pb	22 09 35.6	-0.4
EDPE	**Pejibaye, P**	**0.94**	**102**	*e*P	Pb	22 09 35.8	-0.6
EDPE	**Pejibaye, P**	**0.94**	**102**	*e*P	Pb	22 09 35.7	-0.7
CVTQ	**Turrialba Volc**	**0.97**	**48**	*e*P	Pb	22 09 36.6	-0.5
CVTQ	**Turrialba Volc**	**0.97**	**48**	*e*P	Pb	22 09 36.8	-0.3
NYURE	**Nandayure**	**0.98**	**311**	*e*P	Pb	22 09 37.1	0.0
NYURE	**Nandayure**	**0.98**	**311**	*e*P	Pb	22 09 36.8	-0.3
CVTV	**Tajo**	**0.98**	**49**	*e*P	Pb	22 09 36.6	-0.7
CVTV	**Tajo**	**0.98**	**49**	*e*P	Pb	22 09 36.7	-0.6
VTR0	**Volcan Turrial**	**0.98**	**48**	*e*P	Pb	22 09 36.7	-0.6
VTR0	**Volcan Turrial**	**0.98**	**48**	*e*P	Pb	22 09 37.1	-0.3
CVTR	**Volcan Turrial**	**0.98**	**48**	*e*P	Pb	22 09 36.5	-0.9
CVTR	**Volcan Turrial**	**0.98**	**48**	*e*P	Pb	22 09 36.5	-0.9
VTCV	**VTCV, Calle Va**	**0.98**	**51**	*e*P	Pb	22 09 36.6	-0.7
VTCV	**VTCV, Calle Va**	**0.98**	**51**	*e*P	Pb	22 09 36.8	-0.5
VERB	**Verbena**	**0.98**	**53**	*e*P	Pb	22 09 36.9	-0.4
VERB	**Verbena**	**0.98**	**53**	*e*P	Pb	22 09 37.0	-0.3
ABRB	**Las Abras (San**	**1.00**	**50**	*e*P	Pb	22 09 36.8	-0.9
ABRB	**Las Abras (San**	**1.00**	**50**	*e*P	Pb	22 09 37.5	-0.2
JTS	**Las Juntas de**	**1.03**	**334**	*e*P	Pn	22 09 37.4	-0.6
RESJ	**San Isidro (Tu**	**1.08**	**51**	*e*P	Pn	22 09 38.6	-0.1
RESJ	**San Isidro (Tu**	**1.08**	**51**	*e*P	Pn	22 09 38.6	0.0
PILE	**Guapiles**	**1.10**	**39**	*e*P	Pn	22 09 39.0	0.0
VARE2	**V. Arenal**	**1.12**	**349**	*e*P	Pb	22 09 39.9	+0.3
VARE2	**V. Arenal**	**1.12**	**349**	*e*P	Pb	22 09 39.6	0.0
DRK0	**Durika**	**1.24**	**94**	*e*P	Pn	22 09 39.9	-1.1
DRK0	**Durika**	**1.24**	**94**	*e*P	Pn	22 09 39.7	-1.3
PLVR	**Palo Verde**	**1.29**	**320**	*e*P	Pn	22 09 41.5	-0.2
PLVR	**Palo Verde**	**1.29**	**320**	*e*P	Pn	22 09 41.5	-0.3
TRT2	**Tortugero**	**1.41**	**32**	*e*P	Pn	22 09 43.5	+0.3
PIRO	**Carate, Puerto**	**1.49**	**129**	*e*P	Pn	22 09 44.9	+0.7
MESS	**Mesas**	**1.54**	**334**	*e*P	Pb	22 09 46.2	-0.5
CEUA	**Cerro Uatsi, L**	**1.56**	**80**	*e*P	Pb	22 09 47.7	+0.7
ALCO	**Alturas Coton,**	**1.69**	**104**	*e*P	Pn	22 09 47.8	+0.6
ALCO	**Alturas Coton,**	**1.69**	**104**	*e*P	Pn	22 09 47.3	+0.1

*NEIC **16** 22:35:34.7±1.7, 17°.1S±0°.2×177°.3W±0°.1, h300km±8km, mb4.3/21, Error ellipse: s-maj=28.2km s-min=6.9km az=147.0*
*IDC **16** 22:35:44.7±12.0, 17°.7OS×177°.34W, h418km±128km, mb3.2/5, mbtmp4.0/5, Error ellipse: s-maj=112.9km s-min=44.4km az=162.0*

ISC 16 22:35:42.7±0.7, 17°.3S±0°.2×177°.4W±0°.1, h392km, n32, σ1s19/33, mb4.0/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**14.32**	**251**	P	**P**	**22 38 46.2**	**-1.8**
RTZ	**Ruatahuna**	**21.76**	**192**	P	**P**	**22 40 05.0**	**+1.2**
RTZ				IAmb	IAmb	22 40 48.5	
	comp=Z,23nm,1.2s						
MSWZ	**Moikau Station**	**24.82**	**193**	P	**P**	**22 40 32.6**	**+1.5**
CTZ	**Chatham Island**	**26.33**	**179**	P	**P**	**22 40 45.1**	**+0.6**
ARMA	**Armidale**	**31.03**	**239**	P	**P**	**22 41 23.1**	**-3.1**
ARMA				IAmb	IAmb	22 41 41.4	
	comp=Z,8.5nm,1.4s						
COEN	**Coen**	**38.03**	**269**	P	**P**	**22 42 28.3**	**+2.8**
COEN				IAmb	IAmb	22 42 28.7	
	comp=Z,25nm,1.4s						
STKA	**Stephens Creek**	**39.72**	**241**	P	**P**	**22 42 39.8**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=106,slow=15,SNR=3.7						
	comp=Z,1.7nm,0.5s						
STKA	**Stephens Creek**	**39.72**	**241**	P	**P**	**22 42 39.6**	**+0.5**
STKA				IAmb	IAmb	22 42 41.2	
	comp=Z,18nm,0.9s						
INKA	**Innaminka**	**39.82**	**247**	P	**P**	**22 42 41.3**	**+1.3**
BBOO	**Buckleboo**	**44.49**	**241**	P	**P**	**22 43 16.8**	**-0.4**
BBOO				IAmb	IAmb	22 43 23.3	
	comp=Z,16nm,1.3s						
WB0	**Warramunga Arr**	**45.61**	**259**	P	**P**	**22 43 25.9**	**-0.2**
WRA	**Warramunga Arr**	**45.65**	**259**	P	**P**	**22 43 26.1**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=96,slow=8.4,SNR=35						
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**45.65**	**259**	P	**P**	**22 43 25.9**	**-0.4**
ASAR	**Alice Springs**	**45.84**	**254**	P	**P**	**22 43 27.3**	**-0.6**
	comp=Z,3.9nm,0.6s,baz=87,slow=8.7,SNR=45						
ASAR				PcP	**PcP**	**22 44 55.5**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=86,slow=4.1,SNR=1.8						
	comp=Z,3.9nm,0.6s						
ASAR	**Alice Springs**	**45.84**	**254**	P	**P**	**22 43 27.1**	**-0.8**
KNRA	**Kununurra**	**51.47**	**264**	P	**P**	**22 44 10.1**	**0.0**
KNRA				IAmb	IAmb	22 44 23.1	
	comp=Z,22nm,1.5s						
FITZ	**Fitzroy Crossi**	**54.04**	**260**	P	**P**	**22 44 28.1**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=74,slow=7.4,SNR=1.7						
	comp=Z,1.7nm,0.8s						
CCCA	**Chr Cany lake**	**77.44**	**46**	P	**P**	**22 46 55.4**	**-0.7**
CCCA				IAmb	IAmb	22 47 21.4	
	comp=Z,7.7nm,1.4s						
O15K	**Ungalikthiuk R**	**77.58**	**9**	P	**P**	**22 46 56.0**	**-0.2**
O15K				IAmb	IAmb	22 47 00.3	
	comp=Z,26nm,1.4s						
BERG	**Berg Lake**	**82.10**	**16**	P	**P**	**22 47 19.0**	**-1.2**
X18A	**Snowflake**	**82.25**	**50**	P	**P**	**22 47 21.2**	**-0.5**
X18A				IAmb	IAmb	22 47 51.7	
	comp=Z,1.7nm,0.5s						
TMUT	**Trail Mountain**	**83.57**	**46**	P	**P**	**22 47 27.4**	**-1.1**
G19K	**Purcell Mounta**	**84.62**	**8**	P	**P**	**22 47 34.3**	**+1.6**
G19K				IAmb	IAmb	22 48 10.2	
	comp=Z,4.4nm,1.5s						
PV04	**Paradox Valley**	**84.75**	**47**	P	**P**	**22 47 34.3**	**+0.1**
PV04				IAmb	IAmb	22 47 39.3	
	comp=Z,12nm,1.1s						
TXAR	**Lajitas Array**	**84.91**	**57**	P	**P**	**22 47 34.6**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=264,slow=5.9,SNR=2.0						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**84.91**	**57**	P	**P**	**22 47 34.7**	**-0.4**
G21K	**Allakaket**	**85.49**	**9**	P	**P**	**22 47 38.5**	**+1.5**
BW06	**Boulder Array**	**86.30**	**43**	P	**P**	**22 47 41.9**	**+0.1**
PDAR	**Pinedale Array**	**86.30**	**43**	P	**P**	**22 47 41.9**	**+0.2**
TEIG	**Tepich**	**95.08**	**71**	P	**P**	**22 48 23.1**	**+0.4**
BRTR	**Keskin Array B**	**145.02**	**316**	PKPbc	**PKPab**	**22 54 35.7**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=76,slow=3.7,SNR=2.7						
BRTR	**Keskin Array B**	**145.02**	**316**		**PKPab**	**22 54 35.3**	**0.0**

KRSC 16 23:01:26.2±2.0, 48°.16N×157°.05E, h16km±36km, MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**3.32**	**357**	*e*P	Pn	23 02 18.8	+1.4
PAU				*e*S	Sn	23 02 59.6	+3.1
KDTR	**Khodutka, Kamc**	**3.72**	**10**	*e*P	Pn	23 02 25.9	+3.0
KDTR				*e*S	Sb	23 03 11.7	-4.5
ASAK	**Asacha**	**4.27**	**7**	*e*P	Pn	23 02 34.0	+3.5
MTVR	**Mutnovka**	**4.39**	**9**	*e*P	Pn	23 02 35.9	+3.5
KRMR	**Karymshinskiy**	**4.73**	**8**	*e*P	Pn	23 02 40.9	+4.0
UGLR	**Uglovaya**	**5.18**	**12**	*e*P	Pn	23 02 46.6	+3.4
AVH	**Avacha**	**5.23**	**11**	*e*P	Pn	23 02 50.0	+6.2
SMAR	**Somma**	**5.23**	**12**	*e*P	Pn	23 02 48.9	+4.9
KOK	**Koryaka**	**5.24**	**11**	*e*P	Pn	23 02 48.4	+4.5
KRER	**Koryakskii**	**5.27**	**11**	*e*P	Pn	23 02 49.7	+5.3
SPN	**Mys Shipunski**	**5.30**	**20**	*e*P	Pn	23 02 49.7	+5.1
SPN				*e*S	Sn	23 03 51.5	+6.2
KRX	**Arik**	**5.31**	**10**	*e*P	Pn	23 02 49.1	+4.2
MKZ	**Mys Kozlova**	**7.05**	**23**	*e*P	Pn	23 03 13.1	+4.5

*JMA **16** 23:03:40.9±0.1, 38°.2N±0°.3×140°.7E±0°.4, h98km, MV3.0/39, SOUTHERN MIYAGI PREF*
*IDC **16** 23:03:48.3±9.8, 37°.90N×139°.76E, h151km±53km, mb3.2/4, mbtmp3.6/4, Error ellipse: s-maj=168.2km s-min=20.8km az=63.0*

ISC 16 23:03:40.6±0.9, 38°.17N±0°.04×140°.69E±0°.06, h102km±7km, n18, σ0s53/29, mb3.8/4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOU	**Okura**	**0.19**	**355**	*i* P	**Pn**	**23 03 55.1**	**+0.1**
JOU				S	**Sn**	**23 04 05.9**	**+0.2**
JMM	**Marumori**	**0.32**	**165**	*i* P	**Pn**	**23 03 55.5**	**+0.1**
JMM				S	**Sn**	**23 04 06.5**	**0.0**
JYS	**Shirataka**	**0.49**	**276**	*i* P	**Pn**	**23 03 56.7**	**+0.2**
JYS				S	**Sn**	**23 04 08.7**	**+0.3**
JIO	**Ouri**	**0.59**	**61**	*i* P	**Pn**	**23 03 57.3**	**+0.1**
JIO				S	**Sn**	**23 04 09.1**	**-0.5**
JOTO	**OTAMA OYAMA**	**0.67**	**205**	*i* P	**Pn**	**23 03 58.3**	**+0.3**
JOTO				S	**Sn**	**23 04 11.5**	**+0.5**
JYK	**Kaneyama**	**0.79**	**341**	*i* P	**Pn**	**23 03 59.0**	**0.0**
JYK				S	**Sn**	**23 04 12.2**	**-0.5**
JFK	**Kawauchi**	**0.82**	**169**	*i* P	**Pn**	**23 03 59.6**	**+0.3**
JFK				S	**Sn**	**23 04 13.5**	**+0.1**
JYA	**Atsumi**	**0.87**	**299**	P	**Pn**	**23 03 59.8**	**+0.1**
JYA				S	**Sn**	**23 04 14.3**	**+0.1**
JMK	**Ichinoseki**	**0.88**	**28**	*i* P	**Pn**	**23 04 00.1**	**+0.2**
JFY	**Yanaizu**	**1.09**	**226**	P	**Pn**	**23 04 02.6**	**+0.5**
JNS	**Sasagawa**	**1.14**	**252**	P	**Pn**	**23 04 02.8**	**+0.1**
JNS				S	**Sn**	**23 04 19.1**	**-0.1**
JRG	**Rokugo**	**1.22**	**358**	P	**Pn**	**23 04 04.2**	**+0.6**
JRG				S	**Sn**	**23 04 22.2**	**+1.2**
JOM	**Ohasama**	**1.38**	**20**	P	**Pn**	**23 04 06.1**	**+0.7**
JOM				S	**Sn**	**23 04 25.1**	**+0.8**
MJAR	**Matsushiro Arr**	**2.56**	**231**	P	**Pn**	**23 04 21.6**	**+1.1**
	12nm,0.5s,baz=32,slow=13,SNR=21						
MKAR	**Makanchi Array**	**43.03**	**301**	P	**P**	**23 11 29.2**	**-0.8**
	0.2nm,0.7s,baz=83,slow=6.2,SNR=1.9						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**44.85**	**307**	P	**P**	**23 11 43.8**	**-0.7**
	1.1nm,0.6s,baz=83,slow=8.2,SNR=9.8						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**58.11**	**187**	P	**P**	**23 13 23.1**	**-0.3**
	0.7nm,0.5s,baz=4.0,slow=7.3,SNR=9.3						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**61.84**	**187**	P	**P**	**23 13 49.3**	**+0.4**
	0.5nm,0.7s,baz=6.1,slow=6.5,SNR=3.1						
	0.5nm,0.7s						

*GCG **16** 23:15:52.6±1.6, 14°.54N×90°.19W, h6km±12km, MD3.6, ML3.6, Presumed earthquake*
*CATAC **16** 23:15:53.1±0.3, 15°.N±2°.×9°.0W±°., h4km±1km, M3.2/11, MLv3.2/11, Error ellipse: s-maj=5.1km s-min=2.6km az=16.3, confirmed*
*SNET **16** 23:15:53.0±1.0, 14°.50N×90°.25W, h13km±6km, ML3.3, Presumed earthquake*

ISC 16 23:15:53.1±1.1, 14°.55N±0°.03×90°.16W±0°.02, h6km±13km, n36, σ0s83/49, 4C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCG4	**OSOP**	**0.37**	**276**	*i* P	**Pg**	**23 15 59.7**	**-0.5**
GCG4				*i* S	**Sg**	**23 16 04.5**	**-0.6**
GCG4				IAML		23 16 05.3	
	comp=N,5μm,0.4s						
FG16	**Alotenango, Sa**	**0.44**	**231**	*i* P	**Pn**	**23 16 05.8**	**-0.3**
APG	**El Apazote**	**0.54**	**327**	*i* P	**Pg**	**23 16 03.0**	**-0.6**
RBDL	**Robledal**	**0.63**	**133**	⇑*i* P	**Pg**	**23 16 05.4**	**+0.2**
RBDL				*e*S	**Sg**	**23 16 14.5**	**+1.1**
SLOZ	**Alcaldia de Sa**	**0.63**	**145**	P	**Pg**	**23 16 05.1**	**-0.1**
SLOZ	**Alcaldia de Sa**	**0.63**	**145**	⇑*e*P	**Pg**	**23 16 05.1**	**-0.1**
SLOZ				*e*S	**Sb**	**23 16 14.4**	**-1.3**
LOAL	**Lomas de Alarc**	**0.66**	**146**	P	**Pg**	**23 16 05.7**	**0.0**
LOAL				S	**Sg**	**23 16 15.0**	**+0.8**
LOAL	**Lomas de Alarc**	**0.66**	**146**	*e*P	**Pg**	**23 16 05.6**	**-0.2**
ESSG	**Sabana Grande**	**0.67**	**256**	*i* P	**Pg**

BHK					IAML			23 37 29.5		
	comp=N,132nm,0.2s									
BHK					eS		Sn	23 37 30.3	+4.5	
EKS2	**Erkin-Say**	**7.06**	**22**	P			**Pn**	**23 36 09.9**	**+1.6**	
	SNR=8.2									
AAK	**Ala-Archa**	**7.27**	**26**	P			**Pn**	**23 36 11.9**	**+0.8**	
	comp=N,4.6nm,0.5s,baz=204,slow=5.9,SNR=28									
AAK					S		**Sn**	**23 37 32.4**	**+0.1**	
	comp=N,8.6nm,0.5s,baz=336,slow=20,SNR=7.2									
AAK	**Ala-Archa**	**7.27**	**26**	P			**Pn**	**23 36 12.4**	**+1.3**	
	SNR=9.1									
AAK	**Ala-Archa**	**7.27**	**26**				**Pn**	**23 36 12.2**	**+1.0**	
AAK	**Ala-Archa**	**7.27**	**26**	⇑P			**Pn**	**23 36 12.2**	**+1.0**	
	comp=N,5.3nm,0.8s									
AAK					⇓S		**Sn**	**23 37 30.6**	**-1.7**	
	comp=N,12nm,0.9s									
KBK	**Karagaybulak**	**7.46**	**28**	P			**Pn**	**23 36 15.3**	**+1.6**	
	SNR=8.0									
FRU1	**Bishkek**	**7.47**	**26**	Pn			**Pn**	**23 36 16.2**	**+2.4**	
CHMS	**Chumysh**	**7.68**	**26**	P			**Pn**	**23 36 17.4**	**+0.8**	
	SNR=11									
SMLA	**Simla**	**7.68**	**129**	eP			**Pn**	**23 36 16.9**	**+0.3**	
SMLA					eS		**Sn**	**23 37 38.0**	**-4.0**	
SMLA					IAML			23 37 44.9		
	comp=N,119nm,0.4s									
SMLA					IAML			23 37 45.0		
	comp=E,88nm,0.4s									
BOOM	**Boomskoye usch**	**7.73**	**33**	Pn			**Pn**	**23 36 18.5**	**+1.2**	
USP	**Ospenovka**	**7.83**	**24**	P			**Pn**	**23 36 20.1**	**+1.5**	
	SNR=7.0									
TKM2	**Tokmak 2**	**7.94**	**30**	P			**Pn**	**23 36 20.6**	**+0.5**	
	SNR=12									
KDJ	**Kajisay**	**8.06**	**40**	Pn			**Pn**	**23 36 23.4**	**+1.6**	
PRZ	**Przheval'sk**	**8.96**	**43**	Pn			**Pn**	**23 36 35.4**	**+1.4**	
KUDL	**Kundal**	**9.61**	**145**	eP			**Pn**	**23 36 41.8**	**-0.8**	
KUDL					eS		**Sn**	**23 38 21.1**	**-7.7**	
KUDL					IAML			23 38 25.8		
	comp=E,58nm,0.4s									
KUDL					IAML			23 38 26.3		
	comp=N,20nm,0.2s									
JOSI	**Joshimath**	**9.62**	**123**	eP			**Pn**	**23 36 40.5**	**-2.4**	
JOSI					eS		**Sn**	**23 38 22.3**	**-7.1**	
JOSI					IAML			23 38 29.0		
	comp=N,72nm,0.4s									
JOSI					IAML			23 38 30.2		
	comp=E,72nm,0.4s									
PTH	**Pithoragarh**	**10.67**	**125**	eP			**Pn**	**23 36 54.8**	**-2.2**	
PTH					eS		**Sn**	**23 38 46.2**	**-8.4**	
PTH					IAML			23 39 47.6		
	comp=N,21nm,0.5s									
PTH					IAML			23 39 48.3		
	comp=E,21nm,0.2s									
MAKZ	**Makanchi**	**13.81**	**36**				**Pn**	**23 37 38.8**	**+1.0**	
MKAR	**Makanchi Array**	**13.95**	**37**	P			**Pn**	**23 37 40.5**	**+0.9**	
	comp=E,1.9nm,0.7s,baz=231,slow=18,SNR=5.7									
MKAR	**Makanchi Array**	**13.95**	**37**				**Pn**	**23 37 40.6**	**+1.0**	
AB31	**Akbulak array**	**15.08**	**333**				**Pn**	**23 37 53.2**	**-0.7**	
AB31					IAmb		IAmb	23 37 54.9		
	comp=Z,5.9nm,0.7s									
AB31	**Akbulak array**	**15.08**	**333**	⇓P			**Pn**	**23 37 53.4**	**-0.5**	
	comp=Z,2.2nm,0.4s,baz=147,slow=11,SNR=164									
AB31				⇓S			**Sn**	**23 40 32.4**	**-8.2**	
	comp=Z,2.8nm,0.7s,baz=150,slow=22,SNR=5.0									
ABKAR	**Akbulak array**	**15.08**	**333**				**Pn**	**23 37 52.5**	**-1.3**	
WMQ	**Urumqi**	**15.43**	**55**	eP			**P**	**23 38 00.4**	**+0.3**	
KURBB	**Kurchatov Arra**	**15.66**	**20**	P			**P**	**23 38 04.2**	**+1.7**	
	comp=Z,1.3nm,0.3s,baz=209,slow=10,SNR=10									
KURK	**Kurchatov**	**15.77**	**20**				**Pn**	**23 38 03.4**	**+1.1**	
AKTO	**Aktyubinsk**	**16.76**	**332**	P			**P**	**23 38 15.4**	**+0.7**	
	comp=Z,10.0nm,0.7s,baz=143,slow=11,SNR=28									
AKTO					S		Sn	23 41 09.6	-11	
	comp=Z,0.6nm,0.3s,baz=13,slow=8.5,SNR=1.2									
AKTO	**Aktyubinsk**	**16.76**	**332**	⇓P			**Pn**	**23 38 14.9**	**+0.3**	
	comp=Z,7.0nm,0.7s									
AKTO					⇓S		**Sn**	**23 41 12.4**	**-8.7**	
	comp=Z,7.1nm,1.6s									
BVAR	**Borovoye Array**	**16.86**	**0**	P			**Pn**	**23 38 17.8**	**+2.0**	
	comp=Z,1.6nm,0.5s,baz=168,slow=7.6,SNR=9.0									
BVAR					S		Sn	23 41 08.2	-15	
	comp=Z,1.0nm,0.7s,baz=255,slow=34,SNR=2.2									
GOMU	**GeErMu**	**19.87**	**83**	P			**P**			
GOMU					pmax		pmax			
	comp=Z,3.0nm,0.9s									
GNI	**Garni**	**20.38**	**289**	P			Pn	23 38 58.3	+0.5	
	comp=Z,19nm,0.9s,baz=68,slow=3.4,SNR=7.8									
	comp=Z,19nm,0.9s									
GNI	**Garni**	**20.38**	**289**	P			**P**	**23 38 54.3**	**-0.2**	
ZAA0	**Zalesovo Array**	**20.50**	**25**				**P**	**23 38 55.7**	**+0.4**	
ZAA0					IAmb		IAmb	23 38 57.6		
	comp=Z,6.9nm,0.9s									
ZALV	**Zalesovo Beam**	**20.50**	**25**	P			**P**	**23 38 57.0**	**+1.6**	
	comp=Z,5.2nm,0.3s,baz=215,slow=11,SNR=29									
	comp=Z,5.2nm,0.3s									
ZALV	**Zalesovo Beam**	**20.50**	**25**				**P**	**23 38 56.4**	**+1.1**	
SHL	**Shillong**	**21.36**	**114**				**P**	**23 39 05.1**	**0.0**	
SHL					IAmb		IAmb	23 39 09.6		
	comp=Z,12nm,1.0s									
ARTI	**Arti**	**21.75**	**342**	P			**P**	**23 39 11.1**	**+2.3**	
	comp=Z,1.5nm,0.5s,baz=187,slow=4.2,SNR=3.2									
ARTI					S		**S**	**23 43 03.3**	**+1.8**	
	comp=Z,0.7nm,0.5s,baz=271,slow=22,SNR=1.4									
	comp=Z,1.5nm,0.5s									
ARTI	**Arti**	**21.75**	**342**	P			**P**	**23 39 09.8**	**+1.0**	
ARTI					IAmb		IAmb	23 39 34.9		
	comp=Z,3.8nm,0.7s									
KBZ	**Khabaz**	**22.18**	**298**	P			**P**	**23 39 16.0**	**+2.7**	
	comp=Z,1.8nm,0.9s,baz=129,slow=11,SNR=3.9									
	comp=Z,1.8nm,0.9s									
RAYN	**Ar Rayn**	**24.76**	**246**	P			**P**	**23 39 38.4**	**+0.7**	
RAYN					IAmb		IAmb	23 39 41.4		
	comp=Z,3.7nm,1.2s									
PZH	**PanZhiHua**	**28.51**	**101**	P			**P**	**23 40 14.3**	**+2.9**	
BRTR	**Keskin Array B**	**28.92**	**288**	P			**P**	**23 40 16.2**	**+1.4**	
	comp=Z,0.4nm,0.6s,baz=90,slow=9.9,SNR=3.7									
	comp=Z,0.4nm,0.6s									
SONM	**Songino Array**	**29.07**	**55**	P			**P**	**23 40 17.9**	**+1.8**	
	comp=Z,0.2nm,0.6s,baz=255,slow=8.8,SNR=2.1									
	comp=Z,0.2nm,0.6s									
CMAR	**Chiang Mai Arr**	**30.88**	**117**	P			**P**	**23 40 34.5**	**+2.3**	
	comp=Z,0.4nm,0.3s,baz=301,slow=5.9,SNR=5.3									
	comp=Z,0.4nm,0.3s									
HHC	**Hu-ho-hao-te**	**32.49**	**69**	eP			**P**	**23 40 48.0**	**+1.7**	
HHC					pmax		pmax			
	comp=Z,4.0nm,0.6s									
HHC					pmax		pmax			
	comp=Z,170nm,5.0s									
FINES	**FINESS Array B**	**37.40**	**327**	P			**P**	**23 41 29.6**	**+1.6**	
	comp=Z,5.5nm,1.0s,baz=112,slow=7.3,SNR=1.7									
	comp=Z,5.5nm,1.0s									
HFS	**Hagfors**	**42.93**	**322**	P			**P**	**23 42 14.6**	**+1.1**	
	comp=Z,7.0nm,1.0s,baz=121,slow=10,SNR=2.0									
	comp=Z,7.0nm,1.0s									
NOA	**NORSAR Array B**	**44.26**	**323**	P			**P**	**23 42 25.0**	**+0.8**	
	comp=Z,0.5nm,0.5s,baz=97,slow=8.1,SNR=1.9									
	comp=Z,0.5nm,0.5s									
TORD	**Torodi Ar. Bea**	**65.06**	**268**	P			**P**	**23 44 54.5**	**-0.4**	
	comp=Z,0.6nm,0.6s,baz=50,slow=8.8,SNR=7.0									
	comp=Z,0.6nm,0.6s									
WRA	**Warramunga Arr**	**82.37**	**121**	P			**P**	**23 46 35.4**	**-0.3**	
	comp=Z,0.3nm,0.4s,baz=323,slow=5.0,SNR=11									
	comp=Z,0.3nm,0.4s									
ASAR	**Alice Springs**	**84.60**	**124**	P			**P**	**23 46 47.0**	**-0.2**	
	comp=Z,0.4nm,0.5s,baz=315,slow=5.0,SNR=6.0									
	comp=Z,0.4nm,0.5s									
VNDA	**Vanda**	**125.35**	**165**	PKP			**PKPdf**	**23 53 11.4**	**-0.9**	
	comp=Z,0.7nm,0.4s,baz=35,slow=11,SNR=1.1									

*ATH **16** 23:45:19.8, 36°.82N×23°.68E, h80km±4km, ML2.6/3, Manual Solution by M.Papanikolaou First location: 2020/02/16 23:46:23, This location: 2020/02/17 01:25:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **16** 23:45:20.9, 37°.N±.6'×2°.4E±°, h71km±.8km, M2.4/6, MLh2.4/6*

ISC 16 23:45:19.2±1.8, 36°.81N±0°.04×23°.68E±0°.05, h86km±14km, n22, σ0s49/34, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHLO	**Agia Marina, M**	**0.59**	**101**	P	**Pn**	**23 45 34.8**	**+0.5**
MHLO				S	**Sn**	**23 45 45.6**	**+0.1**
VLI	**Veliai**	**0.61**	**262**	P	**Pn**	**23 45 34.6**	**+0.1**
VLI				S	**Sn**	**23 45 45.4**	**-0.5**
VLI	**Veliai**	**0.61**	**262**	P	**Pn**	**23 45 34.5**	**+0.1**
VLI				S	**Sn**	**23 45 45.1**	**-0.7**
MET2	**Kameni Chora,**	**0.85**	**341**	P	**Pn**	**23 45 37.5**	**+0.5**
MET2				S	**Sn**	**23 45 50.5**	**+0.2**
MET5	**Makryloggos,Me**	**0.86**	**342**	P	**Pn**	**23 45 37.6**	**+0.6**
MET5				S	**Sn**	**23 45 50.3**	**-0.1**
VLY	**Voula,Athens**	**1.05**	**5**	P	**Pn**	**23 45 39.2**	**-0.1**
VLY				S	**Sn**	**23 45 53.8**	**-0.4**
VLY	**Voula,Athens**	**1.05**	**5**	P	**Pn**	**23 45 39.1**	**-0.1**
ATHU	**Athens Univers**	**1.16**	**4**	P	**Pn**	**23 45 40.5**	**-0.1**
ATHU				S	**Sn**	**23 45 55.6**	**-1.0**
PTL	**Penteli**	**1.25**	**7**	P	**Pn**	**23 45 42.0**	**+0.3**
PTL				S	**Sn**	**23 45 58.5**	**-0.1**
PTL	**Penteli**	**1.25**	**7**	P	**Pn**	**23 45 41.9**	**+0.3**
PTL				S	**Sn**	**23 45 57.8**	**-0.7**
DION	**Dionisos Attik**	**1.29**	**9**	P	**Pn**	**23 45 42.6**	**+0.5**
DION				S	**Sn**	**23 45 59.4**	**0.0**
DION	**Dionisos Attik**	**1.29**	**9**	P	**Pn**	**23 45 42.4**	**+0.3**
LTK	**Loutraki**	**1.34**	**335**	P	**Pn**	**23 45 43.4**	**+0.5**
IMMV	**Iera Moni Meta**	**1.36**	**170**	P	**Pn**	**23 45 44.0**	**+0.9**
IMMV				S	**Sn**	**23 46 00.4**	**-0.6**
KARY	**Karystos**	**1.36**	**26**	P	**Pn**	**23 45 43.4**	**+0.4**
VIL2	**Platees**	**1.44**	**347**	P	**Pn**	**23 45 43.9**	**-0.1**
VAM	**Vamos**	**1.46**	**163**	P	**Pn**	**23 45 45.0**	**+0.7**
GUR	**Goura**	**1.56**	**317**	P	**Pn**	**23 45 46.1**	**+0.5**
GUR				S	**Sn**	**23 46 05.5**	**0.0**
GUR	**Goura**	**1.56**	**317**	P	**Pn**	**23 45 46.0**	**+0.4**
KLV	**Kalavryta, Ach**	**1.74**	**316**	P	**Pn**	**23 45 48.2**	**+0.3**
IDI	**Anoyia**	**1.80**	**147**	P	**Pn**	**23 45 48.1**	**-0.7**
AIOA	**Agios Ioannis,**	**1.90**	**317**	P	**Pn**	**23 45 50.0**	**+0.1**

*IDC **16** 23:59:18.3±1.3, 6°.56S×128°.53E, h226km±18km, mb3.0/1, mbtmp4.0/6, Error ellipse: s-maj=24.2km s-min=12.9km az=113.0*

ISC 16 23:59:17.8±0.9, 6°.67S±0°.07×128°.7E±0°.1, h200km, n6, σ3s27/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.06**	**234**	P	**Pn**	**00 00 48.4**	**+2.5**
	46nm,0.5s,baz=229,slow=0.5,SNR=7.5						
BATI				S	**Sn**	**00 01 55.9**	**+0.3**
	22nm,0.3s,baz=95,slow=16,SNR=1.5						
SIJI	**Sorong**	**6.32**	**25**	P	**Pn**	**00 00 51.2**	**+1.8**
	14nm,0.4s,baz=200,slow=15,SNR=24						
SIJI				S	**Sn**	**00 02 00.7**	**-1.2**
	5.1nm,0.4s,baz=275,slow=23,SNR=1.5						
FITZ	**Fitzroy Crossi**	**11.73**	**194**	P	**Pn**	**00 01 58.6**	**-0.8**
	2.5nm,0.3s,baz=6.4,slow=8.0,SNR=20						
FITZ				S	**Sn**	**00 04 05.2**	**-5.1**
	3.0nm,0.7s,baz=131,slow=6.7,SNR=2.3						
WRA	**Warramunga Arr**	**14.31**	**158**	P	**Pn**	**00 02 30.9**	**-0.8**
	0.5nm,0.6s,baz=328,slow=13,SNR=8.8						
WRA				S	S	00 05 05.5	-5.4
	0.4nm,0.3s,baz=335,slow=22,SNR=7.4						
ASAR	**Alice Springs**	**17.64**	**164**	P	**P**	**00 03 10.9**	**+1.1**
	3.8nm,0.5s,baz=334,slow=9.2,SNR=65						
ASAR				S	**S**	**00 06 27.6**	**+4.8**
	0.4nm,0.7s,baz=347,slow=24,SNR=1.6						
MKAR	**Makanchi Array**	**67.22**	**327**	P	**P**	**00 09 47.2**	**-3.4**
	0.2nm,0.4s,baz=131,slow=8.0,SNR=5.3						
	0.2nm,0.4s						

SDD 17 00:06:49.3±2.1, 19°.45N×67°.30W, h18km±252km, MD3.5, ML2.5, MW3.0, 7C-1D, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.99**	**170**	⇑eP	g	00 07 08.0	0.0
AGPR				IAML		00 07 27.6	
	comp=N,144nm,2.7s						
PRSN	**Puerto Rico Se**	**1.23**	**173**	⇑eP	g	00 07 10.9	-0.7
PRSN				⇑eSg	Sn	00 07 27.9	+0.1
PRSN				IAML		00 07 28.9	
	comp=N,100nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.45**	**173**	eP	g	00 07 12.9	-1.6
CRPR				⇑eSg	Sn	00 07 33.1	+0.1
CRPR				IAML		00 07 33.6	
	comp=N,50nm,1.1s						
SJG	**San Juan**	**1.72**	**141**	⇑eP	g	00 07 19.4	-0.9
MIDR	**Miches**	**1.72**	**255**	⇑eP	g	00 07 18.7	+0.4
MIDR				IAML		00 08 04.4	
	comp=N,36nm,2.3s						
SMDR	**Samana, DR**	**1.79**	**265**	⇑eSg	Sb	00 07 43.7	-0.1
SMDR				IAML		00 07 44.0	
	comp=N,96nm,0.8s						
HATOM	**Hato Mayor del**	**2.08**	**252**	⇓eP	g	00 07 24.9	+1.6
HATOM				IAML		00 08 37.2	
	comp=N,25nm,1.6s						

*SJA **17** 00:17:40.8±0.7, 19°.95S×69°.79W, h67km±4km, ML3.3, MW3.5*
*GUC **17** 00:17:41.7±0.8, 19°.93S×69°.84W, h68km±3km, ML3.3*

ISC 17 00:17:43.1±1.3, 19°.93S±0°.03×69°.85W±0°.05, h57km±7km, n26, σ1s14/46, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**0.25**	**47**	⇓eP	**Pn**	**00 17 52.3**	**-0.5**
PB11				eS	**Sn**	**00 18 01.2**	**+1.5**
PB11				IAML		00 18 01.5	
	comp=E,4μm,0.4s						
PB11	**IPOC Station P**	**0.25**	**47**	eP	**Pn**	**00 17 51.7**	**-1.1**
PB11				IAML		00 18 01.3	
	comp=Z,1μm,0.1s						
HMBC	**Humberstone**	**0.35**	**186**	⇓eP	**Pn**	**00 17 53.3**	**-0.3**
HMBC				eS	**Sn**	**00 18 01.9**	**+0.8**
HMBC				IAML		00 18 02.3	
	comp=E,2μm,0.4s						
HMBC	**Humberstone**	**0.35**	**186**	eP	**Pn**	**00 17 53.0**	**-0.6**
HMBC				IAML		00 18 04.2	
	comp=Z,1μm,0.2s						
TA02	**Huaiquique**	**0.43**	**218**	eP	**Pn**	**00 17 54.1**	**0.0**
TA02				eS	**Sn**	**00 18 03.3**	**+1.2**
TA02	**Huaiquique**	**0.43**	**218**	eP	**Pn**	**00 17 53.5**	**-0.7**
TA02				eS	**Sn**	**00 18 03.0**	**+0.8**
TA02				IAML		00 18 05.3	
	comp=Z,4μm,0.2s						
PX03	**IPOC Station P**	**0.51**	**157**	eP	**Pn**	**00 17 53.8**	**-1.4**
GO01	**Chusmiza**	**0.67**	**67**	eP	**Pn**	**00 17 56.1**	**-1.2**
GO01				eS	**Sn**	**00 18 07.5**	**-0.1**
GO01	**Chusmiza**	**0.67**	**67**	eP	**Pn**	**00 17 56.1**	**-1.2**
GO01				eS	**Sn**	**00 18 07.5**	**-0.1**
GO01				IAML		00 18 08.8	
	comp=Z,3μm,0.1s						
TA01	**Diego Aracena**	**0.70**	**206**	⇑eP	**Pn**	**00 17 56.7**	**-0.6**
TA01				eS	**Sn**	**00 18 08.1**	**+0.5**
TA01				IAML		00 18 09.1	
	comp=E,1μm,0.3s						
TA01	**Diego Aracena**	**0.70**	**206**	eP	**Pn**	**00 17 56.5**	**-0.8**
TA01				eS	**Sn**	**00 18 08.1**	**+0.5**
TA01				IAML		00 18 08.5	
	comp=Z,443nm,0.2s						
PX02	**IPOC Station P**	**1.02**	**341**	eP	**Pn**	**00 17 59.9**	**-1.5**
PX02				eS	**Sn**	**00 18 14.2**	**-0.7**
PB02	**IPOC Station P**	**1.38**	**182**	eP	**Pn**	**00 18 05.8**	**-0.5**
PB02				eS	**Sn**	**00 18 24.0**	**+0.3**
PB02				IAML		00 18 33.9	
	comp=E,708nm,0.3s						
PB02	**IPOC Station P**	**1.38**	**182**	eP	**Pn**	**00 18 05.6**	**-0.7**
PB02				eS	**Sn**	**00 18 21.8**	**-1.9**
PB02				IAML		00 18 25.7	
	comp=Z,542nm,0.3s						
PB12	**IPOC Station P**	**1.39**	**341**	eP	**Pn**	**00 18 05.5**	**-0.9**
PB12				eS	**Sn**	**00 18 23.9**	**+0.2**
PB12				IAML		00 18 25.6	
	comp=E,594nm,0.2s						
PB12	**IPOC Station P**	**1.39**	**341**	eP	**Pn**	**00 18 05.5**	**-0.9**
PB12				eS	**Sn**	**00 18 24.1**	**+0.4**
PB12				IAML		00 18 25.9	
	comp=Z,315nm,0.3s						
PB16	**IPOC Station P**	**1.62**	**12**	⇓eP	**Pn**	**00 18 09.8**	**-0.1**
PB16				eS	**Sn**	**00 18 32.2**	**+2.2**
PB16	**IPOC Station P**	**1.62**	**12**	eP	**Pn**	**00 18 09.2**	**-0.7**
PB16				eS	**Sn**	**00 18 32.6**	**+2.6**
AP01	**Chacalluta**	**1.62**	**343**	⇑eP	**Pn**	**00 18 08.9**	**-0.5**
AP01				eS	**Sn**	**00 18 29.7**	**+0.5**
AP01				IAML		00 18 32.0	
	comp=E,1μm,0.3s						
AP01	**Chacalluta**	**1.62**	**343**	eP	**Pn**	**00 18 09.1**	**-0.3**
AP01				eS	**Sn**	**00 18 30.6**	**+1.4**
AP01				IAML		00 18 35.9	
	comp=Z,439nm,0.2s						
PB07	**IPOC Station P**	**1.79**	**181**	⇑eP	**Pn**	**00 18 11.1**	**-0.8**
PB07				eS	**Sn**	**00 18 34.7**	**+1.1**
PB07				IAML		00 18 39.2	
	comp=E,357nm,0.7s						
PB09	**IPOC Station P**	**1.94**	**163**	⇑eP	**Pn**	**00 18 13.9**	**0.0**
PB09				eS	**Sn**	**00 18 39.0**	**+1.7**
PB09				IAML		00 18 46.2	
	comp=E,193nm,0.5s						
PB09	**IPOC Station P**	**1.94**	**163**	eP	**Pn**	**00 18 13.3**	**-0.6**
PB09				eS	**Sn**	**00 18 40.3**	**+3.0**
PB09				IAML		00 18 43.7	
	comp=Z,195nm,0.7s						
PB03	**IPOC Station P**	**2.11**	**178**	eP	**Pn**	**00 18 15.6**	**-0.7**
PB03				IAML		00 18 47.0	
	comp=E,202nm,0.6s						
PB03	**IPOC Station P**	**2.11**	**178**	eP	**Pn**	**00 18 15.4**	**-0.8**
PB03				IAML		00 18 45.4	
	comp=Z,163nm,0.4s						
PB05	**IPOC Station P**	**2.93**	**186**	eP	**Pn**	**00 18 25.9**	**-1.4**
PB05				eS	Sn	00 18 49.4	-12
PB05				IAML		00 19 20.6	
	comp=Z,46nm,0.6s						

*UPP **17** 00:17:54.9±0.3, 67°.82N×20°.20E, h1km±1km, ML2.8, Suspected explosion*
*DNK **17** 00:17:55.2±1.3, 67°.87N×20°.15E, h0km, ML2.8(UPP), Explosion*

ISC 17 00:17:54.8±1.0, 67°.82N±0°.03×20°.22E±0°.02, h0km, n20, σ0s45/28, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**18**	P	**Pg**	**00 17 57.4**	**-0.1**
	baz=225						
KUA				S	**Sg**	**00 17 59.3**	**0.0**
KUA	**Kurravaara**	**0.14**	**18**	P	**Pg**	**00 17 57.4**	**-0.1**
	baz=225						
KUA				S	**Sg**	**00 17 59.3**	**0.0**
RATU	**Laukkuluspa**	**0.24**	**271**	P	**Pg**	**00 17 59.4**	**0.0**
RATU				S	**Sg**	**00 18 02.6**	**+0.1**
RATU	**Laukkuluspa**	**0.24**	**271**	P	**Pg**	**00 17 59.4**	**0.0**
RATU				S	**Sg**	**00 18 02.6**	**+0.1**
NIKU	**Nikkaluokta**	**0.45**	**276**	P	**Pg**	**00 18 03.3**	**-0.1**
NIKU				S	**Sg**	**00 18 09.4**	**+0.1**
NIKU	**Nikkaluokta**	**0.45**	**276**	P	**Pg**	**00 18 03.3**	**-0.1**
NIKU				S	**Sg**	**00 18 09.4**	**+0.1**
LANU	**Lannavaara**	**0.71**	**70**	P	**Pg**	**00 18 08.1**	**-0.3**
LANU				S	**Sg**	**00 18 18.0**	**+0.5**
LANU	**Lannavaara**	**0.71**	**70**	P	**Pg**	**00 18 08.1**	**-0.3**
LANU				S	**Sg**	**00 18 18.0**	**+0.5**
DUNU	**Dundret**	**0.72**	**169**	S	**Sg**	**00 18 18.7**	**+1.0**
DUNU	**Dundret**	**0.72**	**169**	S	**Sg**	**00 18 18.7**	**+1.0**
MASU	**Masugnsbyn**	**0.77**	**117**	P	**Pg**	**00 18 09.7**	**+0.1**
MASU	**Masugnsbyn**	**0.77**	**117**	P	**Pg**	**00 18 09.7**	**+0.1**
SALU	**Saltoluokta**	**0.79**	**237**	eP	**Pn**	**00 18 12.8**	**-0.5**
SALU	**Saltoluokta**	**0.79**	**237**	P	**Pg**	**00 18 09.8**	**-0.1**
SALU	**Saltoluokta**	**0.79**	**237**	P	**Pg**	**00 18 09.8**	**-0.1**
KIF	**Kilpisjarvi**	**1.21**	**10**	eP	**Pn**	**00 18 19.3**	**+0.4**
PAJU	**Pajala**	**1.37**	**124**	P	**Pg**	**00 18 20.2**	**-0.8**
PAJU	**Pajala**	**1.37**	**124**	P	**Pg**	**00 18 20.2**	**-0.8**
ERTU	**Ertsjaerv**	**1.49**	**148**	P	**Pn**	**00 18 22.5**	**-0.3**
ERTU	**Ertsjaerv**	**1.49**	**148**	P	**Pn**	**00 18 22.5**	**-0.3**

*UPP **17** 00:20:22.8±0.3, 67°.85N×20°.20E, h0km±1km, ML2.8, Suspected explosion*
*DNK **17** 00:20:23.1±1.6, 67°.89N×20°.15E, h0km, ML2.8(UPP), Explosion*

ISC 17 00:20:22.5±1.0, 67°.82N±0°.03×20°.25E±0°.03, h0km, n21, σ0s43/29, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**14**	P	**Pg**	**00 20 25.3**	**+0.1**
	baz=232						
KUA				S	**Sg**	**00 20 27.1**	**+0.1**
KUA	**Kurravaara**	**0.14**	**14**	P	**Pg**	**00 20 25.3**	**+0.1**
	baz=232						
KUA				S	**Sg**	**00 20 27.1**	**+0.1**
RATU	**Laukkuluspa**	**0.25**	**272**	P	**Pg**	**00 20 27.4**	**+0.2**
RATU				S	**Sg**	**00 20 30.6**	**+0.2**
RATU	**Laukkuluspa**	**0.25**	**272**	P	**Pg**	**00 20 27.4**	**+0.2**
RATU				S	**Sg**	**00 20 30.6**	**+0.2**
RATU	**Laukkuluspa**	**0.25**	**272**	P	**Sg**	**00 20 30.5**	**+0.1**
NIKU	**Nikkaluokta**	**0.46**	**277**	P	**Pg**	**00 20 31.3**	**0.0**
NIKU				S	**Sg**	**00 20 37.8**	**+0.5**
NIKU	**Nikkaluokta**	**0.46**	**277**	P	**Pg**	**00 20 31.3**	**0.0**
N

λ74.00000°. NP2:φ8327.00000°,δ60.00000°,λ100.00000°. Principal axes: T 1.5300, Plg73.0000°, Azm261.0000°; N -0.0500, Plg8.0000°, Azm142.0000°; P -1.4800, Plg15.0000°, Azm50.0000°:

GCMT **17** 00:28:18.1±0.1,33.04S±0.01×179.93W±0.01, h168km, MW5.5/153,Moment Tensor Solution. s139,c209; s153,c256; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.65±.02; $M_{\theta\theta}$-1.39±.03; $M_{\phi\phi}$-0.26±.03; $M_{r\theta}$-0.41±.02; $M_{r\phi}$0.54±.02; $M_{\theta\phi}$0.88±.02; Best double couple: Mo1.88700×10^{17} NP1:φ97.00000°,δ35.00000°, λ61.00000°. NP2:φ310.00000°,δ60.00000°,λ109.00000°. Principal axes: T 2.0050, Plg69.0000°, Azm261.0000°; N -0.2450, Plg16.0000°, Azm121.0000°; P -1.7690, Plg13.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC **17** 00:28:18.1±1.7,33.11S±0.07×179.87E±0.10,h178km±3km, mb5.2/219,Mww5.4/32 Error ellipse: s-maj=12.4km s-min=9.5km az=117.0

ISC 17 00:28:15.7±0.4,**33.17S**±0.03×**179.99W**±0.04, **h171**km±3km,**h171**km;**pP-P,n934,**σ1s**73**/952,**mb5.2**/198, **58C-38D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.28**	**25**	P			Pn	00 29 15.6	-4.5
GLKZ				S			**Sn**	**00 30 03.9**	**-6.5**
RAO	**Raoul Island**	**4.29**	**25**	P			**Pn**	**00 29 16.5**	**-3.7**
	2μm,0.3s,baz=64,slow=18,SNR=26								
RAO				S			**Sn**	**00 30 05.2**	**-5.4**
	11μm,0.5s,baz=273,slow=23,SNR=22								
RAO	**Raoul Island**	**4.29**	**25**				**Pn**	**00 29 16.1**	**-4.1**
RAO	**Raoul Island**	**4.29**	**25**	P			**Pn**	**00 29 16.5**	**-3.7**
RAO	**Raoul Island**	**4.29**	**25**	S			**Sn**	**00 30 06.7**	**-4.0**
RAO	**Raoul Island**	**4.29**	**25**	P			**Pn**	**00 29 16.4**	**-3.9**
RAO				S			**Sn**	**00 30 04.7**	**-6.0**
RIZ	**Raoul Island**	**4.29**	**25**	P			Pn	00 29 10.9	-9.4
RIZ				S			Sn	00 29 59.9	-11
MXZ	**Matakaoa Point**	**4.60**	**197**	Pn			**Pn**	**00 29 22.1**	**-2.1**
MXZ	**Matakaoa Point**	**4.60**	**197**	P			**Pn**	**00 29 21.8**	**-2.3**
MXZ	**Matakaoa Point**	**4.60**	**197**	S			**Sn**	**00 30 11.7**	**-6.1**
MXZ	**Matakaoa Point**	**4.60**	**197**	P			**Pn**	**00 29 22.0**	**-2.2**
MXZ				S			**Sn**	**00 30 15.8**	**-2.0**
WMGZ	**Waiomatatini S**	**4.82**	**195**	P			**Pn**	**00 29 25.6**	**-1.4**
WMGZ				S			**Sn**	**00 30 22.3**	**-0.7**
GRZ	**Great Barrier**	**4.85**	**229**	P			**Pn**	**00 29 29.7**	**+2.3**
WSRZ	**White Island S**	**4.92**	**207**	P			**Pn**	**00 29 27.1**	**-1.2**
WIZ	**White Island**	**4.92**	**207**	P			**Pn**	**00 29 27.4**	**-0.9**
HAZ	**Te Kaha**	**4.92**	**201**	P			**Pn**	**00 29 27.8**	**-0.6**
HAZ				S			**Sn**	**00 30 25.7**	**+0.3**
PKGZ	**Pakihiroa**	**4.94**	**198**	P			**Pn**	**00 29 27.0**	**-1.7**
PKGZ				S			**Sn**	**00 30 24.2**	**-0.7**
KUZ	**Kuaotunu**	**5.01**	**223**	P			**Pn**	**00 29 30.9**	**+1.3**
KUZ	**Kuaotunu**	**5.01**	**223**	P			**Pn**	**00 29 31.9**	**+2.4**
PUZ	**Puketiti**	**5.09**	**196**	P			**Pn**	**00 29 28.3**	**-2.3**
PUZ				S			**Sn**	**00 30 27.1**	**-2.4**
MYRZ	**Mayor Island**	**5.13**	**216**	P			**Pn**	**00 29 32.9**	**+1.7**
RUGZ	**Raukumara Rang**	**5.15**	**201**	P			**Pn**	**00 29 29.2**	**-2.2**
RUGZ				S			**Sn**	**00 30 29.4**	**-1.5**
TWGZ	**Tauwhareparae**	**5.26**	**198**	P			**Pn**	**00 29 31.4**	**-1.5**
TWGZ				S			**Sn**	**00 30 32.4**	**-1.0**
WHRZ	**Whale Island**	**5.29**	**207**	P			**Pn**	**00 29 32.2**	**-1.0**
WCZ	**Waipu Caves**	**5.43**	**238**	P			**Pn**	**00 29 38.0**	**+2.9**
OPRZ	**Ohinepanea**	**5.45**	**210**	P			**Pn**	**00 29 34.5**	**-0.7**
TGRZ	**Tauranga**	**5.48**	**213**	P			**Pn**	**00 29 35.5**	**-0.2**
CNGZ	**Carnagh Statio**	**5.50**	**195**	P			**Pn**	**00 29 33.4**	**-2.5**
CNGZ				S			**Sn**	**00 30 38.7**	**-0.3**
MARZ	**Manawahe**	**5.52**	**209**	P			**Pn**	**00 29 35.0**	**-1.2**
MWZ	**Matawai**	**5.53**	**201**	P			**Pn**	**00 29 33.9**	**-2.5**
TKGZ	**Te Karaka**	**5.54**	**198**	P			**Pn**	**00 29 34.7**	**-2.7**
MKAZ	**Moumakai**	**5.59**	**224**	P			**Pn**	**00 29 39.6**	**+2.6**
EDRZ	**Edgecumbe**	**5.60**	**208**	P			**Pn**	**00 29 36.2**	**-1.1**
URZ	**Urewera**	**5.60**	**204**	P			**Pn**	**00 29 34.9**	**-2.3**
	415nm,0.4s,baz=29,slow=3.3,SNR=132								
URZ				S			**Sn**	**00 30 36.0**	**-5.2**
	1μm,0.6s,baz=194,slow=14,SNR=4.3								
URZ	**Urewera**	**5.60**	**204**	P			**Pn**	**00 29 34.5**	**-2.7**
URZ	**Urewera**	**5.60**	**204**	S			**Sn**	**00 30 37.0**	**-4.3**
URZ	**Urewera**	**5.60**	**204**	P			**Pn**	**00 29 34.7**	**-2.6**
ETAZ	**East Tamaki Re**	**5.62**	**226**	P			**Pn**	**00 29 40.3**	**+2.7**
LIRZ	**Lichensteins R**	**5.66**	**210**	P			**Pn**	**00 29 37.6**	**-0.4**
HBAZ	**Herne Bay Bore**	**5.68**	**228**	P			**Pn**	**00 29 41.5**	**+3.3**
EPAZ	**Eden Park BICE**	**5.69**	**228**	P			**Pn**	**00 29 41.6**	**+3.2**
OUZ	**Omahuta**	**5.70**	**247**	P			**Pn**	**00 29 40.2**	**+2.2**
OUZ	**Omahuta**	**5.70**	**247**	P			**Pn**	**00 29 40.9**	**+2.3**
RAGZ	**Rawiri**	**5.72**	**201**	P			**Pn**	**00 29 36.5**	**-2.4**
KMRZ	**Kaimai**	**5.73**	**214**	P			**Pn**	**00 29 39.2**	**+0.3**
KARZ	**Kaharoa**	**5.73**	**211**	P			**Pn**	**00 29 38.4**	**-0.6**
MKRZ	**Makatiti**	**5.74**	**209**	P			**Pn**	**00 29 38.9**	**-0.2**
KBAZ	**Karaka Road Bo**	**5.74**	**226**	P			**Pn**	**00 29 42.2**	**+3.1**
OMRZ	**Omania**	**5.75**	**210**	P			**Pn**	**00 29 38.4**	**-0.8**
TARZ	**Mount Tarawera**	**5.80**	**208**	P			**Pn**	**00 29 38.9**	**-1.1**
RIGZ	**Rimuhau**	**5.82**	**198**	P			**Pn**	**00 29 37.3**	**-2.9**
NGRZ	**Ngongotaha**	**5.82**	**211**	P			**Pn**	**00 29 39.9**	**-0.3**
TOZ	**Tahuroa Road**	**5.85**	**218**	Pn			**Pn**	**00 29 40.6**	**+0.1**
TOZ	**Tahuroa Road**	**5.85**	**218**	P			**Pn**	**00 29 41.9**	**+1.3**
AWAZ	**Awhitu Peninsu**	**5.87**	**227**	P			**Pn**	**00 29 44.0**	**+3.2**
HLRZ	**Highlands Stat**	**5.88**	**209**	P			**Pn**	**00 29 40.0**	**-0.9**
UTU	**Utuhina**	**5.88**	**211**	P			**Pn**	**00 29 41.1**	**+0.1**
RRRZ	**Republican Roa**	**5.89**	**208**	P			**Pn**	**00 29 39.7**	**-1.3**
MUGZ	**Murupara**	**5.91**	**206**	P			**Pn**	**00 29 39.2**	**-2.2**
RTZ	**Ruatahuna**	**5.96**	**204**	P			**Pn**	**00 29 38.6**	**-3.5**
HSRZ	**Hossack Road**	**5.97**	**210**	P			**Pn**	**00 29 41.3**	**-0.9**
PRGZ	**Paritu Road**	**5.99**	**196**	P			**Pn**	**00 29 40.0**	**-2.5**
SNGZ	**Shannon Statio**	**6.00**	**200**	P			**Pn**	**00 29 39.7**	**-2.9**
HRRZ	**Handcock Road**	**6.03**	**209**	P			**Pn**	**00 29 42.3**	**-0.5**
PRRZ	**Plateau Road**	**6.08**	**208**	P			**Pn**	**00 29 41.4**	**-2.1**
KNZ	**Kokohu**	**6.14**	**197**	P			**Pn**	**00 29 40.7**	**-3.6**
ALRZ	**Allen Road**	**6.15**	**208**	P			**Pn**	**00 29 42.2**	**-2.3**
WPRZ	**Whakapapatarin**	**6.19**	**209**	P			**Pn**	**00 29 43.5**	**-1.5**
RAHZ	**Arahi**	**6.20**	**202**	P			**Pn**	**00 29 41.9**	**-3.3**
MHGZ	**Mahia Peninsul**	**6.21**	**195**	P			**Pn**	**00 29 41.6**	**-3.6**
MTHZ	**Maungataniwha**	**6.22**	**203**	P			**Pn**	**00 29 41.8**	**-3.7**
TLZ	**Tolley Road**	**6.30**	**214**	P			**Pn**	**00 29 46.4**	**-0.1**
KUTZ	**Kaahu Road**	**6.30**	**211**	P			**Pn**	**00 29 45.7**	**-0.9**
WHHZ	**Waihua**	**6.31**	**200**	P			**Pn**	**00 29 43.1**	**-3.5**
MRHZ	**Matea Rd**	**6.36**	**206**	P			**Pn**	**00 29 43.7**	**-3.5**
WHTZ	**Whakaora**	**6.39**	**210**	P			**Pn**	**00 29 46.6**	**-1.2**
NMHZ	**Naumai**	**6.46**	**203**	P			**Pn**	**00 29 45.2**	**-3.4**
WAZ	**Wairara**	**6.53**	**211**	P			**Pn**	**00 29 47.7**	**-1.8**
HATZ	**Hinemaiaia**	**6.53**	**208**	P			**Pn**	**00 29 46.5**	**-3.0**
ARHZ	**Aropaoanui**	**6.55**	**201**	P			**Pn**	**00 29 45.8**	**-3.9**
BKZ	**Black Stump Fm**	**6.62**	**204**	P			**Pn**	**00 29 47.0**	**-3.7**
BKZ	**Black Stump Fm**	**6.62**	**204**	S			**Sn**	**00 31 01.3**	**-4.4**
BKZ	**Black Stump Fm**	**6.62**	**204**	P			**Pn**	**00 29 47.1**	**-3.7**
RATZ	**Rangitukua**	**6.64**	**210**	P			**Pn**	**00 29 49.1**	**-1.9**
RITZ	**Rihia Road**	**6.70**	**209**	P			**Pn**	**00 29 49.2**	**-2.6**
KATZ	**Kakaramea**	**6.76**	**210**	P			**Pn**	**00 29 50.6**	**-2.1**
HIZ	**Hauiti**	**6.78**	**217**	P			**Pn**	**00 29 53.1**	**+0.3**
HIZ	**Hauiti**	**6.78**	**217**	P			**Pn**	**00 29 53.4**	**+0.7**
MCHZ	**McNeill Hill**	**6.81**	**202**	P			**Pn**	**00 29 48.9**	**-4.3**
NTVZ	**North Tongarir**	**6.88**	**209**	P			**Pn**	**00 29 51.3**	**-2.9**
TMVZ	**Te Maari**	**6.88**	**209**	P			**Pn**	**00 29 51.1**	**-3.2**
KWHZ	**Kaweka Forest**	**6.88**	**204**	P			**Pn**	**00 29 49.7**	**-4.5**
KRVZ	**Karewarewa**	**6.89**	**210**	P			**Pn**	**00 29 51.5**	**-2.8**
ETVZ	**East Tongariro**	**6.89**	**209**	P			**Pn**	**00 29 51.1**	**-3.3**
WTVZ	**West Tongariro**	**6.93**	**210**	P			**Pn**	**00 29 51.7**	**-3.1**
NNVZ	**North Ngauruho**	**6.93**	**210**	P			**Pn**	**00 29 52.0**	**-2.9**
OTVZ	**Oturere**	**6.94**	**209**	P			**Pn**	**00 29 51.8**	**-3.2**
TWVZ	**Taurewa**	**6.96**	**211**	P			**Pn**	**00 29 52.4**	**-2.8**
SNVZ	**South Ngauruho**	**6.97**	**209**	P			**Pn**	**00 29 52.3**	**-3.1**
NGZ	**Ngauruhoe**	**6.97**	**210**	P			**Pn**	**00 29 52.3**	**-3.2**
COVZ	**Chateau Observ**	**7.02**	**210**	P			**Pn**	**00 29 52.9**	**-3.1**
TUVZ	**Tukino**	**7.03**	**209**	P			**Pn**	**00 29 53.3**	**-3.0**
FWVZ	**Far West T-bar**	**7.06**	**209**	P			**Pn**	**00 29 53.1**	**-3.6**
MAVZ	**Matarangi**	**7.07**	**209**	P			**Pn**	**00 29 53.4**	**-3.5**
WHVZ	**Whangaehu Hut**	**7.07**	**209**	P			**Pn**	**00 29 53.6**	**-3.2**
KAHZ	**Kahuranaki**	**7.08**	**200**	P			Pn	00 29 52.1	-4.6
KRHZ	**Kereru**	**7.09**	**203**	P			Pn	00 29 51.8	-5.2
TRVZ	**Turoa**	**7.10**	**209**	P			**Pn**	**00 29 53.8**	**-3.4**
WNVZ	**Wahianoa**	**7.10**	**209**	P			**Pn**	**00 29 53.3**	**-3.9**
MOVZ	**Moawhango**	**7.11**	**208**	P			Pn	00 29 52.6	-4.6
PKVZ	**Pokaka**	**7.18**	**210**	P			**Pn**	**00 29 54.8**	**-3.3**
PXZ	**Pawanui**	**7.30**	**199**	P			Pn	00 29 54.0	-5.7
VRZ	**Vera Road**	**7.30**	**214**	P			**Pn**	**00 29 58.7**	**-1.0**
PNHZ	**Pukenui**	**7.39**	**203**	P			Pn	00 29 55.3	-5.7
PRHZ	**Porangahau**	**7.58**	**200**	P			Pn	00 29 57.4	-6.0
KHEZ	**Kahui Hut**	**7.80**	**217**	P			**Pn**	**00 30 05.8**	**-0.5**
KHEZ	**Kahui Hut**	**7.80**	**217**	S			**Sn**	**00 31 32.6**	**-1.1**
BFZ	**Birch Farm**	**8.08**	**201**	P			Pn	00 30 03.1	-6.9
BFZ	**Birch Farm**	**8.08**	**201**	S			**Sn**	**00 31 35.0**	**-5.3**
SNZO	**South Karori**	**9.16**	**206**	P			Pn	00 30 17.3	-6.9
SNZO	**South Karori**	**9.16**	**206**	S			**Sn**	**00 31 59.5**	**-6.6**
TKNZ	**Takaka Hill**	**9.66**	**214**				Pn	00 30 25.1	-5.6
QRZ	**Quartz Range**	**9.70**	**216**	P			Pn	00 30 25.1	-6.2
KHZ	**Kahutara**	**10.55**	**207**	P			Pn	00 30 34.7	-7.7
CTZ	**Chatham Island**	**10.87**	**167**				**Pn**	**00 30 45.5**	**-1.1**
CTZ	**Chatham Island**	**10.87**	**167**	S			Sn	00 32 35.9	-11
CTZ	**Chatham Island**	**10.87**	**167**	P			**Pn**	**00 30 47.5**	**+0.9**
CTZ				S			**Sn**	**00 32 39.2**	**-7.9**
NFK	**Norfolk Island**	**11.14**	**288**	P			**P**	**00 30 54.0**	**-3.5**
	comp=Z,488nm,1.1s								
LTZ	**Lake Taylor**	**11.37**	**210**				**Pn**	**00 30 48.9**	**-4.2**
INZ	**Inchbonnie**	**11.69**	**213**				**Pn**	**00 30 54.4**	**-2.8**
MQZ	**McQueen's Vall**	**11.99**	**207**				Pn	00 30 53.5	-7.6
RPZ	**Rata Peaks**	**12.64**	**211**	P			Pn	00 31 03.0	-6.5
	comp=Z,220nm,0.4s,baz=192,slow=0.8,SNR=19								
RPZ				S			Sn	00 33 14.8	-15
	comp=Z,325nm,1.0s,baz=186,slow=4.1,SNR=13								
RPZ				LR			LR	00 35 57.7	
	comp=Z,568nm,21.7s,baz=260,slow=36								
RPZ	**Rata Peaks**	**12.64**	**211**				Pn	00 31 02.8	-6.8
RPZ	**Rata Peaks**	**12.64**	**211**	P			Pn	00 31 02.6	-6.9
ODZ	**Otahua Downs**	**13.90**	**209**				**Pn**	**00 31 24.8**	**-0.5**
ODZ	**Otahua Downs**	**13.90**	**209**	P			Pn	00 31 18.8	-6.5
JCZ	**Jackson Bay**	**13.97**	**216**	P			Pn	00 31 19.7	-6.6
MSVF	**Nonsavu**	**15.47**	**353**				**Pn**	**00 31 44.7**	**-0.4**
MSVF	**Nonsavu**	**15.47**	**353**	P			**Pn**	**00 31 45.1**	**0.0**
MSVF	**Nonsavu**	**15.47**	**353**	*d*	*i*	P	**Pn**	**00 31 44.7**	**-0.4**
SYZ	**Scrubby Hill**	**15.72**	**209**	P			**Pn**	**00 31 45.6**	**-2.2**
MARNC	**Mare, Loyalty**	**15.76**	**315**	P			**P**	**00 31 52.1**	**+3.2**
OUENC	**Ouen Island, N**	**15.81**	**309**	P			**P**	**00 31 52.2**	**+2.7**
YATNC	**Mamie plateau,**	**16.04**	**310**	P			**P**	**00 31 55.4**	**+3.4**
ONTNC	**Ouen Toro**	**16.14**	**309**				**Pn**	**00 31 55.7**	**+2.5**
DZM	**Mont Dzumac**	**16.32**	**309**	P			**P**	**00 31 53.4**	**-1.8**
	comp=Z,27nm,0.7s,baz=122,slow=12,SNR=17								
DZM	**Mont Dzumac**	**16.32**	**309**				**Pn**	**00 31 57.4**	**+1.9**
DZM	**Mont Dzumac**	**16.32**	**309**	P			**Pn**	**00 31 57.7**	**+2.3**
TAVE	**Taveuni**	**16.39**	**0**	P			**P**	**00 31 55.8**	**-0.1**
PYZ	**Puysegur Point**	**16.52**	**214**	P			**P**	**00 31 54.3**	**-2.8**
NIUE	**Niue**	**16.68**	**35**	P			**P**	**00 31 55.3**	**-3.7**
	comp=Z,498nm,0.9s								
NIUE	**Niue**	**16.68**	**35**	P			**P**	**00 31 56.6**	**-2.4**
NIUE	**Niue**	**16.68**	**35**	P			**P**	**00 31 53.3**	**-5.7**
NIUE	**Niue**	**16.68**	**35**	P			**P**	**00 31 56.7**	**-2.4**
NIUE				S			S	00 34 47.4	-17
LHI	**Lord Howe Isla**	**17.78**	**270**	P			**Pn**	**00 32 13.2**	**+0.5**
	comp=Z,181nm,0.6s								
LHI	**Lord Howe Isla**	**17.78**	**270**				**P**	**00 32 11.1**	**0.0**
RTV	**Rentapao**	**18.52**	**323**	P			**Pn**	**00 32 21.0**	**-0.5**
DVP	**Devils Point**	**18.70**	**322**	P			**Pn**	**00 32 22.6**	**-0.9**
KOUNC	**Koumac, New Ca**	**18.81**	**308**	P			**Pn**	**00 32 25.4**	**+0.6**
RAR	**Rarotonga**	**21.52**	**61**	P			**P**	**00 32 50.4**	**-1.0**
	comp=Z,52nm,0.8s,baz=215,slow=9.2,SNR=7.1								
RAR				S			**S**	**00 36 49.5**	**+10**
	comp=Z,16nm,0.5s,baz=75,slow=17,SNR=2.5								
	comp=Z,52nm,0.8s								
RAR	**Rarotonga**	**21.52**	**61**				**P**	**00 32 52.0**	**+0.7**
RAR	**Rarotonga**	**21.52**	**61**	P			**P**	**00 32 52.1**	**+0.7**
RIV	**Riverview**	**24.04**	**260**	P			**P**	**00 33 13.4**	**-1.6**
	comp=Z,115nm,1.7s								
MGCD	**Mangrove Creek**	**24.16**	**262**	P			**P**	**00 33 16.7**	**+0.6**
	comp=Z,67nm,1.0s								
MGCD	**Mangrove Creek**	**24.16**	**262**	P			**P**	**00 33 19.0**	**+2.9**
ARMA	**Armidale**	**24.25**	**269**	P			**P**	**00 33 19.3**	**+2.1**
	comp=Z,52nm,1.5s								
ARMA	**Armidale**	**24.25**	**269**				**P**	**00 33 18.1**	**+1.0**
ARMA	**Armidale**	**24.25**	**269**	P			**P**	**00 33 20.0**	**+2.9**
CNB	**Canberra Magne**	**25.38**	**257**	P			**P**	**00 33 29.5**	**+2.2**
MILA	**Mila**	**25.48**	**253**	P			**P**	**00 33 30.1**	**+2.0**
	comp=Z,16nm,1.6s								
CAN	**Canberra**	**25.68**	**257**	P			**P**	**00 33 30.8**	**+0.9**
	comp=Z,29nm,0.9s								
CAN	**Canberra**	**25.68**	**257**				**P**	**00 33 30.8**	**+0.9**
CAN	**Canberra**	**25.68**	**257**	P			**P**	**00 33 30.6**	**+0.7**
CAN	**Canberra**	**25.68**	**257**	P			**P**	**00 33 30.8**	**+0.9**
CAN				pmax			pmax		
	comp=Z,38nm,1.2s								
YNG	**Young**	**26.27**	**259**	P			**P**	**00 33 36.7**	**+1.5**
	comp=Z,34nm,1.3s								
EIDS	**Eidsvold**	**26.35**	**280**	P			**P**	**00 33 36.4**	**+0.5**
	comp=Z,50nm,0.6s								
EIDS	**Eidsvold**	**26.35**	**280**				**P**	**00 33 36.5**	**+0.6**
EIDS				IAmb			IAmb	00 33 38.6	
	comp=Z,157nm,1.6s								
EIDS	**Eidsvold**	**26.35**	**280**	P			**P**	**00 33 37.2**	**+1.2**
GLAD	**Gladstone**	**26.59**	**244**	P			**P**	**00 33 39.7**	**+1.8**
TAU	**Tasmania Unive**	**27.38**	**240**				**P**	**00 33 46.5**	**+1.6**
TAU	**Tasmania Unive**	**27.38**	**240**	P			**P**	**00 33 45.1**	**+0.2**
TAU	**Tasmania Unive**	**27.38**	**240**	P			**P**	**00 33 46.5**	**+1.6**
TAU				pmax			pmax		
	comp=Z,69nm,0.7s								
MOO	**Moorlands**	**27.39**	**241**	P			**P**	**00 33 46.6**	**+1.5**
	comp=Z,144nm,0.9s								
MOO	**Moorlands**	**27.39**	**241**	P			**P**	**00 33 46.4**	**+1.3**
TOO	**Toolangi**	**28.39**	**251**	P			**P**	**00 33 54.9**	**+0.8**
	comp=Z,15nm,1.0s								
TOO	**Toolangi**	**28.39**	**251**				**P**	**00 33 55.8**	**+1.7**
TOO	**Toolangi**	**28.39**	**251**	P			**P**	**00 33 55.8**	**+1.7**
TOO				pmax			pmax		
	comp=Z,8.0nm,0.7s								
CMSA	**Cobar Meteorol**	**28.97**	**264**	P			**P**	**00 34 00.1**	**+0.9**
	comp=Z,99nm,1.0s								
CMSA	**Cobar Meteorol**	**28.97**	**264**	P			**P**	**00 34 00.3**	**+1.1**
BRAT	**Ballarat**	**29.63**	**251**	P			**P**	**00 34 04.9**	**-0.1**
TATA	**Tatamba Isabel**	**30.94**	**318**	P			**P**	**00 34 15.5**	**-1.2**
PPTF	**Pamatai, Papee**	**31.41**	**68**	P			**P**	**00 34 21.3**	**+0.4**
PPT	**Papeete**	**31.42**	**68**	P			**P**	**00 34 20.6**	**-0.3**
	comp=Z,40nm,0.8s,baz=200,slow=2.5,SNR=5.3								
PPT				LR			LR	00 44 06.0	
	comp=Z,373nm,21.9s,baz=193,slow=30								
	comp=Z,40nm,0.8s								
QLP	**Quilpie**	**31.60**	**272**	P			**P**	**00 34 23.5**	**+1.0**
	comp=Z,143nm,1.3s								
QLP	**Quilpie**	**31.60**	**272**	P			**P**	**00 34 23.5**	**+1.0**
MGBR	**Mount Gambier**	**32.28**	**251**				**P**	**00 34 29.4**	**+1.1**
MGBR				IAmb			IAmb	00 34 32.9	
	comp=Z,26nm,0.8s								
STKA	**Stephens Creek**	**32.30**	**262**	P			**P**	**00 34 28.6**	**+0.1**
	comp=Z,60nm,0.7s								
STKA	**Stephens Creek**	**32.30**	**262**	P			**P**	**00 34 28.6**	**+0.1**
	comp=Z,5.2nm,0.3s,baz=106,slow=9.5,SNR=19								
STKA				PcP			**PcP**	**00 37 11.6**	**-0.9**
	comp=Z,8.0nm,0.6s,baz=135,slow=2.9,SNR=3.2								
STKA				ScP			**ScP**	**00 40 36.5**	**-3.6**
	comp=Z,3.6nm,0.7s,baz=117,slow=2.3,SNR=3.1								
	comp=Z,5.2nm,0.3s								
STKA	**Stephens Creek**	**32.30**	**262**	P			**P**	**00 34 28.7**	**+0.2**
STKA							**PcP**	**00 37 11.2**	**-1.3**
STKA	**Stephens Creek**	**32.30**	**262**	P			**P**	**00 34 29.6**	**+1.1**
STKA	**Stephens Creek**	**32.30**	**262**	*ce*		P	**P**	**00 34 28.9**	**+0.4**
CTA	**Charters Tower**	**32.72**	**285**	LR			LR	00 45 05.0	
	comp=Z,385nm,21.5s,baz=100,slow=31								
CTA	**Charters Tower**	**32.72**	**285**	P			**P**	**00 34 33.3**	**+1.0**
CTAO	**Charters Tower**	**32.72**	**285**				**P**	**00 34 32.6**	**+0.4**
CTAO	**Charters Tower**	**32.72**	**285**	P			**P**	**00 34 33.5**	**+1.2**
CTAO	**Charters Tower**	**32.72**	**285**	P			**P**	**00 34 32.7**	**+0.4**
CTAO				pmax			pmax		
	comp=Z,121nm,0.6s								
CTAO	**Charters Tower**	**32.72**	**285**	P			**P**	**00 34 33.1**	**+0.8**
CTAO				PcP			**PcP**	**00 37 13.2**	**-0.6**
INKA	**Innaminka**	**34.14**	**269**	P			**P**	**00 34 45.3**	**+0.8**
INKA				IAmb			IAmb	00 34 47.0	
	comp=Z,114nm,1.4s								
HTT	**Hallett**	**34.19**	**258**	P			**P**	**00 34 44.4**	**-0.5**
	comp=Z,10nm,1.2s								
HTT	**Hallett**	**34.19**	**258**	P			**P**	**00 34 45.4**	**+0.5**
MTSU	**Mount Surprise**	**35.30**	**286**	P			**P**	**00 34 55.2**	**+0.7**
	comp=Z,56nm,0.6s								
BBOO	**Buckleboo**	**36.67**	**258**	P			**P**	**00 35 05.8**	**-0.2**
BBOO	**Buckleboo**	**36.67**	**258**	P			**P**	**00 35 05.4**	**-0.6**
QIS	**Mount Isa**	**37.95**	**279**	P			**P**	**00 35 17.0**	**0.0**
	comp=Z,66nm,0.7s								
QIS	**Mount Isa**	**37.95**	**279**	P			**P**	**00 35 17.1**	**+0.2**
PMG	**Port Moresby**	**38.41**	**300**	ScP			**ScP**	**00 40 59.0**	**-3.4**
	comp=Z,4.9nm,0.3s,baz=97,slow=1.9,SNR=4.0								
PMG	**Port Moresby**	**38.41**	**300**	P			**P**	**00 35 21.3**	**+0.5**
PMG	**Port Moresby**	**38.41**	**300**	*c*	*i*	P	**P**	**00 35 21.1**	**+0.3**
PMG				pmax			pmax		
	comp=Z,28nm,0.8s								
PMG	**Port Moresby**	**38.41**	**300**	P			**P**	**00 35 21.0**	**+0.3**
	comp=Z,39nm,0.7s								
COEN	**Coen**	**38.54**	**291**	P			**P**	**00 35 22.0**	**+0.1**
	comp=Z,61nm,1.4s								
COEN	**Coen**	**38.54**	**291**	P			**P**	**00 35 22.2**	**+0.3**
COEN				IAmb			IAmb	00 35 24.0	
	comp=Z,120nm,1.5s								
COEN	**Coen**	**38.54**	**291**	P			**P**	**00 35 22.4**	**+0.5**
RABL	**Rabaul**	**38.82**	**312**	P			**P**	**00 35 24.3**	**+0.1**
DRV	**Dumont d'Urvil**	**40.94**	**203**	P			**P**	**00 35 41.7**	**+0.7**
AS31	**Alice Springs**	**41.37**	**271**	P			**P**	**00 35 45.3**	**+0.1**
AS31				IAmb			IAmb	00 35 48.0	
	comp=Z,24nm,0.6s								
ASAR	**Alice Springs**	**41.37**	**271**	P			**P**	**00 35 44.7**	**-0.5**
	comp=Z,53nm,0.5s,baz=110,slow=7.4,SNR=347								
ASAR				PcP			**PcP**	**00 37 39.4**	**-0.7**
	comp=Z,6.9nm,0.5s,baz=123,slow=3.4,SNR=2.0								
ASAR				ScP			**ScP**	**00 41 10.3**	**-3.7**
	comp=Z,1.4nm,0.6s,baz=127,slow=4.0,SNR=2.7								
ASAR	

PCI Palu 64.81 287 P P 00 38 38.0 +1.5
comp=Z,198nm,1.0s
JAGI Jajag, Banyuwa 65.23 276 P P 00 38 38.2 -1.1
JAGI Jajag, Banyuwa 65.23 276 P P 00 38 39.4 +0.2
JAGI Jajag, Banyuwa 65.23 276 P P 00 38 39.7 +0.5
TOLI2 Tolitoli 65.26 289 P P 00 38 38.3 -1.1
TOLI2 IAmb IAmb 00 38 41.7
comp=Z,86nm,1.5s
TOLI2 Tolitoli 65.26 289 P P 00 38 39.6 +0.2
DAV Davao City (W) 65.32 297 P P 00 38 39.6 -0.1
MPSI Mapaga 65.50 288 P P 00 38 39.6 -1.3
comp=Z,38nm,0.9s
BLJI Banyuglugur 66.08 277 P P 00 38 45.1 +0.4
BELA Belgrano 2 67.27 173 P P 00 38 52.5 +1.2
BBKI Banjar Baru 67.41 281 P P 00 38 53.4 +0.3
SNJI Sawahan-Nganju 67.60 275 P P 00 38 55.4 +0.9
comp=Z,56nm,0.6s
SJI Sawahan 67.61 275 P P 00 38 55.0 +0.5
comp=Z,63nm,0.6s
PCJI Pacitan 67.86 275 P P 00 38 55.9 0.0
UGM Wanagama 68.56 275 P P 00 39 00.4 +0.1
MAW Mawson 69.12 201 P P 00 39 03.5 +0.6
comp=Z,58nm,0.5s,baz=134,slow=6.5,SNR=43
comp=Z,58nm,0.5s
JCJ Chichijima 69.89 324 P P 00 39 07.3 -0.8
KPJI Karang Pucung 70.20 274 P P 00 39 11.6 +1.3
BBJI Bungbulang 71.20 273 P P 00 39 15.3 -1.1
BBJI IAmb IAmb 00 39 16.5
comp=Z,23nm,0.7s
BBJI Bungbulang 71.20 273 P P 00 39 16.3 -0.2
BBJI Bungbulang 71.20 273 P P 00 39 15.7 -0.8
XMI Christmas Isla 71.28 270 P P 00 39 17.1 +0.2
KKM Kota Kinabalu 71.86 290 P P 00 39 20.8 +0.4
KKM Kota Kinabalu 71.86 290 P P 00 39 20.6 +0.2
comp=Z,1μmcomp=Z,93nm,0.7s
DBJI Dramaga 72.44 274 P P 00 39 24.6 +0.8
SBUM Sibu 72.93 285 P P 00 39 26.8 +0.1
SBUM Sibu 72.93 285 P P 00 39 28.1 +1.5
SBUM Sibu 72.93 285 P P 00 39 27.0 +0.4
ESPZ Base Esperanza 73.70 157 P P 00 39 32.3 +2.0
ELIB Princess Elisa 73.90 187 dP P 00 39 32.1 +0.5
SYO Syowa Base 74.03 194 ⇑iP P 00 39 32.1 -0.1
MG03 Isla Dawson 74.18 145 P P 00 39 35.6 +2.3
MG03 IAmb IAmb 00 39 37.0
comp=Z,44nm,0.8s
MG05 Puerto Natales 74.38 142 P P 00 39 36.6 +2.1
MG05 IAmb IAmb 00 39 37.1
comp=Z,39nm,0.8s
GO09 Cerro Castillo 74.69 142 P P 00 39 38.6 +2.2
KASI Kota Agung 74.88 273 P P 00 39 37.4 -0.6
KLSI 75.13 274 P P 00 39 37.8 -1.7
SNAA Sanae 75.43 179 ⇑P P 00 39 41.5 +1.3
comp=Z,1μm,0.3s
SNAA Sanae 75.43 179 P P 00 39 41.5 +1.3
comp=Z,73nm,0.3s,baz=204,slow=8.4,SNR=182
SNAA Sanae 75.43 179 P P 00 39 40.6 +0.3
SNAA Sanae 75.43 179 *c i* P P 00 39 41.3 +1.0
SNAA pmax pmax
comp=Z,251nm,1.1s
VNA3 Neumayer Olymp 75.65 177 ⇑P P 00 39 42.6 +1.1
comp=Z,175nm,0.5s
MDSI Maura Dua 75.70 274 P P 00 39 40.4 -2.3
NVL N'lazarevskaya 76.01 184 *e* P P 00 39 41.8 -1.7
NVL *e* 00 39 57.0
NVL *e* 00 42 37.9
NVL *e* PPP PPP 00 44 24.8
NVL *e* S S 00 49 12.0 -0.1
NVL *e* SS SS 00 54 15.9 +8.6
NVL pmax pmax
comp=Z,171nm,1.2s
VNA2 Neumayer--Watz 76.06 177 ⇑P P 00 39 45.3 +1.4
comp=Z,231nm,0.5s,baz=170,slow=6.1
VNA1 Neumayer--Stat 76.30 177 ⇑P P 00 39 46.7 +1.6
comp=Z,457nm,1.4s
AY03 Cochrane 76.83 138 P P 00 39 50.8 +2.3
AY03 IAmb IAmb 00 39 52.5
comp=Z,102nm,1.4s
PAF Port-aux-Franc 76.93 219 P P 00 39 49.8 +0.8
PAF Port-aux-Franc 76.93 219 P P 00 39 49.8 +0.8
PAF pmax pmax
comp=Z,549nm,1.5s
MASI Maura Aman, Be 78.06 274 P P 00 39 55.0 -0.9
COYC Coyhaique 78.08 137 P P 00 39 58.2 +2.7
AY01 Puyuhuapi 78.42 136 IAmb IAmb 00 40 01.0
comp=Z,83nm,1.4s
LL07 Hotel Espejo d 78.84 134 P P 00 40 01.7 +2.0
LL07 IAmb IAmb 00 40 13.5
comp=Z,96nm,1.1s
AIS Amsterdam Isla 79.10 232 P P 00 40 01.1 -0.1
JGF Kuroka 79.22 326 P P 00 40 01.7 0.0
MJAR Matsushiro Arr 79.59 327 P P 00 40 03.0 -0.7
comp=Z,9.1nm,0.9s,baz=163,slow=6.0,SNR=11
comp=Z,9.1nm,0.9s
MJAR Matsushiro Arr 79.59 327 P P 00 40 03.6 -0.1
MJAR Matsushiro Arr 79.59 327 P P 00 40 03.6 -0.1
MJAR pmax pmax
comp=Z,7.0nm,1.0s
MAJO Matsushiro 79.59 327 ⇑*e* P P 00 40 03.5 -0.2
MAJO pmax pmax
comp=Z,54nm,1.6s
LL05 Los Muermos 79.66 133 P P 00 40 06.5 +2.4
TPUB Ta-pu 79.72 306 P P 00 40 04.0 -0.7
SSLB Suanglung 79.83 307 P P 00 40 05.0 -0.3
SSLB IAmb IAmb 00 40 10.7
comp=Z,56nm,1.3s
SSLB Suanglung 79.83 307 P P 00 40 05.5 +0.2
YHNB Yeheng 80.15 308 P P 00 40 08.1 +1.0
H03S2 Juan Fernandez 80.33 124 T T 02 09 12.6
baz=235,slow=74
H03S1 Juan Fernandez 80.34 124 T T 02 09 18.8
baz=235,slow=74
H03S3 Juan Fernandez 80.35 124 T T 02 09 17.7
baz=235,slow=74
H03N3 Juan Fernandez 80.55 124 T T 02 09 11.9
baz=239,slow=72
H03N2 Juan Fernandez 80.55 124 T T 02 09 10.9
baz=239,slow=72
H03N1 Juan Fernandez 80.56 124 T T 02 09 14.1
baz=239,slow=72
PDSI Padang 80.75 275 P P 00 40 08.7 -1.8
EFI East Falkland 81.38 148 P P 00 40 15.0 +1.9
EFI East Falkland 81.38 148 *de* P P 00 40 14.5 +1.4
EFI pmax pmax
comp=Z,296nm,1.6s
EFI East Falkland 81.38 148 P P 00 40 14.9 +1.8
EFI pP pwP 00 40 59.4 +1.9
PLCA Paso Flores 81.84 134 P P 00 40 18.1 +2.2
comp=Z,27nm,0.7s,baz=237,slow=5.0,SNR=156
PLCA PKKPbc PKKPbc 00 58 45.2 +0.4
comp=Z,1.3nm,0.5s,baz=68,slow=2.1,SNR=10
comp=Z,27nm,0.7s
PLCA Paso Flores 81.84 134 P P 00 40 18.6 +2.7
PLCA Paso Flores 81.84 134 P P 00 40 18.6 +2.7
PLCA pmax pmax
comp=Z,197nm,1.8s
PLCA Paso Flores 81.84 134 P P 00 40 18.3 +2.4
PLCA pP pwP 00 41 01.8 +1.6
GO06 Curarrehue 81.96 132 IAmb IAmb 00 40 20.1
comp=Z,76nm,1.4s
JEM Erimo 82.13 333 P P 00 40 16.4 -0.5
IPM Ipoh 83.25 280 IAmb IAmb 00 40 24.2
comp=Z,48nm,1.5s
IPM Ipoh 83.25 280 P P 00 40 22.3 -1.2
BI02 San Fabin de 83.83 130 IAmb IAmb 00 40 29.7
comp=Z,128nm,1.8s
KULM Kulim 84.02 280 P P 00 40 26.4 -0.9
PSI Prapat 84.07 277 P P 00 40 26.2 -1.6
PSI Prapat 84.07 277 P P 00 40 25.2 -2.6
ASAJ Asahikawa 84.14 334 LR LR 01 10 18.0
comp=Z,136nm,21.3s,baz=171,slow=30
ML02 Panimavida 84.28 129 P P 00 40 29.4 +1.0
GSI Gunungsitoli 84.38 275 P P 00 40 28.8 -0.4
GSI Gunungsitoli 84.38 275 P P 00 40 29.0 -0.2
GSI Gunungsitoli 84.38 275 P P 00 40 29.0 -0.2
GO05 Hualane 84.40 128 P P 00 40 30.4 +1.3
GO05 IAmb IAmb 00 40 32.2
comp=Z,114nm,1.4s
QIZ Qiongzhong 84.68 297 P P 00 40 31.0 +0.5
KIWB Kanaga Island 84.70 2 P P 00 40 30.5 +0.7
ADK Adak 84.74 2 P P 00 40 31.1 +1.1
ADK Adak 84.74 2 P P 00 40 31.3 +1.3
ADK Adak 84.74 2 P P 00 40 31.1 +1.1
ADK pmax pmax
comp=Z,124nm,1.5s

ATKA Atka Island 85.16 4 P P 00 40 33.5 +1.4
BO02 Sierra Bellavi 85.28 129 PcP 00 40 36.0 -0.4
BO01 Tunca 85.32 128 P P 00 40 35.9 +2.2
KSRS Korea Array 85.39 321 P P 00 40 33.6 0.0
comp=Z,6.0nm,0.6s,baz=136,slow=5.5,SNR=20
KSRS LR LR 01 15 15.1
comp=Z,31nm,19.7s,baz=125,slow=33
comp=Z,6.0nm,0.6s
KSAR Wonju Array Be 85.40 321 P P 00 40 35.2 +1.5
KSAR Wonju Array Be 85.40 321 P P 00 40 35.2 +1.5
VA05 Santo Domingo 85.42 127 IAmb IAmb 00 40 36.9
comp=Z,37nm,1.1s
MT01 Popeta 85.53 128 PcP 00 40 36.8 -0.6
MT09 Talagante 85.76 128 P P 00 40 37.3 +1.3
MT09 IAmb IAmb 00 40 38.9
comp=Z,39nm,0.9s
VA01 Torpederas 85.78 127 P P 00 40 37.1 +1.3
BO04 La Punta 85.88 128 PcP 00 40 39.4 +0.4
BO04 IAmb IAmb 00 40 39.5
comp=Z,41nm,1.4s
MT02 Curacav 85.97 127 PcP 00 40 38.8 -0.6
MT02 IAmb IAmb 00 40 40.0
comp=Z,58nm,1.4s
MT13 San Alfonso 86.24 128 P P 00 40 40.4 +2.1
MT13 IAmb IAmb 00 40 42.0
comp=Z,97nm,1.6s
MT03 Universidad Ad 86.25 128 IAmb IAmb 00 40 41.4
comp=Z,70nm,1.3s
MT16 CCHEN 86.28 128 P P 00 40 39.9 +1.4
VA06 Catapilco 86.29 127 P P 00 40 39.8 +1.4
VA06 IAmb IAmb 00 40 41.3
comp=Z,46nm,1.2s
NIKH Nikolski High 86.33 7 P P 00 40 39.7 +1.9
PEL Peldehue 86.34 127 P P 00 40 40.4 +1.6
PEL Peldehue 86.34 127 P P 00 40 40.4 +1.6
PEL pmax pmax
comp=Z,131nm,1.5s
PEL Peldehue 86.34 127 P P 00 40 40.4 +1.6
PEL pP pwP 00 41 24.4 +1.2
YSS Yuzhno-Sakhali 86.53 335 P P 00 40 40.4 +1.5
YSS IAmb IAmb 00 40 41.0
comp=Z,36nm,0.8s
YSS Yuzhno-Sakhali 86.53 335 *e* P P 00 40 39.3 +0.4
YSS *e* 00 41 20.7
YSS pmax pmax
comp=Z,50nm,0.8s
MT08 Bocatoma Ro 86.60 128 IAmb IAmb 00 40 44.1
comp=Z,60nm,1.6s
VA03 San Esteban 86.67 127 IAmb IAmb 00 40 42.8
comp=Z,67nm,1.6s
NJ2 Nanjing 86.79 312 *e* P P 00 40 44.3 +3.7
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
CO04 Los Peladeros 86.82 126 IAmb IAmb 00 40 53.1
comp=Z,58nm,1.7s
LPIG La Paz 87.42 59 LR LR 01 14 18.9
comp=Z,75nm,18.1s,baz=9.5,slow=32
CO03 El Pedregal 87.74 126 IAmb IAmb 00 40 48.6
comp=Z,78nm,1.7s
PET Petropavlovsk 87.83 347 *e* P P 00 40 45.6 +0.6
PET *e* S S 00 51 19.4 +6.6
PET *e**SS pS 00 52 14.2 +8.9
PET pmax pmax
comp=Z,32nm,0.6s
PET MLR MLR
comp=Z,100nm,17.0s
PSTR Posyet 87.90 326 *ce* P P 00 40 46.8 +1.2
GO04 Tololo Observa 88.07 125 P P 00 40 48.3 +0.9
GO04 IAmb IAmb 00 42 14.1
comp=Z,20nm,0.8s
PEA0B Petropavlovsk- 88.09 347 *de* P P 00 40 47.1 +0.8
PETK Petropavlovsk- 88.09 347 P P 00 40 46.3 0.0
comp=Z,23nm,0.5s,baz=122,slow=5.7,SNR=59
PETK LR LR 01 12 40.5
comp=Z,70nm,21.8s,baz=82,slow=30
comp=Z,23nm,0.5s
PETK Petropavlovsk- 88.09 347 P P 00 40 46.6 +0.4
PETK Petropavlovsk- 88.09 347 P P 00 40 46.7 +0.4
CBX Cerro Bola 88.33 49 IAmb IAmb 00 40 52.0
comp=Z,65nm,1.7s
CPE Camp Elliot 88.43 49 IAmb IAmb 00 40 52.0
comp=Z,28nm,1.3s
USRK Ussuriysk Ar. 88.56 328 P P 00 40 49.1 +0.4
comp=Z,4.2nm,0.6s,baz=122,slow=4.4,SNR=11
USRK PKKPbc PKKPbc 00 58 31.4 +0.6
comp=Z,1.4nm,0.5s,baz=282,slow=3.6,SNR=5.1
comp=Z,4.2nm,0.6s
BAR Barrett 88.56 49 P P 00 40 51.0 +1.9
BAR IAmb IAmb 00 40 52.9
comp=Z,32nm,1.4s
ESJX Sierra Juarez 88.58 50 P P 00 40 51.9 +2.6
ESJX IAmb IAmb 00 40 53.6
comp=Z,32nm,1.4s
OSI Osito Audit: C 88.59 46 P P 00 40 51.6 +2.5
OSI IAmb IAmb 00 40 52.8
comp=Z,31nm,1.1s
DPP Dos Picos Cty 88.61 49 P P 00 40 50.7 +1.5
DPP IAmb IAmb 00 40 52.8
comp=Z,31nm,1.3s
TRQA Tornquist 88.66 136 P P 00 40 51.2 +1.5
TRQA IAmb IAmb 00 40 51.8
comp=Z,79nm,1.6s
TRQA Tornquist 88.66 136 P P 00 40 51.2 +1.5
TRQA pmax pmax
comp=Z,79nm,1.6s
CO01 Juntas del Tor 88.67 125 IAmb IAmb 00 40 53.7
comp=Z,27nm,1.3s
WHN Wuhan 88.69 308 P P 00 40 50.1 +0.4
ELS Elsinore Mount 88.73 48 IAmb IAmb 00 40 53.6
comp=Z,49nm,1.6s
MHC Mount Hamilton 88.74 43 IAmb IAmb 00 40 53.5
comp=Z,68nm,1.6s
LCO Las Campanas 88.85 124 P P 00 40 53.3 +2.2
LCO IAmb IAmb 00 40 54.4
comp=Z,58nm,1.3s
LCO Las Campanas 88.85 124 P P 00 40 53.3 +2.2
LCO pmax pmax
comp=Z,58nm,1.3s
CFA Coronel Fontan 88.92 128 P P 00 40 52.8 +1.7
comp=Z,6.8nm,0.7s,baz=234,slow=3.8,SNR=25
comp=Z,6.8nm,0.7s
AROD Rodeo 88.98 126 *eP* P 00 40 53.6 +1.8
BFSC Mount Baldy Ra 88.98 47 P P 00 40 53.1 +1.9
BFSC IAmb IAmb 00 40 54.5
comp=Z,34nm,1.1s
ACCO Cerro Coronel 89.00 126 *eP* P 00 40 53.9 +2.1
YUH Yuha Desert 89.02 49 IAmb IAmb 00 40 55.1
comp=Z,29nm,1.4s
TPO Tropico Hills 89.06 46 P P 00 40 53.9 +2.5
TPO IAmb IAmb 00 40 55.1
comp=Z,46nm,1.2s
AC04 Llanos de Chal 89.08 123 P P 00 40 53.1 +1.3
AC04 IAmb IAmb 00 40 55.1
comp=Z,36nm,1.4s
BORC Borrego Spring 89.11 49 P P 00 40 53.3 +1.7
BORC IAmb IAmb 00 40 55.5
comp=Z,35nm,1.3s
DNR Dunn Ranch,Anz 89.18 48 P P 00 40 54.0 +1.9
DNR IAmb IAmb 00 40 56.0
comp=Z,45nm,1.4s
VES Vestal, Richgr 89.20 45 P P 00 40 52.8 +0.9
VES IAmb IAmb 00 40 55.0
comp=Z,49nm,1.3s
AC05 El Transito 89.25 124 P P 00 40 54.2 +1.5
CPBX Cerro Prieto 89.27 50 P P 00 40 54.4 +2.1
PFO Pinyon Flats O 89.31 48 ⇑*eP* P 00 40 55.2 +2.5
PFO pmax pmax
comp=Z,15nm,1.0s
PFO Pinyon Flats O 89.31 48 P P 00 40 55.1 +2.5
MNRC McLaughlin Min 89.38 41 P P 00 40 53.6 +0.8
MNRC IAmb IAmb 00 40 56.4
comp=Z,24nm,1.1s
PMD Palm Desert 89.39 48 P P 00 40 54.7 +1.8
ISA Isabella, Lake 89.44 46 P P 00 40 54.4 +1.2
ISA IAmb IAmb 00 40 56.8
comp=Z,19nm,1.1s
ISA Isabella, Lake 89.44 46 P P 00 40 54.4 +1.2
ISA pmax pmax
comp=Z,19nm,1.1s
KMPM Mount Pierce 89.56 39 P P 00 40 54.6 +1.0
LRMC Laurel Mtn Rad 89.80 46 P P 00 40 56.6 +1.7
LRMC IAmb IAmb 00 40 58.3
comp=Z,24nm,1.2s
PIX Pinacate 89.91 52 P P 00 40 57.3 +2.0
PIX IAmb IAmb 00 40 59.1

comp=Z,32nm,1.3s
TYV Tymovskoe 89.93 337 *e* P P 00 40 56.1 +1.2
TYV pmax pmax
comp=Z,29nm,0.9s
TYV pmax pmax
comp=Z,300nm,5.6s
CMB Columbia Colle 89.94 43 P P 00 40 56.7 +1.3
CMB Columbia Colle 89.94 43 P P 00 40 56.7 +1.3
CMB pmax pmax
comp=Z,17nm,1.1s
BC3 Big Chuckawall 89.97 49 P P 00 40 58.1 +2.4
BC3 IAmb IAmb 00 41 00.1
comp=Z,42nm,1.4s
GLA Glamis 89.98 50 P P 00 40 57.9 +2.2
GLA IAmb IAmb 00 41 00.0
comp=Z,33nm,1.1s
GLA Glamis 89.98 50 P P 00 40 57.9 +2.2
GLA pmax pmax
comp=Z,33nm,1.1s
SUTB Sutter Butte 89.98 41 P P 00 40 56.7 +1.2
SUTB IAmb IAmb 00 40 58.2
comp=Z,47nm,1.4s
CCCA Chr Cany lake 90.02 46 P P 00 40 58.0 +2.1
CCCA IAmb IAmb 00 40 59.5
comp=Z,28nm,1.3s
AVFE Valle Fertil 90.03 127 *e* P P 00 40 58.1 +1.8
GO03 Copiapo 90.04 123 P P 00 40 58.0 +1.6
GO03 IAmb IAmb 00 40 59.8
comp=Z,74nm,1.5s
CLC China Lake 90.08 46 P P 00 40 58.1 +2.0
CLC IAmb IAmb 00 40 59.5
comp=Z,22nm,1.2s
CLC China Lake 90.08 46 P P 00 40 58.1 +2.0
CLC pmax pmax
comp=Z,22nm,1.2s
O02D Mt. Diablo Mer 90.10 40 P P 00 40 58.0 +1.8
O02D IAmb IAmb 00 41 00.0
comp=Z,41nm,1.1s
CWC Cottonwood Cre 90.20 45 P P 00 40 58.6 +1.8
GSC Goldstone, Bar 90.22 47 P P 00 40 58.0 +1.2
GSC Goldstone, Bar 90.22 47 P P 00 40 58.0 +1.2
GSC pmax pmax
comp=Z,16nm,1.1s
AFDM Forest Hills D 90.24 42 P P 00 40 57.9 +1.2
ACHE Chepes 90.24 128 *eP* P 00 40 58.8 +1.4
MPMC Manual Prospec 90.30 46 P P 00 40 58.5 +1.2
ORV Oroville 90.37 41 P P 00 40 58.8 +1.5
ORV Oroville 90.37 41 P P 00 40 58.8 +1.5
ORV pmax pmax
comp=Z,12nm,1.3s
MDPB Devils Postpil 90.42 44 P P 00 40 58.6 +0.7
113A Mohawk Valley, 90.48 50 P P 00 41 00.4 +2.4
113A IAmb IAmb 00 41 02.1
comp=Z,30nm,1.4s
IRM Iron Mountain 90.50 49 P P 00 41 00.3 +2.2
IRM IAmb IAmb 00 41 02.4
comp=Z,40nm,1.3s
214A Organ Pipe Nat 90.59 52 P P 00 41 01.3 +2.8
214A IAmb IAmb 00 41 02.8
comp=Z,22nm,1.2s
QSM Queen of Sheba 90.62 46 P P 00 41 00.8 +2.2
BLYC Blythe 90.63 49 P P 00 41 01.1 +2.5
BLYC IAmb IAmb 00 41 02.7
comp=Z,20nm,1.2s
TIA Tai'an 90.64 314 P P 00 40 59.4 +0.7
TIA pmax pmax
comp=Z,28nm,0.7s
DANC Danby, Needles 90.66 48 P P 00 41 01.1 +2.3
DANC IAmb IAmb 00 41 48.7
comp=Z,26nm,1.0s
AC01 Pan de Azucar 90.66 122 P P 00 41 00.8 +1.6
AC01 IAmb IAmb 00 41 02.4
comp=Z,13nm,0.8s
N02D Trinity Center 90.71 40 P P 00 41 00.5 +1.5
N02D IAmb IAmb 00 41 02.6
comp=Z,44nm,1.5s
O03E Paynes Creek 90.72 41 IAmb IAmb 00 41 01.7
comp=Z,29nm,1.3s
GWY Greenwater Val 90.88 46 IAmb IAmb 00 41 03.2
comp=Z,29nm,1.9s
DSP Deep Springs 90.89 45 P P 00 41 01.5 +1.8
DSP IAmb IAmb 00 41 03.1
comp=Z,28nm,1.9s
M02C Callahan 90.93 39 P P 00 41 01.9 +1.9
M02C IAmb IAmb 00 41 03.7
comp=Z,46nm,1.6s
SHOC Shoshone, Teco 90.93 47 P P 00 41 01.8 +1.7
SHOC IAmb IAmb 00 42 01.3
comp=Z,15nm,0.5s
FURC Furnace Creek, 90.95 46 P P 00 41 02.3 +2.3
FURC IAmb IAmb 00 41 42.7
comp=Z,23nm,1.6s
LHV Little Huntoon 91.17 44 P P 00 41 02.6 +1.6
NEE2 Needles Airpor 91.22 48 P P 00 41 03.7 +2.3
NEE2 IAmb IAmb 00 41 05.3
comp=Z,19nm,1.1s
M03C McCloud 91.24 40 IAmb IAmb 00 41 04.2
comp=Z,26nm,1.1s
YBH Yreka Blue Hor 91.25 39 P P 00 41 02.8 +1.3
YBH IAmb IAmb 00 41 04.7
comp=Z,40nm,1.8s
YBH Yreka Blue Hor 91.25 39 P P 00 41 02.8 +1.3
YBH pmax pmax
comp=Z,40nm,1.8s
AC02 Maricunga 91.28 123 P P 00 41 04.7 +2.0
CN2 Changchun 91.35 324 *eP* P 00 41 01.8 +0.1
CN2 pmax pmax
comp=Z,20nm,1.0s
NVAR Mina Array Bea 91.41 44 P P 00 41 02.2 -0.3
comp=Z,3.9nm,0.8s,baz=223,slow=7.6,SNR=12
NVAR pP pP 00 41 44.8 +0.4
comp=Z,6.9nm,1.0s,baz=216,slow=7.6,SNR=4.6
NVAR PKKPbc PKKPbc 00 58 23.5 +0.1
comp=Z,0.7nm,0.5s,baz=61,slow=3.5,SNR=4.8
comp=Z,3.9nm,0.8s
GYA Guiyang 91.48 301 ⇓P P 00 41 03.3 +0.3
GYA pP pP 00 41 41.4 -3.3
GYA SKS SKSac 00 51 21.0 +1.5
GYA S S 00 51 47.8 -0.3
GYA pmax pmax
comp=Z,29nm,1.4s
GYA pmax pmax
comp=Z,330nm,3.6s
GYA LR LR
comp=Z,570nm,4.9s
GYA LR LR
comp=Z,270nm,4.2s
GYA LR LR
comp=Z,250nm,5.8s
TPNV Topopah Spring 91.64 46 P P 00 41 04.6 +1.1
TPNV Topopah Spring 91.64 46 P P 00 41 04.6 +1.1
TPNV pmax pmax
comp=Z,9.0nm,1.1s
PB14 IPOC Station P 91.73 121 IAmb IAmb 00 41 07.7
comp=Z,37nm,1.0s
ENH Enshi 91.79 305 IAmb IAmb 00 41 05.3
comp=Z,37nm,1.0s
L04D Klamath Falls 91.80 39 IAmb IAmb 00 41 06.8
comp=Z,15nm,0.9s
TUC Tucson 92.15 52 P P 00 41 08.7 +2.8
TUC IAmb IAmb 00 41 10.3
comp=Z,28nm,1.6s
TUC Tucson 92.15 52 P P 00 41 08.7 +2.8
TUC pmax pmax
comp=Z,28nm,1.6s
I03D Drain, OR 92.31 37 P P 00 41 08.1 +1.9
LYN LuoYang 92.47 310 P P 00 41 08.1 +1.0
LYN pmax pmax
comp=Z,22nm,1.3s
KLR Kul'dur 92.59 331 LR LR 01 18 54.7
comp=Z,21nm,19.2s,baz=104,slow=33
KLR Kul'dur 92.59 331 ⇑*eP* P 00 41 09.6 +2.3
KLR pmax pmax
comp=Z,21nm,2.5s
J04A Umpqua Nationa 92.62 38 P P 00 41 09.8 +1.8
PRN Pahroc Range 92.66 46 P P 00 41 09.8 +1.7
PRN IAmb IAmb 00 41 11.9
comp=Z,14nm,1.2s
CM31 Chiang Mai Arr 92.74 290 P P 00 41 09.6 +0.8
CM31 IAmb IAmb 00 41 12.5
comp=Z,8.4nm,0.6s
CMAR Chiang Mai Arr 92.74 290 P P 00 41 08.9 +0.1
comp=Z,4.3nm,0.5s,baz=145,slow=3.8,SNR=17
CMAR PP PP 00 44 53.5 0.0
comp=Z,1.6nm,0.9s,baz=133,slow=6.6,SNR=6.3

CMAR PKKPbc **PKKPbc** **00 58 19.1 +0.4**
comp=Z,1.2nm,0.3s,baz=282,slow=3.0,SNR=4.1
comp=Z,4.3nm,0.5s
CMAR Chiang Mai Arr 92.74 290 P **P** **00 41 08.6 -0.2**
CMAR Chiang Mai Arr 92.74 290 *i* P **P** **00 41 09.3 +0.5**
CMAR pmax pmax
comp=Z,5.0nm,0.5s
OHAK Old Harbor 92.83 14 P **P** **00 41 08.5 +0.3**
I04A Tendick Farm, 92.86 38 P **P** **00 41 09.9 +1.1**
I04A IAmb IAmb 00 41 12.0
comp=Z,41nm,1.6s
HNS HongShan 92.88 314 ⇓P **P** **00 41 09.8 +0.8**
HNS pmax pmax
comp=Z,15nm,1.6s
K05A Summer Lake 92.91 39 P **P** **00 41 09.9 +0.7**
K05A IAmb IAmb 00 41 11.7
comp=Z,29nm,1.2s
CHTO Chiang Mai 92.94 290 P **P** **00 41 09.8 +0.1**
CHTO Chiang Mai 92.94 290 P **P** **00 41 09.8 +0.1**
CHTO pmax pmax
comp=Z,5.0nm,0.6s
CHTO Chiang Mai 92.94 290 P **P** **00 41 09.9 +0.2**
CHTO Chiang Mai 92.94 290 P **P** **00 41 10.5 +0.8**
PB05 IPOC Station P 92.96 120 P **P** **00 41 11.8 +1.8**
PB05 IAmb IAmb 00 41 13.3
comp=Z,30nm,1.5s
X16A Lo Mia Camp, P 93.03 50 P **P** **00 41 11.2 +1.3**
J05D Fort Rock, OR 93.11 39 P **P** **00 41 11.0 +0.9**
J05D IAmb IAmb 00 41 12.5
comp=Z,15nm,1.2s
WIFE Three Sisters- 93.35 38 P **P** **00 41 12.4 +1.1**
WIFE IAmb IAmb 00 41 14.0
comp=Z,21nm,1.1s
KDAK Kodiak Island 93.49 14 PKKPbc PKKPbc 00 58 18.3 -0.4
comp=Z,3.2nm,0.7s,baz=8.7,slow=3.4,SNR=4.1
LCMT Little Creek M 93.52 47 P **P** **00 41 13.7 +1.6**
H04A Detroit Lake 93.60 37 P **P** **00 41 13.6 +1.4**
H04A IAmb IAmb 00 41 14.6
comp=Z,18nm,1.2s
PINE Pine Mountain 93.62 38 P **P** **00 41 14.1 +1.6**
PINE IAmb IAmb 00 41 15.5
comp=Z,18nm,0.9s
U15A North Rim 93.74 48 P **P** **00 41 14.9 +1.5**
WUAZ Wupatki 93.75 50 P **P** **00 41 13.9 +0.6**
PB03 IPOC Station P 93.78 119 P **P** **00 41 15.7 +1.8**
PB03 IAmb IAmb 00 41 17.2
comp=Z,16nm,1.2s
KNB Kanab 93.78 48 P **P** **00 41 14.7 +1.3**
KNB Kanab 93.78 48 P **P** **00 41 14.7 +1.3**
KNB pmax pmax
comp=Z,6.0nm,1.1s
CCUT Cedar City 93.78 47 P **P** **00 41 15.7 +2.3**
I05D Terrebonne, OR 93.79 38 P **P** **00 41 13.7 +0.6**
I05D IAmb IAmb 00 42 16.5
comp=Z,60nm,1.9s
PB07 IPOC Station P 93.88 119 P **P** **00 41 16.4 +2.1**
PB07 IAmb IAmb 00 41 17.6
comp=Z,12nm,1.0s
M11K Mekoryuk 93.90 7 P **P** **00 41 15.0 +1.9**
WVOR Wild Horse Val 93.92 41 IAmb IAmb 00 41 16.6
comp=Z,23nm,1.6s
XAN Xi'an 94.46 308 P **P** **00 41 16.3 -0.1**
XAN pmax pmax
comp=Z,9.0nm,1.2s
I07A Izee 94.57 39 IAmb IAmb 00 42 34.1
comp=Z,32nm,2.0s
ELK Elko 94.72 44 PKKPbc PKKPbc 00 58 14.8 -0.1
comp=Z,2.0nm,0.5s,baz=125,slow=1.1,SNR=12
PZH PanZhiHua 95.10 298 P **P** **00 41 19.0 -0.6**
CMIG Matias Romero 95.20 73 LR LR 01 14 55.5
comp=Z,110nm,21.0s,baz=172,slow=29
TX31 Lajitas Ar. Si 95.29 58 P **P** **00 41 19.8 -0.6**
TX31 IAmb IAmb 00 41 23.9
comp=Z,13nm,1.6s
TXAR Lajitas Array 95.29 58 P **P** **00 41 20.6 +0.2**
comp=Z,1.3nm,1.1s,baz=201,slow=6.7,SNR=8.4
TXAR pP **pP** **00 42 03.2 +0.6**
comp=Z,1.7nm,1.1s,baz=224,slow=4.9,SNR=4.2
TXAR PKKPbc **PKKPbc** **00 58 12.7 0.0**
comp=Z,0.3nm,0.4s,baz=74,slow=4.0,SNR=6.3
TXAR SKKPbc SKKPbc 01 01 38.0 +0.3
comp=Z,0.6nm,1.0s,baz=252,slow=2.4,SNR=3.4
comp=Z,1.3nm,1.1s
TXAR Lajitas Array 95.29 58 P **P** **00 41 19.8 -0.6**
MA2 Magadan 95.53 346 LR LR 01 22 06.0
comp=Z,80nm,19.5s,baz=180,slow=34
ALPN Alpine 95.91 58 IAmb IAmb 00 41 26.1
comp=Z,10nm,1.4s
CD2 Chengdu 96.15 303 P **P** **00 41 25.9 +1.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
PB16 IPOC Station P 96.22 116 P **P** **00 41 27.4 +1.9**
PB16 IAmb IAmb 00 41 28.9
comp=Z,21nm,1.6s
ANMO Albuquerque 96.61 52 ⇓*e*P **P** **00 41 28.5 +2.1**
ANMO pmax pmax
comp=Z,12nm,4.2s
HHC Hu-ho-hao-te 96.96 315 *e*P **P** **00 41 32.3 +4.6**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,250nm,5.5s
BTO2 Baotou 97.91 314 *e*P Pdif 00 41 35.3 +3.3
BTO2 S **S** **00 52 49.9 +6.6**
BTO2 pmax pmax
comp=Z,11nm,0.6s
BTO2 LR LR
comp=Z,980nm,5.7s
BTO2 LR LR
comp=Z,690nm,5.0s
BTO2 LR LR
comp=Z,740nm,6.6s
HILR Hailar Array B 98.18 325 P **P** **00 41 31.6 -1.2**
comp=Z,0.7nm,0.4s,baz=124,slow=6.5,SNR=1.9
comp=Z,0.7nm,0.4s
LPAZ La Paz 98.51 116 P Pdif 00 41 37.0 +1.1
comp=Z,2.2nm,0.6s,baz=235,slow=3.2,SNR=9.9
LPAZ LR LR 01 20 39.9
comp=Z,45nm,18.2s,baz=84,slow=32
comp=Z,2.2nm,0.6s
LPAZ La Paz 98.51 116 P Pdif 00 41 37.6 +1.7
LPAZ La Paz 98.51 116 P Pdif 00 41 37.6 +1.6
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
LZDM Lanzhou Array 99.06 307 P **Pdif** **00 41 36.9 -0.6**
comp=Z,0.5nm,0.3s,baz=38,slow=16,SNR=1.3
LZDM PKiKP **PKiKP** **00 46 07.2 +0.2**
comp=Z,0.8nm,0.3s,baz=217,slow=3.7,SNR=4.3
comp=Z,0.5nm,0.3s
PDAR Pinedale Array 99.30 45 P **Pdif** **00 41 38.4 +0.1**
comp=Z,0.4nm,0.5s,baz=236,slow=5.0,SNR=5.0
PDAR pP **pP** **00 42 21.0 +0.6**
comp=Z,0.7nm,0.8s,baz=196,slow=4.5,SNR=3.0
PDAR PP **PP** **00 45 46.9 +2.9**
comp=Z,0.8nm,0.8s,baz=217,slow=7.2,SNR=4.2
PDAR PKiKP **PKiKP** **00 46 07.8 +0.6**
comp=Z,0.3nm,0.7s,baz=116,slow=3.4,SNR=1.6
PDAR PKKPbc **PKKPbc** **00 58 01.1 -1.3**
comp=Z,1.5nm,0.5s,baz=82,slow=4.9,SNR=23
PDAR LR LR 01 23 00.5
comp=Z,52nm,18.0s,baz=23,slow=33
comp=Z,0.4nm,0.5s
CPUP Villa Florida 99.55 130 P **Pdif** **00 41 40.0 +0.4**
comp=Z,1.1nm,0.6s,baz=198,slow=6.1,SNR=3.7
CPUP PKKPbc **PKKPbc** **00 57 59.2 -1.0**
comp=Z,1.5nm,0.5s,baz=26,slow=4.7,SNR=13
comp=Z,1.1nm,0.6s
CPUP Villa Florida 99.55 130 IAmb IAmb 00 42 40.5
comp=Z,9.9nm,1.5s
DLBC Dease Lake 100.33 24 PKKPbc PKKPbc 00 57 59.3 -0.6
comp=Z,1.7nm,0.7s,baz=92,slow=14,SNR=3.1
ILAR Eielson Array 101.00 14 P **Pdif** **00 41 45.1 +0.1**
comp=Z,0.4nm,0.5s,baz=228,slow=5.7,SNR=14
ILAR PP **PP** **00 45 55.2 -0.8**
comp=Z,0.9nm,0.8s,baz=231,slow=6.1,SNR=4.6
ILAR PKiKP **PKiKP** **00 46 08.9 -0.3**
comp=Z,0.8nm,0.5s,baz=207,slow=4.8,SNR=18
ILAR PKKPbc **PKKPbc** **00 57 55.2 -2.8**
comp=Z,1.1nm,0.5s,baz=28,slow=3.1,SNR=5.7
SIV San Ignacio 103.94 120 PKiKP **PKiKP** **00 46 16.3 +0.1**
comp=Z,0.6nm,0.6s,baz=0,slow=4.0,SNR=2.4
SONM Songino Array 104.07 318 Pdiff **Pdif** **00 41 58.5 -0.7**
comp=Z,0.5nm,0.5s,baz=143,slow=5.5,SNR=6.5
SONM PKiKP **PKiKP** **00 46 15.1 -0.4**
comp=Z,0.8nm,0.5s,baz=112,slow=1.8,SNR=8.5
SONM PKKPbc **PKKPbc** **00 57 48.3 -0.2**
comp=Z,0.6nm,0.5s,baz=274,slow=3.2,SNR=5.8

INK Inuvik 106.90 16 PKKPbc PKKPbc 00 57 39.6 -0.6
comp=Z,1.1nm,0.6s,baz=94,slow=4.4,SNR=5.5
YKA Yellowknife Ar 108.67 26 PKiKP **PKiKP** **00 46 23.1 -0.3**
comp=Z,1.2nm,0.5s,baz=282,slow=2.1,SNR=30
YKA SKiKP **SKiKP** **00 49 41.9 -0.6**
comp=Z,0.5nm,0.8s,baz=255,slow=3.6,SNR=4.0
YKA PKKPbc **PKKPbc** **00 57 31.9 -2.6**
comp=Z,3.4nm,0.6s,baz=32,slow=3.4,SNR=36
YKA PKPPKP **P'P'df** **01 05 58.8 +1.2**
comp=Z,0.1nm,0.5s,baz=22,slow=2.4,SNR=4.8
ULM Lac du Bonnet 111.24 43 PKiKP **PKiKP** **00 46 27.8 -0.8**
comp=Z,2.6nm,0.5s,baz=242,slow=2.0,SNR=8.0
ULM PKKPbc **PKKPab** **00 57 30.9 -2.0**
comp=Z,4.5nm,0.7s,baz=73,slow=4.7,SNR=11
BDFB Brasilia 113.23 129 PKiKP **PKiKP** **00 46 32.6 -1.1**
comp=Z,1.7nm,0.5s,baz=262,slow=2.8,SNR=5.2
BDFB PKKPbc **PKKPbc** **00 57 18.8 +0.4**
comp=Z,2.1nm,0.6s,baz=94,slow=4.7,SNR=6.4
WMQ Urumqi 113.60 308 *e*PKP **PKiKP** **00 46 35.3 +1.9**
WMQ LR LR
comp=Z,1μm,8.1s
BOSA Boshof 114.05 204 PKP **PKiKP** **00 46 33.9 -1.1**
comp=Z,5.3nm,0.6s,baz=182,slow=1.7,SNR=26
BOSA PP **PP** **00 47 28.7 -1.8**
comp=Z,3.3nm,0.8s,baz=141,slow=9.3,SNR=3.5
BOSA PKKPbc **PKKPbc** **00 57 16.6 +0.5**
comp=Z,1.6nm,0.6s,baz=154,slow=3.0,SNR=1.5
MAKGR Makgori 116.78 205 *i* P **PKPdf** **00 46 39.9 -0.4**
ZSN Zaisan 116.81 311 *e*PKiKP **PKPdf** **00 46 38.6 -0.8**
ZSN Zaisan 116.81 311 *e*PKP **PKPdf** **00 46 38.7 -0.8**
LBTB Lobatse 117.22 206 PKP **PKPdf** **00 46 41.1 0.0**
comp=Z,5.5nm,0.5s,baz=163,slow=2.5,SNR=19
LBTB PP **PP** **00 47 52.2 -0.5**
comp=Z,5.1nm,0.8s,baz=157,slow=7.7,SNR=4.9
MK31 Makanchi Array 118.24 309 *d* iPKiKP **PKPdf** **00 46 40.9 -1.3**
MKAR Makanchi Array 118.24 309 PKP **PKPdf** **00 46 40.4 -1.8**
comp=Z,9.3nm,0.5s,baz=196,slow=1.1,SNR=168
MKAR SKP **SKPdf** **00 49 57.2 -4.3**
comp=Z,2.4nm,0.9s,baz=77,slow=3.1,SNR=4.0
MKAR PKKPbc **PKKPab** **00 57 02.8 +0.2**
comp=Z,3.2nm,0.5s,baz=260,slow=3.0,SNR=73
MKAR SKKPbc **SKKPbc** **01 00 32.7 -1.2**
comp=Z,1.2nm,0.8s,baz=330,slow=2.6,SNR=5.9
LPHEP Lephephe 118.62 207 *i* P **PKPdf** **00 46 43.8 -0.1**
SHLS Shalkode 118.92 305 *e*PKiKP **PKPdf** **00 46 42.2 -1.6**
SHLS Shalkode 118.92 305 *e*PKP **PKPdf** **00 46 42.2 -1.6**
ZALV Zalesovo Beam 118.96 318 PKP **PKPdf** **00 46 41.4 -1.9**
comp=Z,8.4nm,0.6s,baz=137,slow=1.9,SNR=48
ZALV Zalesovo Beam 118.96 318 **PKPdf** **00 46 41.2 -2.1**
UUPR Utuado, UPR, P 118.97 86 **PKiKP** **00 46 45.1 +0.7**
UZB Uzunbulak 119.22 305 *e*PKiKP **PKPdf** **00 46 43.4 -1.0**
UZB *e* 00 48 05.9
UZB Uzunbulak 119.22 305 *e*PKP **PKPdf** **00 46 43.4 -1.0**
UZB *e*PP **PP** **00 48 05.9 -2.0**
LKGWB Lokgwabe 119.56 202 *i* P **PKPdf** **00 46 44.6 -1.0**
SATY Saty 119.61 304 *e*PKiKP **PKPdf** **00 46 44.0 -1.1**
SATY *e* 00 48 08.7
SATY Saty 119.61 304 *e*PKP **PKPdf** **00 46 44.1 -1.1**
SATY *e*PP **PP** **00 48 08.7 -1.9**
M57A Sunshine Farm, 119.92 58 **PKiKP** **00 46 45.9 +0.3**
KHWEE KHWEE 120.06 207 *i* P **PKPdf** **00 46 45.9 -0.8**
BROLN Tlhalogang 120.06 210 *i* P **PKPdf** **00 46 45.7 -1.0**
TDK Taldyqorghan 120.23 306 *e*PKiKP **PKPdf** **00 46 45.0 -1.1**
TDK *e* 00 48 12.9
TDK Taldyqorghan 120.23 306 *e*PKP **PKPdf** **00 46 45.1 -1.1**
TDK *e*PP **PP** **00 48 12.9 -1.7**
KSH2 Kashi 120.34 299 PKP **PKPdf** **00 46 46.0 -0.7**
KGCAE Kacgae 120.40 204 *i* P **PKPdf** **00 46 47.0 -0.3**
MDOK Medeo 120.59 304 *e*PKiKP **PKPdf** **00 46 45.9 -1.1**
MDOK Medeo 120.59 304 *e*PKP **PKPdf** **00 46 45.9 -1.1**
TNSS Tian-Shan 120.62 304 *e*PKiKP **PKPdf** **00 46 46.1 -1.3**
TNSS Tian-Shan 120.62 304 *e*PKP **PKPdf** **00 46 46.1 -1.3**
AAA Alma-Ata 120.70 304 *e*PKiKP **PKPdf** **00 46 46.1 -1.0**
AAA Alma-Ata 120.70 304 *e*PKP **PKPdf** **00 46 46.2 -1.0**
ULHL Ulahol 120.87 303 P **PKPdf** **00 46 47.1 -0.5**
SNR=14
KOOLE Kule 120.92 202 *i* P **PKPdf** **00 46 48.3 -0.1**
NRIK Noril'sk 121.46 335 PKP **PKPdf** **00 46 46.4 -1.2**
comp=Z,7.6nm,0.5s,baz=118,slow=1.8,SNR=32
TKM2 Tokmak 2 121.53 303 P **PKPdf** **00 46 47.4 -1.5**
SNR=39
KURK Kurchatov 121.72 313 *c* iPKiKP **PKPdf** **00 46 47.1 -1.6**
KURK pmax pmax
comp=Z,31nm,0.6s
KURK Kurchatov 121.72 313 P **PKPdf** **00 46 47.4 -1.3**
KURBB Kurchatov Arra 121.75 313 PKhKP PKPpre 00 46 42.2
comp=Z,4.0nm,0.5s,baz=115,slow=1.9,SNR=4.1
KURBB PKP **PKPdf** **00 46 47.5 -1.2**
comp=Z,28nm,0.5s,baz=119,slow=1.7,SNR=200
KURBB PKKPbc **PKKPbc** **00 56 49.1 +0.4**
comp=Z,0.8nm,0.6s,baz=280,slow=4.9,SNR=8.0
KURBB PKKP **PKKPdf** **00 57 24.3 +0.3**
comp=Z,0.3nm,0.5s,baz=293,slow=2.6,SNR=4.1
KURBB SKKPbc SKKPbc 01 00 22.2 -0.5
comp=Z,0.6nm,0.7s,baz=282,slow=3.8,SNR=4.3
KBK Karagaybulak 121.90 303 P **PKPdf** **00 46 49.4 -0.2**
SNR=13
UCH Uchtor 122.08 302 P **PKPdf** **00 46 50.2 -0.1**
SNR=7.4
GRTLG Ghanzi 122.12 203 *i* P **PKPdf** **00 46 50.2 -0.5**
CHMS Chumysh 122.14 303 P **PKPdf** **00 46 49.3 -0.6**
SNR=5.4
AAK Ala-Archa 122.22 303 P **PKPdf** **00 46 50.0 -0.2**
SNR=22
AAK Ala-Archa 122.22 303 *d* iPKiKP **PKPdf** **00 46 49.2 -1.0**
AAK pmax pmax
comp=Z,7.0nm,0.5s
AAK Ala-Archa 122.22 303 P **PKPdf** **00 46 49.8 -0.4**
WIN Windhoek 122.23 199 **PKiKP** **00 46 51.3 +0.2**
WIN Windhoek 122.23 199 PKiKP **PKiKP** **00 46 51.3 +0.2**
USP Osenovka 122.40 304 P **PKPdf** **00 46 49.8 -0.5**
SNR=11
EKS2 Erkin-Say 122.73 303 P **PKPdf** **00 46 50.2 -0.9**
SNR=17
KBL Kabul 123.72 292 **PKPdf** **00 46 52.4 -1.0**
KBL Kabul 123.72 292 PKiKP **PKPdf** **00 46 52.4 -1.0**
KBL Kabul 123.72 292 P **PKPdf** **00 46 52.7 -0.7**
SNR=12
KSANE Kasane 123.91 209 *i* P **PKPdf** **00 46 53.7 -0.4**
XAUDM Khaudum 124.69 205 *i* P **PKiKP** **00 46 56.1 +0.1**
LSZ Lusaka 124.82 214 PKP **PKPdf** **00 46 55.9 0.0**
comp=Z,18nm,0.7s,baz=179,slow=1.8,SNR=53
LSZ PP **PP** **00 48 45.7 +1.0**
comp=Z,3.5nm,0.9s,baz=178,slow=5.3,SNR=3.8
IUG luzhnay 125.26 301 *e*PKiKP **PKPdf** **00 46 54.8 -1.1**
IUG *e* 00 48 46.8
IUG luzhnay 125.26 301 *e*PKP **PKPdf** **00 46 54.9 -1.1**
IUG *e*PP **PP** **00 48 46.8 -1.9**
TSUM Tsumeb 125.28 200 PKP **PKiKP** **00 46 57.0 -0.1**
comp=Z,7.2nm,0.6s,baz=184,slow=5.5,SNR=17
TSUM PP **PP** **00 48 44.8 -2.7**
comp=Z,15nm,0.9s,baz=152,slow=8.8,SNR=11
CHM Chimkent 125.61 301 *e*PKiKP **PKPdf** **00 46 55.4 -1.1**
CHM Chimkent 125.61 301 *e*PKP **PKPdf** **00 46 55.4 -1.1**
JLN Jalan Bani Buh 126.87 274 P **PKPdf** **00 46 57.8 -1.7**
TULEG Thule 126.89 16 *i* P **PKPdf** **00 46 57.8 -0.1**
BVAR Borovoye Array 127.17 314 PKhKP PKPpre 00 46 50.4
comp=Z,0.6nm,0.5s,baz=90,slow=1.5,SNR=4.6
BVAR PKP **PKPdf** **00 46 58.4 -0.7**
comp=Z,33nm,0.5s,baz=144,slow=1.7,SNR=171
BORK Borovoye 127.21 314 **PKPdf** **00 46 58.4 -0.8**
BORK Borovoye 127.21 314 *de*PKiKP **PKPdf** **00 46 58.4 -0.8**
BORK pmax pmax
comp=Z,75nm,1.7s
DQM DQM 127.46 271 P **PKPdf** **00 47 00.5 -0.1**
MHTO MHTO 127.57 272 P **PKPdf** **00 47 00.2 -0.7**
WSAR Wadi Sarin 127.98 275 P **PKPdf** **00 47 01.0 -0.5**
JMDO Jabal Madar 128.06 274 P **PKPdf** **00 47 00.9 -0.9**
SMDO Samad 128.39 274 P **PKPdf** **00 47 01.4 -1.1**
BSY Bisya 128.97 274 P **PKPdf** **00 47 02.1 -1.5**
HOQ Hoqain 129.23 275 P **PKPdf** **00 47 02.8 -1.2**
SCHQ Schefferville 129.42 44 PKP **PKPdf** **00 47 02.9 -0.4**
comp=Z,2.6nm,0.5s,baz=301,slow=1.9,SNR=10
SCHQ SKPbc SKPab 00 50 06.6 -1.9
comp=Z,8.9nm,0.5s,baz=244,slow=5.7,SNR=12
DOK Doka 129.72 267 P **PKPdf** **00 47 03.8 -1.2**
SNR=6.4
ABTO Aybut 129.82 265 P **PKPdf** **00 47 04.5 -0.8**
SOHO SOHO 130.10 275 P **PKPdf** **00 47 04.1 -1.5**
KULLO Kullorsuaq 130.25 17 *i* P **PKPdf** **00 47 03.7 -0.7**
NEEM North Greenlan 130.29 13 *i* P **PKPdf** **00 47 04.2 -0.6**
UMZA Um Al Zommool 130.67 273 P **PKPdf** **00 47 05.6 -1.1**
UOSS Minazif 130.70 276 P **PKPdf** **00 47 04.4 -2.3**
HATD Hatta, Dubai 130.71 276 P **PKPdf** **00 47 05.0 -1.7**

ASHO Ashiyiah 130.72 275 P **PKPdf** **00 47 05.6 -1.2**
ALNE Al Ain 130.72 275 P **PKPdf** **00 47 05.6 -1.2**
MDH Madha 130.76 276 P **PKPdf** **00 47 05.0 -1.8**
NOR Nord 131.05 3 *i* P **PKPdf** **00 47 05.7 -0.1**
FAQ Al Faqa, Dubai 131.13 275 P **PKPdf** **00 47 05.8 -1.7**
NAZ Nazwa, Dubai 131.17 276 P **PKPdf** **00 47 06.7 -0.9**
UPNV Upernavik 131.22 19 *i* P **PKPdf** **00 47 06.1 -0.1**
MZWR Madinat Zayed 132.17 273 P **PKPdf** **00 47 09.5 +0.1**
MZR Muzera 132.20 272 P **PKPdf** **00 47 09.1 -0.5**
NUUG Nuugaatsiaq 132.55 20 *i* P **PKPdf** **00 47 08.3 -0.5**
GHWR Ruwais 133.09 273 P **PKPdf** **00 47 11.3 +0.1**
ABKAR Akbulak array 133.37 309 **PKPdf** **00 47 09.4 -1.5**
SAQQ Saqqaq 133.56 22 *i* P **PKiKP** **00 47 11.7 -0.3**
ILULI Ilulissat 134.16 23 *i* P **PKiKP** **00 47 11.7 -0.1**
ARTI Arti 134.20 319 PKPpre 00 47 07.3
ARTI Arti 134.20 319 *i* PKiKP **PKPdf** **00 47 12.3 0.0**
SPA0 Spitsbergen Ar 134.33 355 *e*P **PKiKP** **00 47 12.9 -0.5**
SPITS Spitsbergen Ar 134.33 355 PKhKP PKPpre 00 47 03.5
comp=Z,2.9nm,0.6s,baz=104,slow=3.5,SNR=7.9
SPITS PKP **PKPdf** **00 47 12.8 +0.7**
comp=Z,7.8nm,0.5s,baz=78,slow=6.1,SNR=22
SPITS SKPbc **SKPbc** **00 50 22.6 -3.0**
comp=Z,2.5nm,0.5s,baz=101,slow=2.9,SNR=5.3
SPB2 Spitsbergen Ar 134.33 355 **PKiKP** **00 47 13.2 -0.2**
SFJD Kangerlussuaq 135.22 26 **PKiKP** **00 47 15.5 +0.1**
SFJD Kangerlussuaq 135.22 26 PKiKP **PKiKP** **00 47 15.5 +0.1**
SFJD Kangerlussuaq 135.22 26 *i* P **PKPdf** **00 47 14.1 +0.2**
DAG Danmarks Havn 135.47 6 *i* P **PKPdf** **00 47 13.9 -0.3**
MBAR Mbarara 135.67 227 PKhKP PKPpre 00 47 11.2
comp=Z,0.9nm,0.3s,baz=25,slow=22,SNR=1.3
MBAR PKP **PKPdf** **00 47 16.7 +0.1**
comp=Z,1.6nm,0.3s,baz=93,slow=3.9,SNR=6.1
MBAR Mbarara 135.67 227 **PKPdf** **00 47 16.8 +0.2**
MBAR Mbarara 135.67 227 PKiKP **PKPdf** **00 47 16.8 +0.2**
NUUK Nuuk 135.81 30 *i* P **PKiKP** **00 47 16.3 -0.4**
DBG Daneborg 137.58 8 *i* P **PKiKP** **00 47 19.9 -0.1**
IVI Ivigtut 138.35 33 *i* P **PKPdf** **00 47 20.5 +0.7**
KIRV Kirov 138.57 323 ⇓*e*PKiKP **PKPdf** **00 47 20.2 -0.1**
RAYN Ar Rayn 139.10 268 PKPpre 00 47 12.9
RAYN Ar Rayn 139.10 268 PKHKP PKPpre 00 47 12.9
NRS Narsarsuaq 139.61 32 *i* P **PKPdf** **00 47 21.7 -0.4**
ARCES ARCESS Array B 140.90 346 PKhKP PKPpre 00 47 17.8
comp=Z,5.3nm,0.5s,baz=51,slow=2.3,SNR=38
ARCES PKP **PKPdf** **00 47 25.4 +1.1**
comp=Z,8.3nm,0.5s,baz=41,slow=2.3,SNR=19
ARCES SKPbc **SKPbc** **00 50 42.0 -2.8**
comp=Z,8.3nm,0.8s,baz=51,slow=1.9,SNR=4.2
ARCES ARCESS Array B 140.90 346 PKPpre 00 47 20.4
AKT Akhty 141.57 297 *e*PKiKP **PKPdf** **00 47 23.9 -2.6**
KTK1 Kautokeino 141.78 347 *e*P **PKPdf** **00 47 21.7 -4.2**
TRO Tromso 141.99 349 *e*P **PKPdf** **00 47 22.1 -4.1**
KLMR Klimovskoe 142.34 329 *e*PKiKP **PKPdf** **00 47 25.2 -1.9**
KLMR pmax pmax
comp=Z,43nm,1.4s
GNI Garni 143.75 294 PKPpre 00 47 27.9
GNI Garni 143.75 294 PKiKP PKPab 00 47 27.9 +0.1
GNI Garni 143.75 294 P PKPbc 00 47 28.3 -0.3
STEI Steigen 144.10 350 *e*P **PKPab** **00 47 27.8 -0.2**
LOF Lofoten 144.14 351 *e*P PKPbc 00 47 28.9 +0.3
FAUS Fauske 144.60 350 *e*P **PKPab** **00 47 30.0 +0.1**
VRH Novokhopyorsk 144.81 313 *e*PKiKP PKPbc 00 47 30.1 -1.1
VRH pmax pmax
comp=Z,86nm,0.6s
GOF Gofitskoye 144.96 303 *c* iPKiKP PKPbc 00 47 31.4 -0.5
KBZ Khabaz 145.15 300 PKP **PKPbc** **00 47 31.8 -0.6**
comp=Z,56nm,0.8s,baz=128,slow=4.5,SNR=171
KBZ Khabaz 145.15 300 *ce*PKiKP **PKPbc** **00 47 31.0 -1.5**
KIV Kislovodsk 145.29 301 **PKPdf** **00 47 32.3 -0.6**
KIV Kislovodsk 145.29 301 ⇑P **PKPdf** **00 47 31.3 -1.6**
KIV Kislovodsk 145.29 301 *e*PKP2 **PKPdf** **00 47 31.7 -1.2**
KIV pmax pmax
comp=Z,41nm,1.1s
KIV Kislovodsk 145.29 301 P **PKPdf** **00 47 32.5 -0.4**
SHA1 Shidzhatmaz 145.32 300 *de*PKP2 **PKPdf** **00 47 32.6 -0.6**
VAGH Vaagaholmen 145.50 351 *e*P **PKPdf** **00 47 31.8 -0.6**
MOS Moscow 145.57 322 *i* PKHKP PKPpre 00 47 30.4
MOS pmax pmax
comp=Z,156nm,0.6s
MOS pmax pmax
comp=N,92nm,1.1s
KONS Konsvik 145.74 351 *e*P **PKPdf** **00 47 32.9 +0.1**
MOR8 Moi Rana 145.85 350 *e*P **PKPdf** **00 47 32.8 -0.3**
STOK Stokkvaagen 145.91 351 *e*P **PKPdf** **00 47 33.4 +0.3**
LPSR Galich'ya Gora 146.06 317 *d* iPKP2 **PKPbc** **00 47 34.6 -0.4**
LPSR pmax pmax
comp=Z,165nm,1.3s
LEIR Leirfjorden 146.10 350 *e*P **PKPdf** **00 47 34.0 +0.6**
VORR Voronezh 146.19 315 *e*PKiKP **PKPdf** **00 47 34.5 +0.5**
VORR pmax pmax
comp=Z,149nm,0.6s
VORD Divnogorie 146.35 314 *e*PKiKP **PKPdf** **00 47 33.5 -0.8**
VORD pmax pmax
comp=Z,110nm,1.4s
VSR Storozhevoye 146.35 314 *e*PKiKP **PKPdf** **00 47 34.8 +0.5**
VSR pmax pmax
comp=Z,130nm,1.4s
OBN Obninsk 146.39 322 **PKPdf** **00 47 33.3 -0.9**
OBN Obninsk 146.39 322 ⇓P **PKPdf** **00 47 34.2 0.0**
OBN Obninsk 146.39 322 *c* iPKiKP **PKPdf** **00 47 34.5 +0.3**
OBN *i* 00 47 38.0
OBN *e* 00 51 07.3
OBN pmax pmax
comp=Z,241nm,1.6s
OBN pmax pmax
comp=Z,144nm,1.7s
OBN MLR MLR
comp=Z,247nm,14.0s
LABN Labinsk 146.64 302 *i* PKiKP **PKPdf** **00 47 35.6 +0.5**
LABN *e* 00 48 20.1
LABN pmax pmax
comp=Z,33nm,0.7s
ERBR Yeremizino-Bor 146.68 304 *i* PKiKP **PKPdf** **00 47 35.8 +0.7**
ERBR pmax pmax
comp=Z,97nm,0.7s
PUL Pulkovo 146.73 332 *de*PKP2 **PKPbc** **00 47 36.5 -0.2**
PUL pmax pmax
comp=Z,118nm,0.7s
FINES FINESS Array B 147.10 337 PKPbc **PKPdf** **00 47 36.3 +1.0**
comp=Z,58nm,0.5s,baz=74,slow=2.0,SNR=234
FINES FINESS Array B 147.10 337 *ce*PKiKP **PKPdf** **00 47 35.0 -0.3**
FINES pmax pmax
comp=Z,58nm,0.5s
VSLR Vesyoloye 147.24 300 *ce*PKiKP **PKPdf** **00 47 37.4 +1.3**
NSS Namsos 147.76 350 *e*P **PKPbc** **00 47 38.8 -0.5**
ANN Anapa 148.94 303 *i* PKiKP **PKPbc** **00 47 41.2 -1.8**
ANN pmax pmax
comp=Z,88nm,0.8s
VSU Vasula 148.99 333 *ce*PKiKP **PKPbc** **00 47 41.4 -1.3**
VSU pmax pmax
comp=Z,253nm,1.7s
GHAJ Ghor Haditha 149.96 276 **PKPbc** **00 47 45.4 -0.5**
ZAHL Zahle 150.18 281 *e*P **PKPbc** **00 47 46.1 -0.5**
MOL Molde 150.19 353 *e*P **PKPbc** **00 47 45.3 -0.2**
BHL Bhannes 150.37 281 *e*P **PKPbc** **00 47 46.3 -0.7**
DQRL Deir Qamar 150.41 281 *e*P **PKPbc** **00 47 46.7 -0.4**
MMAI Mount Meron Ar 150.44 280 PKPbc **PKPbc** **00 47 47.0 -0.2**
comp=Z,34nm,0.5s,baz=61,slow=6.8,SNR=204
DOMB Dombas 150.53 351 *e*P **PKPbc** **00 47 45.7 -0.7**
AKN Aaknes 150.63 353 *e*P **PKPbc** **00 47 46.8 +0.2**
MNK Minsk 151.02 326 *i* PKiKP **PKiKP** **00 47 48.0 -0.2**
comp=E,24nm,1.2s
MNK *i* PKiKP **PKiKP** **00 47 48.0 -0.2**
comp=N,20nm,0.8s,baz=55
MNK *i* PKiKP **PKiKP** **00 47 48.0 -0.2**
comp=Z,121nm,0.8s
MNK *i* pPKiKP **pPKPdf** **00 48 28.9 +3.4**
MNK *i* sPKiKP **sPKPdf** **00 48 43.7 +1.2**
MNK *i* PP **PP** **00 51 21.8 -5.3**
MNK *i* PPP PPP 00 54 53.6
MNK *i* SKKS 01 03 22.8
MNK *i* SS **SS** **01 10 38.5 +3.7**
MNK *i* SSS SSS 01 16 27.2
MNK Minsk 151.02 326 *i* PKiKP **PKiKP** **00 47 48.0 -0.2**
MNK *i* 00 48 28.9
MNK *i* PPP PPP 00 54 53.6
MNK *i* SS SS 01 10 38.5 +3.6
MNK pmax pmax
comp=Z,121nm,0.8s
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=E,24nm,1.2s
NB2 NORSAR Subarra 151.18 349 PKP **PKPbc** **00 47 47.0 -1.0**

comp=Z,26nm,0.5s,baz=16,slow=4.1
NB2 NORSAR Subarra 151.18 349 AMP **PKPbc 00 47 47.0 -1.0**
comp=Z,26nm,0.5s
NB2 PKP **PKPbc 00 47 47.0 -1.0**
NOA NORSAR Array B 151.18 349 PKPbc **PKPbc 00 47 47.0 -1.0**
comp=Z,23nm,0.5s,baz=13,slow=4.0,SNR=127
NOA PKPab **PKPab 00 47 55.5 -1.0**
comp=Z,9.5nm,0.5s,baz=24,slow=3.4,SNR=11
SIM Simferopol' 151.23 304 *k iPKIKP* **PKPbc 00 47 48.6 +0.1**
SIM *e* 00 47 57.0
SIM pmax pmax
comp=Z,170nm,0.5s
SIM pmax pmax
comp=Z,67nm,1.0s
SIM pmax pmax
comp=Z,30nm,0.9s
NC602 NORSAR Array S 151.41 348 *eP* **PKPbc 00 47 47.9 -0.5**
HFS Hagfors 151.56 346 PKPbc **PKPbc 00 47 47.3 -1.5**
comp=Z,39nm,0.6s,baz=73,slow=5.1,SNR=118
HFS PKPab **PKPab 00 47 57.6 -0.4**
comp=Z,23nm,0.6s,baz=95,slow=3.5,SNR=16
HYA Hoyanger 151.71 354 *eP* **PKiKP 00 47 50.0 +0.6**
BZK Bozkurt 151.81 298 ⇓P **PKPbc 00 47 48.8 -1.1**
SKAR Skarslia 151.95 351 *eP* **PKiKP 00 47 50.0 -0.1**
KIRS Kirsehir-Merke 152.09 292 ⇓P **PKPbc 00 47 49.3 -1.5**
BR131 Keskin Array S 152.28 293 P **PKPbc 00 47 49.7 -1.6**
SNR=65
BRTR Keskin Array B 152.28 293 PKP **PKPdf 00 47 42.6 -1.7**
comp=Z,2.9nm,1.1s,baz=194,slow=3.7,SNR=12
BRTR PKPbc **PKPbc 00 47 49.9 -1.4**
comp=Z,26nm,0.5s,baz=148,slow=3.7,SNR=219
BRTR PKPab **PKPab 00 48 00.5 -1.5**
comp=Z,12nm,0.6s,baz=109,slow=3.7,SNR=9.7
AKASG Malin Array Be 152.35 318 PKP **PKPdf 00 47 42.4 -1.5**
comp=Z,1.0nm,0.6s,baz=58,slow=1.3,SNR=5.5
AKASG PKPbc **PKPbc 00 47 49.8 -1.1**
comp=Z,37nm,0.5s,baz=49,slow=2.5,SNR=106
AKASG PKPab **PKPab 00 48 00.6 -1.1**
comp=Z,7.5nm,0.5s,baz=49,slow=4.5,SNR=14
AKASG Malin Array Be 152.35 318 PKPdf 00 47 43.2 -0.7
AKBB Malin Array Si 152.35 318 PKP **PKPdf 00 47 45.2 +1.3**
KIEV Kiev 152.36 318 PKPbc 00 47 49.8 -1.1
KIEV Kiev 152.36 318 ⇑P **PKPbc 00 47 49.8 -1.1**
KIEV Kiev 152.36 318 PKIKP **PKPbc 00 47 49.8 -1.1**
KIEV Kiev 152.36 318 PKP **PKPdf 00 47 45.2 +1.3**
CIDE Kastamonu/Cide 152.61 298 ⇑P **PKPbc 00 47 50.4 -1.3**
KONO Kongsberg 152.76 349 *eP* **PKiKP 00 47 51.9 +0.2**
ODD1 Odda 152.89 353 *eP* **PKiKP 00 47 52.1 +0.2**
DBIC Dimbokro 153.25 169 PKP **PKPdf 00 47 46.9 +0.6**
comp=Z,18nm,0.9s,baz=182,slow=1.2,SNR=24
DBIC PKPbc **PKiKP 00 47 54.7 +0.6**
comp=Z,34nm,0.6s,baz=194,slow=2.4,SNR=20
DBIC PKPab **PKPab 00 48 06.3 +0.1**
comp=Z,14nm,0.4s,baz=211,slow=1.4,SNR=5.5
SUW Suwalki 153.47 329 *e*PKP **PKPbc 00 47 52.8 -0.4**
PURM Purcari 153.66 309 ⇑P **PKPbc 00 47 53.2 -0.6**
SORM Soroca 154.00 313 ⇑P **PKPbc 00 47 53.8 -0.8**
KIS Kishinev 154.17 311 ⇓P **PKPbc 00 47 53.6 -1.3**
HOMB Homborsund 154.25 350 *eP* **PKiKP 00 47 55.6 +0.8**
TLCR 154.79 307 ⇓P **PKPbc 00 47 56.3 0.0**
JURR Jurilovca 154.88 306 ⇑P **PKPab 00 48 12.8 +0.2**
VLDR Vladesti 155.06 309 ⇑P PKPdf 00 47 57.0 +9.1
SILT Sile 155.17 297 ⇑P PKPdf 00 47 56.5 +8.3
CFR Carcaliu 155.25 307 ⇓P PKPdf 00 47 57.3 +9.1
MANR Mangalia 155.35 304 ⇓P **PKPab 00 48 13.9 -0.8**
MFTR Murfatlar 155.37 305 ⇓P PKPdf 00 47 56.6 +8.3
IZVR Izvoarele 155.37 309 ⇑P PKPdf 00 47 58.0 +10
GHRR 155.42 310 ⇑P PKPdf 00 47 57.9 +9.5
GIRR Girov 155.64 312 ⇑P PKPdf 00 47 57.8 +9.1
TESR Tescani 155.73 311 ⇑P **PKPab 00 48 16.7 +0.5**
VRI Vrincioaia 155.93 310 ⇑P PKPdf 00 47 58.5 +9.4
ONER Baraj Valea Uz 155.96 311 ⇑P PKPdf 00 47 59.3 +10
PLOR Plostina 155.99 310 ⇑P **PKPab 00 48 17.6 +0.2**
BURAR Bucovina Array 156.13 315 ⇑P PKPdf 00 47 59.8 +10
COVR Voineasa-Covas 156.28 310 ⇑P PKPdf 00 47 58.0 +8.4
TURR Turia 156.31 311 ⇑P **PKPab 00 48 19.4 +0.7**
LEHL Lehliu 156.37 306 ⇓P PKPdf 00 48 00.1 +10
NEHR Nehoiu 156.38 309 ⇓P PKPdf 00 47 58.6 +8.9
OZUR 156.44 311 ⇑P PKPdf 00 47 59.0 +9.1
BAND Balkesir-Ban 156.45 296 ⇑P **PKPab 00 48 19.0 -0.6**
KWP Kalwaria Pacla 156.47 321 *e*PKP **PKPab 00 48 19.4 +0.1**
BOSR Bodos 156.53 311 ⇑P **PKPab 00 48 20.2 +0.6**
MLR Muntele Rosu 156.58 309 ⇑P **PKPdf 00 47 48.9 -1.2**
MLR ⇑P PKPab 00 47 59.2 -21
DOPR Dopca 156.75 311 ⇓P PKPdf 00 48 00.9 +11
LOZB Loznitsa 156.87 304 ⇓P **PKPab 00 48 21.2 0.0**
RAZG Razgrad 156.87 304 ⇑P **PKPab 00 48 21.6 +0.4**
BMR Baia Mare 157.11 316 ⇓P PKPdf 00 48 01.3 +11
VOIR 157.18 310 ⇑P PKPdf 00 48 01.3 +10
MDB Medias 157.31 312 ⇑P **PKPab 00 48 24.0 +1.0**
ARR Arges 157.48 310 ⇓P **PKPdf 00 47 50.3 -0.9**
ELND Elena 157.50 303 ⇑P **PKPab 00 48 23.8 -0.1**
CJR Cluj-Napoca 157.53 314 ⇓P PKPdf 00 48 01.7 +11
COPA Copaceanca 157.56 307 ⇑P PKPdf 00 48 01.4 +10
OJC Ojcow 157.57 325 *e*PKP **PKPab 00 48 23.7 -0.3**
HUMR Humele 157.58 308 ⇓P PKPdf 00 48 01.9 +11
EKA Eskdalemuir Ar 157.73 5 PKPab **PKPab 00 48 23.8 -0.6**
comp=Z,3.0nm,0.5s,baz=352,slow=2.8,SNR=7.9
MARR Marisel-Cluj 157.83 314 ⇑P **PKPab 00 48 24.8 -0.5**
NIE Niedzica 157.84 323 *e*PKP **PKPab 00 48 25.7 +0.5**
LOT Lotru 158.00 311 ⇑P **PKPab 00 48 26.5 +0.4**
DRGR 158.02 315 ⇑P **PKPab 00 48 25.5 -0.6**
VLAD Vladila 158.16 307 ⇑P **PKPab 00 48 26.9 +0.1**
KECS Kecovo 158.33 321 *e*PKIKP **PKPdf 00 47 55.0 +3.0**
KECS Kecovo 158.33 321 *e* **PKPdf 00 47 55.0 +3.0**
LANS Liptovska Anna 158.43 323 *e*PKIKP **PKPdf 00 47 53.1 +0.9**
LANS *e* 00 48 28.3
LANS Liptovska Anna 158.43 323 *e*PKP **PKPdf 00 47 53.1 +0.9**
LANS *e* 00 48 05.2
LANS *e* 00 48 28.3
OKC Ostrava-Krasne 158.60 326 *e*PKPAB **PKPab 00 48 27.3 -1.1**
OKC Ostrava-Krasne 158.60 326 *e*PKP2 **PKPab 00 48 27.3 -1.1**
GZR Gura Zlata 158.65 312 ⇓P **PKPdf 00 47 50.8 -1.8**
KSP Ksiaz 158.68 331 *e*PKP **PKPab 00 48 28.7 -0.1**
MORC Moravsky Berou 158.93 327 ⇓P **PKPab 00 48 29.8 -0.1**
MORC Moravsky Berou 158.93 327 *e*PKP **PKPdf 00 47 51.6 -1.2**
MORC *e* 00 48 29.3
OSTC Ostas 158.93 330 *e*PKPAB **PKPab 00 48 28.2 -1.7**
OSTC Ostas 158.93 330 *e*PKP2 **PKPab 00 48 28.2 -1.7**
CHVC Chvalec 158.97 331 *e*PKPAB **PKPab 00 48 28.9 -1.1**
CHVC Chvalec 158.97 331 *e*PKP2 **PKPab 00 48 28.9 -1.1**
PSZ Piszkesteto 158.99 320 ⇑P PKPab 00 48 20.2 -10
PUNG Punghina 159.03 309 ⇑P **PKPab 00 48 29.4 -1.1**
UPC Upice 159.05 331 *e*PKPAB **PKPab 00 48 30.0 -0.4**
UPC Upice 159.05 331 *e*PKP2 **PKPab 00 48 30.0 -0.4**
HERR Herculane 159.11 311 ⇓P **PKPab 00 48 29.8 -1.0**
FLTG Flechtingen 159.20 340 *e*PKPab **PKPab 00 48 30.4 -0.4**
baz=31,slow=4.9
BZS Buzias 159.26 313 ⇑P **PKPdf 00 47 51.4 -1.8**
JAVC Velka Javorina 159.51 325 *e*PKP **PKPdf 00 47 52.8 -0.7**
JAVC *e* 00 48 33.3
CLL Collm 159.54 336 *i* PKP2 **PKPab 00 48 31.9 -0.5**
CLL pmax pmax
comp=Z,38nm,0.5s
CLL Collm 159.54 336 *i* PKPab **PKPab 00 48 31.9 -0.5**
comp=Z,38nm,0.5s
CLL *ep*PKPab **pPKPab 00 49 17.0 +2.6**
CLL Collm 159.54 336 *e*PKPab **PKPab 00 48 32.1 -0.3**
baz=31,slow=4.9
BRG Berggiesshubel 159.57 334 ⇓ *e*PKPf **PKPdf 00 47 52.8 -0.6**
BRG Berggiesshubel 159.57 334 Amp 00 47 54.6
comp=Z,34nm,1.6s
BRG Berggiesshubel 159.57 334 PKPab **PKPab 00 48 32.2 -0.4**
BRG Berggiesshubel 159.57 334 Amp 00 48 34.0
comp=Z,11nm,0.7s
PVCC Panska Ves 159.61 333 *e*PKPAB **PKPab 00 48 32.2 -0.6**
PVCC Panska Ves 159.61 333 *e*PKP2 **PKPab 00 48 32.2 -0.6**
VRAC Vranov 159.69 327 ⇑P **PKPab 00 48 33.4 +0.2**
VRAC Vranov 159.69 327 *e*PKP **PKPdf 00 47 52.7 -0.9**
VRAC *e* 00 48 32.8
SMOL Smolenice 159.86 325 *e*PKP2 **PKPab 00 48 34.4 +0.4**
CLZ Clausthal 159.88 341 *e*PKPab **PKPab 00 48 34.2 +0.2**
baz=31,slow=4.9
KRUC Moravsky 159.96 327 *e*PKP **PKPdf 00 47 52.6 -1.3**
KRUC *e* 00 48 33.8
HSKC Hora Svate Kat 159.97 334 *e*PKPAB **PKPab 00 48 34.0 -0.4**
TORD Torodi Ar. Bea 160.01 185 PKP **PKPdf 00 47 54.6 -0.4**
comp=Z,10nm,1.0s,baz=234,slow=4.2,SNR=43
TORD PKPab **PKPab 00 48 35.6 +0.4**
comp=Z,3.6nm,0.6s,baz=190,slow=2.3,SNR=4.7
TORD PP **PP 00 52 17.8 +1.4**
comp=Z,6.2nm,1.1s,baz=214,slow=6.8,SNR=6.2
TORD Torodi Ar. Bea 160.01 185 PKPdf 00 47 55.4 +0.4
TORD **PKPab 00 48 35.4 +0.1**
MODS Modra-Piesok 160.03 325 *e*PKIKP **PKPdf 00 47 54.0 0.0**
MODS *e* 00 48 34.8
MODS Modra-Piesok 160.03 325 *e*PKP **PKPdf 00 47 54.0 0.0**
MODS *e* 00 48 34.8
PRU Pruhonice 160.05 332 *e*PKPAB **PKPab 00 48 34.2 -0.5**
PRU Pruhonice 160.05 332 *e*PKP2 **PKPab 00 48 34.2 -0.5**
TREC Trest 160.19 329 *e*PKPAB **PKPab 00 48 35.1 -0.3**
TREC Trest 160.19 329 *e*PKP2 **PKPab 00 48 35.1 -0.3**
ZVC Zvikov 160.62 331 *e*PKPAB **PKPab 00 48 36.9 -0.3**
MORH Mrgy, Hungar 160.69 318 ⇑P PKPdf 00 47 45.9 -8.9
MANZ Manzenberg 160.96 336 *e*PKPab **PKPab 00 48 38.8 +0.1**
baz=31,slow=4.9
RONA Rosalia, Austr 160.97 324 *e*PKP **PKPdf 00 47 54.0 -1.1**
comp=Z,14nm,1.7s
RONA *i* PKP **PKPab 00 48 38.8 -0.1**
comp=Z,6.6nm,0.7s,SNR=6.3
CONA Conrad Observa 161.02 326 *e*PKP **PKPdf 00 47 54.0 -1.3**
comp=Z,7.7nm,1.4s
CONA *i* PKP **PKPab 00 48 39.1 -0.1**
comp=Z,8.5nm,0.7s,SNR=8.5
CONA Conrad Observa 161.02 326 *e*P **PKPab 00 48 39.1 -0.1**
comp=Z,8.5nm,0.7s,SNR=8.5
CKRC Cesky Krumlov 161.06 330 *e*PKPAB **PKPab 00 48 39.0 -0.2**
CKRC Cesky Krumlov 161.06 330 *e*PKP2 **PKPab 00 48 39.0 -0.2**
ROTZ Rotzenmuhle 161.11 335 *e*PKPab **PKPab 00 48 39.7 +0.4**
baz=31,slow=4.9
KHC Kasperske Hory 161.11 332 *e*PKPDF **PKPdf 00 47 53.5 -1.7**
KHC *e*PKPAB **PKPab 00 48 39.0 -0.4**
KHC Kasperske Hory 161.11 332 *e*PKIKP **PKPdf 00 47 53.5 -1.7**
KHC *e* 00 48 39.0
GEC2 GERESS Array S 161.29 331 *e*PKPab **PKPab 00 48 39.7 -0.6**
baz=31,slow=4.9
GERES GERESS Array B 161.29 331 PKP **PKPdf 00 47 55.0 -0.5**
comp=Z,0.4nm,0.6s,baz=61,slow=2.5,SNR=3.8
GERES PKPab **pPKPdf 00 48 39.5 0.0**
comp=Z,1.9nm,0.5s,baz=30,slow=4.7,SNR=12
GRF Grafenberg Arr 161.51 337 *e*PKPab **PKPab 00 48 41.5 +0.4**
baz=31,slow=4.9
ARSA Arzberg 161.66 325 *i* PKP **PKPdf 00 47 54.7 -1.1**
comp=Z,10nm,1.7s
ARSA *i* PKP **PKPab 00 48 41.4 -0.5**
comp=Z,14nm,1.4s
MOA Mollin 161.81 328 *i* PKP **PKPdf 00 47 54.2 -1.7**
comp=Z,6.9nm,1.7s
MOA *i* PKP **PKPab 00 48 42.2 -0.3**
comp=Z,5.0nm,0.6s,SNR=4.7
MOA Mollin 161.81 328 *e*P **PKPab 00 48 42.2 -0.3**
comp=Z,5.0nm,0.6s,SNR=4.7
BIOA Bad Ischl, Aus 162.21 329 *i* PKP **PKPdf 00 47 54.6 -1.8**
comp=Z,14nm,1.6s
BIOA *i* PKP **PKPab 00 48 44.6 +0.4**
comp=Z,4.2nm,0.6s
SOKA Soboth 162.30 324 *i* PKP **PKPdf 00 47 55.1 -1.5**
comp=Z,11nm,1.2s
SOKA *e*PKP **PKPab 00 48 45.5 +0.7**
comp=Z,5.7nm,0.6s
BLY Banja Luka 162.38 316 ⇑P **PKPab 00 48 45.3 +0.2**
OBKA Obir 162.66 324 *i* PKP **PKPdf 00 47 55.6 -1.3**
comp=Z,5.0nm,1.7s
OBKA *e*PKP **PKPab 00 48 46.4 0.0**
comp=Z,2.7nm,0.6s
KBA Koelnbreinsper 162.81 328 *i* PKP **PKPdf 00 47 55.4 -1.8**
comp=Z,11nm,1.2s
KBA *e*PKP **PKPab 00 48 47.3 +0.2**
comp=Z,3.5nm,0.5s
LESA Schwarzleotal 162.83 330 *e*PKP **PKPdf 00 47 56.0 -1.1**
comp=Z,20nm,1.5s,SNR=5.6
LESA *e*PKP **PKPab 00 48 46.4 -0.7**
comp=Z,5.7nm,0.6s
LJU Ljubljana 163.00 323 *e*PKPdf **PKPdf 00 47 55.5 -1.7**
MYKA Terra Mystica 163.00 326 *e*PKP **PKPdf 00 47 56.3 -1.0**
comp=Z,5.9nm,1.1s
MYKA *i* PKP **PKPab 00 48 47.0 -0.9**
comp=Z,9.1nm,0.6s,SNR=6.5
MYKA Terra Mystica 163.00 326 *e*P **PKPab 00 48 47.0 -0.9**
comp=Z,9.1nm,0.6s,SNR=6.5
CADS Cadrg 163.25 325 *i* PKPdf **PKPdf 00 47 55.4 -2.1**
WATA Walderalm 163.35 332 *i* PKP **PKPdf 00 47 55.5 -2.2**
comp=Z,12nm,1.4s
WATA *i* PKP **PKPab 00 48 49.5 +0.1**
comp=Z,3.2nm,0.5s
WTTA Wattenberg 163.39 331 *e*PKP **PKPdf 00 47 56.3 -1.4**
comp=Z,27nm,1.6s,SNR=7.0
WTTA *i* PKP **PKPab 00 48 49.9 +0.3**
comp=Z,5.7nm,0.8s
ABTA Abfaltersbach 163.43 329 *e*PKP **PKPdf 00 47 55.9 -1.8**
comp=Z,15nm,1.5s
ABTA *e*PKP **PKPab 00 48 48.2 -1.6**
comp=Z,4.4nm,0.5s
MOTA Moosalm 163.53 333 *i* PKP **PKPdf 00 47 56.9 -1.0**
comp=Z,14nm,1.2s
MOTA *i* PKP **PKPab 00 48 49.1 -1.2**
comp=Z,18nm,1.2s
RETA Reutte 163.54 333 *e*PKP **PKPdf 00 47 56.6 -1.1**
comp=Z,11nm,1.9s
RETA *i* PKP **PKPab 00 48 50.0 -0.2**
comp=Z,12nm,0.7s
SQTA Sankt Quirin 163.59 332 *i* PKP **PKPdf 00 47 56.6 -1.3**
comp=Z,17nm,1.6s
SQTA *i* PKP **PKPab 00 48 49.6 -0.8**
comp=Z,4.4nm,0.7s
BFO Black Forest 163.62 340 PKPab 00 48 50.3 -0.1
BFO Black Forest 163.62 340 PKP2 **PKPab 00 48 50.3 -0.1**
FETA Feichten 163.94 333 *e*PKP **PKPdf 00 47 57.0 -1.2**
comp=Z,17nm,1.6s
FETA *e*PKP **PKPab 00 48 51.4 -0.7**
comp=Z,18nm,1.4s
DAVA Damuels 164.03 335 *e*PKP **PKPdf 00 47 57.1 -1.2**
comp=Z,20nm,1.5s
DAVA *i* PKP **PKPab 00 48 52.2 -0.2**
comp=Z,19nm,0.8s,SNR=10
DAVA Damuels 164.03 335 *e*P **PKPab 00 48 52.2 -0.2**
comp=Z,19nm,0.8s,SNR=10
TIP Timpagrande 165.22 299 ⇓P **PKPab 00 48 57.0 -1.0**
TAM Tamanrasset 168.57 207 PKPdf 00 48 03.5 +1.0
TAM Tamanrasset 168.57 207 PKIKP **PKPdf 00 48 03.6 +1.0**
MVO Moncorvo 170.25 33 *e*PKPdf **PKPdf 00 48 03.8 +0.8**
PSARD Sardoal 170.80 43 *e*PKPdf **PKPdf 00 48 04.3 +1.0**
PCBR Castelo Branco 171.02 40 *e*PKPdf **PKPdf 00 48 07.0 +3.7**
MOE Montemor 171.36 49 *e*PKPdf **PKPdf 00 48 04.5 +1.0**
EVO Evora 171.57 48 *e*PKPdf **PKPdf 00 48 04.9 +1.3**
PESTR Estremoz 171.62 45 *e*PKPdf **PKPdf 00 48 05.4 +1.7**
MORF Marmelete 171.80 57 *e*PKPdf **PKPdf 00 48 05.4 +1.6**
MORF Marmelete 171.80 57 PKPdf 00 48 05.6 +1.7
MORF Marmelete 171.80 57 *e*PKPdf **PKPdf 00 48 05.5 +1.7**
MORF Marmelete 171.80 57 PKIKP **PKPdf 00 48 05.6 +1.7**
MESJ Messejana 171.83 53 *e*PKPdf **PKPdf 00 48 05.9 +2.1**
KEST Kesra 171.88 291 PKP **PKPdf 00 48 04.0 +0.1**
comp=Z,11nm,1.1s,baz=315,slow=4.1,SNR=7.2
KEST PKPab **PKPab 00 49 26.9 -0.7**
comp=Z,6.8nm,1.1s,baz=36,slow=3.4,SNR=6.8
PBEJ Beja 171.96 51 *e*PKPdf **PKPdf 00 48 06.0 +2.2**
PCVE Castro Verde 172.06 54 *e*PKPdf **PKPdf 00 48 06.3 +2.4**
PBDV Barranco-do-Ve 172.33 56 *e*PKPdf **PKPdf 00 48 05.8 +1.7**
PBAR Barrancos 172.39 47 *e*PKPdf **PKPdf 00 48 05.2 +1.2**
PAB San Pablo 172.73 28 PKPdf 00 48 04.9 +0.7
PAB San Pablo 172.73 28 PKIKP **PKPdf 00 48 04.9 +0.7**
ESDC Sonseca Array 172.76 25 PKP **PKPdf 00 48 04.7 +0.4**
comp=Z,11nm,1.2s,baz=335,slow=2.9,SNR=21
ESDC PKPab **PKPab 00 49 30.6 -0.5**
comp=Z,1.0nm,0.7s,baz=320,slow=3.8,SNR=6.9
ESDC Sonseca Array 172.76 25 PKPdf 00 48 05.1 +0.9
MD01 Midelt array s 175.98 93 PKPdf 00 48 06.9 +1.3

*DSN **17** 00:29:18.9±1.7,27.°34N×54.°76E,h10km,ML3.6/19, Error ellipse: s-maj=20.6km s-min=5.3km az=13.0*
*IDC **17** 00:29:18.7±1.0,27.°03N×54.°84E,h0km,mb3.9/14, mbtmp4.0/18,ML3.6/4,MS3.6/3, Error ellipse: s-maj=25.2km s-min=16.3km az=148.0*
*NEIC **17** 00:29:20.5±1.2,27.°17N±0.°07×54.°75E±0.°06,h10km±2km, mb4.0/8, Error ellipse: s-maj=12.8km s-min=9.2km az=159.0*
*OMAN **17** 00:29:21.8±0.1,27.°11N×54.°82E,h10km,mb3.7/8, ml3.8/20, Error ellipse: s-maj=2.2km s-min=0.9km az=6.0*
*TEH **17** 00:29:21.0,27.°10N×54.°82E,h17km±21km,ML3.9, Presumed earthquake*

ISC 17 00:29:20.6±1.3,27.°17N±0.°04×54.°81E±0.°03,h10km±9km, n109,σ1°18/118,mb3.9/17,Southern Iran

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

LAR1 LAR 0.63 322 Pg **Pb 00 29 34.2 +0.4**
GENO Geno 1.23 79 Pg **Pg 00 29 44.6 +0.3**
KHL1 Khalili_Fars 1.42 289 Pg **Pg 00 29 48.0 +0.1**
LMD1 Lamerd 1.48 277 Pg **Pg 00 29 49.4 +0.4**
IBND Bandar-abas 1.56 79 Pg **Pb 00 29 49.8 +0.3**
SHME Shamm 1.63 133 *eP* **Pn 00 29 49.3 -0.1**
SNR=16
SHME S **Sb 00 30 11.8 +0.4**
SHME Shamm 1.63 133 P **Pn 00 29 50.0 +0.7**
SNR=16
SHME S **Sb 00 30 11.5 +0.1**
JHRM Jahrom 1.72 321 Pg **Pb 00 29 52.6 +0.2**
BANOM Banah 1.82 133 *eP* **Pn 00 29 52.6 +0.6**
SNR=83
BANOM S **Sg 00 30 19.4 +0.3**
BANOM Banah 1.82 133 P **Pn 00 29 52.6 +0.6**
BANOM S **Sn 00 30 15.7 +0.5**
MASF Masafi 2.16 146 P **Pn 00 29 57.8 +1.1**
SNR=9.6
MASF S **Sn 00 30 24.1 +0.5**
MSFE Esma-Masafi 2.17 146 *eP* **Pn 00 29 57.8 +0.9**
SNR=30
MDH Madha 2.29 144 *eP* **Pn 00 29 59.2 +0.7**
SNR=27
MDH Madha 2.29 144 P **Pn 00 29 59.3 +0.8**
SNR=22
MDH S **Sn 00 30 27.1 +0.3**
NAZ Nazwa, Dubai 2.30 160 *eP* **Pn 00 29 60.0 +1.4**
SNR=15
NAZ Nazwa, Dubai 2.30 160 P **Pn 00 30 00.1 +1.5**
SNR=15
FAQ Al Faqa, Dubai 2.51 164 P **Pn 00 30 03.2 +1.6**
FAQ Al Faqa, Dubai 2.51 164 P **Pn 00 30 03.3 +1.8**
UOSS Minazif 2.54 150 Pn 00 30 02.1 +0.2
UOSS Minazif 2.54 150 *eP* **Pn 00 30 02.6 +0.6**
SNR=22
UOSS Minazif 2.54 150 P **Pn 00 30 02.7 +0.8**
ASUD Al Ashush, Dub 2.58 170 *eP* **Pn 00 30 04.3 +1.9**
SNR=12
ASUD Al Ashush, Dub 2.58 170 P **Pn 00 30 04.4 +2.1**
SNR=12
AJN Ajban 2.60 177 *eP* **Pn 00 30 04.6 +1.9**
SNR=8.9
AJN Ajban 2.60 177 P **Pn 00 30 05.0 +2.3**
SNR=8.9
AJN S **Sn 00 30 35.8 +1.4**
HATD Hatta, Dubai 2.62 153 *eP* **Pn 00 30 03.9 +0.9**
SNR=28
HATD Hatta, Dubai 2.62 153 P **Pn 00 30 04.2 +1.2**
SNR=28
HATD S **Sn 00 30 35.3 +0.5**
ASHO Ashiyiah 2.72 155 *eP* **Pn 00 30 05.2 +0.8**
SNR=69
ASHO Ashiyiah 2.72 155 P **Pn 00 30 05.6 +1.2**
SNR=50
ASHO S **Sn 00 30 38.4 +1.1**
NGRK Negar Kerman 2.99 34 Pn **Pn 00 30 09.7 +1.3**
ALNE Al Ain 3.21 165 *i* P **Pn 00 30 12.5 +1.3**
SNR=19
ALNE Al Ain 3.21 165 P **Pn 00 30 12.5 +1.3**
SNR=19
SOHO SOHO 3.40 152 *i* P **Pn 00 30 13.8 +0.1**
SNR=12
SOHO SOHO 3.40 152 P **Pn 00 30 14.2 +0.5**
MZWR Madinat Zayed 3.50 194 P **Pn 00 30 16.4 +1.3**
KHGB Koh Gabri 3.51 24 Pn **Pn 00 30 18.0 +2.5**
CHMN Cheshme madani 3.60 41 Pn **Pn 00 30 19.2 +2.5**
SHMA Al-Shehemyia 3.69 250 P **Pn 00 30 20.0 +2.3**
SNR=24
KBAM BAM 3.76 58 Pn **Pn 00 30 20.6 +1.8**
TRNA Turayna 4.05 234 P **Pn 00 30 24.0 +1.4**
SNR=20
TRNA S **Sn 00 31 11.3 +1.3**
ZRDN Zarand Kerman 4.07 21 Pn **Pn 00 30 25.6 +2.4**
SLWR Sila 4.18 223 P **Pn 00 30 24.9 +0.5**
SLWR S **Sn 00 31 14.6 +1.3**
IMEH Mehriz 4.21 358 Pn **Pn 00 30 27.8 +2.8**
HOQ Hoqain 4.23 147 P **Pn 00 30 26.2 +1.1**
SNR=7.7
MZR Muzera 4.32 197 *i* P **Pn 00 30 26.7 +0.3**
SNR=11
MZR Muzera 4.32 197 P **Pn 00 30 26.8 +0.4**
SNR=18
SMRA Abu-Samra 4.33 237 P **Pn 00 30 27.9 +1.4**
SNR=12
UMZA Um Al Zommool 4.45 176 P **Pn 00 30 28.8 +0.6**
IBAF Bafgh 4.45 8 Pn **Pn 00 30 30.3 +2.0**
TAFT Taft - Yazd 4.57 353 Pn **Pn 00 30 32.5 +2.4**
BSY Bisya 4.91 153 P **Pn 00 30 36.0 +1.5**
SNR=21
SMDO Samad 5.04 144 P **Pn 00 30 37.7 +1.4**
SNR=31
WSAR Wadi Sarin 5.22 138 P **Pn 00 30 39.9 +1.1**
SNR=18
CHBR Chabahar 5.32 106 Pn **Pn 00 30 40.8 +0.7**
JMDO Jabal Madar 5.64 147 P **Pn 00 30 45.0 +0.5**
ZHDN Zahedan 5.74 66 Pn **Pn 00 30 47.8 +1.8**
WBK Wadi Bani Khal 5.90 139 P **Pn 00 30 48.5 +0.3**
SNR=51
NGCH Negor - Chabah 5.96 106 P **Pn 00 30 50.2 +1.4**
SNR=7.8
NGCH Negor - Chabah 5.96 106 Pn **Pn 00 30 50.0 +1.2**
JLN Jalan Bani Buh 6.51 139 P **Pn 00 30 56.3 -0.2**
SRVN Saravan 6.75 86 Pn **Pn 00 31 01.6 +1.7**
MHTO MHTO 6.80 154 P **Pn 00 31 00.6 +0.2**
SNR=7.4
DQM DQM 7.63 160 P **Pn 00 31 11.7 -0.1**
DOK Doka 8.54 184 P **Pn 00 31 23.8 -0.5**
SNR=15
SHAO Shalim 9.13 175 *i* P **Pn 00 31 31.4 -1.1**
SNR=6.2
SHAO Shalim 9.13 175 P **Pn 00 31 32.1 -0.5**
SNR=14
RAYN Ar Rayn 9.17 249 Pn 00 31 31.1 -2.0
RAYN Ar Rayn 9.17 249 *i* P **Pn 00 31 31.3 -1.8**
SNR=12
RAYN Ar Rayn 9.17 249 P **Pn 00 31 32.6 -0.4**
DMTO DMTO 9.41 179 P **Pn 00 31 35.1 -1.2**
HRA Herat 9.62 40 Pn 00 31 38.2 -1.1
ABTO Aybut 9.87 188 P **Pn 00 31 42.0 -0.7**
SNR=12
GNI Garni 15.41 330 Pn **P 00 33 02.9 +0.1**
0.8nm,0.3s,baz=131,slow=3.5,SNR=6.7
8.2nm,0.7s
GNI Garni 15.41 330 Pn **Pn 00 32 56.6 -1.7**
GNI IAmb IAmb 00 33 13.8
comp=Z,10nm,0.8s
MARD Mardin 15.58 314 P 00 33 02.9 -1.9
ASF Jabal al Asfar 16.35 292 Pn **P 00 33 12.3 -1.0**
comp=Z,0.2nm,0.3s,baz=14,slow=8.1,SNR=3.9
comp=Z,3.9nm,0.9s
EIL Elat 17.65 283 LR LR 00 41 24.1
comp=Z,61nm,19.8s,baz=1.0,slow=41
MMAI Mount Meron Ar 17.77 294 P **P 00 33 28.8 -0.2**
comp=Z,0.3nm,0.3s,baz=116,slow=16,SNR=2.3
comp=Z,3.5nm,0.9s
KBZ Khabaz 19.13 333 P **Pn 00 33 45.6 +1.1**
baz=307,slow=22,SNR=1.4
comp=Z,1.1nm,0.7s
KK31 Karatay Array 20.38 35 P 00 33 58.2 +0.8
KKAR Karatay Array 20.38 35 P 00 33 57.3 -0.2
ARSB Arslanbob 20.55 42 P **P 00 33 59.2 -0.3**
ARSB IAmb IAmb 00 34 07.5
comp=Z,4.1nm,0.6s
BR131 Keskin Array S 21.59 311 P 00 34 10.3 -0.4
BR131 IAmb IAmb 00 34 24.2
comp=Z,6.6nm,1.1s
BRTR Keskin Array B 21.59 311 P **P 00 34 11.2 +0.5**
comp=Z,1.0nm,0.6s,baz=130,slow=14,SNR=10
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 21.59 311 P P 00 34 10.4 -0.3
AAK Ala-Archa 22.25 41 LR LR 00 45 04.7
comp=Z,150nm,19.1s,baz=342,slow=42
AAK Ala-Archa 22.25 41 P P 00 34 17.6 -0.1
AB31 Akbulak array 22.41 9 P P 00 34 18.9 -0.3
AB31 IAmb IAmb 00 34 20.2
comp=Z,5.3nm,0.8s
ABKAR Akbulak array 22.41 9 P P 00 34 18.7 -0.5
BVAR Borovoye Array 28.31 20 P P 00 35 14.0 -0.3
comp=Z,2.0nm,0.7s,baz=212,slow=8.1,SNR=10
BVAR PcP **PcP 00 38 28.8 +1.7**
comp=Z,0.2nm,0.4s,baz=186,slow=1.4,SNR=2.4
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 29.18 41 P P 00 35 22.6 +0.5
comp=Z,0.4nm,0.6s,baz=235,slow=10,SNR=5.1
comp=Z,0.4nm,0.6s

KURBB	**Kurchatov Arra**	29.58	31	P		P	00 35 26.1	+0.6
	comp=Z,0.9nm,0.8s,baz=232,slow=8.8,SNR=9.1							
	comp=Z,0.9nm,0.8s							
ZAA0	**Zalesovo Array**	34.67	31	P		P	00 36 09.6	-0.6
ZALV	**Zalesovo Beam**	34.67	31	P		P	00 36 09.7	-0.5
	comp=Z,3.9nm,0.6s,baz=239,slow=9.7,SNR=18							
	comp=Z,3.9nm,0.6s							
ZALV	**Zalesovo Beam**	34.67	31	P		P	00 36 09.4	-0.8
FINES	**FINESS Array B**	39.31	339	P		P	00 36 49.4	-0.1
	comp=Z,12nm,1.1s,baz=134,slow=8.0,SNR=7.0							
	comp=Z,12nm,1.1s							
SQTA	**Sankt Quirin**	39.46	312	*i* P		P	00 36 50.2	-0.9
	comp=Z,0.9nm,0.3s							
FETA	**Feichten**	39.73	312	*i* P		P	00 36 52.3	-1.1
	comp=Z,1.0nm,0.5s							
DAVA	**Damuels**	40.35	312	*i* P		P	00 36 57.0	-1.6
	comp=Z,4.2nm,0.4s							
HFS	**Hagfors**	43.19	331	P		P	00 37 22.1	+0.7
	comp=Z,3.2nm,0.9s,baz=139,slow=12,SNR=5.4							
	comp=Z,3.2nm,0.9s							
NOA	**NORSAR Array B**	44.70	332	P		P	00 37 35.2	+1.6
	comp=Z,0.7nm,0.7s,baz=107,slow=9.6,SNR=1.5							
	comp=Z,0.7nm,0.7s							
SONM	**Songino Array**	44.88	48	P		P	00 37 37.4	+2.1
	comp=Z,0.3nm,0.7s,baz=274,slow=9.5,SNR=2.0							
	comp=Z,0.3nm,0.7s							
ESDC	**Sonseca Array**	49.82	300	P		P	00 38 14.3	+0.5
	comp=Z,0.3nm,0.4s,baz=76,slow=7.2,SNR=4.8							
	comp=Z,0.3nm,0.4s							
TORD	**Torodi Ar. Bea**	51.43	265	P		P	00 38 25.4	-0.8
	comp=Z,1.4nm,0.9s,baz=68,slow=1.8,SNR=7.3							
	comp=Z,1.4nm,0.9s							
DBIC	**Dimbokro**	60.05	262	P		P	00 39 27.7	-0.5
	comp=Z,4.3nm,0.7s,baz=80,slow=6.1,SNR=6.2							
	comp=Z,4.3nm,0.7s							
BOSA	**Boshof**	62.29	209	P		P	00 39 41.9	-1.3
	comp=Z,2.8nm,0.9s,baz=23,slow=7.4,SNR=4.5							
	comp=Z,2.8nm,0.9s							
JNU	**Nakatsue**	64.72	64	LR		LR	01 12 22.6	
	comp=Z,101nm,18.6s,baz=96,slow=40							
YKA	**Yellowknife Ar**	90.25	355	P		P	00 42 21.1	-0.1
	comp=Z,0.4nm,0.8s,baz=3.9,slow=5.2,SNR=6.2							
	comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	90.25	355	P		P	00 42 21.1	-0.1

RSNC ***17*** *00:29:27.6±0.0,7°N±1°×7°3W±°, h144km±1km, M2.9, mb3.3, ML2.6, MLv3.3*
FUNV ***17*** *00:29:28.8, 6°.90N×73°.13W, h130km, MW3.5, Presumed earthquake*

ISC 17 00:29:25.6±1.3, 6°.84N±0°.03×73°.12W±0°.04, h153km±7km, n34, σ1s25/64, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	0.26	195	P		Pn	00 29 47.3	+0.7
BARC				S		Sn	00 30 02.0	-0.7
BRJC	**Barrancabermej**	0.64	282	P		Pn	00 29 49.1	+1.1
BRJC				S		Sn	00 30 04.5	-0.5
PAMC	**Pamplona, Colo**	0.65	40	P		Pn	00 29 50.1	+1.5
PAMC				S		Sn	00 30 06.7	+0.5
RUSC	**La Rusia**	0.94	178	P		Pn	00 29 51.2	+0.5
RUSC				S		Sn	00 30 09.1	-0.8
RUSC	**La Rusia**	0.94	178	*eP*		Pn	00 29 50.9	+0.1
RUSC				*eS*		Sn	00 30 08.2	-1.7
CAPV	**Capacho**	1.29	38	*eP*		Pn	00 29 54.8	+1.2
CAPV				*eS*		Sn	00 30 11.7	-3.2
PTBC	**PUERTO BERRIO,**	1.36	257	P		Pn	00 29 53.9	-0.1
PTBC				S		Sn	00 30 14.9	-0.8
OCAC	**Ocana**	1.41	352	P		Pn	00 29 55.6	+1.0
OCAC				S		Sn	00 30 17.0	+0.2
SPBC	**San Pablo de B**	1.52	219	P		Pn	00 29 56.4	+0.8
SPBC				S		Sn	00 30 17.4	-1.3
NORC	**Norcasia**	2.16	234	P		Pn	00 30 03.7	+0.9
NORC				S		Sn	00 30 31.0	-0.4
CHIC	**Chingaza**	2.28	196	P		Pn	00 30 05.5	+0.9
CHIC				S		Sn	00 30 33.5	-1.1
ROSC	**El Rosal**	2.32	211	P		Pn	00 30 06.6	+1.5
ROSC				S		Sn	00 30 36.0	+0.6
HELC	**Santa Helena**	2.48	255	P		Pn	00 30 08.2	+1.2
HELC				S		Sn	00 30 38.6	-0.3
HELC	**Santa Helena**	2.48	255	*eP*		Pn	00 30 08.6	+1.6
HELC				*eS*		Sn	00 30 37.5	-1.4
UREC	**San Jos de Ur**	2.56	291	P		Pn	00 30 07.8	+0.2
UREC				S		Sn	00 30 39.2	-0.9
SOCV	**Socops**	2.66	57	*eP*		Pn	00 30 10.3	+1.5
SOCV				*eS*		Sn	00 30 41.3	-0.9
VILC	**Villavicencio,**	2.77	192	P		Pn	00 30 10.9	+0.6
VILC				S		Sn	00 30 45.4	+0.5
CBOC	**Ciudad Bolivar**	3.04	252	P		Pn	00 30 15.2	+1.5
CBOC				S		Sn	00 30 50.1	-0.8
DBBC	**Dabeiba**	3.08	273	P		Pn	00 30 15.1	+1.0
DBBC				S		Sn	00 30 50.2	-1.5
SDV	**Santo Domingo**	3.19	50	P		Pn	00 30 17.0	+1.3
SDV				S		Sn	00 30 54.4	0.0
SDV	**Santo Domingo**	3.19	50	*eP*		Pn	00 30 16.2	+0.6
SDV				*eS*		Sn	00 30 51.7	-2.7
ARGC	**Ariguani, Magd**	3.20	340	P		Pn	00 30 17.2	+1.6
ARGC				S		Sn	00 30 55.9	+1.5
PRAC	**Prado**	3.57	210	P		Pn	00 30 20.6	+0.2
PRAC				S		Sn	00 31 02.1	-0.9
APAC	**Apartado, Choc**	3.59	287	P		Pn	00 30 21.2	+0.6
APAC				S		Sn	00 31 03.3	-0.1
ORTC	**Ortega, Tolima**	3.60	216	P		Pn	00 30 22.3	+1.5
ORTC				S		Sn	00 31 04.0	+0.3
SJCC	**San Jacinto, C**	3.66	326	P		Pn	00 30 21.6	0.0
SJCC				S		Sn	00 31 03.2	-1.9
SJCC	**San Jacinto, C**	3.66	326	*eP*		Pn	00 30 22.2	+0.6
SJCC				*eS*		Sn	00 31 01.7	-3.4
URMC	**La Uribe, Meta**	3.79	199	P		Pn	00 30 24.3	+1.1
URMC				S		Sn	00 31 09.3	+1.3
CRJC	**Cerrejon, Guaj**	4.16	3	P		Pn	00 30 27.8	-0.3
CRJC				S		Sn	00 31 18.4	+1.6
YOTC	**Yotoco, Valle**	4.29	229	P		Pn	00 30 30.3	+0.5
MACC	**Macarena, Meta**	4.72	189	P		Pn	00 30 34.7	-0.7
MACC				S		Sn	00 31 27.7	-2.2
URIC	**Uribia, Colomb**	4.96	13	P		Pn	00 30 38.1	-0.4
JAMC	**Jamundi, Valle**	5.05	225	P		Pn	00 30 40.2	+0.2
JAMC				S		Sn	00 31 36.5	-1.5
CACV	**CAICARA DEL OR**	6.56	83	*eP*		Pn	00 31 07.1	+7.2

AZER 17 00:46:05.9, 40°.11N×48°.83E, h5km, ml1.8, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GBS	**Qobustan**	0.43	11	P		Pn	00 46 17.7	-1.2
GBS				S		Sb	00 46 26.3	+3.3
PQL	**Pirkuli**	0.70	345	P		Pn	00 46 22.4	-0.3
PQL				S		Sn	00 46 35.3	+1.3
ATGJ	**Altiaghaj**	0.76	6	P		Pn	00 46 23.6	+0.2
ATGJ				S		Sn	00 46 38.1	+2.9
SIZA	**Siyzn**	0.97	3	P		Pn	00 46 27.6	+1.4
SIZA				S		Sn	00 46 44.7	+4.2

IDC ***17*** *01:03:20.3±10.0, 17°.50S×178°.88W, h627km±135km, mb3.1/7, mbtmp4.1/7, Error ellipse: s-maj=91.5km s-min=40.8km az=160.0*

ISC 17 01:03:13.2±1.5, 17°.3S±0°.6×178°.8W±0°.4, h539km, n8, σ0s92/8, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	38.59	240	P		P	01 09 50.0	-0.2
	1.4nm,0.6s,baz=98,slow=12,SNR=3.6							
	1.4nm,0.6s							
WRA	**Warramunga Arr**	44.37	259	P		P	01 10 36.6	+0.5
	1.9nm,0.5s,baz=96,slow=7.7,SNR=44							
	1.9nm,0.5s							
ASAR	**Alice Springs**	44.59	254	P		P	01 10 38.3	+0.5
	8.3nm,0.6s,baz=87,slow=8.7,SNR=130							
	8.3nm,0.6s							
NVAR	**Mina Array Bea**	79.26	44	P		P	01 14 24.3	+1.2
	0.4nm,0.5s,baz=253,slow=4.4,SNR=2.2							
	0.4nm,0.5s							
ILAR	**Eielson Array**	85.39	13	P		P	01 14 53.0	-0.2
	0.4nm,0.7s,baz=218,slow=5.4,SNR=7.7							
	0.4nm,0.7s							
TXAR	**Lajitas Array**	86.00	58	P		P	01 14 57.2	+0.1
	1.0nm,0.7s,baz=216,slow=6.5,SNR=14							
	1.0nm,0.7s							
PDAR	**Pinedale Array**	87.18	44	P		P	01 15 02.1	-0.4
	0.5nm,0.6s,baz=203,slow=4.2,SNR=6.2							
	0.5nm,0.6s							
ARCES	**ARCESS Array B**	125.66	350	PKP		PKPdf	01 21 11.4	-1.4
	2.5nm,0.8s,baz=55,slow=1.4,SNR=1.7							

FUNV ***17*** *01:12:47.0, 10°.73N×62°.24W, h28km, MW3.2, Presumed earthquake*
TRN ***17*** *01:12:48.5, 10°.87N×62°.34W, h77km, MD2.9, North of the Paria peninsula.*

ISC 17 01:12:47.0±2.7, 10°.87N±0°.08×62°.4W±0°.1, h81km±44km, n15, σ0s72/26, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	0.85	101	*eP*		Pn	01 13 04.3	-0.1
DMDM				*eS*		Sn	01 13 16.6	-0.6
PSMG	**Mucurapo Girls**	0.87	103	*eP*		Pn	01 13 05.0	+0.3
PSMG				*eS*		Sn	01 13 17.1	-0.7
PSKH	**Kent House, Po**	0.88	102	*eP*		Pn	01 13 05.2	+0.5
PSKH				*eS*		Sn	01 13 17.4	-0.5
PSGH	**Port of Spain**	0.90	103	*eP*		Pn	01 13 05.2	+0.2
PSGH				*eS*		Sn	01 13 17.6	-0.7
TRN	**Trinidad (W)**	1.00	102	*eP*		Pn	01 13 07.4	+1.3
GRFF	**Grenada Fort F**	1.34	29	*eP*		Pn	01 13 10.7	+0.3
GRFF				*eS*		Sn	01 13 27.9	-0.1
GRGR	**Grenville**	1.45	30	*eP*		Pn	01 13 11.8	0.0
GRGR				*eS*		Sn	01 13 30.2	-0.3
GRGR	**Grenville**	1.45	30	*eP*		Pn	01 13 12.2	+0.3
GRGR				*eS*		Sn	01 13 31.1	+0.6
GRSS	**Sisters**	1.62	28	*eP*		Pn	01 13 14.7	+0.7
GRSS				*eS*		Sn	01 13 33.8	-0.6
GCMP	**Grenada, Carri**	1.87	30	*eP*		Pn	01 13 17.6	+0.3
GCMP				*eS*		Sn	01 13 39.5	-0.7
PCRV	**Puerto La Cruz**	2.31	253	*eP*		Pn	01 13 24.4	+1.3
PCRV				*eS*		Sn	01 13 51.0	+0.2
TACV	**Tcata**	4.61	261	*eP*		Pn	01 13 54.9	+0.5
TACV				*eS*		Sn	01 14 45.5	-1.3
BENV	**Beln**	5.20	261	*eP*		Pn	01 14 03.0	+0.6
BENV				*eS*		Sn	01 14 59.8	-1.3
CACV	**CAICARA DEL OR**	5.24	232	*eP*		Pn	01 13 57.6	-5.4
CACV				*eS*		Sn	01 14 48.9	-13
MAPV	**Macapo**	6.05	261	*eP*		Pn	01 14 14.0	-0.1

IDC ***17*** *01:13:48.5±0.9, 4°.23S×126°.53E, h0km, mb3.9/10, mbtmp4.0/12, ML3.9/2, MS3.2/4, Error ellipse: s-maj=34.4km s-min=17.3km az=58.0*
NEIC ***17*** *01:13:51.6±2.0, 4°.25S±0°.07×126°.73E±0°.07, h10km±2km, mb4.3/9, Error ellipse: s-maj=12.5km s-min=12.1km az=211.0*
DJA ***17*** *01:13:51.7±0.4, 4°S±3°×12°7E±°, h10km, M4.5/12, mB5.0/2, mb4.8/6, MLv4.4/12, Mw(mB)4.3/2*

ISC 17 01:13:50.2±0.6, 4°.24S±0°.05×126°.74E±0°.04, h10km, n52, σ1s73/53, mb4.1/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	1.06	20	P		Pb	01 14 10.8	+0.1
NLAI				S		Sg	01 14 23.9	-0.6
AAI	**Ambon**	1.56	69	P		Pn	01 14 17.7	-0.2
AAI				S		Sn	01 14 35.6	-2.6
KRAI	**Karang Ratu**	1.89	61	P		Pn	01 14 23.0	+0.4
SANI	**Sanana**	2.30	341	P		Pn	01 14 28.5	+0.3
SANI				S		Sn	01 14 55.1	-1.6
TNTI	**Ternate**	5.02	7	Pn		Pn	01 15 06.8	+1.2
TNTI	**Ternate**	5.02	7	P		Pn	01 15 09.0	+3.4
LUWI	**Luwuk**	5.08	309	Pn		Pn	01 15 06.2	-0.2
LUWI	**Luwuk**	5.08	309	P		Pn	01 15 06.3	-0.2
SWI	**Sorong**	5.63	54	P		Pn	01 15 15.7	+1.7
	0.4nm2µm93nm,0.6s							
SIJI	**Sorong**	5.63	54	Pn		Pn	01 15 15.1	+1.1
	12nm,0.3s,baz=270,slow=12,SNR=7.6							
SIJI				Sn		Sn	01 16 18.0	-0.8
	4.4nm,0.3s,baz=211,slow=19,SNR=11							
	28nm,0.3s							
SIJI	**Sorong**	5.63	54	P		Pn	01 15 15.9	+1.9
FAKI	**Fak Fak**	5.66	77	Pn		Pn	01 15 16.2	+1.8
FAKI				Sn		Sn	01 16 16.5	-3.0
FAKI	**Fak Fak**	5.66	77	P		Pn	01 15 16.4	+2.0
	0.3nm50nm,0.6s							
SAUI	**Saumlaki**	5.86	130	Pn		Pn	01 15 18.0	+0.8
SOEI	**Soe**	6.00	204	Pn		Pn	01 15 19.0	-0.2
SOEI	**Soe**	6.00	204	P		Pb	01 15 28.8	-6.2
GTOI	**Gorontalo**	6.11	322	P		Pn	01 15 29.2	+8.6
BSSI	**Bau Bau, Buton**	6.50	253	P		Pn	01 15 27.7	+1.7
BATI	**Baumata**	6.66	207	Pn		Pn	01 15 29.4	+1.2
	baz=90,slow=6.1							
BATI				LR		LR	01 18 04.9	
	comp=Z,246nm,20.1s,baz=2.0,slow=39							
MRSI	**Marisa**	6.70	314	P		Pn	01 15 31.3	+2.5
EDFI	**Ende, Flores**	6.72	228	P		Pn	01 15 31.3	+2.2
SPSI	**Sidrap Palu**	6.96	272	P		Pb	01 15 49.6	-1.6
KAPI	**Kappang**	7.00	263	Pn		Pn	01 15 33.5	+0.6
	2.9nm,0.3s,baz=110,slow=11,SNR=11							
KAPI				Sn		Sn	01 16 50.6	-2.1
	0.5nm,0.3s,baz=73,slow=20,SNR=1.9							
KAPI				LR		LR	01 18 23.1	
	comp=Z,150nm,18.2s,baz=86,slow=40							
KAPI	**Kappang**	7.00	263	Pn		Pn	01 15 34.5	+1.6
TOLI2	**Tolitoli**	7.98	312	Pn		Pn	01 15 48.3	+2.0
MPSI	**Mapaga**	8.21	304	P		Pn	01 15 52.9	+3.5
KNRA	**Kununurra**	11.54	170	Pn		Pn	01 16 34.1	-0.9
FITZ	**Fitzroy Crossi**	13.81	184	Pn		Pn	01 17 03.8	-2.4
	0.2nm,0.3s,baz=360,slow=12,SNR=3.9							
	3.7nm,0.9s							
WB0	**Warramunga Arr**	17.14	155	Pn		Pn	01 17 47.4	-2.6
WB0				IAmb		IAmb	01 18 27.5	
	comp=Z,21nm,1.4s							
WRA	**Warramunga Arr**	17.27	155	P		Pn	01 17 49.0	-2.7
	comp=Z,1.4nm,0.8s,baz=340,slow=13,SNR=8.9							
WRA	**Warramunga Arr**	17.27	155	Pn		Pn	01 17 48.3	-3.4
COEN	**Coen**	18.87	122	P		P	01 18 11.4	+0.6
COEN				IAmb		IAmb	01 18 14.1	
	comp=Z,17nm,1.1s							
BBJI	**Bungbulang**	19.25	260	P		P	01 18 15.7	+0.6
BBJI				IAmb		IAmb	01 18 33.9	
	comp=Z,11nm,0.7s							
AS31	**Alice Springs**	20.51	161	P		P	01 18 30.4	+1.7
ASAR	**Alice Springs**	20.51	161	P		P	01 18 29.2	+0.5
	comp=Z,3.6nm,0.7s,baz=334,slow=11,SNR=27							
	comp=Z,3.6nm,0.7s							
ASAR	**Alice Springs**	20.51	161	P		P	01 18 30.1	+1.4
PMG	**Port Moresby**	20.91	105	P		Pn	01 18 35.8	+0.2
	comp=Z,10nm,0.7s,baz=282,slow=11,SNR=4.1							
	comp=Z,10nm,0.7s							
STKA	**Stephens Creek**	30.83	155	P		P	01 20 07.9	+1.4
	comp=Z,6.1nm,1.2s,baz=335,slow=14,SNR=2.9							
	comp=Z,6.1nm,1.2s							
CMAR	**Chiang Mai Arr**	35.48	310	P		P	01 20 47.3	0.0
	comp=Z,0.9nm,0.3s,baz=117,slow=7.8,SNR=2.3							
	comp=Z,0.9nm,0.3s							
LZDM	**Lanzhou Array**	45.44	334	P		P	01 22 10.5	+0.7
	comp=Z,0.6nm,0.4s,baz=126,slow=7.3,SNR=1.3							
	comp=Z,0.6nm,0.4s							
KLR	**Kul'dur**	53.43	4	LR		LR	01 50 03.4	
	comp=Z,12nm,18.9s,baz=304,slow=41							
SONM	**Songino Array**	54.85	343	P		P	01 23 20.2	-0.6
	comp=Z,0.3nm,0.6s,baz=162,slow=5.9,SNR=1.8							
	comp=Z,0.3nm,0.6s							
MK31	**Makanchi Array**	64.17	328	P		P	01 24 24.2	-0.8
MK31				IAmb		IAmb	01 24 36.2	
	comp=Z,3.5nm,1.0s							
MKAR	**Makanchi Array**	64.17	328	P		P	01 24 24.4	-0.6
	comp=Z,1.2nm,0.7s,baz=114,slow=7.8,SNR=19							
	comp=Z,1.2nm,0.7s							
MKAR	**Makanchi Array**	64.17	328	P		P	01 24 23.8	-1.2
MAKZ	**Makanchi**	64.34	328	P		P	01 24 24.9	-1.3
MA2	**Magadan**	66.40	13	LR		LR	01 55 01.9	
	comp=Z,37nm,18.5s,baz=318,slow=37							
ZAA0	**Zalesovo Array**	67.71	335	P		P	01 24 49.2	+1.6
ZAA0				IAmb		IAmb	01 24 58.2	
	comp=Z,2.6nm,0.9s							
ZALV	**Zalesovo Beam**	67.71	335	P		P	01 24 45.9	-1.7
	comp=Z,1.0nm,0.7s,baz=131,slow=7.9,SNR=5.0							
	comp=Z,1.0nm,0.7s							
KURBB	**Kurchatov Arra**	68.49	329	P		P	01 24 50.9	-1.7
	comp=Z,0.4nm,0.3s,baz=129,slow=5.8,SNR=12							
	comp=Z,0.4nm,0.3s							
KURK	**Kurchatov**	68.50	329	P		P	01 24 50.5	-2.1
BVAR	**Borovoye Array**	74.02	328	P		P	01 25 24.6	-1.5
	comp=Z,0.3nm,0.4s,baz=134,slow=8.3,SNR=3.0							
	comp=Z,0.3nm,0.4s							

NNC ***17*** *01:52:04.7±0.7, 46°.17N×79°.32E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=8.9km s-min=4.3km az=129.0*
ASRS ***17*** *01:52:04.8±0.2, 46°N±2°×7°9E±°, h9km, MLh4.3/7, Error ellipse: s-maj=5.8km s-min=2.0km az=129.9, confirmed*
SOME ***17*** *01:52:07.4, 46°.13N×79°.27E, h25km, MS3.7*

ISC 17 01:52:03.6±1.1, 46°.19N±0°.02×79°.34E±0°.02, h1km±9km, n77, σ1s65/131, 13C-10D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	0.90	179	P		Pn	01 52 23.3	-0.2
	526nm,0.1s							
KAPS				S		Sb	01 52 34.9	+0.3
	9µm,0.1s							
TDK	**Taldyqorghan**	1.35	209	P		Pg	01 52 30.5	+1.0
	923nm,0.1s							
TDK				S		Sn	01 52 47.3	-1.0
	4µm,0.3s							
TDK	**Taldyqorghan**	1.35	209	*e*P		Pg	01 52 30.5	+1.0
	923nm,0.1s							
TDK				*e*S		Sn	01 52 47.3	-1.0
	4µm,0.3s							
KNOS	**Konyrlen**	1.83	184	P		Pb	01 52 38.7	+0.8
	60nm,0.2s							
KNOS				S		Sb	01 53 01.3	-0.2
	414nm,0.4s							
DJR	**Jarkent**	1.88	170	P		Pg	01 52 39.8	+0.2
	115nm,0.2s							
DJR				S		Sb	01 53 03.2	+0.4
	384nm,0.3s							
DJR	**Jarkent**	1.88	170	*e*P		Pg	01 52 39.8	+0.2
	115nm,0.2s							
DJR				*e*S		Sb	01 53 03.2	+0.4
	384nm,0.3s							
MAKZ	**Makanchi**	1.93	70	⇑Pn		Pn	01 52 38.7	+1.1
	26nm,0.2s							
MAKZ				⇑Sn		Sb	01 53 03.7	-0.5
	54nm,0.2s							
MAKZ	**Makanchi**	1.93	70	Pg		Pn	01 52 39.0	+1.4
MAKZ				Sg		Sb	01 53 03.6	-0.5
MK31	**Makanchi Array**	2.13	72	⇑Pn		Pn	01 52 41.9	+1.5
	12nm,0.3s,baz=246,slow=14,SNR=2401							
MK31				Pg		Pg	01 52 48.0	+3.5
	54nm,0.3s,baz=248,slow=15,SNR=66							
MK31				⇓Sn		Sn	01 53 08.3	+0.8
	16nm,0.2s,baz=245,slow=27,SNR=4.8							
MK31				⇓Lg		Lg	01 53 18.9	
	26nm,0.2s,baz=239,slow=29,SNR=4.8							
ARXS	**Arharly**	2.24	209	Pg		Pb	01 52 45.7	+0.7
	56nm,0.2s							
ARXS				Lg		Lg	01 53 13.2	
	2µm,0.5s							
ARXS	**Arharly**	2.24	209	*e*P		Pb	01 52 45.6	+0.7
	56nm,0.2s							
ARXS				*e*S		Sb	01 53 13.2	-0.1
	2µm,0.5s							
KPKS	**Kokpek**	2.76	190	Pg		Pb	01 52 55.3	+1.5
	0.4nm,0.2s							
KPKS				Lg		Lg	01 53 29.9	
	689nm,0.5s							
KPKS	**Kokpek**	2.76	190	*e*P		Pb	01 52 55.3	+1.5
	0.4nm,0.2s							
KPKS				*e*S		Sb	01 53 29.9	+1.8
	689nm,0.5s							
KURS	**Kuram**	2.82	198	Pg		Pb	01 52 56.1	+1.2
	36nm,0.3s							
KURS				Lg		Lg	01 53 31.2	
	199nm,0.7s							
KTMS	**Ketmen**	2.83	165	Pg		Pb	01 52 56.1	+1.0
	65nm,0.3s							
KTMS				Lg		Lg	01 53 31.2	
	72nm,0.3s							
KTMS	**Ketmen**	2.83	165	*e*P		Pb	01 52 56.1	+1.0
	65nm,0.3s							
KTMS				*e*S		Sb	01 53 31.2	+0.9
	72nm,0.3s							
PDGK	**Podgornoye**	2.86	178	⇓Pn		Pn	01 52 51.3	+0.8
	1.0nm,0.1s							
PDGK				⇓Pg		Pg	01 52 59.2	+0.9
	40nm,0.5s							
PDGK				⇓Lg		Lg	01 53 38.8	
	226nm,0.6s							
SHLS	**Shalkode**	3.03	178	Pg		Pb	01 53 00.3	+1.9
	94nm,0.3s							
SHLS				Lg		Lg	01 53 38.3	
	424nm,0.6s							
SHLS	**Shalkode**	3.03	178	*e*P		Pb	01 53 00.3	+1.9
	94nm,0.3s							
SHLS				*e*S		Sb	01 53 38.3	+2.4
	424nm,0.6s							
UZB	**Uzynbulak**	3.05	184	Pg		Pb	01 53 00.2	+1.5
	61nm,0.3s							
UZB				Lg		Lg	01 53 38.7	
	154nm,0.3s							
UZB	**Uzynbulak**	3.05	184	*e*P		Pb	01 53 00.2	+1.5
	61nm,0.3s							
UZB				*e*S		Sb	01 53 38.7	+2.2
	154nm,0.3s							
KTBS	**Karatobe**	3.11	218	Pg		Pb	01 53 00.7	+0.9
	73nm,0.3s							
KTBS				Lg		Lg	01 53 39.0	
	0.5nm,0.2s							
KTBS	**Karatobe**	3.11	218	*e*P		Pb	01 53 00.7	+0.9

	275nm,0.4s								
IZV	**Izvestkoviy**	**3.70**	**213**	Pg		**Pb**	**01 53 11.1**	**+1.2**	
	15nm,0.2s								
IZV				Lg		Lg	01 53 57.3		
	225nm,0.7s								
IZV	**Izvestkoviy**	**3.70**	**213**	*e*P		**Pb**	**01 53 11.1**	**+1.2**	
	15nm,0.2s								
IZV				*e*S		**Sb**	**01 53 57.2**	**+1.9**	
	225nm,0.7s								
PRZ	**Przheval'sk**	**3.76**	**191**	Pg		**Pg**	**01 53 18.5**	**+2.8**	
PRZ				Sg		**Sg**	**01 54 03.9**	**-0.5**	
BTLS	**Baital**	**3.88**	**255**	Pg		**Pb**	**01 53 14.8**	**+1.9**	
	80nm,0.6s								
BTLS				Lg		Lg	01 54 03.5		
	58nm,0.6s								
BTLS	**Baital**	**3.88**	**255**	*e*P		**Pb**	**01 53 14.8**	**+1.9**	
	80nm,0.6s								
BTLS				*e*S		**Sb**	**01 54 03.5**	**+3.0**	
	58nm,0.6s								
KST	**Kastek**	**3.96**	**219**	Pg		**Pb**	**01 53 16.2**	**+1.9**	
	34nm,0.3s								
KST				Lg		Lg	01 54 06.1		
	208nm,0.5s								
KST	**Kastek**	**3.96**	**219**	*e*P		**Pb**	**01 53 16.2**	**+1.9**	
	34nm,0.3s								
KST				*e*S		**Sb**	**01 54 06.1**	**+3.4**	
	208nm,0.5s								
ZSN	**Zaisan**	**4.00**	**70**	Pg		**Pg**	**01 53 19.8**	**-0.5**	
	19nm,0.4s								
ZSN				Lg		Lg	01 54 11.9		
	96nm,0.5s								
ZSN	**Zaisan**	**4.00**	**70**	*e*P		**Pg**	**01 53 19.8**	**-0.5**	
	19nm,0.4s								
ZSN				*e*S		**Sg**	**01 54 11.9**	**-0.2**	
	96nm,0.5s								
TKM2	**Tokmak 2**	**4.22**	**221**	P		**Pn**	**01 53 10.1**	**+0.8**	
	SNR=7.8								
SEM	**Semipalatinsk**	**4.27**	**8**	Pg		**Pg**	**01 53 24.8**	**-0.6**	
	25nm,0.2s								
SEM				Lg		Lg	01 54 20.7		
	84nm,0.4s								
SEM	**Semipalatinsk**	**4.27**	**8**	*e*P		**Pg**	**01 53 24.8**	**-0.6**	
	25nm,0.2s								
SEM				*e*S		**Sg**	**01 54 20.7**	**-0.1**	
	84nm,0.4s								
SGDS	**Sogindy**	**4.32**	**232**	Pg		**Pb**	**01 53 23.2**	**+2.8**	
	21nm,0.2s								
SGDS				Lg		Lg	01 54 18.1		
	77nm,0.4s								
BOOM	**Boomskoye usch**	**4.42**	**215**	Pg		**Pb**	**01 53 22.4**	**+0.2**	
BOOM				Sg		**Sg**	**01 54 22.2**	**-3.6**	
KURBB	**Kurchatov Arra**	**4.47**	**353**	⇑Pn		**Pn**	**01 53 12.6**	**+0.1**	
	2.1nm,0.2s								
KURBB				⇓Pg		**Pb**	**01 53 26.1**	**+3.2**	
	11nm,0.3s								
KURBB				⇑Lg		Lg	01 54 25.9		
	118nm,0.6s								
USP	**Ospenovka**	**4.51**	**231**	P		**Pn**	**01 53 13.6**	**+0.4**	
	SNR=73								
ULHL	**Ulahol**	**4.52**	**211**	P		**Pn**	**01 53 15.3**	**+1.8**	
	SNR=21								
KURK	**Kurchatov**	**4.56**	**354**	⇓Pn		**Pn**	**01 53 13.7**	**0.0**	
	1.1nm,0.3s								
KURK				⇑Pg		**Pb**	**01 53 26.7**	**+2.3**	
	0.9nm,0.2s								
KURK				⇑Lg		Lg	01 54 29.9		
	51nm,0.7s								
KURK	**Kurchatov**	**4.56**	**354**	Pn		**Pn**	**01 53 14.0**	**+0.2**	
KURK				Pg		**Pb**	**01 53 25.9**	**+1.5**	
KURK				Sg		**Sg**	**01 54 27.8**	**-2.2**	
CHMS	**Chumysh**	**4.57**	**227**	P		**Pn**	**01 53 14.4**	**+0.5**	
	SNR=9.7								
KBK	**Karagaybulak**	**4.72**	**223**	P		**Pn**	**01 53 17.1**	**+0.9**	
	SNR=15								
AAK	**Ala-Archa**	**4.96**	**226**	P		**Pn**	**01 53 20.0**	**+0.6**	
	SNR=12								
AAK	**Ala-Archa**	**4.96**	**226**	⇑Pn		**Pn**	**01 53 19.5**	**0.0**	
	15nm,0.3s								
AAK				⇑Pg		**Pg**	**01 53 37.6**	**-1.0**	
	42nm,0.4s								
AAK				⇑Lg		Lg	01 54 39.1		
	332nm,0.6s								
AAK	**Ala-Archa**	**4.96**	**226**	Pn		**Pn**	**01 53 20.2**	**+0.8**	
AAK				Pg		**Pg**	**01 53 38.1**	**-0.6**	
AAK				Sg		**Sg**	**01 54 40.7**	**-2.2**	
UCH	**Uchtor**	**5.26**	**223**	P		**Pn**	**01 53 25.6**	**+1.9**	
	SNR=7.7								
EKS2	**Erkin-Say**	**5.32**	**230**	P		**Pn**	**01 53 24.9**	**+0.6**	
	SNR=5.7								
BRZS	**Berezniki**	**5.86**	**313**	Pg		**Pg**	**01 53 56.1**	**+0.2**	
	0.7nm,0.3s								
BRZS	**Berezniki**	**5.86**	**313**	*e*P		**Pg**	**01 53 56.1**	**+0.2**	
	0.7nm,0.3s								
BRZS				*e*S		**Sg**	**01 55 14.4**	**+2.7**	
	63nm,0.4s								
TUNR	**Tungur**	**6.14**	**47**	Pn		**Pn**	**01 53 38.4**	**+2.9**	
TUNR				Pg		**Pb**	**01 53 50.3**	**-1.1**	
TUNR				S		**Sn**	**01 54 47.0**	**+0.7**	
TUNR				Sg		**Sg**	**01 55 18.4**	**-2.3**	
DGZ	**Jazzator, Alta**	**6.47**	**54**	Pn		**Pn**	**01 53 42.3**	**+2.1**	
DGZ				Pg		Pb	01 53 52.4	-4.8	
DGZ				S		**Sn**	**01 54 53.1**	**-1.7**	
DGZ				Sg		**Sg**	**01 55 28.8**	**-2.8**	
CHBI	**Chibit, Altay**	**6.84**	**50**	Pn		**Pn**	**01 53 47.4**	**+2.3**	
CHBI				S		**Sn**	**01 55 04.1**	**+0.5**	
CHBI				Sg		**Sg**	**01 55 40.9**	**-2.3**	
AKAR	**Aktash**	**6.91**	**50**	Pn		**Pn**	**01 53 48.5**	**+2.4**	
AKAR				S		**Sn**	**01 55 04.3**	**-1.0**	
AKAR				Sg		**Sg**	**01 55 43.7**	**-1.6**	
KK31	**Karatay Array**	**7.01**	**247**	Pn		**Pn**	**01 53 46.7**	**-0.7**	
	2.5nm,0.2s,baz=62,slow=13,SNR=178								
KK31				⇑Lg		Lg	01 55 47.8		
	15nm,0.4s,baz=59,slow=27,SNR=5.9								
CUR	**Chagan-Uzun**	**7.19**	**54**	Pn		**Pn**	**01 53 52.4**	**+2.4**	
CUR				S		**Sn**	**01 55 12.3**	**-0.1**	
CUR				Sg		**Sg**	**01 55 51.6**	**-2.8**	
ULGR	**Ulagan, Altay**	**7.26**	**49**	Pn		**Pn**	**01 53 53.4**	**+2.6**	
ULGR				S		**Sn**	**01 55 12.3**	**-1.6**	
ULGR				Sg		**Sg**	**01 55 53.4**	**-3.2**	
IUG	**Iuzhnay**	**7.81**	**242**	Pg		**Pg**	**01 54 31.3**	**-2.0**	
	24nm,0.6s								
IUG	**Iuzhnay**	**7.81**	**242**	*e*P		**Pg**	**01 54 31.3**	**-2.0**	
	24nm,0.6s								
IUG				*e*S		**Sg**	**01 56 15.4**	**+1.0**	
	78nm,0.6s								
BVA0	**Borovoye Array**	**8.97**	**323**	⇓Pn		**Pn**	**01 54 14.6**	**+0.2**	
	0.6nm,0.2s								
BVA0				⇓Sn		**Sn**	**01 55 50.9**	**-5.1**	
	1.6nm,0.5s								
BVA0				⇑Lg		Lg	01 56 41.0		
	34nm,0.8s								

*IDC **17** 02:01:05.5±4.2,20°.61S×177°.76W,h554km±47km, mb3.2/9, mbtmp4.1/11, Error ellipse: s-maj=39.3km s-min=23.7km az=162.0*

*NEIC **17** 02:01:08.4±0.6,20°.7S±0°.2×177°.80W±0°.10,h583km±8km, mb4.1/8, Error ellipse: s-maj=26.4km s-min=11.8km az=194.0*

ISC 17 02:01:04.8±0.9,20°.6S±0°.2×177°.7W±0°.2,h550km,n27, σ0s93/27,mb3.9/12,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DZM	**Mont Dzumac**	**14.86**	**261**	P	**P**		**02 04 14.0**	**+1.0**
	5.3nm,0.8s,baz=122,slow=20,SNR=6.5							
DZM	**Mont Dzumac**	**14.86**	**261**	P	**P**		**02 04 14.5**	**+1.5**
URZ	**Urewera**	**18.18**	**193**	P	**P**		**02 04 44.0**	**-0.1**
	4.7nm,0.7s,baz=161,slow=18,SNR=3.7							
RTZ	**Ruatahuna**	**18.55**	**193**	P	**P**		**02 04 47.1**	**-0.5**
RTZ				IAmb	IAmb		02 04 52.6	
	comp=Z,5.0nm,0.9s							
THZ	**Tophouse**	**22.56**	**199**	P	**P**		**02 05 24.7**	**+0.9**
CTA	**Charters Tower**	**33.77**	**264**	P	**P**		**02 07 01.1**	**-0.4**
	comp=Z,3.5nm,0.4s,baz=93,slow=11,SNR=11							
	comp=Z,3.5nm,0.4s							
CTAO	**Charters Tower**	**33.77**	**264**	P	**P**		**02 07 01.6**	**0.0**
COEN	**Coen**	**37.88**	**274**	P	**P**		**02 07 35.5**	**-0.1**
COEN				IAmb	IAmb		02 07 35.7	
	comp=Z,5.6nm,1.0s							
STKA	**Stephens Creek**	**38.01**	**244**	P	**P**		**02 07 36.5**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=66,slow=12,SNR=2.9							
	comp=Z,1.0nm,0.3s							
BBOO	**Buckleboo**	**42.77**	**244**	P	**P**		**02 08 14.0**	**-0.4**
AS31	**Alice Springs**	**44.78**	**257**	P	**P**		**02 08 29.9**	**-0.2**
AS31				IAmb	IAmb		02 08 31.5	
	comp=Z,1.9nm,0.2s							
ASAR	**Alice Springs**	**44.78**	**257**	P	**P**		**02 08 30.0**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=92,slow=7.6,SNR=57							
ASAR				PcP	**PcP**		**02 10 00.7**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=97,slow=4.2,SNR=4.2							
	comp=Z,2.2nm,0.4s							
ASAR	**Alice Springs**	**44.78**	**257**	P	**P**		**02 08 29.5**	**-0.6**
WB0	**Warramunga Arr**	**44.85**	**262**	P	**P**		**02 08 29.8**	**-0.9**
WRA	**Warramunga Arr**	**44.88**	**262**	P	**P**		**02 08 30.2**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=97,slow=7.7,SNR=42							
	comp=Z,1.1nm,0.3s							
WRA	**Warramunga Arr**	**44.88**	**262**	P	**P**		**02 08 29.3**	**-1.6**
KNRA	**Kununurra**	**50.94**	**266**	P	**P**		**02 09 14.9**	**-1.2**
KNRA				IAmb	IAmb		02 09 21.5	
	comp=Z,4.7nm,1.0s							
FITZ	**Fitzroy Crossi**	**53.30**	**262**	P	**P**		**02 09 32.9**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=88,slow=6.0,SNR=8.7							
	comp=Z,1.2nm,0.4s							
NVAR	**Mina Array Bea**	**80.89**	**43**	P	**P**		**02 12 23.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=263,slow=3.5,SNR=1.7							
	comp=Z,0.1nm,0.3s							
ILAR	**Eielson Array**	**88.33**	**13**	P	**P**		**02 12 57.0**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=216,slow=5.7,SNR=6.2							
	comp=Z,0.3nm,0.4s							
PDAR	**Pinedale Array**	**88.83**	**43**	P	**P**		**02 13 01.8**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=220,slow=3.1,SNR=5.0							
	comp=Z,0.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**90.42**	**289**	P	**P**		**02 13 09.6**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=122,slow=4.3,SNR=2.1							
	comp=Z,0.7nm,0.3s							
BVAR	**Borovoye Array**	**119.33**	**320**	PKP	**PKiKP**		**02 18 51.1**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=82,slow=3.1,SNR=2.4							
AKASG	**Malin Array Be**	**143.23**	**331**	PKP	PKPbc		02 19 33.6	-1.1
	comp=Z,1.0nm,0.4s,baz=45,slow=4.0,SNR=8.9							
BRTR	**Keskin Array B**	**147.11**	**312**	PKPbc	**PKiKP**		**02 19 46.5**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=112,slow=3.9,SNR=4.7							
BRTR	**Keskin Array B**	**147.11**	**312**		**PKPbc**		**02 19 45.7**	**-1.0**
MMAI	**Mount Meron Ar**	**148.11**	**300**	PKPbc	**PKiKP**		**02 19 50.0**	**-0.7**
	comp=Z,3.9nm,1.0s,baz=117,slow=2.9,SNR=5.0							

*IDC **17** 02:50:58.8±1.0,25°.23N×44°.12W,h0km,mb3.6/8, mbtmp3.6/8,MS3.4/2,Error ellipse: s-maj=32.3km s-min=26.1km az=13.0*

ISC 17 02:51:00.4±1.0,25°.3N±0°.2×44°.1W±0°.2,h10km,n16, σ1s01/8,mb3.6/7,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SJG	**San Juan**	**21.66**	**255**	LR	LR		03 02 08.4	
	comp=Z,74nm,20.1s,baz=156,slow=31							
ROSC	**El Rosal**	**35.37**	**240**	LR	LR		03 11 45.3	
	comp=Z,87nm,20.4s,baz=3.6,slow=35							
H10N2	**ASCENSION HYDR**	**43.74**	**135**	T	T		03 45 44.6	
	baz=319,slow=74,SNR=84							
H10N3	**ASCENSION HYDR**	**43.74**	**135**	T	T		03 45 45.6	
	baz=319,slow=74,SNR=88							
H10N1	**ASCENSION HYDR**	**43.76**	**135**	T	T		03 45 41.8	
	baz=319,slow=74,SNR=106							
H10S3	**ASCENSION HYDR**	**44.49**	**136**	T	T		03 46 36.2	
	baz=319,slow=74,SNR=100							
H10S2	**ASCENSION HYDR**	**44.51**	**136**	T	T		03 46 38.4	
	baz=261,slow=74,SNR=77							
TORD	**Torodi Ar. Bea**	**44.71**	**97**	P	**P**		**02 59 15.1**	**+1.0**
	0.7nm,1.0s,baz=291,slow=12,SNR=3.5							
	0.7nm,1.0s							
GERES	**GERESS Array B**	**50.42**	**47**	P	**P**		**02 59 57.7**	**-0.5**
	0.6nm,0.7s,baz=270,slow=8.8,SNR=3.4							
	0.6nm,0.7s							
TXAR	**Lajitas Array**	**52.59**	**289**	P	**P**		**03 00 14.2**	**-0.6**
	0.4nm,0.7s,baz=103,slow=8.0,SNR=5.7							
	0.4nm,0.7s							
PDAR	**Pinedale Array**	**55.65**	**306**	P	**P**		**03 00 37.6**	**+0.6**
	0.4nm,0.9s,baz=104,slow=9.0,SNR=3.2							
	0.4nm,0.9s							
YKA	**Yellowknife Ar**	**58.92**	**329**	P	**P**		**03 00 59.6**	**+0.1**
	0.2nm,0.8s,baz=98,slow=7.0,SNR=3.2							
	0.2nm,0.8s							
H09W1	**TRISTAN DA CUN**	**68.86**	**153**	T	T		04 17 00.9	
	SNR=9.2							
PLCA	**Paso Flores**	**70.10**	**201**	P	**P**		**03 02 12.6**	**-0.3**
	2.6nm,1.0s,baz=10.0,slow=5.0,SNR=5.1							
	2.6nm,1.0s							
ILAR	**Eielson Array**	**72.69**	**334**	P	**P**		**03 02 29.2**	**+1.1**
	0.3nm,0.6s,baz=62,slow=5.0,SNR=5.7							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**89.09**	**32**	P	**P**		**03 03 54.5**	**-1.4**
	0.3nm,0.8s,baz=289,slow=6.5,SNR=4.1							
	0.3nm,0.8s							

*MOS **17** 03:14:05.4±1.8,46°.72N×96°.00E,h9km,mb4.5/3,Error ellipse: s-maj=12.5km s-min=8.9km az=118.6*

*IDC **17** 03:14:07.1±2.0,47°.00N×96°.08E,h0km,mb3.9/7, mbtmp3.8/11,ML2.8/5,MS4.1/1,Error ellipse: s-maj=44.2km s-min=14.0km az=1.0*

*NEIC **17** 03:14:08.3±2.7,46°.9N±0°.1×95°.9E±0°.1,h10km±2km, mb4.2/10,Error ellipse: s-maj=20.2km s-min=13.4km az=174.0*

*ASRS **17** 03:14:17.2±0.4,47°.N±2°.×9°.6E±°,h10km,MLh4.8/9,Error ellipse: s-maj=5.2km s-min=2.6km az=175.8,confirmed*

ISC 17 03:14:10.2±0.8,47°.24N±0°.06×95°.92E±0°.03,h10km,n72, σ2s09/91,mb4.2/12,Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KNGR	**Kungurtug, Tuv**	**3.52**	**17**	P	**Pb**		**03 15 09.4**	**-3.4**
KNGR	**Kungurtug, Tuv**	**3.52**	**17**	Pn	**Pb**		**03 15 09.4**	**-3.4**
KNGR				Pg	**Pg**		**03 15 18.2**	**+0.4**
KNGR				Sg	**Sg**		**03 16 08.4**	**+5.0**
TEL	**Teeli**	**5.33**	**317**	P	Pn		03 15 34.8	+5.0
TEL	**Teeli**	**5.33**	**317**	Pn	Pn		03 15 34.9	+5.0
TEL				Pg	**Pg**		**03 15 50.3**	**-1.9**
TEL				Sg	**Sg**		**03 17 02.3**	**+1.2**
MOY	**Mondy**	**5.53**	**35**	Pg	**Pg**		**03 15 52.2**	**-3.8**
MOY				Sg	**Sg**		**03 17 06.5**	**-1.0**
ARDR	**Aradan**	**5.58**	**344**	P	Pn		03 15 39.2	+5.9
ARDR	**Aradan**	**5.58**	**344**	Pn	Pn		03 15 38.8	+5.5
ARDR				Pg	**Pg**		**03 15 56.3**	**-0.7**
ARDR				Sg	**Sg**		**03 17 09.6**	**+0.3**
CUR	**Chagan-Uzun**	**5.77**	**302**	P	**Pn**		**03 15 40.2**	**+4.2**
CUR	**Chagan-Uzun**	**5.77**	**302**	Pn	**Pn**		**03 15 39.5**	**+3.5**
CUR				Pg	**Pg**		**03 16 00.7**	**0.0**
CUR				Sg	**Sg**		**03 17 15.8**	**+0.3**
ZAK	**Zakamensk**	**5.79**	**54**	Pg	**Pb**		**03 15 54.7**	**+3.4**
ZAK				Sg	**Sg**		**03 17 12.0**	**-4.0**
DGZ	**Jazzator, Alta**	**6.16**	**297**	Pg	**Pg**		**03 16 09.8**	**+1.7**
DGZ				Sg	**Sg**		**03 17 28.5**	**+0.8**
ULGR	**Ulagan, Altay**	**6.24**	**306**	Pn	**Pn**		**03 15 46.1**	**+3.7**
ULGR				Pg	**Pg**		**03 16 09.4**	**-0.2**
ULGR				Sg	**Sg**		**03 17 32.1**	**+1.7**
AKAR	**Aktash**	**6.29**	**302**	Pn	**Pn**		**03 15 46.8**	**+3.7**
AKAR				Sg	**Sg**		**03 17 31.7**	**-0.3**
DJO	**Djoy, Khakassi**	**6.32**	**333**	Pg	**Pg**		**03 16 08.9**	**-2.2**
DJO				Sg	**Sg**		**03 17 30.0**	**-2.9**
CERR	**Cheremushki**	**6.32**	**334**	Pg	**Pg**		**03 16 10.3**	**-0.8**
CERR				Sg	**Sg**		**03 17 33.0**	**0.0**
CHBI	**Chibit, Altay**	**6.35**	**302**	Pn	**Pn**		**03 15 47.8**	**+3.8**
CHBI				Pg	**Pg**		**03 16 12.3**	**+0.4**
CHBI				Sg	**Sg**		**03 17 33.5**	**-0.6**
TLY	**Talaya**	**6.71**	**46**		**Pn**		**03 15 47.6**	**-1.2**
TLY	**Talaya**	**6.71**	**46**	P	**Pn**		**03 15 47.6**	**-1.2**
TLY	**Talaya**	**6.71**	**46**	Pg	**Pg**		**03 16 14.3**	**-4.4**
TLY				Sg	**Sg**		**03 17 42.5**	**-3.1**
TUNR	**Tungur**	**6.99**	**298**	Pg	**Pg**		**03 16 21.8**	**-2.1**
TUNR				Sg	**Sg**		**03 17 57.0**	**+2.8**
VEH	**Verkhnyaya Baz**	**7.00**	**331**	Pg	**Pg**		**03 16 25.5**	**+1.2**
VEH				Sg	**Sg**		**03 17 56.0**	**+1.0**
YALR	**Yailyu, Altay**	**7.05**	**313**	Pg	**Pg**		**03 16 27.0**	**+1.7**
YALR				Sg	**Sg**		**03 18 01.7**	**+5.2**
SONM	**Songino Array**	**7.12**	**81**	Pn	**Pn**		**03 15 52.2**	**-2.3**
	1.2nm,0.3s,baz=268,slow=14,SNR=8.3							
SONM				Pg	**Pb**		**03 16 15.5**	**+1.6**
	1.2nm,0.3s,baz=266,slow=16,SNR=6.8							
SONM				Lg	Lg		03 17 47.3	
	6.4nm,0.3s,baz=269,slow=29,SNR=8.6							
	0.6nm,0.3s							
SONM	**Songino Array**	**7.12**	**81**	Pn	**Pn**		**03 15 55.0**	**+0.5**
SONM	**Songino Array**	**7.12**	**81**	P	**Pn**		**03 15 55.0**	**+0.5**
ARTR	**Artybash**	**7.24**	**312**	Pn	Pn		03 16 01.5	+5.5
ARTR				Pg	**Pg**		**03 16 29.0**	**+0.3**
ARTR				Sg	**Sg**		**03 18 04.2**	**+1.9**
ULN	**Ulaanbaatar**	**7.56**	**81**	Pn	**Pn**		**03 15 59.4**	**-1.2**
ULN	**Ulaanbaatar**	**7.56**	**81**	P	**Pn**		**03 15 59.4**	**-1.2**
MINR	**Mina**	**7.74**	**353**	Pg	**Pg**		**03 16 37.9**	**-0.4**
MINR				Sg	**Sg**		**03 18 19.7**	**+1.2**
UKR	**Ust'-Kan**	**8.20**	**301**	Sg	**Sg**		**03 18 37.0**	**+3.9**
GTA2	**Gaotai**	**8.24**	**159**	*e*P	Pn		03 16 03.5	-6.4
GTA2				pP	Pb		03 16 06.8	-26
GTA2				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ELT	**Eltsovka**	**8.64**	**318**	Pg	**Pg**		**03 16 51.3**	**-4.2**
ELT				Sg	**Sg**		**03 18 46.6**	**-0.7**
MKAR	**Makanchi Array**	**9.32**	**272**	Pn	**Pn**		**03 16 23.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=88,slow=17,SNR=2.1							
MKAR				Lg	Lg		03 19 04.8	
	comp=Z,0.7nm,0.3s,baz=79,slow=32,SNR=6.2							
MKAR	**Makanchi Array**	**9.32**	**272**	Pn	**Pn**		**03 16 22.2**	**-2.4**
MAKZ	**Makanchi**	**9.54**	**272**	Pn	**Pn**		**03 16 26.5**	**-1.0**
MAKZ	**Makanchi**	**9.54**	**272**	P	**Pn**		**03 16 26.5**	**-1.0**
ZALV	**Zalesovo Beam**	**9.73**	**318**	Pn	**Pn**		**03 16 32.2**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=129,slow=12,SNR=5.9							
ZALV				Lg	Lg		03 19 21.1	
	comp=Z,0.6nm,0.3s,baz=133,slow=28,SNR=6.8							
	comp=Z,1.3nm,0.5s							
ZALV	**Zalesovo Beam**	**9.73**	**318**	Pn	**Pn**		**03 16 32.8**	**+2.6**
ZALV	**Zalesovo Beam**	**9.73**	**318**	P	**Pn**		**03 16 32.8**	**+2.6**
GOMU	**GeErMu**	**11.07**	**185**	Pn	Pn		03 16 39.9	-9.0
GOMU				Sn	Sn		03 18 36.4	-16
GOMU				smax	smax			
	comp=N,10.0nm,0.9s							
GOMU				smax	smax			
	comp=E,22nm,0.9s							
KURK	**Kurchatov**	**11.88**	**293**	Pn	**Pn**		**03 16 59.1**	**-0.5**
KURK	**Kurchatov**	**11.88**	**293**	P	**Pn**		**03 16 59.9**	**+0.3**
KURBB	**Kurchatov Arra**	**11.92**	**293**	Pn	**Pn**		**03 16 59.9**	**-0.2**
	baz=98,slow=14,SNR=2.3							
KURBB				Lg	Lg		03 20 28.5	
	comp=E,0.1nm,0.3s,baz=100,slow=32,SNR=8.5							
	comp=E,0.5nm,0.6s							
BVAR	**Borovoye Array**	**17.31**	**299**	P	**P**		**03 18 13.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=109,slow=11,SNR=6.9							
	comp=E,1.3nm,0.4s							
BVAR	**Borovoye Array**	**17.31**	**299**	P	**P**		**03 18 13.0**	**-0.2**
CHGR	**Chuyangaron**	**21.30**	**256**	P	**P**		**03 18 55.5**	**-1.6**
CHGR				IAmb	IAmb		03 18 56.6	
	comp=Z,7.0nm,0.6s							
CHGR	**Chuyangaron**	**21.30**	**256**	P	**P**		**03 18 55.5**	**-1.6**
CHGR				pmax	pmax			
	comp=Z,7.0nm,0.6s							
NRIK	**Noril'sk**	**22.55**	**352**	P	**P**		**03 19 12.5**	**+2.5**
	comp=Z,2.4nm,0.6s,baz=139,slow=7.9,SNR=4.5							
	comp=Z,2.4nm,0.6s							
NRIK	**Noril'sk**	**22.55**	**352**	P	**P**		**03 19 12.6**	**+2.5**
NRIK				IAmb	IAmb		03 19 17.3	
	comp=Z,11nm,1.5s							
NRIK	**Noril'sk**	**22.55**	**352**	P	**P**		**03 19 12.6**	**+2.5**
NRIK				pmax	pmax			
	comp=Z,11nm,1.5s							
AB31	**Akbulak array**	**23.90**	**288**	P	**P**		**03 19 22.6**	**-1.4**
ABKAR	**Akbulak array**	**23.90**	**288**	P	**P**		**03 19 22.4**	**-1.6**
ARTI	**Arti**	**24.66**	**306**	P	**P**		**03 19 31.8**	**+1.0**
	comp=Z,3.0nm,0.5s,baz=99,slow=4.1,SNR=7.6							
	comp=Z,3.0nm,0.5s							
ARTI	**Arti**	**24.66**	**306**	P	**P**		**03 19 31.4**	**+0.6**
ARTI	**Arti**	**24.66**	**306**	P	**P**		**03 19 31.5**	**+0.6**
ARTI				pmax	pmax			
	comp=Z,8.0nm,0.5s							
AKTO	**Aktyubinsk**	**24.97**	**291**	P	**P**		**03 19 34.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=108,slow=3.6,SNR=2.5							
	comp=Z,0.6nm,0.3s							
FINES	**FINESS Array B**	**41.00**	**317**	P	**P**		**03 21 54.1**	**+1.2**
	comp=Z,4.9nm,1.1s,baz=188,slow=7.1,SNR=4.3							
	comp=Z,4.9nm,1.1s							
FINES	**FINESS Array B**	**41.00**	**317**	P	**P**		**03 21 53.7**	**+0.8**
HFS	**Hagfors**	**47.17**	**317**	P	**P**		**03 22 42.1**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=69,slow=7.9,SNR=4.2							
	comp=Z,1.7nm,0.6s							
D19K	**Kuna River**	**52.32**	**27**	P	**P**		**03 23 20.2**	**-1.4**
E19K	**Red

comp=E,18µm,0.3s
GSIG Igitkin Island 1.52 62 Pn 03 33 41.0 -1.4
CERB Semis' Cerberu 1.56 295 Pn 03 33 41.6 -1.4
CERB Sn **Sn** 03 34 03.1 +1.0
CESW Semis' Southwe 1.59 294 Pn 03 33 41.3 -2.0
CEAP Semis' Anvil P 1.62 297 Pn 03 33 42.4 -1.3
AMKA Amchitka 1.64 274 Pn 03 33 40.4 -3.5
AMKA Sn **Sn 03 33 58.9 -5.0**
CETU Semis' Tuman 1.65 295 Pn 03 33 42.8 -1.3
LSSE Little Sitkin 2.18 289 Pn 03 33 50.0 -1.3
LSPA Little Sitkin 2.19 289 Pn 03 33 50.1 -1.3
LSNW Little Sitkin 2.22 289 Pn 03 33 50.5 -1.5
ATKA Atka Island 2.59 68 Pn **Pn 03 33 56.5 -0.5**
ATKA Sn **Sn 03 34 26.8 -0.4**
ATKA IAML 03 34 35.4
comp=N,5µm,0.6s
ATKA IAML 03 34 35.5
comp=E,4µm,0.5s
ATKA Atka Island 2.59 68 P **Pn 03 33 56.4 -0.5**
KOWE Korovin West 2.62 64 Pn 03 33 57.8 +0.4
KOKL Mount Kliuchef 2.63 65 Pn 03 33 57.7 +0.1
KONW Korovin Northw 2.66 64 Pn 03 33 57.9 0.0
KOKV Korovin Volcan 2.67 65 Pn 03 33 58.4 +0.3
KOFP Korovin Flat P 2.67 67 Pn 03 33 58.5 +0.3
KONE Korovin Northe 2.70 64 Pn 03 33 58.9 +0.4
KOSE Korovin Southe 2.73 65 Pn 03 33 58.4 -0.4
SHEM Shemya Is, Ala 5.04 290 P **Pn 03 34 31.9 +1.5**
comp=E,69nm,0.5s,baz=299,slow=7.6,SNR=5.4
SHEM S **Sn 03 35 32.8 +5.6**
comp=E,109nm,0.8s,baz=292,slow=20,SNR=1.8
SHEM LR LR 03 36 34.9
comp=E,2µm,18.1s,baz=112,slow=40
SHEM Shemya Is, Ala 5.04 290 Pn **Pn 03 34 33.0 +2.6**
SHEM IAML 03 35 51.3
comp=E,259nm,1.1s
SMY Shemya 5.04 290 Pn **Pn 03 34 32.9 +2.5**
SMY Shemya 5.04 290 P **Pn 03 34 32.9 +2.5**
CLES Cleveland East 5.29 70 Pn **Pn 03 34 34.2 +0.3**
NIKH Nikolski High 5.94 70 Pn **Pn 03 34 43.0 +0.3**
NIKH Nikolski High 5.94 70 P **Pn 03 34 43.1 +0.4**
NIKH Nikolski High 5.94 70 P **Pn 03 34 42.8 +0.1**
baz=256
OKWE Okmok W'ng Wal 6.42 66 Pn 03 34 50.3 +1.0
OKER Okmok East Rim 6.52 67 Pn 03 34 52.5 +1.7
OKFG Magazine Ridge 6.59 67 Pn 03 34 53.7 +2.0
MGOD Makushin Gods 7.29 65 Pn 03 35 02.8 +1.5
P08K Saint George I 7.33 40 Pn **Pn 03 35 02.8 +1.0**
P08K Saint George I 7.33 40 P **Pn 03 35 02.8 +1.0**
baz=227
MREP Makushin Rep't 7.37 65 Pn 03 35 03.5 +1.1
MNAT Makushin Natee 7.42 65 Pn 03 35 04.3 +1.2
SPIA Saint Paul Isl 7.48 35 Pn **Pn 03 35 06.1 +2.3**
SPIA Saint Paul Isl 7.48 35 P **Pn 03 35 05.2 +1.3**
baz=221
UNV Unalaska Valle 7.51 66 Pn **Pn 03 35 05.7 +1.4**
UNV Unalaska Valle 7.51 66 P **Pn 03 35 05.6 +1.3**
baz=254
AKMO Akutan Morgan 7.86 64 Pn 03 35 11.2 +2.1
LVA Lava Point 7.87 64 Pn **Pn 03 35 11.3 +2.1**
ZRO Akutan Zero 7.88 64 Pn 03 35 11.0 +1.6
AKUT Akutan 8.01 64 Pn **Pn 03 35 12.4 +1.4**
M11K Mekoryuk 11.29 32 Pn **Pn 03 35 58.4 +2.6**
M11K Mekoryuk 11.29 32 P **Pn 03 35 58.4 +2.6**
baz=221,SNR=14
SDPT Sand Point 11.29 62 Pn **Pn 03 35 55.4 -0.5**
SDPT Sand Point 11.29 62 P **Pn 03 35 55.9 0.0**
SDPT Sand Point 11.29 62 P **Pn 03 35 55.5 -0.4**
baz=256
CNBA Chernabura Isl 11.68 65 Pn **Pn 03 35 59.7 -1.5**
CHNA Chernabura Isl 11.68 65 P **Pn 03 36 00.1 -1.1**
CHNA Chernabura Isl 11.68 65 P **Pn 03 36 00.3 -0.8**
baz=260
M13K Dall Lake 12.31 36 Pn **Pn 03 36 12.9 +3.2**
M13K Dall Lake 12.31 36 P **Pn 03 36 12.6 +2.9**
baz=228,SNR=10
O14K Tigyukauivet M 12.45 44 Pn 03 36 14.8 +3.2
O14K Tigyukauivet M 12.45 44 P **Pn 03 36 13.8 +2.2**
baz=237
N14K Kuskokwak Cree 12.65 41 Pn 03 36 17.2 +2.8
N14K Kuskokwak Cree 12.65 41 P **Pn 03 36 16.8 +2.4**
baz=234
K13K Kusilvak Mount 12.95 29 Pn 03 36 20.8 +2.3
K13K Kusilvak Mount 12.95 29 P **Pn 03 36 21.4 +2.9**
baz=220
GAMB Gambell 12.98 13 Pn 03 36 20.6 +1.8
GAMB Gambell 12.98 13 P **Pn 03 36 21.4 +2.6**
baz=198
O15K Ungalikthiuk R 13.05 46 Pn 03 36 20.7 +0.9
O15K Ungalikthiuk R 13.05 46 P **Pn 03 36 22.2 +2.3**
baz=240,SNR=15
M14K Bethel 13.05 37 Pn 03 36 22.0 +2.1
M14K Bethel 13.05 37 P **Pn 03 36 22.8 +3.0**
baz=230
L14K Kuka Creek 13.18 34 Pn 03 36 24.8 +3.2
L14K Kuka Creek 13.18 34 P **Pn 03 36 24.2 +2.7**
baz=227,SNR=13
N15K Kwethluk River 13.45 42 Pn 03 36 25.2 -0.1
N15K Kwethluk River 13.45 42 P **Pn 03 36 28.0 +2.7**
baz=236
M15K Kasigluk River 13.51 39 P **Pn 03 36 27.9 +1.8**
baz=233,SNR=11
P16K Nushagak River 13.82 48 Pn 03 36 30.8 +0.5
P16K Nushagak River 13.82 48 P **Pn 03 36 32.8 +2.5**
baz=244,SNR=6.0
L15K Ungalak Mounta 13.83 35 P **Pn 03 36 32.7 +2.3**
baz=228,SNR=12
J14K Nanvaranak Lak 13.91 29 P **Pn 03 36 34.9 +3.4**
J14K Nanvaranak Lak 13.91 29 P **Pn 03 36 33.4 +1.9**
baz=221
O16K Kokwok River B 14.03 46 P **Pn 03 36 36.1 +3.0**
O16K Kokwok River B 14.03 46 P **Pn 03 36 35.1 +2.1**
baz=242
CHIR Chirikof Islan 14.08 62 Pn **Pn 03 36 31.5 -2.3**
CHIR Chirikof Islan 14.08 62 P **Pn 03 36 32.2 -1.6**
R17L Mt. Peulik Vol 14.11 55 P **Pn 03 36 34.5 +0.3**
baz=252
PLK4 Peulik 4 14.11 55 Pn **Pn 03 36 33.3 -1.0**
N16K Nishlik Lake 14.17 42 P **Pn 03 36 36.3 +1.3**
baz=238,SNR=18
K15K Wolf Creek Mou 14.23 33 P **P 03 36 39.8 -1.7**
K15K Wolf Creek Mou 14.23 33 P **Pn 03 36 38.1 +2.3**
baz=227,SNR=20
Q16K King Salmon 14.31 51 P **Pn 03 36 39.1 +2.3**
baz=248,SNR=9.1
M16K Timber Creek 14.39 40 Pn 03 36 38.0 +0.1
M16K Timber Creek 14.39 40 P **Pn 03 36 40.0 +2.1**
baz=236,SNR=10
O17K Koliganek Bris 14.56 46 P **Pn 03 36 42.2 +2.2**
baz=243
L16K Owhat River 14.59 37 P **Pn 03 36 43.3 +2.8**
L16K Owhat River 14.59 37 P **Pn 03 36 42.2 +1.7**
baz=232,SNR=28
P17K Kvichak River 14.62 49 Pn 03 36 41.2 +0.4
P17K Kvichak River 14.62 49 P **Pn 03 36 42.8 +2.0**
baz=246
ACHA Angle Creek He 14.81 53 Pn 03 36 43.1 -0.4
N17K Nushagak Hills 14.87 43 P **P 03 36 47.2 -1.5**
N17K IAmb IAmb 03 36 53.4
comp=Z,52nm,1.2s
N17K Nushagak Hills 14.87 43 P **Pn 03 36 46.7 +2.6**
baz=241
ANM Nome 14.88 22 Pn 03 36 45.1 +0.8
ANM Nome 14.88 22 P **Pn 03 36 45.1 +0.8**
ANM pmax pmax
comp=Z,20nm,0.7s
ANM Nome 14.88 22 P **Pn 03 36 46.8 +2.5**
baz=212,SNR=21
PEA0B Petropavlovsk- 14.94 286 Pn **Pn 03 36 42.7 -2.4**
PEA0B Petropavlovsk- 14.94 286‖*eP* **Pn 03 36 42.8 -2.3**
PETK Petropavlovsk- 14.94 286 P **Pn 03 36 45.9 +0.8**
comp=Z,7.6nm,0.8s,baz=86,slow=19,SNR=8.3
PETK LR LR 03 42 24.1
comp=Z,414nm,21.5s,baz=88,slow=37
PETK Petropavlovsk- 14.94 286 Pn **Pn 03 36 43.1 -1.9**
SII Sitkinak Islan 15.00 60 Pn **Pn 03 36 45.7 -0.2**
SII Sitkinak Islan 15.00 60 P **Pn 03 36 45.5 -0.4**
SII Sitkinak Islan 15.00 60 P **Pn 03 36 46.7 +0.8**
baz=259
M17K Holitna River 15.22 40 Pn 03 36 49.2 +0.6
M17K Holitna River 15.22 40 P **Pn 03 36 50.6 +2.1**
baz=237
J16K Anvik River 15.23 31 P **P 03 36 51.8 -0.8**
J16K IAmb IAmb 03 36 57.9
comp=Z,58nm,0.8s
J16K Anvik River 15.23 31 P **P 03 36 51.2 -1.3**
baz=226
TNA Tin City 15.24 16 Pn 03 36 49.6 +0.7
TNA Tin City 15.24 16 P **Pn 03 36 51.1 +2.3**
baz=205
P18K Big Mountain, 15.27 49 Pn 03 36 50.1 +0.8
P18K Big Mountain, 15.27 49 P **Pn 03 36 50.7 +1.4**
baz=248,SNR=10
L17K Donlin 15.29 37 P **Pn 03 36 51.1 +1.5**
baz=234
O18K Koktuh Hills 15.46 47 Pn 03 36 52.6 +0.9
O18K IAmb IAmb 03 36 58.2
comp=Z,43nm,0.7s
O18K Koktuh Hills 15.46 47 P **Pn 03 36 52.7 +0.9**
baz=246,SNR=15
F14K Arctic Creek 15.46 19 P **Pn 03 36 53.4 +1.7**
baz=209
N18K Kilae Creek 15.51 44 P **P 03 36 55.2 -0.5**
N18K Kilae Creek 15.51 44 P **P 03 36 55.0 -0.8**
baz=242,SNR=9.9
G15K Niukluk 15.56 23 P **P 03 36 55.7 -0.5**
baz=215,SNR=41
OHAK Old Harbor 15.62 58 Pn 03 36 49.9 -3.8
OHAK IAmb IAmb 03 36 59.8
comp=Z,46nm,0.6s
OHAK Old Harbor 15.62 58 P **Pn 03 36 52.2 -1.5**
OHAK Old Harbor 15.62 58 P **Pn 03 36 52.3 -1.5**
baz=258,SNR=12
I17K Unalakleet 15.62 29 Pn 03 36 53.5 -0.2
K17K Iditarod 15.64 35 P **P 03 36 57.3 +0.1**
K17K IAmb IAmb 03 37 02.2
comp=Z,66nm,0.8s
K17K Iditarod 15.64 35 P **P 03 36 56.8 -0.4**
baz=232
H16K Elim 15.74 26 P **P 03 36 58.1 -0.1**
baz=219,SNR=26
J17K VABM Dome 15.81 33 P **P 03 36 58.2 -0.8**
baz=228
Q19K Cape Douglas, 15.87 52 Pn 03 36 55.7 -1.3
Q19K IAmb IAmb 03 37 05.3
comp=Z,56nm,0.5s
Q19K Cape Douglas, 15.87 52 P **Pn 03 36 57.2 +0.2**
baz=252
M18K Stony River 15.93 41 P **P 03 37 00.2 -0.1**
baz=240,SNR=9.4
O19K Port Alsworth 16.00 47 P **P 03 37 01.6 +0.5**
baz=246
F15K North Star Dit 16.02 20 P **P 03 37 02.7 +1.4**
F15K North Star Dit 16.02 20 P **P 03 37 01.3 -0.1**
baz=212,SNR=29
KDAK Kodiak Island 16.11 56 P **Pn 03 36 56.6 -3.3**
comp=Z,21nm,0.3s,baz=235,slow=6.6,SNR=38
KDAK S **Sn 03 39 58.8 +1.5**
comp=Z,4.1nm,0.4s,baz=110,slow=14,SNR=2.3
KDAK Kodiak Island 16.11 56 Pn 03 36 56.6 -3.3
KDAK IAmb IAmb 03 37 05.8
comp=Z,42nm,0.6s
KDAK Kodiak Island 16.11 56‖*eP* **Pn 03 36 57.8 -2.1**
KDAK pmax pmax
comp=Z,25nm,0.5s
N19K Bonanza Creek 16.18 45 P **P 03 37 03.0 -0.3**
N19K IAmb IAmb 03 37 09.5
comp=Z,71nm,0.9s
N19K Bonanza Creek 16.18 45 P **P 03 37 03.2 -0.1**
baz=244,SNR=27
G16K Koyuk River 16.30 24 P **P 03 37 04.7 +0.3**
baz=217
P19K Oil Pt 16.31 49 P **Pn 03 37 04.3 +1.7**
baz=250
Q20K Shuyak Island 16.41 53 P **Pn 03 37 04.9 +1.2**
baz=254
SYI Shuyak Island 16.41 53 Pn **Pn 03 37 02.4 -1.4**
ILSW Iliamna Southw 16.47 48 P **Pn 03 37 06.4 +1.7**
H17K Granite Mounta 16.62 28 P **P 03 37 09.0 +1.0**
baz=223,SNR=27
L19K White Mountain 16.67 40 IAmb IAmb 03 37 14.6
comp=Z,52nm,0.7s
L19K White Mountain 16.67 40 P **P 03 37 09.4 +0.8**
baz=240,SNR=45
J18K Innoko River 16.67 35 P **P 03 37 09.3 +0.7**
baz=233,SNR=31
RED Redoubt Volcan 16.80 47 P **Pn 03 37 09.6 +0.9**
RED IAmb IAmb 03 37 14.6
comp=Z,84nm,0.9s
G17K Kiwalik Mounta 16.83 26 P **P 03 37 11.0 +0.6**
baz=220,SNR=19
HOM Homer 17.08 50 Pn **Pn 03 37 11.5 -0.5**
HOM IAmb IAmb 03 37 42.0
comp=Z,149nm,0.9s
CNPM China Poot 17.23 51 Pn 03 37 13.0 -1.1
H18K Honhosa River 17.24 29 P **P 03 37 16.4 +1.6**
H18K PcP **PcP 03 41 55.7 +1.6**
H18K Honhosa River 17.24 29 P **P 03 37 15.6 +0.8**
baz=226
M20K Styx River 17.24 42 P **P 03 37 15.6 +0.6**
baz=243
SPCR Spurr Chakacha 17.36 45 P **P 03 37 17.5 +1.2**
baz=247,SNR=16
J19K Poorman 17.38 34 Pn 03 37 14.7 -1.1
J19K Poorman 17.38 34 P **P 03 37 17.7 +1.3**
baz=233,SNR=42
F17K Baldwin Pennin 17.41 23 P **P 03 37 18.0 +1.3**
baz=217
SPU Mount Spurr 17.42 45 P **Pn 03 37 15.9 -0.4**
GCSA Galena City Sc 17.43 31 P **P 03 37 18.2 +1.3**
baz=229,SNR=11
BRLK Bradley Lake 17.48 50 Pn 03 37 15.5 -1.5
BRSE Bradley Lake S 17.54 51 P **Pn 03 37 18.6 +0.8**
baz=253,SNR=9.2
K20K Telida 17.59 37 P **P 03 37 19.8 +1.1**
K20K Telida 17.59 37 P **P 03 37 19.9 +1.1**
baz=238,SNR=28
CAPN Captain Cook N 17.67 47 P **P 03 37 21.5 +1.9**
baz=249
G18K Tagagawik 17.68 27 P **P 03 37 21.2 +1.5**
G18K Tagagawik 17.68 27 P **P 03 37 20.9 +1.1**
baz=223,SNR=17
E17K Hotham Inlet 17.80 21 P **Pn 03 37 22.3 +1.4**
baz=215,SNR=75
F18K Selawik 17.94 24 P **Pn 03 37 23.9 +1.4**
baz=235,SNR=13
SKT Skwentna 17.97 43 P **Pn 03 37 23.9 +0.9**
SKT IAmb IAmb 03 37 28.4
comp=Z,43nm,0.7s
SKT Skwentna 17.97 43 P **Pn 03 37 24.4 +1.4**
baz=245,SNR=34
SLKM Skilak Lake 18.02 48 P **P 03 37 23.5 0.0**
D17K Noatak River 18.05 19 P **Pn 03 37 25.9 +2.0**
baz=212,SNR=28
PPLA Purkeypile 18.10 40 IAmb IAmb 03 37 31.3
comp=Z,44nm,0.6s
PPLA Purkeypile 18.10 40 P **Pn 03 37 25.8 +1.1**
baz=242
SUA Susitna One 18.11 45 P **P 03 37 25.1 +0.5**
baz=248,SNR=19
C16K Lisburne Hills 18.14 15 P **Pn 03 37 26.3 +1.3**
C16K PcP **PcP 03 41 55.3 -0.1**
C16K Lisburne Hills 18.14 15 P **Pn 03 37 26.1 +1.1**
baz=206
SEW Seward 18.26 50 IAmb IAmb 03 37 33.2
comp=Z,44nm,0.8s
SEW Seward 18.26 50 P **P 03 37 26.3 +0.2**
baz=254,SNR=6.1
G19K Purcell Mounta 18.31 28 P **Pn 03 37 27.5 +0.4**
baz=226,SNR=40
E18K Tukpahlearik C 18.35 22 P **Pn 03 37 28.1 +0.5**
baz=217,SNR=6.7
RDOG Red Dog Mine 18.39 18 P **P 03 37 26.0 -1.5**
RDOG Red Dog Mine 18.39 18 P **Pn 03 37 28.5 +0.4**
baz=211
RC01 Rabbit Creek A 18.43 47 P **P 03 37 28.4 +0.5**
RC01 Rabbit Creek A 18.43 47 P **Pn 03 37 29.3 +0.7**
baz=250,SNR=7.4
BILL Bilibino 18.46 341 P **P 03 37 27.6 -0.7**
BILL Bilibino 18.46 341‖*eP* **P 03 37 27.1 -1.2**
BILL pmax pmax
comp=Z,44nm,0.9s
M22K Willow 18.49 45 P **P 03 37 26.6 -2.0**
M22K IAmb IAmb 03 37 36.6
comp=Z,85nm,0.9s
M22K Willow 18.49 45 P **Pn 03 37 29.8 +0.5**
baz=248
L22K Petersville 18.52 42 IAmb IAmb 03 37 35.6
comp=Z,71nm,0.7s
CHUM Lake Minchumin 18.54 37 P **P 03 37 29.7 +0.6**
baz=239
H20K Anotleneega Mo 18.55 31 P **Pn 03 37 30.4 +0.3**
baz=231
F19K Shaleruckik Mo 18.61 25 P **P 03 37 30.1 +0.2**
F19K IAmb IAmb 03 37 35.6
comp=Z,82nm,1.4s
F19K Shaleruckik Mo 18.61 25 P **Pn 03 37 31.4 +0.8**
baz=223,SNR=38
CUT Chulitna 18.68 43 P **P 03 37 30.8 +0.1**
CUT IAmb IAmb 03 37 37.3
comp=Z,51nm,0.6s
CUT Chulitna 18.68 43 P **P 03 37 31.1 +0.4**
baz=246,SNR=13
C17K DeLong Mountai 18.70 17 P **Pn 03 37 32.4 +0.7**
baz=210,SNR=36
PMR Palmer 18.88 46 P **P 03 37 32.8 0.0**
PMR Palmer 18.88 46 P **Pn 03 37 34.2 +0.3**
PMR Palmer 18.88 46 P **P 03 37 32.8 0.0**
PMR pmax pmax
comp=Z,34nm,1.4s
PMR Palmer 18.88 46 P **Pn 03 37 34.3 +0.4**
baz=250
TRF Thorofare Moun 19.12 40 P **P 03 37 36.0 +0.3**
TRF IAmb IAmb 03 37 42.6
comp=Z,87nm,0.8s
TRF PcP **PcP 03 41 57.6 +0.1**
TRF Thorofare Moun 19.12 40 P **P 03 37 36.8 +1.1**
baz=243,SNR=48
KNK Knik Glacier 19.12 47 IAmb IAmb 03 37 41.2
comp=Z,68nm,0.7s
KNK Knik Glacier 19.12 47 P **P 03 37 36.5 +1.0**
baz=251,SNR=11
BPAW Bear Paw Mtn. 19.15 38 IAmb IAmb 03 37 41.7
comp=Z,64nm,0.6s
BPAW Bear Paw Mtn. 19.15 38 P **Pn 03 37 37.2 -0.1**
baz=241,SNR=78
E19K Redstone River 19.21 25 IAmb IAmb 03 37 43.3
comp=Z,52nm,1.1s
E19K Redstone River 19.21 25 P **Pn 03 37 37.9 0.0**
baz=229
C18K Utukok River 19.23 19 P **Pn 03 37 38.6 +0.4**
baz=214,SNR=25
P23K Montague Islan 19.23 51 P **P 03 37 37.8 +1.1**
baz=256
SML Sawmill 19.31 45 IAmb IAmb 03 37 46.0
comp=Z,32nm,0.6s
SML Sawmill 19.31 45 P **P 03 37 39.0 +1.4**
baz=250
F20K Avaraart Lake 19.33 27 P **Pn 03 37 39.5 +0.2**
baz=226,SNR=24
H21K Melozitna River 19.34 32 IAmb IAmb 03 37 43.6
comp=Z,72nm,1.2s
H21K Melozitna River 19.34 32 P **Pn 03 37 39.7 +0.2**
baz=234,SNR=39
I21K Tanana 19.35 34 IAmb IAmb 03 37 44.0
comp=Z,73nm,0.8s
I21K Tanana 19.35 34 P **Pn 03 37 39.6 +0.1**
baz=236
MA2 Magadan 19.36 307 P **P 03 37 38.0 -0.2**
comp=Z,3.9nm,0.3s,baz=87,slow=9.4,SNR=9.5
MA2 LR LR 03 44 45.6
comp=Z,322nm,19.6s,baz=100,slow=36
MA2 Magadan 19.36 307 P **P 03 37 39.0 +0.8**
MA2 Magadan 19.36 307‖*eP* **Pn 03 37 39.8 +0.1**
MA2 pmax pmax
comp=Z,8.0nm,0.8s
M23K Glacier View 19.58 46 P **P 03 37 41.8 +1.3**
baz=251,SNR=8.3
WAT1 Susitna Watana 19.58 42 P **P 03 37 40.3 -0.3**
baz=247
GLI Glacier Island 19.60 49 IAmb IAmb 03 37 46.1
comp=Z,38nm,0.6s
GLI Glacier Island 19.60 49 P **P 03 37 41.6 +0.9**
baz=254,SNR=5.0
SEY Seymchan 19.61 318 P **P 03 37 41.0 +0.1**
comp=Z,11nm,0.8s,baz=111,slow=11,SNR=10
SEY LR LR 03 44 56.3
comp=Z,334nm,19.0s,baz=131,slow=36
SEY Seymchan 19.61 318‖*eP* **P 03 37 41.6 +0.7**
SEY pmax pmax
comp=Z,18nm,1.0s
Q23K Middleton Isla 19.64 53 P **P 03 37 42.5 +1.4**
baz=259
G21K Allakaket 19.64 30 P **P 03 37 42.4 +1.3**
baz=231
RND Reindeer 19.68 41 IAmb IAmb 03 37 47.3
comp=Z,44nm,0.7s
MLY Manley 19.72 35 P **P 03 37 43.0 +1.0**
baz=239,SNR=89
HIN Hinchinbrook I 19.76 50 IAmb IAmb 03 38 07.1
comp=Z,95nm,1.2s
SCM Sheep Creek Mo 19.77 46 IAmb IAmb 03 37 49.5
comp=Z,50nm,0.6s
SCM Sheep Creek Mo 19.77 46 P **P 03 37 42.8 +0.1**
baz=252,SNR=10
D19K Kuna River 19.78 22 IAmb IAmb 03 37 47.7
comp=Z,34nm,0.9s
D19K Kuna River 19.78 22 P **P 03 37 44.0 +1.3**
baz=219
MCK McKinley 19.79 40 P **P 03 37 42.9 +0.1**
baz=244,SNR=12
WAT6 Susitna Watana 19.84 44 P **P 03 37 42.6 -0.9**
baz=249,SNR=16
C19K Lookout Ridge 19.94 20 P **P 03 37 45.8 +1.3**
C19K PcP **PcP 03 41 59.9 +1.2**
C19K Lookout Ridge 19.94 20 P **Pn 03 37 46.0 -0.6**
baz=216,SNR=24
H22K Ishtalitna Cre 19.96 33 P **P 03 37 45.9 +1.3**
baz=236,SNR=29
E20K Nigu River 20.07 24 P **P 03 37 47.1 +1.3**
baz=223
F21K Alatna River 20.10 28 IAmb IAmb 03 37 52.1
comp=Z,34nm,0.7s
F21K Alatna River 20.10 28 P **Pn** 03 37 47.8 -0.6
baz=230,SNR=54
NEA2 Nenana 20.12 37 IAmb IAmb 03 37 53.3
comp=Z,35nm,0.7s
NEA2 Nenana 20.12 37 P **P 03 37 47.3 +0.9**
baz=242,SNR=33
EYAK Cordova Ski Ar 20.16 50 P **P 03 37 48.2 +1.4**
baz=257
DHY Denali Highway 20.17 42 P **P 03 37 46.0 -1.1**
DHY Denali Highway 20.17 42 P **P 03 37 46.6 -0.5**
baz=248,SNR=73
I23K Minto, Yukon-K 20.28 36 P **P 03 37 48.6 +0.6**
I23K IAmb IAmb 03 37 53.9
comp=Z,52nm,0.6s
I23K Minto, Yukon-K 20.28 36 P **Pn** 03 37 49.8 -0.7
baz=240,SNR=29
DIV Divide 20.29 48 IAmb IAmb 03 37 55.0
comp=Z,31nm,0.5s
D20K Etivluk River 20.31 23 P **P 03 37 49.6 +1.3**
D20K PcP **PcP 03 42 00.8 +1.5**
D20K Etivluk River 20.31 23 P **P 03 37 49.3 +1.0**
baz=221
KLU Klutina 20.31 47 IAmb IAmb 03 37 55.6
comp=Z,27nm,0.7s
KLU Klutina 20.31 47 P **P 03 37 50.0 +1.4**
baz=254,SNR=16
M24K Tolsona, Glenn 20.37 46 IAmb IAmb 03 37 56.7
comp=Z,64nm,0.7s
M24K Tolsona, Glenn 20.37 46 P **P 03 37 49.2 +0.1**
baz=252,SNR=12
WRH Wood River Hil 20.45 38 IAmb IAmb 03 37 54.8
comp=Z,28nm,0.5s
CCB Clear Creek Bu 20.63 38 P **P 03 37 51.1 -0.8**
CCB IAmb IAmb 03 38 07.9
comp=Z,31nm,0.6s
RAGM Ragged Mountai 20.65 51 IAmb IAmb 03 37 58.0
comp=Z,38nm,1.0s
KAIM Kayak Island 20.69 52 P **P 03 37 53.2 +0.7**
baz=260
COLA College 20.72 37 P **P 03 37 52.6 -0.2**
COLA IAmb IAmb 03 38 00.7
comp=Z,38nm,0.8s
COLA College 20.72 37 P **Pn** 03 37 55.6 0.0
COLA College 20.72 37*de*P **P 03 37 52.6 -0.2**
COLA pmax pmax
comp=Z,10.0nm,0.6s
COLA College 20.72 37 P **P 03 37 54.0 +1.3**
baz=243
E21K Killik River 20.78 25 P **P 03 37 54.2 +0.7**
baz=226
BMRM Bremner River 20.80 49 IAmb IAmb 03 38 02.2
comp=Z,39nm,0.6s
BMRM Bremner River 20.80 49 P **P 03 37 54.9 +1.1**
baz=257,SNR=6.6
HDA Harding Lake 20.87 39 IAmb IAmb 03 37 57.8

comp=Z,21nm,0.5s
HDA **Harding Lake** 20.87 39 P P 03 37 55.3 +0.9
baz=246,SNR=18
G23K **Bananza Creek** 20.87 32 P P 03 37 55.9 +1.3
baz=236
HARP **HAARP** 20.91 45 P P 03 37 56.0 +1.1
baz=253
PAX **Paxson** 20.95 44 IAmb IAmb 03 38 03.2
comp=Z,500nm,1.1s
PAX **Paxson** 20.95 44 P P 03 37 55.0 -0.5
baz=251,SNR=31
N25K **Chitina, Valde** 20.95 48 P P 03 37 56.8 +1.3
baz=256,SNR=42
ILAR **Eielson Array** 21.04 38 P P 03 37 55.4 -1.0
comp=Z,4.4nm,0.4s,baz=238,slow=9.5,SNR=56
ILAR PcP PcP 03 42 00.6 -0.1
comp=Z,1.1nm,0.8s,baz=296,slow=5.2
ILAR ScP ScP 03 45 31.9 -0.5
comp=Z,0.4nm,0.5s,baz=270,slow=3.4,SNR=8.8
ILAR LR LR 03 47 16.0
comp=Z,242nm,18.2s,baz=247,slow=40
comp=Z,4.4nm,0.4s
ILAR **Eielson Array** 21.04 38 P P 03 37 54.4 -1.9
C21K **Knifeblade Rid** 21.08 23 P P 03 37 57.5 +0.8
baz=224,SNR=59
K24K **Donnelly Dome** 21.11 41 IAmb IAmb 03 38 04.7
comp=Z,59nm,0.9s
K24K **Donnelly Dome** 21.11 41 P P 03 37 57.2 +0.2
baz=249,SNR=22
COLD **Coldfoot** 21.11 30 IAmb IAmb 03 38 04.0
comp=Z,29nm,0.8s
COLD **Coldfoot** 21.11 30 P P 03 37 58.2 +1.2
baz=235,SNR=36
H24K **Noodor Dome** 21.16 35 IAmb IAmb 03 38 02.9
comp=Z,52nm,0.6s
H24K **Noodor Dome** 21.16 35 P P 03 37 58.7 +1.1
baz=241,SNR=57
E22K **Anaktuvuk Pass** 21.18 27 IAmb IAmb 03 38 04.4
comp=Z,28nm,0.7s
E22K **Anaktuvuk Pass** 21.18 27 P P 03 37 58.8 +1.0
baz=230
GLB **Gilahina Butte** 21.28 48 P P 03 38 00.4 +1.5
GLB IAmb IAmb 03 38 05.3
comp=Z,43nm,0.6s
VRDI **Verde Repeater** 21.40 49 P P 03 38 01.8 +1.4
D22K **Ayikyak River** 21.43 25 P P 03 38 01.1 +0.7
D22K IAmb IAmb 03 38 04.9
comp=Z,54nm,0.8s
D22K PcP PcP 03 42 02.5 +1.0
D22K **Ayikyak River** 21.43 25 P P 03 38 01.4 +0.9
baz=228,SNR=57
CRQM **Cirque** 21.46 50 P P 03 38 01.9 +0.9
CRQM IAmb IAmb 03 38 11.8
comp=Z,25nm,0.7s
RIDG **Independent Ri** 21.47 42 IAmb IAmb 03 38 10.0
comp=Z,28nm,0.7s
RIDG **Independent Ri** 21.47 42 P P 03 38 00.4 -0.6
baz=250,SNR=10.0
CRQE **Cirque** 21.48 50 P P 03 38 01.7 +0.5
baz=259
SNH **Sunshine Point** 21.51 52 P 03 38 00.8 -0.7
SNH IAmb IAmb 03 38 36.7
comp=Z,89nm,1.4s
WAX **Waxell Ridge** 21.55 51 P P 03 38 01.5 -0.3
WAX IAmb IAmb 03 38 11.2
comp=Z,31nm,0.8s
J25K **Salcha River,** 21.57 39 P P 03 38 01.8 -0.3
baz=247,SNR=22
TGL **Tana Glacier** 21.61 50 P P 03 38 02.5 -0.1
MCARA **McCarthy VSAT** 21.64 49 P P 03 38 02.9 +0.2
MCARA IAmb IAmb 03 38 12.2
comp=Z,46nm,0.7s
MCARA **McCarthy VSAT** 21.64 49 P P 03 38 03.5 +0.8
baz=258,SNR=9.4
MENT **Mentasta** 21.70 44 P P 03 38 03.1 -0.3
MENT IAmb IAmb 03 38 15.1
comp=Z,23nm,0.6s
G24K **Hadweenzic Riv** 21.73 33 IAmb IAmb 03 38 10.1
comp=Z,43nm,0.7s
G24K **Hadweenzic Riv** 21.73 33 P P 03 38 04.8 +1.2
baz=240
DOT **Dot Lake** 21.77 42 IAmb IAmb 03 38 09.7
comp=Z,38nm,0.6s
E23K **Chandalar** 21.78 29 IAmb IAmb 03 38 10.2
comp=Z,17nm,0.6s
E23K **Chandalar** 21.78 29 P P 03 38 05.0 +0.8
baz=234,SNR=14
ISLE **Juniper Island** 21.82 51 P P 03 38 03.3 -1.6
PRP **Porcupine Dome** 21.88 37 P P 03 38 04.6 -0.8
PRP **Porcupine Dome** 21.88 37 P P 03 38 06.5 +1.1
baz=245,SNR=21
M26K **Nabesna, AK** 21.88 46 IAmb IAmb 03 38 16.1
comp=Z,20nm,0.6s
M26K **Nabesna, AK** 21.88 46 P P 03 38 06.8 +1.5
baz=256
L26K **Log Cabin Wild** 21.89 44 P P 03 38 04.7 -0.8
L26K IAmb IAmb 03 38 15.8
comp=Z,35nm,0.7s
L26K **Log Cabin Wild** 21.89 44 P P 03 38 06.2 +0.7
baz=254,SNR=28
SCRK **Sand Creek** 21.91 42 P P 03 38 04.1 -1.6
SCRK IAmb IAmb 03 38 09.4
comp=Z,24nm,0.8s
SCRK **Sand Creek** 21.91 42 P P 03 38 05.5 -0.2
baz=250,SNR=32
MESA **MESA** 21.95 52 P P 03 38 06.8 +0.5
baz=262
D23K **Nanushuk River** 22.03 26 IAmb IAmb 03 38 12.8
comp=Z,47nm,0.6s
D23K **Nanushuk River** 22.03 26 P P 03 38 07.5 +0.6
baz=230
GRNC **Granite Creek** 22.13 51 IAmb IAmb 03 38 40.8
comp=Z,46nm,1.4s
E24K **Your Creek** 22.14 29 P P 03 38 08.1 +0.1
E24K IAmb IAmb 03 38 14.0
comp=Z,19nm,0.6s
E24K **Your Creek** 22.14 29 P P 03 38 08.9 +0.9
baz=235,SNR=36
J26L **Joseph Creek** 22.26 40 IAmb IAmb 03 38 13.9
comp=Z,29nm,0.7s
A21K **Barrow** 22.33 18 P P 03 38 10.4 +0.4
baz=217
CTG **Chitna Glacier** 22.36 50 P P 03 38 10.5 -0.2
baz=261
M27K **Edge Creek, AK** 22.38 46 IAmb IAmb 03 38 16.5
comp=Z,40nm,0.7s
M27K **Edge Creek, AK** 22.38 46 P P 03 38 11.5 +0.7
baz=257,SNR=34
FYU **Fort Yukon** 22.45 35 IAmb IAmb 03 38 15.4
comp=Z,55nm,0.7s
L27K **Beaver Creek,** 22.57 45 P P 03 38 12.6 -0.1
baz=255,SNR=13
BCAR **Beaver Creek A** 22.59 45 P P 03 38 11.9 -1.0
C23K **Itkillik River** 22.61 25 IAmb IAmb 03 38 16.9
comp=Z,47nm,0.6s
C23K **Itkillik River** 22.61 25 P P 03 38 13.9 +0.8
baz=229
D24K **Happy Valley** 22.67 27 IAmb IAmb 03 38 18.8
comp=Z,34nm,0.6s
D24K **Happy Valley** 22.67 27 P P 03 38 14.1 +0.4
baz=233
I26K **Coal Creek Min** 22.71 39 P P 03 38 14.8 +0.7
baz=249,SNR=10
PINM **Pinnacle** 22.79 53 P P 03 38 15.1 +0.1
baz=264
F25K **Christian Rive** 22.79 32 P P 03 38 15.4 +0.3
F25K IAmb IAmb 03 38 19.5
comp=Z,34nm,0.7s
F25K PcP PcP 03 42 05.6 +1.3
F25K **Christian Rive** 22.79 32 P P 03 38 15.4 +0.3
baz=240,SNR=58
BVCY **Beaver Creek** 22.85 46 P P 03 38 15.1 -0.6
baz=258,SNR=24
O28M **Mount Upton** 22.89 51 IAmb IAmb 03 38 36.4
comp=Z,17nm,0.6s
O28M **Mount Upton** 22.89 51 P P 03 38 16.0 -0.4
baz=262
YUK3 **Moose Creek** 22.92 48 P P 03 38 16.5 -0.1
baz=260,SNR=21
C24K **Franklin Bluff** 23.05 26 P P 03 38 17.6 0.0
baz=232
BMAR **Burnt Mountain** 23.07 33 P P 03 38 17.6 -0.3
E25K **Arctic Village** 23.08 31 IAmb IAmb 03 38 22.0
comp=Z,28nm,0.7s
E25K **Arctic Village** 23.08 31 P P 03 38 18.3 +0.3
baz=239,SNR=39
G26K **Porcupine Rive** 23.13 34 P P 03 38 18.7 +0.3
baz=244
YUK8 **Steele Glacier** 23.17 50 P P 03 38 19.1 0.0
baz=262,SNR=6.0
F26K **Sheenjek River** 23.34 33 IAmb IAmb 03 38 25.9
comp=Z,23nm,0.7s
F26K **Sheenjek River** 23.34 33 P P 03 38 20.8 +0.3
baz=242,SNR=40
I27K **Kandik River** 23.42 38 P P 03 38 21.4 +0.2
baz=250,SNR=8.1
D25K **Kavik River** 23.48 28 IAmb IAmb 03 38 25.9
comp=Z,37nm,0.7s
D25K **Kavik River** 23.48 28 P P 03 38 21.6 -0.2
baz=236,SNR=54
O29M **Mount Kennedy** 23.64 52 P P 03 38 23.8 +0.4
baz=265
H27K **Steamboat Moun** 23.67 37 P P 03 38 24.1 +0.6
baz=249
YUK4 **Talbot Arm** 23.71 50 P P 03 38 24.9 +0.7
baz=263,SNR=6.3
YUK6 **Outpost Mounta** 23.80 51 P P 03 38 25.2 +0.1
baz=264
DAWY **Dawson** 23.87 43 P P 03 38 25.0 -0.5
baz=256,SNR=18
M29M **Somme Creek** 23.95 47 IAmb IAmb 03 38 31.1
comp=Z,22nm,0.7s
M29M **Somme Creek** 23.95 47 P P 03 38 25.8 -0.5
baz=266
I28M **Miner Creek** 24.03 39 IAmb IAmb 03 38 30.5
comp=Z,35nm,0.8s
I28M **Miner Creek** 24.03 39 P P 03 38 26.2 -0.7
baz=252,SNR=49
HYT **Haines Junctio** 24.21 51 P P 03 38 28.3 -0.3
baz=265
C26K **Camden Bay** 24.24 27 P P 03 38 29.1 +0.5
baz=237,SNR=59
E27K **Coleen River** 24.43 33 P P 03 38 31.5 +1.1
E27K IAmb IAmb 03 38 36.0
comp=Z,35nm,0.7s
E27K PcP PcP 03 42 08.7 +1.0
E27K **Coleen River** 24.43 33 P P 03 38 30.4 0.0
baz=244,SNR=51
P30M **Million Dollar** 24.43 53 P P 03 38 31.0 +0.4
baz=267
C27K **Jago River** 24.44 29 P P 03 38 30.9 +0.5
C27K IAmb IAmb 03 38 34.8
comp=Z,24nm,1.0s
C27K **Jago River** 24.44 29 P P 03 38 30.9 +0.5
baz=239,SNR=20
J29N **Klondike Camp** 24.46 42 P P 03 38 31.1 +0.3
baz=256
TYV **Tymovskoe** 24.47 285 *e*P P 03 38 31.3 +0.4
TYV pmax pmax
comp=Z,25nm,0.9s
TYV pmax pmax
comp=Z,500nm,5.4s
K29M **Barlow Dome** 24.63 44 P P 03 38 31.9 -0.4
baz=258,SNR=62
I29M **Ogilvie Camp,** 24.66 40 IAmb IAmb 03 38 37.6
comp=Z,26nm,0.8s
I29M **Ogilvie Camp,** 24.66 40 P P 03 38 32.4 -0.1
baz=254
M30M **Minto, Yukon** 24.74 47 P P 03 38 33.4 0.0
baz=262
F28M **Old Crow** 24.79 34 IAmb IAmb 03 38 39.4
comp=Z,31nm,0.8s
F28M **Old Crow** 24.79 34 P P 03 38 34.2 +0.5
baz=248,SNR=39
O30N **Mendenhall** 24.90 51 P P 03 38 35.3 +0.6
baz=266
N31M **Braeburn, Yuko** 25.10 50 P P 03 38 36.8 +0.2
baz=265
D27M **Malcolm River** 25.10 30 P P 03 38 37.2 +0.7
baz=243
G29M **Pine Creek** 25.22 37 P P 03 38 37.9 +0.2
baz=252
SKAG **Skagway** 25.24 54 P P 03 38 38.1 +0.3
baz=270
J30M **Hart River** 25.29 42 IAmb IAmb 03 38 43.6
comp=Z,17nm,0.7s
J30M **Hart River** 25.29 42 P P 03 38 38.5 +0.2
baz=258,SNR=8.7
E28M **Babbage River** 25.30 32 IAmb IAmb 03 38 44.6
comp=Z,31nm,0.7s
E28M **Babage River** 25.30 32 P P 03 38 39.4 +1.2
baz=246
SIT **Sitka** 25.36 60 P P 03 38 38.5 -0.3
baz=275
UGL **Uglegorsk** 25.39 281 *e*P P 03 38 40.0 +0.7
UGL *e*S S 03 42 57.6 -4.1
UGL pmax pmax
comp=Z,100nm,0.8s
UGL smax smax
comp=E,1μm,16.0s
UGL smax smax
comp=N,2μm,15.0s
I30M **Mount Dempster** 25.41 41 IAmb IAmb 03 38 45.7
comp=Z,16nm,0.6s
I30M **Mount Dempster** 25.41 41 P P 03 38 38.7 -0.7
baz=257,SNR=28
WHY **Whitehorse** 25.48 52 P P 03 38 40.3 +0.1
baz=268
S32K **Killisnoo** 25.72 59 P P 03 38 41.8 -0.4
baz=275
YSS **Yuzhno-Sakhali** 25.77 276 P P 03 38 42.3 -0.4
YSS IAmb IAmb 03 38 44.6
comp=Z,40nm,0.9s
YSS **Yuzhno-Sakhali** 25.77 276 *e*P P 03 38 43.5 +0.8
YSS *e*S S 03 43 07.1 -0.6
YSS pmax pmax
comp=N,30nm,0.9s
YSS pmax pmax
comp=Z,50nm,0.9s
YSS pmax pmax
comp=E,40nm,1.0s
YSS MLR MLR
comp=Z,500nm,15.0s
E29M **Blow River** 25.77 33 P P 03 38 44.1 +1.6
E29M IAmb IAmb 03 38 49.1
comp=Z,27nm,0.7s
E29M PcP PcP 03 42 11.3 +0.6
E29M **Blow River** 25.77 33 P P 03 38 43.0 +0.5
baz=249,SNR=39
M31M **Drury Creek, Y** 25.81 48 P P 03 38 42.9 -0.1
baz=265,SNR=6.7
G30M **tAoh Zraii Nji** 25.92 37 P P 03 38 43.9 -0.1
baz=253
P32M **Atlin** 26.06 54 P P 03 38 45.7 +0.4
baz=271
F30M **Barrier River** 26.27 36 P P 03 38 47.2 +0.2
baz=253
FARO **Faro, Yukon** 26.30 48 P P 03 38 47.3 -0.1
baz=266
H31M **Peel River** 26.36 40 P P 03 38 47.4 -0.5
baz=258
N32M **Quiet Lake** 26.38 51 P P 03 38 48.0 -0.2
baz=268
P33M **Teslin, Yukon** 26.50 53 P P 03 38 49.7 +0.3
baz=271
U33K **Whale Pass** 26.68 62 P P 03 38 50.8 0.0
baz=278
CRAG **Craig** 26.78 63 P P 03 38 51.5 -0.2
baz=280
F31M **Tsiigehtchic** 26.98 36 P P 03 38 53.5 +0.1
baz=255,SNR=5.1
WRAK **Wrangell Islan** 27.06 61 P P 03 38 53.9 -0.4
baz=278
JKA **Kamikawa-asahi** 27.15 270 IAmb IAmb 03 39 30.3
comp=Z,80nm,1.5s
ASAJ **Asahikawa** 27.15 270 P P 03 38 54.8 -0.4
comp=Z,29nm,1.1s,baz=53,slow=11,SNR=6.1
ASAJ LR LR 03 48 58.6
comp=Z,120nm,19.8s,baz=28,slow=35
comp=Z,29nm,1.1s
INK **Inuvik** 27.28 35 P P 03 38 56.5 +0.4
baz=254
R33M **Jennings River** 27.47 54 P P 03 38 58.1 0.0
baz=274
S34M **Telegraph Cree** 27.52 58 P P 03 38 58.9 +0.5
baz=276
DLBC **Dease Lake** 28.04 56 LR LR 03 49 14.3
comp=Z,120nm,21.9s,baz=280,slow=34
DLBC **Dease Lake** 28.04 56 P P 03 39 03.8 +0.6
baz=276
WTLY **Watson Lake, Y** 28.52 53 P P 03 39 07.4 +0.1
baz=274
YAK **Yakutsk** 29.81 311 LR LR 03 51 14.2
comp=Z,243nm,19.3s,baz=105,slow=36
TOAD **Toad River Com** 30.47 55 P P 03 39 24.5 -0.1
baz=279
BBB **Bella Bella** 30.47 68 LR LR 03 48 56.7
comp=Z,86nm,20.7s,baz=298,slow=31
C36M **Paulatuk** 30.86 34 P P 03 39 27.8 0.0
baz=262
WRGLY **Wrigley** 30.86 46 IAmb IAmb 03 39 32.8
comp=Z,20nm,0.8s
WRGLY **Wrigley** 30.86 46 P P 03 39 27.8 -0.1
baz=273,SNR=7.4
KOTAN **Kotaneelee Air** 30.88 52 P P 03 39 28.0 -0.1
baz=278
TIXI **Tiksi** 30.94 331 LR LR 03 52 42.0
comp=Z,231nm,19.0s,baz=139,slow=38
TIXI **Tiksi** 30.94 331 P P 03 39 30.1 +1.6
TIXI **Tiksi** 30.94 331 ⇓*e*P P 03 39 30.4 +1.9
TIXI pmax pmax
comp=Z,5.0nm,0.7s
A36M **Sachs Harbour** 30.95 29 P P 03 39 29.4 +0.8
A36M IAmb IAmb 03 39 33.4
comp=Z,26nm,0.7s
A36M PcP PcP 03 42 23.8 +0.4
A36M **Sachs Harbour** 30.95 29 P P 03 39 28.1 -0.5
baz=257,SNR=27
KLR **Kul'dur** 31.63 286 LR LR 03 52 32.3
comp=Z,52nm,20.1s,baz=54,slow=37
KLR **Kul'dur** 31.63 286 *c*⇑P P 03 39 34.5 -0.4
KLR pmax pmax
comp=Z,14nm,1.3s
ZEA **Zeya** 32.67 296 *e*P P 03 39 42.7 -1.2
ZEA pmax pmax
comp=Z,10.0nm,1.1s
H11N2 **WAKE ISLAND Hy** 33.63 206 T T 04 16 33.4
baz=17,slow=76,SNR=502
H11N3 **WAKE ISLAND Hy** 33.64 206 T T 04 16 34.1
baz=17,slow=76,SNR=319
H11N1 **WAKE ISLAND Hy** 33.65 206 T T 04 16 34.7
baz=17,slow=76,SNR=387
USRK **Ussuriysk Ar.** 33.75 278 P P 03 39 53.0 -0.4
comp=Z,8.9nm,0.6s,baz=54,slow=8.2,SNR=23
comp=Z,8.9nm,0.6s
MAJO **Matsushiro** 34.21 262 ⇑*i*P P 03 39 57.6 +0.1
MAJO pmax pmax
comp=Z,24nm,1.2s
MJAR **Matsushiro Arr** 34.21 262 P P 03 39 57.1 -0.4
comp=Z,7.4nm,0.8s,baz=57,slow=7.8,SNR=10
MJAR LR LR 03 51 13.0
comp=Z,162nm,21.7s,baz=41,slow=31
comp=Z,7.4nm,0.8s
MJAR **Matsushiro Arr** 34.21 262 P P 03 39 57.5 0.0
MJAR **Matsushiro Arr** 34.21 262 P P 03 39 57.5 0.0
MJAR pmax pmax
comp=Z,4.0nm,0.9s
LLLB **Lillooet** 34.68 69 IAmb IAmb 03 40 04.5
comp=Z,18nm,1.0s
H11S1 **WAKE ISLAND Hy** 34.85 206 T T 04 17 16.3
baz=19,SNR=414
H11S2 **WAKE ISLAND Hy** 34.87 206 T T 04 17 17.4
baz=19,slow=74,SNR=171
H11S3 **WAKE ISLAND Hy** 34.87 206 T T 04 17 14.4
baz=19,slow=74,SNR=144
YKAW3 **Yellowknife Wh** 34.96 46 IAmb IAmb 03 40 07.8
comp=Z,12nm,0.7s
YKA **Yellowknife Ar** 34.98 46 P P 03 40 03.4 -0.4
comp=Z,4.4nm,0.7s,baz=288,slow=9.0,SNR=31
YKA PcP PcP 03 42 36.1 +1.4
comp=Z,1.1nm,0.6s,baz=294,slow=3.5,SNR=9.6
YKA ScP ScP 03 46 13.8 -1.4
comp=Z,0.2nm,0.5s,baz=290,slow=3.7,SNR=4.7
comp=Z,4.4nm,0.7s
YKA **Yellowknife Ar** 34.98 46 *i*P P 03 40 05.6 +1.8
YKA pmax pmax
comp=Z,5.0nm,0.6s
MDJ **Mudanjiang** 35.03 280 P P 03 40 03.3 -1.1
MDJ pmax pmax
comp=Z,16nm,0.9s
YKAW1 **Yellowknife Wh** 35.03 46 IAmb IAmb 03 40 08.1
comp=Z,9.7nm,0.9s
GNW **Green Mountain** 35.42 74 IAmb IAmb 03 40 11.2
comp=Z,11nm,0.9s
BNX **BinXian** 35.82 283 ⇓P P 03 40 10.3 -0.9
BNX pmax pmax
comp=Z,34nm,0.8s
LON **Longmire** 36.41 74 IAmb IAmb 03 40 24.3
comp=Z,9.1nm,0.6s
H04D **Lebanon** 36.95 78 IAmb IAmb 03 40 29.6
comp=Z,19nm,0.7s
B08A **Colville Reser** 37.15 71 IAmb IAmb 03 40 25.3
comp=Z,13nm,0.7s
HOOD **Mount Hood Mea** 37.21 76 IAmb IAmb 03 40 26.3
comp=Z,51nm,1.5s
EPH **Ephrata** 37.46 72 IAmb IAmb 03 40 31.3
comp=Z,12nm,1.0s
I04A **Tendick Farm,** 37.53 79 IAmb IAmb 03 40 28.8
comp=Z,29nm,0.8s
E07A **Sunnyside** 37.69 74 IAmb IAmb 03 40 37.3
comp=Z,9.4nm,0.7s
WIFE **Three Sisters-** 37.75 78 IAmb IAmb 03 40 31.0
comp=Z,21nm,0.8s
WAH2 **Wahluke Slope** 37.77 73 IAmb IAmb 03 40 30.9
comp=Z,19nm,0.5s
BBOR **Butler Butte** 37.84 81 P P 03 40 30.8 +2.2
BBOR IAmb IAmb 03 40 38.5
comp=Z,10nm,0.9s
I05D **Terrebonne, OR** 37.90 78 IAmb IAmb 03 40 32.0
comp=Z,21nm,0.8s
HAWA **Hanford** 37.96 74 IAmb IAmb 03 40 32.2
comp=Z,25nm,1.0s
F07A **Phinny Hill Vi** 37.97 75 IAmb IAmb 03 40 37.3
comp=Z,20nm,0.7s
D08A **Wollman Farm,** 38.01 72 IAmb IAmb 03 40 31.6
comp=Z,7.0nm,0.6s
C09A **Chrisman Ranch** 38.04 71 IAmb IAmb 03 40 32.5
comp=Z,29nm,1.4s
PINE **Pine Mountain** 38.43 78 IAmb IAmb 03 40 37.1
comp=Z,20nm,1.1s
L04D **Klamath Falls** 38.44 81 P P 03 40 35.6 +2.0
L04D IAmb IAmb 03 40 50.7
comp=Z,12nm,0.9s
L04D PcP PcP 03 42 46.5 +0.7
YBH **Yreka Blue Hor** 38.45 82 LR LR 03 53 11.9
comp=Z,9.5nm,21.1s,baz=306,slow=31
YBH **Yreka Blue Hor** 38.45 82 P P 03 40 35.5 +1.8
YBH **Yreka Blue Hor** 38.45 82 P P 03 40 35.5 +1.8
YBH pmax pmax
comp=Z,12nm,1.4s
NEW **Newport** 38.50 70 LR LR 03 56 17.2
comp=Z,147nm,18.4s,baz=346,slow=36
NEW **Newport** 38.50 70 IAmb IAmb 03 40 36.2
comp=Z,18nm,0.6s
J05D **Fort Rock, OR** 38.52 79 IAmb IAmb 03 40 37.7
comp=Z,15nm,0.8s
K04D **Chiloquin, OR** 38.56 80 IAmb IAmb 03 40 56.5
comp=Z,26nm,0.7s
HILR **Hailar Array B** 38.59 293 P P 03 40 34.3 -0.4
comp=Z,1.0nm,0.4s,baz=50,slow=9.8,SNR=4.6
HILR LR LR 03 58 03.1
comp=Z,246nm,18.1s,baz=30,slow=38
comp=Z,1.0nm,0.4s
HIA **Hailar** 38.73 292 P P 03 40 34.4 -1.5
HIA IAmb IAmb 03 40 36.2
comp=Z,12nm,0.9s
HIA **Hailar** 38.73 292 P P 03 40 34.4 -1.5
HIA pmax pmax
comp=Z,12nm,0.9s
K05A **Summer Lake** 39.03 80 IAmb IAmb 03 40 42.1
comp=Z,15nm,0.8s
I07A **Izee** 39.16 77 IAmb IAmb 03 40 42.4
comp=Z,18nm,0.7s
RES **Resolute Bay** 39.65 24 LR LR 04 00 09.5
comp=Z,180nm,18.8s,baz=341,slow=41
HATC **Hat Creek Radi** 39.75 82 IAmb IAmb 03 40 47.5
comp=Z,22nm,0.8s
O03E **Paynes Creek** 39.84 83 IAmb IAmb 03 40 56.0
comp=Z,13nm,0.8s
KSRS **Korea Array** 40.08 271 P P 03 40 48.0 +0.8
comp=Z,4.9nm,0.7s,baz=50,slow=8.6,SNR=10
comp=Z,4.9nm,0.7s
BMO **Blue Mountains** 40.09 75 P P 03 40 48.2 +0.9
BMO **Blue Mountains** 40.09 75 P P 03 40 48.2 +0.9
BMO pmax pmax
comp=Z,5.0nm,0.8s
J08A **Circle Bar Ran** 40.18 77 IAmb IAmb 03 40 50.7
comp=Z,15nm,0.7s
ORV **Oroville** 40.45 84 P P 03 40 51.1 +0.8
ORV **Oroville** 40.45 84 P P 03 40 51.1 +0.8
ORV pmax pmax
comp=Z,3.0nm,0.9s

WVOR Wild Horse Val 40.59 79 IAmb IAmb 03 40 54.2
comp=Z,18nm,0.8s
PLID Pearl Lake 40.76 74 P P **03 40 53.5 +0.5**
JNU Nakatsue 41.00 264 P P **03 40 55.5 +0.6**
comp=Z,32nm,0.9s,baz=86,slow=4.5,SNR=6.8
JNU LR LR 03 56 57.0
comp=Z,128nm,20.3s,baz=22,slow=35
comp=Z,32nm,0.9s
MSO Missoula 41.08 70 IAmb IAmb 03 40 57.5
comp=Z,11nm,0.7s
PNTR Pine Nut 41.92 83 IAmb IAmb 03 41 19.6
comp=Z,16nm,0.6s
BLKN Baker Lake 42.43 40 P P **03 41 05.2 -0.9**
BLKN PcP PcP **03 42 57.8 -0.3**
LRM Limekiln Ridge 42.49 71 P P **03 41 07.4 +0.2**
HLID Hailey 42.54 75 IAmb IAmb 03 41 09.9
comp=Z,13nm,0.9s
BCYI Bear Canyon 42.73 73 IAmb IAmb 03 41 11.3
comp=Z,18nm,0.9s
EGMT Eagleton 42.91 66 P P **03 41 10.0 -0.3**
EGMT IAmb IAmb 03 41 13.1
comp=Z,17nm,0.9s
BOZ Bozeman (W) 43.09 70 IAmb IAmb 03 41 14.1
comp=Z,36nm,1.4s
NVAR Mina Array Bea 43.12 83 P P **03 41 14.1 +1.8**
comp=Z,3.7nm,0.8s,baz=289,slow=8.1,SNR=24
NVAR PcP PcP **03 43 02.2 +1.1**
comp=Z,1.1nm,0.8s,baz=303,slow=5.0,SNR=3.1
NVAR LR LR 03 57 16.0
comp=Z,98nm,18.6s,baz=290,slow=33
comp=Z,3.7nm,0.8s
ELK Elko 43.64 78 LR LR 03 58 03.2
comp=Z,142nm,18.2s,baz=326,slow=34
ELK Elko 43.64 78 IAmb IAmb 03 41 19.0
comp=Z,12nm,0.8s
XLT XiLinHaoTe 43.65 287 *e*P P **03 41 16.9 +0.6**
XLT pmax pmax
comp=Z,19nm,1.2s
XLT pmax pmax
comp=Z,270nm,5.3s
YHL Hebgen Lake 43.77 71 IAmb IAmb 03 41 28.9
comp=Z,16nm,1.0s
YHB Horse Butte 43.81 71 IAmb IAmb 03 41 24.2
comp=Z,10nm,0.6s
FFC Flin Flon 43.84 54 P P **03 41 16.9 -0.7**
FFC PcP PcP **03 43 03.6 +0.6**
YMR Madison River 44.00 71 IAmb IAmb 03 41 21.5
comp=Z,27nm,1.4s
YNR Norris Junctio 44.14 71 IAmb IAmb 03 41 23.2
comp=Z,21nm,1.3s
VES Vestal, Richgr 44.24 87 IAmb IAmb 03 41 32.4
comp=Z,15nm,0.6s
H17A Grant Village 44.38 71 IAmb IAmb 03 41 26.1
comp=Z,36nm,1.4s
HVU Hansel Valley 44.55 76 IAmb IAmb 03 41 26.0
comp=Z,22nm,0.6s
NRIK Nord'sk 44.72 330 P P **03 41 24.4 0.0**
comp=Z,4.8nm,0.8s,baz=76,slow=11,SNR=5.2
comp=Z,4.8nm,0.8s
RLMT Red Lodge 44.75 70 P P **03 41 25.4 +0.1**
RLMT IAmb IAmb 03 41 27.7
comp=Z,22nm,1.1s
POIN Pond Inlet 44.81 25 P P **03 41 25.4 +0.3**
POIN PcP PcP **03 43 05.9 -0.1**
S11A Rachel 45.20 82 IAmb IAmb 03 41 31.3
comp=Z,9.7nm,0.9s
ILON Igloolik, Nuna 45.30 30 IAmb IAmb 03 41 29.6
comp=Z,7.0nm,0.6s
TPNV Topopah Spring 45.32 83 IAmb IAmb 03 41 32.1
comp=Z,12nm,0.8s
DUG Dugway, Tooele 45.46 77 P P **03 41 31.5 +0.6**
DUG IAmb IAmb 03 41 33.4
comp=Z,24nm,0.9s
DUG Dugway, Tooele 45.46 77 P P **03 41 31.5 +0.6**
DUG pmax pmax
comp=Z,24nm,1.0s
LAO LASA Array 45.66 66 IAmb IAmb 03 41 34.4
comp=Z,23nm,0.8s
FCC Fort Churchill 45.71 46 IAmb IAmb 03 41 36.4
comp=Z,9.0nm,0.7s
TCUT Toone Canyon 45.77 76 IAmb IAmb 03 41 35.8
comp=Z,21nm,0.7s
PRN Pahroc Range 45.78 82 IAmb IAmb 03 41 52.7
comp=Z,18nm,0.8s
CTU Camp Tracy 45.81 76 IAmb IAmb 03 41 35.8
comp=Z,13nm,1.0s
PSUT Pine Spring 45.82 80 IAmb IAmb 03 41 41.8
comp=Z,6.9nm,0.7s
BJI2 Beijing 45.84 283 P P **03 41 34.3 +0.6**
BJI2 pmax pmax
comp=Z,6.0nm,0.9s
BJT Baijiatuan 45.84 283 IAmb IAmb 03 41 35.0
comp=Z,9.9nm,0.9s
BW06 Boulder Array 45.91 73 IAmb IAmb 03 41 36.6
comp=Z,20nm,0.8s
PD31 Pinedale Array 45.91 73 IAmb IAmb 03 41 36.6
comp=Z,19nm,0.8s
PDAR Pinedale Array 45.91 73 P P **03 41 35.5 +0.9**
comp=Z,14nm,0.6s,baz=306,slow=3.7,SNR=164
PDAR LR LR 04 00 52.6
comp=Z,95nm,19.3s,baz=356,slow=36
comp=Z,14nm,0.6s
PDAR Pinedale Array 45.91 73 P P **03 41 34.9 +0.3**
GSC Goldstone, Bar 46.01 86 IAmb IAmb 03 41 46.5
comp=Z,9.2nm,0.6s
MPU Maple Canyon 46.29 77 IAmb IAmb 03 41 39.7
comp=Z,13nm,0.7s
BSUT Blindstream Ca 46.51 76 IAmb IAmb 03 41 42.3
comp=Z,6.5nm,0.5s
TCRU Three Creeks R 46.65 79 IAmb IAmb 03 41 43.0
comp=Z,10nm,0.8s
ULN Ulaanbaatar 46.70 297 P P **03 41 40.4 -0.1**
ULN IAmb IAmb 03 41 41.9
comp=Z,9.0nm,0.8s
ULN Ulaanbaatar 46.70 297 *de*P P **03 41 41.3 +0.7**
ULN pmax pmax
comp=Z,12nm,1.0s
SONM Songino Array 47.09 297 P P **03 41 43.4 -0.1**
comp=Z,8.9nm,1.0s,baz=53,slow=10,SNR=25
SONM PcP PcP **03 43 15.2 +0.6**
comp=Z,1.8nm,0.6s,baz=71,slow=3.4,SNR=3.9
SONM LR LR 04 02 13.8
comp=Z,282nm,19.6s,baz=34,slow=37
comp=Z,8.9nm,1.0s
SONM Songino Array 47.09 297 P P **03 41 43.8 +0.3**
SONM PcP PcP **03 43 13.0 -1.6**
MTPU Mount Pierson 47.16 79 IAmb IAmb 03 41 47.6
comp=Z,7.8nm,1.0s
PFO Pinyon Flats O 47.33 87 LR LR 03 57 28.1
comp=Z,79nm,21.2s,baz=336,slow=31
P18A Preston Nutter 47.37 76 IAmb IAmb 03 41 48.5
comp=Z,16nm,0.8s
KNB Kanab 47.41 81 IAmb IAmb 03 41 48.9
comp=Z,7.3nm,0.9s
TIA Tai'an 47.62 278 P P **03 41 47.6 0.0**
TIA pmax pmax
comp=Z,17nm,1.0s
K22A Casper 47.79 71 IAmb IAmb 03 41 51.3
comp=Z,6.4nm,0.6s
U15A North Rim 48.11 81 IAmb IAmb 03 41 54.3
comp=Z,11nm,0.9s
HMU Henry Mountain 48.11 79 IAmb IAmb 03 41 54.0
comp=Z,19nm,0.8s
HHC Hu-ho-hao-te 48.14 286 *e*P P **03 41 52.3 +0.5**
HHC pmax pmax
comp=Z,14nm,1.2s
HHC pmax pmax
comp=Z,300nm,5.4s
HNS HongShan 48.36 281 ⇑P P **03 41 54.0 +0.7**
HNS pmax pmax
comp=Z,20nm,1.0s
RSSD Black Hills 48.38 68 P P **03 41 53.6 -0.1**
RSSD Black Hills 48.38 68 P P **03 41 53.7 -0.1**
RSSD pmax pmax
comp=Z,5.0nm,1.1s
HAYD Hayden 48.64 74 IAmb IAmb 03 41 57.8
comp=Z,7.1nm,0.9s
PV21 Cone Mtn., Par 48.81 77 IAmb IAmb 03 41 58.7
comp=Z,12nm,0.6s
PV14 Lion Creek, Pa 48.90 77 IAmb IAmb 03 41 59.4
comp=Z,15nm,0.8s
PV22 Blue Mesa, Par 48.94 77 IAmb IAmb 03 41 59.7
comp=Z,16nm,0.8s
PV03 Paradox Valley 49.08 77 P P **03 41 59.7 +0.5**
WUAZ Wupatki 49.26 81 IAmb IAmb 03 42 02.8
comp=Z,7.5nm,0.8s
ULM Lac du Bonnet 49.36 57 P P **03 42 00.5 -0.4**
comp=Z,3.0nm,0.5s,baz=286,slow=12,SNR=3.7
ULM LR LR 04 03 55.0
comp=Z,123nm,18.6s,baz=13,slow=37
comp=Z,3.0nm,0.5s
TIY Taiyuan 49.56 283 P P **03 42 04.0 +1.4**
TIY pmax pmax
comp=Z,25nm,0.6s
MVCO Mesa Verde 49.95 78 IAmb IAmb 03 42 07.7
comp=Z,14nm,1.1s
ISCO Idaho Springs 50.07 73 IAmb IAmb 03 42 09.2
comp=Z,6.7nm,0.8s
KNGR Kungurtug, Tuv 50.29 304⇑ *e*P P **03 42 09.3 +1.2**
KNGR pmax pmax
comp=Z,9.0nm,1.0s
SPITS Spitsbergen Ar 50.50 356 P P **03 42 08.8 -0.3**
comp=Z,8.4nm,0.5s,baz=50,slow=6.7,SNR=25
comp=Z,8.4nm,0.5s
EPLO Experimental L 50.83 57 IAmb IAmb 03 42 12.7
comp=Z,6.6nm,0.7s
SDCO Great Sand Dun 51.44 75 IAmb IAmb 03 42 19.4
comp=Z,7.3nm,0.8s
LYN LuoYang 51.58 279 P P **03 42 18.5 +0.7**
LYN pmax pmax
comp=Z,27nm,0.6s
TUC Tucson 51.75 84 P P **03 42 19.4 +0.2**
TUC Tucson 51.75 84 P P **03 42 19.4 +0.2**
TUC pmax pmax
comp=Z,6.0nm,1.1s
T25A Trinidad 52.49 75 IAmb IAmb 03 42 27.2
comp=Z,22nm,0.9s
ANMO Albuquerque 52.68 79 LR LR 04 01 47.5
comp=Z,69nm,21.1s,baz=360,slow=32
ANMO Albuquerque 52.68 79 P P **03 42 26.9 +0.7**
ANMO Albuquerque 52.68 79⇓ *e*P P **03 42 26.5 +0.3**
ANMO pmax pmax
comp=Z,5.0nm,0.9s
ECSD EROS Data Cent 52.88 64 IAmb IAmb 03 42 27.6
comp=Z,11nm,1.1s
Y22A Socorro 53.03 80 IAmb IAmb 03 42 31.3
comp=Z,10nm,0.8s
EYMN Ely 53.05 57 IAmb IAmb 03 42 29.4
comp=Z,17nm,1.4s
WHN Wuhan 53.10 274 P P **03 42 29.0 -0.1**
TBO Thunder Bay 53.70 55 IAmb IAmb 03 42 37.8
comp=Z,9.8nm,0.6s
E38A The Farm, Brul 53.86 58 IAmb IAmb 03 42 34.9
comp=Z,12nm,0.7s
RTBA Rita Blanca 53.97 75 IAmb IAmb 03 42 37.1
comp=Z,11nm,0.8s
XAN Xi'an 54.11 281 P P **03 42 36.1 -0.4**
XAN pmax pmax
comp=Z,17nm,1.0s
ZALV Zalesovo Beam 54.42 314 P P **03 42 37.9 -0.5**
comp=Z,0.7nm,0.5s,baz=89,slow=14,SNR=3.9
ZALV PcP PcP **03 43 42.3 +0.9**
comp=Z,9.1nm,0.8s,baz=33,slow=3.7,SNR=32
comp=Z,0.7nm,0.5s
ZALV Zalesovo Beam 54.42 314 P P **03 42 37.0 -1.4**
ZALV PcP PcP **03 43 41.9 +0.5**
I37A Lemond, Waseca 54.50 62 IAmb IAmb 03 42 40.8
comp=Z,14nm,0.8s
EPT El Paso 54.78 82 IAmb IAmb 03 42 43.8
comp=Z,17nm,1.0s
PH02 Texas Public H 55.14 75 IAmb IAmb 03 42 45.7
comp=Z,31nm,0.7s
G40A Rib Lake 55.44 59 IAmb IAmb 03 42 46.7
comp=Z,12nm,1.2s
MNTX Cornudas Mount 55.53 81 IAmb IAmb 03 42 48.9
comp=Z,9.6nm,0.9s
SFJD Kangerlussuaq 55.57 22 LR LR 04 08 40.2
comp=Z,192nm,19.0s,baz=75,slow=38
MSTX Muleshoe 55.59 77 IAmb IAmb 03 42 49.5
comp=Z,12nm,0.8s
LZH Lanzhou 55.84 287 *e*P P **03 42 50.1 +1.0**
LZH pP pP 03 42 59.6 -4.4
LZH sP sP 03 43 04.8 -5.6
LZH pmax pmax
comp=Z,37nm,1.5s
LZH LR LR
comp=N,380nm,10.3s
LZH LR LR
comp=E,360nm,9.8s
LZH LR LR
comp=Z,390nm,12.6s
DGZ Jazzator, Alta 55.94 309⇑ *i*P P **03 42 50.4 +0.7**
DGZ pmax pmax
comp=Z,9.0nm,1.2s
GTA2 Gaotai 55.99 292 ⇑P P **03 42 50.8 +0.6**
GTA2 pP pP 03 42 58.4 -6.6
GTA2 pmax pmax
comp=Z,85nm,0.7s
LZDM Lanzhou Array 56.01 287 P P **03 42 51.1 +0.6**
comp=Z,14nm,1.0s,baz=38,slow=2.6,SNR=16
LZDM LR LR 04 08 34.2
comp=Z,161nm,19.4s,baz=320,slow=38
comp=Z,14nm,1.0s
I40A Norwalk 56.11 60 IAmb IAmb 03 42 51.5
comp=Z,8.2nm,0.8s
KAN08 Anthony NE Sta 56.30 71 IAmb IAmb 03 42 53.0
comp=Z,10.0nm,0.7s
ENH Enshi 56.33 278 P P **03 42 50.8 -1.7**
ENH IAmb IAmb 03 42 53.7
comp=Z,7.6nm,0.8s
SMWD Samnorwood 56.37 74 IAmb IAmb 03 42 54.5
comp=Z,16nm,0.7s
VHRN Van Horn 56.40 81 P P **03 42 54.0 +0.8**
KAN01 Arnnia South 56.48 71 IAmb IAmb 03 42 54.9
comp=Z,12nm,0.8s
128A Castleberry Fa 56.69 78 IAmb IAmb 03 42 56.4
comp=Z,9.4nm,0.8s
DKNS Dickens 56.93 76 IAmb IAmb 03 42 58.4
comp=Z,11nm,0.6s
JFWS Jewell Farm 56.95 61 IAmb IAmb 03 42 57.1
comp=Z,9.4nm,0.7s
L40A Anamosa 56.98 62 IAmb IAmb 03 43 19.7
comp=Z,7.2nm,0.7s
POST Post 56.98 77 IAmb IAmb 03 42 58.5
comp=Z,12nm,0.8s
I42A Draeger Farm, 57.03 60 IAmb IAmb 03 43 00.8
comp=Z,10nm,1.0s
TPB01 Permian Basin 57.04 80 IAmb IAmb 03 42 58.9
comp=Z,5.3nm,0.9s
TPB05 Hovey Rd 57.34 80 IAmb IAmb 03 43 01.2
comp=Z,7.0nm,0.9s
T35A Soner Cattle 57.38 70 IAmb IAmb 03 43 00.6
comp=Z,16nm,0.9s
MNHN Monahans 57.40 79 IAmb IAmb 03 43 01.3
comp=Z,15nm,0.8s
OK048 Pawnee Station 57.46 71 IAmb IAmb 03 43 01.9
comp=Z,14nm,0.7s
WMOK Wichita Mounta 57.50 74 IAmb IAmb 03 43 02.4
comp=Z,8.7nm,0.8s
OK029 Liberty Lake 57.57 72 IAmb IAmb 03 43 03.5
comp=Z,14nm,0.8s
APMT Aspermont 57.65 76 IAmb IAmb 03 43 05.1
comp=Z,9.9nm,0.9s
E46A Sault Ste Mari 57.81 55 IAmb IAmb 03 43 08.0
comp=Z,11nm,0.6s
OK052 Battle Ridge R 57.83 71 IAmb IAmb 03 43 04.2
comp=Z,16nm,0.9s
L42A Oliver, Polo 57.88 62 IAmb IAmb 03 43 03.5
comp=Z,14nm,1.2s
DEOK Depew 58.11 71 IAmb IAmb 03 43 07.1
comp=Z,20nm,0.9s
P40A Paris 58.21 65 P P **03 43 05.1 -0.5**
TX31 Lajitas Ar. Si 58.23 82 P P **03 43 06.1 +0.1**
TXAR Lajitas Array 58.23 82 P P **03 43 06.7 +0.6**
comp=Z,2.1nm,0.7s,baz=305,slow=5.5,SNR=30
comp=Z,2.1nm,0.7s
ARCES ARCESS Array B 58.26 350 P P **03 43 04.6 -0.9**
comp=Z,3.8nm,0.6s,baz=27,slow=8.4,SNR=14
ARCES PcP PcP **03 43 56.2 +0.1**
comp=Z,11nm,0.9s,baz=357,slow=4.5,SNR=6.4
comp=Z,3.8nm,0.6s
ARCES ARCESS Array B 58.26 350 P P **03 43 04.8 -0.7**
ARCES IAmb IAmb 03 43 06.5
comp=Z,11nm,1.0s
ARCES PcP PcP **03 43 56.1 0.0**
ABTX Abilene, Hawle 58.42 76 IAmb IAmb 03 43 10.8
comp=Z,12nm,1.0s
OZNA Ozona 58.69 79 IAmb IAmb 03 43 10.2
comp=Z,8.1nm,0.8s
U38A Gravette 58.95 69 IAmb IAmb 03 43 11.4
comp=Z,8.9nm,0.6s
PLPT Palo Pinto 59.10 75 IAmb IAmb 03 43 13.4
comp=Z,11nm,0.7s
HHAR Hobbs 59.32 69 IAmb IAmb 03 43 13.7
comp=Z,11nm,0.6s
KURK Kurchatov 59.41 314 P P **03 43 12.6 -1.2**
KURK Kurchatov 59.41 314⇓ *e*P P **03 43 12.5 -1.2**
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURBB Kurchatov Arra 59.51 314 P P **03 43 12.9 -1.6**
comp=Z,3.3nm,0.7s,baz=42,slow=6.8,SNR=22
KURBB PcP PcP **03 44 01.6 +0.2**
comp=Z,2.5nm,0.7s,baz=43,slow=3.4,SNR=9.4
comp=Z,3.3nm,0.7s
J47A Sunmer 59.67 58 IAmb IAmb 03 43 17.1
comp=Z,15nm,0.8s
CCM Cathedral Cave 59.67 66 P P **03 43 14.3 -1.5**
CCM IAmb IAmb 03 43 16.2
comp=Z,7.6nm,0.8s
CCM Cathedral Cave 59.67 66 P P **03 43 14.3 -1.5**
CCM pmax pmax
comp=Z,8.0nm,0.8s
MGMO Mountain Grove 59.70 67 IAmb IAmb 03 43 16.0
comp=Z,7.7nm,0.8s
WMQ Urumqi 59.77 303 *e*P P **03 43 17.4 +1.0**
WMQ PcP PcP **03 44 03.9 +1.2**
WMQ pmax pmax
comp=Z,11nm,0.7s
SCHQ Schefferville 59.80 39 P P **03 43 15.1 -1.3**
comp=Z,1.4nm,0.8s,baz=333,slow=7.1,SNR=5.0
comp=Z,1.4nm,0.8s
SCHQ Schefferville 59.80 39 IAmb IAmb 03 43 48.5
comp=Z,9.6nm,1.4s
JCT Junction City 59.81 78 IAmb IAmb 03 43 31.3
comp=Z,5.0nm,0.6s
DRIO Del Rio 60.05 79 IAmb IAmb 03 43 18.9
comp=Z,5.1nm,0.7s
MK31 Makanchi Array 60.44 309 *de*P P **03 43 19.1 -1.8**
MKAR Makanchi Array 60.44 309 P P **03 43 20.0 -0.9**
comp=Z,1.7nm,0.5s,baz=44,slow=6.8,SNR=35
MKAR PcP PcP **03 44 05.3 +0.1**
comp=Z,1.5nm,0.6s,baz=41,slow=4.7,SNR=5.0
MKAR LR LR 04 09 28.1
comp=Z,176nm,20.3s,baz=331,slow=36
comp=Z,1.7nm,0.5s
MKAR Makanchi Array 60.44 309 P P **03 43 19.4 -1.6**
T42A Van Buren 60.47 67 IAmb IAmb 03 43 21.2
comp=Z,8.3nm,0.5s
MAKZ Makanchi 60.58 309 P P **03 43 19.9 -2.0**
MAKZ Makanchi 60.58 309 P P **03 43 19.9 -2.0**
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
GYA Guiyang 60.77 277 ⇓P P **03 43 25.3 +1.7**
GYA pmax pmax
comp=Z,8.0nm,1.4s
WHAR Wooly Hollow 60.98 69 IAmb IAmb 03 43 25.0
comp=Z,11nm,1.2s
S44A Carbondale 61.06 65 IAmb IAmb 03 43 26.2
comp=Z,16nm,1.1s
SIUC Southern Illin 61.06 65 IAmb IAmb 03 43 26.2
comp=Z,22nm,1.2s
GOMU GeErMu 61.10 293 P P **03 43 25.3 -0.7**
GOMU pmax pmax
comp=Z,34nm,0.9s
CGM3 Cape Girardeau 61.10 66 IAmb IAmb 03 43 38.9
comp=Z,12nm,1.4s
X40A Basin Creek Fa 61.22 70 IAmb IAmb 03 43 27.6
comp=Z,9.8nm,1.0s
BVAR Borovoye Array 61.25 320 P P **03 43 25.8 -0.5**
comp=Z,5.2nm,0.5s,baz=43,slow=6.2,SNR=34
BVAR PcP PcP **03 44 08.6 +0.3**
comp=Z,4.0nm,0.7s,baz=61,slow=3.7,SNR=8.4
BVAR LR LR 04 12 50.3
comp=Z,152nm,18.3s,baz=356,slow=39
comp=Z,5.2nm,0.5s
BORK Borovoye 61.26 320 P P **03 43 25.8 -0.6**
BORK IAmb IAmb 03 43 26.8
comp=Z,3.5nm,0.5s
BORK Borovoye 61.26 320 *de*P P **03 43 26.3 -0.1**
BORK pmax pmax
comp=Z,3.0nm,0.6s
M50A Fremont 61.89 58 IAmb IAmb 03 43 32.0
comp=Z,14nm,0.7s
O49A Covington 62.05 60 IAmb IAmb 03 43 33.0
comp=Z,16nm,1.1s
WCI Wyandotte Cave 62.35 63 P P **03 43 33.7 -0.2**
WCI Wyandotte Cave 62.35 63 P P **03 43 33.7 -0.2**
WCI pmax pmax
comp=Z,29nm,0.8s
HKT Hockley 62.62 76 P P **03 43 35.4 -0.3**
HKT IAmb IAmb 03 43 39.8
comp=Z,14nm,1.5s
HKT Hockley 62.62 76⇑ *e*P P **03 43 36.0 +0.3**
HKT pmax pmax
comp=Z,10.0nm,1.3s
WVT Waverly 62.97 65 P P **03 43 38.1 +0.1**
WVT IAmb IAmb 03 43 39.7
comp=Z,15nm,1.1s
WVT Waverly 62.97 65 P P **03 43 38.1 +0.1**
WVT pmax pmax
comp=Z,15nm,1.1s
ARTI Arti 63.01 329 P P **03 43 37.4 -0.5**
ARTI Arti 63.01 329 *c*P P **03 43 37.5 -0.5**
ARTI **03 44 13.9**
ARTI S S **03 52 05.0 +1.3**
ARTI SS SS **03 56 09.3 +0.3**
ARTI pmax pmax
comp=Z,13nm,0.8s
PZH PanZhiHua 63.80 280 P P **03 43 44.0 +0.2**
PZH pmax pmax
comp=Z,20nm,0.8s
V48A Smith Brothers 63.82 65 IAmb IAmb 03 43 45.1
comp=Z,17nm,1.1s
KIRV Kirov 63.85 335 LR LR 04 13 22.4
comp=Z,248nm,18.9s,baz=327,slow=38
KIRV Kirov 63.85 335⇓ *e*P P **03 43 43.7 +0.2**
U49A Red Boiling Sp 63.86 64 IAmb IAmb 03 43 45.5
comp=Z,15nm,0.8s
P53A Whipple 64.14 59 IAmb IAmb 03 43 47.2
comp=Z,12nm,0.8s
O54A Avella 64.18 58 P P **03 43 45.5 -0.5**
O54A PcP PcP **03 44 20.4 -0.1**
O54A IAmb IAmb 03 44 22.2
comp=Z,9.9nm,0.6s
X48A Hartselle 64.61 66 P P **03 43 47.8 -1.1**
X48A IAmb IAmb 03 43 49.9
comp=Z,9.5nm,0.6s
D62A Allapoint, All 64.65 46 IAmb IAmb 03 43 49.8
comp=Z,11nm,1.1s
SWET Sewanee 64.70 65 IAmb IAmb 03 43 51.1
comp=Z,16nm,1.0s
M57A Sunshine Farm, 65.03 55 P P **03 43 52.0 +0.5**
M57A IAmb IAmb 03 43 53.0
comp=Z,8.3nm,0.6s
SSPA Standing Stone 65.16 56 P P **03 43 52.5 +0.2**
SSPA IAmb IAmb 03 44 23.0
comp=Z,16nm,1.4s
CPCT Cooper Cave 65.33 64 IAmb IAmb 03 43 54.4
comp=Z,16nm,1.1s
G62A West of Eustis 65.38 48 P P **03 43 53.5 -0.2**
G62A IAmb IAmb 03 44 32.4
comp=Z,14nm,1.4s
Y49A Blount Mountai 65.40 66 IAmb IAmb 03 43 54.8
comp=Z,10nm,0.7s
LBNH Lisbon 65.46 49 P P **03 43 54.2 -0.1**
LBNH IAmb IAmb 03 44 02.0
comp=Z,7.4nm,1.1s
LBNH Lisbon 65.46 49 P P **03 43 54.2 -0.1**
LBNH pmax pmax
comp=Z,7.0nm,1.1s
L59A Walton 65.46 53 P P **03 43 54.4 0.0**
KSPA Keystone Colle 65.56 54 P P **03 43 55.6 +0.6**
KSPA IAmb IAmb 03 44 27.0
comp=Z,14nm,1.3s
H62A Milan 65.57 49 P P **03 43 54.8 -0.2**
H62A IAmb IAmb 03 44 01.7
comp=Z,24nm,1.4s
TKL Tuckaleechee C 65.60 63 LR LR 04 13 00.3
comp=Z,117nm,18.2s,baz=16,slow=36
N58A Sunbury 65.61 55 P P **03 43 56.3 +1.0**
N58A IAmb IAmb 03 44 01.2
comp=Z,10.0nm,1.1s
LRAL Lakeview Retre 65.66 67 P P **03 43 55.4 -0.3**
LRAL IAmb IAmb 03 43 57.0
comp=Z,11nm,0.6s
R55A Marlinton 65.70 59 P P **03 43 56.1 +0.1**
R55A IAmb IAmb 03 44 07.1
comp=Z,14nm,1.1s
X51A Calhoun 65.78 65 IAmb IAmb 03 43 57.9
comp=Z,18nm,1.0s
FINES FINESS Array B 65.97 348 P P **03 43 56.4 -0.9**

comp=Z,8.8nm,0.9s,baz=33,slow=4.4,SNR=13
FINES PcP **PcP** **03 44 26.9 -0.6**
comp=Z,4.0nm,0.7s,baz=53,slow=1.0,SNR=4.2
comp=Z,8.8nm,0.9s
FINES FINESS Array B 65.97 348 P **P** **03 43 56.1 -1.2**
FINES PcP **PcP** **03 44 26.6 -0.9**
WUS Wushi 66.01 306 IAmb IAmb 03 44 00.1
comp=Z,8.0nm,0.8s
152A Waverly Hall 67.24 66 P **P** **03 44 05.2 -0.6**
152A IAmb IAmb 03 44 06.0
comp=Z,9.3nm,0.5s
AAK Ala-Archa 67.26 310 P **P** **03 44 05.5 -0.5**
comp=Z,4.3nm,0.8s,baz=172,slow=3.5,SNR=13
AAK LR LR 04 16 37.2
comp=Z,197nm,18.7s,baz=354,slow=39
comp=Z,4.3nm,0.8s
AAK Ala-Archa 67.26 310 P **P** **03 44 05.7 -0.4**
AAK Ala-Archa 67.26 310⇑*eP* **P** **03 44 06.0 0.0**
AAK pmax pmax
comp=Z,4.0nm,0.7s
SIJI Sorong 67.26 237 P **P** **03 44 05.8 -0.3**
comp=Z,18nm,0.8s,baz=29,slow=10,SNR=5.6
comp=Z,18nm,0.8s
PAULI Pauline 67.30 62 P **P** **03 44 06.9 +0.7**
KMSC Kings Mountain 67.33 62 P **P** **03 44 07.2 +0.9**
M63A Gales Ferry 67.53 51 P **P** **03 44 07.2 -0.3**
NC204 NORSAR Array S 67.57 355 P **P** **03 44 07.8 +0.3**
NC303 NORSAR Array S 67.59 355 P **P** **03 44 07.4 -0.1**
NB2 NORSAR Subarra 67.78 355 P **P** **03 44 09.0 +0.2**
comp=Z,1.2nm,0.5s,baz=5.9,slow=6.5
NOA NORSAR Array B 67.78 355 P **P** **03 44 08.4 -0.4**
comp=Z,2.0nm,0.7s,baz=5.9,slow=6.4,SNR=5.6
NOA PcP **sP** **03 44 34.1 +3.6**
comp=Z,1.2nm,1.0s,baz=0.5,slow=3.1,SNR=4.3
NOA LR LR 04 14 38.6
comp=Z,118nm,19.2s,baz=260,slow=37
comp=Z,2.0nm,0.7s
LSA Lhasa 67.89 290 P **P** **03 44 08.8 -1.7**
LSA pmax pmax
comp=Z,48nm,0.8s
JSC Jenkinsville 68.01 62 P **P** **03 44 10.7 +0.1**
JSC Jenkinsville 68.01 62 P **P** **03 44 10.7 +0.1**
JSC pmax pmax
comp=Z,31nm,0.8s
AKTO Aktyubinsk 68.02 325 P **P** **03 44 09.7 -0.7**
comp=Z,11nm,0.7s,baz=48,slow=5.9,SNR=36
comp=Z,11nm,0.7s
T59A Double "B" Far 68.04 58 P **P** **03 44 10.7 -0.1**
T59A IAmb IAmb 03 44 12.3
comp=Z,11nm,0.9s
W57A Gilead 68.07 61 P **P** **03 44 11.2 +0.2**
W57A IAmb IAmb 03 44 12.3
comp=Z,24nm,1.2s
BIRD Birdtown, Kers 68.18 62 P **P** **03 44 12.3 +0.6**
154A Montrose 68.20 65 P **P** **03 44 11.9 +0.1**
AB31 Akbulak array 68.28 323 P **P** **03 44 11.6 -0.5**
AB31 IAmb IAmb 03 44 13.7
comp=Z,16nm,1.4s
ABKAR Akbulak array 68.28 323 P **P** **03 44 11.3 -0.8**
HFS Hagfors 68.53 354 P **P** **03 44 12.1 -1.4**
comp=Z,7.0nm,1.0s,baz=5.7,slow=1.5,SNR=9.8
HFS PcP **PcP** **03 44 37.3 -1.0**
comp=Z,4.2nm,0.7s,baz=90,slow=3.0,SNR=5.3
comp=Z,7.0nm,1.0s
KKAR Karatay Array 68.78 313 P **P** **03 44 14.0 -1.3**
KKAR Karatay Array 68.78 313 P **P** **03 44 14.0 -1.3**
X58A Rowland 68.87 61 P **P** **03 44 16.5 +0.5**
ARSB Arslanbob 68.99 310 P **P** **03 44 17.1 +0.2**
ARSB Arslanbob 68.99 310 P **P** **03 44 17.1 +0.2**
ARSB pmax pmax
comp=Z,7.0nm,1.0s
MOS Moscow 69.31 339 *eP* **P** **03 44 18.1 -0.2**
KSH2 Kashi 69.40 307 P **P** **03 44 20.3 +0.9**
KSH2 pP pP 03 44 27.3 -7.3
KSH2 pmax pmax
comp=Z,8.0nm,1.2s
BELG Belogornoye 69.74 332⇑*eP* **P** **03 44 21.6 +0.6**
BELG pmax pmax
comp=Z,3.0nm,0.9s
OBN Obninsk 70.11 340⇓*eP* **P** **03 44 24.6 +1.3**
OBN *SP **pP** **03 44 39.0 +0.3**
OBN 03 44 45.0
OBN S **S** **03 53 31.0 +1.4**
OBN PS **PnS** **03 53 50.0 -12**
OBN PPS PPS 03 54 18.0
OBN *e*SS **SS** **03 57 59.3 +0.4**
OBN pmax pmax
comp=Z,11nm,1.1s
SHL Shillong 70.50 287 P **P** **03 44 27.0 +0.6**
SHL Shillong 70.50 287 P **P** **03 44 27.0 +0.6**
SHL pmax pmax
comp=Z,19nm,0.6s
656A Willston 70.94 67 P **P** **03 44 30.0 +1.3**
CMAR Chiang Mai Arr 71.46 276 P **P** **03 44 32.2 +0.2**
comp=Z,2.3nm,0.3s,baz=28,slow=6.7,SNR=18
comp=Z,2.3nm,0.3s
CMIG Matias Romero 72.64 84 LR LR 04 14 38.8
comp=Z,59nm,19.5s,baz=11,slow=34
CHGR Chuyangaron 72.91 311 IAmb IAmb 03 44 42.9
comp=Z,12nm,0.6s
PPT Papeete 72.97 152 LR LR 04 10 35.9
comp=Z,45nm,19.1s,baz=350,slow=31
EKA Eskdalemuir Ar 73.67 3 P **P** **03 44 44.3 -0.3**
comp=Z,5.5nm,0.9s,baz=350,slow=4.6,SNR=4.7
comp=Z,5.5nm,0.9s
RAR Rarotonga 73.96 162 LR LR 04 08 55.6
comp=Z,74nm,20.1s,baz=320,slow=29
NIL Nilore 74.83 305 P **P** **03 44 51.9 +0.1**
NIL IAmb IAmb 03 44 53.9
comp=Z,10nm,0.7s
NIL Nilore 74.83 305 P **P** **03 44 51.9 +0.1**
NIL pmax pmax
comp=Z,10.0nm,0.7s
AK21 Malin Array Si 75.74 343 P **P** **03 44 56.3 -0.3**
AK22 Malin Array Si 75.75 343 P **P** **03 44 56.6 -0.1**
AK04 Malin Array Si 75.77 343 P **P** **03 44 56.4 -0.4**
AKASG Malin Array Be 75.77 342 P **P** **03 44 56.2 -0.6**
comp=Z,8.7nm,0.7s,baz=23,slow=5.9,SNR=21
comp=Z,8.7nm,0.7s
AKASG Malin Array Be 75.77 342 P **P** **03 44 56.6 -0.2**
AKASG Malin Array Be 75.77 342*ceP* **P** **03 44 56.7 -0.2**
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKBB Malin Array Si 75.77 342 IAmb IAmb 03 44 58.0
comp=Z,14nm,0.8s
AKBB Malin Array Si 75.77 342*deP* **P** **03 44 56.9 +0.1**
AKBB Malin Array Si 75.77 342 P **P** **03 44 56.6 -0.2**
KIEV Kiev 75.78 342 P **P** **03 44 56.2 -0.7**
KIEV IAmb IAmb 03 44 58.0
comp=Z,13nm,0.8s
KIEV Kiev 75.78 342⇓P **P** **03 44 55.8 -1.1**
KIEV Kiev 75.78 342 P **P** **03 44 56.2 -0.7**
KIEV pmax pmax
comp=Z,13nm,0.9s
KIEV Kiev 75.78 342 P **P** **03 44 56.6 -0.3**
comp=Z,71nm,1.4s
AK09 Malin Array Si 75.84 342 P **P** **03 44 56.7 -0.5**
KBL Kabul 76.25 308 P **P** **03 44 59.2 -0.9**
KBL IAmb IAmb 03 45 01.4
comp=Z,11nm,0.8s
KBL Kabul 76.25 308 P **P** **03 44 59.2 -0.9**
KBL pmax pmax
comp=Z,11nm,0.8s
LUBAR Lubar, Ukraine 76.80 343 P **P** **03 45 02.0 -0.6**
KAPI Kappang 77.02 245 LR LR 04 14 36.2
comp=Z,25nm,20.3s,baz=78,slow=32
CTA Charters Tower 77.65 214 P **P** **03 45 07.5 -0.2**
comp=Z,6.2nm,1.0s,baz=50,slow=8.1,SNR=3.8
comp=Z,6.2nm,1.0s
CHVC Chvalec 77.80 351 *eP* **P** **03 45 08.9 +0.6**
CHVC Chvalec 77.80 351 *eP* **P** **03 45 08.9 +0.6**
OSTC Ostas 77.81 351 *eP* P 03 45 13.5 +5.1
OSTC Ostas 77.81 351 *eP* P 03 45 13.5 +5.1
KMPD K-Podol'skiy 78.33 344 P **P** **03 45 11.2 0.0**
SORM Soroca 78.40 342⇓P **P** **03 45 11.6 0.0**
SORM Soroca 78.40 342 P **P** **03 45 11.3 -0.3**
comp=Z,39nm,0.6s
MORC Moravsky Berou 78.44 350 P **P** **03 45 11.6 -0.3**
MORC Moravsky Berou 78.44 350 P **P** **03 45 11.6 -0.3**
MORC pmax pmax
comp=Z,7.0nm,1.3s
STNU Starunia 78.53 345 P **P** **03 45 12.1 -0.2**
BHOU Houvegnez 78.68 357 *dP* **P** **03 45 11.6 -1.5**
BMRD Maredsous 78.76 358 *dP* **P** **03 45 14.4 +0.8**
KIV Kislovodsk 78.77 331 P **P** **03 45 13.6 -0.3**
KIV IAmb IAmb 03 45 15.1
comp=Z,18nm,0.9s
KIV Kislovodsk 78.77 331⇓P **P** **03 45 14.5 +0.7**
KIV Kislovodsk 78.77 331 *eP* **P** **03 45 14.1 +0.2**
KIV pmax pmax
comp=Z,16nm,1.0s
KIV Kislovodsk 78.77 331 P **P** **03 45 13.8 -0.1**
KSV Kosov 78.81 344 P **P** **03 45 13.9 0.0**
LANS Liptovska Anna 78.83 348 *eP* **P** **03 45 15.9 +1.9**
LANS pmax pmax
comp=Z,6.0nm,0.9s
LANS Liptovska Anna 78.83 348 *eP* **P** **03 45 15.9 +1.9**
NCK Nalchik 78.91 330⇓*eP* **P** **03 45 15.5 +1.0**
NCK pmax pmax
comp=Z,26nm,0.9s
KBZ Khabaz 78.91 331 P **P** **03 45 15.3 +0.9**
comp=Z,8.7nm,0.8s,baz=28,slow=2.4,SNR=20
KBZ LR LR 04 24 32.5
comp=Z,163nm,18.7s,baz=345,slow=39
comp=Z,8.7nm,0.8s
KBZ Khabaz 78.91 331*ceP* **P** **03 45 14.9 +0.4**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
DOU Dourbes 78.97 358 *dP* **P** **03 45 14.4 -0.3**
SHA1 Shidzhatmaz 78.97 331*deP* **P** **03 45 15.8 +0.6**
VRAC Vranov 79.00 350⇓P **P** **03 45 15.5 +0.6**
NSLU Nyzhne Selyshc 79.03 345 P **P** **03 45 15.8 +0.7**
HOLU Holmets 79.03 346 P **P** **03 45 15.2 +0.1**
ZVC Zvikov 79.11 352 *eP* **P** **03 45 15.6 +0.1**
BERU Beregovo 79.28 346 P **P** **03 45 16.4 0.0**
KORU Korolevo 79.28 346 P **P** **03 45 16.6 +0.2**
AKT Akhty 79.36 327 *eP* **P** **03 45 17.1 -0.1**
AKT *e* 03 45 25.2
AKT pmax pmax
comp=Z,21nm,1.0s
BUR08 Bucovina Ar. S 79.44 344 IAmb IAmb 03 45 19.0
comp=Z,9.3nm,0.8s
BURAR Bucovina Array 79.47 344 P **P** **03 45 17.9 +0.3**
BURAR IAmb IAmb 03 45 19.4
comp=Z,11nm,0.7s
BURAR Bucovina Array 79.47 344⇑P **P** **03 45 17.9 +0.3**
KHC Kasperske Hory 79.47 352 *eP* **P** **03 45 15.0 -2.5**
KHC Kasperske Hory 79.47 352 *eP* **P** **03 45 15.0 -2.5**
HRA Herat 79.60 313 P **P** **03 45 18.1 -0.7**
HRA IAmb IAmb 03 45 19.8
comp=Z,4.9nm,0.6s
GERES GERESS Array B 79.74 352 P **P** **03 45 19.5 +0.4**
comp=Z,1.7nm,0.6s,baz=24,slow=7.8,SNR=4.8
comp=Z,1.7nm,0.6s
MODS Modra-Piesok 79.85 350 *eP* **P** **03 45 21.2 +1.6**
MODS pmax pmax
comp=Z,18nm,1.0s
MODS Modra-Piesok 79.85 350 *eP* **P** **03 45 21.2 +1.6**
TESR Tescani 80.28 343⇑P **P** **03 45 21.7 -0.2**
CONA Conrad Observa 80.44 351 *eP* **P** **03 45 24.0 +1.1**
comp=Z,4.6nm,0.8s,SNR=5.7
RONA Rosalia, Austr 80.62 350 *i* P **P** **03 45 25.0 +1.2**
comp=Z,6.4nm,1.1s
VLDR Vladesti 80.65 342⇓P **P** **03 45 24.9 +1.0**
DRGR 80.68 346⇓P **P** **03 45 25.1 +0.9**
MOA Molln 80.68 352 *i* P **P** **03 45 24.8 +0.7**
comp=Z,5.5nm,1.0s
MARR Marisel-Cluj 80.72 345⇑P **P** **03 45 25.1 +0.7**
TURR Turia 80.83 343⇑P **P** **03 45 26.8 +1.8**
OZUR 80.84 343⇑P **P** **03 45 25.6 +0.6**
VRI Vrincioaia 80.89 343⇓P **P** **03 45 25.9 +0.7**
BIOA Bad Ischl, Aus 80.89 352 *i* P **P** **03 45 26.1 +0.9**
comp=Z,7.1nm,1.2s
PLOR Plostina 80.92 343⇓P **P** **03 45 26.5 +1.2**
ODBI Odobesti 80.92 342⇓P **P** **03 45 27.3 +1.9**
COVR Voineasa-Covas 81.00 343⇑P **P** **03 45 27.2 +1.4**
DOPR Dopca 81.03 344⇓P **P** **03 45 27.3 +1.3**
TLCR 81.13 341⇓P **P** **03 45 26.1 -0.4**
ARSA Arzberg 81.15 351 *i* P **P** **03 45 27.9 +1.3**
comp=Z,4.3nm,0.8s
LESA Schwarzleotal 81.24 353 *eP* **P** **03 45 28.2 +1.1**
comp=Z,4.2nm,0.6s
CFR Carcaliu 81.28 342⇑P **P** **03 45 27.5 +0.3**
NEHR Nehoiu 81.39 343⇑P **P** **03 45 28.8 +0.9**
MLR Muntele Rosu 81.39 343 P **P** **03 45 29.3 +1.3**
MLR IAmb IAmb 03 45 30.7
comp=Z,31nm,1.2s
MLR Muntele Rosu 81.39 343⇑P **P** **03 45 29.9 +1.9**
MLR Muntele Rosu 81.39 343 P **P** **03 45 29.3 +1.3**
MLR pmax pmax
comp=Z,31nm,1.2s
WATA Walderalm 81.41 353 *eP* **P** **03 45 28.6 +0.5**
comp=Z,14nm,1.2s
MOTA Moosalm 81.43 354 *i* P **P** **03 45 28.5 +0.2**
comp=Z,15nm,1.4s
WTTA Wattenberg 81.48 353 *eP* **P** **03 45 29.3 +0.7**
comp=Z,9.6nm,0.8s
JURR Jurilovca 81.52 341⇑P **P** **03 45 28.8 +0.3**
KBA Koelnbreinsper 81.53 352 *i* P **P** **03 45 29.8 +1.0**
comp=Z,24nm,0.8s
TPGR Topolog 81.53 341⇓P **P** **03 45 29.1 +0.5**
SQTA Sankt Quirin 81.55 354 *i* P **P** **03 45 29.2 +0.4**
comp=Z,8.3nm,1.1s
VOIR 81.61 344⇓P **P** **03 45 30.3 +1.2**
ARR Arges 81.75 344⇑P **P** **03 45 30.5 +0.7**
SOKA Soboth 81.77 351 *i* P **P** **03 45 30.6 +0.7**
comp=Z,12nm,0.7s,SNR=12
FETA Feichten 81.78 354 *i* P **P** **03 45 30.8 +0.7**
comp=Z,8.4nm,1.0s
MTUR Matau 81.81 344⇓P **P** **03 45 31.9 +1.7**
MORH Mrgy, Hungar 81.81 348⇑P **P** **03 45 30.5 +0.4**
TIRR Tirgusor 81.91 341⇓P **P** **03 45 31.2 +0.6**
ABTA Abfaltersbach 81.92 353 *i* P **P** **03 45 31.5 +0.7**
comp=Z,9.2nm,0.9s
OBKA Obir 81.98 351 *eP* **P** **03 45 31.8 +0.7**
comp=Z,7.7nm,0.9s,SNR=9.1
BZS Buzias 81.99 346⇑P **P** **03 45 31.9 +0.9**
GZR Gura Zlata 82.03 345⇑P **P** **03 45 31.8 +0.6**
WB0 Warramunga Arr 82.08 225 P **P** **03 45 30.8 -0.8**
PRED Cave del Predi 82.14 352 IAmb IAmb 03 45 34.3
comp=Z,10nm,0.6s
WRA Warramunga Arr 82.25 224 P **P** **03 45 32.0 -0.5**
comp=Z,2.0nm,0.7s,baz=33,slow=5.8,SNR=20
comp=Z,2.0nm,0.7s
WRA Warramunga Arr 82.25 224 P **P** **03 45 30.9 -1.7**
TUE Stuetta 82.41 355 P **P** **03 45 34.5 +1.0**
TUE IAmb IAmb 03 45 37.6
comp=Z,7.5nm,1.1s
HERR Herculane 82.58 345⇓P **P** **03 45 34.9 +0.7**
VLAD Vladila 83.11 344⇓P **P** **03 45 37.8 +1.0**
LOZB Loznitsa 83.32 342⇑P **P** **03 45 38.2 +0.2**
BLY Banja Luka 83.44 349⇓P **P** **03 45 39.0 +0.4**
PLVB Pleven 83.67 344⇑P **P** **03 45 40.3 +0.6**
ELND Elena 83.88 343⇓P **P** **03 45 41.0 +0.2**
GURO Guroymak-BITLI 83.89 329 P **P** **03 45 41.5 +0.4**
GURO IAmb IAmb 03 45 43.9
comp=Z,6.4nm,0.8s
TOKA Tokat 83.90 334 P **P** **03 45 40.6 -0.5**
TOKA IAmb IAmb 03 45 42.9
comp=Z,10nm,0.9s
BOVS Bovan 83.91 346⇑P **P** **03 45 41.2 +0.2**
FITZ Fitzroy Crossi 84.75 233 P **P** **03 45 45.9 +0.5**
comp=Z,16nm,0.9s,baz=27,slow=5.8,SNR=17
comp=Z,16nm,0.9s
BR131 Keskin Array S 85.22 336*d i*P **P** **03 45 48.0 +0.2**
BRTR Keskin Array B 85.22 336 P **P** **03 45 48.1 +0.3**
comp=Z,11nm,0.8s,baz=54,slow=2.7,SNR=77
comp=Z,11nm,0.8s
BRTR Keskin Array B 85.22 336 P **P** **03 45 47.6 -0.2**
PDG Podgorica 85.45 347 P **P** **03 45 49.0 +0.3**
FDMO Fiordimonte 85.56 352 IAmb IAmb 03 45 51.0
comp=Z,12nm,1.0s
ARMA Armidale 85.61 206 P **P** **03 45 49.6 +0.1**
ARMA IAmb IAmb 03 45 52.0
comp=Z,9.7nm,0.9s
RDO Rodhopi 85.67 342 P **P** **03 45 50.3 +0.5**
KIRS Kirsehir-Merke 85.70 336⇓P **P** **03 45 50.9 +0.7**
ASAR Alice Springs 85.72 223 P **P** **03 45 50.5 +0.3**
comp=Z,5.0nm,0.8s,baz=29,slow=5.0,SNR=31
comp=Z,5.0nm,0.8s
ASAR Alice Springs 85.72 223 P **P** **03 45 50.0 -0.1**
DR12 Loma Pena Alta 86.66 64 P **P** **03 45 56.0 +0.9**
MATE Matera 87.54 349⇑P **P** **03 45 59.2 +0.3**
CUC Castrocucco 88.29 349 IAmb IAmb 03 46 02.4
comp=Z,8.3nm,0.8s
TIP Timpagrande 88.98 349⇑P **P** **03 46 05.3 -0.6**
SJG San Juan 89.01 62 LR LR 04 29 02.1
comp=Z,34nm,18.8s,baz=2.5,slow=38
ESDC Sonseca Array 89.27 5 P **P** **03 46 07.0 -0.2**
comp=Z,2.6nm,0.6s,baz=348,slow=4.2,SNR=26
comp=Z,2.6nm,0.6s
ESDC Sonseca Array 89.27 5 P **P** **03 46 06.7 -0.6**
PESTR Estremoz 89.84 7 P **P** **03 46 09.2 -0.7**
STKA Stephens Creek 90.09 213 P **P** **03 46 11.8 +1.0**
comp=Z,6.8nm,0.7s,baz=349,slow=7.1,SNR=14
comp=Z,6.8nm,0.7s
STKA Stephens Creek 90.09 213 P **P** **03 46 11.4 +0.6**
KEST Kesra 93.11 354 P **P** **03 46 24.8 -0.4**
comp=Z,3.0nm,0.9s,baz=62,slow=4.3,SNR=4.4
comp=Z,3.0nm,0.9s
KEST Kesra 93.11 354 IAmb IAmb 03 46 31.7
comp=Z,5.8nm,1.1s
ROSC El Rosal 94.81 76 LR LR 04 32 24.7
comp=Z,65nm,18.6s,baz=68,slow=37
RAYN Ar Rayn 96.24 320 P **P** **03 46 38.4 -1.3**
RAYN IAmb IAmb 03 46 40.2
comp=Z,5.3nm,0.9s
RAYN Ar Rayn 96.24 320 P **P** **03 46 38.4 -1.3**
RAYN pmax pmax
comp=Z,5.0nm,1.0s
TORD Torodi Ar. Bea 115.84 0 PKP **PKiKP** **03 51 53.2 -0.7**
comp=Z,0.9nm,0.6s,baz=258,slow=4.4,SNR=11
H03N2 Juan Fernandez 120.69 106 T T 06 04 29.0
baz=317,slow=77,SNR=29
H03N1 Juan Fernandez 120.70 106 T T 06 04 31.5
baz=317,slow=77,SNR=40
H03N3 Juan Fernandez 120.71 106 T T 06 04 32.9
baz=317,slow=77,SNR=35
DBIC Dimbokro 121.98 8 PKP **PKPdf** **03 52 05.2 -0.5**
comp=Z,3.5nm,0.4s,baz=22,slow=2.8,SNR=19
DBIC Dimbokro 121.98 8 **PKPdf** **03 52 05.5 -0.2**
DBIC Dimbokro 121.98 8 PKIKP **PKPdf** **03 52 05.5 -0.2**
TSUM Tsumeb 145.68 333 PKPdf **PKPab** **03 52 50.5 +0.1**
BOSA Boshof 151.37 313 PKPbc **PKiKP** **03 53 05.5 +0.3**
comp=Z,8.5nm,0.5s,baz=28,slow=2.5,SNR=35
BOSA Boshof 151.37 313 PKPbc **PKPbc** **03 53 05.2 +0.5**
BOSA Boshof 151.37 313 PKIKP **PKPbc** **03 53 05.2 +0.5**
NVL N'lazarevskaya 159.92 190 *e*PKP2 PKPab 03 53 39.7 -8.6
NVL pmax pmax
comp=Z,57nm,2.1s

HEL ***17*** *03:35:04.2±0.3, 67.86N×19.96E, h0km, ML1.4, Suspected explosion*
UPP ***17*** *03:35:05.3±0.0, 67.85N×20.22E, h0km, ML2.8, Confirmed Induced event*
DNK ***17*** *03:35:05.7±0.4, 67.85N×20.21E, h0km, ML2.8(UPP), Suspected explosion*
ISC 17 03:35:05.1±0.8, 67.84N±0.02×20.23E±0.02, h0km, n34, σ0s74, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**19**	P	**Pg**	**03 35 07.7**	**+0.4**
KUA				S	**Sg**	**03 35 09.4**	**+0.5**
KUA	**Kurravaara**	**0.12**	**19**	P	**Pg**	**03 35 07.7**	**+0.4**
KUA				S	**Sg**	**03 35 09.4**	**+0.5**
RATU	**Laukkuluspa**	**0.24**	**266**	P	**Pg**	**03 35 10.0**	**+0.3**
RATU				S	**Sg**	**03 35 13.1**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**266**	P	**Pg**	**03 35 10.0**	**+0.3**
RATU				S	**Sg**	**03 35 13.1**	**+0.3**
NIKU	**Nikkaluokta**	**0.46**	**274**	P	**Pg**	**03 35 13.9**	**+0.1**
NIKU				S	**Sg**	**03 35 20.0**	**+0.4**
NIKU	**Nikkaluokta**	**0.46**	**274**	P	**Pg**	**03 35 13.9**	**+0.1**
NIKU				S	**Sg**	**03 35 20.0**	**+0.4**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**	**03 35 18.5**	**+0.1**
LANU				S	**Sg**	**03 35 28.1**	**+0.6**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**	**03 35 18.5**	**+0.1**
LANU				S	**Sg**	**03 35 28.1**	**+0.6**
LANU	**Lannavaara**	**0.70**	**72**	PG	**Pg**	**03 35 18.4**	**0.0**
LANU				SG	**Sg**	**03 35 28.0**	**+0.6**
DUNU	**Dundret**	**0.73**	**170**	P	**Pg**	**03 35 19.1**	**0.0**
DUNU				S	**Sg**	**03 35 29.6**	**+1.0**
DUNU	**Dundret**	**0.73**	**170**	P	**Pg**	**03 35 19.1**	**0.0**
DUNU				S	**Sg**	**03 35 29.6**	**+1.0**
MASU	**Masugnsbyn**	**0.78**	**119**	P	**Pg**	**03 35 20.2**	**+0.3**
MASU	**Masugnsbyn**	**0.78**	**119**	P	**Pg**	**03 35 20.2**	**+0.3**
SALU	**Saltoluokta**	**0.81**	**236**	*e*P	**Pg**	**03 35 20.5**	**-0.1**
SALU	**Saltoluokta**	**0.81**	**236**	P	**Pg**	**03 35 20.4**	**-0.1**
SALU	**Saltoluokta**	**0.81**	**236**	P	**Pg**	**03 35 20.4**	**-0.1**
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*P	**Pg**	**03 35 27.7**	**-0.1**
KIF	**Kilpisjarvi**	**1.19**	**10**	PN	**Pg**	**03 35 27.9**	**+0.1**
KIF				smax	smax	03 35 41.3	
	comp=Z,4.6nm,0.2s						
KIF				SB	**Sb**	**03 35 43.8**	**-0.5**
PAJU	**Pajala**	**1.38**	**125**	P	**Pg**	**03 35 30.8**	**-0.7**
PAJU	**Pajala**	**1.38**	**125**	P	**Pg**	**03 35 30.8**	**-0.7**
PAJU	**Pajala**	**1.38**	**125**	PG	**Pg**	**03 35 30.7**	**-0.8**
	baz=303						
PAJU				SG	**Sb**	**03 35 50.3**	**+0.4**
HEF	**Hetta**	**1.41**	**64**	PG	**Pn**	**03 35 31.3**	**-0.6**
	baz=251						
HEF				smax	smax	03 35 48.8	
	comp=Z,2.5nm,0.2s						
HEF				SG	**Sg**	**03 35 49.8**	**-0.4**
ERTU	**Ertsjaerv**	**1.50**	**149**	P	**Pn**	**03 35 32.9**	**-0.3**
ERTU	**Ertsjaerv**	**1.50**	**149**	P	**Pn**	**03 35 32.9**	**-0.3**
ERTU	**Ertsjaerv**	**1.50**	**149**	PG	**Pn**	**03 35 32.8**	**-0.3**
	baz=330						
ERTU				SN	**Sn**	**03 35 54.1**	**+0.7**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**03 35 34.0**	**0.0**
KLF				smax	smax	03 35 54.0	
	comp=Z,1.9nm,0.2s						
KLF				SG	**Sg**	**03 35 56.0**	**+0.9**
KTK1	**Kautokeino**	**1.62**	**42**	PN	**Pn**	**03 35 34.9**	**+0.1**
KTK1				SN	**Sg**	**03 35 58.9**	**+1.9**
HARU	**Harads**	**1.71**	**170**	P	**Pn**	**03 35 36.5**	**+0.4**
HARU	**Harads**	**1.71**	**170**	P	**Pn**	**03 35 36.5**	**+0.4**
TOF	**Tornio**	**2.39**	**136**	PB	**Pb**	**03 35 47.4**	**-1.5**
	baz=315						
TOF				smax	smax	03 36 17.5	
	comp=Z,0.9nm,0.2s						
TOF				SG	**Sb**	**03 36 19.8**	**+0.9**
RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pb**	**03 35 50.4**	**-1.5**
RNF				SG	**Sb**	**03 36 24.6**	**+0.6**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	**Pn**	**03 35 49.6**	**+1.7**
ARA0				SB	**Sb**	**03 36 22.7**	**-1.4**
RAJF	**Raja-Jooseppi**	**3.09**	**74**	SB	**Sb**	**03 36 38.5**	**-0.4**
RANF	**Ranua**	**3.17**	**122**	SG	**Sb**	**03 36 43.3**	**+2.1**

MOS ***17*** *03:40:49.9±0.8, 35.94N×140.17E, h49km, mb4.7/36, Error ellipse: s-maj=8.6km s-min=5.9km az=112.9*
NIED ***17*** *03:40:50.7, 35.99N×140.21E, h40km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-2.45; Mθθ-1.64; Mϕϕ4.08; Mrθ2.72; Mθϕ-0.53; Mϕr-0.83; Fault plane solution: M0 4.57000×10^15 NP1: ϕs207.00000°, δ48.00000°, λ-33.00000°. NP2: ϕs321.00000°, δ66.00000°, λ-133.00000°.*
JMA ***17*** *03:40:50.7±0.1, 36.0N±0.3×140.2E±0.4, h40km, MD4.4/38, MV4.1/38, SOUTHERN IBARAKI PREF*
JMA Felt III J1 at SOUTHERN IBARAKI PREF .
IDC ***17*** *03:40:51.5±1.2, 35.93N×140.22E, h49km±11km, mb4.1/28, mbtmp4.4/33, ML4.0/5, MS3.5/6, Error ellipse: s-maj=12.0km s-min=7.0km az=65.0*
NEIC ***17*** *03:40:53.0±1.3, 35.90N±0.06×140.15E±0.09, h57km±6km, mb4.6/168, Error ellipse: s-maj=10.1km s-min=8.3km az=102.0*
ISC 17 03:40:50.9±0.7, 35.93N±0.04×140.21E±0.04, h43km±6km, n470, σ0s90/444, mb4.6/132, MS3.8/4, 18C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.26**	**82**	⇓*i* P	**Pn**	**03 40 58.8**	**-0.3**
JIHU				A	A	03 40 58.8	
	comp=N,125nm,1.9s,comp=E,161nm,1.4s						
JIHU				⇓*e*S	**Sn**	**03 41 04.9**	**+0.2**
JYT	**Yasato**	**0.30**	**358**	⇓*i* P	**Pn**	**03 40 58.4**	**-1.0**
JYT				A	A	03 40 58.4	
	comp=N,137nm,0.4s,comp=E,69nm,0.3s						
JYT				⇓S	**Sn**	**03 41 03.7**	**-1.7**
TOK	**Tokyo**	**0.44**	**237**	A	A	03 41 01.0	
	comp=N,101nm,0.9s,comp=E,125nm,0.7s						
JHYU	**Hitachinakayam**	**0.51**	**37**	A	A	03 41 00.8	
	comp=N,16nm,2.8s,comp=E,48nm,1.1s						
JCCN	**Chibachonan**	**0.54**	**178**	A	A	03 41 02.8	
	comp=N,46nm,1.9s,comp=E,45nm,2.6s						
JKUC	**kamogawauchiur**	**0.77**	**181**	A	A	03 41 06.1	
	comp=N,20nm,1.9s,comp=E,18nm,1.2s						
JAG	**Ashikaga**	**0.79**	**309**	⇓*i* P	**Pn**	**03 41 04.6**	**-1.0**

JAG A A 03 41 04.6
comp=N,27nm,1.4s,comp=E,18nm,0.6s
JAG ⇓S **Sn** **03 41 14.7 -1.5**
JYO Yokosk 0.83 212 A A 03 41 06.8
comp=N,35nm,1.1s,comp=E,47nm,0.8s
JSGW Sagamiharawaka 0.88 248 A A 03 41 07.1
comp=N,18nm,0.6s,comp=E,20nm,1.4s
TATJ Tateyama 2 0.93 196 A A 03 41 08.4
comp=N,34nm,1.7s,comp=E,31nm,3.5s
JRY Ryogami san 1.06 275 *i* P **Pn** **03 41 09.2 -0.1**
JRY A A 03 41 09.2
comp=N,11nm,0.9s,comp=E,10.0nm,3.3s
JOD2 Odawara 2 1.13 234 A A 03 41 11.0
comp=N,20nm,1.3s,comp=E,16nm,1.4s
JKT Katashina 1.14 318 A A 03 41 10.0
comp=N,25nm,0.4s,comp=E,32nm,0.4s
BSO3 Boso 3 1.15 168 *i* P **Pn** **03 41 11.8 +1.5**
JFFD Fukushimafurud 1.20 14 A A 03 41 10.5
comp=N,7.0nm,0.8s,comp=E,7.0nm,1.0s
JIM2 Oshima 3 1.36 208 A A 03 41 14.7
comp=N,17nm,1.2s,comp=E,18nm,1.2s
JHTM Izuhatsuma 1.38 226 A A 03 41 14.7
comp=N,35nm,0.9s,comp=E,34nm,0.8s
JGK Kuni 1.42 297 A A 03 41 14.3
comp=N,9.0nm,1.0s,comp=E,8.0nm,1.6s
JYN Shimob 1.42 253 A A 03 41 15.0
comp=N,21nm,1.7s,comp=E,11nm,1.4s
JFNN Fujinakano 1.44 240 A A 03 41 15.5
comp=N,16nm,0.9s,comp=E,15nm,1.3s
JIZS Izushimoda 1.62 222 A A 03 41 18.4
comp=N,10.0nm,1.9s,comp=E,7.0nm,0.9s
JNT Takato 1.68 269 A A 03 41 18.6
comp=N,8.0nm,1.4s,comp=E,8.0nm,1.0s
MJAR Matsushiro Arr 1.73 291 P **Pn** **03 41 18.5 0.0**
comp=E,142nm,0.3s,baz=96,slow=7.9,SNR=240
MJAR S **Sn** **03 41 40.2 +0.8**
comp=E,315nm,0.6s,baz=112,slow=21,SNR=7.9
MJAR LR LR 03 42 18.2
comp=E,599nm,19.4s,baz=194,slow=50
MJAR Matsushiro Arr 1.73 291 **Pn** **03 41 18.6 +0.2**
MJAR Matsushiro Arr 1.73 291 P **Pn** **03 41 18.7 +0.2**
MAJO Matsushiro 1.73 291 **Pn** **03 41 18.9 +0.4**
MAJO Matsushiro 1.73 291 *c i* P **Pn** **03 41 19.1 +0.6**
MJB9 Matsu-Tunnel 1.73 291 Pn **Pn** **03 41 20.3 +1.7**
SHZ3 Shizuoka 3 1.84 243 A A 03 41 21.3
comp=N,12nm,1.0s,comp=E,9.0nm,2.7s
JNY Yasuok 1.99 254 A A 03 41 23.3
comp=N,11nm,1.2s,comp=E,12nm,1.0s
JSG Sagara 2.07 233 Pn **Pn** **03 41 24.4 +1.2**
JGF Kuroka 2.34 263 Pn **Pn** **03 41 29.4 +2.5**
INU Inuyama 2.66 258 Pn **Pn** **03 41 33.2 +1.9**
JHJ Hachijo jima 2 2.82 187 P **Pn** **03 41 34.3 +0.8**
comp=E,269nm,0.3s,baz=100,slow=5.4,SNR=20
JHJ S **Sn** **03 42 06.7 +0.4**
comp=E,452nm,0.3s,baz=242,slow=22,SNR=7.2
JHJ LR LR 03 42 57.8
comp=E,876nm,21.5s,baz=81,slow=45
comp=E,592nm,0.4s
JHJ2 Mitsune 2.83 187 Pn **Pn** **03 41 34.2 +0.6**
JMN Monobe 5.65 249 Pn **Pn** **03 42 14.8 +2.5**
JNU Nakatsue 8.19 253 P **Pn** **03 42 48.6 +1.4**
comp=E,0.8nm,0.3s,baz=70,slow=12,SNR=5.4
JNU LR LR 03 46 16.8
comp=E,446nm,18.3s,baz=22,slow=40
comp=E,20nm,0.9s
ASAJ Asahikawa 8.38 12 P **Pn** **03 42 48.6 -1.2**
comp=E,4.3nm,0.3s,baz=223,slow=9.5,SNR=27
comp=E,11nm,0.4s
JKA Kamikawa-asahi 8.38 12 Pn **Pn** **03 42 48.4 -1.4**
JCJ Chichijima 8.96 169 P Pn 03 42 43.0 -15
comp=E,136nm,0.4s,baz=286,slow=19,SNR=14
JCJ Chichijima 8.96 169 Pn **Pn** **03 42 55.5 -2.4**
KSRS Korea Array 9.98 282 P **Pn** **03 43 13.8 +2.1**
comp=E,0.6nm,0.3s,baz=92,slow=14,SNR=8.8
KSRS LR LR 03 47 05.3
comp=E,110nm,20.3s,baz=105,slow=37
comp=E,3.7nm,0.6s
USRK Ussuriysk Ar. 10.38 325 P **Pn** **03 43 18.8 +1.7**
comp=E,0.5nm,0.3s,baz=144,slow=12,SNR=12
comp=E,8.8nm,0.7s
YSS Yuzhno-Sakhali 11.18 9 Pn **Pn** **03 43 29.7 +1.7**
YSS Yuzhno-Sakhali 11.18 9 *eP* **Pn** **03 43 26.8 -1.2**
YSS pmax pmax
comp=Z,20nm,0.8s
BNX BinXian 13.77 319 ⇑P **Pn** **03 44 05.4 +2.0**
BNX pmax pmax
comp=Z,21nm,2.5s
KLR Kul'dur 14.67 338⇑ *eP* **Pn** **03 44 16.4 +0.9**
KLR pmax pmax
comp=Z,1.0nm,0.6s
TYV Tymovskoe 15.03 6 *eP* **P** **03 44 23.3 -1.6**
TYV *eS* **Sn** **03 47 11.7 +6.2**
TYV pmax pmax
comp=Z,300nm,4.1s
TYV pmax pmax
comp=Z,15nm,0.7s
TYV smax smax
comp=N,600nm,5.5s
TYV smax smax
comp=E,600nm,5.5s
NJ2 Nanjing 18.12 264 *eP* **Pn** **03 44 58.8 -0.5**
NJ2 pmax pmax
comp=Z,7.0nm,0.7s
BJT Baijiatuau 19.37 289 P **P** **03 45 12.8 -0.1**
BJT Baijiatuau 19.37 289 P **P** **03 45 12.8 -0.1**
BJT pmax pmax
comp=Z,8.0nm,1.0s
ZEA Zeya 19.98 337 *eP* **Pn** **03 45 21.7 +0.3**
XLT XiLinHaoTe 20.10 301 *eP* **P** **03 45 19.3 -1.6**
XLT pmax pmax
comp=Z,13nm,0.9s
XLT pmax pmax
comp=Z,420nm,6.4s
HILR Hailar Array B 20.19 319 P **P** **03 45 20.2 -1.6**
comp=Z,1.8nm,0.4s,baz=112,slow=11,SNR=5.8
comp=Z,1.8nm,0.4s
HNS HongShan 20.50 282 ⇑P Pn 03 45 28.1 +0.5
HNS pmax pmax
comp=Z,9.0nm,1.0s
PEA0B Petropavlovsk- 21.13 30 P **P** **03 45 32.8 +0.9**
PEA0B lAmb lAmb 03 45 49.7
comp=Z,32nm,1.2s
PEA0B Petropavlovsk- 21.13 30⇓ *eP* **P** **03 45 32.3 +0.4**
PETK Petropavlovsk- 21.13 30 P **P** **03 45 31.4 -0.5**
comp=Z,7.3nm,0.9s,baz=204,slow=9.8,SNR=5.3
PETK LR LR 03 53 53.0
comp=Z,62nm,18.9s,baz=255,slow=37
comp=Z,7.3nm,0.9s
PETK Petropavlovsk- 21.13 30 P **P** **03 45 32.1 +0.2**
PETK Petropavlovsk- 21.13 30 P **P** **03 45 32.1 +0.2**
PET Petropavlovsk 21.46 31 *c i* P **P** **03 45 35.8 +0.4**
PET pmax pmax
comp=Z,30nm,1.3s
HHC Hu-ho-hao-te 22.93 291 *eP* **P** **03 45 52.3 +0.9**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,180nm,4.5s
MA2 Magadan 24.64 13 P **P** **03 46 06.5 -0.7**
comp=Z,13nm,0.8s,baz=197,slow=8.2,SNR=17
MA2 LR LR 03 57 17.5
comp=Z,117nm,19.1s,baz=298,slow=40
comp=Z,13nm,0.8s
MA2 Magadan 24.64 13 P **P** **03 46 08.0 +0.8**
MA2 lAmb lAmb 03 46 17.8
comp=Z,15nm,0.8s
MA2 Magadan 24.64 13⇑ *eP* **P** **03 46 07.3 +0.1**
MA2 pmax pmax
comp=Z,15nm,0.9s
ENH Enshi 26.28 266 **P** **03 46 20.6 -1.7**
ENH lAmb lAmb 03 46 22.2
comp=Z,16nm,0.7s
ULN Ulaanbaatar 27.20 306 P **P** **03 46 31.2 +0.6**
ULN Ulaanbaatar 27.20 306⇑ *eP* **P** **03 46 30.2 -0.4**
ULN pmax pmax
comp=Z,8.0nm,1.6s
SONM Songino Array 27.62 306 P **P** **03 46 33.4 -1.0**
comp=Z,3.0nm,0.8s,baz=102,slow=8.9,SNR=7.6
comp=Z,3.0nm,0.8s
SONM Songino Array 27.62 306 P **P** **03 46 33.8 -0.6**
SONM Songino Array 27.62 306 P **P** **03 46 33.8 -0.6**
SONM pmax pmax
comp=Z,4.0nm,1.0s
SEY Seymchan 28.07 12 P **P** **03 46 38.9 +0.9**
comp=Z,2.1nm,0.5s,baz=204,slow=8.2,SNR=6.1
comp=Z,2.1nm,0.5s
SEY Seymchan 28.07 12⇑ *i* P **P** **03 46 38.3 +0.3**
SEY pmax pmax
comp=Z,6.0nm,1.1s
GTA2 Gaotai 32.01 289 *eP* **P** **03 47 13.8 +0.5**
GTA2 pP pP 03 47 18.0 -6.9
GTA2 pmax pmax
comp=Z,4.0nm,0.7s
KNGR Kungurtug, Tuv 33.86 309⇑ *eP* **P** **03 47 30.3 +1.0**
KNGR pmax pmax
comp=Z,3.0nm,0.7s
PZH PanZhiHua 34.03 265 P **P** **03 47 29.9 -1.1**
PZH pmax pmax
comp=Z,110nm,0.6s
BILL Bilibino 35.36 17⇑ *eP* **P** **03 47 42.8 +0.9**
BILL pmax pmax
comp=Z,4.0nm,1.1s
TIXI Tiksi 36.28 354 **P** **03 47 47.9 -1.8**
TIXI Tiksi 36.28 354⇑ *eP* **P** **03 47 49.4 -0.3**
TIXI pmax pmax
comp=Z,4.0nm,0.9s
GOMU GeErMu 36.44 284 P **P** **03 47 51.8 -0.1**
GAMB Gambell 40.16 31 P **P** **03 48 22.9 +0.5**
baz=249
DGZ Jazzator, Alta 40.26 307⇓ *eP* **P** **03 48 24.4 +0.7**
DGZ pmax pmax
comp=Z,17nm,0.8s
WMQ Urumqi 40.48 298 *eP* **P** **03 48 29.8 +4.3**
WMQ sS sS 03 54 53.0 +1.9
WMQ pmax pmax
comp=Z,15nm,1.5s
UNV Unalaska Valle 40.70 47 P **P** **03 48 27.2 +0.2**
baz=266
LSA Lhasa 41.35 276 P **P** **03 48 33.1 -0.1**
LSA Lhasa 41.35 276 P **P** **03 48 33.1 -0.1**
LSA pmax pmax
comp=Z,4.0nm,0.7s
ZAA0 Zalesovo Array 41.95 313 P **P** **03 48 36.5 -0.8**
ZALV Zalesovo Beam 41.95 313 P **P** **03 48 36.7 -0.6**
comp=Z,3.8nm,0.7s,baz=94,slow=7.6,SNR=11
ZALV PcP **PcP** **03 50 32.3 +0.4**
comp=Z,0.7nm,0.5s,baz=87,slow=1.5,SNR=2.8
comp=Z,3.8nm,0.7s
ZALV Zalesovo Beam 41.95 313 *i* P **P** **03 48 37.4 +0.1**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
TNA Tin City 42.29 29 P **P** **03 48 39.6 -0.3**
baz=252
K13K Kusilvak Mount 42.77 35 P **P** **03 48 44.0 +0.3**
baz=259
F14K Arctic Creek 42.90 30 P **P** **03 48 44.9 +0.1**
baz=253
ANM Nome 43.04 31 P **P** **03 48 46.4 +0.4**
baz=255
J14K Nanvaranak Lak 43.43 34 P **P** **03 48 49.4 +0.3**
baz=259
F15K North Star Dit 43.64 29 P **P** **03 48 51.1 +0.3**
baz=255
G15K Niukluk 43.70 31 P **P** **03 48 51.5 +0.2**
baz=256
M14K Bethel 43.85 37 P **P** **03 48 52.9 +0.4**
baz=262
MK31 Makanchi Array 43.89 303 *c i* P **P** **03 48 53.0 -0.2**
MKAR Makanchi Array 43.89 303 P **P** **03 48 53.3 +0.1**
comp=Z,6.6nm,0.7s,baz=90,slow=9.8,SNR=26
comp=Z,6.6nm,0.7s
MKAR Makanchi Array 43.89 303 P **P** **03 48 52.5 -0.7**
MAKZ Makanchi 44.10 303 **P** **03 48 54.6 -0.2**
MAKZ lAmb lAmb 03 48 56.6
comp=Z,9.7nm,0.9s
MAKZ Makanchi 44.10 303 P **P** **03 48 54.6 -0.2**
MAKZ pmax pmax
comp=Z,10.0nm,0.9s
C16K Lisburne Hills 44.12 26 **P** **03 48 55.1 +0.5**
C16K Lisburne Hills 44.12 26 P **P** **03 48 55.3 +0.7**
baz=252
H16K Elim 44.38 31 P **P** **03 48 57.4 +0.7**
baz=258
M15K Kasigluk River 44.47 37 P **P** **03 48 58.2 +0.7**
baz=264
G16K Koyuk River 44.49 30 P **P** **03 48 58.6 +1.0**
baz=257
D17K Noatak River 44.77 27 P **P** **03 48 59.5 -0.2**
baz=254
O15K Ungalikthiuk R 44.77 39 P **P** **03 49 00.2 +0.3**
baz=266
J16K Anvik River 44.85 33 P **P** **03 48 59.9 -0.6**
baz=261
RDOG Red Dog Mine 44.93 26 P **P** **03 49 01.6 +0.5**
baz=254
C17K DeLong Mountai 44.95 26 P **P** **03 49 02.0 +0.7**
baz=260
E17K Hotham Inlet 45.08 28 P **P** **03 49 02.4 +0.1**
baz=256,SNR=5.4
F17K Baldwin Pennin 45.16 29 P **P** **03 49 03.7 +0.8**
baz=258
L16K Owhat River 45.16 36 P **P** **03 49 03.4 +0.4**
baz=264
G17K Kiwalik Mounta 45.21 30 P **P** **03 49 03.5 +0.1**
baz=259
M16K Timber Creek 45.34 37 P **P** **03 49 04.6 +0.2**
baz=265
N16K Nishlik Lake 45.39 37 P **P** **03 49 05.4 +0.5**
baz=266
H17K Granite Mounta 45.41 31 P **P** **03 49 05.6 +0.6**
baz=260
J17K VABM Dome 45.54 33 P **P** **03 49 06.5 +0.4**
baz=263
E18K Tukpahlearik C 45.62 28 P **P** **03 49 07.1 +0.5**
baz=257
C18K Utukok River 45.70 26 **P** **03 49 07.9 +0.6**
C18K lAmb lAmb 03 49 10.9
comp=Z,7.5nm,0.9s
C18K Utukok River 45.70 26 P **P** **03 49 08.0 +0.8**
baz=255,SNR=7.8
L17K Donlin 45.76 35 P **P** **03 49 07.8 +0.1**
baz=265
K17K Iditarod 45.81 34 **P** **03 49 09.3 +1.2**
K17K lAmb lAmb 03 49 21.3
comp=Z,7.7nm,0.9s
K17K Iditarod 45.81 34 P **P** **03 49 09.2 +1.0**
baz=264
F18K Selawik 45.82 29 P **P** **03 49 09.3 +1.2**
baz=259
KURK Kurchatov 45.86 309 **P** **03 49 08.5 -0.1**
KURK Kurchatov 45.86 309 *c i* P **P** **03 49 08.0 -0.7**
KURK pmax pmax
comp=Z,22nm,0.9s
KURBB Kurchatov Arra 45.92 309 P **P** **03 49 08.7 -0.5**
comp=Z,12nm,0.7s,baz=85,slow=7.8,SNR=20
comp=Z,12nm,0.7s
G18K Tagagawik 46.09 30 P **P** **03 49 11.2 +0.9**
G18K lAmb lAmb 03 49 12.4
comp=Z,4.8nm,0.8s
G18K Tagagawik 46.09 30 P **P** **03 49 10.6 +0.3**
baz=261
H18K Honhosa River 46.09 31 P **P** **03 49 11.1 +0.7**
H18K lAmb lAmb 03 49 12.5
comp=Z,4.5nm,0.6s
H18K Honhosa River 46.09 31 P **P** **03 49 11.0 +0.7**
baz=262
M17K Holitna River 46.11 36 P **P** **03 49 12.1 +1.6**
M17K lAmb lAmb 03 49 24.9
comp=Z,16nm,1.2s
N17K Nushagak Hills 46.18 37 P **P** **03 49 11.5 +0.5**
baz=267
C19K Lookout Ridge 46.37 25 P **P** **03 49 14.1 +1.6**
C19K lAmb lAmb 03 49 17.2
comp=Z,6.1nm,1.1s
C19K Lookout Ridge 46.37 25 P **P** **03 49 13.1 +0.6**
baz=257,SNR=6.0
Q16K King Salmon 46.39 40 P **P** **03 49 13.1 +0.4**
baz=269
F19K Shaleruckik Mo 46.59 29 P **P** **03 49 14.1 -0.1**
baz=261
J18K Innoko River 46.61 33 P **P** **03 49 14.7 +0.3**
baz=265
G19K Purcell Mounta 46.76 30 P **P** **03 49 15.8 +0.2**
G19K Purcell Mounta 46.76 30 P **P** **03 49 16.3 +0.8**
baz=262
D19K Kuna River 46.76 26 P **P** **03 49 15.7 +0.1**
D19K lAmb lAmb 03 49 17.8
comp=Z,5.1nm,0.8s
D19K Kuna River 46.76 26 P **P** **03 49 16.3 +0.7**
baz=259
N18K Kilae Creek 46.82 37 P **P** **03 49 17.2 +1.0**
N18K Kilae Creek 46.82 37 P **P** **03 49 16.2 +0.1**
baz=268
M18K Stony River 46.89 36 P **P** **03 49 16.8 +0.3**
baz=267
E19K Redstone River 46.90 28 P **P** **03 49 17.4 +0.7**
E19K lAmb lAmb 03 49 19.0
comp=Z,5.4nm,0.7s
E19K Redstone River 46.90 28 P **P** **03 49 17.1 +0.5**
baz=260
WUS Wushi 47.13 296 P **P** **03 49 19.3 +0.3**
WUS lAmb lAmb 03 49 30.2
comp=Z,7.2nm,0.7s
J19K Poorman 47.14 33 **P** **03 49 19.1 +0.6**
J19K Poorman 47.14 33 P **P** **03 49 19.0 +0.6**
baz=265
O18K Koktuh Hills 47.15 38 P **P** **03 49 19.4 +0.8**
O18K Koktuh Hills 47.15 38 P **P** **03 49 19.4 +0.8**
baz=270
D20K Etivluk River 47.35 26 P **P** **03 49 21.1 +1.0**
D20K lAmb lAmb 03 49 24.5
comp=Z,5.0nm,0.9s
D20K Etivluk River 47.35 26 P **P** **03 49 21.0 +0.9**
baz=260
L19K White Mountain 47.38 35 P **P** **03 49 21.1 +0.7**
L19K lAmb lAmb 03 49 37.1
comp=Z,12nm,1.3s
L19K White Mountain 47.38 35 P **P** **03 49 20.8 +0.3**
baz=268
F20K Avaraart Lake 47.42 29 P **P** **03 49 21.4 +0.7**
baz=262
E20K Nigu River 47.42 27 P **P** **03 49 21.3 +0.5**
baz=261
N19K Bonanza Creek 47.52 37 P **P** **03 49 20.8 -0.8**
baz=269
H20K Anotleneega Mo 47.59 31 P **P** **03 49 21.8 -0.2**
baz=265
SII Sitkinak Islan 47.77 43 P **P** **03 49 22.7 -0.9**
baz=273
K20K Telida 47.79 34 P **P** **03 49 24.9 +1.3**
K20K lAmb lAmb 03 49 26.2
comp=Z,4.8nm,0.8s
K20K Telida 47.79 34 P **P** **03 49 23.3 -0.3**
baz=267
Q19K Cape Douglas, 47.96 40 P **P** **03 49 24.6 -0.4**
baz=272
TARG Taragay, Kyrgy 48.02 297 P **P** **03 49 25.7 -0.6**
TARG Taragay, Kyrgy 48.02 297 P **P** **03 49 25.7 -0.6**
TARG pmax pmax
comp=Z,9.0nm,0.7s
C21K Knifeblade Rid 48.07 26 P **P** **03 49 25.0 -0.7**
baz=261
M20K Styx River 48.18 36 P **P** **03 49 26.5 -0.2**
baz=270
OHAK Old Harbor 48.23 42 P **P** **03 49 26.4 -0.6**
baz=274
G21K Allakaket 48.24 29 **P** **03 49 27.8 +0.8**
G21K Allakaket 48.24 29 P **P** **03 49 27.0 0.0**
baz=265
F21K Alatna River 48.31 29 P **P** **03 49 28.7 +1.1**
F21K Alatna River 48.31 29 P **P** **03 49 28.1 +0.5**
baz=264
H21K Melozitna Rive 48.46 31 P **P** **03 49 29.7 +1.0**
H21K Melozitna Rive 48.46 31 P **P** **03 49 29.4 +0.6**
baz=266
KDAK Kodiak Island 48.57 41 P **P** **03 49 29.9 +0.3**
KDAK Kodiak Island 48.57 41 P **P** **03 49 29.9 +0.3**
KDAK pmax pmax
comp=Z,23nm,1.3s
CHUM Lake Minchumin 48.59 33 P **P** **03 49 29.9 +0.2**
baz=268
SYI Shuyak Island 48.62 40 P **P** **03 49 30.1 +0.1**
SPCR Spurr Chakacha 48.62 37 P **P** **03 49 30.5 +0.3**
baz=271
PPLA Purkeypile 48.63 34 P **P** **03 49 32.0 +1.7**
PPLA lAmb lAmb 03 49 39.3
comp=Z,11nm,1.1s
PPLA Purkeypile 48.63 34 P **P** **03 49 30.3 0.0**
baz=269
SPU Mount Spurr 48.70 37 P **P** **03 49 32.2 +1.5**
SPU lAmb lAmb 03 49 43.7
comp=Z,5.6nm,1.2s
I21K Tanana 48.78 31 P **P** **03 49 32.1 +1.0**
baz=268
D22K Ayikyak River 48.78 26 P **P** **03 49 32.7 +1.5**
D22K lAmb lAmb 03 49 33.6
comp=Z,6.1nm,0.6s
D22K Ayikyak River 48.78 26 P **P** **03 49 31.9 +0.6**
baz=264,SNR=8.0
E22K Anaktuvuk Pass 49.03 27 P **P** **03 49 33.8 +0.7**
E22K lAmb lAmb 03 49 35.4
comp=Z,5.4nm,0.7s
E22K Anaktuvuk Pass 49.03 27 P **P** **03 49 34.0 +0.8**
baz=265
H22K Ishtalitna Cre 49.06 30 P **P** **03 49 34.4 +1.0**
H22K Ishtalitna Cre 49.06 30 P **P** **03 49 34.1 +0.7**
baz=268
BOOM Boomskoye usch 49.17 298 P **P** **03 49 35.5 +0.7**
BOOM Boomskoye usch 49.17 298 P **P** **03 49 35.5 +0.7**
BOOM pmax pmax
comp=Z,15nm,1.2s
BPAW Bear Paw Mtn. 49.18 33 **P** **03 49 35.4 +1.0**
BPAW Bear Paw Mtn. 49.18 33 P **P** **03 49 35.3 +1.0**
baz=269
MTN Manton Dam 49.26 192 **P** **03 49 34.2 -1.1**
MLY Manley 49.30 32 P **P** **03 49 36.1 +0.9**
MLY lAmb lAmb 03 49 37.4
comp=Z,3.9nm,0.8s
MLY Manley 49.30 32 P **P** **03 49 36.0 +0.7**
baz=269
SUA Susitna One 49.32 36 P **P** **03 49 36.3 +0.7**
baz=272
BRSE Bradley Lake S 49.41 39 P **P** **03 49 37.0 +0.9**
baz=273
NRN Naryn 49.41 297 P **P** **03 49 35.6 -1.2**
NRN lAmb lAmb 03 49 47.1
comp=Z,3.5nm,0.5s
NRN Naryn 49.41 297 P **P** **03 49 35.6 -1.2**
NRN pmax pmax
comp=Z,4.0nm,0.5s
TRF Thorofare Moun 49.49 34 P **P** **03 49 38.1 +1.3**
TRF lAmb lAmb 03 49 58.6
comp=Z,12nm,1.5s
TRF Thorofare Moun 49.49 34 P **P** **03 49 37.5 +0.6**
baz=271
D23K Nanushuk River 49.51 26 P **P** **03 49 38.5 +1.7**
D23K Nanushuk River 49.51 26 P **P** **03 49 38.1 +1.3**
baz=266
C23K Itkillik River 49.61 25 P **P** **03 49 37.9 +0.5**
C23K lAmb lAmb 03 49 39.8
comp=Z,5.0nm,0.8s
C23K Itkillik River 49.61 25 P **P** **03 49 38.3 +0.8**
baz=265
G23K Bananza Creek 49.64 29 P **P** **03 49 38.1 +0.3**
baz=268
COEN Coen 49.69 176 P **P** **03 49 39.1 +0.4**
COEN lAmb lAmb 03 49 42.3
comp=Z,6.9nm,0.8s
H23K Yukon River 49.81 30 P **P** **03 49 40.0 +0.9**
baz=269
E23K Chandalar 49.85 28 P **P** **03 49 40.2 +0.7**
E23K lAmb lAmb 03 49 42.0
comp=Z,4.6nm,0.7s
E23K Chandalar 49.85 28 P **P** **03 49 40.3 +0.9**
baz=267,SNR=8.1
NEA2 Nenana 50.01 32 P **P** **03 49 41.9 +1.2**
NEA2 lAmb lAmb 03 49 45.0
comp=Z,5.2nm,0.8s
NEA2 Nenana 50.01 32 P **P** **03 49 41.8 +1.2**
baz=271
SEW Seward 50.03 38 P **P** **03 49 41.2 +0.5**
MCK McKinley 50.09 33 P **P** **03 49 41.1 -0.1**
MCK lAmb lAmb 03 49 53.0
comp=Z,6.5nm,1.1s
MCK McKinley 50.09 33 P **P** **03 49 41.1 -0.1**
MCK pmax pmax
comp=Z,7.0nm,1.1s
MCK McKinley 50.09 33 P **P** **03 49 41.9 +0.6**
baz=272
PMR Palmer 50.09 36 P **P** **03 49 41.3 +0.1**
PMR lAmb lAmb 03 50 08.1
comp=Z,9.6nm,1.2s
PMR Palmer 50.09 36 P **P** **03 49 41.3 +0.1**
PMR pmax pmax
comp=Z,10.0nm,1.2s
PMR Palmer 50.09 36 P **P** **03 49 42.0 +0.8**
baz=273
RND Reindeer 50.14 34 **P** **03 49 42.2 +0.5**
RND lAmb lAmb 03 49 44.6
comp=Z,9.6nm,1.0s

RND **Reindeer** **50.14** **34** P **P** **03 49 42.2 +0.5**
RND pmax pmax
comp=Z,10.0nm,1.0s
AAK **Ala-Archa** **50.16** **299** P **P** **03 49 42.9 +0.6**
comp=Z,2.1nm,0.6s,baz=41,slow=4.1,SNR=5.9
comp=Z,2.1nm,0.6s
AAK **Ala-Archa** **50.16** **299** P **P** **03 49 42.3 0.0**
AAK **Ala-Archa** **50.16** **299**⇓ *eP* **P** **03 49 42.9 +0.6**
AAK pmax pmax
comp=Z,7.0nm,1.8s
GHO **Glory Hole Cre** **50.18** **36** P **P** **03 49 42.4 +0.4**
GHO IAmb IAmb 03 49 45.1
comp=Z,9.4nm,1.0s
D24K **Happy Valley** **50.19** **26** IAmb IAmb 03 49 44.1
comp=Z,5.4nm,0.6s
D24K **Happy Valley** **50.19** **26** P **P** **03 49 42.6 +0.7**
baz=267
C24K **Franklin Bluff** **50.27** **25** P **P** **03 49 42.9 +0.5**
baz=267
E24K **Your Creek** **50.27** **28** P **P** **03 49 44.1 +1.5**
E24K IAmb IAmb 03 50 05.0
comp=Z,6.4nm,1.4s
E24K **Your Creek** **50.27** **28** P **P** **03 49 42.8 +0.2**
baz=268
WAT1 **Susitna Watana** **50.30** **34** P **P** **03 49 43.1 +0.3**
baz=273
KSH2 **Kashi** **50.39** **294** P **P** **03 49 46.4 +2.4**
KSH2 pmax pmax
comp=Z,3.0nm,1.0s
KNK **Knik Glacier** **50.42** **36** P **P** **03 49 44.4 +0.6**
KNK **Knik Glacier** **50.42** **36** P **P** **03 49 44.4 +0.6**
baz=274
WRH **Wood River Hil** **50.44** **32** **P** **03 49 45.0 +1.1**
WRH IAmb IAmb 03 49 47.4
comp=Z,4.7nm,0.8s
SML **Sawmill** **50.46** **36** P **P** **03 49 44.7 +0.6**
SML **Sawmill** **50.46** **36** P **P** **03 49 44.6 +0.6**
baz=274
H24K **Noodor Dome** **50.50** **30** **P** **03 49 45.7 +1.3**
H24K IAmb IAmb 03 49 47.0
comp=Z,4.9nm,0.8s
H24K **Noodor Dome** **50.50** **30** P **P** **03 49 45.0 +0.6**
baz=271
COLA **College** **50.53** **32** P **P** **03 49 45.9 +1.4**
COLA IAmb IAmb 03 49 47.1
comp=Z,6.3nm,0.6s
COLA **College** **50.53** **32**⇑ *eP* **P** **03 49 45.5 +1.0**
COLA pmax pmax
comp=Z,5.0nm,0.9s
COLA **College** **50.53** **32** P **P** **03 49 45.5 +1.0**
baz=272
CCB **Clear Creek Bu** **50.56** **32** P **P** **03 49 45.4 +0.7**
BVAR **Borovoye Array** **50.60** **313** P **P** **03 49 45.0 -0.3**
comp=Z,2.1nm,0.5s,baz=86,slow=7.8,SNR=11
comp=Z,2.1nm,0.5s
BVAR **Borovoye Array** **50.60** **313** P **P** **03 49 45.0 -0.3**
BORK **Borovoye** **50.64** **313** P **P** **03 49 45.7 +0.2**
BORK **Borovoye** **50.64** **313**⇑ *eP* **P** **03 49 45.7 +0.2**
BORK pmax pmax
comp=Z,34nm,6.1s
G24K **Hadweenzic Riv** **50.65** **29** P **P** **03 49 46.5 +1.1**
G24K IAmb IAmb 03 50 04.9
comp=Z,7.9nm,1.4s
G24K **Hadweenzic Riv** **50.65** **29** P **P** **03 49 46.2 +0.8**
baz=270
WAT6 **Susitna Watana** **50.68** **35** P **P** **03 49 46.5 +0.6**
baz=274
DHY **Denali Highway** **50.82** **34** P **P** **03 49 47.8 +0.9**
DHY **Denali Highway** **50.82** **34** P **P** **03 49 47.8 +0.9**
baz=274
SCM **Sheep Creek Mo** **50.93** **36** P **P** **03 49 48.5 +0.8**
SCM **Sheep Creek Mo** **50.93** **36** P **P** **03 49 48.5 +0.8**
SCM pmax pmax
comp=Z,21nm,1.4s
SCM **Sheep Creek Mo** **50.93** **36** P **P** **03 49 48.1 +0.4**
baz=275
HDA **Harding Lake** **50.94** **32** P **P** **03 49 48.2 +0.7**
HDA **Harding Lake** **50.94** **32** P **P** **03 49 48.4 +0.8**
baz=273,SNR=5.5
IL31 **50.95** **32** P **P** **03 49 48.1 +0.5**
IL31 IAmb IAmb 03 49 49.2
comp=Z,7.1nm,0.7s
ILAR **Eielson Array** **50.95** **32** P **P** **03 49 48.2 +0.5**
comp=Z,5.3nm,0.7s,baz=269,slow=5.9,SNR=74
comp=Z,5.3nm,0.7s
ILAR **Eielson Array** **50.95** **32** P **P** **03 49 48.1 +0.4**
D25K **Kavik River** **51.07** **26** IAmb IAmb 03 49 50.6
comp=Z,4.2nm,0.6s
D25K **Kavik River** **51.07** **26** P **P** **03 49 49.5 +0.9**
baz=269
F25K **Christian River** **51.35** **28** P **P** **03 49 51.3 +0.5**
baz=271
E25K **Arctic Village** **51.37** **27** P **P** **03 49 51.6 +0.8**
baz=271
M24K **Tolsona, Glenn** **51.45** **35** P **P** **03 49 52.9 +1.4**
M24K **Tolsona, Glenn** **51.45** **35** P **P** **03 49 51.5 0.0**
baz=275
PRP **Porcupine Dome** **51.48** **31** P **P** **03 49 53.0 +1.1**
PRP **Porcupine Dome** **51.48** **31** P **P** **03 49 52.2 +0.4**
baz=273
K24K **Donnelly Dome** **51.49** **33** P **P** **03 49 52.3 +0.5**
K24K **Donnelly Dome** **51.49** **33** P **P** **03 49 52.3 +0.5**
baz=274
C26K **Camden Bay** **51.59** **25** P **P** **03 49 52.8 +0.4**
baz=270
J25K **Salcha River,** **51.61** **32** P **P** **03 49 53.5 +0.8**
J25K IAmb IAmb 03 50 15.7
comp=Z,10nm,1.5s
J25K **Salcha River,** **51.61** **32** P **P** **03 49 53.0 +0.3**
baz=274
ARSB **Arslanbob** **51.62** **298** P **P** **03 49 53.7 +0.5**
ARSB IAmb IAmb 03 49 59.7
comp=Z,6.3nm,1.0s
ARSB **Arslanbob** **51.62** **298** P **P** **03 49 53.7 +0.5**
ARSB pmax pmax
comp=Z,6.0nm,1.0s
KLU **Klutina** **51.63** **36** P **P** **03 49 53.8 +0.8**
KLU IAmb IAmb 03 50 22.5
comp=Z,7.8nm,1.2s
KLU **Klutina** **51.63** **36** P **P** **03 49 53.6 +0.6**
baz=276
PAX **Paxson** **51.70** **34** P **P** **03 49 53.7 +0.3**
baz=275
BMAR **Burnt Mountain** **51.77** **28** P **P** **03 49 55.2 +1.4**
HARP **HAARP** **51.90** **35** P **P** **03 49 54.9 +0.1**
baz=276
RIDG **Independent Ri** **51.91** **33** P **P** **03 49 54.5 -0.5**
baz=275
F26K **Sheenjek River** **51.92** **28** IAmb IAmb 03 49 58.1
comp=Z,5.8nm,0.7s
F26K **Sheenjek River** **51.92** **28** P **P** **03 49 55.1 +0.2**
baz=273
C27K **Jago River** **52.01** **26** P **P** **03 49 56.0 +0.5**
baz=272
G26K **Porcupine Rive** **52.10** **29** P **P** **03 49 56.7 +0.5**
baz=274
N25K **Chitina, Valde** **52.25** **36** P **P** **03 49 59.0 +1.4**
N25K **Chitina, Valde** **52.25** **36** P **P** **03 49 57.9 +0.4**
baz=277
SCRK **Sand Creek** **52.26** **33** **P** **03 49 58.4 +0.8**
SCRK IAmb IAmb 03 49 59.1
comp=Z,5.1nm,0.6s
SCRK **Sand Creek** **52.26** **33** P **P** **03 49 57.7 0.0**
baz=276,SNR=7.0
BMRM **Bremner River** **52.33** **37** P **P** **03 49 59.2 +1.2**
BMRM **Bremner River** **52.33** **37** P **P** **03 49 58.1 +0.1**
baz=278
J26L **Joseph Creek** **52.39** **32** P **P** **03 49 58.4 -0.1**
J26L **Joseph Creek** **52.39** **32** P **P** **03 49 59.0 +0.4**
baz=276
KNRA **Kununurra** **52.45** **194** P **P** **03 49 58.9 -0.4**
MENT **Mentasta** **52.49** **34** P **P** **03 50 00.8 +1.5**
MENT IAmb IAmb 03 50 03.9
comp=Z,6.4nm,1.0s
L26K **Log Cabin Wild** **52.65** **34** P **P** **03 50 00.6 +0.1**
baz=277
KK31 **Karatay Array** **52.84** **300** P **P** **03 50 01.6 -0.5**
KK31 IAmb IAmb 03 50 14.4
comp=Z,8.3nm,1.1s
KK31 **Karatay Array** **52.84** **300** P **P** **03 50 01.6 -0.5**
KK31 pmax pmax
comp=Z,8.0nm,1.1s
KKAR **Karatay Array** **52.84** **300** P **P** **03 50 01.9 -0.2**
KKAR **Karatay Array** **52.84** **300** P **P** **03 50 02.0 -0.2**
VRDI **Verde Repeater** **52.84** **36** P **P** **03 50 02.9 +0.9**
VRDI IAmb IAmb 03 50 29.3
comp=Z,15nm,1.5s
BERG **Berg Lake** **52.85** **37** P **P** **03 50 03.5 +1.7**
E27K **Coleen River** **52.85** **27** IAmb IAmb 03 50 04.4
comp=Z,4.8nm,0.7s
E27K **Coleen River** **52.85** **27** P **P** **03 50 01.6 -0.3**
baz=275
M26K **Nabesna, AK** **52.89** **35** P **P** **03 50 02.3 +0.1**
baz=278
D27M **Malcolm River** **53.00** **26** P **P** **03 50 03.7 +0.7**
baz=274
MCARA **McCarthy VSAT** **53.02** **36** P **P** **03 50 04.4 +1.2**
MCARA **McCarthy VSAT** **53.02** **36** P **P** **03 50 04.2 +1.0**
baz=278
H27K **Steamboat Moun** **53.06** **30** **P** **03 50 05.6 +2.2**
H27K IAmb IAmb 03 50 06.9
comp=Z,3.8nm,0.7s
I27K **Kandik River** **53.10** **31** P **P** **03 50 04.8 +1.1**
I27K IAmb IAmb 03 50 08.9
comp=Z,6.9nm,1.3s
I27K **Kandik River** **53.10** **31** P **P** **03 50 04.8 +1.1**
baz=277
WAX **Waxell Ridge** **53.25** **37** P **P** **03 50 06.1 +1.1**
L27K **Beaver Creek,** **53.33** **34** P **P** **03 50 06.8 +1.3**
L27K IAmb IAmb 03 50 08.9
comp=Z,6.2nm,1.1s
L27K **Beaver Creek,** **53.33** **34** P **P** **03 50 06.2 +0.8**
baz=278
BCAR **Beaver Creek A** **53.35** **34** P **P** **03 50 06.4 +0.8**
M27K **Edge Creek, AK** **53.41** **35** **P** **03 50 07.6 +1.4**
M27K IAmb IAmb 03 50 10.2
comp=Z,6.4nm,1.0s
M27K **Edge Creek, AK** **53.41** **35** P **P** **03 50 07.0 +0.8**
baz=279
ISLE **Juniper Island** **53.48** **37** P **P** **03 50 06.2 -0.5**
F28M **Old Crow** **53.56** **28** **P** **03 50 08.1 +1.0**
F28M IAmb IAmb 03 50 09.7
comp=Z,3.2nm,0.7s
F28M **Old Crow** **53.56** **28** P **P** **03 50 08.0 +1.0**
baz=277
E28M **Babbage River** **53.57** **27** IAmb IAmb 03 50 09.7
comp=Z,3.3nm,0.7s
E28M **Babbage River** **53.57** **27** P **P** **03 50 08.3 +1.2**
baz=276
BARN **Barnard Glacie** **53.73** **36** P **P** **03 50 09.7 +1.1**
BARN IAmb IAmb 03 50 10.6
comp=Z,4.8nm,0.8s
GRNC **Granite Creek** **53.74** **37** P **P** **03 50 09.2 +0.5**
MESA **MESA** **53.74** **37** P **P** **03 50 09.1 +0.4**
baz=280
I28M **Miner Creek** **53.81** **31** **P** **03 50 09.6 +0.7**
I28M IAmb IAmb 03 50 13.0
comp=Z,5.4nm,0.8s
I28M **Miner Creek** **53.81** **31** P **P** **03 50 09.8 +0.8**
baz=278,SNR=9.2
BVCY **Beaver Creek** **53.87** **34** P **P** **03 50 10.4 +1.0**
baz=280
CTG **Chitna Glacier** **53.90** **36** P **P** **03 50 10.5 +0.7**
baz=280
CTGM **Chitina Glacie** **53.90** **36** P **P** **03 50 10.8 +1.0**
LOGN **Logan Glacier** **54.09** **36** P **P** **03 50 12.4 +1.3**
TABL **Table Mountain** **54.09** **37** P **P** **03 50 12.0 +0.8**
YUK3 **Moose Creek** **54.17** **35** P **P** **03 50 11.8 0.0**
baz=280
E29M **Blow River** **54.20** **27** P **P** **03 50 12.4 +0.8**
E29M IAmb IAmb 03 50 14.3
comp=Z,4.0nm,0.8s
E29M **Blow River** **54.20** **27** P **P** **03 50 12.7 +1.0**
baz=278
DAWY **Dawson** **54.26** **32** P **P** **03 50 12.9 +0.8**
baz=280
G29M **Pine Creek** **54.36** **29** P **P** **03 50 13.6 +0.7**
baz=279
O28M **Mount Upton** **54.49** **36** P **P** **03 50 15.0 +0.7**
O28M IAmb IAmb 03 50 28.7
comp=Z,13nm,1.3s
I29M **Ogilvie Camp,** **54.50** **31** P **P** **03 50 14.3 +0.4**
baz=280
J29N **Klondike Camp** **54.69** **32** P **P** **03 50 15.8 +0.4**
baz=280
M29M **Somme Creek** **54.97** **34** **P** **03 50 19.1 +1.7**
M29M IAmb IAmb 03 50 20.6
comp=Z,5.4nm,0.8s
M29M **Somme Creek** **54.97** **34** P **P** **03 50 18.0 +0.5**
baz=282
G30M **tAoh Zraii Nji** **55.05** **28** IAmb IAmb 03 50 22.1
comp=Z,7.8nm,0.9s
G30M **tAoh Zraii Nji** **55.05** **28** P **P** **03 50 18.8 +0.9**
baz=280,SNR=7.6
F30M **Barrier River** **55.10** **28** P **P** **03 50 20.1 +1.9**
F30M IAmb IAmb 03 50 21.5
comp=Z,7.8nm,0.7s
F30M **Barrier River** **55.10** **28** P **P** **03 50 18.8 +0.5**
baz=280
K29M **Barlow Dome** **55.11** **32** IAmb IAmb 03 50 22.6
comp=Z,5.0nm,1.0s
K29M **Barlow Dome** **55.11** **32** P **P** **03 50 18.6 +0.1**
baz=281
YUK4 **Talbot Arm** **55.11** **35** P **P** **03 50 18.9 +0.3**
baz=282
CHGR **Chuyangaron** **55.27** **296** P **P** **03 50 19.5 -0.5**
CHGR **Chuyangaron** **55.27** **296** P **P** **03 50 19.5 -0.5**
CHGR pmax pmax
comp=Z,25nm,0.7s
I30M **Mount Dempster** **55.32** **31** P **P** **03 50 20.6 +0.7**
baz=281
YUK6 **Outpost Mounta** **55.33** **36** P **P** **03 50 20.6 +0.4**
baz=283
O29M **Mount Kennedy** **55.37** **37** P **P** **03 50 20.3 -0.1**
baz=283
J30M **Hart River** **55.47** **31** P **P** **03 50 21.6 +0.5**
baz=282
FITZ **Fitzroy Crossi** **55.48** **197** P **P** **03 50 21.4 0.0**
comp=Z,9.7nm,0.9s,baz=13,slow=8.5,SNR=8.9
comp=Z,9.7nm,0.9s
WB0 **Warramunga Arr** **55.66** **187** **P** **03 50 22.9 +0.1**
M30M **Minto, Yukon** **55.70** **34** P **P** **03 50 23.5 +0.9**
M30M IAmb IAmb 03 50 25.4
comp=Z,4.4nm,0.8s
M30M **Minto, Yukon** **55.70** **34** P **P** **03 50 23.5 +0.9**
baz=283
HYT **Haines Junctio** **55.76** **36** **P** **03 50 23.3 0.0**
HYT IAmb IAmb 03 50 27.1
comp=Z,5.4nm,0.7s
HYT **Haines Junctio** **55.76** **36** P **P** **03 50 23.9 +0.7**
baz=283
INK **Inuvik** **55.81** **27** IAmb IAmb 03 50 24.9
comp=Z,4.6nm,0.7s
INK **Inuvik** **55.81** **27** P **P** **03 50 23.0 -0.2**
baz=282,SNR=6.0
WRAB **Tennant Creek** **55.83** **187** P **P** **03 50 23.1 -0.8**
WRAB **Tennant Creek** **55.83** **187** *ceP* **P** **03 50 23.5 -0.4**
WRAB pmax pmax
comp=Z,9.0nm,0.9s
WRA **Warramunga Arr** **55.84** **187** P **P** **03 50 24.1 +0.1**
comp=Z,6.8nm,0.6s,baz=2.5,slow=7.3,SNR=78
comp=Z,6.8nm,0.6s
WRA **Warramunga Arr** **55.84** **187** **P** **03 50 23.6 -0.4**
F31M **Tsiigehtchic** **55.91** **28** P **P** **03 50 24.5 +0.6**
baz=282
H31M **Peel River** **56.03** **30** P **P** **03 50 25.6 +0.7**
baz=283
P30M **Million Dollar** **56.19** **37** P **P** **03 50 27.0 +0.8**
baz=284
N31M **Braeburn, Yuko** **56.42** **35** P **P** **03 50 29.3 +1.6**
N31M **Braeburn, Yuko** **56.42** **35** P **P** **03 50 28.2 +0.4**
baz=284
O30N **Mendenhall** **56.45** **36** P **P** **03 50 28.8 +0.8**
O30N IAmb IAmb 03 50 46.0
comp=Z,7.9nm,1.2s
ARTI **Arti** **56.65** **319** P **P** **03 50 29.3 -0.1**
comp=Z,7.8nm,0.5s,baz=77,slow=2.6,SNR=11
comp=Z,7.8nm,0.5s
ARTI **Arti** **56.65** **319** P **P** **03 50 29.0 -0.5**
ARTI **Arti** **56.65** **319** P **P** **03 50 29.0 -0.5**
ARTI pmax pmax
comp=Z,16nm,0.6s
M31M **Drury Creek, Y** **56.87** **34** P **P** **03 50 31.9 +1.0**
WHY **Whitehorse** **57.05** **36** P **P** **03 50 32.5 +0.2**
baz=286
FARO **Faro, Yukon** **57.34** **34** P **P** **03 50 34.9 +0.6**
baz=286
A36M **Sachs Harbour** **57.64** **22** P **P** **03 50 36.1 -0.1**
A36M **Sachs Harbour** **57.64** **22** P **P** **03 50 36.9 +0.7**
baz=287,SNR=13
AB31 **Akbulak array** **57.91** **310** IAmb IAmb 03 50 54.1
comp=Z,3.5nm,0.7s
ABKAR **Akbulak array** **57.91** **310** **P** **03 50 38.4 -0.1**
P33M **Teslin, Yukon** **58.16** **36** P **P** **03 50 40.0 -0.2**
baz=287
AKTO **Aktyubinsk** **58.69** **312** P **P** **03 50 44.0 +0.1**
comp=Z,3.2nm,0.8s,baz=75,slow=13,SNR=8.2
comp=Z,3.2nm,0.8s
AKTO **Aktyubinsk** **58.69** **312** P **P** **03 50 44.0 +0.1**
C36M **Paulatuk** **58.84** **24** P **P** **03 50 45.2 +0.7**
baz=289,SNR=10
AS31 **Alice Springs** **59.57** **187** IAmb IAmb 03 50 55.6
comp=Z,2.0nm,0.5s
ASAR **Alice Springs** **59.57** **187** P **P** **03 50 50.5 +0.3**
comp=Z,1.5nm,0.5s,baz=9.9,SNR=22
comp=Z,1.5nm,0.5s
ASAR **Alice Springs** **59.57** **187** P **P** **03 50 49.7 -0.5**
ASAR **Alice Springs** **59.57** **187** P **P** **03 50 49.7 -0.5**
WRAK **Wrangell Islan** **59.62** **40** P **P** **03 50 50.4 +0.3**
baz=290
S34M **Telegraph Cree** **59.73** **38** P **P** **03 50 51.5 +0.6**
baz=290
DLBC **Dease Lake** **60.09** **37** P **P** **03 50 53.9 +0.4**
baz=291
WTLY **Watson Lake, Y** **60.09** **35** P **P** **03 50 53.6 +0.1**
baz=291
PSA00 **Pilbara Seismi** **60.35** **202** P **P** **03 50 55.2 -0.4**
T35M **Bob Quinn** **60.50** **39** P **P** **03 50 56.9 +0.7**
baz=291
KIRV **Kirov** **60.54** **323**⇑ *eP* **P** **03 50 56.5 +0.1**
TOAD **Toad River Com** **62.26** **36** P **P** **03 51 09.0 +0.9**
baz=294
INKA **Innaminka** **63.33** **179** P **P** **03 51 14.8 -0.6**
INKA IAmb IAmb 03 51 17.0
comp=Z,4.2nm,0.8s
YKA **Yellowknife Ar** **65.25** **30** P **P** **03 51 27.7 0.0**
comp=Z,1.0nm,0.7s,baz=304,slow=7.2,SNR=15
comp=Z,1.0nm,0.7s
YKA **Yellowknife Ar** **65.25** **30** P **P** **03 51 27.2 -0.5**
DAG **Danmarks Havn** **66.79** **355** *i P* **P** **03 51 36.0 -1.3**
STKA **Stephens Creek** **67.46** **179** P **P** **03 51 42.4 +0.3**
comp=Z,4.5nm,0.8s,baz=339,slow=6.5,SNR=13
comp=Z,4.5nm,0.8s
FINES **FINESS Array B** **69.34** **332** P **P** **03 51 52.6 -0.9**
comp=Z,7.1nm,1.0s,baz=60,slow=6.5,SNR=8.4
comp=Z,7.1nm,1.0s
FINES **FINESS Array B** **69.34** **332** P **P** **03 51 53.1 -0.4**
FINES **FINESS Array B** **69.34** **332** *i P* **P** **03 51 53.5 -0.1**
FINES pmax pmax
comp=Z,6.0nm,0.9s
I03D **Drain, OR** **70.36** **50** P **P** **03 52 01.6 +1.4**
ILON **Igloolik, Nuna** **70.57** **15** P **P** **03 52 00.4 -0.6**
BLKN **Baker Lake** **70.78** **23** P **P** **03 52 01.7 -0.7**
BLKN IAmb IAmb 03 52 03.1
comp=Z,4.7nm,0.8s
KBZ **Khabaz** **70.88** **310** P **P** **03 52 03.2 -0.1**
comp=Z,3.6nm,0.9s,baz=19,slow=1.4,SNR=7.0
comp=Z,3.6nm,0.9s
KIV **Kislovodsk** **70.89** **311** P **P** **03 52 04.0 +0.4**
KIV **Kislovodsk** **70.89** **311** *eP* **P** **03 52 04.3 +0.7**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,169nm,18.0s
GNI **Garni** **71.58** **306** LR LR 04 26 35.4
comp=Z,134nm,19.0s,baz=354,slow=38
L04D **Klamath Falls** **71.79** **51** P **P** **03 52 09.7 +0.6**
L04D IAmb IAmb 03 52 12.7
comp=Z,13nm,1.1s
K05A **Summer Lake** **72.40** **50** P **P** **03 52 14.0 +1.2**
K05A IAmb IAmb 03 52 14.8
comp=Z,8.2nm,1.1s
AKASG **Malin Array Be** **74.57** **322** P **P** **03 52 24.5 -0.6**
comp=Z,1.2nm,0.5s,baz=50,slow=5.8,SNR=7.7
comp=Z,1.2nm,0.5s
AKASG **Malin Array Be** **74.57** **322** *i P* **P** **03 52 24.5 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
HFS **Hagfors** **74.69** **335** P **P** **03 52 24.2 -1.4**
comp=Z,15nm,1.2s,baz=16,slow=7.9,SNR=5.2
comp=Z,15nm,1.2s
NC204 **NORSAR Array S** **74.79** **337** P **P** **03 52 25.6 -0.7**
NB2 **NORSAR Subarra** **74.83** **337** P **P** **03 52 25.3 -1.2**
comp=Z,1.6nm,0.6s,baz=41,slow=5.9
NOA **NORSAR Array B** **74.83** **337** P **P** **03 52 25.9 -0.6**
comp=Z,2.0nm,0.7s,baz=40,slow=5.9,SNR=6.2
comp=Z,2.0nm,0.7s
PAHR **Pah Rah Range** **75.01** **52** P **P** **03 52 29.0 +0.9**
FFC **Flin Flon** **75.16** **32** P **P** **03 52 27.7 -0.7**
FFC IAmb IAmb 03 52 30.0
comp=Z,7.7nm,1.2s
FFC **Flin Flon** **75.16** **32** P **P** **03 52 27.7 -0.7**
FFC pmax pmax
comp=Z,8.0nm,1.2s
BOZ **Bozeman (W)** **76.21** **43** P **P** **03 52 35.1 +0.2**
BOZ **Bozeman (W)** **76.21** **43** P **P** **03 52 35.1 +0.2**
BOZ pmax pmax
comp=Z,3.0nm,1.0s
NVAR **Mina Array Bea** **76.43** **52** P **P** **03 52 36.9 +0.5**
comp=Z,1.2nm,0.6s,baz=286,slow=5.2,SNR=12
comp=Z,1.2nm,0.6s
HVU **Hansel Valley** **77.87** **47** P **P** **03 52 45.3 +1.1**
HVU **Hansel Valley** **77.87** **47** P **P** **03 52 45.3 +1.1**
HVU pmax pmax
comp=Z,3.0nm,0.9s
HWUT **Hardware Ranch** **78.69** **47** P **P** **03 52 49.3 +0.5**
DUG **Dugway, Tooele** **78.81** **48** P **P** **03 52 49.7 +0.2**
DUG **Dugway, Tooele** **78.81** **48** P **P** **03 52 49.7 +0.2**
DUG pmax pmax
comp=Z,3.0nm,0.9s
BRTR **Keskin Array B** **78.85** **311** P **P** **03 52 49.0 -0.7**
comp=Z,0.9nm,0.9s,baz=98,slow=2.7,SNR=4.8
comp=Z,0.9nm,0.9s
BRTR **Keskin Array B** **78.85** **311** P **P** **03 52 49.5 -0.2**
BRTR **Keskin Array B** **78.85** **311** *i P* **P** **03 52 50.0 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
PDAR **Pinedale Array** **79.13** **45** P **P** **03 52 50.6 -0.7**
comp=Z,1.0nm,0.6s,baz=250,slow=1.2,SNR=13
comp=Z,1.0nm,0.6s
PDAR **Pinedale Array** **79.13** **45** P **P** **03 52 51.2 -0.1**
MPU **Maple Canyon** **79.64** **48** P **P** **03 52 55.1 +1.0**
P17A **Butcher Ranch,** **80.51** **48** P **P** **03 52 59.7 +1.0**
P17A IAmb IAmb 03 53 00.8
comp=Z,4.0nm,0.6s
RDMU **Red Mountain** **80.52** **46** P **P** **03 53 00.1 +1.3**
RDMU IAmb IAmb 03 53 00.7
comp=Z,4.3nm,0.7s
KNB **Kanab** **80.76** **51** P **P** **03 53 01.4 +1.3**
KNB **Kanab** **80.76** **51** P **P** **03 53 01.4 +1.3**
KNB pmax pmax
comp=Z,4.0nm,1.0s
HMU **Henry Mountain** **81.48** **49** P **P** **03 53 05.0 +1.0**
HMU IAmb IAmb 03 53 07.0
comp=Z,4.0nm,0.8s
ESJX **Sierra Juarez** **81.77** **56** P **P** **03 53 06.1 +0.5**
ESJX IAmb IAmb 03 53 42.0
comp=Z,11nm,1.4s
BKZ **Black Stump Fm** **81.89** **152** P **P** **03 53 05.7 +0.1**
BKZ IAmb IAmb 03 53 07.5
comp=Z,10.0nm,1.1s
PV23 **Carpenter Ridg** **82.20** **48** P **P** **03 53 08.3 +0.4**
PV23 IAmb IAmb 03 53 11.5
comp=Z,7.2nm,0.8s
TUC **Tucson** **85.01** **53** **P** **03 53 22.5 +0.4**
TUC **Tucson** **85.01** **53** P **P** **03 53 22.5 +0.4**
TUC pmax pmax
comp=Z,3.0nm,0.8s
ANMO **Albuquerque** **86.04** **49** P **P** **03 53 26.6 -0.8**
ANMO IAmb IAmb 03 53 30.4
comp=Z,4.2nm,1.2s
ANMO **Albuquerque** **86.04** **49** P **P** **03 53 27.1 -0.2**
ANMO IAmb IAmb 03 53 32.2
comp=Z,2.4nm,1.0s
ANMO **Albuquerque** **86.04** **49**⇑ *eP* **P** **03 53 28.3 +0.9**
ANMO pmax pmax
comp=Z,3.0nm,1.1s
SCHQ **Schefferville** **86.66** **15** P **P** **03 53 29.7 -0.1**
comp=Z,1.9nm,0.8s,baz=347,slow=7.0,SNR=3.5
comp=Z,1.9nm,0.8s
SCHQ **Schefferville** **86.66** **15** IAmb IAmb 03 53 52.5
comp=Z,8.0nm,1.3s
TX31 **Lajitas Ar. Si** **91.56** **52** P **P** **03 53 53.9 +0.4**
TX31 IAmb IAmb 03 53 54.7
comp=Z,1.3nm,0.7s
TXAR **Lajitas Array** **91.57** **52** P **P** **03 53 54.5 +1.0**
comp=Z,1.3nm,0.6s,baz=304,slow=2.8,SNR=23
comp=Z,1.3nm,0.6s
TXAR **Lajitas Array** **91.57** **52** P **P** **03 53 54.3 +0.8**

PMSA	**Palmer Station**	**147.66**	**161**	PKPbc	**PKPab**	**04 00 32.3**	**+0.2**
LPAZ	**La Paz**	**148.09**	**60**	PKPbc	**PKPbc**	**04 00 33.7**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=308,slow=1.9,SNR=5.6						
LPAZ	**La Paz**	**148.09**	**60**	PKPbc	**PKPbc**	**04 00 33.6**	**+0.5**
LPAZ	**La Paz**	**148.09**	**60**	PKP2	**PKPbc**	**04 00 33.6**	**+0.5**
PB16	**IPOC Station P**	**148.45**	**64**	PKPbc	**PKPbc**	**04 00 34.4**	**+0.5**
PB14	**IPOC Station P**	**151.38**	**75**	PKPbc	**PKPbc**	**04 00 41.1**	**+0.5**
LCO	**Las Campanas**	**153.10**	**84**	PKPbc	**PKiKP**	**04 00 45.2**	**+0.7**
LCO	**Las Campanas**	**153.10**	**84**	PKiKP	**PKiKP**	**04 00 45.2**	**+0.7**

NNC ***17*** *03:44:09.4±0.9, 47.58N×82.41E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=6.9km s-min=3.5km az=14.0*

SOME ***17*** *03:44:11.5, 47.55N×82.10E, h15km*

ISC 17 03:44:14.5±1.4, 47.52N±0.05×82.35E±0.05, h19km, n8, σ2.993/14, 3C-3D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**0.73**	**183**	⇓P	**Pb**	**03 44 25.0**	**-3.5**
	2.1nm,0.2s,baz=4.0,slow=17,SNR=787						
MK31				⇑S	**Sb**	**03 44 34.8**	**-3.4**
	11nm,0.2s,baz=6.3,slow=31,SNR=7.2						
ZSN	**Zaisan**	**1.71**	**91**	*e*P	**Pb**	**03 44 45.1**	**-0.1**
ZSN	9.1nm,0.1s			*e*S	**Sb**	**03 45 08.8**	**+2.4**
	42nm,0.2s						
DJR	**Jarkent**	**3.66**	**210**	*e*P	**Pb**	**03 45 16.8**	**-1.7**
DJR	2.1nm,0.4s			*e*S	**Sb**	**03 46 03.1**	**+0.6**
	2.4nm,0.5s						
KURBB	**Kurchatov Arra**	**3.99**	**322**	⇓Pg	**Pb**	**03 45 22.4**	**-1.8**
KURBB	1.2nm,0.3s			⇑Lg	Lg	03 46 15.3	
	19nm,0.4s						
KURK	**Kurchatov**	**4.03**	**324**	⇑Pg	**Pb**	**03 45 22.3**	**-2.4**
KURK	0.3nm,0.3s			⇓Lg	Lg	03 46 14.9	
	6.0nm,0.5s						
ARXS	**Arharly**	**4.58**	**225**	*e*P	**Pb**	**03 45 33.5**	**-0.7**
ARXS	2.9nm,0.4s			*e*S	**Sb**	**03 46 32.5**	**+3.6**
	9.8nm,0.6s						
KPKS	**Kokpek**	**4.80**	**214**	*e*P	**Pb**	**03 45 38.8**	**+0.7**
KPKS	0.6nm,0.3s			*e*S	**Sb**	**03 46 41.2**	**+5.7**
	4.7nm,0.6s						
SHLS	**Shalkode**	**4.82**	**206**	*e*P	**Pb**	**03 45 37.0**	**-1.3**
SHLS	3.1nm,0.1s			*e*S	**Sb**	**03 46 38.1**	**+2.2**
	9.0nm,0.6s						

NEIC ***17*** *03:54:33.4±1.7, 4.27S±0.08×152.98E±0.07, h43km±5km, mb4.6/57, Error ellipse: s-maj=11.8km s-min=9.4km az=212.0*

IDC ***17*** *03:54:34.4±0.9, 4.29S×153.07E, h60km±6km, mb3.9/14, mbtmp4.3/16, MS3.6/5, Error ellipse: s-maj=20.5km s-min=14.0km az=95.0*

DJA ***17*** *03:54:34.5±7.6, 4°S±14°×15°3E±3°0, h14km±38km, M5.3/8, mb5.4/8, mB6.0/7, MLv5.0/1, Mw(mB)5.6/7, MwMwp5.3/1, Mwp5.5/1*

ISC 17 03:54:34.4±0.4, 4.32S±0.06×152.98E±0.07, h55km, n119, σ1.930/116, mb4.5/48, MS3.5/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.82**	**279**	Pn	**Pn**	**03 54 48.7**	**-1.3**
RABL				Sn	**Sn**	**03 54 58.9**	**-2.5**
MANU	**Manus Island**	**6.04**	**292**	Pn	**Pn**	**03 56 03.3**	**+2.0**
PMG	**Port Moresby**	**7.67**	**228**	P	**Pn**	**03 56 25.9**	**+2.3**
	77nm,0.8s,baz=30,slow=9.9,SNR=18						
PMG				S	**Sn**	**03 57 49.9**	**+0.6**
	51nm,0.7s,baz=101,slow=19,SNR=7.0						
PMG				LR	LR	03 59 30.6	
	comp=Z,318nm,18.9s,baz=356,slow=38						
PMG	**Port Moresby**	**7.67**	**228**	P	**Pn**	**03 56 27.2**	**+3.5**
	0.3nm104nm,0.9s						
TATA	**Tatamba Isabel**	**7.90**	**121**	P	**Pn**	**03 56 27.6**	**+0.9**
HNR	**Honiara**	**8.58**	**127**	LR	LR	04 00 05.1	
	comp=Z,27nm,21.5s,baz=28,slow=39						
COEN	**Coen**	**13.61**	**225**	Pn	**Pn**	**03 57 45.7**	**+0.8**
COEN	**Coen**	**13.61**	**225**	P	**Pn**	**03 57 45.8**	**+1.0**
CTA	**Charters Tower**	**16.99**	**202**	P	**P**	**03 58 29.7**	**+0.1**
	5.7nm,0.9s,baz=20,slow=12,SNR=5.2						
QIS	**Mount Isa**	**20.73**	**218**	P	**P**	**03 59 10.8**	**+0.2**
EIDS	**Eidsvold**	**21.01**	**185**	P	**P**	**03 59 16.3**	**+2.7**
DZM	**Mont Dzumac**	**21.95**	**145**	P	**P**	**03 59 23.6**	**-0.2**
	30nm,1.0s,baz=246,slow=5.6,SNR=14						
DZM				LR	LR	04 07 25.1	
	comp=Z,125nm,19.3s,baz=332,slow=35						
	30nm,1.0s						
DZM	**Mont Dzumac**	**21.95**	**145**	P	**P**	**03 59 23.6**	**-0.2**
DZM				IAmb	IAmb	03 59 32.3	
	comp=Z,45nm,1.1s						
DZM	**Mont Dzumac**	**21.95**	**145**	P	**P**	**03 59 23.9**	**+0.1**
SIJI	**Sorong**	**21.95**	**278**	P	**P**	**03 59 25.9**	**+2.1**
	comp=Z,28nm,1.1s,baz=104,slow=12,SNR=4.1						
	comp=Z,28nm,1.1s						
SIJI	**Sorong**	**21.95**	**278**	P	**P**	**03 59 27.4**	**+3.6**
MTN	**Manton Dam**	**23.18**	**247**		**P**	**03 59 34.8**	**-1.8**
MTN				IAmb	IAmb	03 59 37.0	
	comp=Z,30nm,1.0s						
WB0	**Warramunga Arr**	**23.75**	**228**	P	**P**	**03 59 41.0**	**-1.0**
WRAB	**Tennant Creek**	**23.88**	**228**	P	**P**	**03 59 42.1**	**-1.0**
WRAB	**Tennant Creek**	**23.88**	**228**	P	**P**	**03 59 42.5**	**-0.7**
WRA	**Warramunga Arr**	**23.89**	**228**	P	**P**	**03 59 41.7**	**-1.6**
	comp=Z,42nm,0.7s,baz=52,slow=9.6,SNR=179						
WRA				S	**S**	**04 03 57.4**	**+1.5**
	comp=Z,4.5nm,1.1s,baz=55,slow=18,SNR=5.6						
WRA				ScP	**ScP**	**04 06 58.6**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=52,slow=2.9,SNR=6.4						
WRA	**Warramunga Arr**	**23.89**	**228**		**P**	**03 59 40.9**	**-2.4**
ARMA	**Armidale**	**25.99**	**183**	P	**P**	**04 00 02.7**	**+0.3**
ARMA				IAmb	IAmb	04 00 09.7	
	comp=Z,7.9nm,1.1s						
INKA	**Innaminka**	**26.05**	**205**	P	**P**	**04 00 02.6**	**-0.2**
KNRA	**Kununurra**	**26.34**	**243**	P	**P**	**04 00 05.8**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**26.39**	**30**	T	T	04 27 38.5	
	baz=211,slow=76,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**26.40**	**30**	T	T	04 27 38.4	
	baz=211,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**26.41**	**30**	T	T	04 27 40.0	
	baz=211,slow=76,SNR=11						
AS31	**Alice Springs**	**26.62**	**222**	P	**P**	**04 00 08.0**	**-0.1**
ASAR	**Alice Springs**	**26.62**	**222**	P	**P**	**04 00 07.2**	**-0.8**
	comp=Z,6.9nm,0.8s,baz=54,slow=8.6,SNR=25						
ASAR				ScP	**ScP**	**04 07 07.0**	**+0.2**
	comp=Z,1.3nm,1.1s,baz=53,slow=2.9,SNR=4.6						
	comp=Z,6.9nm,0.8s						
STKA	**Stephens Creek**	**29.42**	**200**	P	**P**	**04 00 32.1**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=28,slow=13,SNR=4.7						
	comp=Z,1.8nm,0.6s						
STKA	**Stephens Creek**	**29.42**	**200**	P	**P**	**04 00 31.7**	**-1.2**
STKA				IAmb	IAmb	04 00 38.4	
	comp=Z,35nm,1.4s						
BBOO	**Buckleboo**	**32.46**	**207**	P	**P**	**04 00 59.9**	**+0.2**
BBOO				IAmb	IAmb	04 01 09.8	
	comp=Z,10nm,1.2s						
WBSI	**Waikabubak, Su**	**33.74**	**259**	P	P	04 01 15.6	+4.5
DBNI	**Kabupaten Domp**	**34.69**	**261**	P	**P**	**04 01 17.0**	**-2.3**
PLAI	**Plampang**	**35.24**	**261**	P	**P**	**04 01 20.1**	**-4.0**
PLAI	**Plampang**	**35.24**	**261**	P	P	04 01 28.7	+4.6
FORT	**Forrest**	**35.27**	**219**	P	**P**	**04 01 23.0**	**-1.1**
FORT				IAmb	IAmb	04 01 27.9	
	comp=Z,11nm,0.9s						
MBWA	**Marble Bar**	**36.36**	**240**		**P**	**04 01 32.2**	**-1.4**
MBWA	**Marble Bar**	**36.36**	**240**	P	**P**	**04 01 32.3**	**-1.3**
PSA00	**Pilbara Seismi**	**36.43**	**239**		**P**	**04 01 32.5**	**-1.7**
PSA00	**Pilbara Seismi**	**36.43**	**239**	P	**P**	**04 01 32.4**	**-1.7**
PSA00				IAmb	IAmb	04 01 33.4	
	comp=Z,15nm,0.9s						
QRZ	**Quartz Range**	**40.38**	**157**	P	**P**	**04 02 07.9**	**+0.9**
RTZ	**Ruatahuna**	**40.52**	**151**	P	**P**	**04 02 08.5**	**+0.1**
RTZ				IAmb	IAmb	04 02 10.5	
	comp=Z,30nm,1.4s						
THZ	**Tophouse**	**41.32**	**157**	P	**P**	**04 02 14.9**	**0.0**
GIRL	**Giralia**	**41.65**	**240**	P	**P**	**04 02 16.8**	**-1.0**
BHW	**Baring Head**	**41.82**	**155**	P	**P**	**04 02 18.8**	**0.0**
BFZ	**Birch Farm**	**41.82**	**153**	P	**P**	**04 02 18.6**	**-0.3**
LTZ	**Lake Taylor**	**41.97**	**159**	P	**P**	**04 02 21.1**	**+0.9**
KHZ	**Kahutara**	**42.13**	**157**	P	**P**	**04 02 20.8**	**-0.5**
KHZ	**Kahutara**	**42.13**	**157**	P	**P**	**04 02 21.2**	**-0.1**
RPZ	**Rata Peaks**	**42.36**	**160**	P	**P**	**04 02 24.5**	**+1.2**
MORW	**Morawa**	**42.78**	**231**	P	**P**	**04 02 26.1**	**-0.9**
MORW				IAmb	IAmb	04 02 26.9	
	comp=Z,16nm,0.9s						
MORW	**Morawa**	**42.78**	**231**	P	**P**	**04 02 26.2**	**-0.7**
MQZ	**McQueen's Vall**	**42.91**	**159**	P	**P**	**04 02 27.4**	**-0.2**
BLDU	**Ballidu**	**43.03**	**228**	P	**P**	**04 02 27.6**	**-1.3**
SYZ	**Scrubby Hill**	**44.33**	**164**	P	**P**	**04 02 39.6**	**+0.5**
BBJI	**Bungbulang**	**45.18**	**264**	P	**P**	**04 02 44.3**	**-2.1**
BBJI				IAmb	IAmb	04 02 47.4	
	comp=Z,16nm,1.0s						
LEM	**Lembang**	**45.20**	**265**	LR	LR	04 26 33.7	
	comp=Z,51nm,18.5s,baz=177,slow=42						
NJ2	**Nanjing**	**48.59**	**321**	*e*P	**P**	**04 03 13.3**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**57.83**	**295**	P	**P**	**04 04 21.8**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=116,slow=6.2,SNR=1.6						
	comp=Z,1.2nm,0.3s						
PZH	**PanZhiHua**	**58.24**	**305**	P	**P**	**04 04 26.0**	**+2.2**
XLT	**XiLinHaoTe**	**58.34**	**329**	*e*P	**P**	**04 04 23.9**	**-0.2**
XLT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,470nm,5.0s						
HHC	**Hu-ho-hao-te**	**58.76**	**324**	*e*P	**P**	**04 04 30.4**	**+3.3**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,5.5s						
LZDM	**Lanzhou Array**	**61.05**	**315**	P	**P**	**04 04 42.8**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=133,slow=11,SNR=1.2						
LZDM				pP	**pP**	**04 04 59.8**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=188,slow=4.5,SNR=2.2						
	comp=Z,0.4nm,0.4s						
MA2	**Magadan**	**63.72**	**359**	P	**P**	**04 04 59.6**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=168,slow=6.7,SNR=4.0						
	comp=Z,2.1nm,0.3s						
GTA2	**Gaotai**	**65.50**	**317**	*e*P	**P**	**04 05 14.4**	**+2.1**
GTA2				pP	pP	04 05 18.3	-10
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	**66.01**	**328**	P	**P**	**04 05 15.6**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=150,slow=5.9,SNR=5.7						
SONM				pP	**pP**	**04 05 31.5**	**+0.6**
	comp=Z,1.3nm,1.0s,baz=156,slow=4.7,SNR=2.8						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**66.01**	**328**	P	**P**	**04 05 14.6**	**-0.9**
VNDA	**Vanda**	**73.30**	**178**	P	**P**	**04 06 00.3**	**+0.6**
VNDA				IAmb	IAmb	04 06 02.6	
	comp=Z,3.6nm,0.8s						
K15K	**Wolf Creek Mou**	**74.89**	**20**	P	**P**	**04 06 09.5**	**+0.4**
K15K				IAmb	IAmb	04 06 27.8	
	comp=Z,9.2nm,1.2s						
H17K	**Granite Mounta**	**77.21**	**19**	P	**P**	**04 06 22.3**	**+0.1**
C16K	**Lisburne Hills**	**78.00**	**15**	P	**P**	**04 06 25.9**	**-0.7**
SUA	**Susitna One**	**78.45**	**24**	P	**P**	**04 06 27.6**	**-1.8**
SUA				IAmb	IAmb	04 06 36.7	
	comp=Z,2.6nm,1.0s						
F19K	**Shaleruckik Mo**	**79.11**	**18**	P	**P**	**04 06 32.7**	**0.0**
KNK	**Knik Glacier**	**79.36**	**25**	P	**P**	**04 06 33.6**	**-0.7**
E19K	**Redstone River**	**79.68**	**17**	P	**P**	**04 06 36.0**	**+0.1**
E19K				IAmb	IAmb	04 06 37.4	
	comp=Z,2.4nm,0.7s						
MKAR	**Makanchi Array**	**80.08**	**319**	P	**P**	**04 06 37.5**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=107,slow=6.5,SNR=4.1						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**80.08**	**319**	P	**P**	**04 06 37.7**	**-0.8**
MCK	**McKinley**	**80.35**	**23**	P	**P**	**04 06 38.5**	**-1.1**
MCK				IAmb	IAmb	04 06 42.3	
	comp=Z,15nm,1.4s						
M24K	**Tolsona, Glenn**	**80.65**	**25**	P	**P**	**04 06 41.7**	**+0.4**
ZALV	**Zalesovo Beam**	**80.85**	**326**	P	**P**	**04 06 41.3**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=107,slow=7.7,SNR=2.5						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**80.85**	**326**	P	**P**	**04 06 42.4**	**0.0**
I23K	**Minto, Yukon-K**	**80.93**	**21**	P	**P**	**04 06 42.0**	**-0.6**
I23K				IAmb	IAmb	04 06 48.0	
	comp=Z,6.4nm,1.4s						
CCB	**Clear Creek Bu**	**81.24**	**22**	P	**P**	**04 06 42.6**	**-1.6**
ILAR	**Eielson Array**	**81.65**	**22**	P	**P**	**04 06 44.8**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=244,slow=5.9,SNR=22						
ILAR				pP	**pP**	**04 07 01.9**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=244,slow=5.6,SNR=4.7						
	comp=Z,0.6nm,0.6s						
H24K	**Noodor Dome**	**81.82**	**21**	P	**P**	**04 06 47.2**	**-0.2**
J25K	**Salcha River,**	**82.15**	**23**	P	**P**	**04 06 48.4**	**-0.8**
CTGM	**Chitina Glacie**	**82.24**	**27**	P	**P**	**04 06 49.9**	**+0.1**
CTGM				IAmb	IAmb	04 06 54.9	
	comp=Z,15nm,1.4s						
LOGN	**Logan Glacier**	**82.33**	**27**	P	**P**	**04 06 49.2**	**-1.1**
LOGN				IAmb	IAmb	04 07 03.5	
	comp=Z,6.3nm,1.1s						
G24K	**Hadweenzic Riv**	**82.39**	**20**	P	**P**	**04 06 50.1**	**-0.2**
G24K				IAmb	IAmb	04 06 52.7	
	comp=Z,3.2nm,1.2s						
SCRK	**Sand Creek**	**82.40**	**23**	P	**P**	**04 06 49.6**	**-0.9**
D23K	**Nanushuk River**	**82.54**	**18**	P	**P**	**04 06 52.0**	**+0.9**
D23K				IAmb	IAmb	04 06 52.5	
	comp=Z,2.5nm,0.8s						
M27K	**Edge Creek, AK**	**82.57**	**25**	P	**P**	**04 06 51.5**	**+0.1**
M27K				IAmb	IAmb	04 06 51.6	
	comp=Z,7.5nm,1.4s						
BCAR	**Beaver Creek A**	**82.90**	**25**	P	**P**	**04 06 52.1**	**-0.9**
KSH2	**Kashi**	**82.99**	**310**	P	**P**	**04 06 57.1**	**+2.9**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
I26K	**Coal Creek Min**	**83.30**	**22**	P	**P**	**04 06 53.6**	**-1.4**
I26K				IAmb	IAmb	04 06 56.1	
	comp=Z,9.4nm,1.5s						
BOOM	**Boomskoye usch**	**83.39**	**313**	P	**P**	**04 06 55.0**	**-1.2**
BOOM				IAmb	IAmb	04 06 57.7	
	comp=Z,14nm,1.2s						
KURBB	**Kurchatov Arra**	**83.53**	**322**	P	**P**	**04 06 55.1**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=111,slow=3.7,SNR=4.7						
	comp=Z,0.5nm,0.8s						
G26K	**Porcupine Rive**	**83.80**	**21**	P	**P**	**04 06 57.9**	**+0.4**
G26K				IAmb	IAmb	04 06 59.0	
	comp=Z,6.7nm,1.5s						
I27K	**Kandik River**	**84.01**	**22**	P	**P**	**04 06 58.3**	**-0.4**
I27K				IAmb	IAmb	04 07 07.3	
	comp=Z,6.6nm,1.5s						
DAWY	**Dawson**	**84.28**	**24**	P	**P**	**04 07 00.9**	**+0.8**
I28M	**Miner Creek**	**84.59**	**23**	P	**P**	**04 07 01.3**	**-0.5**
K29M	**Barlow Dome**	**84.97**	**25**	P	**P**	**04 07 03.6**	**-0.1**
K29M				IAmb	IAmb	04 07 12.9	
	comp=Z,8.7nm,1.5s						
C27K	**Jago River**	**85.02**	**18**	P	**P**	**04 07 04.1**	**+0.4**
C27K				IAmb	IAmb	04 07 10.4	
	comp=Z,6.9nm,1.4s						
QSPA	**South Pole Qui**	**85.64**	**180**	P	**P**	**04 07 04.1**	**+0.1**
	comp=Z,7.4nm,0.7s,baz=345,slow=2.0,SNR=7.8						
	comp=Z,7.4nm,0.7s						
D27M	**Malcolm River**	**85.73**	**19**	P	**P**	**04 07 07.7**	**+0.4**
D27M				IAmb	IAmb	04 07 08.3	
	comp=Z,1.9nm,0.7s						
H31M	**Peel River**	**86.89**	**23**	P	**P**	**04 07 12.1**	**-1.0**
H31M				IAmb	IAmb	04 07 26.4	
	comp=Z,6.7nm,1.4s						
BVAR	**Borovoye Array**	**88.96**	**323**	P	**P**	**04 07 21.9**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=104,slow=4.6,SNR=12						
	comp=Z,2.2nm,0.6s						
BORK	**Borovoye**	**89.01**	**323**	P	**P**	**04 07 21.0**	**-2.4**
BORK				IAmb	IAmb	04 07 23.1	
	comp=Z,2.4nm,0.9s						
PFO	**Pinyon Flats O**	**92.83**	**57**	LR	LR	04 46 34.2	
	comp=Z,46nm,18.4s,baz=30,slow=34						
RPN	**Rapa Nui**	**94.88**	**118**	LR	LR	04 45 20.4	
	comp=Z,19nm,18.3s,baz=178,slow=32						
YKA	**Yellowknife Ar**	**94.92**	**28**	pP	pP	04 08 07.7	+1.2
	comp=Z,0.2nm,0.7s,baz=277,slow=4.9,SNR=3.6						
MD01	**Midelt array s**	**144.79**	**326**		PKPbc	04 14 04.9	-0.2
MD31	**MD31**	**144.79**	**326**	PKPdf	**PKPdf**	**04 14 04.9**	**-1.0**
AVE	**Averroes**	**145.85**	**330**	PKPdf	**PKPab**	**04 14 07.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**150.32**	**289**	PKPbc	**PKPbc**	**04 14 19.9**	**-0.9**
	comp=Z,12nm,0.8s,baz=58,slow=4.5,SNR=100						
BDFB	**Brasilia**	**151.28**	**134**	PKPbc	**PKPbc**	**04 14 22.7**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=218,slow=2.7,SNR=7.1						
BDFB	**Brasilia**	**151.28**	**134**	PKPbc	**PKPbc**	**04 14 22.3**	**-0.8**

KRSC 17 04:04:38.4±1.0, 53.74N×161.76E, h41km±16km, MI3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.82**	**359**	*e*P	Pn	04 04 54.7	+1.2
MKZ				*e*S	Sn	04 05 05.9	+1.5
SPN	**Mys Shipunski**	**1.22**	**239**	*e*P	Pn	04 04 60.0	+1.1
SPN				*e*S	Sn	04 05 14.4	+0.2
KII	**Karymskiy**	**1.40**	**283**	*e*P	Pn	04 05 02.4	+0.9
NLC	**Nalytchevo**	**1.55**	**250**	*e*P	Pn	04 05 04.7	+1.2
NLC				*e*S	Sn	04 05 23.0	+0.7
SDLR	**Sedlovina**	**1.78**	**256**	*e*P	Pn	04 05 08.2	+1.5
SMAR	**Somma**	**1.83**	**256**	*e*P	Pn	04 05 09.2	+1.7
UGLR	**Uglovaya**	**1.83**	**254**	*e*P	Pn	04 05 09.4	+1.9
KRER	**Koryakskii**	**1.85**	**258**	*e*P	Pn	04 05 09.8	+2.0
AVH	**Avacha**	**1.86**	**257**	*e*P	Pn	04 05 10.1	+2.2
KRX	**Arik**	**1.89**	**260**	*e*P	Pn	04 05 09.9	+1.5
KOK	**Koryaka**	**1.92**	**258**	*e*P	Pn	04 05 10.5	+1.9
DALK	**Dalny**	**1.93**	**250**	*e*P	Pn	04 05 10.1	+1.4
PET	**Petropavlovsk**	**1.99**	**250**	*e*P	Pn	04 05 13.5	+4.0
KMNR	**Kamenistaya**	**2.21**	**337**	*e*P	Pn	04 05 16.2	+3.6
GNL	**Ganaly**	**2.27**	**270**	*e*P	Pn	04 05 16.4	+2.9
RUS	**Russkaya**	**2.35**	**238**	*e*P	Pn	04 05 17.9	+3.4
KRMR	**Karymshinskiy**	**2.36**	**249**	*e*P	Pn	04 05 18.4	+3.8
KRMR				*e*S	Sn	04 05 45.3	+3.0
MTVR	**Mutnovka**	**2.49**	**241**	*e*P	Pn	04 05 19.4	+2.8
GRL	**Gorelyy**	**2.52**	**243**	*e*P	Pn	04 05 20.5	+3.6
KBTR	**Krutoberegovo**	**2.55**	**13**	*e*P	Pn	04 05 20.9	+3.7
ASAK	**Asacha**	**2.69**	**241**	*e*P	Pn	04 05 23.5	+4.3
ESO	**Esso**	**2.82**	**322**	*e*P	Pn	04 05 23.3	+2.4
BKI	**Bering**	**2.87**	**57**	*e*P	Pn	04 05 24.9	+3.4
BKI				*e*S	Sn	04 05 56.4	+1.8
APC	**Apacha**	**2.88**	**255**	*e*P	Pn	04 05 25.5	+3.8
KDTR	**Khodutka, Kamc**	**2.95**	**231**	*e*P	Pn	04 05 26.2	+3.5
PAU	**Pauzhetka**	**3.78**	**235**	*e*P	Pn	04 05 38.7	+4.7

MDD ***17*** *04:33:59.3±1.1, 32.55N×2.50W, h0km, Mb3.9/9, M_mb3.9/9, Error ellipse: s-maj=11.7km s-min=6.7km az=131.0*

INMG ***17*** *04:34:02.7±1.5, 32.72N×2.78W, h13km, ML2.4, Error ellipse: s-maj=8.9km s-min=5.2km az=129.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

CNRM ***17*** *04:34:02.7, 32.67N×2.69W, h93km, ML3.2*

ISC 17 04:34:00.9±1.7, 32.74N±0.03×2.73W±0.03, h10km±13km, n31, σ1.985/52, 7C, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FIGM	**Figuig**	**1.38**	**116**	P	**Pb**	**04 34 26.5**	**-0.5**
FIGM				S	**Sg**	**04 34 45.1**	**-0.3**
MDT	**Midelt**	**1.58**	**273**	P	**Pn**	**04 34 28.7**	**-0.4**
MDT				S	**Sb**	**04 34 51.4**	**+0.9**
JBK	**JBK**	**1.60**	**5**	P	**Pb**	**04 34 30.5**	**-0.2**
JBK				S	**Sb**	**04 34 51.1**	**0.0**
MD31	**MD31**	**1.71**	**275**	P	**Pn**	**04 34 30.8**	**-0.2**
MD31				S	**Sb**	**04 34 55.5**	**+1.3**
ARF	**Arif**	**1.81**	**225**	P	**Pn**	**04 34 32.1**	**-0.2**
ARF				S	**Sn**	**04 34 55.8**	**+0.3**
AKLM	**AKL**	**2.00**	**332**	P	**Pn**	**04 34 37.4**	**-0.1**
AKLM				S	**Sg**	**04 35 05.8**	**+0.5**
LCRM	**LCR**	**2.02**	**299**	P	**Pn**	**04 34 36.7**	**+1.5**
LCRM				S	**Sn**	**04 35 02.1**	**+1.5**
TAF	**Taforalt**	**2.09**	**7**	P	**Pn**	**04 34 37.0**	**+0.9**
TAF				S	**Sb**	**04 35 04.2**	**-0.8**
GOLM	**Goulmima**	**2.15**	**242**	P	**Pn**	**04 34 36.9**	**0.0**
GOLM				S	**Sn**	**04 35 04.8**	**+1.1**
IFR	**Ifrane**	**2.15**	**292**	Pn	**Pn**	**04 34 37.3**	**+0.1**
IFR				Sn	**Sb**	**04 35 07.8**	**+0.8**
SICH	**Sidi Chahed**	**2.56**	**303**	P	**Pn**	**04 34 43.3**	**+0.8**
SICH				S	**Sn**	**04 35 15.1**	**+1.4**
EMEL	**Melilla**	**2.56**	**356**	⇑*i*Vmb_VC		04 34 45.4	
	546nm,SNR=1.5						
EMEL				Sn	**Sb**	**04 35 16.1**	**-2.5**
WMELI	**Melilla**	**2.58**	**356**	Sg	**Sg**	**04 35 26.3**	**+2.5**
PALE	**Palemas**	**2.67**	**338**	P	**Pn**	**04 34 44.6**	**+0.6**
PALE				S	**Sn**	**04 35 18.1**	**+1.6**
TZRR	**Tazzarine**	**3.10**	**232**	P	**Pn**	**04 34 50.4**	**+0.3**
TZRR				S	**Sn**	**04 35 27.3**	**0.0**
TISM	**Timmit**	**3.30**	**253**

comp=N,25nm,1.5s

NEIC ***17*** *04:51:59.5±1.2, 17°.97N±0°.05×66°.820W±0°.009, h10km±1km, ML2.9/33, Md2.7/9(RSPR), Error ellipse: s-maj=8.1km s-min=1.8km az=1.0*
RSPR ***17*** *04:51:59.6, 17°.97N×66°.85W, h12km, MD2.7/9*
SDD ***17*** *04:51:59.3±1.4, 17°.92N×66°.85W, h15km±16km, MD3.6, ML2.7, MW3.2, Presumed earthquake*

ISC 17 04:51:59.0±0.9, 17°.97N±0°.05×66°.82W±0°.02, h15km±6km, n35, σ0°.44/61, 16C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
GBPR	**Guanica, Bosqu**	**0.06**	**279**			**Pg**	**04**	**52**	**01.9**	**0.0**
GBPR						**Sg**	**04**	**52**	**03.8**	**0.0**
GBPR	**Guanica, Bosqu**	**0.06**	**279**	⇑	*i*P	**Pg**	**04**	**52**	**01.9**	**0.0**
GBPR					*e*S	**Sg**	**04**	**52**	**03.8**	**0.0**
MLPR	**Magueyes Islan**	**0.21**	**271**			**Pg**	**04**	**52**	**03.8**	**-0.2**
MLPR					Sg	**Sg**	**04**	**52**	**07.0**	**-0.2**
MLPR	2μm,0.4s				IAML		04	52	07.7	
MLPR	3μm,0.3s				IAML		04	52	07.8	
OBIP	**Obispado Ponce**	**0.22**	**70**			**Pb**	**04**	**52**	**04.5**	**-0.2**
OBIP					Sg	**Sb**	**04**	**52**	**08.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.22**	**70**	⇓	*e*P	**Pb**	**04**	**52**	**04.5**	**-0.2**
OBIP					*e*S	**Sb**	**04**	**52**	**08.7**	**+0.2**
CELP	**Cerrillos**	**0.25**	**65**			**Pb**	**04**	**52**	**05.2**	**-0.2**
CELP					Sg	**Sb**	**04**	**52**	**09.2**	**-0.4**
CELP	1μm,0.2s				IAML		04	52	09.8	
CRPR	**Cabo Rojo, PR**	**0.28**	**278**			**Pg**	**04**	**52**	**04.8**	**-0.1**
CRPR					Sg	**Sg**	**04**	**52**	**08.6**	**-0.4**
CRPR	2μm,0.6s				IAML		04	52	09.2	
CRPR	1μm,0.5s				IAML		04	52	09.5	
CRPR	**Cabo Rojo, PR**	**0.28**	**278**	⇑	*e*Pg	**Pg**	**04**	**52**	**04.8**	**-0.1**
CRPR				⇑	*e*Sg	**Sg**	**04**	**52**	**08.3**	**-0.7**
CRPR	comp=N,988nm,0.2s				IAML		04	52	09.1	
CRPR	**Cabo Rojo, PR**	**0.28**	**278**	⇓	*e*P	**Pg**	**04**	**52**	**04.9**	**-0.1**
CRPR					*e*S	**Sg**	**04**	**52**	**08.8**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.30**	**18**			**Pg**	**04**	**52**	**05.6**	**+0.2**
UUPR					Sg	**Sg**	**04**	**52**	**09.8**	**0.0**
LSP	**Las Mesas**	**0.33**	**309**			**Pg**	**04**	**52**	**05.9**	**0.0**
LSP	**Las Mesas**	**0.33**	**309**	⇓	*e*P	**Pg**	**04**	**52**	**05.9**	**0.0**
PRSN	**Puerto Rico Se**	**0.40**	**309**			**Pg**	**04**	**52**	**06.8**	**-0.2**
PRSN					Sg	**Sg**	**04**	**52**	**12.9**	**+0.3**
PRSN	**Puerto Rico Se**	**0.40**	**309**	⇑	*e*Pg	**Pg**	**04**	**52**	**06.9**	**-0.2**
PRSN				⇑	*e*Sg	**Sg**	**04**	**52**	**12.2**	**-0.3**
PRSN	comp=N,1μm,0.2s				IAML		04	52	15.1	
PRSN	**Puerto Rico Se**	**0.40**	**309**	⇑	*e*P	**Pg**	**04**	**52**	**06.9**	**-0.2**
PRSN					*e*S	**Sg**	**04**	**52**	**12.8**	**+0.2**
ECPR	**Experimental S**	**0.56**	**51**		Pg	**Pb**	**04**	**52**	**10.0**	**-0.5**
ECPR					Sg	**Sg**	**04**	**52**	**17.2**	**-0.3**
ECPR	comp=N,1μm,0.3s				IAML		04	52	18.9	
ECPR	**Experimental S**	**0.56**	**51**	⇑	*e*P	**Pb**	**04**	**52**	**10.3**	**-0.2**
ECPR					*e*S	**Sb**	**04**	**52**	**18.4**	**+0.1**
AGPR	**Aguadilla, PR**	**0.57**	**331**			**Pg**	**04**	**52**	**09.9**	**-0.4**
AGPR	comp=N,385nm,0.6s				IAML		04	52	22.7	
AGPR	**Aguadilla, PR**	**0.57**	**331**	⇑	*e*Pg	**Pg**	**04**	**52**	**10.0**	**-0.3**
AGPR				⇑	*e*Sg	**Sg**	**04**	**52**	**18.3**	**+0.4**
AGPR	comp=N,337nm,1.0s				IAML		04	52	23.2	
AGPR	**Aguadilla, PR**	**0.57**	**331**	⇑	*e*P	**Pg**	**04**	**52**	**10.1**	**-0.3**
AGPR					*e*S	**Sg**	**04**	**52**	**17.9**	**0.0**
SJG	**San Juan**	**0.65**	**77**		Pg	**Pb**	**04**	**52**	**11.7**	**-0.5**
SJG	**San Juan**	**0.65**	**77**		Sg	**Sb**	**04**	**52**	**20.7**	**-0.3**
SJG	comp=N,343nm,0.2s				IAML		04	52	22.7	
SJG	comp=N,463nm,0.2s				IAML		04	52	22.7	
SJG	**San Juan**	**0.65**	**77**	⇑	*e*Pg	**Pb**	**04**	**52**	**11.8**	**-0.3**
SJG				⇑	*e*Sg	**Sb**	**04**	**52**	**20.9**	**-0.2**
SJG	**San Juan**	**0.65**	**77**	⇑	*e*P	**Sb**	**04**	**52**	**11.8**	**-0.3**
SJG					*e*S	**Sb**	**04**	**52**	**21.7**	**+0.6**
IDE	**Isla Desecheo**	**0.75**	**304**			**Pb**	**04**	**52**	**13.0**	**-0.8**
IDE						**Sg**	**04**	**52**	**23.1**	**-0.5**
IDE	**Isla Desecheo**	**0.75**	**304**	⇑	*e*P	**Pb**	**04**	**52**	**13.0**	**-0.8**
IDE					*e*S	**Sg**	**04**	**52**	**23.1**	**-0.5**
PDPR	**Patillas Dam,**	**0.76**	**86**			**Pb**	**04**	**52**	**13.8**	**-0.1**
PDPR					Sg	**Sb**	**04**	**52**	**24.4**	**+0.2**
GCPR	**Guaynabo City**	**0.78**	**64**			**Pg**	**04**	**52**	**13.9**	**-0.3**
GCPR					Sg	**Sg**	**04**	**52**	**24.0**	**-0.5**
GCPR	**Guaynabo City**	**0.78**	**64**	⇑	*e*P	**Pg**	**04**	**52**	**13.8**	**-0.3**
GCPR					*e*S	**Sb**	**04**	**52**	**24.4**	**-0.3**
HUMP	**Col San Antoni**	**0.94**	**79**			**Pb**	**04**	**52**	**16.5**	**-0.5**
HUMP					Sg	**Sg**	**04**	**52**	**29.3**	**-0.3**
HUMP	**Col San Antoni**	**0.94**	**79**	⇓	*e*P	**Pb**	**04**	**52**	**16.5**	**-0.5**
HUMP					*e*S	**Sb**	**04**	**52**	**28.6**	**-0.7**
CUPR	**Culebra, Puert**	**1.50**	**77**			**Pb**	**04**	**52**	**26.0**	**-0.6**
PCDR	**Punta Cana, DR**	**1.58**	**290**	⇑	*e*Pg	**Pn**	**04**	**52**	**27.0**	**+0.5**
PCDR	comp=N,187nm,2.7s				IAML		04	53	31.1	
DR12	**Loma Pena Alta**	**2.56**	**289**		Pn	**Pn**	**04**	**52**	**41.1**	**+1.0**
HATOM	**Hato Mayor del**	**2.57**	**289**	⇑	*e*Pg	**Pn**	**04**	**52**	**41.8**	**+1.7**
HATOM	comp=N,33nm,3.0s				IAML		04	53	27.7	

IDC ***17*** *05:07:01.3±1.8, 38°.91N×21°.90E, h0km, mb3.3/3, mbtmp3.4/4, ML3.1/1, MS3.9/1, Error ellipse: s-maj=39.0km s-min=29.8km az=152.0*
THE ***17*** *05:07:02.8, 39°.0N±0°.6×21°.9E±0°.7, h1km±1km, M3.0/73, MLh3.0/73*
ATH ***17*** *05:07:02.5, 38°.98N×21°.90E, h13km, ML3.3/37, Manual Solution by M.Kolligri First location: 2020/02/17 05:07:56, This location: 2020/02/17 05:22:55 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
PDG ***17*** *05:07:02.5±0.4, 38°.98N×21°.92E, h10km, ML3.3/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

ISC 17 05:07:03.3±0.7, 38°.97N±0°.01×21°.91E±0°.01, h14km±4km, n180, σ0°.98/244, 15C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
EVR	**Evrytania**	**0.10**	**237**	P		**Pg**	**05**	**07**	**06.1**	**-0.4**
EVR				S		**Sg**	**05**	**07**	**08.5**	**-0.1**
EVR	**Evrytania**	**0.10**	**237**	P		**Pg**	**05**	**07**	**06.1**	**-0.4**
EVR				S		**Sg**	**05**	**07**	**08.0**	**-0.7**
MAKR	**Makrakomi, Fth**	**0.18**	**75**	P		**Pg**	**05**	**07**	**07.5**	**0.0**
MAKR				S		**Sg**	**05**	**07**	**10.0**	**-0.3**
MAKR	**Makrakomi, Fth**	**0.18**	**75**	P		**Pg**	**05**	**07**	**07.5**	**0.0**
MAKR				S		**Sg**	**05**	**07**	**10.4**	**+0.1**
AGG	**Agios Georgios**	**0.33**	**81**	P		**Pg**	**05**	**07**	**09.9**	**-0.3**
AGG				S		**Sg**	**05**	**07**	**14.0**	**-0.7**
AGG	**Agios Georgios**	**0.33**	**81**	P		**Pg**	**05**	**07**	**09.8**	**-0.3**
AGG				S		**Sg**	**05**	**07**	**14.6**	**-0.1**
ANX	**Ano Chora**	**0.38**	**179**	P		**Pg**	**05**	**07**	**10.7**	**-0.2**
ANX				S		**Sb**	**05**	**07**	**16.7**	**-0.9**
ANX	**Ano Chora**	**0.38**	**179**	P		**Pg**	**05**	**07**	**10.5**	**-0.4**
ANX				S		**Sg**	**05**	**07**	**16.1**	**0.0**
SOFA	**Sofades**	**0.40**	**21**	P		**Pg**	**05**	**07**	**11.1**	**-0.2**
SOFA				S		**Sb**	**05**	**07**	**17.4**	**-0.7**
LAM2	**Lamia**	**0.41**	**99**	P		**Pg**	**05**	**07**	**11.2**	**-0.3**
LAM2				S		**Sg**	**05**	**07**	**17.3**	**+0.3**
PVO	**Paravola**	**0.46**	**221**	P		**Pg**	**05**	**07**	**12.1**	**-0.4**
PVO				S		**Sg**	**05**	**07**	**18.5**	**-0.2**
PVO	**Paravola**	**0.46**	**221**	P		**Pg**	**05**	**07**	**12.0**	**-0.5**
PVO				S		**Sb**	**05**	**07**	**18.8**	**-1.3**
EFP	**Efpalio**	**0.54**	**181**	P		**Pg**	**05**	**07**	**13.6**	**-0.4**
EFP				S		**Sg**	**05**	**07**	**21.3**	**+0.1**
EFP	**Efpalio**	**0.54**	**181**	P		**Pg**	**05**	**07**	**13.3**	**-0.6**
EFP				S		**Sb**	**05**	**07**	**21.6**	**-0.7**
AMPL	**Ampelaki**	**0.55**	**265**	P		**Pg**	**05**	**07**	**13.5**	**-0.6**
AMPL				S		**Sb**	**05**	**07**	**21.4**	**-1.1**
AMPL	**Ampelaki**	**0.55**	**265**	P		**Pg**	**05**	**07**	**13.2**	**-0.9**
AMPL				S		**Sb**	**05**	**07**	**21.0**	**-1.5**
MG00	**Magoula, Dorid**	**0.55**	**177**	P		**Pg**	**05**	**07**	**13.4**	**-0.8**
MG00				S		**Sg**	**05**	**07**	**21.8**	**+0.3**
SERG	**Sergoula**	**0.57**	**169**	P		**Pg**	**05**	**07**	**13.8**	**-0.7**
SERG				S		**Sg**	**05**	**07**	**22.1**	**+0.1**
SERG	**Sergoula**	**0.57**	**169**	P		**Pg**	**05**	**07**	**13.5**	**-1.0**
SERG				S		**Sg**	**05**	**07**	**22.2**	**+0.3**
MALA	**Malamata, Dori**	**0.58**	**183**	P		**Pg**	**05**	**07**	**13.9**	**-0.7**
MALA				S		**Sb**	**05**	**07**	**22.6**	**-0.6**
AGRP	**Agrapidokambos**	**0.59**	**195**	P		**Pg**	**05**	**07**	**14.5**	**-0.5**
AGRP				S		**Sg**	**05**	**07**	**22.7**	**-0.1**
TRKA	**Trikala**	**0.59**	**349**	P		**Pb**	**05**	**07**	**14.9**	**-0.6**
TRKA				S		**Sb**	**05**	**07**	**23.6**	**-0.2**
THL	**Klokotos Trika**	**0.60**	**7**	P		**Pg**	**05**	**07**	**14.5**	**-0.6**
THL				S		**Sg**	**05**	**07**	**21.3**	**-1.8**
THL	**Klokotos Trika**	**0.60**	**7**	P		**Pg**	**05**	**07**	**14.2**	**-0.9**
THL				S		**Sg**	**05**	**07**	**22.9**	**-0.1**
KALE	**Kalithea**	**0.60**	**163**	P		**Pg**	**05**	**07**	**14.2**	**-1.0**
KALE				S		**Sb**	**05**	**07**	**23.9**	**-0.3**
KALE	**Kalithea**	**0.60**	**163**	P		**Pg**	**05**	**07**	**14.1**	**-1.0**
KALE				S		**Sb**	**05**	**07**	**24.0**	**-0.2**
AXAR	**Agios Charalam**	**0.62**	**109**	P		**Pg**	**05**	**07**	**14.7**	**-0.7**
AXAR				S		**Sg**	**05**	**07**	**23.1**	**-0.5**
AXAR	**Agios Charalam**	**0.62**	**109**	P		**Pg**	**05**	**07**	**14.6**	**-0.8**
AXAR				S		**Sg**	**05**	**07**	**23.7**	**+0.1**
TRIZ	**Trizonia**	**0.62**	**168**	P		**Pg**	**05**	**07**	**14.5**	**-0.9**
TETR	**Tetrakomo, Epi**	**0.62**	**307**	P		**Pg**	**05**	**07**	**14.5**	**-1.1**
TETR				S		**Sb**	**05**	**07**	**23.6**	**-1.1**
TETR	**Tetrakomo, Epi**	**0.62**	**307**	P		**Pg**	**05**	**07**	**14.4**	**-1.1**
TETR				S		**Sb**	**05**	**07**	**23.3**	**-1.5**
ZIRI	**Ziria, Aigiali**	**0.66**	**178**	P		**Pg**	**05**	**07**	**15.7**	**-0.6**
ZIRI				S		**Sb**	**05**	**07**	**25.4**	**-0.4**
DLFA	**Delphi**	**0.67**	**137**	P		**Pg**	**05**	**07**	**14.8**	**-1.5**
DLFA				S		**Sg**	**05**	**07**	**24.7**	**-0.5**
UPR	**University Cam**	**0.69**	**188**	P		**Pb**	**05**	**07**	**17.2**	**0.0**
UPR				S		**Sb**	**05**	**07**	**27.6**	**+1.0**
UPR	**University Cam**	**0.69**	**188**	P		**Pg**	**05**	**07**	**16.5**	**-0.3**
MSL1	**Messolongi**	**0.71**	**213**	P		**Pb**	**05**	**07**	**16.4**	**-0.7**
PATC	**Patra C**	**0.71**	**190**	P		**Pg**	**05**	**07**	**16.9**	**-0.3**
AGEO	**AgiosGiorgios,**	**0.71**	**170**	P		**Pg**	**05**	**07**	**16.3**	**-0.9**
ART2	**Arta**	**0.74**	**284**	P		**Pg**	**05**	**07**	**16.7**	**-1.0**
PATG	**Patra B**	**0.74**	**191**	P		**Pb**	**05**	**07**	**17.9**	**-0.2**
TEME	**Temeni, Aigial**	**0.75**	**168**	P		**Pg**	**05**	**07**	**17.3**	**-0.6**
AST1	**Astakos**	**0.77**	**237**	P		**Pb**	**05**	**07**	**18.6**	**0.0**
AST1				S		**Sn**	**05**	**07**	**30.7**	**-0.5**
GINA	**Giannouli**	**0.79**	**28**	P		**Pg**	**05**	**07**	**18.0**	**-0.7**
PRMD	**Pramanda**	**0.85**	**312**	P		**Pg**	**05**	**07**	**18.9**	**-0.8**
PRMD				S		**Sb**	**05**	**07**	**31.2**	**+0.1**
PRMD	**Pramanda**	**0.85**	**312**	P		**Pg**	**05**	**07**	**18.8**	**-1.0**
AXS	**Araxos**	**0.88**	**209**	P		**Pb**	**05**	**07**	**20.1**	**-0.3**
AXS				S		**Sn**	**05**	**07**	**33.7**	**-0.2**
AXS	**Araxos**	**0.88**	**209**	P		**Pb**	**05**	**07**	**20.1**	**-0.3**
AIDA	**Aidipsos**	**0.89**	**97**	P		**Pg**	**05**	**07**	**19.9**	**-0.8**
LKR	**Lokris**	**0.91**	**110**	P		**Pg**	**05**	**07**	**19.5**	**-1.4**
LKR				S		**Sg**	**05**	**07**	**31.8**	**-1.0**
LKR	**Lokris**	**0.91**	**110**	P		**Pg**	**05**	**07**	**19.9**	**-1.0**
ATAL	**Atalanti**	**0.91**	**107**	P		**Pg**	**05**	**07**	**19.7**	**-1.2**
ATAL				S		**Sg**	**05**	**07**	**31.3**	**-1.5**
ATAL	**Atalanti**	**0.91**	**107**	P		**Pg**	**05**	**07**	**19.7**	**-1.2**
KLV	**Kalavryta, Ach**	**0.94**	**169**	P		**Pg**	**05**	**07**	**20.2**	**-1.3**
KLV				S		**Sb**	**05**	**07**	**34.1**	**+0.2**
KLV	**Kalavryta, Ach**	**0.94**	**169**	P		**Pg**	**05**	**07**	**20.2**	**-1.3**
KLV1	**Kalavrita**	**0.95**	**171**	P		**Pg**	**05**	**07**	**20.9**	**-0.7**
RLS	**Riolos of Patr**	**0.97**	**201**	P		**Pb**	**05**	**07**	**21.8**	**-0.2**
RLS				S		**Sn**	**05**	**07**	**36.8**	**+0.5**
RLS	**Riolos of Patr**	**0.97**	**201**	P		**Pb**	**05**	**07**	**21.9**	**-0.1**
NYDR	**Nydri-Lefkada**	**0.98**	**255**	P		**Pb**	**05**	**07**	**21.6**	**-0.6**
NYDR				S		**Sn**	**05**	**07**	**37.1**	**+0.6**
NYDR	**Nydri-Lefkada**	**0.98**	**255**	P		**Pg**	**05**	**07**	**21.3**	**-1.0**
TSLK	**Tsoukalades, L**	**0.99**	**262**	P		**Pb**	**05**	**07**	**22.1**	**-0.2**
TSLK				S		**Sn**	**05**	**07**	**37.0**	**+0.3**
TSLK	**Tsoukalades, L**	**0.99**	**262**	P		**Pb**	**05**	**07**	**22.1**	**-0.2**
LKD2	**Lefkada island**	**1.00**	**260**	P		**Pb**	**05**	**07**	**22.2**	**-0.2**
LKD2				S		**Sn**	**05**	**07**	**38.1**	**+1.3**
LKD2	**Lefkada island**	**1.00**	**260**	P		**Pb**	**05**	**07**	**22.1**	**-0.2**
DRO	**Drossia**	**1.03**	**189**	P		**Pg**	**05**	**07**	**22.5**	**-0.7**
DRO				S		**Sb**	**05**	**07**	**37.4**	**+1.1**
DRO	**Drossia**	**1.03**	**189**	P		**Pg**	**05**	**07**	**22.5**	**-0.7**
EVGI	**Lefkada island**	**1.04**	**251**	P		**Pg**	**05**	**07**	**22.4**	**-1.1**
EVGI				S		**Sn**	**05**	**07**	**39.8**	**+1.9**
EVGI	**Lefkada island**	**1.04**	**251**	P		**Pg**	**05**	**07**	**22.4**	**-1.1**
JAN	**Janina**	**1.07**	**310**	P		**Pb**	**05**	**07**	**23.5**	**-0.3**
JAN	**Janina**	**1.07**	**310**	P		**Pb**	**05**	**07**	**23.3**	**-0.4**
KPRO	**Kipourio**	**1.07**	**337**	P		**Pg**	**05**	**07**	**22.6**	**-1.5**
KPRO				S		**Sn**	**05**	**07**	**38.9**	**+0.1**
KPRO	**Kipourio**	**1.07**	**337**	P		**Pg**	**05**	**07**	**22.9**	**-1.1**
NEO	**Neokhori**	**1.07**	**71**	P		**Pg**	**05**	**07**	**22.5**	**-1.5**
NEO				S		**Sg**	**05**	**07**	**38.4**	**+0.3**
NEO	**Neokhori**	**1.07**	**71**	P		**Pg**	**05**	**07**	**22.9**	**-1.1**
DRAG	**Dragano-Lefkad**	**1.08**	**255**	P		**Pg**	**05**	**07**	**23.2**	**-1.0**
DRAG	**Dragano-Lefkad**	**1.08**	**255**	P		**Pg**	**05**	**07**	**23.1**	**-1.4**
GUR	**Goura**	**1.08**	**162**	P		**Pg**	**05**	**07**	**22.7**	**-1.5**
GUR				S		**Sn**	**05**	**07**	**39.5**	**+0.3**
GUR	**Goura**	**1.08**	**162**	P		**Pg**	**05**	**07**	**22.9**	**-1.4**
FSK	**Fiskardo**	**1.17**	**245**	P		**Pg**	**05**	**07**	**24.6**	**-1.3**
FSK	**Fiskardo**	**1.17**	**245**	P		**Pg**	**05**	**07**	**24.3**	**-1.6**
VSK1	**VASILIKIADES**	**1.20**	**243**	P		**Pg**	**05**	**07**	**25.0**	**-1.3**
LIT	**Litokhoron**	**1.22**	**21**	P		**Pg**	**05**	**07**	**25.7**	**-1.0**
LIT				S		**Sb**	**05**	**07**	**42.5**	**+0.8**
LIT	**Litokhoron**	**1.22**	**21**	P		**Pg**	**05**	**07**	**25.3**	**-1.5**
CLEM	**Kyllini,Ilia,G**	**1.24**	**210**	P		**Pn**	**05**	**07**	**27.4**	**+1.1**
LTK	**Loutraki**	**1.25**	**138**	P		**Pn**	**05**	**07**	**26.8**	**+0.3**
LTK	**Loutraki**	**1.25**	**138**	P		**Pn**	**05**	**07**	**26.3**	**-0.2**
RTZL	**Ratzakli, Kefa**	**1.26**	**225**	P		**Pg**	**05**	**07**	**26.9**	**-0.8**
RTZL	**Ratzakli, Kefa**	**1.26**	**225**	P		**Pg**	**05**	**07**	**26.9**	**-0.8**
VIL2	**Platees**	**1.30**	**125**	P		**Pb**	**05**	**07**	**28.1**	**+0.5**
VLS	**Valsamata**	**1.30**	**233**	P		**Pn**	**05**	**07**	**26.7**	**-0.4**
VLS	**Valsamata**	**1.30**	**233**	P		**Pn**	**05**	**07**	**26.8**	**-0.4**
KZN	**Kozani**	**1.34**	**355**	P		**Pn**	**05**	**07**	**27.9**	**+0.2**
KZN	**Kozani**	**1.34**	**355**	P		**Pn**	**05**	**07**	**27.8**	**0.0**
IGT	**Igoumenitsa**	**1.35**	**295**	P		**Pn**	**05**	**07**	**27.1**	**-0.7**
IGT	**Igoumenitsa**	**1.35**	**295**	P		**Pg**	**05**	**07**	**28.5**	**-0.8**
VILL	**Villia**	**1.36**	**126**	P		**Pn**	**05**	**07**	**28.2**	**+0.2**
PENT	**Pentalofos**	**1.36**	**334**	P		**Pn**	**05**	**07**	**27.8**	**-0.3**
PENT	**Pentalofos**	**1.36**	**334**	P		**Pn**	**05**	**07**	**27.5**	**-0.6**
DMLN	**Damoulianata-K**	**1.41**	**239**	P		**Pn**	**05**	**07**	**28.6**	**0.0**
DMLN	**Damoulianata-K**	**1.41**	**239**	P		**Pn**	**05**	**07**	**28.2**	**-0.4**
KYPS	**Kipseli, Zakin**	**1.43**	**217**	P		**Pg**	**05**	**07**	**30.1**	**-0.7**
AMT	**Artemida-Makis**	**1.44**	**186**	P		**Pg**	**05**	**07**	**30.4**	**-0.7**
ORTH	**Orthonies,Zaky**	**1.47**	**221**	P		**Pg**	**05**	**07**	**31.0**	**-0.6**
ORTH	**Orthonies,Zaky**	**1.47**	**221**	P		**Pg**	**05**	**07**	**30.6**	**-1.0**
STFN	**Stefani**	**1.50**	**121**	P		**Pn**	**05**	**07**	**30.6**	**+0.6**
STFN	**Stefani**	**1.50**	**121**	P		**Pn**	**05**	**07**	**30.6**	**+0.6**
AOS2	**Alonissos-2**	**1.51**	**83**	P		**Pn**	**05**	**07**	**29.3**	**-0.8**
LFKM	**Lefkimmi**	**1.52**	**289**	P		**Pg**	**05**	**07**	**31.6**	**-0.8**
LITH	**Lithakia**	**1.52**	**214**	P		**Pb**	**05**	**07**	**31.8**	**-0.1**
LTHK	**Lithakia**	**1.52**	**214**	P		**Pb**	**05**	**07**	**30.7**	**-0.9**
MAGU	**Magoula**	**1.54**	**125**	P		**Pn**	**05**	**07**	**31.0**	**+0.6**
MAGU	**Magoula**	**1.54**	**125**	P		**Pn**	**05**	**07**	**30.9**	**+0.5**
AOS	**Alonnisos**	**1.54**	**82**	P		**Pn**	**05**	**07**	**29.7**	**-0.8**
NEST	**Nestorio**	**1.59**	**335**	P		**Pb**	**05**	**07**	**32.6**	**-0.1**
NEST	**Nestorio**	**1.59**	**335**	P		**Pb**	**05**	**07**	**32.5**	**-0.1**
VLX	**Vlachokerasia**	**1.64**	**167**	P		**Pn**	**05**	**07**	**31.6**	**-0.3**
ATH	**Athens Observa**	**1.73**	**125**	P		**Pn**	**05**	**07**	**33.8**	**+0.7**
SRN	**Sarande**	**1.74**	**302**	P		**Pb**	**05**	**07**	**34.7**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.74**	**100**	P		**Pn**	**05**	**07**	**33.2**	**0.0**
KYMI	**Kymi, Euboea I**	**1.74**	**100**	P		**Pn**	**05**	**07**	**33.0**	**-0.2**
MET5	**Makryloggos,Me**	**1.76**	**139**	P		**Pn**	**05**	**07**	**33.8**	**+0.3**
ATHU	**Athens Univers**	**1.78**	**124**	P		**Pn**	**05**	**07**	**34.0**	**+0.3**
PTL	**Penteli**	**1.79**	**120**	P		**Pn**	**05**	**07**	**34.6**	**+0.8**
ITM	**Ithomi**	**1.79**	**180**	P		**Pb**	**05**	**07**	**36.1**	**+0.3**
DION	**Dionisos Attik**	**1.82**	**119**	P		**Pn**	**05**	**07**	**34.8**	**+0.5**
PLG	**Polygyros**	**1.83**	**40**	P		**Pn**	**05**	**07**	**33.7**	**-0.8**
THE	**Thessaloniki**	**1.85**	**26**	P		**Pn**	**05**	**07**	**33.0**	**-0.9**
VLY	**Voula,Athens**	**1.85**	**126**	P		**Pn**	**05**	**07**	**35.3**	**+0.6**
HORT	**Hortiatis**	**1.87**	**29**	P		**Pn**	**05**	**07**	**34.1**	**-0.9**
KBN	**Korca**	**1.87**	**333**	P		**Pn**	**05**	**07**	**35.8**	**+0.8**
GRG	**Griva**	**2.02**	**11**	P		**Pn**	**05**	**07**	**37.5**	**+0.5**
PYL	**PYLOS**	**2.08**	**184**	P		**Pb**	**05**	**07**	**39.7**	**-1.1**
OUR	**Ouranopolis**	**2.10**	**49**	P		**Pn**	**05**	**07**	**37.8**	**-0.3**
KARY	**Karystos**	**2.19**	**115**	P		**Pn**	**05**	**07**	**39.8**	**+0.5**
OHR	**Ohrid**	**2.30**	**339**	*i*	Pn	**Pb**	**05**	**07**	**43.7**	**-1.1**
KNT	**Kendrikon**	**2.32**	**19**	P		**Pn**	**05**	**07**	**41.5**	**+0.4**
VLI	**Veliai**	**2.39**	**160**	P		**Pn**	**05**	**07**	**43.0**	**+0.9**
VAY	**Valandovo**	**2.40**	**12**	*i*	Pn	**Pn**	**05**	**07**	**43.4**	**+1.1**
SRS	**Serrai**	**2.50**	**30**	P		**Pn**	**05**	**07**	**43.5**	**-0.1**
THAS	**Thassos island**	**2.71**	**52**	P		**Pn**	**05**	**07**	**45.1**	**-1.4**
NVR	**Nevrokopi**	**2.81**	**32**	P		**Pn**	**05**	**07**	**48.3**	**+0.4**
KAVA	**Kavala**	**2.84**	**44**	P		**Pn**	**05**	**07**	**47.6**	**-0.7**
MMB	**Musomishta**	**2.93**	**28**	P		**Pn**	**05**	**07**	**49.8**	**+0.2**
PHP	**Peshkopia**	**2.94**	**338**	P		**Pn**	**05**	**07**	**51.2**	**+1.5**
SKO	**Skopje**	**3.02**	**353**	*i*	Pn	**Pn**	**05**	**07**	**52.0**	**+1.2**
SMTH	**Samothraki Isl**	**3.17**	**61**	P		**Pn**	**05**	**07**	**51.6**	**-1.2**
RZN	**Rozhen**	**3.47**	**38**	P		**Pn**	**05**	**07**	**57.1**	**-0.1**
EZN	**Ezine**	**3.52**	**75**	P		**Pn**	**05**	**07**	**57.5**	**-0.2**
ULC	**Ulcinj**	**3.62**	**327**	*e*Pn		**Pn**	**05**	**08**	**00.3**	**+1.3**
ULC				*i*	Sn	**Sn**	**05**	**08**	**43.8**	**+2.3**
ALN	**Alexandroupoli**	**3.71**	**57**	P		**Pn**	**05**	**07**	**59.4**	**-0.9**
DRME	**Dracevica, Mon**	**3.83**	**328**	⇑	*i*Pn	**Pn**	**05**	**08**	**03.8**	**+1.9**
DRME				*i*	Sn	**Sn**	**05**	**08**	**48.3**	**+1.6**
PVY	**Plav**	**3.91**	**338**	⇑	*i*Pn	**Pn**	**05**	**08**	**05.2**	**+2.0**
PVY				*i*	Sn	**Sn**	**05**	**08**	**50.8**	**+1.8**
PDG	**Podgorica**	**4.00**	**331**	⇑	P	**Pn**	**05**	**08**	**05.4**	**+1.2**
PDG				⇓	S	**Sn**	**05**	**08**	**53.2**	**+2.2**
TIP	**Timpagrande**	**4.02**	**275**	⇓	P	**Pn**	**05**	**08**	**06.9**	**+2.3**
TIP				⇑	S	**Sn**	**05**	**08**	**54.4**	**+3.0**
BUM	**Brajici-Budva**	**4.04**	**326**	*e*Pn		**Pn**	**05**	**08**	**06.2**	**+1.3**
BUM				*i*

ML02 IAmb IAmb 05 17 30.5
comp=Z,25nm,0.6s
BO02 Sierra Bellavi 37.58 293 P P 05 17 30.9 -1.1
BO02 IAmb IAmb 05 17 36.4
comp=Z,27nm,0.8s
GO05 Hualane 37.94 291 P P 05 17 34.5 -0.5
GO05 IAmb IAmb 05 17 36.5
comp=Z,28nm,0.8s
BO01 Tunca 38.05 293 P P **05 17 35.0 -0.9**
BO01 IAmb IAmb 05 17 36.4
comp=Z,19nm,0.7s
BO04 La Punta 38.17 294 IAmb IAmb 05 17 39.2
comp=Z,27nm,0.8s
MT13 San Alfonso 38.22 294 P P **05 17 37.3 -0.2**
MT13 IAmb IAmb 05 17 42.8
comp=Z,18nm,0.6s
PARB Paraibuna 38.81 333 *eP* P **05 17 44.3 +2.0**
PEL Peldehue 38.91 294 P P **05 17 43.1 0.0**
AUSP Uspallata 39.09 296 *eP* P **05 17 45.5 +0.6**
CFA Coronel Fontan 39.11 298 LR LR 05 32 53.6
comp=Z,76nm,21.5s,baz=163,slow=34
VA03 San Esteban 39.16 295 *eP* P **05 17 45.3 0.0**
PTGB Pitanga 39.20 323 *eP* P **05 17 45.8 +0.2**
ROC1 El Roble 39.20 294 *eP* P **05 17 43.0 -2.7**
ZON Zonda 39.35 298 *eP* P **05 17 46.8 0.0**
CPUP Villa Florida 39.41 316 P P **05 17 47.9 +0.6**
comp=Z,9.9nm,0.4s,baz=158,slow=8.5,SNR=27
CPUP LR LR 05 32 14.9
comp=Z,68nm,22.0s,baz=98,slow=33
comp=Z,9.9nm,0.4s
CPUP Villa Florida 39.41 316 *eP* P **05 17 47.4 +0.1**
CPUP Villa Florida 39.41 316 P P **05 17 46.9 -0.4**
CPUP x x 05 18 08.9
RTLS Leoncito 39.41 297‖ *eP* P **05 17 48.0 +0.4**
RTLL Cerro Villicun 39.45 298 *eP* P **05 17 47.0 -0.6**
VAO Valinhos 39.45 331 P P **05 17 48.5 +0.9**
VAO Valinhos 39.45 331 *eP* P **05 17 49.1 +1.5**
VA01 Torpederas 39.45 293 P P **05 17 47.8 +0.3**
VA01 IAmb IAmb 05 17 54.2
comp=Z,26nm,0.7s
AVFE Valle Fertil 39.57 300 *eP* P **05 17 48.5 -0.2**
FRTB Fartura 39.78 328 *eP* P **05 17 51.6 +1.1**
CO04 Los Peladeros 39.96 295 IAmb IAmb 05 17 54.6
comp=Z,47nm,0.7s
LDASE Londrina, Braz 40.17 325 *eP* P **05 17 54.7 +1.1**
ACCO Cerro Coronel 40.34 298 *eP* P **05 17 56.2 +0.9**
ACLC CERRO LA CRUZ 40.42 301‖ *eP* P **05 17 56.2 +0.4**
CO02 Combarbal 40.68 295 IAmb IAmb 05 18 01.1
comp=Z,73nm,1.0s
ACDV Cuesta del Vie 40.72 298 *eP* P **05 17 58.9 +0.6**
CO03 El Pedregal 40.85 296 IAmb IAmb 05 18 01.0
comp=Z,38nm,0.7s
AROD Rodeo 40.88 298 *eP* P **05 18 00.9 +1.1**
BSCB Bom Sucesso 40.88 335 *eP* P **05 18 00.5 +1.0**
TRCB Terra Rica 41.17 324 P P **05 18 00.9 -1.0**
TRCB IAmb IAmb 05 18 04.2
comp=Z,32nm,1.1s
TRCB Terra Rica 41.17 324 *eP* P **05 18 02.2 +0.4**
CO06 Fray Jorge 41.42 295 IAmb IAmb 05 18 05.1
comp=Z,57nm,1.1s
GO04 Tololo Observa 41.47 296 IAmb IAmb 05 18 07.0
comp=Z,48nm,0.6s
VCA Vinchina 41.56 301 *eP* P **05 18 06.6 +1.5**
BB19B Bebedouro 41.69 330 *eP* P **05 18 07.0 +0.9**
AMBA Amambai (Brazi 41.78 320 *eP* P **05 18 06.2 -0.6**
TINO Tinogasta 41.87 302 *eP* P **05 18 08.8 +1.2**
SUR Sutherland 42.03 71 P P **05 18 09.0 0.0**
SUR IAmb IAmb 05 18 14.3
comp=Z,43nm,1.4s
LCO Las Campanas 42.42 297 P P **05 18 11.6 -0.7**
LCO Las Campanas 42.42 297 P P **05 18 11.6 -0.7**
LCO pmax pmax
comp=Z,54nm,0.6s
LCO Las Campanas 42.42 297 P P **05 18 12.5 +0.3**
LCO pP **pP** **05 18 33.6 -0.2**
LCO x x 05 18 37.8
VNDA Vanda 42.55 183 P P **05 18 14.7 +2.3**
comp=Z,4.8nm,0.7s,baz=197,slow=4.7,SNR=8.2
VNDA LR LR 05 35 47.1
comp=Z,62nm,18.2s,baz=221,slow=36
comp=Z,4.8nm,0.7s
VNDA Vanda 42.55 183 P P **05 18 14.3 +1.9**
FSA Cafayete 42.92 305 *eP* P **05 18 14.8 -1.4**
GO03 Copiapo 43.43 299 IAmb IAmb 05 18 21.0
comp=Z,49nm,0.8s
GO03 Copiapo 43.43 299 *eP* P **05 18 19.8 -0.4**
PMNB Patos De Minas 43.63 334 *eP* P **05 18 23.5 +1.7**
AQDB Aquidauana 44.30 321 P **05 18 26.4 -0.6**
AQDB IAmb IAmb 05 18 27.5
comp=Z,21nm,0.6s
AQDB Aquidauana 44.30 321 *eP* P **05 18 26.2 -0.8**
GUA01 Guaratinga, BA 44.31 343 *eP* P **05 18 27.9 +0.7**
IPMB Ipameri, GO 44.57 331 *eP* P **05 18 30.8 +1.4**
BDQN Bodoquena, MS 44.66 319 *eP* P **05 18 29.2 -0.7**
AC01 Pan de Azucar 44.85 300 P P **05 18 31.1 -0.3**
AC01 IAmb IAmb 05 18 32.9
comp=Z,26nm,0.8s
C2SB Chapadao do Su 45.04 325 *eP* P **05 18 34.7 +1.8**
PB14 IPOC Station P 46.09 301 IAmb IAmb 05 18 42.3
comp=Z,44nm,0.8s
H04S2 CROZET ISLANDS 46.22 111 T T 06 09 16.6
baz=224,slow=75,SNR=21
H04S3 CROZET ISLANDS 46.23 111 T T 06 09 31.0
baz=224,slow=75,SNR=27
H04S1 CROZET ISLANDS 46.24 111 T T 06 09 21.8
baz=224,slow=75,SNR=23
JANB Januaria 46.56 338 *eP* P **05 18 45.1 +0.1**
AF01 San Pedro de A 46.63 304 P P **05 18 46.8 +1.0**
PP1B Ponte de Pedra 46.74 323 *eP* P **05 18 46.2 -0.2**
BDFB Brasilia 46.78 333 P P **05 18 46.7 -0.1**
comp=Z,2.3nm,0.4s,baz=126,slow=8.1,SNR=6.1
BDFB LR LR 05 35 17.4
comp=Z,58nm,19.9s,baz=15,slow=32
comp=Z,2.3nm,0.4s
BDFB Brasilia 46.78 333 P P **05 18 46.1 -0.7**
BDFB Brasilia 46.78 333 P P **05 18 46.1 -0.7**
BDFB pmax pmax
comp=Z,4.0nm,0.7s
PB10 IPOC Station P 47.14 301 P P **05 18 49.4 0.0**
PB10 IAmb IAmb 05 18 50.5
comp=Z,58nm,1.0s
BOSA Boshof 47.28 73 P P **05 18 51.4 +0.8**
comp=Z,4.3nm,0.7s,baz=220,slow=5.6,SNR=9.9
BOSA pP **pP** **05 19 14.1 +1.5**
comp=Z,6.4nm,0.8s,baz=202,slow=9.7,SNR=4.6
comp=Z,4.3nm,0.7s
BOSA Boshof 47.28 73 P P **05 18 51.3 +0.6**
BOSA Boshof 47.28 73 P P **05 18 51.3 +0.6**
BOSA x x 05 19 14.7
PB06 IPOC Station P 47.43 303 P P **05 18 51.8 -0.1**
PB06 IAmb IAmb 05 18 53.5
comp=Z,46nm,0.8s
PB05 IPOC Station P 47.57 302 IAmb IAmb 05 18 53.9
comp=Z,46nm,0.7s
PB03 IPOC Station P 48.09 303 IAmb IAmb 05 18 58.1
comp=Z,47nm,0.8s
PB09 IPOC Station P 48.10 304 P P **05 18 57.7 +0.6**
PB09 IAmb IAmb 05 18 59.2
comp=Z,39nm,0.8s
PB07 IPOC Station P 48.43 303 P P **05 18 60.0 +0.3**
PB02 IPOC Station P 48.80 304 P P **05 19 02.6 +0.3**
PB08 IPOC Station P 49.54 305 IAmb IAmb 05 19 10.1
comp=Z,20nm,0.6s
KOOLE Kule 49.72 63 IAmb IAmb 05 19 11.1
comp=Z,24nm,0.8s
PB11 IPOC Station P 50.09 305 IAmb IAmb 05 19 13.3
comp=Z,28nm,0.8s
PTLB Pontes e Lacer 50.11 319 P P **05 19 12.2 0.0**
PTLB IAmb IAmb 05 19 15.3
comp=Z,20nm,0.7s
PTLB Pontes e Lacer 50.11 319 *eP* P **05 19 11.8 -0.3**
SIV San Ignacio 50.26 316 P P **05 19 12.9 -0.4**
comp=Z,8.9nm,0.5s,baz=164,slow=7.9,SNR=47
SIV LR LR 05 38 53.6
comp=Z,54nm,21.7s,baz=113,slow=34
comp=Z,8.9nm,0.5s
KGCAE Kacgae 50.75 65 P P **05 19 18.2 +1.0**
KGCAE IAmb IAmb 05 19 43.4
comp=Z,32nm,0.8s
SNDB Serra Nova Dou 51.11 330 *eP* P **05 19 20.5 +0.8**
PB16 IPOC Station P 51.31 306 IAmb IAmb 05 19 23.4
comp=Z,19nm,0.5s
PB12 IPOC Station P 51.39 305 P P **05 19 22.0 +0.1**
PB12 IAmb IAmb 05 19 23.3
comp=Z,22nm,0.4s

GRTLG Ghanzi 51.60 64 IAmb IAmb 05 19 25.2
comp=Z,12nm,0.8s
TSUM Tsumeb 51.91 58 P P **05 19 26.4 +0.5**
H10S2 ASCENSION HYDR 51.92 16 T T 06 15 42.4
baz=32,slow=74,SNR=13
H10S3 ASCENSION HYDR 51.92 16 T T 06 15 41.1
baz=188,slow=74,SNR=9.1
PB18 Visviri 51.97 306 P P **05 19 27.2 +0.5**
PB18 IAmb IAmb 05 19 29.2
comp=Z,31nm,0.7s
LPAZ La Paz 52.60 308 P P **05 19 31.3 -0.2**
comp=Z,16nm,0.5s,baz=126,slow=4.6,SNR=110
comp=Z,16nm,0.5s
LPAZ La Paz 52.60 308 IAmb IAmb 05 19 33.0
comp=Z,17nm,0.6s
LPAZ La Paz 52.60 308 *eP* P **05 19 32.2 +0.7**
LPAZ pmax pmax
comp=Z,16nm,0.5s
LPAZ La Paz 52.60 308 *eP* P **05 19 31.8 +0.3**
LPAZ La Paz 52.60 308 P P **05 19 32.2 +0.7**
QNGWA Qangwa 53.19 62 IAmb IAmb 05 20 01.6
comp=Z,15nm,0.7s
SMTB Santa Maria do 53.25 335 *eP* P **05 19 36.0 +0.4**
CLDB Colider 53.38 325 *eP* P **05 19 35.9 -0.7**
XAUDM Khaudum 54.13 62 IAmb IAmb 05 20 08.9
comp=Z,16nm,0.8s
NPGB Novo Progresso 56.90 327 *eP* P **05 20 02.2 +0.3**
NNA Nana 60.06 301 P P **05 20 23.8 -0.1**
comp=Z,22nm,0.8s,baz=168,slow=6.2,SNR=9.1
comp=Z,22nm,0.8s
NNA Nana 60.06 301 P P **05 20 24.6 +0.6**
NNA IAmb IAmb 05 20 25.2
comp=Z,20nm,0.8s
NNA Nana 60.06 301‖ *i*P P **05 20 24.5 +0.6**
NNA pmax pmax
comp=Z,29nm,0.9s
LSZ Lusaka 60.09 67 P P **05 20 24.8 +0.7**
comp=Z,13nm,0.8s,baz=205,slow=7.7,SNR=30
LSZ pP **pP** **05 20 48.6 +1.6**
comp=Z,6.5nm,0.8s,baz=185,slow=5.8,SNR=4.3
comp=Z,13nm,0.8s
LSZ Lusaka 60.09 67 P P **05 20 24.9 +0.8**
LSZ IAmb IAmb 05 20 25.9
comp=Z,14nm,0.8s
MACA Manacapuru-AM 62.15 322 P P **05 20 36.6 -1.3**
MACA IAmb IAmb 05 20 38.6
comp=Z,22nm,1.0s
MACA Manacapuru-AM 62.15 322 *eP* P **05 20 38.1 +0.2**
TEFE Tefe 63.11 318 *eP* P **05 20 43.2 -1.0**
ATAH Atahualpa 65.07 302 P P **05 20 58.2 +0.6**
comp=Z,5.7nm,0.7s,baz=136,slow=12,SNR=4.0
comp=Z,5.7nm,0.7s
BOAV Boa Vista 67.37 324 P P **05 21 10.5 -1.2**
BOAV IAmb IAmb 05 21 11.0
comp=Z,9.6nm,0.5s
BOAV Boa Vista 67.37 324 *eP* P **05 21 10.5 -1.2**
MDP Montagnes des 67.89 333 LR LR 05 51 42.8
comp=Z,38nm,18.3s,baz=131,slow=36
DBIC Dimbokro 68.92 24 P P **05 21 20.9 -0.4**
comp=Z,3.5nm,0.5s,baz=213,slow=4.6,SNR=10.0
DBIC pP **pwP** **05 21 46.3 -0.8**
comp=Z,4.6nm,0.5s,baz=214,slow=7.0,SNR=3.1
DBIC LR LR 05 45 06.6
comp=Z,104nm,18.3s,baz=3.0,slow=30
comp=Z,3.5nm,0.5s
DBIC Dimbokro 68.92 24 P P **05 21 21.4 0.0**
DBIC Dimbokro 68.92 24 P P **05 21 21.4 0.0**
DBIC pmax pmax
comp=Z,10.0nm,0.9s
SLOR San Lorenzo - 70.89 305 P P **05 21 33.9 -0.3**
OTAV Otavalo 71.75 305 P P **05 21 39.2 -0.1**
OTAV Otavalo 71.75 305 P P **05 21 39.2 -0.1**
OTAV pmax pmax
comp=Z,13nm,1.2s
OTAV Otavalo 71.75 305 *eP* P **05 21 39.9 +0.6**
ROSC El Rosal 74.32 311 LR LR 05 58 25.8
comp=Z,50nm,18.7s,baz=231,slow=39
TORD Torodi Ar. Bea 76.67 29 P P **05 22 07.8 +0.7**
comp=Z,8.9nm,0.4s,baz=195,slow=6.0,SNR=164
TORD pP **pP** **05 22 31.1 -0.1**
comp=Z,7.5nm,0.6s,baz=209,slow=10.0,SNR=5.5
comp=Z,8.9nm,0.4s
TORD Torodi Ar. Bea 76.67 29 P P **05 22 07.5 +0.4**
SDV Santo Domingo 76.72 316 P P **05 22 06.0 -1.7**
comp=Z,6.3nm,0.4s,baz=26,slow=1.7,SNR=16
SDV LR LR 05 56 59.7
comp=Z,58nm,19.6s,baz=82,slow=36
comp=Z,6.3nm,0.4s
SDV Santo Domingo 76.72 316 P **05 22 07.1 -0.7**
SDV Santo Domingo 76.72 316 *eP* P **05 22 07.1 -0.7**
BSWZ Blackbirch Sta 77.06 196 P P **05 22 10.0 +0.8**
THZ Tophouse 77.14 196 P P **05 22 11.5 +1.8**
THZ IAmb IAmb 05 22 28.8
comp=Z,48nm,1.3s
TCW Tory Channel 77.49 197 P P **05 22 12.3 +0.7**
MRNZ Matariki Terra 77.52 196 P P **05 22 12.6 +0.8**
BFZ Birch Farm 77.71 198 P P **05 22 12.8 -0.1**
BFZ IAmb IAmb 05 22 40.5
comp=Z,32nm,1.1s
QRZ Quartz Range 78.11 195 P P **05 22 14.9 -0.2**
QRZ IAmb IAmb 05 22 23.9
comp=Z,96nm,1.4s
STKA Stephens Creek 87.97 171 P P **05 23 05.8 -0.2**
comp=Z,4.2nm,0.8s,baz=145,slow=8.4,SNR=9.2
STKA LR LR 06 00 16.6
comp=Z,41nm,19.8s,baz=209,slow=34
comp=Z,4.2nm,0.8s
STKA Stephens Creek 87.97 171 P P **05 23 06.6 +0.6**
STKA IAmb IAmb 05 23 10.8
comp=Z,35nm,1.2s
STKA Stephens Creek 87.97 171 *eP* P **05 23 07.3 +1.3**
STKA pmax pmax
comp=Z,4.0nm,0.8s
INKA Innaminka 92.00 170 P P **05 23 26.2 +1.4**
ASAR Alice Springs 95.22 163 P P **05 23 40.0 +0.3**
comp=Z,2.6nm,0.6s,baz=184,slow=4.1,SNR=27
ASAR LR LR 06 05 03.9
comp=Z,36nm,19.1s,baz=247,slow=34
comp=Z,2.6nm,0.6s
ASAR Alice Springs 95.22 163 P P **05 23 40.1 +0.4**
WRA Warramunga Arr 98.94 163 P Pdif 05 23 56.4 -0.1
comp=Z,0.5nm,0.6s,baz=193,slow=4.3,SNR=6.5
WRA PKKPbc **PKKPdf** **05 40 21.6 -0.2**
comp=Z,0.4nm,0.9s,baz=360,slow=2.8,SNR=4.7
comp=Z,0.5nm,0.6s
OJC Ojcow 116.42 32 PKiKP PKiKP 05 29 01.9 +3.8
OJC Ojcow 116.42 32 PKiKP **PKiKP** **05 29 02.0 +3.8**
SCHQ Schefferville 118.73 335 PKP **PKPdf** **05 29 00.6 -1.9**
comp=Z,1.8nm,0.6s,baz=219,slow=4.1,SNR=3.9
SCHQ Schefferville 118.73 335 PKPdf 05 29 01.9 -0.6
PDAR Pinedale Array 122.25 300 PKP **PKPdf** **05 29 08.6 -1.4**
comp=Z,6.6nm,0.5s,baz=128,slow=5.0,SNR=9.8
NVAR Mina Array Bea 122.70 291 PKP **PKiKP** **05 29 11.7 +0.5**
comp=Z,1.1nm,0.6s,baz=126,slow=3.4,SNR=10.0
ULM Lac du Bonnet 122.96 315 PKP **PKPdf** **05 29 08.7 -2.1**
comp=Z,0.5nm,0.3s,baz=107,slow=3.1,SNR=3.9
ULM Lac du Bonnet 122.96 315 *e*PKIKP **PKPdf** **05 29 09.9 -0.8**
ULM pmax pmax
comp=Z,1.0nm,0.3s
MOOW Moose Ponds 123.55 300 PKPdf 05 29 11.9 -0.5
FXWY Fox Creek 123.58 300 PKiKP 05 29 12.6 -0.1
CMAR Chiang Mai Arr 123.77 113 PKP **PKiKP** **05 29 13.6 0.0**
comp=Z,1.0nm,0.3s,baz=231,slow=3.4,SNR=10.0
CMAR Chiang Mai Arr 123.77 113 PKPdf 05 29 13.4 +0.1
O03E Paynes Creek 125.83 290 PKiKP 05 29 17.1 0.0
FINES FINESS Array B 128.02 29 PKP **PKPdf** **05 29 19.4 -0.6**
comp=Z,4.4nm,0.9s,baz=122,slow=2.5,SNR=12
FINES pPKP **pPKPdf** **05 29 45.7 0.0**
comp=Z,3.2nm,0.7s,baz=34,slow=0.7,SNR=2.3
FINES SKPbc SKPbc 05 32 27.9
comp=Z,3.2nm,0.8s,baz=145,slow=5.1,SNR=6.8
FINES FINESS Array B 128.02 29 PKPdf 05 29 20.1 +0.1
FINES FINESS Array B 128.02 29 PKiKP **PKPdf** **05 29 20.1 +0.1**
KSH2 Kashi 129.26 78 PKP **PKiKP** **05 29 27.0 +2.9**
AB31 Akbulak array 129.75 58 PKPdf 05 29 23.7 0.0
ABKAR Akbulak array 129.75 58 PKPdf 05 29 23.3 -0.4
AAK Ala-Archa 131.41 74‖ *i*PKIKP **PKPdf** **05 29 27.2 -0.1**
PZH PanZhiHua 131.99 111 PKP **PKPdf** **05 29 29.3 +0.4**
BLKN Baker Lake 134.28 326 PKPdf 05 29 31.7 -0.1
ARCES ARCESS Array B 134.74 23 PKhKP PKPpre 05 29 22.9
comp=Z,3.2nm,0.8s,baz=212,slow=4.3,SNR=3.6
ARCES PKP **PKPdf** **05 29 31.9 -0.6**
comp=Z,3.0nm,0.8s,baz=215,slow=2.7,SNR=7.2
ARCES SKPbc **SKPbc** **05 32 52.2 -1.6**
comp=Z,3.7nm,0.8s,baz=211,slow=1.4,SNR=5.9
ARCES ARCESS Array B 134.74 23 PKIKP **PKPdf** **05 29 32.0 -0.6**

CD2 Chengdu 136.65 110 PKP **PKPdf** **05 29 37.5 +0.1**
BORK Borovoye 137.00 61‖ *i*PKIKP **PKiKP** **05 29 39.3 +0.2**
BVAR Borovoye Array 137.02 61 PKP **PKPdf** **05 29 36.7 -0.6**
comp=Z,1.7nm,0.5s,baz=198,slow=2.3,SNR=7.9
BVAR SKPbc **SKPbc** **05 32 59.8 -1.5**
comp=Z,4.2nm,0.7s,baz=245,slow=3.1,SNR=14
MK31 Makanchi Array 138.23 76‖ *i*PKIKP **PKPdf** **05 29 39.2 -0.6**
MKAR Makanchi Array 138.23 76 PKhKP PKPpre 05 29 29.8
comp=Z,0.3nm,0.6s,baz=222,slow=1.9,SNR=2.8
MKAR PKP **PKPdf** **05 29 40.5 +0.7**
comp=Z,0.4nm,0.3s,baz=210,slow=3.5,SNR=5.2
MKAR SKPbc **SKPbc** **05 33 03.8 -1.3**
comp=Z,2.1nm,0.7s,baz=228,slow=1.7,SNR=15
MKAR Makanchi Array 138.23 76 PKPdf **PKPdf** **05 29 39.2 -0.6**
WMQ Urumqi 138.77 83 *e*PKP **PKiKP** **05 29 42.6 -0.5**
YKA Yellowknife Ar 138.94 315 PKP **PKPdf** **05 29 40.1 -0.3**
comp=Z,3.0nm,0.8s,baz=126,slow=1.4,SNR=37
YKA PP **PP** **05 32 31.4 -3.3**
comp=Z,0.7nm,0.9s,baz=125,slow=5.9,SNR=6.0
YKA SKPbc **SKPbc** **05 33 04.9 -1.5**
comp=Z,0.2nm,0.5s,baz=126,slow=2.6,SNR=2.6
KURBB Kurchatov Arra 139.09 69 PKhKP PKPpre 05 29 34.6
comp=Z,0.3nm,0.4s,baz=230,slow=3.4,SNR=6.7
KURBB PKP **PKiKP** **05 29 42.5 -0.9**
comp=Z,1.3nm,0.8s,baz=235,slow=2.2,SNR=8.9
KURBB SKPbc **SKPbc** **05 33 05.7 -1.5**
comp=Z,0.6nm,0.7s,baz=230,slow=3.6,SNR=5.1
KURK Kurchatov 139.19 69‖ *i*PKIKP **PKPdf** **05 29 40.8 -0.5**
SPITS Spitsbergen Ar 140.54 13 PKhKP PKPpre 05 29 36.3
comp=Z,0.8nm,0.3s,baz=157,slow=4.5,SNR=8.5
SPITS SKPbc **SKPbc** **05 33 09.6 -0.8**
comp=Z,1.3nm,0.5s,baz=200,slow=2.2,SNR=6.3
KOTAN Kotaneelee Air 141.00 308 P **PKPdf** **05 29 45.5 +1.1**
baz=128
V35K Ketchikan 141.20 298 P **PKPdf** **05 29 45.7 +0.9**
baz=129
T35M Bob Quinn 141.63 301 P **PKPdf** **05 29 46.7 +1.1**
baz=128
CRAG Craig 141.96 297 P **PKPdf** **05 29 47.2 +1.1**
baz=128
U33K Whale Pass 142.35 298 P **PKPdf** **05 29 47.5 +0.7**
baz=128
S34M Telegraph Cree 142.57 301 P **PKPdf** **05 29 48.2 +1.0**
baz=127
WRGLY Wrigley 142.60 312 P **PKPdf** **05 29 48.5 +1.5**
baz=125
DGZ Jazzator, Alta 142.73 76 *e*PKIKP **PKPdf** **05 29 47.5 -0.5**
R33M Jennings River 143.38 303 P **PKPdf** **05 29 49.3 +0.5**
baz=125
Q32M Nakina River 143.68 302 P **PKPdf** **05 29 50.0 +0.6**
baz=125
S32K Killisnoo 143.81 299 P **PKPdf** **05 29 49.9 +0.6**
baz=126
SIT Sitka 143.90 298 P **PKPdf** **05 29 49.9 +0.4**
baz=126
ZAA0 Zalesovo Array 144.18 69 PKPab 05 29 48.0 -0.1
ZALV Zalesovo Beam 144.18 69 PKP **PKPab** **05 29 48.0 -0.2**
comp=Z,7.5nm,0.5s,baz=231,slow=3.8,SNR=40
ZALV pPKP **pPKPdf** **05 30 14.2 -1.7**
comp=Z,3.0nm,0.4s,baz=245,slow=2.5,SNR=4.7
ZALV SKPbc **SKPbc** **05 33 18.1 -2.0**
comp=Z,1.7nm,0.7s,baz=252,slow=4.0,SNR=6.8
R32K Eaglecrest 144.25 300 P PKPbc 05 29 49.0 +0.3
baz=125
NJ2 Nanjing 144.28 127 *eP* **PKPdf** **05 29 52.3 +1.3**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
P33M Teslin, Yukon 144.61 304 P **PKPab** **05 29 49.6 -0.1**
baz=123,SNR=20
P32M Atlin 144.64 302 P **PKPab** **05 29 49.9 0.0**
baz=124,SNR=13
S31K Pelican 144.82 299 P **PKPab** **05 29 50.4 0.0**
baz=124
N32M Quiet Lake 145.23 305 P **PKPbc** **05 29 51.7 0.0**
baz=122
SKAG Skagway 145.26 301 P **PKPdf** **05 29 51.8 0.0**
baz=123
WHY Whitehorse 145.72 303 P **PKPbc** **05 29 53.4 0.0**
baz=122
FARO Faro, Yukon 145.90 306 P **PKPbc** **05 29 53.8 0.0**
baz=121,SNR=9.6
C36M Paulatuk 145.98 321 P **PKPbc** **05 29 53.9 +0.2**
baz=117
O30N Mendenhall 146.28 303 P **PKPbc** **05 29 54.5 -0.5**
baz=121
M31M Drury Creek, Y 146.31 306 P **PKPbc** **05 29 54.4 -0.7**
baz=120,SNR=10
P30M Million Dollar 146.31 302 P **PKPdf** **05 29 54.4 +0.7**
baz=122
N31M Braeburn, Yuko 146.52 304 P **PKPbc** **05 29 54.9 -0.7**
baz=120
HYT Haines Junctio 146.91 302 P **PKPdf** **05 29 55.7 +0.9**
baz=120
HNS HongShan 147.07 116‖ PKPbc **PKPbc** **05 29 58.5 +0.6**
O29M Mount Kennedy 147.10 301 P **PKPdf** **05 29 56.1 +1.0**
baz=120
TIA Tai'an 147.15 121 PKPbc **PKPbc** **05 29 58.8 +0.6**
YUK6 Outpost Mounta 147.33 302 P **PKPdf** **05 29 56.7 +1.1**
baz=120
A36M Sachs Harbour 147.45 325 PKPbc 05 29 56.6 -1.2
A36M Sachs Harbour 147.45 325 P **PKPbc** **05 29 56.7 -1.2**
baz=112,SNR=23
M30M Minto, Yukon 147.47 306 P **PKPbc** **05 29 56.9 -1.3**
baz=118
BTO2 Baotou 147.50 107 *e*PKPbc **PKPdf** **05 29 52.3 -4.1**
BTO2 *e*PKPab **PKPbc** **05 30 00.1 +0.9**
BTO2 PP **PP** **05 33 27.0 +0.4**
MAYO Mayo, Yukon 147.58 308 PKPbc 05 29 58.5 0.0
MAYO Mayo, Yukon 147.58 308 P **PKPbc** **05 29 57.9 -0.6**
baz=117,SNR=5.3
YUK4 Talbot Arm 147.65 303 P **PKPbc** **05 29 58.4 -0.6**
baz=119
PINM Pinnacle 147.72 300 P **PKPbc** **05 29 58.4 -0.7**
baz=120
H31M Peel River 147.97 312 P **PKPbc** **05 29 58.7 -0.8**
baz=115
O28M Mount Upton 148.02 301 P **PKPbc** **05 29 59.5 -0.6**
baz=119
YUK8 Steele Glacier 148.09 302 P **PKPbc** **05 29 59.7 -0.6**
baz=118
M29M Somme Creek 148.09 305 P **PKPbc** **05 30 00.5 +0.4**
baz=118
J30M Hart River 148.19 309 P **PKPbc** **05 30 00.3 0.0**
baz=116
K29M Barlow Dome 148.34 307 P **PKPbc** **05 30 00.6 0.0**
baz=116
HHC Hu-ho-hao-te 148.38 109 *eP* **PKPab** **05 30 06.5 +1.5**
F31M Tsiigehtchic 148.42 315 P **PKPbc** **05 30 00.1 -0.5**
baz=113
I30M Mount Dempster 148.49 310 P **PKPbc** **05 30 00.3 -0.7**
baz=115
CTG Chitna Glacier 148.61 301 P **PKPbc** **05 30 00.6 -0.8**
baz=118
YUK3 Moose Creek 148.62 303 P **PKPbc** **05 30 00.6 -0.9**
baz=117
INK Inuvik 148.67 317 P **PKPbc** **05 30 00.4 -0.8**
baz=112
J29N Klondike Camp 148.88 308 P **PKPbc** **05 30 01.4 -0.6**
baz=115,SNR=8.0
BVCY Beaver Creek 149.07 304 P **PKPbc** **05 30 02.0 -0.4**
baz=116
G30M tAoh Zraii Nji 149.13 313 P **PKPbc** **05 30 01.9 -0.6**
baz=112
DAWY Dawson 149.18 307 P **PKPbc** **05 30 01.7 -0.9**
baz=115
F30M Barrier River 149.21 315 P **PKPbc** **05 30 02.1 -0.5**
baz=111
CRQE Cirque 149.27 300 P **PKPbc** **05 30 02.4 -0.6**
baz=118
I29M Ogilvie Camp, 149.28 310 P **PKPbc** **05 30 02.5 -0.4**
baz=113
KAIM Kayak Island 149.46 298 P **PKPbc** **05 30 02.6 -0.8**
baz=118
M27K Edge Creek, AK 149.47 303 P **PKPbc** **05 30 03.0 -0.6**
baz=116
MCARA McCarthy VSAT 149.53 301 P **PKPbc** **05 30 03.2 -0.3**
baz=117
L27K Beaver Creek, 149.75 304 P **PKPbc** **05 30 03.5 -0.5**
baz=115
G29M Pine Creek 149.76 313 P **PKPbc** **05 30 03.8 -0.2**
baz=111
BJT Baijiatuau 149.87 115 PKiKP 05 30 05.6 -0.3
BJT Baijiatuau 149.87 115 PKP2 **PKiKP** **05 30 05.6 -0.3**
I28M Miner Creek 149.95 309 P **PKPbc** **05 30 04.5 0.0**
baz=112
M26K Nabesna, AK 149.96 303 P **PKPbc** **05 30 04.1 -0.5**
baz=115

BMRM	Bremner River	150.03	300	P		PKPbc	05 30 04.5	-0.3
	baz=116							
Q23K	Middleton Isla	150.09	296	P		PKPbc	05 30 04.5	-0.4
	baz=118							
E29M	Blow River	150.22	316	P		PKPbc	05 30 04.2	-0.8
	baz=109							
N25K	Chitina, Valde	150.31	301	P		PKPbc	05 30 05.2	-0.3
	baz=116,SNR=6.4							
EYAK	Cordova Ski Ar	150.34	298	P		PKPbc	05 30 05.2	-0.2
	baz=117							
L26K	Log Cabin Wild	150.37	304	P		PKPbc	05 30 05.3	-0.3
	baz=114,SNR=10							
I27K	Kandik River	150.66	309	P		PKPbc	05 30 06.2	0.0
	baz=111,SNR=10							
MOY	Mondy	150.66	83	*e*	PKIKP	PKiKP	05 30 07.4	+0.1
F28M	Old Crow	150.68	314	P		PKPbc	05 30 06.0	-0.2
	baz=109,SNR=5.2							
P23K	Montague Islan	150.83	297	P		PKPbc	05 30 06.2	-0.4
	baz=117							
KLU	Klutina	150.83	300	P		PKPbc	05 30 06.8	0.0
	baz=115,SNR=7.7							
H27K	Steamboat Moun	150.84	310	P		PKPbc	05 30 06.2	-0.4
	baz=110							
E28M	Babbage River	150.87	316	P		PKPbc	05 30 06.4	-0.1
	baz=107							
HARP	HAARP	150.88	302	P		PKPbc	05 30 06.7	0.0
	baz=114							
SONM	Songino Array	150.93	94	PKPbc		PKPbc	05 30 07.8	+0.3
	comp=Z,7.6nm,0.5s,baz=217,slow=3.1,SNR=51							
SONM				pPKPbc		pPKPbc	05 30 32.6	-0.5
	comp=Z,4.7nm,0.8s,baz=227,slow=1.9,SNR=6.3							
SONM	Songino Array	150.93	94			PKPbc	05 30 07.6	+0.1
SCRK	Sand Creek	151.01	305	P		PKPbc	05 30 06.8	-0.3
	baz=112,SNR=16							
ZAK	Zakamensk	151.02	87	*e*	PKIKP	PKPbc	05 30 06.7	-0.9
ZAK				*e*			05 30 32.5	
ZAK					pmax	pmax		
	comp=Z,11nm,1.4s							
ZAK					pmax	pmax		
	comp=Z,7.0nm,1.1s							
J26L	Joseph Creek	151.03	307	P		PKPbc	05 30 07.0	-0.2
	baz=111,SNR=24							
GLI	Glacier Island	151.08	298	P		PKPbc	05 30 06.9	-0.3
	baz=116							
I26K	Coal Creek Min	151.15	308	P		PKPbc	05 30 07.1	-0.2
	baz=110							
M24K	Tolsona, Glenn	151.19	301	P		PKiKP	05 30 08.1	+0.1
	baz=114,SNR=9.1							
PAX	Paxson	151.24	303	P		PKPbc	05 30 07.9	+0.2
	baz=113,SNR=6.6							
RIDG	Independent Ri	151.27	305	P		PKPbc	05 30 07.1	-0.6
	baz=112,SNR=16							
E27K	Coleen River	151.47	314	P		PKPbc	05 30 08.2	+0.2
	baz=106,SNR=10							
D27M	Malcolm River	151.54	317	P		PKPbc	05 30 08.2	0.0
	baz=105							
SCM	Sheep Creek Mo	151.58	300	P		PKPbc	05 30 08.4	-0.1
	baz=114,SNR=5.7							
K24K	Donnelly Dome	151.68	304	P		PKPbc	05 30 08.8	+0.2
	baz=111							
M23K	Glacier View	151.74	300	P		PKiKP	05 30 09.0	-0.2
	baz=114							
SEW	Seward	151.80	296	P		PKPbc	05 30 08.7	-0.2
	baz=116							
J25K	Salcha River,	151.80	306	P		PKPbc	05 30 08.8	-0.1
	baz=110,SNR=14							
KNK	Knik Glacier	151.91	299	P		PKPbc	05 30 08.9	-0.3
	baz=114							
G26K	Porcupine Rive	151.92	311	P		PKPbc	05 30 08.6	-0.3
	baz=107,SNR=12							
SML	Sawmill	152.01	300	P		PKPbc	05 30 08.7	-0.7
	baz=113,SNR=6.5							
WAT6	Susitna Watana	152.05	301	P		PKPbc	05 30 09.4	-0.2
	baz=112,SNR=14							
DHY	Denali Highway	152.08	302	P		PKPbc	05 30 09.7	0.0
	baz=112							
O22K	Cooper Landing	152.08	296	P		PKPbc	05 30 09.2	-0.3
	baz=115							
PRP	Porcupine Dome	152.16	308	P		PKPbc	05 30 09.7	-0.1
	baz=108,SNR=9.5							
NRIK	Noril'sk	152.18	44	PKPbc		PKPbc	05 30 09.2	-0.3
	comp=Z,2.1nm,0.6s,baz=76,slow=3.0,SNR=3.9							
KDAK	Kodiak Island	152.19	290			PKPbc	05 30 09.8	0.0
KDAK	Kodiak Island	152.19	290	PKIKP		PKPbc	05 30 09.8	0.0
KDAK	Kodiak Island	152.19	290	P		PKPbc	05 30 09.5	-0.3
	baz=118							
BRSE	Bradley Lake S	152.23	294	P		PKPbc	05 30 10.0	+0.1
	baz=116							
OHAK	Old Harbor	152.26	288	P		PKPbc	05 30 10.1	+0.1
	baz=119							
F26K	Sheenjek River	152.27	313	P		PKiKP	05 30 10.4	+0.4
	baz=105							
PMR	Palmer	152.27	299	P		PKiKP	05 30 10.2	+0.1
	baz=113							
RC01	Rabbit Creek A	152.34	298	P		PKiKP	05 30 10.5	+0.2
	baz=114							
SII	Sitkinak Islan	152.36	287	P		PKPbc	05 30 10.1	-0.2
	baz=120							
HDA	Harding Lake	152.37	305	P		PKiKP	05 30 10.4	0.0
	baz=109,SNR=5.3							
ILAR	Eielson Array	152.47	306	PKPbc		PKPbc	05 30 09.2	-1.0
	comp=Z,7.5nm,0.6s,baz=323,slow=0.8,SNR=116							
ILAR	Eielson Array	152.47	306			PKPbc	05 30 09.7	-0.6
Q20K	Shuyak Island	152.49	291	P		PKiKP	05 30 11.0	+0.3
	baz=117							
WAT1	Susitna Watana	152.49	302	P		PKiKP	05 30 10.9	+0.2
	baz=111							
C27K	Jago River	152.57	317	P		PKiKP	05 30 10.8	+0.2
	baz=102							
HOM	Homer	152.60	294	P		PKiKP	05 30 11.3	+0.3
	baz=115							
M22K	Willow	152.77	299	P		PKPbc	05 30 10.9	-0.1
	baz=112							
F25K	Christian Rive	152.79	312	P		PKPbc	05 30 11.1	+0.1
	baz=104							
CAPN	Captain Cook N	152.84	296	P		PKPbc	05 30 11.1	0.0
	baz=114							
COLA	College	152.89	306			PKPbc	05 30 10.8	-0.4
COLA	College	152.89	306	PKIKP		PKPbc	05 30 10.8	-0.4
COLA	College	152.89	306	P		PKPbc	05 30 11.2	+0.1
	baz=108							
E25K	Arctic Village	152.90	313	P		PKiKP	05 30 11.3	0.0
	baz=104							
SUA	Susitna One	152.94	298	P		PKPbc	05 30 11.6	+0.1
	baz=113							
MCK	McKinley	152.97	303	P		PKPbc	05 30 11.2	-0.3
	baz=110,SNR=6.9							
C26K	Camden Bay	153.04	317	P		PKiKP	05 30 11.8	+0.3
	baz=100							
CUT	Chulitna	153.08	300	P		PKiKP	05 30 11.9	+0.1
	baz=111							
H24K	Noodor Dome	153.19	308	P		PKiKP	05 30 12.1	+0.1
	baz=106							
Q19K	Cape Douglas,	153.21	291	P		PKiKP	05 30 12.4	+0.1
	baz=116							
G24K	Hadweenzic Riv	153.26	310	P		PKiKP	05 30 13.0	+0.9
	baz=105							
NEA2	Nenana	153.30	305	P		PKPbc	05 30 12.0	-0.1
	baz=108							
P19K	Oil Pt	153.33	293	P		PKPbc	05 30 12.1	-0.3
	baz=115							
D25K	Kavik River	153.43	316	P		PKPbc	05 30 12.3	0.0
	baz=100							
TRF	Thorofare Moun	153.45	302	P		PKPbc	05 30 12.6	-0.1
	baz=109							
SKT	Skwentna	153.48	299	P		PKiKP	05 30 12.7	0.0
	baz=111							
I23K	Minto, Yukon-K	153.59	306	P		PKiKP	05 30 13.1	+0.4
	baz=106							
H23K	Yukon River	153.84	308	P		PKiKP	05 30 13.6	+0.2
	baz=105							
R17L	Mt. Peulik Vol	153.92	287	P		PKPbc	05 30 13.5	-0.2
	baz=117							
BPAW	Bear Paw Mtn.	153.95	303	P		PKPbc	05 30 12.8	-0.7
	baz=108							
E24K	Your Creek	153.95	313	P		PKiKP	05 30 13.8	+0.2
	baz=101							
O19K	Port Alsworth	154.05	294	P		PKPbc	05 30 13.7	-0.2
	baz=113							
PPLA	Purkeypile	154.08	300	P		PKPbc	05 30 13.7	-0.3
	baz=109							
MLY	Manley	154.11	305	P		PKiKP	05 30 14.0	0.0
	baz=106							
CHNA	Chernabura Isl	154.12	280	P		PKPbc	05 30 13.5	-0.6
	baz=121							
M20K	Styx River	154.15	298	P		PKPbc	05 30 13.9	-0.2
	baz=110							
P18K	Big Mountain,	154.15	292	P		PKPbc	05 30 13.9	-0.2
	baz=114							
G23K	Bananza Creek	154.25	309	P		PKiKP	05 30 14.4	+0.2
	baz=103							
D24K	Happy Valley	154.27	315	P		PKiKP	05 30 14.3	+0.2
	baz=99							
C24K	Franklin Bluff	154.31	316	P		PKiKP	05 30 14.5	+0.3
	baz=98							
O18K	Koktuh Hills	154.33	293	P		PKPbc	05 30 14.0	-0.4
	baz=113							
N19K	Bonanza Creek	154.37	295	P		PKPbc	05 30 14.1	-0.5
	baz=112							
E23K	Chandalar	154.37	313	P		PKPbc	05 30 14.4	0.0
	baz=100							
COLD	Coldfoot	154.43	311	P		PKPbc	05 30 14.4	0.0
	baz=102							
CHUM	Lake Minchumin	154.44	303	P		PKiKP	05 30 14.7	+0.1
	baz=107							
R16K	Pilot Point	154.47	287	P		PKiKP	05 30 15.5	+0.7
	baz=117							
Q16K	King Salmon	154.52	289	P		PKiKP	05 30 16.0	+1.2
	baz=115							
H22K	Ishtalitna Cre	154.59	307	P		PKiKP	05 30 16.2	+1.3
	baz=104							
P17K	Kvichak River	154.63	291	P		PKPab	05 30 31.1	+0.7
	baz=114							
I21K	Tanana	154.66	306	P		PKPab	05 30 31.1	+0.7
	baz=105							
SDPT	Sand Point	154.83	280	P		PKPab	05 30 32.1	+0.8
	baz=120							
D23K	Nanushuk River	154.90	315	P		PKPab	05 30 31.2	-0.2
	baz=98,SNR=6.1							
N18K	Kilae Creek	154.96	294	P		PKPab	05 30 31.5	-0.3
	baz=112							
C23K	Itkillik River	154.98	317	P		PKPab	05 30 31.7	0.0
	baz=96							
L19K	White Mountain	155.01	298	P		PKPab	05 30 31.5	-0.6
	baz=109							
K20K	Telida	155.04	301	P		PKPab	05 30 32.3	+0.2
	baz=107							
H21K	Melozitna Rive	155.11	306	P		PKPab	05 30 32.4	+0.1
	baz=103							
O17K	Koliganek Bris	155.17	292	P		PKPab	05 30 32.5	-0.2
	baz=113							
M18K	Stony River	155.22	296	P		PKPab	05 30 33.2	+0.4
	baz=110							
P16K	Nushagak River	155.30	290	P		PKPab	05 30 33.5	+0.2
	baz=114							
N17K	Nushagak Hills	155.50	293	P		PKPab	05 30 33.7	-0.4
	baz=111							
G21K	Allakaket	155.57	308	P		PKPab	05 30 34.2	-0.1
	baz=101							
O16K	Kokwok River B	155.57	291	P		PKPab	05 30 34.6	+0.2
	baz=113							
D22K	Aniyak River	155.61	314	P		PKPab	05 30 34.9	+0.5
	baz=96							
F21K	Alatna River	155.68	310	P		PKPab	05 30 35.0	+0.2
	baz=99							
H20K	Anotleneega Mo	155.92	306	P		PKPab	05 30 35.5	-0.3
	baz=102							
M17K	Holitna River	155.92	295	P		PKPab	05 30 36.2	+0.3
	baz=109							
E21K	Killik River	156.03	313	P		PKPab	05 30 35.8	-0.5
	baz=96							
FALS	False Pass	156.03	277	P		PKPab	05 30 36.7	+0.2
	baz=120							
J18K	Innoko River	156.21	300	P		PKPab	05 30 37.3	+0.2
	baz=105							
N16K	Nishlik Lake	156.21	292	P		PKPab	05 30 37.5	+0.3
	baz=110							
O15K	Ungalikthiuk R	156.23	289	P		PKPab	05 30 37.5	+0.3
	baz=113							
C21K	Knifeblade Rid	156.39	315	P		PKPab	05 30 37.9	+0.1
	baz=94							
M16K	Timber Creek	156.49	294	P		PKPab	05 30 38.6	+0.2
	baz=109							
F20K	Avaraart Lake	156.52	309	P		PKPab	05 30 38.4	+0.1
	baz=98							
L17K	Donlin	156.54	297	P		PKPab	05 30 38.6	+0.1
	baz=107							
GCSA	Galena City Sc	156.59	303	P		PKPab	05 30 38.9	+0.3
	baz=102							
K17K	Iditarod	156.70	298	P		PKPab	05 30 39.3	0.0
	baz=106							
N15K	Kwethluk River	156.72	291	P		PKPab	05 30 39.3	-0.1
	baz=111							
E20K	Nigu River	156.83	312	P		PKPab	05 30 39.0	-0.7
	baz=95							
G19K	Purcell Mounta	156.93	307	P		PKPab	05 30 39.4	-0.8
	baz=99							
O14K	Tigyukauivet M	156.94	288	P		PKPab	05 30 39.7	-0.6
	baz=102							
L16K	Owhat River	156.94	295	P		PKPab	05 30 40.0	-0.2
	baz=108							
D20K	Etivluk River	157.02	313	P		PKPab	05 30 40.0	-0.5
	baz=93							
A21K	Barrow	157.03	320	P		PKPab	05 30 39.8	-0.6
	baz=87							
UNV	Unalaska Valle	157.05	273	P		PKPab	05 30 40.3	-0.6
	baz=122							
E19K	Redstone River	157.15	310	P		PKPab	05 30 40.9	-0.2
	baz=96							
M15K	Kasigluk River	157.18	292	P		PKPab	05 30 40.7	-0.6
	baz=109							
J17K	VABM Dome	157.22	299	P		PKPab	05 30 41.1	-0.4
	baz=104							
H18K	Honhosa River	157.28	304	P		PKPab	05 30 41.4	-0.3
	baz=100							
F19K	Shaleruckik Mo	157.29	308	P		PKPab	05 30 41.6	0.0
	baz=97							
N14K	Kuskokwak Cree	157.38	290	P		PKPab	05 30 42.0	-0.2
	baz=110							
G18K	Tagagawik	157.52	306	P		PKPab	05 30 42.0	-0.7
	baz=98							
D19K	Kuna River	157.56	313	P		PKPab	05 30 42.6	-0.2
	baz=92,SNR=5.5							
NIKH	Nikolski High	157.75	269	P		PKPab	05 30 42.8	-1.2
	baz=124							
M14K	Betel	157.79	292	P		PKPab	05 30 43.6	-0.3
	baz=108							
L15K	Ungalak Mounta	157.85	294	P		PKPab	05 30 44.5	+0.3
	baz=106							
J16K	Anvik River	157.86	299	P		PKPab	05 30 43.7	-0.5
	baz=103							
H17K	Granite Mounta	157.90	303	P		PKPab	05 30 44.1	-0.3
	baz=100							
F18K	Selawik	158.01	308	P		PKPab	05 30 44.7	-0.1
	baz=96							
I17K	Unalakleet	158.03	300	P		PKPab	05 30 45.2	+0.2
	baz=102							
K15K	Wolf Creek Mou	158.04	296	P		PKPab	05 30 45.6	+0.6
	baz=105							
C19K	Lookout Ridge	158.10	314	P		PKPab	05 30 45.6	+0.4
	baz=90,SNR=5.5							
G17K	Kiwalik Mounta	158.29	305	P		PKPab	05 30 46.2	+0.1
	baz=98							
M13K	Dall Lake	158.33	290	P		PKPab	05 30 46.2	-0.1
	baz=108							
E18K	Tukpahlearik C	158.45	310	P		PKPab	05 30 46.4	-0.3
	baz=93							
F17K	Baldwin Pennin	158.63	307	P		PKPab	05 30 47.0	-0.4
	baz=95							
C18K	Utukok River	158.69	313	P		PKPab	05 30 46.9	-0.9
	baz=89							
H16K	Elim	158.83	302	P		PKPab	05 30 47.8	-0.6
	baz=99							
E17K	Hotham Inlet	158.91	309	P		PKPab	05 30 48.6	-0.1
	baz=93							
G16K	Koyuk River	158.98	304	P		PKPab	05 30 49.5	+0.5
	baz=97							
J14K	Nanvaranak Lak	159.06	296	P		PKPab	05 30 50.1	+0.8
	baz=103							
RDOG	Red Dog Mine	159.34	311	P		PKPab	05 30 50.8	+0.3
	baz=89							
K13K	Kusilvak Mount	159.37	294	P		PKPab	05 30 50.5	-0.3
	baz=104							
D17K	Noatak River	159.41	310	P		PKPab	05 30 50.6	-0.3
	baz=90							
C17K	DeLong Mountai	159.43	313	P		PKPab	05 30 50.9	-0.1
	baz=88,SNR=7.8							
G15K	Niukluk	159.64	303	P		PKPab	05 30 52.1	+0.2
	baz=96							
M11K	Mekoryuk	159.67	289	P		PKPab	05 30 52.7	+0.6
	baz=107							
P08K	Saint George I	159.91	277	P		PKPab	05 30 52.8	-0.5
	baz=116							
F15K	North Star Dit	159.96	305	P		PKPab	05 30 53.2	-0.1
	baz=94							
ANM	Nome	160.16	301	P		PKPab	05 30 53.9	-0.3
	baz=96							
C16K	Lisburne Hills	160.24	312	P		PKPab	05 30 55.1	+0.7
	baz=86							
SPIA	Saint Paul Isl	160.51	278	P		PKPab	05 30 55.3	-0.6
	baz=114							
F14K	Arctic Creek	160.64	304	P		PKPab	05 30 55.8	-0.5
	baz=93							
TNA	Tin City	161.31	304	P		PKPab	05 30 58.8	-0.4
	baz=92							

UCR 17 05:25:47.7±1.0, 9.92N×83.41W, h13^{km}±2^{km}, MW3.7, 6C-24D, Presumed earthquake, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAAN	**Batan**	**0.18**	**20**	⇓*i*	**P**	**Pb** 05 25 52.6	-0.3
TAAN				*e*	**S**	**Sb** 05 25 57.0	+0.7
LCOCO	**El Coco**	**0.22**	**319**	⇓*i*	**P**	**Pb** 05 25 53.6	-0.1
LCOCO				*e*	**S**	**Sb** 05 25 58.1	+0.4
RESJ	**San Isidro (Tu**	**0.26**	**296**	⇓*i*	**P**	**Pb** 05 25 54.0	-0.3
RESJ				*e*	**S**	**Sb** 05 25 59.1	+0.4
RVLA	**Villa Bonita**	**0.26**	**317**	⇓*i*	**P**	**Pb** 05 25 53.9	-0.4
RVLA				*e*	**S**	**Sb** 05 25 58.9	+0.1
TURIB	**Turrialba**	**0.27**	**268**	⇑*i*	**P**	**Pg** 05 25 53.8	+0.3
TURIB				*e*	**S**	**Sb** 05 25 58.4	-0.8
VERB	**Verbena**	**0.28**	**276**	⇓*i*	**P**	**Pb** 05 25 54.4	-0.3
VERB				*e*	**S**	**Sb** 05 25 59.5	0.0
ABRB	**Las Abras (San**	**0.32**	**287**	⇓*e*	**P**	**Pb** 05 25 55.1	-0.3
ABRB				*e*	**S**	**Sb** 05 26 00.9	+0.3
VTCV	**VTCV, Calle Va**	**0.32**	**282**	⇓*i*	**P**	**Pb** 05 25 55.0	-0.4
VTCV				*e*	**S**	**Sb** 05 26 00.2	-0.4
VINA	**Juan Vinas**	**0.33**	**267**	⇑*i*	**P**	**Pg** 05 25 54.8	+0.2
VINA				*e*	**S**	**Sb** 05 26 00.8	-0.8
CVTV	**Tajo**	**0.35**	**285**	⇓*i*	**P**	**Pb** 05 25 55.6	-0.3
CVTV				*e*	**S**	**Sb** 05 26 01.4	-0.1
CVTR	**Volcan Turrial**	**0.36**	**287**	⇓*i*	**P**	**Pg** 05 25 55.6	+0.5
CVTR				*e*	**S**	**Sb** 05 26 01.6	-0.4
VTR0	**Volcan Turrial**	**0.36**	**286**	⇓*i*	**P**	**Pb** 05 25 55.8	-0.5
VTR0				*e*	**S**	**Sb** 05 26 01.5	-0.5
CVTQ	**Turrialba Volc**	**0.36**	**284**	⇓*i*	**P**	**Pb** 05 25 55.9	-0.3
CVTQ				*e*	**S**	**Sb** 05 26 02.0	0.0
PCAYA	**Pacayas**	**0.40**	**270**	*eP*		**Pg** 05 25 56.0	+0.3
PCAYA				*e*		**Sb** 05 26 02.1	-0.7
RAFA	**San Farael, Vo**	**0.40**	**276**	⇓*i*	**P**	**Pg** 05 25 56.1	+0.3
RAFA				*e*	**S**	**Sb** 05 26 02.4	-0.6
VICA	**Volcano Irazu**	**0.44**	**279**	⇓*i*	**P**	**Pg** 05 25 56.7	+0.2
VICA				*e*	**S**	**Sb** 05 26 03.5	-0.7
REPA	**Paraso**	**0.46**	**259**	⇑*eP*		**Pg** 05 25 57.0	+0.1
REPA				*e*	**S**	**Sb** 05 26 03.9	-0.7
PILE	**Guapiles**	**0.48**	**309**	⇓*i*	**P**	**Pb** 05 25 57.7	-0.3
PILE				*e*	**S**	**Sb** 05 26 04.8	+0.5
BUS1	**Rivas**	**0.49**	**223**	⇓*i*	**P**	**Pg** 05 25 57.2	-0.3
BUS1				*e*	**S**	**Sg** 05 26 04.1	-0.1
CEUA	**Cerro Uatsi, L**	**0.55**	**122**	⇑*eP*		**Pb** 05 25 59.5	+0.3
CEUA				*e*	**S**	**Sb** 05 26 08.3	+1.3
CARI	**Cariari**	**0.55**	**324**	⇓*i*	**P**	**Pg** 05 25 58.6	+0.1
CARI				*e*	**S**	**Sb** 05 26 07.8	+0.7
TRIO	**Tres Rios**	**0.58**	**269**	*eP*		**Pg** 05 25 58.6	-0.4
TRIO				*e*	**S**	**Sg** 05 26 06.9	+0.1
PIEC	**Cerro El Cedra**	**0.61**	**242**	*eP*		**Pg** 05 25 59.7	-0.1
PIEC				*e*	**S**	**Sg** 05 26 07.9	-0.1
ZEDO	**Perez Zeledon**	**0.62**	**206**	*eP*		**Pg** 05 25 59.0	-0.8
ECI	**Escuela Centro**	**0.64**	**272**	*eP*		**Pg** 05 25 59.7	-0.4
SJS	**Escuela Geolog**	**0.64**	**272**	*eP*		**Pg** 05 26 00.0	-0.1
SJS				*e*	**S**	**Sg** 05 26 09.1	+0.4
AMPA	**Desamparados**	**0.65**	**268**	*eP*		**Pn** 05 26 04.5	+1.9
AMPA				*e*	**S**	**Sg** 05 26 08.6	-0.3
BRIBI	**Bribri**	**0.65**	**117**	*eP*		**Pb** 05 26 01.1	+0.1
BRIBI				*e*	**S**	**Sb** 05 26 11.2	+1.3
LUJA	**Lujan**	**0.65**	**271**	*eP*		**Pg** 05 26 00.4	-0.1
LUJA				*e*	**S**	**Sg** 05 26 09.6	+0.4
PITB	**Pirrs, San**	**0.66**	**247**	*eP*		**Pg** 05 26 00.5	-0.1
PITB				*e*	**S**	**Sg** 05 26 09.0	-0.3
RAZU	**San Marcos de**	**0.66**	**247**	*eP*		**Pg** 05 25 59.7	-0.8
DRK0	**Durika**	**0.67**	**166**	*eP*		**Pg** 05 25 58.0	-2.7
DOMI	**Santo Domingo**	**0.68**	**276**	*eP*		**Pg** 05 26 01.1	+0.2
DOMI				*e*	**S**	**Sb** 05 26 10.9	+0.1
HDC	**Heredia**	**0.70**	**277**	*eP*		**Pg** 05 26 01.4	0.0
HDC				*e*	**S**	**Sb** 05 26 11.4	-0.1
TRT2	**Tortugero**	**0.71**	**333**	*eP*		**Pg** 05 26 00.9	-0.8
TRT2				*e*	**S**	**Sn** 05 26 13.3	-1.1
BURE	**Buenos Aires**	**0.74**	**175**	⇓*i*	**P**	**Pg** 05 26 01.0	-1.1
BURE				*e*	**S**	**Sg** 05 26 10.9	-1.0
ACOS	**Acosta**	**0.75**	**261**	*eP*		**Pg** 05 26 02.5	+0.2
ACOS				*e*	**S**	**Sg** 05 26 12.2	-0.1
EDPE	**Pejibaye, P**	**0.77**	**192**	⇓*i*	**P**	**Pg** 05 26 01.8	-0.9
EDPE				*e*	**S**	**Sg** 05 26 12.2	-0.5
BELE	**Belen**	**0.77**	**275**	*eP*		**Pg** 05 26 02.6	-0.1
BELE				*e*	**S**	**Sg** 05 26 12.4	-0.5
PICV	**PH. Pirrs**	**0.83**	**250**	*eP*		**Pg** 05 26 02.6	-1.2
PICV				*e*	**S**	**Sg** 05 26 13.7	-0.9
ARTO	**Ro Cuarto**	**0.90**	**298**	*eP*		**Pg** 05 26 04.2	-1.0
ARTO				*e*	**S**	**Sg** 05 26 16.7	-0.3
EDP2	**Potrero Grande**	**0.92**	**166**	⇓*eP*		**Pg** 05 26 04.5	-1.1
EDP2				*e*	**S**	**Sg** 05 26 16.9	-0.7
PANP	**Palmar Norte**	**0.95**	**183**	⇑*iP*		**Pb** 05 26 05.6	-0.4
PANP				*e*	**S**	**Sn** 05 26 19.7	-0.5
ITAL	**Pital**	**1.00**	**302**	*eP*		**Pb** 05 26 06.0	-1.0
ITAL				*e*	**S**	**Sb** 05 26 20.0	-0.1
TRB2	**Turrubares**	**1.02**	**270**	*eP*		**Pb** 05 26 06.7	-0.7
ALCO	**Alturas Coton,**	**1.11**	**149**	⇓*iP*		**Pb** 05 26 07.1	-1.8
VITO	**San Vito**	**1.17**	**158**	⇑*iP*		**Pb** 05 26 09.3	-0.6
ARZA	**Esparza**	**1.24**	**274**	*eP*		**Pn**

C19K	**Lookout Ridge**	**21.11**	**27**	P	**P**	**05 37 13.7**	**+2.9**
C19K				IAmb	IAmb	05 37 24.9	
	comp=Z,1.7nm,1.1s						
L22K	**Petersville**	**21.52**	**47**	P	**P**	**05 37 15.8**	**+0.6**
SCM	**Sheep Creek Mo**	**23.00**	**50**	P	**P**	**05 37 29.9**	**-1.1**
D22K	**Ayikyak River**	**23.04**	**31**	P	**P**	**05 37 31.2**	**-0.1**
CCB	**Clear Creek Bu**	**23.29**	**43**	P	**P**	**05 37 33.7**	**-0.1**
CCB				IAmb	IAmb	05 37 36.1	
	comp=Z,1.7nm,1.1s						
ILAR	**Eielson Array**	**23.70**	**43**	P	**P**	**05 37 37.8**	**0.0**
	comp=Z,0.2nm,0.6s,baz=259,slow=7.3,SNR=4.8						
	comp=Z,0.2nm,0.6s						
PRP	**Porcupine Dome**	**24.43**	**41**	P	**P**	**05 37 44.5**	**-0.3**
PRP				IAmb	IAmb	05 38 08.6	
	comp=Z,1.3nm,1.0s						
BMAR	**Burnt Mountain**	**25.28**	**37**	P	**P**	**05 37 52.5**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**32.85**	**192**	T	T	06 14 03.3	
	baz=8.1,slow=76,SNR=7.5						
H11N3	**WAKE ISLAND Hy**	**32.86**	**192**	T	T	06 13 52.7	
	baz=8.1,slow=76,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**32.87**	**192**	T	T	06 13 54.5	
	baz=8.1,slow=76,SNR=6.9						
H11S1	**WAKE ISLAND Hy**	**34.08**	**192**	T	T	06 15 33.1	
	baz=7.6,slow=76,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**34.09**	**192**	T	T	06 15 31.7	
	baz=7.6,slow=76,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**34.10**	**192**	T	T	06 15 33.3	
	baz=7.6,slow=76,SNR=4.8						
MKAR	**Makanchi Array**	**55.70**	**304**	P	**P**	**05 42 04.9**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=54,slow=6.4,SNR=6.6						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.70**	**304**	P	**P**	**05 42 03.6**	**+1.3**
TXAR	**Lajitas Array**	**63.13**	**76**	P	**P**	**05 42 53.7**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=300,slow=3.9,SNR=3.8						
	comp=Z,0.4nm,1.0s						
ABKAR	**Akbulak array**	**64.27**	**318**	P	**P**	**05 43 02.1**	**+1.1**

*AFAD **17** 05:39:28.6, 36°.13N×36°.25E, h9km±2km, ML2.5*
*ISK **17** 05:39:29.7, 36°.13N×36°.15E, h5km, ML2.3/13*

ISC 17 05:39:28.4±1.5, 36°.09N±0°.06×36°.24E±0°.02, h3km±10km, n29, σ0°82/45, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAHT	**Tahtakopru-Hat**	**0.29**	**352**	Pg	**Pg**	**05 39 34.9**	**+0.9**
RHAN	**Hatay/Reyhanl**	**0.34**	**60**	P	**Pg**	**05 39 35.1**	**+0.1**
RHAN				S	**Sg**	**05 39 39.7**	**+0.2**
RHAN				IAML		05 39 40.0	
	comp=N,922nm,0.2s						
ASUZ	**Hatay-Arsuz**	**0.42**	**299**	P	**Pg**	**05 39 37.2**	**+0.8**
ASUZ				S	**Sg**	**05 39 42.4**	**+0.6**
ASUZ				IAML		05 39 46.0	
	comp=N,286nm,0.3s						
HASA	**Hatay-Hassa-Ha**	**0.69**	**17**	P	Pn	05 39 51.3	+6.1
YURE	**YUREGIR**	**0.88**	**327**	P	**Pb**	**05 39 46.8**	**+0.4**
KUZU	**Kuzuini**	**0.96**	**44**	P	**Pg**	**05 39 46.7**	**-0.2**
KUZU				S	**Sg**	**05 39 58.9**	**-0.5**
KUZU				IAML		05 40 02.0	
	comp=E,359nm,0.3s						
KUZU				IAML		05 40 04.0	
	comp=N,613nm,0.3s						
CEYT	**Ceyhan**	**1.00**	**337**	Pg	**Pb**	**05 39 48.1**	**-0.3**
CEYT				Sg	**Sb**	**05 40 01.3**	**-0.7**
KAMA	**Osmaniye**	**1.15**	**17**	P	**Pb**	**05 39 51.0**	**0.0**
KAMA				S	**Sb**	**05 40 06.5**	**+0.1**
GAZ	**Gaziantep**	**1.34**	**36**	Pn	**Pb**	**05 39 54.8**	**+0.6**
KOZT	**Kozan**	**1.43**	**347**	Pn	**Pb**	**05 39 56.0**	**+0.3**
KOZT				Sn	**Sn**	**05 40 15.6**	**+1.0**
ANDN	**Andirin**	**1.49**	**3**	P	**Pg**	**05 39 57.8**	**+0.7**
ANDN				S	**Sg**	**05 40 15.3**	**-1.1**
KHMN	**Narli-Kahraman**	**1.50**	**29**	Pn	**Pg**	**05 39 57.7**	**+0.6**
KHMN	**Narli-Kahraman**	**1.50**	**29**	P	**Pg**	**05 39 57.8**	**+0.6**
NZIP	**Nizip/Gaziante**	**1.50**	**50**	P	**Pn**	**05 39 55.7**	**-0.7**
NZIP				S	**Sb**	**05 40 14.1**	**-2.4**
NZIP				IAML		05 40 16.0	
	comp=N,57nm,0.2s						
NZIP				IAML		05 40 17.0	
	comp=E,72nm,0.4s						
KARA	**Karaisali**	**1.51**	**321**	Pn	**Pg**	**05 39 56.8**	**-0.5**
KARA				Sn	**Sn**	**05 40 16.4**	**-0.1**
KMRS	**Kahramanmaras**	**1.51**	**20**	Pn	**Pg**	**05 39 57.8**	**+0.4**
KMRS				Sn	**Sn**	**05 40 18.2**	**+1.5**
GZT	**Gaziantep**	**1.66**	**40**	P	**Pb**	**05 39 59.7**	**0.0**
GZT				S	**Sn**	**05 40 20.1**	**-0.3**
GZT				IAML		05 40 27.0	
	comp=N,52nm,0.3s						
GULE	**Gulek**	**1.67**	**316**	P	**Pg**	**05 40 00.4**	**-0.1**
GULE				S	**Sg**	**05 40 21.2**	**-0.9**
GULE				IAML		05 40 24.0	
	comp=N,42nm,0.6s						
KIZK	**Mersin**	**1.73**	**284**	Pn	**Pb**	**05 40 00.2**	**-0.7**
KIZK				Sn	**Sn**	**05 40 22.3**	**+0.2**
KIZK	**Mersin**	**1.73**	**284**	P	**Pn**	**05 39 59.7**	**+0.2**
KIZK				S	**Sn**	**05 40 22.1**	**0.0**
KIZK				IAML		05 40 28.0	
	comp=N,33nm,0.3s						
CMRD	**Camardi-Nigde**	**1.86**	**328**	Pn	**Pn**	**05 40 01.8**	**+0.5**
CMRD				Sn	**Sb**	**05 40 25.6**	**-1.3**
SILI	**Silifke-Mersin**	**1.89**	**279**	Pn	**Pn**	**05 40 02.5**	**+0.9**
AKCA	**Adyaman/G¶l**	**2.06**	**34**	P	**Pg**	**05 40 07.7**	**-0.2**
AKCA				S	**Sg**	**05 40 33.5**	**-1.2**
AKCA				IAML		05 40 36.0	
	comp=E,45nm,0.3s						
IKL	**Isikli**	**2.07**	**275**	Pn	**Pn**	**05 40 04.9**	**+0.9**
KEBE	**Keben-Mersin**	**2.07**	**281**	Pn	**Pn**	**05 40 04.9**	**+0.8**
SURC	**SANLIURFA_SURC**	**2.07**	**67**	P	**Pn**	**05 40 05.8**	**+1.6**
SURC				S	**Sn**	**05 40 30.9**	**+0.4**
SURC				IAML		05 40 35.0	
	comp=N,64nm,0.3s						
KERG	**Konya-Eregli**	**2.15**	**309**	P	**Pb**	**05 40 07.3**	**-0.8**
SARI	**SarD1z-Kayseri**	**2.32**	**4**	Pn	**Pn**	**05 40 09.0**	**+1.3**
AKCD	**Akcadag**	**2.58**	**31**	P	**Pn**	**05 40 11.6**	**+0.3**

IDC 17 06:02:36.0±3.1, 19°.76N×122°.08E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=265.4km s-min=22.3km az=62.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.24**	**162**	P	P	06 10 22.4	-0.5
	0.1nm,0.3s,baz=343,slow=10,SNR=5.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**42.15**	**319**	P	P	06 10 30.7	+0.5
	0.7nm,0.7s,baz=127,slow=8.1,SNR=8.9						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**44.67**	**165**	P	P	06 10 51.2	+0.4
	0.1nm,0.3s,baz=341,slow=8.3,SNR=1.7						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**46.07**	**322**	P	P	06 11 00.8	-0.7
	0.9nm,0.7s,baz=121,slow=8.3,SNR=10						
	0.9nm,0.7s						

IDC 17 06:02:58.4±8.1, 18°.01S×176°.56W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=353.7km s-min=38.4km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.34**	**259**	P	P	06 11 26.4	-0.2
	0.4nm,0.5s,baz=96,slow=7.5,SNR=7.3						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**46.46**	**254**	P	P	06 11 27.5	0.0
	0.6nm,0.5s,baz=90,slow=7.7,SNR=8.9						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**85.61**	**12**	P	P	06 15 38.3	0.0
	0.4nm,1.1s,baz=206,slow=5.1,SNR=5.2						
	0.4nm,1.1s						

KRSC 17 06:13:07.9±1.4, 49°.38N×156°.92E, h14km±26km, MI3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.41**	**339**	*eS*	Sn	06 13 50.6	-0.9
PAU	**Pauzhetka**	**2.09**	**358**	*eS*	Sb	06 14 11.0	-0.5
KDTR	**Khodutka, Kamc**	**2.54**	**16**	*eP*	Pb	06 13 51.3	-2.0
KDTR				*eS*	Sb	06 14 23.4	-1.1
ASAK	**Asacha**	**3.07**	**11**	*eP*	Pn	06 13 58.8	+2.6
MTVR	**Mutnovka**	**3.21**	**14**	*eP*	Pn	06 14 00.9	+2.8
MTVR				*eS*	Sb	06 14 40.3	-3.5
RUS	**Russkaya**	**3.22**	**18**	*eP*	Pn	06 14 00.6	+2.5
RUS				*eS*	Sn	06 14 39.8	+3.5
GRL	**Gorelyy**	**3.26**	**12**	*eP*	Pn	06 14 01.8	+3.1
AVH	**Avacha**	**4.05**	**16**	*eP*	Pn	06 14 14.3	+4.6
KOK	**Koryaka**	**4.06**	**15**	*eP*	Pn	06 14 14.1	+4.3
SMAR	**Somma**	**4.07**	**16**	*eP*	Pn	06 14 14.6	+4.7
SDLR	**Sedlovina**	**4.09**	**17**	*eP*	Pn	06 14 13.4	+3.1
KRX	**Arik**	**4.13**	**15**	*eP*	Pn	06 14 14.0	+3.3
SPN	**Mys Shipunski**	**4.20**	**26**	*eS*	Sn	06 15 05.3	+4.8

*IDC **17** 06:19:47.0±1.3, 55°.69S×26°.76W, h0km, mb4.1/4, mbtmp4.0/4, Error ellipse: s-maj=62.2km s-min=33.1km az=30.0*
*NEIC **17** 06:19:51.6±1.4, 55°.8S±0°.2×26°.9W±0°.2, h35km±2km, mb4.6/20, Error ellipse: s-maj=28.4km s-min=17.7km az=30.0*

ISC 17 06:19:54.3±0.8, 55°.9S±0°.1×27°.2W±0°.1, h63km, n32, σ1°21/27, mb4.5/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.57**	**283**	Pn	**Pn**	**06 21 12.8**	**-1.7**
PMSA	**Palmer Station**	**20.03**	**229**	P	**P**	**06 24 21.3**	**-0.3**
BELA	**Belgrano 2**	**22.27**	**184**	P	**P**	**06 24 44.0**	**-1.6**
BELA				IAmb	IAmb	06 24 44.1	
	comp=Z,21nm,1.2s						
MG01	**Puerto William**	**22.76**	**255**	P	**P**	**06 24 52.0**	**+1.0**
MG01				IAmb	IAmb	06 25 33.1	
	comp=Z,34nm,1.0s						
CPUP	**Villa Florida**	**36.69**	**311**	P	**P**	**06 26 55.7**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=155,slow=11,SNR=5.5						
	comp=Z,0.9nm,0.6s						
CPUP	**Villa Florida**	**36.69**	**311**	P	**P**	**06 26 54.1**	**-0.8**
MT09	**Talagante**	**37.25**	**288**	P	**P**	**06 26 59.4**	**-0.5**
PEL	**Peldehue**	**37.57**	**289**	P	**P**	**06 27 03.3**	**+0.8**
PEL				IAmb	IAmb	06 27 04.8	
	comp=Z,6.1nm,0.7s						
MT02	**Curacav**	**37.73**	**288**	P	**P**	**06 27 04.0**	**+0.3**
MT02				IAmb	IAmb	06 27 04.9	
	comp=Z,9.2nm,1.0s						
ZON	**Zonda**	**37.76**	**293**	P	**P**	**06 27 05.0**	**+0.9**
CO01	**Juntas del Tor**	**39.74**	**292**	P	**P**	**06 27 21.6**	**+0.7**
CO01				IAmb	IAmb	06 27 50.1	
	comp=Z,11nm,1.5s						
AC05	**El Transito**	**40.75**	**293**	P	**P**	**06 27 30.6**	**+1.4**
AC04	**Llanos de Chal**	**41.67**	**293**	P	**P**	**06 27 37.5**	**+1.0**
AC04				IAmb	IAmb	06 27 38.5	
	comp=Z,16nm,0.9s						
AC02	**Maricunga**	**41.79**	**296**	P	**P**	**06 27 38.8**	**+0.7**
GO02	**Mina Guanaco**	**43.40**	**297**	P	**P**	**06 27 52.5**	**+1.6**
GO02				IAmb	IAmb	06 27 53.3	
	comp=Z,9.1nm,0.8s						
PB03	**IPOC Station P**	**46.09**	**299**	P	**P**	**06 28 13.8**	**+1.7**
VNDA	**Vanda**	**46.77**	**183**	P	**P**	**06 28 18.2**	**+1.6**
PTLB	**Pontes e Lacer**	**47.16**	**316**	P	**P**	**06 28 20.4**	**+0.1**
PTLB				IAmb	IAmb	06 28 22.1	
	comp=Z,3.7nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.81**	**17**	T	T	07 19 47.3	
	baz=189,slow=74,SNR=16						
H10S3	**ASCENSION HYDR**	**47.82**	**17**	T	T	07 19 50.4	
	baz=31,slow=74,SNR=15						
GO01	**Chusmiza**	**47.84**	**302**	P	**P**	**06 28 26.4**	**+0.2**
GO01				IAmb	IAmb	06 28 32.5	
	comp=Z,3.4nm,0.7s						
CRZF	**Crozet Islands**	**47.89**	**114**	P	**P**	**06 28 24.6**	**-1.1**
H10N1	**ASCENSION HYDR**	**48.93**	**17**	T	T	07 21 14.1	
	baz=196						
H10N3	**ASCENSION HYDR**	**48.93**	**17**	T	T	07 21 14.5	
	baz=196,slow=74,SNR=11						
H10N2	**ASCENSION HYDR**	**48.95**	**17**	T	T	07 21 14.1	
	baz=196,slow=74,SNR=9.2						
LPAZ	**La Paz**	**50.27**	**305**	P	**P**	**06 28 46.8**	**+1.9**
	comp=Z,2.4nm,0.5s,baz=138,slow=5.2,SNR=11						
	comp=Z,2.4nm,0.5s						
LPAZ	**La Paz**	**50.27**	**305**	P	**P**	**06 28 45.6**	**+0.7**
BOAV	**Boa Vista**	**64.13**	**322**	P	**P**	**06 30 21.1**	**-0.8**
BOAV				IAmb	IAmb	06 30 43.3	
	comp=Z,8.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.89**	**29**	P	**P**	**06 31 16.7**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=182,slow=5.4,SNR=2.1						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**99.17**	**162**	P	**Pdif**	**06 33 31.6**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=172,slow=2.9,SNR=4.3						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**149.99**	**312**	PKPbc	**PKiKP**	**06 39 36.8**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=131,slow=3.6,SNR=26						
SONM	**Songino Array**	**150.72**	**86**	PKPbc	**PKiKP**	**06 39 38.7**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=230,slow=3.2,SNR=7.1						

*IDC **17** 06:24:54.0±1.1, 54°.55S×5°.23E, h0km, mb4.2/7, mbtmp4.3/8, ML4.3/1, MS3.9/18, Error ellipse: s-maj=34.9km s-min=24.7km az=64.0*
*NEIC **17** 06:24:55.5±0.4, 54°.61S±0°.04×5°.3E±0°.2, h10km±1km, mb4.7/11, Error ellipse: s-maj=24.7km s-min=5.7km az=96.0*

ISC 17 06:24:55.1±0.8, 54°.6S±0°.1×5°.3E±0°.2, h10km, n53, σ0°43/31, mb4.5/9, MS4.0/17, 3D, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.24**	**195**	⇓P	**Pn**	**06 28 55.8**	**+0.2**
	comp=Z,7.2nm,0.2s						
VNA2	**Neumayer--Watz**	**17.36**	**194**	⇓P	**Pn**	**06 28 57.5**	**+0.4**
	comp=Z,5.6nm,0.2s,baz=23,slow=15						
SNAA	**Sanae**	**17.55**	**189**	P	**Pn**	**06 28 58.8**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=13,slow=13,SNR=16						
SNAA				LR	LR	06 34 29.8	
	comp=Z,401nm,19.3s,baz=12,slow=33						
	comp=Z,34nm,0.9s						
SNAA	**Sanae**	**17.55**	**189**		**Pn**	**06 28 59.0**	**-0.5**
SNAA				IAmb	IAmb	06 29 03.1	
	comp=Z,53nm,1.0s						
VNA3	**Neumayer Olymp**	**17.99**	**196**	⇓P	**P**	**06 29 05.3**	**0.0**
	comp=Z,5.7nm,0.4s						
SUR	**Sutherland**	**24.75**	**33**	LR	LR	06 37 25.2	
	comp=Z,222nm,21.8s,baz=190,slow=30						
BELA	**Belgrano 2**	**27.27**	**197**	P	**P**	**06 30 39.2**	**+0.2**
BOSA	**Boshof**	**29.69**	**37**	LR	LR	06 40 32.3	
	comp=Z,267nm,20.8s,baz=192,slow=32						
H04S2	**CROZET ISLANDS**	**30.02**	**95**	T	T	07 03 00.9	
	baz=238,slow=75,SNR=34						
H04S3	**CROZET ISLANDS**	**30.02**	**95**	T	T	07 02 57.2	
	baz=238,slow=75,SNR=38						
H04S1	**CROZET ISLANDS**	**30.04**	**95**	T	T	07 02 53.8	
	baz=238,slow=75,SNR=58						
LBTB	**Lobatse**	**33.12**	**35**	LR	LR	06 42 54.1	
	comp=Z,154nm,18.4s,baz=194,slow=33						
PMSA	**Palmer Station**	**34.67**	**225**	LR	LR	06 42 35.0	
	comp=Z,192nm,18.6s,baz=100,slow=31						
QSPA	**South Pole Qui**	**35.69**	**180**	P	**P**	**06 31 53.6**	**+0.3**
	comp=Z,2.4nm,0.4s,baz=239,slow=5.1,SNR=5.0						
QSPA				LR	LR	06 45 48.0	
	comp=Z,301nm,19.4s,baz=212,slow=35						
	comp=Z,2.4nm,0.4s						
QSPA	**South Pole Qui**	**35.69**	**180**	P	**P**	**06 31 53.1**	**-0.2**
QSPA				IAmb	IAmb	06 31 56.6	
	comp=Z,9.5nm,1.1s						
LSZ	**Lusaka**	**43.05**	**33**	LR	LR	06 48 52.6	
	comp=Z,178nm,18.7s,baz=212,slow=33						
CASY	**Casey**	**47.05**	**148**	P	**P**	**06 33 26.1**	**-0.1**
VNDA	**Vanda**	**47.39**	**173**	LR	LR	06 53 00.4	
	comp=Z,184nm,19.8s,baz=213,slow=36						
H10S2	**ASCENSION HYDR**	**48.18**	**333**	T	T	07 25 23.9	
	baz=164,slow=74,SNR=22						
H10S3	**ASCENSION HYDR**	**48.19**	**333**	T	T	07 25 25.7	
	baz=56,slow=74,SNR=21						
LL02	**Futaleuf**	**49.53**	**250**	P	**P**	**06 33 45.6**	**0.0**
LL02				IAmb	IAmb	06 33 49.4	
	comp=Z,16nm,1.3s						
PLCA	**Paso Flores**	**50.47**	**253**	P	**P**	**06 33 52.9**	**0.0**
	comp=Z,1.6nm,0.9s,baz=145,slow=9.8,SNR=3.5						
	comp=Z,1.6nm,0.9s						
LR05	**Currie**	**51.62**	**252**	P	**P**	**06 34 02.0**	**+0.6**
LR05				IAmb	IAmb	06 34 03.9	
	comp=Z,16nm,1.1s						
CPUP	**Villa Florida**	**53.20**	**276**	P	**P**	**06 34 13.4**	**0.0**
	comp=Z,5.1nm,1.1s,baz=82,slow=7.8,SNR=6.2						
	comp=Z,5.1nm,1.1s						
CPUP	**Villa Florida**	**53.20**	**276**	P	**P**	**06 34 13.1**	**-0.3**
BDFB	**Brasilia**	**56.42**	**292**	P	**P**	**06 34 36.7**	**-0.2**
	comp=Z,4.8nm,1.0s,baz=125,slow=8.3,SNR=6.2						
BDFB				LR	LR	06 54 12.5	
	comp=Z,86nm,19.0s,baz=30,slow=31						
	comp=Z,4.8nm,1.0s						
BDFB	**Brasilia**	**56.42**	**292**	P	**P**	**06 34 36.9**	**0.0**
BDFB				IAmb	IAmb	06 34 38.0	
	comp=Z,8.0nm,1.1s						
AC02	**Maricunga**	**59.69**	**266**	P	**P**	**06 35 00.1**	**-0.1**
AC02				IAmb	IAmb	06 35 02.6	
	comp=Z,12nm,1.4s						
DBIC	**Dimbokro**	**61.58**	**349**	LR	LR	06 56 51.8	
	comp=Z,140nm,18.3s,baz=196,slow=31						
LPAZ	**La Paz**	**67.29**	**274**	P	**P**	**06 35 51.8**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=115,slow=5.1,SNR=6.8						
LPAZ				LR	LR	07 01 43.9	
	comp=Z,36nm,21.9s,baz=68,slow=33						
	comp=Z,2.5nm,0.9s						
LPAZ	**La Paz**	**67.29**	**274**	P	**P**	**06 35 50.2**	**-0.5**
LPAZ				IAmb	IAmb	06 35 52.6	
	comp=Z,5.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**67.50**	**356**	P	**P**	**06 35 51.4**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=190,slow=7.2,SNR=2.1						
	comp=Z,0.3nm,0.5s						
H01W2	**Cape Leeuwin H**	**72.04**	**125**	T	T	07 56 09.4	
	baz=216,slow=75,SNR=9.7						
H01W1	**Cape Leeuwin H**	**72.06**	**125**	T	T	07 56 08.9	
	baz=216,slow=75,SNR=9.7						
H01W3	**Cape Leeuwin H**	**72.06**	**125**	T	T	07 56 12.0	
	baz=216,slow=75,SNR=9.6						
MDP	**Montagnes des**	**76.33**	**300**	LR	LR	07 06 43.0	
	comp=Z,118nm,18.5s,baz=132,slow=33						
RPN	**Rapa Nui**	**81.25**	**235**	LR	LR	07 05 12.7	
	comp=Z,31nm,21.4s,baz=90,slow=30						
RPZ	**Rata Peaks**	**81.36**	**170**	LR	LR	07 10 47.8	
	comp=Z,86nm,21.4s,baz=91,slow=34						
URZ	**Urewera**	**87.29**	**174**	LR	LR	07 14 01.3	
	comp=Z,70nm,19.1s,baz=195,slow=34						
ROSC	**El Rosal**	**87.91**	**281**	LR	LR	07 14 56.5	
	comp=Z,69nm,19.4s,baz=261,slow=34						
ASAR	**Alice Springs**	**90.51**	**134**	P	**P**	**06 37 58.1**	**+0.9**
	comp=Z,1.4nm,1.0s,baz=220,slow=5.4,SNR=5.8						
	comp=Z,1.4nm,1.0s						
ASAR	**Alice Springs**	**90.51**	**134**	P	**P**	**06 37 57.3**	**+0.1**
AS31	**Alice Springs**	**90.51**	**134**		**P**	**06 37 56.9**	**-0.3**
ASF	**Jabal al Asfar**	**90.56**	**26**	LR	LR	07 16 06.9	
	comp=Z,130nm,20.2s,baz=211,slow=34						
MMAI	**Mount Meron Ar**	**90.99**	**25**	LR	LR	07 16 06.5	
	comp=Z,76nm,21.8s,baz=228,slow=34						
PDAR	**Pinedale Array**	**136.90**	**282**	PKP	**PKiKP**	**06 44 19.1**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=132,slow=2.2,SNR=3.7						
MXC	**Moxie City**	**145.32**	**280**	PKPbc	**PKPbc**	**06 44 31.6**	**-0.5**
B08A	**Colville Reser**	**145.73**	**283**	PKPdf	**PKPbc**	**06 44 33.1**	**-0.2**
YKAW1	**Yellowknife Wh**	**148.67**	**309**		**PKPbc**	**06 44 41.0**	**0.0**
YKA	**Yellowknife Ar**	**148.73**	**309**	PKPbc	**PKPbc**	**06 44 40.8**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=86,slow=1.9,SNR=28						
YKA	**Yellowknife Ar**	**148.73**	**309**		**PKPbc**	**06 44 40.9**	**-0.2**
ILAR	**Eielson Array**	**162.78**	**318**	PKPab	**PKPab**	**06 45 45.0**	**+0.1**
	comp=Z,1.1nm,1.0s,baz=30,slow=3.4,SNR=6.8						
ILAR	**Eielson Array**	**162.78**	**318**		**PKPab**	**06 45 44.1**	**-0.8**

*NNC **17** 06:53:49.2±4.2, 51°.26N×81°.91E, h0km, mb2.2, mpv1.7, Error ellipse: s-maj=29.8km s-min=21.6km az=47.0, Suspected Mining explosion.*
*IDC **17** 06:53:52.4±2.4, 51°.25N×82°.40E, h0km, mbtmp2.1/1, Error ellipse: s-maj=45.6km s-min=14.3km az=106.0*

ISC 17 06:53:54.1±1.8, 51°.20N±0°.10×81°.61E±0°.10, h0km, n6, σ0°22/4, 2C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**1.95**	**257**	⇑Pg	**Pn**	**06 54 28.6**	**+0.2**
	0.1nm,0.3s						
KURK				⇓Lg	Lg	06 54 58.1	
	2.2nm,0.8s						
KURBB	**Kurchatov Arra**	**2.03**	**255**	⇓Pg	**Pn**	**06 54 29.4**	**-0.2**
	0.4nm,0.3s,baz=73,slow=17						
KURBB				⇓Lg	Lg	06 54 59.9	
	11nm,0.8s,baz=124,slow=28						
I46RU	**ZALESOVO INFRA**	**3.38**	**34**	I	I	07 10 20.0	
	baz=214,slow=330,SNR=6.5						
ZALV	**Zalesovo Beam**	**3.38**	**34**	Pg	**Pn**	**06 54 48.0**	**0.0**
	0.2nm,0.3s,baz=213,slow=17,SNR=3.7						
ZALV				Lg	Lg	06 55 30.4	
	0.1nm,0.3s,baz=209,slow=28,SNR=3.9						
MK31	**Makanchi Array**	**4.44**	**174**	⇑Lg	Lg	06 56 13.8	
	2.4nm,0.9s,baz=8.3,slow=27,SNR=4.7						
MKAR	**Makanchi Array**	**4.44**	**174**	Pn	**Pn**	**06 55 02.6**	**0.0**
	0.4nm,0.9s,baz=5.0,slow=14,SNR=2.3						
MKAR				Lg	Lg	06 56 11.9	
	0.1nm,0.3s,baz=7.6,slow=27,SNR=5.6						

*ISK **17** 06:58:27.3, 39°.64N×26°.06E, h7km, ML2.7/25*
*AFAD **17** 06:58:27.0, 39°.62N×26°.07E, h17km±6km, ML2.5*
*THE **17** 06:58:28.1, 39°.6N±0°.7×2°.6E±°, h8km±1km, M2.3/10, MLh2.3/10*

**ISC 17 06:58:27.6±0.9, 39°.64N±0°.02×26°.05E±0°.02, h13km±7km, n54, σ

ALN				S		**Sn**	**06 59 08.4**	**+0.9**
KESN	**Edirne-Kesan**	**1.28**	**22**	P		**Pn**	**06 58 51.0**	**-0.5**
KESN				S		**Sn**	**06 59 10.2**	**+1.5**
KESN				IAML			06 59 11.0	
	comp=N,100nm,0.7s							
KESN				IAML			06 59 11.0	
	comp=E,94nm,0.3s							
GONE	**Gonen-Balikesi**	**1.32**	**72**	Pn		**Pg**	**06 58 52.5**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.36**	**39**	Pn		**Pg**	**06 58 53.3**	**-0.4**
THAS	**Thassos island**	**1.40**	**314**	P		**Pn**	**06 58 52.0**	**-0.3**
THAS				S		**Sb**	**06 59 10.0**	**-1.4**
BALB	**Balikesir**	**1.42**	**89**	Pn		**Pb**	**06 58 53.7**	**-0.1**
BKES	**Balkesir-Mer**	**1.46**	**86**	P		**Pn**	**06 58 53.9**	**+0.3**
BKES				S		**Sg**	**06 59 13.9**	**-0.6**
BKES				IAML			06 59 21.0	
	comp=E,42nm,0.7s							
MADA	**Marmara adas**	**1.49**	**50**	P		**Pb**	**06 58 55.2**	**0.0**
MADA				S		**Sg**	**06 59 14.8**	**-0.9**
MADA				IAML			06 59 17.0	
	comp=N,72nm,0.6s							
MADA				IAML			06 59 17.0	
	comp=E,79nm,0.3s							
BLKS	**Balkesir-Sus**	**1.50**	**80**	P		**Pn**	**06 58 54.5**	**+0.3**
BLKS				S		**Sb**	**06 59 14.5**	**+0.3**
CMHT	**Manyas**	**1.53**	**75**	P		**Pb**	**06 58 55.3**	**-0.4**
CMHT				S		**Sn**	**06 59 14.7**	**+0.5**
CMHT				IAML			06 59 17.0	
	comp=E,62nm,0.2s							
CMHT				IAML			06 59 18.0	
	comp=N,56nm,0.3s							
MRMT	**Marmara Adasi**	**1.53**	**51**	Pn		**Pb**	**06 58 55.9**	**+0.1**
UKOP	**Uzunkopru-Edir**	**1.55**	**17**	Pn		**Pb**	**06 58 55.9**	**-0.3**
RDO	**Rodhopi**	**1.55**	**346**	Pn		**Pb**	**06 58 55.9**	**-0.3**
RDO	**Rodhopi**	**1.55**	**346**	P		**Pn**	**06 58 55.4**	**+0.5**
RDO				S		**Sn**	**06 59 15.5**	**+0.6**
EDC	**Edincik**	**1.56**	**63**	Pn		**Pb**	**06 58 55.9**	**-0.5**
SUSR	**Susurluk-Balik**	**1.60**	**78**	Pn		**Pb**	**06 58 56.6**	**-0.4**
BAND	**Balkesir-Ban**	**1.73**	**65**	P		**Pb**	**06 58 58.7**	**-0.5**
BAND				S		**Sg**	**06 59 22.1**	**-1.2**
BAND				IAML			06 59 23.0	
	comp=N,53nm,0.3s							
BAND				IAML			06 59 24.0	
	comp=E,38nm,0.2s							
OUR	**Ouranopolis**	**1.73**	**294**	P		**Pn**	**06 58 57.8**	**+0.4**
OUR				S		**Sn**	**06 59 19.7**	**+0.4**
KAVA	**Kavala**	**1.79**	**320**	P		**Pn**	**06 58 58.6**	**+0.4**
KAVA				S		**Sn**	**06 59 21.3**	**+0.5**
GORD	**Gordes-Manisa**	**1.81**	**113**	Pn		**Pn**	**06 58 59.3**	**+0.8**
DURS	**Dursunbey**	**1.87**	**90**	P		**Pn**	**06 58 59.4**	**0.0**
DURS				S		**Sb**	**06 59 24.4**	**-0.7**
SMG	**Samos**	**2.03**	**162**	P		**Pn**	**06 59 01.9**	**+0.5**

AFAD ***17*** *07:09:50.2, 33°.83N×27°.05E, h8km±5km, ML3.9*
IDC ***17*** *07:10:08.2±1.0, 35°.28N×27°.89E, h0km, mb3.9/9, mbtmp3.8/18, ML3.4/9, MS3.7/1, Error ellipse: s-maj=20.1km s-min=16.1km az=176.0*
NEIC ***17*** *07:10:09.7±1.1, 35°.20N±0°.06×27°.96E±0°.05, h10km±1km, mb4.5/11, Error ellipse: s-maj=10.4km s-min=5.8km az=199.0*
MCSM ***17*** *07:10:10.3±0.6, 35°.N±6°×2°.8E±°, h9km±3km, mb4.1, mB5.1, MLv3.9, Mw(mB)4.5*
ATH ***17*** *07:10:11.1, 35°.19N×27°.98E, h12km±4km, ML3.5/5, Manual Solution by M.Kolligri First location: 2020/02/17 07:11:48, This location: 2020/02/17 07:21:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
ISK ***17*** *07:10:11.0, 35°.27N×27°.88E, h7km, ML3.6/16*
THE ***17*** *07:10:14.0, 35°.N±5°×2°.8E±°, h0km±11km, M3.3/12, MLh3.3/12*

ISC 17 07:10:11.6±1.3, 35°.16N±0°.04×27°.86E±0°.03, h25km±9km, n125, σ1§54/139, mb4.3/13, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.69**	**305**		**Pb**	**07 10 23.8**	**-1.2**
KARP					**Sb**	**07 10 34.3**	**+0.2**
KARP	**Karpathos**	**0.69**	**305**	Pg	**Pb**	**07 10 23.9**	**-1.2**
KARP				Sg	**Sb**	**07 10 33.4**	**-0.7**
KARP	**Karpathos**	**0.69**	**305**	P	**Pb**	**07 10 24.2**	**-0.8**
KARP				S	**Sb**	**07 10 32.8**	**-1.3**
KARP	**Karpathos**	**0.69**	**305**	P	**Pb**	**07 10 24.2**	**-0.8**
KARP				S	**Sn**	**07 10 36.1**	**+0.4**
KARP	**Karpathos**	**0.69**	**305**	P	**Pb**	**07 10 24.1**	**-0.8**
KARP				S	**Sn**	**07 10 35.6**	**-0.1**
ARG	**Arkhangelos**	**1.08**	**12**		**Pb**	**07 10 30.4**	**-1.3**
ARG	**Arkhangelos**	**1.08**	**12**	Pg	**Pb**	**07 10 29.9**	**-1.7**
ARG				Sg	**Sb**	**07 10 43.8**	**-1.5**
ARG	**Arkhangelos**	**1.08**	**12**	P	**Pb**	**07 10 30.3**	**-1.3**
ARG				S	**Sb**	**07 10 43.2**	**-2.1**
ARG	**Arkhangelos**	**1.08**	**12**	P	**Pb**	**07 10 30.2**	**-1.4**
ARG				S	**Sn**	**07 10 45.0**	**-0.3**
ZKR	**Zakros**	**1.34**	**269**	Pn	**Pb**	**07 10 37.6**	**+1.5**
ZKR	**Zakros**	**1.34**	**269**	P	**Pb**	**07 10 37.5**	**+1.4**
ZKR	**Zakros**	**1.34**	**269**	P	**Pb**	**07 10 37.1**	**+1.0**
YAZI	**Mula-Dat§a-**	**1.56**	**348**	P	**Pb**	**07 10 38.5**	**-1.3**
YAZI				S	**Sb**	**07 11 04.9**	**+5.9**
YAZI				IAML		07 11 13.0	
	comp=E,345nm,1.0s						
DAT	**Datca**	**1.58**	**352**	Pn	**Pb**	**07 10 38.8**	**-1.5**
DAT				Sn	**Sb**	**07 10 58.8**	**-1.1**
DAT	**Datca**	**1.58**	**352**	P	**Pn**	**07 10 37.2**	**-1.0**
DAT				S	**Sb**	**07 11 05.5**	**+5.5**
DAT				IAML		07 11 11.0	
	comp=E,476nm,0.8s						
DATC	**Datca-Mugla**	**1.61**	**354**	Pn	**Pn**	**07 10 38.8**	**+0.4**
IZZE	**Mula-Seydike**	**1.69**	**41**	P	**Pn**	**07 10 39.4**	**-0.3**
IZZE				S	Sb	07 11 18.1	+15
IZZE				IAML		07 11 19.0	
	comp=N,411nm,0.4s						
KSL	**Kastellorizon**	**1.72**	**54**	P	**Pn**	**07 10 39.7**	**-0.2**
KSL				S	**Sb**	**07 11 06.1**	**+2.4**
KSL	**Kastellorizon**	**1.72**	**54**	P	**Pn**	**07 10 40.1**	**+0.1**
DALY	**Dalyan (Mula)**	**1.78**	**21**	Pn	**Pn**	**07 10 41.3**	**+0.6**
FETY	**Fethiye**	**1.78**	**34**	P	Pn	07 10 30.9	-10
FETY				S	**Sb**	**07 11 07.9**	**+2.4**
AKAS	**Kas**	**1.78**	**53**		**Pn**	**07 10 39.4**	**-1.6**
AKAS	**Kas**	**1.78**	**53**	Pn	**Pn**	**07 10 40.9**	**-0.1**
AKAS	**Kas**	**1.78**	**53**	P	**Pn**	**07 10 40.6**	**-0.4**
AKAS				S	Sb	07 11 27.9	+22
AKAS				IAML		07 11 41.0	
	comp=N,439nm,0.9s						
NPS	**Neapolis**	**1.84**	**274**	P	**Pb**	**07 10 45.5**	**+0.9**
NPS	**Neapolis**	**1.84**	**274**	P	**Pb**	**07 10 44.4**	**-0.1**
SABU	**Mula-Dalaman**	**1.89**	**28**	P	**Pn**	**07 10 42.3**	**-0.1**
SABU				S	Sb	07 11 23.4	+15
SABU				IAML		07 11 26.0	
	comp=N,256nm,0.8s						
SABU				IAML		07 11 37.0	
	comp=E,231nm,0.7s						
BDRM	**Kayabasi**	**1.93**	**350**	P	**Pb**	**07 10 46.0**	**-0.2**
BDRM				S	Sb	07 11 18.6	+8.7
BODT	**Bodrum**	**1.95**	**347**	Pn	**Pn**	**07 10 43.8**	**+0.6**
BODT	**Bodrum**	**1.95**	**347**	P	**Pb**	**07 10 44.8**	**-1.6**
BODT				S	**Sn**	**07 11 07.0**	**+0.2**
YER	**Yerkesik**	**2.00**	**10**	Pn	**Pn**	**07 10 44.6**	**+0.7**
YER	**Yerkesik**	**2.00**	**10**	P	**Pb**	**07 10 45.5**	**-1.9**
YKAV	**Yalikavak-Bodr**	**2.02**	**347**	Pn	**Pn**	**07 10 45.2**	**+1.2**
CAME	**Cameli-Denizli**	**2.13**	**33**	Pn	**Pn**	**07 10 46.4**	**+0.6**
KNIK	**Mula-Seydike**	**2.19**	**39**	P	**Pn**	**07 10 46.7**	**+0.2**
KNIK				S	Sb	07 11 32.4	+15
THERA	**Ancient Thera,**	**2.28**	**303**	P	**Pb**	**07 10 50.4**	**-1.6**
THERA	**Ancient Thera,**	**2.28**	**303**	P	**Pb**	**07 10 50.3**	**-1.8**
CAEL	**Denizli, Camel**	**2.29**	**31**	P	**Pn**	**07 10 49.1**	**+1.1**
CAEL				S	Sb	07 11 41.0	+21
CAEL				IAML		07 11 50.0	
	comp=N,578nm,1.4s						
CAEL				IAML		07 11 50.0	
	comp=E,637nm,0.9s						
THR8	**Santorini-Mono**	**2.30**	**304**	P	**Pn**	**07 10 49.8**	**+1.9**
ELL	**Elmali**	**2.30**	**46**		**Pn**	**07 10 46.1**	**-1.9**
ELL	**Elmali**	**2.30**	**46**	Pn	**Pn**	**07 10 49.2**	**+1.1**
DNZT	**Denizli-Tavas-**	**2.32**	**24**	P	**Pn**	**07 10 49.0**	**+0.8**
DNZT				S	**Sb**	**07 11 28.5**	**+7.5**
THR6	**Thira Island,**	**2.33**	**302**	P	**Pn**	**07 10 49.5**	**+1.2**
THR6	**Thira Island,**	**2.33**	**302**	P	**Pn**	**07 10 49.7**	**+1.3**
THR3	**Thira Island,**	**2.35**	**303**	P	**Pn**	**07 10 49.6**	**+0.9**
THR3	**Thira Island,**	**2.35**	**303**	P	**Pn**	**07 10 50.0**	**+1.3**
SNT5	**Nea Kammeni, S**	**2.35**	**303**	P	**Pb**	**07 10 51.2**	**-2.1**
THR9	**Santorini-Faro**	**2.36**	**301**	P	**Pn**	**07 10 50.5**	**+1.8**
IDI	**Anoyia**	**2.43**	**274**	Pn	**Pb**	**07 10 53.3**	**-1.4**
	13nm,0.3s,baz=91,slow=2.2,SNR=35						
IDI	**Anoyia**	**2.43**	**274**		**Pn**	**07 10 51.8**	**+2.0**
IDI	**Anoyia**	**2.43**	**274**	P	**Pb**	**07 10 53.8**	**-0.9**
IDI	**Anoyia**	**2.43**	**274**	P	**Pn**	**07 10 52.2**	**+2.4**
TAVA	**DENIZLI_Tavas**	**2.46**	**20**	P	**Pn**	**07 10 50.0**	**-0.1**
TAVA				S	Sb	07 11 36.5	+11
AYDN	**Tasoluk**	**2.50**	**0**	P	**Pn**	**07 10 51.8**	**+1.1**
AYDN				IAML		07 11 38.0	
	comp=E,167nm,0.9s						
AYDN				IAML		07 11 50.0	
	comp=N,159nm,0.9s						
GCAM	**G?zelcaml?**	**2.59**	**349**	Pn	**Pn**	**07 10 52.9**	**+1.0**
APMY	**Acipayam-Deniz**	**2.59**	**26**	Pn	**Pn**	**07 10 52.6**	**+0.6**
SMG	**Samos**	**2.67**	**342**	P	**Pn**	**07 10 53.4**	**+0.3**
SMG	**Samos**	**2.67**	**342**	P	**Pn**	**07 10 54.7**	**+1.6**
KORT	**Korkueli**	**2.73**	**47**	Pn	**Pn**	**07 10 55.6**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**2.78**	**1**	Pn	**Pn**	**07 10 56.2**	**+1.5**
NAZL	**Nazilli-Aydin**	**2.82**	**7**	Pn	**Pn**	**07 10 56.2**	**+1.0**
INCE	**Denizli-Bozkur**	**2.90**	**28**	P	**Pn**	**07 10 55.8**	**-0.5**
INCE				S	Sb	07 11 54.0	+16
INCE				IAML		07 12 00.0	
	comp=N,157nm,0.8s						
INCE				IAML		07 12 03.0	
	comp=E,143nm,0.7s						
SULTU	**Buldan**	**2.98**	**14**	P	**Pn**	**07 10 58.4**	**+0.9**
SULTU				IAML		07 12 02.0	
	comp=E,147nm,1.7s						
SULTU				IAML		07 12 06.0	
	comp=N,187nm,0.8s						
VAM	**Vamos**	**3.00**	**276**	P	**Pb**	**07 11 02.0**	**-2.4**
KIRA	**zmir-Kiraz**	**3.06**	**8**	P	**Pn**	**07 10 59.2**	**+0.6**
ODEM	**Odemis-Izmir**	**3.12**	**3**	Pn	**Pn**	**07 11 00.6**	**+1.4**
IMMV	**Iera Moni Meta**	**3.18**	**277**	P	**Pb**	**07 11 04.7**	**-2.8**
IMMV	**Iera Moni Meta**	**3.18**	**277**	P	**Pn**	**07 11 02.4**	**+2.3**
BLCB	**Balcova**	**3.29**	**349**	Pn	**Pn**	**07 11 02.2**	**+0.7**
MANT	**Manti**	**3.37**	**9**		**Pn**	**07 11 01.6**	**-1.4**
KULA	**Kula-Manisa**	**3.41**	**11**	Pn	**Pn**	**07 11 03.6**	**+0.3**
AKMS	**Akamas**	**3.68**	**91**	P	**Pn**	**07 11 05.8**	**-1.0**
GORD	**Gordes-Manisa**	**3.75**	**4**	Pn	**Pn**	**07 11 09.6**	**+1.6**
ALFC	**Alefka**	**3.89**	**89**	P	**Pn**	**07 11 09.0**	**-0.8**
VLI	**Veliai**	**4.28**	**293**	P	**Pn**	**07 11 17.3**	**+2.1**
ASGA	**Asgata**	**4.44**	**93**	P	**Pn**	**07 11 16.9**	**-0.5**
CSS	**Mathiatis**	**4.50**	**91**	Pn	**Pn**	**07 11 17.3**	**-0.8**
CSS	**Mathiatis**	**4.50**	**91**	P	**Pn**	**07 11 18.1**	**0.0**
EZN	**Ezine**	**4.82**	**346**	P	**Pn**	**07 11 24.1**	**+1.6**
ITM	**Ithomi**	**5.20**	**295**		**Pn**	**07 11 27.6**	**-0.3**
BR105	**Keskin Array S**	**6.46**	**44**	P	**Pn**	**07 11 45.8**	**+0.6**
	0.0nm59nm6.3nm,0.8s						
BR105				S	**Sn**	**07 13 01.1**	**+2.9**
	0.0nm59nm6.3nm,0.8s						
BRTR	**Keskin Array B**	**6.48**	**44**	Pn	**Pn**	**07 11 45.0**	**-0.4**
	0.2nm,0.3s,baz=221,slow=14,SNR=14 2.5nm,0.8s						
BRTR	**Keskin Array B**	**6.48**	**44**		**Pn**	**07 11 44.4**	**-1.1**
BR131	**Keskin Array S**	**6.48**	**44**		**Pn**	**07 11 43.6**	**-1.9**
MMAI	**Mount Meron Ar**	**6.62**	**107**	Pn	**Pn**	**07 11 46.5**	**-0.8**
	5.7nm,0.3s,baz=324,slow=14,SNR=8.2 2.0nm,0.3s						
ILGA	**Ilgaz**	**7.48**	**36**	Pn	**Pn**	**07 11 58.1**	**-1.2**
EIL	**Elat**	**8.12**	**130**	Pn	**Pn**	**07 12 07.8**	**-0.1**
	0.8nm,0.3s,baz=126,slow=0.3,SNR=8.2 5.9nm,0.5s						
TIP	**Timpagrande**	**9.72**	**298**	Pn	**Pn**	**07 12 29.5**	**-0.4**
CEL	**Celeste**	**10.09**	**291**	P	**Pn**	**07 12 36.6**	**+1.7**
	13nm,0.8s						
MLR	**Muntele Rosu**	**10.42**	**353**	Pn	**Pn**	**07 12 37.7**	**-1.9**
	0.1nm,0.3s,baz=201,slow=5.0,SNR=5.9 1.3nm,0.4s						
CUC	**Castrocucco**	**10.70**	**300**		**Pn**	**07 12 44.1**	**+0.8**
RAFF	**Raffo Rosso**	**11.10**	**285**	Pn	**Pn**	**07 12 49.0**	**+0.3**
BRIU	**Brid**	**13.65**	**346**	P	**Pn**	**07 13 24.7**	**+1.2**
KBZ	**Khabaz**	**14.42**	**49**	Pn	**Pn**	**07 13 35.5**	**+1.5**
	0.1nm,0.3s,baz=230,slow=7.0,SNR=13 0.5nm,0.6s						
KEST	**Kesra**	**15.10**	**278**	Pn	**Pn**	**07 13 45.0**	**+1.7**
	0.2nm,0.3s,baz=28,slow=21,SNR=1.6 0.8nm,0.5s						
AKASG	**Malin Array Be**	**15.57**	**3**	Pn	**Pn**	**07 13 48.3**	**-0.9**
	0.5nm,0.3s,baz=178,slow=9.4,SNR=5.9 0.2nm,0.3s						
AKBB	**Malin Array Si**	**15.57**	**3**	P	**Pn**	**07 13 50.7**	**+1.4**
RNPP1	**Kostyukhnivka**	**16.25**	**355**	P	**Pn**	**07 13 59.1**	**+1.0**
GERES	**GERESS Array B**	**17.21**	**327**	P	**Pn**	**07 14 10.0**	**-0.3**
	baz=153,slow=12,SNR=8.1 1.6nm,0.8s						
KHC	**Kasperske Hory**	**17.48**	**327**	*e*P	**Pn**	**07 14 13.5**	**-0.1**
DAVOX	**Davos/Dischmat**	**17.82**	**316**	P	**Pn**	**07 14 18.3**	**+0.4**
	0.1nm,0.3s,baz=135,slow=6.2,SNR=4.0 1.9nm,0.7s						
ESDC	**Sonseca Array**	**25.59**	**290**	P	**P**	**07 15 39.2**	**+0.3**
	0.7nm,0.6s,baz=78,slow=9.4,SNR=6.2 0.7nm,0.6s						
FIA1	**FINESS Array S**	**26.33**	**358**	P	**P**	**07 15 45.0**	**-0.2**
FINES	**FINESS Array B**	**26.33**	**358**	P	**P**	**07 15 43.7**	**-1.4**
	3.1nm,0.8s,baz=158,slow=11,SNR=8.1 3.1nm,0.8s						
FINES	**FINESS Array B**	**26.33**	**358**	P	**P**	**07 15 44.5**	**-0.7**
AB31	**Akbulak array**	**27.39**	**49**	P	**P**	**07 15 53.4**	**-1.5**
ABKAR	**Akbulak array**	**27.39**	**49**	P	**P**	**07 15 53.4**	**-1.5**
TORD	**Torodi Ar. Bea**	**32.22**	**234**	P	**P**	**07 16 38.6**	**+0.7**
	1.6nm,0.8s,baz=7.2,slow=3.1,SNR=6.8 1.6nm,0.8s						
ARCES	**ARCESS Array B**	**34.46**	**359**	P	**P**	**07 16 55.5**	**-1.4**
	0.6nm,0.4s,baz=184,slow=6.0,SNR=5.2 0.6nm,0.4s						
ARCES	**ARCESS Array B**	**34.46**	**359**	P	**P**	**07 16 55.8**	**-1.1**
KURBB	**Kurchatov Arra**	**39.41**	**51**	P	**P**	**07 17 39.1**	**-0.1**
	0.4nm,0.3s,baz=276,slow=8.9,SNR=5.5 0.4nm,0.3s						
MK31	**Makanchi Array**	**41.93**	**57**	P	**P**	**07 17 59.2**	**-0.9**
MKAR	**Makanchi Array**	**41.93**	**57**	P	**P**	**07 18 00.6**	**+0.4**
	0.5nm,0.6s,baz=278,slow=7.0,SNR=7.2 0.5nm,0.6s						
MKAR	**Makanchi Array**	**41.93**	**57**	P	**P**	**07 17 59.6**	**-0.6**
SPITS	**Spitsbergen Ar**	**43.41**	**357**	P	**P**	**07 18 10.8**	**-0.9**
	8.3nm,1.0s,baz=143,slow=12,SNR=5.3 8.9nm,1.0s						
TSUM	**Tsumeb**	**54.93**	**192**	LR	LR	07 45 40.8	
	comp=Z,63nm,18.4s,baz=334,slow=39						
TULEG	**Thule**	**57.66**	**344**	P	**P**	**07 19 59.2**	**-0.1**
TULEG				IAmb	IAmb	07 20 37.8	
	comp=Z,5.2nm,1.0s						
SONM	**Songino Array**	**57.77**	**51**	P	**P**	**07 20 00.7**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=299,slow=7.9,SNR=6.5 comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**57.77**	**51**	P	**P**	**07 19 59.9**	**-0.7**
SONM				IAmb	IAmb	07 20 27.4	
	comp=Z,3.6nm,1.5s						
SCHQ	**Schefferville**	**64.61**	**320**	P	**P**	**07 20 46.5**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=60,slow=3.2,SNR=4.2 comp=Z,1.6nm,0.7s						
SCHQ	**Schefferville**	**64.61**	**320**	P	**P**	**07 20 46.8**	**+0.1**
SCHQ				IAmb	IAmb	07 21 10.7	
	comp=Z,8.0nm,1.4s						
D19K	**Kuna River**	**76.56**	**2**	P	**P**	**07 21 59.5**	**+0.1**
D19K				IAmb	IAmb	07 22 03.8	
	comp=Z,6.3nm,1.5s						
E19K	**Redstone River**	**77.63**	**2**	P	**P**	**07 22 05.8**	**+0.4**
E19K				IAmb	IAmb	07 22 07.0	
	comp=Z,3.7nm,1.1s						
G16K	**Koyuk River**	**79.46**	**4**	P	**P**	**07 22 16.1**	**+0.7**
G16K				IAmb	IAmb	07 22 40.1	
	comp=Z,5.7nm,1.4s						
M29M	**Somme Creek**	**82.11**	**354**	P	**P**	**07 22 30.1**	**+0.3**
M29M				IAmb	IAmb	07 23 11.8	
	comp=Z,10nm,1.4s						

NEIC ***17*** *07:15:46.5±2.2, 5°.1S±0°.1×129°.4E±0°.1, h178km±10km, mb4.2/7, Error ellipse: s-maj=18.8km s-min=14.3km az=110.0*
IDC ***17*** *07:15:47.2±2.3, 5°.08S×129°.67E, h182km±29km, mb3.4/2, mbtmp4.4/6, Error ellipse: s-maj=48.2km s-min=14.7km az=84.0*

ISC 17 07:15:46.5±0.7, 5°.23S±0°.06×129°.46E±0°.08, h200km, n30, σ2§48/35, mb3.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.83**	**32**	P	**Pn**	**07 16 18.0**	**+2.8**
FAKI	**Fak Fak**	**3.60**	**51**		**Pn**	**07 16 43.6**	**+0.1**
FAKI				Sn	**Sn**	**07 17 25.0**	**-3.1**
FAKI	**Fak Fak**	**3.60**	**51**	P	**Pn**	**07 16 43.5**	**+0.1**
SIJI	**Sorong**	**4.69**	**23**	P	**Pn**	**07 16 56.2**	**-0.9**
	37nm,0.2s,baz=259,slow=24,SNR=51						
SIJI				S	**Sn**	**07 17 47.0**	**-5.6**
	123nm,0.2s,baz=84,slow=23,SNR=18						
SANI	**Sanana**	**4.69**	**312**	P	**Pn**	**07 16 58.8**	**+1.8**
DRS	**Darwin Rock St**	**7.29**	**169**	P	**Pn**	**07 17 33.2**	**+2.6**
MTN	**Manton Dam**	**7.74**	**168**		**Pn**	**07 17 37.6**	**+1.1**
LUWI	**Luwuk**	**7.87**	**302**		**Pn**	**07 17 39.3**	**+1.2**
LUWI	**Luwuk**	**7.87**	**302**	P	**Pn**	**07 17 40.1**	**+2.0**
KAPI	**Kappang**	**9.68**	**271**	Pn	**Pn**	**07 17 60.0**	**-1.6**
KNRA	**Kurunurra**	**10.40**	**184**	Pn	**Pn**	**07 18 12.1**	**+1.0**
TOLI2	**Tolitoli**	**10.72**	**306**	Pn	**Pn**	**07 18 12.2**	**-2.9**
TOLI2	**Tolitoli**	**10.72**	**306**	P	**Pn**	**07 18 17.9**	**+2.8**
PLAI	**Plampang**	**12.14**	**252**	P	**P**	**07 18 36.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**13.32**	**196**	P	**P**	**07 18 50.6**	**-0.2**
	4.6nm,0.5s,baz=26,slow=12,SNR=20						
FITZ				S	**S**	**07 21 11.2**	**-5.5**
	1.0nm,0.3s,baz=82,slow=6.8,SNR=2.1						
WB0	**Warramunga Arr**	**15.23**	**162**		**P**	**07 19 12.5**	**+0.5**
WB0				IAmb	IAmb	07 19 16.8	
	comp=Z,13nm,0.5s						
WRAB	**Tennant Creek**	**15.37**	**162**	P	**P**	**07 19 15.0**	**+1.4**
WRA	**Warramunga Arr**	**15.38**	**162**	P	**P**	**07 19 14.4**	**+0.8**
	comp=Z,5.1nm,0.5s,baz=344,slow=10,SNR=37						
WRA				S	**S**	**07 21 57.3**	**-6.8**
	comp=Z,0.7nm,0.4s,baz=340,slow=19,SNR=5.0						
WRA	**Warramunga Arr**	**15.38**	**162**		**P**	**07 19 14.0**	**+0.4**
QIS	**Mount Isa**	**18.15**	**148**	P	**Pn**	**07 19 47.4**	**+1.0**
MBWA	**Marble Bar**	**18.44**	**210**	P	**Pn**	**07 19 49.1**	**-0.6**
MBWA				IAmb	IAmb	07 20 27.3	
	comp=Z,19nm,1.4s						
PSA00	**Pilbara Seismi**	**18.73**	**209**	P	**Pn**	**07 19 51.4**	**-1.8**
PSA00				IAmb	IAmb	07 20 00.6	
	comp=Z,7.1nm,1.4s						
PSA00	**Pilbara Seismi**	**18.73**	**209**	P	**Pn**	**07 19 51.6**	**-1.6**
PSA00				IAmb	IAmb	07 20 09.5	
	comp=Z,19nm,1.3s						
PSA00	**Pilbara Seismi**	**18.73**	**209**	P	**Pn**	**07 19 52.8**	**-0.4**
AS31	**Alice Springs**	**18.82**	**167**		**Pn**	**07 19 55.0**	**+0.7**
ASAR	**Alice Springs**	**18.82**	**167**	P	**Pn**	**07 19 55.1**	**+0.8**
	comp=Z,25nm,0.5s,baz=349,slow=11,SNR=454						
ASAR				S	**S**	**07 23 15.9**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=349,slow=20,SNR=9.9						
STKA	**Stephens Creek**	**28.84**	**158**	P	**P**	**07 21 29.4**	**+3.1**
	comp=Z,0.7nm,0.3s,baz=350,slow=6.1,SNR=6.0 comp=Z,0.7nm,0.3s						
MK31	**Makanchi Array**	**66.46**	**327**	P	**P**	**07 26 16.1**	**+1.6**
MK31				IAmb	IAmb	07 26 25.4	
	comp=Z,0.7nm,0.9s						
MKAR	**Makanchi Array**	**66.46**	**327**	P	**P**	**07 26 16.9**	**+2.4**
	comp=Z,0.3nm,0.4s,baz=120,slow=8.1,SNR=6.3 comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**66.46**	**327**	P	**P**	**07 26 15.9**	**+1.4**

IDC ***17*** *07:16:23.6±0.8, 35°.50N×74°.64E, h0km, mb3.9/13, mbtmp4.0/19, ML3.7/6, MS4.1/2, Error ellipse: s-maj=22.6km s-min=14.7km az=56.0*
NEIC ***17*** *07:16:26.0±1.6, 35°.61N±0°.07×74°.5E±0°.1, h10km±1km, mb4.4/19, Error ellipse: s-maj=16.0km s-min=10.9km az=282.0*

ISC 17 07:16:29.7±0.5, 35°.64N±0°.05×74°.56E±0°.07, h36km, n72, σ1§94/74, mb4.2/18, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	**Nilore**	**2.26**	**209**		**Pn**	**07 17 04.5**	**-0.1**
ALCI	**Alchi Leh**	**2.59**	**123**	*e*P	**Pn**	**07 17 11.2**	**+1.9**
ALCI				IAML		07 17 41.4	
	comp=E,2μm,0.4s						
ALCI				*e*S	**Sn**	**07 17 41.5**	**+1.8**
ALCI				IAML		07 17 41.6	
	comp=N,2μm,0.3s						
JMU	**Jammu**	**2.86**	**175**	*e*P	**Pn**	**07 17 16.1**	**+3.3**
JMU				*e*S	**Sn**	**07 17 50.6**	**+4.5**
JMU				IAML		07 17 58.0	
	comp=N,2μm,0.6s						
JMU				IAML		07 17 58.3	
	comp=E,2μm,0.6s						
TSSA	**Tissa**	**3.10**	**154**	*e*P	**Pn**

ZAA0					IAmb	IAmb	07 20 59.8		
	comp=Z,9.2nm,0.5s								
ZALV	**Zalesovo Beam**	**19.66**	**18**	P	**P**		**07 20 55.0**	**-0.3**	
	comp=Z,1.9nm,0.3s,baz=210,slow=10,SNR=19								
	comp=Z,8.8nm,0.6s								
ZALV	**Zalesovo Beam**	**19.66**	**18**	P	**P**		**07 20 54.4**	**-0.8**	
SONM	**Songino Array**	**26.50**	**53**	P	**P**		**07 22 02.5**	**-1.2**	
	comp=Z,1.0nm,0.6s,baz=252,slow=10.0,SNR=6.4								
	comp=Z,1.0nm,0.6s								
SONM	**Songino Array**	**26.50**	**53**	P	**P**		**07 22 02.0**	**-1.7**	
CM31	**Chiang Mai Arr**	**27.53**	**122**	P	**P**		**07 22 10.1**	**-3.0**	
CM31					IAmb	IAmb	07 22 18.3		
	comp=Z,6.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**27.53**	**122**	P	**P**		**07 22 11.2**	**-1.9**	
	comp=Z,3.4nm,0.6s,baz=310,slow=11,SNR=19								
	comp=Z,3.4nm,0.6s								
CMAR	**Chiang Mai Arr**	**27.53**	**122**	P	**P**		**07 22 10.4**	**-2.7**	
NRIK	**Noril'sk**	**34.51**	**8**	P	**P**		**07 23 14.6**	**+0.6**	
	comp=Z,2.3nm,0.7s,baz=190,slow=3.7,SNR=5.8								
	comp=Z,2.3nm,0.7s								
NRIK	**Noril'sk**	**34.51**	**8**	P	**P**		**07 23 14.1**	**+0.2**	
NRIK					IAmb	IAmb	07 23 18.9		
	comp=Z,3.5nm,0.9s								
HILR	**Hailar Array B**	**35.50**	**53**	LR	LR		07 39 16.7		
	comp=Z,143nm,18.3s,baz=70,slow=39								
AKASG	**Malin Array Be**	**35.72**	**309**	P	**P**		**07 23 26.3**	**+1.7**	
	comp=Z,0.4nm,0.4s,baz=78,slow=8.6,SNR=2.9								
	comp=Z,0.4nm,0.4s								
FIA1	**FINESS Array S**	**39.80**	**326**	P	**P**		**07 23 59.2**	**+0.3**	
FINES	**FINESS Array B**	**39.81**	**326**	P	**P**		**07 23 59.7**	**+0.8**	
	comp=Z,0.6nm,0.3s,baz=119,slow=10,SNR=4.5								
	comp=Z,0.6nm,0.3s								
FINES	**FINESS Array B**	**39.81**	**326**	P	**P**		**07 23 59.4**	**+0.4**	
BKNI	**Bangkinang**	**42.92**	**139**	P	**P**		**07 24 24.2**	**-0.8**	
ARCES	**ARCESS Array B**	**43.04**	**337**	P	**P**		**07 24 24.4**	**-1.1**	
	comp=Z,2.7nm,0.7s,baz=108,slow=7.8,SNR=6.5								
	comp=Z,2.7nm,0.7s								
ARCES	**ARCESS Array B**	**43.04**	**337**	P	**P**		**07 24 25.2**	**-0.3**	
ARCES					IAmb	IAmb	07 24 45.5		
	comp=Z,15nm,1.4s								
NOA	**NORSAR Array B**	**46.79**	**323**	P	**P**		**07 24 56.4**	**+1.0**	
	comp=Z,0.9nm,0.7s,baz=93,slow=7.5,SNR=3.4								
	comp=Z,0.9nm,0.7s								
SPITS	**Spitsbergen Ar**	**48.99**	**347**	P	**P**		**07 25 13.9**	**+1.8**	
	comp=Z,1.3nm,0.5s,baz=112,slow=11,SNR=7.6								
	comp=Z,1.3nm,0.5s								
C19K	**Lookout Ridge**	**68.26**	**18**	P	**P**		**07 27 26.7**	**+0.3**	
C19K					IAmb	IAmb	07 27 48.3		
	comp=Z,3.9nm,1.3s								
TORD	**Torodi Ar. Bea**	**68.60**	**271**	P	**P**		**07 27 27.9**	**-1.4**	
	comp=Z,0.3nm,0.4s,baz=60,slow=12,SNR=6.0								
	comp=Z,0.3nm,0.4s								
F15K	**North Star Dit**	**69.16**	**22**	P	**P**		**07 27 33.1**	**+1.1**	
F15K					IAmb	IAmb	07 28 01.9		
	comp=Z,4.8nm,1.4s								
G19K	**Purcell Mounta**	**71.07**	**20**	P	**P**		**07 27 44.1**	**+0.4**	
G19K					IAmb	IAmb	07 27 55.3		
	comp=Z,5.0nm,1.4s								
A36M	**Sachs Harbour**	**71.76**	**6**	IAmb	IAmb		07 27 53.3		
	comp=Z,5.7nm,1.2s								
BMAR	**Burnt Mountain**	**73.06**	**15**	P	**P**		**07 27 56.6**	**+1.0**	
ILAR	**Eielson Array**	**74.78**	**17**	P	**P**		**07 28 04.8**	**-0.8**	
	comp=Z,0.7nm,0.7s,baz=310,slow=4.2,SNR=6.3								
	comp=Z,0.7nm,0.7s								
ILAR	**Eielson Array**	**74.78**	**17**	P	**P**		**07 28 05.2**	**-0.5**	
BCAR	**Beaver Creek A**	**77.42**	**16**	P	**P**		**07 28 21.2**	**+0.4**	
WB0	**Warramunga Arr**	**79.02**	**124**	P	**P**		**07 28 29.7**	**-0.5**	
WRA	**Warramunga Arr**	**79.11**	**124**	P	**P**		**07 28 29.7**	**-0.9**	
	comp=Z,1.1nm,0.6s,baz=323,slow=5.5,SNR=16								
	comp=Z,1.1nm,0.6s								
WRA	**Warramunga Arr**	**79.11**	**124**	P	**P**		**07 28 30.0**	**-0.6**	
WRAB	**Tennant Creek**	**79.11**	**124**	P	**P**		**07 28 30.5**	**-0.1**	
WRAB					IAmb	IAmb	07 29 12.9		
	comp=Z,2.6nm,0.8s								
ASAR	**Alice Springs**	**81.42**	**127**	P	**P**		**07 28 42.4**	**-0.7**	
	comp=Z,0.6nm,0.8s,baz=304,slow=5.1,SNR=6.3								
	comp=Z,0.6nm,0.8s								
YKA	**Yellowknife Ar**	**81.92**	**4**	P	**P**		**07 28 45.1**	**0.0**	
	comp=Z,0.2nm,0.4s,baz=347,slow=6.0,SNR=6.1								
	comp=Z,0.2nm,0.4s								
SADO	**Sadowa**	**96.48**	**341**	LR	LR		08 17 26.4		
	comp=Z,127nm,18.4s,baz=80,slow=38								

IDC ***17*** *07:20:25.4±2.1,5°.42S×150°.57E, h0km, mb3.6/4, mbtmp3.6/5, ML1.7/1, MS3.3/1, Error ellipse: s-maj=110.6km s-min=27.5km az=126.0*

ISC 17 07:20:32.9±2.7, 5°.9S±0°.8×150°.7E±0°.9, h35km, n7, σ1s81/6, mb3.5/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.95**	**226**	Pn	**Pn**	**07 21 44.5**	**-0.3**
	1.9nm,0.3s,baz=38,slow=12,SNR=3.8						
PMG				Sn	**Sn**	**07 22 42.4**	**+1.5**
	5.5nm,0.3s,baz=330,slow=14,SNR=3.7						
	9.7nm,0.5s						
WRA	**Warramunga Arr**	**21.17**	**227**	P	**P**	**07 25 13.5**	**-1.9**
	0.9nm,0.5s,baz=50,slow=10,SNR=5.8						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**23.95**	**221**	P	**P**	**07 25 43.8**	**-0.4**
	0.6nm,0.6s,baz=54,slow=8.2,SNR=5.0						
	0.6nm,0.6s						
BATI	**Baumata**	**27.14**	**259**	LR	LR	07 39 31.4	
	comp=Z,66nm,20.1s,baz=16,slow=42						
FITZ	**Fitzroy Crossi**	**27.32**	**242**	P	**P**	**07 26 13.6**	**-1.1**
	1.3nm,0.6s,baz=56,slow=7.3,SNR=1.8						
	1.3nm,0.6s						
ILAR	**Eielson Array**	**83.98**	**22**	P	P	07 32 54.5	-4.8
	0.3nm,0.8s,baz=246,slow=5.0,SNR=2.1						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.67**	**286**	PKPbc	**PKPdf**	**07 40 15.4**	**+1.6**
	1.9nm,0.6s,baz=61,slow=3.7,SNR=9.7						

IDC 17 07:22:35.4±43.0, 59°.21S×147°.15E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=759.1km s-min=254.0km az=150.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.59**	**350**	P	P	07 28 24.7	+0.6
	2.4nm,0.9s,baz=165,slow=12,SNR=3.3						
	2.4nm,0.9s						
H01W1	**Cape Leeuwin H**	**32.54**	**304**	T	T	08 02 26.7	
	baz=144,slow=75,SNR=9.6						
H01W2	**Cape Leeuwin H**	**32.55**	**304**	T	T	08 02 27.7	
	baz=144,slow=75,SNR=8.4						
H01W3	**Cape Leeuwin H**	**32.56**	**304**	T	T	08 02 27.1	
	baz=144,slow=75,SNR=7.8						
ASAR	**Alice Springs**	**36.74**	**339**	P	P	07 29 43.9	-0.4
	0.4nm,0.7s,baz=166,slow=7.9,SNR=4.3						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**40.30**	**341**	P	P	07 30 14.0	-0.2
	0.7nm,0.7s,baz=168,slow=7.6,SNR=8.9						
	0.7nm,0.7s						
H04S2	**CROZET ISLANDS**	**53.75**	**238**	T	T	08 31 33.7	
	baz=143,slow=75,SNR=7.2						
H04S1	**CROZET ISLANDS**	**53.75**	**238**	T	T	08 31 34.3	
	baz=143,slow=75,SNR=9.8						
H04S3	**CROZET ISLANDS**	**53.76**	**238**	T	T	08 31 37.5	
	baz=143,slow=75,SNR=8.2						

NEIC ***17*** *07:34:09.8±1.0, 17°.90N±0°.03×67°.04W±0°.01, h10km±1km, ML3.3/35, Md3.5/5(RSPR), Error ellipse: s-maj=5.4km s-min=2.6km az=19.0*

OSPL ***17*** *07:34:10.1±0.4, 17°.90N×67°.07W, h11km±4km, ML2.6, Presumed earthquake*

SDD ***17*** *07:34:10.4±1.2, 17°.92N×67°.05W, h15km±6km, MD3.5, ML3.1, MW3.2, Presumed earthquake*

RSPR ***17*** *07:34:10.3, 17°.94N×67°.02W, h6km, MD3.5/5*

ISC 17 07:34:09.5±1.2, 17°.88N±0°.07×67°.02W±0°.03, h13km±6km, n42, σ0s46/60, 15C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.09**	**343**		**Pg**	**07 34 11.8**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.15**	**324**		**Pb**	**07 34 14.7**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.15**	**324**	IAML		07 34 15.3	
	11μm,0.5s						
CRPR				IAML		07 34 15.5	
	7μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.15**	**324**	⇑*e*Pg	**Pg**	**07 34 12.8**	**-0.4**
CRPR				⇑*e*Sg	**Pb**	**07 34 14.8**	**+0.5**
CRPR				IAML		07 34 15.2	
	comp=N,12μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.15**	**324**	*e*Pg	**Pg**	**07 34 13.1**	**-0.2**
CRPR				*e*Sg	**Pb**	**07 34 14.7**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.15**	**324**	*i* P	**Pg**	**07 34 13.0**	**-0.2**
CRPR				*e*S	**Pb**	**07 34 14.7**	**+0.5**
CRPR				IAML		07 34 17.2	
	comp=Z,7μm,0.5s						
GBPR	**Guanica, Bosqu**	**0.16**	**55**		**Pg**	**07 34 13.7**	**+0.4**
GBPR					**Sg**	**07 34 16.1**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.16**	**55**	⇑*e*P	**Pg**	**07 34 13.7**	**+0.4**
GBPR				*e*S	**Sg**	**07 34 16.1**	**+0.2**
LSP	**Las Mesas**	**0.30**	**347**		**Pg**	**07 34 15.6**	**-0.1**
LSP					**Sg**	**07 34 19.9**	**0.0**
LSP	**Las Mesas**	**0.30**	**347**	⇑*e*P	**Pg**	**07 34 15.6**	**-0.1**
LSP				*e*S	**Sg**	**07 34 19.9**	**0.0**
PRSN	**Puerto Rico Se**	**0.35**	**340**		**Pg**	**07 34 16.6**	**-0.1**
PRSN					**Sg**	**07 34 21.6**	**+0.1**
PRSN	**Puerto Rico Se**	**0.35**	**340**	IAML		07 34 22.6	
	comp=Z,14μm,0.3s						
PRSN				IAML		07 34 23.7	
	comp=Z,10μm,0.3s						
PRSN	**Puerto Rico Se**	**0.35**	**340**	⇑*e*Pg	**Pg**	**07 34 16.6**	**-0.1**
PRSN				⇑*e*Sg	**Sg**	**07 34 21.6**	**+0.1**
PRSN				IAML		07 34 22.1	
	comp=N,8μm,0.4s						
PRSN	**Puerto Rico Se**	**0.35**	**340**	⇑*e*P	**Pg**	**07 34 16.6**	**-0.1**
PRSN				*e*S	**Sg**	**07 34 21.6**	**+0.1**
OBIP	**Obispado Ponce**	**0.42**	**68**		**Pb**	**07 34 18.4**	**-0.4**
OBIP					**Sb**	**07 34 24.9**	**-0.3**
OBIP	**Obispado Ponce**	**0.42**	**68**	⇓*e*P	**Pb**	**07 34 18.4**	**-0.4**
OBIP				*e*S	**Sb**	**07 34 24.9**	**-0.3**
OBIP	**Obispado Ponce**	**0.42**	**68**	*i* P	**Pb**	**07 34 18.5**	**-0.4**
OBIP				*e*S	**Sb**	**07 34 24.9**	**-0.3**
OBIP				IAML		07 34 25.3	
	comp=Z,455nm,0.6s						
CELP	**Cerrillos**	**0.46**	**65**		**Pb**	**07 34 19.1**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.46**	**37**		**Pg**	**07 34 18.6**	**-0.1**
AGPR	**Aguadilla, PR**	**0.59**	**351**		**Pg**	**07 34 20.9**	**-0.2**
AGPR				IAML		07 34 28.8	
	comp=Z,2μm,0.4s						
AGPR				IAML		07 34 28.8	
	comp=Z,2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.59**	**351**	*e*Pg	**Pg**	**07 34 20.8**	**-0.2**
AGPR				⇑*e*Sg	**Sg**	**07 34 28.2**	**-0.7**
AGPR				IAML		07 34 30.4	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.59**	**351**	⇑*e*P	**Pg**	**07 34 20.9**	**-0.2**
AGPR				*e*S	**Sg**	**07 34 28.6**	**-0.3**
IDE	**Isla Desecheo**	**0.66**	**319**		**Pg**	**07 34 22.0**	**-0.4**
IDE					**Sg**	**07 34 31.2**	**0.0**
IDE	**Isla Desecheo**	**0.66**	**319**	⇓*e*P	**Pg**	**07 34 22.0**	**-0.4**
IDE				*e*S	**Sg**	**07 34 31.2**	**0.0**
ECPR	**Experimental S**	**0.76**	**55**	IAML		07 34 35.6	
	comp=N,1μm,0.2s						
ECPR				IAML		07 34 39.9	
	comp=N,1μm,0.2s						
ECPR	**Experimental S**	**0.76**	**55**	⇓*e*P	**Pg**	**07 34 23.9**	**-0.3**
ECPR				*e*S	**Sg**	**07 34 34.4**	**+0.2**
SJG	**San Juan**	**0.86**	**74**		**Pg**	**07 34 25.8**	**-0.3**
SJG	**San Juan**	**0.86**	**74**	IAML		07 34 41.3	
	comp=N,360nm,0.5s						
SJG	**San Juan**	**0.86**	**74**	⇓*e*Pg	**Pg**	**07 34 25.8**	**-0.3**
SJG				⇓*e*Sg	**Sg**	**07 34 37.4**	**+0.1**
SJG	**San Juan**	**0.86**	**74**	⇓*e*P	**Pg**	**07 34 25.8**	**-0.3**
SJG				*e*S	**Sg**	**07 34 37.5**	**+0.1**
SJG	**San Juan**	**0.86**	**74**	*i* P	**Pg**	**07 34 25.9**	**-0.3**
SJG				*e*S	**Sb**	**07 34 37.9**	**+0.2**
SJG				IAML		07 34 40.0	
	comp=Z,185nm,0.8s						
PDPR	**Patillas Dam,**	**0.96**	**82**		**Pg**	**07 34 28.0**	**0.0**
GCPR	**Guaynabo City**	**0.98**	**64**		**Pb**	**07 34 27.9**	**-0.6**
GCPR					**Sb**	**07 34 40.8**	**-0.6**
GCPR	**Guaynabo City**	**0.98**	**64**	⇑*e*P	**Pb**	**07 34 27.9**	**-0.6**
GCPR				*e*S	**Sb**	**07 34 40.8**	**-0.6**
HUMP	**Col San Antoni**	**1.14**	**77**		**Pb**	**07 34 30.7**	**-0.4**
HUMP	**Col San Antoni**	**1.14**	**77**	IAML		07 34 50.3	
	comp=Z,311nm,0.7s						
HUMP				IAML		07 34 52.9	
	comp=Z,237nm,0.3s						
HUMP	**Col San Antoni**	**1.14**	**77**	⇑*e*P	**Pb**	**07 34 30.7**	**-0.4**
PCDR	**Punta Cana, DR**	**1.44**	**296**	⇑*e*Pg	**Pn**	**07 34 35.2**	**-0.1**
PCDR				IAML		07 35 32.1	
	comp=N,259nm,1.3s						
CUPR	**Culebra, Puert**	**1.70**	**75**		**Pb**	**07 34 40.6**	**0.0**
MIDR	**Miches**	**2.22**	**300**	⇑*e*Pg	**Pn**	**07 34 47.5**	**+1.5**
MIDR				IAML		07 35 23.0	
	comp=N,56nm,1.5s						
DR12	**Loma Pena Alta**	**2.42**	**292**		**Pn**	**07 34 50.3**	**+1.4**
HATOM	**Hato Mayor del**	**2.42**	**292**	*e*Pg	**Pb**	**07 34 51.8**	**-1.2**
HATOM				IAML		07 35 30.9	
	comp=N,47nm,0.5s						

RSPR ***17*** *07:41:13.5, 19°.09N×67°.86W, h28km±25km*

NEIC ***17*** *07:41:13.0±1.2, 19°.02N±0°.03×67°.63W±0°.04, h10km±1km, ML3.5/39, Md3.3/2(RSPR), Error ellipse: s-maj=7.9km s-min=3.7km az=52.0*

SDD ***17*** *07:41:15.8±2.5, 18°.95N×67°.62W, h20km±97km, MD3.7, ML3.6, MW3.7, Presumed earthquake*

OSPL ***17*** *07:41:16.3±2.4, 19°.05N×67°.47W, h0km±13km, ML3.5, Presumed earthquake*

ISC 17 07:41:13.2±1.4, 18°.99N±0°.05×67°.58W±0°.03, h1km±11km, n49, σ1s11/78, 18C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.61**	**170**		**Pb**	**07 41 26.3**	**-0.4**
IDE					**Sb**	**07 41 34.9**	**-0.8**
IDE	**Isla Desecheo**	**0.61**	**170**	⇓*i* P	**Pb**	**07 41 26.3**	**-0.4**
IDE				*e*S	**Sb**	**07 41 34.9**	**-0.8**
AGPR	**Aguadilla, PR**	**0.69**	**139**		**Pb**	**07 41 28.1**	**+0.1**
AGPR				Sg	**Sb**	**07 41 39.0**	**+1.0**
AGPR				IAML		07 41 39.4	
	2μm,0.5s						
AGPR				IAML		07 41 39.6	
	2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.69**	**139**	⇑*e*Pg	**Pb**	**07 41 28.1**	**+0.1**
AGPR				*e*Sg	**Sb**	**07 41 38.5**	**+0.6**
AGPR				IAML		07 41 39.5	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.69**	**139**	⇑*i* P	**Pb**	**07 41 28.2**	**+0.1**
AGPR				*e*S	**Sb**	**07 41 38.9**	**+1.0**
PRSN	**Puerto Rico Se**	**0.87**	**152**		**Pb**	**07 41 31.3**	**+0.1**
PRSN					**Sn**	**07 41 44.6**	**-1.4**
PRSN	**Puerto Rico Se**	**0.87**	**152**	⇑*e*Pg	**Pb**	**07 41 31.2**	**+0.1**
PRSN				⇑*e*Sg	**Sg**	**07 41 41.7**	**-0.2**
PRSN				IAML		07 41 48.3	
	comp=N,1μm,0.3s						
PRSN	**Puerto Rico Se**	**0.87**	**152**	⇑*e*P	**Pb**	**07 41 31.3**	**+0.1**
PRSN				*e*S	**Sn**	**07 41 44.6**	**-1.4**
PCDR	**Punta Cana, DR**	**0.89**	**238**	⇑*e*Pg	**Pg**	**07 41 30.4**	**+0.1**
PCDR				⇑*e*Sg	**Sg**	**07 41 41.0**	**-0.9**
PCDR				IAML		07 41 45.6	
	comp=N,1μm,0.3s						
LSP	**Las Mesas**	**0.94**	**150**		**Pb**	**07 41 32.4**	**0.0**
LSP					**Sn**	**07 41 46.9**	**-0.7**
LSP	**Las Mesas**	**0.94**	**150**	⇓*e*P	**Pb**	**07 41 32.4**	**0.0**
LSP				*e*S	**Sn**	**07 41 46.9**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.08**	**155**		**Pb**	**07 41 33.9**	**-0.8**
CRPR					**Sn**	**07 41 49.3**	**-1.7**
CRPR	**Cabo Rojo, PR**	**1.08**	**155**	IAML		07 41 52.5	
	comp=N,735nm,0.5s						
CRPR				IAML		07 41 52.7	
	comp=N,1μm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.08**	**155**	⇑*e*Pg	**Pb**	**07 41 33.9**	**-0.8**
CRPR				IAML		07 41 52.6	
	comp=N,933nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.08**	**155**	⇑*e*P	**Pb**	**07 41 33.9**	**-0.8**
CRPR				*e*S	**Sn**	**07 41 49.3**	**-1.7**
CRPR	**Cabo Rojo, PR**	**1.08**	**155**	*i* P	**Pb**	**07 41 34.5**	**-0.2**
CRPR				*e*S	**Sn**	**07 41 51.6**	**+0.6**
CRPR				IAML		07 41 52.6	
	comp=Z,1μm,0.5s						
UUPR	**Utuado, UPR, P**	**1.10**	**132**		**Pb**	**07 41 34.8**	**-0.2**
MLPR	**Magueyes Islan**	**1.14**	**153**		**Pb**	**07 41 35.1**	**-0.6**
MLPR				IAML		07 41 53.9	
	comp=Z,876nm,0.7s						
MLPR				IAML		07 41 53.9	
	comp=Z,711nm,0.7s						
GBPR	**Guanica, Bosqu**	**1.21**	**146**		**Pn**	**07 41 36.6**	**-0.7**
GBPR					**Sn**	**07 41 53.4**	**-0.9**
GBPR	**Guanica, Bosqu**	**1.21**	**146**	⇓*e*P	**Pn**	**07 41 36.6**	**-0.7**
GBPR				*e*S	**Sn**	**07 41 53.4**	**-0.9**
CELP	**Cerrillos**	**1.32**	**134**		**Pn**	**07 41 38.3**	**-0.4**
CELP				IAML		07 42 00.5	
	comp=Z,533nm,0.3s						
CELP				IAML		07 42 00.6	
	comp=Z,389nm,0.3s						
OBIP	**Obispado Ponce**	**1.32**	**135**		**Pn**	**07 41 38.2**	**-0.7**
OBIP					**Sg**	**07 41 57.0**	**+1.3**
OBIP	**Obispado Ponce**	**1.32**	**135**	⇑*e*P	**Pn**	**07 41 38.2**	**-0.7**
OBIP				*e*S	**Sg**	**07 41 57.0**	**+1.3**
OBIP	**Obispado Ponce**	**1.32**	**135**	*i* P	**Pn**	**07 41 38.3**	**-0.5**
OBIP				*e*S	**Sb**	**07 41 56.2**	**-0.1**
OBIP				IAML		07 42 01.0	
	comp=Z,210nm,0.3s						
ECPR	**Experimental S**	**1.34**	**120**		**Pn**	**07 41 38.3**	**-0.7**
ECPR				IAML		07 42 04.8	
	comp=Z,878nm,0.2s						
ECPR	**Experimental S**	**1.34**	**120**	⇑*i* P	**Pn**	**07 41 38.2**	**-0.7**
ECPR				*e*S	**Sb**	**07 41 57.0**	**+0.3**
MIDR	**Miches**	**1.39**	**270**	⇓*e*Pg	**Pn**	**07 41 38.1**	**-1.6**
MIDR				IAML		07 42 01.5	
	comp=N,324nm,0.4s						
SMDR	**Samana, DR**	**1.55**	**281**	⇑*e*Pg	**Pn**	**07 41 41.6**	**-0.3**
SMDR				⇑*e*Sg	**Sg**	**07 42 03.3**	**+0.3**
SMDR				IAML		07 42 14.4	
	comp=N,287nm,0.3s						
GCPR	**Guaynabo City**	**1.57**	**115**		**Pn**	**07 41 41.6**	**-0.7**
GCPR					**Sn**	**07 42 03.0**	**-0.3**
GCPR	**Guaynabo City**	**1.57**	**115**	⇑*e*P	**Pn**	**07 41 41.6**	**-0.7**
GCPR				*e*S	**Sn**	**07 42 03.0**	**-0.3**
SJG	**San Juan**	**1.62**	**123**		**Pn**	**07 41 42.6**	**-0.2**
SJG	**San Juan**	**1.62**	**123**	IAML		07 42 08.0	
	comp=N,323nm,0.6s						
SJG				IAML		07 42 08.4	
	comp=N,289nm,0.3s						
SJG	**San Juan**	**1.62**	**123**	*e*Pg	**Pn**	**07 41 42.8**	**-0.1**
SJG				⇑*e*Sg	**Sb**	**07 42 05.0**	**+0.3**
SJG	**San Juan**	**1.62**	**123**	⇓*e*P	**Pn**	**07 41 42.6**	**-0.2**
SJG				*e*S	**Sn**	**07 42 04.4**	**0.0**
SJG	**San Juan**	**1.62**	**123**	*i* P	**Pn**	**07 41 42.7**	**-0.2**
SJG				*e*S	**Sb**	**07 42 05.0**	**+0.2**
SJG				IAML		07 42 09.4	
	comp=Z,276nm,0.3s						
DR12	**Loma Pena Alta**	**1.71**	**264**		**Pn**	**07 41 43.2**	**-1.1**
HATOM	**Hato Mayor del**	**1.71**	**264**	⇑*e*Pg	**Pg**	**07 41 46.2**	**+0.1**
HATOM				⇑*e*Sg	**Sg**	**07 42 07.4**	**-1.0**
HATOM				IAML		07 42 11.4	
	comp=N,260nm,0.6s						
HUMP	**Col San Antoni**	**1.85**	**117**		**Pn**	**07 41 46.3**	**+0.2**
HUMP					**Sn**	**07 42 10.6**	**+0.6**
HUMP	**Col San Antoni**	**1.85**	**117**	⇓*e*P	**Pn**	**07 41 46.3**	**+0.2**
HUMP				*e*S	**Sn**	**07 42 10.6**	**+0.6**
NADR	**Nagua**	**2.18**	**280**	⇑*e*Pg	**Pb**	**07 41 52.5**	**-0.9**
NADR				IAML		07 42 32.7	
	comp=N,1μm,0.5s						
CUPR	**Culebra, Puert**	**2.29**	**107**	Pn	**Pn**	**07 41 51.4**	**-0.6**
DR08	**Loma La Naviza**	**2.31**	**270**	⇑*e*Sg	**Sb**	**07 42 23.4**	**-1.4**
DR08				IAML		07 42 25.5	
	comp=N,3μm,0.2s						
SFDR	**San Fco. de Ma**	**2.53**	**277**	⇑*e*Pg	**Pb**	**07 41 58.6**	**-0.8**
SFDR				IAML		07 42 42.0	
	comp=N,515nm,0.5s						
SC01	**Santiago de lo**	**3.00**	**279**	*i* P	**Pb**	**07 42 05.4**	**-2.2**
SC01				IAML		07 42 57.9	
	comp=Z,124nm,0.8s						
SDDR	**Presa de Saban**	**3.50**	**270**	Pn	**Pn**	**07 42 10.7**	**+1.7**
SDDR				IAML		07 43 06.4	
	comp=Z,116nm,0.8s						
SDDR	**Presa de Saban**	**3.50**	**270**	*i* P	**Pn**	**07 42 11.6**	**+2.7**
SDDR				IAML		07 43 08.3	
	comp=Z,89nm,0.4s						
LODU1	**El Espartillar**	**3.74**	**261**	*i* P	**Pn**	**07 42 15.5**	**+3.3**
LODU1				IAML		07 43 14.0	
	comp=Z,61nm,1.1s						
LOVI	**El Cajuil, Ovi**	**3.78**	**252**	*i* P	**Pn**	**07 42 16.0**	**+3.3**
LOVI				*e*S	**Sn**	**07 42 58.6**	**+0.7**
LOVI				IAML		07 43 09.0	
	comp=Z,64nm,1.7s						
LOBH	**Bahia de las A**	**4.01**	**254**	*i* P	**Pn**	**07 42 19.2**	**+3.4**
LOBH				*e*S	**Sn**	**07 43 05.7**	**+2.2**
LOBH				IAML		07 43 11.8	
	comp=Z,53nm,2.3s						

IDC ***17*** *07:

MKAR	**Makanchi Array**	**86.51**	**318**	P		**P**		**08 11 46.1**	**-0.1**
	0.4nm,0.6s,baz=88,slow=6.0,SNR=5.7								
	0.4nm,0.6s								
NVAR	**Mina Array Bea**	**90.88**	**51**	P		**P**		**08 12 08.3**	**+1.0**
	0.8nm,0.9s,baz=245,slow=6.4,SNR=3.9								
	0.8nm,0.9s								

*ASRS **17** 08:10:12.0±0.7, 54°.22N×87°.11E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 17 08:10:13.9±3.3, 54°.24N×87°.18E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=29.6km s-min=18.3km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**259**	I	I	08 20 30.0	
	baz=78,slow=329,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.42**	**259**	Pg	Pn	08 10 39.3	-1.7
	0.8nm,0.3s,baz=75,slow=16,SNR=9.1						
ZALV				Lg	Lg	08 10 59.1	
	0.5nm,0.3s,baz=80,slow=28,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.41**	**239**	Pn	Pn	08 11 49.9	+0.5
	baz=55,slow=14,SNR=4.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**8.08**	**205**	Pn	Pn	08 12 14.1	+1.7
	baz=18,slow=24,SNR=1.5						
MKAR				Lg	Lg	08 14 31.4	
	baz=24,slow=32,SNR=1.8						
	0.1nm,0.3s						

*ASRS **17** 08:26:05.0±1.7, 53°.71N×91°.07E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 17 08:26:11.8±4.9, 53°.72N×90°.66E, h0km, mbtmp2.7/1, ML2.8/1, Error ellipse: s-maj=39.5km s-min=26.3km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.47**	**276**	Pg	Pb	08 27 13.1	-0.9
	0.5nm,0.3s,baz=91,slow=15,SNR=6.3						
ZALV				Lg	Lg	08 28 03.4	
	0.8nm,0.3s,baz=93,slow=26,SNR=9.1						
MKAR	**Makanchi Array**	**8.76**	**221**	Pn	Pn	08 28 20.6	+1.0
	0.1nm,0.3s,baz=30,slow=13,SNR=5.2						
MKAR				Sn	Sn	08 29 57.5	-1.4
	0.1nm,0.3s,baz=36,slow=27,SNR=2.1						
MKAR				Lg	Lg	08 30 49.0	
	baz=32,slow=28,SNR=3.6						
	0.1nm,0.3s						
SONM	**Songino Array**	**11.56**	**114**	Lg	Lg	08 32 11.6	
	baz=302,slow=22						
I34MN	**SONGINO INFRAS**	**11.59**	**114**	I	I	09 35 40.0	
	baz=310,slow=329,SNR=1.5						

*AFAD **17** 08:28:24.6, 34°.89N×27°.91E, h13km±3km, ML2.5*
*ISK **17** 08:28:30.0, 35°.18N×27°.91E, h12km, ML2.3/9*
*THE **17** 08:28:36.7, 35°.N±3°×2°.8E±°, h13km±7km, M2.4/8, MLh2.4/8*
ISC 17 08:28:34.3±1.5, 35°.28N±0°.06×27°.85E±0°.04, h25km±15km, n27, σ2°.33/39, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.62**	**295**	P	**Pb**	**08 28 44.3**	**-2.3**
KARP				S	**Sb**	**08 28 53.9**	**-1.1**
ARG	**Arkhangelos**	**0.96**	**13**	Pg	**Pb**	**08 28 50.6**	**-1.6**
ARG				Sg	**Sn**	**08 29 05.7**	**+0.7**
ARG	**Arkhangelos**	**0.96**	**13**	P	**Pb**	**08 28 52.7**	**+0.5**
ARG				S	**Sb**	**08 29 04.3**	**-0.2**
ZKR	**Zakros**	**1.35**	**263**	P	**Pn**	**08 28 59.4**	**+1.8**
YAZI	**Mula-Dat§a-**	**1.43**	**347**	P	**Pn**	**08 28 58.1**	**-0.6**
YAZI				S	**Sb**	**08 29 23.7**	**+5.5**
YAZI				IAML		08 29 30.0	
	comp=N,36nm,1.3s						
DAT	**Datca**	**1.46**	**351**	Pn	**Pn**	**08 28 58.5**	**-0.7**
DAT	**Datca**	**1.46**	**351**	P	**Pn**	**08 28 59.0**	**-0.1**
DAT				S	**Sb**	**08 29 18.5**	**-0.6**
DAT	**Datca**	**1.46**	**351**	P	**Pn**	**08 28 58.7**	**-0.5**
DAT				S	**Sb**	**08 29 24.2**	**+5.2**
DAT				IAML		08 29 30.0	
	comp=N,45nm,0.4s						
DAT				IAML		08 29 32.0	
	comp=E,36nm,0.7s						
TURN	**Turunc**	**1.52**	**12**	Pn	**Pn**	**08 28 59.2**	**-0.7**
TURN				Sn	**Sb**	**08 29 20.2**	**-0.5**
IZZE	**Mula-Seydike**	**1.60**	**44**	P	**Pn**	**08 28 58.2**	**-2.8**
IZZE				IAML		08 29 28.0	
	comp=E,35nm,0.4s						
KSL	**Kastellorizon**	**1.65**	**58**	P	**Pb**	**08 29 04.6**	**+0.5**
KSL				S	**Sb**	**08 29 26.5**	**+2.1**
DALY	**Dalyan (Mula)**	**1.66**	**23**	Pn	**Pn**	**08 29 00.4**	**-1.4**
FETY	**Fethiye**	**1.68**	**36**	P	Pn	08 28 45.6	-17
FETY				S	**Sn**	**08 29 18.0**	**-4.9**
AKAS	**Kas**	**1.71**	**56**	Pn	**Pn**	**08 29 00.6**	**-2.1**
AKAS	**Kas**	**1.71**	**56**	P	**Pn**	**08 29 00.6**	**-2.1**
AKAS				S	**Sn**	**08 29 26.1**	**+2.3**
AKAS				IAML		08 29 37.0	
	comp=E,54nm,2.0s						
AKAS				IAML		08 29 39.0	
	comp=N,79nm,1.8s						
SABU	**Mula-Dalaman**	**1.78**	**30**	P	**Pn**	**08 29 02.5**	**-1.0**
SABU				S	**Sb**	**08 29 34.8**	**+6.6**
BODT	**Bodrum**	**1.83**	**346**	Pn	**Pn**	**08 29 03.6**	**-0.5**
BODT	**Bodrum**	**1.83**	**346**	P	**Pn**	**08 29 04.9**	**+0.7**
BODT				S	**Sb**	**08 29 27.4**	**-2.2**
NPS	**Neapolis**	**1.83**	**270**	S	**Sb**	**08 29 29.2**	**-0.4**
YER	**Yerkesik**	**1.88**	**11**	Pn	**Pn**	**08 29 04.7**	**-0.2**
YER	**Yerkesik**	**1.88**	**11**	P	**Pn**	**08 29 06.4**	**+1.5**
DNZT	**Denizli-Tavas-**	**2.21**	**25**	P	**Pn**	**08 29 09.2**	**-0.2**
TAVA	**DENIZLI_Tavas**	**2.34**	**21**	P	**Pn**	**08 29 10.2**	**-1.0**
GOLH	**Golhisar**	**2.39**	**35**	P	**Pn**	**08 29 10.2**	**-1.7**
GOLH				S	**Sb**	**08 29 48.0**	**+2.2**
GOLH				IAML		08 29 48.0	
	comp=N,37nm,2.7s						
GOLH				IAML		08 29 59.0	
	comp=E,17nm,0.7s						
IDI	**Anoyia**	**2.42**	**271**	P	**Pn**	**08 29 14.5**	**+2.1**
APMY	**Acipayam-Deniz**	**2.48**	**28**	Pn	**Pn**	**08 29 12.7**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**2.66**	**1**	Pn	**Pn**	**08 29 15.5**	**-0.2**

*IDC **17** 08:34:51.2±0.8, 52°.30N×170°.20W, h0km, mb4.0/26, mbtmp4.0/28, ML3.6/2, MS3.6/8, Error ellipse: s-maj=22.8km s-min=13.5km az=1.0*
*AEIC **17** 08:34:56.6±1.9, 52°.16N±0°.07×170°.03W±0°.08, h33km±5km, Error ellipse: s-maj=11.4km s-min=5.2km az=150.0*
*NEIC **17** 08:34:56.7±1.5, 52°.28N±0°.07×170°.08W±0°.09, h35km±2km, mb4.1/100, ML4.2/20, ML3.8(AEIC), Error ellipse: s-maj=15.4km s-min=3.0km az=143.0*
ISC 17 08:34:56.7±1.3, 52°.18N±0°.09×170°.04W±0°.05, h41km±10km, n201, σ1§21/176, mb4.1/52, MS3.5/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLCO	**Concord Point,**	**0.64**	**17**		**Pn**	**08 35 08.5**	**-0.8**
CLCO					**Sn**	**08 35 19.1**	**+0.8**
CLES	**Cleveland East**	**0.65**	**8**		**Pn**	**08 35 09.0**	**-0.5**
CLES					**Sn**	**08 35 17.5**	**-1.2**
CLES				IAML		08 35 29.9	
	comp=E,10μm,0.4s						
NIKH	**Nikolski High**	**1.07**	**42**		**Pn**	**08 35 14.0**	**-1.2**
NIKH					**Sn**	**08 35 28.1**	**-0.8**
NIKH	**Nikolski High**	**1.07**	**42**	P	**Pn**	**08 35 13.7**	**-1.6**
NIKH	**Nikolski High**	**1.07**	**42**	S	**Sn**	**08 35 29.1**	**+0.2**
OKSP	**Okmok Steeple**	**1.51**	**44**		**Pn**	**08 35 20.1**	**-1.2**
OKWE	**Okmok W'ng Wal**	**1.69**	**39**		**Pn**	**08 35 23.7**	**-0.1**
OKER	**Okmok East Rim**	**1.75**	**43**		**Pn**	**08 35 23.9**	**-0.8**
OKER					**Sn**	**08 35 47.1**	**+1.3**
OKFG	**Magazine Ridge**	**1.78**	**45**		**Pn**	**08 35 24.5**	**-0.5**
KOSE	**Korovin Southe**	**2.47**	**275**		**Pn**	**08 35 34.8**	**+0.3**
KOSE					**Sn**	**08 36 04.0**	**+0.5**
KOSE					Lg	08 36 06.8	
MAPS	**Pakushin South**	**2.48**	**48**		**Pn**	**08 35 34.0**	**-0.6**
KOFP	**Korovin Flat P**	**2.50**	**274**		**Pn**	**08 35 34.2**	**-0.6**
KOFP					**Sn**	**08 36 05.9**	**+1.8**
MGOD	**Makushin Gods**	**2.50**	**49**		**Pn**	**08 35 35.0**	**+0.1**
KONE	**Korovin Northe**	**2.52**	**276**		**Pn**	**08 35 35.2**	**+0.1**
KOKV	**Korovin Volcan**	**2.54**	**276**		**Pn**	**08 35 35.2**	**-0.3**
ATKA	**Atka Island**	**2.56**	**272**	Pn	**Pn**	**08 35 35.3**	**-0.4**
ATKA				Sn	**Sn**	**08 36 04.6**	**-0.9**
ATKA	**Atka Island**	**2.56**	**272**	P	**Pn**	**08 35 34.9**	**-0.8**
ATKA	**Atka Island**	**2.56**	**272**	P	**Sn**	**08 36 05.9**	**+0.4**
KOKL	**Mount Kliuchef**	**2.56**	**275**		**Pn**	**08 35 36.0**	**+0.2**
MREP	**Makushin Rep't**	**2.57**	**49**		**Pn**	**08 35 35.4**	**-0.6**
KOWE	**Korovin West**	**2.60**	**276**		**Pn**	**08 35 36.8**	**+0.6**
UNV	**Unalaska Valle**	**2.71**	**51**	Pn	**Pn**	**08 35 37.4**	**-0.2**
UNV				IAML		08 36 24.9	
	comp=N,928nm,0.9s						
UNV				IAML		08 36 26.6	
	comp=E,784nm,1.1s						
AKRB	**Akutan Reef Bi**	**3.08**	**49**		**Pn**	**08 35 43.0**	**+0.1**
AKBBA	**Akutan Broad B**	**3.13**	**51**		**Pn**	**08 35 44.2**	**+0.7**
AKGG	**Akutan Green G**	**3.16**	**49**		**Pn**	**08 35 44.5**	**+0.5**
AHB	**Akutan Harbor**	**3.20**	**51**		**Pn**	**08 35 44.7**	**+0.3**
AKUT	**Akutan**	**3.23**	**51**		**Pn**	**08 35 48.1**	**+3.3**
AKUT				IAML		08 36 42.6	
	comp=E,638nm,0.8s						
GSIG	**Igitkin Island**	**3.64**	**269**		**Pn**	**08 35 50.1**	**-0.3**
GSTR	**Great Sitkin T**	**3.71**	**271**	Pn	**Pn**	**08 35 50.8**	**-0.7**
GSMY	**Great Sitkin M**	**3.71**	**270**		**Pn**	**08 35 51.3**	**-0.2**
ETKA	**Kagalaska Isla**	**3.95**	**268**		**Pn**	**08 35 54.1**	**-0.6**
ADAG	**Mount Adagdak**	**4.06**	**270**		**Pn**	**08 35 56.2**	**-0.1**
ADK	**Adak**	**4.12**	**268**		**Pn**	**08 35 57.1**	**+0.1**
ADK				IAML		08 37 06.2	
	comp=E,259nm,0.9s						
ADK				IAML		08 37 08.9	
	comp=E,225nm,1.4s						
ADK	**Adak**	**4.12**	**268**	P	**Pn**	**08 35 56.6**	**-0.4**
ADK	**Adak**	**4.12**	**268**	S	**Sn**	**08 36 43.5**	**-0.4**
KIWB	**Kanaga Island**	**4.41**	**269**	Pn	**Pn**	**08 36 01.1**	**+0.1**
KIWB				IAML		08 36 56.4	
	comp=N,270nm,1.0s						
KIWB				IAML		08 37 06.4	
	comp=E,275nm,0.7s						
P08K	**Saint George I**	**4.44**	**3**	Pn	**Pn**	**08 36 04.5**	**+3.0**
P08K				IAML		08 37 01.0	
	comp=E,215nm,1.4s						
P08K				IAML		08 37 37.8	
	comp=N,242nm,1.4s						
KIMD	**Kanaga Island**	**4.47**	**267**		**Pn**	**08 36 01.5**	**-0.4**
SPIA	**Saint Paul Isl**	**5.01**	**359**	Pn	**Pn**	**08 36 08.7**	**-0.6**
GANE	**Gareloi Northe**	**5.41**	**270**		**Pn**	**08 36 15.1**	**+0.2**
CEPE	**Semis' Perret**	**6.37**	**272**		**Pn**	**08 36 29.7**	**+1.8**
SDPT	**Sand Point**	**6.50**	**57**	Pn	**Pn**	**08 36 29.9**	**+0.3**
SDPT	**Sand Point**	**6.50**	**57**	P	**Pn**	**08 36 30.8**	**+1.2**
M11K	**Mekoryuk**	**8.49**	**13**		**Pn**	**08 36 57.2**	**+0.2**
O15K	**Ungalikthiuk R**	**9.07**	**35**		**Pn**	**08 37 07.6**	**+2.7**
CHIR	**Chirikof Islan**	**9.24**	**61**	Pn	**Pn**	**08 37 07.1**	**-0.1**
CHIR	**Chirikof Islan**	**9.24**	**61**	P	**Pn**	**08 37 07.0**	**-0.1**
PLK4	**Peulik 4**	**9.58**	**50**	Pn	**Pn**	**08 37 12.6**	**+0.6**
P16K	**Nushagak River**	**9.66**	**40**	Pn	**Pn**	**08 37 16.0**	**+3.0**
M14K	**Bethel**	**9.68**	**24**		**Pn**	**08 37 15.9**	**+2.7**
N15K	**Kwethluk River**	**9.73**	**31**	Pn	**Pn**	**08 37 11.7**	**-2.2**
O16K	**Kokwok River B**	**10.00**	**37**		**Pn**	**08 37 20.1**	**+2.6**
L14K	**Kuka Creek**	**10.02**	**21**		**Pn**	**08 37 19.5**	**+1.6**
SII	**Sitkinak Islan**	**10.23**	**58**	P	**Pn**	**08 37 21.0**	**+0.2**
OHAK	**Old Harbor**	**10.92**	**56**	Pn	**Pn**	**08 37 28.5**	**-1.7**
OHAK	**Old Harbor**	**10.92**	**56**	P	**Pn**	**08 37 28.1**	**-2.1**
N17K	**Nushagak Hills**	**10.97**	**35**		**Pn**	**08 37 33.7**	**+2.8**
P18K	**Big Mountain,**	**11.01**	**43**		**Pn**	**08 37 33.0**	**+1.5**
L16K	**Owhat River**	**11.14**	**27**		**Pn**	**08 37 36.5**	**+3.3**
O18K	**Koktuh Hills**	**11.29**	**41**		**Pn**	**08 37 37.7**	**+2.4**
Q19K	**Cape Douglas,**	**11.46**	**47**	Pn	**Pn**	**08 37 38.5**	**+0.8**
KDAK	**Kodiak Island**	**11.47**	**54**	Pn	**Pn**	**08 37 35.9**	**-1.8**
	comp=N,1.5nm,0.3s,baz=170,slow=2.5,SNR=45						
KDAK	**Kodiak Island**	**11.47**	**54**	Pn	**Pn**	**08 37 36.2**	**-1.6**
M17K	**Holitna River**	**11.51**	**32**	Pn	**Pn**	**08 37 41.6**	**+3.2**
SYI	**Shuyak Island**	**11.90**	**50**	Pn	**Pn**	**08 37 41.8**	**-1.8**
J16K	**Anvik River**	**12.20**	**21**		**Pn**	**08 37 50.1**	**+2.4**
K17K	**Iditarod**	**12.28**	**26**		**Pn**	**08 37 50.9**	**+2.1**
RED	**Redoubt Volcan**	**12.61**	**42**	Pn	**Pn**	**08 37 55.9**	**+2.5**
ANM	**Nome**	**12.65**	**9**		**Pn**	**08 37 56.5**	**+2.6**
TNA	**Tin City**	**13.46**	**4**		**Pn**	**08 38 04.6**	**-0.3**
SLKM	**Skilak Lake**	**13.74**	**45**	Pn	**Pn**	**08 38 08.2**	**-0.7**
SUA	**Susitna One**	**14.02**	**41**	Pn	**Pn**	**08 38 12.2**	**-0.3**
KTH	**Kantishna Hill**	**15.19**	**34**	IAmb	IAmb	08 38 38.5	
	comp=E,8.9nm,0.8s						
TRF	**Thorofare Moun**	**15.35**	**35**		**P**	**08 38 32.6**	**-1.9**
TRF				IAmb	IAmb	08 38 39.3	
	comp=E,12nm,1.1s						
HIN	**Hinchinbrook I**	**15.37**	**48**	Pn	**Pn**	**08 38 28.9**	**-1.6**
BPAW	**Bear Paw Mtn.**	**15.53**	**32**		**P**	**08 38 34.9**	**-1.4**
SCM	**Sheep Creek Mo**	**15.61**	**43**	Pn	**Pn**	**08 38 31.6**	**-2.0**
EYAK	**Cordova Ski Ar**	**15.77**	**48**	Pn	**Pn**	**08 38 33.7**	**-1.8**
EYAK	**Cordova Ski Ar**	**15.77**	**48**	P	**Pn**	**08 38 33.5**	**-2.1**
RND	**Reindeer**	**15.84**	**37**		**Pn**	**08 38 38.2**	**+1.7**
RND				IAmb	IAmb	08 38 48.6	
	comp=E,8.1nm,0.8s						
KLU	**Klutina**	**16.06**	**45**		**Pn**	**08 38 37.1**	**-2.3**
KLU				IAmb	IAmb	08 38 42.5	
	comp=E,12nm,0.5s						
M24K	**Tolsona, Glenn**	**16.22**	**43**	IAmb	IAmb	08 38 55.9	
	comp=E,23nm,0.9s						
N25K	**Chitina, Valde**	**16.69**	**46**	IAmb	IAmb	08 39 29.1	
	comp=E,18nm,1.4s						
I23K	**Minto, Yukon-K**	**16.75**	**31**	P	**P**	**08 38 49.1**	**-0.6**
I23K				IAmb	IAmb	08 39 16.5	
	comp=E,15nm,1.5s						
CCB	**Clear Creek Bu**	**16.95**	**34**		**Pn**	**08 38 49.2**	**-1.2**
GLB	**Gilahina Butte**	**16.97**	**47**		**Pn**	**08 38 49.6**	**-1.3**
GLB				IAmb	IAmb	08 39 11.7	
	comp=E,17nm,1.4s						
CRQM	**Cirque**	**17.05**	**49**	P	**Pn**	**08 38 51.0**	**-0.9**
CRQM				IAmb	IAmb	08 39 11.4	
	comp=E,29nm,1.3s						
VRDI	**Verde Repeater**	**17.06**	**48**	P	**Pn**	**08 38 50.4**	**-1.7**
WAX	**Waxell Ridge**	**17.09**	**50**	P	**Pn**	**08 38 51.5**	**-0.9**
WAX				IAmb	IAmb	08 39 08.4	
	comp=E,17nm,0.9s						
TGL	**Tana Glacier**	**17.19**	**49**	P	**Pn**	**08 38 52.3**	**-1.4**
TGL				IAmb	IAmb	08 39 25.9	
	comp=E,14nm,1.0s						
MCARA	**McCarthy VSAT**	**17.31**	**47**	P	**Pn**	**08 38 54.4**	**-0.6**
MCARA				IAmb	IAmb	08 39 07.4	
	comp=E,16nm,1.1s						
ILAR	**Eielson Array**	**17.34**	**34**	P	**Pn**	**08 38 53.5**	**-1.8**
	comp=E,0.2nm,0.3s,baz=230,slow=10,SNR=20						
ILAR					LR	08 45 04.7	
	comp=E,126nm,20.8s,baz=216,slow=36						
	comp=E,0.3nm,0.3s						
ILAR	**Eielson Array**	**17.34**	**34**	P	**Pn**	**08 38 54.4**	**-1.0**
ISLE	**Juniper Island**	**17.38**	**50**	P	**Pn**	**08 38 55.1**	**-0.9**
ISLE				IAmb	IAmb	08 39 09.4	
	comp=E,11nm,0.8s						
H24K	**Noodor Dome**	**17.67**	**31**	P	**Pn**	**08 38 59.8**	**+0.3**
GRNC	**Granite Creek**	**17.69**	**50**	P	**Pn**	**08 38 59.6**	**-0.4**
GRNC				IAmb	IAmb	08 39 07.5	
	comp=E,21nm,1.2s						
BARN	**Barnard Glacie**	**17.83**	**49**	P	**P**	**08 39 02.1**	**+0.1**
BARN				IAmb	IAmb	08 39 17.4	
	comp=E,6.9nm,0.7s						
CTGM	**Chitina Glacie**	**17.95**	**49**	P	**P**	**08 39 03.6**	**+0.3**
CTGM				IAmb	IAmb	08 39 15.4	
	comp=E,9.0nm,0.8s						
LOGN	**Logan Glacier**	**18.07**	**50**	P	**Pn**	**08 39 04.6**	**0.0**
LOGN				IAmb	IAmb	08 39 42.1	
	comp=E,23nm,1.4s						
J26L	**Joseph Creek**	**18.40**	**38**	P	**P**	**08 39 06.3**	**-1.8**
J26L				IAmb	IAmb	08 39 13.6	
	comp=E,7.6nm,0.6s						
O28M	**Mount Upton**	**18.44**	**51**	IAmb	IAmb	08 39 23.7	
	comp=E,8.6nm,0.8s						
BCAR	**Beaver Creek A**	**18.47**	**43**	P	**P**	**08 39 08.0**	**-0.8**
FYU	**Fort Yukon**	**18.96**	**31**	P	**P**	**08 39 12.7**	**-1.4**
PEA0B	**Petropavlovsk-**	**19.52**	**286**	P	**P**	**08 39 19.9**	**-0.5**
PEA0B				IAmb	IAmb	08 39 33.1	
	comp=E,13nm,0.9s						
PETK	**Petropavlovsk-**	**19.52**	**286**	P	**P**	**08 39 19.4**	**-1.0**
	comp=E,0.9nm,0.3s,baz=84,slow=14,SNR=30						
	comp=E,4.7nm,0.5s						
G26K	**Porcupine Rive**	**19.65**	**31**	IAmb	IAmb	08 39 32.2	
	comp=E,11nm,1.5s						
HYT	**Haines Junctio**	**19.74**	**51**	IAmb	IAmb	08 39 29.5	
	comp=E,13nm,0.8s						
E25K	**Arctic Village**	**19.85**	**27**	P	**Pn**	**08 39 25.2**	**-0.5**
E25K				IAmb	IAmb	08 39 46.5	
	comp=E,8.9nm,1.3s						
H27K	**Steamboat Moun**	**20.01**	**34**	P	**P**	**08 39 25.2**	**-0.5**
O30N	**Mendenhall**	**20.41**	**52**	IAmb	IAmb	08 39 56.0	
	comp=E,8.3nm,0.8s						
D25K	**Kavik River**	**20.46**	**24**		**P**	**08 39 30.7**	**+0.1**
K29M	**Barlow Dome**	**20.54**	**43**	IAmb	IAmb	08 40 05.1	
	comp=E,7.5nm,1.1s						
SKAG	**Skagway**	**20.62**	**56**	P	Pn	08 39 33.7	-1.0
N31M	**Braeburn, Yuko**	**20.69**	**50**	P	**P**	**08 39 33.7**	**+0.7**
N31M				IAmb	IAmb	08 39 43.3	
	comp=E,10nm,0.9s						
WHY	**Whitehorse**	**20.98**	**52**	P	**P**	**08 39 36.5**	**+0.3**
C27K	**Jago River**	**21.36**	**25**	P	**P**	**08 39 42.1**	**+2.0**
N32M	**Quiet Lake**	**21.92**	**51**	IAmb	IAmb	08 40 01.4	
	comp=E,11nm,0.8s						
P33M	**Teslin, Yukon**	**21.95**	**54**	P	**P**	**08 39 47.4**	**+0.8**
P33M				IAmb	IAmb	08 40 19.1	
	comp=E,8.8nm,1.0s						
F30M	**Barrier River**	**22.66**	**34**		**P**	**08 39 53.9**	**-0.1**
F30M				IAmb	IAmb	08 40 29.4	
	comp=E,5.8nm,0.9s						
MA2	**Magadan**	**22.91**	**304**	LR	LR	08 50 47.5	
	comp=E,64nm,18.1s,baz=84,slow=42						
INK	**Inuvik**	**23.73**	**33**	LR	LR	08 49 30.7	
	comp=Z,155nm,20.1s,baz=4,slow=37						
INK	**Inuvik**	**23.73**	**33**	P	**P**	**08 40 04.2**	**-0.4**
INK				IAmb	IAmb	08 40 08.1	
	comp=Z,4.4nm,1.1s						
RADR	**Rader Ridge**	**30.27**	**82**	P	**P**	**08 41 03.6**	**-0.1**
YKAW3	**Yellowknife Wh**	**30.66**	**48**	IAmb	IAmb	08 41 13.1	
	comp=Z,2.4nm,1.0s						
YKA	**Yellowknife Ar**	**30.67**	**49**	P	**P**	**08 41 07.8**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=274,slow=7.7,SNR=19						
YKA				LR	LR	08 53 32.8	
	comp=Z,109nm,19.3s,baz=346,slow=36						
	comp=Z,0.8nm,0.7s						
YKAW1	**Yellowknife Wh**	**30.73**	**49**	IAmb	IAmb	08 41 12.4	
	comp=Z,2.5nm,0.8s						
YAK	**Yakutsk**	**32.99**	**311**	LR	LR	08 54 46.2	
	comp=Z,95nm,19.0s,baz=339,slow=36						
NEW	**Newport**	**33.45**	**75**	IAmb	IAmb	08 41 47.4	
	comp=Z,4.0nm,1.0s						
RES	**Resolute Bay**	**36.72**	**25**	LR	LR	09 00 33.6	
	comp=Z,9nm,18.9s,baz=351,slow=42						
H11N2	**WAKE ISLAND Hy**	**37.05**	**218**	T	T	09 21 52.7	
	baz=24,slow=76,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**37.06**	**218**	T	T	09 21 34.0	
	baz=24,slow=76,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**37.07**	**218**	T	T	09 21 40.4	
	baz=24,slow=76,SNR=5.9						
BOZ	**Bozeman (W)**	**38.04**	**76**	IAmb	IAmb	08 42 29.3	
	comp=Z,7.0nm,1.4s						
NVAR	**Mina Array Bea**	**38.07**	**90**	P	**P**	**08 42 12.8**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=316,slow=7.0,SNR=5.3						
	comp=Z,0.6nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**38.24**	**217**	T	T	09 23 18.5	
	baz=23,slow=76,SNR=71						
H11S2	**WAKE ISLAND Hy**	**38.26**	**217**	T	T	09 23 24.1	
	baz=23,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**38.26**	**217**	T	T	09 23 26.2	
	baz=23,slow=76,SNR=34						
YHL	**Hebgen Lake**	**38.70**	**77**	IAmb	IAmb	08 42 30.1	
	comp=Z,2.8nm,0.8s						
YHH	**Holmes Hill**	**38.94**	**77**	P	**P**	**08 42 20.0**	**+1.2**
FFC	**Flin Flon**	**39.17**	**58**	P	**P**	**08 42 21.2**	**+1.1**
FFC				IAmb	IAmb	08 42 25.0	
	comp=Z,4.2nm,1.1s						
YNE	**Yellowstone No**	**39.32**	**76**	P	**P**	**08 42 22.2**	**+0.3**
YNE				IAmb	IAmb	08 42 36.2	
	comp=Z,1.8nm,0.8s						
RLMT	**Red Lodge**	**39.70**	**75**	IAmb	IAmb	08 42 40.4	
	comp=Z,4.6nm,0.9s						
BW06	**Boulder Array**	**40.84**	**78**	P	**P**	**08 42 35.1**	**+0.6**
BW06				IAmb	IAmb	08 42 39.3	
	comp=Z,3.5nm,0.9s						
PD31	**Pinedale Array**	**40.84**	**78**	P	**P**	**08 42 35.1**	**+0.6**
PD31				IAmb	IAmb	08 42 39.3	
	comp=Z,3.4nm,0.9s						
PDAR	**Pinedale Array**	**40.84**	**78**	P	**P**	**08 42 35.2**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=305,slow=2.9,SNR=25						
	comp=Z,1.8nm,0.6s						
PDAR	**Pinedale Array**	**40.84**	**78**	P	**P**	**08 42 35.6**	**+1.1**
FCC	**Fort Churchill**	**41.38**	**50**		**P**	**08 42 39.1**	**+0.8**
FCC				IAmb	IAmb	08 42 43.5	
	comp=Z,5.9nm,0.9s						
ILON	**Igloolik, Nuna**	**41.96**	**32**		**P**	**08 42 43.2**	**+0.2**
ILON				IAmb	IAmb	08 43 04.3	
	comp=Z,7.8nm,1.5s			

comp=Z,2.2nm,1.1s
ABKAR **Akbulak array** 70.38 328 P P 08 46 05.7 -0.3
KKAR **Karatay Array** 71.66 318 P P 08 46 13.6 -0.3
EKA **Eskdalemuir Ar** 72.30 8 P P 08 46 18.1 +0.6
comp=Z,0.7nm,0.5s,baz=349,slow=4.4,SNR=3.9
comp=Z,0.7nm,0.5s
KSH2 **Kashi** 72.69 312 P P 08 46 19.3 -1.0
KSH2 pmax pmax
comp=Z,1.0nm,0.6s
AKASG **Malin Array Be** 76.20 348 P P 08 46 39.6 -0.7
comp=Z,1.2nm,0.5s,baz=18,slow=5.8,SNR=3.6
comp=Z,1.2nm,0.5s
CMAR **Chiang Mai Arr** 76.26 282 P P 08 46 41.9 +0.8
comp=Z,1.0nm,0.3s,baz=36,slow=7.0,SNR=1.0
comp=Z,1.0nm,0.3s
GERES **GERESS Array B** 79.30 357 P P 08 46 57.8 +0.1
comp=Z,0.2nm,0.4s,baz=7.0,slow=8.9,SNR=2.2
comp=Z,0.2nm,0.4s
KBZ **Khabaz** 80.32 336 P P 08 47 03.2 0.0
comp=Z,0.7nm,0.5s,baz=58,slow=6.0,SNR=2.2
comp=Z,0.7nm,0.5s
CTA **Charters Tower** 81.41 221 LR LR 09 16 40.2
comp=Z,28nm,20.0s,baz=336,slow=31
BRTR **Keskin Array B** 86.18 342 P P 08 47 33.5 -0.1
comp=Z,0.5nm,0.6s,baz=15,slow=4.2,SNR=2.8
comp=Z,0.5nm,0.6s
WRA **Warramunga Arr** 86.57 231 P P 08 47 36.1 +0.7
comp=Z,0.5nm,0.8s,baz=25,slow=5.2,SNR=3.7
comp=Z,0.5nm,0.8s
ESDC **Sonseca Array** 87.72 11 P P 08 47 40.5 -0.5
comp=Z,0.9nm,0.7s,baz=337,slow=5.0,SNR=5.6
comp=Z,0.9nm,0.7s
AS31 **Alice Springs** 89.96 230 P P 08 47 51.4 -0.1
AS31 IAmb IAmb 08 48 03.8
comp=Z,0.6nm,0.8s
ASAR **Alice Springs** 89.96 230 P P 08 47 51.3 -0.2
comp=Z,1.1nm,0.8s,baz=32,slow=5.0,SNR=12
comp=Z,1.1nm,0.8s
ASAR **Alice Springs** 89.96 230 P P 08 47 51.7 +0.2

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*CATAC **17** 08:50:23.9±0.5, 12°N±2°×8°8W±°, h22km±4km, M4.0/37, MLv4.0/37, Error ellipse: s-maj=5.6km s-min=2.3km az=21.9, confirmed*
*IDC **17** 08:50:23.1±1.4, 12°.66N×87°.47W, h0km, mb3.7/6, mbtmp3.7/8, ML3.3/2, MS2.8/1, Error ellipse: s-maj=49.2km s-min=13.9km az=44.0*
*SNET **17** 08:50:25.0±0.8, 12°.28N×87°.99W, h2km±14km, ML3.6, Presumed earthquake*
ISC 17 08:50:26.2±1.3, **12°.02N**±0°.07×**87°.99W**±0°.04, **h53**km±13km, **n69**, σ1s**13**/87, **mb3.6/6**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.04**	**24**	P	**Pn**	**08 50 43.6**	**-1.1**
CSGN				S	**Sn**	**08 50 58.7**	**+0.4**
CRIN	**San Cristobal**	**1.14**	**53**	P	**Pn**	**08 50 45.2**	**-0.8**
CRIN				S	**Sn**	**08 51 01.8**	**+1.1**
TEL3	**Telica 3**	**1.25**	**64**	P	**Pn**	**08 50 45.8**	**-1.6**
CNCH	**Conchagua**	**1.26**	**7**	P	**Pn**	**08 50 46.2**	**-1.5**
CNCH	**Conchagua**	**1.26**	**7**	*eP*	**Pn**	**08 50 46.5**	**-1.2**
CNCH				*eS*	**Sn**	**08 51 06.1**	**+2.5**
HOYN	**Al Sur del Vol**	**1.27**	**63**	P	**Pn**	**08 50 46.4**	**-1.4**
HOYN				S	**Sn**	**08 51 05.4**	**+1.5**
HERN	**Volcan Telica**	**1.28**	**62**	P	**Pn**	**08 50 46.3**	**-1.5**
LCND	**La Caada**	**1.29**	**4**	P	**Pn**	**08 50 46.9**	**-1.0**
LCND	**La Caada**	**1.29**	**4**	*eP*	**Pn**	**08 50 46.6**	**-1.3**
POLN	**Al Sur del Vol**	**1.31**	**61**	P	**Pn**	**08 50 46.7**	**-1.6**
POLN				S	**Sn**	**08 51 04.9**	**+0.2**
ROCN	**Rota Cerro Neg**	**1.32**	**68**	P	**Pn**	**08 50 47.7**	**-0.6**
CNGA	**Al SSO del Vol**	**1.35**	**69**	P	**Pn**	**08 50 48.0**	**-0.8**
CNGN	**Cerro Negro**	**1.35**	**69**	P	**Pn**	**08 50 47.8**	**-1.0**
MACN	**El Madrono**	**1.36**	**71**	P	**Pn**	**08 50 47.5**	**-1.4**
COPN	**Copaltepe**	**1.38**	**83**	P	**Pn**	**08 50 48.1**	**-1.0**
LEVN	**Ruinas Leon Vi**	**1.40**	**74**	P	**Pn**	**08 50 48.8**	**-0.5**
CNRM	**Centro Naciona**	**1.46**	**353**	P	**Pn**	**08 50 49.0**	**-1.2**
CNRM	**Centro Naciona**	**1.46**	**353**	*eP*	**Pn**	**08 50 49.2**	**-1.0**
MOMN	**Momotombo**	**1.47**	**75**	P	**Pn**	**08 50 49.1**	**-1.3**
AMTN	**Mateare**	**1.54**	**82**	S	**Sn**	**08 51 11.1**	**+0.8**
TECA	**Tecapa**	**1.55**	**341**	*eP*	**Pn**	**08 50 50.5**	**-1.2**
SAPS	**Ciudad Sandino**	**1.56**	**84**	P	**Pn**	**08 50 50.8**	**-0.8**
APQ2	**Apoyeque**	**1.64**	**84**	P	**Pn**	**08 50 53.7**	**+1.0**
ALLN	**Telcor Managua**	**1.68**	**85**	P	**Pn**	**08 50 52.5**	**-0.8**
UNAN	**Cigeo UNAN**	**1.69**	**87**	P	**Pn**	**08 50 52.2**	**-1.1**
UNAN				S	**Sn**	**08 51 14.9**	**+1.1**
TISN	**Laguna Tiscapa**	**1.69**	**86**	P	**Pn**	**08 50 52.6**	**-0.8**
TECO	**Alcaldia de Te**	**1.70**	**333**	P	**Pn**	**08 50 52.5**	**-1.0**
TECO				S	**Sn**	**08 51 14.6**	**+0.5**
TECO	**Alcaldia de Te**	**1.70**	**333**	*eP*	**Pn**	**08 50 52.1**	**-1.4**
MGAN	**Managua**	**1.71**	**85**	P	**Pn**	**08 50 52.7**	**-0.9**
MGAN				S	**Sn**	**08 51 15.3**	**+1.0**
MAS3	**Al N del Volca**	**1.77**	**90**	P	**Pn**	**08 50 53.4**	**-1.1**
MAS3				S	**Sn**	**08 51 15.8**	**-0.2**
AERN	**Aeropuerto Man**	**1.79**	**86**	S	**Sn**	**08 51 18.1**	**+1.8**
SABN	**Sabanita**	**1.79**	**92**	P	**Pn**	**08 50 53.8**	**-1.0**
COEG	**Centro de Oper**	**1.81**	**332**	P	**Pn**	**08 50 54.0**	**-1.1**
COEG	**Centro de Oper**	**1.81**	**332**	*eP*	**Pn**	**08 50 54.0**	**-1.1**
SCLA	**Alcaldia de Sa**	**1.82**	**337**	P	**Pn**	**08 50 54.8**	**-0.4**
SCLA				S	**Sn**	**08 51 17.5**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.82**	**337**	*eP*	**Pn**	**08 50 54.6**	**-0.6**
NANN	**Nandasmo**	**1.83**	**92**	P	**Pn**	**08 50 55.4**	**+0.1**
NANN				S	**Sn**	**08 51 17.8**	**+0.4**
LIMN	**Finca el Limon**	**1.90**	**57**	P	**Pn**	**08 50 55.2**	**-1.1**
LIMN				S	**Sn**	**08 51 20.0**	**+0.9**
PAVA	**Las Pavas**	**1.92**	**331**	P	**Pn**	**08 50 56.0**	**-0.6**
LALI	**Alcalda de L**	**1.96**	**319**	S	**Sn**	**08 51 18.1**	**-2.3**
LOMA	**Loma Larga**	**1.99**	**325**	*eP*	**Pn**	**08 50 57.4**	**-0.1**
LBRS	**Las Brisas**	**2.00**	**329**	*eP*	**Pn**	**08 50 57.1**	**-0.5**
UDBS	**Universidad Do**	**2.04**	**326**	P	**Pn**	**08 50 57.8**	**-0.3**
UDBS				S	**Sn**	**08 51 22.3**	**-0.1**
IGN	**Direccin Gen**	**2.04**	**326**	S	**Sn**	**08 51 23.0**	**+0.4**
UEES	**Universidad Ev**	**2.08**	**324**	P	**Pn**	**08 50 58.3**	**-0.6**
UEES				S	**Sn**	**08 51 24.8**	**+1.2**
PIC2	**El Picacho**	**2.12**	**324**	*eP*	**Pn**	**08 50 59.2**	**-0.2**
PMON	**Piamonte**	**2.12**	**323**	P	**Pn**	**08 50 58.6**	**-0.8**
PMON	**Piamonte**	**2.12**	**323**	*eP*	**Pn**	**08 50 58.8**	**-0.6**
JAYA	**Jayaque - finc**	**2.16**	**319**	P	**Pn**	**08 50 58.5**	**-1.5**
MATN	**Matagalpa**	**2.21**	**66**	P	**Pn**	**08 50 58.4**	**-2.2**
YUSH	**Yuscaran**	**2.23**	**30**	P	**Pn**	**08 51 00.3**	**-0.5**
RCSN	**San Juan de Ri**	**2.31**	**51**	P	**Pn**	**08 51 01.7**	**-0.3**
BOAB	**BOACO BROADBAN**	**2.31**	**79**	P	**Pn**	**08 51 00.5**	**-1.3**
LLGN	**La Laguna**	**2.33**	**337**	P	**Pn**	**08 51 01.7**	**-0.5**
LLGN				S	**Sn**	**08 51 32.8**	**+3.1**
RCVN	**Varillal2**	**2.34**	**48**	P	**Pn**	**08 51 01.9**	**-0.5**
RCVN				S	**Sn**	**08 51 31.7**	**+1.5**
RCPN	**Sur Rio San Ju**	**2.38**	**51**	P	**Pn**	**08 51 02.8**	**-0.2**
NUBE	**Las Nubes**	**2.56**	**317**	P	**Pn**	**08 51 04.4**	**-1.0**
NUBE				S	**Sn**	**08 51 34.3**	**-1.2**
NUBE	**Las Nubes**	**2.56**	**317**	*eP*	**Pn**	**08 51 04.6**	**-0.8**
SLOZ	**Alcaldia de Sa**	**2.65**	**319**	P	**Pn**	**08 51 06.7**	**+0.1**
MTO3	**Montecristo**	**2.72**	**331**	P	**Pn**	**08 51 08.7**	**+1.1**
JTS	**Las Juntas de**	**3.44**	**120**	Pn	**Pn**	**08 51 18.2**	**+0.8**
	3.7nm,0.3s,baz=296,slow=10.0,SNR=8.4						
JTS				Pg		08 51 25.1	
	4.1nm,0.3s,baz=315,slow=22,SNR=5.0						
JTS				Lg	Lg	08 52 11.9	
	2.3nm,0.3s,baz=315,slow=23,SNR=1.5						
JTS				LR	LR	08 52 54.5	
	comp=Z,128nm,20.0s,baz=3.6,slow=44						
	3.7nm,0.3s						
APG	**El Apazote**	**3.82**	**321**	Pn	**Pn**	**08 51 23.4**	**+0.7**
	baz=192,slow=13,SNR=1.4						
APG				Pg		08 51 32.0	
	0.1nm,0.3s,baz=84,slow=12,SNR=4.6						
CMIG	**Matias Romero**	**8.37**	**308**	Pn	**Pn**	**08 52 26.1**	**+1.2**
	0.4nm,0.3s,baz=155,slow=7.2,SNR=15						
CMIG				Sn	**Sn**	**08 53 58.7**	**+0.7**
	0.2nm,0.3s,baz=161,slow=18,SNR=1.4						
	2.7nm,0.7s						
TXAR	**Lajitas Array**	**22.58**	**322**	P	**P**	**08 55 23.8**	**+1.4**
	2.2nm,0.8s,baz=139,slow=11,SNR=25						
	2.2nm,0.8s						
PDAR	**Pinedale Array**	**35.91**	**333**	P	**P**	**08 57 23.1**	**+1.5**
	0.5nm,0.8s,baz=136,slow=8.1,SNR=5.1						
	0.5nm,0.8s						
ULM	**Lac du Bonnet**	**38.67**	**352**	P	**P**	**08 57 43.4**	**-1.3**
	2.6nm,0.5s,baz=145,slow=7.9,SNR=6.5						
	2.6nm,0.5s						
SCHQ	**Schefferville**	**45.84**	**17**	P	**P**	**08 58 41.5**	**-1.5**
	1.9nm,0.6s,baz=208,slow=7.6,SNR=6.5						
	1.9nm,0.6s						
YKA	**Yellowknife Ar**	**53.89**	**345**	P	**P**	**08 59 44.0**	**+0.1**
	0.3nm,0.5s,baz=144,slow=7.0,SNR=9.9						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**66.20**	**336**	P	**P**	**09 01 08.1**	**-0.1**
	0.2nm,0.7s,baz=96,slow=6.8,SNR=2.1						
	0.2nm,0.7s						

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*IDC **17** 09:05:31.5±1.8, 39°.36S×92°.35W, h0km, mb3.7/7, mbtmp3.7/8, ML3.4/1, MS3.6/8, Error ellipse: s-maj=46.2km s-min=25.5km az=35.0*
ISC 17 09:05:33.1±1.6, **39°.4S**±0°.2×**92°.3W**±0°.2, **h10**km, **n23**, σ0s**55/8**, **mb3.7/7**, **MS3.8/6**, **Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.10**	**67**	T	T	09 20 35.6	
	baz=240,slow=73,SNR=259						
H03S1	**Juan Fernandez**	**12.11**	**67**	T	T	09 20 35.6	
	baz=240,slow=73,SNR=314						
H03S3	**Juan Fernandez**	**12.12**	**67**	T	T	09 20 35.9	
	baz=240,slow=73,SNR=494						
H03N3	**Juan Fernandez**	**12.30**	**66**	T	T	09 20 55.0	
	baz=241,slow=73,SNR=154						
H03N2	**Juan Fernandez**	**12.30**	**65**	T	T	09 21 08.2	
	baz=241,slow=73,SNR=99						
H03N1	**Juan Fernandez**	**12.32**	**65**	T	T	09 20 52.0	
	baz=241,slow=73,SNR=291						
PLCA	**Paso Flores**	**16.73**	**102**	Pn	**Pn**	**09 09 28.3**	**+0.6**
	baz=259,slow=12,SNR=2.8						
PLCA				LR	LR	09 14 44.6	
	comp=Z,81nm,20.7s,baz=270,slow=33						
	1.8nm,1.1s						
RPN	**Rapa Nui**	**18.70**	**306**	LR	LR	09 14 43.0	
	comp=Z,138nm,21.2s,baz=120,slow=30						
CFA	**Coronel Fontan**	**21.05**	**76**	P	**P**	**09 10 17.5**	**+0.2**
	1.7nm,0.7s,baz=238,slow=13,SNR=5.8						
	1.7nm,0.7s						
USHA	**Ushuaia**	**22.29**	**142**	P	**P**	**09 10 30.1**	**-0.2**
	11nm,0.4s,baz=213,slow=0.9,SNR=2.3						
	11nm,0.4s						
LPAZ	**La Paz**	**31.23**	**49**	P	**P**	**09 11 53.5**	**0.0**
	1.9nm,0.9s,baz=207,slow=5.4,SNR=5.2						
LPAZ				LR	LR	09 21 25.6	
	comp=Z,114nm,21.8s,baz=210,slow=30						
	1.9nm,0.9s						
CPUP	**Villa Florida**	**31.95**	**77**	P	**P**	**09 11 58.6**	**-0.5**
	0.9nm,0.7s,baz=244,slow=9.2,SNR=3.3						
	0.9nm,0.7s						
ATAH	**Atahualpa**	**34.45**	**25**	LR	LR	09 22 49.0	
	comp=Z,82nm,20.9s,baz=229,slow=30						
SDV	**Santo Domingo**	**52.06**	**28**	LR	LR	09 35 16.5	
	comp=Z,126nm,18.1s,baz=156,slow=34						
MDP	**Montagnes des**	**57.43**	**49**	LR	LR	09 36 27.2	
	comp=Z,92nm,18.7s,baz=91,slow=32						
TXAR	**Lajitas Array**	**69.16**	**349**	P	**P**	**09 16 39.6**	**-0.1**
	0.1nm,0.4s,baz=168,slow=8.6,SNR=4.6						
	0.1nm,0.4s						
NVAR	**Mina Array Bea**	**81.00**	**340**	P	**P**	**09 17 48.8**	**+0.8**
	0.4nm,0.6s,baz=179,slow=3.9,SNR=3.6						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**83.23**	**347**	P	**P**	**09 17 59.2**	**-0.4**
	0.4nm,0.8s,baz=167,slow=5.9,SNR=3.7						
	0.4nm,0.8s						
SUR	**Sutherland**	**85.48**	**129**	LR	LR	09 50 05.3	
	comp=Z,31nm,21.1s,baz=321,slow=31						
LBTB	**Lobatse**	**93.66**	**127**	LR	LR	09 54 36.2	
	comp=Z,53nm,18.9s,baz=360,slow=31						
H11S2	**WAKE ISLAND Hyl**	**09.82**	**278**	T	T	11 22 58.8	
	baz=124,slow=74						
H11S1	**WAKE ISLAND Hyl**	**09.83**	**278**	T	T	11 22 59.0	
	baz=124,slow=74						
H11S3	**WAKE ISLAND Hyl**	**09.83**	**278**	T	T	11 22 59.5	
	baz=124						

IDC 17 09:16:09.5±4.7, **18°.98S×177°.48W, h0**km, **mb3.8**/4, **mbtmp3.8**/4, **Error ellipse: s-maj=194.4km s-min=38.8km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.90**	**243**	P	P	09 23 37.6	+0.6
	1.4nm,0.7s,baz=84,slow=9.2,SNR=2.1						
	1.4nm,0.7s						
WRA	**Warramunga Arr**	**45.31**	**260**	P	P	09 24 29.2	-0.3
	0.5nm,0.3s,baz=97,slow=7.4,SNR=20						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**45.36**	**255**	P	P	09 24 29.5	-0.4
	1.1nm,0.6s,baz=98,slow=7.9,SNR=24						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**86.73**	**13**	P	P	09 28 54.9	0.0
	0.3nm,0.8s,baz=207,slow=4.4,SNR=1.5						
	0.3nm,0.8s						

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*BJI **17** 09:18:01.9, 57°.61N×156°.37W, h105km, mB5.5/14, mb5.0/55*
*MOS **17** 09:18:03.1±0.8, 57°.73N×156°.21W, h102km, mb4.9/37, Error ellipse: s-maj=9.7km s-min=5.4km az=95.2*
*NEIC **17** 09:18:04.8±1.5, 57°.52N±0°.04×156°.04W±0°.07, h108km±4km, mb4.9/116, ML4.9/100, ML4.9(AEIC), Error ellipse: s-maj=5.7km s-min=5.1km az=166.0*
*ANF **17** 09:18:05.0±0.2, 57°.56N×156°.07W, h111km±3km, ML5.0/54, Error ellipse: s-maj=3.1km s-min=2.0km az=28.0*
*IDC **17** 09:18:05.3±0.7, 57°.72N×156°.32W, h106km±6km, mb4.3/34, mbtmp4.7/39, MS3.4/14, Error ellipse: s-maj=13.2km s-min=8.2km az=4.0*
*AEIC **17** 09:18:06.3±2.4, 57°.52N±0°.03×156°.06W±0°.06, h101km±3km, Error ellipse: s-maj=5.3km s-min=4.3km az=213.0*
ISC 17 09:18:04.4±0.3, **57°.55N**±0°.03×**156°.05W**±0°.02, **h106**km±2km, **h106**km:**pP-P**, **n774**, σ1s**20**/802, **mb4.8**/133, **13C-13D**, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLK4	**Peulik 4**	**0.18**	**297**		**Pn**	**09 18 20.2**	**+0.8**
PLK4					**Sn**	**09 18 31.4**	**+0.7**
PLK4				IAML		09 18 32.1	
	comp=N,32μm,0.6s						
PLK4				IAML		09 18 32.4	
	comp=E,40μm,0.9s						
R17L	**Mt. Peulik Vol**	**0.19**	**296**	P	**Pn**	**09 18 20.1**	**+0.8**
	baz=99,SNR=344						
R17L				S	**Sn**	**09 18 31.5**	**+0.9**
	baz=99						
PLK1	**Peulik 1**	**0.39**	**310**		**Pn**	**09 18 20.9**	**+0.8**
PLK1					**Sn**	**09 18 33.3**	**+1.4**
PLBL	**Peulik Blue Cr**	**0.44**	**290**		**Pn**	**09 18 21.2**	**+0.7**
PLBL					**Sn**	**09 18 33.8**	**+1.3**
PLK5	**Peulik 5**	**0.63**	**316**		**Pn**	**09 18 22.8**	**+1.0**
PLK5					**Sn**	**09 18 36.2**	**+1.4**
ANCK	**Angle Creek**	**0.72**	**24**		**Pn**	**09 18 23.6**	**+1.0**
Q17K	**Contact Creek**	**0.72**	**7**	P	**Pn**	**09 18 23.4**	**+0.7**
	baz=192						
Q17K				S	**Sn**	**09 18 37.0**	**+0.5**
	baz=192						
CNTC	**Contact Creek**	**0.72**	**7**		**Pn**	**09 18 23.4**	**+0.7**
CNTC					**Sn**	**09 18 37.0**	**+0.5**
R16K	**Pilot Point**	**0.82**	**272**		**Pn**	**09 18 24.1**	**+0.7**
R16K				IAML		09 18 39.8	
	comp=N,30μm,1.0s						
R16K	**Pilot Point**	**0.82**	**272**		**Sn**	**09 18 38.1**	**+0.3**
R16K	**Pilot Point**	**0.82**	**272**	P	**Pn**	**09 18 24.1**	**+0.7**
	baz=86,SNR=17						
R16K				S	**Sn**	**09 18 38.5**	**+0.7**
	baz=86						
KABU	**Katmai Buttres**	**0.83**	**29**		**Pn**	**09 18 24.8**	**+1.1**
KABU					**Sn**	**09 18 40.2**	**+2.0**
KCE	**Katmai Mt Cerb**	**0.84**	**33**		**Pn**	**09 18 24.1**	**+0.4**
KBM	**Katmai Bkd Mtn**	**0.86**	**32**		**Pn**	**09 18 24.0**	**+0.1**
KCG	**Knife Ck. Glac**	**0.91**	**33**		**Pn**	**09 18 24.7**	**+0.3**
KAKN	**Katmai Knife C**	**0.92**	**35**		**Pn**	**09 18 25.3**	**+0.8**
KAKN					**Sn**	**09 18 41.5**	**+1.8**
KVTA	**Katmai Vly 10**	**0.93**	**25**		**Pn**	**09 18 24.6**	**0.0**
KAWH	**Katmai**	**1.07**	**38**		**Pn**	**09 18 26.9**	**+0.8**
KAWH					**Sn**	**09 18 43.8**	**+1.3**
Q16K	**King Salmon**	**1.18**	**344**		**Pn**	**09 18 27.9**	**+0.7**
Q16K					**Sn**	**09 18 45.8**	**+1.4**
Q16K	**King Salmon**	**1.18**	**344**	P	**Pn**	**09 18 28.2**	**+1.0**
	baz=166,SNR=1000						
Q16K				S	**Sn**	**09 18 45.6**	**+1.2**
	baz=166						
KARR	**Katmai Rainbow**	**1.19**	**36**		**Pn**	**09 18 28.4**	**+1.0**
KAHG	**Katmai Hook Gl**	**1.24**	**40**		**Sn**	**09 18 47.8**	**+2.0**
ANNE	**Aniakchak Nort**	**1.27**	**241**		**Pn**	**09 18 28.4**	**+0.2**
ANNW	**Aniakchak Nort**	**1.31**	**244**		**Pn**	**09 18 29.7**	**+0.9**
AZAC	**Aniakchak**	**1.35**	**242**		**Pn**	**09 18 29.8**	**+0.5**
KAPH	**Katmai Pasha**	**1.39**	**40**		**Pn**	**09 18 31.0**	**+1.3**
SII	**Sitkinak Islan**	**1.42**	**133**	Pn	**Pn**	**09 18 30.2**	**+0.2**
SII				Sn	**Sn**	**09 18 49.3**	**-0.2**
SII	**Sitkinak Islan**	**1.42**	**133**	P	**Pn**	**09 18 29.9**	**-0.2**
SII	**Sitkinak Islan**	**1.42**	**133**	P	**Sn**	**09 18 49.6**	**+0.1**
SII	**Sitkinak Islan**	**1.42**	**133**	P	**Pn**	**09 18 30.3**	**+0.2**
	baz=315,SNR=869						
SII				S	**Sn**	**09 18 49.3**	**-0.2**
	baz=315						
ANPB	**Aniakchak Plen**	**1.43**	**239**		**Pn**	**09 18 30.3**	**+0.2**
OHAK	**Old Harbor**	**1.53**	**101**	Pn	**Pn**	**09 18 31.5**	**+0.3**
OHAK				IAML		09 18 52.9	
	comp=E,6μm,0.6s						
OHAK				IAML		09 18 57.3	
	comp=N,11μm,0.5s						
OHAK	**Old Harbor**	**1.53**	**101**	P	**Pn**	**09 18 31.3**	**0.0**
OHAK	**Old Harbor**	**1.53**	**101**	P	**Pn**	**09 18 31.6**	**+0.3**
	baz=285,SNR=707						
OHAK				S	**Sn**	**09 18 50.9**	**-0.9**
	baz=285						
BPBCA	**Veniaminof**	**1.63**	**235**		**Pn**	**09 18 33.0**	**+0.4**
P17K	**Kvichak River**	**1.66**	**353**	Pn	**Pn**	**09 18 34.1**	**+1.2**
P17K	**Kvichak River**	**1.66**	**353**	P	**Pn**	**09 18 34.1**	**+1.2**
	baz=174,SNR=1000						
P17K				S	**Sn**	**09 18 55.8**	**+1.2**
	baz=174						
CHIR	**Chirikof Islan**	**1.75**	**172**		**Sn**	**09 18 54.9**	**-1.7**
CHIR	**Chirikof Islan**	**1.75**	**172**	Pn	**Pn**	**09 18 33.5**	**-0.5**
CHIR				IAML		09 18 55.9	
	comp=N,12μm,0.8s						
CHIR	**Chirikof Islan**	**1.75**	**172**	P	**Pn**	**09 18 33.3**	**-0.7**
CHIR	**Chirikof Islan**	**1.75**	**172**	P	**Sn**	**09 18 55.3**	**-1.2**
CHIR	**Chirikof Islan**	**1.75**	**172**	P	**Pn**	**09 18 33.5**	**-0.5**
	baz=351,SNR=43						
CHIR				S	**Sn**	**09 18 54.7**	**-1.8**
	baz=351						
P16K	**Nushagak River**	**1.81**	**326**		**Pn**	**09 18 35.5**	**+0.8**
P16K					**Sn**	**09 18 59.5**	**+1.7**
P16K	**Nushagak River**	**1.81**	**326**	IAML		09 19 13.7	
	comp=N,6μm,0.9s						
P16K	**Nushagak River**	**1.81**	**326**	P	**Pn**	**09 18 35.7**	**+1.0**
	baz=145,SNR=16						
P16K				S	**Sn**	**09 18 59.5**	**+1.7**
	baz=145						
KDAK	**Kodiak Island**	**1.88**	**81**	P	**Pn**	**09 18 36.1**	**+0.5**
	comp=N,3μm,0.4s,baz=255,slow=6.3						
KDAK				S	**Sn**	**09 18 58.9**	**-0.5**
	comp=N,4μm,0.5s,baz=295,slow=18,SNR=28						
KDAK				LR	LR	09 19 18.3	
	comp=N,596nm,22.0s,baz=266,slow=36						
KDAK	**Kodiak Island**	**1.88**	**81**		**Pn**	**09 18 36.3**	**+0.8**
KDAK					**Sn**	**09 18 58.6**	**-0.8**
KDAK	**Kodiak Island**	**1.88**	**81**	IAML		09 19 01.0	
	comp=N,12μm,0.7s						
KDAK				IAML		09 19 03.1	
	comp=N,10μm,0.8s						
KDAK	**Kodiak Island**	**1.88**	**81**	*i*P	**Pn**	**09 18 35.4**	**-0.2**
KDAK	**Kodiak Island**	**1.88**	**81**	P	**Pn**	**09 18 36.4**	**+0.8**
	baz=266						
KDAK				S	**Sn**	**09 18 58.6**	**-0.8**
	baz=266						
Q19K	**Cape Douglas,**	**1.88**	**42**		**Pn**	**09 18 37.0**	**+1.3**
Q19K	**Cape Douglas,**	**1.88**	**42**	P	**Pn**	**09 18 37.1**	**+1.3**
	baz=226,SNR=417						
Q19K				S	**Sn**	**09 19 01.2**	**+1.7**
	baz=226						
P18K	**Big Mountain,**	**1.90**	**13**	Pn	**Pn**	**09 18 36.8**	**+0.9**
P18K	**Big Mountain,**	**1.90**	**13**	P	**Pn**	**09 18 36.9**	**+0.9**
	baz=196,SNR=1000						
P18K				S	**Sn**	**09 19 00.4**	**+0.4**
	baz=196						
VNHG	**Veniaminof 1**	**2.17**	**233**		**Pn**	**09 18 40.0**	**+0.6**
VNNF	**Veniaminof 3**	**2.19**	**236**		**Pn**	**09 18 40.5**	**+0.7**
VNSG	**Veniaminof 6**	**2.19**	**231**		**Pn**	**09 18 40.1**	**+0.4**
Q20K	**Shuyak Island**	**2.21**	**60**	P	**Pn**	**09 18 41.2**	**+1.3**
	baz=245,SNR=175						
Q20K				S	**Sn**	**09 19 06.8**	**-0.3**
	baz=245						
SYI	**Shuyak Island**	**2.21**	**60**		**Pn**	**09 18 41.2**	**+1.3**
SYI					**Sn**	**09 19 06.9**	**-0.3**
AUW	**Augustine West**	**2.27**	**35**		**Pn**	**09 18 42.5**	**+1.8**
AUF	**Augustine Flow**	**2.29**	**35**		**Pn**	**09 18 42.8**	**+1.9**
AUL	**Augustine Lava**	**2.29**	**36**		**Pn**	**09 18 42.7**	**+1.7**
O17K	**Koliganek Bris**	**2.30**	**347**		**Pn**	**09 18 41.9**	**+0.9**
O17K	**Koliganek Bris**	**2.30**	**347**	P	**Pn**	**09 18 41.9**	**+0.9**
	baz=167,SNR=515						
O17K				S	**Sn**	**09 19 09.9**	**+0.9**
	baz=167						
VNFG	**Fog Glacier, M**	**2.30**	**238**		**Pn**	**09 18 41.8**	**+0.7**
O16K	**Kokwok River B**	**2.31**	**333**		**Pn**	**09 18 42.0**	**+0.9**
O16K					**Sn**	**09 19 10.1**	**+0.7**
O16K	**Kokwok River B**	**2.31**

SDPT IAML 09 19 37.1
comp=E,2µm,0.9s
SDPT Sand Point 3.30 230 P Pn 09 18 53.9 -0.3
SDPT Sand Point 3.30 230 S Sn 09 19 32.1 -0.6
SDPT Sand Point 3.30 230 P Pn 09 18 53.9 -0.3
baz=45,SNR=44
SDPT S Sn **09 19 32.5 -0.2**
baz=45
RED Redoubt Volcan 3.34 29 Pn 09 18 56.4 +1.6
RED IAML 09 19 36.1
comp=E,2µm,0.8s
N15K Kwethluk River 3.36 323 Pn 09 18 56.3 +1.3
N15K IAML 09 19 36.3
comp=N,2µm,1.1s
N15K Kwethluk River 3.36 323 P Pn 09 18 56.2 +1.1
baz=140,SNR=119
N15K S Sn **09 19 35.5 +1.3**
baz=140
CHNA Chernabura Isl 3.37 217 P Pn 09 18 54.4 -0.7
CHNA Chernabura Isl 3.37 217 P Pn 09 18 54.1 -1.0
baz=33,SNR=47
N19K Bonanza Creek 3.37 13 Pn 09 18 56.7 +1.5
N19K Bonanza Creek 3.37 13 P Pn 09 18 56.8 +1.5
baz=196,SNR=697
CNBA Chernabura Isl 3.38 217 Pn 09 18 54.0 -1.2
NCT North Crescent 3.42 27 Pn 09 18 57.3 +1.3
BRLK Bradley Lake 3.49 48 Pn 09 18 57.1 +0.3
BRSE Bradley Lake S 3.54 49 P Pn 09 18 57.9 +0.4
baz=235,SNR=148
BRSE S Sn **09 19 36.0 -2.4**
baz=235
N14K Kuskokwak Cree 3.78 311 Pn 09 19 01.9 +1.3
N14K Kuskokwak Cree 3.78 311 IAML 09 20 07.3
comp=E,2µm,1.9s
N14K IAML 09 20 18.0
comp=N,1µm,1.4s
N14K Kuskokwak Cree 3.78 311 P Pn 09 19 01.9 +1.3
baz=126
N14K S Sn **09 19 45.5 +1.4**
baz=126
M16K Timber Creek 3.79 338 Pn 09 19 01.8 +1.1
M16K Timber Creek 3.79 338 IAML 09 19 46.4
comp=N,1µm,1.6s
M16K IAML 09 19 47.3
comp=E,1µm,1.6s
M16K Timber Creek 3.79 338 P Pn 09 19 01.8 +1.1
baz=156
M16K S Sn **09 19 44.9 +0.5**
baz=156
M17K Holitna River 3.93 350 Pn 09 19 03.6 +1.0
M17K Holitna River 3.93 350 IAML 09 19 49.5
comp=E,2µm,0.9s
M17K IAML 09 20 02.1
comp=N,2µm,1.0s
M17K Holitna River 3.93 350 P Pn 09 19 03.6 +1.0
baz=170,SNR=116
M17K S Sn **09 19 48.1 +0.4**
baz=170
HAG Hague Volcano 3.95 238 Pn 09 19 03.1 +0.2
HAG Hague Volcano 3.95 238 P Pn 09 19 03.1 +0.2
M18K Stony River 3.96 2 Pn 09 19 04.2 +1.2
M18K Stony River 3.96 2 P Pn 09 19 04.1 +1.2
baz=183
M18K S Sn **09 19 49.1 +0.7**
baz=183
M15K Kasigluk River 3.96 325 Pn 09 19 03.7 +0.7
M15K Kasigluk River 3.96 325 P Pn 09 19 03.7 +0.7
baz=141
M15K S Sn **09 19 48.4 0.0**
baz=141
DOL Dolgoi Island 4.03 236 Pn 09 19 03.8 -0.3
CAPN Captain Cook N 4.09 36 Pn 09 19 07.0 +2.1
CAPN Captain Cook N 4.09 36 P Pn 09 19 06.9 +2.1
baz=221,SNR=19
CAPN S Sn **09 19 53.4 +1.7**
baz=221
SPCR Spurr Chakacha 4.16 27 P Pn 09 19 07.0 +1.3
baz=211,SNR=496
SPU Mount Spurr 4.18 28 Pn 09 19 07.2 +1.2
DTNA Dutton South F 4.21 238 Pn 09 19 06.3 0.0
SLKM Skilak Lake 4.23 43 Pn 09 19 07.3 +0.6
SLKM Skilak Lake 4.23 43 IAML 09 19 54.5
comp=E,2µm,0.3s
SLKM IAML 09 20 01.4
comp=N,2µm,0.8s
DT1 Dutton Round H 4.25 237 Pn 09 19 06.5 -0.3
SEW Seward 4.28 50 Pn 09 19 07.2 -0.1
SEW Seward 4.28 50 IAML 09 19 58.0
comp=N,1µm,0.6s
SEW IAML 09 19 59.2
comp=E,2µm,0.9s
SEW Seward 4.28 50 P Pn 09 19 07.2 -0.1
baz=237,SNR=87
M14K Bethel 4.42 319 Pn 09 19 10.3 +1.1
M14K IAML 09 20 34.2
comp=N,894nm,1.3s
M14K IAML 09 20 36.9
comp=E,1µm,1.5s
M14K Bethel 4.42 319 P Pn 09 19 10.2 +1.0
baz=134,SNR=443
M14K S Sn **09 19 59.6 0.0**
baz=134
M19K Big River Lodg 4.45 10 Pn 09 19 11.1 +1.4
M19K Big River Lodg 4.45 10 P Pn 09 19 11.1 +1.4
baz=192
STLK Strandline Lak 4.50 27 Pn 09 19 11.6 +1.2
L16K Owhat River 4.52 339 Pn 09 19 11.2 +0.6
L16K IAML 09 20 19.8
comp=E,657nm,1.1s
L16K Owhat River 4.52 339 P Pn 09 19 10.9 +0.3
baz=156,SNR=14
L16K S Sn **09 20 01.9 -0.1**
baz=156
M20K Styx River 4.59 18 Pn 09 19 13.5 +2.0
M20K Styx River 4.59 18 P Pn 09 19 13.6 +2.0
baz=201,SNR=1000
L19K White Mountain 4.69 7 IAML 09 20 08.5
comp=N,529nm,1.1s
L19K IAML 09 20 39.1
comp=E,503nm,0.9s
L19K White Mountain 4.69 7 P Pn 09 19 14.0 +1.1
baz=189,SNR=530
L19K S Sn **09 20 07.3 +1.3**
baz=189
L17K Donlin 4.74 347 P Pn 09 19 14.0 +0.5
baz=166,SNR=43
L17K S Sn **09 20 06.4 -0.8**
baz=166
M13K Dall Lake 4.74 310 Pn 09 19 14.8 +1.2
M13K Dall Lake 4.74 310 IAML 09 20 27.0
comp=N,600nm,2.5s
M13K IAML 09 21 00.5
comp=E,772nm,1.4s
M13K Dall Lake 4.74 310 P Pn 09 19 14.3 +0.7
baz=124
M13K S Sn **09 20 08.3 +1.0**
baz=124
SUA Susitna One 4.76 32 IAML 09 20 09.2
comp=N,1µm,1.0s
SUA Susitna One 4.76 32 P Pn 09 19 14.3 +0.3
baz=218,SNR=691
SUA S Sn **09 20 06.8 -1.3**
baz=218
RC01 Rabbit Creek A 4.80 40 P Pn 09 19 14.3 -0.1
baz=226,SNR=289
FALS False Pass 4.92 240 Pn 09 19 16.3 +0.3
FALS False Pass 4.92 240 P Pn 09 19 16.4 +0.4
FALS False Pass 4.92 240 S Sn 09 20 11.1 -0.6
FALS False Pass 4.92 240 P Pn 09 19 16.0 0.0
baz=53
L15K Ungalak Mounta 4.98 329 Pn 09 19 17.4 +0.6
L15K Ungalak Mounta 4.98 329 P Pn 09 19 17.3 +0.6
baz=144,SNR=55
SKT Skwentna 5.00 25 IAML 09 20 47.4
comp=E,381nm,1.3s
SKT Skwentna 5.00 25 P Pn 09 19 18.0 +0.9
baz=210,SNR=222
L14K Kuka Creek 5.09 321 IAML 09 20 49.7
comp=E,660nm,1.3s
L14K IAML 09 20 49.8
comp=N,823nm,1.2s
L14K Kuka Creek 5.09 321 P Pn 09 19 18.9 +0.7
baz=136,SNR=191
ISNN Isanotski Nort 5.10 241 Pn 09 19 18.8 +0.3
P23K Montague Islan 5.12 58 Pn 09 19 19.1 +0.4
P23K Montague Islan 5.12 58 P Pn 09 19 19.1 +0.4
baz=246,SNR=32
M22K Willow 5.18 33 P Pn 09 19 19.8 +0.4
baz=219,SNR=248
K17K Iditarod 5.30 349 IAML 09 20 24.6
comp=N,904nm,1.0s
K17K IAML 09 21 12.1
comp=E,581nm,1.0s
K17K Iditarod 5.30 349 P Pn 09 19 21.6 +0.5
baz=167,SNR=121
PMR Palmer 5.37 38 IAML 09 20 18.7
comp=E,552nm,0.4s
PMR IAML 09 20 22.0
comp=N,622nm,0.6s
PMR Palmer 5.37 38 P Pn 09 19 21.0 -1.0
PMR Palmer 5.37 38 P Pn 09 19 21.0 -1.0
baz=225,SNR=186
Q23K Middleton Isla 5.43 66 P Pn 09 19 22.7 0.0
baz=255,SNR=6.3
KNK Knik Glacier 5.47 42 Pn 09 19 22.8 -0.7
KNK Knik Glacier 5.47 42 P Pn 09 19 23.1 -0.4
baz=229,SNR=130
K15K Wolf Creek Mou 5.50 332 Pn 09 19 25.6 +1.8
K15K Wolf Creek Mou 5.50 332 P Pn 09 19 24.5 +0.7
baz=148,SNR=46
GHO Glory Hole Cre 5.56 37 Pn 09 19 24.0 -0.8
L22K Petersville 5.65 26 Pn 09 19 26.1 +0.2
CUT Chulitna 5.67 28 P Pn 09 19 26.8 +0.7
baz=214,SNR=60
GLI Glacier Island 5.68 50 Pn 09 19 25.1 -1.1
GLI Glacier Island 5.68 50 P Pn 09 19 25.3 -0.9
baz=239,SNR=48
PPLA Purkeypile 5.70 18 Pn 09 19 28.1 +1.4
PPLA Purkeypile 5.70 18 P Pn 09 19 28.2 +1.6
baz=202,SNR=328
HIN Hinchinbrook I 5.70 56 Pn 09 19 26.8 +0.2
SML Sawmill 5.79 39 Pn 09 19 27.0 -0.7
SML Sawmill 5.79 39 P Pn 09 19 27.0 -0.7
baz=227,SNR=107
K20K Telida 5.91 9 Pn 09 19 30.6 +1.2
K20K Telida 5.91 9 P Pn 09 19 30.4 +1.1
baz=191,SNR=502
J18K Innoko River 5.95 357 Pn 09 19 30.8 +0.9
J18K Innoko River 5.95 357 P Pn 09 19 30.7 +0.9
baz=177
M11K Mekoryuk 5.97 303 Pn 09 19 30.7 +0.5
M11K Mekoryuk 5.97 303 P Pn 09 19 29.0 -1.1
baz=114,SNR=26
M23K Glacier View 5.99 41 Pn 09 19 30.0 -0.5
M23K Glacier View 5.99 41 P Pn 09 19 29.8 -0.7
baz=229,SNR=169
J17K VABM Dome 6.05 347 Pn 09 19 31.9 +0.6
J17K VABM Dome 6.05 347 P Pn 09 19 31.9 +0.6
baz=165,SNR=49
EYAK Cordova Ski Ar 6.11 56 Pn 09 19 32.0 0.0
EYAK Cordova Ski Ar 6.11 56 P Pn 09 19 31.7 -0.3
EYAK Cordova Ski Ar 6.11 56 S Sn 09 20 39.0 -1.3
EYAK Cordova Ski Ar 6.11 56 P Pn 09 19 32.1 +0.1
baz=246,SNR=104
SCM Sheep Creek Mo 6.16 42 Pn 09 19 32.6 -0.2
SCM Sheep Creek Mo 6.16 42 P Pn 09 19 32.6 -0.2
SCM Sheep Creek Mo 6.16 42 P Pn 09 19 32.5 -0.2
baz=230,SNR=235
J16K Anvik River 6.18 341 Pn 09 19 33.6 +0.6
J16K Anvik River 6.18 341 P Pn 09 19 33.9 +0.9
baz=157,SNR=42
K13K Kusilvak Mount 6.18 319 Pn 09 19 33.6 +0.6
K13K Kusilvak Mount 6.18 319 P Pn 09 19 33.3 +0.3
baz=132,SNR=55
DIV Divide 6.36 51 Pn 09 19 35.6 0.0
WAT7 Susitna Watana 6.40 31 Pn 09 19 35.3 -0.8
J14K Nanvaranak Lak 6.42 327 Pn 09 19 37.1 +0.9
J14K Nanvaranak Lak 6.42 327 P Pn 09 19 36.6 +0.4
baz=141
J19K Poorman 6.47 2 Pn 09 19 37.7 +0.8
J19K Poorman 6.47 2 P Pn 09 19 38.2 +1.3
baz=183,SNR=416
WAT1 Susitna Watana 6.48 32 Pn 09 19 36.2 -1.0
WAT1 Susitna Watana 6.48 32 P Pn 09 19 36.1 -1.0
baz=219
KLU Klutina 6.49 48 Pn 09 19 37.4 +0.2
KLU Klutina 6.49 48 P Pn 09 19 37.5 +0.2
baz=238,SNR=1000
KAIM Kayak Island 6.51 64 Pn 09 19 37.9 +0.5
KAIM Kayak Island 6.51 64 P Pn 09 19 38.3 +0.8
baz=254,SNR=14
KTH Kantishna Hill 6.53 21 Pn 09 19 37.9 0.0
RAGM Ragged Mountai 6.53 59 Pn 09 19 37.8 0.0
WAT6 Susitna Watana 6.54 36 Pn 09 19 37.0 -1.0
WAT6 Susitna Watana 6.54 36 P Pn 09 19 37.0 -1.0
baz=224,SNR=205
TRF Thorofare Moun 6.57 23 Pn 09 19 38.4 0.0
TRF Thorofare Moun 6.57 23 P Pn 09 19 37.9 -0.5
baz=209,SNR=144
ZRO Akutan Zero 6.58 242 Pn 09 19 39.0 +0.6
GOAT Goat Mountain 6.58 58 Pn 09 19 38.9 +0.4
AKMO Akutan Morgan 6.59 243 Pn 09 19 39.3 +0.6
CHUM Lake Minchumin 6.61 14 Pn 09 19 39.6 +0.7
CHUM Lake Minchumin 6.61 14 P Pn 09 19 39.8 +0.9
baz=198,SNR=462
I17K Unalakleet 6.75 342 Pn 09 19 43.2 +2.5
I17K Unalakleet 6.75 342 P Pn 09 19 42.7 +1.9
baz=158,SNR=13
M24K Tolsona, Glenn 6.75 43 Pn 09 19 41.0 +0.1
M24K Tolsona, Glenn 6.75 43 P Pn 09 19 40.5 -0.4
baz=232,SNR=261
BMRM Bremner River 6.79 55 Pn 09 19 41.4 +0.1
BMRM Bremner River 6.79 55 P Pn 09 19 41.5 +0.1
baz=245,SNR=135
SUCK Suckling Hills 6.86 63 Pn 09 19 42.6 +0.4
RND Reindeer 6.86 28 Pn 09 19 41.4 -1.0
RND Reindeer 6.86 28 P Pn 09 19 41.4 -1.0
UNV Unalaska Valle 6.98 242 Pn 09 19 42.9 -0.9
UNV Unalaska Valle 6.98 242 P Pn 09 19 42.9 -0.9
baz=53,SNR=6.4
BERG Berg Lake 6.99 61 Pn 09 19 44.2 +0.2
DHY Denali Highway 7.01 34 Pn 09 19 43.4 -1.0
DHY Denali Highway 7.01 34 P Pn 09 19 43.5 -1.0
baz=222,SNR=182
BPAW Bear Paw Mtn. 7.02 18 Pn 09 19 43.8 -0.6
BPAW Bear Paw Mtn. 7.02 18 P Pn 09 19 43.4 -1.0
baz=204,SNR=574
MNAT Makushin Natee 7.04 243 Pn 09 19 44.4 -0.4
N25K Chitina, Valde 7.09 50 Pn 09 19 45.7 +0.2
N25K Chitina, Valde 7.09 50 P Pn 09 19 45.7 +0.2
baz=241,SNR=197
BGLC Bering Glacier 7.11 63 P Pn 09 19 46.7 +1.2
baz=255
MCK McKinley 7.12 26 Pn 09 19 44.8 -0.9
MCK McKinley 7.12 26 P Pn 09 19 44.8 -0.9
MCK McKinley 7.12 26 P Pn 09 19 44.8 -0.9
baz=213,SNR=175
GRIN Grindle Hills 7.14 62 Pn 09 19 46.6 +0.6
MGOD Makushin Gods 7.18 243 Pn 09 19 46.8 +0.1
KHIT Khitrov Hills 7.22 61 Pn 09 19 47.4 +0.2
GCSA Galena City Sc 7.23 357 Pn 09 19 48.3 +1.1
GCSA Galena City Sc 7.23 357 P Pn 09 19 48.4 +1.2
baz=177,SNR=324
HARP HAARP 7.31 44 Pn 09 19 48.5 +0.2
HARP HAARP 7.31 44 P Pn 09 19 48.5 +0.2
baz=234,SNR=222
SNH Sunshine Point 7.34 63 Pn 09 19 49.2 +0.5
GLB Gilahina Butte 7.35 53 Pn 09 19 48.8 -0.1
CRQM Cirque 7.37 59 Pn 09 19 49.7 +0.3
CRQE Cirque 7.39 59 P Pn 09 19 49.7 +0.1
baz=251,SNR=78
WACK Wrangell Chich 7.40 48 Pn 09 19 50.5 +0.7
WAX Waxell Ridge 7.41 61 Pn 09 19 50.0 +0.2
VRDI Verde Repeater 7.41 55 Pn 09 19 50.1 +0.2
WASW Wrangell South 7.43 49 Pn 09 19 50.6 +0.4
TGL Tana Glacier 7.52 59 Pn 09 19 51.5 +0.3
WAZA Wrangell Mount 7.52 48 Pn 09 19 52.4 +1.1
PAX Paxson 7.56 40 Pn 09 19 51.4 -0.3
PAX Paxson 7.56 40 P Pn 09 19 51.4 -0.3
PAX Paxson 7.56 40 P Pn 09 19 51.5 -0.3
baz=229,SNR=751
BARK Barkley Ridge 7.57 62 Pn 09 19 52.5 +0.6
H17K Granite Mounta 7.64 348 Pn 09 19 54.6 +1.8
H17K Granite Mounta 7.64 348 P Pn 09 19 54.4 +1.6
baz=164
MCARA McCarthy VSAT 7.66 54 Pn 09 19 53.3 +0.2
MCARA McCarthy VSAT 7.66 54 P Pn 09 19 53.4 +0.3
baz=246,SNR=180
ISLE Juniper Island 7.70 61 Pn 09 19 54.1 +0.4
H18K Honhosa River 7.71 353 Pn 09 19 55.1 +1.3
H18K Honhosa River 7.71 353 P Pn 09 19 54.9 +1.1
baz=171
H16K Elim 7.71 340 Pn 09 19 55.3 +1.5
H16K Elim 7.71 340 P Pn 09 19 54.6 +0.9
baz=155,SNR=65
MESA MESA 7.77 64 Pn 09 19 55.2 +0.5
MESA MESA 7.77 64 P Pn 09 19 55.3 +0.6
baz=257,SNR=24
BAGL Bagley Icefiel 7.78 62 Pn 09 19 55.5 +0.8
KIAG Kiagna River 7.79 59 Pn 09 19 55.1 +0.1
NEA2 Nenana 7.83 23 Pn 09 19 54.4 -1.0
NEA2 Nenana 7.83 23 P Pn 09 19 54.5 -0.9
baz=209,SNR=174
BALM Baldy 7.83 58 Pn 09 19 55.8 +0.2
PTPK Patty Peak 7.83 57 Pn 09 19 56.0 +0.4
I21K Tanana 7.90 13 Pn 09 19 56.8 +0.5
I21K Tanana 7.90 13 P Pn 09 19 56.8 +0.5
baz=197
OKFG Magazine Ridge 7.91 243 Pn 09 19 55.8 -0.7
MLY Manley 7.93 17 Pn 09 19 55.8 -0.9
MLY Manley 7.93 17 P Pn 09 19 55.8 -0.9
baz=202,SNR=211
WRH Wood River Hil 7.94 26 Pn 09 19 55.4 -1.5
H20K Anotleneega Mo 7.99 4 Pn 09 19 58.6 +1.1
H20K Anotleneega Mo 7.99 4 P Pn 09 19 58.6 +1.1
baz=185,SNR=427
GRNC Granite Creek 8.01 61 Pn 09 19 58.6 +0.6
K24K Donnelly Dome 8.04 34 Pn 09 19 58.5 +0.2
K24K Donnelly Dome 8.04 34 P Pn 09 19 58.4 +0.2
baz=224,SNR=91
RKAV Rock Avalanche 8.09 64 Pn 09 19 59.8 +0.7
M26K Nabesna, AK 8.15 48 Pn 09 20 00.4 +0.7
M26K Nabesna, AK 8.15 48 P Pn 09 20 00.4 +0.7
baz=240,SNR=393
BARN Barnard Glacie 8.16 58 Pn 09 20 00.5 +0.5
CCB Clear Creek Bu 8.16 26 Pn 09 19 58.0 -1.8
MENT Mentasta 8.16 43 P Pn 09 19 59.9 -0.1
MENT Mentasta 8.16 43 S Sn 09 21 28.8 -1.6
HDA Harding Lake 8.17 29 Pn 09 19 58.3 -1.7
HDA Harding Lake 8.17 29 P Pn 09 19 58.4 -1.7
baz=217,SNR=270
OKSP Okmok Steeple 8.19 243 Pn 09 19 59.3 -1.0
TABL Table Mountain 8.22 63 Pn 09 20 01.6 +0.7
I23K Minto, Yukon-K 8.27 20 Pn 09 20 00.2 -1.1
I23K Minto, Yukon-K 8.27 20 P Pn 09 19 59.9 -1.3
baz=206,SNR=1000
CTG Chitna Glacier 8.27 59 P Pn 09 20 02.3 +0.7
baz=253,SNR=117
G17K Kiwalik Mounta 8.27 347 Pn 09 20 03.1 +1.7
G17K Kiwalik Mounta 8.27 347 P Pn 09 20 02.9 +1.5
baz=163
CTGM Chitina Glacie 8.28 59 Pn 09 20 02.3 +0.7
H21K Melozitna Rive 8.28 9 Pn 09 20 02.5 +1.0
H21K Melozitna Rive 8.28 9 P Pn 09 20 02.4 +1.0
baz=193,SNR=725
RIDG Independent Ri 8.29 37 Pn 09 20 00.7 -0.9
RIDG Independent Ri 8.29 37 P Pn 09 20 00.8 -0.9
baz=227,SNR=182
MDM Murphy Dome 8.33 24 Pn 09 20 00.4 -1.8
COLA College 8.34 25 Pn 09 20 00.6 -1.6
COLA College 8.34 25 P Pn 09 20 00.9 -1.3
COLA College 8.34 25 P Pn 09 20 00.6 -1.6
COLA College 8.34 25 P Pn 09 20 00.5 -1.6
baz=212
L26K Log Cabin Wild 8.35 44 Pn 09 20 02.7 +0.2
L26K Log Cabin Wild 8.35 44 P Pn 09 20 02.9 +0.3
baz=235,SNR=236
ANM Nome 8.36 331 Pn 09 20 04.0 +1.5
ANM Nome 8.36 331 P Pn 09 20 04.0 +1.5
ANM Nome 8.36 331 P Pn 09 20 03.9 +1.5
baz=143,SNR=44
LOGN Logan Glacier 8.39 61 Pn 09 20 03.4 +0.3
G15K Niukluk 8.39 336 Pn 09 20 05.0 +2.0
G15K Niukluk 8.39 336 P Pn 09 20 04.3 +1.3
baz=149
G16K Koyuk River 8.43 342 Pn 09 20 05.4 +2.0
G16K Koyuk River 8.43 342 P Pn 09 20 05.5 +2.1
baz=156
G18K Tagagawik 8.47 353 Pn 09 20 05.2 +1.2
G18K Tagagawik 8.47 353 P Pn 09 20 05.1 +1.2
baz=171,SNR=107
ILAR Eielson Array 8.48 28 P Pn 09 20 02.2 -2.0
comp=N,176nm,0.4s,baz=216,slow=13,SNR=1765
ILAR S Sn **09 21 31.6 -6.5**
comp=N,21nm,0.4s,baz=199,slow=19,SNR=5.3
ILAR ScP **ScP 09 29 45.9 0.0**
comp=N,0.8nm,0.8s,baz=275,slow=2.8,SNR=5.1
ILAR Eielson Array 8.48 28 Pn 09 20 02.9 -1.3
ILAR Eielson Array 8.48 28 P Pn 09 20 02.9 -1.3
DOT Dot Lake 8.49 39 Pn 09 20 02.7 -1.6
IM02 Indian Mountai 8.55 6 Pn 09 20 06.2 +1.1
PCA Pinnacle 8.58 66 Pn 09 20 06.0 +0.4
M27K Edge Creek, AK 8.58 50 Pn 09 20 06.5 +0.8
M27K Edge Creek, AK 8.58 50 P Pn 09 20 06.3 +0.6
baz=243
PINM Pinnacle 8.58 66 P Pn 09 20 06.2 +0.5
baz=260,SNR=40
G19K Purcell Mounta 8.64 357 Pn 09 20 06.0 -0.4
G19K Purcell Mounta 8.64 357 P Pn 09 20 06.9 +0.6
baz=177,SNR=166
H22K Ishtalitna Cre 8.66 13 Pn 09 20 05.7 -0.9
H22K Ishtalitna Cre 8.66 13 P Pn 09 20 07.2 +0.6
baz=197
SCRK Sand Creek 8.73 37 Pn 09 20 06.0 -1.7
SCRK Sand Creek 8.73 37 P Pn 09 20 06.1 -1.6
baz=226,SNR=174
O28M Mount Upton 8.76 62 Pn 09 20 09.2 +0.9
O28M Mount Upton 8.76 62 P Pn 09 20 09.2 +0.9
baz=256,SNR=351
J25K Salcha River, 8.76 32 Pn 09 20 06.5 -1.6
J25K Salcha River, 8.76 32 P Pn 09 20 06.5 -1.6
baz=222,SNR=545
YUK2 White River 8.78 55 Pn 09 20 09.6 +1.2
BCPM Bancas Point 8.86 67 Pn 09 20 09.6 +0.2
YUK3 Moose Creek 8.95 55 Pn 09 20 11.8 +1.1
YUK3 Moose Creek 8.95 55 P Pn 09 20 11.9 +1.2
baz=249,SNR=524
BC01 Beaver Creek A 8.95 46 Pn 09 20 10.9 +0.3
L27K Beaver Creek, 8.95 46 Pn 09 20 11.2 +0.5
L27K Beaver Creek, 8.95 46 P Pn 09 20 11.1 +0.5
baz=239,SNR=367
BCAR Beaver Creek A 8.97 46 Pn 09 20 11.4 +0.5
BVCY Beaver Creek 9.03 51 Pn 09 20 12.6 +0.8
BVCY Beaver Creek 9.03 51 P Pn 09 20 12.5 +0.8
baz=245,SNR=183
G21K Allakaket 9.08 6 Pn 09 20 13.1 +0.8
G21K Allakaket 9.08 6 P Pn 09 20 13.2 +1.0
baz=189
YUK8 Steele Glacier 9.10 59 Pn 09 20 14.2 +1.4
YUK8 Steele Glacier 9.10 59 P Pn 09 20 14.4 +1.5
baz=253,SNR=286
F15K North Star Dit 9.14 337 Pn 09 20 15.5 +2.4
F15K North Star Dit 9.14 337 P Pn 09 20 15.4 +2.3
baz=150,SNR=27
H24K Noodor Dome 9.17 22 Pn 09 20 11.6 -2.0
H24K Noodor Dome 9.17 22 P Pn 09 20 11.3 -2.2
baz=209,SNR=228
J26L Joseph Creek 9.22 36 Pn 09 20 13.0 -1.3
J26L Joseph Creek 9.22 36 P Pn 09 20 12.7 -1.7
baz=227,SNR=236
F18K Selawik 9.24 351 Pn 09 20 15.1 +0.7
F18K Selawik 9.24 351 P Pn 09 20 15.2 +0.8
baz=168,SNR=28
F17K Baldwin Pennin 9.25 347 Pn 09 20 16.4 +1.9
F17K Baldwin Pennin 9.25 347 P Pn 09 20 16.5 +1.9
baz=163
F14K Arctic Creek 9.33 333 Pn 09 20 17.8 +2.1
F14K Arctic Creek 9.33 333 P Pn 09 20 17.2 +1.5
baz=144
F19K Shaleruckik Mo 9.35 356 Pn 09 20 16.9 +0.9
F19K Shaleruckik Mo 9.35 356 P Pn 09 20 16.8 +0.9
baz=175
PRP Porcupine Dome 9.43 28 Pn 09 20 14.8 -2.3
PRP Porcupine Dome 9.43 28 P Pn 09 20 14.6 -2.6
baz=217,SNR=237
O29M Mount Kennedy 9.44 66 Pn 09 20 18.2 +0.9
O29M Mount Kennedy 9.44 66 P Pn 09 20 18.4 +1.0
baz=261,SNR=196
F20K Avaraart Lake 9.54 1 Pn 09 20 20.0 +1.6
F20K Avaraart Lake 9.54 1 P Pn 09 20 20.0 +1.6
baz=181,SNR=581
G23K Bananza Creek 9.61 14 Pn 09 20 18.1 -1.4
G23K Bananza Creek 9.61 14 P Pn 09 20 17.8 -1.7
baz=200,SNR=366

YUK4 **Talbot Arm** 9.63 59 P Pn 09 20 21.8 +1.8
baz=255,SNR=60
YUK6 **Outpost Mounta** 9.67 62 Pn 09 20 21.3 +0.7
YUK6 **Outpost Mounta** 9.67 62 P Pn 09 20 21.4 +0.8
baz=258,SNR=19
YUK7 **Dusty Glacier** 9.69 65 Pn 09 20 21.7 +0.8
F21K **Alatna River** 9.78 6 Pn 09 20 22.9 +1.1
F21K **Alatna River** 9.78 6 P Pn 09 20 22.7 +0.9
baz=188
TNA **Tin City** 9.81 330 Pn 09 20 24.6 +2.4
TNA **Tin City** 9.81 330 P Pn 09 20 22.7 +0.5
baz=140,SNR=32
GAMB **Gambell** 9.88 316 Pn 09 20 25.2 +2.1
GAMB **Gambell** 9.88 316 P Pn 09 20 23.5 +0.4
baz=122,SNR=15
E17K **Hotham Inlet** 9.93 347 Pn 09 20 25.2 +1.3
E17K **Hotham Inlet** 9.93 347 P Pn 09 20 25.1 +1.3
baz=162,SNR=49
YUK5 **Granite Creek** 9.95 61 Pn 09 20 25.4 +1.2
E19K **Redstone River** 9.96 357 Pn 09 20 25.5 +1.2
E19K **Redstone River** 9.96 357 P Pn 09 20 25.3 +1.1
baz=177,SNR=213
G24K **Hadweenzic Riv** 10.01 20 Pn 09 20 22.3 -2.6
G24K **Hadweenzic Riv** 10.01 20 P Pn 09 20 23.1 -1.8
baz=208,SNR=172
HYT **Haines Junctio** 10.06 63 Pn 09 20 26.7 +1.0
HYT **Haines Junctio** 10.06 63 P Pn 09 20 26.7 +1.0
baz=260,SNR=18
M29M **Somme Creek** 10.06 54 Pn 09 20 26.9 +1.1
M29M **Somme Creek** 10.06 54 P Pn 09 20 26.8 +1.0
baz=249,SNR=1000
COLD **Coldfoot** 10.08 13 Pn 09 20 24.5 -1.3
COLD **Coldfoot** 10.08 13 P Pn 09 20 24.0 -1.8
baz=199,SNR=112
E18K **Tukpahlearik C** 10.13 350 Pn 09 20 27.6 +1.1
E18K **Tukpahlearik C** 10.13 350 P Pn 09 20 27.5 +1.1
baz=166,SNR=46
P30M **Million Dollar** 10.22 67 Pn 09 20 28.6 +0.8
P30M **Million Dollar** 10.22 67 P Pn 09 20 28.5 +0.6
baz=264,SNR=22
DAWY **Dawson** 10.41 44 Pn 09 20 30.7 +0.4
DAWY **Dawson** 10.41 44 P Pn 09 20 30.8 +0.4
baz=239,SNR=268
I27K **Kandik River** 10.58 34 P Pn 09 20 31.4 -1.4
baz=228,SNR=97
S31K **Pelican** 10.59 79 P Pn 09 20 32.3 -0.6
baz=277,SNR=12
D17K **Noatak River** 10.68 345 P Pn 09 20 35.8 +1.8
baz=159,SNR=20
O30N **Mendenhall** 10.73 64 P Pn 09 20 35.0 +0.2
baz=262,SNR=20
E20K **Nigu River** 10.75 360 P Pn 09 20 34.5 -0.5
baz=180,SNR=73
M30M **Minto, Yukon** 10.84 54 P Pn 09 20 36.4 +0.2
baz=251,SNR=210
E23K **Chandalar** 10.94 13 P Pn 09 20 35.3 -2.3
baz=199
E21K **Killik River** 10.97 4 P Pn 09 20 38.3 +0.3
baz=186
RDOG **Red Dog Mine** 10.99 346 Pn 09 20 39.6 +1.5
RDOG **Red Dog Mine** 10.99 346 P Pn 09 20 39.9 +1.7
baz=160,SNR=51
SKAG **Skagway** 11.00 71 P Pn 09 20 39.7 +1.4
SKAG **Skagway** 11.00 71 P Pn 09 20 39.5 +1.2
baz=269,SNR=13
G26K **Porcupine Rive** 11.00 26 P Pn 09 20 35.1 -3.2
baz=217,SNR=133
N31M **Braeburn, Yuko** 11.01 61 P Pn 09 20 39.0 +0.5
baz=258,SNR=47
I28M **Miner Creek** 11.01 37 P Pn 09 20 36.7 -1.8
baz=232
K29M **Barlow Dome** 11.03 47 P Pn 09 20 39.3 +0.6
baz=244,SNR=62
D19K **Kuna River** 11.03 356 P Pn 09 20 40.3 +1.6
baz=174
H27K **Steamboat Moun** 11.04 32 P Pn 09 20 36.8 -2.2
baz=225,SNR=82
J29N **Klondike Camp** 11.05 44 P Pn 09 20 39.6 +0.6
baz=240,SNR=307
E24K **Your Creek** 11.10 15 P Pn 09 20 37.3 -2.5
baz=202
F25K **Christian Rive** 11.14 21 P Pn 09 20 36.4 -3.8
baz=211,SNR=123
D20K **Etivluk River** 11.21 359 P Pn 09 20 41.9 +0.8
baz=179
SIT **Sitka** 11.22 84 Pn 09 20 40.7 -0.5
SIT **Sitka** 11.22 84 P Pn 09 20 40.7 -0.5
SIT **Sitka** 11.22 84 P Pn 09 20 40.7 -0.5
SIT **Sitka** 11.22 84 P Pn 09 20 40.9 -0.3
baz=282
BESE **Bessie Mountai** 11.27 76 Pn 09 20 42.4 +0.4
WHY **Whitehorse** 11.30 65 P Pn 09 20 42.4 -0.1
baz=264,SNR=29
C18K **Utukok River** 11.38 350 P Pn 09 20 43.6 +0.2
baz=166
C17K **DeLong Mountai** 11.42 347 P Pn 09 20 44.2 +0.2
baz=160
R32K **Eaglecrest** 11.47 77 P Pn 09 20 46.1 +1.4
baz=276
D22K **Ayikyak River** 11.47 6 P Pn 09 20 43.7 -1.0
baz=190
I29M **Ogilvie Camp,** 11.51 40 P Pn 09 20 44.5 -0.6
baz=236,SNR=91
F26K **Sheenjek River** 11.53 23 P Pn 09 20 42.0 -3.5
baz=214,SNR=42
JIS **Juneau Island** 11.54 77 P Pn 09 20 46.1 +0.6
S32K **Killisnoo** 11.54 81 P Pn 09 20 45.9 +0.3
baz=280,SNR=18
C16K **Lisburne Hills** 11.55 343 P Pn 09 20 43.9 -1.7
baz=154
MAYO **Mayo, Yukon** 11.58 50 P Pn 09 20 46.6 +0.5
baz=248,SNR=44
E25K **Arctic Village** 11.62 20 P Pn 09 20 43.5 -3.0
baz=210,SNR=163
C21K **Knifeblade Rid** 11.67 2 P Pn 09 20 46.5 -0.7
baz=184
D23K **Nanushuk River** 11.71 10 P Pn 09 20 46.8 -0.9
baz=195,SNR=35
C19K **Lookout Ridge** 11.71 354 Pn 09 20 49.9 +2.2
C19K **Lookout Ridge** 11.71 354 P Pn 09 20 49.2 +1.4
baz=171,SNR=25
ATKA **Atka Island** 11.73 251 P Pn 09 20 47.0 -1.1
M31M **Drury Creek, Y** 11.81 58 P Pn 09 20 49.9 +0.7
baz=257,SNR=63
J30M **Hart River** 11.82 45 P Pn 09 20 50.2 +0.8
baz=243
P32M **Atlin** 11.82 71 P Pn 09 20 49.2 -0.2
baz=270,SNR=12
D24K **Happy Valley** 12.08 12 P Pn 09 20 50.8 -1.8
baz=189
I30M **Mount Dempster** 12.12 43 P Pn 09 20 53.5 +0.2
baz=240
N32M **Quiet Lake** 12.24 63 P Pn 09 20 55.3 +0.4
baz=263
P33M **Teslin, Yukon** 12.29 68 P Pn 09 20 55.9 +0.3
baz=268,SNR=10
FARO **Faro, Yukon** 12.29 58 P Pn 09 20 55.7 +0.2
baz=258,SNR=52
F28M **Old Crow** 12.49 30 Pn 09 20 55.9 -2.3
F28M **Old Crow** 12.49 30 P Pn 09 20 55.8 -2.3
baz=224,SNR=57
T33K **Petersburg** 12.54 84 P Pn 09 20 59.3 +0.5
baz=283
G29M **Pine Creek** 12.54 34 P Pn 09 20 57.2 -1.6
baz=231
D25K **Kavik River** 12.56 16 P Pn 09 20 57.6 -1.4
baz=205,SNR=130
Q32M **Nakina River** 12.59 74 P Pn 09 20 59.7 +0.1
baz=274
U33K **Whale Pass** 12.62 87 Pn 09 20 59.5 -0.3
U33K **Whale Pass** 12.62 87 P Pn 09 20 59.7 -0.2
baz=286,SNR=12
CRAG **Craig** 12.82 90 Pn 09 21 02.1 -0.4
CRAG **Craig** 12.82 90 P Pn 09 21 02.0 -0.4
CRAG **Craig** 12.82 90 P Pn 09 21 02.5 +0.1
baz=289
WRAK **Wrangell Islan** 12.96 85 P Pn 09 21 04.5 +0.2
baz=285,SNR=7.5
G30M **tAoh Zrail Nji** 13.14 36 P Pn 09 21 05.6 -1.0
baz=234
H31M **Peel River** 13.14 42 P Pn 09 21 06.6 -0.1
baz=242
ADK **Adak** 13.18 253 P Pn 09 21 05.9 -1.3
R33M **Jennings River** 13.23 71 P Pn 09 21 07.0 -0.9
baz=273
C27K **Jago River** 13.26 19 P Pn 09 21 07.4 -0.8
baz=210,SNR=45

S34M **Telegraph Cree** 13.30 78 P Pn 09 21 10.9 +2.2
baz=279,SNR=5.2
E28M **Babbage River** 13.31 27 P Pn 09 21 06.4 -2.4
baz=222
C26K **Camden Bay** 13.32 17 P Pn 09 21 07.0 -1.9
baz=207
D27M **Malcolm River** 13.48 23 P Pn 09 21 09.9 -1.2
baz=217
E29M **Blow River** 13.57 29 P Pn 09 21 10.7 -1.4
baz=226
F30M **Barrier River** 13.66 34 Pn 09 21 12.1 -1.2
F30M **Barrier River** 13.66 34 P Pn 09 21 12.1 -1.2
baz=233,SNR=42
V35K **Ketchikan** 13.68 89 P Pn 09 21 15.5 +1.9
baz=290,SNR=7.6
DLBC **Dease Lake** 13.80 75 P Pn 09 21 16.7 +1.4
comp=N,6.7nm,0.3s,baz=274,slow=7.4,SNR=41
DLBC S Sn 09 23 44.5 -2.6
comp=N,22nm,0.4s,baz=222,slow=26,SNR=7.6
DLBC LR LR 09 26 14.3
comp=N,62nm,18.9s,baz=291,slow=35
DLBC **Dease Lake** 13.80 75 P Pn 09 21 16.9 +1.6
baz=278
A21K **Barrow** 13.83 359 P Pn 09 21 13.8 -1.7
baz=179,SNR=9.8
T35M **Bob Quinn** 13.95 81 P P 09 21 20.3 -1.4
baz=284
F31M **Tsiigehtchic** 14.20 37 P Pn 09 21 18.2 -2.0
baz=237,SNR=46
WTLY **Watson Lake, Y** 14.30 68 P P 09 21 23.7 -1.9
baz=272,SNR=15
U35K **Hyder** 14.35 85 P P 09 21 24.9 -1.2
baz=288
INK **Inuvik** 14.76 34 P Pn 09 21 26.7 -0.7
comp=N,88nm,0.8s,baz=247,slow=13,SNR=76
INK S Sn 09 24 16.6 -4.7
comp=N,20nm,0.6s,baz=223,slow=32,SNR=13
INK LR LR 09 27 27.9
comp=N,234nm,18.4s,baz=358,slow=38
INK **Inuvik** 14.76 34 P Pn 09 21 25.3 -2.1
baz=234,SNR=104
TOAD **Toad River Com** 16.23 72 P Pn 09 21 46.0 +0.2
baz=279,SNR=25
KOTAN **Kotaneelee Air** 16.67 68 P P 09 21 53.0 +1.1
baz=275,SNR=16
BBB **Bella Bella** 16.88 97 P P 09 21 56.2 +2.1
comp=N,33nm,1.0s,baz=303,slow=15,SNR=5.0
BBB S Sn 09 24 59.0 -2.2
comp=N,7.3nm,0.7s,baz=342,slow=20,SNR=7.5
BBB LR LR 09 26 39.6
comp=N,125nm,20.0s,baz=288,slow=30
WRGLY **Wrigley** 16.94 57 P P 09 21 55.6 +0.8
baz=266,SNR=67
SHEM **Shemya Is, Ala** 17.65 267 P P 09 22 01.3 -1.3
comp=N,148nm,0.8s,baz=68,slow=16,SNR=2.2
C36M **Paulatuk** 18.25 37 P P 09 22 08.1 -1.0
baz=246,SNR=214
A36M **Sachs Harbour** 19.18 29 P P 09 22 17.5 -1.7
baz=237,SNR=163
BILL **Bilibino** 19.80 317 P 09 22 26.0 0.0
BILL **Bilibino** 19.80 317 ⇑ *i*P P 09 22 25.2 -0.8
BILL pmax pmax
comp=Z,41nm,0.6s
YKA **Yellowknife Ar** 21.00 59 P P 09 22 40.2 +1.3
comp=Z,21nm,0.7s,baz=276,slow=10,SNR=272
YKA ScP ScP 09 30 08.0 -0.1
comp=Z,0.7nm,0.7s,baz=294,slow=3.0,SNR=4.3
comp=Z,21nm,0.7s
NEW **Newport** 24.93 95 LR LR 09 33 16.3
comp=Z,103nm,18.2s,baz=336,slow=36
WIFE **Three Sisters-** 25.18 108 IAmb IAmb 09 23 59.3
comp=Z,28nm,1.0s
SEY **Seymchan** 25.55 304 P P 09 23 21.5 -1.2
comp=Z,6nm,0.8s,baz=96,slow=9.2,SNR=78
comp=Z,14nm,0.8s
SEY **Seymchan** 25.55 304 *e*P P 09 23 20.4 -2.4
SEY pmax pmax
comp=Z,18nm,1.0s
PET **Petropavlovsk** 25.80 279 P P 09 23 24.3 -0.8
PET IAmb IAmb 09 23 26.9
comp=Z,60nm,1.1s
PET **Petropavlovsk** 25.80 279 *e*P P 09 23 25.9 +0.7
PET *e**PP pP 09 23 48.4 0.0
PET *e*S S 09 27 47.2 +0.8
PET pmax pmax
comp=Z,61nm,1.1s
PET MLR MLR
comp=Z,100nm,18.0s
PINE **Pine Mountain** 25.82 107 IAmb IAmb 09 24 08.7
comp=Z,111nm,1.9s
J05D **Fort Rock, OR** 26.02 108 IAmb IAmb 09 23 57.1
comp=Z,78nm,1.5s
PEA0B **Petropavlovsk-** 26.27 280 IAmb IAmb 09 23 32.0
comp=Z,62nm,1.4s
PEA0B **Petropavlovsk-** 26.27 280 *d* *i*P P 09 23 29.9 +0.5
PETK **Petropavlovsk-** 26.27 280 P P 09 23 28.4 -1.1
comp=Z,10nm,0.5s,baz=70,slow=13,SNR=43
PETK PcP PcP 09 26 53.3 +0.5
comp=Z,2.7nm,0.9s,baz=45,slow=4.6,SNR=4.1
comp=Z,10nm,0.5s
PETK **Petropavlovsk-** 26.27 280 P P 09 23 28.8 -0.6
PETK **Petropavlovsk-** 26.27 280 P P 09 23 28.8 -0.6
MA2 **Magadan** 27.20 297 LR LR 09 34 59.7
comp=Z,94nm,18.9s,baz=32,slow=38
MA2 **Magadan** 27.20 297 P 09 23 37.3 -0.4
MA2 **Magadan** 27.20 297 ⇓ *i*P P 09 23 37.7 0.0
MA2 pmax pmax
comp=Z,9.0nm,0.8s
MA2 **Magadan** 27.20 297 P P 09 23 37.4 -0.3
comp=Z,19nm,0.8s
O03E **Paynes Creek** 27.94 113 IAmb IAmb 09 24 30.7
comp=Z,24nm,1.1s
RES **Resolute Bay** 28.23 29 P 09 23 46.2 -0.5
RES **Resolute Bay** 28.23 29 P P 09 23 46.2 -0.5
RES pmax pmax
comp=Z,6.0nm,0.7s
SKR **Severo-Kuril's** 28.35 277 ⇑ *i*P P 09 23 48.6 +0.7
SKR pmax pmax
comp=Z,1.0nm,1.1s
BLKN **Baker Lake** 28.91 51 IAmb IAmb 09 23 55.0
comp=Z,48nm,1.6s
FFC **Flin Flon** 29.59 72 P P 09 23 59.7 +0.7
FFC **Flin Flon** 29.59 72 P P 09 23 59.7 +0.7
FFC pmax pmax
comp=Z,6.0nm,1.1s
PNTR **Pine Nut** 29.96 112 IAmb IAmb 09 24 36.2
comp=Z,14nm,0.8s
YHH **Holmes Hill** 30.48 95 P P 09 24 10.3 +3.1
NVAR **Mina Array Bea** 31.11 111 P P 09 24 15.6 +2.8
comp=Z,3.1nm,0.7s,baz=308,slow=9.0,SNR=26
NVAR pP pP 09 24 39.2 +2.9
comp=Z,3.0nm,0.6s,baz=307,slow=8.8,SNR=7.6
NVAR ScP ScP 09 30 39.3 +1.1
comp=Z,0.6nm,0.7s,baz=289,slow=2.9,SNR=4.3
NVAR LR LR 09 35 59.9
comp=Z,86nm,19.0s,baz=102,slow=34
comp=Z,3.1nm,0.7s
FCC **Fort Churchill** 31.69 61 IAmb IAmb 09 24 19.8
comp=Z,34nm,1.2s
PDAR **Pinedale Array** 32.53 97 P P 09 24 27.5 +2.3
comp=Z,1.0nm,0.5s,baz=312,slow=4.6,SNR=20
PDAR pP pP 09 24 51.5 +2.7
comp=Z,2.5nm,0.5s,baz=311,slow=8.1,SNR=11
comp=Z,1.0nm,0.5s
PDAR **Pinedale Array** 32.53 97 P P 09 24 26.0 +0.8
TIXI **Tiksi** 32.56 325 P P 09 24 24.7 -0.1
TIXI IAmb IAmb 09 24 25.4
comp=Z,14nm,0.8s
TIXI **Tiksi** 32.56 325 P P 09 24 24.7 -0.1
TIXI pmax pmax
comp=Z,14nm,0.8s
ILON **Igloolik, Nuna** 32.91 39 P P 09 24 28.9 +1.0
POIN **Pond Inlet** 33.18 32 P P 09 24 30.8 +0.6
BSUT **Blindstream Ca** 33.45 101 IAmb IAmb 09 25 01.8
comp=Z,14nm,0.8s
RSSD **Black Hills** 34.59 90 P P 09 24 44.3 +1.4
RSSD IAmb IAmb 09 25 12.1
comp=Z,11nm,0.6s
RSSD **Black Hills** 34.59 90 P P 09 24 44.3 +1.4
RSSD pmax pmax
comp=Z,11nm,0.6s
RSSD **Black Hills** 34.59 90 P P 09 24 44.3 +1.4
RSSD pP pP 09 25 07.5 +0.7
ULM **Lac du Bonnet** 35.13 75 P P 09 24 48.9 +1.6
comp=Z,6.5nm,0.5s,baz=306,slow=9.0,SNR=20
ULM pP pP 09 25 13.3 +2.2
comp=Z,8.6nm,0.9s,baz=295,slow=9.1,SNR=5.1
comp=Z,6.5nm,0.5s
ULM **Lac du Bonnet** 35.13 75 IAmb IAmb 09 24 49.7
comp=Z,13nm,1.0s
TYV **Tymovskoe** 35.35 286 *e*P P 09 24 48.8 -0.4
TYV pmax pmax
comp=Z,300nm,4.3s
TYV pmax pmax
comp=Z,42nm,1.0s
YAK **Yakutsk** 35.74 309 LR LR 09 38 50.2
comp=Z,46nm,18.5s,baz=314,slow=35
YAK **Yakutsk** 35.74 309 P 09 24 51.4 -1.0
YAK **Yakutsk** 35.74 309 *c* *i*P P 09 24 50.9 -1.4
YAK *e**PP pP 09 25 13.2 -3.1
YAK *e*S S 09 30 20.6 -0.5
YAK *e**SS ScP 09 30 56.7 +3.0
YAK *e*SS SS 09 33 09.8 +9.4
YAK pmax pmax
comp=Z,70nm,0.9s
YAK pmax pmax
comp=E,19nm,1.1s
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=Z,592nm,5.6s
YAK pmax pmax
comp=E,386nm,5.7s
YAK pmax pmax
comp=N,367nm,4.8s
YAK smax smax
comp=N,330nm,4.7s
YAK smax smax
comp=E,119nm,4.2s
YAK **Yakutsk** 35.74 309 P P 09 24 50.9 -1.4
PFO **Pinyon Flats O** 35.83 115 LR LR 09 36 32.0
comp=E,60nm,20.2s,baz=12,slow=31
PFO **Pinyon Flats O** 35.83 115 ⇓ *e*P P 09 24 54.8 +1.2
PFO pmax pmax
comp=Z,3.0nm,1.0s
AGMN **Agassiz Nation** 36.30 78 IAmb IAmb 09 25 23.9
comp=Z,9.5nm,0.8s
EPLO **Experimental L** 36.59 75 P 09 25 01.1 +1.4
EPLO IAmb IAmb 09 25 02.0
comp=Z,13nm,0.6s
BLYC **Blythe** 36.67 112 IAmb IAmb 09 25 41.1
comp=Z,12nm,0.8s
YSS **Yuzhno-Sakhali** 37.67 281 *e*P P 09 25 09.3 +0.4
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,900nm,14.0s
EYMN **Ely** 38.81 76 P P 09 25 19.8 +1.3
JKA **Kamikawa-asahi** 39.61 277 P 09 25 24.7 -0.4
ASAJ **Asahikawa** 39.61 277 LR LR 09 43 15.3
comp=Z,68nm,18.7s,baz=326,slow=38
ASAJ **Asahikawa** 39.61 277 P P 09 25 24.7 -0.4
ASAJ pmax pmax
comp=Z,41nm,0.7s
E38A **The Farm, Brul** 39.64 77 IAmb IAmb 09 25 27.3
comp=Z,12nm,0.6s
SPMN **Marine on St.** 39.88 80 IAmb IAmb 09 25 54.0
comp=Z,16nm,0.9s
FRB **Frobisher Bay** 40.11 44 LR LR 09 44 48.1
comp=Z,122nm,18.4s,baz=86,slow=40
I37A **Lemond, Waseca** 40.37 82 IAmb IAmb 09 25 58.1
comp=Z,14nm,0.7s
JEM **Erimo** 40.74 275 P P 09 25 34.6 +0.2
G40A **Rib Lake** 41.23 78 P P 09 25 39.9 +1.5
G40A IAmb IAmb 09 25 40.5
comp=Z,8.9nm,0.6s
ZEA **Zeya** 41.31 299 *e*P P 09 25 37.6 -1.4
ZEA pmax pmax
comp=Z,10.0nm,0.6s
KLR **Kul'dur** 41.92 291 ⇓ *i*P P 09 25 43.5 -0.6
KLR pmax pmax
comp=Z,13nm,0.8s
I40A **Norwalk** 41.93 80 P P 09 25 45.9 +1.7
I40A IAmb IAmb 09 26 10.8
comp=Z,13nm,0.7s
JFWS **Jewell Farm** 42.80 80 IAmb IAmb 09 26 17.5
comp=Z,11nm,0.7s
I42A **Draeger Farm,** 42.84 78 IAmb IAmb 09 25 58.4
comp=Z,17nm,1.1s
L40A **Anamosa** 42.87 82 IAmb IAmb 09 26 17.7
comp=Z,14nm,0.9s
P38A **Dawn** 43.35 86 IAmb IAmb 09 26 22.4
comp=Z,12nm,0.8s
KUQ **Kuujjuuaa** 43.49 50 IAmb IAmb 09 25 57.6
comp=Z,17nm,0.7s
E46A **Sault Ste Mari** 43.57 73 IAmb IAmb 09 25 59.5
comp=Z,14nm,0.7s
SFJD **Kangerlussuaq** 44.10 33 P P 09 26 02.3 +0.9
SFJD **Kangerlussuaq** 44.10 33 P P 09 26 02.3 +0.9
SFJD pmax pmax
comp=Z,26nm,0.6s
SFJD **Kangerlussuaq** 44.10 33 P P 09 26 02.4 +1.0
SFJD pP pP 09 26 26.2 +0.1
SFJD x x 09 26 38.2
SPITS **Spitsbergen Ar** 44.45 2 P P 09 26 02.4 -1.6
comp=Z,6.4nm,0.8s,baz=20,slow=5.8,SNR=24
SPITS PcP PcP 09 27 46.0 +0.4
comp=Z,1.1nm,0.4s,baz=57,slow=3.1,SNR=4.7
comp=Z,6.4nm,0.8s
W35A **Tecumseh** 44.84 94 IAmb IAmb 09 26 34.2
comp=Z,47nm,1.8s
R40A **Maddies Statio** 45.00 87 P P 09 26 08.9 +0.1
R40A IAmb IAmb 09 26 35.5
comp=Z,13nm,0.6s
USRK **Ussuriysk Ar.** 45.15 285 P P 09 26 08.2 -1.8
comp=Z,4.0nm,0.6s,baz=61,slow=9.9,SNR=12
comp=Z,4.0nm,0.6s
U38A **Gravette A** 45.22 90 P P 09 26 10.6 0.0
TX31 **Lajitas Ar. Si** 45.74 105 P P 09 26 16.2 +1.2
TXAR **Lajitas Array** 45.75 105 P P 09 26 17.0 +2.0
comp=Z,0.7nm,0.7s,baz=316,slow=5.7,SNR=11
TXAR pP pP 09 26 42.8 +3.0
comp=Z,2.9nm,0.8s,baz=313,slow=7.0,SNR=10
TXAR ScP ScP 09 31 35.1 +1.3
comp=Z,0.2nm,0.6s,baz=329,slow=3.8,SNR=2.9
comp=Z,0.7nm,0.7s
TXAR **Lajitas Array** 45.75 105 P P 09 26 15.8 +0.8
SCHQ **Schefferville** 46.27 53 P P 09 26 19.3 +0.6
comp=Z,11nm,0.6s,baz=308,slow=7.0,SNR=52
comp=Z,11nm,0.6s
SCHQ **Schefferville** 46.27 53 IAmb IAmb 09 26 20.0
comp=Z,11nm,0.6s
N47A **Urbana** 46.64 79 IAmb IAmb 09 26 47.8
comp=Z,18nm,1.0s
BUKO **Buck Lake** 46.70 70 IAmb IAmb 09 26 23.9
comp=Z,16nm,0.7s
PSTR **Posyet** 46.85 285 *e*P P 09 26 23.6 +0.3
PSTR pmax pmax
comp=Z,6.0nm,1.1s
PBMO **Poplar Bluff** 47.10 87 IAmb IAmb 09 26 52.0
comp=Z,9.7nm,0.7s
MJB9 **Matsu-Tunnel** 47.34 273 P P 09 26 27.6 +0.3
MAJO **Matsushiro** 47.34 273 P P 09 26 26.7 -0.6
MAJO **Matsushiro** 47.34 273 P P 09 26 27.2 0.0
MAJO **Matsushiro** 47.34 273 ⇓ *i*P P 09 26 27.2 0.0
MAJO pmax pmax
comp=Z,26nm,0.9s
MAJO **Matsushiro** 47.34 273 P P 09 26 27.1 0.0
MJAR **Matsushiro Arr** 47.34 273 P P 09 26 27.0 -0.2
comp=Z,11nm,0.7s,baz=40,slow=6.6,SNR=30
comp=Z,11nm,0.7s
MJAR **Matsushiro Arr** 47.34 273 P P 09 26 26.7 -0.6
MJAR IAmb IAmb 09 26 28.0
comp=Z,45nm,1.6s
HILR **Hailar Array B** 47.58 299 P P 09 26 27.9 -1.0
comp=Z,4.9nm,0.6s,baz=60,slow=8.8,SNR=7.2
HILR PcP PcP 09 27 56.8 -0.2
comp=Z,2.7nm,0.6s,baz=336,slow=3.3,SNR=4.0
comp=Z,4.9nm,0.6s
HIA **Hailar** 47.78 298 ⇑ *i*P P 09 26 29.7 -0.8
HIA pmax pmax
comp=Z,5.0nm,0.8s
P48A **Milroy** 47.81 80 IAmb IAmb 09 26 57.4
comp=Z,38nm,1.4s
JGF **Kuroka** 48.50 273 P P 09 26 36.5 +0.3
TRQ **Mont Tremblant** 48.59 66 IAmb IAmb 09 26 38.1
comp=Z,7.5nm,0.6s
CN2 **Changchun** 48.80 289 *e*P P 09 26 36.8 -1.5
CN2 pmax pmax
comp=Z,10.0nm,0.8s
INU **Inuyama** 48.87 273 P P 09 26 38.8 -0.2
IVI **Ivigtut** 48.94 38 P P 09 26 40.4 +1.3
L56A **Greenwood** 49.99 72 P P 09 26 48.7 +1.3

L59A	Walton	51.23	70	P	P	09 26 57.7	+0.9	
BATG	Bathurst New B	51.91	60	IAmb	IAmb	09 27 03.2		
	comp=Z,14nm,0.9s							
KSRS	Korea Array	52.15	282	P	P	09 27 04.0	+0.4	
	comp=Z,19nm,0.8s,baz=42,slow=6.9,SNR=32							
KSRS				PcP	PcP	09 28 14.6	+0.7	
	comp=Z,3.2nm,0.9s,baz=25,slow=4.0,SNR=2.8							
KSRS				LR	LR	09 48 40.6		
	comp=Z,21nm,19.7s,baz=330,slow=35							
	comp=Z,19nm,0.8s							
KSAR	Wonju Array Be	52.18	282	P	P	09 27 03.3	-0.5	
KSAR	Wonju Array Be	52.18	282	P	P	09 27 03.3	-0.5	
TLY	Talaya	53.20	310 *ce*	P	P	09 27 12.0	+0.8	
TLY				pmax	pmax			
	comp=Z,9.0nm,1.0s							
ARCES	ARCESS Array B	53.21	359	P	P	09 27 10.1	-0.9	
	comp=Z,3.0nm,0.8s,baz=16,slow=6.8,SNR=6.8							
ARCES				PcP	PcP	09 28 17.7	+0.3	
	comp=Z,2.5nm,0.7s,baz=4.9,slow=6.5,SNR=2.0							
	comp=Z,3.0nm,0.8s							
XLT	XiLinHaoTe	53.38	296 *eP*		P	09 27 11.9	-0.8	
XLT				PcP	PcP	09 28 17.5	-1.1	
XLT				pmax	pmax			
	comp=Z,7.0nm,0.7s							
XLT				pmax	pmax			
	comp=Z,420nm,5.8s							
JTU	Tsushima	53.58	278	P	P	09 27 14.3	+0.2	
JNU	Nakatsue	53.86	276	P	P	09 27 15.6	-0.7	
	comp=Z,12nm,0.7s,baz=19,slow=6.3,SNR=6.4							
	comp=Z,12nm,0.7s							
MOY	Mondy	54.29	312 *eP*		P	09 27 19.4	+0.1	
ZAK	Zakamensk	54.33	309 *eP*		P	09 27 18.6	-1.0	
ZAK			*e*			09 28 21.6		
ZAK				pmax	pmax			
	comp=Z,8.0nm,1.2s							
ZAK				pmax	pmax			
	comp=Z,7.0nm,1.3s							
ULN	Ulaanbaatar	54.62	305		P	09 27 21.5	-0.2	
ULN				PcP	PcP	09 28 24.0	+0.6	
ULN				IAmb	IAmb	09 28 24.7		
	comp=Z,10nm,0.7s							
ULN	Ulaanbaatar	54.62	305 *c iP*		P	09 27 21.2	-0.5	
ULN				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ULN	Ulaanbaatar	54.62	305	P	P	09 27 21.3	-0.5	
ULN				pP	pP	09 27 45.4	-1.9	
ULN				PcP	PcP	09 28 23.9	+0.6	
SONM	Songino Array	54.93	305	P	P	09 27 24.0	0.0	
	comp=Z,19nm,0.7s,baz=46,slow=7.3,SNR=65							
SONM				PcP	PcP	09 28 25.4	+0.9	
	comp=Z,9.7nm,0.7s,baz=61,slow=1.9,SNR=9.4							
	comp=Z,19nm,0.7s							
SONM	Songino Array	54.93	305		P	09 27 23.9	0.0	
KNGR	Kungurtug, Tuv	56.50	313 ⇓ *iP*		P	09 27 35.7	+0.6	
KNGR				pmax	pmax			
	comp=Z,8.0nm,0.9s							
HHC	Hu-ho-hao-te	57.88	296 *eP*		P	09 27 45.0	+0.1	
HHC				pmax	pmax			
	comp=Z,14nm,0.7s							
HHC				pmax	pmax			
	comp=Z,360nm,6.5s							
ZAA0	Zalesovo Array	58.39	323		P	09 27 47.8	-0.3	
ZAA0				IAmb	IAmb	09 27 48.9		
	comp=Z,10nm,0.8s							
ZALV	Zalesovo Beam	58.39	323	P	P	09 27 47.7	-0.4	
	comp=Z,8.0nm,0.6s,baz=37,slow=6.8,SNR=36							
ZALV				PcP	PcP	09 28 38.1	+0.3	
	comp=Z,5.8nm,0.8s,baz=34,slow=4.6,SNR=6.9							
ZALV				ScP	ScP	09 32 27.2	-0.6	
	comp=Z,1.8nm,0.8s,baz=35,slow=5.4,SNR=5.9							
	comp=Z,8.0nm,0.6s							
BTO2	Baotou	58.77	298 *eP*		P	09 27 50.8	-0.3	
BTO2				sP	sP	09 28 27.0	-1.7	
BTO2				S	S	09 35 47.0	-0.8	
BTO2				pmax	pmax			
	comp=Z,14nm,0.7s							
BTO2				pmax	pmax			
	comp=Z,1μm,4.6s							
HNS	HongShan	59.00	292 ⇑ *P*		P	09 27 52.3	-0.3	
HNS				pmax	pmax			
	comp=Z,20nm,0.9s							
DGZ	Jazzator, Alta	61.04	318 ⇑ *iP*		P	09 28 06.5	0.0	
DGZ				pmax	pmax			
	comp=Z,6.0nm,1.1s							
NJ2	Nanjing	61.06	285 *eP*		P	09 28 09.5	+2.8	
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.8s							
KLMR	Klimovskoe	61.30	351 *eP*		P	09 28 06.1	-1.8	
KLMR				pmax	pmax			
	comp=Z,13nm,0.9s							
NB2	NORSAR Subarra	61.33	7	P	P	09 28 08.3	+0.1	
	comp=Z,0.9nm,0.5s,baz=353,slow=6.9							
NOA	NORSAR Array B	61.33	7	P	P	09 28 08.4	+0.2	
	comp=Z,1.3nm,0.7s,baz=352,slow=6.8,SNR=4.5							
	comp=Z,1.3nm,0.7s							
FINES	FINESS Array B	61.33	359	P	P	09 28 07.7	-0.4	
	comp=Z,3.3nm,0.5s,baz=9.9,slow=8.9,SNR=30							
	comp=Z,3.3nm,0.5s							
FINES	FINESS Array B	61.33	359 *i P*		P	09 28 07.6	-0.5	
FINES				pmax	pmax			
	comp=Z,3.0nm,0.5s							
LYN	LuoYang	62.36	291	P	P	09 28 15.1	-0.3	
LYN				pmax	pmax			
	comp=Z,53nm,0.7s							
HFS	Hagfors	62.38	6	P	P	09 28 15.1	0.0	
	comp=Z,4.5nm,0.4s,baz=5.0,slow=4.9,SNR=30							
	comp=Z,4.5nm,0.4s							
KIRV	Kirov	62.45	345 ⇓ *iP*		P	09 28 14.9	-0.7	
ARTI	Arti	63.09	339		P	09 28 19.3	-0.6	
ARTI	Arti	63.09	339 *d iP*		P	09 28 19.4	-0.5	
ARTI						09 28 55.8		
ARTI						09 30 36.4		
ARTI				S	S	09 36 39.5	-2.4	
ARTI				pmax	pmax			
	comp=Z,27nm,0.9s							
ARTI	Arti	63.09	339	P	P	09 28 19.4	-0.5	
ARTI				PcP	PcP	09 28 56.6	0.0	
KURK	Kurchatov	63.13	324		P	09 28 19.9	-0.4	
KURK				IAmb	IAmb	09 28 57.1		
	comp=Z,6.4nm,0.6s							
KURK	Kurchatov	63.13	324 ⇓ *iP*		P	09 28 20.1	-0.2	
KURK				pmax	pmax			
	comp=Z,9.0nm,0.9s							
KURK	Kurchatov	63.13	324	P	P	09 28 19.7	-0.6	
KURK				PcP	PcP	09 28 56.8	-0.1	
KURBB	Kurchatov Arra	63.24	324	P	P	09 28 20.5	-0.5	
	comp=Z,10nm,1.0s,baz=28,slow=6.2,SNR=35							
KURBB				PcP	PcP	09 28 57.5	+0.1	
	comp=Z,4.4nm,0.5s,baz=37,slow=3.9,SNR=14							
KURBB				PP	PP	09 30 39.9	-0.8	
	comp=Z,0.8nm,0.6s,baz=34,slow=9.0,SNR=4.2							
	comp=Z,10nm,1.0s							
BORK	Borovoye	63.46	331		P	09 28 22.2	-0.3	
BORK				IAmb	IAmb	09 28 22.8		
	comp=Z,13nm,0.6s							
BORK	Borovoye	63.46	331 ⇑ *iP*		P	09 28 22.0	-0.4	
BORK				pmax	pmax			
	comp=Z,12nm,0.9s							
BORK	Borovoye	63.46	331	P	P	09 28 21.7	-0.7	
BORK				x	x	09 28 59.2		
BVAR	Borovoye Array	63.46	331	P	P	09 28 21.9	-0.6	
	comp=Z,20nm,0.6s,baz=24,slow=6.6,SNR=104							
	comp=Z,20nm,0.6s							
ZSN	Zaisan	63.85	319 *eP*		P	09 28 25.0	-0.1	
ZSN				pmax	pmax			
	comp=Z,17nm,1.1s							
ZSN	Zaisan	63.85	319 *eP*		P	09 28 25.1	-0.1	
	comp=Z,18nm,1.1s							
GTA2	Gaotai	64.46	304	P	P	09 28 28.6	-0.8	
GTA2				pmax	pmax			
	comp=Z,29nm,1.0s							
XAN	Xi'an	64.53	294	P	P	09 28 28.8	-1.0	
XAN				pmax	pmax			
	comp=Z,22nm,0.7s							
WHN	Wuhan	64.59	287 ⇑ *P*		P	09 28 29.6	-0.5	
WHN				pmax	pmax			
	comp=Z,51nm,0.6s							
MK31	Makanchi Array	65.32	320 *c iP*		P	09 28 33.5	-1.2	
MKAR	Makanchi Array	65.32	320	P	P	09 28 33.8	-0.9	
	comp=Z,5.2nm,0.7s,baz=43,slow=7.3,SNR=52							
MKAR				PP	PP	09 30 51.0	-8.0	
	comp=Z,1.0nm,0.8s,baz=50,slow=8.5,SNR=2.3							
	comp=Z,5.2nm,0.7s							
MKAR	Makanchi Array	65.32	320	P	P	09 28 33.2	-1.5	
MKAR	Makanchi Array	65.32	320 *i P*		P	09 28 33.7	-1.0	
MKAR				pmax	pmax			
	comp=Z,5.0nm,0.7s							
LZH	Lanzhou	65.34	299 *eP*		P	09 28 34.8	-0.3	
LZH				pP	pP	09 28 56.9	-4.6	
LZH				pmax	pmax			
	comp=Z,25nm,1.1s							
EKA	Eskdalemuir Ar	65.36	17	P	P	09 28 35.5	+0.8	
	comp=Z,8.1nm,0.6s,baz=333,slow=5.3,SNR=32							
EKA				PcP	PcP	09 29 06.0	0.0	
	comp=Z,2.1nm,0.4s,baz=334,slow=5.1,SNR=4.6							
	comp=Z,8.1nm,0.6s							
MAKZ	Makanchi	65.42	320		P	09 28 34.8	-0.5	
MAKZ				IAmb	IAmb	09 28 35.6		
	comp=Z,12nm,1.1s							
MAKZ	Makanchi	65.42	320	P	P	09 28 34.8	-0.5	
MAKZ				pmax	pmax			
	comp=Z,12nm,1.1s							
MAKZ	Makanchi	65.42	320	P	P	09 28 34.5	-0.8	
LZDM	Lanzhou Array	65.51	299	P	P	09 28 35.6	-0.9	
	comp=Z,1.9nm,0.4s,baz=80,slow=1.6,SNR=11							
	comp=Z,1.9nm,0.4s							
WMQ	Urumqi	65.89	315 *eP*		P	09 28 43.9	+5.4	
WMQ				pmax	pmax			
	comp=Z,18nm,1.1s							
SSLB	Suanglung	66.55	278		P	09 28 41.6	-1.2	
SSLB	Suanglung	66.55	278	P	P	09 28 42.9	0.0	
YULB	Yu-li	66.68	277	P	P	09 28 44.3	+0.6	
OBN	Obninsk	67.23	352 ⇑ *iP*		P	09 28 45.1	-1.5	
OBN				*e*		09 29 14.6		
OBN				*SP	sP	09 29 23.0	-1.8	
OBN				S	S	09 37 27.0	-5.4	
OBN				*i* SS	SS	09 41 58.1	+5.6	
OBN				pmax	pmax			
	comp=Z,13nm,1.0s							
OBN				MLR	MLR			
	comp=Z,237nm,13.0s							
TDK	Taldyqorghan	68.21	322 *eP*		P	09 28 53.0	0.0	
TDK				pmax	pmax			
	comp=Z,14nm,1.1s							
TDK	Taldyqorghan	68.21	322 *eP*		P	09 28 53.0	0.0	
	comp=Z,14nm,1.1s							
BELG	Belogornoye	68.72	345 ⇑ *iP*		P	09 28 55.2	-0.8	
BELG				pmax	pmax			
	comp=Z,4.0nm,1.0s							
GOMU	GeErMu	69.37	305	P	P	09 28 59.6	-1.2	
GOMU				pmax	pmax			
	comp=Z,12nm,0.8s							
KPKS	Kokpek	69.47	321 *eP*		P	09 29 01.1	+0.1	
KPKS	Kokpek	69.47	321 *eP*		P	09 29 01.1	+0.1	
SHLS	Shalkode	69.47	320 *eP*		P	09 29 00.0	-1.0	
SHLS				pmax	pmax			
	comp=Z,11nm,0.7s							
SHLS	Shalkode	69.47	320 *eP*		P	09 29 00.1	-1.0	
	comp=Z,11nm,0.7s							
ABKAR	Akkak array	69.48	336		P	09 29 00.7	-0.1	
UZB	Uzynbulak	69.64	320 *eP*		P	09 29 02.0	-0.1	
UZB				pmax	pmax			
	comp=Z,9.0nm,1.0s							
UZB	Uzynbulak	69.64	320 *eP*		P	09 29 02.0	-0.1	
	comp=Z,8.7nm,1.0s							
MDOK	Medeo	70.29	322 *eP*		P	09 29 05.9	-0.2	
MDOK	Medeo	70.29	322 *eP*		P	09 29 05.1	-1.0	
AAA	Alma-Ata	70.30	322 *eP*		P	09 29 05.9	-0.1	
AAA	Alma-Ata	70.30	322 *eP*		P	09 29 06.0	-0.1	
TNSS	Tian-Shan	70.44	322 *eP*		P	09 29 06.9	-0.4	
TNSS	Tian-Shan	70.44	322 *eP*		P	09 29 06.9	-0.4	
TKM2	Tokmak 2	70.99	322	P	P	09 29 10.8	+0.4	
	SNR=21							
USP	Ospenovka	71.04	323	P	P	09 29 10.8	+0.4	
	SNR=13							
KDJ	Kajisay	71.17	321	IAmb	IAmb	09 29 12.7		
	comp=Z,14nm,1.1s							
CHMS	Chumysh	71.20	323	P	P	09 29 12.0	+0.6	
	SNR=14							
WUS	Wushi	71.29	319	P	P	09 29 12.3	+0.2	
TARG	Taragay, Kyrgy	71.31	320	IAmb	IAmb	09 29 14.5		
	comp=Z,10.0nm,0.6s							
ULHL	Ulahol	71.38	322	P	P	09 29 13.5	+0.7	
	SNR=7.0							
RNPP9	Sopachiv	71.39	359	P	P	09 29 12.0	-0.3	
KBK	Karagaybulak	71.44	323	P	P	09 29 13.6	+0.6	
	SNR=16							
AAK	Ala-Archa	71.60	323	P	P	09 29 14.5	+0.5	
	SNR=19							
AAK	Ala-Archa	71.60	323		P	09 29 14.6	+0.5	
AAK				IAmb	IAmb	09 29 15.2		
	comp=Z,16nm,0.7s							
AAK	Ala-Archa	71.60	323	P	P	09 29 14.6	+0.5	
AAK				pmax	pmax			
	comp=Z,16nm,0.7s							
AAK	Ala-Archa	71.60	323	P	P	09 29 14.5	+0.5	
EKS2	Erkin-Say	71.81	324	P	P	09 29 15.8	+0.5	
	SNR=18							
UCH	Uchtor	71.97	323	P	P	09 29 17.0	+0.5	
	SNR=5.3							
AKASG	Malin Array Be	72.03	356	P	P	09 29 15.4	-0.8	
	comp=Z,4.8nm,0.5s,baz=8.8,slow=6.0,SNR=21							
	comp=Z,4.8nm,0.5s							
AKASG	Malin Array Be	72.03	356	IAmb	IAmb	09 29 17.4		
	comp=Z,9.8nm,1.7s							
AKBB	Malin Array Si	72.03	356	IAmb	IAmb	09 29 16.1		
	comp=Z,13nm,0.6s							
AKBB	Malin Array Si	72.03	356	P	P	09 29 15.5	-0.7	
KIEV	Kiev	72.03	356		P	09 29 15.5	-0.7	
KIEV				IAmb	IAmb	09 29 16.1		
	comp=Z,12nm,0.6s							
KIEV	Kiev	72.03	356	P	P	09 29 15.5	-0.7	
KIEV				pmax	pmax			
	comp=Z,12nm,0.6s							
NRN	Naryn	72.19	321	IAmb	IAmb	09 29 19.4		
	comp=Z,20nm,1.2s							
DZA	Taraz	72.37	325 *eP*		P	09 29 18.4	0.0	
DZA				pmax	pmax			
	comp=Z,8.0nm,0.7s							
DZA	Taraz	72.37	325 *eP*		P	09 29 18.5	0.0	
	comp=Z,7.5nm,0.7s							
KK31	Karatay Array	72.43	326	IAmb	IAmb	09 29 19.5		
	comp=Z,18nm,0.7s							
KKAR	Karatay Array	72.43	326		P	09 29 18.9	+0.1	
KKAR	Karatay Array	72.43	326	P	P	09 29 18.9	+0.1	
LUBAR	Lubar, Ukraine	72.85	357	P	P	09 29 20.2	-0.9	
ARSB	Arslanbob	73.28	324	IAmb	IAmb	09 29 24.5		
	comp=Z,13nm,0.5s							
STHS	Stebnicka Huta	73.38	2 *eP*		P	09 29 24.6	+0.4	
CHM	Chimkent	73.42	326 *eP*		P	09 29 24.5	0.0	
CHM				pmax	pmax			
	comp=Z,9.0nm,0.4s							
CHM	Chimkent	73.42	326 *eP*		P	09 29 24.6	0.0	
	comp=Z,8.5nm,0.4s							
IUG	luzhnay	73.44	326 *eP*		P	09 29 24.9	0.0	
IUG				pmax	pmax			
	comp=Z,7.0nm,0.6s							
IUG	luzhnay	73.44	326 *eP*		P	09 29 24.9	0.0	
	comp=Z,7.3nm,0.6s							
GERES	GERESS Array B	73.63	7	P	P	09 29 26.4	+0.5	
	comp=Z,1.5nm,0.6s,baz=349,slow=5.4,SNR=8.1							
	comp=Z,1.5nm,0.6s							
PZH	PanZhiHua	74.24	294	P	P	09 29 28.9	-0.8	
PZH				pmax	pmax			
	comp=Z,20nm,0.9s							
MODS	Modra-Piesok	74.30	5 *eP*		P	09 29 31.0	+1.4	
MODS	Modra-Piesok	74.30	5 *eP*		P	09 29 31.0	+1.4	
KSH2	Kashi	74.38	321	P	P	09 29 31.0	+0.5	
KSH2				pmax	pmax			
	comp=Z,26nm,0.8s							
BTK	Batken	75.11	325	IAmb	IAmb	09 29 35.4		
	comp=Z,15nm,0.6s							
BUR08	Bucovina Ar. S	75.17	359	IAmb	IAmb	09 30 31.9		
	comp=Z,23nm,1.9s							
LSA	Lhasa	76.50	304	P	P	09 29 39.8	-3.3	
LSA				pmax	pmax			
	comp=Z,14nm,0.8s							
LSA	Lhasa	76.50	304	P	P	09 29 43.5	+0.5	
LSA				x	x	09 29 54.4		
PYA1	Pyatigorsk	77.50	346 ⇓ *iP*		P	09 29 48.3	+0.4	
KIV	Kislovodsk	77.66	346 *eP*		P	09 29 48.6	-0.2	
KIV				pmax	pmax			
	comp=Z,28nm,1.1s							
KIV	Kislovodsk	77.66	346	P	P	09 29 48.4	-0.4	
KIV				pP	pP	09 30 13.8	-2.1	
KBZ	Khabaz	77.85	346	P	P	09 29 50.1	+0.3	
	comp=Z,13nm,0.9s,baz=325,slow=2.8,SNR=25							
	comp=Z,13nm,0.9s							
KBZ	Khabaz	77.85	346 ⇓ *iP*		P	09 29 50.6	+0.8	
SHA1	Shidzhatmaz	77.87	346 ⇓ *iP*		P	09 29 50.9	+0.7	
AKT	Akhty	79.34	342 *eP*		P	09 29 58.0	-0.2	
AKT				pmax	pmax			
	comp=Z,14nm,0.8s							
SDV	Santo Domingo	80.11	89	LR	LR	10 07 50.5		
	comp=Z,36nm,20.0s,baz=68,slow=37							
NIL	Nilore	80.14	320		P	09 30 02.8	+0.3	
NIL				IAmb	IAmb	09 30 03.2		
	comp=Z,23nm,0.8s							
NIL	Nilore	80.14	320	P	P	09 30 02.8	+0.3	
NIL				pmax	pmax			
	comp=Z,23nm,0.8s							
ESDC	Sonseca Array	80.34	22	P	P	09 30 04.9	+1.4	
	comp=Z,1.1nm,0.7s,baz=344,slow=4.9,SNR=3.5							
	comp=Z,1.1nm,0.7s							
KBL	Kabul	80.73	324		P	09 30 04.7	-1.2	
KBL	Kabul	80.73	324	P	P	09 30 04.7	-1.2	
KBL				pmax	pmax			
	comp=Z,7.0nm,0.8s							
KOPT	Kop Dagi	81.81	347	IAmb	IAmb	09 30 14.1		
	comp=Z,14nm,1.2s							
CMAR	Chiang Mai Arr	82.38	292	P	P	09 30 14.1	-0.4	
	comp=Z,8.5nm,0.8s,baz=20,slow=5.3,SNR=33							
	comp=Z,8.5nm,0.8s							
BRTR	Keskin Array B	82.75	352	P	P	09 30 16.5	+0.2	
	comp=Z,4.1nm,0.8s,baz=16,slow=2.7,SNR=26							
	comp=Z,4.1nm,0.8s							
BNN	Bunyan	83.44	351	IAmb	IAmb	09 30 21.7		
	comp=Z,14nm,0.8s							
KEST	Kesra	86.26	12	P	P	09 30 35.1	+1.1	
	comp=Z,1.7nm,0.4s,baz=92,slow=12,SNR=4.5							
	comp=Z,1.7nm,0.4s							
CTAO	Charters Tower	90.96	233	P	P	09 30 56.7	+0.6	
CTAO	Charters Tower	90.96	233	P	P	09 30 56.7	+0.6	
CTAO				pmax	pmax			
	comp=Z,10.0nm,0.8s							
MDP	Montagnes des	92.87	76	LR	LR	10 17 10.6		
	comp=Z,23nm,18.9s,baz=322,slow=38							
WRA	Warramunga Arr	96.25	243	P	P	09 31 19.4	-1.1	
	comp=Z,0.6nm,0.9s,baz=34,slow=5.6,SNR=6.9							
	comp=Z,0.6nm,0.9s							
WRA	Warramunga Arr	96.25	243 *i* P		P	09 31 22.2	+1.8	
ASAR	Alice Springs	99.64	241	P	Pdif	09 31 36.1	+0.5	
	comp=Z,0.8nm,0.9s,baz=32,slow=3.6,SNR=4.3							
	comp=Z,0.8nm,0.9s							
QSPA	South Pole Qui	147.34	180	PKPbc	PKPbc	09 37 34.3	+0.3	
	comp=Z,4.9nm,0.6s,baz=349,slow=1.3,SNR=7.3							
QSPA	South Pole Qui	147.34	180		PKPbc	09 37 34.1	+0.1	
BOSA	Boshof	151.06	358	PKP	PKPdf	09 37 38.6	0.0	
	comp=Z,6.1nm,0.7s,baz=349,slow=5.2,SNR=10							
BOSA				PKPbc	PKPbc	09 37 44.8	+0.2	
	comp=Z,6.1nm,0.7s,baz=347,slow=1.6,SNR=6.2							
NVL	N'lazarevskaya	165.77	164 *e*	PKIKP	PKPdf	09 37 55.6	+0.9	
NVL			*e*			09 42 43.2		
NVL			*e*			09 44 49.7		
NVL			*e* SS	SS		10 03 13.3	+1.5	
NVL			*e* SSS	SSS		10 09 42.4		
NVL				pmax	pmax			
	comp=Z,37nm,1.9s							

RSNC ***17*** *09:49:43.5±0.0,8°N±1°×7°2W±°, h-1km±2km, M2.9, mb3.5, mB4.8,ML2.3,Mw(mB)4.1, MwMwp4.6, Mwp5.0*
FUNV ***17*** *09:49:43.4, 8°24N×71°87W, h5km, MW3.3, Presumed earthquake*

ISC 17 09:49:41.5±1.4, 8°26N±0°03×71°81W±0°03, h1km±11km, n34, σ1°76/63, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CAPV	Capacho	0.63	232	*eP*		Pg	09 49 53.3	-0.3
SOCV	Socops	0.95	88	*eP*		Pb	09 50 01.4	+0.6
SOCV				*eS*		Sb	09 50 14.8	+1.0
PAMC	Pamplona, Colo	1.27	224	P		Pg	09 50 05.6	-0.2
PAMC				S		Sg	09 50 21.6	-0.7
SDV	Santo Domingo	1.32	62	P		Pg	09 50 07.8	+0.9
SDV				S		Sn	09 50 26.1	+0.4
SDV	Santo Domingo	1.32	62	*eP*		Pb	09 50 08.1	+0.8
SDV				*eS*		Sn	09 50 26.8	+1.0
OCAC	Ocana	1.49	269	P		Pn	09 50 08.2	-1.4
OCAC				S		Sb	09 50 27.1	-2.5
MCQV	Machiques	1.92	338	*eP*		Pn	09 50 15.4	+0.1
MCQV				*eS*		Sn	09 50 40.5	+0.4
BARC	Barichara	2.14	219	P		Pn	09 50 20.0	+1.4
BARC				S		Sn	09 50 48.2	+2.2
BRJC	Barrancabermej	2.30	236	P		Pn	09 50 21.3	+0.7
BRJC				S		Sb	09 50 52.6	-0.3
RUSC	La Rusia	2.67	208	P		Pn	09 50 27.0	+0.9
RUSC				S		Sn	09 51 01.1	+1.7
RUSC	La Rusia	2.67	208	*eP*		Pn	09 50 26.4	+0.3
RUSC				*eS*		Sn	09 50 57.3	-2.1
ARGC	Ariguani, Magd	2.88	304	P		Pn	09 50 28.3	-0.3
TEPV	Terepaima	3.09	57	*eP*		Pn	09 50 33.5	+2.0
TEPV				*eS*		Sn	09 51 10.0	+0.7
PTBC	PUERTO BERRIO,	3.13	237	P		Pn	09 50 31.0	-1.0
PTBC				S		Sn	09 51 11.9	+1.8
SPBC	San Pablo de B	3.43	221	P		Pn	09 50 36.9	+0.7
SPBC				S		Sn	09 51 20.7	+3.1
MAPV	Macapo	3.66	65	*eP*		Pn	09 50 40.9	+1.5
MAPV				*eS*		Sn	09 51 22.9	-0.4
SJCC	San Jacinto, C	3.70	296	P		Pn	09 50 40.4	+0.4
SJCC				S		Sn	09 51 26.7	+2.4
SJCC	San Jacinto, C	3.70	296	*eP*		Pn	09 50 39.7	-0.2
SJCC				*eS*		Sn	09 51 21.3	-3.0
UREC	San Jos de Ur	3.72	262	P		Pn	09 50 41.4	+1.3
UREC				S		Sn	09 51 26.6	+1.9
CHIC	Chingaza	4.08	208	P		Pn	09 50 46.1	+0.6
CHIC				S		Sn	09 51 34.1	0.0
TURV	Turiamo	4.48	61	*eP*		Pn	09 50 51.2	+0.5
TURV				*eS*		Sn	09 51 41.7	-1.8
BENV	Beln	4.49	68	*eP*		Pn	09 50 51.4	+0.6
BENV				*eS*		Sn	09 51 42.8	-1.0
VILC	Villavicencio,	4.53	205	P		Pn	09 50 52.2	+0.9
VILC

n5,σ0$63/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
OJC	**Ojcow**	**0.43**	**80**	*e*Pg **Pg**	**09 59 37.5**	**-0.1**
OJC				*e*Sg **Sg**	**09 59 43.8**	**+0.5**
LANS	**Liptovska Anna**	**1.02**	**168**	*e*PG **Pg**	**09 59 48.8**	**0.0**
LANS				*e*SG **Sg**	**10 00 02.5**	**+0.5**
LANS				*e*LG Lg	10 00 02.9	
MORC	**Moravsky Berou**	**1.09**	**251**	*e*PG **Pb**	**09 59 50.5**	**-0.2**
MORC				*e*SG **Sg**	**10 00 04.5**	**+0.2**
STHS	**Stebnicka Huta**	**1.55**	**117**	*e*PG **Pn**	**09 59 57.9**	**+0.2**
STHS				*e*SG **Sg**	**10 00 19.7**	**+0.6**
KECS	**Kecovo**	**1.89**	**151**	*e*PN **Pb**	**10 00 03.2**	**-1.1**
KECS				*e*SN **Sn**	**10 00 27.0**	**+0.5**
KECS				*e*LG Lg	10 00 28.7	

*ISU **17** 10:23:46, 40˚.98N×69˚.83E, h5km*
*NNC **17** 10:23:50.2±17.0, 41˚.17N×69˚.11E, h0km, mb3.1, mpv2.5, Error ellipse: s-maj=142.4km s-min=51.0km az=24.0*
ISC 17 10:23:46.9±4.6, 41˚.0N±0˚.2×69˚.7E±0˚.2, h10km, n4, σ0$37/5, 1C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
TVKS	**Tavaksay**	**0.61**	**356**	P **Pb**	**10 23 59.4**	**-0.4**
TVKS				S **Sb**	**10 24 08.7**	**+0.1**
CHRV	**Charvak**	**0.70**	**15**	S **Sb**	**10 24 11.2**	**0.0**
KK31	**Karatay Array**	**2.23**	**15**	⇑Pg **Pg**	**10 24 29.8**	**+0.2**
	0.7nm,0.2s,baz=205,slow=16,SNR=63					
KK31				⇓Lg Lg	10 25 01.3	
	1.3nm,0.2s,baz=211,slow=26,SNR=4.5					
AB31	**Akbulak array**	**10.78**	**324**	P **Pn**	**10 26 21.4**	**+0.2**
	0.4nm,0.6s,baz=174,slow=22,SNR=5.1					

*IDC **17** 10:39:50.4±4.5, 4˚.70S×152˚.34E, h160km±37km, mb3.5/9, mbtmp4.0/11, Error ellipse: s-maj=40.8km s-min=23.8km az=102.0*
ISC 17 10:39:49.7±1.4, 4˚.7S±0˚.1×152˚.3E±0˚.2, h150km, n12, σ2$21/14, mb3.6/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PMG	**Port Moresby**	**6.92**	**227**	P **Pn**	**10 41 30.4**	**+1.6**
	20nm,0.4s,baz=57,slow=6.2,SNR=14					
PMG				S **Sn**	**10 42 47.5**	**+1.1**
	25nm,0.8s,baz=29,slow=19,SNR=7.5					
CTA	**Charters Tower**	**16.42**	**200**	P **P**	**10 43 32.9**	**+1.2**
	4.8nm,0.9s,baz=25,slow=13,SNR=5.4					
WRA	**Warramunga Arr**	**23.14**	**227**	P **P**	**10 44 42.6**	**-0.3**
	3.3nm,0.5s,baz=52,slow=9.5,SNR=72					
WRA				S **S**	**10 48 36.4**	**-6.8**
	1.3nm,0.9s,baz=57,slow=15,SNR=8.4					
	3.3nm,0.5s					
ASAR	**Alice Springs**	**25.90**	**221**	P **P**	**10 45 07.8**	**-0.1**
	0.6nm,0.4s,baz=50,slow=8.5,SNR=23					
	0.6nm,0.4s					
CMAR	**Chiang Mai Arr**	**57.33**	**295**	P **P**	**10 49 23.1**	**+0.6**
	2.8nm,0.7s,baz=118,slow=5.4,SNR=15					
	2.8nm,0.7s					
LZDM	**Lanzhou Array**	**60.79**	**316**	P **P**	**10 49 47.3**	**+0.9**
	0.4nm,0.3s,baz=140,slow=7.0,SNR=1.7					
	0.4nm,0.3s					
SONM	**Songino Array**	**65.92**	**328**	P **P**	**10 50 20.0**	**+0.3**
	0.4nm,0.5s,baz=139,slow=6.1,SNR=2.0					
	0.4nm,0.5s					
MKAR	**Makanchi Array**	**79.87**	**319**	P **P**	**10 51 41.4**	**-0.3**
	0.8nm,0.9s,baz=106,slow=4.0,SNR=5.3					
	0.8nm,0.9s					
ZALV	**Zalesovo Beam**	**80.74**	**326**	P **P**	**10 51 45.9**	**-0.2**
	0.5nm,0.5s,baz=96,slow=6.0,SNR=2.5					
	0.5nm,0.5s					
ILAR	**Eielson Array**	**82.23**	**22**	P **P**	**10 51 53.3**	**-0.5**
	0.3nm,0.6s,baz=256,slow=5.5,SNR=5.9					
	0.3nm,0.6s					
BVAR	**Borovoye Array**	**88.81**	**323**	P **P**	**10 52 25.6**	**-1.0**
	0.9nm,0.6s,baz=105,slow=3.5,SNR=5.1					
	0.9nm,0.6s					
TORD	**Torodi Ar. Bea**	**149.75**	**288**	PKPbc **PKPbc**	**10 59 22.7**	**-0.2**
	2.3nm,0.7s,baz=69,slow=3.4,SNR=14					

*SOME **17** 10:54:55.3, 39˚.87N×77˚.20E, h15km*
*KRNET **17** 10:54:56.2±0.1, 39˚.69N×77˚.18E, mb3.1*
*NNC **17** 10:54:57.1±0.9, 39˚.98N×77˚.16E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=6.3km s-min=4.6km az=175.0*
ISC 17 10:54:59.5±2.0, 40˚.10N±0˚.09×77˚.10E±0˚.04, h10km, n40, σ1$57/62, 11C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.47**	**311**	⇓*i*P **Pn**	**10 55 25.9**	**-0.4**
JNKS				⇓*i*S **Sg**	**10 55 47.8**	**+0.9**
NRN	**Naryn**	**1.57**	**328**	⇑*i*P **Pb**	**10 55 28.3**	**-0.6**
NRN				⇑*i*S **Sg**	**10 55 51.5**	**+1.4**
TARG	**Taragay, Kyrgy**	**1.71**	**18**	⇑*i*P **Pb**	**10 55 30.2**	**-1.1**
TARG				⇑*i*S **Sg**	**10 55 54.8**	**+0.2**
KDJ	**Kajisay**	**2.02**	**2**	⇑*i*P **Pb**	**10 55 34.9**	**-1.7**
KDJ				⇑*i*S **Sb**	**10 56 02.8**	**+0.9**
ULHL	**Ulahol**	**2.24**	**343**	⇓*i*P **Pb**	**10 55 37.9**	**-2.3**
ULHL				⇓*i*S **Sb**	**10 56 08.1**	**+0.1**
BOOM	**Boomskoye usch**	**2.54**	**340**	⇓*i*P **Pn**	**10 55 42.1**	**+1.1**
BOOM				⇓*i*S **Sb**	**10 56 15.3**	**-1.4**
ANVS	**Anan'yevo**	**2.71**	**9**	⇑*e*P **Pn**	**10 55 43.8**	**+0.4**
ANVS				⇑*e*S **Sn**	**10 56 18.7**	**+2.4**
ARLS	**Aral**	**2.74**	**311**	⇑*e*P **Pn**	**10 55 43.1**	**-0.6**
ARLS				⇑*e*S **Sn**	**10 56 17.7**	**+0.7**
TNSS	**Tian-Shan**	**2.93**	**358**	Pg **Pb**	**10 55 52.9**	**+0.8**
	1.7nm,0.4s					
TNSS				Lg Lg	10 56 34.6	
	4.4nm,0.4s					
TNSS	**Tian-Shan**	**2.93**	**358**	*e*P **Pb**	**10 55 52.9**	**+0.8**
	1.7nm,0.4s					
TNSS				*e*S **Sg**	**10 56 34.6**	**+0.8**
	4.4nm,0.4s					
IZV	**Izvestkoviy**	**2.95**	**353**	Pg **Pb**	**10 55 53.3**	**+1.0**
	5.3nm,0.5s					
IZV				Lg Lg	10 56 35.2	
	11nm,0.2s					
IZV	**Izvestkoviy**	**2.95**	**353**	*e*P **Pb**	**10 55 53.3**	**+1.0**
	5.3nm,0.5s					
IZV				*e*S **Sg**	**10 56 35.2**	**+0.8**
	11nm,0.2s					
MDOK	**Medeo**	**3.06**	**359**	Pg **Pg**	**10 55 55.7**	**-2.4**
	2.4nm,0.2s					
MDOK				Lg Lg	10 56 39.5	
	27nm,0.6s					
KST	**Kastek**	**3.06**	**344**	Pg **Pb**	**10 55 55.6**	**+1.4**
	4.9nm,0.3s					
KST				Lg Lg	10 56 39.2	
	12nm,0.6s					
KST	**Kastek**	**3.06**	**344**	*e*P **Pb**	**10 55 55.6**	**+1.4**
	4.9nm,0.3s					
KST				*e*S **Sg**	**10 56 39.2**	**+1.4**
	12nm,0.6s					
MTBS	**Maitube**	**3.07**	**351**	Pg **Pg**	**10 55 55.9**	**-2.4**
	2.0nm,0.2s					
MTBS				Lg Lg	10 56 39.3	
	18nm,0.5s					
MTBS	**Maitube**	**3.07**	**351**	*e*P **Pg**	**10 55 55.9**	**-2.4**
	2.0nm,0.2s					
MTBS				*e*S **Sg**	**10 56 39.3**	**+1.3**
	18nm,0.5s					
KOTS	**Kotyrbulak**	**3.13**	**0**	Pg **Pg**	**10 55 57.1**	**-2.4**
	7.2nm,0.3s					
KOTS				Lg Lg	10 56 41.7	
	33nm,0.7s					
KOTS	**Kotyrbulak**	**3.13**	**0**	*e*P **Pg**	**10 55 57.1**	**-2.4**
	7.2nm,0.3s					
KOTS				*e*S **Sg**	**10 56 41.7**	**+1.7**
	33nm,0.7s					
AAK	**Ala-Archa**	**3.20**	**323**	⇑Pg **Pb**	**10 55 57.9**	**+1.3**
	1.4nm,0.6s					
AAK				⇓Lg Lg	10 56 42.3	
	1.3nm,0.5s					
UZB	**Uzynbulak**	**3.37**	**25**	Pg **Pb**	**10 56 00.3**	**+0.9**
	4.0nm,0.3s					
UZB				Lg Lg	10 56 46.9	
	8.2nm,0.4s					
UZB	**Uzynbulak**	**3.37**	**25**	*e*P **Pb**	**10 56 00.3**	**+0.9**
	4.0nm,0.3s					
UZB				*e*S **Sg**	**10 56 46.9**	**-0.7**
	8.2nm,0.4s					
SHLS	**Shalkode**	**3.53**	**29**	Pg **Pg**	**10 56 05.9**	**-1.2**
	5.5nm,0.3s					
SHLS				Lg Lg	10 56 56.4	
	6.6nm,0.4s					
SHLS	**Shalkode**	**3.53**	**29**	*e*P **Pg**	**10 56 05.9**	**-1.2**
	5.5nm,0.3s					
SHLS				*e*S **Sg**	**10 56 56.4**	**+3.6**
	6.6nm,0.4s					
KPKS	**Kokpek**	**3.56**	**19**	Pg **Pb**	**10 56 04.0**	**+1.3**
	0.1nm,0.1s					
KPKS				Lg Lg	10 56 53.6	
	3.6nm,0.5s					
KPKS	**Kokpek**	**3.56**	**19**	*e*P **Pb**	**10 56 04.0**	**+1.3**
	0.1nm,0.1s					
KPKS				*e*S **Sg**	**10 56 53.5**	**-0.4**
	3.6nm,0.5s					
KTBS	**Karatobe**	**3.62**	**355**	Pg **Pb**	**10 56 04.6**	**+1.0**
	2.7nm,0.5s					
KTBS				Lg Lg	10 56 54.6	
	0.7nm,0.5s					
KTBS	**Karatobe**	**3.62**	**355**	*e*P **Pb**	**10 56 04.6**	**+1.0**
	2.7nm,0.5s					
KTBS				*e*S **Sg**	**10 56 54.6**	**-1.2**
	0.7nm,0.5s					
PDGK	**Podgornoye**	**3.69**	**28**	⇓Pg **Pb**	**10 56 05.0**	**+0.2**
	2.2nm,0.5s					
PDGK				⇓Lg Lg	10 56 55.4	
	7.6nm,0.6s					
KRBS	**Karabastau**	**3.74**	**344**	Pg **Pb**	**10 56 07.5**	**+1.7**
	2.5nm,0.4s					
KRBS				Lg Lg	10 56 59.5	
	7.9nm,0.6s					
KRBS	**Karabastau**	**3.74**	**344**	*e*P **Pb**	**10 56 07.5**	**+1.7**
	2.5nm,0.4s					
KRBS				*e*S **Sg**	**10 56 59.5**	**-0.3**
	7.9nm,0.6s					
MRKS	**Merke**	**3.93**	**313**	Pg **Pb**	**10 56 10.8**	**+1.8**
	2.1nm,0.5s					
MRKS				Lg Lg	10 57 04.9	
	3.3nm,0.4s					
MRKS	**Merke**	**3.93**	**313**	*e*P **Pb**	**10 56 10.8**	**+1.8**
	2.1nm,0.5s					
MRKS				*e*S **Sg**	**10 57 04.9**	**-0.8**
	3.3nm,0.4s					
KTMS	**Ketmen**	**4.13**	**35**	Pg **Pb**	**10 56 13.5**	**+1.1**
	0.8nm,0.1s					
KTMS				Lg Lg	10 57 09.8	
	6.2nm,0.2s					
KTMS	**Ketmen**	**4.13**	**35**	*e*P **Pb**	**10 56 13.5**	**+1.1**
	0.8nm,0.1s					
KTMS				*e*S **Sg**	**10 57 09.8**	**-2.4**
	6.2nm,0.2s					
ARXS	**Arharly**	**4.14**	**7**	Pg **Pb**	**10 56 14.6**	**+2.1**
	3.1nm,0.7s					
ARXS				Lg Lg	10 57 11.7	
	7.9nm,0.5s					
ARXS	**Arharly**	**4.14**	**7**	*e*P **Pb**	**10 56 14.6**	**+2.1**
	3.1nm,0.7s					
ARXS				*e*S **Sg**	**10 57 11.7**	**-0.8**
	7.9nm,0.5s					
KNOS	**Konyrlen**	**4.52**	**19**	Pg **Pg**	**10 56 23.6**	**-2.5**
	2.1nm,0.5s					
KNOS				Lg Lg	10 57 27.2	
	3.2nm,0.6s					
DJR	**Jarkent**	**4.67**	**24**	Pg **Pb**	**10 56 24.1**	**+2.5**
	0.5nm,0.1s					
DJR				Lg Lg	10 57 28.1	
	2.8nm,0.3s					
DJR	**Jarkent**	**4.67**	**24**	*e*P **Pb**	**10 56 24.1**	**+2.5**
	0.5nm,0.1s					
DJR				*e*S **Sg**	**10 57 28.1**	**-1.5**
	2.8nm,0.3s					

*SJA **17** 11:16:14.1±0.8, 22˚.61S×70˚.08W, h18km±2km, ML3.9, MW3.8*
*GUC **17** 11:16:16.7±0.8, 22˚.59S×69˚.90W, h42km±2km, ML3.8*
ISC 17 11:16:14.1±1.2, 22˚.58S±0˚.02×70˚.06W±0˚.04, h3km±10km, n28, σ1$59/53, 2C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PB05	**IPOC Station P**	**0.31**	**206**	*e*P **Pn**	**11 16 25.7**	**0.0**
PB05				*e*S **Sb**	**11 16 32.0**	**+4.1**
PB05				IAML	11 16 32.2	
	comp=N,5μm,0.3s					
PB05	**IPOC Station P**	**0.31**	**206**	*e*P **Pg**	**11 16 20.1**	**0.0**
PB06	**IPOC Station P**	**0.47**	**106**	⇑*e*P **Pb**	**11 16 24.7**	**-0.4**
PB06				*e*S **Sg**	**11 16 30.4**	**+1.2**
PB06				IAML	11 16 30.5	
	comp=E,13μm,0.1s					
PB06	**IPOC Station P**	**0.47**	**106**	*e*P **Pg**	**11 16 24.4**	**+1.3**
PB03	**IPOC Station P**	**0.60**	**28**	⇓*e*P **Pb**	**11 16 28.2**	**+0.9**
PB03				*e*S **Sb**	**11 16 36.3**	**+0.1**
PB03				IAML	11 16 36.9	
	comp=E,12μm,0.3s					
PB03	**IPOC Station P**	**0.60**	**28**	*e*P **Pb**	**11 16 27.4**	**+0.1**
PB03				*e*S **Sb**	**11 16 36.4**	**+0.2**
PB03				IAML	11 16 37.2	
	comp=Z,10μm,0.1s					
PB07	**IPOC Station P**	**0.86**	**11**	*e*P **Pb**	**11 16 32.6**	**+0.8**
PB07				*e*S **Sb**	**11 16 44.3**	**+0.5**
PB07				IAML	11 16 45.4	
	comp=E,10μm,0.2s					
PB10	**IPOC Station P**	**1.04**	**206**	⇓*e*P **Pb**	**11 16 35.4**	**+0.6**
PB10				*e*S **Sn**	**11 16 50.2**	**-0.6**
PB10	**IPOC Station P**	**1.04**	**206**	*e*P **Pg**	**11 16 34.7**	**+0.7**
PB10				*e*S **Sn**	**11 16 52.1**	**+1.3**
PB09	**IPOC Station P**	**1.08**	**44**	⇓*e*P **Pg**	**11 16 35.3**	**+0.4**
PB09				*e*S **Sg**	**11 16 48.1**	**-0.8**
PB09				IAML	11 16 49.2	
	comp=E,12μm,0.2s					
PB09	**IPOC Station P**	**1.08**	**44**	*e*P **Pg**	**11 16 35.2**	**+0.4**
PB09				*e*S **Sg**	**11 16 48.4**	**-0.5**
PB02	**IPOC Station P**	**1.26**	**7**	⇓*e*P **Pg**	**11 16 38.5**	**+0.2**
PB02				*e*S **Sg**	**11 16 55.3**	**+0.7**
PB02				IAML	11 16 56.8	
	comp=E,5μm,0.4s					
PB02	**IPOC Station P**	**1.26**	**7**	*e*P Pg	11 16 33.1	-5.1
PB02				*e*P **Pg**	**11 16 38.5**	**+0.2**
PB02				*e*S **Sb**	**11 16 55.7**	**+0.4**
PB02				IAML	11 17 00.4	
	comp=Z,4μm,0.3s					
PB01	**IPOC Station P**	**1.61**	**19**	⇓*e*P **Pn**	**11 16 43.5**	**-0.2**
PB01				*e*S **Sn**	**11 17 03.1**	**-2.0**
PB01				IAML	11 17 06.5	
	comp=E,1μm,0.3s					
PB01	**IPOC Station P**	**1.61**	**19**	*e*P **Pn**	**11 16 43.4**	**-0.2**
PB01				*e*S **Sg**	**11 17 07.0**	**+1.0**
PB01				IAML	11 17 07.7	
	comp=Z,1μm,0.4s					
AF01	**San Pedro de A**	**1.77**	**103**	*e*P **Pn**	**11 16 46.4**	**+0.4**
AF01				*e*S **Sb**	**11 17 10.1**	**-0.2**
AF01				IAML	11 17 21.9	
	comp=Z,3μm,0.4s					
PB14	**IPOC Station P**	**2.07**	**189**	*e*P **Pn**	**11 16 50.0**	**-0.1**
PB14				*e*S **Sn**	**11 17 16.9**	**+0.3**
PB14	**IPOC Station P**	**2.07**	**189**	*e*P **Pn**	**11 16 50.0**	**-0.1**
PB14				*e*S **Sn**	**11 17 17.1**	**+0.6**
PB14				*e*S **Sg**	**11 17 20.1**	**-0.4**
PB14				IAML	11 17 29.5	
	comp=Z,468nm,0.5s					
PB08	**IPOC Station P**	**2.56**	**19**	*e*P **Pn**	**11 16 57.9**	**+0.9**
PB08				IAML	11 17 40.4	
	comp=N,533nm,0.6s					
PB08				IAML	11 17 43.9	
	comp=E,498nm,0.2s					
GO02	**Mina Guanaco**	**2.61**	**171**	⇓*e*P **Pn**	**11 16 58.3**	**+0.7**
GO02				IAML	11 17 48.9	
	comp=E,853nm,0.6s					
GO02	**Mina Guanaco**	**2.61**	**171**	*e*P **Pn**	**11 16 58.3**	**+0.7**
GO02				*e*S **Sb**	**11 17 33.1**	**-1.3**
GO02				IAML	11 17 54.8	
	comp=Z,444nm,0.8s					
PB11	**IPOC Station P**	**2.83**	**8**	*e*P **Pn**	**11 17 01.1**	**+0.7**
PB11				IAML	11 17 51.7	
	comp=N,671nm,0.5s					
GO01	**Chusmiza**	**3.00**	**16**	*e*P **Pn**	**11 17 04.5**	**+1.4**
GO01	**Chusmiza**	**3.00**	**16**	*e*P **Pn**	**11 17 04.5**	**+1.4**
GO01				*e*S **Sb**	**11 17 45.1**	**-0.8**
GO01				IAML	11 17 53.8	
	comp=Z,436nm,0.4s					
AC01	**Pan de Azucar**	**3.59**	**188**	*e*P **Pn**	**11 17 09.6**	**-1.2**
AC01				*e*S **Sg**	**11 18 07.5**	**-2.0**
AC01				IAML	11 18 13.5	
	comp=Z,88nm,0.6s					
PB16	**IPOC Station P**	**4.25**	**7**	*e*P **Pn**	**11 17 22.4**	**+2.0**
PB16				*e*S **Sb**	**11 18 23.6**	**+1.7**
PB16				*e*S **Sg**	**11 18 24.1**	**-6.7**
PB16				IAML	11 18 36.4	
	comp=Z,71nm,0.6s					
AC02	**Maricunga**	**4.33**	**169**	*e*P **Pn**	**11 17 17.1**	**-4.2**
AC02				*e*P **Pn**	**11 17 22.5**	**+1.2**
AC02				*e*S **Sb**	**11 18 24.1**	**+0.2**
AC02				IAML	11 18 42.6	
	comp=Z,69nm,0.6s					
GO03	**Copiapo**	**5.00**	**182**	*e*P **Pn**	**11 17 29.0**	**-1.2**
GO03				*e*S **Sb**	**11 18 40.6**	**-2.3**

*IDC **17** 11:17:38.2±1.3, 34˚.72N×46˚.87E, h0km, mb3.7/8, mbtmp3.7/10, ML2.9/2, MS3.2/3, Error ellipse: s-maj=24.6km s-min=18.0km az=8.0*
*TEH **17** 11:17:38.9, 34˚.67N×46˚.84E, h8km±33km, ML4.1, Presumed earthquake*
*ISN **17** 11:17:38.6±0.7, 34˚.64N×46˚.91E, h15km±9km, ML4.1, Presumed earthquake Hypocentre not reviewed by the ISC*
*THR **17** 11:17:40.0±0.0, 34˚.63N×46˚.72E, h10km±6km, ML4.2, Presumed earthquake*
*OMAN **17** 11:17:46.9±0.5, 33˚.95N×47˚.03E, h10km, mb4.3/25, Error ellipse: s-maj=6.0km s-min=3.9km az=52.0*
*DSN **17** 11:17:50.5±2.5, 33˚.69N×47˚.06E, h15km, mb4.7/1, Error ellipse: s-maj=32.2km s-min=15.0km az=3.0*
ISC 17 11:17:39.1±0.5, 34˚.51N±0˚.03×46˚.85E±0˚.03, h12km, n81, σ1$97/101, mb3.5/7, 4C-2D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
KCHF	**Cheshme Sefid,**	**0.28**	**145**	Pg **Pb**	**11 17 47.6**	**+1.3**
IGHG	**Ghaleghazi**	**0.29**	**232**	Pg **Pb**	**11 17 47.3**	**+0.9**
IDHR	**Dehrash**	**0.42**	**297**	Pg **Pg**	**11 17 46.6**	**-1.0**
IDHR				Sg **Sg**	**11 17 52.1**	**-1.2**
SNGE	**Sanandaj**	**0.71**	**35**	*e*Pg **Pb**	**11 17 54.4**	**+0.7**
SNGE				*e*Sg **Sb**	**11 18 03.7**	**+0.2**
SNGE				IAML	11 18 04.6	
	comp=Z,7μm,1.0s					
SNQR	**Sonqor, Kerman**	**0.73**	**61**	Pg **Pg**	**11 17 52.4**	**-1.1**
SNQR				Sg **Sg**	**11 18 02.8**	**-0.3**
IBZA	**Bozab**	**0.84**	**92**	Pg **Pg**	**11 17 55.7**	**+0.3**
GLG1	**Gilan-e-Gharb**	**0.87**	**243**	Pg **Pn**	**11 17 57.6**	**+0.3**
IALM	**Almabolaq**	**1.14**	**72**	Pg **Pb**	**11 18 00.2**	**-0.9**
IDOB	**Doab**	**1.32**	**123**	Pg **Pg**	**11 18 06.4**	**+1.9**
IBDR	**Badra**	**1.59**	**209**	*e*Pn	11 18 10.0	
IBDR				*e*Sn	11 18 33.0	
HAGD	**Aghdareh**	**1.92**	**80**	Pn **Pb**	**11 18 14.0**	**-0.2**
SRSL	**SARDASHT**	**2.05**	**326**	*e*Pn **Pn**	**11 18 14.0**	**+0.3**
SRSL				IAML	11 18 48.2	
	comp=Z,2μm,1.0s					
IKRK	**Kirkuk**	**2.24**	**294**	*e*Pn	11 18 16.7	
IKRK				*e*Sn	11 18 45.0	
IKRK				AML	11 18 52.4	
	comp=N,2μm,0.7s					
IKRK				AML	11 18 59.1	
	comp=E,2μm,0.8s					
BHD	**Baghdad**	**2.39**	**240**	*e*Pn	11 18 21.0	
BHD				*e*Sn	11 18 51.0	
MAHB	**Mahabad**	**2.44**	**338**	Pn **Pn**	**11 18 19.6**	**+0.7**
ASAO	**Ashtian**	**2.63**	**88**	*e*Pn **Pb**	**11 18 26.8**	**+0.5**
ASAO				IAML	11 19 16.6	
	comp=Z,640nm,1.0s					
ZNJK	**Zanjan**	**2.63**	**34**	*e*Pn **Pn**	**11 18 24.0**	**+2.4**
ZNJK				IAML	11 19 05.0	
	comp=Z,4.0nm,1.0s					
GTMR	**Gotvand**	**2.78**	**136**	*e*Pn **Pb**	**11 18 28.7**	**-0.1**
GTMR				IAML	11 19 25.2	
	comp=Z,370nm,1.0s					
IHSH	**Hashtrud**	**2.81**	**7**	Pn **Pn**	**11 18 24.6**	**+0.4**
RAFI	**Al-Rafai**	**2.85**	**193**	*e*Pn	11 18 27.0	
RAFI				*e*Sn	11 19 03.0	
JIR1	**Jirandeh**	**3.26**	**47**	Pn **Pn**	**11 18 31.3**	**+1.1**
IHRS	**Heris**	**3.81**	**2**	Pn **Pn**	**11 18 38.7**	**+0.9**
ISHB	**Shabestar**	**3.89**	**346**	Pn **Pn**	**11 18 39.9**	**+0.9**
KBD	**Kabd**	**5.37**	**172**	P **Pn**	**11 18 59.2**	**+0.2**
KBD				S **Sn**	**11 19 55.5**	**-5.3**
GNI	**Garni**	**5.87**	**344**	Pg **Pb**	**11 19 21.7**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=211,slow=5.6,SNR=8.4					
GNI				Lg Lg	11 20 39.3	
	comp=Z,0.7nm,0.3s,baz=281,slow=10,SNR=3.3					
GNI				LR LR	11 20 41.1	
	comp=Z,80nm,22.0s,baz=180,slow=32					
GNI	**Garni**	**5.87**	**344**	P **Pb**	**11 19 22.2**	**+0.6**
ASF	**Jabal al Asfar**	**8.64**	**257**	Pn **Pn**	**11 19 46.0**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=96,slow=16,SNR=1.7					
ASF				Lg Lg	11 22 13.9	
	comp=Z,0.4nm,0.3s,baz=128,slow=2.8,SNR=6.3					
	comp=Z,1.6nm,0.4s					
SHMA	**Al-Shehemyia**	**9.33**	**156**	P **Pn**	**11 19 54.5**	**+1.0**
SHMA				S **Sn**	**11 21 35.0**	**-3.3**
KVAR	**Kislovodsk Arr**	**9.96**	**342**	LR LR	11 23 44.6	
	comp=Z,830nm,21.1s,baz=262,slow=38					
SMRA	**Abu-Samra**	**10.33**	**159**	P **Pn**	**11 20 09.2**	**+2.1**
SMRA				S **Sn**	**11 21 58.8**	**-4.0**
TRNA	**Turayna**	**10.45**	**158**	P **Pn**	**11 20 11.0**	**+2.2**
TRNA				S **Sn**	**11 22 02.2**	**-3.7**
RAYN	**Ar Rayn**	**11.01**	**186**	P **Pn**	**11 20 17.0**	**+0.5**
RAYN	**Ar Rayn**	**11.01**	**186**	P **Pn**	**11 20 17.6**	**+1.0**
RAYN				S **Sn**	**11 22 16.4**	**-3.3**
EIL	**Elat**	**11.18**	**248**	LR LR	11 24 36.1	
	comp=Z,56nm,18.9s,baz=54,slow=37					
SHME	**Shamm**	**11.64**	**134**	P **Pn**	**11 20 26.2**	**+1.1**
SHME	**Shamm**	**11.64**	**134**	P **Pn**	**11 20 26.9**	**+1.8**
SHME				S **Sn**	**11 22 33.2**	**-1.8**
BRTR	**Keskin Array B**	**11.75**	**300**	Pn **Pn**	**11 20 29.0**	**+2.2**
	baz=110,slow=13,SNR=5.8					
	comp=Z,1.4nm,0.9s					
BANOM	**Banah**	**11.83**	**134**	*i* P **Pn**	**11 20 28.7**	**+0.9**
	SNR=12					
BANOM				S **Sn**	**11 22 34.7**	**-5.0**
BANOM	**Banah**	**11.83**	**134**	P **Pn**	**11 20 29.0**	**+1.3**
BANOM				S **Sn**	**11 22 37.5**	**-2.2**
MASF	**Masafi**	**12.16**	**136**	P **Pn**	**11 20 33.4**	**+1.1**
	SNR=5.8					
MASF				S **Sn**	**11 22 44.9**	**-3.1**
MSFE	**Esma-Masafi**	**12.17**	**136**	*i* P **Pn**	**11 20 34.0**	**+1.5**
	SNR=5.8					
AJN	**Ajban**	**12.18**	**142**	*i* P **Pn**	**11 20 34.6**	**+2.1**
	SNR=6.

SNR=5.4
DOK Doka 17.11 156 P Pn 11 21 38.5 +0.4
SNR=7.7
ABTO Aybut 18.03 160 P Pn 11 21 49.8 +0.1
RBK Rabkut 18.17 157 P P 11 21 52.5 +0.8
SHAO Shalim 18.19 152 P Pn 11 21 50.9 -0.7
SHAO Shalim 18.19 152 P Pn 11 21 52.0 +0.3
DMTO DMTO 18.22 155 P Pn 11 21 52.2 +0.2
VOIR 19.89 310 ⇓P Pn 11 22 11.8 -0.3
ARR Arges 20.13 309 ⇑P Pn 11 22 14.5 -0.3
AKASG Malin Array Be 20.65 327 P P 11 22 16.5 -2.0
comp=Z,0.4nm,0.3s,baz=134,slow=12,SNR=5.2
comp=Z,0.4nm,0.3s
LOT Lotru 20.71 309 ⇓P P 11 22 20.4 +1.0
BURAR Bucovina Array 20.83 315 ⇑P P 11 22 21.4 +0.9
BOVS Bovan 21.47 303 ⇑P P 11 22 27.7 +0.2
MARR Marisel-Cluj 21.64 311 ⇑P P 11 22 30.4 +1.0
BVAR Borovoye Array 24.94 35 P P 11 23 01.3 -0.8
comp=Z,0.8nm,0.7s,baz=228,slow=5.8,SNR=7.4
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 29.31 54 P P 11 23 40.1 -1.4
comp=Z,0.3nm,0.5s,baz=253,slow=7.7,SNR=2.9
comp=Z,0.3nm,0.5s
FINES FINESS Array B 30.05 340 P P 11 23 46.8 -1.0
comp=Z,2.6nm,0.8s,baz=142,slow=9.6,SNR=5.0
comp=Z,2.6nm,0.8s
HFS Hagfors 33.46 330 P P 11 24 17.0 -0.7
comp=Z,6.8nm,0.9s,baz=120,slow=8.8,SNR=4.4
comp=Z,6.8nm,0.9s
ESDC Sonseca Array 40.42 293 P P 11 25 17.8 +0.6
comp=Z,1.1nm,0.9s,baz=66,slow=9.6,SNR=4.8
comp=Z,1.1nm,0.9s
CMAR Chiang Mai Arr 48.78 95 P P 11 26 25.8 +1.6
comp=Z,0.5nm,0.3s,baz=306,slow=7.8,SNR=4.2
comp=Z,0.5nm,0.3s
YKA Yellowknife Ar 82.18 351 P P 11 29 59.7 +0.1
comp=Z,0.1nm,0.7s,baz=7.4,slow=6.1,SNR=3.5
comp=Z,0.1nm,0.7s

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*RSPR **17** 11:18:04.6, 17.92N×66.90W, h11km, MD3.6/5*
*OSPL **17** 11:18:04.2±0.3, 17.84N×66.90W, h10km±3km, ML3.5, Presumed earthquake*
*PTWC **17** 11:18:04, 17.90N×66.90W, Ml3.8/13*
*NEIC **17** 11:18:04.0±0.7, 17.92N±0.04×66.90W±0.02, h16km±1km, MS3.8/37, Md3.6/5(RSPR), Mwr3.5/16(SLM), Error ellipse: s-maj=5.8km s-min=1.9km az=193.0*
*SDD **17** 11:18:04.0±2.7, 17.84N×66.89W, h15km±28km, MD3.7, ML3.6, MW3.7, Presumed earthquake*
*NEIC **17** 11:18:04, 17.92N×66.90W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.48; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$0.73; $M_{r\theta}$-0.56; $M_{\theta\phi}$2.05; $M_{\phi r}$0.90; Fault plane solution: $M_0$2.40000×10^{14} NP1:ϕ_s176.00000°, δ76.00000°, λ-154.00000°. NP2:ϕ_s80.00000°, δ65.00000°, λ-15.00000°. Principal axes: T 2.3947, Plg8.0000°, Azm306.0000°; N 0.0004, Plg61.0000°, Azm202.0000°; P -2.3951, Plg28.0000°, Azm40.0000°;*
ISC 17 11:18:03.8±0.8, 17.91N±0.05×66.90W±0.02, h17km±4km, n64, σ1s00/101, 17C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**17**			**Pg**	**11 18 06.9**	**-0.1**
GBPR						**Sg**	**11 18 08.6**	**-0.6**
GBPR	**Guanica, Bosqu**	**0.07**	**17**	⇑*eP*		**Pg**	**11 18 06.9**	**-0.1**
GBPR				*eS*		**Sg**	**11 18 08.6**	**-0.6**
MLPR	**Magueyes Islan**	**0.15**	**293**			**Pg**	**11 18 08.0**	**+0.1**
MLPR				Sg		**Sg**	**11 18 10.9**	**+0.2**
MLPR				IAML			11 18 11.1	
30μm,0.3s								
CRPR	**Cabo Rojo, PR**	**0.22**	**296**	Pg		**Pg**	**11 18 09.2**	**+0.3**
CRPR				Sg		**Sg**	**11 18 12.3**	**-0.2**
CRPR				IAML			11 18 13.7	
14μm,0.2s								
CRPR				IAML			11 18 14.1	
17μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.22**	**296**	P		**Pg**	**11 18 08.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.22**	**296**	⇑*ePg*		**Pg**	**11 18 09.2**	**+0.3**
CRPR				⇑*eSg*		**Sg**	**11 18 12.8**	**+0.4**
CRPR				IAML			11 18 14.0	
comp=N,14μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.22**	**296**	⇑*iP*		**Pg**	**11 18 09.3**	**+0.3**
CRPR				*eS*		**Sg**	**11 18 12.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.22**	**296**	*iP*		**Pg**	**11 18 09.2**	**+0.3**
CRPR				*eS*		**Sg**	**11 18 12.8**	**+0.4**
CRPR				IAML			11 18 14.0	
comp=Z,10μm,0.2s								
OBIP	**Obispado Ponce**	**0.31**	**65**			**Pb**	**11 18 10.5**	**-0.3**
OBIP						**Sb**	**11 18 15.4**	**-0.3**
OBIP	**Obispado Ponce**	**0.31**	**65**	P		**Pb**	**11 18 10.6**	**-0.3**
OBIP	**Obispado Ponce**	**0.31**	**65**	⇓*iP*		**Pb**	**11 18 10.6**	**-0.3**
OBIP				*eS*		**Sb**	**11 18 15.7**	**0.0**
OBIP	**Obispado Ponce**	**0.31**	**65**	*iP*		**Pb**	**11 18 10.6**	**-0.3**
OBIP				*eS*		**Sb**	**11 18 15.4**	**-0.3**
OBIP				IAML			11 18 15.8	
comp=Z,3μm,0.6s								
LSP	**Las Mesas**	**0.32**	**326**			**Pg**	**11 18 10.9**	**+0.3**
LSP	**Las Mesas**	**0.32**	**326**	⇓*iP*		**Pg**	**11 18 10.9**	**+0.3**
CELP	**Cerrillos**	**0.35**	**62**			**Pg**	**11 18 11.2**	**+0.2**
CELP				Sg		**Sb**	**11 18 16.4**	**-0.3**
CELP				IAML			11 18 17.1	
comp=Z,13μm,0.3s								
UUPR	**Utuado, UPR, P**	**0.38**	**27**			**Pg**	**11 18 11.7**	**0.0**
UUPR				Sg		**Sg**	**11 18 17.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.39**	**323**	Pg		**Pg**	**11 18 12.0**	**+0.2**
PRSN				IAML			11 18 20.4	
comp=Z,17μm,0.2s								
PRSN	**Puerto Rico Se**	**0.39**	**323**			**Sg**	**11 18 16.8**	**-0.3**
PRSN	**Puerto Rico Se**	**0.39**	**323**	P		**Pg**	**11 18 11.7**	**0.0**
PRSN	**Puerto Rico Se**	**0.39**	**323**	⇑*ePg*		**Pg**	**11 18 12.0**	**+0.2**
PRSN				⇑*eSg*		**Sg**	**11 18 17.6**	**+0.5**
PRSN				IAML			11 18 18.5	
comp=N,14μm,0.2s								
PRSN	**Puerto Rico Se**	**0.39**	**323**	⇑*iP*		**Pg**	**11 18 12.0**	**+0.2**
PRSN				*eS*		**Sg**	**11 18 16.8**	**-0.3**
AGPR	**Aguadilla, PR**	**0.59**	**340**			**Pg**	**11 18 15.5**	**0.0**
AGPR				Sg		**Sg**	**11 18 23.6**	**+0.2**
AGPR				IAML			11 18 25.9	
comp=N,5μm,0.2s								
AGPR	**Aguadilla, PR**	**0.59**	**340**	P		**Pg**	**11 18 15.5**	**0.0**
AGPR	**Aguadilla, PR**	**0.59**	**340**	⇑*ePg*		**Pg**	**11 18 15.5**	**0.0**
AGPR				⇑*eSg*		**Sg**	**11 18 23.5**	**+0.1**
AGPR				IAML			11 18 24.4	
comp=N,6μm,0.3s								
AGPR	**Aguadilla, PR**	**0.59**	**340**	⇑*eP*		**Pg**	**11 18 15.5**	**0.0**
AGPR				*eS*		**Sg**	**11 18 23.5**	**+0.2**
ECPR	**Experimental S**	**0.65**	**51**			**Pg**	**11 18 16.4**	**-0.3**
ECPR				Sg		**Sg**	**11 18 25.3**	**0.0**
ECPR				IAML			11 18 26.6	
comp=N,5μm,0.2s								
ECPR				IAML			11 18 28.6	
comp=N,4μm,0.2s								
ECPR	**Experimental S**	**0.65**	**51**	⇓*iP*		**Pg**	**11 18 16.4**	**-0.3**
ECPR				*eS*		**Sg**	**11 18 25.2**	**-0.2**
IDE	**Isla Desecheo**	**0.72**	**311**			**Pb**	**11 18 17.8**	**-0.2**
IDE						**Sb**	**11 18 26.4**	**-1.2**
IDE	**Isla Desecheo**	**0.72**	**311**	⇑*eP*		**Pb**	**11 18 17.8**	**-0.2**
IDE				*eS*		**Sb**	**11 18 26.4**	**-1.2**
SJG	**San Juan**	**0.74**	**74**			**Pb**	**11 18 17.9**	**-0.3**
SJG				Sg		**Sg**	**11 18 28.1**	**-0.1**
SJG				IAML			11 18 30.8	
comp=N,4μm,0.5s								
SJG	**San Juan**	**0.74**	**74**	*eP*		**Pb**	**11 18 18.1**	**-0.2**
SJG	**San Juan**	**0.74**	**74**	⇓*ePg*		**Pb**	**11 18 17.9**	**-0.3**
SJG				⇑*eSg*		**Sg**	**11 18 28.0**	**-0.1**
SJG	**San Juan**	**0.74**	**74**	⇓*eP*		**Pb**	**11 18 17.9**	**-0.3**
SJG				*eS*		**Sb**	**11 18 27.6**	**-0.5**
SJG	**San Juan**	**0.74**	**74**	*iP*		**Pb**	**11 18 17.9**	**-0.3**
SJG				*eS*		**Sg**	**11 18 28.1**	**-0.1**
SJG				IAML			11 18 29.9	
comp=Z,2μm,0.9s								
PDPR	**Patillas Dam,**	**0.84**	**82**			**Pb**	**11 18 19.9**	**-0.1**
PDPR				Sg		**Sg**	**11 18 31.3**	**-0.1**
GCPR	**Guaynabo City**	**0.87**	**63**			**Pb**	**11 18 20.0**	**-0.5**
GCPR	**Guaynabo City**	**0.87**	**63**			**Sb**	**11 18 31.4**	**-0.5**
GCPR	**Guaynabo City**	**0.87**	**63**	P		**Pb**	**11 18 19.8**	**-0.7**
GCPR				S		**Sg**	**11 18 32.1**	**-0.2**
GCPR	**Guaynabo City**	**0.87**	**63**	⇑*eP*		**Pb**	**11 18 20.0**	**-0.5**
GCPR				*eS*		**Sb**	**11 18 31.7**	**-0.2**
HUMP	**Col San Antoni**	**1.02**	**77**			**Pb**	**11 18 22.9**	**-0.2**
HUMP						**Sb**	**11 18 36.3**	**0.0**
HUMP	**Col San Antoni**	**1.02**	**77**	Pg		**Pb**	**11 18 22.6**	**-0.5**
HUMP						**Sb**	**11 18 36.5**	**+0.2**
HUMP				IAML			11 18 37.1	
comp=Z,2μm,0.5s								
HUMP				IAML			11 18 40.2	
comp=Z,2μm,0.3s								
HUMP	**Col San Antoni**	**1.02**	**77**	P		**Pb**	**11 18 22.4**	**-0.7**
HUMP	**Col San Antoni**	**1.02**	**77**	⇑*eP*		**Pb**	**11 18 22.9**	**-0.2**
HUMP				*eS*		**Sb**	**11 18 36.3**	**0.0**
PCDR	**Punta Cana, DR**	**1.53**	**293**	⇑*ePg*		**Pn**	**11 18 30.9**	**+0.5**
PCDR				IAML			11 19 07.6	
comp=N,697nm,0.7s								
CUPR	**Culebra, Puert**	**1.59**	**75**			**Pb**	**11 18 32.4**	**-0.3**
MIDR	**Miches**	**2.30**	**298**	P		**Pn**	**11 18 42.0**	**+1.0**
MIDR	**Miches**	**2.30**	**298**	⇑*ePg*		**Pb**	**11 18 43.2**	**-1.7**
MIDR				IAML			11 19 21.6	
comp=N,138nm,0.5s								
DR12	**Loma Pena Alta**	**2.51**	**291**	Pn		**Pn**	**11 18 45.7**	**+1.8**
HATOM	**Hato Mayor del**	**2.51**	**291**	⇑*ePg*		**Pb**	**11 18 46.3**	**-2.2**
HATOM				IAML			11 19 33.9	
comp=N,151nm,0.6s								
SMDR	**Samana, DR**	**2.57**	**303**	⇑*ePg*		**Pb**	**11 18 49.2**	**-0.2**
SMDR				⇑*eSg*		**Sg**	**11 19 24.4**	**-2.0**
SMDR				IAML			11 19 32.4	
comp=N,225nm,0.7s								
DR08	**Loma La Naviza**	**3.14**	**290**	P		**Pn**	**11 18 53.7**	**+1.1**
SMRT	**St. Maarten**	**3.64**	**87**	Pn		**Pn**	**11 19 00.2**	**+0.7**
SDDR	**Presa de Saban**	**4.30**	**285**	P		**Pb**	**11 19 14.8**	**-4.2**
SDDR	**Presa de Saban**	**4.30**	**285**	*eP*		**Pb**	**11 19 16.6**	**-2.4**
SDDR				*eS*		**Sb**	**11 20 11.0**	**+0.3**
SDDR	**Presa de Saban**	**4.30**	**285**	*eP*		Pb	11 19 14.0	-5.0
MBFL	**Flemmings, Mon**	**4.62**	**104**	*eP*		**Pn**	**11 19 13.9**	**+1.0**
MBWH	**Windy Hill**	**4.64**	**104**	*eP*		**Pn**	**11 19 13.7**	**+0.4**
MBWH				*eS*		**Sn**	**11 20 04.9**	**-2.0**
DHSZ	**Broadband at M**	**5.17**	**108**	*eP*		**Pn**	**11 19 23.1**	**+2.6**
DHSZ				*eS*		**Sn**	**11 20 19.5**	**-0.3**
GDHS	**Morne Mazeau,**	**5.17**	**108**	Pn		**Pn**	**11 19 20.2**	**-0.3**
ATGZ	**Broadband at L**	**5.27**	**109**	*eP*		**Pn**	**11 19 22.6**	**+0.9**
ATGZ				*eS*		**Sn**	**11 20 20.4**	**-1.8**
BIM	**Bigot**	**6.54**	**120**	Pn		**Pn**	**11 19 39.0**	**-0.2**
SVB	**Belmont**	**7.13**	**129**	*eP*		**Pb**	**11 20 07.7**	**+0.4**
MASC	**Masc**	**7.29**	**289**	*eP*		**Pn**	**11 19 53.1**	**+3.5**
MASC				*eS*		**Sn**	**11 21 11.9**	**-0.1**
QMBU	**Quimbuelo**	**7.82**	**288**	*eP*		**Pn**	**11 20 01.0**	**+4.1**
QMBU				*eS*		**Sn**	**11 21 25.7**	**+0.6**

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*NEIC **17** 11:37:26.7±1.6, 19.65S±0.09×173.03W±0.07, h10km±1km, mb4.8/31, Error ellipse: s-maj=15.6km s-min=11.5km az=168.0*
*IDC **17** 11:37:26.4±0.9, 19.10S×173.59W, h0km, mb4.2/9, mbtmp4.2/9, MS4.1/10, Error ellipse: s-maj=48.4km s-min=18.5km az=143.0*
ISC 17 11:37:29.6±0.5, 19.35S±0.08×173.29W±0.08, h25km, n97, σ2s20/76, mb4.7/32, MS4.1/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.19**	**86**			Pn	11 38 11.8	-6.3
AFI	**Afiamalu**	**5.61**	**15**	Pn		**Pn**	**11 38 51.5**	**0.0**
MSVF	**Nonsavu**	**8.37**	**280**	Pn		**Pn**	**11 39 30.7**	**+1.3**
RAO	**Raoul Island**	**10.72**	**202**	Pn		Pn	11 39 56.3	-5.2
RAR	**Rarotonga**	**12.82**	**101**	Pn		Pn	11 40 22.4	-7.9
7.0nm,0.3s,baz=261,slow=4.7,SNR=13								
RAR	**Rarotonga**	**12.82**	**101**			Pn	11 40 22.8	-7.5
PINNC	**Pines Island,**	**18.28**	**256**			**Pn**	**11 41 39.8**	**-1.8**
PINNC				IAmb		IAmb	11 41 54.6	
comp=Z,47nm,0.9s								
DZM	**Mont Dzumac**	**19.15**	**258**	*eP*		**Pn**	**11 41 54.2**	**+1.9**
comp=Z,55nm,1.1s								
DZM				*eS*		**Sn**	**11 45 22.0**	**-4.3**
comp=Z,109nm,23.2s								
DZM				*eLR*	LR		11 46 26.9	
comp=Z,281nm,21.4s								
DZM	**Mont Dzumac**	**19.15**	**258**	P		**Pn**	**11 41 52.2**	**0.0**
OUZ	**Omahuta**	**19.60**	**214**	P		**Pn**	**11 41 59.7**	**+2.3**
KUZ	**Kuaotunu**	**19.83**	**207**	P		**Pn**	**11 42 02.7**	**+2.6**
comp=Z,25nm,1.2s								
HAZ	**Te Kaha**	**19.92**	**201**	P		**Pn**	**11 42 04.6**	**+3.4**
comp=Z,14nm,0.6s								
PKGZ	**Pakihiroa**	**19.92**	**200**	P		**Pn**	**11 42 04.3**	**+3.1**
comp=Z,10nm,0.7s								
PUZ	**Puketiti**	**20.05**	**200**	P		Pn	11 42 02.8	0.0
comp=Z,24nm,1.4s								
WIAZ	**Waiheke Island**	**20.12**	**208**	P		Pn	11 42 05.5	+1.9
comp=Z,27nm,0.9s,comp=Z,209nm								
RUGZ	**Raukumara Rang**	**20.14**	**201**	P		Pn	11 42 06.6	+2.6
comp=Z,6.5nm,1.0s								
MKAZ	**Moumakai**	**20.37**	**207**	P		Pn	11 42 09.1	+2.6
comp=Z,34nm,1.8s								
CNGZ	**Camagh Statio**	**20.44**	**199**	P		Pn	11 42 10.8	+3.5
comp=Z,22nm,0.9s								
WTAZ	**Waiatarua**	**20.49**	**209**	P		Pn	11 42 09.2	+1.2
comp=Z,44nm,0.9s								
MWZ	**Matawai**	**20.53**	**201**	P		Pn	11 42 11.2	+2.8
comp=Z,20nm,1.6s								
URZ	**Urewera**	**20.61**	**202**	P		Pn	11 42 09.2	0.0
comp=Z,6.8nm,0.5s,baz=295,slow=3.4,SNR=15								
URZ					S	**S**	**11 45 51.7**	**-4.3**
comp=Z,0.9nm,0.5s,baz=172,slow=21,SNR=0.7								
comp=Z,6.8nm,0.5s								
URZ	**Urewera**	**20.61**	**202**	P		Pn	11 42 09.9	+0.6
comp=Z,20nm,1.6s								
SNGZ	**Shannon Statio**	**21.00**	**201**	P		Pn	11 42 15.5	+1.7
comp=Z,24nm,0.8s								
MTHZ	**Maungataniwha**	**21.23**	**202**	P		**P**	**11 42 16.3**	**+2.6**
comp=Z,9.3nm,1.0s								
BKZ	**Black Stump Fm**	**21.63**	**202**	P		**P**	**11 42 20.1**	**+2.1**
comp=Z,22nm,2.1s								
OTVZ	**Oturere**	**21.93**	**204**	P		**P**	**11 42 21.1**	**-0.3**
comp=Z,25nm,2.9s								
TBI	**Tubuai**	**22.54**	**104**	*eP*		**P**	**11 42 26.4**	**-1.4**
comp=Z,313nm,33.5s								
TBI				*eLR*	LR		11 47 45.0	
comp=Z,616nm,21.8s								
PPT2	**Papeete2**	**22.56**	**89**	*eP*		**P**	**11 42 24.5**	**-3.7**
comp=Z,58nm,36.2s								
PPT2				*eLR*	LR		11 47 47.1	
comp=Z,196nm,22.8s								
PPT2				*eLR*	LR		11 47 52.2	
comp=Z,206nm,21.2s								
PPT	**Papeete**	**22.56**	**89**	LR	LR		11 49 34.3	
comp=Z,281nm,18.6s,baz=266,slow=32								
TSZ	**Takapari Road**	**22.61**	**202**	P		**P**	**11 42 31.9**	**+3.4**
comp=Z,18nm,1.9s								
BFZ	**Birch Farm**	**23.07**	**201**	P		**P**	**11 42 38.6**	**+5.4**
comp=Z,47nm,1.2s								
MRZ	**Mangatainoka R**	**23.28**	**202**	P		**P**	**11 42 36.0**	**+0.7**
comp=Z,22nm,1.2s								
QRZ	**Quartz Range**	**24.60**	**207**	P		**P**	**11 42 53.7**	**+5.9**
comp=Z,62nm,2.1s								
THZ	**Tophouse**	**25.24**	**205**	P		**P**	**11 42 59.8**	**+6.2**
KHZ	**Kahutara**	**25.55**	**203**	P		**P**	**11 43 02.0**	**+5.7**
comp=Z,23nm,1.8s								
GVZ	**Greta Valley S**	**26.22**	**203**	P		**P**	**11 43 09.3**	**+6.9**
comp=Z,51nm,1.8s								
LTZ	**Lake Taylor**	**26.35**	**204**	P		P	11 43 11.3	+7.7
HNR	**Honiara**	**27.70**	**287**	P		**P**	**11 43 16.6**	**+0.6**
EIDS	**Eidsvold**	**33.42**	**253**	P		**P**	**11 44 06.4**	**-0.1**
EIDS				IAmb	IAmb		11 44 20.1	
comp=Z,12nm,1.4s								
TAOE	**Nuku Hiva Isla**	**33.73**	**77**	*eLR*	LR		11 52 56.7	
comp=Z,151nm,20.8s								
CAN	**Canberra**	**36.83**	**237**	P		**P**	**11 44 35.3**	**-0.6**
CAN				IAmb	IAmb		11 44 52.0	
comp=Z,28nm,1.3s								
RABL	**Rabaul**	**36.91**	**290**	P		**P**	**11 44 36.8**	**+0.1**
RABL				IAmb	IAmb		11 45 04.7	
comp=Z,25nm,0.9s								
CTAO	**Charters Tower**	**38.02**	**262**			**P**	**11 44 45.1**	**-1.0**
TOO	**Toolangi**	**40.15**	**234**	P		**P**	**11 45 02.2**	**-1.6**
COEN	**Coen**	**41.97**	**270**	P		**P**	**11 45 18.7**	**-0.3**
STKA	**Stephens Creek**	**42.27**	**244**	P		**P**	**11 45 20.1**	**-1.1**
comp=Z,1.1nm,0.5s,baz=83,slow=10,SNR=3.6								
STKA					LR	LR	12 01 45.6	
comp=Z,167nm,18.2s,baz=33,slow=35								
comp=Z,1.1nm,0.5s								
STKA	**Stephens Creek**	**42.27**	**244**	P		**P**	**11 45 20.5**	**-0.7**
STKA				IAmb	IAmb		11 45 38.4	
comp=Z,51nm,1.4s								
INKA	**Innaminka**	**42.76**	**250**	P		**P**	**11 45 24.9**	**-0.3**
BBOO	**Buckleboo**	**47.02**	**243**	P		**P**	**11 45 57.7**	**-1.4**
AS31	**Alice Springs**	**49.09**	**255**			**P**	**11 46 15.2**	**-0.1**
ASAR	**Alice Springs**	**49.09**	**255**	P		**P**	**11 46 14.4**	**-0.9**
comp=Z,8.2nm,0.9s,baz=94,slow=7.9,SNR=52								
ASAR				PcP		**PcP**	**11 47 38.1**	**-0.7**
comp=Z,0.9nm,0.7s,baz=97,slow=4.1,SNR=0.7								
ASAR				LR		LR	12 07 01.5	
comp=Z,134nm,19.3s,baz=114,slow=36								
comp=Z,8.2nm,0.9s								
WB0	**Warramunga Arr**	**49.13**	**260**	P		**P**	**11 46 14.8**	**-0.8**
WB0				IAmb		IAmb	11 46 18.8	
comp=Z,5.5nm,0.7s								
WRAB	**Tennant Creek**	**49.15**	**260**	P		**P**	**11 46 15.3**	**-0.5**
WRAB				IAmb		IAmb	11 46 33.9	
comp=Z,7.7nm,1.2s								
WRA	**Warramunga Arr**	**49.16**	**260**	P		**P**	**11 46 14.3**	**-1.5**
comp=Z,2.7nm,0.6s,baz=93,slow=5.8,SNR=43								
WRA				PcP		**PcP**	**11 47 39.3**	**+0.3**
comp=Z,0.6nm,0.6s,baz=99,slow=4.9,SNR=1.3								
comp=Z,2.7nm,0.6s								
WRA	**Warramunga Arr**	**49.16**	**260**			**P**	**11 46 15.1**	**-0.7**
MTN	**Manton Dam**	**53.61**	**268**	P		**P**	**11 46 49.4**	**+0.2**
MTN				IAmb		IAmb	11 47 12.0	
comp=Z,19nm,1.2s								
FORT	**Forrest**	**53.81**	**246**	P		**P**	**11 46 49.8**	**-0.6**
KNRA	**Kununurra**	**55.17**	**264**	P		**P**	**11 47 00.8**	**+0.3**
KNRA				IAmb		IAmb	11 47 13.1	
comp=Z,9.8nm,1.1s								
RPN	**Rapa Nui**	**58.74**	**110**	LR		LR	12 06 54.6	
comp=Z,140nm,18.5s,baz=323,slow=30								
SBA	**Scott Base**	**59.34**	**185**	P		**P**	**11 47 26.2**	**-2.8**
LPIG	**La Paz**	**75.04**	**57**	LR		LR	12 15 06.9	
comp=Z,141nm,19.0s,baz=285,slow=30								
NVAR	**Mina Array Bea**	**77.20**	**41**	P		**P**	**11 49 23.4**	**+1.7**
comp=Z,2.4nm,1.0s,baz=226,slow=9.4,SNR=8.7								
comp=Z,2.4nm,1.0s								
K15K	**Wolf Creek Mou**	**81.91**	**6**			**P**	**11 49 49.2**	**+2.7**
TXAR	**Lajitas Array**	**82.73**	**56**	P		**P**	**11 49 52.0**	**+0.3**
comp=Z,1.9nm,1.1s,baz=224,slow=5.2,SNR=9.5								
comp=Z,1.9nm,1.1s								
TXAR	**Lajitas Array**	**82.73**	**56**	P		**P**	**11 49 51.2**	**-0.5**
NEW	**Newport**	**83.91**	**34**	LR		LR	12 24 05.9	
comp=Z,183nm,18.1s,baz=226,slow=33								
MCK	**McKinley**	**84.97**	**11**	P		**P**	**11 50 03.4**	**+1.1**
MCK				IAmb		IAmb	11 50 05.5	
comp=Z,8.9nm,1.0s								
PDAR	**Pinedale Array**	**85.13**	**42**	P		**P**	**11 50 04.5**	**+0.7**
comp=Z,0.6nm,0.9s,baz=220,slow=3.9,SNR=4.7								
comp=Z,0.6nm,0.9s								
PDAR	**Pinedale Array**	**85.13**	**42**	P		**P**	**11 50 03.7**	**-0.1**
WRH	**Wood River Hil**	**85.80**	**11**	P		**P**	**11 50 07.3**	**+1.0**
WRH				IAmb		IAmb	11 50 09.2	
comp=Z,11nm,1.0s								
CCB	**Clear Creek Bu**	**86.01**	**11**	P		**P**	**11 50 08.1**	**+0.7**
CCB				IAmb		IAmb	11 50 09.9	
comp=Z,7.6nm,1.2s								
G19K	**Purcell Mounta**	**86.11**	**7**	P		**P**	**11 50 09.3**	**+1.4**
G19K				IAmb		IAmb	11 50 11.4	
comp=Z,5.7nm,1.1s								
COLA	**College**	**86.21**	**11**	P		**P**	**11 50 08.9**	**+0.6**
ILAR	**Eielson Array**	**86.28**	**11**	P		**P**	**11 50 09.1**	**+0.3**
comp=Z,2.0nm,1.1s,baz=219,slow=6.7,SNR=9.8								
comp=Z,2.0nm,1.1s								
ILAR	**Eielson Array**	**86.28**	**11**	P		**P**	**11 50 09.4**	**+0.7**
J26L	**Joseph Creek**	**86.68**	**12**			**P**	**11 50 11.7**	**+0.9**
PLCA	**Paso Flores**	**86.80**	**132**	LR		LR	12 24 00.1	
comp=Z,70nm,18.1s,baz=134,slow=32								
E19K	**Redstone River**	**87.37**	**6**			**P**	**11 50 14.1**	**+0.1**
E19K				IAmb		IAmb	11 50 17.4	
comp=Z,7.8nm,1.1s								
D20K	**Etivluk River**	**88.65**	**6**	P		**P**	**11 50 21.5**	**+1.5**
D20K				IAmb		IAmb	11 50 34.3	
comp=Z,5.2nm,1.2s								
C19K	**Lookout Ridge**	**88.76**	**5**	P		**P**	**11 50 22.3**	**+1.6**
C19K				IAmb		IAmb	11 50 48.1	
comp=Z,6.0nm,1.4s								
SNAA	**Sanae**	**88.97**	**177**	LR		LR	12 26 42.1	
comp=Z,68nm,19.4s,baz=356,slow=33								
E28M	**Babbage River**	**91.05**	**12**	P		**P**	**11 50 31.5**	**+0.2**
E28M				IAmb		IAmb	11 50 32.3	
comp=Z,2.7nm,0.8s								
F31M	**Tsiigehtchic**	**91.32**	**14**			**P**	**11 50 33.4**	**+0.9**
ATAH	**Atahualpa**	**92.25**	**98**	LR		LR	12 24 53.1	
comp=Z,96nm,18.3s,baz=

BOD	**Bodaibo**	**1.52**	**357**	⇑ *i*PN	**Pn**	**11 41 11.5**	**-0.8**
BOD				*e*		11 41 31.0	
BOD				pmax	pmax		
	comp=Z,1μm,0.2s						
BOD				smax	smax		
	comp=E,2μm,0.3s						
BOD	**Bodaibo**	**1.52**	**357**	⇑ *i*Pg	**Pb**	**11 41 11.9**	**-1.4**
BOD				*e*Sg	**Sb**	**11 41 31.4**	**-1.3**
BOD				Pmax			
	comp=E,1μm,0.2s						
BOD				Smax			
	comp=E,2μm,0.3s						
KMO	**Kumora**	**1.70**	**257**	*e*PN	**Pb**	**11 41 16.1**	**-0.2**
KMO				*e*		11 41 39.2	
KMO				pmax	pmax		
	comp=Z,173nm,0.4s						
KMO				smax	smax		
	comp=E,646nm,0.6s						
KMO	**Kumora**	**1.70**	**257**	*e*Pg	**Pb**	**11 41 16.1**	**-0.2**
KMO				*e*Sg	**Sg**	**11 41 39.4**	**-0.1**
KMO				Pmax			
	comp=E,190nm,0.2s						
KMO				Smax			
	comp=E,760nm,0.9s						
YLYR	**Ulyunkhan**	**2.21**	**231**	*e*PN	**Pn**	**11 41 23.4**	**+1.6**
YLYR				*e*		11 41 25.7	
YLYR				*e*S	**Sn**	**11 41 50.4**	**+1.2**
YLYR				*e*		11 41 53.3	
YLYR				pmax	pmax		
	comp=Z,106nm,0.4s						
YLYR				smax	smax		
	comp=E,431nm,0.3s						
YLYR	**Ulyunkhan**	**2.21**	**231**	⇓ *i*Pn	**Pn**	**11 41 23.4**	**+1.6**
YLYR				*e*Pg	**Pb**	**11 41 26.2**	**+1.1**
YLYR				*e*Sg	**Sg**	**11 41 55.9**	**-0.1**
YLYR				Pmax			
	comp=E,105nm,0.3s						
YLYR				Smax			
	comp=E,410nm,0.2s						
CRS	**Chara**	**2.36**	**74**	*e*PN	**Pn**	**11 41 24.4**	**+0.5**
CRS				*e*		11 41 28.3	
CRS				*e*		11 41 58.5	
CRS				pmax	pmax		
	comp=Z,168nm,0.7s						
CRS				smax	smax		
	comp=E,510nm,0.5s						
CRS	**Chara**	**2.36**	**74**	*e*Pn	**Pn**	**11 41 24.4**	**+0.5**
CRS				*e*Pg	**Pb**	**11 41 27.9**	**+0.2**
CRS				*e*Sg	**Sg**	**11 41 58.3**	**-2.6**
CRS				Pmax			
	comp=E,163nm,0.4s						
CRS				Smax			
	comp=E,504nm,0.5s						
NIZB	**Nizh Angarsk**	**2.63**	**260**	*e*Pn	**Pn**	**11 41 29.2**	**+1.7**
NIZB				*e*Pg	**Pb**	**11 41 33.1**	**+0.9**
NIZB				*e*Sg	**Sg**	**11 42 07.5**	**-2.0**
NIZB				Pmax			
	comp=E,51nm,0.4s						
NIZB				Smax			
	comp=E,264nm,0.6s						
VTMR	**Vitim**	**3.26**	**346**	*e*Pn	**Pn**	**11 41 36.3**	**+0.2**
VTMR				*e*Pg	**Pb**	**11 41 42.8**	**-0.1**
VTMR				*e*Sn	**Sn**	**11 42 12.8**	**-2.1**
VTMR				*e*Sg	**Sb**	**11 42 23.5**	**+0.9**
SYVR	**Suvo**	**3.56**	**224**	*e*PN	**Pn**	**11 41 41.4**	**+1.0**
SYVR				*e*		11 41 51.3	
SYVR				*e*		11 42 37.4	
SYVR				pmax	pmax		
	comp=Z,34nm,0.6s						
SYVR				smax	smax		
	comp=E,300nm,0.7s						
SYVR	**Suvo**	**3.56**	**224**	*e*Pn	**Pn**	**11 41 41.7**	**+1.3**
SYVR				*e*		11 41 45.3	
SYVR				*e*Pg	**Pb**	**11 41 50.9**	**+2.8**
SYVR				*e*Sg	**Sg**	**11 42 38.4**	**-1.0**
SYVR				Pmax			
	comp=E,31nm,0.4s						
SYVR				Smax			
	comp=E,289nm,0.6s						
TUP	**Tupik**	**3.82**	**117**	*e*PN	**Pn**	**11 41 44.0**	**+0.1**
TUP				*e*		11 41 53.9	
TUP				*e*S	**Sn**	**11 42 27.4**	**-1.4**
TUP				*e*		11 42 43.2	
TUP				pmax	pmax		
	comp=Z,57nm,0.5s						
TUP				smax	smax		
	comp=N,398nm,0.6s						
TUP	**Tupik**	**3.82**	**117**	*e*Pn	**Pn**	**11 41 44.2**	**+0.3**
TUP				*e*		11 41 48.1	
TUP				*e*SgSg	Pn	11 41 48.3	+4.4
TUP				*e*Pg	**Pb**	**11 41 54.2**	**+1.7**
TUP				*e*Sn	**Sn**	**11 42 27.4**	**-1.4**
TUP				*e*Sg	**Sg**	**11 42 44.0**	**-3.5**
TUP				Pmax			
	comp=N,49nm,0.4s						
TUP				max			
	comp=N,398nm,0.6s						
YKLR	**Yuktali**	**4.18**	**83**	*e*Pn	**Pn**	**11 41 49.4**	**+0.5**
YKLR				*e*Pg	**Pb**	**11 41 59.9**	**+1.2**
YKLR				*e*Sg	**Sg**	**11 42 54.3**	**-5.0**
CIT	**Chita**	**4.30**	**185**	*e*PN	**Pn**	**11 41 51.0**	**+0.4**
CIT				*e*		11 42 03.1	
CIT				*e*		11 43 00.5	
CIT				pmax	pmax		
	comp=Z,85nm,0.6s						
CIT				smax	smax		
	comp=E,480nm,0.7s						
CIT	**Chita**	**4.30**	**185**	*e*Pg	**Pg**	**11 42 04.9**	**-2.5**
CIT				*e*Sg	**Sg**	**11 43 02.3**	**-0.8**
CIT				Pmax			
	comp=E,91nm,0.3s						
CIT				Smax			
	comp=E,397nm,0.5s						
MXMB	**Maximikha**	**4.36**	**228**	*e*Pn	**Pn**	**11 41 52.7**	**+1.4**
MXMB				*e*Pg	**Pb**	**11 42 05.1**	**+3.4**
MXMB				*e*Sg	**Sg**	**11 43 02.8**	**-2.1**
OGRR	**Ongureny**	**4.61**	**237**	*e*PN	**Pn**	**11 41 56.0**	**+1.2**
OGRR				*e*		11 42 09.0	
OGRR				*e*		11 43 09.9	
OGRR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
OGRR				smax	smax		
	comp=E,86nm,1.2s						
OGRR	**Ongureny**	**4.61**	**237**	*e*Pn	**Pn**	**11 41 56.0**	**+1.2**
OGRR				*e*Pg	**Pb**	**11 42 09.3**	**+3.3**
OGRR				*e*Sg	**Sg**	**11 43 10.4**	**-2.7**
OGRR				Pmax			
	comp=E,11nm,0.5s						
OGRR				Smax			
	comp=E,72nm,0.6s						
GORB	**Goryachinsk**	**4.75**	**228**	*e*Pn	**Pn**	**11 41 58.0**	**+1.3**
GORB				*e*Pg	**Pb**	**11 42 12.3**	**+3.9**
GORB				*e*Sg	**Sg**	**11 43 14.6**	**-2.9**
UZR	**Uzur**	**4.75**	**234**	*e*Pn	**Pn**	**11 41 57.9**	**+1.2**
UZR				*e*Pg	**Pg**	**11 42 12.6**	**-3.4**
UZR				*e*Sg	**Sg**	**11 43 15.3**	**-2.2**
UZR				Pmax			
	comp=E,12nm,0.5s						
UZR				Smax			
	comp=E,73nm,0.8s						
KELR	**Kotokel**	**5.00**	**227**	*e*Pg	**Pb**	**11 42 16.4**	**+3.8**
KELR				*e*Sg	**Sg**	**11 43 23.3**	**-2.2**
ZRHB	**Zarechye**	**5.54**	**230**	*e*Pg	**Pg**	**11 42 26.7**	**-4.4**
ZRHB				*e*Sg	**Sg**	**11 43 39.5**	**-3.3**
ZRHB				Pmax			
	comp=E,31nm,0.3s						
ZRHB				Smax			
	comp=E,247nm,0.7s						
TRG	**Tyrgan**	**5.76**	**235**	*e*Pn	**Pn**	**11 42 12.6**	**+2.1**
TRG				*e*Pg	**Pb**	**11 42 29.7**	**+4.2**
TRG				*e*Sg	**Sg**	**11 43 44.1**	**-5.6**
TRG				Pmax			
	comp=E,8.0nm,0.6s						
TRG				Smax			
	comp=E,47nm,1.1s						
UUDB	**Ulan-Yde**	**5.85**	**223**	*e*Pg	**Pb**	**11 42 31.4**	**+4.3**
UUDB				*e*Sg	**Sg**	**11 43 48.7**	**-4.0**
UUDB				Pmax			
	comp=E,8.0nm,0.4s						
UUDB				Smax			
	comp=E,339nm,1.9s						
CLNS	**Chul'man**	**5.97**	**80**	*e*Pg	**Pb**	**11 42 32.2**	**+3.0**
CLNS				*e*Sg	**Sg**	**11 43 50.4**	**-6.2**
FFNB	**Fofonovo**	**6.07**	**228**	*e*Pg	Pg	11 42 36.3	-5.0
FFNB				*e*Sg	**Sg**	**11 43 55.9**	**-4.0**
KAB	**Kabansk**	**6.12**	**229**	*e*Sg	**Sg**	**11 43 56.7**	**-4.6**
KAB				Smax			
	comp=E,291nm,1.3s						
STDB	**Stepnoy Dvoret**	**6.15**	**231**	*e*Sg	**Sg**	**11 43 58.8**	**-3.6**
BGT	**Bolshoye Golou**	**6.66**	**234**	*e*Sg	**Sg**	**11 44 13.6**	**-5.2**
BGT				Smax			
	comp=E,28nm,0.7s						
KPC	**Khapcheranga**	**6.70**	**190**	*e*PN	**Pn**	**11 42 23.1**	**-0.3**
KPC				*e*		11 42 45.4	
KPC				*e*		11 44 14.8	
KPC				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KPC				smax	smax		
	comp=E,119nm,0.8s						
KPC	**Khapcheranga**	**6.70**	**190**	*e*	**Pn**	**11 42 23.2**	**-0.2**
KPC				*e*Pg	Pg	11 42 48.1	-5.1
KPC				*e*Sg	**Sg**	**11 44 16.2**	**-3.6**
KPC				Pmax			
	comp=E,15nm,0.6s						
KPC				Smax			
	comp=E,118nm,1.0s						
LSTR	**Listvyanka**	**7.05**	**235**	*e*Pg	Pg	11 42 53.8	-6.0
LSTR				*e*Sg	**Sg**	**11 44 26.3**	**-4.7**
LSTR				Pmax			
	comp=E,2.0nm,0.3s						
LSTR				Smax			
	comp=E,48nm,1.9s						
IVK	**Ivanovka**	**7.28**	**236**	*e*Pg	Pb	11 42 57.1	+5.7
IVK				*e*Sg	**Sg**	**11 44 31.7**	**-6.9**
IVK				Pmax			
	comp=E,8.0nm,0.8s						
IVK				Smax			
	comp=E,67nm,1.8s						
HILR	**Hailar Array B**	**7.56**	**151**	Pn	**Pn**	**11 42 33.5**	**-1.8**
	baz=336,slow=13						
HILR				Lg	Lg	11 44 38.8	
	baz=338,slow=31						
	comp=E,1.9nm,0.3s						
TLY	**Talaya**	**7.72**	**238**	*e*Sg	**Sg**	**11 44 45.3**	**-7.3**
TLY				Smax			
	comp=E,27nm,1.1s						
ARS	**Arshan**	**8.16**	**242**	*e*Sg	**Sg**	**11 44 59.7**	**-7.0**
ARS				Smax			
	comp=E,95nm,0.9s						
ZAK	**Zakamensk**	**8.79**	**232**	*e*Sg	**Sg**	**11 45 20.3**	**-6.5**
ZAK				Smax			
	comp=E,35nm,1.9s						
SONM	**Songino Array**	**9.72**	**213**	Pn	**Pn**	**11 43 04.8**	**-0.1**
	baz=26,slow=13,SNR=1.4						
SONM				Lg	Lg	11 45 47.6	
	comp=E,1.2nm,0.3s,baz=24,slow=27,SNR=13						
SONM				LR	LR	11 47 26.9	
	comp=E,86nm,20.3s,baz=345,slow=42						
	comp=E,0.2nm,0.4s						
KURK	**Kurchatov**	**21.67**	**270**	P	**P**	**11 45 40.0**	**+4.5**
KURBB	**Kurchatov Arra**	**21.77**	**270**	P	**P**	**11 45 40.0**	**+3.4**
	comp=E,0.4nm,0.6s,baz=69,slow=11,SNR=4.3						
	comp=E,0.4nm,0.6s						
MKAR	**Makanchi Array**	**21.79**	**258**	P	**P**	**11 45 37.8**	**+0.9**
	comp=E,0.7nm,0.7s,baz=50,slow=12,SNR=6.7						
	comp=E,0.7nm,0.7s						
BVAR	**Borovoye Array**	**25.19**	**281**	P	**P**	**11 46 15.1**	**+4.7**
	comp=E,0.6nm,0.5s,baz=60,slow=11,SNR=3.5						
	comp=E,0.6nm,0.5s						

AFAD ***17*** *11:42:13.8, 38.40N×39.12E, h12km±1km, MW4.2*
ISK ***17*** *11:42:13.5, 38.36N×39.12E, h5km, ML4.5/21*
IDC ***17*** *11:42:14.6±0.7, 38.39N×39.09E, h0km, mb4.0/14, mbtmp4.0/22, ML3.8/8, MS3.8/29, Error ellipse: s-maj=15.2km s-min=9.5km az=169.0*
MOS ***17*** *11:42:14.4±1.1, 38.14N×39.06E, h11km, mb4.4/20, Error ellipse: s-maj=9.5km s-min=5.0km az=71.8*
MED_RC ***17*** *11:42:14.0±0.7, 38.34N×39.12E, h10km, MW4.4/25, Moment Tensor Solution. Mantle waves: s25,c25; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.18±.23; $M_{\theta\theta}$-3.59±.33; $M_{\phi\phi}$3.41±.23; $M_{r\theta}$-2.09±1.38; $M_{\theta\phi}$3.22±.21; $M_{r\phi}$1.58±.71; Best double couple: M_o5.35000×10^{15} NP1:ϕ_s64.00000°,δ67.00000°, λ-9.00000°. NP2:ϕ_s157.00000°,δ82.00000°, λ-156.00000°. Principal axes: T 4.7900, Plg10.0000°, Azm289.0000°; N 1.1000, Plg65.0000°, Azm176.0000°; P -5.9000, Plg23.0000°, Azm23.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
GII ***17*** *11:42:15.2±0.0, 38.391N±0.004×39.234E±0.001, h0km, Mws4.7, confirmed*
NEIC ***17*** *11:42:15.9±1.9, 38.34N±0.04×39.11E±0.1, h10km±1km, mb4.3/34, Error ellipse: s-maj=6.9km s-min=5.1km az=196.0*

ISC 17 11:42:16.0±0.4, 38.39N±0.02×39.11E±0.02, h10km, n209, σ1s53/222, mb4.3/38, MS3.9/20, 10C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESGZ	**Sivrice-Elazig**	**0.06**	**320**	Pg	**Pg**	**11 42 15.8**	**-2.5**
ESGZ				Sg	**Sg**	**11 42 17.3**	**-2.7**
MDYL	**Doganyol-Malat**	**0.09**	**219**	Pg	**Pg**	**11 42 16.1**	**-2.4**
ELZG	**Elazig**	**0.15**	**319**	P	**Pg**	**11 42 17.6**	**-1.9**
ELZG				S	**Sg**	**11 42 20.0**	**-1.9**
SVRC	**Sivrice-ELAZID**	**0.15**	**92**	Pg	**Pg**	**11 42 16.9**	**-2.6**
ESIJ	**Sivrice-Elazig**	**0.17**	**68**	Pg	**Pg**	**11 42 17.6**	**-2.2**
ESIJ				Sg	**Sg**	**11 42 20.9**	**-1.5**
CNGT	**ngs**	**0.23**	**139**	P	**Pg**	**11 42 18.2**	**-2.5**
CNGT				S	**Sg**	**11 42 21.6**	**-2.3**
ELZ	**Elazig**	**0.31**	**14**	P	**Pg**	**11 42 20.2**	**-2.1**
ELZ				S	**Sg**	**11 42 25.2**	**-1.3**
MDNT	**Maden**	**0.45**	**89**	P	**Pg**	**11 42 22.9**	**-1.9**
MDNT				S	**Sg**	**11 42 28.7**	**-2.0**
MAYA	**Malatya/Merkez**	**0.54**	**264**	P	**Pg**	**11 42 24.7**	**-1.8**
MAYA				S	**Sg**	**11 42 32.9**	**-0.8**
NARI	**Adyaman-Kaht**	**0.57**	**209**	P	**Pg**	**11 42 25.6**	**-1.5**
NARI				S	**Sb**	**11 42 34.8**	**-1.6**
KOVA	**Elazig, Kovanc**	**0.64**	**60**	P	**Pg**	**11 42 25.8**	**-2.6**
KOVA				S	**Sg**	**11 42 35.7**	**-1.1**
KAHTU	**Kahta**	**0.70**	**214**	P	**Pg**	**11 42 28.1**	**-1.5**
KAHTU				S	**Sb**	**11 42 38.4**	**-1.6**
MCKZ	**Bingol**	**0.74**	**352**	P	**Pg**	**11 42 27.5**	**-2.8**
MCKZ				S	**Sg**	**11 42 38.3**	**-1.7**
TNCL	**Tunceli-Merkez**	**0.80**	**25**	P	**Pg**	**11 42 28.5**	**-3.0**
TNCL				S	**Sb**	**11 42 41.5**	**-1.6**
HANM	**anlurfa/Hi**	**0.82**	**193**	P	**Pg**	**11 42 30.4**	**-1.5**
HANM				S	**Sn**	**11 42 44.7**	**-1.2**
AZEY	**Adyaman-Merk**	**0.89**	**230**	P	**Pg**	**11 42 31.6**	**-1.5**
DYBB	**Diyarbakir**	**0.92**	**118**	Pg	**Pg**	**11 42 31.0**	**-2.7**
DIYA	**Diyarbakir**	**0.92**	**120**	P	**Pg**	**11 42 31.8**	**-1.9**
DIYA				S	**Sb**	**11 42 45.5**	**-0.9**
ARPR	**Arapgir-MALATY**	**0.93**	**320**	P	**Pg**	**11 42 31.7**	**-2.3**
ARPR				Sg	**Sb**	**11 42 45.3**	**-1.5**
ARPR	**Arapgir-MALATY**	**0.93**	**320**	Pg	**Pg**	**11 42 31.7**	**-2.3**
ARPR				Sg	**Sb**	**11 42 46.1**	**-0.7**
AKCD	**Akcadag**	**0.94**	**265**	P	**Pg**	**11 42 31.7**	**-2.3**
AKCD				S	**Sg**	**11 42 45.0**	**-1.3**
HEKM	**Malatya_Hekimh**	**1.03**	**299**	P	**Pg**	**11 42 33.1**	**-2.7**
HEKM				S	**Sg**	**11 42 47.5**	**-1.7**
MAYK		**1.04**	**70**	P	**Pg**	**11 42 33.8**	**-2.3**
MAYK				S	**Sn**	**11 42 50.0**	**-1.5**
ATAB	**Bozova**	**1.12**	**215**	P	**Pb**	**11 42 35.9**	**-1.5**
ATAB				S	**Sn**	**11 42 53.0**	**-0.3**
ILIC	**ilic-Erzincan**	**1.15**	**338**	Pn	**Pb**	**11 42 35.7**	**-2.9**
SANL	**SANLIURFA_Merk**	**1.22**	**185**	P	**Pb**	**11 42 37.7**	**-1.4**
SANL				S	**Sn**	**11 42 55.2**	**-0.4**
MDIV		**1.25**	**319**	P	**Pn**	**11 42 37.4**	**-2.3**
MDIV				S	**Sn**	**11 42 55.9**	**-0.7**
MIMR	**Divri**	**1.25**	**319**	P	Pg	11 42 45.1	+5.1
MIMR				S	Sn	11 43 09.0	+12
AKCA	**Adyaman/G¶l**	**1.27**	**243**	P	**Pn**	**11 42 38.5**	**-1.4**
ERZN	**Erzincan**	**1.29**	**21**	Pn	**Pn**	**11 42 38.4**	**-1.8**
ERZN				Sn	**Sn**	**11 42 58.1**	**+0.4**
BNGB	**Bingl**	**1.37**	**63**	Pn	**Pn**	**11 42 39.3**	**-2.0**
BNGB				Sn	**Sg**	**11 42 58.9**	**-1.2**
EUZM	**Uzumlu**	**1.40**	**19**	P	**Pn**	**11 42 39.6**	**-2.1**
EUZM				S	**Sg**	**11 43 01.2**	**+0.2**
YEDI	**Yedisu-Bingol**	**1.54**	**46**	Pn	**Pb**	**11 42 42.9**	**-1.7**
MARD	**Mardin**	**1.70**	**128**		**Pn**	**11 42 44.1**	**-1.7**
MARD				Sn	**Sn**	**11 43 06.7**	**-1.0**
KARO	**Karliova-Bingo**	**1.77**	**58**	Pn	**Pn**	**11 42 45.5**	**-1.4**
KHMN	**Narli-Kahraman**	**1.84**	**238**	Pn	**Pn**	**11 42 46.2**	**-1.4**
GAZ	**Gaziantep**	**1.93**	**232**		**Pn**	**11 42 48.1**	**-0.9**
GAZ				Sn	**Sn**	**11 43 12.2**	**-1.1**
GAZ	**Gaziantep**	**1.93**	**232**	Pn	**Pn**	**11 42 47.5**	**-1.5**
KOPT	**Kop Dagi**	**1.96**	**33**		**Pn**	**11 42 49.4**	**-0.1**
KMRS	**Kahramanmaras**	**1.96**	**244**	Pn	**Pn**	**11 42 48.1**	**-1.2**
VRTB	**Varto-Mus**	**1.99**	**66**	Pn	**Pn**	**11 42 48.9**	**-1.0**
GUMT	**Gumushane**	**2.09**	**8**	Pn	**Pn**	**11 42 50.8**	**-0.4**
SARI	**SarD1z-Kayseri**	**2.12**	**271**	Pn	**Pn**	**11 42 50.5**	**-1.1**
BAYT	**Aydıntepe-Bayb**	**2.16**	**21**	Pn	**Pn**	**11 42 51.8**	**-0.4**
SVSK	**Karacayir**	**2.25**	**314**	Pn	**Pn**	**11 42 52.6**	**-0.6**
GURO	**Guroymak-BITLI**	**2.30**	**85**		**Pn**	**11 42 53.2**	**-0.9**
GURO	**Guroymak-BITLI**	**2.30**	**85**	Pn	**Pn**	**11 42 52.6**	**-1.5**
BNN	**Bunyan**	**2.60**	**281**		**Pn**	**11 42 58.7**	**+0.5**
BNN	**Bunyan**	**2.60**	**281**	Pn	**Pn**	**11 42 57.2**	**-1.0**
KOZT	**Kozan**	**2.75**	**252**	Pn	**Pn**	**11 42 59.3**	**-0.9**
TOKT	**Tokat**	**2.77**	**315**	Pn	**Pn**	**11 43 00.4**	**-0.1**
MLAZ	**Malazgirt-MUS**	**2.79**	**73**	Pn	**Pn**	**11 42 59.9**	**-1.0**
TOKA	**Tokat**	**2.81**	**314**		**Pn**	**11 43 02.0**	**+0.9**
CHOM	**Cayeli-Rize**	**2.99**	**25**	Pn	**Pn**	**11 43 03.4**	**-0.1**
CEYT	**Ceyhan**	**3.00**	**244**	Pn	**Pn**	**11 43 02.7**	**-0.9**
AKDM	**Akdamar-Van**	**3.04**	**90**	Pn	**Pn**	**11 43 03.6**	**-0.7**
GEVA	**Gevas**	**3.10**	**90**		**Pn**	**11 43 04.9**	**-0.3**
AGRB	**Hanur-Agry**	**3.25**	**67**	Pn	**Pn**	**11 43 06.8**	**-0.4**
KARS	**Kars**	**3.80**	**53**		**Pn**	**11 43 15.1**	**+0.4**
KARS	**Kars**	**3.80**	**53**	P	**Pn**	**11 43 15.1**	**+0.4**
BR131	**Keskin Array S**	**4.46**	**289**		**Pn**	**11 43 24.4**	**+0.6**
BR131	**Keskin Array S**	**4.46**	**289**	⇓ *i*P	**Pn**	**11 43 23.9**	**0.0**
BRTR	**Keskin Array B**	**4.46**	**289**	*i* P	**Pn**	**11 43 24.5**	**+0.6**
	7.9nm,0.3s,baz=115,slow=13,SNR=149						
BRTR				Lg	Lg	11 44 37.5	
	baz=113,slow=33						
BRTR				LR	LR	11 45 25.1	
	comp=Z,1μm,18.3s,baz=97,slow=43						
	27nm,0.5s						
BRTR	**Keskin Array B**	**4.46**	**289**	*i* P	**Pn**	**11 43 24.5**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,26nm,0.5s						
BEIL	**Beino**	**4.50**	**212**	*e*P	**Pn**	**11 43 23.5**	**-0.8**
FKH	**Fakeheh**	**4.67**	**209**	*e*P	**Pn**	**11 43 26.0**	**-0.7**
SNOP	**Sinop**	**4.70**	**322**	Pn	**Pn**	**11 43 28.2**	**+1.2**
GNI	**Garni**	**4.71**	**66**	Pn	**Pn**	**11 43 28.3**	**+1.0**
	comp=Z,6.1nm,0.3s,baz=320,slow=5.6,SNR=10						
	comp=Z,16nm,0.5s						
GNI	**Garni**	**4.71**	**66**		**Pn**	**11 43 27.2**	**-0.1**
GNI	**Garni**	**4.71**	**66**	⇓ *i*P	**Pn**	**11 43 28.5**	**+1.2**
GNI				pmax	pmax		
	comp=Z,14nm,0.4s						
ILGA	**Ilgaz**	**4.94**	**304**		**Pn**	**11 43 31.2**	**+0.7**
VSLR	**Vesyoloye**	**5.12**	**8**	⇑ *i*P	Pb	11 43 38.0	-7.6
VSLR				pmax	pmax		
	comp=Z,40nm,0.6s						
SOC	**Sochi**	**5.21**	**5**	*e*P	Pn	11 43 38.7	+4.7
SOC				*e*		11 44 42.9	
SOC				pmax	pmax		
	comp=Z,51nm,0.8s						
SOC				MLR	MLR		
	comp=Z,218nm,9.0s						
ZAHL	**Zahle**	**5.22**	**211**	*e*P	**Pn**	**11 43 33.8**	**-0.4**
BHL	**Bhannes**	**5.27**	**213**	*e*P	**Pn**	**11 43 34.6**	**-0.3**
BZK	**Bozkurt**	**5.30**	**314**	Pn	**Pn**	**11 43 34.7**	**-0.4**
RPOR	**Krasnaya Polya**	**5.38**	**9**	*d* iP	Pb	11 43 42.2	-7.9
DQRL	**Deir Qamar**	**5.48**	**213**	*e*P	**Pn**	**11 43 38.3**	**+0.6**
RCY	**Rachaya**	**5.55**	**210**	*e*P	**Pn**	**11 43 39.0**	**+0.2**
QRWL	**Qaraoun**	**5.57**	**211**	*e*P	**Pn**	**11 43 39.3**	**+0.3**
NEUR	**Neytrino**	**5.58**	**28**	⇑ *i*P	Pn	11 43 43.3	+4.1
NEUR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CSS	**Mathiatis**	**5.76**	**235**	Pn	**Pn**	**11 43 40.0**	**-1.6**
CSS	**Mathiatis**	**5.76**	**235**	P	**Pn**	**11 43 43.0**	**+1.4**
NATI	**Neve Ativ**	**5.80**	**209**	P	**Pn**	**11 43 43.1**	**+1.0**
NATI				S	**Sn**	**11 44 51.1**	**+2.5**
GEM	**Giv'at Ha'Em**	**5.87**	**210**	P	**Pn**	**11 43 44.0**	**+0.9**
GEM				S	**Sn**	**11 44 52.4**	**+2.0**
SHA1	**Shidzhatmaz**	**5.98**	**25**	⇑ *i*P	**Pn**	**11 43 47.1**	**+2.3**
KSHT	**Keshet**	**6.02**	**207**	P	**Pn**	**11 43 46.7**	**+1.5**
KSHT				S	**Sn**	**11 44 56.5**	**+2.3**
KBZ	**Khabaz**	**6.06**	**27**	Pn	**Pn**	**11 43 47.1**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=236,slow=5.2,SNR=5.8						
KBZ				LR	LR	11 46 31.5	
	comp=Z,712nm,18.9s,baz=235,slow=42						
	comp=Z,1.3nm,0.5s						
MMC7	**Mount Meron ar**	**6.15**	**211**	P	**Pn**	**11 43 48.5**	**+1.6**
MMAI	**Mount Meron Ar**	**6.15**	**210**	Pn	**Pn**	**11 43 47.1**	**+0.2**
	comp=Z,6.2nm,0.3s,baz=27,slow=15,SNR=11						
MMAI				Lg	Lg	11 45 25.1	
	comp=Z,0.8nm,0.3s,baz=32,slow=36,SNR=2.0						
	comp=Z,4.4nm,0.4s						
KIV	**Kislovodsk**	**6.18**	**25**	Pn	**Pn**	**11 43 48.1**	**+0.7**
KIV	**Kislovodsk**	**6.18**	**25**	*e*P	Pn	11 43 51.5	+4.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,151nm,10.0s						
LABN	**Labinsk**	**6.37**	**10**	*e*P	Pn	11 43 56.4	+6.6
LABN				*e*S	Sn	11 45 11.5	+8.9
LABN				pmax	pmax		
	comp=Z,44nm,0.8s						
PYA1	**Pyatigorsk**	**6.42**	**27**	⇑ *i*P	**Pn**	**11 43 53.6**	**+3.0**
ASF	**Jabal al Asfar**	**6.46**	**197**	Pn	**Pn**	**11 43 49.9**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=24,slow=11,SNR=8.3						
ASF				Lg	Lg	11 45 34.8	
	comp=Z,1.7nm,0.3s,baz=332,slow=15,SNR=3.2						
ASF				LR	LR	11 46 34.6	
	comp=Z,539nm,21.6s,baz=359,slow=40						
	comp=Z,4.2nm,0.4s						
MDUB	**Mudurnu**	**6.47**	**291**	Pn	**Pn**	**11 43 51.0**	**-0.4**
HMDT	**Nahal Hemdat**	**6.78**	**207**	P	**Pn**	**11 43 56.5**	**+0.9**
HMDT				S	**Sn**	**11 45 15.2**	**+2.4**
ERBR	**Yeremizino-Bor**	**7.40**	**7**	*e*P	Pn	11 44 10.3	+6.3
ERBR		

MNK pmax pmax
comp=Z,7.0nm,0.5s
MNK MLR MLR
comp=Z,189nm,10.0s
MNK MLR MLR
comp=E,447nm,19.0s
MNK MLR MLR
comp=N,329nm,20.0s
ACER Acerenza 18.01 285 P P 11 46 25.9 -0.9
AKTO Aktyubinsk 18.04 42 P Pn 11 46 25.5 -1.1
comp=N,0.6nm,0.3s,baz=234,slow=6.8,SNR=13
AKTO LR LR 11 56 05.8
comp=N,106nm,18.1s,baz=358,slow=46
comp=N,5.9nm,0.7s
CUC Castrocucco 18.12 282 P P 11 46 28.0 -0.2
AB31 Akbulak array 18.49 47 Pn 11 46 31.0 -1.1
ABKAR Akbulak array 18.49 47 P Pn 11 46 30.9 -1.2
VRAC Vranov 19.49 311 LR LR 11 55 51.5
comp=N,323nm,18.8s,baz=93,slow=42
INTR Introdacqua 19.57 289 P P 11 46 42.5 -1.5
INTR IAmb IAmb 11 46 47.1
comp=Z,15nm,1.1s
UOSS Minazif 19.73 128 P P 11 46 44.1 -1.8
UOSS IAmb IAmb 11 47 09.9
comp=Z,11nm,0.7s
CAMP Campotosto 19.96 290 Pn 11 46 48.0 -2.1
CAMP IAmb IAmb 11 46 52.2
comp=Z,20nm,1.4s
NRCA Norcia 20.20 291 P P 11 46 50.6 -0.3
FDMO Fiordimonte 20.23 292 P P 11 46 50.4 -0.8
FDMO IAmb IAmb 11 46 53.2
comp=Z,20nm,1.1s
MURB Monte Urbino 20.66 292 P P 11 46 54.2 -1.7
MURB IAmb IAmb 11 47 02.4
comp=Z,18nm,1.0s
GEC2 GERESS Array S 21.07 308 P 11 47 00.1 -0.2
GEC2 IAmb IAmb 11 47 09.2
comp=Z,10nm,0.7s
GERES GERESS Array B 21.07 308 LR LR 11 57 16.7
comp=Z,182nm,21.5s,baz=1,0,slow=43
KIRV Kirov 21.29 15 P **P 11 47 04.0 +1.5**
comp=Z,16nm,0.7s,baz=255,slow=1.5,SNR=5.3
KIRV LR LR 11 55 50.2
comp=Z,264nm,20.6s,baz=290,slow=38
comp=Z,16nm,0.7s
KIRV Kirov 21.29 15 ⇓*i*P **P 11 47 05.3 +2.9**
CTI Castel Tesino 21.66 300 P 11 47 06.8 +0.2
CTI IAmb IAmb 11 47 12.0
comp=Z,8.7nm,0.7s
CTI Castel Tesino 21.66 300 P **P 11 47 06.9 +0.2**
CTI pmax pmax
comp=Z,9.0nm,0.7s
CASP Castiglione de 21.85 291 P P 11 47 10.3 +1.7
ARTI Arti 22.11 29 LR LR 11 57 03.6
comp=Z,176nm,18.8s,baz=212,slow=40
ARTI Arti 22.11 29 P P 11 47 10.7 -0.6
ARTI Arti 22.11 29*c i*P **P 11 47 10.6 -0.6**
ARTI S **S 11 51 15.2 +0.5**
ARTI pmax pmax
comp=Z,18nm,0.9s
PRMA PARMA 22.39 296 P P 11 47 12.6 -1.8
CLL Collm 22.43 314 P P 11 47 13.7 -1.0
CLL IAmb IAmb 11 47 29.8
comp=Z,11nm,1.0s
CLL Collm 22.43 314 *eP* **P 11 47 14.0 -0.8**
CLL *e* 11 47 22.0
CLL Collm 22.43 314 *eP* **P 11 47 14.0 -0.8**
CLL *ex* x 11 47 21.0
CLL *ex* x 11 47 22.0
comp=Z,7.0nm,0.6s
CLL *ex* x 11 47 26.0
KLMR Klimovskoe 22.49 1 *eP* **P 11 47 18.1 +2.8**
KLMR pmax pmax
comp=Z,44nm,1.5s
KEST Kesra 23.85 273 P P 11 47 30.1 +0.6
comp=Z,4.7nm,0.8s,baz=126,slow=7.7,SNR=6.1
comp=Z,4.7nm,0.8s
KEST Kesra 23.85 273 P P 11 47 28.5 -1.0
KEST IAmb IAmb 11 47 43.8
comp=Z,6.7nm,0.9s
KK31 Karatay Array 24.17 69 P 11 47 31.5 -0.9
KK31 IAmb IAmb 11 47 36.8
comp=Z,7.8nm,1.0s
KK31 Karatay Array 24.17 69 P P 11 47 31.5 -0.9
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 24.17 69 P 11 47 32.6 +0.2
KKAR Karatay Array 24.17 69 P P 11 47 32.6 +0.2
FIA1 FINESS Array S 24.47 345 P P 11 47 36.2 +1.4
FINES FINESS Array B 24.47 345 P P 11 47 35.4 +0.5
comp=Z,2.4nm,0.7s,baz=134,slow=5.5,SNR=7.3
comp=Z,2.4nm,0.7s
FINES FINESS Array B 24.47 345 P P 11 47 36.6 +1.7
FINES FINESS Array B 24.47 345 *i*P **P 11 47 36.9 +2.1**
FINES pmax pmax
comp=Z,6.0nm,1.0s
BNI Bardonecchia 24.99 296 P P 11 47 39.5 -0.4
BNI Bardonecchia 24.99 296 P P 11 47 39.5 -0.4
BNI pmax pmax
comp=Z,16nm,1.3s
ECH Echery 25.08 303 P P 11 47 41.6 +1.0
ECH Echery 25.08 303 P P 11 47 41.6 +1.0
ECH pmax pmax
comp=Z,10.0nm,1.0s
BORK Borovoye 26.00 46 ⇓*i*P **P 11 47 52.2 +3.3**
BORK pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 26.04 46 P P 11 47 49.8 +0.6
comp=Z,1.7nm,0.6s,baz=248,slow=7.8,SNR=7.7
BVAR LR LR 12 00 18.0
comp=Z,74nm,22.0s,baz=276,slow=42
comp=Z,1.7nm,0.6s
AAK Ala-Archa 27.11 70 *eP* **P 11 47 59.2 0.0**
AAK pmax pmax
comp=Z,1.0nm,1.0s
NOA NORSAR Array B 28.57 332 LR LR 12 02 06.8
comp=Z,143nm,18.3s,baz=270,slow=42
FURI Furi 29.36 181 LR LR 11 58 48.5
comp=Z,92nm,19.5s,baz=5.5,slow=34
KURBB Kurchatov Arra 30.30 53 P P 11 48 28.7 +1.4
comp=Z,2.7nm,0.6s,baz=265,slow=8.9,SNR=24
KURBB PcP **PcP 11 51 28.3 +0.9**
comp=Z,1.1nm,1.0s,baz=264,slow=3.3,SNR=6.8
comp=Z,2.7nm,0.6s
KURK Kurchatov 30.37 53 P 11 48 28.5 +0.6
KURK IAmb IAmb 11 48 29.7
comp=Z,3.8nm,0.8s
KURK Kurchatov 30.37 53 ⇑*i*P **P 11 48 29.2 +1.3**
KURK pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 32.54 61 ⇓*i*P **P 11 48 50.2 +3.1**
MKAR Makanchi Array 32.54 61 P P 11 48 48.5 +1.4
comp=Z,1.7nm,0.7s,baz=274,slow=7.1,SNR=17
comp=Z,1.7nm,0.7s
MKAR Makanchi Array 32.54 61 P 11 48 47.8 +0.8
ESDC Sonseca Array 33.25 286 P P 11 48 53.0 -0.4
comp=Z,1.1nm,0.7s,baz=61,slow=8.4,SNR=5.3
comp=Z,1.1nm,0.7s
ESDC Sonseca Array 33.25 286 P P 11 48 52.0 -1.4
ZAA0 Zalesovo Array 34.60 48 P P 11 49 05.1 +0.3
ZALV Zalesovo Beam 34.60 48 P P 11 49 05.2 +0.3
comp=Z,1.1nm,0.5s,baz=254,slow=9.7,SNR=7.9
ZALV LR LR 12 07 03.5
comp=Z,90nm,18.8s,baz=264,slow=43
comp=Z,1.1nm,0.5s
ZALV Zalesovo Beam 34.60 48 P P 11 49 04.8 -0.1
LODK Lodwar 34.97 187 P P 11 49 07.4 -1.0
MD31 MD31 35.83 275 P P 11 49 13.5 -2.3
MD31 IAmb IAmb 11 49 27.8
comp=Z,6.9nm,1.4s
DGZ Jazzator, Alta 35.94 56 ⇑*eP* **P 11 49 18.5 +1.8**
DGZ pmax pmax
comp=Z,4.0nm,1.1s
MBAR Mbarara 39.55 193 LR LR 12 04 44.3
comp=Z,60nm,19.2s,baz=106,slow=34
SONM Songino Array 48.59 56 P P 11 51 01.8 +2.1
comp=Z,0.7nm,0.5s,baz=289,slow=8.3,SNR=3.6
SONM LR LR 12 13 51.6
comp=Z,164nm,21.0s,baz=242,slow=39
comp=Z,0.7nm,0.5s
ULN Ulaanbaatar 49.01 56 ⇑*i*P **P 11 51 05.3 +2.3**
ULN pmax pmax
comp=Z,5.0nm,0.9s
LZDM Lanzhou Array 50.57 72 P P 11 51 15.6 +0.5
comp=Z,0.4nm,0.3s,baz=294,slow=7.8,SNR=1.8
comp=Z,0.4nm,0.3s

DBIC Dimbokro 50.71 243 LR LR 12 17 23.5
comp=Z,121nm,18.3s,baz=14,slow=42
TIXI Tiksi 54.01 23 LR LR 12 20 02.3
comp=Z,83nm,19.2s,baz=16,slow=42
TIXI Tiksi 54.01 23 ⇓*i*P P 11 51 43.7 +3.9
TIXI pmax pmax
comp=Z,4.0nm,1.3s
LSZ Lusaka 54.35 193 LR LR 12 16 56.9
comp=Z,112nm,20.0s,baz=330,slow=38
CMAR Chiang Mai Arr 55.29 93 P P 11 51 49.0 -0.8
comp=Z,0.6nm,0.3s,baz=298,slow=9.1,SNR=5.3
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 55.29 93 P P 11 51 48.9 -0.9
CMAR Chiang Mai Arr 55.29 93 *i*P **P 11 51 52.7 +2.9**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
YAK Yakutsk 57.20 34 LR LR 12 18 55.9
comp=Z,103nm,18.2s,baz=294,slow=38
TSUM Tsumeb 60.74 203 LR LR 12 18 00.8
comp=Z,90nm,19.2s,baz=350,slow=35
KLR Kul'dur 63.69 47 LR LR 12 24 43.1
comp=Z,38nm,18.0s,baz=310,slow=40
LBTB Lobatse 64.33 194 LR LR 12 20 45.4
comp=Z,137nm,21.3s,baz=348,slow=36
SEY Seymchan 65.93 27 ⇑*i*P **P 11 53 03.5 +1.7**
SEY pmax pmax
comp=Z,2.0nm,0.9s
BILL Bilibino 66.77 19 ⇓*i*P **P 11 53 08.5 +1.4**
BILL pmax pmax
comp=Z,3.0nm,1.0s
KSRS Korea Array 67.21 60 P P 11 53 10.0 -0.3
comp=Z,2.0nm,0.8s,baz=294,slow=7.3,SNR=2.3
KSRS LR LR 12 26 20.9
comp=Z,68nm,18.2s,baz=320,slow=39
comp=Z,2.0nm,0.8s
MA2 Magadan 67.38 31 LR LR 12 25 53.4
comp=Z,94nm,19.0s,baz=310,slow=39
MA2 Magadan 67.38 31 ⇑*i*P P 11 53 15.5 +4.4
MA2 pmax pmax
comp=Z,2.0nm,0.9s
BOSA Boshof 67.90 193 LR LR 12 24 00.2
comp=Z,108nm,18.3s,baz=24,slow=37
C18K Utukok River 72.21 8 P P 11 53 42.2 +1.4
C18K IAmb IAmb 11 53 42.9
comp=Z,2.2nm,0.8s
D25K Kavik River 72.53 2 P P 11 53 44.4 +1.8
D22K Ayikyak River 72.69 4 P P 11 53 44.4 +0.8
D22K IAmb IAmb 11 53 46.0
comp=Z,2.5nm,0.9s
E19K Redstone River 73.75 6 P P 11 53 51.3 +1.4
E19K IAmb IAmb 11 53 51.8
comp=Z,3.0nm,0.9s
E25K Arctic Village 73.76 2 P P 11 53 51.5 +1.6
BMAR Burnt Mountain 74.47 1 P P 11 53 55.1 +1.0
G16K Koyuk River 75.21 9 P P 11 53 59.7 +1.4
G16K IAmb IAmb 11 54 26.0
comp=Z,3.8nm,1.4s
FCC Fort Churchill 75.68 337 P P 11 54 01.3 +0.2
FCC IAmb IAmb 11 54 12.8
comp=Z,3.3nm,1.4s
FCC Fort Churchill 75.68 337 P P 11 54 01.3 +0.2
FCC pmax pmax
comp=Z,3.0nm,1.4s
YKA Yellowknife Ar 77.26 348 P P 11 54 10.4 +0.4
comp=Z,0.2nm,0.7s,baz=16,slow=5.8,SNR=4.5
comp=Z,0.2nm,0.7s
YKA Yellowknife Ar 77.26 348 P P 11 54 10.1 +0.1
YKA Yellowknife Ar 77.26 348 *i*P **P 11 54 11.1 +1.1**
SCM Sheep Creek Mo 79.99 3 P P 11 54 25.9 +0.8
SCM Sheep Creek Mo 79.99 3 P P 11 54 26.0 +0.8
SCM pmax pmax
comp=Z,19nm,1.4s
SADO Sadowa 80.27 320 LR LR 12 30 59.3
comp=Z,49nm,18.4s,baz=93,slow=36
ULM Lac du Bonnet 83.25 333 P P 11 54 42.0 -0.6
comp=Z,1.3nm,0.8s,baz=0.0,slow=3.0,SNR=2.9
comp=Z,1.3nm,0.8s
ULM Lac du Bonnet 83.25 333 P P 11 54 42.2 -0.3
ULM Lac du Bonnet 83.25 333 P P 11 54 42.2 -0.3
ULM pmax pmax
comp=Z,4.0nm,1.2s

STR 17 11:44:00.7±0.6, **47°N**±4°×**°**±**°, h0km, MLv1.6/7, LOCSAT earthModelID haslach_taup-2.11 preliminary, France**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOR	**Lormes**	**0.45**	**357**	Pg	Pg	11 44 09.5	+0.1
PLYF	**Puligny Montra**	**0.60**	**76**	Pg	Pg	11 44 11.9	-0.4
PLDF	**La Plantade**	**0.87**	**192**	Pg	Pg	11 44 17.4	+0.1
PLDF				Sg	Sb	11 44 30.2	-0.7
AGO	**Saint Agoulin**	**0.93**	**215**	Pg	Pg	11 44 18.8	+0.3
AGO				Pn	Pb	11 44 19.7	0.0
AGO				Sn	Sb	11 44 33.2	+0.6
COLF	**Collangettes**	**1.31**	**186**	Pg	Pg	11 44 25.7	0.0
COLF				Sg	Sb	11 44 43.4	-0.1
VERF	**Verneugheol**	**1.45**	**223**	Pg	Pn	11 44 28.3	+0.1
VERF				Sg	Sb	11 44 47.6	+0.1

*VIE **17** 11:45:19.4±0.3, 49°.85N×18°.53E, h0km, mb2.7/3, ml3.0/2, Error ellipse: s-maj=3.2km s-min=2.5km az=163.0 20 km E of Ostrava Suspected Mining induced.*
*IPEC **17** 11:45:19.3±0.3, 49°.82N×18°.56E, h1km, ML2.4/6, Error ellipse: s-maj=1.8km s-min=1.4km az=74.0*
*BGR **17** 11:45:20.2±0.5, 49°.85N×18°.48E, h1km, ML2.5/8, Error ellipse: s-maj=10.0km s-min=4.4km az=170.0*
*PRU **17** 11:45:21.5, 49°.86N×18°.42E, h0km, Mining Induced Event Csm, E=4.1e+05*

ISC 17 11:45:17.9±0.8, **49°.85N**±0°.03×**18°.53E**±0°.02, **h0km, n40, σ1s01/66, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.25**	**267**	*e*PG	**Pg**	**11 45 24.9**	**+2.3**
OKC				*e*SG	**Sg**	**11 45 28.8**	**+3.0**
	comp=Z,141nm,0.4s						
OKC	**Ostrava-Krasne**	**0.25**	**267**	*e*Pg	**Pg**	**11 45 24.9**	**+2.3**
OKC				*e*Sg	**Sg**	**11 45 29.3**	**+3.5**
STEB	**Steborice**	**0.49**	**280**	*e*PG	**Pb**	**11 45 29.3**	**-0.2**
STEB				*e*SG	**Sb**	**11 45 36.5**	**-0.8**
MORC	**Moravsky Berou**	**0.64**	**264**	*e*Pg	**Pb**	**11 45 32.2**	**+0.2**
MORC				*e*Sg	**Sb**	**11 45 41.2**	**-0.3**
MORC	**Moravsky Berou** baz=86	**0.64**	**264**	*e*Pg	**Pb**	**11 45 32.0**	**0.0**
MORC				*e*Sg	**Sb**	**11 45 40.1**	**-1.5**
	87nm,0.6s,baz=86						
ANAC	**Anensky vrch** baz=108	**0.78**	**287**	*e*Pg	**Pb**	**11 45 34.5**	**+0.2**
ANAC				*e*Sg	**Sb**	**11 45 44.5**	**-0.9**
	73nm,0.4s,baz=108						
LOSC	**Losov** baz=75	**0.78**	**253**	*e*Pg	**Pb**	**11 45 34.6**	**+0.2**
LOSC				*e*Sg	**Sg**	**11 45 44.3**	**+1.2**
	54nm,0.3s,baz=75						
OJC	**Ojcow**	**0.90**	**65**	*e*Pg	**Pb**	**11 45 36.0**	**-0.4**
OJC				*e*Sg	**Sb**	**11 45 49.1**	**+0.1**
OJC	**Ojcow**	**0.90**	**65**	*e*Pg	**Pb**	**11 45 36.1**	**-0.3**
OJC				*e*Sg	**Sn**	**11 45 50.7**	**-0.9**
LANS	**Liptovska Anna**	**0.93**	**138**	*e*PG	**Pb**	**11 45 36.7**	**-0.3**
LANS				*e*SG	**Sb**	**11 45 49.8**	**-0.1**
LANS				*e*LG	Lg	11 45 53.1	
JAVC	**Velka Javorina** baz=31	**1.14**	**210**	*e*Pg	**Pn**	**11 45 40.9**	**-0.2**
JAVC	**Velka Javorina**	**1.14**	**210**	*e*PG	**Pn**	**11 45 41.0**	**-0.2**
NIE	**Niedzica**	**1.23**	**110**	*e*Pg	**Pn**	**11 45 42.4**	**0.0**
NIE				*e*Sg	**Sn**	**11 46 00.2**	**+0.4**
VRAC	**Vranov** baz=67	**1.37**	**247**	*e*Pg	**Pb**	**11 45 44.9**	**+0.5**
VRAC				*e*Sg	**Sb**	**11 46 02.4**	**-0.1**
	52nm,0.4s,baz=67						
DPC	**Dobruska-Polom**	**1.50**	**290**	*e*PG	**Pg**	**11 45 47.2**	**+0.4**
DPC				*e*SG	**Sn**	**11 46 07.0**	**+0.4**
	comp=Z,27nm,0.3s						
DPC	**Dobruska-Polom**	**1.50**	**290**	*e*Pg	**Pg**	**11 45 47.3**	**+0.6**
DPC				*e*Sg	**Sn**	**11 46 07.1**	**+0.6**
KRUC	**Moravsky** baz=61	**1.60**	**241**	*e*Pg	**Pg**	**11 45 48.4**	**-0.1**
KRUC				*e*Sg	**Sg**	**11 46 09.5**	**+0.3**
	22nm,0.2s,baz=61						
KRUC	**Moravsky**	**1.60**	**241**	*e*PG	**Pg**	**11 45 48.5**	**-0.1**
KRUC				*e*SG	**Sg**	**11 46 09.6**	**+0.3**
OSTC	**Ostas**	**1.65**	**296**	*e*PG	**Pg**	**11 45 49.8**	**+0.4**
OSTC				*e*SG	**Sg**	**11 46 11.5**	**+0.8**
	comp=Z,74nm,0.8s						
MODS	**Modra-Piesok**	**1.69**	**210**	*e*PG	**Pb**	**11 45 49.9**	**0.0**
MODS				*e*SG	**Sb**	**11 46 11.7**	**0.0**
KSP	**Ksiaz**	**1.74**	**306**	*e*Pg	**Pg**	**11 45 53.2**	**+1.9**
KSP				*e*Sg	**Sg**	**11 46 14.1**	**+0.2**
UPC	**Upice**	**1.75**	**293**	*e*PG	**Pg**	**11 45 51.5**	**+0.1**
UPC				*e*SG	**Sg**	**11 46 14.5**	**+0.5**
	comp=Z,26nm,0.4s						
CHVC	**Chvalec**	**1.75**	**296**	*e*PG	**Pg**	**11 45 51.7**	**+0.2**
CHVC				*e*SG	**Sg**	**11 46 14.5**	**+0.3**
	comp=Z,26nm,0.7s						
STHS	**Stebnicka Huta**	**1.82**	**103**	*e*PG	**Pg**	**11 45 52.7**	**-0.1**
STHS				*e*SG	**Sg**	**11 46 18.6**	**+2.3**
STHS				*e*LG	Lg	11 46 22.0	
KECS	**Kecovo**	**1.88**	**136**	*e*PN	**Pn**	**11 45 51.2**	**-0.1**
KECS				*e*SN	**Sn**	**11 46 14.8**	**-0.8**
KECS				*e*LG	Lg	11 46 20.8	
PRU	**Pruhonice**	**2.58**	**275**	*e*PG	**Pg**	**11 46 07.4**	**+0.1**
PRU				*e*SG	**Sg**	**11 46 39.2**	**-1.5**
	comp=Z,13nm,0.5s						
CONA	**Conrad Observa** 0.7nm,0.2s	**2.61**	**223**	*e*Pn	**Pn**	**11 46 01.4**	**0.0**
CONA				*e*Sn	**Sn**	**11 46 33.8**	**0.0**
	7.8nm,0.5s						
PVCC	**Panska Ves**	**2.63**	**286**	*e*PG	**Pg**	**11 46 07.5**	**-0.9**
PVCC				*e*SG	**Sg**	**11 46 43.0**	**+0.5**
	comp=Z,22nm,0.4s						
CKRC	**Cesky Krumlov**	**2.94**	**251**	*e*SG	**Sg**	**11 46 51.9**	**-0.6**
	comp=Z,9.5nm,0.5s						
BRG	**Berggiesshubel**	**3.11**	**291**	*e*Sg	**Sg**	**11 46 57.3**	**-0.5**
BRG	**Berggiesshubel**	**3.11**	**291**	Amp		11 46 59.6	
	comp=Z,6.5nm,0.4s						
BRG	**Berggiesshubel**	**3.11**	**291**	Pg	**Pg**	**11 46 16.4**	**-1.1**
BRG	**Berggiesshubel**	**3.11**	**291**	Sg	**Sg**	**11 46 57.5**	**-0.3**
KHC	**Kasperske Hory**	**3.31**	**259**	*e*PG	**Pg**	**11 46 20.0**	**-1.2**
KHC				*e*SG	**Sg**	**11 47 04.5**	**+0.4**
GEC2	**GERESS Array S**	**3.31**	**254**	*e*Sg	**Sg**	**11 47 02.9**	**-1.4**
HSKC	**Hora Svate Kat**	**3.36**	**285**	*e*SG	**Sg**	**11 47 05.3**	**-0.5**
	comp=Z,16nm,0.8s						
WET	**Wettzell**	**3.75**	**261**	*e*Sg	**Sg**	**11 47 16.6**	**-1.7**
CLL	**Collm**	**3.81**	**295**	*e*Sg	**Sg**	**11 47 19.8**	**-0.5**
TANN	**Tannenbergstha**	**3.94**	**281**	*e*Sg	**Sg**	**11 47 24.0**	**-0.5**
WERD	**Werda**	**4.04**	**281**	*e*Sg	**Sg**	**11 47 26.3**	**-1.5**

*EST **17** 12:02:57.6, 59°.77N×22°.28E, h0km, ML1.6(HEL), Explosion*
*HEL **17** 12:02:57.5±0.0, 59°.80N×22°.26E, h0km, Explosion*
*IDC **17** 12:02:58.5±1.8, 59°.80N×22°.19E, h0km, mbtmp3.1/4, ML2.3/4, Error ellipse: s-maj=27.1km s-min=7.2km az=161.0*

ISC 17 12:02:55.6±0.8, **59°.81N**±0°.05×**22°.26E**±0°.03, **h0km, n17, σ1s31/19, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVF	**Tvarminne**	**0.50**	**85**	*e*P	**Pb**	**12 03 06.3**	**-1.0**
TVF				*e*S	**Sb**	**12 03 13.0**	**-2.1**
EE06	**Soera, Palade,**	**0.89**	**160**	*e*P	**Pb**	**12 03 13.5**	**-0.4**
MEF	**Metsahovi**	**1.15**	**68**	*e*P	**Pb**	**12 03 18.1**	**-0.2**
AAL	**Aland**	**1.20**	**289**	S	**Sg**	**12 03 30.9**	**-3.2**
AAL	**Aland**	**1.20**	**289**	*e*P	**Pg**	**12 03 18.9**	**+0.4**
AAL	**Aland**	**1.20**	**289**	P	**Pg**	**12 03 18.9**	**+0.4**
RAF	**Rauma**	**1.25**	**349**	*e*P	**Pg**	**12 03 19.0**	**-0.4**
MTSE	**Matsula**	**1.36**	**143**	*e*S	**Sg**	**12 03 38.2**	**-0.9**
NUR	**Nurmijarvi**	**1.39**	**58**	*e*P	**Pb**	**12 03 22.6**	**+0.2**
EE02	**Kiisa, Saku**	**1.39**	**115**	*e*P	**Pb**	**12 03 22.3**	**-0.1**
NRTU	**Norrtaelje**	**1.84**	**268**	S	**Sn**	**12 03 51.3**	**-1.1**
NRTU	**Norrtaelje**	**1.84**	**268**	*e*P	**Pn**	**12 03 29.9**	**+1.5**
NRTU	**Norrtaelje**	**1.84**	**268**	P	**Pb**	**12 03 30.1**	**0.0**
FINES	**FINESS Array B** 2.1nm,0.3s,baz=234,slow=14,SNR=24	**2.50**	**47**	Pn	**Pb**	**12 03 41.1**	**-0.2**
FINES				Pg	**Pg**	**12 03 44.4**	**+1.0**
	2.1nm,0.3s,baz=234,slow=14,SNR=4.0						
FINES				Lg	Lg	12 04 17.4	
	3.4nm,0.3s,baz=228,slow=30,SNR=16 3.2nm,0.2s						
HFS	**Hagfors**	**4.32**	**278**	Pn	**Pn**	**12 04 04.2**	**+1.8**
	0.2nm,0.3s,baz=94,slow=12,SNR=6.6						
HFS				Lg	Lg	12 05 10.4	
	1.6nm,0.3s,baz=91,slow=32,SNR=12 2.7nm,0.8s						
NOA	**NORSAR Array B** baz=98,slow=14,SNR=3.9	**5.61**	**287**	Pn	**Pn**	**12 04 21.7**	**+1.5**
NOA				Lg	Lg	12 05 49.1	
	0.1nm,0.3s,baz=125,slow=23,SNR=0.9 0.1nm,0.3s						
ARCES	**ARCESS Array B** 0.1nm,0.3s,baz=187,slow=13,SNR=7.5 2.4nm,0.7s	**9.87**	**7**	Pn	**Pn**	**12 05 19.3**	**+0.9**

*UPP **17** 12:03:03.3±0.9, 59°.84N×21°.51E, h0km, ML1.9, Presumed earthquake*

HEL 17 12:03:01.4±0.0, **59°.80N×22°.27E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVF	**Tvarminne**	**0.50**	**85**	*e*P	Pg	12 03 10.1	-0.8
TVF				*e*S	Sg	12 03 17.0	-0.3
EE06	**Soera, Palade,**	**0.89**	**160**	*e*P	Pg	12 03 17.2	-1.1
EE06				*e*S	Sg	12 03 28.6	-1.1
EE01	**Perakula, Nova**	**0.91**	**130**	*e*P	Pg	12 03 17.8	-1.1
EE01				*e*S	Sg	12 03 30.1	-0.5
MEF	**Metsahovi**	**1.15**	**68**	*e*P	Pg	12 03 22.0	-1.3
AAL	**Aland**	**1.21**	**289**	*e*P	Pg	12 03 21.7	-2.8
AAL				*e*S	Sg	12 03 38.4	-1.7
RAF	**Rauma**	**1.25**	**349**	*e*P	Pg	12 03 22.7	-2.6
RAF				*e*S	Sg	12 03 39.8	-1.7
RAF				smax	smax	12 03 43.2	
	comp=Z,4.3nm,0.1s						
HEL5	**Espoo, Suvisaa**	**1.28**	**75**	*e*P	Pg	12 03 24.4	-1.6
MTSE	**Matsula**	**1.35**	**143**	*e*SB	Sg	12 03 44.5	-0.1
EE02	**Kiisa, Saku**	**1.38**	**115**	*e*PG	Pg	12 03 26.3	-1.5
EE02				*e*S	Sg	12 03 43.9	-1.8
NUR	**Nurmijarvi**	**1.39**	**58**	*e*PG	Pg	12 03 26.4	-1.5
NRTU	**Norrtaelje**	**1.85**	**268**	*e*P	Pn	12 03 34.0	-0.3
NRTU				*e*S	Sn	12 03 57.9	-0.4
PVF	**Pernaja** comp=Z,4.1nm,0.2s	**1.94**	**66**	smax	smax	12 04 00.7	
GRAU	**Graesoe**	**1.94**	**288**	P	Pn	12 03 32.1	-3.5
KPF	**Kankaanpaa** comp=Z,2.2nm,0.1s	**2.04**	**357**	smax	smax	12 04 03.5	
BOGU	**Bogesund**	**2.13**	**261**	P	Pn	12 03 35.4	-2.7
FLYU	**Flymyra** baz=100	**2.23**	**280**	P	Pn	12 03 36.5	-3.0
FIBU	**Brunna**	**2.48**	**274**	P	Pn	12 03 41.0	-2.0
FIA0	**FINESS Array S** comp=Z,5.9nm,0.2s	**2.50**	**47**	smax	smax	12 04 15.1	
OSTU	**Oestervaala**	**2.62**	**282**	P	Pn	12 03 41.1	-3.7
KEF	**Keuruu** comp=Z,2.3nm,0.2s	**2.69**	**27**	smax	smax	12 04 18.5	

*DNK **17** 12:07:33.8±2.7, 59°.72N×22°.83E, h15km±43km, ML2.6, Presumed earthquake*
*HEL **17** 12:07:36.1±0.1, 59°.81N×22°.27E, h0km, ML1.7, Explosion*
*EST **17** 12:07:36.0, 59°.81N×22°.26E, h0km, ML1.9(HEL), Explosion*
*IDC **17** 12:07:38.2±1.5, 60°.21N×22°.04E, h0km, mbtmp3.5/5, ML2.5/5, Error ellipse: s-maj=25.6km s-min=7.3km az=163.0*
*UPP **17** 12:07:38.4±1.0, 59°.79N×21°.88E, h0km, ML2.6, Presumed earthquake*
*BER **17** 12:07:39.0±2.0, 59°.85N×22°.14E, h0km, ML2.6(UPP), Suspected explosion*

ISC 17 12:07:33.2±0.7, **59°.78N**±0°.03×**22°.23E**±0°.02, **h0km, n70, σ1s57/94, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVF	**Tvarminne**	**0.52**	**82**	*e*P	**Pg**	**12 07 44.7**	**+1.6**
TVF				*e*S	**Sg**	**12 07 50.9**	**+1.0**
EE06	**Soera, Palade,**	**0.87**	**158**	*e*P	**Pb**	**12 07 52.0**	**+0.8**
EE06				*e*S	**Sb**	**12 08 03.1**	**-0.2**
EE01	**Perakula, Nova**	**0.92**	**128**	*e*P	**Pb**	**12 07 52.5**	**+0.6**
EE01				*e*S	**Sb**	**12 08 04.4**	**-0.1**
MEF	**Metsahovi**	**1.18**	**67**	*e*P	**Pn**	**12 07 57.5**	**+0.7**
MEF	**Metsahovi**	**1.18**	**67**	*e*P	**Pg**	**12 07 56.5**	**+0.8**
AAL	**Aland**	**1.19**	**291**	P	**Pn**	**12 07 57.6**	**+0.5**

AAL				S		Sb	12 08 12.6	+0.1	
AAL	**Aland**	**1.19**	**291**	P		Pn	12 07 57.6	+0.5	
AAL				S		Sb	12 08 12.6	+0.1	
AAL	**Aland**	**1.19**	**291**	*e*P		Pn	12 07 57.5	+0.5	
AAL	**Aland**	**1.19**	**291**	*e*P		Pn	12 07 57.7	+0.6	
AAL				*e*S		Sb	12 08 12.6	+0.1	
RAF	**Rauma**	**1.27**	**350**	*e*P		Pg	12 07 57.5	0.0	
RAF	**Rauma**	**1.27**	**350**	*e*P		Pb	12 07 58.6	+0.7	
RAF				*e*S		Sg	12 08 14.2	+0.3	
RAF				smax		smax	12 08 16.5		
	comp=Z,6.7nm,0.2s								
MTSE	**Matsula**	**1.34**	**142**	*e*P		Pb	12 08 00.3	+1.1	
EE02	**Kiisa, Saku**	**1.39**	**114**	*e*P		Pb	12 08 00.9	+0.9	
EE02				*e*S		Sg	12 08 18.4	+0.6	
NUR	**Nurmijarvi**	**1.42**	**58**	*e*P		Pn	12 08 00.8	+0.7	
NUR				*e*S		Sg	12 08 18.2	-0.4	
NUR				smax		smax	12 08 20.3		
	comp=Z,6.8nm,0.1s								
NRTU	**Norrtaelje**	**1.82**	**268**	P		Pg	12 08 08.4	+0.3	
NRTU				S		Sg	12 08 32.8	+1.1	
NRTU	**Norrtaelje**	**1.82**	**268**	P		Pg	12 08 08.4	+0.3	
NRTU				S		Sg	12 08 32.8	+1.1	
NRTU	**Norrtaelje**	**1.82**	**268**	P		Pg	12 08 08.4	+0.3	
NRTU				S		Sg	12 08 32.8	+1.1	
EE08	**Sarghaua, Vand**	**1.92**	**125**	*e*PN		Pg	12 08 10.0	+0.2	
EE08				*e*SG		Sg	12 08 34.9	+0.2	
GRAU	**Graesoe**	**1.93**	**288**	P		Pb	12 08 09.7	+0.6	
GRAU				S		Sg	12 08 35.5	+0.3	
GRAU	**Graesoe**	**1.93**	**288**	P		Pb	12 08 09.7	+0.6	
GRAU				S		Sg	12 08 35.5	+0.3	
GRAU	**Graesoe**	**1.93**	**288**	P		Pb	12 08 09.7	+0.6	
GRAU				S		Sg	12 08 35.5	+0.3	
ARBE	**Arbavere**	**1.94**	**99**	*e*P		Pb	12 08 10.2	+0.8	
ARBE	**Arbavere**	**1.94**	**99**	*e*S		Sb	12 08 35.2	+1.1	
PVF	**Pernaja**	**1.98**	**65**	*e*P		Pb	12 08 10.5	+0.6	
PVF				*e*S		Sb	12 08 35.4	+0.3	
PVF				smax		smax	12 08 36.4		
	comp=Z,8.9nm,0.2s								
KPF	**Kankaanpaa**	**2.06**	**358**	smax		smax	12 08 39.8		
	comp=Z,1.8nm,0.1s								
BOGU	**Bogesund**	**2.10**	**261**	P		Pb	12 08 12.9	+0.9	
FORU	**Forsmark**	**2.12**	**289**	P		Pb	12 08 13.2	+0.9	
FORU	**Forsmark**	**2.12**	**289**	P		Pb	12 08 13.2	+0.9	
FORU	**Forsmark**	**2.12**	**289**	P		Pb	12 08 13.2	+0.9	
SLIT	**Slitere, Latvi**	**2.16**	**179**	*e*P		Pb	12 08 13.0	0.0	
SLIT	**Slitere, Latvi**	**2.16**	**179**	*e*P		Pb	12 08 13.4	+0.4	
SLIT				*e*S		Sb	12 08 41.1	+0.9	
NYNU	**Nynaeshamn**	**2.29**	**252**	P		Pb	12 08 15.7	+0.3	
NYNU	**Nynaeshamn**	**2.29**	**252**	P		Pb	12 08 15.7	+0.3	
NYNU	**Nynaeshamn**	**2.29**	**252**	P		Pb	12 08 15.7	+0.3	
FIBU	**Brunna**	**2.46**	**275**	P		Pb	12 08 17.9	-0.4	
FIBU	**Brunna**	**2.46**	**275**	P		Pb	12 08 17.9	-0.4	
FIBU	**Brunna**	**2.46**	**275**	P		Pb	12 08 17.9	-0.4	
FINES	**FINESS Array B**	**2.53**	**47**	Pn		Pb	12 08 19.1	-0.2	
	comp=Z,3.2nm,0.3s,baz=235,slow=14,SNR=88								
FINES				Sn		Sb	12 08 51.5	+0.5	
	comp=Z,9.3nm,0.3s,baz=236,slow=23,SNR=32								
	comp=Z,5.8nm,0.2s								
BACU	**Backbrunna**	**2.59**	**274**	P		Pb	12 08 19.4	-0.9	
BACU	**Backbrunna**	**2.59**	**274**	P		Pb	12 08 19.4	-0.9	
BACU	**Backbrunna**	**2.59**	**274**	P		Pb	12 08 19.4	-0.9	
OSTU	**Oestervaala**	**2.60**	**282**	P		Pb	12 08 19.3	-1.2	
OSTU	**Oestervaala**	**2.60**	**282**	P		Pb	12 08 19.3	-1.2	
OSTU	**Oestervaala**	**2.60**	**282**	P		Pb	12 08 19.3	-1.2	
VSU	**Vasula**	**2.67**	**118**	*e*P		Pb	12 08 20.7	-1.1	
KEF	**Keuruu**	**2.72**	**27**	*e*P		Pn	12 08 20.7	+2.6	
FALU	**Falun**	**3.28**	**285**	P		Pn	12 08 29.3	+3.6	
FALU	**Falun**	**3.28**	**285**	P		Pn	12 08 29.3	+3.6	
	baz=96								
FALU	**Falun**	**3.28**	**285**	P		Pn	12 08 29.3	+3.6	
	baz=96								
VAF	**Ylistaro**	**3.28**	**4**	*e*P		Pn	12 08 28.4	+2.7	
HFS	**Hagfors**	**4.30**	**278**	Pn		Pn	12 08 42.7	+2.9	
	comp=Z,0.3nm,0.3s,baz=87,slow=11,SNR=13								
HFS				Pg		Pb	12 08 50.7	+1.1	
	comp=Z,0.6nm,0.3s,baz=88,slow=19,SNR=12								
HFS				Sn		Sn	12 09 32.0	+1.3	
	comp=Z,0.4nm,0.3s,baz=89,slow=25,SNR=1.3								
HFS				Lg		Lg	12 09 47.3		
	comp=Z,2.4nm,0.3s,baz=85,slow=32,SNR=12								
	comp=Z,4.1nm,0.8s								
BLEU	**Blekinge**	**4.87**	**227**	*i* P		Pn	12 08 45.5	-2.1	
BLEU				*i* S		Sn	12 09 44.7	+0.1	
BORU	**Boraas**	**5.38**	**251**	*i* S		Sn	12 09 59.0	+1.9	
JOF	**Joensuu**	**5.39**	**50**	*e*P		Pn	12 08 57.5	+2.8	
NC602	**NORSAR Array S**	**5.41**	**285**	*e*P		Pn	12 08 58.0	+3.0	
DEL	**Delary**	**5.53**	**237**	*i* P		Pn	12 08 57.4	+0.8	
DEL				*i* S		Sn	12 10 00.8	0.0	
NC303	**NORSAR Array S**	**5.56**	**290**	*e*P		Pn	12 08 59.3	+2.3	
NB201	**NORSAR Array S**	**5.56**	**288**	*e*P		Pn	12 08 59.1	+2.0	
NOA	**NORSAR Array B**	**5.60**	**288**	Pn		Pn	12 08 58.6	+0.9	
	baz=93,slow=14,SNR=5.6								
	comp=Z,0.2nm,0.3s								
NC204	**NORSAR Array S**	**5.86**	**290**	*e*P		Pn	12 09 03.1	+1.9	
BSD	**Bornholm Skovb**	**6.12**	**223**	*i* P		Pn	12 09 04.0	-0.7	
BSD				*i* S		Sn	12 10 12.2	-3.1	
BSD				IAML			12 10 15.7		
	comp=Z,2.5nm,0.2s								
BJUU	**Bjuv**	**6.15**	**237**	*i* P		Pn	12 09 05.8	+0.7	
BJUU				*i* S		Sn	12 10 12.2	-3.9	
MOR8	**Moi Rana**	**7.33**	**334**	*e*P		Pn	12 09 24.4	+3.1	
SALU	**Saltoluokta**	**7.81**	**349**	*e*P		Pn	12 09 28.8	+0.9	
HEF	**Hetta**	**8.69**	**4**	*e*P		Pn	12 09 40.4	+0.4	
KIF	**Kilpisjarvi**	**9.29**	**357**	*e*P		Pn	12 09 49.1	+1.1	
JETT	**Jettan, Norway**	**9.85**	**356**	*e*P		Pn	12 09 56.7	+0.9	
ARA0	**ARCESS Array S**	**9.90**	**7**	*e*P		Pn	12 09 56.9	+0.5	
ARCES	**ARCESS Array B**	**9.90**	**7**	Pn		Pn	12 09 52.5	-3.9	
	comp=Z,0.2nm,0.3s,baz=187,slow=13,SNR=13								
	comp=Z,1.5nm,0.7s								
SPITS	**Spitsbergen Ar**	**18.59**	**356**	Pn		P	12 11 45.5	-5.9	
	baz=168,slow=14								
	comp=Z,18nm,1.2s								

*NEIC **17** 12:11:46.0±2.6, 7°.31S±0°.09×105°.93E±0°.07, h47km±6km, mb4.7/35, Error ellipse: s-maj=13.7km s-min=8.4km az=206.0*

*DJA **17** 12:11:46.4±0.6, 7°S±3°×107°6E±°, h17km±4km, M4.8/51, mB5.4/6, mb4.9/10, MLv4.7/51, Mw(mB)4.8/6*

*IDC **17** 12:11:50.6±1.8, 6°.95S×106°.13E, h81km±13km, mb4.2/23, mbtmp4.5/23, MS3.4/8, Error ellipse: s-maj=21.8km s-min=10.0km az=40.0*

ISC 17 12:11:48.0±1.2, **7°.29S**±0°.07×**106°.03E**±0°.07, **h69**km±9km, **n144**, σ1**S19**/132, **mb4.7**/49, **1C**, **Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DBJI	**Dramaga**	**1.02**	**44**	P		Pn	12 12 05.7	-1.0
SBJI	**Serang**	**1.17**	**5**	P		Pn	12 12 08.0	-0.6
TNG	**Tangerang**	**1.27**	**29**	P		Pn	12 12 09.4	-0.5
TNG				P		Pn	12 12 09.4	-0.5
BBJI	**Bungbulang**	**1.61**	**96**			Pn	12 12 13.2	-1.3
BBJI	**Bungbulang**	**1.61**	**96**	P		Pn	12 12 13.2	-1.3
LEM	**Lembang**	**1.64**	**74**	P		Pn	12 12 14.9	-0.1
	2μm,0.6s,baz=235,slow=4.0,SNR=199							
LEM				S		Sn	12 12 35.3	0.0
	6μm,0.7s,baz=145,slow=20,SNR=20							
LEM	**Lembang**	**1.64**	**74**	P		Pn	12 12 15.7	+0.8
BLSI	**Bandar Lampung**	**2.06**	**338**	P		Pn	12 12 21.0	+0.5
KASI	**Kota Agung**	**2.33**	**319**	P		Pn	12 12 25.0	+0.9
KLI	**Kotabumi**	**2.68**	**334**	P		Pn	12 12 30.3	+1.4
KPJI	**Karang Pucung**	**2.87**	**91**	P		Pn	12 12 33.4	+1.9
KLSI		**2.89**	**333**	P		Pn	12 12 33.2	+1.5
LWLI	**Liwa**	**2.99**	**319**	P		Pn	12 12 34.9	+1.7
CTJI	**Waduk Cacaban**	**3.14**	**85**	P		Pn	12 12 36.3	+1.2
MDSI	**Maura Dua**	**3.34**	**326**	P		Pn	12 12 39.4	+1.5
EGSI	**Enggano, Bengk**	**4.20**	**297**	P		Pn	12 12 50.6	+1.0
MNAI	**Manna**	**4.22**	**313**	Pn		Pn	12 12 51.0	+1.0
MNAI	**Manna**	**4.22**	**313**	P		Pn	12 12 50.9	+1.0
SMRI	**Semarang**	**4.38**	**87**	Pn		Pn	12 12 51.0	-1.1
SMRI	**Semarang**	**4.38**	**87**	P		Pn	12 12 52.4	+0.3
UGM	**Wanagama**	**4.49**	**98**			Pn	12 12 53.4	-0.2
UGM	**Wanagama**	**4.49**	**98**	P		Pn	12 12 53.1	-0.6
PMBI	**Palembang**	**4.51**	**344**	P		Pn	12 12 55.8	+1.9
TPI	**Tanjungpandan**	**4.78**	**20**	P		Pn	12 12 57.1	-0.5
KSI	**Kapahiang**	**4.98**	**316**	P		Pn	12 13 01.9	+1.6
PPBI	**Pangkal Pinang**	**5.09**	**1**	P		Pn	12 13 03.5	+1.6
PCJI	**Pacitan**	**5.17**	**100**	P		Pn	12 13 02.7	-0.3
	0.6nm2μm90nm,1.0s							
MASI	**Maura Aman, Be**	**5.59**	**317**	P		Pn	12 13 09.8	+1.1
	3μm219nm,0.8s							
SNJI	**Sawahan-Nganju**	**5.70**	**95**	P		Pn	12 13 11.2	+0.9
	0.5nm57nm,0.7s							
SJI	**Sawahan**	**5.70**	**95**	P		Pn	12 13 10.8	+0.6
	0.5nm3μm33nm,0.8s							
DSRI	**Dabo**	**6.92**	**348**	P		Pn	12 13 27.6	+0.8
	0.2nm76nm,0.9s							
JAGI	**Jajag, Banyuwa**	**8.13**	**99**			Pn	12 13 43.3	0.0
TPRI	**Tanjung Pinang**	**8.29**	**349**	P		Pn	12 13 47.1	+1.5
MYKOM	**Kota Tinggi**	**9.28**	**346**			Pn	12 13 59.7	+0.6
SBUM	**Sibu**	**11.48**	**33**			Pn	12 14 30.7	+1.6
GSI	**Gunungsitoli**	**12.00**	**315**			Pn	12 14 31.0	-5.4
KAPI	**Kappang**	**13.82**	**81**	LR		LR	12 20 46.2	
	comp=Z,82nm,18.4s,baz=274,slow=39							
KKM	**Kota Kinabalu**	**16.69**	**38**			P	12 15 40.3	+1.3
GIRL	**Giralia**	**17.19**	**154**	Pn		Pn	12 15 41.9	-1.8
GIRL				IAmb		IAmb	12 16 07.5	
	comp=Z,150nm,1.5s							
BATI	**Baumata**	**17.66**	**101**	LR		LR	12 23 05.8	
	comp=Z,125nm,18.8s,baz=308,slow=38							
SOEI	**Soe**	**18.20**	**99**	P		P	12 15 55.3	-0.3
SOEI				IAmb		IAmb	12 16 10.5	
	comp=Z,38nm,0.8s							
MBWA	**Marble Bar**	**19.12**	**138**	P		P	12 16 05.1	-0.4
PSA00	**Pilbara Seismi**	**19.48**	**138**	P		P	12 16 07.7	-1.9
FITZ	**Fitzroy Crossi**	**21.91**	**121**	P		P	12 16 38.0	+2.3
	comp=Z,2.6nm,0.7s,baz=291,slow=4.7,SNR=5.4							
	comp=Z,2.6nm,0.7s							
KNRA	**Kununurra**	**23.76**	**113**			P	12 16 55.2	+0.9
KNRA				IAmb		IAmb	12 17 00.2	
	comp=Z,37nm,1.5s							
DAV	**Davao City (W)**	**24.16**	**54**	LR		LR	12 26 21.7	
	comp=Z,82nm,21.1s,baz=296,slow=36							
MTN	**Manton Dam**	**25.31**	**105**	P		P	12 17 08.5	+0.1
MTN				IAmb		IAmb	12 17 12.9	
	comp=Z,25nm,1.3s							
SIJI	**Sorong**	**25.95**	**77**	P		P	12 17 13.1	-1.2
	comp=Z,20nm,0.9s,baz=171,slow=22,SNR=6.4							
	comp=Z,20nm,0.9s							
FAKI	**Fak Fak**	**26.46**	**82**	P		P	12 17 19.2	+0.3
CMAR	**Chiang Mai Arr**	**26.52**	**345**	P		P	12 17 17.6	-1.7
	comp=Z,1.0nm,0.3s,baz=178,slow=8.3,SNR=10							
CMAR				PcP		PcP	12 20 44.1	+1.4
	comp=Z,1.1nm,0.6s,baz=210,slow=2.7,SNR=8.2							
CMAR				LR		LR	12 27 14.7	
	comp=Z,61nm,20.8s,baz=210,slow=35							
	comp=Z,1.0nm,0.3s							
H01W3	**Cape Leeuwin H**	**28.46**	**166**	T		T	12 48 07.0	
	baz=344,slow=76,SNR=60							
H01W1	**Cape Leeuwin H**	**28.47**	**166**	T		T	12 48 08.0	
	baz=344,slow=76,SNR=54							
H01W2	**Cape Leeuwin H**	**28.47**	**166**	T		T	12 48 08.0	
	baz=344,slow=76,SNR=55							
PALK	**Pallekele**	**29.11**	**299**	LR		LR	12 28 00.5	
	comp=Z,86nm,20.3s,baz=130,slow=33							
WB0	**Warramunga Arr**	**30.17**	**117**	P		P	12 17 53.0	+1.1
WB0				IAmb		IAmb	12 17 54.3	
	comp=Z,9.9nm,1.1s							
WRA	**Warramunga Arr**	**30.18**	**117**	P		P	12 17 52.8	+0.8
	comp=Z,3.7nm,0.9s,baz=303,slow=9.3,SNR=38							
WRA				PcP		PcP	12 20 53.3	+1.4
	comp=Z,0.7nm,0.4s,baz=309,slow=2.0,SNR=7.6							
	comp=Z,3.7nm,0.9s							
WRA	**Warramunga Arr**	**30.18**	**117**	P		P	12 17 53.1	+1.1
WRAB	**Tennant Creek**	**30.19**	**117**	P		P	12 17 53.4	+1.3
WRAB				IAmb		IAmb	12 17 54.3	
	comp=Z,8.8nm,1.1s							
AS31	**Alice Springs**	**31.31**	**124**	P		P	12 18 00.9	-1.0
ASAR	**Alice Springs**	**31.31**	**124**	P		P	12 18 03.1	+1.2
	comp=Z,0.8nm,0.5s,baz=300,slow=7.6,SNR=16							
ASAR				PcP		PcP	12 20 56.6	+1.9
	comp=Z,0.5nm,0.3s,baz=307,slow=2.3,SNR=5.4							
ASAR				LR		LR	12 31 53.6	
	comp=Z,56nm,18.0s,baz=300,slow=38							
	comp=Z,0.8nm,0.5s							
ASAR	**Alice Springs**	**31.31**	**124**	P		P	12 18 00.4	-1.5
H08S2	**Diego Garcia H**	**33.25**	**267**	T		T	12 53 43.9	
	baz=91,slow=76,SNR=56							
H08S3	**Diego Garcia H**	**33.26**	**267**	T		T	12 53 44.6	
	baz=91,slow=76,SNR=45							
H08S1	**Diego Garcia H**	**33.27**	**267**	T		T	12 53 48.7	
	baz=91,slow=76,SNR=44							
PZH	**PanZhiHua**	**33.85**	**353**	P		P	12 18 25.8	+1.7
PZH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
COEN	**Coen**	**37.06**	**103**	P		P	12 18 52.5	+0.7
COEN				IAmb		IAmb	12 18 56.2	
	comp=Z,8.3nm,0.8s							
EVN	**Everest**	**39.66**	**333**	P		P	12 19 11.8	-2.3
EVN				IAmb		IAmb	12 19 15.3	
	comp=Z,4.6nm,0.5s							
PMG	**Port Moresby**	**40.73**	**96**	P		P	12 19 23.7	+1.2
	comp=Z,10nm,0.7s,baz=282,slow=15,SNR=1.5							
	comp=Z,10nm,0.7s							
PMG	**Port Moresby**	**40.73**	**96**	P		P	12 19 23.5	+1.0
PMG				IAmb		IAmb	12 19 27.8	
	comp=Z,13nm,0.8s							
CTA	**Charters Tower**	**40.98**	**112**	P		P	12 19 25.6	+1.2
	comp=Z,2.6nm,0.8s,baz=239,slow=9.2,SNR=4.5							
CTA				LR		LR	12 38 46.6	
	comp=Z,42nm,18.0s,baz=244,slow=39							
	comp=Z,2.6nm,0.8s							
NJ2	**Nanjing**	**40.99**	**17**	*e*P		P	12 19 27.6	+3.4
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
STKA	**Stephens Creek**	**41.16**	**131**	P		P	12 19 27.9	+2.1
	comp=Z,1.7nm,0.4s,baz=322,slow=8.7,SNR=6.4							
STKA				LR		LR	12 39 08.2	
	comp=Z,55nm,18.3s,baz=222,slow=40							
	comp=Z,1.7nm,0.4s							
STKA	**Stephens Creek**	**41.16**	**131**	P		P	12 19 27.9	+2.1
STKA				IAmb		IAmb	12 19 28.7	
	comp=Z,32nm,1.1s							
XAN	**Xi'an**	**41.19**	**4**	⇑P		P	12 19 23.9	-2.1
XAN				pmax		pmax		
	comp=Z,5.0nm,0.8s							
LZDM	**Lanzhou Array**	**43.07**	**357**	PcP		PcP	12 21 30.8	+0.3
	comp=Z,1.0nm,0.4s,baz=198,slow=4.2,SNR=5.0							
GTA2	**Gaotai**	**46.90**	**353**	*e*P		P	12 20 11.0	-0.7
GTA2				pP		pP	12 20 27.1	-1.8
GTA2				PcP		PcP	12 21 44.8	+1.3
GTA2				pmax		pmax		
	comp=Z,5.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**48.17**	**6**	*e*P		P	12 20 26.8	+5.3
HHC				pmax		pmax		
	comp=Z,7.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,140nm,4.8s							
NIL	**Nilore**	**51.23**	**325**	P		P	12 20 43.4	-1.4
NIL				IAmb		IAmb	12 20 45.4	
	comp=Z,17nm,1.1s							
XLT	**XiLinHaoTe**	**51.75**	**9**	*e*P		P	12 20 48.4	-0.2
XLT				pmax		pmax		
	comp=Z,7.0nm,0.9s							
XLT				pmax		pmax		
	comp=Z,470nm,6.0s							
WUS	**Wushi**	**54.17**	**335**	IAmb		IAmb	12 21 06.3	
	comp=Z,8.5nm,1.2s							
KBL	**Kabul**	**54.34**	**322**			P	12 21 06.8	-1.1
KBL				IAmb		IAmb	12 21 08.2	
	comp=Z,8.1nm,0.7s							
SONM	**Songino Array**	**54.88**	**0**	P		P	12 21 10.3	-1.2
	comp=Z,1.3nm,0.5s,baz=172,slow=8.3,SNR=8.2							
SONM				PcP		PcP	12 22 13.0	+0.1
	comp=Z,4.5nm,0.6s,baz=177,slow=3.6,SNR=19							
	comp=Z,1.3nm,0.5s							
SONM	**Songino Array**	**54.88**	**0**	IAmb		IAmb	12 21 11.5	
	comp=Z,1.6nm,0.8s							
SHLS	**Shalkode**	**55.71**	**337**	*e*P		P	12 21 15.8	-1.8
KDJ	**Kajisay**	**55.80**	**334**			P	12 21 17.8	-0.5
KDJ				IAmb		IAmb	12 21 18.6	
	comp=Z,6.2nm,1.1s							
UZB	**Uzynbulak**	**55.88**	**336**	*e*P		P	12 21 17.9	-0.9
	comp=Z,5.1nm,0.6s							
KPKS	**Kokpek**	**56.28**	**336**	*e*P		P	12 21 21.1	-0.5
MDOK	**Medeo**	**56.70**	**335**	*e*P		P	12 21 24.1	-0.5
AAA	**Alma-Ata**	**56.79**	**335**	*e*P		P	12 21 24.7	-0.5
ARSB	**Arslanbob**	**57.09**	**331**	P		P	12 21 26.9	-0.5
ARSB				IAmb		IAmb	12 21 27.4	
	comp=Z,5.5nm,1.0s							
CHGR	**Chuyangaron**	**57.12**	**326**	P		P	12 21 26.1	-1.5
TDK	**Taldyorghan**	**57.67**	**337**	*e*P		P	12 21 30.9	-0.4
	comp=Z,2.7nm,0.5s							
MKAR	**Makanchi Array**	**57.84**	**341**	P		P	12 21 30.9	-1.4
	comp=Z,2.8nm,0.4s,baz=152,slow=8.6,SNR=47							
	comp=Z,2.8nm,0.4s							
MKAR	**Makanchi Array**	**57.84**	**341**			P	12 21 31.0	-1.4
HILR	**Hailar Array B**	**57.86**	**11**	P		P	12 21 30.2	-2.3
	comp=Z,3.8nm,0.6s,baz=188,slow=9.0,SNR=4.4							
HILR				PcP		PcP	12 22 24.9	+0.6
	comp=Z,2.2nm,0.4s,baz=163,slow=4.7,SNR=3.6							
	comp=Z,3.8nm,0.6s							
DZA	**Taraz**	**59.08**	**331**	*e*P		P	12 21 40.5	-0.7
	comp=Z,5.7nm,0.5s							
IUG	**Iuzhnay**	**59.17**	**329**	*e*P		P	12 21 41.0	-0.8
	comp=Z,5.6nm,0.6s							
BTLS	**Baital**	**59.49**	**334**	*e*P		P	12 21 43.5	-0.4
CHM	**Chimkent**	**59.51**	**329**	*e*P		P	12 21 43.5	-0.6
BRLS	**Borolday**	**59.91**	**330**	*e*P		P	12 21 45.6	-1.3
H04N2	**CROZET ISLANDS**	**60.42**	**220**	T		T	13 28 05.7	
	baz=68,slow=74,SNR=108							
H04N1	**CROZET ISLANDS**	**60.44**	**220**	T		T	13 28 05.0	
	baz=68,slow=74,SNR=99							
H04N3	**CROZET ISLANDS**	**60.44**	**220**	T		T	13 28 05.2	
	baz=68,slow=74,SNR=103							
H04S1	**CROZET ISLANDS**	**60.61**	**220**	T		T	13 28 14.8	
	baz=65							
H04S3	**CROZET ISLANDS**	**60.62**	**220**	T		T	13 28 13.9	
	baz=65							
H04S2	**CROZET ISLANDS**	**60.63**	**220**	T		T	13 28 14.8	
	baz=65							
KURBB	**Kurchatov Arra**	**62.40**	**341**	P		P	12 22 02.1	-1.4
	comp=Z,1.1nm,0.5s,baz=152,slow=6.4,SNR=12							
KURBB				PcP		PcP	12 22 42.6	+0.3
	comp=Z,1.5nm,0.5s,baz=148,slow=3.6,SNR=10							
	comp=Z,1.1nm,0.5s							
KURK	**Kurchatov**	**62.45**	**341**			P	12 22 02.8	-1.0
KURK				IAmb		IAmb	12 22 04.8	
	comp=Z,3.8nm,1.0s							
ZAA0	**Zalesovo Array**	**63.58**	**346**	P		P	12 22 09.6	-1.7
ZALV	**Zalesovo Beam**	**63.58**	**346**	P		P	12 22 09.5	-1.8
	comp=Z,1.2nm,0.3s,baz=163,slow=4.9,SNR=9.7							
	comp=Z,1.2nm,0.3s							
ZALV	**Zalesovo Beam**	**63.58**	**346**	P		P	12 22 09.7	-1.5
BRZS	**Berezniki**	**63.98**	**337**	*e*P		P	12 22 13.8	-0.2
BVAR	**Borovoye Array**	**67.26**	**338**	P		P	12 22 34.2	-0.8
	comp=Z,3.1nm,0.3s,baz=146,slow=8.0,SNR=30							
	comp=Z,3.1nm,0.3s							
BORK	**Borovoye**	**67.31**	**338**			P	12 22 34.7	-0.6
BORK				IAmb		IAmb	12 22 36.1	
	comp=Z,6.4nm,0.8s							
AB31	**Akbulak array**	**69.17**	**330**			P	12 22 47.0	-0.1
ABKAR	**Akbulak array**	**69.17**	**330**			P	12 22 47.0	-0.1
AKTO	**Aktyubinsk**	**70.89**	**330**	P		P	12 22 57.5	-0.1
	comp=Z,2.6nm,0.3s,baz=137,slow=3.6,SNR=16							
	comp=Z,2.6nm,0.3s							
RAO	**Raoul Island**	**74.32**	**118**	LR		LR	12 57 30.9	
	comp=Z,317nm,18.1s,baz=126,slow=37							
ARTI	**Arti**	**74.52**	**335**	P		P	12 23 19.2	+0.2
	comp=Z,14nm,0.3s,baz=134,slow=5.3,SNR=28							
	comp=Z,14nm,0.3s							
ARTI	**Arti**	**74.52**	**335**	P		P	12 23 18.9	-0.1
KBZ	**Khabaz**	**76.22**	**318**	P		P	12 23 29.8	+0.8
	comp=Z,8.6nm,0.9s,baz=186,slow=5.6,SNR=20							
	comp=Z,8.6nm,0.8s							
MMAI	**Mount Meron Ar**	**77.99**	**306**	P		P	12 23 41.4	+2.0
	comp=Z,1.7nm,0.4s,baz=83,slow=7.1,SNR=4.6							
	comp=Z,1.7nm,0.4s							
CSS	**Mathiatis**	**80.19**	**307**	P		P	12 23 53.1	+1.9
	comp=Z,18nm,0.9s							
**TIXI

MWZ	**Matawai**	**0.93**	**102**	P	**Pn**	**12 17 05.4**	**-0.1**
MWZ				S	**Sn**	**12 17 23.5**	**-2.3**
RAHZ	**Arahi**	**0.95**	**144**	P	**Pn**	**12 17 06.5**	**+0.8**
RAHZ				S	**Sn**	**12 17 25.8**	**-0.4**
KATZ	**Kakaramea**	**0.98**	**213**	P	**Pn**	**12 17 06.6**	**+0.6**
SNGZ	**Shannon Statio**	**0.99**	**130**	P	**Pn**	**12 17 06.7**	**+0.8**
SNGZ				S	**Sn**	**12 17 25.4**	**-1.3**
NMHZ	**Naumai**	**1.00**	**160**	P	**Pn**	**12 17 07.4**	**+1.3**
NMHZ				S	**Sn**	**12 17 27.7**	**+0.6**
BKZ	**Black Stump Fm**	**1.02**	**175**	P	**Pn**	**12 17 06.2**	**0.0**
BKZ	**Black Stump Fm**	**1.02**	**175**	S	**Sn**	**12 17 26.5**	**-0.7**
BKZ	**Black Stump Fm**	**1.02**	**175**	P	**Pn**	**12 17 06.7**	**+0.4**
BKZ				S	**Sn**	**12 17 25.7**	**-1.5**
RUGZ	**Raukumara Rang**	**1.05**	**80**	P	**Pn**	**12 17 05.3**	**-1.2**
NTVZ	**North Tongarir**	**1.09**	**210**	P	**Pn**	**12 17 07.6**	**+0.7**
TMVZ	**Te Maari**	**1.10**	**208**	P	**Pn**	**12 17 07.6**	**+0.7**
KRVZ	**Karewarewa**	**1.10**	**211**	P	**Pn**	**12 17 07.6**	**+0.7**
ETVZ	**East Tongariro**	**1.11**	**208**	P	**Pn**	**12 17 07.8**	**+0.7**
WTVZ	**West Tongariro**	**1.14**	**212**	P	**Pn**	**12 17 08.0**	**+0.7**
WHHZ	**Waihua**	**1.15**	**144**	P	**Pn**	**12 17 08.2**	**+1.0**
NNVZ	**North Ngauruho**	**1.15**	**211**	P	**Pn**	**12 17 08.1**	**+0.8**
OTVZ	**Oturere**	**1.15**	**208**	P	**Pn**	**12 17 08.4**	**+1.0**
TWVZ	**Taurewa**	**1.18**	**218**	P	**Pn**	**12 17 08.3**	**+0.8**
HAZ	**Te Kaha**	**1.18**	**71**	P	**Pn**	**12 17 06.5**	**-0.9**
HAZ				S	**Sn**	**12 17 25.8**	**-3.4**
SNVZ	**South Ngauruho**	**1.18**	**209**	P	**Pn**	**12 17 08.5**	**+0.8**
NGZ	**Ngauruhoe**	**1.19**	**210**	P	**Pn**	**12 17 08.6**	**+0.9**
TKGZ	**Te Karaka**	**1.20**	**104**	P	**Pn**	**12 17 08.1**	**+0.5**
ARHZ	**Aropaoanui**	**1.21**	**157**	P	**Pn**	**12 17 09.0**	**+1.2**
RIGZ	**Rimuhau**	**1.22**	**117**	P	**Pn**	**12 17 08.6**	**+0.7**
COVZ	**Chateau Observ**	**1.23**	**212**	P	**Pn**	**12 17 08.6**	**+0.6**
HIZ	**Hauiti**	**1.25**	**208**	P	**Pn**	**12 17 08.5**	**+0.5**
HIZ	**Hauiti**	**1.25**	**253**	P	**Pn**	**12 17 08.9**	**+0.8**
TUVZ	**Tukino**	**1.25**	**207**	P	**Pn**	**12 17 09.2**	**+0.9**
TWGZ	**Tauwhareparae**	**1.27**	**92**	P	**Pn**	**12 17 08.9**	**+0.6**
KWHZ	**Kaweka Forest**	**1.27**	**178**	P	**Pn**	**12 17 09.3**	**+0.9**
FWVZ	**Far West T-bar**	**1.28**	**210**	P	**Pn**	**12 17 09.2**	**+0.6**
MAVZ	**Matarangi**	**1.28**	**209**	P	**Pn**	**12 17 09.4**	**+0.7**
WHVZ	**Whangaehu Hut**	**1.29**	**208**	P	**Pn**	**12 17 09.5**	**+0.8**
TRVZ	**Turoa**	**1.32**	**209**	P	**Pn**	**12 17 09.6**	**+0.6**
MCHZ	**McNeill Hill**	**1.32**	**169**	P	**Pn**	**12 17 10.1**	**+1.4**
WNVZ	**Wahianoa**	**1.32**	**207**	P	**Pn**	**12 17 09.7**	**+0.8**
KNZ	**Kokohu**	**1.34**	**131**	P	**Pn**	**12 17 09.5**	**+0.7**
MOVZ	**Moawhango**	**1.34**	**201**	P	**Pn**	**12 17 09.5**	**+0.5**
PKGZ	**Pakihiroa**	**1.38**	**79**	P	**Pn**	**12 17 09.0**	**-0.2**
PKVZ	**Pokaka**	**1.39**	**215**	P	**Pn**	**12 17 10.3**	**+0.9**
PRGZ	**Paritu Road**	**1.41**	**124**	P	**Pn**	**12 17 10.3**	**+0.7**
MKAZ	**Moumakai**	**1.42**	**317**	P	**Pn**	**12 17 09.7**	**0.0**
MTVZ	**Mangateitei**	**1.42**	**210**	P	**Pn**	**12 17 10.7**	**+1.0**
CNGZ	**Carnagh Statio**	**1.48**	**104**	P	**Pn**	**12 17 11.2**	**+1.0**
PUZ	**Puketitiri**	**1.49**	**88**	P	**Pn**	**12 17 10.2**	**-0.2**
KRHZ	**Kereru**	**1.49**	**180**	P	**Pn**	**12 17 11.1**	**+0.8**
KUZ	**Kuaotunu**	**1.50**	**340**	P	**Pn**	**12 17 09.5**	**-0.9**
KUZ	**Kuaotunu**	**1.50**	**340**	P	**Pn**	**12 17 09.9**	**-0.5**
MHGZ	**Mahia Peninsul**	**1.56**	**130**	P	**Pn**	**12 17 12.2**	**+1.2**
KBAZ	**Karaka Road Bo**	**1.58**	**311**	P	**Pn**	**12 17 11.5**	**+0.3**
VRZ	**Vera Road**	**1.59**	**232**	P	**Pn**	**12 17 12.6**	**+1.3**
CKHZ	**Cape Kidnapper**	**1.60**	**160**	P	**Pn**	**12 17 12.7**	**+1.3**
MXZ	**Matakaoa Point**	**1.64**	**70**	P	**Pn**	**12 17 11.7**	**-0.1**
MXZ	**Matakaoa Point**	**1.64**	**70**	S	**Sn**	**12 17 35.9**	**-1.1**
MXZ	**Matakaoa Point**	**1.64**	**70**	P	**Pn**	**12 17 11.9**	**+0.1**
WMGZ	**Waiomatatini S**	**1.65**	**79**	P	**Pn**	**12 17 11.9**	**+0.1**
ETAZ	**East Tamaki Re**	**1.66**	**316**	P	**Pn**	**12 17 12.1**	**+0.1**
WIAZ	**Waiheke Island**	**1.68**	**324**	P	**Pn**	**12 17 12.3**	**+0.1**
KAHZ	**Kahuranaki**	**1.69**	**167**	P	**Pn**	**12 17 13.6**	**+1.3**
AWAZ	**Awhitu Peninsu**	**1.75**	**308**	P	**Pn**	**12 17 13.1**	**+0.1**
PNHZ	**Pukenui**	**1.77**	**184**	P	**Pn**	**12 17 13.7**	**+0.5**
MBAZ	**Motutapu North**	**1.81**	**319**	P	**Pn**	**12 17 13.8**	**+0.3**
EPAZ	**Eden Park BICE**	**1.82**	**314**	P	**Pn**	**12 17 13.6**	**0.0**
WTAZ	**Waiatarua**	**1.88**	**310**	P	**Pn**	**12 17 14.6**	**+0.3**
WPHZ	**Waipukurau**	**1.91**	**178**	P	**Pn**	**12 17 15.4**	**+0.8**
PXZ	**Pawanui**	**1.92**	**169**	P	**Pn**	**12 17 15.7**	**+1.0**
TSZ	**Takapari Road**	**1.93**	**189**	P	**Pn**	**12 17 15.5**	**+0.6**
WAZ	**Wanganui**	**1.93**	**214**	P	**Pn**	**12 17 16.0**	**+1.1**
ABAZ	**Army Bay**	**1.98**	**321**	P	**Pn**	**12 17 15.9**	**+0.5**
RVAZ	**Riverhead Bore**	**1.98**	**313**	P	**Pn**	**12 17 15.4**	**0.0**
DREZ	**Durham Road**	**1.99**	**238**	P	**Pn**	**12 17 17.6**	**+2.1**
LREZ	**Lake Rotokare**	**2.02**	**229**	P	**Pn**	**12 17 17.5**	**+1.7**
GRZ	**Great Barrier**	**2.03**	**339**	P	**Pn**	**12 17 15.9**	**-0.1**
PRHZ	**Porangahau**	**2.12**	**175**	P	**Pn**	**12 17 17.8**	**+0.8**
PKE	**Pukeiti**	**2.14**	**240**	P	**Pn**	**12 17 19.0**	**+1.8**
DVHZ	**Dannevirke**	**2.15**	**184**	P	**Pn**	**12 17 17.7**	**+0.4**
KHEZ	**Kahui Hut**	**2.17**	**238**	P	**Pn**	**12 17 19.1**	**+1.5**
KHEZ	**Kahui Hut**	**2.17**	**238**	P	**Pn**	**12 17 19.7**	**+2.1**
OHKZ	**Ohakea**	**2.25**	**253**	P	**Pn**	**12 17 19.5**	**+1.4**
NBEZ	**Newall Road No**	**2.25**	**240**	P	**Pn**	**12 17 20.6**	**+2.1**
POWZ	**Post Office Ro**	**2.29**	**192**	P	**Pn**	**12 17 19.2**	**+0.4**
ANWZ	**Angora Road**	**2.31**	**178**	P	**Pn**	**12 17 19.9**	**+0.8**
NMEZ	**Namu Road**	**2.32**	**236**	P	**Pn**	**12 17 21.1**	**+1.9**
PRWZ	**Pori Road**	**2.42**	**187**	P	**Pn**	**12 17 21.0**	**+0.6**
BFZ	**Birch Farm**	**2.53**	**182**	P	**Pn**	**12 17 21.6**	**-0.1**
BFZ	**Birch Farm**	**2.53**	**182**	S	**Sn**	**12 17 53.5**	**-1.4**
BFZ	**Birch Farm**	**2.53**	**182**	P	**Pn**	**12 17 22.0**	**+0.3**
MRZ	**Mangatainoka R**	**2.58**	**194**	P	**Pn**	**12 17 22.3**	**+0.1**
TIWZ	**Tintock**	**2.65**	**188**	P	**Pn**	**12 17 23.4**	**+0.3**
WCZ	**Waipu Caves**	**2.74**	**323**	P	**Pn**	**12 17 24.6**	**+0.3**
CPWZ	**Castlepoint**	**2.76**	**183**	P	**Pn**	**12 17 25.2**	**+0.8**
OGWZ	**Otaki Gorge**	**2.82**	**199**	P	**Pn**	**12 17 25.2**	**0.0**
HOWZ	**Holdsworth Sta**	**2.82**	**193**	P	**Pn**	**12 17 25.0**	**-0.2**
KIW	**Kapiti Island**	**2.93**	**202**	P	**Pn**	**12 17 26.1**	**-0.4**
TMWZ	**Te Maipa**	**2.98**	**187**	P	**Pn**	**12 17 26.9**	**-0.2**
MTW	**Mount Morrison**	**3.08**	**192**	P	**Pn**	**12 17 27.8**	**-0.5**
CAW	**Cannon Point**	**3.12**	**198**	P	**Pn**	**12 17 28.0**	**-0.5**
DUWZ	**D'Urville Isla**	**3.26**	**215**	P	**Pn**	**12 17 29.9**	**-0.7**
TRWZ	**Traveller**	**3.29**	**189**	P	**Pn**	**12 17 30.4**	**-0.5**
PAWZ	**Paruwai Farm**	**3.31**	**192**	P	**Pn**	**12 17 30.5**	**-0.7**
WEL	**Wellington**	**3.37**	**201**	P	**Pn**	**12 17 31.3**	**-0.6**
MSWZ	**Moikau Station**	**3.37**	**195**	P	**Pn**	**12 17 31.2**	**-0.8**
SNZO	**South Karori**	**3.41**	**202**	P	**Pn**	**12 17 31.3**	**-1.1**
SNZO	**South Karori**	**3.41**	**202**	S	**Sn**	**12 18 12.9**	**-1.1**
BHW	**Baring Head**	**3.45**	**199**	P	**Pn**	**12 17 32.1**	**-0.9**
TCW	**Tory Channel**	**3.46**	**207**	P	**Pn**	**12 17 32.2**	**-0.9**
OUZ	**Omahuta**	**3.68**	**322**	P	**Pn**	**12 17 36.4**	**+0.5**
OUZ	**Omahuta**	**3.68**	**322**	P	**Pn**	**12 17 36.8**	**+0.9**
TUWZ	**Tuamarina**	**3.77**	**209**	P	**Pn**	**12 17 36.2**	**-0.8**
NNZ	**Nelson**	**3.84**	**216**	P	**Pn**	**12 17 37.0**	**-0.8**
TKNZ	**Takaka Hill**	**3.90**	**221**	P	**Pn**	**12 17 38.0**	**-0.7**
QRZ	**Quartz Range**	**4.00**	**227**	P	**Pn**	**12 17 38.5**	**-1.4**
QRZ	**Quartz Range**	**4.00**	**227**	S	**Sn**	**12 18 26.9**	**-0.5**
QRZ	**Quartz Range**	**4.00**	**227**	P	**Pn**	**12 17 38.5**	**-1.4**
BSWZ	**Blackbirch Sta**	**4.04**	**208**	P	**Pn**	**12 17 39.7**	**-0.8**
MRNZ	**Matariki Terra**	**4.28**	**220**	P	**Pn**	**12 17 42.2**	**-1.3**
THZ	**Tophouse**	**4.49**	**215**	P	**Pn**	**12 17 45.4**	**-0.9**
KHZ	**Kahutara**	**4.78**	**206**	P	**Pn**	**12 17 48.7**	**-1.3**
KHZ	**Kahutara**	**4.78**	**206**	S	**Sn**	**12 18 43.4**	**-2.1**
KHZ	**Kahutara**	**4.78**	**206**	P	**Pn**	**12 17 48.7**	**-1.3**
DSZ	**Denniston Nort**	**5.02**	**223**	P	**Pn**	**12 17 52.7**	**-0.5**
GVZ	**Greta Valley S**	**5.44**	**207**	P	**Pn**	**12 17 56.8**	**-1.8**
LTZ	**Lake Taylor**	**5.58**	**213**	P	**Pn**	**12 17 58.7**	**-1.9**
AMCZ	**Amberley**	**5.76**	**208**	P	**Pn**	**12 18 01.1**	**-1.7**
INZ	**Inchbonnie**	**5.92**	**218**	P	**Pn**	**12 18 04.8**	**-0.1**
OKCZ	**Okains Bay**	**6.11**	**203**	P	**Pn**	**12 18 05.5**	**-1.9**
OXZ	**Oxford**	**6.13**	**211**	P	**Pn**	**12 18 05.6**	**-2.1**
MQZ	**McQueen's Vall**	**6.22**	**206**	P	**Pn**	**12 18 06.0**	**-2.9**
AKCZ	**Akaroa Harbour**	**6.29**	**204**	P	**Pn**	**12 18 07.6**	**-2.1**
RACZ	**Rakaia**	**6.43**	**209**	P	**Pn**	**12 18 09.0**	**-2.5**
MHCZ	**Mount Hutt**	**6.49**	**213**	P	**Pn**	**12 18 10.7**	**-1.8**
WACZ	**Wakanui South**	**6.72**	**209**	P	**Pn**	**12 18 13.5**	**-2.0**
RPZ	**Rata Peaks**	**6.86**	**214**	Pn	**Pn**	**12 18 15.2**	**-2.2**
	1.3nm,0.3s,baz=25,slow=0.5,SNR=8.9						
RPZ				Sn	**Sn**	**12 19 28.3**	**-6.4**
	7.1nm,0.3s,baz=302,slow=0.5,SNR=9.1						
	4.1nm,0.4s						
RPZ	**Rata Peaks**	**6.86**	**214**	P	**Pn**	**12 18 16.0**	**-1.4**
RPZ	**Rata Peaks**	**6.86**	**214**	P	**Pn**	**12 18 16.2**	**-1.2**
ARCZ	**Arundel**	**7.00**	**212**	P	**Pn**	**12 18 17.8**	**-1.3**
TMZ	**Timaru**	**7.42**	**211**	P	**Pn**	**12 18 22.8**	**-1.9**
CTZ	**Chatham Island**	**7.70**	**139**	P	**Pn**	**12 18 30.6**	**+2.2**
LBZ	**Lake Benmore**	**7.78**	**215**	P	**Pn**	**12 18 29.0**	**-0.4**
ODZ	**Otahua Downs**	**8.11**	**210**	P	**Pn**	**12 18 32.2**	**-1.6**
ODZ	**Otahua Downs**	**8.11**	**210**	P	**Pn**	**12 18 32.1**	**-1.8**
JCZ	**Jackson Bay**	**8.23**	**222**	P	**Pn**	**12 18 35.5**	**0.0**
JCZ	**Jackson Bay**	**8.23**	**222**	P	**Pn**	**12 18 35.9**	**+0.4**
WHZ	**Wether Hill Ro**	**9.95**	**216**	P	**Pn**	**12 18 57.4**	**-0.6**
ASAR	**Alice Springs**	**38.85**	**279**	P	**P**	**12 23 50.4**	**+2.6**
	0.4nm,0.5s,baz=127,slow=8.0,SNR=9.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**40.58**	**284**	P	**P**	**12 24 04.0**	**+1.9**
	0.1nm,0.3s,baz=124,slow=8.2,SNR=6.0						
	0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**154.65**	**192**	PKPbc	**PKPab**	**12 36 37.0**	**+1.6**
	0.5nm,0.4s,baz=138,slow=3.6,SNR=5.9						

SVSA 17 12:31:24.3±0.4, 38.72N×27.22W, h7km±3km, Error ellipse: s-maj=1.6km s-min=1.3km az=57.0, #DIST_RANGE: LOCAL #IPMA_REGION: Caldeira Guilherme Moniz, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAGU	**Agualva, Azore**	**0.05**	**31**	*eP*	Pg	12 31 25.8	-0.2
PAGU				*eS*	Sg	12 31 27.0	-0.1
PAGU	**Agualva, Azore**	**0.05**	**31**	*eP*	Pg	12 31 25.8	-0.2
PAGU				*eS*	Sg	12 31 27.0	-0.1
PAGU				IAML		12 31 27.1	
PAGU				IAML		12 31 27.2	
ADH	**Angra Heroismo**	**0.07**	**192**	*eP*	Pg	12 31 25.9	-0.3
ADH				*eS*	Sg	12 31 27.4	-0.1
ADH	**Angra Heroismo**	**0.07**	**192**	*eP*	Pg	12 31 25.8	-0.3
ADH				*eS*	Sg	12 31 27.3	-0.1
PSCM	**Serra do Cume**	**0.08**	**107**	*eP*	Pg	12 31 26.2	-0.1
PSCM	**Serra do Cume**	**0.08**	**107**	*eP*	Pg	12 31 26.2	-0.1
PSBA	**Serra de Santa**	**0.10**	**297**	*eP*	Pg	12 31 26.7	+0.1

SVSA 17 12:31:26.9±1.4, 38.73N×27.22W, h3km, ML2.5(INMG), Error ellipse: s-maj=3.4km s-min=3.2km az=67.0, #DIST_RANGE: LOCAL #IPMA_REGION: Caldeira Guilherme Moniz, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAGU	**Agualva, Azore**	**0.05**	**32**	*eP*	Pg	12 31 28.0	0.0
PAGU				*eS*	Sg	12 31 29.2	+0.5
PAGU				IAML		12 31 29.5	
PAGU				IAML		12 31 29.7	
PAGU				IAML		12 31 30.1	
ADH	**Angra Heroismo**	**0.07**	**192**	*eP*	Pg	12 31 28.1	-0.3
ADH				*eS*	Sg	12 31 29.6	+0.2
ADH				IAML		12 31 29.7	
ADH				IAML		12 31 29.8	
ADH				IAML		12 31 30.0	
ADH	**Angra Heroismo**	**0.07**	**192**	*eP*	Pg	12 31 28.1	-0.3
ADH				*eS*	Sg	12 31 29.6	+0.2
ADH				IAML		12 31 29.7	
ADH				IAML		12 31 29.8	
ADH				IAML		12 31 30.0	
PSCM	**Serra do Cume**	**0.08**	**109**	*eP*	Pg	12 31 28.2	-0.3
PSCM				*eS*	Sg	12 31 30.1	+0.5
PSCM				IAML		12 31 30.6	
PSCM				IAML		12 31 30.6	
PSCM				IAML		12 31 30.7	
PSBA	**Serra de Santa**	**0.09**	**295**	*eP*	Pg	12 31 28.2	-0.6
PSBA				*eS*	Sg	12 31 30.1	0.0
PSBA				IAML		12 31 30.3	
PSBA				IAML		12 31 30.7	
PSBA				IAML		12 31 31.1	
PMAN	**Manadas**	**0.69**	**262**	*eS*	Sg	12 31 47.8	-1.3
PMAN				IAML		12 31 47.9	
PMAN				IAML		12 31 48.0	
PMAN				IAML		12 31 48.2	
PMAN	**Manadas**	**0.69**	**262**	*eS*	Sg	12 31 47.7	-1.4
PMAN				IAML		12 31 47.9	
PMAN				IAML		12 31 48.0	
PMAN				IAML		12 31 48.2	
ROSA	**Rosais**	**0.80**	**270**	*eS*	Sg	12 31 50.7	-2.0
ROSA				IAML		12 31 51.1	
ROSA				IAML		12 31 51.1	
ROSA				IAML		12 31 51.3	
ROSA	**Rosais**	**0.80**	**270**	*eS*	Sg	12 31 50.7	-2.0
ROSA				IAML		12 31 51.0	
ROSA				IAML		12 31 51.1	
ROSA				IAML		12 31 51.3	

*IDC **17** 12:32:17.8±9.2, 18°.49S×177°.92W, h571km±100km, mb2.9/6, mbtmp3.8/6, Error ellipse: s-maj=66.4km s-min=28.9km az=129.0*
*NEIC **17** 12:32:18.8±0.9, 18°.3S±0°.2×178°.0W±0°.2, h575km±10km, mb4.2/11, Error ellipse: s-maj=39.4km s-min=10.9km az=132.0*

ISC 17 12:32:18.5±1.3, 18°.5S±0°.2×177°.9W±0°.2, h583km±11km, n25, σ0°.84/30, mb3.8/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.95**	**280**	P	**P**	**12 33 43.3**	**+0.9**
AFI	**Afiamalu**	**7.40**	**53**	P	**P**	**12 34 10.5**	**-1.1**
ARMA	**Armidale**	**30.11**	**241**	P	**P**	**12 37 42.6**	**+0.3**
ARMA				IAmb	IAmb	12 38 03.0	
	comp=Z,17nm,1.4s						
WB0	**Warramunga Arr**	**45.01**	**260**	P	**P**	**12 39 42.7**	**-0.6**
WB0				IAmb	IAmb	12 40 15.4	
	comp=Z,3.8nm,1.1s						
WB0				PcP	**PcP**	**12 41 10.5**	**-1.3**
WRA	**Warramunga Arr**	**45.04**	**260**	P	**P**	**12 39 42.9**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=98,slow=6.9,SNR=20						
WRA				PcP	**PcP**	**12 41 11.9**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=90,slow=3.5,SNR=1.7						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**45.04**	**260**	P	**P**	**12 39 42.0**	**-1.5**
WRA					**PcP**	**12 41 11.5**	**-0.3**
AS31	**Alice Springs**	**45.14**	**255**	P	**P**	**12 39 44.2**	**-0.1**
AS31				PcP	**PcP**	**12 41 12.7**	**+0.5**
ASAR	**Alice Springs**	**45.14**	**255**	P	**P**	**12 39 44.0**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=95,slow=7.4,SNR=27						
ASAR				PcP	**PcP**	**12 41 12.3**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=104,slow=3.9,SNR=4.9						
	comp=Z,0.7nm,0.4s						
NWAO	**Narrogin (SRO)**	**59.41**	**242**	P	**P**	**12 41 26.1**	**+0.1**
TPUB	**Ta-pu**	**72.99**	**302**	P	**P**	**12 42 49.9**	**-0.3**
PETK	**Petropavlovsk-**	**74.34**	**345**	P	**P**	**12 42 57.7**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=105,slow=8.0,SNR=8.1						
	comp=Z,1.3nm,0.6s						
PETK	**Petropavlovsk-**	**74.34**	**345**	P	**P**	**12 42 56.2**	**-1.0**
SEY	**Seymchan**	**84.43**	**347**	P	**P**	**12 43 50.0**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=105,slow=19,SNR=4.2						
	comp=Z,0.8nm,0.3s						
TXAR	**Lajitas Array**	**85.86**	**57**	P	**P**	**12 43 58.6**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=232,slow=4.7,SNR=1.5						
	comp=Z,0.1nm,0.5s						
ILAR	**Eielson Array**	**86.31**	**13**	P	**P**	**12 43 58.9**	**0.0**
	comp=Z,0.2nm,0.4s,baz=222,slow=4.6,SNR=7.3						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**86.31**	**13**	P	**P**	**12 44 00.0**	**+1.1**
M29M	**Somme Creek**	**86.42**	**17**	P	**P**	**12 43 59.5**	**-0.2**
M29M				IAmb	IAmb	12 44 40.6	
	comp=Z,5.5nm,1.4s						
J26L	**Joseph Creek**	**86.81**	**14**	P	**P**	**12 44 03.0**	**+1.6**
J26L				IAmb	IAmb	12 44 16.8	
	comp=Z,5.9nm,1.5s						
M30M	**Minto, Yukon**	**87.00**	**18**	P	**P**	**12 44 03.8**	**+1.5**
M30M				IAmb	IAmb	12 44 04.0	
	comp=Z,6.8nm,1.4s						
D19K	**Kuna River**	**87.89**	**7**	P	**P**	**12 44 06.7**	**+0.4**
D19K				IAmb	IAmb	12 44 50.9	
	comp=Z,5.8nm,1.4s						
GCMT	**Greycliff**	**88.75**	**41**	P	**P**	**12 44 11.4**	**+0.4**
D22K	**Ayikyak River**	**88.97**	**9**	P	**P**	**12 44 11.9**	**+0.6**
D22K				IAmb	IAmb	12 44 47.2	
	comp=Z,7.5nm,1.4s						
BMAR	**Burnt Mountain**	**89.09**	**12**	P	**P**	**12 44 11.7**	**-0.2**
BRTR	**Keskin Array B**	**145.53**	**315**	PKPdf	**PKPdf**	**12 50 50.1**	**-1.3**
CLL	**Collm**	**146.11**	**348**	PKPbc	**PKPbc**	**12 50 53.7**	**-0.2**

*BJI **17** 12:54:50.7, 28°.51N×142°.71E, h14km, mB5.6/50, mb5.1/77, Ms5.2/91, Ms7 5.0/88*
*MOS **17** 12:54:51.5±0.9, 28°.57N×142°.66E, h9km, mb5.4/57, MS4.9/14, Error ellipse: s-maj=8.4km s-min=4.0km az=115.2*
*IDC **17** 12:54:51.6±0.5, 28°.57N×142°.69E, h0km, mb4.7/28, mbtmp4.7/33, ML4.1/5, MS4.8/73, Error ellipse: s-maj=15.2km s-min=12.7km az=63.0*
*NEIC **17** 12:54:54.0±1.9, 28°.60N±0°.04×142°.66E±0°.06, h10km±1km, mb5.3/385, Mww5.3/40, Error ellipse: s-maj=11.0km s-min=4.0km az=48.0*
*GFZ **17** 12:54:53.8, 28°.56N×142°.75E, h10km, MW5.4, Moment Tensor Solution. s71 Moment tensor: Mrr0.86; Mθθ0.09; Mϕϕ-0.95; Mrθ0.01; Mθϕ0.09; Mϕr1.36; Fault plane solution: NP1:φs170.00000°, δ17.00000°, λ80.00000°. NP2:φs360.00000°, δ73.00000°, λ93.00000°. Principal axes: T 1.5900, Plg62.0000°, Azm274.0000°; N 0.0900, Plg3.0000°, Azm179.0000°; P -1.6800, Plg28.0000°, Azm87.0000°;*
*NEIC **17** 12:54:54, 28°.60N×142°.66E, h14km*
*NEIC **17** 12:54:54, 28°.50N×142°.77E, h14km, Moment Tensor Solution. Duration: 2s4 Moment tensor: Scale 10^17^Nm; Mrr0.97; Mθθ0.20; Mϕϕ-1.17; Mrθ0.36; Mθϕ0.10; Mϕr0.46; Fault plane solution: Mo1.23000×10^17^ NP1: φs154.90000°, δ38.00000°, λ55.77000°. NP2:φs15.71000°, δ59.40000°, λ113.73000°. Principal axes: T 1.1994, Plg67.0000°, Azm331.0000°; N 0.0669, Plg20.0000°, Azm183.0000°; P -1.2663, Plg11.0000°, Azm89.0000°;*
*JMA **17** 12:54:54.8±0.2, 28°.7N±0°.6×14°.2E±°, h41km, MV5.1/39, MW5.3/39, NEAR CHICHIJIMA ISLAND*
*NIED **17** 12:54:54.8, 28°.67N×142°.44E, h41km, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr5.08; Mθθ0.65; Mϕϕ-5.73; Mrθ-4.99; Mθϕ4.05; Mϕr-4.31; Fault plane solution: Mo9.22000×10^16^ NP1: φs304.00000°, δ48.00000°, λ35.00000°. NP2: φs189.00000°, δ65.00000°, λ132.00000°.*
*GCMT **17** 12:54:57.0±0.1, 28°.52N±0°.01×142°.87E±0°.01, h12km, MW5.3/149, Moment Tensor Solution. s75,c140; s149,c265; Duration: 1s1 Moment tensor: Scale 10^17^ Nm; Mrr1.04±.01; Mθθ0.12±.01; Mϕϕ-1.17±.01; Mrθ0.11±.04; Mθϕ0.08±.01; Mϕr0.48±.03; Best double couple: Mo1.21400×10^17^ NP1:φs169.00000°, δ34.00000°, λ77.00000°. NP2:φs4.00000°, δ57.00000°, λ99.00000°. Principal axes: T 1.1550, Plg76.0000°, Azm300.0000°; N 0.1110, Plg7.0000°, Azm179.0000°; P -1.2730, Plg12.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 12:54:55.1±0.5, 28°.62N±0°.03×142°.62E±0°.04, h20km±2km, h19km: pP-P, n856, σ1s40/742, mb5.2/304, MS4.9/108, 27C-17D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.56**	**194**	*eP*	**Pn**	**12 55 21.3**	**-0.5**
CBIJ				A	A	12 55 21.3	
	comp=N,173nm,4.7s,comp=E,316nm,5.3s						
CBIJ				*eS*	**Sn**	**12 55 40.7**	**-0.9**
JCJ	**Chichijima**	**1.56**	**194**	Pn	Pn	12 55 08.6	-13
	comp=E,55nm,0.3s,baz=274,slow=22,SNR=25						
JCJ				Sn	Sn	12 55 29.1	-13
	comp=E,263nm,0.3s,baz=283,slow=23,SNR=11						
JCJ	**Chichijima**	**1.56**	**194**		**Pn**	**12 55 20.9**	**-1.0**
JHH2	**Haha-jima-NKT2**	**2.02**	**191**	*eP*	**Pn**	**12 55 27.9**	**-0.2**
JHH2				A	A	12 55 27.9	
	comp=N,132nm,4.6s,comp=E,211nm,5.2s						
JHJ2	**Mitsune**	**5.09**	**332**	Pn	**Pn**	**12 56 10.9**	**+0.7**
JHJ2				Sn	**Sn**	**12 57 06.8**	**-1.6**
JHJ2	**Mitsune**	**5.09**	**332**	*eS*	**Sn**	**12 57 05.9**	**-2.5**
JHJ	**Hachijo jima 2**	**5.11**	**332**	Pn	**

comp=E,2μm,4.7s
YSS MLR MLR
comp=Z,3μm,17.0s
YSS MLR MLR
comp=N,4μm,16.0s
YSS MLR MLR
comp=E,4μm,14.0s
SSE Sheshan 18.75 283 P P 12 59 12.5 -0.4
SSE S **Sn 13 02 43.8 +1.1**
SSE pmax pmax
comp=E,510nm,5.5s
SSE LR LR
comp=E,1μm,14.2s
SSE LR LR
comp=E,940nm,15.2s
MDJ Mudanjiang 19.05 330 P 12 59 15.2 -0.8
MDJ IAmb IAmb 12 59 19.5
comp=Z,222nm,1.4s
MDJ Mudanjiang 19.05 330 P Pn 12 59 17.4 +0.6
MDJ S **S 13 02 52.1 +0.8**
MDJ pmax pmax
comp=Z,130nm,1.2s
MDJ pmax pmax
comp=Z,4μm,4.6s
MDJ LR LR
comp=Z,5μm,16.5s
MDJ LR LR
comp=Z,5μm,16.2s
MDJ LR LR
comp=Z,3μm,21.8s
TATO Taipei 19.21 264 P P 12 59 17.8 -0.1
TATO IAmb IAmb 12 59 23.8
comp=Z,154nm,0.9s
TATO Taipei 19.21 264 P Pn 12 59 18.9 0.0
NACB Ninganchiao 19.34 262 Pn 12 59 20.4 -0.1
NACB IAmb IAmb 12 59 29.3
comp=Z,258nm,1.8s
YHNB Yeheng 19.39 263 Pn 12 59 21.3 +0.1
YHNB IAmb IAmb 12 59 24.4
comp=Z,448nm,1.9s
YULB Yu-li 19.85 260 Pn 12 59 26.7 0.0
YULB IAmb IAmb 12 59 32.9
comp=Z,96nm,0.7s
SSLB Suanglung 20.02 261 Pn 12 59 28.7 0.0
DL2 Dalian 20.20 306 P P 12 59 28.1 -0.6
DL2 S **S 13 03 16.4 +1.9**
DL2 pmax pmax
comp=Z,120nm,1.2s
DL2 pmax pmax
comp=Z,2μm,4.4s
DL2 LR LR
comp=Z,4μm,14.7s
DL2 LR LR
comp=Z,6μm,15.6s
DL2 LR LR
comp=Z,7μm,19.0s
TWG Pinlang 20.24 258 P 12 59 30.5 +1.2
TWG IAmb IAmb 12 59 36.7
comp=Z,347nm,1.8s
SNY Shenyang 20.33 315 ⇑P **P 12 59 25.3 -4.7**
SNY S S 13 03 03.3 -14
SNY pmax pmax
comp=Z,44nm,2.1s
SNY pmax pmax
comp=Z,1μm,5.4s
SNY LR LR
comp=N,3μm,14.5s
SNY LR LR
comp=E,2μm,17.3s
SNY LR LR
comp=Z,3μm,16.2s
UGL Uglegorsk 20.43 359⇓*e*P Pn 12 59 33.1 -0.1
UGL S **S 13 03 16.1 -2.8**
UGL pmax pmax
comp=Z,188nm,1.0s
UGL smax smax
comp=E,3μm,5.6s
UGL smax smax
comp=N,2μm,7.6s
UGL MLR MLR
comp=Z,3μm,11.0s
UGL MLR MLR
comp=N,3μm,16.0s
UGL MLR MLR
comp=E,1μm,13.0s
TPUB Ta-pu 20.46 260 P P 12 59 31.1 -0.5
CN2 Changchun 20.47 322 *e*P **P 12 59 30.8 -0.7**
CN2 *es*P sP 12 59 38.0 -0.3
CN2 *e*S **S 13 03 17.9 -1.9**
CN2 pmax pmax
comp=E,900nm,5.0s
CN2 LR LR
comp=E,6μm,17.0s
CN2 LR LR
comp=E,5μm,17.0s
CN2 LR LR
comp=E,4μm,16.6s
NJ2 Nanjing 20.79 285 ⇑P **P 12 59 34.9 -0.2**
NJ2 S **S 13 03 26.9 +0.7**
NJ2 pmax pmax
comp=E,83nm,1.2s
NJ2 pmax pmax
comp=E,2μm,4.1s
NJ2 LR LR
comp=E,2μm,17.1s
NJ2 LR LR
comp=E,2μm,18.9s
NJ2 LR LR
comp=E,3μm,15.2s
BNX BinXian 20.89 329 ⇑P **P 12 59 36.4 +0.3**
BNX sP **pP 12 59 40.9 +0.3**
BNX S Sn 13 03 32.0 -2.0
BNX pmax pmax
comp=E,190nm,1.5s
BNX pmax pmax
comp=E,2μm,4.5s
BNX LR LR
comp=E,4μm,15.6s
BNX LR LR
comp=E,5μm,15.4s
BNX LR LR
comp=E,4μm,12.8s
QZH2 Quanzhou 21.74 266 P P 12 59 46.1 +0.7
QZH2 S **S 13 03 49.3 +4.0**
QZH2 pmax pmax
comp=E,77nm,0.8s
QZH2 LR LR
comp=E,1μm,9.4s
QZH2 LR LR
comp=E,2μm,13.2s
QZH2 LR LR
comp=E,2μm,16.0s
KNMB Chin-men Tao 22.06 265 P P 12 59 47.5 -1.3
KNMB IAmb IAmb 12 59 52.6
comp=Z,142nm,1.0s
KLR Kul'dur 22.21 341⇑*i*P **P 12 59 50.8 +0.6**
KLR pmax pmax
comp=Z,30nm,1.3s
TYV Tymovskoe 22.22 0 *e*P **P 12 59 50.4 +0.1**
TYV *e*S **S 13 03 56.3 +2.4**
TYV pmax pmax
comp=Z,600nm,3.7s
TYV pmax pmax
comp=Z,37nm,1.1s
TYV smax smax
comp=N,11nm,1.8s
TYV smax smax
comp=N,2μm,6.1s
TYV smax smax
comp=E,3μm,6.1s
TYV MLR MLR
comp=Z,4μm,22.0s
GRNR Gornyy 22.61 350⇑*i*P **P 12 59 55.0 +0.4**
GRNR pmax pmax
comp=N,6.0nm,1.0s
GRNR pmax pmax
comp=Z,10.0nm,1.0s
TIA Tai'an 22.77 296 P P 12 59 55.0 -1.4
TIA S **S 13 04 02.9 -1.5**
TIA pmax pmax
comp=Z,35nm,0.7s
TIA LR LR
comp=Z,2μm,11.6s
TIA LR LR
comp=Z,4μm,17.5s
TIA LR LR

comp=Z,4μm,17.3s
H11N2 WAKE ISLAND Hy 23.81 106 T T 13 25 08.5
baz=296,slow=74,SNR=59
H11N1 WAKE ISLAND Hy 23.82 106 T T 13 25 09.1
baz=296,slow=74,SNR=49
H11N3 WAKE ISLAND Hy 23.83 106 T T 13 25 08.5
baz=296,slow=74,SNR=57
H11S3 WAKE ISLAND Hy 24.21 109 T T 13 25 38.6
baz=305,slow=74,SNR=6.3
H11S1 WAKE ISLAND Hy 24.21 109 T T 13 25 39.2
baz=305,slow=74,SNR=4.2
H11S2 WAKE ISLAND Hy 24.23 109 T T 13 25 39.1
baz=305
HEH HeiHe 24.50 336 *e*P **P 13 00 13.6 +0.6**
HEH pP **pP 13 00 16.6 -1.2**
HEH sS **sS 13 04 44.1 +4.2**
HEH pmax pmax
comp=Z,72nm,1.9s
HEH pmax pmax
comp=Z,2μm,5.2s
HEH LR LR
comp=Z,4μm,14.6s
HEH LR LR
comp=Z,6μm,14.2s
HEH LR LR
comp=Z,4μm,17.1s
BJI2 Beijing 24.54 305 P P 13 00 11.9 -1.5
BJI2 S **S 13 04 35.3 +2.2**
BJI2 LR LR
comp=Z,2μm,17.1s
BJI2 LR LR
comp=Z,2μm,18.8s
BJI2 LR LR
comp=Z,2μm,19.1s
BJT Baijiatuau 24.54 305 IAmb IAmb 13 00 24.4
comp=Z,69nm,1.4s
WHN Wuhan 24.64 281 ⇑P **P 13 00 13.9 -0.5**
WHN sP **pwP 13 00 25.0 +0.8**
WHN LR LR
comp=Z,4μm,12.5s
WHN LR LR
comp=Z,5μm,12.7s
WHN LR LR
comp=Z,8μm,13.6s
TGY Tagaytay City 24.77 239 LR LR 13 08 54.9
comp=Z,2μm,20.6s,baz=77,slow=34
HNS HongShan 24.92 298 ⇓P **P 13 00 15.4 -1.5**
HNS S **S 13 04 34.5 -4.8**
HNS pmax pmax
comp=Z,36nm,1.9s
HNS LR LR
comp=Z,2μm,14.3s
HNS LR LR
comp=Z,4μm,15.1s
HNS LR LR
comp=Z,5μm,15.1s
CNSH ChangSha 26.09 276 P **P 13 00 25.6 -2.0**
CNSH S **S 13 04 57.9 -0.2**
CNSH LR LR
comp=Z,2μm,14.7s
CNSH LR LR
comp=Z,2μm,14.5s
CNSH LR LR
comp=Z,2μm,19.9s
XLT XiLinHaoTe 26.13 313 *e*P **P 13 00 27.1 -0.8**
XLT PP **PnPn 13 01 09.9 +3.4**
XLT sS sS 13 05 07.9 +2.0
XLT pmax pmax
comp=Z,29nm,1.3s
XLT pmax pmax
comp=Z,820nm,7.2s
XLT LR LR
comp=Z,300nm,16.4s
XLT LR LR
comp=Z,2μm,16.0s
XLT LR LR
comp=Z,2μm,19.6s
LYN LuoYang 26.30 291 P **P 13 00 27.8 -1.7**
LYN PP **PnPn 13 01 10.6 +1.8**
LYN S **S 13 05 01.3 0.0**
LYN pmax pmax
comp=Z,24nm,1.1s
LYN pmax pmax
comp=Z,730nm,6.1s
LYN LR LR
comp=Z,2μm,15.8s
LYN LR LR
comp=Z,2μm,19.6s
LYN LR LR
comp=Z,5μm,22.0s
DAV Davao City (W) 26.81 220 LR LR 13 09 17.8
comp=Z,2μm,21.6s,baz=64,slow=32
PEA0B Petropavlovsk- 26.88 20⇑*i*P **P 13 00 36.2 +1.7**
PETK Petropavlovsk- 26.88 20 P **P 13 00 36.0 +1.5**
comp=Z,8.6nm,1.1s,baz=190,slow=7.2,SNR=5.3
PETK LR LR 13 12 08.2
comp=Z,2μm,19.7s,baz=206,slow=38
comp=Z,8.6nm,1.1s
PETK Petropavlovsk- 26.88 20 P P 13 00 35.7 +1.2
PETK Petropavlovsk- 26.88 20 P P 13 00 35.7 +1.2
HIA Hailar 27.05 326 P 13 00 36.8 +0.7
HIA IAmb IAmb 13 00 42.1
comp=Z,66nm,1.0s
HIA Hailar 27.05 326 P P 13 00 36.8 +0.7
HIA pmax pmax
comp=Z,66nm,1.0s
PET Petropavlovsk 27.11 21 *e*P **P 13 00 36.3 -0.2**
PET *e*S **S 13 05 13.2 -0.4**
PET pmax pmax
comp=Z,33nm,1.1s
PET MLR MLR
comp=Z,2μm,13.0s
PET MLR MLR
comp=Z,2μm,13.0s
HILR Hailar Array B 27.23 326 P **P 13 00 39.8 +2.0**
comp=Z,26nm,0.6s,baz=134,slow=13,SNR=32
comp=Z,26nm,0.6s
ZEA Zeya 27.51 340 *e*P **P 13 00 40.6 +0.4**
ZEA *e*S **S 13 05 15.4 -4.6**
ZEA pmax pmax
comp=N,50nm,1.1s
ZEA pmax pmax
comp=Z,70nm,1.0s
ZEA smax smax
comp=N,600nm,11.9s
ZEA smax smax
comp=E,1μm,5.2s
HHC Hu-ho-hao-te 28.14 304⇓*i*P **P 13 00 45.8 -0.3**
HHC pP pwP 13 00 57.1 +0.7
HHC S **S 13 05 29.3 -1.1**
HHC sS sS 13 05 37.4 -0.1
HHC SS **SnSn 13 06 53.0 +6.6**
HHC pmax pmax
comp=E,26nm,1.2s
HHC pmax pmax
comp=E,610nm,6.2s
HHC LR LR
comp=E,1μm,15.7s
HHC LR LR
comp=E,4μm,16.2s
HHC LR LR
comp=E,5μm,18.9s
GULI GuiLin 28.89 271 P **P 13 00 53.5 +0.7**
GULI S **S 13 05 48.5 +6.2**
GULI pmax pmax
comp=E,15nm,1.2s
GULI LR LR
comp=E,1μm,18.5s
GULI LR LR
comp=E,2μm,18.5s
GULI LR LR
comp=E,3μm,19.2s
XAN Xi'an 29.20 289 ⇑P **P 13 00 54.0 -1.5**
XAN PP **PnPn 13 01 46.3 -2.2**
XAN S **S 13 05 46.6 -0.6**
XAN pmax pmax
comp=E,42nm,1.2s
XAN pmax pmax
comp=E,580nm,4.1s
XAN LR LR
comp=E,4μm,13.9s
XAN LR LR
comp=E,3μm,13.1s
XAN LR LR
comp=E,6μm,15.6s
BTO2 Baotou 29.35 303 *e*P **P 13 00 55.8 -1.0**

BTO2 PP **PnPn 13 01 54.5 +4.0**
BTO2 S **S 13 05 49.6 +0.2**
BTO2 pmax pmax
comp=E,37nm,1.6s
BTO2 pmax pmax
comp=E,1μm,5.9s
BTO2 LR LR
comp=E,6μm,14.5s
BTO2 LR LR
comp=E,7μm,16.3s
BTO2 LR LR
comp=E,11μm,16.1s
SIJI Sorong 31.27 202 LR LR 13 11 18.9
comp=E,3μm,21.0s,baz=28,slow=32
QIZ Qiongzhong 31.38 260 P P 13 01 13.9 -0.9
QIZ S **S 13 06 22.6 +1.2**
QIZ pmax pmax
comp=E,44nm,2.1s
QIZ LR LR
comp=E,1μm,13.7s
QIZ LR LR
comp=E,2μm,14.4s
QIZ LR LR
comp=E,2μm,14.4s
MA2 Magadan 31.45 8 P 13 01 14.0 -1.0
MA2 IAmb IAmb 13 01 27.4
comp=Z,37nm,1.3s
MA2 Magadan 31.45 8⇓*i*P **P 13 01 13.8 -1.2**
MA2 pmax pmax
comp=Z,14nm,1.1s
MA2 Magadan 31.45 8 P **P 13 01 15.1 +0.1**
comp=Z,21nm,0.7s
CIT Chita 31.84 325 *e*P **P 13 01 19.8 +1.1**
CIT *e* 13 02 41.2
CIT pmax pmax
comp=Z,156nm,2.9s
GYA Guiyang 31.88 275⇓P **P 13 01 19.4 0.0**
GYA S **S 13 06 27.8 -1.6**
GYA pmax pmax
comp=Z,75nm,1.2s
GYA pmax pmax
comp=Z,430nm,3.3s
GYA LR LR
comp=Z,2μm,15.2s
GYA LR LR
comp=Z,2μm,18.8s
GYA LR LR
comp=Z,3μm,20.6s
WAMI Wamena 32.53 187 P P 13 01 27.5 +2.6
MYLDM Lahad Datu 32.66 229 P P 13 01 26.3 +0.2
MYLDM Lahad Datu 32.66 229 P P 13 01 27.4 +1.4
comp=Z,2μmcomp=Z,60nm,1.2s
LZH Lanzhou 33.42 293 *e*P **P 13 01 31.4 -1.4**
LZH sP pwP 13 01 42.8 +0.2
LZH S **S 13 06 51.6 -1.7**
LZH sS pS 13 07 10.0 +11
LZH pmax pmax
comp=Z,25nm,1.7s
LZH pmax pmax
comp=Z,410nm,4.7s
LZH LR LR
comp=Z,3μm,16.8s
LZH LR LR
comp=Z,3μm,16.5s
LZH LR LR
comp=Z,4μm,18.7s
SHEM Shemya Is, Ala 33.46 35 LR LR 13 13 44.6
comp=Z,2μm,19.7s,baz=240,slow=34
ULN Ulaanbaatar 33.51 315 P 13 01 34.0 +0.6
ULN Ulaanbaatar 33.51 315⇓*i*P **P 13 01 34.6 +1.2**
ULN pmax pmax
comp=Z,59nm,1.2s
ULN Ulaanbaatar 33.51 315 P **P 13 01 33.6 +0.3**
ULN P **P 13 01 33.6 +0.3**
ULN S **S 13 06 54.8 +0.5**
ULN S **S 13 06 54.8 +0.5**
ULN Ulaanbaatar 33.51 315 P **P 13 01 33.9 +0.6**
LZDM Lanzhou Array 33.54 293 P **P 13 01 33.0 -1.0**
comp=Z,5.9nm,0.6s,baz=126,slow=7.5,SNR=16
LZDM LR LR 13 16 12.9
comp=Z,2μm,20.0s,baz=120,slow=38
comp=Z,5.9nm,0.6s
GTOI Gorontalo 33.55 217 P **P 13 01 32.9 -1.0**
comp=Z,831nmcomp=Z,49nm,1.3s
CD2 Chengdu 33.70 284⇑*i*P **P 13 01 34.3 -0.8**
CD2 S **S 13 06 57.8 +0.3**
CD2 pmax pmax
comp=Z,130nm,0.6s
CD2 pmax pmax
comp=Z,580nm,6.0s
CD2 LR LR
comp=Z,6μm,14.5s
CD2 LR LR
comp=Z,4μm,14.7s
CD2 LR LR
comp=Z,3μm,14.9s
SONM Songino Array 33.91 314 P **P 13 01 37.7 +0.8**
comp=Z,10nm,0.6s,baz=129,slow=7.4,SNR=55
SONM LR LR 13 16 14.1
comp=Z,3μm,18.1s,baz=109,slow=38
comp=Z,10nm,0.6s
SONM Songino Array 33.91 314 P 13 01 37.5 +0.7
SONM Songino Array 33.91 314 P **P 13 01 37.5 +0.7**
SONM pmax pmax
comp=Z,90nm,1.5s
MRSI Marisa 34.27 219 P **P 13 01 40.4 +0.3**
comp=Z,2μmcomp=Z,99nm,1.3s
SANI Sanana 34.42 210 P **P 13 01 39.6 -1.8**
comp=Z,850nmcomp=Z,68nm,1.0s
YAK Yakutsk 34.49 349 P 13 01 40.8 -0.8
YAK IAmb IAmb 13 01 56.1
comp=Z,35nm,0.8s
YAK Yakutsk 34.49 349 *e*P **P 13 01 41.1 -0.4**
YAK *e* 13 02 55.1
YAK *e* 13 04 10.0
YAK *e*S **S 13 07 06.2 -2.7**
YAK *e*SS **SnSn 13 09 19.9 -0.3**
YAK *e*SSS SSS 13 09 43.1
YAK pmax pmax
comp=Z,45nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=N,23nm,1.2s
YAK pmax pmax
comp=Z,499nm,4.1s
YAK pmax pmax
comp=N,224nm,3.5s
YAK pmax pmax
comp=E,313nm,4.3s
YAK smax smax
comp=N,260nm,4.5s
YAK smax smax
comp=E,405nm,4.4s
YAK MLR MLR
comp=Z,2μm,14.0s
YAK MLR MLR
comp=N,1μm,13.0s
YAK MLR MLR
comp=E,714nm,12.0s
KRAI Karang Ratu 34.57 206 P **P 13 01 43.2 +0.5**
comp=E,3μmcomp=E,101nm,1.1s
SEY Seymchan 34.91 8⇓*i*P **P 13 01 45.8 +0.7**
SEY pmax pmax
comp=Z,21nm,1.0s
KMI2 Kunming 35.62 274⇑P **P 13 01 52.0 0.0**
KMI2 sP pwP 13 02 01.9 0.0
KMI2 PP **PP 13 03 16.8 +3.8**
KMI2 S **S 13 07 21.4 -6.1**
KMI2 pmax pmax
comp=Z,41nm,1.3s
KMI2 pmax pmax
comp=Z,630nm,5.8s
KMI2 LR LR
comp=Z,1μm,15.3s
KMI2 LR LR
comp=Z,2μm,16.9s
KMI2 LR LR
comp=Z,2μm,18.8s
PZH PanZhiHua 36.18 277 P P 13 01 56.1 -0.6
PZH PP **PP 13 03 21.8 +2.8**
PZH S **S 13 07 34.3 -1.6**
PZH SS **SnSn 13 09 57.8 -4.4**
PZH pmax pmax
comp=Z,80nm,1.2s
PZH pmax pmax

comp=Z,600nm,3.5s
PZH LR LR
comp=Z,790nm,19.6s
PZH LR LR
comp=Z,2µm,16.3s
PZH LR LR
comp=Z,2µm,18.2s
ZAK Zakamensk 36.74 317 *e*P **P 13 02 01.2 +0.1**
ZAK pmax pmax
comp=Z,116nm,2.1s
GTA2 Gaotai 36.82 299 P **P 13 02 00.8 -1.2**
GTA2 pP pP 13 02 04.4 -2.6
GTA2 S **S 13 07 38.5 -7.0**
GTA2 pmax pmax
comp=Z,27nm,1.4s
GTA2 pmax pmax
comp=Z,48nm,3.6s
GTA2 LR LR
comp=Z,2µm,14.5s
GTA2 LR LR
comp=Z,2µm,19.3s
GTA2 LR LR
comp=Z,3µm,20.4s
IRK Irkutsk 36.90 321 *e*P **P 13 02 02.4 +0.1**
IRK *e*S **S 13 07 49.1 +3.1**
IRK pmax pmax
comp=Z,275nm,2.9s
TLY Talaya 37.02 319 LR LR 13 17 50.7
comp=Z,3µm,18.6s,baz=109,slow=37
TLY Talaya 37.02 319 **P 13 02 05.0 +1.5**
TLY IAmb IAmb 13 02 06.7
comp=Z,43nm,0.9s
TLY Talaya 37.02 319 *ce*P **P 13 02 05.3 +1.9**
TLY pmax pmax
comp=Z,126nm,1.3s
TLY Talaya 37.02 319 P **P 13 02 04.3 +0.9**
TLY P **P 13 02 04.3 +0.9**
TLY S **S 13 07 50.6 +2.6**
TLY S **S 13 07 50.6 +2.6**
PMG Port Moresby 38.05 173 LR LR 13 16 22.3
comp=Z,561nm,21.2s,baz=328,slow=34
MOY Mondy 38.55 318 *e*P **P 13 02 17.3 +0.9**
MOY pmax pmax
comp=Z,139nm,1.5s
SBUM Sibu 38.94 234 **P 13 02 20.1 +0.2**
SBUM Sibu 38.94 234 P **P 13 02 20.5 +0.6**
TNCH TengChong 39.35 275 ⇑P **P 13 02 23.4 -0.2**
TNCH pP pP 13 02 25.9 -2.6
TNCH sP sP 13 02 29.9 -0.5
TNCH PP **PP 13 03 54.0 0.0**
TNCH S **S 13 08 20.9 -3.3**
TNCH sS pS 13 08 31.9 +1.5
TNCH SS **SS 13 11 10.3 -7.8**
TNCH pmax pmax
comp=Z,140nm,1.3s
TNCH pmax pmax
comp=Z,950nm,3.7s
TNCH LR LR
comp=Z,890nm,13.7s
TNCH LR LR
comp=Z,2µm,16.8s
TNCH LR LR
comp=Z,4µm,18.1s
MTKI Muara Teweh, K 39.61 227 P P 13 02 32.1 +6.5
KAPI Kappang 40.04 217 LR LR 13 17 47.8
comp=Z,771nm,21.9s,baz=38,slow=34
KAPI Kappang 40.04 217 S **S 13 08 33.2 -0.9**
GOMU GeErMu 40.73 293 P **P 13 02 34.3 -0.8**
GOMU PcP **PcP 13 04 35.1 -1.3**
GOMU S **S 13 08 44.8 -0.1**
GOMU pmax pmax
comp=Z,41nm,1.0s
GOMU LR LR
comp=Z,1µm,16.2s
GOMU LR LR
comp=Z,920nm,15.4s
GOMU LR LR
comp=Z,2µm,15.2s
CHTO Chiang Mai 40.97 266 **P 13 02 35.7 -1.1**
CHTO Chiang Mai 40.97 266 P **P 13 02 35.7 -1.1**
CHTO pmax pmax
comp=Z,23nm,0.9s
CHTO Chiang Mai 40.97 266 P **P 13 02 36.6 -0.3**
CM31 Chiang Mai Arr 41.10 266 P **P 13 02 37.6 -0.4**
CM31 Chiang Mai Arr 41.10 266 P **P 13 02 39.3 +1.4**
SNR=6.8
CMAR Chiang Mai Arr 41.10 266 P **P 13 02 38.0 0.0**
comp=Z,8.9nm,1.1s,baz=54,slow=7.7,SNR=37
CMAR LR LR 13 21 25.1
comp=Z,1µm,19.9s,baz=70,slow=39
comp=Z,8.9nm,1.1s
CMAR Chiang Mai Arr 41.10 266 **P 13 02 37.8 -0.1**
CMAR Chiang Mai Arr 41.10 266 *i* P **P 13 02 38.0 0.0**
CMAR pmax pmax
comp=Z,8.0nm,1.0s
HNR Honiara 41.37 154 LR LR 13 18 21.3
comp=Z,75nm,21.1s,baz=46,slow=34
BILL Bilibino 41.89 13 **P 13 02 43.8 +0.1**
BILL Bilibino 41.89 13 ⇓*i*P **P 13 02 44.0 +0.2**
BILL pmax pmax
comp=Z,14nm,1.1s
SOEI Soe 42.07 208 P **P 13 02 45.4 -0.5**
SOEI IAmb IAmb 13 03 08.5
comp=Z,76nm,1.0s
COEN Coen 42.33 179 P **P 13 02 47.4 -0.5**
comp=Z,31nm,1.4s
COEN Coen 42.33 179 **P 13 02 47.5 -0.3**
MTN Manton Dam 42.69 197 P **P 13 02 50.9 +0.1**
comp=Z,31nm,0.7s
MTN Manton Dam 42.69 197 **P 13 02 50.4 -0.4**
MTN IAmb IAmb 13 02 53.2
comp=Z,91nm,1.6s
BATI Baumata 42.73 208 LR LR 13 19 24.3
comp=Z,968nm,21.1s,baz=6.5,slow=34
NIKH Nikolski High 42.98 42 P **P 13 02 51.1 -1.7**
baz=255
SPIA Saint Paul Isl 43.50 35 P **P 13 02 56.8 -0.1**
baz=249
P08K Saint George I 43.66 36 P **P 13 02 58.2 -0.1**
baz=250
TIXI Tiksi 43.74 354 LR LR 13 21 51.9
comp=Z,551nm,22.0s,baz=176,slow=37
TIXI Tiksi 43.74 354 **P 13 02 58.2 -0.5**
TIXI Tiksi 43.74 354 ⇓*i*P **P 13 02 58.8 +0.1**
TIXI pmax pmax
comp=Z,10.0nm,1.1s
UNV Unalaska Valle 44.56 41 P **P 13 03 05.2 -0.2**
baz=256
LSA Lhasa 44.65 284 IAmb IAmb 13 03 20.3
comp=Z,53nm,1.9s
LSA Lhasa 44.65 284 P P 13 03 00.8 -6.4
LSA S S 13 09 27.3 -16
LSA LR LR
comp=N,650nm,15.8s
LSA LR LR
comp=E,590nm,19.0s
LSA LR LR
comp=Z,560nm,17.3s
SHL Shillong 45.00 279 P **P 13 03 09.2 -0.5**
SNR=18
RTBI Rangdo, Negare 45.53 220 P **P 13 03 13.3 -0.3**
comp=Z,2µmcomp=Z,152nm,1.2s
MYKOM Kota Tinggi 45.58 241 IAmb IAmb 13 03 28.3
comp=Z,33nm,0.9s
MYKOM Kota Tinggi 45.58 241 P **P 13 03 14.5 +0.4**
comp=Z,41nm,0.9s
GAMB Gambell 45.59 26 IAmb IAmb 13 03 17.7
comp=Z,62nm,1.7s
GAMB Gambell 45.59 26 P **P 13 03 13.8 +0.3**
baz=242
TPI Tanjungpandan 45.82 233 P **P 13 03 15.3 -0.7**
comp=Z,31nm,1.4s
JAGI Jajag, Banyuwa 45.99 221 **P 13 03 15.7 -1.5**
JAGI Jajag, Banyuwa 45.99 221 P **P 13 03 15.9 -1.4**
KULM Kulim 46.01 248 IAmb IAmb 13 03 19.7
comp=Z,22nm,0.8s
KULM Kulim 46.01 248 P **P 13 03 18.2 +0.7**
comp=Z,710nmcomp=Z,31nm,0.9s
WMQ Urumqi 46.02 305 ⇑P **P 13 03 17.4 +0.1**
WMQ sP pwP 13 03 28.9 +1.8
WMQ PP **PP 13 05 04.3 -0.9**
WMQ S **S 13 10 06.3 +4.7**
WMQ pmax pmax
comp=Z,46nm,1.5s
WMQ LR LR
comp=Z,2µm,19.1s
WMQ LR LR
comp=Z,1µm,14.7s
WMQ LR LR
comp=Z,1µm,17.3s
KNRA Kununurra 46.03 199 P **P 13 03 18.5 +1.0**
comp=Z,27nm,0.7s
KNRA Kununurra 46.03 199 IAmb IAmb 13 03 40.7
comp=Z,78nm,1.7s
BRDH Bariadhala 46.06 275 LR LR 13 25 30.9
comp=Z,895nm,18.1s,baz=122,slow=40
IPM Ipoh 46.17 247 IAmb IAmb 13 03 20.4
comp=Z,20nm,0.8s
IPM Ipoh 46.17 247 P **P 13 03 18.8 0.0**
comp=Z,32nm,1.4s
DGZ Jazzator, Alta 46.51 313*c i*P **P 13 03 22.2 +1.0**
DGZ pmax pmax
comp=Z,80nm,1.1s
M11K Mekoryuk 46.58 32 P **P 13 03 21.6 +0.2**
baz=250
SJI Sawahan 46.82 224 P **P 13 03 24.4 +0.5**
SNJI Sawahan-Nganju 46.86 224 P **P 13 03 22.5 -1.8**
comp=Z,27nm,1.2s
K13K Kusilvak Mount 47.80 31 P **P 13 03 30.2 -0.7**
baz=251
TNA Tin City 47.85 25 **P 13 03 32.2 +1.0**
TNA IAmb IAmb 13 03 35.4
comp=Z,64nm,1.7s
TNA Tin City 47.85 25 P **P 13 03 31.2 0.0**
baz=244
CTJI Waduk Cacaban 47.89 227 P **P 13 03 31.8 -0.4**
comp=Z,5µmcomp=Z,62nm,1.2s
M13K Dall Lake 47.94 33 P **P 13 03 32.0 +0.1**
baz=253
ZSN Zaisan 48.06 309*c i*P **P 13 03 33.6 +0.4**
ZSN pmax pmax
comp=Z,18nm,1.6s
ZSN Zaisan 48.06 309⇑ *i*P **P 13 03 33.6 +0.4**
comp=Z,18nm,1.6s
SDPT Sand Point 48.29 40 P **P 13 03 33.7 -1.1**
baz=260
KPJI Karang Pucung 48.30 227 P **P 13 03 35.0 -0.3**
comp=Z,89nm,1.0s
F14K Arctic Creek 48.42 26 P **P 13 03 35.0 -0.6**
baz=246
ANM Nome 48.43 27 **P 13 03 36.5 +0.8**
ANM Nome 48.43 27 P **P 13 03 36.5 +0.8**
ANM pmax pmax
comp=Z,84nm,1.5s
ANM Nome 48.43 27 P **P 13 03 35.9 +0.2**
baz=248,SNR=21
L14K Kuka Creek 48.52 32 IAmb IAmb 13 04 00.9
comp=Z,40nm,1.2s
L14K Kuka Creek 48.52 32 P **P 13 03 35.6 -0.8**
baz=253
J14K Nanvaranak Lak 48.56 30 IAmb IAmb 13 03 41.0
comp=Z,56nm,1.4s
J14K Nanvaranak Lak 48.56 30 P **P 13 03 36.6 -0.1**
baz=251
ZALV Zalesovo Beam 48.60 318 P **P 13 03 37.6 +0.4**
comp=Z,12nm,0.5s,baz=97,slow=8.1,SNR=49
ZALV PcP **PcP 13 05 02.2 -0.3**
comp=Z,4.7nm,0.7s,baz=108,slow=5.0,SNR=1.9
ZALV ScP **ScP 13 08 56.8 +0.4**
comp=Z,0.7nm,0.6s,baz=106,slow=4.7,SNR=1.9
ZALV LR LR 13 24 43.2
comp=Z,2µm,19.1s,baz=96,slow=37
comp=Z,12nm,0.5s
ZALV Zalesovo Beam 48.60 318 **P 13 03 37.3 +0.1**
ZALV Zalesovo Beam 48.60 318 *i* P **P 13 03 37.4 +0.1**
ZALV pmax pmax
comp=Z,12nm,0.5s
N14K Kuskokwak Cree 48.61 34 P **P 13 03 36.4 -0.8**
baz=255
O14K Tigyukauivet M 48.65 35 P **P 13 03 36.9 -0.6**
baz=256
M14K Bethel 48.69 33 P **P 13 03 37.4 -0.4**
baz=254
CHNA Chernabura Isl 48.72 41 P **P 13 03 37.4 -0.6**
baz=262
EVN Everest 48.75 283 IAmb IAmb 13 03 53.0
comp=Z,19nm,0.7s
WB0 Warramunga Arr 48.76 190 **P 13 03 38.1 -0.6**
LEM Lembang 48.79 229 LR LR 13 24 07.1
comp=Z,665nm,21.8s,baz=27,slow=36
PSI Prapat 48.85 246 P **P 13 03 40.0 +0.2**
comp=Z,635nmcomp=Z,37nm,1.1s
RPSI Rantau Prapat 48.91 246 IAmb IAmb 13 03 42.0
comp=Z,28nm,0.8s
WRAB Tennant Creek 48.92 190 P **P 13 03 39.5 -0.5**
WRAB Tennant Creek 48.92 190 ⇓*i*P **P 13 03 39.7 -0.3**
WRAB pmax pmax
comp=Z,63nm,1.0s
WRA Warramunga Arr 48.94 190 P **P 13 03 39.6 -0.5**
comp=Z,43nm,0.8s,baz=15,slow=8.8,SNR=152
WRA ScP **ScP 13 08 59.8 +1.5**
comp=Z,0.7nm,1.0s,baz=6.2,slow=4.8,SNR=2.6
comp=Z,43nm,0.8s
WRA Warramunga Arr 48.94 190 **P 13 03 38.8 -1.3**
WRA Warramunga Arr 48.94 190 *i* P **P 13 03 39.4 -0.7**
WRA pmax pmax
comp=Z,30nm,0.6s
G15K Niukluk 49.12 27 P **P 13 03 41.6 +0.5**
baz=249,SNR=10
F15K North Star Dit 49.15 26 IAmb IAmb 13 03 45.9
comp=Z,65nm,1.4s
F15K North Star Dit 49.15 26 P **P 13 03 41.3 +0.1**
baz=248
L15K Ungalak Mounta 49.16 31 P **P 13 03 41.3 -0.1**
baz=254
BBJI Bungbulang 49.24 229 P **P 13 03 40.0 -2.6**
KLSI 49.24 234 P **P 13 03 42.1 -0.5**
comp=Z,1µmcomp=Z,73nm,0.9s
FITZ Fitzroy Crossi 49.26 202 LR LR 13 22 15.4
comp=Z,428nm,21.9s,baz=21,slow=33
M15K Kasigluk River 49.28 33 P **P 13 03 42.0 -0.3**
baz=256
K15K Wolf Creek Mou 49.31 31 P **P 13 03 42.1 -0.4**
baz=254
O15K Ungalikthiuk R 49.36 35 P **P 13 03 42.0 -1.0**
baz=258
KCSI Kotacane, Aceh 49.37 248 P **P 13 03 42.1 -1.5**
N15K Kwethluk River 49.44 34 IAmb IAmb 13 04 01.8
comp=Z,39nm,1.1s
N15K Kwethluk River 49.44 34 P **P 13 03 42.9 -0.7**
baz=257
MDSI Maura Dua 49.50 235 P **P 13 03 43.8 -0.7**
comp=Z,1µmcomp=Z,118nm,0.9s
MNSI Mandailing Nat 49.53 244 P **P 13 03 44.6 -0.2**
comp=Z,51nm,0.7s
PPI Padang Panjang 49.66 242 P **P 13 03 46.3 +0.5**
comp=Z,837nmcomp=Z,35nm,0.8s
H16K Elim 49.73 28 P **P 13 03 45.4 -0.2**
baz=251,SNR=17
MK31 Makanchi Array 49.82 309 *i* P **P 13 03 46.1 -0.6**
MK31 pmax pmax
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 49.82 309 P **P 13 03 46.9 +0.2**
comp=Z,6.7nm,0.6s,baz=86,slow=9.9,SNR=57
MKAR ScP **ScP 13 09 03.8 +1.9**
comp=Z,1.6nm,0.7s,baz=81,slow=5.2,SNR=5.3
MKAR LR LR 13 25 42.3
comp=Z,2µm,20.4s,baz=82,slow=37
comp=Z,6.7nm,0.6s
G16K Koyuk River 49.93 27 P **P 13 03 46.9 -0.3**
baz=250
C16K Lisburne Hills 49.94 23 IAmb IAmb 13 03 51.0
comp=Z,29nm,1.0s
C16K Lisburne Hills 49.94 23 P **P 13 03 46.8 -0.4**
baz=245
LWLI Liwa 49.95 234 P **P 13 03 47.0 -1.1**
comp=Z,95nm,0.7s
MASI Maura Aman, Be 50.00 238 P **P 13 03 49.1 +0.7**
J16K Anvik River 50.00 30 P **P 13 03 47.8 +0.1**
baz=254
MAKZ Makanchi 50.03 309 **P 13 03 48.4 +0.1**
MAKZ IAmb IAmb 13 04 02.8
comp=Z,35nm,1.3s
MAKZ Makanchi 50.03 309 P **P 13 03 48.4 +0.1**
MAKZ pmax pmax
comp=Z,35nm,1.3s
KSI Kapahiang 50.08 237 P **P 13 03 48.9 -0.2**
L16K Owhat River 50.10 32 P **P 13 03 48.5 0.0**
baz=256
I17K Unalakleet 50.13 29 IAmb IAmb 13 03 53.2
comp=Z,77nm,1.6s
I17K Unalakleet 50.13 29 P **P 13 03 48.7 0.0**
baz=253
N16K Nishlik Lake 50.15 33 P **P 13 03 48.9 -0.1**
baz=258
M16K Timber Creek 50.18 33 IAmb IAmb 13 03 53.9
comp=Z,46nm,1.3s
M16K Timber Creek 50.18 33 P **P 13 03 49.3 +0.1**
baz=257
R16K Pilot Point 50.23 37 P **P 13 03 48.6 -1.0**
baz=261
P16K Nushagak River 50.26 35 P **P 13 03 48.2 -1.5**
baz=260
O16K Kokwok River B 50.31 35 P **P 13 03 48.7 -1.4**
baz=259
D17K Noatak River 50.49 24 P **P 13 03 51.7 +0.4**
baz=248,SNR=33
G17K Kiwalik Mounta 50.64 27 P **P 13 03 52.3 -0.2**
baz=252,SNR=13
RDOG Red Dog Mine 50.68 23 IAmb IAmb 13 03 57.2
comp=Z,45nm,1.1s
RDOG Red Dog Mine 50.68 23 P **P 13 03 53.4 +0.5**
baz=248,SNR=14
F17K Baldwin Pennin 50.71 26 P **P 13 03 53.4 +0.3**
baz=250
E17K Hotham Inlet 50.71 25 P **P 13 03 53.3 +0.2**
baz=249,SNR=17
L17K Donlin 50.74 31 P **P 13 03 53.6 +0.2**
baz=257
C17K DeLong Mountai 50.76 23 P **P 13 03 53.1 -0.4**
baz=247,SNR=25
H17K Granite Mounta 50.77 28 IAmb IAmb 13 03 57.9
comp=Z,69nm,1.6s
H17K Granite Mounta 50.77 28 P **P 13 03 53.7 +0.2**
baz=253
GSI Gunungsitoli 50.82 246 P **P 13 03 54.2 -0.4**
comp=Z,5µmcomp=Z,84nm,1.1s
O17K Koliganek Bris 50.84 35 P **P 13 03 54.2 +0.1**
baz=260
K17K Iditarod 50.87 31 IAmb IAmb 13 04 09.1
K17K Iditarod 50.87 31 P **P 13 03 54.0 -0.3**
baz=256,SNR=9.1
Q16K King Salmon 50.88 36 P **P 13 03 54.0 -0.4**
baz=261
R17L Mt. Peulik Vol 50.89 37 P **P 13 03 54.2 -0.4**
baz=262
N17K Nushagak Hills 50.93 34 P **P 13 03 54.8 -0.1**
baz=259
M17K Holitna River 50.98 32 P **P 13 03 55.2 0.0**
baz=258
P17K Kvichak River 51.07 35 P **P 13 03 55.7 -0.2**
baz=261
CHIR Chirikof Islan 51.09 40 P **P 13 03 55.7 -0.3**
baz=264
Q17K Contact Creek 51.22 37 P **P 13 03 57.0 -0.2**
baz=262
E18K Tukpahlearik C 51.28 24 IAmb IAmb 13 04 01.9
comp=Z,53nm,1.4s
E18K Tukpahlearik C 51.28 24 P **P 13 03 57.7 +0.4**
baz=250,SNR=20
F18K Selawik 51.37 26 P **P 13 03 58.3 +0.3**
baz=252,SNR=24
H18K Honhosa River 51.46 28 IAmb IAmb 13 04 02.6
comp=Z,68nm,1.6s
H18K Honhosa River 51.46 28 P **P 13 03 59.3 +0.5**
baz=254
EGSI Enggano, Bengk 51.46 235 P **P 13 04 00.2 +0.8**
comp=Z,80nm,0.9s
C18K Utukok River 51.50 23 IAmb IAmb 13 04 03.1
comp=Z,86nm,1.7s
C18K Utukok River 51.50 23 P **P 13 03 58.9 -0.1**
baz=249
G18K Tagagawik 51.55 27 IAmb IAmb 13 04 03.4
comp=Z,44nm,1.2s
G18K Tagagawik 51.55 27 P **P 13 03 59.6 +0.2**
baz=254
N18K Kilae Creek 51.59 34 IAmb IAmb 13 04 04.3
comp=Z,81nm,1.8s
N18K Kilae Creek 51.59 34 P **P 13 03 59.6 -0.2**
baz=260
P18K Big Mountain, 51.72 35 P **P 13 04 00.5 -0.3**
baz=262
J18K Innoko River 51.74 30 P **P 13 04 00.8 -0.1**
baz=257
M18K Stony River 51.76 32 P **P 13 04 01.0 0.0**
baz=260
O18K Koktuh Hills 51.79 35 P **P 13 04 01.1 -0.2**
baz=262
SII Sitkinak Islan 51.95 39 P **P 13 04 02.0 -0.6**
baz=265
GCSA Galena City Sc 51.97 28 P **P 13 04 02.7 +0.2**
baz=256
PDGK Godgoonoye 51.99 304 P **P 13 04 02.8 -0.4**
SHLS Shalkode 52.03 304 *e*P **P 13 04 01.3 -2.2**
SHLS pmax pmax
comp=Z,38nm,1.4s
SHLS Shalkode 52.03 304 *e*P **P 13 04 01.4 -2.2**
comp=Z,38nm,1.4s
F19K Shaleruckik Mo 52.15 26 P **P 13 04 03.8 -0.1**
baz=254
C19K Lookout Ridge 52.20 23 P **P 13 04 04.3 0.0**
baz=250,SNR=40
KURK Kurchatov 52.20 314 **P 13 04 05.1 +0.6**
KURK Kurchatov 52.20 314 *i* P **P 13 04 03.6 -0.9**
KURK pmax pmax
comp=Z,63nm,1.1s
KURK Kurchatov 52.20 314 P **P 13 04 04.4 -0.1**
KURK S **S 13 11 27.9 -0.2**
G19K Purcell Mounta 52.23 27 P **P 13 04 04.6 +0.1**
baz=255
KURBB Kurchatov Arra 52.26 314 P **P 13 04 05.5 +0.6**
comp=Z,40nm,0.6s,baz=91,slow=8.2,SNR=252
KURBB LR LR 13 25 49.5
comp=Z,2µm,20.0s,baz=102,slow=36
comp=Z,40nm,0.6s
O19K Port Alsworth 52.28 34 P **P 13 04 04.8 -0.1**
baz=262
N19K Bonanza Creek 52.29 33 P **P 13 04 05.0 -0.1**
baz=262
J19K Poorman 52.33 29 IAmb IAmb 13 04 09.0
comp=Z,80nm,1.7s
J19K Poorman 52.33 29 P **P 13 04 04.6 -0.7**
baz=258,SNR=12
L19K White Mountain 52.33 32 P **P 13 04 05.4 0.0**
baz=260
UZB Uzynbulak 52.35 304 *e*P **P 13 04 06.0 +0.1**
UZB pmax pmax
comp=Z,11nm,0.6s
UZB Uzynbulak 52.35 304 *e*P **P 13 04 06.1 +0.1**
comp=Z,11nm,0.6s
Q19K Cape Douglas, 52.47 36 P **P 13 04 06.1 -0.3**
baz=264
OHAK Old Harbor 52.50 38 P **P 13 04 06.3 -0.3**
baz=265
M19K Big River Lodg 52.50 32 IAmb IAmb 13 04 11.0
comp=Z,63nm,1.7s
M19K Big River Lodg 52.50 32 P **P 13 04 06.6 0.0**
baz=261
D19K Kuna River 52.51 24 IAmb IAmb 13 04 10.7
comp=Z,81nm,1.5s
D19K Kuna River 52.51 24 P **P 13 04 07.2 +0.6**
baz=252
E19K Redstone River 52.53 25 IAmb IAmb 13 04 33.0
comp=Z,68nm,1.6s
E19K Redstone River 52.53 25 P **P 13 04 06.8 +0.1**
baz=254
TDK Taldyqorghan 52.62 306 *e*P **P 13 04 08.1 +0.4**
TDK pmax pmax
comp=Z,11nm,0.6s
TDK Taldyqorghan 52.62 306 *e*P **P 13 04 08.2 +0.4**
comp=Z,11nm,0.6s
ASAR Alice Springs 52.66 190 P **P 13 04 07.0 -1.1**
comp=Z,3.5nm,0.7s,baz=9.6,slow=6.8,SNR=51
ASAR LR LR 13 24 41.3
comp=Z,2µm,22.0s,baz=356,slow=34
comp=Z,3.5nm,0.7s
ASAR Alice Springs 52.66 190 P **P 13 04 07.2 -0.9**
ASAR Alice Springs 52.66 190 P **P 13 04 07.2 -0.9**
P19K Oil Pt 52.76 35 P **P 13 04 08.7 +0.2**
baz=264
K20K Telida 52.89 30 P **P 13 04 09.6 +0.2**
baz=260,SNR=14
KDAK Kodiak Island 52.92 37 LR LR 13 25 42.5
comp=Z,2µm,20.4s,baz=244,slow=35
KDAK Kodiak Island 52.92 37 **P 13 04 09.3 -0.3**
KDAK Kodiak Island 52.92 37 ⇓*i*P **P 13 04 10.4 +0.7**
KDAK pmax pmax
comp=Z,44nm,1.3s
KDAK Kodiak Island 52.92 37 P **P 13 04 09.4 -0.3**
baz=266

H20K Anotleneega Mo 52.96 28 P P 13 04 10.0 +0.1
baz=258
F20K Avaraart Lake 52.98 26 P P 13 04 09.4 -0.7
baz=256
M20K Styx River 53.09 32 P P 13 04 11.7 +0.7
baz=262
Q20K Shuyak Island 53.09 36 P P 13 04 10.9 0.0
baz=265
D20K Etivluk River 53.10 23 P P 13 04 11.6 +0.7
baz=254
E20K Nigu River 53.13 24 P P 13 04 11.7 +0.5
baz=254
TARG Taragay, Kyrgy 53.41 302 IAmb IAmb 13 04 27.9
comp=Z,28nm,0.9s
SPCR Spurr Chakacha 53.44 33 P P 13 04 13.8 +0.3
baz=263
HOM Homer 53.56 35 P P 13 04 14.9 +0.5
baz=265
STLK Strandline Lak 53.65 33 IAmb IAmb 13 04 18.8
comp=Z,55nm,1.9s
PPLA Purkeypile 53.66 31 P P 13 04 15.6 +0.3
baz=262
G21K Allakaket 53.72 27 P P 13 04 16.3 +0.8
baz=258
CHUM Lake Minchumin 53.75 30 P P 13 04 16.6 +0.9
baz=261
MDOK Medeo 53.78 304 eP P 13 04 17.1 +0.6
MDOK Medeo 53.78 304 eP P 13 04 17.1 +0.6
KDJ Kajisay 53.82 303 IAmb IAmb 13 04 20.8
comp=Z,65nm,1.6s
H21K Melozitna Rive 53.84 28 IAmb IAmb 13 04 31.0
comp=Z,34nm,1.3s
H21K Melozitna Rive 53.84 28 P P 13 04 17.0 +0.7
baz=259,SNR=13
SKT Skwentna 53.85 32 IAmb IAmb 13 04 19.9
comp=Z,53nm,1.6s
SKT Skwentna 53.85 32 P P 13 04 16.5 0.0
baz=263
C21K Knifeblade Rid 53.86 23 P P 13 04 16.8 +0.4
baz=255
TNSS Tian-Shan 53.87 304 eP P 13 04 17.5 +0.1
TNSS Tian-Shan 53.87 304 eP P 13 04 17.6 +0.1
AAA Alma-Ata 53.88 304 eP P 13 04 17.5 +0.5
AAA pmax pmax
comp=Z,25nm,0.8s
AAA Alma-Ata 53.88 304 eP P 13 04 17.6 +0.5
comp=Z,25nm,0.8s
F21K Alatna River 53.88 26 P P 13 04 17.3 +0.6
baz=258
A21K Barrow 53.88 20 P P 13 04 16.9 +0.4
baz=252
CAPN Captain Cook N 53.91 34 P P 13 04 16.9 0.0
baz=265
E21K Killik River 53.97 24 IAmb IAmb 13 04 21.3
comp=Z,45nm,1.2s
E21K Killik River 53.97 24 P P 13 04 18.1 +0.8
baz=256
BRSE Bradley Lake S 54.02 35 P P 13 04 17.6 -0.2
baz=266
I21K Tanana 54.09 28 P P 13 04 18.9 +0.7
baz=261
SUA Susitna One 54.17 33 P P 13 04 19.0 +0.1
baz=264
EIDS Eidsvold 54.29 171 IAmb IAmb 13 04 48.8
comp=Z,67nm,1.9s
BPAW Bear Paw Mtn. 54.36 30 P 13 04 20.8 +0.6
BPAW IAmb IAmb 13 04 36.1
comp=Z,52nm,1.6s
BPAW Bear Paw Mtn. 54.36 30 P P 13 04 20.2 0.0
baz=262
H22K Ishtalitna Cre 54.46 27 IAmb IAmb 13 04 25.6
comp=Z,65nm,1.8s
H22K Ishtalitna Cre 54.46 27 P P 13 04 21.6 +0.7
baz=261
CUT Chulitna 54.48 32 P P 13 04 21.5 +0.4
baz=264
M22K Willow 54.49 33 P P 13 04 21.2 +0.1
baz=265
PSA00 Pilbara Seismi 54.52 206 P 13 04 21.2 -0.7
PSA00 IAmb IAmb 13 04 32.7
comp=Z,56nm,1.9s
D22K Ayikyak River 54.53 24 P P 13 04 22.2 +0.9
baz=257
TRF Thorofare Moun 54.59 31 IAmb IAmb 13 04 26.2
comp=Z,29nm,1.2s
TRF Thorofare Moun 54.59 31 P P 13 04 22.4 +0.4
baz=263
MLY Manley 54.59 29 IAmb IAmb 13 04 26.3
comp=Z,84nm,1.9s
MLY Manley 54.59 29 P P 13 04 22.5 +0.6
baz=262
RC01 Rabbit Creek A 54.62 33 P P 13 04 22.2 +0.1
baz=266
BOOM Boomskoye usch 54.68 304 IAmb IAmb 13 04 26.3
comp=Z,25nm,0.6s
SEW Seward 54.70 35 P P 13 04 23.0 +0.3
baz=267
NRN Naryn 54.80 302 IAmb IAmb 13 04 38.8
comp=Z,36nm,1.2s
TKM2 Tokmak 2 54.87 304 P P 13 04 25.4 +0.9
SNR=24
PMR Palmer 54.95 33 P P 13 04 24.3 -0.2
baz=266
G23K Bananza Creek 55.12 27 P P 13 04 26.3 +0.5
baz=261
COLD Coldfoot 55.13 26 IAmb IAmb 13 04 30.4
comp=Z,41nm,1.6s
COLD Coldfoot 55.13 26 P P 13 04 25.5 -0.2
baz=261,SNR=10
I23K Minto, Yukon-K 55.19 29 IAmb IAmb 13 04 30.5
comp=Z,34nm,1.4s
I23K Minto, Yukon-K 55.19 29 P P 13 04 26.9 +0.8
baz=263,SNR=7.3
MCK McKinley 55.22 30 IAmb IAmb 13 04 30.4
comp=Z,57nm,1.5s
MCK McKinley 55.22 30 P P 13 04 26.1 -0.3
baz=264
NEA2 Nenana 55.25 29 IAmb IAmb 13 04 43.8
comp=Z,28nm,1.0s
NEA2 Nenana 55.25 29 P P 13 04 26.7 +0.1
baz=264
D23K Nanushuk River 55.26 24 P P 13 04 26.8 +0.2
baz=259,SNR=43
KNK Knik Glacier 55.26 33 IAmb IAmb 13 05 01.4
comp=Z,30nm,1.0s
KNK Knik Glacier 55.26 33 P P 13 04 26.7 -0.1
baz=266
WAT1 Susitna Watana 55.31 31 P P 13 04 26.4 -0.7
baz=266
SML Sawmill 55.34 33 IAmb IAmb 13 04 46.5
comp=Z,28nm,1.0s
SML Sawmill 55.34 33 P P 13 04 26.8 -0.7
baz=266
KBK Karagaybulak 55.38 304 P P 13 04 29.0 +0.8
SNR=22
CHMS Chumysh 55.47 304 P P 13 04 29.2 +0.6
SNR=9.7
E23K Chandalar 55.49 25 IAmb IAmb 13 04 35.0
comp=Z,32nm,1.0s
E23K Chandalar 55.49 25 P P 13 04 28.9 +0.5
baz=261
SGDS Sogindy 55.49 305 eP P 13 04 29.2 +0.4
KSH2 Kashi 55.52 300 P P 13 04 30.3 +1.1
KSH2 sP pwP 13 04 41.4 +2.4
KSH2 pmax pmax
comp=Z,20nm,1.5s
KSH2 pmax pmax
comp=Z,590nm,7.6s
KSH2 LR LR
comp=Z,2µm,16.8s
KSH2 LR LR
comp=Z,1µm,16.5s
KSH2 LR LR
comp=Z,1µm,13.4s
USP Ospenovka 55.62 305 P P 13 04 30.2 +0.5
SNR=13
M23K Glacier View 55.63 33 P P 13 04 29.5 +0.1
baz=267
WRH Wood River Hil 55.66 29 IAmb IAmb 13 04 32.8
comp=Z,63nm,1.8s
WAT6 Susitna Watana 55.67 32 P P 13 04 29.6 -0.3
baz=266,SNR=10
AAK Ala-Archa 55.72 304 LR LR 13 30 32.3
comp=Z,1µm,18.7s,baz=71,slow=38
AAK Ala-Archa 55.72 304 P P 13 04 31.1 +0.6
SNR=15
AAK Ala-Archa 55.72 304 P 13 04 31.2 +0.7
AAK IAmb IAmb 13 04 32.8
comp=Z,45nm,1.6s
AAK Ala-Archa 55.72 304 i P P 13 04 31.1 +0.6
SNR=17
AAK Ala-Archa 55.72 304 i P P 13 04 30.2 -0.3
AAK pmax pmax
comp=Z,90nm,1.2s
P23K Montague Islan 55.72 35 P P 13 04 29.4 -0.6
baz=268
UCH Uchtor 55.77 304 P P 13 04 32.2 +1.0
SNR=25
CCB Clear Creek Bu 55.79 29 IAmb IAmb 13 04 53.0
comp=Z,48nm,2.0s
COLA College 55.79 29 P P 13 04 32.2 +1.7
COLA College 55.79 29 i P P 13 04 31.4 +0.9
COLA pmax pmax
comp=Z,8.0nm,1.5s
COLA College 55.79 29 P P 13 04 30.6 +0.1
baz=265
SCM Sheep Creek Mo 55.82 33 IAmb IAmb 13 04 49.6
comp=Z,39nm,0.9s
SCM Sheep Creek Mo 55.82 33 P P 13 04 30.4 -0.5
baz=267
DHY Denali Highway 55.87 31 P P 13 04 31.2 -0.1
baz=266
H24K Noodor Dome 55.88 28 P P 13 04 32.0 +0.8
baz=264,SNR=11
GLI Glacier Island 55.90 34 P P 13 04 31.5 +0.2
baz=268
E24K Your Creek 55.91 25 P P 13 04 32.0 +0.7
baz=262
BRZS Berezniki 56.04 313 eP P 13 04 33.2 +0.6
BRZS Berezniki 56.04 313 eP P 13 04 33.2 +0.6
G24K Hadweenzic Riv 56.13 27 IAmb IAmb 13 04 37.9
comp=Z,69nm,1.6s
G24K Hadweenzic Riv 56.13 27 P P 13 04 33.6 +0.7
baz=264
HDA Harding Lake 56.15 30 IAmb IAmb 13 04 35.9
comp=Z,70nm,1.8s
HDA Harding Lake 56.15 30 P P 13 04 32.7 -0.3
baz=266
ILAR Eielson Array 56.20 29 P P 13 04 32.2 -1.2
comp=Z,8.2nm,1.0s,baz=254,slow=2.2,SNR=30
ILAR LR LR 13 27 41.4
comp=Z,611nm,19.8s,baz=256,slow=35
ILAR PKP2bc P'P'bc 13 34 38.9 -11
comp=Z,0.6nm,1.1s,baz=159,slow=1.8,SNR=4.5
comp=Z,8.2nm,1.0s
ILAR Eielson Array 56.20 29 P 13 04 32.7 -0.7
ILAR Eielson Array 56.20 29 P P 13 04 32.7 -0.7
EKS2 Erkin-Say 56.23 304 P P 13 04 35.2 +1.0
SNR=5.7
Q23K Middleton Isla 56.25 36 P P 13 04 34.0 +0.2
baz=270
M24K Tolsona, Glenn 56.38 32 P P 13 04 35.0 +0.2
baz=268
KLU Klutina 56.48 33 P P 13 04 36.0 +0.4
baz=269
EYAK Cordova Ski Ar 56.55 34 P P 13 04 36.0 +0.1
baz=270
K24K Donnelly Dome 56.62 30 P P 13 04 36.7 +0.2
baz=267
PAX Paxson 56.73 31 IAmb IAmb 13 05 00.6
comp=Z,73nm,1.9s
PAX Paxson 56.73 31 P P 13 04 37.6 +0.2
baz=268,SNR=7.2
PRP Porcupine Dome 56.82 28 P P 13 04 37.6 -0.4
baz=266
D25K Kavik River 56.83 24 P P 13 04 38.5 +0.6
baz=263
J25K Salcha River, 56.84 29 P P 13 04 38.0 0.0
baz=267
HARP HAARP 56.86 32 P P 13 04 38.5 +0.3
baz=269
F25K Christian Rive 56.93 26 IAmb IAmb 13 04 43.9
comp=Z,56nm,1.4s
F25K Christian Rive 56.93 26 P P 13 04 38.9 +0.3
baz=265
E25K Arctic Village 57.00 25 IAmb IAmb 13 04 44.3
comp=Z,62nm,1.4s
E25K Arctic Village 57.00 25 P P 13 04 39.7 +0.6
baz=265
RIDG Independent Ri 57.03 30 P P 13 04 39.5 +0.1
baz=268
BMRM Bremner River 57.12 34 IAmb IAmb 13 04 44.6
comp=Z,43nm,1.1s
BMRM Bremner River 57.12 34 P P 13 04 40.4 +0.3
baz=270,SNR=6.5
N25K Chitina, Valde 57.12 33 P P 13 04 40.6 +0.5
baz=270
BVA0 Borovoye Array 57.19 317 P P 13 04 39.7 -1.0
BVAR Borovoye Array 57.19 317 P P 13 04 41.3 +0.6
comp=Z,19nm,0.5s,baz=91,slow=7.1,SNR=95
BVAR LR LR 13 30 11.1
comp=Z,2µm,19.0s,baz=82,slow=37
comp=Z,19nm,0.5s
KAIM Kayak Island 57.22 35 P P 13 04 40.3 -0.4
baz=271
BORK Borovoye 57.23 317 P 13 04 42.3 +1.4
BORK Borovoye 57.23 317 ⇑ i P P 13 04 41.5 +0.6
BORK pmax pmax
comp=Z,49nm,1.6s
BMAR Burnt Mountain 57.32 26 P 13 04 42.8 +1.4
DOT Dot Lake 57.38 30 IAmb IAmb 13 04 46.0
comp=Z,34nm,1.4s
C26K Camden Bay 57.41 23 P P 13 04 43.1 +1.2
baz=264
SCRK Sand Creek 57.42 30 P P 13 04 42.2 0.0
baz=269,SNR=13
GLB Gilahina Butte 57.49 33 IAmb IAmb 13 05 09.9
comp=Z,22nm,1.0s
F26K Sheenjek River 57.51 26 P P 13 04 43.4 +0.8
baz=266
MENT Masata 57.53 31 IAmb IAmb 13 05 11.5
comp=Z,34nm,1.5s
G26K Porcupine Rive 57.60 27 P P 13 04 44.0 +0.7
baz=267
J26L Joseph Creek 57.61 29 P P 13 04 43.3 -0.3
baz=269,SNR=20
VRDI Verde Repeater 57.67 33 IAmb IAmb 13 05 08.9
comp=Z,44nm,1.4s
L26K Log Cabin Wild 57.70 31 IAmb IAmb 13 04 49.2
comp=Z,50nm,1.8s
L26K Log Cabin Wild 57.70 31 P P 13 04 44.1 -0.1
baz=270
C27K Jago River 57.80 23 IAmb IAmb 13 04 49.4
comp=Z,30nm,0.8s
C27K Jago River 57.80 23 P P 13 04 45.5 +0.8
baz=266,SNR=11
CRQE Cirque 57.86 34 P P 13 04 45.0 -0.4
baz=272,SNR=5.5
M26K Nabesna, AK 57.87 32 IAmb IAmb 13 05 01.0
comp=Z,54nm,1.8s
M26K Nabesna, AK 57.87 32 P P 13 04 45.3 0.0
baz=271
MCARA McCarthy VSAT 57.87 33 IAmb IAmb 13 05 15.0
comp=Z,32nm,1.0s
MCARA McCarthy VSAT 57.87 33 P P 13 04 44.9 -0.4
baz=271
DZA Taraz 57.97 305 eP P 13 04 46.8 +0.5
DZA pmax pmax
comp=Z,10.0nm,0.7s
DZA Taraz 57.97 305 eP P 13 04 46.9 +0.5
comp=Z,10nm,0.7s
TGL Tana Glacier 57.99 34 IAmb IAmb 13 05 13.8
comp=Z,29nm,1.1s
M27K Edge Creek, AK 58.39 32 IAmb IAmb 13 04 52.8
comp=Z,48nm,1.8s
M27K Edge Creek, AK 58.39 32 P P 13 04 49.0 -0.1
baz=272
L27K Beaver Creek, 58.39 31 P P 13 04 49.5 +0.6
baz=271,SNR=7.8
BCAR Beaver Creek A 58.41 31 P P 13 04 49.2 +0.1
MESA MESA 58.45 35 P P 13 04 49.1 -0.5
baz=273
I27K Kandik River 58.45 28 P P 13 04 49.9 +0.5
baz=270
H27K Steamboat Moun 58.49 27 P P 13 04 49.9 +0.3
baz=270
KK31 Karatay Array 58.52 305 i P P 13 04 50.5 +0.3
KKAR Karatay Array 58.52 305 P 13 04 50.8 +0.7
KKAR Karatay Array 58.52 305 P P 13 04 50.8 +0.7
GRNC Granite Creek 58.52 34 IAmb IAmb 13 04 54.3
comp=Z,18nm,0.8s
BARN Barnard Glacie 58.55 34 IAmb IAmb 13 05 05.9
comp=Z,24nm,1.2s
NIL Nilore 58.59 294 P 13 04 51.2 +0.4
NIL Nilore 58.59 294 P P 13 04 51.2 +0.4
NIL pmax pmax
comp=Z,98nm,1.7s
CTG Chitna Glacier 58.71 34 P P 13 04 52.0 +0.6
baz=273
D27M Malcolm River 58.75 24 P P 13 04 51.3 -0.1
baz=268
BVCY Beaver Creek 58.86 32 P P 13 04 53.2 +0.9
baz=273
BRLS Borolday 59.02 305 c i P P 13 04 55.2 +1.6
BRLS pmax pmax
comp=Z,10.0nm,0.9s
BRLS Borolday 59.02 305 ⇑ i P P 13 04 55.2 +1.6
comp=Z,9.7nm,0.9s
IUG luznay 59.06 304 c i P P 13 04 54.4 +0.4
IUG pmax pmax
comp=Z,16nm,0.7s
IUG luznay 59.06 304 ⇑ i P P 13 04 54.5 +0.4
comp=Z,16nm,0.7s
YUK3 Moose Creek 59.08 33 P P 13 04 54.6 +0.6
baz=273,SNR=5.4
F28M Old Crow 59.14 26 IAmb IAmb 13 05 15.2
comp=Z,21nm,1.1s
F28M Old Crow 59.14 26 P P 13 04 54.7 +0.6
baz=270,SNR=13
I28M Miner Creek 59.15 28 P P 13 04 54.1 -0.2
baz=272
E28M Babbage River 59.26 25 P P 13 04 56.2 +1.3
baz=270
O28M Mount Upton 59.28 34 IAmb IAmb 13 05 21.8
comp=Z,51nm,1.8s
O28M Mount Upton 59.28 34 P P 13 04 55.7 +0.2
baz=274
PINM Pinnacle 59.30 35 P P 13 04 55.2 -0.2
baz=274
CHM Chimkent 59.33 304 eP P 13 04 56.2 +0.4
CHM Chimkent 59.33 304 eP P 13 04 56.3 +0.4
ARMA Armidale 59.33 171 IAmb IAmb 13 05 20.8
comp=Z,29nm,1.1s
HYB Hyderabad 59.41 274 eP P 13 04 57.6 +0.9
DAWY Dawson 59.44 30 P P 13 04 56.7 +0.5
baz=273,SNR=11
YUK8 Steele Glacier 59.45 33 P P 13 04 56.9 +0.3
baz=274
I29M Ogilvie Camp, 59.84 28 IAmb IAmb 13 05 28.4
comp=Z,35nm,1.2s
I29M Ogilvie Camp, 59.84 28 P P 13 04 59.8 +0.9
baz=273
E29M Blow River 59.87 25 P P 13 05 00.2 +1.1
baz=272
G29M Pine Creek 59.87 27 P P 13 04 59.9 +0.7
baz=272
J29N Klondike Camp 59.93 29 P P 13 05 00.5 +0.8
baz=274
M29M Somme Creek 59.97 32 IAmb IAmb 13 05 27.9
comp=Z,19nm,1.1s
M29M Somme Creek 59.97 32 P P 13 05 00.7 +0.7
baz=275
YUK4 Talbot Arm 59.98 33 P P 13 05 00.9 +0.7
baz=275,SNR=18
O29M Mount Kennedy 60.12 34 P P 13 05 01.8 +0.7
baz=276
YUK6 Outpost Mounta 60.16 34 P P 13 05 02.0 +0.5
baz=276
STKA Stephens Creek 60.17 181 P P 13 05 00.9 -0.6
comp=Z,4.1nm,0.8s,baz=2.6,slow=9.2,SNR=6.4
STKA LR LR 13 30 20.0
comp=Z,905nm,20.8s,baz=3.2,slow=35
comp=Z,4.1nm,0.8s
STKA Stephens Creek 60.17 181 ⇓ i P P 13 05 01.5 0.0
K29M Barlow Dome 60.28 30 IAmb IAmb 13 05 18.5
comp=Z,54nm,1.6s
K29M Barlow Dome 60.28 30 P P 13 05 03.2 +1.1
baz=275
CHGR Chuyangaron 60.50 300 P P 13 05 04.8 +0.7
CHGR Chuyangaron 60.50 300 P P 13 05 04.8 +0.7
CHGR pmax pmax
comp=Z,107nm,0.6s
G30M tAoh Zraii Nji 60.58 26 P P 13 05 04.9 +0.9
baz=274
HYT Haines Junctio 60.59 34 P 13 05 05.2 +0.9
HYT IAmb IAmb 13 05 08.8
comp=Z,38nm,1.3s
HYT Haines Junctio 60.59 34 P P 13 05 05.3 +1.1
baz=276,SNR=10
I30M Mount Dempster 60.66 29 IAmb IAmb 13 05 10.0
comp=Z,55nm,1.6s
I30M Mount Dempster 60.66 29 P P 13 05 05.4 +0.7
baz=275
FORT Forrest 60.68 194 P P 13 05 05.1 +0.1
FORT IAmb IAmb 13 05 33.4
comp=Z,20nm,1.1s
F30M Barrier River 60.70 26 P P 13 05 05.7 +1.0
baz=274,SNR=14
M30M Minto, Yukon 60.73 32 P P 13 05 05.5 +0.4
baz=276
J30M Hart River 60.73 29 IAmb IAmb 13 05 44.2
comp=Z,29nm,1.6s
J30M Hart River 60.73 29 P P 13 05 05.7 +0.5
baz=275
P30M Million Dollar 60.94 34 P P 13 05 06.5 -0.1
baz=277
MAYO Mayo, Yukon 61.03 30 IAmb IAmb 13 05 36.9
comp=Z,26nm,1.0s
MAYO Mayo, Yukon 61.03 30 P P 13 05 07.6 +0.5
baz=276
O30N Mendenhall 61.28 34 IAmb IAmb 13 05 56.0
comp=Z,25nm,1.5s
O30N Mendenhall 61.28 34 P P 13 05 09.2 +0.3
baz=278
N31M Braeburn, Yuko 61.34 33 IAmb IAmb 13 05 39.1
comp=Z,26nm,1.1s
N31M Braeburn, Yuko 61.34 33 P P 13 05 10.1 +0.9
baz=278
H31M Peel River 61.44 28 P P 13 05 10.5 +0.6
baz=276
INK Inuvik 61.49 25 P 13 05 10.3 +0.2
INK Inuvik 61.49 25 P P 13 05 10.3 +0.2
INK pmax pmax
comp=Z,46nm,1.3s
INK Inuvik 61.49 25 P P 13 05 10.2 +0.2
baz=276,SNR=29
F31M Tsiigehtchic 61.50 26 P 13 05 10.0 -0.2
F31M Tsiigehtchic 61.50 26 P P 13 05 10.5 +0.4
baz=276,SNR=8.1
S31K Pelican 61.62 37 P P 13 05 11.1 0.0
baz=279
KBL Kabul 61.70 296 P 13 05 12.8 +0.5
KBL Kabul 61.70 296 P P 13 05 12.9 +0.5
KBL pmax pmax
comp=Z,71nm,1.7s
KBL Kabul 61.70 296 P P 13 05 12.4 +0.1
SNR=13
SKAG Skagway 61.85 35 P P 13 05 12.4 -0.2
baz=279
WHY Whitehorse 61.89 34 P P 13 05 13.4 +0.4
baz=279
M31M Drury Creek, Y 61.89 32 IAmb IAmb 13 05 53.2
comp=Z,16nm,1.1s
M31M Drury Creek, Y 61.89 32 P P 13 05 13.6 +0.7
baz=278,SNR=7.8
PALK Pallekele 61.93 263 LR LR 13 31 39.9
comp=Z,376nm,21.3s,baz=62,slow=36
PALK Pallekele 61.93 263 P P 13 05 14.1 +0.1
PALK Pallekele 61.93 263 S S 13 13 35.7 -1.8
SIT Sitka 62.26 38 P P 13 05 15.8 +0.4
baz=280
SVE Sverdlovsk 62.26 322 eP P 13 05 17.3 +1.8
FARO Faro, Yukon 62.37 32 IAmb IAmb 13 05 20.1
comp=Z,52nm,1.8s
FARO Faro, Yukon 62.37 32 P P 13 05 16.7 +0.5
baz=279
R32K Eaglecrest 62.47 36 P P 13 05 17.1 +0.3
baz=280
S32K Killisnoo 62.58 37 P P 13 05 17.1 -0.5
baz=281
P32M Atlin 62.64 35 P P 13 05 18.1 +0.1
baz=280
N32M Quiet Lake 62.67 33 IAmb IAmb 13 05 51.5
comp=Z,13nm,0.8s
N32M Quiet Lake 62.67 33 P P 13 05 18.4 +0.1
baz=280
P33M Teslin, Yukon 62.97 34 P P 13 05 19.8 -0.5
baz=281,SNR=7.3
Q32M Nakina River 63.49 35 P P 13 05 23.7 -0.2
baz=282
ARTI Arti 63.57 322 LR LR 13 35 44.0
comp=Z,1µm,18.4s,baz=72,slow=38
ARTI Arti 63.57 322 P 13 05 24.4 +0.3

ARTI Arti 63.57 322 *c i* P P **13 05 24.7 +0.5**
ARTI 13 06 01.8
ARTI S **S** **13 13 58.7 +2.0**
ARTI pmax pmax
comp=Z,58nm,1.5s
ARTI MLR MLR
comp=Z,1µm,16.0s
U33K Whale Pass 63.64 38 P P **13 05 24.2 -0.4**
baz=282
A36M Sachs Harbour 63.73 20 P P **13 05 25.6 +0.6**
baz=281,SNR=19
CRAG Craig 63.78 39 P P **13 05 25.3 -0.2**
baz=283
WRAK Wrangell Islan 63.99 38 P P **13 05 26.7 -0.2**
baz=283
R33M Jennings River 64.05 35 IAmb IAmb 13 05 32.1
comp=Z,58nm,1.9s
R33M Jennings River 64.05 35 P P **13 05 27.7 +0.2**
baz=282
S34M Telegraph Cree 64.30 36 P P **13 05 29.4 +0.5**
baz=283
AB31 Akbulak array 64.32 314 P **13 05 30.0 +0.8**
AB31 Akbulak array 64.32 314 *i* P P **13 05 29.2 0.0**
ABKAR Akbulak array 64.32 314 P **13 05 29.9 +0.7**
V35K Ketchikan 64.65 39 P P **13 05 31.6 +0.3**
baz=284
C36M Paulatuk 64.69 23 P P **13 05 31.6 +0.3**
baz=284,SNR=20
DLBC Dease Lake 64.75 36 LR LR 13 31 42.5
comp=Z,1µm,21.3s,baz=278,slow=34
DLBC Dease Lake 64.75 36 P P **13 05 32.2 +0.3**
baz=284
WTLY Watson Lake, Y 64.96 34 IAmb IAmb 13 05 49.6
comp=Z,22nm,1.4s
WTLY Watson Lake, Y 64.96 34 P P **13 05 33.6 +0.4**
baz=284
T35M Bob Quinn 64.99 37 P P **13 05 33.9 +0.4**
baz=284
AKTO Aktyubinsk 65.22 315 LR LR 13 35 10.0
comp=Z,2µm,19.6s,baz=62,slow=37
AKTO Aktyubinsk 65.22 315 P P **13 05 35.3 +0.2**
U35K Hyder 65.38 38 P P **13 05 36.2 +0.2**
baz=285
NWAO Narrogin (SRO) 65.78 203 LR LR 13 33 52.6
comp=Z,332nm,19.8s,baz=84,slow=36
TOO Toolangi 65.90 178 P **13 05 40.1 +0.6**
TOO Toolangi 65.90 178 P P **13 05 40.1 +0.6**
TOO pmax pmax
comp=Z,9.0nm,1.0s
WRGLY Wrigley 66.57 29 IAmb IAmb 13 05 59.7
comp=Z,20nm,0.9s
WRGLY Wrigley 66.57 29 P P **13 05 43.8 +0.3**
baz=287
TOAD Toad River Com 67.05 34 P P **13 05 46.1 -0.6**
baz=287
KOTAN Kotaneelee Air 67.23 33 P P **13 05 47.6 -0.3**
baz=288
BBB Bella Bella 67.52 42 LR LR 13 33 08.5
comp=Z,480nm,19.3s,baz=282,slow=34
KIRV Kirov 67.66 326 LR LR 13 38 21.5
comp=Z,872nm,18.6s,baz=73,slow=38
KIRV Kirov 67.66 326 ⇓ *i* P P **13 05 51.4 +0.9**
RAO Raoul Island 68.81 143 LR LR 13 31 52.5
comp=Z,655nm,20.4s,baz=119,slow=32
SPITS Spitsbergen Ar 68.96 350 P P **13 05 58.2 -0.2**
comp=Z,13nm,1.0s,baz=93,slow=12,SNR=5.4
comp=Z,13nm,1.0s
KBS Kingsbay 69.10 351 *i* P P **13 06 00.1 +0.9**
RES Resolute Bay 70.49 14 LR LR 13 41 26.7
comp=Z,191nm,18.0s,baz=344,slow=40
RES Resolute Bay 70.49 14 IAmb IAmb 13 06 26.4
comp=Z,34nm,1.4s
YKAW3 Yellowknife Wh 70.59 29 IAmb IAmb 13 06 12.2
comp=Z,27nm,1.4s
YKA Yellowknife Ar 70.62 29 P P **13 06 08.6 -0.3**
comp=Z,9.0nm,1.1s,baz=296,slow=6.6,SNR=32
comp=Z,9.0nm,1.1s
YKA Yellowknife Ar 70.62 29 P P **13 06 09.3 +0.4**
YKA Yellowknife Ar 70.62 29 *i* P P **13 06 08.6 -0.3**
YKA pmax pmax
comp=Z,10.0nm,1.1s
YKAW1 Yellowknife Wh 70.68 29 IAmb IAmb 13 06 12.7
comp=Z,33nm,1.5s
BELG Belogornoye 70.75 320 ⇓ *i* P P **13 06 10.6 +0.8**
BELG pmax pmax
comp=Z,13nm,1.3s
APA Apatity 70.79 337 ⇓ *e* P P **13 06 09.7 -0.1**
APA *e* 13 06 31.6
APA *e* 13 08 45.4
APA pmax pmax
comp=Z,12nm,1.3s
APA MLR MLR
comp=Z,2µm,24.0s
KLMR Klimovskoe 71.46 330 *e* P P **13 06 14.0 0.0**
KLMR pmax pmax
comp=Z,36nm,1.5s
ARCES ARCESS Array B 72.23 341 P P **13 06 17.7 -0.8**
comp=Z,7.6nm,1.0s,baz=44,slow=5.9,SNR=3.2
ARCES LR LR 13 42 25.6
comp=Z,753nm,21.9s,baz=70,slow=40
comp=Z,7.8nm,1.0s
ARCES ARCESS Array B 72.23 341 IAmb IAmb 13 06 36.4
comp=Z,48nm,1.3s
GNW Green Mountain 72.34 45 IAmb IAmb 13 06 38.0
comp=Z,26nm,1.3s
TULEG Thule 73.29 7 *i* P P **13 06 24.9 +0.3**
TULEG IAmb IAmb 13 06 42.2
comp=Z,7.2nm,0.9s
NEEM North Greenlan 73.85 3 *i* P P **13 06 28.6 +0.3**
NEEM IAmb IAmb 13 06 47.0
comp=Z,14nm,0.9s
URZ Urewera 73.94 152 LR LR 13 35 33.4
comp=Z,455nm,20.8s,baz=328,slow=33
JLN Jalan Bani Buh 74.04 287 P P **13 06 29.3 -0.7**
RTZ Ruatahuna 74.19 153 P P **13 06 29.2 -1.3**
RTZ IAmb IAmb 13 06 47.2
comp=Z,41nm,1.3s
WBK Wadi Bani Khal 74.22 287 P P **13 06 30.7 -0.4**
SNR=16
DAG Danmarks Havn 74.22 356 *i* P P **13 06 30.0 -0.1**
DAG IAmb IAmb 13 06 50.0
comp=Z,9.1nm,1.2s
WSAR Wadi Sarin 74.24 288 P P **13 06 31.7 +0.5**
WSAR S **S** **13 16 02.9 -1.3**
MXC Moxie City 74.33 45 P P **13 06 31.9 +0.6**
RAR Rarotonga 74.45 125 LR LR 13 36 14.2
comp=Z,1µm,18.1s,baz=294,slow=33
BIDO Bidbid 74.54 289 P P **13 06 33.6 +0.7**
SNR=10
MAK Makhachkala 74.57 311 *c i* P P 13 06 27.9 -4.8
MAK *e* 13 09 17.9
MAK *e* PPP PPP 13 11 05.0
MAK *e* S **SKiKP** **13 16 02.0 +4.3**
MAK *e* SSS SSS 13 24 09.1
MAK pmax pmax
comp=Z,48nm,0.3s
MAK MLR MLR
comp=Z,3µm,15.0s
VRH Novokhopyorsk 74.58 320 *e* P P **13 06 32.7 +0.1**
VRH pmax pmax
comp=Z,12nm,0.5s
MOS Moscow 74.67 325 *e* P P **13 06 31.8 -1.2**
MOS *e* S **S** **13 16 07.1 -0.8**
MOS pmax pmax
comp=Z,44nm,0.6s
YBH Yreka Blue Hor 74.79 51 LR LR 13 33 53.8
comp=Z,81nm,21.5s,baz=290,slow=31
YBH Yreka Blue Hor 74.79 51 IAmb IAmb 13 06 51.7
comp=Z,43nm,1.8s
SMDO Samad 74.80 288 P P **13 06 33.8 -0.8**
SNR=6.6
D08A Wollman Farm, 74.97 44 IAmb IAmb 13 06 51.9
comp=Z,45nm,1.7s
AKT Akhty 75.04 309 *e* P P **13 06 36.3 +0.7**
AKT *e* 13 06 48.6
AKT *e* S **S** **13 16 12.4 -0.4**
AKT *e* 13 16 47.7
AKT pmax pmax
comp=Z,54nm,0.7s
AKT MLR MLR
comp=Z,1µm,15.0s
C09A Chrisman Ranch 75.04 44 IAmb IAmb 13 06 53.4
comp=Z,48nm,1.6s
JMDO Jabal Madar 75.04 288 P P **13 06 36.7 +0.9**
BANOM Banah 75.05 292 *i* P P **13 06 36.8 +0.9**
SNR=7.2

BANOM Banah 75.05 292 P P **13 06 36.8 +0.9**
PINE Pine Mountain 75.10 48 P P **13 06 36.2 +0.2**
PINE IAmb IAmb 13 06 54.6
comp=Z,40nm,1.2s
J05D Fort Rock, OR 75.12 49 IAmb IAmb 13 06 54.4
comp=Z,64nm,1.7s
SHME Shamm 75.13 292 *i* P P **13 06 37.0 +0.8**
SNR=9.8
SHME Shamm 75.13 292 P P **13 06 36.9 +0.7**
HOQ Hoqain 75.19 289 P P **13 06 37.6 +0.9**
SNR=13
MDH Madha 75.31 291 P P **13 06 37.4 +0.1**
MDH Madha 75.31 291 P P **13 06 36.7 -0.6**
MDH S **S** **13 16 13.5 -2.5**
MASF Masafi 75.39 291 P P **13 06 37.6 -0.3**
MSFE Esma-Masafi 75.40 291 *i* P P **13 06 38.2 +0.3**
SNR=6.4
LPSR Galich'ya Gora 75.48 322 *e* P P **13 06 38.0 +0.2**
LPSR pmax pmax
comp=Z,36nm,1.3s
OBN Obninsk 75.50 325 LR LR 13 42 01.8
comp=Z,1µm,18.2s,baz=10,slow=37
OBN Obninsk 75.50 325 ⇓ *i* P P **13 06 38.3 +0.5**
OBN *PP **sP** **13 06 44.0 -0.8**
OBN *SP **pwP** **13 06 46.0 -2.6**
OBN *i* 13 06 50.9
OBN PS PnS 13 17 13.0 +19
OBN pmax pmax
comp=Z,27nm,1.6s
OBN MLR MLR
comp=Z,1µm,17.0s
NEW Newport 75.53 43 LR LR 13 34 55.9
comp=Z,727nm,20.4s,baz=305,slow=32
NEW Newport 75.53 43 IAmb IAmb 13 06 55.2
comp=Z,57nm,1.9s
UOSS Minazif 75.54 291 P P **13 06 39.2 +0.6**
UOSS IAmb IAmb 13 06 53.0
comp=Z,19nm,0.9s
UOSS Minazif 75.54 291 *i* P P **13 06 38.9 +0.2**
SNR=7.0
UOSS Minazif 75.54 291 P P **13 06 39.7 +1.0**
UOSS S **S** **13 16 17.1 -1.5**
SOHO SOHO 75.61 290 *i* P P **13 06 39.1 +0.1**
SNR=13
SOHO SOHO 75.61 290 P P **13 06 39.9 +0.8**
SOHO S **S** **13 16 17.9 -1.5**
BSY Bisya 75.64 288 P P **13 06 40.2 +0.9**
SNR=7.6
HATD Hatta, Dubai 75.65 291 *i* P P **13 06 39.3 0.0**
SNR=9.8
HATD Hatta, Dubai 75.65 291 P P **13 06 40.2 +0.9**
SNR=12
HATD S **S** **13 16 20.0 +0.1**
E09A Wood Farm, Sta 75.69 45 IAmb IAmb 13 06 56.3
comp=Z,41nm,1.7s
MHTO MHTO 75.75 286 P P **13 06 40.8 +0.9**
SNR=7.8
MHTO S **S** **13 16 19.1 -1.9**
ASHO Ashiyiah 75.77 290 *i* P P **13 06 40.4 +0.4**
SNR=12
ASHO Ashiyiah 75.77 290 P P **13 06 41.0 +1.0**
SNR=12
VORR Voronezh 75.77 321 *e* P P **13 06 40.1 +0.7**
VORR pmax pmax
comp=Z,42nm,0.3s
I07A Izee 75.91 47 IAmb IAmb 13 06 44.7
comp=Z,36nm,2.0s
NAZ Nazwa, Dubai 75.97 291 P P **13 06 41.5 +0.4**
O03E Paynes Creek 76.02 52 IAmb IAmb 13 06 58.6
comp=Z,40nm,1.2s
FAQ Al Faqa, Dubai 76.12 291 P P **13 06 42.4 +0.4**
ALNE Al Ain 76.29 290 *i* P P **13 06 43.2 +0.2**
SNR=6.9
ALNE Al Ain 76.29 290 P P **13 06 43.8 +0.8**
SNR=9.4
ALNE S **S** **13 16 24.7 -2.2**
ASUD Al Ashush, Dub 76.39 291 P P **13 06 44.3 +0.8**
ASUD Al Ashush, Dub 76.39 291 P P **13 06 44.6 +1.1**
ORV Oroville 76.55 52 IAmb IAmb 13 07 00.7
comp=Z,73nm,1.9s
GOF Gofitskoye 76.56 314 *c e* P P **13 06 45.0 +0.9**
RPZ Rata Peaks 76.56 159 LR LR 13 37 03.7
comp=Z,457nm,21.5s,baz=24,slow=33
AJN Ajban 76.70 291 P P **13 06 45.7 +0.4**
AJN Ajban 76.70 291 P P **13 06 46.2 +0.9**
AJN S **S** **13 16 28.9 -2.5**
DBG Daneborg 76.71 355 *i* P P **13 06 45.1 +0.7**
DBG IAmb IAmb 13 07 04.1
comp=Z,5.9nm,1.3s
BLKN Baker Lake 76.74 22 IAmb IAmb 13 07 02.5
comp=Z,24nm,1.1s
FINES FINESS Array B 76.75 334 P P **13 06 44.7 -0.1**
comp=Z,5.6nm,0.8s,baz=89,slow=5.4,SNR=17
comp=Z,5.6nm,0.8s
FINES FINESS Array B 76.75 334 *i* P P **13 06 45.7 +0.8**
FINES pmax pmax
comp=Z,6.0nm,0.8s
ILON Igloolik, Nuna 77.11 15 IAmb IAmb 13 07 04.5
comp=Z,69nm,1.9s
AFDM Forest Hills D 77.19 53 IAmb IAmb 13 07 04.8
comp=Z,29nm,1.5s
WVOR Wild Horse Val 77.21 49 IAmb IAmb 13 07 06.2
comp=Z,53nm,1.8s
KBZ Khabaz 77.26 313 P P **13 06 49.2 +1.2**
comp=Z,36nm,1.2s,baz=92,slow=3.9,SNR=18
KBZ LR LR 13 44 58.5
comp=Z,1µm,18.1s,baz=68,slow=39
comp=Z,36nm,1.2s
KBZ Khabaz 77.26 313 ⇑ *i* P P **13 06 49.2 +1.2**
KBZ pmax pmax
comp=Z,33nm,1.2s
KVAR Kislovodsk Arr 77.28 313 LR LR 13 43 34.2
comp=Z,515nm,18.1s,baz=247,slow=38
KIV Kislovodsk 77.29 313 P **13 06 49.5 +1.1**
KIV Kislovodsk 77.29 313 *i* P P **13 06 49.9 +1.6**
SNR=6.1
KIV Kislovodsk 77.29 313 *e* P P **13 06 48.3 -0.1**
KIV *eS **S** **13 16 39.2 +1.8**
KIV pmax pmax
comp=Z,31nm,1.1s
KIV MLR MLR
comp=Z,830nm,19.0s
UMZA Um Al Zommool 77.35 289 P P **13 06 48.3 -0.6**
UMZA S **S** **13 16 35.6 -2.9**
SHA1 Shidzhatmaz 77.41 313 ⇑ *i* P P **13 06 50.4 +1.2**
GNI Garni 77.66 309 LR LR 13 44 11.3
comp=Z,638nm,18.5s,baz=63,slow=38
GNI Garni 77.66 309 P **13 06 48.4 -2.2**
GNI Garni 77.66 309 P P **13 06 48.4 -2.2**
GNI pmax pmax
comp=Z,109nm,1.5s
PLID Pearl Lake 77.68 45 IAmb IAmb 13 07 07.4
comp=Z,45nm,1.8s
ERBR Yeremizino-Bor 77.85 316 *e* P P **13 06 51.4 +0.1**
ERBR *eS **S** **13 16 43.1 -0.1**
ERBR pmax pmax
comp=Z,86nm,1.3s
PAHR Pah Rah Range 77.94 51 IAmb IAmb 13 07 09.1
comp=Z,51nm,1.7s
MZWR Madinat Zayed 77.96 291 P P **13 06 52.4 +0.1**
MZWR S **S** **13 16 42.3 -2.7**
CMB Columbia Colle 78.00 53 IAmb IAmb 13 07 10.3
comp=Z,51nm,1.6s
LABN Labinsk 78.21 314 *e* P P **13 06 53.6 +0.2**
LABN *eS **S** **13 16 45.6 -1.5**
LABN pmax pmax
comp=Z,28nm,0.7s
JRN Qarnain Island 78.29 292 P P **13 06 53.9 -0.2**
JRN S **S** **13 16 46.8 -1.8**
MFID Camas Ranch 78.58 47 IAmb IAmb 13 07 09.7
comp=Z,26nm,1.1s
MZR Muzera 78.62 290 *i* P P **13 06 56.3 +0.3**
SNR=7.3
MZR Muzera 78.62 290 P P **13 06 56.8 +0.8**
SNR=8.5
MZR S **S** **13 16 49.4 -2.9**
SUMG Summit 79.07 0 IAmb IAmb 13 07 12.9
comp=Z,61nm,1.5s
SUMG Summit 79.07 0 *i* P P **13 06 59.0 +0.9**
SUMG IAmb IAmb 13 07 13.3
comp=Z,11nm,0.8s
LHV Little Huntoon 79.22 52 IAmb IAmb 13 07 17.6
comp=Z,42nm,1.4s
NVAR Mina Array Bea 79.28 52 P P **13 06 59.4 -0.3**
comp=Z,2.6nm,0.8s,baz=285,slow=6.0,SNR=16
NVAR LR LR 13 38 39.6
comp=Z,1µm,19.1s,baz=282,slow=33
comp=Z,2.6nm,0.8s
SOC Sochi 79.36 314 *e* P P **13 07 01.7 +2.0**
SOC *e* 13 09 59.5
SOC *e* PPP PPP 13 11 46.5
SOC *eS* **S** **13 17 03.6 +4.2**
SOC *eSS* **SS** **13 22 15.0 +9.2**
SOC *eSSS* SSS 13 25 28.1
SOC pmax pmax
comp=Z,32nm,0.8s
SOC MLR MLR
comp=Z,1µm,21.0s
SHMA Al-Shehemyia 79.41 294 P P **13 07 00.7 +0.5**
SHMA S **S** **13 16 57.8 -2.7**
GEVA Gevas 79.67 308 IAmb IAmb 13 07 08.1
comp=Z,46nm,1.3s
DMTO DMTO 79.74 285 P P **13 07 02.9 +0.8**
DMTO S **S** **13 17 02.2 -2.0**
PPT Papeete 79.99 116 LR LR 13 36 04.0
comp=Z,560nm,18.9s,baz=304,slow=31
DOK Doka 80.03 286 P P **13 07 04.0 +0.3**
SNR=6.0
MNK Minsk 80.07 327 *i* P P **13 07 02.4 -1.0**
comp=E,31nm,0.9s
MNK *i* P P **13 07 02.4 -1.0**
comp=N,24nm,1.0s
MNK *i* P P **13 07 02.4 -1.0**
comp=Z,7.0nm,0.7s,baz=54
MNK *i* PcP **sP** **13 07 09.6 -0.7**
MNK *i* PP **PP** **13 10 04.5 -0.4**
MNK *i* PPP PPP 13 11 54.5
MNK *i* S **S** **13 17 08.1 +1.6**
MNK *i* SS **SS** **13 22 19.8 +3.9**
MNK *i* SSS SSS 13 25 46.0
MNK *i* LQ LQ 13 38 47.8
MNK *i* LR LR 13 43 04.4
MNK *i* LRM MLR 13 45 38.0
comp=Z,773nm,17.7s
MNK *i* LRM MLR 13 45 42.8
comp=N,567nm,15.3s
MNK *i* LRM MLR 13 45 53.3
comp=E,464nm,18.4s
MNK Minsk 80.07 327 *i* P P **13 07 02.3 -1.0**
MNK *i* 13 07 09.5
MNK *i* 13 10 04.4
MNK *i* PPP PPP 13 11 54.5
MNK *i* S **S** **13 17 08.1 +1.6**
MNK *i* SS **SS** **13 22 19.7 +3.9**
MNK *i* SSS SSS 13 25 45.9
MNK pmax pmax
comp=N,24nm,1.0s
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK pmax pmax
comp=E,31nm,0.9s
MNK MLR MLR
comp=Z,773nm,18.0s
MNK MLR MLR
comp=N,567nm,15.0s
MNK MLR MLR
comp=E,464nm,18.0s
ANN Anapa 80.17 316 *e* P P **13 07 03.8 -0.2**
ANN *eS* **S** **13 17 11.3 +3.4**
ANN pmax pmax
comp=Z,37nm,1.4s
FFC Flin Flon 80.25 32 P **13 07 04.4 +0.1**
FFC IAmb IAmb 13 07 37.4
comp=Z,28nm,1.2s
FFC Flin Flon 80.25 32 P P **13 07 04.4 +0.1**
FFC pmax pmax
comp=Z,28nm,1.2s
ELK Elko 80.25 49 LR LR 13 37 26.4
comp=Z,1µm,20.5s,baz=300,slow=32
GURO Guroymak-BITLI 80.27 309 IAmb IAmb 13 07 12.3
comp=Z,22nm,0.9s
SAATT Saattut 80.33 5 *i* P P **13 07 04.5 +0.1**
SAATT IAmb IAmb 13 07 24.1
comp=Z,11nm,1.0s
KOPT Kop Dagi 80.60 310 IAmb IAmb 13 07 47.2
comp=Z,41nm,1.3s
YHB Horse Butte 80.81 44 IAmb IAmb 13 07 26.4
comp=Z,28nm,1.3s
FCC Fort Churchill 81.07 26 IAmb IAmb 13 07 11.7
comp=Z,33nm,1.6s
PABE Paberze 81.25 330 P **13 07 09.9 +0.3**
YPP Pitchstone Pla 81.30 44 IAmb IAmb 13 07 45.5
comp=Z,34nm,1.6s
HVU Hansel Valley 81.34 47 IAmb IAmb 13 07 45.2
comp=Z,40nm,1.8s
H17A Grant Village 81.37 44 IAmb IAmb 13 07 31.1
comp=Z,39nm,1.3s
YMP Mirror Lake Pl 81.45 44 IAmb IAmb 13 07 51.6
comp=Z,39nm,1.5s
FLWY Flagg Ranch 81.46 44 IAmb IAmb 13 07 45.8
comp=Z,36nm,1.4s
GWY Greenwater Val 81.49 53 IAmb IAmb 13 07 44.3
comp=Z,65nm,1.9s
AK03 Malin Array Si 81.61 324 P P **13 07 11.5 -0.1**
AKASG Malin Array Be 81.62 324 P P **13 07 11.3 -0.3**
comp=Z,2.3nm,0.5s,baz=47,slow=5.5,SNR=12
AKASG LR LR 13 45 53.9
comp=Z,2µm,18.4s,baz=47,slow=38
comp=Z,2.3nm,0.5s
AKASG Malin Array Be 81.62 324 IAmb IAmb 13 07 12.3
comp=Z,14nm,1.4s
AKASG Malin Array Be 81.62 324 *i* P P **13 07 11.8 +0.1**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 81.62 324 IAmb IAmb 13 07 19.0
comp=Z,51nm,1.6s
AKBB Malin Array Si 81.62 324 P P **13 07 12.0 +0.3**
KIEV Kiev 81.63 324 P **13 07 11.6 -0.1**
KIEV IAmb IAmb 13 07 19.0
comp=Z,46nm,1.6s
KIEV Kiev 81.63 324 P P **13 07 11.6 -0.1**
KIEV pmax pmax
comp=Z,46nm,1.7s
RLMT Red Lodge 81.78 43 IAmb IAmb 13 07 30.9
comp=Z,27nm,1.4s
DUG Dugway, Tooele 82.13 48 IAmb IAmb 13 07 48.1
comp=Z,28nm,1.4s
HFS Hagfors 82.18 337 P P **13 07 13.5 -0.9**
comp=Z,4.1nm,0.6s,baz=92,slow=4.7,SNR=9.0
comp=Z,4.1nm,0.6s
NB2 NORSAR Subarra 82.34 338 P P **13 07 14.5 -0.8**
comp=Z,16nm,0.8s,baz=42,slow=5.3
NB2 NORSAR Subarra 82.34 338 P P **13 07 14.5 -0.8**
NB2 AMP 13 07 14.5
comp=Z,16nm,0.8s
NOA NORSAR Array B 82.34 338 P P **13 07 14.7 -0.7**
comp=Z,3.0nm,0.5s,baz=41,slow=5.2,SNR=11
NOA LR LR 13 48 50.8
comp=Z,798nm,19.9s,baz=50,slow=39
comp=Z,3.0nm,0.5s
CTU Camp Tracy 82.57 48 IAmb IAmb 13 07 35.3
comp=Z,35nm,1.8s
MTPC Mountain Pass 82.63 54 IAmb IAmb 13 07 34.6
comp=Z,43nm,2.0s
LAO LASA Array 82.69 40 IAmb IAmb 13 07 21.6
comp=Z,29nm,1.4s
LUBAR Lubar, Ukraine 82.84 324 P P **13 07 18.0 -0.1**
PDAR Pinedale Array 82.86 45 P P **13 07 18.1 -0.6**
comp=Z,1.9nm,0.9s,baz=270,slow=3.0,SNR=12
PDAR LR LR 13 39 21.6
comp=Z,638nm,20.4s,baz=310,slow=32
comp=Z,1.9nm,0.9s
PDAR Pinedale Array 82.86 45 P **13 07 17.7 -1.0**
RNPP9 Sopachiv 82.89 326 P P **13 07 18.0 -0.3**
PFO Pinyon Flats O 82.90 56 LR LR 13 39 22.1
comp=Z,587nm,19.1s,baz=280,slow=32
PMD Palm Desert 82.94 56 IAmb IAmb 13 07 40.7
comp=Z,37nm,1.8s
RNPP5 Staryi Chortor 83.00 326 P P **13 07 19.1 +0.2**
DANC Danby, Needles 83.17 54 IAmb IAmb 13 07 39.0
comp=Z,23nm,1.0s
SORM Soroca 83.58 322 P P **13 07 21.9 0.0**
comp=Z,11nm,1.0s
BC3 Big Chuckawall 83.61 55 IAmb IAmb 13 07 40.4
comp=Z,25nm,1.4s
KNB Kanab 83.76 51 IAmb IAmb 13 07 41.8
comp=Z,24nm,1.1s
P17A Butcher Ranch, 83.87 48 IAmb IAmb 13 07 42.1
comp=Z,18nm,1.1s
RDMU Red Mountain 84.04 47 IAmb IAmb 13 07 43.1
comp=Z,38nm,1.5s
P18A Preston Nutter 84.11 48 IAmb IAmb 13 08 11.6

	comp=Z,47nm,1.8s						
SFJD	**Kangerlussuaq**	**84.16**	**5**	LR	LR	13 46 58.4	
	comp=Z,254nm,20.4s,baz=350,slow=37						
SRU	**San Rafael Swe**	**84.20**	**48**	IAmb	IAmb	13 07 43.4	
	comp=Z,16nm,1.2s						
U15A	**North Rim**	**84.42**	**51**	IAmb	IAmb	13 07 32.0	
	comp=Z,39nm,1.9s						
HMU	**Henry Mountain**	**84.68**	**50**	IAmb	IAmb	13 08 16.3	
	comp=Z,17nm,1.2s						
RAYN	**Ar Rayn**	**84.89**	**294**		**P**	**13 07 29.9**	**+0.8**
RAYN	**Ar Rayn**	**84.89**	**294**	*i* P	**P**	**13 07 30.2**	**+1.0**
	SNR=68						
RAYN	**Ar Rayn**	**84.89**	**294**	P	**P**	**13 07 29.9**	**+0.8**
RAYN				pmax	pmax		
	comp=Z,73nm,0.8s						
RAYN	**Ar Rayn**	**84.89**	**294**	P	**P**	**13 07 28.7**	**-0.5**
RAYN				S	**SKSac**	**13 17 49.7**	**-3.3**
O20A	**White River Ci**	**85.13**	**47**	IAmb	IAmb	13 08 16.8	
	comp=Z,20nm,1.2s						
BR131	**Keskin Array S**	**85.25**	**313**	IAmb	IAmb	13 07 47.2	
	comp=Z,15nm,0.8s						
BR131	**Keskin Array S**	**85.25**	**313**	P	**P**	**13 07 31.7**	**+0.9**
	SNR=12						
BRTR	**Keskin Array B**	**85.25**	**313**	P	**P**	**13 07 31.4**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=103,slow=3.9,SNR=28						
BRTR				LR	LR	13 49 58.9	
	comp=Z,501nm,20.0s,baz=52,slow=39						
	comp=Z,3.8nm,0.7s						
BRTR	**Keskin Array B**	**85.25**	**313**		**P**	**13 07 31.2**	**+0.4**
RSSD	**Black Hills**	**85.43**	**42**	P	**P**	**13 07 32.3**	**+0.6**
RSSD				IAmb	IAmb	13 08 04.7	
	comp=Z,27nm,1.7s						
RSSD	**Black Hills**	**85.43**	**42**	P	**P**	**13 07 32.3**	**+0.6**
RSSD				pmax	pmax		
	comp=Z,27nm,1.7s						
PV21	**Cone Mtn., Par**	**85.52**	**48**	IAmb	IAmb	13 07 50.4	
	comp=Z,20nm,0.9s						
WUAZ	**Wupatki**	**85.54**	**52**	IAmb	IAmb	13 07 51.2	
	comp=Z,16nm,1.1s						
BUR08	**Bucovina Ar. S**	**85.57**	**323**	IAmb	IAmb	13 07 53.5	
	comp=Z,36nm,1.9s						
PV14	**Lion Creek, Pa**	**85.59**	**48**	IAmb	IAmb	13 07 46.1	
	comp=Z,17nm,0.9s						
PV04	**Paradox Valley**	**85.65**	**48**	IAmb	IAmb	13 07 51.1	
	comp=Z,15nm,0.9s						
PV22	**Blue Mesa, Par**	**85.65**	**48**	IAmb	IAmb	13 07 51.0	
	comp=Z,24nm,1.3s						
PV17	**East Wray Mesa**	**85.68**	**48**	IAmb	IAmb	13 07 51.1	
	comp=Z,20nm,0.9s						
PV16	**Nyswonger Mesa**	**85.69**	**48**	IAmb	IAmb	13 07 49.9	
	comp=Z,16nm,0.8s						
PV05	**Paradox Valley**	**85.70**	**49**	IAmb	IAmb	13 07 49.4	
	comp=Z,13nm,0.9s						
PV11	**David Mesa, Pa**	**85.73**	**48**	IAmb	IAmb	13 07 51.4	
	comp=Z,20nm,0.8s						
PV13	**Radium Mtn., P**	**85.84**	**49**	IAmb	IAmb	13 07 49.1	
	comp=Z,17nm,1.2s						
PV02	**Paradox Valley**	**85.87**	**48**	IAmb	IAmb	13 07 50.2	
	comp=Z,17nm,1.0s						
ULM	**Lac du Bonnet**	**85.96**	**33**	P	**P**	**13 07 33.3**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=315,slow=3.1,SNR=5.0						
ULM				LR	LR	13 50 06.2	
	comp=Z,344nm,18.0s,baz=314,slow=39						
	comp=Z,3.9nm,0.9s						
STHS	**Stebnicka Huta**	**86.45**	**326**	*e*P	**P**	**13 07 35.6**	**-0.8**
STHS	**Stebnicka Huta**	**86.45**	**326**	*e*P	**P**	**13 07 35.6**	**-0.8**
MLR	**Muntele Rosu**	**86.50**	**321**	LR	LR	13 49 14.6	
	comp=Z,914nm,18.5s,baz=50,slow=38						
MVCO	**Mesa Verde**	**86.57**	**49**	IAmb	IAmb	13 08 10.5	
	comp=Z,35nm,1.9s						
ASF	**Jabal al Asfar**	**87.11**	**305**	LR	LR	13 51 18.2	
	comp=Z,199nm,19.7s,baz=22,slow=39						
AGMN	**Agassiz Nation**	**87.26**	**35**	IAmb	IAmb	13 08 12.8	
	comp=Z,20nm,1.4s						
MMAI	**Mount Meron Ar**	**87.72**	**307**	P	**P**	**13 07 42.7**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=56,slow=5.5,SNR=5.8						
MMAI				LR	LR	13 51 17.4	
	comp=Z,321nm,19.6s,baz=25,slow=39						
	comp=Z,2.2nm,0.6s						
MORC	**Moravsky Berou**	**87.98**	**328**	*e*P	**P**	**13 07 43.3**	**-0.5**
JAVC	**Velka Javorina**	**88.56**	**327**	*e*P	**P**	**13 07 46.4**	**-0.2**
VRAC	**Vranov**	**88.75**	**328**	LR	LR	13 50 45.3	
	comp=Z,808nm,18.8s,baz=46,slow=38						
CLL	**Collm**	**88.91**	**331**	*e*S	**S**	**13 18 41.0**	**+6.2**
CLL				*e*PPS	PPS	13 20 15.0	
CLL				*e*SS	**SS**	**13 24 18.0**	**-8.1**
MODS	**Modra-Piesok**	**89.08**	**327**	*e*P	**P**	**13 07 50.1**	**+1.1**
MODS	**Modra-Piesok**	**89.08**	**327**	*e*P	**P**	**13 07 50.1**	**+1.1**
ANMO	**Albuquerque**	**89.21**	**50**	LR	LR	13 45 20.2	
	comp=Z,720nm,19.0s,baz=306,slow=34						
KUQ	**Kuujjuuaa**	**89.78**	**16**	IAmb	IAmb	13 08 41.8	
	comp=Z,23nm,1.4s						
EIL	**Elat**	**89.86**	**304**	LR	LR	13 53 21.9	
	comp=Z,443nm,18.5s,baz=49,slow=39						
GERES	**GERESS Array B**	**90.41**	**329**	P	**P**	**13 07 55.0**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=298,slow=2.9,SNR=3.4						
GERES				LR	LR	13 52 21.5	
	comp=Z,770nm,18.0s,baz=46,slow=38						
	comp=Z,0.6nm,0.5s						
GERES	**GERESS Array B**	**90.41**	**329**	P	**P**	**13 07 55.0**	**-0.3**
E38A	**The Farm, Brul**	**90.55**	**34**	IAmb	IAmb	13 08 08.1	
	comp=Z,41nm,1.7s						
LPIG	**La Paz**	**92.43**	**61**	LR	LR	13 43 32.7	
	comp=Z,588nm,19.6s,baz=314,slow=32						
VHRN	**Van Horn**	**92.61**	**53**	IAmb	IAmb	13 08 54.2	
	comp=Z,12nm,1.4s						
PECS	**Pecos**	**93.05**	**52**	IAmb	IAmb	13 08 29.9	
	comp=Z,23nm,1.8s						
SCHQ	**Schefferville**	**93.11**	**17**	LR	LR	13 51 16.1	
	comp=Z,431nm,21.5s,baz=326,slow=36						
IDI	**Anoyia**	**93.48**	**313**	LR	LR	13 55 20.0	
	comp=Z,420nm,18.3s,baz=56,slow=39						
FUORN	**Ofenpass-Fuorn**	**93.61**	**329**	IAmb	IAmb	13 09 11.3	
	comp=Z,9.9nm,0.9s						
DAVOX	**Davos/Dischmat**	**93.66**	**330**	LR	LR	13 56 07.5	
	comp=Z,646nm,18.1s,baz=41,slow=39						
TPB05	**Hovey Rd**	**93.69**	**52**	IAmb	IAmb	13 08 29.3	
	comp=Z,7.2nm,0.9s						
E46A	**Sault Ste Mari**	**94.13**	**30**	IAmb	IAmb	13 08 53.5	
	comp=Z,21nm,1.3s						
WMOK	**Wichita Mounta**	**94.38**	**46**	IAmb	IAmb	13 08 18.2	
	comp=Z,17nm,1.6s						
TX31	**Lajitas Ar. Si**	**94.39**	**53**	IAmb	IAmb	13 08 31.5	
	comp=Z,10nm,1.1s						
TXAR	**Lajitas Array**	**94.39**	**53**	P	**P**	**13 08 14.4**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=299,slow=2.8,SNR=14						
TXAR				LR	LR	13 47 48.4	
	comp=Z,775nm,19.6s,baz=318,slow=34						
	comp=Z,1.6nm,0.8s						
SADO	**Sadowa**	**97.62**	**29**	LR	LR	13 52 22.4	
	comp=Z,379nm,20.9s,baz=333,slow=35						
QSPA	**South Pole Qui**	**118.38**	**180**	PKP	**PKPdf**	**13 13 39.3**	**-1.2**
	comp=Z,3.4nm,0.7s,baz=313,slow=1.3,SNR=5.1						
TORD	**Torodi Ar. Bea**	**123.86**	**312**	PKP	**PKPdf**	**13 13 51.9**	**-0.6**
	comp=Z,2.0nm,1.0s,baz=32,slow=5.4,SNR=6.8						
TORD				PP	**PP**	**13 15 33.4**	**-1.5**
	comp=Z,2.0nm,1.0s,baz=3.4,slow=2.6,SNR=7.5						
TORD	**Torodi Ar. Bea**	**123.86**	**312**		**PKPdf**	**13 13 52.5**	**-0.1**
DBIC	**Dimbokro**	**132.95**	**313**	P	sPKiKP	13 14 22.8	+4.6
	comp=Z,6.3nm,0.8s,baz=68,slow=5.3,SNR=5.6						
DBIC	**Dimbokro**	**132.95**	**313**				
	comp=Z,6.3nm,0.8s						
PB16	**IPOC Station P**	**148.89**	**78**		**PKiKP**	**13 14 44.1**	**-0.1**
LPAZ	**La Paz**	**149.14**	**73**	PKPbc	**PKPbc**	**13 14 44.1**	**+0.6**
	comp=Z,12nm,0.9s,baz=335,slow=2.5,SNR=29						
LPAZ	**La Paz**	**149.14**	**73**		**PKPdf**	**13 14 41.1**	**+1.7**
LPAZ	**La Paz**	**149.14**	**73**	PKP2	**PKPdf**	**13 14 41.1**	**+1.7**
LPAZ	**La Paz**	**149.14**	**73**	*e*P	**PKPdf**	**13 14 40.4**	**+1.0**
PLCA	**Paso Flores**	**150.34**	**123**	PKPbc	**PKPbc**	**13 14 45.7**	**+0.6**
	comp=Z,6.5nm,1.0s,baz=354,slow=2.1,SNR=5.4						
PLCA	**Paso Flores**	**150.34**	**123**		**PKiKP**	**13 14 45.8**	**-0.1**
BI02	**San Fabin de**	**150.47**	**115**		**PKPbc**	**13 14 45.6**	**0.0**
BO02	**Sierra Bellavi**	**151.01**	**111**		**PKPbc**	**13 14 46.0**	**-0.9**

HEL 17 13:00:42.0±0.4, 67°20N×20°67E, h0km, ML1.1,
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.88**	**136**	PG	Pg	13 00 57.2	-1.6
ERTU				SG	Sg	13 01 08.8	-1.5
PAJU	**Pajala**	**0.97**	**99**	PG	Pg	13 00 59.0	-1.6
PAJU				SG	Sg	13 01 11.8	-1.4
LANU	**Lannavaara**	**0.99**	**30**	PB	Pg	13 00 59.6	-1.4
KLF	**Kolari**	**1.28**	**87**	PG	Pg	13 01 04.9	-1.7
HEF	**Hetta**	**1.67**	**42**	PG	Pn	13 01 11.2	-1.2
	baz=223						
HEF				smax	smax	13 01 31.8	
	comp=Z,0.8nm,0.2s						
HEF				SN	Sn	13 01 33.4	-1.0
KIF	**Kilpisjarvi**	**1.82**	**2**	PG	Pn	13 01 15.1	+0.7
KIF				smax	smax	13 01 37.2	
	comp=Z,2.2nm,0.2s						
KIF				SG	Sg	13 01 40.0	-0.3
TOF	**Tornio**	**1.84**	**126**	PG	Pn	13 01 15.5	+0.7
TOF				smax	smax	13 01 36.9	
	comp=Z,1.0nm,0.2s						
TOF				SG	Sn	13 01 39.3	+0.6
KTK1	**Kautokeino**	**2.06**	**27**	PG	Pb	13 01 19.5	-0.7
KTK1				SG	Sb	13 01 46.1	-0.3
KU2	**Taivalkoski**	**3.38**	**113**	PN	Pn	13 01 36.2	+0.2

*IDC **17** 13:07:02.4±1.4, 33°.92N×24°.03E, h0km, mb3.7/4, mbtmp3.7/4, MS3.9/2, Error ellipse: s-maj=381.7km s-min=25.6km az=141.0*
*AFAD **17** 13:07:20.4, 34°.66N×26°.53E, h5km±1km, ML2.8*
*THE **17** 13:07:25.7, 35°N±13°×2°6E±°, h29km±9km, M2.5/7, MLh2.5/7*
*ATH **17** 13:07:26.5±0.5, 34°.97N×26°.08E, h36km±3km, ML2.5/7, Manual Solution by G.Panopoulou First location: 2020/02/17 13:08:57, This location: 2020/02/17 13:51:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 2 km*

ISC 17 13:07:24.8±1.4, 34°.79N±0°.10×26°.13E±0°.03, h48km±9km, n36, σ1§15/52, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.33**	**12**	P	**Pn**	**13 07 33.9**	**-0.1**
ZKR	**Zakros**	**0.33**	**12**	P	**Pn**	**13 07 33.7**	**-0.3**
ZKR				S	**Sn**	**13 07 41.2**	**+0.6**
SIT2	**Siteia**	**0.41**	**357**	P	**Pn**	**13 07 34.9**	**0.0**
SIT2				S	**Sn**	**13 07 41.5**	**-0.6**
NPS	**Neapolis**	**0.63**	**318**	P	**Pn**	**13 07 37.8**	**+0.2**
NPS				S	**Sn**	**13 07 48.3**	**+1.5**
NPS	**Neapolis**	**0.63**	**318**	P	**Pn**	**13 07 38.3**	**+0.6**
NPS				S	**Sn**	**13 07 47.0**	**+0.2**
KARP	**Karpathos**	**1.13**	**48**	P	**Pn**	**13 07 45.3**	**+1.0**
KARP				S	**Sn**	**13 08 00.5**	**+1.9**
KARP	**Karpathos**	**1.13**	**48**	P	**Pn**	**13 07 45.3**	**+1.0**
KARP				S	**Sn**	**13 07 58.9**	**+0.2**
IDI	**Anoyia**	**1.13**	**296**	P	**Pn**	**13 07 45.3**	**+1.0**
IDI				S	**Sn**	**13 08 01.1**	**+2.3**
IDI	**Anoyia**	**1.13**	**296**	P	**Pn**	**13 07 44.8**	**+0.5**
IDI				S	**Sn**	**13 07 58.4**	**-0.4**
THERA	**Ancient Thera,**	**1.66**	**341**	P	**Pn**	**13 07 52.3**	**+0.8**
THERA	**Ancient Thera,**	**1.66**	**341**	P	**Pn**	**13 07 51.3**	**-0.1**
GVD	**Gavdhos**	**1.68**	**272**	P	**Pn**	**13 07 53.5**	**+1.8**
GVD				S	**Sn**	**13 08 13.2**	**+1.0**
VAM	**Vamos**	**1.70**	**292**	P	**Pn**	**13 07 52.4**	**+0.4**
SAP3	**Santorini-Thir**	**1.76**	**339**	P	**Pn**	**13 07 52.8**	**-0.1**
IMMV	**Iera Moni Meta**	**1.89**	**291**	P	**Pn**	**13 07 55.6**	**+1.0**
ARG	**Arkhangelos**	**2.16**	**48**	P	**Pn**	**13 07 60.0**	**+1.7**
ARG	**Arkhangelos**	**2.16**	**48**	P	**Pn**	**13 07 59.4**	**+1.1**
BODT	**Bodrum**	**2.46**	**23**	P	**Pn**	**13 08 04.4**	**+1.9**
YER	**Yerkesik**	**2.92**	**36**	P	**Pn**	**13 08 09.4**	**+0.7**
IZZE	**Mula-Seydike**	**3.01**	**56**	P	**Pn**	**13 08 09.3**	**-0.7**
IZZE				S	**Sn**	**13 08 44.6**	**-0.1**
IZZE				IAML		13 08 46.0	
	comp=N,87nm,0.5s						
IZZE				IAML		13 08 47.0	
	comp=E,44nm,0.3s						
SABU	**Mula-Dalaman**	**3.07**	**48**	P	**Pn**	**13 08 10.5**	**-0.3**
SABU				S	**Sn**	**13 08 46.1**	**-0.2**
KSL	**Kastellorizon**	**3.12**	**63**	P	**Pn**	**13 08 12.3**	**+0.7**
AKAS	**Kas**	**3.18**	**62**	P	**Pn**	**13 08 10.8**	**-1.6**
AKAS				S	**Sn**	**13 08 47.0**	**-2.1**
AKAS				IAML		13 08 54.0	
	comp=E,44nm,0.3s						
AKAS				IAML		13 08 58.0	
	comp=N,71nm,1.0s						
VLI	**Velíai**	**3.23**	**307**	P	**Pn**	**13 08 12.1**	**-0.9**
VLI				S	**Sn**	**13 08 48.4**	**-1.9**
DNZT	**Denizli-Tavas-**	**3.41**	**43**	P	**Pn**	**13 08 15.7**	**+0.1**
DNZT				S	**Sn**	**13 08 57.2**	**+2.4**
KNIK	**Mula-Seydike**	**3.46**	**53**	P	**Pn**	**13 08 16.3**	**-0.1**
KNIK				S	**Sn**	**13 08 56.8**	**+0.6**
KNIK				IAML		13 09 01.0	
	comp=E,17nm,0.8s						
CAEL	**Denizli, Camel**	**3.48**	**47**	P	**Pn**	**13 08 18.0**	**+1.5**
CAEL				S	**Sn**	**13 08 57.6**	**+1.1**
TAVA	**DENIZLI_Tavas**	**3.49**	**39**	P	**Pn**	**13 08 16.7**	**+0.1**
TAVA				S	**Sn**	**13 08 58.3**	**+1.5**
MET1	**Methana Town,**	**3.56**	**322**	P	**Pn**	**13 08 17.2**	**-0.3**
MET2	**Kameni Chora,**	**3.61**	**322**	P	**Pn**	**13 08 18.3**	**+0.1**
GOLH	**Golhisar**	**3.70**	**48**	P	**Pn**	**13 08 19.3**	**-0.2**
GOLH				S	**Sn**	**13 09 04.2**	**+2.4**
GOLH				IAML		13 09 05.0	
	comp=N,20nm,0.7s						
GOLH				IAML		13 09 12.0	
	comp=E,18nm,0.9s						
KVAR	**Kislovodsk Arr**	**15.72**	**49**	LR	LR	13 20 22.9	
	comp=Z,266nm,18.1s,baz=87,slow=46						
KURBB	**Kurchatov Arra**	**40.73**	**51**	P	**P**	**13 15 00.1**	**-0.7**
	0.3nm,0.4s,baz=272,slow=8.9,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**43.31**	**56**	P	**P**	**13 15 21.4**	**-0.6**
	0.2nm,0.5s,baz=266,slow=7.2,SNR=5.2						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**44.68**	**46**	P	**P**	**13 15 31.2**	**-1.6**
	0.4nm,0.4s,baz=265,slow=8.5,SNR=2.6						
	0.4nm,0.4s						
JTS	**Las Juntas de**	**100.98**	**291**	LR	LR	14 06 25.5	
	comp=Z,74nm,18.3s,baz=194,slow=36						

*IDC **17** 13:13:45.7±1.1, 4°.04N×63°.36E, h0km, mb3.8/11, mbtmp3.8/11, MS4.0/2, Error ellipse: s-maj=32.6km s-min=20.6km az=42.0*
*NEIC **17** 13:13:47.4±1.9, 3°.95N±0°.09×63°.48E±0°.10, h10km±1km, mb4.2/14, Error ellipse: s-maj=21.9km s-min=6.1km az=134.0*

ISC 17 13:13:46.7±0.6, 3°.96N±0°.09×63°.52E±0°.08, h10km, n40, σ1§00/42, mb4.0/17, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSEY	**Mahe Island**	**11.75**	**223**	Pn	**Pn**	**13 16 34.5**	**-0.1**
TRD	**Trivandrum**	**14.10**	**71**	*e*P	**Pn**	**13 17 05.3**	**-1.3**
TRD				*e*S	**Sn**	**13 19 43.4**	**+0.1**
TRD				IAML		13 23 05.3	
	comp=N,198nm,0.1s						
TRD				IAML		13 23 05.6	
	comp=E,232nm,0.1s						
POO	**Poona**	**17.65**	**34**	*e*P	**Pn**	**13 17 51.9**	**-1.0**
POO				IAmb	IAmb	13 18 06.0	
	comp=Z,9.2nm,0.5s						
POO				*e*S	**Sn**	**13 21 09.0**	**-0.9**
MDRS	**Chennai**	**18.84**	**60**	*e*P	**P**	**13 18 05.7**	**-1.2**
MDRS				IAmb	IAmb	13 18 06.0	
	comp=Z,158nm,0.1s						
MDRS				IAmb	IAmb	13 19 02.5	
	comp=E,40nm,0.2s						
MDRS				IAmb	IAmb	13 19 03.2	
	comp=N,50nm,0.1s						
AKL	**Akola**	**21.20**	**37**	*e*P	**P**	**13 18 34.1**	**+1.5**
AKL				IAmb	IAmb	13 22 07.7	
	comp=E,2.0nm,0.3s						
AKL				IAmb	IAmb	13 22 08.4	
	comp=N,3.9nm,0.3s						
AKL				*e*S	**S**	**13 22 30.8**	**+2.3**
ROCAM	**Rodrigues Isla**	**23.57**	**180**	P	**P**	**13 18 57.6**	**0.0**
BTK	**Batken**	**36.53**	**9**	P	**P**	**13 20 52.0**	**-0.6**
BTK				IAmb	IAmb	13 20 56.1	
	comp=Z,4.9nm,1.0s						
LSA	**Lhasa**	**36.60**	**43**	P	**P**	**13 20 53.1**	**-0.6**
LSA				IAmb	IAmb	13 21 01.9	
	comp=Z,3.4nm,0.6s						
IPM	**Ipoh**	**37.40**	**88**	P	**P**	**13 20 58.6**	**-1.7**
CMAR	**Chiang Mai Arr**	**37.51**	**65**	P	**P**	**13 21 03.0**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=250,slow=9.8,SNR=5.8						
CMAR				PcP	**PcP**	**13 23 20.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=243,slow=4.7,SNR=4.5						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**37.51**	**65**		**PcP**	**13 23 18.9**	**-0.5**
ARSB	**Arslanbob**	**38.16**	**12**	P	**P**	**13 21 07.7**	**+1.3**
ARSB				IAmb	IAmb	13 21 08.5	
	comp=Z,3.2nm,0.8s						
KKAR	**Karatay Array**	**39.47**	**8**	P	**P**	**13 21 17.0**	**-0.2**
KBZ	**Khabaz**	**43.60**	**338**	P	**P**	**13 21 51.5**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=183,slow=9.3,SNR=3.9						
	comp=Z,1.5nm,0.7s						
BR131	**Keskin Array S**	**44.70**	**327**	P	**P**	**13 22 00.7**	**+0.5**
BR131				IAmb	IAmb	13 22 04.8	
	comp=Z,2.7nm,1.1s						
BRTR	**Keskin Array B**	**44.70**	**327**	P	**P**	**13 22 00.3**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=143,slow=9.8,SNR=8.5						
BRTR				PcP	**PcP**	**13 23 42.2**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=160,slow=4.6,SNR=2.2						
	comp=Z,1.2nm,0.8s						
AB31	**Akbulak array**	**45.23**	**357**	P	**P**	**13 22 05.0**	**+1.0**
AB31				IAmb	IAmb	13 22 06.8	
	comp=Z,5.6nm,1.2s						
ABKAR	**Akbulak array**	**45.23**	**357**	P	**P**	**13 22 04.9**	**+0.8**
MKAR	**Makanchi Array**	**45.66**	**18**	P	**P**	**13 22 07.2**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=204,slow=8.0,SNR=7.2						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**45.66**	**18**	P	**P**	**13 22 07.7**	**+0.1**
KURBB	**Kurchatov Arra**	**48.19**	**13**	P	**P**	**13 22 27.1**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=212,slow=7.9,SNR=6.3						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**48.30**	**13**	P	**P**	**13 22 27.7**	**-0.3**
BVAR	**Borovoye Array**	**49.23**	**5**	P	**P**	**13 22 35.3**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=187,slow=9.4,SNR=2.3						
	comp=Z,0.6nm,0.7s						
BORK	**Borovoye**	**49.25**	**5**	P	**P**	**13 22 35.0**	**-0.3**
BORK				IAmb	IAmb	13 22 40.8	
	comp=Z,2.0nm,0.8s						
ZAA0	**Zalesovo Array**	**52.79**	**16**	P	**P**	**13 23 01.2**	**-0.8**
ZAA0				IAmb	IAmb	13 23 05.0	
	comp=Z,2.8nm,1.1s						
ZALV	**Zalesovo Beam**	**52.79**	**16**	P	**P**	**13 23 01.5**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=202,slow=7.7,SNR=4.1						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**52.79**	**16**	P	**P**	**13 23 01.3**	**-0.6**
KAPI	**Kappang**	**56.87**	**99**	LR	LR	13 46 16.7	
	comp=Z,61nm,20.5s,baz=308,slow=34						
SONM	**Songino Array**	**57.09**	**33**	P	**P**	**13 23 34.6**	**+1.2**
	comp=Z,2.0nm,0.9s,baz=223,slow=7.1,SNR=8.8						
SONM				LR	LR	13 46 54.2	
	comp=Z,228nm,19.1s,baz=145,slow=35						
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**57.09**	**33**	IAmb	IAmb	13 23 37.5	
	comp=Z,1.7nm,0.9s						
NC602	**NORSAR Array S**	**68.80**	**335**	P	**P**	**13 24 50.3**	**-0.6**
MD01	**Midelt array s**	**69.65**	**304**	P	**P**	**13 24 57.0**	**0.0**
ESDC	**Sonseca Array**	**70.22**	**311**	P	**P**	**13 24 59.4**	**-0.9**
	comp=Z,2.1nm,0.9s,baz=91,slow=4.9,SNR=9.8						
	comp=Z,2.1nm,0.9s						
ESDC	**Sonseca Array**	**70.22**	**311**	IAmb	IAmb	13 25 00.9	
	comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	**73.43**	**112**	P	**P**	**13 25 21.7**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=288,slow=5.2,SNR=6.0						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**73.43**	**112**	P	**P**	**13 25 21.4**	**+1.5**
ASAR	**Alice Springs**	**73.75**	**116**	P	**P**	**13 25 23.5**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=287,slow=5.8,SNR=8.7						
	comp=Z,0.8nm,0.9s						
PDAR	**Pinedale Array**	**133.07**	**353**	PKP	**PKPdf**	**13 33 02.6**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=96,slow=5.2,SNR=3.7						
NVAR	**Mina Array Bea**	**137.79**	**2**	PKP	**PKiKP**	**13 33 13.6**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=271,slow=2.6,SNR=2.1						
TXAR	**Lajitas Array**	**144.69**	**340**	PKP	**PKPdf**	**13 33 24.5**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=46,slow=5.6,SNR=4.1						

KRSC 17 13:28:12.4±1.1, 55°.44N×165°.99E, h30km±10km, MI3.5,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.23**	**182**	*e*P	Pb	13 28 19.4	+0.4
BKI				*e*S	Sb	13 28 24.6	+1.2
KBTR	**Krutoberegovo**	**1.95**	**295**	*e*P	Pn	13 28 44.5	+1.0
KBTR				*e*S	Sb	13 29 09.2	-1.8
KBG	**Krutoberegovo**	**2.02**	**295**	*e*P	Pn	13 28 46.2	+1.7
KBG				*e*S	Sb	13 29 12.2	-1.0
MKZ	**Mys Kozlova**	**2.61**	**252**	*e*P	Pb	13 28 55.8	-2.6
SPN	**Mys Shipunski**	**4.21**	**239**	*e*S	Sn	13 30 05.6	+3.0
NLC	**Nalytchevo**	**4.50**	**242**	*e*S	Sn	13 30 14.8	+5.0
SDLR	**Sedlovina**	**4.68**	**245**	*e*P	Pn	13 29 25.5	+4.4
SMAR	**Somma**	**4.73**

	comp=Z,2.2nm,0.7s							
MJAR	**Matsushiro Arr**	**67.63**	**323**	P	**P**	**13 44 14.2**	**-1.5**
ATKA	**Atka Island**	**69.74**	**3**	P	**P**	**13 44 27.6**	**-0.4**
PETK	**Petropavlovsk-**	**73.45**	**345**	P	**P**	**13 44 49.5**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=132,slow=9.9,SNR=7.8							
	comp=Z,2.1nm,0.7s							
PETK	**Petropavlovsk-**	**73.45**	**345**	P	**P**	**13 44 49.2**	**-0.4**
PLK4	**Peulik 4**	**77.33**	**12**	P	**P**	**13 45 11.1**	**-0.1**
YBH	**Yreka Blue Hor**	**78.52**	**39**	P	**P**	**13 45 18.4**	**+0.4**
N14K	**Kuskokwak Cree**	**78.59**	**9**	P	**P**	**13 45 18.1**	**+0.3**
N14K				IAmb	IAmb	13 45 53.9	
	comp=Z,62nm,1.4s							
O16K	**Kokwok River B**	**78.84**	**10**	P	**P**	**13 45 18.2**	**-0.9**
O16K				IAmb	IAmb	13 45 48.3	
	comp=Z,26nm,1.4s							
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**13 45 23.7**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=225,slow=9.9,SNR=7.4							
	comp=Z,1.0nm,0.8s							
O18K	**Koktuh Hills**	**79.62**	**12**	P	**P**	**13 45 23.3**	**0.0**
O18K				IAmb	IAmb	13 45 35.2	
	comp=Z,29nm,1.3s							
L16K	**Owhat River**	**80.63**	**9**	P	**P**	**13 45 28.7**	**+0.2**
N19K	**Bonanza Creek**	**80.64**	**12**	P	**P**	**13 45 28.5**	**-0.3**
SLKM	**Skilak Lake**	**81.27**	**14**	P	**P**	**13 45 31.9**	**+0.1**
SLKM				IAmb	IAmb	13 45 40.3	
	comp=Z,32nm,1.4s							
GHO	**Glory Hole Cre**	**82.68**	**14**	P	**P**	**13 45 38.8**	**-0.3**
GHO				IAmb	IAmb	13 45 59.1	
	comp=Z,11nm,1.2s							
SCM	**Sheep Creek Mo**	**83.10**	**14**	P	**P**	**13 45 41.0**	**-0.2**
SCM				IAmb	IAmb	13 46 02.9	
	comp=Z,14nm,1.1s							
ISLE	**Juniper Island**	**83.35**	**17**	P	**P**	**13 45 42.3**	**-0.3**
ISLE				IAmb	IAmb	13 46 10.0	
	comp=Z,15nm,1.2s							
J19K	**Poorman**	**83.39**	**10**	P	**P**	**13 45 42.5**	**0.0**
TABL	**Table Mountain**	**83.56**	**18**	P	**P**	**13 45 43.7**	**0.0**
TABL				IAmb	IAmb	13 45 44.9	
	comp=Z,25nm,1.4s							
N25K	**Chitina, Valde**	**83.58**	**16**	P	**P**	**13 45 43.5**	**-0.1**
N25K				IAmb	IAmb	13 46 22.2	
	comp=Z,11nm,1.4s							
GLB	**Gilahina Butte**	**83.65**	**16**	P	**P**	**13 45 43.7**	**-0.2**
GLB				IAmb	IAmb	13 45 45.7	
	comp=Z,16nm,1.4s							
Q32M	**Nakina River**	**85.30**	**22**	P	**P**	**13 45 52.7**	**+0.5**
Q32M				IAmb	IAmb	13 46 11.2	
	comp=Z,12nm,1.4s							
ILAR	**Eielson Array**	**85.76**	**13**	P	**P**	**13 45 52.9**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=224,slow=5.2,SNR=12							
	comp=Z,0.5nm,0.3s							
J25K	**Salcha River,**	**85.95**	**14**	P	**P**	**13 45 54.8**	**-0.3**
J25K				IAmb	IAmb	13 45 55.4	
	comp=Z,10.0nm,1.4s							
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**	**13 45 58.1**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=219,slow=6.2,SNR=12							
	comp=Z,1.0nm,0.8s							
E19K	**Redstone River**	**86.39**	**8**	P	**P**	**13 45 56.8**	**-0.2**
PDAR	**Pinedale Array**	**87.36**	**44**	P	**P**	**13 46 02.6**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=214,slow=3.4,SNR=15							
	comp=Z,0.7nm,0.5s							
D22K	**Ayikyak River**	**88.36**	**9**	P	**P**	**13 46 06.2**	**0.0**
D22K				IAmb	IAmb	13 46 26.8	
	comp=Z,8.6nm,1.4s							
BMAR	**Burnt Mountain**	**88.53**	**12**	P	**P**	**13 46 07.3**	**+0.2**
MKAR	**Makanchi Array**	**108.86**	**314**	PKiKP	**PKiKP**	**13 51 38.3**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=103,slow=4.0,SNR=2.3							
BVAR	**Borovoye Array**	**116.57**	**321**	PKP	**PKPdf**	**13 51 53.6**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=99,slow=3.0,SNR=7.1							
BRTR	**Keskin Array B**	**144.50**	**315**	PKP	**PKPdf**	**13 52 47.1**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=142,slow=2.8,SNR=5.4							
MMAI	**Mount Meron Ar**	**145.87**	**303**	PKPbc	**PKPbc**	**13 52 51.8**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=76,slow=2.3,SNR=1.9							
GERES	**GERESS Array B**	**147.38**	**345**	PKPbc	**PKPbc**	**13 52 55.2**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=22,slow=4.3,SNR=7.2							
OSSC	**Osservatorio P**	**152.96**	**344**		**PKPab**	**13 53 21.5**	**-1.1**

MEX 17 13:39:38.3±0.3, 19.45N×102.30W, h18km±3km, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.22**	**98**	*eP*	Pb	13 39 42.4	-1.2
URUA				*i* S	Sb	13 39 45.7	-1.3
INCO	**Volcan de Coli**	**1.23**	**274**	*eP*	Pn	13 40 01.0	+0.1
INCO				*e*S	Sg	13 40 19.6	+1.2
SOMAC	**Volcano de Col**	**1.26**	**274**	*eP*	Pn	13 40 00.5	-0.7
SOMAC				*e*S	Sg	13 40 19.9	+0.7
CEGR	**Campo Tres**	**1.47**	**268**	*eP*	Pb	13 40 05.2	0.0
CEGR				*e*S	Sg	13 40 25.2	-0.7
MMIG	**Aquila**	**1.52**	**221**	*eP*	Pg	13 40 08.8	+1.1
MMIG				*e*S	Sb	13 40 25.8	+0.9
CDAR	**Ciudad de Arme**	**1.69**	**253**	*eP*	Pb	13 40 08.0	-0.9
CDAR				*e*S	Sb	13 40 30.6	+0.7
ZIIG	**Zihuatanejo**	**2.00**	**156**	*e*S	Sn	13 40 35.5	-0.1
ARIG	**Puente Sto Nin**	**2.19**	**122**	*eP*	Pn	13 40 14.8	+1.0
ARIG				*e*S	Sb	13 40 42.7	-1.4

AFAD 17 13:42:16.4, 38.49N×44.62E, h6km±5km, ML2.3
AZER 17 13:42:18.7, 38.42N×44.57E, h10km, ml2.5
ISC 17 13:42:18.6±1.3, 38.46N±0.04×44.54E±0.03, h2km±12km, n14, σ1s48/28, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**295**	P	**Pg**	**13 42 26.9**	**-0.9**
OZAP				S	**Sg**	**13 42 34.1**	**+0.2**
OZAP				IAML		13 42 35.0	
	comp=N,160nm,0.5s						
OZAP				IAML		13 42 37.0	
	comp=E,202nm,0.3s						
TVAN	**Van**	**0.89**	**275**	P	**Pg**	**13 42 33.2**	**-2.5**
TVAN				S	**Sg**	**13 42 48.7**	**+1.4**
TVAN				IAML		13 43 07.0	
	comp=N,74nm,0.7s						
TVAN				IAML		13 43 08.0	
	comp=E,96nm,1.1s						
VMUR	**Van-Muradiye**	**0.92**	**305**	P	**Pg**	**13 42 34.7**	**-1.6**
VMUR				S	**Sg**	**13 42 49.8**	**+1.5**
VMUR				IAML		13 42 53.0	
	comp=E,54nm,0.5s						
NAX	**Nakhchivan**	**1.03**	**46**	P	**Pb**	**13 42 38.5**	**-0.7**
NAX				S	**Sn**	**13 42 54.3**	**-1.0**
HAKT	**HAKKARI**	**1.12**	**216**	P	**Pg**	**13 42 38.9**	**-1.1**
HAKT				S	**Sb**	**13 42 56.7**	**+0.9**
HAKT	**HAKKARI**	**1.12**	**216**	P	**Pg**	**13 42 39.0**	**-1.1**
HAKT				S	**Sb**	**13 42 56.3**	**+0.5**
GEVA	**Gevas**	**1.17**	**263**	P	**Pg**	**13 42 38.3**	**-2.9**
GEVA				S	**Sg**	**13 42 56.5**	**+0.2**
SBZ	**Shahbuz**	**1.22**	**40**	P	**Pg**	**13 42 41.5**	**-0.6**
SBZ				S	**Sn**	**13 42 59.6**	**-0.4**
ORD	**Ordubad**	**1.23**	**67**	P	**Pn**	**13 42 41.9**	**-1.0**
ORD				S	**Sn**	**13 42 59.9**	**-0.3**
HYR	**Heyderabad**	**1.28**	**11**	P	**Pg**	**13 42 42.6**	**-0.6**
HYR				S	**Sn**	**13 43 01.3**	**-0.1**
IGDI	**IGDIR**	**1.45**	**346**	P	**Pn**	**13 42 46.3**	**+0.3**
IGDI				S	**Sg**	**13 43 07.7**	**+2.4**
PERV	**Siirt/Pervari-**	**1.66**	**253**	P	**Pb**	**13 42 50.3**	**+0.4**
PERV				S	**Sg**	**13 43 15.8**	**+4.0**
PERV				IAML		13 43 18.0	
	comp=N,42nm,0.8s						
PERV				IAML		13 43 22.0	
	comp=E,56nm,0.6s						
KOTA	**Agri, Merkez-K**	**1.69**	**323**	P	**Pn**	**13 42 49.8**	**+0.4**
KOTA				S	**Sn**	**13 43 11.3**	**-0.4**
YRD	**Yardimli**	**2.93**	**80**	P	**Pn**	**13 43 07.3**	**+0.9**
YRD				S	**Sn**	**13 43 41.9**	**-0.4**

IDC 17 13:46:29.2±2.6, 10.56S×161.19E, h73km±24km, mb3.0/3, mbtmp3.5/4, Error ellipse: s-maj=29.4km s-min=21.4km az=63.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.66**	**312**	P	Pn	13 46 54.9	-1.6
	8.5nm,0.5s,baz=230,slow=22,SNR=21						
HNR				S	Sn	13 47 17.2	+0.2
	18nm,0.4s,baz=149,slow=24,SNR=15						
DZM	**Mont Dzumac**	**12.51**	**157**	P	Pn	13 49 25.1	+0.8
	4.4nm,0.8s,baz=347,slow=15,SNR=14						
DZM				S	Sn	13 51 38.2	-3.7
	2.9nm,0.9s,baz=78,slow=20,SNR=1.2						
WRA	**Warramunga Arr**	**27.50**	**247**	P	P	13 52 09.9	+0.9
	0.2nm,0.4s,baz=76,slow=8.8,SNR=4.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**29.09**	**240**	P	P	13 52 23.7	+0.5
	0.2nm,0.8s,baz=62,slow=10,SNR=4.3						
	0.2nm,0.8s						
ILAR	**Eielson Array**	**84.53**	**20**	P	P	13 58 52.7	-1.2
	0.2nm,0.6s,baz=224,slow=5.4,SNR=1.3						
	0.2nm,0.6s						

NEIC 17 13:50:21.8±1.4, 4.50S±0.07×138.72E±0.08, h146km±7km, mb4.8/23, Error ellipse: s-maj=12.5km s-min=9.6km az=51.0
DJA 17 13:50:21.7±0.2, 4.°S±2.°×13.°9E±.°, h165km±3km, M4.7/13, mb4.5/13, mB4.7/3, MLv4.8/12, Mw(mB)3.9/3
IDC 17 13:50:21.8±0.8, 4.43S×138.76E, h149km±8km, mb3.6/11, mbtmp4.4/19, MS3.6/1, Error ellipse: s-maj=16.6km s-min=11.0km az=81.0
ISC 17 13:50:21.6±0.5, 4.54S±0.04×138.79E±0.05, h145km±5km, h146km:pP-P,n97, σ1s58/110, mb4.5/26, 1D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**2.38**	**35**	P	**Pn**	**13 51 01.7**	**+0.7**
GENI	**Genyem**	**2.38**	**35**	S	**Sn**	**13 51 31.3**	**-0.1**
GENI	**Genyem**	**2.38**	**35**	P	**Pn**	**13 51 00.6**	**-0.5**
JAY	**Jayapura**	**2.78**	**44**	P	**Pn**	**13 51 05.2**	**-0.8**
	131nm,0.4s,baz=206,slow=9.5,SNR=51						
JAY				S	**Sn**	**13 51 36.4**	**-4.0**
	180nm,0.3s,baz=200,slow=12,SNR=4.2						
JAY	**Jayapura**	**2.78**	**44**	P	**Pn**	**13 51 05.4**	**-0.7**
JAY				S	**Sn**	**13 51 41.1**	**+0.7**
SRPI	**Serui, Papua**	**3.68**	**316**	P	**Pn**	**13 51 17.1**	**-0.5**
MMPI	**Merauke**	**4.21**	**158**	P	**Pn**	**13 51 27.2**	**+2.7**
MMPI				S	**Sn**	**13 52 16.2**	**+2.8**
BAKI	**Biak**	**4.27**	**321**	P	**Pn**	**13 51 26.1**	**+0.7**
BAKI				S	**Sn**	**13 52 15.5**	**+0.5**
MWPI	**Manokwari, Pap**	**5.95**	**307**	P	**Pn**	**13 51 48.4**	**+0.7**
	0.7nm110nm,0.8s						
MWPI				S	**Sn**	**13 52 56.7**	**+1.8**
	0.7nm110nm,0.8s						
FAKI	**Fak Fak**	**6.72**	**284**	Pn	**Pn**	**13 51 57.0**	**-1.0**
FAKI	**Fak Fak**	**6.72**	**284**	P	**Pn**	**13 51 57.4**	**-0.6**
	0.3nm38nm,0.9s						
FAKI				S	**Sn**	**13 53 13.8**	**+0.3**
	0.3nm38nm,0.9s						
SAUI	**Saumlaki**	**8.19**	**245**	Pn	**Pn**	**13 52 16.1**	**-1.6**
SIJI	**Sorong**	**8.35**	**296**	P	**Pn**	**13 52 19.1**	**-0.8**
	12nm,0.4s,baz=122,slow=7.4,SNR=17						
SIJI				S	**Sn**	**13 53 48.6**	**-4.2**
	8.9nm,0.8s,baz=109,slow=22,SNR=1.5						
SIJI	**Sorong**	**8.35**	**296**	P	**Pn**	**13 52 19.6**	**-0.3**
	583nm32nm,0.8s						
SWI	**Sorong**	**8.36**	**296**	P	**Pn**	**13 52 20.0**	**0.0**
	872nm38nm,0.9s						
PMG	**Port Moresby**	**9.61**	**121**	P	**Pn**	**13 52 38.1**	**+1.6**
	3.1nm,0.3s,baz=350,slow=8.7,SNR=7.1						
COEN	**Coen**	**10.30**	**155**		**Pn**	**13 52 46.3**	**+0.5**
COEN	**Coen**	**10.30**	**155**	P	**Pn**	**13 52 46.4**	**+0.5**
KRAI	**Karang Ratu**	**10.44**	**276**	P	**Pn**	**13 52 47.1**	**-0.6**
MTN	**Manton Dam**	**11.19**	**222**		**Pn**	**13 52 56.8**	**-0.7**
MTSU	**Mount Surprise**	**14.55**	**159**	P	**Pn**	**13 53 41.7**	**+0.9**
KNRA	**Kununurra**	**14.82**	**221**		**Pn**	**13 53 43.2**	**-0.9**
SOEI	**Soe**	**15.31**	**249**		**Pn**	**13 53 48.5**	**-1.8**
SOEI	**Soe**	**15.31**	**249**	P	**P**	**13 53 53.3**	**+1.5**
SOEI	**Soe**	**15.31**	**249**	P	**P**	**13 53 51.1**	**-0.7**
WRAB	**Tennant Creek**	**15.90**	**195**	P	**Pn**	**13 53 57.5**	**0.0**
WRAB	**Tennant Creek**	**15.90**	**195**	P	**Pn**	**13 53 58.2**	**+0.7**
WRA	**Warramunga Arr**	**15.91**	**195**	P	**Pn**	**13 53 58.2**	**+0.6**
	36nm,0.6s,baz=17,slow=13,SNR=137						
WRA				S	**Sn**	**13 56 49.0**	**-5.8**
	9.4nm,0.9s,baz=13,slow=22,SNR=6.3						
QIS	**Mount Isa**	**15.94**	**177**	P	**P**	**13 53 59.3**	**+0.6**
BATI	**Baumata**	**16.02**	**249**	P	**P**	**13 53 59.6**	**0.0**
	36nm,0.5s,baz=144,slow=8.5,SNR=5.4						
CTA	**Charters Tower**	**17.07**	**155**	P	**Pn**	**13 54 12.3**	**+0.6**
	13nm,0.6s,baz=332,slow=12,SNR=26						
CTA	**Charters Tower**	**17.07**	**155**	P	**Pn**	**13 54 12.5**	**+0.7**
CTAO	**Charters Tower**	**17.07**	**155**		**Pn**	**13 54 12.4**	**+0.6**
CTAO	**Charters Tower**	**17.07**	**155**	P	**Pn**	**13 54 12.9**	**+1.1**
FITZ	**Fitzroy Crossi**	**18.63**	**223**	P	**P**	**13 54 28.4**	**+0.2**
	28nm,0.8s,baz=37,slow=9.7,SNR=42						
FITZ				S	**S**	**13 57 48.1**	**-4.8**
	28nm,0.8s,baz=203,slow=19,SNR=9.1						
TOLI2	**Tolitoli**	**18.85**	**287**	Pn	**Pn**	**13 54 31.3**	**-1.6**
AS31	**Alice Springs**	**19.59**	**193**		**P**	**13 54 38.8**	**+0.2**
ASAR	**Alice Springs**	**19.59**	**193**	P	**P**	**13 54 39.4**	**+0.8**
	18nm,0.5s,baz=26,slow=7.9,SNR=171						
ASAR				pP	**pP**	**13 55 05.2**	**+1.0**
	26nm,0.7s,baz=12,slow=10,SNR=7.5						
ASAR				S	**S**	**13 58 09.2**	**-2.9**
	11nm,0.8s,baz=18,slow=23,SNR=12						
ASAR	**Alice Springs**	**19.59**	**193**		**P**	**13 54 39.1**	**+0.5**
AUALC	**St Philip's Co**	**19.61**	**194**	P	**Pn**	**13 54 41.4**	**-0.4**
QLP	**Quilpie**	**22.52**	**167**	P	**P**	**13 55 12.0**	**+2.6**
EIDS	**Eidsvold**	**23.83**	**152**		**P**	**13 55 21.6**	**+0.1**
EIDS				IAmb	IAmb	13 55 24.0	
	comp=Z,21nm,0.8s						
EIDS	**Eidsvold**	**23.83**	**152**	P	**P**	**13 55 23.9**	**+2.4**
MBWA	**Marble Bar**	**24.81**	**227**	P	**P**	**13 55 30.7**	**+0.3**
MBWA				IAmb	IAmb	13 56 04.5	
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**27.32**	**175**	P	**P**	**13 55 54.2**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=17,slow=9.0,SNR=4.7						
STKA				pP	**pP**	**13 56 25.2**	**+1.7**
	comp=Z,4.9nm,0.7s,baz=346,slow=9.3,SNR=4.7						
	comp=Z,0.6nm,0.3s						
STKA	**Stephens Creek**	**27.32**	**175**	P	**P**	**13 55 52.4**	**-0.5**
STKA					**pP**	**13 56 26.0**	**+2.5**
ARMA	**Armidale**	**28.45**	**156**	P	**P**	**13 56 02.7**	**-0.4**
ARMA				IAmb	IAmb	13 56 49.6	
	comp=Z,31nm,1.5s						
MGBR	**Mount Gambier**	**33.07**	**177**	P	**P**	**13 56 42.7**	**-0.8**
TOO	**Toolangi**	**33.44**	**170**	P	**P**	**13 56 45.9**	**-0.9**
TOO				IAmb	IAmb	13 57 53.5	
	comp=Z,24nm,2.0s						
QIZ	**Qiongzhong**	**36.89**	**310**	P	**P**	**13 57 18.0**	**+1.5**
QIZ				pP	**pP**	**13 57 49.1**	**0.0**
QIZ				S	**S**	**14 02 53.0**	**+2.3**
QIZ				LR	LR		
	comp=N,500nm,13.9s						
QIZ				LR	LR		
	comp=E,300nm,11.1s						
QIZ				LR	LR		
	comp=Z,290nm,6.7s						
TAU	**Tasmania Unive**	**38.95**	**170**	P	**P**	**13 57 33.9**	**+0.4**
TAU				IAmb	IAmb	13 58 29.9	
	comp=Z,43nm,1.3s						
NJ2	**Nanjing**	**41.04**	**334**	*eP*	**P**	**13 57 54.3**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.8s						
KSRS	**Korea Array**	**42.99**	**347**	P	**P**	**13 58 06.7**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=163,slow=9.4,SNR=1.3						
	comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**45.43**	**301**	P	**P**	**13 58 25.8**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=119,slow=6.4,SNR=16						
	comp=Z,1.9nm,0.7s						
PZH	**PanZhiHua**	**47.31**	**313**	P	**P**	**13 58 43.0**	**+2.0**
HNS	**HongShan**	**47.37**	**334**	||P	**P**	**13 58 40.8**	**-0.3**
TCW	**Tory Channel**	**48.39**	**144**	P	**P**	**13 58 48.9**	**0.0**
BKZ	**Black Stump Fm**	**48.50**	**141**	P	**P**	**13 58 50.3**	**+0.4**
BKZ				IAmb	IAmb	13 59 21.8	
	comp=Z,68nm,1.9s						
CD2	**Chengdu**	**48.59**	**319**	*eP*	**P**	**13 58 50.5**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**51.60**	**334**	*eP*	**P**	**13 59 17.0**	**+3.7**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,450nm,6.2s						
SONM	**Songino Array**	**59.40**	**335**	P	**P**	**14 00 08.3**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=126,slow=7.4,SNR=2.9						
	comp=Z,0.5nm,0.5s						
EVN	**Everest**	**59.56**	**306**	P	**P**	**14 00 10.5**	**-0.6**
PEA0B	**Petropavlovsk-**	**59.62**	**13**	P	**P**	**14 00 10.0**	**-0.1**
PEA0B				IAmb	IAmb	14 01 08.3	
	comp=Z,27nm,1.2s						
PETK	**Petropavlovsk-**	**59.62**	**13**	P	**P**	**14 00 09.6**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=157,slow=6.3,SNR=10						
PETK				LR	LR	14 24 31.5	
	comp=Z,48nm,19.9s,baz=294,slow=34						
	comp=Z,3.2nm,0.8s						
PETK	**Petropavlovsk-**	**59.62**	**13**	P	**P**	**14 00 10.0**	**-0.1**
CASY	**Casey**	**64.71**	**192**	P	**P**	**14 00 44.6**	**+0.8**
WMQ	**Urumqi**	**66.49**	**322**	*eP*	**P**	**14 00 57.3**	**+1.5**
MKAR	**Makanchi Array**	**71.28**	**323**	P	**P**	**14 01 24.6**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=114,slow=7.5,SNR=15						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**71.28**	**323**	P	**P**	**14 01 24.2**	**-1.2**
MAKZ	**Makanchi**	**71.48**	**323**	P	**P**	**14 01 25.3**	**-1.2**
KSH2	**Kashi**	**72.56**	**313**	P	**P**	**14 01 37.3**	**+4.0**
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BOOM	**Boomskoye usch**	**73.53**	**317**	P	**P**	**14 01 38.3**	**-0.6**
BOOM				IAmb	IAmb	14 02 48.1	
	comp=Z,20nm,1.2s						
ZALV	**Zalesovo Beam**	**73.55**	**330**	P	**P**	**14 01 36.0**	**-2.6**
	comp=Z,0.9nm,0.6s,baz=108,slow=4.8,SNR=5.6						
	comp=Z,0.9nm,0.6s						
VNDA	**Vanda**	**73.96**	**175**	P	**P**	**14 01 39.7**	**-0.9**
SPIA	**Saint Paul Isl**	**73.98**	**26**	P	**P**	**14 01 40.8**	**-0.2**
KURK	**Kurchatov**	**75.26**	**325**	P	**P**	**14 01 47.1**	**-1.3**
KURK	**Kurchatov**	**75.26**	**325**	pP		**14 02 24.1**	**-1.1**
KURBB	**Kurchatov Arra**	**75.27**	**325**	P	**P**	**14 01 47.1**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=114,slow=4.6,SNR=6.3						
KURBB				pP	**pP**	**14 02 24.1**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=122,slow=5.1,SNR=1.5						
	comp=Z,0.4nm,0.5s						
BVAR	**Borovoye Array**	**80.85**	**325**	P	**P**	**14 02 18.6**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=113,slow=6.9,SNR=9.9						
	comp=Z,1.6nm,0.6s						
BORK	**Borovoye**	**80.90**	**325**	P	**P**	**14 02 18.7**	**-0.9**
L16K	**Owhat River**	**81.04**	**25**	P	**P**	**14 02 20.6**	**+0.5**
L16K				IAmb	IAmb	14 05 24.0	
	comp=Z,40nm,1.9s						
QSPA	**South Pole Qui**	**85.41**	**180**	P	**P**	**14 02 41.5**	**-1.2**
	comp=Z,4.3nm,0.6s,baz=321,slow=1.9,SNR=6.1						
	comp=Z,4.3nm,0.6s						
QSPA	**South Pole Qui**	**85.41**	**180**	IAmb	IAmb	14 03 57.8	
	comp=Z,28nm,1.9s						
CCB	**Clear Creek Bu**	**87.05**	**24**	P	**P**	**14 02 48.6**	**-1.9**
CCB				IAmb	IAmb	14 04 26.0	
	comp=Z,23nm,1.9s						
ILAR	**Eielson Array**	**87.46**	**24**	P	**P**	**14 02 50.2**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=260,slow=4.4,SNR=14						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**87.46**	**24**	P	**P**	**14 02 50.1**	**-2.3**
BARN	**Barnard Glacie**	**88.90**	**29**	P	**P**	**14 02 58.7**	**-0.9**
BMAR	**Burnt Mountain**	**89.06**	**22**	P	**P**	**14 03 00.3**	**+0.3**
BCAR	**Beaver Creek A**	**89.24**	**27**	P	**P**	**14 03 01.0**	**0.0**
DAWY	**Dawson**	**90.48**	**26**	P	**P**	**14 03 06.5**	**-0.2**
DAWY				IAmb	IAmb	14 06 13.9	
	comp=Z,17nm,1.8s						
TORD	**Torodi Ar. Bea**	**136.81**	**284**	PKP	**PKPdf**	**14 09 26.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=76,slow=1.2,SNR=3.6						
DBIC	**Dimbokro**	**143.76**	**275**	PKhKP	PKPpre	14 09 37.0	
	comp=Z,3.8nm,0.6s,baz=95,slow=5.0,SNR=4.3						
PB18	**Visviri**	**144.47**	**129**		**PKPdf**	**14 09 42.0**	**-0.5**
CPUP	**Villa Florida**	**145.56**	**154**	PKPbc	**PKPbc**	**14 09 43.8**	**0.0**
	comp=Z,3.4nm,0.8s,baz=235,slow=3.4,SNR=9.4						
CPUP	**Villa Florida**	**145.56**	**154**	PKPdf	**PKPdf**	**14 09 43.2**	**-0.2**
LPAZ	**La Paz**	**146.28**	**128**	PKPbc	**PKPab**	**14 09 47.5**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=249,slow=3.1,SNR=9.1						
LPAZ	**La Paz**	**146.28**	**128**		**PKPab**	**14 09 47.8**	**-0.2**

IDC 17 14:20:19.6±0.9, 37.06N×15.16W, h0km, mb3.8/13, mbtmp3.9/16, ML4.5/3, MS3.8/8, Error ellipse: s-maj=24.8km s-min=17.3km az=9.0
MDD 17 14:20:21.4±0.3, 37.02N×15.19W, h20km, Mb5.0/55, M_mb4.6/55, Error ellipse: s-maj=4.1km s-min=1.7km az=125.0
IGIL 17 14:20:24.2, 37.01N×15.18W, h63km, ML4.3
LDG 17 14:20:24.5±0.3, 37.28N×15.26W, h30km, Ml4.5/7, Error ellipse: s-maj=6.3km s-min=5.4km az=66.0
NEIC 17 14:20:24.9±2.3, 37.09N±0.08×14.62W±0.08, h10km±1km, mb4.7/11, Error ellipse: s-maj=15.5km s-min=8.3km az=327.0
INMG 17 14:20:25.4±2.8, 37.04N×15.20W, h10km±6km, ML4.2, Error ellipse: s-maj=7.2km s-min=2.5km az=122.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Madeira-Tore
CNRM 17 14:20:29.2, 36.96N×14.10W, h0km, ML4.8
ISC 17 14:20:21.5±0.5, 36.95N±0.04×14.89W±0.05, h10km, n247, σ3s21/335, mb4.2/39, MS3.8/7, 30C-5D, Azores-Cape St. Vincent Ridge

| Code |

MORF	**Marmelete**	**5.00**	**84**	*e*P		**Pn**	**14 21 37.7**	**+1.0**
MORF				*e*S		**Sn**	**14 22 31.2**	**-3.4**
MORF				IAML			14 22 36.5	
	comp=N,366nm,0.2s							
MORF	**Marmelete**	**5.00**	**84**			**Pn**	**14 21 37.6**	**+1.0**
MORF	**Marmelete**	**5.00**	**84**	*e*P		**Pn**	**14 21 37.7**	**+1.0**
MORF				*e*S		**Sn**	**14 22 31.4**	**-3.2**
MORF				*i* IAML			14 22 38.2	
MORF				*i* IAML			14 22 41.0	
MORF				*i* IAML			14 22 42.2	
PPOR	**Portimao**	**5.09**	**86**	*e*P		**Pn**	**14 21 39.4**	**+1.6**
PPOR				*e*S		**Sn**	**14 22 34.0**	**-2.7**
PPOR				*i* IAML			14 22 37.6	
PPOR				*i* IAML			14 22 43.0	
PPOR				*i* IAML			14 22 43.4	
AML04	**Campo deTiro d**	**5.10**	**67**	*e*P		**Pn**	**14 21 39.4**	**+1.4**
AML04				*e*S		**Sn**	**14 22 34.3**	**-2.6**
AML04				*i* IAML			14 22 42.9	
AML04				*i* IAML			14 22 43.6	
AML04				*i* IAML			14 22 44.1	
AML05	**Montejunto**	**5.12**	**62**	*e*P		**Pn**	**14 21 39.0**	**+0.7**
AML05				*e*S		**Sn**	**14 22 34.0**	**-3.4**
AML05				*i* IAML			14 22 38.1	
AML05				*i* IAML			14 22 40.5	
AML05				*i* IAML			14 22 43.1	
PBEN	**Benavente**	**5.20**	**66**	*e*S		**Sn**	**14 22 36.6**	**-2.7**
PBEN				*i* IAML			14 22 41.5	
PBEN				*i* IAML			14 22 42.5	
PBEN				*i* IAML			14 22 46.5	
PALBU	**Albufeira**	**5.32**	**86**	*e*P		**Pn**	**14 21 42.3**	**+1.3**
PALBU				*e*S		**Sn**	**14 22 40.1**	**-2.2**
MESJ	**Messejana**	**5.39**	**78**	*e*P		**Pn**	**14 21 42.6**	**+0.7**
MESJ				*e*S		**Sn**	**14 22 39.9**	**-4.1**
MESJ				IAML			14 22 45.7	
	comp=N,133nm,0.2s							
MESJ	**Messejana**	**5.39**	**78**			**Pn**	**14 21 42.6**	**+0.7**
MESJ	**Messejana**	**5.39**	**78**	*e*P		**Pn**	**14 21 42.7**	**+0.7**
MESJ				*e*S		**Sn**	**14 22 40.0**	**-4.1**
MESJ				*i* IAML			14 22 44.6	
MESJ				*i* IAML			14 22 45.4	
MESJ				*i* IAML			14 22 46.0	
MOE	**Montemor**	**5.42**	**71**	*e*P		**Pn**	**14 21 42.7**	**+0.3**
MOE				*e*S		**Sn**	**14 22 40.2**	**-4.6**
MOE				*i* IAML			14 22 44.5	
MOE				*i* IAML			14 22 46.5	
MOE				*i* IAML			14 22 48.2	
PSBE	**So Bento**	**5.44**	**60**	*e*P		**Pn**	**14 21 39.3**	**+0.3**
PSBE				*e*S		**Sn**	**14 22 41.8**	**-3.7**
PSBE				*i* IAML			14 22 44.3	
PSBE				*i* IAML			14 22 45.8	
PSBE				*i* IAML			14 22 47.6	
PCVE	**Castro Verde**	**5.51**	**81**	P		**Pn**	**14 21 44.4**	**+0.8**
PCVE				S		**Sn**	**14 22 42.6**	**-4.4**
PCVE	**Castro Verde**	**5.51**	**81**	*e*P		**Pn**	**14 21 44.2**	**+0.6**
PCVE				*e*S		**Sn**	**14 22 42.1**	**-5.0**
PCVE				*i* IAML			14 22 48.2	
PCVE				*i* IAML			14 22 50.1	
PCVE				*i* IAML			14 22 50.2	
PBDV	**Barranco-do-Ve**	**5.57**	**85**	P		**Pn**	**14 21 46.0**	**+1.4**
PBDV				S		**Sn**	**14 22 46.9**	**-1.8**
PBDV	**Barranco-do-Ve**	**5.57**	**85**	*e*P		**Pn**	**14 21 46.0**	**+1.4**
PBDV				*e*S		**Sn**	**14 22 46.4**	**-2.3**
PBDV				*i* IAML			14 22 51.9	
PBDV				*i* IAML			14 22 55.3	
PBDV				*i* IAML			14 22 56.1	
PMTG	**Montargil**	**5.68**	**66**	*e*P		**Pn**	**14 21 45.9**	**0.0**
PMTG				*e*S		**Sn**	**14 22 46.4**	**-4.8**
PMTG				*i* IAML			14 22 49.4	
PMTG				*i* IAML			14 22 49.6	
PMTG				*i* IAML			14 22 51.8	
EVO	**Evora**	**5.68**	**72**	P		**Pn**	**14 21 46.1**	**+0.2**
EVO				S		**Sn**	**14 22 47.4**	**-3.8**
EVO	**Evora**	**5.68**	**72**	*e*P		**Pn**	**14 21 46.8**	**+0.8**
EVO				*e*S		**Sn**	**14 22 46.0**	**-5.2**
EVO				*i* IAML			14 22 51.2	
EVO				*i* IAML			14 22 52.1	
EVO				*i* IAML			14 22 54.0	
PBEJ	**Beja**	**5.69**	**77**	*e*P		**Pn**	**14 21 47.0**	**+0.8**
PBEJ				*e*S		**Sn**	**14 22 46.6**	**-4.9**
PBEJ				*i* IAML			14 22 52.0	
PBEJ				*i* IAML			14 22 52.3	
PBEJ				*i* IAML			14 22 52.4	
PARRA	**Arraiolos**	**5.73**	**69**	*e*P		**Pn**	**14 21 46.5**	**-0.2**
PARRA				*e*S		**Sn**	**14 22 47.7**	**-4.9**
PARRA				*i* IAML			14 22 52.3	
PARRA				*i* IAML			14 22 52.4	
PARRA				*i* IAML			14 22 52.9	
PVAQ	**Vaqueiros**	**5.75**	**83**			**Pn**	**14 21 48.0**	**+1.0**
PVAQ	**Vaqueiros**	**5.75**	**83**	*e*P		**Pn**	**14 21 47.9**	**+1.0**
PVAQ				*e*S		**Sn**	**14 22 49.8**	**-3.2**
PVAQ				*i* IAML			14 22 54.0	
PVAQ				*i* IAML			14 22 55.6	
PVAQ				*i* IAML			14 22 56.4	
PVAQ	**Vaqueiros**	**5.75**	**83**	P		**Pn**	**14 21 47.8**	**+0.8**
PVAQ				S		**Sn**	**14 22 46.1**	**-6.9**
PTAV	**Tavira**	**5.79**	**86**	*e*P		**Pn**	**14 21 49.8**	**+2.2**
PTAV				*e*S		**Sn**	**14 22 51.7**	**-2.3**
PTAV				*i* IAML			14 22 55.6	
PTAV				*i* IAML			14 22 56.2	
PTAV				*i* IAML			14 22 57.6	
PCAS	**Casmilo, Conde**	**5.90**	**56**	*e*P		**Pn**	**14 21 48.8**	**-0.1**
PCAS				*e*S		**Sn**	**14 22 51.5**	**-5.2**
PCAS				*i* IAML			14 22 53.4	
PCAS				*i* IAML			14 22 57.1	
PCAS				*i* IAML			14 22 58.3	
PSARD	**Sardoal**	**5.92**	**61**	*e*P		**Pn**	**14 21 50.1**	**+0.7**
PSARD				*e*S		**Sn**	**14 22 52.0**	**-5.3**
PSARD				*i* IAML			14 22 56.3	
PSARD				*i* IAML			14 22 60.0	
PSARD				*i* IAML			14 23 00.8	
EGRO	**El Granado**	**5.94**	**82**	P		**Pn**	**14 21 50.2**	**+0.6**
EGRO				S		**Sn**	**14 22 55.0**	**-2.7**
EGRO	**El Granado**	**5.94**	**82**	Pn		**Pn**	**14 21 50.5**	**+1.0**
EGRO				⇑*i*Vmb_VC			14 21 54.2	
	comp=N,1µm,SNR=12							
EGRO				Sn		**Sn**	**14 22 54.0**	**-3.7**
EXAYA	**Ayamonte**	**5.99**	**85**	Sn		**Sn**	**14 22 56.1**	**-2.8**
PESTR	**Estremoz**	**6.09**	**69**	P		**Pn**	**14 21 52.0**	**+0.4**
PESTR				S		**Sn**	**14 22 56.6**	**-4.6**
PESTR	**Estremoz**	**6.09**	**69**			**Pn**	**14 21 52.9**	**+1.3**
PESTR	**Estremoz**	**6.09**	**69**	*e*P		**Pn**	**14 21 52.5**	**+0.9**
PESTR				*e*S		**Sn**	**14 22 56.8**	**-4.5**
PESTR				*i* IAML			14 22 59.8	
PESTR				*i* IAML			14 23 04.6	
PESTR				*i* IAML			14 23 05.6	
PESTR	**Estremoz**	**6.09**	**69**	P		**Pn**	**14 21 52.3**	**+0.8**
PESTR				S		**Sn**	**14 22 55.3**	**-6.0**
PBAR	**Barrancos**	**6.36**	**77**	P		**Pn**	**14 21 55.6**	**+0.2**
PBAR				S		**Sn**	**14 23 03.8**	**-4.2**
PBAR	**Barrancos**	**6.36**	**77**	*e*P		**Pn**	**14 21 56.7**	**+1.4**
PBAR				*e*S		**Sn**	**14 23 04.0**	**-4.0**
PBAR				*i* IAML			14 23 07.3	
PBAR				*i* IAML			14 23 09.2	
PBAR				*i* IAML			14 23 09.9	
PMRV	**Marv??o**	**6.41**	**65**	*e*P		**Pn**	**14 21 56.0**	**0.0**
PMRV				*e*S		**Sn**	**14 23 03.3**	**-5.9**
PMRV				*i* IAML			14 23 07.2	
PMRV				*i* IAML			14 23 07.9	
PMRV				*i* IAML			14 23 08.0	
PTO	**Porto**	**6.44**	**48**	*e*P		**Pn**	**14 21 55.0**	**-1.4**
PTO				*e*S		**Sn**	**14 23 02.0**	**-7.9**
PTO				*i* IAML			14 23 03.7	
PTO				*i* IAML			14 23 04.0	
PTO				*i* IAML			14 23 06.4	
EBAD	**Badajoz**	**6.49**	**71**	P		**Pn**	**14 21 57.3**	**+0.2**
EBAD				S		**Sn**	**14 23 06.9**	**-4.4**
EBAD	**Badajoz**	**6.49**	**71**	Pn		**Pn**	**14 21 57.4**	**+0.2**
EBAD				⇑*i*Vmb_VC			14 22 04.4	
	comp=N,1µm,SNR=7.5							
EBAD				Sn		**Sn**	**14 23 05.4**	**-5.8**
PCBR	**Castelo Branco**	**6.50**	**61**	*e*P		**Pn**	**14 21 57.5**	**+0.2**
PCBR				*e*S		**Sn**	**14 23 05.8**	**-5.7**
PCBR				*i* IAML			14 23 06.8	
PCBR				*i* IAML			14 23 10.0	
PCBR				*i* IAML			14 23 10.9	
ARNO	**Arenosillo**	**6.53**	**86**	P		**Pn**	**14 21 58.8**	**+1.1**
ARNO				S		**Sn**	**14 23 10.4**	**-1.8**
EMIN	**Mina Concepcio**	**6.60**	**80**	P		**Pn**	**14 21 58.9**	**+0.3**
EMIN				S		**Sn**	**14 23 08.3**	**-5.6**
EMIN	**Mina Concepcio**	**6.60**	**80**	Pn		**Pn**	**14 21 59.0**	**+0.3**
EMIN				⇑*i*Vmb_VC			14 22 02.0	
	comp=N,750nm,SNR=6.2							
EMIN				Sn		**Sn**	**14 23 07.6**	**-6.3**
PVIS	**Viseu**	**6.63**	**53**	*e*P		**Pn**	**14 21 57.9**	**-1.2**
PVIS				*e*S		**Sn**	**14 23 06.7**	**-8.1**
MTE	**Manteigas**	**6.71**	**57**			**Pn**	**14 21 59.8**	**-0.3**
MTE	**Manteigas**	**6.71**	**57**	*e*P		**Pn**	**14 22 00.5**	**+0.3**
MTE				*e*S		**Sn**	**14 23 10.7**	**-5.9**
MTE				*i* IAML			14 23 15.2	
MTE				*i* IAML			14 23 15.4	
MTE				*i* IAML			14 23 16.1	
PVRL	**Vila Real**	**7.06**	**50**	*e*P		**Pn**	**14 22 03.9**	**-1.1**
PVRL				*e*S		**Sn**	**14 23 17.0**	**-8.2**
PVRL				*i* IAML			14 23 21.2	
PVRL				*i* IAML			14 23 23.2	
PVRL				*i* IAML			14 23 23.2	
EZAM	**Zamans**	**7.07**	**41**	Pn		**Pn**	**14 22 02.8**	**-2.2**
EZAM				Sn		Sn	14 23 11.8	-14
POLO	**Lamas de Olo**	**7.07**	**49**	*e*P		**Pn**	**14 22 04.1**	**-1.0**
POLO				*e*S		**Sn**	**14 23 17.1**	**-8.5**
POLO				*i* IAML			14 23 21.8	
POLO				*i* IAML			14 23 21.9	
POLO				*i* IAML			14 23 32.5	
AVE	**Averroes**	**7.13**	**118**	P		**Pn**	**14 22 08.1**	**+2.3**
AVE				S		**Sn**	**14 23 27.4**	**+0.5**
AVE	**Averroes**	**7.13**	**118**			**Pn**	**14 22 07.3**	**+1.4**
AVE	**Averroes**	**7.13**	**118**	P		**Pn**	**14 22 06.9**	**+1.1**
AVE				S		**Sn**	**14 23 26.8**	**-0.1**
CNIL	**Conil**	**7.13**	**92**	P		**Pn**	**14 22 07.9**	**+2.0**
PCAB	**Cabril**	**7.14**	**46**	*e*P		**Pn**	**14 22 04.1**	**-1.9**
PCAB				*e*S		Sn	14 23 17.1	-10
PCAB				*i* IAML			14 23 22.8	
PCAB				*i* IAML			14 23 25.7	
PCAB				*i* IAML			14 23 28.7	
PGAV	**Gavieira, Arco**	**7.17**	**44**	*e*P		**Pn**	**14 22 05.0**	**-1.4**
PGAV				*e*S		Sn	14 23 17.5	-11
PGAV				*i* IAML			14 23 22.7	
PGAV				*i* IAML			14 23 25.8	
PGAV				*i* IAML			14 23 26.6	
ELOB	**Lobios**	**7.22**	**45**	Pn		**Pn**	**14 22 05.5**	**-1.7**
ELOB				Sn		Sn	14 23 19.5	-10
ESPR	**Espera**	**7.24**	**88**	P		**Pn**	**14 22 09.3**	**+1.9**
ESPR				S		**Sn**	**14 23 26.3**	**-3.4**
ESPR	**Espera**	**7.24**	**88**	Pn		**Pn**	**14 22 09.3**	**+1.9**
ESPR				⇑*i*Vmb_VC			14 22 15.9	
	comp=N,1µm,SNR=12							
ESPR				Sn		**Sn**	**14 23 27.1**	**-2.6**
SRHM	**Skhour des Reh**	**7.29**	**126**	P		**Pn**	**14 22 10.0**	**+1.9**
SRHM				S		**Sn**	**14 23 29.9**	**-1.1**
MVO	**Moncorvo**	**7.43**	**53**	*e*P		**Pn**	**14 22 09.2**	**-0.8**
MVO				*e*S		Sn	14 23 25.0	-9.4
MVO				*i* IAML			14 23 30.0	
MVO				*i* IAML			14 23 31.7	
MVO				*i* IAML			14 23 31.8	
EMAZ	**Mazaricos**	**7.52**	**35**	Pn		**Pn**	**14 22 08.2**	**-3.1**
EMAZ				Sn		Sn	14 23 23.5	-13
EPLA	**Plasencia**	**7.58**	**63**	Pn		**Pn**	**14 22 12.5**	**+0.4**
EPLA				⇑*i*Vmb_VC			14 22 14.3	
	comp=N,899nm,SNR=5.8							
EPLA				Sn		**Sn**	**14 23 31.5**	**-6.5**
EJIF	**Jimena Fronter**	**7.59**	**91**	Pn		**Pn**	**14 22 15.2**	**+3.0**
EJIF				Sn		**Sn**	**14 23 40.4**	**+2.1**
ECAB	**El Cabril**	**7.62**	**79**	P		**Pn**	**14 22 13.0**	**+0.4**
ECAB				S		**Sn**	**14 23 32.8**	**-6.1**
ECAB	**El Cabril**	**7.62**	**79**	Pn		**Pn**	**14 22 13.9**	**+1.3**
ECAB				⇑*i*Vmb_VC			14 22 19.1	
	comp=N,1µm,SNR=12							
ECAB				Sn		**Sn**	**14 23 33.0**	**-5.9**
STS	**Santiago**	**7.68**	**37**	Pn		**Pn**	**14 22 11.0**	**-2.3**
STS				Sn		**Sn**	**14 23 31.9**	**-8.5**
E1302	**La Puebla de C**	**7.72**	**86**	Pn		**Pn**	**14 22 16.4**	**+2.4**
E1302				⇑*i*Vmb_VC			14 22 21.8	
	comp=N,1µm,SNR=8.5							
E1302				Sn		**Sn**	**14 23 39.2**	**-2.3**
ECEU	**Ceuta**	**7.74**	**95**	P		**Pn**	**14 22 17.8**	**+3.5**
CEU	**Ceuta**	**7.75**	**95**	P		**Pn**	**14 22 17.3**	**+3.0**
CEU				S		**Sn**	**14 23 40.8**	**-1.3**
SMIR	**Smir Dam**	**7.78**	**96**	P		**Pn**	**14 22 16.5**	**+1.7**
SMIR				S		**Sn**	**14 23 38.3**	**-4.7**
EAGO	**Agolada(Pontev**	**7.85**	**40**	Pn		**Pn**	**14 22 13.1**	**-2.7**
EAGO				Sn		Sn	14 23 33.3	-11
CDLV	**Cueva Verdes**	**7.86**	**171**	Pn		**Pn**	**14 22 17.2**	**+1.4**
CDLV				Sn		**Sn**	**14 23 39.5**	**-5.3**
CIBOR	**Castaar de Ib**	**7.92**	**67**	Pn		**Pn**	**14 22 16.7**	**0.0**
CIBOR				Sn		**Sn**	**14 23 40.2**	**-6.1**
PBRG	**Braganca**	**7.96**	**50**	*e*P		**Pn**	**14 22 16.1**	**-1.3**
PBRG				*e*S		Sn	14 23 37.8	-10
PBRG				*i* IAML			14 23 41.5	
PBRG				*i* IAML			14 23 44.4	
PBRG				*i* IAML			14 23 46.7	
ECAL	**Calabor**	**8.04**	**49**	P		**Pn**	**14 22 16.6**	**-1.8**
ECAL				S		Sn	14 23 39.7	-10
ECAL	**Calabor**	**8.04**	**49**	Pn		**Pn**	**14 22 17.1**	**-1.4**
ECAL				Sn		Sn	14 23 39.1	-10
EJUZ	**Juzbado, Salam**	**8.14**	**57**	Pn		**Pn**	**14 22 18.7**	**-1.1**
EJUZ				Sn		**Sn**	**14 23 43.5**	**-8.3**
OUK	**Oukaimeden**	**8.17**	**132**	P		**Pn**	**14 22 23.4**	**+3.0**
OUK				P		**Pn**	**14 22 23.6**	**+3.1**
EADA	**Adamuz**	**8.29**	**78**	P		**Pn**	**14 22 22.2**	**+0.5**
EADA				S		**Sn**	**14 23 50.5**	**-4.9**
EADA	**Adamuz**	**8.29**	**78**	Pn		**Pn**	**14 22 22.5**	**+0.7**
EADA				⇑*i*Vmb_VC			14 22 28.7	
	comp=N,1µm,SNR=8.0							
EADA				Sn		**Sn**	**14 23 49.8**	**-5.6**
CFUE	**Fuerteventura**	**8.31**	**174**	Pn		**Pn**	**14 22 20.9**	**-1.3**
CFUE				⇑*i*Vmb_VC			14 22 27.7	
	comp=N,467nm,SNR=2.1							
CFUE				Sn		**Sn**	**14 23 48.5**	**-7.6**
EMAL	**Malaga-Limoner**	**8.39**	**88**	P		**Pn**	**14 22 26.5**	**+3.3**
CROM	**Garafia, La Pa**	**8.54**	**198**	⇑*i*Vmb_VC			14 22 24.1	
	comp=N,728nm,SNR=1.0							
CROM				Sn		Sn	14 23 51.3	-11
CMIR	**El Paso, La Pa**	**8.59**	**198**	Sn		Sn	14 23 52.3	-11
TBT	**Taburiente**	**8.62**	**198**	⇑*i*Vmb_VC			14 22 25.6	
	comp=N,365nm,SNR=1.2							
TBT				Sn		Sn	14 23 52.6	-11
EGOR	**Sierra Gorda,**	**8.63**	**86**	P		**Pn**	**14 22 29.3**	**+2.7**
EGOR				S		**Sn**	**14 24 00.3**	**-3.7**
EGOR	**Sierra Gorda,**	**8.63**	**86**	Pn		**Pn**	**14 22 28.9**	**+2.4**
EGOR				⇑*i*Vmb_VC			14 22 31.8	
	comp=N,248nm,SNR=3.6							
EGOR				Sn		**Sn**	**14 24 01.1**	**-2.9**
CVIE	**Villa de Mazo,**	**8.69**	**197**	Sn		**Sn**	**14 23 56.7**	**-8.8**
IFR	**Ifrane**	**8.69**	**110**	P		**Pn**	**14 22 29.2**	**+1.7**
IFR				S		**Sn**	**14 24 01.5**	**-4.1**
PAB	**San Pablo**	**8.69**	**69**			**Pn**	**14 22 27.1**	**-0.4**
PAB	**San Pablo**	**8.69**	**69**	Pn		**Pn**	**14 22 26.8**	**-0.6**
PAB				⇑*i*Vmb_VC			14 22 30.7	
	comp=N,462nm,SNR=5.4							
PAB				Sn		**Sn**	**14 23 59.4**	**-6.2**
EPON	**Pontenova**	**8.70**	**41**	Pn		**Pn**	**14 22 25.4**	**-2.1**
EPON				Sn		Sn	14 23 53.0	-13
TISM	**Timmit**	**8.72**	**124**	P		**Pn**	**14 22 28.0**	**+0.4**
TIO	**Tiouine**	**8.73**	**131**	P		**Pn**	**14 22 30.4**	**+2.5**
TIO				S		**Sn**	**14 24 05.1**	**-1.4**
TIO	**Tiouine**	**8.73**	**131**	P		**Pn**	**14 22 30.0**	**+2.0**
CGIN	**Giniginamar, F**	**8.74**	**175**	Pn		**Pn**	**14 22 28.2**	**+0.2**
CGIN				⇑*i*Vmb_VC			14 22 29.4	
	comp=N,427nm,SNR=1.2							
CGIN				Sn		Sn	14 23 57.0	-10
CDOS	**Garachico, Isl**	**8.77**	**191**	⇑*i*Vmb_VC			14 22 32.1	
	comp=N,701nm,SNR=0.6							
CDOS				Sn		Sn	14 23 56.8	-11
GUIA	**Guia de Isora,**	**8.81**	**191**	Sn		Sn	14 23 57.7	-11
CCAN	**Las Canadas**	**8.82**	**190**	Sn		Sn	14 23 58.4	-10
PSIM	**Granatula de C**	**9.00**	**75**	Pn		**Pn**	**14 22 32.3**	**+0.7**
PSIM				Sn		**Sn**	**14 24 08.8**	**-4.3**
ESDC	**Sonseca Array**	**9.01**	**69**	Pn		**Pn**	**14 22 31.7**	**-0.1**
	comp=N,4.6nm,0.3s,baz=256,slow=13,SNR=62							
ESDC				Sn		**Sn**	**14 24 05.8**	**-7.6**
	comp=N,5.2nm,0.3s,baz=260,slow=23,SNR=12							
ESDC				LR		LR	14 25 50.0	
	comp=N,242nm,18.5s,baz=262,slow=36							
	comp=N,9.1nm,0.4s							
ESDC	**Sonseca Array**	**9.01**	**69**			**Pn**	**14 22 32.1**	**+0.3**
ESDC	**Sonseca Array**	**9.01**	**69**	Pn		**Pn**	**14 22 31.7**	**-0.1**
ESDC				⇑*i*Vmb_VC			14 22 37.9	
	comp=N,554nm,SNR=5.4							
ESDC				Sn		**Sn**	**14 24 06.3**	**-7.1**
ESBB	**Sonseca Array**	**9.02**	**69**	Pn		**Pn**	**14 22 31.9**	**+0.1**
ESBB	**Sonseca Array**	**9.02**	**69**	Pn		**Pn**	**14 22 32.5**	**+0.7**
ESBB				⇑*i*Vmb_VC			14 22 37.9	
	comp=N,482nm,SNR=4.4							
ESBB				Sn		**Sn**	**14 24 06.0**	**-7.4**
ELGU	**Los Guajares,**	**9.03**	**87**	P		**Pn**	**14 22 35.0**	**+3.0**
ELGU				S		**Sn**	**14 24 09.7**	**-4.0**
ELGU	**Los Guajares,**	**9.03**	**87**	Pn		**Pn**	**14 22 34.6**	**+2.7**
ELGU				⇑*i*Vmb_VC			14 22 40.2	
	comp=N,251nm,SNR=3.6							
ELGU				Sn		**Sn**	**14 24 13.6**	**-0.2**
OUZM	**OUZ**	**9.05**	**129**	P		**Pn**	**14 22 34.6**	**+2.2**
CLUM	**San Bartolome**	**9.12**	**184**	Sn		Sn	14 24 06.8	-9.3
EQTA	**Presa de Quent**	**9.16**	**85**	P		**Pn**	**14 22 34.9**	**+1.2**
EQTA				S		**Sn**	**14 24 13.4**	**-3.6**
EQUE	**Quentar**	**9.16**	**85**	Pn		**Pn**	**14 22 35.8**	**+2.0**
EQUE				⇑*i*Vmb_VC			14 22 41.9	
	comp=N,314nm,SNR=3.5							
EQUE				Sn		**Sn**	**14 24 15.3**	**-1.7**
GUD	**Guadarrama**	**9.16**	**63**	Pn		**Pn**	**14 22 33.8**	**0.0**
GUD				⇑*i*Vmb_VC			14 22 37.1	
	comp=N,258nm,SNR=3.1							
GUD				Sn		**Sn**	**14 24 10.8**	**-6.3**
MD01	**Midelt array s**	**9.26**	**113**			**Pn**	**14 22 36.3**	**+1.0**
MD31	**MD31**	**9.26**	**113**			**Pn**	**14 22 36.1**	**+0.8**
MD31	**MD31**	**9.26**	**113**	P		**Pn**	**14 22 36.5**	**+1.2**
AKLM	**AKL**	**9.29**	**102**	P		**Pn**	**14 22 36.1**	**+0.5**
MDT	**Midelt**	**9.40**	**113**	Pn		**Pn**	**14 22 38.2**	**+1.1**
	comp=N,1.8nm,0.3s,baz=279,slow=8.3,SNR=27							
MDT				Sn		**Sn**	**14 24 18.1**	**-4.9**
	comp=N,9.7nm,0.3s,baz=18,slow=16,SNR=14							
	comp=N,3.2nm,0.3s							
MDT	**Midelt**	**9.40**	**113**	P		**Pn**	**14 22 38.4**	**+1.3**
EQES	**Quesada**	**9.45**	**81**	Pn		**Pn**	**14 22 38.7**	**+0.8**
EQES				⇑*i*Vmb_VC			14 22 45.4	
	comp=N,295nm,SNR=3.1							
EQES				Sn		**Sn**	**14 24 22.1**	**-2.1**
EALB	**Alboran**	**9.61**	**92**	S		**Sn**	**14 24 24.8**	**-3.1**
UCM	**Universidad Co**	**9.71**	**66**	P		**Pn**	**14 22 43.1**	**+1.7**
UCM				S		**Sn**	**14 24 23.5**	**-7.1**
EARI	**Arriondas**	**9.76**	**46**	Pn		**Pn**	**14 22 41.4**	**-0.6**
EARI				⇑*i*Vmb_VC			14 22 43.3	
	comp=N,1µm,SNR=2.8							
EARI				Sn		Sn	14 24 22.4	-9.2
TZRR	**Tazzarine**	**9.89**	**126**	P		**Pn**	**14 22 48.0**	**+4.1**
YEBES	**Yebes (Guadala**	**9.89**	**65**	Pn		**Pn**	**14 22 44.3**	**+0.5**
YEBES				⇑*i*Vmb_VC			14 22 49.8	
	comp=N,866nm,SNR=2.8							
YEBES				Sn		**Sn**	**14 24 31.8**	**-3.1**
ZGR	**Zagora**	**10.30**	**129**	P		**Pn**	**14 22 51.1**	**+1.6**
ETOB	**Tobarra**	**10.70**	**77**	P		**Pn**	**14 22 54.4**	**-0.5**
ETOB				S		**Sn**	**14 24 47.7**	**-7.1**
ETOB	**Tobarra**	**10.70**	**77**	Pn		**Pn**	**14 22 55.5**	**+0.7**
ETOB				⇑*i*Vmb_VC			14 22 57.3	
	comp=N,206nm,SNR=1.6							
ETOB				Sn		**Sn**	**14 24 46.8**	**-7.9**
ETOR	**Torete**	**10.73**	**65**	Pn		**Pn**	**14 22 55.2**	**-0.1**
ETOR				⇑*i*Vmb_VC			14 23 00.8	
	comp=N,405nm,SNR=3.3							
ETOR				Sn		**Sn**	**14 24 48.1**	**-7.4**
ELAN	**Lanestosa**	**10.79**	**51**	Pn		**Pn**	**14 22 55.8**	**-0.2**
ELAN				⇑*i*Vmb_VC			14 22 57.7	
	comp=N,557nm,SNR=1.7							
ELAN				Sn		Sn	14 24 47.4	-9.5
EMUR	**La Murta**	**10.90**	**81**	Pn		**Pn**	**14 22 59.1**	**+1.4**
EMUR				Sn		**Sn**	**14 24 55.4**	**-4.2**
ECHE	**Chera**	**11.26**	**72**	Pn		**Pn**	**14 23 04.5**	**+1.9**
ECHE				Sn		**Sn**	**14 25 01.5**	**-7.0**
EMOS	**Mosqueruela**	**11.78**	**69**	Pn		**Pn**	**14 23 10.9**	**+1.1**
EMOS				⇑*i*Vmb_VC			14 23 15.7	
	comp=N,213nm,SNR=2.1							
EMOS				Sn		Sn	14 25 12.1	-9.3
EALK	**Alkurruntz**	**12.01**	**54**	Pn		**Pn**	**14 23 13

GEC2					IAmb	IAmb	14 25 43.8		
	comp=Z,16nm,1.1s								
GERES	**GERESS Array B**	**23.94**	**51**	P		**P**	**14 25 37.5**	**+1.7**	
	comp=Z,3.1nm,0.8s,baz=233,slow=9.9,SNR=15								
GERES				LR		LR	14 34 00.8		
	comp=Z,106nm,18.0s,baz=235,slow=34								
	comp=Z,3.1nm,0.8s								
KHC	**Kasperske Hory**	**23.96**	**50**	*eP*		**P**	**14 25 38.0**	**+2.1**	
MOA	**Molln**	**24.00**	**54**	*eP*		**P**	**14 25 38.1**	**+1.8**	
	comp=Z,13nm,1.2s								
SOKA	**Soboth**	**24.21**	**57**	*eP*		**P**	**14 25 39.6**	**+1.3**	
	comp=Z,7.7nm,1.0s								
CLL	**Collm**	**24.45**	**45**	*eP*		**P**	**14 25 42.0**	**+1.6**	
ARSA	**Arzberg**	**24.66**	**56**	*eP*		**P**	**14 25 43.0**	**+0.6**	
	comp=Z,2.2nm,0.7s								
CONA	**Conrad Observa**	**25.05**	**54**	*eP*		**P**	**14 25 47.2**	**+1.3**	
	comp=Z,7.7nm,1.5s								
RONA	**Rosalia, Austr**	**25.28**	**55**	*eP*		**P**	**14 25 50.4**	**+2.4**	
	comp=Z,9.5nm,1.1s								
VRAC	**Vranov**	**25.89**	**52**	LR		LR	14 36 32.9		
	comp=Z,140nm,20.8s,baz=257,slow=38								
MODS	**Modra-Piesok**	**26.08**	**54**	*eP*		**P**	**14 25 59.9**	**+4.7**	
TORD	**Torodi Ar. Bea**	**27.97**	**144**	P		**P**	**14 26 14.5**	**+2.1**	
	comp=Z,2.5nm,1.0s,baz=294,slow=11,SNR=7.1								
	comp=Z,2.5nm,1.0s								
NC204	**NORSAR Array S**	**29.21**	**25**	P		**P**	**14 26 25.8**	**+2.7**	
NC204				IAmb		IAmb	14 26 35.9		
	comp=Z,34nm,1.4s								
PABE	**Paberze**	**32.10**	**42**	P		**P**	**14 26 50.5**	**+1.9**	
FINES	**FINESS Array B**	**35.36**	**33**	P		**P**	**14 27 16.1**	**-0.7**	
	comp=Z,5.8nm,0.9s,baz=226,slow=7.1,SNR=6.5								
	comp=Z,5.8nm,0.9s								
ARCES	**ARCESS Array B**	**39.21**	**21**	LR		LR	14 43 25.3		
	comp=Z,132nm,18.6s,baz=238,slow=35								
ARCES	**ARCESS Array B**	**39.21**	**21**	P		**P**	**14 27 51.8**	**+2.3**	
ARCES				IAmb		IAmb	14 28 10.2		
	comp=Z,12nm,1.4s								
AB31	**Akbulak array**	**53.88**	**52**	P		**P**	**14 29 45.8**	**+1.0**	
ABKAR	**Akbulak array**	**53.88**	**52**	P		**P**	**14 29 45.9**	**+1.1**	
BVAR	**Borovoye Array**	**58.89**	**45**	P		**P**	**14 30 20.5**	**+0.1**	
	comp=Z,0.9nm,0.8s,baz=324,slow=7.3,SNR=4.9								
	comp=Z,0.9nm,0.8s								
YKA	**Yellowknife Ar**	**62.14**	**329**	P		**P**	**14 30 40.5**	**-2.0**	
	comp=Z,0.4nm,0.8s,baz=62,slow=6.4,SNR=7.1								
	comp=Z,0.4nm,0.8s								
YKA	**Yellowknife Ar**	**62.14**	**329**	P		**P**	**14 30 44.8**	**+2.4**	
KURBB	**Kurchatov Arra**	**64.48**	**45**	P		**P**	**14 30 58.1**	**0.0**	
	comp=Z,3.2nm,0.8s,baz=300,slow=7.3,SNR=16								
	comp=Z,3.2nm,0.8s								
KURK	**Kurchatov**	**64.48**	**45**	P		**P**	**14 30 58.5**	**+0.3**	
KURK				IAmb		IAmb	14 31 08.7		
	comp=Z,4.6nm,1.0s								
BILN	**Bilwi Airport**	**64.56**	**269**	P		**P**	**14 31 03.4**	**+4.2**	
BILN				IAmb		IAmb	14 31 08.5		
	comp=Z,111nm,0.9s								
ZALV	**Zalesovo Beam**	**66.25**	**40**	P		**P**	**14 31 09.3**	**-0.2**	
	comp=Z,0.3nm,0.3s,baz=306,slow=6.7,SNR=1.8								
	comp=Z,0.3nm,0.3s								
KSH2	**Kashi**	**68.21**	**57**	P		**P**	**14 31 25.0**	**+2.6**	
KSH2				sP		pwP	14 31 33.6	+4.9	
KSH2				pmax		pmax			
	comp=Z,4.0nm,0.8s								
MKAR	**Makanchi Array**	**68.53**	**47**	P		**P**	**14 31 24.7**	**+0.5**	
	comp=Z,0.8nm,0.8s,baz=285,slow=6.3,SNR=9.2								
	comp=Z,0.8nm,0.8s								
MKAR	**Makanchi Array**	**68.53**	**47**	P		**P**	**14 31 25.3**	**+1.1**	
PDAR	**Pinedale Array**	**69.09**	**308**	P		**P**	**14 31 25.9**	**-2.0**	
	comp=Z,0.2nm,0.6s,baz=62,slow=6.7,SNR=7.7								
	comp=Z,0.2nm,0.6s								
PDAR	**Pinedale Array**	**69.09**	**308**	P		**P**	**14 31 30.7**	**+2.8**	
ILAR	**Eielson Array**	**71.88**	**340**	P		**P**	**14 31 42.6**	**-1.7**	
	comp=Z,0.2nm,0.8s,baz=22,slow=6.5,SNR=2.1								
	comp=Z,0.2nm,0.8s								
ILAR	**Eielson Array**	**71.88**	**340**	P		**P**	**14 31 45.7**	**+1.4**	
TXAR	**Lajitas Array**	**72.14**	**293**	P		**P**	**14 31 45.0**	**-1.7**	
	comp=Z,0.3nm,0.8s,baz=76,slow=5.3,SNR=7.8								
	comp=Z,0.3nm,0.8s								
TXAR	**Lajitas Array**	**72.14**	**293**	P		**P**	**14 31 49.9**	**+3.2**	
LBTB	**Lobatse**	**72.47**	**142**	P		**P**	**14 31 50.7**	**+2.2**	
LBTB				IAmb		IAmb	14 32 26.8		
	comp=Z,6.6nm,1.4s								
WMQ	**Urumqi**	**73.35**	**48**	*eP*		**P**	**14 31 54.1**	**+0.5**	
WMQ				pmax		pmax			
	comp=Z,11nm,0.7s								
BMRM	**Bremner River**	**74.17**	**337**	P		**P**	**14 32 01.9**	**+3.8**	
BMRM				IAmb		IAmb	14 32 16.8		
	comp=Z,6.8nm,1.0s								
TLY	**Talaya**	**76.70**	**34**	LR		LR	15 08 24.9		
	comp=Z,90nm,18.0s,baz=323,slow=38								
N19K	**Bonanza Creek**	**77.14**	**341**	P		**P**	**14 32 17.7**	**+2.6**	
N19K				IAmb		IAmb	14 32 35.4		
	comp=Z,24nm,1.5s								
PFO	**Pinyon Flats O**	**78.71**	**304**	LR		LR	15 05 49.5		
	comp=Z,53nm,18.5s,baz=42,slow=35								
SONM	**Songino Array**	**80.68**	**36**	LR		LR	15 10 17.9		
	comp=Z,81nm,18.8s,baz=334,slow=37								
LZH	**Lanzhou**	**87.77**	**45**	*eP*		P	14 33 20.6	+9.5	
LZH				sP		pwP	14 33 29.6	+12	
LZH				pmax		pmax			
	comp=Z,8.0nm,1.7s								
HHC	**Hu-ho-hao-te**	**88.35**	**38**	*eP*		**P**	**14 33 14.8**	**+1.1**	
HHC				pmax		pmax			
	comp=Z,6.0nm,0.7s								
HHC				pmax		pmax			
	comp=Z,240nm,6.3s								
PZH	**PanZhiHua**	**93.22**	**53**	P		**P**	**14 33 37.5**	**+0.8**	
NJ2	**Nanjing**	**98.88**	**38**	*eP*		Pdif	14 34 03.5	+1.4	
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
WRA	**Warramunga Arr**	**148.27**	**66**	PKPbc		**PKPbc**	**14 40 07.4**	**-1.0**	
	comp=Z,0.4nm,0.9s,baz=306,slow=2.3,SNR=2.1								
ASAR	**Alice Springs**	**150.13**	**73**	PKPbc		**PKPbc**	**14 40 13.0**	**0.0**	
	comp=Z,0.3nm,0.8s,baz=304,slow=1.7,SNR=4.2								

IDC 17 14:51:12.7±6.0, 12°.11S×167°.50E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=302.4km s-min=34.2km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.76**	**252**	P	P	14 57 47.3	-0.4
	0.4nm,0.5s,baz=84,slow=9.2,SNR=6.1						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**33.88**	**245**	P	P	14 57 57.7	+0.2
	0.3nm,0.6s,baz=72,slow=10,SNR=12						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**83.98**	**18**	P	P	15 03 44.5	0.0
	0.4nm,0.9s,baz=224,slow=6.1,SNR=4.7						
	0.4nm,0.9s						

WEL 17 14:54:01.2±0.9, 35°.5S±10°×17°.9E±1°.2, h207km±16km, M3.7/18, ML3.6/20, MLv3.7/18, Error ellipse: s-maj=17.0km s-min=12.1km az=117.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.23**	**192**	P	Pn	14 54 42.2	-0.3
MXZ				S	S	14 55 14.2	-0.4
WMGZ	**Waiomatatini S**	**2.47**	**189**	P	Pn	14 54 45.6	+0.5
WMGZ				S	S	14 55 20.7	+1.6
HAZ	**Te Kaha**	**2.53**	**200**	P	Pn	14 54 45.7	-0.1
PKGZ	**Pakihiroa**	**2.57**	**194**	P	Pn	14 54 46.6	+0.4
PKGZ				S	S	14 55 22.8	+1.7
PUZ	**Puketiti**	**2.73**	**190**	P	Pn	14 54 47.9	-0.2
PUZ				S	S	14 55 25.0	+0.5
RUGZ	**Raukumara Rang**	**2.76**	**200**	P	Pn	14 54 48.5	0.0
TWGZ	**Tauwhareparae**	**2.89**	**194**	P	Pn	14 54 50.9	+1.0
TWGZ				S	S	14 55 29.5	+1.8
KUZ	**Kuaotunu**	**2.90**	**241**	P	Pn	14 54 49.1	-0.9
OPRZ	**Ohinepanea**	**3.09**	**217**	P	Pn	14 54 52.6	+0.4
MWZ	**Matawai**	**3.14**	**200**	P	Pn	14 54 53.0	+0.1
MWZ				S	S	14 55 33.5	+0.5
CNGZ	**Carnagh Statio**	**3.15**	**190**	P	Pn	14 54 53.1	+0.3
CNGZ				S	S	14 55 32.1	-0.9
MARZ	**Manawahe**	**3.15**	**214**	P	Pn	14 54 53.6	+0.7
TKGZ	**Te Karaka**	**3.17**	**195**	P	Pn	14 54 53.0	-0.1
TKGZ				S	S	14 55 34.8	+1.4
URZ	**Urewera**	**3.21**	**206**	P	Pn	14 54 53.1	-0.5
RAGZ	**Rawiri**	**3.33**	**200**	P	Pn	14 54 55.2	+0.1
RAGZ				S	S	14 55 37.9	+0.9
KARZ	**Kaharoa**	**3.38**	**218**	P	Pn	14 54 57.0	+1.3
KMRZ	**Kaimai**	**3.42**	**223**	P	Pn	14 54 56.9	+0.8
TARZ	**Mount Tarawera**	**3.43**	**213**	P	Pn	14 54 58.0	+1.6
RIGZ	**Rimuhau**	**3.44**	**195**	P	Pn	14 54 56.3	-0.1
RIGZ				S	S	14 55 40.1	+0.8
MUGZ	**Murupara**	**3.53**	**208**	P	Pn	14 54 57.3	-0.1
MUGZ				S	S	14 55 42.3	+1.1
RTZ	**Ruatahuna**	**3.57**	**205**	P	Pn	14 54 57.3	-0.7
RTZ				S	S	14 55 41.6	-0.7
TOZ	**Tahuroa Road**	**3.59**	**228**	P	Pn	14 55 00.5	+2.3
SNGZ	**Shannon Statio**	**3.62**	**200**	P	Pn	14 54 58.2	-0.2
SNGZ				S	S	14 55 43.5	+0.4
PRGZ	**Paritu Road**	**3.63**	**192**	P	Pn	14 54 59.0	+0.3
PRGZ				S	S	14 55 44.2	+0.8
PRRZ	**Plateau Road**	**3.70**	**212**	P	Pn	14 54 59.8	+0.3
KNZ	**Kokohu**	**3.76**	**195**	P	Pn	14 54 59.2	-1.1
ALRZ	**Allen Road**	**3.77**	**212**	P	Pn	14 55 00.7	+0.3
RAHZ	**Arahi**	**3.81**	**202**	P	Pn	14 55 00.6	-0.3
RAHZ				S	S	14 55 49.0	+1.5
MTHZ	**Maungataniwha**	**3.83**	**205**	P	Pn	14 55 00.9	-0.2
MHGZ	**Mahia Peninsul**	**3.85**	**191**	P	Pn	14 55 01.0	-0.3
MHGZ				S	S	14 55 49.1	+0.9
WHNZ	**Waihua**	**3.92**	**199**	P	Pn	14 55 01.7	-0.5
WHHZ				S	S	14 55 51.4	+1.6
MRHZ	**Matea Rd**	**3.97**	**209**	P	Pn	14 55 02.3	-0.5
MRHZ				S	S	14 55 51.6	+0.5
TLZ	**Tolley Road**	**3.98**	**221**	P	Pn	14 55 04.0	+1.0
NMHZ	**Naumai**	**4.07**	**203**	P	Pn	14 55 03.7	-0.3
ARHZ	**Aropaoanui**	**4.16**	**201**	P	Pn	14 55 04.3	-0.8
BKZ	**Black Stump Fm**	**4.23**	**206**	P	Pn	14 55 05.5	-0.6
RATZ	**Rangitukua**	**4.28**	**215**	P	Pn	14 55 07.5	+0.9
OUZ	**Omahuta**	**4.33**	**271**	P	Pn	14 55 04.8	-2.4
RITZ	**Rihia Road**	**4.33**	**213**	P	Pn	14 55 07.3	+0.1
MCHZ	**McNeill Hill**	**4.42**	**203**	P	Pn	14 55 07.7	-0.7
KWHZ	**Kaweka Forest**	**4.49**	**205**	P	Pn	14 55 08.4	-0.9
HIZ	**Hauiti**	**4.49**	**225**	P	Pn	14 55 11.0	+1.7
CKHZ	**Cape Kidnapper**	**4.51**	**198**	P	Pn	14 55 08.3	-1.1
NTVZ	**North Tongarir**	**4.51**	**214**	P	Pn	14 55 09.5	-0.1
TMVZ	**Te Maari**	**4.51**	**213**	P	Pn	14 55 09.4	-0.3
ETVZ	**East Tongariro**	**4.53**	**213**	P	Pn	14 55 09.1	-0.8
OTVZ	**Oturere**	**4.57**	**213**	P	Pn	14 55 09.7	-0.7
SNVZ	**South Ngauruho**	**4.60**	**213**	P	Pn	14 55 10.1	-0.7
TWVZ	**Taurewa**	**4.60**	**216**	P	Pn	14 55 10.2	-0.5
NGZ	**Ngauruhoe**	**4.61**	**214**	P	Pn	14 55 10.6	-0.3
TUVZ	**Tukino**	**4.66**	**213**	P	Pn	14 55 10.7	-0.8
KAHZ	**Kahuranaki**	**4.69**	**199**	P	Pn	14 55 10.6	-1.2
FWVZ	**Far West T-bar**	**4.69**	**213**	P	Pn	14 55 11.4	-0.6
KRHZ	**Kereru**	**4.70**	**204**	P	Pn	14 55 10.4	-1.6
MOVZ	**Moawhango**	**4.73**	**211**	P	Pn	14 55 10.8	-1.5
WNVZ	**Wahianoa**	**4.73**	**213**	P	Pn	14 55 11.6	-0.9
PXZ	**Pawanui**	**4.91**	**198**	P	Pn	14 55 12.5	-2.0
PNHZ	**Pukenui**	**5.00**	**204**	P	Pn	14 55 13.8	-2.0
WPHZ	**Waipukurau**	**5.06**	**202**	P	Pn	14 55 15.1	-1.4
PRHZ	**Porangahau**	**5.19**	**199**	P	Pn	14 55 16.2	-2.0
TSZ	**Takapari Road**	**5.21**	**205**	P	Pn	14 55 16.1	-2.3
DVHZ	**Dannevirke**	**5.36**	**203**	P	Pn	14 55 17.7	-2.6
PKE	**Pukeiti**	**5.45**	**224**	P	Pn	14 55 23.0	+1.5
POWZ	**Post Office Ro**	**5.58**	**205**	P	Pn	14 55 21.2	-1.9
PRWZ	**Pori Road**	**5.66**	**203**	P	Pn	14 55 22.6	-1.5
BFZ	**Birch Farm**	**5.69**	**201**	P	Pn	14 55 22.2	-2.3
MRZ	**Mangatainoka R**	**5.88**	**205**	P	Pn	14 55 24.1	-2.9
TIWZ	**Tintock**	**5.88**	**203**	P	Pn	14 55 24.7	-2.3
HOWZ	**Holdsworth Sta**	**6.12**	**205**	P	Pn	14 55 26.8	-3.2
OGWZ	**Otaki Gorge**	**6.17**	**207**	P	Pn	14 55 27.5	-3.1
TMWZ	**Te Maipa**	**6.18**	**201**	P	Pn	14 55 28.0	-2.8
KIW	**Kapiti Island**	**6.31**	**209**	P	Pn	14 55 29.3	-3.1
MTW	**Mount Morrison**	**6.35**	**204**	P	Pn	14 55 29.6	-3.4
CAW	**Cannon Point**	**6.46**	**207**	P	Pn	14 55 30.8	-3.6
TRWZ	**Traveller**	**6.51**	**202**	P	Pn	14 55 32.0	-3.1
MSWZ	**Mowau Station**	**6.67**	**204**	P	Pn	14 55 33.6	-3.5
WEL	**Wellington**	**6.72**	**208**	P	Pn	14 55 34.6	-3.2
BHW	**Baring Head**	**6.79**	**206**	P	Pn	14 55 34.7	-3.9
TCW	**Tory Channel**	**6.86**	**210**	P	Pn	14 55 35.8	-3.7
TUWZ	**Tuamarina**	**7.18**	**211**	P	Pn	14 55 39.4	-4.2

*BER **17** 15:00:22.6±1.4, 80°.12N×1°.17W, h10km, Mw2.6, Confirmed Earthquake*
*DNK **17** 15:00:26.8±4.1, 79°.97N×0°.72W, h36km±117km, ML1.0, Presumed earthquake*

ISC 17 15:00:12.9±1.6, 78°.8N±0°.2×1°.58W±0°.05, h10km, n7, σ1§84/13, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.62**	**82**	*eP*	**Pg**	**15 01 04.6**	**+1.6**
KBS				*eS*	**Sb**	**15 01 32.4**	**+0.4**
KBS	**Kingsbay**	**2.62**	**82**	*i* P	**Pg**	**15 01 04.4**	**+1.4**
KBS				*i* S	**Sb**	**15 01 32.4**	**+0.4**
SPA0	**Spitsbergen Ar**	**3.65**	**92**	*eP*	**Pg**	**15 01 20.5**	**-2.1**
SPA0				*eS*	**Sb**	**15 02 01.5**	**0.0**
SPA0				IAML		15 02 08.9	
	comp=Z,2.5nm,0.9s						
HSPB	**Hornsund (broa**	**4.03**	**109**	*eS*	**Sg**	**15 02 20.6**	**-1.6**
DAG	**Danmarks Havn**	**4.16**	**249**	*i* P	**Pg**	**15 01 33.5**	**+1.0**
DAG				*eS*	**Sg**	**15 02 25.3**	**-1.1**
DAG				IAML		15 02 29.2	
	comp=Z,0.8nm,0.4s						
DAG	**Danmarks Havn**	**4.16**	**249**	*i* P	**Pg**	**15 01 33.5**	**+1.0**
DAG				*i* S	**Sg**	**15 02 25.1**	**-1.3**
DAG				IAML		15 02 29.2	
	comp=Z,0.8nm,0.4s						
DBG	**Daneborg**	**6.25**	**233**	*i* P	**Pg**	**15 02 09.2**	**-3.3**
DBG				*i* S	**Sb**	**15 03 18.9**	**+2.5**
DBG				IAML		15 03 24.3	
	comp=Z,0.4nm,0.2s						

*GII **17** 15:04:21.5±0.0, 35°.979N±0°.002×29°.310E±0°.001, h0km, Mws3.3, confirmed*
*ATH **17** 15:04:22.8, 36°.16N×29°.19E, h47km±4km, ML3.3/6, Manual Solution by A.Fokaefs First location: 2020/02/17 15:05:48, This location: 2020/02/17 15:10:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 1 km*
*ISK **17** 15:04:22.9, 36°.20N×29°.09E, h17km, ML3.2/28*
*THE **17** 15:04:23.9, 36°N±2°×2°.9E±°, h23km±6km, M3.1/10, MLh3.1/10*
*AFAD **17** 15:04:23.4, 36°.24N×29°.13E, h30km, ML3.2*
*NIC **17** 15:04:23.6, 36°.02N×29°.26E, h42km±4km, Ml2.9/6*

ISC 17 15:04:22.0±0.9, 36°.11N±0°.03×29°.18E±0°.02, h32km±8km, n120, σ1§56/174, 3C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZZE	**Mula-Seydike**	**0.33**	**7**	P	**Pb**	**15 04 30.0**	**0.0**
IZZE				S	**Sb**	**15 04 34.5**	**-1.0**
IZZE				IAML		15 04 36.0	
	comp=E,5µm,0.6s						
KSL	**Kastellorizon**	**0.33**	**83**	P	**Pn**	**15 04 31.9**	**+1.4**
KSL				S	**Sn**	**15 04 38.7**	**+2.6**
KSL	**Kastellorizon**	**0.33**	**83**	P	**Pn**	**15 04 32.0**	**+1.4**
KSL				S	**Sn**	**15 04 38.8**	**+2.6**
KSL	**Kastellorizon**	**0.33**	**83**	P	**Pn**	**15 04 31.9**	**+1.4**
KSL				S	**Sn**	**15 04 38.9**	**+2.6**
AKAS	**Kas**	**0.37**	**71**	Pg	**Pn**	**15 04 32.2**	**+1.0**
AKAS				Sg	**Sn**	**15 04 38.8**	**+1.5**
AKAS	**Kas**	**0.37**	**71**	P	**Pn**	**15 04 32.1**	**+0.9**
AKAS				S	**Sn**	**15 04 39.0**	**+1.7**
AKAS				IAML		15 04 43.0	
	comp=N,3µm,0.3s						
FETY	**Fethiye**	**0.53**	**352**	P	**Pb**	**15 04 32.6**	**-0.4**
FETY				S	**Sb**	**15 04 40.1**	**-0.5**
DEMR	**Demre-Antalya**	**0.60**	**78**	Pg	**Pn**	**15 04 35.7**	**+1.4**
DEMR				Sg	**Sn**	**15 04 45.6**	**+2.7**
SABU	**Mula-Dalaman**	**0.73**	**347**	P	**Pb**	**15 04 35.8**	**-0.5**
SABU				S	**Sb**	**15 04 44.5**	**-1.5**
SABU				IAML		15 04 47.0	
	comp=N,975nm,0.3s						
KNIK	**Mula-Seydike**	**0.80**	**23**	P	**Pn**	**15 04 38.0**	**+0.8**
KNIK				S	**Sn**	**15 04 48.1**	**+0.1**
KNIK				IAML		15 04 50.0	
	comp=E,959nm,0.9s						
DALY	**Dalyan (Mula)**	**0.82**	**329**	Pg	**Pb**	**15 04 37.1**	**-0.7**
DALY				Sg	**Sb**	**15 04 47.4**	**-1.2**
CAME	**Cameli-Denizli**	**0.84**	**7**	Pg	**Pb**	**15 04 37.9**	**-0.3**
CAME				Sg	**Sn**	**15 04 49.2**	**+0.2**
RDI1	**Rhodes Town Ha**	**0.84**	**294**	P	**Pn**	**15 04 38.2**	**+0.7**
RDI1				S	**Sb**	**15 04 49.8**	**+0.6**
RODB	**Rodos**	**0.84**	**294**	P	**Pn**	**15 04 37.8**	**+0.2**
ARG	**Arkhangelos**	**0.86**	**277**	Pg	**Pn**	**15 04 38.6**	**+0.8**
ARG				Sg	**Sb**	**15 04 50.2**	**+0.6**
ARG	**Arkhangelos**	**0.86**	**277**	P	**Pn**	**15 04 38.6**	**+0.8**
ARG				S	**Sb**	**15 04 50.7**	**+1.2**
ARG	**Arkhangelos**	**0.86**	**277**	P	**Pn**	**15 04 38.6**	**+0.8**
ARG				S	**Sn**	**15 04 51.1**	**+1.9**
ARG	**Arkhangelos**	**0.86**	**277**	P	**Pn**	**15 04 38.6**	**+0.8**
ARG				S	**Sb**	**15 04 50.8**	**+1.2**
ELL	**Elmali**	**0.87**	**43**	Pg	**Pb**	**15 04 39.9**	**+1.2**
ELL				Sg	**Sn**	**15 04 52.8**	**+3.1**
ELL	**Elmali**	**0.87**	**43**	P	**Pb**	**15 04 39.9**	**+1.2**
ELL				S	**Sn**	**15 04 51.7**	**+2.0**
AKUM	**Antalya-Kumluc**	**0.97**	**77**	P	**Pb**	**15 04 41.2**	**+1.0**
AKUM				S	**Sb**	**15 04 55.7**	**+3.1**
CAEL	**Denizli, Camel**	**1.02**	**6**	P	**Pb**	**15 04 40.9**	**-0.3**
CAEL				S	**Sb**	**15 04 53.2**	**-1.0**
CAEL				IAML		15 04 56.0	
	comp=N,534nm,0.6s						
CAEL				IAML		15 05 05.0	
	comp=E,690nm,1.1s						
GOLH	**Golhisar**	**1.17**	**15**	P	**Pb**	**15 04 43.9**	**+0.3**
GOLH				S	**Sb**	**15 04 58.4**	**-0.1**
GOLH				IAML		15 05 01.0	
	comp=N,715nm,0.7s						
GOLH				IAML		15 05 01.0	
	comp=E,437nm,0.6s						
DNZT	**Denizli-Tavas-**	**1.17**	**354**	P	**Pb**	**15 04 43.2**	**-0.6**
DNZT				S	**Sn**	**15 04 56.8**	**-0.3**
KEMT	**Kemer-ANTALYA**	**1.22**	**66**	Pn	**Pb**	**15 04 46.5**	**+2.1**
YER	**Yerkesik**	**1.25**	**325**	Pn	**Pn**	**15 04 44.5**	**+1.2**
YER				Sn	**Sb**	**15 05 00.6**	**-0.2**
YER	**Yerkesik**	**1.25**	**325**	P	**Pn**	**15 04 44.1**	**+0.8**
YER				S	**Sb**	**15 05 00.0**	**-0.8**
KORT	**Korkueli**	**1.30**	**46**	Pn	**Pb**	**15 04 46.5**	**+0.6**
KORT	**Korkueli**	**1.30**	**46**	P	**Pb**	**15 04 46.0**	**+0.2**
KORT	**Korkueli**	**1.30**	**46**	P	**Pb**	**15 04 46.3**	**+0.4**
KORT				S	**Sb**	**15 05 03.8**	**+1.5**
KORT				IAML		15 05 13.0	
	comp=N,333nm,1.1s						
MULA	**Mugla, Merkez-**	**1.33**	**329**	P	**Pn**	**15 04 45.5**	**+1.1**
MULA				S	**Sn**	**15 05 01.6**	**+0.4**
MULA				IAML		15 05 05.0	
	comp=E,351nm,0.5s						
APMY	**Acipayam-Deniz**	**1.36**	**4**	Pn	**Pb**	**15 04 46.3**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.37**	**351**	P	**Pn**	**15 04 45.8**	**+0.8**
TAVA				S	**Sn**	**15 05 02.0**	**0.0**
TAVA				IAML		15 05 04.0	
	comp=N,592nm,0.4s						
ANTB	**Antalya**	**1.43**	**56**	Pn	**Pb**	**15 04 49.4**	**+1.4**
DAT	**Datca**	**1.43**	**296**	Pn	**Pn**	**15 04 46.8**	**+1.0**
DAT	**Datca**	**1.43**	**296**	P	**Pn**	**15 04 46.8**	**+1.0**
DAT				S	**Sn**	**15 05 04.7**	**+1.1**
DAT	**Datca**	**1.43**	**296**	P	**Pn**	**15 04 46.6**	**+0.8**
YAZI	**Mula-Dat§a-**	**1.50**	**293**	P	**Pn**	**15 04 47.3**	**+0.7**
YAZI				S	**Sn**	**15 05 05.9**	**-1.3**
DNIZ	**Denizli-Tavas-**	**1.52**	**356**	P	**Pn**	**15 04 48.0**	**+1.1**
INCE	**Denizli-Bozkur**	**1.63**	**11**	P	**Pb**	**15 04 51.0**	**-0.4**
INCE				IAML		15 05 12.0	
	comp=E,429nm,0.4s						
INCE				IAML		15 05 13.0	
	comp=N,320nm,0.6s						
MLSB	**Milas**	**1.63**	**317**	Pn	**Pn**	**15 04 50.5**	**+2.0**
BUCA	**Burdur, Bucak-**	**1.65**	**42**	P	**Pb**	**15 04 52.0**	**+0.3**
BDRM	**Kayabasi**	**1.69**	**305**	P	**Pn**	**15 04 49.9**	**+0.7**
KARP	**Karpathos**	**1.73**	**252**	Pn	**Pn**	**15 04 52.0**	**+2.1**
KARP	**Karpathos**	**1.73**	**252**	P	**Pn**	**15 04 52.0**	**+2.1**
KARP				S	**Sn**	**15 05 13.6**	**+2.7**
KARP	**Karpathos**	**1.73**	**252**	P	**Pn**	**15 04 52.0**	**+2.1**
KARP				S	**Sn**	**15 05 13.6**	**+2.3**
BRDR	**BURDUR-Merkez**	**1.73**	**24**	P	**Pb**	**15 04 51.8**	**+1.4**
BCK	**Bucak**	**1.76**	**40**	Pn	**Pb**	**15 04 53.5**	**-0.2**
BODT	**Bodrum**	**1.78**	**303**	Pn	**Pn**	**15 04 52.2**	**+1

GVD	**Gavdhos**	**4.34**	**254**	P	**Pn**	**15 05 28.2 +2.5**
VLI	**Veliai**	**5.07**	**279**	P	**Pn**	**15 05 37.6 +1.8**
MMC7	**Mount Meron ar**	**5.98**	**119**	P	**Pn**	**15 05 47.3 -1.0**
MMA0B	**Mount Meron ar**	**5.99**	**119**	P	**Pn**	**15 05 47.2 -1.2**
MMA0B				S	**Sn**	**15 06 53.6 -2.4**
GEM	**Giv'at Ha'Em**	**6.08**	**117**	P	**Pn**	**15 05 48.3 -1.2**
GEM				S	**Sn**	**15 06 55.9 -2.1**
NATI	**Neve Ativ**	**6.11**	**116**	P	**Pn**	**15 05 48.9 -1.0**
NATI				S	**Sn**	**15 06 56.7 -2.0**
KSHT	**Keshet**	**6.30**	**118**	P	**Pn**	**15 05 51.6 -1.1**
KSHT				S	**Sn**	**15 07 01.9 -1.7**
MMLI	**Mount Malkishu**	**6.33**	**124**	P	**Pn**	**15 05 52.0 -1.2**
MMLI				S	**Sn**	**15 07 02.2 -2.3**
KZIT	**Kziot**	**6.78**	**139**	P	**Pn**	**15 05 57.9 -1.3**
KZIT				S	**Sn**	**15 07 12.9 -2.4**
YTIR	**Yattir**	**6.85**	**132**	P	**Pn**	**15 05 59.1 -1.1**
YTIR				S	**Sn**	**15 07 15.2 -2.0**
DSI	**Dead Sea**	**6.87**	**130**	P	**Pn**	**15 05 59.1 -1.3**
DSI				S	**Sn**	**15 07 15.2 -2.3**
MSBI	**Mazada**	**7.03**	**131**	P	**Pn**	**15 06 01.4 -1.3**
MSBI				S	**Sn**	**15 07 18.5 -2.9**
RMNI	**Mount Ramon**	**7.21**	**138**	P	**Pn**	**15 06 04.4 -0.9**
RMNI				S	**Sn**	**15 07 23.7 -2.5**
PRNI	**Paran**	**7.54**	**138**	P	**Pn**	**15 06 08.4 -1.3**
PRNI				S	**Sn**	**15 07 30.9 -3.1**
KRMI	**Paran Flat**	**7.57**	**141**	P	**Pn**	**15 06 08.9 -1.3**
KRMI				S	**Sn**	**15 07 32.4 -2.5**
MBRI	**Mt Berech**	**7.93**	**141**	P	**Pn**	**15 06 13.6 -1.5**
MBRI				S	**Sn**	**15 07 41.4 -2.3**
EIL	**Elat**	**8.05**	**141**	P	**Pn**	**15 06 15.4 -1.3**

*IDC **17** 15:07:26.7±1.1,56.˚53N×163.˚52E, h0km, mb3.5/7, mbtmp3.5/8, ML2.2/1, MS2.9/1, Error ellipse: s-maj=36.4km s-min=18.1km az=149.0*

*KRSC **17** 15:07:27.4±1.4, 56.˚18N×163.˚84E, h24km±17km, Ml3.9*

ISC 17 15:07:26.9±1.5, 56°38N±0'.05×163°85E±0'.04, h8km±10km, n44, σ1§89/48, mb3.4/7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.60**	**254**	*e*P	**Pg**	**15 07 38.5**	**0.0**
KBTR				*e*S	**Sg**	**15 07 45.7**	**-0.6**
KBG	**Krutoberegovo**	**0.65**	**259**	*e*P	**Pg**	**15 07 39.8**	**+0.4**
KBG				*e*S	**Sb**	**15 07 48.6**	**-1.0**
SMKR	**Semkarok**	**1.34**	**280**	*e*P	**Pg**	**15 07 52.9**	**+0.4**
SMKR				*e*S	**Sg**	**15 08 11.4**	**+1.6**
BDR	**Baidarnaya**	**1.48**	**278**	*e*S	**Sg**	**15 08 15.4**	**+1.1**
BKI	**Bering**	**1.68**	**134**	*e*P	**Pn**	**15 07 56.2**	**-0.3**
BKI				*e*S	**Sn**	**15 08 16.5**	**-1.6**
KLY	**Klyuchi**	**1.78**	**269**	*e*P	**Pn**	**15 07 57.5**	**-0.4**
KLY				*e*S	**Sn**	**15 08 19.0**	**-1.6**
KMNR	**Kamenistaya**	**2.12**	**254**	*e*P	**Pn**	**15 08 02.9**	**+0.3**
MKZ	**Mys Kozlova**	**2.19**	**214**	*e*P	**Pn**	**15 08 02.1**	**-1.3**
MKZ				*e*S	**Sn**	**15 08 26.7**	**-4.1**
KOZ	**Kozyrevsk**	**2.25**	**263**	*e*P	**Pb**	**15 08 06.5**	**-1.1**
SRDR	**Sredinnyy**	**2.30**	**270**	*e*P	**Pb**	**15 08 07.7**	**-0.9**
SRDR				*e*S	**Sb**	**15 08 37.1**	**0.0**
OSSR	**Ossora**	**2.91**	**352**	*e*P	**Pb**	**15 08 16.2**	**-2.6**
OSSR				*e*S	**Sb**	**15 08 50.9**	**-3.6**
ESO	**Esso**	**2.92**	**263**	*e*P	**Pn**	**15 08 15.6**	**+2.1**
TIGL	**Tigil**	**3.15**	**298**	*e*P	**Pb**	**15 08 20.8**	**-2.2**
PALN	**Palana**	**3.42**	**324**	*e*P	**Pb**	**15 08 26.4**	**-1.2**
KII	**Karymskiy**	**3.45**	**229**	*e*P	**Pn**	**15 08 21.5**	**+0.6**
SPN	**Mys Shipunski**	**3.97**	**216**	*e*P	**Pn**	**15 08 27.0**	**-0.9**
SPN				*e*S	**Sn**	**15 09 06.6**	**-6.0**
NLC	**Nalytchevo**	**4.14**	**221**	*e*S	**Sn**	**15 09 15.9**	**-2.9**
SDLR	**Sedlovina**	**4.23**	**225**	*e*P	**Pn**	**15 08 32.5**	**+0.8**
KRX	**Arik**	**4.27**	**227**	*e*P	**Pn**	**15 08 34.4**	**+2.3**
KRER	**Koryakskii**	**4.27**	**226**	*e*P	**Pn**	**15 08 33.6**	**+1.4**
SMAR	**Somma**	**4.28**	**225**	*e*P	**Pn**	**15 08 33.1**	**+0.8**
AVH	**Avacha**	**4.30**	**226**	*e*P	**Pn**	**15 08 34.4**	**+1.9**
UGLR	**Uglovaya**	**4.31**	**225**	*e*P	**Pn**	**15 08 33.8**	**+1.1**
GNL	**Ganaly**	**4.34**	**234**	*e*P	**Pn**	**15 08 34.8**	**+1.7**
DALK	**Dalny**	**4.47**	**223**	*e*P	**Pn**	**15 08 35.6**	**+0.8**
DALK				*e*S	**Sn**	**15 09 24.9**	**-2.0**
PETK	**Petropavlovsk-** 0.5nm,0.3s,baz=56,slow=16,SNR=16	**4.84**	**230**	Pn	**Pn**	**15 08 40.2**	**+0.2**
PETK				Sn	**Sn**	**15 09 38.6**	**+2.5**
	0.3nm,0.3s,baz=28,slow=23,SNR=1.0 2.5nm,0.5s						
KRMR	**Karymshinskiy**	**4.87**	**225**	*e*P	**Pn**	**15 08 41.8**	**+1.5**
GRL	**Gorelyy**	**5.11**	**224**	*e*P	**Pn**	**15 08 45.0**	**+1.4**
MTVR	**Mutnovka**	**5.12**	**223**	*e*P	**Pn**	**15 08 45.0**	**+1.2**
ASAK	**Asacha**	**5.30**	**223**	*e*P	**Pn**	**15 08 48.0**	**+1.7**
MA2	**Magadan** comp=Z,72nm,18.1s,baz=152,slow=37	**7.65**	**300**	LR	LR	15 12 04.2	
TIXI	**Tiksi** 5.0nm,0.3s,baz=145,slow=7.5,SNR=3.9 5.0nm,0.3s	**21.16**	**330**	P	**P**	**15 12 10.7**	**-1.2**
ILAR	**Eielson Array** 0.8nm,0.9s,baz=264,slow=7.9,SNR=8.6 0.8nm,0.9s	**24.99**	**50**	P	**P**	**15 12 51.7**	**+1.2**
MJAR	**Matsushiro Arr** 2.5nm,0.9s,baz=18,slow=10,SNR=4.5 2.5nm,0.9s	**26.30**	**232**	P	**P**	**15 13 02.9**	**+0.3**
H11N2	**WAKE ISLAND Hy** baz=357,slow=76,SNR=393	**36.67**	**175**	T	T	15 53 21.6	
H11N3	**WAKE ISLAND Hy** baz=357,slow=76,SNR=244	**36.68**	**175**	T	T	15 53 24.4	
H11N1	**WAKE ISLAND Hy** baz=357,slow=76,SNR=302	**36.68**	**175**	T	T	15 53 23.1	
H11S1	**WAKE ISLAND Hy** baz=0.3,slow=76,SNR=8.6	**37.87**	**176**	T	T	15 54 56.7	
H11S3	**WAKE ISLAND Hy** baz=0.3,slow=76,SNR=7.2	**37.89**	**176**	T	T	15 54 52.3	
H11S2	**WAKE ISLAND Hy** baz=0.3,slow=76,SNR=5.3	**37.89**	**176**	T	T	15 54 52.2	
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=302,slow=9.2,SNR=1.7 0.1nm,0.3s	**39.28**	**46**	P	**P**	**15 14 56.4**	**+0.8**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=47,slow=6.2,SNR=5.4 0.5nm,0.7s	**48.71**	**295**	P	**P**	**15 16 10.8**	**-0.5**
PDAR	**Pinedale Array** 0.1nm,0.4s,baz=306,slow=3.2,SNR=1.8 0.1nm,0.4s	**54.09**	**65**	P	**P**	**15 16 54.0**	**+2.0**
TXAR	**Lajitas Array** 0.1nm,0.5s,baz=311,slow=4.5,SNR=1.8 0.1nm,0.5s	**67.42**	**71**	P	**P**	**15 18 25.4**	**+2.7**

*IDC **17** 15:07:27.6±2.0,6.˚34S×130.˚20E, h131km±20km, mb3.8/8, mbtmp4.3/13, Error ellipse: s-maj=19.0km s-min=13.8km az=64.0*

*NEIC **17** 15:07:27.6±0.7,6.˚31S±0'.07×130.˚25E±0'.07, h130km±8km, mb4.5/24, Error ellipse: s-maj=10.8km s-min=9.1km az=58.0*

*DJA **17** 15:07:28.6±0.3,6.˚S±2.˚×13.˚0E±.˚, h169km±8km, M4.7/25, mB5.3/6, mb4.4/12, MLv4.8/25, Mw(mB)4.7/6*

ISC 17 15:07:28.3±0.4, 6°36S±0'.04×130°30E±0'.04, h150km, n86, σ1§55/88, mb4.4/16, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.87**	**348**	P	**Pn**	**15 08 03.3**	**+1.4**
BNDI	**Bandanaira**	**1.87**	**348**	P	**Pn**	**15 08 03.4**	**+1.5**
SAUI	**Saumlaki**	**1.89**	**148**		**Pn**	**15 08 01.9**	**-0.3**
SAUI				Sn	**Sn**	**15 08 25.8**	**-2.4**
SAUI	**Saumlaki**	**1.89**	**148**	P	**Pn**	**15 08 03.4**	**+1.2**
SAUI	**Saumlaki**	**1.89**	**148**	P	**Pn**	**15 08 03.5**	**+1.2**
MSAI	**Masohi**	**3.29**	**335**	P	**Pn**	**15 08 20.8**	**+1.4**
KRAI	**Karang Ratu**	**3.57**	**328**	P	**Pn**	**15 08 25.2**	**+2.2**
FAKI	**Fak Fak**	**3.94**	**30**		**Pn**	**15 08 26.1**	**-1.7**
FAKI	**Fak Fak**	**3.94**	**30**	P	**Pn**	**15 08 28.0**	**+0.2**
KMPI	**Kaimana, Papua**	**4.33**	**52**	P	**Pn**	**15 08 32.5**	**-0.4**
SIJI	**Sorong** 33nm,0.2s,baz=63,slow=9.7,SNR=81	**5.54**	**10**	P	**Pn**	**15 08 47.5**	**-1.5**
SIJI				S	**Sn**	**15 09 44.9**	**-7.2**
	92nm,0.3s,baz=127,slow=23,SNR=16						
SIJI	**Sorong**	**5.54**	**10**	P	**Pn**	**15 08 48.4**	**-0.6**
SWI	**Sorong** 1.5nm8µm41nm,0.5s	**5.55**	**10**	P	**Pn**	**15 08 48.5**	**-0.5**
DRS	**Darwin Rock St**	**6.06**	**174**	P	**Pn**	**15 08 56.2**	**+0.4**
DRS	**Darwin Rock St**	**6.06**	**174**	S	**Sn**	**15 10 04.4**	**+0.1**
SANI	**Sanana**	**6.07**	**315**	P	**Pn**	**15 08 58.3**	**+2.4**
SANI	**Sanana**	**6.07**	**315**	S	**Sn**	**15 10 05.4**	**+0.9**
SANI	**Sanana**	**6.07**	**315**	P	**Pn**	**15 08 57.8**	**+1.9**
RKPI	**Ransiki, Papua**	**6.18**	**39**	P	**Pn**	**15 08 57.7**	**+0.2**
MTN	**Manton Dam**	**6.49**	**173**		**Pn**	**15 09 01.3**	**-0.3**
MWPI	**Manokwari, Pap**	**6.56**	**35**	P	**Pn**	**15 09 03.8**	**+1.2**
MWPI				S	**Sn**	**15 10 16.3**	**-0.1**
SOEI	**Soe**	**6.85**	**240**		**Pn**	**15 09 05.4**	**-1.2**
SOEI	**Soe**	**6.85**	**240**	P	**Pn**	**15 09 08.0**	**+1.4**
SOEI	**Soe**	**6.85**	**240**	S	**Sn**	**15 10 23.1**	**-0.5**
SOEI	**Soe**	**6.85**	**240**	P	**Pn**	**15 09 07.8**	**+1.2**
SOEI				S	**Sn**	**15 10 25.3**	**+1.7**
SRPI	**Serui, Papua**	**7.42**	**53**	P	**Pn**	**15 09 13.2**	**-0.8**
BATI	**Baumata** 17nm,0.4s,baz=56,slow=12,SNR=4.1	**7.59**	**239**	P	**Pn**	**15 09 15.2**	**-1.2**
BATI				S	**Sn**	**15 10 39.3**	**-1.9**
	125nm,0.4s,baz=142,slow=16,SNR=15						
BATI	**Baumata**	**7.59**	**239**	P	**Pn**	**15 09 16.6**	**+0.3**
BATI				S	**Sn**	**15 10 42.7**	**+1.5**
BAKI	**Biak**	**7.75**	**49**	P	**Pn**	**15 09 18.0**	**-0.4**
KNRA	**Kununurra**	**9.38**	**189**		**Pn**	**15 09 38.7**	**-1.4**
FITZ	**Fitzroy Crossi** 2.4nm,0.3s,baz=19,slow=9.1,SNR=17	**12.52**	**201**	P	**Pn**	**15 10 19.6**	**-1.8**
FITZ				S	Sn	15 12 28.8	-11
	13nm,0.3s,baz=319,slow=19,SNR=8.4						
PLAI	**Plampang**	**12.65**	**258**	P	**Pn**	**15 10 22.8**	**-0.3**
WRA	**Warramunga Arr** 1.5nm,0.3s,baz=348,slow=14,SNR=31	**14.06**	**164**	P	**Pn**	**15 10 37.9**	**-3.2**
WRA				S	Sn	15 13 07.1	-10
	6.8nm,0.6s,baz=326,slow=25,SNR=9.6						
WRA	**Warramunga Arr**	**14.06**	**164**		Sn	15 13 06.5	-10
COEN	**Coen**	**14.75**	**122**		**P**	**15 10 50.2**	**-1.6**
COEN	**Coen**	**14.75**	**122**	P	**P**	**15 10 51.8**	**0.0**
JAGI	**Jajag, Banyuwa** comp=Z,45nm,1.3s	**16.14**	**262**	Pn	**Pn**	**15 11 02.8**	**-4.2**
JAGI				IAmb	IAmb	15 11 30.3	
JAGI	**Jajag, Banyuwa**	**16.14**	**262**	P	**P**	**15 11 07.5**	**+0.2**
QIS	**Mount Isa**	**16.75**	**148**	P	**Pn**	**15 11 15.6**	**+1.3**
PMG	**Port Moresby** comp=Z,28nm,0.8s,baz=294,slow=9.6,SNR=10	**16.98**	**101**	P	**Pn**	**15 11 19.0**	**+2.0**
PMG	**Port Moresby**	**16.98**	**101**		**P**	**15 11 15.0**	**-1.5**
PMG				IAmb	IAmb	15 11 20.8	
	comp=Z,37nm,0.9s						
PMG	**Port Moresby**	**16.98**	**101**	P	**Pn**	**15 11 19.7**	**+2.7**
AS31	**Alice Springs**	**17.55**	**169**		**Pn**	**15 11 23.6**	**-0.3**
ASAR	**Alice Springs** comp=Z,4.5nm,0.8s,baz=346,slow=8.8,SNR=58	**17.55**	**169**	P	**Pn**	**15 11 23.7**	**-0.2**
MBWA	**Marble Bar**	**17.92**	**214**	P	**Pn**	**15 11 26.4**	**-1.8**
MBWA				IAmb	IAmb	15 11 28.7	
	comp=Z,9.6nm,0.8s						
MBWA	**Marble Bar**	**17.92**	**214**	P	**Pn**	**15 11 28.2**	**0.0**
MTSU	**Mount Surprise**	**18.00**	**132**	P	**Pn**	**15 11 30.1**	**+0.9**
PSA00	**Pilbara Seismi**	**18.19**	**213**	P	**Pn**	**15 11 29.8**	**-1.6**
PSA00				IAmb	IAmb	15 11 32.2	
	comp=Z,8.1nm,0.7s						
PSA00	**Pilbara Seismi**	**18.19**	**213**	P	**Pn**	**15 11 31.4**	**0.0**
KKM	**Kota Kinabalu**	**18.69**	**311**	Pn	**Pn**	**15 11 36.8**	**-0.7**
KKM				IAmb	IAmb	15 12 00.2	
	comp=Z,31nm,1.0s						
KKM	**Kota Kinabalu**	**18.69**	**311**	P	**Pn**	**15 11 37.0**	**-0.5**
UGM	**Wanagama**	**19.68**	**264**	P	**Pn**	**15 11 46.0**	**-3.0**
UGM	**Wanagama**	**19.68**	**264**	P	**Pn**	**15 11 47.8**	**-1.2**
SBUM	**Sibu**	**20.06**	**295**		**P**	**15 11 49.2**	**-0.8**
SBUM	**Sibu**	**20.06**	**295**	P	Pn	15 11 51.9	-1.5
CTA	**Charters Tower** comp=Z,2.5nm,0.5s,baz=309,slow=13,SNR=6.1	**20.65**	**133**	P	Pn	15 11 58.5	-1.9
	comp=Z,2.5nm,0.5s						
GIRL	**Giralia**	**22.40**	**222**	P	**P**	**15 12 14.2**	**-0.3**
BBJI	**Bungbulang**	**22.51**	**266**		**P**	**15 12 15.3**	**-0.5**
BBJI				IAmb	IAmb	15 12 17.2	
	comp=Z,15nm,0.7s						
BBJI	**Bungbulang**	**22.51**	**266**	P	**P**	**15 12 15.9**	**+0.2**
INKA	**Innaminka**	**23.46**	**156**	P	**P**	**15 12 25.4**	**+1.0**
FORT	**Forrest**	**24.38**	**185**	P	**P**	**15 12 33.3**	**+0.7**
FORT				IAmb	IAmb	15 13 17.4	
	comp=Z,20nm,1.1s						
MORW	**Morawa**	**26.30**	**209**	P	**P**	**15 12 50.4**	**+0.4**
MORW				IAmb	IAmb	15 13 17.9	
	comp=Z,19nm,1.2s						
STKA	**Stephens Creek** comp=Z,1.6nm,0.8s,baz=324,slow=11,SNR=4.8	**27.49**	**159**	P	**P**	**15 13 02.0**	**+1.3**
	comp=Z,1.6nm,0.8s						
STKA	**Stephens Creek**	**27.49**	**159**	P	**P**	**15 13 01.4**	**+0.7**
CMAR	**Chiang Mai Arr** comp=Z,2.5nm,0.7s,baz=134,slow=7.2,SNR=28	**39.55**	**309**	P	**P**	**15 14 46.0**	**+1.0**
	comp=Z,2.5nm,0.7s						
NJ2	**Nanjing**	**39.73**	**345**	*e*P	P	15 14 49.8	+3.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
CHTO	**Chiang Mai**	**39.76**	**310**		**P**	**15 14 46.6**	**-0.1**
CHTO				IAmb	IAmb	15 14 48.2	
	comp=Z,5.6nm,0.8s						
PZH	**PanZhiHua**	**42.82**	**321**	P	**P**	**15 15 14.4**	**+2.7**
HNS	**HongShan**	**45.91**	**343**	⇓P	**P**	**15 15 36.3**	**+0.5**
HHC	**Hu-ho-hao-te**	**50.03**	**341**	*e*P	**P**	**15 16 10.6**	**+2.9**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
EVN	**Everest**	**54.08**	**311**	P	**P**	**15 16 38.3**	**-0.2**
SONM	**Songino Array** comp=Z,1.3nm,0.7s,baz=166,slow=7.2,SNR=6.6	**57.94**	**341**	P	**P**	**15 17 06.2**	**+1.2**
	comp=Z,1.3nm,0.7s						
SONM	**Songino Array**	**57.94**	**341**	P	**P**	**15 17 05.1**	**+0.2**
MKAR	**Makanchi Array** comp=Z,3.8nm,0.4s,baz=113,slow=8.5,SNR=118	**67.86**	**327**	P	**P**	**15 18 11.5**	**+1.1**
	comp=Z,3.8nm,0.4s						
MAKZ	**Makanchi**	**68.04**	**326**	P	**P**	**15 18 12.5**	**+1.0**
MAKZ				IAmb	IAmb	15 18 13.0	
	comp=Z,4.1nm,0.5s						
BOOM	**Boomskoye usch**	**69.25**	**320**	P	**P**	**15 18 19.8**	**+0.4**
BOOM				IAmb	IAmb	15 18 44.5	
	comp=Z,12nm,1.2s						
SMY	**Shemya**	**69.58**	**27**	P	**P**	**15 18 21.7**	**+0.8**
AAK	**Ala-Archa**	**70.25**	**320**	P	**P**	**15 18 26.3**	**+0.8**
ARSB	**Arslanbob**	**70.62**	**318**	P	**P**	**15 18 28.2**	**+0.5**
ARSB				IAmb	IAmb	15 18 29.5	
	comp=Z,4.2nm,0.8s						
ZALV	**Zalesovo Beam** comp=Z,1.7nm,0.6s,baz=122,slow=4.8,SNR=7.0	**71.14**	**334**	P	**P**	**15 18 30.3**	**-0.1**
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**71.14**	**334**	P	**P**	**15 18 30.1**	**-0.3**
KURBB	**Kurchatov Arra** comp=Z,1.8nm,0.6s,baz=128,slow=5.0,SNR=27	**72.12**	**328**	P	**P**	**15 18 37.0**	**+0.7**
	comp=Z,1.8nm,0.6s						
KURK	**Kurchatov**	**72.13**	**328**	P	**P**	**15 18 36.8**	**+0.4**
BVAR	**Borovoye Array** comp=Z,1.1nm,0.7s,baz=132,slow=10,SNR=4.2	**77.68**	**328**	P	**P**	**15 19 08.6**	**+0.4**
	comp=Z,1.1nm,0.7s						
JOKA	**Jonika Flow**	**77.81**	**69**	P	**P**	**15 19 10.3**	**+0.6**
CPUP	**Villa Florida** comp=Z,1.1nm,0.7s,baz=227,slow=4.9,SNR=3.1	**146.67**	**167**	PKPbc	**PKiKP**	**15 26 54.4**	**-1.4**

IDC 17 15:26:39.0±9.5, 30°49S×179°46W, h385km±99km, mb2.4/2, mbtmp3.3/3, Error ellipse: s-maj=100.1km s-min=53.6km az=16.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera** 1.2nm,0.3s,baz=264,slow=5.4,SNR=22	**8.25**	**199**	P	Pn	15 28 36.8	+0.3
URZ				S	S	15 30 12.7	-0.1
	1.7nm,0.4s,baz=250,slow=19,SNR=8.9						
ASAR	**Alice Springs** 0.3nm,0.8s,baz=107,slow=7.9,SNR=2.1 0.3nm,0.8s	**41.85**	**268**	P	P	15 33 53.2	-0.1
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=111,slow=7.7,SNR=5.9 0.3nm,0.7s	**42.84**	**273**	P	P	15 34 01.1	-0.1
FINES	**FINESS Array B** 2.7nm,0.8s,baz=49,slow=2.8,SNR=5.8	**144.79**	**339**	PKP	PKPdf	15 45 29.2	-0.7

*IDC **17** 15:32:37.3±4.6, 19.˚08S×177.˚28W, h431km±44km, mb3.4/2, mbtmp4.2/3, Error ellipse: s-maj=46.7km s-min=21.1km az=75.0*

*NEIC **17** 15:32:48.1±0.8, 20.˚2S±0.˚2×177.˚4W±0.˚2, h535km±14km, mb4.1/12, Error ellipse: s-maj=31.0km s-min=29.0km az=159.0*

ISC 17 15:32:50.6±2.1, 20°0S±0'.2×177°8W±0'.3, h550km, n18, σ1§00/19, mb4.2/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.56**	**300**	P	**P**	**15 34 16.4**	**-0.6**
ONTNC	**Ouen Toro**	**14.87**	**259**	P	**P**	**15 35 58.8**	**0.0**
URZ	**Urewera** 1.4nm,0.3s,baz=251,slow=3.7,SNR=12	**18.68**	**193**	P	**P**	**15 36 37.1**	**+2.5**
URZ				S	S	15 39 53.9	+17
	3.1nm,0.8s,baz=18,slow=20,SNR=1.7						

TUWZ	**Tuamarina**	**22.45**	**196**	P	**P**	**15 37 06.6 -1.9**
CTAO	**Charters Tower**	**33.73**	**264**	P	**P**	**15 38 47.8 +0.7**
CTAO				IAmb	IAmb	15 38 48.3
	comp=Z,5.9nm,1.1s					
TOO	**Toolangi**	**36.33**	**233**	P	**P**	**15 39 07.1 -1.4**
TOO				IAmb	IAmb	15 39 42.1
	comp=Z,4.5nm,1.2s					
COEN	**Coen**	**37.76**	**273**	P	**P**	**15 39 21.2 +0.8**
COEN				IAmb	IAmb	15 39 21.4
	comp=Z,6.2nm,1.1s					
INKA	**Innaminka**	**38.54**	**250**	P	**P**	**15 39 27.9 +1.3**
INKA				IAmb	IAmb	15 39 56.1
	comp=Z,5.5nm,1.4s					
BBOO	**Buckleboo**	**42.93**	**243**	P	**P**	**15 40 01.2 -0.3**
AS31	**Alice Springs**	**44.82**	**256**	P	**P**	**15 40 16.5 +0.3**
ASAR	**Alice Springs** comp=Z,2.7nm,0.5s,baz=85,slow=8.1,SNR=74	**44.82**	**256**	P	**P**	**15 40 16.6 +0.3**
ASAR				PcP	**PcP**	**15 41 45.8 -0.6**
	comp=Z,0.2nm,0.5s,baz=90,slow=5.2,SNR=1.8 comp=Z,2.7nm,0.5s					
ASAR	**Alice Springs**	**44.82**	**256**	P	**P**	**15 40 16.1 -0.2**
WB0	**Warramunga Arr**	**44.84**	**262**	P	**P**	**15 40 16.5 +0.1**
WB0				IAmb	IAmb	15 40 59.7
	comp=Z,12nm,1.5s					
WRA	**Warramunga Arr** comp=Z,1.2nm,0.3s,baz=97,slow=7.6,SNR=86 comp=Z,1.2nm,0.3s	**44.86**	**262**	P	**P**	**15 40 16.7 +0.1**
KNRA	**Kununurra**	**50.89**	**266**	P	**P**	**15 41 01.8 +0.1**
KNRA				IAmb	IAmb	15 41 27.2
	comp=Z,10nm,1.1s					
MBWA	**Marble Bar**	**58.15**	**257**	P	**P**	**15 41 52.6 +0.2**
MBWA				IAmb	IAmb	15 42 11.7
	comp=Z,37nm,1.5s					
UGM	**Wanagama**	**70.17**	**269**	P	**P**	**15 43 08.8 -0.1**
BRTR	**Keskin Array B** comp=Z,0.2nm,0.5s,baz=66,slow=3.4,SNR=1.8	**146.68**	**313**	PKPbc	**PKPdf**	**15 51 28.9 +0.2**

*BEO **17** 15:45:10.2±0.4, 41.˚55N×19.˚51E, h0km±2km, ML2.8/15*
*TIR **17** 15:45:10.0, 41.˚62N×19.˚52E, h26km±1km, Md2.5/5, Ml2.9/7*
*PDG **17** 15:45:11.3±0.1, 41.˚67N×19.˚51E, h10km, MD3.0/2, ML2.9/12, Error ellipse: s-maj=0.2km s-min=0.4km az=0.0*
*ATH **17** 15:45:12.9, 41.˚53N×19.˚27E, h34km±14km, ML2.9/9, Manual Solution by F.Xalaris First location: 2020/02/17 15:46:47, This location: 2021/10/14 05:03:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*

ISC 17 15:45:10.3±1.0, 41°59N±0'.02×19°45E±0'.02, h10km±8km, n70, σ1§36/116, 14C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.40**	**128**	P*i*Pg	**Pg**	**15 45 18.1**	**-0.1**
TIR				S*i*Sg	**Sg**	**15 45 23.6**	**+0.1**
TIR				AML	AML	15 45 24.5	
	7.3nm,0.5s						
TIR				AML	AML	15 45 24.8	
	5.2nm,0.3s						
ULC	**Ulcinj**	**0.40**	**338**	⇑*i*Pg	**Pg**	**15 45 17.7**	**-0.6**
ULC				*i*Sg	**Sg**	**15 45 23.8**	**+0.2**
SDA	**Shkodra**	**0.46**	**5**	Pg	**Pg**	**15 45 19.0**	**-0.4**
SDA				Sg	**Sg**	**15 45 26.1**	**+0.5**
SDA				AML	AML	15 45 27.4	
	3.8nm,0.2s						
SDA				AMd		15 45 58.9	
DRME	**Dracevica, Mon**	**0.63**	**342**	*e*Pg	**Pb**	**15 45 21.8**	**-1.6**
DRME				*e*Sg	**Sg**	**15 45 33.0**	**+2.2**
PHP	**Peshkopia**	**0.75**	**83**	Pg	**Pb**	**15 45 23.4**	**-2.1**
PHP				Sg	**Sb**	**15 45 33.4**	**-2.4**
PHP				AML	AML	15 45 40.8	
	2.8nm,0.3s						
PHP				AMd		15 45 59.7	
BUM	**Brajici-Budva**	**0.82**	**330**	⇑*i*Pg	**Pb**	**15 45 25.9**	**-0.8**
BUM				*i*Sg	**Sb**	**15 45 38.3**	**+0.5**
PDG	**Podgorica**	**0.85**	**350**	Pg	**Pb**	**15 45 25.6**	**-1.6**
PDG				Sg	**Sb**	**15 45 38.7**	**+0.1**
PDG				AMd		15 46 15.7	
PDG	**Podgorica**	**0.85**	**350**	⇑P	**Pb**	**15 45 25.5**	**-1.6**
PDG				⇓S	**Sb**	**15 45 38.9**	**+0.4**
PDG	**Podgorica**	**0.85**	**350**	⇑*i*Pg	**Pb**	**15 45 25.9**	**-1.3**
PDG				*i*Sg	**Sb**	**15 45 38.5**	**-0.1**
PDG	**Podgorica**	**0.85**	**350**	*e*Pg	**Pb**	**15 45 25.5**	**-1.6**
PDG				*e*Sg	**Sb**	**15 45 39.0**	**+0.4**
CEME	**Cevo**	**1.03**	**338**

BOVS				⇑S		**Sn**	**15 46 26.1**	**+1.2**
BOVS	**Bovan**	**2.64**	**38**	*e*Pn		**Pn**	**15 45 53.7**	**+0.8**
BOVS				*e*Sn		**Sb**	**15 46 26.8**	**-3.2**
TRUS	**Trudelj**	**2.72**	**15**	*e*Pn		**Pn**	**15 45 55.4**	**+1.3**
TRUS				*e*Sn		**Sb**	**15 46 29.7**	**-2.8**
LIT	**Litokhoron**	**2.75**	**122**	P		**Pn**	**15 45 55.9**	**+1.5**
ZAPS	**Zavoj**	**2.90**	**53**	*e*Pn		**Pn**	**15 45 58.0**	**+1.5**
ZAPS				*e*Sn		**Sn**	**15 46 32.0**	**+0.6**
TSLK	**Tsoukalades, L**	**2.91**	**161**	P		**Pn**	**15 45 56.8**	**+0.1**
LKD2	**Lefkada island**	**2.95**	**161**	P		**Pn**	**15 45 56.9**	**-0.3**
VTS	**Vitosha**	**3.00**	**69**	*e*Pn		**Pn**	**15 45 58.9**	**+0.9**
ZAGS	**Zajecar**	**3.02**	**42**	*e*Pn		**Pn**	**15 45 59.3**	**+1.1**
ZAGS				*e*Sn		**Sb**	**15 46 36.8**	**-4.4**
BORS2	**Bor- Borsko je**	**3.13**	**36**	*e*Pn		**Pn**	**15 45 59.3**	**-0.4**
BORS2				*e*Sn		**Sn**	**15 46 37.0**	**-0.1**
SRS	**Serrai**	**3.16**	**97**	*e*Pn		**Pn**	**15 46 00.9**	**+0.9**
TIP	**Timpagrande**	**3.17**	**221**	⇑P		**Pn**	**15 45 59.1**	**-1.2**
KUBS	**Kucevo**	**3.26**	**29**	*e*Pn		**Pn**	**15 46 01.2**	**-0.2**
KUBS				*e*Sn		**Sn**	**15 46 41.5**	**+1.2**
MDVR	**Moldovita**	**3.59**	**27**	⇑P		**Pn**	**15 46 06.5**	**+0.4**
MDVR				⇓S		**Sn**	**15 46 49.9**	**+1.4**
MDVR	**Moldovita**	**3.59**	**27**	*e*Pn		**Pn**	**15 46 06.8**	**+0.7**
HERR	**Herculane**	**3.94**	**32**	⇑P		**Pn**	**15 46 11.4**	**+0.6**
BZS	**Buzias**	**4.32**	**21**	⇓P		**Pn**	**15 46 16.6**	**+0.6**
GZR	**Gura Zlata**	**4.51**	**31**	⇑P		**Pn**	**15 46 19.1**	**+0.5**
GZR				⇑S		**Sn**	**15 47 12.6**	**+1.5**
GZR	**Gura Zlata**	**4.51**	**31**	*e*Pn		**Pn**	**15 46 20.4**	**+1.8**

NEIC ***17*** *15:52:27.8±2.8, 17°.9S±0°.6×173°.8W±0°.1, h92km±15km, mb4.2/7, Error ellipse: s-maj=47.1km s-min=14.1km az=195.0*

IDC ***17*** *15:52:32.3±5.4, 18°.09S×173°.89W, h128km±47km, mb3.7/4, mbtmp4.1/4, Error ellipse: s-maj=45.2km s-min=20.7km az=102.0*

ISC 17 15:52:26.6±0.7, 17°.53S±0°.06×173°.71W±0°.07, h100km, n41, σ2ᵎ58/45, mb4.2/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.91**	**114**	Pn	**Pn**	**15 53 25.4**	**+0.8**
NIUE				Sn	**Sn**	**15 54 07.2**	**-2.2**
NIUE	**Niue**	**3.91**	**114**	P	**Pn**	**15 53 25.8**	**+1.3**
NIUE				S	**Sn**	**15 54 06.5**	**-2.9**
AFI	**Afiamalu**	**4.05**	**28**	Pn	**Pn**	**15 53 29.3**	**+2.7**
AFI				Sn	**Sn**	**15 54 09.1**	**-4.0**
AFI	**Afiamalu**	**4.05**	**28**	P	**Pn**	**15 53 27.2**	**+0.6**
AFI				S	**Sn**	**15 54 10.8**	**-2.4**
MARNC	**Mare, Loyalty**	**17.65**	**254**	P	**P**	**15 56 24.2**	**-1.5**
DZM	**Mont Dzumac**	**19.21**	**253**	P	**P**	**15 56 42.1**	**-0.7**
DZM				IAmb	IAmb	15 57 22.1	
	comp=Z,12nm,1.1s						
OUZ	**Omahuta**	**20.93**	**210**	P	**P**	**15 57 02.3**	**+1.0**
WCZ	**Waipu Caves**	**21.18**	**208**	P	**P**	**15 57 06.0**	**+2.1**
WMGZ	**Waiomatatini S**	**21.36**	**197**	P	**P**	**15 57 10.2**	**+4.4**
HAZ	**Te Kaha**	**21.49**	**199**	P	**P**	**15 57 10.3**	**+3.2**
PKGZ	**Pakihiroa**	**21.50**	**198**	P	**P**	**15 57 10.7**	**+3.4**
RUGZ	**Raukumara Rang**	**21.71**	**199**	P	**P**	**15 57 11.5**	**+1.8**
TWGZ	**Tauwhareparae**	**21.82**	**198**	P	**P**	**15 57 15.0**	**+4.2**
CNGZ	**Carnagh Statio**	**22.04**	**197**	P	**P**	**15 57 14.3**	**+1.3**
MWZ	**Matawai**	**22.10**	**199**	P	**P**	**15 57 16.8**	**+3.1**
URZ	**Urewera**	**22.16**	**199**	P	**P**	**15 57 11.8**	**-2.5**
	comp=Z,8.4nm,0.6s,baz=47,slow=2.0,SNR=15						
URZ				S	**S**	**16 01 04.0**	**-8.0**
	comp=Z,4.8nm,1.0s,baz=355,slow=11,SNR=1.3 comp=Z,8.4nm,0.6s						
URZ	**Urewera**	**22.16**	**199**	P	**P**	**15 57 15.4**	**+1.2**
RAGZ	**Rawiri**	**22.28**	**199**	P	**P**	**15 57 17.6**	**+1.9**
SNGZ	**Shannon Statio**	**22.57**	**198**	P	**P**	**15 57 21.2**	**+2.6**
KNZ	**Kokohu**	**22.69**	**198**	P	**P**	**15 57 22.7**	**+3.0**
TLZ	**Tolley Road**	**22.76**	**202**	P	**P**	**15 57 23.2**	**+2.7**
MTHZ	**Maungataniwha**	**22.79**	**199**	P	**P**	**15 57 22.2**	**+1.4**
NMHZ	**Naumai**	**23.02**	**199**	P	**P**	**15 57 24.8**	**+1.6**
HIZ	**Hauiti**	**23.17**	**203**	P	**P**	**15 57 27.9**	**+3.4**
BKZ	**Black Stump Fm**	**23.18**	**200**	P	**P**	**15 57 25.0**	**+0.4**
OTVZ	**Oturere**	**23.46**	**201**	P	**P**	**15 57 27.4**	**+0.1**
WNVZ	**Wahianoa**	**23.63**	**201**	P	**P**	**15 57 30.5**	**+1.7**
KAHZ	**Kahuranaki**	**23.64**	**198**	P	**P**	**15 57 32.0**	**+3.3**
PXZ	**Pawanui**	**23.86**	**198**	P	**P**	**15 57 33.7**	**+3.0**
PNHZ	**Pukenui**	**23.96**	**199**	P	**P**	**15 57 33.9**	**+2.2**
TSZ	**Takapari Road**	**24.17**	**200**	P	**P**	**15 57 35.4**	**+1.9**
MRZ	**Mangatainoka R**	**24.83**	**200**	P	**P**	**15 57 40.2**	**+0.7**
TOO	**Toolangi**	**40.91**	**232**	P	**P**	**15 59 59.4**	**+0.1**
TOO				IAmb	IAmb	16 00 04.5	
	comp=Z,5.1nm,1.2s						
PTCN	**Pitcairn Islan**	**41.18**	**108**	P	**P**	**16 00 03.6**	**+2.1**
WB0	**Warramunga Arr**	**49.07**	**259**	P	**P**	**16 01 03.1**	**-0.9**
WB0				IAmb	IAmb	16 01 09.6	
	comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**49.10**	**259**	P	**P**	**16 01 04.7**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=98,slow=7.2,SNR=17 comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**49.10**	**259**	P	**P**	**16 01 03.3**	**-1.0**
AS31	**Alice Springs**	**49.20**	**254**	P	**P**	**16 01 05.3**	**+0.3**
AS31				IAmb	IAmb	16 01 08.9	
	comp=Z,3.8nm,1.4s						
ASAR	**Alice Springs**	**49.20**	**254**	P	**P**	**16 01 05.7**	**+0.6**
	comp=Z,4.0nm,0.5s,baz=90,slow=8.7,SNR=126 comp=Z,4.0nm,0.5s						
ASAR	**Alice Springs**	**49.20**	**254**	P	**P**	**16 01 04.9**	**-0.1**
ILAR	**Eielson Array**	**84.58**	**11**	P	P	16 04 53.6	+5.3
	comp=Z,0.4nm,0.8s,baz=206,slow=5.2,SNR=4.6 comp=Z,0.4nm,0.8s						

IDC ***17*** *15:53:44.7±1.3, 3°.83N×32°.53W, h0km, mb3.8/7, mbtmp3.8/8, ML3.5/1, MS3.9/40, Error ellipse: s-maj=39.3km s-min=25.0km az=160.0*

NEIC ***17*** *15:53:47.0±2.0, 3°.81N±0°.07×32°.5W±0°.1, h10km±1km, mb4.5/20, Error ellipse: s-maj=21.4km s-min=12.0km az=95.0*

ISC 17 15:53:45.7±0.6, 3°.69N±0°.09×32°.5W±0°.1, h10km, n69, σ0ᵎ92/27, mb4.3/14, MS4.0/39, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.03**	**200**	Pn	**Pn**	**15 56 12.0**	**+1.9**
	0.4nm,0.3s,baz=22,slow=19,SNR=15						
RCBR				Sn	**Sn**	**15 58 00.4**	**-2.5**
	0.6nm,0.3s,baz=289,slow=23,SNR=7.4						
RCBR				LR	LR	15 59 26.0	
	comp=Z,91nm,20.3s,baz=56,slow=34 2.2nm,0.5s						
MDP	**Montagnes des**	**20.09**	**275**	LR	LR	16 04 27.6	
	comp=Z,191nm,21.1s,baz=104,slow=32						
H10N3	**ASCENSION HYDR**	**21.33**	**123**	T	T	16 20 45.9	
	baz=303,slow=74,SNR=84						
H10N2	**ASCENSION HYDR**	**21.34**	**122**	T	T	16 20 45.1	
	baz=303,slow=74,SNR=104						
H10N1	**ASCENSION HYDR**	**21.35**	**122**	T	T	16 20 46.9	
	baz=303,slow=74,SNR=78						
H10S3	**ASCENSION HYDR**	**21.80**	**125**	T	T	16 21 24.7	
	baz=299,slow=74,SNR=40						
H10S2	**ASCENSION HYDR**	**21.82**	**125**	T	T	16 21 24.3	
	baz=281,slow=74,SNR=39						
BDFB	**Brasilia**	**24.57**	**218**	LR	LR	16 08 00.1	
	comp=Z,178nm,18.6s,baz=48,slow=35						
DBIC	**Dimbokro**	**27.72**	**83**	LR	LR	16 07 56.1	
	comp=Z,228nm,21.2s,baz=320,slow=31						
SIV	**San Ignacio**	**34.34**	**235**	LR	LR	16 14 08.7	
	comp=Z,393nm,20.2s,baz=114,slow=36						
TORD	**Torodi Ar. Bea**	**35.10**	**72**	P	**P**	**16 00 39.5**	**-0.1**
	1.7nm,0.9s,baz=252,slow=12,SNR=5.7 1.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**35.10**	**72**	IAmb	IAmb	16 01 10.7	
	comp=Z,4.0nm,0.5s						
SJG	**San Juan**	**35.89**	**296**	LR	LR	16 12 09.9	
	comp=Z,136nm,21.4s,baz=162,slow=31						
SDV	**Santo Domingo**	**38.20**	**280**	LR	LR	16 18 32.9	
	comp=Z,53nm,18.4s,baz=88,slow=39						
SDV	**Santo Domingo**	**38.20**	**280**	P	**P**	**16 01 06.6**	**+0.3**
CPUP	**Villa Florida**	**38.29**	**217**	LR	LR	16 16 45.5	
	comp=Z,146nm,18.6s,baz=74,slow=36						
MD01	**Midelt array s**	**38.96**	**39**	P	**P**	**16 01 13.2**	**+0.8**
MDT	**Midelt**	**39.02**	**39**	LR	LR	16 15 22.6	
	comp=Z,109nm,21.4s,baz=254,slow=33						
LPAZ	**La Paz**	**40.40**	**240**	LR	LR	16 17 26.6	
	comp=Z,226nm,21.1s,baz=62,slow=35						
SDDR	**Presa de Saban**	**40.79**	**295**	P	**P**	**16 01 28.9**	**+1.2**
ROSC	**El Rosal**	**41.68**	**273**	LR	LR	16 19 39.7	
	comp=Z,228nm,18.1s,baz=141,slow=37						
ESDC	**Sonseca Array**	**44.19**	**32**	P	**P**	**16 01 54.9**	**-0.2**
	comp=Z,2.8nm,1.0s,baz=228,slow=8.8,SNR=9.5 comp=Z,2.8nm,1.0s						
H09W1	**TRISTAN DA CUN**	**44.73**	**157**	T	T	16 50 11.8	
NNA	**Nana**	**46.72**	**250**	LR	LR	16 21 50.2	
	comp=Z,204nm,19.0s,baz=64,slow=36						
ATAH	**Atahualpa**	**47.01**	**257**	LR	LR	16 22 05.1	
	comp=Z,64nm,18.0s,baz=58,slow=36						
TSUM	**Tsumeb**	**54.28**	**117**	LR	LR	16 21 59.5	
	comp=Z,141nm,19.1s,baz=312,slow=31						
WBO	**Williamsburg**	**55.59**	**324**	P	**P**	**16 03 20.9**	**-0.7**
WBO				IAmb	IAmb	16 03 44.2	
	comp=Z,9.7nm,1.2s						
MURB	**Monte Urbino**	**56.04**	**39**	P	**P**	**16 03 25.8**	**+0.8**
MURB				IAmb	IAmb	16 03 49.1	
	comp=Z,5.8nm,0.9s						
PLCA	**Paso Flores**	**56.23**	**214**	LR	LR	16 26 02.3	
	comp=Z,108nm,20.1s,baz=52,slow=34						
UCC	**Uccle**	**56.23**	**27**	P	**P**	**16 03 26.1**	**+0.1**
DAVOX	**Davos/Dischmat**	**56.44**	**34**	LR	LR	16 27 30.4	
	comp=Z,143nm,18.1s,baz=258,slow=36						
TKL	**Tuckaleechee C**	**56.91**	**311**	LR	LR	16 22 42.7	
	comp=Z,134nm,21.0s,baz=88,slow=31						
SADO	**Sadowa**	**57.77**	**322**	LR	LR	16 22 26.0	
	comp=Z,82nm,21.4s,baz=126,slow=30						
TRI	**Trieste**	**58.08**	**37**	P	**P**	**16 03 38.8**	**-0.5**
GERES	**GERESS Array B**	**59.74**	**34**	P	**P**	**16 03 50.3**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=234,slow=13,SNR=3.8						
GERES				LR	LR	16 27 36.2	
	comp=Z,157nm,18.1s,baz=288,slow=34 comp=Z,0.6nm,0.8s						
L46A	**Eue Claire**	**61.16**	**317**	P	**P**	**16 04 00.7**	**+0.1**
SUR	**Sutherland**	**61.97**	**130**	LR	LR	16 25 59.1	
	comp=Z,76nm,19.3s,baz=332,slow=31						
CMIG	**Matias Romero**	**62.51**	**287**	LR	LR	16 30 42.7	
	comp=Z,48nm,20.1s,baz=10,slow=36						
LSZ	**Lusaka**	**62.98**	**109**	LR	LR	16 26 56.9	
	comp=Z,66nm,19.0s,baz=316,slow=32						
LBTB	**Lobatse**	**63.19**	**120**	LR	LR	16 28 08.5	
	comp=Z,108nm,18.6s,baz=313,slow=33						
MBAR	**Mbarara**	**63.38**	**93**	LR	LR	16 29 57.3	
	comp=Z,118nm,18.2s,baz=332,slow=34						
BOSA	**Boshof**	**64.08**	**124**	LR	LR	16 27 56.5	
	comp=Z,75nm,18.5s,baz=3.5,slow=32						
MLR	**Muntele Rosu**	**65.64**	**41**	LR	LR	16 33 02.3	
	comp=Z,158nm,18.1s,baz=308,slow=36						
MLR	**Muntele Rosu**	**65.64**	**41**	P	**P**	**16 04 30.9**	**+0.5**
EIL	**Eilat**	**68.65**	**60**	LR	LR	16 35 44.4	
	comp=Z,202nm,18.0s,baz=238,slow=37						
BR131	**Keskin Array S**	**69.42**	**49**	P	**P**	**16 04 54.0**	**-0.4**
BR131				IAmb	IAmb	16 04 56.4	
	comp=Z,3.8nm,1.1s						
BRTR	**Keskin Array B**	**69.42**	**49**	P	**P**	**16 04 54.7**	**+0.3**
	comp=Z,1.7nm,1.0s,baz=251,slow=3.8,SNR=6.8 comp=Z,1.7nm,1.0s						
BRTR	**Keskin Array B**	**69.42**	**49**	P	**P**	**16 04 54.4**	**-0.1**
ULM	**Lac du Bonnet**	**70.33**	**322**	LR	LR	16 30 47.0	
	comp=Z,83nm,19.9s,baz=30,slow=32						
ASF	**Jabal al Asfar**	**70.66**	**57**	LR	LR	16 36 25.7	
	comp=Z,81nm,19.2s,baz=67,slow=36						
FURI	**Furi**	**70.89**	**82**	LR	LR	16 35 55.9	
	comp=Z,66nm,18.2s,baz=106,slow=36						
BNN	**Bunyan**	**70.91**	**50**	P	**P**	**16 05 04.3**	**+0.7**
BNN				IAmb	IAmb	16 05 05.8	
	comp=Z,5.4nm,1.2s						
TXAR	**Lajitas Array**	**71.76**	**300**	P	**P**	**16 05 09.8**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=122,slow=9.0,SNR=4.3 comp=Z,0.5nm,0.9s						
FCC	**Fort Churchill**	**72.40**	**331**	P	**P**	**16 05 11.5**	**-0.4**
FCC				IAmb	IAmb	16 05 13.2	
	comp=Z,4.1nm,1.1s						
ILON	**Igloolik, Nuna**	**73.11**	**344**	P	**P**	**16 05 15.1**	**-0.9**
ANMO	**Albuquerque**	**74.72**	**305**	LR	LR	16 34 30.9	
	comp=Z,122nm,20.0s,baz=63,slow=33						
PDAR	**Pinedale Array**	**77.98**	**313**	P	**P**	**16 05 44.9**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=101,slow=8.0,SNR=6.2						
PDAR				LR	LR	16 35 52.6	
	comp=Z,46nm,20.2s,baz=74,slow=32 comp=Z,0.8nm,0.9s						
YNE	**Yellowstone No**	**78.54**	**315**	P	**P**	**16 05 48.2**	**+0.3**
YNE				IAmb	IAmb	16 05 58.5	
	comp=Z,4.1nm,1.4s						
BSUT	**Blindstream Ca**	**78.66**	**310**	P	**P**	**16 05 47.4**	**-1.4**
BSUT				IAmb	IAmb	16 05 47.8	
	comp=Z,5.1nm,1.3s						
HWUT	**Hardware Ranch**	**79.35**	**311**	P	**P**	**16 05 52.9**	**+0.5**
HWUT				IAmb	IAmb	16 05 54.5	
	comp=Z,3.1nm,0.8s						
RPN	**Rapa Nui**	**79.97**	**242**	LR	LR	16 37 45.3	
	comp=Z,45nm,18.8s,baz=102,slow=33						
PIX	**Pinacate**	**80.34**	**301**	P	**P**	**16 05 57.0**	**-0.7**
ELK	**Elko**	**82.07**	**310**	LR	LR	16 37 51.6	
	comp=Z,79nm,21.8s,baz=87,slow=32						
PFO	**Pinyon Flats O**	**82.91**	**303**	LR	LR	16 42 30.6	
	comp=Z,55nm,18.2s,baz=59,slow=35						
YKA	**Yellowknife Ar**	**83.08**	**332**	P	**P**	**16 06 10.6**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=91,slow=4.6,SNR=6.6						
YKA				LR	LR	16 39 54.1	
	comp=Z,58nm,18.9s,baz=44,slow=33 comp=Z,0.4nm,0.7s						
NEW	**Newport**	**83.66**	**318**	LR	LR	16 38 38.3	
	comp=Z,75nm,20.4s,baz=62,slow=32						
NVAR	**Mina Array Bea**	**84.41**	**308**	LR	LR	16 44 09.5	
	comp=Z,35nm,18.0s,baz=66,slow=36						
BVAR	**Borovoye Array**	**84.81**	**36**	LR	LR	16 52 28.3	
	comp=Z,67nm,18.1s,baz=296,slow=37						
ILAR	**Eielson Array**	**96.81**	**337**	LR	LR	16 48 50.5	
	comp=Z,51nm,18.7s,baz=66,slow=34						

IDC ***17*** *16:02:28.0±2.0, 6°.33S×152°.63E, h0km, mb3.9/3, mbtmp4.1/4, ML2.6/1, Error ellipse: s-maj=116.9km s-min=26.8km az=131.0*

NEIC ***17*** *16:02:32.2±0.8, 6°.39S±0°.08×152°.5E±0°.2, h10km±2km, mb4.3/7, Error ellipse: s-maj=32.6km s-min=13.0km az=100.0*

ISC 17 16:02:31.1±1.2, 6°.3S±0°.1×152°.3E±0°.2, h10km, n17, σ1ᵎ68/18, mb4.1/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.07**	**356**	Pn	**Pb**	**16 03 09.3**	**+0.5**
PMG	**Port Moresby**	**5.98**	**238**	Pn	**Pn**	**16 04 02.0**	**+2.3**
	8.0nm,0.3s,baz=59,slow=7.1,SNR=27						
PMG				Sn	**Sn**	**16 05 04.1**	**-4.1**
	14nm,0.3s,baz=38,slow=15,SNR=15 22nm,0.3s						
PMG	**Port Moresby**	**5.98**	**238**		**Pn**	**16 04 01.8**	**+2.0**
COEN	**Coen**	**11.79**	**229**	Pn	**Pn**	**16 05 22.5**	**+2.9**
CTAO	**Charters Tower**	**14.94**	**203**	Pn	**Pn**	**16 06 03.4**	**+0.8**
WB0	**Warramunga Arr**	**21.98**	**231**	P	**P**	**16 07 26.5**	**+1.0**
WB0				IAmb	IAmb	16 07 39.7	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**22.12**	**230**	P	**P**	**16 07 27.4**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=55,slow=9.7,SNR=38 comp=Z,3.9nm,0.7s						
WRA	**Warramunga Arr**	**22.12**	**230**	P	**P**	**16 07 26.4**	**-0.6**
INKA	**Innaminka**	**24.01**	**206**	P	**P**	**16 07 46.0**	**-0.3**
INKA				IAmb	IAmb	16 07 49.5	
	comp=Z,2.9nm,1.2s						
AS31	**Alice Springs**	**24.75**	**224**	P	**P**	**16 07 53.4**	**+0.3**
AS31				IAmb	IAmb	16 07 56.1	
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**24.75**	**224**	P	**P**	**16 07 52.6**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=58,slow=9.4,SNR=54 comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**24.75**	**224**	P	**P**	**16 07 53.3**	**+0.1**
KNRA	**Kununurra**	**24.91**	**246**	P	**P**	**16 07 55.3**	**+0.7**
KNRA				IAmb	IAmb	16 08 03.1	
	comp=Z,9.2nm,0.6s						
MMRI	**Maumere**	**29.90**	**264**	P	**P**	**16 08 39.5**	**0.0**
PSA00	**Pilbara Seismi**	**34.88**	**241**	P	**P**	**16 09 23.0**	**0.0**
PSA00				IAmb	IAmb	16 09 53.6	
	comp=Z,21nm,1.2s						
ILAR	**Eielson Array**	**83.69**	**22**	P	**P**	**16 14 57.9**	**-2.0**
	comp=Z,0.5nm,1.0s,baz=251,slow=5.8,SNR=5.1 comp=Z,0.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**150.26**	**286**	PKPbc	**PKPbc**	**16 22 23.8**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=72,slow=3.6,SNR=1.4						

RSNC ***17*** *16:11:56.8±0.0, 7°.N±1°.7×7°.3W±°, h150km±2km, M2.9, ML2.7*
FUNV ***17*** *16:11:57.3, 6°.84N×73°.13W, h151km, MW3.8, Presumed earthquake*

ISC 17 16:11:55.5±1.3, 6°.85N±0°.03×73°.10W±0°.03, h154km±8km, n34, σ1ᵎ28/66, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**198**	P	**Pn**	**16 12 17.0**	**+0.2**
PAMC	**Pamplona, Colo**	**0.63**	**39**	P	**Pn**	**16 12 19.3**	**+0.7**
PAMC				S	**Sn**	**16 12 36.9**	**+0.7**
BRJC	**Barrancabermej**	**0.66**	**281**	P	**Pn**	**16 12 18.8**	**+0.6**
BRJC				S	**Sn**	**16 12 35.6**	**+0.2**
RUSC	**La Rusia**	**0.95**	**179**	P	**Pn**	**16 12 21.0**	**+0.1**
RUSC				S	**Sn**	**16 12 39.7**	**-0.5**
RUSC	**La Rusia**	**0.95**	**179**	*e*P	**Pn**	**16 12 21.2**	**+0.3**
RUSC				*e*S	**Sn**	**16 12 39.1**	**-1.1**
CAPV	**Capacho**	**1.27**	**38**	*e*P	**Pn**	**16 12 24.5**	**+1.1**
CAPV				*e*S	**Sn**	**16 12 44.7**	**-0.1**
PTBC	**PUERTO BERRIO,**	**1.39**	**257**	P	**Pn**	**16 12 23.7**	**-0.6**
PTBC				S	**Sn**	**16 12 44.7**	**-1.5**
OCAC	**Ocana**	**1.40**	**351**	P	**Pn**	**16 12 25.3**	**+0.7**
OCAC				S	**Sn**	**16 12 47.3**	**+0.4**
SPBC	**San Pablo de B**	**1.54**	**219**	P	**Pn**	**16 12 25.9**	**0.0**
SPBC				S	**Sn**	**16 12 48.0**	**-1.2**
NORC	**Norcasia**	**2.18**	**234**	P	**Pn**	**16 12 32.5**	**-0.6**
NORC				S	**Sn**	**16 13 01.0**	**-0.9**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**16 12 34.8**	**0.0**
CHIC				S	**Sn**	**16 13 04.2**	**-0.9**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**16 12 37.3**	**+2.0**
ROSC				S	**Sn**	**16 13 06.3**	**+0.3**
HELC	**Santa Helena**	**2.50**	**255**	P	**Pn**	**16 12 38.9**	**+1.6**
HELC				S	**Sn**	**16 13 09.1**	**-0.3**
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**16 12 38.2**	**+1.0**
HELC				*e*S	**Sn**	**16 13 06.8**	**-2.7**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	P	**Pn**	**16 12 38.5**	**+1.0**
CVER				S	**Sn**	**16 13 09.9**	**+0.1**
UREC	**San Jos de Ur**	**2.58**	**290**	P	**Pn**	**16 12 39.1**	**-0.7**
UREC				S	**Sn**	**16 13 08.9**	**-1.6**
SOCV	**Socops**	**2.64**	**57**	*e*P	**Pn**	**16 12 39.7**	**+1.1**
SOCV				*e*S	**Sn**	**16 13 09.7**	**-2.2**
VILC	**Villavicencio,**	**2.78**	**192**	P	**Pn**	**16 12 40.5**	**0.0**
VILC				S	**Sn**	**16 13 15.4**	**+0.1**
PTGC	**Puerto Gaitan,**	**2.80**	**160**	P	**Pn**	**16 12 40.6**	**0.0**
PTGC				S	**Sn**	**16 13 13.5**	**-2.0**
RECRC	**Villamaria, Ca**	**2.93**	**230**	P	**Pn**	**16 12 45.2**	**+2.5**
RECRC				S	**Sn**	**16 13 22.0**	**+2.9**
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	**Pn**	**16 12 44.9**	**+0.9**
CBOC				S	**Sn**	**16 13 22.3**	**+0.8**
DBBC	**Dabeiba**	**3.10**	**273**	P	**Pn**	**16 12 44.8**	**+0.4**
DBBC				S	**Sn**	**16 13 19.5**	**-2.6**
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**16 12 46.5**	**+1.1**
SDV				S	**Sn**	**16 13 24.4**	**+0.3**
SDV	**Santo Domingo**	**3.17**	**50**	*e*P	**Pn**	**16 12 46.0**	**+0.5**
SDV				*e*S	**Sn**	**16 13 23.2**	**-0.8**
ARGC	**Ariguani, Magd**	**3.20**	**339**	P	**Pn**	**16 12 47.4**	**+1.8**
ARGC				S	**Sn**	**16 13 27.4**	**+2.9**
ANIL	**Santa Ana**	**3.28**	**225**	P	**Pn**	**16 12 48.3**	**+1.4**
ANIL				S	**Sn**	**16 13 28.4**	**+1.7**
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	**16 12 50.6**	**-0.1**
PRAC				S	**Sn**	**16 13 32.2**	**-1.3**
APAC	**Apartado, Choc**	**3.61**	**287**	P	**Pn**	**16 12 51.2**	**+0.3**
APAC				S	**Sn**	**16 13 32.2**	**-1.6**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	**16 12 51.3**	**+0.2**
ORTC				S	**Sn**	**16 13 35.3**	**+1.1**
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	**16 12 52.2**	**+0.6**
SJCC				S	**Sn**	**16 13 34.5**	**-0.7**
URMC	**La Uribe, Meta**	**3.80**	**200**	P	**Pn**	**16 12 53.9**	**+0.5**
URMC				S	**Sn**	**16 13 37.9**	**-0.5**
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	P	**Pn**	**16 12 57.2**	**-0.8**
CRJC				S	**Sn**	**16 13 44.4**	**-2.2**
YOTC	**Yotoco, Valle**	**4.31**	**229**	P	**Pn**	**16 12 59.8**	**-0.3**
SMRC	**Santa Marta, M**	**4.43**	**346**	P	**Pn**	**16 13 02.7**	**+1.2**
SMRC				S	**Sn**	**16 13 50.5**	**-2.5**

IDC ***17*** *16:12:30.4±5.7, 34°.96N×23°.61E, h0km, mb3

VIL2	Platees	1.33	332	P	Pn	16 13 21.0 +0.2
VIL2				S	Sn	16 13 38.3 -1.6
VLX	Vlachokerasia	1.39	284	P	Pn	16 13 22.2 +0.7
CHAN	Chania	1.52	181	P	Pn	16 13 23.7 +0.8
CHAN				S	Sn	16 13 43.1 -0.4
CH01	Chania	1.52	182	P	Pn	16 13 24.0 +1.1
CHNB	Souda	1.55	180	P	Pn	16 13 24.2 +0.9
IMMV	Iera Moni Meta	1.58	183	S	Sn	16 13 44.1 -0.7
IMMV	Iera Moni Meta	1.58	183	P	Pn	16 13 24.5 +0.9
IMMV				S	Sn	16 13 44.7 -0.2
KYMI	Kymi, Euboea I	1.59	1	P	Pn	16 13 24.6 +0.8
VAM	Vamos	1.63	176	P	Pn	16 13 25.2 +0.9
VAM	Vamos	1.63	176	P	Pn	16 13 25.3 +1.0
VAM				S	Sn	16 13 45.3 -0.7
GUR	Goura	1.64	304	S	Sn	16 13 45.1 -1.3
GUR	Goura	1.64	304	P	Pn	16 13 25.0 +0.5
GUR				S	Sn	16 13 45.4 -1.0
ITM	Ithomi	1.72	275	S	Sn	16 13 48.4 +0.4
ITM	Ithomi	1.72	275	P	Pn	16 13 27.1 +1.7
ITM				S	Sn	16 13 47.0 -1.0
LKR	Lokris	1.82	332	P	Pn	16 13 27.8 +1.2
LKR	Lokris	1.82	332	P	Pn	16 13 27.8 +1.2
LKR				S	Sn	16 13 50.4 +0.3
KLV	Kalavryta, Ach	1.83	304	P	Pn	16 13 27.1 +0.4
KLV				S	Sn	16 13 49.7 -0.7
KLV	Kalavryta, Ach	1.83	304	P	Pn	16 13 27.0 +0.2
KLV				S	Sn	16 13 50.6 +0.2
ATAL	Atalanti	1.85	334	S	Sn	16 13 51.0 +0.2
ATAL	Atalanti	1.85	334	P	Pn	16 13 27.9 +1.0
IDI	Anoyia	1.87	159	P	Pn	16 13 27.5 +0.3
IDI	Anoyia	1.87	159	P	Pn	16 13 27.6 +0.3
IDI				S	Sn	16 13 50.9 +0.9
PYL	PYLOS	1.87	266	P	Pn	16 13 27.7 +0.5
PYL				S	Sn	16 13 51.4 +0.1
PYL	PYLOS	1.87	266	P	Pn	16 13 27.7 +0.5
PYL				S	Sn	16 13 51.5 +0.3
IACM	Heraklion	1.91	155	P	Pn	16 13 28.3 +0.6
PYL1	Pylos	1.91	267	P	Pn	16 13 28.4 +0.8
PYL1				S	Sn	16 13 52.6 +0.6
MTHA	Methoni	1.91	264	P	Pn	16 13 28.6 +1.0
AMT	Artemida-Makis	1.95	285	P	Pn	16 13 29.9 +1.7
AMT				S	Sn	16 13 53.2 +0.2
AMT	Artemida-Makis	1.95	285	P	Pn	16 13 30.0 +1.8
TEME	Temeni, Aigial	1.96	308	P	Pn	16 13 29.8 +1.6
AIOA	Agios Ioannis,	1.97	306	P	Pn	16 13 28.7 +0.3
ZARO	Zacharo	1.98	284	P	Pn	16 13 30.1 +1.5
AGEO	AgiosGiorgios,	2.01	308	P	Pn	16 13 30.3 +1.4
KALE	Kalithea	2.04	312	P	Pn	16 13 30.1 +0.6
AXAR	Agios Charalam	2.06	327	P	Pn	16 13 30.2 +1.4
AXAR				S	Sn	16 13 56.5 +1.0
DRO	Drossia	2.09	297	P	Pn	16 13 31.7 +1.7
DRO				S	Sn	16 13 56.5 +0.3
SERG	Sergoula	2.11	311	P	Pn	16 13 30.9 +0.7
SERG				S	Sn	16 13 57.5 +0.9
ZIRI	Ziria, Aigiali	2.11	308	P	Pn	16 13 31.2 +1.0
AOS2	Alonissos-2	2.11	355	P	Pn	16 13 30.7 +0.4
NPS	Neapolis	2.17	144	P	Pn	16 13 31.3 +0.3
MG00	Magoula, Dorid	2.17	310	P	Pn	16 13 31.5 +0.5
GVD	Gavdhos	2.19	180	P	Pn	16 13 32.7 +1.3
EFP	Efpalio	2.21	310	P	Pn	16 13 32.4 +0.9
MALA	Malamata, Dori	2.21	308	P	Pn	16 13 31.4 0.0
AGRP	Agrapidokambos	2.30	307	P	Pn	16 13 34.2 +1.5
ANX	Ano Chora	2.31	313	P	Pn	16 13 34.3 +1.5
RLS	Riolos of Patr	2.31	297	P	Pn	16 13 34.4 +1.7
NEO	Neokhori	2.36	344	P	Pn	16 13 34.6 +1.1
AGG	Agios Georgios	2.41	326	P	Pn	16 13 35.0 +0.9
AXS	Araxos	2.43	299	P	Pn	16 13 36.8 +2.3
MAKR	Makrakomi, Fth	2.50	323	P	Pn	16 13 36.4 +1.2
PVO	Paravola	2.56	309	P	Pn	16 13 38.1 +2.1
EVR	Evrytania	2.59	317	P	Pn	16 13 37.9 +1.4
LTHK	Lithakia	2.66	286	P	Pn	16 13 37.3 0.0
KYPS	Kipseli, Zakin	2.70	288	P	Pn	16 13 38.1 +0.3
ORTH	Orthonies,Zaky	2.81	288	P	Pn	16 13 40.1 +0.8
RTZL	Ratzakli, Kefa	2.82	293	P	Pn	16 13 40.1 +0.7
KARP	Karpathos	2.91	120	P	Pn	16 13 41.5 +0.9
AMPL	Ampelaki	2.94	311	P	Pn	16 13 42.5 +1.5
VLS	Valsamata	2.99	293	P	Pn	16 13 41.6 -0.1
FSK	Fiskardo	3.12	298	P	Pn	16 13 43.5 +0.1
EVGI	Lefkada island	3.13	301	P	Pn	16 13 44.8 +1.3
TETR	Tetrakomo, Epi	3.19	317	P	Pn	16 13 45.3 +1.0
LKD2	Lefkada island	3.22	304	P	Pn	16 13 45.1 +0.4
TSLK	Tsoukalades, L	3.24	304	P	Pn	16 13 45.7 +0.8
LIT	Litokhoron	3.30	338	P	Pn	16 13 46.2 +0.4
PRMD	Pramanda	3.42	318	P	Pn	16 13 48.7 +1.3
IGT	Igoumenitsa	3.85	311	P	Pn	16 13 53.1 +0.9
PENT	Pentalofos	3.90	325	P	Pn	16 13 54.5 +0.7
NEST	Nestorio	4.12	326	P	Pn	16 13 56.9 +0.1
KNT	Kendrikon	4.22	348	P	Pn	16 13 59.4 +1.4
BRTR	Keskin Array B 0.1nm,0.3s,baz=241,slow=13,SNR=4.7 0.7nm,0.8s	7.98	67	Pn	Pn	16 14 49.3 +0.4
GERES	GERESS Array B baz=146,slow=9.5,SNR=4.7 0.4nm,0.5s	14.02	331	Pn	P	16 16 13.2 -0.3
EKA	Eskdalemuir Ar 0.5nm,0.4s,baz=122,slow=9.3,SNR=5.7 0.5nm,0.4s	26.01	323	P	P	16 18 18.6 +0.8
MKAR	Makanchi Array 0.1nm,0.3s,baz=272,slow=7.6,SNR=9.8 0.1nm,0.3s	43.50	58	P	P	16 20 46.5 -1.3

*FUNV **17** 16:23:11.1, 10°.11N×61°.44W, h127km, MW4.2, Presumed earthquake*
*TRN **17** 16:23:16.1, 10°.34N×62°.10W, h4km, MD3.9, Gulf of Paria.*
ISC 17 16:23:10.2±2.0, 10°.11N±0°.07×62°.00W±0°.05, h4km±13km, n24, σ2s78/43, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TPP	Pointe-a-Pierr	0.58	69	eP		Pn	16 23 28.4	+3.2
PSMG	Mucurapo Girls	0.72	40	eP		Pn	16 23 28.4	+1.2
PSMG				eS		Sn	16 23 39.2	+0.5
DMDM	Guralp CMG5TDE	0.73	37	eP		Pn	16 23 28.5	+1.2
DMDM				eS		Sn	16 23 38.3	-0.7
TRN	Trinidad (W)	0.79	48	eP		Pn	16 23 29.2	+1.1
TRN				eS		Sn	16 23 42.5	+2.1
TRN	Trinidad (W)	0.79	48	eP		Pn	16 23 30.1	+2.0
TRN				eS		Sn	16 23 40.6	+0.3
GRFF	Grenada Fort F	1.94	8	eP		Pg	16 23 47.6	+0.1
GRFF				eS		Sb	16 24 10.1	-0.8
GRGR	Grenville	2.04	10	eP		Pb	16 23 47.9	+0.1
GRGR				eS		Sb	16 24 12.4	-1.1
GRW	Mount Saint Ca	2.06	9	eP		Pb	16 23 48.8	+0.4
GRW				eS		Sb	16 24 13.4	-1.0
GRSS	Sisters	2.21	10	eP		Pb	16 23 51.4	+0.7
GRSS				eS		Sb	16 24 16.2	-2.2
GCMP	Grenada, Carri	2.43	13	eP		Pb	16 23 55.4	+1.0
GCMP				eS		Sb	16 24 22.3	-2.5
PCRV	Puerto La Cruz	2.60	272	eP		Pb	16 23 58.9	+1.5
PCRV				eS		Sg	16 24 32.4	-1.3
PCRV	Puerto La Cruz	2.60	272	eP		Pb	16 23 57.6	+0.2
PCRV				eS		Sb	16 24 29.5	-0.1
SVB	Belmont	3.23	13	eP		Pn	16 23 57.0	-4.7
SVB				eS		Sn	16 24 34.6	-6.0
SVB	Belmont	3.23	13	eP		Pb	16 24 07.2	-0.9
SVB				eS		Sn	16 24 42.1	+1.6
MCLT	Moule a Chique	3.72	16	eP		Pn	16 24 12.5	+4.0
MCLT				eS		Sn	16 24 55.1	+2.2
SLBI	Saint Lucia, B	4.02	14	eP		Pb	16 24 17.3	-4.2
SLBI				eS		Sn	16 25 00.4	+0.4
TACV	Tcata	4.95	271	eP		Pn	16 24 28.7	+3.3
CACV	CAICARA DEL OR	5.15	241	eP		Pn	16 24 24.9	-3.3
CACV				eS		Sn	16 25 20.0	-8.1
DSLB	Salisbury	5.33	6	eP		Pn	16 24 34.5	+3.9
BENV	Belin	5.52	269	eP		Pn	16 24 36.9	+3.6
BENV				eS		Sn	16 25 37.5	+0.3
ATGZ	Broadband at L	5.96	3	eP		Pn	16 24 43.3	+4.2
DSDZ	La Diserade, G	6.23	8	eP		Pn	16 24 46.4	+3.4
MAPV	Macapo	6.37	268	eP		Pn	16 24 48.2	+3.3
MAPV				eS		Sn	16 25 59.0	+0.8
TEPV	Terepaima	7.08	269	eP		Pn	16 24 56.2	+1.4
TEPV				eS		Sn	16 26 14.7	-1.1

*AFAD **17** 16:33:02.8, 39°.11N×27°.83E, h7km±5km, ML1.9*
ISK 17 16:33:03.3, 39.12N×27.83E, h10km, ML2.1/20, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SOMA	Soma-Manisa	0.23	280	Pg		Pg	16 33 08.6	+0.6
AKS	Akhisar	0.24	182	Pg		Pg	16 33 08.5	+0.4
AKS				Sg		Sg	16 33 12.5	+1.1
AKHS	Akhisar	0.24	182	P		Pg	16 33 08.5	+0.4
AKHS				S		Sg	16 33 12.5	+1.1
AKHS				IAML			16 33 13.0	
	comp=E,305nm,0.3s							
STEP	BALIKESIR_Sava	0.27	342	P		Pg	16 33 08.8	0.0
STEP				S		Sg	16 33 13.3	+0.8
GORD	Gordes-Manisa	0.34	127	Pg		Pg	16 33 10.5	+0.4
GOMA	Golmarmara-Man	0.41	170	Pg		Pb	16 33 12.1	-0.6
KTTT	Salihli	0.48	154	P		Pg	16 33 12.8	+0.3
KTTT				S		Sg	16 33 18.9	0.0
BALB	Balikesir	0.53	5	Pg		Pg	16 33 14.0	+0.5
BALB				Sg		Sb	16 33 21.9	-0.4
CAMT	Merkez	0.54	228	P		Pg	16 33 13.6	-0.2
CAMT				S		Sb	16 33 22.1	-0.8
ZEDA	zmir-Bergama	0.60	256	P		Pg	16 33 15.3	+0.3
ZEDA				S		Sg	16 33 22.6	-0.2
BKES	Balkesir-Mer	0.62	7	P		Pg	16 33 15.7	+0.4
BALY	Balya	0.64	346	P		Pg	16 33 16.0	+0.3
BALY				IAML			16 33 29.0	
	comp=N,78nm,0.6s							
BALY				IAML			16 33 29.0	
	comp=E,48nm,0.3s							
BUHA	Balikesir, Bur	0.70	304	P		Pg	16 33 15.5	-1.3
DEMI	Demirci	0.70	96	P		Pg	16 33 16.5	-0.3
DEMI				S		Sg	16 33 25.9	0.0
DEMI				IAML			16 33 32.0	
	comp=N,69nm,0.3s							
DURS	Dursunbey	0.70	46	P		Pg	16 33 16.6	-0.2
DURS				IAML			16 33 26.0	
	comp=N,44nm,0.2s							
DURS				IAML			16 33 30.0	
	comp=E,48nm,0.3s							
IZMD	zmir-Dikili-	0.71	260	P		Pb	16 33 18.3	+0.4
IZMD				S		Sg	16 33 25.8	-0.6
DKL	Dikili	0.72	267	Pg		Pb	16 33 17.8	-0.1
DKL				Sg		Sb	16 33 27.7	-0.1
BLKS	Balkesir-Sus	0.77	8	P		Pg	16 33 17.6	-0.5
BLKS				S		Sg	16 33 27.8	-0.2
YAYO	Edremit-Balk	0.77	310	Pg		Pb	16 33 18.4	-0.3
YAYO				Sg		Sb	16 33 29.6	+0.4
DST	Dursunbey	0.79	51	Pg		Pb	16 33 18.9	-0.2
DST				Sg		Sb	16 33 30.6	+0.7
MANT	Manisa	0.85	137	P		Pg	16 33 19.4	-0.2
MANT				S		Sg	16 33 30.7	0.0
ODEM	Odemis-Izmir	0.86	167	Pg		Pb	16 33 20.5	+0.1
SUSR	Susurluk-Balik	0.87	13	Pg		Pg	16 33 20.2	+0.2
KULA	Kula-Manisa	0.89	132	Pg		Pg	16 33 20.4	0.0
BAGT	Foa	0.89	239	P		Pb	16 33 21.1	+0.2
BAGT				S		Sg	16 33 31.8	-0.2
BAGT				IAML			16 33 36.0	
	comp=E,79nm,0.8s							
BAGT				IAML			16 33 54.0	
	comp=N,46nm,1.3s							
CMHT	Manyas	0.90	7	P		Pg	16 33 20.8	+0.2
CMHT				S		Sg	16 33 32.0	-0.4
CMHT				IAML			16 33 35.0	
	comp=N,48nm,0.3s							
CMHT				IAML			16 33 36.0	
	comp=E,53nm,0.5s							
SIMA	Simav-Kutahya	0.90	92	Pg		Pb	16 33 20.9	-0.2
AYVA	Ayvalik	0.90	283	P		Pb	16 33 21.3	+0.2
GONE	Gonen-Balikesi	0.94	353	Pg		Pb	16 33 21.5	-0.2
YENI	Yenice-Canakka	0.94	331	Pg		Pb	16 33 21.8	+0.1
DUVT	Torbali	0.94	198	P		Pn	16 33 23.4	+0.6
FOCM	Foa	0.94	245	Pg		Pb	16 33 21.9	+0.1
BLCB	Balcova	0.95	220	Pg		Pb	16 33 22.1	+0.2
IZMR	zmir-demi	0.98	174	P		Pb	16 33 22.4	0.0
IZMR				S		Sg	16 33 34.2	-0.8
IZMR				IAML			16 33 37.0	
	comp=N,23nm,0.4s							
IZMR				IAML			16 33 37.0	
	comp=E,28nm,0.4s							
USAK	Uak-Merkez	1.01	113	P		Pg	16 33 22.6	-0.1
USAK				S		Sg	16 33 35.0	-0.9
USAK				IAML			16 33 37.0	
	comp=N,22nm,0.9s							
USAK				IAML			16 33 40.0	
	comp=E,18nm,0.3s							
USAK	Uak-Merkez	1.01	113	P		Pg	16 33 22.6	-0.2
USAK				S		Sg	16 33 35.1	-0.9
KIRA	zmir-Kiraz	1.02	154	P		Pb	16 33 23.3	+0.1
KIRA				S		Sb	16 33 36.5	-0.2
KIRA				IAML			16 33 38.0	
	comp=N,25nm,0.2s							
KIRA				IAML			16 33 38.0	
	comp=E,38nm,0.2s							
KIRA	zmir-Kiraz	1.02	154	P		Pb	16 33 23.2	0.0
KIRA				S		Sb	16 33 36.9	+0.1
CANM	Can-anakkale	1.07	326	Pg		Pn	16 33 24.6	+0.1
SHAP	Saphane-Kutahy	1.09	94	Pn		Pg	16 33 24.3	0.0
AYDB	Zeytinkoy-Aydi	1.17	177	Pn		Pn	16 33 25.9	0.0
NAZL	Nazilli-Aydin	1.21	162	Pn		Pg	16 33 26.8	+0.3
GEDZ	Gediz	1.24	93	Pn		Pg	16 33 27.3	+0.3
SULTU	Buldan	1.29	145	P		Pn	16 33 27.0	-0.6
DGB	zmir	1.29	215	P		Pn	16 33 27.0	-0.5
DGB				IAML			16 33 46.0	
	comp=N,17nm,0.2s							

AFAD 17 16:33:10.0, 37°.16N×30°.88E, h87km±9km, ML1.8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BUCA	Burdur, Bucak-	0.31	303	P		Pn	16 33 24.4	+1.2
BUCA				S		Sn	16 33 34.2	+1.2
BUCA				IAML			16 33 39.0	
	comp=E,29nm,0.8s							
KORT	Korkueli	0.45	250	P		Pn	16 33 25.5	+1.2
KORT				S		Sn	16 33 36.0	+1.1
KORT				IAML			16 33 38.0	
	comp=N,24nm,0.5s							
KORT				IAML			16 33 38.0	
	comp=E,30nm,0.8s							
SEDI	Konya, Seydise	0.76	67	P		Pn	16 33 27.2	+0.2
SEDI				S		Sn	16 33 39.3	-0.3
BAGO	Egridir - ISPA	0.83	355	P		Pn	16 33 28.4	+0.7
BAGO				S		Sn	16 33 42.1	+1.2
AKUM	Antalya-Kumluc	0.94	207	P		Pn	16 33 29.7	+0.9
AKUM				S		Sn	16 33 44.6	+1.7
GOLH	Golhisar	1.06	275	P		Pn	16 33 31.8	+1.5
GOLH				S		Sn	16 33 47.7	+2.3
GOLH				IAML			16 34 08.0	
	comp=N,18nm,1.5s							
KNIK	Mula-Seydike	1.09	254	P		Pn	16 33 32.6	+1.9
KNIK				S		Sn	16 33 47.6	+1.4
KNIK				IAML			16 33 52.0	
	comp=N,12nm,0.8s							
DOGA	KONYA_Doganhis	1.13	33	P		Pn	16 33 32.3	+1.1
DOGA				S		Sn	16 33 48.0	+0.9
DOGA				IAML			16 33 50.0	
	comp=N,17nm,0.3s							
DOGA				IAML			16 33 50.0	
	comp=E,9.9nm,0.3s							
YVAC	Isparta, Yalva	1.14	14	P		Pn	16 33 32.9	+1.6
YVAC				S		Sn	16 33 47.5	+0.2
CAEL	Denizli, Camel	1.25	269	P		Pn	16 33 32.3	-0.3
CAEL				S		Sn	16 33 52.3	+2.7
CAEL				IAML			16 33 56.0	
	comp=E,23nm,0.4s							
AKAS	Kas	1.38	228	P		Pn	16 33 34.1	-0.1
AKAS				S		Sn	16 33 52.1	-0.4
GAZI	Gazipasa	1.48	128	P		Pn	16 33 36.3	+0.9
GAZI				IAML			16 34 24.0	
	comp=E,16nm,1.5s							
DNZT	Denizli-Tavas-	1.49	275	P		Pn	16 33 37.8	+2.3
DNZT				S		Sn	16 33 55.8	+1.0
DNZT				IAML			16 34 09.0	
	comp=N,12nm,2.7s							
IZZE	Mula-Seydike	1.51	242	P		Pn	16 33 36.9	+1.1
IZZE				S		Sn	16 33 55.7	+0.4
IZZE				IAML			16 33 57.0	
	comp=E,17nm,0.5s							
IZZE				IAML			16 33 58.0	
	comp=N,22nm,0.7s							
SABU	Mula-Dalaman	1.57	258	P		Pn	16 33 37.9	+1.4
SABU				S		Sn	16 33 57.2	+0.7
SABU				IAML			16 34 06.0	
	comp=N,9.8nm,0.5s							
SABU				IAML			16 34 12.0	
	comp=E,14nm,1.7s							
TAVA	DENIZLI_Tavas	1.60	282	P		Pn	16 33 37.8	+0.9
TAVA				S		Sn	16 33 58.4	+1.0
TAVA				IAML			16 34 11.0	
	comp=E,12nm,1.8s							
PASA	Karahalli, USA	1.62	317	P		Pn	16 33 32.1	-5.1

*IDC **17** 16:55:01.6±1.4, 21°.96N×143°.03E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=54.7km s-min=24.5km az=83.0*
ISC 17 16:55:06.7±1.3, 21°.9N±0°.2×143°.1E±0°.4, h35km, n12, σ0s47/6, mb3.5/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H11N1	WAKE ISLAND Hy	22.38	91	T		T	17 23 14.9	
	baz=281,slow=75,SNR=6.7							
H11N2	WAKE ISLAND Hy	22.39	91	T		T	17 23 13.4	
	baz=281,slow=75,SNR=7.0							
H11N3	WAKE ISLAND Hy	22.40	91	T		T	17 23 16.1	
	baz=281,slow=75,SNR=4.9							
H11S2	WAKE ISLAND Hy	22.43	95	T		T	17 23 17.7	
	baz=284,slow=75,SNR=32							
H11S1	WAKE ISLAND Hy	22.44	94	T		T	17 23 18.3	
	baz=284,slow=75,SNR=30							
H11S2	WAKE ISLAND Hy	22.45	95	T		T	17 23 19.0	
	baz=284,slow=75,SNR=19							
WRA	Warramunga Arr 0.7nm,1.0s,baz=14,slow=8.6,SNR=2.7 0.7nm,1.0s	42.48	192	P		P	17 02 58.2	-0.4
ASAR	Alice Springs 0.4nm,0.9s,baz=14,slow=7.9,SNR=4.7 0.4nm,0.9s	46.19	192	P		P	17 03 28.7	+0.4
ZALV	Zalesovo Beam 0.4nm,0.6s,baz=107,slow=8.6,SNR=2.1 0.4nm,0.6s	53.96	322	P		P	17 04 27.2	+0.3
KURBB	Kurchatov Arra 0.7nm,0.8s,baz=96,slow=7.1,SNR=5.1 0.7nm,0.8s	57.28	317	P		P	17 04 50.3	-0.4
BVAR	Borovoye Array 0.8nm,0.5s,baz=93,slow=6.1,SNR=6.7 0.8nm,0.5s	62.42	319	P		P	17 05 26.3	+0.2
YKA	Yellowknife Ar 0.1nm,0.5s,baz=312,slow=6.0,SNR=3.8 0.1nm,0.5s	76.31	28	P		P	17 06 51.6	-0.1

IDC 17 17:04:35.5±5.5, 23°.30S×179°.56W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=243.6km s-min=40.4km az=149.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAR	Alice Springs 0.2nm,0.4s,baz=100,slow=8.2,SNR=13 0.2nm,0.4s	42.54	260	P		P	17 12 32.7	-0.5
WRA	Warramunga Arr 0.3nm,0.4s,baz=103,slow=7.8,SNR=16 0.3nm,0.4s	42.86	265	P		P	17 12 35.9	+0.2
ILAR	Eielson Array 0.3nm,0.9s,baz=203,slow=3.9,SNR=2.0 0.3nm,0.9s	91.35	13	P		P	17 17 42.5	-0.1
BRTR	Keskin Array B 0.4nm,0.6s,baz=96,slow=5.8,SNR=2.7	147.53	308	PKPbc		PKPbc	17 24 21.3	-0.7

*RSNC **17** 17:27:32.7±0.0, 7°.N±1°.×7°.3W±°, h149km±1km, M3.0, mB4.3, mb3.6, ML2.8, MLv3.4, Mw(mB)3.4*
*FUNV **17** 17:27:33.8, 6°.91N×73°.17W, h137km, MW3.6, Presumed earthquake*
ISC 17 17:27:31.2±1.3, 6°.88N±0°.03×73°.12W±0°.03, h154km±7km, n34, σ1s35/66, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BARC	Barichara	0.29	192	P		Pn	17 27 52.7	+0.2
BARC				S		Sn	17 28 08.4	-0.3
PAMC	Pamplona, Colo	0.62	42	P		Pn	17 27 55.5	+1.3
PAMC				S		Sn	17 28 12.8	+1.1
BRJC	Barrancabermej	0.62	279	P		Pn	17 27 54.4	+0.8
BRJC				S		Sn	17 28 11.3	+0.6
RUSC	La Rusia	0.98	178	P		Pn	17 27 56.6	-0.1
RUSC				S		Sn	17 28 15.2	-1.0
RUSC	La Rusia	0.98	178	eP		Pn	17 27 56.7	0.0
RUSC				eS		Sn	17 28 15.1	-1.1
CAPV	Capacho	1.27	39	eP		Pn	17 28 00.5	+1.5
CAPV				eS		Sn	17 28 18.1	-2.2
PTBC	PUERTO BERRIO,	1.37	256	P		Pn	17 27 59.2	-0.5
PTBC				S		Sn	17 28 20.2	-1.3
OCAC	Ocana	1.37	352	P		Pn	17 28 00.8	+0.9
OCAC				S		Sn	17 28 23.3	+1.4
SPBC	San Pablo de B	1.54	218	P		Pn	17 28 01.7	+0.1
SPBC				S		Sn	17 28 23.6	-1.3
NORC	Norcasia	2.17	233	P		Pn	17 28 08.6	0.0
NORC				S		Sn	17 28 36.7	-0.7
CHIC	Chingaza	2.31	195	P		Pn	17 28 10.5	-0.2
CHIC				S		Sn	17 28 40.1	-1.0
ROSC	El Rosal	2.35	211	P		Pn	17 28 12.3	+1.2
ROSC				S		Sn	17 28 43.0	+1.2
HELC	Santa Helena	2.49	254	P		Pn	17 28 13.6	+0.9
HELC				S		Sn	17 28 43.8	-0.8
HELC	Santa Helena	2.49	254	eP		Pn	17 28 12.5	-0.2
HELC				eS		Sn	17 28 42.0	-2.7
UREC	San Jos de Ur	2.54	290	P		Pn	17 28 12.3	-0.7
UREC				S		Sn	17 28 44.1	-1.2
SOCV	Socops	2.65	58	eP		Pn	17 28 16.0	+1.6
SOCV				eS		Sn	17 28 45.5	-2.1
VILC	Villavicencio,	2.81	192	P		Pn	17 28 16.1	-0.3
VILC				S		Sn	17 28 51.1	-0.3
PTGC	Puerto Gaitan,	2.84	160	P		Pn	17 28 15.6	-1.1
PTGC				S		Sn	17 28 49.2	-2.7
RECRC	Villamaria, Ca	2.92	229	P		Pn	17 28 20.3	+2.0
RECRC				S		Sn	17 28 55.9	+1.3
DBBC	Dabeiba	3.07	273	P		Pn	17 28 20.4	+0.8
DBBC				S		Sn	17 28 56.3	-0.8
SDV	Santo Domingo	3.17	51	P		Pn	17 28 22.6	+1.5
SDV

0.2nm,0.6s
KURBB **Kurchatov Arra 64.78 320** P P 17 53 13.5 -0.6
0.4nm,0.5s,baz=104,slow=6.3,SNR=7.8
0.4nm,0.5s
BVAR **Borovoye Array 70.13 322** P P 17 53 48.0 0.0
0.4nm,0.4s,baz=87,slow=4.8,SNR=4.7
0.4nm,0.4s

KRNET ***17*** *18:01:57.0±0.1, 42°.08N×77°.14E, h18km, mb4.2*
IDC ***17*** *18:01:56.9±1.1, 41°.93N×77°.04E, h0km, mb3.5/5, mbtmp3.5/10, ML3.2/5, MS2.1/1, Error ellipse: s-maj=15.0km s-min=11.0km az=173.0*
MOS ***17*** *18:01:57.7±0.9, 42°.07N×77°.10E, h11km, mb4.1/1, Error ellipse: s-maj=5.6km s-min=5.1km az=55.8*
SOME ***17*** *18:01:57.6, 42°.13N×77°.10E, h10km, MS3.8*
NNC ***17*** *18:01:58.5±0.6, 42°.16N×77°.13E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=4.3km s-min=2.9km az=178.0*
KNET ***17*** *18:01:59.3±0.4, 42°.13N×77°.00E, h14km±2km, ml3.8, Error ellipse: s-maj=5.0km s-min=2.5km az=13.0*

ISC 17 18:01:57.8±0.8, 42°.12N±0°.02×77°.14E±0°.01, h5km±5km, n147, σ1§55/243, mb3.5/5, 50C-31D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.03**	**80**	⇑*i*P	**Pg**	**18 01 59.1**	**0.0**
KDJ				⇑*i*S	**Sg**	**18 02 00.5**	**+0.6**
TARG	**Taragay, Kyrgy**	**0.64**	**128**	*i* PG	**Pg**	**18 02 08.7**	**-1.4**
TARG				*i* S	**Sg**	**18 02 17.0**	**-1.3**
TARG	**Taragay, Kyrgy**	**0.64**	**128**	⇓*i*P	**Pg**	**18 02 08.7**	**-1.4**
TARG				⇓*i*S	**Sg**	**18 02 17.0**	**-1.3**
ULHL	**Ulahol**	**0.68**	**281**	⇑P	**Pg**	**18 02 10.6**	**-0.3**
	383nm,0.1s						
ULHL				⇓S	**Sg**	**18 02 20.0**	**+0.3**
	2μm,0.2s						
ULHL	**Ulahol**	**0.68**	**281**	*i* PG	**Pg**	**18 02 10.2**	**-0.6**
ULHL				*i* S	**Sg**	**18 02 19.9**	**+0.3**
ULHL	**Ulahol**	**0.68**	**281**	⇑*i*P	**Pg**	**18 02 10.2**	**-0.6**
ULHL				⇑*i*S	**Sg**	**18 02 19.9**	**+0.3**
ANVS	**Anan'yevo**	**0.77**	**31**	*i* PG	**Pg**	**18 02 12.2**	**-0.3**
ANVS				*i* S	**Sb**	**18 02 23.3**	**-1.3**
ANVS	**Anan'yevo**	**0.77**	**31**	⇑*i*P	**Pg**	**18 02 12.2**	**-0.3**
ANVS				⇑*i*S	**Sb**	**18 02 23.3**	**-1.3**
TNSS	**Tian-Shan**	**0.92**	**351**	P	**Pg**	**18 02 15.4**	**-0.1**
	48nm,0.3s						
TNSS				S	**Sb**	**18 02 28.3**	**-1.1**
	346nm,0.2s						
TNSS	**Tian-Shan**	**0.92**	**351**	*e*P	**Pg**	**18 02 15.4**	**-0.1**
	48nm,0.3s						
TNSS				*e*S	**Sb**	**18 02 28.3**	**-1.1**
	346nm,0.2s						
BOOM	**Boomskoye usch**	**0.96**	**293**	*i* PG	**Pg**	**18 02 15.4**	**-0.8**
BOOM				*i* S	**Sg**	**18 02 28.8**	**+0.1**
BOOM	**Boomskoye usch**	**0.96**	**293**	⇓*i*P	**Pg**	**18 02 15.4**	**-0.8**
BOOM				⇓*i*S	**Sg**	**18 02 28.8**	**+0.1**
IZV	**Izvestkoviy**	**0.99**	**337**	P	**Pg**	**18 02 15.2**	**-1.6**
	182nm,0.1s						
IZV				S	**Sg**	**18 02 27.7**	**-2.0**
	767nm,0.1s						
IZV	**Izvestkoviy**	**0.99**	**337**	*e*P	**Pg**	**18 02 15.2**	**-1.6**
	182nm,0.1s						
IZV				*e*S	**Sg**	**18 02 27.7**	**-2.0**
	767nm,0.1s						
PRZ	**Przheval'sk**	**1.00**	**69**	*i* PG	**Pg**	**18 02 16.1**	**-1.0**
PRZ				*i* S	**Sb**	**18 02 29.9**	**-1.5**
PRZ	**Przheval'sk**	**1.00**	**69**	⇑*i*P	**Pg**	**18 02 16.1**	**-1.0**
PRZ				⇑*i*S	**Sb**	**18 02 29.9**	**-1.5**
MDOK	**Medeo**	**1.04**	**356**	Pg	**Pg**	**18 02 17.5**	**-0.3**
	85nm,0.3s						
MDOK				Lg	Lg	18 02 31.7	
	865nm,0.6s						
NRN	**Naryn**	**1.09**	**231**	*i* PG	**Pg**	**18 02 17.6**	**-1.2**
NRN				*i* S	**Sg**	**18 02 32.5**	**-0.5**
NRN	**Naryn**	**1.09**	**231**	⇓*i*P	**Pg**	**18 02 17.6**	**-1.2**
NRN				⇓*i*S	**Sg**	**18 02 32.5**	**-0.5**
AAA	**Alma-Ata**	**1.10**	**351**	*e*PG	**Pg**	**18 02 17.2**	**-1.6**
KNDC	**Almaty**	**1.10**	**353**	⇑P	**Pg**	**18 02 18.5**	**-0.4**
	94nm,0.3s						
KNDC				⇑S	**Sn**	**18 02 34.4**	**-1.2**
	1μm,0.6s						
KNDC	**Almaty**	**1.10**	**353**	PG	**Pg**	**18 02 18.5**	**-0.4**
KNDC				S	**Sn**	**18 02 34.4**	**-1.2**
KOTS	**Kotyrbulak**	**1.11**	**359**	P	**Pb**	**18 02 18.9**	**-0.7**
	76nm,0.3s						
KOTS				S	**Sn**	**18 02 34.1**	**-1.9**
	1μm,0.3s						
KOTS	**Kotyrbulak**	**1.11**	**359**	*e*P	**Pb**	**18 02 18.9**	**-0.7**
KOTS				*e*S	**Sn**	**18 02 34.2**	**-1.9**
KOTS	**Kotyrbulak**	**1.11**	**359**	*e*P	**Pb**	**18 02 18.9**	**-0.7**
	76nm,0.3s						
KOTS				*e*S	**Sn**	**18 02 34.1**	**-1.9**
	1μm,0.3s						
MTBS	**Maitube**	**1.13**	**333**	P	**Pg**	**18 02 19.1**	**-0.4**
	307nm,0.3s						
MTBS				S	**Sb**	**18 02 34.6**	**-0.5**
	1μm,0.2s						
MTBS	**Maitube**	**1.13**	**333**	*e*P	**Pg**	**18 02 19.1**	**-0.4**
	307nm,0.3s						
MTBS				*e*S	**Sb**	**18 02 34.6**	**-0.5**
	1μm,0.2s						
KST	**Kastek**	**1.26**	**317**	P	**Pn**	**18 02 21.5**	**-0.8**
	328nm,0.2s						
KST				S	**Sb**	**18 02 38.6**	**-0.3**
	610nm,0.3s						
KST	**Kastek**	**1.26**	**317**	*e*P	**Pn**	**18 02 21.5**	**-0.8**
	328nm,0.2s						
KST				*e*S	**Sb**	**18 02 38.6**	**-0.3**
	610nm,0.3s						
SATY	**Saty**	**1.32**	**45**	P	**Pb**	**18 02 22.4**	**-0.9**
	81nm,0.1s						
SATY				S	**Sn**	**18 02 40.1**	**-1.1**
	514nm,0.1s						
TKM2	**Tokmak 2**	**1.39**	**305**	P	**Pn**	**18 02 23.7**	**-0.4**
	382nm,0.3s,SNR=607						
TKM2				⇓S	**Sg**	**18 02 42.8**	**+0.3**
	857nm,0.2s						
TKM2	**Tokmak 2**	**1.39**	**305**	*i* PG	**Pn**	**18 02 23.1**	**-1.0**
TKM2				*i* S	**Sb**	**18 02 42.3**	**-0.3**
TKM2	**Tokmak 2**	**1.39**	**305**	⇑*i*P	**Pn**	**18 02 23.1**	**-1.0**
TKM2				⇑*i*S	**Sb**	**18 02 42.3**	**-0.3**
DGS	**Degeres**	**1.50**	**318**	P	**Pb**	**18 02 25.8**	**-0.5**
	142nm,0.1s						
DGS				S	**Sg**	**18 02 46.1**	**-0.1**
	584nm,0.2s						
DGS	**Degeres**	**1.50**	**318**	*e*P	**Pb**	**18 02 25.9**	**-0.5**
	142nm,0.1s						
DGS				*e*S	**Sg**	**18 02 46.1**	**-0.1**
	584nm,0.2s						
JNKS	**Jany-Kuch**	**1.56**	**227**	⇑*i*P	**Pn**	**18 02 25.0**	**-1.5**
JNKS				⇑*i*S	**Sn**	**18 02 45.4**	**-1.8**
KURS	**Kuram**	**1.56**	**29**	P	**Pg**	**18 02 26.8**	**-0.9**
	32nm,0.3s						
KURS				S	**Sg**	**18 02 47.6**	**-0.3**
	122nm,0.5s						
KTBS	**Karatobe**	**1.62**	**348**	P	**Pg**	**18 02 28.1**	**-0.8**
	133nm,0.3s						
KTBS				S	**Sg**	**18 02 50.0**	**0.0**
	0.8nm,0.2s						
KTBS	**Karatobe**	**1.62**	**348**	*e*P	**Pg**	**18 02 28.1**	**-0.8**
	133nm,0.3s						
KTBS				*e*S	**Sg**	**18 02 50.0**	**0.0**
	0.8nm,0.2s						
KBK	**Karagaybulak**	**1.71**	**289**	P	**Pb**	**18 02 29.4**	**-0.4**
	109nm,0.1s,SNR=282						
KBK				⇓S	**Sg**	**18 02 52.7**	**+0.1**
	1μm,0.3s						
KBK	**Karagaybulak**	**1.71**	**289**	*i* PN	**Pn**	**18 02 28.6**	**+0.2**
KBK				*i* S	**Sb**	**18 02 51.6**	**-0.1**
KBK	**Karagaybulak**	**1.71**	**289**	⇑*i*P	**Pn**	**18 02 28.6**	**+0.2**
KBK				⇑*i*S	**Sb**	**18 02 51.6**	**-0.1**
UZB	**Uzynbulak**	**1.73**	**53**	P	**Pb**	**18 02 29.5**	**-0.6**
	49nm,0.3s						
UZB				S	**Sg**	**18 02 52.4**	**-0.9**
	749nm,0.4s						
UZB	**Uzynbulak**	**1.73**	**53**	*e*PN	**Pb**	**18 02 29.5**	**-0.6**
UZB	**Uzynbulak**	**1.73**	**53**	*e*P	**Pb**	**18 02 29.5**	**-0.6**
	49nm,0.3s						
UZB				*e*S	**Sg**	**18 02 52.4**	**-0.9**
	749nm,0.4s						
KPKS	**Kokpek**	**1.76**	**40**	P	**Pg**	**18 02 30.3**	**-1.2**
	0.2nm,0.1s						
KPKS				S	**Sg**	**18 02 53.6**	**-0.7**
	798nm,0.5s						
KRBS	**Karabastau**	**1.90**	**326**	P	**Pb**	**18 02 33.0**	**-0.1**
	493nm,0.1s						
KRBS				S	**Sg**	**18 02 58.2**	**-0.7**
	252nm,0.3s						
KRBS	**Karabastau**	**1.90**	**326**	*e*P	**Pb**	**18 02 33.0**	**-0.1**
	493nm,0.1s						
KRBS				*e*S	**Sg**	**18 02 58.2**	**-0.7**
	252nm,0.3s						
UCH	**Uchtor**	**1.95**	**274**	P	**Pb**	**18 02 33.4**	**-0.8**
	75nm,0.2s,SNR=374						
UCH				⇓S	**Sb**	**18 02 59.3**	**+0.3**
	405nm,0.2s						
UCH	**Uchtor**	**1.95**	**274**	*i* PN	**Pn**	**18 02 32.5**	**+0.4**
UCH				*i* S	**Sb**	**18 02 58.4**	**-0.6**
UCH	**Uchtor**	**1.95**	**274**	⇑*i*P	**Pn**	**18 02 32.5**	**+0.4**
UCH				⇑*i*S	**Sb**	**18 02 58.4**	**-0.6**
CHMS	**Chumysh**	**1.97**	**297**	⇑P	**Pb**	**18 02 33.5**	**-0.7**
	114nm,0.2s,SNR=182						
CHMS				⇑S	**Sg**	**18 03 00.0**	**-1.0**
	694nm,0.3s						
CHMS	**Chumysh**	**1.97**	**297**	*i* PN	**Pn**	**18 02 32.5**	**+0.6**
CHMS				*i* S	**Sb**	**18 02 58.4**	**-0.6**
CHMS	**Chumysh**	**1.97**	**297**	⇑*i*P	**Pn**	**18 02 32.5**	**+0.6**
CHMS				⇑*i*S	**Sb**	**18 02 58.4**	**-0.6**
FRU1	**Bishkek**	**1.98**	**291**	*i* PN	**Pb**	**18 02 33.0**	**-1.4**
FRU1				*i* S	**Sb**	**18 02 59.2**	**-0.1**
FRU1	**Bishkek**	**1.98**	**291**	⇑*i*P	**Pb**	**18 02 33.0**	**-1.4**
FRU1				⇑*i*S	**Sb**	**18 02 59.2**	**-0.1**
SHLS	**Shalkode**	**2.00**	**58**	Pg	**Pg**	**18 02 38.7**	**+2.5**
	150nm,0.4s						
SHLS				Lg	Lg	18 03 07.9	
	1μm,0.5s						
SHLS	**Shalkode**	**2.00**	**58**	*e*PN	**Pg**	**18 02 38.9**	**+2.7**
SHLS	**Shalkode**	**2.00**	**58**	*e*P	**Pg**	**18 02 38.6**	**+2.5**
	150nm,0.4s						
SHLS				*e*S	**Sg**	**18 03 07.9**	**+5.8**
	1μm,0.5s						
AAK	**Ala-Archa**	**2.02**	**286**	Pn	**Pb**	**18 02 34.8**	**-0.4**
	59nm,0.3s,baz=116,slow=8.4,SNR=1006						
AAK				Lg	Lg	18 03 01.9	
	67nm,0.3s,baz=241,slow=10,SNR=7.6						
AAK				LR	LR	18 03 08.2	
	comp=Z,48nm,21.4s,baz=74,slow=35						
	116nm,0.3s						
AAK	**Ala-Archa**	**2.02**	**286**	⇓P	**Pb**	**18 02 34.6**	**-0.7**
	139nm,0.2s,SNR=205						
AAK				⇓S	**Sb**	**18 03 01.6**	**+0.8**
	594nm,0.3s						
AAK	**Ala-Archa**	**2.02**	**286**	⇑Pn	**Pb**	**18 02 34.7**	**-0.5**
	327nm,0.4s						
AAK				⇑Sn	**Sb**	**18 03 01.2**	**+0.4**
	1μm,0.4s						
AAK	**Ala-Archa**	**2.02**	**286**	*i* PN	**Pb**	**18 02 34.2**	**-1.0**
AAK	**Ala-Archa**	**2.02**	**286**	⇑*i*P	**Pn**	**18 02 33.3**	**+0.5**
AAK				⇑*i*S	**Sb**	**18 02 59.9**	**-0.9**
PDGK	**Podgornoye**	**2.11**	**54**	⇓Pn	**Pb**	**18 02 35.9**	**-0.8**
	199nm,0.7s						
PDGK				⇓Sn	**Sg**	**18 03 03.4**	**-2.2**
	639nm,0.7s						
PDGK	**Podgornoye**	**2.11**	**54**	PN	**Pb**	**18 02 35.9**	**-0.8**
PDGK						18 03 03.3	
ARLS	**Aral**	**2.11**	**264**	⇓*e*P	**Pn**	**18 02 35.0**	**+1.0**
ARLS				⇓*e*S	**Sn**	**18 03 01.0**	**+0.2**
ARXS	**Arharly**	**2.15**	**13**	Pg	**Pb**	**18 02 37.2**	**-0.1**
	42nm,0.3s						
ARXS				Lg	Lg	18 03 05.4	
	306nm,0.2s						
ARXS	**Arharly**	**2.15**	**13**	*e*PN	**Pb**	**18 02 37.1**	**-0.2**
ARXS	**Arharly**	**2.15**	**13**	*e*P	**Pb**	**18 02 37.2**	**-0.1**
	42nm,0.3s						
ARXS				*e*S	**Sg**	**18 03 05.4**	**-1.4**
	306nm,0.2s						
USP	**Ospenovka**	**2.25**	**301**	⇑P	**Pb**	**18 02 38.1**	**-1.0**
	131nm,0.2s,SNR=368						
USP				⇑S	**Sb**	**18 03 07.8**	**+0.5**
	562nm,0.2s						
USP	**Ospenovka**	**2.25**	**301**	*i* PN	**Pn**	**18 02 36.6**	**+0.7**
USP				*i* S	**Sb**	**18 03 05.4**	**-1.9**
USP	**Ospenovka**	**2.25**	**301**	⇑*i*P	**Pn**	**18 02 36.6**	**+0.7**
USP				⇑*i*S	**Sb**	**18 03 05.4**	**-1.9**
SGDS	**Sogindy**	**2.27**	**307**	Pg	**Pb**	**18 02 39.0**	**-0.4**
	102nm,0.2s						
SGDS				Lg	Lg	18 03 08.5	
	978nm,0.4s						
EKS2	**Erkin-Say**	**2.55**	**283**	⇓P	**Pb**	**18 02 42.3**	**-1.7**
	79nm,0.2s,SNR=96						
EKS2	**Erkin-Say**	**2.55**	**283**	*i* PN	**Pn**	**18 02 40.5**	**+0.6**
EKS2				*i* S	**Sn**	**18 03 12.4**	**+1.0**
EKS2	**Erkin-Say**	**2.55**	**283**	⇑*i*P	**Pn**	**18 02 40.5**	**+0.6**
EKS2				⇑*i*S	**Sn**	**18 03 12.4**	**+1.0**
KNOS	**Konyrlen**	**2.69**	**33**	Pg	**Pb**	**18 02 46.5**	**0.0**
	17nm,0.2s						
KNOS				Lg	Lg	18 03 21.4	
	381nm,0.3s						
KTMS	**Ketmen**	**2.71**	**60**	Pg	**Pb**	**18 02 46.0**	**-0.9**
	38nm,0.5s						
KTMS				Lg	Lg	18 03 20.5	
	247nm,0.5s						
KTMS	**Ketmen**	**2.71**	**60**	*e*P	**Pb**	**18 02 46.0**	**-0.9**
	38nm,0.5s						
KTMS				*e*S	**Sb**	**18 03 20.5**	**0.0**
	247nm,0.5s						
SALK	**Salom-Alik**	**2.78**	**245**	*i* PN	**Pn**	**18 02 43.5**	**+0.3**
SALK				*i* S	**Sn**	**18 03 17.4**	**+0.1**
SALK	**Salom-Alik**	**2.78**	**245**	⇓*i*P	**Pn**	**18 02 43.5**	**+0.3**
SALK				⇓*i*S	**Sn**	**18 03 17.4**	**+0.1**
DJR	**Jarkent**	**2.94**	**40**	Pg	**Pb**	**18 02 50.9**	**+0.1**
	27nm,0.2s						
DJR				Lg	Lg	18 03 28.8	
	208nm,0.4s						
DJR	**Jarkent**	**2.94**	**40**	*e*P	**Pb**	**18 02 50.9**	**+0.1**
	27nm,0.2s						
DJR				*e*S	**Sg**	**18 03 28.8**	**-3.3**
	208nm,0.4s						
MRKS	**Merke**	**2.96**	**283**	Pg	**Pb**	**18 02 51.0**	**-0.1**
	54nm,0.2s						
MRKS				Lg	Lg	18 03 29.1	
	898nm,0.3s						
MRKS	**Merke**	**2.96**	**283**	*e*P	**Pb**	**18 02 51.0**	**-0.1**
	54nm,0.2s						
MRKS				*e*S	**Sb**	**18 03 29.1**	**+1.4**
	898nm,0.3s						
TDK	**Taldyqorghan**	**3.02**	**17**	Pg	**Pb**	**18 02 52.3**	**+0.1**
	58nm,0.1s						
TDK				Lg	Lg	18 03 31.3	
	3.4nm,0.6s						
TDK	**Taldyqorghan**	**3.02**	**17**	*e*P	**Pb**	**18 02 52.2**	**+0.1**
	58nm,0.1s						
TDK				*e*S	**Sg**	**18 03 31.4**	**-3.5**
	3.4nm,0.6s						
KSH2	**Kashi**	**3.21**	**202**	Pn	**Pb**	**18 02 52.4**	**-3.0**
KSH2				Sn	**Sb**	**18 03 36.9**	**+2.1**
KSH2				smax	smax		
	comp=N,170nm,0.9s						
KSH2				smax	smax		
	comp=E,250nm,0.8s						
ARSB	**Arslanbob**	**3.21**	**257**	*i* PN	**Pn**	**18 02 49.5**	**+0.4**
ARSB				*i* S	**Sn**	**18 03 27.9**	**+0.1**
ARSB	**Arslanbob**	**3.21**	**257**	⇑*i*P	**Pn**	**18 02 49.5**	**+0.4**
ARSB				⇑*i*S	**Sn**	**18 03 27.9**	**+0.1**
MNAS	**Manas**	**3.46**	**278**	*i* PN	**Pn**	**18 02 53.1**	**+0.6**
MNAS				*i* S	**Sn**	**18 03 34.1**	**+0.2**
MNAS	**Manas**	**3.46**	**278**	⇓*i*P	**Pn**	**18 02 53.1**	**+0.6**
MNAS				⇓*i*S	**Sn**	**18 03 34.1**	**+0.2**
SFK	**Sufi-Kurgan**	**3.46**	**234**	*i* PN	**Pn**	**18 02 52.9**	**+0.3**
SFK				*i* S	**Sn**	**18 03 33.7**	**-0.5**
SFK	**Sufi-Kurgan**	**3.46**	**234**	⇓*i*P	**Pn**	**18 02 52.9**	**+0.3**
SFK				⇓*i*S	**Sn**	**18 03 33.7**	**-0.5**
KAPS	**Kapalarasan**	**3.55**	**26**	Pg	**Pb**	**18 03 01.6**	**+0.5**
	comp=E,12nm,0.3s						
KAPS				Lg	Lg	18 03 47.2	
	comp=E,163nm,0.3s						
OHH	**Osh**	**3.65**	**245**	*i* PN	**Pn**	**18 02 55.3**	**+0.3**
OHH				*i* S	**Sn**	**18 03 38.0**	**-0.5**
OHH	**Osh**	**3.65**	**245**	⇑*i*P	**Pn**	**18 02 55.3**	**+0.3**
OHH				⇑*i*S	**Sn**	**18 03 38.0**	**-0.5**
BTLS	**Baital**	**3.68**	**323**	Pg	**Pb**	**18 03 01.6**	**-1.7**
	comp=E,52nm,0.4s						
BTLS				Lg	Lg	18 03 47.3	
	comp=E,213nm,0.5s						
BTLS	**Baital**	**3.68**	**323**	*e*PN	**Pn**	**18 02 57.6**	**+2.2**
	comp=E,52nm,0.4s						
BTLS				*e*S	**Sb**	**18 03 47.3**	**-1.0**
	comp=E,213nm,0.5s						
ARK	**Arkit**	**3.87**	**267**	*i* PN	**Pn**	**18 02 58.7**	**+0.5**
ARK				*i* S	**Sn**	**18 03 43.9**	**-0.2**
ARK	**Arkit**	**3.87**	**267**	⇑*i*P	**Pn**	**18 02 58.7**	**+0.5**
ARK				⇑*i*S	**Sn**	**18 03 43.9**	**-0.2**
DZA	**Taraz**	**4.36**	**282**	*e*P	**Pb**	**18 03 16.8**	**+1.8**
	comp=E,28nm,0.1s						
DZA				*e*S	**Sg**	**18 04 13.3**	**-4.5**
	comp=E,227nm,0.4s						
TRKS	**Terek-Say**	**4.52**	**264**	*i* PN	**Pn**	**18 03 07.6**	**+0.5**
TRKS				*i* S	**Sn**	**18 03 59.2**	**-0.9**
TRKS	**Terek-Say**	**4.52**	**264**	⇑*i*P	**Pn**	**18 03 07.6**	**+0.5**
TRKS				⇑*i*S	**Sn**	**18 03 59.2**	**-0.9**
DRK	**Karamyk**	**4.83**	**239**	*i* PN	**Pn**	**18 03 11.9**	**+0.3**
DRK				*i* S	**Sn**	**18 04 06.7**	**-1.4**
DRK	**Karamyk**	**4.83**	**239**	⇑*i*P	**Pn**	**18 03 11.9**	**+0.3**
DRK				⇑*i*S	**Sn**	**18 04 06.7**	**-1.4**
KK31	**Karatay Array**	**4.99**	**284**	⇓Pn	**Pn**	18 03 19.2	+5.8
	comp=E,0.5nm,0.3s,baz=105,slow=11,SNR=6.7						
KK31				⇓Pg	**Pb**	**18 03 28.5**	**+2.9**
	comp=E,11nm,0.5s,baz=96,slow=14,SNR=105						
KK31				⇑Lg	Lg	18 04 32.4	
	comp=E,48nm,0.4s,baz=95,slow=30,SNR=19						
KK31	**Karatay Array**	**4.99**	**284**	PN	Pn	18 03 19.2	+5.8
KK31				P	**Pb**	**18 03 28.5**	**+2.9**
BTK	**Batken**	**5.20**	**249**	*i* PN	**Pn**	**18 03 16.9**	**+0.5**
BTK				*i* S	**Sn**	**18 04 15.3**	**-1.5**
BTK	**Batken**	**5.20**	**249**	⇓*i*P	**Pn**	**18 03 16.9**	**+0.5**
BTK				⇓*i*S	**Sn**	**18 04 15.3**	**-1.5**
IUG	**Iuzhnay**	**5.28**	**273**	Pg	**Pg**	**18 03 35.4**	**-3.6**
	comp=E,23nm,0.3s						
IUG				Lg	Lg	18 04 45.1	
	comp=E,248nm,0.5s						
IUG	**Iuzhnay**	**5.28**	**273**	*e*PN	**Pb**	**18 03 33.7**	**+3.0**
IUG	**Iuzhnay**	**5.28**	**273**	*e*P	**Pg**	**18 03 35.4**	**-3.6**
	comp=E,23nm,0.3s						
IUG				*e*S	**Sg**	**18 04 45.1**	**-2.4**
	comp=E,248nm,0.5s						
BRLS	**Borolday**	**5.47**	**282**	Pg	**Pg**	**18 03 38.4**	**-4.1**
	comp=E,2.2nm,0.3s						
BRLS				Lg	Lg	18 04 50.2	
	comp=E,50nm,0.4s						
BRLS	**Boroldav**	**5.47**	**282**	*e*P	**Pg**	**18 03 38.4**	**-4.1**
	comp=E,2.2nm,0.3s						
BRLS				*e*S	**Sg**	**18 04 50.2**	**-3.1**
	comp=E,50nm,0.4s						
CHM	**Chimkent**	**5.60**	**275**	*e*P	**Pg**	**18 03 41.9**	**-3.1**
	comp=E,39nm,0.2s						
CHM				*e*S	**Sg**	**18 04 56.3**	**-1.2**
	comp=E,164nm,0.4s						
MK31	**Makanchi Array**	**5.95**	**37**	⇓Pn	**Pn**	**18 03 29.0**	**+2.4**
	comp=E,0.6nm,0.2s,baz=213,slow=14,SNR=82						
MK31				⇑Pg	**Pg**	**18 03 50.1**	**-1.6**
	comp=E,1.7nm,0.3s,baz=211,slow=15,SNR=7.7						
MK31				⇑Lg	Lg	18 05 00.5	
	comp=E,8.5nm,0.5s,baz=218,slow=28,SNR=4.7						
MK31	**Makanchi Array**	**5.95**	**37**	*i* PN	**Pn**	**18 03 29.1**	**+2.5**
MKAR	**Makanchi Array**	**5.95**	**37**	Pn	**Pn**	**18 03 29.4**	**+2.8**
	comp=E,0.9nm,0.3s,baz=212,slow=14,SNR=39						
MKAR				Lg	Lg	18 05 00.8	
	comp=E,3.5nm,0.3s,baz=217,slow=30,SNR=7.7						
	comp=E,1.2nm,0.3s						
MKAR	**Makanchi Array**	**5.95**	**37**	*i* PN	**Pn**	**18 03 29.3**	**+2.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHGR	**Chuyangaron**	**7.00**	**243**	*i* PN	**Pn**	**18 03 41.6**	**+0.4**
CHGR	**Chuyangaron**	**7.00**	**243**	⇓*i*P	**Pn**	**18 03 41.6**	**+0.4**
CHGR				⇓*i*S	**Sn**	**18 04 57.9**	**-3.4**
ZSN	**Zaisan**	**7.65**	**43**	Pg	**Pg**	**18 04 20.0**	**-4.2**
	comp=Z,2.5nm,0.4s						
ZSN	**Zaisan**	**7.65**	**43**	*e*P	**Pg**	**18 04 20.0**	**-4.2**
	comp=Z,2.5nm,0.4s						
ZSN				*e*S	**Sg**	**18 06 01.4**	**-1.9**
	comp=Z,7.3nm,0.4s						
BRZS	**Berezniki**	**8.45**	**340**	*e*P	Pg	18 04 32.7	-6.8
	comp=Z,0.2nm,0.1s						
BRZS				*e*S	**Sg**	**18 06 23.1**	**-5.7**
	comp=Z,28nm,0.5s						
KURBB	**Kurchatov Arra**	**8.55**	**6**	Pn	**Pn**	**18 04 05.7**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=189,slow=12,SNR=5.4						
KURBB				Sn	**Sn**	**18 05 40.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=198,slow=15,SNR=4.7						
KURBB				Lg	Lg	18 06 27.0	
	comp=Z,0.4nm,0.3s,baz=178,slow=28,SNR=8.6						
	comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	**8.65**	**6**	⇑Pn	**Pn**	**18 04 03.9**	**+0.3**
	comp=Z,1.3nm,0.9s						
KURK				⇓Sn	Sn	18 05 57.3	+16
	comp=Z,4.1nm,0.9s						
KURK				⇑Lg	Lg	18 06 27.6	
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**8.65**	**6**	*i* P	**Pn**	**18 04 05.0**	**+1.4**
DGZ	**Jazzator, Alta**	**10.43**	**40**	*i* P	**Pn**	**18 04 30.8**	**+2.7**
BVA0	**Borovoye Array**	**11.81**	**340**	P	**Pn**	**18 04 49.5**	**+2.6**
BVAR	**Borovoye Array**	**11.81**	**340**	Pn	**Pn**	**18 04 46.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=143,slow=13,SNR=22						
BVAR				Lg	Lg	18 08 05.0	
	comp=Z,0.1n

0.9nm,0.7s,baz=106,slow=7.9,SNR=13
0.9nm,0.7s
BATI Baumata 58.43 274 LR LR 18 53 28.4
comp=Z,62nm,18.5s,baz=176,slow=37
LEM Lembang 74.20 270 LR LR 19 01 28.1
comp=Z,43nm,19.9s,baz=264,slow=35
KSRS Korea Array 82.42 319 P **P** **18 29 59.6 +0.8**
1.4nm,0.7s,baz=114,slow=5.2,SNR=4.0
1.4nm,0.7s
MKAR Makanchi Array 116.34 311 PKP **PKiKP** **18 36 19.6 -0.4**
0.2nm,0.7s,baz=84,slow=0.7,SNR=5.2
AKASG **Malin Array Be 149.05 327** PKPbc **PKPbc** **18 37 23.3 -1.1**
0.2nm,0.4s,baz=54,slow=2.4,SNR=1.6
BRTR Keskin Array B 151.72 305 PKPbc **PKPbc** **18 37 30.8 -0.6**
0.3nm,0.6s,baz=76,slow=2.3,SNR=2.0

*IDC **17** 18:41:36.2±1.9,52.˚25S×139.˚93E, h0km, mb3.8/4, mbtmp3.8/4, MS3.6/5, Error ellipse: s-maj=107.2km s-min=32.8km az=96.0*
*NEIC **17** 18:41:37.3±2.0,52.˚4S±0.˚1×139.˚5E±0.˚2, h10km±1km, mb4.5/9, Error ellipse: s-maj=27.6km s-min=5.4km az=219.0*
ISC 17 18:41:36.9±0.8, 52.˚5S±0.˚2×139.˚5E±0.˚2, h10km, n35, σ1§18/26, mb4.2/6, MS3.5/5, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLZ	**Mavora Lakes**	**19.98**	**81**	P	**P**	**18 46 08.7**	**-0.7**
MLZ				IAmb	IAmb	18 46 23.9	
	comp=Z,50nm,1.4s						
CASY	**Casey**	**19.99**	**215**	P	**P**	**18 46 06.9**	**-2.3**
CASY				IAmb	IAmb	18 46 14.7	
	comp=Z,31nm,1.3s						
STKA	**Stephens Creek**	**20.61**	**5**	P	Pn	18 46 16.4	-2.1
	comp=Z,1.3nm,0.7s,baz=212,slow=15,SNR=3.1						
STKA				LR	LR	18 53 04.1	
	comp=Z,77nm,19.4s,baz=200,slow=34						
	comp=Z,1.3nm,0.7s						
RPZ	**Rata Peaks**	**22.64**	**80**	LR	LR	18 53 29.8	
	comp=Z,72nm,18.4s,baz=120,slow=32						
FORT	**Forrest**	**23.24**	**334**	P	**P**	**18 46 42.6**	**-1.5**
FORT				IAmb	IAmb	18 47 11.2	
	comp=Z,10nm,1.0s						
INKA	**Innaminka**	**24.70**	**3**	P	**P**	**18 46 55.6**	**-2.4**
INKA				IAmb	IAmb	18 47 15.0	
	comp=Z,8.6nm,1.1s						
THZ	**Tophouse**	**24.88**	**78**		**P**	**18 47 00.6**	**+0.8**
H01W1	**Cape Leeuwin H**	**25.20**	**304**	T	T	19 13 03.0	
	baz=140,slow=75,SNR=25						
H01W2	**Cape Leeuwin H**	**25.20**	**304**	T	T	19 13 06.4	
	baz=140,slow=75,SNR=14						
H01W3	**Cape Leeuwin H**	**25.21**	**304**	T	T	19 13 04.3	
	baz=140,slow=75,SNR=16						
ASAR	**Alice Springs**	**29.06**	**349**	P	**P**	**18 47 36.5**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=164,slow=9.5,SNR=18						
ASAR				PcP	**PcP**	**18 50 45.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=173,slow=2.5,SNR=7.6						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**29.06**	**349**	P	**P**	**18 47 36.7**	**-0.7**
AS31	**Alice Springs**	**29.06**	**349**	P	**P**	**18 47 36.4**	**-0.9**
WRA	**Warramunga Arr**	**32.70**	**351**	P	**P**	**18 48 08.1**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=174,slow=7.1,SNR=28						
WRA				PcP	**PcP**	**18 50 54.4**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=182,slow=2.3,SNR=7.8						
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**32.70**	**351**	P	**P**	**18 48 08.6**	**-0.8**
CTA	**Charters Tower**	**32.72**	**12**	LR	LR	19 01 10.7	
	comp=Z,94nm,18.4s,baz=218,slow=36						
WB0	**Warramunga Arr**	**32.87**	**351**	P	**P**	**18 48 09.6**	**-1.3**
WB0				IAmb	IAmb	18 48 25.4	
	comp=Z,7.8nm,1.1s						
QSPA	**South Pole Qui**	**37.66**	**180**	LR	LR	19 03 24.1	
	comp=Z,165nm,18.4s,baz=354,slow=34						
MAW	**Mawson**	**38.32**	**217**	LR	LR	19 02 53.3	
	comp=Z,129nm,20.4s,baz=105,slow=33						
H04S1	**CROZET ISLANDS**	**53.67**	**238**	T	T	19 49 41.4	
	baz=129,slow=75,SNR=28						
H04S2	**CROZET ISLANDS**	**53.67**	**238**	T	T	19 49 35.4	
	baz=129,slow=75,SNR=38						
H04S3	**CROZET ISLANDS**	**53.69**	**238**	T	T	19 49 40.8	
	baz=129,slow=75,SNR=30						
CMAR	**Chiang Mai Arr**	**78.92**	**321**	P	**P**	**18 53 41.9**	**+1.4**
	comp=Z,0.2nm,0.2s,baz=153,slow=5.0,SNR=4.4						
	comp=Z,0.2nm,0.2s						
FINES	**FINESS Array B**	**144.16**	**311**	PKP	**PKPdf**	**19 01 11.4**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=116,slow=3.2,SNR=3.4						
MYKA	**Terra Mystica**	**145.12**	**283**	*i* pPdiff	**PKPdf**	**19 01 14.9**	**+1.1**
	comp=Z,2.3nm,0.5s						
ABTA	**Abfaltersbach**	**145.86**	**282**	*i* PKP	**PKPab**	**19 01 16.9**	**+0.8**
	comp=Z,9.8nm,1.6s						
ARCES	**ARCESS Array B**	**145.89**	**325**	PKPbc	**PKPab**	**19 01 15.6**	**0.0**
	comp=Z,7.7nm,1.1s,baz=96,slow=2.5,SNR=9.6						
LESA	**Schwarzleotal**	**146.09**	**283**	*i* PKP	**PKPbc**	**19 01 17.1**	**+0.7**
	comp=Z,2.4nm,0.5s						
GERES	**GERESS Array B**	**146.14**	**286**	PKPbc	**PKPbc**	**19 01 16.8**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=119,slow=3.2,SNR=8.5						
WTTA	**Wattenberg**	**146.63**	**282**	*i* PKP	**PKPbc**	**19 01 19.2**	**+1.1**
	comp=Z,2.5nm,0.5s						
SQTA	**Sankt Quirin**	**146.87**	**282**	*i* PKP	**PKPbc**	**19 01 19.9**	**+1.2**
	comp=Z,4.4nm,0.5s						
MOTA	**Moosalm**	**146.99**	**282**	*i* PKP	**PKPbc**	**19 01 20.1**	**+1.0**
	comp=Z,6.2nm,1.1s						
SPITS	**Spitsbergen Ar**	**147.45**	**341**	PKPbc	**PKPbc**	**19 01 19.6**	**+0.2**
	comp=Z,23nm,1.1s,baz=73,slow=5.3,SNR=13						
ESDC	**Sonseca Array**	**151.96**	**258**	PKPbc	**PKiKP**	**19 01 33.4**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=123,slow=1.2,SNR=7.2						
ESDC	**Sonseca Array**	**151.96**	**258**		**PKPdf**	**19 01 24.2**	**-0.9**

*IDC **17** 18:53:10.7±0.5, 7.˚58S×74.˚63W, h149km±4km, mb4.0/13, mbtmp4.5/18, MS2.9/2, Error ellipse: s-maj=12.8km s-min=9.1km az=43.0*
*NEIC **17** 18:53:11.4±2.3, 7.˚61S±0.˚07×74.˚67W±0.˚06, h150km±6km, mb4.5/120, Error ellipse: s-maj=10.1km s-min=8.9km az=215.0*
*VAO **17** 18:53:11.4±0.5, 7.˚66S×74.˚59W, h154km±4km, mbR4.3, Presumed earthquake*
ISC 17 18:53:10.6±0.4, 7.˚62S±0.˚05×74.˚62W±0.˚06, h150km±4km, h150km:pP-P, n136, σ0§88/108, mb4.5/62, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZSB	**Cruzeiro do Su**	**1.90**	**93**		**Pn**	**18 53 46.6**	**+2.1**
CZSB	**Cruzeiro do Su**	**1.90**	**93**	*eP*	**Pn**	**18 53 46.1**	**+1.6**
ATAH	**Atahualpa**	**3.77**	**277**	P	**Pn**	**18 54 08.1**	**-0.2**
	232nm,0.4s,baz=63,slow=2.9,SNR=859						
ATAH				S	**Sn**	**18 54 52.3**	**-0.7**
	268nm,0.4s,baz=258,slow=22,SNR=7.7						
ATAH				LR	LR	18 55 31.6	
	comp=Z,216nm,18.4s,baz=354,slow=37						
NNA	**Nana**	**4.86**	**207**	P	**Pn**	**18 54 24.0**	**+1.8**
	25nm,0.3s,baz=4.5,slow=8.8,SNR=9.9						
NNA				S	**Sn**	**18 55 15.7**	**-2.4**
	233nm,0.3s,baz=334,slow=23,SNR=17						
NNA	**Nana**	**4.86**	**207**		**Pn**	**18 54 24.0**	**+1.8**
COHC	**Cochancay**	**6.89**	**318**		**Pn**	**18 54 49.7**	**+0.5**
SLOR	**San Lorenzo -**	**7.86**	**330**		**Pn**	**18 55 02.8**	**+0.2**
OTAV	**Otavalo**	**8.69**	**334**		**Pn**	**18 55 14.7**	**+1.0**
OTAV	**Otavalo**	**8.69**	**334**	*eP*	**Pn**	**18 55 14.0**	**+0.3**
LPAZ	**La Paz**	**10.70**	**144**	P	**Pn**	**18 55 39.2**	**-1.2**
	6.5nm,0.7s,baz=324,slow=12,SNR=18						
LPAZ				LR	LR	19 00 00.8	
	comp=Z,55nm,20.6s,baz=323,slow=38						
LPAZ	**La Paz**	**10.70**	**144**		**Pn**	**18 55 38.6**	**-1.9**
LPAZ	**La Paz**	**10.70**	**144**	*eP*	**Pn**	**18 55 38.7**	**-1.8**
PB16	**IPOC Station P**	**11.76**	**155**		**Pn**	**18 55 55.0**	**+0.7**
MACA	**Manacapuru-AM**	**14.56**	**73**		**Pn**	**18 56 28.9**	**-0.8**
MACA	**Manacapuru-AM**	**14.56**	**73**	*eP*	**P**	**18 56 30.7**	**-1.3**
VILB	**Vilhena**	**15.14**	**112**		**Pn**	**18 56 37.1**	**+0.1**
VILB	**Vilhena**	**15.14**	**112**	*eP*	**Pn**	**18 56 36.5**	**-0.5**
SIV	**San Ignacio**	**15.65**	**123**	P	**Pn**	**18 56 42.5**	**-0.7**
	47nm,1.1s,baz=298,slow=12,SNR=56						
SDV	**Santo Domingo**	**16.87**	**14**	P	**Pn**	**18 56 58.2**	**0.0**
	8.1nm,0.7s,baz=204,slow=8.8,SNR=10						
SDV	**Santo Domingo**	**16.87**	**14**		**P**	**18 56 57.2**	**-0.6**
SDV				IAmb	IAmb	18 57 03.1	
	comp=Z,12nm,0.9s						
SDV	**Santo Domingo**	**16.87**	**14**	*eP*	**Pn**	**18 56 59.7**	**+1.4**
PTLB	**Pontes e Lacer**	**17.04**	**119**		**Pn**	**18 57 00.1**	**0.0**
PTLB				IAmb	IAmb	18 57 19.2	
	comp=Z,18nm,0.7s						
PTLB	**Pontes e Lacer**	**17.04**	**119**	*eP*	**Pn**	**18 56 59.6**	**-0.5**
BOAV	**Boa Vista**	**17.23**	**55**		**Pn**	**18 57 02.8**	**+0.4**
BOAV	**Boa Vista**	**17.23**	**55**	*eP*	**Pn**	**18 57 02.9**	**+0.4**
PDRB	**Porto dos Gac**	**18.08**	**104**	*eP*	**Pn**	**18 57 11.5**	**-1.0**
CLDB	**Colider**	**18.86**	**101**	*eP*	**P**	**18 57 18.7**	**-0.7**
ITTB	**Itaituba**	**19.06**	**81**	*eP*	**P**	**18 57 21.7**	**+0.1**
NPGB	**Novo Progresso**	**19.11**	**90**	*eP*	**P**	**18 57 21.7**	**-0.5**
SALV	**Santo Antonio**	**20.26**	**116**	*eP*	**P**	**18 57 35.0**	**+0.5**
PP1B	**Ponte de Pedra**	**21.65**	**119**	*eP*	**P**	**18 57 50.4**	**+1.1**
AQDB	**Aquidauana**	**22.33**	**127**		**P**	**18 57 56.3**	**+0.1**
AQDB				IAmb	IAmb	18 57 57.9	
	comp=Z,18nm,0.9s						
SNDB	**Serra Nova Dou**	**23.38**	**103**	*eP*	**P**	**18 58 06.4**	**+0.3**
AMBA	**Amambai (Brazi**	**24.24**	**131**	*eP*	**P**	**18 58 13.6**	**-0.2**
CPUP	**Villa Florida**	**24.84**	**141**	P	**P**	**18 58 19.0**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=320,slow=12,SNR=6.0						
	comp=Z,1.3nm,0.4s						
CPUP	**Villa Florida**	**24.84**	**141**	P	**P**	**18 58 19.1**	**0.0**
SMTB	**Santa Maria do**	**26.78**	**95**	*eP*	**P**	**18 58 37.1**	**+0.2**
BDFB	**Brasilia**	**27.23**	**109**	P	**P**	**18 58 42.3**	**+1.4**
	comp=Z,4.4nm,0.5s,baz=282,slow=13,SNR=6.0						
BDFB				pP	**pP**	**18 59 14.1**	**+1.6**
	comp=Z,5.6nm,0.6s,baz=272,slow=14,SNR=4.0						
	comp=Z,4.4nm,0.5s						
BDFB	**Brasilia**	**27.23**	**109**	P	P	**18 58 42.3**	**+1.4**
BDFB					**pP**	**18 59 14.8**	**+2.4**
BDFB				IAmb	IAmb	18 59 17.8	
	comp=Z,6.0nm,0.6s						
PTGB	**Pitanga**	**27.46**	**131**	*eP*	**P**	**18 58 42.3**	**-0.6**
IPMB	**Ipameri, GO**	**27.70**	**114**	*eP*	**P**	**18 58 45.2**	**+0.2**
ITAB	**Concordia**	**28.90**	**135**		**P**	**18 58 57.4**	**+1.9**
JANB	**Januaria**	**30.59**	**107**	*eP*	**P**	**18 59 11.2**	**+0.5**
PLCA	**Paso Flores**	**33.17**	**174**	P	**P**	**18 59 34.0**	**+1.0**
	comp=Z,4.0nm,0.8s,baz=346,slow=8.5,SNR=8.0						
PLCA				pP	**pP**	**19 00 04.6**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=357,slow=7.5,SNR=2.9						
	comp=Z,4.0nm,0.8s						
CMC01	**Camacan, BA**	**35.21**	**106**	*eP*	**P**	**18 59 50.2**	**-0.6**
152A	**Waverly Hall**	**41.20**	**347**	P	**P**	**19 00 41.2**	**+0.6**
152A				IAmb	IAmb	19 00 41.5	
	comp=Z,15nm,0.8s						
W57A	**Gilead**	**42.84**	**354**	IAmb	IAmb	19 00 55.5	
	comp=Z,22nm,1.0s						
DRIO	**Del Rio**	**44.53**	**327**		**P**	**19 01 07.8**	**+0.3**
DRIO				IAmb	IAmb	19 01 09.2	
	comp=Z,13nm,0.7s						
R55A	**Marlinton**	**45.95**	**354**	P	**P**	**19 01 19.7**	**+1.0**
R55A				IAmb	IAmb	19 01 20.4	
	comp=Z,16nm,0.8s						
OZNA	**Ozona**	**45.97**	**328**		**P**	**19 01 19.5**	**+0.5**
TXAR	**Lajitas Array**	**46.17**	**324**	P	**P**	**19 01 21.3**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=147,slow=8.8,SNR=13						
TXAR				PcP	**PcP**	**19 02 54.5**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=131,slow=2.3,SNR=4.5						
	comp=Z,1.4nm,0.7s						
ABTX	**Abilene, Hawle**	**46.58**	**331**	IAmb	IAmb	19 01 25.4	
	comp=Z,13nm,0.7s						
TPB05	**Hovey Rd**	**47.17**	**326**	IAmb	IAmb	19 01 31.1	
	comp=Z,4.9nm,0.9s						
APMT	**Aspermont**	**47.38**	**331**	IAmb	IAmb	19 01 31.7	
	comp=Z,7.5nm,0.7s						
W35A	**Tecumseh**	**47.45**	**335**	IAmb	IAmb	19 01 31.1	
	comp=Z,10nm,0.7s						
MGMO	**Mountain Grove**	**47.51**	**341**	IAmb	IAmb	19 01 30.8	
	comp=Z,9.8nm,1.1s						
VHRN	**Van Horn**	**48.01**	**324**	IAmb	IAmb	19 01 36.5	
	comp=Z,5.6nm,0.8s						
128A	**Castleberry Fa**	**48.02**	**328**	IAmb	IAmb	19 01 36.1	
	comp=Z,6.0nm,0.6s						
MSTX	**Muleshoe**	**49.22**	**329**	IAmb	IAmb	19 01 45.1	
	comp=Z,7.3nm,0.6s						
L56A	**Greenwood**	**49.59**	**357**	IAmb	IAmb	19 01 47.9	
	comp=Z,16nm,1.0s						
121A	**Cookes Peak, D**	**50.92**	**323**	IAmb	IAmb	19 01 59.1	
	comp=Z,5.0nm,0.7s						
ANMO	**Albuquerque**	**51.92**	**327**	P	**P**	**19 02 04.6**	**+0.2**
WBO	**Williamsburg**	**52.38**	**359**	IAmb	IAmb	19 02 08.3	
	comp=Z,11nm,0.8s						
T25A	**Trinidad**	**52.53**	**330**	IAmb	IAmb	19 02 10.8	
	comp=Z,6.3nm,1.0s						
SDCO	**Great Sand Dun**	**53.55**	**330**	IAmb	IAmb	19 02 18.2	
	comp=Z,4.7nm,0.8s						
214A	**Organ Pipe Nat**	**53.64**	**319**	P	**P**	**19 02 17.7**	**+0.9**
214A				IAmb	IAmb	19 02 18.8	
	comp=Z,4.9nm,0.9s						
SPMN	**Marine on St.**	**55.09**	**344**	IAmb	IAmb	19 02 26.6	
	comp=Z,11nm,0.9s						
WUAZ	**Wupatki**	**55.13**	**323**	IAmb	IAmb	19 02 29.8	
	comp=Z,8.9nm,1.0s						
PV01	**Paradox Valley**	**55.43**	**328**	IAmb	IAmb	19 02 31.7	
	comp=Z,6.9nm,0.9s						
PV03	**Paradox Valley**	**55.66**	**328**	IAmb	IAmb	19 02 33.1	
	comp=Z,4.2nm,0.9s						
PV05	**Padox Valley**	**55.67**	**327**	IAmb	IAmb	19 02 32.9	
	comp=Z,7.3nm,0.8s						
PV12	**Saucer Basin,**	**55.69**	**328**	IAmb	IAmb	19 02 34.2	
	comp=Z,11nm,1.0s						
PV18	**Skein Mesa, Pa**	**55.69**	**328**	IAmb	IAmb	19 02 33.3	
	comp=Z,7.9nm,0.8s						
HMU	**Henry Mountain**	**56.46**	**326**	IAmb	IAmb	19 02 40.4	
	comp=Z,8.5nm,1.3s						
IRM	**Iron Mountain**	**56.55**	**320**	P	**P**	**19 02 38.6**	**+1.0**
IRM				IAmb	IAmb	19 02 39.8	
	comp=Z,6.4nm,1.0s						
KNB	**Kanab**	**57.01**	**324**	IAmb	IAmb	19 02 43.3	
	comp=Z,4.7nm,0.9s						
SRU	**San Rafael Swe**	**57.19**	**327**	IAmb	IAmb	19 02 43.1	
	comp=Z,3.2nm,0.7s						
BSUT	**Blindstream Ca**	**58.34**	**328**	IAmb	IAmb	19 02 52.3	
	comp=Z,5.1nm,1.1s						
PSUT	**Pine Spring**	**58.64**	**324**	IAmb	IAmb	19 02 54.4	
	comp=Z,4.0nm,0.9s						
CCCA	**Chr Cany lake**	**58.83**	**320**	P	**P**	**19 02 52.5**	**-1.1**
CCCA				IAmb	IAmb	19 02 55.8	
	comp=Z,12nm,1.2s						
TPNV	**Topopah Spring**	**59.02**	**322**	IAmb	IAmb	19 02 58.5	
	comp=Z,5.1nm,0.9s						
WCT	**Wildcat Mounta**	**59.15**	**321**	IAmb	IAmb	19 02 58.0	
	comp=Z,3.9nm,0.8s						
DUG	**Dugway, Tooele**	**59.20**	**327**	IAmb	IAmb	19 02 58.1	
	comp=Z,7.0nm,0.8s						
BW06	**Boulder Array**	**59.38**	**331**	IAmb	IAmb	19 02 57.8	
	comp=Z,12nm,1.1s						
PD31	**Pinedale Array**	**59.38**	**331**	IAmb	IAmb	19 03 09.5	
	comp=Z,7.8nm,0.8s						
PDAR	**Pinedale Array**	**59.38**	**331**	PcP	**PcP**	**19 03 43.3**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=118,slow=3.9,SNR=1.6						
PDAR	**Pinedale Array**	**59.38**	**331**		**P**	**19 02 56.5**	**-0.9**
SPUT	**South Promonto**	**59.79**	**328**	IAmb	IAmb	19 03 01.2	
	comp=Z,5.8nm,0.9s						
HVU	**Hansel Valley**	**60.29**	**328**	P	**P**	**19 03 03.8**	**+0.1**
ULM	**Lac du Bonnet**	**60.52**	**344**	P	**P**	**19 03 03.9**	**-0.9**
	comp=Z,7.5nm,0.6s,baz=155,slow=6.3,SNR=16						
ULM				pP	**pP**	**19 03 39.7**	**-0.4**
	comp=Z,8.1nm,0.7s,baz=135,slow=6.6,SNR=9.8						
ULM				PcP	**PcP**	**19 03 47.2**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=169,slow=9.5,SNR=3.5						
	comp=Z,7.5nm,0.6s						
ULM	**Lac du Bonnet**	**60.52**	**344**		**P**	**19 03 03.5**	**-1.2**
ULM					**pP**	**19 03 39.5**	**-0.7**
MOOW	**Moose Ponds**	**60.69**	**331**	P	**P**	**19 03 06.4**	**0.0**
NVAR	**Mina Array Bea**	**61.22**	**322**	P	**P**	**19 03 10.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=135,slow=6.8,SNR=6.2						
NVAR				PcP	**PcP**	**19 03 50.8**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=107,slow=5.2,SNR=3.8						
	comp=Z,1.0nm,0.7s						
YHH	**Holmes Hill**	**61.52**	**331**	P	**P**	**19 03 12.2**	**+0.2**
BOZ	**Bozeman (W)**	**62.49**	**332**	IAmb	IAmb	19 03 37.1	
	comp=Z,10nm,1.0s						
SCHQ	**Schefferville**	**62.56**	**5**	P	**P**	**19 03 18.1**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=186,slow=5.1,SNR=6.5						
SCHQ				pP	**pP**	**19 03 53.8**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=216,slow=6.2,SNR=2.7						
	comp=Z,3.5nm,0.8s						
SCHQ	**Schefferville**	**62.56**	**5**	IAmb	IAmb	19 03 19.0	
	comp=Z,4.1nm,0.9s						
MFID	**Camas Ranch**	**63.05**	**327**	IAmb	IAmb	19 03 23.9	
	comp=Z,8.7nm,0.8s						
ORV	**Oroville**	**63.88**	**321**	IAmb	IAmb	19 03 29.7	
	comp=Z,7.5nm,1.0s						
MSO	**Missoula**	**64.48**	**331**	IAmb	IAmb	19 03 33.7	
	comp=Z,8.6nm,0.9s						
I07A	**Izee**	**65.49**	**326**	IAmb	IAmb	19 03 39.8	
	comp=Z,5.7nm,0.9s						
F10A	**Beach Ranch, E**	**65.52**	**329**	IAmb	IAmb	19 03 41.8	
	comp=Z,3.7nm,0.7s						
PINE	**Pine Mountain**	**66.11**	**325**	IAmb	IAmb	19 03 45.8	
	comp=Z,5.5nm,0.9s						
FFC	**Flin Flon**	**66.21**	**343**		**P**	**19 03 41.7**	**-0.4**
FFC				IAmb	IAmb	19 03 42.8	
	comp=Z,5.4nm,1.0s						
FCC	**Fort Churchill**	**68.00**	**349**	IAmb	IAmb	19 03 53.6	
	comp=Z,6.7nm,0.7s						
DBIC	**Dimbokro**	**71.01**	**80**	P	**P**	**19 04 11.9**	**-0.8**
	comp=Z,8.9nm,0.5s,baz=266,slow=7.6,SNR=6.8						
	comp=Z,8.9nm,0.5s						
DBIC	**Dimbokro**	**71.01**	**80**	P	**P**	**19 04 12.0**	**-0.8**
YKA	**Yellowknife Ar**	**76.35**	**342**	P	**P**	**19 04 42.5**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=142,slow=5.5,SNR=19						
YKA				pP	**pP**	**19 05 19.1**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=138,slow=5.6,SNR=5.3						
	comp=Z,1.0nm,0.5s						
ILON	**Igloolik, Nuna**	**76.98**	**357**	IAmb	IAmb	19 04 46.6	
	comp=Z,6.1nm,0.8s						
SNAA	**Sanae**	**77.11**	**162**	P	**P**	**19 04 47.3**	**+0.1**
	comp=Z,1.9nm,0.3s,baz=206,slow=7.4,SNR=2.0						
	comp=Z,1.9nm,0.3s						
SNAA	**Sanae**	**77.11**	**162**	IAmb	IAmb	19 05 04.5	
	comp=Z,8.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**78.54**	**75**	P	**P**	**19 04 54.9**	**-1.1**
	comp=Z,3.5nm,0.8s,baz=259,slow=5.1,SNR=6.3						
	comp=Z,3.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.54**	**75**	IAmb	IAmb	19 04 55.4	
	comp=Z,4.9nm,1.1s						
QSPA	**South Pole Qui**	**82.49**	**180**	P	**P**	**19 05 17.4**	**+1.1**
	comp=Z,7.9nm,0.7s,baz=159,slow=2.5,SNR=9.0						
	comp=Z,7.9nm,0.7s						
QSPA	**South Pole Qui**	**82.49**	**180**	P	**P**	**19 05 17.3**	**+1.1**
QSPA				IAmb	IAmb	19 05 18.3	
	comp=Z,8.0nm,0.8s						
SUMG	**Summit**	**83.37**	**10**		**P**	**19 05 20.5**	**-0.4**
SUMG	**Summit**	**83.37**	**10**	*i* P	**P**	**19 05 20.0**	**-0.9**
TULEG	**Thule**	**84.09**	**1**	P	**P**	**19 05 24.4**	**+0.4**
TULEG				IAmb	IAmb	19 05 25.3	
	comp=Z,5.6nm,0.8s						
J25K	**Salcha River,**	**88.74**	**336**	IAmb	IAmb	19 05 47.6	
	comp=Z,4.7nm,0.6s						
ILAR	**Eielson Array**	**89.41**	**336**	P	**P**	**19 05 49.7**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=134,slow=3.3,SNR=7.9						
ILAR				pP	**pP**	**19 06 27.4**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=139,slow=3.3,SNR=7.6						
	comp=Z,0.6nm,0.5s						
BVAR	**Borovoye Array**	**126.55**	**26**	PKP	**PKPdf**	**19 11 56.4**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=299,slow=3.1,SNR=6.2						
STKA	**Stephens Creek**	**127.67**	**219**	PKP	**PKPdf**	**19 11 58.5**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=88,slow=2.1,SNR=6.1						
ZALV	**Zalesovo Beam**	**130.91**	**16**	PKP	**PKPdf**	**19 12 04.5**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=298,slow=3.2,SNR=13						
ZALV				pPKP	**pPKPdf**	**19 12 43.4**	**-0.6**
	comp=Z,3.8nm,1.1s,baz=306,slow=3.5,SNR=5.2						
ZALV	**Zalesovo Beam**	**130.91**	**16**		**PKPdf**	**19 12 03.8**	**-0.4**
KURK	**Kurchatov**	**131.63**	**23**		**PKPdf**	**19 12 05.9**	**+0.2**
KURBB	**Kurchatov Arra**	**131.68**	**23**	PKP	**PKPdf**	**19 12 06.5**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=314,slow=2.3,SNR=14						
KURBB				pPKP	**pPKPdf**	**19 12 45.3**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=316,slow=2.4,SNR=5.2						
MKAR	**Makanchi Array**	**136.24**	**23**	PKP	**PKPdf**	**19 12 13.9**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=318,slow=2.6,SNR=9.3						
MKAR				pPKP	**pPKPdf**	**19 12 53.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=321,slow=1.6,SNR=4.2						
ASAR	**Alice Springs**	**138.24**	**221**	PKhKP	PKPpre	19 12 12.1	
	comp=Z,0.8nm,0.5s,baz=137,slow=2.1,SNR=17						
ASAR				PKP	**PKPdf**	**19 12 18.8**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=120,slow=2.3,SNR=13						
SONM	**Songino Array**	**139.92**	**359**	PKhKP	PKPpre	19 12 14.5	
	comp=Z,0.3nm,0.5s,baz=328,slow=2.8,SNR=2

ANIL	**Santa Ana**	**3.26**	**224**	P	**Pn**	**19 01 58.4**	**+1.6**
ANIL				S	**Sn**	**19 02 37.2**	**+0.9**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**19 02 01.1**	**+0.5**
PRAC				S	**Sn**	**19 02 43.1**	**-0.1**
APAC	**Apartado, Choc**	**3.59**	**287**	P	**Pn**	**19 02 01.2**	**+0.5**
APAC				S	**Sn**	**19 02 44.2**	**+0.8**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**19 02 02.0**	**+1.0**
ORTC				S	**Sn**	**19 02 44.9**	**+1.0**
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	**19 02 00.9**	**-0.7**
SJCC				S	**Sn**	**19 02 42.9**	**-2.1**
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*	**Pn**	**19 02 01.2**	**-0.4**
SJCC				*eS*	**Sn**	**19 02 42.7**	**-2.3**
PLMC	**San Jos del P**	**3.69**	**239**	P	**Pn**	**19 02 02.6**	**+0.5**
PLMC				S	**Sn**	**19 02 47.7**	**+1.8**
URMC	**La Uribe, Meta**	**3.79**	**199**	P	**Pn**	**19 02 04.2**	**+0.8**
URMC				S	**Sn**	**19 02 47.9**	**-0.3**
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	P	**Pn**	**19 02 07.5**	**-0.7**
CRJC				S	**Sn**	**19 02 54.7**	**-2.1**
YOTC	**Yotoco, Valle**	**4.29**	**229**	P	**Pn**	**19 02 09.8**	**-0.2**
SMRC	**Santa Marta, M**	**4.43**	**346**	P	**Pn**	**19 02 12.6**	**+0.9**
SMRC				S	**Sn**	**19 03 01.5**	**-1.5**
URIC	**Uribia, Colomb**	**4.95**	**13**	P	**Pn**	**19 02 17.7**	**-0.8**
TEPV	**Terepaima**	**4.97**	**51**	*eP*	**Pn**	**19 02 18.9**	**+0.1**
MAPV	**Macapo**	**5.48**	**57**	*i P*	**Pn**	**19 02 26.2**	**+0.6**
MAPV				*eP*	**Pn**	**19 02 26.2**	**+0.6**

IDC ***17*** *19:31:06.0±4.7, 32.°65N×88.°12E, h62km±42km, mb3.5/9, mbtmp3.7/13, ML3.3/4, Error ellipse: s-maj=30.8km s-min=17.0km az=47.0*

ISC 17 19:31:02.9±1.0, 32.°6N±0.°1×87.°9E±0.°1, h35km, n13, σ1s26/13, mb3.8/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**13.46**	**71**	P	**Pn**	**19 34 13.4**	**+1.6**
	baz=254,slow=11 0.3nm,0.3s						
MKAR	**Makanchi Array**	**14.85**	**345**	P	**Pn**	**19 34 30.1**	**-0.1**
	0.1nm,0.3s,baz=157,slow=13,SNR=13 1.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.19**	**142**	P	**Pn**	**19 35 00.9**	**+0.5**
	0.1nm,0.3s,baz=324,slow=13,SNR=9.8 0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**19.33**	**342**	P	**Pn**	**19 35 25.1**	**-1.1**
	baz=157,slow=11,SNR=16 2.1nm,0.8s						
SONM	**Songino Array**	**20.68**	**37**	P	**P**	**19 35 39.9**	**0.0**
	1.8nm,1.1s,baz=230,slow=10.0,SNR=9.7 1.8nm,1.1s						
ZALV	**Zalesovo Beam**	**21.48**	**355**	P	**P**	**19 35 48.5**	**+0.2**
	1.0nm,0.5s,baz=169,slow=10,SNR=9.2 1.0nm,0.5s						
KSRS	**Korea Array**	**32.93**	**70**	P	**P**	**19 37 32.2**	**-1.8**
	2.2nm,0.5s,baz=275,slow=8.9,SNR=9.0 2.2nm,0.5s						
MJAR	**Matsushiro Arr**	**41.22**	**70**	P	**P**	**19 38 43.5**	**-0.9**
	1.4nm,0.7s,baz=253,slow=3.7,SNR=2.0 1.4nm,0.7s						
FINES	**FINESS Array B**	**48.60**	**326**	P	**P**	**19 39 44.9**	**+2.2**
	3.1nm,0.9s,baz=96,slow=7.7,SNR=5.7 3.1nm,0.9s						
WRA	**Warramunga Arr**	**68.53**	**133**	P	**P**	**19 42 01.8**	**-0.2**
	0.9nm,0.7s,baz=322,slow=6.2,SNR=7.0 0.9nm,0.7s						
ASAR	**Alice Springs**	**71.08**	**136**	P	**P**	**19 42 17.9**	**+0.1**
	0.6nm,0.8s,baz=325,slow=5.4,SNR=6.9 0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**79.92**	**279**	P	**P**	**19 43 08.5**	**-0.2**
	0.4nm,0.7s,baz=67,slow=3.1,SNR=2.2 0.4nm,0.7s						
YKA	**Yellowknife Ar**	**83.54**	**10**	P	**P**	**19 43 25.3**	**-1.6**
	0.6nm,0.9s,baz=333,slow=5.0,SNR=3.8 0.6nm,0.9s						

TEH ***17*** *19:36:01.9, 27.°14N×55.°12E, h20km±22km, ML3.3, Presumed earthquake*
DSN ***17*** *19:36:03.4±1.2, 27.°13N×55.°12E, h15km, ML2.8/13, Error ellipse: s-maj=14.5km s-min=4.9km az=13.0*
OMAN ***17*** *19:36:03.2±0.1, 27.°14N×55.07E, h16km±1km, ml3.0/15, Error ellipse: s-maj=2.8km s-min=0.7km az=11.0*

ISC 17 19:36:02.4±1.7, 27.°16N±0.°05×55.°13E±0.°03, h11km±13km, n52, σ0.92/68, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.84**	**308**	**Pg**	**Pb**	**19 36 17.8**	**-1.3**
BNDS	**Bandar-Abbas**	**0.96**	**75**	Pg	**Pb**	**19 36 20.0**	**-1.2**
GENO	**Geno**	**0.96**	**75**	Pg	**Pb**	**19 36 20.1**	**-1.2**
GENO				Sg	**Sn**	**19 36 35.6**	**-0.3**
IBND	**Bandar-abas**	**1.29**	**77**	Pg	**Pn**	**19 36 26.6**	**+0.2**
SHME	**Shamm**	**1.43**	**140**	P	**Pn**	**19 36 27.9**	**-0.4**
SHME				S	**Sg**	**19 36 48.1**	**-0.3**
SHME	**Shamm**	**1.43**	**140**	P	**Pn**	**19 36 28.1**	**-0.2**
SHME				S	**Sg**	**19 36 49.1**	**+0.7**
BANOM	**Banah** SNR=44	**1.62**	**139**	*eP*	**Pn**	**19 36 31.1**	**+0.1**
BANOM				S	**Sn**	**19 36 52.0**	**+0.2**
BANOM	**Banah**	**1.62**	**139**	P	**Pn**	**19 36 31.0**	**+0.1**
BANOM				S	**Sb**	**19 36 53.5**	**+0.8**
KHL1	**Khalili_Fars**	**1.69**	**287**	Pg	**Pb**	**19 36 33.1**	**-0.5**
LMD1	**Lamerd**	**1.76**	**276**	Pg	**Pb**	**19 36 34.6**	**-0.1**
LMD1				Sg	**Sg**	**19 37 00.4**	**+1.5**
MASF	**Masafi**	**2.00**	**152**	P	**Pn**	**19 36 37.1**	**+0.8**
MASF				S	**Sb**	**19 37 02.6**	**-1.4**
MSFE	**Esma-Masafi**	**2.02**	**152**	P	**Pn**	**19 36 36.8**	**+0.4**
MDH	**Madha**	**2.13**	**150**	P	**Pn**	**19 36 38.7**	**+0.8**
MDH	**Madha**	**2.13**	**150**	P	**Pn**	**19 36 38.6**	**+0.7**
MDH				S	**Sn**	**19 37 05.3**	**+0.9**
NAZ	**Nazwa, Dubai**	**2.21**	**167**	P	**Pn**	**19 36 39.8**	**+0.7**
KHNJ	**Kahnooj**	**2.42**	**70**	Pn	**Pn**	**19 36 42.0**	**0.0**
FAQ	**Al Faqa, Dubai**	**2.44**	**170**	P	**Pn**	**19 36 43.0**	**+0.8**
FAQ	**Al Faqa, Dubai**	**2.44**	**170**	P	**Pn**	**19 36 43.3**	**+1.1**
HATD	**Hatta, Dubai**	**2.49**	**158**	P	**Pn**	**19 36 43.8**	**+0.8**
HATD	**Hatta, Dubai** SNR=6.9	**2.49**	**158**	P	**Pn**	**19 36 44.4**	**+1.4**
HATD				S	**Sn**	**19 37 14.5**	**+1.1**
ASUD	**Al Ashush, Dub** SNR=6.5	**2.53**	**176**	*eP*	**Pn**	**19 36 44.3**	**+0.8**
ASUD	**Al Ashush, Dub** SNR=6.0	**2.53**	**176**	P	**Pn**	**19 36 44.9**	**+1.5**
ASHO	**Ashiyiah** SNR=15	**2.60**	**161**	*eP*	**Pn**	**19 36 45.1**	**+0.6**
ASHO	**Ashiyiah**	**2.60**	**161**	P	**Pn**	**19 36 45.2**	**+0.6**
ASHO				S	**Sn**	**19 37 17.9**	**+1.7**
NGRK	**Negar Kerman**	**2.85**	**29**	Pn	**Pn**	**19 36 49.5**	**+1.2**
ALNE	**Al Ain**	**3.14**	**170**	P	**Pn**	**19 36 52.6**	**+0.7**
ALNE				S	**Sn**	**19 37 29.9**	**+0.5**
SOHO	**SOHO**	**3.27**	**157**	P	**Pn**	**19 36 53.9**	**+0.3**
KHGB	**Koh Gabri**	**3.42**	**20**	Pn	**Pn**	**19 36 57.1**	**+1.1**
CHMN	**Cheshme madani**	**3.43**	**38**	Pn	**Pn**	**19 36 57.1**	**+0.9**
GHWR	**Ruwais**	**3.77**	**213**	P	**Pn**	**19 36 59.8**	**-0.8**
SHMA	**Al-Shehemyia**	**3.95**	**252**	P	**Pn**	**19 37 02.8**	**-0.2**
IMEH	**Mehriz**	**4.24**	**354**	Pn	**Pn**	**19 37 07.8**	**+0.5**
TRNA	**Turayna** SNR=10	**4.27**	**236**	P	**Pn**	**19 37 06.9**	**-0.4**
TRNA				S	**Sn**	**19 37 56.1**	**-1.1**
UMZA	**Um Al Zommool**	**4.42**	**180**	P	**Pn**	**19 37 09.6**	**+0.1**
IBAF	**Bafgh**	**4.43**	**5**	Pn	**Pn**	**19 37 09.8**	**0.0**
SMRA	**Abu-Samra**	**4.56**	**239**	P	**Pn**	**19 37 11.0**	**-0.3**
SMRA				S	**Sn**	**19 38 03.9**	**-0.5**
TAFT	**Taft - Yazd**	**4.63**	**350**	Pn	**Pn**	**19 37 13.2**	**+0.7**
BSY	**Bisya**	**4.78**	**156**	P	**Pn**	**19 37 15.0**	**+0.6**
BSY				S	**Sn**	**19 38 10.7**	**+0.8**
DOBD	**Dorbid, Yazd**	**4.85**	**354**	Pn	**Pn**	**19 37 16.2**	**+0.7**
SMDO	**Samad** SNR=6.0	**4.87**	**146**	P	**Pn**	**19 37 16.9**	**+1.2**
SMDO				S	**Sn**	**19 38 13.3**	**+1.2**
WSAR	**Wadi Sarin**	**5.03**	**140**	P	**Pn**	**19 37 18.7**	**+0.8**
WSAR				S	**Sn**	**19 38 15.4**	**-0.7**
IRAM	**Ramesheh**	**5.22**	**333**	Pn	**Pn**	**19 37 20.8**	**+0.2**
WBK	**Wadi Bani Khal**	**5.72**	**142**	P	**Pn**	**19 37 27.3**	**0.0**
WBK	**Wadi Bani Khal**	**5.72**	**142**	Pn	**Pn**	**19 37 27.3**	**0.0**
JLN	**Jalan Bani Buh**	**6.33**	**141**	P	**Pn**	**19 37 36.1**	**+0.4**
SRVN	**Saravan**	**6.48**	**86**	Pn	**Pn**	**19 37 39.1**	**+1.2**
MHTO	**MHTO** SNR=11	**6.67**	**156**	P	**Pn**	**19 37 40.1**	**-0.2**
DOK	**Doka**	**8.55**	**186**	P	**Pn**	**19 38 04.4**	**-1.8**
SHAO	**Shalim** SNR=7.0	**9.10**	**177**	*i P*	**Pn**	**19 38 13.0**	**-0.9**
SHAO	**Shalim** SNR=7.1	**9.10**	**177**	P	**Pn**	**19 38 12.3**	**-1.5**
DMTO	**DMTO**	**9.40**	**181**	P	**Pn**	**19 38 16.0**	**-1.9**
ABTO	**Aybut**	**9.90**	**190**	P	**Pn**	**19 38 22.9**	**-1.9**

SVSA 17 19:54:46.2±1.1, 38.°61N×29.°13W, h7km, ML2.1 (INMG), **1C-1D, Error ellipse: s-maj=9.8km s-min=6.6km az=17.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCAPE	**Capelo, Faial**	**0.24**	**92**	*eP*	Pg	19 54 50.8	-0.1
PCAPE				*eS*	Sg	19 54 54.4	+0.3
PCAPE				IAML		19 54 56.4	
PCAPE				IAML		19 54 56.6	
PCAPE				IAML		19 54 57.0	
PCAPE	**Capelo, Faial**	**0.24**	**92**	*eP*	Pg	19 54 50.7	-0.2
PCAPE				*eS*	Sg	19 54 54.0	0.0
PCAPE				IAML		19 54 54.8	
PCAPE				IAML		19 54 55.0	
PCAPE				IAML		19 54 55.2	
PFCBR	**Castelo Branco**	**0.33**	**105**	*eP*	Pg	19 54 51.9	-0.8
PFCBR				*eS*	Sg	19 54 56.5	-0.6
PFCBR				IAML		19 54 56.7	
PFCBR				IAML		19 54 56.8	
PFCBR	**Castelo Branco**	**0.33**	**105**	*eP*	Pg	19 54 51.9	-0.8
PFCBR				*eS*	Sg	19 54 56.5	-0.7
PFCBR				IAML		19 54 56.7	
PFCBR				IAML		19 54 56.8	
CALA	**Caldeira**	**0.34**	**94**	*eP*	Pg	19 54 52.0	-0.8
CALA				*eS*	Sg	19 54 56.3	-1.0
CALA				IAML		19 54 57.1	
CALA				IAML		19 54 57.5	
CALA				IAML		19 55 04.0	
CALA	**Caldeira**	**0.34**	**94**	*eP*	Pg	19 54 51.9	-0.9
CALA				*eS*	Sg	19 54 56.3	-1.0
CALA				IAML		19 54 57.1	
CALA				IAML		19 54 57.5	
CALA				IAML		19 55 04.0	
PCED	**Cedros**	**0.34**	**86**	*eP*	Pg	19 54 52.1	-0.7
PCED				*eS*	Sg	19 54 56.5	-0.7
PCED				IAML		19 54 57.5	
PCED				IAML		19 54 58.2	
PCED				IAML		19 55 01.5	
PCED	**Cedros**	**0.34**	**86**	*eP*	Pg	19 54 52.0	-0.7
PCED				*eS*	Sg	19 54 56.5	-0.7
PCED				IAML		19 54 57.5	
PCED				IAML		19 54 58.2	
PCED				IAML		19 55 01.5	
HOR	**Horta**	**0.40**	**101**	*eP*	Pg	19 54 53.0	-1.0
HOR				*eS*	Sg	19 54 58.4	-0.8
HOR				IAML		19 54 58.6	
HOR				IAML		19 54 59.0	
HOR				IAML		19 54 59.5	
HOR	**Horta**	**0.40**	**101**	*eP*	Pg	19 54 53.0	-1.0
HOR				*eS*	Sg	19 54 58.5	-0.7
HOR				IAML		19 54 58.6	
HOR				IAML		19 54 59.0	
HOR				IAML		19 54 59.5	
PCAN	**Candelaria**	**0.52**	**106**	*eP*	Pg	19 54 55.2	-1.1
PCAN				*eS*	Sg	19 55 01.7	-1.4
PCAN				IAML		19 55 02.5	
PCAN				IAML		19 55 02.9	
PCAN				IAML		19 55 04.6	
PCAN	**Candelaria**	**0.52**	**106**	*eP*	Pg	19 54 55.2	-1.2
PCAN				*eS*	Sg	19 55 01.2	-2.0
PCAN				IAML		19 55 02.5	
PCAN				IAML		19 55 02.9	
PCAN				IAML		19 55 04.6	
PICO	**Pico**	**0.56**	**101**	*eP*	Pg	19 54 55.8	-1.2
PICO				*eS*	Sg	19 55 03.6	-0.8
PICO				IAML		19 55 04.2	
PICO				IAML		19 55 07.8	
PICO				IAML		19 55 09.0	
PICO	**Pico**	**0.56**	**101**	*eP*	Pg	19 54 55.9	-1.1
PICO				*eS*	Sg	19 55 03.5	-0.8
PICO				IAML		19 55 04.2	
PICO				IAML		19 55 07.8	
PICO				IAML		19 55 09.0	
ROSA	**Rosais**	**0.70**	**80**	*eP*	Pg	19 54 56.6	-2.1
ROSA				*eS*	Sg	19 55 06.1	-2.8
ROSA				IAML		19 55 09.2	
ROSA				IAML		19 55 09.4	
ROSA				IAML		19 55 11.7	
ROSA	**Rosais**	**0.70**	**80**	*eP*	Pg	19 54 57.7	-2.1
ROSA				*eS*	Sg	19 55 06.2	-2.8
ROSA				IAML		19 55 06.9	
ROSA				IAML		19 55 07.2	
ROSA				IAML		19 55 07.5	

KRSC 17 20:08:49.1±0.9, 52.°27N×159.°13E, h63km±11km, Ml3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.41**	**294**	*eP*	Pn	20 09 01.8	+1.4
RUS				*eS*	Sn	20 09 09.4	+0.7
MTVR	**Mutnovka**	**0.62**	**291**	*eP*	Pn	20 09 04.3	+1.5
MTVR				*eS*	Sn	20 09 13.9	+1.2
GRL	**Gorelyy**	**0.71**	**294**	*eP*	Pn	20 09 05.8	+2.1
GRL				*eS*	Sn	20 09 16.6	+2.1
ASAK	**Asacha**	**0.76**	**279**	*eP*	Pn	20 09 06.3	+1.9
ASAK				*eS*	Sn	20 09 17.1	+1.5
KDTR	**Khodutka, Kamc**	**0.80**	**235**	*eP*	Pn	20 09 06.0	+1.3
KDTR				*eS*	Sn	20 09 17.2	+1.1
DALK	**Dalny**	**0.80**	**344**	*eP*	Pn	20 09 06.0	+1.3
DALK				*eS*	Sn	20 09 16.3	+0.1
PET	**Petropavlovsk**	**0.81**	**339**	*eP*	Pn	20 09 06.0	+1.1
PET				*eS*	Sn	20 09 17.1	+0.6
KRMR	**Karymshinskiy**	**0.83**	**313**	*eP*	Pn	20 09 06.5	+1.4
KRMR				*eS*	Sn	20 09 17.8	+0.9
INSR	**Institute**	**0.86**	**339**	*eP*	Pn	20 09 07.0	+1.5
INSR				*eS*	Sn	20 09 18.6	+1.0
NLC	**Nalytchevo**	**0.92**	**8**	*eP*	Pn	20 09 07.1	+0.9
NLC				*eS*	Sn	20 09 18.9	+0.1
UGLR	**Uglovaya**	**0.96**	**349**	*eP*	Pn	20 09 08.6	+1.7
SPN	**Mys Shipunski**	**1.00**	**33**	*eP*	Pn	20 09 09.5	+2.3
SPN				*eS*	Sn	20 09 23.2	+2.6
SMAR	**Somma**	**1.02**	**349**	*eP*	Pn	20 09 09.0	+1.3
SDLR	**Sedlovina**	**1.02**	**352**	*eP*	Pn	20 09 09.0	+1.3
SDLR				*eS*	Sn	20 09 21.8	+0.4
AVH	**Avacha**	**1.03**	**347**	*eP*	Pn	20 09 09.7	+2.0
AVH				*eS*	Sn	20 09 23.2	+1.7
KRER	**Koryakskii**	**1.06**	**348**	*eP*	Pn	20 09 10.0	+1.7
KRER				*eS*	Sn	20 09 24.2	+1.6
KOK	**Koryaka**	**1.07**	**344**	*eP*	Pn	20 09 10.3	+2.1
KOK				*eS*	Sn	20 09 24.7	+2.2
KRX	**Arik**	**1.13**	**345**	*eP*	Pn	20 09 10.9	+1.8
KRX				*eS*	Sn	20 09 25.4	+1.4
APC	**Apacha**	**1.37**	**300**	*eP*	Pn	20 09 14.0	+1.9
APC				*eS*	Sn	20 09 31.7	+2.4
GNL	**Ganaly**	**1.60**	**334**	*eP*	Pn	20 09 17.3	+2.0
GNL				*eS*	Sn	20 09 37.7	+2.6
PAU	**Pauzhetka**	**1.65**	**242**	*eP*	Pn	20 09 17.8	+2.0
KII	**Karymskiy**	**1.78**	**6**	*eP*	Pn	20 09 21.0	+3.3
KII				*eS*	Sn	20 09 43.0	+3.5
SKR	**Severo-Kuril's**	**2.46**	**231**	*eP*	Pn	20 09 28.3	+1.5
SKR				*eS*	Sn	20 09 57.4	+1.6
MKZ	**Mys Kozlova**	**2.77**	**33**	*eP*	Pn	20 09 33.0	+1.9
KBTR	**Krutoberegovo**	**4.50**	**27**	*eP*	Pn	20 09 57.2	+2.5
BKI	**Bering**	**5.02**	**51**	*eP*	Pn	20 10 03.4	+1.7

ISK ***17*** *20:16:50.8, 38.°71N×43.°18E, h5km, ML3.9/16*
NSSP ***17*** *20:16:50.8, 38.°73N×43.°30E, h10km, Ms3.5*
MOS ***17*** *20:16:51.6±2.0, 38.°52N×43.°32E, h14km, mb4.2/9, Error ellipse: s-maj=6.9km s-min=5.3km az=80.3*
AFAD ***17*** *20:16:51.3, 38.°69N×43.°18E, h10km±2km, MW4.1*
IDC ***17*** *20:16:51.0±0.9, 38.°67N×43.°37E, h0km, mb3.8/9, mbtmp3.6/17, ML3.6/5, MS3.1/4, Error ellipse: s-maj=15.6km s-min=9.9km az=150.0*
NEIC ***17*** *20:16:52.0±2.0, 38.°64N±0.°04×43.°20E±0.°05, h10km±1km, mb4.0/18, Error ellipse: s-maj=8.0km s-min=5.9km az=143.0*
MCSM ***17*** *20:16:54.3±0.7, 38.°N±6.°×4.°3E±1.°1, h12km±2km, mb4.1, MLv3.9*

ISC 17 20:16:52.1±0.6, 38.°66N±0.°02×43.°17E±0.°02, h11km±4km,

n181, σ1s96/214, mb4.0/18, 18C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**110**	Pg	**Pg**	**20 16 57.8**	**+1.6**
VANB				Sg	**Sg**	**20 17 02.5**	**+3.4**
TVAN	**Van**	**0.23**	**124**	P	**Pg**	**20 16 56.6**	**-0.3**
TVAN				S	**Sg**	**20 17 00.2**	**-0.1**
GEVA	**Gevas**	**0.35**	**194**		**Pb**	**20 16 58.9**	**-1.6**
GEVA	**Gevas**	**0.35**	**194**	P	**Pb**	**20 16 59.3**	**-1.2**
GEVA				S	**Sb**	**20 17 04.2**	**-1.9**
AKDM	**Akdamar-Van**	**0.36**	**204**	Pg	**Pb**	**20 16 59.3**	**-1.3**
AKDM				Sg	**Sb**	**20 17 07.3**	**+1.0**
ADCV	**BITLIS_Adilcev**	**0.38**	**294**	P	**Pg**	**20 16 59.6**	**0.0**
ADCV				S	**Sg**	**20 17 04.8**	**0.0**
ERCV	**ERCIS-VAN**	**0.39**	**20**	Pg	**Pg**	**20 16 58.3**	**-1.5**
ERCV				Sg	**Sg**	**20 17 04.3**	**-0.7**
ERCV	**ERCIS-VAN**	**0.39**	**20**	P	**Pg**	**20 16 58.2**	**-1.6**
ERCV				S	**Sg**	**20 17 03.9**	**-1.1**
VMUR	**Van-Muradiye**	**0.46**	**44**	P	**Pg**	**20 17 00.1**	**-1.0**
VMUR				S	**Sg**	**20 17 06.7**	**-0.6**
OZAP	**Van, Ozalp-Mer**	**0.65**	**89**	P	**Pg**	**20 17 04.1**	**-0.5**
MLAZ	**Malazgirt-MUS**	**0.68**	**315**	Pg	**Pg**	**20 17 04.8**	**-0.5**
MLAZ				Sg	**Sg**	**20 17 14.7**	**+0.4**
DORK	**Agr/Tutak/Do**	**0.79**	**338**	P	**Pg**	**20 17 05.8**	**-1.6**
DORK				S	**Sg**	**20 17 14.6**	**-3.1**
BLIS	**Bitlis-Merkez**	**0.86**	**254**	P	**Pg**	**20 17 08.2**	**-0.5**
BLIS				S	**Sb**	**20 17 19.8**	**-0.8**
PERV	**Siirt/Pervari-**	**0.86**	**215**	P	**Pb**	**20 17 08.5**	**-0.7**
GURO	**Guroymak-BITLI**	**0.90**	**264**		**Pg**	**20 17 08.1**	**-1.2**
GURO					**Sb**	**20 17 21.4**	**-0.3**
GURO	**Guroymak-BITLI**	**0.90**	**264**	Pg	**Pg**	**20 17 08.9**	**-0.5**
AGRB	**Hanur-Agry**	**0.93**	**352**	Pg	**Pg**	**20 17 08.2**	**-1.8**
AGRB				Sg	**Sg**	**20 17 21.6**	**-0.5**
DYDN	**Diyadin**	**0.97**	**24**	P	**Pg**	**20 17 08.2**	**-2.6**
KOTA	**Agri, Merkez-K**	**1.14**	**2**	P	**Pg**	**20 17 11.9**	**-2.2**
KOTA				S	**Sg**	**20 17 27.6**	**-1.4**
SRTM	**Siirt_Merkez**	**1.18**	**236**	P	**Pn**	**20 17 14.8**	**+0.2**
SRTM				S	**Sn**	**20 17 32.1**	**+1.4**
MUSM	**Mu-Merkez**	**1.30**	**273**	P	**Pg**	**20 17 15.2**	**-1.8**
MUSM				S	**Sg**	**20 17 30.0**	**-3.8**
SIRN	**Sırnak**	**1.30**	**207**	P	**Pn**	**20 17 10.4**	**+0.7**
IGDI	**IGDIR**	**1.40**	**30**	P	**Pn**	**20 17 16.4**	**-1.2**
IGDI				S	**Sb**	**20 17 35.2**	**-0.9**
VRTB	**Varto-Mus**	**1.43**	**291**	Pn	**Pb**	**20 17 19.2**	**+0.4**
VRTB				Sn	**Sn**	**20 17 39.5**	**+2.7**
VRTB	**Varto-Mus**	**1.43**	**291**	P	**Pb**	**20 17 19.1**	**+0.4**
VRTB				S	**Sb**	**20 17 37.3**	**+0.3**
CUKT	**Cukurca**	**1.45**	**166**	P	**Pb**	**20 17 18.1**	**-1.0**
CUKT				S	**Sn**	**20 17 38.3**	**+0.9**
VNNZ	**Vanand**	**1.53**	**19**	*eP*	**Pn**	**20 17 19.2**	**-0.2**
VNNZ				*eS*	**Sn**	**20 17 40.1**	**+0.8**
METS	**Metsamor**	**1.65**	**25**	*eP*	**Pn**	**20 17 21.6**	**+0.6**
METS				*eS*	**Sn**	**20 17 44.3**	**+2.1**
BTMN	**Batman**	**1.68**	**243**	P	**Pb**	**20 17 22.7**	**-0.3**
BTMN				S	**Sg**	**20 17 44.3**	**-1.8**
HOMI	**Horasan**	**1.70**	**325**	P	**Pn**	**20 17 22.1**	**+0.3**
HOMI				S	**Sn**	**20 17 44.2**	**+0.6**
SLHN	**Bingol, Solhan**	**1.70**	**281**	P	**Pn**	**20 17 22.8**	**+1.0**
SLHN				S	**Sb**	**20 17 45.9**	**+1.0**
DIGO	**Kars**	**1.76**	**5**	P	**Pn**	**20 17 23.2**	**+0.5**
ARUZ	**Aruch**	**1.77**	**23**	*eP*	**Pn**	**20 17 23.1**	**+0.3**
ARUZ				*eS*	**Sn**	**20 17 46.8**	**+1.5**
KARO	**Karliova-Bingo**	**1.77**	**292**	Pn	**Pn**	**20 17 23.5**	**+0.7**
KARO				Sn	**Sn**	**20 17 47.5**	**+2.0**
ERZM	**Erzurum**	**1.87**	**312**	P	**Pn**	**20 17 25.5**	**+1.3**
MIDY	**Mardin/Midyat-**	**1.87**	**229**	P	**Pb**	**20 17 25.1**	**-1.2**
MIDY				S	**Sb**	**20 17 49.1**	**-0.7**
NAX	**Nakhchivan**	**1.89**	**73**	P	**Pb**	**20 17 27.2**	**+0.6**
AMBZ	**Amberd**	**1.92**	**26**	*eP*	**Pn**	**20 17 25.0**	**+0.1**
AMBZ				*eS*	**Sn**	**20 17 50.2**	**+1.0**
EDAM	**Erzurum-Paland**	**1.92**	**311**	Pn	**Pn**	**20 17 25.9**	**+1.0**
GNI	**Garni** 30nm,0.3s,baz=257,slow=3.4,SNR=118	**1.93**	**39**	Pn	**Pn**	**20 17 25.4**	**+0.5**
GNI	28nm,0.3s,baz=8.2,slow=22,SNR=9.8			Sn	**Sn**	**20 17 51.7**	**+2.6**
GNI	**Garni**	**1.93**	**39**		**Pn**	**20 17 25.2**	**+0.3**
GNI	**Garni**	**1.93**	**39**	Pn	**Pn**	**20 17 25.6**	**+0.7**
GNI	**Garni**	**1.93**	**39**	*eP*	**Pn**	**20 17 24.9**	**+0.1**
GNI				*eS*	**Sn**	**20 17 50.0**	**+0.9**
GNI	**Garni**	**1.93**	**39**	*i P*	**Pn**	**20 17 25.0**	**+0.1**
BOZK	**Kars-Merkez-Bo**	**1.94**	**356**	P	**Pn**	**20 17 25.6**	**+0.6**
ECAT	**Cat-ERZURUM**	**1.95**	**300**	P	**Pn**	**20 17 26.3**	**+1.0**
KARS	**Kars**	**1.97**	**358**		**Pn**	**20 17 25.8**	**+0.3**
KARS	**Kars**	**1.97**	**358**	Pn	**Pn**	**20 17 26.2**	**+0.7**
KARS	**Kars**	**1.97**	**358**	P	**Pn**	**20 17 25.8**	**+0.3**
BNGB	**Bingl**	**1.97**	**281**	Pn	**Pn**	**20 17 26.2**	**+0.7**
SENK	**Senkaya-Erzuru**	**2.00**

comp=Z,240nm,10.0s
SOC Sochi 5.57 333 *e*P **Pn** **20 18 18.0 +3.2**
SOC *e* 20 19 22.3
SOC MLR MLR
comp=Z,122nm,10.0s
BNN Bunyan 5.73 274 Pn Pn 20 18 17.0 -0.1
BR131 Keskin Array S 7.48 281 Pn **Pn** 20 18 43.3 +2.2
BR131 Keskin Array S 7.48 281 *i* P Pn 20 18 46.2 +5.1
BRTR Keskin Array B 7.48 281 Pn **Pn** **20 18 45.9 +4.8**
comp=Z,0.4nm,0.5s,baz=107,slow=12,SNR=3.9
BRTR LR LR 20 22 29.5
comp=Z,69nm,21.6s,baz=333,slow=44
ASF Jabal al Asfar 8.25 220 Pn **Pn** **20 18 55.4 +3.7**
comp=Z,0.4nm,0.3s,baz=165,slow=6.7,SNR=4.6
ASF Lg Lg 20 21 18.3
comp=Z,0.4nm,0.3s,baz=188,slow=20,SNR=4.2
comp=Z,1.3nm,0.6s
MMAI Mount Meron Ar 8.45 231 Pn **Pn** **20 18 58.6 +4.1**
comp=Z,0.9nm,0.3s,baz=43,slow=15,SNR=4.6
MMAI Lg Lg 20 21 23.4
comp=Z,0.6nm,0.3s,baz=96,slow=24,SNR=3.9
comp=Z,0.8nm,0.5s
EIL Elat 11.25 220 Lg Lg 20 22 53.8
comp=Z,0.2nm,0.3s,baz=57,slow=21,SNR=1.4
EIL LR LR 20 24 36.5
comp=Z,129nm,18.5s,baz=54,slow=41
GHRR 13.79 307 P **Pn** **20 20 11.6 +4.3**
SORM Soroca 14.32 316 ⇑P **P** **20 20 20.2 -1.5**
SORM Soroca 14.32 316 ⇑P **P** **20 20 20.2 -1.5**
MLR Muntele Rosu 14.48 304 Pn **P** **20 20 22.9 -0.9**
comp=Z,0.1nm,0.3s,baz=136,slow=11,SNR=3.1
comp=Z,0.9nm,0.8s
MLR Muntele Rosu 14.48 304 ⇑P P 20 20 30.5 +6.8
DOPR Dopca 15.03 305 ⇑P **P** **20 20 32.5 +2.9**
VOIR 15.05 303 ⇓P **P** **20 20 33.9 +3.9**
VOIR 15.05 303 ⇓P **P** **20 20 33.9 +3.9**
RAYN Ar Rayn 15.22 172 Pn **Pn** **20 20 21.6 -5.4**
RAYN IAmb IAmb 20 20 32.1
comp=Z,2.6nm,0.6s
RAYN Ar Rayn 15.22 172 P **Pn** **20 20 23.0 -3.9**
ARR Arges 15.30 302 ⇑P **P** **20 20 35.4 +2.6**
AKASG Malin Array Be 15.57 325 Pn **Pn** **20 20 32.3 +1.1**
comp=Z,0.3nm,0.3s,baz=134,slow=11,SNR=6.7
comp=Z,0.1nm,0.3s
AKBB Malin Array Si 15.57 325 Pn **Pn** **20 20 28.9 -2.3**
AKBB IAmb IAmb 20 20 45.7
comp=Z,16nm,1.2s
AKBB Malin Array Si 15.57 325 *i* P **P** **20 20 36.0 +0.4**
KIEV Kiev 15.57 325 Pn **Pn** **20 20 28.6 -2.7**
KIEV IAmb IAmb 20 20 45.7
comp=Z,16nm,1.3s
KIEV Kiev 15.57 325 P **Pn** **20 20 28.6 -2.7**
KIEV pmax pmax
comp=Z,16nm,1.3s
LUBAR Lubar, Ukraine 15.73 321 P **P** **20 20 38.6 +1.2**
AKTO Aktyubinsk 15.80 37 Pn **Pn** **20 20 31.9 -2.4**
comp=Z,0.2nm,0.3s,baz=234,slow=12,SNR=7.2
AKTO LR LR 20 29 04.5
comp=Z,176nm,18.8s,baz=253,slow=47
comp=Z,1.0nm,0.6s
BURAR Bucovina Array 15.84 310 **Pn** **20 20 32.7 -2.2**
BURAR Bucovina Array 15.84 310 ⇑P **P** **20 20 41.5 +2.8**
BURAR Bucovina Array 15.84 310 ⇑P **P** **20 20 41.5 +2.8**
LOT Lotru 15.91 301 ⇓P **P** **20 20 42.3 +2.7**
HRA Herat 15.91 100 **P** **20 20 39.0 -0.8**
HORU Horodok 15.99 317 P **P** **20 20 40.1 -0.2**
HORU pP **sP** **20 20 43.9 -1.7**
MI29 MI29, Kamyanyy 16.01 322 P **P** **20 20 41.9 +1.4**
comp=Z,147nm,1.6s
AB31 Akbulak array 16.03 43 Pn **Pn** **20 20 33.3 -4.0**
ABKAR Akbulak array 16.03 43 Pn **Pn** **20 20 34.1 -3.2**
KSV Kosov 16.27 312 P **P** **20 20 44.0 +0.6**
GZR Gura Zlata 16.56 301 ⇓P **Pn** **20 20 43.7 -0.4**
GZR Gura Zlata 16.56 301 ⇓P **Pn** **20 20 43.7 -0.4**
MARR Marisel-Cluj 16.75 305 ⇓P **P** **20 20 55.6 +6.8**
BOVS Bovan 16.90 294 ⇑P **P** **20 20 54.3 +3.9**
DRGR 17.05 305 ⇑P **Pn** **20 20 49.9 -0.5**
DRGR 17.05 305 ⇑P **Pn** **20 20 49.9 -0.5**
MDVR Moldovita 17.12 298 ⇓P **P** **20 20 55.3 +2.4**
RNPP2 Kostyukhnivka 17.54 322 P **P** **20 21 00.6 +3.1**
RNPP9 Sopachiv 17.60 322 P **P** **20 21 01.7 +3.6**
RNPP9 pP **sP** **20 21 04.5 +1.1**
MORH Mrgy, Hungar 19.56 301 ⇑P **Pn** **20 21 21.3 +0.3**
ARTI Arti 20.42 25 P **P** **20 21 28.5 -0.4**
comp=Z,4.5nm,1.0s,baz=226,slow=6.9,SNR=4.7
comp=Z,4.5nm,1.0s
ARTI Arti 20.42 25 IAmb IAmb 20 21 33.4
comp=Z,5.2nm,0.7s
MPLH Magyarpolny 20.54 303 P **P** **20 21 32.2 +1.9**
MPLH pP Pn 20 21 37.1 +4.6
MODS Modra-Piesok 21.05 306 *e*P **P** **20 21 41.4 +5.5**
MODS Modra-Piesok 21.05 306 *e*P **P** **20 21 41.4 +5.5**
KK31 Karatay Array 21.11 69 P **P** **20 21 35.5 -1.1**
KK31 IAmb IAmb 20 21 41.9
comp=Z,6.5nm,0.8s
KK31 Karatay Array 21.11 69 P **P** **20 21 35.5 -1.1**
KK31 pmax pmax
comp=Z,7.0nm,0.8s
KKAR Karatay Array 21.11 69 **P** **20 21 35.7 -0.8**
KKAR Karatay Array 21.11 69 P **P** **20 21 35.7 -0.8**
KBL Kabul 21.15 93 P **P** **20 21 36.1 -1.2**
KBL IAmb IAmb 20 21 40.0
comp=Z,8.7nm,1.1s
KBL Kabul 21.15 93 P **P** **20 21 36.1 -1.2**
KBL pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 22.34 355 *e*P **P** **20 21 53.0 +3.5**
KLMR pmax pmax
comp=Z,25nm,1.7s
ARSB Arslanbob 22.95 74 IAmb IAmb 20 22 11.2
comp=Z,10nm,1.4s
NRCA Norcia 23.09 290 P **P** **20 21 57.3 -0.4**
NRCA IAmb IAmb 20 22 07.9
comp=Z,9.8nm,1.3s
BORK Borovoye 23.58 44 P **P** **20 22 01.4 -1.1**
BORK Borovoye 23.58 44 *ce*P **P** **20 21 59.9 -2.5**
BORK pmax pmax
comp=Z,19nm,3.5s
BVAR Borovoye Array 23.60 44 P **P** **20 22 01.9 -0.8**
comp=Z,1.1nm,0.7s,baz=254,slow=9.1,SNR=7.0
comp=Z,1.1nm,0.7s
TEOL Teolo 24.24 296 P **P** **20 22 07.2 -1.7**
NIL Nilore 24.74 92 P **P** **20 22 13.0 -0.5**
NIL Nilore 24.74 92 P **P** **20 22 13.0 -0.5**
NIL pmax pmax
comp=Z,11nm,1.3s
KSH2 Kashi 25.15 79 P **P** **20 22 19.4 +2.1**
KSH2 pmax pmax
comp=Z,1.0nm,1.1s
KURBB Kurchatov Arra 27.59 53 P **P** **20 22 39.5 +0.4**
comp=Z,1.5nm,0.8s,baz=263,slow=9.1,SNR=15
comp=Z,1.5nm,0.8s
KURK Kurchatov 27.67 53 P **P** **20 22 40.8 +1.0**
KURK IAmb IAmb 20 22 41.0
comp=Z,2.4nm,0.9s
KURK Kurchatov 27.67 53 *ce*P **P** **20 22 41.0 +1.3**
KURK pmax pmax
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 29.62 61 *ce*P **P** **20 22 58.8 +1.6**
MKAR Makanchi Array 29.62 61 P **P** **20 22 56.3 -0.9**
comp=Z,0.6nm,0.8s,baz=280,slow=7.3,SNR=6.7
comp=Z,0.6nm,0.8s
MKAR Makanchi Array 29.62 61 *ce*P **P** **20 22 58.0 +0.8**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 32.05 48 P **P** **20 23 18.8 +0.3**
comp=Z,0.3nm,0.5s,baz=243,slow=6.3,SNR=1.8
comp=Z,0.3nm,0.5s
DGZ Jazzator, Alta 33.16 56 *i* P **P** **20 23 28.2 -0.3**
DGZ pmax pmax
comp=Z,8.0nm,3.0s
EKA Eskdalemuir Ar 34.97 314 P **P** **20 23 43.6 -0.3**
comp=Z,3.9nm,0.8s,baz=104,slow=8.3,SNR=6.2
comp=Z,3.9nm,0.8s
EVN Everest 37.70 93 P **P** **20 24 08.5 +0.2**
KMBO Kilima Mbogo 39.96 189 *i* P P 20 24 32.4 +5.6
KMBO pmax pmax
comp=Z,18nm,0.4s
LSA Lhasa 40.30 88 **P** **20 24 30.2 +0.3**
LSA IAmb IAmb 20 24 31.4
comp=Z,2.2nm,0.8s
LSA Lhasa 40.30 88 P **P** **20 24 30.2 +0.3**
LSA pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 52.14 96 P **P** **20 26 01.9 -0.8**

comp=Z,1.6nm,0.8s,baz=298,slow=8.0,SNR=14
comp=Z,1.6nm,0.8s
KSRS Korea Array 64.30 62 P **P** **20 27 26.0 -1.4**
comp=Z,1.1nm,0.6s,baz=303,slow=7.3,SNR=2.6
comp=Z,1.1nm,0.6s
KSRS Korea Array 64.30 62 P **P** **20 27 26.0 -1.4**
G29M Pine Creek 74.75 0 P **P** **20 28 31.9 +0.4**
YKA Yellowknife Ar 77.61 350 P **P** **20 28 48.2 +0.3**
comp=Z,0.3nm,0.9s,baz=15,slow=5.4,SNR=5.4
comp=Z,0.3nm,0.9s
YKA Yellowknife Ar 77.61 350 *ce*P **P** **20 28 52.4 +4.6**

*IDC **17**20:17:48.3±1.9,59.˝74S×25.˝78W,h0km,mb3.7/1, mbtmp3.7/1,MS3.4/1,Error ellipse: s-maj=108.5km s-min=78.0km az=137.0*
ISC 17 20:17:53.5±1.4,**60.°2S**±0.°2×**24.°8W**±0.°5,**h35**km,**n14, σ2s88/10,3C-3D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.46**	**154**	⇑P	**Pn**		**20 20 50.6**	**+2.7**
	comp=Z,12nm,0.3s							
VNA3	**Neumayer Olymp**	**12.63**	**157**	⇑P	**Pn**		**20 20 53.2**	**+2.8**
	comp=Z,5.6nm,0.2s							
VNA3				⇓S	**Sn**		**20 23 05.6**	**-3.9**
	comp=N,1.7nm,0.3s							
VNA2	**Neumayer--Watz**	**12.86**	**154**	⇑P	**Pn**		**20 20 56.1**	**+2.7**
	comp=Z,3.5nm,0.2s,baz=315,slow=15							
VNA2				⇓S	**Sn**		**20 23 12.4**	**-2.6**
	comp=E,1.2nm,0.4s,baz=316,slow=17							
SNAA	**Sanae**	**14.43**	**152**	⇓P	**Pn**		**20 21 18.3**	**+3.4**
	comp=Z,145nm,0.4s							
PLCA	**Paso Flores**	**34.10**	**284**	LR	LR		20 37 01.6	
	comp=Z,58nm,18.7s,baz=92,slow=34							
H10S2	**ASCENSION HYDR**	**51.73**	**13**	T	T		21 22 58.1	
	baz=185,slow=74,SNR=122							
H10S3	**ASCENSION HYDR**	**51.74**	**13**	T	T		21 23 00.3	
	baz=35,slow=74,SNR=181							
H10N1	**ASCENSION HYDR**	**52.85**	**13**	T	T		21 24 23.4	
	baz=182,slow=72,SNR=21							
H10N3	**ASCENSION HYDR**	**52.85**	**13**	T	T		21 24 26.7	
	baz=182,slow=72,SNR=37							
H10N2	**ASCENSION HYDR**	**52.87**	**13**	T	T		21 24 26.4	
	baz=182,slow=72,SNR=28							
TORD	**Torodi Ar. Bea**	**76.17**	**27**	P	**P**		**20 29 36.8**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=204,slow=7.0,SNR=4.3							
	comp=Z,0.6nm,0.8s							
YKA	**Yellowknife Ar**	**140.05**	**314**	PKP	**PKPdf**		**20 37 16.1**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=126,slow=2.0,SNR=4.9							
SONM	**Songino Array**	**149.54**	**92**	PKPbc	**PKiKP**		**20 37 39.3**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=244,slow=1.2,SNR=4.9							
ILAR	**Eielson Array**	**153.70**	**305**	PKPbc	**PKPbc**		**20 37 45.8**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=125,slow=1.4,SNR=8.5							

*ISK **17**20:18:58.0,38.˝71N×43.˝16E,h5km,ML3.5/7*
*AFAD **17**20:18:58.6,38.˝70N×43.˝19E,h8km±3km,MW3.7*
*NSSP **17**20:19:00.9,38.˝85N×43.˝43E,h10km,Ms3.2*
ISC 17 20:18:59.3±0.8,**38.°70N**±0.°02×**43.°18E**±0.°02,**h17**km±6km, **n58,σ1s10/83,2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VANB	**Van**	**0.20**	**123**	Pg	**Pg**		**20 19 05.3**	**+1.2**
VANB				Sg	**Sg**		**20 19 09.8**	**+2.4**
TVAN	**Van**	**0.25**	**134**	P	**Pg**		**20 19 03.8**	**-1.3**
TVAN				S	**Sg**		**20 19 07.2**	**-1.7**
ERCV	**ERCIS-VAN**	**0.34**	**21**	Pg	**Pg**		**20 19 05.6**	**-0.9**
ERCV	**ERCIS-VAN**	**0.34**	**21**	P	**Pg**		**20 19 05.2**	**-1.3**
ADCV	**BITLIS_Adilcev**	**0.37**	**287**	P	**Pg**		**20 19 06.9**	**-0.1**
GEVA	**Gevas**	**0.40**	**194**	P	**Pg**		**20 19 06.4**	**-1.2**
AKDM	**Akdamar-Van**	**0.41**	**203**	Pg	**Pg**		**20 19 06.6**	**-1.0**
AKDM				Sg	**Sb**		**20 19 14.0**	**-0.1**
VMUR	**Van-Muradiye**	**0.42**	**47**	P	**Pg**		**20 19 07.1**	**-0.8**
VMUR				S	**Sb**		**20 19 13.7**	**-0.9**
OZAP	**Van, Ozalp-Mer**	**0.64**	**93**	P	**Pb**		**20 19 12.3**	**+0.2**
OZAP				S	**Sg**		**20 19 19.8**	**-0.7**
MLAZ	**Malazgirt-MUS**	**0.66**	**312**	Pg	**Pg**		**20 19 11.8**	**-0.5**
MLAZ				Sg	**Sb**		**20 19 22.0**	**+0.6**
DORK	**Agr/Tutak/Do**	**0.75**	**336**	P	**Pg**		**20 19 12.9**	**-1.1**
DORK				S	**Sg**		**20 19 22.7**	**-1.3**
BLIS	**Bitlis-Merkez**	**0.88**	**251**	P	**Pg**		**20 19 15.3**	**-1.2**
BLIS				S	**Sg**		**20 19 26.9**	**-1.2**
AGRB	**Hanur-Agry**	**0.88**	**351**	Pg	**Pg**		**20 19 15.4**	**-1.1**
PERV	**Siirt/Pervari-**	**0.91**	**214**	P	**Pn**		**20 19 17.6**	**+0.1**
PERV				S	**Sn**		**20 19 30.0**	**-0.2**
GURO	**Guroymak-BITLI**	**0.91**	**261**	Pg	**Pg**		**20 19 16.1**	**-1.1**
DYDN	**Diyadin**	**0.93**	**25**	P	**Pg**		**20 19 16.1**	**-1.3**
DYDN				S	**Sg**		**20 19 27.6**	**-2.0**
KOTA	**Agri, Merkez-K**	**1.10**	**1**	P	**Pg**		**20 19 19.1**	**-1.5**
KOTA				S	**Sb**		**20 19 34.9**	**+0.7**
SRTM	**Siirt_Merkez**	**1.22**	**235**	P	**Pn**		**20 19 23.3**	**+1.6**
MUSM	**Mu-Merkez**	**1.30**	**271**	P	**Pn**		**20 19 22.5**	**-0.4**
MUSM				S	**Sb**		**20 19 37.6**	**-2.4**
SIRN	**Sırnak**	**1.35**	**207**	P	**Pg**		**20 19 25.0**	**-0.3**
IGDI	**IGDIR**	**1.36**	**31**	P	**Pn**		**20 19 24.1**	**+0.5**
VRTB	**Varto-Mus**	**1.42**	**289**	Pn	**Pg**		**20 19 26.2**	**-0.4**
VRTB	**Varto-Mus**	**1.42**	**289**	P	**Pg**		**20 19 26.2**	**-0.4**
VNNZ	**Vanand**	**1.48**	**19**	*e*P	**Pb**		**20 19 26.5**	**0.0**
VNNZ				*e*S	**Sn**		**20 19 45.2**	**+0.8**
CUKT	**Cukurca**	**1.49**	**167**	Pn	**Pg**		**20 19 27.7**	**-0.3**
CUKT				Sn	**Sg**		**20 19 48.2**	**+0.7**
CUKT	**Cukurca**	**1.49**	**167**	P	**Pn**		**20 19 25.7**	**+0.2**
METS	**Metsamor**	**1.60**	**26**	*e*P	**Pb**		**20 19 29.9**	**+0.3**
METS				*e*S	**Sb**		**20 19 49.4**	**+0.8**
HOMI	**Horasan**	**1.66**	**324**	P	**Pb**		**20 19 30.1**	**+0.4**
SLHN	**Bingol, Solhan**	**1.70**	**279**	P	**Pb**		**20 19 30.8**	**+0.5**
BTMN	**Batman**	**1.71**	**242**	P	**Pg**		**20 19 31.1**	**-1.0**
DIGO	**Kars**	**1.72**	**5**	P	**Pb**		**20 19 30.7**	**+0.2**
ARUZ	**Aruch**	**1.73**	**24**	*e*P	**Pb**		**20 19 30.3**	**-0.4**
ARUZ				*e*S	**Sn**		**20 19 51.8**	**+1.3**
KARO	**Karliova-Bingo**	**1.77**	**291**	Pn	**Pb**		**20 19 30.8**	**-0.6**
ERZM	**Erzurum**	**1.85**	**311**	P	**Pb**		**20 19 33.6**	**+0.7**
AMBZ	**Amberd**	**1.88**	**26**	*e*P	**Pb**		**20 19 33.2**	**-0.1**
AMBZ				*e*S	**Sb**		**20 19 56.8**	**+0.1**
GNI	**Garni**	**1.89**	**39**	Pn	**Pb**		**20 19 32.9**	**-0.5**
GNI	**Garni**	**1.89**	**39**	*e*P	**Pb**		**20 19 33.6**	**+0.3**
GNI				*e*S	**Sb**		**20 19 57.5**	**+0.8**
BOZK	**Kars-Merkez-Bo**	**1.89**	**355**	P	**Pn**		**20 19 32.3**	**+1.2**
MIDY	**Mardin/Midyat-**	**1.91**	**228**	P	**Pb**		**20 19 33.8**	**+0.1**
KARS	**Kars**	**1.92**	**358**	Pn	**Pb**		**20 19 33.2**	**-0.8**
ECAT	**Cat-ERZURUM**	**1.94**	**298**	P	**Pg**		**20 19 35.5**	**-1.0**
SENK	**Senkaya-Erzuru**	**1.96**	**341**	Pn	**Pb**		**20 19 33.9**	**-0.8**
BNGB	**Bingl**	**1.97**	**279**	Pn	**Pn**		**20 19 33.7**	**+1.6**
AKDA	**Akdag**	**1.98**	**315**	P	**Pb**		**20 19 35.8**	**+0.7**
KAPZ	**Kaputan**	**2.00**	**36**	*e*P	**Pb**		**20 19 34.3**	**-1.0**
KAPZ				*e*S	**Sn**		**20 19 58.7**	**+1.4**
EAK	**Akyaka**	**2.01**	**9**	P	**Pg**		**20 19 37.0**	**-0.9**
VAYK	**Vayk**	**2.01**	**60**	⇓*e*S	**Sg**		**20 20 01.8**	**-2.1**
VAYK				⇓*e*P	**Pb**		**20 19 35.6**	**+0.1**
EOLT	**Oltu**	**2.06**	**334**	P	**Pb**		**20 19 37.2**	**+0.8**
GOLE	**Ardahan-G¶le**	**2.18**	**348**	P	**Pb**		**20 19 39.0**	**+0.6**
KRIK	**Erzurum-spir**	**2.39**	**314**	P	**Pb**		**20 19 43.0**	**+1.0**
DDEM	**Demirkent**	**2.45**	**334**	P	**Pb**		**20 19 44.1**	**+1.2**
AYRK	**Ayrk**	**2.46**	**54**	*e*S	**Sb**		**20 20 13.1**	**-0.4**
AYRK				*e*P	**Pb**		**20 19 42.6**	**-0.8**
ALVK	**Alvank**	**2.49**	**84**	*e*S	**Sn**		**20 20 06.8**	**-2.4**
ALVK				*e*P	**Pn**		**20 19 39.0**	**-0.1**
AHAN	**Ardahan-Merkez**	**2.50**	**350**	P	**Pg**		**20 19 46.0**	**-1.2**
SRTK	**Saratovka**	**2.52**	**20**	*e*S	**Sn**		**20 20 11.8**	**+1.8**
SRTK				*e*P	**Pn**		**20 19 41.8**	**+2.2**
DBAD	**Bademkaya**	**2.58**	**334**	P	**Pb**		**20 19 46.2**	**+1.1**
EGVZ	**Egvard**	**2.67**	**78**	*e*S	**Sn**		**20 20 14.2**	**+0.4**
EGVZ				*e*P	**Pn**		**20 19 43.2**	**+1.5**
LSVT	**Lusahovit**	**2.70**	**34**	*e*S	**Sn**		**20 20 15.8**	**+1.4**
LSVT				*e*P	**Pn**		**20 19 44.1**	**+2.1**

*IDC **17**20:48:51.0±1.1,6.˝34S×143.˝17E,h0km,mb3.8/7, mbtmp3.9/10,ML3.9/2,MS3.4/6,Error ellipse: s-maj=23.3km s-min=16.4km az=110.0*
*NEIC **17**20:48:51.8±2.5,6.˝36S±0.˝05×143.˝38E±0.˝08,h10km±1km, mb4.5/8,Error ellipse: s-maj=14.2km s-min=8.1km az=101.0*
ISC 17 20:48:54.4±0.7,**6.°54S**±0.°06×**143.°19E**±0.°07,**h35**km,**n29, σ2s51/26,mb3.9/7,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.70**	**328**	Pn	**Pn**		**20 50 01.3**	**-1.6**
	6.8nm,0.3s,baz=133,slow=19,SNR=11							
JAY				Sn	**Sn**		**20 50 55.1**	**-1.2**
	2.9nm,0.3s,baz=120,slow=20,SNR=2.0							
JAY				LR	LR		20 52 13.0	
	comp=Z,212nm,19.1s,baz=16,slow=45							
	23nm,0.5s							
PMG	**Port Moresby**	**4.85**	**126**	Pn	**Pn**		**20 50 06.5**	**+1.5**
	6.8nm,0.3s,baz=355,slow=7.9,SNR=5.3							
PMG				Sn	**Sn**		**20 50 58.2**	**-1.8**
	4.3nm,0.3s,baz=253,slow=19,SNR=6.2							
PMG	**Port Moresby**	**4.85**	**126**		**Pn**		**20 50 04.4**	**-0.5**
COEN	**Coen**	**7.37**	**180**		**Pn**		**20 50 42.0**	**+2.4**
FAKI	**Fak Fak**	**11.48**	**288**	Pn	**Pn**		**20 51 33.5**	**-2.4**
SIJI	**Sorong**	**13.16**	**295**	LR	LR		20 57 46.0	
	comp=Z,105nm,19.9s,baz=122,slow=41							
MTN	**Manton Dam**	**13.43**	**241**	Pn	**Pn**		**20 52 00.8**	**-1.8**
CTA	**Charters Tower**	**13.79**	**168**	Lg	Lg		20 56 22.5	
	0.2nm,0.3s,baz=241,slow=11,SNR=4.7							
WRAB	**Tennant Creek**	**15.84**	**212**		**Pn**		**20 52 34.3**	**-0.6**
KNRA	**Kununurra**	**16.81**	**236**		**Pn**		**20 52 45.0**	**-2.2**
KNRA				IAmb	IAmb		20 53 01.0	
	comp=Z,13nm,0.8s							
SOEI	**Soe**	**19.00**	**259**		**Pn**		**20 53 15.2**	**+0.9**
SOEI				IAmb	IAmb		20 53 35.2	
	comp=Z,22nm,0.8s							
AS31	**Alice Springs**	**19.23**	**207**	P	**Pn**		**20 53 18.6**	**+1.7**
ASAR	**Alice Springs**	**19.23**	**207**	P	**Pn**		**20 53 19.3**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=33,slow=9.8,SNR=51							
ASAR				S	**S**		**20 56 44.2**	**-7.6**
	comp=Z,0.5nm,0.7s,baz=20,slow=28,SNR=1.9							
ASAR				Lg	Lg		20 59 01.8	
	comp=Z,0.1nm,0.3s,baz=35,slow=29,SNR=4.5							
ASAR				LR	LR		21 00 18.3	
	comp=Z,94nm,18.2s,baz=30,slow=35							
	comp=Z,6.2nm,0.7s							
ASAR	**Alice Springs**	**19.23**	**207**	P	**Pn**		**20 53 19.1**	**+2.2**
BATI	**Baumata**	**19.66**	**258**	LR	LR		21 01 18.4	
	comp=Z,177nm,18.8s,baz=97,slow=38							
PATS	**Pohnpei**	**20.10**	**49**	P	**P**		**20 53 22.0**	**-3.2**
FITZ	**Fitzroy Crossi**	**20.62**	**235**	P	**P**		**20 53 32.0**	**+1.2**
	comp=Z,3.2nm,0.5s,baz=66,slow=7.9,SNR=9.0							
FITZ				S	Sn		20 57 27.0	+2.0
	comp=Z,5.5nm,0.8s,baz=82,slow=7.0,SNR=3.4							
FITZ				Lg	Lg		20 59 40.1	
	comp=Z,0.3nm,0.3s,baz=336,slow=22,SNR=5.6							
	comp=Z,3.2nm,0.5s							
KAPI	**Kappang**	**23.37**	**272**	LR	LR		21 05 47.7	
	comp=Z,54nm,18.8s,baz=80,slow=44							
STKA	**Stephens Creek**	**25.25**	**183**	P	**P**		**20 54 20.8**	**+3.4**
	comp=Z,1.5nm,0.8s,baz=339,slow=11,SNR=1.3							
	comp=Z,1.5nm,0.8s							
STKA	**Stephens Creek**	**25.25**	**183**	P	**P**		**20 54 16.3**	**-1.0**
STKA				IAmb	IAmb		20 54 58.6	
	comp=Z,90nm,1.4s							
CMAR	**Chiang Mai Arr**	**50.21**	**300**	P	**P**		**20 57 49.6**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=116,slow=8.0,SNR=1.5							
	comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**75.53**	**322**	P	**P**		**21 00 35.1**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=106,slow=7.0,SNR=11							
	comp=Z,0.3nm,0.7s							
KURK	**Kurchatov**	**79.40**	**324**	P	**P**		**21 00 58.6**	**+1.7**
KURK	**Kurchatov**	**79.40**	**324**	IAmb	IAmb		21 01 18.8	
	comp=Z,1.9nm,1.1s							
KURBB	**Kurchatov Arra**	**79.42**	**324**	P	**P**		**21 00 58.6**	**+1.6**
	comp=Z,0.2nm,0.2s,baz=121,slow=4.4,SNR=4.4							
	comp=Z,0.2nm,0.2s							
R16K	**Pilot Point**	**79.71**	**28**	P	**P**		**21 00 57.8**	**-0.5**
MAW	**Mawson**	**80.30**	**203**	LR	LR		21 34 45.6	
	comp=Z,117nm,18.1s,baz=131,slow=34							
BVAR	**Borovoye Array**	**84.99**	**325**	P	**P**		**21 01 28.0**	**+1.9**
	comp=Z,1.2nm,0.7s,baz=110,slow=6.3,SNR=4.9							
	comp=Z,1.2nm,0.7s							
ILAR	**Eielson Array**	**87.48**	**24**	P	**P**		**21 01 39.7**	**+1.6**
	comp=Z,0.6nm,0.9s,baz=244,slow=5.5,SNR=4.8							
	comp=Z,0.6nm,0.9s							

*IDC **17**20:53:08.4±1.8,26.˝47S×27.˝33E,h0km,mb3.8/2, mbtmp4.0/6,ML3.2/3,Error ellipse: s-maj=23.5km s-min=14.5km az=97.0*
*BUL **17**20:53:09.4±2.1,26.˝67S×27.˝97E,h10km,MD3.8, Presumed earthquake*
*BGSI **17**20:53:10.3±1.6,26.˝52S×27.˝48E,h0km±41km,ML3.7*
*NEIC **17**20:53:10.3±1.3,26.˝49S±0.˝02×27.˝3E±0.˝1,h5km±2km, mb_Lg3.5/5,Error ellipse: s-maj=21.4km s-min=3.1km az=85.0*
ISC 17 20:53:10.6±2.6,**26.°45S**±0.°05×**27.°44E**±0.°07,**h30**km±22km, **n43,σ2s19/57,South Africa**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.20**	**310**	Pg	**Pn**		**20 53 47.3**	**+2.2**
	95nm,0.3s,baz=136,slow=11,SNR=532							
LBTB				Lg	Lg		20 54 16.1	
	459nm,0.3s,baz=225,slow=16,SNR=92							
LBTB	**Lobatse**	**2.20**	**310**	P	**Pn**		**20 53 46.9**	**+1.7**
LBTB				Sn	**Sn**		**20 54 13.9**	**+2.5**
LBTB	**Lobatse**	**2.20**	**310**	P	**Pn**		**20 53 47.3**	**+2.2**
MAKGR	**Makgori**	**2.46**	**284**	*i* P	**Pn**		**20 53 50.1**	**+1.3**
MAKGR				*i* S	**Sn**		**20 54 21.0**	**+3.1**
MAKGR				IAML			20 54 26.7	
	comp=N,2µm,0.3s							
BOSA	**Boshof**	**2.90**	**222**	Pn	**Pn**		**20 53 56.2**	**+1.3**
	comp=N,3.9nm,0.3s,baz=46,slow=12,SNR=183							
BOSA				Sn	**Sn**		**20 54 30.5**	**+1.8**
	comp=N,7.4nm,0.3s,baz=76,slow=3.6,SNR=6.4							
BOSA				Lg	Lg		20 54 36.4	
	comp=N,54nm,0.3s,baz=322,slow=11,SNR=28							
	comp=N,8.7nm,0.3s							

comp=Z,37nm,0.8s
KSANE **Kasane** 8.87 346 *i* P **Pn** 20 55 17.3 +0.5
KSANE **Kasane** 8.87 346 P **Pn** 20 55 19.9 +3.0
WIN **Windhoek** 10.18 290 Pn **Pn** 20 55 35.6 +0.6
LSZ **Lusaka** 11.14 4 Pn **Pn** 20 55 48.3 +0.2
comp=Z,4.8nm,0.6s,baz=187,slow=12,SNR=20
LSZ Sn **Sn** 20 57 47.7 -4.1
comp=Z,0.4nm,0.3s,baz=87,slow=19,SNR=2.0
LSZ Lg Lg 20 58 52.4
comp=Z,0.7nm,0.3s,baz=260,slow=21,SNR=3.7
LSZ Lusaka 11.14 4 Pn **Pn** 20 55 47.8 -0.2
LSZ Lusaka 11.14 4 *i* P **Pn** 20 55 48.7 +0.6
LSZ *i* S **Sn** 20 57 45.0 -6.8
TSUM Tsumeb 11.60 306 Pn **Pn** 20 55 54.7 +0.3
comp=Z,1.0nm,0.3s,baz=124,slow=13,SNR=12
TSUM Sn **Sn** 20 57 56.7 -6.3
comp=Z,0.3nm,0.3s,baz=171,slow=11,SNR=2.1
TSUM Lg Lg 20 59 06.2
comp=Z,0.9nm,0.3s,baz=238,slow=20,SNR=5.9
comp=Z,3.4nm,0.4s
TSUM Tsumeb 11.60 306 *i* P **Pn** 20 55 55.9 +1.5
TSUM *i* S **Sn** 20 58 03.2 +0.2
TORD Torodi Ar. Bea 46.65 324 P **P** 21 01 38.0 +1.5
comp=Z,1.1nm,0.5s,baz=144,slow=7.7,SNR=14
comp=Z,1.1nm,0.5s
ESDC Sonseca Array 72.01 335 P **P** 21 04 33.9 +2.4
comp=Z,0.3nm,0.4s,baz=159,slow=6.0,SNR=4.9
comp=Z,0.3nm,0.4s

KRSC 17 20:58:07.1±1.2, **50°.12N**×**159°.16E, h59**km±30km, **MI3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.83**	**338**	*e*P	Pn	20 58 38.7	+2.5
KDTR				*e*S	Sn	20 59 00.8	+2.6
PAU	**Pauzhetka**	**2.01**	**313**	*e*P	Pn	20 58 41.5	+2.8
PAU				*e*S	Sn	20 59 05.6	+2.9
SKR	**Severo-Kuril's**	**2.03**	**287**	*e*P	Pn	20 58 40.8	+1.9
SKR				*e*S	Sn	20 59 04.7	+1.6
RUS	**Russkaya**	**2.36**	**350**	*e*P	Pn	20 58 45.7	+2.3
RUS				*e*S	Sn	20 59 13.0	+1.9
ASAK	**Asacha**	**2.40**	**341**	*e*P	Pn	20 58 47.2	+3.1
ASAK				*e*S	Sn	20 59 15.5	+3.1
MTVR	**Mutnovka**	**2.45**	**346**	*e*P	Pn	20 58 47.6	+2.8
MTVR				*e*S	Sn	20 59 16.4	+2.8
GRL	**Gorelyy**	**2.53**	**345**	*e*P	Pn	20 58 49.1	+3.2
GRL				*e*S	Sn	20 59 18.9	+3.2
KRMR	**Karymshinskiy**	**2.79**	**347**	*e*P	Pn	20 58 52.5	+3.2
KRMR				*e*S	Sn	20 59 25.0	+3.2
DALK	**Dalny**	**2.93**	**355**	*e*P	Pn	20 58 53.7	+2.5
DALK				*e*S	Sn	20 59 26.9	+1.7
SPN	**Mys Shipunski**	**3.04**	**10**	*e*P	Pn	20 58 55.8	+3.2
SPN				*e*S	Sn	20 59 30.6	+2.9
APC	**Apacha**	**3.08**	**337**	*e*S	Sn	20 59 33.3	+4.5
UGLR	**Uglovaya**	**3.10**	**356**	*e*P	Pn	20 58 56.4	+2.7
SMAR	**Somma**	**3.16**	**356**	*e*P	Pn	20 58 57.4	+2.8
AVH	**Avacha**	**3.17**	**355**	*e*P	Pn	20 58 57.6	+3.1
SDLR	**Sedlovina**	**3.17**	**357**	*e*P	Pn	20 58 56.7	+2.1
KOK	**Koryaka**	**3.20**	**354**	*e*P	Pn	20 58 58.0	+3.1
KRER	**Koryakskii**	**3.20**	**356**	*e*P	Pn	20 58 57.9	+2.8
KRX	**Arik**	**3.26**	**355**	*e*P	Pn	20 58 58.7	+2.8
GNL	**Ganaly**	**3.66**	**349**	*e*P	Pn	20 59 05.0	+3.6
KII	**Karymskiy**	**3.93**	**2**	*e*P	Pn	20 59 08.1	+3.1

*KRNET **17** 21:01:13.9±0.1, 40°.16N×72°.79E, h17km, mb2.7*
*SOME **17** 21:01:15.9, 40°.25N×72°.97E, h20km*
*ISU **17** 21:01:19, 40°.20N×72°.87E, h7km*
*NNC **17** 21:01:23.3±5.5, 40°.65N×72°.64E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=46.1km s-min=17.1km az=170.0*
ISC 17 21:01:14.7±1.1, **40°.10N**±0°.03×**72°.83E**±0°.02, **h5**km±9km, **n35**, σ1**§62**/60, **18C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.42**	**356**	⇓*e*P	**Pg**	**21 01 21.1**	**-1.7**
OHH				⇓*e*S	**Sg**	**21 01 26.4**	**-2.0**
SFK	**Sufi-Kurgan**	**0.53**	**100**	⇓*e*P	**Pg**	**21 01 24.8**	**0.0**
SFK				⇓*e*S	**Sg**	**21 01 32.7**	**+1.0**
TSTA	**Tashata**	**0.55**	**331**	P	**Pg**	**21 01 24.6**	**-0.6**
TSTA				S	**Sg**	**21 01 32.2**	**-0.1**
FRG	**Fergana**	**0.84**	**289**	P	**Pg**	**21 01 30.2**	**-0.7**
FRG				S	**Sg**	**21 01 42.8**	**+1.0**
DRK	**Karamyk**	**1.01**	**232**	⇑*e*P	**Pg**	**21 01 33.1**	**-0.9**
DRK				⇑*e*S	**Sg**	**21 01 47.0**	**-0.1**
SALK	**Salom-Alik**	**1.09**	**44**	⇓*e*P	**Pg**	**21 01 33.9**	**-1.6**
SALK				⇓*e*S	**Sg**	**21 01 48.3**	**-1.3**
ARSB	**Arslanbob**	**1.23**	**5**	⇓*e*P	**Pg**	**21 01 35.7**	**-2.9**
ARSB				⇓*e*S	**Sb**	**21 01 51.6**	**-2.9**
KSNS	**Kasansay**	**1.45**	**317**	P	**Pb**	**21 01 42.5**	**+0.3**
KSNS				S	**Sg**	**21 02 02.2**	**+0.9**
MINT	**Mingtut**	**1.46**	**285**	S	**Sg**	**21 02 03.4**	**+1.7**
BTK	**Batken**	**1.54**	**269**	⇑*e*P	**Pn**	**21 01 41.9**	**-1.0**
BTK				⇑*e*S	**Sn**	**21 02 02.1**	**-1.2**
CHDK	**Chadak**	**1.80**	**299**	P	**Pn**	**21 01 47.2**	**+0.7**
CHDK				S	**Sb**	**21 02 12.0**	**+0.9**
ARK	**Arkit**	**1.81**	**339**	⇑*e*P	**Pn**	**21 01 46.1**	**-0.6**
ARK				⇑*e*S	**Sn**	**21 02 09.4**	**-0.7**
TRKS	**Terek-Say**	**1.92**	**319**	⇑*e*P	**Pn**	**21 01 46.7**	**-1.4**
TRKS				⇑*e*S	**Sn**	**21 02 10.5**	**-2.1**
MNAS	**Manas**	**2.39**	**354**	⇓*e*P	**Pn**	**21 01 54.3**	**-0.3**
MNAS				⇓*e*S	**Sn**	**21 02 23.8**	**-0.6**
UCH	**Uchtor**	**2.47**	**30**	⇓*e*P	**Pn**	**21 01 56.0**	**0.0**
UCH				⇓*e*S	**Sn**	**21 02 26.6**	**-0.2**
EKS2	**Erkin-Say**	**2.65**	**15**	⇑*e*P	**Pn**	**21 01 58.1**	**-0.1**
EKS2				⇑*e*S	**Sn**	**21 02 30.3**	**-0.5**
MRKS	**Merke**	**2.66**	**6**	Pg	**Pb**	**21 02 01.1**	**-1.7**
	3.5nm,0.3s						
MRKS				Lg	Lg	21 02 33.3	
	11nm,0.3s						
MRKS	**Merke**	**2.66**	**6**	*e*P	**Pb**	**21 02 01.1**	**-1.7**
	3.5nm,0.3s						
MRKS				*e*S	**Sb**	**21 02 33.4**	**-2.3**
	11nm,0.3s						
MRKS	**Merke**	**2.66**	**6**	*e*P	**Pg**	**21 02 09.0**	**+3.5**
	3.6nm,0.3s						
MRKS				*e*S	**Sb**	**21 02 37.6**	**+1.9**
	11nm,0.2s						
CHRV	**Charvak**	**2.67**	**306**	S	**Sn**	**21 02 31.5**	**+0.5**
TVKS	**Tavaksay**	**2.82**	**302**	S	**Sn**	**21 02 35.3**	**+0.5**
AAK	**Ala-Archa**	**2.83**	**26**	⇑Pg	**Pb**	**21 02 06.2**	**+0.5**
	1.3nm,0.6s						
AAK				⇑Lg	Lg	21 02 39.3	
	0.8nm,0.4s						
AAK	**Ala-Archa**	**2.83**	**26**	⇑*e*P	**Pn**	**21 02 00.7**	**+0.1**
AAK				⇑*e*S	**Sn**	**21 02 34.7**	**-0.4**
IUG	**luzhnay**	**2.94**	**315**	Pg	**Pb**	**21 02 09.2**	**+1.7**
	8.5nm,0.2s						
IUG				Pg	**Pb**	**21 02 09.4**	**+1.9**
	3.7nm,0.2s						
IUG				Lg	Lg	21 02 38.5	
	14nm,0.2s						
IUG	**luzhnay**	**2.94**	**315**	*e*P	**Pb**	**21 02 09.2**	**+1.7**
	8.5nm,0.2s						
IUG				*e*S	**Sg**	**21 02 47.5**	**-1.5**
	64nm,0.4s						
IUG	**luzhnay**	**2.94**	**315**	*e*P	**Pb**	**21 02 09.4**	**+1.9**
	3.7nm,0.2s						
IUG				*e*S	**Sn**	**21 02 38.5**	**+0.8**
	14nm,0.2s						
KK31	**Karatay Array**	**3.46**	**331**	⇑Pn	**Pn**	**21 02 09.2**	**-0.1**
	0.3nm,0.4s,baz=240,slow=15,SNR=5.8						
KK31				⇑Pg	**Pb**	**21 02 17.5**	**+1.1**
	0.4nm,0.3s,baz=154,slow=17,SNR=9.6						
KK31				⇑Sn	**Sn**	**21 02 50.3**	**-0.3**
	1.1nm,0.4s,baz=139,slow=23,SNR=4.5						
KK31				⇑Lg	Lg	21 03 01.3	
	1.1nm,0.3s,baz=318,slow=12,SNR=5.1						
BRLS	**Boroldav**	**3.69**	**323**	Pg	**Pb**	**21 02 20.0**	**-0.3**
	1.0nm,0.3s						
BRLS				Pg	Pg	21 02 20.1	-5.2
	1.0nm,0.3s						
BRLS				Lg	Lg	21 02 56.8	
	1.5nm,0.2s						
BRLS	**Boroldav**	**3.69**	**323**	*e*P	**Pb**	**21 02 20.0**	**-0.3**
	1.0nm,0.3s						
BRLS				*e*S	**Sb**	**21 03 06.3**	**+1.1**
	1.9nm,0.2s						
BRLS	**Boroldav**	**3.69**	**323**	*e*P	**Pb**	**21 02 20.1**	**-0.1**
	1.0nm,0.3s						
BRLS				*e*S	**Sn**	**21 02 56.8**	**+0.7**
	1.5nm,0.2s						
KST	**Kastek**	**3.76**	**38**	Pg	**Pb**	**21 02 20.9**	**-0.7**
	1.4nm,0.3s						
KST				Lg	Lg	21 03 08.0	
	1.9nm,0.3s						
KST	**Kastek**	**3.76**	**38**	*e*P	**Pb**	**21 02 20.9**	**-0.7**
	1.4nm,0.3s						
KST				*e*S	**Sb**	**21 03 08.0**	**+0.4**
	1.9nm,0.3s						
KST	**Kastek**	**3.76**	**38**	*e*P	Pg	21 02 34.6	+7.9
	0.8nm,0.2s						
KST				*e*S	**Sg**	**21 03 21.8**	**+6.3**
	2.4nm,0.3s						
DGS	**Degeres**	**3.83**	**34**	Pg	Pg	21 02 34.5	+6.4
	1.4nm,0.5s						
DGS				Lg	Lg	21 03 21.3	
	3.0nm,0.7s						
DGS	**Degeres**	**3.83**	**34**	*e*P	Pg	21 02 34.5	+6.4
	1.4nm,0.5s						
DGS				*e*S	**Sg**	**21 03 21.3**	**+3.5**
	3.0nm,0.7s						

*IDC **17** 21:02:37.6±2.9, 13°.41N×120°.55E, h34km±26km, mb4.0/10, mbtmp4.2/10, Error ellipse: s-maj=39.0km s-min=13.9km az=68.0*
*NEIC **17** 21:02:39.4±0.9, 13°.46N±0°.07×120°.6E±0°.1, h49km±8km, mb4.3/15, Error ellipse: s-maj=20.2km s-min=9.7km az=100.0*
ISC 17 21:02:40.7±0.6, **13°.44N**±0°.08×**120°.7E**±0°.1, **h70**km, **n33**, σ0**§90**/34, **mb4.3**/19, **Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.71**	**22**	Pg	**Pn**	**21 02 52.8**	**-3.0**
	846nm,0.3s,baz=204,slow=2.3,SNR=51						
TGY				Lg	Lg	21 03 04.5	
	768nm,0.3s,baz=310,slow=22,SNR=7.6						
MYLDM	**Lahad Datu**	**8.48**	**195**	Pn	**Pn**	**21 04 38.9**	**-2.0**
CM31	**Chiang Mai Arr**	**21.46**	**286**	P	**P**	**21 07 23.9**	**+0.4**
CM31				IAmb	IAmb	21 07 29.1	
	comp=Z,13nm,1.3s						
CMAR	**Chiang Mai Arr**	**21.46**	**286**	P	**P**	**21 07 23.1**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=95,slow=9.0,SNR=18						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**21.46**	**286**	P	**P**	**21 07 23.7**	**+0.2**
BATI	**Baumata**	**23.68**	**173**	P	**P**	**21 07 46.5**	**+0.2**
	comp=Z,14nm,0.5s,baz=18,slow=12,SNR=3.1						
	comp=Z,14nm,0.5s						
WB0	**Warramunga Arr**	**35.66**	**157**	P	**P**	**21 09 32.1**	**-0.2**
WB0				IAmb	IAmb	21 09 32.9	
	comp=Z,4.5nm,0.6s						
WRAB	**Tennant Creek**	**35.80**	**158**	P	**P**	**21 09 33.5**	**0.0**
WRA	**Warramunga Arr**	**35.80**	**158**	P	**P**	**21 09 33.6**	**+0.1**
	comp=Z,3.7nm,0.5s,baz=335,slow=8.9,SNR=23						
	comp=Z,3.7nm,0.5s						
ULN	**Ulaanbaatar**	**36.15**	**344**	P	**P**	**21 09 36.8**	**+0.5**
ULN				IAmb	IAmb	21 09 37.1	
	comp=Z,5.2nm,1.4s						
SONM	**Songino Array**	**36.29**	**344**	P	**P**	**21 09 37.8**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=163,slow=11,SNR=15						
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**36.29**	**344**	P	**P**	**21 09 37.5**	**0.0**
AS31	**Alice Springs**	**39.09**	**161**	P	**P**	**21 10 02.3**	**+1.0**
AS31				IAmb	IAmb	21 10 02.6	
	comp=Z,2.6nm,0.5s						
ASAR	**Alice Springs**	**39.09**	**161**	P	**P**	**21 10 01.9**	**+0.7**
	comp=Z,5.5nm,0.5s,baz=339,slow=7.0,SNR=128						
	comp=Z,5.5nm,0.5s						
ASAR	**Alice Springs**	**39.09**	**161**	P	**P**	**21 10 01.9**	**+0.6**
INKA	**Innaminka**	**45.33**	**155**	P	**P**	**21 10 53.4**	**+1.5**
INKA				IAmb	IAmb	21 11 23.1	
	comp=Z,4.8nm,1.4s						
MKAR	**Makanchi Array**	**46.22**	**324**	P	**P**	**21 10 59.4**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=112,slow=8.7,SNR=7.4						
MKAR				PcP	**PcP**	**21 12 34.8**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=106,slow=3.1,SNR=3.2						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**46.22**	**324**	P	**P**	**21 10 58.6**	**-0.2**
MAKZ	**Makanchi**	**46.41**	**324**	P	**P**	**21 11 00.4**	**+0.2**
BBOO	**Buckleboo**	**48.29**	**163**	P	**P**	**21 11 14.9**	**0.0**
ZALV	**Zalesovo Beam**	**49.27**	**333**	P	**P**	**21 11 21.7**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=130,slow=7.2,SNR=4.9						
	comp=Z,0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**50.38**	**326**	P	**P**	**21 11 31.1**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=127,slow=7.7,SNR=10						
	comp=Z,0.9nm,0.4s						
KURK	**Kurchatov**	**50.38**	**326**	P	**P**	**21 11 31.0**	**+0.3**
KURK				IAmb	IAmb	21 11 32.4	
	comp=Z,4.0nm,0.6s						
KKAR	**Karatay Array**	**52.13**	**315**	P	**P**	**21 11 43.8**	**-0.2**
BVAR	**Borovoye Array**	**55.96**	**326**	P	**P**	**21 12 11.7**	**0.0**
	comp=Z,8.8nm,0.5s,baz=124,slow=7.2,SNR=3.9						
	comp=Z,0.8nm,0.5s						
AB31	**Akbulak array**	**60.90**	**319**	P	**P**	**21 12 45.2**	**-1.0**
AB31				IAmb	IAmb	21 12 51.7	
	comp=Z,3.5nm,1.4s						
ABKAR	**Akbulak array**	**60.90**	**319**	P	**P**	**21 12 45.9**	**-0.3**
BKZ	**Black Stump Fm**	**73.77**	**138**	P	**P**	**21 14 08.3**	**+0.7**
L22K	**Petersville**	**77.53**	**28**	P	**P**	**21 14 30.0**	**+1.2**
L22K				IAmb	IAmb	21 14 59.1	
	comp=Z,4.1nm,1.2s						
ARCES	**ARCESS Array B**	**79.31**	**339**	P	**P**	**21 14 39.1**	**+0.7**
	comp=Z,7.4nm,1.2s,baz=70,slow=6.3,SNR=1.4						
	comp=Z,7.4nm,1.2s						
BMAR	**Burnt Mountain**	**79.52**	**23**	P	**P**	**21 14 40.7**	**+1.1**
BURAR	**Bucovina Array**	**83.82**	**317**	P	**P**	**21 15 03.1**	**+0.3**
BUR08	**Bucovina Ar. S**	**83.83**	**317**	P	**P**	**21 15 03.1**	**+0.3**
BUR08				IAmb	IAmb	21 15 33.2	
	comp=Z,6.3nm,1.4s						

*NEIC **17** 21:11:10.9±2.2, 9°.19S±0°.06×123°.04E±0°.06, h90km±6km, mb4.4/24, Error ellipse: s-maj=12.1km s-min=5.3km az=223.0*
*IDC **17** 21:11:11.2±0.8, 9°.10S×123°.20E, h89km±11km, mb3.8/13, mbtmp4.2/15, MS3.4/11, Error ellipse: s-maj=28.2km s-min=13.9km az=61.0*
*DJA **17** 21:11:11.5±0.6, 9°.2S×12°.3E±°, h37km±13km, M4.7/37, mb4.8/37, mB5.2/16, MLv4.7/29, Mw(mB)4.7/16*
ISC 17 21:11:10.5±0.6, **9°.27S**±0°.05×**123°.07E**±0°.05, **h89**km±6km, **n131**, σ1**§79**/133, **mb4.3**/26, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.04**	**307**		**Pn**	**21 11 30.3**	**-0.3**
MMRI				Sn	**Sn**	**21 11 44.1**	**-1.5**
MMRI	**Maumere**	**1.04**	**307**	P	**Pn**	**21 11 30.8**	**+0.2**
MMRI	**Maumere**	**1.04**	**307**	P	**Pn**	**21 11 30.2**	**-0.4**
MMRI				S	**Sn**	**21 11 45.9**	**+0.3**
BATI	**Baumata**	**1.10**	**148**	P	**Pn**	**21 11 32.9**	**+1.6**
	817nm,0.4s,baz=338,slow=3.4,SNR=320						
BATI				S	**Sn**	**21 11 49.6**	**+2.6**
	3µm,0.5s,baz=49,slow=18,SNR=11						
BATI	**Baumata**	**1.10**	**148**	P	**Pn**	**21 11 32.7**	**+1.3**
SOEI	**Soe**	**1.27**	**113**	Pn	**Pn**	**21 11 34.6**	**+1.1**
SOEI	**Soe**	**1.27**	**113**	P	**Pn**	**21 11 35.0**	**+1.5**
SOEI	**Soe**	**1.27**	**113**	P	**Pn**	**21 11 34.3**	**+0.8**
EDFI	**Ende, Flores**	**1.46**	**290**	P	**Pn**	**21 11 36.5**	**+0.7**
EDFI				S	**Sn**	**21 11 55.5**	**+0.5**
BASI	**Baing, Sumba**	**2.64**	**249**	P	**Pn**	**21 11 53.3**	**+2.2**
WSI	**Waingapu**	**2.77**	**261**	P	**Pn**	**21 11 54.3**	**+1.4**
WSI				S	**Sn**	**21 12 26.8**	**+1.3**
WBSI	**Waikabubak, Su**	**3.65**	**264**	P	**Pn**	**21 12 06.5**	**+1.6**
WBSI				S	**Sn**	**21 12 48.5**	**+1.5**
BSSI	**Bau Bau, Buton**	**4.02**	**320**	P	**Pn**	**21 12 11.4**	**+1.5**
DBNI	**Kabupaten Domp**	**4.77**	**279**	P	**Pn**	**21 12 23.0**	**+3.0**
DBNI				S	**Sn**	**21 13 16.8**	**+2.8**
PLAI	**Plampang**	**5.25**	**274**	P	**Pn**	**21 12 29.2**	**+2.6**
PLAI	**Plampang**	**5.25**	**274**	P	**Pn**	**21 12 29.6**	**+3.0**
PLAI				S	**Sn**	**21 13 28.5**	**+2.7**
KKSI	**Kolaka, Sulawe**	**5.25**	**344**	P	**Pn**	**21 12 28.8**	**+2.2**
	0.3nm1µm57nm,0.6s						
KDI	**Kendari**	**5.29**	**355**	P	**Pn**	**21 12 28.6**	**+1.4**
KAPI	**Kappang**	**5.36**	**322**	P	**Pn**	**21 12 28.7**	**+0.6**
	33nm,0.6s,baz=154,slow=6.2,SNR=19						
KAPI				LR	LR	21 14 42.1	
	comp=Z,224nm,20.7s,baz=140,slow=40						
KAPI	**Kappang**	**5.36**	**322**	Pn	**Pn**	**21 12 29.7**	**+1.7**
KAPI	**Kappang**	**5.36**	**322**	P	**Pn**	**21 12 30.2**	**+2.2**
KAPI	**Kappang**	**5.36**	**322**	P	**Pn**	**21 12 30.4**	**+2.4**
	44nm,1.0s						
MKS	**Makassar**	**5.38**	**318**	P	**Pn**	**21 12 30.0**	**+1.6**
	0.6nm143nm,0.8s						
SPSI	**Sidrap Palu**	**6.21**	**328**	P	**Pn**	**21 12 42.0**	**+2.4**

NLAI Namlea 7.20 34 P **Pn** 21 12 55.7 +2.5
0.6nm1µm188nm,1.0s
KHKI Kahang-Kahang 7.43 276 P **Pn** 21 12 58.2 +1.9
0.5nm878nm90nm,0.7s
KHKI S **Sn** 21 14 22.5 +3.4
0.5nm878nm90nm,0.7s
SANI Sanana 7.73 22 P **Pn** 21 13 02.3 +1.9
SANI Sanana 7.73 22 P **Pn** 21 13 02.5 +2.1
0.2nm726nm46nm,1.4s
DNP Denpasar 7.79 274 P **Pn** 21 13 01.7 +0.5
DNP S **Sn** 21 14 30.6 +2.7
IGBI Denpasar 7.84 273 P **Pn** 21 13 03.3 +1.4
IGBI S **Sn** 21 14 30.4 +1.3
KRAI Karang Ratu 7.93 42 P Pn 21 13 09.3 +6.2
RTBI Rangdo, Negare 8.08 275 P **Pn** 21 13 04.5 -0.6
83nm,0.8s
LUWI Luwuk 8.18 358 Pn Pn 21 13 01.3 -5.1
SAUI Saumlaki 8.23 82 Pn **Pn** 21 13 05.1 -2.1
SAUI Saumlaki 8.23 82 P **Pn** 21 13 08.9 +1.7
150nm,1.0s
MSAI Masohi 8.27 45 P **Pn** 21 13 09.3 +1.5
3µm122nm,0.9s
KNRA Kununurra 8.45 139 **Pn** 21 13 07.9 -2.3
MTN Manton Dam 8.67 115 **Pn** 21 13 11.6 -1.6
JAGI Jajag, Banyuwa 8.85 274 **Pn** 21 13 14.3 -1.4
JAGI Jajag, Banyuwa 8.85 274 P **Pn** 21 13 14.5 -1.1
JAGI Jajag, Banyuwa 8.85 274 P **Pn** 21 13 14.6 -1.1
1µm67nm,0.5s
ABJI Asem Bagus 8.86 279 P **Pn** 21 13 18.6 +2.8
54nm,0.6s
FITZ Fitzroy Crossi 9.13 164 P **Pn** 21 13 18.6 -0.8
5.0nm,1.0s,baz=7.8,slow=4.1,SNR=17
FITZ S **Sn** 21 14 54.2 -6.2
86nm,0.5s,baz=89,slow=16,SNR=20
BBKI Banjar Baru 10.01 305 P Pn 21 13 41.5 +10
TOLI2 Tolitoli 10.56 347 **Pn** 21 13 38.0 -1.0
TOLI2 Tolitoli 10.56 347 P **Pn** 21 13 39.5 +0.5
SJI Sawahan 11.29 277 P **Pn** 21 13 51.7 +2.8
1µm67nm,0.6s
SNJI Sawahan-Nganju 11.29 277 P **Pn** 21 13 51.3 +2.3
1µm51nm,0.6s
SIJI Sorong 11.66 45 P Pn 21 13 48.4 -5.6
22nm,0.8s,baz=236,slow=5.9,SNR=8.6
SIJI LR LR 21 18 22.4
comp=Z,140nm,19.0s,baz=212,slow=38
SIJI Sorong 11.66 45 P **Pn** 21 13 56.3 +2.3
40nm,1.2s
SWI Sorong 11.66 45 P **Pn** 21 13 55.8 +1.8
65nm,1.1s
PCJI Pacitan 11.81 274 P **Pn** 21 13 55.8 -0.1
MBWA Marble Bar 12.26 195 Pn **Pn** 21 14 01.4 -0.5
MBWA Marble Bar 12.26 195 P **Pn** 21 14 04.4 +2.5
UGM Wanagama 12.48 275 **Pn** 21 14 04.0 -1.0
UGM Wanagama 12.48 275 P **Pn** 21 14 05.1 +0.1
PSA00 Pilbara Seismi 12.62 194 Pn **Pn** 21 14 06.7 -0.1
PSA00 Pilbara Seismi 12.62 194 P **Pn** 21 14 09.5 +2.7
WB0 Warramunga Arr 15.12 135 Pn **Pn** 21 14 35.4 -4.0
WRA Warramunga Arr 15.20 136 P **Pn** 21 14 36.5 -4.0
2.8nm,0.5s,baz=310,slow=14,SNR=18
WRA S Sn 21 17 15.1 -13
4.2nm,0.4s,baz=145,slow=6.9,SNR=6.6
WRAB Tennant Creek 15.21 135 Pn **Pn** 21 14 36.4 -4.1
BBJI Bungbulang 15.37 276 **Pn** 21 14 41.3 -1.3
BBJI IAmb IAmb 21 14 52.4
comp=Z,18nm,0.7s
BBJI Bungbulang 15.37 276 P **Pn** 21 14 42.1 -0.5
LEM Lembang 15.49 278 P **Pn** 21 14 44.5 +0.2
comp=Z,54nm,0.7s,baz=44,slow=13,SNR=12
LEM LR LR 21 21 32.5
comp=Z,131nm,21.0s,baz=0.0,slow=40
GIRL Giralia 15.77 211 Pn **Pn** 21 14 45.3 -2.3
GIRL IAmb IAmb 21 14 54.0
comp=Z,49nm,1.2s
DAV Davao City (W) 16.42 9 LR LR 21 21 33.3
comp=Z,56nm,18.3s,baz=306,slow=38
AS31 Alice Springs 17.67 145 P **P** 21 15 10.5 -0.2
ASAR Alice Springs 17.67 145 P **P** 21 15 10.6 -0.1
comp=Z,2.2nm,0.4s,baz=320,slow=12,SNR=63
ASAR S Sn 21 18 16.5 -11
comp=Z,8.7nm,0.9s,baz=318,slow=21,SNR=11
ASAR LR LR 21 22 43.7
comp=Z,67nm,20.2s,baz=314,slow=39
ASAR ScP **ScP** **21 23 13.2 +0.8**
comp=Z,1.3nm,0.8s,baz=336,slow=2.6,SNR=4.7
ASAR Alice Springs 17.67 145 P **Pn** 21 15 10.9 -0.1
MEEK Meekatharra 17.79 193 P **Pn** 21 15 15.0 +2.6
QIS Mount Isa 19.50 127 P **Pn** 21 15 33.1 +0.2
COEN Coen 20.23 105 P **P** 21 15 39.2 +0.5
COEN IAmb IAmb 21 15 46.3
comp=Z,8.5nm,0.6s
COEN Coen 20.23 105 P Pn 21 15 41.9 +0.5
MNAI Manna 20.56 282 **P** 21 15 40.8 -1.4
MORW Morawa 20.78 198 **P** 21 15 45.3 +0.8
MORW IAmb IAmb 21 15 48.0
comp=Z,30nm,1.3s
MORW Morawa 20.78 198 P Pn 21 15 47.2 -0.4
FORT Forrest 21.90 168 P **P** 21 15 56.1 -0.4
BLDU Ballidu 22.06 195 P **P** 21 16 00.6 +2.5
NWAO Narrogin (SRO) 24.16 192 P **P** 21 16 17.9 -0.5
CTA Charters Tower 24.84 118 LR LR 21 27 12.5
comp=Z,74nm,19.7s,baz=249,slow=39
BBOO Buckleboo 26.32 155 P **P** 21 16 38.5 +0.4
BBOO Buckleboo 26.32 155 P **P** 21 16 41.5 +3.4
GSI Gunungsitoli 27.48 291 P **P** 21 16 45.9 -2.8
HTT Hallett 28.14 151 P **P** 21 16 57.6 +3.3
STKA Stephens Creek 28.31 145 P **P** 21 16 54.5 -1.4
comp=Z,1.1nm,0.6s,baz=300,slow=10,SNR=3.8
STKA Stephens Creek 28.31 145 P **P** 21 16 54.7 -1.1
CMSA Cobar Meteorol 30.54 140 P **P** 21 17 18.7 +3.1
CMAR Chiang Mai Arr 36.41 319 P **P** 21 18 07.0 +0.3
comp=Z,0.6nm,0.3s,baz=142,slow=6.6,SNR=9.0
CMAR ScP **ScP** **21 24 08.8 +0.7**
comp=Z,0.4nm,0.3s,baz=132,slow=3.1,SNR=4.6
CMAR L

AAK				IAmb	IAmb	21 22 03.2		
	comp=Z,2.7nm,0.8s							
ARSB	**Arslanbob**	**68.18**	**322**	P	**P**	**21 22 01.1**	**-0.5**
ARSB				IAmb	IAmb	21 22 02.7		
	comp=Z,3.2nm,0.8s							
PETK	**Petropavlovsk-**	**68.77**	**22**	P	**P**	**21 22 04.5**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=107,slow=5.0,SNR=4.5							
	comp=Z,3.5nm,0.8s							
PETK	**Petropavlovsk-**	**68.77**	**22**	P	**P**	**21 22 05.3**	**+0.5**
MAW	**Mawson**	**70.38**	**201**	LR	LR	21 50 24.7		
	comp=Z,55nm,19.4s,baz=115,slow=33							
KKAR	**Karatay Array**	**70.70**	**322**	P	**P**	**21 22 17.3**	**+0.4**
ZAA0	**Zalesovo Array**	**70.78**	**337**	P	**P**	**21 22 16.5**	**-0.6**
ZAA0				IAmb	IAmb	21 22 19.2		
	comp=Z,3.4nm,0.8s							
ZALV	**Zalesovo Beam**	**70.78**	**337**	P	**P**	**21 22 16.5**	**-0.6**
	comp=Z,2.5nm,0.5s,baz=135,slow=4.4,SNR=13							
	comp=Z,2.5nm,0.5s							
ZALV	**Zalesovo Beam**	**70.78**	**337**	P	**P**	**21 22 15.8**	**-1.4**
KURBB	**Kurchatov Arra**	**71.05**	**332**	P	**P**	**21 22 18.7**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=149,slow=4.7,SNR=8.2							
	comp=Z,0.8nm,0.6s							
KURK	**Kurchatov**	**71.07**	**332**		**P**	**21 22 18.8**	**-0.2**
KURK				IAmb	IAmb	21 22 26.2		
	comp=Z,3.9nm,1.0s							
SEY	**Seymchan**	**75.43**	**13**	P	**P**	**21 22 43.2**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=215,slow=7.6,SNR=13							
	comp=Z,1.6nm,0.5s							
BVAR	**Borovoye Array**	**76.47**	**330**	P	**P**	**21 22 49.5**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=128,slow=9.6,SNR=3.7							
	comp=Z,1.0nm,0.7s							
ABKAR	**Akbulak array**	**80.13**	**324**	P	**P**	**21 23 10.5**	**-0.2**
TIXI	**Tiksi**	**80.83**	**2**	P	**P**	**21 23 13.0**	**-1.0**
TIXI				IAmb	IAmb	21 23 19.3		
	comp=Z,6.2nm,1.4s							
D19K	**Kuna River**	**94.48**	**21**	P	**P**	**21 24 19.3**	**-1.1**
D19K				IAmb	IAmb	21 24 21.6		
	comp=Z,3.6nm,1.1s							
E19K	**Redstone River**	**94.56**	**22**	P	**P**	**21 24 21.2**	**+0.4**
E19K				IAmb	IAmb	21 24 29.1		
	comp=Z,2.6nm,1.1s							
MODS	**Modra-Piesok**	**107.36**	**318**	*e*PDIFF	**Pdif**	**21 25 14.5**	**-4.0**
MODS				*e*		21 44 53.5		
TORD	**Torodi Ar. Bea**	**122.47**	**280**	PKP	**PKiKP**	**21 29 58.1**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=56,slow=5.9,SNR=5.3							
FCC	**Fort Churchill**	**123.13**	**22**	PKPdf	**PKiKP**	**21 29 56.3**	**-0.5**
PDAR	**Pinedale Array**	**123.33**	**44**	PKP	**PKiKP**	**21 29 58.0**	**0.0**
	comp=Z,0.2nm,0.5s,baz=48,slow=2.0,SNR=4.2							
PDAR	**Pinedale Array**	**123.33**	**44**	PKPdf	**PKiKP**	**21 29 57.6**	**-0.4**
EPLO	**Experimental L**	**129.43**	**30**	PKPdf	**PKiKP**	**21 30 10.0**	**+0.4**
TXAR	**Lajitas Array**	**131.96**	**59**	SKPbc	**SKPab**	**21 33 33.6**	**0.0**
	comp=Z,0.8nm,0.7s,baz=301,slow=3.9,SNR=7.2							

ISK ***17*** *21:20:00.4,38.38N×39.16E,h4km,ML3.3/29*
AFAD ***17*** *21:20:00.5,38.41N×39.13E,h13km±1km,MW3.6*
ISC 17 21:20:00.9±0.8,38.40N±0.02×39.14E±0.02,h7km±6km,
n59,σ0s96/81,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESGZ	**Sivrice-Elazig**	**0.07**	**295**	Pg	**Pg**	**21 20 02.9**	**+0.1**
ESGZ				Sg	**Sg**	21 20 04.5	+0.3
MDYL	**Doganyol-Malat**	**0.12**	**221**	Pg	**Pg**	21 20 03.4	-0.1
MDYL				Sg	**Sg**	21 20 05.2	-0.1
SVRC	**Sivrice-ELAZID**	**0.14**	**100**	Pg	**Pg**	21 20 03.4	-0.4
SVRC				Sg	**Sg**	21 20 05.4	-0.5
ESIJ	**Sivrice-Elazig**	**0.14**	**71**	Pg	**Pg**	21 20 04.2	+0.2
ESIJ				Sg	**Sg**	21 20 06.8	+0.7
ELZG	**Elazig**	**0.15**	**309**	P	**Pg**	21 20 04.5	+0.3
ELZG				S	**Sg**	21 20 06.8	+0.4
CNGT	**ngs**	**0.23**	**146**	P	**Pg**	21 20 05.0	-0.4
CNGT				S	**Sg**	21 20 08.1	-0.4
ELZ	**Elazig**	**0.29**	**11**	P	**Pg**	21 20 06.8	+0.1
ELZ				S	**Sg**	21 20 10.9	+0.3
MDNT	**Maden**	**0.43**	**91**	P	**Pg**	21 20 09.2	**0.0**
MDNT				S	**Sg**	21 20 15.5	+0.6
MAYA	**Malatya/Merkez**	**0.56**	**262**	P	**Pg**	21 20 11.6	-0.2
MAYA				S	**Sg**	21 20 18.7	-0.5
NARI	**Adyaman-Kaht**	**0.60**	**210**	P	**Pg**	21 20 12.4	**0.0**
KOVA	**Elazig, Kovanc**	**0.61**	**60**	P	**Pg**	21 20 12.4	-0.3
KAHTU	**Kahta**	**0.73**	**215**	P	**Pb**	21 20 15.0	-0.9
MCKZ	**Bingol**	**0.73**	**350**	P	**Pg**	21 20 14.1	-0.9
MCKZ				S	**Sg**	21 20 24.5	+0.1
TNCL	**Tunceli-Merkez**	**0.78**	**24**	P	**Pg**	21 20 15.2	-0.7
TNCL				S	**Sb**	21 20 26.5	-1.2
HANM	**anlurfa/Hi**	**0.85**	**194**	P	**Pb**	21 20 17.0	-0.9
DYBB	**Diyarbakir**	**0.91**	**119**	Pg	**Pb**	21 20 18.1	-0.9
DYBB				Sg	**Sb**	21 20 30.9	-0.4
DIYA	**Diyarbakir**	**0.91**	**121**	P	**Pb**	21 20 18.4	-0.7
AZEY	**Adyaman-Merk**	**0.92**	**230**	P	**Pb**	21 20 18.9	-0.3
AZEY				S	**Sb**	21 20 31.9	+0.4
ARPR	**Arapgir-MALATY**	**0.93**	**318**	Pg	**Pb**	21 20 18.6	-0.2
ARPR				Sg	**Sn**	21 20 32.8	-1.5
AKCD	**Akcadag**	**0.96**	**264**	P	**Pg**	21 20 18.6	-0.7
AKCD				S	**Sb**	21 20 32.4	-0.5
MAYK		**1.02**	**71**	P	**Pb**	21 20 20.2	-0.7
HEKM	**Malatya_Hekimh**	**1.04**	**298**	P	**Pg**	21 20 20.4	-0.5
HEKM				S	**Sb**	21 20 35.0	-0.3
ILIC	**ilic-Erzincan**	**1.14**	**337**	Pn	**Pg**	21 20 22.4	-0.4
ATAB	**Bozova**	**1.15**	**216**	P	**Pn**	21 20 22.8	-0.6
ATAB				S	**Sn**	21 20 39.0	-0.3
SANL	**SANLIURFA_Merk**	**1.23**	**186**	P	**Pg**	21 20 24.4	-0.2
MDIV		**1.25**	**317**	P	**Pn**	21 20 24.2	-0.7
MDIV				S	**Sn**	21 20 42.6	+0.5
MIMR	**Divri**	**1.25**	**317**	P	Pg	21 20 31.9	+6.9
MIMR				S	Sn	21 20 56.2	+14
ERZN	**Erzincan**	**1.27**	**21**	Pn	**Pg**	21 20 25.2	**0.0**
ERZN				Sn	**Sn**	21 20 43.9	+1.4
AKCA	**Adyaman/G¶l**	**1.29**	**242**	P	**Pg**	21 20 25.4	-0.3
AKCA				S	**Sn**	21 20 46.6	+1.5
BNGB	**Bingl**	**1.34**	**64**	Pn	**Pg**	21 20 26.4	-0.2
EUZM	**Uzumlu**	**1.37**	**18**	P	**Pb**	21 20 26.5	-0.5
YEDI	**Yedisu-Bingol**	**1.51**	**46**	Pn	**Pb**	21 20 29.0	-0.3
SURC	**SANLIURFA_SURC**	**1.58**	**195**	P	**Pb**	21 20 29.5	-0.9
SLHN	**Bingol, Solhan**	**1.58**	**69**	P	**Pg**	21 20 30.8	-0.4
SLHN				S	**Sg**	21 20 53.6	+2.0
GZT	**Gaziantep**	**1.62**	**230**	P	**Pb**	21 20 30.4	-0.9
GZT				S	**Sb**	21 20 51.6	-0.4
MBOZ		**1.69**	**347**	P	**Pn**	21 20 30.8	-0.2
KARO	**Karliova-Bingo**	**1.75**	**58**	Pn	**Pb**	21 20 32.4	-1.0
KELT	**Kelkit**	**1.75**	**3**	P	**Pg**	21 20 33.7	-0.7
KELT				S	**Sg**	21 20 56.8	-0.2
NZIP	**Nizip/Gaziante**	**1.79**	**221**	P	**Pb**	21 20 32.9	-1.1
KHMN	**Narli-Kahraman**	**1.86**	**238**	Pn	**Pb**	21 20 34.0	-1.3
KHMN	**Narli-Kahraman**	**1.86**	**238**	P	**Pb**	21 20 34.3	-1.0
SUSE	**Susehri**	**1.94**	**338**	P	**Pb**	21 20 37.0	+0.3
GAZ	**Gaziantep**	**1.96**	**232**	Pn	**Pn**	21 20 35.1	+0.5
VRTB	**Varto-Mus**	**1.96**	**67**	Pn	**Pb**	21 20 35.4	-1.7
KMRS	**Kahramanmaras**	**1.98**	**244**	Pn	**Pb**	21 20 36.1	-1.2
BAYT	**Aydıntepe-Bayb**	**2.13**	**21**	Pn	**Pb**	21 20 38.6	-1.4
SARI	**SarD1z-Kayseri**	**2.14**	**271**	Pn	**Pb**	21 20 38.5	-1.5
SVSK	**Karacayir**	**2.25**	**313**	Pn	**Pb**	21 20 40.5	-1.3
GURO	**Guroymak-BITLI**	**2.28**	**85**	Pn	**Pn**	21 20 39.4	+0.4
BNN	**Bunyan**	**2.62**	**281**	Pn	**Pn**	21 20 45.2	+1.5
KOZT	**Kozan**	**2.77**	**252**	Pn	**Pn**	21 20 47.6	+1.8
TOKT	**Tokat**	**2.78**	**314**	Pn	**Pn**	21 20 47.5	+1.7
AKDM	**Akdamar-Van**	**3.02**	**90**	Pn	**Pn**	21 20 50.6	+1.3
CEYT	**Ceyhan**	**3.03**	**244**	Pn	**Pn**	21 20 50.4	+1.2
TAHT	**Tahtakopru-Hat**	**3.10**	**230**	Pn	**Pn**	21 20 51.8	+1.6
YOZ	**Yozgat**	**3.22**	**294**	Pn	**Pn**	21 20 54.2	+2.2
CMRD	**Camardi-Nigde**	**3.36**	**259**	Pn	**Pn**	21 20 55.8	+1.9
KARA	**Karaisali**	**3.43**	**252**	Pn	**Pn**	21 20 56.9	+2.2
KOZK	**Kozakli-Nevseh**	**3.43**	**285**	Pn	**Pn**	21 20 56.9	+2.0

IDC 17 21:29:18.4±2.4,6.41S×129.72E,h0km,mb3.1/1,
mbtmp3.4/4,ML3.3/3,Error ellipse: s-maj=94.2km
s-min=30.7km az=76.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.28**	**199**	Pn	Pn	21 32 14.6	-0.1
	0.1nm,0.3s,baz=26,slow=12,SNR=1.6						
	2.5nm,1.0s						
WRA	**Warramunga Arr**	**14.18**	**162**	Pn	Pn	21 32 42.6	+1.9
	0.1nm,0.3s,baz=345,slow=13,SNR=1.6						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**17.62**	**167**	P	Pn	21 33 24.4	-1.2
	0.1nm,0.3s,baz=345,slow=10,SNR=6.6						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**67.58**	**327**	P	P	21 40 16.9	0.0
	0.1nm,0.5s,baz=118,slow=5.0,SNR=1.4						
	0.1nm,0.5s						

NEIC ***17*** *21:30:31.7±2.0,7.38S±0.06×128.59E±0.06,h146km±6km,*
mb4.3/41,Error ellipse: s-maj=9.2km s-min=8.1km
az=58.0
DJA ***17*** *21:30:31.4±0.2,7.3S±2.2×128.9E±.,h180km,M4.5/24,*
mB5.1/8,mb4.5/15,MLv4.7/24,Mw(mB)4.5/8
IDC ***17*** *21:30:32.2±2.0,7.32S×128.57E,h152km±18km,mb4.0/17,*
mbtmp4.5/21,Error ellipse: s-maj=17.1km s-min=10.9km
az=73.0
ISC 17 21:30:31.3±0.4,7.43S±0.04×128.60E±0.04,h151km,n103,
σ1s44/110,mb4.3/41,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.73**	**102**		**Pn**	**21 31 16.0**	**+0.7**
SAUI				Sn	**Sn**	21 31 46.5	-2.8
SAUI	**Saumlaki**	**2.73**	**102**	P	**Pn**	21 31 16.7	+1.4
SAUI				S	**Sn**	21 31 52.8	+3.5
BNDI	**Bandanaira**	**3.16**	**24**	P	**Pn**	21 31 23.4	+2.6
AAI	**Ambon**	**3.74**	**354**	P	**Pn**	21 31 29.4	+1.1
KRAI	**Karang Ratu**	**4.09**	**357**	P	**Pn**	21 31 35.0	+2.2
NLAI	**Namlea**	**4.42**	**340**	P	**Pn**	21 31 38.3	+1.1
SOEI	**Soe**	**4.87**	**241**		**Pn**	21 31 43.6	+0.4
SOEI	**Soe**	**4.87**	**241**	P	**Pn**	21 31 44.4	+1.2
SOEI				S	**Sn**	21 32 39.7	+0.5
BATI	**Baumata**	**5.61**	**240**	P	**Pn**	21 31 54.0	+1.1
	201nm,0.4s,baz=85,slow=2.0,SNR=89						
BATI				S	**Sn**	21 32 54.2	-2.3
	134nm,0.3s,baz=134,slow=23,SNR=12						
BATI	**Baumata**	**5.61**	**240**	P	**Pn**	21 31 53.9	+1.1
BATI				S	**Sn**	21 32 57.6	+1.0
MTN	**Manton Dam**	**5.93**	**155**	Pn	**Pn**	21 31 56.8	-0.3
SANI	**Sanana**	**5.95**	**334**	P	**Pn**	21 31 58.5	+1.2
	23nm,0.9s						
KMPI	**Kaimana, Papua**	**6.31**	**54**	P	**Pn**	21 32 02.5	+0.3
	131nm,0.8s						
MMRI	**Maumere**	**6.42**	**259**	Pn	**Pn**	21 32 03.6	**0.0**
MMRI	**Maumere**	**6.42**	**259**	P	**Pn**	21 32 04.4	+0.8
	0.2nm1µm64nm,0.9s						
EDFI	**Ende, Flores**	**6.97**	**259**	P	**Pn**	21 32 12.0	+0.9
	0.2nm35nm,0.6s						
SIJI	**Sorong**	**7.04**	**22**	P	**Pn**	21 32 12.0	+0.1
	9.1nm,0.3s,baz=230,slow=23,SNR=14						
SIJI				S	**Sn**	21 33 26.6	-4.2
	17nm,0.6s,baz=77,slow=23,SNR=7.7						
SIJI	**Sorong**	**7.04**	**22**	P	**Pn**	21 32 12.1	+0.1
SWI	**Sorong**	**7.04**	**22**	P	**Pn**	21 32 12.0	**0.0**
	0.2nm16nm,0.8s						
RKPI	**Ransiki, Papua**	**8.09**	**44**	P	**Pn**	21 32 25.1	-0.9
	113nm,0.7s						
KNRA	**Kununurra**	**8.20**	**179**		**Pn**	21 32 26.8	-0.6
BASI	**Baing, Sumba**	**8.40**	**250**	P	**Pn**	21 32 29.3	-0.8
	2µm76nm,0.7s						
MWPI	**Manokwari, Pap**	**8.43**	**40**	P	**Pn**	21 32 32.0	+1.5
	79nm,1.4s						
WSI	**Waingapu**	**8.51**	**254**	P	**Pn**	21 32 30.2	-1.4
FITZ	**Fitzroy Crossi**	**10.99**	**195**	P	**Pn**	21 33 02.5	-2.0
	7.9nm,0.6s,baz=9.8,slow=9.1,SNR=26						
FITZ				S	**Sn**	21 34 58.2	-7.8
	16nm,0.4s,baz=89,slow=15,SNR=4.5						
WB0	**Warramunga Arr**	**13.49**	**156**	Pn	**Pn**	21 33 34.4	-2.5
WRAB	**Tennant Creek**	**13.62**	**156**		**Pn**	21 33 36.2	-2.3
WRA	**Warramunga Arr**	**13.63**	**156**	P	**Pn**	21 33 36.5	-2.1
	5.3nm,0.5s,baz=333,slow=13,SNR=28						
WRA				S	Sn	21 35 57.1	-12
	5.1nm,0.4s,baz=339,slow=22,SNR=6.3						
JAGI	**Jajag, Banyuwa**	**14.35**	**265**	Pn	**Pn**	21 33 47.3	-0.4
COEN	**Coen**	**15.71**	**116**		**P**	21 34 06.0	+0.5
COEN				IAmb	IAmb	21 34 18.9	
	comp=Z,12nm,0.8s						
MBWA	**Marble Bar**	**16.12**	**211**		**Pn**	21 34 09.3	-0.2
MBWA				IAmb	IAmb	21 34 33.4	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**16.41**	**210**		**Pn**	21 34 12.6	-0.4
PSA00				IAmb	IAmb	21 34 32.4	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**16.93**	**163**		**P**	21 34 19.6	+0.8
AS31				IAmb	IAmb	21 34 30.2	
	comp=Z,4.9nm,0.5s						
ASAR	**Alice Springs**	**16.93**	**163**	P	**Pn**	21 34 20.7	+1.3
	comp=Z,9.7nm,0.6s,baz=337,slow=9.7,SNR=114						
ASAR				S	S	21 37 14.4	-13
	comp=Z,1.2nm,0.5s,baz=324,slow=18,SNR=4.1						
PMG	**Port Moresby**	**18.46**	**97**	P	**Pn**	21 34 38.2	+0.6
	comp=Z,18nm,0.7s,baz=309,slow=2.9,SNR=7.1						
PMG	**Port Moresby**	**18.46**	**97**	P	**Pn**	21 34 37.5	-0.2
SBUM	**Sibu**	**19.07**	**300**	P	**P**	21 34 42.5	+0.2
CTA	**Charters Tower**	**21.24**	**128**	P	**P**	21 35 07.6	+2.0
	comp=Z,0.9nm,0.2s,baz=348,slow=9.3,SNR=1.6						
	comp=Z,0.9nm,0.2s						
MORW	**Morawa**	**24.57**	**207**	P	**P**	21 35 39.8	+2.4
MORW				IAmb	IAmb	21 36 00.2	
	comp=Z,9.9nm,1.1s						
BBOO	**Buckleboo**	**26.19**	**166**	P	**P**	21 35 53.3	+1.4
BBOO				IAmb	IAmb	21 36 21.6	
	comp=Z,7.0nm,0.9s						
STKA	**Stephens Creek**	**27.17**	**155**	P	**P**	21 36 02.2	+1.5
	comp=Z,1.6nm,0.5s,baz=333,slow=11,SNR=6.6						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**27.17**	**155**	P	**P**	21 36 01.7	+1.0
NWAO	**Narrogin (SRO)**	**27.48**	**201**	P	**P**	21 36 04.0	+0.6
	comp=Z,3.4nm,0.4s,baz=14,slow=12,SNR=1.9						
	comp=Z,3.4nm,0.4s						
NWAO	**Narrogin (SRO)**	**27.48**	**201**	P	**P**	21 36 03.5	+0.1
CM31	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	21 37 43.4	+0.4
CMAR	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	21 37 43.3	+0.4
	comp=Z,2.8nm,1.0s,baz=142,slow=6.9,SNR=14						
CMAR				PcP	**PcP**	21 39 52.0	+1.4
	comp=Z,1.1nm,0.6s,baz=157,slow=2.6,SNR=7.8						
	comp=Z,2.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	21 37 42.4	-0.6
CHTO	**Chiang Mai**	**39.18**	**312**	P	**P**	21 37 44.7	-0.2
CHTO				IAmb	IAmb	21 37 46.6	
	comp=Z,4.0nm,0.8s						
ENH	**Enshi**	**41.74**	**335**	P	**P**	21 38 04.5	-1.1
ENH				IAmb	IAmb	21 38 06.0	
	comp=Z,5.9nm,0.9s						
PZH	**PanZhiHua**	**42.63**	**323**	P	**P**	21 38 13.6	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	**Korea Array**	**44.65**	**359**	P	**P**	21 38 28.2	-0.7
	comp=Z,1.1nm,0.6s,baz=179,slow=9.2,SNR=2.3						
	comp=Z,1.1nm,0.6s						
MJAR	**Matsushiro Arr**	**44.66**	**11**	P	**P**	21 38 26.9	-2.0
	comp=Z,1.4nm,0.4s,baz=183,slow=9.4,SNR=5.3						
	comp=Z,1.4nm,0.4s						
XAN	**Xi'an**	**45.26**	**337**	P	**P**	21 38 32.9	-1.0
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
SHL	**Shillong**	**48.48**	**314**		**P**	21 38 58.7	-0.5
SHL				IAmb	IAmb	21 38 59.6	
	comp=Z,5.7nm,0.9s						
LZDM	**Lanzhou Array**	**49.10**	**333**	P	**P**	21 39 04.4	+0.5
	comp=Z,4.9nm,0.6s,baz=171,slow=10,SNR=22						
	comp=Z,4.9nm,0.6s						
LZH	**Lanzhou**	**49.15**	**333**	*e*P	**P**	21 39 04.9	+0.9
LZH				pP	pP	21 39 35.6	-1.2
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.53**	**343**	*e*P	**P**	21 39 17.8	+3.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.0s						
USRK	**Ussuriysk Ar.**	**51.48**	**3**	P	**P**	21 39 20.6	-0.6
	comp=Z,2.1nm,0.5s,baz=175,slow=7.6,SNR=5.5						
	comp=Z,2.1nm,0.5s						
LSA	**Lhasa**	**51.56**	**318**	P	**P**	21 39 22.6	-0.1
LSA				IAmb	IAmb	21 39 25.1	
	comp=Z,3.5nm,0.6s						
EVN	**Everest**	**53.54**	**313**	P	**P**	21 39 37.4	-0.1
EVN				IAmb	IAmb	21 39 38.4	
	comp=Z,3.5nm,0.8s						
GOMU	**GeErMu**	**53.76**	**326**	P	P	21 39 44.8	+6.2
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA2	**Gaotai**	**53.78**	**332**	*e*P	P	21 39 25.8	-13
GTA2				pP	pP	21 39 31.1	-41
GTA2	**Gaotai**	**53.78**	**332**	P	**P**	**21 39 39.0**	**+0.6**
GTA2				pP	pP	21 39 51.4	-21
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GTA2				pmax	pmax		
	comp=Z,19nm,0.7s						
SONM	**Songino Array**	**58.42**	**343**	P	**P**	**21 40 11.7**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=167,slow=7.4,SNR=25						
	comp=Z,3.8nm,0.9s						
WMQ	**Urumqi**	**63.01**	**328**	*e*P	**P**	**21 40 43.3**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
PETK	**Petropavlovsk-**	**65.17**	**19**	P	**P**	**21 40 56.6**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=177,slow=5.1,SNR=5.5						
	comp=Z,4.2nm,0.7s						
WUS	**Wushi**	**66.24**	**321**	P	**P**	**21 41 04.4**	**+1.0**
WUS				IAmb	IAmb	21 41 04.5	
	comp=Z,2.4nm,0.8s						
KSH2	**Kashi**	**67.48**	**318**	P	**P**	**21 41 11.8**	**+0.5**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**67.83**	**328**	P	**P**	**21 41 13.4**	**+0.3**
	comp=Z,3.8nm,0.4s,baz=117,slow=8.2,SNR=104						
	comp=Z,3.8nm,0.4s						
MKAR	**Makanchi Array**	**67.83**	**328**		**P**	**21 41 13.6**	**+0.5**
MAKZ	**Makanchi**	**68.01**	**327**	P	**P**	**21 41 14.6**	**+0.3**
MAKZ				IAmb	IAmb	21 41 15.3	
	comp=Z,5.7nm,1.0s						
NRN	**Naryn**	**68.39**	**320**	P	**P**	**21 41 16.5**	**-0.7**
BOOM	**Boomskoye usch**	**69.00**	**321**	P	**P**	**21 41 21.6**	**+0.9**
YAK	**Yakutsk**	**69.26**	**1**	P	**P**	**21 41 21.1**	**-0.5**
	comp=Z,17nm,0.5s,baz=358,slow=1.0,SNR=6.4						
	comp=Z,17nm,0.5s						
YAK	**Yakutsk**	**69.26**	**1**	P	**P**	**21 41 21.3**	**-0.2**
AAK	**Ala-Archa**	**69.98**	**320**		**P**	**21 41 27.9**	**+1.2**
ARSB	**Arslanbob**	**70.29**	**319**	P	**P**	**21 41 29.2**	**+0.6**
ARSB				IAmb	IAmb	21 41 31.3	
	comp=Z,4.3nm,0.6s						
BTK	**Batken**	**71.13**	**317**	P	**P**	**21 41 33.7**	**+0.1**
ZAA0	**Zalesovo Array**	**71.36**	**334**		**P**	**21 41 34.0**	**-0.6**
ZALV	**Zalesovo Beam**	**71.36**	**334**	P	**P**	**21 41 34.1**	**-0.5**
	comp=Z,6.1nm,0.6s,baz=134,slow=5.6,SNR=30						
	comp=Z,6.1nm,0.6s						
CHGR	**Chuyangaron**	**71.65**	**315**	P	**P**	**21 41 38.7**	**+1.9**
KURBB	**Kurchatov Arra**	**72.16**	**329**	P	**P**	**21 41 39.9**	**+0.5**
	comp=Z,6.6nm,0.5s,baz=130,slow=5.0,SNR=52						
	comp=Z,6.6nm,0.5s						
KURK	**Kurchatov**	**72.17**	**329**		**P**	**21 41 39.7**	**+0.2**
VNDA	**Vanda**	**72.19**	**173**	P	**P**	**21 41 40.9**	**+1.6**
	comp=Z,3.0nm,0.9s,baz=325,slow=6.9,SNR=2.0						
	comp=Z,3.0nm,0.9s						
VNDA	**Vanda**	**72.19**	**173**	P	**P**	**21 41 40.3**	**+1.1**
SEY	**Seymchan**	**72.49**	**11**	P	**P**	**21 41 41.5**	**+0.4**
	comp=Z,7.2nm,0.6s,baz=210,slow=4.3,SNR=33						
	comp=Z,7.2nm,0.6s						
KK31	**Karatay Array**	**72.75**	**319**		**P**	**21 41 43.8**	**+0.6**
KKAR	**Karatay Array**	**72.75**	**319**	P	**P**	**21 41 43.6**	**+0.5**
BVAR	**Borovoye Array**	**77.69**	**328**	P	**P**	**21 42 10.8**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=124,slow=10,SNR=32						
	comp=Z,2.6nm,0.5s						
BORK	**Borovoye**	**77.74**	**328**	P	**P**	**21 42 11.2**	**-0.2**
BORK				IAmb	IAmb	21 42 12.0	
	comp=Z,2.9nm,0.6s						
AB31	**Akbulak array**	**81.98**	**322**	P	**P**	**21 42 33.8**	**-0.5**
ABKAR	**Akbulak array**	**81.98**	**322**	P	**P**	**21 42 33.7**	**-0.6**
ARTI	**Arti**	**85.42**	**328**	P	**P**	**21 42 51.4**	**-0.2**
ARTI				IAmb	IAmb	21 42 51.4	
	comp=Z,7.3nm,1.0s						
M14K	**Bethel**	**86.61**	**27**	P	**P**	**21 42 57.8**	**+0.4**
G16K	**Koyuk River**	**88.17**

	0.2nm,0.4s								
FINES	**FINESS Array B**	**80.93**	**334**	P		**P**		**21 48 20.3**	**+0.7**
	7.6nm,1.1s,baz=53,slow=5.4,SNR=5.4 7.6nm,1.1s								

*IDC **17** 21:57:22.1±0.8, 6°.71N×72°.94W, h154km±11km, mb2.8/3, mbtmp3.4/5, Error ellipse: s-maj=37.6km s-min=8.2km az=131.0*
*RSNC **17** 21:57:23.0±0.0, 7°.1N±3°×7°.3W±°, h139km±6km, M3.2, mB4.6, ML2.9, Mw(mB)3.8*
*FUNV **17** 21:57:23.0, 6°.80N×73°.13W, h155km, MW3.9, Presumed earthquake*

ISC 17 21:57:22.2±0.8, 6°.84N±0°.03×73°.10W±0°.03, h150km±6km, n56, σ1°34/97, mb3.1/3, 1C-6D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**199**	P	**Pn**	**21 57 43.1**	**+0.1**
BARC				S	**Sn**	**21 57 58.0**	**-0.8**
PAMC	**Pamplona, Colo**	**0.63**	**39**	P	**Pn**	**21 57 46.2**	**+1.3**
PAMC				S	**Sn**	**21 58 02.8**	**+0.6**
BRJC	**Barrancabermej**	**0.65**	**282**	P	**Pn**	**21 57 44.9**	**+0.5**
BRJC				S	**Sn**	**21 58 01.8**	**+0.5**
RUSC	**La Rusia**	**0.94**	**179**	P	**Pn**	**21 57 47.0**	**-0.2**
RUSC				S	**Sn**	**21 58 05.5**	**-0.6**
RUSC	**La Rusia**	**0.94**	**179**	⇑*i*P	**Pn**	**21 57 46.9**	**-0.2**
RUSC				*e*S	**Sn**	**21 58 05.2**	**-0.8**
CAPV	**Capacho**	**1.28**	**37**	⇓*i*P	**Pn**	**21 57 51.4**	**+1.6**
CAPV				*e*S	**Sn**	**21 58 10.5**	**+0.5**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	P	**Pn**	**21 57 49.7**	**-0.9**
PTBC				S	**Sn**	**21 58 10.4**	**-1.9**
OCAC	**Ocana**	**1.41**	**351**	P	**Pn**	**21 57 51.5**	**+0.5**
OCAC				S	**Sn**	**21 58 13.1**	**0.0**
SPBC	**San Pablo de B**	**1.53**	**219**	P	**Pn**	**21 57 52.1**	**-0.1**
SPBC				S	**Sn**	**21 58 13.7**	**-1.4**
NORC	**Norcasia**	**2.17**	**234**	P	**Pn**	**21 57 59.1**	**-0.3**
NORC				S	**Sn**	**21 58 27.2**	**-0.8**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**21 58 01.4**	**+0.2**
CHIC				S	**Sn**	**21 58 30.1**	**-1.0**
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**21 58 02.9**	**+1.2**
	39nm,0.3s,baz=115,slow=22,SNR=26						
ROSC				S	**Sn**	**21 58 32.1**	**0.0**
	90nm,0.4s,baz=15,slow=21,SNR=9.4						
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**21 58 03.0**	**+1.3**
ROSC				S	**Sn**	**21 58 33.1**	**+1.1**
CVER	**Cruz Verde, Cu**	**2.50**	**203**	P	**Pn**	**21 58 04.8**	**+0.9**
CVER				S	**Sn**	**21 58 35.3**	**-0.6**
HELC	**Santa Helena**	**2.50**	**255**	P	**Pn**	**21 58 03.8**	**+0.1**
HELC				S	**Sn**	**21 58 34.1**	**-1.5**
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**21 58 03.3**	**-0.4**
HELC				*e*S	**Sn**	**21 58 33.1**	**-2.5**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**21 58 03.6**	**-0.7**
UREC				S	**Sn**	**21 58 34.6**	**-2.2**
SOCV	**Socops**	**2.65**	**57**	⇓*i*P	**Pn**	**21 58 06.2**	**+1.0**
SOCV				*e*S	**Sn**	**21 58 36.9**	**-1.5**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**21 58 07.0**	**+0.1**
VILC				S	**Sn**	**21 58 40.7**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	P	**Pn**	**21 58 06.3**	**-0.8**
PTGC				S	**Sn**	**21 58 39.6**	**-2.1**
RECRC	**Villamaria, Ca**	**2.92**	**230**	P	**Pn**	**21 58 12.2**	**+3.1**
RECRC				S	**Sn**	**21 58 50.8**	**+5.0**
CBCC	**Ciudad Bolivar**	**3.05**	**252**	P	**Pn**	**21 58 11.4**	**+0.9**
CBOC				S	**Sn**	**21 58 47.1**	**-0.6**
DBBC	**Dabeiba**	**3.09**	**273**	P	**Pn**	**21 58 11.5**	**+0.6**
DBBC				S	**Sn**	**21 58 47.5**	**-1.0**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**21 58 12.6**	**+0.5**
	39nm,0.3s,baz=205,slow=2.2,SNR=75						
SDV				S	**Sn**	**21 58 50.2**	**-0.4**
	20nm,0.4s,baz=316,slow=14,SNR=6.7						
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**21 58 12.9**	**+0.9**
SDV				S	**Sn**	**21 58 50.0**	**-0.6**
SDV	**Santo Domingo**	**3.18**	**50**	⇓*i*P	**Pn**	**21 58 12.9**	**+0.9**
SDV				*e*S	**Sn**	**21 58 49.3**	**-1.3**
ARGC	**Ariguani, Magd**	**3.21**	**339**	P	**Pn**	**21 58 13.3**	**+1.1**
ARGC				S	**Sn**	**21 58 52.2**	**+1.2**
MCQV	**Machiques**	**3.24**	**10**	*e*P	**Pn**	**21 58 13.7**	**+1.0**
MCQV				*e*S	**Sn**	**21 58 49.9**	**-1.8**
ANIL	**Santa Ana**	**3.27**	**225**	P	**Pn**	**21 58 14.6**	**+1.2**
ANIL				S	**Sn**	**21 58 53.2**	**+0.3**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**21 58 16.7**	**-0.4**
PRAC				S	**Sn**	**21 58 59.4**	**-0.3**
APAC	**Apartado, Choc**	**3.61**	**287**	P	**Pn**	**21 58 17.8**	**+0.4**
APAC				S	**Sn**	**21 59 00.0**	**-0.2**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**21 58 16.8**	**-0.7**
ORTC				S	**Sn**	**21 59 01.5**	**+1.1**
SJCC	**San Jacinto, C**	**3.67**	**326**	P	**Pn**	**21 58 17.6**	**-0.7**
SJCC				S	**Sn**	**21 58 59.4**	**-2.3**
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**21 58 17.8**	**-0.5**
SJCC				*e*S	**Sn**	**21 58 58.8**	**-3.0**
PLMC	**San Jos del P**	**3.71**	**239**	P	**Pn**	**21 58 19.2**	**+0.4**
PLMC				S	**Sn**	**21 59 04.1**	**+1.5**
URMC	**La Uribe, Meta**	**3.79**	**200**	P	**Pn**	**21 58 20.2**	**+0.3**
URMC				S	**Sn**	**21 59 04.0**	**-0.7**
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	P	**Pn**	**21 58 23.9**	**-0.8**
CRJC				S	**Sn**	**21 59 10.9**	**-2.4**
YOTC	**Yotoco, Valle**	**4.30**	**229**	P	**Pn**	**21 58 26.4**	**-0.2**
SMRC	**Santa Marta, M**	**4.44**	**346**	P	**Pn**	**21 58 28.5**	**+0.3**
SMRC				S	**Sn**	**21 59 17.5**	**-2.2**
PIZC	**Pizarro, Choco**	**4.63**	**246**	P	**Pn**	**21 58 32.6**	**+1.8**
PTAC	**Punta Ardita,**	**4.69**	**274**	P	**Pn**	**21 58 31.2**	**-0.3**
PTAC				S	**Sn**	**21 59 24.3**	**-1.2**
MACC	**Macarena, Meta**	**4.72**	**189**	P	**Pn**	**21 58 30.5**	**-1.6**
MACC				S	**Sn**	**21 59 23.0**	**-3.5**
URIC	**Uribia, Colomb**	**4.95**	**13**	P	**Pn**	**21 58 34.5**	**-0.5**
URIC				S	**Sn**	**21 59 30.6**	**-1.2**
URIC	**Uribia, Colomb**	**4.95**	**13**	*e*P	**Pn**	**21 58 34.1**	**-0.9**
TEPV	**Terepaima**	**4.96**	**51**	⇓*i*P	**Pn**	**21 58 35.0**	**-0.1**
GARC	**Garzon, Huila**	**5.20**	**207**	P	**Pn**	**21 58 37.9**	**-0.7**
GARC				S	**Sn**	**21 59 35.0**	**-3.2**
MAPV	**Macapo**	**5.47**	**57**	⇓*i*P	**Pn**	**21 58 41.5**	**-0.4**
BENV	**Beln**	**6.26**	**60**	*e*P	**Pn**	**21 58 50.8**	**-1.7**
TURV	**Turiamo**	**6.32**	**55**	⇓*e*P	**Pn**	**21 58 53.1**	**-0.1**
CACV	**CAICARA DEL OR**	**6.55**	**83**	*e*P	Pn	21 59 01.9	+5.6
TACV	**Tcata**	**6.84**	**61**	*e*P	**Pn**	**21 58 58.8**	**-1.5**
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**22 04 14.1**	**+1.1**
	0.2nm,0.5s,baz=107,slow=8.0,SNR=2.0 0.2nm,0.5s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**22 05 47.8**	**+0.9**
	0.1nm,0.5s,baz=147,slow=8.1,SNR=1.8 0.1nm,0.5s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**22 07 35.0**	**+0.5**
	0.3nm,0.6s,baz=138,slow=5.5,SNR=5.5 0.3nm,0.6s						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**22 16 52.9**	**-0.9**
	0.3nm,0.6s,baz=107,slow=4.0,SNR=4.7						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**22 16 55.9**	**-0.9**
	0.2nm,0.4s,baz=106,slow=3.9,SNR=8.7						

*DJA **17** 22:08:54.1±0.2, 0°.S±2°×12°.3E±°, h140km±3km, M4.2/31, mB4.8/2, mb4.2/4, MLv4.2/31, Mw(mB)4.0/2*
*IDC **17** 22:08:57.2±3.8, 0°.07N×123°.63E, h177km±39km, mb3.1/8, mbtmp3.8/10, MS2.5/1, Error ellipse: s-maj=48.3km s-min=14.4km az=65.0*

ISC 17 22:08:54.3±0.7, 0°.10S±0°.06×123°.47E±0°.05, h150km, n23, σ0°94/27, mb3.6/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.86**	**328**	P	**Pn**	**22 09 18.1**	**+0.1**
GTOI				S	**Sn**	**22 09 37.0**	**+0.9**
LUWI	**Luwuk**	**1.17**	**217**	P	**Pn**	**22 09 19.5**	**-1.1**
LUWI				S	**Sn**	**22 09 39.5**	**-1.2**
MRSI	**Marisa**	**1.64**	**290**	P	**Pn**	**22 09 23.6**	**-1.7**
APSI	**Ampana**	**1.99**	**246**	P	**Pn**	**22 09 29.9**	**+0.5**
MNI	**Manado**	**2.05**	**42**	P	**Pn**	**22 09 30.1**	**0.0**
SANI	**Sanana**	**3.17**	**128**	P	**Pn**	**22 09 42.8**	**-1.1**
MPSI	**Mapaga**	**3.60**	**277**	P	**Pn**	**22 09 48.6**	**-0.8**
PCI	**Palu**	**3.72**	**258**	P	**Pn**	**22 09 51.6**	**+0.6**
TNTI	**Ternate**	**3.99**	**77**	P	**Pn**	**22 09 53.5**	**-1.0**
TNTI				S	**Sn**	**22 10 40.6**	**-0.6**
TTSI	**Tana Toraja**	**4.68**	**231**	P	**Pn**	**22 10 03.3**	**-0.2**
NLAI	**Namlea**	**4.78**	**131**	P	**Pn**	**22 10 05.7**	**+0.8**
NLAI				S	**Sn**	**22 11 00.0**	**+0.1**
SPSI	**Sidrap Palu**	**5.33**	**224**	P	**Pn**	**22 10 12.5**	**+0.3**
	0.1nm12nm,0.5s						
KAPI	**Kappang**	**6.14**	**217**	LR	LR	22 13 04.5	
	comp=Z,41nm,18.9s,baz=338,slow=39						
DAV	**Davao City (W)**	**7.42**	**16**	P	**Pn**	**22 10 40.4**	**+0.3**
	124nm,0.5s,baz=63,slow=17,SNR=2.1						

SIJI	**Sorong**	**7.83**	**96**	P		**Pn**		**22 10 46.5**	**+0.9**
	11nm,0.7s,baz=204,slow=7.3,SNR=4.8								
WRA	**Warramunga Arr**	**22.41**	**152**	P		**P**		**22 13 41.9**	**+1.2**
	0.3nm,0.5s,baz=329,slow=10,SNR=12 0.3nm,0.5s								
ASAR	**Alice Springs**	**25.52**	**157**	P		**P**		**22 14 10.2**	**+1.0**
	0.1nm,0.3s,baz=346,slow=11,SNR=1.5								
ASAR				PcP		**PcP**		**22 17 37.5**	**+0.6**
	0.2nm,0.4s,baz=335,slow=2.4,SNR=1.6 0.1nm,0.3s								
CMAR	**Chiang Mai Arr**	**30.35**	**309**	P		**P**		**22 14 53.6**	**+1.5**
	0.8nm,0.3s,baz=141,slow=6.6,SNR=5.5 0.8nm,0.3s								
HILR	**Hailar Array B**	**49.57**	**357**	P		**P**		**22 17 29.4**	**-0.6**
	0.8nm,0.4s,baz=159,slow=12,SNR=1.7 0.8nm,0.4s								
SONM	**Songino Array**	**50.00**	**345**	P		**P**		**22 17 33.3**	**-0.2**
	0.8nm,0.7s,baz=162,slow=8.7,SNR=6.7 0.8nm,0.7s								
MKAR	**Makanchi Array**	**58.95**	**328**	P		**P**		**22 18 37.2**	**-0.7**
	0.6nm,0.5s,baz=122,slow=8.5,SNR=16 0.6nm,0.5s								
ZALV	**Zalesovo Beam**	**62.60**	**335**	P		**P**		**22 19 01.0**	**-1.4**
	0.3nm,0.4s,baz=122,slow=7.9,SNR=2.2 0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**63.28**	**330**	P		**P**		**22 19 05.9**	**-1.1**
	0.3nm,0.6s,baz=138,slow=6.4,SNR=6.5 0.3nm,0.6s								

NDI 17 22:10:03.9±2.5, 33°.83N×75°.95E, h16km±12km, ML3.6, MW3.6, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSSA	**Tissa**	**1.01**	**170**	*e*P	Pb	22 10 23.0	-0.2
TSSA				IAML		22 10 30.4	
	comp=N,2μm,0.1s						
TSSA				IAML		22 10 30.8	
	comp=E,1μm,0.2s						
TSSA				*e*S	Sn	22 10 37.5	-0.1
ALCI	**Alchi Leh**	**1.09**	**69**	*i* Pg	Pn	22 10 25.0	+0.1
ALCI				*e*S	Sb	22 10 39.0	+0.1
ALCI				IAML		22 10 43.1	
	comp=E,1μm,0.4s						
ALCI				IAML		22 10 43.1	
	comp=N,1μm,0.3s						
JMU	**Jammu**	**1.41**	**222**	*e*P	Pb	22 10 30.0	+0.2
JMU				*e*S	Sb	22 10 47.5	0.0
JMU				IAML		22 10 57.9	
	comp=N,1μm,0.1s						
JMU				IAML		22 10 58.0	
	comp=E,1μm,0.3s						
DHRM	**DHARAMSHALA**	**1.61**	**169**	*e*P	Pn	22 10 32.1	+0.3
DHRM				*e*S	Sn	22 10 51.4	-1.0
DHRM				IAML		22 10 56.0	
	comp=E,837nm,0.3s						
DHRM				IAML		22 10 57.1	
	comp=N,484nm,0.2s						
BHK	**Bhakra**	**2.46**	**171**	*e*P	Pb	22 10 46.5	-1.3
BHK				*e*S	Sb	22 11 16.0	-1.9
BHK				IAML		22 11 17.4	
	comp=N,430nm,0.4s						
BHK				IAML		22 11 17.6	
	comp=E,470nm,0.3s						
SMLA	**Simla**	**2.89**	**159**	*e*P	Pn	22 10 50.8	+1.6
SMLA				*e*S	Sn	22 11 23.6	0.0
SMLA				IAML		22 11 29.1	
	comp=E,337nm,0.5s						
SMLA				IAML		22 11 29.8	
	comp=N,214nm,0.2s						
DDI	**Dehra Dun**	**3.93**	**152**	*e*P	Pn	22 11 03.9	+0.2
DDI				*e*S	Sn	22 11 47.6	-2.0
DDI				IAML		22 11 52.8	
	comp=E,120nm,0.2s						
DDI				IAML		22 11 56.5	
	comp=N,91nm,0.4s						
JOSI	**Joshimath**	**4.48**	**136**	*e*P	Pn	22 11 09.3	-2.1
JOSI				*e*S	Sn	22 12 01.9	-1.4
JOSI				IAML		22 12 07.0	
	comp=E,144nm,0.4s						
JOSI				IAML		22 12 07.7	
	comp=N,170nm,0.3s						
PTH	**Pithoragarh**	**5.57**	**138**	*e*P	Pn	22 11 26.8	+0.4
PTH				*e*S	Sn	22 12 24.8	-5.4
PTH				IAML		22 12 30.3	
	comp=E,198nm,0.4s						
PTH				IAML		22 12 30.9	
	comp=N,135nm,0.3s						
LGTI	**Lohaghat**	**5.66**	**140**	*e*P	Pn	22 11 26.8	-0.8
LGTI				*e*S	Sn	22 12 27.7	-4.6
LGTI				IAML		22 12 31.4	
	comp=E,117nm,0.1s						
LGTI				IAML		22 12 31.8	
	comp=N,113nm,0.1s						

*IDC **17** 22:13:01.2±2.0, 20°.78S×178°.78W, h578km±23km, mb3.6/15, mbtmp4.5/17, Error ellipse: s-maj=16.4km s-min=15.2km az=140.0*
*NEIC **17** 22:13:01.6±2.2, 20°.77S±0°.07×178°.7W±0°.1, h582km±7km, mb4.2/40, Error ellipse: s-maj=16.8km s-min=10.1km az=71.0*

ISC 17 22:13:04.5±0.5, 20°.83S±0°.09×178°.88W±0°.09, h619km, n98, σ0°93/96, mb4.2/34, 3C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.23**	**316**	P	**P**	**22 14 32.4**	**-0.7**
MARNC	**Mare, Loyalty**	**12.23**	**265**	P	**P**	**22 15 44.3**	**-1.2**
DZM	**Mont Dzumac**	**13.72**	**262**	P	**P**	**22 15 58.0**	**-2.2**
	2.0nm,0.5s,baz=140,slow=22,SNR=1.1						
URZ	**Urewera**	**17.71**	**190**	P	**P**	**22 16 34.5**	**-1.9**
	3.1nm,0.3s,baz=233,slow=2.9,SNR=6.7						
BKZ	**Black Stump Fm**	**18.70**	**191**	P	**P**	**22 16 43.3**	**-2.1**
THZ	**Tophouse**	**21.99**	**197**	P	**P**	**22 17 13.4**	**-1.6**
FOZ	**Fox Glacier**	**24.53**	**200**	P	**P**	**22 17 37.7**	**+0.4**
WHZ	**Wether Hill Ro**	**27.23**	**200**	P	**P**	**22 18 00.5**	**-0.6**
PPT	**Papeete**	**27.84**	**88**	P	**P**	**22 18 04.7**	**-2.0**
	23nm,0.3s,baz=253,slow=20,SNR=2.9 23nm,0.3s						
CTAO	**Charters Tower**	**32.64**	**265**	P	**P**	**22 18 48.2**	**+0.5**
CTAO				IAmb	IAmb	22 18 49.0	
	comp=Z,7.6nm,1.0s						
COEN	**Coen**	**36.78**	**274**	P	**P**	**22 19 22.1**	**0.0**
COEN				IAmb	IAmb	22 19 25.1	
	comp=Z,3.7nm,0.9s						
STKA	**Stephens Creek**	**36.90**	**244**	P	**P**	**22 19 23.6**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=96,slow=12,SNR=4.3 comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**36.90**	**244**	P	**P**	**22 19 23.2**	**+0.3**
BBOO	**Buckleboo**	**41.66**	**244**	P	**P**	**22 20 01.2**	**+0.3**
JAY	**Jayapura**	**43.37**	**289**	P	**P**	**22 20 14.1**	**-0.3**
	comp=Z,8nm,0.8s,baz=164,slow=4.4,SNR=4.6 comp=Z,38nm,0.8s						
AS31	**Alice Springs**	**43.64**	**257**	P	**P**	**22 20 16.5**	**+0.1**
ASAR	**Alice Springs**	**43.64**	**257**	P	**P**	**22 20 16.8**	**+0.4**
	comp=Z,5.1nm,0.5s,baz=96,slow=7.6,SNR=87						
ASAR				PcP	**PcP**	**22 21 49.7**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=82,slow=3.9,SNR=2.5						
ASAR				ScP	**ScP**	**22 24 46.9**	**+3.8**
	comp=Z,0.6nm,0.7s,baz=103,slow=5.0,SNR=6.5						
ASAR				S	**S**	**22 26 02.5**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=95,slow=14,SNR=2.6 comp=Z,5.1nm,0.5s						
ASAR	**Alice Springs**	**43.64**	**257**	P	**P**	**22 20 16.4**	**0.0**
WB0	**Warramunga Arr**	**43.72**	**263**	P	**P**	**22 20 16.9**	**-0.2**
WB0				IAmb	IAmb	22 20 17.5	
	comp=Z,7.1nm,0.5s						
WRA	**Warramunga Arr**	**43.74**	**263**	P	**P**	**22 20 16.8**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=98,slow=7.7,SNR=36 comp=Z,2.3nm,0.4s						
MTN	**Manton Dam**	**48.34**	**271**	P	**P**	**22 20 51.6**	**-0.4**
MTN				IAmb	IAmb	22 20 52.2	
	comp=Z,8.1nm,0.8s						
KNRA	**Kununurra**	**49.82**	**267**	P	**P**	**22 21 02.9**	**+0.2**
KNRA				IAmb	IAmb	22 21 07.7	
	comp=Z,4.4nm,0.8s						
PSA00	**Pilbara Seismi**	**56.79**	**257**	P	**P**	**22 21 52.1**	**+0.3**
PSA00				IAmb	IAmb	22 22 05.1	
	comp=Z,9.9nm,1.1s						
MBWA	**Marble Bar**	**56.98**	**258**	P	**P**	**22 21 52.9**	**-0.2**
VNDA	**Vanda**	**57.51**	**185**	P	**P**	**22 21 56.8**	**+1.1**
	comp=Z,3.5nm,1.0s,baz=42,slow=11,SNR=1.4 comp=Z,3.5nm,1.0s						
VNDA	**Vanda**	**57.51**	**185**	P	**P**	**22 21 57.5**	**+1.8**

QSPA	**South Pole Qui**	**69.24**	**180**	P		**P**		**22 23 11.6**	**+0.9**
	comp=Z,3.3nm,0.4s,baz=35,slow=0.8,SNR=5.4 comp=Z,3.3nm,0.4s								
QSPA	**South Pole Qui**	**69.24**	**180**	P		**P**		**22 23 12.2**	**+1.5**
QSPA				IAmb		IAmb		22 23 12.6	
	comp=Z,9.9nm,1.1s								
MJAR	**Matsushiro Arr**	**69.99**	**324**	P		**P**		**22 23 15.5**	**0.0**
	comp=Z,1.7nm,0.6s,baz=345,slow=9.4,SNR=5.6 comp=Z,1.7nm,0.6s								
TPUB	**Ta-pu**	**73.47**	**303**	P		**P**		**22 23 35.2**	**-0.6**
ASAJ	**Asahikawa**	**73.63**	**332**	P		**P**		**22 23 37.2**	**+1.0**
	comp=Z,5.1nm,0.4s,baz=269,slow=0.3,SNR=3.5 comp=Z,5.1nm,0.4s								
UNV	**Unalaska Vale**	**75.13**	**8**	P		**P**		**22 23 43.4**	**-1.0**
PEA0B	**Petropavlovsk-**	**76.38**	**346**	P		**P**		**22 23 52.0**	**+0.7**
PETK	**Petropavlovsk-**	**76.38**	**346**	P		**P**		**22 23 52.0**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=174,slow=2.8,SNR=5.5 comp=Z,2.9nm,0.6s								
PETK	**Petropavlovsk-**	**76.38**	**346**	P		**P**		**22 23 51.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**78.78**	**326**	P		**P**		**22 24 05.3**	**+0.9**
	comp=Z,3.6nm,0.8s,baz=144,slow=5.4,SNR=3.2 comp=Z,3.6nm,0.8s								
BELA	**Belgrano 2**	**79.33**	**173**	P		**P**		**22 24 06.8**	**-0.1**
BELA				IAmb		IAmb		22 24 22.8	
	comp=Z,12nm,1.1s								
O16K	**Kokwok River B**	**81.93**	**11**	P		**P**		**22 24 19.5**	**-0.8**
O16K				IAmb		IAmb		22 24 44.8	
	comp=Z,9.4nm,1.1s								
N15K	**Kwethluk River**	**82.15**	**9**	P		**P**		**22 24 21.7**	**+0.3**
N15K				IAmb		IAmb		22 24 23.5	
	comp=Z,9.5nm,0.9s								
K05A	**Summer Lake**	**82.74**	**39**	P		**P**		**22 24 26.2**	**+1.1**
J05D	**Fort Rock, OR**	**82.88**	**38**	P		**P**		**22 24 26.9**	**+1.2**
J05D				IAmb		IAmb		22 24 28.0	
	comp=Z,5.1nm,0.7s								
M16K	**Timber Creek**	**83.14**	**10**	P		**P**		**22 24 27.4**	**+1.0**
K15K	**Wolf Creek Mou**	**83.99**	**8**	P		**P**		**22 24 30.0**	**-0.5**
K15K				IAmb		IAmb		22 24 36.9	
	comp=Z,7.7nm,1.1s								
GSI	**Gunungsitoli**	**84.43**	**274**	P		**P**		**22 24 35.6**	**+1.8**
GSI				IAmb		IAmb		22 24 41.8	
	comp=Z,12nm,1.1s								
STLK	**Strandline Lak**	**84.87**	**13**	P		**P**		**22 24 34.0**	**-0.9**
STLK				IAmb		IAmb		22 24 50.4	
	comp=Z,4.8nm,1.2s								
SUA	**Susitna One**	**85.07**	**13**	P		**P**		**22 24 35.4**	**-0.5**
J17K	**VABM Dome**	**85.38**	**9**	P		**P**		**22 24 37.6**	**+0.3**
GHO	**Glory Hole Cre**	**85.74**	**14**	P		**P**		**22 24 38.7**	**-0.4**
BMRM	**Bremner River**	**86.08**	**16**	P		**P**		**22 24 40.7**	**0.0**
SCM	**Sheep Creek Mo**	**86.16**	**14**	P		**P**		**22 24 40.8**	**-0.3**
SEY	**Seymchan**	**86.51**	**347**	P		**P**		**22 24 42.8**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=128,slow=8.2,SNR=8.3 comp=Z,1.6nm,0.5s								
N25K	**Chitina, Valde**	**86.62**	**16**	P		**P**		**22 24 43.2**	**-0.1**
N25K				IAmb		IAmb		22 24 43.8	
	comp=Z,4.8nm,0.8s								
TRF	**Thorofare Moun**	**86.95**	**12**	P		**P**		**22 24 44.3**	**-0.6**
TRF				IAmb		IAmb		22 24 56.5	
	comp=Z,4.9nm,1.0s								
G19K	**Purcell Mounta**	**88.27**	**9**	P		**P**		**22 24 51.1**	**+0.4**
CCB	**Clear Creek Bu**	**88.52**	**13**	P		**P**		**22 24 50.8**	**-1.1**
CCB				IAmb		IAmb		22 24 51.8	
	comp=Z,3.6nm,0.8s								
ILAR	**Eielson Array**	**88.82**	**13**	P		**P**		**22 24 52.6**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=217,slow=5.1,SNR=15 comp=Z,1.0nm,0.6s								
ILAR	**Eielson Array**	**88.82**	**13**	P		**P**		**22 24 52.2**	**-1.2**
H22K	**Ishtalitna Cre**	**88.94**	**11**	P		**P**		**22 24 53.4**	**-0.6**
J26L	**Joseph Creek**	**89.33**	**14**	P		**P**		**22 24 56.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P		**P**		**22 24 59.1**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=106,slow=4.6,SNR=7.6 comp=Z,0.8nm,0.3s								
M30M	**Minto, Yukon**	**89.54**	**18**	P		**P**		**22 24 57.0**	**+0.2**
M30M				IAmb		IAmb		22 24 58.5	
	comp=Z,3.1nm,0.8s								
PDAR	**Pinedale Array**	**89.77**	**44**	P		**P**		**22 24 59.4**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=202,slow=3.7,SNR=4.8 comp=Z,0.4nm,0.7s								
D19K	**Kuna River**	**90.35**	**8**	P		**P**		**22 25 00.0**	**-0.4**
D19K				IAmb		IAmb		22 25 01.7	
	comp=Z,4.0nm,1.1s								
C19K	**Lookout Ridge**	**90.76**	**7**	P

AKTO	**Aktyubinsk**	**14.51**	**24**	Pn		**Pn**	**22 38 39.6**	**-3.7**
	0.3nm,0.3s,baz=214,slow=7.3,SNR=6.2							
AKTO				Sn		Sn	22 41 12.8	-11
	0.2nm,0.3s,baz=343,slow=14,SNR=2.6							
	1.1nm,0.4s							
MLR	**Muntele Rosu**	**19.00**	**302**	P		**Pn**	**22 39 41.6**	**+1.1**
	2.0nm,0.7s,baz=101,slow=16							
MLR	**Muntele Rosu**	**19.00**	**302**	⇓P		**Pn**	**22 39 42.0**	**+1.5**
AKASG	**Malin Array Be**	**19.34**	**320**	P		**P**	**22 39 43.0**	**-0.4**
	0.4nm,0.3s,baz=122,slow=12,SNR=5.5							
	0.5nm,0.5s							
DOPR	**Dopca**	**19.51**	**303**	⇓P		**Pn**	**22 39 47.7**	**+1.1**
VOIR		**19.59**	**302**	⇑P		**Pn**	**22 39 48.5**	**+1.0**
VLAD	**Vladila**	**19.71**	**297**	⇑P		**Pn**	**22 39 50.2**	**+1.4**
ARR	**Arges**	**19.85**	**301**	⇑P		**Pn**	**22 39 51.2**	**+0.6**
BURAR	**Bucovina Array**	**20.18**	**308**	⇓P		**P**	**22 39 53.9**	**+1.3**
LOT	**Lotru**	**20.46**	**301**	⇑P		**P**	**22 39 56.8**	**+1.0**
GZR	**Gura Zlata**	**21.13**	**300**	⇓P		**P**	**22 40 04.2**	**+1.3**
MARR	**Marisel-Cluj**	**21.22**	**304**	⇓P		**P**	**22 40 05.3**	**+1.3**
DRGR		**21.52**	**304**	⇑P		**P**	**22 40 06.9**	**-0.3**
BVAR	**Borovoye Array**	**21.55**	**37**	P		**P**	**22 40 07.6**	**+0.2**
	3.3nm,0.6s,baz=238,slow=9.7,SNR=21							
	3.3nm,0.6s							
KURBB	**Kurchatov Arra**	**24.81**	**48**	P		**P**	**22 40 41.0**	**+0.9**
	0.8nm,0.8s,baz=255,slow=9.7,SNR=7.4							
	0.8nm,0.8s							
MKAR	**Makanchi Array**	**26.25**	**59**	P		**P**	**22 40 54.3**	**+1.1**
	1.7nm,0.8s,baz=256,slow=9.8,SNR=17							
	1.7nm,0.8s							
ZALV	**Zalesovo Beam**	**29.58**	**45**	P		**P**	**22 41 21.7**	**-1.1**
	0.4nm,0.4s,baz=240,slow=7.6,SNR=2.6							
	0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**47.43**	**99**	P		**P**	**22 43 53.2**	**+0.3**
	0.2nm,0.3s,baz=304,slow=8.7,SNR=4.3							
	0.2nm,0.3s							

*NOU **17** 23:02:34.3,22˚.98S×169˚.67E,h0km,MLv4.7/14,*
Southeast of Loyalty Islands
*IDC **17** 23:02:36.7±2.8,20˚.28S×168˚.91E,h0km,mb3.6/4,*
mbtmp3.7/5,ML4.3/1,MS3.2/3,Error ellipse:
s-maj=104.8km s-min=25.8km az=139.0
ISC 17 23:02:31.0±1.4,23˚.2S±0˚.1×169˚.99E±0˚.09,h25km,n19,
σ2s15/17,mb3.7/4,MS3.1/3,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PINNC	**Pines Island,**	**2.42**	**284**	P		**Pn**	**23 03 10.7**	**+1.8**
PINNC	**Pines Island,**	**2.42**	**284**	S		**Sn**	**23 03 36.8**	**-0.9**
MARNC	**Mare, Loyalty**	**2.50**	**313**	P		**Pn**	**23 03 10.4**	**+0.4**
MARNC	**Mare, Loyalty**	**2.50**	**313**	S		**Sn**	**23 03 39.0**	**-0.6**
YATNC	**Mamie plateau,**	**3.08**	**291**	P		**Pn**	**23 03 18.7**	**+0.7**
YATNC	**Mamie plateau,**	**3.08**	**291**	S		**Sn**	**23 03 53.3**	**-0.8**
ONTNC	**Ouen Toro**	**3.38**	**285**	P		**Pn**	**23 03 23.9**	**+1.7**
DZM	**Mont Dzumac**	**3.46**	**288**	Pn		**Pn**	**23 03 24.7**	**+1.3**
	42nm,0.3s,baz=329,slow=21,SNR=458							
DZM				Sn		**Sn**	**23 04 01.5**	**-2.2**
	23nm,0.3s,baz=96,slow=20,SNR=4.2							
	81nm,0.3s							
DZM	**Mont Dzumac**	**3.46**	**288**	P		**Pn**	**23 03 24.3**	**+0.9**
RTV	**Rentapao**	**5.58**	**345**	P		**Pn**	**23 03 54.9**	**+2.5**
DVP	**Devils Point**	**5.71**	**342**	P		**Pn**	**23 03 56.3**	**+2.1**
KOUNC	**Koumac, New Ca**	**5.92**	**295**	P		**Pn**	**23 03 58.8**	**+1.8**
CTA	**Charters Tower**	**22.27**	**273**	LR		LR	23 14 34.8	
	comp=Z,67nm,19.4s,baz=35,slow=34							
STKA	**Stephens Creek**	**26.56**	**245**	LR		LR	23 17 33.6	
	comp=Z,42nm,20.6s,baz=176,slow=33							
ASAR	**Alice Springs**	**33.06**	**262**	P		P	23 09 09.3	+4.6
	1.4nm,0.9s,baz=79,slow=9.7,SNR=8.7							
ASAR				LR		LR	23 20 57.0	
	comp=Z,50nm,19.1s,baz=124,slow=34							
	1.4nm,0.9s							
WRA	**Warramunga Arr**	**33.26**	**269**	P		**P**	**23 09 09.9**	**+3.4**
	0.5nm,0.8s,baz=98,slow=8.1,SNR=2.8							
	0.5nm,0.8s							
SONM	**Songino Array**	**90.79**	**323**	P		**P**	**23 15 27.4**	**-4.6**
	0.3nm,0.9s,baz=140,slow=4.9,SNR=1.5							
	0.3nm,0.9s							
ILAR	**Eielson Array**	**93.80**	**17**	P		**P**	**23 15 44.5**	**-0.8**
	0.3nm,0.9s,baz=239,slow=5.0,SNR=6.9							
	0.3nm,0.9s							
EKA	**Eskdalemuir Ar**	**147.51**	**353**	PKP		**PKPbc**	**23 22 13.5**	**+1.0**
	1.7nm,0.6s,baz=5.2,slow=1.8,SNR=5.1							

IDC 17 23:07:06.0±3.3,8˚.72S×135˚.87E,h0km,mb3.3/1,
mbtmp3.1/3,ML3.1/2,Error ellipse: s-maj=119.7km
s-min=28.9km az=86.0,Arafura Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**11.26**	**187**	Pn		Pn	23 09 49.8	+1.6
	0.1nm,0.3s,baz=11,slow=14,SNR=1.5							
WRA				Sn		Sn	23 11 55.6	+0.8
	0.2nm,0.3s,baz=6.7,slow=23,SNR=1.6							
	0.1nm,0.3s							
ASAR	**Alice Springs**	**14.98**	**187**	Pn		Pn	23 10 38.3	-0.9
	0.1nm,0.3s,baz=12,slow=14,SNR=7.4							
ASAR				Sn		Sn	23 13 24.4	-1.6
	0.1nm,0.3s,baz=7.1,slow=28,SNR=1.8							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**72.91**	**325**	P		P	23 18 37.0	-0.1
	0.2nm,0.5s,baz=123,slow=7.1,SNR=2.4							
	0.2nm,0.5s							

*NEIC **17** 23:38:56.1±1.2,19˚.05N±0˚.03×67˚.62W±0˚.03,h10km±1km,*
ML3.0/33,Md3.5/6(RSPR),Error ellipse: s-maj=6.2km
s-min=4.1km az=47.0
*RSPR **17** 23:38:57.5,19˚.07N×67˚.82W,h25km±31km,MD3.5/6*
*OSPL **17** 23:38:58.6±0.8,18˚.91N×67˚.63W,h4km±23km,ML2.6,*
Presumed earthquake
*SDD **17** 23:38:59.9±2.0,18˚.85N×67˚.66W,h20km±66km,MD3.7,*
ML2.7,MW3.1,Presumed earthquake
ISC 17 23:38:57.3±1.3,18˚.96N±0˚.06×67˚.63W±0˚.03,h13km±10km,
n45,σ0s43/69,14C-4D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.59**	**166**			**Pb**	**23 39 09.4**	**-0.1**
IDE						**Sb**	**23 39 18.3**	**+0.5**
IDE	**Isla Desecheo**	**0.59**	**166**	⇑*i*P		**Pb**	**23 39 09.4**	**-0.1**
IDE				*e*S		**Sb**	**23 39 18.3**	**+0.5**
AGPR	**Aguadilla, PR**	**0.69**	**135**	Pg		**Pb**	**23 39 11.2**	**-0.1**
AGPR				Sg		**Sb**	**23 39 20.8**	**+0.1**
AGPR				IAML			23 39 22.0	
	745nm,0.3s							
AGPR	**Aguadilla, PR**	**0.69**	**135**	⇑*e*Pg		**Pb**	**23 39 11.2**	**-0.1**
AGPR				⇑*e*Sg		**Sb**	**23 39 20.5**	**-0.2**
AGPR				IAML			23 39 22.6	
	comp=N,792nm,0.2s							
AGPR	**Aguadilla, PR**	**0.69**	**135**	⇑*e*P		**Pb**	**23 39 11.7**	**+0.4**
AGPR				*e*S		**Sb**	**23 39 22.0**	**+1.2**
PCDR	**Punta Cana, DR**	**0.84**	**238**	⇑*e*Pg		**Pg**	**23 39 13.5**	**-0.1**
PCDR				IAML			23 39 28.1	
	comp=N,301nm,1.1s							
PRSN	**Puerto Rico Se**	**0.87**	**148**	Pg		**Pb**	**23 39 14.5**	**+0.3**
PRSN	**Puerto Rico Se**	**0.87**	**148**			**Sn**	**23 39 27.8**	**0.0**
PRSN	**Puerto Rico Se**	**0.87**	**148**	⇑*e*Pg		**Pb**	**23 39 14.8**	**+0.5**
PRSN				IAML			23 39 30.3	
	comp=N,669nm,0.3s							
PRSN	**Puerto Rico Se**	**0.87**	**148**	⇑*i*P		**Pb**	**23 39 14.6**	**+0.3**
PRSN				*e*S		**Sn**	**23 39 27.8**	**0.0**
LSP	**Las Mesas**	**0.93**	**147**			**Pb**	**23 39 15.5**	**+0.1**
LSP						**Sn**	**23 39 29.9**	**+0.5**
LSP	**Las Mesas**	**0.93**	**147**	⇑*i*P		**Pb**	**23 39 15.5**	**+0.1**
LSP				*e*S		**Sn**	**23 39 29.9**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.07**	**153**			**Pb**	**23 39 17.6**	**0.0**
CRPR						**Sn**	**23 39 33.3**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.07**	**153**	IAML			23 39 35.8	
	comp=N,383nm,0.5s							
CRPR				IAML			23 39 40.3	
	comp=N,220nm,0.4s							
CRPR	**Cabo Rojo, PR**	**1.07**	**153**	⇑*e*Pg		**Pb**	**23 39 17.6**	**0.0**
CRPR				⇑*e*Sg		**Sb**	**23 39 30.3**	**-1.3**
CRPR				IAML			23 39 40.3	
	comp=N,273nm,0.4s							
CRPR	**Cabo Rojo, PR**	**1.07**	**153**	⇑*i*P		**Pb**	**23 39 17.6**	**0.0**
CRPR				*e*S		**Sn**	**23 39 33.3**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.07**	**153**	*i* P		**Pb**	**23 39 17.5**	**-0.2**
CRPR				*e*S		**Sb**	**23 39 30.3**	**-1.2**
CRPR				IAML			23 39 35.7	
	comp=Z,268nm,0.3s							
UUPR	**Utuado, UPR, P**	**1.11**	**129**	Pn		**Pb**	**23 39 17.8**	**-0.6**
UUPR				Sn		**Sg**	**23 39 33.5**	**+0.2**
MLPR	**Magueyes Islan**	**1.13**	**151**	Pn		**Pb**	**23 39 18.0**	**-0.7**
MLPR				IAML			23 39 31.4	
	comp=Z,328nm,0.2s							
MLPR				IAML			23 39 37.8	
	comp=Z,318nm,0.4s							
EMPR	**Esperanza - Ma**	**1.15**	**115**			**Pb**	**23 39 18.9**	**-0.1**
EMPR						**Sg**	**23 39 34.5**	**+0.2**
EMPR	**Esperanza - Ma**	**1.15**	**115**	⇑*e*P		**Pb**	**23 39 18.9**	**-0.1**
EMPR				*e*S		**Sg**	**23 39 34.5**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.21**	**144**			**Pg**	**23 39 20.8**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.21**	**144**	⇓*e*P		**Pg**	**23 39 20.8**	**+0.2**
OBIP	**Obispado Ponce**	**1.33**	**133**			**Pn**	**23 39 21.3**	**-0.3**
OBIP						**Sb**	**23 39 39.0**	**-0.1**
OBIP	**Obispado Ponce**	**1.33**	**133**	⇑*i*P		**Pn**	**23 39 21.5**	**-0.1**
OBIP				*e*S		**Sg**	**23 39 40.1**	**-0.1**
OBIP	**Obispado Ponce**	**1.33**	**133**	*i* P		**Pn**	**23 39 21.5**	**-0.1**
OBIP				*e*S		**Sb**	**23 39 38.9**	**-0.2**
OBIP				IAML			23 39 41.2	
	comp=Z,86nm,0.2s							
MIDR	**Miches**	**1.35**	**271**	⇑*e*Pg		**Pb**	**23 39 22.9**	**+0.4**
MIDR				IAML			23 39 44.5	
	comp=N,108nm,0.6s							
ECPR	**Experimental S**	**1.36**	**118**	Pn		**Pn**	**23 39 21.3**	**-0.7**
ECPR				IAML			23 39 44.4	
	comp=N,285nm,0.2s							
ECPR	**Experimental S**	**1.36**	**118**	⇓*i*P		**Pn**	**23 39 21.8**	**-0.2**
ECPR				*e*S		**Sn**	**23 39 39.8**	**-0.1**
SMDR	**Samana, DR**	**1.51**	**283**	⇑*e*Sg		**Sg**	**23 39 45.8**	**-0.3**
SMDR				IAML			23 39 54.2	
	comp=N,82nm,0.7s							
GCPR	**Guaynabo City**	**1.60**	**114**			**Sn**	**23 39 46.2**	**+0.3**
GCPR	**Guaynabo City**	**1.60**	**114**			**Pn**	**23 39 24.7**	**-0.6**
GCPR	**Guaynabo City**	**1.60**	**114**	⇑*e*P		**Pn**	**23 39 25.8**	**+0.4**
GCPR				*e*S		**Sn**	**23 39 46.2**	**+0.3**
SJG	**San Juan**	**1.64**	**121**			**Pn**	**23 39 25.4**	**-0.4**
SJG				IAML			23 39 51.6	
	comp=N,125nm,0.2s							
SJG				IAML			23 39 53.7	
	comp=N,121nm,0.2s							
SJG	**San Juan**	**1.64**	**121**	⇓*e*Pg		**Pn**	**23 39 26.1**	**+0.2**
SJG				⇑*e*Sg		**Sg**	**23 39 50.0**	**0.0**
SJG	**San Juan**	**1.64**	**121**	⇓*e*P		**Pn**	**23 39 25.7**	**-0.1**
SJG				*e*S		**Sb**	**23 39 47.7**	**-0.3**
SJG	**San Juan**	**1.64**	**121**	*i* P		**Pn**	**23 39 25.8**	**0.0**
SJG				*e*S		**Sn**	**23 39 46.5**	**-0.2**
SJG				IAML			23 39 52.7	
	comp=Z,75nm,0.2s							
DR12	**Loma Pena Alta**	**1.67**	**264**	Pn		**Pn**	**23 39 26.0**	**-0.3**
HATOM	**Hato Mayor del**	**1.67**	**264**	⇑*e*Pg		**Pb**	**23 39 28.4**	**+0.4**
HATOM				IAML			23 39 51.6	
	comp=N,62nm,1.4s							
PDPR	**Patillas Dam,**	**1.79**	**121**	Pn		**Pn**	**23 39 27.8**	**-0.1**
HUMP	**Col San Antoni**	**1.87**	**115**			**Sb**	**23 39 54.3**	**-0.4**
HUMP	**Col San Antoni**	**1.87**	**115**	Pn		**Pn**	**23 39 28.4**	**-0.7**
HUMP				Sg		**Sb**	**23 39 55.3**	**+0.6**
HUMP				IAML			23 39 59.7	
	comp=N,90nm,0.2s							
HUMP	**Col San Antoni**	**1.87**	**115**	⇓*e*P		**Pn**	**23 39 29.6**	**+0.5**
HUMP				*e*S		**Sb**	**23 39 54.3**	**-0.4**
CUPR	**Culebra, Puert**	**2.31**	**106**	Pn		**Pn**	**23 39 35.4**	**+0.2**
SDDR	**Presa de Saban**	**3.46**	**271**	Pn		**Pn**	**23 39 50.7**	**-0.3**
SDDR				IAML			23 40 49.5	
	comp=N,32nm,1.0s							
SDDR				IAML			23 40 55.6	
	comp=N,29nm,2.0s							

*LDG **17** 23:46:53.8±0.7,40˚.88N×10˚.46E,h15km,Ml4.0/6,Error*
ellipse: s-maj=18.0km s-min=10.7km az=93.0
*IDC **17** 23:46:53.8±0.9,40˚.89N×9˚.88E,h0km,mb3.7/10,*
mbtmp3.7/19,ML3.5/8,MS3.3/5,Error ellipse:
s-maj=20.5km s-min=14.1km az=102.0
*ROM **17** 23:46:54.4±0.1,40˚.806N±0˚.004×10˚.197E±0˚.006,*
h24km,ML3.5/107,Error ellipse: s-maj=0.4km s-min=0.3km
az=183.0
*CRAAG **17** 23:46:54.2,40˚.77N×10˚.15E,Mb4.2,Mer-Tyrrhenian*
ISC 17 23:46:55.8±1.3,40˚.87N±0˚.03×10˚.08E±0˚.04,h15km±9km,
n200,σ2s32/209,mb3.8/8,3C-7D,Tyrrhenian Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SENA	**Sos Enattos**	**0.63**	**228**	⇓P		**Pg**	**23 47 07.7**	**-0.5**
SENA				S		**Sg**	**23 47 16.6**	**+0.1**
SENA				AML		AML		
	comp=E,36050μm,1.0s							
SENA				AML		AML		
	comp=N,24550μm,1.0s							
AGLI	**Aglientu**	**0.73**	**291**	⇓P		**Pb**	**23 47 10.5**	**+0.3**
AGLI				S		**Sn**	**23 47 21.5**	**-1.0**
AGLI				AML		AML		
	comp=E,12700μm,1.3s							
AGLI				AML		AML		
	comp=N,38900μm,0.4s							
SMPL	**Sampolo**	**1.36**	**334**	⇓P		**Pn**	**23 47 19.5**	**-0.8**
SMPL				S		**Sg**	**23 47 39.1**	**-0.7**
SMPL				AML		AML		
	comp=E,1372μm,0.7s							
SMPL				AML		AML		
	comp=N,1200μm,0.7s							
SMPL				AML		AML		
	comp=N,757μm,0.8s							
SMPL				AML		AML		
	comp=E,607μm,1.9s							
AJAC	**Base Areonaval**	**1.45**	**318**	⇓P		**Pn**	**23 47 21.2**	**-0.3**
VSL	**Villasalto**	**1.47**	**202**	⇑P		**Pn**	**23 47 19.9**	**-1.8**
VSL				S		**Sn**	**23 47 38.6**	**-2.1**
VSL				AML		AML		
	comp=N,5300μm,0.3s							
VSL				AML		AML		
	comp=E,7615μm,0.3s							
CGL	**Cagliari Serpe**	**1.62**	**202**	⇑P		**Pn**	**23 47 22.1**	**-1.8**
CGL				S		**Sn**	**23 47 41.6**	**-2.9**
CGL				AML		AML		
	comp=E,8535μm,0.4s							
CGL				AML		AML		
	comp=N,7830μm,0.4s							
MAON	**Monte Argentar**	**1.75**	**27**	P		**Pn**	**23 47 24.1**	**-1.5**
MAON				AML		AML		
	comp=E,804μm,0.7s							
MAON				AML		AML		
	comp=N,598μm,0.7s							
MAON				AML		AML		
	comp=N,650μm,1.0s							
MAON				AML		AML		
	comp=N,650μm,1.0s							
MAON				AML		AML		
	comp=N,598μm,0.7s							
MAON				AML		AML		
	comp=E,804μm,0.7s							
MAON				AML		AML		
	comp=E,795μm,0.7s							
PGF	**Pioggiola**	**1.86**	**335**	*e*Pn		**Pn**	**23 47 27.0**	**-0.3**
PGF				*e*Sn		**Sn**	**23 47 48.8**	**-1.8**
PGF	**Pioggiola**	**1.86**	**335**	P		**Pn**	**23 47 27.4**	**+0.1**
PGF				AML		AML		
	comp=E,2045μm,0.8s							
PGF				AML		AML		
	comp=N,1700μm,0.7s							
PGF				AML		AML		
	comp=E,2045μm,1.2s							
PGF				AML		AML		
	comp=N,1412μm,0.8s							
TOLF	**Tolfa**	**1.88**	**50**	P		**Pn**	**23 47 25.1**	**-2.3**
CELB	**S.Piero in Cam**	**1.88**	**3**	P		**Pn**	**23 47 25.9**	**-1.6**
CELB				AML		AML		
	comp=E,292μm,1.0s							
CELB				AML		AML		
	comp=N,253μm,1.1s							
CELB				AML		AML		
	comp=E,292μm,1.0s							
CELB				AML		AML		
	comp=N,272μm,1.2s							
CASP	**Castiglione de**	**2.01**	**17**	P		**Pn**	**23 47 28.3**	**-0.9**
BARO	**Barbarano Roma**	**2.03**	**46**	P		**Pn**	**23 47 27.8**	**-1.6**
BARO				AML		AML		
	comp=E,756μm,0.6s							
BARO				AML		AML		
	comp=N,800μm,0.7s							
BARO				AML		AML		
	comp=N,1235μm,0.5s							
BARO				AML		AML		
	comp=E,13170μm,1.6s							
BARO				AML		AML		
	comp=N,15330μm,1.6s							
BARO				AML		AML		
	comp=E,1275μm,0.7s							
BARO				AML		AML		
	comp=N,1235μm,1.5s							
BARO				AML		AML		
	comp=N,15365μm,1.6s							
BARO				AML		AML		
	comp=E,13200μm,1.6s							
BARO				AML		AML		
	comp=E,1275μm,1.3s							
SAMA	**S.Maria delle**	**2.10**	**63**	P		**Pn**	**23 47 28.3**	**-2.2**
SU26	**Carbonia-Igles**	**2.12**	**215**	P		**Pn**	**23 47 29.8**	**-0.9**
SU26				AML		AML		
	comp=E,12300μm,0.7s							
SU26				AML		AML		
	comp=N,12300μm,0.5s							
SU26				AML		AML		
	comp=E,12300μm,1.3s							
MA9	**Marino**	**2.15**	**64**	P		**Pn**	**23 47 28.8**	**-2.3**
LATE	**Laterza**	**2.17**	**36**	P		**Pn**	**23 47 30.0**	**-1.5**
LATE				AML		AML		
	comp=E,928μm,1.4s							
LATE				AML		AML		
	comp=N,1052μm,1.5s							
LATE				AML		AML		
	comp=E,928μm,0.6s							
LATE				AML		AML		
	comp=N,1052μm,0.5s							
RDP	**Rocca di Papa**	**2.18**	**65**	P		**Pn**	**23 47 28.8**	**-2.8**
RMP	**Rome, Mte Porz**	**2.19**	**64**	P		**Pn**	**23 47 29.2**	**-2.6**
RMP				AML		AML		
	comp=E,1730μm,0.6s							
RMP				AML		AML		
	comp=N,1700μm,0.8s							
RMP				AML		AML		
	comp=E,1730μm,1.4s							
RIBO	**Ribolla Roccas**	**2.21**	**19**	P		**Pn**	**23 47 30.8**	**-1.1**
SF14	**Selvena**	**2.21**	**31**	P		**Pn**	**23 47 30.8**	**-1.2**
VIVA	**Pratoni del Vi**	**2.21**	**66**	P		**Pn**	**23 47 29.2**	**-2.8**
SF01	**Poggio Pratacc**	**2.24**	**29**	P		**Pn**	**23 47 31.5**	**-0.9**
SF01				AML		AML		
	comp=E,705μm,1.4s							
SF01				AML		AML		
	comp=E,705μm,0.6s							
SF01				AML		AML		
	comp=N,795μm,1.1s							
ARCI	**Arcidosso**	**2.24**	**27**	P		**Pn**	**23 47 31.7**	**-0.8**
MCIV	**Monte Civitell**	**2.25**	**32**	P		**Pn**	**23 47 31.9**	**-0.8**
SF13	**Bagnolo**	**2.27**	**30**	P		**Pn**	**23 47 31.8**	**-1.0**
LATB	**Latina**	**2.27**	**73**	P		**Pn**	**23 47 29.8**	**-2.9**
SF03	**Valle Cupa**	**2.28**	**31**	P		**Pn**	**23 47 32.9**	**0.0**
SRES	**S.Oreste - Sor**	**2.28**	**52**	P		**Pn**	**23 47 31.1**	**-1.9**
SRES				AML		AML		
	comp=E,218μm,1.5s							
SRES				AML		AML		
	comp=E,190μm,4.5s							
SRES				AML		AML		
	comp=N,261μm,1.0s							
SRES				AML		AML		
	comp=E,218μm,0.5s							
MTCE	**Montecelio**	**2.31**	**59**	P		**Pn**	**23 47 31.1**	**-2.3**
MTCE				AML		AML		
	comp=E,260μm,0.9s							
MTCE				AML		AML		
	comp=N,276μm,1.0s							
MTCE				AML		AML		
	comp=E,260μm,1.1s							
MTCE				AML		AML		
	comp=N,276μm,1.0s							
SF11	**Podere del Sol**	**2.33**	**30**	P		**Pn**	**23 47 33.7**	**0.0**
RCAV	**Rocca di Cave**	**2.37**	**65**	P		**Pn**	**23 47 31.4**	**-2.9**
RCAV				AML		AML		
	comp=N,288μm,1.6s							
RCAV				AML		AML		
	comp=E,250μm,0.7s							
RCAV				AML		AML		
	comp=N,288μm,0.4s							
SACS	**San Casciano d**	**2.41**	**34**	P		**Pn**	**23 47 33.3**	**-1.5**
CERT	**Cerreto**	**2.44**	**63**	P		**Pn**	**23 47 32.9**	**-2.3**
CERT				AML		AML		
	comp=E,388μm,0.5s							
CERT				AML		AML		
	comp=N,268μm,0.8s							
CERT				AML		AML		
	comp=N,244μm,0.7s							
MAGO	**Bibbona**	**2.44**	**10**	⇓P		**Pn**	**23 47 34.2**	**-1.0**
MAGO				AML		AML		
	comp=E,284μm,0.6s							
MAGO				AML		AML		
	comp=E,284μm,1.4s							
MAGO				AML		AML		
	comp=N,348μm,1.1s							
FROS	**Frosini**	**2.48**	**19**	P		**Pn**	**23 47 34.7**	**-1.0**
FROS				AML		AML		
	comp=E,542μm,0.7s							
FROS				AML		AML		
	comp=N,523μm,1.1s							
FROS				AML		AML		
	comp=E,542μm,1.3s							
FROS				AML		AML		
	comp=N,523μm,0.9s							
GIUL	**Giuliano Di Ro**	**2.50**	**73**	⇓P		**Pn**	**23 47 33.0**	**-2.9**
GIUL				AML		AML		
	comp=E,228μm,1.2s							
GIUL				AML		AML		
	comp=N,295μm,1.3s							
GIUL				AML		AML		
	comp=N,295μm,0.7s							
VENT	**Ventotene**	**2.54**	**91**	P		**Pn**	**23 47 32.4**	**-4.0**
VENT				AML		AML		
	comp=E,408μm,1.5s							
VENT				AML		AML		
	comp=N,388μm,1.1s							
VENT				AML		AML		
	comp=N,388μm,0.9s							
VENT				AML		AML		
	comp=E,376μm,3.6s							
VENT				AML		AML		
	comp=E,408μm,0.5s							
MGAB	**Montegabbione**	**2.55**	**36**	P		**Pn**	**23 47 35.4**	**-1.3**
MGAB				AML		AML		
	comp=N,202μm,1.0s							
MGAB				AML		AML		
	comp=N,204μm,1.6s							
MGAB				AML		AML		
	comp=E,173μm,1.4s							
MGAB				AML		AML		
	comp=E,202μm,1.4s							
CESX	**Cesi**	**2.56**	**46**	P		**Pn**	**23 47 34.7**	**-2.0**
GUAR	**Guarcino**	**2.61**	**68**	P		**Pn**	**23 47 34.9**	**-2.6**
FIAM	**Fiamignano**	**2.68**	**57**	P		**Pn**	**23 47 36.5**	**-2.0**
FIAM				AML		AML		
	comp=E,180μm,0.8s							
FIAM				AML		AML		
	comp=E,180

POFI					AML	AML			
	comp=N,174µm,1.5s								
POFI					AML	AML			
	comp=E,152µm,0.4s								
IFOR	**Ischia Forio P**	**2.87**	**92**	P	**Pn**	**23 47 37.6**	**-3.4**		
IFOR				AML	AML				
	comp=N,3355µm,1.1s								
IFOR				AML	AML				
	comp=E,2375µm,0.4s								
PII	**Pisa**	**2.87**	**7**	P	**Pn**	**23 47 39.8**	**-1.2**		
PII				AML	AML				
	comp=E,276µm,0.9s								
PII				AML	AML				
	comp=N,218µm,0.6s								
IMTC	**Ischia Forio M**	**2.89**	**92**	P	**Pn**	**23 47 37.8**	**-3.5**		
IMTC				AML	AML				
	comp=E,866µm,1.1s								
IMTC				AML	AML				
	comp=N,49µm,1.0s								
IMTC				AML	AML				
	comp=N,49µm,1.0s								
IMTC				AML	AML				
	comp=E,866µm,0.9s								
MCI	**Monte Cassino**	**2.89**	**76**	P	**Pn**	**23 47 38.6**	**-2.7**		
MCI				AML	AML				
	comp=N,363µm,0.3s								
MCI				AML	AML				
	comp=N,363µm,1.7s								
MCI				AML	AML				
	comp=E,448µm,0.3s								
AQU	**L'Aquila**	**2.90**	**58**	P	**Pn**	**23 47 42.0**	**+0.4**		
IOCA	**Ischia Osserva**	**2.91**	**91**	P	**Pn**	**23 47 38.2**	**-3.3**		
IOCA				AML	AML				
	comp=E,1630µm,1.1s								
IOCA				AML	AML				
	comp=N,1185µm,0.9s								
IOCA				AML	AML				
	comp=N,1185µm,1.1s								
IOCA				AML	AML				
	comp=E,1630µm,0.9s								
SMA1	**SAN MARTINO**	**3.01**	**53**	P	**Pn**	**23 47 41.8**	**-1.2**		
SMA1				AML	AML				
	comp=N,242µm,0.9s								
SMA1				AML	AML				
	comp=E,290µm,0.9s								
MAIM	**Mastiano**	**3.06**	**6**	P	**Pn**	**23 47 42.8**	**-0.8**		
CERA	**Filignano**	**3.06**	**75**	P	**Pn**	**23 47 41.1**	**-2.6**		
CERA				AML	AML				
	comp=E,276µm,1.6s								
CERA				AML	AML				
	comp=E,287µm,1.6s								
CERA				AML	AML				
	comp=N,458µm,1.5s								
CERA				AML	AML				
	comp=E,287µm,0.4s								
CERA				AML	AML				
	comp=N,309µm,3.8s								
CERA				AML	AML				
	comp=E,276µm,0.4s								
CERA				AML	AML				
	comp=N,458µm,0.5s								
CERA				AML	AML				
	comp=N,430µm,1.5s								
T0110	**Collepietro**	**3.10**	**63**	P	**Pn**	**23 47 41.9**	**-2.2**		
T0110				AML	AML				
	comp=E,280µm,1.6s								
T0110				AML	AML				
	comp=N,239µm,1.2s								
T0110				AML	AML				
	comp=E,280µm,0.4s								
INTR	**Introdacqua**	**3.10**	**67**	P	**Pn**	**23 47 41.9**	**-2.3**		
INTR				AML	AML				
	comp=E,260µm,1.4s								
INTR				AML	AML				
	comp=E,256µm,1.3s								
INTR				AML	AML				
	comp=N,364µm,1.6s								
INTR				AML	AML				
	comp=N,438µm,1.4s								
PIGN	**Pignataro Magg**	**3.12**	**83**	P	**Pn**	**23 47 41.3**	**-3.2**		
PIGN				AML	AML				
	comp=E,147µm,1.5s								
PIGN				AML	AML				
	comp=N,132µm,0.3s								
PIGN				AML	AML				
	comp=N,132µm,1.7s								
PIGN				AML	AML				
	comp=E,147µm,0.5s								
MMO1	**Montemonaco**	**3.17**	**49**	P	**Pn**	**23 47 43.5**	**-1.7**		
CARD	**Cardoso**	**3.17**	**5**	P	**Pn**	**23 47 44.0**	**-1.2**		
RNI2	**Rionero Sannit**	**3.18**	**73**	P	**Pn**	**23 47 42.5**	**-2.9**		
RNI2				AML	AML				
	comp=E,365µm,1.4s								
RNI2				AML	AML				
	comp=N,360µm,1.6s								
RNI2				AML	AML				
	comp=E,331µm,1.6s								
RNI2				AML	AML				
	comp=N,344µm,1.6s								
RNI2				AML	AML				
	comp=E,365µm,0.6s								
RNI2				AML	AML				
	comp=N,344µm,0.4s								
RNI2				AML	AML				
	comp=N,360µm,0.4s								
RNI2				AML	AML				
	comp=E,331µm,0.4s								
PLMA	**Palmaria, Port**	**3.19**	**357**	P	**Pn**	**23 47 44.7**	**-0.7**		
VAGA	**Valle Agricola**	**3.19**	**79**	P	**Pn**	**23 47 42.4**	**-3.0**		
VAGA				AML	AML				
	comp=E,142µm,1.4s								
VAGA				AML	AML				
	comp=N,266µm,1.2s								
VAGA				AML	AML				
	comp=E,134µm,0.4s								
VAGA				AML	AML				
	comp=N,264µm,1.2s								
VAGA				AML	AML				
	comp=N,266µm,0.8s								
VAGA				AML	AML				
	comp=N,264µm,0.8s								
VAGA				AML	AML				
	comp=E,142µm,0.6s								
POPM	**Popiglio**	**3.22**	**9**	P	**Pn**	**23 47 44.7**	**-1.1**		
POPM				AML	AML				
	comp=E,72µm,1.4s								
POPM				AML	AML				
	comp=N,105µm,1.3s								
POPM				AML	AML				
	comp=E,72µm,0.6s								
POPM				AML	AML				
	comp=E,75µm,4.8s								
POPM				AML	AML				
	comp=N,105µm,0.7s								
USI	**Ustica**	**3.22**	**131**	P	**Pn**	**23 47 42.8**	**-3.1**		
MIDA	**Miranda**	**3.25**	**75**	P	**Pn**	**23 47 43.4**	**-2.9**		
MIDA				AML	AML				
	comp=E,207µm,1.6s								
MIDA				AML	AML				
	comp=N,134µm,1.3s								
MIDA				AML	AML				
	comp=N,134µm,0.7s								
MIDA				AML	AML				
	comp=E,207µm,0.4s								
SGG	**Gregorio Mates**	**3.29**	**79**	P	**Pn**	**23 47 43.9**	**-3.0**		
SGG				AML	AML				
	comp=E,232µm,0.6s								
SGG				AML	AML				
	comp=N,144µm,1.2s								
SGG				AML	AML				
	comp=E,232µm,1.4s								
SGG				AML	AML				
	comp=N,144µm,0.8s								
VLC	**Villacollemand**	**3.30**	**4**	P	**Pn**	**23 47 46.3**	**-0.7**		
VLC				S	**Sn**	**23 48 24.6**	**-1.3**		
LEVAN	**Levanzo**	**3.37**	**148**	P	**Pn**	**23 47 44.6**	**-3.2**		
LEVAN				AML	AML				
	comp=E,196µm,1.3s								
LEVAN				AML	AML				
	comp=N,263µm,0.6s								
LEVAN				AML	AML				
	comp=N,263µm,1.4s								
LEVAN				AML	AML				
	comp=E,196µm,0.7s								
ERC	**Erice**	**3.43**	**145**	P	**Pn**	**23 47 46.1**	**-2.7**		
IMI	**Imperia**	**3.45**	**333**	P	**Pn**	**23 47 48.2**	**-0.8**		
IMI				AML	AML				
	comp=E,225µm,0.7s								
IMI				AML	AML				
	comp=N,350µm,0.9s								
BURY	**Giardini Botan**	**3.46**	**328**	P	**Pn**	**23 47 48.8**	**-0.4**		
BSSO	**Busso**	**3.48**	**77**	P	**Pn**	**23 47 47.0**	**-2.4**		
BSSO				AML	AML				
	comp=E,228µm,1.6s								
BSSO				AML	AML				
	comp=N,158µm,1.6s								
BSSO				AML	AML				
	comp=E,228µm,1.6s								
BSSO				AML	AML				
	comp=N,160µm,1.6s								
BSSO				AML	AML				
	comp=E,228µm,0.4s								
BSSO				AML	AML				
	comp=N,158µm,0.4s								
BSSO				AML	AML				
	comp=E,228µm,0.4s								
BSSO				AML	AML				
	comp=N,160µm,0.4s								
TRIV	**Trivento**	**3.49**	**74**	P	**Pn**	**23 47 47.1**	**-2.5**		
TRIV				AML	AML				
	comp=E,139µm,1.6s								
TRIV				AML	AML				
	comp=N,138µm,1.6s								
TRIV				AML	AML				
	comp=E,139µm,0.4s								
TRIV				AML	AML				
	comp=N,138µm,0.4s								
RORO	**Rocca Rossa**	**3.57**	**336**	P	**Pn**	**23 47 49.9**	**-0.7**		
SBF	**Sospel**	**3.58**	**328**	*e*Pn	**Pn**	**23 47 49.2**	**-1.6**		
SBF				*e*Sn	**Sn**	**23 48 29.0**	**-3.8**		
CANO	**Canova, Maglio**	**3.61**	**338**	P	**Pn**	**23 47 50.6**	**-0.6**		
CANO				AML	AML				
	comp=E,707µm,0.8s								
CANO				AML	AML				
	comp=N,182µm,0.4s								
LMR	**La Mourre**	**3.62**	**314**	*e*Pn	**Pn**	**23 47 50.3**	**-1.1**		
LMR				*e*Sn	**Sn**	**23 48 30.4**	**-3.4**		
	comp=N,31nm,0.2s								
SAOF	**Saorge**	**3.63**	**330**	P	**Pn**	**23 47 50.8**	**-0.8**		
SAOF				AML	AML				
	comp=E,299µm,0.8s								
SAOF				AML	AML				
	comp=N,221µm,0.7s								
SAOF				AML	AML				
	comp=N,221µm,1.3s								
SAOF				AML	AML				
	comp=E,299µm,1.2s								
MARS	**Marsala (TP) I**	**3.66**	**147**	P	**Pn**	**23 47 49.4**	**-2.5**		
MBFT	**Monte Bonifato**	**3.67**	**142**	P	**Pn**	**23 47 49.7**	**-2.3**		
MBFT				AML	AML				
	comp=E,264µm,0.8s								
MBFT				AML	AML				
	comp=E,264µm,1.2s								
MBFT				AML	AML				
	comp=N,174µm,0.6s								
QLNO	**Quiliano**	**3.69**	**340**	P	**Pn**	**23 47 51.5**	**-0.7**		
QLNO				AML	AML				
	comp=E,120µm,1.6s								
QLNO				AML	AML				
	comp=N,134µm,1.6s								
QLNO				AML	AML				
	comp=N,134µm,0.4s								
QLNO				AML	AML				
	comp=E,120µm,0.4s								
RNCA	**Ronca, Sant'Oi**	**3.70**	**347**	P	**Pn**	**23 47 51.8**	**-0.6**		
MPG	**Monte Pellegri**	**3.71**	**136**	P	**Pn**	**23 47 49.6**	**-3.0**		
MFNL	**Monte Finestre**	**3.78**	**143**	P	**Pn**	**23 47 51.2**	**-2.4**		
CAVT	**Castelvetrano**	**3.80**	**146**	P	**Pn**	**23 47 51.4**	**-2.5**		
CAVT				AML	AML				
	comp=E,544µm,0.9s								
CAVT				AML	AML				
	comp=N,652µm,0.6s								
CAVT				AML	AML				
	comp=N,652µm,1.4s								
CAVT				AML	AML				
	comp=E,544µm,1.1s								
CRJA	**Costa Raja**	**3.81**	**142**	P	**Pn**	**23 47 52.4**	**-1.6**		
CRJA				AML	AML				
	comp=E,428µm,1.5s								
CRJA				AML	AML				
	comp=N,438µm,0.6s								
CRJA				AML	AML				
	comp=E,428µm,0.5s								
CRJA				AML	AML				
	comp=N,438µm,1.4s								
PCP	**Piancastagn**	**3.84**	**343**	P	**Pn**	**23 47 54.0**	**-0.4**		
SOLUN	**Solunto**	**3.85**	**135**	P	**Pn**	**23 47 51.8**	**-2.7**		
SOLUN				AML	AML				
	comp=E,184µm,1.6s								
SOLUN				AML	AML				
	comp=N,138µm,1.4s								
CORL	**Corleone**	**3.88**	**139**	P	**Pn**	**23 47 51.6**	**-3.4**		
IACL	**Alicudi**	**4.04**	**124**	P	**Pn**	**23 47 54.0**	**-3.1**		
SCIAC	**Sciacca**	**4.09**	**144**	P	**Pn**	**23 47 54.9**	**-2.8**		
SCIAC				AML	AML				
	comp=N,174µm,1.1s								
SCIAC				AML	AML				
	comp=E,181µm,0.5s								
IFIL	**Filicudi I Eol**	**4.16**	**122**	P	**Pn**	**23 47 55.8**	**-2.9**		
MGR	**Morigerati**	**4.24**	**98**	P	**Pn**	**23 47 55.8**	**-4.1**		
MGR				AML	AML				
	comp=E,73µm,0.9s								
MGR				AML	AML				
	comp=N,52µm,0.9s								
MGR				AML	AML				
	comp=E,73µm,1.1s								
MGR				AML	AML				
	comp=N,52µm,1.1s								
PZZ	**Stroppo**	**4.24**	**330**	P	**Pn**	**23 48 00.1**	**0.0**		
PZZ				AML	AML				
	comp=N,450µm,0.6s								
PZZ				AML	AML				
	comp=E,252µm,0.8s								
CSLB	**Castelbuono**	**4.25**	**132**	P	**Pn**	**23 47 57.0**	**-3.1**		
PLLN	**Pollina**	**4.26**	**131**	P	**Pn**	**23 47 56.7**	**-3.5**		
PLLN				AML	AML				
	comp=N,162µm,0.5s								
PLLN				AML	AML				
	comp=E,126µm,0.8s								
PLLN				AML	AML				
	comp=N,162µm,1.5s								
CBOGS	**Bougous**	**4.35**	**198**	P	Pg	23 48 26.7	+7.6		
LLI	**Lipari**	**4.47**	**121**	P	**Pn**	**23 48 01.4**	**-1.6**		
IST3	**Stromboli F**	**4.47**	**116**	⇑P	**Pn**	**23 48 00.1**	**-3.0**		
IST3				AML	AML				
	comp=N,313µm,0.2s								
IST3				AML	AML				
	comp=E,228µm,0.7s								
IVGP	**Vulcano Grotta**	**4.51**	**122**	P	**Pn**	**23 48 00.7**	**-2.9**		
VPL	**Vulcano Piano**	**4.53**	**122**	P	**Pn**	**23 48 00.7**	**-3.2**		
MAHO	**Mahon**	**4.54**	**260**	P	**Pn**	**23 48 03.6**	**-0.3**		
MAHO				S	**Sn**	**23 48 52.1**	**-4.3**		
SMRF	**Simiane la Rot**	**4.56**	**315**	*e*Pn	**Pn**	**23 48 04.4**	**+0.2**		
MBDF	**Montbardon**	**4.56**	**329**	*e*Pn	**Pn**	**23 48 06.1**	**+1.7**		
MBDF				*e*Sn	**Sn**	**23 48 55.1**	**-2.1**		
	comp=E,169nm,0.6s								
MUCR	**Ucria**	**4.66**	**126**	P	**Pn**	**23 48 02.5**	**-3.2**		
MUCR				AML	AML				
	comp=E,42µm,1.2s								
MUCR				AML	AML				
	comp=N,62µm,0.7s								
MUCR				AML	AML				
	comp=E,42µm,0.8s								
MUCR				AML	AML				
	comp=E,44µm,5.8s								
CMAH	**Djebel Manchou**	**4.71**	**207**	P	Pb	23 48 13.2	-5.0		
VAE	**Valguarnera**	**4.77**	**134**	Pn	**Pn**	**23 48 09.8**	**+2.5**		
	comp=E,7.4nm,0.8s,baz=105,slow=16,SNR=3.4								
VAE				Sn	**Sn**	**23 49 02.3**	**-0.1**		
	comp=E,0.4nm,0.3s,baz=56,slow=19,SNR=2.1								
CAR1	**CAROLEI**	**4.98**	**107**	P	**Pn**	**23 48 06.2**	**-3.9**		
CBOS	**Bilal Ibnou Ra**	**5.01**	**217**	P	Pn	23 48 15.8	+5.3		
CBST	**Bordj Sabath**	**5.02**	**209**	P	**Pn**	**23 48 12.5**	**+1.8**		
ORIF	**Oris-en-Rattie**	**5.09**	**324**	*e*Pn	**Pn**	**23 48 12.4**	**+0.8**		
ORIF	**Oris-en-Rattie**	**5.09**	**324**	P	**Pn**	**23 48 12.7**	**+1.1**		
KEST	**Kesra**	**5.16**	**187**	Pn	**Pn**	**23 48 13.7**	**+1.1**		
	comp=E,1.7nm,0.3s,baz=158,slow=13,SNR=59								
KEST				Sn	**Sn**	**23 49 09.0**	**-2.8**		
	comp=E,3.7nm,0.3s,baz=35,slow=23,SNR=12								
	comp=E,17nm,0.5s								
CBHR	**Beni Haroun da**	**5.22**	**216**	P	Pb	23 48 20.5	-6.3		
LPG	**La Plagne**	**5.23**	**333**	*e*Pn	**Pn**	**23 48 15.1**	**+1.4**		
LPL	**La Plagne**	**5.25**	**333**	*e*Pn	**Pn**	**23 48 15.5**	**+1.5**		
CASM	**Ain Smara**	**5.39**	**213**	P	**Pb**	**23 48 31.1**	**+1.4**		
CSGS	**Sigus**	**5.41**	**210**	P	**Pb**	**23 48 31.4**	**+1.3**		
DFRA	**Djebel Bou Aff**	**5.42**	**219**	P	**Pb**	**23 48 26.9**	**-3.4**		
CRHA	**Rehia**	**5.44**	**201**	P	**Pn**	**23 48 16.9**	**+0.5**		
COAT	**Oued Athmania**	**5.50**	**214**	P	Pb	23 48 25.6	-5.9		
CTEI	**Djebel Teioual**	**5.59**	**212**	P	Pn	23 48 24.3	+5.7		
LASF	**Ste Croix**	**5.61**	**307**	*e*Pn	**Pn**	**23 48 17.5**	**-1.1**		
LASF				*e*Sn	**Sn**	**23 49 19.3**	**-3.5**		
	comp=E,51nm,0.5s								
VIVF	**Saint-Julien-l**	**5.63**	**317**	*e*Pn	**Pn**	**23 48 18.8**	**-0.1**		
ETOS	**Mallorca**	**5.66**	**261**	P	**Pn**	**23 48 21.1**	**+1.8**		
ETOS				S	**Sn**	**23 49 20.8**	**-3.3**		
DAVOX	**Davos/Dischmat**	**5.92**	**359**	Pn	**Pn**	**23 48 23.3**	**+0.3**		
	comp=E,2.6nm,0.3s,baz=189,slow=9.0,SNR=36								
	comp=E,7.5nm,0.4s								
SET	**Setif**	**5.93**	**220**	P	**Sn**	**23 49 37.0**	**+6.2**		
CJSR	**Ain Djasser**	**5.96**	**214**	P	**Pb**	**23 48 34.9**	**-4.5**		
CTCHA	**Tamokra**	**6.13**	**226**	P	**Pn**	**23 48 27.6**	**+1.7**		
ABTA	**Abfaltersbach**	**6.14**	**16**	*i* Pn	**Pn**	**23 48 27.6**	**+1.6**		
	comp=E,3.0nm,0.5s								
CBBAR	**Babar**	**6.15**	**203**	P	**Pn**	**23 48 28.9**	**+2.7**		
FETA	**Feichten**	**6.17**	**4**	*e*Pn	**Pn**	**23 48 30.8**	**+4.2**		
	comp=E,6.6nm,0.9s								
ATKB	**Taksebt**	**6.26**	**230**	P	**Pn**	**23 48 32.0**	**+4.4**		
MYKA	**Terra Mystica**	**6.31**	**23**	*i* Pn	**Pn**	**23 48 31.3**	**+2.9**		
	comp=E,0.7nm,0.3s								
MTLF	**Montolieu**	**6.35**	**296**	*e*Pn	**Pn**	**23 48 26.3**	**-2.5**		
MTLF				*e*Sn	**Sn**	**23 49 38.7**	**-2.3**		
	comp=E,132nm,0.7s								
DAVA	**Damuels**	**6.42**	**359**	*i* Pn	**Pn**	**23 48 33.3**	**+3.4**		
	comp=E,4.0nm,0.4s,SNR=6.4								
WTTA	**Wattenberg**	**6.50**	**9**	*i* Pn	**Pn**	**23 48 34.4**	**+3.4**		
	comp=E,2.7nm,0.3s								
OBKA	**Obir**	**6.51**	**28**	*i* Pn	**Pn**	**23 48 34.4**	**+3.3**		
	comp=E,1.8nm,0.4s								
MOTA	**Moosalm**	**6.52**	**6**	*i* Pn	**Pn**	**23 48 35.1**	**+3.8**		
	comp=E,4.4nm,0.5s								
WATA	**Walderalm**	**6.56**	**9**	*i* Pn	**Pn**	**23 48 34.1**	**+2.3**		
	comp=E,5.1nm,0.5s								
RETA	**Reutte**	**6.64**	**4**	*i* Pn	**Pn**	**23 48 35.3**	**+2.5**		
	comp=E,1.8nm,0.3s								
KBA	**Koelnbreinsper**	**6.64**	**20**	*i* Pn	**Pn**	**23 48 36.2**	**+3.2**		
	comp=E,1.1nm,0.3s								
AKED	**El Kharrouba**	**6.69**	**233**	P	**Pn**	**23 48 36.0**	**+2.5**		
LESA	**Schwarzleotal**	**6.82**	**15**	*i* Pn	**Pn**	**23 48 38.1**	**+2.8**		
	comp=E,3.5nm,0.6s								
SOKA	**Soboth**	**6.83**	**30**	*i* Pn	**Pn**	**23 48 38.0**	**+2.5**		
	comp=E,1.9nm,0.5s								
AKET	**Djebel Ketaf**	**6.84**	**227**	P	Pn	23 48 42.4	+6.7		
EIBI	**Ibiza**	**6.96**	**258**	P	**Pn**	**23 48 38.4**	**+1.3**		
EIBI				S	**Sn**	**23 49 52.6**	**-3.4**		
CAF	**Calviac**	**7.14**	**307**	*e*Pn	**Pn**	**23 48 38.8**	**-1.0**		
CAF				*e*Sn	**Sn**	**23 49 56.2**	**-4.5**		
	comp=E,44nm,0.7s								
BIOA	**Bad Ischl, Aus**	**7.29**	**19**	*i* Pn	**Pn**	**23 48 44.4**	**+2.7**		
	comp=E,0.8nm,0.3s								
SMF	**Signal de Mont**	**7.33**	**324**	*e*Pn	**Pn**	**23 48 42.1**	**-0.2**		
SMF				*e*Sn	**Sn**	**23 49 59.2**	**-6.0**		
	comp=E,3.9nm,0.4s								
ARSA	**Arzberg**	**7.49**	**30**	*i* Pn	**Pn**	**23 48 46.7**	**+2.2**		
	comp=E,4.8nm,0.8s								
ABRIN	**Birine**	**7.57**	**228**	P	**Pn**	**23 48 47.5**	**+1.9**		
EPF	**Esparros**	**7.57**	**290**	*e*Pn	**Pn**	**23 48 47.9**	**+2.2**		
MOA	**Molln**	**7.60**	**22**	*i* Pn	**Pn**	**23 48 48.7**	**+2.7**		
	comp=E,1.6nm,0.5s								
AVF	**Avril sur Loir**	**7.66**	**323**	*e*Pn	**Pn**	**23 48 46.7**	**-0.1**		
RJF	**Les Rejaudoux**	**7.67**	**308**	*e*Pn	**Pn**	**23 48 45.5**	**-1.5**		
BGF	**Bois d'Agland**	**7.73**	**320**	*e*Pn	**Pn**	**23 48 49.1**	**+1.3**		
SSF	**Saint Saulge**	**7.80**	**325**	*e*Pn	**Pn**	**23 48 50.8**	**+2.1**		
EDDR	**Deurdeur**	**7.85**	**234**	P	**Pn**	**23 48 49.5**	**0.0**		
TCF	**Toulx Ste Croi**	**7.87**	**316**	*e*Pn	**Pn**	**23 48 49.5**	**-0.2**		
ADCK	**Dar Chioukh**	**7.92**	**223**	P	Pn	23 48 55.7	+5.2		
LFF	**La Frestale**	**7.97**	**304**	*e*Pn	**Pn**	**23 48 51.5**	**+0.5**		
AFDJ	**Sidi Ladjel**	**8.04**	**230**	P	Pn	23 49 00.0	+7.9		
CONA	**Conrad Observa**	**8.18**	**28**	*i* Pn	**Pn**	**23 48 55.9**	**+1.8**		
	comp=E,2.7nm,0.6s								
ETSF	**Etsaut**	**8.19**	**288**	*e*Pn	**Pn**	**23 48 57.1**	**+2.9**		
EBGR	**Bougara**	**8.31**	**233**	P	**Pn**	**23 48 58.0**	**+2.2**		
GERES	**GERESS Array B**	**8.38**	**17**	Pn	**Pn**	**23 48 56.9**	**+0.1**		
	baz=191,slow=11,SNR=4.2								
	comp=E,0.4nm,0.5s								
ECHE	**Chera**	**8.54**	**265**	P	**Pn**	**23 49 00.1**	**+1.1**		
ECHE				S	**Sn**	**23 50 32.9**	**-2.3**		
EZEK	**Zmalet El Emir**	**8.58**	**228**	P	Pn	23 49 05.5	+6.0		
SJPF	**Ste Jean**	**8.71**	**289**	*e*Pn	**Pn**	**23 49 04.6**	**+3.4**		
CART	**Cartagena**	**9.20**	**253**	P	**Pn**	**23 49 10.0**	**+2.1**		
ETOB	**Tobarra**	**9.22**	**260**	P	**Pn**	**23 49 09.9**	**+1.6**		
ETOB				S	**Sn**	**23 50 48.4**	**-3.4**		
EMUR	**La Murta**	**9.27**	**255**	P	**Pn**	**23 49 11.3**	**+2.3**		
EMUR				S	**Sn**	**23 50 51.4**	**-1.6**		
VRAC	**Vranov**	**9.62**	**26**	Pn	**Pn**	**23 49 14.1**	**+0.5**		
	comp=E,0.4nm,0.3s,baz=206,slow=6.8,SNR=6.3								
	comp=E,2.6nm,0.7s								
UCM	**Universidad Co**	**10.15**	**271**	P	**Pn**	**23 49 23.2**	**+2.2**		
ESDC	**Sonseca Array**	**10.79**	**268**	Pn	**Pn**	**23 49 27.5**	**-2.3**		
	comp=E,0.4nm,0.3s,baz=76,slow=14,SNR=29								
ESDC				LR	LR	23 52 53.8			
	comp=E,161nm,18.5s,baz=300,slow=34								
	comp=E,7.0nm,0.8s								
OBBL	**Beni Bahdel**	**11.03**	**240**	P	**Pn**	**23 49 35.0**	**+1.9**		
ELGU	**Los Guajares,**	**11.40**	**254**	P	**Pn**	**23 49 41.9**	**+3.7**		
EADA	**Adamuz**	**11.63**	**261**	P	**Pn**	**23 49 41.6**	**+0.3**		
EGOR	**Sierra Gorda,**	**11.66**	**256**	P	**Pn**	**23 49 45.5**	**+3.8**		
ECAB	**El Cabril**	**12.29**	**262**	P	**Pn**	**23 49 52.9**	**+2.6**		
MLR	**Muntele Rosu**	**12.47**	**63**	LR	LR	23 55 50.2			
	comp=E,243nm,21.1s,baz=342,slow=43								
PBAR	**Barrancos**	**13.48**	**264**	P	**Pn**	**23 50 09.3**	**+2.8**		
MDT	**Midelt**	**14.23**	**240**	LR	LR	23 55 05.0			
	comp=E,120nm,18.5s,baz=256,slow=35								
AKASG	**Malin Array Be**	**16.54**	**47**	Pn	**P**	**23 50 48.7**	**-0.9**		
	comp=E,0.3nm,0.3s,baz=240,slow=12,SNR=2.5								
	comp=E,0.5nm,0.4s								
BRTR	**Keskin Array B**	**18.00**	**86**	P	**P**	**23 51 08.8**	**+2.7**		
	baz=278,slow=9.8,SNR=1.6								
BRTR				LR	LR	23 57 59.3			
	comp=E,64nm,21.5s,baz=277,slow=37								
	comp=E,0.5nm,0.9s								
HFS	**Hagfors**	**19.42**	**5**	P	**Pn**	**23 51 21.9**	**-0.6**		
	comp=E,0.2nm,0.3s,baz=218,slow=22,SNR=2.3								
	comp=E,7.2nm,1.1s								
NOA	**NORSAR Array B**	**20.21**	**2**	P	**P**	**23 51 30.0**	**0.0**		
	comp=E,1.1nm,0.8s,baz=186,slow=7.6,SNR=1.7								
	comp=E,1.1nm,0.8s								
MMAI	**Mount Meron Ar**	**21.66**	**103**	P	**P**	**23 51 49.1**	**+3.4**		
	comp=E,3.4nm,0.8s,baz=327,slow=15,SNR=3.9								
	comp=E,3.4nm,0.8s								
FINES	**FINESS Array B**	**22.80**	**20**	P	**P**	**23 51 58.1**	**+0.5**		
	comp=E,5

BNDI				S	**Sb**	23 50 06.6	+1.5
KRAI	**Karang Ratu**	**1.74**	**252**	P	**Pn**	23 49 41.4	+0.3
AAI	**Ambon**	**2.06**	**244**	P	**Pn**	23 49 46.1	+0.6
SIJI	**Sorong**	**2.25**	**33**	Pn	**Pb**	23 49 52.1	-0.5
	4.3nm,0.3s,baz=204,slow=22,SNR=13						
SIJI				Sn	**Sb**	23 50 20.1	0.0
	4.5nm,0.3s,baz=208,slow=23,SNR=6.3						
	14nm,0.2s						
SIJI	**Sorong**	**2.25**	**33**	P	**Pb**	23 49 52.0	-0.5
SIJI				S	**Sb**	23 50 21.5	+1.5
SWI	**Sorong**	**2.26**	**32**	P	**Pb**	23 49 52.2	-0.4
NLAI	**Namlea**	**2.98**	**261**	P	**Pn**	23 49 58.5	+0.3
SANI	**Sanana**	**4.12**	**280**	P	**Pn**	23 50 13.6	-0.3
WRA	**Warramunga Arr**	**17.56**	**167**	P	**Pn**	23 53 12.7	-3.0
	0.1nm,0.3s,baz=343,slow=13,SNR=6.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**21.09**	**170**	P	**P**	23 53 54.5	-0.8
	3.8nm,0.8s,baz=349,slow=9.8,SNR=22						
	3.8nm,0.8s						
MKAR	**Makanchi Array**	**64.77**	**326**	P	**P**	23 59 50.3	+1.4
	0.1nm,0.5s,baz=122,slow=7.4,SNR=1.6						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**68.98**	**328**	P	**P**	00 00 17.1	+1.5
	0.3nm,0.4s,baz=131,slow=6.0,SNR=4.5						
	0.3nm,0.4s						

*IDC **17** 23:51:41.4±2.1, 7.°58S×128.°55E, h162km±22km, mb3.3/5, mbtmp3.7/9, Error ellipse: s-maj=24.3km s-min=20.9km az=118.0*

ISC 17 23:51:40.1±0.8, **7.°72S**±0.°06×**128.°69E**±0.°09, **h151**km, **n10, σ2s31/14, mb3.6/5, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.55**	**243**	P	**Pn**	23 53 02.6	+1.7
	83nm,0.4s,baz=123,slow=3.7,SNR=15						
BATI				S	**Sn**	23 54 04.2	+0.3
	51nm,0.4s,baz=214,slow=17,SNR=9.1						
SIJI	**Sorong**	**7.27**	**21**	P	**Pn**	23 53 24.0	+0.1
	5.5nm,0.3s,baz=227,slow=19,SNR=1.9						
FITZ	**Fitzroy Crossi**	**10.74**	**196**	P	**Pn**	23 54 11.5	+1.6
	1.4nm,0.6s,baz=25,slow=12,SNR=1.5						
FITZ				S	**Sn**	23 56 04.5	-4.2
	3.0nm,0.3s,baz=85,slow=22,SNR=6.3						
WRA	**Warramunga Arr**	**13.33**	**156**	P	**Pn**	23 54 45.5	+2.0
	0.6nm,0.6s,baz=329,slow=13,SNR=8.0						
WRA				S	**Sn**	23 57 08.4	-2.8
	2.5nm,0.5s,baz=330,slow=23,SNR=9.5						
ASAR	**Alice Springs**	**16.63**	**163**	P	**Pn**	23 55 28.5	+3.9
	0.3nm,0.5s,baz=337,slow=10,SNR=2.3						
ASAR				S	**S**	23 58 28.9	-0.6
	0.4nm,0.3s,baz=316,slow=16,SNR=5.5						
LZDM	**Lanzhou Array**	**49.40**	**333**	P	**P**	00 00 14.1	-0.8
	0.5nm,0.3s,baz=150,slow=10.0,SNR=1.6						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**68.12**	**328**	P	**P**	00 02 23.0	-0.7
	0.3nm,0.4s,baz=116,slow=8.1,SNR=9.1						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**71.66**	**334**	P	**P**	00 02 43.1	-2.1
	0.6nm,0.6s,baz=141,slow=4.8,SNR=2.6						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**72.45**	**329**	P	**P**	00 02 48.5	-1.4
	0.3nm,0.2s,baz=133,slow=4.7,SNR=4.8						
	0.3nm,0.2s						
BVAR	**Borovoye Array**	**77.98**	**328**	P	**P**	00 03 20.9	-0.7
	0.5nm,0.8s,baz=104,slow=6.1,SNR=2.9						
	0.5nm,0.8s						

*UPP **18** 00:22:32.0±0.0, 67.°82N×20.°21E, h0km, ML2.6, Suspected explosion*
*HEL **18** 00:22:32.5±0.2, 67.°81N×20.°20E, h0km, ML1.2, Suspected explosion*

ISC 18 00:22:31.7±0.8, **67.°81N**±0.°02×**20.°23E**±0.°02, **h0**km, **n21, σ0s76/35, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kuravaara**	**0.15**	**15**	P	**Pg**	**00 22 35.0**	**+0.3**
KUA				S	**Sg**	**00 22 37.0**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**275**	P	**Pg**	**00 22 36.7**	**+0.3**
RATU				S	**Sg**	**00 22 39.9**	**+0.4**
NIKU	**Nikkaluokta**	**0.46**	**278**	P	**Pg**	**00 22 40.6**	**+0.1**
NIKU				S	**Sg**	**00 22 46.9**	**+0.4**
DUNU	**Dundret**	**0.70**	**169**	P	**Pg**	**00 22 45.6**	**+0.5**
LANU	**Lannavaara**	**0.71**	**69**	P	**Pg**	**00 22 45.5**	**+0.2**
LANU				S	**Sg**	**00 22 54.8**	**+0.3**
LANU	**Lannavaara**	**0.71**	**69**	PG	**Pg**	**00 22 45.5**	**+0.2**
	baz=264						
LANU				SG	**Sg**	**00 22 55.3**	**+0.9**
MASU	**Masugnsbyn**	**0.76**	**117**	P	**Pg**	**00 22 46.6**	**+0.4**
SALU	**Saltoluokta**	**0.79**	**238**	P	**Pg**	**00 22 46.9**	**+0.1**
KIF	**Kilpisjarvi**	**1.22**	**10**	PG	**Pg**	**00 22 55.2**	**+0.1**
KIF				smax	smax	00 23 10.6	
	comp=Z,2.4nm,0.2s						
KIF				SG	**Sg**	**00 23 11.4**	**+0.4**
PAJU	**Pajala**	**1.36**	**124**	P	**Pg**	**00 22 57.3**	**-0.4**
HEF	**Hetta**	**1.42**	**63**	PG	**Pn**	**00 22 58.0**	**-0.8**
HEF				smax	smax	00 23 15.5	
	comp=Z,1.5nm,0.2s						
HEF				SN	**Sn**	**00 23 19.4**	**+1.2**
ERTU	**Ertsjaerv**	**1.47**	**148**	P	**Pn**	**00 22 59.2**	**-0.2**
ERTU	**Ertsjaerv**	**1.47**	**148**	PG	**Pn**	**00 22 59.2**	**-0.2**
ERTU				SN	**Sn**	**00 23 19.8**	**+0.4**
KLF	**Kolari**	**1.54**	**110**	PG	**Pn**	**00 23 00.4**	**-0.1**
	baz=307						
KLF				smax	smax	00 23 19.2	
	comp=Z,1.0nm,0.2s						
KLF				SN	**Sg**	**00 23 22.2**	**+1.0**
KTK1	**Kautokeino**	**1.65**	**41**	PG	**Pn**	**00 23 01.9**	**0.0**
KTK1				SN	**Sg**	**00 23 26.1**	**+1.6**
HARU	**Harads**	**1.67**	**170**	P	**Pb**	**00 23 02.9**	**-0.4**
TRO	**Tromso**	**1.90**	**346**	PG	**Pb**	**00 23 06.4**	**-0.7**
TRO				SG	**Sb**	**00 23 31.3**	**-0.1**
TOF	**Tornio**	**2.37**	**135**	PG	**Pb**	**00 23 13.6**	**-1.5**
	baz=307						
TOF				smax	smax	00 23 43.0	
	comp=Z,0.8nm,0.2s						
TOF				SG	**Sb**	**00 23 45.6**	**+0.8**
RNF	**Rovaniemi**	**2.55**	**115**	PG	**Pb**	**00 23 16.8**	**-1.5**
RNF				SG	**Sb**	**00 23 50.0**	**-0.2**
ARA0	**ARCESS Array S**	**2.60**	**46**	PG	**Pb**	**00 23 17.6**	**-1.5**
ARA0				SG	**Sb**	**00 23 50.9**	**-0.6**
KEV	**Kevo**	**3.15**	**48**	SN	**Sn**	**00 24 02.0**	**+1.3**

*UPP **18** 00:24:10.7±0.3, 67.°83N×20.°21E, h1km±1km, ML2.9, Suspected explosion*
*DNK **18** 00:24:11.1±0.3, 67.°83N×20.°21E, h0km, ML2.9(UPP), Explosion*
*HEL **18** 00:24:11.8±0.2, 67.°83N×20.°31E, h0km, ML1.2, Suspected explosion*

ISC 18 00:24:10.6±0.8, **67.°80N**±0.°02×**20.°25E**±0.°02, **h0**km, **n33, σ0s71/50, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kuravaara**	**0.16**	**13**	P	**Pg**	**00 24 13.4**	**-0.2**
KUA				S	**Sg**	**00 24 15.3**	**-0.3**
KUA	**Kuravaara**	**0.16**	**13**	P	**Pg**	**00 24 13.4**	**-0.2**
KUA				S	**Sg**	**00 24 15.3**	**-0.3**
RATU	**Laukkuluspa**	**0.25**	**276**	P	**Pg**	**00 24 15.3**	**-0.1**
RATU				S	**Sg**	**00 24 18.6**	**0.0**
RATU	**Laukkuluspa**	**0.25**	**276**	P	**Pg**	**00 24 15.3**	**-0.1**
RATU				S	**Sg**	**00 24 18.6**	**0.0**
NIKU	**Nikkaluokta**	**0.46**	**279**	P	**Pg**	**00 24 19.2**	**-0.3**
NIKU				S	**Sg**	**00 24 25.3**	**-0.1**
NIKU	**Nikkaluokta**	**0.46**	**279**	P	**Pg**	**00 24 19.2**	**-0.3**
NIKU				S	**Sg**	**00 24 25.3**	**-0.1**
DUNU	**Dundret**	**0.69**	**169**	P	**Pg**	**00 24 24.2**	**+0.4**
DUNU	**Dundret**	**0.69**	**169**	P	**Pg**	**00 24 24.2**	**+0.4**
LANU	**Lannavaara**	**0.71**	**69**	P	**Pg**	**00 24 24.0**	**-0.1**
LANU				S	**Sg**	**00 24 33.7**	**+0.5**
LANU	**Lannavaara**	**0.71**	**69**	P	**Pg**	**00 24 24.0**	**-0.1**
LANU				S	**Sg**	**00 24 33.7**	**+0.5**
LANU	**Lannavaara**	**0.71**	**69**	PG	**Pg**	**00 24 23.9**	**-0.1**
LANU				SG	**Sg**	**00 24 32.6**	**-0.6**
LANU	**Lannavaara**	**0.71**	**69**	P	**Sg**	**00 24 32.5**	**-0.6**
MASU	**Masugnsbyn**	**0.76**	**116**	P	**Pg**	**00 24 25.3**	**+0.3**
MASU	**Masugnsbyn**	**0.76**	**116**	P	**Pg**	**00 24 25.3**	**+0.3**
SALU	**Saltoluokta**	**0.79**	**238**	P	**Pg**	**00 24 25.5**	**-0.2**
SALU	**Saltoluokta**	**0.79**	**238**	P	**Pg**	**00 24 25.5**	**-0.2**
KIF	**Kilpisjarvi**	**1.23**	**9**	PN	**Pn**	**00 24 36.2**	**+1.3**
KIF				smax	smax	00 24 49.1	
	comp=Z,3.0nm,0.2s						
KIF				SG	**Sg**	**00 24 49.4**	**-0.6**
PAJU	**Pajala**	**1.35**	**124**	P	**Pg**	**00 24 36.0**	**-0.5**
PAJU	**Pajala**	**1.35**	**124**	P	**Pg**	**00 24 36.0**	**-0.5**
HEF	**Hetta**	**1.42**	**63**	PG	**Pn**	**00 24 36.8**	**-0.8**
	baz=251						
HEF				smax	smax	00 24 53.5	
	comp=Z,1.9nm,0.2s						
HEF				SN	**Sg**	**00 24 56.1**	**0.0**
ERTU	**Ertsjaerv**	**1.46**	**148**	P	**Pn**	**00 24 38.1**	**-0.1**
ERTU	**Ertsjaerv**	**1.46**	**148**	P	**Pn**	**00 24 38.1**	**-0.1**
ERTU	**Ertsjaerv**	**1.46**	**148**	PG	**Pn**	**00 24 38.2**	**-0.1**
ERTU				SN	**Sn**	**00 24 58.9**	**+0.8**
KLF	**Kolari**	**1.54**	**110**	PG	**Pn**	**00 24 39.2**	**0.0**
KLF				smax	smax	00 24 57.7	
	comp=Z,1.0nm,0.2s						
KLF				SN	**Sn**	**00 25 00.8**	**+1.0**
KTK1	**Kautokeino**	**1.65**	**41**	PG	**Pn**	**00 24 40.4**	**-0.3**
KTK1				SN	**Sb**	**00 25 03.1**	**+0.1**
HARU	**Harads**	**1.67**	**170**	P	**Pb**	**00 24 41.6**	**-0.6**
HARU	**Harads**	**1.67**	**170**	P	**Pb**	**00 24 41.6**	**-0.6**
TRO	**Tromso**	**1.90**	**346**	SN	**Sn**	**00 25 09.3**	**+0.5**
TOF	**Tornio**	**2.36**	**135**	PG	**Pb**	**00 24 52.6**	**-1.2**
TOF				smax	smax	00 25 21.8	
	comp=Z,0.8nm,0.2s						
TOF				SG	**Sg**	**00 25 25.4**	**-0.9**
RNF	**Rovaniemi**	**2.54**	**115**	PB	**Pb**	**00 24 55.6**	**-1.4**
	baz=302						
RNF				SG	**Sb**	**00 25 30.0**	**+1.2**
ARA0	**ARCESS Array S**	**2.59**	**45**	SB	**Sn**	**00 25 28.0**	**+2.0**
RAJF	**Raja-Jooseppi**	**3.09**	**74**	PB	**Pn**	**00 25 02.4**	**+1.8**
RAJF				SG	**Sb**	**00 25 43.6**	**-1.0**
KEV	**Kevo**	**3.15**	**48**	SN	**Sn**	**00 25 40.6**	**+1.1**

UPP 18 00:24:19.2±0.0, **67.°85N**×**20.°19E, h0**km, **ML2.2, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**28**	P	Pg	00 24 21.8	+0.2
	baz=135						
KUA				S	Sg	00 24 23.6	+0.4
RATU	**Laukkuluspa**	**0.23**	**265**	P	Pg	00 24 23.7	+0.2
NIKU	**Nikkaluokta**	**0.44**	**273**	P	Pg	00 24 27.4	-0.2
NIKU				S	Sg	00 24 33.6	+0.4
LANU	**Lannavaara**	**0.71**	**73**	S	Sg	00 24 42.2	+0.2
DUNU	**Dundret**	**0.74**	**168**	P	Pg	00 24 33.1	-0.3
SALU	**Saltoluokta**	**0.80**	**235**	P	Pg	00 24 34.1	-0.3
PAJU	**Pajala**	**1.40**	**125**	P	Pn	00 24 44.9	-1.0

*IDC **18** 00:29:44.1±9.2, 36.°38N×71.°26E, h108km±80km, mb3.3/6, mbtmp3.6/8, ML3.2/2, MS3.3/1, Error ellipse: s-maj=46.7km s-min=26.9km az=13.0*
*NNC **18** 00:29:51.3±3.8, 36.°80N×71.°18E, h117km±49km, mb3.4, mpv4.0, Error ellipse: s-maj=29.9km s-min=22.9km az=17.0*

ISC 18 00:29:43.6±1.1, **36.°38N**±0.°10×**71.°3E**±0.°1, **h100**km, **n21, σ1s96/23, mb3.2/5, 3C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.36**	**22**	P	**Pn**	**00 31 17.2**	**+2.0**
	SNR=25						
EKS2	**Erkin-Say**	**6.57**	**17**	P	**Pn**	**00 31 20.5**	**+2.8**
	SNR=16						
AAK	**Ala-Archa**	**6.73**	**21**	P	**Pn**	**00 31 22.4**	**+2.5**
	SNR=8.2						
AAK	**Ala-Archa**	**6.73**	**21**	⇑P	**Pn**	**00 31 22.2**	**+2.3**
	1.7nm,0.4s						
AAK				⇑S	**Sn**	**00 32 33.7**	**-1.4**
	3.6nm,0.6s						
KK31	**Karatay Array**	**6.74**	**355**	⇓P	**Pn**	**00 31 22.0**	**+2.1**
	18nm,0.3s,baz=182,slow=13,SNR=440						
KK31				⇓S	**Sn**	**00 32 34.0**	**-1.1**
	3.8nm,0.3s,baz=140,slow=19,SNR=5.9						
KBK	**Karagaybulak**	**6.89**	**23**	P	**Pn**	**00 31 24.2**	**+2.1**
	SNR=6.3						
CHMS	**Chumysh**	**7.14**	**21**	P	**Pn**	**00 31 28.1**	**+2.7**
	SNR=5.7						
USP	**Ospenovka**	**7.32**	**19**	P	**Pn**	**00 31 30.6**	**+2.8**
	SNR=12						
MK31	**Makanchi Array**	**13.27**	**35**	⇓P	**P**	**00 32 52.5**	**-1.5**
	1.6nm,0.8s,baz=210,slow=8.4,SNR=6.4						
MKAR	**Makanchi Array**	**13.27**	**35**	P	**Pn**	**00 32 48.0**	**0.0**
	0.1nm,0.3s,baz=218,slow=14,SNR=3.5						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**15.17**	**18**	⇑P	**Pn**	**00 33 14.1**	**+1.7**
	2.1nm,0.8s						
AB31	**Akbulak array**	**15.29**	**331**	P	**Pn**	**00 33 14.8**	**+1.1**
	0.8nm,0.3s,baz=158,slow=11,SNR=54						
AB31				S	**Sn**	**00 35 58.8**	**-3.6**
	1.0nm,0.4s,baz=156,slow=24,SNR=4.1						
AKTO	**Aktyubinsk**	**16.98**	**330**	⇓P	**P**	**00 33 36.7**	**+1.6**
	1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**19.94**	**24**	P	**P**	**00 34 06.9**	**-0.5**
	0.7nm,0.3s,baz=209,slow=10.0,SNR=16						
	1.5nm,0.4s						
GNI	**Garni**	**21.12**	**288**	LR	LR	00 46 02.2	
	comp=Z,76nm,18.1s,baz=331,slow=46						
SONM	**Songino Array**	**28.24**	**55**	P	**P**	**00 35 27.5**	**+0.3**
	0.5nm,0.8s,baz=248,slow=7.6,SNR=3.9						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**00 36 49.4**	**+0.5**
	6.7nm,1.0s,baz=109,slow=8.9,SNR=2.5						
	6.7nm,1.0s						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**00 37 43.9**	**-1.7**
	1.2nm,0.9s,baz=104,slow=7.0,SNR=1.3						
	1.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.92**	**269**	P	**P**	**00 40 19.2**	**0.0**
	0.2nm,0.5s,baz=54,slow=8.2,SNR=2.3						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**81.35**	**3**	P	**P**	**00 41 48.2**	**-0.5**
	0.2nm,0.6s,baz=347,slow=6.1,SNR=4.0						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**81.76**	**122**	P	**P**	**00 41 50.6**	**-0.9**
	0.3nm,0.7s,baz=316,slow=5.2,SNR=2.2						
	0.3nm,0.7s						

KRSC 18 00:48:12.0±1.7, **50.°01N**×**157.°01E, h17**km±25km, **Ml3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.88**	**320**	*e*P	Pb	00 48 27.7	-1.2
SKR				*e*S	Sb	00 48 39.5	-0.9
PAU	**Pauzhetka**	**1.46**	**355**	*e*P	Pb	00 48 38.4	-0.4
PAU				*e*S	Sb	00 48 57.8	+0.6
KDTR	**Khodutka, Kamc**	**1.93**	**20**	*e*P	Pn	00 48 45.2	+1.2
KDTR				*e*S	Sb	00 49 10.5	+0.2
ASAK	**Asacha**	**2.44**	**13**	*e*P	Pb	00 48 53.6	-2.0
MTVR	**Mutnovka**	**2.58**	**16**	*e*P	Pn	00 48 54.5	+1.3
MTVR				*e*S	Sb	00 49 28.2	-1.3
RUS	**Russkaya**	**2.60**	**21**	*e*P	Pn	00 48 55.5	+2.1
RUS				*e*S	Sb	00 49 27.3	-2.6
GRL	**Gorelyy**	**2.63**	**14**	*e*P	Pn	00 48 56.1	+2.2
KRMR	**Karymshinskiy**	**2.91**	**14**	*e*P	Pn	00 49 00.2	+2.7
APC	**Apacha**	**2.92**	**2**	*e*P	Pb	00 49 01.5	-2.1
DALK	**Dalny**	**3.22**	**19**	*e*P	Pn	00 49 04.4	+2.7
UGLR	**Uglovaya**	**3.40**	**19**	*e*P	Pn	00 49 07.7	+3.3
AVH	**Avacha**	**3.43**	**18**	*e*P	Pb	00 49 08.8	-3.6
KOK	**Koryaka**	**3.44**	**17**	*e*P	Pb	00 49 08.7	-3.8
SMAR	**Somma**	**3.44**	**18**	*e*P	Pb	00 49 09.5	-3.2
KRER	**Koryakskii**	**3.47**	**18**	*e*P	Pb	00 49 09.5	-3.7
SDLR	**Sedlovina**	**3.48**	**19**	*e*P	Pn	00 49 07.7	+2.3
KRX	**Arik**	**3.51**	**16**	*e*P	Pb	00 49 10.4	-3.3
SPN	**Mys Shipunski**	**3.62**	**30**	*e*P	Pn	00 49 10.1	+2.8
SPN				*e*S	Sn	00 49 52.2	+2.6
GNL	**Ganaly**	**3.74**	**9**	*e*P	Pb	00 49 13.4	-4.2

*NEIC **18** 00:48:38.7±1.3, 17.°88N±0.°03×66.°804W±0.°008, h10km±1km, ML2.8/35, Md2.5/8(RSPR), Error ellipse: s-maj=5.8km s-min=2.8km az=3.0*
*RSPR **18** 00:48:39.5, 17.°95N×66.°84W, h12km, MD2.5/8*
*SDD **18** 00:48:39.5±1.6, 17.°93N×66.°83W, h20km±12km, MD3.6, ML2.8, MW2.9, Presumed earthquake*

ISC 18 00:48:38.9±0.9, **17.°94N**±0.°04×**66.°81W**±0.°02, **h16**km±5km, **n40, σ0s60/67, 12C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.07**	**298**		**Pg**	**00 48 42.0**	**-0.1**
GBPR					**Sg**	**00 48 44.0**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.07**	**298**	⇑*i*P	**Pg**	**00 48 42.0**	**-0.1**
GBPR				*e*S	**Sg**	**00 48 44.0**	**-0.2**
MLPR	**Magueyes Islan**	**0.22**	**277**		**Pg**	**00 48 43.8**	**-0.2**
MLPR				Sg	**Sg**	**00 48 47.2**	**-0.3**
MLPR				IAML		00 48 47.9	
	2μm,0.1s						
MLPR				IAML		00 48 48.2	
	2μm,0.1s						
OBIP	**Obispado Ponce**	**0.22**	**63**		**Pg**	**00 48 44.2**	**+0.2**
OBIP	**Obispado Ponce**	**0.22**	**63**	⇓*e*P	**Pg**	**00 48 44.4**	**+0.3**
OBIP				*e*S	**Sb**	**00 48 48.1**	**-0.2**
CELP	**Cerrillos**	**0.26**	**59**		**Pg**	**00 48 45.0**	**+0.4**
CELP				Sg	**Sg**	**00 48 49.1**	**+0.5**
CELP				IAML		00 48 49.8	
	1μm,0.3s						
CELP				IAML		00 48 50.2	
	1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**283**		**Pg**	**00 48 45.0**	**-0.2**
CRPR				Sg	**Sg**	**00 48 49.0**	**-0.4**
CRPR				IAML		00 48 49.4	
	2μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.29**	**283**	⇑*e*Pg	**Pg**	**00 48 45.0**	**-0.2**
CRPR				⇑*e*Sg	**Sg**	**00 48 49.0**	**-0.4**
CRPR				IAML		00 48 49.5	
	comp=N,2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**283**	⇓*i*P	**Pg**	**00 48 45.0**	**-0.2**
CRPR				*e*S	**Sg**	**00 48 49.0**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.32**	**16**		**Pg**	**00 48 45.8**	**0.0**
UUPR				Sg	**Sg**	**00 48 50.2**	**-0.2**
LSP	**Las Mesas**	**0.35**	**312**		**Pg**	**00 48 46.1**	**-0.1**
LSP					**Sg**	**00 48 50.9**	**-0.3**
LSP	**Las Mesas**	**0.35**	**312**	⇓*i*P	**Pg**	**00 48 46.1**	**-0.1**
LSP				*e*S	**Sg**	**00 48 50.9**	**-0.3**
PRSN	**Puerto Rico Se**	**0.42**	**311**		**Pg**	**00 48 47.0**	**-0.4**
PRSN	**Puerto Rico Se**	**0.42**	**311**		**Sg**	**00 48 53.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.42**	**311**	⇑*e*Pg	**Pg**	**00 48 47.0**	**-0.4**
PRSN				⇑*e*Sg	**Sg**	**00 48 52.2**	**-1.0**
PRSN				IAML		00 48 55.4	
	comp=N,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.42**	**311**	⇓*i*P	**Pg**	**00 48 47.1**	**-0.3**
PRSN				*e*S	**Sg**	**00 48 53.0**	**-0.1**
ECPR	**Experimental S**	**0.57**	**49**		**Pg**	**00 48 50.0**	**-0.3**
ECPR					**Sg**	**00 48 57.6**	**-0.3**
ECPR				IAML		00 48 59.0	
	comp=N,835nm,0.2s						
ECPR				IAML		00 48 59.5	
	comp=N,1μm,0.3s						
ECPR	**Experimental S**	**0.57**	**49**	⇑*i*P	**Pg**	**00 48 50.0**	**-0.2**
ECPR				*e*S	**Sg**	**00 48 57.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.59**	**332**		**Pg**	**00 48 50.0**	**-0.7**
AGPR				IAML		00 48 59.6	
	comp=N,215nm,0.2s						
AGPR				IAML		00 49 03.4	
	comp=N,229nm,0.5s						
AGPR	**Aguadilla, PR**	**0.59**	**332**	⇑*e*Pg	**Pg**	**00 48 50.2**	**-0.5**
AGPR				⇑*e*Sg	**Sg**	**00 48 58.6**	**-0.1**
AGPR				IAML		00 49 00.7	
	comp=N,207nm,0.3s						
AGPR	**Aguadilla, PR**	**0.59**	**332**	⇑*i*P	**Pg**	**00 48 50.2**	**-0.5**
AGPR				*e*S	**Sg**	**00 48 58.6**	**0.0**
EMPR	**Esperanza - Ma**	**0.60**	**27**		**Pb**	**00 48 50.9**	**0.0**
EMPR					**Sb**	**00 48 59.2**	**0.0**
EMPR	**Esperanza - Ma**	**0.60**	**27**	⇑*i*P	**Pb**	**00 48 50.9**	**0.0**
EMPR				*e*S	**Sb**	**00 48 59.2**	**0.0**
SJG	**San Juan**	**0.65**	**75**		**Pg**	**00 48 51.6**	**-0.2**
SJG				Sg	**Sg**	**00 49 00.7**	**+0.2**
SJG				IAML		00 49 01.3	
	comp=N,273nm,0.5s						
SJG				IAML		00 49 02.6	
	comp=N,217nm,0.2s						
SJG	**San Juan**	**0.65**	**75**	⇑*e*Pg	**Pg**	**00 48 51.4**	**-0.4**
SJG				⇑*e*Sg	**Sb**	**00 49 01.1**	**+0.3**
SJG	**San Juan**	**0.65**	**75**	⇓*i*P	**Pg**	**00 48 51.3**	**-0.4**
SJG				*e*S	**Sg**	**00 48 58.7**	**-1.8**
PDPR	**Patillas Dam,**	**0.76**	**84**		**Pg**	**00 48 53.4**	**-0.3**
PDPR				Sg	**Sg**	**00 49 03.5**	**-0.2**
IDE	**Isla Desecheo**	**0.77**	**305**		**Pb**	**00 48 53.2**	**-0.7**
IDE					**Sg**	**00 49 03.6**	**-0.5**
IDE	**Isla Desecheo**	**0.77**	**305**	⇑*i*P	**Pb**	**00 48 53.2**	**-0.7**
IDE				*e*S	**Sg**	**00 49 03.6**	**-0.5**
GCPR	**Guaynabo City**	**0.78**	**62**		**Pb**	**00 48 53.7**	**-0.5**
GCPR	**Guaynabo City**	**0.78**	**62**		**Sb**	**00 49 04.2**	**-0.4**
GCPR	**Guaynabo City**	**0.78**	**62**	⇑*e*P	**Pb**	**00 48 52.6**	**-1.6**
GCPR				*e*S	**Sb**	**00 49 04.2**	**-0.4**
HUMP	**Col San Antoni**	**0.94**	**78**		**Pb**	**00 48 56.5**	**-0.3**
HUMP				IAML		00 49 13.2	
	comp=N,152nm,0.2s						
HUMP	**Col San Antoni**	**0.94**	**78**		**Sb**	**00 49

THR5	Thira Island,	2.22	40	P	Pn	00 57 28.3	+0.6
SAP3	Santorini-Thir	2.23	40	P	Pn	00 57 28.1	+0.2
SNT5	Nea Kammeni, S	2.24	41	P	Pn	00 57 28.3	+0.4
THR3	Thira Island,	2.25	41	P	Pn	00 57 28.2	+0.2
THERA	Ancient Thera,	2.26	43	P	Pn	00 57 28.1	-0.1
THERA	Ancient Thera,	2.26	43	P	Pn	00 57 27.8	-0.4
THR8	Santorini-Mono	2.29	43	P	Pn	00 57 28.6	0.0
PYL	PYLOS	2.61	326	P	Pn	00 57 33.0	-0.1
ITM	Ithomi	2.77	332	Pn	Pn	00 57 34.8	-0.6
MET5	Makryloggos,Me	2.88	357	P	Pn	00 57 37.4	+0.6
KARP	Karpathos	3.06	74	Pn	Pn	00 57 40.1	+0.8
KARP	Karpathos	3.06	74	P	Pn	00 57 40.1	+0.8
KARP	Karpathos	3.06	74	P	Pn	00 57 40.1	+0.8
LTK	Loutraki	3.31	352	P	Pn	00 57 35.5	+0.7
PTL	Penteli	3.31	4	P	Pn	00 57 42.5	-0.3
MAGU	Magoula	3.34	359	P	Pn	00 57 43.4	+0.3
GUR	Goura	3.34	343	P	Pn	00 57 44.7	+1.5
DION	Dionisos Attik	3.35	5	P	Pn	00 57 43.1	-0.2
KARY	Karystos	3.36	12	P	Pn	00 57 43.0	-0.5
STFN	Stefani	3.43	360	P	Pn	00 57 44.4	0.0
VIL2	Platees	3.48	356	P	Pn	00 57 44.4	-0.6
KLV	Kalavryta, Ach	3.49	341	P	Pn	00 57 45.8	+0.6
RLS	Riolos of Patr	3.72	334	P	Pn	00 57 49.1	+0.8
KALE	Kalithea	3.82	343	P	Pn	00 57 50.0	+0.2
DAT	Datca	3.83	58	Pn	Pn	00 57 50.9	+1.0
BODT	Bodrum	3.83	52	Pn	Pn	00 57 51.1	+1.3
AXS	Araxos	3.88	334	P	Pn	00 57 51.4	+0.9
KYMI	Kymi, Euboea I	3.91	6	P	Pn	00 57 50.5	-0.4
LKR	Lokris	3.93	354	P	Pn	00 57 51.0	-0.2
SMG	Samos	3.98	41	P	Pn	00 57 53.1	+1.2
ARG	Arkhangelos	4.01	67	Pn	Pn	00 57 53.1	+0.8
ARG	Arkhangelos	4.01	67	P	Pn	00 57 52.7	+0.4
ANX	Ano Chora	4.07	342	P	Pn	00 57 54.6	+1.5
AXAR	Agios Charalam	4.09	350	P	Pn	00 57 54.3	+0.9
EVR	Evrytania	4.40	342	P	Pn	00 57 59.5	+1.7
MAKR	Makrakomi, Fth	4.42	345	P	Pn	00 57 59.0	+1.1
FSK	Fiskardo	4.43	328	P	Pn	00 58 00.1	+2.1
YER	Yerkesik	4.52	57	Pn	Pn	00 58 01.1	+1.8
DALY	Dalyan (Mula)	4.63	62	Pn	Pn	00 58 01.9	+1.1
BRTR	Keskin Array B 0.1nm,0.3s,baz=231,slow=13,SNR=3.1 0.4nm,0.6s	9.45	55	Pn	Pn	00 59 07.7	+0.6
GERES	GERESS Array B baz=142,slow=14,SNR=3.6 0.4nm,0.5s	15.88	336	Pn	Pn	01 00 35.5	+1.7
AKASG	Malin Array Be 0.6nm,0.3s,baz=210,slow=9.7,SNR=2.3 0.2nm,0.3s	16.48	13	Pn	Pn	01 00 40.7	-0.6
HFS	Hagfors 1.2nm,0.5s,baz=160,slow=9.3,SNR=1.0 1.2nm,0.5s	26.21	349	P	P	01 02 22.0	-2.0
FINES	FINESS Array B 3.3nm,0.9s,baz=186,slow=11,SNR=1.7 3.3nm,0.9s	26.77	3	P	P	01 02 26.7	-2.2
NOA	NORSAR Array B 0.5nm,0.6s,baz=154,slow=11,SNR=1.5 0.5nm,0.6s	27.49	347	P	P	01 02 36.4	+1.0
KURBB	Kurchatov Arra 0.4nm,0.4s,baz=271,slow=8.5,SNR=10 0.4nm,0.4s	42.41	51	P	P	01 04 42.7	-0.9
MKAR	Makanchi Array 0.3nm,0.3s,baz=267,slow=7.4,SNR=12 0.3nm,0.3s	45.10	56	P	P	01 05 04.4	-1.0
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=265,slow=9.3,SNR=3.5 0.6nm,0.4s	46.24	46	P	P	01 05 12.3	-1.9

*JMA **18** 01:45:45.2±0.2,23°.8N±1°.0×122°.5E±0°.6,h22km,MV2.6/11, NEAR ISHIGAKIJIMA ISLAND*
*TAP **18** 01:45:45.7,23°.83N×122°.55E,h31km,ML3.3,C*
ISC 18 01:45:45.3±1.1,23°.78N±0°.03×122°.51E±0°.02,h26km±11km, n73,σ0s62/121, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.38	333	*i* P	Pb	01 45 53.8	+0.4
EOS4				*i* S	Sn	01 46 00.0	-1.1
EOS3	EOS3	0.53	341	P	Pn	01 45 56.9	-0.2
EOS3				S	Sn	01 46 06.5	+1.4
EOS2	EOS2	0.68	338	*e*P	Pn	01 45 59.8	+0.6
EOS2				*e*S	Sn	01 46 09.8	+0.9
JYNG	Yonagunijimaku	0.78	31	*e*S	Sb	01 46 09.9	-0.5
YOJ	Yonaguni jima	0.82	34	*e*P	Pb	01 46 00.4	-0.6
YOJ				*e*S	Sb	01 46 11.1	-0.5
YOJ	Yonaguni jima	0.82	34	*e*P	Pb	01 46 00.6	-0.4
YOJ				*e*S	Sb	01 46 11.1	-0.5
TEYL	Yanliau Villag	0.84	276	*e*S	Sb	01 46 12.3	+0.1
HWA	Hwalien	0.85	283	*e*S	Sn	01 46 13.3	+0.1
SHUL	Shoufeng	0.87	271	*e*P	Pb	01 46 01.6	-0.2
SHUL				*e*S	Sn	01 46 14.0	+0.4
TWD	Chiawan	0.89	290	*e*P	Pb	01 46 02.2	+0.1
TWD				*e*S	Sb	01 46 13.2	-0.3
NACB	Ninganchiao	0.92	295	*e*P	Pn	01 46 02.0	-0.6
NACB				*e*S	Sb	01 46 14.4	-0.2
ETM	Tongmen	0.95	281	P	Pn	01 46 02.2	-0.8
ETM				*e*S	Sb	01 46 14.8	-0.4
ENA	Nanau	0.95	313	*e*P	Pb	01 46 03.8	+0.6
EGFH	Guangfu	1.00	264	*e*P	Pb	01 46 04.1	+0.1
EGFH				*e*S	Sb	01 46 16.8	+0.1
TWC	Suao	1.02	324	*e*P	Pb	01 46 04.5	+0.1
TWC				*e*S	Sb	01 46 16.4	-1.0
ETLH	Xiulin Townshi	1.03	294	*e*P	Pn	01 46 04.1	0.0
ETLH				*e*S	Sb	01 46 17.1	-0.6
LXIB	Xiulin Townshi	1.03	284	*e*P	Pn	01 46 04.2	-0.1
LXIB				*e*S	Sb	01 46 17.8	0.0
WARBT	Fenglin Townsh	1.03	267	*e*P	Pn	01 46 03.3	-0.8
WARBT				*e*S	Sn	01 46 16.9	-0.8
HGSD	Ruisui	1.03	254	*e*P	Pn	01 46 03.6	-0.6
HGSD				*e*S	Sn	01 46 17.3	-0.4
ECBN	Changbin	1.07	245	*e*S	Sn	01 46 18.5	-0.2
EHYH	Wanrong	1.10	255	P	Pn	01 46 05.1	0.0
EHYH				*e*S	Sn	01 46 19.6	+0.2
NDS	Dongshan	1.11	320	*e*P	Pn	01 46 05.4	+0.2
NDS				*e*S	Sb	01 46 19.9	-0.2
EHY	Hungye	1.12	256	*i* P	Pn	01 46 05.3	-0.1
EHY				*i* S	Sn	01 46 20.0	+0.1
LATG	Datong	1.17	310	*e*P	Pb	01 46 06.9	0.0
YULB	Yu-li	1.18	251	P	Pn	01 46 05.9	-0.2
YULB				S	Sn	01 46 21.5	+0.2
TWF1	Yuli	1.19	249	*e*P	Pn	01 46 06.0	-0.3
TWF1				*e*S	Sn	01 46 21.7	+0.1
WHF	Hehuan Shan	1.19	288	*e*P	Pn	01 46 06.9	+0.2
WHF				*e*S	Sn	01 46 22.1	-0.2
TWE	Neicheng	1.21	321	*e*P	Pb	01 46 07.8	+0.3
ENTT	Nioudou	1.21	315	*e*P	Pb	01 46 07.7	+0.1
NNSB	Datong	1.21	302	*i* P	Pn	01 46 06.7	0.0
NNSB				*e*S	Sn	01 46 22.2	-0.1
NNSH	Datong	1.21	302	*e*P	Pn	01 46 06.9	+0.2
NNSH				*e*S	Sb	01 46 22.9	-0.1
HATJ	Hateruma jima	1.22	77	*e*P	Pb	01 46 07.5	-0.2
HATJ				*e*S	Sb	01 46 23.8	+0.7
NNS	Nan Shan	1.23	303	*e*S	Sn	01 46 22.8	0.0
OWD	Renai	1.23	278	*e*S	Sn	01 46 22.4	-0.4
FUSS	Fushou	1.25	292	*e*P	Pb	01 46 08.3	-0.1
FUSS				*e*S	Sb	01 46 23.7	-0.4
IRIF	Iriomote-Funau	1.25	64	*e*P	Pb	01 46 08.2	+0.1
CHKT	Chengkung	1.25	237	*i* P	Pn	01 46 06.3	-0.8
CHKT				*e*S	Sn	01 46 21.8	-1.3
VWDT	VWDT	1.25	269	*i* P	Pn	01 46 07.5	+0.3
VWDT				*e*S	Sn	01 46 23.2	+0.1
FULB	Fuli	1.26	243	P	Pn	01 46 06.7	-0.5
FULB				*e*S	Sn	01 46 23.8	+0.5
FUSB	Fushanzhiwuyua	1.29	319	*e*P	Pb	01 46 09.1	+0.1
FUSB				*e*S	Sb	01 46 26.1	+1.0
WUSB	Renai	1.29	280	*e*P	Pn	01 46 08.4	+0.6
WUSB				*e*S	Sn	01 46 24.8	+0.6
TDCB	Techi	1.32	291	*e*S	Sn	01 46 25.1	+0.1
TIPB	Shuangxi	1.34	332	*e*P	Pb	01 46 09.4	-0.4
TIPB				*e*S	Sn	01 46 24.7	-0.6
NWLT	Wulai	1.35	317	*e*P	Pb	01 46 10.0	0.0
EHD	Haiduan	1.35	242	*e*P	Pn	01 46 08.5	0.0
YHNB	Yeheng	1.36	311	*e*S	Sb	01 46 26.4	-0.9
ECS	Chishang	1.37	240	*e*S	Sn	01 46 25.4	+0.4
NSK	Sanguang	1.38	311	*e*P	Pb	01 46 09.4	+0.5
NSK				*e*S	Sn	01 46 26.6	+0.2
SXI1	Grass Mountain	1.43	336	*e*P	Pb	01 46 10.5	-0.8
JKRS	Kuro-shima	1.45	71	*e*P	Pb	01 46 11.1	-0.5
YUS	Yu-Shan	1.46	259	*e*P	Pn	01 46 10.8	+0.4
SMLT	Sun Moon Lake	1.48	274	*e*P	Pn	01 46 11.4	+1.1
SMLT				*e*S	Sn	01 46 29.8	+0.9
ELDTW	Lidau	1.49	247	*e*P	Pn	01 46 10.4	-0.1
ELDTW				*e*S	Sn	01 46 28.6	-0.6
WHP	Taichung City	1.51	289	*e*P	Pb	01 46 13.1	+0.3
WHP				*e*S	Sb	01 46 31.2	-0.4
WHYT	Xinyi Township	1.52	267	*e*P	Pn	01 46 12.0	+1.1
NFF	Wufeng Townshi	1.52	304	*e*P	Pb	01 46 13.1	+0.1
NFF				*e*S	Sb	01 46 31.9	-0.1
ALS	Alishan	1.58	261	*e*P	Pn	01 46 13.1	+1.1
JIJ	Ishigaki jima	1.60	68	*e*P	Pn	01 46 12.4	+0.4
LIOB	Emei	1.61	303	*e*P	Pb	01 46 14.2	-0.2
LIOB				*e*S	Sb	01 46 34.6	+0.2
NSTT	Nanjuang	1.61	302	*e*P	Pb	01 46 14.2	-0.2
NSTT				*e*S	Sb	01 46 34.0	-0.4
TWGBT	Beinan	1.63	234	*e*P	Pn	01 46 12.1	-0.2
TWGBT				*e*S	Sn	01 46 32.3	-0.1
TWG	Pinlang	1.63	234	*e*P	Pn	01 46 12.0	-0.4
TWG				*e*S	Sn	01 46 32.1	-0.3
ZUZH	Zhuzihu	1.63	328	*e*P	Pb	01 46 13.6	-1.2
ZUZH				*e*S	Sn	01 46 32.4	-0.2
NTST	Danshui	1.68	325	*e*P	Pn	01 46 13.5	+0.5
TWQ1	Liyutan	1.68	290	*e*S	Sb	01 46 36.9	+0.5
CHN5	Tsauling	1.69	264	*e*P	Pb	01 46 14.9	-0.9
CHN5				*e*S	Sb	01 46 36.7	+0.1
STYH	Taoyuan	1.70	249	P	Pn	01 46 14.2	+0.9
STYH				S	Sn	01 46 35.1	+0.9
SBCB	Hsinchu	1.71	306	*e*S	Sb	01 46 36.3	-1.0
TPUB	Ta-pu	1.79	255	*e*P	Pn	01 46 16.2	+1.6
TPUB				*e*S	Sb	01 46 39.4	-0.1
SGST	Jiashian	1.90	249	*e*P	Pn	01 46 17.5	+1.4
SGST				*e*S	Sb	01 46 42.5	-0.2
CHN1	Nanshi	1.91	252	*e*P	Pb	01 46 18.4	-1.2
CHN1				*e*S	Sb	01 46 43.6	+0.6
TWK	Hsinying	1.92	255	*e*P	Pn	01 46 18.4	+2.0
TWK				*e*S	Sb	01 46 42.2	-1.2
SMST	Manzhou Townsh	2.33	222	*e*P	Pn	01 46 23.2	+1.2
SMST				*e*S	Sn	01 46 50.9	+1.1

*IDC **18** 01:47:58.5±1.6,6°.07S×142°.99E,h0km,mb3.7/4, mbtmp3.8/6,ML3.4/2,Error ellipse: s-maj=47.5km s-min=26.4km az=98.0*
ISC 18 01:48:03.8±1.4,6°.1S±0°.1×142°.9E±0°.2,h35km,n6,σ1s08/7, mb3.8/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	4.16	328	Pn	Pn	01 49 03.7	-1.2
JAY	0.9nm,0.3s,baz=133,slow=19,SNR=1.3			Sn	Sn	01 49 52.8	+0.4
ASAR	0.6nm,0.3s,baz=135,slow=18,SNR=1.1 15nm,0.8s Alice Springs	19.51	205	P	P	01 52 27.7	-0.5
FITZ	0.3nm,0.3s,baz=32,slow=11,SNR=14 1.8nm,0.7s Fitzroy Crossi	20.65	233	P	P	01 52 40.5	-0.1
MKAR	2.5nm,0.7s,baz=45,slow=11,SNR=2.3 2.5nm,0.7s Makanchi Array	75.00	322	P	P	01 59 42.7	+1.1
BVAR	0.3nm,0.7s,baz=101,slow=7.5,SNR=2.8 0.3nm,0.7s Borovoye Array	84.45	325	P	P	02 00 33.9	+1.1
ILAR	1.3nm,0.7s,baz=104,slow=6.3,SNR=8.5 1.3nm,0.7s Eielson Array	87.18	24	P	P	02 00 45.4	-0.7
	0.4nm,0.7s,baz=266,slow=4.5,SNR=6.1 0.4nm,0.7s						

*NDI **18** 01:55:36.9±2.8, 19°.12N×96°.37E, h10km, ML4.0, MW4.0*
*IDC **18** 01:55:37.3±1.8, 19°.24N×96°.36E, h0km, mb3.5/3, mbtmp3.6/4, ML4.5/1, MS3.2/2, Error ellipse: s-maj=33.7km s-min=22.5km az=53.0*
*NEIC **18** 01:55:37.4±1.6, 19°.13N±0°.06×96°.31E±0°.08, h10km±2km, mb4.0/5, Error ellipse: s-maj=15.5km s-min=6.1km az=237.0*
*BKK **18** 01:55:42.4±1.2, 19°.N±5°.×9°.7E±1°.1, h5km, M3.9/12, Mjma3.8/12, ML4.3/7, MLv3.8/5*
ISC 18 01:55:37.4±0.7,19°.27N±0°.08×96°.30E±0°.08,h10km,n36, σ1s65/39,mb3.8/6,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	Chiang Mai	2.54	100	Pn	Pn	01 56 16.8	-2.0
CHTO	Chiang Mai	2.54	100	P	Pn	01 56 18.8	+0.1
CM13	Chiang Mai Arr	2.61	108	P	Pn	01 56 20.3	+0.6
CM15	Chiang Mai Arr	2.62	108	P	Pn	01 56 20.5	+0.8
CM31	Chiang Mai Arr	2.63	107		Pn	01 56 19.1	-0.8
CM31	Chiang Mai Arr	2.63	107	P	Pn	01 56 21.4	+1.5
CMAR	Chiang Mai Arr 24nm,0.3s,baz=283,slow=19,SNR=58	2.63	107	Pn	Pn	01 56 20.2	+0.3
CMAR	36nm,0.3s,baz=290,slow=29,SNR=12 57nm,0.7s			Sn	Sn	01 56 52.4	+0.4
CMAR	Chiang Mai Arr	2.63	107		Pn	01 56 19.6	-0.4
CM02	Chiang Mai Arr	2.64	108	P	Pn	01 56 21.2	+1.1
CM05	Chiang Mai Arr	2.65	109	P	Pn	01 56 21.5	+1.3
CM01	Chiang Mai Arr	2.66	108	P	Pn	01 56 21.3	+1.0
CMAI	Chiengmai2	2.67	75	P	Pn	01 56 21.6	+0.9
CM09	Chiang Mai Arr	2.68	107	P	Pn	01 56 22.2	+1.6
CM04	Chiang Mai Arr	2.68	108	P	Pn	01 56 22.3	+1.7
LAMP	Lampang	3.24	103	P	Pn	01 56 30.5	+2.2
UTTA	Uttaradit	4.31	110	P	Pn	01 56 39.2	-3.9
KHLT	Khaolaem Dam	4.96	153	P	Pb	01 57 05.5	+1.2
IMP	Imphal	5.95	339	*e*P	Pn	01 57 07.2	+1.6
IMP				*e*S	Sn	01 58 13.4	-0.5
IMP	comp=E,124nm,0.5s			IAML		02 01 57.4	
IMP	comp=N,199nm,0.7s			IAML		02 02 06.1	
AGT	Agartala	6.58	315	*e*P	Pn	01 57 15.5	+1.4
AGT				*e*S	Sn	01 58 28.3	-0.9
AGT	comp=N,244nm,0.3s			IAML		02 12 38.7	
KOHI	KOHIMA	6.73	343	*e*P	Pn	01 57 17.6	+1.1
KOHI				*e*S	Sn	01 58 33.7	+0.4
KOHI	comp=N,97nm,0.2s			IAML		02 06 26.1	
KOHI	comp=E,83nm,0.2s			IAML		02 06 28.1	
SHL	Shillong	7.48	328	*e*P	Pn	01 57 27.1	+0.4
SHL				*e*S	Sn	01 58 45.2	-6.5
SHL	comp=N,86nm,0.0s			IAML		02 06 59.7	
SHL	comp=E,73nm,0.0s			IAML		02 07 00.1	
ITAN	ITANAGAR	8.19	344	*e*P	Pn	01 57 37.0	+0.7
ITAN	comp=N,167nm,0.2s			IAML		01 58 32.9	
ITAN	comp=E,142nm,0.3s			IAML		01 58 34.7	
ITAN				*e*S	Sn	01 59 03.9	-5.1
EVN	Everest	12.26	317	Pn	Pn	01 58 34.1	+1.5
KBL	Kabul	28.55	308	P	P	02 01 32.5	-1.2
KBL	comp=Z,2.3nm,0.6s			IAmb	IAmb	02 01 36.5	
KAAM	Kaadhehdhoo	29.50	233	P	P	02 01 40.4	-1.6
MKAR	Makanchi Array comp=Z,0.3nm,0.6s,baz=154,slow=9.3,SNR=4.2 comp=Z,0.3nm,0.6s	29.76	340	P	P	02 01 45.1	+1.0
MKAR	Makanchi Array	29.76	340	P	P	02 01 43.9	-0.1
KAPI	Kappang comp=Z,23nm,18.3s,baz=338,slow=41	33.40	134	LR	LR	02 18 38.7	
HRA	Herat	33.73	303	P	P	02 02 18.9	-0.5
HRA	comp=Z,2.0nm,1.1s			IAmb	IAmb	02 02 20.4	
KURBB	Kurchatov Arra comp=Z,0.5nm,0.6s,baz=148,slow=9.0,SNR=4.7 comp=Z,0.5nm,0.6s	34.32	340	P	P	02 02 25.1	+1.2
KURK	Kurchatov	34.37	340	P	P	02 02 24.6	+0.2
KURK	comp=Z,2.6nm,1.1s			IAmb	IAmb	02 02 56.1	
ZALV	Zalesovo Beam comp=Z,0.5nm,0.5s,baz=152,slow=6.5,SNR=2.2 comp=Z,0.5nm,0.5s	35.73	348	P	P	02 02 39.5	+3.4
ZALV	Zalesovo Beam	35.73	348	P	P	02 02 37.8	+1.7
BATI	Baumata comp=Z,52nm,19.5s,baz=346,slow=37	39.82	135	LR	LR	02 20 23.0	
AB31	Akbulak array	41.73	324	P	P	02 03 27.4	+0.9
ABKAR	Akbulak array	41.73	324	P	P	02 03 27.7	+1.2

*IDC **18** 02:07:34.6±1.1, 11°.63N×144°.64E, h0km, mb3.7/11, mbtmp3.7/11, Error ellipse: s-maj=33.8km s-min=17.7km az=97.0*
ISC 18 02:07:38.9±1.1,11°.6N±0°.1×144°.6E±0°.2,h29km,n12, σ0s57/13,mb3.8/11,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam 42nm,0.3s,baz=180,slow=13,SNR=9.1	1.96	7	P	Pn	02 08 09.4	-0.9
GUMO	85nm,0.3s,baz=180,slow=20,SNR=7.5			Sn	Sn	02 08 34.5	+0.6
GUMO	comp=Z,111nm,19.1s,baz=90,slow=52			LR	LR	02 09 15.9	
WRA	Warramunga Arr 0.3nm,0.6s,baz=20,slow=9.6,SNR=6.4 0.3nm,0.6s	32.96	198	P	P	02 14 11.6	+0.3
ASAR	Alice Springs 0.3nm,0.6s,baz=16,slow=11,SNR=5.3 0.3nm,0.6s	36.61	197	P	P	02 14 42.5	-0.3
LZDM	Lanzhou Array 0.5nm,0.3s,baz=126,slow=7.3,SNR=1.8 0.5nm,0.3s	44.13	310	P	P	02 15 44.6	-0.8
CMAR	Chiang Mai Arr 0.7nm,0.3s,baz=78,slow=6.4,SNR=6.3 0.7nm,0.3s	44.53	284	P	P	02 15 48.1	-0.3
SONM	Songino Array 0.7nm,0.5s,baz=144,slow=7.3,SNR=7.6 0.7nm,0.5s	48.19	326	P	P	02 16 17.9	+1.0
MKAR	Makanchi Array 0.3nm,0.5s,baz=96,slow=8.4,SNR=6.2 0.3nm,0.5s	62.73	317	P	P	02 18 02.0	+0.5
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=106,slow=8.1,SNR=2.3 0.4nm,0.4s	63.07	325	P	P	02 18 03.5	0.0
KURBB	Kurchatov Arra 1.5nm,0.6s,baz=105,slow=6.8,SNR=17 1.5nm,0.6s	65.96	320	P	P	02 18 22.7	+0.3
ILAR	Eielson Array 0.3nm,0.5s,baz=265,slow=6.2,SNR=4.7 0.3nm,0.5s	70.44	25	P	P	02 18 50.2	-0.1
BVAR	Borovoye Array 1.4nm,0.5s,baz=101,slow=7.5,SNR=11 1.4nm,0.5s	71.31	322	P	P	02 18 56.1	+0.3
YKA	Yellowknife Ar 0.1nm,0.6s,baz=292,slow=6.7,SNR=1.6 0.1nm,0.6s	84.71	27	P	P	02 20 10.2	+0.2

*ISK **18** 02:55:44.7,39°.00N×27°.86E,h9km,ML3.5/30*
*AFAD **18** 02:55:44.8,38°.99N×27°.88E,h10km±1km,MW3.5*
*THE **18** 02:55:46.3,39°.N±3°.×2°.8E±°,h13km±19km,M3.1/12, MLh3.1/12*
ISC 18 02:55:45.1±0.8,39°.00N±0°.01×27°.86E±0°.01,h13km±5km, n92,σ0s51/131,7C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.12	198	P	Pg	02 55 48.4	0.0
AKHS				S	Sg	02 55 50.9	+0.2
AKS	Akhisar	0.12	198	Pg	Pg	02 55 47.9	-0.5
AKS				Sg	Sg	02 55 50.5	-0.2
GORD	Gordes-Manisa	0.26	109	Pg	Pg	02 55 50.8	+0.1
GORD				Sg	Sg	02 55 54.9	+0.5
GOMA	Golmarmara-Man	0.29	171	Pg	Pg	02 55 51.4	+0.3
GOMA				Sg	Sb	02 55 55.9	-1.0
SOMA	Soma-Manisa	0.30	302	Pg	Pg	02 55 51.2	-0.2
SOMA				Sg	Sg	02 55 56.2	+0.6
KTTT	Salihli	0.35	149	P	Pg	02 55 52.2	-0.1
KTTT				S	Sg	02 55 56.8	-0.3
STEP	BALIKESIR_Sava	0.40	344	P	Pg	02 55 52.8	-0.3
STEP				S	Sg	02 55 58.7	+0.2
CAMT	Merkez	0.49	240	P	Pb	02 55 55.4	-0.3
CAMT				S	Sb	02 56 02.6	-0.2
ZEDA	zmir-Bergama	0.61	268	P	Pb	02 55 57.6	0.0
BALB	Balikesir	0.65	1	Pg	Pg	02 55 57.5	-0.2
DEMI	Demirci	0.67	86	P	Pg	02 55 58.4	+0.3
DEMI				S	Sg	02 56 06.3	-0.7
IZMD	zmir-Dikili-	0.73	269	P	Pb	02 55 59.5	-0.2
IZMD				P	Pg	02 55 59.7	+0.4
IZMD				S	Sg	02 56 08.6	-0.3
ODEM	Odemis-Izmir	0.74	167	Pg	Pb	02 55 59.6	-0.2
MANT	Manisa	0.74	133	P	Pg	02 55 59.4	-0.2
DKL	Dikili	0.75	276	Pg	Pb	02 56 00.0	0.0
BALY	Balya	0.77	346	P	Pg	02 55 59.7	-0.3
BALY				S	Sg	02 56 09.6	-0.6
DURS	Dursunbey	0.77	38	P	Pg	02 55 59.4	-0.7
KULA	Kula-Manisa	0.79	127	Pg	Pg	02 56 00.3	-0.1
DUVT	Torbali	0.84	203	P	Pg	02 56 01.1	-0.2
DUVT				S	Sg	02 56 11.8	-0.5
BAGT	Foa	0.86	247	P	Pb	02 56 02.1	+0.2
IZMR	zmir-demi	0.86	175	P	Pb	02 56 01.8	-0.1
IZMR				S	Sg	02 56 11.9	-1.1
SIMA	Simav-Kutahya	0.88	84	Pg	Pb	02 56 02.4	+0.1
SMAA	Simav-Kutahya	0.88	83	Pg	Pb	02 56 02.2	-0.1
BLKS	Balkesir-Sus	0.88	5	P	Pg	02 56 01.5	-0.7
BLKS				S	Sg	02 56 11.6	-2.1
BLCB	Balcova	0.89	227	Pg	Pg	02 56 01.9	-0.3
BLCB	Balcova	0.89	227	P	Pg	02 56 02.0	-0.2
BLCB				S	Sg	02 56 15.0	+0.9
KIRA	zmir-Kiraz	0.90	152	P	Pg	02 56 02.3	-0.2
KIRA				S	Sb	02 56 14.4	-0.3
FOCM	Foa	0.93	253	Pg	Pg	02 56 02.9	-0.1
USAK	Uak-Merkez	0.94	107	P	Pg	02 56 03.0	-0.4
AYVA	Ayvalik	0.96	289	P	Pb	02 56 03.8	+0.1
AYVA				S	Sg	02 56 15.8	-0.6
SUSR	Susurluk-Balik	0.98	10	Pg	Pg	02 56 03.4	-0.7
AYDB	Zeytinkoy-Aydi	1.05	179	Pg	Pb	02 56 05.1	-0.1
YENI	Yenice-Canakka	1.06	333	Pg	Pb	02 56 05.2	-0.1
SHAP	Saphane-Kutahy	1.06	88	Pg	Pg	02 56 05.7	+0.1
NAZL	Nazilli-Aydin	1.08	162	Pn	Pb	02 56 05.6	-0.1
KRBN	Karaburun

DNIZ	**Denizli-Tavas-**	**1.65 146**	P	**Pn**	**02 56 14.0**	**+0.1**
DNIZ			S	**Sb**	**02 56 37.0**	**+0.8**
TAVA	**DENIZLI_Tavas**	**1.74 151**	P	**Pn**	**02 56 15.3**	**+0.2**
TAVA			S	**Sb**	**02 56 38.1**	**-0.5**
MULA	**Mugla, Merkez-**	**1.77 168**	P	**Pn**	**02 56 15.8**	**+0.3**
YER	**Yerkesik**	**1.89 170**	P	**Pn**	**02 56 17.1**	**-0.1**
GADA	**Gvkgeada**	**1.93 309**	P	**Pn**	**02 56 18.1**	**+0.5**
BODT	**Bodrum**	**1.98 193**	P	**Pn**	**02 56 19.2**	**+0.9**
CAVK	**Edirne/Enez-Ca**	**2.14 323**	⇓P	**Pn**	**02 56 21.5**	**+1.0**
CAVK			⇑S	**Sb**	**02 56 49.1**	**-1.1**
ENEZ	**Enez**	**2.18 323**	P	**Pn**	**02 56 21.9**	**+0.8**
ENEZ			S	**Sn**	**02 56 49.7**	**+1.8**
LIA	**Limnos Island**	**2.26 294**	P	**Pn**	**02 56 22.7**	**+0.5**
SMTH	**Samothraki Isl**	**2.33 310**	P	**Pn**	**02 56 23.6**	**+0.5**
ALN	**Alexandroupoli**	**2.36 324**	P	**Pn**	**02 56 24.2**	**+0.6**
ALN			S	**Sn**	**02 56 52.9**	**+0.6**
SILT	**Sile**	**2.55 32**	⇑P	**Pn**	**02 56 27.1**	**+0.9**
ARG	**Arkhangelos**	**2.78 176**	P	**Pn**	**02 56 29.7**	**+0.3**
RDO	**Rodhopi**	**2.79 321**	P	**Pn**	**02 56 30.4**	**+0.9**
THAS	**Thassos island**	**2.91 305**	P	**Pn**	**02 56 31.1**	**+0.1**
ELND	**Elena**	**4.21 340**	⇓P	**Pn**	**02 56 49.9**	**+0.9**
KIRS	**Kirsehir-Merke**	**4.71 86**	⇑P	**Pn**	**02 56 56.6**	**+0.6**
MLR	**Muntele Rosu**	**6.65 348**	⇓P	**Pn**	**02 57 23.0**	**+0.5**
PLOR	**Plostina**	**6.91 353**	⇑P	**Pn**	**02 57 27.4**	**+1.3**
MDVR	**Moldovita**	**7.38 324**	⇑P	**Pn**	**02 57 33.1**	**+0.5**

*IDC **18** 02:58:05.6±1.6,5˚.26N×125˚.60E,h81^{km}±13^{km},mb3.9/19, mbtmp4.2/20,MS2.6/2, Error ellipse: s-maj=31.1km s-min=10.1km az=73.0*

*DJA **18** 02:58:06.8±0.7,5˚N±2˚×12˚6E±˚,h11^{km}±5^{km},M4.8/19, mb4.9/18,mB5.3/11,MLv4.8/19,Mw(mB)4.7/11*

*NEIC **18** 02:58:08.6±1.4,5˚.41N±0˚.06×125˚.9E±0˚.1,h103^{km}±6^{km}, mb4.5/35, Error ellipse: s-maj=15.6km s-min=8.4km az=76.0*

ISC 18 02:58:08.2±0.8,**5˚40N**±0˚.04×**126˚11E**±0˚.07,**h103**^{km}±7^{km}, **n100,**σ1°**53**/112,**mb4.4**/43,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**1.74 342**		P		**Pn**	**02 58 34.3**	**-3.3**
	377nm,0.4s,baz=52,slow=4.2,SNR=2.6							
DAV				S		**Sn**	**02 58 57.1**	**-2.9**
	620nm,0.5s,baz=53,slow=22,SNR=7.1							
DAV	**Davao City (W)**	**1.74 342**		Pn		**Pn**	**02 58 36.8**	**-0.8**
DAV				Sn		**Sn**	**02 58 59.2**	**-0.8**
DAV	**Davao City (W)**	**1.74 342**		P		**Pn**	**02 58 38.5**	**+0.9**
DAV				S		**Sn**	**02 59 03.5**	**+3.5**
SGSI	**Sangihe**	**1.80 199**		P		**Pn**	**02 58 38.3**	**-0.1**
SGSI				S		**Sn**	**02 59 01.5**	**+0.1**
GAMI	**Galela, Maluku**	**3.92 155**		P		**Pn**	**02 59 04.9**	**-1.5**
MNI	**Manado**	**4.13 198**		P		**Pn**	**02 59 10.8**	**+1.5**
TNTI	**Ternate**	**4.77 165**		Pn		**Pn**	**02 59 18.9**	**+1.0**
TNTI	**Ternate**	**4.77 165**		P		**Pn**	**02 59 17.3**	**-0.6**
GTOI	**Gorontalo**	**5.66 213**		P		**Pn**	**02 59 29.1**	**-0.8**
MRSI	**Marisa**	**6.42 221**		P		**Pn**	**02 59 40.8**	**+0.5**
	0.5nm2µm152nm,0.7s							
TOLI2	**Tolitoli**	**6.82 231**				**Pn**	**02 59 44.2**	**-1.4**
LUWI	**Luwuk**	**7.22 208**				**Pn**	**02 59 50.2**	**-0.9**
LUWI	**Luwuk**	**7.22 208**		P		Pn	03 00 02.9	+12
SANI	**Sanana**	**7.40 181**		P		**Pn**	**02 59 50.1**	**-3.5**
MYLDM	**Lahad Datu**	**7.58 269**				**Pn**	**02 59 52.4**	**-3.6**
MYLDM	**Lahad Datu**	**7.58 269**		P		**Pn**	**02 59 58.5**	**+2.4**
	0.2nm50nm,0.8s							
APSI	**Ampana**	**7.69 216**		P		**Pn**	**03 00 00.5**	**+2.9**
	115nm,1.2s							
MPSI	**Mapaga**	**7.99 231**		P		**Pn**	**03 00 03.7**	**+2.1**
SWI	**Sorong**	**8.07 140**		P		**Pn**	**03 00 02.3**	**-0.5**
	0.1nm31nm,0.8s							
SIJI	**Sorong**	**8.08 140**		P		**Pn**	**03 00 02.8**	**-0.1**
	19nm,0.6s,baz=353,slow=14,SNR=5.8							
SIJI				S		**Sn**	**03 01 28.7**	**-4.0**
	4.2nm,0.3s,baz=343,slow=19,SNR=1.6							
SIJI	**Sorong**	**8.08 140**		P		**Pn**	**03 00 02.3**	**-0.6**
	0.1nm27nm,0.7s							
NLAI	**Namlea**	**8.64 173**		P		**Pn**	**03 00 07.2**	**-3.3**
	49nm,0.4s							
KRAI	**Karang Ratu**	**8.96 165**		P		**Pn**	**03 00 19.2**	**+4.4**
MWPI	**Manokwari, Pap**	**10.11 128**		P		**Pn**	**03 00 30.7**	**+0.2**
KAPI	**Kappang**	**12.14 212**		Pn		**Pn**	**03 00 56.2**	**-1.6**
SBUM	**Sibu**	**14.16 259**				**P**	**03 01 29.2**	**+0.7**
SBUM	**Sibu**	**14.16 259**		P		**P**	**03 01 29.7**	**+1.2**
TWSI	**Taliwang, Sumb**	**16.79 213**		P		**P**	**03 02 02.9**	**+5.2**
GUMO	**Guam**	**20.20 65**		LR		LR	03 09 52.1	
	comp=Z,16nm,20.0s,baz=76,slow=34							
KNRA	**Kununurra**	**21.11 173**				**P**	**03 02 44.3**	**-0.4**
KNRA				IAmb		IAmb	03 02 45.1	
	comp=Z,17nm,0.6s							
COEN	**Coen**	**25.63 139**		P		**P**	**03 03 29.3**	**+1.0**
COEN				IAmb		IAmb	03 03 33.0	
	comp=Z,11nm,0.8s							
WB0	**Warramunga Arr**	**26.31 162**				**P**	**03 03 34.3**	**-0.1**
WRA	**Warramunga Arr**	**26.45 162**		P		**P**	**03 03 35.1**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=339,slow=10,SNR=17							
WRA				ScP		**ScP**	**03 10 29.0**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=344,slow=3.0,SNR=2.8							
WRA	**Warramunga Arr**	**26.45 162**		P		**P**	**03 03 35.1**	**-0.6**
WRA						**ScP**	**03 10 28.1**	**-1.2**
MBWA	**Marble Bar**	**27.13 193**		P		**P**	**03 03 40.2**	**-1.5**
MBWA				IAmb		IAmb	03 04 06.2	
	comp=Z,14nm,1.1s							
NJ2	**Nanjing**	**27.37 347**		*e*P		**P**	**03 03 44.5**	**+0.7**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.6s							
PSA00	**Pilbara Seismi**	**27.50 193**		P		**P**	**03 03 44.4**	**-0.7**
PSA00				IAmb		IAmb	03 03 45.5	
	comp=Z,15nm,0.9s							
PSA00	**Pilbara Seismi**	**27.50 193**		P		**P**	**03 03 44.4**	**-0.7**
PSA00				IAmb		IAmb	03 03 45.5	
	comp=Z,7.9nm,0.9s							
CMAR	**Chiang Mai Arr**	**29.52 298**		LR		LR	03 14 42.8	
	comp=Z,12nm,21.9s,baz=80,slow=34							
AS31	**Alice Springs**	**29.88 166**				**P**	**03 04 08.5**	**+2.3**
ASAR	**Alice Springs**	**29.88 166**		P		**P**	**03 04 05.7**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=344,slow=7.5,SNR=12							
ASAR				PcP		**PcP**	**03 07 07.1**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=351,slow=2.8,SNR=6.5							
ASAR				ScP		**ScP**	**03 10 40.1**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=343,slow=3.2,SNR=8.7							
	comp=Z,0.8nm,0.5s							
ASAR	**Alice Springs**	**29.88 166**		P		**P**	**03 04 07.0**	**+0.8**
ASAR						**PcP**	**03 07 06.8**	**-0.2**
ASAR						**ScP**	**03 10 40.5**	**+0.6**
PZH	**PanZhiHua**	**31.33 315**		P		**P**	**03 04 20.3**	**+1.2**
KSRS	**Korea Array**	**31.95 3**		P		**P**	**03 04 25.9**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=186,slow=9.2,SNR=2.1							
	comp=Z,1.0nm,0.6s							
XAN	**Xi'an**	**32.66 333**		P		**P**	**03 04 29.5**	**-1.0**
XAN				pmax		pmax		
	comp=Z,7.0nm,1.1s							
BJI2	**Beijing**	**35.61 347**		P		**P**	**03 04 55.8**	**-0.1**
BJI2				pmax		pmax		
	comp=Z,3.0nm,0.8s							
MORW	**Morawa**	**35.62 195**		P		**P**	**03 04 55.1**	**-1.0**
INKA	**Innaminka**	**35.85 158**		P		**P**	**03 04 58.6**	**+0.5**
FORT	**Forrest**	**36.02 177**		P		**P**	**03 04 59.3**	**-0.2**
LZDM	**Lanzhou Array**	**36.73 329**		P		**P**	**03 05 04.3**	**-1.7**
	comp=Z,2.0nm,0.6s,baz=163,slow=10,SNR=5.6							
LZDM				PcP		**PcP**	**03 07 26.9**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=122,slow=1.9,SNR=2.4							
	comp=Z,2.0nm,0.6s							
LZH	**Lanzhou**	**36.76 329**		*e*P		**P**	**03 05 06.8**	**+0.8**
LZH				pP		pP	03 05 28.8	+0.2
LZH				pmax		pmax		
	comp=Z,12nm,1.3s							
HHC	**Hu-ho-hao-te**	**37.63 342**		*e*P		**P**	**03 05 14.3**	**+1.1**
HHC				pmax		pmax		
	comp=Z,11nm,0.6s							
HHC				pmax		pmax		
	comp=Z,150nm,5.0s							
USRK	**Ussuriysk Ar.**	**38.98 7**		P		**P**	**03 05 25.1**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=204,slow=8.3,SNR=4.8							
	comp=Z,2.6nm,0.6s							
NWAO	**Narrogin (SRO)**	**39.04 192**		P		**P**	**03 05 24.8**	**-0.2**
EIDS	**Eidsvold**	**39.04 143**		P		**P**	**03 05 25.8**	**+0.7**
EIDS				IAmb		IAmb	03 06 01.4	
	comp=Z,7.8nm,1.1s							
BBOO	**Buckleboo**	**39.16 167**		P		**P**	**03 05 26.6**	**+0.6**
STKA	**Stephens Creek**	**39.90 159**		P		**P**	**03 05 32.6**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=329,slow=5.6,SNR=4.5							
	comp=Z,2.4nm,0.7s							
STKA	**Stephens Creek**	**39.90 159**		P		**P**	**03 05 32.7**	**+0.5**

GTA2	**Gaotai**	**41.44 329**	*e*P	**P**	**03 05 44.4**	**-0.5**
GTA2			pP	pP	03 06 04.8	-3.2
GTA2			PcP	**PcP**	**03 07 41.5**	**+0.5**
GTA2			pmax	pmax		
	comp=Z,4.0nm,1.1s					
GOMU	**GeErMu**	**42.00 321**	P	**P**	**03 05 49.4**	**-0.4**
GOMU			pmax	pmax		
	comp=Z,3.0nm,0.9s					
ARMA	**Armidale**	**43.20 147**	P	**P**	**03 05 59.9**	**+0.7**
ARMA			IAmb	IAmb	03 06 01.8	
	comp=Z,8.1nm,1.1s					
EVN	**Everest**	**43.51 306**	P	**P**	**03 06 02.2**	**-0.3**
EVN			IAmb	IAmb	03 06 04.3	
	comp=Z,4.2nm,0.6s					
HILR	**Hailar Array B**	**44.33 354**	P	**P**	**03 06 09.0**	**+1.0**
	comp=Z,1.8nm,0.4s,baz=174,slow=8.7,SNR=5.0					
	comp=Z,1.8nm,0.4s					
SONM	**Songino Array**	**45.53 341**	P	**P**	**03 06 17.4**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=155,slow=8.0,SNR=5.7					
SONM			PcP	**PcP**	**03 07 54.9**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=160,slow=4.2,SNR=7.6					
	comp=Z,0.6nm,0.5s					
SONM	**Songino Array**	**45.53 341**	P	**P**	**03 06 17.4**	**-0.2**
SONM				**PcP**	**03 07 54.9**	**+0.2**
PETK	**Petropavlovsk-**	**54.13 23**	P	**P**	**03 07 25.5**	**+3.0**
	comp=Z,0.8nm,0.5s,baz=220,slow=2.3,SNR=4.2					
	comp=Z,0.8nm,0.5s					
MKAR	**Makanchi Array**	**55.84 325**	P	**P**	**03 07 33.9**	**-1.1**
	comp=Z,2.8nm,0.4s,baz=117,slow=7.4,SNR=83					
	comp=Z,2.8nm,0.4s					
MKAR	**Makanchi Array**	**55.84 325**	P	**P**	**03 07 34.0**	**-0.9**
MAKZ	**Makanchi**	**56.03 325**	P	**P**	**03 07 35.2**	**-1.1**
MAKZ			IAmb	IAmb	03 07 35.9	
	comp=Z,4.9nm,0.9s					
MAKZ			PcP	**PcP**	**03 08 32.5**	**-0.9**
KSH2	**Kashi**	**56.58 314**	P	**P**	**03 07 41.1**	**+0.6**
ZALV	**Zalesovo Beam**	**58.83 333**	P	**P**	**03 07 53.7**	**-2.1**
	comp=Z,1.3nm,0.3s,baz=119,slow=7.1,SNR=8.7					
	comp=Z,1.3nm,0.3s					
KURBB	**Kurchatov Arra**	**60.01 327**	P	**P**	**03 08 02.7**	**-1.2**
	comp=Z,3.0nm,0.6s,baz=127,slow=6.3,SNR=32					
	comp=Z,3.0nm,0.6s					
KURK	**Kurchatov**	**60.01 327**		**P**	**03 08 02.4**	**-1.5**
KURK			IAmb	IAmb	03 08 03.8	
	comp=Z,4.6nm,0.6s					
KBL	**Kabul**	**60.03 307**	P	**P**	**03 08 04.0**	**-0.7**
KBL			IAmb	IAmb	03 08 06.3	
	comp=Z,4.9nm,0.7s					
KKAR	**Karatay Array**	**61.60 317**	P	**P**	**03 08 13.1**	**-1.8**
BVAR	**Borovoye Array**	**65.59 327**	P	**P**	**03 08 40.1**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=122,slow=7.0,SNR=12					
	comp=Z,1.1nm,0.4s					
AB31	**Akbulak array**	**70.47 321**	P	**P**	**03 09 10.6**	**-1.0**
ABKAR	**Akbulak array**	**70.47 321**	P	**P**	**03 09 10.5**	**-1.1**
ARTI	**Arti**	**73.28 327**	P	**P**	**03 09 26.4**	**-1.8**
ARTI			IAmb	IAmb	03 09 39.6	
	comp=Z,11nm,1.4s					
E19K	**Redstone River**	**79.93 22**	P	**P**	**03 10 05.6**	**+0.1**
E19K			IAmb	IAmb	03 10 08.6	
	comp=Z,4.4nm,0.9s					
ILAR	**Eielson Array**	**83.87 25**	P	**P**	**03 10 27.9**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=268,slow=5.0,SNR=6.1					
	comp=Z,0.5nm,0.7s					
ILAR	**Eielson Array**	**83.87 25**	P	**P**	**03 10 27.2**	**+1.0**
VNDA	**Vanda**	**85.15 173**	P	**P**	**03 10 32.5**	**+0.2**
VNDA			IAmb	IAmb	03 10 38.9	
	comp=Z,15nm,1.5s					
D27M	**Malcolm River**	**86.03 21**	P	**P**	**03 10 37.8**	**+0.8**
F28M	**Old Crow**	**86.58 23**	P	**P**	**03 10 40.2**	**+0.5**
F28M			IAmb	IAmb	03 11 12.7	
	comp=Z,7.8nm,1.5s					
I28M	**Miner Creek**	**86.77 25**	P	**P**	**03 10 40.1**	**-0.7**
G30M	**tAoh Zraii Nji**	**88.07 23**	P	**P**	**03 10 47.3**	**+0.5**
G30M			IAmb	IAmb	03 11 20.1	
	comp=Z,3.6nm,1.2s					
F30M	**Barrier River**	**88.13 22**	P	**P**	**03 10 48.1**	**+1.1**
F30M			IAmb	IAmb	03 10 54.0	
	comp=Z,4.4nm,1.2s					
BRTR	**Keskin Array B**	**88.49 310**	P	**P**	**03 10 47.0**	**-2.6**
	comp=Z,0.5nm,0.8s,baz=111,slow=7.9,SNR=3.6					
	comp=Z,0.5nm,0.8s					
BRTR	**Keskin Array B**	**88.49 310**	P	**P**	**03 10 47.3**	**-2.3**
ARCES	**ARCESS Array B**	**88.68 340**	P	**P**	**03 10 49.0**	**-0.6**
	comp=Z,13nm,1.1s,baz=46,slow=5.2,SNR=6.4					
	comp=Z,13nm,1.1s					
ARCES	**ARCESS Array B**	**88.68 340**	P	**P**	**03 10 48.7**	**-0.9**
SPB2	**Spitsbergen Ar**	**88.73 349**	P	**P**	**03 10 49.6**	**-0.1**
SPITS	**Spitsbergen Ar**	**88.73 349**	P	**P**	**03 10 49.8**	**0.0**
	comp=Z,7.8nm,1.0s,baz=96,slow=8.5,SNR=8.4					
	comp=Z,7.6nm,1.0s					
F31M	**Tsiigehtchic**	**88.93 22**	P	**P**	**03 10 50.9**	**+0.1**
F31M			IAmb	IAmb	03 11 20.2	
	comp=Z,4.4nm,1.2s					
FINES	**FINESS Array B**	**90.08 332**	P	**P**	**03 10 54.9**	**-1.4**
	comp=Z,2.5nm,0.6s,baz=99,slow=2.5,SNR=11					
	comp=Z,2.5nm,0.6s					
FINES	**FINESS Array B**	**90.08 332**	P	**P**	**03 10 54.7**	**-1.6**
P33M	**Teslin, Yukon**	**90.83 29**	P	**P**	**03 10 59.5**	**-0.4**
P33M			IAmb	IAmb	03 11 06.4	
	comp=Z,3.6nm,1.3s					
YKA	**Yellowknife Ar**	**98.24 24**	P	Pdif	03 11 34.4	+0.7
	comp=Z,0.2nm,0.7s,baz=305,slow=4.8,SNR=4.3					
	comp=Z,0.2nm,0.7s					
TORD	**Torodi Ar. Bea**	**121.80 289**	PKP	**PKPdf**	**03 16 50.5**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=53,slow=3.1,SNR=12					

KRSC 18 03:09:54.9±1.2,**55˚.35N**×**160˚.35E,h173**^{km}±13^{km},**MI3.6, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMNR	**Kamenistaya**	**0.41**	**351**	*e*P		Pn	03 10 20.3	+1.7
KOZ	**Kozyrevsk**	**0.76**	**339**	*e*P		Pn	03 10 20.9	+0.7
KLY	**Klyuchi**	**0.98**	**10**	*e*P		Pn	03 10 23.1	+1.4
SRDR	**Sredinnyy**	**1.03**	**340**	*e*P		Pn	03 10 22.6	+0.4
MKZ	**Mys Kozlova**	**1.12**	**134**	*e*P		Pn	03 10 24.2	+1.4
MKZ				*e*S		Sn	03 10 46.3	+1.9
KBG	**Krutoberegovo**	**1.61**	**55**	*e*P		Pn	03 10 28.5	+1.2
KBG				*e*S		Sn	03 10 53.4	+1.0
KBTR	**Krutoberegovo**	**1.64**	**57**	*e*P		Pn	03 10 28.7	+1.1
KBTR				*e*S		Sn	03 10 53.4	+0.4
NLC	**Nalytchevo**	**2.26**	**196**	*e*S		Sn	03 11 06.3	+1.4
SPN	**Mys Shipunski**	**2.26**	**185**	*e*P		Pn	03 10 34.8	+0.4
SPN				*e*S		Sn	03 11 04.2	-0.8
SMAR	**Somma**	**2.28**	**204**	*e*P		Pn	03 10 37.5	+2.7
MTVR	**Mutnovka**	**3.14**	**205**	*e*P		Pn	03 10 47.3	+2.2
BKI	**Bering**	**3.22**	**90**	*e*P		Pn	03 10 47.7	+1.9
BKI				*e*S		Sn	03 11 26.0	+0.5
ASAK	**Asacha**	**3.31**	**207**	*e*P		Pn	03 10 49.2	+2.1
KDTR	**Khodutka, Kamc**	**3.80**	**202**	*e*P		Pn	03 10 54.9	+1.7
KDTR				*e*S		Sn	03 11 37.2	-1.4

*SDD **18** 03:22:23.7±1.2, 19˚.86N×73˚.54W, h21^{km}±60^{km}, MD2.9, ML2.2, MW2.6, Presumed earthquake*

*SSNC **18** 03:22:23.8±1.4, 19˚.98N×73˚.46W, h7^{km}±8^{km}, MD3.1, ML1.8, Presumed earthquake*

*OSPL **18** 03:22:25.3±0.4, 20˚.23N×73˚.55W, h24^{km}±4^{km}, ML2.2, Presumed earthquake*

ISC 18 03:22:21.9±1.1,**19˚9N**±0˚.1×**73˚44W**±0˚.05,**h20**^{km}±8^{km},**n20,** σ1°**39**/39,**4C-7D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MASC	**Masc**	**0.78**	**288**	*e*P		**Pn**	**03 22 36.7**	**-1.0**
MASC				*e*S		**Sb**	**03 22 45.3**	**-1.6**
MASC				IAML			03 22 46.9	
	comp=E,42nm,0.1s							
MASC				IAML			03 22 47.0	
	comp=N,57nm,0.1s							
MASC	**Masc**	**0.78**	**288**	⇓P		**Pn**	**03 22 36.8**	**-0.9**
MASC				⇓*e*S		**Sb**	**03 22 45.6**	**-1.4**
MASC				IAML			03 22 46.0	
	comp=N,59nm,0.6s							
MASC	**Masc**	**0.78**	**288**	*i* P		**Pn**	**03 22 36.7**	**-1.0**
MASC				*e*S		**Sb**	**03 22 45.4**	**-1.6**
MASC				IAML			03 22 47.6	
	comp=Z,48nm,0.1s							
QMBU	**Quimbuelo**	**1.32**	**282**	*e*P		**Pn**	**03 22 44.8**	**-0.4**
QMBU				*e*S		**Sn**	**03 22 59.7**	**-2.5**
QMBU				IAML			03 23 01.7	
	comp=E,79nm,0.3s							
QMBU				IAML			03 23 04.0	
	comp=N,68nm,0.2s							

QMBU	**Quimbuelo**	**1.32**	**282**	⇓*e*Pg	**Pn**	**03 22 45.0**	**-0.2**
QMBU				⇑*e*Sg	**Sn**	**03 22 59.9**	**-2.3**
QMBU				IAML		03 23 04.1	
	comp=N,59nm,0.3s						
GTBY	**Guantanamo Bay**	**1.57**	**270**	*e*P	**Pn**	**03 22 49.2**	**+0.6**
GTBY				*e*S	**Sn**	**03 23 07.0**	**-1.4**
GTBY				IAML		03 23 08.2	
	comp=N,8.3nm,0.1s						
GTBY				*e*Sg	**Sb**	**03 23 09.8**	**+0.1**
GTBY				IAML		03 23 10.2	
	comp=N,14nm,0.1s						
GTBY	**Guantanamo Bay**	**1.57**	**270**	⇓*e*Pg	**Pn**	**03 22 49.6**	**+1.0**
GTBY				⇓*e*Sg	**Sn**	**03 23 07.1**	**-1.2**
GTBY				IAML		03 23 11.2	
	comp=N,55nm,1.9s						
GTBY	**Guantanamo Bay**	**1.57**	**270**	*i* P	**Pn**	**03 22 49.3**	**+0.6**
GTBY				*e*S	**Sn**	**03 23 06.7**	**-1.7**
GTBY				IAML		03 23 10.4	
	comp=Z,36nm,2.2s						
NMDO	**Nuevo Mundo**	**1.58**	**294**	*e*P	**Pn**	**03 22 49.0**	**+0.3**
NMDO				*e*S	**Sn**	**03 23 08.4**	**-0.1**
NMDO				IAML		03 23 11.1	
	comp=N,19nm,0.1s						
NMDO				IAML		03 23 11.6	
	comp=E,18nm,0.1s						
NMDO	**Nuevo Mundo**	**1.58**	**294**	⇑*e*Pg	**Pn**	**03 22 49.1**	**+0.4**
NMDO				⇑*e*Sg	**Sn**	**03 23 08.6**	**0.0**
NMDO				IAML		03 23 13.8	
	comp=N,18nm,0.2s						
MOAC	**Moa**	**1.60**	**297**	*e*P	**Pn**	**03 22 49.0**	**0.0**
MOAC				*e*S	**Sn**	**03 23 08.8**	**-0.3**
MOAC				IAML		03 23 11.3	
	comp=E,9.5nm,0.1s						
MOAC				IAML		03 23 13.2	
	comp=N,25nm,0.1s						
REDR	**Restauracion**	**2.07**	**111**	⇓*e*Pg	**Pn**	**03 22 55.2**	**-0.3**
REDR				⇑*e*Sg	**Sn**	**03 23 17.3**	**-3.4**
REDR				IAML		03 23 27.0	
	comp=N,45nm,0.2s						
RCC	**Rio Carpintero**	**2.12**	**272**	*e*P	**Pn**	**03 22 56.9**	**+0.7**
RCC				*e*S	**Sn**	**03 23 20.8**	**-1.2**
RCC				IAML		03 23 23.3	
	comp=E,7.8nm,0.1s						
RCC				IAML		03 23 25.1	
	comp=N,6.7nm,0.1s						
SDDR	**Presa de Saban**	**2.24**	**114**	*i* P	**Pb**	**03 23 02.5**	**+0.9**
SDDR				*e*S	**Sb**	**03 23 30.3**	**+1.4**
SDDR				IAML		03 23 38.9	
	comp=Z,12nm,1.5s						
MARVS	**Santiago de Cu**	**2.31**	**272**	*e*P	**Pn**	**03 22 59.3**	**+0.5**
MARVS				*e*S	**Sn**	**03 23 25.8**	**-1.0**
MARVS				IAML		03 23 28.9	
	comp=E,16nm,0.2s						
MARVS				IAML		03 23 30.0	
	comp=N,8.7nm,0.2s						
HLGC	**Holguin**	**2.64**	**292**	*e*P	**Pn**	**03 23 05.4**	**+2.1**
HLGC				*e*S	**Sn**	**03 23 37.9**	**+3.2**
HLGC				IAML		03 23 40.1	
	comp=E,1.0nm,0.1s						
HLGC				IAML		03 23 51.5	
	comp=N,0.3nm,0.0s						
YAR	**Yar**	**2.78**	**280**	*e*P	**Pn**	**03 23 06.3**	**+1.1**
YAR				⇓*e*S	**Sn**	**03 23 39.2**	**+1.1**
YAR				IAML		03 23 42.4	
	comp=N,0.3nm,0.1s						
YAR				IAML		03 23 45.3	
	comp=E,1.3nm,0.3s						
CHIV	**Chivirico**	**2.80**	**271**	*e*P	**Pn**	**03 23 06.4**	**+0.9**
CHIV				*e*S	**Sn**	**03 23 38.0**	**-0.7**
CHIV				IAML		03 23 40.4	
	comp=E,3.6nm,0.2s						
CHIV				IAML		03 23 40.9	
	comp=N,4.8nm,0.1s						
LMGC	**Las Mercedes**	**3.35**	**273**	*e*P	**Pn**	**03 23 13.8**	**+0.7**
LMGC				*e*S	**Sn**	**03 23 53.5**	**+1.1**
LMGC				IAML		03 23 55.6	
	comp=N,4.0nm,0.1s						
LMGC				IAML		03 23 56.1	
	comp=E,3.2nm,0.1s						
CCCC	**Cccc**	**4.25**	**288**	*e*P	Pn	03 23 20.3	-5.1
CCCC				*e*S	Sn	03 24 04.0	-10
CCCC				IAML		03 24 06.2	
	comp=N,0.5nm,0.1s						
CCCC				IAML		03 24 06.5

comp=N,380nm,14.6s
XAN LR LR
comp=E,540nm,15.5s
XAN LR LR
comp=Z,950nm,14.3s
HILR Hailar Array B 20.93 339 P **P 03 49 49.4 -1.0**
comp=Z,4.1nm,0.6s,baz=150,slow=12,SNR=3.7
comp=Z,4.1nm,0.6s
LZDM Lanzhou Array 23.57 291 P **P 03 50 18.9 +0.3**
comp=Z,1.3nm,0.4s,baz=133,slow=6.3,SNR=4.6
comp=Z,1.3nm,0.4s
SONM Songino Array 25.70 319 P **P 03 50 36.8 -1.0**
comp=Z,0.9nm,0.6s,baz=142,slow=11,SNR=5.4
comp=Z,0.9nm,0.6s
SONM Songino Array 25.70 319 P **P 03 50 37.1 -0.7**
H11N2 WAKE ISLAND Hy 33.97 100 T T 04 27 45.6
baz=296,slow=75,SNR=89
H11N1 WAKE ISLAND Hy 33.97 100 T T 04 27 47.5
baz=296,slow=75,SNR=63
H11N3 WAKE ISLAND Hy 33.98 100 T T 04 27 48.5
baz=296,slow=75,SNR=77
SEY Seymchan 35.24 17 LR LR 04 06 52.1
comp=Z,105nm,20.1s,baz=152,slow=37
ZALV Zalesovo Beam 40.60 319 P **P 03 52 44.7 -2.2**
comp=Z,0.8nm,0.5s,baz=104,slow=11,SNR=5.7
comp=Z,0.8nm,0.5s
ZALV Zalesovo Beam 40.60 319 P **P 03 52 46.0 -0.9**
MKAR Makanchi Array 40.81 308 P **P 03 52 48.4 -0.5**
comp=Z,0.6nm,0.5s,baz=98,slow=9.7,SNR=7.9
comp=Z,0.6nm,0.5s
MKAR Makanchi Array 40.81 308 P **P 03 52 48.1 -0.8**
MAKZ Makanchi 41.03 308 P **P 03 52 50.8 +0.1**
KURK Kurchatov 43.67 313 P **P 03 53 11.6 -0.5**
KURK IAmb IAmb 03 53 33.8
comp=Z,5.9nm,1.2s
KURBB Kurchatov Arra 43.72 313 P **P 03 53 11.6 -0.8**
comp=Z,0.7nm,0.3s,baz=101,slow=8.4,SNR=7.1
comp=Z,0.7nm,0.3s
BVAR Borovoye Array 48.95 316 P **P 03 53 53.0 -0.5**
comp=Z,2.1nm,0.3s,baz=89,slow=9.2,SNR=17
comp=Z,2.1nm,0.3s
KKAR Karatay Array 49.19 303 P **P 03 53 55.5 0.0**
WB0 Warramunga Arr 50.03 176 P **P 03 54 01.8 -0.3**
WB0 IAmb IAmb 03 54 09.0
comp=Z,7.1nm,1.2s
WRA Warramunga Arr 50.20 176 P **P 03 54 03.0 -0.3**
comp=Z,2.6nm,0.8s,baz=350,slow=8.4,SNR=11
comp=Z,2.6nm,0.8s
WRA Warramunga Arr 50.20 176 P **P 03 54 02.4 -1.0**
ASAR Alice Springs 53.88 177 P **P 03 54 30.6 -0.1**
comp=Z,2.4nm,0.6s,baz=10,slow=13,SNR=25
comp=Z,2.4nm,0.6s
ASAR Alice Springs 53.88 177 P **P 03 54 30.8 +0.1**
L18K Granite Mounta 55.29 33 P **P 03 54 40.9 +0.4**
L18K IAmb IAmb 03 54 58.1
comp=Z,7.7nm,1.5s
AB31 Akbulak array 55.71 311 P **P 03 54 43.7 0.0**
AB31 IAmb IAmb 03 54 44.6
comp=Z,4.2nm,0.8s
ABKAR Akbulak array 55.71 311 P **P 03 54 43.8 0.0**
ARTI Arti 55.84 320 P **P 03 54 44.0 -0.6**
ILAR Eielson Array 59.51 30 P **P 03 55 10.3 +0.2**
comp=Z,0.2nm,0.7s,baz=276,slow=7.3,SNR=3.9
comp=Z,0.2nm,0.7s
ILAR Eielson Array 59.51 30 P **P 03 55 10.6 +0.4**
STKA Stephens Creek 62.78 170 P **P 03 55 33.0 +0.3**
comp=Z,4.1nm,0.7s,baz=2.5,slow=4.9,SNR=7.4
comp=Z,4.1nm,0.7s
STKA Stephens Creek 62.78 170 P **P 03 55 32.7 0.0**
INK Inuvik 64.00 24 P **P 03 55 41.0 +0.8**
comp=Z,1.3nm,0.9s,baz=318,slow=5.3,SNR=5.7
comp=Z,1.3nm,0.9s
INK Inuvik 64.00 24 P **P 03 55 40.6 +0.3**
INK IAmb IAmb 03 56 01.7
comp=Z,8.9nm,1.5s
SPITS Spitsbergen Ar 65.23 348 P **P 03 55 48.1 -0.2**
comp=Z,19nm,1.1s,baz=80,slow=9.7,SNR=15
comp=Z,19nm,1.1s
ARCES ARCESS Array B 67.03 338 P **P 03 55 59.1 -0.8**
comp=Z,3.1nm,0.8s,baz=60,slow=6.5,SNR=3.9
comp=Z,3.1nm,0.8s
ARCES ARCESS Array B 67.03 338 P **P 03 55 59.8 -0.1**
ARCES IAmb IAmb 03 56 38.2
comp=Z,21nm,1.3s
KBZ Khabaz 68.50 309 P **P 03 56 09.3 -0.2**
comp=Z,7.6nm,0.8s,baz=110,slow=2.9,SNR=15
comp=Z,7.6nm,0.8s
FINES FINESS Array B 70.46 331 P **P 03 56 20.6 -0.7**
comp=Z,5.2nm,0.5s,baz=68,slow=5.9,SNR=46
comp=Z,5.2nm,0.5s
FINES FINESS Array B 70.46 331 P **P 03 56 21.1 -0.2**
RES Resolute Bay 70.92 12 P **P 03 56 23.0 -0.9**
comp=Z,2.0nm,0.8s,baz=322,slow=6.5,SNR=9.7
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 73.62 26 P **P 03 56 41.0 +0.8**
comp=Z,0.2nm,0.5s,baz=301,slow=6.5,SNR=4.0
comp=Z,0.2nm,0.5s
YKA Yellowknife Ar 73.62 26 P **P 03 56 40.4 +0.1**
AKASG Malin Array Be 73.99 320 P **P 03 56 42.1 -0.6**
comp=Z,1.0nm,0.4s,baz=55,slow=6.2,SNR=7.7
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 73.99 320 P **P 03 56 42.2 -0.5**
AKASG IAmb IAmb 03 57 03.1
comp=Z,4.3nm,1.3s
HFS Hagfors 76.26 333 P **P 03 56 54.5 -1.1**
comp=Z,27nm,1.2s,baz=102,slow=6.8,SNR=9.9
NC405 NORSAR Array S 76.41 334 P **P 03 56 55.1 -1.4**
BRTR Keskin Array B 76.46 308 P **P 03 56 56.5 -0.8**
comp=Z,5.6nm,1.1s,baz=96,slow=5.5,SNR=19
comp=Z,5.6nm,1.1s
BRTR Keskin Array B 76.46 308 P **P 03 56 56.8 -0.5**
NC303 NORSAR Array S 76.47 334 P **P 03 56 55.7 -1.1**
NC303 IAmb IAmb 03 57 21.6
comp=Z,22nm,1.2s
NB201 NORSAR Array S 76.61 334 P **P 03 56 56.7 -0.9**
NB2 NORSAR Subarra 76.65 334 P **P 03 56 56.8 -1.0**
comp=Z,3.6nm,0.8s,baz=50,slow=5.9
NOA NORSAR Array B 76.65 334 P **P 03 56 57.1 -0.7**
comp=Z,1.3nm,0.6s,baz=50,slow=5.6,SNR=4.2
comp=Z,1.3nm,0.6s
SUMG Summit 76.99 357 P **P 03 57 00.1 +0.1**
SUMG IAmb IAmb 03 57 30.0
comp=Z,11nm,1.4s
ILON Igloolik, Nuna 77.59 11 P **P 03 57 03.0 +0.1**
ILON IAmb IAmb 03 57 23.6
comp=Z,2.9nm,1.0s
BUR08 Bucovina Ar. S 77.81 318 P **P 03 57 04.0 -0.6**
BUR08 IAmb IAmb 03 57 32.8
comp=Z,4.3nm,1.4s
BURAR Bucovina Array 77.81 318 P **P 03 57 03.5 -1.2**
RONA Rosalia, Austr 82.71 322 *ep*P P 03 57 46.9 +16
comp=Z,3.9nm,0.7s
CONA Conrad Observa 82.80 322 *eP* **P 03 57 31.9 +0.3**
comp=Z,5.7nm,1.5s
ARSA Arzberg 83.40 322 *e*PcP **P 03 57 36.2 +1.6**
comp=Z,5.3nm,1.3s
SOKA Soboth 84.02 322 *i* P **P 03 57 37.7 -0.1**
comp=Z,5.8nm,1.3s
KBA Koelnbreinsper 84.67 323 *eP* **P 03 57 39.2 -1.9**
comp=Z,3.2nm,0.8s
LESA Schwarzleotal 84.79 323 *e*PcP **P 03 57 42.7 +1.0**
comp=Z,2.8nm,0.5s
FRB Frobisher Bay 84.83 9 P **P 03 57 40.9 -0.5**
comp=Z,1.0nm,0.6s,baz=357,slow=5.9,SNR=4.5
comp=Z,1.0nm,0.6s
NVAR Mina Array Bea 85.75 48 P **P 03 57 48.2 +1.4**
comp=Z,0.5nm,0.7s,baz=312,slow=7.2,SNR=3.8
comp=Z,0.5nm,0.7s
EKA Eskdalemuir Ar 86.03 336 P **P 03 57 45.9 -1.6**
comp=Z,0.6nm,0.5s,baz=53,slow=3.7,SNR=3.9
comp=Z,0.6nm,0.5s

*NIED **18** 03:45:29.3, 30.40N×131.32E, h31km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.86; $M_{\theta\theta}$0.02; $M_{\phi\phi}$0.84; $M_{r\theta}$-2.27; $M_{\theta\phi}$0.62; $M_{\phi r}$-2.38; Fault plane solution: $M_0$3.45000×10^{15} NP1: ϕ_s186.00000°, δ10.00000°, λ-127.00000°. NP2: ϕ_s43.00000°, δ82.00000°, λ-84.00000°.*
*JMA **18** 03:45:29.3±0.1, 30.4N±0.3×131.3E±0.7, h31km, MD4.1/18, MV3.9/18, NEAR TANEGASHIMA ISLAND*
*IDC **18** 03:45:31.8±3.1, 30.47N±131.04E, h38km±26km, mb4.0/20, mbtmp4.2/24, ML3.5/4, MS3.8/2, Error ellipse: s-maj=24.3km s-min=15.1km az=68.0*
*NEIC **18** 03:45:32.0±1.2, 30.52N±0.09×131.1E±0.1, h35km±2km, mb4.7/20, Error ellipse: s-maj=18.9km s-min=15.7km az=79.0*

ISC 18 03:45:31.2±0.9, 30.47N±0.05×131.15E±0.06, h34km±2km, n65, σ0.68/66, mb4.6/28, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.23**	**253**	*eP*		**Pn**	**03 45 37.5**	**0.0**
JMTN				A		A	03 45 37.5	
	comp=N,52nm,1.6s,comp=E,28nm,0.9s							
JMTN				*eS*		**Sb**	**03 45 43.2**	**+0.2**
JTN	**Tanegashima 3**	**0.24**	**321**	*eP*		**Pn**	**03 45 37.7**	**-0.1**
JTN				A		A	03 45 37.7	
	comp=N,22nm,1.8s,comp=E,19nm,0.4s							
JTN				*eS*		**Sb**	**03 45 43.9**	**+0.7**
JYAK	**Yakushimahirau**	**0.60**	**248**	*eP*		**Pn**	**03 45 42.6**	**-0.7**
JYAK				A		A	03 45 42.6	
	comp=N,12nm,3.0s,comp=E,14nm,0.7s							
JYAK				*eS*		**Sn**	**03 45 52.5**	**+0.7**
JTSR	**Tashiro 2**	**0.73**	**344**	*eP*		**Pn**	**03 45 45.2**	**+0.1**
JTSR				A		A	03 45 45.2	
	comp=N,13nm,1.5s,comp=E,22nm,1.5s							
JTSR				*eS*		**Sn**	**03 45 56.3**	**+1.2**
JKC	**Kuchinoerabu**	**0.83**	**270**	*eS*		**Sb**	**03 45 59.7**	**+1.7**
JNAR	**Kushima--Naru**	**1.06**	**5**	A		A	03 46 03.3	
	comp=N,8.0nm,1.3s,comp=E,8.0nm,2.2s							
JNAR				*eS*		**Sn**	**03 46 03.3**	**0.0**
JSU	**Suzuyama**	**1.20**	**330**	A		A	03 45 52.3	
	comp=N,4.0nm,1.1s,comp=E,5.0nm,1.9s							
JNKG	**Nichinankitago**	**1.21**	**9**	A		A	03 45 51.1	
	comp=N,8.0nm,1.1s,comp=E,7.0nm,2.0s							
JNN	**Nakanoshima**	**1.27**	**241**	A		A	03 45 52.9	
	comp=N,11nm,1.2s,comp=E,12nm,4.0s							
JNU	**Nakatsue**	**2.66**	**355**	Pn		**Pn**	**03 46 11.9**	**+0.2**
	comp=E,20nm,0.3s,baz=315,slow=5.7,SNR=10.0							
JNU				*Sn*		**Sn**	**03 46 44.4**	**+1.6**
	comp=E,16nm,0.3s,baz=217,slow=19,SNR=5.6							
JNU				LR		LR	03 47 37.5	
	comp=E,1μm,18.6s,baz=168,slow=48							
	comp=E,174nm,0.5s							
KSRS	**Korea Array**	**7.47**	**340**	Pn		**Pn**	**03 47 17.1**	**-0.6**
	comp=E,0.5nm,0.3s,baz=166,slow=15,SNR=4.4							
	comp=E,3.1nm,0.5s							
MAJO	**Matsushiro**	**8.45**	**42**	Pn		**Pn**	**03 47 31.4**	**+0.2**
MJAR	**Matsushiro Arr**	**8.45**	**42**	Pn		**Pn**	**03 47 31.8**	**+0.6**
	comp=E,0.2nm,0.3s,baz=246,slow=13,SNR=5.4							
	comp=E,2.9nm,0.5s							
MJAR	**Matsushiro Arr**	**8.45**	**42**			**Pn**	**03 47 31.3**	**+0.1**
USRK	**Ussuriysk Ar.**	**13.73**	**3**	Pn		**Pn**	**03 48 44.1**	**+0.8**
	comp=E,0.2nm,0.3s,baz=166,slow=15,SNR=4.0							
	comp=E,3.2nm,0.8s							
HILR	**Hailar Array B**	**20.93**	**339**	P		**P**	**03 50 10.4**	**-0.4**
	comp=E,1.7nm,0.4s,baz=140,slow=13,SNR=2.0							
	comp=E,1.7nm,0.4s							
SONM	**Songino Array**	**25.70**	**319**	P		**P**	**03 50 57.7**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=142,slow=11,SNR=4.2							
	comp=E,0.9nm,0.5s							
SONM	**Songino Array**	**25.70**	**319**	P		**P**	**03 50 57.5**	**-0.8**
SOEI	**Soe**	**40.53**	**190**	P		**P**	**03 53 09.1**	**+1.7**
ZALV	**Zalesovo Beam**	**40.60**	**319**	P		**P**	**03 53 07.3**	**-0.1**
	comp=E,0.8nm,0.3s,baz=118,slow=8.8,SNR=4.4							
	comp=E,0.8nm,0.3s							
ZALV	**Zalesovo Beam**	**40.60**	**319**	P		**P**	**03 53 07.6**	**+0.2**
MKAR	**Makanchi Array**	**40.82**	**308**	P		**P**	**03 53 09.2**	**-0.2**
	comp=E,0.6nm,0.5s,baz=99,slow=7.7,SNR=5.3							
	comp=E,0.6nm,0.5s							
MKAR	**Makanchi Array**	**40.82**	**308**	P		**P**	**03 53 09.5**	**+0.1**
TIXI	**Tiksi**	**41.26**	**359**	LR		LR	04 11 11.6	
	comp=E,154nm,18.1s,baz=198,slow=37							
KURK	**Kurchatov**	**43.67**	**313**	P		**P**	**03 53 31.8**	**-0.7**
KURBB	**Kurchatov Arra**	**43.72**	**313**	P		**P**	**03 53 32.5**	**-0.4**
	comp=E,0.8nm,0.3s,baz=100,slow=8.9,SNR=4.6							
	comp=E,0.8nm,0.3s							
KSH2	**Kashi**	**45.84**	**297**	P		**P**	**03 53 50.6**	**+0.4**
KSH2				pmax		pmax		
	comp=Z,5.0nm,0.8s							
BVAR	**Borovoye Array**	**48.95**	**316**	P		**P**	**03 54 13.5**	**-0.5**
	comp=Z,2.6nm,0.3s,baz=87,slow=8.6,SNR=12							
	comp=Z,2.6nm,0.3s							
KK31	**Karatay Array**	**49.19**	**303**			**P**	**03 54 16.0**	**-0.1**
KK31				IAmb		IAmb	03 54 16.6	
	comp=Z,4.4nm,0.6s							
KKAR	**Karatay Array**	**49.19**	**303**			**P**	**03 54 15.8**	**-0.3**
WB0	**Warramunga Arr**	**50.04**	**176**	P		**P**	**03 54 22.1**	**-0.4**
WB0				IAmb		IAmb	03 54 25.1	
	comp=Z,8.0nm,1.4s							
WRA	**Warramunga Arr**	**50.21**	**176**	P		**P**	**03 54 23.4**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=354,slow=8.0,SNR=5.2							
	comp=Z,1.8nm,0.8s							
WRA	**Warramunga Arr**	**50.21**	**176**	P		**P**	**03 54 23.2**	**-0.6**
CHGR	**Chuyangaron**	**50.86**	**297**			**P**	**03 54 28.7**	**-0.2**
ASAR	**Alice Springs**	**53.89**	**177**	P		**P**	**03 54 51.7**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=10,slow=14,SNR=6.6							
	comp=Z,1.5nm,0.7s							
ASAR	**Alice Springs**	**53.89**	**177**	P		**P**	**03 54 51.8**	**+0.6**
AB31	**Akbulak array**	**55.72**	**311**	P		**P**	**03 55 04.5**	**+0.3**
AB31				IAmb		IAmb	03 55 14.4	
	comp=Z,2.8nm,0.7s							
ABKAR	**Akbulak array**	**55.72**	**311**	P		**P**	**03 55 04.5**	**+0.3**
ARTI	**Arti**	**55.84**	**320**	P		**P**	**03 55 04.3**	**-0.7**
ARTI				IAmb		IAmb	03 55 05.7	
	comp=Z,12nm,0.5s							
D22K	**Ayikyak River**	**56.97**	**25**	P		**P**	**03 55 13.5**	**+0.6**
D22K				IAmb		IAmb	03 55 15.9	
	comp=Z,6.7nm,1.1s							
P19K	**Oil Pt**	**57.08**	**36**	P		**P**	**03 55 14.0**	**+0.2**
COLD	**Coldfoot**	**57.94**	**27**	P		**P**	**03 55 19.9**	**+0.2**
ILAR	**Eielson Array**	**59.50**	**30**	P		**P**	**03 55 31.4**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=282,slow=6.7,SNR=5.3							
	comp=Z,0.7nm,0.8s							
C27K	**Jago River**	**60.12**	**24**	P		**P**	**03 55 35.6**	**+0.8**
C27K				IAmb		IAmb	03 55 38.0	
	comp=Z,4.8nm,0.8s							
STKA	**Stephens Creek**	**62.79**	**170**	P		**P**	**03 55 53.3**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=322,slow=2.1,SNR=3.7							
	comp=Z,3.1nm,0.7s							
STKA	**Stephens Creek**	**62.79**	**170**	P		**P**	**03 55 53.1**	**-0.1**
SPITS	**Spitsbergen Ar**	**65.23**	**348**	P		**P**	**03 56 08.8**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=79,slow=8.7,SNR=7.9							
	comp=Z,3.0nm,0.5s							
KBZ	**Khabaz**	**68.50**	**309**	P		**P**	**03 56 30.2**	**+0.2**
	comp=Z,9.1nm,0.8s,baz=347,slow=1.9,SNR=9.3							
	comp=Z,9.1nm,0.8s							
KIV	**Kislovodsk**	**68.56**	**309**			**P**	**03 56 30.8**	**+0.2**
KIV				IAmb		IAmb	03 56 32.4	
	comp=Z,17nm,0.8s							
FINES	**FINESS Array B**	**70.46**	**331**	P		**P**	**03 56 41.2**	**-0.6**
	comp=Z,5.3nm,0.4s,baz=55,slow=5.5,SNR=16							
	comp=Z,5.3nm,0.4s							
FINES	**FINESS Array B**	**70.46**	**331**	P		**P**	**03 56 41.4**	**-0.4**
RES	**Resolute Bay**	**70.91**	**12**	P		**P**	**03 56 44.6**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=339,slow=6.4,SNR=6.6							
	comp=Z,2.8nm,0.8s							
RES	**Resolute Bay**	**70.91**	**12**			**P**	**03 56 44.7**	**+0.4**
RES				IAmb		IAmb	03 56 45.1	
	comp=Z,4.3nm,0.9s							
GURO	**Guroymak-BITLI**	**71.13**	**304**			**P**	**03 56 46.8**	**+0.3**
GURO				IAmb		IAmb	03 56 48.2	
	comp=Z,7.3nm,1.0s							
AKASG	**Malin Array Be**	**73.99**	**320**	P		**P**	**03 57 02.5**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=60,slow=6.3,SNR=5.7							
	comp=Z,1.5nm,0.4s							
AKASG	**Malin Array Be**	**73.99**	**320**	P		**P**	**03 57 02.1**	**-1.0**
HFS	**Hagfors**	**76.26**	**333**	P		**P**	**03 57 15.8**	**-0.3**
	comp=Z,7.1nm,1.1s,baz=90,slow=7.4,SNR=5.6							
	comp=Z,7.1nm,1.1s							
BR131	**Keskin Array S**	**76.47**	**308**			**P**	**03 57 17.6**	**-0.3**
BR131				IAmb		IAmb	03 57 18.9	
	comp=Z,7.4nm,0.9s							
BRTR	**Keskin Array B**	**76.47**	**308**	P		**P**	**03 57 17.5**	**-0.3**
	comp=Z,4.3nm,0.9s,baz=102,slow=5.2,SNR=8.3							
	comp=Z,4.3nm,0.9s							
BRTR	**Keskin Array B**	**76.47**	**308**			**P**	**03 57 17.3**	**-0.5**
NOA	**NORSAR Array B**	**76.65**	**334**	P		**P**	**03 57 17.1**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=49,slow=5.6,SNR=4.1							
	comp=Z,0.8nm,0.5s							
EKA	**Eskdalemuir Ar**	**86.02**	**336**	P		**P**	**03 58 06.2**	**-1.8**
	comp=Z,4.9nm,1.0s,baz=53,slow=4.7,SNR=3.9							
	comp=Z,4.9nm,1.0s							
PDAR	**Pinedale Array**	**88.27**	**40**	P		**P**	**03 58 20.5**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=303,slow=4.6,SNR=3.2							
	comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**88.27**	**40**	P		**P**	**03 58 19.8**	**+0.4**
PV12	**Saucer Basin,**	**91.64**	**43**	P		**P**	**03 58 34.3**	**-1.0**

*VAO **18** 04:29:26.0±2.8, 21.41S×71.20W, h307km, mb3.9, Presumed earthquake*

*NEIC **18** 04:29:44.3±1.7, 20.90S±0.06×68.01W±0.07, h151km±8km, mb4.2/7, Error ellipse: s-maj=9.6km s-min=8.3km az=102.0*
*SJA **18** 04:29:44.5±1.8, 20.92S×68.12W, h150km, ML3.7, MW3.6*
*SCB **18** 04:29:45.4±1.2, 20.94S×68.16W, h145km±12km, ML3.8/4, Error ellipse: s-maj=3.9km s-min=3.4km az=358.0*
*GUC **18** 04:29:45.9±0.7, 20.89S×68.27W, h166km±6km, ML3.5*
*IDC **18** 04:29:47.1±3.5, 20.72S×67.75W, h164km±25km, mb3.7/1, mbtmp4.0/5, Error ellipse: s-maj=40.3km s-min=22.2km az=47.0*

ISC 18 04:29:44.4±0.7, 20.92S±0.03×68.17W±0.04, h165km±7km, n96, σ1.41/132, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.20**	**310**			**Pn**	**04 30 13.1**	**+0.3**
PB08				Sn		**Sn**	**04 30 34.2**	**-0.3**
PB08	**IPOC Station P**	**1.20**	**310**	*eP*		**Pn**	**04 30 13.1**	**+0.3**
PB08				*i* S		**Sn**	**04 30 34.2**	**-0.3**
PB08				IAML			04 30 35.3	
	comp=E,490nm,0.6s							
PB08	**IPOC Station P**	**1.20**	**310**	*eP*		**Pn**	**04 30 13.0**	**+0.3**
PB08				*eS*		**Sn**	**04 30 35.5**	**+1.0**
PB08	**IPOC Station P**	**1.20**	**310**	Pg		**Pn**	**04 30 13.1**	**+0.3**
PB01	**IPOC Station P**	**1.23**	**264**			**Pn**	**04 30 12.9**	**+0.2**
PB01				Sn		**Sn**	**04 30 34.4**	**0.0**
PB01	**IPOC Station P**	**1.23**	**264**	*eP*		**Pn**	**04 30 12.6**	**-0.1**
PB01				*i* S		**Sn**	**04 30 33.4**	**-1.1**
PB01	**IPOC Station P**	**1.23**	**264**	*eP*		**Pn**	**04 30 12.6**	**-0.1**
PB01				*eS*		**Sn**	**04 30 34.2**	**-0.2**
PB01				IAML			04 30 35.0	
	comp=Z,2μm,0.2s							
PB01	**IPOC Station P**	**1.23**	**264**	Pg		**Pn**	**04 30 12.7**	**0.0**
PB01				Sg		**Sn**	**04 30 33.3**	**-1.1**
PB01				IAML			04 30 37.0	
	comp=Z,494nm,0.3s							
PB09	**IPOC Station P**	**1.32**	**228**			**Pn**	**04 30 14.4**	**+0.8**
PB09	**IPOC Station P**	**1.32**	**228**	*eP*		**Pn**	**04 30 14.5**	**+0.8**
PB09				*i* S		**Sn**	**04 30 36.6**	**+0.4**
PB09				IAML			04 30 38.6	
	comp=N,448nm,0.2s							
PB09	**IPOC Station P**	**1.32**	**228**	*eP*		**Pn**	**04 30 13.9**	**+0.3**
PB09				*eS*		**Sn**	**04 30 36.9**	**+0.7**
PB09				IAML			04 30 37.9	
	comp=Z,566nm,0.7s							
PB09	**IPOC Station P**	**1.32**	**228**	Pg		**Pn**	**04 30 14.5**	**+0.8**
GO01	**Chusmiza**	**1.57**	**322**			**Pn**	**04 30 16.5**	**+0.2**
GO01	**Chusmiza**	**1.57**	**322**	*eP*		**Pn**	**04 30 16.6**	**+0.2**
GO01				*eS*		**Sn**	**04 30 45.8**	**+4.8**
GO01	**Chusmiza**	**1.57**	**322**	Pg		**Pn**	**04 30 16.5**	**+0.2**
PB02	**IPOC Station P**	**1.66**	**256**			**Pn**	**04 30 17.1**	**+0.3**
PB02	**IPOC Station P**	**1.66**	**256**	*eP*		**Pn**	**04 30 17.0**	**+0.1**
PB02				*i* S		**Sn**	**04 30 40.8**	**-1.1**
PB02	**IPOC Station P**	**1.66**	**256**	*eP*		**Pn**	**04 30 16.6**	**-0.2**
PB02				*eS*		**Sn**	**04 30 41.3**	**-0.6**
PB02	**IPOC Station P**	**1.66**	**256**	Pg		**Pn**	**04 30 17.2**	**+0.3**
PB02				Sg		**Sn**	**04 30 41.3**	**-0.6**
PB02				IAML			04 30 42.0	
	comp=Z,2μm,0.3s							
PB07	**IPOC Station P**	**1.79**	**243**			**Pn**	**04 30 18.8**	**+0.5**
PB07	**IPOC Station P**	**1.79**	**243**	*eP*		**Pn**	**04 30 18.6**	**+0.2**
PB07				*i* S		**Sn**	**04 30 41.4**	**-1.1**
PB07	**IPOC Station P**	**1.79**	**243**	*eP*		**Pn**	**04 30 18.5**	**+0.2**
PB07				*eS*		**Sn**	**04 30 44.1**	**-0.4**
PB07				IAML			04 30 45.9	
	comp=Z,844nm,0.3s							
PB11	**IPOC Station P**	**1.80**	**309**			**Pn**	**04 30 18.3**	**-0.2**
PB11	**IPOC Station P**	**1.80**	**309**	*eP*		**Pn**	**04 30 18.4**	**-0.2**
PB11				*i* S		**Sn**	**04 30 43.4**	**-1.4**
PB11	**IPOC Station P**	**1.80**	**309**	*eP*		**Pn**	**04 30 18.3**	**-0.2**
PB11				*eS*		**Sn**	**04 30 44.8**	**0.0**
PB11				IAML			04 30 46.9	
	comp=Z,229nm,0.2s							
PB11	**IPOC Station P**	**1.80**	**309**	Pg		**Pn**	**04 30 18.4**	**-0.2**
PB11				Sg		**Sn**	**04 30 44.6**	**-0.2**
PB11				IAML			04 30 45.4	
	comp=Z,412nm,0.4s							
PB03	**IPOC Station P**	**1.85**	**232**			**Pn**	**04 30 19.1**	**+0.2**
PB03	**IPOC Station P**	**1.85**	**232**	*eP*		**Pn**	**04 30 19.4**	**+0.4**
PB03				*i* S		**Sn**	**04 30 44.9**	**-0.8**
PB03	**IPOC Station P**	**1.85**	**232**	*eP*		**Pn**	**04 30 19.2**	**+0.2**
PB03				*eS*		Sn	04 30 35.5	-10
PB03				IAML			04 30 46.4	
	comp=Z,1μm,0.2s							
TA02	**Huaiquique**	**1.94**	**289**	*eP*		**Pn**	**04 30 19.8**	**0.0**
TA02				*i* S		**Sn**	**04 30 45.5**	**-1.6**
TA02	**Huaiquique**	**1.94**	**289**	*eP*		**Pn**	**04 30 19.5**	**-0.4**
TA02				*eS*		**Sn**	**04 30 46.2**	**-1.0**
TA02				IAML			04 30 47.5	
	comp=Z,344nm,0.1s							
AF01	**San Pedro de A**	**2.02**	**180**	Pn		**Pn**	**04 30 22.8**	**+1.8**
PB06	**IPOC Station P**	**2.20**	**216**			**Pn**	**04 30 23.6**	**+0.7**
PB06	**IPOC Station P**	**2.20**	**216**	*eP*		**Pn**	**04 30 23.6**	**+0.7**
PB06				*i* S		**Sn**	**04 30 52.5**	**-0.3**
PB06	**IPOC Station P**	**2.20**	**216**	*eP*		**Pn**	**04 30 23.0**	**0.0**
PB06				*eS*		**Sn**	**04 30 52.8**	**0.0**
PB06				IAML			04 30 53.2	
	comp=Z,315nm,0.3s							
PB06	**IPOC Station P**	**2.20**	**216**	Pg		**Pn**	**04 30 23.6**	**+0.7**
SOEO	**Opoqueri**	**2.36**	**7**	Pg		**Pn**	**04 30 26.0**	**+0.9**
MOCB	**Mochara**	**2.39**	**98**	Pg		**Pn**	**04 30 26.1**	**+0.7**
MOCB				Sg		**Sn**	**04 30 57.1**	**0.0**
MOCB				IAML			04 30 57.4	
	comp=Z,301nm,0.7s							
PB05	**IPOC Station P**	**2.69**	**224**			**Pn**	**04 30 28.9**	**+0.2**
PB05	**IPOC Station P**	**2.69**	**224**	*eP*

GO02	**Mina Guanaco**	**4.42**	**197**	*eP*		**Pn**	**04 30 47.4**	**-3.5**
GO02				*eS*		**Sn**	**04 31 40.8**	**-1.9**
GO02				IAML			04 31 46.4	
	comp=Z,75nm,0.3s							
LPAZ	**La Paz**	**4.61**	**1**	P		**Pn**	**04 30 54.3**	**+0.7**
	comp=Z,8.1nm,0.4s,baz=167,slow=6.6,SNR=58							
LPAZ				S		**Sn**	**04 31 46.2**	**-1.2**
	comp=Z,3.8nm,0.7s,baz=97,slow=17,SNR=1.6							
LPAZ	**La Paz**	**4.61**	**1**	*eP*		**Pn**	**04 30 55.0**	**+1.4**
LPAZ	**La Paz**	**4.61**	**1**	*eP*		**Pn**	**04 30 54.4**	**+0.7**
LPAZ	**La Paz**	**4.61**	**1**	Pg		**Pn**	**04 30 54.3**	**+0.7**
BBOB	**La Paz, Bander**	**4.75**	**0**	Pg		**Pn**	**04 30 56.4**	**+1.0**
SIV	**San Ignacio**	**8.33**	**55**	P		**Pn**	**04 31 38.8**	**-3.4**
	comp=Z,5.3nm,0.4s,baz=243,slow=8.3,SNR=40							
SIV				S		**Sn**	**04 33 07.8**	**-7.5**
	comp=Z,1.1nm,0.6s,baz=173,slow=16,SNR=3.7							
PTLB	**Pontes e Lacer**	**10.16**	**59**			**Pn**	**04 32 04.8**	**-1.6**
CPUP	**Villa Florida**	**11.31**	**121**	P		**Pn**	**04 32 20.5**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=301,slow=12,SNR=10							
CPUP	**Villa Florida**	**11.31**	**121**			**Pn**	**04 32 19.1**	**-2.1**
AMBA	**Amambai (Brazi**	**12.40**	**102**	*eP*		**P**	**04 32 42.2**	**+1.5**
MT02	**Curacav**	**12.57**	**191**	Pn		**Pn**	**04 32 36.9**	**-0.7**
PSAL	**Palomas, Salto**	**13.87**	**139**	*eP*		Pn	04 32 47.5	-6.6
PTGB	**Pitanga**	**15.33**	**107**	*eP*		**P**	**04 33 15.7**	**+2.4**
ITAB	**Concordia**	**15.94**	**116**			**Pn**	**04 33 18.4**	**-1.3**
ITAB				IAmb		IAmb	04 33 22.0	
	comp=Z,23nm,1.2s							
ITAB	**Concordia**	**15.94**	**116**	*eP*		**P**	**04 33 20.2**	**+0.2**
LDASE	**Londrina, Braz**	**15.99**	**102**	*eP*		**P**	**04 33 22.6**	**+1.9**
FRTB	**Fartura**	**17.41**	**101**	*eP*		**Pn**	**04 33 37.3**	**-0.2**
TRQA	**Tornquist**	**17.90**	**164**	P		**Pn**	**04 33 42.3**	**-0.9**
TRQA				IAmb		IAmb	04 34 07.9	
	comp=Z,11nm,1.4s							
BB19B	**Bebedouro**	**18.35**	**94**	*eP*		**Pn**	**04 33 48.9**	**+0.3**
SNDB	**Serra Nova Dou**	**18.46**	**64**	*eP*		**P**	**04 33 47.4**	**-0.4**
VAO	**Valinhos**	**19.78**	**100**	P		**P**	**04 34 01.3**	**-0.8**
VAO				IAmb		IAmb	04 34 35.6	
	comp=Z,12nm,1.3s							
VAO	**Valinhos**	**19.78**	**100**	*eP*		**P**	**04 34 00.1**	**-2.0**
BDFB	**Brasilia**	**19.84**	**78**	P		**P**	**04 34 01.8**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=242,slow=17,SNR=4.9							
BDFB	**Brasilia**	**19.84**	**78**	P		**P**	**04 34 00.5**	**-2.3**
SNAA	**Sanae**	**62.60**	**161**	P		**P**	**04 39 52.2**	**+1.5**
SNAA				IAmb		IAmb	04 40 33.1	
	comp=Z,5.8nm,1.0s							
ECSD	**EROS Data Cent**	**69.43**	**338**	P		**P**	**04 40 36.1**	**+1.7**
ECSD				IAmb		IAmb	04 41 01.4	
	comp=Z,5.5nm,1.5s							
TORD	**Torodi Ar. Bea**	**76.51**	**70**	P		**P**	**04 41 16.9**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=245,slow=8.3,SNR=12							
	comp=Z,1.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.51**	**70**	P		**P**	**04 41 17.4**	**+0.7**

*MDD **18** 04:33:09.1±0.7,36.58N×11.28W,h33km±19km, Mb4.1/13, M_mb3.5/11, Error ellipse: s-maj=10.1km s-min=4.5km az=82.0*

*INMG **18** 04:33:10.5±1.0,36.59N×11.26W,h38km, ML2.2, Error ellipse: s-maj=4.0km s-min=2.3km az=92.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

*IGIL **18** 04:33:10.0,36.61N×11.23W,h25km, ML1.9*

ISC 18 04:33:07.5±2.1, 36.57N±0.05×11.2W±0.1, h35km, n57, σ1s70/107, 12C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.01**	**73**	Pn		**Pn**	**04 33 40.7**	**+1.7**
PFVI				Sn		**Sn**	**04 34 02.7**	**-0.2**
PFVI	**Vila Bisbo**	**2.01**	**73**	*eP*		**Pn**	**04 33 40.7**	**+1.7**
PFVI				*eS*		**Sn**	**04 34 03.1**	**+0.2**
PFVI				*i* IAML			04 34 06.3	
PFVI				*i* IAML			04 34 09.5	
PFVI				*i* IAML			04 34 10.2	
MORF	**Marmelete**	**2.19**	**70**	*eP*		**Pn**	**04 33 43.4**	**+1.8**
MORF				*eS*		**Sn**	**04 34 07.5**	**0.0**
MORF				IAML			04 34 09.8	
	comp=E,11nm,0.2s							
MORF	**Marmelete**	**2.19**	**70**	*eP*		**Pn**	**04 33 43.4**	**+1.8**
MORF				*eS*		**Sn**	**04 34 08.3**	**+0.8**
MORF				*i* IAML			04 34 13.1	
MORF				*i* IAML			04 34 13.3	
MORF				*i* IAML			04 34 14.8	
PTEO	**Sao Teotonio**	**2.23**	**63**	*eP*		**Pn**	**04 33 44.0**	**+1.9**
PTEO				*eS*		**Sn**	**04 34 09.1**	**+0.8**
PTEO				*i* IAML			04 34 11.5	
PTEO				*i* IAML			04 34 12.8	
PTEO				*i* IAML			04 34 13.0	
MESJ	**Messejana**	**2.72**	**61**	*eP*		**Pn**	**04 33 50.4**	**+1.6**
MESJ				*eS*		**Sn**	**04 34 19.8**	**-0.6**
MESJ				IAML			04 34 21.6	
	comp=N,3.7nm,0.3s							
MESJ	**Messejana**	**2.72**	**61**	*eP*		**Pn**	**04 33 50.6**	**+1.9**
MESJ				*eS*		**Sn**	**04 34 20.3**	**-0.1**
MESJ				*i* IAML			04 34 21.7	
MESJ				*i* IAML			04 34 26.1	
MESJ				*i* IAML			04 34 28.1	
PBDV	**Barranco-do-Ve**	**2.73**	**75**	Pn		**Pn**	**04 33 50.8**	**+1.9**
PBDV				Sn		**Sn**	**04 34 20.1**	**-0.6**
PBDV	**Barranco-do-Ve**	**2.73**	**75**	*eP*		**Pn**	**04 33 51.1**	**+2.2**
PBDV				*eS*		**Sn**	**04 34 21.0**	**+0.2**
PBDV				*i* IAML			04 34 27.7	
PBDV				*i* IAML			04 34 27.8	
PBDV				*i* IAML			04 34 28.1	
PCVE	**Castro Verde**	**2.77**	**67**	Pn		**Pn**	**04 33 51.2**	**+1.8**
PCVE				Sn		**Sn**	**04 34 20.8**	**-0.7**
PCVE	**Castro Verde**	**2.77**	**67**	*eP*		**Pn**	**04 33 51.3**	**+1.9**
PCVE				*eS*		**Sn**	**04 34 21.6**	**+0.1**
PCVE				*i* IAML			04 34 26.1	
PCVE				*i* IAML			04 34 26.5	
PCVE				*i* IAML			04 34 27.6	
PMAFR	**Mafra**	**2.84**	**32**	Pn		**Pn**	**04 33 51.5**	**+1.2**
PMAFR	**Mafra**	**2.84**	**32**	*eP*		**Pn**	**04 33 51.6**	**+1.2**
PMAFR				*eS*		**Sn**	**04 34 23.2**	**-0.2**
PMAFR				*i* IAML			04 34 23.9	
PMAFR				*i* IAML			04 34 24.4	
PVAQ	**Vaqueiros**	**2.94**	**72**	*eP*		**Pn**	**04 33 53.8**	**+2.1**
PVAQ				*eS*		**Sn**	**04 34 25.8**	**0.0**
PVAQ				*i* IAML			04 34 27.0	
PVAQ				*i* IAML			04 34 28.1	
PVAQ				*i* IAML			04 34 29.5	
MOE	**Montemor**	**3.01**	**49**	*eP*		**Pn**	**04 33 54.2**	**+1.4**
MOE				*eS*		**Sn**	**04 34 27.1**	**-0.5**
MOE				*i* IAML			04 34 29.2	
MOE				*i* IAML			04 34 29.2	
MOE				*i* IAML			04 34 29.3	
PBEJ	**Beja**	**3.05**	**61**	*eP*		**Pn**	**04 33 55.2**	**+1.9**
PBEJ				*eS*		**Sn**	**04 34 28.7**	**0.0**
EGRO	**El Granado**	**3.15**	**71**	Pn		**Pn**	**04 33 56.6**	**+2.0**
EGRO				Sn		**Sn**	**04 34 30.4**	**-0.7**
EGRO	**El Granado**	**3.15**	**71**	P		**Pn**	**04 33 56.3**	**+1.6**
EGRO				⇑*i*Vmb_VC			04 33 58.2	
	comp=N,210nm,SNR=1.3							
EGRO				S		**Sn**	**04 34 30.5**	**-0.5**
EVO	**Evora**	**3.22**	**52**	Pn		**Pn**	**04 33 57.5**	**+1.9**
EVO				Sn		**Sn**	**04 34 32.1**	**-0.8**
EVO	**Evora**	**3.22**	**52**	*eP*		**Pn**	**04 33 57.6**	**+1.9**
EVO				*eS*		**Sn**	**04 34 32.9**	**0.0**
EVO				*i* IAML			04 34 35.3	
EVO				*i* IAML			04 34 35.5	
EVO				*i* IAML			04 34 36.5	
PARRA	**Arraiolos**	**3.38**	**48**	*eP*		**Pn**	**04 33 59.1**	**+1.3**
PARRA				*eS*		**Sn**	**04 34 36.8**	**0.0**
PARRA				*i* IAML			04 34 39.1	
PARRA				*i* IAML			04 34 39.9	
PARRA				*i* IAML			04 34 42.6	
PMTG	**Montargil**	**3.45**	**43**	*eP*		**Pn**	**04 33 59.7**	**+1.0**
PMTG				*eS*		**Sn**	**04 34 37.9**	**-0.5**
PMTG				*i* IAML			04 34 40.6	
PMTG				*i* IAML			04 34 41.1	
PMTG				*i* IAML			04 34 41.1	
PSBE	**So Bento**	**3.51**	**32**	*eS*		**Sn**	**04 34 40.4**	**+0.3**
PESTR	**Estremoz**	**3.69**	**50**	Sn		**Sn**	**04 34 43.8**	**-0.5**
PESTR	**Estremoz**	**3.69**	**50**	*eP*		**Pn**	**04 34 04.4**	**+2.3**
PESTR				*eS*		**Sn**	**04 34 44.1**	**-0.3**
PESTR				*i* IAML			04 34 47.1	
PBAR	**Barrancos**	**3.71**	**63**	Pn		**Pn**	**04 34 03.8**	**+1.5**
PBAR				Sn		**Sn**	**04 34 43.5**	**-1.2**
PBAR	**Barrancos**	**3.71**	**63**	*eP*		**Pn**	**04 34 04.4**	**+2.1**
PBAR				*eS*		**Sn**	**04 34 44.0**	**-0.7**
PBAR				*i* IAML			04 34 45.4	
PBAR				*i* IAML			04 34 46.1	
PBAR				*i* IAML			04 34 46.6	
EMIN	**Mina Concepcio**	**3.83**	**70**	Pn		**Pn**	**04 34 05.8**	**+1.7**
EMIN				Sn		**Sn**	**04 34 46.7**	**-1.2**
EMIN	**Mina Concepcio**	**3.83**	**70**	P		**Pn**	**04 34 05.7**	**+1.7**
EMIN				⇑*i*Vmb_VC			04 34 06.3	
	comp=N,116nm,SNR=1.0							
EMIN				S		**Sn**	**04 34 47.0**	**-1.0**
PSARD	**Sardoal**	**3.88**	**38**	*eP*		**Pn**	**04 34 06.4**	**+1.8**
PSARD				*eS*		**Sn**	**04 34 48.2**	**-0.7**
PSARD				*i* IAML			04 34 49.9	
PSARD				*i* IAML			04 34 50.7	
PSARD				*i* IAML			04 34 51.4	
EBAD	**Badajoz**	**4.00**	**56**	Pn		**Pn**	**04 34 07.8**	**+1.5**
EBAD				Sn		**Sn**	**04 34 50.8**	**-1.1**
EBAD	**Badajoz**	**4.00**	**56**	P		**Pn**	**04 34 07.6**	**+1.3**
EBAD				⇑*i*Vmb_VC			04 34 08.3	
	comp=N,139nm,SNR=1.0							
EBAD				S		**Sn**	**04 34 50.5**	**-1.4**
PCAS	**Casmilo, Conde**	**4.09**	**31**	*eP*		**Pn**	**04 34 09.0**	**+1.5**
PCAS				*eS*		**Sn**	**04 34 52.4**	**-1.8**
PCAS				*i* IAML			04 34 56.6	
PCAS				*i* IAML			04 34 57.9	
PCAS				*i* IAML			04 35 02.3	
PMRV	**Marv??o**	**4.17**	**46**	*eP*		**Pn**	**04 34 09.5**	**+0.9**
PMRV				*eS*		**Sn**	**04 34 54.4**	**-1.7**
PMRV				*i* IAML			04 34 56.3	
PMRV				*i* IAML			04 34 56.4	
PMRV				*i* IAML			04 34 59.2	
ESPR	**Espera**	**4.33**	**84**	Pn		**Pn**	**04 34 13.1**	**+2.2**
ESPR				Sn		**Sn**	**04 34 59.7**	**-0.5**
ESPR	**Espera**	**4.33**	**84**	P		**Pn**	**04 34 12.6**	**+1.7**
ESPR				⇑*i*Vmb_VC			04 34 13.9	
	comp=N,152nm,SNR=1.2							
ESPR				S		**Sn**	**04 34 58.8**	**-1.4**
PCBR	**Castelo Branco**	**4.41**	**41**	*eP*		**Pn**	**04 34 13.3**	**+1.4**
PCBR				*eS*		**Sn**	**04 35 01.1**	**-0.8**
PCBR				*i* IAML			04 35 03.3	
AVE	**Averroes**	**4.53**	**135**	Pn		**Pn**	**04 34 15.6**	**+2.0**
MTE	**Manteigas**	**4.80**	**36**	*eP*		**Pn**	**04 34 18.9**	**+1.6**
MTE				*eS*		**Sn**	**04 35 09.9**	**-1.8**
MTE				*i* IAML			04 35 12.0	
MTE				*i* IAML			04 35 13.2	
E1302	**La Puebla de C**	**4.84**	**82**	P		**Pn**	**04 34 19.1**	**+1.2**
E1302				⇑*i*Vmb_VC			04 34 21.1	
	comp=N,152nm,SNR=1.1							
E1302				S		**Sn**	**04 35 11.5**	**-1.2**
ECAB	**El Cabril**	**4.87**	**70**	Pn		**Pn**	**04 34 20.0**	**+1.6**
ECAB				Sn		**Sn**	**04 35 10.9**	**-2.7**
ECAB	**El Cabril**	**4.87**	**70**	P		**Pn**	**04 34 19.1**	**+0.7**
ECAB				⇑*i*Vmb_VC			04 34 20.8	
	comp=N,122nm,SNR=1.3							
ECAB				S		**Sn**	**04 35 11.0**	**-2.5**
PVIS	**Viseu**	**4.90**	**31**	*eP*		**Pn**	**04 34 19.6**	**+0.9**
PVIS				*eS*		**Sn**	**04 35 12.0**	**-2.2**
EPLA	**Plasencia**	**5.35**	**48**	P		**Pn**	**04 34 26.0**	**+1.1**
EPLA				⇑*i*Vmb_VC			04 34 27.9	
	comp=N,115nm,SNR=0.6							
EPLA				S		**Sn**	**04 35 23.1**	**-2.1**
POLO	**Lamas de Olo**	**5.50**	**28**	*eS*		**Sn**	**04 35 26.9**	**-2.0**
POLO				*i* IAML			04 35 28.1	
POLO				*i* IAML			04 35 28.4	
POLO				*i* IAML			04 35 28.4	
CIBOR	**Castaar de Ib**	**5.51**	**55**	P		**Pn**	**04 34 27.8**	**+0.7**
CIBOR				S		**Sn**	**04 35 26.9**	**-2.3**
EADA	**Adamuz**	**5.54**	**71**	Pn		**Pn**	**04 34 29.4**	**+1.9**
EADA				Sn		**Sn**	**04 35 28.1**	**-1.8**
EADA	**Adamuz**	**5.54**	**71**	P		**Pn**	**04 34 28.7**	**+1.2**
EADA				⇑*i*Vmb_VC			04 34 30.8	
	comp=N,119nm,SNR=0.9							
EADA				S		**Sn**	**04 35 27.7**	**-2.3**
MVO	**Moncorvo**	**5.64**	**34**	*eP*		**Pn**	**04 34 30.1**	**+1.1**
MVO				*eS*		**Sn**	**04 35 29.6**	**-2.9**
MVO				*i* IAML			04 35 32.0	
MVO				*i* IAML			04 35 32.5	
MVO				*i* IAML			04 35 32.7	
ELOB	**Lobios**	**5.84**	**24**	P		**Pn**	**04 34 32.5**	**+0.9**
ELOB				⇑*i*Vmb_VC			04 34 33.5	
	comp=N,278nm,SNR=0.9							
ELOB				S		**Sn**	**04 35 33.8**	**-3.5**
PGAV	**Gavieira, Arco**	**5.86**	**22**	*eS*		**Sn**	**04 35 35.0**	**-3.0**
PGAV				*i* IAML			04 35 36.1	
PGAV				*i* IAML			04 35 39.3	
PGAV				*i* IAML			04 35 39.6	
IFR	**Ifrane**	**5.86**	**120**	Pn		**Pn**	**04 34 33.2**	**+1.1**
IFR				Sn		**Sn**	**04 35 34.1**	**-4.1**
PAB	**San Pablo**	**6.19**	**59**	P		**Pn**	**04 34 37.8**	**+1.3**
PAB				⇑*i*Vmb_VC			04 34 41.7	
	comp=N,116nm,SNR=1.1							
PAB				S		**Sn**	**04 35 42.3**	**-3.9**
PBRG	**Braganca**	**6.29**	**32**	*eS*		**Sn**	**04 35 46.5**	**-1.8**
PBRG				*i* IAML			04 35 46.9	
PBRG				*i* IAML			04 35 48.6	
PBRG				*i* IAML			04 35 50.7	
PSIM	**Granatula de C**	**6.34**	**67**	P		**Pn**	**04 34 40.0**	**+1.5**
PSIM				S		**Sn**	**04 35 46.7**	**-3.1**
TIO	**Tiouine**	**6.53**	**148**	Pn		**Pn**	**04 34 43.2**	**+2.0**
TIO				Sn		**Sn**	**04 35 51.0**	**-3.5**
EQES	**Quesada**	**6.63**	**77**	P		**Pn**	**04 34 44.3**	**+1.6**
EQES				⇑*i*Vmb_VC			04 34 48.5	
	comp=N,56nm,SNR=0.5							
EQES				S		**Sn**	**04 35 53.6**	**-3.4**

*IDC **18** 04:52:54.6±1.4,2.85S×139.08E, h0km, mb3.6/2, mbtmp3.8/3, ML4.0/1, MS2.7/1, Error ellipse: s-maj=30.4km s-min=22.6km az=152.0*

*DJA **18** 04:52:55.8±0.7,3.5S×13.9E±, h56km±20km, M3.6/5, MLv3.6/5*

ISC 18 04:53:00.2±1.2, 3.0S±0.1×139.11E±0.07, h46km, n8, σ1s62/11, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SMPI	**Sarmi**	**1.12**	**339**	P		**Pn**	**04 53 18.1**	**-1.4**
SMPI				S		**Sn**	**04 53 35.1**	**+1.4**
GENI	**Genyem**	**1.15**	**67**	P		**Pn**	**04 53 19.0**	**-0.9**
GENI				S		**Sn**	**04 53 36.5**	**+2.0**
JAY	**Jayapura**	**1.68**	**72**	Pn		**Pn**	**04 53 25.5**	**-1.7**
	13nm,0.3s,baz=204,slow=7.5,SNR=20							
JAY				Sn		**Sn**	**04 53 47.2**	**-0.3**
	11nm,0.3s,baz=81,slow=17,SNR=4.9							
JAY	**Jayapura**	**1.68**	**72**	P		**Pn**	**04 53 25.8**	**-1.4**
JAY				S		**Sn**	**04 53 49.1**	**+1.5**
WRA	**Warramunga Arr**	**17.43**	**195**	P		**P**	**04 56 60.0**	**-1.0**
	0.5nm,0.3s,baz=17,slow=12,SNR=17							
	1.8nm,0.5s							
KAPI	**Kappang**	**19.41**	**264**	LR		LR	05 06 11.2	
	comp=Z,23nm,19.1s,baz=45,slow=41							
ASAR	**Alice Springs**	**21.11**	**193**	P		**P**	**04 57 43.2**	**+2.0**
	1.8nm,0.6s,baz=20,slow=9.8,SNR=24							
	1.8nm,0.6s							
MKAR	**Makanchi Array**	**70.29**	**322**	P		**P**	**05 04 09.1**	**+0.1**
	0.5nm,0.6s,baz=111,slow=8.1,SNR=7.1							
	0.5nm,0.6s							

*IDC **18** 04:57:21.1±2.6,30.92N×49.43E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=56.5km s-min=34.4km az=149.0*

*TEH **18** 04:57:21.5,30.64N×50.00E, h16km±18km, ML3.5, Presumed earthquake*

*OMAN **18** 04:57:27.1±0.1,30.30N×50.40E, h10km, mb3.8/20, Error ellipse: s-maj=1.6km s-min=1.5km az=257.0*

ISC 18 04:57:20.6±0.7, 30.58N±0.06×50.02E±0.06, h10km, n54, σ1s91/66, mb3.7/4, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AMIS	**Naft Sefid**	**1.25**	**330**	Pg		**Pn**	**04 57 43.7**	**-0.5**
AHWZ	**Ahwaz**	**1.39**	**303**	Pg		**Pn**	**04 57 47.0**	**+0.9**
KLNJ	**Kolanjah**	**1.42**	**72**	Pg		**Pn**	**04 57 47.9**	**+1.1**
ZNGN	**Zangian**	**1.69**	**25**	Pg		**Pn**	**04 57 52.0**	**+1.4**
IBRJ	**Brojen**	**1.70**	**39**	Pg		**Pn**	**04 57 52.3**	**+1.6**
KAZ2	**Kazeron-Fars-I**	**1.72**	**124**	Pg		**Pb**	**04 57 54.7**	**+2.2**
JHBN	**Jahan bin**	**1.74**	**19**	Pg		**Pn**	**04 57 52.5**	**+1.4**
SHI	**Shiraz**	**2.36**	**113**	Pn		**Pn**	**04 58 02.0**	**+2.4**
IRAM	**Ramesheh**	**2.37**	**58**	Pn		**Pn**	**04 58 02.3**	**+2.6**
DSBU	**Dashti - Bushe**	**2.46**	**154**	Pn		**Pn**	**04 58 03.7**	**+2.8**
BDRS	**Dareh Seyedi**	**3.50**	**344**	Pn		**Pn**	**04 58 16.5**	**+1.1**
IDOB	**Doab**	**3.56**	**335**	Pn		**Pn**	**04 58 17.3**	**+1.2**
TAFT	**Taft - Yazd**	**3.74**	**71**	Pn		**Pn**	**04 58 20.6**	**+1.9**
IMEH	**Mehriz**	**4.03**	**77**	Pn		**Pn**	**04 58 24.4**	**+1.8**
ICHK	**Chekchek**	**4.11**	**65**	Pn		**Pn**	**04 58 25.5**	**+1.8**
SHMA	**Al-Shehemyia**	**4.78**	**170**	P		**Pn**	**04 58 34.5**	**+1.8**
	SNR=42							
SHMA				S		**Sn**	**04 59 29.1**	**+0.9**
IDHR	**Dehrash**	**5.12**	**324**	Pn		**Pn**	**04 58 39.0**	**+1.4**
QABG	**Abgarm-Qazvin**	**5.13**	**356**	Pn		**Pn**	**04 58 38.5**	**+0.8**
KHGB	**Koh Gabri**	**5.58**	**90**	Pn		**Pn**	**04 58 45.6**	**+1.6**
NGRK	**Negar Kerman**	**5.89**	**97**	Pn		**Pn**	**04 58 50.5**	**+2.2**
TRNA	**Turayna**	**5.92**	**169**	P		**Pn**	**04 58 50.1**	**+1.8**
	SNR=15							
TRNA				S		**Sn**	**04 59 55.8**	**-0.4**
JRN	**Qarnain Island**	**6.15**	**155**	P		**Pn**	**04 58 52.9**	**+1.4**
CHMN	**Cheshme madani**	**6.55**	**94**	Pn		**Pn**	**04 58 59.7**	**+2.3**
SLWR	**Sila**	**6.66**	**167**	P		**Pn**	**04 58 59.9**	**+1.5**
SLWR				S		**Sn**	**05 00 13.8**	**-0.6**
BANOM	**Banah**	**7.23**	**128**	P		**Pn**	**04 59 06.4**	**0.0**
BANOM				S		**Sn**	**05 00 25.1**	**-3.5**
AJN	**Ajban**	**7.44**	**142**	P		**Pn**	**04 59 10.6**	**+1.3**
AJN				S		**Sn**	**05 00 31.2**	**-2.6**
KBAM	**BAM**	**7.47**	**99**	Pn		**Pn**	**04 59 11.8**	**+2.1**
NAZ	**Nazwa, Dubai**	**7.49**	**137**	P		**Pn**	**04 59 10.8**	**+0.9**
NAZ				S		**Sn**	**05 00 32.3**	**-2.6**
MASF	**Masafi**	**7.51**	**132**	P		**Pn**	**04 59 11.4**	**+1.1**
MASF				S		**Sn**	**05 00 32.5**	**-3.1**
ASUD	**Al Ashush, Dub**	**7.58**	**140**	P		**Pn**	**04 59 12.5**	**+1.4**
ASUD				S		**Sn**	**05 00 35.3**	**-1.8**
FAQ	**Al Faqa, Dubai**	**7.63**	**138**	P		**Pn**	**04 59 13.5**	**+1.6**
FAQ				S		**Sn**	**05 00 36.0**	**-2.5**
MDH	**Madha**	**7.65**	**132**	P		**Pn**	**04 59 13.1**	**+0.9**
MDH				S		**Sn**	**05 00 35.4**	**-3.6**
HATD	**Hatta, Dubai**	**7.89**	**135**	P		**Pn**	**04 59 17.1**	**+1.7**
HATD				S		**Sn**	**05 00 42.0**	**-2.8**
ASHO	**Ashiyiah**	**7.95**	**136**	P		**Pn**	**04 59 17.2**	**+0.9**
	SNR=7.4							
ASHO				S		**Sn**	**05 00 43.2**	**-3.2**
MZR	**Muzera**	**8.16**	**157**	P		**Pn**	**04 59 20.5**	**+1.3**
	SNR=6.9							
ALNE	**Al Ain**	**8.26**	**141**	P		**Pn**	**04 59 22.0**	**+1.4**
ALNE				S		**Sn**	**05 00 50.8**	**-3.2**
SOHO	**SOHO**	**8.65**	**136**	P		**Pn**	**04 59 26.2**	**+0.3**
BSY	**Bisya**	**10.11**	**139**	P		**Pn**	**04 59 46.5**	**+0.6**
SMDO	**Samad**	**10.37**	**134**	P		**Pn**	**04 59 50.3**	**+0.7**
	SNR=7.2							
WSAR	**Wadi Sarin**	**10.61**	**132**	P		**Pn**	**04 59 52.7**	**0.0**
JMDO	**Jabal Madar**	**10.92**	**137**	P		**Pn**	**04 59 59.3**	**+2.3**
NGCH	**Negor - Chabah**	**11.12**	**115**	P		**Pn**	**04 59 59.5**	**-0.2**
WBK	**Wadi Bani Khal**	**11.28**	**133**	P		**Pn**	**05 00 04.6**	**+2.7**
	SNR=9.4							
JLN	**Jalan Bani Buh**	**11.89**	**133**	P		**Pn**	**05 00 11.0**	**+0.7**
MHTO	**MHTO**	**11.94**	**141**	P		**Pn**	**05 00 10.8**	**-0.2**
DOK	**Doka**	**12.48**	**162**	P		**Pn**	**05 00 18.9**	**+0.5**
DMTO	**DMTO**	**13.57**	**160**	P		**Pn**	**05 00 31.7**	**-1.6**
BRTR	**Keskin Array B**	**16.18**	**309**	Pn		**Pn**	**05 01 08.2**	**-0.1**
	0.1nm,0.3s,baz=122,slow=12,SNR=5.6							
MKAR	**Makanchi Array**	**29.68**	**48**	P		**P**	**05 03 30.0**	**+3.4**
	0.2nm,0.6s,baz=238,slow=10.0,SNR=2.2							
	0.2nm,0.6s							
FINES	**FINESS Array B**	**34.64**	**340**	P		**P**	**05 04 07.1**	**-2.7**
	7.5nm,1.1s,baz=140,slow=8.9,SNR=2.0							
	7.5nm,1.1s							
HFS	**Hagfors**	**38.18**	**331**	P		**P**	**05 04 37.6**	**-2.5**
	2.2nm,0.7s,baz=134,slow=8.3,SNR=6.6							
	2.2nm,0.7s							
NOA	**NORSAR Array B**	**39.71**	**331**	P		**P**	**05 04 50.5**	**-2.4**
	0.8nm,0.8s,baz=109,slow=9.4,SNR=1.4							
	0.8nm,0.8s							
SBV	**Sambava**	**43.78**	**180**	P		P	05 05 34.7	+8.1
TORD	**Torodi Ar. Bea**	**47.70**	**260**	P		**P**	**05 05 56.2**	**-1.6**
	0.1nm,0.3s,baz=53,slow=9.7,SNR=4.8							
	0.1nm,0.3s							

*SJA **18** 05:32:42.1±0.

BO01 IAML 05 34 01.2
comp=E,14µm,0.6s
BO01 Tunca 2.12 56 *e*P **Pn 05 33 20.7 0.0**
BO01 *e*S **Sg 05 33 57.9 +5.0**
BO01 IAML 05 34 00.3
comp=Z,9µm,1.6s
BO02 Sierra Bellavi 2.14 69 *e*P **Pn 05 33 21.3 +0.2**
BO02 Sierra Bellavi 2.14 69 *e*P **Pn 05 33 21.5 +0.4**
BO02 *i*S **Sg 05 33 52.0 -1.6**
BO02 IAML 05 34 02.6
comp=E,46µm,0.7s
BO02 Sierra Bellavi 2.14 69 *e*P **Pn 05 33 21.6 +0.6**
BO02 *e*S **Sg 05 33 54.6 +1.0**
BO02 IAML 05 34 04.1
comp=Z,23µm,0.8s
VA05 Santo Domingo 2.34 34 *e*P **Pn 05 33 22.9 -0.8**
VA05 Santo Domingo 2.34 34⇑ *e*P **Pn 05 33 23.1 -0.7**
MT01 Popeta 2.37 43 *e*P **Pn 05 33 23.1 -0.9**
MT01 Popeta 2.37 43 *e*P **Pn 05 33 23.3 -0.7**
MT01 *i*S **Sg 05 33 59.5 -1.3**
MT01 Popeta 2.37 43 *e*P **Pn 05 33 23.4 -0.7**
MT01 *e*S **Sg 05 34 04.5 +3.8**
MT01 IAML 05 34 08.8
comp=Z,12µm,0.8s
MT09 Talagante 2.58 46 *e*P **Pn 05 33 26.7 -0.4**
MT09 Talagante 2.58 46 *e*P **Pn 05 33 27.0 -0.2**
MT09 *i*S **Sg 05 34 07.6 -0.1**
BO04 La Punta 2.67 54 *e*P **Pn 05 33 28.8 +0.4**
BO04 La Punta 2.67 54 *e*P **Pn 05 33 28.7 +0.4**
BO04 *i*S **Sg 05 34 10.0 -0.7**
BI04 Isla Mocha 2.85 191 *e*P **Pn 05 33 29.7 -1.1**
CANA Caviahue 2.86 144 *e*P **Pn 05 33 33.1 +2.1**
CANA *e*S **Sg 05 34 20.7 +4.2**
MT12 Pirque 2.88 50 *i*S **Sb 05 34 12.2 +0.3**
VA01 Torpederas 2.88 27 Pn Pn 05 33 30.2 -0.9
VA01 Torpederas 2.88 27 *e*P **Pn 05 33 31.1 0.0**
VA01 *i*S **Sg 05 34 20.6 +3.3**
VA01 IAML 05 34 30.4
comp=N,4µm,0.7s
VA01 Torpederas 2.88 27 *e*P **Pn 05 33 30.5 -0.6**
VA01 *e*S **Sg 05 34 23.7 +6.4**
VA01 IAML 05 34 26.8
comp=Z,9µm,0.9s
MT02 Curacav 2.90 37 Pn 05 33 30.9 -0.5
MT02 Curacav 2.90 37 *e*P **Pn 05 33 30.9 -0.5**
MT02 Curacav 2.90 37 *e*P **Pn 05 33 30.9 -0.5**
MT02 *e*S **Sg 05 34 17.6 -0.2**
MT02 IAML 05 34 21.3
comp=Z,5µm,0.6s
MT15 Las Vizcachas 2.99 49⇑ *e*P **Pn 05 33 32.7 0.0**
MT15 *i*S **Sb 05 34 15.0 -0.3**
MT05 Renca 3.00 43 Pn 05 33 32.8 -0.1
MT05 Renca 3.00 43 *e*P **Pn 05 33 33.0 +0.1**
MT05 *i*S **Sb 05 34 15.4 -0.2**
MT05 Renca 3.00 43 *e*P **Pn 05 33 33.2 +0.4**
MT05 *e*S **Sg 05 34 25.1 +3.8**
MT05 IAML 05 34 29.9
comp=Z,11µm,1.1s
LMEL Las Melosas 3.03 56 *e*P **Pn 05 33 33.9 +0.5**
LMEL *i*S **Sb 05 34 14.5 -1.9**
LMEL IAML 05 34 26.6
comp=E,14µm,0.8s
MT13 San Alfonso 3.04 53 Pn 05 33 33.4 0.0
MT13 San Alfonso 3.04 53 *e*P **Pn 05 33 33.9 +0.5**
MT13 *i*S **Sb 05 34 15.6 -1.1**
MT13 San Alfonso 3.04 53 *e*P **Pn 05 33 34.7 +1.2**
MT13 *e*S **Sg 05 34 22.7 +0.4**
MT13 IAML 05 34 28.6
comp=Z,8µm,1.1s
MT03 Universidad Ad 3.06 47 Pn 05 33 33.6 -0.1
MT03 Universidad Ad 3.06 47 *e*P **Pn 05 33 34.4 +0.7**
MT03 *i*S **Sg 05 34 21.2 -1.9**
MT03 Universidad Ad 3.06 47 *e*P **Pn 05 33 35.1 +1.3**
MT03 *e*S **Sg 05 34 23.1 -0.1**
MT03 IAML 05 34 28.5
comp=Z,16µm,0.8s
MT16 CCHEN 3.10 46 Pn 05 33 34.1 -0.1
MT16 CCHEN 3.10 46⇑ *e*P **Pn 05 33 34.3 +0.1**
EDS3 Malargue 3.10 94 *e*P **Pb 05 33 37.6 -2.8**
MT14 Cerro Cal¡n 3.12 46 *e*P **Pn 05 33 34.7 +0.2**
MT14 *i*S **Sb 05 34 18.1 -0.8**
LC02 Puerto Saavedr 3.19 183⇑ *e*P **Pn 05 33 34.8 -0.5**
ROCH El Roble 3.19 35⇑ *e*P **Pn 05 33 35.3 -0.4**
ROCH *e*P **Pb** 05 33 35.3 -6.7
ROCH *i*S **Sb 05 34 20.5 -0.7**
MT10 Hacienda Santa 3.20 44 *e*P **Pn 05 33 35.8 +0.1**
MT10 *i*S **Sb 05 34 20.1 -1.4**
PEL Peldehue 3.22 41 Pn 05 33 35.9 0.0
PEL Peldehue 3.22 41 P **Pn 05 33 35.9 0.0**
PEL Peldehue 3.22 41 *e*P **Pn 05 33 36.0 +0.2**
PEL *i*S **Sb 05 34 22.1 +0.3**
PEL Peldehue 3.22 41 *e*P **Pn 05 33 36.5 +0.7**
PEL *e*S **Sg 05 34 30.9 +2.7**
PEL IAML 05 34 38.5
comp=Z,8µm,0.8s
MT04 Ro Olivares 3.35 50 *e*P **Pn 05 33 38.4 +0.6**
MT04 *i*S **Sg 05 34 29.7 -2.7**
MT04 Ro Olivares 3.35 50 *e*P **Pn 05 33 39.4 +1.6**
MT04 *e*S **Sg 05 34 32.4 0.0**
MT04 IAML 05 34 33.8
comp=Z,4µm,0.7s
MT08 Bocatoma Ro 3.40 52 Pn 05 33 38.0 -0.6
MT08 Bocatoma Ro 3.40 52⇑ *e*P **Pn 05 33 39.5 +1.0**
MT08 Bocatoma Ro 3.40 52 *e*P **Pn 05 33 40.1 +1.6**
MT08 *e*S **Sg 05 34 32.7 -1.3**
MT08 IAML 05 34 43.1
comp=Z,5µm,0.6s
VA06 Catapilco 3.42 28 Pn 05 33 38.4 -0.2
VA06 Catapilco 3.42 28⇑ *e*P **Pn 05 33 38.0 -0.5**
LC01 Cunco 3.45 163 *e*P **Pn 05 33 40.3 +1.3**
LC01 *i*S **Sn 05 34 18.1 -2.2**
VA03 San Esteban 3.59 39 Pn 05 33 40.9 -0.1
VA03 San Esteban 3.59 39 *e*P **Pn 05 33 41.1 +0.1**
VA03 San Esteban 3.59 39 *e*P **Pn 05 33 41.7 +0.8**
VA03 *e*S **Sg 05 34 40.6 +0.7**
VA03 IAML 05 34 46.9
comp=Z,8µm,0.9s
RFA San Rafael 3.97 79 *e*P **Pn 05 33 48.3 +2.1**
RFA *e*S **Sg 05 34 57.0 +4.7**
RFA IAML 05 35 06.7
comp=Z,3µm,1.0s
CO04 Los Peladeros 4.01 28 Pn 05 33 46.3 -0.6
CO04 Los Peladeros 4.01 28 *e*P **Pn 05 33 46.6 -0.2**
GO06 Curarrehue 4.21 161 Pn 05 33 50.5 +1.1
GO06 Curarrehue 4.21 161 *e*P **Pn 05 33 50.9 +1.5**
LR04 Corral 4.27 182 Pn 05 33 49.3 -1.0
LR04 Corral 4.27 182 *e*P **Pn 05 33 49.6 -0.7**
LR04 IAML 05 35 18.3
comp=Z,1µm,0.8s
LR05 Currie 4.71 169 Pn 05 33 56.8 +0.5
LR05 Currie 4.71 169 *e*P **Pn 05 33 57.3 +1.0**
LR05 *e*S **Sn 05 34 53.7 +2.4**
LR05 IAML 05 35 17.2
comp=Z,2µm,1.6s
CO02 Combarbal 4.76 23 *e*P **Pn 05 33 56.7 -0.4**
CO02 IAML 05 35 25.5
comp=Z,2µm,0.8s
RTLS Leoncito 5.00 42 *e*P **Pn 05 34 02.8 +2.2**
RTLS IAML 05 35 30.6
comp=Z,6µm,1.9s
H03S1 Juan Fernandez 5.01 289 T T 05 39 08.0
baz=110,slow=74,SNR=2372
H03S3 Juan Fernandez 5.02 289 T T 05 38 59.0
baz=110,slow=74,SNR=1195
H03S2 Juan Fernandez 5.03 289 T T 05 39 00.8
baz=110,slow=74,SNR=1305
VA04 Juan Fernndez 5.03 291 Pn 05 33 58.2 -2.5
VA04 Juan Fernndez 5.03 291 *e*P **Pn 05 34 00.8 +0.1**
CO03 El Pedregal 5.20 25 *e*P **Pn 05 34 03.2 +0.1**
CO03 IAML 05 35 39.7
comp=Z,2µm,0.8s
PLCA Paso Flores 5.53 159 Pn **Pn 05 34 09.4 +1.7**
comp=Z,5.8nm,0.3s,baz=324,slow=11,SNR=207
PLCA LR LR 05 35 45.6
comp=Z,468nm,20.6s,baz=328,slow=33
comp=Z,21nm,0.5s
PLCA Paso Flores 5.53 159 Pn 05 34 08.3 +0.6
PLCA Paso Flores 5.53 159 *e*P **Pn 05 34 08.3 +0.6**
PLCA Paso Flores 5.53 159 *e*P **Pn 05 34 07.8 +0.2**
CFA Coronel Fontan 5.75 48 Pn **Pn 05 34 11.7 +1.1**
comp=Z,8.5nm,0.3s,baz=223,slow=13,SNR=210
CFA Sn **Sn 05 35 19.1 +2.2**
comp=Z,6.1nm,0.3s,baz=239,slow=12,SNR=3.7
comp=Z,50nm,0.3s
LL05 Los Muermos 5.80 182 Pn 05 34 11.0 -0.2
LCO Las Campanas 6.91 19 Pn 05 34 25.6 -1.2
LCO Las Campanas 6.91 19 P **Pn 05 34 25.6 -1.2**
TRQA Tornquist 9.33 109 Pn 05 35 00.8 +1.1
TRQA Tornquist 9.33 109 P **Pn 05 35 00.8 +1.1**
COYC Coyhaique 9.99 175 Pn 05 35 09.2 +0.4
GO02 Mina Guanaco 10.86 18 Pn 05 35 19.4 -1.6
PB14 IPOC Station P 11.21 13 Pn 05 35 23.4 -2.4
AY03 Cochrane 11.65 178 Pn 05 35 30.3 -1.1
GO08 Villa O'Higgin 12.86 178 Pn **Pn 05 35 47.5 -0.5**
PSAL Palomas, Salto 13.79 75 *e*P **Pn 05 35 58.5 -2.2**
PB09 IPOC Station P 14.19 15 P 05 36 15.2 +1.1
PB11 IPOC Station P 16.09 12 IAmb IAmb 05 36 39.1
comp=Z,162nm,1.1s
CPUP Villa Florida 16.44 60 Pn **Pn 05 36 33.0 -3.0**
comp=Z,0.3nm,0.3s,baz=247,slow=9.1,SNR=6.3
CPUP LR LR 05 44 14.2
comp=Z,872nm,19.9s,baz=236,slow=42
CPUP Villa Florida 16.44 60 P **Pn 05 36 36.9 +0.9**
CPUP Villa Florida 16.44 60 P **Pn 05 36 36.9 +0.9**
CPUP pmax pmax
comp=Z,9.0nm,0.9s
CPUP Villa Florida 16.44 60 *e*P **Pn 05 36 33.0 -3.0**
PLTB Pedras Altas 16.76 82 Pn **Pn 05 36 38.2 -1.9**
PLTB Pedras Altas 16.76 82 *e*P **Pn 05 36 39.9 -0.1**
PB12 IPOC Station P 17.11 9 Pn 05 36 41.8 -2.9
CPSB Cacapava Do Su 17.36 78 *e*P **Pn 05 36 45.5 -2.1**
PB18 Visviri 18.25 11 IAmb IAmb 05 37 06.6
comp=Z,177nm,1.3s
MG03 Isla Dawson 18.34 175 P **Pn 05 36 59.3 -0.3**
EFI East Falkland 19.38 151 P **P 05 37 10.7 -0.4**
EFI IAmb IAmb 05 37 23.0
comp=Z,160nm,1.6s
EFI East Falkland 19.38 151⇑ *i*P **P 05 37 11.1 0.0**
EFI pmax pmax
comp=Z,14nm,0.5s
LPAZ La Paz 19.76 15 P **Pn 05 37 18.4 +0.8**
comp=Z,0.6nm,0.3s,baz=178,slow=8.8,SNR=40
comp=Z,34nm,1.1s
LPAZ La Paz 19.76 15 P **P 05 37 15.2 -0.9**
LPAZ **Pn 05 37 18.5 +0.8**
LPAZ La Paz 19.76 15 *e*P **P 05 37 15.2 -0.9**
LPAZ La Paz 19.76 15 *e*P **Pn 05 37 18.7 +1.1**
ITAB Concordia 19.80 71 P **P 05 37 15.6 -0.2**
ITAB IAmb IAmb 05 37 29.2
comp=Z,176nm,1.4s
ITAB Concordia 19.80 71 *e*P **Pn 05 37 16.3 -1.0**
CNLB Canela 19.86 78 *e*P **P 05 37 16.3 -0.2**
AMBA Amambai (Brazi 20.26 56 *e*P Pn 05 37 21.6 -1.2
BDQN Bodoquena, MS 20.90 48 *e*P **P 05 37 27.7 -0.2**
PTGB Pitanga 21.21 65 *e*P **P 05 37 30.8 -0.5**
AQDB Aquidauana 21.53 50 P **P 05 37 34.3 -0.3**
AQDB Aquidauana 21.53 50 *e*P **P 05 37 34.6 0.0**
TRCB Terra Rica 21.98 60 P **P 05 37 38.6 -0.9**
TRCB Terra Rica 21.98 60 *e*P **P 05 37 38.5 -0.9**
SIV San Ignacio 22.34 32 LR LR 05 48 17.5
comp=Z,3µm,18.4s,baz=234,slow=42
LDASE Londrina, Braz 22.69 64 *e*P **P 05 37 46.0 -1.2**
PTLB Pontes e Lacer 23.70 36 P 05 37 57.3 -0.1
PTLB IAmb IAmb 05 38 05.0
comp=Z,55nm,1.0s
PTLB Pontes e Lacer 23.70 36 *e*P **P 05 37 57.2 -0.1**
NNA Nana 23.74 351 *e*P **P 05 37 58.5 +0.7**
NNA pmax pmax
comp=Z,19nm,0.9s
FRTB Fartura 23.87 66 *e*P **P 05 37 58.2 -0.8**
PP1B Ponte de Pedra 24.22 47 *e*P **P 05 38 01.6 -0.6**
C2SB Chapadao do Su 24.61 52 *e*P **P 05 38 05.8 0.0**
PET01 Itanhaem-SP 25.06 70 *e*P **P 05 38 09.6 -0.3**
SALV Santo Antonio 25.10 43 *e*P **P 05 38 10.1 -0.2**
SPB Sao Paulo 25.33 69 *e*P **P 05 38 12.4 +0.1**
VILB Vilhena 25.43 31 P 05 38 13.1 -0.2
VILB Vilhena 25.43 31 *e*P **P 05 38 12.9 -0.3**
ITRB Iturama 25.60 58 *e*P **P 05 38 15.8 +1.0**
RCLB Rio Claro- Sao 25.92 66 *e*P **P 05 38 17.5 -0.3**
BB19B Bebedouro 26.01 63 *e*P **P 05 38 18.3 -0.3**
VAO Valinhos 26.01 68 *e*P **P 05 38 18.6 0.0**
PARB Paraibuna 26.85 70 *e*P **P 05 38 27.0 +0.8**
PDRB Porto dos Gac 28.17 36 *e*P **P 05 38 37.8 -0.2**
IPMB Ipameri, GO 28.26 58 *e*P **P 05 38 38.0 -0.8**
ATAH Atahualpa 28.73 349 LR LR 05 47 57.5
comp=Z,278nm,21.3s,baz=183,slow=32
BSCB Bom Sucesso 28.83 67 *e*P **P 05 38 43.7 -0.2**
PMNB Patos De Minas 29.14 61 *e*P **P 05 38 46.4 -0.2**
CLDB Colider 29.26 37 *e*P **P 05 38 47.4 -0.3**
PMSA Palmer Station 29.72 172 LR LR 05 50 48.8
comp=Z,849nm,18.0s,baz=340,slow=36
BDFB Brasilia 30.03 55 P **P 05 38 54.1 -0.6**
comp=Z,24nm,1.0s,baz=226,slow=8.1,SNR=26
BDFB LR LR 05 51 18.0
comp=Z,679nm,20.6s,baz=221,slow=37
comp=Z,24nm,1.0s
BDFB Brasilia 30.03 55 P 05 38 54.0 -0.6
BDFB IAmb IAmb 05 39 02.1
comp=Z,39nm,1.0s
DUB01 Friburgo-RJ 30.04 72 *e*P **P 05 38 55.0 +0.3**
CAM01 Campos-RJ 30.74 72 *e*P **P 05 39 00.1 -0.6**
SNDB Serra Nova Dou 30.76 46 *e*P **P 05 39 00.5 -0.5**
DIAM Diamantina, MG 31.30 64 *e*P **P 05 39 05.9 0.0**
RPN Rapa Nui 31.85 275 LR LR 05 48 35.7
comp=Z,632nm,18.8s,baz=130,slow=30
NPGB Novo Progresso 32.80 34 *e*P **P 05 39 17.9 -1.1**
SJMB Sao Joao De Ma 32.90 68 *e*P **P 05 39 19.4 -0.3**
TEFE Tefe 32.91 16 *e*P **P 05 39 20.1 +0.3**
JANB Januaria 32.98 59 *e*P **P 05 39 20.1 -0.5**
BSFB Barra de Sao F 33.08 68 *e*P **P 05 39 21.2 -0.1**
RIB01 Linhares ES 33.13 69 *e*P **P 05 39 21.6 -0.2**
MACA Manacapuru-AM 34.30 23 *e*P **P 05 39 32.1 +0.2**
SDBA SAO DESIDERIO 34.44 55 *e*P **P 05 39 32.9 -0.4**
ITTB Itaituba 35.02 31 *e*P **P 05 39 37.6 -0.6**
GUA01 Guaratinga, BA 35.24 66 *e*P **P 05 39 39.7 -0.4**
SMTB Santa Maria do 35.43 47 *e*P **P 05 39 41.1 -0.6**
OTAV Otavalo 35.99 351 *e*P **P 05 39 47.3 +0.3**
CMC01 Camacan, BA 36.22 65 *e*P **P 05 39 48.6 0.0**
NBIT Itapeh - BA 36.56 64 *e*P **P 05 39 51.8 +0.4**
BOAV Boa Vista 39.62 20 P 05 40 16.6 -0.6
BOAV Boa Vista 39.62 20 *e*P **P 05 40 17.1 -0.1**
ROSC El Rosal 40.24 358 P **P 05 40 23.6 +0.8**
comp=Z,7.0nm,0.6s,baz=172,slow=23,SNR=4.8
comp=Z,7.0nm,0.6s
NBPS Pedro II - PI 42.69 51 *e*P **P 05 40 42.5 -0.2**
SDV Santo Domingo 44.32 4 P **P 05 40 55.6 -0.2**
SDV IAmb IAmb 05 41 09.0
comp=Z,24nm,0.9s
SDV Santo Domingo 44.32 4 *e*P **P 05 40 56.0 +0.2**
NBPA Parai_RN 44.53 57 *e*P **P 05 40 58.1 +0.8**
MDP Montagnes des 44.86 30 LR LR 06 01 42.3
comp=Z,1µm,18.9s,baz=189,slow=39
RCBR Riachuelo 45.30 58 *e*P **P 05 41 03.8 +0.2**
NBPV Pedro Velho 45.31 59 *e*P **P 05 41 04.4 +0.8**
JTS Las Juntas de 46.98 344 *e*P **P 05 41 16.5 -0.1**
JTS pmax pmax
comp=Z,13nm,1.2s
VNA3 Neumayer Olymp 48.25 157⇑ P **P 05 41 27.4 +1.4**
comp=Z,30nm,0.7s
VNA1 Neumayer--Stat 48.59 156⇑ P **P 05 41 30.1 +1.6**
comp=Z,24nm,1.0s
VNA2 Neumayer--Watz 48.92 157⇑ P **P 05 41 32.4 +1.3**
comp=Z,24nm,0.6s,baz=278,slow=8.2
SNAA Sanae 50.47 157⇑ P **P 05 41 44.6 +1.6**
comp=Z,818nm,1.1s
SNAA Sanae 50.47 157 P **P 05 41 44.1 +1.1**
comp=Z,38nm,1.0s,baz=270,slow=6.4,SNR=14
SNAA LR LR 06 01 43.9
comp=Z,281nm,19.8s,baz=260,slow=34
comp=Z,38nm,1.0s
SNAA Sanae 50.47 157 P 05 41 44.1 +1.1
SNAA Sanae 50.47 157*c i*P **P 05 41 44.1 +1.1**
SNAA pmax pmax
comp=Z,51nm,1.1s
APG El Apazote 52.92 339 P **P 05 42 01.9 -0.1**
comp=Z,0.2nm,0.5s,baz=169,slow=12,SNR=2.1
QSPA South Pole Qui 54.63 180 P **P 05 42 15.5 +1.5**
comp=Z,21nm,1.1s,baz=135,slow=3.8,SNR=9.6
comp=Z,21nm,1.1s
QSPA South Pole Qui 54.63 180 P 05 42 15.5 +1.5
QSPA IAmb IAmb 05 42 19.1
comp=Z,24nm,1.1s
CMIG Matias Romero 56.29 335 LR LR 06 01 31.8
comp=Z,65nm,19.4s,baz=156,slow=31
VNDA Vanda 62.34 192 LR LR 06 06 13.5
comp=Z,124nm,20.8s,baz=120,slow=32
HKT Hockley 68.60 339 *e*P **P 05 43 49.8 +1.5**
HKT pmax pmax
comp=Z,5.0nm,1.2s
LPIG La Paz 68.99 324 LR LR 06 07 52.7
comp=Z,111nm,18.1s,baz=132,slow=30
PPT Papeete 69.08 263 LR LR 06 05 37.4
comp=Z,288nm,18.3s,baz=111,slow=28
SAND Sanderson 70.66 334 IAmb IAmb 05 44 12.9
comp=Z,18nm,1.1s
TXAR Lajitas Array 70.68 332 P **P 05 44 03.3 +1.9**
comp=Z,1.2nm,0.6s,baz=162,slow=4.4,SNR=4.5
comp=Z,1.2nm,0.6s
BG3 Lake Jocassee 70.82 352 IAmb IAmb 05 44 13.0
comp=Z,15nm,0.9s
WLAR White Oak Lake 71.41 343 IAmb IAmb 05 44 16.5
comp=Z,32nm,1.2s
V53A Saluda 71.47 352 IAmb IAmb 05 44 07.2
comp=Z,18nm,1.2s
CPCT Cooper Cave 71.47 350 IAmb IAmb 05 44 16.7
comp=Z,22nm,1.2s
V55A Taylorsville 71.48 353 IAmb IAmb 05 44 17.2
comp=Z,19nm,1.1s
TKL Tuckaleechee C 71.58 351 P **P 05 44 07.3 +0.7**
comp=Z,6.4nm,0.9s,baz=158,slow=6.4,SNR=6.4
comp=Z,6.4nm,0.9s
TKL Tuckaleechee C 71.58 351 IAmb IAmb 05 44 16.9
comp=Z,19nm,1.1s
MAW Mawson 71.92 164 LR LR 06 16 54.9
comp=Z,254nm,18.5s,baz=229,slow=37
MNHN Monahans 72.15 334 IAmb IAmb 05 44 21.4
comp=Z,18nm,1.3s
TPB01 Permian Basin 72.17 333 IAmb IAmb 05 44 22.2
comp=Z,13nm,1.2s
ABTX Abilene, Hawle 72.26 337 IAmb IAmb 05 44 21.9
comp=Z,36nm,1.2s
T59A Double "B" Far 72.32 356 IAmb IAmb 05 44 20.1
comp=Z,29nm,1.2s
CLTN Cedars of Leba 72.37 349 IAmb IAmb 05 44 22.8
comp=Z,17nm,1.2s
WVT Waverly 72.66 348 P 05 44 13.5 +0.5
WVT Waverly 72.66 348 P **P 05 44 13.5 +0.5**
WVT pmax pmax
comp=Z,41nm,1.2s
APMT Aspermont 73.06 337 IAmb IAmb 05 44 26.7
comp=Z,32nm,1.2s
S57A Dark Hollow, R 73.19 355 IAmb IAmb 05 44 17.6
comp=Z,20nm,1.1s
128A Castleberry Fa 73.21 334 IAmb IAmb 05 44 27.8
comp=Z,18nm,1.2s
T47A Sharon Grove 73.37 348 IAmb IAmb 05 44 26.9
comp=Z,18nm,1.0s
S51A Beattyville 73.51 351 IAmb IAmb 05 44 19.7
comp=Z,16nm,0.9s
R55A Marlinton 73.80 354 IAmb IAmb 05 44 21.5
comp=Z,22nm,1.0s
HHAR Hobbs 74.08 343 IAmb IAmb 05 44 31.4
comp=Z,23nm,1.3s
CGM3 Cape Girardeau 74.13 346 IAmb IAmb 05 44 31.5
comp=Z,21nm,1.3s
TUL3 Leonard 74.20 341 IAmb IAmb 05 44 32.6
comp=Z,24nm,0.9s
R49A Shelbyville 74.36 350 IAmb IAmb 05 44 33.4
comp=Z,17nm,1.1s
S44A Carbondale 74.43 347 IAmb IAmb 05 44 33.2
comp=Z,17nm,1.0s
SIUC Southern Illin 74.45 347 IAmb IAmb 05 44 33.8
comp=Z,26nm,1.1s
MGMO Mountain Grove 74.53 344 IAmb IAmb 05 44 34.7
comp=Z,23nm,1.2s
MSTX Muleshoe 74.53 335 IAmb IAmb 05 44 35.2
comp=Z,20nm,0.9s
Q52A Bidwell 74.67 353 IAmb IAmb 05 44 33.4
comp=Z,30nm,1.0s
P57A Homestead Farm 74.85 356 IAmb IAmb 05 44 35.9
comp=Z,20nm,1.1s
Q51A Peebles 74.85 352 IAmb IAmb 05 44 34.8
comp=Z,14nm,0.9s
SUR Sutherland 74.89 119 LR LR 06 15 23.5
comp=Z,322nm,18.4s,baz=226,slow=34
CCM Cathedral Cave 75.17 345 P 05 44 28.0 +0.3
CCM Cathedral Cave 75.17 345 P **P 05 44 28.0 +0.3**
CCM pmax pmax
comp=Z,47nm,1.3s
P51A Williamsport 75.27 352 IAmb IAmb 05 44 37.1
comp=Z,22nm,0.9s
S39A Bolivar 75.28 344 IAmb IAmb 05 44 38.3
comp=Z,28nm,1.4s
MVL Millersville 75.29 358 IAmb IAmb 05 44 30.6
comp=Z,18nm,1.2s
T35A Sooner Cattle 75.33 341 IAmb IAmb 05 44 39.7
comp=Z,21nm,0.9s
PAGS Pennsylvania G 75.53 357 IAmb IAmb 05 44 31.5
comp=Z,29nm,1.0s
P48A Milroy 75.54 350 IAmb IAmb 05 44 40.3
comp=Z,30nm,1.1s
R40A Maddies Statio 75.62 345 IAmb IAmb 05 44 40.2
comp=Z,33nm,1.3s
O52A Adamsville 75.77 353 IAmb IAmb 05 44 39.5
comp=Z,23nm,1.0s
P46A Rosedale 75.96 349 IAmb IAmb 05 44 41.1
comp=Z,38nm,1.4s
ACSO Alum Creek Sta 76.00 352 IAmb IAmb 05 44 40.8
comp=Z,32nm,1.1s
O49A Covington 76.11 351 IAmb IAmb 05 44 43.4
comp=Z,25nm,1.0s
DBIC Dimbokro 76.60 72 P **P 05 44 37.1 +0.7**
comp=Z,32nm,1.0s,baz=257,slow=6.2,SNR=18
DBIC LR LR 06 17 35.6
comp=Z,233nm,18.0s,baz=258,slow=35
comp=Z,32nm,1.0s
DBIC Dimbokro 76.60 72 P 05 44 37.1 +0.7
ANMO Albuquerque 76.74 332 P **P 05 44 39.4 +2.4**
comp=Z,3.4nm,1.0s,baz=162,slow=8.9,SNR=4.5
ANMO LR LR 06 14 31.4
comp=Z,174nm,18.6s,baz=142,slow=33
comp=Z,3.4nm,1.0s
ANMO Albuquerque 76.74 332 P **P 05 44 38.5 +1.5**
ANMO IAmb IAmb 05 44 49.1
comp=Z,20nm,1.1s
ANMO Albuquerque 76.74 332⇓ *i*P **P 05 44 36.6 -0.4**
ANMO pmax pmax
comp=Z,17nm,1.1s
P38A Dawn 77.17 344 IAmb IAmb 05 44 48.8
comp=Z,25nm,1.1s
L59A Walton 77.44 359 IAmb IAmb 05 44 42.5
comp=Z,12nm,0.9s
WIN Windhoek 77.46 109 P **P 05 44 41.7 +0.2**
WIN IAmb IAmb 05 44 43.7
comp=Z,21nm,1.1s
WIN Windhoek 77.46 109 P **P 05 44 41.7 +0.2**
WIN pmax pmax
comp=Z,21nm,1.1s
L56A Greenwood 77.47 357 IAmb IAmb 05 44 42.4
comp=Z,21nm,1.0s
TRY Troy 77.96 360 IAmb IAmb 05 44 53.6
comp=Z,28nm,1.1s
L40A Anamosa 79.03 346 IAmb IAmb 05 44 58.9
comp=Z,42nm,1.2s
ACRG Accra 79.60 75 P **P 05 44 52.6 -0.5**
TSUM Tsumeb 79.69 106 LR LR 06 17 19.5
comp=Z,287nm,18.8s,baz=242,slow=34
Q24A Divide 79.86 335 IAmb IAmb 05 45 05.6
comp=Z,21nm,1.2s
PFO Pinyon Flats O 79.87 324 P **P 05 44 55.4 +1.2**
comp=Z,2.2nm,0.8s,baz=165,slow=5.7,SNR=3.8
comp=Z,2.2nm,0.8s
BOSA Boshof 80.17 118 P **P 05 44 56.4 +0.2**
comp=Z,18nm,0.9s,baz=233,slow=3.6,SNR=22
BOSA LR LR 06 17 14.2
comp=Z,188nm,18.7s,baz=209,slow=33
comp=Z,18nm,0.9s
BOSA Boshof 80.17 118 P 05 44 56.6 +0.4
BOSA IAmb IAmb 05 45 06.4
comp=Z,18nm,0.8s
BOSA Boshof 80.17 118 P **P 05 44 56.6 +0.4**
BOSA pmax pmax
comp=Z,18nm,0.9s
SADO Sadowa 80.18 356 LR LR 06 23 53.0
comp=Z,83nm,19.1s,baz=152,slow=38
WBO Williamsburg 80.25 359 IAmb IAmb 05 44 57.6
comp=Z,16nm,0.9s
G62A West of Eustis 80.48 2 IAmb IAmb 05 45 07.4
comp=Z,22nm,1.0s
PV18 Skein Mesa, Pa 80.58 332 IAmb IAmb 05 45 09.2
comp=Z,23nm,1.1s
PV19 Morning Glory 80.66 332 IAmb IAmb 05 45 10.2
comp=Z,39nm,1.7s
PV10 Paradox Valley 80.74 332 IAmb IAmb 05 45 09.8

	comp=Z,17nm,0.9s						
HMU	**Henry Mountain**	**81.02**	**331**	IAmb	IAmb	05 45 13.2	
	comp=Z,53nm,1.6s						
KNB	**Kanab**	**81.08**	**329**	IAmb	IAmb	05 45 13.4	
	comp=Z,34nm,1.3s						
TRQ	**Mont Tremblant**	**81.46**	**359**	IAmb	IAmb	05 45 03.9	
	comp=Z,18nm,1.0s						
ECSD	**EROS Data Cent**	**81.79**	**343**	IAmb	IAmb	05 45 14.4	
	comp=Z,37nm,1.2s						
RPZ	**Rata Peaks**	**81.81**	**221**	LR	LR	06 13 50.8	
	comp=Z,231nm,18.7s,baz=112,slow=30						
URZ	**Urewera**	**81.88**	**228**	LR	LR	06 13 42.8	
	comp=Z,237nm,18.7s,baz=137,slow=30						
P18A	**Preston Nutter**	**82.29**	**332**	IAmb	IAmb	05 45 19.3	
	comp=Z,42nm,1.5s						
P17A	**Butcher Ranch,**	**82.35**	**332**	IAmb	IAmb	05 45 19.1	
	comp=Z,19nm,1.3s						
D62A	**Allapoint, All**	**82.40**	**3**	IAmb	IAmb	05 45 16.5	
	comp=Z,16nm,1.0s						
LBTB	**Lobatse**	**82.50**	**115**	LR	LR	06 18 47.6	
	comp=Z,184nm,18.7s,baz=231,slow=34						
LBTB	**Lobatse**	**82.50**	**115**		**P**	**05 45 09.1**	**+0.5**
LBTB				IAmb	IAmb	05 45 10.1	
	comp=Z,32nm,1.4s						
LBTB	**Lobatse**	**82.50**	**115**	P	**P**	**05 45 09.1**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,33nm,1.4s						
LMQ	**La Malbaie**	**82.82**	**2**	P	**P**	**05 45 09.3**	**-0.1**
LMQ				IAmb	IAmb	05 45 11.2	
	comp=Z,32nm,1.6s						
MPU	**Maple Canyon**	**83.16**	**331**	IAmb	IAmb	05 45 23.5	
	comp=Z,14nm,1.2s						
BSUT	**Blindstream Ca**	**83.27**	**332**	IAmb	IAmb	05 45 24.5	
	comp=Z,22nm,1.4s						
VLDQ	**Val d'Or**	**83.43**	**357**	IAmb	IAmb	05 45 22.0	
	comp=Z,20nm,1.2s						
F33A	**5 Mile Ranch,**	**83.71**	**344**	IAmb	IAmb	05 45 24.8	
	comp=Z,14nm,1.1s						
BGU	**Big Grassy Mou**	**84.49**	**331**	IAmb	IAmb	05 45 32.1	
	comp=Z,14nm,1.3s						
HWUT	**Hardware Ranch**	**84.50**	**332**	IAmb	IAmb	05 45 30.0	
	comp=Z,18nm,1.1s						
NVAR	**Mina Array Bea**	**84.66**	**326**	P	**P**	**05 45 21.9**	**+2.5**
	comp=Z,2.1nm,0.8s,baz=164,slow=7.6,SNR=11						
NVAR				LR	LR	06 18 43.9	
	comp=Z,71nm,19.8s,baz=93,slow=33						
	comp=Z,2.1nm,0.8s						
PDAR	**Pinedale Array**	**84.77**	**334**	P	**P**	**05 45 22.6**	**+2.9**
	comp=Z,0.8nm,0.9s,baz=164,slow=5.9,SNR=9.0						
	comp=Z,0.8nm,0.9s						
PDAR	**Pinedale Array**	**84.77**	**334**		**P**	**05 45 20.4**	**+0.6**
ICQ	**Pointe Anglais**	**84.92**	**4**		**P**	**05 45 20.9**	**+0.9**
ICQ				IAmb	IAmb	05 45 29.5	
	comp=Z,22nm,1.2s						
ELK	**Elko**	**85.24**	**329**	P	**P**	**05 45 26.1**	**+3.9**
	comp=Z,1.2nm,0.7s,baz=189,slow=2.7,SNR=4.3						
DRLN	**Deer Lake**	**85.63**	**10**		**P**	**05 45 24.3**	**+0.7**
TORD	**Torodi Ar. Bea**	**85.65**	**71**	P	**P**	**05 45 24.7**	**+0.1**
	comp=Z,10nm,1.0s,baz=235,slow=10,SNR=30						
	comp=Z,10nm,1.0s						
TORD	**Torodi Ar. Bea**	**85.65**	**71**	IAmb	IAmb	05 45 26.0	
	comp=Z,9.5nm,1.0s						
AGMN	**Agassiz Nation**	**85.94**	**345**	IAmb	IAmb	05 45 34.5	
	comp=Z,26nm,1.6s						
FLWY	**Flagg Ranch**	**86.32**	**334**	IAmb	IAmb	05 45 38.6	
	comp=Z,14nm,1.1s						
YMR	**Madison River**	**86.93**	**334**	IAmb	IAmb	05 45 42.5	
	comp=Z,24nm,1.3s						
ORV	**Oroville**	**87.05**	**325**	IAmb	IAmb	05 45 43.5	
	comp=Z,21nm,1.2s						
BCYI	**Bear Canyon**	**87.52**	**332**	IAmb	IAmb	05 45 44.8	
	comp=Z,11nm,1.1s						
ULM	**Lac du Bonnet**	**87.80**	**346**	P	**P**	**05 45 34.2**	**0.0**
	comp=Z,7.9nm,0.9s,baz=159,slow=4.4,SNR=14						
	comp=Z,7.9nm,0.9s						
ULM	**Lac du Bonnet**	**87.80**	**346**	IAmb	IAmb	05 45 43.3	
	comp=Z,17nm,1.2s						
ULM	**Lac du Bonnet**	**87.80**	**346**	⇑*i*P	**P**	**05 45 34.1**	**-0.1**
DLMT	**Dillon**	**88.11**	**333**	IAmb	IAmb	05 45 48.0	
	comp=Z,24nm,1.4s						
I07A	**Izee**	**89.78**	**329**	IAmb	IAmb	05 45 55.6	
	comp=Z,11nm,1.2s						
PINE	**Pine Mountain**	**90.16**	**328**	IAmb	IAmb	05 45 58.1	
	comp=Z,10nm,0.9s						
LSZ	**Lusaka**	**90.21**	**109**	LR	LR	06 23 38.5	
	comp=Z,362nm,18.4s,baz=190,slow=34						
SCHQ	**Schefferville**	**90.24**	**4**	P	**P**	**05 45 45.3**	**-0.3**
	comp=Z,6.7nm,1.1s,baz=209,slow=7.9,SNR=4.2						
	comp=Z,6.7nm,1.1s						
MDT	**Midelt**	**93.57**	**52**	LR	LR	06 28 48.7	
	comp=Z,325nm,18.0s,baz=248,slow=36						
ESDC	**Sonseca Array**	**98.37**	**47**	P	**P**	**05 46 23.4**	**0.0**
	comp=Z,1.1nm,0.9s,baz=249,slow=5.0,SNR=5.1						
ESDC				LR	LR	06 29 25.6	
	comp=Z,209nm,18.4s,baz=234,slow=35						
	comp=Z,1.1nm,0.9s						
ESDC	**Sonseca Array**	**98.37**	**47**	IAmb	IAmb	05 48 10.4	
	comp=Z,7.1nm,1.6s						
FRB	**Frobisher Bay**	**99.08**	**2**	LR	LR	06 33 02.6	
	comp=Z,45nm,19.6s,baz=125,slow=36						
YKA	**Yellowknife Ar**	**103.27**	**342**	Pdiff	**Pdif**	**05 46 44.6**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=140,slow=3.2,SNR=4.1						
ASAR	**Alice Springs**	**115.70**	**208**	PKP	**PKiKP**	**05 51 28.1**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=198,slow=1.8,SNR=4.0						
ASAR				PKKPbc	**PKKPbc**	**06 02 00.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=344,slow=3.3,SNR=8.4						
WRA	**Warramunga Arr**	**118.90**	**210**	PKP	**PKPdf**	**05 51 34.0**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=163,slow=1.6,SNR=7.9						
WRA	**Warramunga Arr**	**118.90**	**210**	PKiKP	**PKPdf**	**05 51 34.0**	**-0.7**
BR131	**Keskin Array S**	**123.44**	**62**	⇓*i*PKiKP	**PKPdf**	**05 51 43.1**	**+0.3**
BRTR	**Keskin Array B**	**123.44**	**62**	PKP	**PKPdf**	**05 51 42.5**	**-0.3**
	comp=Z,1.2nm,1.0s,baz=207,slow=1.4,SNR=4.0						
AKASG	**Malin Array Be**	**123.98**	**48**	PKP	**PKPdf**	**05 51 42.4**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=263,slow=2.8,SNR=4.7						
AKBB	**Malin Array Si**	**123.98**	**48**	⇓*i*PKiKP	**PKPdf**	**05 51 42.8**	**-0.5**
SPITS	**Spitsbergen Ar**	**124.46**	**14**	PKP	**PKPdf**	**05 51 43.2**	**-0.3**
	comp=Z,15nm,1.0s,baz=160,slow=4.6,SNR=2.3						
OBN	**Obninsk**	**129.25**	**44**	*e*PKiKP	**PKPdf**	**05 51 52.2**	**-1.0**
OBN				*e*		05 54 02.9	
OBN				*e*PPP	PPP	05 56 48.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,142nm,11.0s						
KBZ	**Khabaz**	**131.24**	**60**⇑	*e*PKiKP	**PKPdf**	**05 51 57.2**	**-0.1**
KLMR	**Klimovskoe**	**131.26**	**37**	*e*PKiKP	**PKPdf**	**05 51 56.9**	**+0.1**
KLMR				pmax	pmax		
	comp=Z,42nm,1.7s						
BILL	**Bilibino**	**133.84**	**333**	*e*PKiKP	**PKPdf**	**05 52 00.7**	**-0.9**
BELG	**Belogornoye**	**135.56**	**49**⇑	*i*PKiKP	**PKPdf**	**05 52 04.9**	**-0.3**
KIRV	**Kirov**	**136.37**	**40**⇓	*i*PKiKP	**PKiKP**	**05 52 08.1**	**-0.1**
SEY	**Seymchan**	**140.92**	**329**⇓	*i*PKiKP	**PKiKP**	**05 52 16.7**	**-0.7**
ARTI	**Arti**	**141.49**	**42**	*i* PKiKP	**PKPdf**	**05 52 15.9**	**-0.1**
ARTI						05 55 15.3	
TIXI	**Tiksi**	**142.09**	**349**⇓	*i*PKiKP	**PKPdf**	**05 52 17.4**	**+0.8**
MA2	**Magadan**	**142.88**	**324**	*e*PKiKP	**PKPdf**	**05 52 15.5**	**-2.9**
BORK	**Borovoye**	**149.05**	**44**		**PKiKP**	**05 52 34.3**	**-0.1**
BORK	**Borovoye**	**149.05**	**44**	PKP2	**PKiKP**	**05 52 34.3**	**-0.1**
HYB	**Hyderabad**	**149.07**	**118**	*e*PKiKP	**PKPbc**	**05 52 34.7**	**+0.4**
BVAR	**Borovoye Array**	**149.10**	**44**	PKPbc	**PKiKP**	**05 52 34.4**	**-0.1**
	comp=Z,10.0nm,0.6s,baz=298,slow=3.2,SNR=40						
YAK	**Yakutsk**	**149.89**	**339**	*e*PKP2	**PKPbc**	**05 52 35.4**	**+0.5**
YAK				*e*		05 56 14.7	
YAK				pmax	pmax		
	comp=Z,38nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,147nm,6.6s						
YAK				pmax	pmax		
	comp=N,141nm,5.9s						
YAK				pmax	pmax		
	comp=E,49nm,4.4s						
YSS	**Yuzhno-Sakhali**	**150.94**	**304**	*e*PKiKP	**PKiKP**	**05 52 39.2**	**+0.7**
KKAR	**Karatay Array**	**151.13**	**64**		**PKPbc**	**05 52 38.6**	**0.0**
KKAR	**Karatay Array**	**151.13**	**64**	PKiKP	**PKPbc**	**05 52 38.6**	**0.0**
NIL	**Nilore**	**152.40**	**84**		**PKPbc**	**05 52 41.8**	**0.0**
NIL	**Nilore**	**152.40**	**84**	PKiKP	**PKPbc**	**05 52 41.8**	**0.0**
AAK	**Ala-Archa**	**154.09**	**64**		**PKiKP**	**05 52 46.4**	**+1.0**
AAK	**Ala-Archa**	**154.09**	**64**	PKiKP	**PKiKP**	**05 52 46.4**	**+1.0**
KURBB	**Kurchatov Arra**	**154.69**	**45**	PKP	**PKPdf**	**05 52 38.2**	**+0.7**
	comp=E,1.3nm,1.0s,baz=305,slow=1.9,SNR=6.6						
KURBB				PKPbc	**PKPbc**	**05 52 46.4**	**+0.2**
	comp=E,4.9nm,1.0s,baz=301,slow=2.9,SNR=14						
KURBB				PKPab	**PKPab**	**05 53 01.4**	**+0.4**
	comp=E,2.9nm,0.8s,baz=295,slow=4.3,SNR=13						
KURK	**Kurchatov**	**154.70**	**45**		**PKPdf**	**05 52 38.2**	**+0.6**
KURK	**Kurchatov**	**154.70**	**45**	PKiKP	**PKPdf**	**05 52 38.2**	**+0.6**
KURK						05 52 46.4	
ZALV	**Zalesovo Beam**	**156.09**	**33**	PKP	**PKPdf**	**05 52 39.7**	**+0.3**
	comp=E,4.4nm,1.0s,baz=298,slow=3.2,SNR=12						
ZALV				PKPab	**PKPab**	**05 53 07.6**	**+0.7**
	comp=E,7.3nm,0.5s,baz=304,slow=5.0,SNR=13						
MKAR	**Makanchi Array**	**156.53**	**51**	PKP	**PKPdf**	**05 52 42.9**	**+0.2**
	comp=E,1.9nm,1.0s,baz=321,slow=1.7,SNR=10						
MKAR				PKPab	**PKPab**	**05 53 18.0**	**+0.2**
	comp=E,2.6nm,0.6s,baz=304,slow=3.0,SNR=11						
MKAR	**Makanchi Array**	**158.53**	**51**		**PKPdf**	**05 52 41.1**	**-1.6**
CMAR	**Chiang Mai Arr**	**161.56**	**156**	PKP	**PKPdf**	**05 52 46.9**	**-0.1**
	comp=E,1.0nm,0.4s,baz=155,slow=0.6,SNR=6.6						
WMQ	**Urumqi**	**163.19**	**55**	*e*PKP	**PKPdf**	**05 52 46.9**	**-1.0**
SONM	**Songino Array**	**167.78**	**1**	PKPab	**PKPab**	**05 53 59.3**	**+1.1**
	comp=E,2.5nm,0.9s,baz=340,slow=2.8,SNR=11						
NJ2	**Nanjing**	**169.36**	**254**	*e*P	**PKPdf**	**05 52 52.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH	**PanZhiHua**	**169.95**	**153**	PKP	**PKPdf**	**05 52 51.8**	**-1.9**
GOMU	**GeErMu**	**170.26**	**83**	PKP	**PKPdf**	**05 52 52.8**	**-1.1**
GTA2	**Gaotai**	**173.20**	**53**	PKP	**PKPdf**	**05 52 55.6**	**+0.7**
HHC	**Hu-ho-hao-te**	**173.56**	**326**	*e*P	**PKPdf**	**05 52 49.3**	**-5.7**
BTO2	**Baotou**	**174.32**	**336**	*e*PKPbc	**PKPdf**	**05 52 50.8**	**-4.5**
BTO2				PKPab	**PKPab**	**05 54 23.0**	**-4.5**
BTO2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,340nm,7.6s						
CD2	**Chengdu**	**174.67**	**151**	PKP	**PKPdf**	**05 52 53.0**	**-2.6**

IDC ***18*** *05:35:43.0±3.6, 42.°03N×142.°63E, h69km±27km, mb3.6/10, mbtmp3.9/11, MS3.8/2, Error ellipse: s-maj=28.2km s-min=26.1km az=113.0*
NIED ***18*** *05:35:42.5, 42.°03N×142.°61E, h63km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.45; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-2.51; $M_{r\theta}$1.61; $M_{\theta\phi}$-0.04; $M_{\phi r}$2.90; Fault plane solution: $M_0$4.13000×10^{14} NP1: ϕ_s164.00000°, δ22.00000°, λ54.00000°. NP2:ϕ_s22.00000°, δ72.00000°, λ103.00000°.*
JMA ***18*** *05:35:42.5±0.2, 42.°0N±0.°8×142.°6E±0.°8, h63km±1km, MV3.6/40, S OFF URAKAWA*
JMA Felt I J1 at S OFF URAKAWA .

ISC 18 05:35:42.4±0.8, 42.°01N±0.°05×142.°58E±0.°04, h63km±6km, n29, σ0°48/41, mb3.9/10, 8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.30**	**25**	*i* P		**Pn**	**Sn**	**05 35 52.5**	**-0.3**
JNBK				S		**Sn**	**Sn**	**05 36 00.3**	**-0.1**
JSHD	**Hidakashinhida**	**0.41**	**348**	*i* P		**Pn**	**Sn**	**05 35 53.8**	**0.0**
JSHD				S		**Sn**	**Sn**	**05 36 02.4**	**+0.4**
JEM	**Erimo**	**0.43**	**88**	*i* P		**Pn**	**Sn**	**05 35 54.2**	**+0.3**
JEM				*e*S		**Sn**	**Sn**	**05 36 03.1**	**+0.9**
JTHR	**Tokachihiroo**	**0.60**	**62**	*i* P		**Pn**	**Sn**	**05 35 55.8**	**0.0**
JTHR				*e*S		**Sn**	**Sn**	**05 36 05.5**	**0.0**
JIAM	**Iburiatsuma**	**0.79**	**322**	P		**Pn**	**Sn**	**05 35 58.6**	**+0.7**
JBT2	**Biratori 2**	**0.79**	**348**	⇓*i*P		**Pn**	**Sn**	**05 35 57.6**	**-0.4**
JBT2				⇓S		**Sn**	**Sn**	**05 36 09.0**	**-0.3**
JCH	**Churui**	**0.84**	**43**	*i* P		**Pn**	**Sn**	**05 35 58.4**	**-0.2**
JCH				*e*S		**Sn**	**Sn**	**05 36 10.2**	**-0.2**
JFR	**Furan**	**1.16**	**0**	P		**Pn**	**Sn**	**05 36 02.6**	**-0.1**
JKB	**Kayabe**	**1.16**	**265**	⇓*i*P		**Pn**	**Sn**	**05 36 02.8**	**+0.1**
JKB				⇓S		**Sn**	**Sn**	**05 36 17.8**	**+0.1**
JEW	**Eniwo**	**1.18**	**315**	⇓*i*P		**Pn**	**Sn**	**05 36 03.0**	**+0.1**
JEW				⇓S		**Sn**	**Sn**	**05 36 19.1**	**+0.8**
JNB	**Noboribetsu**	**1.24**	**293**	⇓*i*P		**Pn**	**Sn**	**05 36 03.0**	**-0.6**
JNB				⇓S		**Sn**	**Sn**	**05 36 19.1**	**-0.4**
JOB	**Onbets**	**1.29**	**46**	*i* P		**Pn**	**Sn**	**05 36 05.2**	**+0.9**
JOT	**Ohata**	**1.31**	**242**	*i* P		**Pn**	**Sn**	**05 36 04.9**	**+0.3**
JOT				S		**Sn**	**Sn**	**05 36 22.1**	**+0.9**
JAB	**Ashibetsu**	**1.52**	**350**	P		**Pn**	**Sn**	**05 36 07.7**	**+0.2**
JAB				S		**Sn**	**Sn**	**05 36 26.6**	**+0.3**
JISS	**Ishikarishitsu**	**1.53**	**326**	*i* P		**Pn**	**Sn**	**05 36 07.8**	**+0.2**
JISS				*e*S		**Sn**	**Sn**	**05 36 27.1**	**+0.5**
JAR	**Ashorobuto**	**1.56**	**34**	*i* P		**Pn**	**Sn**	**05 36 08.0**	**0.1**
JAR				S		**Sn**	**Sn**	**05 36 27.1**	**-0.1**
ASAJ	**Asahikawa**	**2.11**	**0**	P		**Pn**	**Sn**	**05 36 16.7**	**+1.3**
	64nm,0.3s,baz=206,slow=12,SNR=57								
ASAJ				S			**Sn**	**05 36 41.0**	**+0.5**
	56nm,0.4s,baz=95,slow=32,SNR=7.8								
JHJ	**Hachijo jima 2**	**9.14**	**195**	LR		LR	LR	05 40 57.3	
	comp=Z,331nm,20.3s,baz=58,slow=34								
SONM	**Songino Array**	**26.11**	**295**	P		**P**	**05 41 10.2**	**-0.2**	
	0.4nm,0.5s,baz=86,slow=9.6,SNR=3.8								
	0.4nm,0.5s								
ZALV	**Zalesovo Beam**	**39.40**	**308**	P		**P**	**05 43 06.2**	**+0.5**	
	1.3nm,0.5s,baz=85,slow=8.0,SNR=7.6								
	1.3nm,0.5s								
MKAR	**Makanchi Array**	**42.42**	**298**	P		**P**	**05 43 31.1**	**+0.4**	
	1.3nm,0.9s,baz=81,slow=9.1,SNR=7.0								
	1.3nm,0.9s								
KURBB	**Kurchatov Arra**	**43.80**	**304**	P		**P**	**05 43 41.8**	**0.0**	
	1.7nm,0.6s,baz=76,slow=8.8,SNR=10								
	1.7nm,0.6s								
ILAR	**Eielson Array**	**44.86**	**35**	P		**P**	**05 43 50.0**	**0.0**	
	0.4nm,0.8s,baz=267,slow=5.3,SNR=5.2								
	0.4nm,0.8s								
BVAR	**Borovoye Array**	**48.01**	**309**	P		**P**	**05 44 14.7**	**-0.2**	
	0.8nm,0.3s,baz=75,slow=9.5,SNR=8.0								
	0.8nm,0.3s								
WRA	**Warramunga Arr**	**62.10**	**189**	P		**P**	**05 45 56.2**	**-0.5**	
	0.2nm,0.4s,baz=7.6,slow=6.6,SNR=2.2								
	0.2nm,0.4s								
FINES	**FINESS Array B**	**64.86**	**332**	P		**P**	**05 46 14.1**	**-0.3**	
	2.2nm,0.7s,baz=57,slow=7.0,SNR=7.5								
	2.2nm,0.7s								
HFS	**Hagfors**	**69.94**	**335**	P		**P**	**05 46 46.1**	**-0.4**	
	1.0nm,0.3s,baz=38,slow=5.4,SNR=7.9								
	1.0nm,0.3s								
NOA	**NORSAR Array B**	**69.96**	**337**	P		**P**	**05 46 46.6**	**-0.1**	
	0.8nm,0.7s,baz=36,slow=6.0,SNR=3.4								
	0.8nm,0.7s								
ELK	**Elko**	**71.70**	**51**	LR		LR	LR	06 12 58.1	
	comp=Z,138nm,21.1s,baz=321,slow=31								

IDC 18 05:42:34.8±1.8, 12.°14N×141.°32E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=50.3km s-min=37.7km az=64.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.61**	**192**	P		P	P	05 49 08.2	-0.2
	0.9nm,0.8s,baz=12,slow=9.5,SNR=4.9								
	0.9nm,0.8s								
ASAR	**Alice Springs**	**36.31**	**192**	P		P	P	05 49 40.4	-0.1
	0.3nm,0.5s,baz=18,slow=12,SNR=4.1								
	0.3nm,0.5s								
CMAR	**Chiang Mai Arr**	**41.28**	**284**	P		P	P	05 50 22.4	0.0
	0.9nm,0.3s,baz=81,slow=6.9,SNR=4.3								
	0.9nm,0.3s								
LPAZ	**La Paz**	**151.17**	**102**	PKPbc		PKPbc	PKPbc	06 02 31.6	-0.3
	1.6nm,0.6s,baz=290,slow=0.9,SNR=8.0								

CATAC ***18*** *05:42:52.7±0.4, 14.°N±3.°×8.°8W±.°, h60km±5km, M2.8/6, MLv2.8/6, Error ellipse: s-maj=6.9km s-min=4.0km az=4.4, confirmed*
SNET ***18*** *05:42:58.6±0.8, 13.°10N×88.°95W, h50km, ML2.8, Presumed earthquake*

ISC 18 05:43:00.2±2.1, 13.°3N±0.°2×88.°85W±0.°05, h57km±14km, n26, σ1°60/31, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.27**	**14**	S			**Sn**	**05 43 17.7**	**+0.9**
COEG	**Centro de Oper**	**0.34**	**354**	*e*P		**Pn**	**Sn**	**05 43 10.1**	**-0.4**
COEG				*e*S		**Sn**	**Sn**	**05 43 19.6**	**+1.7**
LFRS	**El Faro**	**0.40**	**329**	*e*S		**Sn**	**Sn**	**05 43 20.0**	**+1.0**
PAVA	**Las Pavas**	**0.44**	**349**	S		**Sn**	**Sn**	**05 43 19.6**	**-0.1**
PQSS	**Presa 15 de Se**	**0.44**	**39**	P		**Pn**	**Sn**	**05 43 03.2**	**-8.2**
PQSS				S		**Sn**	**Sn**	**05 43 14.2**	**-5.3**
LBRS	**Las Brisas**	**0.50**	**337**	*e*P		**Pn**	**Sn**	**05 43 12.1**	**0.0**
LALI	**Alcalda de L**	**0.51**	**295**	P		**Pn**	**Sn**	**05 43 11.6**	**-0.4**
PACA	**Pacayal**	**0.54**	**69**	*e*P		**Pn**	**Sn**	**05 43 12.4**	**-0.2**
PACA				*e*S		**Sn**	**Sn**	**05 43 24.3**	**+2.7**
RANC	**El Ranchito**	**0.56**	**74**	*e*P		**Pn**	**Sn**	**05 43 12.8**	**-0.1**
UEES	**Universidad Ev**	**0.58**	**319**	S		**Sn**	**Sn**	**05 43 23.3**	**+1.0**
UEES	**Universidad Ev**	**0.58**	**319**	*e*S		**Sn**	**Sn**	**05 43 23.0**	**+0.7**
PIC2	**El Picacho**	**0.61**	**319**	*e*P		**Pn**	**Sn**	**05 43 13.0**	**-0.6**
PIC2				*e*S		**Sn**	**Sn**	**05 43 24.4**	**+1.2**
BLLM	**Bellamira**	**0.61**	**74**	*e*P		**Pn**	**Sn**	**05 43 12.8**	**-0.6**
PMON	**Piamonte**	**0.63**	**314**	P		**Pn**	**Sn**	**05 43 12.1**	**-1.5**
PMON				S		**Sn**	**Sn**	**05 43 24.9**	**+1.5**
PMON	**Piamonte**	**0.63**	**314**	*e*P		**Pn**	**Sn**	**05 43 13.1**	**-0.5**
PMON				*e*S		**Sn**	**Sn**	**05 43 23.5**	**+0.1**
JAYA	**Jayaque - finc**	**0.70**	**303**	P		**Pn**	**Sn**	**05 43 13.2**	**-1.3**
JAYA	**Jayaque - finc**	**0.70**	**303**	*e*S		**Sn**	**Sn**	**05 43 24.4**	**-0.4**
CEDA	**San Andres**	**0.75**	**314**	S		**Sn**	**Sn**	**05 43 26.8**	**+1.1**
CEVE	**Cerro Verde**	**0.93**	**306**	S		**Sn**	**Sn**	**05 43 32.7**	**+2.4**
SBLS	**San Blas**	**0.94**	**307**	*e*P		**Pn**	**Sn**	**05 43 17.0**	**-0.7**
SBLS				*e*S		**Sn**	**Sn**	**05 43 31.2**	**+0.8**
UNIC	**Universidad Ca**	**0.98**	**316**	P		**Pn**	**Sn**	**05 43 12.9**	**-5.1**
UNIC				S		**Sn**	**Sn**	**05 43 32.8**	**+1.8**
NUBE	**Las Nubes**	**1.10**	**305**	P		**Pn**	**Sn**	**05 43 18.4**	**-1.2**
SLOZ	**Alcaldia de Sa**	**1.18**	**309**	S		**Sn**	**Sn**	**05 43 37.3**	**+1.5**
FAME	**Alcaldia de Sa**	**1.27**	**296**	P		**Pn**	**Sn**	**05 43 19.9**	**-1.8**
ESQI	**Esquipulas**	**1.36**	**339**	P		**Pn**	Pn	05 43 13.2	-10
YUSH	**Yuscaran**	**2.06**	**71**	P		**Pn**	Pn	05 43 16.0	-17
YUSH				S			**Sn**	**05 43 32.5**	**-0.1**

MEX 18 06:10:42.1±0.3, 19.°43N×102.°32W, h19km±4km, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URUA	**Uruapan**	**0.23**	**91**	*e*P		**Pn**	Pb	06 10 46.6	-0.9
URUA				*i* S		Sb	Sb	06 10 49.8	-1.2
MOIG	**Morelia**	**1.09**	**76**	*e*P		**Pn**	Pb	06 11 01.6	-0.9
MOIG				*e*S		Sb	Sb	06 11 14.4	-2.1
INCO	**Volcan de Coli**	**1.22**	**275**	*e*P		**Pn**	Pb	06 11 05.0	+0.2
INCO				*e*S		Sg	Sg	06 11 22.3	+0.5
SOMAC	**Volcano de Col**	**1.24**	**275**	*e*P		**Pn**	Pg	06 11 05.8	-0.5
SOMAC				*e*S		Sg	Sg	06 11 22.6	0.0
CEGR	**Campo Tres**	**1.46**	**269**	*e*P		**Pn**	Pb	06 11 08.8	0.0
CEGR				*e*S		Sg	Sg	06 11 28.4	-0.9
MMIG	**Aquila**	**1.49**	**221**	*e*P		**Pn**	Pb	06 11 08.5	+0.6
MMIG				*e*S		Sb	Sb	06 11 28.5	+1.0
CDAR	**Ciudad de Arme**	**1.67**	**254**	*e*P		**Pn**	Pb	06 11 11.8	-0.5
CDAR				*e*S		Sb	Sb	06 11 33.8	+0.8
ZIIG	**Zihuatanejo**	**1.98**	**156**	*e*P		**Pn**	Pb	06 11 15.4	+0.8
ZIIG				*e*S		Sb	Sb	06 11 43.9	+2.0
ARIG	**Puente Sto Nin**	**2.18**	**121**	*e*P		**Pn**	Pb	06 11 21.1	0.0
ARIG				*e*S		Sb	Sb	06 11 48.3	+0.5
CJM	**Chamela**	**2.58**	**272**	*e*P	

CO02	**Combarbal**	**4.72**	**26**			**Pn**	**06 18 07.2**	**+1.4**
LR05	**Currie**	**4.85**	**167**			**Pn**	**06 18 07.5**	**+0.1**
LR05	**Currie**	**4.85**	**167**	*eP*		**Pn**	**06 18 08.0**	**+0.7**
LR05				*eS*		**Sb**	**06 19 21.0**	**+3.2**
LR05				IAML			06 19 27.5	
	comp=Z,188nm,1.4s							
RTLS	**Leoncito**	**5.02**	**44**	*eP*		Pn	06 18 14.2	+4.1
RTLS				*eS*		**Sb**	**06 19 28.5**	**+5.4**
RTLS				IAML			06 19 45.7	
	comp=Z,673nm,1.0s							
CO06	**Fray Jorge**	**5.03**	**17**			**Pn**	**06 18 11.2**	**+1.4**
CO03	**El Pedregal**	**5.17**	**27**			**Pn**	**06 18 13.4**	**+1.6**
CO03	**El Pedregal**	**5.17**	**27**	*eP*		**Pn**	**06 18 13.7**	**+1.9**
CO03				*eS*		**Sn**	**06 19 13.8**	**+2.0**
CO03				IAML			06 19 50.2	
	comp=Z,201nm,0.8s							
ZON	**Zonda**	**5.57**	**46**			**Pn**	**06 18 18.8**	**+1.5**
PLCA	**Paso Flores**	**5.69**	**158**	Pn		**Pn**	**06 18 18.5**	**-0.4**
GO04	**Tololo Observa**	**5.74**	**23**	Pn		**Pn**	**06 18 22.5**	**+2.7**
LL05	**Los Muermos**	**5.90**	**181**	Pn		**Pn**	**06 18 21.6**	**-0.2**
CO01	**Juntas del Tor**	**6.16**	**28**			**Pn**	**06 18 28.2**	**+2.6**
LCO	**Las Campanas**	**6.85**	**20**	Pn		**Pn**	**06 18 36.3**	**+1.1**
LL01	**San Ignacio de**	**6.92**	**174**	Pn		**Pn**	**06 18 34.3**	**-1.4**
AC05	**El Transito**	**7.14**	**23**			**Pn**	**06 18 41.0**	**+2.0**
AC04	**Llanos de Chal**	**7.53**	**16**	Pn		**Pn**	**06 18 44.8**	**+0.6**
GO07	**Milladeo Hill,**	**7.61**	**182**	Pn		**Pn**	**06 18 45.6**	**+0.3**
GO03	**Copiapo**	**8.32**	**20**	Pn		**Pn**	**06 18 56.6**	**+1.4**
AC02	**Maricunga**	**9.37**	**24**			**Pn**	**06 19 11.1**	**+1.2**
TRQA	**Tornquist**	**9.50**	**109**	Pn		**Pn**	**06 19 11.2**	**0.0**
GO02	**Mina Guanaco**	**10.81**	**19**	Pn		**Pn**	**06 19 30.4**	**+1.0**
PB14	**IPOC Station P**	**11.14**	**14**	Pn		**Pn**	**06 19 34.9**	**+0.9**
PB08	**IPOC Station P**	**15.74**	**15**	Pn		**P**	**06 20 38.0**	**-2.7**
PB11	**IPOC Station P**	**16.02**	**13**	Pn		**P**	**06 20 40.9**	**-2.5**
PB11				IAmb		IAmb	06 20 56.3	
	comp=Z,23nm,0.9s							
GO01	**Chusmiza**	**16.20**	**14**	Pn		**Pn**	**06 20 43.3**	**+0.7**
PB16	**IPOC Station P**	**17.44**	**12**	Pn		**P**	**06 20 58.6**	**-1.1**
PB16				IAmb		IAmb	06 21 13.9	
	comp=Z,17nm,1.2s							
LPAZ	**La Paz**	**19.70**	**15**	P		**Pn**	**06 21 24.9**	**-1.1**
LPAZ				IAmb		IAmb	06 21 41.9	
	comp=Z,4.9nm,0.8s							
ITAB	**Concordia**	**19.91**	**71**	P		**Pn**	**06 21 26.4**	**-1.4**
ITAB				IAmb		IAmb	06 21 48.5	
	comp=Z,13nm,1.0s							
AQDB	**Aquidauana**	**21.58**	**51**			**P**	**06 21 45.4**	**+1.1**
AQDB				IAmb		IAmb	06 21 54.1	
	comp=Z,17nm,1.0s							
TRCB	**Terra Rica**	**22.05**	**61**	P		**P**	**06 21 50.1**	**+0.7**
TRCB				IAmb		IAmb	06 22 01.2	
	comp=Z,14nm,0.8s							
PTLB	**Pontes e Lacer**	**23.70**	**36**			**P**	**06 22 07.3**	**+0.9**
PTLB				IAmb		IAmb	06 22 08.4	
	comp=Z,4.9nm,1.0s							
VILB	**Vilhena**	**25.41**	**31**	P		**P**	**06 22 24.1**	**+1.9**
MACA	**Manacapuru-AM**	**34.26**	**23**	P		**P**	**06 23 41.8**	**+1.0**

BJI **18** *06:21:59.1, 1.°57N×128.°43E, h51km, mb4.7/56, mB5.2/14, Ms4.7/3, Ms7 4.4/3*
DJA **18** *06:22:01.6±0.2, 2.°N±2.°×12.°8E±.°, h10km, M5.0/64, mB5.5/32, mb5.1/64, MLv5.0/29, Mw(mB)4.9/32*
IDC **18** *06:22:04.8±1.7, 2.°10N×128.°06E, h47km±18km, mb4.1/22, mbtmp4.4/25, ML4.8/3, MS3.5/12, Error ellipse: s-maj=19.3km s-min=10.1km az=67.0*
NEIC **18** *06:22:05.8±2.3, 2.°08N±0.°06×127.°96E±0.°06, h48km±7km, mb4.9/65, Error ellipse: s-maj=8.7km s-min=8.1km az=81.0*
ISC 18 06:22:05.3±0.3, 2.°09N±0.°04×127.°93E±0.°05, h50km, n211, σ1§49/202, mb4.8/78, MS3.4/11, 2C, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.29**	**210**	P		Pn	06 22 08.1	-6.3
GAMI				S		**Sn**	**06 22 15.2**	**-5.6**
TNTI	**Ternate**	**1.43**	**203**			**Pn**	**06 22 27.2**	**-1.6**
TNTI					Sn	**Sn**	**06 22 47.5**	**+1.1**
TNTI	**Ternate**	**1.43**	**203**	P		**Pn**	**06 22 27.2**	**-1.6**
TNTI				S		**Sn**	**06 22 47.3**	**+0.8**
SGSI	**Sangihe**	**2.88**	**303**	P		**Pn**	**06 22 46.9**	**-1.8**
MNI	**Manado**	**3.16**	**258**	P		**Pn**	**06 22 51.8**	**-0.8**
SWI	**Sorong**	**4.43**	**131**	P		**Pn**	**06 23 09.5**	**-0.6**
SIJI	**Sorong**	**4.44**	**131**	P		**Pn**	**06 23 09.3**	**-0.9**
	27nm,0.3s,baz=336,slow=21,SNR=34							
SIJI				S		**Sn**	**06 23 58.2**	**-2.5**
	76nm,0.5s,baz=134,slow=20,SNR=9.5							
SIJI				LR		LR	06 25 12.2	
	comp=Z,723nm,21.1s,baz=250,slow=43 44nm,0.3s							
SIJI	**Sorong**	**4.44**	**131**	P		**Pn**	**06 23 10.1**	**-0.1**
SANI	**Sanana**	**4.55**	**205**	P		**Pn**	**06 23 10.7**	**-1.0**
GTOI	**Gorontalo**	**5.13**	**254**	P		**Pn**	**06 23 20.1**	**+0.5**
	1.0nm3μm282nm,0.6s							
NLAI	**Namlea**	**5.36**	**189**	P		**Pn**	**06 23 23.2**	**+0.4**
	0.4nm113nm,0.7s							
KRAI	**Karang Ratu**	**5.39**	**175**	P		**Pn**	**06 23 25.3**	**+2.0**
	104nm,0.6s							
DAV	**Davao City (W)**	**5.48**	**335**	P		**Pn**	**06 23 25.5**	**+1.1**
	75nm,0.3s,baz=135,slow=5.5,SNR=4.7							
DAV				LR		LR	06 25 02.4	
	comp=Z,320nm,20.9s,baz=52,slow=32 226nm,0.4s							
DAV	**Davao City (W)**	**5.48**	**335**	Pn		**Pn**	**06 23 25.3**	**+0.9**
MSAI	**Masohi**	**5.49**	**170**	P		**Pn**	**06 23 25.9**	**+1.3**
LUWI	**Luwuk**	**6.03**	**239**			**Pn**	**06 23 33.2**	**+1.3**
LUWI	**Luwuk**	**6.03**	**239**	P		**Pn**	**06 23 31.3**	**-0.6**
	1.2nm3μm186nm,0.6s							
MRSI	**Marisa**	**6.20**	**255**	P		**Pn**	**06 23 33.3**	**-1.1**
	0.8nm2μm224nm,0.7s							
FAKI	**Fak Fak**	**6.58**	**139**			**Pn**	**06 23 39.6**	**0.0**
FAKI	**Fak Fak**	**6.58**	**139**	P		**Pn**	**06 23 39.3**	**-0.3**
	0.4nm111nm,1.2s							
APSI	**Ampana**	**6.96**	**245**	P		**Pn**	**06 23 43.5**	**-1.2**
	0.7nm2μm173nm,0.8s							
RKPI	**Ransiki, Papua**	**7.19**	**120**	P		**Pn**	**06 23 48.0**	**0.0**
	0.9nm8μm187nm,0.7s							
TOLI2	**Tolitoli**	**7.21**	**262**			**Pn**	**06 23 46.6**	**-1.7**
KDI	**Kendari**	**8.02**	**221**	P		**Pn**	**06 23 58.8**	**-0.5**
MPSI	**Mapaga**	**8.22**	**258**	P		**Pn**	**06 23 59.4**	**-2.6**
KKSI	**Kolaka, Sulawe**	**8.84**	**225**	P		**Pn**	**06 24 10.1**	**-0.4**
	100nm,0.8s							
SRPI	**Serui, Papua**	**9.19**	**115**	P		**Pn**	**06 24 15.1**	**-0.2**
BBSI	**Bau Bau**	**9.24**	**215**	P		**Pn**	**06 24 16.2**	**+0.2**
	151nm,1.1s							
TTSI	**Tana Toraja**	**9.58**	**238**	P		**Pn**	**06 24 18.4**	**-2.3**
	2μm93nm,0.7s							
MYLDM	**Lahad Datu**	**9.90**	**288**			**Pn**	**06 24 26.3**	**+1.2**
MYLDM	**Lahad Datu**	**9.90**	**288**	P		**Pn**	**06 24 25.9**	**+0.8**
	82nm,0.8s							
SPSI	**Sidrap Palu**	**10.14**	**234**	P		**Pn**	**06 24 28.0**	**-0.3**
	2μm86nm,0.8s							
SAUI	**Saumlaki**	**10.55**	**161**	Pn		**Pn**	**06 24 34.7**	**+0.7**
KAPI	**Kappang**	**10.80**	**229**	P		**Pn**	**06 24 36.6**	**-0.8**
	4.3nm,0.3s,baz=337,slow=0.5,SNR=9.0							
KAPI				LR		LR	06 30 02.7	
	comp=Z,173nm,18.3s,baz=64,slow=44 19nm,0.5s							
KAPI	**Kappang**	**10.80**	**229**			**Pn**	**06 24 37.9**	**+0.5**
EDFI	**Ende, Flores**	**12.44**	**210**	P		**Pn**	**06 25 00.4**	**+0.5**
DBNI	**Kabupaten Domp**	**14.24**	**222**	P		**P**	**06 25 33.4**	**+3.1**
WBSI	**Waikabubak, Su**	**14.43**	**216**	P		**P**	**06 25 32.5**	**0.0**
PLAI	**Plampang**	**14.84**	**223**	P		**Pn**	**06 25 33.5**	**+1.3**
	102nm,1.0s							
MTN	**Manton Dam**	**15.17**	**168**	Pn		**Pn**	**06 25 36.5**	**0.0**
MTN				IAmb		IAmb	06 25 37.0	
	comp=Z,106nm,1.9s							
TWSI	**Taliwang, Sumb**	**15.40**	**226**	P		**Pn**	**06 25 41.7**	**+2.3**
	comp=Z,1μmcomp=Z,161nm,1.2s							
SBUM	**Sibu**	**15.71**	**272**	Pn		**Pn**	**06 25 42.3**	**-1.2**
SBUM	**Sibu**	**15.71**	**272**	P		**P**	**06 25 46.1**	**-0.6**
KLNI	**Mataram**	**15.76**	**228**	P		**Pn**	**06 25 44.2**	**+0.1**
	comp=Z,88nm,0.9s							
KHKI	**Kahang-Kahang**	**16.09**	**230**	P		**P**	**06 25 51.9**	**+1.0**
	comp=Z,972nmcomp=Z,99nm,0.9s							
SRBI	**Singaraja**	**16.22**	**231**	P		**P**	**06 25 52.1**	**-0.3**
	comp=Z,2μmcomp=Z,132nm,1.0s							
RTBI	**Rangdo, Negare**	**16.66**	**231**	P		**P**	**06 25 57.6**	**+0.3**
	comp=Z,1μmcomp=Z,81nm,0.7s							
ABJI	**Asem Bagus**	**16.83**	**234**	P		**P**	**06 26 01.0**	**+1.9**
JAGI	**Jajag, Banyuwa**	**17.29**	**232**	P		**P**	**06 26 04.8**	**+0.6**
JAGI				IAmb		IAmb	06 26 08.0	
	comp=Z,123nm,1.0s							
JAGI	**Jajag, Banyuwa**	**17.29**	**232**	P		**Pn**	**06 26 04.0**	**+0.7**
	comp=Z,1μmcomp=Z,138nm,1.0s							
BLJI	**Banyuglugur**	**17.32**	**236**	P		**Pn**	**06 26 04.7**	**+1.0**
	comp=Z,3μmcomp=Z,97nm,0.6s							
KNRA	**Kununurra**	**17.67**	**177**			**P**	**06 26 08.7**	**+0.3**
SJI	**Sawahan**	**18.85**	**239**	P		**P**	**06 26 22.6**	**+1.1**
	comp=Z,61nm,0.6s							
SNJI	**Sawahan-Nganju**	**18.88**	**239**	P		**Pn**	**06 26 23.2**	**+0.3**
	comp=Z,66nm,1.2s							
NGJI	**Ngawi**	**18.93**	**240**	P		**Pn**	**06 26 24.4**	**+1.0**
	comp=Z,93nm,0.9s							
PCJI	**Pacitan**	**19.59**	**238**	P		**P**	**06 26 31.0**	**+1.6**
UGM	**Wanagama**	**20.01**	**240**			**P**	**06 26 34.6**	**+0.5**
UGM				IAmb		IAmb	06 26 38.7	
	comp=Z,62nm,0.9s							
FITZ	**Fitzroy Crossi**	**20.19**	**186**	P		**P**	**06 26 35.8**	**-0.1**
	comp=Z,11nm,0.7s,baz=12,slow=8.9,SNR=17 comp=Z,11nm,0.7s							
GUMO	**Guam**	**20.27**	**55**	LR		LR	06 33 16.6	
	comp=Z,172nm,20.2s,baz=288,slow=33							
CTJI	**Waduk Cacaban**	**20.78**	**244**	P		**P**	**06 26 43.8**	**+1.4**
	comp=Z,5μmcomp=Z,116nm,1.0s							
KPJI	**Karang Pucung**	**21.15**	**244**	P		**P**	**06 26 44.8**	**-1.6**
	comp=Z,53nm,0.7s							
TWG	**Pinlang**	**21.66**	**343**	P		**P**	**06 26 49.4**	**-2.3**
TWG				IAmb		IAmb	06 27 10.1	
	comp=Z,33nm,0.8s							
COEN	**Coen**	**21.97**	**137**			**P**	**06 26 56.8**	**+1.7**
YULB	**Yu-li**	**22.13**	**344**	P		**P**	**06 26 54.5**	**-2.4**
YULB				IAmb		IAmb	06 27 18.3	
	comp=Z,63nm,1.4s							
TPUB	**Ta-pu**	**22.24**	**342**			**P**	**06 26 56.6**	**-1.4**
TPUB				IAmb		IAmb	06 26 58.3	
	comp=Z,54nm,0.7s							
BBJI	**Bungbulang**	**22.35**	**245**			**P**	**06 26 58.4**	**-1.0**
BBJI				IAmb		IAmb	06 27 00.5	
	comp=Z,30nm,0.9s							
BBJI	**Bungbulang**	**22.35**	**245**	P		**P**	**06 27 00.6**	**+1.2**
	comp=Z,34nm,0.8s							
WB0	**Waramunga Arr**	**22.63**	**164**			**P**	**06 27 01.7**	**-0.5**
WRAB	**Tennant Creek**	**22.77**	**164**	P		**P**	**06 27 04.8**	**+1.0**
WRA	**Warramunga Arr**	**22.78**	**164**	P		**P**	**06 27 03.2**	**-0.6**
	comp=Z,12nm,0.6s,baz=341,slow=10,SNR=72 comp=Z,12nm,0.6s							
WRA	**Warramunga Arr**	**22.78**	**164**			**P**	**06 27 03.1**	**-0.7**
YHNB	**Yeheng**	**23.32**	**345**	P		**P**	**06 27 10.9**	**+1.6**
MYKOM	**Kota Tinggi**	**24.07**	**270**	P		**P**	**06 27 15.7**	**-0.6**
MYKOM				IAmb		IAmb	06 27 39.2	
	comp=Z,25nm,1.1s							
KNMB	**Chin-men Tao**	**24.08**	**338**	P		**P**	**06 27 17.2**	**+1.0**
KNMB				IAmb		IAmb	06 27 29.0	
	comp=Z,42nm,1.1s							
KLSI		**24.14**	**254**	P		**P**	**06 27 17.0**	**+0.1**
	comp=Z,29nm,0.9s							
MBWA	**Marble Bar**	**24.46**	**199**	P		**P**	**06 27 18.4**	**-1.3**
	comp=Z,76nm,0.8s							
MBWA	**Marble Bar**	**24.46**	**199**			**P**	**06 27 18.8**	**-0.9**
MBWA				IAmb		IAmb	06 27 20.1	
	comp=Z,48nm,0.8s							
JOW	**Kunigami**	**24.60**	**1**	LR		LR	06 36 31.3	
	comp=Z,74nm,20.4s,baz=36,slow=35							
MDSI	**Maura Dua**	**24.62**	**255**	P		**P**	**06 27 21.0**	**-0.3**
PSAC2	**Pilbara Seismi**	**24.79**	**198**	P		**P**	**06 27 22.2**	**-0.5**
	comp=Z,62nm,1.1s							
PSAC1	**Pilbara Seismi**	**24.79**	**198**	P		**P**	**06 27 21.3**	**-1.4**
	comp=Z,60nm,1.0s							
PSA00	**Pilbara Seismi**	**24.81**	**198**	P		**P**	**06 27 22.1**	**-0.9**
	comp=Z,56nm,1.0s							
PSA00	**Pilbara Seismi**	**24.81**	**198**			**P**	**06 27 22.0**	**-0.9**
PSA00				IAmb		IAmb	06 27 22.9	
	comp=Z,42nm,0.8s							
PSA00	**Pilbara Seismi**	**24.81**	**198**			**P**	**06 27 22.5**	**-0.5**
PSA00				IAmb		IAmb	06 27 22.9	
	comp=Z,31nm,0.9s							
QIS	**Mount Isa**	**25.25**	**154**	P		**P**	**06 27 27.7**	**+0.8**
	comp=Z,85nm,0.8s							
MNAI	**Manna**	**25.77**	**256**	P		**P**	**06 27 31.9**	**+0.2**
AS31	**Alice Springs**	**26.25**	**168**	P		**P**	**06 27 36.3**	**+0.3**
ASAR	**Alice Springs**	**26.25**	**168**	P		**P**	**06 27 35.9**	**-0.1**
	comp=Z,1nm,0.5s,baz=354,slow=7.5,SNR=49							
ASAR				PcP		**PcP**	**06 31 01.6**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=344,slow=2.4,SNR=4.1							
ASAR				LR		LR	06 40 21.8	
	comp=Z,184nm,18.9s,baz=60,slow=42 comp=Z,2.1nm,0.5s							
ASAR	**Alice Springs**	**26.25**	**168**	P		**P**	**06 27 37.5**	**+1.5**
WRKA	**Warakurna**	**26.97**	**179**	P		**P**	**06 27 42.1**	**-0.4**
	comp=Z,7.0nm,0.8s							
GIRL	**Giralia**	**27.98**	**208**	P		**P**	**06 27 52.6**	**+1.1**
MEEK	**Meekatharra**	**29.94**	**197**	P		**P**	**06 28 07.7**	**-1.2**
	comp=Z,31nm,2.4s							
GSI	**Gunungsitoli**	**30.36**	**269**	P		**P**	**06 28 11.5**	**-1.2**
GSI				IAmb		IAmb	06 28 12.0	
	comp=Z,15nm,0.8s							
JNU	**Nakatsue**	**30.99**	**5**	LR		LR	06 40 13.5	
	comp=Z,43nm,20.2s,baz=193,slow=35							
NJ2	**Nanjing**	**31.01**	**345**	*eP*		**P**	**06 28 20.1**	**+1.9**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.6s							
WHN	**Wuhan**	**31.09**	**337**	P		**P**	**06 28 21.3**	**+2.4**
INKA	**Innaminka**	**32.12**	**158**	P		**P**	**06 28 29.4**	**+1.4**
FORT	**Forrest**	**32.69**	**180**	P		**P**	**06 28 32.7**	**-0.2**
FORT				IAmb		IAmb	06 28 51.7	
	comp=Z,12nm,0.8s							
CMAR	**Chiang Mai Arr**	**32.74**	**302**	P		**P**	**06 28 34.4**	**+0.7**
	comp=Z,1.6nm,0.4s,baz=110,slow=8.6,SNR=12							
CMAR				LR		LR	06 44 40.9	
	comp=Z,36nm,18.0s,baz=90,slow=41 comp=Z,1.6nm,0.4s							
MORW	**Morawa**	**33.01**	**199**	P		**P**	**06 28 34.7**	**-1.1**
MORW	**Morawa**	**33.01**	**199**	P		**P**	**06 28 35.0**	**-0.9**
MORW				IAmb		IAmb	06 28 35.6	
	comp=Z,16nm,0.7s							
KMBL	**Kambalda**	**33.77**	**189**	P		**P**	**06 28 41.6**	**-0.8**
	comp=Z,10nm,1.1s							
HNR	**Honiara**	**33.88**	**110**	LR		LR	06 42 59.7	
	comp=Z,5.2nm,19.5s,baz=7.5,slow=37							
BLDU	**Ballidu**	**34.24**	**197**	P		**P**	**06 28 45.2**	**-1.3**
	comp=Z,36nm,1.3s							
KLBR	**Kellerberrin**	**34.87**	**195**	P		**P**	**06 28 50.8**	**-1.2**
	comp=Z,84nm,0.6s							
PZH	**PanZhiHua**	**34.95**	**316**	P		**P**	**06 28 55.1**	**+2.2**
KSRS	**Korea Array**	**35.19**	**360**	P		**P**	**06 28 54.0**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=175,slow=10,SNR=11							
KSRS				LR		LR	06 41 34.5	
	comp=Z,30nm,21.2s,baz=110,slow=33 comp=Z,4.0nm,0.7s							
EIDS	**Eidsvold**	**35.33**	**142**	P		**P**	**06 28 56.6**	**+0.7**
	comp=Z,18nm,1.1s							
EIDS	**Eidsvold**	**35.33**	**142**			**P**	**06 28 56.7**	**+0.7**
EIDS				IAmb		IAmb	06 29 03.6	
	comp=Z,12nm,0.8s							
LYN	**LuoYang**	**35.37**	**338**	*eP*		**P**	**06 28 58.0**	**+1.8**
LYN				pP		pP	06 29 08.0	-1.0
LYN				pmax		pmax		
	comp=Z,10.0nm,0.9s							
BBOO	**Buckleboo**	**35.55**	**168**	P		**P**	**06 28 57.1**	**-0.7**
MJAR	**Matsushiro Arr**	**35.57**	**14**	P		**P**	**06 28 56.3**	**-1.6**
	comp=Z,3.1nm,0.6s,baz=184,slow=9.5,SNR=7.5 comp=Z,3.1nm,0.6s							
MJAR	**Matsushiro Arr**	**35.57**	**14**	IAmb		IAmb	06 29 21.2	
	comp=Z,20nm,1.6s							
MUN	**Mundaring**	**35.66**	**197**	P		**P**	**06 28 57.7**	**-1.1**
	comp=Z,57nm,1.5s							
STKA	**Stephens Creek**	**36.19**	**160**	P		**P**	**06 29 03.3**	**+0.1**
	comp=Z,143nm,0.7s							
STKA	**Stephens Creek**	**36.19**	**160**	P		**P**	**06 29 03.6**	**+0.3**
	comp=Z,14nm,0.7s,baz=332,slow=9.5,SNR=23							
STKA				LR		LR	06 46 39.5	
	comp=Z,160nm,20.3s,baz=14,slow=41 comp=Z,14nm,0.7s							
STKA	**Stephens Creek**	**36.19**	**160**			**P**	**06 29 04.0**	**+0.7**
NWAO	**Narrogin (SRO)**	**36.27**	**195**	P		**P**	**06 29 03.1**	**-0.8**
	comp=Z,40nm,0.7s							
NWAO	**Narrogin (SRO)**	**36.27**	**195**			**P**	**06 29 03.4**	**-0.6**
NWAO	**Narrogin (SRO)**	**36.27**	**195**	P		**P**	**06 29 03.2**	**-0.8**
TNCH	**TengChong**	**36.39**	**311**	P		**P**	**06 29 07.4**	**+2.0**
TNCH				pP		pP	06 29 19.9	+1.7
TNCH				S		**S**	**06 34 39.9**	**-3.8**
TNCH				sS		sS	06 35 07.8	+2.0
TNCH				ScS		**ScS**	**06 39 11.0**	**-7.3**
TNCH				pmax		pmax		
	comp=Z,25nm,0.6s							
TNCH				pmax		pmax		
	comp=Z,180nm,4.9s							
TNCH				LR		LR		
	comp=Z,1μm,18.8s							
TNCH				LR		LR		
	comp=Z,1μm,14.4s							
TNCH				LR		LR		
	comp=Z,220nm,15.6s							
XAN	**Xi'an**	**36.41**	**333**	P		**P**	**06 29 05.1**	**-0.1**
XAN				pmax		pmax		
	comp=Z,35nm,1.3s							
HNS	**HongShan**	**37.19**	**342**	⇑P		**P**	**06 29 12.4**	**+0.7**
HNS				pmax		pmax		
	comp=Z,12nm,1.0s							
RKGY	**Rocky Gully**	**37.93**	**195**	P		**P**	**06 29 18.4**	**+0.4**
	comp=Z,118nm,0.9s							
BJI2	**Beijing**	**39.24**	**346**	P		**P**	**06 29 29.4**	**+0.5**
BJI2				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BJT	**Baijiatuau**	**39.24**	**346**	P		**P**	**06 29 29.8**	**+0.9**
BJT				IAmb		IAmb	06 29 51.9	
	comp=Z,10nm,0.7s							
LZDM	**Lanzhou Array**	**40.49**	**329**	P		**P**	**06 29 43.1**	**+3.3**
	comp=Z,7.6nm,0.7s,baz=160,slow=10,SNR=18							
LZH	**Lanzhou**	**40.52**	**329**	*eP*		**P**	**06 29 41.3**	**+1.5**
LZH				sP		sP	06 29 58.0	-0.9
LZH				pmax		pmax		
	comp=Z,31nm,1.5s							
H11S3	**WAKE ISLAND Hy**	**41.32**	**64**	T		T	07 13 34.4	
	baz=252,slow=75,SNR=36							
HHC	**Hu-ho-hao-te**	**41.33**	**341**	*eP*		**P**	**06 29 51.1**	**+4.8**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,300nm,4.3s							
H11S2	**WAKE ISLAND Hy**	**41.34**	**64**	T		T	07 13 34.1	
	baz=252,slow=75,SNR=23							
H11S1	**WAKE ISLAND Hy**	**41.34**	**64**	T		T	07 13 35.5	
	baz=252,slow=75,SNR=13							
SHL	**Shillong**	**41.81**	**307**	P		**P**	**06 29 50.0**	**-0.6**
SHL				IAmb		IAmb	06 29 55.3	
	comp=Z,21nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**41.90**	**62**	T		T	07 14 51.7	
	baz=248,slow=75,SNR=45							
H11N2	**WAKE ISLAND Hy**	**41.91**	**62**	T		T	07 14 53.8	
	baz=248,slow=75,SNR=6.9							
H11N3	**WAKE ISLAND Hy**	**41.92**	**62**	T		T	07 14 52.6	
	baz=248,slow=75,SNR=62							
USRK	**Ussuriysk Ar.**	**42.09**	**4**	P		**P**	**06 29 50.6**	**-1.7**
	comp=Z,4.1nm,0.7s,baz=127,slow=6.4,SNR=3.1 comp=Z,4.1nm,0.7s							
TOO	**Toolangi**	**42.69**	**159**	P		**P**	**06 29 57.5**	**+0.1**
XLT	**XiLinHaoTe**	**42.94**	**347**	*eP*		**P**	**06 29 59.8**	**+0.4**
XLT				pmax		pmax		
	comp=Z,9.0nm,1.0s							
BNX	**BinXian**	**43.47**	**359**	⇑P		**P**	**06 30 03.8**	**+0.2**
BNX				pmax		pmax		
	comp=Z,6.0nm,1.1s							
ASAJ	**Asahikawa**	**43.82**	**15**	LR		LR	06 47 16.4	
	comp=Z,104nm,20.4s,baz=155,slow=34							
LSA	**Lhasa**	**44.42**	**312**	P		**P**	**06 30 10.6**	**-1.4**
LSA				IAmb		IAmb	06 30 25.9	
	comp=Z,9.0nm,0.6s							
LSA	**Lhasa**	**44.42**	**312**	P		**P**	**06 30 09.9**	**-2.1**
LSA				pmax		pmax		
	comp=Z,5.0nm,0.6s							
GTA2	**Gaotai**	**45.20**	**329**	*eP*		**P**	**06 30 19.8**	**+2.2**
GTA2				pmax		pmax		
	comp=Z,11nm,0.9s							
GOMU	**GeErMu**	**45.71**	**322**	P		**P**	**06 30 24.0**	**+2.0**
GOMU				pmax		pmax		
	comp=Z,3.0nm,1.0s							
EVN	**Everest**	**46.93**	**307**	P		**P**	**06 30 32.0**	**-0.1**
EVN				IAmb		IAmb	06 30 43.1	
	comp=Z,17nm,0.8s							
HILR	**Hailar Array B**	**47.80**	**353**	P		**P**	**06 30 37.6**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=181,slow=8.9,SNR=4.5 comp=Z,1.9nm,0.5s							
ULN	**Ulaanbaatar**	**49.04**	**341**			**P**	**06 30 48.8**	**+1.3**
ULN				IAmb		IAmb	06 30 49.9	
	comp=Z,8.9nm,1.0s							
SONM	**Songino Array**	**49.23**	**341**	P		**P**	**06 30 49.6

	comp=Z,1.1nm,0.4s							
M14K	**Bethel**	**78.55**	**28**	P		**P**	**06 34 02.2**	**+1.0**
E18K	**Tukpahlearik C**	**81.02**	**22**			**P**	**06 34 15.3**	**+0.8**
E18K				IAmb		IAmb	06 34 34.5	
	comp=Z,21nm,1.8s							
C18K	**Utukok River**	**81.16**	**20**	P		**P**	**06 34 15.8**	**+0.5**
VNDA	**Vanda**	**81.66**	**173**	P		**P**	**06 34 16.3**	**-1.4**
	comp=Z,2.3nm,0.9s,baz=326,slow=7.3,SNR=5.6							
VNDA				LR		LR	07 09 02.5	
	comp=Z,71nm,19.3s,baz=301,slow=34							
	comp=Z,2.3nm,0.9s							
C19K	**Lookout Ridge**	**81.85**	**20**			**P**	**06 34 19.8**	**+0.8**
C19K				IAmb		IAmb	06 35 11.6	
	comp=Z,11nm,0.8s							
E19K	**Redstone River**	**82.29**	**22**	IAmb		IAmb	06 34 44.0	
	comp=Z,8.5nm,0.8s							
E23K	**Chandalar**	**85.24**	**22**	IAmb		IAmb	06 34 42.7	
	comp=Z,28nm,1.9s							
ILAR	**Eielson Array**	**86.06**	**25**	P		**P**	**06 34 39.5**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=252,slow=5.4,SNR=4.3							
	comp=Z,0.3nm,0.7s							
BRTR	**Keskin Array B**	**91.99**	**310**	P		**P**	**06 35 09.5**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=38,slow=7.3,SNR=1.9							
	comp=Z,0.3nm,0.6s							
ARCES	**ARCESS Array B**	**92.39**	**340**	P		**P**	**06 35 10.2**	**-0.1**
	comp=Z,7.9nm,1.1s,baz=104,slow=5.9,SNR=4.4							
	comp=Z,7.9nm,1.1s							
TXAR	**Lajitas Array**	**121.62**	**53**	PKP		**PKPdf**	**06 40 54.8**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=214,slow=1.2,SNR=5.7							
TORD	**Torodi Ar. Bea**	**124.56**	**287**	PKP		**PKPdf**	**06 40 59.0**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=221,slow=2.7,SNR=5.2							

MEX 18 06:28:54.1±0.4, 16°.46N×93°.42W, h160km±5km, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGIG		**0.43**	**42**	*e*P	Pn	06 29 14.6	-1.7
TGIG				*e*S	Sn	06 29 31.4	-2.1
PCIG		**0.77**	**165**	*e*P	Pn	06 29 16.4	-1.7
PCIG				*e*S	Sn	06 29 34.2	-2.4
UXUV	**UXUV**	**1.10**	**321**	*e*P	Pn	06 29 19.7	-1.0
UXUV				*e*S	Sn	06 29 38.7	-2.5
CMIG	**Matias Romero**	**1.54**	**294**	*e*P	Pn	06 29 23.6	-1.2
CMIG				*e*S	Sn	06 29 46.5	-2.0
PAVE	**Pavencul**	**1.73**	**136**	*i* P	Pn	06 29 25.8	-1.4
PAVE				*i* S	Sn	06 29 50.9	-1.7
PATR	**El Naranjo**	**1.75**	**139**	*e*P	Pn	06 29 25.8	-1.6
PATR				*e*S	Sn	06 29 51.1	-1.9
CHUJ	**Union Juarez**	**1.85**	**137**	*e*P	Pn	06 29 27.2	-1.2
CHUJ				*e*S	Sn	06 29 53.2	-1.7
NEUV	**Arroyo Zacate**	**2.60**	**299**	*e*P	Pn	06 29 35.9	-1.0
NEUV				*e*S	Sn	06 30 07.2	-2.8

IDC ***18*** *06:36:04.8±2.8, 39°.17N×54°.66E, h0km, mb3.1/4, mbtmp3.5/8, ML3.5/4, Error ellipse: s-maj=47.0km s-min=15.8km az=1.0*

TEH ***18*** *06:36:09.2, 39°.57N×54°.81E, h10km, ML3.7, Presumed earthquake*

NNC ***18*** *06:36:22.4±3.6, 40°.46N×55°.73E, h0km, mb4.0, Error ellipse: s-maj=47.2km s-min=15.5km az=69.0*

ISC 18 06:36:08.8±0.8, 39°.71N±0°.06×54°.80E±0°.06, h10km, n28, σ2s°70/31, mb3.5/3, 4C-2D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRVT	**Maraveh tapeh**	**2.28**	**153**	Pn	**Pb**	**06 36 47.2**	**-2.9**
IGLO	**Ghaloghah**	**3.29**	**194**	Pn	**Pn**	**06 37 01.5**	**+0.9**
ISFR	**Sfrayin**	**3.65**	**135**	Pn	**Pn**	**06 37 06.7**	**+1.0**
IALA	**Alasht**	**3.94**	**204**	Pn	**Pn**	**06 37 10.3**	**+0.7**
IAKL	**Akhelmad**	**4.40**	**134**	Pn	**Pn**	**06 37 16.9**	**+1.0**
GIDE	**GILAN DEYLAMAN**	**4.74**	**236**	Pn	**Pn**	**06 37 21.8**	**+1.2**
IGZV	**Ghazvin**	**4.90**	**229**	Pn	**Pn**	**06 37 24.5**	**+1.7**
JIR1	**Jirandeh**	**4.94**	**234**	Pn	**Pn**	**06 37 24.5**	**+1.2**
GLBA	**Clilabad**	**4.98**	**267**	Pn	**Pn**	**06 37 25.9**	**+2.3**
GRMI	**Germi**	**5.43**	**263**	Pn	**Pn**	**06 37 32.1**	**+2.1**
ISFB	**Sefidab**	**5.72**	**202**	Pn	**Pn**	**06 37 34.7**	**+0.8**
QABG	**Abgarm-Qazvin**	**5.75**	**228**	Pn	**Pn**	**06 37 35.6**	**+1.3**
SEKA	**Sheki**	**5.99**	**287**	Pn	**Pn**	**06 37 41.1**	**+3.6**
ORD	**Ordubad**	**6.87**	**266**	Pn	**Pn**	**06 37 52.5**	**+2.9**
GDB	**GEDABAY**	**7.00**	**281**	Pn	**Pn**	**06 37 53.9**	**+2.5**
QZX	**Qazax, Azerbai**	**7.32**	**284**	Pn	**Pn**	**06 37 59.4**	**+3.6**
KBZ	**Khabaz**	**9.76**	**298**	Pn	**Pn**	**06 38 29.2**	**+0.1**
	0.2nm,0.3s,baz=136,slow=4.5,SNR=8.5						
KBZ				Sn	**Sn**	**06 40 12.4**	**-6.4**
	0.2nm,0.3s,baz=128,slow=18,SNR=1.9						
	0.7nm,0.2s						
AB31	**Akbulak array**	**10.23**	**19**	⇓Pn	**Pn**	**06 38 36.9**	**+1.3**
	2.3nm,0.3s,baz=202,slow=13,SNR=349						
AB31				⇑Sn	Sn	06 40 24.2	-6.0
	1.3nm,0.2s,baz=188,slow=24,SNR=9.7						
AKTO	**Aktyubinsk**	**10.97**	**11**	Pn	**Pn**	**06 38 48.2**	**+2.5**
	0.8nm,0.3s,baz=189,slow=13,SNR=7.2						
AKTO				Sn	**Sn**	**06 40 43.4**	**-5.0**
	2.6nm,0.3s,baz=7.8,slow=22,SNR=10						
	1.8nm,0.4s						
AKTO	**Aktyubinsk**	**10.97**	**11**	⇑Pn	**Pn**	**06 38 48.6**	**+2.9**
	2.1nm,0.4s						
AKTO				⇑Sn	**Sn**	**06 40 44.3**	**-4.1**
	4.4nm,0.3s						
KK31	**Karatay Array**	**12.28**	**69**	⇑P	**Pn**	**06 39 04.4**	**+0.7**
	0.7nm,0.3s,baz=262,slow=14,SNR=7.7						
AAK	**Ala-Archa**	**15.12**	**72**	Pn	**Pn**	**06 39 41.1**	**-1.4**
	0.3nm,0.3s,baz=193,slow=13,SNR=3.8						
	0.8nm,0.3s						
BVAR	**Borovoye Array**	**17.07**	**34**	P	**Pn**	**06 40 09.2**	**+1.7**
	0.1nm,0.3s,baz=224,slow=8.9,SNR=6.3						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**19.89**	**49**	P	**P**	**06 40 41.4**	**+1.2**
	0.4nm,0.8s,baz=245,slow=9.7,SNR=3.5						
	0.4nm,0.8s						
AKASG	**Malin Array Be**	**21.00**	**310**	P	**P**	**06 40 53.1**	**+0.9**
	0.8nm,0.5s,baz=102,slow=7.9,SNR=5.5						
	0.8nm,0.5s						
MK31	**Makanchi Array**	**21.17**	**61**	⇓P	**P**	**06 40 59.2**	**+5.0**
	1.4nm,0.7s,baz=254,slow=13,SNR=9.9						
MKAR	**Makanchi Array**	**21.17**	**61**	P	**P**	**06 40 55.7**	**+1.5**
	0.3nm,0.4s,baz=256,slow=11,SNR=7.0						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**24.76**	**45**	P	**P**	**06 41 31.5**	**+1.1**
	0.4nm,0.4s,baz=264,slow=8.5,SNR=1.9						
	0.4nm,0.4s						

ASRS ***18*** *07:09:42.0±2.8, 53°.72N×91°.08E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 18 07:09:46.3±4.2, 53°.84N×90°.99E, h0km, mbtmp2.9/2, ML2.3/2, Error ellipse: s-maj=34.7km s-min=26.1km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.65**	**274**	Pg	Pb	07 10 51.0	-0.6
	0.5nm,0.3s,baz=94,slow=16,SNR=10						
ZALV				Lg	Lg	07 11 41.6	
	0.4nm,0.3s,baz=90,slow=27,SNR=7.3						
KURBB	**Kurchatov Arra**	**8.30**	**252**	Pn	Pn	07 11 48.1	+0.4
	baz=64,slow=14,SNR=4.9						
KURBB				Sn	Sn	07 13 20.7	-1.4
	baz=66,slow=25,SNR=11						
KURBB				Lg	Lg	07 14 05.3	
	baz=65,slow=30,SNR=4.3						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**8.98**	**222**	Pn	Pn	07 11 57.4	+0.3
	baz=33,slow=12,SNR=3.5						
MKAR				Sn	Sn	07 13 37.5	-1.3
	baz=35,slow=23,SNR=4.0						
MKAR				Lg	Lg	07 14 25.5	
	baz=38,slow=31,SNR=2.4						
	0.3nm,0.6s						
SONM	**Songino Array**	**11.44**	**115**	Lg	Lg	07 15 37.3	
	0.3nm,0.3s,baz=302,slow=27,SNR=2.2						
I34MN	**SONGINO INFRAS**	**11.46**	**116**	I	I	08 17 40.0	
	baz=310,slow=333,SNR=1.2						

KRNET ***18*** *07:15:26.8±0.1, 42°.49N×78°.56E, h19km, mb2.7*

NNC ***18*** *07:15:27.2±0.8, 42°.56N×78°.55E, h0km, mb2.6, mpv2.7, Error ellipse: s-maj=6.6km s-min=2.3km az=163.0*

SOME ***18*** *07:15:27.4, 42°.48N×78°.57E, h20km*

ISC 18 07:15:26.3±1.1, 42°.47N±0°.04×78°.59E±0°.03, h15km±7km, n31, σ0s68/59, 8C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.14**	**275**	⇓*i*P	**Pg**	**07 15 30.4**	**0.0**
PRZ				⇓*i*S	**Sg**	**07 15 32.9**	**-0.1**
SATY	**Saty**	**0.60**	**347**	P	**Pb**	**07 15 37.8**	**-0.9**
	4.0nm,0.1s						
SATY				S	**Sb**	**07 15 44.5**	**-2.5**
	14nm,0.1s						
UZB	**Uzynbulak**	**0.75**	**25**	P	**Pb**	**07 15 40.5**	**-0.6**
	3.5nm,0.2s						
UZB				S	**Sb**	**07 15 50.3**	**-0.9**
	19nm,0.1s						
UZB	**Uzynbulak**	**0.75**	**25**	*e*P	**Pb**	**07 15 40.8**	**-0.4**
	3.5nm,0.2s						
UZB				*e*S	**Sb**	**07 15 50.3**	**-0.9**
	19nm,0.1s						
ANVS	**Anan'yevo**	**0.75**	**295**	⇑*i*P	**Pb**	**07 15 40.8**	**-0.4**
ANVS				⇑*i*S	**Sb**	**07 15 50.5**	**-0.8**
TARG	**Taragay, Kyrgy**	**0.94**	**219**	⇑*i*P	**Pb**	**07 15 44.5**	**-0.1**
TARG				⇑*i*S	**Sb**	**07 15 56.9**	**-0.2**
KPKS	**Kokpek**	**1.00**	**4**	P	**Pb**	**07 15 44.8**	**-0.5**
	0.2nm,0.1s						
KPKS				S	**Sb**	**07 15 57.6**	**-0.8**
	3.5nm,0.1s						
KPKS	**Kokpek**	**1.00**	**4**	*e*P	**Pb**	**07 15 45.0**	**-0.4**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**07 15 57.6**	**-0.8**
	3.5nm,0.1s						
PDGK	**Podgornoye**	**1.08**	**37**	⇑P	**Pn**	**07 15 47.6**	**+0.5**
	0.8nm,0.2s						
PDGK				⇑S	**Sb**	**07 16 00.8**	**-0.1**
	4.6nm,0.7s						
KDJ	**Kajisay**	**1.10**	**252**	⇓*i*P	**Pb**	**07 15 46.8**	**-0.4**
KDJ				⇓*i*S	**Sb**	**07 16 01.0**	**-0.4**
KOTS	**Kotyrbulak**	**1.33**	**306**	P	**Pb**	**07 15 51.4**	**+0.3**
	2.2nm,0.3s						
KOTS				S	**Sb**	**07 16 07.6**	**-0.3**
	16nm,0.3s						
KOTS	**Kotyrbulak**	**1.33**	**306**	*e*P	**Pb**	**07 15 50.9**	**-0.1**
KOTS				*e*S	**Sb**	**07 16 07.7**	**-0.3**
KOTS	**Kotyrbulak**	**1.33**	**306**	*e*P	**Pb**	**07 15 50.9**	**-0.1**
	2.2nm,0.3s						
KOTS				*e*S	**Sb**	**07 16 07.6**	**-0.3**
	16nm,0.3s						
MDOK	**Medeo**	**1.33**	**302**	Pg	**Pn**	**07 15 50.7**	**+0.3**
	3.3nm,0.2s						
MDOK				Lg	Lg	07 16 07.7	
	16nm,0.3s						
TNSS	**Tian-Shan**	**1.34**	**296**	P	**Pn**	**07 15 50.6**	**-0.3**
	0.7nm,0.1s						
TNSS				S	**Sn**	**07 16 08.4**	**-0.1**
	2.7nm,0.1s						
TNSS	**Tian-Shan**	**1.34**	**296**	*e*P	**Pb**	**07 15 51.3**	**0.0**
	0.7nm,0.1s						
TNSS				*e*S	**Sn**	**07 16 08.4**	**-0.1**
	2.7nm,0.1s						
IZV	**Izvestkoviy**	**1.56**	**292**	P	**Pb**	**07 15 54.8**	**-0.3**
	3.6nm,0.2s						
IZV				S	**Sb**	**07 16 14.3**	**-0.3**
	6.7nm,0.3s						
IZV	**Izvestkoviy**	**1.56**	**292**	*e*P	**Pb**	**07 15 54.8**	**-0.3**
	3.6nm,0.2s						
IZV				*e*S	**Sb**	**07 16 14.3**	**-0.3**
	6.7nm,0.3s						
MTBS	**Maitube**	**1.72**	**293**	P	Pb	**07 15 57.6**	**-0.1**
	1.2nm,0.2s						
MTBS				S	**Sb**	**07 16 19.3**	**+0.2**
	5.6nm,0.2s						
MTBS	**Maitube**	**1.72**	**293**	*e*P	**Pb**	**07 15 57.7**	**0.0**
	1.2nm,0.2s						
MTBS				*e*S	**Sb**	**07 16 19.4**	**+0.2**
	5.6nm,0.2s						
ULHL	**Ulahol**	**1.75**	**263**	⇓*i*P	**Pb**	**07 15 58.4**	**+0.1**
ULHL				⇓*i*S	**Sb**	**07 16 21.3**	**+1.1**
ARXS	**Arharly**	**1.83**	**343**	P	**Pb**	**07 15 59.7**	**+0.2**
ARXS				S	**Sb**	**07 16 23.1**	**+0.9**
ARXS	**Arharly**	**1.83**	**343**	*e*P	**Pb**	**07 15 59.9**	**+0.4**
	2.4nm,0.2s						
ARXS				*e*S	**Sb**	**07 16 23.1**	**+0.9**
	8.7nm,0.2s						
KTBS	**Karatobe**	**1.87**	**312**	P	**Pb**	**07 16 01.0**	**+0.8**
	0.8nm,0.2s						
KTBS				S	**Sb**	**07 16 24.5**	**+1.1**
	0.5nm,0.3s						
KTBS	**Karatobe**	**1.87**	**312**	*e*P	**Pb**	**07 16 00.7**	**+0.5**
	0.8nm,0.2s						
KTBS				*e*S	**Sb**	**07 16 24.5**	**+1.1**
	0.3nm,0.3s						
KNOS	**Konyrlen**	**1.94**	**13**	P	**Pb**	**07 16 01.7**	**+0.3**
	1.5nm,0.1s						
KNOS				S	**Sb**	**07 16 26.3**	**+0.9**
	3.8nm,0.2s						
KST	**Kastek**	**2.02**	**287**	Pg	**Pb**	**07 16 03.7**	**+1.0**
	4.4nm,0.3s						
KST				Lg	Lg	07 16 30.5	
	4.4nm,0.3s						
KST	**Kastek**	**2.02**	**287**	*e*P	**Pb**	**07 16 03.0**	**+0.3**
	4.3nm,0.3s						
KST				*e*S	**Sb**	**07 16 28.3**	**+0.6**
	3.2nm,0.3s						
DJR	**Jarkent**	**2.06**	**25**	Pg	**Pb**	**07 16 03.7**	**+0.3**
	1.8nm,0.2s						
DJR				Lg	Lg	07 16 29.9	
	4.3nm,0.3s						
DJR	**Jarkent**	**2.06**	**25**	*e*P	**Pb**	**07 16 03.9**	**+0.5**
	1.8nm,0.2s						
DJR				*e*S	**Sb**	**07 16 29.9**	**+1.1**
	4.3nm,0.3s						
TKM2	**Tokmak 2**	**2.25**	**283**	⇑*i*P	**Pb**	**07 16 05.6**	**-1.2**
TKM2				⇑*i*S	**Sb**	**07 16 33.5**	**-1.1**

IDC ***18*** *07:15:29.0±10.0, 12°.38S×166°.73E, h286km±125km, mb3.3/6, mbtmp3.9/7, MS3.4/1, Error ellipse: s-maj=93.8km s-min=32.0km az=156.0*

ISC 18 07:15:30.2±1.2, 12°.42S±0°.10×166°.8E±0°.3, h300km, n8, σ1s12/8, mb3.5/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.60**	**182**	P	**Pn**	**07 17 43.5**	**0.0**
	3.2nm,0.6s,baz=132,slow=23,SNR=7.2						
DZM				S	**S**	**07 19 32.4**	**+0.1**
	baz=162,slow=3.2						
STKA	**Stephens Creek**	**30.16**	**226**	LR	LR	07 32 10.4	
	comp=Z,72nm,18.7s,baz=207,slow=33						
WRA	**Warramunga Arr**	**31.97**	**252**	P	**P**	**07 21 28.0**	**-1.0**
	0.5nm,0.7s,baz=82,slow=8.9,SNR=1.0						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**33.09**	**246**	P	**P**	**07 21 38.5**	**-0.3**
	0.5nm,0.7s,baz=68,slow=10,SNR=7.0						
	0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.56**	**294**	P	**P**	**07 26 33.0**	**+1.7**
	1.0nm,0.3s,baz=110,slow=6.6,SNR=5.3						
	1.0nm,0.3s						
SONM	**Songino Array**	**80.35**	**324**	P	**P**	**07 27 07.1**	**-1.3**
	0.5nm,0.6s,baz=126,slow=7.3,SNR=3.5						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**84.50**	**18**	P	**P**	**07 27 29.1**	**-0.2**
	0.4nm,0.6s,baz=233,slow=5.5,SNR=4.8						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**95.19**	**317**	P	**P**	**07 28 20.4**	**+0.6**
	1.0nm,0.6s,baz=92,slow=5.7,SNR=8.3						
	1.0nm,0.6s						

SOME ***18*** *07:24:14.4, 41°.48N×74°.40E, h15km*

KRNET ***18*** *07:24:16.7±0.1, 41°.67N×74°.51E, h17km, mb2.6*

NNC ***18*** *07:24:17.6±1.8, 41°.72N×74°.37E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=11.2km s-min=9.0km az=163.0*

ISC 18 07:24:16.8±1.2, 41°.68N±0°.04×74°.39E±0°.03, h15km±10km, n22, σ1s02/38, 10C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**0.56**	**9**	⇓*i*P	**Pg**	**07 24 27.5**	**-0.5**
UCH				⇓*i*S	**Sg**	**07 24 35.4**	**-0.1**
SALK	**Salom-Alik**	**0.91**	**209**	⇑*i*P	**Pg**	**07 24 34.4**	**0.0**
SALK				⇑*i*S	**Sn**	**07 24 47.1**	**-0.9**
AAK	**Ala-Archa**	**0.96**	**4**	⇑P	**Pb**	**07 24 34.9**	**-0.4**
	0.7nm,0.4s						
AAK				⇑S	**Sg**	**07 24 48.2**	**0.0**
	4.6nm,0.7s						
AAK	**Ala-Archa**	**0.96**	**4**	⇓*i*P	**Pb**	**07 24 34.7**	**-0.6**
AAK				⇓*i*S	**Sb**	**07 24 47.8**	**-0.1**
EKS2	**Erkin-Say**	**1.08**	**335**	⇑*i*P	**Pn**	**07 24 37.7**	**+0.1**
EKS2				⇑*i*S	**Sn**	**07 24 53.2**	**+0.8**
MRKS	**Merke**	**1.37**	**321**	P	**Pb**	**07 24 42.7**	**+0.5**
	2.1nm,0.3s						
MRKS				S	**Sg**	**07 25 02.6**	**+1.4**
	6.6nm,0.4s						
MRKS	**Merke**	**1.37**	**321**	*e*P	**Pb**	**07 24 42.4**	**+0.1**
	2.1nm,0.3s						
MRKS				*e*S	**Sg**	**07 25 02.6**	**+1.4**
	6.6nm,0.4s						
BOOM	**Boomskoye usch**	**1.41**	**54**	⇑*i*P	**Pn**	**07 24 41.5**	**-0.6**
BOOM				⇑*i*S	**Sn**	**07 24 59.6**	**-0.8**
KST	**Kastek**	**1.79**	**40**	Pg	**Pg**	**07 24 51.5**	**+0.3**
	4.0nm,0.3s						
KST				Lg	Lg	07 25 18.2	
	15nm,0.4s						
KST	**Kastek**	**1.79**	**40**	*e*P	**Pg**	**07 24 50.4**	**-0.9**
	4.5nm,0.4s						
KST				*e*S	**Sg**	**07 25 16.2**	**+1.6**
	5.9nm,0.7s						
DGS	**Degeres**	**1.86**	**33**	Pg	**Pg**	**07 24 52.3**	**-0.4**
	6.6nm,0.2s						
DGS				Lg	Lg	07 25 20.3	
	7.9nm,0.6s						
DGS	**Degeres**	**1.86**	**33**	*e*P	**Pb**	**07 24 50.6**	**-0.1**
	3.1nm,0.4s						
DGS				*e*S	**Sg**	**07 25 16.4**	**-0.5**
	7.9nm,0.6s						
MTBS	**Maitube**	**2.09**	**45**	Pg	**Pb**	**07 24 54.6**	**+0.1**
	2.4nm,0.3s						
MTBS				Lg	Lg	07 25 23.5	
	7.3nm,0.4s						
MTBS	**Maitube**	**2.09**	**45**	*e*P	**Pb**	**07 24 54.6**	**+0.1**
	2.4nm,0.3s						
MTBS				*e*S	**Sg**	**07 25 23.5**	**-0.6**
	7.3nm,0.4s						
IZV	**Izvestkoviy**	**2.13**	**50**	*e*P	**Pb**	**07 24 56.4**	**+1.1**
	3.5nm,0.2s						
IZV				*e*S	**Sg**	**07 25 26.4**	**+1.0**
	7.4nm,0.4s						
KRBS	**Karabastau**	**2.23**	**25**	Pg	**Pb**	**07 24 57.7**	**+0.9**
	4.4nm,0.2s						
KRBS				Lg	Lg	07 25 29.1	
	2.1nm,0.5s						
KRBS	**Karabastau**	**2.23**	**25**	*e*P	**Pb**	**07 24 57.9**	**+1.1**
	4.4nm,0.2s						
KRBS				*e*S	**Sg**	**07 25 29.1**	**+0.6**
	2.1nm,0.5s						
KTBS	**Karatobe**	**2.64**	**39**	Pg	**Pb**	**07 25 04.4**	**+0.6**
	3.8nm,0.5s						
KTBS				Lg	Lg	07 25 41.0	
	7.5nm,0.4s						
KTBS	**Karatobe**	**2.64**	**39**	*e*P	**Pb**	**07 25 04.8**	**+1.0**
	3.8nm,0.5s						
KTBS				*e*S	**Sg**	**07 25 41.0**	**-0.7**
	7.5nm,0.4s						
KK31	**Karatay Array**	**3.21**	**298**	⇑Pg	**Pg**	**07 25 16.0**	**-2.3**
	1.0nm,0.6s,baz=134,slow=16,SNR=4.4						
KK31				⇑Lg	Lg	07 26 00.3	
	1.2nm,0.5s,baz=110,slow=28,SNR=6.8						
IUG	**Iuzhnay**	**3.29**	**280**	*e*P	**Pb**	**07 25 14.4**	**-0.5**
	4.9nm,0.3s						
IUG				*e*S	**Sb**	**07 25 57.1**	**+2.3**
	8.2nm,0.7s						
ARXS	**Arharly**	**3.57**	**44**	*e*P	**Pb**	**07 25 21.4**	**+1.6**
	1.7nm,0.3s						
ARXS				*e*S	**Sg**	**07 26 09.5**	**-2.1**
	6.4nm,0.5s						

FCIAR ***18*** *07:29:36.0, 85°.74N×25°.57E, h10km, station OMEGA has station magnitude of 5.20 station ZFI2 has station magnitude of 5.20*

IDC ***18*** *07:29:37.5±0.4, 85°.75N×23°.07E, h0km, mb5.2/36, mbtmp5.2/38, ML5.7/2, MS5.1/88, Error ellipse: s-maj=10.0km s-min=9.1km az=75.0*

MOS ***18*** *07:29:37.2±0.9, 85°.74N×22°.46E, h10km, mb5.7/89, MS5.3/4, Error ellipse: s-maj=59.1km s-min=3.3km az=90.6*

NEIC ***18*** *07:29:39.0±1.4, 85°.73N±0°.06×2°.3E±°, h10km±1km, mb5.7/962, Ms_20 5.3/582, Mww5.5/45, Error ellipse: s-maj=13.4km s-min=9.8km az=68.0*

NEIC ***18*** *07:29:39, 85°.73N×24°.11E, h12km, Moment Tensor Solution. Duration: 2s9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.31; $M_{\theta\theta}$0.43; $M_{\phi\phi}$-0.12; $M_{r\theta}$-2.17; $M_{\theta\phi}$0.15; $M_{\phi r}$-1.22; Fault plane solution: $M_0$2.52000×10^{17} NP1: ϕ_s281.91000°, δ5.52000°, λ-48.90000°. NP2:ϕ_s60.68000°, δ85.85000°, λ-93.63000°. Principal axes: T 2.5811, Plg41.0000°, Azm154.0000°; N -0.1169, Plg4.0000°, Azm61.0000°; P -2.4642, Plg49.0000°, Azm327.0000°;*

KOLA ***18*** *07:29:39.9, 84°.93N×40°.55E, h0km, ML3.0 Error ellipse: s-maj=325.7km s-min=64.0km az=120.0, Arctic Ocean*

GFZ ***18*** *07:29:39.6, 85°.78N×22°.33E, h10km, MW5.3, Moment Tensor Solution. s66 Moment tensor: M_{rr}-0.28; $M_{\theta\theta}$0.71; $M_{\phi\phi}$-0.44; $M_{r\theta}$-0.75; $M_{\theta\phi}$0.08; $M_{\phi r}$-0.29; Fault plane solution: NP1:ϕ_{s1}61.00000°, δ78.00000°, λ-114.00000°. NP2:ϕ_{s2}307.00000°, δ27.00000°, λ-26.00000°. Principal axes: T 1.1400, Plg29.0000°, Azm171.0000°; N -0.3300, Plg24.0000°, Azm67.0000°; P -0.8100, Plg51.0000°, Azm303.0000°;*

NEIC ***18*** *07:29:39, 85°.73N×22°.77E, h12km*

ISC-PP ***18*** *07:29:39, 85°.73N×22°.69E, h7km, Mwppsm5.8, Moment Tensor Solution. s59 Moment tensor: Scale 10^{17}Nm; M_{rr}0.25±.06; $M_{\theta\theta}$0.72±.11; $M_{\phi\phi}$0.23±.11; $M_{r\theta}$0.38±.08; $M_{\theta\phi}$0.20±.09; $M_{\phi r}$-0.01±.10; Fault plane solution: $M_0$5.25000×10^{17} NP1:ϕ_s129.20000°, δ26.10000°, λ335.00000°. NP2:ϕ_{s2}242.00000°, δ79.20000°, λ-114.00000°.*

GCMT ***18*** *07:29:43.0±0.1, 85°.84N±0°.01×22°.2E±0°.1, h12km, MW5.5/141, Moment Tensor Solution. s58, c69; s141, c242; Duration: 1s4 Moment tensor:

comp=Z,33µm,18.2s,baz=349,slow=36
comp=Z,126nm,0.3s
SPITS Spitsbergen Ar 7.63 190 P **Pn** 07 31 28.1 -1.9
SPITS S **Sn** 07 32 50.0 -6.5
SPB2 Spitsbergen Ar 7.64 190 **Pn** 07 31 28.0 -2.0
BRBB Barentsburg B 7.75 193 Pn **Pn** 07 31 29.9 -1.6
BRBB Sn **Sn** 07 32 52.9 -6.3
BRBB Barentsburg B 7.75 193 *eP* **Pn** 07 31 29.8 -1.7
BRBB *eS* **Sn** 07 32 52.6 -6.6
BRBB Barentsburg B 7.75 193 P **Pn** 07 31 29.4 -2.1
BRBB S **Sn** 07 32 53.1 -6.1
HSPB Hornsund (broa 8.82 190 *eP* **Pn** 07 31 46.2 0.0
HSPB *eS* **Sn** 07 33 19.7 -6.0
HSPB Hornsund (broa 8.82 190 Pn **Pn** 07 31 45.0 -1.2
HSPB Sn **Sn** 07 33 18.2 -7.4
HSPB Hornsund (broa 8.82 190 *eP* **Pn** 07 31 45.0 -1.2
HSPB *eS* **Sn** 07 33 18.6 -7.0
HSPB IAML 07 33 23.7
comp=Z,118nm,0.7s
HSPB Hornsund (broa 8.82 190 *eP* **Pn** 07 31 47.0 +0.7
HSPB *eS* **Sn** 07 33 26.9 +1.3
HSPB Hornsund (broa 8.82 190 P **Pn** 07 31 44.9 -1.4
HSPB S **Sn** 07 33 17.4 -8.2
HOPEN Hopen 9.28 176 Pn **Pn** 07 31 50.3 -2.2
HOPEN Sn Sn 07 33 27.2 -10
HOPEN Hopen 9.28 176 *eP* **Pn** 07 31 50.3 -2.2
HOPEN *eS* Sn 07 33 26.4 -10
HOPEN IAML 07 33 34.3
comp=Z,304nm,0.6s
DAG Danmarks Havn 10.46 237 *eP* **Pn** 07 32 09.5 +1.0
DAG Danmarks Havn 10.46 237 *i P* **Pn** 07 32 08.8 +0.3
DAG IAML 07 37 19.9
comp=Z,91nm,5.6s
SVZ Severnaya Zeml 10.83 78 *eP* Pn 07 32 07.6 -6.1
SVZ *eS* **Sn** 07 34 06.8 -8.1
BJO1 Bjornoya 11.30 185 Pn **Pn** 07 32 18.3 -1.9
BJO1 Bjornoya 11.30 185 *eP* **Pn** 07 32 18.2 -1.9
BJO1 *eS* Sn 07 34 14.5 -12
BJO1 IAML 07 34 26.8
comp=Z,90nm,0.8s
BEAR Bear Island, N 11.31 185 Pn **Pn** 07 32 17.8 -2.4
baz=356,slow=14
BEAR Sn Sn 07 34 14.4 -12
baz=4.2,slow=22
NEEM North Greenlan 12.13 273 *i P* **Pn** 07 32 28.8 -2.9
NEEM North Greenlan 12.13 273 *i P* **Pn** 07 32 28.8 -2.9
NEEM IAML 07 39 24.3
comp=Z,139nm,6.0s
DBG Daneborg 12.96 235 P **Pn** 07 32 42.1 -0.6
DBG Daneborg 12.96 235 *eP* **Pn** 07 32 41.8 -0.9
DBG Daneborg 12.96 235 *i P* **Pn** 07 32 39.8 -2.8
DBG IAML 07 39 39.6
comp=Z,98nm,6.0s
TULEG Thule 14.30 288 **Pn** 07 32 56.4 -4.6
TULEG Thule 14.30 288 *i P* Pn 07 32 55.0 -6.0
TULEG Thule 14.30 288 *i P* **Pn** 07 32 56.4 -4.6
TULEG IAML 07 38 44.0
comp=Z,110nm,8.7s
HAMF Hammerfest 15.18 178 P **Pn** 07 33 08.6 -4.2
HAMF S Sn 07 35 44.7 -16
HAMF Hammerfest 15.18 178 *eP* **Pn** 07 33 08.6 -4.2
KULLO Kullorsuaq 15.33 275 *i P* **Pn** 07 33 09.5 -5.4
KULLO Kullorsuaq 15.33 275 *i P* **Pn** 07 33 09.5 -5.4
KULLO IAML 07 38 51.0
comp=Z,146nm,6.4s
JNW Jan Mayen West 15.55 219 *eP* **Pn** 07 33 19.1 +1.3
JMIC Jan Mayen 15.60 219 LR LR 07 37 45.8
comp=Z,2µm,20.3s,baz=58,slow=31
VADS Vadso 15.74 171 P **Pn** 07 33 15.3 -4.9
VADS S Sn 07 35 59.0 -15
VADS Vadso 15.74 171 *eP* **Pn** 07 33 18.6 -1.6
VADS *eS* Sn 07 35 59.3 -15
VADS IAML 07 36 17.8
comp=Z,74nm,0.5s
SUMG Summit 15.88 254 P **Pn** 07 33 20.2 -2.3
SUMG Summit 15.88 254 **Pn** 07 33 20.0 -2.5
SUMG IAmb IAmb 07 33 21.4
comp=Z,726nm,1.5s
SUMG Summit 15.88 254 *i P* **Pn** 07 33 18.6 -3.9
SUMG Summit 15.88 254 P **Pn** 07 33 20.0 -2.5
SUMG pmax pmax
comp=Z,725nm,1.5s
SUMG Summit 15.88 254 *i P* **Pn** 07 33 18.6 -3.9
KEV Kevo 16.08 174 **Pn** 07 33 21.5 -3.1
KEV IAmb IAmb 07 33 28.9
comp=Z,1µm,1.7s
KEV Kevo 16.08 174 P **Pn** 07 33 22.1 -2.6
KEV S Sn 07 36 09.3 -13
KEV Kevo 16.08 174 *eP* **Pn** 07 33 21.4 -3.3
KEV *eS* Sn 07 36 05.5 -17
KEV Kevo 16.08 174 P **Pn** 07 33 21.5 -3.1
KEV pmax pmax
comp=Z,1µm,1.7s
TRO Tromso 16.20 184 P **Pn** 07 33 23.8 -2.4
TRO Tromso 16.20 184 *eP* **Pn** 07 33 25.0 -1.1
JETT Jettan, Norway 16.27 183 P **Pn** 07 33 24.8 -2.3
JETT S Sn 07 36 11.6 -16
JETT Jettan, Norway 16.27 183 P **Pn** 07 33 24.8 -2.3
JETT S Sn 07 36 11.6 -16
ARA0 ARCESS Array S 16.30 176 P **Pn** 07 33 24.0 -3.4
baz=3.2,slow=11
ARA0 ARCESS Array S 16.30 176 P **Pn** 07 33 24.0 -3.4
ARCES ARCESS Array B 16.30 176 Pn **Pn** 07 33 24.6 -2.9
comp=Z,14nm,0.3s,baz=360,slow=9.9,SNR=101
ARCES Sn Sn 07 36 12.3 -16
comp=Z,2.3nm,0.3s,baz=13,slow=17,SNR=3.3
ARCES LR LR 07 39 46.1
comp=Z,14µm,18.1s,baz=335,slow=37
comp=Z,82nm,0.5s
ARCES ARCESS Array B 16.30 176 **Pn** 07 33 23.8 -3.7
KTK1 Kautokeino 16.81 179 P **Pn** 07 33 30.5 -3.5
KTK1 Kautokeino 16.81 179 *eP* **Pn** 07 33 32.2 -1.7
KIF Kilpisjarvi 16.82 182 P **Pn** 07 33 31.8 -2.3
KIF Kilpisjarvi 16.82 182 *eP* **Pn** 07 33 33.5 -0.6
SCO Scoresbysund 16.83 234 Pn **Pn** 07 33 32.8 -1.3
SCO Scoresbysund 16.83 234 *i P* **Pn** 07 33 35.2 +1.1
SCO Scoresbysund 16.83 234 P **Pn** 07 33 32.8 -1.3
SCO pmax pmax
comp=Z,404nm,1.6s
SCO Scoresbysund 16.83 234 *i P* **Pn** 07 33 35.2 +1.1
UPNV Upernavik 16.99 273 *i P* **Pn** 07 33 32.2 -4.0
UPNV Upernavik 16.99 273 *i P* **Pn** 07 33 32.2 -4.0
HEF Hetta 17.42 179 P **Pn** 07 33 40.3 -1.3
HEF Hetta 17.42 179 *eP* **Pn** 07 33 40.0 -1.6
LOF Lofoten 17.76 191 *eP* **Pn** 07 33 44.7 -1.1
RES Resolute Bay 17.80 309 P **Pn** 07 33 42.6 -3.5
comp=Z,27nm,0.6s,baz=29,slow=13,SNR=52
RES LR LR 07 40 47.6
comp=Z,19µm,18.5s,baz=11,slow=38
RES Resolute Bay 17.80 309 **Pn** 07 33 42.7 -3.5
RES Resolute Bay 17.80 309 P **Pn** 07 33 42.7 -3.5
RES pmax pmax
comp=Z,348nm,1.3s
STEI Steigen 17.94 189 *eP* **Pn** 07 33 47.8 -0.2
NUUG Nuugaatsiaq 17.99 269 *i P* **Pn** 07 33 42.5 -6.0
NUUG Nuugaatsiaq 17.99 269 *i P* **Pn** 07 33 44.4 -4.1
LVZ Lovozero 18.05 165 **Pn** 07 33 46.5 -2.9
LVZ Lovozero 18.05 165 ⇑ *i P* **Pn** 07 33 46.8 -2.6
APA0 Apatity Array 18.31 167 P **Pn** 07 33 48.4 -4.2
baz=358,slow=12
APA0 Apatity Array 18.31 167 P **Pn** 07 33 48.4 -4.2
APA Apatity 18.36 167 ⇓ *i P* **Pn** 07 33 47.8 -5.3
APA pmax pmax
comp=Z,162nm,0.9s
APA MLR MLR
comp=Z,18µm,16.3s
SALU Saltoluokta 18.46 185 *eP* **Pn** 07 33 54.8 +0.3
FAUS Fauske 18.49 189 P **Pn** 07 33 55.2 +0.4
FAUS Fauske 18.49 189 *eP* **P** 07 33 53.7 -0.9
SAATT Saattut 18.58 267 *i P* **P** 07 33 52.3 -3.3
POIN Pond Inlet 18.66 293 **P** 07 33 53.1 -3.3
NIAQ Niaqornat 18.75 269 *i P* **P** 07 33 54.3 -3.2
VAGH Vaagaholmen 19.17 191 *eP* **Pn** 07 34 02.6 -0.3
SAQQ Saqqaq 19.39 266 *i P* **P** 07 34 01.9 -2.6
KONS Konsvik 19.41 191 *eP* **Pn** 07 34 05.6 -0.2
STOK Stokkvaagen 19.57 191 *eP* **Pn** 07 34 08.1 +0.3
MOR8 Moi Rana 19.72 190 *eP* **P** 07 34 07.0 -1.1
LEIR Leirfjorden 19.80 191 *eP* **P** 07 34 09.5 +0.6
TIXI Tiksi 20.09 62 P **P** 07 34 12.7 +0.6
comp=Z,24nm,1.0s,baz=23,slow=10.0,SNR=30
TIXI LR LR 07 41 57.0
comp=Z,1µm,18.5s,baz=3.0,slow=37
comp=Z,24nm,1.0s
TIXI Tiksi 20.09 62 ⇑ *i P* **P** 07 34 12.3 +0.2
TIXI Tiksi 20.09 62 *i P* **P** 07 34 12.8 +0.7
TIXI pmax pmax
comp=Z,134nm,2.5s
ILULI Ilulissat 20.11 265 **P** 07 34 11.4 -0.9
ILULI Ilulissat 20.11 265 *i P* **P** 07 34 12.4 +0.2
ILULI Ilulissat 20.11 265 P **P** 07 34 11.4 -0.9
ILULI pmax pmax
comp=Z,87nm,1.0s
ILULI MLR MLR
comp=Z,7µm,22.0s
ILULI Ilulissat 20.11 265 *i P* **P** 07 34 12.4 +0.2
GDH Godhavn 20.25 267 *i P* **P** 07 34 12.9 -0.9
GDH Godhavn 20.25 267 *i P* **P** 07 34 12.9 -0.9
LSH Leshukonskoye 21.38 152 *eP* **P** 07 34 25.3 -0.8
LSH *eS* **S** 07 38 18.6 -4.3
NSS Namsos 21.40 192 *eP* **P** 07 34 27.1 +0.8
A36M Sachs Harbour 21.88 334 P **P** 07 34 30.5 -0.9
A36M IAMs_20 IAMs_20 07 43 14.0
comp=Z,8µm,18.0s
A36M Sachs Harbour 21.88 334 P **P** 07 34 31.0 -0.4
baz=6.1,SNR=201
ADZR Andozero 22.11 161 *d i P* **P** 07 34 33.3 -0.6
ADZR S **S** 07 38 42.4 +5.2
ADZR pmax pmax
comp=Z,493nm,2.0s
ADZR MLR MLR
comp=Z,27µm,15.0s
ILON Igloolik, Nuna 22.20 295 **P** 07 34 34.3 -0.5
SFJD Kangerlussuaq 22.26 263 LR LR 07 42 57.6
comp=Z,7µm,18.6s,baz=6.0,slow=36
SFJD Kangerlussuaq 22.26 263 P **P** 07 34 35.8 +0.4
SFJD Kangerlussuaq 22.26 263 *i P* **P** 07 34 35.6 +0.2
SFJD Kangerlussuaq 22.26 263 P **P** 07 34 35.8 +0.4
SFJD pmax pmax
comp=Z,284nm,1.5s
SFJD Kangerlussuaq 22.26 263 *i P* **P** 07 34 35.6 +0.2
BORG Borgarnes 22.48 231 LR LR 07 42 07.4
comp=Z,1µm,19.5s,baz=3.6,slow=33
BORG Borgarnes 22.48 231 P **P** 07 34 35.2 -2.6
BORG IAmb IAmb 07 34 54.1
comp=Z,479nm,1.9s
BORG Borgarnes 22.48 231 P **P** 07 34 35.2 -2.6
BORG pmax pmax
comp=Z,479nm,1.9s
ANGG Ammassalik, Gr 22.68 249 P **P** 07 34 37.2 -2.7
ANGG Ammassalik, Gr 22.68 249 *eP* **P** 07 34 38.4 -1.5
ANGG Ammassalik, Gr 22.68 249 *eP* **P** 07 34 38.4 -1.5
A21K Barrow 23.10 359 P **P** 07 34 43.7 -0.6
baz=0.1,SNR=20
MOL Molde 23.45 197 *eP* **P** 07 34 48.6 +0.7
AKN Aaknes 23.86 198 P **P** 07 34 52.9 +0.9
AKN Aaknes 23.86 198 P **P** 07 34 52.9 +0.9
AKN *eP* **P** 07 34 52.9 +0.9
DOMB Dombas 23.95 196 *eP* **P** 07 34 53.4 +0.6
FIA1 FINESS Array S 24.42 176 P **P** 07 34 56.5 -0.6
FIA0 FINESS Array S 24.42 176 P **P** 07 34 57.2 +0.1
baz=4.4,slow=14
FIA0 FINESS Array S 24.42 176 P **P** 07 34 57.2 +0.1
FINES FINESS Array B 24.42 176 P **P** 07 34 56.5 -0.6
comp=Z,39nm,0.6s,baz=6.1,slow=7.6,SNR=102
FINES LR LR 07 44 18.8
comp=Z,5µm,19.2s,baz=2.0,slow=36
comp=Z,39nm,0.6s
C26K Camden Bay 24.43 350 P **P** 07 34 57.9 +0.8
baz=2.2,SNR=113
C36M Paulatuk 24.48 332 P **P** 07 34 57.4 -0.1
C36M IAMs_20 IAMs_20 07 44 35.9
comp=Z,6µm,19.0s
C36M Paulatuk 24.48 332 P **P** 07 34 57.7 +0.1
baz=5.7,SNR=68
C23K Itkillik River 24.57 354 P **P** 07 34 58.9 +0.5
baz=1.2
C24K Franklin Bluff 24.67 353 P **P** 07 34 59.9 +0.7
baz=1.5
NC204 NORSAR Array S 24.69 194 P **P** 07 35 00.2 +0.6
NC204 IAmb IAmb 07 35 02.6
comp=Z,512nm,1.6s
NC204 NORSAR Array S 24.69 194 *eP* **P** 07 35 00.2 +0.6
C27K Jago River 24.70 348 IAMs_20 IAMs_20 07 43 06.5
comp=Z,9µm,21.0s
C27K Jago River 24.70 348 P **P** 07 35 00.2 +0.6
baz=2.4
NC303 NORSAR Array S 24.73 193 *eP* **P** 07 35 00.7 +0.8
HYA Hoyanger 24.89 199 *eP* **P** 07 35 00.9 -0.5
D28M Stokes Point 24.91 344 P **P** 07 35 02.2 +0.7
baz=3.2
NB2 NORSAR Subarra 24.91 193 P **P** 07 35 01.9 +0.3
comp=Z,265nm,1.4s,baz=2.5,slow=9.3
NB2 NORSAR Subarra 24.91 193 P **P** 07 35 01.9 +0.3
NB2 NORSAR Subarra 24.91 193 P **P** 07 35 01.9 +0.3
NOA NORSAR Array B 24.91 193 P **P** 07 35 01.5 -0.1
comp=Z,41nm,0.7s,baz=2.6,slow=10,SNR=83
NOA LR LR 07 43 54.5
comp=Z,4µm,18.3s,baz=0.0,slow=34
comp=Z,41nm,0.7s
NBO00 NORSAR Array S 24.93 194 *eP* **P** 07 35 02.2 +0.4
D27M Malcolm River 25.04 346 IAmb IAmb 07 35 04.4
comp=Z,193nm,0.8s
D27M Malcolm River 25.04 346 P **P** 07 35 03.1 +0.4
baz=2.9
D25K Kavik River 25.04 351 IAMs_20 IAMs_20 07 43 56.5
comp=Z,6µm,19.0s
D25K Kavik River 25.04 351 P **P** 07 35 02.9 +0.1
baz=1.9
NAO01 NORSAR Array S 25.12 193 *eP* **P** 07 35 04.9 +1.5
NUUK Nuuk 25.12 263 *eP* **P** 07 35 01.5 -1.8
NUUK Nuuk 25.12 263 *eP* **P** 07 35 01.5 -1.8
NRA0 NORESS Array S 25.21 193 P **P** 07 35 04.3 0.0
baz=12,slow=11
NRA0 NORESS Array S 25.21 193 P **P** 07 35 04.3 0.0
KLMR Klimovskoe 25.22 160 *eP* **P** 07 35 03.8 -0.5
KLMR *eS* **S** 07 39 30.2 +0.8
KLMR pmax pmax
comp=Z,502nm,1.2s
KLMR MLR MLR
comp=Z,20µm,14.0s
KLMR Klimovskoe 25.22 160 *eP* P 07 35 16.1 +12
KLMR *eS* S 07 39 42.2 +13
D24K Happy Valley 25.24 353 P **P** 07 35 05.2 +0.8
baz=1.5
C21K Kniefelade Rid 25.27 358 P **P** 07 35 05.4 +0.6
baz=0.4
C19K Lookout Ridge 25.33 2 P **P** 07 35 05.9 +0.7
C19K Lookout Ridge 25.33 2 P **P** 07 35 06.2 +0.9
baz=360,SNR=267
SKAR Skarslia 25.33 196 *eP* **P** 07 35 06.5 +1.1
D23K Nanushuk River 25.44 354 P **P** 07 35 07.4 +1.1
baz=1.1
D22K Ayikyak River 25.54 356 IAmb IAmb 07 35 11.5
comp=Z,361nm,1.2s
D22K Ayikyak River 25.54 356 P **P** 07 35 07.8 +0.6
baz=0.8
E28M Babbage River 25.65 345 IAmb IAmb 07 35 11.8
comp=Z,149nm,1.0s
E28M IAMs_20 IAMs_20 07 46 19.8
comp=Z,7µm,19.0s
E28M Babbage River 25.65 345 P **P** 07 35 08.6 +0.4
baz=3.0
BILL Bilibino 25.69 31 P **P** 07 35 08.1 -0.3
BILL Bilibino 25.69 31 ⇓ *i P* **P** 07 35 08.2 -0.3
BILL pmax pmax
comp=Z,101nm,1.5s
D20K Etivluk River 25.72 359 P **P** 07 35 09.6 +0.7
baz=0.1,SNR=273
C18K Utukok River 25.78 3 IAmb IAmb 07 35 13.1
comp=Z,326nm,1.1s
C18K Utukok River 25.78 3 P **P** 07 35 10.0 +0.6
baz=359,SNR=250
HFS Hagfors 25.79 190 P **P** 07 35 09.4 0.0
comp=Z,28nm,0.6s,baz=32,slow=8.5,SNR=20
HFS LR LR 07 44 19.1
comp=Z,5µm,18.8s,baz=2.5,slow=34
comp=Z,28nm,0.6s
HFS Hagfors 25.79 190 P **P** 07 35 09.5 0.0
baz=16,slow=11
HFS Hagfors 25.79 190 P **P** 07 35 09.5 0.0
INK Inuvik 25.82 340 LR LR 07 45 57.4
comp=Z,8µm,20.6s,baz=31,slow=38
INK Inuvik 25.82 340 P **P** 07 35 08.8 -0.8
INK IAmb IAmb 07 35 13.2
comp=Z,226nm,1.1s
INK Inuvik 25.82 340 P **P** 07 35 08.8 -0.8
INK pmax pmax
comp=Z,226nm,1.2s
INK Inuvik 25.82 340 P P 07 35 09.2 -0.5
baz=4.0,SNR=150
E29M Blow River 25.84 343 IAmb IAmb 07 35 14.6
comp=Z,178nm,1.1s
E29M Blow River 25.84 343 P **P** 07 35 10.1 +0.2
baz=3.3
D19K Kuna River 25.94 1 IAmb IAmb 07 35 13.0
comp=Z,215nm,0.8s
D19K Kuna River 25.94 1 P **P** 07 35 11.4 +0.6
baz=360
C17K DeLong Mountai 25.94 5 P **P** 07 35 11.3 +0.4
baz=359
E21K Killik River 25.99 357 P **P** 07 35 11.5 +0.2
baz=0.6
C16K Lisburne Hills 26.13 7 IAmb IAmb 07 35 16.1
comp=Z,204nm,1.0s
C16K Lisburne Hills 26.13 7 P **P** 07 35 13.2 +0.7
baz=359,SNR=126
PUL Pulkovo 26.14 171 ⇓ *i P* **P** 07 35 14.4 +1.8
PUL pmax pmax
comp=Z,202nm,0.5s
ODD1 Odda 26.14 198 *eP* **P** 07 35 16.2 +3.5
E20K Nigu River 26.18 359 P **P** 07 35 13.0 0.0
baz=0.2
E25K Arctic Village 26.24 350 P **P** 07 35 13.5 0.0
E25K IAmb IAmb 07 35 18.0
comp=Z,180nm,1.1s
E25K IAMs_20 IAMs_20 07 44 28.2
comp=Z,6µm,20.0s
E25K Arctic Village 26.24 350 P **P** 07 35 13.7 +0.1
baz=2.0,SNR=144
E22K Anaktuvuk Pass 26.29 355 IAmb IAmb 07 35 16.9
comp=Z,153nm,0.9s
E22K Anaktuvuk Pass 26.29 355 P **P** 07 35 14.1 +0.1
baz=0.9
KONO Kongsberg 26.34 195 P **P** 07 35 14.3 -0.2
KONO IAmb IAmb 07 35 20.2
comp=Z,436nm,1.6s
KONO Kongsberg 26.34 195 IAMs_20 IAMs_20 07 44 17.2
comp=Z,7µm,20.0s
KONO Kongsberg 26.34 195 *eP* **P** 07 35 15.2 +0.7
KONO Kongsberg 26.34 195 *c i P* **P** 07 35 15.0 +0.5
KONO pmax pmax
comp=Z,301nm,1.5s
E23K Chandalar 26.34 353 IAmb IAmb 07 35 17.0
comp=Z,190nm,1.3s
E23K Chandalar 26.34 353 P **P** 07 35 15.0 +0.4
baz=1.3
RDOG Red Dog Mine 26.37 5 P **P** 07 35 14.7 0.0
RDOG IAmb IAmb 07 35 18.5
comp=Z,237nm,1.0s
RDOG Red Dog Mine 26.37 5 P **P** 07 35 15.0 +0.3
baz=359,SNR=48
F30M Barrier River 26.57 342 IAmb IAmb 07 35 19.4
comp=Z,207nm,1.1s
F30M Barrier River 26.57 342 P **P** 07 35 16.3 -0.2
baz=3.5
BLS5 Blasjo 26.63 198 *eP* **P** 07 35 17.6 +0.5
F26K Sheenjek River 26.65 349 IAMs_20 IAMs_20 07 45 21.0
comp=Z,5µm,20.0s
F26K Sheenjek River 26.65 349 P **P** 07 35 17.4 +0.1
baz=2.2
F28M Old Crow 26.65 345 P **P** 07 35 17.4 +0.1
F28M IAmb IAmb 07 35 21.3
comp=Z,230nm,0.9s
F28M Old Crow 26.65 345 P **P** 07 35 17.6 +0.3
baz=2.9,SNR=232
F31M Tsiigehtchic 26.69 340 P **P** 07 35 17.0 -0.5
F31M IAmb IAmb 07 35 23.2
comp=Z,144nm,1.1s
F31M IAMs_20 IAMs_20 07 47 17.1
comp=Z,5µm,18.0s
F31M Tsiigehtchic 26.69 340 P **P** 07 35 17.1 -0.5
baz=3.8,SNR=97
D17K Noatak River 26.72 5 P **P** 07 35 18.4 +0.5
baz=359,SNR=312
F25K Christian Rive 26.77 350 IAMs_20 IAMs_20 07 44 56.2
comp=Z,7µm,19.0s
F25K Christian Rive 26.77 350 P **P** 07 35 18.4 0.0
baz=1.9,SNR=62
FRB Frobisher Bay 26.81 280 LR LR 07 45 45.5
comp=Z,8µm,18.9s,baz=5.5,slow=36
BMAR Burnt Mountain 26.92 349 P **P** 07 35 19.5 -0.2
STRU Stroemstad 26.93 193 *eP* **P** 07 35 20.8 +1.1
E19K Redstone River 26.98 360 P **P** 07 35 20.5 +0.3
baz=0.0,SNR=76
E18K Tukpahlearik C 27.01 3 IAmb IAmb 07 35 26.2
comp=Z,315nm,1.1s
E18K Tukpahlearik C 27.01 3 P **P** 07 35 21.0 +0.5
baz=360,SNR=167
COLD Coldfoot 27.18 354 IAmb IAmb 07 35 24.4
comp=Z,153nm,1.1s
COLD Coldfoot 27.18 354 P **P** 07 35 22.0 0.0
baz=1.2,SNR=44
F21K Alatna River 27.21 357 IAmb IAmb 07 35 27.7
comp=Z,200nm,1.4s
F21K Alatna River 27.21 357 P **P** 07 35 22.6 +0.3
baz=0.6
G30M tAoh Zraii Nji 27.21 342 IAmb IAmb 07 35 26.8
comp=Z,215nm,1.4s
G30M tAoh Zraii Nji 27.21 342 P **P** 07 35 21.6 -0.7
baz=3.4
G29M Pine Creek 27.32 343 P **P** 07 35 23.2 -0.1
baz=3.1
E17K Hotham Inlet 27.35 4 P **P** 07 35 23.5 0.0
baz=359,SNR=128
G26K Porcupine Rive 27.39 348 IAmb IAmb 07 35 28.4
comp=Z,168nm,1.0s
G26K Porcupine Rive 27.39 348 P **P** 07 35 24.4 +0.6
baz=2.2,SNR=126
F20K Avaraart Lake 27.39 358 IAmb IAmb 07 35 29.6
comp=Z,157nm,1.3s
F20K Avaraart Lake 27.39 358 P **P** 07 35 24.1 +0.2
baz=0.3,SNR=85
VSU Vasula 27.42 175 *c i P* **P** 07 35 22.3 -1.9
VSU pmax pmax
comp=Z,272nm,1.9s
F19K Shaleruckik Mo 27.61 0 P **P** 07 35 25.5 -0.3
baz=360
NRS Narsarsuaq 27.65 256 *i P* **P** 07 35 25.9 -0.3
G24K Hadweenzic Riv 27.69 351 P **P** 07 35 27.4 +0.8
baz=1.6,SNR=54
G23K Bananza Creek 27.70 354 P **P** 07 35 26.4 -0.3
baz=1.2
FYU Fort Yukon 27.80 349 P **P** 07 35 27.9 +0.5
FYU IAMs_20 IAMs_20 07 45 58.3
comp=Z,6µm,20.0s
IVI Ivigtut 27.80 258 *i P* **P** 07 35 28.0 +0.4
IVI Ivigtut 27.80 258 *i P* **P** 07 35 28.0 +0.4
KIRV Kirov 27.81 149 P **P** 07 35 27.1 -0.5
comp=Z,69nm,0.8s,baz=348,slow=1.0,SNR=20
KIRV LR LR 07 49 17.2
comp=Z,8µm,19.1s,baz=1.9,slow=42
comp=Z,69nm,0.8s
F18K Selawik 27.84 2 P **P** 07 35 28.1 +0.2
baz=360,SNR=96
G21K Allakaket 27.92 357 IAmb IAmb 07 35 35.5
comp=Z,178nm,1.2s
G21K Allakaket 27.92 357 P **P** 07 35 29.0 +0.4
baz=0.6,SNR=57
F17K Baldwin Pennin 28.00 3 P **P** 07 35 29.5 +0.2
baz=359
H27K Steamboat Moun 28.07 346 P **P** 07 35 31.2 +1.1
baz=2.5,SNR=93
BLKN Baker Lake 28.12 306 P **P** 07 35 30.6 +0.2
BLKN IAmb IAmb 07 35 34.4
comp=Z,232nm,1.9s
G19K Purcell Mounta 28.30 360 P **P** 07 35 31.6 -0.4
baz=0.0
H31M Peel River 28.34 340 IAMs_20 IAMs_20 07 48 16.9
comp=Z,6µm,18.0s
H31M Peel River 28.34 340 P **P** 07 35 32.0 -0.5
baz=3.5
G18K Tagagawik 28.55 1 IAmb IAmb 07 35 36.5
comp=Z,129nm,0.9s
G18K Tagagawik 28.55 1 P **P** 07 35 34.3 +0.1
baz=360
H24K Noodor Dome 28.56 352 P **P** 07 35 34.9 +0.5
baz=1.5
I27K Kandik River 28.70 346 IAMs_20 IAMs_20 07 48 35.4
comp=Z,5µm,18.0s
I27K Kandik River 28.70 346 P **P** 07 35 36.3 +0.6
baz=2.4,SNR=38
F15K North Star Dit 28.71 6 P **P** 07 35 36.5 +0.9
baz=359
H21K Melozitna Rive 28.78 356 P **P** 07 35 37.2 +0.9
baz=0.7,SNR=63

I28M	**Miner Creek**	**28.83**	**345**		IAmb	IAmb	07 35 38.9		
	comp=Z,364nm,1.9s								
I28M	**Miner Creek**	**28.83**	**345**		P	**P**	**07 35 37.0**	**+0.2**	
	baz=2.6,SNR=44								
TNA	**Tin City**	**28.83**	**9**		P	**P**	**07 35 36.8**	**+0.1**	
	baz=358								
PRP	**Porcupine Dome**	**28.85**	**350**		P	**P**	**07 35 36.1**	**-1.0**	
PRP					IAMs_20	IAMs_20	07 46 31.2		
	comp=Z,6µm,20.0s								
PRP	**Porcupine Dome**	**28.85**	**350**		P	**P**	**07 35 38.4**	**+1.4**	
	baz=1.8,SNR=22								
I29M	**Ogilvie Camp,**	**28.88**	**343**		P	**P**	**07 35 36.5**	**-0.7**	
I29M					IAmb	IAmb	07 35 38.9		
	comp=Z,200nm,1.8s								
I29M	**Ogilvie Camp,**	**28.88**	**343**		P	**P**	**07 35 36.7**	**-0.5**	
	baz=2.9,SNR=21								
F14K	**Arctic Creek**	**28.93**	**8**		P	**P**	**07 35 38.3**	**+0.7**	
	baz=359,SNR=17								
G17K	**Kiwalik Mounta**	**28.94**	**3**		P	**P**	**07 35 38.0**	**+0.3**	
	baz=360								
H20K	**Anotleneega Mo**	**28.95**	**358**		P	**P**	**07 35 38.4**	**+0.5**	
	baz=0.4,SNR=35								
I30M	**Mount Dempster**	**28.98**	**342**		IAmb	IAmb	07 35 39.9		
	comp=Z,264nm,1.6s								
I30M	**Mount Dempster**	**28.98**	**342**		P	**P**	**07 35 37.9**	**-0.4**	
	baz=3.2,SNR=80								
G16K	**Koyuk River**	**29.04**	**4**		IAmb	IAmb	07 35 41.7		
	comp=Z,162nm,1.3s								
G16K					IAMs_20	IAMs_20	07 46 26.2		
	comp=Z,5µm,21.0s								
G16K	**Koyuk River**	**29.04**	**4**		P	**P**	**07 35 39.0**	**+0.4**	
	baz=359,SNR=80								
I21K	**Tanana**	**29.25**	**355**		P	**P**	**07 35 40.8**	**+0.3**	
I21K					IAmb	IAmb	07 35 44.0		
	comp=Z,155nm,1.1s								
I21K	**Tanana**	**29.25**	**355**		P	**P**	**07 35 41.4**	**+0.9**	
	baz=0.8,SNR=30								
I23K	**Minto, Yukon-K**	**29.27**	**353**		P	**P**	**07 35 41.3**	**+0.7**	
	baz=1.2,SNR=36								
H18K	**Honhosa River**	**29.30**	**1**		IAmb	IAmb	07 35 43.8		
	comp=Z,250nm,1.5s								
H18K	**Honhosa River**	**29.30**	**1**		P	**P**	**07 35 41.4**	**+0.5**	
	baz=360								
MLY	**Manley**	**29.39**	**354**		P	**P**	**07 35 42.4**	**+0.6**	
MLY	**Manley**	**29.39**	**354**		P	**P**	**07 35 42.3**	**+0.5**	
	baz=1.0,SNR=14								
G15K	**Niukluk**	**29.43**	**6**		P	**P**	**07 35 42.8**	**+0.8**	
	baz=359								
H17K	**Granite Mounta**	**29.51**	**2**		IAmb	IAmb	07 35 45.7		
	comp=Z,187nm,1.6s								
H17K	**Granite Mounta**	**29.51**	**2**		P	**P**	**07 35 43.3**	**+0.5**	
	baz=360								
COLA	**College**	**29.53**	**352**		P	**P**	**07 35 43.6**	**+0.8**	
COLA					IAmb	IAmb	07 35 45.3		
	comp=Z,81nm,0.8s								
COLA	**College**	**29.53**	**352**	*d*	*i*P	**P**	**07 35 43.8**	**+0.9**	
COLA					pmax	pmax			
	comp=Z,93nm,0.9s								
COLA	**College**	**29.53**	**352**		P	**P**	**07 35 43.7**	**+0.8**	
	baz=1.4								
MUD	**Monsted U'grnd**	**29.55**	**195**	*i*	P	**P**	**07 35 39.7**	**-3.4**	
MUD	**Monsted U'grnd**	**29.55**	**195**	*i*	P	**P**	**07 35 39.7**	**-3.4**	
ILAR	**Eielson Array**	**29.62**	**351**		P	**P**	**07 35 44.2**	**+0.5**	
	comp=Z,78nm,0.9s,baz=358,slow=7.4,SNR=316								
ILAR					LR	LR	07 47 05.4		
	comp=Z,4µm,19.7s,baz=8.0,slow=35								
	comp=Z,78nm,0.9s								
ILAR	**Eielson Array**	**29.62**	**351**		P	**P**	**07 35 44.4**	**+0.7**	
J30M	**Hart River**	**29.63**	**342**		P	**P**	**07 35 44.0**	**+0.1**	
	baz=3.1,SNR=63								
YAK	**Yakutsk**	**29.66**	**66**		LR	LR	07 47 52.2		
	comp=Z,2µm,19.6s,baz=344,slow=37								
YAK	**Yakutsk**	**29.66**	**66**		P	**P**	**07 35 43.6**	**-0.5**	
YAK	**Yakutsk**	**29.66**	**66**	*e*	P	**P**	**07 35 42.6**	**-1.5**	
YAK				*e*	*e**PP	**pP**	**07 35 45.6**	**-0.1**	
YAK				*e*	PPP	PPP	07 36 46.3		
YAK				*e*			07 38 47.6		
YAK				*e*	S	**S**	**07 40 38.6**	**-0.7**	
YAK				*e*			07 46 24.3		
YAK					pmax	pmax			
	comp=Z,70nm,0.9s								
YAK					pmax	pmax			
	comp=N,20nm,1.2s								
YAK					pmax	pmax			
	comp=E,10.0nm,1.1s								
YAK					pmax	pmax			
	comp=Z,248nm,3.9s								
YAK					pmax	pmax			
	comp=N,236nm,3.5s								
YAK					pmax	pmax			
	comp=E,86nm,2.0s								
YAK					smax	smax			
	comp=E,813nm,5.8s								
YAK					smax	smax			
	comp=N,370nm,4.7s								
YAK					MLR	MLR			
	comp=Z,2µm,21.0s								
YAK					MLR	MLR			
	comp=N,2µm,21.0s								
YAK					MLR	MLR			
	comp=E,553nm,17.0s								
GCSA	**Galena City Sc**	**29.71**	**359**		P	**P**	**07 35 45.4**	**+0.9**	
	baz=0.1,SNR=50								
CCB	**Clear Creek Bu**	**29.75**	**352**		P	**P**	**07 35 45.5**	**+0.6**	
CCB					IAmb	IAmb	07 35 47.8		
	comp=Z,239nm,1.5s								
J25K	**Salcha River,**	**29.76**	**349**		IAmb	IAmb	07 35 48.2		
	comp=Z,130nm,1.2s								
J25K					IAMs_20	IAMs_20	07 47 18.2		
	comp=Z,6µm,20.0s								
J25K	**Salcha River,**	**29.76**	**349**		P	**P**	**07 35 46.2**	**+1.2**	
	baz=1.8,SNR=52								
J29N	**Klondike Camp**	**29.79**	**343**		P	**P**	**07 35 45.4**	**0.0**	
J29N	**Klondike Camp**	**29.79**	**343**		P	**P**	**07 35 45.6**	**+0.3**	
	baz=2.8,SNR=22								
H16K	**Elim**	**29.80**	**4**		P	**P**	**07 35 46.0**	**+0.7**	
	baz=359,SNR=33								
NEA2	**Nenana**	**29.82**	**353**		P	**P**	**07 35 46.1**	**+0.6**	
NEA2	**Nenana**	**29.82**	**353**		P	**P**	**07 35 46.2**	**+0.6**	
	baz=1.2,SNR=8.8								
J26L	**Joseph Creek**	**29.84**	**348**		IAMs_20	IAMs_20	07 46 54.4		
	comp=Z,5µm,20.0s								
J26L	**Joseph Creek**	**29.84**	**348**		P	**P**	**07 35 46.5**	**+0.7**	
	baz=2.0,SNR=20								
ANM	**Nome**	**29.85**	**7**		P	**P**	**07 35 46.6**	**+0.9**	
ANM	**Nome**	**29.85**	**7**		P	**P**	**07 35 46.6**	**+0.9**	
ANM					pmax	pmax			
	comp=Z,103nm,1.2s								
ANM					MLR	MLR			
	comp=Z,3µm,20.0s								
ANM	**Nome**	**29.85**	**7**		P	**P**	**07 35 46.7**	**+0.9**	
	baz=359,SNR=34								
WRH	**Wood River Hil**	**29.93**	**352**		P	**P**	**07 35 47.3**	**+0.8**	
WRH					IAmb	IAmb	07 35 49.5		
	comp=Z,180nm,1.1s								
HDA	**Harding Lake**	**29.98**	**351**		P	**P**	**07 35 47.6**	**+0.7**	
	baz=1.5,SNR=34								
SVE	**Sverdlovsk**	**30.07**	**137**	*e*	P	**P**	**07 35 48.4**	**+0.6**	
SVE				*e*	S	**S**	**07 40 50.0**	**+4.2**	
SVE					pmax	pmax			
	comp=N,68nm,0.9s								
SVE					MLR	MLR			
	comp=N,3µm,18.0s								
SEY	**Seymchan**	**30.15**	**44**		LR	LR	07 48 07.2		
	comp=N,3µm,18.2s,baz=348,slow=37								
SEY	**Seymchan**	**30.15**	**44**	⇑*i*	P	**P**	**07 35 48.0**	**-0.4**	
SEY					pmax	pmax			
	comp=Z,21nm,1.4s								
DAWY	**Dawson**	**30.20**	**344**		P	**P**	**07 35 49.0**	**0.0**	
	baz=2.6,SNR=44								
COP	**Copenhagen**	**30.26**	**191**	*i*	P	**P**	**07 35 46.7**	**-2.8**	
COP	**Copenhagen**	**30.26**	**191**	*i*	P	**P**	**07 35 46.7**	**-2.8**	
MOS	**Moscow**	**30.30**	**163**	*e*	P	**P**	**07 35 48.7**	**-1.1**	
MOS					pmax	pmax			
	comp=Z,70nm,0.9s								
MOS					MLR	MLR			
	comp=Z,9µm,14.0s								
MOS					MLR	MLR			
	comp=N,9µm,15.0s								
BPAW	**Bear Paw Mtn.**	**30.33**	**354**		IAmb	IAmb	07 35 53.1		
	comp=Z,206nm,1.4s								
BPAW	**Bear Paw Mtn.**	**30.33**	**354**		P	**P**	**07 35 51.0**	**+0.9**	
	baz=0.9,SNR=36								
PABE	**Paberze**	**30.37**	**178**		IAMs_20	IAMs_20	07 47 58.8		
	comp=Z,6µm,18.0s								
SCRK	**Sand Creek**	**30.38**	**348**		IAmb	IAmb	07 35 53.5		
	comp=Z,215nm,1.8s								
SCRK					IAMs_20	IAMs_20	07 47 20.5		
	comp=Z,5µm,20.0s								
SCRK	**Sand Creek**	**30.38**	**348**		P	**P**	**07 35 51.4**	**+0.8**	
	baz=1.9,SNR=32								
K29M	**Barlow Dome**	**30.39**	**343**		IAmb	IAmb	07 35 53.4		
	comp=Z,146nm,1.5s								
K29M					IAMs_20	IAMs_20	07 48 43.9		
	comp=Z,5µm,20.0s								
K29M	**Barlow Dome**	**30.39**	**343**		P	**P**	**07 35 50.8**	**+0.2**	
	baz=2.9								
ARTI	**Arti**	**30.39**	**140**		LR	LR	07 50 07.2		
	comp=Z,4µm,18.7s,baz=353,slow=40								
ARTI	**Arti**	**30.39**	**140**		P	**P**	**07 35 50.6**	**-0.1**	
ARTI					IAmb	IAmb	07 35 52.8		
	comp=Z,101nm,0.7s								
ARTI					IAMs_20	IAMs_20	07 48 53.1		
	comp=Z,5µm,21.0s								
ARTI	**Arti**	**30.39**	**140**	*c*	*i*P	**P**	**07 35 51.1**	**+0.5**	
ARTI							07 36 45.2		
ARTI					S	**S**	**07 40 53.0**	**+2.1**	
ARTI					pmax	pmax			
	comp=Z,95nm,0.8s								
ARTI					MLR	MLR			
	comp=Z,4µm,19.0s								
J19K	**Poorman**	**30.46**	**358**		IAmb	IAmb	07 35 54.4		
	comp=Z,125nm,1.3s								
J19K	**Poorman**	**30.46**	**358**		P	**P**	**07 35 52.3**	**+1.1**	
	baz=0.2,SNR=41								
SSRD	**Sdr. Stenderup**	**30.52**	**194**	*i*	P	**P**	**07 35 50.7**	**-1.0**	
SSRD	**Sdr. Stenderup**	**30.52**	**194**	*i*	P	**P**	**07 35 50.7**	**-1.0**	
CHUM	**Lake Minchumin**	**30.56**	**355**		P	**P**	**07 35 53.3**	**+1.3**	
	baz=0.7								
I17K	**Unalakleet**	**30.57**	**3**		IAmb	IAmb	07 35 55.1		
	comp=Z,146nm,1.4s								
I17K	**Unalakleet**	**30.57**	**3**		P	**P**	**07 35 53.0**	**+1.0**	
	baz=360								
GAMB	**Gambell**	**30.57**	**12**		P	**P**	**07 35 52.1**	**+0.1**	
GAMB					IAMs_20	IAMs_20	07 49 38.4		
	comp=Z,6µm,18.0s								
GAMB	**Gambell**	**30.57**	**12**		P	**P**	**07 35 52.3**	**+0.2**	
	baz=358,SNR=12								
K24K	**Donnelly Dome**	**30.57**	**350**		IAmb	IAmb	07 35 55.4		
	comp=Z,93nm,0.8s								
K24K					IAMs_20	IAMs_20	07 47 42.8		
	comp=Z,5µm,19.0s								
K24K	**Donnelly Dome**	**30.57**	**350**		P	**P**	**07 35 52.5**	**+0.3**	
	baz=1.7,SNR=14								
WRGLY	**Wrigley**	**30.58**	**330**		P	**P**	**07 35 52.3**	**+0.1**	
WRGLY					IAmb	IAmb	07 35 55.5		
	comp=Z,106nm,1.1s								
WRGLY	**Wrigley**	**30.58**	**330**		P	**P**	**07 35 52.4**	**+0.1**	
	baz=4.7,SNR=41								
MAYO	**Mayo, Yukon**	**30.60**	**341**		IAmb	IAmb	07 36 04.5		
	comp=Z,99nm,1.0s								
MAYO	**Mayo, Yukon**	**30.60**	**341**		P	**P**	**07 35 52.6**	**+0.2**	
	baz=3.1,SNR=11								
RIDG	**Independent Ri**	**30.63**	**349**		IAMs_20	IAMs_20	07 47 36.1		
	comp=Z,5µm,19.0s								
RIDG	**Independent Ri**	**30.63**	**349**		P	**P**	**07 35 53.3**	**+0.6**	
	baz=1.8,SNR=8.4								
MCK	**McKinley**	**30.68**	**353**		P	**P**	**07 35 54.2**	**+1.0**	
	baz=1.2,SNR=16								
DOT	**Dot Lake**	**30.71**	**348**		IAmb	IAmb	07 35 56.4		
	comp=Z,145nm,1.3s								
DOT					IAMs_20	IAMs_20	07 47 30.3		
	comp=Z,5µm,20.0s								
BSD	**Bornholm Skovb**	**30.80**	**189**	*i*	P	**P**	**07 35 49.9**	**-4.3**	
BSD	**Bornholm Skovb**	**30.80**	**189**	*i*	P	**P**	**07 35 49.9**	**-4.3**	
YKAW3	**Yellowknife Wh**	**30.88**	**322**		IAmb	IAmb	07 35 58.1		
	comp=Z,106nm,1.0s								
KTH	**Kantishna Hill**	**30.88**	**354**		IAmb	IAmb	07 35 58.1		
	comp=Z,159nm,1.0s								
OBN	**Obninsk**	**30.91**	**164**		P	**P**	**07 35 54.7**	**-0.4**	
	comp=Z,89nm,0.7s,baz=284,slow=6.7,SNR=18								
OBN					LR	LR	07 48 54.8		
	comp=Z,8µm,18.5s,baz=303,slow=37								
	comp=Z,89nm,0.7s								
OBN	**Obninsk**	**30.91**	**164**		P	**P**	**07 35 54.7**	**-0.4**	
OBN					IAmb	IAmb	07 35 56.3		
	comp=Z,140nm,0.8s								
OBN					IAMs_20	IAMs_20	07 48 42.8		
	comp=Z,7µm,18.0s								
OBN	**Obninsk**	**30.91**	**164**	⇑	P	**P**	**07 35 54.9**	**-0.3**	
OBN	**Obninsk**	**30.91**	**164**	*c*	*i*P	**P**	**07 35 54.6**	**-0.5**	
OBN				*e*			07 36 57.6		
OBN				*e*			07 38 51.0		
OBN				*e*	S	**S**	**07 41 00.8**	**+1.9**	
OBN					pmax	pmax			
	comp=Z,124nm,0.8s								
OBN					MLR	MLR			
	comp=Z,9µm,16.0s								
YKA	**Yellowknife Ar**	**30.95**	**322**		P	**P**	**07 35 55.3**	**-0.1**	
	comp=Z,35nm,1.0s,baz=358,slow=8.8,SNR=234								
YKA					PcP	**PcP**	**07 38 51.3**	**+0.1**	
	comp=Z,2.6nm,0.7s,baz=1.0,slow=3.2,SNR=4.3								
YKA					LR	LR	07 48 36.0		
	comp=Z,6µm,20.3s,baz=359,slow=37								
	comp=Z,35nm,1.0s								
YKAW1	**Yellowknife Wh**	**30.95**	**322**		P	**P**	**07 35 55.2**	**-0.3**	
YKAW1					IAmb	IAmb	07 35 59.5		
	comp=Z,175nm,1.4s								
TRF	**Thorofare Moun**	**30.98**	**354**		P	**P**	**07 35 56.6**	**+0.7**	
TRF	**Thorofare Moun**	**30.98**	**354**		P	**P**	**07 35 56.3**	**+0.4**	
	baz=1.0,SNR=15								
NACGM	**Naroch**	**30.99**	**175**	⇑	*i*P	**P**	**07 35 55.2**	**-0.6**	
	comp=Z,74nm,1.3s,baz=359								
J18K	**Innoko River**	**30.99**	**359**		IAmb	IAmb	07 35 59.2		
	comp=Z,122nm,1.1s								
J18K	**Innoko River**	**30.99**	**359**		P	**P**	**07 35 56.8**	**+0.9**	
	baz=0.1								
RND	**Reindeer**	**31.01**	**352**		P	**P**	**07 35 56.5**	**+0.4**	
RND	**Reindeer**	**31.01**	**352**		P	**P**	**07 35 56.5**	**+0.4**	
RND					pmax	pmax			
	comp=Z,40nm,1.0s								
RND					MLR	MLR			
	comp=Z,3µm,20.0s								
EKA	**Eskdalemuir Ar**	**31.02**	**209**		P	**P**	**07 35 56.8**	**+0.7**	
	comp=Z,6.2nm,0.6s,baz=356,slow=7.2,SNR=24								
EKA					LR	LR	07 46 17.7		
	comp=Z,2µm,18.6s,baz=13,slow=32								
	comp=Z,6.2nm,0.6s								
EKA	**Eskdalemuir Ar**	**31.02**	**209**		P	**P**	**07 35 57.5**	**+1.4**	
	baz=14,slow=9.3								
EKA	**Eskdalemuir Ar**	**31.02**	**209**		P	**P**	**07 35 57.5**	**+1.4**	
J17K	**VABM Dome**	**31.06**	**1**		IAmb	IAmb	07 35 59.4		
	comp=Z,145nm,1.0s								
J17K	**VABM Dome**	**31.06**	**1**		P	**P**	**07 35 57.1**	**+0.7**	
	baz=360								
K20K	**Telida**	**31.09**	**357**		IAmb	IAmb	07 36 00.1		
	comp=Z,127nm,1.1s								
K20K	**Telida**	**31.09**	**357**		P	**P**	**07 35 57.8**	**+1.0**	
	baz=0.5,SNR=43								
J16K	**Anvik River**	**31.17**	**3**		IAmb	IAmb	07 36 00.3		
	comp=Z,114nm,0.9s								
J16K	**Anvik River**	**31.17**	**3**		P	**P**	**07 35 57.6**	**+0.2**	
	baz=360,SNR=62								
BCAR	**Beaver Creek A**	**31.25**	**346**		P	**P**	**07 35 59.0**	**+0.8**	
L27K	**Beaver Creek,**	**31.26**	**346**		IAmb	IAmb	07 36 01.5		
	comp=Z,99nm,1.1s								
L27K	**Beaver Creek,**	**31.26**	**346**		P	**P**	**07 35 59.5**	**+1.2**	
	baz=2.2								
L26K	**Log Cabin Wild**	**31.32**	**348**		P	**P**	**07 35 59.7**	**+1.0**	
L26K					IAmb	IAmb	07 36 02.2		
	comp=Z,92nm,1.2s								
L26K					IAMs_20	IAMs_20	07 47 29.5		
	comp=Z,4µm,21.0s								
L26K	**Log Cabin Wild**	**31.32**	**348**		P	**P**	**07 35 59.8**	**+1.0**	
	baz=2.0,SNR=20								
DHY	**Denali Highway**	**31.33**	**351**		P	**P**	**07 35 58.6**	**-0.4**	
DHY					IAmb	IAmb	07 36 03.2		
	comp=Z,86nm,1.0s								
DHY	**Denali Highway**	**31.33**	**351**		P	**P**	**07 35 59.4**	**+0.4**	
	baz=1.4,SNR=8.5								
RGN	**Rugen**	**31.39**	**190**		IAMs_20	IAMs_20	07 47 08.8		
	comp=Z,5µm,22.0s								
MNK	**Minsk**	**31.40**	**174**	*i*	P	**P**	**07 35 59.8**	**+0.3**	
	comp=E,52nm,1.1s								
MNK				*i*	P	**P**	**07 35 59.8**	**+0.3**	
	comp=N,18nm,1.0s								
MNK				*i*	P	**P**	**07 35 59.8**	**+0.3**	
	comp=Z,50nm,0.9s,baz=359								
MNK				*i*	PP	**PP**	**07 37 03.3**	**-6.7**	
MNK				*i*	PPP	PPP	07 37 12.1		
MNK				*i*	S	**S**	**07 41 08.8**	**+2.2**	
MNK				*i*	SS	**SnSn**	**07 42 55.0**	**+5.1**	
MNK				*i*	SSS	SSS	07 43 10.6		
MNK				*i*	LQ	LQ	07 45 54.4		
MNK				*i*	LR	LR	07 47 05.3		
MNK				*i*	LRM	MLR	07 48 26.9		
	comp=N,3µm,16.3s								
MNK				*i*	LRM	MLR	07 48 51.2		
	comp=E,6µm,16.0s								
MNK				*i*	LRM	MLR	07 48 57.8		
	comp=Z,7µm,16.4s								
MNK	**Minsk**	**31.40**	**174**	*i*	P	**P**	**07 35 59.8**	**+0.3**	
MNK				*i*			07 37 03.3		
MNK				*i*	S	**S**	**07 41 08.7**	**+2.2**	
MNK				*i*	SS	**SnSn**	**07 42 54.9**	**+5.1**	
MNK				*i*	SSS	SSS	07 43 10.6		
MNK					pmax	pmax			
	comp=E,52nm,1.1s								
MNK					pmax	pmax			
	comp=Z,50nm,0.9s								
MNK					pmax	pmax			
	comp=N,18nm,1.0s								
MNK					MLR	MLR			
	comp=N,3µm,16.0s								
MNK					MLR	MLR			
	comp=E,6µm,16.0s								
MNK					MLR	MLR			
	comp=Z,7µm,16.0s								
PAX	**Paxson**	**31.41**	**349**		P	**P**	**07 35 59.2**	**-0.4**	
PAX					IAMs_20	IAMs_20	07 48 29.8		
	comp=Z,4µm,19.0s								
PAX	**Paxson**	**31.41**	**349**		P	**P**	**07 35 59.2**	**-0.4**	
PAX					pmax	pmax			
	comp=Z,96nm,1.6s								
PAX					MLR	MLR			
	comp=Z,4µm,19.0s								
PAX	**Paxson**	**31.41**	**349**		P	**P**	**07 35 59.7**	**+0.1**	
	baz=1.7,SNR=15								
MENT	**Mentasta**	**31.41**	**348**		IAmb	IAmb	07 36 03.1		
	comp=Z,168nm,1.1s								
IDGL	**Inch Island, C**	**31.45**	**213**		P	**P**	**07 36 00.8**	**+0.9**	
PPLA	**Purkeypile**	**31.55**	**355**		P	**P**	**07 36 01.5**	**+0.5**	
	baz=0.7,SNR=16								
WAT1	**Susitna Watana**	**31.59**	**352**		P	**P**	**07 36 01.2**	**+0.1**	
	baz=1.2								
M30M	**Minto, Yukon**	**31.64**	**342**		P	**P**	**07 36 02.2**	**+0.6**	
M30M					IAmb	IAmb	07 36 04.3		
	comp=Z,122nm,1.1s								
M30M	**Minto, Yukon**	**31.64**	**342**		P	**P**	**07 36 02.4**	**+0.7**	
	baz=2.9,SNR=81								
J14K	**Nanvaranak Lak**	**31.69**	**5**		IAMs_20	IAMs_20	07 48 20.2		
	comp=Z,5µm,21.0s								
J14K	**Nanvaranak Lak**	**31.69**	**5**		P	**P**	**07 36 02.3**	**+0.4**	
	baz=359								
K17K	**Iditarod**	**31.75**	**1**		IAmb	IAmb	07 36 06.3		
	comp=Z,160nm,1.3s								
K17K	**Iditarod**	**31.75**	**1**		P	**P**	**07 36 03.4**	**+0.9**	
	baz=360								
M29M	**Somme Creek**	**31.81**	**343**		IAmb	IAmb	07 36 07.7		
	comp=Z,105nm,1.0s								
M29M	**Somme Creek**	**31.81**	**343**		P	**P**	**07 36 04.7**	**+1.4**	
	baz=2.6,SNR=85								
WAT6	**Susitna Watana**	**31.83**	**351**		P	**P**	**07 36 03.6**	**+0.2**	
	baz=1.4,SNR=19								
SUW	**Suwalki**	**31.87**	**179**	*e*	P	**P**	**07 36 02.4**	**-1.2**	
BVCY	**Beaver Creek**	**31.89**	**345**		P	**P**	**07 36 05.3**	**+1.5**	
	baz=2.3,SNR=43								
FARO	**Faro, Yukon**	**31.90**	**339**		IAmb	IAmb	07 36 07.2		
	comp=Z,88nm,1.1s								
FARO	**Faro, Yukon**	**31.90**	**339**		P	**P**	**07 36 05.3**	**+1.4**	
	baz=3.3,SNR=31								
L22K	**Petersville**	**31.91**	**354**		IAmb	IAmb	07 36 06.3		
	comp=Z,158nm,1.1s								
M26K	**Nabesna, AK**	**31.94**	**347**		IAmb	IAmb	07 36 07.8		
	comp=Z,126nm,1.0s								
M26K					IAMs_20	IAMs_20	07 48 01.9		
	comp=Z,4µm,21.0s								
M26K	**Nabesna, AK**	**31.94**	**347**		P	**P**	**07 36 05.6**	**+1.3**	
	baz=2.0,SNR=40								
M31M	**Drury Creek, Y**	**31.96**	**340**		IAmb	IAmb	07 36 07.7		
	comp=Z,108nm,0.9s								
M31M					IAMs_20	IAMs_20	07 50 18.4		
	comp=Z,5µm,19.0s								
M31M	**Drury Creek, Y**	**31.96**	**340**		P	**P**	**07 36 05.7**	**+1.3**	
	baz=3.1,SNR=71								
M27K	**Edge Creek, AK**	**31.96**	**346**		IAMs_20	IAMs_20	07 50 37.6		
	comp=Z,4µm,18.0s								
M27K	**Edge Creek, AK**	**31.96**	**346**		P	**P**	**07 36 05.7**	**+1.1**	
	baz=2.1,SNR=15								
HARP	**HAARP**	**31.98**	**349**		P	**P**	**07 36 05.5**	**+1.0**	
	baz=1.7								
CUT	**Chulitna**	**32.03**	**354**		P	**P**	**07 36 05.2**	**+0.3**	
CUT	**Chulitna**	**32.03**	**354**		P	**P**	**07 36 04.8**	**-0.1**	
	baz=1.0,SNR=29								
K15K	**Wolf Creek Mou**	**32.16**	**4**		IAmb	IAmb	07 36 09.9		
	comp=Z,117nm,1.1s								
K15K	**Wolf Creek Mou**	**32.16**	**4**		P	**P**	**07 36 06.5**	**+0.4**	
	baz=359								
L19K	**White Mountain**	**32.28**	**358**		IAmb	IAmb	07 36 10.2		
	comp=Z,132nm,1.1s								
L19K	**White Mountain**	**32.28**	**358**		P	**P**	**07 36 08.3**	**+1.1**	
	baz=0.3								
M24K	**Tolsona, Glenn**	**32.28**	**350**		P	**P**	**07 36 08.1**	**+0.8**	
	baz=1.6,SNR=15								
L17K	**Donlin**	**32.33**	**1**		P	**P**	**07 36 08.6**	**+1.0**	
	baz=360								
KUQ	**Kuujjuuaa**	**32.39**	**278**		P	**P**	**07 36 07.7**	**-0.5**	
K

MCARA **McCarthy VSAT** 32.96 347 P P 07 36 13.8 +0.7
baz=1.9,SNR=14
M18K **Stony River** 32.97 359 P P 07 36 14.0 +0.8
baz=0.2,SNR=9.1
N32M **Quiet Lake** 32.98 338 IAMs_20 IAMs_20 07 50 34.3
comp=Z,4µm,20.0s
N32M **Quiet Lake** 32.98 338 P P 07 36 14.2 +0.9
baz=3.2,SNR=14
SUA **Susitna One** 32.98 354 IAmb IAmb 07 36 22.1
comp=Z,140nm,0.8s
SUA **Susitna One** 32.98 354 P P 07 36 13.7 +0.3
baz=0.9,SNR=26
YUK8 **Steele Glacier** 33.00 344 P P 07 36 14.7 +0.9
baz=2.4,SNR=15
KNK **Knik Glacier** 33.01 352 P P 07 36 14.0 +0.4
KNK IAmb IAmb 07 36 16.0
comp=Z,143nm,1.1s
KNK **Knik Glacier** 33.01 352 P P 07 36 13.9 +0.4
baz=1.2,SNR=15
M17K **Holitna River** 33.06 360 P P 07 36 14.8 +0.8
baz=360,SNR=51
L14K **Kuka Creek** 33.11 5 IAmb IAmb 07 36 18.0
comp=Z,136nm,1.1s
L14K **Kuka Creek** 33.11 5 P P 07 36 14.9 +0.5
baz=359
VRDI **Verde Repeater** 33.12 348 P P 07 36 14.7 -0.1
VRDI IAmb IAmb 07 36 18.3
comp=Z,116nm,0.9s
VRDI IAMs_20 IAMs_20 07 48 29.2
comp=Z,5µm,22.0s
IGLA **Glengowla, Co** 33.18 215 P P 07 36 17.1 +2.0
DSB **Dublin** 33.23 212 P P 07 36 16.0 +0.5
DSB **Dublin** 33.23 212 P P 07 36 17.0 +1.5
SPCR **Spurr Chakacha** 33.25 355 P P 07 36 15.2 -0.5
baz=0.7,SNR=22
DIV **Divide** 33.26 350 IAMs_20 IAMs_20 07 49 29.7
comp=Z,4µm,18.0s
RETH **Rethem/Aller,** 33.27 195 *e*P P 07 36 17.1 +1.3
comp=Z,246nm,1.4s,baz=3.0,slow=8.7
YUK6 **Outpost Mounta** 33.31 343 P P 07 36 17.9 +1.3
baz=2.5,SNR=39
RC01 **Rabbit Creek A** 33.34 353 P P 07 36 16.3 -0.2
baz=1.0,SNR=17
CTG **Chitna Glacier** 33.35 346 P P 07 36 17.5 +0.8
baz=2.1,SNR=31
CTGM **Chitina Glacie** 33.35 346 IAmb IAmb 07 36 19.2
comp=Z,96nm,0.8s
BMRM **Bremner River** 33.40 349 IAmb IAmb 07 36 18.9
comp=Z,86nm,1.0s
BMRM **Bremner River** 33.40 349 P P 07 36 16.2 -0.9
baz=1.7,SNR=9.1
HYT **Haines Junctio** 33.41 342 IAmb IAmb 07 36 20.5
comp=Z,152nm,1.0s
HYT **Haines Junctio** 33.41 342 P P 07 36 17.5 +0.2
baz=2.6,SNR=73
MA2 **Magadan** 33.41 47 LR LR 07 50 15.0
comp=Z,2µm,18.2s,baz=360,slow=37
MA2 **Magadan** 33.41 47 P P 07 36 16.6 -0.6
MA2 **Magadan** 33.41 47 *d* *i*P P 07 36 16.5 -0.6
MA2 pmax pmax
comp=Z,43nm,1.3s
O30N **Mendenhall** 33.44 341 IAmb IAmb 07 36 20.1
comp=Z,166nm,1.1s
O30N **Mendenhall** 33.44 341 P P 07 36 18.1 +0.8
baz=2.8,SNR=57
M16K **Timber Creek** 33.44 1 P P 07 36 18.0 +0.6
baz=360
LPSR **Galich'ya Gora** 33.48 162 *c* *i*P P 07 36 17.6 -0.1
LPSR pmax pmax
comp=Z,223nm,0.8s
WHY **Whitehorse** 33.52 340 P P 07 36 18.2 +0.1
baz=3.0,SNR=12
O28M **Mount Upton** 33.52 345 P P 07 36 18.9 +0.5
baz=2.3,SNR=10
GLI **Glacier Island** 33.53 351 IAmb IAmb 07 36 20.0
comp=Z,92nm,0.8s
GLI **Glacier Island** 33.53 351 P P 07 36 18.1 0.0
baz=1.4
FCC **Fort Churchill** 33.53 302 P P 07 36 17.4 -0.6
FCC IAmb IAmb 07 36 19.8
comp=Z,105nm,1.3s
FCC **Fort Churchill** 33.53 302 P P 07 36 17.5 -0.6
FCC pmax pmax
comp=Z,105nm,1.3s
TGL **Tana Glacier** 33.59 347 IAMs_20 IAMs_20 07 49 27.5
comp=Z,4µm,20.0s
CRQM **Cirque** 33.59 347 IAmb IAmb 07 36 21.1
CRQM IAMs_20 IAMs_20 07 49 26.7
comp=Z,4µm,20.0s
GRNC **Granite Creek** 33.59 346 IAmb IAmb 07 36 21.0
comp=Z,66nm,0.8s
CRQE **Cirque** 33.60 347 P P 07 36 18.6 -0.2
baz=1.9,SNR=6.5
FLTG **Flechtingen** 33.64 192 *e*P P 07 36 19.5 +0.4
comp=Z,312nm,2.0s,baz=3.0,slow=8.7
N19K **Bonanza Creek** 33.65 357 IAmb IAmb 07 36 22.3
comp=Z,101nm,1.0s
N19K **Bonanza Creek** 33.65 357 P P 07 36 19.5 +0.2
baz=0.4,SNR=17
R9F13 **Warsaw-Wawer** 33.66 181 *e*P P 07 36 20.4 +1.1
R9F13 *e* 07 37 10.1
R9F13 *e*PP **PP** 07 37 40.9 +5.7
R9F13 *e*S **S** 07 41 43.9 +2.1
R9F13 *e*SS **SS** 07 44 13.4 +6.8
CAPN **Captain Cook N** 33.68 354 P P 07 36 19.1 -0.3
baz=0.8
KOTAN **Kotaneelee Air** 33.70 330 P P 07 36 20.6 +1.0
baz=4.2,SNR=27
M14K **Bethel** 33.71 4 IAmb IAmb 07 36 22.3
comp=Z,163nm,1.2s
M14K IAMs_20 IAMs_20 07 49 01.4
comp=Z,4µm,22.0s
M14K **Bethel** 33.71 4 P P 07 36 19.6 0.0
baz=359,SNR=16
ISLE **Juniper Island** 33.73 347 IAMs_20 IAMs_20 07 49 53.3
comp=Z,4µm,20.0s
M15K **Kasigluk River** 33.77 3 P P 07 36 19.3 -0.9
baz=360
N18K **Kilae Creek** 33.79 359 IAmb IAmb 07 36 23.4
comp=Z,88nm,1.2s
N18K **Kilae Creek** 33.79 359 P P 07 36 20.8 +0.5
baz=0.2
EYAK **Cordova Ski Ar** 33.84 350 IAmb IAmb 07 36 23.4
comp=Z,86nm,0.9s
EYAK IAMs_20 IAMs_20 07 49 31.1
comp=Z,5µm,20.0s
EYAK **Cordova Ski Ar** 33.84 350 P P 07 36 21.8 +1.0
baz=1.5,SNR=5.2
ASSE **Asse, Remlinge** 33.85 193 *e*P P 07 36 21.9 +1.0
comp=Z,769nm,2.2s,baz=3.0,slow=8.7
TABL **Table Mountain** 33.88 345 IAmb IAmb 07 36 23.8
comp=Z,116nm,1.4s
TABL IAMs_20 IAMs_20 07 52 35.1
comp=Z,3µm,18.0s
WTLY **Watson Lake, Y** 33.88 334 IAmb IAmb 07 36 24.3
comp=Z,114nm,1.3s
WTLY **Watson Lake, Y** 33.88 334 P P 07 36 22.6 +1.3
baz=3.7,SNR=20
WAX **Waxell Ridge** 33.90 347 IAMs_20 IAMs_20 07 49 25.6
comp=Z,5µm,20.0s
P33M **Teslin, Yukon** 33.91 338 P P 07 36 22.2 +0.7
baz=3.2,SNR=55
BELG **Belogornoye** 33.94 152 LR LR 07 52 51.7
comp=Z,6µm,18.4s,baz=356,slow=41
N17K **Nushagak Hills** 33.94 360 P P 07 36 22.7 +1.0
baz=0.0
O22K **Cooper Landing** 33.95 353 P P 07 36 21.6 -0.2
baz=1.0
O29M **Mount Kennedy** 33.96 343 IAMs_20 IAMs_20 07 50 24.3
comp=Z,4µm,20.0s
O29M **Mount Kennedy** 33.96 343 P P 07 36 22.1 +0.1
baz=2.5
BERG **Berg Lake** 33.97 348 IAMs_20 IAMs_20 07 49 17.5
comp=Z,5µm,20.0s
N16K **Nishlik Lake** 33.99 1 P P 07 36 21.8 -0.4
baz=360
HIN **Hinchinbrook I** 34.00 350 IAMs_20 IAMs_20 07 49 45.4
comp=Z,4µm,20.0s
M13K **Dall Lake** 34.04 5 IAMs_20 IAMs_20 07 50 02.2
comp=Z,4µm,21.0s
M13K **Dall Lake** 34.04 5 P P 07 36 22.5 0.0
baz=359
M11K **Mekoryuk** 34.04 8 IAmb IAmb 07 36 25.8
comp=Z,111nm,1.2s
M11K **Mekoryuk** 34.04 8 P P 07 36 23.0 +0.5
baz=359,SNR=7.2
BEL **Belsk** 34.05 182 *e*P P 07 36 23.5 +0.8

P30M **Million Dollar** 34.10 342 P P 07 36 23.7 +0.5
baz=2.6
IWEX **Carrickbyrne,** 34.11 212 P P 07 36 24.5 +1.3
CLZ **Clausthal** 34.15 193 *e*P P 07 36 24.7 +1.1
comp=Z,827nm,2.1s,baz=3.0,slow=8.7
MESA **MESA** 34.15 346 IAmb IAmb 07 36 26.9
comp=Z,161nm,1.0s
MESA IAMs_20 IAMs_20 07 50 15.4
comp=Z,5µm,20.0s
MESA **MESA** 34.15 346 P P 07 36 24.2 +0.5
baz=2.0,SNR=13
SNH **Sunshine Point** 34.17 347 IAMs_20 IAMs_20 07 49 33.8
comp=Z,6µm,21.0s
PCA **Pinnacle** 34.20 345 IAmb IAmb 07 36 27.8
comp=Z,102nm,1.2s
PCA IAMs_20 IAMs_20 07 51 30.7
comp=Z,4µm,20.0s
PINM **Pinnacle** 34.20 345 P P 07 36 24.3 +0.3
baz=2.2,SNR=7.2
O19K **Port Alsworth** 34.27 357 IAmb IAmb 07 36 27.1
comp=Z,140nm,1.0s
O19K **Port Alsworth** 34.27 357 P P 07 36 24.2 -0.3
baz=0.4,SNR=18
SUCK **Suckling Hills** 34.29 348 IAMs_20 IAMs_20 07 51 01.0
comp=Z,6µm,19.0s
N15K **Kwethluk River** 34.30 2 P P 07 36 25.7 +0.9
baz=360
SEW **Seward** 34.33 353 IAmb IAmb 07 36 36.8
comp=Z,106nm,1.1s
SEW **Seward** 34.33 353 P P 07 36 24.3 -0.7
baz=1.0
BORK **Borovoye** 34.38 128 P P 07 36 26.6 +1.1
BORK **Borovoye** 34.38 128 IAMs_20 IAMs_20 07 52 54.3
comp=Z,5µm,20.0s
BORK **Borovoye** 34.38 128 *c* *i*P P 07 36 26.6 +1.1
BORK pmax pmax
comp=Z,270nm,2.8s
BVA0 **Borovoye Array** 34.40 128 P P 07 36 26.4 +0.6
BVAR **Borovoye Array** 34.40 128 P P 07 36 26.8 +1.0
comp=Z,54nm,0.8s,baz=341,slow=7.8,SNR=199
BVAR LR LR 07 53 25.4
comp=Z,6µm,18.8s,baz=351,slow=42
comp=Z,54nm,0.8s
VORR **Voronezh** 34.41 162 *e*P P 07 36 25.5 -0.3
VORR pmax pmax
comp=Z,83nm,0.4s
P23K **Montague Islan** 34.41 351 IAMs_20 IAMs_20 07 48 56.3
comp=Z,5µm,21.0s
P23K **Montague Islan** 34.41 351 P P 07 36 26.0 +0.3
baz=1.3,SNR=6.0
ZAA0 **Zalesovo Array** 34.42 112 P P 07 36 25.3 -0.6
ZALV **Zalesovo Beam** 34.42 112 P P 07 36 25.4 -0.4
comp=Z,14nm,0.7s,baz=332,slow=6.2,SNR=60
ZALV PcP **PcP** 07 38 59.9 -1.1
comp=Z,10nm,0.8s,baz=279,slow=3.4,SNR=5.9
ZALV LR LR 07 52 57.1
comp=Z,5µm,19.1s,baz=348,slow=41
comp=Z,14nm,0.7s
ZALV **Zalesovo Beam** 34.42 112 P P 07 36 25.6 -0.3
ZALV **Zalesovo Beam** 34.42 112 P P 07 36 25.6 -0.3
KAIM **Kayak Island** 34.45 348 P P 07 36 27.0 +0.9
baz=1.7
GTTG **Gottingen** 34.45 194 *e*P P 07 36 27.6 +1.4
comp=Z,150nm,1.1s,baz=3.0,slow=8.7
ILSW **Iliamna Southw** 34.48 356 P P 07 36 26.2 -0.3
ILSW IAmb IAmb 07 36 31.1
comp=Z,112nm,1.4s
N14K **Kuskokwak Cree** 34.54 4 IAmb IAmb 07 37 00.8
comp=Z,120nm,1.2s
N14K **Kuskokwak Cree** 34.54 4 P P 07 36 26.5 -0.3
baz=359,SNR=5.6
P32M **Atlin** 34.56 339 P P 07 36 26.9 -0.2
P32M IAmb IAmb 07 36 29.7
comp=Z,123nm,1.2s
P32M IAMs_20 IAMs_20 07 51 50.1
comp=Z,4µm,18.0s
P32M **Atlin** 34.56 339 P P 07 36 27.6 +0.6
baz=3.0,SNR=31
BUG **Bochum--Univer** 34.61 197 *e*P P 07 36 28.6 +1.0
comp=Z,391nm,1.5s,baz=3.0,slow=8.7
O18K **Koktuh Hills** 34.61 358 P P 07 36 28.5 +1.0
baz=0.3,SNR=34
CLL **Collm** 34.64 190 IAmb IAmb 07 36 30.0
comp=Z,208nm,1.6s
CLL IAMs_20 IAMs_20 07 49 54.7
comp=Z,4µm,19.0s
CLL **Collm** 34.64 190 *i* P P 07 36 28.0 +0.2
CLL *e*S **S** 07 41 57.0 0.0
CLL pmax pmax
comp=Z,154nm,1.5s
CLL **Collm** 34.64 190 *i* P P 07 36 28.0 +0.2
comp=Z,154nm,1.5s
CLL *e*Pmax 07 36 38.0
CLL *ex* x 07 37 12.0
CLL *e*PP **PP** 07 37 48.0 +2.0
CLL *e*PPP PPP 07 37 58.0
CLL *e*S **S** 07 41 57.0 0.0
CLL *ex* x 07 43 18.0
CLL *e*SSS SSS 07 44 30.0
CLL AMS AMS 07 50 00.0
comp=N,3µm,18.3s
CLL AMS AMS 07 50 00.0
comp=E,2µm,18.9s
CLL AMS AMS 07 50 00.0
CLL **Collm** 34.64 190 *e*P P 07 36 28.1 +0.3
comp=E,190nm,1.6s,baz=3.0,slow=8.7
R33M **Jennings River** 34.67 336 IAMs_20 IAMs_20 07 52 13.2
comp=Z,6µm,19.0s
R33M **Jennings River** 34.67 336 P P 07 36 29.1 +0.9
baz=3.3,SNR=20
BRLK **Bradley Lake** 34.68 354 P P 07 36 27.8 -0.4
BRLK IAmb IAmb 07 36 49.7
comp=Z,275nm,1.8s
VAL **Valentia** 34.69 216 P P 07 36 27.7 -0.5
VAL **Valentia** 34.69 216 P P 07 36 29.6 +1.4
O17K **Koliganek Bris** 34.70 360 P P 07 36 27.9 -0.3
baz=0.0,SNR=22
BRSE **Bradley Lake S** 34.70 354 P P 07 36 28.2 -0.1
baz=0.9
SKAG **Skagway** 34.73 340 P P 07 36 29.0 +0.5
baz=2.8
NEUB **Neuenburg** 34.76 192 *e*P P 07 36 29.7 +0.9
comp=Z,496nm,2.0s,baz=3.0,slow=8.7
HOM **Homer** 34.79 355 P P 07 36 29.2 +0.2
baz=0.7,SNR=5.4
P19K **Oil Pt** 34.81 356 P P 07 36 28.6 -0.6
baz=0.5
KASTN **Kahler Asten** 34.82 196 *e*P P 07 36 30.8 +1.4
comp=Z,334nm,1.6s,baz=3.0,slow=8.7
VSR **Storozhevoye** 34.87 162 *e*P P 07 36 29.1 -0.7
VSR pmax pmax
comp=Z,160nm,1.9s
VSR MLR MLR
comp=Z,8µm,16.0s
O16K **Kokwok River B** 34.88 1 P P 07 36 31.0 +1.3
baz=360
CNPM **China Poot** 34.92 354 IAmb IAmb 07 36 32.8
comp=Z,159nm,1.0s
VRH **Novokhopyorsk** 34.95 159 *c* *i*P P 07 36 29.7 -0.7
VRH pmax pmax
comp=Z,89nm,0.8s
Q23K **Middleton Isla** 34.97 350 P P 07 36 31.5 +1.0
baz=1.4
TOAD **Toad River Com** 35.03 331 P P 07 36 32.2 +1.1
baz=4.0,SNR=84
BRG **Berggiesshubel** 35.06 189 *e*P P 07 36 31.9 +0.4
comp=Z,182nm,1.5s,baz=3.0,slow=8.7
BRG **Berggiesshubel** 35.06 189 *i*P P 07 36 32.0 +0.5
BRG Amp 07 36 34.5
comp=Z,182nm,1.5s
BRG **Berggiesshubel** 35.06 189 S S 07 42 08.0 +4.5
KSP **Ksiaz** 35.07 187 *e*P P 07 36 31.9 +0.3
P18K **Big Mountain,** 35.08 358 IAmb IAmb 07 36 34.5
comp=Z,179nm,0.9s
P18K **Big Mountain,** 35.08 358 P P 07 36 32.6 +1.1
baz=0.3,SNR=19
VORD **Divnogorie** 35.12 161 *e*P P 07 36 31.3 -0.6
VORD pmax pmax
comp=Z,60nm,0.9s
Q32M **Nakina River** 35.15 337 IAmb IAmb 07 36 35.5
comp=Z,274nm,1.6s
Q32M IAMs_20 IAMs_20 07 52 35.7
comp=Z,3µm,18.0s
Q32M **Nakina River** 35.15 337 P P 07 36 33.2 +0.8
baz=3.1
O14K **Tigyukauivet M** 35.21 3 P P 07 36 33.0 +0.3
baz=360

AKASG **Malin Array Be** 35.22 173 P P 07 36 32.1 -0.6
comp=Z,34nm,0.8s,baz=359,slow=8.8,SNR=71
AKASG PcP **PcP** 07 39 01.2 -2.1
comp=Z,7.1nm,0.8s,baz=358,slow=3.0,SNR=5.5
AKASG LR LR 07 51 07.7
comp=Z,9µm,19.2s,baz=352,slow=37
comp=Z,34nm,0.8s
AKASG **Malin Array Be** 35.22 173 P P 07 36 31.7 -1.1
AKASG **Malin Array Be** 35.22 173 *i* P P 07 36 32.0 -0.8
AKASG pmax pmax
comp=Z,36nm,0.8s
AKBB **Malin Array Si** 35.22 173 IAmb IAmb 07 36 33.9
comp=Z,120nm,1.1s
AKBB **Malin Array Si** 35.22 173 *c* *i*P P 07 36 32.1 -0.7
AKBB pmax pmax
comp=Z,142nm,1.3s
KIEV **Kiev** 35.22 173 P P 07 36 32.1 -0.7
KIEV IAmb IAmb 07 36 33.9
comp=Z,119nm,1.2s
KIEV **Kiev** 35.22 173 ⇓P P 07 36 32.6 -0.3
KIEV **Kiev** 35.22 173 *i* P P 07 36 32.3 -0.6
SNR=33
KIEV **Kiev** 35.22 173 P P 07 36 32.5 -0.3
P17K **Kvichak River** 35.28 359 P P 07 36 34.6 +1.4
baz=0.1,SNR=13
BEBN **Eben Emael** 35.29 199 *d*P P 07 36 34.4 +1.0
O15K **Ungalikthiuk R** 35.29 2 IAmb IAmb 07 36 35.7
comp=Z,96nm,0.9s
O15K **Ungalikthiuk R** 35.29 2 P P 07 36 34.2 +0.9
baz=360,SNR=12
UCC **Uccle** 35.32 200 IAmb IAmb 07 36 36.0
comp=Z,167nm,1.7s
UCC **Uccle** 35.32 200 *d*P P 07 36 34.3 +0.7
MOX **Moxa** 35.33 192 *e*P P 07 36 34.8 +1.0
comp=Z,144nm,1.1s,baz=3.0,slow=8.7
MOX *e*L L 07 50 12.6
comp=Z,2µm,21.1s
CHVC **Chvalec** 35.33 187 *e*P P 07 36 34.5 +0.7
CHVC AMS AMS 07 50 40.0
comp=Z,4µm,18.6s
OSTC **Ostas** 35.36 187 *e*P P 07 36 34.8 +0.8
OSTC AMS AMS 07 50 50.0
comp=Z,4µm,16.4s
PVCC **Panska Ves** 35.40 189 *e*P P 07 36 35.1 +0.7
PVCC AMS AMS 07 50 40.0
comp=Z,3µm,17.0s
UPC **Upice** 35.41 187 AMS AMS 07 50 50.0
comp=Z,4µm,19.3s
P16K **Nushagak River** 35.44 0 P P 07 36 34.9 +0.2
baz=360,SNR=8.2
MEM **Membach** 35.47 198 *d*P P 07 36 35.5 +0.5
comp=Z,33nm,1.4s
PLN **Plauen** 35.48 191 *e*P P 07 36 35.9 +0.8
comp=Z,110nm,1.8s,baz=3.0,slow=8.7
BTNL **Ternell** 35.49 198 *d*P P 07 36 35.1 -0.1
comp=Z,32nm,1.5s
SCHQ **Schefferville** 35.53 275 P P 07 36 36.1 +0.7
comp=Z,11nm,0.7s,baz=17,slow=7.9,SNR=17
SCHQ LR LR 07 51 11.8
comp=Z,6µm,18.2s,baz=8.0,slow=36
comp=Z,11nm,0.7s
Q19K **Cape Douglas,** 35.54 357 P P 07 36 34.3 -1.2
baz=0.5
TANN **Tannenbergstha** 35.54 191 *e*P P 07 36 36.6 +0.9
comp=Z,283nm,1.9s,baz=3.0,slow=8.7
DPC **Dobruska-Polom** 35.56 187 *e*P P 07 36 36.5 +0.7
DPC AMS AMS 07 50 50.0
comp=Z,4µm,21.1s
DPC **Dobruska-Polom** 35.56 187 *e*P P 07 36 36.5 +0.7
DPC MLR MLR
comp=Z,4µm,21.1s
BESE **Bessie Mountai** 35.60 340 P P 07 36 36.5 +0.5
BESE IAMs_20 IAMs_20 07 51 25.7
comp=Z,4µm,21.0s
DLBC **Dease Lake** 35.60 335 LR LR 07 52 56.8
comp=Z,3µm,19.4s,baz=336,slow=39
DLBC **Dease Lake** 35.60 335 P P 07 36 37.9 +1.8
baz=3.4,SNR=55
OJC **Ojcow** 35.67 183 *e*P P 07 36 37.3 +0.6
OJC **Ojcow** 35.67 183 P P 07 36 36.6 -0.1
OJC **Ojcow** 35.67 183 P P 07 36 36.6 -0.1
BCLA **Clavier** 35.68 199 *d*P P 07 36 37.7 +0.9
comp=Z,35nm,1.4s
BGES **Gesves** 35.72 199 *d*P P 07 36 37.8 +0.7
comp=Z,22nm,1.4s
BGES *dx* x 07 36 53.2
BHOU **Houvegnez** 35.73 198 *d*P P 07 36 38.4 +1.2
Q16K **King Salmon** 35.80 359 P P 07 36 39.0 +1.3
baz=0.1,SNR=7.9
TNS **Taunus Nts** 35.80 195 *e*P P 07 36 39.1 +1.2
comp=Z,258nm,1.5s,baz=3.0,slow=8.7
BMRD **Maredsous** 35.81 199 *d*P P 07 36 38.8 +0.9
comp=Z,29nm,1.4s
SYI **Shuyak Island** 35.85 355 IAmb IAmb 07 37 17.8
comp=Z,272nm,1.6s
Q20K **Shuyak Island** 35.85 355 P P 07 36 39.8 +1.7
baz=0.6
R32K **Eaglecrest** 35.90 339 IAmb IAmb 07 36 41.9
comp=Z,213nm,1.6s
R32K IAMs_20 IAMs_20 07 51 13.5
comp=Z,4µm,21.0s
R32K **Eaglecrest** 35.90 339 P P 07 36 40.3 +1.7
baz=2.8,SNR=9.9
RCHB **Rochefort** 35.94 199 *d*P P 07 36 39.6 +0.6
comp=Z,29nm,1.4s
PRU **Pruhonice** 35.94 189 AMS AMS 07 59 00.0
comp=Z,4µm,13.9s
STEB **Steborice** 35.97 185 *e*P P 07 36 39.8 +0.5
MANZ **Manzenberg** 35.98 191 *e*P P 07 36 40.0 +0.6
comp=Z,45nm,1.8s,baz=3.0,slow=8.7
DOU **Dourbes** 36.02 200 *d*P P 07 36 40.3 +0.7
comp=Z,19nm,1.6s
OKC **Ostrava-Krasne** 36.06 185 *e*P P 07 36 40.6 +0.6
OKC AMS AMS 07 52 50.0
comp=Z,4µm,16.4s
OKC **Ostrava-Krasne** 36.06 185 *e*P P 07 36 40.6 +0.6
OKC MLR MLR
comp=Z,4µm,16.4s
MORC **Moravsky Berou** 36.13 185 ⇑P P 07 36 41.3 +0.6
MORC **Moravsky Berou** 36.13 185 P P 07 36 41.3 +0.6
MORC **Moravsky Berou** 36.13 185 *e*P P 07 36 41.1 +0.4
S34M **Telegraph Cree** 36.16 336 IAmb IAmb 07 36 44.5
comp=Z,124nm,1.1s
S34M IAMs_20 IAMs_20 07 53 56.6
comp=Z,7µm,18.0s
S34M **Telegraph Cree** 36.16 336 P P 07 36 42.5 +1.6
baz=3.2,SNR=51
ROTZ **Rotzenmuhle** 36.20 191 *e*P P 07 36 42.4 +1.2
comp=Z,68nm,1.7s,baz=3.0,slow=8.7
Q17K **Contact Creek** 36.21 359 P P 07 36 41.0 -0.4
baz=0.2
S31K **Pelican** 36.25 341 IAMs_20 IAMs_20 07 51 03.0
comp=Z,4µm,22.0s
S31K **Pelican** 36.25 341 P P 07 36 42.0 +0.4
baz=2.6,SNR=5.5
KWP **Kalwaria Pacla** 36.25 180 *e*P P 07 36 42.3 +0.6
GRA1 **Grafenberg Arr** 36.28 192 IAMs_20 IAMs_20 07 51 44.3
comp=Z,3µm,18.0s
GRF **Grafenberg Arr** 36.28 192 *e*P P 07 36 43.3 +1.3
comp=Z,468nm,1.9s,baz=3.0,slow=8.7
GRF *e*L L 07 50 30.0
comp=Z,1µm,21.8s
GRFO **Grafenberg** 36.29 192 IAMs_20 IAMs_20 07 51 44.3
comp=Z,3µm,18.0s
AKTO **Aktyubinsk** 36.32 141 LR LR 07 54 58.0
comp=Z,7µm,18.2s,baz=8.0,slow=42
AKTO **Aktyubinsk** 36.32 141 P P 07 36 41.8 -0.5
WLF **Walferdange** 36.41 198 P P 07 36 42.9 -0.1
WLF **Walferdange** 36.41 198 IAmb IAmb 07 36 46.2
comp=Z,170nm,1.3s
WLF IAMs_20 IAMs_20 07 51 37.6
comp=Z,4µm,19.0s
WLF **Walferdange** 36.41 198 *d*P P 07 36 44.5 +1.4
comp=Z,46nm,1.3s
WLF **Walferdange** 36.41 198 *e*P P 07 36 44.4 +1.4
comp=Z,198nm,1.4s,baz=3.0,slow=8.7
STHS **Stebnicka Huta** 36.47 181 *e*P P 07 36 43.4 -0.2
STHS pmax pmax
comp=Z,48nm,1.0s
STHS **Stebnicka Huta** 36.47 181 *e*P P 07 36 43.4 -0.2
NIE **Niedzica** 36.47 182 *e*P P 07 36 44.6 +1.0
ZVC **Zvikov** 36.50 189 AMS AMS 07 52 10.0
comp=Z,4µm,17.6s
MAUC **Maruska** 36.54 185 *e*P P 07 36 45.0 +0.8
VRAC **Vranov** 36.60 186 LR LR 07 52 17.5
comp=Z,3µm,18.0s,baz=356,slow=37
VRAC **Vranov** 36.60 186 ⇑P P 07 36 45.7 +1.0

VRAC Vranov 36.60 186 P P 07 36 45.7 +1.0
VRAC Vranov 36.60 186 *e*P **P 07 36 45.3 +0.6**
TREC Trest 36.63 188 AMS AMS 07 51 30.0
comp=Z,4μm,15.7s
KDAK Kodiak Island 36.68 356 LR LR 07 52 03.5
comp=Z,2μm,20.3s,baz=12,slow=37
KDAK Kodiak Island 36.68 356 P **P 07 36 45.5 +0.3**
KDAK IAmb IAmb 07 36 47.2
comp=Z,130nm,1.1s
KDAK Kodiak Island 36.68 356*c i*P **P 07 36 45.7 +0.5**
KDAK pmax pmax
comp=Z,168nm,1.0s
KDAK Kodiak Island 36.68 356 P **P 07 36 44.6 -0.6**
baz=0.6
S32K Killisnoo 36.70 339 P **P 07 36 45.4 0.0**
S32K IAMs_20 IAMs_20 07 51 48.9
comp=Z,3μm,21.0s
S32K Killisnoo 36.70 339 P **P 07 36 45.7 +0.3**
baz=2.8
LANS Liptovska Anna 36.74 183 *e*P **P 07 36 47.1 +1.2**
LANS pmax pmax
comp=Z,25nm,0.8s
LANS Liptovska Anna 36.74 183 *e*P **P 07 36 47.1 +1.2**
LANS *e*PP **PP 07 38 14.7 +5.4**
WET Wettzell 36.81 191 *e*P **P 07 36 47.8 +1.3**
comp=Z,300nm,1.9s,baz=3.0,slow=8.7
KHC Kasperske Hory 36.81 190 *e*P **P 07 36 47.5 +1.0**
KHC Kasperske Hory 36.81 190 *e*P **P 07 36 47.5 +1.0**
R17L Mt. Peulik Vol 36.85 359 P **P 07 36 46.5 -0.2**
baz=0.1
KRUC Moravsky 36.85 187 *e*P **P 07 36 47.5 +0.7**
R16K Pilot Point 36.91 0 P **P 07 36 48.3 +1.1**
baz=360
JAVC Velka Javorina 37.04 185 *e*P **P 07 36 50.0 +1.5**
T35M Bob Quinn 37.07 335 IAMs_20 IAMs_20 07 54 32.5
comp=Z,5μm,18.0s
T35M Bob Quinn 37.07 335 P **P 07 36 49.9 +1.3**
baz=3.2
GEC2 GERESS Array S 37.10 190 *e*P **P 07 36 50.2 +1.2**
comp=Z,282nm,1.9s,baz=3.0,slow=8.7
GERES GERESS Array B 37.10 190 P **P 07 36 50.1 +1.1**
comp=Z,13nm,0.8s,baz=10,slow=8.4,SNR=32
GERES LR LR 07 51 42.0
comp=Z,3μm,18.1s,baz=0.5,slow=36
comp=Z,13nm,0.8s
CKRC Cesky Krumlov 37.12 189 *e*P **P 07 36 50.2 +1.1**
CKRC AMS AMS 07 52 30.0
comp=Z,4μm,15.4s
CKRC Cesky Krumlov 37.12 189 *e*P **P 07 36 50.2 +1.1**
CKRC MLR MLR
comp=Z,4μm,15.4s
SIT Sitka 37.14 340 P **P 07 36 50.3 +1.2**
baz=2.6
SPIA Saint Paul Isl 37.21 11 P **P 07 36 50.3 +0.6**
baz=358
KURK Kurchatov 37.22 119 P **P 07 36 49.9 0.0**
KURK Kurchatov 37.22 119*c i*P **P 07 36 49.9 0.0**
KURK pmax pmax
comp=Z,62nm,1.0s
KURK Kurchatov 37.22 119 P **P 07 36 50.0 +0.1**
KURK P **P 07 36 50.0 +0.1**
STU Stuttgart 37.24 195 P **P 07 36 50.7 +0.6**
STU Stuttgart 37.24 195 P **P 07 36 50.7 +0.6**
STU pmax pmax
comp=Z,374nm,1.5s
STU MLR MLR
comp=Z,3μm,19.0s
STU Stuttgart 37.24 195 *e*P **P 07 36 51.4 +1.3**
comp=Z,765nm,1.4s,baz=3.0,slow=8.7
OHAK Old Harbor 37.25 356 P **P 07 36 50.7 +0.7**
OHAK Old Harbor 37.25 356 P **P 07 36 50.8 +0.7**
baz=0.5,SNR=16
KURBB Kurchatov Arra 37.30 119 P **P 07 36 50.7 +0.1**
comp=Z,51nm,0.8s,baz=356,slow=8.3,SNR=296
KURBB PcP **PcP 07 39 09.1 -0.5**
comp=Z,8.4nm,0.8s,baz=347,slow=3.3,SNR=7.5
KURBB LR LR 07 55 52.6
comp=Z,4μm,19.1s,baz=339,slow=42
comp=Z,51nm,0.8s
KURBB Kurchatov Arra 37.30 119 P **P 07 36 50.0 -0.6**
T33K Petersburg 37.31 338 P **P 07 36 51.3 +0.7**
baz=2.9
SMOL Smolenice 37.39 186 *e*P **P 07 36 53.0 +1.6**
SMOL pmax pmax
comp=Z,87nm,1.3s
KECS Kecovo 37.41 182 *e*P **P 07 36 52.9 +1.4**
MODS Modra-Piesok 37.53 186 *e*P **P 07 36 54.0 +1.4**
MODS pmax pmax
comp=Z,698nm,1.9s
MODS Modra-Piesok 37.53 186 *e*P **P 07 36 54.0 +1.4**
IRK Irkutsk 37.53 93 *e*P **P 07 36 51.1 -1.5**
IRK pmax pmax
comp=Z,165nm,1.1s
BRZS Berezniki 37.57 126 *e*P **P 07 36 54.0 +1.1**
BRZS *e*S **S 07 42 44.2 +2.3**
BRZS Berezniki 37.57 126 *e*P **P 07 36 54.0 +1.1**
BRZS *e*S **S 07 42 44.2 +2.3**
AB31 Akbulak array 37.59 139 P **P 07 36 53.2 +0.2**
AB31 IAmb IAmb 07 36 55.5
comp=Z,223nm,1.9s
AB31 Akbulak array 37.59 139 *i* P **P 07 36 53.0 -0.1**
ABKAR Akbulak array 37.59 139 P **P 07 36 53.4 +0.3**
WRAK Wrangell Islan 37.69 337 P **P 07 36 54.9 +1.1**
baz=3.0
BFO Black Forest 37.70 195 P **P 07 36 55.3 +1.2**
BFO IAmb IAmb 07 36 57.1
comp=Z,336nm,1.5s
BFO IAMs_20 IAMs_20 07 51 38.7
comp=Z,4μm,20.0s
BFO Black Forest 37.70 195 P **P 07 36 55.3 +1.2**
BFO pmax pmax
comp=Z,336nm,1.5s
BFO MLR MLR
comp=Z,4μm,20.0s
BFO Black Forest 37.70 195 *e*P **P 07 36 55.3 +1.2**
comp=Z,359nm,1.5s,baz=3.0,slow=8.7
ZEA Zeya 37.74 70 *e*P **P 07 36 55.0 +0.7**
ZEA *e* 07 38 19.7
ZEA *e* 07 39 19.0
ZEA *e*S **S 07 42 39.9 -4.4**
ZEA *e*SS **SnSn 07 45 22.3 -1.1**
ZEA *e* 07 47 08.9
ZEA pmax pmax
comp=Z,200nm,4.6s
ZEA pmax pmax
comp=E,10.0nm,0.5s
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.9s
ZEA pmax pmax
comp=N,200nm,6.0s
ZEA pmax pmax
comp=Z,300nm,5.6s
ZEA smax smax
comp=E,400nm,8.8s
ZEA smax smax
comp=N,400nm,5.5s
ZEA MLR MLR
comp=N,600nm,16.0s
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=Z,1μm,14.0s
SORM Soroca 37.78 174 ⇓P **P 07 36 54.6 -0.1**
SORM Soroca 37.78 174 P **P 07 36 54.5 -0.1**
P08K Saint George I 37.80 11 P **P 07 36 55.5 +0.9**
baz=358
FUR Furstenfeldbru 37.81 192 *e*P **P 07 36 56.2 +1.2**
comp=Z,616nm,2.0s,baz=3.0,slow=8.7
ECH Echery 37.84 197 IAmb IAmb 07 36 58.2
comp=Z,297nm,1.5s
ECH IAMs_20 IAMs_20 07 53 52.4
comp=Z,3μm,19.0s
MOY Mondy 37.86 96 *e*P **P 07 36 55.8 +0.3**
MOY pmax pmax
comp=Z,153nm,2.3s
SII Sitkinak Islan 37.92 357 P **P 07 36 56.0 +0.2**
baz=0.4,SNR=6.0
PSZ Piszkesteto 37.97 183 IAmb IAmb 07 37 01.5
comp=Z,429nm,2.0s
PSZ IAMs_20 IAMs_20 07 52 28.9
comp=Z,7μm,21.0s
PSZ Piszkesteto 37.97 183 ⇑P **P 07 36 57.6 +1.2**
PSZ Piszkesteto 37.97 183 P **P 07 36 57.6 +1.2**
CONA Conrad Observa 37.99 187 *i* pP pP 07 36 57.6 -0.6
comp=Z,101nm,1.8s,SNR=32
U33K Whale Pass 38.02 338 P **P 07 36 57.1 +0.5**
baz=2.9
FFC Flin Flon 38.04 309 P **P 07 36 56.1 -0.7**
FFC Flin Flon 38.04 309 P **P 07 36 56.1 -0.7**
FFC pmax pmax
comp=Z,44nm,1.2s
FFC MLR MLR
comp=Z,8μm,18.0s
TLY Talaya 38.05 93 LR LR 07 53 00.5
comp=Z,5μm,21.8s,baz=348,slow=37
TLY Talaya 38.05 93 P **P 07 36 56.2 -0.7**
TLY Talaya 38.05 93*c i*P **P 07 36 56.3 -0.6**
TLY pmax pmax
comp=Z,25nm,1.1s
TLY Talaya 38.05 93 P **P 07 36 56.8 -0.1**
MOA Molln 38.09 189 *i* P **P 07 36 58.0 +0.7**
comp=Z,69nm,1.2s,SNR=16
SRO Srobarova 38.09 185 *e*P **P 07 36 58.9 +1.7**
SRO pmax pmax
comp=Z,55nm,1.1s
SRO Srobarova 38.09 185 *e*P **P 07 36 58.9 +1.7**
SRO *e*PP **PnPn 07 38 29.3 +3.9**
U35K Hyder 38.13 335 IAMs_20 IAMs_20 07 54 15.6
comp=Z,5μm,19.0s
U35K Hyder 38.13 335 P **P 07 36 58.9 +1.4**
baz=3.2
CLF Chambon-Foret 38.15 202 P **P 07 36 57.0 -0.8**
CLF IAmb IAmb 07 37 00.7
comp=Z,177nm,1.2s
BMR Baia Mare 38.21 179 ⇑P **P 07 36 58.9 +0.6**
BMR Baia Mare 38.21 179 P **P 07 36 58.9 +0.6**
RONA Rosalia, Austr 38.22 187 *i* pP pP 07 36 59.4 -0.6
comp=Z,77nm,1.8s,SNR=17
BUR08 Bucovina Ar. S 38.25 177 P **P 07 36 58.8 0.0**
BUR08 IAmb IAmb 07 37 02.8
comp=Z,177nm,1.5s
BIOA Bad Ischl, Aus 38.25 190 *i* pP pP 07 37 00.0 -0.3
comp=Z,27nm,1.5s,SNR=6.9
BURAR Bucovina Array 38.28 177 P **P 07 36 59.2 +0.2**
BURAR Bucovina Array 38.28 177 ⇓P **P 07 36 58.8 -0.2**
BURAR Bucovina Array 38.28 177 P **P 07 36 59.0 0.0**
UBR Ueberruh 38.32 194 *e*P **P 07 37 00.4 +1.1**
comp=Z,306nm,1.7s,baz=3.0,slow=8.7
CIT Chita 38.45 83 *e*P **P 07 37 00.4 0.0**
CIT *e* 07 38 30.4
CIT *e* 07 38 56.8
CIT pmax pmax
comp=Z,161nm,2.5s
RETA Reutte 38.50 193 *i* pP pP 07 37 02.3 -0.2
comp=Z,97nm,1.5s,SNR=20
LESA Schwarzleotal 38.53 191 *i* pP pP 07 37 02.5 -0.2
comp=Z,74nm,1.7s,SNR=12
MOTA Moosalm 38.63 192 *i* pP pP 07 37 03.4 -0.4
comp=Z,78nm,1.7s,SNR=21
WATA Walderalm 38.64 192 *i* pP pP 07 37 03.5 -0.3
comp=Z,58nm,1.8s,SNR=11
KNGR Kungurtug, Tuv 38.66 100⇑ *i*P **P 07 37 02.7 +0.5**
KNGR pmax pmax
comp=Z,34nm,1.1s
CRAG Craig 38.67 338 P **P 07 37 03.5 +1.5**
baz=2.8
ARSA Arzberg 38.67 188 P **P 07 37 02.2 0.0**
ARSA Arzberg 38.67 188 *i* P **P 07 37 02.9 +0.7**
comp=Z,36nm,1.5s,SNR=10
WTTA Wattenberg 38.71 192 *i* pP pP 07 37 04.6 +0.2
comp=Z,92nm,1.7s,SNR=18
DAVA Damuels 38.71 194 *i* pP pP 07 37 03.9 -0.5
comp=Z,101nm,1.6s,SNR=15
SQTA Sankt Quirin 38.76 192 *i* pP pP 07 37 04.6 -0.1
comp=Z,33nm,1.2s,SNR=16
V35K Ketchikan 38.76 337 P **P 07 37 03.3 +0.5**
baz=3.0,SNR=7.6
DGZ Jazzator, Alta 38.83 110*c i*P **P 07 37 04.2 +0.5**
DGZ pmax pmax
comp=Z,35nm,1.2s
KBA Koelnbreinsper 38.87 190 *i* pP pP 07 37 05.8 +0.1
comp=Z,80nm,1.8s,SNR=19
FETA Feichten 38.97 193 *i* pP pP 07 37 06.4 -0.1
comp=Z,62nm,1.6s,SNR=13
DRGR 39.10 180 ⇑P **P 07 37 06.1 +0.2**
DRGR 39.10 180 P **P 07 37 06.0 +0.2**
ABTA Abfaltersbach 39.21 191 *e*pP pP 07 37 08.3 -0.2
comp=Z,14nm,0.6s
MARR Marisel-Cluj 39.21 179 ⇑P **P 07 37 07.6 +0.8**
DAVOX Davos/Dischmat 39.22 194 LR LR 07 53 55.9
comp=Z,2μm,18.4s,baz=353,slow=37
SOKA Soboth 39.25 188 *i* pP pP 07 37 08.3 -0.5
comp=Z,64nm,1.0s,SNR=31
PERS Pernice 39.29 188⇑ *i*P **P 07 37 08.5 +1.1**
ZAK Zakamensk 39.31 94 *e*P **P 07 37 07.0 -0.6**
ZAK *e* 07 38 35.8
ZAK pmax pmax
comp=Z,24nm,1.4s
ZAK pmax pmax
comp=Z,45nm,2.3s
MYKA Terra Mystica 39.31 190 *i* pP pP 07 37 09.2 -0.1
comp=Z,116nm,1.8s,SNR=25
FUORN Ofenpass-Fuorn 39.37 193 P **P 07 37 08.0 -0.4**
FUORN IAmb IAmb 07 37 17.8
comp=Z,289nm,1.8s
TESR Tescani 39.39 175 ⇓P **P 07 37 08.5 +0.3**
OBKA Obir 39.42 189 *i* pP pP 07 37 10.0 -0.3
comp=Z,117nm,1.0s,SNR=38
PRED Cave del Predi 39.50 190 P **P 07 37 09.6 +0.4**
TUE Stuetta 39.54 194 IAmb IAmb 07 37 13.3
comp=Z,210nm,1.4s
TUE IAMs_20 IAMs_20 07 53 00.3
comp=Z,4μm,18.0s
ONER Baraj Valea Uz 39.56 176 ⇑P **P 07 37 10.6 +0.9**
MORH Mrgy, Hungar 39.68 184 ⇓P **P 07 37 11.6 +1.0**
SENIN Lac Senin/Sane 39.69 197 IAmb IAmb 07 37 14.2
comp=Z,186nm,1.2s
SENIN IAMs_20 IAMs_20 07 52 30.3
comp=Z,3μm,20.0s
STAL STALIGIAL 39.70 191 P **P 07 37 11.3 +0.5**
CADS Cadrg 39.71 190⇑ *e*P **P 07 37 11.5 +0.5**
MDB Medias 39.75 178 ⇑P **P 07 37 12.7 +1.4**
MDB Medias 39.75 178 P **P 07 37 12.6 +1.4**
OZUR 39.80 176 ⇑P **P 07 37 12.4 +0.8**
VNDS Vrh nad Dolski 39.83 188⇑ *i*P **P 07 37 12.8 +0.9**
GHRR 39.84 175 ⇓P **P 07 37 12.4 +0.4**
CTI Castel Tesino 39.92 192 P **P 07 37 13.7 +0.9**
CTI Castel Tesino 39.92 192 P **P 07 37 13.7 +0.9**
CTI pmax pmax
comp=Z,117nm,1.3s
DOPR Dopca 39.93 177 ⇑P **P 07 37 13.7 +1.0**
SABO M.te Sabotino 39.96 190 P **P 07 37 13.6 +0.6**
SABO IAmb IAmb 07 37 19.0
comp=Z,550nm,1.9s
VRI Vrincioaia 40.03 175 ⇓P **P 07 37 14.2 +0.6**
VRI Vrincioaia 40.03 175 P **P 07 37 14.2 +0.6**
PLOR Plostina 40.05 175 ⇓P **P 07 37 14.5 +0.7**
PLOR Plostina 40.05 175 P **P 07 37 14.4 +0.7**
COVR Voineasa-Covas 40.05 176 ⇓P **P 07 37 15.0 +1.3**
ODBI Odobesti 40.14 175 ⇑P **P 07 37 15.0 +0.5**
EDM Edmonton 40.15 319 P **P 07 37 14.6 +0.1**
EDM Edmonton 40.15 319 P **P 07 37 14.6 +0.1**
EDM pmax pmax
comp=Z,556nm,1.6s
PEA0B Petropavlovsk- 40.23 41 P **P 07 37 14.4 -0.7**
PEA0B Petropavlovsk- 40.23 41⇑ *e*P **P 07 37 14.5 -0.6**
PETK Petropavlovsk- 40.23 41 P **P 07 37 14.6 -0.5**
comp=Z,9.5nm,0.9s,baz=36,slow=8.6,SNR=8.1
PETK LR LR 07 55 00.1
comp=Z,1μm,18.1s,baz=351,slow=38
comp=Z,9.5nm,0.9s
PETK Petropavlovsk- 40.23 41 P **P 07 37 14.4 -0.7**
TRI Trieste 40.23 189 P **P 07 37 14.7 -0.5**
TRI Trieste 40.23 189 P **P 07 37 14.7 -0.5**
SCTR Scanteiesti 40.24 174 ⇑P **P 07 37 14.9 -0.4**
BZS Buzias 40.27 181 ⇑P **P 07 37 16.5 +1.0**
BZS Buzias 40.27 181 P **P 07 37 16.5 +1.0**
PET Petropavlovsk 40.36 40 *e*P **P 07 37 15.1 -1.1**
PET *e* 07 38 52.5
PET *e* 07 39 24.8
PET *e*S **S 07 43 19.5 -4.2**
PET *e* 07 47 24.5
PET pmax pmax
comp=Z,600nm,4.4s
PET pmax pmax
comp=Z,300nm,5.0s
PET pmax pmax
comp=Z,28nm,1.3s
PET MLR MLR
comp=Z,1μm,14.0s
PET MLR MLR
comp=Z,2μm,16.0s
ERBR Yeremizino-Bor 40.40 160 *e*P **P 07 37 16.7 +0.1**
ERBR *e**PP **sP 07 37 19.6 +0.7**
ERBR *e*S **S 07 43 26.0 +1.5**
ERBR pmax pmax
comp=Z,68nm,0.8s
ERBR MLR MLR
comp=Z,9μm,17.0s
ERBR MLR MLR
comp=N,29μm,17.0s
ERBR MLR MLR
comp=E,10μm,16.0s
MLR Muntele Rosu 40.41 176 LR LR 07 54 25.8
comp=E,5μm,19.1s,baz=8.0,slow=37
MLR Muntele Rosu 40.41 176 P **P 07 37 17.4 +0.6**
MLR IAMs_20 IAMs_20 07 54 15.2
comp=Z,6μm,19.0s
MLR Muntele Rosu 40.41 176 ⇑P **P 07 37 18.0 +1.2**
MLR Muntele Rosu 40.41 176 P **P 07 37 18.0 +1.2**
VOIR 40.46 177 ⇑P **P 07 37 18.4 +1.2**
VOIR 40.46 177 P **P 07 37 18.4 +1.2**
NEHR Nehoiu 40.47 176 ⇑P **P 07 37 18.8 +1.6**
GZR Gura Zlata 40.49 180 ⇓P **P 07 37 18.2 +0.7**
GZR Gura Zlata 40.49 180 P **P 07 37 18.2 +0.7**
ARR Arges 40.52 178 ⇓P **P 07 37 19.3 +1.5**
UNV Unalaska Valle 40.59 8 P **P 07 37 16.3 -1.8**
baz=359
MTUR Matau 40.67 177 ⇑P **P 07 37 19.5 +0.6**
MTUR Matau 40.67 177 P **P 07 37 19.5 +0.6**
CFR Carcaliu 40.73 174 ⇑P **P 07 37 19.3 0.0**
CFR Carcaliu 40.73 174 P **P 07 37 19.3 0.0**
ISR Istrita 40.78 176 ⇓P **P 07 37 20.8 +0.9**
ISR Istrita 40.78 176 P **P 07 37 20.7 +0.9**
SSB Saint Sauveur 40.84 199 P **P 07 37 20.0 -0.3**
SSB IAmb IAmb 07 37 23.0
comp=Z,196nm,1.4s
SSB Saint Sauveur 40.84 199 P **P 07 37 20.0 -0.3**
SSB pmax pmax
comp=Z,196nm,1.4s
ICQ Pointe Anglais 40.84 275 P **P 07 37 20.8 +0.7**
DIB Dawson Inlet, 40.92 337 P **P 07 37 21.0 +0.3**
DIB IAmb IAmb 07 37 25.4
comp=Z,154nm,1.2s
HERR Herculane 41.01 180 ⇓P **P 07 37 22.3 +0.7**
BNI Bardonecchia 41.01 197 IAMs_20 IAMs_20 07 52 54.4
comp=Z,3μm,21.0s
SIM Simferopol' 41.03 167 P **P 07 37 22.8 +1.0**
SIM pmax pmax
comp=Z,295nm,22.2s
SIM MLR MLR
comp=Z,8μm,17.0s
TPGR Topolog 41.06 174 ⇓P **P 07 37 23.0 +1.0**
MDVR Moldovita 41.11 181 ⇑P **P 07 37 23.4 +0.9**
GOF Gofitskoye 41.13 158*ce*P **P 07 37 23.0 +0.4**
BLY Banja Luka 41.16 186 ⇑P **P 07 37 23.6 +0.8**
HEH HeiHe 41.22 70 *e*P **P 07 37 22.8 -0.5**
HEH pP **sP 07 37 26.0 +0.4**
HEH PP **PP 07 39 01.8 +3.7**
HEH S **S 07 43 35.8 -0.7**
HEH SS **SS 07 46 38.0 -1.0**
HEH ScS **ScS 07 47 26.6 -0.3**
HEH pmax pmax
comp=Z,23nm,1.3s
HEH pmax pmax
comp=Z,550nm,6.0s
HEH LR LR
comp=Z,2μm,15.1s
HEH LR LR
comp=Z,850nm,13.8s
HEH LR LR
comp=Z,2μm,14.5s
ANN Anapa 41.24 164 *e*P **P 07 37 23.6 +0.1**
ANN *e**PP **sP 07 37 26.3 +0.5**
ANN *e* 07 38 58.8
ANN *e*S **S 07 43 38.7 +1.7**
ANN *e*SS **SS 07 46 42.1 +2.5**
ANN pmax pmax
comp=Z,125nm,1.1s
ANN MLR MLR
comp=Z,4μm,13.0s
ANN MLR MLR
comp=E,3μm,13.0s
ANN MLR MLR
comp=N,2μm,14.0s
SHEM Shemya Is, Ala 41.29 26 LR LR 07 57 05.3
comp=N,805nm,18.4s,baz=358,slow=40
GRNR Gornyy 41.32 62⇓ *i*P **P 07 37 24.5 +0.3**
GRNR pmax pmax
comp=Z,9.0nm,1.1s
GRNR MLR MLR
comp=E,760nm,14.0s
GRNR MLR MLR
comp=N,970nm,16.0s
GRNR MLR MLR
comp=Z,1μm,15.0s
MAKZ Makanchi 41.33 116 P **P 07 37 23.9 -0.4**
MAKZ Makanchi 41.33 116 P **P 07 37 24.3 0.0**
HILR Hailar Array B 41.36 78 P **P 07 37 24.5 0.0**
comp=Z,27nm,1.0s,baz=350,slow=8.0,SNR=15
HILR LR LR 07 54 43.6
comp=Z,979nm,18.1s,baz=50,slow=36
comp=Z,27nm,1.0s
HUMR Humele 41.36 177 ⇑P **P 07 37 25.3 +0.8**
MK31 Makanchi Array 41.37 116*c i*P **P 07 37 24.0 -0.6**
MKAR Makanchi Array 41.37 116 P **P 07 37 24.1 -0.5**
comp=Z,18nm,0.8s,baz=342,slow=8.0,SNR=131
MKAR PP **PP 07 38 52.1 -7.7**
comp=Z,6.1nm,0.8s,baz=347,slow=9.7,SNR=2.4
MKAR LR LR 07 58 12.2
comp=Z,7μm,19.4s,baz=340,slow=42
comp=Z,18nm,0.8s
MKAR Makanchi Array 41.37 116 P **P 07 37 24.2 -0.4**
NIKH Nikolski High 41.44 10 P **P 07 37 23.8 -1.3**
baz=359
TIRR Tirgusor 41.45 174 ⇓P **P 07 37 25.7 +0.4**
TIRR Tirgusor 41.45 174 P **P 07 37 25.6 +0.4**
LABN Labinsk 41.48 160 *e*P **P 07 37 26.4 +0.9**
LABN *e**PP **sP 07 37 28.7 +0.9**
LABN *e*S **S 07 43 42.7 +2.2**
LABN pmax pmax
comp=Z,59nm,0.8s
LABN MLR MLR
comp=N,12μm,14.0s
LABN MLR MLR
comp=E,6μm,12.0s
LABN MLR MLR
comp=Z,11μm,16.0s
TYV Tymovskoe 41.63 56 *e*P **P 07 37 26.7 +0.1**
TYV *e*S **S 07 43 44.0 +1.4**
TYV pmax pmax
comp=Z,400nm,3.5s
TYV pmax pmax
comp=Z,11nm,1.2s
TYV smax smax
comp=N,7.0nm,1.2s
TYV smax smax
comp=N,800nm,6.6s
TYV smax smax
comp=E,2μm,6.6s
HG4B Hotspring 41.79 336 P **P 07 37 28.2 +0.2**
BBB Bella Bella 41.80 333 LR LR 07 54 54.3
comp=E,2μm,21.7s,baz=2.0,slow=36
BBB Bella Bella 41.80 333 P **P 07 37 28.5 +0.5**
VLC Villacollemand 41.83 193 P **P 07 37 29.2 +0.8**
SONM Songino Array 42.08 91 P **P 07 37 31.2 +0.6**
comp=E,45nm,0.9s,baz=344,slow=8.1,SNR=163
SONM PP **PP 07 39 04.1 -3.5**
comp=E,14nm,1.1s,baz=355,slow=8.9,SNR=4.5
SONM LR LR 07 56 08.3
comp=E,3μm,18.1s,baz=352,slow=38
comp=E,45nm,0.9s
SONM Songino Array 42.08 91 P **P 07 37 30.9 +0.4**
SONM Songino Array 42.08 91 P **P 07 37 30.9 +0.4**
SONM pmax pmax
comp=Z,42nm,0.9s
ULN Ulaanbaatar 42.10 91 P **P 07 37 31.4 +0.7**
ULN Ulaanbaatar 42.10 91 IAMs_20 IAMs_20 07 56 06.2
comp=Z,4μm,19.0s
ULN Ulaanbaatar 42.10 91*c i*P **P 07 37 31.5 +0.8**
ULN pmax pmax
comp=Z,78nm,0.8s
ULN Ulaanbaatar 42.10 91 P **P 07 37 31.5 +0.8**
ULN Ulaanbaatar 42.10 91 P **P 07 37 30.7 0.0**

ATKA Atka Island 42.12 15 P P 07 37 30.8 +0.1
ATKA IAmb IAmb 07 37 32.7
comp=Z,181nm,1.0s
ULM Lac du Bonnet 42.13 303 P P 07 37 30.9 +0.1
comp=Z,59nm,1.0s,baz=6.0,slow=7.4,SNR=44
ULM LR LR 07 54 51.2
comp=Z,5µm,20.1s,baz=5.5,slow=36
comp=Z,59nm,1.0s
ULM Lac du Bonnet 42.13 303 P P 07 37 30.7 -0.1
KIV Kislovodsk 42.22 158 P P 07 37 32.1 +0.5
KIV Kislovodsk 42.22 158 ⇑P P 07 37 32.2 +0.5
KIV Kislovodsk 42.22 158 *i* P P 07 37 32.2 +0.5
SNR=16
KIV Kislovodsk 42.22 158 *e*P P 07 37 31.1 -0.6
KIV *e* 07 39 09.4
KIV *e*S S 07 43 52.1 +0.4
KIV pmax pmax
comp=Z,49nm,1.1s
KIV pmax pmax
comp=Z,606nm,4.4s
KIV MLR MLR
comp=Z,7µm,16.0s
KIV Kislovodsk 42.22 158 P P 07 37 33.2 +1.5
BOVS Bovan 42.25 181 ⇑P P 07 37 31.9 +0.1
ADK Adak 42.39 18 P P 07 37 32.7 -0.1
ADK IAmb IAmb 07 37 34.4
comp=Z,163nm,1.1s
ADK Adak 42.39 18 P P 07 37 32.7 -0.1
ADK pmax pmax
comp=Z,163nm,1.2s
SHA1 Shidzhatmaz 42.43 158*c* *i*P P 07 37 34.1 +0.5
KBZ Khabaz 42.45 158 P P 07 37 34.8 +1.3
comp=Z,47nm,0.9s,baz=331,slow=6.8,SNR=45
KBZ LR LR 07 56 28.9
comp=Z,8µm,18.7s,baz=5.5,slow=38
comp=Z,47nm,0.9s
KBZ Khabaz 42.45 158*c* *i*P P 07 37 34.7 +1.3
KBZ pmax pmax
comp=Z,219nm,2.2s
OSSC Osservatorio P 42.45 192 P P 07 37 34.1 +0.6
PLVB Pleven 42.50 178 ⇑P P 07 37 33.9 +0.1
SOC Sochi 42.51 161*c* *i*P P 07 37 34.1 +0.2
SOC *e* 07 39 10.3
SOC *e*PPP PPP 07 39 45.0
SOC *e*S S 07 43 56.6 +0.8
SOC *e*SS SS 07 46 53.8 -11
SOC *e*SSS SSS 07 47 33.5
SOC pmax pmax
comp=Z,21nm,0.8s
SOC MLR MLR
comp=Z,7µm,16.0s
MPEP Malo Peshtene 42.53 179 P P 07 37 33.2 -0.9
KLR Kul'dur 42.54 66 LR LR 07 55 38.2
comp=Z,418nm,18.1s,baz=354,slow=37
KLR Kul'dur 42.54 66*d* *i*P P 07 37 33.9 -0.2
KLR pmax pmax
comp=Z,34nm,1.2s
PLE Pljevlja 42.56 183 ⇑*i*P P 07 37 33.0 -1.5
SZH Strazhitsa 42.63 176 P P 07 37 34.2 -0.7
SZH Strazhitsa 42.63 176 P P 07 37 33.6 -1.3
VSLR Vesyoloye 42.64 161 ⇓*i*P P 07 37 36.0 +1.0
VSLR pmax pmax
comp=Z,83nm,1.2s
UPM Unac-Piva 42.69 184 ⇑*i*P P 07 37 36.1 +0.4
MURB Monte Urbino 42.70 191 P P 07 37 36.4 +0.9
NCK Nalchik 42.70 157 ⇓*i*P P 07 37 37.2 +1.7
NCK pmax pmax
comp=Z,125nm,0.8s
PRD Provadia 42.74 175 P P 07 37 35.8 0.0
GUMA Gualdo di Mace 42.88 190 P P 07 37 37.2 +0.2
GUMA IAmb IAmb 07 37 44.3
comp=Z,362nm,2.0s
TDK Taldyqorghan 42.90 120*c* *i*P P 07 37 38.1 +1.1
TDK *e* 07 39 17.7
TDK pmax pmax
comp=Z,150nm,1.2s
TDK MLR MLR
comp=Z,2µm,13.0s
TDK Taldyqorghan 42.90 120 ⇑*i*P P 07 37 38.2 +1.1
comp=Z,150nm,1.2s
TDK *e*PP PP 07 39 17.7 +1.4
TDK LR LR 07 57 42.7
comp=Z,2µm,12.6s
NEUR Neytrino 42.91 158*c* *i*P P 07 37 39.7 +2.3
NEUR pmax pmax
comp=Z,101nm,1.9s
FDMO Fiordimonte 42.91 190 P P 07 37 37.3 +0.1
FDMO IAmb IAmb 07 37 39.8
comp=Z,426nm,2.0s
VLDQ Val d'Or 42.99 285 P P 07 37 37.6 -0.1
BRY Bratogost 43.00 184 ⇑*i*P P 07 37 38.1 0.0
IVA Berane 43.02 183 ⇑*i*P P 07 37 38.8 +0.6
KOME Kolasin 43.04 183 ⇑*i*P P 07 37 39.2 +0.8
NRCA Norcia 43.12 190 IAmb IAmb 07 37 41.7
comp=Z,319nm,1.5s
NKME Niksic 43.13 184 ⇑*i*P P 07 37 39.0 0.0
VTS Vitosha 43.27 179 P P 07 37 39.5 -0.8
VTS Vitosha 43.27 179 P P 07 37 39.2 -1.1
PVY Plav 43.30 183 ⇑*i*P P 07 37 40.5 0.0
TBO Thunder Bay 43.30 296 IAmb IAmb 07 37 42.9
comp=Z,146nm,1.0s
CEME Cevo 43.35 184 ⇑*i*P P 07 37 40.6 -0.2
MAK Makhachkala 43.36 153*d* *i*P P 07 37 35.5 -5.3
MAK *e* 07 39 18.8
MAK *e*S S 07 44 00.4 -7.8
MAK *e*SS SS 07 47 16.0 -5.3
MAK pmax pmax
comp=Z,525nm,2.0s
MAK MLR MLR
comp=Z,22µm,16.0s
UGL Uglegorsk 43.37 56 *e*P P 07 37 41.5 +0.7
UGL *e*S S 07 44 08.9 +0.7
UGL smax smax
comp=E,2µm,6.6s
UGL smax smax
comp=N,600nm,7.3s
UGL MLR MLR
comp=E,2µm,18.0s
UGL MLR MLR
comp=N,1µm,17.0s
UGL MLR MLR
comp=Z,2µm,17.0s
PGB Panagyurishte 43.38 178 P P 07 37 40.5 -0.5
JMB Yambol 43.41 176 P P 07 37 41.2 0.0
CAMP Campotosto 43.41 190 IAmb IAmb 07 37 46.5
comp=Z,244nm,1.7s
HCY Herceg Novi 43.45 184 ⇑*i*P P 07 37 41.0 -0.6
PDG Podgorica 43.46 183 IAmb IAmb 07 37 42.4
comp=Z,225nm,1.8s
PDG IAMs_20 IAMs_20 07 56 39.2
comp=Z,4µm,19.0s
PDG Podgorica 43.46 183 ⇑P P 07 37 41.8 +0.2
PDG Podgorica 43.46 183 ⇑*i*P P 07 37 41.5 -0.1
AQU L'Aquila 43.59 190 P P 07 37 43.4 +0.6
BUM Brajici-Budva 43.60 184 ⇑*i*P P 07 37 42.4 -0.4
CEST Esterri de Car 43.60 203 IAmb IAmb 07 37 46.5
comp=Z,388nm,2.0s
ARXS Arharly 43.64 121 *e*P P 07 37 43.7 +0.5
PLD Plovdiv 43.74 178 P P 07 37 43.4 -0.5
PLD Plovdiv 43.74 178 P P 07 37 43.0 -0.9
DIM Dimitrovgrad 43.85 177 P P 07 37 44.1 -0.6
KUU Kurty 43.87 123 *e*P P 07 37 46.1 +1.2
KUU MLR MLR
comp=Z,2µm,18.0s
KUU Kurty 43.87 123 *e*P P 07 37 46.1 +1.2
KUU LR LR 07 58 08.4
comp=Z,2µm,18.3s
E62A Clayton Lake 43.89 277 IAmb IAmb 07 37 47.8
comp=Z,102nm,1.0s
INTR Introdacqua 43.93 189 IAmb IAmb 07 37 56.5
comp=Z,277nm,1.7s
ULC Ulcinj 43.93 183 ⇑*i*P P 07 37 44.9 -0.6
BZK Bozkurt 44.02 168 ⇓P P 07 37 46.5 +0.4
KKB Krupnik 44.05 179 P P 07 37 45.7 -0.6
KKB Krupnik 44.05 179 P P 07 37 45.6 -0.8
AGMN Agassiz Nation 44.07 302 IAmb IAmb 07 37 49.1
comp=Z,192nm,1.2s
AGMN IAMs_20 IAMs_20 07 55 49.0
comp=Z,5µm,20.0s
RZN Rozhen 44.20 178 P P 07 37 47.1 -0.7
SGDS Sogindy 44.20 124 *e*P P 07 37 48.6 +1.0
CORI Orista 44.20 202 IAmb IAmb 07 37 50.7
comp=Z,172nm,1.3s
PHP Peshkopia 44.20 182 P P 07 37 47.2 -0.5

KDZ Kurdzhali 44.26 177 P P 07 37 46.0 -2.1
KK31 Karatay Array 44.30 129 *i* P P 07 37 48.6 +0.2
KKAR Karatay Array 44.30 129 P P 07 37 49.3 +0.9
KKAR Karatay Array 44.30 129 P P 07 37 49.3 +0.9
BRLS Borolday 44.33 129*c* *i*P P 07 37 51.6 +3.0
BRLS pmax pmax
comp=Z,52nm,1.3s
BRLS Borolday 44.33 129 ⇑*i*P P 07 37 51.7 +3.0
comp=Z,52nm,1.3s
MMB Musomishta 44.34 179 P P 07 37 48.2 -0.6
USP Ospenovka 44.38 125 P P 07 37 50.0 +1.0
SNR=17
ECAL Calabor 44.53 211 P P 07 37 51.8 +1.4
NVR Nevrokopi 44.54 179 P P 07 37 49.9 -0.5
DZA Taraz 44.56 128 *e*P P 07 37 51.5 +1.0
DZA Taraz 44.56 128 *e*P P 07 37 51.5 +1.0
F64A Sherman 44.56 275 IAMs_20 IAMs_20 07 56 12.1
comp=Z,5µm,20.0s
VAY Valandovo 44.56 180 *i* P P 07 37 50.6 +0.1
PGAV Gavieira, Arco 44.57 213 *e*P P 07 37 52.0 +1.4
PGAV *i* IAmb IAmb 07 37 54.2
comp=Z,172nm,1.8s
PDGK Podgornoye 44.63 119 P P 07 37 51.1 -0.1
MDOK Medeo 44.64 122 *e*P P 07 37 52.2 +1.0
MDOK *e* 07 39 36.3
MDOK *e*S S 07 44 28.9 +1.7
MDOK Medeo 44.64 122 *e*P P 07 37 52.3 +1.0
MDOK *e*PP PP 07 39 36.4 +1.3
MDOK *e*S S 07 44 28.9 +1.7
MDOK LR LR 07 58 35.0
CHMS Chumysh 44.66 124 P P 07 37 52.8 +1.5
SNR=16
TRQ Mont Tremblant 44.66 281 IAmb IAmb 07 37 54.1
comp=Z,143nm,1.0s
PBRG Braganca 44.67 211 *e*P P 07 37 53.1 +1.8
PBRG *i* IAmb IAmb 07 37 55.3
comp=Z,246nm,1.7s
WMQ Urumqi 44.70 111 *e*P P 07 37 52.5 +0.9
WMQ PP PP 07 39 40.3 +4.7
WMQ pmax pmax
comp=Z,33nm,1.1s
WMQ pmax pmax
comp=Z,2µm,4.7s
WMQ LR LR
comp=Z,5µm,13.9s
WMQ LR LR
comp=Z,5µm,14.7s
WMQ LR LR
comp=Z,3µm,13.1s
KNT Kendrikon 44.73 180 P P 07 37 51.4 -0.4
RDO Rodhopi 44.75 177 P P 07 37 52.4 +0.4
MDND Maddock 44.75 306 IAmb IAmb 07 37 54.1
comp=Z,196nm,1.3s
MDND IAMs_20 IAMs_20 07 56 43.0
comp=Z,6µm,19.0s
TNSS Tian-Shan 44.76 122 *e*P P 07 37 53.3 +0.8
TNSS Tian-Shan 44.76 122 *e*P P 07 37 53.3 +0.8
SRS Serrai 44.77 179 P P 07 37 51.6 -0.6
OHR Ohrid 44.78 182 *i* P P 07 37 52.6 +0.4
UZB Uzynbulak 44.78 120 *e*P P 07 37 53.4 +1.0
UZB *e* 07 39 37.8
UZB Uzynbulak 44.78 120 *e*P P 07 37 53.5 +1.0
UZB *e*PP PP 07 39 37.9 +1.3
TKM2 Tokmak 2 44.79 123 P P 07 37 53.9 +1.4
SNR=7.4
SHLS Shalkode 44.80 119*c* *i*P P 07 37 53.8 +1.3
SHLS pmax pmax
comp=Z,70nm,1.4s
SHLS Shalkode 44.80 119 ⇑*i*P P 07 37 53.8 +1.3
comp=Z,70nm,1.4s
PCAB Cabril 44.81 213 *e*P P 07 37 54.5 +1.9
PCAB *i* IAmb IAmb 07 37 57.3
comp=Z,365nm,1.5s
SATY Saty 44.83 121*c* *i*P P 07 37 53.8 +1.1
SATY *e*S S 07 44 31.7 +1.8
SATY pmax pmax
comp=Z,52nm,1.1s
SATY Saty 44.83 121 ⇑*i*P P 07 37 53.9 +1.1
comp=Z,52nm,1.1s
SATY *e*S S 07 44 31.8 +1.8
KAVA Kavala 44.89 178 P P 07 37 52.5 -0.6
PAOL Paolisi 44.90 188 IAmb IAmb 07 37 54.6
comp=Z,203nm,1.8s
GRG Griva 44.93 180 P P 07 37 53.8 +0.4
ALN Alexandroupoli 45.00 176 P P 07 37 54.1 +0.2
AAK Ala-Archa 45.00 125 P P 07 37 55.4 +1.3
SNR=34
AAK Ala-Archa 45.00 125 LR LR 07 59 39.8
comp=Z,5µm,19.6s,baz=337,slow=40
AAK Ala-Archa 45.00 125 P P 07 37 55.2 +1.0
AAK Ala-Archa 45.00 125 IAMs_20 IAMs_20 07 59 19.4
comp=Z,5µm,21.0s
AAK Ala-Archa 45.00 125 *i* P P 07 37 55.4 +1.3
SNR=35
AAK Ala-Archa 45.00 125*c* *e*P P 07 37 55.7 +1.5
AAK pmax pmax
comp=Z,72nm,1.0s
AAK Ala-Archa 45.00 125 P P 07 37 55.5 +1.3
KBK Karagaybulak 45.01 124 P P 07 37 55.7 +1.4
SNR=9.3
CLRS Cowichan Lake 45.02 329 IAmb IAmb 07 37 57.8
comp=Z,76nm,1.0s
CHM Chimkent 45.03 130 *e*P P 07 37 55.3 +1.1
CHM pmax pmax
comp=Z,64nm,1.1s
CHM MLR MLR
comp=Z,763nm,16.0s
CHM Chimkent 45.03 130 *e*P P 07 37 55.4 +1.2
comp=Z,64nm,1.1s
CHM LR LR 07 58 46.3
comp=Z,763nm,15.8s
A04D Lummi Island 45.06 328 IAmb IAmb 07 37 58.2
comp=Z,106nm,1.3s
POLO Lamas de Olo 45.14 212 *e*P P 07 37 56.8 +1.6
POLO *i* IAmb IAmb 07 37 59.1
comp=Z,100nm,1.6s
EGMT Eagleton 45.15 315 IAmb IAmb 07 37 57.2
comp=Z,122nm,1.4s
EGMT IAMs_20 IAMs_20 07 57 00.6
comp=Z,4µm,18.0s
G65A Princeton 45.16 274 IAMs_20 IAMs_20 07 56 58.0
comp=Z,5µm,18.0s
ENEZ Enez 45.16 176 P P 07 37 55.4 +0.2
PGC Sidney 45.16 328 IAmb IAmb 07 37 59.4
comp=Z,129nm,1.4s
E46A Sault Ste Mari 45.22 291 IAmb IAmb 07 37 58.1
comp=Z,162nm,1.2s
E46A IAMs_20 IAMs_20 07 55 43.5
comp=Z,4µm,22.0s
IUG Iuzhnay 45.22 129*c* *i*P P 07 37 57.1 +1.3
IUG *e* 07 39 42.6
IUG pmax pmax
comp=Z,112nm,1.2s
IUG Iuzhnay 45.22 129 ⇑*i*P P 07 37 57.2 +1.3
comp=Z,112nm,1.2s
IUG *e*PP PP 07 39 42.7 +1.4
PKME Peaks-Kenny Pk 45.22 276 P P 07 37 56.3 +0.6
PKME IAmb IAmb 07 37 59.4
comp=Z,137nm,1.5s
PKME IAMs_20 IAMs_20 07 56 46.7
comp=Z,5µm,18.0s
PVRL Vila Real 45.23 212 *e*P P 07 37 57.5 +1.7
PVRL *i* IAmb IAmb 07 37 59.8
comp=Z,219nm,1.8s
BOOM Boomskoye usch 45.24 123 P P 07 37 57.6 +1.5
BOOM IAmb IAmb 07 37 59.6
comp=Z,96nm,1.0s
BOOM Boomskoye usch 45.24 123 P P 07 37 57.6 +1.5
BOOM pmax pmax
comp=Z,96nm,1.0s
THE Thessaloniki 45.25 179 P P 07 37 55.5 -0.5
MATE Matera 45.26 186 ⇑P P 07 37 56.4 +0.4
KBN Korca 45.26 182 P P 07 37 56.0 -0.2
NEW Newport 45.27 322 LR LR 07 57 41.6
comp=Z,9µm,18.3s,baz=5.5,slow=37
NEW Newport 45.27 322 P P 07 37 56.7 +0.6
NEW IAmb IAmb 07 37 59.4
comp=Z,189nm,1.6s
NEW Newport 45.27 322 P P 07 37 56.7 +0.6
NEW pmax pmax
comp=Z,189nm,1.6s
NEW MLR MLR
comp=Z,8µm,19.0s
B08A Colville Reser 45.28 325 IAmb IAmb 07 37 59.0
comp=Z,122nm,1.1s

THAS Thassos island 45.28 178 P P 07 37 56.1 -0.1
HORT Hortiatis 45.29 179 P P 07 37 56.1 -0.3
MVO Moncorvo 45.32 212 *e*P P 07 37 58.3 +1.7
MVO *i* IAmb IAmb 07 37 59.6
comp=Z,157nm,1.2s
PTO Porto 45.41 213 *e*P P 07 37 59.6 +2.4
UCH Uchtor 45.41 125 P P 07 37 59.6 +1.9
SNR=21
SMTH Samothraki Isl 45.42 177 P P 07 37 57.1 -0.2
NEST Nestorio 45.47 182 P P 07 37 57.4 -0.4
E38A The Farm, Brul 45.48 298 IAMs_20 IAMs_20 07 56 59.3
comp=Z,5µm,18.0s
PLG Polygyros 45.51 179 P P 07 37 58.0 -0.1
YSS Yuzhno-Sakhali 45.53 56 P P 07 37 58.0 -0.1
YSS Yuzhno-Sakhali 45.53 56 *e*P P 07 37 58.0 -0.1
YSS *e* 07 39 39.7
YSS *e*S S 07 44 39.7 +0.1
YSS *e*SS ScS 07 47 56.5 +2.6
YSS pmax pmax
comp=Z,30nm,0.9s
YSS pmax pmax
comp=N,30nm,1.1s
YSS pmax pmax
comp=E,20nm,0.8s
YSS smax smax
comp=N,600nm,6.4s
YSS smax smax
comp=E,900nm,6.0s
YSS MLR MLR
comp=Z,1µm,14.0s
YSS MLR MLR
comp=N,1µm,16.0s
YSS MLR MLR
comp=E,900nm,13.0s
BAND Balkesir-Ban 45.55 174 ⇓P P 07 37 58.3 -0.1
OUR Ouranopolis 45.55 178 P P 07 37 58.4 0.0
KZN Kozani 45.58 181 P P 07 37 58.6 -0.1
EMMW East Machias 45.64 274 IAmb IAmb 07 38 03.2
comp=Z,79nm,1.1s
EMMW IAMs_20 IAMs_20 07 57 04.8
comp=Z,4µm,18.0s
PENT Pentalofos 45.69 181 P P 07 37 59.1 -0.5
GADA Gvkgeada 45.70 176 P P 07 37 59.8 +0.3
BNX BinXian 45.71 71 ⇓P P 07 37 59.3 -0.2
BNX S S 07 44 42.5 +0.2
BNX pmax pmax
comp=Z,25nm,0.9s
BNX pmax pmax
comp=Z,400nm,4.9s
BNX LR LR
comp=Z,1µm,13.9s
BNX LR LR
comp=Z,900nm,12.7s
BNX LR LR
comp=Z,1µm,15.2s
LIT Litokhoron 45.78 180 IAmb IAmb 07 38 06.1
comp=Z,135nm,1.6s
LIT Litokhoron 45.78 180 P P 07 38 00.2 -0.1
BUKO Buck Lake 45.79 286 IAmb IAmb 07 38 02.6
comp=Z,72nm,0.9s
PVIS Viseu 45.80 212 *e*P P 07 38 02.1 +1.7
SCTE Santa Cesarea 45.82 184 IAmb IAmb 07 38 02.4
comp=Z,77nm,1.0s
CUC Castrocucco 45.92 187 IAmb IAmb 07 38 09.5
comp=Z,190nm,1.8s
CUC IAMs_20 IAMs_20 07 59 17.2
comp=Z,3µm,18.0s
KPRO Kipourio 45.93 181 P P 07 38 01.5 0.0
WVL Waterville 45.95 276 IAmb IAmb 07 38 04.0
comp=Z,81nm,0.9s
LIA Limnos Island 45.99 177 P P 07 38 01.8 0.0
SRN Sarande 46.01 183 P P 07 38 02.0 +0.1
UCM Universidad Co 46.03 207 P P 07 38 03.3 +1.1
EZN Ezine 46.07 176 P P 07 38 02.4 0.0
GNI Garni 46.08 156 LR LR 07 59 25.4
comp=Z,4µm,18.6s,baz=356,slow=39
GNI Garni 46.08 156 P P 07 38 04.1 +1.4
GNI IAmb IAmb 07 38 37.3
comp=Z,139nm,1.6s
GNI Garni 46.08 156 IAMs_20 IAMs_20 07 58 56.1
comp=Z,4µm,18.0s
GNI Garni 46.08 156 P P 07 38 04.2 +1.5
GNI Garni 46.08 156*c* *i*P P 07 38 03.9 +1.2
GNI pmax pmax
comp=Z,105nm,1.6s
GNI Garni 46.08 156 P P 07 38 04.1 +1.5
GNI P P 07 38 04.1 +1.5
F42A Maple Grove Fa 46.09 295 IAMs_20 IAMs_20 07 58 09.5
comp=Z,3µm,18.0s
MTE Manteigas 46.10 212 IAmb IAmb 07 38 05.8
comp=Z,79nm,1.0s
MTE Manteigas 46.10 212 *e*P P 07 38 04.3 +1.6
MTE *i* IAmb IAmb 07 38 06.6
comp=Z,148nm,2.0s
KEK Kerkira 46.18 183 P P 07 38 03.5 +0.2
KEK IAmb IAmb 07 38 05.2
comp=Z,94nm,1.2s
KEK Kerkira 46.18 183 P P 07 38 03.3 0.0
ARSB Arslanbob 46.22 126 IAmb IAmb 07 38 07.0
comp=Z,158nm,1.7s
GNW Green Mountain 46.22 328 IAmb IAmb 07 38 06.7
comp=Z,109nm,1.2s
JAN Janina 46.23 182 P P 07 38 04.1 +0.4
BR131 Keskin Array S 46.25 168*c* *i*P P 07 38 04.8 +0.8
BR131 Keskin Array S 46.25 168 P P 07 38 05.0 +0.9
SNR=26
BR131 P P 07 38 05.0 +0.9
SNR=26
BRTR Keskin Array B 46.25 168 P P 07 38 04.8 +0.7
comp=Z,18nm,0.8s,baz=359,slow=6.0,SNR=65
BRTR LR LR 07 59 02.5
comp=Z,4µm,20.3s,baz=23,slow=38
comp=Z,18nm,0.8s
BRTR Keskin Array B 46.25 168 P P 07 38 04.9 +0.9
BRTR Keskin Array B 46.25 168 *i* P P 07 38 04.9 +0.9
BRTR pmax pmax
comp=Z,18nm,0.8s
LONY Lake Ozonia 46.26 281 IAMs_20 IAMs_20 07 56 56.1
comp=Z,4µm,20.0s
BALB Balikesir 46.27 174 P P 07 38 04.4 +0.4
EPH Ephrata 46.30 325 IAmb IAmb 07 38 06.0
comp=Z,26nm,1.3s
NRN Naryn 46.30 123 P P 07 38 03.8 -0.8
NRN IAmb IAmb 07 38 15.1
comp=Z,166nm,2.0s
NRN Naryn 46.30 123 P P 07 38 03.8 -0.8
NRN pmax pmax
comp=Z,166nm,2.0s
THL Klokotos Trika 46.32 181 P P 07 38 03.9 -0.5
IGT Igoumenitsa 46.35 182 P P 07 38 04.6 -0.1
PRMD Pramanda 46.36 181 P P 07 38 05.5 +0.7
VT1 Waterbury 46.41 279 IAmb IAmb 07 38 09.7
comp=Z,84nm,1.2s
VT1 IAMs_20 IAMs_20 07 57 01.4
comp=Z,4µm,19.0s
NLWA Neilton Lookou 46.43 329 IAmb IAmb 07 38 10.5
comp=Z,154nm,1.4s
LBNH Lisbon 46.44 279 IAMs_20 IAMs_20 07 56 53.9
comp=Z,5µm,20.0s
SADO Sadowa 46.44 286 LR LR 07 57 17.9
comp=Z,3µm,18.2s,baz=20,slow=36
PCAS Casmilo, Conde 46.49 213 *e*P P 07 38 07.7 +1.9
PCAS *i* IAmb IAmb 07 38 09.6
comp=Z,240nm,1.9s
I63A Otisfield 46.53 277 IAMs_20 IAMs_20 07 57 08.2
comp=Z,5µm,20.0s
TETR Tetrakomo, Epi 46.54 181 P P 07 38 07.1 +0.8
F33A 5 Mile Ranch, 46.55 302 IAMs_20 IAMs_20 07 57 13.5
comp=Z,5µm,20.0s
MSO Missoula 46.56 319 IAmb IAmb 07 38 08.8
comp=Z,102nm,0.9s
NEO Neokhori 46.58 179 P P 07 38 06.3 -0.1
PRK Paraskevi 46.65 176 P P 07 38 06.7 -0.3
PCBR Castelo Branco 46.66 212 *e*P P 07 38 08.7 +1.7
PCBR *i* IAmb IAmb 07 38 10.8
comp=Z,259nm,1.8s
ECHE Chera 46.67 205 P P 07 38 07.8 +0.6
SIGR SIGRI 46.68 176 P P 07 38 07.4 +0.2
ESBB Sonseca Array 46.69 208 IAmb IAmb 07 38 10.1
comp=Z,124nm,1.2s
ESDC Sonseca Array 46.69 208 P P 07 38 08.5 +1.1
comp=Z,42nm,0.9s,baz=0.4,slow=8.4,SNR=91
comp=Z,42nm,0.9s
ESDC Sonseca Array 46.69 208 P P 07 38 08.1 +0.7
ESDC IAmb IAmb 07 38 10.1
comp=Z,131nm,1.4s

WISH	**Wishkah**	**46.70**	**329**	IAmb	IAmb	07 38 46.6		
	comp=Z,112nm,1.3s							
AOS	**Alonnisos**	**46.72**	**179**	P	**P**	**07 38 07.9**	**+0.4**	
XLT	**XiLinHaoTe**	**46.72**	**82**	*eP*	**P**	**07 38 08.6**	**+1.0**	
XLT				S	**S**	**07 45 03.8**	**+6.8**	
XLT				pmax	pmax			
	comp=Z,38nm,0.9s							
XLT				pmax	pmax			
	comp=Z,680nm,5.9s							
XLT				LR	LR			
	comp=Z,140nm,16.3s							
XLT				LR	LR			
	comp=Z,540nm,10.0s							
XLT				LR	LR			
	comp=Z,2µm,19.7s							
G40A	**Rib Lake**	**46.72**	**296**	IAmb	IAmb	07 38 09.7		
	comp=Z,107nm,1.1s							
G40A				IAMs_20	IAMs_20	07 57 39.1		
	comp=Z,4µm,18.0s							
TIP	**Timpagrande**	**46.73**	**186**	IAmb	IAmb	07 38 10.2		
	comp=Z,93nm,1.1s							
TIP				IAMs_20	IAMs_20	07 58 47.5		
	comp=Z,2µm,18.0s							
TIP	**Timpagrande**	**46.73**	**186**	⇓P	**P**	**07 38 08.8**	**+1.1**	
WUS	**Wushi**	**46.73**	**120**	IAMs_20	IAMs_20	08 01 10.1		
	comp=Z,3µm,18.0s							
I62A	**Tamworth**	**46.76**	**278**	IAmb	IAmb	07 38 12.5		
	comp=Z,84nm,1.0s							
GLMI	**Grayling**	**46.78**	**291**	IAmb	IAmb	07 38 11.2		
	comp=Z,78nm,1.0s							
GLMI				IAMs_20	IAMs_20	07 57 01.7		
	comp=Z,4µm,19.0s							
PAB	**San Pablo**	**46.83**	**209**	P	**P**	**07 38 09.7**	**+1.2**	
PAB	**San Pablo**	**46.83**	**209**	P	**P**	**07 38 09.7**	**+1.2**	
PAB				pmax	pmax			
	comp=Z,203nm,1.2s							
KIRS	**Kirsehir-Merke**	**46.84**	**168**	⇑P	**P**	**07 38 09.6**	**+1.0**	
AGG	**Agios Georgios**	**46.86**	**180**	P	**P**	**07 38 08.0**	**-0.8**	
MAKR	**Makrakomi, Fth**	**46.87**	**180**	P	**P**	**07 38 08.9**	**+0.2**	
WAH2	**Wahluke Slope**	**46.89**	**325**	P	**P**	**07 38 09.1**	**+0.3**	
WAH2				IAmb	IAmb	07 38 11.3		
	comp=Z,117nm,1.8s							
PSARD	**Sardoal**	**46.92**	**213**	*eP*	**P**	**07 38 10.8**	**+1.6**	
PSARD				*i* IAmb	IAmb	07 38 12.8		
	comp=Z,152nm,2.1s							
SPMN	**Marine on St.**	**46.93**	**299**	IAmb	IAmb	07 38 12.0		
	comp=Z,131nm,1.1s							
SPMN				IAMs_20	IAMs_20	07 57 44.8		
	comp=Z,4µm,18.0s							
AMPL	**Ampelaki**	**46.96**	**181**	P	**P**	**07 38 09.7**	**+0.2**	
ARPR	**Arapgir-MALATY**	**46.97**	**163**	IAMs_20	IAMs_20	08 00 04.7		
	comp=Z,3µm,19.0s							
EVR	**Evrytania**	**46.97**	**181**	P	**P**	**07 38 10.3**	**+0.7**	
MDJ	**Mudanjiang**	**46.98**	**69**	P	**P**	**07 38 08.5**	**-1.0**	
MDJ				pmax	pmax			
	comp=Z,34nm,0.9s							
HNH	**Hanover**	**47.00**	**279**	IAMs_20	IAMs_20	07 57 10.6		
	comp=Z,5µm,20.0s							
SKY	**Skiros Island**	**47.01**	**178**	P	**P**	**07 38 10.5**	**+0.7**	
TSLK	**Tsoukalades, L**	**47.06**	**182**	P	**P**	**07 38 10.3**	**+0.1**	
PMRV	**Marv??o**	**47.06**	**212**	*eP*	**P**	**07 38 11.7**	**+1.4**	
PMRV				*i* IAmb	IAmb	07 38 14.8		
	comp=Z,221nm,1.3s							
LKD2	**Lefkada island**	**47.10**	**182**	P	**P**	**07 38 10.5**	**0.0**	
AXAR	**Agios Charalam**	**47.12**	**180**	P	**P**	**07 38 10.7**	**0.0**	
E08A	**Dider Farm, El**	**47.13**	**324**	IAmb	IAmb	07 38 13.3		
	comp=Z,80nm,1.4s							
BNN	**Bunyan**	**47.16**	**166**	IAmb	IAmb	07 38 18.1		
	comp=Z,183nm,1.9s							
EIBI	**Ibiza**	**47.16**	**203**	P	**P**	**07 38 09.9**	**-1.2**	
ATAL	**Atalanti**	**47.19**	**179**	P	**P**	**07 38 11.1**	**-0.1**	
LKR	**Lokris**	**47.23**	**179**	P	**P**	**07 38 11.2**	**-0.4**	
HAWA	**Hanford**	**47.25**	**325**	IAMs_20	IAMs_20	07 57 50.0		
	comp=Z,5µm,21.0s							
KYMI	**Kymi, Euboea I**	**47.25**	**178**	P	**P**	**07 38 11.7**	**0.0**	
EVGI	**Lefkada island**	**47.27**	**182**	P	**P**	**07 38 11.2**	**-0.6**	
PVO	**Paravola**	**47.27**	**181**	P	**P**	**07 38 12.5**	**+0.6**	
ANX	**Ano Chora**	**47.29**	**181**	P	**P**	**07 38 12.0**	**-0.1**	
BTK	**Batken**	**47.35**	**129**	IAmb	IAmb	07 38 15.8		
	comp=Z,109nm,1.0s							
J61A	**Chester**	**47.37**	**279**	IAMs_20	IAMs_20	07 57 21.6		
	comp=Z,4µm,21.0s							
J59A	**Piesco**	**47.40**	**281**	IAMs_20	IAMs_20	07 57 40.3		
	comp=Z,4µm,18.0s							
MANT	**Manisa**	**47.42**	**174**	IAmb	IAmb	07 38 20.3		
	comp=Z,166nm,1.6s							
FSK	**Fiskardo**	**47.43**	**182**	P	**P**	**07 38 12.5**	**-0.6**	
EFP	**Efpalio**	**47.46**	**181**	P	**P**	**07 38 13.8**	**+0.5**	
PMTG	**Montargil**	**47.46**	**213**	*eP*	**P**	**07 38 14.6**	**+1.3**	
PMTG				*i* IAmb	IAmb	07 38 16.5		
	comp=Z,218nm,1.6s							
SERG	**Sergoula**	**47.47**	**180**	P	**P**	**07 38 13.5**	**+0.1**	
KALE	**Kalithea**	**47.49**	**180**	P	**P**	**07 38 13.2**	**-0.5**	
CN2	**Changchun**	**47.50**	**73**	P	**P**	**07 38 13.3**	**-0.3**	
CN2				pmax	pmax			
	comp=Z,20nm,1.5s							
CN2				LR	LR			
	comp=Z,2µm,12.0s							
CN2				LR	LR			
	comp=Z,810nm,12.0s							
CN2				LR	LR			
	comp=Z,2µm,14.0s							
CHOS	**Chios island**	**47.51**	**176**	P	**P**	**07 38 13.5**	**-0.2**	
BLCB	**Balcova**	**47.51**	**175**	P	**P**	**07 38 13.4**	**-0.3**	
USRK	**Ussuriysk Ar.**	**47.56**	**67**	P	**P**	**07 38 13.1**	**-1.0**	
	comp=Z,16nm,1.0s,baz=319,slow=6.9,SNR=11							
	comp=Z,16nm,1.0s							
J57A	**Williamstown**	**47.56**	**282**	IAmb	IAmb	07 38 16.7		
	comp=Z,92nm,1.1s							
J57A				IAMs_20	IAMs_20	07 57 24.6		
	comp=Z,4µm,20.0s							
YPT	**Yellepit**	**47.57**	**324**	IAmb	IAmb	07 38 17.0		
	comp=Z,83nm,1.4s							
GURO	**Guroymak-BITLI**	**47.60**	**159**	IAmb	IAmb	07 38 20.1		
	comp=Z,131nm,1.8s							
PESTR	**Estremoz**	**47.63**	**212**	P	**P**	**07 38 15.3**	**+0.6**	
PESTR	**Estremoz**	**47.63**	**212**	*eP*	**P**	**07 38 16.0**	**+1.3**	
PESTR				*i* IAmb	IAmb	07 38 18.9		
	comp=Z,261nm,1.6s							
I45A	**Fountain**	**47.67**	**292**	IAMs_20	IAMs_20	07 57 54.4		
	comp=Z,3µm,19.0s							
AXS	**Araxos**	**47.69**	**181**	P	**P**	**07 38 15.5**	**+0.4**	
PARRA	**Arraiolos**	**47.70**	**212**	*eP*	**P**	**07 38 16.1**	**+0.9**	
PARRA				*i* IAmb	IAmb	07 38 18.6		
	comp=Z,144nm,1.7s							
F04D	**Rainier, OR**	**47.71**	**328**	IAmb	IAmb	07 38 18.4		
	comp=Z,59nm,0.9s							
VLS	**Valsamata**	**47.71**	**182**	P	**P**	**07 38 15.1**	**-0.2**	
VILL	**Villia**	**47.72**	**179**	P	**P**	**07 38 15.1**	**-0.3**	
EBAD	**Badajoz**	**47.72**	**211**	P	**P**	**07 38 15.8**	**+0.4**	
F07A	**Phinny Hill Vi**	**47.77**	**325**	IAmb	IAmb	07 38 18.8		
	comp=Z,175nm,1.8s							
MAGU	**Magoula**	**47.80**	**179**	P	**P**	**07 38 15.5**	**-0.5**	
DION	**Dionisos Attik**	**47.81**	**178**	P	**P**	**07 38 16.0**	**-0.1**	
RTZL	**Ratzakli, Kefa**	**47.81**	**182**	P	**P**	**07 38 16.3**	**+0.2**	
RLS	**Riolos of Patr**	**47.83**	**181**	P	**P**	**07 38 16.6**	**+0.4**	
PTL	**Penteli**	**47.84**	**179**	P	**P**	**07 38 16.0**	**-0.3**	
KLV	**Kalavryta, Ach**	**47.84**	**180**	P	**P**	**07 38 16.4**	**0.0**	
KARY	**Karystos**	**47.85**	**178**	P	**P**	**07 38 16.8**	**+0.4**	
LTK	**Loutraki**	**47.86**	**179**	P	**P**	**07 38 15.7**	**-0.8**	
GEVA	**Gevas**	**47.86**	**158**	IAmb	IAmb	07 38 49.3		
	comp=Z,134nm,1.9s							
F03A	**Seaside**	**47.88**	**328**	IAmb	IAmb	07 38 19.7		
	comp=Z,158nm,1.4s							
ATH	**Athens Observa**	**47.91**	**179**	P	**P**	**07 38 16.5**	**-0.3**	
ATHU	**Athens Univers**	**47.92**	**179**	P	**P**	**07 38 16.5**	**-0.4**	
DRO	**Drossia**	**47.93**	**181**	P	**P**	**07 38 17.3**	**+0.3**	
GUR	**Goura**	**47.95**	**180**	P	**P**	**07 38 16.8**	**-0.5**	
DLMT	**Dillon**	**47.95**	**318**	IAmb	IAmb	07 38 20.7		
	comp=Z,64nm,1.1s							
DLMT				IAMs_20	IAMs_20	07 58 51.7		
	comp=Z,4µm,18.0s							
EVO	**Evora**	**47.98**	**212**	P	**P**	**07 38 17.7**	**+0.4**	
EVO	**Evora**	**47.98**	**212**	*eP*	**P**	**07 38 18.5**	**+1.1**	
EVO				*i* IAmb	IAmb	07 38 20.8		
	comp=Z,83nm,2.2s							
I42A	**Draeger Farm,**	**48.00**	**295**	IAMs_20	IAMs_20	07 58 03.1		
	comp=Z,4µm,18.0s							
MOE	**Montemor**	**48.01**	**213**	*eP*	**P**	**07 38 18.6**	**+1.0**	
MOE				*i* IAmb	IAmb	07 38 20.7		
	comp=Z,109nm,1.9s							
RLMT	**Red Lodge**	**48.02**	**315**	IAMs_20	IAMs_20	07 58 38.5		
	comp=Z,3µm,18.0s							
K62A	**Royalston**	**48.03**	**279**	IAMs_20	IAMs_20	07 57 41.9		
	comp=Z,5µm,21.0s							
VLY	**Voula,Athens**	**48.03**	**179**	P	**P**	**07 38 17.4**	**-0.3**	
TRY	**Troy**	**48.07**	**280**	IAMs_20	IAMs_20	07 58 10.0		
	comp=Z,4µm,18.0s							
ISP	**Isparta**	**48.10**	**171**	IAMs_20	IAMs_20	08 00 02.3		
	comp=Z,2µm,19.0s							
HRV	**Adam Dziewonsk**	**48.13**	**278**	P	**P**	**07 38 19.6**	**+1.1**	
I37A	**Lemond, Waseca**	**48.18**	**299**	IAMs_20	IAMs_20	07 58 50.7		
	comp=Z,3µm,18.0s							
SMG	**Samos**	**48.19**	**175**	P	**P**	**07 38 18.5**	**-0.4**	
EADA	**Adamuz**	**48.22**	**209**	P	**P**	**07 38 18.6**	**-0.6**	
L61B	**Northampton**	**48.27**	**279**	IAMs_20	IAMs_20	07 57 59.5		
	comp=Z,4µm,19.0s							
K57A	**Scipio Center**	**48.28**	**283**	IAmb	IAmb	07 38 22.4		
	comp=Z,112nm,1.1s							
K57A				IAMs_20	IAMs_20	07 58 16.5		
	comp=Z,4µm,20.0s							
PBAR	**Barrancos**	**48.30**	**211**	P	**P**	**07 38 20.4**	**+0.6**	
PBAR	**Barrancos**	**48.30**	**211**	*eP*	**P**	**07 38 21.2**	**+1.4**	
PBAR				*i* IAmb	IAmb	07 38 24.1		
	comp=Z,214nm,1.6s							
G08A	**Pilot Rock**	**48.33**	**324**	IAmb	IAmb	07 38 23.3		
	comp=Z,67nm,1.1s							
ECAB	**El Cabril**	**48.34**	**210**	P	**P**	**07 38 20.4**	**+0.3**	
ASAJ	**Asahikawa**	**48.35**	**57**	LR	LR	08 00 18.0		
	comp=Z,772nm,18.3s,baz=30,slow=38							
ASAJ	**Asahikawa**	**48.35**	**57**	P	**P**	**07 38 17.7**	**-2.4**	
ASAJ				pmax	pmax			
	comp=Z,54nm,1.2s							
JKA	**Kamikawa-asahi**	**48.35**	**57**	P	**P**	**07 38 17.7**	**-2.4**	
AMT	**Artemida-Makis**	**48.35**	**181**	P	**P**	**07 38 20.5**	**+0.3**	
J47A	**Sunmer**	**48.37**	**291**	P	**P**	**07 38 20.7**	**+0.4**	
J47A				IAmb	IAmb	07 38 23.0		
	comp=Z,79nm,1.0s							
J47A				IAMs_20	IAMs_20	07 58 28.9		
	comp=Z,4µm,18.0s							
MMNY	**Mt. Morris Dam**	**48.38**	**284**	P	**P**	**07 38 21.2**	**+0.9**	
PLID	**Pearl Lake**	**48.39**	**321**	IAMs_20	IAMs_20	07 59 14.3		
	comp=Z,4µm,18.0s							
HOOD	**Mount Hood Mea**	**48.41**	**326**	IAmb	IAmb	07 38 24.4		
	comp=Z,78nm,1.1s							
EMUR	**La Murta**	**48.43**	**205**	P	**P**	**07 38 22.1**	**+1.3**	
VAE	**Valguarnera**	**48.45**	**189**	LR	LR	07 59 33.4		
	comp=Z,4µm,18.1s,baz=346,slow=37							
G05A	**Wamic**	**48.48**	**326**	IAmb	IAmb	07 38 51.7		
	comp=Z,128nm,1.3s							
YNM	**Yellowstone No**	**48.49**	**316**	IAmb	IAmb	07 38 25.8		
	comp=Z,76nm,1.2s							
YNR	**Norris Junctio**	**48.50**	**316**	IAmb	IAmb	07 38 28.0		
	comp=Z,66nm,1.1s							
VLX	**Vlachokerasia**	**48.51**	**180**	P	**P**	**07 38 21.3**	**-0.3**	
KSH2	**Kashi**	**48.55**	**124**	P	**P**	**07 38 23.1**	**+1.2**	
KSH2				pP	sP	07 38 25.8	+1.6	
KSH2				PP	**PP**	**07 40 13.0**	**-1.4**	
KSH2				pmax	pmax			
	comp=Z,22nm,0.8s							
KSH2				pmax	pmax			
	comp=Z,2µm,5.3s							
KSH2				LR	LR			
	comp=Z,5µm,17.9s							
KSH2				LR	LR			
	comp=Z,3µm,13.7s							
KSH2				LR	LR			
	comp=Z,6µm,16.1s							
YMR	**Madison River**	**48.56**	**316**	IAmb	IAmb	07 38 24.9		
	comp=Z,144nm,1.5s							
VLA	**Vladivostok**	**48.63**	**67**	⇑*eP*	**P**	**07 38 22.5**	**+0.2**	
VLA				pmax	pmax			
	comp=Z,145nm,2.6s							
L64A	**Middleborough**	**48.65**	**277**	IAmb	IAmb	07 38 26.6		
	comp=Z,106nm,1.1s							
ECSD	**EROS Data Cent**	**48.66**	**302**	IAMs_20	IAMs_20	07 58 27.6		
	comp=Z,3µm,19.0s							
CART	**Cartagena**	**48.67**	**205**	P	**P**	**07 38 24.4**	**+1.7**	
K50A	**Casco**	**48.67**	**289**	IAMs_20	IAMs_20	07 58 43.0		
	comp=Z,4µm,18.0s							
MESJ	**Messejana**	**48.68**	**213**	*eP*	**P**	**07 38 23.8**	**+1.0**	
MESJ				IAmb	IAmb	07 38 26.1		
	comp=Z,111nm,1.2s							
MESJ	**Messejana**	**48.68**	**213**	IAmb	IAmb	07 38 25.8		
	comp=Z,74nm,1.0s							
MESJ	**Messejana**	**48.68**	**213**	*eP*	**P**	**07 38 24.2**	**+1.4**	
MESJ				*i* IAmb	IAmb	07 38 25.7		
	comp=Z,119nm,1.3s							
EMIN	**Mina Concepcio**	**48.69**	**211**	P	**P**	**07 38 24.6**	**+1.7**	
ITM	**Ithomi**	**48.70**	**181**	P	**P**	**07 38 22.4**	**-0.5**	
L59A	**Walton**	**48.71**	**281**	IAMs_20	IAMs_20	07 58 20.9		
	comp=Z,4µm,19.0s							
BINY	**Binghamton**	**48.77**	**282**	IAMs_20	IAMs_20	07 58 23.5		
	comp=Z,4µm,20.0s							
YER	**Yerkesik**	**48.77**	**174**	P	**P**	**07 38 23.8**	**+0.3**	
BODT	**Bodrum**	**48.84**	**175**	P	**P**	**07 38 24.2**	**+0.2**	
PCVE	**Castro Verde**	**48.88**	**212**	P	**P**	**07 38 26.0**	**+1.7**	
PCVE	**Castro Verde**	**48.88**	**212**	*eP*	**P**	**07 38 25.6**	**+1.3**	
PCVE				*i* IAmb	IAmb	07 38 28.0		
	comp=Z,162nm,1.7s							
L56A	**Greenwood**	**48.94**	**284**	IAmb	IAmb	07 38 28.2		
	comp=Z,124nm,1.1s							
EGRO	**El Granado**	**48.96**	**212**	P	**P**	**07 38 25.4**	**+0.5**	
PYL	**PYLOS**	**48.98**	**181**	P	**P**	**07 38 24.0**	**-1.1**	
M65A	**Busby, Falmout**	**49.01**	**277**	P	**P**	**07 38 24.2**	**-1.0**	
	baz=5.7							
BCYI	**Bear Canyon**	**49.04**	**319**	IAmb	IAmb	07 38 28.5		
	comp=Z,129nm,1.6s							
KSCT	**Kent School, K**	**49.05**	**280**	IAmb	IAmb	07 38 30.1		
	comp=Z,147nm,1.1s							
JFWS	**Jewell Farm**	**49.06**	**296**	IAMs_20	IAMs_20	07 58 53.2		
	comp=Z,3µm,18.0s							
PVAQ	**Vaqueiros**	**49.10**	**212**	*eP*	**P**	**07 38 27.6**	**+1.7**	
PVAQ				*i* IAmb	IAmb	07 38 29.7		
	comp=Z,243nm,1.6s							
EQTA	**Presa de Quent**	**49.13**	**207**	P	**P**	**07 38 27.8**	**+1.4**	
ERPA	**Erie**	**49.14**	**286**	IAmb	IAmb	07 38 28.8		
	comp=Z,94nm,0.9s							
ERPA				IAMs_20	IAMs_20	07 58 32.3		
	comp=Z,2µm,19.0s							
K43A	**Burlington**	**49.14**	**294**	IAMs_20	IAMs_20	08 01 30.3		
	comp=Z,2µm,18.0s							
VLI	**Veliai**	**49.16**	**180**	P	**P**	**07 38 24.5**	**-2.0**	
COR	**Corvallis**	**49.21**	**328**	P	**P**	**07 38 28.7**	**+1.9**	
COR				IAmb	IAmb	07 38 30.5		
	comp=Z,168nm,1.2s							
COR	**Corvallis**	**49.21**	**328**	IAMs_20	IAMs_20	08 02 59.9		
	comp=Z,2µm,19.0s							
COR	**Corvallis**	**49.21**	**328**	P	**P**	**07 38 28.7**	**+1.9**	
COR				pmax	pmax			
	comp=Z,168nm,1.3s							
COR				MLR	MLR			
	comp=Z,2µm,19.0s							
MORF	**Marmelete**	**49.23**	**213**	*eP*	**P**	**07 38 27.9**	**+0.8**	
MORF				IAmb	IAmb	07 38 29.2		
	comp=Z,154nm,1.6s							
MORF	**Marmelete**	**49.23**	**213**	*eP*	**P**	**07 38 28.9**	**+1.8**	
MORF				*i* IAmb	IAmb	07 38 30.4		
	comp=Z,98nm,1.4s							
MORF	**Marmelete**	**49.23**	**213**	*eP*	**P**	**07 38 27.9**	**+0.8**	
H04D	**Lebanon**	**49.25**	**327**	IAmb	IAmb	07 38 30.1		
	comp=Z,133nm,1.2s							
EGOR	**Sierra Gorda,**	**49.25**	**208**	P	**P**	**07 38 27.0**	**-0.4**	
PBDV	**Barranco-do-Ve**	**49.26**	**212**	P	**P**	**07 38 27.0**	**-0.3**	
PBDV	**Barranco-do-Ve**	**49.26**	**212**	*eP*	**P**	**07 38 29.2**	**+1.9**	
PBDV				*i* IAmb	IAmb	07 38 32.8		
	comp=Z,240nm,1.3s							
M63A	**Gales Ferry**	**49.27**	**278**	IAMs_20	IAMs_20	07 58 39.7		
	comp=Z,5µm,20.0s							
ENIJ	**Nijar**	**49.33**	**206**	P	**P**	**07 38 27.8**	**+0.1**	
SNY	**Shenyang**	**49.33**	**75**	⇓P	**P**	**07 38 27.6**	**-0.1**	
SNY				S	**S**	**07 45 34.3**	**+0.6**	
SNY				pmax	pmax			
	comp=Z,29nm,0.7s							
SNY				pmax	pmax			
	comp=Z,440nm,5.4s							
SNY				LR	LR			
	comp=Z,890nm,11.9s							
SNY				LR	LR			
	comp=Z,670nm,14.5s							
SNY				LR	LR			
	comp=Z,1µm,15.2s							
I05D	**Terrebonne, OR**	**49.38**	**326**	IAmb	IAmb	07 38 31.4		
	comp=Z,98nm,1.0s							
BTO2	**Baotou**	**49.39**	**89**	*eP*	**P**	**07 38 28.0**	**-0.3**	
BTO2				PP	**PP**	**07 40 24.0**	**+2.0**	
BTO2				S	**S**	**07 45 35.3**	**+0.3**	
BTO2				pmax	pmax			
	comp=Z,49nm,1.0s							
BTO2				pmax	pmax			
	comp=Z,2µm,4.7s							
BTO2				LR	LR			
	comp=Z,3µm,15.0s							
BTO2				LR	LR			
	comp=Z,3µm,13.1s							
BTO2				LR	LR			
	comp=Z,5µm,14.6s							
HHC	**Hu-ho-hao-te**	**49.41**	**87**	*eP*	**P**	**07 38 28.6**	**+0.1**	
HHC				pP	pwP	07 38 32.8	-1.5	
HHC				S	**S**	**07 45 35.0**	**-0.2**	
HHC				ScS	**ScS**	**07 48 20.9**	**+0.9**	
HHC				SS	**SS**	**07 48 58.6**	**-7.6**	
HHC				pmax	pmax			
	comp=Z,22nm,0.9s							
HHC				pmax	pmax			
	comp=Z,570nm,5.8s							
HHC				LR	LR			
	comp=Z,2µm,13.6s							
HHC				LR	LR			
	comp=Z,510nm,11.6s							
HHC				LR	LR			
	comp=Z,3µm,15.3s							
PFVI	**Vila Bisbo**	**49.41**	**213**	P	**P**	**07 38 29.0**	**+0.6**	
PFVI	**Vila Bisbo**	**49.41**	**213**	*eP*	**P**	**07 38 30.6**	**+2.3**	
ELGU	**Los Guajares,**	**49.48**	**208**	P	**P**	**07 38 30.0**	**+1.0**	
THERA	**Ancient Thera,**	**49.52**	**177**	P	**P**	**07 38 27.1**	**-2.1**	
ESPR	**Espera**	**49.56**	**210**	P	**P**	**07 38 31.9**	**+2.5**	
BUCK	**Buck Mountain**	**49.59**	**328**	IAmb	IAmb	07 38 48.2		
	comp=Z,149nm,1.5s							
WSPT	**Westport, CT**	**49.59**	**279**	P	**P**	**07 38 29.9**	**+0.2**	
WSPT				IAmb	IAmb	07 38 33.8		
	comp=Z,152nm,1.2s							
WSPT				IAMs_20	IAMs_20	07 58 38.4		
	comp=Z,4µm,20.0s							
LOHW	**Long Hollow**	**49.60**	**316**	IAmb	IAmb	07 38 32.9		
	comp=Z,82nm,1.2s							
LOHW				IAMs_20	IAMs_20	07 59 47.2		
	comp=Z,5µm,19.0s							
EMAL	**Malaga-Limoner**	**49.61**	**209**	P	**P**	**07 38 31.7**	**+1.8**	
L44A	**Lake County Fo**	**49.64**	**294**	IAMs_20	IAMs_20	07 58 56.4		
	comp=Z,3µm,21.0s							
WIFE	**Three Sisters-**	**49.68**	**327**	IAmb	IAmb	07 38 33.9		
	comp=Z,93nm,1.0s							
AKAS	**Kas**	**49.68**	**172**	IAmb	IAmb	07 38 32.7		
	comp=Z,92nm,0.8s							
ARG	**Arkhangelos**	**49.68**	**174**	IAmb	IAmb	07 38 31.6		
	comp=Z,57nm,0.9s							
ARG	**Arkhangelos**	**49.69**	**174**	P	**P**	**07 38 29.2**	**-1.3**	
PAOC	**Oil Creek Stat**	**49.72**	**286**	IAmb	IAmb	07 38 33.3		
	comp=Z,116nm,1.0s							
KSL	**Kastellorizon**	**49.76**	**172**	P	**P**	**07 38 30.9**	**-0.2**	
PAL	**Palisades**	**49.80**	**280**	IAmb	IAmb	07 38 34.2		
	comp=Z,95nm,0.8s							
M52A	**Chesterland**	**49.81**	**287**	IAmb	IAmb	07 38 34.2		
	comp=Z,159nm,1.1s							
M52A				IAMs_20	IAMs_20	07 59 01.1		
	comp=Z,4µm,20.0s							
HLID	**Hailey**	**49.84**	**319**	IAMs_20	IAMs_20	08 00 07.5		
	comp=Z,5µm,19.0s							
N62A	**Caumsett State**	**49.84**	**280**	IAMs_20	IAMs_20	07 58 45.0		
	comp=Z,3µm,20.0s							
GTA2	**Gaotai**	**49.88**	**99**	⇑P	**P**	**07 38 32.4**	**+0.3**	
GTA2				sP	pwP	07 38 38.5	+0.5	
GTA2				PP	**PP**	**07 40 26.6**	**+0.1**	
GTA2				S	**S**	**07 45 38.9**	**-3.0**	
GTA2				pmax	pmax			
	comp=Z,43nm,1.1s							
GTA2				pmax	pmax			
	comp=Z,2µm,6.0s							
GTA2				LR	LR			
	comp=Z,4µm,16.3s							
GTA2				LR	LR			
	comp=Z,3µm,15.1s							
GTA2				LR	LR			
	comp=Z,5µm,15.1s							
PINE	**Pine Mountain**	**49.91**	**326**	IAmb	IAmb	07 38 36.0		
	comp=Z,74nm,1.0s							
L42A	**Oliver, Polo**	**49.93**	**296**	IAMs_20	IAMs_20	07 59 20.2		
	comp=Z,4µm,19.0s							
SFS	**San Fernando**	**49.97**	**210**	P	**P**	**07 38 33.5**	**+0.9**	
CPNY	**Central Park**	**50.02**	**280**	IAmb	IAmb	07 38 35.8		
	comp=Z,213nm,1.9s							
MFID	**Camas Ranch**	**50.05**	**321**	IAMs_20	IAMs_20	08 00 42.2		
	comp=Z,4µm,19.0s							
CNIL	**Conil**	**50.06**	**210**	P	**P**	**07 38 34.6**	**+1.3**	
M50A	**Fremont**	**50.07**	**289**	IAmb	IAmb	07 38 35.8		
	comp=Z,118nm,0.9s							
M50A				IAMs_20	IAMs_20	07 59 26.9		
	comp=Z,4µm,18.0s							
N58A	**Sunbury**	**50.17**	**283**	IAmb	IAmb	07 38 37.8		
	comp=Z,145nm,1.4s							
N58A				IAMs_20	IAMs_20	07 59 34.7		
	comp=Z,4µm,18.0s							
SCIA	**State Center**	**50.26**	**299**	IAmb	IAmb	07 38 36.9		
	comp=Z,137nm,0.9s							
KEST	**

comp=Z,2µm,18.0s
GVD Gavdhos 51.04 178 P **P** **07 38 39.2 -1.6**
O53A New Philadelph 51.09 287 IAmb IAmb 07 38 43.7
comp=Z,150nm,1.1s
O54A Avella 51.09 286 IAmb IAmb 07 38 43.7
comp=Z,124nm,0.9s
O54A IAMs_20 IAMs_20 07 59 52.0
comp=Z,4µm,19.0s
K04D Chiloquin, OR 51.11 326 IAmb IAmb 07 38 44.4
comp=Z,94nm,1.2s
ACSO Alum Creek Sta 51.23 289 IAMs_20 IAMs_20 07 59 54.6
comp=Z,3µm,19.0s
O52A Adamsville 51.26 288 IAmb IAmb 07 38 44.6
comp=Z,117nm,1.1s
O52A IAMs_20 IAMs_20 07 59 46.5
comp=Z,4µm,20.0s
N41A Harden Midland 51.30 297 IAmb IAmb 07 38 45.2
comp=Z,148nm,1.2s
N41A IAMs_20 IAMs_20 08 00 22.4
comp=Z,4µm,18.0s
HDIL Hopedale 51.35 295 IAmb IAmb 07 38 45.5
comp=Z,193nm,1.2s
HDIL IAMs_20 IAMs_20 08 00 13.6
comp=Z,3µm,18.0s
O48B Farmland 51.36 291 IAmb IAmb 07 38 45.0
comp=Z,151nm,1.0s
SFIN Lafayette 51.37 293 IAmb IAmb 07 38 45.2
comp=Z,147nm,1.1s
SFIN IAMs_20 IAMs_20 07 59 58.3
comp=Z,3µm,20.0s
N38A Joes South For 51.37 299 IAmb IAmb 07 38 44.6
comp=Z,114nm,1.0s
N35A Tabor 51.46 301 IAMs_20 IAMs_20 07 59 54.6
comp=Z,3µm,21.0s
L04D Klamath Falls 51.53 327 IAmb IAmb 07 38 47.2
comp=Z,90nm,1.0s
MCWV Mont Chateau 51.58 286 IAmb IAmb 07 38 47.4
comp=Z,120nm,1.0s
MCWV IAMs_20 IAMs_20 07 59 24.8
comp=Z,3µm,21.0s
SDMD Soldier's Deli 51.60 283 IAmb IAmb 07 38 49.4
comp=Z,82nm,1.1s
P57A Homestead Farm 51.62 284 IAMs_20 IAMs_20 08 00 17.9
comp=Z,4µm,19.0s
KBO Bosley Butte 51.62 329 IAmb IAmb 07 38 48.3
comp=Z,129nm,1.3s
HWUT Hardware Ranch 51.65 317 IAmb IAmb 07 38 47.7
comp=Z,98nm,1.1s
L02F Cave Junction 51.68 328 IAmb IAmb 07 38 48.7
comp=Z,117nm,1.6s
P53A Whipple 51.86 287 IAMs_20 IAMs_20 08 00 15.2
comp=Z,4µm,20.0s
P51A Williamsport 51.98 289 IAmb IAmb 07 38 49.5
comp=Z,123nm,0.9s
KSXB Camp Six Broad 51.98 328 IAmb IAmb 07 38 51.2
comp=Z,93nm,1.2s
SPUT South Promonto 51.99 317 IAmb IAmb 07 38 52.3
comp=Z,248nm,1.8s
YBH Yreka Blue Hor 52.04 327 LR LR 08 02 02.3
comp=Z,183nm,19.3s,baz=17,slow=37
DL2 Dalian 52.09 78 P **P** **07 38 48.3 -0.2**
DL2 S **S** **07 46 12.9 +0.8**
DL2 pmax pmax
comp=Z,40nm,1.2s
DL2 pmax pmax
comp=Z,530nm,4.6s
DL2 LR LR
comp=Z,1µm,19.1s
DL2 LR LR
comp=Z,1µm,17.9s
DL2 LR LR
comp=Z,2µm,17.9s
TCUT Toone Canyon 52.13 316 IAmb IAmb 07 38 52.9
comp=Z,182nm,1.8s
P46A Rosedale 52.14 293 IAmb IAmb 07 38 50.8
comp=Z,89nm,0.9s
P46A IAMs_20 IAMs_20 08 00 31.6
comp=Z,3µm,19.0s
Q56A Snyder Ridge, 52.14 285 IAmb IAmb 07 38 51.7
comp=Z,139nm,1.2s
Q56A IAMs_20 IAMs_20 07 59 53.8
comp=Z,3µm,21.0s
P48A Milroy 52.17 291 IAMs_20 IAMs_20 08 00 46.4
comp=Z,4µm,19.0s
P43A Skaggs, Pawnee 52.27 295 IAmb IAmb 07 38 51.4
comp=Z,147nm,0.9s
P43A IAMs_20 IAMs_20 08 01 50.1
comp=Z,3µm,21.0s
KRMB Red Mountain 52.29 328 IAmb IAmb 07 38 53.8
comp=Z,117nm,1.4s
Q54A Coxs Mills 52.32 287 IAmb IAmb 07 38 52.8
comp=Z,103nm,0.9s
M02C Callahan 52.38 327 IAmb IAmb 07 39 04.0
comp=Z,135nm,1.6s
M02C IAMs_20 IAMs_20 08 02 02.7
comp=Z,4µm,19.0s
BGU Big Grassy Mou 52.40 318 IAmb IAmb 07 38 54.5
comp=Z,91nm,1.2s
Q52A Bidwell 52.44 288 IAmb IAmb 07 38 53.1
comp=Z,125nm,1.0s
Q52A IAMs_20 IAMs_20 08 00 31.7
comp=Z,3µm,20.0s
Q51A Peebles 52.45 289 IAmb IAmb 07 38 54.9
comp=Z,117nm,1.1s
Q51A IAMs_20 IAMs_20 08 00 52.0
comp=Z,4µm,18.0s
M03C McCloud 52.47 327 IAmb IAmb 07 38 54.1
comp=Z,80nm,1.0s
HAYD Hayden 52.50 312 IAMs_20 IAMs_20 08 01 35.8
comp=Z,3µm,18.0s
P40A Paris 52.55 298 IAmb IAmb 07 38 53.8
comp=Z,101nm,1.0s
P40A IAMs_20 IAMs_20 08 01 18.5
comp=Z,3µm,18.0s
R61A Willards 52.57 281 IAMs_20 IAMs_20 08 00 41.0
comp=Z,5µm,20.0s
RDMU Red Mountain 52.57 315 IAmb IAmb 07 38 54.7
comp=Z,171nm,1.5s
TIY Taiyuan 52.59 87 P **P** **07 38 53.3 +0.9**
TIY S **S** **07 46 24.6 +5.4**
TIY ScS **ScS** **07 48 45.6 +3.7**
TIY pmax pmax
comp=Z,15nm,0.9s
TIY pmax pmax
comp=Z,630nm,5.5s
TIY LR LR
comp=Z,2µm,16.2s
TIY LR LR
comp=Z,640nm,12.2s
TIY LR LR
comp=Z,2µm,15.6s
BSUT Blindstream Ca 52.67 316 IAmb IAmb 07 38 57.5
comp=Z,155nm,1.6s
ELK Elko 52.69 320 LR LR 08 02 10.5
comp=Z,6µm,18.4s,baz=6.0,slow=37
KBL Kabul 52.74 131 P **P** **07 38 53.9 +0.2**
KBL IAmb IAmb 07 38 56.0
comp=Z,127nm,0.9s
KBL Kabul 52.74 131 P **P** **07 38 53.9 +0.2**
KBL pmax pmax
comp=Z,127nm,0.9s
KBL Kabul 52.74 131 P **P** **07 38 53.8 +0.1**
SNR=69
GOMU GeErMu 52.79 105 P **P** **07 38 53.4 -0.8**
GOMU PP **PP** **07 40 52.8 -0.4**
GOMU S **S** **07 46 21.5 -1.0**
GOMU ScS **ScS** **07 48 42.8 -1.2**
GOMU SS **SS** **07 50 01.6 +1.1**
GOMU pmax pmax
comp=Z,59nm,0.9s
GOMU LR LR
comp=Z,2µm,18.6s
GOMU LR LR
comp=Z,1µm,15.7s
GOMU LR LR
comp=Z,2µm,17.8s
N02D Trinity Center 52.79 327 IAMs_20 IAMs_20 08 02 16.6
comp=Z,4µm,20.0s
CBN Corbin Frederi 52.84 283 IAMs_20 IAMs_20 08 00 48.3
comp=Z,3µm,20.0s
IFR Ifrane 52.87 209 P **P** **07 38 54.7 0.0**
HATC Hat Creek Radi 52.90 326 IAmb IAmb 07 39 02.0
comp=Z,172nm,1.2s
O20A White River Ci 52.94 313 IAmb IAmb 07 38 57.4
comp=Z,92nm,0.9s
R55A Marlinton 52.96 286 IAmb IAmb 07 38 57.7
comp=Z,225nm,1.5s
R55A IAMs_20 IAMs_20 08 00 52.5
comp=Z,3µm,19.0s
MMAI Mount Meron Ar 52.97 166 P **P** **07 38 55.8 +0.6**
comp=Z,8.2nm,0.7s,baz=357,slow=12,SNR=7.6
MMAI LR LR 08 03 52.2
comp=Z,2µm,19.2s,baz=326,slow=39
comp=Z,8.2nm,0.7s
Q44A Meyer Farm, Va 52.97 295 IAMs_20 IAMs_20 08 00 58.6
comp=Z,2µm,18.0s
JCC Jacoby Creek, 53.00 328 IAMs_20 IAMs_20 08 02 25.1
comp=Z,4µm,19.0s
HNS HongShan 53.08 85 ⇑P **P** **07 38 56.6 +0.8**
HNS S **S** **07 46 28.3 +2.7**
HNS pmax pmax
comp=Z,10.0nm,1.0s
HNS pmax pmax
comp=Z,670nm,4.9s
HNS LR LR
comp=Z,2µm,15.9s
HNS LR LR
comp=Z,890nm,15.3s
HNS LR LR
comp=Z,2µm,15.1s
DUG Dugway, Tooele 53.12 318 IAMs_20 IAMs_20 08 02 08.3
comp=Z,3µm,18.0s
R58B Mineral 53.12 284 IAMs_20 IAMs_20 08 01 13.6
comp=Z,4µm,18.0s
ISCO Idaho Springs 53.12 311 IAmb IAmb 07 38 59.2
comp=Z,75nm,0.9s
ISCO IAMs_20 IAMs_20 08 03 23.5
comp=Z,3µm,20.0s
AVE Averroes 53.17 211 P **P** **07 38 57.2 +0.5**
AVE Averroes 53.17 211 P **P** **07 38 57.1 +0.5**
AVE IAmb IAmb 07 38 60.0
comp=Z,156nm,1.1s
R50A Paris 53.26 290 IAmb IAmb 07 38 59.0
comp=Z,94nm,1.1s
KSU1 Kansas State U 53.28 302 IAMs_20 IAMs_20 08 01 13.7
comp=Z,3µm,20.0s
KSU1 Kansas State U 53.28 302 IAmb IAmb 07 38 58.6
comp=Z,148nm,1.0s
R49A Shelbyville 53.31 291 IAmb IAmb 07 38 59.4
comp=Z,158nm,1.1s
SLM Saint Louis 53.32 296 IAmb IAmb 07 38 59.5
comp=Z,83nm,1.1s
S57A Dark Hollow, R 53.40 285 IAmb IAmb 07 39 02.3
comp=Z,127nm,1.2s
S57A IAMs_20 IAMs_20 08 01 14.0
comp=Z,3µm,19.0s
KMPM Mount Pierce 53.41 328 IAmb IAmb 07 39 03.6
comp=Z,259nm,1.8s
KMPM IAMs_20 IAMs_20 08 02 35.8
comp=Z,3µm,20.0s
O03E Paynes Creek 53.43 326 IAmb IAmb 07 39 02.9
comp=Z,192nm,1.3s
O03E IAMs_20 IAMs_20 08 01 43.6
comp=Z,5µm,21.0s
WCI Wyandotte Cave 53.45 292 IAMs_20 IAMs_20 08 01 29.5
comp=Z,4µm,20.0s
MD31 MD31 53.51 209 IAmb IAmb 07 39 01.4
comp=Z,92nm,1.4s
S54A Dingess, Beckl 53.53 287 IAmb IAmb 07 39 01.5
comp=Z,123nm,1.1s
S54A IAMs_20 IAMs_20 08 01 18.5
comp=Z,4µm,19.0s
P18A Preston Nutter 53.55 315 IAmb IAmb 07 39 03.8
comp=Z,229nm,1.5s
MDT Midelt 53.55 208 LR LR 08 01 39.9
comp=Z,309nm,18.3s,baz=30,slow=36
LZH Lanzhou 53.56 96 *e*P **P** **07 39 00.4 +0.7**
LZH pP pwP 07 39 06.5 +0.9
LZH sP sP 07 39 08.9 +6.9
LZH PcP **PcP** **07 40 10.3 +4.1**
LZH S **S** **07 46 34.3 +1.6**
LZH SS **SS** **07 50 08.5 -3.8**
LZH pmax pmax
comp=Z,100nm,1.7s
LZH pmax pmax
comp=Z,1µm,4.5s
LZH LR LR
comp=Z,5µm,16.8s
LZH LR LR
comp=Z,2µm,16.2s
LZH LR LR
comp=Z,6µm,16.5s
KMRM Mail Ridge 53.58 328 IAmb IAmb 07 39 05.0
comp=Z,115nm,1.4s
KMRM IAMs_20 IAMs_20 08 02 46.1
comp=Z,4µm,20.0s
O02D Mt. Diablo Mer 53.59 327 IAmb IAmb 07 39 02.5
comp=Z,100nm,1.3s
LZDM Lanzhou Array 53.68 96 P **P** **07 39 01.0 +0.3**
comp=Z,39nm,0.8s,baz=336,slow=3.3,SNR=52
LZDM LR LR 08 03 46.6
comp=Z,4µm,19.3s,baz=5.0,slow=38
comp=Z,39nm,0.8s
P17A Butcher Ranch, 53.73 316 IAmb IAmb 07 39 04.3
comp=Z,103nm,1.1s
CBKS Cedar Bluff 53.76 305 IAmb IAmb 07 39 03.2
comp=Z,122nm,0.9s
R40A Maddies Statio 53.80 298 IAmb IAmb 07 39 02.0
comp=Z,87nm,0.9s
R40A IAMs_20 IAMs_20 08 01 31.5
comp=Z,2µm,19.0s
ASF Jabal al Asfar 53.84 165 LR LR 08 04 34.1
comp=Z,2µm,19.4s,baz=352,slow=39
S51A Beattyville 53.85 289 IAmb IAmb 07 39 03.7
comp=Z,62nm,1.0s
S51A IAMs_20 IAMs_20 08 01 27.0
comp=Z,3µm,18.0s
NIL Nilore 53.87 127 P **P** **07 39 02.2 +0.4**
NIL Nilore 53.87 127 P **P** **07 39 02.2 +0.4**
NIL pmax pmax
comp=Z,125nm,0.9s
NIL MLR MLR
comp=Z,5µm,19.0s
NIL Nilore 53.87 127 P **P** **07 39 02.7 +0.9**
PAHR Pah Rah Range 53.92 324 IAmb IAmb 07 39 05.2
comp=Z,105nm,1.3s
Q24A Divide 53.93 310 IAmb IAmb 07 39 04.7
comp=Z,99nm,1.0s
CCM Cathedral Cave 53.97 297 P **P** **07 39 01.7 -0.7**
CCM Cathedral Cave 53.97 297 IAMs_20 IAMs_20 08 01 53.9
comp=Z,4µm,18.0s
CCM Cathedral Cave 53.97 297 P **P** **07 39 01.7 -0.7**
CCM pmax pmax
comp=Z,234nm,1.1s
CCM MLR MLR
comp=Z,4µm,18.0s
KSRS Korea Array 53.99 72 P **P** **07 39 01.8 -0.8**
comp=Z,8.7nm,0.9s,baz=358,slow=7.3,SNR=16
KSRS LR LR 08 04 16.4
comp=Z,529nm,18.7s,baz=350,slow=38
comp=Z,8.7nm,0.9s
KSAR Wonju Array Be 54.00 72 P **P** **07 39 01.5 -1.1**
KSAR Wonju Array Be 54.00 72 P **P** **07 39 01.5 -1.1**
SRU San Rafael Swe 54.08 315 IAmb IAmb 07 39 05.3
comp=Z,53nm,0.9s
S44A Carbondale 54.19 295 IAMs_20 IAMs_20 08 01 35.9
comp=Z,3µm,19.0s
Q16A Castle Valley 54.31 316 IAmb IAmb 07 39 07.9
comp=Z,130nm,1.0s
MPK Martis Peak 54.35 324 P **P** **07 39 06.1 +0.6**
MPK IAmb IAmb 07 39 08.4
comp=Z,98nm,1.0s
TIA Tai'an 54.44 82 P **P** **07 39 05.9 +0.1**
TIA sP **pwP** **07 39 12.5 +0.8**
TIA PP **PP** **07 41 06.8 -0.8**
TIA S **S** **07 46 47.3 +3.2**
TIA ScS **ScS** **07 48 58.5 +3.7**
TIA SS **SS** **07 50 28.3 +2.6**
TIA pmax pmax
comp=Z,43nm,0.9s
TIA pmax pmax
comp=Z,750nm,6.0s
TIA LR LR
comp=Z,490nm,5.8s
TIA LR LR
comp=Z,540nm,5.6s
TIA LR LR
comp=Z,410nm,6.5s
S39A Bolivar 54.47 299 IAMs_20 IAMs_20 08 02 12.2
comp=Z,4µm,18.0s
SUTB Sutter Butte 54.49 326 IAmb IAmb 07 39 07.7
comp=Z,67nm,1.0s
SUTB IAMs_20 IAMs_20 08 02 26.7
comp=Z,3µm,21.0s
PV21 Cone Mtn., Par 54.54 314 IAmb IAmb 07 39 09.0
comp=Z,60nm,1.0s
T50A Nancy 54.55 290 IAmb IAmb 07 39 08.2
comp=Z,93nm,1.3s
CGM3 Cape Girardeau 54.61 295 IAmb IAmb 07 39 08.1
comp=Z,77nm,0.9s
PV07 Paradox Valley 54.65 314 IAmb IAmb 07 39 09.7
comp=Z,74nm,1.0s
PV23 Carpenter Ridg 54.66 314 IAmb IAmb 07 39 09.8
comp=Z,96nm,1.1s
Q09A Carvers 54.69 322 IAmb IAmb 07 39 10.8
comp=Z,133nm,1.1s
PV04 Paradox Valley 54.71 314 IAmb IAmb 07 39 10.2
comp=Z,73nm,1.0s
PV10 Paradox Valley 54.73 314 IAmb IAmb 07 39 11.2
comp=Z,131nm,1.0s
PV15 Paradox Valley 54.74 313 IAmb IAmb 07 39 10.4
comp=Z,98nm,1.0s
AFDM Forest Hills D 54.74 325 IAmb IAmb 07 39 10.1
comp=Z,72nm,1.1s
T47A Sharon Grove 54.74 293 IAmb IAmb 07 39 10.2
comp=Z,98nm,1.0s
T47A IAMs_20 IAMs_20 08 02 37.6
comp=Z,4µm,18.0s
PV20 West Nyswonger 54.76 314 IAmb IAmb 07 39 10.5
comp=Z,94nm,0.9s
HOPS Hopland Field 54.78 327 IAmb IAmb 07 39 12.6
comp=Z,186nm,1.4s
HOPS IAMs_20 IAMs_20 08 03 35.3
comp=Z,3µm,20.0s
PV16 Nyswonger Mesa 54.79 314 IAmb IAmb 07 39 14.4
comp=Z,92nm,1.0s
PV19 Morning Glory 54.80 314 IAmb IAmb 07 39 14.3
comp=Z,101nm,1.1s
T45A Paducah 54.82 294 IAmb IAmb 07 39 09.9
comp=Z,108nm,0.9s
T45A IAMs_20 IAMs_20 08 02 05.7
comp=Z,3µm,20.0s
PSUT Pine Spring 54.83 319 IAmb IAmb 07 39 11.7
comp=Z,72nm,1.1s
U54A Nelsons Funny 54.84 287 IAmb IAmb 07 39 10.9
comp=Z,119nm,1.0s
U54A IAMs_20 IAMs_20 08 02 08.1
comp=Z,4µm,19.0s
PV03 Paradox Valley 54.84 314 IAmb IAmb 07 39 13.0
comp=Z,88nm,1.1s
MNRC McLaughlin Min 54.87 327 IAmb IAmb 07 39 14.0
comp=Z,95nm,1.1s
U56A King 54.91 286 IAmb IAmb 07 39 11.5
comp=Z,93nm,0.9s
U56A IAMs_20 IAMs_20 08 02 01.9
comp=Z,3µm,18.0s
MGMO Mountain Grove 54.93 298 IAmb IAmb 07 39 11.2
comp=Z,94nm,1.1s
TZTN Tazewell 54.94 289 IAmb IAmb 07 39 13.4
comp=Z,154nm,1.2s
TZTN IAMs_20 IAMs_20 08 02 01.7
comp=Z,3µm,18.0s
GDXM Geysers 54.96 327 IAmb IAmb 07 39 14.6
comp=Z,96nm,1.2s
T42A Van Buren 54.98 296 IAmb IAmb 07 39 10.8
comp=Z,136nm,1.1s
T42A IAMs_20 IAMs_20 08 02 25.7
comp=Z,4µm,19.0s
PV05 Paradox Valley 55.03 314 IAmb IAmb 07 39 12.3
comp=Z,137nm,1.3s
U49A Red Boiling Sp 55.12 291 IAMs_20 IAMs_20 08 02 38.7
comp=Z,4µm,18.0s
NVAR Mina Array Bea 55.14 323 P **P** **07 39 11.9 +0.7**
comp=Z,36nm,1.0s,baz=10,slow=3.5,SNR=102
NVAR LR LR 08 03 53.7
comp=Z,5µm,18.4s,baz=356,slow=37
comp=Z,36nm,1.0s
PBMO Poplar Bluff 55.18 296 IAmb IAmb 07 39 12.3
comp=Z,125nm,0.9s
MTPU Mount Pierson 55.23 317 IAmb IAmb 07 39 17.4
comp=Z,228nm,1.9s
HMU Henry Mountain 55.26 315 IAmb IAmb 07 39 16.1
comp=Z,86nm,1.2s
V58A Windy Hill, Pi 55.36 285 IAmb IAmb 07 39 14.9
comp=Z,105nm,1.3s
V58A IAMs_20 IAMs_20 08 01 43.1
comp=Z,3µm,21.0s
CVS Carmenet Viney 55.40 327 IAMs_20 IAMs_20 08 05 03.8
comp=Z,3µm,18.0s
T35A Sooner Cattle 55.44 302 IAMs_20 IAMs_20 08 02 41.0
comp=Z,3µm,20.0s
V55A Taylorsville 55.46 287 IAmb IAmb 07 39 15.5
comp=Z,94nm,1.0s
TIO Tiouine 55.53 211 P **P** **07 39 14.5 +0.5**
MAJO Matsushiro 55.60 62 *e*P **P** **07 39 14.4 +0.1**
MAJO pmax pmax
comp=Z,97nm,2.9s
MJAR Matsushiro Arr 55.60 62 P **P** **07 39 13.6 -0.7**
comp=Z,11nm,0.9s,baz=356,slow=7.3,SNR=13
MJAR LR LR 08 06 07.4
comp=Z,636nm,18.2s,baz=8.0,slow=39
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 55.60 62 P **P** **07 39 13.9 -0.4**
MJAR Matsushiro Arr 55.60 62 P **P** **07 39 13.9 -0.4**
MJAR pmax pmax
comp=Z,11nm,1.1s
MCCM Marconi Confer 55.62 327 IAMs_20 IAMs_20 08 04 09.5
comp=Z,4µm,20.0s
WVT Waverly 55.65 293 P **P** **07 39 14.5 -0.1**
WVT IAmb IAmb 07 39 16.7
comp=Z,127nm,1.2s
WVT IAMs_20 IAMs_20 08 02 41.5
comp=Z,4µm,19.0s
WVT Waverly 55.65 293 P **P** **07 39 14.5 -0.1**
WVT pmax pmax
comp=Z,127nm,1.2s
WVT MLR MLR
comp=Z,4µm,19.0s
LYN LuoYang 55.74 87 P **P** **07 39 15.4 +0.2**
LYN S **S** **07 47 03.3 +1.7**
LYN pmax pmax
comp=Z,25nm,1.0s
LYN pmax pmax
comp=Z,1µm,4.9s
LYN LR LR
comp=Z,5µm,15.2s
LYN LR LR
comp=Z,890nm,10.5s
LYN LR LR
comp=Z,5µm,14.8s
V53A Saluda 55.75 288 IAmb IAmb 07 39 17.4
comp=Z,57nm,0.9s
V53A IAMs_20 IAMs_20 08 02 36.4
comp=Z,3µm,20.0s
U38A Gravette 55.78 300 IAmb IAmb 07 39 16.7
comp=Z,144nm,1.1s
TKL Tuckaleechee C 55.83 289 LR LR 08 02 50.4
comp=Z,3µm,18.5s,baz=14,slow=36
TKL Tuckaleechee C 55.83 289 IAmb IAmb 07 39 17.6
comp=Z,85nm,0.9s
HHAR Hobbs 55.91 299 IAmb IAmb 07 39 17.2
comp=Z,131nm,1.0s
V48A Smith Brothers 55.97 292 IAmb IAmb 07 39 18.4
comp=Z,116nm,1.0s
OK048 Pawnee Station 55.97 302 IAMs_20 IAMs_20 08 02 56.9
comp=Z,4µm,19.0s
MDPB Devils Postpil 55.97 323 IAmb IAmb 07 39 20.5
comp=Z,83nm,0.9s
XAN Xi'an 55.98 91 P **P** **07 39 16.6 -0.5**
XAN pP pwP 07 39 23.0 +0.1
XAN S **S** **07 47 04.3 -0.6**
XAN pmax pmax
comp=Z,44nm,0.9s
XAN pmax pmax
comp=Z,1µm,5.3s
XAN LR LR
comp=Z,3µm,14.6s
XAN LR LR
comp=Z,3µm,13.4s
XAN LR LR
comp=Z,5µm,15.8s
PRN Pahroc Range 56.01 320 IAmb IAmb 07 39 21.5
comp=Z,106nm,1.2s
W57A Gilead 56.06 285 IAmb IAmb 07 39 19.7
comp=Z,82nm,0.9s
W57A IAMs_20 IAMs_20 08 02 36.6
comp=Z,3µm,20.0s
FARB Farallon Islan 56.07 327 IAMs_20 IAMs_20 08 04 11.4
comp=Z,3µm,20.0s
RLO Rose Lookout 56.09 300 IAmb IAmb 07 39 18.8
comp=Z,81nm,1.0s
KMSC Kings Mountain 56.17 287 IAmb IAmb 07 39 20.3
comp=Z,93nm,1.0s

FCAR	Ozark Folk Cen	56.18	297	IAmb	IAmb	07 39 19.9				
	comp=Z,106nm,1.0s									
DSP	Deep Springs	56.18	322	IAmb	IAmb	07 39 22.9				
	comp=Z,140nm,1.3s									
KNB	Kanab	56.28	317	IAmb	IAmb	07 39 22.2				
	comp=Z,67nm,1.0s									
EIL	Elat	56.30	167	LR	LR	08 06 29.0				
	comp=Z,1µm,18.6s,baz=359,slow=39									
RTBA	Rita Blanca	56.30	308	IAmb	IAmb	07 39 20.7				
	comp=Z,239nm,1.8s									
LCMT	Little Creek M	56.31	318	IAmb	IAmb	07 39 22.4				
	comp=Z,90nm,0.9s									
JRSC	Jasper Ridge	56.33	326	IAmb	IAmb	07 39 22.1				
	comp=Z,84nm,1.0s									
JRSC				IAMs_20	IAMs_20	08 05 00.4				
	comp=Z,2µm,19.0s									
MHC	Mount Hamilton	56.37	326	IAmb	IAmb	07 39 29.4				
	comp=Z,140nm,1.4s									
OK052	Battle Ridge R	56.38	302	IAMs_20	IAMs_20	08 03 09.8				
	comp=Z,4µm,20.0s									
TUL3	Leonard	56.40	301	IAMs_20	IAMs_20	08 02 50.3				
	comp=Z,2µm,19.0s									
W52A	Murphy	56.41	289	IAmb	IAmb	07 39 21.7				
	comp=Z,77nm,0.9s									
W52A				IAMs_20	IAMs_20	08 02 48.6				
	comp=Z,3µm,19.0s									
SWET	Sewanee	56.42	291	IAmb	IAmb	07 39 20.9				
	comp=Z,88nm,1.2s									
BG3	Lake Jocassee	56.43	288	IAmb	IAmb	07 39 22.1				
	comp=Z,62nm,1.0s									
TPNV	Topopah Spring	56.52	321	IAMs_20	IAMs_20	08 04 08.4				
	comp=Z,2µm,19.0s									
PAULI	Pauline	56.52	287	IAmb	IAmb	07 39 22.8				
	comp=Z,102nm,1.2s									
BIRD	Birdtown, Kers	56.60	286	IAmb	IAmb	07 39 23.7				
	comp=Z,121nm,0.9s									
X58A	Rowland	56.61	285	IAmb	IAmb	07 39 23.9				
	comp=Z,105nm,1.3s									
X58A				IAMs_20	IAMs_20	08 02 31.1				
	comp=Z,3µm,20.0s									
X51A	Calhoun	56.99	290	IAmb	IAmb	07 39 25.4				
	comp=Z,63nm,0.9s									
OKCSW	OKLAHOMA CITY	57.01	302	IAmb	IAmb	07 39 25.6				
	comp=Z,120nm,1.0s									
JSC	Jenkinsville	57.02	287	IAmb	IAmb	07 39 27.0				
	comp=Z,102nm,1.0s									
FORD	Fort Ord Natur	57.03	326	IAMs_20	IAMs_20	08 05 53.8				
	comp=Z,3µm,18.0s									
FURC	Furnace Creek,	57.03	321	IAmb	IAmb	07 39 30.5				
	comp=Z,110nm,1.3s									
HODGE	Hodges	57.14	287	IAmb	IAmb	07 39 26.9				
	comp=Z,70nm,1.0s									
Y57A	Sumter	57.22	286	IAmb	IAmb	07 39 28.0				
	comp=Z,80nm,1.0s									
X48A	Hartselle	57.26	292	IAmb	IAmb	07 39 29.1				
	comp=Z,134nm,1.2s									
X48A				IAMs_20	IAMs_20	08 03 56.3				
	comp=Z,3µm,18.0s									
Y58A	Scranton	57.28	285	IAMs_20	IAMs_20	08 02 50.8				
	comp=Z,3µm,22.0s									
PH02	Texas Public H	57.30	307	IAmb	IAmb	07 39 27.6				
	comp=Z,61nm,0.8s									
GWY	Greenwater Val	57.30	321	IAmb	IAmb	07 39 29.4				
	comp=Z,65nm,0.9s									
OXF	Oxford	57.37	295	IAMs_20	IAMs_20	08 03 44.0				
	comp=Z,3µm,18.0s									
SMWD	Samnorwood	57.48	305	IAmb	IAmb	07 39 29.7				
	comp=Z,65nm,1.1s									
SHOC	Shoshone, Teco	57.57	321	IAMs_20	IAMs_20	08 05 39.1				
	comp=Z,3µm,19.0s									
Y52A	Lilburn	57.64	289	IAmb	IAmb	07 39 30.9				
	comp=Z,90nm,1.0s									
Y52A				IAMs_20	IAMs_20	08 03 27.2				
	comp=Z,3µm,21.0s									
HULI	Fort Hunter Li	57.67	325	IAmb	IAmb	07 39 32.0				
	comp=Z,87nm,1.0s									
BBSR	BB Station	57.69	270	P	P	07 39 31.2	+2.1			
BBSR	BB Station	57.69	270	IAMs_20	IAMs_20	08 03 41.9				
	comp=Z,2µm,20.0s									
WUAZ	Wupatki	57.70	316	IAmb	IAmb	07 39 32.3				
	comp=Z,122nm,1.1s									
WUAZ				IAMs_20	IAMs_20	08 05 13.7				
	comp=Z,3µm,18.0s									
CLC	China Lake	57.71	322	IAmb	IAmb	07 39 32.3				
	comp=Z,59nm,1.0s									
PKD	Bear Valley Ra	57.72	325	IAmb	IAmb	07 39 33.4				
	comp=Z,69nm,1.1s									
WMOK	Wichita Mounta	57.75	304	IAMs_20	IAMs_20	08 04 55.2				
	comp=Z,3µm,18.0s									
WMOK	Wichita Mounta	57.75	304	IAmb	IAmb	07 39 33.4				
	comp=Z,112nm,1.1s									
Y49A	Blount Mountai	57.81	292	IAmb	IAmb	07 39 30.9				
	comp=Z,62nm,0.9s									
X34A	Smith Ranch, M	57.83	303	IAmb	IAmb	07 39 33.6				
	comp=Z,120nm,1.1s									
ISA	Isabella, Lake	57.91	323	IAmb	IAmb	07 39 44.1				
	comp=Z,89nm,1.4s									
CCCA	Chr Cany lake	57.99	322	IAmb	IAmb	07 39 34.4				
	comp=Z,57nm,1.0s									
ANMO	Albuquerque	58.01	311	LR	LR	08 05 04.0				
	comp=Z,6µm,19.5s,baz=11,slow=37									
ANMO	Albuquerque	58.01	311	P	P	07 39 31.6	-0.1			
ANMO				IAmb	IAmb	07 39 34.7				
	comp=Z,88nm,1.2s									
ANMO	Albuquerque	58.01	311	P	P	07 39 31.5	-0.1			
ANMO				IAmb	IAmb	07 39 34.7				
	comp=Z,88nm,1.2s									
ANMO	Albuquerque	58.01	311	IAMs_20	IAMs_20	08 04 42.8				
	comp=Z,6µm,20.0s									
ANMO	Albuquerque	58.01	311	IAMs_20	IAMs_20	08 04 42.8				
	comp=Z,6µm,20.0s									
ANMO	Albuquerque	58.01	311 *d i*	P	P	07 39 31.5	-0.1			
ANMO				pmax	pmax					
	comp=Z,95nm,1.3s									
W18A	Petrified Fore	58.01	314	IAmb	IAmb	07 39 35.1				
	comp=Z,129nm,1.1s									
Y45A	Yeager Farm, C	58.02	295	IAMs_20	IAMs_20	08 04 12.2				
	comp=Z,3µm,18.0s									
GOGA	Godfrey	58.04	289	IAmb	IAmb	07 39 33.1				
	comp=Z,92nm,1.1s									
GOGA				IAMs_20	IAMs_20	08 03 49.0				
	comp=Z,3µm,19.0s									
LRMC	Laurel Mtn Rad	58.05	322	IAmb	IAmb	07 39 34.7				
	comp=Z,69nm,0.9s									
NHSC	New Hope	58.11	285	IAMs_20	IAMs_20	08 03 59.8				
	comp=Z,3µm,19.0s									
GSC	Goldstone, Bar	58.19	321	IAmb	IAmb	07 39 36.9				
	comp=Z,84nm,1.2s									
W13A	Hualapai Mount	58.25	318	IAmb	IAmb	07 39 37.2				
	comp=Z,67nm,1.2s									
RGRS	Roger Stewart	58.31	285	IAmb	IAmb	07 39 36.5				
	comp=Z,241nm,1.2s									
NEE2	Needles Airpor	58.62	319	IAMs_20	IAMs_20	08 05 42.8				
	comp=Z,3µm,18.0s									
LRAL	Lakeview Retre	58.67	292	IAMs_20	IAMs_20	08 03 50.3				
	comp=Z,3µm,22.0s									
TPO	Tropico Hills	58.67	322	IAmb	IAmb	07 39 39.1				
	comp=Z,113nm,1.0s									
NJ2	Nanjing	58.70	81	⇓P	P	07 39 36.0	-0.2			
NJ2				S	S	07 47 41.3	+0.8			
NJ2				ScS	ScS	07 49 28.5	+2.8			
NJ2				pmax	pmax					
	comp=Z,27nm,0.9s									
NJ2				pmax	pmax					
	comp=Z,630nm,4.7s									
NJ2				LR	LR					
	comp=Z,1µm,15.6s									
NJ2				LR	LR					
	comp=Z,690nm,13.7s									
NJ2				LR	LR					
	comp=Z,2µm,14.7s									
CD2	Chengdu	58.70	96	P	P	07 39 36.3	0.0			
CD2				PP	PP	07 41 47.0	+1.3			
CD2				S	S	07 47 44.0	+3.2			
CD2				ScS	ScS	07 49 26.5	+0.6			
CD2				pmax	pmax					
	comp=Z,100nm,0.9s									
CD2				pmax	pmax					
	comp=Z,190nm,5.0s									
CD2				LR	LR					
	comp=Z,5µm,18.0s									
CD2				LR	LR					
	comp=Z,3µm,16.0s									
CD2				LR	LR					
	comp=Z,5µm,17.0s									
MSTX	Muleshoe	58.76	307	IAmb	IAmb	07 39 38.1				
	comp=Z,67nm,0.9s									
DANC	Danby, Needles	58.78	320	IAmb	IAmb	07 39 45.3				
	comp=Z,122nm,1.2s									
154A	Montrose	58.81	288	IAMs_20	IAMs_20	08 04 31.3				
	comp=Z,3µm,19.0s									
152A	Waverly Hall	58.87	290	IAmb	IAmb	07 39 40.0				
	comp=Z,95nm,1.2s									
152A				IAMs_20	IAMs_20	08 04 15.9				
	comp=Z,4µm,20.0s									
DKNS	Dickens	58.95	306	IAmb	IAmb	07 39 39.6				
	comp=Z,67nm,0.9s									
OSI	Osito Audit: C	58.96	323	IAmb	IAmb	07 39 40.9				
	comp=Z,75nm,0.9s									
LSA	Lhasa	58.98	109	IAMs_20	IAMs_20	08 07 11.2				
	comp=Z,2µm,18.0s									
LSA	Lhasa	58.98	109	P	P	07 39 35.3	-3.5			
LSA				pmax	pmax					
	comp=Z,28nm,0.8s									
Z38A	Mt. Pleasant	58.98	300	IAMs_20	IAMs_20	08 05 11.7				
	comp=Z,3µm,20.0s									
Z35A	Perchaven, San	59.06	302	IAmb	IAmb	07 39 40.2				
	comp=Z,90nm,1.0s									
Z35A				IAMs_20	IAMs_20	08 04 54.7				
	comp=Z,3µm,18.0s									
IRM	Iron Mountain	59.25	319	IAmb	IAmb	07 39 42.8				
	comp=Z,85nm,1.3s									
BFSC	Mt. Baldy Ra	59.29	322	IAmb	IAmb	07 39 44.4				
	comp=Z,87nm,1.0s									
BFSC				IAMs_20	IAMs_20	08 06 08.6				
	comp=Z,3µm,18.0s									
143A	Socs Landing,	59.30	296	IAMs_20	IAMs_20	08 05 10.1				
	comp=Z,2µm,20.0s									
MWC	Mount Wilson	59.32	322	IAmb	IAmb	07 39 43.5				
	comp=Z,100nm,1.0s									
Y14A	Wickenburg	59.36	317	IAmb	IAmb	07 39 43.8				
	comp=Z,60nm,1.0s									
PASC	Pasadena Art C	59.38	322	IAmb	IAmb	07 39 43.4				
	comp=Z,74nm,1.1s									
SN07	Snyder 07	59.52	306	IAmb	IAmb	07 39 43.4				
	comp=Z,86nm,1.2s									
BLYC	Blythe	59.62	319	IAmb	IAmb	07 39 45.4				
	comp=Z,77nm,0.9s									
VBMS	Vicksburg	59.72	295	IAMs_20	IAMs_20	08 06 07.3				
	comp=Z,2µm,19.0s									
BC3	Big Chuckawall	59.76	320	IAmb	IAmb	07 39 48.7				
	comp=Z,145nm,1.8s									
ENH	Emshi	59.76	91	IAmb	IAmb	07 39 47.8				
	comp=Z,83nm,1.1s									
ENH				IAMs_20	IAMs_20	08 07 34.8				
	comp=Z,2µm,20.0s									
SSE	Sheshan	59.82	79	P	P	07 39 42.8	-1.1			
SSE				S	S	07 47 56.3	+1.2			
SSE				pmax	pmax					
	comp=Z,16nm,0.8s									
SSE				pmax	pmax					
	comp=Z,350nm,5.2s									
SSE				LR	LR					
	comp=Z,760nm,16.8s									
SSE				LR	LR					
	comp=Z,350nm,16.7s									
PFO	Pinyon Flats O	59.85	321	LR	LR	08 07 22.9				
	comp=Z,3µm,18.7s,baz=339,slow=38									
PFO	Pinyon Flats O	59.85	321 *d i*	P	P	07 39 44.7	+0.3			
PFO				pmax	pmax					
	comp=Z,71nm,1.0s									
WHN	Wuhan	59.86	86 ⇑	P	P	07 39 43.8	-0.4			
WHN				S	S	07 48 00.3	+4.7			
WHN				pmax	pmax					
	comp=Z,88nm,0.8s									
WHN				LR	LR					
	comp=Z,2µm,8.9s									
WHN				LR	LR					
	comp=Z,3µm,11.5s									
WHN				LR	LR					
	comp=Z,6µm,16.8s									
DNR	Dunn Ranch,Anz	59.91	321	IAmb	IAmb	07 39 50.6				
	comp=Z,93nm,1.1s									
ABTX	Abilene, Hawle	59.91	304	IAmb	IAmb	07 39 46.1				
	comp=Z,91nm,1.0s									
TIGA	Tifton	60.01	289	IAMs_20	IAMs_20	08 05 27.1				
	comp=Z,3µm,18.0s									
129A	Stewart Farms,	60.04	306	IAmb	IAmb	07 39 48.5				
	comp=Z,100nm,1.2s									
128A	Castleberry Fa	60.09	307	IAmb	IAmb	07 39 47.7				
	comp=Z,51nm,1.0s									
BORC	Borrego Spring	60.20	321	P	P	07 39 47.2	+0.7			
BORC				IAmb	IAmb	07 39 50.4				
	comp=Z,52nm,1.1s									
GLA	Glamis	60.33	319	IAmb	IAmb	07 39 51.2				
	comp=Z,61nm,1.1s									
GLA				IAMs_20	IAMs_20	08 06 29.3				
	comp=Z,2µm,20.0s									
SAKB	Bahrain	60.39	151	P	P	07 39 48.4	+0.5			
WHTX	Lake Whitney,	60.40	302	IAmb	IAmb	07 39 49.5				
	comp=Z,84nm,0.9s									
WHTX				IAMs_20	IAMs_20	08 05 48.3				
	comp=Z,3µm,19.0s									
EVN	Everest	60.41	114	P	P	07 39 48.3	-0.5			
EVN				IAmb	IAmb	07 40 01.4				
	comp=Z,73nm,1.3s									
DPP	Dos Picos Cty	60.49	321	IAmb	IAmb	07 39 53.0				
	comp=Z,111nm,1.3s									
BRAL	Brewton	60.52	292	IAMs_20	IAMs_20	08 05 48.7				
	comp=Z,3µm,19.0s									
SHMA	Al-Shehemyia	60.53	150	P	P	07 39 49.1	+0.3			
	SNR=7.4									
SHME	Shamm	60.55	145 *i*	P	P	07 39 48.3	-0.6			
	SNR=12									
SHME	Shamm	60.55	145	P	P	07 39 49.2	+0.2			
	SNR=6.6									
ODSA	Odessa	60.59	307	IAmb	IAmb	07 39 50.9				
	comp=Z,178nm,1.7s									
CPE	Camp Elliot	60.60	321	IAmb	IAmb	07 39 51.8				
	comp=Z,63nm,1.2s									
CPE				IAMs_20	IAMs_20	08 08 15.5				
	comp=Z,3µm,19.0s									
456A	Hilliard	60.61	287	IAmb	IAmb	07 39 51.2				
	comp=Z,100nm,1.2s									
BANOM	Banah	60.68	145 *i*	P	P	07 39 50.0	0.0			
	SNR=16									
BANOM	Banah	60.68	145	P	P	07 39 50.2	+0.3			
229A	Bryant Ranch,	60.70	306	IAmb	IAmb	07 39 51.5				
	comp=Z,48nm,0.9s									
SGCY	Sterling City	60.71	306	IAmb	IAmb	07 39 52.8				
	comp=Z,94nm,1.1s									
YUH	Yuha Desert	60.79	320	IAmb	IAmb	07 39 53.5				
	comp=Z,72nm,1.1s									
BAR	Barrett	60.79	321	P	P	07 39 51.1	+0.4			
BAR				IAmb	IAmb	07 39 53.2				
	comp=Z,59nm,1.1s									
BAR				IAMs_20	IAMs_20	08 06 53.5				
	comp=Z,3µm,19.0s									
TUC	Tucson	60.87	315	P	P	07 39 52.0	+0.8			
TUC				IAmb	IAmb	07 39 53.9				
	comp=Z,91nm,1.0s									
TUC	Tucson	60.87	315	P	P	07 39 52.0	+0.8			
TUC				pmax	pmax					
	comp=Z,91nm,1.0s									
TUC				MLR	MLR					
	comp=Z,6µm,18.0s									
CPBX	Cerro Prieto	60.99	319	P	P	07 39 50.9	-1.0			
CPBX				IAmb	IAmb	07 39 54.8				
	comp=Z,101nm,1.3s									
UMQ	Umm Al-Quwin	61.05	146 *i*	P	P	07 39 53.3	+1.0			
	SNR=5.9									
TPB06	Permian Basin	61.10	308	IAmb	IAmb	07 39 54.8				
	comp=Z,107nm,0.9s									
CBX	Cerro Bola	61.16	321	IAmb	IAmb	07 39 56.0				
	comp=Z,92nm,0.9s									
EPT	El Paso	61.17	311	IAmb	IAmb	07 39 54.9				
	comp=Z,46nm,1.0s									
MASF	Masafi	61.22	145	P	P	07 39 53.8	+0.2			
	SNR=46									
MSFE	Esma-Masafi	61.23	145 *i*	P	P	07 39 54.1	+0.3			
	SNR=26									
MDH	Madha	61.30	145 *i*	P	P	07 39 53.9	-0.2			
	SNR=24									
MDH	Madha	61.30	145	P	P	07 39 54.1	0.0			
	SNR=21									
MDH				P	P	07 39 54.1	0.0			
	SNR=21									
JRN	Qarnain Island	61.51	149	P	P	07 39 55.8	+0.2			
	SNR=11									
NAZ	Nazwa, Dubai	61.58	146 *i*	P	P	07 39 56.2	+0.2			
	SNR=20									
NAZ	Nazwa, Dubai	61.58	146	P	P	07 39 56.4	+0.4			
	SNR=18									
NAZ				P	P	07 39 56.4	+0.4			
	SNR=18									
CCX	Cicese	61.60	321	IAmb	IAmb	07 39 58.8				
	comp=Z,75nm,1.1s									
SMRA	Abu-Samra	61.63	151	P	P	07 39 56.4	+0.1			
	SNR=17									
UOSS	Minazif	61.65	145	P	P	07 39 56.2	-0.3			
UOSS				IAmb	IAmb	07 40 04.5				
	comp=Z,45nm,0.9s									
UOSS	Minazif	61.65	145	IAMs_20	IAMs_20	08 10 56.2				
	comp=Z,2µm,21.0s									
UOSS	Minazif	61.65	145	P	P	07 39 56.2	-0.3			
UOSS	Minazif	61.65	145	P	P	07 39 54.6	-1.9			
TRNA	Turayna	61.65	150	P	P	07 39 56.8	+0.3			
	SNR=23									
OZNA	Ozona	61.69	306	P	P	07 39 56.7	-0.2			
PIX	Pinacate	61.75	318	IAmb	IAmb	07 40 00.7				
	comp=Z,61nm,1.1s									
HATD	Hatta, Dubai	61.76	145 *i*	P	P	07 39 57.4	+0.1			
	SNR=24									
HATD	Hatta, Dubai	61.76	145	P	P	07 39 57.6	+0.4			
	SNR=44									
FAQ	Al Faqa, Dubai	61.82	146 *i*	P	P	07 39 57.4	-0.2			
	SNR=21									
FAQ	Al Faqa, Dubai	61.82	146	P	P	07 39 58.0	+0.3			
	SNR=10									
TPB05	Hovey Rd	61.83	308	IAmb	IAmb	07 40 01.1				
	comp=Z,206nm,1.3s									
TPB01	Permian Basin	61.83	308	IAmb	IAmb	07 40 01.6				
	comp=Z,325nm,1.9s									
ASHO	Ashiyiah	61.90	145 *i*	P	P	07 39 58.3	0.0			
	SNR=34									
ASHO	Ashiyiah	61.90	145	P	P	07 39 58.5	+0.3			
	SNR=37									
ASUD	Al Ashush, Dub	61.93	146 *i*	P	P	07 39 58.5	+0.1			
	SNR=10									
ASUD	Al Ashush, Dub	61.93	146	P	P	07 39 59.1	+0.8			
	SNR=8.4									
AJN	Ajban	61.98	146 *i*	P	P	07 39 58.4	-0.3			
	SNR=13									
AJN	Ajban	61.98	146	P	P	07 39 59.1	+0.4			
	SNR=7.0									
VTX	Valle De La Tr	62.03	320	IAmb	IAmb	07 40 02.1				
	comp=Z,50nm,1.0s									
CNSH	ChangSha	62.10	87	P	P	07 39 58.5	-1.0			
CNSH				S	S	07 48 24.0	-0.2			
CNSH				pmax	pmax					
	comp=Z,52nm,1.0s									
CNSH				LR	LR					
	comp=Z,2µm,15.2s									
CNSH				LR	LR					
	comp=Z,710nm,13.1s									
CNSH				LR	LR					
	comp=Z,2µm,15.6s									
HKT	Hockley	62.33	300	P	P	07 40 01.1	+0.2			
HKT				IAmb	IAmb	07 40 04.2				
	comp=Z,83nm,1.2s									
HKT	Hockley	62.33	300 *d i*	P	P	07 40 01.0	+0.1			
HKT				pmax	pmax					
	comp=Z,93nm,1.1s									
SFX	San Felipe	62.34	319	IAmb	IAmb	07 40 03.7				
	comp=Z,66nm,1.3s									
ALPN	Alpine	62.39	308	IAmb	IAmb	07 40 03.5				
	comp=Z,64nm,0.9s									
SOHO	SOHO	62.47	145 *i*	P	P	07 40 01.0	-1.0			
	SNR=19									
SOHO	SOHO	62.47	145	P	P	07 40 01.6	-0.3			
SOHO				P	P	07 40 01.6	-0.3			
ALNE	Al Ain	62.51	146 *i*	P	P	07 40 02.2	-0.1			
	SNR=32									
ALNE	Al Ain	62.51	146	P	P	07 40 02.8	+0.5			
	SNR=36									
RAYN	Ar Rayn	62.67	156	P	P	07 40 03.9	+0.5			
RAYN	Ar Rayn	62.67	156	IAMs_20	IAMs_20	08 10 58.4				
	comp=Z,3µm,20.0s									
RAYN	Ar Rayn	62.67	156 *i*	P	P	07 40 04.2	+0.8			
	SNR=38									
RAYN	Ar Rayn	62.67	156	P	P	07 40 03.9	+0.5			
RAYN				pmax	pmax					
	comp=Z,28nm,0.9s									
RAYN				MLR	MLR					
	comp=Z,3µm,20.0s									
RAYN	Ar Rayn	62.67	156	P	P	07 40 04.0	+0.5			
SAND	Sanderson	62.72	307	IAmb	IAmb	07 40 06.2				
	comp=Z,77nm,1.2s									
MZWR	Madinat Zayed	62.73	148	P	P	07 40 04.1	+0.4			
PZH	PanZhiHua	62.93	99	P	P	07 40 04.5	-0.7			
PZH				S	S	07 48 35.5	+0.6			
PZH				pmax	pmax					
	comp=Z,40nm,1.1s									
PZH				pmax	pmax					
	comp=Z,880nm,5.3s									
PZH				LR	LR					
	comp=Z,4µm,18.3s									
PZH				LR	LR					
	comp=Z,1µm,16.4s									
PZH				LR	LR					
	comp=Z,5µm,18.4s									
HNDO	Hondo	62.97	304	IAmb	IAmb	07 40 06.9				
	comp=Z,78nm,1.0s									
HOQ	Hoqain	63.05	144	P	P	07 40 05.1	-0.7			
	SNR=22									
HOQ				P	P	07 40 05.2	-0.7			
SHL	Shillong	63.14	109	P	P	07 40 05.3	-1.4			
	SNR=13									
BIDO	Bidbid	63.15	143	P	P	07 40 07.0	+0.5			
	SNR=41									
DWPF	Disney Wildern	63.16	286	P	P	07 40 07.5	+0.9			
DWPF				IAmb	IAmb	07 40 09.4				
	comp=Z,87nm,1.1s									
DWPF	Disney Wildern	63.16	286	IAMs_20	IAMs_20	08 07 13.6				
	comp=Z,3µm,18.0s									
TAM	Tamanrasset	63.23	198	P	P	07 40 07.6	+0.3			
TAM				IAmb	IAmb	07 40 10.0				
	comp=Z,31nm,0.6s									
TAM				IAMs_20	IAMs_20	08 09 53.7				
	comp=Z,1µm,19.0s									
TAM	Tamanrasset	63.23	198	P	P	07 40 07.6	+0.3			
TAM				pmax	pmax					
	comp=Z,31

TNCH pmax pmax
comp=Z,1µm,4.6s
TNCH LR LR
comp=Z,3µm,15.2s
TNCH LR LR
comp=Z,1µm,15.0s
TNCH LR LR
comp=Z,7µm,18.5s
060A Indiantown 64.15 285 IAms_20 IAms_20 08 07 12.8
comp=Z,3µm,22.0s
JMDO Jabal Madar 64.29 143 P **P** **07 40 14.0 -0.1**
SNR=30
KMI2 Kunming 64.34 98 ⇑P **P** **07 40 14.3 -0.4**
KMI2 sP pwP 07 40 21.6 +1.0
KMI2 S **S** **07 48 52.0 -0.8**
KMI2 SKS **SKSac** **07 50 06.3 -2.5**
KMI2 pmax pmax
comp=Z,36nm,0.9s
KMI2 pmax pmax
comp=Z,970nm,5.0s
KMI2 LR LR
comp=Z,4µm,16.9s
KMI2 LR LR
comp=Z,1µm,20.6s
KMI2 LR LR
comp=Z,5µm,17.6s
JOW Kunigami 64.57 72 LR LR 08 10 19.6
comp=Z,965nm,18.1s,baz=342,slow=38
JLN Jalan Bani Buh 64.57 142 P **P** **07 40 16.2 +0.3**
SNR=24
MORE Moreh 64.63 106 IAms_20 IAms_20 08 10 42.1
comp=Z,1µm,19.0s
KVTX Kingsville 64.85 302 IAms_20 IAms_20 08 13 21.1
comp=Z,2µm,19.0s
JCJ Chichijima 65.25 59 LR LR 08 11 24.8
comp=Z,179nm,18.3s,baz=280,slow=38
061Z Ochoppi 65.36 285 IAms_20 IAms_20 08 08 33.6
comp=Z,3µm,20.0s
MHTO MHTO 65.66 143 P **P** **07 40 22.5 -0.5**
SNR=28
MHTO P **P** **07 40 22.5 -0.5**
SNR=28
BRDH Bariadhala 65.99 109 LR LR 08 12 38.7
comp=Z,3µm,18.5s,baz=350,slow=39
DQM DQM 66.69 144 P **P** **07 40 29.1 -0.6**
SNR=5.7
DOK Doka 67.85 148 P **P** **07 40 36.6 -0.4**
SNR=17
HKPS Hong Kong Po S 68.05 87 IAms_20 IAms_20 08 11 36.2
comp=Z,1µm,18.0s
SHAO Shalim 68.50 146 *i* P **P** **07 40 39.8 -1.3**
SNR=12
SHAO Shalim 68.50 146 P **P** **07 40 40.0 -1.0**
SNR=5.5
SOR Soroa 68.56 287 *eP* **P** **07 40 41.8 +0.4**
DMTO DMTO 68.78 147 P **P** **07 40 41.4 -1.3**
RBK Rabkut 68.96 147 P **P** **07 40 42.5 -1.5**
SNR=14
LPIG La Paz 69.00 314 LR LR 08 12 06.5
comp=Z,2µm,19.6s,baz=356,slow=37
MGV Manicaragua 69.01 284 *eP* **P** **07 40 45.1 +1.0**
ABTO Aybut 69.07 148 P **P** **07 40 44.1 -0.6**
SNR=14
SLBS Sierra La Lagu 69.40 314 P **P** **07 40 47.1 +0.4**
SLBS IAmb IAmb 07 40 50.2
comp=Z,73nm,1.1s
CCCC Cccc 69.75 282 *eP* **P** **07 40 49.7 +0.9**
NMDO Nuevo Mundo 70.19 279 IAmb IAmb 07 40 57.6
comp=Z,170nm,1.6s
PINC Pinares de May 70.32 280 *eP* **P** **07 40 53.2 +1.0**
HYB Hyderabad 70.33 123 *eP* **P** **07 40 51.5 -0.9**
HYB *ep*P **sP** **07 40 56.3 +1.5**
HYB *e*PP **PP** **07 43 28.1 +0.4**
CHTO Chiang Mai 70.35 102 P **P** **07 40 51.1 -1.4**
CHTO Chiang Mai 70.35 102 P **P** **07 40 51.1 -1.4**
CHTO pmax pmax
comp=Z,22nm,1.0s
CHTO MLR MLR
comp=Z,5µm,19.0s
CHTO Chiang Mai 70.35 102 P **P** **07 40 51.8 -0.7**
CHTO Chiang Mai 70.35 102 P **P** **07 40 50.8 -1.7**
comp=Z,829nmcomp=Z,27nm,1.0s
CM31 Chiang Mai Arr 70.70 102 P **P** **07 40 53.7 -0.9**
SNR=10
CMAR Chiang Mai Arr 70.70 102 P **P** **07 40 53.6 -1.1**
comp=Z,25nm,0.9s,baz=348,slow=7.4,SNR=105
CMAR LR LR 08 14 31.4
comp=Z,5µm,19.2s,baz=355,slow=38
comp=Z,25nm,0.9s
CMAR Chiang Mai Arr 70.70 102 *i* P **P** **07 40 53.9 -0.8**
CMAR pmax pmax
comp=Z,25nm,0.9s
RCC Rio Carpintero 70.80 280 *eP* **P** **07 40 55.7 +0.5**
GTBY Guantanamo Bay 70.82 279 IAms_20 IAms_20 08 11 29.5
comp=Z,1µm,20.0s
GTBY Guantanamo Bay 70.82 279 *eP* **P** **07 40 51.9 -3.4**
CHIV Chivirico 70.87 280 IAmb IAmb 07 41 00.5
comp=Z,105nm,1.3s
QIZ Qiongzhong 70.95 91 IAms_20 IAms_20 08 14 35.1
comp=Z,1µm,18.0s
QIZ Qiongzhong 70.95 91 P **P** **07 40 55.3 -0.8**
QIZ S **S** **07 50 10.6 -1.0**
QIZ pmax pmax
comp=Z,50nm,1.9s
QIZ pmax pmax
comp=Z,730nm,5.7s
QIZ LR LR
comp=Z,2µm,16.9s
QIZ LR LR
comp=Z,770nm,12.2s
QIZ LR LR
comp=Z,2µm,16.1s
SDDR Presa de Saban 71.47 275 IAmb IAmb 07 41 09.1
comp=Z,117nm,1.6s
TEIG Tepich 71.47 292 P **P** **07 41 00.4 +1.1**
TEIG IAmb IAmb 07 41 01.6
comp=Z,104nm,1.2s
TEIG IAms_20 IAms_20 08 11 47.7
comp=Z,2µm,21.0s
SMRT St. Maarten 71.78 267 IAms_20 IAms_20 08 10 46.1
comp=Z,2µm,21.0s
SJG San Juan 71.95 270 LR LR 08 12 18.8
comp=Z,992nm,20.3s,baz=349,slow=36
SJG San Juan 71.95 270 IAms_20 IAms_20 08 12 26.6
comp=Z,1µm,20.0s
SABA Saba 72.22 267 IAms_20 IAms_20 08 11 29.7
comp=Z,2µm,20.0s
SEUS St. Eustatius 72.33 267 IAms_20 IAms_20 08 10 52.5
comp=Z,2µm,20.0s
MTDJ Mount Denham 72.69 281 IAms_20 IAms_20 08 13 19.9
comp=Z,1µm,20.0s
TOA0 Torodi Ar. Sit 72.92 201 P **P** **07 41 08.2 +0.2**
SNR=11
TORD Torodi Ar. Bea 72.92 201 P **P** **07 41 07.7 -0.3**
comp=Z,29nm,0.8s,baz=313,slow=5.5,SNR=108
TORD LR LR 08 14 43.6
comp=Z,982nm,18.1s,baz=10.0,slow=37
comp=Z,29nm,0.8s
TORD Torodi Ar. Bea 72.92 201 P **P** **07 41 07.8 -0.3**
TORD IAmb IAmb 07 41 09.5
comp=Z,82nm,1.2s
UNM Universidad Na 73.09 303 IAms_20 IAms_20 08 15 08.3
comp=Z,1µm,19.0s
ATD Arta Tunnel 74.51 159 IAms_20 IAms_20 08 18 22.3
comp=Z,1µm,21.0s
CMIG Matias Romero 75.03 298 LR LR 08 18 40.8
comp=Z,635nm,19.7s,baz=49,slow=39
TGY Tagaytay City 76.66 81 LR LR 08 17 42.8
comp=Z,431nm,20.1s,baz=116,slow=38
APG El Apazote 76.81 294 LR LR 08 17 55.0
comp=Z,103nm,18.5s,baz=94,slow=38
FURI Furi 77.03 164 LR LR 08 20 13.4
comp=Z,758nm,18.8s,baz=6.5,slow=39
FURI Furi 77.03 164 IAms_20 IAms_20 08 20 56.1
comp=Z,1µm,19.0s
MTO3 Monteceristo 77.33 293 IAmb IAmb 07 41 37.7
comp=Z,91nm,1.2s
TGUH Tegucigalpa,Un 77.52 291 IAms_20 IAms_20 08 16 23.0
comp=Z,1µm,20.0s
GRGR Grenville 77.54 265 IAms_20 IAms_20 08 15 26.7
comp=Z,997nm,20.0s
SIUN Universidad Ur 77.68 288 IAmb IAmb 07 41 39.5
comp=Z,34nm,1.3s
GUMO Guam 78.83 57 LR LR 08 16 38.1
comp=Z,58nm,20.1s,baz=12,slow=36
MALK Mahakanadarawa 79.40 121 P **P** **07 41 43.7 -1.2**
DBIC Dimbokro 79.56 208 P **P** **07 41 45.2 -0.5**
comp=Z,18nm,0.8s,baz=12,slow=5.7,SNR=13
DBIC LR LR 08 17 07.7
comp=Z,321nm,19.0s,baz=32,slow=36
comp=Z,18nm,0.8s
DBIC Dimbokro 79.56 208 P **P** **07 41 44.9 -0.8**
ACRG Accra 80.43 203 IAmb IAmb 07 41 52.0
comp=Z,208nm,1.8s
PALK Pallekele 80.52 121 LR LR 08 22 36.5
comp=Z,2µm,18.2s,baz=350,slow=40
JTS Las Juntas de 81.09 288 LR LR 08 18 39.2
comp=Z,2µm,18.5s,baz=3.1,slow=36
JTS Las Juntas de 81.09 288 IAms_20 IAms_20 08 17 48.6
comp=Z,2µm,20.0s
HDC Heredia 81.32 287 IAms_20 IAms_20 08 18 33.6
comp=Z,2µm,20.0s
SDV Santo Domingo 81.43 274 LR LR 08 16 37.7
comp=Z,1µm,21.4s,baz=344,slow=35
SDV Santo Domingo 81.43 274 P **P** **07 41 56.1 +0.1**
SDV IAms_20 IAms_20 08 16 15.8
comp=Z,1µm,21.0s
SDV Santo Domingo 81.43 274 *eP* **P** **07 41 56.5 +0.5**
SDV Santo Domingo 81.43 274 P **P** **07 41 57.8 +1.8**
comp=Z,1µmcomp=Z,49nm,1.7s
EDA Edea 82.04 192 IAms_20 IAms_20 08 19 39.1
comp=Z,920nm,20.0s
OCAC Ocana 82.27 276 P **P** **07 42 02.8 +2.4**
comp=Z,2µmcomp=Z,44nm,0.9s
LODK Lodwar 82.41 167 IAms_20 IAms_20 08 24 34.5
comp=Z,969nm,20.0s
LODK Lodwar 82.41 167 P **P** **07 42 01.7 +0.7**
SNR=8.5
UREC San Jos de Ur 82.92 279 P **P** **07 42 06.3 +2.7**
comp=Z,2µmcomp=Z,58nm,1.4s
LHMI Lhok Sumawe 83.67 105 IAms_20 IAms_20 08 22 12.3
comp=Z,1µm,21.0s
DBBC Dabeiba 83.70 279 P **P** **07 42 12.0 +4.3**
MDP Montagnes des 83.84 256 LR LR 08 17 43.8
comp=Z,659nm,19.0s,baz=334,slow=34
KULM Kulim 83.88 101 P **P** **07 42 06.7 -1.8**
comp=Z,34nm,0.8s
DAV Davao City (W) 83.97 76 LR LR 08 22 43.2
comp=Z,336nm,19.6s,baz=336,slow=38
KKM Kota Kinabalu 84.29 86 IAmb IAmb 07 42 13.2
comp=Z,73nm,1.0s
KKM Kota Kinabalu 84.29 86 P **P** **07 42 10.0 -0.7**
comp=Z,80nm,1.1s
RUSC La Rusia 84.58 276 P **P** **07 42 16.1 +3.4**
comp=Z,2µmcomp=Z,141nm,1.5s
IPM Ipoh 84.71 101 IAmb IAmb 07 42 12.9
comp=Z,38nm,0.7s
IPM IAms_20 IAms_20 08 23 55.9
comp=Z,2µm,18.0s
IPM Ipoh 84.71 101 P **P** **07 42 11.1 -1.6**
comp=Z,1µmcomp=Z,67nm,0.8s
CBOC Ciudad Bolivar 84.83 279 P **P** **07 42 16.6 +3.1**
comp=Z,2µmcomp=Z,54nm,1.3s
MYLDM Lahad Datu 85.32 84 P **P** **07 42 16.8 +1.0**
comp=Z,91nm,1.5s
ROSC El Rosal 85.72 277 P **P** **07 42 19.3 +1.0**
comp=Z,26nm,0.8s,baz=11,slow=6.2,SNR=17
ROSC LR LR 08 20 45.5
comp=Z,509nm,21.2s,baz=47,slow=36
comp=Z,26nm,0.8s
ROSC El Rosal 85.72 277 IAmb IAmb 07 42 23.3
comp=Z,69nm,1.1s
ROSC El Rosal 85.72 277 P **P** **07 42 21.9 +3.7**
comp=Z,2µmcomp=Z,69nm,1.2s
PLMC San Jos del P 85.80 279 P **P** **07 42 21.8 +3.5**
comp=Z,1µmcomp=Z,46nm,1.6s
PSI Prapat 86.22 103 P **P** **07 42 18.8 -1.6**
comp=Z,836nmcomp=Z,48nm,1.0s
RPSI Rantau Prapat 86.32 103 IAmb IAmb 07 42 21.0
comp=Z,39nm,1.0s
MBAR Mbarara 86.34 172 LR LR 08 23 27.9
comp=Z,421nm,21.9s,baz=4.0,slow=37
MBAR Mbarara 86.34 172 P **P** **07 42 21.7 +0.7**
MBAR IAmb IAmb 07 42 23.5
comp=Z,135nm,1.9s
MBAR Mbarara 86.34 172 P **P** **07 42 21.7 +0.7**
MBAR pmax pmax
comp=Z,135nm,1.9s
MBAR MLR MLR
comp=Z,500nm,22.0s
YOTC Yotoco, Valle 86.72 279 P **P** **07 42 24.6 +1.8**
comp=Z,1µmcomp=Z,57nm,1.6s
PRAC Prado 86.87 278 P **P** **07 42 26.2 +2.7**
comp=Z,2µmcomp=Z,66nm,1.3s
KMBO Kilima Mbogo 86.96 165 *i* P **P** **07 42 25.5 +1.4**
KMBO pmax pmax
comp=Z,6.0nm,0.4s
BOAV Boa Vista 87.10 263 IAmb IAmb 07 42 28.1
comp=Z,63nm,1.6s
BOAV Boa Vista 87.10 263 *eP* **P** **07 42 24.4 -0.2**
JAMC Jamundi, Valle 87.50 279 P **P** **07 42 29.3 +2.5**
comp=Z,1µmcomp=Z,44nm,2.0s
GSI Gunungsitoli 87.60 105 IAms_20 IAms_20 08 25 50.6
comp=Z,2µm,22.0s
GSI Gunungsitoli 87.60 105 P **P** **07 42 26.2 -0.8**
POPC Popayan, Colom 88.17 279 P **P** **07 42 31.2 +1.2**
comp=Z,940nmcomp=Z,67nm,1.3s
KIBK Kibwezi 88.18 164 P **P** **07 42 30.4 +0.6**
KIBK Kibwezi 88.18 164 P **P** **07 42 31.2 +1.4**
SNR=6.5
TULM Tulcn-Chalpat 90.06 280 P **P** **07 42 41.7 +2.5**
SGC2 Sao Gabriel da 90.11 269 P **P** **07 42 40.1 +1.3**
comp=Z,862nmcomp=Z,28nm,1.8s
OTAV Otavalo 90.58 281 P **P** **07 42 42.7 +1.2**
OTAV Otavalo 90.58 281 P **P** **07 42 42.7 +1.2**
OTAV pmax pmax
comp=Z,15nm,1.2s
OTAV MLR MLR
comp=Z,700nm,21.0s
OTAV Otavalo 90.58 281 *eP* **P** **07 42 43.1 +1.6**
MSEY Mahe Island 91.03 147 IAms_20 IAms_20 08 29 48.9
comp=Z,1µm,20.0s
SIJI Sorong 92.25 71 LR LR 08 25 02.6
comp=Z,203nm,19.7s,baz=342,slow=36
PMBI Palembang 92.32 98 IAms_20 IAms_20 08 30 12.9
comp=Z,1µm,18.0s
NBPS Pedro II - PI 92.47 244 *eP* **P** **07 42 50.5 +0.7**
ITTB Itaituba 93.45 258 *eP* **P** **07 42 55.7 +1.5**
JAY Jayapura 94.53 62 LR LR 08 23 33.3
comp=Z,189nm,20.7s,baz=5.0,slow=34
KAPI Kappang 95.51 83 LR LR 08 28 57.6
comp=Z,117nm,20.0s,baz=302,slow=37
NPGB Novo Progresso 96.08 257 *eP* **P** **07 43 07.2 +1.0**
BBJI Bungbulang 97.03 95 IAms_20 IAms_20 08 30 57.4
comp=Z,865nm,19.0s
ATAH Atahualpa 97.88 280 LR LR 08 28 42.4
comp=Z,555nm,20.6s,baz=24,slow=36
PDRB Porto dos Gac 100.70 258 *eP* **Pdif** **07 43 28.8 +1.8**
LSZ Lusaka 100.90 174 IAms_20 IAms_20 08 37 15.7
comp=Z,1µm,19.0s
NNA Nana 102.57 278 IAms_20 IAms_20 08 31 45.0
comp=Z,788nm,20.0s
TAOE Nuku Hiva Isla 102.90 342 *eLR* LR 08 17 25.5
comp=Z,1µm,21.9s
TSUM Tsumeb 104.79 185 IAms_20 IAms_20 08 35 19.0
comp=Z,596nm,20.0s
WIN Windhoek 108.14 185 IAms_20 IAms_20 08 40 24.9
comp=Z,790nm,21.0s
WRA Warramunga Arr 111.37 70 PKKPbc PKKPbc 07 59 08.2 +3.8
comp=Z,1.2nm,1.0s,baz=180,slow=3.0,SNR=4.5
PPT2 Papeete2 111.74 352 *e*PKIKP **PKiKP** **07 48 17.6 +4.3**
PPT2 *e*S 07 55 56.8
comp=Z,38nm,23.5s
PPT2 *e*SS **SS** **08 04 27.9 -3.4**
comp=Z,179nm,27.2s
PPT2 *e*LR LR 08 21 21.2
comp=Z,222nm,25.2s
PPT2 *e*LR LR 08 21 29.5
comp=Z,596nm,26.8s
PPT2 *e*LR LR 08 21 29.5
comp=Z,566nm,21.8s
ASAR Alice Springs 115.03 70 PKP **PKPdf** **07 48 18.1 -1.2**
comp=Z,1.3nm,0.9s,baz=322,slow=1.5,SNR=7.0
DZM Mont Dzumac 115.39 37 *e*LR LR 08 23 07.7
comp=Z,525nm,21.5s
TBI Tubuai 117.47 352 *e*S 07 55 57.5
comp=Z,1µm,26.2s
TBI *e*SS **SS** **08 05 53.2 +6.7**
comp=Z,526nm,28.5s
TBI *e*LR LR 08 23 55.7
comp=Z,3µm,27.0s
TBI *e*LR LR 08 23 58.4
comp=Z,933nm,25.8s
AC05 El Transito 118.79 270 IAms_20 IAms_20 08 36 11.8
comp=Z,1µm,21.0s
MT05 Renca 123.35 270 IAms_20 IAms_20 08 50 16.5
comp=Z,543nm,19.0s
PLCA Paso Flores 130.63 269 PKP **PKiKP** **07 48 49.6 -0.1**
comp=Z,9.1nm,1.1s,baz=356,slow=1.2,SNR=9.4
PLCA Paso Flores 130.63 269 **PKiKP** **07 48 49.9 +0.2**
PLCA Paso Flores 130.63 269 *eP* **PKiKP** **07 48 51.1 +1.4**
INZ Inchbonnie 136.18 33 IAMs_20 IAMs_20 08 48 30.1
comp=Z,745nm,18.0s
NVL N'lazarevskaya 156.40 189 *e*PKIKP **PKPdf** **07 49 33.4 +1.8**
NVL *e* 07 53 40.4
NVL *e* 07 56 39.8
NVL *e*PPP PPP 07 57 13.7
NVL *e*SS SS 08 13 32.5 +3.3
NVL *e*SSS SSS 08 19 31.2
NVL pmax pmax
comp=Z,72nm,2.2s
ELIB Princess Elisa 157.53 179 *d*PKP **PKPab** **07 50 06.6 +1.2**
SNAA Sanae 157.59 201 PKPab **PKPab** **07 50 05.3 -0.3**
comp=Z,5.5nm,0.9s,baz=345,slow=1.8,SNR=3.9
SNAA Sanae 157.59 201 IAMs_20 IAMs_20 09 11 28.1
comp=Z,418nm,18.0s
QSPA South Pole Qui 175.73 179 **PKPab** **07 51 25.2 -0.5**

IDC ***18*** *07:36:38.3±1.2,7°.84S×118°.78E,h0km,mb3.8/5, mbtmp3.9/9,ML3.8/4,MS3.4/4,Error ellipse: s-maj=51.9km s-min=16.8km az=56.0*
NEIC ***18*** *07:36:40.6±2.5,7°.83S±0°.06×118°.84E±0°.07,h10km±1km, mb4.3/8,Error ellipse: s-maj=12.6km s-min=10.4km az=263.0*
DJA ***18*** *07:36:41.9±0.6,8°S±1°×11°9E±°,h21km±5km,M4.5/37, mB5.1/2,mb4.6/8,MLv4.5/37,Mw(mB)4.5/2*

ISC 18 07:36:42.0±1.5,7°.82S±0°.03×118°.87E±0°.04,h25km±13km, n56,σ1°39/60,mb4.1/9,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DBNI	**Kabupaten Domp**	**0.87**	**219**	P		**Pb**		**07 36 58.4**	**-0.1**
DBNI				S		**Sb**		**07 37 10.1**	**+0.4**
LBFI	**Labuhan Bajo,**	**1.21**	**123**	P		**Pn**		**07 37 03.2**	**0.0**
PLAI	**Plampang**	**1.47**	**227**	P		**Pn**		**07 37 07.0**	**+0.1**
PLAI				S		**Sn**		**07 37 25.6**	**+0.3**
WBSI	**Waikabubak, Su**	**1.88**	**164**	P		**Pn**		**07 37 13.4**	**+0.8**
WBSI				S		**Sn**		**07 37 36.7**	**+1.2**
TWSI	**Taliwang, Sumb**	**2.17**	**245**	P		**Pn**		**07 37 16.7**	**+0.3**
WSI	**Waingapu**	**2.32**	**142**	P		**Pn**		**07 37 17.7**	**-0.8**
WSI				S		**Sn**		**07 37 48.0**	**+1.8**
BSSI	**Bau Bau, Buton**	**2.32**	**44**	P		**Pn**		**07 37 18.3**	**-0.3**
MKS	**Makassar**	**2.66**	**13**	P		**Pn**		**07 37 22.8**	**-0.4**
KLNI	**Mataram**	**2.81**	**258**	P		**Pn**		**07 37 24.7**	**-0.6**
BASI	**Baing, Sumba**	**2.92**	**145**	P		**Pn**		**07 37 27.6**	**+0.8**
BASI				S		**Sn**		**07 38 02.6**	**+1.5**
KAPI	**Kappang**	**2.92**	**18**	Pn		**Pn**		**07 37 27.1**	**+0.2**
KAPI	20nm,0.3s,baz=234,slow=6.0,SNR=31			Sn		**Sn**		**07 37 59.1**	**-2.1**
	37nm,0.3s,baz=226,slow=4.5,SNR=6.2 92nm,0.4s								
KAPI	**Kappang**	**2.92**	**18**	P		**Pn**		**07 37 26.9**	**0.0**
EDFI	**Ende, Flores**	**2.94**	**108**	P		**Pn**		**07 37 28.0**	**+0.8**
KHKI	**Kahang-Kahang**	**3.27**	**260**	P		**Pn**		**07 37 31.4**	**-0.2**
MMRI	**Maumere**	**3.43**	**104**			**Pn**		**07 37 34.4**	**+0.5**
MMRI	**Maumere**	**3.43**	**104**	P		**Pn**		**07 37 33.9**	**0.0**
SRBI	**Singaraja**	**3.63**	**266**	P		**Pn**		**07 37 36.0**	**-0.6**
IGBI	**Denpasar**	**3.81**	**255**	P		**Pn**		**07 37 38.8**	**-0.3**
IGBI				S		**Sn**		**07 38 23.7**	**+0.6**
SPSI	**Sidrap Palu**	**3.94**	**13**	P		**Pn**		**07 37 41.4**	**+0.6**
SPSI				S		**Sn**		**07 38 27.9**	**+1.7**
RTBI	**Rangdo, Negare**	**3.94**	**260**	P		**Pn**		**07 37 41.2**	**+0.4**
PMSI	**Majene**	**4.29**	**1**	P		**Pn**		**07 37 45.1**	**-0.6**
KKSI	**Kolaka, Sulawe**	**4.56**	**38**	P		**Pn**		**07 37 51.0**	**+1.6**
ABJI	**Asem Bagus**	**4.59**	**270**	P		**Pn**		**07 37 49.7**	**-0.1**
JAGI	**Jajag, Banyuwa**	**4.71**	**262**			**Pn**		**07 37 51.6**	**+0.2**
JAGI	**Jajag, Banyuwa**	**4.71**	**262**	P		**Pn**		**07 37 51.3**	**-0.2**
TTSI	**Tana Toraja**	**4.84**	**11**	P		**Pn**		**07 37 54.7**	**+1.5**
KMMI	**Kalianget**	**4.92**	**279**	P		**Pn**		**07 37 55.4**	**+1.1**
MMSI	**Mamuju**	**5.10**	**0**	P		**Pn**		**07 37 57.3**	**+0.5**
	0.3nm57nm,0.8s								
BLJI	**Banyuglugur** 0.4nm2µm82nm,0.5s	**5.22**	**270**	P		**Pn**		**07 37 56.4**	**-2.1**
BATI	**Baumata** 3.9nm,0.3s,baz=252,slow=20,SNR=1.4	**5.30**	**117**	Pn		**Pn**		**07 37 59.0**	**-0.6**
BATI	comp=Z,207nm,20.9s,baz=262,slow=42 13nm,0.2s			LR		LR		07 40 26.3	
BATI	**Baumata** 0.3nm2µm42nm,0.9s	**5.30**	**117**	P		**Pn**		**07 37 59.9**	**+0.3**
GMJI	**Gumukmas** 59nm,0.9s	**5.39**	**265**	P		**Pn**		**07 38 01.2**	**+0.4**
SOEI	**Soe**	**5.67**	**110**	Pn		**Pn**		**07 38 08.4**	**+3.6**
SOEI	**Soe** 0.3nm88nm,0.9s	**5.67**	**110**	P		**Pn**		**07 38 08.1**	**+3.3**
SNJI	**Sawahan-Nganju**	**7.04**	**270**	P		**Pn**		**07 38 25.3**	**+1.6**
LEM	**Lembang** comp=Z,60nm,21.6s,baz=83,slow=43	**11.20**	**274**	LR		LR		07 44 32.3	
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=340,slow=13,SNR=1.5	**12.16**	**148**	Pn		**Pn**		**07 39 31.5**	**-2.1**
FITZ	0.7nm,0.3s,baz=188,slow=14,SNR=6.1 1.9nm,0.9s			Sn		**Sn**		**07 41 42.8**	**-5.7**
KNRA	**Kununurra**	**12.44**	**130**	Pn		**Pn**		**07 39 36.5**	**-1.0**
MTN	**Manton Dam**	**13.06**	**113**	Pn		**Pn**		**07 39 44.5**	**-1.5**
WB0	**Warramunga Arr**	**19.17**	**130**	P		**P**		**07 41 04.0**	**+0.2**
WB0	comp=Z,5.9nm,0.7s			IAmb		IAmb		07 41 15.2	
WRA	**Warramunga Arr** comp=Z,0.7nm,0.3s,baz=305,slow=13,SNR=29 comp=Z,3.5nm,0.8s	**19.23**	**130**	P		**P**		**07 41 05.0**	**+0.4**
WRA	**Warramunga Arr**	**19.23**	**130**	P		**P**		**07 41 03.7**	**-0.8**
MORW	**Morawa**	**21.30**	**187**	P		**P**		**07 41 27.6**	**+0.8**
MORW	comp=Z,28nm,1.3s			IAmb		IAmb		07 41 46.7	
AS31	**Alice Springs**	**21.36**	**139**	P		**P**		**07 41 28.8**	**+1.2**
ASAR	**Alice Springs** comp=Z,1.5nm,0.5s,baz=316,slow=9.6,SNR=27 comp=Z,1.5nm,0.5s	**21.36**	**139**	P		**P**		**07 41 28.6**	**+1.0**
COEN	**Coen**	**24.62**	**106**	P		**P**		**07 42 01.5**	**+0.9**
COEN	comp=Z,8.1nm,0.9s			IAmb		IAmb		07 42 21.1	
NWAO	**Narrogin (SRO)** comp=Z,55nm,18.8s,baz=14,slow=36	**25.03**	**183**	LR		LR		07 51 45.0	
BBOO	**Buckleboo**	**29.54**	**150**	P		**P**		**07 42 45.9**	**+1.3**
STKA	**Stephens Creek** comp=Z,1.2nm,0.6s,baz=294,slow=10.0,SNR=1.5 comp=Z,1.2nm,0.6s	**31.95**	**142**	P		**P**		**07 43 06.8**	**+1.0**
TIA	**Tai'an**	**43.83**	**358**	P		P		07 44 53.5	+7.5
TIA	comp=Z,9.0nm,2.2s			pmax		pmax			
MKAR	**Makanchi Array** comp=Z,0.7nm,0.6s,baz=145,slow=7.3,SNR=7.7 comp=Z,0.7nm,0.6s	**63.35**	**333**	P		**P**		**07 47 09.8**	**+0.8**
KURBB	**Kurchatov Arra** comp=Z,0.7nm,0.6s,baz=142,slow=5.8,SNR=7.5 comp=Z,0.7nm,0.6s	**67.86**	**334**	P		**P**		**07 47 38.4**	**+0.4**
KURK	**Kurchatov**	**67.89**	**334**	P		**P**		**07 47 38.4**	**+0.2**
KURK	**Kurchatov** comp=Z,1.7nm,0.8s	**67.89**	**334**	IAmb		IAmb		07 47 39.2	
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.7s,baz=126,slow=3.7,SNR=3.0 comp=Z,1.0nm,0.7s	**67.90**	**339**	P		**P**		**07 47 36.8**	**-1.4**
PPT	**Papeete** comp=Z,144nm,19.0s,baz=350,slow=36	**89.15**	**108**	LR		LR		08 30 07.2	

MEX 18 07:38:55.0±0.9,15°.06N×94°.49W,h17km±41km,MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CARR	**Arriaga**	**1.30**	**25**	*eP*		Pn		07 39 14.4	-4.0
CARR				*e*S		Sn		07 39 28.9	-6.5
PCIG		**1.38**	**62**	*eP*		Pn		07 39 16.2	-3.2
PCIG				*e*S		Sn		07 39 32.2	-5.1
HUIG	**Huatulco**	**1.71**	**294**	*eP*		Pn		07 39 21.5	-2.6
HUIG				*e*S		Sn		07 39 40.0	-5.6
CMIG	**Matias Romero**	**2.05**	**349**	*eP*		Pn		07 39 25.8	-3.0
CMIG				*e*S		Sn		07 39 49.4	-4.6
TGIG		**2.15**	**37**	*eP*		Pn		07 39 27.6	-2.6
TGIG				*e*S		Sn		07 39 51.6	-4.9
PATR	**El Naranjo**	**2.18**	**88**	*eP*		Pn		07 39 27.7	-3.0
PATR				*e*S		Sn		07 39 52.2	-5.1
PAVE	**Pavencul**	**2.23**	**86**	*eP*		Pn		07 39 29.0	-2.4
PAVE				*e*S		Sn		07 39 53.9	-4.9
UXUV	**UXUV**	**2.27**	**8**	*eP*		Pn		07 39 29.9	-1.7
UXUV				*e*S		Sn		07 39 56.5	-2.8
CHUJ	**Union Juarez**	**2.30**	**89**	*eP*		Pn		07 39 29.6	-2.7

CHUJ				eS	Sn	07 39 55.8	-4.6
CCIG	**Comitan**	**2.57**	**61**	eP	Pn	07 39 34.6	-1.3
CCIG				eS	Sn	07 40 05.4	-1.5
PEIG	**Puerto Escondi**	**2.73**	**290**	eP	Pn	07 39 36.4	-1.6
PEIG				eS	Sn	07 40 04.2	-6.5
HUEH	**Huehuetenango**	**2.89**	**85**	eP	Pn	07 39 40.1	-0.4
HUEH				eS	Sn	07 40 14.0	-0.9
NEUV	**Arroyo Zacate**	**2.92**	**335**	eP	Pn	07 39 38.1	-2.6
NEUV				eS	Sn	07 40 09.9	-5.5
VHO	**Vista Hermosa**	**2.94**	**313**	eS	Sn	07 40 11.1	-5.1
YOIG	**Yosondua**	**3.44**	**302**	eP	Pn	07 39 50.1	+2.0
YOIG				eS	Sn	07 40 25.3	-3.3
TXIG	**Tlaxiaco**	**3.83**	**305**	eP	Pn	07 39 55.6	+2.2
TXIG				eS	Sn	07 40 35.5	-2.8
TOIG	**Toxpalan**	**3.90**	**321**	eP	Pn	07 39 52.9	-1.3
TOIG				eS	Sn	07 40 34.3	-5.4
FTIG	**Fresnillo de T**	**4.50**	**309**	eP	Pn	07 40 01.8	-0.7
FTIG				eS	Sn	07 40 51.1	-3.4
PETF	**Flores**	**4.81**	**67**	eP	Pn	07 40 05.2	-1.5
PETF				eS	Sn	07 40 59.6	-2.4
SCIG	**Sabancuy**	**5.00**	**39**	eP	Pn	07 40 07.6	-1.8

KRSC 18 07:40:39.9±1.6, 53°.12N×162°.94E, h65km±29km, MI3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.61**	**334**	eP	Pn	07 41 08.3	+2.2
MKZ				eS	Sn	07 41 28.0	+2.0
SPN	**Mys Shipunski**	**1.76**	**271**	eP	Pn	07 41 10.1	+1.9
SPN				eS	Sn	07 41 31.0	+1.4
NLC	**Nalytchevo**	**2.17**	**273**	eP	Pn	07 41 16.0	+2.4
NLC				eS	Sn	07 41 41.4	+2.0
KII	**Karymskiy**	**2.28**	**295**	eP	Pn	07 41 17.8	+2.6
KII				eS	Sn	07 41 44.5	+2.3
SDLR	**Sedlovina**	**2.45**	**275**	eP	Pn	07 41 20.4	+2.9
SDLR				eS	Sn	07 41 48.9	+2.5
UGLR	**Uglovaya**	**2.48**	**274**	eP	Pn	07 41 21.2	+3.2
UGLR				eS	Sn	07 41 50.1	+2.9
SMAR	**Somma**	**2.50**	**275**	eP	Pn	07 41 21.1	+2.8
DALK	**Dalny**	**2.53**	**270**	eP	Pn	07 41 21.2	+2.7
DALK				eS	Sn	07 41 50.6	+2.5
KRER	**Koryakskii**	**2.53**	**276**	eP	Pn	07 41 22.0	+3.3
KRER				eS	Sn	07 41 51.9	+3.4
AVH	**Avacha**	**2.53**	**275**	eP	Pn	07 41 22.0	+3.3
AVH				eS	Sn	07 41 51.9	+3.5
TUMD	**Tumrok D**	**2.57**	**325**	eS	Sn	07 41 51.5	+2.3
PET	**Petropavlovsk**	**2.59**	**270**	eP	Pn	07 41 22.3	+3.0
PET				eS	Sn	07 41 51.9	+2.3
KRX	**Arik**	**2.59**	**277**	eP	Pn	07 41 22.5	+3.0
KRX				eS	Sn	07 41 52.4	+2.5
KOK	**Koryaka**	**2.59**	**276**	eP	Pn	07 41 22.7	+3.2
KOK				eS	Sn	07 41 52.9	+2.9
BKI	**Bering**	**2.75**	**39**	eS	Sn	07 41 53.3	-0.2
RUS	**Russkaya**	**2.77**	**257**	eP	Pn	07 41 24.4	+2.5
RUS				eS	Sn	07 41 55.5	+1.3
KRMR	**Karymshinskiy**	**2.92**	**266**	eP	Pn	07 41 26.5	+2.6
KRMR				eS	Sn	07 41 59.6	+1.8
MTVR	**Mutnovka**	**2.96**	**260**	eP	Pn	07 41 27.2	+2.7
MTVR				eS	Sn	07 42 00.9	+2.0
GRL	**Gorelyy**	**3.01**	**261**	eP	Pn	07 41 28.3	+3.1
GRL				eS	Sn	07 42 02.7	+2.6
GNL	**Ganaly**	**3.05**	**283**	eP	Pn	07 41 29.8	+4.1
GNL				eS	Sn	07 42 05.0	+4.0
KMNR	**Kamenistaya**	**3.08**	**330**	eP	Pn	07 41 30.4	+4.3
KBTR	**Krutoberegovo**	**3.10**	**359**	eS	Sn	07 42 04.2	+2.1
KBG	**Krutoberegovo**	**3.15**	**358**	eP	Pn	07 41 29.7	+2.7
KBG				eS	Sn	07 42 05.0	+1.7
ASAK	**Asacha**	**3.15**	**259**	eP	Pn	07 41 30.2	+3.2
ASAK				eS	Sn	07 42 06.3	+2.8
KDTR	**Khodutka, Kamc**	**3.25**	**248**	eP	Pn	07 41 30.4	+2.0
KDTR				eS	Sn	07 42 06.1	+0.3
KOZ	**Kozyrevsk**	**3.45**	**330**	eP	Pn	07 41 35.0	+3.9
KLY	**Klyuchi**	**3.47**	**338**	eP	Pn	07 41 33.9	+2.6
APC	**Apacha**	**3.50**	**269**	eP	Pn	07 41 36.4	+4.7
APC				eS	Sn	07 42 16.4	+4.6
ESO	**Esso**	**3.75**	**320**	eP	Pn	07 41 39.0	+3.9

*IDC **18** 07:42:22.4±1.8, 14°.06S×166°.95E, h0km, mb4.0/4, mbtmp4.1/5, ML4.5/1, MS3.0/1, Error ellipse: s-maj=54.0km s-min=29.3km az=125.0*
*NEIC **18** 07:42:32.9±1.6, 14°.54S±0°.07×167°.4E±0°.2, h97km±15km, mb4.3/10, Error ellipse: s-maj=29.8km s-min=6.5km az=106.0*

ISC 18 07:42:33.8±1.3, 14°.7S±0°.1×167°.3E±0°.2, h100km, n16, σ1s68/17, mb4.2/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**6.74**	**174**	Pn	**Pn**	**07 44 10.1**	**0.0**
DZM	**Mont Dzumac**	**7.34**	**186**	Pn	**Pn**	**07 44 20.5**	**+2.1**
	6.5nm,0.3s,baz=34,slow=8.4,SNR=58						
DZM				Sn	**Sn**	**07 45 36.6**	**-3.6**
	1.6nm,0.3s,baz=300,slow=20,SNR=1.7						
DZM				LR	LR	07 46 56.1	
	comp=Z,86nm,18.2s,baz=216,slow=34						
	14nm,0.3s						
DZM	**Mont Dzumac**	**7.34**	**186**		**Pn**	**07 44 20.6**	**+2.2**
ONTNC	**Ouen Toro**	**7.57**	**186**		**Pn**	**07 44 24.0**	**+2.5**
EIDS	**Eidsvold**	**18.55**	**233**	P	**P**	**07 46 43.2**	**+0.4**
EIDS				IAmb	IAmb	07 46 46.4	
	comp=Z,6.5nm,0.7s						
TOZ	**Tahuroa Road**	**24.02**	**164**	P	**P**	**07 47 41.4**	**+2.0**
TOZ				IAmb	IAmb	07 47 41.9	
	comp=Z,9.0nm,0.7s						
BKZ	**Black Stump Fm**	**25.63**	**163**	P	**P**	**07 47 53.9**	**-0.1**
LTZ	**Lake Taylor**	**28.27**	**172**	P	**P**	**07 48 17.7**	**+0.1**
STKA	**Stephens Creek**	**29.04**	**230**	P	**P**	**07 48 25.4**	**+0.9**
	comp=Z,3.9nm,0.6s,baz=52,slow=9.2,SNR=10						
	comp=Z,3.9nm,0.6s						
WB0	**Warramunga Arr**	**31.82**	**256**	P	**P**	**07 48 47.9**	**-1.4**
WB0				IAmb	IAmb	07 49 15.9	
	comp=Z,10nm,1.4s						
WRAB	**Tennant Creek**	**31.88**	**256**	P	**P**	**07 48 49.4**	**-0.3**
WRAB				IAmb	IAmb	07 49 10.0	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**31.89**	**256**	P	**P**	**07 48 48.4**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=90,slow=12,SNR=1.8						
	comp=Z,0.5nm,0.7s						
AS31	**Alice Springs**	**32.73**	**249**	P	**P**	**07 48 56.9**	**-0.3**
ASAR	**Alice Springs**	**32.73**	**249**	P	**P**	**07 48 56.0**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=79,slow=8.9,SNR=14						
	comp=Z,1.0nm,0.5s						
BBOO	**Buckleboo**	**33.62**	**232**	P	**P**	**07 49 05.1**	**+0.3**
ILAR	**Eielson Array**	**86.52**	**18**	P	**P**	**07 55 04.2**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=249,slow=4.8,SNR=7.3						
	comp=Z,0.5nm,0.7s						

IDC 18 07:48:38.2±1.7, 51°.23N×108°.47E, h0km, mbtmp3.3/3, ML3.3/2, Error ellipse: s-maj=21.4km s-min=13.0km az=23.0, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLY	**Talaya**	**3.05**	**280**	Pn	Pn	07 49 28.4	+0.7
	12nm,0.3s,baz=102,slow=10						
TLY				Pg	Pb	07 49 31.9	-1.4
	baz=114,slow=13						
TLY				Lg	Lg	07 50 14.3	
	baz=8.2,slow=19						
SONM	**Songino Array**	**3.66**	**202**	Pn	Pn	07 49 37.8	+1.7
	2.2nm,0.3s,baz=18,slow=13,SNR=15						
SONM				Pg	Pb	07 49 44.8	+1.0
	9.3nm,0.3s,baz=18,slow=17,SNR=36						
SONM				Lg	Lg	07 50 33.1	
	8.4nm,0.3s,baz=18,slow=31,SNR=15						
	3.6nm,0.3s						
I34MN	**SONGINO INFRAS**	**3.69**	**202**	I	I	08 13 00.0	
	baz=24,slow=341,SNR=2.2						
HILR	**Hailar Array B**	**7.41**	**99**	Pn	Pn	07 50 27.9	+0.4
	baz=293,slow=14						
HILR				Pg	Pg	07 50 54.3	-5.7
	baz=291,slow=14						
HILR				Lg	Lg	07 52 30.9	
	baz=285,slow=33						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**14.61**	**290**	Lg	Lg	07 56 16.2	
	0.3nm,0.3s,baz=104,slow=30,SNR=2.9						

*IDC **18** 08:16:33.3±2.1, 85°.70N×21°.23E, h0km, mb3.4/2, mbtmp3.7/5, ML3.8/3, Error ellipse: s-maj=74.9km s-min=19.8km az=81.0*
*KOLA **18** 08:16:35.7, 85°.37N×32°.50E, h0km, ML2.4, Error ellipse: s-maj=249.5km s-min=51.7km az=110.0, Arctic Ocean, Gakkel ridge*
*FCIAR **18** 08:16:41.0, 85°.02N×29°.11E, h10km, station OMEGA has station magnitude of 3.40 station ZFI2 has station magnitude of 3.40*

ISC 18 08:16:38.8±3.0, 85°.2N±0°.2×25°.15E±0°.08, h10km, n21, σ1s06/28, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**5.12**	**136**	eP	**Pn**	**08 17 56.7**	**+1.3**
ZFI2				eS	**Sn**	**08 18 53.2**	**-1.1**
	30nm,2.7s						
OMEGA	**Omega**	**5.15**	**136**	eP	**Pn**	**08 17 56.7**	**+1.0**
OMEGA				eS	**Sn**	**08 18 53.2**	**-1.8**
	37nm,2.4s						
NOR	**Nord**	**5.82**	**255**	eP	**Pn**	**08 18 05.1**	**+0.3**
KBS	**Kingsbay**	**6.53**	**203**	eP	**Pn**	**08 18 13.6**	**-1.0**
KBS	**Kingsbay**	**6.53**	**203**	P	**Pn**	**08 18 13.4**	**-1.2**
KBS				S	**Sn**	**08 19 27.1**	**-1.9**
SPA0	**Spitsbergen Ar**	**7.15**	**195**	eP	**Pn**	**08 18 23.3**	**0.0**
SPA0				IAML		08 18 25.8	
	comp=Z,4.6nm,0.3s						
SPA0				eS	**Sn**	**08 19 45.8**	**+1.4**
SPA0	**Spitsbergen Ar**	**7.15**	**195**	eP	**Pn**	**08 18 21.9**	**-1.3**
SPA0				eS	**Sn**	**08 19 43.8**	**-0.6**
SPITS	**Spitsbergen Ar**	**7.15**	**195**	Pn	**Pn**	**08 18 23.2**	**0.0**
	baz=31,slow=12						
SPITS				Sn	**Sn**	**08 19 45.5**	**+1.1**
	baz=19,slow=14						
	comp=Z,3.9nm,0.4s						
SPITS	**Spitsbergen Ar**	**7.15**	**195**	P	**Pn**	**08 18 23.2**	**0.0**
SPITS				S	**Sn**	**08 19 43.1**	**-1.3**
BRBB	**Barentsburg B**	**7.29**	**198**	eP	**Pn**	**08 18 26.3**	**+1.2**
BRBB	**Barentsburg B**	**7.29**	**198**	P	**Pn**	**08 18 25.6**	**+0.6**
BRBB				S	**Sn**	**08 19 48.2**	**+0.6**
BRBA	**Barentsburg A**	**7.32**	**198**	eP	**Pn**	**08 18 26.5**	**+1.0**
HSPB	**Hornsund (broa**	**8.35**	**195**	eP	**Pn**	**08 18 40.7**	**+1.3**
HSPB				eS	**Sn**	**08 20 10.8**	**+0.2**
HSPB				IAML		08 20 16.1	
	comp=Z,2.1nm,0.5s						
HSPB	**Hornsund (broa**	**8.35**	**195**	eP	**Pn**	**08 18 40.1**	**+0.6**
HSPB				eS	**Sn**	**08 20 13.3**	**-0.3**
HSPB	**Hornsund (broa**	**8.35**	**195**	P	**Pn**	**08 18 40.8**	**+1.3**
HOPEN	**Hopen**	**8.74**	**180**	eP	**Pn**	**08 18 45.8**	**+1.0**
DAG	**Danmarks Havn**	**10.37**	**242**	eP	**Pn**	**08 19 06.6**	**-0.6**
ARCES	**ARCESS Array B**	**15.75**	**180**	Pn	**Pn**	**08 20 20.6**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=355,slow=9.9,SNR=12						
	comp=Z,2.1nm,0.5s						
RES	**Resolute Bay**	**18.31**	**313**	P	Pn	08 20 41.5	-11
	comp=Z,0.1nm,0.3s,baz=19,slow=15,SNR=4.3						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**30.18**	**353**	P	P	08 22 39.5	-8.9
	comp=Z,0.4nm,0.9s,baz=357,slow=6.0,SNR=5.4						
	comp=Z,0.4nm,0.9s						
TXAR	**Lajitas Array**	**63.93**	**311**	P	P	08 27 03.7	-7.8
	comp=Z,0.3nm,0.8s,baz=358,slow=8.4,SNR=4.7						
	comp=Z,0.3nm,0.8s						

*IDC **18** 08:21:33.7±0.7, 5°.60S×154°.45E, h140km±6km, mb4.2/22, mbtmp4.6/22, MS3.4/1, Error ellipse: s-maj=16.6km s-min=10.9km az=88.0*
*NEIC **18** 08:21:35.7±1.6, 5°.60S±0°.08×154°.43E±0°.08, h149km±6km, mb4.6/27, Error ellipse: s-maj=12.4km s-min=10.8km az=223.0*
*DJA **18** 08:21:42.5±2.5, 6°S±10°×15°.4E±1°.6, h212km±17km, M5.0/15, mb4.9/15, mB5.2/8, MLv5.4/1, Mw(mB)4.5/8*

ISC 18 08:21:35.0±0.3, 5°.54S±0°.05×154°.51E±0°.05, h150km, n227, σ1s28/191, mb4.6/95, 2C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.69**	**300**		**Pn**	**08 22 18.2**	**-0.4**
TATA	**Tatamba Isabel**	**5.97**	**119**	P	**Pn**	**08 23 01.9**	**+0.5**
SAVO	**Savo Central**	**6.37**	**125**	P	**Pn**	**08 23 09.8**	**+3.1**
HNR	**Honiara**	**6.63**	**126**	P	**Pn**	**08 23 10.6**	**+0.4**
	13nm,0.8s,baz=323,slow=3.3,SNR=4.1						
HNR	**Honiara**	**6.63**	**126**	Pn	**Pn**	**08 23 10.9**	**+0.7**
MANU	**Manus Island**	**7.93**	**296**	Pn	**Pn**	**08 23 28.0**	**+0.4**
NGOA	**Tingoa Renbel**	**8.12**	**138**	P	**Pn**	**08 23 30.2**	**+0.2**
PMG	**Port Moresby**	**8.23**	**242**	P	**Pn**	**08 23 32.7**	**+1.1**
	185nm,0.9s,baz=1.4,slow=4.9,SNR=27						
PMG				S	**Sn**	**08 25 06.9**	**+3.6**
	103nm,0.7s,baz=127,slow=18,SNR=8.6						
PMG	**Port Moresby**	**8.23**	**242**	Pn	**Pn**	**08 23 30.5**	**-1.1**
PMG	**Port Moresby**	**8.23**	**242**	P	**Pn**	**08 23 35.6**	**+4.0**
PMG	**Port Moresby**	**8.23**	**242**	S	**Sn**	**08 25 07.5**	**+4.2**
PMG	**Port Moresby**	**8.23**	**242**	P	**Pn**	**08 23 35.2**	**+3.6**
PMG	**Port Moresby**	**8.23**	**242**	S	**Sn**	**08 25 07.6**	**+4.2**
PMG	**Port Moresby**	**8.23**	**242**	P	**Pn**	**08 23 34.3**	**+2.7**
	0.7nm1um209nm,0.8s						
HURO	**Huon Makira**	**8.81**	**124**	P	**Pn**	**08 23 41.2**	**+2.0**
PATS	**Pohnpei**	**12.87**	**17**	Pn	**Pn**	**08 24 34.1**	**+1.5**
COEN	**Coen**	**13.95**	**232**		**P**	**08 24 47.6**	**-2.0**
COEN	**Coen**	**13.95**	**232**	P	**P**	**08 24 47.9**	**-1.7**
MTSU	**Mount Surprise**	**15.99**	**218**	P	**P**	**08 25 13.2**	**+0.9**
SMPI	**Sarmi**	**16.15**	**282**	P	**P**	**08 25 14.2**	**+0.1**
	174nm,1.4s						
CTA	**Charters Tower**	**16.54**	**208**	P	**P**	**08 25 19.2**	**+0.9**
	70nm,0.8s,baz=24,slow=12,SNR=103						
CTA				LR	LR	08 31 06.1	
	comp=Z,133nm,21.4s,baz=42,slow=35						
CTAO	**Charters Tower**	**16.54**	**208**		**P**	**08 25 18.2**	**-0.2**
CTAO	**Charters Tower**	**16.54**	**208**	P	**P**	**08 25 19.6**	**+1.3**
AUNRC	**North Rockhamp**	**18.11**	**192**	P	**P**	**08 25 36.1**	**+0.5**
GD1S	**Gladstone Soft**	**18.48**	**190**	P	**P**	**08 25 39.9**	**+0.4**
EIDS	**Eidsvold**	**19.99**	**189**		**P**	**08 25 56.0**	**+0.1**
EIDS	**Eidsvold**	**19.99**	**189**	P	**P**	**08 25 55.9**	**0.0**
DZM	**Mont Dzumac**	**20.08**	**146**	P	**P**	**08 25 57.1**	**0.0**
	17nm,0.6s,baz=240,slow=9.5,SNR=25						
	17nm,0.6s						
DZM	**Mont Dzumac**	**20.08**	**146**		**P**	**08 25 57.4**	**+0.3**
DZM				IAmb	IAmb	08 26 02.8	
	comp=Z,51nm,1.3s						
DZM	**Mont Dzumac**	**20.08**	**146**	P	**P**	**08 25 58.2**	**+1.1**
ONTNC	**Ouen Toro**	**20.28**	**146**	P	**P**	**08 25 59.1**	**+0.1**
ONTNC				IAmb	IAmb	08 26 36.7	
	comp=Z,30nm,0.9s						
QIS	**Mount Isa**	**20.79**	**223**	P	**P**	**08 26 04.1**	**-0.5**
QIS	**Mount Isa**	**20.79**	**223**	S	**S**	**08 29 47.7**	**-0.8**
RMQ	**Roma**	**21.54**	**194**	P	**P**	**08 26 12.8**	**+0.3**
AUWSH	**Wavell State H**	**21.78**	**184**	P	**P**	**08 26 15.0**	**0.0**
TW1H	**Toowoomba 1 Ha**	**22.01**	**186**	P	**P**	**08 26 17.0**	**-0.5**
FAKI	**Fak Fak**	**22.35**	**276**	P	**P**	**08 26 19.8**	**-1.1**
FAKI				IAmb	IAmb	08 26 29.4	
	comp=Z,44nm,1.1s						
GC1S	**Gold Coast 1 S**	**22.52**	**182**	P	**P**	**08 26 22.2**	**-0.1**
QLP	**Quilpie**	**23.11**	**204**	P	**P**	**08 26 27.4**	**-0.4**
WB0	**Warramunga Arr**	**24.14**	**232**	P	**P**	**08 26 37.0**	**-0.4**
MTN	**Manton Dam**	**24.17**	**251**	P	**P**	**08 26 37.2**	**-0.5**
WRAB	**Tennant Creek**	**24.27**	**232**	P	**P**	**08 26 38.0**	**-0.5**
WRAB	**Tennant Creek**	**24.27**	**232**	P	**P**	**08 26 38.4**	**-0.1**
WRA	**Warramunga Arr**	**24.28**	**232**	P	**P**	**08 26 37.8**	**-0.9**
	comp=Z,55nm,0.7s,baz=56,slow=9.5,SNR=297						
WRA	**Warramunga Arr**	**24.28**	**232**		**P**	**08 26 36.6**	**-2.0**
AULRC	**Lightning Ridg**	**24.55**	**194**	P	**P**	**08 26 40.9**	**0.0**
ARMA	**Armidale**	**24.89**	**186**		**P**	**08 26 44.3**	**+0.1**
ARMA	**Armidale**	**24.89**	**186**	P	**P**	**08 26 44.0**	**-0.2**
AUPHS	**Peel High Scho**	**25.65**	**187**	P	**P**	**08 26 50.8**	**-0.1**
INKA	**Innaminka**	**25.66**	**209**		**P**	**08 26 50.2**	**-0.8**
H11S3	**WAKE ISLAND Hy**	**26.73**	**26**	T	T	08 55 49.8	
	baz=206,SNR=11						
H11S2	**WAKE ISLAND Hy**	**26.74**	**26**	T	T	08 55 50.6	
	baz=206,slow=74,SNR=8.2						
H11S1	**WAKE ISLAND Hy**	**26.75**	**26**	T	T	08 55 50.3	
	baz=206,slow=74,SNR=6.6						
AS31	**Alice Springs**	**26.80**	**226**		**P**	**08 27 00.4**	**-1.0**
ASAR	**Alice Springs**	**26.80**	**226**	P	**P**	**08 27 00.2**	**-1.2**
	comp=Z,14nm,0.7s,baz=57,slow=9.2,SNR=193						
	comp=Z,14nm,0.7s						
AUALC	**St Philip's Co**	**26.83**	**226**	P	**P**	**08 27 00.9**	**-0.7**
AUDCS	**Dubbo College**	**27.11**	**191**	P	**P**	**08 27 03.3**	**-0.7**
CMSA	**Cobar Meteorol**	**27.15**	**197**	P	**P**	**08 27 03.4**	**-0.9**
KNRA	**Kununurra**	**27.20**	**246**	P	**P**	**08 27 03.7**	**-1.2**
KNRA				IAmb	IAmb	08 27 06.1	
	comp=Z,16nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**27.42**	**274**	P	**P**	**08 27 07.3**	**+0.3**
STKA	**Stephens Creek**	**28.85**	**203**	P	**P**	**08 27 17.8**	**-1.7**
	comp=Z,12nm,0.7s,baz=9.4,slow=9.0,SNR=25						
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**28.85**	**203**	P	**P**	**08 27 18.4**	**-1.1**
STKA	**Stephens Creek**	**28.85**	**203**	P	**P**	**08 27 18.2**	**-1.3**
CAN	**Canberra**	**30.07**	**189**	P	**P**	**08 27 29.4**	**-0.8**
HTT	**Hallett**	**31.31**	**206**	P	**P**	**08 27 40.6**	**-0.6**
BBOO	**Buckleboo**	**32.12**	**210**	P	**P**	**08 27 47.3**	**-1.0**
BBOO	**Buckleboo**	**32.12**	**210**	P	**P**	**08 27 46.9**	**-1.4**
AMBR	**Murray Bridge**	**32.63**	**204**	P	**P**	**08 27 51.7**	**-0.9**
TOO	**Toolangi**	**32.92**	**193**	P	**P**	**08 27 54.7**	**-0.5**
TOLI2	**Tolitoli**	**34.32**	**280**	P	**P**	**08 28 06.4**	**-1.3**
TOLI2				IAmb	IAmb	08 28 42.9	
	comp=Z,10nm,1.0s						
OUZ	**Omahuta**	**34.39**	**152**	P	**P**	**08 28 08.6**	**+0.7**
MPSI	**Mapaga**	**35.05**	**278**	P	**P**	**08 28 12.4**	**-1.4**
	comp=Z,580nmcomp=Z,36nm,0.8s						
RAO	**Raoul Island**	**35.15**	**135**	P	**P**	**08 28 13.1**	**-1.3**
FORT	**Forrest**	**35.33**	**222**	P	**P**	**08 28 15.0**	**-1.0**
MBWA	**Marble Bar**	**37.10**	**242**	P	**P**	**08 28 30.2**	**-1.0**
MBWA				IAmb	IAmb	08 28 30.4	
	comp=Z,12nm,0.8s						
PSA00	**Pilbara Seismi**	**37.14**	**241**	P	**P**	**08 28 30.2**	**-1.3**
PSA00				IAmb	IAmb	08 28 30.9	
	comp=Z,13nm,0.8s						
PSA00	**Pilbara Seismi**	**37.14**	**241**	P	**P**	**08 28 30.1**	**-1.5**
MOO	**Moorlands**	**37.32**	**189**	P	**P**	**08 28 33.1**	**+0.4**
TAU	**Tasmania Unive**	**37.75**	**189**	P	**P**	**08 28 37.3**	**+0.9**
HAZ	**Te Kaha**	**38.44**	**150**	P	**P**	**08 28 42.5**	**+0.3**
URZ	**Urewera**	**38.50**	**151**	P	**P**	**08 28 42.6**	**-0.1**
URZ	**Urewera**	**38.50**	**151**	P	**P**	**08 28 44.0**	**+1.3**
QRZ	**Quartz Range**	**38.67**	**158**	P	**P**	**08 28 44.2**	**+0.1**
RTZ	**Ruatahuna**	**38.72**	**151**	P	**P**	**08 28 45.1**	**+0.5**
MWZ	**Matawai**	**38.77**	**151**	P	**P**	**08 28 45.6**	**+0.7**
BKZ	**Black Stump Fm**	**38.93**	**152**	P	**P**	**08 28 46.1**	**-0.3**
TSZ	**Takapari Road**	**39.42**	**154**	P	**P**	**08 28 49.8**	**-0.5**
THZ	**Tophouse**	**39.62**	**158**	P	**P**	**08 28 51.4**	**-0.7**
BFZ	**Birch Farm**	**40.05**	**154**	P	**P**	**08 28 54.9**	**-0.7**
MEEK	**Meekatharra**	**40.13**	**234**	P	**P**	**08 28 55.6**	**-0.9**
LTZ	**Lake Taylor**	**40.29**	**160**	P	**P**	**08 28 57.3**	**-0.2**
KHZ	**Kahutara**	**40.42**	**158**	P	**P**	**08 28 57.9**	**-0.6**
OXZ	**Oxford**	**40.69**	**160**	P	**P**	**08 28 59.9**	**-0.9**
MSZ	**Milford Sound**	**40.71**	**165**	P	**P**	**08 29 01.5**	**+0.6**
RPZ	**Rata Peaks**	**40.72**	**162**	P	**P**	**08 29 01.1**	**+0.1**
RPZ	**Rata Peaks**	**40.72**	**162**	P	**P**	**08 29 00.9**	**-0.1**
GVZ	**Greta Valley S**	**40.72**	**159**	P	**P**	**08 29 00.5**	**-0.5**
LBZ	**Lake Benmore**	**41.06**	**163**	P	**P**	**08 29 02.4**	**-1.4**
MQZ	**McQueen's Vall**	**41.23**	**160**	P	**P**	**08 29 05.0**	**-0.2**
MLZ	**Mavora Lakes**	**41.41**	**165**		**P**	**08 29 06.3**	**-0.3**
MLZ				IAmb	IAmb	08 29 06.8	
	comp=Z,25nm,1.0s						
KLBR	**Kellerberrin**	**43.06**	**228**	P	**P**	**08 29 18.9**	**-1.3**
MORW	**Morawa**	**43.23**	**233**	P	**P**	**08 29 20.0**	**-1.6**
MORW				IAmb	IAmb	08 29 20.8	
	comp=Z,14nm,0.7s						
MJAR	**Matsushiro Arr**	**44.56**	**341**	P	**P**	**08 29 30.4**	**-1.6**
	comp=Z,2.5nm,0.8s,baz=174,slow=8.1,SNR=4.8						
	comp=Z,2.5nm,0.8s						
MJAR	**Matsushiro Arr**	**44.56**	**341**	IAmb	IAmb	08 29 33.0	
	comp=Z,2.5nm,0.9s						
BBJI	**Bungbulang**	**46.58**	**265**	P	**P**	**08 29 46.8**	**-1.6**
BBJI				IAmb	IAmb	08 30 19.4	
	comp=Z,18nm,1.1s						
TJN	**Taejon**	**48.84**	**331**	P	**P**	**08 30 06.0**	**+0.7**
KSRS	**Korea Array**	**49.44**	**332**	P	**P**	**08 30 10.1**	**+0.2**
	comp=Z,9.4nm,0.8s,baz=147,slow=7.7,SNR=35						
	comp=Z,9.4nm,0.8s						
KSAR	**Wonju Array Be**	**49.44**	**332**	P	**P**	**08 30 10.4**	**+0.5**
KS19	**Wonju Array Si**	**49.50**	**332**	P	**P**	**08 30 10.1**	**-0.3**
KS19				IAmb	IAmb	08 30 10.8	
	comp=Z,12nm,0.8s						
INCN	**Inchon**	**50.07**	**331**	P	**P**	**08 30 14.9**	**+0.2**
INCN	**Inchon**	**50.07**	**331**	P	**P**	**08 30 15.6**	**+0.9**

	comp=Z,15nm,0.8s						
ANM	**Nome**	**75.98**	**17**	P	**P**	**08 33 06.8**	**+1.6**
ANM				IAmb	IAmb	08 33 08.0	
	comp=Z,7.2nm,0.8s						
I17K	**Unalakleet**	**76.91**	**19**	IAmb	IAmb	08 33 13.8	
	comp=Z,8.9nm,0.8s						
G16K	**Koyuk River**	**77.47**	**17**	IAmb	IAmb	08 33 16.4	
	comp=Z,11nm,0.8s						
F17K	**Baldwin Pennin**	**78.53**	**17**	IAmb	IAmb	08 33 23.6	
	comp=Z,8.5nm,0.8s						
TIXI	**Tiksi**	**78.86**	**352**	P	**P**	**08 33 20.0**	**-1.0**
	comp=Z,3.4nm,0.3s,baz=109,slow=3.8,SNR=3.8						
	comp=Z,3.4nm,0.3s						
TIXI	**Tiksi**	**78.86**	**352**	P	**P**	**08 33 21.4**	**+0.4**
SUA	**Susitna One**	**78.95**	**24**	P	**P**	**08 33 22.5**	**+0.6**
RDOG	**Red Dog Mine**	**79.25**	**15**	P	**P**	**08 33 25.1**	**+1.9**
RDOG				IAmb	IAmb	08 34 06.6	
	comp=Z,20nm,1.2s						
G19K	**Purcell Mounta**	**79.56**	**18**	IAmb	IAmb	08 34 07.7	
	comp=Z,9.8nm,1.1s						
PMR	**Palmer**	**79.66**	**24**	P	**P**	**08 33 26.5**	**+0.9**
PMR				IAmb	IAmb	08 33 38.9	
	comp=Z,12nm,0.9s						
C18K	**Utukok River**	**80.12**	**15**	IAmb	IAmb	08 34 11.1	
	comp=Z,11nm,1.2s						
E19K	**Redstone River**	**80.39**	**17**	IAmb	IAmb	08 34 12.9	
	comp=Z,13nm,0.9s						
RND	**Reindeer**	**80.75**	**22**	IAmb	IAmb	08 33 32.8	
	comp=Z,12nm,0.7s						
D19K	**Kuna River**	**80.83**	**16**	IAmb	IAmb	08 34 14.8	
	comp=Z,11nm,1.0s						
C19K	**Lookout Ridge**	**80.86**	**15**	IAmb	IAmb	08 34 15.0	
	comp=Z,8.9nm,0.8s						
G21K	**Allakaket**	**80.92**	**19**	IAmb	IAmb	08 34 14.7	
	comp=Z,9.6nm,1.1s						
D20K	**Etivluk River**	**81.39**	**16**	IAmb	IAmb	08 34 17.4	
	comp=Z,13nm,1.2s						
N25K	**Chitina, Valde**	**81.54**	**25**	IAmb	IAmb	08 33 35.7	
	comp=Z,8.9nm,0.8s						
COLA	**College**	**81.91**	**21**	P	**P**	**08 33 37.5**	**0.0**
COLA				IAmb	IAmb	08 33 38.3	
	comp=Z,10nm,0.7s						
COLA	**College**	**81.91**	**21**	P	**P**	**08 33 38.3**	**+0.9**
MK31	**Makanchi Array**	**82.00**	**319**	P	**P**	**08 33 37.9**	**-0.5**
MKAR	**Makanchi Array**	**82.00**	**319**	P	**P**	**08 33 38.2**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=95,slow=8.0,SNR=29						
MKAR				pP	**pP**	**08 34 14.1**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=104,slow=5.1,SNR=2.8						
	comp=Z,1.9nm,0.6s						
MKAR	**Makanchi Array**	**82.00**	**319**		**P**	**08 33 38.0**	**-0.3**
ILAR	**Eielson Array**	**82.21**	**22**	P	**P**	**08 33 38.7**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=242,slow=5.7,SNR=58						
ILAR				pP	**pP**	**08 34 13.7**	**-2.5**
	comp=Z,3.2nm,0.9s,baz=251,slow=5.1,SNR=7.4						
	comp=Z,4.4nm,0.6s						
ILAR	**Eielson Array**	**82.21**	**22**	P	**P**	**08 33 38.9**	**-0.2**
MAKZ	**Makanchi**	**82.21**	**319**		**P**	**08 33 39.0**	**-0.5**
COLD	**Coldfoot**	**82.40**	**19**	P	**P**	**08 33 41.2**	**+1.3**
D22K	**Ayikyak River**	**82.61**	**17**	IAmb	IAmb	08 33 43.4	
	comp=Z,7.0nm,0.7s						
J25K	**Salcha River,**	**82.69**	**22**	IAmb	IAmb	08 33 43.3	
	comp=Z,10.0nm,0.7s						
ZAA0	**Zalesovo Array**	**82.71**	**326**		**P**	**08 33 40.9**	**-1.0**
ZALV	**Zalesovo Beam**	**82.71**	**326**	P	**P**	**08 33 40.7**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=95,slow=5.7,SNR=10						
	comp=Z,1.7nm,0.4s						
L26K	**Log Cabin Wild**	**82.72**	**24**	P	**P**	**08 33 42.5**	**+0.7**
L26K				IAmb	IAmb	08 33 43.6	
	comp=Z,6.9nm,0.8s						
SCRK	**Sand Creek**	**82.91**	**23**	P	**P**	**08 33 43.7**	**+0.8**
E23K	**Chandalar**	**83.05**	**18**	IAmb	IAmb	08 34 29.5	
	comp=Z,8.2nm,1.1s						
O28M	**Mount Upton**	**83.08**	**27**	P	**P**	**08 33 45.6**	**+1.6**
O28M				IAmb	IAmb	08 33 46.9	
	comp=Z,10.0nm,0.8s						
J26L	**Joseph Creek**	**83.32**	**23**	IAmb	IAmb	08 33 47.0	
	comp=Z,5.1nm,0.7s						
BCAR	**Beaver Creek A**	**83.38**	**24**	P	**P**	**08 33 46.6**	**+1.5**
C23K	**Itkillik River**	**83.77**	**17**	IAmb	IAmb	08 34 30.8	
	comp=Z,15nm,1.2s						
D24K	**Happy Valley**	**83.90**	**18**	IAmb	IAmb	08 33 50.6	
	comp=Z,6.2nm,0.8s						
HYT	**Haines Junctio**	**84.31**	**27**	P	**P**	**08 33 51.8**	**+1.8**
HYT				IAmb	IAmb	08 34 33.8	
	comp=Z,15nm,0.9s						
BMAR	**Burnt Mountain**	**84.36**	**20**	P	**P**	**08 33 51.7**	**+1.7**
E25K	**Arctic Village**	**84.38**	**19**	P	**P**	**08 33 51.6**	**+1.5**
G26K	**Porcupine Rive**	**84.40**	**20**	IAmb	IAmb	08 33 53.1	
	comp=Z,11nm,0.8s						
QSPA	**South Pole Qui**	**84.42**	**180**	P	**P**	**08 33 49.8**	**-0.8**
	comp=Z,3.3nm,0.4s,baz=5.6,slow=1.3,SNR=5.8						
	comp=Z,3.3nm,0.4s						
QSPA	**South Pole Qui**	**84.42**	**180**	IAmb	IAmb	08 34 28.3	
	comp=Z,7.6nm,0.9s						
M29M	**Somme Creek**	**84.51**	**25**	P	**P**	**08 33 52.3**	**+1.3**
I27K	**Kandik River**	**84.56**	**22**	IAmb	IAmb	08 33 54.0	
	comp=Z,6.0nm,0.8s						
DAWY	**Dawson**	**84.77**	**24**	P	**P**	**08 33 54.1**	**+1.9**
DAWY				IAmb	IAmb	08 34 35.3	
	comp=Z,8.7nm,1.1s						
H27K	**Steamboat Moun**	**84.87**	**21**	P	**P**	**08 33 54.2**	**+1.5**
H27K				IAmb	IAmb	08 33 55.3	
	comp=Z,7.2nm,0.8s						
O30N	**Mendenhall**	**84.94**	**27**	P	**P**	**08 33 54.9**	**+1.8**
KSH2	**Kashi**	**84.94**	**310**	P	**P**	**08 33 53.0**	**-0.8**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
I28M	**Miner Creek**	**85.13**	**22**	IAmb	IAmb	08 33 56.2	
	comp=Z,5.4nm,0.8s						
M30M	**Minto, Yukon**	**85.28**	**26**	P	**P**	**08 33 56.7**	**+1.9**
N31M	**Braeburn, Yuko**	**85.33**	**27**	P	**P**	**08 33 57.0**	**+2.0**
J29N	**Klondike Camp**	**85.39**	**24**	P	**P**	**08 33 57.4**	**+2.0**
J29N				IAmb	IAmb	08 33 58.0	
	comp=Z,9.4nm,0.7s						
KURK	**Kurchatov**	**85.40**	**322**	P	**P**	**08 33 54.7**	**-0.8**
KURBB	**Kurchatov Arra**	**85.43**	**322**	P	**P**	**08 33 54.5**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=94,slow=5.3,SNR=12						
	comp=Z,0.8nm,0.5s						
K29M	**Barlow Dome**	**85.44**	**24**	IAmb	IAmb	08 34 39.5	
	comp=Z,7.1nm,0.9s						
C27K	**Jago River**	**85.70**	**18**	IAmb	IAmb	08 33 58.9	
	comp=Z,7.4nm,0.8s						
I29M	**Ogilvie Camp,**	**85.72**	**23**	P	**P**	**08 33 57.3**	**+0.5**
I29M				IAmb	IAmb	08 33 58.6	
	comp=Z,9.2nm,0.8s						
MAYO	**Mayo, Yukon**	**86.03**	**25**	P	**P**	**08 34 00.0**	**+1.6**
F28M	**Old Crow**	**86.06**	**20**	P	**P**	**08 34 00.1**	**+1.7**
F28M				IAmb	IAmb	08 34 01.0	
	comp=Z,7.3nm,0.8s						
M31M	**Drury Creek, Y**	**86.19**	**26**	P	**P**	**08 34 00.6**	**+1.3**
M31M				IAmb	IAmb	08 34 01.4	
	comp=Z,6.5nm,0.8s						
J30M	**Hart River**	**86.20**	**24**	IAmb	IAmb	08 34 02.2	
	comp=Z,9.1nm,0.8s						
D27M	**Malcolm River**	**86.39**	**19**	IAmb	IAmb	08 34 02.4	
	comp=Z,6.0nm,0.7s						
G29M	**Pine Creek**	**86.43**	**21**	IAmb	IAmb	08 34 02.7	
	comp=Z,13nm,1.0s						
S34M	**Telegraph Cree**	**86.44**	**31**	IAmb	IAmb	08 34 03.9	
	comp=Z,6.7nm,0.9s						
F30M	**Barrier River**	**87.50**	**21**	IAmb	IAmb	08 34 07.5	
	comp=Z,8.5nm,0.9s						
F31M	**Tsiigehtchic**	**88.18**	**22**	IAmb	IAmb	08 34 52.1	
	comp=Z,12nm,1.4s						
INK	**Inuvik**	**88.54**	**21**	P	**P**	**08 34 10.2**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=289,slow=3.3,SNR=9.8						
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**88.54**	**21**	IAmb	IAmb	08 34 53.5	
	comp=Z,11nm,1.4s						
BVAR	**Borovoye Array**	**90.85**	**323**	P	**P**	**08 34 19.7**	**-1.8**
	comp=Z,1.7nm,0.5s,baz=104,slow=6.3,SNR=9.3						
BVAR				pP	**pP**	**08 34 55.9**	**-2.7**
	comp=Z,1.6nm,0.8s,baz=124,slow=4.5,SNR=3.1						
	comp=Z,1.7nm,0.5s						
NVAR	**Mina Array Bea**	**91.21**	**52**	P	**P**	**08 34 25.3**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=257,slow=5.3,SNR=7.9						
	comp=Z,1.0nm,0.8s						
A36M	**Sachs Harbour**	**92.22**	**18**		**P**	**08 34 27.5**	**+0.2**
A36M				IAmb	IAmb	08 34 28.7	
	comp=Z,5.1nm,0.8s						
YKA	**Yellowknife Ar**	**95.29**	**28**	P	**P**	**08 34 41.0**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=278,slow=5.1,SNR=15						
YKA				pP	**pP**	**08 35 17.8**	**-1.8**
	comp=Z,0.8nm,0.9s,baz=276,slow=5.1,SNR=4.7						
	comp=Z,0.8nm,0.8s						
GERES	**GERESS Array B**	**125.56**	**329**	PKhKP	PKPpre	08 40 15.3	
	comp=Z,0.8nm,0.4s,baz=108,slow=2.2,SNR=2.5						

TORD	**Torodi Ar. Bea**	**152.15**	**288**	PKPbc	**PKPbc**	**08 41 12.2**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=69,slow=3.3,SNR=10						

IDC 18 08:26:26.3±1.6, 51.25N×108.48E, h0km, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=21.4km s-min=12.7km az=22.0, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLY	**Talaya**	**3.06**	**280**	Pn	Pn	08 27 15.6	-0.2
	19nm,0.3s,baz=104,slow=10						
TLY				Pg	Pb	08 27 21.4	-0.2
	baz=118,slow=15						
TLY				Lg	Lg	08 28 01.3	
	baz=336,slow=20						
SONM	**Songino Array**	**3.68**	**202**	Pn	Pn	08 27 25.8	+1.3
	3.3nm,0.3s,baz=19,slow=13,SNR=83						
SONM				Pg	Pb	08 27 32.7	+0.4
	13nm,0.3s,baz=21,slow=17,SNR=27						
SONM				Lg	Lg	08 28 23.0	
	8.9nm,0.3s,baz=19,slow=36,SNR=20						
	5.3nm,0.3s						
I34MN	**SONGINO INFRAS**	**3.71**	**202**	I	I	08 50 50.0	
	baz=24,slow=344,SNR=2.6						
HILR	**Hailar Array B**	**7.40**	**99**	Pn	Pn	08 28 15.8	+0.3
	baz=290,slow=13						
HILR				Pg	Pb	08 28 41.6	+6.1
	baz=286,slow=17						
HILR				Lg	Lg	08 30 20.7	
	baz=288,slow=29						
	0.6nm,0.3s						

MEX 18 08:31:21.1±0.7, 17.54N×94.33W, h196km±4km, MD4.2, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UXUV	**UXUV**	**0.28**	**141**	*e*P	Pn	08 31 45.8	-1.4
UXUV				*e*S	Sn	08 32 04.5	-2.8
CMIG	**Matias Romero**	**0.69**	**230**	*i* P	Pn	08 31 47.3	-1.3
CMIG				*e*S	Sn	08 32 08.1	-1.8
PMUV	**Sontecomapan**	**1.25**	**323**	*e*P	Pn	08 31 50.8	-1.7
PMUV				*e*S	Sn	08 32 14.3	-2.6
CARR	**Arriaga**	**1.34**	**163**	*e*P	Pn	08 31 52.5	-0.7
CARR				*e*S	Sn	08 32 16.2	-1.8
TGIG		**1.38**	**123**	*e*P	Pn	08 31 52.0	-1.5
TGIG				*e*S	Sn	08 32 16.7	-2.0
NEUV	**Arroyo Zacate**	**1.41**	**277**	*e*P	Pn	08 31 52.2	-1.5
NEUV				*e*S	Sn	08 32 16.4	-2.5
PCIG		**2.11**	**149**	*e*S	Sn	08 32 28.5	-2.7
VHO	**Vista Hermosa**	**2.34**	**259**	*e*P	Pn	08 32 02.2	-1.0
VHO				*e*S	Sn	08 32 35.8	-0.1
HUIG	**Huatulco**	**2.45**	**224**	*e*P	Pn	08 32 01.5	-2.7
HUIG				*e*S	Sn	08 32 36.9	-0.9
TOIG	**Toxpalan**	**2.66**	**282**	*e*P	Pn	08 32 06.0	-0.7
TOIG				*e*S	Sn	08 32 39.8	-2.5
JAUV	**Jalcomulco**	**2.97**	**308**	*e*P	Pn	08 32 08.4	-1.8
JAUV				*e*S	Sn	08 32 44.7	-3.9
TPIG	**Tehuac#an**	**3.01**	**287**	*e*P	Pn	08 32 10.2	-0.6
TPIG				*e*S	Sn	08 32 47.4	-2.4
PEIG	**Puerto Escondi**	**3.10**	**241**	*e*P	Pn	08 32 09.0	-2.8
PEIG				*e*S	Sn	08 32 49.7	-1.7
PAVE	**Pavencul**	**3.12**	**138**	*e*P	Pn	08 32 10.3	-1.9
PATR	**El Naranjo**	**3.14**	**140**	*e*P	Pn	08 32 13.0	+0.5
YOIG	**Yosondua**	**3.14**	**258**	*e*P	Pn	08 32 11.3	-1.3
YOIG				*e*S	Sn	08 32 50.6	-2.1
CHUJ	**Union Juarez**	**3.23**	**138**	*e*P	Pn	08 32 13.4	-0.3
TXIG	**Tlaxiaco**	**3.29**	**266**	*e*P	Pn	08 32 13.5	-0.8
TXIG				*e*S	Sn	08 32 51.6	-4.3
HLIG	**Huajuapan de L**	**3.32**	**276**	*e*P	Pn	08 32 13.9	-0.8
HLIG				*e*S	Sn	08 32 52.1	-4.4
FTIG	**Fresnillo de T**	**3.64**	**276**	*e*P	Pn	08 32 18.5	+0.1
FTIG				*e*S	Sn	08 33 00.9	-2.4
PNIG	**Pinotepa**	**3.81**	**253**	*e*P	Pn	08 32 18.0	-2.4
PNIG				*e*S	Sn	08 33 02.8	-4.0
TLIG	**Tlapa**	**4.04**	**271**	*e*P	Pn	08 32 22.7	-0.7
TLIG				*e*S	Sn	08 33 08.3	-3.9
CXUV	**Coxquihui**	**4.05**	**311**	*e*P	Pn	08 32 22.0	-1.4
CXUV				*e*S	Sn	08 33 11.4	-0.9
MGIG	**Malinaltepec**	**4.12**	**266**	*e*P	Pn	08 32 23.7	-0.8
MGIG				*e*S	Sn	08 33 11.7	-2.4
PPM	**Popocatepetl**	**4.35**	**291**	*e*P	Pn	08 32 28.3	+0.6
PPM				*e*S	Sn	08 33 15.9	-4.1
CRIG	**Cruz Grande**	**4.66**	**261**	*e*P	Pn	08 32 29.3	-1.8
CRIG				*e*S	Sn	08 33 23.8	-2.2

IDC 18 09:00:41.2±7.7, 28.85N×144.01E, h0km, mb3.7/4, mbtmp3.7/5, ML3.0/1, Error ellipse: s-maj=294.8km s-min=24.0km az=72.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**9.09**	**329**	Pn	Pn	09 02 53.4	-0.3
	0.2nm,0.3s,baz=151,slow=9.6,SNR=8.2						
	1.8nm,0.5s						
SONM	**Songino Array**	**34.62**	**314**	P	P	09 07 32.0	-0.1
	0.2nm,0.3s,baz=125,slow=7.2,SNR=2.2						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**49.40**	**192**	P	P	09 09 32.9	+0.1
	1.3nm,0.5s,baz=13,slow=8.4,SNR=18						
	1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**52.99**	**313**	P	P	09 09 59.3	-0.2
	1.5nm,0.7s,baz=87,slow=7.6,SNR=2.8						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**53.11**	**192**	P	P	09 10 00.3	-0.4
	0.2nm,0.7s,baz=14,slow=7.9,SNR=1.6						
	0.2nm,0.7s						

*SJA **18** 09:05:46.6±1.1, 19.19S×70.61W, h40km, ML3.8, MW3.8*
*GUC **18** 09:05:48.8±0.8, 19.12S×70.44W, h63km±8km, ML3.9*
*NEIC **18** 09:05:48.8±1.9, 19.14S±0.04×70.59W±0.06, h55km±13km, mb4.0/5, ML3.9(GUC), Error ellipse: s-maj=9.8km s-min=2.9km az=55.0*
*IDC **18** 09:05:53.0±3.4, 19.04S×70.35W, h102km±29km, mb3.4/5, mbtmp3.7/6, Error ellipse: s-maj=33.9km s-min=26.3km az=87.0*
*VAO **18** 09:06:20.8±1.0, 17.17S×68.38W, h154km±7km, mb4.0, Presumed earthquake*

ISC 18 09:05:47.9±0.9, 19.14S±0.03×70.56W±0.07, h64km±8km, n83, σ1°70/88, mb3.8/4, 5C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB12	**IPOC Station P**	**0.57**	**23**		**Pn**	**09 06 01.5**	**+0.5**
PB12	**IPOC Station P**	**0.57**	**23**	*e*P	**Pn**	**09 06 01.5**	**+0.5**
PB12	**IPOC Station P**	**0.57**	**23**	*e*P	**Pn**	**09 06 00.7**	**-0.3**
PB12				*e*S	**Sn**	**09 06 10.9**	**+0.3**
PB12				IAML		09 06 12.1	
	comp=Z,3μm,0.1s						
AP01	**Chacalluta**	**0.79**	**15**		**Pn**	**09 06 04.1**	**+0.5**
AP01	**Chacalluta**	**0.79**	**15**	*e*P	**Pn**	**09 06 04.0**	**+0.5**
AP01				*e*S	**Sn**	**09 06 15.2**	**+0.2**
AP01				IAML		09 06 15.9	
	comp=E,9μm,0.3s						
AP01	**Chacalluta**	**0.79**	**15**	*e*P	**Pn**	**09 06 03.4**	**-0.1**
AP01				*e*S	**Sn**	**09 06 15.8**	**+0.8**
AP01				IAML		09 06 16.6	
	comp=Z,4μm,0.3s						
PB11	**IPOC Station P**	**1.05**	**126**		**Pn**	**09 06 07.5**	**+0.6**
PB11	**IPOC Station P**	**1.05**	**126**	*e*P	**Pn**	**09 06 07.5**	**+0.6**
PB11				*e*S	**Sn**	**09 06 21.5**	**+0.4**
PB11				IAML		09 06 22.3	
	comp=E,6μm,0.3s						
PB11	**IPOC Station P**	**1.05**	**126**	*e*P	**Pn**	**09 06 06.8**	**-0.2**
PB11				IAML		09 06 22.7	
	comp=Z,3μm,0.1s						
TA02	**Huaiquique**	**1.19**	**160**	*e*P	**Pn**	**09 06 10.2**	**+1.6**
TA02				*e*S	**Sn**	**09 06 25.4**	**+1.3**
TA02	**Huaiquique**	**1.19**	**160**	*e*P	**Pn**	**09 06 09.6**	**+1.0**
TA02				IAML		09 06 29.3	
	comp=Z,3μm,0.1s						
PB16	**IPOC Station P**	**1.28**	**51**		**Pn**	**09 06 10.6**	**+0.3**
PB16	**IPOC Station P**	**1.28**	**51**	*e*P	**Pn**	**09 06 10.6**	**+0.3**
PB16				*e*S	**Sn**	**09 06 26.6**	**-0.4**
PB16				IAML		09 06 28.0	
	comp=N,2μm,0.5s						
PB16	**IPOC Station P**	**1.28**	**51**	*e*P	**Pn**	**09 06 09.8**	**-0.5**
PB16				IAML		09 06 30.1	
	comp=Z,2μm,0.5s						
GO01	**Chusmiza**	**1.39**	**112**		**Pn**	**09 06 12.5**	**+0.8**
GO01	**Chusmiza**	**1.39**	**112**	*e*P	**Pn**	**09 06 12.4**	**+0.8**
GO01				*e*S	**Sn**	**09 06 30.4**	**+0.9**
GO01				IAML		09 06 32.6	
	comp=N,6μm,0.1s						
GO01	**Chusmiza**	**1.39**	**112**	*e*P	**Pn**	**09 06 11.7**	**0.0**
GO01				*e*S	**Sn**	**09 06 30.3**	**+0.9**
GO01				IAML		09 06 31.0	
	comp=Z,2μm,0.1s						
PX03	**IPOC Station P**	**1.53**	**145**	*e*P	**Pn**	**09 06 14.5**	**+1.3**
PX03				*e*S	**Sn**	**09 06 33.2**	**+1.0**
PX03				IAML		09 06 33.9	
	comp=N,1μm,0.2s						
PB08	**IPOC Station P**	**1.66**	**127**		**Pn**	**09 06 16.1**	**+0.9**
PB08	**IPOC Station P**	**1.66**	**127**	*e*P	**Pn**	**09 06 16.0**	**+0.8**
PB08				*e*S	**Sn**	**09 06 36.2**	**+0.5**
PB08				IAML		09 06 37.6	
	comp=E,2μm,0.1s						
PB08	**IPOC Station P**	**1.66**	**127**	*e*P	**Pn**	**09 06 15.3**	**+0.1**
PB08				*e*S	**Sn**	**09 06 36.6**	**+0.9**
PB08				IAML		09 06 38.1	
	comp=Z,2μm,0.2s						
PB18	**Visviri**	**1.85**	**34**		**Pn**	**09 06 20.3**	**+2.4**
PB18	**Visviri**	**1.85**	**34**	*e*P	**Pn**	**09 06 20.3**	**+2.4**
PB18				*e*S	**Sn**	**09 06 44.1**	**+3.5**
PB18				IAML		09 06 57.1	
	comp=N,814nm,0.4s						
PB01	**IPOC Station P**	**2.14**	**152**		**Pn**	**09 06 22.2**	**+0.7**
PB01	**IPOC Station P**	**2.14**	**152**	*e*P	**Pn**	**09 06 22.4**	**+0.9**
PB01				IAML		09 06 56.9	
	comp=N,480nm,0.3s						
PB01	**IPOC Station P**	**2.14**	**152**	*e*P	**Pn**	**09 06 21.8**	**+0.3**
PB01				*e*S	**Sn**	**09 06 47.9**	**+0.8**
PB02	**IPOC Station P**	**2.25**	**164**		**Pn**	**09 06 24.2**	**+1.2**
PB02	**IPOC Station P**	**2.25**	**164**	*e*P	**Pn**	**09 06 24.5**	**+1.5**
PB02				IAML		09 06 52.7	
	comp=E,931nm,0.1s						
PB02	**IPOC Station P**	**2.25**	**164**	*e*P	**Pn**	**09 06 23.9**	**+0.8**
PB02				*e*S	**Sn**	**09 06 50.5**	**+0.7**
PB02				IAML		09 07 11.0	
	comp=Z,729nm,0.3s						
PB07	**IPOC Station P**	**2.65**	**166**		**Pn**	**09 06 29.9**	**+1.5**
PB07	**IPOC Station P**	**2.65**	**166**	*e*P	**Pn**	**09 06 27.7**	**-0.7**
PB07				*e*S	**Sn**	**09 06 59.8**	**+0.3**
PB07				IAML		09 07 00.6	
	comp=Z,235nm,0.6s						
PB09	**IPOC Station P**	**2.92**	**155**		**Pn**	**09 06 34.2**	**+2.1**
PB09	**IPOC Station P**	**2.92**	**155**	*e*P	**Pn**	**09 06 33.9**	**+1.8**
PB09				IAML		09 07 30.3	
	comp=E,267nm,0.3s						
PB09	**IPOC Station P**	**2.92**	**155**	*e*P	Pn	09 06 20.6	-12
PB09				IAML		09 07 29.9	
	comp=Z,177nm,0.5s						
PB03	**IPOC Station P**	**2.99**	**166**		**Pn**	**09 06 34.3**	**+1.2**
PB03	**IPOC Station P**	**2.99**	**166**	*e*P	**Pn**	**09 06 34.2**	**+1.2**
PB03	**IPOC Station P**	**2.99**	**166**	*e*P	Pn	09 06 27.1	-6.0
PB03				*e*S	**Sn**	**09 07 07.6**	**-0.3**
PB03				IAML		09 07 11.8	
	comp=Z,192nm,0.2s						
LPAZ	**La Paz**	**3.66**	**40**	P	**Pn**	**09 06 45.3**	**+2.6**
	comp=Z,9.9nm,0.3s,baz=228,slow=2.7,SNR=79						
LPAZ	**La Paz**	**3.66**	**40**		**Pn**	**09 06 45.8**	**+3.1**
LPAZ	**La Paz**	**3.66**	**40**	*e*P	**Pn**	**09 06 45.5**	**+2.8**
PB06	**IPOC Station P**	**3.67**	**166**		**Pn**	**09 06 43.1**	**+0.8**
PB06	**IPOC Station P**	**3.67**	**166**	*e*P	**Pn**	**09 06 42.8**	**+0.4**
PB06	**IPOC Station P**	**3.67**	**166**	*e*P	**Pn**	**09 06 42.5**	**+0.1**
PB06				*e*S	**Sn**	**09 07 28.1**	**+3.7**
PB05	**IPOC Station P**	**3.71**	**175**		**Pn**	**09 06 43.2**	**+0.3**
PB05	**IPOC Station P**	**3.71**	**175**	*e*P	**Pn**	**09 06 43.0**	**+0.1**
PB05	**IPOC Station P**	**3.71**	**175**	*e*P	**Pn**	**09 06 43.0**	**+0.1**
PB05				*e*S	**Sn**	**09 07 24.5**	**-0.9**
PB10	**IPOC Station P**	**4.35**	**180**	Pn	**Pn**	**09 06 51.6**	**+0.1**
PB10	**IPOC Station P**	**4.35**	**180**	*e*P	**Pn**	**09 06 51.5**	**0.0**
PB10				*e*S	**Sn**	**09 07 37.0**	**-4.0**
PB10				IAML		09 07 41.7	
	comp=Z,56nm,0.3s						
PB14	**IPOC Station P**	**5.46**	**179**	Pn	**Pn**	**09 07 06.5**	**-0.5**
GO02	**Mina Guanaco**	**6.06**	**172**		**Pn**	**09 07 15.7**	**+0.5**
SIV	**San Ignacio**	**9.57**	**72**	P	**Pn**	**09 08 01.1**	**-2.1**
	comp=Z,3.2nm,0.4s,baz=254,slow=11,SNR=30						
PTLB	**Pontes e Lacer**	**11.51**	**73**	*e*P	**Pn**	**09 08 26.8**	**-2.7**
VILB	**Vilhena**	**11.70**	**60**		**Pn**	**09 08 30.8**	**-1.4**
VILB	**Vilhena**	**11.70**	**60**	*e*P	Pn	09 08 26.9	-5.3
SALV	**Santo Antonio**	**14.54**	**80**	*e*P	**Pn**	**09 09 10.7**	**+0.3**
PDRB	**Porto dos Gac**	**15.29**	**63**	*e*P	**Pn**	**09 09 14.6**	**-5.5**
**

TIA smax smax
comp=E,43µm,0.6s
HNS HongShan 1.75 299 ⇑Pn **Pn 09 07 47.3 -1.0**
HNS Pg **Pb 09 07 49.5 -0.6**
HNS Sn **Sg 09 08 11.8 -2.4**
HNS Sg **Sb 09 08 13.3 +1.1**
HNS smax smax
comp=N,8µm,0.8s
HNS smax smax
comp=E,6µm,0.6s
BJT Baijiatuau 3.47 354 **Pn 09 08 11.4 -0.6**
BJT Baijiatuau 3.47 354 P **Pn 09 08 11.4 -0.6**
BJI2 Beijing 3.47 354 Pn **Pn 09 08 11.1 -0.9**
BJI2 Pg **Pg 09 08 21.9 -2.5**
BJI2 smax smax
comp=N,840nm,0.6s
BJI2 smax smax
comp=E,630nm,0.5s
TIY Taiyuan 3.54 290 Pg **Pg 09 08 24.3 -1.5**
TIY Sn **Sg 09 09 07.4 -4.4**
TIY Sg **Sb 09 09 10.6 +6.7**
TIY smax smax
comp=N,600nm,1.1s
TIY smax smax
comp=E,660nm,0.8s
LYN LuoYang 3.94 241 Pn **Pn 09 08 18.0 -0.5**
LYN Pg **Pb 09 08 27.3 -0.3**
LYN Sn **Sn 09 09 06.4 +1.5**
LYN Sg **Sb 09 09 16.3 +1.0**
LYN smax smax
comp=N,830nm,0.9s
LYN smax smax
comp=E,450nm,0.8s
LYN LR LR
comp=N,2µm,8.1s
LYN LR LR
comp=E,1µm,4.9s
LYN LR LR
comp=Z,2µm,11.8s
DL2 Dalian 4.60 58 Pn **Pn 09 08 27.6 +0.1**
DL2 Pg **Pb 09 08 38.3 -0.4**
DL2 Sn **Sn 09 09 20.9 -0.1**
DL2 Sg **Sb 09 09 34.8 +0.7**
DL2 smax smax
comp=N,520nm,0.7s
DL2 smax smax
comp=E,440nm,0.7s
NJ2 Nanjing 4.86 157 *e*Pn **Pn 09 08 28.5 -2.7**
NJ2 Pg **Pb 09 08 43.8 +0.6**
NJ2 Sn **Sn 09 09 23.8 -3.7**
NJ2 Sg **Sb 09 09 45.6 +3.8**
NJ2 smax smax
comp=N,440nm,0.5s
NJ2 smax smax
comp=E,810nm,0.8s
HHC Hu-ho-hao-te 5.83 319 *e*Pg Pg 09 09 03.9 -5.7
HHC Sg **Sg 09 10 22.0 -3.1**
HHC smax smax
comp=N,83nm,1.2s
HHC smax smax
comp=E,180nm,1.3s
WHN Wuhan 6.30 198 Pn **Pn 09 08 50.4 -0.5**
WHN Sn **Sn 09 10 02.1 -0.8**
WHN LR LR
comp=N,3µm,13.1s
WHN LR LR
comp=E,4µm,11.7s
WHN LR LR
comp=Z,2µm,6.7s
SSE Sheshan 6.64 144 Pn **Pn 09 08 52.4 -3.2**
SSE Sn **Sn 09 10 09.3 -2.1**
SSE smax smax
comp=N,120nm,0.8s
SSE smax smax
comp=E,160nm,0.8s
SSE LR LR
comp=N,440nm,10.7s
SSE LR LR
comp=E,620nm,10.2s
BTO2 Baotou 6.73 310 *e*Pg **Pb 09 09 10.8 -4.3**
BTO2 smax smax
comp=N,540nm,0.7s
BTO2 smax smax
comp=E,460nm,0.8s
XAN Xi'an 6.79 250 Pn **Pn 09 08 57.0 -0.7**
XAN Pg **Pb 09 09 20.3 +4.2**
XAN Sn **Sn 09 10 14.6 -0.4**
XAN Sg **Sg 09 10 50.3 -5.5**
XAN smax smax
comp=N,150nm,1.0s
XAN smax smax
comp=E,100nm,0.9s
XAN LR LR
comp=N,710nm,6.2s
XAN LR LR
comp=E,600nm,5.2s
XAN LR LR
comp=Z,630nm,7.7s
XLT XiLinHaoTe 7.34 357 *e*Pn Pb 09 09 14.9 -11
XLT *e*Pg Pg 09 09 33.3 -5.1
XLT Sg **Sg 09 11 06.9 -6.5**
XLT smax smax
comp=N,7.0nm,1.1s
XLT smax smax
comp=E,110nm,1.1s
CNSH ChangSha 8.92 202 P **Pn 09 09 29.1 +2.2**
CNSH S **Sn 09 11 08.6 +1.1**
CNSH smax smax
comp=E,62nm,1.1s
CNSH smax smax
comp=E,65nm,1.2s
KS19 Wonju Array Si 9.03 81 **Pn 09 09 28.9 +0.5**
KSAR Wonju Array Be 9.05 81 Pn **Pn 09 09 29.4 +0.9**
KSAR Wonju Array Be 9.05 81 P **Pn 09 09 29.5 +0.9**
KSRS Korea Array 9.08 81 Pn **Pn 09 09 28.9 -0.1**
comp=E,2.3nm,0.3s,baz=269,slow=13,SNR=21
KSRS Lg Lg 09 12 03.3
comp=E,2.9nm,0.3s,baz=270,slow=29,SNR=10
KSRS LR LR 09 13 31.8
comp=E,107nm,19.1s,baz=280,slow=42
comp=E,4.4nm,0.3s
CN2 Changchun 9.88 40 P Pn 09 09 45.4 +5.4
LZH Lanzhou 10.33 271 *e*P **Pn 09 09 48.8 +2.5**
LZH sP 09 09 55.8
LZH pmax pmax
comp=E,10.0nm,1.5s
LZH LR LR
comp=E,610nm,12.7s
LZH LR LR
comp=E,720nm,11.4s
LZH LR LR
comp=E,640nm,11.7s
LZDM Lanzhou Array 10.46 271 Pn **Pn 09 09 48.9 +0.6**
baz=72,slow=18
comp=E,1.4nm,0.3s
JNU Nakatsue 12.20 102 Lg Lg 09 13 42.1
comp=E,0.5nm,0.3s,baz=234,slow=6.1,SNR=5.3
BNX BinXian 12.23 38 ⇑P **Pn 09 10 14.6 +2.4**
BNX S **Sn 09 12 28.9 +0.4**
BNX pmax pmax
comp=E,8.0nm,2.1s
BNX pmax pmax
comp=E,260nm,6.7s
BNX LR LR
comp=E,470nm,12.2s
BNX LR LR
comp=E,500nm,15.1s
BNX LR LR
comp=E,440nm,10.5s
HILR Hailar Array B 13.18 9 Pn **Pn 09 10 24.5 -0.6**
baz=182,slow=13
HILR Lg Lg 09 14 16.0
baz=189,slow=26
HILR LR LR 09 16 32.6
comp=E,181nm,18.2s,baz=235,slow=42
comp=E,0.7nm,0.3s
ULN Ulaanbaatar 13.32 331⇓*e*P **Pn 09 10 30.7 +3.5**
SONM Songino Array 13.56 329 Pn **Pn 09 10 31.3 +0.8**
comp=E,0.2nm,0.3s,baz=150,slow=11,SNR=5.7
SONM Lg Lg 09 14 30.7
comp=E,0.4nm,0.3s,baz=133,slow=28,SNR=5.7
SONM LR LR 09 16 32.8
comp=E,372nm,18.2s,baz=152,slow=41
comp=E,0.4nm,0.7s
GTA2 Gaotai 13.62 287 *e*P **Pn 09 10 32.1 +0.9**
GTA2 pP P 09 10 43.3 +3.0
GTA2 pmax pmax
comp=E,2.0nm,1.0s
GTA2 LR LR
comp=E,430nm,8.6s
GTA2 LR LR
comp=E,240nm,9.0s
GTA2 LR LR
comp=E,330nm,8.4s
HEH HeiHe 15.74 26 *e*P **P 09 11 02.4 -1.2**
HEH S **Sn 09 13 55.3 +1.3**
PZH PanZhiHua 16.16 236 P **Pn 09 11 04.6 -0.7**
PZH pmax pmax
comp=E,10.0nm,1.2s
KMI2 Kunming 16.46 230 P **Pn 09 11 07.4 -1.8**
KMI2 pmax pmax
comp=E,11nm,1.2s
KMI2 LR LR
comp=E,520nm,15.7s
KMI2 LR LR
comp=E,550nm,15.0s
KMI2 LR LR
comp=E,220nm,12.1s
KLR Kul'dur 16.78 36*ce*P **P 09 11 16.4 +1.3**
KLR pmax pmax
comp=Z,5.0nm,2.5s
ZAK Zakamensk 16.83 329 *e*P **P 09 11 17.2 +1.4**
ZAK pmax pmax
comp=Z,9.0nm,1.3s
MJAR Matsushiro Arr 17.34 84 P **Pn 09 11 20.3 +0.2**
baz=281,slow=13,SNR=6.0
MJAR LR LR 09 18 08.4
comp=Z,93nm,18.2s,baz=22,slow=38
comp=Z,0.7nm,0.5s
GOMU GeErMu 17.57 275 P **Pn 09 11 21.8 -1.5**
GOMU pmax pmax
comp=Z,5.0nm,1.0s
GOMU LR LR
comp=Z,260nm,10.2s
GOMU LR LR
comp=Z,330nm,11.0s
TLY Talaya 17.71 333 LR LR 09 19 08.4
comp=Z,104nm,22.0s,baz=124,slow=40
TLY Talaya 17.71 333 P **Pn 09 11 24.1 -0.5**
TLY Talaya 17.71 333⇑*i*P **P 09 11 29.0 +3.5**
TLY pmax pmax
comp=Z,7.0nm,1.8s
QIZ Qiongzhong 18.46 201 P **P 09 11 31.0 -2.9**
QIZ S **Sn 09 14 58.6 -1.7**
QIZ LR LR
comp=Z,400nm,10.8s
QIZ LR LR
comp=Z,620nm,14.0s
ZEA Zeya 18.70 20 *e*P **Pn 09 11 38.8 +2.2**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
TNCH TengChong 19.31 239 *e*P **P 09 11 42.3 -1.1**
TNCH S **Sn 09 15 12.5 -8.6**
TNCH SS **SnSn 09 15 39.3 +4.1**
TNCH pmax pmax
comp=Z,18nm,0.3s
TNCH LR LR
comp=Z,2µm,21.8s
TNCH LR LR
comp=Z,2µm,16.4s
TNCH LR LR
comp=Z,510nm,11.3s
KNGR Kungurtug, Tuv 19.63 322⇓*i*P **Pn 09 11 52.8 +4.8**
KNGR pmax pmax
comp=Z,6.0nm,1.1s
ASAJ Asahikawa 21.12 61 LR LR 09 19 21.0
comp=Z,91nm,19.4s,baz=162,slow=34
YSS Yuzhno-Sakhali 21.98 54 *e*P **P 09 12 15.9 +3.9**
LSA Lhasa 22.37 260 P **P 09 12 16.3 -0.5**
LSA Lhasa 22.37 260 P **P 09 12 16.3 -0.5**
LSA pmax pmax
comp=Z,8.0nm,1.1s
WMQ Urumqi 23.18 297 *e*P **P 09 12 25.9 +1.1**
SHL Shillong 23.80 250 P **P 09 12 30.9 -0.2**
SHL IAmb IAmb 09 12 39.0
comp=Z,9.9nm,0.9s
SHL Shillong 23.80 250 P **P 09 12 30.9 -0.2**
SHL pmax pmax
comp=Z,10.0nm,0.9s
CMAR Chiang Mai Arr 23.83 226 P **P 09 12 32.4 +1.1**
comp=Z,0.8nm,0.3s,baz=40,slow=5.5,SNR=4.6
comp=Z,0.8nm,0.3s
CMAR Chiang Mai Arr 23.83 226 P **P 09 12 31.0 -0.3**
CMAR Chiang Mai Arr 23.83 226 *e*P **P 09 12 34.9 +3.6**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BRDH Bariadhala 25.66 244 LR LR 09 24 43.1
comp=Z,122nm,18.1s,baz=22,slow=41
EVN Everest 26.55 260 P **P 09 12 55.3 -1.5**
EVN IAmb IAmb 09 13 17.9
comp=Z,5.5nm,0.7s
YAK Yakutsk 26.77 14 LR LR 09 24 27.0
comp=Z,115nm,18.5s,baz=334,slow=38
YAK Yakutsk 26.77 14 *e*P **P 09 13 01.0 +3.4**
YAK *e**PP sP 09 13 10.4 +8.5
YAK *e*PPP PPP 09 13 52.0
YAK *e* 09 16 20.9
YAK *e*S **S 09 17 36.1 +2.9**
YAK *e* 09 23 51.4
YAK pmax pmax
comp=Z,32nm,1.1s
YAK pmax pmax
comp=N,18nm,1.3s
YAK pmax pmax
comp=E,13nm,1.4s
YAK pmax pmax
comp=Z,234nm,5.4s
YAK pmax pmax
comp=N,72nm,4.6s
YAK pmax pmax
comp=E,238nm,5.5s
YAK smax smax
comp=E,145nm,5.3s
YAK smax smax
comp=N,90nm,3.5s
YAK MLR MLR
comp=Z,114nm,15.0s
YAK MLR MLR
comp=N,86nm,17.0s
YAK MLR MLR
comp=E,59nm,14.0s
MK31 Makanchi Array 27.41 303 P **P 09 13 02.9 -0.7**
MK31 Makanchi Array 27.41 303 P **P 09 13 02.9 -0.7**
MK31 pmax pmax
comp=Z,1.0nm,1.1s
MKAR Makanchi Array 27.41 303 P **P 09 13 05.6 +1.9**
comp=Z,0.5nm,0.7s,baz=101,slow=7.8,SNR=3.4
comp=Z,0.5nm,0.7s
MKAR Makanchi Array 27.41 303 P **P 09 13 03.2 -0.4**
ZAA0 Zalesovo Array 28.01 318 P **P 09 13 05.2 -3.7**
ZALV Zalesovo Beam 28.01 318 P **P 09 13 11.8 +2.9**
comp=Z,0.3nm,0.3s,baz=106,slow=11,SNR=2.2
ZALV LR LR 09 25 04.1
comp=Z,114nm,18.6s,baz=74,slow=38
comp=Z,0.3nm,0.3s
ZALV Zalesovo Beam 28.01 318 P **P 09 13 05.7 -3.2**
KURK Kurchatov 30.56 310 P **P 09 13 31.0 -0.5**
KURK Kurchatov 30.56 310⇑*i*P **P 09 13 34.6 +3.1**
KURK pmax pmax
comp=Z,22nm,4.5s
KURBB Kurchatov Arra 30.59 309 P **P 09 13 32.2 +0.4**
comp=Z,2.7nm,0.2s,baz=104,slow=8.9,SNR=6.5
comp=Z,2.7nm,0.2s
MA2 Magadan 31.82 33 LR LR 09 26 19.7
comp=Z,46nm,18.2s,baz=331,slow=36
MA2 Magadan 31.82 33*ce*P **P 09 13 45.8 +3.3**
MA2 pmax pmax
comp=Z,5.0nm,1.3s
AAK Ala-Archa 32.77 294⇓*e*P **P 09 13 54.0 +2.7**
AAK pmax pmax
comp=Z,10.0nm,1.8s
PETK Petropavlovsk- 32.95 47 LR LR 09 27 51.1
comp=Z,85nm,18.1s,baz=278,slow=38
SBUM Sibu 34.19 188 P **P 09 14 03.0 -0.6**
SBUM IAmb IAmb 09 14 04.3
comp=Z,12nm,1.5s
SEY Seymchan 34.27 28⇑*e*P **P 09 14 04.8 +0.9**
SEY pmax pmax
comp=Z,10.0nm,2.8s
KK31 Karatay Array 35.65 295 P **P 09 14 14.8 -1.3**
KK31 IAmb IAmb 09 14 41.4
comp=Z,9.1nm,1.5s
KK31 Karatay Array 35.65 295 P **P 09 14 14.8 -1.3**
KK31 pmax pmax
comp=Z,9.0nm,1.5s
KKAR Karatay Array 35.65 295 P **P 09 14 14.7 -1.4**
KKAR Karatay Array 35.65 295 P **P 09 14 14.7 -1.4**
TIXI Tiksi 35.72 7 LR LR 09 30 01.0
comp=Z,42nm,19.9s,baz=231,slow=38
TIXI Tiksi 35.72 7‖*e*P **P 09 14 17.7 +1.4**
TIXI pmax pmax
comp=Z,19nm,5.0s
BVAR Borovoye Array 36.00 312 LR LR 09 30 05.2
comp=Z,165nm,19.8s,baz=65,slow=38
BILL Bilibino 41.78 25⇓*e*P **P 09 15 08.8 +1.7**
BILL pmax pmax
comp=Z,11nm,2.7s
AB31 Akbulak array 42.45 306 P **P 09 15 10.8 -2.0**
ABKAR Akbulak array 42.45 306 P **P 09 15 10.7 -2.2**
ARTI Arti 43.23 316 LR LR 09 32 51.3
comp=Z,121nm,21.7s,baz=50,slow=35
ANM Nome 52.60 32 IAmb IAmb 09 16 35.5
comp=Z,3.5nm,1.0s
F15K North Star Dit 52.76 31 **P 09 16 31.6 -1.1**
F15K IAmb IAmb 09 16 37.1
comp=Z,6.3nm,1.2s
C18K Utukok River 53.69 27 P **P 09 16 39.3 -0.3**
C18K IAmb IAmb 09 16 42.7
comp=Z,4.5nm,1.1s
NCK Nalchik 54.70 301⇓*e*P P 09 16 51.9 +4.6
NCK pmax pmax
comp=Z,38nm,0.4s
D19K Kuna River 54.84 27 P **P 09 16 47.7 -0.2**
D19K IAmb IAmb 09 16 50.5
comp=Z,8.5nm,1.4s
FITZ Fitzroy Crossi 55.03 170 LR LR 09 42 37.2
comp=Z,76nm,21.2s,baz=180,slow=39
GNI Garni 55.05 297 *i*P P 09 16 55.7 +5.6
GNI pmax pmax
comp=Z,7.0nm,0.9s
KBZ Khabaz 55.11 302 P **P 09 16 51.9 +1.7**
comp=Z,2.0nm,0.9s,baz=98,slow=5.2,SNR=3.8
comp=Z,2.0nm,0.9s
KBZ Khabaz 55.11 302⇑*e*P **P 09 16 53.0 +2.9**
KBZ pmax pmax
comp=Z,9.0nm,2.3s
KIV Kislovodsk 55.17 302 *e*P **P 09 16 54.0 +3.2**
KIV pmax pmax
comp=Z,8.0nm,1.0s
SHA1 Shidzhatmaz 55.27 302⇑*e*P **P 09 16 54.1 +2.5**
D20K Etivluk River 55.33 26 IAmb IAmb 09 16 53.4
comp=Z,8.9nm,1.4s
E19K Redstone River 55.38 28 IAmb IAmb 09 16 55.0
comp=Z,4.4nm,1.1s
NEUR Neytrino 55.40 301⇓*e*P **P 09 16 56.5 +4.0**
NEUR pmax pmax
comp=Z,14nm,4.1s
OBN Obninsk 55.58 317 *e*P **P 09 16 55.7 +2.4**
OBN *e* 09 17 53.8
OBN *e* 09 19 02.1
OBN *e*PPP PPP 09 20 14.9
OBN pmax pmax
comp=Z,3.0nm,1.0s
J18K Innoko River 56.56 33 P **P 09 17 00.1 -0.2**
J18K IAmb IAmb 09 17 06.8
comp=Z,8.3nm,1.4s
COLD Coldfoot 58.06 27 IAmb IAmb 09 17 15.1
comp=Z,4.1nm,1.0s
WRA Warramunga Arr 58.64 160 P **P 09 17 14.1 -1.3**
comp=Z,1.6nm,0.7s,baz=346,slow=7.4,SNR=6.3
comp=Z,1.6nm,0.7s
WRA Warramunga Arr 58.64 160 P **P 09 17 14.6 -0.8**
WRA Warramunga Arr 58.64 160 *e*P **P 09 17 15.3 -0.1**
WRA pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 58.91 326 P **P 09 17 17.8 +1.0**
comp=Z,1.8nm,0.9s,baz=82,slow=13,SNR=1.2
comp=Z,1.8nm,0.9s
FINES FINESS Array B 58.91 326 P **P 09 17 17.6 +0.8**
COLA College 59.78 29⇓*i*P **P 09 17 24.8 +2.0**
COLA pmax pmax
comp=Z,25nm,1.8s
BMAR Burnt Mountain 60.02 26 P **P 09 17 24.5 0.0**
ILAR Eielson Array 60.20 29 P **P 09 17 25.5 -0.2**
comp=Z,2.3nm,1.0s,baz=278,slow=5.7,SNR=13
comp=Z,2.3nm,1.0s
ILAR Eielson Array 60.20 29 P **P 09 17 25.2 -0.5**
AKASG Malin Array Be 61.25 314 P **P 09 17 32.5 -0.6**
comp=Z,0.3nm,0.4s,baz=62,slow=6.2,SNR=1.9
comp=Z,0.3nm,0.4s
F28M Old Crow 61.58 25 IAmb IAmb 09 17 38.4
comp=Z,4.6nm,0.9s
H27K Steamboat Moun 61.62 27 IAmb IAmb 09 17 39.3
comp=Z,5.9nm,1.2s
ASAR Alice Springs 62.09 162 P **P 09 17 37.5 -1.4**
comp=Z,1.5nm,1.0s,baz=335,slow=8.0,SNR=6.3
comp=Z,1.5nm,1.0s
BCAR Beaver Creek A 62.97 30 P **P 09 17 43.8 -0.7**
BR131 Keskin Array S 63.04 301 P **P 09 17 45.0 -0.5**
BR131 IAmb IAmb 09 17 48.2
comp=Z,3.7nm,1.0s
BR131 Keskin Array S 63.04 301⇑*i*P **P 09 17 47.7 +2.3**
BRTR Keskin Array B 63.04 301 P **P 09 17 46.0 +0.6**
comp=Z,2.2nm,1.0s,baz=78,slow=6.8,SNR=8.8
comp=Z,2.2nm,1.0s
BRTR Keskin Array B 63.04 301 P **P 09 17 45.1 -0.4**
BRTR Keskin Array B 63.04 301 *e*P **P 09 17 47.8 +2.3**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 73.06 22 P **P 09 18 47.7 -0.1**
comp=Z,1.3nm,0.9s,baz=320,slow=6.6,SNR=15
comp=Z,1.3nm,0.9s
YKA Yellowknife Ar 73.06 22 P **P 09 18 47.2 -0.6**
YKAW1 Yellowknife Wh 73.11 22 P **P 09 18 47.7 -0.4**
YKAW1 IAmb IAmb 09 18 50.8
comp=Z,3.1nm,1.1s
ILON Igloolik, Nuna 73.50 7 IAmb IAmb 09 18 51.5
comp=Z,3.7nm,1.0s
B08A Colville Reser 81.87 34 P **P 09 19 38.5 +1.1**
B08A IAmb IAmb 09 19 40.4
comp=Z,3.6nm,1.1s
NVAR Mina Array Bea 89.78 40 P **P 09 20 18.3 +1.3**
comp=Z,0.7nm,0.8s,baz=340,slow=5.4,SNR=4.2
comp=Z,0.7nm,0.8s
PDAR Pinedale Array 90.52 32 P **P 09 20 20.3 -0.2**
comp=Z,0.4nm,0.8s,baz=322,slow=2.3,SNR=3.7
comp=Z,0.4nm,0.8s
NVL N'lazarevskaya 128.89 204 *e*PKIKP **PKiKP 09 26 25.9 +0.6**
NVL pmax pmax
comp=Z,73nm,2.3s

IDC ***18*** *09:07:47.8±2.1,0.˙44S×133.˙26E,h0km,mb3.5/2, mbtmp3.6/5,ML3.5/3,MS2.6/1,Error ellipse: s-maj=36.2km s-min=26.5km az=56.0*
DJA ***18*** *09:07:49.0±0.6,0.˚S±3.˚×13.˚3E±.˚,h11km±4km,M4.3/14, mB6.1/2,mb4.5/4,MLv4.2/14,Mw(mB)5.7/2*
ISC 18 09:07:49.0±3.5,0.°4S±0.°1×133.°25E±0.°04,h8km±21km,n16, σ0°74/19,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MWPI	**Manokwari, Pap**	**0.98**	**126**	P		**Pn**	**09 08 09.5**	**+0.4**
MWPI				S		**Sn**	**09 08 23.3**	**+0.1**
RKPI	**Ransiki, Papua**	**1.48**	**141**	P		**Pn**	**09 08 15.5**	**-0.5**
RKPI				S		**Sg**	**09 08 37.1**	**+0.4**
SIJI	**Sorong**	**2.05**	**255**	Pn		**Pn**	**09 08 23.8**	**-0.1**
	24nm,0.3s,baz=209,slow=20,SNR=110							
SIJI				Sn		**Sn**	**09 08 50.3**	**+0.6**
	35nm,0.3s,baz=298,slow=23,SNR=12							
SIJI				LR		LR	09 09 26.4	
	comp=Z,154nm,20.0s,baz=193,slow=48							
	96nm,0.4s							
SIJI	**Sorong**	**2.05**	**255**	P		**Pn**	**09 08 24.1**	**+0.2**
SIJI				S		**Sn**	**09 08 50.1**	**+0.4**
SWI	**Sorong**	**2.05**	**256**	P		**Pn**	**09 08 24.2**	**+0.3**
SWI				S		**Sn**	**09 08 50.6**	**+0.9**
FAKI	**Fak Fak**	**2.74**	**201**	P		**Pn**	**09 08 33.9**	**+0.5**
BAKI	**Biak**	**2.98**	**106**	P		**Pn**	**09 08 36.6**	**0.0**
BAKI				S		**Sn**	**09 09 13.9**	**+1.3**
KMPI	**Kaimana, Papua**	**3.32**	**172**	P		**Pn**	**09 08 42.1**	**+0.7**
MSAI	**Masohi**	**5.24**	**235**	P		**Pn**	**09 09 07.8**	**0.0**
FITZ	**Fitzroy Crossi**	**19.16**	**203**	P		**P**	**09 12 11.9**	**-1.2**
	0.1nm,0.3s,baz=20,slow=12,SNR=3.0							
FITZ				S		Sn	09 15 32.8	-16
	1.9nm,0.8s,baz=280,slow=18,SNR=1.2							
	1.7nm,0.8s							
WRA	**Warramunga Arr**	**19.50**	**177**	P		**P**	**09 12 16.1**	**-0.7**

	0.2nm,0.3s,baz=356,slow=12,SNR=7.5							
WRA				S	Sn	09 15 41.1	-16	
	0.7nm,0.8s,baz=356,slow=23,SNR=4.9							
	0.8nm,0.6s							
ASAR	**Alice Springs**	**23.19**	**178**	P	**P**	**09 12 55.2**	**-1.2**	
	0.6nm,0.3s,baz=360,slow=12,SNR=15							
	0.6nm,0.3s							
H11N1	**WAKE ISLAND Hy**	**38.53**	**57**	T	T	09 56 21.6		
	baz=243,slow=75,SNR=32							
H11N2	**WAKE ISLAND Hy**	**38.54**	**57**	T	T	09 56 20.0		
	baz=243,slow=75,SNR=36							
H11N3	**WAKE ISLAND Hy**	**38.55**	**57**	T	T	09 56 23.2		
	baz=243,slow=75,SNR=26							
MKAR	**Makanchi Array**	**64.64**	**324**	P	**P**	**09 18 27.7**	**+0.3**	
	0.3nm,0.5s,baz=120,slow=7.1,SNR=2.7							
	0.3nm,0.5s							

IDC 18 09:19:25.2±1.6, 13°50N×120°95E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=100.6km s-min=9.6km az=85.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.59**	**359**	Pg	Pg	09 19 37.1	+0.5
	363nm,0.3s,baz=202,slow=2.4,SNR=12						
TGY				Lg	Lg	09 19 44.5	
	577nm,0.3s,baz=40,slow=19,SNR=9.9						
WRA	**Warramunga Arr**	**35.75**	**158**	P	P	09 26 26.0	-0.1
	0.3nm,0.6s,baz=338,slow=9.5,SNR=4.6						
	0.3nm,0.6s						
SONM	**Songino Array**	**36.31**	**343**	P	P	09 26 30.5	-0.3
	0.6nm,0.6s,baz=170,slow=6.6,SNR=4.5						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**39.05**	**161**	P	P	09 26 53.9	-0.2
	0.1nm,0.4s,baz=339,slow=7.8,SNR=5.4						
	0.1nm,0.4s						

*AFAD **18** 09:38:46.3, 42°.71N×42°.27E, h7km±4km, ML2.1*
*MOS **18** 09:38:48.3, 42°.63N×42°.38E, h11km, MPVA3.3*
*NORS **18** 09:38:48.4, 42°.61N×42°.40E, h9km, MPVA3.4*

ISC 18 09:38:47.5±1.2, 42°61N±0°.02×42°33E±0°.04, h5km±11km, n21, σ0°78/40, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEUR	**Neytrino**	**0.71**	**22**	*e*Pg	**Pg**	**09 39 01.6**	**+0.4**
NEUR				*e*Sg	**Sg**	**09 39 10.8**	**+0.4**
DIGR	**Digorskoe uzhe**	**0.97**	**72**	*e*Pg	**Pg**	**09 39 05.0**	**-1.1**
DIGR				*e*Sg	**Sg**	**09 39 18.6**	**0.0**
EPOS	**Posof**	**1.14**	**165**	P	**Pg**	**09 39 08.2**	**-1.1**
EPOS				S	**Sg**	**09 39 24.8**	**+0.7**
EPOS				IAML		09 39 27.0	
	comp=E,60nm,0.4s						
EPOS				IAML		09 39 37.0	
	comp=N,58nm,0.5s						
SHA1	**Shidzhatmaz**	**1.16**	**12**	*e*Pg	**Pb**	**09 39 10.3**	**+0.2**
SHA1				*e*Sg	**Sb**	**09 39 25.4**	**-0.1**
KBZ	**Khabaz**	**1.20**	**20**	*e*Pg	**Pb**	**09 39 10.0**	**-0.6**
KBZ				*e*Sg	**Sn**	**09 39 26.6**	**-0.9**
ARXR	**Arkhyz**	**1.23**	**321**	*e*Pg	**Pb**	**09 39 11.0**	**-0.3**
ARXR				*e*Sg	**Sn**	**09 39 29.0**	**+0.4**
LSNR	**Lesken**	**1.29**	**58**	*e*Pg	**Pn**	**09 39 11.7**	**-0.5**
LSNR				*e*Sg	**Sn**	**09 39 29.2**	**-0.6**
DBOC	**Borcka**	**1.35**	**202**	P	**Pn**	**09 39 11.8**	**-1.2**
DBOC				S	**Sb**	**09 39 31.5**	**+0.5**
KIV	**Kislovodsk**	**1.38**	**11**	*e*Pg	**Pn**	**09 39 12.7**	**-0.7**
KIV				*e*Sg	**Sb**	**09 39 31.3**	**-0.3**
KBTC	**Kuba-Taba**	**1.45**	**33**	*e*Pg	**Pg**	**09 39 15.8**	**+0.6**
KBTC				*e*Sg	**Sg**	**09 39 35.0**	**+1.1**
AHAN	**Ardahan-Merkez**	**1.46**	**171**	P	**Pn**	**09 39 14.2**	**-0.4**
AHAN				S	**Sn**	**09 39 34.5**	**+0.3**
AHAN				IAML		09 39 37.0	
	comp=N,30nm,0.6s						
AHAN				IAML		09 39 43.0	
	comp=E,58nm,1.0s						
LACR	**Lac**	**1.47**	**81**	*e*Pg	**Pn**	**09 39 14.7**	**0.0**
LACR				*e*Sg	**Sg**	**09 39 34.4**	**-0.2**
GUDG	**Gudauri**	**1.59**	**94**	*e*Pg	**Pb**	**09 39 17.8**	**+0.3**
GUDG				*e*Sg	**Sg**	**09 39 38.9**	**+0.2**
DBAD	**Bademkaya**	**1.66**	**197**	P	**Pn**	**09 39 16.0**	**-1.3**
DBAD				S	**Sn**	**09 39 40.1**	**+1.2**
DBAD				IAML		09 39 42.0	
	comp=N,46nm,0.4s						
DBAD				IAML		09 39 42.0	
	comp=E,43nm,0.3s						
GRYR	**Gornoye**	**1.76**	**330**	*e*Pg	**Pb**	**09 39 20.9**	**+0.6**
GRYR				*e*Sg	**Sb**	**09 39 43.6**	**+0.9**
DDEM	**Demirkent**	**1.77**	**194**	P	**Pn**	**09 39 18.3**	**-0.5**
DDEM				S	**Sb**	**09 39 44.0**	**+1.2**
GOLE	**Ardahan-G¶le**	**1.78**	**173**	P	**Pn**	**09 39 20.3**	**+1.2**
GOLE				IAML		09 39 49.0	
	comp=E,17nm,0.6s						
GOLE				IAML		09 39 53.0	
	comp=N,15nm,0.3s						
BOZK	**Kars-Merkez-Bo**	**2.07**	**166**	P	**Pn**	**09 39 24.4**	**+1.4**
BOZK				S	**Sg**	**09 39 54.1**	**+0.1**
BOZK				IAML		09 39 58.0	
	comp=N,9.8nm,0.7s						
BOZK				IAML		09 40 00.0	
	comp=E,19nm,0.8s						
EOLT	**Oltu**	**2.08**	**188**	P	**Pn**	**09 39 23.5**	**+0.5**
EOLT				IAML		09 39 54.0	
	comp=E,17nm,0.7s						
EOLT				IAML		09 39 56.0	
	comp=N,20nm,0.2s						
IZDR	**Rize**	**2.25**	**217**	P	**Pn**	**09 39 23.9**	**-1.5**
IZDR				S	**Sn**	**09 39 52.7**	**-0.8**
IZDR				IAML		09 39 57.0	
	comp=E,8.7nm,0.5s						
IZDR				IAML		09 39 59.0	
	comp=N,11nm,0.4s						
KRIK	**Erzurum-spir**	**2.50**	**205**	P	**Pn**	**09 39 28.9**	**0.0**
KRIK				S	**Sb**	**09 40 04.1**	**0.0**
KRIK				IAML		09 40 09.0	
	comp=E,7.8nm,0.7s						
KRIK				IAML		09 40 11.0	
	comp=N,5.9nm,0.4s						

*RSPR **18** 10:14:28.7, 19°.25N×67°.83W, h35km±15km, MD3.3/8*
*NEIC **18** 10:14:28.7±1.2, 19°.14N±0°.02×67°.60W±0°.04, h10km±1km, ML3.2/31, Md3.3/8(RSPR), Error ellipse: s-maj=7.8km s-min=2.9km az=243.0*
*OSPL **18** 10:14:30.6±1.5, 19°.22N×67°.47W, h0km±15km, ML3.1, Presumed earthquake*
*SDD **18** 10:14:30.9±1.5, 19°.08N×67°.65W, h12km±999km, MD3.5, ML3.0, MW3.0, Presumed earthquake*

ISC 18 10:14:29.5±1.5, 19°08N±0°.06×67°60W±0°.04, h7km±10km, n39, σ0°95/62, 15C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.70**	**170**		**Pg**	**10 14 43.1**	**0.0**
IDE					**Sg**	**10 14 52.5**	**+0.3**
IDE	**Isla Desecheo**	**0.70**	**170**	⇑*e*P	**Pg**	**10 14 43.1**	**0.0**
IDE				*e*S	**Sg**	**10 14 52.5**	**+0.3**
AGPR	**Aguadilla, PR**	**0.77**	**143**		**Pg**	**10 14 45.0**	**+0.7**
AGPR				Sg	**Sb**	**10 14 55.9**	**0.0**
AGPR				IAML		10 14 57.8	
	693nm,0.3s						
AGPR				IAML		10 14 58.0	
	585nm,0.3s						
AGPR	**Aguadilla, PR**	**0.77**	**143**	⇑*e*Pg	**Pg**	**10 14 45.0**	**+0.7**
AGPR				⇑*e*Sg	**Sb**	**10 14 56.1**	**+0.2**
AGPR				IAML		10 14 57.8	
	comp=N,450nm,0.2s						
AGPR	**Aguadilla, PR**	**0.77**	**143**	⇓*e*P	**Pg**	**10 14 44.9**	**+0.7**
AGPR				*e*S	**Sb**	**10 14 56.3**	**+0.5**
PCDR	**Punta Cana, DR**	**0.93**	**233**	⇓*e*Pg	**Pg**	**10 14 46.5**	**-0.9**
PCDR				⇑*e*Sg	**Sg**	**10 14 58.3**	**-1.1**
PCDR				IAML		10 15 01.0	
	comp=N,372nm,0.5s						
PRSN	**Puerto Rico Se**	**0.96**	**153**		**Pg**	**10 14 48.6**	**+0.6**
LSP	**Las Mesas**	**1.03**	**151**		**Pb**	**10 14 48.9**	**-0.7**
LSP					**Sn**	**10 15 04.7**	**-0.3**
LSP	**Las Mesas**	**1.03**	**151**	⇑*e*P	**Pb**	**10 14 48.9**	**-0.7**
LSP				*e*S	**Sn**	**10 15 04.7**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.17**	**156**		**Pb**	**10 14 51.1**	**-0.9**
CRPR					**Sn**	**10 15 08.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.17**	**156**	IAML		10 15 10.8	
	comp=N,511nm,0.5s						
CRPR				IAML		10 15 13.9	
	comp=N,387nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.17**	**156**	⇓*e*Pg	**Pg**	**10 14 53.0**	**+1.1**
CRPR				⇑*e*Sg	**Sn**	**10 15 08.6**	**+0.2**
CRPR				IAML		10 15 10.7	
	comp=N,467nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.17**	**156**	⇑*e*P	**Pb**	**10 14 51.1**	**-0.9**
CRPR				*e*S	**Sn**	**10 15 08.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.17**	**156**	*i* P	**Pg**	**10 14 52.5**	**+0.6**
CRPR				*e*S	**Sn**	**10 15 09.9**	**+1.5**
CRPR				IAML		10 15 10.7	
	comp=Z,452nm,0.5s						
UUPR	**Utuado, UPR, P**	**1.18**	**134**		**Pn**	**10 14 51.6**	**-0.7**
MLPR	**Magueyes Islan**	**1.23**	**154**		**Pn**	**10 14 52.1**	**-0.9**
MLPR				Sg	**Sg**	**10 15 11.7**	**+2.7**
MLPR				IAML		10 15 11.8	
	comp=Z,358nm,0.6s						
GBPR	**Guanica, Bosqu**	**1.30**	**148**		**Pn**	**10 14 52.8**	**-1.2**
GBPR					**Sg**	**10 15 11.5**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.30**	**148**	⇑*e*P	**Pn**	**10 14 52.8**	**-1.2**
GBPR				*e*S	**Sg**	**10 15 11.5**	**+0.2**
CELP	**Cerrillos**	**1.40**	**136**		**Pn**	**10 14 55.5**	**+0.1**
CELP				IAML		10 15 20.9	
	comp=Z,350nm,0.3s						
CELP				IAML		10 15 21.6	
	comp=Z,411nm,0.3s						
ECPR	**Experimental S**	**1.40**	**123**		**Pn**	**10 14 55.2**	**-0.3**
ECPR				IAML		10 15 21.2	
	comp=Z,475nm,0.2s						
ECPR	**Experimental S**	**1.40**	**123**	⇑*e*P	**Pn**	**10 14 54.3**	**-1.2**
ECPR				*e*S	**Sn**	**10 15 14.2**	**0.0**
OBIP	**Obispado Ponce**	**1.40**	**137**		**Pn**	**10 14 55.1**	**-0.3**
OBIP	**Obispado Ponce**	**1.40**	**137**	⇑*e*P	**Pn**	**10 14 54.4**	**-1.0**
OBIP				*e*S	**Sb**	**10 15 13.9**	**-0.1**
OBIP	**Obispado Ponce**	**1.40**	**137**	*i* P	**Pn**	**10 14 55.1**	**-0.3**
OBIP				*e*S	**Sb**	**10 15 14.3**	**+0.2**
OBIP				IAML		10 15 22.0	
	comp=Z,112nm,0.5s						
SMDR	**Samana, DR**	**1.51**	**278**	⇑*e*Pg	**Pb**	**10 14 56.7**	**-1.1**
SMDR				⇑*e*Sg	**Sg**	**10 15 17.5**	**-0.6**
SMDR				IAML		10 15 19.6	
	comp=N,176nm,0.5s						
GCPR	**Guaynabo City**	**1.63**	**118**		**Pn**	**10 14 57.8**	**-0.9**
GCPR					**Sn**	**10 15 20.2**	**+0.3**
GCPR	**Guaynabo City**	**1.63**	**118**	⇑*e*P	**Pn**	**10 14 57.8**	**-0.9**
GCPR				*e*S	**Sn**	**10 15 20.2**	**+0.3**
SJG	**San Juan**	**1.68**	**125**		**Pn**	**10 14 58.2**	**-1.1**
SJG	**San Juan**	**1.68**	**125**	IAML		10 15 27.4	
	comp=N,218nm,0.3s						
SJG				IAML		10 15 27.9	
	comp=N,273nm,0.4s						
SJG	**San Juan**	**1.68**	**125**	⇓*e*P	**Pn**	**10 14 58.2**	**-1.1**
SJG				*e*S	**Sn**	**10 15 21.6**	**+0.4**
SJG	**San Juan**	**1.68**	**125**	*i* P	**Pn**	**10 14 59.1**	**-0.2**
SJG				*e*S	**Sn**	**10 15 21.0**	**-0.2**
SJG				IAML		10 15 26.2	
	comp=Z,81nm,0.2s						
DR12	**Loma Pena Alta**	**1.71**	**260**		**Pb**	**10 14 59.8**	**-1.4**
HATOM	**Hato Mayor del**	**1.71**	**260**	⇑*e*Pg	**Pb**	**10 15 00.2**	**-1.0**
HATOM				*e*Sg	**Sg**	**10 15 23.9**	**-0.5**
HATOM				IAML		10 15 24.6	
	comp=N,157nm,0.5s						
HUMP	**Col San Antoni**	**1.91**	**119**		**Pn**	**10 15 01.5**	**-0.9**
HUMP					**Sn**	**10 15 27.4**	**+0.7**
HUMP	**Col San Antoni**	**1.91**	**119**	IAML		10 15 35.1	
	comp=N,127nm,0.2s						
HUMP	**Col San Antoni**	**1.91**	**119**	⇑*e*P	**Pn**	**10 15 01.5**	**-0.9**
HUMP				*e*S	**Sn**	**10 15 27.4**	**+0.7**
SC01	**Santiago de lo**	**2.97**	**277**	*i* P	**Pn**	**10 15 17.8**	**+0.7**
SC01				IAML		10 16 15.6	
	comp=Z,86nm,2.1s						
SDDR	**Presa de Saban**	**3.49**	**269**	*i* P	**Pn**	**10 15 26.9**	**+2.7**
SDDR				IAML		10 16 26.0	
	comp=Z,37nm,1.2s						
LODU1	**El Espartillar**	**3.74**	**259**	*i* P	**Pn**	**10 15 30.3**	**+2.7**

IDC 18 10:17:20.0±1.6, 2°60N×127°57E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=160.4km s-min=18.6km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.36**	**164**	P	P	10 22 30.8	+0.4
	0.4nm,0.3s,baz=341,slow=10,SNR=16						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**26.82**	**167**	P	P	10 23 02.5	+0.3
	0.3nm,0.4s,baz=353,slow=7.9,SNR=9.6						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**36.78**	**160**	P	P	10 24 28.6	-1.0
	0.7nm,0.4s,baz=345,slow=10.0,SNR=4.6						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**58.96**	**325**	P	P	10 27 23.1	+1.7
	0.2nm,0.5s,baz=105,slow=8.2,SNR=2.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.14**	**327**	P	P	10 27 48.9	-0.7
	0.5nm,0.4s,baz=122,slow=6.9,SNR=5.6						
	0.5nm,0.4s						
BVAR	**Borovoye Array**	**68.72**	**327**	P	P	10 28 25.0	-0.5
	0.4nm,0.5s,baz=101,slow=7.5,SNR=2.1						
	0.4nm,0.5s						

AFAD 18 10:18:14.9, 38°.70N×38°.11E, h7km±5km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HEKM	**Malatya_Hekimh**	**0.21**	**326**	P	Pg	10 18 19.4	+0.2
HEKM				IAML		10 18 23.0	
	comp=N,268nm,0.2s						
HEKM				IAML		10 18 23.0	
	comp=E,238nm,0.2s						
HEKM				S	Sg	10 18 23.3	+1.1
AKCD	**Akcadag**	**0.43**	**200**	P	Pg	10 18 23.2	-0.1
AKCD				S	Sb	10 18 31.2	-0.5
AKCD				IAML		10 18 33.0	
	comp=E,23nm,0.2s						
AKCD				IAML		10 18 34.0	
	comp=N,27nm,0.2s						
MAYA	**Malatya/Merkez**	**0.45**	**147**	P	Pg	10 18 23.2	-0.5
MAYA				S	Sb	10 18 31.6	-0.6
ELZG	**Elazig**	**0.72**	**106**	P	Pg	10 18 28.4	-0.2
ELZG				S	Sb	10 18 39.8	-0.1
ELZG				IAML		10 18 41.0	
	comp=N,8.5nm,0.2s						
ELZG				IAML		10 18 43.0	
	comp=E,9.7nm,0.5s						
MCKZ	**Bingol**	**0.79**	**58**	P	Pg	10 18 29.7	-0.5
MCKZ				IAML		10 18 40.0	
	comp=E,14nm,1.2s						
MCKZ				S	Sb	10 18 42.1	0.0
MCKZ				IAML		10 18 46.0	
	comp=N,3.6nm,0.3s						

ISK 18 10:19:05.5, 38°.29N×38°.88E, h13km±2km, ML1.4/5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDYL	**Doganyol-Malat**	**0.12**	**78**	Pg	Pb	10 19 09.4	-0.4
MDYL				Sg	Sg	10 19 11.7	+0.4
ESGZ	**Sivrice-Elazig**	**0.20**	**45**	Pg	Pg	10 19 10.3	+0.2
ESGZ				Sg	Sg	10 19 13.4	+0.2
SVRC	**Sivrice-ELAZID**	**0.34**	**75**	Pg	Pg	10 19 12.9	+0.3
SVRC				Sg	Sb	10 19 18.4	-0.7
URFA	**Urfa**	**0.85**	**183**	Pg	Pg	10 19 21.9	0.0
ARPR	**Arapgir-MALATY**	**0.91**	**332**	Pg	Pb	10 19 23.3	0.0
ARPR				Sg	Sn	10 19 36.7	-0.6

IDC 18 10:25:28.1±7.8, 7°20S×128°33E, h395km±101km, mb2.6/1, mbtmp3.5/4, Error ellipse: s-maj=74.2km s-min=39.7km az=51.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.14**	**193**	P	P	10 27 57.7	-0.8
	3.9nm,0.8s,baz=29,slow=10,SNR=6.2						
FITZ				S	S	10 30 04.2	+1.6
	3.2nm,0.8s,baz=175,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**13.94**	**156**	P	P	10 28 27.7	-1.7
	0.2nm,0.3s,baz=334,slow=13,SNR=8.8						
WRA				S	S	10 30 57.4	-2.0
	0.4nm,0.5s,baz=333,slow=21,SNR=5.9						
ASAR	**Alice Springs**	**17.23**	**162**	P	P	10 29 05.9	+1.1
	0.9nm,0.6s,baz=340,slow=9.4,SNR=10						
MKAR	**Makanchi Array**	**67.50**	**328**	P	P	10 35 43.0	0.0
	0.2nm,0.5s,baz=110,slow=6.3,SNR=4.3						
	0.2nm,0.5s						

MEX 18 10:26:41.0±0.6, 17°.26N×94°.93W, h123km±7km, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.18**	**164**	*i* P	Pn	10 26 56.3	-1.7
CMIG				*e*S	Sn	10 27 08.7	-2.1
UXUV	**UXUV**	**0.76**	**86**	*e*P	Pn	10 27 00.1	-1.0
UXUV				*e*S	Sn	10 27 14.7	-1.6
NEUV	**Arroyo Zacate**	**0.94**	**298**	*e*P	Pn	10 27 01.1	-1.7
NEUV				*e*S	Sn	10 27 17.5	-1.7
VHO	**Vista Hermosa**	**1.73**	**264**	*e*P	Pn	10 27 10.3	-1.2
VHO				*e*S	Sn	10 27 33.9	-1.0
TGIG		**1.80**	**105**	*e*P	Pn	10 27 11.0	-1.3
HUIG	**Huatulco**	**1.87**	**217**	*e*P	Pn	10 27 08.5	-4.5
TOIG	**Toxpalan**	**2.19**	**292**	*e*P	Pn	10 27 16.3	-0.8
TOIG				*e*S	Sn	10 27 43.5	-1.3
YOIG	**Yosondua**	**2.53**	**261**	*e*P	Pn	10 27 19.1	-2.5

*JMA **18** 10:46:58.4±0.2, 25°.0N±0°.7×123°.4E±0°.3, h22km, MV3.1/9, NW OFF ISHIGAKIJIMA IS*
*IDC **18** 10:47:15.7±5.2, 24°.92N×123°.11E, h167km±51km, mb3.2/8, mbtmp3.7/9, MS3.4/3, Error ellipse: s-maj=29.4km s-min=14.9km az=67.0*

ISC 18 10:46:59.5±0.8, 24°88N±0°.07×123°45E±0°.05, h20km±7km, n19, σ1°12/23, mb3.6/8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.58**	**223**	P	**Pb**	**10 47 10.5**	**-0.4**
YOJ				S	**Sb**	**10 47 19.0**	**+0.3**
IRIF	**Iriomote-Funau**	**0.60**	**155**	*i* P	**Pb**	**10 47 11.8**	**+0.3**
IRIF				S	**Sn**	**10 47 20.6**	**-1.5**
JYNG	**Yonagunijimaku**	**0.63**	**227**	P	**Pb**	**10 47 11.3**	**-0.4**
JYNG				S	**Sb**	**10 47 20.4**	**+0.2**
JIJ	**Ishigaki jima**	**0.82**	**129**	P	**Pb**	**10 47 14.6**	**-0.4**
JIJ				S	**Sn**	**10 47 26.1**	**-1.3**
JKRS	**Kuro-shima**	**0.82**	**141**	P	**Pn**	**10 47 15.4**	**-0.5**
JKRS				S	**Sn**	**10 47 27.7**	**+0.2**
JISG	**Ishigakijimahi**	**0.84**	**110**	P	**Pb**	**10 47 14.8**	**-0.5**
HATJ	**Hateruma jima**	**0.89**	**158**	P	**Pn**	**10 47 16.5**	**-0.3**
HATJ				S	**Sn**	**10 47 29.6**	**+0.6**
KSRS	**Korea Array**	**13.10**	**16**	P	**P**	**10 50 16.2**	**+1.8**
	1.6nm,0.7s,baz=196,slow=12,SNR=5.0						
KSRS				LR	LR	10 56 06.5	
	comp=Z,89nm,19.6s,baz=205,slow=40						
JHJ	**Hachijo jima 2**	**16.47**	**56**	LR	LR	10 56 51.5	
	comp=Z,156nm,21.0s,baz=96,slow=34						
CMAR	**Chiang Mai Arr**	**23.63**	**259**	P	**P**	**10 52 09.8**	**+0.3**
	0.5nm,0.3s,baz=43,slow=7.4,SNR=4.9						
	0.5nm,0.3s						
SONM	**Songino Array**	**26.59**	**334**	P	**P**	**10 52 36.9**	**+0.6**
	1.1nm,0.8s,baz=146,slow=10,SNR=5.2						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	**39.30**	**314**	P	**P**	**10 54 25.5**	**-1.4**
	1.4nm,0.8s,baz=107,slow=9.2,SNR=11						
	1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**40.80**	**326**	P	**P**	**10 54 38.6**	**-0.7**
	1.5nm,0.7s,baz=107,slow=8.5,SNR=6.8						
	1.5nm,0.7s						
KURBB	**Kurchatov Arra**	**42.92**	**319**	P	**P**	**10 54 56.3**	**-0.4**
	1.3nm,0.9s,baz=111,slow=8.2,SNR=8.2						
	1.3nm,0.9s						
WRA	**Warramunga Arr**	**45.80**	**166**	P	**P**	**10 55 21.2**	**+1.2**
	1.0nm,0.7s,baz=347,slow=8.7,SNR=7.8						
	1.0nm,0.7s						
TIXI	**Tiksi**	**46.90**	**2**	LR	LR	11 15 58.8	
	comp=Z,65nm,18.0s,baz=246,slow=37						
ASAR	**Alice Springs**	**49.32**	**167**	P	**P**	**10 55 48.9**	**+1.6**
	0.5nm,0.8s,baz=352,slow=7.7,SNR=7.0						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**81.52**	**23**	P	**P**	**10 59 14.9**	**-0.3**
	0.2nm,0.7s,baz=311,slow=5.9,SNR=4.0						
	0.2nm,0.7s						
DBIC	**Dimbokro**	**120.72**	**295**	PKP	**PKPdf**	**11 05 48.1**	**-2.8**
	2.3nm,0.6s,baz=146,slow=3.6,SNR=4.8						

TAP 18 10:47:44.3, 24°.44N×121°.91E, h21km, ML2.3, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.12**	**275**	*i* P	Pb	10 47 49.0	-1.8
EWUT				*i* S	Sb	10 47 52.4	-3.0
ENA	**Nanau**	**0.15**	**267**	*e*P	Pb	10 47 49.4	-0.9
ENA				*e*S	Sb	10 47 53.1	-1.5
TWC	**Suao**	**0.18**	**343**	P	Pb	10 47 49.0	-0.5
TWC				S	Sb	10 47 53.6	-0.8
EAHA	**Aohua**	**0.19**	**236**	P	Pb	10 47 49.5	-0.7
EAHA				S	Sb	10 47 53.8	-0.5
NDS	**Dongshan**	**0.26**	**319**	P	Pb	10 47 50.5	-0.1
NDS				S	Sb	10 47 55.8	+0.8
EOS2	**EOS2**	**0.30**	**93**	P	Pb	10 47 51.5	+0.6
EOS2				S	Sn	10 47 57.5	-1.5
TWE	**Neicheng**	**0.36**	**322**	*e*P	Pb	10 47 52.6	+0.7
TWE				S	Sb	10 47 58.3	+1.2
LATG	**Datong**	**0.36**	**286**	P	Pb	10 47 52.2	+0.2
LATG				S	Sb	10 47 58.7	+1.4
ENTT	**Nioudou**	**0.37**	**303**	P	Pb	10 47 52.9	+0.8
ENTT				S	Sb	10 47 58.7	+1.2
ETL	**Fush Village**	**0.38**	**223**	*e*P	Pb	10 47 52.4	+0.2
NACB	**Ninganchiao**	**0.39**	**228**	P	Pb	10 47 52.6	+0.3
NACB				S	Sb	10 47 59.2	+1.4
EOS3	**EOS3**	**0.40**	**112**	*e*S	Sn	10 47 59.9	-1.6
FUSB	**Fushanzhiwuyua**	**0.43**	**318**	P	Pb	10 47 54.1	+0.8
FUSB				*e*S	Sb	10 48 00.7	+1.3
ETLH	**Xiulin Townshi**	**0.45**	**240**	P	Pb	10 47 54.3	+0.8
ETLH				*e*S	Sb	10 48 01.0	+1.2
**

VMUR				IAML		10 56 58.0		
	comp=N,227nm,0.3s							
VMUR				IAML		10 56 59.0		
	comp=E,121nm,0.4s							
NAX	**Nakhchivan**	**1.05**	**45**	P	**Pn**	**10 56 42.5**	**-0.3**	
NAX				S	**Sn**	**10 56 58.0**	**+0.3**	
HAKT	**HAKKARI**	**1.10**	**217**	P	**Pg**	**10 56 42.3**	**-0.4**	
HAKT				S	**Sn**	**10 56 59.8**	**+0.7**	
HAKT				IAML		10 57 01.0		
	comp=N,232nm,0.4s							
HAKT				IAML		10 57 02.0		
	comp=E,209nm,0.4s							
HAKT	**HAKKARI**	**1.10**	**217**	P	**Pn**	**10 56 43.1**	**-0.5**	
HAKT				S	**Sn**	**10 57 00.7**	**+1.6**	
GEVA	**Gevas**	**1.17**	**264**	P	**Pg**	**10 56 42.3**	**-1.8**	
GEVA				S	**Sb**	**10 57 00.1**	**+0.4**	
GEVA				IAML		10 57 04.0		
	comp=N,150nm,0.4s							
GEVA				IAML		10 57 05.0		
	comp=E,211nm,0.4s							
AKDM	**Akdamar-Van**	**1.23**	**265**	Pn	**Pn**	**10 56 43.9**	**-1.5**	
AKDM				Sn	**Sn**	**10 57 02.7**	**+0.4**	
ORD	**Ordubad**	**1.24**	**66**	P	**Pn**	**10 56 46.4**	**+1.0**	
ORD				S	**Sn**	**10 57 04.9**	**+2.5**	
SBZ	**Shahbuz**	**1.24**	**39**	P	**Pn**	**10 56 46.1**	**+0.6**	
SBZ				S	**Sn**	**10 57 05.1**	**+2.6**	
ITBZ	**Tabriz**	**1.28**	**99**	Pg	**Pn**	**10 56 45.8**	**-0.3**	
DYDN	**Diyadin**	**1.29**	**329**	P	**Pn**	**10 56 44.8**	**-1.4**	
DYDN				S	**Sb**	**10 57 02.8**	**-0.4**	
DYDN				IAML		10 57 08.0		
	comp=N,123nm,0.7s							
DYDN				IAML		10 57 12.0		
	comp=E,102nm,0.9s							
HYR	**Heyderabad**	**1.30**	**11**	P	**Pg**	**10 56 47.6**	**+1.0**	
HYR				S	**Sn**	**10 57 05.7**	**+1.7**	
IAZR	**Azarshahr**	**1.36**	**123**	Pg	**Pg**	**10 56 48.9**	**+1.0**	
CUKT	**Cukurca**	**1.40**	**212**	Pn	**Pn**	**10 56 47.3**	**-0.3**	
CUKT	**Cukurca**	**1.40**	**212**	P	**Pb**	**10 56 47.5**	**-0.6**	
CUKT				S	**Sg**	**10 57 11.7**	**+5.1**	
CUKT				IAML		10 57 14.0		
	comp=N,184nm,0.8s							
CUKT				IAML		10 57 14.0		
	comp=E,214nm,0.6s							
IGDI	**IGDIR**	**1.47**	**346**	P	**Pb**	**10 56 48.6**	**-0.8**	
IGDI				S	**Sg**	**10 57 09.6**	**+0.6**	
IGDI				IAML		10 57 13.0		
	comp=N,48nm,1.1s							
IGDI				IAML		10 57 13.0		
	comp=E,69nm,1.0s							
IGDI	**IGDIR**	**1.47**	**346**	P	**Pg**	**10 56 50.8**	**+0.8**	
IGDI				S	**Sg**	**10 57 13.8**	**+4.8**	
PERV	**Siirt/Pervari-**	**1.65**	**253**	P	**Pb**	**10 56 52.4**	**0.0**	
PERV				IAML		10 57 26.0		
	comp=E,230nm,0.5s							
PERV				IAML		10 57 28.0		
	comp=N,215nm,0.5s							
AGRB	**Hanur-Agry**	**1.66**	**314**	Pn	**Pb**	**10 56 52.4**	**-0.2**	
DORK	**Agr/Tutak/Do**	**1.67**	**305**	P	**Pn**	**10 56 51.2**	**-0.2**	
DORK				S	**Sg**	**10 57 15.4**	**+0.1**	
DORK				IAML		10 57 23.0		
	comp=N,39nm,1.0s							
DORK				IAML		10 57 25.0		
	comp=E,45nm,0.6s							
MLAZ	**Malazgirt-MUS**	**1.71**	**295**	Pn	**Pb**	**10 56 52.7**	**-0.7**	
KOTA	**Agri, Merkez-K**	**1.71**	**323**	P	**Pb**	**10 56 53.1**	**-0.5**	
KOTA				S	**Sg**	**10 57 16.9**	**+0.2**	
KOTA				IAML		10 57 37.0		
	comp=E,15nm,1.1s							
KOTA				IAML		10 57 40.0		
	comp=N,16nm,0.9s							
GNI	**Garni**	**1.72**	**5**	Pn	**Pg**	**10 56 53.6**	**-1.0**	
GNI	**Garni**	**1.72**	**5**	Pg	**Pg**	**10 56 54.6**	**0.0**	
IHRS	**Heris**	**1.97**	**93**	Pn	**Pg**	**10 56 59.6**	**+0.2**	
GURO	**Guroymak-BITLI**	**1.97**	**274**	Pn	**Pn**	**10 56 56.1**	**+0.6**	
SRTM	**Siirt_Merkez**	**2.11**	**259**	P	**Pb**	**10 56 59.4**	**-0.9**	
SRTM				IAML		10 57 36.0		
	comp=E,80nm,0.5s							
SRTM				IAML		10 57 43.0		
	comp=N,124nm,0.8s							
GDB	**GEDABAY**	**2.47**	**22**	P	**Pb**	**10 57 05.5**	**-0.9**	
GDB				S	**Sb**	**10 57 37.5**	**+0.5**	
GRMI	**Germi**	**2.65**	**81**	Pn	**Pb**	**10 57 08.6**	**-0.9**	
QZX	**Qazax, Azerbai**	**2.69**	**13**	P	**Pb**	**10 57 07.7**	**-2.4**	
QZX				S	**Sb**	**10 57 41.9**	**-1.6**	
YRD	**Yardimli**	**2.94**	**79**	P	**Pb**	**10 57 12.1**	**-2.3**	
YRD				S	**Sb**	**10 57 46.1**	**-4.4**	
LRK	**Lerik**	**2.99**	**85**	P	**Pb**	**10 57 12.5**	**-2.7**	

STR 18 11:05:56.3±0.5, 47.°N×3.°×±°, h0km, MLv2.1/10, LOCSAT earthModelID haslach_tau-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMF	**Charmoille**	**0.22**	**195**	Pg	Pg	11 05 59.9	-0.5
CHMF				Sg	Sg	11 06 04.2	+1.0
BOURR	**Bourrignon**	**0.34**	**100**	Pg	Pg	11 06 02.7	-0.2
BOURR				Sg	Sg	11 06 07.8	+0.5
BOUC	**Bouclans**	**0.39**	**237**	Pg	Pg	11 06 03.3	-0.4
BOUC				Sg	Sg	11 06 09.5	+0.8
BRANT	**Les Verrieres**	**0.55**	**199**	Pg	Pg	11 06 07.0	+0.2
BRANT				Sg	Sg	11 06 14.9	+1.0
WALT	**Westhalten**	**0.63**	**36**	Pg	Pb	11 06 09.6	-0.6
WALT				Sg	Sb	11 06 19.8	+0.3
ECH	**Echery**	**0.81**	**21**	Pg	Pg	11 06 11.6	-0.3
ECH				Sg	Sb	11 06 23.7	-1.1
SULZ	**Cheisacher**	**0.94**	**85**	Pg	Pg	11 06 13.8	-0.5
KIZ	**Kirchzarten**	**0.94**	**58**	Pg	Pg	11 06 14.3	-0.1
KIZ				Sg	Sb	11 06 27.8	-0.8
GIMEL	**St. Georges /**	**0.98**	**199**	Pg	Pg	11 06 13.9	-1.1
HOHE	**HOHENGOEFT**	**1.30**	**22**	Pg	Pg	11 06 20.1	-1.2
HOHE				Sg	Sg	11 06 34.9	-3.4
OPP	**Oppenau**	**1.43**	**43**	Pg	Pn	11 06 11.6	-12
OPP				Sg	Sg	11 06 16.9	-25

STR 18 11:05:59.2±0.7, 47.°N×9.°×±°, h0km, MLv1.5/4, LOCSAT earthModelID auvergne_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAHY	**Fahy-L¯s-Autr**	**0.28**	**70**	Pg	Pg	11 06 04.0	-0.5
FAHY				Sg	Sg	11 06 08.2	+0.1
FAHY	**Fahy-L¯s-Autr**	**0.28**	**70**	Pg	Pg	11 06 04.0	-0.5
FAHY				Sg	Sg	11 06 08.3	+0.2
FOURG	**Fourg**	**0.59**	**121**	Pg	Pg	11 06 10.3	-0.1
FOURG				Sg	Sb	11 06 22.5	+1.3
FOURG	**Fourg**	**0.59**	**121**	Pg	Pg	11 06 10.3	0.0
LOR	**Lormes**	**0.84**	**261**	Pg	Pg	11 06 15.4	+0.1
LOR				Sg	Sg	11 06 26.3	+0.1

HEL 18 11:07:05.5±0.2, 62.°69N×25.°92E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF	**Keuruu**	**0.72**	**223**	PG	Pg	11 07 18.2	-1.0
	baz=38						
KEF				SG	Sg	11 07 26.6	-1.9
KEF				smax	smax	11 07 28.1	
	comp=Z,2.7nm,0.2s						
NIF	**Nilsia**	**1.11**	**50**	PN	Pb	11 07 27.8	+0.2
	baz=227						
NIF				smax	smax	11 07 39.5	
	comp=Z,1.0nm,0.2s						
FIA0	**FINESS Array S**	**1.25**	**176**	PG	Pg	11 07 28.4	-1.1
	baz=352						
FIA0				smax	smax	11 07 43.4	
	comp=Z,2.4nm,0.2s						
FIA0				SG	Sg	11 07 44.0	-1.8
VAF	**Ylistaro**	**1.53**	**285**	PN	Pn	11 07 34.1	+0.1
VAF				smax	smax	11 07 51.4	
	comp=Z,1.0nm,0.2s						
OUF	**Merijarvi**	**1.76**	**343**	smax	smax	11 07 58.1	
	comp=Z,1.0nm,0.2s						
OUF				SN	Sg	11 08 02.7	+0.6
RUF	**Ruokolahti**	**1.91**	**130**	PG	Pn	11 07 40.0	+0.7
	baz=309						
RUF				smax	smax	11 08 02.3	
	comp=Z,2.1nm,0.2s						
KPF	**Kankaanpaa**	**1.99**	**246**	PG	Pn	11 07 41.4	+1.0
KPF				smax	smax	11 08 04.8	
	comp=Z,1.2nm,0.2s						
VJF	**Virojoki**	**2.30**	**159**	smax	smax	11 08 13.4	
	comp=Z,1.5nm,0.2s						
VJF				SG	Sb	11 08 15.4	-1.3
RMF	**Romuvaara**	**2.37**	**48**	smax	smax	11 08 15.5	
	comp=Z,1.2nm,0.2s						
OUL	**Oulu**	**2.40**	**360**	SG	Sb	11 08 21.0	+1.3
JOF	**Joensuu**	**2.49**	**82**	PG	Pb	11 07 50.1	-0.9
JOF				SG	Sb	11 08 22.4	+0.3
RAF	**Rauma**	**2.58**	**231**	smax	smax	11 08 21.7	
	comp=Z,1.2nm,0.2s						
RAF				SB	Sn	11 08 22.1	+1.6

*IDC **18** 11:11:30.0±8.5, 5.°97S×154.°74E, h170km±80km, mb3.4/6, mbtmp3.9/7, MS1.6/1, Error ellipse: s-maj=33.4km s-min=31.6km az=42.0*

ISC 18 11:11:20.9±1.2, 5.°9S±0.°2×154.°9E±0.°3, h89km, n8, σ1=102/9, mb3.7/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.18**	**126**	LR	LR	11 15 15.9	
	comp=Z,5.0nm,18.6s,baz=288,slow=36						
DZM	**Mont Dzumac**	**19.64**	**146**	P	**Pn**	**11 15 45.6**	**+0.8**
	2.6nm,0.6s,baz=330,slow=18,SNR=1.5						
WRA	**Warramunga Arr**	**24.37**	**233**	P	**P**	**11 16 31.4**	**+0.5**
	1.5nm,0.4s,baz=58,slow=9.8,SNR=52						
WRA				PcP	**PcP**	**11 20 06.7**	**-1.6**
	0.3nm,0.9s,baz=58,slow=2.7,SNR=1.3						
	1.5nm,0.4s						
ASAR	**Alice Springs**	**26.84**	**227**	P	**P**	**11 16 52.7**	**-0.6**
	0.5nm,0.4s,baz=56,slow=9.1,SNR=8.8						
ASAR				PcP	**PcP**	**11 20 12.8**	**-1.1**
	0.3nm,0.5s,baz=52,slow=2.8,SNR=1.5						
	0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**60.17**	**295**	P	**P**	**11 21 20.7**	**+0.9**
	0.4nm,0.3s,baz=111,slow=6.9,SNR=2.3						
	0.4nm,0.3s						
SONM	**Songino Array**	**68.30**	**327**	P	**P**	**11 22 13.0**	**+0.4**
	0.4nm,0.4s,baz=136,slow=6.2,SNR=3.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**82.46**	**319**	P	**P**	**11 23 33.4**	**-0.2**
	0.6nm,0.6s,baz=105,slow=5.4,SNR=8.5						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**83.16**	**326**	P	**P**	**11 23 36.5**	**-0.5**
	0.3nm,0.4s,baz=176,slow=8.7,SNR=2.7						
	0.3nm,0.4s						

IDC 18 11:27:21.6±1.9, 17.°01S×178.°00W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=155.5km s-min=33.3km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.41**	**240**	P	P	11 34 54.5	+1.1
	1.8nm,0.5s,baz=76,slow=8.5,SNR=7.6						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**45.18**	**259**	P	P	11 35 40.0	-0.8
	0.8nm,0.5s,baz=99,slow=8.1,SNR=34						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**45.41**	**253**	P	P	11 35 42.0	-0.6
	8.9nm,0.5s,baz=88,slow=8.1,SNR=217						
	8.9nm,0.5s						
TXAR	**Lajitas Array**	**85.19**	**58**	P	P	11 40 00.5	+0.1
	0.2nm,0.9s,baz=264,slow=5.9,SNR=1.5						
	0.2nm,0.9s						

*IDC **18** 11:28:02.2±1.5, 37.°80N×72.°66E, h106km±12km, mb4.3/30, mbtmp4.7/35, MS3.4/13, Error ellipse: s-maj=12.3km s-min=8.0km az=16.0*
*BJI **18** 11:28:04.3, 38.°01N×72.°81E, h123km, mB5.0/12, mb4.6/49*
*MOS **18** 11:28:04.1±0.9, 37.°98N×72.°69E, h127km, mb4.8/36, Error ellipse: s-maj=4.9km s-min=3.3km az=93.0*
*NEIC **18** 11:28:05.7±1.1, 37.°96N±0.°06×72.°68E±0.°09, h129km±4km, mb4.7/107, Error ellipse: s-maj=10.0km s-min=8.0km az=104.0*
*NNC **18** 11:28:08.5±3.8, 38.°32N×72.°46E, h173km±36km, mb4.3, mpv5.4, Error ellipse: s-maj=36.8km s-min=18.0km az=11.0*

ISC 18 11:28:03.9±0.4, 37.°87N±0.°03×72.°68E±0.°03, h122km±3km, h122km:pP-P, n522, σ1=76/544, mb4.7/155, 55C-23D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.75**	**337**	Pn	**Pn**	**11 28 35.6**	**+0.9**
DRK				Sn	**Sn**	**11 28 58.0**	**-0.2**
DRK	**Karamyk**	**1.75**	**337**	PN	**Pn**	**11 28 35.6**	**+0.9**
DRK						11 28 58.0	
KSH2	**Kashi**	**2.59**	**60**	P	**Pn**	**11 28 48.0**	**+2.8**
KSH2				S	**Sn**	**11 29 21.0**	**+4.2**
KSH2				smax	smax		
	comp=N,8μm,0.8s						
KSH2				smax	smax		
	comp=E,4μm,1.1s						
BTK	**Batken**	**2.62**	**327**		**Pn**	**11 28 46.5**	**+1.1**
BTK				Sn	**Sn**	**11 29 16.8**	**-0.6**
OHH	**Osh**	**2.65**	**2**	PN	**Pn**	**11 28 44.7**	**-1.1**
TRKS	**Terek-Say**	**3.84**	**342**	PN	**Pn**	**11 29 00.1**	**-1.5**
ARLS	**Aral**	**4.18**	**17**	PN	**Pn**	**11 29 06.2**	**+0.2**
SRNI	**Srinagar**	**4.18**	**155**	*e*P	**Pn**	**11 29 03.9**	**-2.2**
SRNI				*e*S	**Sn**	**11 29 50.8**	**-3.5**
NIL	**Nilore**	**4.24**	**174**		**Pn**	**11 29 09.9**	**+3.2**
NIL	**Nilore**	**4.24**	**174**	PN	**Pn**	**11 29 09.9**	**+3.2**
NRN	**Naryn**	**4.38**	**35**		**Pn**	**11 29 08.6**	**-0.3**
NRN	**Naryn**	**4.38**	**35**	PN	**Pn**	**11 29 08.6**	**-0.3**
KBL	**Kabul**	**4.44**	**223**		**Pn**	**11 29 12.2**	**+2.6**
KBL	**Kabul**	**4.44**	**223**	PN	**Pn**	**11 29 12.2**	**+2.6**
KBL	**Kabul**	**4.44**	**223**	P	**Pn**	**11 29 12.5**	**+2.9**
	SNR=30						
KBL				S	**Sn**	**11 30 03.9**	**+3.4**
UCH	**Uchtor**	**4.57**	**17**	P	**Pn**	**11 29 12.3**	**+0.8**
	SNR=184						
IUG	**luzhnay**	**4.73**	**335**	*e*PN	**Pn**	**11 29 13.1**	**-0.2**
IUG	**luzhnay**	**4.73**	**335**	*e*P	**Pn**	**11 29 13.2**	**-0.2**
EKS2	**Erkin-Say**	**4.86**	**10**	P	**Pn**	**11 29 15.8**	**+0.8**
	SNR=90						
AAK	**Ala-Archa**	**4.96**	**16**	P	**Pn**	**11 29 17.6**	**+1.1**
	SNR=203						
AAK	**Ala-Archa**	**4.96**	**16**	P	**Pn**	**11 29 17.3**	**+0.9**
	197nm,0.4s,baz=120,slow=3.2,SNR=841						
AAK				S	**Sn**	**11 30 11.2**	**-1.7**
	199nm,0.5s,baz=341,slow=22,SNR=6.9						
AAK				LR	LR	11 31 02.7	
	comp=Z,76nm,18.9s,baz=220,slow=36						
AAK	**Ala-Archa**	**4.96**	**16**		**Pn**	**11 29 17.5**	**+1.1**
AAK	**Ala-Archa**	**4.96**	**16**	⇓P	**Pn**	**11 29 17.6**	**+1.1**
	776nm,0.5s						
AAK				⇑S	**Sn**	**11 30 11.7**	**-1.2**
	5μm,0.7s						
AAK	**Ala-Archa**	**4.96**	**16**	*i* P	**Pn**	**11 29 17.5**	**+1.1**
	SNR=211						
AAK	**Ala-Archa**	**4.96**	**16**	*i* PN	**Pn**	**11 29 17.5**	**+1.1**
AAK				pmax	pmax		
	comp=Z,776nm,0.5s						
AAK	**Ala-Archa**	**4.96**	**16**	P	**Pn**	**11 29 16.9**	**+0.4**
AAK				S	**Sn**	**11 30 11.2**	**-1.7**
CHM	**Chimkent**	**5.03**	**333**	*e*PN	**Pn**	**11 29 18.0**	**+0.7**
CHM	**Chimkent**	**5.03**	**333**	*e*P	**Pn**	**11 29 18.0**	**+0.7**
KBK	**Karagaybulak**	**5.08**	**19**	P	**Pn**	**11 29 20.0**	**+1.9**
	SNR=13						
DZA	**Taraz**	**5.12**	**349**	*e*PN	**Pn**	**11 29 18.6**	**+0.1**
DZA				*e*S	**Sn**	**11 30 15.2**	**-1.4**
DZA	**Taraz**	**5.12**	**349**	*e*P	**Pn**	**11 29 18.6**	**+0.1**
DZA				*e*S	**Sn**	**11 30 15.2**	**-1.4**
ULHL	**Ulahol**	**5.15**	**31**	P	**Pn**	**11 29 19.7**	**+0.6**
	SNR=8.6						
FRU1	**Bishkek**	**5.15**	**16**		**Pn**	**11 29 21.0**	**+2.0**
FRU1	**Bishkek**	**5.15**	**16**	PN	**Pn**	**11 29 21.0**	**+2.0**
ALCI	**Alchi Leh**	**5.16**	**134**	*e*P	**Pn**	**11 29 16.8**	**-2.5**
ALCI				*e*S	**Sn**	**11 30 11.8**	**-6.2**
ALCI				IAML		11 30 20.7	
	comp=E,606nm,0.9s						
ALCI				IAML		11 30 21.2	
	comp=N,808nm,1.4s						
BOOM	**Boomskoye usch**	**5.25**	**27**		**Pn**	**11 29 21.3**	**+1.0**
BOOM	**Boomskoye usch**	**5.25**	**27**	PN	**Pn**	**11 29 21.3**	**+1.0**
CHMS	**Chumysh**	**5.36**	**16**	P	**Pn**	**11 29 22.6**	**+0.9**
	SNR=96						
JMU	**Jammu**	**5.37**	**160**	*e*P	**Pn**	**11 29 20.4**	**-1.5**
JMU				*e*S	**Sn**	**11 30 17.4**	**-5.3**
JMU				IAML		11 30 33.9	
	comp=N,1μm,1.0s						
JMU				IAML		11 30 34.9	
	comp=E,2μm,1.0s						
KDJ	**Kajisay**	**5.48**	**38**	Pn	**Pn**	**11 29 24.9**	**+1.4**
KDJ	**Kajisay**	**5.48**	**38**	PN	**Pn**	**11 29 24.9**	**+1.4**
KK31	**Karatay Array**	**5.48**	**343**		**Pn**	**11 29 23.1**	**-0.3**
KK31	**Karatay Array**	**5.48**	**343**	P	**Pn**	**11 29 23.0**	**-0.3**
	comp=E,197nm,0.3s,baz=158,slow=12,SNR=1956						
KK31				⇑S	**Sn**	**11 30 19.9**	**-5.4**
	comp=E,229nm,0.2s,baz=174,slow=18,SNR=21						
KK31	**Karatay Array**	**5.48**	**343**	PN	**Pn**	**11 29 23.1**	**-0.3**
KKAR	**Karatay Array**	**5.48**	**343**		**Pn**	**11 29 22.9**	**-0.4**
KKAR	**Karatay Array**	**5.48**	**343**	PN	**Pn**	**11 29 23.0**	**-0.4**
TKM2	**Tokmak 2**	**5.51**	**23**	P	**Pn**	**11 29 24.6**	**+0.7**
	SNR=30						
USP	**Ospenovka**	**5.57**	**14**	P	**Pn**	**11 29 24.8**	**+0.3**
	SNR=52						
TSSA	**Tissa**	**5.76**	**150**	*e*P	**Pn**	**11 29 25.0**	**-2.4**
TSSA				*e*S	**Sn**	**11 30 26.4**	**-6.1**
TSSA				IAML		11 30 35.8	
	comp=E,1μm,0.8s						
TSSA				IAML		11 30 36.0	
	comp=N,1μm,0.6s						
SGDS	**Sogindy**	**5.77**	**14**	*e*P	**Pn**	**11 29 27.5**	**+0.2**
WUS	**Wushi**	**6.05**	**55**		**Pn**	**11 29 32.0**	**+0.9**
TNSS	**Tian-Shan**	**6.10**	**31**	*e*PN	**Pn**	**11 29 32.1**	**+0.1**
TNSS	**Tian-Shan**	**6.10**	**31**	*e*P	**Pn**	**11 29 32.2**	**+0.2**
AAA	**Alma-Ata**	**6.23**	**30**	*e*PN	**Pn**	**11 29 33.9**	**+0.4**
AAA	**Alma-Ata**	**6.23**	**30**	*e*P	**Pn**	**11 29 33.9**	**+0.4**
MDOK	**Medeo**	**6.25**	**31**	*e*PN	**Pn**	**11 29 34.1**	**+0.4**
MDOK				*e*S	**Sn**	**11 30 43.0**	**-0.8**
MDOK	**Medeo**	**6.25**	**31**	*e*P	**Pn**	**11 29 34.2**	**+0.4**
MDOK				*e*S	**Sn**	**11 30 43.0**	**-0.8**
DHRM	**DHARAMSHALA**	**6.34**	**151**	*e*P	**Pn**	**11 29 31.9**	**-3.3**
DHRM				*e*S	**Sn**	**11 30 40.7**	**-5.7**
DHRM				IAML		11 30 49.9	
	comp=N,839nm,0.4s						
DHRM				IAML		11 30 52.4	
	comp=E,911nm,0.4s						
PRZ	**Przheval'sk**	**6.35**	**42**		**Pn**	**11 29 37.0**	**+1.8**
PRZ	**Przheval'sk**	**6.35**	**42**	PN	**Pn**	**11 29 37.0**	**+1.8**
TLWR	**Talawar**	**6.48**	**155**	*e*P	**Pn**	**11 29 34.3**	**-2.6**
TLWR				*e*S	Sn	11 30 40.6	-8.9
TLWR				IAML		11 30 48.1	
	comp=N,171nm,0.4s						
TLWR				IAML		11 30 49.3	
	comp=E,478nm,0.3s						
KUU	**Kurty**	**6.62**	**24**	*e*PN	**Pn**	**11 29 39.2**	**+0.5**
KUU	**Kurty**	**6.62**	**24**	*e*P	**Pn**	**11 29 39.2**	**+0.5**
SATY	**Saty**	**6.77**	**38**	*e*PN	**Pn**	**11 29 41.2**	**+0.4**
SATY	**Saty**	**6.77**	**38**	*e*P	**Pn**	**11 29 41.3**	**+0.4**
SATY				*e*S	**Sn**	**11 30 55.9**	**-0.7**
BHK	**Bhakra**	**7.14**	**154**	*e*P	**Pn**	**11 29 46.1**	**+0.3**
UZB	**Uzynbulak**	**7.15**	**40**	*e*PN	**Pn**	**11 29 46.2**	**+0.3**
UZB	**Uzynbulak**	**7.15**	**40**	*e*P	**Pn**	**11 29 46.3**	**+0.3**
HNLY	**HANLEY**	**7.22**	**133**	*e*P	**Pn**	**11 29 44.6**	**-2.8**
SHLS	**Shalkode**	**7.38**	**42**	*e*PN	**Pn**	**11 29 52.6**	**+3.5**
SHLS	**Shalkode**	**7.38**	**42**	*e*P	**Pn**	**11 29 52.6**	**+3.5**
ARXS	**Arharly**	**7.43**	**30**	*e*PN	**Pn**	**11 29 49.1**	**-0.6**
PDGK	**Podgornoye**	**7.52**	**41**	⇑P	**Pn**	**11 29 50.5**	**-0.4**
	comp=E,62nm,0.7s						
PDGK	**Podgornoye**	**7.52**	**41**	PN	**Pn**	**11 29 50.5**	**-0.4**
SMLA	**Simla**	**7.67**	**150**	*e*P	**Pn**	**11 29 50.8**	**-2.2**
SMLA				*e*S	**Sn**	**11 31 10.5**	**-7.8**
SMLA				IAML		11 31 19.2	
	comp=N,610nm,0.3s						
SMLA				IAML		11 31 20.4	
	comp=E,758nm,0.1s						
KLP	**Kalpa**	**7.81**	**142**	*e*P	**Pn**	**11 29 50.6**	**-4.4**
KLP				*e*S	Sn	11 31 11.2	-11
KLP				IAML		11 31 25.9	
	comp=N,641nm,1.6s						
KLP				IAML		11 31 26.9	
	comp=E,934nm,0.5s						
TDK	**Taldyqorghan**	**8.32**	**29**	*e*PN	**Pn**	**11 30 01.6**	**0.0**
TDK	**Taldyqorghan**	**8.32**	**29**	*e*P	**Pn**	**11 30 01.6**	**0.0**
DDI	**Dehra Dun**	**8.74**	**148**	*e*P	**Pn**	**11 30 05.2**	**-2.3**
DDI				*e*S	**Sn**	**11 31 35.5**	**-8.9**
DDI				IAML		11 31 44.6	
	comp=E,452nm,0.4s						
DDI				IAML		11 31 47.6	
	comp=N,565nm,0.3s						
HRA	**Herat**	**9.13**	**251**		**Pn**	**11 30 13.9**	**+1.1**
JOSI	**Joshimath**	**9.25**	**140**	*e*P	**Pn**	**11 30 11.3**	**-3.2**
JOSI				*e*S	Sn	11 31 45.9	-11
JOSI				IAML		11 31 53.8	
	comp=N,228nm,0.8s						
JOSI				IAML		11 31 54.7	
	comp=E,301nm,0.6s						
BKNR	**BIKANER**	**9.84**	**177**	*e*P	Pn	11 30 16.9	-5.3
BKNR				*e*S	Sn	11 31 55.7	-15
BKNR				IAML		11 32 08.3	
	comp=E,139nm,0.6s						
BKNR				IAML		11 32 14.2	
	comp=N,230nm,0.5s						
NDI	**New Delhi**	**9.91**	**156**	*e*P	**Pn**	**11 30 19.1**	**-4.0**
NDI				*e*S	Sn	11 32 01.2	-11
NDI				IAML		11 32 26.2	
	comp=Z,77nm,0.6s						
KUDL	**Kundal**	**10.21**	**161**	*e*P	**Pn**	**11 30 23.3**	**-3.9**
KUDL				*e*S	Sn	11 32 08.2	-12
KUDL				IAML		11 32 16.6	
	comp=E,197nm,2.1s						
KUDL				IAML		11 32 19.0	
	comp=N,131nm,1.6s						
PTH	**Pithoragarh**	**10.36**	**141**	*e*P	**Pn**	**11 30 26.5**	**-2.9**
PTH				*e*S	Sn	11 32 11.3	-12
PTH				IAML		11 32 21.3	
	comp=N,75nm,0.5s						
PTH				IAML		11 32 22.3	
	comp=E,66nm,0.5s						
LGTI	**Lohaghat**	**

BVA0 Borovoye Array 15.24 355 ⇑P **Pn 11 31 29.8 -2.7**
comp=Z,42nm,1.2s
BVA0 Borovoye Array 15.24 355 P **Pn 11 31 29.7 -2.7**
BVA0 S **Sn 11 34 10.9 -10**
BVAR Borovoye Array 15.24 355 P **Pn 11 31 30.4 -2.1**
comp=Z,19nm,0.4s,baz=159,slow=12,SNR=70
BVAR S Sn 11 34 09.5 -12
comp=Z,10nm,0.6s,baz=166,slow=19,SNR=5.9
BVAR LR LR 11 37 35.8
comp=Z,95nm,21.2s,baz=173,slow=38
BORK Borovoye 15.27 355 Pn 11 31 31.0 -1.7
BORK Borovoye 15.27 355⇑*i*P **Pn 11 31 30.8 -1.9**
BORK pmax pmax
comp=Z,79nm,0.9s
EVN Everest 15.43 126 Pn 11 31 34.2 -1.4
EVN IAmb IAmb 11 31 39.8
comp=Z,39nm,0.6s
NGCH Negor - Chabah 15.87 221 P **P 11 31 41.4 -0.2**
DGZ Jazzator, Alta 15.88 37⇓*i*P **Pn 11 31 39.0 -1.5**
DGZ pmax pmax
comp=Z,47nm,1.4s
AKTO Aktyubinsk 16.35 325 P **Pn 11 31 44.9 -1.3**
comp=Z,95nm,0.5s,baz=132,slow=9.6,SNR=188
AKTO S Sn 11 34 32.2 -15
comp=Z,59nm,0.7s,baz=354,slow=16,SNR=7.5
AKTO LR LR 11 38 46.4
comp=Z,159nm,19.0s,baz=49,slow=39
AKTO Aktyubinsk 16.35 325⇓P **Pn 11 31 44.6 -1.5**
comp=Z,150nm,1.0s
LSA Lhasa 17.36 113 P **P 11 31 56.6 -2.0**
LSA pmax pmax
comp=Z,13nm,0.9s
LSA Lhasa 17.36 113 P **Pn 11 32 00.8 +1.7**
GOMU GeErMu 17.75 89 P **Pn 11 32 03.9 +0.3**
GOMU pmax pmax
comp=Z,35nm,1.2s
ZAA0 Zalesovo Array 18.12 24⇓P **P 11 32 05.5 -0.6**
comp=Z,14nm,0.9s
ZALV Zalesovo Beam 18.12 24 P **P 11 32 05.5 -0.6**
comp=Z,16nm,0.5s,baz=216,slow=10,SNR=79
ZALV S **S 11 35 20.1 -7.3**
comp=Z,3.2nm,0.9s,baz=222,slow=19,SNR=1.5
ZALV Zalesovo Beam 18.12 24 P **P 11 32 05.9 -0.3**
ZALV Zalesovo Beam 18.12 24 *i*P **P 11 32 05.8 -0.3**
ZALV pmax pmax
comp=Z,16nm,0.5s
BANOM Banah 18.28 234 *i*P **P 11 32 07.7 -0.6**
SNR=9.1
BANOM Banah 18.28 234 P **P 11 32 08.0 -0.2**
SHME Shamm 18.30 235 P **P 11 32 08.1 -0.3**
SHME Shamm 18.30 235 P **P 11 32 08.5 +0.2**
MDH Madha 18.72 233 P **P 11 32 11.9 -1.2**
MDH Madha 18.72 233 P **P 11 32 12.3 -0.8**
MASF Masafi 18.76 233 P **Pn 11 32 14.5 -0.8**
SNR=10
MSFE Esma-Masafi 18.77 233 *i*P **P 11 32 14.4 +0.8**
SNR=12
WSAR Wadi Sarin 18.92 224 P **Pn 11 32 16.4 -0.8**
UOSS Minazif 19.04 232 P **P 11 32 14.9 -1.6**
UOSS IAmb IAmb 11 32 17.7
comp=Z,42nm,0.8s
UOSS Minazif 19.04 232 *i*P **P 11 32 16.9 +0.4**
SNR=11
UOSS Minazif 19.04 232 P **P 11 32 17.0 +0.5**
HATD Hatta, Dubai 19.17 232 *i*P **P 11 32 18.3 +0.4**
SNR=11
HATD Hatta, Dubai 19.17 232 P **P 11 32 18.4 +0.5**
WBK Wadi Bani Khal 19.24 222 P **P 11 32 19.5 +0.7**
ASHO Ashiyiah 19.32 232 *i*P **P 11 32 20.2 +0.6**
SNR=62
ASHO Ashiyiah 19.32 232 P **P 11 32 20.2 +0.6**
SNR=29
NAZ Nazwa, Dubai 19.35 233 P **P 11 32 20.1 +0.3**
NAZ Nazwa, Dubai 19.35 233 P **P 11 32 20.4 +0.5**
SNR=5.9
SMDO Samad 19.38 225 P **P 11 32 21.1 +0.8**
HOQ Hoqain 19.39 227 P **Pn 11 32 21.5 -1.2**
JLN Jalan Bani Buh 19.40 220 P **Pn 11 32 21.8 -1.0**
SOHO SOHO 19.43 230 P **P 11 32 19.6 -1.2**
AKT Akhty 19.52 288 *e*P **P 11 32 22.3 +0.5**
AKT *e*S **S 11 35 55.0 -0.7**
AKT pmax pmax
comp=Z,36nm,0.6s
FAQ Al Faqa, Dubai 19.57 233 P **P 11 32 22.4 +0.2**
ASUD Al Ashush, Dub 19.82 233 *i*P **P 11 32 25.7 +0.8**
SNR=5.6
ASUD Al Ashush, Dub 19.82 233 P **P 11 32 25.7 +0.8**
JMDO Jabal Madar 19.90 223 P **P 11 32 26.9 +1.1**
SNR=5.3
ALNE Al Ain 19.97 231 *i*P **P 11 32 27.0 +0.4**
SNR=7.5
ALNE Al Ain 19.97 231 P **P 11 32 27.3 +0.8**
SNR=10
AJN Ajban 20.08 234 P **P 11 32 28.5 +0.7**
AJN Ajban 20.08 234 P **P 11 32 28.6 +0.8**
SNR=7.9
BSY Bisya 20.11 226 P **P 11 32 29.5 +1.4**
SNR=5.1
SHL Shillong 20.38 121 P 11 32 32.4 +1.2
SHL IAmb IAmb 11 32 33.9
comp=Z,59nm,0.9s
SHL Shillong 20.38 121 P **P 11 32 32.4 +1.2**
SHL pmax pmax
comp=Z,59nm,0.9s
SVE Sverdlovsk 20.59 341*ce*P **P 11 32 32.8 -0.1**
SVE pmax pmax
comp=N,132nm,0.8s
ARTI Arti 20.85 337 P **P 11 32 35.4 -0.3**
comp=N,98nm,0.8s,baz=152,slow=6.7,SNR=104
ARTI LR LR 11 41 10.6
comp=N,145nm,21.9s,baz=176,slow=38
comp=N,98nm,0.8s
ARTI Arti 20.85 337 P 11 32 35.0 -0.7
ARTI Arti 20.85 337*d i*P **P 11 32 35.2 -0.5**
ARTI 11 33 03.4
ARTI S **S 11 36 20.6 -0.6**
ARTI SS Sn 11 37 04.2 +29
ARTI pmax pmax
comp=Z,108nm,0.9s
MHTO MHTO 21.10 221 P **P 11 32 40.6 +1.9**
GTA2 Gaotai 21.17 77 P **P 11 32 40.8 +1.3**
GTA2 pP pP 11 33 08.1 +4.9
GTA2 pmax pmax
comp=Z,29nm,1.1s
JRN Qarnain Island 21.22 238 P **P 11 32 40.6 +0.6**
JRN S **S 11 36 25.6 -3.3**
KNGR Kungurtug, Tuv 21.75 46⇑*i*P **P 11 32 46.8 +1.2**
KNGR pmax pmax
comp=Z,24nm,0.8s
GNI Garni 21.80 285 P **P 11 32 45.8 -0.5**
comp=Z,34nm,0.6s,baz=151,slow=3.5,SNR=20
comp=Z,34nm,0.6s
GNI Garni 21.80 285 P 11 32 49.0 +2.7
GNI Garni 21.80 285 P **P 11 32 45.8 -0.5**
GNI Garni 21.80 285*d i*P **P 11 32 48.5 +2.3**
GNI pmax pmax
comp=Z,127nm,1.2s
GHWR Ruwais 21.87 236 P **P 11 32 45.6 -1.3**
GHWR S **S 11 36 36.5 -4.3**
MZR Muzera 22.16 233 *i*P **P 11 32 48.4 -1.5**
SNR=9.7
MZR Muzera 22.16 233 P **P 11 32 48.8 -1.1**
SNR=5.4
MZR S **S 11 36 42.9 -2.8**
TRNA Turayna 22.47 241 P **P 11 32 53.5 +0.5**
SLWR Sila 22.59 238 P **P 11 32 54.5 +0.4**
SLWR S **S 11 36 49.1 -3.5**
BELG Belogornoye 22.72 318*c i*P **P 11 32 54.9 -0.3**
BELG pmax pmax
comp=Z,33nm,1.0s
SMRA Abu-Samra 22.74 241 P **P 11 32 54.4 -1.2**
SMRA S **S 11 36 52.4 -2.6**
KARS Kars 23.04 286 IAmb IAmb 11 33 45.3
comp=Z,45nm,1.1s
PYA1 Pyatigorsk 23.11 295⇓*e*P **P 11 32 59.0 -0.1**
KBZ Khabaz 23.22 294 P **P 11 32 59.8 -0.2**
comp=Z,13nm,0.8s,baz=120,slow=4.9,SNR=18
comp=Z,13nm,0.8s
KBZ Khabaz 23.22 294⇑*i*P **P 11 33 00.4 +0.4**
KBZ pmax pmax
comp=Z,13nm,0.8s
GOF Gofitskoye 23.26 297*ce*P **P 11 33 02.1 +1.7**
GEVA Gevas 23.28 280 IAmb IAmb 11 33 05.2
comp=Z,30nm,1.0s
NEUR Neytrino 23.33 293*d i*P **P 11 33 03.3 +2.0**
NEUR pmax pmax
comp=Z,39nm,1.2s
KIV Kislovodsk 23.39 295 P **P 11 33 02.1 +0.3**
KIV Kislovodsk 23.39 295⇑P **P 11 33 02.6 +0.8**
KIV Kislovodsk 23.39 295 *e*P **P 11 33 02.0 +0.3**
KIV *e*S **S 11 37 04.9 -0.6**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,53nm,14.0s
SHA1 Shidzhatmaz 23.40 294*c i*P **P 11 33 03.1 +1.1**
MOY Mondy 24.19 46 *e*P **P 11 33 10.6 +1.7**
MOY pmax pmax
comp=Z,16nm,2.2s
SHAO Shalim 24.78 222 P **P 11 33 15.8 +1.4**
SHAO Shalim 24.78 222 P **P 11 33 15.8 +1.4**
LZDM Lanzhou Array 24.82 85 P **P 11 33 16.2 +1.3**
comp=Z,4.0nm,0.5s,baz=280,slow=8.9,SNR=20
LZDM ScP **ScP 11 40 16.2 +0.6**
comp=Z,0.8nm,0.4s,baz=70,slow=1.7,SNR=4.1
comp=Z,4.0nm,0.5s
LABN Labinsk 24.85 296 *e*P **P 11 33 16.6 +1.7**
LABN *e**PP **pP 11 33 43.1 +1.0**
LABN *e*S **S 11 37 30.4 +1.7**
LABN pmax pmax
comp=Z,51nm,0.8s
LZH Lanzhou 24.90 84 *e*P **P 11 33 17.4 +1.8**
LZH pP pP 11 33 43.0 -0.1
LZH sP sP 11 33 55.8 -2.2
LZH pmax pmax
comp=Z,39nm,1.9s
KOPT Kop Dagi 25.06 285 IAmb IAmb 11 33 24.4
comp=Z,23nm,0.9s
ZAK Zakamensk 25.08 50 *e*P **P 11 33 17.6 +0.6**
ZAK *e* 11 33 47.1
ZAK pmax pmax
comp=Z,19nm,1.2s
ZAK pmax pmax
comp=Z,14nm,2.2s
DOK Doka 25.11 225 P **P 11 33 18.5 +1.1**
ERBR Yeremizino-Bor 25.13 298 *e*P **P 11 33 19.8 +2.5**
ERBR *e**PP **pP 11 33 46.7 +2.1**
ERBR *e*S **S 11 37 36.5 +3.5**
ERBR pmax pmax
comp=Z,19nm,0.7s
MARD Mardin 25.23 279 P 11 33 21.0 +2.5
TNCH TengChong 25.39 113⇑P **P 11 33 22.1 +2.0**
TNCH pP pP 11 33 48.9 +1.0
TNCH sP sP 11 34 02.5 0.0
TNCH PP **PnPn 11 34 09.3 +6.2**
TNCH pmax pmax
comp=Z,24nm,1.1s
DMTO DMTO 25.40 223 P **P 11 33 21.2 +1.2**
SOC Sochi 25.52 293 *e*P **P 11 33 21.2 +0.3**
SOC *e* 11 34 05.4
SOC *e*S **S 11 37 39.1 -0.1**
SOC pmax pmax
comp=Z,18nm,0.8s
VRH Novokhopyorsk 25.56 311 *e*P **P 11 33 20.9 -0.3**
VRH pmax pmax
comp=Z,54nm,0.6s
KIRV Kirov 25.64 331⇑*i*P **P 11 33 22.4 +0.6**
TLY Talaya 25.72 48 P **P 11 33 22.9 +0.2**
TLY Talaya 25.72 48*ce*P **P 11 33 25.0 +2.3**
TLY pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 26.46 57 P **P 11 33 30.4 +1.0**
comp=Z,4.8nm,0.8s,baz=263,slow=7.9,SNR=34
SONM ScP **ScP 11 40 19.4 -0.4**
comp=Z,0.5nm,0.8s,baz=222,slow=2.0,SNR=3.7
SONM LR LR 11 45 00.8
comp=Z,77nm,18.3s,baz=150,slow=38
comp=Z,4.8nm,0.8s
SONM Songino Array 26.46 57 P **P 11 33 30.5 +1.0**
SONM Songino Array 26.46 57 P **P 11 33 30.5 +1.0**
SONM pmax pmax
comp=Z,8.0nm,1.1s
ABTO Aybut 26.60 225 P **P 11 33 31.2 +0.3**
ARPR Arapgir-MALATY 26.83 283 IAmb IAmb 11 33 37.1
comp=Z,34nm,1.0s
ULN Ulaanbaatar 26.90 57⇑*i*P **P 11 33 34.6 +1.1**
ULN pmax pmax
comp=Z,5.0nm,0.7s
VORD Divnogorie 26.95 310 *e*P **P 11 33 33.2 -0.5**
VORD pmax pmax
comp=Z,20nm,0.8s
PZH PanZhiHua 26.97 106 P **P 11 33 37.4 +3.1**
VSR Storozhevoye 27.10 310 *e*P **P 11 33 34.8 -0.2**
VSR pmax pmax
comp=Z,30nm,0.7s
ANN Anapa 27.20 296 *e*P **P 11 33 40.0 +4.0**
ANN *e**PP **pP 11 34 06.3 +2.9**
ANN *e*S **S 11 38 11.8 +6.1**
ANN pmax pmax
comp=Z,16nm,0.8s
VORR Voronezh 27.20 311 *e*P **P 11 33 36.0 +0.1**
VORR pmax pmax
comp=Z,43nm,0.3s
RAYN Ar Rayn 27.28 246 P **P 11 33 38.7 +1.7**
LPSR Galich'ya Gora 27.66 313 *e*P **P 11 33 40.0 +0.1**
LPSR pmax pmax
comp=Z,36nm,0.6s
GAZ Gaziantep 28.04 280 IAmb IAmb 11 33 47.0
comp=Z,21nm,0.8s
KMI2 Kunming 28.46 108 P **P 11 33 49.5 +1.8**
KMI2 pP pP 11 34 21.0 +5.5
KMI2 pmax pmax
comp=Z,13nm,0.7s
XAN Xi'an 29.46 86 P **P 11 33 56.9 +0.6**
XAN pmax pmax
comp=Z,10.0nm,0.9s
MOS Moscow 29.48 319 *e*P **P 11 33 56.0 -0.1**
MOS *e**PP **pP 11 34 24.1 +0.2**
MOS *e* 11 34 54.8
MOS pmax pmax
comp=Z,38nm,0.7s
OBN Obninsk 29.81 317 P **P 11 33 59.4 +0.3**
OBN Obninsk 29.81 317 *e*P **P 11 33 59.3 +0.3**
OBN *e**PP **pP 11 34 26.9 +0.2**
OBN *e**SP **sP 11 34 43.8 +2.5**
OBN *e* 11 35 00.5
OBN *e* 11 36 58.5
OBN pmax pmax
comp=Z,33nm,0.6s
CM31 Chiang Mai Arr 30.00 123 P **P 11 34 02.0 +0.9**
CM31 IAmb IAmb 11 34 38.4
comp=Z,10nm,0.9s
CMAR Chiang Mai Arr 30.00 123 P **P 11 34 01.6 +0.6**
comp=Z,2.3nm,0.9s,baz=314,slow=9.0,SNR=15
CMAR ScP **ScP 11 40 31.6 +0.5**
comp=Z,0.4nm,0.3s,baz=312,slow=2.4,SNR=4.3
comp=Z,2.3nm,0.9s
CMAR Chiang Mai Arr 30.00 123 P **P 11 34 02.2 +1.2**
CMAR Chiang Mai Arr 30.00 123 *i*P **P 11 34 02.2 +1.2**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
HHC Hu-ho-hao-te 30.04 72 *e*P **P 11 34 03.0 +1.6**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,78nm,4.8s
ILGA Ilgaz 30.08 288 IAmb IAmb 11 34 04.9
comp=Z,30nm,1.0s
KIRS Kirsehir-Merke 30.21 285⇑P **P 11 34 04.9 +2.0**
BR131 Keskin Array S 30.33 286 P **P 11 34 05.0 +1.1**
BR131 IAmb IAmb 11 34 06.3
comp=Z,30nm,1.1s
BR131 Keskin Array S 30.33 286*d i*P **P 11 34 05.2 +1.3**
BRTR Keskin Array B 30.33 286 P **P 11 34 05.0 +1.0**
comp=Z,7.0nm,0.6s,baz=95,slow=7.7,SNR=51
BRTR PcP **PcP 11 37 00.9 -0.2**
comp=Z,0.9nm,0.8s,baz=148,slow=4.3,SNR=2.1
comp=Z,7.0nm,0.6s
BRTR Keskin Array B 30.33 286 P **P 11 34 04.8 +0.9**
BRTR Keskin Array B 30.33 286 *i*P **P 11 34 05.3 +1.3**
BRTR pmax pmax
comp=Z,8.0nm,0.5s
GYA Guiyang 30.77 102⇓P **P 11 34 11.0 +3.0**
GYA pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 30.98 329 *e*P **P 11 34 08.2 -1.0**
KLMR *e**PP **pP 11 34 37.4 +0.3**
KLMR pmax pmax
comp=Z,26nm,0.7s
PALK Pallekele 31.32 165 P **P 11 34 14.5 +1.8**
LYN LuoYang 32.10 84 P **P 11 34 21.8 +2.4**
LYN pmax pmax
comp=Z,10.0nm,1.0s
EIL Elat 32.24 267 LR LR 11 50 52.1
comp=Z,55nm,19.3s,baz=6.5,slow=42
PURM Purcari 32.54 299⇑P **P 11 34 24.6 +1.6**
HNS HongShan 33.08 78⇑P **P 11 34 30.5 +2.6**
HNS pmax pmax
comp=Z,7.0nm,1.0s
AKASG Malin Array Be 33.17 307 P **P 11 34 28.6 +0.1**
comp=Z,7.2nm,0.6s,baz=80,slow=7.5,SNR=41
comp=Z,7.2nm,0.6s
AKASG Malin Array Be 33.17 307 *i*P **P 11 34 28.6 +0.1**
AKASG pmax pmax
comp=Z,13nm,0.5s
AKBB Malin Array Si 33.17 307*d i*P **P 11 34 28.3 -0.2**
AKBB pmax pmax
comp=Z,29nm,0.9s
KIEV Kiev 33.18 307 P 11 34 28.5 -0.1
KIEV Kiev 33.18 307⇑P **P 11 34 29.0 +0.4**
KIEV Kiev 33.18 307 P **P 11 34 28.7 +0.1**
KIEV Kiev 33.18 307 P **P 11 34 29.0 +0.4**
TPGR Topolog 33.61 296⇑P **P 11 34 33.8 +1.3**
CFR Carcaliu 33.79 297⇑P **P 11 34 35.3 +1.3**
CFR Carcaliu 33.79 297 P **P 11 34 35.3 +1.3**
ICOR Ion Corvin 34.11 295⇑P **P 11 34 38.8 +2.1**
BAND Balkesir-Ban 34.41 288⇑P **P 11 34 41.1 +1.7**
MANT Manisa 34.44 285 IAmb IAmb 11 34 42.0
comp=Z,20nm,1.0s
MNK Minsk 34.51 313 *i*P **P 11 34 40.2 +0.2**
comp=E,27nm,0.7s
MNK *i*P **P 11 34 40.2 +0.2**
comp=N,23nm,0.9s
MNK *i*P **P 11 34 40.2 +0.2**
comp=Z,33nm,0.8s,baz=100
MNK *i*pP **pP 11 35 07.9 -0.3**
MNK *i*PP **PP 11 35 59.9 -0.5**
MNK *i*S **S 11 39 59.0 -0.5**
MNK *i*SS **SnSn 11 42 24.9 +0.7**
MNK *i*LRM MLR 11 50 12.3
comp=Z,82nm,11.3s
MNK *i*LRM MLR 11 50 30.2
comp=N,481nm,18.6s
MNK *i*LRM MLR 11 50 38.9
comp=E,655nm,20.9s
MNK Minsk 34.51 313 *i*P **P 11 34 40.2 +0.2**
MNK *i**PP **pP 11 35 07.9 -0.3**
MNK *i* 11 35 59.9
MNK *i*S **S 11 39 58.9 -0.5**
MNK *i*SS **SnSn 11 42 24.8 +0.7**
MNK pmax pmax
comp=N,23nm,0.9s
MNK pmax pmax
comp=Z,33nm,0.8s
MNK pmax pmax
comp=E,27nm,0.7s
MNK MLR MLR
comp=Z,82nm,11.0s
MNK MLR MLR
comp=N,481nm,19.0s
MNK MLR MLR
comp=E,655nm,21.0s
VRI Vrincioaia 34.74 298⇑P **P 11 34 44.2 +2.0**
VRI Vrincioaia 34.74 298 P **P 11 34 44.2 +2.0**
TESR Tescani 34.76 299⇑P **P 11 34 43.2 +0.8**
PLOR Plostina 34.80 298⇑P **P 11 34 44.4 +1.6**
PLOR Plostina 34.80 298 P **P 11 34 44.3 +1.6**
GIRR Girov 34.85 300⇑P **P 11 34 44.5 +1.4**
ISR Istrita 34.92 297⇑P **P 11 34 46.0 +2.2**
ISR Istrita 34.92 297 P **P 11 34 46.0 +2.2**
ONER Baraj Valea Uz 34.95 299⇑P **P 11 34 44.8 +0.8**
WHN Wuhan 35.00 89 P **P 11 34 46.0 +1.5**
WHN pP **pP 11 35 16.0 +3.2**
RAZG Razgrad 35.10 294⇑P **P 11 34 46.3 +1.0**
COVR Voineasa-Covas 35.11 298⇑P **P 11 34 47.5 +2.1**
NACGM Naroch 35.20 314 *e*P **P 11 34 46.8 +0.8**
comp=Z,56nm,0.9s,baz=100
TIA Tai'an 35.26 79 P **P 11 34 48.3 +1.5**
TIA pmax pmax
comp=Z,13nm,1.3s
MLR Muntele Rosu 35.31 298 P **P 11 34 47.7 +0.4**
comp=Z,32nm,0.8s,baz=61,slow=1.6,SNR=32
comp=Z,32nm,0.8s
MLR Muntele Rosu 35.31 298⇓P **P 11 34 49.3 +2.0**
MLR Muntele Rosu 35.31 298 P **P 11 34 49.2 +2.0**
JOF Joensuu 35.38 329 *e*P **P 11 34 47.9 +0.5**
HILR Hailar Array B 35.42 55 P **P 11 34 48.5 +0.5**
comp=Z,1.7nm,0.5s,baz=325,slow=1.8,SNR=2.5
comp=Z,1.7nm,0.5s
ELND Elena 35.64 293⇑P **P 11 34 51.7 +1.8**
DOPR Dopca 35.67 298⇑P **P 11 34 52.2 +2.1**
BURAR Bucovina Array 35.70 301 P **P 11 34 51.4 +1.0**
BURAR IAmb IAmb 11 34 52.7
comp=Z,16nm,0.8s
BURAR Bucovina Array 35.70 301⇑P **P 11 34 51.7 +1.2**
BURAR Bucovina Array 35.70 301 P **P 11 34 51.7 +1.2**
BUR08 Bucovina Ar. S 35.71 301 IAmb IAmb 11 34 52.5
comp=Z,12nm,0.8s
VOIR 35.95 298⇑P **P 11 34 54.1 +1.5**
VOIR 35.95 298 P **P 11 34 54.0 +1.5**
RDO Rodhopi 36.18 290 IAmb IAmb 11 34 56.7
comp=Z,9.5nm,0.9s
ARR Arges 36.24 298⇑P **P 11 34 56.2 +1.1**
KARP Karpathos 36.30 281 *e*P **P 11 34 56.6 +0.9**
TNR Turnu Rosu 36.47 298⇓P **P 11 34 59.2 +2.2**
TNR Turnu Rosu 36.47 298 P **P 11 34 59.2 +2.2**
ARBE Arbavere 36.60 321 *e*P **P 11 34 58.4 +0.6**
LOT Lotru 36.84 298⇑P **P 11 35 02.1 +1.9**
PABE Paberze 36.89 315 *e*P **P 11 35 00.6 +0.3**
APA Apatity 36.91 336 *e*P **P 11 34 57.0 -3.4**
APA *e**PP **pP 11 35 28.3 -0.8**
APA pmax pmax
comp=Z,13nm,1.2s
FIA1 FINESS Array S 37.12 325 P **P 11 35 02.3 +0.1**
FINES FINESS Array B 37.12 325 P **P 11 35 02.5 +0.2**
comp=Z,26nm,0.6s,baz=110,slow=9.4,SNR=115
FINES PP **PP 11 36 26.2 -2.9**
comp=Z,6.3nm,0.7s,baz=105,slow=13,SNR=4.3
FINES S **S 11 40 43.7 +4.6**
comp=Z,24nm,0.8s,baz=133,slow=26,SNR=18
FINES LR LR 11 50 22.7
comp=Z,165nm,21.0s,baz=240,slow=36
comp=Z,26nm,0.6s
FINES FINESS Array B 37.12 325 P **P 11 35 02.8 +0.5**
MARR Marisei-Cluj 37.18 300⇑P **P 11 35 04.7 +1.6**
KWP Kalwaria Pacla 37.31 305 *e*P **P 11 35 05.2 +1.2**
DRGR 37.45 300⇑P **P 11 35 06.2 +0.9**
DRGR 37.45 300 P **P 11 35 06.2 +0.9**
MTSE Matsula 37.52 320 *e*P **P 11 35 05.9 +0.3**
GZR Gura Zlata 37.54 298⇑P **P 11 35 07.4 +1.3**
GZR Gura Zlata 37.54 298 P **P 11 35 07.4 +1.3**
MEF Metsahovi 37.58 322 *e*P **P 11 35 06.6 +0.6**
HERR Herculane 37.86 297⇑P **P 11 35 09.3 +0.6**
KEF Keuruu 37.89 326 *e*P **P 11 35 09.0 +0.4**
NJ2 Nanjing 37.98 85⇓P **P 11 35 11.4 +1.6**
NJ2 pmax pmax
comp=Z,14nm,0.7s
PBUR Paburge 38.10 315 *e*P **P 11 35 10.8 +0.3**
STHS Stebnicka Huta 38.27 304 *e*P **P 11 35 11.8 -0.3**
STHS pmax pmax
comp=Z,12nm,0.6s
STHS Stebnicka Huta 38.27 304 *e*P **P 11 35 11.8 -0.3**
BZS Buzias 38.33 298⇑P **P 11 35 14.1 +1.5**
BZS Buzias 38.33 298 P **P 11 35 14.0 +1.5**
MDVR Moldovita 38.37 297⇑P **P 11 35 14.0 +1.0**
BEL Belsk 38.52 308 *e*P **P 11 35 15.8 +1.7**
BOVS Bovan 38.55 295⇑P **P 11 35 16.2 +1.8**
LIT Litokhoron 38.66 289 IAmb IAmb 11 35 16.9
comp=Z,10nm,0.8s
KECS Kecovo 38.82 303 *e*P **P 11 35 17.6 +0.9**
KECS pmax pmax
comp=Z,11nm,0.6s
KECS Kecovo 38.82 303 *e*P **P 11 35 17.5 +0.9**
NIE Niedzica 38.89 305 *e*P **P 11 35 19.1 +1.8**
VAF Ylistaro 39.11 326 *e*P **P 11 35 19.2 +0.4**
OJC Ojcow 39.17 306 *e*P **P 11 35 20.2 +0.6**
PSZ Piszkesteto 39.26 302 IAmb IAmb 11 35 22.7
comp=Z,9.3nm,0.8s
PSZ Piszkesteto 39.26 302 *e*P **P 11 35 21.3 +0.9**
LANS Liptovska Anna 39.45 304 *e*P **P 11 35 23.8 +1.9**
LANS pmax pmax
comp=Z,3.0nm,1.0s
LANS Liptovska Anna 39.45 304 *e*P **P 11 35 23.8 +1.9**
VADS Vadso 39.52 338 *e*P **P 11 35 22.8 +0.6**

ZEA Zeya 40.15 49 eP P 11 35 29.5 +1.9
ZEA e 11 36 01.2
MORH Mrgy, Hungar 40.31 300 ⇑P P 11 35 29.7 +0.7
SRO Srobarova 40.33 302 eP P 11 35 30.8 +1.6
SRO pmax pmax
comp=Z,36nm,1.3s
SRO Srobarova 40.33 302 eP P 11 35 30.8 +1.6
HEH HeiHe 40.35 54 eP P 11 35 30.5 +1.2
HEH pmax pmax
comp=Z,24nm,1.0s
ARA0 ARCESS Array S 40.41 337 eP P 11 35 28.1 -1.5
ARCES ARCESS Array B 40.41 337 P P 11 35 29.9 +0.3
comp=Z,9.3nm,0.6s,baz=111,slow=8.0,SNR=52
ARCES LR LR 11 51 24.5
comp=Z,98nm,19.9s,baz=225,slow=35
comp=Z,9.3nm,0.6s
STEB Steborice 40.49 305 eP P 11 35 31.2 +0.7
JAVC Velka Javorina 40.65 304 eP P 11 35 34.0 +2.1
MORC Moravsky Berou 40.65 305 IAmb IAmb 11 35 33.9
comp=Z,14nm,0.9s
MORC Moravsky Berou 40.65 305 ⇑P P 11 35 33.3 +1.4
MORC Moravsky Berou 40.65 305 P P 11 35 33.2 +1.4
MORC Moravsky Berou 40.65 305 eP P 11 35 32.9 +1.0
GKP Gorka Klasztor 40.68 311 eP P 11 35 33.0 +1.0
SMOL Smolenice 40.84 303 eP P 11 35 34.9 +1.5
SMOL pmax pmax
comp=Z,5.0nm,0.8s
BNX BinXian 40.85 61 ⇓P P 11 35 34.8 +1.4
BNX pmax pmax
comp=Z,10.0nm,1.4s
KTK1 Kautokeino 40.92 335 eP P 11 35 33.8 0.0
MODS Modra-Piesok 40.96 303 eP P 11 35 35.7 +1.3
MODS pmax pmax
comp=Z,17nm,0.9s
MODS Modra-Piesok 40.96 303 eP P 11 35 35.7 +1.3
VRAC Vranov 41.31 305 P P 11 35 37.7 +0.5
comp=Z,17nm,0.7s,baz=86,slow=9.4,SNR=9.6
VRAC LR LR 11 55 19.3
comp=Z,146nm,18.9s,baz=5.5,slow=40
comp=Z,17nm,0.7s
VRAC Vranov 41.31 305 eP P 11 35 38.4 +1.2
KSP Ksiaz 41.37 307 eP P 11 35 38.8 +1.1
DPC Dobruska-Polom 41.39 306 eP P 11 35 39.1 +1.2
DPC Dobruska-Polom 41.39 306 eP P 11 35 39.1 +1.2
OSTC Ostas 41.44 307 eP P 11 35 39.5 +1.2
KRUC Moravsky 41.47 304 eP P 11 35 39.7 +1.2
CHVC Chvalec 41.54 307 eP P 11 35 40.0 +0.9
BLY Banja Luka 41.56 298 ⇑P P 11 35 40.3 +1.0
UPC Upice 41.57 306 eP P 11 35 40.7 +1.3
UPC Upice 41.57 306 eP P 11 35 40.7 +1.3
RONA Rosalia, Austr 41.70 302 *i* P **P 11 35 41.7 +1.3**
comp=Z,13nm,0.8s
CONA Conrad Observa 41.96 303 *i* P **P 11 35 43.8 +1.2**
comp=Z,26nm,0.8s,SNR=9.4
JETT Jettan, Norway 42.06 335 eP P 11 35 43.6 +0.5
YAK Yakutsk 42.07 36 eP P 11 35 43.9 +0.7
YAK pmax pmax
comp=Z,8.0nm,0.8s
ARSA Arzberg 42.28 302 IAmb IAmb 11 35 46.9
comp=Z,8.0nm,0.7s
ARSA Arzberg 42.28 302 *i* P **P 11 35 46.1 +1.0**
comp=Z,7.9nm,0.7s
GOLS Golise 42.41 300 eP P 11 35 47.1 +0.8
PRU Pruhonice 42.56 306 eP P 11 35 48.5 +1.1
PERS Pernice 42.65 301 *i* P **P 11 35 49.0 +0.8**
SOKA Soboth 42.70 301 *i* P **P 11 35 49.8 +1.1**
comp=Z,20nm,0.8s,SNR=8.2
HFS Hagfors 42.84 321 P P 11 35 49.5 0.0
comp=Z,39nm,0.5s,baz=98,slow=11,SNR=96
HFS PP **PP 11 37 27.1 -3.9**
comp=Z,6.3nm,0.5s,baz=95,slow=11,SNR=4.3
comp=Z,39nm,0.5s
BRG Berggiesshubel 42.85 307 ⇓*i*P **P 11 35 50.8 +1.1**
BRG Amp 11 35 51.3
comp=Z,21nm,0.9s
ZVC Zvikov 42.85 305 eP P 11 35 51.2 +1.4
CKRC Cesky Krumlov 42.86 304 eP P 11 35 51.0 +1.2
CKRC Cesky Krumlov 42.86 304 eP P 11 35 51.0 +1.2
MOA Molln 43.03 303 *i* P **P 11 35 51.9 +0.7**
comp=Z,12nm,0.8s
OBKA Obir 43.06 301 *i* P **P 11 35 52.7 +1.2**
comp=Z,20nm,1.1s,SNR=6.0
KSRS Korea Array 43.18 73 P P 11 35 52.5 +0.1
comp=Z,1.6nm,0.8s,baz=275,slow=6.8,SNR=5.1
comp=Z,1.6nm,0.8s
TIP Timpagrande 43.18 290 IAmb IAmb 11 35 54.1
comp=Z,27nm,1.4s
HSKC Hora Svate Kat 43.20 307 eP P 11 35 54.4 +1.8
FAUS Fauske 43.23 332 eP P 11 35 52.8 +0.4
SGRT San Giovanni R 43.23 294 IAmb IAmb 11 35 54.2
comp=Z,21nm,0.7s
GERES GERESS Array B 43.25 304 P P 11 35 53.8 +0.7
comp=Z,1.3nm,0.3s,baz=73,slow=8.5,SNR=6.2
GERES PP **PP 11 37 31.5 -4.3**
comp=Z,1.3nm,0.7s,baz=63,slow=9.3,SNR=3.5
comp=Z,1.3nm,0.3s
KLR Kul'dur 43.26 55 LR LR 11 54 12.9
comp=Z,16nm,19.3s,baz=332,slow=36
KLR Kul'dur 43.26 55 ⇓*i*P **P 11 35 54.3 +1.3**
KLR pmax pmax
comp=Z,5.0nm,0.8s
KHC Kasperske Hory 43.30 305 eP P 11 35 54.0 +0.7
KHC Kasperske Hory 43.30 305 eP P 11 35 54.0 +0.7
MOR8 Moi Rana 43.30 330 eP P 11 35 52.7 -0.4
STEI Steigen 43.37 332 eP P 11 35 54.0 +0.4
CLL Collm 43.40 308 IAmb IAmb 11 35 55.4
comp=Z,17nm,0.6s
CLL Collm 43.40 308 *i* P **P 11 35 54.3 +0.3**
CLL pmax pmax
comp=Z,17nm,0.8s
CLL Collm 43.40 308 *i* P **P 11 35 54.3 +0.3**
comp=Z,17nm,0.8s
CLL *e*PP **PP 11 37 38.0 +0.9**
CLL *ex* x 11 37 50.0
CLL *e*SS SS 11 45 30.0 -1.0
BIOA Bad Ischl, Aus 43.47 303 *i* P **P 11 35 55.3 +0.5**
comp=Z,16nm,1.3s
CUC Castrocucco 43.65 291 IAmb IAmb 11 35 58.8
comp=Z,24nm,0.7s
MYKA Terra Mystica 43.66 301 *i* P **P 11 35 57.1 +0.8**
comp=Z,6.1nm,0.9s
PRED Cave del Predi 43.74 301 IAmb IAmb 11 35 58.7
comp=Z,13nm,1.3s
TRI Trieste 43.75 300 IAmb IAmb 11 35 56.9
comp=Z,16nm,0.6s
ROBS Robic 43.82 301 *i* P **P 11 35 57.9 +0.4**
LEIR Leirfjorden 43.82 330 eP P 11 35 57.6 +0.4
PSTR Posyet 43.86 65 eP P 11 35 58.5 +0.6
PSTR pmax pmax
comp=Z,2.0nm,0.9s
VAGH Vaagaholmen 43.87 330 eP P 11 35 58.7 +1.1
NC405 NORSAR Array S 43.87 322 IAmb IAmb 11 35 58.8
comp=Z,35nm,1.1s
KONS Konsvik 43.88 330 eP P 11 35 58.0 +0.3
STOK Stokkvaagen 43.89 330 eP P 11 35 58.1 +0.3
NC602 NORSAR Array S 43.94 322 eP P 11 35 58.2 0.0
TIXI Tiksi 44.00 22 P P 11 35 58.9 +0.3
TIXI IAmb IAmb 11 36 00.2
comp=Z,15nm,1.2s
TIXI Tiksi 44.00 22 ⇑*i*P **P 11 35 59.3 +0.7**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
NC303 NORSAR Array S 44.05 322 P P 11 35 59.5 +0.4
NSS Namsos 44.06 327 eP P 11 35 59.5 +0.4
NB201 NORSAR Array S 44.07 322 P P 11 35 59.5 +0.1
NB2 NORSAR Subarra 44.11 322 P P 11 35 59.4 -0.3
comp=Z,14nm,0.5s,baz=91,slow=7.9
NB2 NORSAR Subarra 44.11 322 AMP P 11 35 59.4 -0.3
comp=Z,14nm,0.5s
NB2 P P **11 35 59.4 -0.3**
NOA NORSAR Array B 44.11 322 P P 11 35 59.3 -0.4
comp=Z,18nm,0.6s,baz=92,slow=7.7,SNR=61
NOA PP **PcP 11 37 40.5 -2.1**
comp=Z,1.8nm,0.6s,baz=101,slow=11,SNR=3.8
comp=Z,18nm,0.6s
LESA Schwarzleotal 44.16 302 *i* P **P 11 36 00.8 +0.5**
comp=Z,13nm,0.6s,SNR=7.3
NBO00 NORSAR Array S 44.32 322 P P 11 36 00.6 -0.7
USRK Ussuriysk Ar. 44.34 62 P P 11 36 02.7 +1.1
comp=Z,2.1nm,0.7s,baz=261,slow=9.6,SNR=2.0
comp=Z,2.1nm,0.7s
STAL STALIGIAL 44.36 301 IAmb IAmb 11 36 02.8
comp=Z,18nm,1.2s
ABTA Abfaltersbach 44.40 301 *i* P **P 11 36 02.1 -0.2**
comp=Z,4.2nm,0.7s
INTR Introdacqua 44.49 295 IAmb IAmb 11 36 04.4
comp=Z,15nm,0.8s
GUMA Gualdo di Mace 44.64 296 IAmb IAmb 11 36 18.4
comp=Z,18nm,0.9s
CAMP Campotosto 44.72 295 IAmb IAmb 11 36 06.8
comp=Z,22nm,1.4s
FDMO Fiordimonte 44.82 296 IAmb IAmb 11 36 07.1
comp=Z,16nm,0.7s
NRCA Norcia 44.85 296 IAmb IAmb 11 36 07.9
comp=Z,16nm,0.9s
KONO Kongsberg 44.88 320 *e*P **P 11 36 05.9 +0.2**
KONO Kongsberg 44.88 320*ce*P **P 11 36 07.1 +1.3**
KONO pmax pmax
comp=Z,55nm,1.7s
WTTA Wattenberg 44.89 302 *i* P **P 11 36 06.5 +0.2**
comp=Z,21nm,1.0s,SNR=5.7
WATA Walderalm 44.91 302 *i* P **P 11 36 06.1 -0.3**
comp=Z,5.6nm,0.7s
CTI Castel Tesino 45.12 301 IAmb IAmb 11 36 09.0
comp=Z,13nm,0.6s
SQTA Sankt Quirin 45.18 302 *e*P **P 11 36 08.5 0.0**
comp=Z,4.3nm,0.6s
DOMB Dombas 45.18 323 *e*P **P 11 36 08.6 +0.5**
MOTA Moosalm 45.23 303 *i* P **P 11 36 08.8 -0.1**
comp=Z,16nm,1.0s
CESX Cesi 45.29 296 P P 11 36 10.0 +0.7
CESX IAmb IAmb 11 36 10.9
comp=Z,18nm,1.0s
RETA Reutte 45.42 303 *i* P **P 11 36 10.4 0.0**
comp=Z,9.6nm,1.3s
SKAR Skarslia 45.53 322 *e*P **P 11 36 12.0 +1.0**
FETA Feichten 45.54 302 *i* P **P 11 36 11.1 -0.3**
comp=Z,14nm,1.1s
MOL Molde 45.90 324 *e*P **P 11 36 14.7 +0.9**
FUORN Ofenpass-Fuorn 45.94 302 IAmb IAmb 11 36 22.2
comp=Z,13nm,0.8s
DAVA Damuels 46.05 303 *i* P **P 11 36 15.7 +0.3**
comp=Z,39nm,0.6s,SNR=12
ODD1 Odda 46.38 320 *e*P **P 11 36 18.6 +1.0**
SPB2 Spitsbergen Ar 46.47 346 P P 11 36 19.2 +1.2
SPA0 Spitsbergen Ar 46.48 346 *e*P **P 11 36 19.0 +0.9**
SPITS Spitsbergen Ar 46.48 346 P P 11 36 19.0 +0.9
comp=Z,9.1nm,0.6s,baz=99,slow=16,SNR=30
comp=Z,9.1nm,0.6s
SPITS Spitsbergen Ar 46.48 346 P P 11 36 19.0 +0.9
TUE Stuetta 46.59 302 P 11 36 19.3 -0.3
KBS Kingsbay 47.58 347 *e*P **P 11 36 27.6 +1.0**
KBS Kingsbay 47.58 347 *i* P **P 11 36 26.2 -0.4**
MEM Membach 47.87 308 *d*P **P 11 36 29.9 +0.6**
WLF Walferdange 47.98 307 *d*P **P 11 36 31.4 +1.4**
comp=Z,16nm,0.9s
SENIN Lac Senin/Sane 47.99 302 IAmb IAmb 11 36 31.4
comp=Z,14nm,0.6s
BGES Gesves 48.49 308 *d*P **P 11 36 33.9 -0.2**
BMRD Maredsous 48.71 308 *d*P **P 11 36 36.7 +1.0**
comp=Z,9.8nm,0.8s
BNI Bardonecchia 48.75 301 P P 11 36 37.0 +0.7
BNI IAmb IAmb 11 36 38.3
comp=Z,20nm,1.1s
BNI Bardonecchia 48.75 301 P P 11 36 37.0 +0.7
BNI pmax pmax
comp=Z,20nm,1.2s
KEST Kesra 49.88 288 P P 11 36 45.9 +0.9
comp=Z,6.6nm,0.8s,baz=45,slow=2.8,SNR=3.6
comp=Z,6.6nm,0.8s
MJAR Matsushiro Arr 51.21 70 P P 11 36 55.6 +0.7
comp=Z,2.6nm,0.8s,baz=286,slow=9.9,SNR=4.6
comp=Z,2.6nm,0.8s
KIBK Kibwezi 51.26 227 P P 11 36 56.1 +0.7
EKA Eskdalemuir Ar 52.25 316 P P 11 37 01.8 -0.3
comp=Z,8.3nm,0.7s,baz=88,slow=7.5,SNR=23
comp=Z,8.3nm,0.7s
NOR Nord 52.70 349 *i* P **P 11 37 04.7 -0.5**
NOR IAmb IAmb 11 37 06.3
comp=Z,4.7nm,0.8s
DAG Danmarks Havn 53.80 343 *i* P **P 11 37 13.0 -0.2**
DAG IAmb IAmb 11 37 13.9
comp=Z,21nm,0.6s
DBG Daneborg 54.74 341 *i* P **P 11 37 19.2 -0.8**
BILL Bilibino 56.78 27 ⇑*i*P **P 11 37 36.3 +1.5**
BILL pmax pmax
comp=Z,12nm,3.0s
ESDC Sonseca Array 58.01 298 P P 11 37 43.9 0.0
comp=Z,8.5nm,0.7s,baz=58,slow=6.9,SNR=46
comp=Z,8.5nm,0.7s
ESDC Sonseca Array 58.01 298 P 11 37 44.3 +0.4
ESDC IAmb IAmb 11 37 45.0
comp=Z,6.0nm,0.9s
PCAB Cabril 59.94 301 *e*P **P 11 37 58.3 +1.1**
NEEM North Greenlan 59.98 348 *i* P **P 11 37 56.2 -0.9**
NEEM IAmb IAmb 11 37 58.3
comp=Z,29nm,0.9s
PGAV Gavieira, Arco 60.00 302 *e*P **P 11 37 58.5 +0.9**
SUMG Summit 60.20 341 IAmb IAmb 11 38 00.4
comp=Z,15nm,0.7s
SUMG Summit 60.20 341 *i* P **P 11 37 59.0 +0.1**
SUMG IAmb IAmb 11 38 00.6
comp=Z,34nm,1.0s
PVIS Viseu 60.28 300 *e*P **P 11 37 59.8 +0.2**
PMRV Marv??o 60.51 299 *e*P **P 11 38 02.2 +1.1**
PBAR Barrancos 60.82 297 *e*P **P 11 38 03.8 +0.7**
PBAR *i* IAmb IAmb 11 38 05.7
comp=Z,50nm,1.8s
PESTR Estremoz 60.90 298 *e*P **P 11 38 04.6 +0.9**
PBEJ Beja 61.47 298 *e*P **P 11 38 08.4 +0.9**
PVAQ Vaqueiros 61.65 297 *e*P **P 11 38 09.5 +0.8**
PVAQ *i* IAmb IAmb 11 38 30.5
comp=Z,88nm,1.8s
KULLO Kullorsuaq 63.05 347 *i* P **P 11 38 16.4 -1.1**
KULLO IAmb IAmb 11 38 21.7
comp=Z,15nm,0.7s
TULEG Thule 63.31 351 *i* P **P 11 38 17.1 -2.1**
TULEG IAmb IAmb 11 38 19.9
comp=Z,34nm,1.5s
UPNV Upernavik 64.16 345 *i* P **P 11 38 24.5 -0.3**
UPNV IAmb IAmb 11 38 25.9
comp=Z,15nm,0.9s
ILULI Ilulissat 65.55 341 IAmb IAmb 11 38 34.9
comp=Z,23nm,0.6s
ILULI Ilulissat 65.55 341 *i* P **P 11 38 32.4 -1.4**
ILULI IAmb IAmb 11 38 34.9
comp=Z,25nm,0.5s
GDH Godhavn 66.14 342 *i* P **P 11 38 35.6 -1.9**
C19K Lookout Ridge 66.62 18 IAmb IAmb 11 38 45.4
comp=Z,15nm,1.4s
SFJD Kangerlussuaq 66.96 339 *i* P **P 11 38 41.1 -1.7**
SFJD IAmb IAmb 11 38 43.6
comp=Z,11nm,1.0s
TORD Torodi Ar. Bea 67.09 269 P P 11 38 43.6 -0.8
comp=Z,4.6nm,0.3s,baz=49,slow=8.4,SNR=65
comp=Z,4.6nm,0.3s
RES Resolute Bay 67.42 356 P P 11 38 46.4 +0.8
RES IAmb IAmb 11 38 46.9
comp=Z,8.3nm,1.4s
RES Resolute Bay 67.42 356 P P 11 38 46.4 +0.8
RES pmax pmax
comp=Z,8.0nm,1.4s
D19K Kuna River 67.43 18 IAmb IAmb 11 38 47.1
comp=Z,10nm,0.9s
D20K Etivluk River 67.63 17 IAmb IAmb 11 38 48.4
comp=Z,5.2nm,0.9s
POIN Pond Inlet 67.86 351 P 11 38 49.2 +0.8
POIN IAmb IAmb 11 38 50.0
comp=Z,8.5nm,1.0s
C23K Itkillik River 68.06 15 IAmb IAmb 11 38 52.1
comp=Z,6.2nm,0.8s
E22K Anaktuvuk Pass 69.19 16 IAmb IAmb 11 38 58.4
comp=Z,8.6nm,1.4s
NRS Narsarsuaq 69.28 333 *i* P **P 11 38 56.5 -0.9**
A36M Sachs Harbour 69.71 6 IAmb IAmb 11 39 01.8
comp=Z,8.9nm,0.9s
COLD Coldfoot 70.28 16 IAmb IAmb 11 39 04.8
comp=Z,7.9nm,1.1s
ILON Igloolik, Nuna 71.43 351 P P 11 39 10.7 +0.3
INK Inuvik 72.33 10 P 11 39 16.4 +0.7
INK Inuvik 72.33 10 P P 11 39 16.4 +0.7
INK pmax pmax
comp=Z,7.0nm,1.0s
COLA College 72.78 17 ⇑*i*P **P 11 39 19.1 +0.7**
COLA pmax pmax
comp=Z,7.0nm,0.9s
ILAR Eielson Array 73.09 17 P P 11 39 19.8 -0.5
comp=Z,2.1nm,0.9s,baz=318,slow=5.2,SNR=20
comp=Z,2.1nm,0.9s
F31M Tsiigehtchic 73.11 10 P 11 39 20.6 +0.3
DBIC Dimbokro 76.11 268 P P 11 39 38.1 -0.4
comp=Z,6.8nm,1.1s,baz=47,slow=7.4,SNR=4.8
comp=Z,6.8nm,1.1s
BLKN Baker Lake 77.76 355 IAmb IAmb 11 39 48.0
comp=Z,12nm,0.8s
KUQ Kuujjuuaa 78.98 340 IAmb IAmb 11 39 54.8
comp=Z,15nm,1.0s
YKA Yellowknife Ar 79.81 3 P P 11 39 58.5 +0.3
comp=Z,2.0nm,0.6s,baz=352,slow=6.1,SNR=40
YKA LR LR 12 18 28.9
comp=Z,34nm,20.1s,baz=336,slow=38
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 79.81 3 P P 11 39 58.2 +0.1
SCHQ Schefferville 81.35 338 P P 11 40 06.5 -0.1
comp=Z,6.4nm,0.7s,baz=35,slow=6.0,SNR=9.8
comp=Z,6.4nm,0.7s
WRA Warramunga Arr 81.59 123 P P 11 40 08.1 -0.2
comp=Z,4.2nm,0.7s,baz=322,slow=4.7,SNR=40
comp=Z,4.2nm,0.7s
WRA Warramunga Arr 81.59 123 *i* P **P 11 40 08.5 +0.2**
WRA pmax pmax
comp=Z,5.0nm,0.7s
WRAB Tennant Creek 81.59 123 ⇓*i*P **P 11 40 08.7 +0.4**
WRAB pmax pmax
comp=Z,5.0nm,0.8s
FCC Fort Churchill 83.09 353 IAmb IAmb 11 40 17.1
comp=Z,7.0nm,0.9s
AS31 Alice Springs 83.95 126 P P 11 40 20.6 +0.1
ASAR Alice Springs 83.95 126 P P 11 40 20.0 -0.5
comp=Z,2.1nm,0.8s,baz=310,slow=5.2,SNR=21
comp=Z,2.1nm,0.8s
ASAR Alice Springs 83.95 126 P P 11 40 20.8 +0.4
ASAR Alice Springs 83.95 126 P P 11 40 20.8 +0.4
ICQ Pointe Anglais 86.05 335 IAmb IAmb 11 40 32.6
comp=Z,8.6nm,0.9s
FFC Flin Flon 87.66 357 P 11 40 38.6 +0.3
FFC IAmb IAmb 11 40 39.6
comp=Z,6.3nm,1.0s
FFC Flin Flon 87.66 357 P P 11 40 38.6 +0.3
FFC pmax pmax
comp=Z,6.0nm,1.0s
ULM Lac du Bonnet 91.68 353 eP P 11 40 57.2 0.0
NVL N'lazarevskaya 116.68 199 ePKIKP PKiKP 11 46 41.3 +8.9
NVL pmax pmax
comp=Z,55nm,1.6s
PLCA Paso Flores 151.54 253 PKPbc **PKiKP 11 47 44.0 +0.2**
comp=Z,3.9nm,0.9s,baz=123,slow=2.8,SNR=8.2

KRSC 18 11:29:41.9±0.9, 49°.21N×157°.07E, h15km±18km, Ml4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.60**	**338**	*eP*	Pn	11 30 09.6	+0.1
SKR				*eS*	Sn	11 30 29.6	-0.2
PAU	**Pauzhetka**	**2.27**	**356**	*eP*	Pb	11 30 20.6	-1.8
PAU				*eS*	Sb	11 30 49.0	-1.2
KDTR	**Khodutka, Kamc**	**2.68**	**14**	*eP*	Pn	11 30 26.4	+2.0
KDTR				*eS*	Sb	11 30 59.7	-2.5
ASAK	**Asacha**	**3.22**	**9**	*eP*	Pn	11 30 34.8	+2.8
MTVR	**Mutnovka**	**3.35**	**12**	*eP*	Pn	11 30 36.7	+2.9
MTVR				*eS*	Sb	11 31 17.6	-4.1
RUS	**Russkaya**	**3.35**	**15**	*eP*	Pn	11 30 37.1	+3.4
GRL	**Gorelyy**	**3.41**	**10**	*eP*	Pn	11 30 37.7	+3.1
KRMR	**Karymshinskiy**	**3.69**	**10**	*eP*	Pn	11 30 42.1	+3.8
DALK	**Dalny**	**3.97**	**15**	*eP*	Pn	11 30 45.3	+3.2
UGLR	**Uglovaya**	**4.15**	**15**	*eP*	Pn	11 30 49.0	+4.2
AVH	**Avacha**	**4.19**	**14**	*eP*	Pn	11 30 49.3	+4.0
SMAR	**Somma**	**4.20**	**14**	*eP*	Pn	11 30 49.5	+4.0
KOK	**Koryaka**	**4.20**	**13**	*eP*	Pn	11 30 49.8	+4.4
SDLR	**Sedlovina**	**4.23**	**15**	*eP*	Pn	11 30 49.1	+3.3
KRER	**Koryakskii**	**4.23**	**14**	*eP*	Pn	11 30 49.9	+3.9
KRX	**Arik**	**4.27**	**13**	*eP*	Pn	11 30 50.5	+4.1
SPN	**Mys Shipunski**	**4.31**	**24**	*eP*	Pn	11 30 50.5	+3.6
SPN				*eS*	Sn	11 31 41.9	+5.0
GNL	**Ganaly**	**4.52**	**7**	*eP*	Pn	11 30 53.8	+3.9

*AFAD **18** 11:32:54.4, 38°.85N×27°.53E, h8km±3km, ML1.5*
ISK 18 11:32:58.9, 39°.03N×27°.65E, h5km, ML1.7/11, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOMA	**Soma-Manisa**	**0.16**	**326**	Pg	Pg	11 33 02.7	+0.7
SOMA				Sg	Sg	11 33 05.1	+1.0
AKS	**Akhisar**	**0.20**	**139**	Pg	Pg	11 33 03.0	+0.2
AKS				Sg	Sg	11 33 06.6	+1.2
STEP	**BALIKESIR_Sava**	**0.35**	**9**	P	Pg	11 33 05.3	-0.5
STEP				S	Sb	11 33 13.5	-0.1
STEP				IAML		11 33 19.0	
	comp=E,25nm,0.4s						
STEP				IAML		11 33 21.0	
	comp=N,18nm,0.3s						
GORD	**Gordes-Manisa**	**0.43**	**106**	Pg	Pg	11 33 07.9	+0.7
GORD				Sg	Sb	11 33 14.5	-1.3
DKL	**Dikili**	**0.58**	**275**	Pg	Pg	11 33 10.6	+0.6
DKL				Sg	Sb	11 33 19.2	-0.8
BALY	**Balya**	**0.71**	**358**	P	Pg	11 33 11.0	-1.6
BALY				S	Sb	11 33 24.1	+0.2
BALY				IAML		11 33 26.0	
	comp=N,18nm,0.2s						
BALY				IAML		11 33 26.0	
	comp=E,17nm,0.4s						
YAYO	**Edremit-Balk**	**0.73**	**323**	Pg	Pb	11 33 13.6	-0.5
BKES	**Balkesir-Mer**	**0.74**	**17**	P	Pg	11 33 12.6	-0.4
BKES				S	Sn	11 33 28.2	+0.6
BKES				IAML		11 33 29.0	
	comp=E,13nm,0.1s						
BKES				IAML		11 33 30.0	
	comp=N,10nm,0.4s						
FOCM	**Foa**	**0.78**	**247**	Pg	Pb	11 33 14.5	-0.4
BLCB	**Balcova**	**0.80**	**217**	Pg	Pb	11 33 14.7	-0.5
ODEM	**Odemis-Izmir**	**0.82**	**156**	Pg	Pb	11 33 15.2	-0.5
DURS	**Dursunbey**	**0.86**	**48**	P	Pb	11 33 16.7	+0.4
DURS				S	Sb	11 33 29.0	+0.8
DURS				IAML		11 33 33.0	
	comp=N,14nm,0.3s						
DURS				IAML		11 33 34.0	
	comp=E,12nm,0.4s						
BLKS	**Balkesir-Sus**	**0.88**	**16**	S	Sn	11 33 30.7	-0.5
KULA	**Kula-Manisa**	**0.94**	**123**	Pg	Pg	11 33 16.9	-0.1
SUSR	**Susurluk-Balik**	**0.99**	**20**	Pg	Pb	11 33 18.5	-0.1
CMHT	**Manyas**	**1.01**	**14**	P	Pg	11 33 16.7	-1.6
CMHT				IAML		11 33 33.0	
	comp=N,14nm,0.9s						
CMHT				S	Sb	11 33 33.1	+0.5
CMHT				IAML		11 33 36.0	
	comp=E,19nm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**1.10**	**170**	Pn	Pb	11 33 20.2	-0.2

HEL 18 11:40:46.4±0.2, 60°.39N×24°.85E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUR	**Nurmijarvi** baz=137	**0.16**	**321**	PG	Pg	11 40 49.4	-0.1
NUR				SG	Sg	11 40 52.1	+0.6
HEL5	**Espoo, Suvisaa**	**0.28**	**192**	PG	Pg	11 40 50.9	-0.8
HEL5				SG	Sg	11 40 54.5	-0.7
MEF	**Metsahovi**	**0.28**	**233**	*eP*	Pg	11 40 51.1	-0.6
MEF	**Metsahovi**	**0.28**	**233**	PG	Pg	11 40 51.4	-0.4
MEF				SG	Sg	11 40 55.3	-0.1
PVF	**Pernaja** baz=256	**0.53**	**72**	PG	Pg	11 40 55.2	-1.3
PVF				SG	Sg	11 41 01.9	-1.3
PVF				smax	smax	11 41 03.3	
	comp=Z,3.9nm,0.2s						
TVF	**Tvarminne**	**0.97**	**237**	PB	Pg	11 41 04.3	-0.6
TVF				smax	smax	11 41 16.2	
	comp=Z,0.7nm,0.2s						
TVF				SB	Sg	11 41 17.1	-0.4
FIA0	**FINESS Array S** baz=209	**1.22**	**29**	PG	Pg	11 41 08.6	-1.1
FIA0				smax	smax	11 41 23.2	
	comp=Z,3.2nm,0.2s						
FIA0				SG	Sg	11 41 24.0	-1.5
VJF	**Virojoki**	**1.35**	**82**	smax	smax	11 41 27.1	
	comp=Z,7.6nm,0.2s						
VJF				SN	Sn	11 41 30.8	-0.2
RAF	**Rauma** baz=110	**1.65**	**294**	PG	Pn	11 41 15.0	-1.5
RAF				smax	smax	11 41 35.6	
	comp=Z,2.4nm,0.2s						

RAF SN Sn 11 41 38.4 0.0
KEF Keuruu 1.79 0 smax smax 11 41 39.8
comp=Z,2.2nm,0.2s
KEF SG Sb 11 41 43.1 +0.2
VSU Vasula 2.16 153 PG Pb 11 41 25.7 -0.5
AAL Aland 2.43 267 SG Sb 11 42 01.3 0.0

HEL 18 11:41:42.0±0.2, 64°07'N×27°15'E, h0km, ML1.1, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.75**	**157**	PB	Pg	11 41 56.2	-0.1
NIF				smax	smax	11 42 05.3	
	comp=Z,1.2nm,0.2s						
NIF				SB	Sg	11 42 05.9	0.0
OUF	**Merijarvi**	**1.10**	**287**	PG	Pg	11 42 01.8	-1.2
OUF				smax	smax	11 42 15.4	
	comp=Z,1.2nm,0.2s						
OUL	**Oulu**	**1.15**	**333**	SB	Sg	11 42 18.4	-0.5
RMF	**Romuvaara**	**1.23**	**82**	PB	Pg	11 42 04.0	-1.5
RMF	**Romuvaara**	**1.23**	**82**	PG	Pg	11 42 04.0	-1.5
RMF				smax	smax	11 42 19.1	
	comp=Z,1.1nm,0.2s						
RMF				SG	Sg	11 42 20.2	-1.2
KU2	**Taivalkoski**	**1.71**	**15**	PN	Pn	11 42 13.4	+0.4
KU2				SN	Sn	11 42 34.5	-1.0
KU1	**Kurvinen**	**1.82**	**33**	SG	Sb	11 42 39.1	-0.2
RANF	**Ranua** baz=174	**1.96**	**356**	PG	Pn	11 42 16.4	+0.1
RANF				SB	Sn	11 42 40.4	-1.2
MSF	**Maaselka**	**2.01**	**23**	SG	Sn	11 42 43.1	+0.1
KEF	**Keuruu**	**2.18**	**209**	smax	smax	11 42 46.5	
	comp=Z,0.7nm,0.2s						
KEF				SG	Sb	11 42 50.3	+0.7
JOF	**Joensuu**	**2.20**	**120**	SG	Sb	11 42 49.7	-0.5
VAF	**Ylistaro**	**2.26**	**245**	smax	smax	11 42 48.9	
	comp=Z,0.9nm,0.2s						
VAF				SG	Sb	11 42 52.5	+0.5
KU6	**Riekki**	**2.28**	**29**	smax	smax	11 42 49.4	
	comp=Z,0.9nm,0.2s						
KU6				SB	Sn	11 42 50.1	+0.5
TOF	**Tornio**	**2.34**	**331**	smax	smax	11 42 51.2	
	comp=Z,0.5nm,0.2s						
TOF				SG	Sn	11 42 52.8	+1.7
OLKF	**Oulanka, Finla**	**2.45**	**22**	smax	smax	11 42 54.3	
	comp=Z,0.5nm,0.2s						
OLKF				SB	Sb	11 42 55.6	-1.8
FIA0	**FINESS Array S**	**2.69**	**191**	smax	smax	11 43 01.0	
	comp=Z,0.6nm,0.2s						
FIA0				SG	Sb	11 43 03.7	-0.6

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*NOU **18** 11:50:11.3, 15°.14S×178°.33W, h411km, mb4.7/28, Fiji Islands Region*
*IDC **18** 11:50:12.6±0.7, 15°.19S×178°.71W, h395km±6km, mb4.1/19, mbtmp4.8/20, Error ellipse: s-maj=14.9km s-min=10.8km az=129.0*
*NEIC **18** 11:50:13.4±1.3, 15°.2S±0°.1×178°.6W±0°.1, h406km±6km, mb4.7/321, Error ellipse: s-maj=17.2km s-min=12.8km az=130.0*

ISC 18 11:50:11.9±0.3, 15°.13S±0°.06×178°.64W±0°.07, h390km, n530, σ0.93/397, mb4.7/179, 1C-14D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGTI	**Dogotuki**	**1.95**	**233**	P	**Pn**	**11 51 08.6**	**+2.0**
TAVE	**Taveuni**	**1.99**	**218**	P	**Pn**	**11 51 09.5**	**+2.7**
LKBA	**Tubou, Lakemba**	**3.09**	**183**	P	**Pn**	**11 51 16.8**	**+1.8**
MSVF	**Nonsavu**	**4.10**	**230**		**Pn**	**11 51 27.6**	**+3.2**
MSVF	**Nonsavu**	**4.10**	**230**	P	**Pn**	**11 51 27.6**	**+3.2**
MSVF	**Nonsavu**	**4.10**	**230**	S	**S**	**11 52 29.0**	**+5.9**
AFI	**Afiamalu**	**6.75**	**80**	Pn	**P**	**11 51 53.5**	**+0.1**
FUNA	**Funafuti**	**6.90**	**342**	Pn	**P**	**11 51 55.5**	**+0.4**
FUNA	**Funafuti**	**6.90**	**342**	P	**P**	**11 51 55.2**	**+0.2**
MARNC	**Mare, Loyalty**	**14.14**	**242**	P	**Pn**	**11 53 16.8**	**-1.0**
DZM	**Mont Dzumac** 16nm,0.8s,baz=71,slow=18,SNR=14	**15.73**	**242**	P	**P**	**11 53 33.4**	**+0.7**
DZM	**Mont Dzumac**	**15.73**	**242**	P	**Pn**	**11 53 35.4**	**-0.6**
ONTNC	**Ouen Toro**	**15.82**	**241**	P	**P**	**11 53 34.8**	**+1.2**
ONTNC				IAmb	IAmb	11 53 39.8	
	comp=Z,38nm,0.9s						
OUZ	**Omahuta**	**21.18**	**198**	P	**P**	**11 54 26.7**	**-1.0**
KUZ	**Kuaotunu**	**22.10**	**192**	P	**P**	**11 54 34.5**	**-1.5**
AUWSH	**Wavell State H**	**29.00**	**240**	P	**P**	**11 55 38.0**	**+0.3**
TW1H	**Toowoomba 1 Ha**	**29.95**	**241**	P	**P**	**11 55 46.7**	**+0.6**
FOZ	**Fox Glacier**	**29.98**	**197**	P	**P**	**11 55 44.8**	**-1.1**
AUNRC	**North Rockhamp**	**30.19**	**250**	P	**P**	**11 55 48.1**	**0.0**
JCZ	**Jackson Bay**	**30.77**	**198**	P	**P**	**11 55 50.8**	**-2.2**
JCZ	**Jackson Bay**	**30.77**	**198**	S	**S**	**12 00 24.7**	**-2.4**
ARMA	**Armidale**	**31.23**	**236**		**P**	**11 55 57.3**	**+0.1**
ARMA	**Armidale**	**31.23**	**236**	P	**P**	**11 55 57.6**	**+0.4**
WKZ	**Wanaka**	**31.39**	**197**	P	**P**	**11 55 56.2**	**-2.1**
AUPHS	**Peel High Scho**	**32.08**	**235**	P	**P**	**11 56 04.7**	**+0.3**
MLZ	**Mavora Lakes**	**32.14**	**198**		**P**	**11 56 04.1**	**-0.7**
DCZ	**Deep Cove**	**32.52**	**199**		**P**	**11 56 06.7**	**-1.3**
DCZ				IAmb	IAmb	11 56 11.4	
	comp=Z,35nm,0.9s						
WHZ	**Wether Hill Ro**	**32.67**	**197**	P	**P**	**11 56 08.4**	**-0.9**
CTA	**Charters Tower**	**33.78**	**256**	P	**P**	**11 56 19.0**	**-0.2**
CTAO	**Charters Tower**	**33.78**	**256**		**P**	**11 56 19.1**	**-0.1**
CTAO				IAmb	IAmb	11 56 20.1	
	comp=Z,28nm,0.8s						
CTAO	**Charters Tower**	**33.78**	**256**	P	**P**	**11 56 19.1**	**-0.1**
AULRC	**Lightning Ridg**	**33.87**	**239**	P	**P**	**11 56 19.1**	**-0.7**
MTSU	**Mount Surprise**	**35.59**	**260**	P	**P**	**11 56 34.7**	**+0.2**
QLP	**Quilpie**	**36.39**	**246**	P	**P**	**11 56 40.5**	**-0.6**
CMSA	**Cobar Meteorol**	**36.40**	**237**	P	**P**	**11 56 40.5**	**-0.6**
COEN	**Coen**	**36.95**	**267**	P	**P**	**11 56 47.1**	**+1.2**
COEN	**Coen**	**36.95**	**267**	P	**P**	**11 56 46.7**	**+0.8**
TOO	**Toolangi**	**38.80**	**228**	P	**P**	**11 57 00.7**	**-0.2**
INKA	**Innaminka**	**39.66**	**245**		**P**	**11 57 08.4**	**+0.4**
STKA	**Stephens Creek** comp=Z,21nm,0.9s,baz=86,slow=10,SNR=17	**39.84**	**238**	P	**P**	**11 57 08.9**	**-0.6**
	comp=Z,21nm,0.9s						
STKA	**Stephens Creek**	**39.84**	**238**		**P**	**11 57 09.4**	**0.0**
STKA	**Stephens Creek**	**39.84**	**238**	P	**P**	**11 57 09.6**	**+0.2**
QIS	**Mount Isa**	**40.03**	**256**	P	**P**	**11 57 11.1**	**-0.1**
WRAB	**Tennant Creek**	**44.97**	**257**	P	**P**	**11 57 47.7**	**-0.7**
WRAB	**Tennant Creek**	**44.97**	**257**	P	**P**	**11 57 49.8**	**-0.7**
WRA	**Warramunga Arr** comp=Z,13nm,0.8s,baz=91,slow=7.7,SNR=129	**44.98**	**257**	P	**P**	**11 57 49.2**	**-1.4**
WRA				ScP	**ScP**	**12 02 39.4**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=75,slow=4.2,SNR=6.0						
WRA				S	**S**	**12 03 55.5**	**-3.8**
	comp=Z,1.8nm,0.8s,baz=90,slow=15,SNR=6.3						
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	**44.98**	**257**		**P**	**11 57 48.3**	**-2.3**
AS31	**Alice Springs**	**45.39**	**252**		**P**	**11 57 53.4**	**-0.3**
ASAR	**Alice Springs** comp=Z,115nm,0.4s,baz=84,slow=8.6,SNR=3778	**45.39**	**252**	P	**P**	**11 57 53.2**	**-0.5**
ASAR				ScP	**ScP**	**12 02 41.3**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=95,slow=4.1,SNR=7.4						
ASAR				S	**S**	**12 04 00.7**	**-4.5**
	comp=Z,1.6nm,0.7s,baz=87,slow=15,SNR=12						
ASAR	**Alice Springs**	**45.39**	**252**	P	**P**	**11 57 53.5**	**-0.2**
KNRA	**Kununurra**	**50.60**	**262**	P	**P**	**11 58 33.1**	**-0.1**
KNRA				IAmb	IAmb	11 59 02.0	
	comp=Z,53nm,1.4s						
FORT	**Forrest**	**51.04**	**243**		**P**	**11 58 35.7**	**-0.5**
PSA00	**Pilbara Seismi**	**58.43**	**254**	P	**P**	**11 59 28.3**	**-0.4**
PSA00	**Pilbara Seismi**	**58.43**	**254**	P	**P**	**11 59 28.4**	**-0.4**
PSA00				IAmb	IAmb	11 59 28.9	
	comp=Z,11nm,0.7s						
NWAO	**Narrogin (SRO)**	**60.35**	**241**	P	**P**	**11 59 41.0**	**-0.5**
NWAO				IAmb	IAmb	11 59 41.1	
	comp=Z,16nm,0.8s						
VNDA	**Vanda** comp=Z,5.9nm,1.1s,baz=34,slow=7.1,SNR=3.4	**63.17**	**185**	P	**P**	**12 00 00.0**	**+0.7**
	comp=Z,5.9nm,1.1s						
VNDA	**Vanda**	**63.17**	**185**	P	**P**	**11 59 59.6**	**+0.3**
MJAR	**Matsushiro Arr** comp=Z,13nm,0.9s,baz=156,slow=6.6,SNR=16	**65.57**	**323**	P	**P**	**12 00 15.2**	**-0.1**
	comp=Z,13nm,0.9s						
MJAR	**Matsushiro Arr**	**65.57**	**323**	P	**P**	**12 00 15.7**	**+0.4**
MJAR				IAmb	IAmb	12 00 16.0	
	comp=Z,10nm,0.9s						
MAJO	**Matsushiro**	**65.57**	**323**	P	**P**	**12 00 15.1**	**-0.3**
MAJO				IAmb	IAmb	12 00 15.7	
	comp=Z,19nm,0.8s						
NIKH	**Nikolski High** baz=190	**68.35**	**6**	P	**P**	**12 00 33.9**	**+1.7**
CASY	**Casey**	**68.56**	**204**	P	**P**	**12 00 33.5**	**+0.1**
JKA	**Kamikawa-asahi**	**68.75**	**331**	P	**P**	**12 00 36.3**	**+1.4**
JKA				IAmb	IAmb	12 00 37.4	
	comp=Z,20nm,0.9s						
UNV	**Unalaska Valle** baz=192	**69.48**	**8**	P	**P**	**12 00 40.6**	**+1.6**
YSS	**Yuzhno-Sakhali**	**70.86**	**333**		**P**	**12 00 47.7**	**+0.3**
FALS	**False Pass** baz=196	**70.90**	**9**	P	**P**	**12 00 48.8**	**+1.3**
PEA0B	**Petropavlovsk-**	**70.96**	**345**		**P**	**12 00 48.7**	**+0.7**
PETK	**Petropavlovsk-** comp=Z,24nm,0.8s,baz=127,slow=8.3,SNR=25	**70.96**	**345**	P	**P**	**12 00 48.4**	**+0.4**
	comp=Z,24nm,0.8s						
CHNA	**Chernabura Isl** baz=199	**71.55**	**11**	P	**P**	**12 00 52.4**	**+1.1**
P08K	**Saint George I** baz=189	**71.87**	**5**	P	**P**	**12 00 53.7**	**+0.5**
SDPT	**Sand Point** baz=198	**71.87**	**11**	P	**P**	**12 00 53.9**	**+0.7**
SPIA	**Saint Paul Isl** baz=188	**72.38**	**5**	P	**P**	**12 00 57.0**	**+0.8**
KSRS	**Korea Array** comp=Z,5.6nm,0.9s,baz=133,slow=6.5,SNR=16	**72.50**	**318**	P	**P**	**12 00 58.5**	**+1.1**
	comp=Z,5.6nm,0.9s						
CHIR	**Chirikof Islan** baz=203	**73.29**	**13**	P	**P**	**12 01 01.9**	**+0.4**
USRK	**Usuriysk Ar.** comp=Z,1.1nm,0.8s,baz=138,slow=4.1,SNR=5.6	**74.22**	**325**	P	**P**	**12 01 08.6**	**+1.5**
	comp=Z,6.1nm,0.8s						
SII	**Sitkinak Islan** baz=204	**74.30**	**14**	P	**P**	**12 01 07.7**	**+0.4**
R16K	**Pilot Point** baz=201	**74.51**	**12**	P	**P**	**12 01 08.9**	**+0.5**
SAO	**San Andreas Ge**	**74.60**	**44**		**P**	**12 01 09.3**	**-0.2**
SAO				IAmb	IAmb	12 01 12.4	
	comp=Z,20nm,0.9s						
MHC	**Mount Hamilton** comp=Z,22nm,1.1s	**74.78**	**44**	IAmb	IAmb	12 01 13.3	
CVS	**Carmenet Viney**	**74.79**	**43**	P	**P**	**12 01 10.5**	**-0.1**
CVS				IAmb	IAmb	12 01 15.9	
	comp=Z,26nm,1.1s						
R17L	**Mt. Peulik Vol** baz=202	**74.81**	**12**	P	**P**	**12 01 10.7**	**+0.5**
QSPA	**South Pole Qui** comp=Z,48nm,0.7s,baz=26,slow=1.2,SNR=54	**74.90**	**180**	P	**P**	**12 01 11.1**	**+0.2**
	comp=Z,48nm,0.7s						
OHAK	**Old Harbor**	**75.11**	**14**	P	**P**	**12 01 12.6**	**+0.7**
OHAK	**Old Harbor** baz=205	**75.11**	**14**	P	**P**	**12 01 12.5**	**+0.6**
O14K	**Tigyukauivet M** baz=197	**75.47**	**9**	P	**P**	**12 01 14.3**	**+0.5**
Q17K	**Contact Creek** baz=203	**75.49**	**12**	P	**P**	**12 01 14.2**	**0.0**
PASC	**Pasadena Art C** comp=Z,18nm,1.2s	**75.53**	**48**	IAmb	IAmb	12 01 16.8	
O15K	**Ungalikthiuk R** baz=199	**75.62**	**10**	P	**P**	**12 01 15.2**	**+0.4**
MWC	**Mount Wilson** comp=Z,17nm,1.0s	**75.65**	**48**	IAmb	IAmb	12 01 17.7	
SUTB	**Sutter Butte** comp=Z,12nm,0.8s	**75.71**	**42**	IAmb	IAmb	12 01 17.4	
Q16K	**King Salmon** baz=202	**75.72**	**12**	P	**P**	**12 01 15.6**	**+0.3**
KDAK	**Kodiak Island** baz=206	**75.78**	**14**	P	**P**	**12 01 16.3**	**+0.7**
P16K	**Nushagak River** baz=200	**75.80**	**11**	P	**P**	**12 01 16.3**	**+0.6**
DPP	**Dos Picos Cty** comp=Z,18nm,1.3s	**75.86**	**50**	IAmb	IAmb	12 01 18.9	
M11K	**Mekoryuk** baz=192	**75.92**	**6**	P	**P**	**12 01 17.3**	**+1.0**
VTX	**Valle De La Tr** comp=Z,27nm,1.3s	**75.97**	**52**	IAmb	IAmb	12 01 20.1	
CMB	**Columbia Colle** comp=Z,15nm,0.9s	**75.99**	**44**	IAmb	IAmb	12 01 19.4	
NJ2	**Nanjing**	**76.02**	**309**	*e*P	**P**	**12 01 19.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
N14K	**Kuskokwak Cree** baz=197	**76.05**	**9**	P	**P**	**12 01 17.8**	**+0.7**
ISA	**Isabella, Lake** comp=Z,17nm,1.1s	**76.07**	**47**	IAmb	IAmb	12 01 20.4	
ORV	**Oroville**	**76.08**	**42**		**P**	**12 01 17.2**	**-0.5**
ORV				IAmb	IAmb	12 01 19.8	
	comp=Z,13nm,1.0s						
AFDM	**Forest Hills D** comp=Z,12nm,0.9s	**76.09**	**43**	IAmb	IAmb	12 01 19.9	
N02D	**Trinity Center**	**76.10**	**40**		**P**	**12 01 20.1**	**+2.1**
N02D				IAmb	IAmb	12 01 20.8	
	comp=Z,23nm,1.1s						
ESJX	**Sierra Juarez** comp=Z,14nm,1.3s	**76.14**	**51**	IAmb	IAmb	12 01 21.2	
P17K	**Kvichak River** baz=202	**76.25**	**12**	P	**P**	**12 01 18.5**	**+0.3**
M02C	**Callahan** comp=Z,19nm,1.0s	**76.25**	**40**	IAmb	IAmb	12 01 21.7	
M13K	**Dall Lake** baz=195	**76.29**	**8**	P	**P**	**12 01 19.2**	**+0.8**
O16K	**Kokwok River B** baz=200	**76.31**	**11**	P	**P**	**12 01 18.5**	**0.0**
DNR	**Dunn Ranch,Anz** comp=Z,23nm,1.3s	**76.37**	**49**	IAmb	IAmb	12 01 22.1	
BORC	**Bosego Spring** comp=Z,17nm,1.2s	**76.38**	**50**	IAmb	IAmb	12 01 22.0	
YUH	**Yuha Desert** comp=Z,15nm,1.2s	**76.45**	**50**	IAmb	IAmb	12 01 22.4	
N15K	**Kwethluk River** baz=198	**76.52**	**9**	P	**P**	**12 01 20.1**	**+0.3**
SFX	**San Felipe** comp=Z,11nm,1.0s	**76.52**	**52**	IAmb	IAmb	12 01 22.6	
YBH	**Yreka Blue Hor**	**76.53**	**40**		**P**	**12 01 22.3**	**+1.9**
YBH				IAmb	IAmb	12 01 23.0	
	comp=Z,20nm,0.9s						
Q20K	**Shuyak Island** baz=206	**76.57**	**14**	P	**P**	**12 01 20.0**	**0.0**
Q19K	**Cape Douglas,** baz=205	**76.58**	**13**	P	**P**	**12 01 20.5**	**+0.3**
PMD	**Palm Desert** comp=Z,18nm,1.4s	**76.59**	**49**	IAmb	IAmb	12 01 22.9	
MDPB	**Devils Postpil** comp=Z,15nm,0.9s	**76.66**	**45**	IAmb	IAmb	12 01 23.6	
O17K	**Koliganek Bris** baz=201	**76.66**	**11**	P	**P**	**12 01 20.8**	**+0.3**
P18K	**Big Mountain,**	**76.67**	**12**		**P**	**12 01 20.6**	**-0.1**
P18K	**Big Mountain,** baz=203	**76.67**	**12**	P	**P**	**12 01 20.6**	**-0.1**
CLC	**China Lake** comp=Z,19nm,1.1s	**76.77**	**47**	IAmb	IAmb	12 01 24.1	
CCCA	**Chr Cany lake** comp=Z,23nm,1.1s	**76.79**	**47**	IAmb	IAmb	12 01 24.4	
M14K	**Bethel** baz=196	**76.80**	**8**	P	**P**	**12 01 21.6**	**+0.4**
M15K	**Kasigluk River** baz=198	**76.93**	**9**	P	**P**	**12 01 22.4**	**+0.4**
GSC	**Goldstone, Bar** comp=Z,14nm,1.1s	**77.08**	**48**	IAmb	IAmb	12 01 25.7	
O18K	**Koktuh Hills** baz=203	**77.10**	**12**	P	**P**	**12 01 23.2**	**+0.2**
L14K	**Kuka Creek** comp=Z,16nm,0.9s	**77.27**	**8**	IAmb	IAmb	12 01 25.7	
L14K	**Kuka Creek** baz=196	**77.27**	**8**	P	**P**	**12 01 24.3**	**+0.5**
BC3	**Big Chuckawall** comp=Z,13nm,1.2s	**77.27**	**50**	IAmb	IAmb	12 01 27.2	
DSP	**Deep Springs** comp=Z,16nm,1.0s	**77.28**	**45**	IAmb	IAmb	12 01 27.1	
P19K	**Oil Pt** baz=205	**77.32**	**13**	P	**P**	**12 01 24.5**	**+0.2**
N17K	**Nushagak Hills** baz=201	**77.35**	**11**	P	**P**	**12 01 24.8**	**+0.5**
QSM	**Queen of Sheba** comp=Z,13nm,1.1s	**77.35**	**47**	IAmb	IAmb	12 01 27.1	
LHV	**Little Huntoon** comp=Z,25nm,1.0s	**77.37**	**44**	IAmb	IAmb	12 01 27.6	
GLA	**Glamis** comp=Z,17nm,1.1s	**77.46**	**51**	IAmb	IAmb	12 01 28.4	
M16K	**Timber Creek** baz=199	**77.51**	**10**	P	**P**	**12 01 25.6**	**+0.3**
PAHR	**Pah Rah Range** comp=Z,14nm,1.1s	**77.54**	**43**	IAmb	IAmb	12 01 28.3	
O19K	**Port Alsworth** baz=204	**77.59**	**12**	P	**P**	**12 01 25.7**	**+0.1**
NVAR	**Mina Array Bea** comp=Z,9.0nm,0.8s,baz=228,slow=9.5,SNR=65	**77.59**	**44**	P	**P**	**12 01 27.5**	**+1.0**
NVAR				pP	**pwP**	**12 02 56.8**	**+0.8**
	comp=Z,2.9nm,1.1s,baz=255,slow=4.6,SNR=4.0						
	comp=Z,9.0nm,0.8s						
FURC	**Furnace Creek,**	**77.60**	**47**	IAmb	IAmb	12 01 28.6	
	comp=Z,20nm,1.0s						
GWY	**Greenwater Val** comp=Z,13nm,1.0s	**77.60**	**47**	IAmb	IAmb	12 01 28.4	
K13K	**Kusilvak Mount** baz=194	**77.61**	**7**	P	**P**	**12 01 26.3**	**+0.6**
HOM	**Homer** baz=206	**77.68**	**14**	P	**P**	**12 01 26.6**	**+0.5**
BNX	**BinXian**	**77.72**	**325**	⇓P	**P**	**12 01 27.4**	**+0.7**
BNX				pmax	pmax		
	comp=Z,18nm,0.9s						
N18K	**Kilae Creek** baz=202	**77.73**	**11**	P	**P**	**12 01 27.1**	**+0.6**
IRM	**Iron Mountain** comp=Z,24nm,1.3s	**77.73**	**49**	IAmb	IAmb	12 01 29.7	
L15K	**Ungalak Mounta** baz=197	**77.76**	**8**	P	**P**	**12 01 27.3**	**+0.7**
I04A	**Tendick Farm,** comp=Z,12nm,0.9s	**77.89**	**38**	IAmb	IAmb	12 01 29.4	
WCT	**Wildcat Mounta** comp=Z,14nm,1.0s	**77.93**	**46**	IAmb	IAmb	12 01 30.4	
BRSE	**Bradley Lake S** baz=207	**77.96**	**14**	P	**P**	**12 01 28.3**	**+0.6**
BLYC	**Blythe** comp=Z,10.0nm,0.9s	**78.00**	**50**	IAmb	IAmb	12 01 31.0	
L16K	**Owhat River** baz=199	**78.08**	**9**	P	**P**	**12 01 28.9**	**+0.6**
RED	**Redoubt Volcan** comp=Z,18nm,0.9s	**78.12**	**13**	IAmb	IAmb	12 01 28.7	
113A	**Mohawk Valley,** comp=Z,12nm,1.0s	**78.12**	**51**	IAmb	IAmb	12 01 31.7	
M17K	**Holitna River** baz=201	**78.12**	**10**	P	**P**	**12 01 29.2**	**+0.6**
N19K	**Bonanza Creek** baz=204	**78.12**	**12**	P	**P**	**12 01 28.7**	**+0.1**
TPNV	**Topopah Spring** comp=Z,12nm,0.8s	**78.27**	**46**	IAmb	IAmb	12 01 32.3	
K15K	**Wolf Creek Mou** baz=197	**78.34**	**8**	P	**P**	**12 01 30.4**	**+0.7**
WIFE	**Three Sisters-** comp=Z,19nm,1.0s	**78.39**	**38**	IAmb	IAmb	12 01 32.8	
MA2	**Magadan**	**78.48**	**345**		**P**	**12 01 30.3**	**-0.2**
MA2				IAmb	IAmb	12 01 31.2	
	comp=Z,15nm,0.9s						
214A	**Organ Pipe Nat** comp=Z,16nm,1.2s	**78.49**	**52**	IAmb	IAmb	12 01 34.0	
M18K	**Stony River** baz=202	**78.49**	**11**	P	**P**	**12 01 31.0**	**+0.5**
H04A	**Detroit Lake** comp=Z,13nm,1.1s	**78.53**	**37**	IAmb	IAmb	12 01 33.6	
J14K	**Nanvaranak Lak** baz=195	**78.53**	**7**	P	**P**	**12 01 31.2**	**+0.6**
SEW	**Seward** baz=209	**78.59**	**14**	P	**P**	**12 01 31.4**	**+0.4**
L17K	**Donlin** baz=200	**78.67**	**10**	P	**P**	**12 01 32.2**	**+0.8**
DIB	**Dawson Inlet,** comp=Z,26nm,1.2s	**78.75**	**26**	IAmb	IAmb	12 01 33.7	
CAPN	**Captain Cook N** baz=207	**78.78**	**13**	P	**P**	**12 01 32.6**	**+0.5**
Q23K	**Middleton Isla** baz=212	**78.80**	**16**	P	**P**	**12 01 32.5**	**+0.4**
I05D	**Terrebonne, OR** comp=Z,23nm,1.1s	**78.83**	**38**	IAmb	IAmb	12 01 35.0	
GAMB	**Gambell** comp=Z,16nm,1.0s	**78.84**	**3**	IAmb	IAmb	12 01 34.2	
GAMB	**Gambell** baz=187,SNR=7.1	**78.84**	**3**	P	**P**	**12 01 32.8**	**+0.5**
SPCR	**Spurr Chakacha** baz=206	**78.94**	**13**	P	**P**	**12 01 33.0**	**-0.1**
S11A	**Rachel** comp=Z,17nm,1.0s	**78.95**	**46**	IAmb	IAmb	12 01 35.9	
P23K	**Montague Islan** baz=211	**79.01**	**15**	P	**P**	**12 01 33.3**	**0.0**
L18K	**Granite Mounta** baz=202	**79.02**	**10**	P	**P**	**12 01 33.5**	**+0.2**
M19K	**Big River Lodg** baz=204	**79.14**	**11**	P	**P**	**12 01 34.1**	**0.0**
NLWA	**Neilton Lookou** comp=Z,24nm,1.1s	**79.15**	**34**	IAmb	IAmb	12 01 36.7	
HOOD	**Mount Hood Mea** comp=Z,16nm,0.9s	**79.20**	**37**	IAmb	IAmb	12 01 36.7	
K17K	**Iditarod** baz=200	**79.22**	**9**	P	**P**	**12 01 34.7**	**+0.3**
L19K	**White Mountain** baz=203	**79.31**	**11**	P	**P**	**12 01 35.4**	**+0.5**
PRN	**Pahroc Range** comp=Z,18nm,1.0s	**79.33**	**47**	IAmb	IAmb	12 01 38.4	
M20K	**Styx River** baz=205	**79.37**	**12**	P	**P**	**12 01 35.5**	**+0.1**
RC01	**Rabbit Creek A** baz=208	**79.39**	**14**	P	**P**	**12 01 35.6**	**+0.2**
J16K	**Anvik River** baz=198	**79.42**	**8**	P	**P**	**12 01 35.9**	**+0.4**
WVOR	**Wild Horse Val** comp=Z,18nm,1.0s	**79.45**	**41**	IAmb	IAmb	12 01 38.5	
SUA	**Susitna One** comp=Z,17nm,0.8s	**79.50**	**13**	IAmb	IAmb	12 01 36.8	
SUA	**Susitna One** baz=207	**79.50**	**13**	P	**P**	**12 01 36.5**	**+0.4**
KAIM	**Kayak Island** baz=213	**79.74**	**17**	P	**P**	**12 01 37.5**	**+0.3**
SKT	**Skwentna** baz=206	**79.79**	**13**	P	**P**	**12 01 37.7**	**+0.2**
I07A	**Izee** comp=Z,16nm,0.9s	**79.79**	**39**	IAmb	IAmb	12 01 40.2	
GNW	**Green Mountain** comp=Z,15nm,1.1s	**79.83**	**35**	IAmb	IAmb	12 01 40.0	
M22K	**Willow** baz=208	**79.89**	**13**	P	**P**	**12 01 38.0**	**0.0**
EYAK	**Cordova Ski Ar** baz=212	**79.91**	**16**	P	**P**	**12 01 38.7**	**+0.6**
PMR	**Palmer** baz=209	**79.97**	**14**	P	**P**	**12 01 38.7**	**+0.3**
KNK	**Knik Glacier** baz=209	**79.97**	**14**	P	**P**	**12 01 39.0**	**+0.5**
I17K	**Unalakleet** baz=198	**79.98**	**8**	P	**P**	**12 01 38.9**	**+0.4**
J08A	**Circle Bar Ran** comp=Z,18nm,1.0s	**80.04**	**40**	IAmb	IAmb	12 01 41.5	
CRAG	**Craig** baz=224	**80.09**	**24**	P	**P**	**12 01 39.2**	**+0.1**
ANM	**Nome** comp=Z,15nm,0.9s	**80.10**	**6**	IAmb	IAmb	12 01 41.1	
ANM	**Nome** baz=193,SNR=9.6	**80.10**	**6**	P	**P**	**12 01 39.5**	**+0.4**
J18K	**Innoko River** baz=201	**80.18**	**10**	P	**P**	**12 01 39.7**	**+0.2**
TUC	**Tucson**	**80.19**	**53**		**P**	**12 01 42.5**	**+2.1**
TUC				IAmb	IAmb	12 01 43.4	
	comp=Z,12nm,1.1s						
BGLC	**Bering Glacier** baz=214	**80.22**	**17**	P	**P**	**12 01 39.6**	**-0.2**
SIT	**Sitka** baz=222	**80.41**	**22**	P	**P**	**12 01 40.8**	**0.0**
LCMT	**Little Creek M**	**80.42**	**48**	P	**P**	**12 01 42.2**	**+0.6**
CUT	**Chulitna** baz=208	**80.44**	**13**	P	**P**	**12 01 40.6**	**-0.2**
HEH	**HeiHe**	**80.45**	**328**	*e*P	**P**	**12 01 41.3**	**+0.1**
HEH				pmax	pmax		
	comp=Z,13nm,1.3s						
PPLA	**Purkeypile** baz=206	**80.48**	**12**	P	**P**	**12 01 40.6**	**-0.7**
M23K	**Glacier View** baz=210	**80.48**	**14**	P	**P**	**12 01 40.8**	**-0.3**
H16K	**Elim** baz=196,SNR=20	**80.51**	**7**	P	**P**	**12 01 41.5**	**+0.4**

CRQE	Cirque baz=215	80.80	17	P	P	12 01 42.9	0.0	
U15A	North Rim comp=Z,18nm,1.0s	80.84	48	IAmb	IAmb	12 01 46.8		
J19K	Poorman baz=202	80.85	10	P	P	12 01 43.3	+0.3	
TNA	Tin City baz=190	80.86	4	P	P	12 01 43.4	+0.4	
F14K	Arctic Creek baz=192,SNR=25	80.90	5	P	P	12 01 43.8	+0.6	
319A	Douglas comp=Z,21nm,0.9s	80.98	54	IAmb	IAmb	12 01 47.6		
S32K	Killisnoo baz=223	80.99	22	P	P	12 01 43.8	0.0	
HAWA	Hanford comp=Z,18nm,0.9s	81.03	37	IAmb	IAmb	12 01 46.3		
WRAK	Wrangell Islan baz=225	81.08	24	P	P	12 01 43.1	-1.2	
H17K	Granite Mounta baz=198	81.09	8	P	P	12 01 44.5	+0.3	
VRDI	Verde Repeater comp=Z,28nm,1.3s	81.09	16	IAmb	IAmb	12 01 46.1		
N25K	Chitina, Valde comp=Z,16nm,0.9s	81.10	16	IAmb	IAmb	12 01 46.1		
N25K	Chitina, Valde baz=213	81.10	16	P	P	12 01 44.3	-0.2	
TABL	Table Mountain	81.11	18	P	P	12 01 45.3	+0.6	
WUAZ	Wupatki comp=Z,12nm,1.1s	81.11	50	IAmb	IAmb	12 01 48.0		
M24K	Tolsona, Glenn baz=212	81.13	15	P	P	12 01 44.1	-0.5	
WAT6	Susitna Watana baz=210	81.16	14	P	P	12 01 44.4	-0.5	
WAT1	Susitna Watana baz=209	81.19	13	P	P	12 01 45.0	+0.1	
WAH2	Wahluke Slope comp=Z,13nm,1.1s	81.20	37	IAmb	IAmb	12 01 47.9		
G16K	Koyuk River baz=196	81.23	7	P	P	12 01 44.6	-0.3	
F15K	North Star Dit comp=Z,24nm,1.2s	81.29	6	IAmb	IAmb	12 01 47.1		
F15K	North Star Dit baz=194,SNR=11	81.29	6	P	P	12 01 45.2	0.0	
KTH	Kantishna Hill comp=Z,27nm,1.3s	81.32	12	IAmb	IAmb	12 01 47.9		
MCARA	McCarthy VSAT baz=215	81.34	16	P	P	12 01 45.6	0.0	
CHUM	Lake Minchumin baz=206	81.35	11	P	P	12 01 45.8	+0.2	
GCSA	Galena City Sc baz=201,SNR=5.5	81.35	9	P	P	12 01 45.9	+0.3	
E08A	Dider Farm, El comp=Z,15nm,1.1s	81.36	37	IAmb	IAmb	12 01 48.8		
TRF	Thorofare Moun comp=Z,18nm,0.9s	81.36	12	IAmb	IAmb	12 01 47.5		
TRF	Thorofare Moun baz=208	81.36	12	P	P	12 01 45.5	-0.4	
CTG	Chitna Glacier baz=216	81.47	17	P	P	12 01 46.2	-0.3	
CTGM	Chitina Glacie comp=Z,18nm,0.8s	81.47	17	IAmb	IAmb	12 01 48.1		
HNS	HongShan	81.50	312	⇑P	P	12 01 47.9	+0.9	
HNS	comp=Z,9.0nm,1.1s			pmax	pmax			
H18K	Honhosa River baz=200	81.51	9	P	P	12 01 46.9	+0.5	
EPH	Ephrata comp=Z,18nm,1.0s	81.51	36	IAmb	IAmb	12 01 48.5		
G17K	Kiwalik Mounta baz=198,SNR=14	81.53	7	P	P	12 01 46.6	+0.1	
R32K	Eaglecrest baz=223	81.60	22	P	P	12 01 46.7	-0.3	
HARP	HAARP baz=212	81.63	15	P	P	12 01 47.6	+0.4	
MTPU	Mount Pierson comp=Z,20nm,1.0s	81.64	47	IAmb	IAmb	12 01 51.3		
O28M	Mount Upton baz=217	81.65	18	P	P	12 01 47.7	0.0	
BJI2	Beijing	81.66	315	P	P	12 01 48.6	+0.8	
BJI2	comp=Z,6.0nm,1.0s			pmax	pmax			
BJT	Baijiatuau comp=Z,22nm,1.4s	81.67	315	IAmb	IAmb	12 01 49.6		
DHY	Denali Highway baz=210	81.67	14	P	P	12 01 46.9	-0.6	
MFID	Camas Ranch comp=Z,17nm,1.1s	81.73	41	IAmb	IAmb	12 01 50.2		
D08A	Wollman Farm, comp=Z,13nm,1.0s	81.74	37	IAmb	IAmb	12 01 50.0		
O29M	Mount Kennedy baz=219	81.78	19	P	P	12 01 47.6	-0.5	
BPAW	Bear Paw Mtn. baz=207	81.80	12	P	P	12 01 47.8	-0.2	
MCK	McKinley baz=209,SNR=7.2	81.90	13	P	P	12 01 48.4	-0.1	
PAX	Paxson baz=212	82.03	15	P	P	12 01 48.5	-0.8	
LLLB	Lillooet comp=Z,17nm,1.1s	82.10	33	IAmb	IAmb	12 01 51.4		
P30M	Million Dollar baz=220,SNR=8.5	82.15	20	P	P	12 01 49.5	-0.4	
W18A	Petrified Fore comp=Z,12nm,1.2s	82.16	51	IAmb	IAmb	12 01 53.2		
G18K	Tagagawik baz=199	82.17	8	P	P	12 01 50.1	+0.3	
M26K	Nabesna, AK baz=214,SNR=10	82.19	16	P	P	12 01 50.4	+0.3	
YUK8	Steele Glacier baz=218	82.19	18	P	P	12 01 50.7	+0.4	
SKAG	Skagway comp=Z,22nm,1.2s	82.19	21	IAmb	IAmb	12 01 52.4		
SKAG	Skagway baz=222	82.19	21	P	P	12 01 50.1	+0.1	
B08A	Colville Reser comp=Z,13nm,0.9s	82.21	35	IAmb	IAmb	12 01 51.6		
T35M	Bob Quinn baz=227	82.30	24	P	P	12 01 51.1	+0.4	
YUK6	Outpost Mounta baz=219	82.34	19	P	P	12 01 51.8	+0.7	
H20K	Anolleneega Mo baz=203	82.36	10	P	P	12 01 51.1	+0.3	
F17K	Baldwin Pennin baz=197	82.36	7	P	P	12 01 51.4	+0.7	
YUK3	Moose Creek baz=217,SNR=7.0	82.38	17	P	P	12 01 51.2	0.0	
MENT	Mentasta comp=Z,15nm,1.0s	82.44	15	IAmb	IAmb	12 01 52.8		
M27K	Edge Creek, AK baz=216	82.45	16	P	P	12 01 51.7	+0.2	
HYT	Haines Junctio comp=Z,18nm,1.1s	82.52	19	IAmb	IAmb	12 01 53.6		
HYT	Haines Junctio baz=220	82.52	19	P	P	12 01 52.3	+0.4	
ENH	Enshi	82.55	304		P	12 01 53.7	+1.1	
ENH	comp=Z,16nm,0.9s			IAmb	IAmb	12 01 54.6		
YUK4	Talbot Arm baz=219	82.57	18	P	P	12 01 52.8	+0.6	
I21K	Tanana baz=206,SNR=6.9	82.58	11	P	P	12 01 52.2	+0.3	
S34M	Telegraph Cree comp=Z,18nm,0.9s	82.60	23	IAmb	IAmb	12 01 54.3		
S34M	Telegraph Cree baz=226,SNR=9.0	82.60	23	P	P	12 01 52.7	+0.6	
L26K	Log Cabin Wild comp=Z,18nm,1.1s	82.61	15	IAmb	IAmb	12 01 53.6		
L26K	Log Cabin Wild baz=214,SNR=5.1	82.61	15	P	P	12 01 52.6	+0.4	
G19K	Purcell Mounta baz=201	82.63	9	P	P	12 01 52.8	+0.6	
NEA2	Nenana baz=209	82.63	12	P	P	12 01 51.9	-0.3	
K24K	Donnelly Dome baz=212,SNR=6.1	82.67	14	P	P	12 01 52.9	+0.4	
MLY	Manley comp=Z,17nm,1.0s	82.68	12	IAmb	IAmb	12 01 53.1		
MLY	Manley baz=207	82.68	12	P	P	12 01 52.3	-0.2	
HLID	Hailey comp=Z,16nm,0.9s	82.70	41	IAmb	IAmb	12 01 55.6		
F18K	Selawik baz=198,SNR=10	82.71	8	P	P	12 01 52.7	+0.2	
Q16A	Castle Valley comp=Z,11nm,1.0s	82.74	47	IAmb	IAmb	12 01 56.4		
BVCY	Beaver Creek baz=216,SNR=7.3	82.78	17	P	P	12 01 53.0	0.0	
RIDG	Independent Ri comp=Z,23nm,1.0s	82.84	14	IAmb	IAmb	12 01 54.4		
RIDG	Independent Ri baz=213	82.84	14	P	P	12 01 53.7	+0.3	
P32M	Atlin comp=Z,13nm,1.0s	82.85	21	IAmb	IAmb	12 01 55.4		
P32M	Atlin baz=223	82.85	21	P	P	12 01 53.3	-0.2	
H21K	Melozitna Rive baz=205	82.87	10	P	P	12 01 53.7	+0.3	
MPU	Maple Canyon comp=Z,11nm,1.0s	82.90	45	IAmb	IAmb	12 01 56.6		
Q32M	Nakina River baz=225	82.91	22	P	P	12 01 54.1	+0.1	
E17K	Hotham Inlet baz=196,SNR=34	82.92	7	P	P	12 01 53.9	+0.4	
HDA	Harding Lake comp=Z,18nm,0.8s	82.92	13	IAmb	IAmb	12 01 54.6		
HDA	Harding Lake baz=211,SNR=6.0	82.92	13	P	P	12 01 53.9	+0.2	
HVU	Hansel Valley comp=Z,21nm,1.0s	82.92	43	IAmb	IAmb	12 01 56.6		
O30N	Mendenhall comp=Z,11nm,0.8s	82.92	20	IAmb	IAmb	12 01 55.0		
O30N	Mendenhall baz=221,SNR=5.1	82.92	20	P	P	12 01 54.0	+0.1	
SPUT	South Promonto comp=Z,21nm,1.0s	82.93	44	IAmb	IAmb	12 01 56.7		
L27K	Beaver Creek, baz=216	83.04	16	P	P	12 01 54.7	+0.3	
BCAR	Beaver Creek A	83.05	16		P	12 01 54.6	+0.1	
I23K	Minto, Yukon-K comp=Z,20nm,1.2s	83.06	12	IAmb	IAmb	12 01 55.2		
I23K	Minto, Yukon-K baz=208,SNR=6.4	83.06	12	P	P	12 01 54.2	-0.1	
CTU	Camp Tracy comp=Z,13nm,1.0s	83.12	45	IAmb	IAmb	12 01 57.4		
COLA	College	83.13	13	P	P	12 01 54.3	-0.3	
COLA	College baz=210	83.13	13	P	P	12 01 54.8	+0.1	
F19K	Shaleruckik Mo baz=200	83.18	8	P	P	12 01 55.4	+0.5	
WHY	Whitehorse baz=222,SNR=5.7	83.24	20	P	P	12 01 55.5	0.0	
SCRK	Sand Creek comp=Z,19nm,0.9s	83.25	15	IAmb	IAmb	12 01 56.7		
SCRK	Sand Creek baz=214,SNR=12	83.25	15	P	P	12 01 55.5	0.0	
ILAR	Eielson Array comp=Z,20nm,1.0s,baz=233,slow=6.2,SNR=87 comp=Z,20nm,1.0s	83.25	13	P	P	12 01 54.8	-0.6	
SRU	San Rafael Swe comp=Z,19nm,0.9s	83.28	47	IAmb	IAmb	12 01 58.4		
P17A	Butcher Ranch, comp=Z,22nm,1.5s	83.28	46	IAmb	IAmb	12 01 58.7		
H22K	Ishtalitna Cre baz=206	83.34	11	P	P	12 01 56.2	+0.5	
D17K	Noatak River baz=195,SNR=24	83.38	6	P	P	12 01 56.5	+0.6	
E18K	Tukpahlearik C baz=197,SNR=11	83.38	7	P	P	12 01 56.3	+0.3	
DLBC	Dease Lake baz=227,SNR=6.1	83.38	23	P	P	12 01 56.8	+0.5	
J25K	Salcha River, baz=212	83.45	14	P	P	12 01 56.1	-0.4	
M29M	Somme Creek baz=219	83.48	18	P	P	12 01 56.6	0.0	
G21K	Allakaket baz=204	83.53	10	P	P	12 01 56.9	+0.1	
XLT	XiLinHaoTe	83.53	319	eP	P	12 01 58.4	+1.0	
XLT	comp=Z,8.0nm,1.2s			pmax	pmax			
N31M	Braeburn, Yuko baz=221,SNR=5.2	83.56	19	P	P	12 01 57.1	+0.1	
P33M	Teslin, Yukon baz=224	83.61	21	P	P	12 01 56.8	-0.6	
BILL	Bilibino	83.67	354		P	12 01 57.3	0.0	
BILL	comp=Z,33nm,1.4s			IAmb	IAmb	12 01 58.4		
F20K	Avaraart Lake baz=202	83.67	9	P	P	12 01 57.8	+0.4	
R33M	Jennings River comp=Z,16nm,1.1s	83.69	22	IAmb	IAmb	12 01 59.9		
R33M	Jennings River baz=202	83.69	22	P	P	12 01 57.7	-0.1	
BSUT	Blindstream Ca comp=Z,16nm,0.9s	83.73	45	IAmb	IAmb	12 02 00.9		
C16K	Lisburne Hills comp=Z,24nm,1.2s	83.73	5	IAmb	IAmb	12 01 59.2		
C16K	Lisburne Hills baz=193,SNR=11	83.73	5	P	P	12 01 58.5	+0.9	
RDOG	Red Dog Mine comp=Z,17nm,0.8s	83.74	6	IAmb	IAmb	12 01 59.5		
RDOG	Red Dog Mine baz=195,SNR=5.2	83.74	6	P	P	12 01 58.5	+0.8	
Y22A	Socorro comp=Z,11nm,1.1s	83.78	53	IAmb	IAmb	12 02 01.3		
J26L	Joseph Creek baz=214	83.79	14	P	P	12 01 58.3	+0.2	
E19K	Redstone River comp=Z,14nm,0.9s	83.84	8	IAmb	IAmb	12 01 59.8		
E19K	Redstone River baz=201,SNR=17	83.84	8	P	P	12 01 58.9	+0.6	
PV05	Paradox Valley comp=Z,20nm,1.3s	83.85	48	IAmb	IAmb	12 02 02.5		
H24K	Noodor Dome baz=210	83.96	12	P	P	12 01 59.0	0.0	
PV10	Paradox Valley comp=Z,21nm,1.0s	84.02	48	IAmb	IAmb	12 02 01.9		
PV14	Lion Creek, Pa comp=Z,12nm,1.0s	84.03	48	IAmb	IAmb	12 02 02.2		
PV18	Skein Mesa, Pa comp=Z,20nm,1.2s	84.06	48	IAmb	IAmb	12 02 02.2		
PV23	Carpenter Ridg comp=Z,19nm,0.9s	84.07	48	IAmb	IAmb	12 02 02.5		
M30M	Minto, Yukon comp=Z,21nm,0.9s	84.08	18	IAmb	IAmb	12 02 00.9		
M30M	Minto, Yukon baz=220,SNR=12	84.08	18	P	P	12 02 00.2	+0.6	
PV03	Paradox Valley comp=Z,13nm,1.3s	84.10	48	IAmb	IAmb	12 02 02.5		
PV11	David Mesa, Pa comp=Z,19nm,1.2s	84.11	48	IAmb	IAmb	12 02 04.3		
C17K	DeLong Mountai baz=195	84.12	6	P	P	12 02 00.4	+0.7	
HILR	Hailar Array B comp=Z,3.5nm,0.7s,baz=134,slow=8.4,SNR=4.4 comp=Z,3.5nm,0.7s	84.14	325	P	P	12 02 01.2	+1.0	
PV12	Saucer Basin, comp=Z,26nm,1.3s	84.16	48	IAmb	IAmb	12 02 02.9		
PV02	Paradox Valley comp=Z,24nm,1.3s	84.16	48	IAmb	IAmb	12 02 02.8		
F21K	Alatna River baz=204	84.18	10	P	P	12 01 59.8	-0.1	
PRP	Porcupine Dome comp=Z,17nm,1.2s	84.19	13	IAmb	IAmb	12 02 01.7		
PRP	Porcupine Dome baz=212,SNR=5.9	84.19	13	P	P	12 02 00.5	+0.3	
N32M	Quiet Lake baz=224	84.20	20	P	P	12 02 00.0	-0.2	
G23K	Bananza Creek baz=208	84.32	11	P	P	12 02 01.0	+0.3	
AHID	Auburn Hatcher comp=Z,17nm,1.2s	84.48	43	IAmb	IAmb	12 02 05.0		
C18K	Utukok River comp=Z,12nm,1.2s	84.49	6	IAmb	IAmb	12 02 02.9		
C18K	Utukok River baz=197	84.49	6	P	P	12 02 01.8	+0.3	
DAWY	Dawson comp=Z,19nm,1.0s	84.50	16	IAmb	IAmb	12 02 03.0		
DAWY	Dawson baz=218,SNR=12	84.50	16	P	P	12 02 02.0	+0.4	
M31M	Drury Creek, Y	84.54	19	P	P	12 02 02.0	+0.1	
M31M	Drury Creek, Y baz=222,SNR=5.1	84.54	19	P	P	12 02 02.0	+0.1	
ANMO	Albuquerque	84.56	52	P	P	12 02 02.4	-0.4	
D19K	Kuna River baz=200	84.70	7	P	P	12 02 03.3	+0.8	
TX31	Lajitas Ar. Si comp=Z,15nm,1.1s	84.71	58	IAmb	IAmb	12 02 06.6		
TXAR	Lajitas Array comp=Z,5.5nm,0.9s,baz=224,slow=6.1,SNR=52	84.71	58	P	P	12 02 05.3	+1.8	
TXAR	comp=Z,0.9nm,1.1s,baz=275,slow=5.0,SNR=2.8 comp=Z,5.5nm,0.9s			pP	pP	12 03 35.0	+2.7	
TXAR	Lajitas Array	84.71	58		P	12 02 02.8	-0.7	
E20K	Nigu River baz=202	84.73	8	P	P	12 02 03.3	+0.5	
COLD	Coldfoot comp=Z,18nm,1.2s	84.74	11	IAmb	IAmb	12 02 05.3		
COLD	Coldfoot baz=207,SNR=11	84.74	11	P	P	12 02 03.5	+0.8	
G24K	Hadweenzic Riv baz=210	84.80	12	P	P	12 02 03.7	+0.7	
K29M	Barlow Dome baz=220	84.84	17	P	P	12 02 03.7	+0.3	
FARO	Faro, Yukon baz=223	84.89	20	P	P	12 02 03.6	0.0	
FXWY	Fox Creek comp=Z,14nm,1.1s	84.91	42	IAmb	IAmb	12 02 08.2		
BELA	Belgrano 2	84.93	173	P	P	12 02 04.0	+0.3	
WTLY	Watson Lake, Y comp=Z,9.2nm,1.0s	84.99	23	IAmb	IAmb	12 02 05.9		
WTLY	Watson Lake, Y baz=228	84.99	23	P	P	12 02 04.8	+0.6	
D20K	Etivluk River baz=201	85.10	8	P	P	12 02 05.1	+0.6	
C19K	Lookout Ridge comp=Z,9.5nm,1.0s	85.11	7	IAmb	IAmb	12 02 06.3		
C19K	Lookout Ridge baz=198	85.11	7	P	P	12 02 04.6	+0.1	
J29N	Klondike Camp baz=219,SNR=6.1	85.12	16	P	P	12 02 05.1	+0.3	
MAYO	Mayo, Yukon baz=221,SNR=5.4	85.12	18	P	P	12 02 05.2	+0.5	
I27K	Kandik River baz=216	85.17	15	P	P	12 02 04.1	-0.8	
LOHW	Long Hollow comp=Z,9.3nm,1.1s	85.18	43	IAmb	IAmb	12 02 07.2		
TPB01	Permian Basin comp=Z,7.4nm,1.0s	85.18	56	IAmb	IAmb	12 02 07.9		
HHC	Hu-ho-hao-te	85.19	314	eP	P	12 02 06.8	+1.1	
HHC	comp=Z,11nm,0.8s			pmax	pmax			
HHC	comp=Z,97nm,4.6s			pmax	pmax			
E21K	Killik River baz=204	85.22	9	P	P	12 02 04.8	-0.3	
E22K	Anaktuvuk Pass baz=206	85.28	10	P	P	12 02 05.2	-0.2	
BOZ	Bozeman (W) comp=Z,24nm,1.4s	85.40	40	IAmb	IAmb	12 02 08.9		
I28M	Miner Creek baz=217	85.46	15	P	P	12 02 06.4	0.0	
BW06	Boulder Array comp=Z,17nm,1.3s	85.50	44	IAmb	IAmb	12 02 08.9		
PD31	Pinedale Array comp=Z,15nm,1.2s	85.50	44	IAmb	IAmb	12 02 08.9		
PDAR	Pinedale Array comp=Z,4.3nm,0.8s,baz=222,slow=2.8,SNR=39	85.50	44	P	P	12 02 07.5	+0.1	
PDAR	comp=Z,0.7nm,0.9s,baz=271,slow=3.2,SNR=3.9 comp=Z,4.3nm,0.8s			pP	pwP	12 03 37.8	-0.9	
TPB05	Hovey Rd comp=Z,7.3nm,1.1s	85.54	56	IAmb	IAmb	12 02 10.1		
H17A	Grant Village comp=Z,15nm,0.9s	85.54	42	IAmb	IAmb	12 02 10.8		
TOAD	Toad River Com baz=231	85.55	25	P	P	12 02 06.8	-0.1	
E23K	Chandalar baz=208	85.59	11	P	P	12 02 06.9	-0.1	
YNR	Norris Junctio comp=Z,12nm,1.0s	85.61	42	IAmb	IAmb	12 02 11.8		
H27K	Steamboat Moun baz=216	85.70	14	P	P	12 02 06.7	-0.8	
J30M	Hart River baz=221	85.74	17	P	P	12 02 07.1	-0.7	
C21K	Knifeblade Rid baz=203	85.76	8	P	P	12 02 08.2	+0.5	
G26K	Porcupine Rive baz=214	85.78	13	P	P	12 02 08.1	+0.3	
E24K	Your Creek baz=209	85.80	11	P	P	12 02 08.6	+0.6	
I29M	Ogilvie Camp, baz=219	85.81	16	P	P	12 02 08.2	+0.2	
D22K	Ayikyak River baz=205	85.82	9	P	P	12 02 08.1	+0.2	
F25K	Christian Rive baz=212	85.93	12	P	P	12 02 09.1	+0.5	
YMP	Mirror Lake Pl comp=Z,16nm,1.3s	85.96	42	IAmb	IAmb	12 02 26.6		
YNE	Yellowstone No comp=Z,16nm,1.1s	86.17	41	IAmb	IAmb	12 02 13.0		
D23K	Nanushuk River baz=207	86.21	10	P	P	12 02 10.5	+0.7	
I30M	Mount Dempster baz=220	86.22	16	P	P	12 02 10.0	-0.2	
F26K	Sheenjek River baz=213	86.33	13	P	P	12 02 10.5	0.0	
MAW	Mawson comp=Z,19nm,0.8s,baz=108,slow=4.9,SNR=4.7 comp=Z,19nm,0.8s	86.38	200	P	P	12 02 11.2	+0.4	
E25K	Arctic Village baz=212	86.40	12	P	P	12 02 11.1	+0.3	
D24K	Happy Valley baz=209	86.69	10	P	P	12 02 12.5	+0.4	
RLMT	Red Lodge comp=Z,11nm,1.0s	86.69	42	IAmb	IAmb	12 02 15.3		
KOTAN	Kotaneelee Air baz=232	86.82	24	P	P	12 02 13.4	+0.5	
C23K	Itkillik River baz=207	87.00	9	P	P	12 02 14.3	+0.7	
G29M	Pine Creek baz=219	87.09	15	P	P	12 02 14.4	+0.3	
F28M	Old Crow baz=217	87.20	14	P	P	12 02 14.4	-0.2	
H31M	Peel River baz=222	87.22	17	P	P	12 02 14.7	-0.1	
DRIO	Del Rio comp=Z,11nm,1.3s	87.24	59	IAmb	IAmb	12 02 18.0		
D25K	Kavik River baz=211	87.28	11	P	P	12 02 14.4	-0.6	
A21K	Barrow baz=201	87.55	7	P	P	12 02 15.9	-0.1	
G30M	tAoh Zraii Nji baz=221	87.60	15	P	P	12 02 16.3	-0.2	
CMAR	Chiang Mai Arr comp=Z,0.3nm,0.3s,baz=114,slow=2.9,SNR=1.2	87.75	290	P	P	12 02 19.4	+1.1	
CMAR	comp=Z,0.4nm,0.4s,baz=101,slow=9.0,SNR=1.7			pP	pwP	12 03 49.8	-0.8	
CMAR	comp=Z,0.4nm,0.5s,baz=86,slow=11,SNR=4.3 comp=Z,0.3nm,0.3s			PP	PP	12 05 53.5	+2.8	
EDM	Edmonton comp=Z,10nm,0.9s	87.97	33	IAmb	IAmb	12 02 19.1		
C27K	Jago River baz=214	88.03	12	P	P	12 02 18.5	0.0	
C26K	Camden Bay baz=212	88.05	11	P	P	12 02 18.8	+0.3	
E28M	Babbage River baz=217	88.07	13	P	P	12 02 18.8	+0.1	
F30M	Barrier River baz=221	88.19	15	P	P	12 02 19.3	+0.1	
D27M	Malcolm River baz=216	88.28	13	P	P	12 02 19.7	+0.1	
E29M	Blow River baz=219	88.28	14	P	P	12 02 19.8	+0.2	
HNDO	Hondo comp=Z,16nm,1.4s	88.38	59	IAmb	IAmb	12 02 23.7		
F31M	Tsiigehtchic comp=Z,9.8nm,1.0s	88.59	16	IAmb	IAmb	12 02 22.8		
F31M	Tsiigehtchic baz=223	88.59	16	P	P	12 02 20.7	-0.3	
D28M	Stokes Point baz=218	88.82	13	P	P	12 02 21.7	-0.4	
WRGLY	Wrigley baz=232	88.94	22	P	P	12 02 22.4	-0.4	
LZDM	Lanzhou Array comp=Z,0.4nm,0.3s,baz=72,slow=4.7,SNR=3.8 comp=Z,0.4nm,0.3s	89.10	308	P	P	12 02 25.3	+0.6	
INK	Inuvik baz=223	89.28	15	P	P	12 02 23.1	-1.2	
RSSD	Black Hills	89.73	44	P	P	12 02 27.3	+0.1	
RSSD	comp=Z,13nm,1.1s			IAmb	IAmb	12 02 28.7		
PLPT	Palo Pinto comp=Z,13nm,1.0s	90.18	56	IAmb	IAmb	12 02 31.0		
ULN	Ulaanbaatar	90.92	320		P	12 02 33.3	+0.7	
ULN	Ulaanbaatar comp=Z,20nm,1.1s	90.92	320	P	P	12 02 32.5	-0.1	
SONM	Songino Array comp=Z,1.4nm,0.8s,baz=108,slow=3.4,SNR=5.7	91.32	319	P	P	12 02 33.8	-0.6	
SONM	comp=Z,1.1nm,0.9s,baz=134,slow=4.2,SNR=2.1			PP	pwP	12 04 05.9	-1.1	
SONM	comp=Z,0.4nm,0.5s,baz=121,slow=7.4,SNR=3.6 comp=Z,1.4nm,0.8s			PP	PP	12 06 14.2	-4.2	
YKA	Yellowknife Ar comp=Z,0.6nm,0.9s,baz=253,slow=5.0,SNR=4.6	91.92	25	P	P	12 02 36.0	-0.6	

YKA				PP		**PP**	**12 06 19.6**	**-2.8**	
	comp=Z,0.4nm,0.8s,baz=241,slow=8.1,SNR=4.8								
	comp=Z,0.6nm,0.9s								
C36M	**Paulatuk**	**92.52**	**17**	P		**P**	**12 02 38.8**	**-0.4**	
	baz=232								
SNAA	**Sanae**	**93.36**	**179**	⇓P		**P**	**12 02 42.5**	**-0.9**	
	comp=Z,163nm,0.7s								
SNAA	**Sanae**	**93.36**	**179**	P		**P**	**12 02 42.0**	**-1.3**	
	comp=Z,7.2nm,0.8s,baz=184,slow=4.1,SNR=9.3								
	comp=Z,7.2nm,0.8s								
SNAA	**Sanae**	**93.36**	**179**	P		**P**	**12 02 42.5**	**-0.9**	
TIXI	**Tiksi**	**93.43**	**345**	P		**P**	**12 02 42.6**	**-0.8**	
VNA3	**Neumayer Olymp**	**93.50**	**176**	⇓P		**P**	**12 02 44.2**	**+0.2**	
	comp=Z,16nm,0.7s								
A36M	**Sachs Harbour**	**93.86**	**14**	P		**P**	**12 02 44.9**	**-0.4**	
	baz=231								
VNA2	**Neumayer--Watz**	**93.94**	**177**	⇓P		**P**	**12 02 45.3**	**-0.7**	
	comp=Z,16nm,0.6s,baz=174,slow=4.5								
F33A	**5 Mile Ranch,**	**95.48**	**44**	IAmb		IAmb	12 02 59.8		
	comp=Z,6.4nm,1.3s								
MKAR	**Makanchi Array**	**107.05**	**315**	PKKPbc		PKKPbc	12 19 05.9	-5.8	
	comp=Z,0.1nm,0.3s,baz=297,slow=1.3,SNR=5.7								
KURBB	**Kurchatov Arra**	**109.67**	**319**	PP		**PP**	**12 08 36.1**	**+0.6**	
	comp=Z,1.2nm,1.2s,baz=85,slow=7.0,SNR=4.1								
BVAR	**Borovoye Array**	**114.56**	**322**	PKP		PKPdf	12 08 05.2	-1.0	
	comp=Z,0.9nm,0.6s,baz=64,slow=3.4,SNR=3.6								
BVAR				PP		**PP**	**12 09 05.2**	**-4.7**	
	comp=Z,0.2nm,0.5s,baz=46,slow=4.2,SNR=3.6								
FINES	**FINESS Array B**	**130.47**	**345**	SKPbc		**SKPbc**	**12 11 22.1**	**-0.7**	
	comp=Z,5.2nm,0.9s,baz=41,slow=5.7,SNR=4.9								
NOA	**NORSAR Array B**	**133.61**	**353**	SKPbc		**SKPbc**	**12 11 34.1**	**+0.3**	
	comp=Z,3.1nm,1.0s,baz=1.4,slow=2.2,SNR=3.3								
AKASG	**Malin Array Be**	**138.00**	**334**	SKPbc		**SKPbc**	**12 11 47.5**	**+0.1**	
	comp=Z,0.3nm,0.3s,baz=43,slow=2.9,SNR=6.5								
BR131	**Keskin Array S**	**142.65**	**317**			**PKPdf**	**12 08 57.3**	**-2.4**	
BRTR	**Keskin Array B**	**142.65**	**317**	PKP		**PKPdf**	**12 08 57.1**	**-2.6**	
	comp=Z,4.5nm,0.9s,baz=179,slow=1.4,SNR=20								
BRTR				SKPbc		**SKPbc**	**12 12 00.1**	**-0.1**	
	comp=Z,0.6nm,0.7s,baz=72,slow=2.3,SNR=3.7								
CLL	**Collm**	**142.72**	**348**	*e*PKPdf		**PKPdf**	**12 08 57.0**	**-2.3**	
STEB	**Steborice**	**142.81**	**342**	*e*PKP		**PKPdf**	**12 08 57.0**	**-2.5**	
DPC	**Dobruska-Polom**	**142.84**	**344**	*e*PKP		**PKPdf**	**12 08 57.9**	**-1.7**	
MORC	**Moravsky Berou**	**143.02**	**343**	*e*PKP		PKPab	12 08 56.7	0.0	
KECS	**Kecovo**	**143.21**	**339**	*e*PKP		PKPbc	12 08 59.0	+1.1	
VRAC	**Vranov**	**143.71**	**343**	*e*PKP		PKPbc	12 08 59.7	+0.2	
MDUB	**Mudurnu**	**143.79**	**320**			**PKPdf**	**12 09 01.0**	**-0.7**	
JAVC	**Velka Javorina**	**143.80**	**342**	*e*PKP		**PKPdf**	**12 09 01.1**	**-0.2**	
KRUC	**Moravsky**	**143.99**	**343**	*e*PKP		PKPbc	12 09 00.6	+0.2	
ZVC	**Zvikov**	**144.22**	**346**	*e*PKP		**PKPdf**	**12 09 01.7**	**-0.3**	
MODS	**Modra-Piesok**	**144.35**	**342**	*e*PKP		**PKPdf**	**12 09 02.3**	**0.0**	
MMAI	**Mount Meron Ar**	**144.40**	**306**	PKP		**PKPdf**	**12 09 03.0**	**+0.1**	
	comp=Z,10nm,0.6s,baz=41,slow=11,SNR=10								
MEM	**Membach**	**144.42**	**355**	*d*PKP		PKPbc	12 09 01.7	0.0	
BTNL	**Ternell**	**144.43**	**355**	*d*PKP		**PKPdf**	**12 09 02.2**	**-0.1**	
BSTI	**Sart Tilman**	**144.48**	**355**	*d*PKP		PKPbc	12 09 01.9	0.0	
SRO	**Srobarova**	**144.52**	**340**	*e*PKP		PKPbc	12 09 01.4	-0.7	
LODK	**Lodwar**	**144.55**	**254**			**PKPdf**	**12 09 03.7**	**0.0**	
KHC	**Kasperske Hory**	**144.65**	**346**	*e*PKP		PKPbc	12 09 02.5	-0.1	
BCLA	**Clavier**	**144.66**	**356**	*d*PKP		PKPbc	12 09 02.5	0.0	
BHOU	**Houvegnez**	**144.67**	**355**	*d*PKP		**PKPab**	**12 09 03.1**	**+0.3**	
BGES	**Gesves**	**144.71**	**356**	*d*PKP		PKPbc	12 09 02.2	-0.5	
CKRC	**Cesky Krumlov**	**144.76**	**345**	*e*PKP		**PKPab**	**12 09 03.3**	**+0.1**	
BMRD	**Maredsous**	**144.82**	**356**	*d*PKP		**PKPdf**	**12 09 02.9**	**0.0**	
GERES	**GERESS Array B**	**144.89**	**346**	PKP		**PKPdf**	**12 09 03.2**	**-0.1**	
	comp=Z,5.1nm,0.7s,baz=31,slow=3.4,SNR=16								
RCHB	**Rochefort**	**144.93**	**356**	*d*PKP		**PKPdf**	**12 09 01.5**	**-1.6**	
DOU	**Dourbes**	**145.03**	**356**	*d*PKP		**PKPbc**	**12 09 03.6**	**0.0**	
CONA	**Conrad Observa**	**145.17**	**343**	*i* PKP		**PKPab**	**12 09 04.9**	**0.0**	
	comp=Z,10nm,0.7s								
WLF	**Walferdange**	**145.34**	**355**	*d*PKP		**PKPab**	**12 09 05.3**	**0.0**	
MOA	**Molln**	**145.67**	**345**	*i* PKP		**PKPbc**	**12 09 05.9**	**+0.2**	
	comp=Z,9.3nm,0.9s								
ARSA	**Arzberg**	**145.88**	**343**	*i* PKP		**PKPbc**	**12 09 06.1**	**-0.2**	
	comp=Z,4.5nm,0.8s								
BIOA	**Bad Ischl, Aus**	**145.98**	**345**	*e*PKP		**PKPbc**	**12 09 06.8**	**+0.2**	
	comp=Z,9.6nm,0.8s								
BFO	**Black Forest**	**146.40**	**352**			**PKPbc**	**12 09 07.7**	**-0.1**	
LESA	**Schwarzleotal**	**146.46**	**346**	*e*PKP		**PKPbc**	**12 09 07.9**	**-0.1**	
	comp=Z,6.9nm,1.1s								
SOKA	**Soboth**	**146.54**	**343**	*e*PKP		**PKPbc**	**12 09 08.0**	**-0.3**	
	comp=Z,9.4nm,1.1s								
WATA	**Walderalm**	**146.79**	**347**	*e*PKP		**PKPbc**	**12 09 08.8**	**-0.2**	
	comp=Z,11nm,1.0s								
RETA	**Reutte**	**146.81**	**348**	*e*PKP		**PKPbc**	**12 09 09.1**	**+0.1**	
	comp=Z,8.5nm,0.9s								
OBKA	**Obir**	**146.83**	**343**	*e*PKP		**PKPbc**	**12 09 08.4**	**-0.7**	
	comp=Z,9.2nm,1.3s								
WTTA	**Wattenberg**	**146.84**	**347**	*e*PKP		**PKPbc**	**12 09 08.8**	**-0.4**	
	comp=Z,11nm,1.0s								
MOTA	**Moosalm**	**146.88**	**348**	*e*PKP		**PKPbc**	**12 09 09.1**	**-0.2**	
	comp=Z,14nm,0.9s								
MYKA	**Terra Mystica**	**146.96**	**344**	*e*PKP		**PKPbc**	**12 09 08.7**	**-0.7**	
	comp=Z,3.3nm,0.5s								
SQTA	**Sankt Quirin**	**146.98**	**348**	*e*PKP		**PKPbc**	**12 09 08.9**	**-0.6**	
	comp=Z,3.7nm,0.7s								
ABTA	**Abfaltersbach**	**147.13**	**346**	*e*PKP		**PKPbc**	**12 09 09.4**	**-0.5**	
	comp=Z,9.9nm,0.8s								
DAVA	**Damuels**	**147.17**	**349**	*e*PKiKP		**PKPbc**	**12 09 10.2**	**+0.1**	
	comp=Z,13nm,0.9s								
FETA	**Feichten**	**147.26**	**348**	*e*PKiKP		**PKPbc**	**12 09 10.5**	**+0.2**	
	comp=Z,6.8nm,0.9s								
FUORN	**Ofenpass-Fuorn**	**147.74**	**348**			**PKiKP**	**12 09 12.7**	**-0.7**	
SENIN	**Lac Senin/Sane**	**148.47**	**352**			**PKPbc**	**12 09 14.2**	**+0.6**	
ESDC	**Sonseca Array**	**155.11**	**10**	PKPab		**PKPab**	**12 09 46.3**	**+0.3**	
	comp=Z,1.5nm,1.0s,baz=335,slow=2.1,SNR=4.9								
TORD	**Torodi Ar. Bea**	**178.00**	**189**	PKP		**PKPdf**	**12 09 36.1**	**-1.0**	
	comp=Z,0.7nm,1.1s,baz=229,slow=4.5,SNR=4.3								
TORD				PP		**PP**	**12 15 19.9**	**+0.6**	
	comp=Z,1.9nm,1.1s,baz=195,slow=4.7,SNR=6.5								

*SJA **18** 11:52:53.2±0.9, 35°.52S×73°.42W, h15km, ML4.0, MW4.3*
*IDC **18** 11:52:55.1±1.3, 35°.64S×73°.10W, h0km, mb3.9/3, mbtmp3.8/6, ML3.8/3, Error ellipse: s-maj=37.4km s-min=25.1km az=82.0*
*NEIC **18** 11:52:55.6±1.4, 35°.59S±0°.04×73°.35W±0°.05, h10km±1km, mb4.2/6, ML4.1(GUC), Error ellipse: s-maj=8.7km s-min=5.0km az=314.0*
*GUC **18** 11:52:57.2±0.9, 35°.67S×73°.22W, h14km±6km, ML4.1*
ISC 18 11:52:56.7±1.6, 35°.59S±0°.03×73°.37W±0°.05, h19km±6km, n93, σ1.9s17/109, mb4.2/5, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**1.17**	**173**		**Pn**	**11 53 17.2**	**-0.8**
BI05				Sg	**Sb**	**11 53 33.1**	**+0.1**
BI05	**Punta Hualpn**	**1.17**	**173**	*e*P	**Pn**	**11 53 17.0**	**-1.0**
BI05				*i* S	**Sb**	**11 53 31.4**	**-1.6**
BI05				IAML		11 53 36.9	
	comp=N,5μm,0.2s						
BI05	**Punta Hualpn**	**1.17**	**173**	*e*P	**Pn**	**11 53 17.0**	**-1.0**
BI05				IAML		11 53 38.8	
	comp=Z,2μm,0.4s						
GO05	**Hualane**	**1.31**	**64**		**Pn**	**11 53 18.8**	**-1.1**
GO05					**Sn**	**11 53 37.1**	**+0.2**
GO05	**Hualane**	**1.31**	**64**	*e*P	**Pn**	**11 53 18.2**	**-1.7**
GO05				*i* S	**Sn**	**11 53 36.1**	**-0.7**
GO05				IAML		11 53 41.5	
	comp=N,4μm,0.4s						
ML02	**Panimavida**	**1.59**	**97**		**Pn**	**11 53 23.1**	**-0.7**
ML02					**Sn**	**11 53 43.2**	**-0.7**
ML02	**Panimavida**	**1.59**	**97**	*e*P	**Pn**	**11 53 22.6**	**-1.2**
ML02				*i* S	**Sn**	**11 53 42.9**	**-1.0**
ML02				IAML		11 53 50.3	
	comp=E,7μm,0.4s						
ML02	**Panimavida**	**1.59**	**97**	*e*P	**Pn**	**11 53 23.4**	**-0.5**
ML02				IAML		11 53 48.3	
	comp=Z,2μm,0.3s						
BI02	**San Fabin de**	**2.01**	**123**		**Pn**	**11 53 28.9**	**-0.7**
BI02	**San Fabin de**	**2.01**	**123**	*e*P	**Pn**	**11 53 28.8**	**-0.7**
BI02				*e*S	**Sn**	**11 53 53.5**	**-0.7**
BI02				IAML		11 53 57.2	
	comp=E,2μm,0.5s						
BI02	**San Fabin de**	**2.01**	**123**	*e*P	**Pn**	**11 53 28.3**	**-1.3**
BI02				IAML		11 54 03.8	
	comp=Z,1μm,0.4s						
BO01	**Tunca**	**2.22**	**58**		**Pn**	**11 53 32.4**	**0.0**
BO01	**Tunca**	**2.22**	**58**	*e*P	**Pn**	**11 53 32.3**	**-0.1**
BO01				*i* S	**Sb**	**11 54 02.3**	**-0.9**
BO01				IAML		11 54 10.7	
	comp=N,902nm,0.6s						
BO01	**Tunca**	**2.22**	**58**	*e*P	**Pn**	**11 53 31.8**	**-0.6**
BO01				*e*S	**Sn**	**11 54 01.4**	**+2.1**
BO01				IAML		11 54 16.6	
	comp=Z,703nm,0.6s						
BO02	**Sierra Bellavi**	**2.26**	**70**		**Pn**	**11 53 33.0**	**0.0**
BO02	**Sierra Bellavi**	**2.26**	**70**	*e*P	**Pn**	**11 53 32.1**	**-0.9**
BO02				*i* S	**Sb**	**11 54 02.8**	**-1.7**
BO02	**Sierra Bellavi**	**2.26**	**70**	*e*P	**Pn**	**11 53 32.7**	**-0.3**
BO02				*e*S	**Sn**	**11 53 59.9**	**-0.5**
BO02				IAML		11 54 13.4	
	comp=Z,2μm,0.6s						
VA05	**Santo Domingo**	**2.41**	**37**		**Pn**	**11 53 35.1**	**+0.2**
VA05	**Santo Domingo**	**2.41**	**37**	*e*P	**Pn**	**11 53 34.7**	**-0.3**
VA05				IAML		11 54 20.1	
	comp=E,1μm,0.4s						
MT01	**Popeta**	**2.44**	**46**		**Pn**	**11 53 34.7**	**-0.8**
MT01	**Popeta**	**2.44**	**46**	*e*P	**Pn**	**11 53 35.8**	**+0.2**
MT01				*i* S	**Sb**	**11 54 09.1**	**-0.7**
MT01				IAML		11 54 16.0	
	comp=N,593nm,0.4s						
MT09	**Talagante**	**2.66**	**48**		**Pn**	**11 53 38.5**	**-0.2**
MT09	**Talagante**	**2.66**	**48**	*e*P	**Pn**	**11 53 38.4**	**-0.2**
MT09				IAML		11 54 25.8	
	comp=N,1μm,0.7s						
BO04	**La Punta**	**2.77**	**56**		**Pn**	**11 53 39.8**	**-0.2**
BO04	**La Punta**	**2.77**	**56**	*e*P	**Pn**	**11 53 40.5**	**+0.4**
BO04				*i* S	**Sb**	**11 54 20.2**	**+1.1**
BO04				IAML		11 54 27.6	
	comp=N,987nm,0.5s						
VA01	**Torpederas**	**2.92**	**30**		**Pn**	**11 53 41.9**	**-0.2**
MT02	**Curacav**	**2.96**	**39**		**Pn**	**11 53 42.0**	**-0.7**
MT02	**Curacav**	**2.96**	**39**	*e*P	**Pn**	**11 53 41.8**	**-0.8**
MT02				*i* S	**Sb**	**11 54 22.3**	**-2.4**
MT02				IAML		11 54 38.7	
	comp=E,332nm,0.6s						
MT02	**Curacav**	**2.96**	**39**	*e*P	**Pn**	**11 53 41.9**	**-0.7**
MT02				*e*S	**Sb**	**11 54 23.9**	**-0.7**
MT02				IAML		11 54 39.5	
	comp=Z,314nm,0.6s						
MT12	**Pirque**	**2.97**	**52**	*e*P	**Pn**	**11 53 43.4**	**+0.6**
MT15	**Las Vizcachas**	**3.08**	**51**	*e*P	**Pn**	**11 53 45.1**	**+0.8**
MT05	**Renca**	**3.08**	**46**		**Pn**	**11 53 44.8**	**+0.5**
MT05	**Renca**	**3.08**	**46**	*e*P	**Pn**	**11 53 43.5**	**-0.9**
MT05				IAML		11 54 37.3	
	comp=E,1μm,0.3s						
MT05	**Renca**	**3.08**	**46**	*e*P	**Pn**	**11 53 44.6**	**+0.2**
MT05				IAML		11 54 38.6	
	comp=Z,504nm,1.1s						
LMEL	**Las Melosas**	**3.13**	**57**	*e*P	**Pn**	**11 53 46.7**	**+1.6**
LMEL				IAML		11 54 39.8	
	comp=N,660nm,0.3s						
MT13	**San Alfonso**	**3.13**	**55**		**Pn**	**11 53 45.6**	**+0.4**
MT13	**San Alfonso**	**3.13**	**55**	*e*P	**Pn**	**11 53 46.0**	**+0.9**
MT13				IAML		11 54 37.6	
	comp=E,807nm,0.3s						
MT13	**San Alfonso**	**3.13**	**55**	*e*P	**Pn**	**11 53 45.5**	**+0.4**
MT13				*e*S	**Sb**	**11 54 29.9**	**+0.3**
MT13				IAML		11 54 41.1	
	comp=Z,497nm,1.6s						
MT03	**Universidad Ad**	**3.15**	**49**		**Pn**	**11 53 44.8**	**-0.5**
MT03	**Universidad Ad**	**3.15**	**49**	*e*P	**Pn**	**11 53 46.1**	**+0.8**
MT03				IAML		11 54 42.2	
	comp=E,946nm,0.6s						
MT03	**Universidad Ad**	**3.15**	**49**	*e*P	**Pn**	**11 53 45.4**	**+0.1**
MT03				*e*S	**Sb**	**11 54 28.9**	**-1.1**
MT03				IAML		11 54 38.5	
	comp=Z,766nm,0.7s						
MT16	**CCHEN**	**3.18**	**48**		**Pn**	**11 53 46.0**	**+0.3**
MT16	**CCHEN**	**3.18**	**48**	*e*P	**Pn**	**11 53 46.1**	**+0.3**
MT16				IAML		11 54 41.5	
	comp=N,911nm,0.8s						
MT14	**Cerro Cal¡n**	**3.20**	**48**	*e*P	**Pn**	**11 53 45.7**	**-0.3**
LC02	**Puerto Saavedr**	**3.20**	**180**	*e*P	**Pn**	**11 53 48.7**	**+2.8**
ROCH	**El Roble**	**3.25**	**37**	*e*P	**Pn**	**11 53 46.8**	**-0.1**
ROCH				*e*P	**Pb**	**11 53 47.2**	**-6.7**
MT10	**Hacienda Santa**	**3.28**	**46**	*e*P	**Pn**	**11 53 47.3**	**0.0**
PEL	**Peldehue**	**3.29**	**43**		**Pn**	**11 53 47.9**	**+0.5**
PEL	**Peldehue**	**3.29**	**43**	*e*P	**Pn**	**11 53 47.8**	**+0.5**
PEL				IAML		11 54 42.6	
	comp=N,525nm,0.6s						
MT04	**Ro Olivares**	**3.44**	**52**	*e*P	**Pn**	**11 53 49.7**	**+0.3**
MT04				IAML		11 54 48.3	
	comp=E,348nm,0.4s						
MT04	**Ro Olivares**	**3.44**	**52**	*e*P	**Pn**	**11 53 49.5**	**+0.1**
MT04				IAML		11 54 48.5	
	comp=Z,181nm,0.7s						
VA06	**Catapilco**	**3.47**	**30**		**Pn**	**11 53 50.0**	**+0.4**
VA06	**Catapilco**	**3.47**	**30**	*e*P	**Pn**	**11 53 49.4**	**-0.3**
MT08	**Bocatoma Ro**	**3.49**	**53**	⇓*e*P	**Pn**	**11 53 51.6**	**+1.4**
MT08				IAML		11 54 49.9	
	comp=N,368nm,0.6s						
MT08	**Bocatoma Ro**	**3.49**	**53**	*e*P	**Pn**	**11 53 51.1**	**+0.9**
MT08				*e*S	**Sg**	**11 54 47.0**	**-2.0**
MT08				IAML		11 54 55.1	
	comp=Z,204nm,0.9s						
VA03	**San Esteban**	**3.66**	**40**		**Pn**	**11 53 52.6**	**+0.3**
VA03	**San Esteban**	**3.66**	**40**	*e*P	**Pn**	**11 53 52.5**	**+0.2**
VA03	**San Esteban**	**3.66**	**40**	*e*P	**Pn**	**11 53 52.1**	**-0.2**
VA03				IAML		11 55 06.7	
	comp=Z,370nm,0.7s						
CO04	**Los Peladeros**	**4.05**	**30**	*e*P	**Pn**	**11 53 57.1**	**-0.8**
RFA	**San Rafael**	**4.09**	**80**	*e*P	**Pn**	**11 53 59.2**	**+0.9**
RFA				*e*S	**Sb**	**11 55 03.0**	**+5.7**
RFA				IAML		11 55 05.3	
	comp=Z,127nm,1.0s						
GO06	**Curarrehue**	**4.27**	**160**		**Pn**	**11 54 01.7**	**+1.0**
GO06	**Curarrehue**	**4.27**	**160**	*e*P	**Pn**	**11 54 01.2**	**+0.5**
LR04	**Corral**	**4.29**	**181**		**Pn**	**11 54 00.7**	**-0.2**
LR05	**Currie**	**4.76**	**167**		**Pn**	**11 54 08.2**	**+0.9**
CO02	**Combarbal**	**4.80**	**25**	*e*P	**Pn**	**11 54 08.0**	**0.0**
CO02				*e*S	**Sn**	**11 55 02.8**	**-0.2**
CO02				IAML		11 55 43.4	
	comp=Z,110nm,0.6s						
ASAL	**Salagasta**	**4.80**	**53**	*e*P	**Pn**	**11 54 10.5**	**+2.5**
H03S1	**Juan Fernandez**	**4.88**	**289**	T	T	11 59 23.1	
	baz=110,slow=74,SNR=1236						
H03S3	**Juan Fernandez**	**4.89**	**289**	T	T	11 59 29.6	
	baz=110,slow=74,SNR=1082						
H03S2	**Juan Fernandez**	**4.90**	**289**	T	T	11 59 21.5	
	baz=110,slow=74,SNR=1194						
H03N1	**Juan Fernandez**	**5.05**	**293**	T	T	11 59 38.9	
	baz=111,slow=75,SNR=27						
H03N3	**Juan Fernandez**	**5.06**	**293**	T	T	11 59 37.6	
	baz=111,slow=75,SNR=36						
H03N2	**Juan Fernandez**	**5.07**	**293**	T	T	11 59 39.0	
	baz=111,slow=75,SNR=34						
RTLS	**Leoncito**	**5.08**	**43**	*e*P	**Pn**	**11 54 14.4**	**+2.4**
RTLS				IAML		11 55 45.7	
	comp=Z,260nm,1.0s						
CO06	**Fray Jorge**	**5.11**	**17**	Pn	**Pn**	**11 54 10.9**	**-1.2**
CO03	**El Pedregal**	**5.24**	**26**	*e*P	**Pn**	**11 54 13.6**	**-0.4**
CO03				IAML		11 55 52.7	
	comp=Z,69nm,0.6s						
PLCA	**Paso Flores**	**5.60**	**158**	Pn	**Pn**	**11 54 19.5**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=330,slow=9.8,SNR=28						
PLCA				Sn	**Sn**	**11 55 20.2**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=23,slow=16,SNR=3.1						
	comp=Z,2.0nm,0.5s						
PLCA	**Paso Flores**	**5.60**	**158**		**Pn**	**11 54 20.0**	**+1.1**
CFA	**Coronel Fontan**	**5.84**	**49**	Pn	**Pn**	**11 54 22.6**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=241,slow=13,SNR=18						
CFA				Sn	**Sn**	**11 55 25.6**	**-3.0**
	comp=Z,0.9nm,0.3s,baz=228,slow=15,SNR=1.3						
	comp=Z,4.0nm,0.3s						
LCO	**Las Campanas**	**6.93**	**20**	Pn	**Pn**	**11 54 36.9**	**-0.6**
AC04	**Llanos de Chal**	**7.61**	**15**	Pn	**Pn**	**11 54 44.8**	**-1.8**
GO03	**Copiapo**	**8.40**	**19**	Pn	**Pn**	**11 54 56.8**	**-0.7**
PB16	**IPOC Station P**	**17.52**	**12**		**Pn**	**11 56 60.0**	**-0.5**
LPAZ	**La Paz**	**19.78**	**15**	P	**Pn**	**11 57 28.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=192,slow=8.3,SNR=5.1						
	comp=Z,1.6nm,0.7s						
ITAB	**Concordia**	**19.92**	**71**	P	**P**	**11 57 27.0**	**-0.2**
ITAB				IAmb	IAmb	11 57 40.5	
	comp=Z,16nm,1.1s						
AQDB	**Aquidauana**	**21.62**	**51**	P	**P**	**11 57 45.6**	**0.0**
AQDB				IAmb	IAmb	11 57 46.8	
	comp=Z,7.6nm,0.8s						
PTLB	**Pontes e Lacer**	**23.76**	**36**	P	**P**	**11 58 06.7**	**-1.2**
PTLB				IAmb	IAmb	11 58 10.6	
	comp=Z,9.0nm,1.5s						
OTAV	**Otavalo**	**35.95**	**351**	P	**P**	**11 59 55.8**	**-0.9**
BOAV	**Boa Vista**	**39.65**	**20**	P	**P**	**12 00 27.2**	**-0.1**
BOAV				IAmb	IAmb	12 00 54.1	
	comp=Z,8.1nm,1.5s						
TXAR	**Lajitas Array**	**70.60**	**332**	P	**P**	**12 04 13.2**	**+2.5**
	comp=Z,0.2nm,0.6s,baz=162,slow=9.3,SNR=5.6						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**85.77**	**71**	P	**P**	**12 05 35.6**	**+0.7**
	comp=Z,1.0nm,1.0s,baz=244,slow=6.8,SNR=3.5						
	comp=Z,1.0nm,1.0s						
ULM	**Lac du Bonnet**	**87.75**	**346**	P	**P**	**12 05 45.1**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=200,slow=6.7,SNR=3.2						
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**149.18**	**44**	PKPbc	**PKiKP**	**12 12 45.1**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=291,slow=1.2,SNR=3.6						
MKAR	**Makanchi Array**	**158.62**	**51**	PKPab	**PKPab**	**12 13 26.6**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=302,slow=3.2,SNR=3.3						

*WEL **18** 11:53:08.9±0.2, 40°.56S±1°.17°.5E±1°, h11km±2km, M3.6/64, ML3.6/64, MLv3.6/64, Error ellipse: s-maj=2.8km s-min=1.7km az=89.2*
*NOU **18** 11:53:09.9, 40°.08S×175°.42E, h33km, mB5.2/21, North Island, New Zealand*
ISC 18 11:53:09.6±0.9, 40°.06S±0°.02×175°.38E±0°.02, h28km±7km, n153, σ0.88/170, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHWZ	**Ohakea**	**0.15**	**199**	P	**Pb**	**11 53 14.8**	**-0.4**
OHWZ				S	**Sb**	**11 53 19.1**	**+0.2**
WAZ	**Wanganui**	**0.43**	**315**	P	**Pb**	**11 53 19.0**	**+0.2**
WAZ				S	**Sn**	**11 53 26.3**	**-0.5**
POWZ	**Post Office Ro**	**0.45**	**138**	P	**Pb**	**11 53 19.0**	**-0.1**
POWZ				S	**Sb**	**11 53 26.0**	**+0.5**
TSZ	**Takapari Road**	**0.45**	**90**	P	**Pb**	**11 53 18.8**	**-0.3**
TSZ				S	**Sb**	**11 53 25.6**	**0.0**
MRZ	**Mangatainoka R**	**0.62**	**166**	P	**Pb**	**11 53 21.8**	**-0.1**
MRZ				S	**Sb**	**11 53 30.5**	**+0.1**
PNHZ	**Pukenui**	**0.65**	**77**	P	**Pb**	**11 53 21.9**	**-0.5**
PNHZ				S	**Sb**	**11 53 31.0**	**-0.1**
DVHZ	**Dannevirke**	**0.65**	**112**	P	**Pb**	**11 53 22.5**	**+0.1**
DVHZ				S	**Sn**	**11 53 32.8**	**-0.2**
PRNZ	**Pori Road**	**0.67**	**138**	P	**Pb**	**11 53 23.1**	**-0.1**
MTVZ	**Mangateitei**	**0.68**	**6**	P	**Pb**	**11 53 22.3**	**-0.6**
MTVZ				S	**Sb**	**11 53 32.5**	**+0.5**
MOVZ	**Moawhango**	**0.71**	**24**	P	**Pb**	**11 53 22.3**	**-1.2**
MOVZ				S	**Sb**	**11 53 32.6**	**-0.4**
WNVZ	**Wahianoa**	**0.75**	**13**	P	**Pb**	**11 53 23.2**	**-1.0**
PKVZ	**Pokaka**	**0.77**	**358**	P	**Pb**	**11 53 23.8**	**-0.7**
TRVZ	**Turoa**	**0.77**	**10**	P	**Pb**	**11 53 23.7**	**-0.8**
TRVZ				S	**Sb**	**11 53 34.9**	**+0.1**
OGWZ	**Otaki Gorge**	**0.77**	**192**	P	**Pb**	**11 53 23.7**	**-0.8**
OGWZ				S	**Sb**	**11 53 33.9**	**-0.7**
WHVZ	**Whangaehu Hut**	**0.79**	**12**	P	**Pb**	**11 53 24.0**	**-0.9**
WHVZ				S	**Sn**	**11 53 36.0**	**0.0**
MAVZ	**Matarangi**	**0.80**	**10**	P	**Pb**	**11 53 24.2**	**-0.9**
MAVZ				S	**Sb**	**11 53 35.8

MRNZ	**Matariki Terra**	**2.40**	**235**	P	**Pn**	**11 53 47.9**	**+0.9**
TGRZ	**Tauranga**	**2.43**	**17**	P	**Pb**	**11 53 50.5**	**-2.1**
TKGZ	**Te Karaka**	**2.51**	**51**	P	**Pn**	**11 53 48.5**	**0.0**
THZ	**Tophouse**	**2.53**	**227**	P	**Pn**	**11 53 49.3**	**+0.4**
CNGZ	**Carnagh Statio**	**2.70**	**55**	P	**Pn**	**11 53 51.1**	**+0.1**
KHZ	**Kahutara**	**2.73**	**210**	P	**Pn**	**11 53 51.4**	**-0.1**
KHZ	**Kahutara**	**2.73**	**210**	P	**Pn**	**11 53 50.9**	**-0.6**
RUGZ	**Raukumara Rang**	**2.75**	**41**	P	**Pn**	**11 53 52.1**	**+0.2**
MKAZ	**Moumakai**	**2.96**	**357**	P	**Pn**	**11 53 55.4**	**+0.8**
HAZ	**Te Kaha**	**2.97**	**40**	P	**Pn**	**11 53 54.2**	**-0.5**
PUZ	**Puketiti**	**2.99**	**49**	P	**Pn**	**11 53 54.6**	**-0.5**
AWAZ	**Awhitu Peninsu**	**3.05**	**349**	P	**Pn**	**11 53 57.4**	**+1.5**
ETAZ	**East Tamaki Re**	**3.12**	**353**	P	**Pn**	**11 54 00.0**	**+3.2**
WTAZ	**Waiatarua**	**3.19**	**348**	P	**Pn**	**11 53 59.6**	**+1.8**
DSZ	**Denniston Nort**	**3.19**	**237**	P	**Pn**	**11 53 58.5**	**+0.6**
WMGZ	**Waiomatatini S**	**3.26**	**48**	P	**Pn**	**11 53 58.4**	**-0.4**
MBAZ	**Motutapu North**	**3.31**	**353**	P	**Pn**	**11 54 03.3**	**+3.9**
KUZ	**Kuaotunu**	**3.32**	**5**	P	**Pn**	**11 54 00.1**	**+0.5**
KUZ	**Kuaotunu**	**3.32**	**5**	S	**Sn**	**11 54 38.0**	**-0.1**
KUZ	**Kuaotunu**	**3.32**	**5**	P	**Pn**	**11 54 02.7**	**+3.2**
RVAZ	**Riverhead Bore**	**3.34**	**349**	P	**Pn**	**11 54 01.2**	**+1.3**
MXZ	**Matakaoa Point**	**3.38**	**43**	P	**Pn**	**11 53 59.9**	**-0.6**
MXZ	**Matakaoa Point**	**3.38**	**43**	P	**Pn**	**11 54 01.1**	**+0.6**
GVZ	**Greta Valley S**	**3.40**	**210**	P	**Pn**	**11 53 59.6**	**-1.1**
LTZ	**Lake Taylor**	**3.59**	**220**	P	**Pn**	**11 54 02.5**	**-0.8**
INZ	**Inchbonnie**	**3.98**	**227**	P	**Pn**	**11 54 08.8**	**+0.2**
OXZ	**Oxford**	**4.11**	**216**	P	**Pn**	**11 54 10.2**	**-0.3**
WCZ	**Waipu Caves**	**4.19**	**348**	P	**Pn**	**11 54 14.0**	**+2.4**
MHCZ	**Mount Hutt**	**4.49**	**218**	P	**Pn**	**11 54 14.3**	**-1.5**
OUZ	**Omahuta**	**5.03**	**343**	P	**Pn**	**11 54 23.2**	**0.0**
ODZ	**Otahua Downs**	**6.08**	**214**	P	**Pn**	**11 54 36.6**	**-1.0**
JCZ	**Jackson Bay**	**6.34**	**229**	P	**Pn**	**11 54 40.4**	**-0.7**
CTZ	**Chatham Island**	**7.01**	**124**	P	**Pn**	**11 54 49.0**	**-1.2**

HEL 18 11:53:35.5±0.1, 64°.11N × 28°.05E, h0km, ML1.2,
Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.73**	**189**	PG	Pg	11 53 49.4	-0.1
NIF				smax	smax	11 53 58.6	
	comp=Z,1.5nm,0.2s						
NIF				SG	Sg	11 53 58.7	-0.3
RMF	**Romuvaara**	**0.83**	**82**	PB	Pg	11 53 51.4	0.0
RMF				smax	smax	11 54 01.2	
	comp=Z,1.9nm,0.2s						
RMF				SB	Sg	11 54 01.7	-0.5
OUL	**Oulu**	**1.35**	**317**	PN	Pg	11 54 01.2	-0.1
OUF	**Merijarvi**	**1.47**	**281**	PN	Pn	11 54 02.9	-0.3
OUF				smax	smax	11 54 19.8	
	comp=Z,2.1nm,0.2s						
OUF				SN	Sg	11 54 22.4	-0.3
KU1	**Kurvinen**	**1.59**	**23**	PG	Pn	11 54 04.8	-0.1
KU1				SN	Sn	11 54 25.4	-0.8
KU2	**Taivalkoski**	**1.60**	**3**	SN	Sn	11 54 26.5	0.0
MSF	**Maaselka**	**1.85**	**13**	PB	Pn	11 54 05.9	-2.6
MSF				SG	Sn	11 54 32.6	0.0
JOF	**Joensuu**	**1.89**	**128**	*e*P	Pb	11 54 10.1	-0.7
JOF	**Joensuu**	**1.89**	**128**	PG	Pn	11 54 09.6	+0.7
JOF				SG	Sn	11 54 34.0	+0.5
RANF	**Ranua**	**1.98**	**345**	PG	Pb	11 54 11.8	-0.6
RANF				SG	Sb	11 54 37.2	-0.4
KU6	**Riekki**	**2.07**	**21**	smax	smax	11 54 36.9	
	comp=Z,1.2nm,0.2s						
KU6				SG	Sn	11 54 38.8	+0.8
OLKF	**Oulanka, Finla**	**2.29**	**14**	smax	smax	11 54 43.1	
	comp=Z,0.8nm,0.2s						
OLKF				SG	Sb	11 54 45.7	-0.7
KEF	**Keuruu**	**2.43**	**218**	*e*P	Pb	11 54 19.4	-0.6
KEF	**Keuruu**	**2.43**	**218**	PG	Pb	11 54 18.9	-1.1
KEF				smax	smax	11 54 47.3	
	comp=Z,1.5nm,0.2s						
KEF				SG	Sb	11 54 50.3	-0.2
TOF	**Tornio**	**2.53**	**323**	smax	smax	11 54 49.9	
	comp=Z,0.3nm,0.2s						
TOF				SG	Sb	11 54 54.0	+0.7
VAF	**Ylistaro**	**2.63**	**248**	*e*P	Pb	11 54 24.0	+0.5
VAF	**Ylistaro**	**2.63**	**248**	smax	smax	11 54 53.2	
	comp=Z,0.8nm,0.2s						
VAF				SG	Sb	11 54 56.6	+0.3
RNF	**Rovaniemi**	**2.65**	**342**	PG	Pb	11 54 22.8	-1.0
FIA0	**FINESS Array S**	**2.83**	**200**	smax	smax	11 54 58.7	
	comp=Z,0.6nm,0.2s						
FIA0				SG	Sb	11 55 01.7	-0.2
RAF	**Rauma**	**4.25**	**226**	*e*P	Pn	11 54 43.5	+2.1
RAF	**Rauma**	**4.25**	**226**	PB	Pb	11 54 47.0	-4.0
HEL5	**Espoo, Suvisaa**	**4.30**	**203**	SN	Sn	11 55 32.9	0.0
RAJF	**Raja-Jooseppi**	**4.38**	**1**	SB	Sb	11 55 42.1	-4.5

*IDC **18** 11:55:30.5±2.2, 6°.44N × 126°.20E, h0km, mb3.9/6, mbtmp3.9/6, MS3.2/1, Error ellipse: s-maj=227.7km s-min=21.4km az=67.0*
*DJA **18** 11:55:40.0±0.5, 7°.1N ± 4°.4 × 12°.7E ± °, h129km ± 6km, M4.5/13, mb4.4/13, mB5.2/4, MLv4.5/13, Mw(mB)4.6/4*
*NEIC **18** 11:55:41.0±1.1, 6°.47N ± 0°.10 × 126°.8E ± 0°.1, h93km ± 9km, mb4.3/13, Error ellipse: s-maj=18.0km s-min=10.2km az=49.0*

ISC 18 11:55:41.0±0.7, 6°.50N ± 0°.06 × 126°.79E ± 0°.09, h100km, n42, σ0s96/43, mb4.2/13, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.33**	**295**	Pn	**Pn**	**11 56 04.7**	**-0.5**
DAV				Sn	**Sn**	**11 56 23.0**	**-0.6**
DAV	**Davao City (W)**	**1.33**	**295**	P	**Pn**	**11 56 04.9**	**-0.4**
DAV				S	**Sn**	**11 56 25.4**	**+1.8**
SGSI	**Sangihe**	**3.06**	**204**	P	**Pn**	**11 56 28.3**	**+0.6**
SGSI				S	**Sn**	**11 57 05.7**	**+2.1**
MNI	**Manado**	**5.38**	**201**	P	**Pn**	**11 56 58.8**	**-0.2**
	0.6nm6µm62nm,0.5s						
GTOI	**Gorontalo**	**6.94**	**213**	P	**Pn**	**11 57 18.9**	**-1.2**
	0.1nm651nm42nm,0.7s						
MRSI	**Marisa**	**7.69**	**219**	P	**Pn**	**11 57 29.6**	**-0.8**
	0.1nm25nm,0.6s						
MRSI				S	**Sn**	**11 58 56.0**	**0.0**
	0.1nm25nm,0.6s						
TOLI2	**Tolitoli**	**8.03**	**228**	Pn	**Pn**	**11 57 32.9**	**-2.2**
MYLDM	**Lahad Datu**	**8.35**	**261**	Pn	**Pn**	**11 57 39.5**	**+0.1**
MYLDM	**Lahad Datu**	**8.35**	**261**	P	**Pn**	**11 57 39.1**	**-0.3**
	22nm,1.3s						
LUWI	**Luwuk**	**8.49**	**208**	Pn	**Pn**	**11 57 41.1**	**-0.2**
LUWI	**Luwuk**	**8.49**	**208**	P	**Pn**	**11 57 40.3**	**-1.0**
SANI	**Sanana**	**8.53**	**185**	P	**Pn**	**11 57 41.2**	**-0.6**
SUI	**Sorong**	**8.57**	**148**	P	**Pn**	**11 57 42.2**	**-0.2**
FAKI	**Fak Fak**	**10.82**	**150**	Pn	**Pn**	**11 58 12.6**	**-0.4**
SBUM	**Sibu**	**15.07**	**255**	P	**P**	**11 59 12.2**	**+0.5**
SBUM				IAmb	IAmb	11 59 15.3	
	comp=Z,8.4nm,0.8s						
KNRA	**Kununurra**	**22.12**	**175**	P	**P**	**12 00 27.1**	**-1.3**
KNRA				IAmb	IAmb	12 01 01.5	
	comp=Z,62nm,1.4s						
WB0	**Warramunga Arr**	**27.15**	**164**	P	**P**	**12 01 14.1**	**-1.0**
WB0				IAmb	IAmb	12 01 35.2	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**27.30**	**164**	P	**P**	**12 01 19.4**	**+2.9**
	comp=Z,0.3nm,0.6s,baz=342,slow=9.6,SNR=1.6						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**27.30**	**164**	P	**P**	**12 01 14.4**	**-2.1**
AS31	**Alice Springs**	**30.77**	**167**	P	**P**	**12 01 46.9**	**-0.4**
ASAR	**Alice Springs**	**30.77**	**167**	P	**P**	**12 01 47.2**	**0.0**
	comp=Z,0.2nm,0.4s,baz=342,slow=8.5,SNR=1.6						
	comp=Z,0.2nm,0.4s						
XAN	**Xi'an**	**32.01**	**331**	P	**P**	**12 01 57.6**	**-0.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
JKA	**Kamikawa-asahi**	**39.95**	**18**	P	**P**	**12 03 06.2**	**+0.6**
BBOO	**Buckleboo**	**40.07**	**168**	P	**P**	**12 03 06.7**	**0.0**
NWAO	**Narrogin (SRO)**	**40.24**	**192**	P	**P**	**12 03 08.3**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**40.63**	**69**	T	T	12 47 27.8	
	baz=258						
H11S1	**WAKE ISLAND Hy**	**40.65**	**69**	T	T	12 47 26.0	
	baz=258						
H11S2	**WAKE ISLAND Hy**	**40.65**	**69**	T	T	12 47 23.9	
	baz=258						
EVN	**Everest**	**43.45**	**304**	P	**P**	**12 03 35.2**	**+0.1**
EVN				IAmb	IAmb	12 03 36.2	
	comp=Z,2.8nm,0.6s						
MKAR	**Makanchi Array**	**55.35**	**324**	P	**P**	**12 05 04.9**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=117,slow=7.7,SNR=39						
	comp=Z,1.2nm,0.5s						
MKAR				PcP	**PcP**	**12 06 03.8**	**-0.2**
MAKZ	**Makanchi**	**55.54**	**324**	P	**P**	**12 05 06.5**	**+0.5**
MAKZ				IAmb	IAmb	12 05 36.9	
	comp=Z,3.2nm,1.4s						
MA2	**Magadan**	**56.03**	**14**	LR	LR	12 31 23.1	
	comp=Z,18nm,18.0s,baz=52,slow=38						
ZALV	**Zalesovo Beam**	**58.17**	**332**	P	**P**	**12 05 23.3**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=119,slow=5.1,SNR=3.3						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**58.17**	**332**	P	**P**	**12 05 24.0**	**-0.5**
KURK	**Kurchatov**	**59.47**	**327**	P	**P**	**12 05 33.6**	**+0.2**
KURK				IAmb	IAmb	12 05 34.6	
	comp=Z,2.2nm,0.7s						
KURBB	**Kurchatov Arra**	**59.47**	**327**	P	**P**	**12 05 33.4**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=126,slow=6.1,SNR=26						
	comp=Z,1.8nm,0.6s						
KKAR	**Karatay Array**	**61.28**	**316**	P	**P**	**12 05 46.6**	**+0.6**
BVAR	**Borovoye Array**	**65.06**	**326**	P	**P**	**12 06 10.7**	**0.0**
	comp=Z,1.2nm,0.5s,baz=134,slow=8.2,SNR=6.1						
	comp=Z,1.2nm,0.5s						
BORK	**Borovoye**	**65.11**	**326**	P	**P**	**12 06 11.3**	**+0.3**
BORK				IAmb	IAmb	12 06 12.1	
	comp=Z,2.1nm,0.6s						
AB31	**Akbulak array**	**70.07**	**320**	P	**P**	**12 06 42.5**	**+0.2**
ABKAR	**Akbulak array**	**70.07**	**320**	P	**P**	**12 06 42.2**	**-0.1**

*IDC **18** 12:32:38.7±0.9, 12°.24N × 143°.75E, h0km, mb3.6/7, mbtmp3.6/7, MS3.3/2, Error ellipse: s-maj=38.7km s-min=18.7km az=110.0*

ISC 18 12:32:42.7±0.9, 12°.3N ± 0°.2 × 143°.8E ± 0°.2, h26km, n16, σ0s98/9, mb3.5/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.69**	**38**	Pn	**Pn**	**12 33 09.8**	**-0.6**
	43nm,0.3s,baz=345,slow=22,SNR=29						
GUMO				Sn	**Sn**	**12 33 30.9**	**-0.3**
	59nm,0.3s,baz=19,slow=24,SNR=20						
H11S3	**WAKE ISLAND Hy**	**22.90**	**71**	T	T	13 01 40.9	
	baz=258,slow=75,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**22.92**	**71**	T	T	13 01 38.3	
	baz=258,slow=75,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**22.92**	**71**	T	T	13 01 36.2	
	baz=258,slow=75,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**23.38**	**69**	T	T	13 02 13.6	
	baz=255,slow=75,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**23.39**	**69**	T	T	13 02 08.7	
	baz=255,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**23.40**	**69**	T	T	13 02 12.9	
	baz=255,slow=75,SNR=5.4						
JNU	**Nakatsue**	**23.91**	**332**	LR	LR	12 46 01.1	
	comp=Z,27nm,18.3s,baz=28,slow=34						
WRA	**Warramunga Arr**	**33.32**	**196**	P	**P**	**12 39 17.8**	**-0.8**
	1.1nm,0.7s,baz=20,slow=9.6,SNR=18						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**36.99**	**195**	P	**P**	**12 39 50.0**	**-0.2**
	0.6nm,0.9s,baz=16,slow=8.1,SNR=8.3						
	0.6nm,0.9s						
SONM	**Songino Array**	**47.24**	**326**	P	**P**	**12 41 13.6**	**-0.2**
	0.3nm,0.7s,baz=110,slow=6.3,SNR=4.4						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**64.98**	**320**	P	**P**	**12 43 20.4**	**+0.1**
	0.4nm,0.7s,baz=104,slow=6.4,SNR=2.9						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**70.21**	**25**	P	**P**	**12 43 53.8**	**+0.7**
	0.4nm,0.9s,baz=258,slow=5.5,SNR=4.2						
	0.4nm,0.9s						
BVAR	**Borovoye Array**	**70.34**	**322**	LR	LR	13 15 45.9	
	comp=Z,53nm,18.7s,baz=302,slow=37						
YKA	**Yellowknife Ar**	**84.52**	**27**	P	**P**	**12 45 12.2**	**-1.0**
	0.1nm,0.4s,baz=292,slow=5.7,SNR=4.7						
	0.1nm,0.4s						
NVAR	**Mina Array Bea**	**88.56**	**51**	P	**P**	**12 45 35.5**	**+1.7**
	0.7nm,0.8s,baz=290,slow=5.3,SNR=6.4						
	0.7nm,0.8s						

IDC 18 12:33:35.9±21.0, 48°.83N × 35°.18E, h0km, mb3.6/3, mbtmp3.8/4, ML2.5/1, Error ellipse: s-maj=402.7km s-min=29.7km az=38.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**13.65**	**341**	Pn	Pn	12 36 43.8	-6.7
	0.1nm,0.3s,baz=153,slow=16,SNR=2.6						
	8.0nm,1.0s						
KURBB	**Kurchatov Arra**	**27.79**	**70**	P	P	12 39 26.2	-0.1
	0.3nm,0.7s,baz=276,slow=8.2,SNR=3.1						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**30.87**	**61**	P	P	12 39 53.5	-0.1
	1.5nm,0.5s,baz=265,slow=9.4,SNR=5.6						
	1.5nm,0.5s						
MKAR	**Makanchi Array**	**31.32**	**76**	P	P	12 39 57.8	+0.2
	0.3nm,0.5s,baz=274,slow=7.1,SNR=4.4						
	0.3nm,0.5s						

*KRSC **18** 12:37:06.5±2.0, 59°.05N × 158°.25E, h4km ± 20km, Ml4.1*
*IDC **18** 12:37:13.2±1.4, 58°.86N × 158°.94E, h0km, mb3.5/3, mbtmp3.4/5, ML4.0/1, Error ellipse: s-maj=27.5km s-min=17.7km az=14.0*
*NERS **18** 12:37:25.5, 59°.02N × 157°.82E, h33km*

ISC 18 12:37:13.7±0.7, 58°.83N ± 0°.03 × 158°.87E ± 0°.03, h10km, n22, σ2s20/39, mb3.6/3, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALN	**Palana**	**0.62**	**65**	*e*P	**Pb**	**12 37 25.5**	**-1.2**
PALN				*e*S	**Sb**	**12 37 35.1**	**-0.3**
TIGL	**Tigil**	**1.07**	**186**	*e*P	**Pb**	**12 37 32.2**	**-2.1**
TIGL				*e*S	**Sg**	**12 37 48.6**	**+0.3**
OSSR	**Ossora**	**2.21**	**77**	*e*P	**Pn**	**12 37 49.9**	**-0.4**
OSSR				*e*S	**Sg**	**12 38 21.3**	**-3.2**
SRDR	**Sredinnyy**	**2.56**	**169**	*e*P	**Pn**	**12 37 54.2**	**-1.1**
KLY	**Klyuchi**	**2.70**	**158**	*e*P	**Pn**	**12 37 58.1**	**+1.0**
KLY				*e*S	**Sg**	**12 38 38.8**	**-1.5**
KOZ	**Kozyrevsk**	**2.83**	**169**	*e*P	**Pn**	**12 37 58.5**	**-0.5**
ESO	**Esso**	**2.91**	**182**	*e*P	**Pn**	**12 37 59.0**	**-1.1**
KMNR	**Kamenistaya**	**3.17**	**166**	*e*P	**Pn**	**12 38 05.6**	**+1.9**
KBTR	**Krutoberegovo**	**3.38**	**139**	*e*P	**Pn**	**12 38 08.7**	**+2.2**
GADL	**Gadlja**	**3.97**	**285**	*e*P	**Pn**	**12 38 16.7**	**+2.2**
GADL				*e*Pg	**Pg**	**12 38 28.6**	**-1.0**
GADL				Pgmax		12 38 28.8	
	40nm,0.4s						
GADL				*e*Sg	**Sb**	**12 39 13.5**	**+1.9**
GADL				Sgmax		12 39 34.5	
	360nm,0.6s						
TLAR	**Talaya**	**3.99**	**308**	*e*	**Pn**	**12 38 15.3**	**+0.5**
TLAR				*e*Pg	**Pg**	**12 38 30.1**	**+0.1**
TLAR				Pgmax		12 38 38.7	
	40nm,0.5s						
TLAR				*e*S	**Sn**	**12 39 01.9**	**+0.3**
TLAR				*e*Sg	**Sg**	**12 39 17.4**	**-4.2**
TLAR				Sgmax		12 39 23.8	
	120nm,0.4s						
OMS	**Omsukchan**	**4.00**	**339**	*e*P	**Pb**	**12 38 22.9**	**-1.3**
OMS				*e*Pg	**Pg**	**12 38 31.9**	**+1.7**
OMS				Pgmax		12 38 36.5	
	40nm,0.6s						
OMS				*e*Sg	**Sg**	**12 39 21.4**	**-0.6**
OMS				Sgmax		12 39 32.7	
	60nm,0.5s						
OMS				Sgmax		12 39 32.7	
	40nm,0.8s						
MA2	**Magadan**	**4.23**	**284**	Pn	**Pn**	**12 38 18.6**	**+0.4**
	0.9nm,0.3s,baz=142,slow=18,SNR=3.8						
MA2				Pg	**Pb**	**12 38 27.6**	**-0.5**
	1.3nm,0.3s,baz=80,slow=12,SNR=7.2						
MA2				Lg	Lg	12 39 23.0	
	4.1nm,0.3s,baz=182,slow=8.4,SNR=10						
	1.9nm,0.4s						
MA2	**Magadan**	**4.23**	**284**	*e*P	**Pn**	**12 38 20.5**	**+2.3**
MA2				*e*		12 38 31.0	
MA2				*e*Pg	**Pg**	**12 38 34.6**	**-0.1**
MA2				Pgmax		12 38 37.0	
	10.0nm,0.6s						
MA2				*e*Sg	**Sb**	**12 39 22.3**	**+3.0**
MA2				Sgmax		12 39 28.4	
	50nm,0.7s						
MA2				Sgmax		12 39 28.4	
	20nm,0.7s						
SEY	**Seymchan**	**5.19**	**325**	Pg	**Pb**	**12 38 40.2**	**-4.3**
	0.2nm,0.3s,baz=139,slow=17,SNR=1.8						
SEY				Lg	Lg	12 39 55.2	
	2.6nm,0.3s,baz=276,slow=23,SNR=5.5						
SEY	**Seymchan**	**5.19**	**325**	*e*Pg	**Pg**	**12 38 54.9**	**+1.9**
SEY				Pgmax		12 39 09.7	
	10.0nm,0.8s						
SEY				*e*Sg	**Sg**	**12 39 57.8**	**-2.4**
SEY				Sgmax		12 40 13.7	
	20nm,0.7s						
SEY				Sgmax		12 40 13.7	
	20nm,0.5s						
TLON	**Talon**	**5.32**	**284**	*e*Sg	**Sg**	**12 39 58.6**	**-5.6**
TLON				Sgmax		12 40 17.1	
	90nm,0.6s						
PETK	**Petropavlovsk-**	**5.77**	**187**	Pn	**Pn**	**12 38 39.5**	**+0.2**
	2.9nm,0.9s,baz=45,slow=14,SNR=7.8						
SUUS	**Susuman**	**6.56**	**312**	*e*P	**Pn**	**12 38 53.6**	**+3.4**
SUUS				*e*Pg	**Pg**	**12 39 19.4**	**+0.2**
SUUS				Pgmax		12 39 28.6	
	10.0nm,0.7s						
SUUS				*e*Sg	**Sg**	**12 40 39.7**	**-4.4**
SUUS				Sgmax		12 41 00.7	
	40nm,0.8s						
SUUS				Sgmax		12 41 00.7	
	50nm,0.8s						
ILAR	**Eielson Array**	**25.59**	**54**	P	**P**	**12 42 43.0**	**+0.5**
	0.6nm,0.8s,baz=278,slow=9.7,SNR=5.9						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**44.44**	**296**	P	**P**	**12 45 25.5**	**+1.2**
	0.9nm,0.8s,baz=48,slow=8.1,SNR=7.1						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**84.75**	**203**	P	**P**	**12 49 49.6**	**+1.9**
	0.4nm,1.0s,baz=21,slow=5.1,SNR=1.9						
	0.4nm,1.0s						

*KOLA **18** 12:57:34.1, 69°.62N × 29°.96E, h0km, ML1.6, Error ellipse: s-maj=12.1km s-min=4.9km az=120.0, Kirkenes, Norway*

HEL 18 12:57:35.9±0.8, 70°.45N × 28°.63E, h0km, ML1.3, Explosion, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VADS	**Vadso**	**0.42**	**143**	P	Pg	12 57 44.4	+0.6
VADS				S	Sg	12 57 50.6	+1.4
KEV	**Kevo**	**0.89**	**219**	PG	Pg	12 57 52.1	-0.9
KEV				SB	Sg	12 58 04.8	+0.3
ARA0	**ARCESS Array S**	**1.42**	**231**	PG	Pn	12 58 01.6	-1.2
ARA0				SN	Sn	12 58 23.6	+1.4
ARCES	**ARCESS Array B**	**1.42**	**231**	P	Pn	12 58 01.5	-1.3
ARCES				S	Sn	12 58 22.2	0.0
RAJF	**Raja-Jooseppi**	**1.99**	**183**	PG	Pb	12 58 12.0	-1.0
RAJF				SG	Sn	12 58 36.9	+0.6
KTK1	**Kautokeino**	**2.37**	**235**	PG	Pn	12 58 17.3	+1.4
HEF	**Hetta**	**2.70**	**223**	PG	Pb	12 58 24.0	-1.0
	baz=41						
HEF				smax	smax	12 58 55.5	
	comp=Z,0.7nm,0.2s						
VRF	**Varrio**	**2.74**	**172**	smax	smax	12 58 56.8	
	comp=Z,0.9nm,0.2s						
VRF				SG	Sb	12 58 59.1	-0.7

*IDC **18** 13:03:07.9±1.3, 39°.59N × 20°.34E, h0km, mb3.7/5, mbtmp3.6/7, ML2.8/1, Error ellipse: s-maj=27.3km s-min=22.8km az=80.0*
*ATH **18** 13:03:09.5, 39°.47N × 20°.25E, h7km ± 1km, ML3.2/17, Manual Solution by A.Papageorgiou First location: 2020/02/18 13:04:13, This location: 2020/02/18 13:41:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*THE **18** 13:03:11.3, 39°.4N ± 0°.8 × 20°.0E ± °, h0km ± 2km, M3.0/29, MLh3.0/29*
*TIR **18** 13:03:11.9, 39°.36N × 20°.19E, h38km, Ml3.6/4*

ISC 18 13:03:10.5±0.8, 39°.43N ± 0°.02 × 20°.37E ± 0°.02, h16km ± 5km, n87, σ0s92/118, mb3.8/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.11**	**346**	P	**Pb**	**13 03 14.6**	**+0.3**
IGT				S	**Sb**	**13 03 16.9**	**+0.2**
IGT	**Igoumenitsa**	**0.11**	**346**	P	**Pg**	**13 03 13.7**	**-0.3**
IGT				S	**Sg**	**13 03 15.8**	**-0.6**
PRGA	**Parga**	**0.14**	**169**	P	**Pb**	**13 03 14.8**	**-0.1**
PRGA				S	**Sb**	**13 03 18.1**	**+0.3**
LFKM	**Lefkimmi**	**0.24**	**274**	P	**Pb**	**13 03 17.3**	**+0.9**
LFKM				S	**Sb**	**13 03 21.2**	**+0.8**
JAN	**Janina**	**0.44**	**58**	P	**Pg**	**13 03 19.6**	**+0.2**
JAN				S	**Sb**	**13 03 26.1**	**-0.2**
JAN	**Janina**	**0.44**	**58**	P	**Pg**	**13 03 19.4**	**0.0**
JAN				S	**Sb**	**13 03 26.3**	**0.0**
KEK	**Kerkira**	**0.52**	**303**	P	**Pb**	**13 03 21.6**	**+0.2**
KEK				S	**Sb**	**13 03 30.2**	**+1.5**
KEK	**Kerkira**	**0.52**	**303**	P	**Pb**	**13 03 21.4**	**+0.1**
KEK				S	**Sb**	**13 03 30.2**	**+1.5**
SRN	**Sarande**	**0.53**	**328**	P	**Pb**	**13 03 21.6**	**+0.1**
SRN				S	**Sn**	**13 03 32.6**	**+0.5**
SRN				AML	AML	13 03 36.1	
	5.0nm,0.5s						
SRN	**Sarande**	**0.53**	**328**	P	**Pg**	**13 03 21.3**	**+0.2**
SRN				S	**Sb**	**13 03 29.8**	**+0.9**
ARTB	**Arta**	**0.55**	**120**	P	**Pg**	**13 03 20.9**	**-0.5**
ART2	**Arta**	**0.56**	**120**	P

KZN	Kozani	1.39	50	P	Pb	13 03 36.1	-0.1
KZN				S	Sg	13 03 55.3	-0.2
MAKR	Makrakomi, Fth	1.43	106	P	Pg	13 03 38.5	+0.4
MAKR	Makrakomi, Fth	1.43	106	P	Pb	13 03 37.5	+0.6
AXS	Araxos	1.46	147	P	Pb	13 03 37.5	+0.2
ANX	Ano Chora	1.47	124	P	Pg	13 03 39.6	+0.8
ANX	Ano Chora	1.47	124	P	Pg	13 03 38.8	0.0
AGRP	Agrapidokambos	1.48	134	P	Pb	13 03 38.1	+0.5
ORTH	Orthonies,Zaky	1.60	171	P	Pb	13 03 40.4	+0.8
SCTE	Santa Cesarea	1.60	294	P	Pn	13 03 37.3	-0.8
SCTE				S	Sn	13 03 56.2	-2.3
OHR	Ohrid	1.71	11	*i* Pn	Pg	13 03 44.0	+0.5
OHR				*i* Sn	Sg	13 04 07.3	+1.6
LIT	Litokhoron	1.77	67	P	Pb	13 03 43.2	+0.6
LIT	Litokhoron	1.77	67	P	Pb	13 03 42.6	0.0
DRO	Drossia	1.81	144	P	Pb	13 03 43.8	+0.5
KLV	Kalavryta, Ach	1.96	134	P	Pb	13 03 46.6	+0.6
GUR	Goura	2.15	133	P	Pb	13 03 48.6	-0.4
GRG	Griva	2.18	45	P	Pn	13 03 47.1	+0.9
PHP	Peshkopia	2.25	1	P	Pb	13 03 50.4	-0.5
PHP				S	Sb	13 04 20.1	+1.5
PHP				AML	AML	13 04 29.5	
	0.9nm,0.7s						
PHP	Peshkopia	2.25	1	P	Pb	13 03 50.0	-1.0
VAY	Valandovo	2.53	41	*i* Pn	Pb	13 03 54.9	-0.6
VAY				*i* Sn	Sb	13 04 25.2	-1.2
ITM	Ithomi	2.56	151	P	Pb	13 03 54.7	-1.4
SKO	Skopje	2.67	17	*i* Pn	Pb	13 03 57.2	-0.8
TIP	Timpagrande	2.81	266	P	Pn	13 03 54.3	-0.6
CEL	Celeste	3.68	253	P	Pn	13 04 06.8	0.0
IDI	Anoyia	5.48	138	Pn	Pn	13 04 31.6	0.0
	5.6nm,0.9s,baz=323,slow=15,SNR=1.6						
IDI				Sn	Sn	13 05 31.8	-2.6
	0.5nm,0.3s,baz=294,slow=20,SNR=1.7						
BOJS	Bojanci	7.15	330	*i* Pn	Pn	13 04 55.6	+1.2
MLR	Muntele Rosu	7.33	32	Pn	Pn	13 04 59.7	+2.7
	0.3nm,0.3s,baz=216,slow=14,SNR=2.1						
CEY	Cerknica	7.68	327	*i* Pn	Pn	13 05 02.8	+1.1
VOJS	Vojsko	8.14	326	*i* Pn	Pn	13 05 08.5	+0.4
SOKA	Soboth	8.23	333	*e*Pn	Pn	13 05 09.5	+0.2
	1.5nm,0.2s						
OBKA	Obir	8.26	331	*e*Pn	Pn	13 05 10.7	+0.9
	0.3nm,0.2s						
GERES	GERESS Array B	10.56	335	Pn	Pn	13 05 39.0	-2.2
	baz=153,slow=14,SNR=2.3						
	0.3nm,0.4s						
FINES	FINESS Array B	22.32	7	P	P	13 08 05.4	-1.7
	5.0nm,0.9s,baz=200,slow=10,SNR=2.0						
	5.0nm,0.9s						
TORD	Torodi Ar. Bea	30.94	217	P	P	13 09 27.9	+1.1
	0.7nm,0.7s,baz=20,slow=7.1,SNR=4.3						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	41.59	55	P	P	13 10 57.1	-0.3
	0.3nm,0.6s,baz=282,slow=9.2,SNR=3.5						
	0.3nm,0.6s						
MKAR	Makanchi Array	44.76	59	P	P	13 11 22.4	-0.8
	0.3nm,0.4s,baz=281,slow=7.4,SNR=9.8						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	44.95	49	P	P	13 11 23.2	-1.3
	0.9nm,0.5s,baz=270,slow=8.0,SNR=5.5						
	0.9nm,0.5s						

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*IDC **18** 13:05:15.8±1.6, 39°.67N×20°.27E, h0km, mb3.6/4, mbtmp3.6/5, ML1.4/1, Error ellipse: s-maj=56.4km s-min=23.4km az=131.0*

*ATH **18** 13:05:17.9, 39°.36N×20°.36E, h12km±1km, ML3.3/8, Manual Solution by A.Andreou First location: 2020/02/18 13:07:03, This location: 2020/02/18 13:39:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

*THE **18** 13:05:19.4, 39°N±3°×2°0E±°, h10km±3km, M3.0/5, MLh3.0/5*

ISC 18 13:05:18.5±0.9**, 39°.43N**±0°.04×**20°.41E**±0°.03**, h14**km±5km**, n26,** σ1**s**.**00**/41**, mb3.5**/3**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.12	328	P	Pg	13 05 21.8	-0.1
IGT				S	Sg	13 05 24.2	0.0
IGT	Igoumenitsa	0.12	328	P	Pg	13 05 22.1	+0.2
IGT				S	Sg	13 05 24.7	+0.5
LFKM	Lefkimmi	0.27	273	P	Pb	13 05 24.9	-0.4
LFKM				S	Sb	13 05 30.1	+0.4
JAN	Janina	0.41	57	P	Pb	13 05 27.0	-0.5
JAN				S	Sb	13 05 33.4	-0.2
JAN	Janina	0.41	57	P	Pb	13 05 27.3	-0.2
JAN				S	Sb	13 05 34.2	+0.6
SRN	Sarande	0.55	325	P	Pb	13 05 29.6	-0.3
SRN				S	Sb	13 05 37.1	-0.5
KEK	Kerkira	0.55	301	P	Pb	13 05 30.2	+0.3
KEK				S	Sb	13 05 37.9	+0.2
KEK	Kerkira	0.55	301	P	Pg	13 05 28.9	-0.5
KEK				S	Sb	13 05 36.7	-1.1
TETR	Tetrakomo, Epi	0.67	97	P	Pg	13 05 31.9	+0.2
TETR				S	Sb	13 05 41.6	+0.3
KPRO	Kipourio	0.90	54	P	Pn	13 05 37.2	+0.4
KPRO				S	Sn	13 05 50.2	+0.5
PENT	Pentalofos	0.94	36	P	Pn	13 05 38.4	+0.9
PENT				S	Sn	13 05 51.5	+0.7
NEST	Nestorio	1.09	26	P	Pg	13 05 40.4	+0.7
NEST				S	Sn	13 05 56.1	+1.6
PVO	Paravola	1.19	133	P	Pn	13 05 40.3	-0.5
EVR	Evrytania	1.20	115	P	Pn	13 05 41.2	+0.1
THL	Klokotos Trika	1.25	83	P	Pb	13 05 41.7	-0.2
MAKR	Makrakomi, Fth	1.40	107	P	Pn	13 05 43.3	-0.4
OHR	Ohrid	1.70	10	*i* Pn	Pg	13 05 52.7	+1.5
OHR				*i* Sn	Sg	13 06 15.0	+1.7
VAY	Valandovo	2.50	40	*i* Pn	Pb	13 06 02.1	-1.1
VAY				*i* Sn	Sb	13 06 31.7	-2.2
SKO	Skopje	2.65	17	*i* Pn	Pb	13 06 03.4	-2.5
IDI	Anoyia	5.46	138	Pn	Pn	13 06 42.0	+2.4
	0.6nm,0.3s,baz=318,slow=15,SNR=1.8						
IDI				Sn	Sn	13 07 41.1	-1.2
	2.3nm,0.3s,baz=320,slow=16,SNR=5.7						
	4.2nm,0.7s						
SOKA	Soboth	8.24	333	*e*Pn	Pn	13 07 17.4	-0.3
	0.5nm,0.2s						
OBKA	Obir	8.27	331	*e*Pn	Pn	13 07 17.6	-0.5
	1.6nm,0.4s						
TORD	Torodi Ar. Bea	30.96	217	P	P	13 11 35.8	+0.5
	0.8nm,0.6s,baz=21,slow=7.4,SNR=20						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	41.56	55	P	P	13 13 04.6	-0.9
	0.1nm,0.3s,baz=290,slow=9.5,SNR=3.5						
	0.1nm,0.3s						
MKAR	Makanchi Array	44.73	59	P	P	13 13 30.2	-1.0
	0.3nm,0.4s,baz=282,slow=7.4,SNR=9.0						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	44.92	49	P	P	13 13 31.4	-1.2
	0.8nm,0.3s,baz=277,slow=8.7,SNR=5.5						
	0.8nm,0.3s						

IDC 18 13:09:39.7±2.9**, 31°.83S**×**179°.97W, h0**km**, mb3.6**/2**, mbtmp3.6**/3**, ML2.9**/1**, Error ellipse: s-maj=62.9km s-min=45.8km az=102.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.85	200	Pn	Pn	13 11 21.0	-0.4
	0.2nm,0.3s,baz=221,slow=3.3,SNR=7.5						
	3.5nm,0.7s						
ASAR	Alice Springs	41.37	269	P	P	13 17 27.8	0.0
	0.3nm,0.4s,baz=104,slow=7.3,SNR=9.2						
	0.3nm,0.4s						
WRA	Warramunga Arr	42.50	275	P	P	13 17 36.7	-0.3
	0.4nm,0.4s,baz=111,slow=8.1,SNR=20						
	0.4nm,0.4s						
FINES	FINESS Array B	145.86	338	PKPbc	PKPdf	13 29 19.5	-0.1
	2.7nm,0.9s,baz=35,slow=5.1,SNR=5.3						

IDC 18 13:09:56.8±2.7**, 31°.71S**×**179°.87E, h0**km**, mb4.0**/2**, mbtmp3.9**/3**, ML3.4**/1**, Error ellipse: s-maj=61.4km s-min=44.2km az=106.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.91	198	Pn	Pn	13 11 38.6	-0.7
	0.7nm,0.3s,baz=261,slow=5.2,SNR=8.6						
	6.4nm,0.8s						
ASAR	Alice Springs	41.24	269	P	P	13 17 44.0	+0.2
	0.9nm,0.7s,baz=107,slow=7.6,SNR=8.4						
	0.9nm,0.7s						
WRA	Warramunga Arr	42.35	275	P	P	13 17 52.5	-0.4
	2.0nm,0.6s,baz=112,slow=8.0,SNR=4.5						
	2.0nm,0.6s						
FINES	FINESS Array B	145.71	338	PKPbc	PKPdf	13 29 36.0	-0.4
	2.2nm,0.4s,baz=58,slow=4.3,SNR=12						

IDC 18 13:11:30.4±10.0**, 31°.05S**×**179°.62E, h0**km**, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=435.4km s-min=62.1km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.04	269	P	P	13 19 15.0	-0.8
	0.3nm,0.4s,baz=102,slow=8.3,SNR=1.8						
	0.3nm,0.4s						
WRA	Warramunga Arr	42.09	274	P	P	13 19 24.9	+0.5
	0.7nm,0.5s,baz=115,slow=8.1,SNR=3.3						
	0.7nm,0.5s						
FINES	FINESS Array B	145.01	338	PKPbc	PKPbc	13 31 07.5	-0.8
	10nm,1.1s,baz=57,slow=5.1,SNR=5.8						

IDC 18 13:12:23.7±3.1**, 31°.59S**×**179°.90E, h0**km**, mb3.5**/2**, mbtmp3.6**/3**, Error ellipse: s-maj=69.8km s-min=48.2km az=100.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.04	198	Pn	Pn	13 14 07.9	-0.1
	4.7nm,0.6s,baz=354,slow=19,SNR=0.7						
ASAR	Alice Springs	41.27	269	P	P	13 20 11.1	+0.2
	0.5nm,0.7s,baz=114,slow=8.2,SNR=2.0						
	0.5nm,0.7s						
WRA	Warramunga Arr	42.37	275	P	P	13 20 19.5	-0.5
	0.4nm,0.4s,baz=115,slow=8.0,SNR=1.9						
	0.4nm,0.4s						
FINES	FINESS Array B	145.60	338	PKPbc	PKPdf	13 32 02.6	-0.6
	4.1nm,0.9s,baz=57,slow=5.1,SNR=4.1						

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*NEIC **18** 13:13:07.0±1.5, 10°.69S±0°.07×116°.08E±0°.06, h10km±1km, mb4.3/14, Error ellipse: s-maj=15.1km s-min=3.0km az=221.0*

*DJA **18** 13:13:08.1±0.4, 11°S±5°×11°6E±°, h10km, M4.4/28, mb4.4/13, MLv4.4/28*

*IDC **18** 13:13:17.0±3.5, 10°.26S×116°.33E, h75km±33km, mb3.8/12, mbtmp4.1/15, MS3.0/2, Error ellipse: s-maj=26.8km s-min=14.7km az=74.0*

ISC 18 13:13:09.7±0.5**, 10°.72S**±0°.06×**116°.11E**±0°.06**, h35**km**, n76,** σ1**s**.**83**/77**, mb4.2**/17**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	2.11	21	P	Pn	13 13 42.9	+0.3
IGBI	Denpasar	2.12	333	P	Pn	13 13 42.2	-0.4
DNP	Denpasar	2.21	336	P	Pn	13 13 45.3	+1.3
KHKI	Kahang-Kahang	2.39	348	P	Pn	13 13 47.9	+1.5
PLAI	Plampang	2.50	41	P	Pn	13 13 48.9	+1.0
PLAI	Plampang	2.50	41	P	Pn	13 13 49.3	+1.4
RTBI	Rangdo, Negare	2.52	333	P	Pn	13 13 48.5	+0.2
JAGI	Jajag, Banyuwa	2.96	319		Pn	13 13 53.0	-1.2
JAGI	Jajag, Banyuwa	2.96	319	P	Pn	13 13 53.7	-0.5
JAGI	Jajag, Banyuwa	2.96	319	P	Pn	13 13 53.5	-0.7
DBNI	Kabupaten Domp	3.09	45	P	Pn	13 13 59.2	+3.1
WBSI	Waikabubak, Su	3.40	72	P	Pn	13 14 01.9	+1.5
ABJI	Asem Bagus	3.45	327	P	Pn	13 14 03.9	+3.0
BLJI	Banyuglugur	3.86	320	P	Pn	13 14 07.1	+0.4
KMMI	Kalianget	4.22	330	P	Pn	13 14 12.7	+1.1
WSI	Waingapu	4.25	76	P	Pn	13 14 14.0	+2.0
BASI	Baing, Sumba	4.42	84	P	Pn	13 14 16.4	+2.0
SNJI	Sawahan-Nganju	5.20	304	P	Pn	13 14 25.5	+0.3
	0.3nm29nm,0.5s						
SJI	Sawahan	5.21	304	P	Pn	13 14 25.1	-0.3
	0.4nm35nm,0.5s						
PCJI	Pacitan	5.48	297	P	Pn	13 14 28.4	-0.5
	0.3nm40nm,1.1s						
EDFI	Ende, Flores	5.84	71	P	Pn	13 14 37.5	+3.6
	0.1nm18nm,0.7s						
UGM	Wanagama	6.18	296	Pn	Pn	13 14 38.6	0.0
UGM	Wanagama	6.18	296	P	Pn	13 14 39.3	+0.7
UGM	Wanagama	6.18	296	P	Pn	13 14 38.1	-0.5
	0.5nm83nm,1.3s						
BSSI	Bau Bau, Buton	6.28	44	P	Pn	13 14 42.2	+2.3
KAPI	Kappang	6.72	33	P	Pn	13 14 48.1	+2.2
	9.6nm,0.4s,baz=194,slow=12,SNR=6.1						
KAPI				S	Sn	13 15 56.5	-4.7
	6.3nm,0.3s,baz=210,slow=24,SNR=1.7						
KAPI				LR	LR	13 17 41.0	
	comp=Z,75nm,19.7s,baz=216,slow=42						
KAPI	Kappang	6.72	33		Pn	13 14 46.5	+0.6
KAPI	Kappang	6.72	33	P	Pn	13 14 47.5	+1.6
BATI	Baumata	7.44	87	P	Pn	13 14 59.6	+3.6
	6.6nm,0.3s,baz=272,slow=2.0,SNR=2.0						
BATI				S	Sn	13 16 19.4	+0.1
	12nm,0.4s,baz=94,slow=23,SNR=3.6						
KPJI	Karang Pucung	7.85	295	P	Pn	13 15 02.2	+0.7
	0.1nm18nm,1.0s						
SOEI	Soe	8.08	84	Pn	Pn	13 15 05.1	+0.3
SOEI	Soe	8.08	84	P	Pn	13 15 07.2	+2.4
	16nm,1.1s						
BBJI	Bungbulang	8.96	290	Pn	Pn	13 15 15.4	-1.4
MBWA	Marble Bar	10.95	162	Pn	Pn	13 15 43.2	-0.8
MBWA	Marble Bar	10.95	162	P	Pn	13 15 43.5	-0.5
PSA00	Pilbara Seismi	11.37	162	Pn	Pn	13 15 49.4	-0.4
PSA00	Pilbara Seismi	11.37	162	P	Pn	13 15 49.7	-0.1
FITZ	Fitzroy Crossi	11.79	130	P	Pn	13 15 58.1	+2.7
	1.1nm,0.3s,baz=342,slow=18,SNR=8.8						
FITZ				S	Sn	13 18 01.2	-4.5
	5.5nm,0.6s,baz=171,slow=19,SNR=7.3						
GIRL	Giralia	11.99	188	Pn	Pn	13 15 58.4	+0.1
KNRA	Kununurra	13.26	113	Pn	Pn	13 16 17.4	+1.8
MEEK	Meekatharra	16.01	172	P	Pn	13 16 52.8	+0.4
FAKI	Fak Fak	17.79	65	P	Pn	13 17 14.4	-0.3
MORW	Morawa	18.26	180	P	Pn	13 17 21.8	+1.4
MORW				IAmb	IAmb	13 17 54.1	
	comp=Z,30nm,1.4s						
WB0	Warramunga Arr	19.78	119	P	P	13 17 36.2	-1.0
BLDU	Ballidu	19.80	178	P	Pn	13 17 38.8	-0.2
WRA	Warramunga Arr	19.81	120	P	Pn	13 17 42.2	+3.1
	comp=Z,0.3nm,0.4s,baz=293,slow=12,SNR=8.9						
WRA				S	S	13 21 11.8	-7.0
	comp=Z,0.2nm,0.5s,baz=291,slow=26,SNR=1.9						
WRAB	Tennant Creek	19.81	120	P	P	13 17 35.9	-1.6
WRAB	Tennant Creek	19.81	120	P	P	13 17 36.4	-1.1
ASAR	Alice Springs	21.29	130	P	P	13 17 58.7	+5.2
	comp=Z,1.4nm,0.5s,baz=308,slow=10,SNR=19						
ASAR				S	S	13 21 49.4	+1.1
	comp=Z,1.5nm,0.9s,baz=306,slow=24,SNR=6.8						
	comp=Z,1.4nm,0.5s						
NWAO	Narrogin (SRO)	22.13	177	P	P	13 18 12.1	+10
	comp=Z,4.4nm,0.5s,baz=352,slow=13,SNR=6.7						
NWAO				S	S	13 22 04.6	+0.3
	comp=Z,6.6nm,0.8s,baz=264,slow=17,SNR=1.6						
	comp=Z,4.4nm,0.5s						
KULM	Kulim	22.14	315	P	P	13 18 01.8	-0.8
CMAR	Chiang Mai Arr	33.58	330	P	P	13 19 47.8	+1.0
	comp=Z,1.7nm,0.8s,baz=157,slow=7.6,SNR=13						
CMAR				LR	LR	13 36 00.3	
	comp=Z,37nm,18.6s,baz=180,slow=41						
	comp=Z,1.7nm,0.8s						
CHTO	Chiang Mai	33.88	330	P	P	13 19 49.3	-0.1
CHTO				IAmb	IAmb	13 19 52.0	
	comp=Z,5.0nm,1.1s						
NACB	Ninganchiao	35.09	9	P	P	13 19 59.4	-0.3
ENH	Enshi	41.25	351	P	P	13 20 51.0	-0.6
ENH				IAmb	IAmb	13 20 52.3	
	comp=Z,4.7nm,0.4s						
MJAR	Matsushiro Arr	51.41	23	P	P	13 22 09.7	-1.6
	comp=Z,1.4nm,0.6s,baz=182,slow=6.7,SNR=2.4						
	comp=Z,1.4nm,0.6s						
MJAR	Matsushiro Arr	51.41	23	IAmb	IAmb	13 22 27.2	
	comp=Z,4.4nm,1.4s						
SONM	Songino Array	58.93	352	P	P	13 23 05.3	-0.2
	comp=Z,1.2nm,0.7s,baz=176,slow=8.0,SNR=6.8						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	58.93	352	IAmb	IAmb	13 23 06.4	
	comp=Z,1.3nm,0.8s						
JKA	Kamikawa-asahi	59.64	22	P	P	13 23 10.8	+0.4
HILR	Hailar Array B	60.10	3	P	P	13 23 13.2	-0.2
	comp=Z,0.8nm,0.4s,baz=187,slow=5.8,SNR=2.2						
	comp=Z,0.8nm,0.4s						
KSH2	Kashi	62.32	325	P	P	13 23 29.3	+0.4
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	64.74	335	P	P	13 23 45.0	+0.5
	comp=Z,0.8nm,0.4s,baz=149,slow=6.8,SNR=21						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	64.74	335	P	P	13 23 44.6	+0.1
AAK	Ala-Archa	65.33	327	P	P	13 23 49.3	+0.7
	comp=Z,1.7nm,0.6s,baz=159,slow=8.6,SNR=2.8						
	comp=Z,1.7nm,0.6s						
AAK	Ala-Archa	65.33	327	IAmb	IAmb	13 23 50.2	
	comp=Z,2.8nm,0.8s						
KURBB	Kurchatov Arra	69.29	335	P	P	13 24 13.7	+0.4
	comp=Z,1.4nm,0.6s,baz=148,slow=5.2,SNR=18						
	comp=Z,1.4nm,0.6s						
KURK	Kurchatov	69.33	336	P	P	13 24 13.7	+0.1
KURK	Kurchatov	69.33	336	IAmb	IAmb	13 24 14.9	
	comp=Z,2.5nm,0.8s						
ZAA0	Zalesovo Array	69.67	341	P	P	13 24 15.2	-0.4
ZALV	Zalesovo Beam	69.67	341	P	P	13 24 15.3	-0.3
	comp=Z,3.7nm,0.5s,baz=152,slow=5.2,SNR=17						
	comp=Z,3.7nm,0.5s						
PETK	Petropavlovsk-	72.80	25	P	P	13 24 36.0	+1.4
	comp=Z,1.8nm,0.5s,baz=234,slow=1.1,SNR=14						
	comp=Z,1.8nm,0.5s						
BVAR	Borovoye Array	74.50	333	P	P	13 24 46.1	+1.6
	comp=Z,0.9nm,0.6s,baz=136,slow=7.4,SNR=7.0						
	comp=Z,0.9nm,0.6s						
AB31	Akbulak array	77.36	326	P	P	13 25 01.1	+0.2
AB31				IAmb	IAmb	13 25 03.4	
	comp=Z,1.7nm,0.8s						
ABKAR	Akbulak array	77.36	326	P	P	13 25 01.3	+0.4
SPITS	Spitsbergen Ar	102.42	348	P	Pdif	13 27 02.2	+0.7
	comp=Z,14nm,1.1s,baz=42,slow=2.3,SNR=2.2						

IDC 18 13:13:50.4±2.9**, 31°.79S**×**179°.94E, h0**km**, mb3.5**/2**, mbtmp3.5**/3**, Error ellipse: s-maj=65.5km s-min=47.0km az=106.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.85	199	Pn	Pn	13 15 31.2	-0.8
	2.1nm,0.5s,baz=0.0,slow=20,SNR=1.1						
ASAR	Alice Springs	41.29	269	P	P	13 21 38.0	+0.2
	0.2nm,0.4s,baz=105,slow=8.1,SNR=1.7						
	0.2nm,0.4s						
WRA	Warramunga Arr	42.41	275	P	P	13 21 46.6	-0.3
	0.4nm,0.4s,baz=111,slow=8.3,SNR=5.6						
	0.4nm,0.4s						
FINES	FINESS Array B	145.80	338	PKPbc	PKPdf	13 33 30.0	-0.2
	0.5nm,0.4s,baz=36,slow=2.6,SNR=7.2						

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*IDC **18** 13:21:02.3±1.9, 31°.55S×177°.70W, h0km, mb4.3/2, mbtmp4.2/4, ML4.3/2, MS3.3/2, Error ellipse: s-maj=52.6km s-min=25.5km az=118.0*

*NEIC **18** 13:21:04.8±1.5, 31°.41S±0°.04×177°.7W±0°.2, h10km±2km, mb4.3/6, Error ellipse: s-maj=28.8km s-min=5.5km az=99.0*

ISC 18 13:21:02.3±1.3**, 31°.52S**±0°.07×**177°.3W**±0°.2**, h10**km**, n41,** σ1**s**.**40**/51**, mb4.4**/8**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.30	347	P	Pn	13 21 39.3	-1.1
GLKZ				S	Sn	13 22 07.3	-1.5
RAO	Raoul Island	2.31	347	Pn	Pn	13 21 41.1	+0.6
	246nm,0.3s,baz=159,slow=17,SNR=5.0						
RAO				Sn	Sn	13 22 07.9	-1.1
	176nm,0.3s,baz=74,slow=20,SNR=3.7						
RAO				LR	LR	13 22 37.8	
	comp=Z,393nm,18.9s,baz=98,slow=42						
	254nm,0.3s						
MXZ	Matakaoa Point	7.02	210	Pn	Pn	13 22 46.1	+1.0
MXZ	Matakaoa Point	7.02	210	P	Pn	13 22 45.7	+0.6
MXZ				S	Sn	13 24 05.9	+1.0
PKGZ	Pakihiroa	7.37	209	P	Pn	13 22 50.6	+0.6
PKGZ				S	Sn	13 24 15.2	+1.5
HAZ	Te Kaha	7.41	211	P	Pn	13 22 51.0	+0.5
HAZ				S	Sn	13 24 15.8	+1.2
PUZ	Puketiti	7.47	208	P	Pn	13 22 51.7	+0.3
PUZ				S	Sn	13 24 15.1	-1.1
RUGZ	Raukumara Rang	7.62	211	P	Pn	13 22 54.1	+0.5
TWGZ	Tauwhareparae	7.67	209	P	Pn	13 22 56.0	+1.8
TWGZ				S	Sn	13 24 21.2	0.0
CNGZ	Carnagh Statio	7.85	206	P	Pn	13 22 57.3	+0.7
CNGZ				S	Sn	13 24 28.6	+3.2
TKGZ	Te Karaka	7.95	208	P	Pn	13 22 58.7	+0.8
MWZ	Matawai	8.00	210	P	Pn	13 22 58.0	-0.6
MWZ				S	Sn	13 24 29.6	+0.4
URZ	Urewera	8.12	213	Pn	Pn	13 22 58.8	-1.4
	1.2nm,0.3s,baz=237,slow=5.0,SNR=13						
URZ				Sn	Sn	13 24 29.7	-2.4
	3.9nm,0.3s,baz=17,slow=22,SNR=12						
	2.2nm,0.3s						
URZ	Urewera	8.12	213	P	Pn	13 22 59.6	-0.7
URZ				S	Sn	13 24 30.3	-1.8
WCZ	Waipu Caves	8.21	235	P	Pn	13 23 06.5	+5.0
RIGZ	Rimuhau	8.21	208	P	Pn	13 23 01.9	+0.3
RIGZ				S	Sn	13 24 34.5	0.0
OUZ	Omahuta	8.43	242	P	Pn	13 23 08.1	+3.6
RTZ	Ruatahuna	8.47	212	Pn	Pn	13 23 06.2	+1.0
RTZ	Ruatahuna	8.47	212	P	Pn	13 23 05.5	+0.3
RTZ				S	Sn	13 24 39.3	-1.5
TOZ	Tahuroa Road	8.55	222	Pn	Pn	13 23 07.4	+1.2
MTHZ	Maungataniwha	8.73	211	P	Pn	13 23 10.0	+1.4
MTHZ				S	Sn	13 24 44.8	-2.4
BKZ	Black Stump Fm	9.14	212	P	Pn	13 23 14.2	-0.2
BKZ				S	Sn	13 24 55.7	-1.5
OTVZ	Oturere	9.53	215	P	Pn	13 23 20.3	+0.6
PNHZ	Pukenui	9.88	210	P	Pn	13 23 23.6	-0.9
CTAO	Charters Tower	34.54	280	P	P	13 27 51.0	-0.2
BBOO	Buckleboo	39.22	255	P	P	13 28 30.6	-0.3
BBOO				IAmb	IAmb	13 28 54.6	
	comp=Z,20nm,1.1s						
AS31	Alice Springs	43.62	268	P	P	13 29 05.2	-1.9
AS31				IAmb	IAmb	13 29 07.4	
	comp=Z,0.7nm,0.9s						
ASAR	Alice Springs	43.62	268	P	P	13 29 06.2	-1.0
	comp=Z,1.4nm,0.5s,baz=111,slow=8.2,SNR=40						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	43.62	268	P	P	13 29 04.7	-2.5
WRAB	Tennant Creek	44.70	273	P	P	13 29 14.6	-1.3
WRAB				IAmb	IAmb	13 29 35.5	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	44.71	273	P	P	13 29 14.9	-1.0
	comp=Z,3.7nm,0.5s,baz=112,slow=8.1,SNR=74						
	comp=Z,3.7nm,0.5s						
WRA	Warramunga Arr	44.71	273	P	P	13 29 14.7	-1.2
WB0	Warramunga Arr	44.74	273	P	P	13 29 14.8	-1.3
WB0				IAmb	IAmb	13 29 20.7	
	comp=Z,12nm,1.4s						
SNAA	Sanae	77.03	178	⇑P	P	13 33 06.8	+12
	comp=Z,54nm,0.9s						
VNA3	Neumayer Olymp	77.16	176	⇑P	P	13 33 06.8	+11
	comp=Z,6.2nm,0.8s						
VNA2	Neumayer--Watz	77.59	177	⇑P	P	13 33 06.7	+8.5
	comp=Z,2.0nm,0.7s,baz=188,slow=3.6						
ASAJ	Asahikawa	83.69	332	LR	LR	14 13 06.8	
	comp=Z,23nm,18.1s,baz=317,slow=37						
KURK	Kurchatov	122.22	313		PKPdf	13 39 57.5	+0.4
KURBB	Kurchatov Arra	122.26	313	PKP	PKPdf	13 39 57.5	+0.3
	comp=Z,0.3nm,0.6s,baz=89,slow=1.9,SNR=4.2						
FINES	FINESS Array B	146.38	340	PKPbc	PKPdf	13 40 43.9	+2.4
	comp=Z,2.2nm,0.6s,baz=46,slow=4.0,SNR=8.9						
HFS	Hagfors	150.45	349	PKPbc	PKPbc	13 40 54.9	+1.4
	comp=Z,6.3nm,1.1s,baz=18,slow=6.1,SNR=1.8						

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*IDC **18** 13:21:04.2±2.3, 40°.09N×48°.91E, h0km, mb3.4/3, mbtmp3.4/7, ML3.2/4, MS2.7/1, Error ellipse: s-maj=46.5km s-min=16.9km az=177.0*

*TEH **18** 13:21:06.6, 40°.15N×49°.00E, h5km, ML3.2, Presumed earthquake*

*AZER **18** 13:21:06.2, 40°.28N×48°.74E, h4km, ml3.1*

*DRS **18** 13:21:07.8, 39°.97N×49°.13E, h30km*

*MOS **18** 13:21:07.8±1.5, 40°.24N×48°.95E, h16km, mb3.9/1, Error ellipse: s-maj=11.7km s-min=5.3km az=118.6*

ISC 18 13:21:08.6±1.1**, 40°.25N**±0°.02×**48°.84E**±0°.02**, h12**km±8km**, n96,** σ1**s**.**60**/143**, mb3.3**/3**, 3C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS	Qobustan	0.30	16	Pg	Pb	13 21 14.9	-1.1

GBS	**Qobustan**	**0.30 16**	P	**Pb**	**13 21 14.9**	**-1.1**
GBS			S	**Sb**	**13 21 22.3**	**+1.4**
ALIB	**&Aumlli-Bayram**	**0.32 156**	P	**Pn**	**13 21 17.4**	**-1.6**
ALIB			S	**Sb**	**13 21 25.3**	**+4.0**
KDMR	**Kurdemir**	**0.52 285**	S	**Sb**	**13 21 28.5**	**+1.4**
PQL	**Pirkuli**	**0.57 341**	Pg	**Pg**	**13 21 19.7**	**-0.2**
PQL	**Pirkuli**	**0.57 341**	P	**Pg**	**13 21 19.6**	**-0.2**
PQL			S	**Sb**	**13 21 30.2**	**+1.3**
ATGJ	**Altiaghaj**	**0.62 7**	P	**Pb**	**13 21 20.9**	**-0.5**
ATGJ			S	**Sn**	**13 21 31.9**	**-1.4**
GOBA	**Gobu**	**0.70 77**	P	**Pn**	**13 21 25.2**	**+0.8**
GOBA			S	**Sn**	**13 21 38.6**	**+3.4**
IML	**Ismayilli**	**0.74 318**	Pg	**Pg**	**13 21 22.6**	**-0.3**
IML	**Ismayilli**	**0.74 318**	P	**Pg**	**13 21 22.5**	**-0.4**
IML			S	**Sb**	**13 21 35.2**	**+1.6**
SIZA	**Siyzn**	**0.83 3**	Pg	**Pb**	**13 21 24.6**	**-0.5**
SIZA	**Siyzn**	**0.83 3**	P	**Pb**	**13 21 24.8**	**-0.3**
SIZA			S	**Sn**	**13 21 37.3**	**-1.2**
ZRD	**Zardab**	**0.88 273**	Pg	**Pg**	**13 21 24.8**	**-0.8**
ZRD	**Zardab**	**0.88 273**	P	**Pg**	**13 21 24.9**	**-0.8**
ZRD			S	**Sg**	**13 21 38.8**	**+1.7**
NDR	**Nardaran**	**0.94 69**	P	**Pn**	**13 21 27.4**	**-0.2**
NDR			S	**Sn**	**13 21 44.6**	**+3.5**
GALA	**Gala**	**1.02 80**	P	**Pn**	**13 21 29.3**	**+0.6**
GALA			S	**Sn**	**13 21 48.3**	**+5.3**
QBL	**Gabala**	**1.03 313**	P	**Pg**	**13 21 27.1**	**-1.4**
QBL			S	**Sg**	**13 21 42.4**	**+0.4**
GLBA	**Clilabad**	**1.06 199**	P	**Pb**	**13 21 28.7**	**-0.2**
GLBA			S	**Sn**	**13 21 47.2**	**+3.2**
XNQ	**Khinaliq**	**1.07 330**	P	**Pg**	**13 21 28.2**	**-1.0**
XNQ			S	**Sb**	**13 21 44.5**	**+1.3**
BLQ	**Beylaqan**	**1.11 242**	P	**Pg**	**13 21 29.1**	**-0.9**
BLQ			S	**Sg**	**13 21 45.1**	**+0.7**
QUBA	**Quba, Azerbaij**	**1.14 347**	P	**Pn**	**13 21 30.3**	**-0.1**
QUBA			S	**Sn**	**13 21 47.1**	**+1.1**
BRDA	**Brd**	**1.27 271**	P	**Pn**	**13 21 31.2**	**-0.9**
BRDA			S	**Sb**	**13 21 50.5**	**+1.8**
AGDM	**Agdam**	**1.33 265**	P	**Pn**	**13 21 32.7**	**-0.4**
AGDM			S	**Sg**	**13 21 54.1**	**+2.6**
QSAR	**Qusar**	**1.34 341**	Pn	**Pg**	**13 21 33.7**	**-0.6**
QSAR			Sn	**Sn**	**13 21 53.8**	**+2.8**
QRD	**Qoradiz**	**1.41 237**	Pn	**Pn**	**13 21 33.0**	**-1.1**
QRD			Sn	**Sn**	**13 21 52.6**	**0.0**
YRD	**Yardimli**	**1.41 199**	Pn	**Pn**	**13 21 33.8**	**-0.5**
YRD			Sn	**Sg**	**13 21 55.4**	**+1.6**
MNGR	**Mingechevir, A**	**1.44 292**	PG	**Pn**	**13 21 34.4**	**0.0**
MNGR	**Mingechevir, A**	**1.44 292**	Pn	**Pn**	**13 21 34.5**	**0.0**
MNGR			Sn	**Sn**	**13 21 53.3**	**0.0**
KSMR	**Kasumkent**	**1.46 339**	*e*PG	**Pg**	**13 21 36.1**	**-0.5**
KSMR			*e*S	**Sg**	**13 21 58.5**	**+3.0**
KSMR			pmax	pmax		
	comp=Z,137nm,0.5s					
AKT	**Akhty**	**1.49 326**	*e*Pg	**Pb**	**13 21 36.2**	**-0.1**
	comp=Z,70nm,0.5s					
AKT			*e*Sg	**Sg**	**13 21 59.3**	**+2.6**
	comp=Z,231nm,0.4s					
AKT	**Akhty**	**1.49 326**	*e*PG	**Pb**	**13 21 36.2**	**-0.1**
AKT			*e*S	**Sg**	**13 21 59.2**	**+2.6**
AKT			pmax	pmax		
	comp=Z,70nm,0.5s					
LKRN	**Lenkeran, Azer**	**1.53 182**	PG	**Pb**	**13 21 36.3**	**-0.6**
LKRN	**Lenkeran, Azer**	**1.53 182**	Pn	**Pb**	**13 21 36.4**	**-0.6**
LKRN			Sn	**Sg**	**13 21 59.2**	**+1.3**
SEKA	**Sheki**	**1.57 308**	PN	**Pn**	**13 21 35.4**	**-1.0**
SEKA	**Sheki**	**1.57 308**	Pn	**Pn**	**13 21 35.4**	**-1.0**
SEKA			Sn	**Sn**	**13 21 57.5**	**+0.7**
GRMI	**Germi**	**1.61 207**	Pg	**Pn**	**13 21 37.1**	**+0.1**
LRK	**Lerik**	**1.65 194**	Pg	**Pn**	**13 21 36.9**	**-0.6**
LRK			Sn	**Sg**	**13 22 01.6**	**+0.1**
ASTR	**Astara**	**1.68 181**	Pn	**Pn**	**13 21 36.9**	**-0.9**
ASTR			Sg	**Sg**	**13 22 01.3**	**-1.4**
DRN	**Derbent**	**1.82 348**	*e*Pg	**Pn**	**13 21 40.1**	**+0.4**
	comp=Z,101nm,0.8s					
DRN			*e*Sg	**Sg**	**13 22 06.1**	**-1.2**
	comp=Z,251nm,0.3s					
DRN	**Derbent**	**1.82 348**	‖*e*PN	**Pn**	**13 21 39.9**	**+0.1**
GAS1	**Astara - Iran**	**1.86 180**	Pg	**Pn**	**13 21 38.6**	**-1.7**
GANJ	**Ganja**	**1.96 283**	PN	**Pn**	**13 21 41.5**	**-0.2**
GANJ	**Ganja**	**1.96 283**	Pn	**Pn**	**13 21 41.6**	**-0.2**
GANJ			Sg	**Sn**	**13 22 05.1**	**-1.2**
VSHL	**Vashlovani**	**2.10 299**	P	**Pn**	**13 21 45.3**	**+1.7**
URKR	**Urkarakh**	**2.12 335**	*e*Pn	**Pn**	**13 21 44.9**	**+0.8**
	comp=Z,30nm,0.6s					
URKR			*e*Sn	**Sb**	**13 22 14.5**	**+1.0**
	comp=Z,63nm,0.4s					
URKR	**Urkarakh**	**2.12 335**	*e*PN	**Pn**	**13 21 44.8**	**+0.8**
URKR			*e*S	**Sb**	**13 22 14.5**	**+1.0**
URKR			pmax	pmax		
	comp=Z,30nm,0.6s					
ZKTA	**Zakatala**	**2.18 310**	Pn	**Pn**	**13 21 46.3**	**+1.6**
ZKTA			Sn	**Sb**	**13 22 15.3**	**+0.3**
KMKR	**Kumukh**	**2.29 326**	*e*Pn	**Pn**	**13 21 46.9**	**+0.3**
	comp=Z,59nm,0.5s					
KMKR			*e*Sn	**Sb**	**13 22 18.9**	**+0.3**
	comp=Z,55nm,0.4s					
KMKR	**Kumukh**	**2.29 326**	*e*PN	**Pn**	**13 21 46.8**	**+0.3**
KMKR			*e*S	**Sb**	**13 22 18.8**	**+0.3**
KMKR			pmax	pmax		
	comp=Z,59nm,0.5s					
IHRS	**Heris**	**2.38 216**	Pn	**Pn**	**13 21 48.7**	**+1.1**
SGKR	**Sergokala**	**2.38 339**	*e*Pn	**Pn**	**13 21 47.9**	**+0.4**
	comp=Z,45nm,0.6s					
SGKR			*e*Sn	**Sb**	**13 22 20.4**	**-0.5**
	comp=Z,59nm,0.8s					
SGKR	**Sergokala**	**2.38 339**	*e*PN	**Pn**	**13 21 47.9**	**+0.4**
SGKR			*e*S	**Sb**	**13 22 20.3**	**-0.5**
SGKR			pmax	pmax		
	comp=Z,45nm,0.6s					
GDB	**GEDABAY**	**2.40 282**	Pn	**Pn**	**13 21 47.3**	**-0.6**
GDB			Sn	**Sn**	**13 22 20.6**	**+3.2**
LGD	**Lagodekhi**	**2.52 310**	P	**Pn**	**13 21 51.8**	**+2.3**
LGD			S	**Sb**	**13 22 26.8**	**+1.8**
ORD	**Ordubad**	**2.56 240**	Pn	**Pn**	**13 21 51.2**	**+1.2**
ORD			Sn	**Sn**	**13 22 24.5**	**+3.3**
GNBR	**Gunib**	**2.56 327**	*e*Pn	**Pn**	**13 21 51.1**	**+1.0**
	comp=Z,20nm,0.5s					
GNBR			*e*Sn	**Sb**	**13 22 25.1**	**-1.0**
	comp=Z,35nm,0.5s					
GNBR	**Gunib**	**2.56 327**	*e*PN	**Pn**	**13 21 51.1**	**+1.0**
GNBR			*e*S	**Sb**	**13 22 25.1**	**-1.0**
GNBR			pmax	pmax		
	comp=Z,20nm,0.5s					
ISRB	**Sarab**	**2.58 201**	Pn	**Pn**	**13 21 50.7**	**+0.3**
SBZ	**Shahbuz**	**2.67 253**	Pn	**Pn**	**13 21 53.0**	**+1.5**
SBZ			Sn	**Sn**	**13 22 25.9**	**+2.1**
ARKR	**Arakani**	**2.73 330**	‖*e*PN	**Pn**	**13 21 54.4**	**+2.0**
QZX	**Qazax, Azerbai**	**2.76 288**	Pn	**Pn**	**13 21 53.2**	**+0.5**
QZX			Sn	**Sn**	**13 22 29.0**	**+3.1**
NAX	**Nakhchivan**	**2.79 249**	PN	**Pn**	**13 21 53.7**	**+0.5**
NAX	**Nakhchivan**	**2.79 249**	Pn	**Pn**	**13 21 53.7**	**+0.5**
NAX			Sn	**Sn**	**13 22 28.1**	**+1.2**
XNZR	**Khunzakh**	**2.80 326**	*e*Pn	**Pn**	**13 21 54.9**	**+1.5**
	comp=Z,18nm,0.4s					
XNZR			*e*Sn	**Sb**	**13 22 32.9**	**-0.1**
	comp=Z,23nm,0.7s					
HNZR	**Khunzah**	**2.81 326**	*e*PN	**Pn**	**13 21 54.9**	**+1.4**
HNZR			*e*S	**Sb**	**13 22 32.9**	**-0.3**
HNZR			pmax	pmax		
	comp=Z,18nm,0.4s					
IMRD	**Marand**	**2.87 239**	Pn	**Pn**	**13 21 56.2**	**+1.9**
DGRG	**David-gareji**	**2.89 296**	P	**Pn**	**13 21 56.3**	**+1.8**
KRNR	**Karanay**	**2.96 331**	‖*e*PN	**Pn**	**13 21 57.7**	**+2.2**
BTLR	**Botlikh**	**3.11 322**	‖*e*PN	**Pn**	**13 22 00.1**	**+2.5**
BTLR			pmax	pmax		
	comp=Z,25nm,0.9s					
GNI	**Garni**	**3.14 270**	Pn	**Pn**	**13 21 59.4**	**+1.4**
	comp=Z,2.5nm,0.3s,baz=96,slow=10,SNR=3.8					
	comp=Z,8.6nm,0.4s					
GNI	**Garni**	**3.14 270**	*de*PN	**Pn**	**13 22 00.0**	**+2.0**
IHSH	**Hashtrud**	**3.18 203**	Pn	**Pn**	**13 21 58.9**	**+0.1**
MAKU	**Maku**	**3.32 256**	Pn	**Pn**	**13 22 03.2**	**+2.7**
DVE	**Vedeno**	**3.39 324**	‖*e*PN	**Pn**	**13 22 03.9**	**+2.5**
DVE			*i* S	**Sn**	**13 22 45.6**	**+4.1**
DVE			pmax	pmax		
	comp=Z,23nm,0.7s					
ZNJK	**Zanjan**	**3.57 182**	Pn	**Pn**	**13 22 03.5**	**-0.5**
TRLG	**Trialeti**	**3.81 291**	P	**Pn**	**13 22 07.7**	**+0.3**
GUDG	**Gudauri**	**3.96 305**	P	**Pn**	**13 22 10.8**	**+1.4**
MZPU	**Pul - Mazandar**	**4.36 150**	Pn	**Pn**	**13 22 13.8**	**-1.2**
QABG	**Abgarm-Qazvin**	**4.57 172**	Pn	**Pn**	**13 22 16.9**	**-0.9**
IPRN	**Peran**	**4.86 144**	Pn	**Pn**	**13 22 20.0**	**-1.6**
IALA	**Alasht**	**5.20 142**	Pn	**Pn**	**13 22 25.3**	**-1.3**

IGLO	**Ghaloghah**	**5.42 132**	Pn	**Pn**	**13 22 28.1**	**-1.3**
KBZ	**Khabaz**	**5.63 310**	Pn	**Pn**	**13 22 34.7**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=132,slow=10,SNR=6.3					
	comp=Z,1.6nm,0.8s					
SHA1	**Shidzhatmaz**	**5.78 309**	‖*e*P	**Pn**	**13 22 35.7**	**+1.3**
MRVT	**Maraveh tapeh**	**6.21 112**	Pn	**Pn**	**13 22 38.7**	**-1.6**
SOC	**Sochi**	**7.57 299**	*e*P	**Pn**	**13 23 02.0**	**+3.2**
SOC			*e*		13 24 30.5	
SOC			MLR	MLR		
	comp=Z,56nm,7.0s					
ISFR	**Sfrayin**	**7.85 111**	Pn	**Pn**	**13 23 01.7**	**-1.1**
BRTR	**Keskin Array B**	**11.67 272**	LR	LR	13 29 11.0	
	comp=Z,34nm,18.4s,baz=307,slow=42					
OBN	**Obninsk**	**16.97 335**	*e*P	**P**	**13 25 06.8**	**-0.8**
OBN			pmax	pmax		
	comp=Z,9.0nm,0.2s					
AKASG	**Malin Array Be**	**17.22 314**	P	**Pn**	**13 25 07.2**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=130,slow=11,SNR=2.0					
	comp=Z,0.5nm,0.5s					
BVAR	**Borovoye Array**	**19.46 42**	P	**P**	**13 25 32.7**	**-2.3**
	baz=228,slow=11,SNR=2.4					
	comp=Z,0.4nm,0.3s					
KURBB	**Kurchatov Arra**	**23.13 53**	P	**P**	**13 26 12.8**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=259,slow=12,SNR=2.2					
	comp=Z,0.3nm,0.7s					
KURK	**Kurchatov**	**23.21 53**	P	**P**	**13 26 12.8**	**-2.5**
MKAR	**Makanchi Array**	**24.99 64**	P	**P**	**13 26 29.9**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=269,slow=9.0,SNR=4.4					
	comp=Z,0.4nm,0.5s					
MKAR	**Makanchi Array**	**24.99 64**	*i* P	**P**	**13 26 32.5**	**+0.3**
FINES	**FINESS Array B**	**25.38 334**	P	**P**	**13 26 33.6**	**-1.7**
	comp=Z,3.3nm,0.8s,baz=134,slow=10.0,SNR=3.9					
	comp=Z,3.3nm,0.8s					

IDC 18 13:22:45.4±2.8, 10.73S×115.56E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=167.0km s-min=23.5km az=47.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.28**	**119**	P	P	13 27 21.6	-1.2
	0.2nm,0.8s,baz=295,slow=8.6,SNR=1.3						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**21.70**	**129**	P	P	13 27 39.1	+0.8
	0.5nm,0.5s,baz=306,slow=9.7,SNR=16						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**64.53**	**335**	P	P	13 33 24.8	+0.6
	0.5nm,0.6s,baz=140,slow=7.7,SNR=5.2						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**69.08**	**336**	P	P	13 33 53.1	+0.1
	0.3nm,0.6s,baz=146,slow=6.5,SNR=4.2						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**69.51**	**341**	P	P	13 33 54.9	-0.8
	0.6nm,0.4s,baz=156,slow=6.6,SNR=2.9						
	0.6nm,0.4s						

WEL 18 13:23:59.8±1.0, 37.5S±5.5×17.7E±., h18km±7km, M2.5/5, ML2.4/7, MLv2.5/5, Error ellipse: s-maj=7.6km s-min=4.6km az=28.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSRZ	**White Island S**	**0.52**	**185**	P	Pb	13 24 11.1	+0.7
WSRZ				S	Sn	13 24 19.4	-1.4
WIZ	**White Island**	**0.53**	**183**	P	Pb	13 24 11.3	+0.8
WIZ				S	Sb	13 24 18.8	+1.0
OPRZ	**Ohinepanea**	**1.00**	**212**	P	Pb	13 24 18.7	+0.1
OPRZ				S	Sg	13 24 32.1	-0.2
MXZ	**Matakaoa Point**	**1.02**	**123**	P	Pb	13 24 18.8	-0.3
MXZ				S	Sb	13 24 32.4	+0.2
RUGZ	**Raukumara Rang**	**1.02**	**160**	P	Pn	13 24 19.6	+0.1
RUGZ				S	Sg	13 24 33.0	-0.2
RUGZ	**Raukumara Rang**	**1.02**	**160**	S	Pn	13 24 19.7	+0.2
TGRZ	**Tauranga**	**1.06**	**226**	P	Pg	13 24 20.2	-0.1
TGRZ				S	Sn	13 24 34.1	0.0
MARZ	**Manawahe**	**1.08**	**204**	P	Pg	13 24 20.6	-0.1
KUZ	**Kuaotunu**	**1.24**	**282**	P	Pn	13 24 21.9	-0.3
KUZ				S	Sb	13 24 36.7	-1.6
GRZ	**Great Barrier**	**1.61**	**297**	P	Pn	13 24 27.5	+0.2
GRZ				S	Sb	13 24 49.1	+0.1

*IDC **18** 13:24:44.5±1.5, 39.52N×20.43E, h0km, mb3.7/4, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=49.8km s-min=20.0km az=122.0*

*NEIC **18** 13:24:46.1±1.2, 39.41N±0.05×20.52E±0.05, h10km±1km, mb4.2/3, Error ellipse: s-maj=9.4km s-min=5.7km az=190.0*

*ATH **18** 13:24:46.9, 39.47N×20.33E, h18km±1km, ML3.3/10, Manual Solution by A.Papageorgiou First location: 2020/02/18 13:25:49, This location: 2020/02/18 13:57:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

*THE **18** 13:24:47.6, 39.4N±0.6×20.4E±0.9, h0km, M3.1/30, MLh3.1/30*

*PDG **18** 13:24:47.5±0.5, 39.46N×20.29E, h13km, ML3.3/8, Error ellipse: s-maj=0.7km s-min=1.2km az=0.0*

*TIR **18** 13:24:49.8, 39.46N×20.38E, h2km±3km, Ml3.1/2*

ISC 18 13:24:47.4±0.7, 39.41N±0.02×20.42E±0.02, h18km±2km, n98, σ1s08/140, mb4.0/6, 4C-4D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRGA	**Parga**	**0.12**	**188**	P	**Pg**	**13 24 51.8**	**+0.6**
PRGA				S	**Sg**	**13 24 55.0**	**+1.2**
IGT	**Igoumenitsa**	**0.14**	**330**	P	**Pb**	**13 24 50.9**	**-0.5**
IGT				S	**Sb**	**13 24 53.3**	**-0.8**
IGT	**Igoumenitsa**	**0.14**	**330**	P	**Pb**	**13 24 50.5**	**-0.9**
IGT				S	**Sb**	**13 24 53.0**	**-1.0**
LFKM	**Lefkimmi**	**0.28**	**278**	P	**Pg**	**13 24 53.8**	**+0.2**
LFKM				S	**Sg**	**13 24 58.0**	**+0.1**
JAN	**Janina**	**0.41**	**53**	P	**Pg**	**13 24 56.0**	**+0.1**
JAN				S	**Sb**	**13 25 02.6**	**+0.4**
JAN	**Janina**	**0.41**	**53**	P	**Pg**	**13 24 55.9**	**0.0**
JAN				S	**Sb**	**13 25 02.2**	**0.0**
ARTB	**Arta**	**0.50**	**120**	P	**Pg**	**13 24 58.2**	**+0.8**
ARTB				S	**Sn**	**13 25 06.8**	**-0.9**
ART2	**Arta**	**0.51**	**120**	P	**Pn**	**13 24 58.8**	**-1.0**
ART2				S	**Sn**	**13 25 07.3**	**-0.9**
PRMD	**Pramanda**	**0.54**	**77**	P	**Pg**	**13 24 58.5**	**+0.4**
PRMD				S	**Sn**	**13 25 07.6**	**-1.3**
PRMD	**Pramanda**	**0.54**	**77**	P	**Pg**	**13 24 58.5**	**+0.4**
PRMD				S	**Sn**	**13 25 07.5**	**-1.3**
KEK	**Kerkira**	**0.57**	**302**	P	**Pb**	**13 24 58.2**	**-0.7**
KEK				S	**Sn**	**13 25 07.8**	**-1.8**
KEK	**Kerkira**	**0.57**	**302**		**Pb**	**13 24 57.9**	**-1.0**
KEK	**Kerkira**	**0.57**	**302**	P	**Pb**	**13 24 57.9**	**-1.0**
SRN	**Sarande**	**0.57**	**325**	P	**Pb**	**13 24 57.8**	**-1.1**
SRN				S	**Sn**	**13 25 09.1**	**-0.6**
SRN				AML	AML	13 25 13.5	
	3.7nm,0.5s						
SRN	**Sarande**	**0.57**	**325**	P	**Pb**	**13 24 57.6**	**-1.3**
SRN				S	**Sb**	**13 25 05.2**	**-1.6**
TSLK	**Tsoukalades, L**	**0.61**	**163**	P	**Pn**	**13 25 00.2**	**-1.0**
TSLK				S	**Sn**	**13 25 10.2**	**-0.4**
TSLK	**Tsoukalades, L**	**0.61**	**163**	P	**Pg**	**13 24 60.0**	**+0.5**
TSLK				S	**Sn**	**13 25 10.0**	**-0.6**
LKD2	**Lefkada island**	**0.64**	**164**	P	**Pn**	**13 25 00.7**	**-0.9**
LKD2				S	**Sn**	**13 25 12.9**	**+1.4**
LKD2	**Lefkada island**	**0.64**	**164**	P	**Pg**	**13 25 00.5**	**+0.4**
LKD2				S	**Sn**	**13 25 11.3**	**-0.2**
TETR	**Tetrakomo, Epi**	**0.66**	**95**	P	**Pg**	**13 25 01.0**	**+0.5**
TETR				S	**Sn**	**13 25 11.0**	**-1.0**
TETR	**Tetrakomo, Epi**	**0.66**	**95**	P	**Pg**	**13 25 00.9**	**+0.4**
TETR				S	**Sn**	**13 25 11.3**	**-0.7**
NYDR	**Nydri-Lefkada**	**0.72**	**163**	P	**Pg**	**13 25 01.8**	**+0.2**
NYDR				S	**Sn**	**13 25 13.3**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.73**	**171**	P	**Pn**	**13 25 02.1**	**-0.8**
DRAG	**Dragano-Lefkad**	**0.73**	**171**	P	**Pg**	**13 25 02.0**	**+0.2**
DRAG				S	**Sn**	**13 25 13.3**	**-0.2**
AMPL	**Ampelaki**	**0.78**	**128**	P	**Pn**	**13 25 03.6**	**+0.1**
AMPL				S	**Sn**	**13 25 16.4**	**+1.6**
AMPL	**Ampelaki**	**0.78**	**128**	P	**Pn**	**13 25 03.5**	**-0.1**
AMPL				S	**Sn**	**13 25 15.7**	**+0.8**
EVGI	**Lefkada island**	**0.81**	**167**	P	**Pg**	**13 25 03.0**	**-0.1**
EVGI	**Lefkada island**	**0.81**	**167**	P	**Pg**	**13 25 03.1**	**-0.1**
EVGI				S	**Sn**	**13 25 15.8**	**+0.4**

KPRO	**Kipourio**	**0.91 53**	P	**Pn**	**13 25 04.9**	**-0.4**
KPRO			S	**Sn**	**13 25 18.9**	**+0.9**
KPRO	**Kipourio**	**0.91 53**	P	**Pn**	**13 25 05.0**	**-0.4**
KPRO			S	**Sb**	**13 25 16.9**	**+0.5**
FSK	**Fiskardo**	**0.95 173**	P	**Pg**	**13 25 06.5**	**+0.7**
PENT	**Pentalofos**	**0.96 35**	P	**Pb**	**13 25 05.5**	**-0.1**
PENT	**Pentalofos**	**0.96 35**	P	**Pb**	**13 25 04.8**	**-0.8**
PENT			S	**Sb**	**13 25 17.6**	**-0.4**
NEST	**Nestorio**	**1.11 25**	P	**Pb**	**13 25 08.3**	**+0.1**
NEST			S	**Sg**	**13 25 24.4**	**+0.7**
NEST	**Nestorio**	**1.11 25**	P	**Pb**	**13 25 08.5**	**+0.3**
PVO	**Paravola**	**1.17 132**	P	**Pg**	**13 25 10.5**	**+0.6**
PVO			S	**Sg**	**13 25 28.3**	**+3.1**
DMLN	**Damoulianata-K**	**1.17 182**	P	**Pg**	**13 25 10.0**	**0.0**
DMLN			S	**Sg**	**13 25 28.6**	**+3.3**
DMLN	**Damoulianata-K**	**1.17 182**	P	**Pg**	**13 25 09.6**	**-0.4**
EVR	**Evrytania**	**1.18 114**	P	**Pg**	**13 25 12.6**	**+2.3**
VLS	**Valsamata**	**1.23 174**	P	**Pg**	**13 25 10.9**	**-0.3**
VLS	**Valsamata**	**1.23 174**	P	**Pg**	**13 25 10.6**	**-0.7**
VLS			S	**Sg**	**13 25 28.3**	**+0.9**
THL	**Klokotos Trika**	**1.24 82**	P	**Pg**	**13 25 11.9**	**+0.6**
THL	**Klokotos Trika**	**1.24 82**	P	**Pb**	**13 25 10.8**	**+0.5**
KBN	**Korca**	**1.25 13**	P	**Pg**	**13 25 12.8**	**+1.3**
KBN			S	**Sg**	**13 25 27.5**	**-0.3**
VLO	**Vlora**	**1.28 326**	P	**Pg**	**13 25 13.0**	**+0.9**
VLO			S	**Sg**	**13 25 30.7**	**+2.0**
VLO			AML	AML	13 25 31.7	
	2.7nm,0.1s					
RTZL	**Ratzakli, Kefa**	**1.36 168**	P	**Pg**	**13 25 13.6**	**0.0**
KZN	**Kozani**	**1.37 49**	P	**Pg**	**13 25 13.8**	**0.0**
MAKR	**Makrakomi, Fth**	**1.38 106**	P	**Pg**	**13 25 14.7**	**+0.6**
AXS	**Araxos**	**1.42 148**	P	**Pg**	**13 25 14.2**	**-0.6**
ANX	**Ano Chora**	**1.42 124**	P	**Pg**	**13 25 15.6**	**+0.8**
ORTH	**Orthonies,Zaky**	**1.57 172**	P	**Pb**	**13 25 16.2**	**+0.3**
SCTE	**Santa Cesarea**	**1.65 294**	Pn	**Pb**	**13 25 16.0**	**-1.3**
SCTE	**Santa Cesarea**	**1.65 294**	P	**Pn**	**13 25 13.6**	**-1.9**
OHR	**Ohrid**	**1.73 9**	*i* Pn	**Pg**	**13 25 20.4**	**-0.1**
OHR			*i* Sn	**Sg**	**13 25 43.8**	**+0.7**
LIT	**Litokhoron**	**1.74 66**	Pn	**Pn**	**13 25 14.3**	**-2.4**
LIT	**Litokhoron**	**1.74 66**	P	**Pb**	**13 25 19.4**	**+0.7**
KLV	**Kalavryta, Ach**	**1.92 135**	P	**Pb**	**13 25 22.3**	**+0.4**
GUR	**Goura**	**2.10 134**	P	**Pb**	**13 25 24.7**	**-0.3**
GRG	**Griva**	**2.17 44**	P	**Pb**	**13 25 25.1**	**-1.0**
PHP	**Peshkopia**	**2.27 0**	P	**Pb**	**13 25 26.4**	**-1.6**
HORT	**Hortiatis**	**2.37 59**	P	**Pb**	**13 25 27.4**	**-2.2**
VAY	**Valandovo**	**2.52 40**	*i* Pn	**Pb**	**13 25 30.3**	**-1.8**
VAY			*i* Sn	**Sb**	**13 26 02.3**	**-0.4**
ITM	**Ithomi**	**2.52 152**	S	**Sg**	**13 26 11.5**	**+3.1**
ITM	**Ithomi**	**2.52 152**	Pn	**Pn**	**13 25 25.9**	**-1.6**
KNT	**Kendrikon**	**2.58 46**	P	**Pb**	**13 25 30.6**	**-2.6**
SKO	**Skopje**	**2.68 16**	*i* Pn	**Pb**	**13 25 34.1**	**-0.7**
AOS	**Alonnisos**	**2.69 94**	P	**Pn**	**13 25 31.8**	**+2.0**
ULC	**Ulcinj**	**2.71 341**	⇑*i* Pn	**Pn**	**13 25 30.7**	**+0.7**
ULC			*i* Sn	**Sn**	**13 26 03.6**	**+1.2**
TIP	**Timpagrande**	**2.85 267**	Pn	**Pn**	**13 25 32.6**	**+0.5**
OUR	**Ouranopolis**	**2.89 70**	P	**Pb**	**13 25 35.3**	**-3.0**
BUM	**Brajici-Budva**	**3.12 339**	‖*i* Pn	**Pn**	**13 25 35.6**	**-0.1**
BUM			*i* Sn	**Sn**	**13 26 13.3**	**+0.8**
PDG	**Podgorica**	**3.15 344**	‖*i* Pn	**Pn**	**13 25 37.7**	**+1.6**
PDG			*i* Sn	**Sn**	**13 26 14.2**	**+1.0**
CEME	**Cevo**	**3.34 341**	‖*i* Pn	**Pn**	**13 25 39.1**	**+0.3**
CEME			*e*Sn	**Sn**	**13 26 18.8**	**+0.8**
HCY	**Herceg Novi**	**3.37 335**	‖*i* Pn	**Pn**	**13 25 39.9**	**+0.7**
HCY			*i* Sn	**Sn**	**13 26 19.5**	**+0.8**
IVA	**Berane**	**3.48 354**	⇑*i* Pn	**Pn**	**13 25 42.2**	**+1.2**
IVA			*i* Sn	**Sn**	**13 26 23.0**	**+1.4**
KOME	**Kolasin**	**3.51 349**	⇑*i* Pn	**Pn**	**13 25 42.3**	**+1.2**
KOME			*e*Sn	**Sn**	**13 26 22.9**	**+0.7**
CUC	**Castrocucco**	**3.60 281**		**Pn**	**13 25 44.0**	**+1.6**
CEL	**Celeste**	**3.72 253**

CLNB	**Carlsbad**	**0.58**	**12**	P		**Pg**	**13 28 18.4**	**-0.8**
CLNB				S		**Sg**	**13 28 26.5**	**-0.4**
CLNB	**Carlsbad**	**0.58**	**12**	⇑P		**Pg**	**13 28 18.3**	**-0.8**
GDL2	**Guadalupe Moun**	**0.58**	**330**			**Pg**	**13 28 18.3**	**-0.9**
GDL2	**Guadalupe Moun**	**0.58**	**330**	P		**Pg**	**13 28 18.3**	**-0.9**
TPB06	**Permian Basin**	**0.69**	**94**	P		**Pb**	**13 28 21.3**	**-0.6**
TPB06				S		**Sb**	**13 28 31.2**	**-0.2**
CBET	**Carlsbad E Tow**	**0.72**	**2**			**Pg**	**13 28 21.0**	**-0.9**
CBET	**Carlsbad E Tow**	**0.72**	**2**	P		**Pg**	**13 28 21.0**	**-0.9**
TPB03	**Saragosa**	**0.75**	**144**			**Pg**	**13 28 21.9**	**-0.6**
TPB03						**Sb**	**13 28 32.7**	**-0.5**
TPB03	**Saragosa**	**0.75**	**144**	⇑P		**Pg**	**13 28 21.9**	**-0.6**
TPB03				S		**Sb**	**13 28 32.7**	**-0.5**
TPB27	**North of Pyote**	**0.77**	**99**	P		**Pg**	**13 28 22.6**	**-0.3**
TPB27				S		**Sb**	**13 28 33.6**	**-0.2**
TPB01	**Permian Basin**	**0.78**	**164**	⇑P		**Pg**	**13 28 22.0**	**-1.0**
TPB01				S		**Sg**	**13 28 33.1**	**-0.1**
TPB04	**Verhalen**	**0.82**	**128**			**Pg**	**13 28 23.1**	**-0.7**
TPB04						**Sg**	**13 28 34.6**	**0.0**
TPB04	**Verhalen**	**0.82**	**128**	⇑P		**Pg**	**13 28 23.2**	**-0.7**
TPB04				S		**Sg**	**13 28 34.6**	**0.0**
HTMS	**Hat Mesa**	**0.84**	**23**	P		**Pg**	**13 28 23.1**	**-1.1**
HTMS				S		**Sb**	**13 28 35.1**	**-0.7**
TPB16	**Coyonosa**	**0.87**	**131**			**Pg**	**13 28 24.0**	**-0.8**
TPB16	**Coyonosa**	**0.87**	**131**	P		**Pg**	**13 28 24.0**	**-0.8**
TPB16				S		**Sb**	**13 28 36.5**	**-0.2**
TPB19	**West of Imperi**	**0.88**	**116**			**Pg**	**13 28 24.0**	**-1.0**
TPB19	**West of Imperi**	**0.88**	**116**	P		**Pg**	**13 28 24.0**	**-1.0**
TPB19				S		**Sg**	**13 28 36.7**	**+0.2**
TPB15	**Southwest of C**	**0.94**	**121**			**Pg**	**13 28 25.0**	**-1.0**
TPB15	**Southwest of C**	**0.94**	**121**	P		**Pg**	**13 28 25.0**	**-1.0**
TPB15				S		**Sb**	**13 28 38.6**	**0.0**
TPB05	**Hovey Rd**	**0.98**	**142**	P		**Pg**	**13 28 25.8**	**-1.0**
TPB05				S		**Sg**	**13 28 39.5**	**-0.1**
MNHN	**Monahans**	**1.14**	**108**			**Pg**	**13 28 28.0**	**-1.8**
MNHN	**Monahans**	**1.14**	**108**	P		**Pg**	**13 28 28.0**	**-1.8**
MNTX	**Cornudas Mount**	**1.16**	**270**			**Pb**	**13 28 29.1**	**-0.8**
MNTX						**Sb**	**13 28 44.0**	**-0.8**
MNTX				IAML			13 28 45.8	
	5µm,0.3s							
MNTX	**Cornudas Mount**	**1.16**	**270**	P		**Pb**	**13 28 29.1**	**-0.8**
MNTX				S		**Sb**	**13 28 44.0**	**-0.8**
VHRN	**Van Horn**	**1.23**	**222**			**Pg**	**13 28 30.2**	**-1.3**
VHRN						**Sn**	**13 28 48.1**	**+0.5**
VHRN				IAML			13 28 52.5	
	6µm,0.5s							
VHRN	**Van Horn**	**1.23**	**222**	⇑P		**Pg**	**13 28 30.2**	**-1.3**
VHRN				S		**Sn**	**13 28 48.1**	**+0.5**
TPB08	**Permian Basin**	**1.25**	**130**			**Pg**	**13 28 30.4**	**-1.5**
TPB08	**Permian Basin**	**1.25**	**130**	P		**Pg**	**13 28 30.5**	**-1.5**
TPB08				S		**Sg**	**13 28 47.8**	**-0.4**
ODSA	**Odessa**	**1.32**	**71**			**Pn**	**13 28 31.1**	**-1.2**
ODSA						**Sg**	**13 28 49.1**	**-1.5**
ODSA	**Odessa**	**1.32**	**71**	P		**Pn**	**13 28 31.3**	**-1.0**
ODSA				S		**Sg**	**13 28 49.1**	**-1.5**
CPRX	**Cap Rock**	**1.33**	**6**			**Pn**	**13 28 32.1**	**-0.4**
CPRX	**Cap Rock**	**1.33**	**6**	P		**Pn**	**13 28 32.0**	**-0.5**
ALPN	**Alpine**	**1.36**	**166**			**Pn**	**13 28 32.2**	**-0.6**
ALPN						**Sg**	**13 28 50.5**	**-1.2**
ALPN				IAmb_Lg			13 28 51.7	
	comp=Z,757nm,0.9s							
ALPN	**Alpine**	**1.36**	**166**	P		**Pn**	**13 28 32.1**	**-0.8**
ALPN				S		**Sg**	**13 28 50.6**	**-1.2**
TMB04	**Seminole**	**1.60**	**54**	P		**Pn**	**13 28 36.1**	**0.0**
TMB02	**Rankin**	**1.77**	**106**	P		**Pn**	**13 28 39.3**	**+0.9**
TMB02				S		**Sb**	**13 29 02.8**	**+0.2**
TMB06	**Greenwood**	**1.91**	**81**	P		**Pb**	**13 28 42.0**	**-0.8**
TMB06				S		**Sb**	**13 29 07.2**	**+0.5**
TMB05	**Klondike**	**2.06**	**63**	P		**Pb**	**13 28 44.2**	**-1.0**
TMB05				S		**Sb**	**13 29 11.1**	**+0.3**
EPT	**El Paso**	**2.12**	**273**			**Pn**	**13 28 44.0**	**+0.8**
EPT				IAML			13 29 17.9	
	comp=E,2µm,0.3s							
EPT				IAML			13 29 17.9	
	comp=N,2µm,0.9s							
EPT	**El Paso**	**2.12**	**273**	P		**Pb**	**13 28 44.8**	**-1.4**
TX31	**Lajitas Ar. Si**	**2.38**	**172**			**Pn**	**13 28 47.3**	**+0.5**
TX31	**Lajitas Ar. Si**	**2.38**	**172**	P		**Pn**	**13 28 48.2**	**+1.4**
TXAR	**Lajitas Array**	**2.38**	**172**	Pn		**Pb**	**13 28 48.6**	**-2.1**
	comp=N,148nm,0.3s,baz=349,slow=14,SNR=539							
TXAR				Lg	Lg		13 29 22.0	
	comp=N,65nm,0.3s,baz=347,slow=16,SNR=4.0							
TXAR				LR	LR		13 29 35.1	
	comp=N,155nm,19.7s,baz=304,slow=37							
TXAR	**Lajitas Array**	**2.38**	**172**			**Pn**	**13 28 48.0**	**+1.2**
SAND	**Sanderson**	**2.39**	**136**			**Pn**	**13 28 48.5**	**+1.6**
SAND	**Sanderson**	**2.39**	**136**	P		**Pn**	**13 28 48.5**	**+1.6**
SGCY	**Sterling City**	**2.48**	**84**			**Pn**	**13 28 47.2**	**-0.9**
SGCY				IAmb_Lg			13 29 25.5	
	comp=Z,422nm,0.7s							
SGCY	**Sterling City**	**2.48**	**84**	P		**Pn**	**13 28 49.5**	**+1.3**
POST	**Post**	**2.53**	**57**			**Pn**	**13 28 48.6**	**-0.3**
SN07	**Snyder 07**	**2.99**	**62**	IAmb_Lg			13 29 49.3	
	comp=Z,466nm,0.8s							
DKNS	**Dickens**	**3.27**	**52**			**Pn**	**13 28 58.4**	**-0.6**
DKNS				IAmb_Lg			13 29 56.1	
	comp=Z,480nm,1.0s							
121A	**Cookes Peak, D**	**3.30**	**286**	IAML			13 29 58.4	
	comp=E,851nm,0.6s							
AMTX	**Amarillo**	**3.73**	**31**	IAmb_Lg			13 30 11.1	
	comp=Z,391nm,0.9s							
ANMO	**Albuquerque**	**3.83**	**328**	Pn		**Pn**	**13 29 08.8**	**+2.0**
	comp=Z,6.0nm,0.3s,baz=137,slow=13,SNR=29							
ANMO				Pg		**Pb**	**13 29 17.1**	**+1.7**
	comp=Z,16nm,0.3s,baz=152,slow=17,SNR=56							
ANMO				Lg	Lg		13 30 04.6	
	comp=Z,73nm,0.3s,baz=28,slow=22,SNR=21							
ANMO				LR	LR		13 30 41.3	
	comp=Z,362nm,20.0s,baz=136,slow=40 comp=Z,2.7nm,0.4s							
ANMO	**Albuquerque**	**3.83**	**328**	IAML			13 30 09.6	
	comp=Z,677nm,0.8s							
ANMO				IAML			13 30 11.9	
	comp=Z,514nm,1.0s							
ANMO				IAmb_Lg			13 30 12.4	
	comp=Z,589nm,1.1s							
ANMO				IAmb_Lg			13 30 12.5	
	comp=Z,592nm,1.1s							
ANMO	**Albuquerque**	**3.83**	**328**	IAML			13 30 09.2	
	comp=Z,368nm,0.9s							
ANMO				IAML			13 30 09.6	
	comp=Z,356nm,0.8s							
ANMO				IAmb_Lg			13 30 14.2	
	comp=Z,370nm,0.7s							
ABTX	**Abilene, Hawle**	**3.83**	**75**	IAmb_Lg			13 30 14.1	
	comp=Z,287nm,0.9s							
PH02	**Texas Public H**	**4.07**	**25**	IAML			13 30 18.8	
	comp=Z,3µm,0.9s							
PH02				IAML			13 30 20.3	
	comp=Z,3µm,0.8s							
PH02				IAmb_Lg			13 30 25.5	
	comp=Z,385nm,0.7s							
BRDY	**Brady**	**4.31**	**94**	IAmb_Lg			13 30 34.2	
	comp=Z,226nm,0.7s							
HNDO	**Hondo**	**4.63**	**117**	IAmb_Lg			13 30 44.5	
	comp=Z,322nm,0.9s							
RTBA	**Rita Blanca**	**4.85**	**12**	IAmb_Lg			13 30 48.3	
	comp=Z,257nm,0.8s							
WMOK	**Wichita Mounta**	**5.34**	**54**	IAmb_Lg			13 31 05.3	
	comp=Z,278nm,1.0s							
WMOK	**Wichita Mounta**	**5.34**	**54**	IAML			13 31 05.9	
	comp=Z,174nm,0.7s							
WMOK				IAML			13 31 05.9	
	comp=Z,234nm,0.7s							
EF02	**Christine**	**5.57**	**120**	IAmb_Lg			13 31 18.5	
	comp=Z,522nm,1.2s							
435B	**Jarrell**	**5.59**	**98**	IAmb_Lg			13 31 15.9	
	comp=Z,238nm,0.8s							
FW06	**Azle**	**5.62**	**75**	IAmb_Lg			13 31 07.2	
	comp=Z,181nm,1.0s							
TUC	**Tucson**	**5.78**	**278**	IAmb_Lg			13 31 25.9	
	comp=Z,114nm,1.1s							
TUC	**Tucson**	**5.78**	**278**	IAmb_Lg			13 31 25.9	
	comp=Z,116nm,1.1s							
ELIS	**Ellis County**	**5.80**	**40**	IAmb_Lg			13 31 26.2	
	comp=Z,199nm,0.7s							
X34A	**Smith Ranch, M**	**5.95**	**59**	IAmb_Lg			13 31 30.7	
	comp=Z,230nm,1.0s							
Z35A	**Perchaven, San**	**5.95**	**72**	IAmb_Lg			13 31 25.8	
	comp=Z,187nm,1.1s							
735A	**Kenedy**	**6.08**	**116**	IAmb_Lg			13 31 35.6	
	comp=Z,230nm,1.0s							
MLDN	**Muldoon**	**6.29**	**106**	IAmb_Lg			13 31 30.6	
	comp=Z,152nm,0.7s							
OK038	**West end E0370**	**6.47**	**41**	IAmb_Lg			13 31 47.5	
	comp=Z,167nm,0.8s							
HBVL	**Hebbronville**	**6.57**	**133**	IAmb_Lg			13 31 49.4	
	comp=Z,184nm,1.2s							
CROK	**Carrier**	**6.93**	**45**	IAmb_Lg			13 31 51.1	
	comp=Z,132nm,0.9s							
KSCO	**Kaye Shedlock'**	**7.38**	**8**	IAmb_Lg			13 32 15.0	
	comp=Z,142nm,0.8s							
HNVL	**Huntsville, TX**	**7.39**	**95**	IAmb_Lg			13 32 18.8	
	comp=Z,161nm,1.1s							
KAN01	**Argonia South**	**7.51**	**42**	IAmb_Lg			13 32 13.6	
	comp=Z,103nm,1.1s							
Z38A	**Mt. Pleasant**	**7.79**	**76**	IAmb_Lg			13 32 31.0	
	comp=Z,129nm,0.9s							
CBKS	**Cedar Bluff**	**7.92**	**25**	IAmb_Lg			13 32 27.6	
	comp=Z,174nm,0.8s							
NATX	**Nacogdoches**	**7.98**	**87**	IAmb_Lg			13 32 37.7	
	comp=Z,153nm,1.3s							
R32A	**Long Quarter,**	**8.00**	**32**	IAmb_Lg			13 32 41.6	
	comp=Z,112nm,0.8s							
TUL3	**Leonard**	**8.04**	**56**	IAmb_Lg			13 32 31.5	
	comp=Z,163nm,1.0s							
T35A	**Sooner Cattle**	**8.10**	**48**	IAmb_Lg			13 32 35.9	
	comp=Z,120nm,1.1s							
ISCO	**Idaho Springs**	**8.19**	**351**			Pg	13 30 38.8	-5.8
RLO	**Rose Lookout**	**8.70**	**57**	IAmb_Lg			13 32 46.6	
	comp=Z,88nm,0.7s							
U38A	**Grevette**	**9.29**	**57**	IAmb_Lg			13 33 01.6	
	comp=Z,91nm,1.1s							
LPIG	**La Paz**	**9.39**	**218**	LR	LR		13 34 03.5	
	comp=Z,92nm,20.0s,baz=42,slow=38							
PFO	**Pinyon Flats O**	**10.65**	**284**	Pn		**Pn**	**13 30 42.4**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=84,slow=14,SNR=6.1							
PFO				Lg	Lg		13 33 44.1	
	comp=Z,0.1nm,0.3s,baz=191,slow=11,SNR=3.8 comp=Z,0.6nm,0.2s							
PDAR	**Pinedale Array**	**11.89**	**340**	Pn		**Pn**	**13 31 00.2**	**+2.7**
	baz=142,slow=15,SNR=3.9							
PDAR				Pg			13 31 45.2	
	comp=Z,0.2nm,0.3s,baz=141,slow=16,SNR=5.8							
PDAR				Lg	Lg		13 34 22.2	
	comp=Z,0.1nm,0.3s,baz=111,slow=14,SNR=3.5							
PDAR				LR	LR		13 35 51.7	
	comp=Z,90nm,19.8s,baz=136,slow=39 comp=Z,0.5nm,0.8s							
ELK	**Elko**	**12.78**	**318**	Pn		**Pn**	**13 31 13.7**	**+4.2**
	comp=Z,0.1nm,0.3s,baz=127,slow=8.3,SNR=6.2							
ELK				Lg	Lg		13 34 46.2	
	baz=20,slow=22,SNR=2.9							
ELK				LR	LR		13 36 33.5	
	comp=Z,88nm,21.3s,baz=92,slow=40 comp=Z,1.8nm,1.0s							
NVAR	**Mina Array Bea**	**13.48**	**304**	Pn		**P**	**13 31 24.1**	**-4.4**
	baz=124,slow=13,SNR=12							
NVAR				Lg	Lg		13 35 09.8	
	baz=34,slow=22,SNR=1.9							
NVAR				LR	LR		13 37 14.6	
	comp=Z,50nm,19.3s,baz=122,slow=41 comp=Z,1.7nm,0.9s							
DLMT	**Dillon**	**15.19**	**336**	IAmb	IAmb		13 32 21.2	
	comp=Z,13nm,1.5s							
CLTN	**Cedars of Leba**	**15.33**	**69**	P		**P**	**13 31 49.5**	**+0.7**
CLTN				IAmb	IAmb		13 31 50.8	
	comp=Z,4.0nm,0.7s							
SWET	**Sewanee**	**15.50**	**72**	P		**P**	**13 31 50.2**	**-0.6**
SWET				IAmb	IAmb		13 31 52.7	
	comp=Z,13nm,0.9s							
FPAL	**Fort Paine**	**15.69**	**75**	P		**P**	**13 31 52.1**	**-0.7**
FPAL				IAmb	IAmb		13 31 54.4	
	comp=Z,6.4nm,0.7s							
W50A	**Signal Mountai**	**16.00**	**72**	P		**P**	**13 31 55.3**	**-1.0**
W50A				IAmb	IAmb		13 31 58.2	
	comp=Z,18nm,1.0s							
PLID	**Pearl Lake**	**16.31**	**328**	P		**P**	**13 31 59.2**	**-0.7**
LYMT	**Lyon Mountain**	**16.52**	**340**	P		**P**	**13 32 01.3**	**-0.9**
O03E	**Paynes Creek**	**16.73**	**306**	P		**P**	**13 32 04.7**	**+0.3**
O03E				IAmb	IAmb		13 32 21.9	
	comp=Z,18nm,1.3s							
BMO	**Blue Mountains**	**16.74**	**325**	P		**P**	**13 32 04.6**	**+0.1**
MSO	**Missoula**	**16.93**	**336**	IAmb	IAmb		13 32 12.9	
	comp=Z,17nm,1.4s							
TKL	**Tuckaleechee C**	**17.31**	**71**	P		**P**	**13 32 12.1**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=284,slow=4.2,SNR=3.6 comp=Z,2.8nm,0.6s							
TKL	**Tuckaleechee C**	**17.31**	**71**	IAmb	IAmb		13 32 13.4	
	comp=Z,7.0nm,0.8s							
K05A	**Summer Lake**	**17.34**	**314**			**P**	**13 32 10.6**	**-0.7**
K05A				IAmb	IAmb		13 32 29.3	
	comp=Z,13nm,1.2s							
YBH	**Yreka Blue Hor**	**17.98**	**309**	P		**P**	**13 32 20.5**	**+2.2**
	comp=Z,0.4nm,0.9s,baz=98,slow=1.4,SNR=8.2							
H04A	**Detroit Lake**	**19.23**	**318**	P		**P**	**13 32 31.5**	**-0.4**
H04A				IAmb	IAmb		13 32 37.7	
	comp=Z,13nm,1.1s							
NEW	**Newport**	**19.30**	**333**	P		**Pn**	**13 32 34.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=150,slow=8.3,SNR=6.4							
NEW				LR	LR		13 39 25.5	
	comp=Z,70nm,18.8s,baz=121,slow=35 comp=Z,4.5nm,0.9s							
ULM	**Lac du Bonnet**	**19.50**	**16**	P		**Pn**	**13 32 36.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=204,slow=11,SNR=4.8							
ULM				Lg			13 38 12.8	
	comp=Z,0.2nm,0.3s,baz=110,slow=18,SNR=3.2							
ULM				LR	LR		13 40 21.6	
	comp=Z,153nm,19.5s,baz=193,slow=38 comp=Z,3.6nm,0.9s							
ULM	**Lac du Bonnet**	**19.50**	**16**			**P**	**13 32 35.1**	**+0.3**
ULM				IAmb	IAmb		13 32 38.7	
	comp=Z,15nm,1.3s							
BINY	**Binghamton**	**24.64**	**57**	P		**P**	**13 33 28.0**	**-0.3**
SIUN	**Universidad Ur**	**25.14**	**131**	P		**P**	**13 33 32.7**	**-0.3**
SIUN				IAmb	IAmb		13 34 12.9	
	comp=Z,15nm,1.4s							
YKA	**Yellowknife Ar**	**31.55**	**351**	P		**P**	**13 34 30.4**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=161,slow=7.9,SNR=15 comp=Z,1.0nm,0.8s							
DLBC	**Dease Lake**	**32.04**	**334**	LR	LR		13 48 25.2	
	comp=Z,159nm,19.1s,baz=97,slow=38							
BLKN	**Baker Lake**	**33.02**	**6**	P		**P**	**13 34 42.6**	**0.0**
BLKN				IAmb	IAmb		13 34 43.1	
	comp=Z,3.2nm,0.9s							
CUPR	**Culebra, Puert**	**37.36**	**102**	P		**P**	**13 35 20.1**	**-0.5**
FRB	**Frobisher Bay**	**39.01**	**24**	LR	LR		13 52 03.5	
	comp=Z,118nm,18.9s,baz=175,slow=37							
BCAR	**Beaver Creek A**	**39.43**	**334**	P		**P**	**13 35 37.3**	**-0.3**
F30M	**Barrier River**	**40.48**	**342**	P		**P**	**13 35 46.0**	**-0.1**
M24K	**Tolsona, Glenn**	**40.65**	**331**	P		**P**	**13 35 48.1**	**+0.4**
F28M	**Old Crow**	**41.61**	**340**	P		**P**	**13 35 56.0**	**+0.5**
F28M				IAmb	IAmb		13 36 06.6	
	comp=Z,5.8nm,1.4s							
ILAR	**Eielson Array**	**42.25**	**334**	P		**P**	**13 36 02.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=107,slow=9.1,SNR=6.6 comp=Z,0.5nm,0.7s							
RES	**Resolute Bay**	**43.30**	**4**	LR	LR		13 54 31.2	
	comp=Z,142nm,18.3s,baz=20,slow=36							
M14K	**Bethel**	**47.33**	**326**	P		**P**	**13 36 42.1**	**+0.9**
C18K	**Utukok River**	**49.02**	**336**	P		**P**	**13 36 55.3**	**+1.0**
C18K				IAmb	IAmb		13 36 57.4	
	comp=Z,2.1nm,1.1s							
SPIA	**Saint Paul Isl**	**51.27**	**320**	P		**P**	**13 37 11.2**	**-0.1**
BORG	**Borgarnes**	**58.75**	**30**	LR	LR		14 04 29.3	
	comp=Z,88nm,18.3s,baz=180,slow=37							
PB08	**IPOC Station P**	**61.44**	**142**	P		**P**	**13 38 23.6**	**-1.1**
MA2	**Magadan**	**70.35**	**329**	LR	LR		14 14 04.2	
	comp=Z,26nm,19.3s,baz=41,slow=39							
NOA	**NORSAR Array B**	**73.75**	**27**	LR	LR		14 11 50.3	
	comp=Z,50nm,18.4s,baz=0.0,slow=36							
MESJ	**Messejana**	**75.45**	**54**	P		**P**	**13 39 51.3**	**-0.6**
ZALV	**Zalesovo Beam**	**94.36**	**355**	LR	LR		14 25 01.0	
	comp=Z,40nm,19.7s,baz=323,slow=36							

IDC ***18*** *13:31:25.2±2.7,28°.49N×142°.47E,h0km,mb3.8/8, mbtmp3.8/9,ML2.9/1,MS3.4/3,Error ellipse: s-maj=98.7km s-min=15.4km az=80.0*

NEIC ***18*** *13:31:27.0±0.9,28°.57N±0°.03×142°.6E±0°.1,h10km±1km, mb4.4/13,Error ellipse: s-maj=21.9km s-min=3.8km az=102.0*

ISC 18 13:31:28.6±0.9,28°.51N±0°.06×142°.5E±0°.2,h25km,n30, σ0s73/30,mb4.2/15,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.44**	**193**	Pn	**Pn**	**13 31 52.1**	**-1.0**
	6.9nm,0.3s,baz=311,slow=18,SNR=1.1						
JCJ				Sn	**Sb**	**13 32 12.3**	**-0.3**
	53nm,0.3s,baz=65,slow=23,SNR=7.2						
JCJ	**Chichijima**	**1.44**	**193**		**Pb**	**13 31 53.8**	**-1.0**
JCJ					**Sb**	**13 32 13.7**	**+1.0**
MJAR	**Matsushiro Arr**	**8.81**	**337**	Pn	**Pn**	**13 33 33.7**	**-0.6**
	0.1nm,0.3s,baz=146,slow=10,SNR=7.9						
MJAR				Sn	Sn	13 35 02.5	-10
	0.1nm,0.3s,baz=76,slow=15,SNR=7.8 1.4nm,0.5s						
MJAR	**Matsushiro Arr**	**8.81**	**337**		**Pn**	**13 33 32.4**	**-1.9**
MAJO	**Matsushiro**	**8.81**	**337**	Pn	**Pn**	**13 33 32.9**	**-1.4**
KSRS	**Korea Array**	**15.15**	**310**	Pn	**P**	**13 35 06.5**	**+0.6**
	0.1nm,0.3s,baz=115,slow=12,SNR=5.7						
KSRS				LR	LR	13 40 23.3	
	comp=Z,35nm,18.5s,baz=95,slow=36						
ENH	**Enshi**	**28.80**	**282**	P	**P**	**13 37 24.8**	**+0.1**
ENH				IAmb	IAmb	13 37 48.8	
	comp=Z,7.6nm,1.4s						
ULN	**Ulaanbaatar**	**33.54**	**315**	P	**P**	**13 38 06.0**	**-0.4**
ULN				IAmb	IAmb	13 38 08.6	
	comp=Z,5.1nm,1.3s						
SONM	**Songino Array**	**33.94**	**315**	P	**P**	**13 38 10.0**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=102,slow=3.4,SNR=3.6 comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**33.94**	**315**	IAmb	IAmb	13 38 12.6	
	comp=Z,1.4nm,1.2s						
WB0	**Warramunga Arr**	**48.63**	**190**	P	**P**	**13 40 10.8**	**+0.3**
WB0				IAmb	IAmb	13 40 54.1	
	comp=Z,7.5nm,1.2s						
ZALV	**Zalesovo Beam**	**48.64**	**318**	P	**P**	**13 40 10.0**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=92,slow=8.4,SNR=3.7 comp=Z,0.5nm,0.4s						
WRAB	**Tennant Creek**	**48.80**	**190**	P	**P**	**13 40 12.0**	**+0.2**
WRA	**Warramunga Arr**	**48.81**	**190**	P	**P**	**13 40 12.0**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=13,slow=8.5,SNR=10 comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**48.81**	**190**	P	**P**	**13 40 10.8**	**-1.1**
MKAR	**Makanchi Array**	**49.83**	**309**	P	**P**	**13 40 19.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=92,slow=8.7,SNR=6.2						
MKAR				PcP	**PcP**	**13 41 40.3**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=85,slow=5.1,SNR=2.5 comp=Z,0.4nm,0.6s						
MAKZ	**Makanchi**	**50.05**	**309**	P	**P**	**13 40 21.5**	**+0.3**
GSI	**Gunungsitoli**	**50.71**	**246**	P	**P**	**13 40 27.4**	**+0.9**
KURK	**Kurchatov**	**52.23**	**314**	P	**P**	**13 40 37.7**	**+0.2**
KURK				IAmb	IAmb	13 40 50.4	
	comp=Z,5.2nm,1.0s						
KURBB	**Kurchatov Arra**	**52.29**	**314**	P	**P**	**13 40 38.3**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=89,slow=6.8,SNR=23 comp=Z,2.2nm,0.7s						
ASAR	**Alice Springs**	**52.53**	**190**	P	**P**	**13 40 39.9**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=8.7,slow=7.7,SNR=1.2 comp=Z,0.1nm,0.4s						
D20K	**Etivluk River**	**53.23**	**23**	P	**P**	**13 40 44.5**	**-0.1**
D20K				IAmb	IAmb	13 40 57.3	
	comp=Z,5.7nm,0.9s						
D24K	**Happy Valley**	**56.08**	**24**	P	**P**	**13 41 05.3**	**+0.1**
D24K				IAmb	IAmb	13 41 18.7	
	comp=Z,5.3nm,0.8s						
BVAR	**Borovoye Array**	**57.23**	**317**	P	**P**	**13 41 13.8**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=92,slow=8.9,SNR=10 comp=Z,2.1nm,0.6s						
ARMA	**Armidale**	**59.23**	**171**	P	**P**	**13 41 28.8**	**+0.9**
AB31	**Akbulak array**	**64.34**	**314**	P	**P**	**13 42 02.8**	**+0.6**
AB31				IAmb	IAmb	13 42 07.2	
	comp=Z,1.7nm,0.8s						
ABKAR	**Akbulak array**	**64.34**	**314**	P	**P**	**13 42 02.6**	**+0.5**
BRTR	**Keskin Array B**	**85.28**	**313**	P	**P**	**13 44 04.1**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=67,slow=3.7,SNR=2.9 comp=Z,0.7nm,0.9s						
MLR	**Muntele Rosu**	**86.54**	**321**	LR	LR	14 26 20.4	
	comp=Z,76nm,18.4s,baz=298,slow=38						
MMAI	**Mount Meron Ar**	**87.73**	**307**	LR	LR	14 25 59.8	
	comp=Z,22nm,20.8s,baz=246,slow=37						

TAP 18 13:56:11.7,23°.85N×121°.51E,h10km±1km,ML1.2,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.08**	**79**	P	Pg	13 56 14.7	+0.7
TEYL				*e*S	Sg	13 56 17.2	+1.6
SHUL	**Shoufeng**	**0.08**	**145**	*i* P	Pg	13 56 14.6	+0.6
SHUL				*i* S	Sg

	3.0nm,0.3s						
URZ	**Urewera**	**8.06**	**210**	P	**Pn**	**14 08 02.7**	**-1.7**
URZ				S	**Sn**	**14 09 33.3**	**-1.0**
OUZ	**Omahuta**	**8.19**	**240**	P	Pn	14 08 11.1	+5.0
RIGZ	**Rimuhau**	**8.19**	**205**	P	**Pn**	**14 08 04.9**	**-1.3**
RIGZ				S	**Sn**	**14 09 37.1**	**-0.4**
MUGZ	**Murupara**	**8.39**	**211**	P	Pn	14 08 04.1	-4.9
MUGZ				S	**Sn**	**14 09 43.0**	**+0.5**
RTZ	**Ruatahuna**	**8.42**	**209**		**Pn**	**14 08 06.3**	**-3.0**
RPZ	**Rata Peaks**	**15.17**	**212**	LR	LR	14 15 34.6	
	comp=Z,186nm,19.7s,baz=284,slow=38						
MARNC	**Mare, Loyalty**	**16.06**	**304**	Pn	**Pn**	**14 09 53.0**	**-0.1**
EIDS	**Eidsvold**	**27.99**	**274**	P	**P**	**14 11 57.3**	**-0.2**
EIDS				IAmb	IAmb	14 12 32.0	
	comp=Z,8.8nm,1.4s						
CTAO	**Charters Tower**	**34.16**	**280**	P	**P**	**14 12 50.9**	**-0.9**
CTAO				IAmb	IAmb	14 12 56.0	
	comp=Z,7.1nm,1.1s						
BBOO	**Buckleboo**	**38.91**	**255**	P	**P**	**14 13 33.2**	**+1.0**
BBOO				IAmb	IAmb	14 13 51.8	
	comp=Z,45nm,1.5s						
AS31	**Alice Springs**	**43.26**	**268**	P	**P**	**14 14 08.0**	**-0.2**
ASAR	**Alice Springs**	**43.26**	**268**	P	**P**	**14 14 08.9**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=107,slow=7.6,SNR=33						
	comp=Z,2.1nm,0.7s						
ASAR	**Alice Springs**	**43.26**	**268**	P	**P**	**14 14 07.5**	**-0.7**
WRAB	**Tennant Creek**	**44.33**	**273**	P	**P**	**14 14 17.1**	**+0.3**
WRAB				IAmb	IAmb	14 14 33.7	
	comp=Z,3.6nm,0.8s						
WRA	**Warramunga Arr**	**44.34**	**273**	P	**P**	**14 14 17.1**	**+0.3**
	comp=Z,2.9nm,0.4s,baz=112,slow=8.1,SNR=69						
	comp=Z,2.9nm,0.4s						
WRA	**Warramunga Arr**	**44.34**	**273**	P	**P**	**14 14 17.7**	**+0.9**
WB0	**Warramunga Arr**	**44.36**	**273**	P	**P**	**14 14 17.5**	**+0.5**
WB0				IAmb	IAmb	14 14 21.2	
	comp=Z,6.7nm,1.1s						
SOEI	**Soe**	**57.69**	**279**	P	**P**	**14 15 57.9**	**+0.5**
BATI	**Baumata**	**57.97**	**278**	LR	LR	14 39 24.3	
	comp=Z,77nm,18.9s,baz=277,slow=34						
H03S2	**Juan Fernandez**	**79.77**	**123**	T	T	15 47 16.8	
	baz=237,slow=74,SNR=4.5						
H03S1	**Juan Fernandez**	**79.78**	**123**	T	T	15 47 25.9	
	baz=237,slow=74,SNR=5.2						
H03S3	**Juan Fernandez**	**79.79**	**123**	T	T	15 47 25.0	
	baz=237,slow=74,SNR=6.3						
H03N3	**Juan Fernandez**	**79.97**	**123**	T	T	15 47 27.5	
	baz=240,slow=72,SNR=5.5						
H03N2	**Juan Fernandez**	**79.97**	**123**	T	T	15 47 22.9	
	baz=240,slow=72,SNR=4.9						
H03N1	**Juan Fernandez**	**79.99**	**123**	T	T	15 47 26.6	
	baz=240,slow=72,SNR=11						
MKAR	**Makanchi Array**	**118.54**	**310**	PKP	**PKiKP**	**14 24 55.8**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=99,slow=1.2,SNR=1.7						
KURK	**Kurchatov**	**121.85**	**313**		**PKiKP**	**14 25 01.2**	**+1.2**
KURBB	**Kurchatov Arra**	**121.89**	**313**	PKP	**PKiKP**	**14 25 01.2**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=98,slow=1.8,SNR=4.8						
FINES	**FINESS Array B**	**146.11**	**340**	PKPbc	**PKiKP**	**14 25 46.8**	**-1.9**
	comp=Z,2.9nm,0.7s,baz=56,slow=4.0,SNR=9.1						
HFS	**Hagfors**	**150.22**	**348**	PKPbc	**PKiKP**	**14 25 56.3**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=35,slow=5.3,SNR=1.3						
TORD	**Torodi Ar. Bea**	**161.87**	**178**	PKPab	**PKPab**	**14 26 56.2**	**+2.8**
	comp=Z,0.5nm,1.0s,baz=180,slow=5.0,SNR=4.2						

*SSNC **18** 14:07:50.5±1.4, 18°.13N×71°.81W, h26km±12km, MD3.2, ML2.5, Presumed earthquake*
*OSPL **18** 14:07:51.9±0.7, 19°.78N×71°.68W, h27km±4km, ML2.2, Presumed earthquake*
*SDD **18** 14:07:53.2±2.2, 19°.73N×71°.64W, h15km±15km, MD2.6, ML2.2, MW2.4, Presumed earthquake*

ISC 18 14:07:51.7±0.9, 19°.66N±0°.04×71°.53W±0°.03, h15km±7km, n11, σ1§15/23, 4C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LODA1	**ITESIL, Dajabo**	**0.20**	**235**	*i* P	**Pb**	**14 07 57.8**	**+0.8**
LODA1				*e*S	**Sg**	**14 08 01.9**	**+2.6**
LODA1				IAML		14 08 02.2	
	comp=Z,929nm,0.8s						
MCDR	**Montecristi**	**0.26**	**334**	⇑*e*Pg	**Pg**	**14 07 56.8**	**-0.5**
MCDR				⇑*e*Sg	**Sg**	**14 08 00.2**	**-0.9**
MCDR				IAML		14 08 02.4	
	comp=N,565nm,0.1s						
LOPP1	**Punta Rusia, P**	**0.37**	**58**	*i* P	**Pb**	**14 08 00.3**	**+0.3**
LOPP1				*e*S	**Sb**	**14 08 07.7**	**+2.0**
LOPP1				IAML		14 08 13.8	
	comp=Z,172nm,0.4s						
REDR	**Restauracion**	**0.51**	**165**	*e*Pg	**Pb**	**14 08 01.8**	**-0.6**
REDR				*e*Sg	**Sg**	**14 08 08.4**	**-0.2**
REDR				IAML		14 08 08.8	
	comp=N,292nm,0.1s						
LUDR	**Luperon**	**0.59**	**67**	⇑*e*Pg	**Pg**	**14 08 03.0**	**-0.4**
LUDR				⇑*e*Sg	**Sn**	**14 08 15.4**	**+0.3**
SDDR	**Presa de Saban**	**0.71**	**161**	*e*P	**Pn**	**14 08 07.3**	**0.0**
SDDR				*e*S	**Sn**	**14 08 18.3**	**+0.3**
SDDR				IAML		14 08 20.1	
	comp=N,47nm,0.6s						
SDDR				IAML		14 08 20.6	
	comp=N,36nm,0.5s						
SDDR	**Presa de Saban**	**0.71**	**161**	*e*Pg	**Pn**	**14 08 07.4**	**0.0**
SDDR				*e*Sg	**Sn**	**14 08 18.4**	**+0.3**
SDDR				IAML		14 08 20.6	
	comp=N,40nm,0.6s						
SDDR	**Presa de Saban**	**0.71**	**161**	*i* P	**Pn**	**14 08 07.3**	**0.0**
SDDR				*e*S	**Sn**	**14 08 18.1**	**0.0**
SDDR				IAML		14 08 20.3	
	comp=Z,45nm,0.5s						
HATOM	**Hato Mayor del**	**2.21**	**113**	⇓*e*Pg	**Pg**	**14 08 33.1**	**-1.1**
HATOM				*e*Sg	**Sg**	**14 09 02.7**	**-0.2**
HATOM				IAML		14 09 15.7	
	comp=N,26nm,2.1s						
MASC	**Masc**	**2.59**	**282**	*e*P	**Pb**	**14 08 35.6**	**-2.3**
MASC				*e*S	**Sb**	**14 09 09.4**	**-0.1**
MASC				IAML		14 09 12.1	
	comp=E,14nm,0.4s						
MASC				IAML		14 09 17.5	
	comp=N,24nm,0.7s						
QMBU	**Quimbuelo**	**3.13**	**280**	*e*P	**Pn**	**14 08 41.7**	**+1.1**
QMBU				*e*S	**Sn**	**14 09 19.4**	**+1.6**
QMBU				IAML		14 09 23.3	
	comp=E,10nm,0.7s						
QMBU				*e*Sg	**Sb**	**14 09 24.0**	**-1.2**
QMBU				IAML		14 09 30.2	
	comp=N,16nm,0.9s						

IDC 18 14:39:37.1±999.0, 51°.43N×47°.22E, h0km, Error ellipse: s-maj=487.4km s-min=143.2km az=96.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**6.91**	**94**	I	I	15 21 50.0	
	0.3nm,0.5s,baz=282,slow=309,SNR=3.1						
I46RU	**ZALESOVO INFRA**	**22.75**	**69**	I	I	16 57 50.0	
	baz=280,slow=323,SNR=2.0						
I34MN	**SONGINO INFRAS**	**37.62**	**72**	I	I	18 29 10.0	
	baz=298,slow=340,SNR=0.7						

*IDC **18** 15:04:10.1±5.0, 35°.11N×25°.97E, h0km, mb3.4/4, mbtmp3.3/5, ML1.0/1, Error ellipse: s-maj=160.0km s-min=29.8km az=171.0*
*ISK **18** 15:04:10.1, 34°.84N×26°.51E, h5km, ML2.9/17*
*THE **18** 15:04:12.7, 35°.N±8°.×2°.6E±°, h0km±5km, M2.6/6, MLh2.6/6*
*ATH **18** 15:04:14.1, 35°.09N×26°.48E, h5km±2km, ML2.8/11, Manual Solution by A.Andreou First location: 2020/02/18 15:05:58, This location: 2020/09/03 09:28:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*
*AFAD **18** 15:04:15.2, 35°.08N×26°.83E, h7km±1km, ML2.6*

ISC 18 15:04:11.8±1.5, 34°.85N±0°.08×26°.46E±0°.03, h12km±9km, n72, σ1§63/84, mb3.3/4, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.33**	**323**	Pg	**Pg**	**15 04 18.6**	**0.0**
ZKR				Sg	**Sg**	**15 04 24.3**	**+1.3**
ZKR	**Zakros**	**0.33**	**323**	P	**Pg**	**15 04 18.4**	**-0.1**
ZKR	**Zakros**	**0.33**	**323**	P	**Pg**	**15 04 18.5**	**-0.1**
ZKR				S	**Sg**	**15 04 21.5**	**-1.5**
NPS	**Neapolis**	**0.81**	**301**	P	**Pg**	**15 04 27.6**	**+0.1**
NPS				S	**Sg**	**15 04 39.9**	**+1.9**
NPS	**Neapolis**	**0.81**	**301**	P	**Pb**	**15 04 28.0**	**+0.2**
KARP	**Karpathos**	**0.90**	**39**	Pg	**Pg**	**15 04 27.9**	**-1.4**
KARP				Sg	**Sg**	**15 04 42.0**	**+0.9**
KARP	**Karpathos**	**0.90**	**39**	P	**Pg**	**15 04 27.8**	**-1.5**
KARP				S	**Sg**	**15 04 40.6**	**-0.5**
KARP	**Karpathos**	**0.90**	**39**	P	**Pg**	**15 04 27.9**	**-1.4**
IDI	**Anoyia**	**1.36**	**289**	Pn	**Pg**	**15 04 38.1**	**+0.1**
IDI				Sn	**Sg**	**15 04 57.9**	**+2.2**
IDI	**Anoyia**	**1.36**	**289**	P	**Pg**	**15 04 38.2**	**+0.1**
IDI	**Anoyia**	**1.36**	**289**	P	**Pg**	**15 04 38.1**	**+0.1**
THERA	**Ancient Thera,**	**1.71**	**332**	P	**Pn**	**15 04 42.5**	**+1.0**
THERA	**Ancient Thera,**	**1.71**	**332**	P	**Pn**	**15 04 41.6**	**+0.1**
THR9	**Santorini-Faro**	**1.75**	**329**	P	**Pn**	**15 04 43.4**	**+1.4**
THR3	**Thira Island,**	**1.78**	**331**	P	**Pn**	**15 04 43.5**	**+1.1**
SAP3	**Santorini-Thir**	**1.82**	**330**	P	**Pn**	**15 04 43.8**	**+0.8**
ARG	**Arkhangelos**	**1.92**	**44**	Pn	**Pn**	**15 04 44.8**	**+0.4**
ARG	**Arkhangelos**	**1.92**	**44**	P	**Pn**	**15 04 46.7**	**+2.3**
ARG	**Arkhangelos**	**1.92**	**44**	P	**Pn**	**15 04 45.2**	**+0.8**
VAM	**Vamos**	**1.93**	**287**	P	**Pb**	**15 04 46.5**	**-0.5**
GVD	**Gavdhos**	**1.95**	**270**	P	**Pg**	**15 04 48.2**	**-1.0**
YAZI	**Mula-Dat§a-**	**2.00**	**24**	P	**Pn**	**15 04 46.2**	**+0.7**
YAZI				S	**Sn**	**15 05 07.3**	**-3.1**
DAT	**Datca**	**2.08**	**26**	Pn	**Pn**	**15 04 47.7**	**+1.0**
DAT	**Datca**	**2.08**	**26**	P	**Pn**	**15 04 48.5**	**+1.8**
DAT				S	**Sn**	**15 05 12.4**	**-0.2**
IMMV	**Iera Moni Meta**	**2.12**	**287**	P	**Pb**	**15 04 49.9**	**-0.3**
BODT	**Bodrum**	**2.31**	**17**	Pn	**Pn**	**15 04 50.9**	**+1.1**
BDRM	**Kayabasi**	**2.35**	**20**	P	**Pn**	**15 04 52.8**	**+2.5**
TURN	**Turunc**	**2.41**	**37**	Pn	**Pn**	**15 04 52.1**	**+1.1**
DALY	**Dalyan (Mula)**	**2.65**	**42**	Pn	**Pn**	**15 04 55.4**	**+1.0**
MLSB	**Milas**	**2.66**	**23**	Pn	**Pn**	**15 04 55.8**	**+1.2**
YER	**Yerkesik**	**2.72**	**32**	Pn	**Pn**	**15 04 56.4**	**+1.0**
YER	**Yerkesik**	**2.72**	**32**	P	**Pn**	**15 04 57.1**	**+1.7**
IZZE	**Mula-Seydike**	**2.75**	**54**	P	**Pn**	**15 04 56.8**	**+1.0**
IZZE				IAML		15 05 08.0	
	comp=E,30nm,0.4s						
IZZE				S	**Sn**	**15 05 27.4**	**-1.6**
IZZE				IAML		15 05 53.0	
	comp=N,34nm,0.5s						
ANKY	**Antikythira Is**	**2.77**	**292**	P	**Pb**	**15 04 59.1**	**-2.2**
ANKY	**Antikythira Is**	**2.77**	**292**	P	**Pb**	**15 04 58.0**	**-3.3**
SABU	**Mula-Dalaman**	**2.83**	**45**	P	**Pn**	**15 04 58.8**	**+1.8**
SABU				S	**Sn**	**15 05 35.7**	**+4.7**
KSL	**Kastellorizon**	**2.86**	**62**	P	**Pn**	**15 04 58.6**	**+1.3**
KSL	**Kastellorizon**	**2.86**	**62**	P	**Pn**	**15 04 58.8**	**+1.5**
SMG	**Samos**	**2.87**	**6**	P	**Pn**	**15 04 57.4**	**0.0**
AKAS	**Kas**	**2.91**	**61**	Pn	**Pn**	**15 04 58.4**	**+0.3**
AKAS	**Kas**	**2.91**	**61**	P	**Pn**	**15 04 59.1**	**+1.0**
AYDN	**Tasoluk**	**3.03**	**22**	P	**Pn**	**15 05 01.8**	**+2.2**
KTHA	**Kythira Island**	**3.10**	**298**	P	**Pn**	**15 05 03.3**	**+2.6**
CAME	**Cameli-Denizli**	**3.11**	**47**	Pn	**Pn**	**15 05 01.8**	**+0.9**
DNZT	**Denizli-Tavas-**	**3.19**	**40**	P	**Pn**	**15 05 03.9**	**+1.9**
DNZT				S	**Sn**	**15 05 40.6**	**+0.6**
DGB	**zmir**	**3.21**	**6**	P	**Pn**	**15 05 03.1**	**+1.0**
KNIK	**Mula-Seydike**	**3.22**	**51**	P	**Pn**	**15 05 04.2**	**+1.9**
CAEL	**Denizli, Camel**	**3.24**	**45**	P	**Pb**	**15 05 09.8**	**+0.4**
TAVA	**DENIZLI_Tavas**	**3.28**	**37**	P	**Pn**	**15 05 05.4**	**+2.3**
TAVA				S	**Sn**	**15 05 41.3**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**3.30**	**20**	Pn	**Pn**	**15 05 05.2**	**+1.8**
ESEN	**Aydn-Nazilli**	**3.31**	**27**	P	**Pn**	**15 05 05.1**	**+1.6**
ELL	**Elmali**	**3.38**	**55**	Pn	**Pn**	**15 05 05.5**	**+0.9**
VLI	**Veliai**	**3.42**	**304**	P	**Pn**	**15 05 06.1**	**+1.2**
GOLH	**Golhisar**	**3.46**	**46**	P	**Pn**	**15 05 05.7**	**0.0**
APMY	**Acipayam-Deniz**	**3.48**	**41**	Pn	**Pn**	**15 05 07.2**	**+1.3**
KARY	**Karayos**	**3.57**	**333**	P	**Pn**	**15 05 07.8**	**+0.8**
ODEM	**Odemis-Izmir**	**3.66**	**20**	Pn	**Pn**	**15 05 10.2**	**+1.9**
KIRA	**zmir-Kiraz**	**3.69**	**25**	P	**Pn**	**15 05 11.2**	**+2.5**
SULTU	**Buldan**	**3.70**	**30**	P	**Pn**	**15 05 11.6**	**+2.7**
KORT	**Korkueli**	**3.82**	**55**	Pn	**Pn**	**15 05 11.7**	**+1.1**
MANT	**Manisa**	**4.00**	**24**	P	**Pn**	**15 05 14.3**	**+1.1**
VIL2	**Platees**	**4.22**	**323**	P	**Pn**	**15 05 15.7**	**-0.4**
LTK	**Loutraki**	**4.24**	**319**	P	**Pn**	**15 05 17.7**	**+1.5**
USAK	**Uak-Merkez**	**4.37**	**27**	P	**Pn**	**15 05 20.1**	**+2.0**
GUR	**Goura**	**4.53**	**314**	P	**Pn**	**15 05 21.0**	**+0.7**
KLV	**Kalavryta, Ach**	**4.71**	**314**	P	**Pn**	**15 05 23.4**	**+0.6**
ANX	**Ano Chora**	**5.22**	**317**	P	**Pn**	**15 05 30.3**	**+0.5**
BRTR	**Keskin Array B**	**7.51**	**48**	Pn	**Pn**	**15 06 05.4**	**+4.1**
	baz=237,slow=18,SNR=2.3						
	0.4nm,0.7s						
ESDC	**Sonseca Array**	**24.62**	**290**	P	**P**	**15 09 28.1**	**-4.1**
	0.3nm,0.4s,baz=92,slow=8.9,SNR=1.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**40.49**	**51**	P	**P**	**15 11 51.5**	**+1.2**
	0.3nm,0.6s,baz=276,slow=8.9,SNR=5.5						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**43.06**	**56**	P	**P**	**15 12 13.0**	**+1.6**
	0.3nm,0.5s,baz=283,slow=7.1,SNR=6.7						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**44.45**	**46**	P	**P**	**15 12 23.2**	**+0.7**
	0.4nm,0.5s,baz=270,slow=8.5,SNR=2.3						
	0.4nm,0.5s						

*IDC **18** 15:05:14.9±9.4, 21°.47S×67°.92W, h114km±59km, mb3.9/2, mbtmp4.0/4, Error ellipse: s-maj=97.8km s-min=39.0km az=44.0*
*GUC **18** 15:05:14.3±0.7, 21°.48S×68°.49W, h123km±4km, ML3.3*

ISC 18 15:05:13.1±1.0, 21°.47S±0°.05×68°.5W±0°.1, h131km±12km, n15, σ1§20/23, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.75**	**244**	⇑*i* P	**Pn**	**15 05 34.5**	**+0.4**
PB09				*e*S	**Sn**	**15 05 50.3**	**+0.3**
PB09				IAML		15 05 52.4	
	comp=N,629nm,0.7s						
PB01	**IPOC Station P**	**1.00**	**295**	⇑*i* P	**Pn**	**15 05 36.2**	**0.0**
PB01				*e*S	**Sn**	**15 05 53.3**	**-0.4**
PB01				IAML		15 05 55.2	
	comp=E,706nm,0.2s						
PB03	**IPOC Station P**	**1.28**	**243**	⇑*i* P	**Pn**	**15 05 39.3**	**+0.3**
PB03				*e*S	**Sn**	**15 05 58.9**	**+0.1**
PB03				IAML		15 06 00.2	
	comp=E,652nm,0.5s						
PB02	**IPOC Station P**	**1.29**	**277**	*i* P	**Pn**	**15 05 39.4**	**+0.3**
PB02				*e*S	**Sn**	**15 05 59.1**	**+0.3**
PB02				IAML		15 05 59.6	
	comp=N,900nm,0.4s						
PB06	**IPOC Station P**	**1.57**	**218**	⇑*i* P	**Pn**	**15 05 42.5**	**+0.3**
PB06				*e*S	**Sn**	**15 06 04.6**	**+0.2**
PB06				IAML		15 06 05.6	
	comp=E,629nm,0.3s						
HMBC	**Humberstone**	**1.75**	**313**	⇑*i* P	**Pn**	**15 05 44.4**	**+0.1**
HMBC				*e*S	**Sn**	**15 06 07.5**	**-0.5**
HMBC				IAML		15 06 08.4	
	comp=N,604nm,0.4s						
GO01	**Chusmiza**	**1.91**	**340**	*e*P	**Pn**	**15 05 47.5**	**+1.0**
PB11	**IPOC Station P**	**2.01**	**328**	*e*P	**Pn**	**15 05 47.6**	**+0.2**
PB11				*e*S	**Sn**	**15 06 13.4**	**-0.3**
PB11				IAML		15 06 15.0	
	comp=N,284nm,0.4s						
PB05	**IPOC Station P**	**2.08**	**228**	*e*P	**Pn**	**15 05 48.5**	**+0.3**
PB05				*e*S	**Sn**	**15 06 14.7**	**-0.4**
PB05				IAML		15 06 21.7	
	comp=N,144nm,0.3s						
LPAZ	**La Paz**	**5.17**	**4**	P	**Pn**	**15 06 30.6**	**+1.5**
	comp=N,1.0nm,0.4s,baz=180,slow=6.1,SNR=3.2						
LPAZ				S	**Sn**	**15 07 30.0**	**+1.8**
	comp=N,0.9nm,0.5s,baz=182,slow=14,SNR=1.6						
SIV	**San Ignacio**	**8.91**	**54**	P	**Pn**	**15 07 15.0**	**-3.9**
	comp=N,2.7nm,0.4s,baz=229,slow=14,SNR=15						
DBIC	**Dimbokro**	**68.38**	**73**	P	**P**	**15 16 01.8**	**+0.7**
	comp=N,3.7nm,0.8s,baz=237,slow=5.9,SNR=3.1						
	comp=N,3.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.00**	**70**	P	**P**	**15 16 52.5**	**+0.5**
	comp=N,1.3nm,0.7s,baz=253,slow=4.9,SNR=7.5						
	comp=N,1.3nm,0.7s						
BVAR	**Borovoye Array**	**135.56**	**35**	PKhKP	PKPpre	15 24 17.5	
	comp=N,0.3nm,0.4s,baz=290,slow=6.0,SNR=2.0						
MKAR	**Makanchi Array**	**145.40**	**36**	PKPbc	**PKiKP**	**15 24 37.9**	**-1.7**
	comp=N,0.4nm,0.7s,baz=324,slow=3.4,SNR=5.1						

*IDC **18** 15:05:40.7±1.3, 30°.43S×177°.44W, h0km, mb4.2/3, mbtmp4.1/4, ML3.6/1, Error ellipse: s-maj=38.1km s-min=25.4km az=116.0*
*NEIC **18** 15:05:53.5±1.6, 29°.6S±0°.1×177°.9W±0°.1, h72km±5km, mb4.6/14, Error ellipse: s-maj=23.5km s-min=13.7km az=221.0*

ISC 18 15:05:45.3±0.9, 30°.34S±0°.07×177°.5W±0°.1, h33km, n39, σ1§54/29, mb4.4/11, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.14**	**341**	Pn	**Pb**	**15 06 05.4**	**-1.2**
	179nm,0.3s,baz=61,slow=14,SNR=8.3						
RAO				Sn	**Sn**	**15 06 17.5**	**-2.0**
	864nm,0.3s,baz=0.1,slow=21,SNR=7.0						
RAO				LR	LR	15 06 43.2	
	comp=Z,234nm,19.2s,baz=144,slow=50						
RAO	**Raoul Island**	**1.14**	**341**		**Pb**	**15 06 05.0**	**-1.5**
URZ	**Urewera**	**9.08**	**208**	Pn	**Pn**	**15 07 51.4**	**-2.5**
	0.6nm,0.3s,baz=60,slow=16,SNR=11						
URZ				Sn	**Sn**	**15 09 32.1**	**-2.9**
	1.2nm,0.3s,baz=56,slow=22,SNR=8.6						
	4.2nm,0.9s						
NIUE	**Niue**	**13.14**	**33**	Pn	**Pn**	**15 08 49.5**	**-0.2**
DZM	**Mont Dzumac**	**16.59**	**296**	P	**P**	**15 09 36.7**	**-1.1**
EIDS	**Eidsvold**	**28.18**	**272**	P	**P**	**15 11 35.9**	**+1.1**
EIDS				IAmb	IAmb	15 12 08.3	
	comp=Z,13nm,1.4s						
CAN	**Canberra**	**28.52**	**251**	P	**P**	**15 11 40.9**	**+3.1**
CAN				IAmb	IAmb	15 12 05.5	
	comp=Z,73nm,1.5s						
CTAO	**Charters Tower**	**34.23**	**279**	P	**P**	**15 12 30.6**	**+2.4**
CTAO				IAmb	IAmb	15 12 31.6	
	comp=Z,6.9nm,1.0s						
STKA	**Stephens Creek**	**34.93**	**257**	P	**P**	**15 12 36.1**	**+2.1**
	comp=Z,1.6nm,0.4s,baz=99,slow=12,SNR=6.5						
	comp=Z,1.6nm,0.4s						
STKA	**Stephens Creek**	**34.93**	**257**	P	**P**	**15 12 36.5**	**+2.4**
INKA	**Innaminka**	**36.47**	**263**	P	**P**	**15 12 49.8**	**+2.5**
INKA				IAmb	IAmb	15 13 33.5	
	comp=Z,4.3nm,1.4s						
BBOO	**Buckleboo**	**39.41**	**254**	P	**P**	**15 13 13.4**	**+1.3**
BBOO				IAmb	IAmb	15 13 56.4	
	comp=Z,29nm,1.4s						
AS31	**Alice Springs**	**43.56**	**267**	P	**P**	**15 13 46.5**	**+0.2**
ASAR	**Alice Springs**	**43.56**	**267**	P	**P**	**15 13 46.2**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=105,slow=7.4,SNR=34						
ASAR				PcP	**PcP**	**15 15 34.0**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=104,slow=3.5,SNR=1.9						
	comp=Z,0.7nm,0.4s						
WRAB	**Tennant Creek**	**44.53**	**272**	P	**P**	**15 13 54.0**	**-0.1**
WRAB				IAmb	IAmb	15 14 08.3	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**44.54**	**272**	P	**P**	**15 13 54.2**	**0.0**
	comp=Z,2.0nm,0.3s,baz=111,slow=8.1,SNR=48						
	comp=Z,2.0nm,0.3s						
WRA	**Warramunga Arr**	**44.54**	**272**	P	**P**	**15 13 54.7**	**+0.5**
WB0	**Warramunga Arr**	**44.56**	**272**	P	**P**	**15 13 54.6**	**+0.3**
WB0				IAmb	IAmb	15 14 14.3	
	comp=Z,4.9nm,1.1s						
BELA	**Belgrano 2**	**69.79**	**172**	P	P	15 17 01.0	+9.2
KKM	**Kota Kinabalu**	**72.96**	**288**	P	**P**	**15 17 11.4**	**-0.6**
KKM				IAmb	IAmb	15 17 12.7	
	comp=Z,30nm,1.3s						
MG03	**Isla Dawson**	**75.23**	**144**	P	P	15 17 32.9	+8.3
H03S2	**Juan Fernandez**	**80.13**	**123**	T	T	16 47 09.8	
	baz=238,slow=74,SNR=16						
H03S1	**Juan Fernandez**	**80.14**	**123**	T	T	16 47 07.2	
	baz=238,slow=74,SNR=15						
H03S3	**Juan Fernandez**	**80.14**	**123**	T	T	16 47 03.4	
	baz=238,slow=74,SNR=18						
H03N3	**Juan Fernandez**	**80.32**	**123**	T	T	16 47 19.4	
	baz=241,slow=73,SNR=8.7						
H03N2	**Juan Fernandez**	**80.32**	**123**	T	T	16 47 19.4	
	baz=241,slow=73,SNR=9.3						
H03N1	**Juan Fernandez**	**80.33**	**123**	T	T	16 47 18.2	
	baz=241,slow=73,SNR=8.9						
MKAR	**Makanchi Array**	**118.07**	**310**	PKP	**PKiKP**	**15 24 28.9**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=80,slow=2.3,SNR=4.2						
KURK	**Kurchatov**	**121.33**	**314**		**PKiKP**	**15 24 35.2**	**+0.5**
KURBB	**Kurchatov Arra**	**121.36**	**314**	PKP	**PKiKP**	**15 24 35.2**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=102,slow=1.9,SNR=7.2						
BVAR	**Borovoye Array**	**126.67**	**316**	PKP	**PKiKP**	**15 24 46.1**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=67,slow=8.6,SNR=3.9						
H10S2	**ASCENSION HYDR**	**137.59**	**154**	T	T	17 59 26.3	
	baz=204,slow=74,SNR=15						
H10S3	**ASCENSION HYDR**	**137.59**	**154**	T	T	17 59 26.9	
	baz=16,slow=74,SNR=16						
H10N3	**ASCENSION HYDR**	**

PBAR				*e*S	**Sb**	**15 31 40.9**	**-1.4**	
PBAR				*i* IAML		15 31 43.6		
PBAR				*i* IAML		15 31 43.9		
PBAR				*i* IAML		15 31 45.5		
MOE	**Montemor**	**2.66**	**347**	*e*P	**Pn**	**15 31 16.7**	**+1.3**	
MOE				*e*S	**Sn**	**15 31 48.3**	**+0.4**	
MOE				*i* IAML		15 31 50.9		
MOE				*i* IAML		15 31 52.5		
MOE				*i* IAML		15 31 54.6		
ECAB	**El Cabril**	**2.77**	**38**	Pn	**Pn**	**15 31 18.1**	**+1.3**	
ECAB				Sn	**Sn**	**15 31 50.0**	**-0.4**	
ECAB	**El Cabril**	**2.77**	**38**	Pn	**Pn**	**15 31 18.8**	**+1.9**	
ECAB				Sn	**Sb**	**15 31 53.1**	**-2.9**	
ECAB				*i* lVmb_Lg		15 32 07.6		
EBAD	**Badajoz**	**2.86**	**9**	Pn	**Pn**	**15 31 19.5**	**+1.3**	
EBAD				Sn	**Sn**	**15 31 53.2**	**+0.4**	
EBAD	**Badajoz**	**2.86**	**9**	Pn	**Pn**	**15 31 19.1**	**+0.9**	
EBAD				Sn	**Sn**	**15 31 54.4**	**+1.5**	
EBAD				*i* lVmb_Lg		15 32 04.5		
PARRA	**Arraiolos**	**2.91**	**353**	*e*P	**Pn**	**15 31 19.9**	**+1.2**	
PARRA				*e*S	**Sn**	**15 31 54.6**	**+0.7**	
EGOR	**Sierra Gorda,**	**3.05**	**66**	Pn	**Pn**	**15 31 22.6**	**+1.8**	
PMTG	**Montargil**	**3.18**	**351**	*e*P	**Pn**	**15 31 23.7**	**+1.2**	
PMTG				*e*S	**Sn**	**15 32 01.9**	**+1.3**	
PMTG				*i* IAML		15 32 02.6		
PMTG				*i* IAML		15 32 03.0		
PMTG				*i* IAML		15 32 05.5		
EADA	**Adamuz**	**3.29**	**46**	Pn	**Pn**	**15 31 25.7**	**+1.6**	
EADA				Sn	**Sn**	**15 32 02.6**	**-0.9**	
ELGU	**Los Guajares,**	**3.34**	**72**	Pn	**Pn**	**15 31 25.2**	**+0.4**	
PMRV	**Marv??o**	**3.50**	**3**	*e*P	**Pn**	**15 31 28.4**	**+1.4**	
PMRV				*e*S	**Sn**	**15 32 09.3**	**+0.6**	
PMRV				*i* IAML		15 32 10.2		
PMRV				*i* IAML		15 32 10.9		
PSARD	**Sardoal**	**3.70**	**353**	*e*P	**Pn**	**15 31 31.2**	**+1.5**	
MD31	**MD31**	**3.85**	**142**	P	Pn	15 31 28.0	-3.8	
MD31				S	Sn	15 32 07.2	-10	
MDT	**Midelt**	**3.97**	**141**	P	Pn	15 31 30.1	-3.4	
MDT				S	Sn	15 32 10.2	-10	
TISM	**Timmit**	**4.30**	**167**	P	Pn	15 31 31.5	-6.4	
TISM				S	Sn	15 32 13.8	-14	
OUZM	**OUZ**	**5.05**	**172**	P	Pn	15 31 43.9	-4.5	
OUZM				S	Sn	15 32 36.0	-11	
POLO	**Lamas de Olo**	**5.44**	**358**	*e*S	**Sn**	**15 32 56.4**	**-0.2**	
POLO				*i* IAML		15 32 57.3		
ETOB	**Tobarra**	**5.53**	**59**	Pn	**Pn**	**15 31 55.5**	**+0.6**	
ETOB				Sn	**Sn**	**15 32 55.6**	**-3.2**	

*IDC **18** 15:32:53.6±1.7, 3°.03N×128°.80E, h0km, mb3.7/6, mbtmp3.7/6, MS3.3/1, Error ellipse: s-maj=111.4km s-min=17.4km az=72.0*

ISC 18 15:32:59.5±2.0, 2°.9N±0°.2×128°.9E±0°.7, h44km, n7, σ0s34/6, mb3.7/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.13**	**189**	P	**P**	**15 37 41.0**	**+0.3**
	0.9nm,0.7s,baz=21,slow=8.6,SNR=0.8 0.9nm,0.7s						
WRA	**Warramunga Arr**	**23.33**	**167**	P	**P**	**15 38 04.2**	**+0.2**
	0.8nm,0.5s,baz=344,slow=9.2,SNR=9.8 0.8nm,0.5s						
ASAR	**Alice Springs**	**26.87**	**170**	P	**P**	**15 38 35.8**	**-0.4**
	0.7nm,0.5s,baz=352,slow=7.5,SNR=33 0.7nm,0.5s						
NWAO	**Narrogin (SRO)**	**37.33**	**196**	LR	LR	15 56 38.1	
	comp=Z,42nm,19.7s,baz=100,slow=38						
MKAR	**Makanchi Array**	**59.47**	**325**	P	**P**	**15 42 57.9**	**-0.2**
	0.4nm,0.4s,baz=113,slow=8.1,SNR=16 0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**62.31**	**332**	P	**P**	**15 43 17.3**	**+0.2**
	0.3nm,0.3s,baz=121,slow=5.9,SNR=2.3 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.60**	**327**	P	**P**	**15 43 25.8**	**0.0**
	1.1nm,0.6s,baz=127,slow=6.0,SNR=14 1.1nm,0.6s						

IDC 18 15:34:53.9±1.6, 1°.86N×126°.21E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=126.3km s-min=19.4km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.84**	**182**	P	Pn	15 39 27.5	-0.6
	0.1nm,0.3s,baz=11,slow=16,SNR=1.0 1.8nm,0.9s						
WRA	**Warramunga Arr**	**23.09**	**160**	P	P	15 40 00.9	-0.6
	0.5nm,0.5s,baz=338,slow=11,SNR=6.7 0.5nm,0.5s						
ASAR	**Alice Springs**	**26.45**	**164**	P	P	15 40 32.9	0.0
	0.1nm,0.3s,baz=339,slow=8.3,SNR=6.8 0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.80**	**326**	P	P	15 44 54.0	-0.1
	0.3nm,0.4s,baz=118,slow=7.8,SNR=14 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.03**	**328**	P	P	15 45 22.9	+0.1
	0.4nm,0.5s,baz=130,slow=6.9,SNR=9.3 0.4nm,0.5s						

IDC 18 15:44:17.6±3.9, 18°.48N×148°.62E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=153.7km s-min=34.9km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.28**	**199**	P	P	15 52 29.2	-0.1
	0.2nm,0.7s,baz=18,slow=9.3,SNR=2.4 0.2nm,0.7s						
MKAR	**Makanchi Array**	**60.62**	**314**	P	P	15 54 30.1	-0.3
	0.2nm,0.4s,baz=93,slow=7.7,SNR=8.0 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.34**	**318**	P	P	15 54 48.6	+0.1
	1.2nm,0.5s,baz=98,slow=7.1,SNR=16 1.2nm,0.5s						
BVAR	**Borovoye Array**	**68.41**	**321**	P	P	15 55 21.4	+0.3
	0.5nm,0.4s,baz=101,slow=7.5,SNR=2.8 0.5nm,0.4s						
FINES	**FINESS Array B**	**88.23**	**336**	P	P	15 57 10.2	-0.3
	5.9nm,1.1s,baz=65,slow=4.7,SNR=4.3 5.9nm,1.1s						

*IDC **18** 15:49:58.7±1.8, 4°.29S×133°.27E, h0km, mb3.6/2, mbtmp3.6/5, ML3.6/3, Error ellipse: s-maj=68.4km s-min=27.0km az=71.0*

ISC 18 15:49:57.8±1.2, 4°.28S±0°.07×133°.1E±0°.2, h10km, n6, σ3s78/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.85**	**332**	Pn	**Pn**	**15 50 56.1**	**-1.0**
	1.9nm,0.3s,baz=251,slow=22,SNR=9.0						
SIJI				Sn	**Sn**	**15 51 38.5**	**-4.0**
	5.2nm,0.3s,baz=167,slow=22,SNR=5.6						
FITZ	**Fitzroy Crossi**	**15.54**	**207**	Pn	**Pn**	**15 53 38.7**	**+1.5**
	0.3nm,0.3s,baz=26,slow=9.8,SNR=6.2						
FITZ				Sn	**Sn**	**15 56 30.9**	**+1.3**
	0.3nm,0.3s,baz=208,slow=13,SNR=7.4 2.4nm,0.9s						
WRA	**Warramunga Arr**	**15.61**	**176**	Pn	**Pn**	**15 53 39.2**	**+1.0**
	0.2nm,0.3s,baz=356,slow=13,SNR=8.8						
WRA				Sn	**Sn**	**15 56 26.2**	**-5.2**
	0.1nm,0.3s,baz=6.0,slow=22,SNR=7.6 0.4nm,0.6s						
ASAR	**Alice Springs**	**19.29**	**178**	P	**Pn**	**15 54 26.5**	**+2.5**
	0.2nm,0.3s,baz=2.1,slow=11,SNR=15						
ASAR				S	**Sn**	**15 57 54.5**	**-5.9**
	0.4nm,0.8s,baz=356,slow=17,SNR=4.6 0.7nm,0.5s						
CTA	**Charters Tower**	**20.28**	**142**	P	**P**	**15 54 34.3**	**+0.4**
	3.9nm,0.8s,baz=328,slow=12,SNR=4.2 3.9nm,0.8s						
MKAR	**Makanchi Array**	**67.72**	**325**	P	**P**	**16 00 58.9**	**+3.3**
	0.4nm,0.7s,baz=124,slow=7.8,SNR=4.6 0.4nm,0.7s						

NNC 18 16:06:10.3±6.4, 36°.61N×70°.13E, h0km, mb3.7, mpv3.3, 4D, Error ellipse: s-maj=61.4km s-min=47.6km az=133.0, Hindu Kush region

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

KK31	**Karatay Array**	**6.49**	**2**	⇓P	Pn	16 07 48.1	+1.0	
	0.8nm,0.3s,baz=174,slow=11,SNR=16							
KK31				S	Sn	16 09 03.2	+1.4	
	2.0nm,0.5s,baz=147,slow=15,SNR=10							
AAK	**Ala-Archa**	**6.90**	**28**	⇓P	Pn	16 07 52.7	-0.1	
	2.5nm,0.9s							
AAK				⇓S	Sn	16 09 12.8	+0.7	
	9.3nm,1.3s							
AB31	**Akbulak array**	**14.66**	**333**	⇓P	Pn	16 09 36.6	-2.2	
	0.7nm,0.6s							

*NAO **18** 16:08:51.0, 36°.07N×30°.47E, h10km, MB5.0*
*IDC **18** 16:09:21.7±0.4, 39°.04N×27°.87E, h0km, mb4.5/31, mbtmp4.5/47, ML4.3/13, MS4.5/73, Error ellipse: s-maj=9.4km s-min=8.2km az=170.0*
*BJI **18** 16:09:21.6, 38°.64N×27°.89E, h15km, mB5.3/14, mb4.5/58, Ms5.0/38, Ms7 4.8/38*
*AFAD **18** 16:09:22.4, 39°.10N×27°.85E, h15km±1km, MW5.2*
*ISK **18** 16:09:22.3, 39°.11N×27°.83E, h13km, ML5.2/11*
*NEIC **18** 16:09:23.8±1.4, 39°.11N±0°.05×27°.82E±0°.03, h10km±1km, mb4.8/87, Error ellipse: s-maj=8.4km s-min=2.8km az=203.0*
*MED_RC **18** 16:09:23.0±0.2, 39°.07N×27°.76E, h17km, MW5.2/82, Moment Tensor Solution. Mantle waves: s82,c153; Duration: 1s1 Moment tensor: Scale 10^16 Nm; Mrr-1.13±.17; Mθθ 1.94±.16; Mϕϕ-0.82±.10; Mrθ-2.10±.32; Mθϕ-6.02±.12; Mϕr-2.73±.33; Best double couple: M07.11000×10^16 NP1:ϕs87.00000°, δ70.00000°, λ-159.00000°. NP2:ϕs350.00000°, δ71.00000°, λ-21.00000°. Principal axes: T 6.7400, Plg0.0000°, Azm39.0000°; N 0.7400, Plg62.0000°, Azm130.0000°; P -7.4800, Plg28.0000°, Azm308.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MOS **18** 16:09:24.1±1.1, 39°.19N×27°.84E, h22km, mb4.9/33, MS4.4/14 Error ellipse: s-maj=4.7km s-min=3.0km az=90.2*
*MCSM **18** 16:09:24.1±1.7, 39°.N±2°.×2°.8E±°, h10km±13km, mb5.0, mB5.4, MLv5.5, Mw(mB)4.9*
*GII **18** 16:09:24.8±0.0, 38°.83N±0°.02×27°.861E±0°.006, h0km, Mws5.0, confirmed*
*GCMT **18** 16:09:25.8±0.2, 39°.10N±0°.01×27°.77E±0°.01, h12km, MW5.1/134, Moment Tensor Solution. s62,c85; s134,c225; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.18±.11; Mθθ 1.54±.11; Mϕϕ-1.36±.10; Mrθ-1.48±.28; Mθϕ-5.46±.08; Mϕr-1.02±.27; Best double couple: M05.92600×10^16 NP1:ϕs351.00000°, δ75.00000°, λ-8.00000°. NP2:ϕs84.00000°, δ83.00000°, λ-164.00000°. Principal axes: T 5.7920, Plg6.0000°, Azm217.0000°; N 0.2700, Plg73.0000°, Azm109.0000°; P -6.0590, Plg16.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*THE **18** 16:09:25.6, 39°.N±2°.×2°.8E±°, h33km±10km, M5.0/27, MLh5.0/27*
*GFZ **18** 16:09:25.3, 39°.07N×27°.82E, h17km, MW5.1, Moment Tensor Solution. s133 Moment tensor: Mrr0.32; Mθθ 1.01; Mϕϕ-1.34; Mrθ-1.53; Mθϕ-4.29; Mϕr-0.77; Fault plane solution: NP1:ϕs351.00000°, δ71.00000°, λ-3.00000°. NP2:ϕs83.00000°, δ86.00000°, λ-160.00000°. Principal axes: T 4.4400, Plg11.0000°, Azm215.0000°; N 0.6200, Plg70.0000°, Azm92.0000°; P -5.0600, Plg16.0000°, Azm309.0000°;*
*CFUSG **18** 16:09:27.3, 39°.61N×27°.68E, h33km, Mb4.3/6, MD3.7/8, MSH4.0/8*
*SOF **18** 16:09:31.4, 39°.79N±0°.04×27°.43E±0°.04, h6km±4km, MD5.1/9*
*BGR **18** 16:09:38.3, 40°.07N×27°.56E, h33km, mb4.6, Ms4.1*

ISC 18 16:09:24.4±0.6, 39°.09N±0°.01×27°.82E±0°.01, h14km±3km, n949, σ1s59/1024, mb4.8/122, MS4.6/85, 53C-68D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.21**	**182**	P	**Pg**	**16 09 27.7**	**-1.5**
AKHS				S	**Sg**	**16 09 31.9**	**-0.6**
AKHS				IAML		16 09 32.0	
	comp=E,23μm,0.8s						
AKS	**Akhisar**	**0.21**	**182**	Pg	**Pg**	**16 09 27.2**	**-2.0**
AKS				Sg	**Sg**	**16 09 31.4**	**-1.0**
SOMA	**Soma-Manisa**	**0.23**	**286**	Pg	**Pg**	**16 09 27.8**	**-1.7**
SOMA				Sg	**Sg**	**16 09 31.8**	**-1.2**
STEP	**BALIKESIR_Sava**	**0.29**	**344**	P	**Pg**	**16 09 28.6**	**-2.0**
STEP				S	**Sg**	**16 09 33.6**	**-1.2**
STEP				IAML		16 09 35.0	
	comp=N,29μm,1.4s						
STEP				IAML		16 09 35.0	
	comp=E,17μm,0.8s						
GORD	**Gordes-Manisa**	**0.33**	**124**	Pg	**Pg**	**16 09 29.8**	**-1.4**
GORD				Sg	**Sg**	**16 09 35.6**	**-0.3**
GOMA	**Golmarmara-Man**	**0.39**	**169**	Pg	**Pg**	**16 09 30.8**	**-1.5**
GOMA				Sg	**Sg**	**16 09 37.1**	**-0.5**
KTTT	**Salihli**	**0.46**	**152**	P	**Pg**	**16 09 32.0**	**-1.5**
KTTT				S	**Sg**	**16 09 37.7**	**-1.9**
KTTT				IAML		16 09 40.0	
	comp=N,14μm,0.6s						
CAMT	**Merkez**	**0.53**	**229**	P	**Pg**	**16 09 33.9**	**-0.9**
CAMT				S	**Sb**	**16 09 42.7**	**-0.2**
CAMT				IAML		16 09 49.0	
	comp=E,16μm,0.8s						
CAMT				IAML		16 09 50.0	
	comp=N,14μm,0.8s						
BALB	**Balikesir**	**0.55**	**5**		**Pg**	**16 09 33.6**	**-1.6**
BALB	**Balikesir**	**0.55**	**5**	Pg	**Pg**	**16 09 33.4**	**-1.8**
BALB				Sg	**Sg**	**16 09 41.5**	**-1.0**
ZEDA	**zmir-Bergama**	**0.59**	**258**	P	**Pg**	**16 09 34.9**	**-1.2**
ZEDA				IAML		16 09 43.0	
	comp=E,10μm,0.4s						
ZEDA				S	**Sg**	**16 09 43.4**	**-0.5**
ZEDA				IAML		16 09 44.0	
	comp=N,18μm,0.9s						
BKES	**Balkesir-Mer**	**0.64**	**7**	P	**Pg**	**16 09 34.8**	**-2.2**
BKES				S	**Sg**	**16 09 45.2**	**-0.3**
BKES				IAML		16 09 49.0	
	comp=E,4μm,0.6s						
BKES				IAML		16 09 52.0	
	comp=N,4μm,0.7s						
BALY	**Balya**	**0.67**	**346**	P	**Pg**	**16 09 35.8**	**-1.6**
BALY				S	**Sg**	**16 09 44.3**	**-1.9**
BALY				IAML		16 09 49.0	
	comp=E,6μm,0.5s						
BALY				IAML		16 09 50.0	
	comp=N,8μm,0.5s						
DEMI	**Demirci**	**0.70**	**94**	P	**Pg**	**16 09 36.4**	**-1.6**
IZMD	**zmir-Dikili-**	**0.71**	**261**	P	**Pg**	**16 09 36.9**	**-1.3**
IZMD				P	**Pg**	**16 09 37.0**	**-1.3**
IZMD				S	**Sg**	**16 09 45.2**	**-2.3**
IZMD				IAML		16 09 50.0	
	comp=N,7μm,1.0s						
BUHA	**Balikesir, Bur**	**0.71**	**305**	P	**Pg**	**16 09 36.6**	**-1.6**
BUHA				S	**Sb**	**16 09 48.6**	**+0.5**
BUHA				IAML		16 09 50.0	
	comp=N,3μm,0.6s						
BUHA				IAML		16 09 53.0	
	comp=E,6μm,0.8s						
DKL	**Dikili**	**0.71**	**268**	Pg	**Pg**	**16 09 37.2**	**-1.1**
DKL				Sg	**Sg**	**16 09 46.9**	**-0.8**
DURS	**Dursunbey**	**0.71**	**45**	P	**Pg**	**16 09 35.9**	**-2.4**
DURS				S	**Sg**	**16 09 45.7**	**-2.1**
DURS				IAML		16 09 49.0	
	comp=N,3μm,1.0s						
DURS				IAML		16 09 56.0	
	comp=E,3μm,0.6s						
YAYO	**Edremit-Balk**	**0.78**	**312**	Pg	**Pg**	**16 09 37.8**	**-1.7**
BLKS	**Balkesir-Sus**	**0.79**	**8**	P	**Pg**	**16 09 37.2**	**-2.5**
BLKS				P	**Pg**	**16 09 37.3**	**-2.5**
DST	**Dursunbey**	**0.80**	**50**	Pg	**Pg**	**16 09 37.9**	**-2.1**
MANT	**Manisa**	**0.83**	**136**		**Pg**	**16 09 38.9**	**-1.7**
MANT	**Manisa**	**0.83**	**136**	P	**Pg**	**16 09 38.7**	**-1.9**
MANT				S	**Sg**	**16 09 50.3**	**-1.2**
MANT				IAML		16 09 53.0	
	comp=N,5μm,0.8s						
MANT				IAML		16 09 53.0	
	comp=E,6μm,0.7s						
ODEM	**Odemis-Izmir**	**0.84**	**166**	Pg	**Pg**	**16 09 39.2**	**-1.5**
KULA	**Kula-Manisa**	**0.87**	**131**	Pg	**Pg**	**16 09 39.6**	**-1.7**
BAGT	**Foa**	**0.88**	**240**	P	**Pb**	**16 09 40.1**	**-1.3**

BAGT				S	**Sg**	**16 09 51.9**	**-1.0**	
BAGT				IAML		16 09 53.0		
	comp=N,24μm,0.8s							
BAGT				IAML		16 09 56.0		
	comp=E,26μm,1.1s							
SUSR	**Susurluk-Balik**	**0.89**	**13**	Pg	**Pb**	**16 09 39.3**	**-2.4**	
SMAA	**Simav-Kutahya**	**0.90**	**89**	Pg	**Pb**	**16 09 40.4**	**-1.4**	
SIMA	**Simav-Kutahya**	**0.90**	**90**	Pg	**Pb**	**16 09 40.3**	**-1.6**	
AYVA	**Ayvalik**	**0.91**	**284**	P	**Pb**	**16 09 40.6**	**-1.3**	
AYVA				S	**Sb**	**16 09 53.1**	**-0.7**	
AYVA				IAML		16 09 56.0		
	comp=E,18μm,0.6s							
AYVA				IAML		16 09 56.0		
	comp=N,34μm,0.8s							
DUVT	**Torbali**	**0.92**	**199**	P	**Pb**	**16 09 40.3**	**-1.9**	
DUVT				S	**Sb**	**16 09 52.2**	**-2.0**	
DUVT				IAML		16 09 55.0		
	comp=E,5μm,0.6s							
CMHT	**Manyas**	**0.92**	**7**	P	**Pb**	**16 09 40.0**	**-2.2**	
CMHT				S	**Sb**	**16 09 52.9**	**-1.5**	
CMHT				IAML		16 09 55.0		
	comp=N,6μm,0.6s							
CMHT				IAML		16 09 56.0		
	comp=E,6μm,0.3s							
FOCM	**Foa**	**0.93**	**246**	Pg	**Pb**	**16 09 40.7**	**-1.7**	
FOCM				Sg	**Sb**	**16 09 53.7**	**-0.9**	
BLCB	**Balcova**	**0.94**	**221**	Pg	**Pb**	**16 09 40.9**	**-1.5**	
BLCB				Sg	**Sg**	**16 09 55.4**	**+0.7**	
BLCB	**Balcova**	**0.94**	**221**	P	**Pb**	**16 09 40.8**	**-1.5**	
BLCB				S	**Sb**	**16 09 52.6**	**-2.0**	
YENI	**Yenice-Canakka**	**0.95**	**332**	Pg	**Pb**	**16 09 40.9**	**-1.8**	
GONE	**Gonen-Balikesi**	**0.96**	**354**	Pg	**Pb**	**16 09 41.1**	**-1.7**	
IZMR	**zmir-demi**	**0.96**	**174**	P	**Pb**	**16 09 41.2**	**-1.6**	
IZMR				P	**Pb**	**16 09 41.2**	**-1.6**	
IZMR				S	**Sb**	**16 09 53.2**	**-2.1**	
IZMR				IAML		16 09 56.0		
	comp=N,4μm,0.9s							
IZMR				IAML		16 09 56.0		
	comp=E,7μm,0.6s							
KIRA	**zmir-Kiraz**	**1.00**	**153**	P	**Pb**	**16 09 42.0**	**-1.6**	
KIRA				S	**Sb**	**16 09 54.9**	**-1.8**	
KIRA				IAML		16 09 57.0		
	comp=N,6μm,0.7s							
KIRA				IAML		16 09 58.0		
	comp=E,10μm,1.0s							
USAK	**Uak-Merkez**	**1.01**	**112**	P	**Pb**	**16 09 42.1**	**-1.5**	
USAK				IAML		16 09 43.0		
	comp=E,2μm,0.4s							
USAK				S	**Sb**	**16 09 55.0**	**-1.7**	
USAK				IAML		16 09 58.0		
	comp=N,2μm,1.0s							
ATIT	**Gnen**	**1.01**	**349**	P	**Pb**	**16 09 42.0**	**-1.7**	
ATIT				S	**Sb**	**16 09 55.5**	**-1.3**	
ATIT				IAML		16 09 58.0		
	comp=E,7μm,0.8s							
ATIT				IAML		16 09 58.0		
	comp=N,7μm,0.5s							
SHAP	**Saphane-Kutahy**	**1.09**	**93**	Pn	**Pb**	**16 09 43.8**	**-1.3**	
CANM	**Can-anakkale**	**1.09**	**327**	Pn	**Pb**	**16 09 43.3**	**-1.8**	
KRBN	**Karaburun**	**1.11**	**244**	Pn	**Pb**	**16 09 44.4**	**-1.0**	
AYDB	**Zeytinkoy-Aydi**	**1.15**	**177**	Pn	**Pb**	**16 09 44.8**	**-1.3**	
AYDB				Sn	**Sb**	**16 10 01.1**	**+0.2**	
BAYC	**CANAKKALE_Bayr**	**1.18**	**304**	P	**Pn**	**16 09 45.0**	**-1.5**	
BAYC				S	**Sb**	**16 10 00.9**	**-0.9**	
BAYC				IAML		16 10 03.0		
	comp=E,3μm,0.5s							
BAYC				IAML		16 10 04.0		
	comp=N,4μm,0.4s							
KARB	**zmir-Karabur**	**1.18**	**249**	P	**Pn**	**16 09 45.2**	**-1.4**	
KARB				S	**Sb**	**16 10 01.1**	**-0.7**	
KARB				IAML		16 10 04.0		
	comp=N,8μm,1.1s							
KARB				IAML		16 10 04.0		
	comp=E,10μm,0.7s							
NAZL	**Nazilli-Aydin**	**1.19**	**162**	Pn	**Pn**	**16 09 45.3**	**-1.3**	
EMET	**Ktahya-Emet**	**1.20**	**76**	P	**Pn**	**16 09 45.7**	**-1.1**	
EMET				S	**Sb**	**16 10 01.0**	**-1.3**	
EMET				IAML		16 10 08.0		
	comp=N,5μm,0.8s							
EMET				IAML		16 10 12.0		
	comp=E,5μm,1.2s							
PRK	**Paraskevi**	**1.22**	**278**	P	**Pn**	**16 09 46.0**	**-0.9**	
PRK				S	**Sb**	**16 10 01.7**	**-1.0**	
GEDZ	**Gediz**	**1.24**	**92**	Pn	**Pn**	**16 09 46.3**	**-1.0**	
GMLD	**Gumuldur**	**1.24**	**215**	Pn	**Pn**	**16 09 45.9**	**-1.4**	
EDC	**Edincik**	**1.25**	**1**	Pn	**Pn**	**16 09 45.9**	**-1.6**	
ORLT	**Orhaneli**	**1.26**	**41**	Pn	**Pn**	**16 09 46.0**	**-1.7**	
ORLT	**Orhaneli**	**1.26**	**41**	P	**Pn**	**16 09 46.0**	**-1.7**	
ORLT				S	**Sn**	**16 10 04.4**	**-0.1**	
ORLT				IAML		16 10 07.0		
	comp=E,8μm,0.9s							
ORLT				IAML		16 10 07.0		
	comp=N,6μm,0.3s							
DGB	**zmir**	**1.27**	**216**	P	**Pn**	**16 09 46.0**	**-1.7**	
DGB				S	**Sb**	**16 10 03.5**	**-0.9**	
DGB				IAML		16 10 06.0		
	comp=N,3μm,0.7s							
DGB				IAML		16 10 06.0		
	comp=E,7μm,0.7s							
SULTU	**Buldan**	**1.27**	**144**	P	**Pn**	**16 09 46.7**	**-1.3**	
SULTU				S	**Sb**	**16 10 02.9**	**-1.6**	
SULTU				IAML		16 10 07.0		
	comp=E,2μm,0.5s							
SULTU				IAML		16 10 07.0		
	comp=N,2μm,1.0s							
BAND	**Balkesir-Ban**	**1.28**	**9**	P	**Pn**	**16 09 46.2**	**-1.7**	
BAND				S	**Sb**	**16 10 03.6**	**-1.0**	
BAND				IAML		16 10 06.0		
	comp=E,3μm,0.3s							
BAND				IAML		16 10 07.0		
	comp=N,2μm,0.7s							
GDZ	**Gediz**	**1.29**	**90**	P	**Pn**	**16 09 46.6**	**-1.5**	
GDZ				S	**Sb**	**16 10 03.5**	**-1.5**	
GDZ				IAML		16 10 06.0		
	comp=E,2μm,0.3s							
BIGA	**Biga-Canakkale**	**1.29**	**337**	Pn	**Pn**	**16 09 46.9**	**-1.2**	
KUSD	**Kusadasi-Aydin**	**1.30**	**199**	Pn	**Pn**	**16 09 46.8**	**-1.4**	
EZNE	**Ezine-Canakkal**	**1.31**	**301**	Pn	**Pn**	**16 09 46.8**	**-1.4**	
TVSB	**Tavsanli**	**1.32**	**74**	Pn	**Pn**	**16 09 47.6**	**-0.9**	
ZEYE	**Izmir, Urla-Ze**	**1.34**	**231**	P	**Pn**	**16 09 47.3**	**-1.4**	
ZEYE				S	**Sn**	**16 10 05.0**	**-1.3**	
ZEYE				IAML		16 10 08.0		
	comp=E,5μm,0.6s							
ZEYE				IAML		16 10 15.0		
	comp=N,4μm,0.6s							
ESEN	**Aydn-Nazilli**	**1.36**	**162**	P	**Pn**	**16 09 47.8**	**-1.1**	
ESEN				S	**Sn**	**16 10 05.0**	**-1.7**	
ESEN				IAML		16 10 09.0		
	comp=N,1μm,1.4s							
ESEN				IAML		16 10 12.0		
	comp=E,2μm,1.3s							
KRBG	**Karabiga-Canak**	**1.36**	**343**	Pn	**Pn**	**16 09 47.7**	**-1.3**	
GPNR	**Gulpinar-Canak**	**1.36**	**286**	Pn	**Pn**	**16 09 47.7**	**-1.3**	
KOCA	**Canakkale,

GCAM IAML 16 10 13.0
comp=E,2µm,0.7s
GCAM IAML 16 10 13.0
comp=N,3µm,0.8s
CNKL anakkale-Mer 1.48 312 P **Pn** **16 09 49.5 -1.0**
CNKL P **Pn** **16 09 49.6 -1.0**
CNKL S **Sb** **16 10 10.4 +0.2**
CNKL IAML 16 10 15.0
comp=E,4µm,0.7s
CNKL IAML 16 10 18.0
comp=N,4µm,1.6s
PASA Karahalli, USA 1.50 119 P **Pn** **16 09 50.0 -1.0**
PASA S **Sg** **16 10 12.9 +0.2**
PASA IAML 16 10 18.0
comp=E,5µm,0.7s
PASA IAML 16 10 20.0
comp=N,7µm,0.6s
MADA Marmara adas 1.51 352 P **Pn** **16 09 49.8 -1.2**
MADA S **Sn** **16 10 09.2 -1.2**
MADA IAML 16 10 16.0
comp=N,2µm,0.9s
MADA IAML 16 10 17.0
comp=E,4µm,1.3s
MDNY Mudanya-Bursa 1.51 32 Pn **Pn** **16 09 49.7 -1.4**
LPK Lapseki 1.52 328 Pn **Pn** **16 09 50.2 -0.9**
MRMT Marmara Adasi 1.52 353 Pn **Pn** **16 09 50.2 -1.0**
SIGR SIGRI 1.54 275 Pn **Pn** **16 09 50.2 -1.2**
SIGR SIGRI 1.54 275 P **Pn** **16 09 50.2 -1.2**
SIGR S **Sn** **16 10 08.9 -2.2**
KHL Karahalli 1.54 120 Pn **Pn** **16 09 50.3 -1.2**
CHOS Chios island 1.55 244 Pn **Pn** **16 09 50.6 -1.1**
BOZC Bozcaada 1.56 299 Pn **Pn** **16 09 50.5 -1.2**
BOZC Bozcaada 1.56 299 P **Pn** **16 09 50.4 -1.2**
BOZC P **Pn** **16 09 50.5 -1.2**
BOZC S **Sn** **16 10 10.3 -1.5**
BOZC IAML 16 10 14.0
comp=E,4µm,1.1s
BOZC IAML 16 10 15.0
comp=N,3µm,0.7s
IGD Bursa 1.58 42 P **Pn** **16 09 50.5 -1.5**
IGD S **Sb** **16 10 12.8 -0.4**
IGD IAML 16 10 16.0
comp=E,8µm,0.8s
IGD IAML 16 10 19.0
comp=N,7µm,0.6s
SMG Samos 1.59 210 P **Pn** **16 09 50.0 -2.1**
SMG S **Sg** **16 10 14.6 -0.9**
ECEA Canakkale, Ece 1.59 307 P **Pn** **16 09 51.4 -0.7**
ECEA S **Sn** **16 10 11.8 -0.6**
ECEA IAML 16 10 16.0
comp=E,9µm,0.6s
ECEA IAML 16 10 23.0
comp=N,4µm,0.6s
DOMA Ktahya-Doman 1.61 64 P **Pn** **16 09 51.0 -1.4**
DOMA S **Sb** **16 10 14.2 +0.2**
DOMA IAML 16 10 20.0
comp=E,3µm,0.8s
DOMA IAML 16 10 20.0
comp=N,3µm,0.5s
BNAZ Uak-Banaz 1.66 104 P **Pn** **16 09 52.5 -0.7**
BNAZ S **Sb** **16 10 16.1 +0.5**
BNAZ IAML 16 10 22.0
comp=E,1µm,0.5s
BNAZ IAML 16 10 22.0
comp=N,3µm,0.6s
ANDZ Kutahya, Merke 1.66 75 P **Pn** **16 09 52.0 -1.2**
ANDZ S **Sb** **16 10 15.7 -0.1**
ANDZ IAML 16 10 18.0
comp=E,1µm,0.3s
ANDZ IAML 16 10 21.0
comp=N,7µm,0.7s
GELI Tayfur-Gelibol 1.67 322 Pn **Pn** **16 09 52.5 -0.7**
RKY Sarkoy-Tekirda 1.67 343 Pn **Pn** **16 09 52.2 -1.1**
SART Tekirdag 1.67 343 P **Pn** **16 09 52.0 -1.3**
SART S **Sn** **16 10 12.6 -1.9**
SART IAML 16 10 19.0
comp=N,2µm,0.6s
SART IAML 16 10 20.0
comp=E,2µm,1.2s
ARMT Armutlu 1.67 28 Pn **Pn** **16 09 51.8 -1.5**
DDIM Aydin, Didim 1.70 196 P **Pn** **16 09 51.7 -1.9**
DDIM S **Sg** **16 10 18.5 -0.5**
KUTH Kutahya 1.73 79 P **Pn** **16 09 53.3 -0.9**
KUTH S **Sb** **16 10 18.4 +0.6**
KUTH IAML 16 10 24.0
comp=N,5µm,0.7s
KUTH IAML 16 10 25.0
comp=E,6µm,0.5s
DNIZ Denizli-Tavas- 1.75 147 P **Pn** **16 09 52.8 -1.6**
DNIZ S **Sb** **16 10 18.3 +0.1**
DNIZ IAML 16 10 23.0
comp=N,1µm,0.4s
DNIZ IAML 16 10 26.0
comp=E,2µm,0.5s
DIDI Didim-Aydin 1.77 195 Pn **Pn** **16 09 53.7 -1.0**
GOKT Kean, EDRN 1.82 330 P **Pn** **16 09 54.5 -0.7**
GOKT S **Sn** **16 10 18.8 +0.7**
GOKT IAML 16 10 21.0
comp=E,2µm,1.0s
GOKT IAML 16 10 22.0
comp=N,4µm,0.9s
GOAD anakkale-G¶ 1.82 306 P **Pn** **16 09 54.1 -1.2**
GOAD S **Sn** **16 10 17.4 -0.9**
GOAD IAML 16 10 22.0
comp=E,2µm,0.5s
GOAD IAML 16 10 26.0
comp=N,2µm,0.7s
KURT Yalova, Merkez 1.84 35 P **Pn** **16 09 53.6 -1.9**
TAVA DENIZLI_Tavas 1.84 152 P **Pn** **16 09 54.4 -1.2**
TAVA S **Sb** **16 10 21.0 +0.2**
TAVA IAML 16 10 28.0
comp=N,7µm,0.8s
TAVA IAML 16 10 31.0
comp=E,5µm,0.7s
GADA Gvkgeada 1.85 307 Pn **Pn** **16 09 54.4 -1.2**
GADA Gvkgeada 1.85 307 P **Pn** **16 09 54.7 -1.0**
ERIK Erikli-Kesan 1.87 328 Pn **Pn** **16 09 55.2 -0.8**
MULA Mugla, Merkez- 1.88 168 P **Pn** **16 09 54.8 -1.3**
MULA S **Sb** **16 10 20.8 -1.1**
MULA IAML 16 10 28.0
comp=N,8µm,0.6s
MULA IAML 16 10 30.0
comp=E,2µm,1.0s
BOTS Marmara Eregli 1.90 4 Pn **Pn** **16 09 55.1 -1.2**
TKR Tekirdag 1.91 353 Pn **Pn** **16 09 55.2 -1.3**
BILE Bilecik/Merkez 1.91 55 P **Pn** **16 09 55.2 -1.4**
BILE S **Sb** **16 10 22.7 -0.1**
BILE IAML 16 10 29.0
comp=E,1µm,1.0s
CAVI Cavuskoy 1.91 54 Pn **Pn** **16 09 55.4 -1.2**
KESN Edirne-Kesan 1.94 333 P **Pn** **16 09 55.8 -1.5**
INCE Denizli-Bozkur 1.95 135 P **Pn** **16 09 56.1 -1.1**
INCE S **Sg** **16 10 25.9 -1.3**
INCE IAML 16 10 31.0
comp=N,6µm,1.2s
INCE IAML 16 10 40.0
comp=E,5µm,1.1s
AFYO Afyonkarahisar 1.95 98 P **Pn** **16 09 56.6 -0.7**
AFYO S **Sb** **16 10 25.2 +1.1**
AFYO IAML 16 10 34.0
comp=E,2µm,0.7s
AFYO IAML 16 10 37.0
comp=N,2µm,0.8s
YER Yerkesik 1.99 169 Pn **Pn** **16 09 56.4 -1.3**
YER Yerkesik 1.99 169 P **Pn** **16 09 56.2 -1.5**
ENZZ Sultanice-Enez 1.99 320 Pn **Pn** **16 09 56.5 -1.1**
ADVT Abdulvahap 1.99 47 Pn **Pn** **16 09 56.4 -1.3**
YLVH Yalova 1.99 36 Pn **Pn** **16 09 56.5 -1.2**
APMY Acipayam-Deniz 1.99 144 Pn **Pn** **16 09 56.8 -1.0**
KZIL AFYON_Kizioren 2.00 114 P **Pn** **16 09 57.0 -0.9**
KZIL S **Sg** **16 10 29.9 +1.3**
KZIL IAML 16 10 40.0
comp=N,5µm,1.3s
KZIL IAML 16 10 44.0
comp=E,6µm,1.2s
AVCI Avcilar-stanb 2.02 20 Pn **Pn** **16 09 56.9 -1.1**
HYBA Heybeliada-Ist 2.03 28 Pn **Pn** **16 09 56.4 -1.7**
BRGA Burgazada-Ista 2.03 28 Pn **Pn** **16 09 56.9 -1.2**
CRLT Corlu 2.03 358 Pn **Pn** **16 09 57.3 -0.9**
BUYA Buyukada-Istan 2.04 29 Pn **Pn** **16 09 56.9 -1.4**
CAVK Edirne/Enez-Ca 2.04 322 ⇓P **Pn** **16 09 57.8 -0.5**
CAVK ⇑S **Sb** **16 10 25.4 -1.1**
CAVK Edirne/Enez-Ca 2.04 322 P **Pn** **16 09 57.6 -0.7**
TUZL Tuzla-Istanbul 2.04 32 Pn **Pn** **16 09 57.2 -1.2**

BDRM Kayabasi 2.05 189 P **Pn** **16 09 55.8 -2.7**
BDRM S **Sb** **16 10 26.2 -0.5**
BDRM IAML 16 10 34.0
comp=E,4µm,0.6s
BODT Bodrum 2.07 191 P **Pb** **16 10 01.4 -0.3**
MURA Muratl, TEK 2.07 353 P **Pn** **16 09 58.2 -0.5**
ENEZ Enez 2.08 322 Pn **Pn** **16 09 58.6 -0.3**
ENEZ Enez 2.08 322 P **Pn** **16 09 58.5 -0.3**
ENEZ S **Sn** **16 10 24.2 -0.4**
GBZT Gebze 2.10 36 P **Pn** **16 09 57.0 -2.1**
ELBA Catalca 2.10 13 P **Pn** **16 09 56.8 -2.4**
BASM Basmaki-Afyon 2.10 123 Pn **Pn** **16 09 58.2 -1.1**
HISA Bilecik-Osmane 2.12 49 P **Pn** **16 09 57.8 -1.7**
SLVT Silivri 2.15 8 Pn **Pn** **16 09 58.6 -1.3**
BORA Eskisehir 2.18 68 P **Pn** **16 09 59.5 -0.8**
BORA Eskisehir 2.18 68 P **Pn** **16 09 59.1 -1.3**
KAVV Kandilli-Istan 2.18 25 Pn **Pn** **16 09 58.9 -1.4**
ISK Istanbul-Kandi 2.19 25 Pn **Pn** **16 09 58.5 -1.8**
LIA Limnos Island 2.19 292 P **Pn** **16 09 59.8 -0.7**
SHUT Suhut-Afyon 2.20 103 Pn **Pn** **16 10 00.3 -0.3**
CTKS Kestanelik-??a 2.20 14 Pn **Pn** **16 09 59.1 -1.4**
BGKT Bogazkoy 2.21 19 Pn **Pn** **16 09 58.9 -1.7**
SATE Sancaktepe, 2.22 30 P **Pn** **16 09 58.8 -2.0**
UKOP Uzunkopru-Edir 2.23 336 Pn **Pn** **16 10 00.4 -0.5**
HRT Hereke 2.23 39 Pn **Pn** **16 09 59.7 -1.3**
SMTH Samothraki Isl 2.24 309 P **Pn** **16 10 00.1 -0.9**
BRDR BURDUR-Merkez 2.25 128 P **Pn** **16 09 59.6 -1.6**
AFYN Afyon-Dinar-K 2.25 111 P **Pn** **16 10 00.5 -0.9**
GPA Golpazari 2.26 57 Pn **Pn** **16 10 00.1 -1.3**
ALN Alexandroupoli 2.26 323 P **Pn** **16 10 00.6 -0.8**
ALN Alexandroupoli 2.26 323 Pn **Pn** **16 10 00.6 -0.8**
ALN Alexandroupoli 2.26 323 P **Pn** **16 10 00.2 -1.1**
ALN Alexandroupoli 2.26 323 P **Pn** **16 10 00.6 -0.8**
CATL atalca, ST 2.28 10 P **Pn** **16 09 59.8 -1.9**
CAEL Denizli, Camel 2.29 149 P **Pn** **16 10 00.5 -1.5**
GOLH Golhisar 2.31 143 P **Pn** **16 10 00.9 -1.1**
SEMS Kocaeli-K¶rfe 2.31 39 P **Pn** **16 09 59.6 -2.4**
TURN Turunc 2.34 172 Pn **Pn** **16 10 00.9 -1.5**
TURN Turunc 2.34 172 P **Pn** **16 10 00.2 -2.2**
KLYT Kilyos 2.35 23 Pn **Pn** **16 10 01.1 -1.5**
KLYT Kilyos 2.35 23 P **Pn** **16 10 01.2 -1.4**
GEYV SAKARYA_Geyve 2.36 53 P **Pn** **16 10 00.8 -1.9**
SRCK Saricakaya, Es 2.36 66 Pn **Pn** **16 10 01.9 -0.9**
DALY Dalyan (Mula) 2.37 164 Pn **Pn** **16 10 01.9 -0.9**
DAT Datca 2.37 185 Pn **Pn** **16 10 02.1 -0.8**
CTYL Yalikoy Yolu 2.41 8 Pn **Pn** **16 10 01.9 -1.4**
YAZI Mula-Dat§a- 2.43 187 P **Pn** **16 10 00.6 -3.0**
SABU Mula-Dalaman 2.44 158 P **Pn** **16 10 02.8 -1.1**
CAME Cameli-Denizli 2.44 151 Pn **Pn** **16 10 03.6 -0.4**
KURO Afyon-Bolvadin 2.45 97 P **Pn** **16 10 03.2 -0.9**
BYAT Afyon-Bayat 2.46 92 P **Pn** **16 10 03.2 -1.1**
GULT Gulveren 2.47 56 Pn **Pn** **16 10 03.2 -1.1**
ISP Isparta 2.47 120 **Pn** **16 10 03.4 -0.9**
ISP Isparta 2.47 120 Pn **Pn** **16 10 03.4 -0.9**
ISP Isparta 2.47 120 *d iP* **Pn** **16 10 03.2 -1.1**
ISP Isparta 2.47 120 P **Pn** **16 10 03.0 -1.3**
ISP S **Sn** **16 10 32.2 -2.2**
VIZE Kirklareli, Vi 2.48 0 P **Pn** **16 10 02.6 -1.8**
SILT Sile 2.48 34 ⇓P **Pn** **16 10 03.5 -0.9**
SILT ⇑S **Sn** **16 10 36.1 +1.5**
SILT Sile 2.48 34 Pn **Pn** **16 10 03.8 -0.6**
SDAG Sultandagi-AFY 2.50 104 Pn **Pn** **16 10 04.6 -0.2**
CIFT Cifteler, Eski 2.53 83 Pn **Pn** **16 10 04.2 -0.9**
SAUV Serdivan-Sakar 2.53 49 Pn **Pn** **16 10 03.8 -1.3**
PHSR Pinarhisar 2.54 355 Pn **Pn** **16 10 04.3 -1.0**
BAGO Egridir - ISPA 2.57 114 P **Pn** **16 10 04.5 -1.2**
KNIK Mula-Seydike 2.64 148 P **Pn** **16 10 06.2 -0.4**
SUSU Bolu-G¶lynk- 2.64 61 P **Pn** **16 10 04.8 -1.9**
FETY Fethiye 2.65 158 P **Pn** 16 09 55.9 -11
FETY Fethiye 2.65 158 P **Pn** 16 09 57.3 -9.4
KAYN Sakarya, Kayna 2.69 45 P **Pn** **16 10 05.5 -1.7**
RDO Rodhopi 2.70 320 **Pn** **16 10 06.8 -0.6**
RDO Rodhopi 2.70 320 Pn **Pn** **16 10 06.8 -0.6**
RDO Rodhopi 2.70 320 P **Pn** **16 10 06.7 -0.6**
APE Apeiranthos 2.71 223 P **Pn** **16 10 06.2 -1.5**
APE S **Sn** **16 10 37.2 -3.1**
BCK Bucak 2.72 126 Pn **Pn** **16 10 07.2 -0.5**
KIRK Kirklareli 2.74 349 P **Pn** **16 10 05.7 -2.3**
ARMN Kirklareli, Me 2.78 354 P **Pn** **16 10 06.7 -1.9**
BUCA Burdur, Bucak- 2.78 128 P **Pn** **16 10 08.1 -0.5**
YVAC Isparta, Yalva 2.80 106 P **Pn** **16 10 08.4 -0.4**
THAS Thassos island 2.83 303 P **Pn** **16 10 07.8 -1.3**
UCAS Afyonkarahisar 2.85 99 P **Pn** **16 10 08.8 -0.7**
BTAS Taskesti 2.86 58 P **Pn** **16 10 08.0 -1.6**
KARY Karystos 2.86 249 P **Pn** **16 10 07.8 -1.8**
ELL Elmali 2.86 144 **Pn** **16 10 09.8 +0.1**
ELL Elmali 2.86 144 Pn **Pn** **16 10 09.3 -0.5**
ELL Elmali 2.86 144 P **Pn** **16 10 09.9 +0.1**
EDRB Edirne 2.87 344 Pn **Pn** **16 10 08.8 -0.9**
IZZE Mula-Seydike 2.88 157 P **Pn** **16 10 09.2 -0.6**
ARG Arkhangelos 2.88 175 **Pn** **16 10 08.6 -1.3**
ARG Arkhangelos 2.88 175 Pn **Pn** **16 10 09.6 -0.3**
ARG Arkhangelos 2.88 175 P **Pn** **16 10 08.5 -1.4**
ARG Arkhangelos 2.88 175 P **Pn** **16 10 08.6 -1.3**
KORT Korkueli 2.89 136 Pn **Pn** **16 10 09.9 -0.2**
KORT Korkueli 2.89 136 P **Pn** **16 10 10.0 -0.2**
SVRH Sivrihisar-ESK 2.89 82 Pn **Pn** **16 10 09.3 -0.8**
SAHE Sakarya_HENDEK 2.92 52 ⇑P **Pn** **16 10 09.9 -0.5**
SAHE Sakarya_HENDEK 2.92 52 P **Pn** **16 10 09.0 -1.4**
MDUB Mudurnu 2.94 61 **Pn** **16 10 09.9 -0.9**
MDUB Mudurnu 2.94 61 Pn **Pn** **16 10 10.1 -0.7**
UVEZ Uvezbeli-DUZCE 2.98 52 Pn **Pn** **16 10 10.2 -1.0**
AOS Alonnisos 3.07 273 P **Pn** **16 10 12.3 -0.2**
ANTB Antalya 3.13 134 Pn **Pn** **16 10 13.0 -0.3**
KDZ Kurdzhali 3.17 324 P **Pn** **16 10 10.8 -3.0**
DOGA KONYA_Doganhis 3.17 107 P **Pn** **16 10 13.4 -0.6**
KAVA Kavala 3.17 308 P **Pn** **16 10 12.9 -1.0**
AKAS Kas 3.19 153 **Pn** **16 10 14.3 +0.1**
AKAS Kas 3.19 153 Pn **Pn** **16 10 14.2 0.0**
AKAS Kas 3.19 153 P **Pn** **16 10 13.7 -0.5**
OUR Ouranopolis 3.21 294 Pn **Pn** **16 10 13.6 -0.8**
OUR Ouranopolis 3.21 294 P **Pn** **16 10 13.3 -1.1**
DION Dionisos Attik 3.21 253 P **Pn** **16 10 13.4 -1.1**
YUVA Yuva-Kibriscik 3.25 65 Pn **Pn** **16 10 14.5 -0.5**
KSL Kastellorizon 3.25 154 P **Pn** **16 10 14.9 -0.1**
PTL Penteli 3.27 253 P **Pn** **16 10 14.4 -0.9**
THERA Ancient Thera, 3.30 215 P **Pn** **16 10 13.6 -2.0**
SNTS Nea Kammeni, S 3.30 215 P **Pn** **16 10 14.5 -1.2**
KIBS BOLU 3.38 66 P **Pn** **16 10 15.1 -1.7**
KDHN Kadinhani 3.40 98 P **Pn** **16 10 16.4 -0.7**
BOLU Bolu-Merkez-Mu 3.41 59 P **Pn** **16 10 16.1 -1.0**
DIM Dimitrovgrad 3.41 331 P **Pn** **16 10 16.3 -0.8**
DIM Dimitrovgrad 3.41 331 P **Pn** **16 10 16.7 -0.4**
AKUM Antalya-Kumluc 3.41 143 P **Pn** **16 10 17.0 -0.2**
POLA Polatl-ANKAR 3.42 78 Pn **Pn** **16 10 16.9 -0.5**
RUZG Kolk¶y-BOLU 3.46 61 Pn **Pn** **16 10 17.5 -0.5**
SEDI Konya, Seydise 3.50 117 P **Pn** **16 10 17.9 -0.7**
RZN Rozhen 3.51 319 P **Pn** **16 10 18.3 -0.3**
RZN Rozhen 3.51 319 P **Pn** **16 10 18.6 -0.1**
JMB Yambol 3.53 344 P **Pn** **16 10 18.3 -0.5**
KARP Karpathos 3.58 189 **Pn** **16 10 18.6 -1.0**
KARP Karpathos 3.58 189 Pn **Pn** **16 10 19.3 -0.2**
KARP Karpathos 3.58 189 P **Pn** **16 10 18.8 -0.7**
KARP Karpathos 3.58 189 P **Pn** **16 10 19.1 -0.4**
KARP S **Sn** **16 11 04.1 +2.5**
SEYD Seydisehir-KON 3.58 117 Pn **Pn** **16 10 19.6 0.0**
PLG Polygyros 3.61 292 P **Pn** **16 10 19.5 -0.5**
LADK Ladik-KONYA 3.67 103 Pn **Pn** **16 10 20.5 -0.3**
BCAM Yenicaga 3.69 61 P **Pn** **16 10 19.6 -1.5**
KONT Konya--Tatoy 3.74 106 Pn **Pn** **16 10 22.0 +0.3**
KONT Konya--Tatoy 3.74 106 P **Pn** **16 10 21.6 -0.1**
NVR Nevrokopi 3.78 308 P **Pn** **16 10 21.6 -0.6**
DEVR Zonguldak/Devr 3.78 56 P **Pn** **16 10 20.6 -1.7**
SRS Serrai 3.82 303 P **Pn** **16 10 22.0 -0.9**
PLD Plovdiv 3.84 323 Pn **Pn** **16 10 22.7 -0.4**
PLD Plovdiv 3.84 323 P **Pn** **16 10 22.8 -0.4**
PLD Plovdiv 3.84 323 P **Pn** **16 10 22.9 -0.2**
LOD Lodumlu 3.90 77 Pn **Pn** **16 10 23.9 -0.1**
KKUL Konya-Kulu 3.96 87 P **Pn** **16 10 24.2 -0.7**
MMB Musomishta 3.96 309 P **Pn** **16 10 24.4 -0.4**
MMB Musomishta 3.96 309 P **Pn** **16 10 24.7 -0.1**
CHBY Cihanbeyli 3.99 96 Pn **Pn** **16 10 25.2 0.0**
KULU Kulu 4.03 89 Pn **Pn** **16 10 25.8 0.0**
ALIN Konya, Altinte 4.03 100 P **Pn** **16 10 24.5 -1.4**
AFSR Afar-Bala (An 4.09 83 Pn **Pn** **16 10 26.5 -0.1**
ELND Elena 4.11 340 ⇓P **Pn** **16 10 26.7 0.0**
ZKR Zakros 4.17 198 Pn **Pn** **16 10 27.9 +0.2**
LIT Litokhoron 4.24 285 **Pn** **16 10 27.3 -1.3**
LIT Litokhoron 4.24 285 P **Pn** **16 10 28.5 -0.2**

LIT Litokhoron 4.24 285 P **Pn** **16 10 27.3 -1.3**
HDMB Hadim 4.25 119 Pn **Pn** **16 10 28.9 0.0**
AGG Agios Georgios 4.28 271 P **Pn** **16 10 29.0 -0.1**
KNT Kendrikon 4.30 300 P **Pn** **16 10 29.3 -0.2**
YALI Yalozu-CANKI 4.30 66 Pn **Pn** **16 10 29.5 -0.1**
LOZB Loznitsa 4.37 348 ⇓P **Pn** **16 10 30.1 -0.3**
PGB Panagyurishte 4.40 322 P **Pn** **16 10 30.7 -0.1**
IDI Anoyia 4.46 213 P **Pn** **16 10 30.3 -1.4**
IDI Anoyia 4.46 213 Pn **Pn** **16 10 30.3 -1.4**
61nm,0.7s,baz=35,slow=12,SNR=52
IDI Sn **Sn** **16 11 20.9 -2.6**
22nm,0.3s,baz=307,slow=12,SNR=3.7
IDI Lg Lg 16 11 43.1
15nm,0.3s,baz=355,slow=11,SNR=3.4
IDI LR LR 16 12 38.2
comp=Z,5µm,21.1s,baz=20,slow=44
IDI Anoyia 4.46 213 **Pn** **16 10 29.7 -2.0**
SERE Sereflikochisa 4.47 90 Pn **Pn** **16 10 32.1 +0.2**
PVL Pavlikeni 4.50 334 P **Pn** **16 10 31.8 -0.3**
KKB Krupnik 4.51 309 P **Pn** **16 10 32.4 +0.1**
BR105 Keskin Array S 4.53 80 P **Pn** **16 10 32.2 -0.5**
BR106 Keskin Array S 4.53 80 P **Pn** **16 10 31.5 -1.2**
BR131 Keskin Array S 4.55 80 **Pn** **16 10 32.2 -0.7**
BR131 Keskin Array S 4.55 80 *d iP* **Pn** **16 10 32.9 0.0**
BR131 Keskin Array S 4.55 80 P **Pn** **16 10 32.9 0.0**
SNR=64
BR131 S **Sn** **16 11 23.7 -2.0**
BRTR Keskin Array B 4.55 80 Pn **Pn** **16 10 32.9 0.0**
10nm,0.3s,baz=253,slow=13,SNR=257
BRTR Pg **Pb** **16 10 46.1 +2.0**
9.8nm,0.3s,baz=257,slow=16,SNR=12
BRTR Sn **Sn** **16 11 22.6 -3.1**
11nm,0.3s,baz=269,slow=17,SNR=3.6
BRTR Lg Lg 16 11 45.2
17nm,0.3s,baz=260,slow=25,SNR=10
BRTR LR LR 16 12 33.5
comp=Z,9µm,19.0s,baz=266,slow=42
30nm,0.3s
BRTR Keskin Array B 4.55 80 **Pn** **16 10 32.5 -0.5**
GAZI Gazipasa 4.57 127 Pn **Pn** **16 10 33.4 +0.3**
RAZG Razgrad 4.58 348 ⇑P **Pn** **16 10 32.9 -0.3**
VAY Valandovo 4.60 301 *i* Pn **Pn** **16 10 33.5 0.0**
KIRS Kirsehir-Merke 4.74 88 ⇑P **Pn** **16 10 36.1 +0.5**
MANR Mangalia 4.75 7 ⇓P **Pn** **16 10 36.2 +0.6**
CIDE Kastamonu/Cide 4.80 53 ⇓P **Pn** **16 10 36.0 -0.2**
PLVB Pleven 4.92 332 ⇑P **Pn** **16 10 37.6 -0.3**
ILGA Ilgaz 4.92 65 **Pn** **16 10 37.7 -0.5**
VTS Vitosha 4.95 317 P **Pn** **16 10 38.4 -0.1**
EFOR EFORIE 5.02 7 ⇓P **Pn** **16 10 39.9 +0.7**
ICOR Ion Corvin 5.02 360 ⇓P **Pn** **16 10 38.9 -0.4**
ITM Ithomi 5.03 249 **Pn** **16 10 39.6 +0.3**
MFTR Murfatlar 5.10 5 ⇑P **Pn** **16 10 39.8 -0.6**
TIRR Tirgusor 5.38 5 **Pn** **16 10 42.9 -1.2**
TIRR Tirgusor 5.38 5 ⇓P **Pn** **16 10 43.4 -0.8**
TIRR Tirgusor 5.38 5 P **Pn** **16 10 43.4 -0.8**
TIRR Tirgusor 5.38 5 P **Pn** **16 10 43.2 -1.0**
2.3nm3µm233nm,0.8s
COPA Copaceanca 5.40 340 ⇑P **Pn** **16 10 44.4 -0.1**
BZK Bozkurt 5.51 57 ⇑P **Pn** **16 10 45.0 -1.0**
VLAD Vladila 5.53 333 ⇑P **Pn** **16 10 46.1 -0.2**
SKO Skopje 5.65 303 *i* Pn **Pn** **16 10 48.5 +0.6**
VALD Valchedram 5.65 326 P **Pn** **16 10 47.3 -0.7**
SULR 5.70 349 ⇑P **Pn** **16 10 47.9 -0.7**
JURR Jurilovca 5.72 8 ⇓P **Pn** **16 10 48.7 -0.2**
OHR Ohrid 5.75 293 *i* Pn **Pn** **16 10 50.7 +1.3**
TPGR Topolog 5.78 4 ⇑P **Pn** **16 10 49.2 -0.5**
HUMR Humele 5.83 340 ⇑P **Pn** **16 10 49.8 -0.6**
BLKB Belogradchik 5.96 321 ⇓P **Pn** **16 10 51.9 -0.3**
BAIL Bailesti 5.96 327 ⇓P **Pn** **16 10 52.8 +0.6**
CSS Mathiatis 6.03 131 **Pn** **16 10 52.3 -0.9**
CSS Mathiatis 6.03 131 P **Pn** **16 10 52.7 -0.5**
0.6nm2µm195nm,0.8s
CSS Mathiatis 6.03 131 P **Pn** **16 10 51.6 -1.6**
CSS S **Sn** **16 11 58.6 -3.6**
CFR Carcaliu 6.08 2 ⇓P **Pn** **16 10 53.0 -0.9**
CFR Carcaliu 6.08 2 P **Pn** **16 10 52.9 -0.9**
ISR Istrita 6.09 351 ⇑P **Pn** **16 10 54.9 +0.8**
ISR Istrita 6.09 351 P **Pn** **16 10 54.9 +0.8**
TLCR 6.13 7 ⇑P **Pn** **16 10 54.5 -0.1**
TLCR 6.13 7 P **Pn** **16 10 54.4 -0.1**
KEK Kerkira 6.25 278 **Pn** **16 10 56.3 +0.1**
GRER 6.31 355 ⇓P **Pn** **16 10 58.0 +1.0**
PUNG Punghina 6.34 326 ⇓P **Pn** **16 10 56.5 -0.9**
SCHLR Schela 6.37 0 ⇓P **Pn** **16 10 57.5 -0.3**
GIUM Giurgiulesti 6.39 2 ⇑P **Pn** **16 10 57.7 -0.4**
NEHR Nehoiu 6.43 350 ⇓P **Pn** **16 10 59.6 +0.9**
NEGRR Negrea 6.44 0 ⇑P **Pn** **16 10 58.8 +0.1**
IZVR Izvoarele 6.45 360 ⇑P **Pn** **16 10 58.7 -0.1**
BOVS Bovan 6.46 317 ⇑P **Pn** **16 10 59.4 +0.3**
TUDR 6.50 359 ⇑P **Pn** **16 11 00.4 +0.9**
BISRR Bisoca 6.50 353 ⇓P **Pn** **16 11 00.7 +1.0**
BISRR Bisoca 6.50 353 P **Pn** **16 11 00.9 +1.2**
11nm16µm1µm,0.9s
TATR Tatarca 6.50 1 ⇓P **Pn** **16 10 59.1 -0.5**
MLR Muntele Rosu 6.54 348 Pn **Pn** **16 11 01.2 +0.9**
9.5nm,0.3s,baz=125,slow=5.0,SNR=41
MLR Sn **Sn** **16 12 12.5 -2.3**
baz=276,slow=24
MLR Lg Lg 16 12 50.8
5.2nm,0.3s,baz=232,slow=17,SNR=3.1
MLR Muntele Rosu 6.54 348 **Pn** **16 10 59.9 -0.4**
MLR Muntele Rosu 6.54 348 ⇓P **Pn** **16 11 00.6 +0.3**
MLR Muntele Rosu 6.54 348 P **Pn** **16 11 01.2 +0.9**
4.6nm5µm410nm,0.9s
SRE Strehaia 6.54 330 ⇑P **Pn** **16 11 00.1 -0.2**
SRE Strehaia 6.54 330 P **Pn** **16 11 00.0 -0.2**
SCTR Scanteiesti 6.58 1 ⇓P **Pn** **16 11 00.2 -0.4**
VOIR 6.66 343 ⇑P **Pn** **16 11 01.3 -0.6**
VOIR 6.66 343 P **Pn** **16 11 01.3 -0.6**
VOIR 6.66 343 P **Pn** **16 11 01.5 -0.4**
1.4nm2µm117nm,0.7s
ODBI Odobesti 6.69 355 ⇓P **Pn** **16 11 03.2 +1.0**
ARR Arges 6.70 340 ⇑P **Pn** **16 11 02.6 +0.2**
VLDR Vladesti 6.75 2 ⇑P **Pn** **16 11 02.6 -0.4**
VARL Varlezi 6.80 0 ⇑P **Pn** **16 11 04.2 +0.5**
PLOR Plostina 6.81 353 ⇑P **Pn** **16 11 04.7 +0.8**
PLOR Plostina 6.81 353 P **Pn** **16 11 04.6 +0.8**
VRI Vrincioaia 6.82 354 ⇑P **Pn** **16 11 04.5 +0.6**
VRI Vrincioaia 6.82 354 P **Pn** **16 11 04.5 +0.6**
VRI Vrincioaia 6.82 354 P **Pn** **16 11 04.9 +1.0**
4.2nm4µm411nm,0.9s
COVR Voineasa-Covas 6.85 350 ⇓P **Pn** **16 11 05.5 +1.0**
GHRR 6.97 358 ⇑P **Pn** **16 11 06.5 +0.5**
SEV Sevastopol' 6.98 37 *eP* **Pn** **16 11 04.7 -1.4**
SEV pmax pmax 16 11 11.3
comp=Z,46nm,0.5s
SEV *eS* **Sn** **16 12 20.3 -4.9**
SEV smax smax 16 12 28.2
comp=N,23nm,0.3s
SEV smax smax 16 12 28.2
comp=E,58nm,0.5s
LOT Lotru 7.02 336 ⇓P **Pn** **16 11 06.6 -0.3**
HERR Herculane 7.05 327 ⇓P **Pn** **16 11 06.5 -0.6**
TNR Turnu Rosu 7.06 339 ⇑P **Pn** **16 11 06.7 -0.7**
TNR Turnu Rosu 7.06 339 P **Pn** **16 11 06.6 -0.7**
TURR Turia 7.08 350 ⇑P **Pn** **16 11 08.2 +0.6**
DOPR Dopca 7.10 346 ⇓P **Pn** **16 11 08.7 +0.8**
BOSR Bodos 7.16 348 ⇑P **Pn** **16 11 09.3 +0.7**
OZUR 7.16 349 ⇑P **Pn** **16 11 09.4 +0.7**
YAL Yalta 7.17 39 *eP* **Pn** **16 11 07.6 -1.1**
YAL pmax pmax 16 11 15.6
comp=Z,30nm,0.3s
YAL *eS* **Sn** **16 12 24.6 -5.3**
YAL smax smax 16 12 31.4
comp=N,86nm,0.4s
YAL smax smax 16 12 31.4
comp=E,46nm,0.3s
TARU Tarkhankut 7.18 28 *eP* **Pn** **16 11 07.7 -1.2**
TARU pmax pmax 16 11 12.9
comp=Z,571nm,0.9s
TARU *eS* **Sn** **16 12 24.7 -5.6**
TARU smax smax 16 12 29.7
comp=N,316nm,0.8s
TARU smax smax 16 12 29.7
comp=E,211nm,0.8s
MDVR Moldovita 7.28 323 ⇑P **Pn** **16 11 09.9 -0.4**
ONER Baraj Valea Uz 7.31 352 ⇓P **Pn** **16 11 11.3 +0.5**
GZR Gura Zlata 7.32 331 ⇓P **Pn** **16 11 09.9 -1.0**
GZR Gura Zlata 7.32 331 P **Pn** **16 11 09.9 -1.0**
LEOM Leova 7.38 2 P **Pn** **16 11 13.4 +1.7**
ALU Alushta 7.43 39 *eP* **Pn** **16 11 11.1 -1.3**
ALU pmax pmax 16 11 20.7

comp=Z,36nm,0.6s
ALU eS Sn 16 12 30.5 -5.9
ALU smax smax 16 12 35.4
comp=N,32nm,0.4s
ALU smax smax 16 12 35.4
comp=E,50nm,0.5s
DNZ2 Donuzlav2 7.44 31 *e*P **Pn 16 11 11.1 -1.4**
DNZ2 pmax pmax 16 11 20.3
comp=Z,118nm,0.5s
DNZ2 eS Sn **16 12 31.0 -5.6**
DNZ2 smax smax 16 12 33.4
comp=N,134nm,0.8s
DNZ2 smax smax 16 12 33.4
comp=E,404nm,0.9s
TESR Tescani 7.46 354 ⇑P **Pn 16 11 12.6 -0.2**
TESR Tescani 7.46 354 P **Pn 16 11 12.7 -0.2**
comp=E,1.0nmcomp=E,317nm,0.8s
MDB Medias 7.49 341 ⇑P **Pn 16 11 13.9 +0.7**
MDB Medias 7.49 341 P **Pn 16 11 13.8 +0.7**
SIM Simferopol' 7.49 37 *e*P **Pn 16 11 12.6 -0.7**
SIM eS Sn **16 12 36.1 -1.8**
SIM pmax pmax
comp=Z,214nm,0.6s
SIM smax smax
comp=E,1µm,1.3s
SIM smax smax
comp=N,558nm,0.9s
SIM MLR MLR
comp=Z,3µm,16.0s
SIM Simferopol' 7.49 37 *e*P **Pn 16 11 12.5 -0.7**
SIM pmax pmax 16 11 15.3
comp=Z,162nm,0.4s
SIM eS Sn **16 12 33.5 -4.4**
SIM smax smax 16 12 38.3
comp=N,154nm,0.7s
SIM smax smax 16 12 38.4
comp=E,726nm,1.0s
DEV Deva 7.70 333 ⇓P **Pn 16 11 16.6 +0.6**
DEV Deva 7.70 333 P **Pn 16 11 16.6 +0.6**
SUDU Sudak 7.88 40 *e*P **Pn 16 11 17.2 -1.3**
SUDU pmax pmax 16 11 19.9
comp=Z,71nm,0.6s
SUDU eS Sn **16 12 42.3 -5.1**
SUDU smax smax 16 12 48.5
comp=N,350nm,0.8s
SUDU smax smax 16 12 48.5
comp=E,157nm,0.6s
GIRR Girov 7.92 353 ⇓P **Pn 16 11 19.1 +0.1**
BANR Banloc 8.00 324 ⇓P **Pn 16 11 19.8 -0.4**
BEIL Beino 8.10 122 *e*P **Pn 16 11 17.2 -4.4**
HWQ Hawqa 8.10 124 *e*P **Pn 16 11 20.4 -1.4**
FEO Feodosiya 8.17 41 *e*P **Pn 16 11 24.1 +1.7**
FEO pmax pmax 16 11 27.4
comp=Z,19nm,0.3s
FEO eS Sn **16 12 54.8 +0.3**
FEO smax smax 16 12 56.9
comp=N,15nm,0.2s
FEO smax smax 16 12 56.9
comp=E,46nm,0.3s
CJR Cluj-Napoca 8.22 339 ⇑P **Pn 16 11 23.3 +0.1**
CJR Cluj-Napoca 8.22 339 P **Pn 16 11 23.3 +0.1**
DQRL Deir Qamar 8.24 128 *e*P **Pn 16 11 22.3 -1.3**
MARR Marisel-Cluj 8.33 337 ⇓P **Pn 16 11 24.7 -0.1**
ZAHL Zahle 8.33 126 *e*P **Pn 16 11 23.6 -1.3**
QRWL Qaraoun 8.41 129 *e*P **Pn 16 11 24.6 -1.4**
FKH Fakeheh 8.43 122 *e*P **Pn 16 11 25.2 -1.0**
HNTI Hanita 8.45 133 P **Pn 16 11 24.5 -1.8**
HNTI S **Sn 16 12 58.1 -3.4**
RCY Rachaya 8.54 128 *e*P **Pn 16 11 25.7 -2.1**
DRGR 8.56 336 ⇑P **Pn 16 11 28.8 +0.9**
DRGR 8.56 336 P **Pn 16 11 28.7 +0.9**
TIP Timpagrande 8.60 274 ⇑P **Pn 16 11 28.9 +0.4**
TIP Timpagrande 8.60 274 P **Pn 16 11 29.7 +1.2**
comp=E,1µmcomp=E,135nm,1.4s
MMC7 Mount Meron ar 8.62 132 P **Pn 16 11 27.5 -1.2**
MMA0B Mount Meron ar 8.63 132 P **Pn 16 11 26.8 -2.0**
MMA0B S **Sn 16 13 02.6 -3.4**
MMAI Mount Meron Ar 8.63 132 Pn **Pn 16 11 27.2 -1.7**
comp=E,10nm,0.3s,baz=330,slow=15,SNR=30
MMAI Sn **Sn 16 13 01.4 -4.6**
comp=E,6.9nm,0.3s,baz=299,slow=32,SNR=5.1
MMAI LR LR 16 15 25.6
comp=E,2µm,21.6s,baz=295,slow=42
comp=E,9.2nm,0.4s
GEM Giv'at Ha'Em 8.64 130 P **Pn 16 11 27.2 -1.8**
GEM S **Sn 16 13 03.1 -3.1**
NATI Neve Ativ 8.64 130 P **Pn 16 11 27.5 -1.5**
NATI S **Sn 16 13 03.3 -3.0**
OFRI `Ofer 8.69 136 P **Pn 16 11 28.0 -1.7**
OFRI S **Sn 16 13 04.1 -3.3**
MATE Matera 8.69 284 ⇑P **Pn 16 11 30.0 +0.3**
BLGI Bet Lehem HaGe 8.71 134 P **Pn 16 11 28.6 -1.4**
BLGI S **Sn 16 13 04.8 -3.2**
BURAR Bucovina Array 8.73 348 **Pn 16 11 29.5 -0.8**
BURAR Bucovina Array 8.73 348 ⇓P **Pn 16 11 30.6 +0.4**
BURAR Bucovina Array 8.73 348 P **Pn 16 11 30.6 +0.4**
KSHT Keshet 8.89 131 P **Pn 16 11 30.9 -1.5**
KSHT S **Sn 16 13 09.7 -2.7**
SLTI Sal'it 9.01 137 P **Pn 16 11 32.2 -1.9**
SLTI S **Sn 16 13 11.3 -4.0**
MMLI Mount Malkishu 9.06 135 P **Pn 16 11 33.2 -1.7**
MMLI S **Sn 16 13 12.8 -3.9**
BMR Baia Mare 9.13 341 ⇑P **Pn 16 11 36.4 +0.6**
BMR Baia Mare 9.13 341 P **Pn 16 11 36.3 +0.6**
ANN Anapa 9.15 48 *e*P **Pn 16 11 34.2 -1.7**
ANN eS **Sn 16 13 16.8 -1.8**
ANN pmax pmax
comp=Z,29nm,1.1s
SALP Salfit 9.22 137 P **Pn 16 11 35.0 -2.0**
SALP S **Sn 16 13 17.0 -3.6**
HMDT Nahal Hemdat 9.26 135 P **Pn 16 11 35.8 -1.7**
HMDT S **Sn 16 13 17.8 -3.8**
ACER Acerenza 9.28 284 **Pn 16 11 36.8 -1.0**
CEL Celeste 9.37 269 **Pn 16 11 38.5 -0.6**
CEL Celeste 9.37 269 P **Pn 16 11 40.7 +1.7**
comp=Z,1µmcomp=Z,150nm,1.0s
SGRT San Giovanni R 9.59 290 **Pn 16 11 41.2 -0.8**
KORU Korolevo 9.67 341 P **Pn 16 11 44.0 +0.9**
DSI Dead Sea 9.71 138 P **Pn 16 11 42.0 -1.7**
DSI S **Sn 16 13 28.6 -4.0**
BLY Banja Luka 9.73 309 ⇓P **Pn 16 11 43.4 -0.5**
YTIR Yattir 9.75 140 P **Pn 16 11 42.4 -1.8**
YTIR S **Sn 16 13 29.4 -4.1**
KZIT Kziot 9.78 145 P **Pn 16 11 43.0 -1.7**
MORH Mrgy, Hungar 9.81 319 ⇓P **Pn 16 11 44.3 -0.7**
KOPT Kop Dagi 9.83 81 **Pn 16 11 44.1 -1.5**
BRIU Brid 9.87 341 P **Pn 16 11 46.5 +0.7**
STNU Starunia 9.91 347 P **Pn 16 11 46.0 -0.3**
MSBI Mazada 9.91 139 P **Pn 16 11 44.5 -1.9**
MSBI S **Sn 16 13 33.6 -3.7**
SOC Sochi 10.00 60 *e*P **Pn 16 11 48.4 +0.8**
SOC *e* 16 13 41.5
SOC MLR MLR
comp=Z,2µm,15.0s
ASF Jabal al Asfar 10.11 130 Pn **Pn 16 11 47.7 -1.5**
comp=Z,1.2nm,0.3s,baz=318,slow=22,SNR=19
comp=Z,3.6nm,0.5s
HORU Horodok 10.17 355 P **Pn 16 11 49.4 -0.5**
HOLU Holmets 10.21 339 P **Pn 16 11 51.1 +0.6**
IDAN Idan 10.26 141 P **Pn 16 11 49.1 -2.1**
IDAN S **Sn 16 13 42.1 -3.9**
MARD Mardin 10.35 96 **Pn 16 11 51.4 -1.1**
PSZ Piszkesteto 10.53 329 **Pn 16 11 54.4 -0.5**
PSZ Piszkesteto 10.53 329 ⇑P **Pn 16 11 55.6 +0.7**
PSZ Piszkesteto 10.53 329 P **Pn 16 11 55.5 +0.7**
PRNI Paran 10.53 144 P **Pn 16 11 53.1 -1.8**
PRNI S **Sn 16 13 48.6 -4.0**
KRMI Paran Flat 10.60 146 P **Pn 16 11 53.8 -2.1**
KRMI S **Sn 16 13 50.2 -4.3**
SHIU Shidnytsya 10.62 344 P **Pn 16 11 56.5 +0.4**
VAE Valguarnera 10.67 265 Pn **Pn 16 11 57.2 +0.4**
comp=Z,24nm,0.3s,baz=63,slow=6.8,SNR=2.7
comp=Z,51nm,0.4s
RAFF Raffo Rosso 10.77 264 **Pn 16 11 58.1 0.0**
HRFI Mount Harif 10.81 145 P **Pn 16 11 56.4 -2.4**
HRFI S **Sn 16 13 55.1 -4.5**
MBRI Mt Berech 10.96 146 P **Pn 16 11 58.9 -2.0**
MBRI S **Sn 16 13 59.7 -3.7**
EIL Elat 11.09 146 Pn **Pn 16 11 59.7 -2.8**
comp=Z,2.5nm,0.3s,baz=335,slow=8.3,SNR=15
EIL Sn Sn 16 13 56.8 -9.5
comp=Z,3.1nm,0.3s,baz=77,slow=20,SNR=3.6
comp=Z,20nm,0.8s

EIL Elat 11.09 146 P **Pn 16 11 59.8 -2.7**
EIL S **Sn 16 14 00.8 -5.6**
LABN Labinsk 11.10 56 *e*P **Pn 16 12 03.2 +0.6**
LABN *e*S **Sn 16 14 08.2 +1.8**
LABN pmax pmax
comp=Z,29nm,0.8s
LABN MLR MLR
comp=Z,2µm,11.0s
LABN MLR MLR
comp=E,2µm,11.0s
LABN MLR MLR
comp=N,2µm,10.0s
SRO Srobarova 11.12 325 *e*P **Pn 16 12 05.8 +3.0**
SRO Srobarova 11.12 325 *e*PN **Pn 16 12 05.8 +3.0**
KWP Kalwaria Pacla 11.15 343 *e*P **Pn 16 12 07.0 +3.7**
BOJS Bojanci 11.29 309 *i* P **Pn 16 12 06.0 +0.7**
GOLS Golise 11.34 311 *i* P **Pn 16 12 05.9 0.0**
STHS Stebnicka Huta 11.34 338 *e*P **Pn 16 12 05.7 -0.3**
STHS Stebnicka Huta 11.34 338 *e*PN **Pn 16 12 05.7 -0.3**
AQU L'Aquila 11.42 291 P **Pn 16 12 05.8 -1.3**
AQU L'Aquila 11.42 291 P **Pn 16 12 08.6 +1.5**
comp=N,75nm,1.0s
ERBR Yeremizino-Bor 11.45 51 *e*P **Pn 16 12 07.3 -0.2**
ERBR *e*S **Sn 16 14 16.2 +1.0**
ERBR pmax pmax
comp=Z,16nm,0.9s
ERBR MLR MLR
comp=Z,2µm,13.0s
ERBR MLR MLR
comp=E,4µm,13.0s
ERBR MLR MLR
comp=N,2µm,12.0s
LEGS Legarje 11.48 311 *i* P **Pn 16 12 08.2 +0.2**
AK14 Malin Array Si 11.57 4 P **Pn 16 12 07.0 -2.0**
AK02 Malin Array Si 11.60 4 P **Pn 16 12 08.3 -1.2**
NIE Niedzica 11.64 335 *e*P **Pn 16 12 11.3 +1.3**
KIEV Kiev 11.64 4 **Pn 16 12 08.5 -1.5**
KIEV Kiev 11.64 4 P **Pn 16 12 08.0 -2.0**
KIEV Kiev 11.64 4 P **Pn 16 12 08.5 -1.5**
AKASG Malin Array Be 11.65 4 Pn **Pn 16 12 08.9 -1.2**
comp=N,2.9nm,0.3s,baz=193,slow=12,SNR=12
AKASG Sn **Sn 16 14 12.3 -7.5**
comp=N,0.4nm,0.3s,baz=186,slow=26,SNR=1.8
AKASG LR LR 16 16 36.4
comp=N,2µm,20.7s,baz=186,slow=37
comp=N,1.3nm,0.4s
AKBB Malin Array Si 11.65 4 **Pn 16 12 08.5 -1.6**
AKBB Malin Array Si 11.65 4⇑ *e*P **Pn 16 12 10.6 +0.5**
AKBB Malin Array Si 11.65 4 P **Pn 16 12 10.1 0.0**
AK19 Malin Array Si 11.66 4 P **Pn 16 12 10.3 +0.1**
AK18 Malin Array Si 11.66 4 P **Pn 16 12 08.8 -1.5**
LANS Liptovska Anna 11.70 332 *e*P Pn 16 12 16.3 +5.4
LANS Liptovska Anna 11.70 332 *e*PN Pn 16 12 16.3 +5.4
ZST Bratislava 11.95 323 *e*P **Pn 16 12 16.7 +2.5**
ZST Bratislava 11.95 323 *e*PN **Pn 16 12 16.7 +2.5**
MODS Modra-Piesok 12.00 324 *e*P **Pn 16 12 17.4 +2.5**
MODS Modra-Piesok 12.00 324 *e*PN **Pn 16 12 17.4 +2.5**
RONA Rosalia, Austr 12.00 320 *e*Pn **Pn 16 12 14.2 -0.8**
comp=N,27nm,1.0s,SNR=16
SOKA Soboth 12.05 313 *e*Pn **Pn 16 12 15.4 -0.3**
comp=N,6.4nm,0.9s
SHA1 Shidzhatmaz 12.06 63‖ *e*P **Pn 16 12 18.3 +2.3**
ARSA Arzberg 12.12 316 *e*Pn **Pn 16 12 16.3 -0.3**
comp=N,22nm,1.1s,SNR=16
KIV Kislovodsk 12.15 62 *e*P **Pn 16 12 20.0 +2.9**
KIV *e*S **Sn 16 14 36.3 +4.0**
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,798nm,13.0s
KVAR Kislovodsk Arr 12.15 62 Pn **Pn 16 12 17.6 +0.5**
comp=Z,2.6nm,0.8s,baz=262,slow=15,SNR=1.7
JAVC Velka Javorina 12.19 327 *e*PN **Pn 16 12 16.7 -0.8**
RNPP5 Staryi Chortor 12.21 354 P **Pn 16 12 16.3 -1.5**
KBZ Khabaz 12.22 63 Pn **Pn 16 12 19.4 +1.4**
comp=Z,14nm,1.1s,baz=265,slow=13,SNR=11
KBZ LR LR 16 18 00.4
comp=Z,2µm,20.4s,baz=254,slow=42
KBZ Khabaz 12.22 63‖ *e*P **Pn 16 12 20.4 +2.4**
OBKA Obir 12.23 312 *e*Pn **Pn 16 12 17.7 -0.6**
comp=Z,16nm,1.1s
RNPP8 Varash 12.32 354 P **Pn 16 12 18.8 -0.5**
CONA Conrad Observa 12.37 319 *e*Pn **Pn 16 12 19.6 -0.5**
comp=Z,49nm,1.1s,SNR=18
OJC Ojcow 12.49 336 *e*P **P 16 12 29.5 -3.9**
MAUC Maruska 12.51 328 *e*P **Pn 16 12 23.3 +1.4**
GOF Gofitskoye 12.77 57*ce*P **P 16 12 40.3 +3.7**
MYKA Terra Mystica 12.83 311 *e*Pn **Pn 16 12 26.0 -0.4**
comp=Z,4.4nm,0.5s
KRUC Moravsky 12.90 324 *e*PN **Pn 16 12 25.7 -1.5**
MORC Moravsky Berou 12.95 329 **Pn 16 12 28.4 +0.5**
MORC Moravsky Berou 12.95 329 P **Pn 16 12 28.4 +0.5**
MORC Moravsky Berou 12.95 329 *e*PN **Pn 16 12 27.1 -0.8**
VRAC Vranov 12.99 325 Pn **Pn 16 12 28.3 -0.1**
comp=Z,0.3nm,0.3s,baz=149,slow=11,SNR=5.9
VRAC LR LR 16 17 40.6
comp=Z,2µm,19.1s,baz=151,slow=38
comp=Z,5.7nm,0.7s
VRAC Vranov 12.99 325 *e*PN **Pn 16 12 27.8 -0.7**
GNI Garni 13.09 80 Pn **Pn 16 12 30.6 +0.6**
comp=Z,0.3nm,0.3s,baz=296,slow=8.1,SNR=4.7
GNI LR LR 16 17 37.9
comp=Z,5µm,18.2s,baz=279,slow=38
comp=Z,3.2nm,0.7s
GNI Garni 13.09 80 P P 16 12 35.3 -5.0
GNI Garni 13.09 80*de*P **Pn 16 12 32.8 +2.8**
GNI Garni 13.09 80 P **Pn 16 12 30.1 0.0**
MOA Molln 13.16 316 *e*Pn **Pn 16 12 30.8 +0.1**
comp=Z,36nm,1.7s,SNR=8.8
KBA Koelnbreinsper 13.24 312 *e*Pn **Pn 16 12 31.7 -0.4**
comp=Z,20nm,1.8s,SNR=5.7
BIOA Bad Ischl, Aus 13.41 314 *e*Pn **Pn 16 12 33.4 -0.8**
comp=Z,23nm,1.0s,SNR=5.8
ABTA Abfaltersbach 13.56 309 *e*Pn **Pn 16 12 35.1 -1.2**
comp=Z,6.8nm,0.8s
NAX Nakhchivan 13.72 84 P **Pn 16 12 37.7 -0.9**
CKRC Cesky Krumlov 13.74 319 *e*P **Pn 16 12 40.3 +1.6**
CKRC AMS AMS 16 20 50.0
comp=Z,4µm,10.4s
CKRC Cesky Krumlov 13.74 319 *e*P **Pn 16 12 40.3 +1.6**
CKRC MLR MLR
comp=Z,4µm,10.4s
CTI Castel Tesino 13.78 305 **Pn 16 12 39.0 -0.4**
CTI Castel Tesino 13.78 305 P **Pn 16 12 39.0 -0.4**
LESA Schwarzleotal 13.81 312 *e*Pn **Pn 16 12 39.0 -0.7**
comp=Z,5.0nm,0.6s
DPC Dobruska-Polom 13.89 328 *e*P **Pn 16 12 43.8 +3.0**
DPC AMS AMS 16 20 40.0
comp=Z,4µm,9.7s
DPC Dobruska-Polom 13.89 328 *e*P **Pn 16 12 43.8 +3.0**
DPC MLR MLR
comp=Z,4µm,9.7s
GEC2 GERESS Array S 14.06 318 *e*P **Pn 16 12 43.4 +0.2**
comp=Z,5.3nm,1.5s,baz=124,slow=12
GERES GERESS Array B 14.06 318 Pn **Pn 16 12 43.0 -0.2**
comp=Z,3.0nm,0.6s,baz=131,slow=9.6,SNR=14
GERES LR LR 16 18 32.7
comp=Z,2µm,19.9s,baz=128,slow=39
GERES GERESS Array B 14.06 318 P **Pn 16 12 43.0 -0.2**
OSTC Ostas 14.09 328 AMS AMS 16 20 40.0
comp=Z,4µm,9.7s
UPC Upice 14.14 328 AMS AMS 16 20 50.0
comp=Z,3µm,10.5s
ZVC Zvikov 14.20 321 AMS AMS 16 19 50.0
comp=Z,3µm,12.5s
KSP Ksiaz 14.28 329 *e*P **P 16 12 55.0 +1.7**
KHC Kasperske Hory 14.31 319 *e*P **Pn 16 12 47.0 +0.5**
KHC *ex* x 16 12 56.0
WTTA Wattenberg 14.34 310 *e*Pn **Pn 16 12 46.6 -0.5**
comp=Z,11nm,0.6s
WTTA *e*P **P 16 12 53.6 -0.6**
comp=Z,6.8nm,0.5s
VORD Divnogorie 14.35 30 *e*P **Pn 16 12 44.2 -2.8**
VORD pmax pmax
comp=Z,40nm,1.3s
PRU Pruhonice 14.41 323 AMS AMS 16 20 10.0
comp=Z,4µm,8.9s
WATA Walderalm 14.41 310 *e*P **P 16 12 53.2 -1.7**
comp=Z,14nm,0.9s
VSR Storozhevoye 14.50 30 *e*P **Pn 16 12 46.2 -2.9**
VSR pmax pmax
comp=Z,30nm,0.6s
SQTA Sankt Quirin 14.57 309 *e*P **P 16 12 56.0 -0.8**
comp=Z,4.8nm,0.6s
WET Wettzell 14.68 318 *e*P **P 16 12 57.0 -0.8**

comp=Z,42nm,1.1s,baz=124,slow=12
MOTA Moosalm 14.70 310 *e*Pn **Pn 16 12 51.1 -0.8**
comp=Z,19nm,1.0s
FETA Feichten 14.78 308 *e*Pn **Pn 16 12 52.7 -0.3**
comp=Z,33nm,1.1s,SNR=18
PVCC Panska Ves 14.78 325 *e*P **P 16 12 59.5 +0.7**
PVCC AMS AMS 16 20 30.0
comp=Z,4µm,12.6s
VORR Voronezh 14.88 29 *e*P **Pn 16 12 51.1 -3.1**
VORR pmax pmax
comp=Z,108nm,0.4s
KEST Kesra 15.06 263 Pn **Pn 16 12 57.5 +0.6**
comp=Z,0.6nm,0.3s,baz=63,slow=18,SNR=7.3
KEST LR LR 16 19 46.8
comp=Z,892nm,20.7s,baz=35,slow=41
comp=Z,12nm,0.9s
KEST Kesra 15.06 263 Pn **Pn 16 12 57.0 +0.1**
KEST Kesra 15.06 263 P **P 16 13 01.9 -0.3**
SNR=15
DAVOX Davos/Dischmat 15.20 306 Pn **Pn 16 12 59.9 +1.1**
comp=Z,1.9nm,0.3s,baz=134,slow=14,SNR=10
DAVOX LR LR 16 19 22.9
comp=Z,3µm,18.7s,baz=99,slow=39
comp=Z,7.6nm,0.9s
SUW Suwalki 15.26 350 *e*P **Pn 16 12 57.9 -1.3**
BRG Berggiesshubel 15.30 325 *e*P **P 16 13 03.7 -0.9**
comp=Z,38nm,1.2s,baz=124,slow=12
BRG Berggiesshubel 15.30 325 *e*P **P 16 13 04.9 +0.3**
BRG Amp 16 13 08.4
comp=Z,35nm,1.1s
BRG Berggiesshubel 15.30 325 S **S 16 16 08.0 +2.5**
MAK Makhachkala 15.34 69 *e*P **Pn 16 12 57.4 -3.0**
MAK *e*S **Sn 16 15 47.7 -2.4**
MAK pmax pmax
comp=Z,247nm,1.4s
MAK MLR MLR
comp=Z,2µm,17.0s
AKT Akhty 15.38 75 *e*P **Pn 16 13 01.2 +0.2**
AKT *e*S **Sn 16 15 51.9 +0.7**
AKT pmax pmax
comp=Z,40nm,1.7s
AKT MLR MLR
comp=Z,3µm,17.0s
ROTZ Rotzenmuhle 15.40 319 *e*P **P 16 13 04.9 -0.9**
comp=Z,3.7nm,0.9s,baz=124,slow=12
DAVA Damuels 15.41 308 *e*P **P 16 13 05.5 -0.6**
comp=Z,65nm,1.1s,SNR=18
MNK Minsk 15.41 0 *i* LRM MLR 16 19 52.0
comp=E,1µm,13.4s
MNK Minsk 15.41 0 *i* P **Pn 16 13 00.3 -0.9**
MNK *i* S **Sn 16 15 50.9 -0.8**
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK pmax pmax
comp=N,19nm,1.0s
MNK pmax pmax
comp=Z,12nm,0.9s
MNK MLR MLR
comp=N,987nm,13.0s
MNK MLR MLR
comp=Z,2µm,15.0s
MNK MLR MLR
comp=E,1µm,13.0s
MNK Minsk 15.41 0 *i* P **Pn 16 13 00.4 -0.9**
comp=Z,12nm,0.9s,baz=180
MNK Minsk 15.41 0 *i* P **Pn 16 13 00.4 -0.9**
comp=N,19nm,1.0s
MNK Minsk 15.41 0 *i* P **Pn 16 13 00.4 -0.9**
comp=E,10.0nm,0.8s
MNK Minsk 15.41 0 *i* PP **P 16 13 09.3 +3.5**
MNK Minsk 15.41 0 *i* PPP PPP 16 13 17.1
MNK Minsk 15.41 0 *i* S **Sn 16 15 50.9 -0.8**
MNK Minsk 15.41 0 *i* SS **S 16 16 04.5 -3.2**
MNK Minsk 15.41 0 *i* SSS SSS 16 16 17.5
MNK Minsk 15.41 0 *i* LQ LQ 16 17 31.1
MNK Minsk 15.41 0 *i* LR LR 16 18 34.0
MNK Minsk 15.41 0 *i* LRM MLR 16 19 37.1
comp=N,987nm,12.9s
MNK Minsk 15.41 0 *i* LRM MLR 16 19 49.2
comp=Z,2µm,15.1s
TUE Stuetta 15.42 305 **Pn 16 13 01.0 -0.6**
UBR Ueberruh 15.45 309 *e*P **P 16 13 04.8 -1.6**
comp=Z,66nm,1.1s,baz=124,slow=12
LPSR Galich'ya Gora 15.54 26 *e*P **Pn 16 13 00.2 -2.7**
LPSR pmax pmax
comp=Z,50nm,0.6s
VRH Novokhopyorsk 15.54 34 *e*P **Pn 16 13 01.0 -2.0**
VRH pmax pmax
comp=Z,130nm,2.0s
MANZ Manzenberg 15.59 319 *e*P **P 16 13 09.6 +1.7**
comp=Z,5.4nm,1.0s,baz=124,slow=12
TANN Tannenbergstha 15.69 321 *e*P **P 16 13 09.4 +0.5**
comp=Z,48nm,1.3s,baz=124,slow=12
NACGM Naroch 15.83 358 *e*P **Pn 16 13 05.2 -1.5**
comp=Z,27nm,0.9s,baz=177
GRF Grafenberg Arr 15.87 317 *e*P **P 16 13 13.4 +2.5**
comp=Z,34nm,1.0s,baz=124,slow=12
GRF *e*L L 16 19 05.5
comp=Z,2µm,20.3s
PLN Plauen 15.88 321 *e*P **P 16 13 10.9 -0.2**
comp=Z,18nm,1.1s,baz=124,slow=12
CLL Collm 16.03 324 Pn **Pn 16 13 08.7 -0.6**
CLL Collm 16.03 324 *i* P **Pn 16 13 08.7 -0.6**
CLL pmax pmax
comp=Z,226nm,2.4s
CLL Collm 16.03 324 *i* P **Pn 16 13 08.7 -0.6**
comp=Z,226nm,2.4s
CLL *i* x x 16 13 14.1
CLL *i* x x 16 13 19.3
CLL *i* x x 16 13 26.5
CLL *e*S **Sn 16 16 12.0 +5.3**
CLL AMS AMS 16 18 00.0
comp=N,3µm,18.8s
CLL AMS AMS 16 18 00.0
comp=E,4µm,18.0s
CLL AMS AMS 16 21 00.0
CLL Collm 16.03 324 *e*P **Pn 16 13 10.5 +1.3**
comp=E,58nm,1.5s,baz=124,slow=12
MOX Moxa 16.25 321 *e*P **P 16 13 16.1 +0.9**
comp=E,52nm,1.0s,baz=124,slow=12
MOX *e*L L 16 21 16.1
comp=E,1µm,19.2s
LKRN Lenkeran, Azer 16.32 85 P **Pn 16 13 12.2 -0.9**
STU Stuttgart 16.50 312 *e*P **P 16 13 21.0 +3.1**
comp=E,110nm,1.0s,baz=124,slow=12
PABE Paberze 16.62 352 IAmb IAmb 16 13 23.4
comp=Z,79nm,1.3s
BNI Bardonecchia 16.77 298 P **P 16 13 20.8 -0.3**
BNI IAmb IAmb 16 13 26.8
comp=Z,110nm,1.2s
BNI Bardonecchia 16.77 298 P **P 16 13 20.8 -0.3**
BNI pmax pmax
comp=Z,110nm,1.3s
BFO Black Forest 16.81 310 Pn **Pn 16 13 17.9 -1.3**
BFO Black Forest 16.81 310 P **Pn 16 13 18.0 -1.3**
BFO pmax pmax
comp=Z,25nm,1.0s
BFO Black Forest 16.81 310 *e*P **P 16 13 21.6 +0.2**
comp=Z,90nm,1.6s,baz=124,slow=12
OBN Obninsk 17.07 17 Pn **Pn 16 13 19.2 -3.2**
comp=Z,4.0nm,0.3s,baz=154,slow=6.4,SNR=13
comp=Z,23nm,0.6s
OBN Obninsk 17.07 17*d* *i*P **Pn 16 13 21.3 -1.2**
OBN pmax pmax
comp=Z,156nm,1.7s
OBN MLR MLR
comp=Z,1µm,16.0s
FLTG Flechtingen 17.53 324 *e*P **Pn 16 13 26.8 -1.4**
comp=Z,58nm,1.4s,baz=124,slow=12
CLZ Clausthal 17.61 322 *e*P **P 16 13 30.7 +0.5**
comp=Z,79nm,1.6s,baz=124,slow=12
MOS Moscow 17.89 18 *e*P **Pn 16 13 28.9 -3.7**
MOS *e*S **Sn 16 16 45.3 -6.5**
MOS pmax pmax
comp=Z,167nm,1.3s
MOS MLR MLR
comp=Z,1µm,17.0s
WLF Walferdange 18.68 311 P **P 16 13 39.6 -2.5**
WLF Walferdange 18.68 311 *d*P **Pn 16 13 43.6 +1.2**
comp=Z,22nm,1.4s
WLF Walferdange 18.68 311 *e*P **Pn 16 13 43.8 +1.4**
comp=Z,197nm,1.7s,baz=124,slow=12
BHOU Houvegnez 19.08 313 *d*P **Pn 16 13 50.7 +3.4**
BELG Belogornoye 19.09 39 P **P 16 13 45.2 -1.3**
comp=Z,1.2nm,0.3s,baz=274,slow=1.4,SNR=19
comp=Z,138nm,1.0s

BELG Belogornoye 19.09 39 *de*P Pn 16 13 48.1 +0.8
BELG pmax pmax
comp=Z,35nm,1.2s
BTNL Ternell 19.12 314 *d*P Pn 16 13 49.3 +1.6
KBD Kabd 19.16 115 S Sn 16 17 19.0 -3.7
MEM Membach 19.20 314 *d*P Pn 16 13 49.1 +0.4
comp=Z,25nm,1.0s
VSU Vasula 19.40 358⇓ *e*P P 16 13 48.2 -1.5
VSU pmax pmax
comp=Z,77nm,0.9s
BSTI Sart Tilman 19.44 313 *d*P Pn 16 13 53.0 +1.6
RCHB Rochefort 19.44 312 *d*P P 16 13 50.5 +0.3
comp=Z,14nm,0.9s
BCLA Clavier 19.51 313 *d*P P 16 13 51.2 +0.1
comp=Z,19nm,1.0s
BGES Gesves 19.62 313 *d*P P 16 13 52.3 +0.1
BMRD Maredsous 19.77 312 *d*P Pn 16 13 54.7 -0.7
comp=Z,22nm,1.1s
DOU Dourbes 19.78 311 *d*P P 16 13 53.7 -0.3
comp=Z,19nm,0.9s
UCC Uccle 20.22 313 P P 16 13 58.7 -0.1
UCC IAmb IAmb 16 14 02.5
comp=Z,50nm,1.1s
UCC Uccle 20.22 313 P P 16 13 58.7 -0.1
UCC pmax pmax
comp=Z,51nm,1.1s
UCC Uccle 20.22 313 *d*P P 16 13 59.6 +0.8
comp=Z,27nm,1.1s
EIBI Ibiza 20.54 278 P P 16 14 02.8 +0.4
PUL Pulkovo 20.76 4⇓ *e*P Pn 16 14 06.3 -0.7
PUL pmax pmax
comp=Z,57nm,0.4s
RAYN Ar Rayn 21.60 131 P P 16 14 13.8 -0.1
RAYN Ar Rayn 21.60 131 *i* P P 16 14 15.3 +1.4
SNR=16
RAYN Ar Rayn 21.60 131 P P 16 14 13.9 -0.1
RAYN pmax pmax
comp=Z,17nm,1.0s
RAYN Ar Rayn 21.60 131 P P 16 14 15.0 +1.0
RAYN S S 16 18 14.0 +1.1
ECHE Chera 22.24 280 P P 16 14 21.2 +0.5
FINES FINESS Array B 22.40 358 P P 16 14 21.3 -0.9
comp=Z,16nm,0.9s,baz=155,slow=9.9,SNR=18
FINES LR LR 16 23 03.2
comp=Z,2μm,18.3s,baz=175,slow=37
comp=Z,16nm,0.9s
ETOB Tobarra 22.83 278 P P 16 14 27.5 +0.5
HFS Hagfors 22.87 342 P P 16 14 25.8 -1.4
comp=Z,5.0nm,0.7s,baz=137,slow=14,SNR=14
HFS LR LR 16 24 07.5
comp=Z,1μm,18.5s,baz=150,slow=39
comp=Z,5.0nm,0.7s
KLMR Klimovskoe 22.97 15 *e*P P 16 14 27.6 -0.6
KLMR S S 16 18 36.4 -1.5
KLMR pmax pmax
comp=Z,157nm,1.2s
SHMA Al-Shehemyia 23.48 117 P P 16 14 33.7 0.0
SNR=7.1
SHMA S S 16 18 47.7 +0.8
KIRV Kirov 23.94 28 P P 16 14 37.4 -0.3
comp=Z,12nm,0.6s,baz=352,slow=3.7,SNR=4.9
KIRV LR LR 16 24 30.8
comp=Z,1μm,19.1s,baz=216,slow=38
comp=Z,12nm,0.6s
KIRV Kirov 23.94 28⇓ *e*P P 16 14 37.3 -0.4
AKTO Aktyubinsk 24.08 52 LR LR 16 27 00.4
comp=Z,1μm,19.4s,baz=256,slow=44
SMRA Abu-Samra 24.11 120 P P 16 14 38.9 -0.8
SMRA S S 16 18 56.4 -0.5
NAO01 NORSAR Array S 24.20 340 P P 16 14 39.6 -0.6
NB2 NORSAR Subarra 24.28 340 P P 16 14 39.7 -1.3
comp=Z,21nm,1.0s,baz=145,slow=9.3
NB2 NORSAR Subarra 24.28 340 P P 16 14 39.7 -1.3
NB2 AMP 16 14 39.7
comp=Z,21nm,1.0s
NOA NORSAR Array B 24.28 340 P P 16 14 40.3 -0.7
comp=Z,8.8nm,0.9s,baz=146,slow=8.9,SNR=14
NOA LR LR 16 24 41.8
comp=Z,902nm,18.2s,baz=150,slow=38
comp=Z,8.8nm,0.9s
TRNA Turayna 24.38 119 P P 16 14 42.4 +0.2
ESBB Sonseca Array 24.51 282 IAmb IAmb 16 15 05.8
comp=Z,27nm,1.1s
ESDC Sonseca Array 24.51 282 P P 16 14 42.9 -0.5
comp=Z,6.5nm,0.9s,baz=70,slow=9.8,SNR=18
ESDC LR LR 16 23 46.9
comp=Z,396nm,19.3s,baz=81,slow=35
comp=Z,6.5nm,0.9s
PAB San Pablo 24.83 281 P P 16 14 46.2 0.0
PAB IAmb IAmb 16 14 52.2
comp=Z,25nm,1.0s
PAB San Pablo 24.83 281 P P 16 14 46.3 0.0
PAB pmax pmax
comp=Z,25nm,1.0s
TAM Tamanrasset 25.00 236 P P 16 14 47.5 -0.5
TAM IAmb IAmb 16 15 18.2
comp=Z,25nm,0.8s
TAM Tamanrasset 25.00 236 P P 16 14 47.5 -0.5
TAM pmax pmax
comp=Z,25nm,0.8s
ABKAR Akbulak array 25.00 56 P P 16 14 47.7 +0.1
JRN Qarnain Island 25.38 116 P P 16 14 51.8 +0.7
SNR=9.5
JRN S S 16 19 18.6 +1.4
GHWR Ruwais 26.03 118 P P 16 15 00.1 +2.9
GHWR P P 16 15 00.1 +2.9
GHWR S S 16 19 30.2 +2.6
GHWR S S 16 19 30.2 +2.6
EKA Eskdalemuir Ar 26.28 318 P P 16 14 59.6 +0.4
comp=Z,11nm,0.8s,baz=116,slow=9.4,SNR=12
EKA LR LR 16 27 52.4
comp=Z,1μm,19.5s,baz=98,slow=42
comp=Z,11nm,0.8s
PBRG Braganca 26.34 287 *e*P P 16 15 02.4 +2.5
PBRG *i* IAmb IAmb 16 15 27.4
comp=Z,57nm,1.9s
ARTI Arti 26.54 39 LR LR 16 26 52.7
comp=Z,614nm,18.4s,baz=234,slow=40
ARTI Arti 26.54 39 P P 16 15 00.8 -0.7
ARTI Arti 26.54 39 *c* P P 16 15 02.4 +0.9
ARTI 16 15 39.0
ARTI S S 16 19 37.9 +2.7
ARTI SS SnSn 16 20 40.2 +3.1
ARTI pmax pmax
comp=Z,67nm,1.0s
MVO Moncorvo 26.62 286 *e*P P 16 15 03.6 +1.1
MVO *i* IAmb IAmb 16 15 09.4
comp=Z,45nm,1.3s
MDT Midelt 26.90 267 LR LR 16 28 10.3
comp=Z,339nm,19.4s,baz=80,slow=42
MD01 Midelt array s 26.99 267 P P 16 15 06.0 0.0
MD31 MD31 26.99 267 P P 16 15 06.4 +0.5
MD31 IAmb IAmb 16 15 13.9
comp=Z,19nm,1.1s
EBAD Badajoz 27.01 280 P P 16 15 05.9 0.0
SHME Shamm 27.05 110 P P 16 15 07.5 +1.1
SHME Shamm 27.05 110 P P 16 15 07.2 +0.8
SHME S S 16 19 42.8 -1.1
MZR Muzera 27.08 119 *i* P P 16 15 08.6 +1.9
SNR=9.4
MZR Muzera 27.08 119 P P 16 15 09.0 +2.3
SNR=5.8
MTE Manteigas 27.12 284 P P 16 15 06.9 0.0
MTE Manteigas 27.12 284 *e*P P 16 15 07.6 +0.6
MTE *i* IAmb IAmb 16 15 30.6
comp=Z,75nm,1.5s
AJN Ajban 27.12 114 S S 16 19 47.1 +2.3
PBAR Barrancos 27.15 279 P P 16 15 08.2 +1.0
PBAR Barrancos 27.15 279 *e*P P 16 15 08.0 +0.8
PBAR *i* IAmb IAmb 16 15 36.1
comp=Z,56nm,1.7s
PCBR Castelo Branco 27.16 283 *e*P P 16 15 07.5 +0.3
PCBR *i* IAmb IAmb 16 15 15.0
comp=Z,82nm,1.8s
PMRV Marv??o 27.17 282 *e*P P 16 15 08.1 +0.7
PMRV *i* IAmb IAmb 16 15 14.4
comp=Z,56nm,1.6s
POLO Lamas de Olo 27.17 286 *e*P P 16 15 09.5 +2.1
BANOM Banah 27.24 110 *i* P P 16 15 08.2 +0.1
SNR=12
BANOM Banah 27.24 110 P P 16 15 08.4 +0.3
ASUD Al Ashush, Dub 27.32 114 P P 16 15 09.1 +0.3
ASUD Al Ashush, Dub 27.32 114 P P 16 15 09.7 +0.9
ASUD P P 16 15 09.7 +0.9
ASUD S S 16 19 47.2 -0.9
ASUD S S 16 19 47.2 -0.9
PVIS Viseu 27.34 285 *e*P P 16 15 09.3 +0.4
NAZ Nazwa, Dubai 27.34 113 P P 16 15 09.4 +0.5
SNR=12
NAZ S S 16 19 47.8 -0.6
PESTR Estremoz 27.43 281 P P 16 15 08.2 -1.5
PESTR Estremoz 27.43 281 IAmb IAmb 16 15 14.7
comp=Z,22nm,1.0s
PESTR Estremoz 27.43 281 *e*P P 16 15 09.8 +0.1
PESTR *i* IAmb IAmb 16 15 11.9
comp=Z,29nm,1.0s
PGAV Gavieira, Arco 27.46 288 *e*P P 16 15 11.9 +1.9
MASF Masafi 27.47 111 P P 16 15 12.3 +2.1
SNR=6.7
MASF S S 16 19 48.9 -1.5
MSFE Esma-Masafi 27.48 111 P P 16 15 09.4 -0.8
MDH Madha 27.61 111 P P 16 15 12.2 +0.8
MDH Madha 27.61 111 P P 16 15 13.8 +2.4
SNR=7.7
UOSS Minazif 27.76 112 P P 16 15 13.1 +0.4
UOSS IAmb IAmb 16 15 25.1
comp=Z,14nm,0.8s
UOSS Minazif 27.76 112 P P 16 15 12.5 -0.3
HATD Hatta, Dubai 27.78 112 P P 16 15 13.0 +0.1
HATD Hatta, Dubai 27.78 112 P P 16 15 14.2 +1.3
SNR=10.0
HATD S S 16 19 54.3 -1.0
PARRA Arraiolos 27.78 281 *e*P P 16 15 14.3 +1.5
ASHO Ashiyiah 27.81 113 *i* P P 16 15 13.6 +0.4
SNR=9.4
ASHO Ashiyiah 27.81 113 P P 16 15 15.0 +1.8
SNR=13
EVO Evora 27.82 280 *e*P P 16 15 14.3 +1.1
PBEJ Beja 27.82 279 *e*P P 16 15 13.8 +0.6
PBEJ *i* IAmb IAmb 16 15 20.3
comp=Z,66nm,1.7s
SVE Sverdlovsk 27.85 40 *e*P P 16 15 16.8 +3.6
PVAQ Vaqueiros 27.86 278 *e*P P 16 15 15.7 +2.2
PVAQ *i* IAmb IAmb 16 15 20.6
comp=Z,75nm,1.2s
PMTG Montargil 27.87 281 *e*P P 16 15 15.4 +1.8
ALNE Al Ain 27.98 114 P P 16 15 14.8 +0.1
SNR=9.7
ALNE S S 16 19 59.1 +0.6
PCVE Castro Verde 28.05 278 P P 16 15 14.6 -0.6
PCVE Castro Verde 28.05 278 *e*P P 16 15 15.6 +0.4
PCVE *i* IAmb IAmb 16 15 35.8
comp=Z,40nm,1.9s
PBDV Barranco-do-Ve 28.06 278 P P 16 15 15.4 0.0
PBDV Barranco-do-Ve 28.06 278 *e*P P 16 15 17.7 +2.3
PBDV *i* IAmb IAmb 16 15 22.9
comp=Z,104nm,1.3s
UMZA Um Al Zommool 28.43 117 P P 16 15 18.9 +0.2
UMZA S S 16 20 04.8 -0.6
SOHO SOHO 28.49 113 P P 16 15 19.0 -0.3
SOHO SOHO 28.49 113 P P 16 15 18.9 -0.3
SOHO P P 16 15 18.9 -0.3
MORF Marmelete 28.60 278 *e*P P 16 15 20.2 0.0
APA Apatity 28.70 4 *e*P P 16 15 26.8 +6.2
APA pmax pmax
comp=Z,21nm,1.3s
APA MLR MLR
comp=Z,4μm,6.6s
HOQ Hoqain 29.39 113 P P 16 15 27.4 +0.1
HOQ P P 16 15 27.4 +0.1
BSY Bisya 29.84 114 P P 16 15 32.1 +0.9
SMDO Samad 30.24 113 P P 16 15 36.9 +2.0
SMDO P P 16 15 36.9 +2.0
ARCES ARCESS Array B 30.53 358 P P 16 15 36.5 -0.3
comp=Z,14nm,1.0s,baz=188,slow=7.3,SNR=8.1
ARCES LR LR 16 27 15.9
comp=Z,568nm,20.1s,baz=172,slow=35
comp=Z,14nm,1.0s
ARCES ARCESS Array B 30.53 358 P P 16 15 36.6 -0.3
ARCES pmax pmax
comp=Z,99nm,1.6s
ATD Arta Tunnel 30.53 150 P P 16 15 41.4 +4.0
DOK Doka 30.59 124 P P 16 15 38.2 +0.4
JMDO Jabal Madar 30.72 114 P P 16 15 39.3 +0.2
ABTO Aybut 31.00 127 P P 16 15 42.0 +0.4
ABTO P P 16 15 42.0 +0.4
NGCH Negor - Chabah 31.14 106 P P 16 15 42.4 -0.3
WBK Wadi Bani Khal 31.18 113 P P 16 15 44.1 +0.9
MHTO MHTO 31.52 116 P P 16 15 46.0 -0.1
MHTO P P 16 15 46.0 -0.1
CHM Chimkent 31.61 71 *e*P P 16 15 47.3 +0.6
CHM Chimkent 31.61 71 *e*P P 16 15 47.4 +0.6
BRLS Borolday 31.68 69 *e*P P 16 15 47.3 0.0
BRLS Borolday 31.68 69 *e*P P 16 15 47.4 0.0
DMTO DMTO 31.78 124 P P 16 15 47.9 -0.4
JLN Jalan Bani Buh 31.79 113 P P 16 15 50.3 +1.9
JLN P P 16 15 50.3 +1.9
IUG Iuzhnay 31.95 71 *e*P P 16 15 50.5 +0.7
IUG pmax pmax
comp=Z,9.0nm,1.2s
IUG Iuzhnay 31.95 71 *e*P P 16 15 50.5 +0.7
comp=Z,9.0nm,1.2s
BORK Borovoye 32.10 50 P P 16 15 50.9 -0.1
BORK Borovoye 32.10 50⇓ *e*P P 16 15 52.7 +1.8
BORK pmax pmax
comp=Z,45nm,5.3s
BVAR Borovoye Array 32.14 50 P P 16 15 52.0 +0.7
comp=Z,2.5nm,0.8s,baz=224,slow=4.1,SNR=9.3
BVAR LR LR 16 30 52.7
comp=Z,755nm,20.0s,baz=258,slow=40
comp=Z,2.5nm,0.8s
BVAR Borovoye Array 32.14 50 P P 16 15 52.0 +0.7
KK31 Karatay Array 32.16 69 IAmb IAmb 16 15 55.6
comp=Z,21nm,1.3s
KKAR Karatay Array 32.16 69 P P 16 15 50.6 -1.0
KKAR Karatay Array 32.16 69 P P 16 15 50.6 -1.0
BTK Batken 32.92 74 IAmb IAmb 16 16 07.7
comp=Z,12nm,1.2s
TORD Torodi Ar. Bea 34.66 229 P P 16 16 13.0 -0.6
comp=Z,6.4nm,0.8s,baz=32,slow=5.8,SNR=35
TORD LR LR 16 33 43.3
comp=Z,741nm,18.0s,baz=45,slow=42
comp=Z,6.4nm,0.8s
TORD Torodi Ar. Bea 34.66 229 P P 16 16 13.0 -0.6
SGDS Sogindy 35.09 67 *e*P P 16 16 17.9 +0.8
AAK Ala-Archa 35.13 69 LR LR 16 34 01.1
comp=Z,812nm,20.1s,baz=284,slow=42
AAK Ala-Archa 35.13 69 P P 16 16 18.9 +1.3
AAK Ala-Archa 35.13 69⇑ *e*P P 16 16 19.8 +2.2
AAK pmax pmax
comp=Z,18nm,1.3s
LODK Lodwar 36.16 167 P P 16 16 26.5 -0.1
LODK IAmb IAmb 16 16 33.1
comp=Z,28nm,1.7s
LODK Lodwar 36.16 167 P P 16 16 31.5 +4.9
SNR=6.6
NIL Nilore 36.68 84 P P 16 16 31.1 +0.2
NIL IAmb IAmb 16 16 36.4
comp=Z,24nm,0.9s
NIL Nilore 36.68 84 P P 16 16 31.1 +0.2
NIL pmax pmax
comp=Z,24nm,1.0s
KSH2 Kashi 36.70 74 P P 16 16 31.8 +0.7
KSH2 sP sP 16 16 37.3 0.0
KSH2 pmax pmax
comp=Z,2.0nm,0.9s
KSH2 LR LR
comp=Z,1μm,18.9s
KSH2 LR LR
comp=Z,630nm,15.5s
KSH2 LR LR
comp=Z,640nm,13.7s
AAA Alma-Ata 36.77 67 *e*P P 16 16 32.3 +0.8
AAA pmax pmax
comp=Z,23nm,0.8s
AAA Alma-Ata 36.77 67 *e*P P 16 16 32.4 +0.8
comp=Z,23nm,0.8s
TNSS Tian-Shan 36.83 68 *e*P P 16 16 32.7 +0.3
TNSS Tian-Shan 36.83 68 *e*P P 16 16 32.8 +0.3
MDOK Medeo 36.87 67 *e*P P 16 16 33.2 +0.7
MDOK Medeo 36.87 67 *e*P P 16 16 33.2 +0.7
JMIC Jan Mayen 36.98 341 LR LR 16 31 31.6
comp=Z,662nm,18.2s,baz=64,slow=36
KURBB Kurchatov Arra 37.05 55 P P 16 16 33.7 0.0
comp=Z,5.8nm,0.9s,baz=279,slow=8.9,SNR=12
KURBB PP PnPn 16 18 02.1 +3.8
comp=Z,1.7nm,0.7s,baz=273,slow=12,SNR=4.3
KURBB LR LR 16 34 10.7
comp=Z,1μm,18.6s,baz=292,slow=40
comp=Z,5.8nm,0.9s
KURK Kurchatov 37.11 55 P P 16 16 33.9 -0.3
KURK Kurchatov 37.11 55⇑ *e*P P 16 16 34.4 +0.2
KURK pmax pmax
comp=Z,10.0nm,1.4s
SATY Saty 37.87 67 *e*P P 16 16 41.4 +0.5
SATY pmax pmax
comp=Z,44nm,1.6s
SATY Saty 37.87 67 *e*P P 16 16 41.4 +0.5
comp=Z,44nm,1.6s
KPKS Kokpek 37.99 67 *e*P P 16 16 42.6 +0.7
KPKS Kokpek 37.99 67 *e*P P 16 16 42.6 +0.7
SEM Semipalatinsk 38.16 55 *e*P P 16 16 43.9 +0.5
SEM Semipalatinsk 38.16 55 *e*P P 16 16 44.0 +0.5
BORG Borgarnes 38.22 328 LR LR 16 35 06.6
comp=Z,2μm,20.4s,baz=109,slow=40
UZB Uzynbulak 38.29 67 *e*P P 16 16 44.9 +0.4
UZB Uzynbulak 38.29 67 *e*P P 16 16 44.9 +0.4
SHLS Shalkode 38.61 67 *e*P P 16 16 50.1 +3.0
SHLS pmax pmax
comp=Z,25nm,1.5s
SHLS Shalkode 38.61 67 *e*P P 16 16 50.1 +3.0
comp=Z,25nm,1.5s
SPITS Spitsbergen Ar 39.48 356 P P 16 16 54.3 +0.4
comp=Z,28nm,1.1s,baz=143,slow=8.4,SNR=7.0
SPITS LR LR 16 34 57.8
comp=Z,416nm,20.8s,baz=171,slow=39
comp=Z,28nm,1.1s
MBAR Mbarara 39.59 175 P P 16 17 00.0 +4.4
MAKZ Makanchi 39.69 61 P P 16 16 55.8 -0.3
MAKZ Makanchi 39.69 61 P P 16 16 55.8 -0.3
MAKZ pmax pmax
comp=Z,26nm,2.0s
MK31 Makanchi Array 39.91 61 *e*P P 16 16 58.2 +0.4
MKAR Makanchi Array 39.91 61 P P 16 16 57.7 -0.1
comp=Z,2.9nm,0.6s,baz=269,slow=8.7,SNR=22
MKAR LR LR 16 35 33.8
comp=Z,1μm,20.3s,baz=266,slow=39
comp=Z,2.9nm,0.6s
MKAR Makanchi Array 39.91 61 P P 16 16 57.4 -0.5
MKAR Makanchi Array 39.91 61 *i* P P 16 16 58.4 +0.6
MKAR pmax pmax
comp=Z,3.0nm,0.6s
SCO Scoresbysund 40.50 337 *i* P P 16 17 05.4 +3.1
SCO IAmb IAmb 16 17 06.9
comp=Z,26nm,1.1s
ZALV Zalesovo Beam 40.79 49 P P 16 17 05.3 +0.4
comp=Z,9.1nm,0.8s,baz=267,slow=7.5,SNR=28
ZALV LR LR 16 36 47.0
comp=Z,298nm,20.6s,baz=266,slow=40
comp=Z,9.1nm,0.8s
ZALV Zalesovo Beam 40.79 49 P P 16 17 04.1 -0.9
ZALV Zalesovo Beam 40.79 49 *i* P P 16 17 07.4 +2.4
ZALV pmax pmax
comp=Z,9.0nm,0.8s
ZSN Zaisan 41.53 59 *e*P P 16 17 12.1 +0.9
ZSN Zaisan 41.53 59 *e*P P 16 17 12.1 +0.9
DAG Danmarks Havn 42.73 346 *i* P P 16 17 22.0 +1.4
DAG IAmb IAmb 16 17 23.8
comp=Z,6.7nm,0.9s
DGZ Jazzator, Alta 42.84 55⇓ *e*P P 16 17 22.1 +0.1
DGZ pmax pmax
comp=Z,5.0nm,0.8s
DBIC Dimbokro 43.69 231 P P 16 17 29.0 0.0
comp=Z,12nm,0.9s,baz=50,slow=7.6,SNR=9.9
DBIC LR LR 16 38 12.9
comp=Z,505nm,18.3s,baz=56,slow=40
comp=Z,12nm,0.9s
DBIC Dimbokro 43.69 231 P P 16 17 28.1 -0.9
DBIC IAmb IAmb 16 17 29.7
comp=Z,22nm,1.1s
DBIC Dimbokro 43.69 231 P P 16 17 29.0 0.0
WMQ Urumqi 44.27 64 *e*P P 16 17 35.8 +2.3
WMQ LR LR
comp=Z,1μm,17.1s
WMQ LR LR
comp=Z,1μm,21.9s
WMQ LR LR
comp=Z,850nm,17.9s
NOR Nord 45.35 352 *i* P P 16 17 41.9 +0.4
NOR IAmb IAmb 16 17 45.4
comp=Z,24nm,0.9s
SUMG Summit 46.12 338 *i* P P 16 17 50.0 +1.8
SUMG IAmb IAmb 16 17 53.5
comp=Z,11nm,0.7s
KNGR Kungurtug, Tuv 49.00 52⇓ *e*P P 16 18 11.0 +0.5
EVN Everest 49.65 84 P P 16 18 15.1 -1.3
EVN IAmb IAmb 16 18 21.3
comp=Z,9.6nm,0.8s
SFJD Kangerlussuaq 50.30 330 LR LR 16 43 43.6
comp=Z,382nm,18.4s,baz=91,slow=41
MOY Mondy 50.83 50 *e*P P 16 18 27.8 +3.4
MOY pmax pmax
comp=Z,22nm,2.2s
GOMU GeErMu 52.02 71 P P 16 18 32.3 -1.6
GOMU pmax pmax
comp=Z,5.0nm,0.9s
LSA Lhasa 52.16 80 P P 16 18 31.0 -4.1
LSA LR LR
comp=Z,540nm,19.0s
LSA LR LR
comp=Z,470nm,20.0s
LSA LR LR
comp=Z,540nm,20.8s
LSA Lhasa 52.16 80 P P 16 18 34.7 -0.4
TLY Talaya 52.40 50 LR LR 16 43 43.1
comp=Z,514nm,20.0s,baz=294,slow=39
TLY Talaya 52.40 50 P P 16 18 36.2 +0.1
TLY Talaya 52.40 50⇓ *e*P P 16 18 37.2 +1.1
TLY pmax pmax
comp=Z,16nm,1.6s
ZAK Zakamensk 52.59 51 *e*P P 16 18 38.0 +0.4
ZAK pmax pmax
comp=Z,13nm,1.6s
TULEG Thule 53.88 343 P P 16 18 46.7 +0.2
TULEG IAmb IAmb 16 18 50.2
comp=Z,12nm,1.0s
TULEG Thule 53.88 343 *i* P P 16 18 46.5 -0.1
GTA2 Gaotai 54.23 65 *e*P P 16 18 49.8 -0.1
GTA2 pP pP 16 18 54.5 +0.1
GTA2 pmax pmax
comp=Z,7.0nm,1.1s
GTA2 LR LR
comp=Z,640nm,18.7s
GTA2 LR LR
comp=Z,580nm,17.9s
GTA2 LR LR
comp=Z,470nm,17.9s
SONM Songino Array 55.39 53 P P 16 18 58.4 +0.2
comp=Z,3.4nm,0.9s,baz=288,slow=7.1,SNR=15
SONM LR LR 16 47 10.7
comp=Z,518nm,18.6s,baz=296,slow=41
comp=Z,3.4nm,0.9s
SONM Songino Array 55.39 53 P P 16 18 57.1 -1.0
SONM IAmb IAmb 16 19 02.2
comp=Z,31nm,2.0s
ULN Ulaanbaatar 55.79 53 P P 16 18 59.6 -1.4
ULN Ulaanbaatar 55.79 53⇓ *e*P P 16 19 02.3 +1.3
ULN pmax pmax
comp=Z,7.0nm,1.0s
TIXI Tiksi 56.74 22 LR LR 16 46 33.4
comp=Z,615nm,20.2s,baz=312,slow=39
TIXI Tiksi 56.74 22 P P 16 19 07.1 -0.1
TIXI IAmb IAmb 16 19 10.9
comp=Z,8.5nm,1.1s
TIXI Tiksi 56.74 22⇓ *e*P P 16 19 07.1 -0.1
TIXI pmax pmax
comp=Z,9.0nm,1.1s
PALK Pallekele 56.98 109 LR LR 16 46 26.4
comp=Z,483nm,18.9s,baz=320,slow=39
POIN Pond Inlet 57.59 340 P P 16 19 14.1 +0.9
POIN IAmb IAmb 16 19 17.3
comp=Z,6.0nm,0.9s
FRB Frobisher Bay 58.39 329 LR LR 16 46 08.0
comp=Z,480nm,19.1s,baz=67,slow=38
LZDM Lanzhou Array 58.58 67 P P 16 19 21.1 0.0
comp=Z,9.3nm,0.9s,baz=272,slow=5.3,SNR=9.3
LZDM LR LR 16 48 13.8
comp=Z,353nm,20.1s,baz=355,slow=40
comp=Z,9.3nm,0.9s
LZH Lanzhou 58.63 67 *e*P P 16 19 20.8 -0.5
LZH pP pP 16 19 25.3 -0.6
LZH pmax pmax
comp=Z,10.0nm,1.5s
LZH LR LR
comp=Z,650nm,16.2s

LZH LR LR
comp=Z,560nm,15.9s
LZH LR LR
comp=Z,580nm,16.2s
TSUM Tsumeb 58.78 191 LR LR 16 47 31.8
comp=Z,548nm,19.8s,baz=11,slow=39
TNCH TengChong 60.16 81 P **P** **16 19 31.3 -0.7**
TNCH pP pP 16 19 35.1 -1.5
TNCH sP sP 16 19 38.0 -0.4
TNCH ScP **ScP** **16 24 10.3 -8.0**
TNCH S **S** **16 27 42.1 -3.2**
TNCH sS pS 16 27 51.8 +0.8
TNCH SS **SS** **16 31 38.8 -3.4**
TNCH pmax pmax
comp=Z,8.0nm,2.2s
TNCH pmax pmax
comp=Z,75nm,3.4s
TNCH LR LR
comp=Z,350nm,21.6s
TNCH LR LR
comp=Z,280nm,18.6s
TNCH LR LR
comp=Z,350nm,23.4s
ILON Igloolik, Nuna 60.36 337 P **P** **16 19 32.2 -0.3**
ILON IAmb IAmb 16 19 40.1
comp=Z,4.8nm,0.8s
RES Resolute Bay 60.42 345 LR LR 16 45 22.8
comp=Z,336nm,20.1s,baz=16,slow=36
RES Resolute Bay 60.42 345 P **P** **16 19 33.1 +0.3**
RES IAmb IAmb 16 19 37.2
comp=Z,5.2nm,0.9s
RES Resolute Bay 60.42 345 P **P** **16 19 33.1 +0.3**
RES pmax pmax
comp=Z,5.0nm,0.9s
BTO2 Baotou 60.66 60 *e*P **P** **16 19 34.4 -0.7**
BTO2 S **S** **16 27 51.6 +0.4**
BTO2 pmax pmax
comp=Z,11nm,0.6s
BTO2 pmax pmax
comp=Z,520nm,3.7s
BTO2 LR LR
comp=Z,770nm,13.9s
BTO2 LR LR
comp=Z,570nm,6.6s
BTO2 LR LR
comp=Z,1μm,19.8s
YAK Yakutsk 61.41 32 P **P** **16 19 39.1 -0.6**
comp=Z,9.6nm,0.8s,baz=252,slow=9.6,SNR=8.9
comp=Z,9.6nm,0.8s
YAK Yakutsk 61.41 32 P **P** **16 19 38.6 -1.1**
YAK IAmb IAmb 16 19 42.9
comp=Z,9.9nm,0.8s
YAK Yakutsk 61.41 32 *e*P **P** **16 19 38.2 -1.5**
YAK *e**PP **sP** **16 19 48.7 +2.6**
YAK *e* 16 20 18.5
YAK *e* 16 21 51.0
YAK *e*S **S** **16 28 00.0 +0.1**
YAK *e*SS **SS** **16 32 02.8 +3.0**
YAK pmax pmax
comp=Z,13nm,1.2s
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.7s
YAK pmax pmax
comp=Z,126nm,4.1s
YAK pmax pmax
comp=N,116nm,4.6s
YAK pmax pmax
comp=E,67nm,4.6s
YAK smax smax
comp=N,70nm,3.0s
YAK smax smax
comp=E,74nm,3.8s
YAK MLR MLR
comp=Z,557nm,24.0s
SCHQ Schefferville 61.59 319 P **P** **16 19 40.7 -0.4**
comp=Z,9.2nm,0.7s,baz=71,slow=6.1,SNR=12
SCHQ LR LR 16 47 03.5
comp=Z,284nm,18.3s,baz=56,slow=37
comp=Z,9.2nm,0.7s
SCHQ Schefferville 61.59 319 IAmb IAmb 16 19 44.0
comp=Z,8.6nm,0.7s
HHC Hu-ho-hao-te 61.73 59 *e*P **P** **16 19 41.9 -0.5**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,5.7s
HHC LR LR
comp=Z,270nm,16.2s
HHC LR LR
comp=Z,680nm,15.3s
HHC LR LR
comp=Z,620nm,18.7s
PZH PanZhiHua 61.84 78 P **P** **16 19 42.0 -1.4**
PZH pmax pmax
comp=Z,10.0nm,0.8s
HILR Hailar Array B 62.64 47 P **P** **16 19 48.1 -0.1**
comp=Z,0.5nm,0.4s,baz=207,slow=3.0,SNR=4.6
comp=Z,0.5nm,0.4s
HIA Hailar 62.78 47 P **P** **16 19 52.9 +3.7**
XLT XiLinHaoTe 63.19 54 *e*P **P** **16 19 55.3 +3.2**
XLT pmax pmax
comp=Z,7.0nm,1.3s
XLT LR LR
comp=Z,71nm,14.4s
XLT LR LR
comp=Z,680nm,16.4s
XLT LR LR
comp=Z,940nm,16.6s
XAN Xi'an 63.26 67 P **P** **16 19 52.0 -0.6**
XAN S **S** **16 28 24.5 +0.3**
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN pmax pmax
comp=Z,250nm,4.5s
XAN LR LR
comp=Z,660nm,18.4s
XAN LR LR
comp=Z,650nm,16.2s
XAN LR LR
comp=Z,660nm,16.0s
KMI2 Kunming 63.33 78 ⇑P **P** **16 19 57.0 +3.6**
KMI2 pmax pmax
comp=Z,10.0nm,1.4s
KMI2 LR LR
comp=Z,310nm,16.9s
KMI2 LR LR
comp=Z,290nm,19.2s
KMI2 LR LR
comp=Z,380nm,26.0s
LBTB Lobatse 63.81 182 P **P** **16 19 56.3 +0.1**
LBTB Lobatse 63.81 182 P **P** **16 19 56.3 +0.1**
LBTB pmax pmax
comp=Z,49nm,1.8s
CHTO Chiang Mai 63.91 86 P **P** **16 20 00.6 +3.6**
CMAR Chiang Mai Arr 64.11 87 P **P** **16 19 57.9 -0.5**
comp=Z,1.6nm,0.8s,baz=308,slow=7.9,SNR=5.7
CMAR LR LR 16 52 53.9
comp=Z,268nm,20.9s,baz=265,slow=41
comp=Z,1.6nm,0.8s
ZEA Zeya 64.56 40 *e*P **P** **16 20 04.5 +3.7**
ZEA MLR MLR
comp=Z,500nm,20.0s
BATG Bathurst New B 64.91 311 P **P** **16 20 03.1 -0.1**
BJT Baijiatuau 65.19 58 P **P** **16 20 07.8 +2.6**
BJI2 Beijing 65.20 58 P **P** **16 20 07.4 +2.2**
BJI2 pmax pmax
comp=Z,3.0nm,1.0s
LYN LuoYang 65.51 65 P **P** **16 20 11.3 +4.0**
LYN pmax pmax
comp=Z,11nm,0.9s
LYN LR LR
comp=Z,820nm,16.8s
LYN LR LR
comp=Z,580nm,12.0s
LYN LR LR
comp=Z,1μm,19.6s
HNS HongShan 65.57 61 ⇓P **P** **16 20 11.3 +3.7**
HNS S **S** **16 29 00.3 +7.8**
HNS pmax pmax
comp=Z,10.0nm,1.2s
HNS LR LR
comp=Z,580nm,19.6s
HNS LR LR
comp=Z,550nm,19.1s
HNS LR LR
comp=Z,760nm,20.7s
ENH Enshi 65.63 70 P **P** **16 20 11.6 +3.4**
HEH HeiHe 66.53 44 *e*P **P** **16 20 13.8 +0.2**
HEH pmax pmax
comp=Z,14nm,1.1s
HEH LR LR
comp=Z,410nm,14.6s
HEH LR LR
comp=Z,700nm,15.2s
HEH LR LR
comp=Z,1μm,16.2s
BOSA Boshof 67.40 182 P **P** **16 20 17.2 -2.1**
comp=Z,2.7nm,1.0s,baz=349,slow=5.5,SNR=6.9
BOSA LR LR 16 52 54.7
comp=Z,214nm,18.6s,baz=360,slow=39
comp=Z,2.7nm,1.0s
TIA Tai'an 67.85 61 P **P** **16 20 24.4 +2.2**
TIA pmax pmax
comp=Z,15nm,1.1s
BLKN Baker Lake 67.88 337 P **P** **16 20 21.5 -0.4**
BLKN IAmb IAmb 16 20 25.0
comp=Z,8.5nm,0.8s
BILL Bilibino 68.72 16 P **P** **16 20 27.2 0.0**
BILL IAmb IAmb 16 20 30.7
comp=Z,7.8nm,1.3s
BILL Bilibino 68.72 16⇓*e*P **P** **16 20 29.3 +2.2**
BILL pmax pmax
comp=Z,8.0nm,1.5s
CN2 Changchun 69.00 50 P **P** **16 20 30.9 +1.6**
CN2 LR LR
comp=Z,650nm,14.0s
CN2 LR LR
comp=Z,370nm,14.0s
CN2 LR LR
comp=Z,630nm,14.0s
BNX BinXian 69.05 48 ⇓P **P** **16 20 29.8 +0.3**
BNX pmax pmax
comp=Z,11nm,0.9s
SEY Seymchan 69.11 24 LR LR 16 55 52.5
comp=Z,549nm,19.5s,baz=328,slow=40
SEY Seymchan 69.11 24⇓*e*P **P** **16 20 30.0 +0.4**
SEY pmax pmax
comp=Z,13nm,1.0s
KLR Kul'dur 69.42 43 LR LR 16 54 24.5
comp=Z,125nm,18.7s,baz=310,slow=39
KLR Kul'dur 69.42 43⇑*e*P **P** **16 20 32.1 +0.3**
KLR pmax pmax
comp=Z,8.0nm,1.3s
GRNR Gornyy 70.88 40 ⇓*i*P **P** **16 20 39.5 -1.2**
GRNR pmax pmax
comp=Z,2.0nm,1.2s
GRNR MLR MLR
comp=E,440nm,16.0s
GRNR MLR MLR
comp=N,190nm,15.0s
GRNR MLR MLR
comp=Z,510nm,16.0s
MA2 Magadan 71.02 27 P **P** **16 20 41.6 +0.2**
comp=Z,13nm,0.9s,baz=335,slow=5.3,SNR=25
MA2 LR LR 16 55 30.1
comp=Z,652nm,18.2s,baz=317,slow=39
comp=Z,13nm,0.9s
MA2 Magadan 71.02 27 P **P** **16 20 44.4 +3.0**
MA2 Magadan 71.02 27⇓*e*P **P** **16 20 41.7 +0.3**
MA2 pmax pmax
comp=Z,32nm,1.8s
NJ2 Nanjing 71.35 64 *e*P **P** **16 20 43.5 -0.4**
NJ2 pmax pmax
comp=Z,2.0nm,0.7s
SUR Sutherland 71.41 186 LR LR 16 53 42.1
comp=Z,242nm,19.8s,baz=4.0,slow=37
INK Inuvik 72.01 353 LR LR 16 55 14.5
comp=Z,248nm,19.5s,baz=2.5,slow=38
QIZ Qiongzhong 72.20 80 P **P** **16 20 47.8 -1.3**
QIZ S **S** **16 30 11.3 -0.2**
QIZ LR LR
comp=Z,260nm,20.6s
QIZ LR LR
comp=Z,440nm,20.6s
QIZ LR LR
comp=Z,280nm,19.0s
D23K Nanushuk River 72.25 359 IAmb IAmb 16 20 55.2
comp=Z,22nm,1.6s
USRK Ussuriysk Ar. 72.58 47 P **P** **16 20 51.1 +0.1**
comp=Z,5.1nm,0.8s,baz=290,slow=1.1,SNR=9.3
comp=Z,5.1nm,0.8s
PSTR Posyet 72.84 49⇓*e*P **P** **16 20 53.5 +0.9**
F30M Barrier River 72.89 354 IAmb IAmb 16 21 01.1
comp=Z,12nm,0.9s
VLA Vladivostok 73.18 48⇓*e*P **P** **16 20 56.7 +2.1**
VLA pmax pmax
comp=Z,26nm,1.1s
E19K Redstone River 73.70 2 IAmb IAmb 16 21 19.8
comp=Z,6.5nm,0.8s
SADO Sadowa 73.80 315 LR LR 16 54 01.7
comp=Z,408nm,19.5s,baz=132,slow=36
KSAR Wonju Array Be 74.22 55 P **P** **16 21 00.3 -0.4**
KSAR Wonju Array Be 74.22 55 P **P** **16 21 00.4 -0.4**
KSRS Korea Array 74.23 54 P **P** **16 20 59.9 -1.0**
comp=Z,6.6nm,0.8s,baz=304,slow=5.3,SNR=12
KSRS LR LR 16 57 33.3
comp=Z,1μm,18.5s,baz=305,slow=39
comp=Z,6.6nm,0.8s
YKAW3 Yellowknife Wh 74.28 343 IAmb IAmb 16 21 04.6
comp=Z,9.5nm,0.9s
F19K Shaleruckik Mo 74.31 2 IAmb IAmb 16 22 42.1
comp=Z,11nm,1.3s
YKAW1 Yellowknife Wh 74.33 343 IAmb IAmb 16 21 06.7
comp=Z,14nm,1.6s
YKA Yellowknife Ar 74.34 343 P **P** **16 21 01.0 -0.1**
comp=Z,3.6nm,0.9s,baz=30,slow=5.8,SNR=37
comp=Z,3.6nm,0.9s
YKA Yellowknife Ar 74.34 343 P **P** **16 21 01.6 +0.5**
YKA Yellowknife Ar 74.34 343 *i* P **P** **16 21 02.7 +1.6**
YKA pmax pmax
comp=Z,4.0nm,0.9s
F15K North Star Dit 75.08 5 IAmb IAmb 16 22 12.3
comp=Z,21nm,1.7s
G18K Tagagawik 75.22 3 IAmb IAmb 16 21 10.4
comp=Z,11nm,1.1s
I27K Kandik River 75.31 355 IAmb IAmb 16 21 11.4
comp=Z,7.1nm,0.9s
COLA College 76.31 358⇑*e*P **P** **16 21 14.6 +2.3**
COLA pmax pmax
comp=Z,24nm,2.2s
ILAR Eielson Array 76.39 358 P **P** **16 21 13.2 +0.3**
comp=Z,1.6nm,0.9s,baz=357,slow=4.4,SNR=11
comp=Z,1.6nm,0.9s
J26L Joseph Creek 76.52 356 IAmb IAmb 16 21 17.8
comp=Z,5.8nm,0.9s
YSS Yuzhno-Sakhali 76.54 40 **P** **16 21 13.8 -0.1**
YSS Yuzhno-Sakhali 76.54 40 P **P** **16 21 17.8 +3.9**
YSS Yuzhno-Sakhali 76.54 40 *e*P **P** **16 21 14.7 +0.8**
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,500nm,14.0s
DAWY Dawson 76.68 354 IAmb IAmb 16 21 18.9
comp=Z,7.3nm,0.9s
WRH Wood River Hil 76.72 358 IAmb IAmb 16 21 19.3
comp=Z,12nm,1.0s
FFC Flin Flon 77.14 333 P **P** **16 21 16.8 -0.4**
FFC Flin Flon 77.14 333 P **P** **16 21 16.8 -0.4**
FFC pmax pmax
comp=Z,6.0nm,1.2s
ULM Lac du Bonnet 78.21 327 P **P** **16 21 23.3 0.0**
comp=Z,6.7nm,0.9s,baz=32,slow=3.6,SNR=11
ULM LR LR 16 58 03.3
comp=Z,343nm,18.6s,baz=14,slow=37
comp=Z,6.7nm,0.9s
ULM Lac du Bonnet 78.21 327 IAmb IAmb 16 21 48.4
comp=Z,12nm,1.1s
ASAJ Asahikawa 78.42 42 LR LR 17 00 04.6
comp=Z,682nm,18.1s,baz=331,slow=39
PETK Petropavlovsk- 78.45 28 LR LR 16 58 22.3
comp=Z,536nm,19.3s,baz=325,slow=38
JNU Nakatsue 78.81 56 LR LR 17 01 17.6
comp=Z,639nm,18.5s,baz=312,slow=40
MDP Montagnes des 79.41 268 LR LR 16 56 16.2
comp=Z,163nm,20.2s,baz=105,slow=35
JOW Kunigami 81.03 63 LR LR 17 05 06.8
comp=Z,125nm,18.1s,baz=306,slow=41
DLBC Dease Lake 81.08 348 LR LR 16 59 39.7
comp=Z,298nm,20.1s,baz=356,slow=37
MJAR Matsushiro Arr 81.14 50 P **P** **16 21 39.6 +0.1**
comp=Z,6.6nm,0.9s,baz=304,slow=3.4,SNR=8.4
MJAR LR LR 17 01 15.4
comp=Z,298nm,18.4s,baz=324,slow=38
comp=Z,6.6nm,0.9s
TKL Tuckaleechee C 82.46 310 LR LR 16 58 09.6
comp=Z,331nm,20.8s,baz=54,slow=36
ECSD EROS Data Cent 83.47 323 IAmb IAmb 16 21 59.6
comp=Z,9.0nm,1.3s
KDAK Kodiak Island 83.48 0 LR LR 17 00 33.8
comp=Z,194nm,21.7s,baz=358,slow=37
KDAK Kodiak Island 83.48 0⇑*e*P **P** **16 21 52.0 +0.7**
KDAK pmax pmax
comp=Z,40nm,1.1s
SHEM Shemya Is, Ala 83.98 20 LR LR 17 04 15.1
comp=Z,238nm,18.4s,baz=100,slow=39
CCM Cathedral Cave 85.00 316 P **P** **16 21 59.3 -0.1**
CCM Cathedral Cave 85.00 316 P **P** **16 21 59.3 -0.1**
CCM pmax pmax
comp=Z,12nm,0.7s
R40A Maddies Statio 85.38 317 P **P** **16 22 01.0 -0.3**
EGMT Eagleton 85.42 333 IAmb IAmb 16 22 05.4
comp=Z,8.6nm,0.8s
T42A Van Buren 85.67 315 IAmb IAmb 16 22 05.6
comp=Z,10nm,0.9s
LEM Lembang 86.40 102 LR LR 17 03 40.5
comp=Z,117nm,19.9s,baz=332,slow=38
BBB Bella Bella 86.71 345 LR LR 17 03 25.0
comp=Z,229nm,18.8s,baz=32,slow=37
NEW Newport 87.61 337 LR LR 17 01 48.2
comp=Z,343nm,18.7s,baz=23,slow=36
YHL Hebgen Lake 88.64 332 IAmb IAmb 16 22 44.4
comp=Z,6.6nm,1.1s
BDFB Brasilia 89.13 249 P **P** **16 22 20.1 +0.3**
comp=Z,5.5nm,0.8s,baz=46,slow=9.0,SNR=6.5
BDFB LR LR 17 02 04.9
comp=Z,370nm,20.5s,baz=55,slow=36
comp=Z,5.5nm,0.8s
BDFB Brasilia 89.13 249 IAmb IAmb 16 22 57.3
comp=Z,8.6nm,1.0s
PDAR Pinedale Array 89.82 330 P **P** **16 22 23.6 +0.8**
comp=Z,0.5nm,0.7s,baz=62,slow=4.4,SNR=6.8
PDAR LR LR 17 04 50.8
comp=Z,159nm,19.1s,baz=18,slow=37
comp=Z,0.5nm,0.7s
SDV Santo Domingo 90.96 282 LR LR 17 02 06.6
comp=Z,81nm,19.2s,baz=60,slow=35
DAV Davao City (W) 91.57 80 LR LR 17 08 58.4
comp=Z,192nm,18.5s,baz=326,slow=39
HWUT Hardware Ranch 91.58 331 IAmb IAmb 16 22 57.8
comp=Z,4.5nm,1.1s
ELK Elko 93.68 333 LR LR 17 07 38.2
comp=Z,404nm,18.0s,baz=37,slow=37
KAPI Kappang 94.62 93 LR LR 17 11 34.9
comp=Z,70nm,18.8s,baz=300,slow=40
ANMO Albuquerque 95.06 324 LR LR 17 06 21.7
comp=Z,275nm,20.2s,baz=36,slow=36
YBH Yreka Blue Hor 95.20 338 LR LR 17 06 29.8
comp=Z,18nm,18.4s,baz=20,slow=36
ROSC El Rosal 96.34 281 LR LR 17 01 26.5
comp=Z,140nm,21.8s,baz=329,slow=32
NVAR Mina Array Bea 96.82 334 LR LR 17 09 40.7
comp=Z,221nm,18.1s,baz=30,slow=37
TXAR Lajitas Array 98.28 319 P Pdif 16 23 03.3 +1.5
comp=Z,0.6nm,0.8s,baz=70,slow=4.1,SNR=5.3
TXAR LR LR 17 07 44.5
comp=Z,274nm,21.1s,baz=40,slow=36
comp=Z,0.6nm,0.8s
NVL N'lazarevskaya 110.16 186 *i* PKIKP PKiKP 16 27 36.3 -18
NVL pmax pmax
comp=Z,66nm,2.2s
NVL MLR MLR
comp=Z,811nm,23.0s
WRA Warramunga Arr 114.90 96 PKP PKPdf 16 28 03.1 -2.0
comp=Z,0.2nm,0.7s,baz=312,slow=1.9,SNR=1.6
ASAR Alice Springs 116.64 100 PKP **PKPdf** **16 28 06.2 -2.1**
comp=Z,0.8nm,0.8s,baz=307,slow=1.3,SNR=7.1
DZM Mont Dzumac 140.92 77 *e*LR LR 17 14 46.6
comp=Z,159nm,25.1s
TAOE Nuku Hiva Isla 148.01 337 *e*LR LR 17 17 58.8
comp=Z,218nm,24.1s
PPT2 Papeete2 158.45 353 *e*LR LR 17 22 41.2
comp=Z,144nm,23.8s
PPT2 *e*LR LR 17 22 43.2
comp=Z,201nm,27.5s
TBI Tubuai 164.13 351 *e*LR LR 17 25 25.6
comp=Z,896nm,26.2s

PRU 18 16:10:56.7, 50°.27N×18°.70E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.56**	**220**	*e*PG	Pg	16 11 06.8	-0.6
OKC				*e*SG	Sg	16 11 15.3	+0.6
STEB	**Steborice**	**0.69**	**241**	*e*PG	Pg	16 11 09.2	-0.6
STEB				*e*SG	Sg	16 11 19.0	+0.3
OJC	**Ojcow**	**0.71**	**94**	*e*Pg	Pg	16 11 09.4	-0.8
OJC				*e*Sg	Sg	16 11 19.2	-0.2
MORC	**Moravsky Berou**	**0.90**	**237**	*e*PG	Pg	16 11 13.0	-0.8
MORC				*e*SG	Sg	16 11 24.6	-0.8
MAUC	**Maruska**	**1.07**	**212**	*e*SG	Sg	16 11 31.3	+0.4
LANS	**Liptovska Anna**	**1.23**	**156**	*e*PG	Pg	16 11 19.0	-1.2
LANS				*e*SG	Sg	16 11 35.4	-0.7
LANS				*e*LG	Lg	16 11 39.3	
DPC	**Dobruska-Polom**	**1.53**	**274**	*e*PG	Pn	16 11 23.9	-1.4
DPC				*e*SG	Sg	16 11 44.7	-1.0
OSTC	**Ostas**	**1.61**	**281**	*e*SG	Sb	16 11 48.3	0.0
VRAC	**Vranov**	**1.67**	**236**	*e*PN	Pn	16 11 26.5	-0.7
VRAC				*e*SG	Sn	16 11 48.6	-0.7
STHS	**Stebnicka Huta**	**1.85**	**116**	*e*PG	Pn	16 11 30.1	+0.3
KRUC	**Moravsky**	**1.93**	**232**	*e*PN	Pn	16 11 30.0	-0.7
KRUC				*e*SG	Sn	16 11 56.1	+0.5
ZVC	**Zvikov**	**3.03**	**256**	*e*SG	Sg	16 12 33.8	-0.3
CKRC	**Cesky Krumlov**	**3.21**	**245**	*e*SG	Sg	16 12 38.9	-0.8

*MOS **18** 16:14:49.5, 41°.60N×49°.01E, h99km±4km, MPVA2.7*
*AZER **18** 16:14:50.6, 41°.90N×49°.04E, h60km, ml2.0*
*DRS **18** 16:14:53.0, 41°.58N×48°.87E, h75km*
ISC 18 16:14:54.9±2.0, 41°.72N±0°.06×48°.87E±0°.10, h74km±14km, n19, σ1s50/37, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUBA	**Quba, Azerbaij**	**0.46**	**218**	P	**Pn**	**16 15 05.8**	**-2.0**
QUBA				S	**Sn**	**16 15 18.6**	**+1.2**
QSAR	**Qusar**	**0.50**	**246**	P	**Pn**	**16 15 05.8**	**-2.3**
QSAR				S	**Sn**	**16 15 18.7**	**+0.8**
KSMR	**Kasumkent**	**0.57**	**258**	*e*Pg	**Pn**	**16 15 08.3**	**-0.5**
KSMR				*e*Sg	**Sn**	**16 15 20.9**	**+1.9**
SIZA	**Siyzn**	**0.65**	**178**	P	**Pn**	**16 15 08.2**	**-1.5**
SIZA				S	**Sn**	**16 15 21.5**	**+1.0**
XNQ	**Khinaliq**	**0.78**	**225**	P	**Pn**	**16 15 10.6**	**-0.6**
XNQ				S	**Sn**	**16 15 25.0**	**+1.8**
ATGJ	**Altiaghaj**	**0.86**	**176**	P	**Pn**	**16 15 11.3**	**-0.7**
ATGJ				S	**Sn**	**16 15 25.7**	**+0.9**
AKT	**Akhty**	**0.89**	**255**	*e*Pg	**Pn**	**16 15 10.8**	**-1.5**
AKT				*e*Sg	**Sn**	**16 15 25.7**	**+0.4**
PQL	**Pirkuli**	**0.95**	**193**	P	**Pn**	**16 15 12.8**	**-0.5**
PQL				S	**Sn**	**16 15 29.8**	**+3.0**
URKR	**Urkarakh**	**1.02**	**296**	*e*Pg	**Pn**	**16 15 12.8**	**-1.2**
URKR				*e*Sg	**Sn**	**16 15 29.5**	**+1.2**
IML	**Ismayilli**	**1.06**	**209**	Pn	**Pn**	**16 15 12.9**	**-1.5**
IML				Sn	**Sn**	**16 15 29.9**	**+0.9**
QBL	**Gabala**	**1.10**	**225**	Sn	**Sn**	**16 15 30.3**	**+0.5**
SGKR	**Sergokala**	**1.17**	**310**	*e*Pg	**Pn**	**16 15 14.6**	**-1.1**
SGKR				*e*Sg	**Sn**	**16 15 33.1**	**+1.9**
KMKR	**Kumukh**	**1.38**	**288**	*e*Pg	**Pn**	**16 15 17.3**	**-1.4**
KMKR				*e*Sg	**Sn**	**16 15 37.6**	**+1.0**
GNBR	**Gunib**	**1.57**	**296**	*e*Pg	**Pn**	**16 15 19.4**	**-1.6**
GNBR				*e*Sg	**Sn**	**16 15 42.2**	**+1.6**
ARKR	**Arakani**	**1.65**	**303**	*e*Pg	**Pn**	**16 15 20.7**	**-1.3**
ARKR				*e*Sg	**Sn**	**16 15 44.2**	**+1.7**
XNZR	**Khunzakh**	**1.81**	**298**	*e*Pg	**Pn**	**16 15 22.9**	**-1.3**
XNZR				*e*Sg	**Sn**	**16 15 48.4**	**+1.9**
KRNR	**Karanay**	**1.83**	**308**	*e*Pg	**Pn**	**16 15 23.1**	**-1.3**
KRNR				*e*Sg	**Sn**	**16 15 48.2**	**+1.3**
UNCR	**Uncukul**	**1.83**	**303**	*e*Pg	**Pn**	**16 15 23.5**	**-0.9**
UNCR				*e*Sg	**Sn**	**16 15 48.3**	**+1.4**
TLTR	**Tlyarata**	**1.92**	**282**	*e*Pg	**Pn**	**16 15 23.9**	**-1.7**
TLTR				*e*Sg	**Sn**	**16 15 50.1**	**+1.1**

*SOME **18** 16:21:26.7, 39°.00N×72°.00E, h20km*
*IDC **18** 16:21:32.7±7.3, 38°.28N×72°.27E, h74km±72km, mb3.9/2,*

mbtmp3.8/6,ML2.8/4, Error ellipse: s-maj=81.9km s-min=54.3km az=110.0

ISC 18 16:21:29.1±2.2,**38.3N**±0.2×**71.8E**±0.1,**h25**km,**n12,** σ1**s05/18,2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**4.04**	**341**	*e*P	**Pn**	**16 22 30.5**	**+1.1**
	13nm,0.1s						
IUG				*e*S	**Sn**	**16 23 16.5**	**+0.5**
	32nm,0.4s						
MRKS	**Merke**	**4.55**	**14**	*e*P	**Pn**	**16 22 37.5**	**+0.9**
	12nm,0.4s						
MRKS				*e*S	**Sn**	**16 23 28.3**	**-0.3**
	27nm,0.5s						
AAK	**Ala-Archa**	**4.78**	**25**	P	**Pn**	**16 22 40.3**	**+0.5**
	1.3nm,0.3s,baz=205,slow=6.1,SNR=20						
AAK				S	**Sn**	**16 23 34.7**	**+0.3**
	14nm,0.8s,baz=161,slow=18,SNR=7.9						
	2.9nm,0.4s						
AAK	**Ala-Archa**	**4.78**	**25**	⇑P	**Pn**	**16 22 41.4**	**+1.6**
	11nm,1.1s						
AAK				⇓S	**Sn**	**16 23 35.3**	**+0.8**
	4.2nm,0.6s						
KK31	**Karatay Array**	**4.87**	**349**	P	**Pn**	**16 22 41.2**	**+0.5**
	6.1nm,0.3s,baz=168,slow=13,SNR=66						
KK31				⇑S	**Sn**	**16 23 36.3**	**+0.1**
	6.8nm,0.5s,baz=149,slow=22,SNR=6.1						
BRLS	**Borolday**	**4.92**	**343**	*e*P	**Pn**	**16 22 42.6**	**+1.1**
	2.7nm,0.3s						
BRLS				*e*S	**Sn**	**16 23 37.1**	**-0.5**
	7.1nm,0.5s						
MKAR	**Makanchi Array**	**11.47**	**39**	P	**Pn**	**16 24 11.6**	**+0.3**
	baz=224,slow=12,SNR=3.7						
	0.8nm,1.0s						
KURBB	**Kurchatov Arra**	**13.20**	**19**	P	**Pn**	**16 24 35.2**	**+0.4**
	baz=217,slow=12,SNR=1.4						
	0.8nm,0.2s						
BVAR	**Borovoye Array**	**14.73**	**357**	P	**P**	**16 25 00.5**	**-1.0**
	0.9nm,0.4s,baz=160,slow=10,SNR=6.3						
ZALV	**Zalesovo Beam**	**18.01**	**26**	P	**Pn**	**16 25 34.9**	**-2.6**
	0.1nm,0.3s,baz=216,slow=12,SNR=2.8						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**36.33**	**325**	P	**P**	**16 28 31.0**	**+0.4**
	5.2nm,1.0s,baz=121,slow=7.4,SNR=3.6						
	5.2nm,1.0s						
HFS	**Hagfors**	**42.02**	**321**	P	**P**	**16 29 18.9**	**+0.8**
	1.2nm,0.4s,baz=95,slow=9.5,SNR=8.3						
	1.2nm,0.4s						

*KRSC **18** 16:37:01.8±1.6,58.°91N×158.°54E,h27km±14km, Ml3.7*
*NERS **18** 16:37:13.5,59.°02N×158.°13E,h33km*

ISC 18 16:37:07.0±0.9,**58.°77N**±0.°04×**158.°92E**±0.°03,**h10**km,**n19,** σ2**s77/30, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALN	**Palana**	**0.63**	**59**	*e*P	**Pg**	**16 37 17.2**	**-2.0**
PALN				*e*S	**Sg**	**16 37 26.6**	**-0.8**
OSSR	**Ossora**	**2.19**	**76**	*e*P	**Pn**	**16 37 41.4**	**-2.1**
OSSR				*e*S	**Sn**	**16 38 10.8**	**+0.1**
SRDR	**Sredinnyy**	**2.50**	**170**	*e*P	Pn	16 37 44.7	-3.0
SMKR	**Semkarok**	**2.58**	**147**	*e*P	**Pn**	**16 37 47.7**	**-1.2**
KLY	**Klyuchi**	**2.63**	**159**	*e*P	**Pn**	**16 37 48.1**	**-1.4**
KOZ	**Kozyrevsk**	**2.77**	**169**	*e*P	**Pn**	**16 37 50.2**	**-1.2**
KOZ				*e*S	**Sn**	**16 38 24.5**	**-0.3**
ESO	**Esso**	**2.85**	**183**	*e*P	**Pn**	**16 37 50.5**	**-2.1**
KMNR	**Kamenistaya**	**3.10**	**166**	*e*P	**Pn**	**16 37 57.0**	**+0.9**
KBG	**Krutoberegovo**	**3.24**	**139**	*e*P	**Pn**	**16 37 57.9**	**0.0**
KBTR	**Krutoberegovo**	**3.32**	**139**	*e*P	**Pn**	**16 37 59.1**	**+0.1**
GADL	**Gadlja**	**4.01**	**286**	*e*Sg	**Sb**	**16 39 06.6**	**+0.4**
GADL				Sgmax		16 39 25.1	
	220nm,0.7s						
TILK	**Tilichiki**	**4.04**	**62**	*e*P	**Pn**	**16 38 06.7**	**-2.1**
TLAR	**Talaya**	**4.05**	**309**	*e*P	**Pn**	**16 38 07.1**	**-1.9**
TLAR				*e*Pg	**Pb**	**16 38 20.8**	**+2.4**
TLAR				Pgmax		16 38 24.3	
	20nm,0.4s						
TLAR				*e*S	**Sn**	**16 38 53.7**	**-2.7**
TLAR				*e*Sg	**Sb**	**16 39 09.2**	**+1.9**
TLAR				Sgmax		16 39 20.2	
	80nm,0.5s						
TLAR				Sgmax		16 39 20.2	
	70nm,0.4s						
OMS	**Omsukchan**	**4.07**	**339**	*e*P	**Pn**	**16 38 07.8**	**-1.4**
OMS				*e*Pg	**Pb**	**16 38 22.6**	**+3.9**
OMS				Pgmax		16 38 28.3	
	20nm,0.4s						
OMS				*e*Sg	**Sb**	**16 39 12.9**	**+5.1**
OMS				Sgmax		16 39 29.9	
	30nm,0.7s						
OMS				Sgmax		16 39 29.9	
	20nm,0.6s						
MA2	**Magadan**	**4.27**	**284**	*e*P	**Pn**	**16 38 12.9**	**+0.8**
MA2				*e*Pg	**Pb**	**16 38 24.4**	**+2.2**
MA2				Pgmax		16 38 33.1	
	10.0nm,0.4s						
MA2				*e*Sg	**Sb**	**16 39 15.4**	**+1.6**
MA2				Sgmax		16 39 31.5	
	40nm,0.9s						
MA2				Sgmax		16 39 31.5	
	20nm,0.9s						
MGD	**Magadan 1**	**4.38**	**290**	*e*P	**Pn**	**16 38 11.3**	**-2.2**
MGD				*e*Sg	**Sb**	**16 39 18.2**	**+1.4**
MGD				Sgmax		16 39 31.3	
	30nm,0.6s						
MGD				Sgmax		16 39 31.3	
	50nm,0.6s						
SEY	**Seymchan**	**5.26**	**325**	*e*P	**Pn**	**16 38 25.7**	**+0.1**
SEY				*e*Pg	Pb	16 38 44.1	+5.1
SEY				*e*Sg	**Sb**	**16 39 46.7**	**+4.6**
SEY				Sgmax		16 40 09.2	
	20nm,0.7s						
SEY				Sgmax		16 40 09.2	
	20nm,0.8s						
TLON	**Talon**	**5.36**	**285**	*e*Sg	**Sb**	**16 39 50.3**	**+5.4**
TLON				Sgmax		16 40 13.6	
	90nm,0.8s						
TLON				Sgmax		16 40 13.6	
	90nm,0.8s						
SUUS	**Susuman**	**6.62**	**312**	*e*Sg	**Sg**	**16 40 32.1**	**-7.3**
SUUS				Sgmax		16 40 51.1	
	20nm,0.8s						
SUUS				Sgmax		16 40 51.1	
	30nm,0.7s						

*ISK **18** 16:45:18.1,39.°11N×27.°82E,h9km,ML4.0/22*
*AFAD **18** 16:45:18.5,39.°09N×27.°82E,h7km±3km,ML3.9*
*CFUSG **18** 16:45:20.5,39.°62N×27.°79E,h1km,Mb3.0/1,MD3.3/1, MSH2.7/3*
*THE **18** 16:45:21.7,39.°N±2.°×2.°8E±.°,h33km±12km,M3.5/15, MLh3.5/15*
*SOF **18** 16:45:55.9,41.°1N±0.°3×25.°6E±0.°2,h13km±72km,MD2.5/4*

ISC 18 16:45:18.5±0.8,**39.°09N**±0.°02×**27.°83E**±0.°02,**h16**km±6km, **n101,** σ1**s31/122, 11C-13D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.21**	**183**	P	**Pg**	**16 45 23.4**	**0.0**
AKHS				S	**Sg**	**16 45 27.1**	**+0.3**
AKHS				IAML		16 45 28.0	
	comp=E,3μm,0.3s						
AKS	**Akhisar**	**0.21**	**184**	Pg	**Pg**	**16 45 22.8**	**-0.6**
AKS				Sg	**Sg**	**16 45 27.0**	**+0.3**
SOMA	**Soma-Manisa**	**0.24**	**286**	Pg	**Pg**	**16 45 23.3**	**-0.5**
SOMA				Sg	**Sg**	**16 45 27.1**	**-0.3**
STEP	**BALIKESIR_Sava**	**0.30**	**343**	P	**Pg**	**16 45 24.4**	**-0.5**
STEP				S	**Sg**	**16 45 28.2**	**-0.9**
STEP				IAML		16 45 30.0	
	comp=N,2μm,0.8s						
GORD	**Gordes-Manisa**	**0.33**	**124**	Pg	**Pg**	**16 45 25.6**	**+0.3**
GORD				Sg	**Sb**	**16 45 31.0**	**0.0**
GOMA	**Golmarmara-Man**	**0.39**	**170**	Pg	**Pg**	**16 45 26.6**	**+0.2**
GOMA				Sg	**Sb**	**16 45 32.7**	**-0.1**
KTTT	**Salihli**	**0.45**	**153**	P	**Pg**	**16 45 27.9**	**+0.4**
KTTT				S	**Sg**	**16 45 33.6**	**-0.1**
KTTT				IAML		16 45 35.0	
	comp=N,8μm,0.6s						
CAMT	**Merkez**	**0.53**	**230**	P	**Pb**	**16 45 29.4**	**0.0**
CAMT				S	**Sb**	**16 45 36.8**	**-0.1**
CAMT				IAML		16 45 41.0	
	comp=N,6μm,0.5s						
CAMT				IAML		16 45 44.0	
	comp=E,7μm,0.9s						
ZEDA	**zmir-Bergama**	**0.60**	**258**	P	**Pg**	**16 45 30.5**	**+0.2**
ZEDA				S	**Sg**	**16 45 38.1**	**-0.2**
ZEDA				IAML		16 45 42.0	
	comp=N,6μm,0.7s						
BKES	**Balkesir-Mer**	**0.64**	**7**	P	**Pg**	**16 45 31.2**	**0.0**
BALY	**Balya**	**0.67**	**346**	P	**Pb**	**16 45 31.8**	**0.0**
DEMI	**Demirci**	**0.69**	**94**	P	**Pb**	**16 45 32.4**	**+0.2**
DEMI				S	**Sg**	**16 45 41.4**	**+0.2**
DEMI				IAML		16 45 43.0	
	comp=E,7μm,0.3s						
DEMI				IAML		16 45 46.0	
	comp=N,4μm,0.3s						
IZMD	**zmir-Dikili-**	**0.71**	**262**	P	**Pb**	**16 45 32.8**	**+0.3**
IZMD				S	**Sg**	**16 45 40.5**	**-1.3**
DURS	**Dursunbey**	**0.71**	**44**	P	**Pb**	**16 45 32.6**	**0.0**
BUHA	**Balikesir, Bur**	**0.71**	**305**	P	**Pg**	**16 45 32.3**	**-0.1**
DKL	**Dikili**	**0.72**	**269**	Pg	**Pg**	**16 45 32.6**	**+0.1**
YAYO	**Edremit-Balk**	**0.78**	**312**	Pg	**Pg**	**16 45 33.4**	**-0.3**
BLKS	**Balkesir-Sus**	**0.79**	**8**	P	**Pg**	**16 45 33.5**	**-0.4**
DST	**Dursunbey**	**0.80**	**50**	Pg	**Pg**	**16 45 33.5**	**-0.5**
MANT	**Manisa**	**0.83**	**136**	P	**Pg**	**16 45 34.8**	**+0.2**
MANT				S	**Sg**	**16 45 45.1**	**-0.4**
MANT				IAML		16 45 49.0	
	comp=E,7μm,0.4s						
MANT				IAML		16 45 49.0	
	comp=N,6μm,0.4s						
ODEM	**Odemis-Izmir**	**0.84**	**167**	Pg	**Pg**	**16 45 34.9**	**+0.1**
KULA	**Kula-Manisa**	**0.87**	**131**	Pg	**Pb**	**16 45 35.3**	**+0.1**
BAGT	**Foa**	**0.88**	**241**	P	**Pg**	**16 45 35.6**	**+0.1**
SUSR	**Susurluk-Balik**	**0.89**	**13**	Pg	**Pb**	**16 45 34.9**	**-0.7**
SMAA	**Simav-Kutahya**	**0.90**	**89**	Pg	**Pn**	**16 45 36.3**	**-0.2**
SIMA	**Simav-Kutahya**	**0.90**	**90**	Pg	**Pg**	**16 45 36.2**	**+0.3**
AYVA	**Ayvalik**	**0.91**	**284**	P	**Pg**	**16 45 36.2**	**+0.1**
DUVT	**Torbali**	**0.92**	**199**	P	**Pn**	**16 45 37.0**	**+0.2**
CMHT	**Manyas**	**0.92**	**7**	P	**Pg**	**16 45 36.5**	**+0.1**
BLCB	**Balcova**	**0.94**	**221**	Pg	**Pb**	**16 45 36.4**	**+0.1**
BLCB	**Balcova**	**0.94**	**221**	P	**Pb**	**16 45 36.4**	**+0.1**
BLCB				S	**Sb**	**16 45 48.4**	**+0.1**
FOCM	**Foa**	**0.94**	**247**	Pg	**Pb**	**16 45 36.1**	**-0.2**
YENI	**Yenice-Canakka**	**0.96**	**332**	Pg	**Pb**	**16 45 36.7**	**0.0**
GONE	**Gonen-Balikesi**	**0.96**	**353**	Pg	**Pb**	**16 45 36.6**	**-0.1**
IZMR	**zmir-demi**	**0.96**	**174**	P	**Pn**	**16 45 38.2**	**+0.9**
IZMR				S	**Sb**	**16 45 48.7**	**-0.4**
IZMR				IAML		16 45 52.0	
	comp=N,4μm,0.3s						
IZMR				IAML		16 45 52.0	
	comp=E,7μm,0.6s						
KIRA	**zmir-Kiraz**	**1.00**	**153**	P	**Pn**	**16 45 38.7**	**+0.7**
USAK	**Uak-Merkez**	**1.00**	**112**	P	**Pg**	**16 45 38.0**	**+0.1**
ATIT	**Gnen**	**1.01**	**348**	P	**Pn**	**16 45 38.1**	**+0.1**
SHAP	**Saphane-Kutahy**	**1.09**	**93**	Pn	**Pg**	**16 45 39.7**	**+0.2**
CANM	**Can-anakkale**	**1.10**	**327**	Pg	**Pb**	**16 45 39.1**	**0.0**
KRBN	**Karaburun**	**1.11**	**244**	Pn	**Pg**	**16 45 39.9**	**0.1**
NAZL	**Nazilli-Aydin**	**1.18**	**162**	Pn	**Pg**	**16 45 41.2**	**-0.1**
KARB	**zmir-Karabur**	**1.19**	**249**	P	**Pb**	**16 45 40.9**	**+0.3**
PRK	**Paraskevi**	**1.22**	**278**	P	**Pg**	**16 45 41.7**	**-0.3**
PRK				S	**Sn**	**16 45 57.3**	**+0.2**
GEDZ	**Gediz**	**1.23**	**92**	Pn	**Pg**	**16 45 42.3**	**+0.1**
GMLD	**Gumuldur**	**1.24**	**216**	Pn	**Pb**	**16 45 41.7**	**+0.2**
SULTU	**Buldan**	**1.27**	**144**	P	**Pb**	**16 45 42.7**	**+0.5**
DGB	**zmir**	**1.28**	**216**	P	**Pg**	**16 45 43.0**	**-0.1**
BAND	**Balkesir-Ban**	**1.28**	**9**	⇑P	**Pb**	**16 45 42.2**	**+0.1**
KUSD	**Kusadasi-Aydin**	**1.30**	**199**	Pn	**Pg**	**16 45 43.4**	**-0.2**
ZEYE	**Izmir, Urla-Ze**	**1.34**	**231**	P	**Pn**	**16 45 43.1**	**+0.5**
ESEN	**Aydn-Nazilli**	**1.35**	**162**	P	**Pg**	**16 45 44.8**	**+0.2**
EZN	**Ezine**	**1.38**	**303**	P	**Pb**	**16 45 44.4**	**+0.5**
EZN				S	**Sb**	**16 46 01.3**	**+0.1**
AYDN	**Tasoluk**	**1.43**	**178**	P	**Pn**	**16 45 44.4**	**+0.6**
GCAM	**G?zelcaml?**	**1.47**	**199**	Pn	**Pb**	**16 45 45.3**	**-0.1**
SIGR	**SIGRI**	**1.54**	**275**	P	**Pn**	**16 45 45.8**	**+0.5**
SIGR				S	**Sn**	**16 46 04.2**	**-0.8**
CHOS	**Chios island**	**1.56**	**244**	P	**Pn**	**16 45 46.2**	**+0.6**
SMG	**Samos**	**1.59**	**210**	P	**Pn**	**16 45 45.8**	**-0.2**
SMG				S	**Sn**	**16 46 05.2**	**-0.9**
GADA	**Gvkgeada**	**1.85**	**307**	P	**Pb**	**16 45 51.1**	**-0.8**
YER	**Yerkesik**	**1.99**	**170**	P	**Pn**	**16 45 52.1**	**+0.6**
CAVK	**Edirne/Enez-Ca**	**2.05**	**322**	⇓P	**Pb**	**16 45 54.0**	**-1.2**
BODT	**Bodrum**	**2.07**	**192**	P	**Pg**	**16 45 57.3**	**-0.9**
ENEZ	**Enez**	**2.09**	**322**	P	**Pb**	**16 45 55.1**	**-0.8**
ENEZ				S	**Sn**	**16 46 20.0**	**+1.5**
LIA	**Limnos Island**	**2.20**	**292**	P	**Pn**	**16 45 55.8**	**+1.5**
SMTH	**Samothraki Isl**	**2.24**	**309**	P	**Pn**	**16 45 56.2**	**+1.2**
ALN	**Alexandroupoli**	**2.26**	**323**	P	**Pn**	**16 45 56.5**	**+1.2**
SILT	**Sile**	**2.48**	**33**	⇑P	**Pn**	**16 46 00.0**	**+1.8**
SILT				⇓S	**Sb**	**16 46 31.3**	**-1.8**
RDO	**Rodhopi**	**2.70**	**320**	P	**Pn**	**16 46 03.1**	**+1.9**
THAS	**Thassos island**	**2.83**	**303**	P	**Pn**	**16 46 04.0**	**+1.0**
SAHE	**Sakarya_HENDEK**	**2.91**	**52**	⇓P	**Pn**	**16 46 06.4**	**+2.2**
AOS	**Alonnisos**	**3.07**	**273**	⇓P	**Pn**	**16 46 08.7**	**+2.3**
KAVA	**Kavala**	**3.18**	**308**	P	**Pn**	**16 46 08.9**	**+1.1**
OUR	**Ouranopolis**	**3.22**	**294**	P	**Pn**	**16 46 09.5**	**+1.2**
DIM	**Dimitrovgrad**	**3.41**	**331**	P	**Pn**	**16 46 14.0**	**+3.0**
RZN	**Rozhen**	**3.51**	**319**	P	**Pn**	**16 46 14.6**	**+2.1**
JMB	**Yambol**	**3.54**	**344**	P	**Pg**	**16 46 25.9**	**-0.3**
PLD	**Plovdiv**	**3.85**	**323**	P	**Pn**	**16 46 19.0**	**+2.0**
MMB	**Musomishta**	**3.97**	**309**	P	**Pn**	**16 46 22.4**	**+3.7**
ELND	**Elena**	**4.11**	**340**	⇑P	**Pn**	**16 46 22.3**	**+1.7**
KIRS	**Kirsehir-Merke**	**4.73**	**88**	⇑P	**Pn**	**16 46 31.6**	**+2.3**
PLVB	**Pleven**	**4.92**	**332**	⇑P	**Pn**	**16 46 33.1**	**+1.3**
VTS	**Vitosha**	**4.95**	**317**	P	**Pn**	**16 46 34.6**	**+2.3**
TPGR	**Topolog**	**5.78**	**4**	⇓P	**Pn**	**16 46 46.3**	**+2.8**
CFR	**Carcaliu**	**6.08**	**2**	⇓P	**Pn**	**16 46 48.9**	**+1.2**
BOVS	**Bovan**	**6.47**	**317**	⇓P	**Pn**	**16 46 55.3**	**+2.4**
MLR	**Muntele Rosu**	**6.54**	**348**	⇑P	**Pn**	**16 46 56.8**	**+2.6**
VOIR		**6.67**	**343**	⇑P	**Pn**	**16 46 58.3**	**+2.5**
PLOR	**Plostina**	**6.81**	**353**	⇑P	**Pn**	**16 47 00.2**	**+2.5**
VRI	**Vrincioaia**	**6.82**	**353**	⇓P	**Pn**	**16 47 00.4**	**+2.6**
COVR	**Voineasa-Covas**	**6.86**	**350**	⇓P	**Pn**	**16 47 00.8**	**+2.5**
SEV	**Sevastopol'**	**6.98**	**37**	*e*P	**Pn**	**16 47 01.4**	**+1.5**
SEV				pmax	pmax	16 47 09.3	
	comp=Z,4.0nm,0.6s						
SEV				*e*S	**Sn**	**16 48 17.3**	**-1.6**
SEV				smax	smax	16 48 19.2	
	comp=N,1.0nm,0.3s						
SEV				smax	smax	16 48 19.2	
	comp=E,4.0nm,0.5s						
LOT	**Lotru**	**7.03**	**336**	⇓P	**Pn**	**16 47 02.9**	**+2.1**
TURR	**Turia**	**7.09**	**350**	⇓P	**Pn**	**16 47 04.1**	**+2.6**
DOPR	**Dopca**	**7.10**	**346**	⇑P	**Pn**	**16 47 04.4**	**+2.6**
OZUR		**7.16**	**349**	⇓P	**Pn**	**16 47 04.4**	**+1.9**
MDVR	**Moldovita**	**7.29**	**323**	⇓P	**Pn**	**16 47 05.8**	**+1.5**
ONER	**Baraj Valea Uz**	**7.32**	**352**	⇑P	**Pn**	**16 47 07.1**	**+2.5**
GZR	**Gura Zlata**	**7.33**	**331**	⇑P	**Pn**	**16 47 06.4**	**+1.5**
DNZ2	**Donuzlav2**	**7.44**	**31**	*e*S	**Sn**	**16 48 25.7**	**-4.6**
DNZ2				smax	smax	16 48 27.3	
	comp=E,1.0nm,0.2s						
DNZ2				smax	smax	16 48 27.4	
	comp=N,7.0nm,0.3s						
SUDU	**Sudak**	**7.88**	**40**	*e*S	**Sn**	**16 48 40.0**	**-1.0**
SUDU				smax	smax	16 48 43.9	
	comp=N,22nm,0.6s						
SUDU				smax	smax	16 48 43.9	
	comp=E,1.0nm,0.2s						
BZS	**Buzias**	**7.98**	**327**	⇓P	**Pn**	**16 47 15.7**	**+2.0**

*ISK **18** 16:52:40.1,39.°10N×27.°82E,h1km,ML3.6/23*
*AFAD **18** 16:52:41.3,39.°09N×27.°82E,h7km±2km,MW3.4*
*THE **18** 16:52:42.5,39.°N±10.°×2.°8E±1.°3,h7km±25km,M3.0/11, MLh3.0/11*

ISC 18 16:52:41.5±0.9,**39.°10N**±0.°02×**27.°81E**±0.°02,**h11**km±7km, **n74,** σ0**s46/92, 12C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.22**	**180**	P	**Pg**	**16 52 46.0**	**0.0**
AKHS				S	**Sg**	**16 52 49.6**	**+0.5**
AKHS				IAML		16 52 51.0	
	comp=E,6μm,0.2s						
AKS	**Akhisar**	**0.22**	**180**	Pg	**Pg**	**16 52 45.5**	**-0.5**
SOMA	**Soma-Manisa**	**0.22**	**286**	Pg	**Pg**	**16 52 45.8**	**-0.4**
SOMA				Sg	**Sg**	**16 52 49.8**	**+0.5**
STEP	**BALIKESIR_Sava**	**0.29**	**346**	P	**Pg**	**16 52 47.2**	**-0.2**
STEP				S	**Sg**	**16 52 51.1**	**-0.2**
STEP				IAML		16 52 52.0	
	comp=N,2μm,0.3s						
GORD	**Gordes-Manisa**	**0.34**	**123**	Pg	**Pg**	**16 52 47.8**	**-0.5**
GORD				Sg	**Sg**	**16 52 53.7**	**+0.9**
GOMA	**Golmarmara-Man**	**0.40**	**168**	Pg	**Pg**	**16 52 49.0**	**-0.3**
GOMA				Sg	**Sg**	**16 52 55.4**	**+0.9**
KTTT	**Salihli**	**0.46**	**152**	P	**Pg**	**16 52 50.4**	**-0.1**
KTTT				S	**Sg**	**16 52 56.3**	**-0.4**
KTTT				IAML		16 52 58.0	
	comp=N,2μm,0.5s						
CAMT	**Merkez**	**0.52**	**229**	P	**Pb**	**16 52 52.1**	**-0.5**
CAMT				S	**Sb**	**16 53 00.1**	**-0.1**
CAMT				IAML		16 53 01.0	
	comp=E,2μm,0.3s						
CAMT				IAML		16 53 03.0	
	comp=N,2μm,0.4s						
BALB	**Balikesir**	**0.55**	**6**	Pg	**Pg**	**16 52 51.8**	**-0.3**
BALB				Sg	**Sb**	**16 53 01.2**	**+0.2**
ZEDA	**zmir-Bergama**	**0.59**	**258**	P	**Pb**	**16 52 53.3**	**-0.4**
ZEDA				S	**Sg**	**16 53 00.9**	**+0.3**
ZEDA				IAML		16 53 01.0	
	comp=E,761nm,0.5s						
ZEDA				IAML		16 53 02.0	
	comp=N,2μm,0.6s						
BKES	**Balkesir-Mer**	**0.64**	**8**	P	**Pg**	**16 52 53.8**	**-0.2**
BALY	**Balya**	**0.66**	**347**	P	**Pg**	**16 52 54.3**	**0.0**
IZMD	**zmir-Dikili-**	**0.70**	**261**	P	**Pb**	**16 52 55.3**	**-0.4**
BUHA	**Balikesir, Bur**	**0.70**	**306**	P	**Pg**	**16 52 55.1**	**+0.1**
DEMI	**Demirci**	**0.71**	**94**	P	**Pg**	**16 52 55.0**	**-0.1**
DKL	**Dikili**	**0.71**	**268**	Pg	**Pg**	**16 52 55.3**	**+0.2**
DURS	**Dursunbey**	**0.72**	**45**	P	**Pg**	**16 52 55.2**	**-0.2**
YAYO	**Edremit-Balk**	**0.77**	**312**	Pg	**Pg**	**16 52 56.0**	**-0.4**
DST	**Dursunbey**	**0.81**	**51**	Pg	**Pg**	**16 52 56.5**	**-0.6**
MANT	**Manisa**	**0.84**	**136**	P	**Pg**	**16 52 57.5**	**-0.2**
MANT				S	**Sg**	**16 53 08.0**	**-0.6**
MANT				IAML		16 53 09.0	
	comp=E,556nm,0.4s						
ODEM	**Odemis-Izmir**	**0.84**	**166**	Pg	**Pg**	**16 52 57.4**	**-0.3**
BAGT	**Foa**	**0.87**	**240**	P	**Pb**	**16 52 58.7**	**+0.2**
KULA	**Kula-Manisa**	**0.88**	**131**	Pg	**Pg**	**16 52 57.9**	**-0.6**
SUSR	**Susurluk-Balik**	**0.89**	**14**	Pg	**Pg**	**16 52 57.9**	**-0.8**
AYVA	**Ayvalik**	**0.90**	**284**	P	**Pb**	**16 52 59.1**	**+0.1**
SMAA	**Simav-Kutahya**	**0.91**	**89**	Pg	**Pg**	**16 52 58.8**	**-0.2**
SIMA	**Simav-Kutahya**	**0.91**	**90**	Pg	**Pg**	**16 52 58.7**	**-0.3**
DUVT	**Torbali**	**0.92**	**198**	P	**Pb**	**16 52 59.3**	**-0.1**
DUVT				S	**Sg**	**16 53 11.1**	**-0.1**
DUVT				IAML		16 53 14.0	
	comp=E,954nm,0.2s						
FOCM	**Foa**	**0.93**	**246**	Pg	**Pg**	**16 52 58.8**	**-0.5**
BLCB	**Balcova**	**0.93**	**221**	Pg	**Pg**	**16 52 58.9**	**-0.5**
BLCB	**Balcova**	**0.93**	**221**	P	**Pg**	**16 52 58.9**	**-0.5**
BLCB				S	**Sg**	**16 53 11.5**	**0.0**
YENI	**Yenice-Canakka**	**0.95**	**332**	Pg	**Pg**	**16 52 59.2**	**-0.6**
GONE	**Gonen-Balikesi**	**0.95**	**354**	Pg	**Pg**	**16 52 59.2**	**-0.7**
IZMR	**zmir-demi**	**0.96**	**173**	P	**Pg**	**16 52 59.6**	**-0.4**
KIRA	**zmir-Kiraz**	**1.01**	**153**	P	**Pb**	**16 53 01.1**	**+0.1**
USAK	**Uak-Merkez**	**1.01**	**112**	P	**Pg**	**16 53 00.7**	**-0.3**
CANM	**Can-anakkale**	**1.09**	**328**	Pn	**Pg**	**16 53 02.2**	**-0.2**
SHAP	**Saphane-Kutahy**	**1.10**	**93**	Pn	**Pg**	**16 53 02.0**	**-0.6**
KRBN	**Karaburun**	**1.10**	**243**	Pn	**Pg**	**16 53 02.4**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.15**	**177**	Pn	**Pg**	**16 53 02.9**	**-0.7**
NAZL	**Nazilli-Aydin**	**1.19**	**161**	Pn	**Pg**	**16 53 03.6**	**-0.7**
PRK	**Paraskevi**	**1.21**	**278**	P	**Pg**	**16 53 04.1**	**-0.6**
PRK				S	**Sb**	**16 53 20.6**	**+0.7**
GMLD	**Gumuldur**	**1.24**	**215**	Pn	**Pg**	**16 53 05.1**	**-0.1**
GEDZ	**Gediz**	**1.25**	**92**	Pn	**Pb**	**16 53 05.0**	**0.0**
BAND	**Balkesir-Ban**	**1.28**	**10**	⇑P	**Pn**	**16 53 04.7**	**-0.6**
BAND				⇑S	**Sg**	**16 53 22.7**	**+0.1**
EZN	**Ezine**	**1.36**	**303**	P	**Pn**	**16 53 06.2**	**-0.3**
EZN				S	**Sb**	**16 53 23.4**	**-1.0**
GCAM	**G?zelcaml?**	**1.47**	**198**	Pn	**Pb**	**16 53 08.6**	**-0.1**
SIGR	**SIGRI**	**1.52**	**275**	P	**Pn**	**16 53 08.3**	**-0.4**
SIGR				S	**Sn**	**16 53 28.6**	**+0.1**
SMG	**Samos**	**1.58**	**209**	P	**Pb**	**16 53 10.3**	**-0.4**
GADA	**Gvkgeada**	**1.84**	**307**	P	**Pn**	**16 53 13.0**	**0.

	comp=Z,0.3nm,0.5s							
H22K	**Ishtalitna Cre**	**88.36**	**11**	P	**P**	**17 06 41.1**	**+0.5**
H22K				IAmb	IAmb	17 06 41.5	
	comp=Z,1.9nm,0.8s							
PDAR	**Pinedale Array**	**88.84**	**43**	P	**P**	**17 06 43.8**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=243,slow=4.8,SNR=2.8							
	comp=Z,0.2nm,0.7s							
E19K	**Redstone River**	**88.94**	**8**	P	**P**	**17 06 43.6**	**+0.4**
E19K				IAmb	IAmb	17 07 05.6	
	comp=Z,3.0nm,1.4s							
SDCO	**Great Sand Dun**	**89.23**	**49**	P	**P**	**17 06 44.5**	**-1.2**
AKASG	**Malin Array Be**	**142.98**	**331**	PKP	**PKPdf**	**17 13 16.7**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=93,slow=1.9,SNR=1.5							

IDC ***18*** *17:02:26.9±1.1, 1°.70N×126°.58E, h0km, mb4.1/9, mbtmp4.1/10, ML4.1/1, MS3.0/1, Error ellipse: s-maj=107.1km s-min=14.5km az=69.0*

NEIC ***18*** *17:02:27.9±2.5, 1°.94N±0°.07×126°.67E±0°.07, h10km±1km, mb4.4/29, Error ellipse: s-maj=15.2km s-min=8.1km az=229.0*

DJA ***18*** *17:02:34.4±0.2,2°N±2°×12°7E±°, h10km, M4.1/24, mb4.2/9, MLv4.0/24*

ISC 18 17:02:28.2±0.5, 1°.87N±0°.04×126°.60E±0°.05, h10km, n63, σ1s78/64, mb4.3/20, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**145**		**Pg**	**17 02 56.2**	**+2.4**
TNTI				Sn	**Sb**	**17 03 10.4**	**-0.1**
TNTI	**Ternate**	**1.33**	**145**	P	**Pg**	**17 02 55.9**	**+2.1**
TNTI				S	**Sg**	**17 03 13.1**	**+2.0**
MNI	**Manado**	**1.81**	**257**	P	**Pg**	**17 03 04.7**	**+1.8**
SGSI	**Sangihe**	**2.10**	**329**	P	**Pg**	**17 03 11.5**	**+3.0**
GTOI	**Gorontalo**	**3.79**	**251**	P	**Pb**	**17 03 33.5**	**-1.7**
SANI	**Sanana**	**3.94**	**189**	P	**Pn**	**17 03 29.8**	**+1.1**
LUWI	**Luwuk**	**4.79**	**233**	Pn	**Pn**	**17 03 42.5**	**+1.9**
LUWI				Sn	**Sn**	**17 04 37.0**	**+0.9**
LUWI	**Luwuk**	**4.79**	**233**	P	Pn	17 03 46.3	+5.8
MRSI	**Marisa**	**4.86**	**254**	P	Pn	17 03 48.1	+6.7
NLAI	**Namlea**	**5.10**	**174**	P	**Pn**	**17 03 48.5**	**+3.8**
DAV	**Davao City (W)**	**5.27**	**349**	Pn	**Pn**	**17 03 47.4**	**+0.3**
SWI	**Sorong**	**5.39**	**120**	P	**Pn**	**17 03 52.6**	**+3.8**
	0.1nm20nm,1.0s							
SIJI	**Sorong**	**5.40**	**120**	LR	LR	17 06 14.8	
	comp=Z,154nm,20.5s,baz=224,slow=43							
KRAI	**Karang Ratu**	**5.46**	**161**	P	**Pn**	**17 03 54.0**	**+4.4**
	0.1nm18nm,0.6s							
TOLI2	**Tolitoli**	**5.86**	**263**	Pn	**Pn**	**17 03 59.1**	**+3.9**
TOLI2				Sn	**Sn**	**17 05 03.4**	**+0.9**
MPSI	**Mapaga**	**6.87**	**257**	P	Pn	17 04 15.8	+6.8
MYLDM	**Lahad Datu**	**8.72**	**292**	Pn	**Pn**	**17 04 36.9**	**+2.3**
MYLDM	**Lahad Datu**	**8.72**	**292**	P	Pn	17 04 42.7	+8.2
	27nm,1.6s							
SBUM	**Sibu**	**14.38**	**273**	Pn	**Pn**	**17 05 54.4**	**+2.4**
MTN	**Manton Dam**	**15.29**	**163**	Pn	**Pn**	**17 06 03.3**	**-1.1**
MTN				IAmb	IAmb	17 06 11.8	
	comp=Z,41nm,1.5s							
KNRA	**Kununurra**	**17.56**	**173**	Pn	**Pn**	**17 06 32.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**19.86**	**183**	P	**P**	**17 06 58.1**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=20,slow=10,SNR=10							
	comp=Z,2.2nm,0.6s							
YULB	**Yu-li**	**22.01**	**347**		**P**	**17 07 19.8**	**-3.0**
YULB				IAmb	IAmb	17 08 01.8	
	comp=Z,44nm,1.5s							
TPUB	**Ta-pu**	**22.08**	**345**	P	**P**	**17 07 21.2**	**-2.4**
COEN	**Coen**	**22.74**	**134**	P	**P**	**17 07 28.3**	**-2.4**
COEN				IAmb	IAmb	17 07 50.2	
	comp=Z,14nm,1.2s							
WB0	**Warramunga Arr**	**22.82**	**161**		**P**	**17 07 30.0**	**-1.5**
WB0				IAmb	IAmb	17 07 32.4	
	comp=Z,12nm,0.7s							
WRA	**Warramunga Arr**	**22.97**	**161**	P	**P**	**17 07 31.6**	**-1.5**
	comp=Z,12nm,0.6s,baz=338,slow=11,SNR=42							
	comp=Z,12nm,0.6s							
WRA	**Warramunga Arr**	**22.97**	**161**		**P**	**17 07 30.1**	**-3.0**
WB2	**Warramunga Arr**	**22.97**	**161**	P	**P**	**17 07 31.5**	**-1.5**
WB2				IAmb	IAmb	17 07 34.0	
	comp=Z,13nm,0.7s							
WR0	**Warramunga Arr**	**23.05**	**161**	P	**P**	**17 07 32.4**	**-1.5**
WR0				IAmb	IAmb	17 07 34.9	
	comp=Z,15nm,1.1s							
AS31	**Alice Springs**	**26.36**	**165**		**P**	**17 08 03.1**	**-1.6**
ASAR	**Alice Springs**	**26.36**	**165**	P	**P**	**17 08 03.5**	**-1.3**
	comp=Z,2.3nm,0.5s,baz=345,slow=7.9,SNR=52							
ASAR				PcP	**PcP**	**17 11 30.2**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=338,slow=2.0,SNR=1.5							
	comp=Z,2.3nm,0.5s							
ASAR	**Alice Springs**	**26.36**	**165**	P	**P**	**17 08 03.3**	**-1.4**
ASAR					**PcP**	**17 11 28.8**	**-1.9**
INKA	**Innaminka**	**32.43**	**156**	P	**P**	**17 08 56.4**	**-2.2**
FORT	**Forrest**	**32.49**	**178**	P	**P**	**17 08 58.5**	**-0.6**
BBOO	**Buckleboo**	**35.63**	**166**	P	**P**	**17 09 25.2**	**-1.2**
NWAO	**Narrogin (SRO)**	**35.72**	**194**	P	**P**	**17 09 26.8**	**-0.3**
STKA	**Stephens Creek**	**36.45**	**158**	P	**P**	**17 09 32.5**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=337,slow=7.7,SNR=3.7							
	comp=Z,1.4nm,0.5s							
STKA	**Stephens Creek**	**36.45**	**158**	P	**P**	**17 09 32.2**	**-1.2**
EVN	**Everest**	**46.01**	**308**	P	**P**	**17 10 52.3**	**-0.6**
EVN				IAmb	IAmb	17 10 56.8	
	comp=Z,2.2nm,0.8s							
SONM	**Songino Array**	**49.01**	**342**	P	**P**	**17 11 17.1**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=151,slow=8.2,SNR=5.3							
	comp=Z,0.7nm,0.6s							
SONM	**Songino Array**	**49.01**	**342**	P	**P**	**17 11 14.7**	**-0.6**
MK31	**Makanchi Array**	**59.01**	**326**	P	**P**	**17 12 28.1**	**-0.2**
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**17 12 29.4**	**+1.2**
	comp=Z,2.1nm,0.4s,baz=120,slow=7.1,SNR=53							
	comp=Z,2.1nm,0.4s							
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**17 12 28.0**	**-0.2**
MAKZ	**Makanchi**	**59.19**	**326**		**P**	**17 12 29.7**	**+0.1**
MAKZ				IAmb	IAmb	17 12 32.9	
	comp=Z,2.4nm,0.5s							
DCZ	**Deep Cove**	**59.24**	**148**	P	**P**	**17 12 30.2**	**+0.4**
KDJ	**Kajisay**	**59.65**	**319**	P	**P**	**17 12 32.6**	**-0.4**
MLZ	**Mavora Lakes**	**59.70**	**147**	P	**P**	**17 12 33.5**	**+0.4**
MRZ	**Mangatainoka R**	**61.44**	**139**	P	**P**	**17 12 42.9**	**-2.1**
ARSB	**Arslanbob**	**62.11**	**317**	P	**P**	**17 12 48.6**	**-1.1**
ZAA0	**Zalesovo Array**	**62.18**	**334**	P	**P**	**17 12 48.5**	**-1.2**
ZAA0				IAmb	IAmb	17 13 17.3	
	comp=Z,2.2nm,1.2s							
ZALV	**Zalesovo Beam**	**62.18**	**334**	P	**P**	**17 12 50.7**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=131,slow=5.4,SNR=4.3							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**62.18**	**334**	P	**P**	**17 12 48.3**	**-1.4**
KURBB	**Kurchatov Arra**	**63.23**	**328**	P	**P**	**17 12 58.2**	**+1.4**
	comp=Z,1.4nm,0.5s,baz=128,slow=6.2,SNR=18							
	comp=Z,1.4nm,0.5s							
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**17 12 57.5**	**+0.7**
KURK				IAmb	IAmb	17 12 59.8	
	comp=Z,2.8nm,0.6s							
KKAR	**Karatay Array**	**64.50**	**318**	P	**P**	**17 13 05.0**	**-0.3**
BVAR	**Borovoye Array**	**68.80**	**327**	P	**P**	**17 13 33.8**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=124,slow=7.9,SNR=4.3							
	comp=Z,0.5nm,0.5s							
BORK	**Borovoye**	**68.85**	**327**	P	**P**	**17 13 33.0**	**+0.1**
BORK				IAmb	IAmb	17 13 35.3	
	comp=Z,1.4nm,0.8s							
AB31	**Akbulak array**	**73.50**	**321**	P	**P**	**17 14 01.3**	**+0.1**
AB31				IAmb	IAmb	17 14 11.4	
	comp=Z,4.4nm,1.4s							
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**17 14 01.2**	**0.0**
AKTO	**Aktyubinsk**	**75.03**	**322**	P	**P**	**17 14 11.3**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=100,slow=7.4,SNR=1.7							
	comp=Z,0.9nm,0.3s							
VNDA	**Vanda**	**81.61**	**173**	P	**P**	**17 14 45.6**	**-0.3**

IDC ***18*** *17:05:33.0±26.0, 19°.28S×174°.45W, h0km, mb4.6/4, mbtmp4.6/4, Error ellipse: s-maj=520.0km s-min=141.4km az=89.0*

NEIC ***18*** *17:06:07.0±1.2, 19°.1S±0°.2×175°.7W±0°.2, h226km±18km, mb4.6/31, Error ellipse: s-maj=36.6km s-min=24.8km az=204.0*

NOU ***18*** *17:06:07.3, 18°.83S×175°.63W, h251km, mb4.5/31, Tonga Islands*

ISC 18 17:06:06.5±1.0, 19°.0S±0°.2×175°.73W±0°.10, h231km, n67, σ0s83/67, mb4.5/15, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.49**	**92**		**Pn**	**17 07 28.0**	**+0.1**
NIUE	**Niue**	**5.49**	**92**	P	**Pn**	**17 07 27.8**	**-0.1**

DVP	**Devils Point**	**15.32**	**272**	P	**P**	**17 09 32.2**	**+1.1**
MARNC	**Mare, Loyalty**	**15.44**	**258**	P	**P**	**17 09 32.8**	**+0.4**
MARNC	**Mare, Loyalty**	**15.44**	**258**	P	**P**	**17 09 32.5**	**+0.1**
PINNC	**Pines Island,**	**16.14**	**254**	P	**P**	**17 09 41.4**	**+1.4**
OUENC	**Ouen Island, N**	**16.66**	**255**	P	**P**	**17 09 46.1**	**+0.3**
DZM	**Mont Dzumac**	**16.97**	**257**		**P**	**17 09 49.6**	**+0.3**
DZM	**Mont Dzumac**	**16.97**	**257**	P	**P**	**17 09 50.7**	**+1.4**
ONTNC	**Ouen Toro**	**17.00**	**256**		**P**	**17 09 49.6**	**+0.2**
ONTNC	**Ouen Toro**	**17.00**	**256**	P	**P**	**17 09 51.2**	**+1.7**
URZ	**Urewera**	**20.18**	**197**	P	**P**	**17 10 24.5**	**+0.9**
RTZ	**Ruatahuna**	**20.55**	**196**	P	**P**	**17 10 27.6**	**-0.1**
RTZ				IAmb	IAmb	17 10 54.1	
	comp=Z,21nm,1.2s							
BKZ	**Black Stump Fm**	**21.20**	**197**	P	**P**	**17 10 33.6**	**-0.8**
BKZ	**Black Stump Fm**	**21.20**	**197**	P	**P**	**17 10 35.7**	**+1.3**
BFZ	**Birch Farm**	**22.68**	**196**	P	**P**	**17 10 50.2**	**+1.9**
TCW	**Tory Channel**	**23.73**	**199**	P	**P**	**17 10 57.1**	**-0.7**
QRZ	**Quartz Range**	**23.97**	**202**	P	**P**	**17 11 00.1**	**+0.2**
QRZ	**Quartz Range**	**23.97**	**202**	P	**P**	**17 11 01.2**	**+1.3**
THZ	**Tophouse**	**24.67**	**201**	P	**P**	**17 11 06.2**	**-0.2**
THZ				IAmb	IAmb	17 11 45.8	
	comp=Z,19nm,1.2s							
JCZ	**Jackson Bay**	**28.17**	**204**	P	**P**	**17 11 39.1**	**+1.5**
WHZ	**Wether Hill Ro**	**30.03**	**203**	P	**P**	**17 11 53.6**	**-0.3**
WHZ				IAmb	IAmb	17 12 01.5	
	comp=Z,23nm,1.4s							
EIDS	**Eidsvold**	**31.32**	**252**	P	**P**	**17 12 05.1**	**-0.5**
ARMA	**Armidale**	**31.65**	**243**	P	**P**	**17 12 07.5**	**-1.0**
ARMA				IAmb	IAmb	17 12 49.4	
	comp=Z,32nm,1.4s							
ARMA	**Armidale**	**31.65**	**243**	P	**P**	**17 12 08.3**	**-0.1**
CNB	**Canberra Magne**	**34.83**	**235**	P	**P**	**17 12 35.3**	**-0.6**
CAN	**Canberra**	**35.12**	**235**	P	**P**	**17 12 38.1**	**-0.2**
CAN				IAmb	IAmb	17 12 41.4	
	comp=Z,40nm,1.4s							
CTA	**Charters Tower**	**35.79**	**262**	P	**P**	**17 12 44.4**	**+0.3**
CTAO	**Charters Tower**	**35.79**	**262**	P	**P**	**17 12 44.2**	**+0.1**
CTAO	**Charters Tower**	**35.79**	**262**	P	**P**	**17 12 44.5**	**+0.3**
CMSA	**Cobar Meteorol**	**36.87**	**243**	P	**P**	**17 12 51.9**	**-1.2**
QLP	**Quilpie**	**37.55**	**251**	P	**P**	**17 12 58.3**	**-0.6**
MTSU	**Mount Surprise**	**37.83**	**265**	P	**P**	**17 13 00.6**	**+0.3**
TOO	**Toolangi**	**38.50**	**233**	P	**P**	**17 13 05.7**	**-1.0**
TOO				IAmb	IAmb	17 13 37.7	
	comp=Z,20nm,1.5s							
COEN	**Coen**	**39.66**	**271**	P	**P**	**17 13 16.4**	**-0.1**
COEN				IAmb	IAmb	17 13 37.1	
	comp=Z,21nm,1.4s							
STKA	**Stephens Creek**	**40.37**	**243**	P	**P**	**17 13 20.6**	**-1.5**
	comp=Z,4.0nm,0.5s,baz=69,slow=11,SNR=13							
	comp=Z,4.0nm,0.5s							
STKA	**Stephens Creek**	**40.37**	**243**	P	**P**	**17 13 21.1**	**-1.0**
STKA				IAmb	IAmb	17 13 58.7	
	comp=Z,47nm,1.3s							
STKA	**Stephens Creek**	**40.37**	**243**	P	**P**	**17 13 21.3**	**-0.8**
INKA	**Innaminka**	**40.72**	**249**	P	**P**	**17 13 24.8**	**-0.3**
QIS	**Mount Isa**	**41.96**	**260**	P	**P**	**17 13 34.8**	**-0.4**
HTT	**Hallett**	**42.82**	**241**	P	**P**	**17 13 41.3**	**-0.7**
BBOO	**Buckleboo**	**45.13**	**242**	P	**P**	**17 13 59.1**	**-1.3**
BBOO				IAmb	IAmb	17 14 06.3	
	comp=Z,40nm,1.4s							
BBOO	**Buckleboo**	**45.13**	**242**	P	**P**	**17 13 59.0**	**-1.3**
WB0	**Warramunga Arr**	**46.92**	**260**	P	**P**	**17 14 13.5**	**-0.9**
WRAB	**Tennant Creek**	**46.94**	**260**	P	**P**	**17 14 14.0**	**-0.5**
WRA	**Warramunga Arr**	**46.94**	**260**	P	**P**	**17 14 14.4**	**-0.2**
	comp=Z,1.9nm,0.3s,baz=97,slow=7.1,SNR=64							
	comp=Z,1.9nm,0.3s							
WRA	**Warramunga Arr**	**46.94**	**260**	P	**P**	**17 14 13.7**	**-0.9**
AS31	**Alice Springs**	**46.95**	**255**		**P**	**17 14 13.9**	**-0.8**
ASAR	**Alice Springs**	**46.96**	**255**	P	**P**	**17 14 14.2**	**-0.4**
	comp=Z,14nm,0.6s,baz=95,slow=8.2,SNR=251							
	comp=Z,14nm,0.6s							
ASAR	**Alice Springs**	**46.96**	**255**		**P**	**17 14 13.9**	**-0.8**
MTN	**Manton Dam**	**51.31**	**269**	P	**P**	**17 14 48.5**	**+0.8**
MTN				IAmb	IAmb	17 15 07.1	
	comp=Z,30nm,1.4s							
FORT	**Forrest**	**51.85**	**245**	P	**P**	**17 14 50.0**	**-1.5**
KNRA	**Kununurra**	**52.91**	**264**	P	**P**	**17 14 59.7**	**+0.3**
KNRA				IAmb	IAmb	17 15 01.0	
	comp=Z,14nm,0.9s							
FITZ	**Fitzroy Crossi**	**55.36**	**261**	P	**P**	**17 15 17.7**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=74,slow=5.5,SNR=10							
	comp=Z,1.7nm,0.3s							
SOEI	**Soe**	**58.62**	**270**	P	**P**	**17 15 39.4**	**-0.7**
PSA00	**Pilbara Seismi**	**60.10**	**256**	P	**P**	**17 15 49.4**	**-0.6**
PSA00				IAmb	IAmb	17 15 51.1	
	comp=Z,9.5nm,0.8s							
PSA00	**Pilbara Seismi**	**60.10**	**256**	P	**P**	**17 15 49.0**	**-1.0**
PSA00				IAmb	IAmb	17 15 51.1	
	comp=Z,14nm,0.7s							
PSA00	**Pilbara Seismi**	**60.10**	**256**	P	**P**	**17 15 50.7**	**+0.7**
MBWA	**Marble Bar**	**60.28**	**256**	P	**P**	**17 15 51.4**	**+0.2**
MBWA	**Marble Bar**	**60.28**	**256**	P	**P**	**17 15 51.4**	**+0.2**
MEEK	**Meekatharra**	**60.44**	**250**	P	**P**	**17 15 51.7**	**-0.5**
KLBR	**Kellerberrin**	**60.63**	**244**	P	**P**	**17 15 53.6**	**+0.2**
NWAO	**Narrogin (SRO)**	**60.95**	**242**	P	**P**	**17 15 55.8**	**+0.2**
BLDU	**Ballidu**	**61.62**	**245**	P	**P**	**17 15 59.8**	**-0.3**
MORW	**Morawa**	**62.38**	**247**	P	**P**	**17 16 04.3**	**-0.9**
GIRL	**Giralia**	**65.02**	**253**	P	**P**	**17 16 23.9**	**+1.5**
JAGI	**Jajag, Banyuwa**	**68.55**	**268**	P	**P**	**17 16 45.0**	**+0.2**
JAGI				IAmb	IAmb	17 16 52.8	
	comp=Z,23nm,1.1s							

IDC ***18*** *17:08:29.9±2.3, 22°.88N×11°.62W, h0km, mb3.9/3, mbtmp3.8/5, ML3.5/2, Error ellipse: s-maj=68.0km s-min=27.6km az=67.0*

ISC 18 17:08:30.1±1.8, 22°.8N±0°.2×11°.8W±0°.3, h10km, n7, σ0s70/8, mb3.7/3, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**16.03**	**124**	Pn	**Pn**	**17 12 15.8**	**0.0**
	0.2nm,0.3s,baz=313,slow=13,SNR=7.9							
TORD				Sn	**Sn**	**17 15 13.8**	**0.0**
	0.1nm,0.3s,baz=25,slow=42,SNR=2.0							
TORD				Lg	Lg	17 16 56.4	
	baz=313,slow=26,SNR=1.0							
	0.4nm,0.5s							
DBIC	**Dimbokro**	**17.38**	**156**	P	**Pn**	**17 12 32.3**	**-0.6**
	0.1nm,0.3s,baz=337,slow=12,SNR=2.1							
DBIC				Lg	Lg	17 17 37.0	
	0.2nm,0.3s,baz=115,slow=23,SNR=2.1							
	4.4nm,0.9s							
HFS	**Hagfors**	**41.39**	**19**	P	**P**	**17 16 15.4**	**-0.9**
	7.4nm,1.1s,baz=212,slow=14,SNR=2.2							
	7.4nm,1.1s							
KURBB	**Kurchatov Arra**	**72.95**	**42**	P	**P**	**17 20 00.0**	**+0.3**
	0.5nm,0.7s,baz=273,slow=6.9,SNR=5.7							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**76.45**	**45**	P	**P**	**17 20 20.8**	**+0.6**
	0.3nm,0.5s,baz=287,slow=6.1,SNR=8.8							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**148.40**	**91**	PKPbc	**PKPbc**	**17 28 18.1**	**+0.5**
	0.3nm,0.6s,baz=292,slow=2.7,SNR=2.0							
ASAR	**Alice Springs**	**148.54**	**98**	PKPbc	**PKPbc**	**17 28 18.8**	**+0.8**
	0.4nm,0.7s,baz=308,slow=2.2,SNR=5.9							

ISK ***18*** *17:20:23.9, 39°.11N×27°.80E, h7km, ML4.0/23*

SOF ***18*** *17:20:24.1, 39°.2N±0°.1×27°.80E±0°.06, h8km±72km, MD4.2/10*

AFAD ***18*** *17:20:24.7, 39°.09N×27°.80E, h7km±2km, ML3.7*

THE ***18*** *17:20:27.0, 39°.N±3°×2°8E±°, h34km±13km, M3.7/15, MLh3.7/15*

CFUSG ***18*** *17:20:29.3, 39°.62N×27°.62E, h33km, Mb3.1/2, MD3.4/3, MSH2.9/5*

ISC 18 17:20:24.6±0.8, 39°.10N±0°.02×27°.81E±0°.02, h14km±6km, n118, σ1s07/142, 14C-16D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.22**	**180**	P	**Pg**	**17 20 29.5**	**0.0**
AKHS				S	**Sg**	**17 20 32.8**	**0.0**
AKHS				IAML		17 20 33.0	
	comp=E,2μm,0.7s							
AKS	**Akhisar**	**0.22**	**180**	Pg	**Pg**	**17 20 29.1**	**-0.4**
AKS				Sg	**Sg**	**17 20 32.9**	**+0.1**
SOMA	**Soma-Manisa**	**0.22**	**284**	Pg	**Pg**	**17 20 28.9**	**-0.6**
SOMA				Sg	**Sg**	**17 20 32.7**	**-0.2**
STEP	**BALIKESIR_Sava**	**0.28**	**345**	P	**Pg**	**17 20 30.8**	**+0.2**
STEP				S	**Sg**	**17 20 34.5**	**-0.2**
GORD	**Gordes-Manisa**	**0.34**	**124**	Pg	**Pg**	**17 20 31.6**	**0.0**
GORD				Sg	**Sb**	**17 20 37.5**	**-0.3**

GOMA	**Golmarmara-Man**	**0.40**	**168**	Pg	**Pg**	**17 20 32.3**	**-0.3**
GOMA				Sg	**Sg**	**17 20 38.8**	**+0.7**
KTTT	**Salihli**	**0.47**	**152**	P	**Pg**	**17 20 33.7**	**-0.2**
KTTT				S	**Sg**	**17 20 39.8**	**-0.3**
CAMT	**Merkez**	**0.53**	**228**	P	**Pg**	**17 20 35.1**	**+0.2**
CAMT				S	**Sb**	**17 20 42.9**	**-0.1**
CAMT				IAML		17 20 51.0	
	comp=E,6μm,0.7s							
CAMT				IAML		17 20 54.0	
	comp=N,5μm,0.7s							
BALB	**Balikesir**	**0.54**	**6**	Pg	**Pg**	**17 20 35.1**	**-0.1**
BALB				Sg	**Sg**	**17 20 42.9**	**+0.5**
ZEDA	**zmir-Bergama**	**0.59**	**257**	P	**Pb**	**17 20 36.5**	**-0.1**
ZEDA				S	**Sg**	**17 20 43.8**	**-0.1**
ZEDA				IAML		17 20 47.0	
	comp=N,7μm,0.6s							
BKES	**Balkesir-Mer**	**0.64**	**8**	P	**Pb**	**17 20 37.5**	**+0.1**
BALY	**Balya**	**0.66**	**347**	P	**Pb**	**17 20 37.9**	**+0.1**
BUHA	**Balıkesir, Bur**	**0.70**	**305**	P	**Pg**	**17 20 38.1**	**0.0**
IZMD	**zmir-Dikili-**	**0.70**	**261**	P	**Pg**	**17 20 38.3**	**+0.1**
DEMI	**Demirci**	**0.71**	**94**	P	**Pg**	**17 20 38.5**	**+0.2**
DKL	**Dikili**	**0.71**	**268**	Pg	**Pg**	**17 20 38.4**	**+0.1**
DKL				Sg	**Sg**	**17 20 47.9**	**+0.3**
DURS	**Dursunbey**	**0.72**	**46**	P	**Pg**	**17 20 38.8**	**+0.2**
YAYO	**Edremit-Balk**	**0.77**	**312**	P	**Pg**	**17 20 39.1**	**-0.4**
BLKS	**Balkesir-Sus**	**0.78**	**9**	P	**Pg**	**17 20 39.8**	**0.0**
DST	**Dursunbey**	**0.80**	**51**	Pg	**Pg**	**17 20 39.6**	**+0.6**
MANT	**Manisa**	**0.84**	**136**	P	**Pg**	**17 20 41.0**	**+0.1**
ODEM	**Odemis-Izmir**	**0.85**	**166**	Pg	**Pg**	**17 20 40.8**	**-0.2**
BAGT	**Foa**	**0.87**	**240**	P	**Pg**	**17 20 41.8**	**+0.4**
KULA	**Kula-Manisa**	**0.89**	**131**	Pg	**Pb**	**17 20 41.3**	**-0.4**
SUSR	**Susurluk-Balik**	**0.89**	**14**	Pg	**Pb**	**17 20 40.9**	**-0.8**
AYVA	**Ayvalik**	**0.90**	**284**	P	**Pg**	**17 20 42.1**	**+0.2**
SMAA	**Simav-Kutahya**	**0.91**	**90**	Pg	**Pb**	**17 20 42.2**	**+0.1**
SIMA	**Simav-Kutahya**	**0.91**	**91**	Pg	**Pb**	**17 20 42.2**	**0.0**
CMHT	**Manyas**	**0.92**	**8**	P	**Pg**	**17 20 42.4**	**+0.1**
DUVT	**Torbali**	**0.93**	**198**	P	**Pg**	**17 20 42.8**	**+0.4**
DUVT				S	**Sb**	**17 20 53.8**	**-0.6**
FOCM	**Foa**	**0.93**	**246**	Pg	**Pb**	**17 20 41.9**	**-0.5**
BLCB	**Balcova**	**0.94**	**220**	Pg	**Pb**	**17 20 42.1**	**-0.4**
BLCB	**Balcova**	**0.94**	**220**	P	**Pb**	**17 20 42.3**	**-0.2**
BLCB				S	**Sb**	**17 20 54.4**	**-0.4**
YENI	**Yenice-Canakka**	**0.94**	**332**	Pg	**Pb**	**17 20 42.2**	**-0.5**
GONE	**Gonen-Balikesi**	**0.95**	**354**	Pg	**Pb**	**17 20 42.5**	**-0.3**
IZMR	**zmir-demi**	**0.97**	**173**	P	**Pg**	**17 20 43.5**	**+0.2**
KIRA	**zmir-Kiraz**	**1.01**	**153**	P	**Pg**	**17 20 44.3**	**+0.1**
USAK	**Uak-Merkez**	**1.02**	**112**	P	**Pb**	**17 20 44.2**	**+0.3**
CANM	**Can-anakkale**	**1.08**	**327**	Pg	**Pb**	**17 20 44.4**	**-0.6**
SHAP	**Saphane-Kutahy**	**1.10**	**94**	Pn	**Pb**	**17 20 45.5**	**+0.1**
KRBN	**Karaburun**	**1.11**	**243**	Pn	**Pn**	**17 20 45.6**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.16**	**177**	Pn	**Pn**	**17 20 46.6**	**+0.2**
KARB	**zmir-Karabur**	**1.18**	**249**	P	**Pb**	**17 20 46.9**	**+0.3**
NAZL	**Nazilli-Aydin**	**1.20**	**162**	Pn	**Pb**	**17 20 47.2**	**+0.2**
PRK	**Paraskevi**	**1.21**	**277**	P	**Pb**	**17 20 47.3**	**+0.2**
PRK				S	**Sb**	**17 21 02.7**	**+0.1**
GMLD	**Gumuldur**	**1.24**	**215**	Pn	**Pg**	**17 20 48.5**	**0.0**
GEDZ	**Gediz**	**1.25**	**92**	Pn	**Pg**	**17 20 48.4**	**-0.1**
BAND	**Balkesir-Ban**	**1.27**	**10**	⇑P	**Pg**	**17 20 48.8**	**-0.2**
DGB	**zmir**	**1.28**	**215**	P	**Pn**	**17 20 47.9**	**0.0**
SULTU	**Buldan**	**1.

comp=E,2.0nm,0.2s

BZS	**Buzias**	**7.96**	**327**	⇑P	**Pn**	**17 22 20.2**	**+0.4**
MARR	**Marisel-Cluj**	**8.32**	**337**	⇓P	**Pn**	**17 22 25.6**	**+0.9**
BURAR	**Bucovina Array**	**8.72**	**348**	⇑P	**Pn**	**17 22 32.1**	**+1.9**

DJA 18 17:26:45.0±0.2,1°S±2°×12°3E±°, h10km, M3.8/21, mb4.2/3, MLv3.6/21, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.73**	**251**	P		Pg	17 26 57.7	-1.3
APSI	**Ampana**	**1.81**	**267**	P		Pn	17 27 16.6	+0.3
MRSI	**Marisa**	**1.99**	**310**	P		Pn	17 27 18.5	-0.2
SANI	**Sanana**	**2.81**	**116**	P		Pn	17 27 29.4	-0.6
PCI	**Palu**	**3.62**	**268**	P		Pn	17 27 41.6	+0.4
MPSI	**Mapaga**	**3.74**	**288**	P		Pn	17 27 44.7	+1.9
NLAI	**Namlea**	**4.37**	**124**	P		Pn	17 27 51.6	+0.2
SPSI	**Sidrap Palu**	**4.84**	**230**	P		Pn	17 27 58.2	+0.3
KAPI	**Kappang**	**5.58**	**221**	P		Pn	17 28 08.6	+0.4
	0.0nm9.3nm,1.1s						
BSSI	**Bau Bau, Buton**	**6.07**	**209**	P		Pn	17 28 15.9	+1.0

*BGSI **18** 17:35:32.1±1.7, 26°82S×27°97E, h35km±80km, ML2.3*
BUL 18 17:35:41.3±1.8, 26.77S×26.91E, h10km, MD2.9, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.11**	**326**	*i* P		Pn	17 36 14.9	-1.9
LBTB				*i* S		Sn	17 36 43.1	-0.1
MAKGR	**Makgori**	**2.12**	**296**	*i* P		Pn	17 36 15.7	-1.2
MAKGR				*i* S		Sg	17 36 49.9	+0.4
MAKGR				IAML			17 36 54.3	
	comp=N,72nm,0.5s							
BOSA	**Boshof**	**2.35**	**218**	*i* P		Pn	17 36 20.5	+0.5
BOSA				*i* S		Sn	17 36 47.4	-1.7
LPHEP	**Lephephe**	**3.53**	**344**	*i* P		Pn	17 36 29.8	-6.4
LPHEP				*i* S		Sn	17 37 11.6	-6.5
LPHEP				IAML			17 37 25.3	
	comp=E,10nm,0.4s							
KDWAN	**Kaudwane**	**3.94**	**328**	*i* P		Pn	17 36 36.7	-5.3
KDWAN				*i* S		Sn	17 37 25.5	-2.9
KDWAN				IAML			17 37 40.9	
	comp=N,18nm,0.4s							
MUSN	**Musina, Limpop**	**5.21**	**32**	*i* P		Pn	17 36 59.0	-0.4
BROLN	**Tlhalogang**	**5.66**	**4**	*i* P		Pn	17 36 54.0	-12
BROLN				*i* S		Sn	17 37 52.4	-18
BROLN				IAML			17 38 19.7	
	comp=E,2.6nm,0.5s							

IDC 18 17:48:32.9±3.0, 5.48S×149.71E, h193km±29km, mb3.1/4, mbtmp3.6/5, Error ellipse: s-maj=92.9km s-min=21.6km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.65**	**213**	P		Pn	17 49 43.0	+0.4
	3.2nm,0.6s,baz=45,slow=8.6,SNR=1.6							
PMG				S		Sn	17 50 37.9	+0.3
	6.1nm,0.5s,baz=38,slow=21,SNR=4.0							
WRA	**Warramunga Arr**	**20.74**	**225**	P		P	17 52 58.4	-0.4
	0.7nm,0.4s,baz=50,slow=10,SNR=14							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**23.64**	**219**	P		P	17 53 27.1	+0.4
	0.5nm,0.3s,baz=50,slow=8.7,SNR=29							
	0.5nm,0.3s							
PETK	**Petropavlovsk-**	**58.76**	**6**	P		P	17 58 10.8	+0.3
	1.4nm,0.8s,baz=157,slow=7.7,SNR=10							
	1.4nm,0.8s							
ILAR	**Eielson Array**	**83.96**	**23**	P		P	18 00 40.0	-1.0
	0.3nm,0.7s,baz=239,slow=7.0,SNR=2.3							
	0.3nm,0.7s							

*AZER **18** 17:49:45.7, 38°72N×48°59E, h18km, ml2.6*
*TEH **18** 17:49:46.7, 38°65N×48°56E, h24km±29km, ML2.6, Presumed earthquake*
ISC 18 17:49:46.5±1.4, 38.70N±0°03×48.57E±0°03, h13km±11km, n33, σ1°15/54, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKRN	**Lenkeran, Azer**	**0.16**	**87**	P		**Pb**	**17 49 51.9**	**+0.5**
LKRN				S		**Sb**	**17 49 56.1**	**+1.5**
LRK	**Lerik**	**0.19**	**252**	P		**Pb**	**17 49 53.0**	**+1.1**
LRK				S		**Sb**	**17 49 57.7**	**+2.0**
ASTR	**Astara**	**0.22**	**129**	P		**Pb**	**17 49 52.5**	**+0.1**
ASTR				S		**Sb**	**17 49 57.1**	**+0.7**
YRD	**Yardimli**	**0.34**	**310**	P		**Pb**	**17 49 54.9**	**+0.4**
YRD				S		**Sb**	**17 50 01.0**	**+1.2**
GAS1	**Astara - Iran**	**0.38**	**146**	Pg		**Pb**	**17 49 54.5**	**-0.6**
GRMI	**Germi**	**0.54**	**282**	Pg		**Pb**	**17 49 57.7**	**-0.2**
GLBA	**Clilabad**	**0.56**	**346**	P		**Pb**	**17 49 58.1**	**0.0**
GLBA				S		**Sn**	**17 50 07.5**	**-1.7**
ISRB	**Sarab**	**1.13**	**219**	Pg		**Pb**	**17 50 07.5**	**-0.5**
SAAT	**Saatly**	**1.16**	**354**	P		**Pg**	**17 50 08.9**	**0.0**
SAAT				S		**Sg**	**17 50 26.0**	**+1.9**
QRD	**Qoradiz**	**1.23**	**308**	P		**Pn**	**17 50 08.7**	**-0.8**
QRD				S		**Sn**	**17 50 25.6**	**-0.3**
IHRS	**Heris**	**1.26**	**253**	Pg		**Pn**	**17 50 09.6**	**-0.4**
BLQ	**Beylaqan**	**1.29**	**323**	Pn		**Pn**	**17 50 09.7**	**-0.5**
BLQ				Sn		**Sn**	**17 50 27.3**	**+0.1**
KDMR	**Kurdemir**	**1.70**	**350**	Pn		**Pn**	**17 50 16.3**	**+0.5**
KDMR				Sn		**Sb**	**17 50 39.9**	**+1.1**
ZRD	**Zardab**	**1.72**	**337**	Pn		**Pb**	**17 50 16.9**	**-1.1**
ZRD				Sn		**Sn**	**17 50 38.4**	**+0.5**
IHSH	**Hashtrud**	**1.74**	**217**	Pg		**Pn**	**17 50 16.4**	**-0.3**
AGDM	**Agdam**	**1.81**	**322**	Pn		**Pn**	**17 50 17.2**	**-0.2**
AGDM				Sn		**Sb**	**17 50 41.0**	**-1.0**
BRDA	**Brd**	**1.90**	**326**	Pn		**Pn**	**17 50 19.1**	**+0.6**
BRDA				Sg		**Sg**	**17 50 46.9**	**-0.6**
ITBZ	**Tabriz**	**1.96**	**257**	Pn		**Pn**	**17 50 19.7**	**+0.1**
ORD	**Ordubad**	**2.03**	**277**	Sn		**Pb**	**17 50 21.2**	**+0.8**
ORD				Sn		**Sb**	**17 50 47.9**	**-0.5**
PQL	**Pirkuli**	**2.08**	**0**	Pn		**Pn**	**17 50 21.7**	**+0.4**
PQL				Sn		**Sn**	**17 50 47.8**	**+0.6**
IML	**Ismayilli**	**2.11**	**352**	Sn		**Sb**	**17 50 49.1**	**-1.7**
JIR1	**Jirandeh**	**2.22**	**154**	Pn		**Pn**	**17 50 21.0**	**-2.2**
IMRD	**Marand**	**2.24**	**271**	Pn		**Pb**	**17 50 24.9**	**-2.1**
QBL	**Gabala**	**2.31**	**346**	Sn		**Sn**	**17 50 53.3**	**+0.6**
ISHB	**Shabestar**	**2.36**	**261**	Pn		**Pn**	**17 50 25.1**	**0.0**
NAX	**Nakhchivan**	**2.44**	**282**	Pg		**Pb**	**17 50 28.7**	**-1.7**
NAX				Sg		**Sb**	**17 51 01.8**	**+1.4**
SBZ	**Shahbuz**	**2.45**	**287**	Pg		**Pb**	**17 50 28.8**	**-1.6**
SBZ				Sg		**Sb**	**17 51 01.0**	**+0.4**
GANJ	**Ganja**	**2.60**	**319**	Pg		**Pb**	**17 50 31.0**	**-2.1**
GANJ				Sn		**Sb**	**17 51 03.7**	**-1.3**
IGZV	**Ghazvin**	**2.66**	**150**	Pn		**Pn**	**17 50 28.3**	**-1.0**
SEKA	**Sheki**	**2.72**	**338**	Pn		**Pn**	**17 50 29.0**	**-1.0**
SEKA				Sn		**Sn**	**17 51 03.2**	**+0.5**
GDB	**GEDABAY**	**2.96**	**314**	Pn		**Pn**	**17 50 33.1**	**-0.3**
GDB				Sn		**Sn**	**17 51 10.4**	**+1.5**
HYR	**Heyderabad**	**3.06**	**291**	Pg		**Pb**	**17 50 40.9**	**0.0**
HYR				Sg		**Sb**	**17 51 21.3**	**+3.1**
ZKTA	**Zakatala**	**3.29**	**334**	Pn		**Pn**	**17 50 37.9**	**+0.2**
ZKTA				Sn		**Sn**	**17 51 17.7**	**+1.0**

*UPP **18** 18:00:33.4±0.1, 67°05N×20°95E, h0km, ML2.1, Suspected explosion*
*IDC **18** 18:00:34.3±1.0, 67°08N×21°01E, h0km, mbtmp3.1/4, ML1.9/4, Error ellipse: s-maj=15.4km s-min=7.9km az=113.0*
ISC 18 18:00:33.3±0.9, 67°05N±0°03×20°93E±0°03, h0km, n18, σ1°09/24, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.16**	**298**	P		**Pg**	**18 00 36.8**	**+0.5**
DUNU				S		**Sg**	**18 00 39.3**	**+1.0**
MASU	**Masugnsbyn**	**0.58**	**45**	P		**Pg**	**18 00 44.4**	**0.0**
MASU				S		**Sg**	**18 00 52.3**	**+0.3**
ERTU	**Ertsjaerv**	**0.70**	**134**	P		**Pg**	**18 00 46.6**	**-0.1**
ERTU				S		**Sg**	**18 00 56.1**	**+0.3**
HARU	**Harads**	**0.89**	**179**	P		**Pg**	**18 00 50.2**	**-0.1**
RATU	**Laukkuluspa**	**0.94**	**327**	P		**Pg**	**18 00 50.6**	**-0.5**
KUA	**Kurravaara**	**0.94**	**346**	P		**Pg**	**18 00 50.6**	**-0.6**
	baz=191							
SALU	**Saltoluokta**	**1.00**	**291**	*e*P		**Pg**	**18 00 53.1**	**+0.7**
SALU	**Saltoluokta**	**1.00**	**291**	P		**Pg**	**18 00 52.2**	**-0.2**
LANU	**Lannavaara**	**1.08**	**22**	P		**Pg**	**18 00 53.1**	**-0.8**
NIKU	**Nikkaluokta**	**1.10**	**319**	P		**Pg**	**18 00 53.8**	**-0.5**
KALU	**Kalix**	**1.54**	**140**	P		**Pn**	**18 01 01.8**	**-0.2**
SJUU	**Sjulsmark**	**1.57**	**170**	P		**Pn**	**18 01 02.4**	**+0.1**
HEF	**Hetta**	**1.72**	**36**	*e*P		**Pn**	**18 01 04.3**	**0.0**
I37NO	**I37NO**	**2.21**	**338**	I		I	18 15 40.0	
	baz=149,slow=334,SNR=0.4							
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn		**Pn**	**18 01 23.1**	**+0.8**
	0.2nm,0.3s,baz=219,slow=14,SNR=20							
ARCES				Sn		**Sn**	**18 02 00.1**	**+0.9**
	0.2nm,0.3s,baz=216,slow=24,SNR=5.0							
	4.9nm,1.1s							
FINES	**FINESS Array B**	**6.06**	**156**	Pn		**Pn**	**18 02 05.3**	**+1.4**
	0.1nm,0.3s,baz=346,slow=14,SNR=8.9							
FINES				Sn		**Sn**	**18 03 15.3**	**+1.5**
	0.2nm,0.3s,baz=339,slow=21,SNR=12							
FINES				Lg		Lg	18 03 45.3	
	0.2nm,0.3s,baz=343,slow=28,SNR=1.9							
	2.7nm,1.0s							
NOA	**NORSAR Array B**	**7.38**	**220**	Pn		**Pn**	**18 02 22.1**	**+0.1**
	baz=30,slow=12,SNR=1.0							
NOA				Sn		**Sn**	**18 03 42.6**	**-3.8**
	baz=48,slow=18,SNR=1.3							
	0.4nm,0.6s							
HFS	**Hagfors**	**7.65**	**208**	Pn		**Pn**	**18 02 25.7**	**0.0**
	0.1nm,0.3s,baz=29,slow=14,SNR=2.2							
HFS				Sn		**Sn**	**18 03 51.9**	**-1.1**
	0.1nm,0.3s,baz=22,slow=28,SNR=6.0							
	3.7nm,0.9s							

TAP 18 18:03:53.0, 21.30N×121.91E, h179km, ML3.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**0.76**	**337**	P		Pn	18 04 18.6	-0.3
LYUB				S		Sn	18 04 37.4	-1.7
LAY	**Lan-yu**	**0.80**	**336**	*e*P		Pn	18 04 18.5	-0.7
LAY				*e*S		Sn	18 04 39.6	0.0
TSEB	**Hengchuen, Pin**	**1.11**	**303**	*e*P		Pn	18 04 19.9	-1.5
TSEB				*e*S		Sn	18 04 43.9	+0.5
TWKBT	**Hengchun**	**1.20**	**302**	P		Pn	18 04 22.7	+0.6
TWKBT				S		Sn	18 04 44.0	-0.7
TWK1	**Hengchun**	**1.21**	**302**	*i* P		Pn	18 04 22.8	+0.6
TWK1				*e*S		Sn	18 04 43.8	-1.0
SMST	**Manzhou Townsh**	**1.22**	**306**	*i* P		Pn	18 04 22.6	+0.3
SMST				S		Sn	18 04 44.3	-0.7
HEN	**Hengchun**	**1.29**	**303**	*i* P		Pn	18 04 23.7	+0.8
SLIU	**Shizi**	**1.37**	**312**	*i* P		Pn	18 04 24.0	+0.3
SLIU				*e*S		Sn	18 04 46.7	-0.8
TAW	**Tawu**	**1.41**	**318**	*i* P		Pn	18 04 23.7	-0.2
TAW				S		Sn	18 04 46.8	-1.2
EAST	**Anshuo**	**1.46**	**318**	*i* P		Pn	18 04 24.4	-0.1
ECL	**Taimali**	**1.56**	**326**	P		Pn	18 04 24.7	-0.8
SCZT	**Fangliau**	**1.60**	**312**	*i* P		Pn	18 04 26.0	+0.2
SCZT				*e*S		Sn	18 04 49.3	-2.0
TWGBT	**Beinan**	**1.69**	**333**	P		Pn	18 04 26.2	-0.5
TWGBT				*e*S		Sn	18 04 50.4	-2.5
TWG	**Pinlang**	**1.70**	**333**	*i* P		Pn	18 04 26.2	-0.6
TWG				*e*S		Sn	18 04 50.5	-2.6
MASBT	**Mashibuluo**	**1.76**	**318**	*i* P		Pn	18 04 27.6	+0.2
MASBT				S		Sn	18 04 52.4	-1.7
WLCH	**Liuqiu**	**1.76**	**307**	P		Pn	18 04 29.4	+2.0
TWP	**Hsiaoliuchiu**	**1.77**	**306**	P		Pn	18 04 29.4	+1.9
SSD	**Sandimen**	**1.86**	**321**	*i* P		Pn	18 04 28.7	+0.2
SSD				S		Sn	18 04 53.7	-2.4
ECS	**Chishang**	**1.89**	**341**	*e*P		Pn	18 04 28.8	0.0
CHKH	**Chenggong**	**1.94**	**346**	P		Pn	18 04 28.9	-0.4
FULB	**Fuli**	**1.97**	**343**	P		Pn	18 04 30.2	+0.5
FULB				S		Sn	18 04 58.5	+0.3
WSSB	**Gushan**	**2.02**	**311**	P		Pn	18 04 31.5	+1.2
WSSB				*e*S		Sn	18 05 00.3	+1.1
TWM1	**Shoushan**	**2.04**	**318**	P		Pn	18 04 32.2	+1.7
ELDTW	**Lidau**	**2.05**	**336**	P		Pn	18 04 31.4	+0.8
ELDTW				*e*S		Sn	18 04 59.1	-0.8
TWF1	**Yuli**	**2.12**	**345**	*e*P		Pn	18 04 31.0	-0.2
TWF1				S		Sn	18 04 59.8	-1.3
STYH	**Taoyuan**	**2.13**	**331**	P		Pn	18 04 31.8	+0.4
STYH				*e*S		Sn	18 05 00.7	-0.7
SGST	**Jiashian**	**2.15**	**326**	P		Pn	18 04 31.0	-0.6
SGST				S		Sn	18 05 00.5	-1.3
YULB	**Yu-li**	**2.15**	**345**	*e*P		Pn	18 04 31.5	-0.2
YULB				*e*S		Sn	18 04 59.0	-2.9
HGSD	**Ruisui**	**2.22**	**349**	*e*P		Pn	18 04 33.5	+1.1
HGSD				S		Sn	18 05 04.1	+0.9
SHHT	**Tainan City**	**2.24**	**320**	*e*P		Pn	18 04 34.5	+1.9
EHYH	**Wanrong**	**2.24**	**347**	*i* P		Pn	18 04 33.0	+0.3
EHYH				S		Sn	18 05 02.0	-1.6
EHY	**Hungye**	**2.26**	**346**	P		Pn	18 04 33.0	+0.1
EHY				*e*S		Sn	18 05 02.7	-1.3
CHN1	**Nanshi**	**2.27**	**326**	P		Pn	18 04 33.2	+0.3
CHN1				S		Sn	18 05 03.2	-0.9
WTP	**Ta-pu**	**2.27**	**329**	P		Pn	18 04 33.3	+0.3
WTP				*e*S		Sn	18 05 03.0	-1.3
SNST	**Tainan City**	**2.31**	**326**	*e*S		Sn	18 05 06.2	+1.2
TPUB	**Ta-pu**	**2.31**	**330**	*i* P		Pn	18 04 33.5	0.0
TPUB				S		Sn	18 05 03.4	-1.7
TWK	**Hsinying**	**2.35**	**326**	P		Pn	18 04 34.0	0.0
TWK				*e*S		Sn	18 05 05.3	-0.6
SSHA	**Shanhua**	**2.36**	**321**	*e*P		Pn	18 04 35.0	+1.0
SSHA				*e*S		Sn	18 05 04.8	-1.2
ALS	**Alishan**	**2.42**	**335**	P		Pn	18 04 35.4	+0.3
ALS				*e*S		Sn	18 05 07.0	-0.7
WCKO	**Fanlu**	**2.44**	**331**	P		Pn	18 04 35.0	0.0
WCKO				S		Sn	18 05 06.5	-1.1
SCLT	**Jiali**	**2.45**	**320**	P		Pn	18 04 35.7	+0.7
WARBT	**Fenglin Townsh**	**2.45**	**349**	P		Pn	18 04 34.8	-0.3
WARBT				S		Sn	18 05 05.8	-2.1
TSCK	**Chigu Township**	**2.49**	**318**	P		Pn	18 04 36.1	+0.6
TSCK				S		Sn	18 05 07.5	-1.1
SHUL	**Shoufeng**	**2.49**	**353**	*e*P		Pn	18 04 35.5	0.0
ESL	**Shilin**	**2.54**	**350**	*e*P		Pn	18 04 34.9	-1.2
ESL				*e*S		Sn	18 05 08.0	-1.7
VWDT	**VWDT**	**2.54**	**344**	P		Pn	18 04 37.2	+1.1
VWDT				*e*S		Sn	18 05 10.0	+0.3
CHN5	**Tsauling**	**2.55**	**334**	P		Pn	18 04 36.4	+0.1
CHN5				*e*S		Sn	18 05 09.0	-1.1
CHN8	**Yiju**	**2.57**	**323**	P		Pn	18 04 36.6	+0.2
CHN8				*e*S		Sn	18 05 09.7	-0.6
WHYT	**Xinyi Township**	**2.57**	**338**	*i* P		Pn	18 04 36.4	+0.1
WHYT				*e*S		Sn	18 05 09.5	-1.0
CHY	**Chiayi**	**2.58**	**328**	*e*P		Pn	18 04 35.7	-0.8
CHY				*e*S		Sn	18 05 08.4	-2.1
SSLB	**Suanglung**	**2.62**	**341**	P		Pn	18 04 37.1	0.0
SSLB				S		Sn	18 05 10.5	-1.1
HWA	**Hwalien**	**2.68**	**354**	*e*P		Pn	18 04 36.1	-1.6
HWA				*e*S		Sn	18 05 09.2	-3.4
ETM	**Tongmen**	**2.68**	**352**	*e*P		Pn	18 04 38.6	+0.9
ETM				*e*S		Sn	18 05 11.7	-0.9
WGK	**Gukeng**	**2.68**	**333**	*e*P		Pn	18 04 37.9	+0.2
WGK				*e*S		Sn	18 05 11.5	-1.1
WDLH	**Douliu**	**2.69**	**332**	P		Pn	18 04 37.9	+0.1
WDLH				*e*S		Sn	18 05 12.3	-0.6
WSL	**Shuilin Townsh**	**2.70**	**325**	P		Pn	18 04 37.9	-0.1
WSL				*e*S		Sn	18 05 11.7	-1.4
WDL	**Douliou City**	**2.71**	**333**	*e*P		Pn	18 04 38.4	+0.3
WDL				*e*S		Sn	18 05 14.2	+0.9
OWD	**Renai**	**2.72**	**346**	*e*P		Pn	18 04 39.4	+0.9
OWD				*e*S		Sn	18 05 13.8	0.0
SMLT	**Sun Moon Lake**	**2.73**	**340**	*e*P		Pn	18 04 37.7	-0.8
SMLT				*e*S		Sn	18 05 14.3	+0.4
LXIB	**Xiulin Townshi**	**2.74**	**351**	*i* P		Pn	18 04 38.5	-0.2
LXIB				*e*S		Sn	18 05 12.7	-1.6
WUSB	**Renai**	**2.77**	**345**	*i* P		Pn	18 04 39.7	+0.7
WUSB				S		Sn	18 05 13.8	-1.0
TWD	**Chiawan**	**2.78**	**354**	*e*P		Pn	18 04 39.9	+0.9
TWD				*e*S		Sn	18 05 15.3	+0.5
WSF	**Szhu**	**2.80**	**326**	*i* P		Pn	18 04 38.9	-0.2
WSF				*e*S		Sn	18 05 14.3	-0.8
WNT	**Mingjian**	**2.80**	**336**	*i* P		Pn	18 04 39.7	+0.5
WNT				*e*S		Sn	18 05 15.4	+0.2
WDGT	**Dungji**	**2.85**	**314**	*e*P		Pn	18 04 39.8	0.0
WDGT				*e*S		Sn	18 05 13.8	-2.4
NACB	**Ninganchiao**	**2.87**	**354**	*e*P		Pn	18 04 40.0	0.0
WCS	**Beigang Elemen**	**2.89**	**342**	*e*S		Sn	18 05 16.9	-0.3
ETLH	**Xiulin Townshi**	**2.92**	**352**	*e*P		Pn	18 04 40.1	-0.5
ETLH				*e*S		Sn	18 05 16.6	-1.4
WRL	**Guolierlin Hig**	**2.95**	**332**	*e*P		Pn	18 04 40.7	-0.2
WRL				*e*S		Sn	18 05 16.8	-1.6
VCHM	**Qimei**	**2.98**	**310**	P		Pn	18 04 41.2	-0.1
FUSS	**Fushou**	**2.99**	**348**	P		Pn	18 04 43.0	+1.2
FUSS				*e*S		Sn	18 05 19.8	-0.1
WCH1	**Changhua City**	**3.03**	**336**	*e*P		Pn	18 04 42.6	+0.7
WCH1				*e*S		Sn	18 05 20.2	+0.1
WCHH	**Zhanghua**	**3.03**	**336**	P		Pn	18 04 42.2	+0.3
WCHH				*e*S		Sn	18 05 20.0	-0.2
TCU	**Taichung**	**3.05**	**338**	*e*P		Pn	18 04 42.5	+0.3
TCU				*e*S		Sn	18 05 20.1	-0.5
PHUB	**P'eng-hu**	**3.08**	**316**	*i* P		Pn	18 04 42.4	-0.2
PHUB				*i* S		Sn	18 05 19.1	-2.2
WHP	**Taichung City**	**3.09**	**344**	P		Pn	18 04 43.3	+0.5
WHP				S		Sn	18 05 21.8	+0.2
PNG	**Penghu**	**3.13**	**316**	*e*P		Pn	18 04 43.0	-0.2
PNG				*e*S		Sn	18 05 20.5	-1.9
NNS	**Nan Shan**	**3.16**	**351**	*e*S		Sn	18 05 23.5	+0.2
TWQ1	**Liyutan**	**3.21**	**341**	*e*P		Pn	18 04 44.6	+0.5
TWQ1				*e*S		Sn	18 05 24.1	0.0
LATG	**Datong**	**3.24**	**354**	*e*P		Pn	18 04 45.7	+1.1
ENTT	**Nioudou**	**3.34**	**355**	*e*P		Pn	18 04 47.2	+1.5
YHNB	**Yeheng**	**3.39**	**352**	*e*P		Pn	18 04 47.3	+0.8
YHNB				*e*S		Sn	18 05 28.3	+0.1
NFF	**Wufeng Townshi**	**3.39**	**348**	*e*P		Pn	18 04 47.9	+1.4
NFF				*e*S		Sn	18 05 27.8	-0.6
NSK	**Sanguang**	**3.40**	**352**	*e*P		Pn	18 04 48.3	+1.8
NSK				*e*S		Sn	18 05 28.8	+0.4
LIOB	**Emei**	**3.43**	**346**	*e*P		Pn	18 04 47.3	+0.4
LIOB				*e*S		Sn	18 05 27.4	-1.7
FUSB	**Fushanzhiwuyua**	**3.45**	**355**	*e*P		Pn	18 04 49.3	+2.1
FUSB				*e*S		Sn	18 05 28.8	-0.9
NWLT	**Wulai**	**3.48**	**354**	*e*P		Pn	18 04 49.6	+2.1
TIPB	**Shuangxi**	**3.65**	**359**	*e*P		Pn	18 04 49.7	0.0
TIPB				*e*S		Sn	18 05 31.1	-2.6
VWUC	**VWUC**	**4.31**	**329**	*e*P		Pn	18 04 58.1	+0.1
VWUC				*e*S		Sn	18 05 46.7	-2.4
MATB	**Ma-tsu**	**5.15**	**340**	*e*P		Pn	18 05 08.3	-0.6
MHZQ	**Yeshan**	**5.45**	**332**	*e*P		Pn	18 05 13.1	+0.2
XPSS	**Dashiqiu**	**5.82**	**345**	*e*P		Pn	18 05 16.8	-0.8

*ISK **18** 19:09:23.7, 38°40N×44°49E, h5km, ML3.9/13*
*IDC **18** 19:09:23.5±0.8, 38°41N×44°24E, h0km, mb3.8/10, mbtmp3.8/16, ML3.5/4, MS3.3/14, Error ellipse: s-maj=13.8km s-min=10.2km az=135.0*
*NSSP **18** 19:09:23.3, 38°43N×44°57E, h10km, Ms3.9*
*TEH **18** 19:09:24.1, 38°45N×44°53E, h6km±44km, ML3.7, Presumed earthquake*
*MOS **18** 19:09:24.2±1.7, 38°34N×44°33E, h9km, mb4.4/14, Error ellipse: s-maj=10.1km s-min=5.2km az=73.8*
*AZER **18** 19:09:31.9, 38°77N×44°90E, h2km, ml3.9*
ISC 18 19:09:24.5±1.1, 38.39N±0°02×44.44E±0°02, h1km±8km, n157, σ2°24/201, mb4.1/16, MS3.2/9, 10C-11D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOVA	**Hakkari_Yksek**	**0.81**	**189**	Pg		**Pn**	**19 09 40.7**	**-2.7**
ISHB	**Shabestar**	**0.93**	**96**	Pg		**Pg**	**19 09 40.2**	**-2.1**
MAKU	**Maku**	**0.98**	**11**	Pg		**Pg**	**19 09 40.7**	**-2.7**
IMRD	**Marand**	**1.04**	**72**	Pg		**Pg**	**19 09 42.9**	**-1.5**
ERCV	**ERCIS-VAN**	**1.07**	**306**	Pn		**Pn**	**19 09 45.9**	**-1.0**
NAX	**Nakhchivan**	**1.14**	**46**	P		**Pg**	**19 09 43.9**	**-3.8**
NAX				S		Sb	19 09 52.1	-1.0
CUKT	**Cukurca**	**1.32**	**210**	Pn		**Pg**	**19 09 50.6**	**+0.8**
CUKT				Sn		**Sn**	**19 10 10.4**	**+1.8**
CUKT	**Cukurca**	**1.32**	**210**	Pg		**Pg**	**19 09 50.8**	**+1.0**
SBZ	**Shahbuz**	**1.33**	**40**	P		**Pn**	**19 09 47.8**	**-2.6**
SBZ				S		Sn	19 09 58.7	-10
ORD	**Ordubad**	**1.33**	**66**	P		**Pn**	**19 09 48.2**	**-2.1**
ORD				S

TBLG	Delisi	3.34	4	P		Pb	19 10 25.9	+1.2
LKRN	Lenkeran, Azer	3.41	83	PN		Pn	19 10 20.8	+1.9
LKRN	Lenkeran, Azer	3.41	83	P		Pn	19 10 20.9	+1.9
LKRN				S		Sn	19 10 58.0	-2.1
ASTR	Astara	3.42	86	P		Pn	19 10 21.1	+2.1
ASTR				S		Sn	19 10 58.5	-1.7
DYBB	Diyarbakir	3.42	264	Pn		Pb	19 10 20.7	-5.3
KDMR	Kurdemir	3.51	54	P		Pn	19 10 20.7	+0.4
KDMR				S		Sn	19 10 57.7	-4.8
SEKA	Sheki	3.52	36	PN		Pn	19 10 21.8	+1.2
SEKA	Sheki	3.52	36	P		Pn	19 10 21.8	+1.2
SEKA				S		Sn	19 10 59.6	-3.4
ZKTA	Zakatala	3.65	27	P		Pn	19 10 23.4	+1.2
ZKTA				S		Sn	19 11 02.5	-3.5
QBL	Gabala	3.66	45	P		Pn	19 10 22.8	+0.5
QBL				S		Sn	19 11 01.3	-4.8
LGD	Lagodekhi	3.71	21	P		Pb	19 10 29.3	-1.6
IML	Ismayilli	3.75	49	P		Pn	19 10 24.1	+0.4
IML				S		Sn	19 11 03.7	-4.9
ALIG	Mtskhetisjvari	3.76	351	P		Pb	19 10 32.0	+0.3
ALIG				S		Sg	19 11 26.8	+1.5
ALIB	&Aumlli-Bayram	3.88	65	P		Pn	19 10 26.0	+0.7
ALIB				S		Sn	19 11 07.2	-4.3
BAYT	Aydıntepe-Bayb	3.89	302	Pn		Pn	19 10 27.3	+1.7
CHRG	Chargali	3.95	5	P		Pb	19 10 35.0	-0.1
CHRG				S		Sg	19 11 30.6	-0.9
XNQ	Khinaliq	3.98	45	P		Pn	19 10 27.3	+0.3
XNQ				S		Sn	19 11 09.5	-4.9
AKT	Akhty	3.99	38	*e*PN		Pn	19 10 28.7	+1.7
AKT				*e*			19 10 38.5	
AKT				*e*S		Sn	19 11 15.3	+0.9
AKT				*e*			19 11 35.0	
AKT				pmax	pmax			
	comp=Z,11nm,0.6s							
AKT				pmax	pmax			
	comp=Z,34nm,0.8s							
AKT				smax	smax			
	comp=E,33nm,0.6s							
AKT				smax	smax			
	comp=N,30nm,0.7s							
AKT				smax	smax			
	comp=E,79nm,1.4s							
AKT				MLR	MLR			
	comp=Z,534nm,9.0s							
IDHR	Dehrash	4.00	156	Pn		Pn	19 10 28.5	+1.3
PQL	Pirkuli	4.00	52	P		Pn	19 10 27.5	+0.3
PQL				S		Sn	19 11 09.8	-5.0
GBS	Qobustan	4.09	57	P		Pn	19 10 28.7	+0.4
GBS				S		Sn	19 11 12.0	-4.8
ATGJ	Altiaghaj	4.26	53	P		Pn	19 10 30.9	+0.3
ATGJ				S		Sn	19 11 16.1	-4.9
GARIG	Gari	4.27	350	P		Pb	19 10 40.2	-0.3
QSAR	Qusar	4.28	42	P		Pn	19 10 31.4	+0.4
QSAR				S		Sn	19 11 16.9	-4.8
SHTL	Shatili	4.30	7	P		Pb	19 10 40.4	-0.6
SHTL				S		Sb	19 11 38.7	+5.3
QUBA	Quba, Azerbaij	4.30	45	P		Pn	19 10 31.6	+0.4
QUBA				S		Sn	19 11 17.2	-4.8
SIZA	Siyzn	4.36	51	P		Pn	19 10 32.4	+0.4
SIZA				S		Sn	19 11 18.6	-4.9
NEUR	Neytrino	5.04	345⇓	*e*PN		Pn	19 10 43.9	+2.4
MAK	Makhachkala	5.12	26	*d*PN		Pn	19 10 40.5	-1.9
MAK				pmax	pmax			
	comp=Z,214nm,1.0s							
MAK				MLR	MLR			
	comp=Z,1μm,11.0s							
NCK	Nalchik	5.14	353⇑	*e*PN		Pn	19 10 45.6	+2.9
KBZ	Khabaz	5.46	348	Pn		Pn	19 10 47.7	+0.6
	comp=Z,2.0nm,1.0s,baz=175,slow=14,SNR=2.2							
KBZ				Lg	Lg		19 12 15.8	
	baz=44,slow=14,SNR=1.4							
KBZ				LR	LR		19 13 16.9	
	comp=Z,197nm,20.6s,baz=167,slow=43							
KBZ	Khabaz	5.46	348⇑	*e*P		Pn	19 10 48.7	+1.7
KIV	Kislovodsk	5.72	347	*e*P		Pn	19 10 54.8	+4.1
KIV				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KIV				MLR	MLR			
	comp=Z,56nm,10.0s							
SOC	Sochi	6.30	327	*e*P		Pn	19 11 01.4	+2.8
SOC				*e*			19 12 14.1	
SOC				MLR	MLR			
	comp=Z,146nm,9.0s							
BRTR	Keskin Array B	8.51	282	Pn		Pn	19 11 27.8	-1.3
	baz=84,slow=13,SNR=5.4							
BRTR				LR	LR		19 14 26.3	
	comp=Z,43nm,21.7s,baz=96,slow=36							
ASF	Jabal al Asfar	8.75	227	Pn		Pn	19 11 30.3	-2.0
	comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=1.2							
ASF				Lg	Lg		19 13 58.5	
	comp=Z,0.2nm,0.3s,baz=65,slow=21,SNR=2.3							
ASF				LR	LR		19 15 14.2	
	comp=Z,164nm,21.0s,baz=34,slow=40							
	comp=Z,2.2nm,0.7s							
MMAI	Mount Meron Ar	9.10	237	Pn		Pn	19 11 34.6	-2.5
	comp=Z,0.4nm,0.3s,baz=59,slow=12,SNR=1.3							
MMAI				LR	LR		19 15 35.7	
	comp=Z,400nm,20.5s,baz=48,slow=41							
	comp=Z,0.2nm,0.3s							
EIL	Elat	11.72	225	LR	LR		19 17 16.2	
	comp=Z,215nm,18.3s,baz=56,slow=41							
BELG	Belogornoye	14.18	8	Pn		Pn	19 12 46.9	+0.5
	comp=Z,17nm,1.0s,baz=139,slow=22,SNR=4.7							
BELG	Belogornoye	14.18	8⇓	*e*P		Pn	19 12 49.1	+2.7
TRNA	Turayna	14.78	155	P		P	19 12 59.9	-1.1
AKTO	Aktyubinsk	15.43	34	Pn		Pn	19 13 02.4	-0.9
	comp=Z,0.4nm,0.3s,baz=229,slow=8.4,SNR=17							
AKTO				LR	LR		19 19 34.0	
	comp=Z,67nm,19.8s,baz=55,slow=39							
	comp=Z,2.1nm,0.7s							
SHME	Shamm	15.77	138	P		P	19 13 11.0	-1.1
BANOM	Banah	15.96	138	P		P	19 13 14.4	+0.3
GHWR	Ruwais	16.08	151	P		P	19 13 15.9	+0.5
MASF	Masafi	16.34	139	P		P	19 13 19.1	+0.8
AKASG	Malin Array Be	16.36	324	Pn		Pn	19 13 13.7	-1.8
	comp=Z,0.3nm,0.3s,baz=135,slow=12,SNR=7.0							
	comp=Z,1.1nm,0.7s							
MDH	Madha	16.46	139	P		P	19 13 20.3	+0.6
UOSS	Minazif	16.71	140	P		P	19 13 23.5	+1.1
HATD	Hatta, Dubai	16.77	140	P		P	19 13 24.9	+1.8
ASHO	Ashiyiah	16.85	141	P		P	19 13 25.0	+1.0
	SNR=5.7							
MZR	Muzera	17.18	151	P		P	19 13 28.1	+0.5
	SNR=11							
SOHO	SOHO	17.55	141	P		P	19 13 33.5	+1.8
OBN	Obninsk	17.56	345	*e*P		Pn	19 13 29.4	-1.0
OBN				pmax	pmax			
	comp=Z,11nm,1.3s							
OBN				MLR	MLR			
	comp=Z,454nm,5.0s							
UMZA	Um Al Zommool	18.12	146	P		P	19 13 38.8	+0.8
HOQ	Hoqain	18.40	140	P		Pn	19 13 44.7	+3.7
BIDO	Bidbid	18.87	138	P		Pn	19 13 48.8	+2.0
BSY	Bisya	19.04	141	P		Pn	19 13 48.8	0.0
SMDO	Samad	19.21	139	P		Pn	19 13 51.7	+0.7
	SNR=6.4							
JMDO	Jabal Madar	19.81	140	P		Pn	19 13 57.6	-0.4
ARTI	Arti	20.26	23	P		P	19 14 01.1	-0.1
	comp=Z,7.5nm,0.9s,baz=215,slow=7.3,SNR=12							
ARTI				LR	LR		19 24 21.4	
	comp=Z,119nm,21.4s,baz=200,slow=44							
	comp=Z,7.5nm,0.9s							
ARTI	Arti	20.26	23	*d*P		Pn	19 14 01.7	-1.4
ARTI							19 14 17.7	
ARTI				S		S	19 17 47.5	-1.5
ARTI				pmax	pmax			
	comp=Z,45nm,2.5s							
KIRV	Kirov	20.47	7⇓	*e*P		P	19 14 03.5	+0.1
MHTO	MHTO	20.91	142	P		Pn	19 14 10.2	-0.7
DOK	Doka	21.43	154	P		P	19 14 14.1	-0.1
ABTO	Aybut	22.35	157	P		P	19 14 24.0	0.0
	SNR=7.9							
RBK	Rabkut	22.50	155	P		P	19 14 25.5	-0.2
BORK	Borovoye	23.09	42	*ce*P		P	19 14 34.3	+2.7
BORK				pmax	pmax			
	comp=Z,19nm,2.4s							
BVAR	Borovoye Array	23.12	42	P		P	19 14 32.1	+0.2
	comp=Z,1.9nm,0.9s,baz=228,slow=8.9,SNR=8.3							
	comp=Z,1.9nm,0.9s							
AAK	Ala-Archa	23.17	70	P		P	19 14 33.5	+0.7
	comp=Z,3.8nm,0.9s,baz=195,slow=7.5,SNR=6.5							
AAK				LR	LR		19 25 28.7	
	comp=Z,66nm,20.3s,baz=288,slow=41							
	comp=Z,3.8nm,0.9s							

AAK	Ala-Archa	23.17	70⇑	*e*P		P	19 14 34.0	+1.2
AAK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
GERES	GERESS Array B	24.43	305	LR	LR		19 25 09.3	
	comp=Z,75nm,18.2s,baz=258,slow=39							
KURBB	Kurchatov Arra	26.96	52	P		P	19 15 08.0	+0.4
	comp=Z,2.3nm,0.8s,baz=262,slow=9.1,SNR=18							
	comp=Z,2.3nm,0.8s							
KURK	Kurchatov	27.04	52	*i*P		P	19 15 08.7	+0.5
KURK				pmax	pmax			
	comp=Z,6.0nm,1.1s							
MK31	Makanchi Array	28.87	61	*d*P		P	19 15 25.3	+0.6
MKAR	Makanchi Array	28.87	61	P		P	19 15 25.4	+0.7
	comp=Z,1.7nm,0.7s,baz=267,slow=6.9,SNR=20							
MKAR				LR	LR		19 27 57.6	
	comp=Z,69nm,18.5s,baz=284,slow=38							
	comp=Z,1.7nm,0.7s							
NOA	NORSAR Array B	30.66	328	LR	LR		19 29 13.4	
	comp=Z,52nm,18.2s,baz=325,slow=39							
ZALV	Zalesovo Beam	31.49	47	P		P	19 15 46.9	-0.8
	comp=Z,0.9nm,0.5s,baz=263,slow=8.8,SNR=6.5							
ZALV				LR	LR		19 30 21.4	
	comp=Z,56nm,19.9s,baz=13,slow=40							
	comp=Z,0.9nm,0.5s							
ZALV	Zalesovo Beam	31.49	47	*e*P		P	19 15 48.7	+1.0
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s							
DGZ	Jazzator, Alta	32.48	56⇓	*i*P		P	19 15 57.3	+0.6
DGZ				pmax	pmax			
	comp=Z,5.0nm,1.1s							
ESDC	Sonseca Array	37.26	288	P		P	19 16 36.0	-2.0
	comp=Z,1.7nm,1.0s,baz=58,slow=9.0,SNR=7.0							
	comp=Z,1.7nm,1.0s							
KNGR	Kungurtug, Tuv	38.97	54⇑	*i*P		P	19 16 54.1	+1.8
KNGR				pmax	pmax			
	comp=Z,9.0nm,1.2s							
TORD	Torodi Ar. Bea	45.42	248	P		P	19 17 43.7	-1.4
	comp=Z,1.0nm,1.1s,baz=51,slow=8.4,SNR=4.1							
	comp=Z,1.0nm,1.1s							
ULN	Ulaanbaatar	45.52	57	*i*P		P	19 17 47.9	+2.1
ULN				pmax	pmax			
	comp=Z,4.0nm,1.2s							
CMAR	Chiang Mai Arr	51.11	97	P		P	19 18 28.5	-0.6
	comp=Z,1.8nm,0.9s,baz=297,slow=8.4,SNR=14							
CMAR				LR	LR		19 43 24.1	
	comp=Z,18nm,18.1s,baz=245,slow=40							
	comp=Z,1.8nm,0.9s							
TIXI	Tiksi	52.35	23⇓	*e*P		P	19 18 39.1	+1.5
TIXI				pmax	pmax			
	comp=Z,19nm,5.2s							
YAK	Yakutsk	54.82	35	LR	LR		19 46 15.1	
	comp=Z,41nm,18.6s,baz=308,slow=40							
KLR	Kul'dur	60.58	49	*i*P		P	19 19 38.8	+2.2
KLR				pmax	pmax			
	comp=Z,18nm,2.6s							
SEY	Seymchan	63.95	29	*ce*P		P	19 20 02.6	+3.7
SEY				pmax	pmax			
	comp=Z,10.0nm,2.5s							
MA2	Magadan	65.17	33	*ce*P		P	19 20 09.5	+2.5
MA2				pmax	pmax			
	comp=Z,6.0nm,1.3s							
YKA	Yellowknife Ar	78.05	350	P		P	19 21 23.4	-1.2
	comp=Z,0.1nm,0.4s,baz=11,slow=6.1,SNR=4.7							
	comp=Z,0.1nm,0.4s							
NVL	N'lazarevskaya	111.36	191	*i* PKIKP		PKiKP	19 28 00.7	+1.6
NVL				*e*			19 28 41.0	
NVL				*e*PPP		PPP	19 31 01.6	
NVL				*e*			19 35 14.2	
NVL				*e*SS		SS	19 44 17.6	+3.2
NVL				*e*SSS		SSS	19 48 26.6	
NVL				pmax	pmax			
	comp=Z,40nm,1.9s							
NVL				MLR	MLR			
	comp=Z,445nm,18.0s							

*ISK **18** 19:12:45.1,39.˚10N×27.˚81E,h9km,ML3.5/17*
*AFAD **18** 19:12:45.7,39.˚10N×27.˚81E,h7km±2km,ML3.2*
*THE **18** 19:12:47.1,39.˚N±3.×2.˚8E±.˚,h17km±17km,M2.9/12,*
MLh2.9/12

ISC 18 19:12:45.6±0.9,**39.˚10N**±0.˚02×**27.˚82E**±0.˚02,**h14**km±7km,
n74,σ0**°35/91**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AKHS	Akhisar	0.22	182	P		Pg	19 12 50.4	-0.1
AKHS				S		Sg	19 12 54.4	+0.6
AKHS				IAML			19 12 55.0	
	comp=E,5μm,0.4s							
AKS	Akhisar	0.22	182	Pg		Pg	19 12 49.9	-0.6
SOMA	Soma-Manisa	0.23	284	Pg		Pg	19 12 50.3	-0.4
SOMA				Sg		Sg	19 12 54.1	0.0
STEP	BALIKESIR_Sava	0.29	344	P		Pg	19 12 51.8	+0.2
STEP				S		Sg	19 12 55.8	+0.1
STEP				IAML			19 12 57.0	
	comp=N,7μm,0.3s							
GORD	Gordes-Manisa	0.34	125	Pg		Pg	19 12 52.6	+0.1
GORD				Sg		Sg	19 12 58.0	+0.8
GOMA	Golmarmara-Man	0.40	169	Pg		Pg	19 12 53.5	-0.1
KTTT	Salihli	0.46	153	P		Pg	19 12 54.9	+0.1
KTTT				S		Sg	19 13 01.1	+0.1
KTTT				IAML			19 13 03.0	
	comp=N,1μm,0.6s							
CAMT	Merkez	0.53	229	P		Pg	19 12 56.4	+0.3
CAMT				S		Sb	19 13 04.0	-0.3
CAMT				IAML			19 13 08.0	
	comp=N,2μm,0.3s							
BALB	Balikesir	0.54	5	Pg		Pg	19 12 56.1	-0.2
ZEDA	zmir-Bergama	0.59	257	P		Pb	19 12 57.6	-0.3
ZEDA				S		Sg	19 13 05.5	+0.3
ZEDA				IAML			19 13 06.0	
	comp=N,1μm,0.6s							
BKES	Balkesir-Mer	0.64	7	P		Pg	19 12 57.8	-0.2
BALY	Balya	0.66	346	P		Pg	19 12 58.6	+0.1
DEMI	Demirci	0.70	94	P		Pg	19 12 59.5	+0.2
DEMI				S		Sg	19 13 07.8	-0.7
DEMI				IAML			19 13 09.0	
	comp=N,1μm,0.2s							
BUHA	Balikesir, Bur	0.70	305	P		Pg	19 12 59.5	+0.1
IZMD	zmir-Dikili-	0.71	261	P		Pb	19 12 59.6	-0.2
DURS	Dursunbey	0.71	45	P		Pg	19 12 59.5	0.0
DKL	Dikili	0.71	268	Pg		Pg	19 12 59.6	+0.1
DKL				Sg		Sb	19 13 09.4	-0.2
YAYO	Edremit-Balk	0.77	312	Pg		Pg	19 13 00.3	-0.4
BLKS	Balkesir-Sus	0.78	8	P		Pg	19 13 00.6	-0.2
DST	Dursunbey	0.80	51	Pg		Pg	19 13 00.4	-0.7
MANT	Manisa	0.84	136	P		Pb	19 13 02.2	+0.1
MANT				S		Sg	19 13 12.8	-0.2
MANT				IAML			19 13 13.0	
	comp=E,862nm,0.5s							
MANT				IAML			19 13 14.0	
	comp=N,532nm,0.3s							
ODEM	Odemis-Izmir	0.85	166	Pg		Pg	19 13 01.9	-0.2
BAGT	Foa	0.88	240	P		Pb	19 13 03.0	+0.3
KULA	Kula-Manisa	0.88	132	Pg		Pg	19 13 02.4	-0.3
SUSR	Susurluk-Balik	0.88	13	Pg		Pg	19 13 01.9	-0.9
SMAA	Simav-Kutahya	0.90	90	Pg		Pg	19 13 03.2	+0.1
AYVA	Ayvalik	0.90	284	P		Pg	19 13 03.3	+0.2
SIMA	Simav-Kutahya	0.90	91	Pg		Pg	19 13 03.2	+0.1
CMHT	Manyas	0.92	7	P		Pb	19 13 03.1	-0.3
DUVT	Torbali	0.93	198	P		Pb	19 13 03.5	-0.1
DUVT				S		Sg	19 13 15.1	-0.6
DUVT				IAML			19 13 19.0	
	comp=E,1μm,0.2s							
FOCM	Foa	0.94	246	Pg		Pb	19 13 03.4	-0.3
BLCB	Balcova	0.94	221	Pg		Pb	19 13 03.3	-0.4
BLCB	Balcova	0.94	221	P		Pb	19 13 03.4	-0.4
BLCB				S		Sg	19 13 16.2	+0.1
YENI	Yenice-Canakka	0.95	332	Pg		Pb	19 13 03.6	-0.3
GONE	Gonen-Balikesi	0.95	354	Pg		Pb	19 13 03.6	-0.3
IZMR	zmir-demi	0.97	174	P		Pb	19 13 04.1	-0.2
ATIT	Gnen	1.00	349	P		Pg	19 13 05.2	+0.2
KIRA	zmir-Kiraz	1.01	153	P		Pn	19 13 05.6	0.0
USAK	Uak-Merkez	1.01	112	P		Pb	19 13 05.1	+0.1
CANM	Can-anakkale	1.09	327	Pn		Pb	19 13 06.4	+0.1
SHAP	Saphane-Kutahy	1.09	94	Pn		Pb	19 13 06.7	+0.3
KRBN	Karaburun	1.11	243	Pn		Pb	19 13 06.7	0.0
AYDB	Zeytinkoy-Aydi	1.15	177	Pn		Pb	19 13 07.3	-0.2
BAYC	CANAKKALE_Bayr	1.18	303	P		Pg	19 13 08.6	+0.3
KARB	zmir-Karabur	1.18	249	P		Pb	19 13 08.1	+0.1
NAZL	Nazilli-Aydin	1.19	162	Pn		Pn	19 13 07.9	-0.1
EMET	Ktahya-Emet	1.20	76	P		Pg	19 13 09.5	+0.8
PRK	Paraskevi	1.21	277	P		Pb	19 13 08.5	+0.1
PRK				S		Sg	19 13 24.8	0.0

GEDZ	Gediz	1.24	92	Pn		Pg	19 13 09.5	0.0
GMLD	Gumuldur	1.25	215	Pn		Pg	19 13 09.3	-0.3
DGB	zmir	1.28	215	P		Pb	19 13 09.4	-0.1
SULTU	Buldan	1.28	144	P		Pg	19 13 10.3	0.0
GDZ	Gediz	1.29	90	P		Pg	19 13 10.5	0.0
KUSD	Kusadasi-Aydin	1.31	199	Pn		Pb	19 13 10.2	+0.2
ZEYE	Izmir, Urla-Ze	1.34	231	P		Pn	19 13 10.1	+0.1
ESEN	Aydn-Nazilli	1.36	162	P		Pg	19 13 11.9	+0.1
EZN	Ezine	1.37	302	P		Pn	19 13 10.5	+0.2
EZN				S		Sn	19 13 28.1	-0.2
AYDN	Tasoluk	1.44	178	P		Pn	19 13 11.1	-0.3
GCAM	G?zelcaml?	1.47	198	Pn		Pn	19 13 12.2	+0.4
GCAM	G?zelcaml?	1.47	198	P		Pg	19 13 13.5	-0.4
SIGR	SIGRI	1.53	275	P		Pn	19 13 12.6	0.0
SIGR				S		Sn	19 13 32.2	-0.1
CHOS	Chios island	1.56	243	P		Pn	19 13 13.2	+0.2
CHOS				S		Sg	19 13 35.5	-0.2
SMG	Samos	1.59	209	S		Sg	19 13 37.1	+0.3
GADA	Gvkgeada	1.84	307	P		Pn	19 13 16.3	-0.6
YER	Yerkesik	2.00	169	P		Pn	19 13 18.9	-0.2
BODT	Bodrum	2.08	191	P		Pn	19 13 20.2	0.0
BODT				S		Pg	19 13 26.3	+0.8
ENEZ	Enez	2.08	322	P		Pn	19 13 21.0	+0.9
LIA	Limnos Island	2.19	292	P		Pn	19 13 22.2	+0.5
SMTH	Samothraki Isl	2.23	308	P		Pn	19 13 22.7	+0.4
ALN	Alexandroupoli	2.25	323	P		Pn	19 13 23.1	+0.5
RDO	Rodhopi	2.69	320	P		Pn	19 13 29.1	+0.6
THAS	Thassos island	2.82	303	P		Pn	19 13 30.3	0.0
AOS	Alonnisos	3.07	273	P		Pn	19 13 34.4	+0.7
OUR	Ouranopolis	3.21	294	P		Pn	19 13 36.0	+0.3

IDC 18 19:13:30.3±2.1,**14.˚89S**×**167.˚10E**,**h0**km,**mb3.5**/3,
mbtmp3.6/4,**ML3.9**/1,**Error ellipse: s-maj=53.8km**
s-min=35.8km az=125.0,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DZM	Mont Dzumac	7.17	185	Pn		Pn	19 15 16.7	+0.1
	2.1nm,0.3s,baz=25,slow=17,SNR=21							
DZM				Sn		Sn	19 16 27.3	-12
	0.5nm,0.3s,baz=115,slow=22,SNR=1.5							
	7.0nm,0.4s							
WRA	Warramunga Arr	31.63	256	P		P	19 19 55.4	+0.1
	0.1nm,0.3s,baz=85,slow=7.8,SNR=5.6							
	0.1nm,0.3s							
ASAR	Alice Springs	32.46	249	P		P	19 20 02.5	-0.2
	0.2nm,0.3s,baz=78,slow=9.0,SNR=15							
	0.2nm,0.3s							
ILAR	Eielson Array	86.73	18	P		P	19 26 15.8	0.0
	0.3nm,0.6s,baz=228,slow=5.5,SNR=1.9							
	0.3nm,0.6s							

*IDC **18** 19:15:40.8±1.4,23.˚08S×115.˚30W,h0km,mb3.5/5,*
mbtmp3.5/5,MS3.8/2,Error ellipse: s-maj=50.4km
s-min=39.8km az=37.0

ISC 18 19:15:44.9±1.5,**22.˚7S**±0.˚4×**115.˚0W**±0.˚3,**h10**km,**n22**,
σ0**°86/11**,**mb3.5/5**,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RPN	Rapa Nui	6.80	132	LR	LR		19 19 17.0	
	comp=Z,512nm,18.8s,baz=290,slow=32							
H03N2	Juan Fernandez	33.46	117	T	T		19 57 35.7	
	baz=282,slow=75,SNR=17							
H03N3	Juan Fernandez	33.47	117	T	T		19 57 41.9	
	baz=282,slow=75,SNR=20							
H03N1	Juan Fernandez	33.48	117	T	T		19 57 37.1	
	baz=282,slow=75,SNR=16							
PLCA	Paso Flores	41.41	126	LR	LR		19 36 06.6	
	comp=Z,156nm,18.8s,baz=210,slow=30							
LPAZ	La Paz	44.53	90	P		P	19 23 57.7	-0.1
	1.2nm,0.9s,baz=265,slow=5.6,SNR=3.9							
	1.2nm,0.9s							
NVAR	Mina Array Bea	60.87	357	P		P	19 25 58.1	+0.2
	0.1nm,0.4s,baz=178,slow=6.0,SNR=1.0							
	0.1nm,0.4s							
ELK	Elko	63.11	360	P		P	19 26 12.7	-0.1
	0.3nm,0.3s,baz=177,slow=5.0,SNR=4.2							
	0.3nm,0.3s							
PDAR	Pinedale Array	65.33	4	P		P	19 26 27.5	+0.2
	0.3nm,0.9s,baz=204,slow=8.0,SNR=1.1							
	0.3nm,0.9s							
YKA	Yellowknife Ar	84.89	0	P		P	19 28 18.9	-0.5
	0.2nm,0.6s,baz=183,slow=4.9,SNR=4.6							
	0.2nm,0.6s							
H11S2	WAKE ISLAND Hy	86.71	291	T	T		21 04 13.0	
	baz=116,slow=75,SNR=115							
H11S1	WAKE ISLAND Hy	86.72	291	T	T		21 04 15.5	
	baz=116,slow=75,SNR=122							
H11S3	WAKE ISLAND Hy	86.72	291	T	T		21 04 14.5	
	baz=116,slow=75,SNR=83							
H11N3	WAKE ISLAND Hy	87.05	293	T	T		21 04 40.2	
	baz=112,slow=78,SNR=32							
H11N1	WAKE ISLAND Hy	87.06	293	T	T		21 04 43.8	
	baz=112,slow=78,SNR=18							
H11N2	WAKE ISLAND Hy	87.07	293	T	T		21 04 41.3	
	baz=112,slow=78,SNR=47							
ZALV	Zal

CAMT					S	Sb	19 21 54.0	+0.8
CAMT					IAML		19 21 55.0	
	comp=E,975nm,0.2s							
CAMT					IAML		19 21 57.0	
	comp=N,2µm,0.4s							
BALB	**Balikesir**	**0.55**	**2**	Pg	**Pb**		**19 21 45.2**	**-0.4**
ZEDA	**zmir-Bergama**	**0.61**	**258**	P	**Pb**		**19 21 46.4**	**-0.3**
ZEDA				S	**Sb**		**19 21 55.2**	**0.0**
ZEDA				IAML			19 21 58.0	
	comp=N,1µm,0.6s							
BKES	**Balkesir-Mer**	**0.64**	**6**	P	**Pg**		**19 21 46.6**	**-0.2**
BKES				S	**Sb**		**19 21 56.1**	**0.0**
BKES				IAML			19 21 58.0	
	comp=E,693nm,0.6s							
BKES				IAML			19 22 01.0	
	comp=N,736nm,0.5s							
BALY	**Balya**	**0.67**	**345**	P	**Pg**		**19 21 47.1**	**-0.2**
BALY				S	**Sb**		**19 21 56.6**	**-0.4**
BALY				IAML			19 21 58.0	
	comp=E,1µm,0.3s							
BALY				IAML			19 22 01.0	
	comp=N,2µm,0.5s							
DEMI	**Demirci**	**0.68**	**94**	P	**Pb**		**19 21 47.9**	**0.0**
DEMI				S	**Sg**		**19 21 56.5**	**+0.1**
DEMI				IAML			19 21 58.0	
	comp=E,4µm,0.3s							
DEMI				IAML			19 22 01.0	
	comp=N,2µm,0.3s							
DURS	**Dursunbey**	**0.70**	**44**	P	**Pg**		**19 21 47.3**	**-0.7**
DURS				S	**Sg**		**19 21 57.1**	**-0.1**
DURS				IAML			19 22 04.0	
	comp=E,667nm,0.2s							
BUHA	**Balikesir, Bur**	**0.72**	**304**	P	**Pb**		**19 21 48.2**	**-0.4**
BUHA				S	**Sn**		**19 22 01.7**	**+0.7**
BUHA				IAML			19 22 03.0	
	comp=E,737nm,0.3s							
BUHA				IAML			19 22 05.0	
	comp=N,782nm,0.9s							
IZMD	**zmir-Dikili-**	**0.73**	**262**	P	**Pb**		**19 21 48.7**	**0.0**
IZMD				S	**Sb**		**19 21 58.3**	**-0.2**
DKL	**Dikili**	**0.73**	**269**	Pg	**Pb**		**19 21 48.8**	**0.0**
BLKS	**Balkesir-Sus**	**0.79**	**7**	P	**Pg**		**19 21 49.0**	**-0.6**
BLKS				S	**Sg**		**19 21 58.3**	**-1.5**
DST	**Dursunbey**	**0.79**	**49**	Pg	**Pb**		**19 21 49.6**	**-0.1**
YAYO	**Edremit-Balk**	**0.79**	**311**	Pg	**Pb**		**19 21 49.7**	**-0.3**
MANT	**Manisa**	**0.82**	**137**	P	**Pg**		**19 21 50.0**	**-0.2**
MANT				S	**Sb**		**19 22 01.6**	**+0.3**
ODEM	**Odemis-Izmir**	**0.83**	**168**	Pg	**Pn**		**19 21 50.9**	**-0.7**
KULA	**Kula-Manisa**	**0.86**	**132**	Pg	**Pb**		**19 21 51.0**	**0.0**
SMAA	**Simav-Kutahya**	**0.88**	**89**	Pg	**Pn**		**19 21 51.6**	**-0.7**
SIMA	**Simav-Kutahya**	**0.88**	**90**	Pg	**Pn**		**19 21 51.7**	**-0.6**
SUSR	**Susurluk-Balik**	**0.89**	**12**	Pg	**Pg**		**19 21 51.3**	**-0.1**
BAGT	**Foa**	**0.89**	**241**	P	**Pg**		**19 21 51.3**	**-0.2**
BAGT				S	**Sn**		**19 22 04.0**	**-1.1**
BAGT				IAML			19 22 07.0	
	comp=E,2µm,0.8s							
BAGT				IAML			19 22 08.0	
	comp=N,1µm,0.7s							
CMHT	**Manyas**	**0.92**	**6**	P	**Pb**		**19 21 51.6**	**-0.4**
CMHT				S	**Sb**		**19 22 02.9**	**-1.2**
CMHT				IAML			19 22 07.0	
	comp=E,2µm,0.7s							
CMHT				IAML			19 22 07.0	
	comp=N,1µm,0.3s							
AYVA	**Ayvalik**	**0.93**	**284**	P	**Pb**		**19 21 51.7**	**-0.3**
AYVA				S	**Sg**		**19 22 04.8**	**+0.5**
AYVA				IAML			19 22 07.0	
	comp=E,1µm,0.6s							
AYVA				IAML			19 22 08.0	
	comp=N,2µm,0.6s							
DUVT	**Torbali**	**0.93**	**200**	P	**Pn**		**19 21 52.3**	**-0.5**
DUVT				S	**Sg**		**19 22 04.1**	**-0.2**
DUVT				IAML			19 22 07.0	
	comp=E,1µm,0.4s							
BLCB	**Balcova**	**0.95**	**222**	Pg	**Pn**		**19 21 52.8**	**-0.3**
BLCB	**Balcova**	**0.95**	**222**	P	**Pn**		**19 21 52.6**	**-0.5**
BLCB				S	**Sg**		**19 22 05.3**	**+0.3**
FOCM	**Foa**	**0.95**	**247**	Pg	**Pg**		**19 21 52.4**	**-0.2**
IZMR	**zmir-demi**	**0.96**	**175**	P	**Pn**		**19 21 53.5**	**+0.2**
IZMR				S	**Sg**		**19 22 05.4**	**+0.1**
IZMR				IAML			19 22 07.0	
	comp=E,1µm,0.4s							
IZMR				IAML			19 22 08.0	
	comp=N,648nm,0.7s							
GONE	**Gonen-Balikesi**	**0.96**	**352**	Pg	**Pg**		**19 21 52.6**	**-0.2**
YENI	**Yenice-Canakka**	**0.96**	**331**	Pg	**Pg**		**19 21 52.7**	**-0.2**
USAK	**Uak-Merkez**	**0.99**	**112**	P	**Pn**		**19 21 53.6**	**-0.2**
USAK				S	**Sb**		**19 22 05.7**	**-0.4**
USAK				IAML			19 22 09.0	
	comp=N,464nm,0.5s							
USAK				IAML			19 22 11.0	
	comp=E,558nm,0.6s							
KIRA	**zmir-Kiraz**	**0.99**	**154**	P	**Pb**		**19 21 53.1**	**-0.2**
KIRA				S	**Sn**		**19 22 07.5**	**-0.2**
KIRA				IAML			19 22 10.0	
	comp=E,1µm,0.3s							
KIRA				IAML			19 22 10.0	
	comp=N,737nm,0.2s							
ATIT	**Gnen**	**1.01**	**347**	P	**Pg**		**19 21 53.7**	**-0.2**
ATIT				S	**Sn**		**19 22 07.4**	**-0.7**
ATIT				IAML			19 22 09.0	
	comp=E,1µm,0.8s							
ATIT				IAML			19 22 09.0	
	comp=N,2µm,0.4s							
SHAP	**Saphane-Kutahy**	**1.07**	**93**	Pn	**Pg**		**19 21 55.2**	**+0.3**
CANM	**Can-anakkale**	**1.10**	**326**	Pn	**Pn**		**19 21 55.1**	**-0.2**
KRBN	**Karaburun**	**1.13**	**244**	Pn	**Pg**		**19 21 55.9**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.15**	**178**	Pn	**Pg**		**19 21 56.1**	**-0.3**
EMET	**Ktahya-Emet**	**1.18**	**76**	P	**Pg**		**19 21 57.1**	**+0.1**
EMET				S	**Sg**		**19 22 12.4**	**+0.1**
EMET				IAML			19 22 19.0	
	comp=N,1µm,0.7s							
EMET				IAML			19 22 19.0	
	comp=E,876nm,0.8s							
NAZL	**Nazilli-Aydin**	**1.18**	**163**	Pn	**Pg**		**19 21 56.7**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**1.20**	**303**	P	**Pg**		**19 21 57.0**	**-0.3**
BAYC				S	**Sg**		**19 22 12.7**	**-0.3**
BAYC				IAML			19 22 15.0	
	comp=E,614nm,0.3s							
BAYC				IAML			19 22 15.0	
	comp=N,768nm,0.3s							
KARB	**zmir-Karabur**	**1.20**	**250**	P	**Pb**		**19 21 56.7**	**-0.1**
KARB				S	**Sg**		**19 22 13.3**	**+0.3**
KARB				IAML			19 22 16.0	
	comp=E,520nm,0.8s							
KARB				IAML			19 22 16.0	
	comp=N,298nm,0.5s							
GEDZ	**Gediz**	**1.22**	**92**	Pn	**Pg**		**19 21 58.3**	**+0.6**
PRK	**Paraskevi**	**1.24**	**278**	P	**Pg**		**19 21 57.9**	**-0.2**
PRK				S	**Sg**		**19 22 13.8**	**-0.4**
GMLD	**Gumuldur**	**1.25**	**216**	Pn	**Pg**		**19 21 58.3**	**0.0**
SULTU	**Buldan**	**1.26**	**145**	P	**Pb**		**19 21 58.0**	**+0.1**
SULTU				S	**Sg**		**19 22 16.0**	**+1.0**
SULTU				IAML			19 22 22.0	
	comp=E,261nm,0.5s							
SULTU				IAML			19 22 23.0	
	comp=N,261nm,0.9s							
GDZ	**Gediz**	**1.27**	**90**	P	**Pg**		**19 21 58.9**	**+0.2**
GDZ				S	**Sg**		**19 22 14.9**	**-0.4**
GDZ				IAML			19 22 18.0	
	comp=E,650nm,0.5s							
GDZ				IAML			19 22 18.0	
	comp=N,956nm,0.7s							
BAND	**Balkesir-Ban**	**1.27**	**9**	⇓P	**Pg**		**19 21 58.2**	**-0.6**
BAND				⇑S	**Sg**		**19 22 16.1**	**+0.7**
DGB	**zmir**	**1.29**	**216**	P	**Pb**		**19 21 58.0**	**-0.3**
DGB				S	**Sg**		**19 22 15.9**	**+0.1**
DGB				IAML			19 22 18.0	
	comp=E,682nm,0.8s							
DGB				IAML			19 22 18.0	
	comp=N,474nm,0.5s							
KUSD	**Kusadasi-Aydin**	**1.31**	**200**	Pn	**Pg**		**19 21 58.8**	**-0.6**
ESEN	**Aydn-Nazilli**	**1.35**	**163**	P	**Pb**		**19 21 58.9**	**-0.4**
ESEN				S	**Sg**		**19 22 17.1**	**-0.7**
ZEYE	**Izmir, Urla-Ze**	**1.36**	**231**	P	**Pb**		**19 21 58.9**	**-0.5**
ZEYE				S	**Sg**		**19 22 19.2**	**+1.2**
ZEYE				IAML			19 22 22.0	
	comp=E,386nm,0.4s							
ZEYE				IAML			19 22 27.0	
	comp=N,490nm,0.5s							
EZN	**Ezine**	**1.39**	**302**	P	**Pb**		**19 21 59.8**	**-0.2**
EZN				S	**Sn**		**19 22 16.6**	**-0.7**
AYDN	**Tasoluk**	**1.43**	**179**	P	**Pb**		**19 22 00.6**	**-0.2**
AYDN				S	**Sb**		**19 22 18.8**	**0.0**
AYDN				IAML			19 22 25.0	
	comp=E,652nm,0.5s							
AYDN				IAML			19 22 25.0	
	comp=N,496nm,0.6s							
GCAM	**G?zelcaml?**	**1.47**	**199**	Pn	**Pb**		**19 22 00.7**	**-0.7**
GCAM	**G?zelcaml?**	**1.47**	**199**	P	**Pn**		**19 21 60.0**	**-0.4**
GCAM				S	**Sg**		**19 22 21.9**	**+0.2**
PASA	**Karahalli, USA**	**1.48**	**120**	P	**Pb**		**19 22 01.8**	**+0.2**
PASA				S	**Sg**		**19 22 22.7**	**+0.7**
SIGR	**SIGRI**	**1.56**	**275**	P	**Pb**		**19 22 02.0**	**-0.8**
SIGR				S	**Sn**		**19 22 21.4**	**0.0**
CHOS	**Chios island**	**1.57**	**244**	P	**Pb**		**19 22 02.5**	**-0.6**
CHOS				S	**Sg**		**19 22 24.3**	**-0.5**
SMG	**Samos**	**1.59**	**210**	P	**Pn**		**19 22 02.4**	**+0.4**
GADA	**Gvkgeada**	**1.86**	**307**	P	**Pn**		**19 22 06.3**	**+0.6**
YER	**Yerkesik**	**1.98**	**170**	P	**Pn**		**19 22 07.2**	**-0.3**
CAVK	**Edirne/Enez-Ca**	**2.06**	**322**	⇑P	**Pb**		**19 22 10.2**	**-1.1**
CAVK				⇑S	**Sb**		**19 22 36.2**	**-0.6**
BODT	**Bodrum**	**2.07**	**192**	P	**Pn**		**19 22 09.3**	**+0.7**
ENEZ	**Enez**	**2.10**	**322**	P	**Pn**		**19 22 10.1**	**+1.2**
LIA	**Limnos Island**	**2.21**	**292**	P	**Pn**		**19 22 11.4**	**+0.8**
SMTH	**Samothraki Isl**	**2.25**	**308**	P	**Pn**		**19 22 11.8**	**+0.7**
ALN	**Alexandroupoli**	**2.27**	**323**	P	**Pn**		**19 22 12.1**	**+0.8**
SILT	**Sile**	**2.47**	**33**	⇓P	**Pn**		**19 22 14.7**	**+0.6**
RDO	**Rodhopi**	**2.71**	**320**	P	**Pn**		**19 22 18.4**	**+1.1**
THAS	**Thassos island**	**2.84**	**303**	P	**Pn**		**19 22 19.4**	**+0.2**
KSL	**Kastellorizon**	**3.25**	**154**	P	**Pn**		**19 22 27.1**	**+2.3**
ELND	**Elena**	**4.11**	**339**	⇑P	**Pn**		**19 22 37.9**	**+1.3**
CFR	**Carcaliu**	**6.08**	**2**	⇑P	**Pn**		**19 23 05.0**	**+1.3**
BOVS	**Bovan**	**6.47**	**316**	⇓P	**Pn**		**19 23 11.5**	**+2.4**
DOPR	**Dopca**	**7.11**	**346**	⇑P	**Pn**		**19 23 19.8**	**+2.1**
MDVR	**Moldovita**	**7.29**	**323**	⇑P	**Pn**		**19 23 21.7**	**+1.3**
GZR	**Gura Zlata**	**7.33**	**331**	⇑P	**Pn**		**19 23 23.0**	**+2.1**
BZS	**Buzias**	**7.98**	**327**	⇑P	**Pn**		**19 23 30.9**	**+1.1**
BURAR	**Bucovina Array**	**8.73**	**348**	⇓P	**Pn**		**19 23 42.9**	**+2.8**

IDC 18 19:21:46.4±30.0, 0°.30N×124°.36E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=655.3km s-min=116.4km az=145.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HILR	**Hailar Array B**	**49.23**	**356**	P	P	19 30 37.3	+0.6
	0.8nm,0.4s,baz=160,slow=8.4,SNR=1.6						
	0.8nm,0.4s						
SONM	**Songino Array**	**49.86**	**344**	P	P	19 30 40.9	-0.7
	0.2nm,0.5s,baz=152,slow=9.4,SNR=1.9						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.09**	**328**	P	P	19 31 49.1	+0.5
	0.7nm,0.3s,baz=123,slow=7.4,SNR=32						
	0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**62.61**	**335**	P	P	19 32 11.3	-1.1
	0.4nm,0.3s,baz=128,slow=6.6,SNR=2.3						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**63.40**	**329**	P	P	19 32 17.8	0.0
	0.5nm,0.5s,baz=131,slow=7.1,SNR=11						
	0.5nm,0.5s						

*NEIC **18** 19:22:54.3±1.6, 5°.4S±0°.1×149°.5E±0°.1, h135km±10km, mb4.1/11, Error ellipse: s-maj=24.9km s-min=10.8km az=128.0*

*IDC **18** 19:22:57.5±3.4, 5°.40S×149°.13E, h153km±31km, mb3.5/6, mbtmp4.0/8, Error ellipse: s-maj=53.0km s-min=25.9km az=121.0*

ISC 18 19:22:55.2±0.7, 5°.5S±0°.1×149°.5E±0°.1, h147km, n26, σ1§28/26, mb3.9/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.91**	**65**	Pn	**Pn**	**19 23 40.0**	**-1.4**
PMG	**Port Moresby**	**4.57**	**211**	P	**Pn**	**19 24 03.6**	**+0.6**
	10nm,0.4s,baz=27,slow=12,SNR=16						
PMG				S	**Sn**	**19 24 55.8**	**0.0**
	129nm,0.5s,baz=51,slow=17,SNR=16						
PMG	**Port Moresby**	**4.57**	**211**		**Pn**	**19 24 02.9**	**-0.1**
COEN	**Coen**	**10.51**	**216**	Pn	**Pn**	**19 25 21.6**	**-0.6**
CTA	**Charters Tower**	**14.89**	**192**	P	**P**	**19 26 20.5**	**0.0**
	5.6nm,0.9s,baz=358,slow=11,SNR=5.1						
CTAO	**Charters Tower**	**14.89**	**192**		**P**	**19 26 19.8**	**-0.8**
MTN	**Manton Dam**	**19.58**	**247**	P	**P**	**19 27 10.4**	**-1.6**
EIDS	**Eidsvold**	**19.86**	**176**	P	**P**	**19 27 15.5**	**+0.6**
EIDS				IAmb	IAmb	19 27 18.2	
	comp=Z,4.8nm,0.8s						
WB0	**Warramunga Arr**	**20.48**	**225**	P	**P**	**19 27 20.1**	**-1.5**
WB0				IAmb	IAmb	19 27 25.9	
	comp=Z,6.3nm,0.7s						
WRA	**Warramunga Arr**	**20.63**	**224**	P	**P**	**19 27 21.8**	**-1.5**
	comp=Z,2.9nm,0.4s,baz=48,slow=10,SNR=48						
	comp=Z,2.9nm,0.4s						
WRA	**Warramunga Arr**	**20.63**	**224**	P	**P**	**19 27 20.5**	**-2.8**
KNRA	**Kununurra**	**22.77**	**242**	P	**P**	**19 27 43.9**	**-1.4**
KNRA				IAmb	IAmb	19 27 55.3	
	comp=Z,14nm,1.3s						
AS31	**Alice Springs**	**23.54**	**218**	P	**P**	**19 27 52.0**	**-0.3**
AS31				IAmb	IAmb	19 27 53.5	
	comp=Z,1.7nm,0.3s						
ASAR	**Alice Springs**	**23.54**	**218**	P	**P**	**19 27 52.5**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=52,slow=8.6,SNR=111						
	comp=Z,1.9nm,0.4s						
ASAR	**Alice Springs**	**23.54**	**218**	P	**P**	**19 27 52.2**	**-0.2**
INKA	**Innaminka**	**23.69**	**200**	P	**P**	**19 27 53.2**	**-0.3**
ARMA	**Armidale**	**24.91**	**176**		**P**	**19 28 05.2**	**+0.4**
STKA	**Stephens Creek**	**27.32**	**195**	P	**P**	**19 28 27.1**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=8.9,slow=9.8,SNR=1.6						
	comp=Z,3.1nm,0.9s						
FORT	**Forrest**	**32.28**	**216**	P	**P**	**19 29 09.4**	**-0.7**
KURK	**Kurchatov**	**82.29**	**323**	P	**P**	**19 35 00.4**	**+0.1**
KURK	**Kurchatov**	**82.29**	**323**	IAmb	IAmb	19 35 37.9	
	comp=Z,4.7nm,1.4s						
KURBB	**Kurchatov Arra**	**82.32**	**323**	P	**P**	**19 35 00.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=118,slow=5.3,SNR=1.3						
	comp=Z,0.3nm,0.6s						
ILAR	**Eielson Array**	**84.00**	**23**	P	**P**	**19 35 10.6**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=259,slow=4.6,SNR=6.9						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**84.00**	**23**	P	**P**	**19 35 10.2**	**+1.4**
NVAR	**Mina Array Bea**	**95.05**	**52**	P	**P**	**19 36 04.8**	**+2.9**
	comp=Z,0.2nm,0.5s,baz=316,slow=4.3,SNR=1.8						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**147.38**	**286**	PKPbc	**PKiKP**	**19 42 23.4**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=86,slow=3.2,SNR=1.8						

IDC 18 19:34:06.6±17.0, 27°.78N×103°.29E, h0km, mb3.4/4, mbtmp3.3/5, ML3.8/1, Error ellipse: s-maj=289.5km s-min=65.3km az=143.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**8.16**	**2**	Pn	Pn	19 36 06.4	-0.2
	baz=178,slow=14						
	0.3nm,0.3s						
SONM	**Songino Array**	**20.16**	**6**	P	P	19 38 43.0	+0.4
	0.3nm,0.3s,baz=195,slow=10.0,SNR=4.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**25.14**	**325**	P	P	19 39 33.6	+0.2
	0.4nm,0.7s,baz=131,slow=11,SNR=5.0						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**29.45**	**338**	P	P	19 40 11.5	-0.4
	0.3nm,0.4s,baz=146,slow=8.5,SNR=1.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**29.55**	**327**	P	P	19 40 12.8	0.0
	0.5nm,0.7s,baz=130,slow=10.0,SNR=6.1						
	0.5nm,0.7s						

*NSSP **18** 19:41:48.8, 38°.42N×44°.52E, h10km, Ms4.0*

*TIF **18** 19:41:49.3, 38°.48N×44°.46E, h5km±2km*

*IDC **18** 19:41:50.2±0.8, 38°.43N×44°.33E, h0km, mb3.9/14, mbtmp3.8/21, ML3.9/5, MS3.2/9, Error ellipse: s-maj=14.2km s-min=10.1km az=151.0*

*NEIC **18** 19:41:50.9±1.3, 38°.33N±0°.04×44°.39E±0°.05, h10km±1km, mb4.2/36, Error ellipse: s-maj=8.3km s-min=3.7km az=131.0*

*MOS **18** 19:41:50.8±1.4, 38°.29N×44°.47E, h23km, mb4.4/23, Error ellipse: s-maj=6.8km s-min=4.7km az=78.0*

*ISK **18** 19:41:50.8, 38°.47N×44°.42E, h5km, ML4.0/14*

*TEH **18** 19:41:50.3, 38°.47N×44°.52E, h6km±48km, ML3.8, Presumed earthquake*

*AFAD **18** 19:41:51.3, 38°.40N×44°.40E, h4km±2km, MW4.1*

*AZER **18** 19:41:51.9, 38°.55N×44°.52E, h10km, ml4.0*

ISC 18 19:41:50.4±1.1, 38°.44N±0°.02×44°.48E±0°.02, h4km±7km, n296, σ1§34/353, mb4.2/39, MS3.3/4, 14C-12D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**301**	P	**Pg**	**19 41 58.6**	**-0.2**
OZAP				S	**Sg**	**19 42 04.6**	**0.0**
OZAP				IAML		19 42 15.0	
	comp=N,8µm,0.9s						
OZAP				IAML		19 42 17.0	
	comp=E,1µm,0.9s						
TVAN	**Van**	**0.84**	**276**	P	**Pg**	**19 42 05.7**	**-0.8**
TVAN				S	**Sg**	**19 42 18.5**	**+1.0**
TVAN				IAML		19 42 22.0	
	comp=N,5µm,0.5s						
TVAN				IAML		19 42 35.0	
	comp=E,6µm,1.2s						
VANB	**Van**	**0.87**	**281**	Pg	**Pg**	**19 42 06.5**	**-0.5**
VMUR	**Van-Muradiye**	**0.90**	**308**	P	**Pg**	**19 42 07.4**	**-0.1**
VMUR				S	**Sg**	**19 42 20.1**	**+1.0**
VMUR				IAML		19 42 25.0	
	comp=E,2µm,0.4s						
VMUR				IAML		19 42 26.0	
	comp=N,3µm,0.3s						
VMUR	**Van-Muradiye**	**0.90**	**308**	Pg	**Pg**	**19 42 07.4**	**-0.1**
ISHB	**Shabestar**	**0.91**	**100**	Pg	**Pg**	**19 42 06.5**	**-1.3**
MAKU	**Maku**	**0.93**	**10**	Pg	**Pg**	**19 42 07.2**	**-1.0**
IMRD	**Marand**	**1.00**	**74**	Pg	**Pg**	**19 42 09.0**	**-0.6**
ERCV	**ERCIS-VAN**	**1.06**	**303**	Pg	**Pg**	**19 42 11.4**	**+0.7**
ERCV				Sg	**Sb**	**19 42 26.4**	**+0.6**
HAKT	**HAKKARI**	**1.07**	**215**	P	**Pg**	**19 42 10.4**	**-0.4**
HAKT	**HAKKARI**	**1.07**	**215**	P	**Pg**	**19 42 10.1**	**-0.8**
HAKT				S	**Sb**	**19 42 26.4**	**+0.3**
NAX	**Nakhchivan**	**1.08**	**47**	PG	**Pg**	**19 42 10.4**	**-0.7**
NAX	**Nakhchivan**	**1.08**	**47**	P	**Pg**	**19 42 10.1**	**-1.0**
NAX				S	**Sg**	**19 42 24.8**	**-0.4**
GEVA	**Gevas**	**1.12**	**264**		**Pg**	**19 42 09.7**	**-2.2**
GEVA				Sn	**Sb**	**19 42 27.0**	**-0.5**
GEVA	**Gevas**	**1.12**	**264**	P	**Pg**	**19 42 10.2**	**-1.6**
GEVA				S	**Sg**	**19 42 26.4**	**0.0**
DYDN	**Diyadin**	**1.26**	**331**	P	**Pg**	**19 42 15.0**	**+0.4**
DYDN				S	**Sg**	**19 42 30.7**	**-0.2**
DYDN				IAML		19 42 43.0	
	comp=N,2µm,0.7s						
DYDN	**Diyadin**	**1.26**	**331**	Pg	**Pg**	**19 42 14.9**	**+0.4**
SBZ	**Shahbuz**	**1.27**	**41**	P	**Pn**	**19 42 13.9**	**-1.3**
SBZ				S	**Sg**	**19 42 31.7**	**+0.4**
ORD	**Ordubad**	**1.28**	**67**	P	**Pn**	**19 42 14.0**	**-1.2**
ORD				S	**Sb**	**19 42 32.5**	**+0.4**
HYR	**Heyderabad**	**1.31**	**13**	P	**Pn**	**19 42 14.4**	**-1.2**
HYR				S	**Sb**	**19 42 30.9**	**-1.9**
ITBZ	**Tabriz**	**1.33**	**98**	Pg	**Pn**	**19 42 14.3**	**-1.7**
CUKT	**Cukurca**	**1.37**	**210**	Pn	**Pg**	**19 42 18.3**	**+1.6**
CUKT				Sn	**Sn**	**19 42 38.2**	**+3.0**
CUKT	**Cukurca**	**1.37**	**210**	P	**Pg**	**19 42 19.7**	**+3.0**
CUKT	**Cukurca**	**1.37**	**210**	Pg	**Pg**	**19 42 17.3**	**+0.6**
IAZR	**Azarshahr**	**1.41**	**122**	Pg	**Pn**	**19 42 16.7**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.42**	**286**	P	**Pn**	**19 42 16.6**	**-0.6**
ADCV	**BITLIS_Adilcev**	**1.42**	**286**	Pg	**Pn**	**19 42 16.6**	**-0.6**
VAYK	**Vayk**	**1.46**	**30**	*i* P	**Pn**	**19 42 17.0**	**-0.6**
VAYK				*i* S	**Sb**	**19 42 34.9**	**+0.6**
IGDI	**IGDIR**	**1.46**	**348**	P	**Pn**	**19 42 17.4**	**-0.2**
IGDI	**IGDIR**	**1.46**	**348**	Pg	**Pn**	**19 42 17.4**	**-0.2**
IGDI	**IGDIR**	**1.46**	**348**	P	**Pn**	**19 42 17.5**	**-0.2**
IGDI				S	**Sn**	**19 42 37.1**	**-0.2**
ALVK	**Alvank**	**1.55**	**71**	*e*P	**Pn**	**19 42 18.1**	**-0.7**
ALVK				*e*S	**Sn**	**19 42 38.9**	**-0.6**
PERV	**Siirt/Pervari-**	**1.60**	**253**	P	**Pb**	**19 42 20.4**	**-0.2**
AGRB	**Hanur-Agry**	**1.62**	**315**	Pn	**Pn**	**19 42 19.9**	**0.0**
AGRB				Sn	**Sg**	**19 42 42.9**	**+0.5**
DORK	**Agr/Tutak/Do**	**1.63**	**306**	P	**Pn**	**19 42 20.4**	**+0.4**
MLAZ	**Malazgirt-MUS**	**1.66**	**296**	Pn	**Pb**	**19 42 21.7**	**+0.1**
MLAZ				Sn	**Sg**	**19 42 43.9**	**+0.2**
KOTA	**Agri, Merkez-K**	**1.68**	**324**	P	**Pg**	**19 42 22.9**	**+0.3**
GNI	**Garni**	**1.72**	**7**	Pn	**Pb**	**19 42 23.5**	**+0.8**
	58nm,0.3s,baz=251,slow=1.5,SNR=120						
GNI				Sn	**Sg**	**19 42 47.6**	**+2.0**
	54nm,0.3s,baz=295,slow=23,SNR=5.9						
GNI	**Garni**	**1.72**	**7**		**Pb**	**19 42 22.5**	**-0.2**
GNI				Sn	**Sg**	**19 42 47.5**	**+1.8**
GNI	**Garni**	**1.72**	**7**	Pn	**Pb**	**19 42 22.5**	**-0.2**
GNI				Sn	**Sg**	**19 42 46.1**	**+0.5**
GNI	**Garni**	**1.72**	**7**	⇓*i* P	**Pg**	**19 42 23.6**	**+0.3**
GNI				⇑*i* S	**Sg**	**19 42 49.5**	**+3.8**
GNI	**Garni**	**1.72**	**7**	*c i* PN	**Pn**	**19 42 22.3**	**+1.0**
GNI				pmax	pmax		
	comp=Z,651nm,1.0s						
GNI	**

AHAN Ardahan-Merkez 3.07 333 P **Pg** **19 42 49.4 +0.2**
MNGR Mingechevir, A 3.08 40 PN **Pn** **19 42 39.1 -0.7**
MNGR Mingechevir, A 3.08 40 P **Pn** **19 42 39.2 -0.7**
MNGR S **Sn** **19 43 15.8 -1.3**
DGRG David-gareji 3.09 13 P **Pb** **19 42 45.5 -0.3**
ZRD Zardab 3.09 53 P **Pn** **19 42 39.4 -0.6**
ZRD S **Sn** **19 43 16.2 -1.2**
TRLG Trialeti 3.11 355 P **Pb** **19 42 46.9 +0.6**
MARD Mardin 3.13 250 **Pn** **19 42 40.7 0.0**
MARD Mardin 3.13 250 P **Pn** **19 42 42.5 +1.8**
EMRE Erzurum,Aziziy 3.15 301 P **Pb** **19 42 48.2 +1.2**
VSHL Vashlovani 3.16 27 P **Pn** **19 42 44.1 +3.1**
VSHL S **Sg** **19 43 31.7 0.0**
GLBA Clilabad 3.16 74 P **Pn** **19 42 40.6 -0.3**
GLBA S **Sn** **19 43 19.1 0.0**
YEDI Yedisu-Bingol 3.22 289 Pn **Pn** **19 42 43.9 +1.9**
DDEM Demirkent 3.23 320 P **Pg** **19 42 50.8 -1.4**
MAYK 3.24 276 P **Pb** **19 42 50.2 +1.7**
TBLG Delisi 3.29 3 Pn **Pn** **19 42 45.1 +2.3**
KRIK Erzurum-spir 3.34 306 P **Pg** **19 42 53.6 -0.7**
EPOS Posof 3.34 337 P **Pg** **19 42 54.7 +0.3**
DBAD Bademkaya 3.35 321 P **Pb** **19 42 51.7 +1.2**
SAAT Saatly 3.38 64 P **Pn** **19 42 43.3 -0.7**
SAAT S **Sn** **19 43 23.3 -1.2**
LKRN Lenkeran, Azer 3.38 84 PN **Pn** **19 42 43.8 -0.2**
LKRN Lenkeran, Azer 3.38 84 P **Pn** **19 42 43.9 -0.2**
LKRN S **Sn** **19 43 25.5 +0.9**
ASTR Astara 3.39 87 P **Pn** **19 42 43.1 -1.0**
ASTR S **Sn** **19 43 25.9 +1.1**
DYBB Diyarbakir 3.45 263 Pn **Pn** **19 42 46.9 +1.9**
KOPT Kop Dagi 3.47 298 **Pn** **19 42 45.2 -0.3**
KOPT Kop Dagi 3.47 298 P **Pg** **19 42 56.0 -0.8**
DIYA Diyarbakir 3.47 263 P **Pn** **19 42 46.8 +1.5**
SEKA Sheki 3.47 36 PN **Pn** **19 42 45.1 -0.1**
SEKA Sheki 3.47 36 P **Pn** **19 42 45.2 -0.1**
SEKA S **Sn** **19 43 26.6 -0.3**
ZKTA Zakatala 3.59 27 P **Pn** **19 42 46.3 -0.6**
ZKTA S **Sn** **19 43 28.9 -1.0**
QBL Gabala 3.60 45 P **Pn** **19 42 46.4 -0.7**
QBL S **Sn** **19 43 28.7 -1.5**
LGD Lagodekhi 3.65 21 P **Pb** **19 42 52.7 -2.8**
KOVA Elazig, Kovanc 3.66 276 P **Pb** **19 42 52.0 -3.8**
IML Ismayilli 3.70 49 P **Pn** **19 42 47.8 -0.7**
IML S **Sn** **19 43 31.2 -1.4**
ALIG Mtskhetisjvari 3.71 350 P **Pb** **19 42 58.9 +2.3**
ALIG S **Sg** **19 43 53.7 +4.0**
ALIB &Aumlli-Bayram 3.83 65 P **Pn** **19 42 49.7 -0.5**
ALIB S **Sn** **19 43 35.0 -0.7**
ERZN Erzincan 3.88 289 Pn **Pn** **19 42 53.1 +2.2**
BAYT Aydıntepe-Bayb 3.88 302 Pn **Pn** **19 42 53.4 +2.4**
CHRG Chargali 3.90 5 P **Pn** **19 42 53.7 +2.5**
XNQ Khinaliq 3.93 45 P **Pn** **19 42 50.9 -0.8**
XNQ S **Sn** **19 43 36.8 -1.5**
AKT Akhty 3.93 38 *e*PN **Pn** **19 42 49.7 -2.0**
AKT *e* 19 43 49.6
AKT pmax pmax
comp=Z,46nm,0.6s
AKT MLR MLR
comp=Z,249nm,9.0s
PQL Pirkuli 3.95 52 P **Pn** **19 42 51.2 -0.8**
PQL S **Sn** **19 43 37.5 -1.4**
GBS Qobustan 4.04 57 P **Pn** **19 42 52.5 -0.6**
GBS S **Sn** **19 43 39.8 -1.2**
SVRC Sivrice-ELAZID 4.06 271 Pn **Pn** **19 42 55.7 +2.2**
ATGJ Altiaghaj 4.21 54 P **Pn** **19 42 54.8 +0.7**
ATGJ S **Sn** **19 43 43.8 -1.3**
QSAR Qusar 4.23 42 P **Pn** **19 42 55.0 -0.7**
QSAR S **Sn** **19 43 44.1 -1.5**
SHTL Shatili 4.24 7 P **Pb** **19 43 06.2 +0.5**
QUBA Quba, Azerbaij 4.25 45 P **Pn** **19 42 55.2 -0.7**
QUBA S **Sn** **19 43 44.5 -1.4**
SIZA Siyzn 4.31 51 P **Pn** **19 42 56.1 -0.7**
SIZA S **Sn** **19 43 46.1 -1.4**
GLG1 Gilan-e-Gharb 4.47 165 Pn **Pn** **19 43 01.7 +2.6**
GOBA Gobu 4.52 63 P **Pn** **19 42 59.1 -0.5**
GOBA S **Sn** **19 43 51.8 -0.8**
NDR Nardaran 4.77 62 P **Pn** **19 43 02.4 -0.6**
NDR S **Sn** **19 43 57.9 -0.9**
ARPR Arapgir-MALATY 4.84 280 **Pn** **19 43 03.0 -1.2**
MAK Makhachkala 5.07 26*d iP*N **Pn** **19 43 04.0 -3.1**
MAK pmax pmax
comp=Z,598nm,1.2s
MAK MLR MLR
comp=Z,461nm,7.0s
NCK Nalchik 5.09 353|| *e*PN **Pn** **19 43 10.4 +2.9**
KBZ Khabaz 5.42 348 Pn **Pn** **19 43 15.5 +3.6**
comp=Z,2.3nm,1.1s,baz=164,slow=15,SNR=2.2
KBZ LR LR 19 45 42.8
comp=Z,119nm,21.5s,baz=194,slow=43
KBZ Khabaz 5.42 348|| *eP* **Pn** **19 43 13.0 +1.1**
SHA1 Shidzhatmaz 5.47 346|| *eP* **Pn** **19 43 15.9 +3.0**
KIV Kislovodsk 5.67 347 Pn **Pn** **19 43 16.9 +1.4**
KIV Kislovodsk 5.67 347 *eP* **Pn** **19 43 15.5 -0.1**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,51nm,10.0s
GAZ Gaziantep 5.89 260 Pn **Pn** **19 43 17.4 -1.1**
SOC Sochi 6.27 327 *eP* **Pn** **19 43 26.1 +2.4**
SOC *e* 19 44 37.9
SOC MLR MLR
comp=Z,149nm,11.0s
BNN Bunyan 6.77 276 Pn **Pn** **19 43 29.1 -1.5**
SNOP Sinop 7.94 300 Pn **Pn** **19 43 46.0 -0.5**
BR131 Keskin Array S 8.53 282 Pn **Pn** **19 43 53.6 -1.1**
BR131 Keskin Array S 8.53 282 P **Pn** **19 43 53.6 -1.1**
BRTR Keskin Array B 8.53 282 Pn **Pn** **19 43 54.0 -0.7**
baz=97,slow=10,SNR=8.5
BRTR LR LR 19 47 10.9
comp=Z,66nm,20.4s,baz=110,slow=38
BRTR Keskin Array B 8.53 282 Pn **Pn** **19 43 54.2 -0.5**
BRTR Keskin Array B 8.53 282 P **Pn** **19 43 54.3 -0.5**
ASF Jabal al Asfar 8.80 227 Pn **Pn** **19 43 58.8 +0.3**
comp=Z,0.5nm,0.3s,baz=41,slow=17,SNR=2.4
comp=Z,1.6nm,0.4s
MMAI Mount Meron Ar 9.14 236 Pn **Pn** **19 44 03.7 +0.5**
comp=Z,1.0nm,0.3s,baz=62,slow=14,SNR=5.7
MMAI LR LR 19 48 01.5
comp=Z,234nm,20.5s,baz=52,slow=41
comp=Z,1.5nm,0.6s
VSR Storozhevoye 13.31 345 *eP* **P** **19 45 11.0 +1.0**
VSR pmax pmax
comp=Z,3.0nm,0.8s
VORR Voronezh 13.74 346 *eP* **P** **19 45 13.9 -0.8**
VORR pmax pmax
comp=Z,5.0nm,0.8s
SMRA Abu-Samra 14.68 157 P **P** **19 45 24.6 -0.7**
LPSR Galich'ya Gora 14.68 347 *eP* **P** **19 45 22.4 -2.7**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
TRNA Turayna 14.81 155 P **P** **19 45 25.3 -1.4**
RAYN Ar Rayn 14.90 176 **Pn** **19 45 17.3 -4.6**
RAYN Ar Rayn 14.90 176 P **Pn** **19 45 17.3 -4.6**
AKTO Aktyubinsk 15.38 34 Pn **Pn** **19 45 28.3 +0.2**
comp=Z,0.6nm,0.3s,baz=224,slow=9.7,SNR=1.8
AKTO LR LR 19 52 46.8
comp=Z,78nm,19.6s,baz=236,slow=42
comp=Z,1.8nm,0.7s
MLR Muntele Rosu 15.46 303 Pn **Pn** **19 45 31.2 +1.8**
comp=Z,0.1nm,0.3s,baz=126,slow=17,SNR=3.6
MLR LR LR 19 53 16.1
comp=Z,50nm,19.2s,baz=12,slow=45
comp=Z,0.5nm,0.4s
AB31 Akbulak array 15.51 41 **Pn** **19 45 28.5 -1.2**
ABKAR Akbulak array 15.51 41 **Pn** **19 45 28.2 -1.6**
SHME Shamm 15.79 138 P **P** **19 45 38.4 +0.8**
BANOM Banah 15.98 138 P **P** **19 45 39.1 -0.6**
IDI Anoyia 15.99 265 Pn **Pn** **19 45 36.8 +0.6**
comp=Z,5.4nm,1.0s,baz=70,slow=15,SNR=2.3
IDI Anoyia 15.99 265 IAmb IAmb 19 45 47.0
comp=Z,11nm,1.0s
GHWR Ruwais 16.11 151 P **P** **19 45 40.1 -1.0**
AKASG Malin Array Be 16.34 324 Pn **Pn** **19 45 40.7 +0.2**
comp=Z,0.4nm,0.3s,baz=131,slow=12,SNR=6.6
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 16.34 324 IAmb IAmb 19 45 47.4
comp=Z,5.7nm,1.2s
AKASG Malin Array Be 16.34 324*ceP* **P** **19 45 46.0 +2.4**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 16.34 324|| *eP* **P** **19 45 43.9 +0.3**
MASF Masafi 16.36 139 P **P** **19 45 44.6 +0.7**
NAZ Nazwa, Dubai 16.43 141 P **P** **19 45 45.3 +0.6**

AJN Ajban 16.47 144 P **P** **19 45 44.7 -0.4**
MDH Madha 16.49 139 P **P** **19 45 45.4 +0.1**
ASUD Al Ashush, Dub 16.57 143 P **P** **19 45 46.9 +0.6**
UOSS Minazif 16.73 140 **Pn** **19 45 45.5 -0.2**
UOSS IAmb IAmb 19 45 53.4
comp=Z,22nm,1.2s
UOSS Minazif 16.73 140 P **P** **19 45 48.8 +0.8**
BURAR Bucovina Array 16.77 309 P **P** **19 45 47.6 -0.8**
BUR08 Bucovina Ar. S 16.79 309 **P** **19 45 48.1 -0.6**
HATD Hatta, Dubai 16.79 141 P **P** **19 45 50.0 +1.3**
ASHO Ashiyiah 16.88 141 P **P** **19 45 50.1 +0.4**
MZR Muzera 17.21 151 P **P** **19 45 54.1 +0.7**
ALNE Al Ain 17.26 143 P **P** **19 45 53.9 0.0**
OBN Obninsk 17.52 345 *eP* **P** **19 45 56.6 +0.1**
OBN pmax pmax
comp=Z,10.0nm,1.1s
SOHO SOHO 17.57 141 P **P** **19 45 57.4 +0.1**
BIDO Bidbid 18.89 138 P **Pn** **19 46 14.8 +2.3**
BSY Bisya 19.07 141 P **Pn** **19 46 14.8 +0.2**
SNR=11
KEK Kerkira 19.19 282 P **P** **19 46 14.3 -0.8**
SMDO Samad 19.23 139 P **Pn** **19 46 17.8 +1.2**
SNR=5.8
WSAR Wadi Sarin 19.39 137 P **Pn** **19 46 19.1 +0.6**
JMDO Jabal Madar 19.83 140 P **Pn** **19 46 23.9 +0.2**
KBL Kabul 20.11 94 P **P** **19 46 24.9 -0.6**
KBL Kabul 20.11 94 P **P** **19 46 24.9 -0.6**
KBL pmax pmax
comp=Z,2.0nm,0.8s
ARTI Arti 20.20 23 P **P** **19 46 26.2 +0.2**
comp=Z,7.1nm,0.7s,baz=217,slow=6.0,SNR=13
ARTI LR LR 19 56 55.5
comp=Z,122nm,18.0s,baz=238,slow=45
comp=Z,7.1nm,0.7s
ARTI Arti 20.20 23 **P** **19 46 26.5 +0.5**
ARTI IAmb IAmb 19 46 29.8
comp=Z,11nm,0.7s
ARTI Arti 20.20 23*c iP* Pn 19 46 27.6 -0.3
ARTI 19 46 41.8
ARTI S Sn 19 50 16.4 +0.9
ARTI pmax pmax
comp=Z,8.0nm,0.7s
KK31 Karatay Array 20.23 68 **P** **19 46 26.4 -0.1**
KK31 IAmb IAmb 19 46 36.3
comp=Z,7.0nm,0.8s
KK31 Karatay Array 20.23 68 P **P** **19 46 26.4 -0.1**
KK31 pmax pmax
comp=Z,7.0nm,0.9s
KKAR Karatay Array 20.23 68 **P** **19 46 25.9 -0.5**
KKAR Karatay Array 20.23 68 P **P** **19 46 26.0 -0.5**
KIRV Kirov 20.41 7 P **P** **19 46 28.1 -0.1**
comp=Z,7.6nm,0.7s,baz=146,slow=7.3,SNR=3.6
comp=Z,7.6nm,0.7s
KIRV Kirov 20.41 7|| *eP* Pn 19 46 29.9 -0.4
BTK Batken 20.45 77 P **P** **19 46 28.0 -0.9**
BTK Batken 20.45 77 P **P** **19 46 28.0 -0.9**
BTK pmax pmax
comp=Z,6.0nm,1.2s
JLN Jalan Bani Buh 20.69 137 P **P** **19 46 32.6 +1.0**
MHTO MHTO 20.93 142 P Pn 19 46 35.8 -0.8
DRK Karamyk 21.25 79 P **P** **19 46 36.7 -1.1**
DRK IAmb IAmb 19 46 44.7
comp=Z,14nm,1.0s
DRK Karamyk 21.25 79 P **P** **19 46 36.7 -1.1**
DRK pmax pmax
comp=Z,14nm,1.0s
SUW Suwalki 21.31 324 P **P** **19 46 38.1 +0.1**
SUW Suwalki 21.31 324 P **P** **19 46 38.1 +0.1**
DOK Doka 21.47 154 P **P** **19 46 40.0 +0.1**
SNR=7.6
ARSB Arslanbob 22.02 73 P **P** **19 46 46.5 +0.5**
ARSB IAmb IAmb 19 46 55.2
comp=Z,11nm,0.9s
ARSB Arslanbob 22.02 73 P **P** **19 46 46.5 +0.5**
ARSB pmax pmax
comp=Z,11nm,0.9s
CUC Castrocucco 22.22 283 P **P** **19 46 47.8 -0.2**
CUC IAmb IAmb 19 47 17.2
comp=Z,13nm,1.3s
ABTO Aybut 22.38 157 P **P** **19 46 50.2 +0.3**
RBK Rabkut 22.53 155 P **P** **19 46 52.2 +0.8**
SHAO Shalim 22.55 151 P **P** **19 46 55.7 +4.1**
KLMR Klimovskoe 22.65 354 *eP* **P** **19 46 55.1 +2.8**
KLMR *e* 19 47 18.9
KLMR pmax pmax
comp=Z,13nm,1.1s
BORK Borovoye 23.04 42 P **P** **19 46 57.0 +0.6**
BORK Borovoye 23.04 42|| *eP* **P** **19 46 59.9 +3.5**
BORK pmax pmax
comp=Z,4.0nm,0.8s
BVAR Borovoye Array 23.06 42 P **P** **19 46 58.4 +1.7**
comp=Z,2.2nm,0.8s,baz=243,slow=6.5,SNR=9.3
comp=Z,2.2nm,0.8s
AAK Ala-Archa 23.13 70 P **P** **19 46 58.3 +0.6**
AAK IAmb IAmb 19 47 05.6
comp=Z,8.1nm,1.1s
AAK Ala-Archa 23.13 70|| *eP* **P** **19 46 59.0 +1.3**
AAK pmax pmax
comp=Z,9.0nm,1.1s
INTR Introdacqua 23.55 288 P **P** **19 47 01.3 -0.6**
INTR IAmb IAmb 19 47 13.5
comp=Z,7.9nm,1.1s
CAMP Campotosto 23.91 290 P **P** **19 47 03.8 -1.5**
CAMP IAmb IAmb 19 47 18.3
comp=Z,13nm,1.4s
NRCA Norcia 24.12 290 P **P** **19 47 05.9 -1.4**
NRCA IAmb IAmb 19 47 23.4
comp=Z,11nm,1.3s
KSH2 Kashi 24.19 79 P **P** **19 47 11.8 +3.7**
KSH2 pmax pmax
comp=Z,4.0nm,1.6s
BOOM Boomskoye usch 24.20 70 P **P** **19 47 06.9 -1.3**
BOOM Boomskoye usch 24.20 70 P **P** **19 47 06.9 -1.3**
BOOM pmax pmax
comp=Z,61nm,1.5s
GERES GERESS Array B 24.42 305 P **P** **19 47 11.0 +0.9**
comp=Z,0.3nm,0.6s,baz=91,slow=9.5,SNR=4.0
comp=Z,0.3nm,0.6s
GERES GERESS Array B 24.42 305 P **P** **19 47 11.0 +0.9**
TARG Taragay, Kyrgy 25.62 72 P **P** **19 47 20.0 -1.4**
TARG Taragay, Kyrgy 25.62 72 P **P** **19 47 20.0 -1.4**
TARG pmax pmax
comp=Z,37nm,1.5s
FINES FINESS Array B 25.71 340 P **P** **19 47 21.8 +0.4**
comp=Z,3.9nm,1.0s,baz=186,slow=8.0,SNR=1.5
comp=Z,3.9nm,1.0s
FINES FINESS Array B 25.71 340 P **P** **19 47 21.1 -0.3**
FUORN Ofenpass-Fuorn 26.34 299 P **P** **19 47 26.7 -1.0**
FUORN IAmb IAmb 19 47 52.3
comp=Z,4.4nm,1.1s
KURBB Kurchatov Arra 26.91 52 P **P** **19 47 34.2 +1.8**
comp=Z,2.2nm,0.6s,baz=264,slow=9.0,SNR=19
comp=Z,2.2nm,0.6s
KURK Kurchatov 26.99 52 P **P** **19 47 32.6 -0.5**
KURK IAmb IAmb 19 47 40.4
comp=Z,6.7nm,1.1s
KURK Kurchatov 26.99 52|| *eP* **P** **19 47 34.6 +1.5**
KURK pmax pmax
comp=Z,8.0nm,1.1s
KURK Kurchatov 26.99 52 P **P** **19 47 35.5 +2.3**
VSL Villasalto 27.21 283 P **P** **19 47 34.0 -1.2**
KEST Kesra 28.05 275 P **P** **19 47 41.8 -1.2**
SENIN Lac Senin/Sane 28.36 298 P **P** **19 47 44.8 -1.0**
ECH Echery 28.60 302 P **P** **19 47 47.5 -0.1**
ECH Echery 28.60 302 P **P** **19 47 47.6 -0.1**
ECH pmax pmax
comp=Z,10.0nm,1.3s
MAKZ Makanchi 28.61 61 P **P** **19 47 48.9 +1.1**
MAKZ IAmb IAmb 19 47 50.6
comp=Z,4.1nm,1.2s
MAKZ Makanchi 28.61 61 P **P** **19 47 48.9 +1.1**
MAKZ pmax pmax
comp=Z,4.0nm,1.3s
BNI Bardonecchia 28.77 295 P **P** **19 47 49.5 +0.3**
BNI Bardonecchia 28.77 295 P **P** **19 47 49.6 +0.3**
BNI pmax pmax
comp=Z,11nm,1.4s
MK31 Makanchi Array 28.83 61 P **P** **19 47 50.2 +0.5**
MK31 IAmb IAmb 19 47 54.3
comp=Z,4.0nm,1.3s
MK31 Makanchi Array 28.83 61*d iP* **P** **19 47 51.4 +1.7**
MKAR Makanchi Array 28.83 61 P **P** **19 47 51.6 +1.9**
comp=Z,1.9nm,0.8s,baz=264,slow=7.4,SNR=19
MKAR LR LR 19 59 18.8
comp=Z,45nm,20.2s,baz=270,slow=36
comp=Z,1.9nm,0.8s
MKAR Makanchi Array 28.83 61 P **P** **19 47 50.3 +0.7**
ZAA0 Zalesovo Array 31.44 47 P **P** **19 48 13.0 +0.3**
ZAA0 IAmb IAmb 19 48 22.9
comp=Z,3.7nm,1.4s
ZALV Zalesovo Beam 31.44 47 P **P** **19 48 13.9 +1.3**
comp=Z,1.1nm,0.4s,baz=260,slow=9.9,SNR=6.7
ZALV LR LR 20 02 33.5
comp=Z,52nm,18.8s,baz=282,slow=39
comp=Z,1.1nm,0.4s
ZALV Zalesovo Beam 31.44 47 P **P** **19 48 12.6 0.0**
ZALV Zalesovo Beam 31.44 47 *i* P **P** **19 48 13.8 +1.2**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
DGZ Jazzator, Alta 32.43 56|| *iP* **P** **19 48 22.9 +1.3**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
EKA Eskdalemuir Ar 35.86 314 P **P** **19 48 51.5 +0.5**
comp=Z,1.8nm,0.8s,baz=102,slow=7.8,SNR=1.4
comp=Z,1.8nm,0.8s
EVN Everest 36.66 94 P **P** **19 48 57.6 -1.3**
TAM Tamanrasset 36.67 256 P **P** **19 48 56.8 -1.8**
TAM Tamanrasset 36.67 256 P **P** **19 48 56.8 -1.8**
TAM pmax pmax
comp=Z,39nm,0.2s
ESDC Sonseca Array 37.27 288 P **P** **19 49 02.1 -1.3**
comp=Z,0.8nm,0.8s,baz=69,slow=8.3,SNR=6.3
comp=Z,0.8nm,0.8s
KNGR Kungurtug, Tuv 38.92 54|| *eP* **P** **19 49 20.2 +2.9**
KNGR pmax pmax
comp=Z,6.0nm,1.2s
TORD Torodi Ar. Bea 45.46 248 P **P** **19 50 11.4 +0.6**
comp=Z,0.6nm,0.7s,baz=45,slow=8.0,SNR=4.6
comp=Z,0.6nm,0.7s
ULN Ulaanbaatar 45.47 57|| *eP* **P** **19 50 13.5 +2.7**
ULN pmax pmax
comp=Z,7.0nm,2.0s
CHTO Chiang Mai 50.90 97 P **P** **19 50 51.6 -1.2**
CHTO Chiang Mai 50.90 97 P **P** **19 50 51.6 -1.2**
CHTO pmax pmax
comp=Z,8.0nm,1.4s
CM31 Chiang Mai Arr 51.10 97 P **P** **19 50 53.4 -0.9**
CM31 IAmb IAmb 19 51 00.9
CMAR Chiang Mai Arr 51.10 97 P **P** **19 50 54.9 +0.5**
comp=Z,1.6nm,0.8s,baz=298,slow=8.4,SNR=17
comp=Z,1.6nm,0.8s
CMAR Chiang Mai Arr 51.10 97 P **P** **19 50 53.4 -0.9**
TIXI Tiksi 52.30 23|| *eP* **P** **19 51 04.1 +1.5**
TIXI pmax pmax
comp=Z,1.0nm,1.0s
YAK Yakutsk 54.76 35 LR LR 20 17 51.8
comp=Z,42nm,19.6s,baz=286,slow=39
YAK Yakutsk 54.76 35|| *eP* **P** **19 51 22.8 +2.0**
YAK pmax pmax
comp=Z,21nm,5.1s
ZEA Zeya 56.17 45 *eP* P 19 51 36.8 +5.7
GSI Gunungsitoli 60.96 114 P **P** **19 52 03.5 -1.5**
PSTR Posyet 62.93 56|| *eP* **P** **19 52 20.0 +2.1**
KSRS Korea Array 63.50 62 P **P** **19 52 21.5 -0.3**
comp=Z,1.3nm,0.9s,baz=285,slow=8.8,SNR=2.3
comp=Z,1.3nm,0.9s
SEY Seymchan 63.89 29|| *eP* **P** **19 52 25.4 +1.5**
SEY pmax pmax
comp=Z,5.0nm,1.2s
MA2 Magadan 65.11 33|| *eP* **P** **19 52 34.9 +2.9**
MA2 pmax pmax
comp=Z,8.0nm,1.6s
BILL Bilibino 65.29 21|| *eP* **P** **19 52 34.5 +1.5**
BILL pmax pmax
comp=Z,15nm,5.7s
YKA Yellowknife Ar 78.01 350 P **P** **19 53 48.7 -1.0**
comp=Z,0.1nm,0.4s,baz=16,slow=5.3,SNR=3.7
comp=Z,0.1nm,0.4s

NEIC ***18*** *19:45:27.0± 1.6, 6.°49S± 0.°06 × 154.°96E± 0.°07, h66km± 8km, mb4.5/28, Error ellipse: s-maj=11.1km s-min=7.1km az=58.0*
IDC ***18*** *19:45:28.6± 2.4, 6.°57S × 154.°99E, h81km± 23km, mb3.9/11, mbtmp4.2/15, MS2.9/3, Error ellipse: s-maj=19.1km s-min=14.3km az=177.0*

ISC 18 19:45:25.7± 0.5, 6.°47S± 0.°06 × 154.°97E± 0.°06, h56km, n56, σ1 s21/60, mb4.4/22, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
RABL	**Rabaul**	**3.59**	**309**		**Pn**	**19 46 20.3**	**+1.4**
HNR	**Honiara**	**5.75**	**121**	P	**Pn**	**19 46 51.8**	**+3.4**
	11nm,0.6s,baz=258,slow=2.7,SNR=3.8						
HNR				S	**Sn**	**19 47 53.9**	**+0.8**
	3.6nm,0.5s,baz=74,slow=14,SNR=1.0						
HNR				LR	LR	19 49 05.5	
	comp=Z,11nm,18.0s,baz=346,slow=38						
HNR	**Honiara**	**5.75**	**121**		**Pn**	**19 46 50.3**	**+1.8**
PMG	**Port Moresby**	**8.27**	**249**	P	**Pn**	**19 47 25.7**	**+2.7**
	16nm,0.5s,baz=61,slow=13,SNR=11						
PMG				S	**Sn**	**19 48 56.4**	**+1.4**
	43nm,0.8s,baz=53,slow=19,SNR=8.9						
PMG				LR	LR	19 50 38.5	
	comp=Z,150nm,19.1s,baz=331,slow=38						
PMG	**Port Moresby**	**8.27**	**249**		**Pn**	**19 47 25.2**	**+2.2**
PMG					**Sn**	**19 48 54.9**	**-0.1**
PATS	**Pohnpei**	**13.63**	**14**	Pn	**Pn**	**19 48 35.6**	**-0.7**
COEN	**Coen**	**13.78**	**236**	P	**P**	**19 48 47.2**	**+2.1**
CTA	**Charters Tower**	**15.97**	**211**	P	**P**	**19 49 07.9**	**-1.6**
	8.7nm,0.8s,baz=24,slow=11,SNR=10						
CTAO	**Charters Tower**	**15.97**	**211**	P	**P**	**19 49 10.2**	**+0.8**
DZM	**Mont Dzumac**	**19.07**	**146**	P	**Pn**	**19 49 44.3**	**-0.8**
	5.5nm,1.0s,baz=282,slow=10,SNR=5.8						
DZM	**Mont Dzumac**	**19.07**	**146**	P	**P**	**19 49 43.1**	**-0.7**
DZM				IAmb	IAmb	19 49 50.4	
	comp=Z,21nm,1.3s						
EIDS	**Eidsvold**	**19.16**	**191**	P	**Pn**	**19 49 43.9**	**-2.1**
WB0	**Warramunga Arr**	**23.96**	**235**		**P**	**19 50 34.8**	**-0.3**
WB0				IAmb	IAmb	19 50 37.2	
	comp=Z,10nm,0.8s						
ARMA	**Armidale**	**24.03**	**187**	P	**P**	**19 50 36.5**	**+0.8**
ARMA				IAmb	IAmb	19 50 50.3	
	comp=Z,27nm,1.3s						
WRA	**Warramunga Arr**	**24.10**	**234**	P	**P**	**19 50 37.0**	**+0.7**
	comp=Z,5.4nm,0.5s,baz=57,slow=9.4,SNR=44						
WRA				PcP	**PcP**	**19 54 16.7**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=63,slow=2.3,SNR=5.7						
	comp=Z,5.4nm,0.5s						
WRA	**Warramunga Arr**	**24.10**	**234**		**P**	**19 50 35.5**	**-0.8**
MTN	**Manton Dam**	**24.32**	**253**	P	**P**	**19 50 38.9**	**+0.6**
MTN				IAmb	IAmb	19 50 43.5	
	comp=Z,18nm,1.5s						
INKA	**Innaminka**	**25.10**	**211**		**P**	**19 50 44.7**	**-0.6**
INKA				IAmb	IAmb	19 50 45.8	
	comp=Z,10nm,0.6s						
AS31	**Alice Springs**	**26.50**	**228**	P	**P**	**19 50 57.6**	**-0.5**
ASAR	**Alice Springs**	**26.50**	**228**	P	**P**	**19 50 57.9**	**-0.2**
	comp=Z,3.0nm,0.5s,baz=59,slow=8.9,SNR=64						
ASAR				PcP	**PcP**	**19 54 21.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=58,slow=2.4,SNR=5.7						
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	**26.50**	**228**	P	**P**	**19 50 57.6**	**-0.5**
ASAR					**PcP**	**19 54 19.9**	**-2.1**
KNRA	**Kununurra**	**27.27**	**248**	P	**P**	**19 51 04.8**	**-0.2**
KNRA				IAmb	IAmb	19 51 15.7	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	**28.20**	**205**	P	**P**	**19 51 12.5**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=23,slow=8.5,SNR=6.7						
	comp=Z,1.7nm,0.5s						
STKA	**Stephens Creek**	**28.20**	**205**	P	**P**	**19 51 12.3**	**-0.8**
BBOO	**Buckleboo**	**31.57**	**211**		**P**	**19 51 42.0**	**-1.0**
FORT	**Forrest**	**34.95**	**223**	P	**P**	**19 52 11.2**	**-1.3**
FORT				IAmb	IAmb	19 52 12.9	
	comp=Z,5.8nm,0.7s						
MBWA	**Marble Bar**	**37.09**	**243**	P	**P**	**19 52 29.2**	**-1.7**
MBWA				IAmb	IAmb	19 52 30.9	
	comp=Z,10nm,0.9s						
RTZ	**Ruatahuna**	**37.70**	**151**	P	**P**	**19 52 35.2**	**-0.7**
THZ	**Tophouse**	**38.60**	**158**	P	**P**	**19 52 43.1**	**-0.3**
TCW	**Tory Channel**	**38.65**	**156**	P	**P**	**19 52 42.3**	**-1.5**
TUWZ	**Tuamarina**	**38.70**	**157**	P	**P**	**19 52 43.6**	**-0.6**
KHZ	**Kahutara**	**39.40**	**158**	P	**P**	**19 52 49.3**	**-0.7**
KHZ				IAmb	IAmb	19 52 53.6	
	comp=Z,6.1nm,1.1s						
TPUB	**Ta-pu**	**44.73**	**313**	P	**P**	**19 53 32.9**	**-0.9**
SSLB	**Suanglung**	**44.79**	**313**	P	**P**	**19 53 32.7**	**-1.6**
KULM	**Kulim**	**55.46**	**281**	P	**P**	**19 54 55.0**	**-0.3**

PETK	**Petropavlovsk-**	**59.39**	**2**	P		**P**	**19 55 22.5**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=174,slow=7.6,SNR=4.8							
	comp=Z,6.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**60.53**	**295**	P		**P**	**19 55 32.0**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=119,slow=5.5,SNR=17							
	comp=Z,1.9nm,0.6s							
CMAR	**Chiang Mai Arr**	**60.53**	**295**	P		**P**	**19 55 30.8**	**+0.1**
LZDM	**Lanzhou Array**	**63.96**	**315**	P		**P**	**19 55 56.3**	**+2.6**
	comp=Z,0.7nm,0.4s,baz=137,slow=7.1,SNR=4.9							
	comp=Z,0.7nm,0.4s							
SONM	**Songino Array**	**68.88**	**327**	P		**P**	**19 56 25.0**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=163,slow=5.3,SNR=4.2							
	comp=Z,0.6nm,0.4s							
SONM	**Songino Array**	**68.88**	**327**	P		**P**	**19 56 24.2**	**-0.5**
TLY	**Talaya**	**72.60**	**329**	LR		LR	20 27 50.7	
	comp=Z,33nm,19.4s,baz=1.0,slow=35							
EVN	**Everest**	**74.04**	**301**	P		**P**	**19 56 55.0**	**-1.9**
EVN				IAmb		IAmb	19 57 06.4	
	comp=Z,3.3nm,1.0s							
K15K	**Wolf Creek Mou**	**76.23**	**19**	P		**P**	**19 57 08.8**	**+0.9**
M16K	**Timber Creek**	**76.23**	**21**	P		**P**	**19 57 08.8**	**+0.9**
G16K	**Koyuk River**	**78.21**	**17**	P		**P**	**19 57 19.6**	**+0.7**
G16K				IAmb		IAmb	19 57 35.4	
	comp=Z,6.7nm,1.3s							
L19K	**White Mountain**	**78.48**	**22**	P		**P**	**19 57 20.9**	**+0.3**
L19K				IAmb		IAmb	19 57 24.1	
	comp=Z,8.3nm,1.1s							
SLKM	**Skilak Lake**	**79.27**	**24**	P		**P**	**19 57 24.6**	**-0.3**
MKAR	**Makanchi Array**	**82.99**	**319**	P		**P**	**19 57 45.4**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=91,slow=8.2,SNR=27							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**82.99**	**319**	P		**P**	**19 57 44.9**	**-0.1**
ZALV	**Zalesovo Beam**	**83.73**	**326**	P		**P**	**19 57 47.5**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=121,slow=7.5,SNR=5.8							
	comp=Z,1.1nm,0.5s							
KURK	**Kurchatov**	**86.40**	**322**	P		**P**	**19 58 01.8**	**-0.2**
KURK	**Kurchatov**	**86.40**	**322**	IAmb		IAmb	19 58 08.8	
	comp=Z,4.0nm,0.2s							
KURBB	**Kurchatov Arra**	**86.43**	**322**	P		**P**	**19 58 01.8**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=99,slow=5.0,SNR=9.0							
	comp=Z,0.4nm,0.4s							
YKA	**Yellowknife Ar**	**95.89**	**28**	P		**P**	**19 58 46.4**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=283,slow=4.4,SNR=4.0							
	comp=Z,0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**152.86**	**286**	PKPbc		**PKPbc**	**20 05 16.6**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=65,slow=3.0,SNR=12							

DMN ***18*** *19:49:53.7±0.4, 30°.24N×85°.74E, h10km, Ml4.5/10, Error ellipse: s-maj=8.1km s-min=5.7km az=6.0*
IDC ***18*** *19:49:57.1±5.9, 30°.14N×85°.64E, h61km±54km, mb3.4/6, mbtmp3.7/10, ML3.5/4, MS3.3/4, Error ellipse: s-maj=50.1km s-min=19.5km az=54.0*

ISC 18 19:49:55.9±1.6, 30°.15N±0°.08×85°.68E±0°.06, h48km±23km, n24, σ0°80/32, mb3.5/6, MS3.3/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**2.24**	**175**	Pn	**Pn**	**19 50 30.1**	**-0.7**
	baz=177,slow=0.0						
GUN				Sn	**Sn**	**19 50 58.5**	**+1.1**
	704nm,0.5s,baz=177,slow=0.0						
GKN	**Gorkha**	**2.32**	**203**	Pn	**Pn**	**19 50 31.1**	**-0.7**
	baz=204,slow=0.0						
GKN				Sn	**Sn**	**19 50 59.5**	**+0.2**
	1μm,0.4s,baz=204,slow=0.0						
KKN	**Kakani**	**2.38**	**188**	Pn	**Pn**	**19 50 32.8**	**+0.2**
	baz=189,slow=0.0						
KKN				Sn	**Sn**	**19 51 00.7**	**0.0**
	688nm,0.4s,baz=189,slow=0.0						
DANN	**Dangsing**	**2.45**	**223**	Pn	**Pn**	**19 50 33.3**	**-0.4**
	baz=223,slow=0.0						
DANN				Sn	**Sn**	**19 51 03.5**	**+0.9**
	952nm,0.5s,baz=223,slow=0.0						
PKIN	**Phulchoki**	**2.57**	**186**	Pn	**Pn**	**19 50 34.9**	**-0.5**
	baz=186,slow=0.0						
PKIN				Sn	**Sn**	**19 51 06.3**	**+0.7**
	511nm,0.5s,baz=186,slow=0.0						
PKI	**Pulchoki**	**2.58**	**185**	Pn	**Pn**	**19 50 34.9**	**-0.6**
	baz=186,slow=0.0						
PKI				Sn	**Sn**	**19 51 05.9**	**+0.1**
	379nm,0.4s,baz=186,slow=0.0						
DMN	**Daman**	**2.58**	**191**	Pn	**Pn**	**19 50 35.8**	**+0.3**
	baz=192,slow=0.0						
DMN				Sn	**Sn**	**19 51 06.6**	**+0.9**
	592nm,0.5s,baz=192,slow=0.0						
KOLN	**Koldanda**	**2.99**	**218**	Pn	**Pn**	**19 50 41.5**	**+0.5**
	baz=218,slow=0.0						
KOLN				Sn	**Sn**	**19 51 15.4**	**-0.3**
	408nm,0.4s,baz=218,slow=0.0						
PYUN	**Piuthan**	**3.11**	**230**	Pn	**Pn**	**19 50 41.3**	**-1.4**
	baz=229,slow=0.0						
PYUN				Sn	**Sn**	**19 51 19.6**	**+0.8**
	baz=229,slow=0.0						
RAMN	**Ramite**	**3.29**	**165**	Pn	**Pn**	**19 50 44.8**	**-0.4**
	baz=167,slow=0.0						
RAMN				Sn	**Sn**	**19 51 21.4**	**-1.8**
	696nm,0.8s,baz=167,slow=0.0						
ODAN	**Odare**	**3.61**	**155**	Pn	**Pn**	**19 50 49.5**	**0.0**
	baz=156,slow=0.0						
ODAN				Sn	**Sn**	**19 51 29.8**	**-1.2**
	711nm,1.4s,baz=156,slow=0.0						
AAK	**Ala-Archa**	**15.36**	**327**	P	**P**	**19 53 31.8**	**-1.6**
	0.2nm,0.3s,baz=139,slow=9.3,SNR=6.4						
	3.5nm,0.8s						
LZDM	**Lanzhou Array**	**16.17**	**64**	P	**Pn**	**19 53 41.4**	**+1.2**
	baz=248,slow=7.8						
	0.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**16.77**	**131**	P	**Pn**	**19 53 47.9**	**+0.4**
	0.1nm,0.3s,baz=309,slow=12,SNR=16						
CMAR				LR	LR	20 01 23.1	
	comp=Z,67nm,19.1s,baz=315,slow=41						
	1.9nm,0.8s						
MKAR	**Makanchi Array**	**16.83**	**352**	P	**Pn**	**19 53 48.1**	**+0.1**
	0.1nm,0.3s,baz=168,slow=13,SNR=22						
	1.5nm,0.7s						
KURBB	**Kurchatov Arra**	**21.14**	**347**	P	**P**	**19 54 36.3**	**-0.4**
	1.0nm,0.6s,baz=166,slow=10,SNR=8.6						
	1.0nm,0.6s						
SONM	**Songino Array**	**23.78**	**36**	P	**P**	**19 55 04.6**	**+0.5**
	0.5nm,0.6s,baz=234,slow=11,SNR=4.0						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**23.79**	**359**	P	**P**	**19 55 04.4**	**+0.5**
	0.5nm,0.5s,baz=185,slow=11,SNR=4.7						
	0.5nm,0.5s						
JOW	**Kunigami**	**37.43**	**84**	LR	LR	20 15 41.4	
	comp=Z,52nm,20.0s,baz=302,slow=41						
KLR	**Kul'dur**	**39.53**	**48**	LR	LR	20 15 57.3	
	comp=Z,15nm,18.8s,baz=40,slow=39						
MLR	**Muntele Rosu**	**48.52**	**306**	LR	LR	20 25 34.8	
	comp=Z,91nm,19.2s,baz=302,slow=44						
FINES	**FINESS Array B**	**49.54**	**327**	P	**P**	**19 58 41.2**	**-0.4**
	5.0nm,1.1s,baz=98,slow=7.6,SNR=4.9						
	5.0nm,1.1s						
WRA	**Warramunga Arr**	**68.36**	**131**	P	**P**	**20 00 52.6**	**0.0**
	1.8nm,0.9s,baz=324,slow=6.3,SNR=6.1						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**70.76**	**134**	P	**P**	**20 01 07.3**	**0.0**
	0.7nm,0.9s,baz=327,slow=7.5,SNR=4.5						
	0.7nm,0.9s						

IDC ***18*** *20:13:44.7±2.6, 23°.91S×67°.56W, h100km±25km, mb3.2/1, mbtmp3.7/4, MS3.4/1, Error ellipse: s-maj=69.1km s-min=27.4km az=100.0*
GUC ***18*** *20:13:44.9±0.8, 23°.83S×68°.03W, h120km±6km, ML3.4*
SJA ***18*** *20:13:45.0±0.7, 23°.79S×68°.13W, h125km±5km, ML3.2, MW3.5*

ISC 18 20:13:45.2±0.9, 23°.82S±0°.04×68°.00W±0°.05, h122km±9km, n37, σ1°96/49, 3C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.88**	**349**	⇓*eP*	**Pn**	**20 14 06.9**	**+0.3**
AF01				*i* S	**Sn**	**20 14 23.0**	**+0.2**
AF01				IAML		20 14 23.5	
	comp=N,1μm,0.7s						
AF01	**San Pedro de A**	**0.88**	**349**	*eP*	**Pn**	**20 14 07.0**	**+0.3**
AF01				*eS*	**Sn**	**20 14 23.2**	**+0.5**
AF01				IAML		20 14 42.4	
	comp=Z,350nm,0.8s						
SALTA		**1.57**	**105**	*eP*	**Pn**	**20 14 10.7**	**-3.4**
SALTA				*eP*		20 14 16.2	
PB06	**IPOC Station P**	**1.82**	**307**	⇓*eP*	**Pn**	**20 14 16.6**	**-0.2**
PB06				IAML		20 14 43.1	
	comp=N,379nm,0.3s						
PB06	**IPOC Station P**	**1.82**	**307**	*eP*	**Pn**	**20 14 16.4**	**-0.4**
PB06				*eS*	**Sn**	**20 14 33.6**	**-7.3**
PB06				IAML		20 14 44.6	
	comp=Z,283nm,0.4s						
GO02	**Mina Guanaco**	**1.98**	**227**	⇑*eP*	**Pn**	**20 14 19.1**	**+0.3**
GO02				*eS*	**Sn**	**20 14 45.0**	**+0.6**
GO02				IAML		20 14 48.0	
	comp=E,217nm,0.3s						
GO02	**Mina Guanaco**	**1.98**	**227**	*eP*	**Pn**	**20 14 19.1**	**+0.3**
GO02				*eS*	**Sn**	**20 14 46.0**	**+1.5**
GO02				IAML		20 14 50.6	
	comp=Z,182nm,0.7s						
PB05	**IPOC Station P**	**2.24**	**295**	*eP*	**Pn**	**20 14 21.2**	**-0.8**
PB05				IAML		20 14 54.4	
	comp=N,120nm,0.2s						
PB05	**IPOC Station P**	**2.24**	**295**	*eP*	**Pn**	**20 14 21.4**	**-0.6**
PB05				*eS*	**Sn**	**20 14 54.2**	**+4.1**
PB05				IAML		20 14 54.5	
	comp=Z,80nm,0.3s						
PB09	**IPOC Station P**	**2.31**	**330**	*eP*	**Pn**	**20 14 24.1**	**+1.1**
PB09	**IPOC Station P**	**2.31**	**330**	*eP*	**Pn**	**20 14 19.1**	**-3.9**
PB09				IAML		20 14 56.9	
	comp=Z,68nm,0.6s						
PB14	**IPOC Station P**	**2.34**	**249**	⇑*eP*	**Pn**	**20 14 22.5**	**-0.9**
PB14	**IPOC Station P**	**2.34**	**249**	*eP*	**Pn**	**20 14 22.7**	**-0.7**
PB14				*eS*	**Sn**	**20 14 51.0**	**-1.7**
PB14				IAML		20 15 02.1	
	comp=Z,91nm,0.6s						
PB10	**IPOC Station P**	**2.37**	**277**	*eP*	**Pn**	**20 14 23.3**	**-0.1**
PB10				IAML		20 14 59.6	
	comp=E,143nm,0.3s						
PB10	**IPOC Station P**	**2.37**	**277**	*eP*	**Pn**	**20 14 23.3**	**-0.1**
PB10				*eS*	**Sn**	**20 14 50.4**	**-2.3**
PB10				IAML		20 15 00.1	
	comp=Z,129nm,0.5s						
PB03	**IPOC Station P**	**2.39**	**317**	*eP*	**Pn**	**20 14 23.9**	**0.0**
PB03				IAML		20 14 59.1	
	comp=N,154nm,0.3s						
PB03	**IPOC Station P**	**2.39**	**317**	*eP*	**Pn**	**20 14 24.0**	**+0.1**
PB03				*eS*	**Sn**	**20 14 53.0**	**-0.6**
PB03				IAML		20 15 02.1	
	comp=Z,108nm,0.2s						
HJA	**Humahuaca**	**2.45**	**76**	*eP*	**Pn**	**20 14 27.7**	**+2.9**
PB07	**IPOC Station P**	**2.71**	**320**	*eP*	**Pn**	**20 14 27.7**	**-0.3**
PB07	**IPOC Station P**	**2.71**	**320**	*eP*	**Pn**	**20 14 27.3**	**-0.8**
PB07				*eS*	**Sn**	**20 15 02.5**	**+1.5**
PB07				IAML		20 15 03.6	
	comp=Z,99nm,0.5s						
YJA	**Yavi**	**2.81**	**55**	*eP*	**Pn**	**20 14 32.3**	**+2.7**
PB02	**IPOC Station P**	**3.04**	**324**	*eP*	**Pn**	**20 14 31.7**	**-0.6**
PB02				IAML		20 15 16.4	
	comp=E,167nm,0.1s						
PB02	**IPOC Station P**	**3.04**	**324**	*eP*	**Pn**	**20 14 31.6**	**-0.6**
PB02				*eS*	**Sn**	**20 15 09.1**	**+0.6**
PB02				IAML		20 15 17.0	
	comp=Z,138nm,0.3s						
PB01	**IPOC Station P**	**3.08**	**333**	*eP*	**Pn**	**20 14 32.2**	**-0.6**
PB01				IAML		20 15 11.7	
	comp=E,84nm,0.3s						
PB01	**IPOC Station P**	**3.08**	**333**	*eP*	**Pn**	**20 14 32.9**	**0.0**
PB01				IAML		20 15 14.2	
	comp=Z,42nm,0.4s						
AC02	**Maricunga**	**3.18**	**199**	⇑*eP*	**Pn**	**20 14 35.2**	**+0.8**
AC02	**Maricunga**	**3.18**	**199**	*eP*	**Pn**	**20 14 35.2**	**+0.8**
AC02				*eS*	**Sn**	**20 15 13.5**	**+1.2**
AC01	**Pan de Azucar**	**3.31**	**225**	*eP*	**Pn**	**20 14 34.0**	**-1.7**
AC01	**Pan de Azucar**	**3.31**	**225**	*eP*	**Pn**	**20 14 34.1**	**-1.6**
AC01				*eS*	**Sn**	**20 15 16.8**	**+2.1**
AC01				IAML		20 15 53.7	
	comp=Z,26nm,1.6s						
GO03	**Copiapo**	**4.27**	**208**	*eS*	**Sn**	**20 15 36.4**	**-1.2**
GO03				IAML		20 16 14.2	
	comp=Z,16nm,1.6s						
AC04	**Llanos de Chal**	**5.17**	**212**	*eP*	**Pn**	**20 14 57.0**	**-3.6**
AC04				IAML		20 16 11.6	
	comp=Z,30nm,1.1s						
LPAZ	**La Paz**	**7.49**	**359**	P	**Pn**	**20 15 33.6**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=165,slow=2.1,SNR=4.8						
CFA	**Coronel Fontan**	**7.76**	**182**	P	**Pn**	**20 15 33.9**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=4.4,slow=16,SNR=1.8						
SIV	**San Ignacio**	**10.14**	**41**	P	**Pn**	**20 16 05.0**	**-2.8**
	comp=Z,8.4nm,0.5s,baz=233,slow=10,SNR=41						
BDFB	**Brasilia**	**20.47**	**70**	LR	LR	20 25 54.3	
	comp=Z,110nm,19.0s,baz=166,slow=36						
TORD	**Torodi Ar. Bea**	**77.35**	**69**	P	**P**	**20 25 27.3**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=246,slow=6.6,SNR=2.1						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**146.96**	**39**	PKPbc	**PKPbc**	**20 33 14.3**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=304,slow=3.6,SNR=6.6						

TEH ***18*** *20:15:37.1, 38°.73N×44°.47E, h10km±132km, ML2.6, Presumed earthquake*
AZER ***18*** *20:15:38.5, 38°.40N×44°.57E, h6km, ml2.6*
ISK ***18*** *20:15:41.8, 38°.46N×44°.33E, h5km, ML2.6/6*

ISC 18 20:15:41.5±1.2, 38°.43N±0°.03×44°.51E±0°.03, h8km±10km, n25, σ1°52/44, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.88**	**99**	Pg	**Pg**	**20 15 57.0**	**-1.5**
HAKT	**HAKKARI**	**1.07**	**216**	P	**Pg**	**20 16 00.9**	**-1.2**
HAKT				S	**Sn**	**20 16 18.6**	**+0.3**
NAX	**Nakhchivan**	**1.07**	**46**	P	**Pg**	**20 16 01.3**	**-0.9**
NAX				S	**Sb**	**20 16 16.2**	**-0.5**
AKDM	**Akdamar-Van**	**1.21**	**266**	Pg	**Pb**	**20 16 02.2**	**-2.5**
AKDM				Sg	**Sb**	**20 16 19.4**	**-1.2**
ORD	**Ordubad**	**1.27**	**66**	P	**Pn**	**20 16 04.7**	**-1.0**
ORD				S	**Sn**	**20 16 23.5**	**+0.5**
SBZ	**Shahbuz**	**1.27**	**40**	P	**Pn**	**20 16 04.5**	**-1.2**
SBZ				S	**Sn**	**20 16 23.2**	**+0.1**
ITBZ	**Tabriz**	**1.30**	**98**	Pg	**Pn**	**20 16 04.8**	**-1.5**
ITBZ				Sg	**Sg**	**20 16 24.4**	**+1.0**
HYR	**Heyderabad**	**1.32**	**12**	P	**Pn**	**20 16 05.7**	**-0.7**
HYR				S	**Sg**	**20 16 27.2**	**+3.2**
CUKT	**Cukurca**	**1.38**	**212**	Pn	**Pg**	**20 16 08.7**	**+0.8**
CUKT				Sn	**Sg**	**20 16 28.2**	**+2.5**
IAZR	**Azarshahr**	**1.38**	**122**	Pg	**Pb**	**20 16 07.4**	**-0.4**
IGDI	**IGDIR**	**1.48**	**347**	P	**Pb**	**20 16 08.7**	**-0.7**
IGDI				S	**Sg**	**20 16 32.0**	**+2.9**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pb**	**20 16 11.4**	**-0.9**
AGRB				Sn	**Sb**	**20 16 32.9**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.69**	**296**	Pn	**Pb**	**20 16 11.9**	**-1.1**
GNI	**Garni**	**1.73**	**6**	Pn	**Pb**	**20 16 13.8**	**+0.1**
GNI				Sn	**Sg**	**20 16 37.4**	**+0.2**
GURO	**Guroymak-BITLI**	**1.95**	**274**	Pn	**Pn**	**20 16 15.5**	**+0.4**
QRD	**Qoradiz**	**2.42**	**64**	P	**Pn**	**20 16 22.5**	**+1.0**
QRD				S	**Sb**	**20 16 54.7**	**-0.8**
KARS	**Kars**	**2.46**	**334**	Pn	**Pn**	20 16 15.4	-6.8
GDB	**GEDABAY**	**2.49**	**22**	P	**Pb**	**20 16 24.1**	**-2.5**
GDB				S	**Sb**	**20 16 58.3**	**+0.8**
GANJ	**Ganja**	**2.62**	**32**	P	**Pn**	**20 16 25.8**	**+1.5**
GANJ				S	**Sb**	**20 16 59.7**	**-1.6**
AGDM	**Agdam**	**2.63**	**49**	P	**Pn**	**20 16 25.2**	**+0.8**
AGDM				S	**Sb**	**20 16 58.7**	**-2.6**
QZX	**Qazax, Azerbai**	**2.71**	**14**	P	**Pn**	**20 16 26.4**	**+0.9**
QZX				S	**Sb**	**20 17 02.1**	**-1.7**
YRD	**Yardimli**	**2.96**	**79**	P	**Pn**	**20 16 31.4**	**+2.3**
YRD				S	**Sn**	**20 17 06.4**	**+1.4**
LRK	**Lerik**	**3.01**	**85**	P	**Pn**	**20 16 31.5**	**+1.8**
LRK				S	**Sn**	**20 17 07.6**	**+1.4**
GLBA	**Clilabad**	**3.14**	**74**	P	**Pn**	**20 16 32.2**	**+0.9**
GLBA				S	**Sn**	**20 17 11.4**	**+2.3**
ASTR	**Astara**	**3.36**	**86**	P	**Pn**	**20 16 34.6**	**+0.2**
ASTR				S	**Sn**	**20 17 15.7**	**+1.2**

HEL ***18*** *20:17:21.5±0.5, 67°.67N×33°.77E, h0km, ML1.2, Explosion*

KOLA 18 20:17:21.4, 67°.68N×33°.71E, h0km, ML1.4, Error ellipse: s-maj=3.0km s-min=2.1km az=70.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.16**	**226**	P	Pg	20 17 24.1	-0.4
APA0	**Apatity Array**	**0.28**	**255**	P	Pg	20 17 26.5	-0.3
APA0				S	Sg	20 17 30.4	-0.1
KVDA	**Kovda**	**1.04**	**199**	P	Pg	20 17 40.0	-1.4
KVDA				S	Sg	20 17 53.8	-1.1
VRF	**Varrio**	**1.56**	**274**	PG	Pn	20 17 49.5	-0.9
VRF				smax	smax	20 18 09.2	
	comp=Z,1.5nm,0.2s						
VRF				SN	Sn	20 18 11.4	0.0
OLKF	**Oulanka, Finla**	**2.17**	**233**	PG	Pb	20 18 00.5	-1.1
OLKF				smax	smax	20 18 26.3	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	20 18 29.5	+0.4
RAJF	**Raja-Jooseppi**	**2.18**	**294**	PB	Pn	20 17 59.8	+0.9
RAJF				SB	Sn	20 18 27.5	+1.0
KU6	**Riekki**	**2.24**	**224**	PG	Pb	20 18 01.3	-1.4
	baz=42						
KU6				smax	smax	20 18 28.1	
	comp=Z,0.8nm,0.2s						
KU6				SG	Sb	20 18 30.6	-0.4
MSF	**Maaselka**	**2.56**	**228**	PG	Pb	20 18 07.2	-1.0
MSF				SG	Sb	20 18 41.3	+1.1
VADS	**Vadso**	**2.91**	**329**	S	Sn	20 18 43.5	-1.1
KU2	**Taivalkoski**	**2.94**	**230**	PB	Pb	20 18 12.6	-2.1
	baz=46						
RNF	**Rovaniemi**	**3.19**	**254**	PN	Pn	20 18 13.0	+0.3
RNF				SB	Sb	20 18 57.0	-1.2
KEV	**Kevo**	**3.21**	**314**	PN	Pn	20 18 13.6	+0.6
ARA0	**ARCESS Array S**	**3.54**	**306**	PN	Pn	20 18 17.4	-0.1
ARCES	**ARCESS Array B**	**3.54**	**306**	P	Pn	20 18 17.2	-0.3
ARCES				S	Sn	20 18 58.2	-1.8
KLF	**Kolari**	**3.78**	**268**	PG	Pb	20 18 30.0	+1.0

HEL 18 20:17:49.2±0.4, 67°.15N×20°.62E, h0km, ML1.1, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.86**	**133**	PG	Pg	20 18 04.9	-0.7
ERTU				SG	Sg	20 18 16.7	-0.1
LANU	**Lannavaara**	**1.05**	**30**	PG	Pg	20 18 08.1	-1.2
LANU				SB	Sg	20 18 22.3	-0.5
KLF	**Kolari**	**1.31**	**85**	PG	Pg	20 18 12.4	-1.8
	baz=266						
KLF				smax	smax	20 18 28.6	
	comp=Z,0.7nm,0.2s						
HEF	**Hetta**	**1.72**	**41**	PG	Pn	20 18 20.0	-0.3
HEF				smax	smax	20 18 40.5	
	comp=Z,0.8nm,0.2s						
HEF				SG	Sn	20 18 41.4	-1.5
TOF	**Tornio**	**1.83**	**124**	PG	Pn	20 18 22.0	+0.3
TOF				smax	smax	20 18 43.6	
	comp=Z,1.2nm,0.2s						
TOF				SN	Sb	20 18 47.0	+0.2
KIF	**Kilpisjarvi**	**1.87**	**2**	PG	Pn	20 18 23.0	+0.6
KIF				smax	smax	20 18 46.0	
	comp=Z,1.8nm,0.2s						
KIF				SG	Sb	20 18 48.4	+0.4
KTK1	**Kautokeino**	**2.12**	**26**	PG	Pb	20 18 27.8	-0.6
KTK1				SG	Sn	20 18 53.9	+1.1
RNF	**Rovaniemi**	**2.20**	**102**	PG	Pn	20 18 28.1	+1.2
TRO	**Tromso**	**2.58**	**347**	SG	Sb	20 19 05.9	+1.1
KEV	**Kevo**	**3.52**	**39**	PG	Pb	20 18 51.5	-0.8

DJA 18 20:17:54.5±0.3, 3°.S±3°.×13°.3E±°, h10km, M3.9/13, mB5.2/1, mb4.5/3, MLv3.6/13, Mw(mB)4.6/1, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.13**	**251**	P	Pb	20 18 15.4	-0.8
FAKI				S	Sb	20 18 29.8	-1.2
KMPI	**Kaimana, Papua**	**1.17**	**161**	P	Pb	20 18 15.3	-1.5
RKPI	**Ransiki, Papua**	**1.34**	**40**	P	Pb	20 18 18.8	-0.5
RKPI				S	Sn	20 18 37.2	0.0
MWPI	**Manokwari, Pap**	**1.76**	**24**	P	Pb	20 18 26.7	-0.3
SIJI	**Sorong**	**2.65**	**309**	P	Pn	20 18 36.0	-1.3
SWI	**Sorong**	**2.66**	**309**	P	Pn	20 18 36.0	-1.4
NLAI	**Namlea**	**6.25**	**264**	P	Pn	20 19 26.9	0.0

JMA ***18*** *20:32:14.8±0.1, 24°.5N±0°.6×122°.1E±0°.3, h73km±1km, MV2.4/11, TAIWAN REGION*
TAP ***18*** *20:32:15.0, 24°.56N×122°.07E, h66km, ML3.2, B*

ISC 18 20:32:15.5±1.3, 24°.56N±0°.03×122°.08E±0°.02, h66km±6km, n117, σ0°77/185, 5C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.20**	**135**	*i* P	**Pn**	**20 32 26.4**	**+0.9**
ESAO	**Su ao**	**0.21**	**275**	P	**Pn**	**20 32 25.9**	**+0.2**
TWC	**Suao**	**0.21**	**284**	⇑*i* P	**Pn**	**20 32 25.8**	**+0.1**
TWC				*i* S	**Sn**	**20 32 33.7**	**+0.6**
EWUT	**Wuta**	**0.29**	**248**	P	**Pn**	**20 32 26.3**	**+0.1**
EWUT				S	**Sn**	**20 32 34.0**	**+0.1**
NDS	**Dongshan**	**0.34**	**283**	P	**Pn**	**20 32 26.8**	**+0.3**
NDS				*i* S	**Sn**	**20 32 34.5**	**-0.1**
EOS3	**EOS3**	**0.35**	**141**	⇓P	**Pn**	**20 32 27.2**	**+0.8**
ILA	**Ilan**	**0.36**	**305**	P	**Pn**	**20 32 24.7**	**-2.0**
ILA				S	**Sn**	**20 32 34.2**	**-0.6**
EAHA	**Aohua**	**0.38**	**234**	P	**Pn**	**20 32 26.6**	**-0.3**
EAHA				*i* S	**Sn**	**20 32 35.7**	**+0.5**
TWE	**

TEYL				*i*	S		**Sn**	**20 32 43.0**	**-0.3**
FUSS	**Fushou**	**0.82**	**248**		P		**Pn**	**20 32 31.8**	**0.0**
FUSS				*i*	S		**Sn**	**20 32 43.5**	**-0.3**
NTST	**Danshui**	**0.83**	**317**	*eP*			**Pn**	**20 32 32.5**	**+0.9**
NTST				*eS*			**Sn**	**20 32 44.5**	**+0.9**
KSHI	**Guanxi Townshi**	**0.85**	**285**	*eP*			**Pn**	**20 32 31.9**	**0.0**
KSHI				*eS*			**Sn**	**20 32 46.2**	**+2.2**
WHF	**Hehuan Shan**	**0.85**	**241**	*eP*			**Pn**	**20 32 31.4**	**-1.0**
WHF				*eS*			**Sn**	**20 32 43.5**	**-1.2**
YOJ	**Yonaguni jima**	**0.86**	**96**		P		**Pn**	**20 32 32.0**	**+0.1**
YOJ					S		**Sn**	**20 32 44.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.86**	**96**	*eP*			**Pn**	**20 32 32.2**	**+0.2**
YOJ				*i*	S		**Sn**	**20 32 44.6**	**+0.5**
NFF	**Wufeng Townshi**	**0.88**	**275**	*i*	P		**Pn**	**20 32 32.0**	**-0.3**
NFF				*i*	S		**Sn**	**20 32 44.8**	**0.0**
TWT	**Tachien**	**0.88**	**250**	*i*	P		**Pn**	**20 32 33.0**	**+0.5**
TWT				*i*	S		**Sn**	**20 32 45.1**	**+0.2**
TDCB	**Techi**	**0.89**	**250**		P		**Pn**	**20 32 32.8**	**+0.2**
TDCB				*i*	S		**Sn**	**20 32 44.9**	**-0.3**
SHUL	**Shoufeng**	**0.90**	**212**		P		**Pn**	**20 32 32.1**	**-0.5**
SHUL				*eS*			**Sn**	**20 32 45.0**	**-0.1**
NCU	**National Centr**	**0.91**	**297**	*eS*			**Sn**	**20 32 44.4**	**-0.9**
NCUH	**Zhongli**	**0.91**	**297**	*eP*			**Pn**	**20 32 32.6**	**0.0**
ESL	**Shilin**	**0.95**	**219**		P		**Pn**	**20 32 31.9**	**-1.2**
LIOB	**Emei**	**0.97**	**275**	*eP*			**Pn**	**20 32 33.7**	**+0.2**
LIOB					S		**Sn**	**20 32 47.0**	**+0.3**
TEGC	**Jichi Village**	**0.98**	**210**	*eP*			**Pn**	**20 32 33.0**	**-0.5**
TEGC				*eS*			**Sn**	**20 32 46.3**	**-0.6**
NSTT	**Nanjuang**	**0.98**	**274**		P		**Pn**	**20 32 33.6**	**+0.1**
NSTT					S		**Sn**	**20 32 47.2**	**+0.2**
OWD	**Renai**	**1.02**	**234**	*i*	P		**Pn**	**20 32 33.9**	**-0.3**
OWD				*i*	S		**Sn**	**20 32 47.3**	**-0.7**
SBCB	**Hsinchu**	**1.02**	**283**	*eS*			**Sn**	**20 32 46.7**	**-1.1**
HSN	**Hsinchu**	**1.04**	**284**	*eP*			**Pn**	**20 32 33.5**	**-0.8**
WUSB	**Renai**	**1.04**	**237**	*i*	P		**Pn**	**20 32 34.4**	**0.0**
WUSB				*i*	S		**Sn**	**20 32 48.8**	**+0.2**
WARBT	**Fenglin Townsh**	**1.05**	**217**	*i*	P		**Pn**	**20 32 32.9**	**-1.6**
EGFH	**Guangfu**	**1.07**	**214**	*eP*			**Pn**	**20 32 33.9**	**-0.8**
WHP	**Taichung City**	**1.07**	**255**		P		**Pn**	**20 32 35.6**	**+0.8**
WHP				*i*	S		**Sn**	**20 32 49.8**	**+0.7**
NMLH	**Miaoli**	**1.17**	**269**	*eP*			**Pn**	**20 32 36.9**	**+0.9**
NMLH				*eS*			**Sn**	**20 32 51.3**	**0.0**
VWDT	**VWDT**	**1.17**	**227**	‖	P		**Pn**	**20 32 35.8**	**-0.2**
VWDT					S		**Sn**	**20 32 52.6**	**+1.3**
WCS	**Beigang Elemen**	**1.18**	**245**	*eP*			**Pn**	**20 32 36.7**	**+0.7**
WCS					S		**Sn**	**20 32 52.7**	**+1.3**
TWQ1	**Liyutan**	**1.21**	**260**	*eP*			**Pn**	**20 32 37.5**	**+1.0**
TWQ1				*eS*			**Sn**	**20 32 52.6**	**+0.5**
NSY	**Sanyi**	**1.21**	**264**	*eP*			**Pn**	**20 32 36.8**	**+0.3**
NSY				*eS*			**Sn**	**20 32 53.0**	**+0.8**
HGSD	**Ruisui**	**1.22**	**210**		P		**Pn**	**20 32 35.8**	**-0.8**
EHYH	**Wanrong**	**1.25**	**212**	*eP*			**Pn**	**20 32 36.5**	**-0.6**
SMLT	**Sun Moon Lake**	**1.27**	**238**		P		**Pn**	**20 32 37.8**	**+0.4**
SSLB	**Suanglung**	**1.28**	**233**		P		**Pn**	**20 32 37.3**	**-0.2**
SSLB	**Suanglung**	**1.28**	**233**		P		**Pn**	**20 32 36.7**	**-0.8**
TCU	**Taichung**	**1.34**	**253**	*eP*			**Pn**	**20 32 38.8**	**+0.5**
TCU				*eS*			**Sn**	**20 32 56.4**	**+1.1**
ECBN	**Changbin**	**1.36**	**205**	*eP*			**Pn**	**20 32 37.7**	**-0.8**
ECBN				*eS*			**Sn**	**20 32 54.6**	**-1.2**
YULB	**Yu-li**	**1.36**	**212**		P		**Pn**	**20 32 36.7**	**-1.9**
YULB	**Yu-li**	**1.36**	**212**	*eP*			**Pn**	**20 32 37.0**	**-1.6**
TWF1	**Yuli**	**1.40**	**211**	*i*	P		**Pn**	**20 32 37.5**	**-1.5**
WHYT	**Xinyi Township**	**1.41**	**233**	*eP*			**Pn**	**20 32 40.1**	**+0.8**
WHYT				*eS*			**Sn**	**20 32 58.7**	**+1.7**
WNT	**Mingjian**	**1.44**	**242**	*i*	P		**Pn**	**20 32 40.1**	**+0.5**
WNT				*i*	S		**Sn**	**20 32 59.2**	**+1.5**
WCHH	**Zhanghua**	**1.47**	**251**	*eS*			**Sn**	**20 32 59.3**	**+0.1**
CHKH	**Chenggong**	**1.50**	**205**	*eP*			**Pn**	**20 32 39.8**	**-0.5**
IRIF	**Iriomote-Funau**	**1.52**	**98**		P		**Pn**	**20 32 40.4**	**-0.2**
IRIF					S		**Sn**	**20 32 59.3**	**-0.3**
FULB	**Fuli**	**1.53**	**208**	*eP*			**Pn**	**20 32 40.3**	**-0.5**
FULB				*eS*			**Sn**	**20 33 00.2**	**+0.3**
ALS	**Alishan**	**1.56**	**228**		P		**Pn**	**20 32 42.0**	**+0.5**
CHN5	**Tsauling**	**1.60**	**233**	*i*	P		**Pn**	**20 32 42.7**	**+1.0**
WDLH	**Douliu**	**1.65**	**239**	*eP*			**Pn**	**20 32 43.3**	**+0.9**
WDLH					S		**Sn**	**20 33 03.8**	**+1.1**
ECS	**Chishang**	**1.66**	**209**	*eP*			**Pn**	**20 32 43.0**	**+0.5**
ELDTW	**Lidau**	**1.67**	**216**	*eP*			**Pn**	**20 32 41.6**	**-1.2**
WRL	**Guolierlin Hig**	**1.69**	**247**	*eP*			**Pn**	**20 32 42.8**	**-0.1**
WCKO	**Fanlu**	**1.75**	**231**	*eP*			**Pn**	**20 32 45.1**	**+1.4**
JKRS	**Kuro-shima**	**1.79**	**100**		P		**Pn**	**20 32 44.4**	**+0.2**
JKRS				*eS*			**Sn**	**20 33 06.2**	**+0.2**
TPUB	**Ta-pu**	**1.82**	**227**		P		**Pn**	**20 32 45.5**	**+0.8**
TPUB	**Ta-pu**	**1.82**	**227**	*eP*			**Pn**	**20 32 45.9**	**+1.2**
STYH	**Taoyuan**	**1.82**	**221**		P		**Pn**	**20 32 45.4**	**+0.7**
STYH				*eS*			**Sn**	**20 33 08.2**	**+1.3**
WTP	**Ta-pu**	**1.87**	**226**	*eP*			**Pn**	**20 32 46.8**	**+1.4**
JIJ	**Ishigaki jima**	**1.89**	**95**		P		**Pn**	**20 32 45.6**	**0.0**
JIJ				*eS*			**Sn**	**20 33 07.5**	**-1.0**
TWK	**Hsinying**	**1.94**	**229**		P		**Pn**	**20 32 47.7**	**+1.3**
TWG	**Pinlang**	**1.96**	**208**	*eP*			**Pn**	**20 32 46.0**	**-0.6**
TWGBT	**Beinan**	**1.96**	**208**	*eP*			**Pn**	**20 32 45.4**	**-1.2**
CHN1	**Nanshi**	**1.97**	**226**	*eP*			**Pn**	**20 32 47.8**	**+1.1**
WSL	**Shuilin Townsh**	**1.98**	**239**	*eP*			**Pn**	**20 32 46.9**	**+0.1**
SGST	**Jiashian**	**2.01**	**223**		P		**Pn**	**20 32 47.2**	**0.0**
JISG	**Ishigakijimahi**	**2.03**	**89**	*eP*			**Pn**	**20 32 47.7**	**+0.2**
ECL	**Taimali**	**2.21**	**208**	*eP*			**Pn**	**20 32 49.2**	**-0.7**
SSD	**Sandimen**	**2.24**	**217**	*eP*			**Pn**	**20 32 51.9**	**+1.6**
TSCK	**Chigu Township**	**2.30**	**233**	*eP*			**Pn**	**20 32 51.9**	**+0.7**
MASBT	**Mashibuluo**	**2.35**	**215**	*i*	P		**Pn**	**20 32 52.7**	**+0.9**
VWUC	**VWUC**	**2.43**	**281**	*eP*			**Pn**	**20 32 52.3**	**-0.6**
EAST	**Anshuo**	**2.44**	**208**		P		**Pn**	**20 32 53.6**	**+0.4**
SCZ	**Fangliau**	**2.52**	**212**	*eP*			**Pn**	**20 32 55.9**	**+1.2**
SMST	**Manzhou Townsh**	**2.77**	**205**	*eP*			**Pn**	**20 32 57.5**	**-0.1**
DSXP	**Dongshan**	**4.33**	**260**	*eP*			**Pn**	**20 33 18.5**	**-0.4**
DSXP					S		**Sn**	**20 34 05.4**	**-2.7**

*IDC **18** 20:37:50.8±3.6, 27°.15N×140°.41E, h416km±47km, mb2.8/6, mbtmp3.6/7, Error ellipse: s-maj=88.0km s-min=16.8km az=76.0*

*JMA **18** 20:37:50.7±0.2, 27°N±2°×14°1E±°, h424km, MV4.0/20, NEAR CHICHIJIMA ISLAND*

ISC 18 20:37:50.1±0.9, 27°.21N±0°.09×140°.5E±0°.2, h400km, n14, σ1ŝ36/14, mb3.0/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.55**	**94**	*eP*	**Pn**	**20 38 44.7**	**+1.1**
JHH2	**Haha-jima-NKT2**	**1.65**	**110**	*eS*	**S**	**20 39 28.8**	**+1.2**
BSO1	**Boso 1**	**7.43**	**3**	*eS*	**S**	**20 41 04.9**	**-1.4**
JIE	**Ise**	**7.84**	**337**	*eP*	**P**	**20 39 45.8**	**+2.2**
JKN2	**Miekihoku**	**7.87**	**334**	*eP*	**P**	**20 39 46.0**	**+2.1**
JAG	**Ashikaga**	**9.22**	**355**	*eP*	**P**	**20 39 57.9**	**-1.0**
JHO	**Hitachi**	**9.37**	**1**	*eP*	**Pn**	**20 40 01.0**	**+0.3**
MJAR	**Matsushiro Arr**	**9.49**	**349**	P	**Pn**	**20 40 03.0**	**+0.8**
	0.6nm,0.4s,baz=169,slow=10.0,SNR=6.0						
WRA	**Warramunga Arr**	**47.25**	**188**	P	**P**	**20 45 43.4**	**-1.7**
	0.5nm,0.5s,baz=5.5,slow=7.4,SNR=7.4						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**49.20**	**310**	P	**P**	**20 45 59.1**	**-0.6**
	0.3nm,1.0s,baz=92,slow=8.7,SNR=2.3						
	0.3nm,1.0s						
ASAR	**Alice Springs**	**50.98**	**188**	P	**P**	**20 46 12.4**	**-0.6**
	0.2nm,0.7s,baz=0.9,slow=6.7,SNR=1.7						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**51.85**	**314**	P	**P**	**20 46 18.4**	**-0.7**
	0.3nm,0.5s,baz=94,slow=8.9,SNR=6.6						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**56.91**	**317**	P	**P**	**20 46 54.5**	**-0.5**
	0.7nm,0.4s,baz=75,slow=6.4,SNR=5.5						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**77.15**	**333**	P	**P**	**20 48 59.9**	**-0.7**
	3.1nm,1.0s,baz=60,slow=4.9,SNR=5.4						
	3.1nm,1.0s						

*IDC **18** 20:44:03.6±1.0, 44°.88N×152°.86E, h0km, mb3.7/10, mbtmp3.7/13, ML3.3/3, Error ellipse: s-maj=27.1km s-min=20.6km az=156.0*

*MOS **18** 20:44:08.7±2.2, 45°.00N×152°.53E, h52km, mb3.8/1, Error ellipse: s-maj=18.4km s-min=14.9km az=76.7*

*SKHL **18** 20:44:09.7±0.5, 44°.60N×152°.40E, h64km±6km, mb4.1/3*

ISC 18 20:44:11.1±0.9, 45°.0N±0°.1×152°.53E±0°.08, h60km, n22, σ2ŝ54/26, mb3.6/10, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.31**	**276**	*ePN*	**Pn**	**20 44 59.0**	**-1.4**
KUR				*eS*	**Sn**	**20 45 36.9**	**-1.6**
KUR					smax	smax	
	comp=E,70nm,0.3s						
KUR					smax	smax	
	comp=N,36nm,0.2s						
KUR	**Kuril'sk**	**3.31**	**276**	*eP*	**Pn**	**20 44 59.0**	**-1.4**
KUR					AMB	AMB	20 45 02.9
	comp=N,30nm,0.6s						
KUR				*eS*	**Sn**	**20 45 36.4**	**-2.1**
KUR					A	A	20 45 39.7
	comp=N,60nm,0.3s						
KUR					A	A	20 45 39.7
	comp=N,60nm,0.3s						
SHO	**Shikotan**	**4.23**	**257**	*eP*	Pn		20 45 21.5 +8.6
SHO					AMB	AMB	20 45 27.9
	comp=N,20nm,0.5s						
SHO				*eS*	**Sn**	**20 46 07.1**	**+6.1**
SHO					A	A	20 46 12.1
	comp=N,20nm,0.4s						
SHO					A	A	20 46 12.1
	comp=N,30nm,0.4s						
NMR	**Nemuro--Hokkai**	**5.15**	**254**	*ePN*	**Pn**	**20 45 22.4**	**-3.1**
NMR	**Nemuro--Hokkai**	**5.15**	**254**	*eP*	**Pn**	**20 45 22.4**	**-3.1**
NMR				*eS*	**Sn**	**20 46 18.5**	**-5.0**
AKK	**Akkeshi**	**5.88**	**253**	*eP*	**Pn**	**20 45 33.2**	**-2.3**
JKA	**Kamikawa-asahi**	**7.15**	**267**	*eP*	**Pn**	**20 45 53.0**	**+0.1**
ASAJ	**Asahikawa**	**7.15**	**267**	Pn	**Pn**	**20 45 53.0**	**+0.1**
	comp=N,0.4nm,0.3s,baz=70,slow=15,SNR=7.5						
	comp=N,4.5nm,0.8s						
PETK	**Petropavlovsk-**	**8.83**	**21**	Pn	**Pn**	**20 46 11.9**	**-3.9**
	comp=N,0.9nm,0.3s,baz=200,slow=9.7,SNR=31						
PETK				Sn	**Sn**	**20 47 54.8**	**+1.1**
	comp=N,0.1nm,0.3s,baz=211,slow=42,SNR=2.0						
	comp=N,2.6nm,0.6s						
SEY	**Seymchan**	**18.00**	**360**	P	**Pn**	**20 48 16.3**	**-0.4**
	comp=N,0.1nm,0.3s,baz=153,slow=11,SNR=5.2						
	comp=N,0.9nm,0.5s						
MKAR	**Makanchi Array**	**47.42**	**299**	P	**P**	**20 52 40.3**	**+1.0**
	comp=N,0.3nm,0.6s,baz=66,slow=6.5,SNR=5.7						
	comp=N,0.3nm,0.6s						
KURK	**Kurchatov**	**48.03**	**305**	P	**P**	**20 52 45.3**	**+1.4**
KURK	**Kurchatov**	**48.03**	**305**	*eP*	**P**	**20 52 45.3**	**+1.4**
KURBB	**Kurchatov Arra**	**48.12**	**305**	P	**P**	**20 52 45.3**	**+0.7**
	comp=N,0.4nm,0.6s,baz=72,slow=8.3,SNR=4.7						
	comp=N,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**52.60**	**36**	P	**P**	**20 53 18.9**	**+0.6**
	comp=N,0.2nm,0.4s,baz=298,slow=8.0,SNR=5.6						
	comp=N,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**63.64**	**61**	P	**P**	**20 54 35.2**	**-0.8**
	comp=N,0.5nm,0.8s,baz=313,slow=5.0,SNR=2.3						
	comp=N,0.5nm,0.8s						
FINES	**FINESS Array B**	**65.48**	**335**	P	**P**	**20 54 50.6**	**+3.3**
	comp=N,3.2nm,1.0s,baz=26,slow=6.0,SNR=1.5						
	comp=N,3.2nm,1.0s						
PDAR	**Pinedale Array**	**66.14**	**53**	P	**P**	**20 54 51.7**	**-0.5**
	comp=N,0.2nm,0.6s,baz=307,slow=7.2,SNR=2.5						
	comp=N,0.2nm,0.6s						
WRA	**Warramunga Arr**	**66.69**	**199**	P	**P**	**20 54 57.0**	**+1.5**
	comp=N,0.7nm,0.8s,baz=12,slow=6.8,SNR=3.5						
	comp=N,0.7nm,0.8s						
HFS	**Hagfors**	**69.99**	**339**	P	**P**	**20 55 19.2**	**+3.5**
	comp=N,2.5nm,0.9s,baz=30,slow=12,SNR=5.0						
	comp=N,2.5nm,0.9s						
AKASG	**Malin Array De**	**72.80**	**326**	P	**P**	**20 55 33.6**	**+0.8**
	comp=N,0.4nm,0.5s,baz=39,slow=6.7,SNR=2.1						
	comp=N,0.4nm,0.5s						
TXAR	**Lajitas Array**	**78.73**	**60**	P	**P**	**20 56 05.9**	**-1.3**
	comp=N,0.4nm,0.6s,baz=327,slow=7.4,SNR=4.1						
	comp=N,0.4nm,0.6s						

IDC 18 21:04:51.1±1.9, 8°.40S×124°.76E, h0km, mb3.2/1, mbtmp3.7/5, ML3.9/4, MS3.2/1, Error ellipse: s-maj=49.3km s-min=25.9km az=78.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.09**	**211**	Pn	Pn	21 05 28.0	+0.5
	61nm,0.3s,baz=31,slow=12,SNR=100						
BATI				Sn	Sn	21 05 47.0	-7.4
	34nm,0.3s,baz=37,slow=20,SNR=6.0						
	150nm,0.3s						
FITZ	**Fitzroy Crossi**	**9.68**	**175**	Pn	Pn	21 07 09.8	-1.9
	0.9nm,0.3s,baz=1.0,slow=11,SNR=34						
FITZ				Sn	Sn	21 08 46.8	-14
	1.2nm,0.3s,baz=356,slow=16,SNR=11						
	2.4nm,0.3s						
WRA	**Warramunga Arr**	**14.75**	**142**	Pn	Pn	21 08 21.1	-0.1
	0.6nm,0.3s,baz=320,slow=34,SNR=15						
WRA				Sn	Sn	21 10 57.1	-8.5
	0.3nm,0.3s,baz=316,slow=24,SNR=6.0						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**17.52**	**151**	P	P	21 08 58.5	+0.2
	0.3nm,0.3s,baz=325,slow=12,SNR=14						
ASAR				S	Sn	21 12 03.3	-10
	0.6nm,1.0s,baz=331,slow=30,SNR=2.7						
	0.9nm,0.6s						
PMG	**Port Moresby**	**22.15**	**94**	LR	LR	21 19 06.1	
	comp=Z,61nm,19.2s,baz=96,slow=39						
MKAR	**Makanchi Array**	**66.67**	**330**	P	P	21 15 43.8	-0.1
	0.1nm,0.4s,baz=115,slow=8.3,SNR=4.3						
	0.1nm,0.4s						

*IDC **18** 21:13:13.1±1.4, 5°.90S×128°.86E, h260km±20km, mb3.2/2, mbtmp4.0/7, Error ellipse: s-maj=28.3km s-min=14.6km az=101.0*

ISC 18 21:13:12.4±0.8, 6°.06S±0°.07×128°.8E±0°.1, h264km, n7, σ3ŝ06/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.70**	**25**	P	**Pn**	**21 14 37.8**	**+0.7**
	8.7nm,0.3s,baz=216,slow=19,SNR=29						
SIJI				S	**S**	**21 15 41.4**	**-3.7**
	20nm,0.2s,baz=217,slow=20,SNR=22						
BATI	**Baumata**	**6.58**	**231**	P	**Pn**	**21 14 50.0**	**+2.0**
	19nm,0.3s,baz=86,slow=5.6,SNR=14						
BATI				S	**S**	**21 16 00.1**	**-4.8**
	9.7nm,0.4s,baz=98,slow=7.1,SNR=2.4						
FITZ	**Fitzroy Crossi**	**12.37**	**194**	P	**P**	**21 16 03.0**	**+0.7**
	1.5nm,0.4s,baz=20,slow=12,SNR=11						
FITZ				S	**S**	**21 18 16.8**	**-1.1**
	1.9nm,0.7s,baz=13,slow=16,SNR=1.9						
WRA	**Warramunga Arr**	**14.80**	**159**	P	**Pn**	**21 16 30.1**	**+0.3**
	0.9nm,0.4s,baz=340,slow=11,SNR=14						
WRA				S	**S**	**21 19 08.3**	**-4.4**
	0.4nm,0.6s,baz=339,slow=19,SNR=4.6						
ASAR	**Alice Springs**	**18.17**	**165**	P	**Pn**	**21 17 07.7**	**-1.7**
	4.3nm,0.6s,baz=345,slow=11,SNR=53						
ASAR				S	**S**	**21 20 18.2**	**-2.1**
	1.0nm,0.9s,baz=348,slow=23,SNR=5.1						
STKA	**Stephens Creek**	**28.32**	**157**	P	**P**	**21 18 45.9**	**+3.9**
	4.3nm,1.0s,baz=332,slow=17,SNR=3.3						
	4.3nm,1.0s						
MKAR	**Makanchi Array**	**66.81**	**327**	P	**P**	**21 23 36.0**	**+0.1**
	0.3nm,0.9s,baz=127,slow=8.0,SNR=1.7						
	0.3nm,0.9s						

*IDC **18** 21:23:08.0±0.8, 39°.00N×27°.76E, h0km, mb3.5/10, mbtmp3.6/17, ML3.4/6, MS3.4/21, Error ellipse: s-maj=15.3km s-min=12.0km az=65.0*

*MED_RC **18** 21:23:09.0±0.4, 39°.09N×27°.82E, h10km, MW4.2/18, Moment Tensor Solution. Mantle waves: s18, c22; Duration: 1ŝ0 Moment tensor: Scale 10¹⁵Nm; Mrr-0.87±.15; Mθθ 0.69±.18; Mφφ 0.18±.15; Mrθ-0.25±.44; Mθφ-2.66±.11; Mφr-0.80±.60; Best double couple: M₀2.86000×10¹⁵ NP1:φs89.00000°, δ69.00000°, λ-166.00000°. NP2:φs354.00000°, δ77.00000°, λ-21.00000°. Principal axes: T 3.1400, Plg5.0000°, Azm43.0000°; N -0.5600, Plg65.0000°, Azm144.0000°; P -2.5800, Plg24.0000°, Azm311.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ISK **18** 21:23:09.0, 39°.11N×27°.80E, h13km, ML4.3/16*

*AFAD **18** 21:23:09.2, 39°.09N×27°.82E, h14km±1km, MW4.2*

*MOS **18** 21:23:09.6±1.0, 39°.20N×27°.88E, h12km, mb4.3/3, Error ellipse: s-maj=9.8km s-min=5.5km az=90.1*

*THE **18** 21:23:11.5, 39°N±2°×2°8E±°, h25km±12km, M3.9/33, MLh3.9/33*

*SOF **18** 21:23:11.4, 39°.4N±0°.1×27°.65E±0°.06, h2km±72km, MD4.2/9*

ISC 18 21:23:09.9±0.8, 39°.10N±0°.01×27°.83E±0°.01, h13km±5km, n233, σ1ŝ35/276, mb3.5/11, MS3.5/11, 24C-19D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.22**	**183**	P	**Pg**	**21 23 14.6**	**-0.2**
AKHS				S	**Sg**	**21 23 18.4**	**+0.4**
AKHS				IAML		21 23 19.0	
	comp=E,6μm,0.7s						
AKS	**Akhisar**	**0.22**	**183**	Pg	**Pg**	**21 23 14.2**	**-0.5**
AKS				Sg	**Sg**	**21 23 18.2**	**+0.2**
SOMA	**Soma-Manisa**	**0.24**	**284**	Pg	**Pg**	**21 23 14.2**	**-0.8**
STEP	**BALIKESIR_Sava**	**0.29**	**343**	P	**Pg**	**21 23 15.3**	**-0.7**
STEP				S	**Sg**	**21 23 19.7**	**-0.3**
STEP				IAML		21 23 20.0	
	comp=E,11μm,0.3s						
STEP				IAML		21 23 20.0	
	comp=N,12μm,0.6s						
GORD	**Gordes-Manisa**	**0.33**	**125**	Pg	**Pg**	**21 23 16.7**	**0.0**
GORD				Sg	**Sb**	**21 23 22.5**	**-0.5**
GOMA	**Golmarmara-Man**	**0.40**	**170**	Pg	**Pg**	**21 23 17.6**	**-0.3**
GOMA				Sg	**Sg**	**21 23 23.9**	**+0.7**
KTTT	**Salihli**	**0.46**	**153**	P	**Pg**	**21 23 18.7**	**-0.4**
KTTT				S	**Sg**	**21 23 25.4**	**+0.2**
KTTT				IAML		21 23 26.0	
	comp=N,1μm,0.6s						
CAMT	**Merkez**	**0.54**	**229**	P	**Pg**	**21 23 20.3**	**-0.1**
CAMT				S	**Sb**	**21 23 28.1**	**-0.7**
CAMT				IAML		21 23 35.0	
	comp=E,7μm,0.6s						
BALB	**Balikesir**	**0.54**	**4**	Pg	**Pg**	**21 23 20.2**	**-0.3**
BALB				Sg	**Sg**	**21 23 28.0**	**+0.3**
ZEDA	**zmir-Bergama**	**0.60**	**257**	P	**Pg**	**21 23 21.4**	**-0.3**
ZEDA				S	**Sg**	**21 23 29.5**	**-0.1**
ZEDA				IAML		21 23 30.0	
	comp=E,6μm,0.3s						
ZEDA				IAML		21 23 30.0	
	comp=N,2μm,0.7s						
BKES	**Balkesir-Mer**	**0.64**	**7**	P	**Pg**	**21 23 21.7**	**-0.6**
BKES				S	**Sb**	**21 23 31.3**	**-0.5**
BKES				IAML		21 23 35.0	
	comp=E,5μm,0.8s						
BKES				IAML		21 23 36.0	
	comp=N,6μm,0.7s						
BALY	**Balya**	**0.66**	**346**	P	**Pg**	**21 23 22.2**	**-0.6**
BALY				S	**Sg**	**21 23 30.5**	**-0.9**
BALY				IAML		21 23 36.0	
	comp=E,1μm,0.3s						
BALY				IAML		21 23 37.0	
	comp=N,10μm,0.2s						
DEMI	**Demirci**	**0.69**	**95**	P	**Pg**	**21 23 23.5**	**+0.1**
DEMI				S	**Sg**	**21 23 31.9**	**-0.7**
DURS	**Dursunbey**	**0.71**	**45**	P	**Pg**	**21 23 22.9**	**-0.8**
DURS				S	**Sn**	**21 23 35.6**	**-1.0**
DURS				IAML		21 23 37.0	
	comp=E,7μm,0.3s						
DURS				IAML		21 23 41.0	
	comp=N,4μm,0.6s						
BUHA	**Balikesir, Bur**	**0.71**	**305**	P	**Pg**	**21 23 23.1**	**-0.5**
BUHA				S	**Sn**	**21 23 35.8**	**-0.6**
BUHA				IAML		21 23 38.0	
	comp=E,3μm,0.2s						
BUHA				IAML		21 23 38.0	
	comp=N,3μm,0.3s						
IZMD	**zmir-Dikili-**	**0.71**	**261**	P	**Pg**	**21 23 23.5**	**-0.2**
IZMD				S	**Sg**	**21 23 33.0**	**-0.2**
IZMD				IAML		21 23 33.0	
	comp=N,6μm,0.8s						
IZMD				IAML		21 23 37.0	
	comp=E,5μm,1.0s						
DKL	**Dikili**	**0.72**	**268**	Pg	**Pg**	**21 23 23.3**	**-0.6**
DKL				Sg	**Sg**	**21 23 33.2**	**-0.2**
YAYO	**Edremit-Balk**	**0.78**	**311**	Pg	**Pg**	**21 23 24.3**	**-0.7**
BLKS	**Balkesir-Sus**	**0.78**	**8**	P	**Pg**	**21 23 24.1**	**-0.9**
BLKS				S	**Sg**	**21 23 34.3**	**-1.0**
BLKS				IAML		21 23 39.0	
	comp=E,5μm,0.4s						
BLKS				IAML		21 23 41.0	
	comp=N,4μm,0.3s						
DST	**Dursunbey**	**0.79**	**50**	Pg	**Pg**	**21 23 24.6**	**-0.7**
MANT	**Manisa**	**0.83**	**137**	P	**Pg**	**21 23 25.5**	**-0.6**
MANT				S	**Sg**	**21 23 37.2**	**+0.2**
MANT			

BAND S Sb 21 23 49.9 -0.1
BAND IAML 21 23 52.0
comp=N,8μm,0.3s
SULTU Buldan 1.28 145 P Pn **21 23 33.5 -0.1**
SULTU S Sg **21 23 51.1 -0.1**
SULTU IAML 21 23 54.0
comp=N,2μm,0.9s
SULTU IAML 21 23 57.0
comp=E,2μm,0.5s
DGB zmir 1.28 216 P Pn **21 23 32.3 -1.2**
DGB S Sg **21 23 51.1 -0.2**
DGB IAML 21 23 52.0
comp=E,6μm,0.9s
DGB IAML 21 23 52.0
comp=N,3μm,0.4s
GDZ Gediz 1.28 90 P Pn **21 23 33.9 +0.2**
GDZ S Sb **21 23 50.7 +0.1**
GDZ IAML 21 23 52.0
comp=E,3μm,0.3s
GDZ IAML 21 23 54.0
comp=N,5μm,0.6s
KUSD Kusadasi-Aydin 1.31 199 Pn Pn **21 23 33.5 -0.5**
ZEYE Izmir, Urla-Ze 1.35 231 P Pn **21 23 33.7 -0.7**
ZEYE S Sg **21 23 53.6 +0.2**
ZEYE IAML 21 24 01.0
comp=N,4μm,0.7s
ZEYE IAML 21 24 01.0
comp=E,2μm,0.4s
ESEN Aydn-Nazilli 1.36 162 P Pn **21 23 34.1 -0.6**
ESEN S Sn **21 23 52.7 +0.1**
ESEN IAML 21 23 58.0
comp=E,2μm,0.4s
ESEN IAML 21 23 59.0
comp=N,882nm,0.3s
EZN Ezine 1.37 302 P Pn **21 23 34.3 -0.5**
EZN S Sb **21 23 52.0 -0.8**
KOCA Canakkale, Ayv 1.37 288 P Pn **21 23 34.3 -0.5**
KOCA S Sb **21 23 52.3 -0.6**
KOCA IAML 21 23 56.0
comp=E,6μm,0.9s
KOCA IAML 21 23 56.0
comp=N,3μm,0.5s
LAPS Lapseki, ANA 1.38 327 P Pn **21 23 34.6 -0.3**
LAPS IAML 21 23 53.0
comp=N,2μm,0.5s
LAPS S Sb **21 23 53.2 -0.1**
AYDN Tasoluk 1.44 178 P Pn **21 23 35.2 -0.5**
AYDN S Sn **21 23 54.6 +0.1**
AYDN IAML 21 24 01.0
comp=E,4μm,1.1s
CNKL anakkale-Mer 1.47 311 P Pn **21 23 36.2 0.0**
GCAM G?zelcaml? 1.48 199 Pn Pn **21 23 36.2 0.0**
GCAM G?zelcaml? 1.48 199 P Pn **21 23 34.8 -1.4**
GCAM S Sg **21 23 57.5 +0.1**
GCAM IAML 21 23 59.0
comp=E,2μm,0.8s
GCAM IAML 21 24 00.0
comp=N,3μm,0.4s
PASA Karahalli, USA 1.50 120 P Pn **21 23 36.7 0.0**
PASA S Sg **21 23 58.4 +0.2**
PASA IAML 21 24 00.0
comp=N,676nm,0.3s
PASA IAML 21 24 03.0
comp=E,647nm,0.3s
SIGR SIGRI 1.54 275 P Pn **21 23 36.5 -0.5**
SIGR S Sn **21 23 56.1 -0.9**
CHOS Chios island 1.56 243 P Pn **21 23 36.9 -0.6**
CHOS S Sn **21 23 57.2 -0.4**
SMG Samos 1.59 210 P Pn **21 23 36.2 -1.7**
SMG S Sb **21 23 59.9 +0.6**
BNAZ Uak-Banaz 1.65 104 P Pb **21 23 39.7 -0.7**
BNAZ S Sg **21 24 02.8 -0.4**
BNAZ IAML 21 24 08.0
comp=E,3μm,0.7s
BNAZ IAML 21 24 08.0
comp=N,4μm,0.5s
DDIM Aydin, Didim 1.71 196 P Pn **21 23 38.4 -0.9**
DDIM S Sg **21 24 04.8 0.0**
DNIZ Denizli-Tavas- 1.75 147 P Pn **21 23 39.4 -0.7**
DNIZ S Sg **21 24 07.3 +1.0**
GADA Gvkgeada 1.85 307 P Pn **21 23 41.2 -0.1**
GADA S Sn **21 24 04.4 -0.1**
YER Yerkesik 2.00 170 P Pn **21 23 42.6 -0.8**
CAVK Edirne/Enez-Ca 2.04 322 ⇑P Pn **21 23 44.3 +0.4**
CAVK ⇑S Sn **21 24 10.5 +1.2**
BODT Bodrum 2.08 192 P Pn **21 23 43.9 -0.6**
ENEZ Enez 2.08 322 P Pn **21 23 44.9 +0.4**
ENEZ S Sn **21 24 10.6 +0.2**
LIA Limnos Island 2.20 292 P Pn **21 23 46.0 -0.2**
SMTH Samothraki Isl 2.24 308 P Pn **21 23 46.6 -0.1**
ALN Alexandroupoli 2.26 323 P Pn **21 23 47.0 0.0**
ISP Isparta 2.47 120*d* *i*P Pn **21 23 50.0 0.0**
SILT Sile 2.48 34 ⇑S Sb **21 24 23.1 -1.6**
SKY Skiros Island 2.56 266 P Pn **21 23 51.5 +0.3**
RDO Rodhopi 2.69 320 P Pn **21 23 53.2 +0.2**
THAS Thassos island 2.83 303 P Pn **21 23 54.2 -0.5**
KARY Karystos 2.87 249 P Pn **21 23 54.7 -0.7**
ARG Arkhangelos 2.89 175 P Pn **21 23 55.9 +0.2**
SAHE Sakarya_HENDEK 2.91 52 ⇑P Pn **21 23 56.4 +0.5**
KYMI Kymi, Euboea I 2.95 262 P Pn **21 23 56.4 -0.1**
AOS Alonnisos 3.07 273 P Pn **21 23 58.6 +0.4**
KDZ Kurdzhali 3.16 324 P Pn **21 23 57.5 -1.9**
KAVA Kavala 3.17 308 P Pn **21 23 59.4 -0.1**
OUR Ouranopolis 3.21 294 P Pn **21 23 59.9 -0.1**
DION Dionisos Attik 3.22 253 P Pn **21 23 59.7 -0.5**
KSL Kastellorizon 3.26 154 P Pn **21 24 01.9 +1.2**
THERA Ancient Thera, 3.31 215 P Pn **21 24 00.4 -1.1**
VLY Voula,Athens 3.40 250 P Pn **21 24 02.7 0.0**
DIM Dimitrovgrad 3.41 330 P Pn **21 24 02.9 +0.1**
DIM Dimitrovgrad 3.41 330 P Pn **21 24 03.2 +0.5**
RZN Rozhen 3.50 319 P Pn **21 24 04.7 +0.4**
RZN Rozhen 3.50 319 P Pn **21 24 04.9 +0.6**
JMB Yambol 3.53 344 P Pn **21 24 05.3 +0.9**
KARP Karpathos 3.59 189 P Pn **21 24 04.9 -0.4**
PLG Polygyros 3.61 292 P Pn **21 24 05.9 +0.3**
NVR Nevrokopi 3.78 308 P Pn **21 24 08.1 +0.2**
SRS Serrai 3.82 303 P Pn **21 24 08.3 -0.2**
PLD Plovdiv 3.84 323 P Pn **21 24 08.8 +0.1**
PLD Plovdiv 3.84 323 P Pn **21 24 09.3 +0.6**
HORT Hortiatis 3.94 294 P Pn **21 24 10.4 +0.3**
LTK Loutraki 3.96 256 P Pn **21 24 10.8 +0.4**
MMB Musomishta 3.96 309 P Pn **21 24 10.7 +0.3**
MMB Musomishta 3.96 309 P Pn **21 24 11.4 +0.9**
ELND Elena 4.10 339 ⇓P Pn **21 24 12.7 +0.3**
NEF NEVSHA 4.18 354 P Pn **21 24 14.1 +0.7**
SZH Strazhitsa 4.39 342 P Pn **21 24 17.0 +0.7**
PGB Panagyurishte 4.39 322 P Pn **21 24 17.1 +0.7**
IDI Anoyia 4.47 213 Pn Pn **21 24 17.3 -0.2**
3.7nm,0.3s,baz=36,slow=13,SNR=20
IDI Sn **Sn 21 25 07.6 -1.8**
4.4nm,0.3s,baz=24,slow=16,SNR=3.8
IDI Lg Lg 21 25 33.4
4.0nm,0.3s,baz=324,slow=19,SNR=5.9
PVL Pavlikeni 4.49 334 P Pn **21 24 18.3 +0.6**
BRTR Keskin Array B 4.54 80 Pn Pn **21 24 19.7 +1.1**
3.1nm,0.3s,baz=255,slow=14,SNR=94
BRTR Sn **Sn 21 25 10.4 -0.8**
3.4nm,0.3s,baz=258,slow=24,SNR=4.9
BRTR Lg Lg 21 25 37.9
1.7nm,0.3s,baz=259,slow=22,SNR=9.2
BRTR LR LR 21 26 20.7
comp=Z,348nm,20.6s,baz=272,slow=42
6.6nm,0.4s
BR131 Keskin Array S 4.54 80*de*P Pn **21 24 19.6 +1.1**
RAZG Razgrad 4.57 348 ⇓P Pn **21 24 19.8 +1.1**
VAY Valandovo 4.60 301 *i* Pn Pn **21 24 20.7 +1.6**
KIRS Kirsehir-Merke 4.74 88 ⇓P Pn **21 24 22.4 +1.3**
MANR Mangalia 4.75 7 ⇑P Pn **21 24 21.8 +0.6**
PLNA Plana 4.75 317 P Pn **21 24 22.7 +1.4**
CIDE Kastamonu/Cide 4.79 53 ⇑P Pn **21 24 22.9 +1.2**
PLVB Pleven 4.92 332 ⇑P Pn **21 24 24.0 +0.5**
ICOR Ion Corvin 5.01 360 ⇑P Pn **21 24 26.0 +1.2**
TIRR Tirgusor 5.37 4 ⇓P Pn **21 24 31.4 +1.7**
TIRR Tirgusor 5.37 4 P Pn **21 24 31.4 +1.7**
SKO Skopje 5.65 303 *i* Pn Pn **21 24 35.6 +2.0**
OHR Ohrid 5.75 293 *i* Pn Pn **21 24 37.7 +2.6**
CFR Carcaliu 6.08 2 ⇑P Pn **21 24 39.9 +0.5**
CFR Carcaliu 6.08 2 P Pn **21 24 39.9 +0.5**
TLCR 6.12 7 ⇓P Pn **21 24 41.4 +1.3**
TLCR 6.12 7 P Pn **21 24 41.3 +1.3**
BOVS Bovan 6.46 316 ⇑P Pn **21 24 45.7 +1.0**
MLR Muntele Rosu 6.54 348 Pn Pn **21 24 47.4 +1.5**
1.7nm,0.3s,baz=218,slow=3.0,SNR=22
MLR Sn **Sn 21 26 00.6 +0.2**
1.3nm,0.3s,baz=176,slow=19,SNR=4.4
MLR Lg Lg 21 26 42.2
0.7nm,0.3s,baz=196,slow=18,SNR=3.4
MLR LR LR 21 26 58.3
comp=Z,120nm,19.5s,baz=330,slow=35
MLR Muntele Rosu 6.54 348 ⇑P Pn **21 24 47.4 +1.5**
VOIR 6.66 343 ⇑P Pn **21 24 48.2 +0.6**
VOIR 6.66 343 P Pn **21 24 48.1 +0.6**
ODBI Odobesti 6.68 355 ⇑P Pn **21 24 49.9 +2.1**
ARR Arges 6.70 340 ⇓P Pn **21 24 49.7 +1.7**
VLDR Vladesti 6.74 1 ⇑P Pn **21 24 50.4 +1.9**
PLOR Plostina 6.80 353 ⇓P Pn **21 24 50.8 +1.4**
PLOR Plostina 6.80 353 P Pn **21 24 50.8 +1.4**
VRI Vrincioaia 6.81 353 ⇑P Pn **21 24 51.4 +1.8**
VRI Vrincioaia 6.81 353 P Pn **21 24 51.3 +1.8**
COVR Voineasa-Covas 6.85 350 ⇓P Pn **21 24 51.4 +1.3**
SEV Sevastopol' 6.97 37 *e*P Pn **21 24 51.5 -0.2**
SEV pmax pmax 21 24 56.5
comp=Z,8.0nm,0.4s
SEV *e*S **Sn 21 26 06.7 -4.1**
SEV smax smax 21 26 08.3
comp=N,16nm,0.3s
SEV smax smax 21 26 08.3
comp=E,2.0nm,0.2s
LOT Lotru 7.02 336 ⇑P Pn **21 24 53.1 +0.6**
TURR Turia 7.08 350 ⇓P Pn **21 24 55.2 +2.0**
DOPR Dopca 7.09 346 ⇓P Pn **21 24 55.2 +1.8**
OZUR 7.15 349 ⇑P Pn **21 24 56.2 +2.0**
YAL Yalta 7.16 39 *e*P Pn **21 24 53.9 -0.4**
YAL pmax pmax 21 24 56.2
comp=Z,8.0nm,0.2s
YAL *e*S **Sn 21 26 11.7 -3.8**
YAL smax smax 21 26 14.5
comp=N,10.0nm,0.4s
YAL smax smax 21 26 14.5
comp=E,28nm,0.3s
TARU Tarkhankut 7.17 28 smax smax 21 26 17.1
comp=E,16nm,0.3s
TARU Tarkhankut 7.17 28 *e*P Pn **21 24 54.7 +0.2**
TARU Tarkhankut 7.17 28 pmax pmax 21 25 03.2
comp=Z,19nm,0.3s
TARU Tarkhankut 7.17 28 *e*S **Sn 21 26 12.6 -3.2**
TARU Tarkhankut 7.17 28 smax smax 21 26 17.1
comp=N,20nm,0.4s
MDVR Moldovita 7.28 323 ⇓P Pn **21 24 55.9 -0.1**
ONER Baraj Valea Uz 7.31 352 ⇑P Pn **21 24 57.8 +1.4**
GZR Gura Zlata 7.32 331 ⇓P Pn **21 24 57.0 +0.4**
GZR Gura Zlata 7.32 331 P Pn **21 24 57.0 +0.4**
ALU Alushta 7.42 39 *e*P Pn **21 24 59.0 +1.1**
ALU pmax pmax 21 25 02.5
comp=Z,6.0nm,0.3s
ALU *e*S **Sn 21 26 17.0 -5.0**
ALU smax smax 21 26 22.4
comp=N,13nm,0.4s
ALU smax smax 21 26 22.4
comp=E,13nm,0.3s
DNZ2 Donuzlav2 7.43 31 *e*P Pn **21 24 58.6 +0.6**
DNZ2 pmax pmax 21 25 02.5
comp=Z,16nm,0.5s
DNZ2 *e*S **Sn 21 26 17.1 -5.1**
DNZ2 smax smax 21 26 25.9
comp=N,16nm,0.3s
DNZ2 smax smax 21 26 25.9
comp=E,24nm,0.3s
TESR Tescani 7.46 354 ⇓P Pn **21 24 59.3 +0.9**
SIM Simferopol' 7.48 37 *e*P Pn **21 24 59.2 +0.4**
SIM *e*S **Sn 21 26 18.5 -5.0**
SIM pmax pmax
comp=Z,26nm,0.7s
SIM smax smax
comp=N,81nm,0.9s
SIM smax smax
comp=E,130nm,1.1s
SIM MLR MLR
comp=Z,149nm,18.0s
SIM Simferopol' 7.48 37 smax smax 21 26 25.5
comp=E,12nm,0.4s
SIM Simferopol' 7.48 37 *e*P Pn **21 24 59.2 +0.4**
SIM Simferopol' 7.48 37 pmax pmax 21 25 03.9
comp=Z,34nm,0.3s
SIM Simferopol' 7.48 37 *e*S **Sn 21 26 18.5 -5.0**
SIM Simferopol' 7.48 37 smax smax 21 26 25.5
comp=N,28nm,0.4s
SUDU Sudak 7.87 40 *e*P Pn **21 25 04.6 +0.6**
SUDU pmax pmax 21 25 11.2
comp=Z,5.0nm,0.2s
SUDU *e*S **Sn 21 26 28.8 -4.1**
SUDU smax smax 21 26 36.3
comp=N,36nm,0.3s
SUDU smax smax 21 26 36.3
comp=E,19nm,0.4s
BZS Buzias 7.97 327 ⇑P Pn **21 25 05.8 +0.3**
BZS Buzias 7.97 327 P Pn **21 25 05.7 +0.3**
FEO Feodosiya 8.16 41 smax smax 21 26 42.0
comp=N,12nm,0.4s
FEO Feodosiya 8.16 41 *e*S **Sn 21 26 36.5 -3.5**
FEO Feodosiya 8.16 41 smax smax 21 26 41.9
comp=E,15nm,0.4s
MARR Marisel-Cluj 8.32 337 ⇑P Pn **21 25 12.0 +1.6**
DRGR 8.55 336 ⇑P Pn **21 25 14.4 +0.9**
DRGR 8.55 336 P Pn **21 25 14.4 +0.9**
MMAI Mount Meron Ar 8.63 132 Pn Pn **21 25 13.8 -0.8**
comp=E,1.6nm,0.3s,baz=319,slow=13,SNR=26
MMAI Sn **Sn 21 26 50.4 -1.4**
comp=E,1.0nm,0.3s,baz=331,slow=30,SNR=1.9
MMAI LR LR 21 29 11.9
comp=E,60nm,21.7s,baz=291,slow=42
BURAR Bucovina Array 8.72 348 ⇑P Pn **21 25 17.3 +1.4**
BURAR Bucovina Array 8.72 348 P Pn **21 25 17.2 +1.4**
MORH Mrgy, Hungar 9.81 319 ⇓P Pn **21 25 31.2 +0.6**
SOC Sochi 9.99 60 *e*P Pn **21 25 36.5 +3.3**
SOC *e* 21 27 31.1
SOC MLR MLR
comp=Z,53nm,7.0s
ASF Jabal al Asfar 10.11 130 Pn Pn **21 25 34.5 -0.3**
comp=Z,0.1nm,0.3s,baz=300,slow=20,SNR=1.4
ASF LR LR 21 30 26.2
comp=Z,55nm,21.6s,baz=339,slow=44
comp=Z,0.7nm,0.3s
EIL Elat 11.09 146 Pn Pn **21 25 46.8 -1.4**
comp=Z,0.6nm,0.3s,baz=342,slow=15,SNR=5.3
EIL Sn **Sn 21 27 46.7 -5.5**
comp=Z,0.5nm,0.3s,baz=325,slow=16,SNR=1.7
comp=Z,3.5nm,0.6s
AKASG Malin Array Be 11.64 4 LR LR 21 31 05.2
comp=Z,118nm,19.8s,baz=200,slow=41
AKBB Malin Array Si 11.64 4⇓*e*P Pn **21 25 57.3 +1.6**
AKBB pmax pmax
comp=Z,39nm,5.2s
MODS Modra-Piesok 11.99 324 *e*P Pn **21 26 02.3 +1.7**
MODS Modra-Piesok 11.99 324 *e*PN Pn **21 26 02.3 +1.7**
MODS *e* 21 26 11.6
KBZ Khabaz 12.22 63 LR LR 21 32 22.8
comp=Z,77nm,20.1s,baz=262,slow=45
VRAC Vranov 12.99 325 LR LR 21 30 59.8
comp=Z,117nm,21.9s,baz=171,slow=36
GNI Garni 13.08 80*de*P Pn **21 26 16.4 +0.8**
GNI pmax pmax
comp=Z,16nm,1.7s
GERES GERESS Array B 14.06 318 Pn Pn **21 26 31.7 +2.8**
baz=125,slow=11,SNR=4.0
GERES LR LR 21 32 21.1
comp=Z,150nm,19.1s,baz=65,slow=39
comp=Z,0.4nm,0.6s
VORD Divnogorie 14.35 30 *e*P Pn **21 26 28.6 -4.0**
VORD pmax pmax
comp=Z,4.0nm,0.8s
VSR Storozhevoye 14.49 30 *e*P Pn **21 26 31.8 -2.8**
VSR pmax pmax
comp=Z,10.0nm,1.3s
VORR Voronezh 14.87 29 *e*P Pn **21 26 37.3 -2.5**
VORR pmax pmax
comp=Z,30nm,0.5s
KEST Kesra 15.07 263 Pn P **21 26 50.5 +2.6**
comp=Z,0.2nm,0.3s,baz=35,slow=12,SNR=4.7
KEST LR LR 21 33 23.9
comp=Z,103nm,18.2s,baz=272,slow=41
DAVOX Davos/Dischmat 15.20 306 Pn P **21 26 49.7 +0.3**
comp=Z,0.2nm,0.3s,baz=129,slow=18,SNR=9.5
DAVOX LR LR 21 33 07.3
comp=Z,200nm,21.1s,baz=132,slow=39
LPSR Galich'ya Gora 15.53 26 *e*P Pn **21 26 44.7 -3.8**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VRH Novokhopyorsk 15.54 34 *e*P Pn 21 26 33.5 -15
VRH pmax pmax
comp=Z,7.0nm,0.5s
OBN Obninsk 17.07 17 *e*P Pn **21 27 06.8 -1.2**
OBN pmax pmax
comp=Z,6.0nm,1.0s
BELG Belogornoye 19.09 39 P P **21 27 31.9 -0.2**
comp=Z,0.2nm,0.3s,baz=298,slow=3.1,SNR=5.0
comp=Z,18nm,1.0s
BELG Belogornoye 19.09 39⇑*e*P P **21 27 32.1 0.0**
BELG pmax pmax
comp=Z,4.0nm,1.0s
FINES FINESS Array B 22.39 358 P P **21 28 09.8 +2.0**
comp=Z,3.0nm,0.9s,baz=177,slow=9.7,SNR=3.5
comp=Z,3.0nm,0.9s
FINES FINESS Array B 22.39 358 *e*P P **21 28 11.6 +3.8**
FINES pmax pmax
comp=Z,3.0nm,0.9s
KLMR Klimovskoe 22.97 15 *e*P P **21 28 16.2 +2.4**
KLMR pmax pmax
comp=Z,18nm,1.2s
KIRV Kirov 23.93 28 LR LR 21 37 51.9
comp=Z,140nm,18.1s,baz=161,slow=37
AKTO Aktyubinsk 24.07 52 LR LR 21 41 41.6
comp=Z,101nm,18.7s,baz=186,slow=46
ESDC Sonseca Array 24.52 282 P P **21 28 28.6 -0.5**
comp=Z,1.2nm,1.0s,baz=72,slow=12,SNR=5.0
comp=Z,1.2nm,1.0s
EKA Eskdalemuir Ar 26.28 318 LR LR 21 41 01.7
comp=Z,148nm,21.5s,baz=146,slow=41
ARTI Arti 26.53 39 P P **21 28 47.6 +0.5**
ARTI 21 29 25.2
ARTI S S **21 33 21.1 +0.2**
BVAR Borovoye Array 32.13 50 LR LR 21 44 49.4
comp=Z,73nm,18.4s,baz=294,slow=40
TORD Torodi Ar. Bea 34.67 229 P P **21 29 57.4 -1.9**
comp=Z,0.3nm,0.9s,baz=30,slow=6.2,SNR=4.5
comp=Z,0.3nm,0.9s
KURBB Kurchatov Arra 37.05 55 P P **21 30 20.2 +0.8**
comp=Z,0.2nm,0.3s,baz=278,slow=8.9,SNR=1.5
comp=Z,0.2nm,0.3s
KURK Kurchatov 37.10 55 P P **21 30 20.2 +0.4**
MK31 Makanchi Array 39.90 61⇓*e*P P **21 30 45.1 +1.6**
MKAR Makanchi Array 39.90 61 P P **21 30 44.2 +0.7**
comp=Z,0.5nm,0.7s,baz=276,slow=6.2,SNR=6.0
comp=Z,0.5nm,0.7s
ZALV Zalesovo Beam 40.78 49 P P **21 30 52.6 +2.0**
comp=Z,0.3nm,0.3s,baz=270,slow=7.2,SNR=2.2
ZALV LR LR 21 50 07.9
comp=Z,45nm,18.8s,baz=296,slow=40
comp=Z,0.3nm,0.3s
DGZ Jazzator, Alta 42.83 55⇓*e*P P **21 31 08.0 +0.3**
DGZ pmax pmax
comp=Z,7.0nm,2.7s
DBIC Dimbokro 43.70 231 LR LR 21 50 09.4
comp=Z,28nm,20.9s,baz=320,slow=37
TLY Talaya 52.39 50 LR LR 21 56 11.6
comp=Z,39nm,19.1s,baz=330,slow=38
SONM Songino Array 55.38 53 P P **21 32 45.1 +1.4**
comp=Z,0.2nm,0.8s,baz=290,slow=9.1,SNR=1.3
comp=Z,0.2nm,0.8s
TIXI Tiksi 56.73 22 LR LR 22 00 39.3
comp=Z,74nm,18.7s,baz=346,slow=40
LZDM Lanzhou Array 58.58 67 P P **21 33 09.1 +2.3**
comp=Z,0.4nm,0.3s,baz=300,slow=6.5,SNR=1.5
comp=Z,0.4nm,0.3s
TSUM Tsumeb 58.78 191 LR LR 21 58 57.6
comp=Z,67nm,18.6s,baz=330,slow=37
MA2 Magadan 71.01 27 LR LR 22 09 14.9
comp=Z,48nm,18.9s,baz=334,slow=39
KSRS Korea Array 74.23 55 P P **21 34 47.4 +0.9**
comp=Z,0.8nm,0.7s,baz=267,slow=6.0,SNR=1.9
KSRS LR LR 22 11 10.9
comp=Z,55nm,19.2s,baz=340,slow=39
comp=Z,0.8nm,0.7s
YKA Yellowknife Ar 74.34 343 P P **21 34 45.7 -1.1**
comp=Z,0.1nm,0.3s,baz=24,slow=6.5,SNR=4.3
comp=Z,0.1nm,0.3s
YKA Yellowknife Ar 74.34 343 *e*P P **21 34 50.0 +3.2**

NEIC ***18*** *21:25:02.4±2.0,31.82N±0.01×115.04W±0.02,h6km±5km, ML2.5/38,ML2.7/58(PAS),Error ellipse: s-maj=2.1km s-min=1.5km az=117.0*
ECX ***18*** *21:25:03.7±0.5,31.84N×115.04W,h16km±5km,MD2.5, ML2.7*
PAS ***18*** *21:25:03.3±2.0,31.86N±0.01×115.05W±0.01,h6km±1km, Error ellipse: s-maj=2.8km s-min=1.8km az=111.0*
MEX ***18*** *21:25:05.6±0.8,31.81N×115.03W,h15km±16km,MD3.8*
ISC 18 21:25:01.9±1.0,31.82N±0.02×115.06W±0.02,h17km±8km, n59,σ0s83/86,5C-5D,Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC h m s	ISC
EDOMX	**El Doctor, EDO**	**0.30**	**62**			**Pb 21 25 08.9**	**+0.1**
EDOMX						**Sb 21 25 13.6**	**+0.2**
EDOMX	**El Doctor, EDO**	**0.30**	**62**	⇑*i*P		**Pb 21 25 08.9**	**+0.1**
EDOMX				*i* S		**Sb 21 25 13.6**	**+0.2**
ECBX	**El Chinero**	**0.34**	**179**	⇓*i*P		**Pn 21 25 10.6**	**-1.5**
ECBX				*i* S		**Sb 21 25 16.1**	**+1.5**
ECBX				IAML		21 25 16.6	
	comp=N,297nm,0.2s						
ECBX				⇓*e*		21 25 16.6	
ECBX				IAML		21 25 17.1	
	comp=E,374nm,0.1s						
ECBX				⇓*e*		21 25 17.1	
RITX	**Riito Sonora**	**0.36**	**13**			**Pb 21 25 09.7**	**-0.1**
RITX						**Sb 21 25 15.1**	**0.0**
RITX	**Riito Sonora**	**0.36**	**13**	*e*P		**Pb 21 25 09.7**	**-0.1**
RITX				*i* S		**Sb 21 25 15.1**	**0.0**
RHX	**Rio Hardy**	**0.37**	**329**	⇑*i*P		**Pg 21 25 09.6**	**0.0**
RHX				*i* S		**Sg 21 25 14.4**	**-0.4**
AGSX	**Ej. Aguas Cali**	**0.46**	**349**	*e*P		**Pb 21 25 11.4**	**-0.1**
AGSX				*e*S		**Sg 21 25 18.0**	**+0.6**
GUVIX	**Guadalupe Vict**	**0.49**	**358**			**Pb 21 25 12.1**	**+0.1**
GUVIX						**Sb 21 25 19.4**	**+0.6**
GUVIX	**Guadalupe Vict**	**0.49**	**358**	⇓*i*P		**Pb 21 25 12.1**	**+0.1**
GUVIX				*e*S		**Sb 21 25 19.2**	**+0.4**
ALAMX	**Rancho Alamar**	**0.59**	**289**	⇑*e*P		**Pb 21 25 14.2**	**+0.5**
ALAMX				⇑*e*		21 25 23.6	
ALAMX				IAML		21 25 23.6	
	comp=E,702nm,0.2s						
ALAMX				IAML		21 25 24.0	
	comp=N,538nm,0.3s						
ALAMX				⇓*e*		21 25 24.0	
CPBX	**Cerro Prieto**	**0.64**	**341**			**Pb 21 25 14.9**	**+0.4**
CPBX						**Sg 21 25 23.4**	**+0.4**
CPBX	**Cerro Prieto**	**0.64**	**341**	*e*P		**Pb 21 25 14.7**	**+0.2**
CPBX				*e*S		**Sg 21 25 23.5**	**+0.4**
SLRCX	**San Luis Rio C**	**0.71**	**25**			**Pg 21 25 15.4**	**-0.4**
VTX	**Valle De La Tr**	**0.75**	**236**	Pg		**Pn 21 25 18.1**	**+0.3**
VTX				Sg		**Sn 21 25 28.8**	**0.0**
VTX				IAML		21 25 30.3	
	comp=N,270nm,0.1s						
VTX	**Valle De La Tr**	**0.75**	**236**	*e*P		**Pn 21 25 17.4**	**-0.4**
VTX				*e*S		**Sn 21 25 28.2**	**-0.6**
ESJX	**Sierra Juarez**	**0.78**	**284**	Pg		**Pb 21 25 17.2**	**0.0**
ESJX				Sg		**Sb 21 25 28.8**	**+1.2**
SFX	**San Felipe**	**0.80**	**167**	Pg		**Pn 21 25 18.3**	**0.0**
SFX				Sg		**Sn 21 25 29.6**	**-0.2**
SFX				IAML		21 25 30.7	
	comp=E,287nm,0.5s						
SFX				IAML		21 25 31.1	
	comp=N,220nm,0.2s						
SFX	**San Felipe**	**0.80**	**167**	*e*P		**Pn 21 25 18.1**	**-0.2**
SFX				*e*		21 25 31.0	
SFX				IAML		21 25 31.0	
	comp=E,185nm,0.3s						
SFX				⇑*e*		21 25 31.2	
SFX				IAML		21 25 31.2	
	comp=N,214nm,0.3s						
SFX	**San Felipe**	**0.80**	**167**	*e*P		**Pn 21 25 19.2**	**+0.9**
SFX				*e*S		**Sn 21 25 28.8**	**-0.9**
SPIG	**San Pedro Mart**	**0.84**	**205**			**Pn 21 25 19.4**	**+0.1**
SPIG						**Sn 21 25 30.1**	**-1.4**
SPIG	**San Pedro Mart**	**0.84**	**205**	*e*P		**Pn 21 25 19.4**	**+0.1**
SPIG				*e*S		**Sn 21 25 30.1**	**-1.4**
UABX	**UABC, Campus M**	**0.88**	**338**			**Sn 21 25 32.2**	**+0.4**
EMSC	**East Mesa**	**0.92**	**4**			**Pg 21 25 19.3**	**-0.6**
EMSC						**Sg 21 25 32.1**	**+0.1**
SGL	**Mount Signal**	**1.01**	**326**			**Pb 21 25 21.1**	**+0.2**
COA	**Coachella**	**1.05**	**357**			**Pb 21 25 19.9**	**-1.7**
COA						**Sg 21 25 36.1**	**+0.2**

WESC	**Westside Schoo**	**1.10**	**329**			**Sn**	**21 25 38.8**	**+1.5**
YUH2	**Yuha Desert**	**1.11**	**319**	*eP*		**Pb**	**21 25 22.7**	**+0.1**
YUH	**Yuha Desert**	**1.11**	**319**			**Pb**	**21 25 22.8**	**+0.2**
YUH	**Yuha Desert**	**1.11**	**319**	Pg		**Pb**	**21 25 22.5**	**-0.1**
YUH				IAML			21 25 38.2	
	comp=N,113nm,0.1s							
YUH				IAML			21 25 39.1	
	comp=E,105nm,0.1s							
RUN	**Ruthven**	**1.16**	**3**			**Pn**	**21 25 21.2**	**-2.0**
RUN						**Sb**	**21 25 37.7**	**-0.4**
RMX	**La Rumorosa**	**1.17**	**312**			**Pb**	**21 25 22.9**	**-0.8**
RMX						**Sb**	**21 25 37.0**	**-1.6**
COK2	**Cook Ranch 2**	**1.18**	**331**			**Pg**	**21 25 24.2**	**-0.4**
COK2						**Sg**	**21 25 40.9**	**+0.8**
IKP	**In-Ko-Pah, Jac**	**1.22**	**313**			**Pn**	**21 25 24.4**	**+0.2**
IKP						**Sb**	**21 25 40.6**	**+0.6**
GLA	**Glamis**	**1.25**	**9**			**Pn**	**21 25 22.8**	**-1.8**
GLA	**Glamis**	**1.25**	**9**	IAML			21 25 41.1	
	comp=N,137nm,0.3s							
GLA				IAML			21 25 42.1	
	comp=E,122nm,0.3s							
SWSC	**Sam W. Stewart**	**1.29**	**331**			**Pg**	**21 25 26.6**	**-0.3**
CRR	**Carrizo Plain**	**1.32**	**324**			**Pb**	**21 25 26.6**	**+0.5**
CRR						**Sn**	**21 25 43.7**	**+1.1**
113A	**Mohawk Valley,**	**1.45**	**49**			**Pg**	**21 25 30.1**	**+0.3**
113A				IAML			21 25 46.1	
	comp=N,72nm,0.2s							
113A				IAML			21 25 53.7	
	comp=E,53nm,0.4s							
CBX	**Cerro Bola**	**1.45**	**290**			**Sn**	**21 25 45.9**	**-0.2**
CBX	**Cerro Bola**	**1.45**	**290**			**Pg**	**21 25 29.5**	**-0.4**
CBX				IAML			21 25 52.3	
	comp=N,106nm,0.5s							
CBX	**Cerro Bola**	**1.45**	**290**	*eP*		**Pn**	**21 25 27.4**	**0.0**
CBX				*eS*		**Sn**	**21 25 45.9**	**-0.2**
TJIG	**Tijuana**	**1.50**	**295**			**Pb**	**21 25 29.5**	**+0.2**
TJIG						**Sn**	**21 25 46.7**	**-0.6**
TJIG	**Tijuana**	**1.50**	**295**	*eP*		**Pb**	**21 25 29.5**	**+0.2**
TJIG				*eS*		**Sn**	**21 25 46.7**	**-0.6**
BAR	**Barrett**	**1.62**	**303**			**Pn**	**21 25 29.4**	**-0.3**
BAR	**Barrett**	**1.62**	**303**	Pn		**Pb**	**21 25 31.8**	**+0.5**
BAR				IAML			21 25 53.4	
	comp=E,128nm,0.2s							
BAR				IAML			21 25 53.6	
	comp=N,147nm,0.2s							
DUZA	**Dulzura**	**1.66**	**299**			**Pn**	**21 25 30.1**	**-0.1**
BORC	**Borrego Spring**	**1.85**	**322**	Pn		**Pb**	**21 25 35.5**	**+0.2**
BORC				IAML			21 26 01.9	
	comp=E,22nm,0.3s							
BC3	**Big Chuckawall**	**1.86**	**350**	Pn		**Pb**	**21 25 35.3**	**-0.3**
214A	**Organ Pipe Nat**	**1.92**	**85**	Pn		**Pb**	**21 25 36.7**	**+0.3**
214A				IAML			21 26 03.3	
	comp=N,25nm,0.3s							
214A				IAML			21 26 04.3	
	comp=E,23nm,0.2s							
BLYC	**Blythe**	**1.98**	**13**	Pn		**Pb**	**21 25 36.8**	**-0.7**
DPP	**Dos Picos Cty**	**1.98**	**307**	Pn		**Pb**	**21 25 37.5**	**-0.1**
DPP				IAML			21 26 04.5	
	comp=E,62nm,0.3s							
DPP				IAML			21 26 05.2	
	comp=N,41nm,0.2s							
PMD	**Palm Desert**	**2.14**	**329**	Pn		**Pb**	**21 25 39.0**	**-1.2**
PLM	**Palomar**	**2.16**	**316**			**Pg**	**21 25 42.3**	**-1.1**
DNR	**Dunn Ranch,Anz**	**2.19**	**323**	Pn		**Pb**	**21 25 40.1**	**-1.1**
DNR				IAML			21 26 13.5	
	comp=N,45nm,0.4s							
DNR				IAML			21 26 15.0	
	comp=E,48nm,0.5s							
IRM	**Iron Mountain**	**2.34**	**358**	Pn		**Pb**	**21 25 42.3**	**-1.2**
ELS	**Elsinore Mount**	**2.71**	**313**	Pn		**Pn**	**21 25 47.3**	**+2.6**
ELS				IAML			21 26 28.6	
	comp=E,12nm,0.5s							
ELS				IAML			21 26 32.7	
	comp=N,10nm,0.5s							
Y14A	**Wickenburg**	**2.73**	**39**	Pn		**Pn**	**21 25 47.7**	**+2.7**
W13A	**Hualapai Mount**	**3.42**	**16**	Pn		**Pn**	**21 25 54.1**	**-0.5**
U15A	**North Rim**	**5.14**	**26**	Pn		**Pn**	**21 26 19.5**	**+1.2**

*SJA **18** 21:26:55.9±0.7,24.˝15S×67.˝00W,h206km±6km, ML3.5, MW3.4*
*GUC **18** 21:26:58.5±0.7,24.˝12S×67.˝36W,h222km±9km, ML3.6*
*IDC **18** 21:27:04.8±10.0,23.˝45S×66.˝33W,h213km±79km, mb2.9/1, mbtmp3.7/2, Error ellipse: s-maj=133.7km s-min=81.8km az=49.0.*

ISC 18 21:26:56.8±1.0,**24.˝18S**±0.˝04×**67.˝04W**±0.˝05,**h204**km±9km, **n36,σ1ş60/62,6C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALTA			**0.64**	**94**	*eP*		**Pn**	**21 27 25.0**	**-0.6**
SLA	**San Lorenzo**		**1.50**	**111**	*eP*		**Pn**	**21 27 31.3**	**+0.2**
AF01	**San Pedro de A**		**1.60**	**319**	*eP*		**Pn**	**21 27 34.5**	**+2.3**
AF01					*eS*		**S**	**21 28 03.5**	**+4.4**
AF01					IAML			21 28 18.5	
	comp=Z,132nm,0.3s								
HJA	**Humahuaca**		**1.78**	**58**	*eP*		**Pn**	**21 27 32.4**	**-1.5**
FSA	**Cafayete**		**2.15**	**154**	*eP*		**Pn**	**21 27 37.3**	**-0.1**
GO02	**Mina Guanaco**		**2.52**	**247**	⇑*iP*		**Pn**	**21 27 41.8**	**+0.4**
GO02					*i S*		**S**	**21 28 15.3**	**-0.3**
GO02					IAML			21 28 16.5	
	comp=E,249nm,0.2s								
GO02	**Mina Guanaco**		**2.52**	**247**	*eP*		**Pn**	**21 27 41.9**	**+0.4**
GO02					*eS*		**S**	**21 28 15.7**	**0.0**
GO02					IAML			21 28 16.4	
	comp=Z,178nm,0.3s								
PB06	**IPOC Station P**		**2.75**	**302**	⇑*iP*		**Pn**	**21 27 44.2**	**+0.2**
PB06					*eS*		**S**	**21 28 18.2**	**-1.8**
PB06					IAML			21 28 20.8	
	comp=E,198nm,0.2s								
PB06	**IPOC Station P**		**2.75**	**302**	*eP*		**Pn**	**21 27 44.1**	**+0.2**
PB06					*eS*		**S**	**21 28 19.2**	**-0.8**
PB06					IAML			21 28 22.4	
	comp=Z,189nm,0.3s								
AHML	**Horco Molle**		**3.02**	**150**	*eP*		**Pn**	**21 27 45.8**	**-1.1**
AHML					*eS*		**S**	**21 28 22.4**	**-3.3**
PB14	**IPOC Station P**		**3.10**	**261**	*eP*		**Pn**	**21 27 47.9**	**-0.2**
PB14					*i S*		**S**	**21 28 25.2**	**-2.4**
PB14					IAML			21 28 26.4	
	comp=E,67nm,0.5s								
PB14	**IPOC Station P**		**3.10**	**261**	*eP*		**Pn**	**21 27 48.1**	**0.0**
PB14					*eS*		**S**	**21 28 25.8**	**-1.8**
PB14					IAML			21 28 27.7	
	comp=Z,61nm,0.4s								
PB09	**IPOC Station P**		**3.12**	**319**	⇑*iP*		**Pn**	**21 27 48.8**	**+0.5**
PB09					*i S*		**S**	**21 28 26.9**	**-1.0**
PB09					IAML			21 28 31.3	
	comp=N,57nm,0.4s								
PB09	**IPOC Station P**		**3.12**	**319**	*eP*		**Pn**	**21 27 48.8**	**+0.5**
PB09					*eS*		**S**	**21 28 27.9**	**0.0**
PB09					IAML			21 28 31.9	
	comp=Z,53nm,0.4s								
PB05	**IPOC Station P**		**3.19**	**294**	⇑*iP*		**Pn**	**21 27 48.8**	**-0.2**
PB05					*i S*		**S**	**21 28 26.0**	**-3.1**
PB05					IAML			21 28 29.5	
	comp=N,78nm,0.3s								
PB05	**IPOC Station P**		**3.19**	**294**	*eP*		**Pn**	**21 27 49.0**	**0.0**
PB05					*eS*		**S**	**21 28 28.9**	**-0.2**
PB05					IAML			21 28 34.2	
	comp=Z,57nm,0.5s								
AC02	**Maricunga**		**3.25**	**215**	*eP*		**Pn**	**21 27 51.0**	**+0.9**
AC02					*eS*		**S**	**21 28 31.2**	**-0.1**
PB03	**IPOC Station P**		**3.27**	**310**	⇑*iP*		**Pn**	**21 27 49.9**	**-0.2**
PB03					*eS*		**S**	**21 28 28.5**	**-2.7**
PB03	**IPOC Station P**		**3.27**	**310**	*eP*		**Pn**	**21 27 50.0**	**-0.1**
PB03					*eS*		**S**	**21 28 30.0**	**-1.1**
PB03					IAML			21 28 32.3	
	comp=Z,134nm,0.3s								
PB10	**IPOC Station P**		**3.28**	**281**	*eP*		**Pn**	**21 27 50.3**	**+0.3**
PB10					*eS*		**S**	**21 28 28.2**	**-2.8**
PB10					IAML			21 28 34.5	
	comp=E,76nm,0.6s								
PB10	**IPOC Station P**		**3.28**	**281**	*eP*		**Pn**	**21 27 50.5**	**+0.5**
PB10					*eS*		**S**	**21 28 30.4**	**-0.6**
PB10					IAML			21 28 32.2	
	comp=Z,56nm,0.5s								
PB07	**IPOC Station P**		**3.58**	**312**	⇑*iP*		**Pn**	**21 27 53.5**	**-0.3**
PB07					*i S*		**S**	**21 28 34.8**	**-3.0**
PB07	**IPOC Station P**		**3.58**	**312**	*eP*		**Pn**	**21 27 53.6**	**-0.3**
PB07					*eS*		**S**	**21 28 36.5**	**-1.4**
PB07					IAML			21 28 38.5	
	comp=Z,85nm,0.6s								
AC01	**Pan de Azucar**		**3.77**	**238**	*eP*		**Pn**	**21 27 55.2**	**-0.7**
AC01					*eS*		**S**	**21 28 40.5**	**-1.3**
AC01					IAML			21 28 43.1	
	comp=Z,27nm,0.3s								
PB01	**IPOC Station P**		**3.85**	**324**	*eP*		**Pn**	**21 27 56.4**	**-0.6**
PB01	**IPOC Station P**		**3.85**	**324**	*eP*		**Pn**	**21 27 56.6**	**-0.5**
PB01					*eS*		**S**	**21 28 42.9**	**-0.8**
PB01					IAML			21 28 45.2	
	comp=Z,46nm,0.2s								
PB02	**IPOC Station P**		**3.88**	**317**	*eP*		**Pn**	**21 27 56.7**	**-0.7**
PB02	**IPOC Station P**		**3.88**	**317**	*eP*		**Pn**	**21 27 56.9**	**-0.5**
PB02					*eS*		**S**	**21 28 43.4**	**-0.9**
PB02					IAML			21 28 49.9	
	comp=Z,120nm,0.3s								
TINO	**Tinogasta**		**3.90**	**187**	*eP*		**Pn**	**21 27 53.9**	**-3.7**
TINO					*eS*		S	21 28 25.6	-19
PB08	**IPOC Station P**		**4.47**	**334**	*eP*		**Pn**	**21 28 05.3**	**+0.3**
PB08					*eS*		**S**	**21 28 57.8**	**-0.3**
PB08					IAML			21 29 02.7	
	comp=Z,30nm,0.4s								
GO01	**Chusmiza**		**4.91**	**336**	*eP*		**Pn**	**21 28 10.5**	**-0.2**
GO01					*eS*		**S**	**21 29 08.7**	**+0.3**
GO01					IAML			21 29 10.9	
	comp=Z,17nm,0.8s								
PB11	**IPOC Station P**		**5.02**	**331**	*eS*		**S**	**21 29 08.2**	**-2.2**
PB11					IAML			21 29 12.8	
	comp=Z,30nm,0.4s								
ACLC	**CERRO LA CRUZ**		**5.23**	**179**	*eP*		**Pn**	**21 28 14.6**	**+0.2**
ACLC					*eS*		**S**	**21 29 15.2**	**-0.1**
LPAZ	**La Paz**		**7.91**	**352**	P		**Pn**	**21 28 49.9**	**+0.3**
	comp=Z,4.1nm,0.4s,baz=172,slow=8.4,SNR=14								
LPAZ					*S*		**S**	**21 30 14.1**	**-5.2**
	comp=Z,1.4nm,0.3s,baz=152,slow=2.4,SNR=1.6								
TORD	**Torodi Ar. Bea**		**76.67**	**69**	P		**P**	**21 38 27.9**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=235,slow=5.3,SNR=1.4								
	comp=Z,0.2nm,0.5s								
MKAR	**Makanchi Array**		**146.69**	**40**	PKPbc		**PKiKP**	**21 46 17.7**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=303,slow=3.5,SNR=7.4								

*SJA **18** 21:41:37.8±0.7,20.˝76S×69.˝34W,h97km±5km, ML4.5, MW4.4*
*IDC **18** 21:41:39.8±0.7,20.˝76S×69.˝15W,h90km±5km, mb3.7/9, mbtmp4.1/13, MS3.5/5, Error ellipse: s-maj=20.2km s-min=16.2km az=38.0*
*NEIC **18** 21:41:39.5±1.4,20.˝77S±0.˝03×69.˝32W±0.˝05,h86km±4km, mb4.5/23, Mwr4.5/31, Mwr4.5(GUC), Error ellipse: s-maj=7.5km s-min=4.1km az=95.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=4.72; $M_{\theta\theta}$=-0.88; $M_{\phi\phi}$5.60; $M_{r\theta}$=4.17; $M_{r\phi}$=-0.47; $M_{\theta\phi}$-0.56; Fault plane solution: M_o6.72000×10^{15} NP1:ϕ_s204.88000°, δ55.21000°, λ-48.80000°. NP2:ϕ_s327.97000°, δ51.84000°, λ-133.47000°. Principal axes: T 5.6473, Plg2.0000°, Azm267.0000°; N 1.7846, Plg33.0000°, Azm358.0000°; P -7.4319, Plg57.0000°, Azm174.0000°;'*
*GUC **18** 21:41:39.9±0.7,20.˝75S×69.˝32W,h87km±2km, ML4.7*
*NEIC **18** 21:41:39.5,20.˝77S×69.˝32W,h86km*
*VAO **18** 21:41:40.4±0.8,20.˝68S×69.˝14W,h91km±5km, mb4.8, Presumed earthquake*

ISC 18 21:41:38.8±0.5,**20.˝76S**±0.˝02×**69.˝35W**±0.˝04,**h88**km±4km, **n161,σ1ş48/194,mb4.4/13,7C-5D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**		**0.31**	**204**	Pn		**Pn**	**21 41 52.7**	**+0.5**
PB01					Sn		**Sn**	**21 42 02.5**	**+0.3**
PB01	**IPOC Station P**		**0.31**	**204**	⇓*iP*		**Pn**	**21 41 52.7**	**+0.5**
PB01					*i S*		**Sn**	**21 42 02.7**	**+0.5**
PB01					IAML			21 42 03.3	
	comp=E,98μm,0.2s								
PB01	**IPOC Station P**		**0.31**	**204**	*eP*		**Pn**	**21 41 52.7**	**+0.5**
PB01					IAML			21 42 04.6	
	comp=Z,31μm,0.2s								
PB08	**IPOC Station P**		**0.64**	**17**	Pn		**Pn**	**21 41 55.3**	**+0.2**
PB08					Sn		**Sn**	**21 42 07.5**	**+0.5**
PB08	**IPOC Station P**		**0.64**	**17**	⇓*iP*		**Pn**	**21 41 55.7**	**+0.7**
PB08					*i S*		**Sn**	**21 42 07.9**	**+0.9**
PB08	**IPOC Station P**		**0.64**	**17**	*eP*		**Pn**	**21 41 55.7**	**+0.7**
PB08					IAML			21 42 11.4	
	comp=Z,7μm,0.1s								
HMBC	**Humberstone**		**0.69**	**313**	Pn		**Pn**	**21 41 55.9**	**+0.7**
HMBC					Sn		**Sn**	**21 42 08.3**	**+0.8**
HMBC	**Humberstone**		**0.69**	**313**	⇓*iP*		**Pn**	**21 41 55.9**	**+0.7**
HMBC					*i S*		**Sn**	**21 42 08.4**	**+0.9**
PB02	**IPOC Station P**		**0.76**	**222**	Pn		**Pn**	**21 41 56.8**	**+0.9**
PB02					Sn		**Sn**	**21 42 09.8**	**+1.2**
PB02	**IPOC Station P**		**0.76**	**222**	⇑*iP*		**Pn**	**21 41 56.8**	**+0.9**
PB02					*eS*		**Sn**	**21 42 09.7**	**+1.1**
PB02					IAML			21 42 12.3	
	comp=E,44μm,0.6s								
PB02	**IPOC Station P**		**0.76**	**222**	*eP*		**Pn**	**21 41 56.8**	**+0.9**
PB02					IAML			21 42 13.7	
	comp=Z,24μm,0.6s								
TA02	**Huaiquique**		**0.88**	**303**	*eP*		**Pn**	**21 41 57.8**	**+0.8**
TA02					*eS*		**Sn**	**21 42 11.1**	**+0.5**
TA02	**Huaiquique**		**0.88**	**303**	*eP*		**Pn**	**21 41 57.9**	**+0.8**
TA02					*eS*		**Sn**	**21 42 12.1**	**+1.5**
PB11	**IPOC Station P**		**1.03**	**344**	Pn		**Pn**	**21 41 59.6**	**+0.6**
PB11					Sn		**Sn**	**21 42 15.2**	**+1.2**
PB11	**IPOC Station P**		**1.03**	**344**	⇓*iP*		**Pn**	**21 41 59.7**	**+0.8**
PB11					*eS*		**Sn**	**21 42 14.3**	**+0.3**
PB11					IAML			21 42 16.8	
	comp=N,21μm,0.6s								
PB11	**IPOC Station P**		**1.03**	**344**	*eP*		**Pn**	**21 41 59.0**	**+0.1**
PB11					IAML			21 42 19.4	
	comp=Z,6μm,0.2s								
PB09	**IPOC Station P**		**1.04**	**174**	Pn		**Pn**	**21 41 60.0**	**+1.0**
PB09					Sn		**Sn**	**21 42 14.8**	**+0.6**
PB09	**IPOC Station P**		**1.04**	**174**	⇑*iP*		**Pn**	**21 42 00.1**	**+1.0**
PB09					*i S*		**Sn**	**21 42 15.5**	**+1.3**
PB09	**IPOC Station P**		**1.04**	**174**	*eP*		**Pn**	**21 41 59.4**	**+0.4**
PB09					IAML			21 42 18.0	
	comp=Z,9μm,0.5s								
PB07	**IPOC Station P**		**1.09**	**207**	Pn		**Pn**	**21 42 00.3**	**+0.7**
PB07					Sn		**Sn**	**21 42 15.7**	**+0.6**
PB07	**IPOC Station P**		**1.09**	**207**	⇑*iP*		**Pn**	**21 42 00.3**	**+0.7**
PB07					*i S*		**Sn**	**21 42 16.0**	**+0.9**
PB07	**IPOC Station P**		**1.09**	**207**	*eP*		**Pn**	**21 41 59.6**	**+0.1**
PB07					IAML			21 42 17.8	
	comp=Z,7μm,0.6s								
GO01	**Chusmiza**		**1.09**	**8**	Pn		**Pn**	**21 42 01.0**	**+1.0**
GO01					Sn		**Sn**	**21 42 16.9**	**+1.2**
GO01	**Chusmiza**		**1.09**	**8**	*eP*		**Pn**	**21 42 00.8**	**+0.9**
GO01					*eS*		**Sn**	**21 42 16.9**	**+1.2**
GO01					IAML			21 42 19.9	
	comp=N,32μm,0.1s								
GO01	**Chusmiza**		**1.09**	**8**	*eP*		**Pn**	**21 42 00.9**	**+0.9**
GO01					*eS*		**Sn**	**21 42 17.6**	**+1.8**
GO01					IAML			21 42 20.1	
	comp=Z,5μm,0.3s								
PB03	**IPOC Station P**		**1.34**	**196**	Pn		**Pn**	**21 42 03.1**	**+0.5**
PB03	**IPOC Station P**		**1.34**	**196**	⇑*iP*		**Pn**	**21 42 03.4**	**+0.8**
PB03					*i S*		**Sn**	**21 42 21.0**	**+0.5**
PB03	**IPOC Station P**		**1.34**	**196**	*eP*		**Pn**	**21 42 03.4**	**+0.8**
PB03					IAML			21 42 25.4	
	comp=Z,5μm,0.6s								
PB06	**IPOC Station P**		**1.95**	**186**	Pn		**Pn**	**21 42 11.0**	**+0.5**
PB06	**IPOC Station P**		**1.95**	**186**	⇑*iP*		**Pn**	**21 42 10.9**	**+0.5**
PB06					*i S*		**Sn**	**21 42 33.5**	**-1.1**
PB06					IAML			21 42 39.9	
	comp=N,4μm,0.5s								
PB06	**IPOC Station P**		**1.95**	**186**	*eP*		**Pn**	**21 42 11.1**	**+0.6**
PB06					*eS*		**Sn**	**21 42 37.3**	**+2.8**
PB06					IAML			21 42 38.2	
	comp=Z,2μm,1.2s								
PX02	**IPOC Station P**		**1.96**	**336**	*eP*		**Pn**	**21 42 10.4**	**-0.1**
PX02					*eS*		**Sn**	**21 42 34.1**	**-0.5**
PB05	**IPOC Station P**		**2.23**	**201**	Pn		**Pn**	**21 42 14.5**	**+0.3**
PB05	**IPOC Station P**		**2.23**	**201**	⇑*iP*		**Pn**	**21 42 14.1**	**-0.1**
PB05					*i S*		**Sn**	**21 42 38.9**	**-2.2**
PB05					IAML			21 42 50.2	
	comp=N,3μm,0.7s								
PB05	**IPOC Station P**		**2.23**	**201**	*eP*		**Pn**	**21 42 14.4**	**+0.3**
PB05					*eS*		**Sn**	**21 42 37.1**	**-4.0**
PB05					IAML			21 42 47.6	
	comp=Z,2μm,1.0s								
PB12	**IPOC Station P**		**2.32**	**336**	Pn		**Pn**	**21 42 15.6**	**+0.3**
PB12	**IPOC Station P**		**2.32**	**336**	*eP*		**Pn**	**21 42 15.8**	**+0.4**
PB12					*eS*		**Sn**	**21 42 43.8**	**+0.6**
PB12					IAML			21 42 50.1	
	comp=E,3μm,0.5s								
PB12	**IPOC Station P**		**2.32**	**336**	*eP*		**Pn**	**21 42 15.9**	**+0.6**
PB12					*eS*		**Sn**	**21 42 39.4**	**-3.8**
PB12					IAML			21 42 49.8	
	comp=Z,2μm,0.6s								
PB16	**IPOC Station P**		**2.41**	**356**	Pn		**Pn**	**21 42 19.3**	**+2.3**
PB16	**IPOC Station P**		**2.41**	**356**	⇑*iP*		**Pn**	**21 42 19.1**	**+2.1**
PB16					*i S*		**Sn**	**21 42 48.1**	**+2.0**
PB16					IAML			21 42 55.3	
	comp=E,3μm,0.4s								
PB16	**IPOC Station P**		**2.41**	**356**	*eP*		**Pn**	**21 42 19.2**	**+2.1**
PB16					*eS*		**Sn**	**21 42 45.3**	**-0.8**
PB16					IAML			21 42 54.2	
	comp=Z,1μm,0.8s								
AF01	**San Pedro de A**		**2.44**	**154**	Pn		**Pn**	**21 42 19.2**	**+2.1**
AF01	**San Pedro de A**		**2.44**	**154**	*eP*		**Pn**	**21 42 19.6**	**+2.5**
AF01	**San Pedro de A**		**2.44**	**154**	*eP*		**Pn**	**21 42 20.8**	**+3.7**
AF01					IAML			21 43 14.0	
	comp=Z,4μm,0.7s								
AP01	**Chacalluta**		**2.55**	**338**	Pn		**Pn**	**21 42 19.2**	**+0.9**
AP01	**Chacalluta**		**2.55**	**338**	*eP*		**Pn**	**21 42 18.7**	**+0.4**
AP01	**Chacalluta**		**2.55**	**338**	*eP*		**Pn**	**21 42 19.7**	**+1.4**
AP01					*eS*		Sn	21 42 38.0	-10
AP01					IAML			21 42 59.6	
	comp=Z,3μm,1.1s								
PB10	**IPOC Station P**		**2.96**	**202**	Pn		**Pn**	**21 42 24.1**	**+0.3**
PB10	**IPOC Station P**		**2.96**	**202**	*eP*		**Pn**	**21 42 23.2**	**-0.6**
PB10					*i S*		**Sn**	**21 42 58.3**	**-0.1**
PB10	**IPOC Station P**		**2.96**	**202**	*eP*		**Pn**	**21 42 24.2**	**+0.4**
PB10					*eS*		**Sn**	**21 43 01.3**	**+2.9**
PB10					IAML			21 43 13.8	
	comp=Z,804nm,0.9s								
PB18	**Visviri**		**3.15**	**358**	Pn		**Pn**	**21 42 30.4**	**+3.5**
PB18	**Visviri**		**3.15**	**358**	*eP*		**Pn**	**21 42 30.3**	**+3.4**
YJA	**Yavi**		**3.84**	**112**	*eP*		**Pn**	**21 42 39.0**	**+2.9**
PB14	**IPOC Station P**		**3.97**	**194**	*eP*		**Pn**	**21 42 36.9**	**-0.9**
PB14					*eS*		**Sn**	**21 43 27.6**	**+4.3**
PB14					IAML			21 43 46.3	
	comp=Z,562nm,0.5s								
GO02	**Mina Guanaco**		**4.39**	**183**	Pn		**Pn**	**21 42 43.2**	**-0.2**
GO02	**Mina Guanaco**		**4.39**	**183**	*eP*		**Pn**	**21 42 43.5**	**+0.1**
GO02					*eS*		Sn	21 43 47.8	+14
GO02					IAML			21 44 10.8	
	comp=Z,759nm,0.7s								
HJA	**Humahuaca**		**4.40**	**124**	*eP*		Pn	21 42 47.1	+3.6
SALTA			**4.43**	**142**	*eP*		**Pn**	**21 42 47.3**	**+3.1**
SALTA					*eP*			21 42 53.8	
LPAZ	**La Paz**		**4.59**	**15**	P		**Pn**	**21 42 48.8**	**+2.3**
	comp=Z,118nm,0.7s,baz=181,slow=9.2,SNR=149								
LPAZ							LR	21 44 34.0	
	comp=Z,122nm,19.7s,baz=186,slow=38								
LPAZ	**La Paz**		**4.59**	**15**	Pn		**Pn**	**21 42 48.9**	**+2.4**
LPAZ	**La Paz**		**4.59**	**15**	*eP*		**Pn**	**21 42 50.6**	**+4.1**
LPAZ	**La Paz**		**4.59**	**15**	*eP*		**Pn**	**21 42 48.8**	**+2.3**
SLA	**San Lorenzo**		**5.31**	**139**	*eP*		**Pn**	**21 42 57.8**	**+2.1**
AC01	**Pan de Azucar**		**5.49**	**192**	Pn		**Pn**	**21 42 56.1**	**-1.9**
AC02	**Maricunga**		**6.05**	**178**	Pn		**Pn**	**21 43 05.9**	**-0.3**
GO03	**Copiapo**		**6.85**	**187**	Pn		**Pn**	**21 43 14.3**	**-2.4**
AC05	**El Transito**		**8.09**	**186**	Pn		**Pn**	**21 43 31.4**	**-2.2**
SIV	**San Ignacio**		**9.18**	**60**	P		**Pn**	**21 43 46.2**	**-2.2**
	comp=Z,34nm,0.4s,baz=241,slow=14,SNR=115								
CFA	**Coronel Fontan**		**10.85**	**175**	P		**Pn**	**21 44 07.6**	**-3.5**
	comp=Z,0.8nm,0.3s,baz=1.9,slow=18,SNR=12								
CFA					*S*		**Sn**	**21 46 14.5**	**+3.9**
	comp=Z,2.9nm,0.8s,baz=307,slow=20,SNR=1.5								
MURT	**Porto Murtinho**		**10.99**	**97**	*eP*		**Pn**	**21 44 10.6**	**-2.5**
PTLB	**Pontes e Lacer**		**11.05**	**63**	Pn		**Pn**	**21 44 13.4**	**-0.5**
PTLB	**Pontes e Lacer**		**11.05**	**63**	*eP*		**Pn**	**21 44 12.9**	**-1.0**
VILB	**Vilhena**		**11.70**	**50**	Pn		**Pn**	**21 44 22.5**	**-0.2**
VILB	**Vilhena**

ICQ	**Pointe Anglais**	**69.99**	**1**	P	**P**	**21 52 41.3**	**+0.8**
ICQ				IAmb	IAmb	21 52 42.4	
	comp=Z,7.3nm,1.0s						
P18A	**Preston Nutter**	**71.18**	**328**	P	**P**	**21 52 50.5**	**+2.0**
P18A				IAmb	IAmb	21 53 13.7	
	comp=Z,3.6nm,0.9s						
PDAR	**Pinedale Array**	**73.26**	**330**	P	**P**	**21 53 03.0**	**+2.3**
	comp=Z,0.2nm,0.6s,baz=146,slow=8.0,SNR=2.7						
PDAR				pP	**pP**	**21 53 24.5**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=145,slow=2.3,SNR=3.8						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**73.26**	**330**	P	**P**	**21 53 01.1**	**+0.4**
EPLO	**Experimental L**	**73.38**	**344**	P	**P**	**21 53 01.7**	**+0.7**
EPLO				IAmb	IAmb	21 53 25.1	
	comp=Z,7.2nm,1.1s						
NVAR	**Mina Array Bea**	**74.66**	**322**	P	**P**	**21 53 09.3**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=140,slow=3.8,SNR=2.0						
NVAR				pP	**pP**	**21 53 34.2**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=128,slow=3.4,SNR=2.5						
	comp=Z,0.1nm,0.3s						
FLWY	**Flagg Ranch**	**74.81**	**330**	P	**P**	**21 53 11.6**	**+2.0**
FLWY				IAmb	IAmb	21 53 35.6	
	comp=Z,6.3nm,0.9s						
SCHQ	**Schefferville**	**75.31**	**2**	P	**P**	**21 53 12.4**	**+0.4**
	comp=Z,3.4nm,0.7s,baz=169,slow=5.2,SNR=7.8						
	comp=Z,3.4nm,0.7s						
SCHQ	**Schefferville**	**75.31**	**2**	P	**P**	**21 53 11.9**	**-0.1**
SCHQ				IAmb	IAmb	21 53 27.2	
	comp=Z,7.8nm,1.3s						
TORD	**Torodi Ar. Bea**	**77.50**	**71**	P	**P**	**21 53 24.4**	**-0.9**
	comp=Z,2.5nm,0.6s,baz=244,slow=7.6,SNR=27						
TORD				pP	**pP**	**21 53 49.1**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=243,slow=8.2,SNR=7.6						
	comp=Z,2.5nm,0.6s						
FCC	**Fort Churchill**	**81.82**	**347**	P	**P**	**21 53 48.6**	**+0.9**
RAR	**Rarotonga**	**83.09**	**257**	LR	LR	22 22 25.6	
	comp=Z,84nm,20.2s,baz=338,slow=29						
YKA	**Yellowknife Ar**	**90.35**	**341**	P	**P**	**21 54 31.8**	**+2.3**
	comp=Z,0.1nm,0.5s,baz=141,slow=4.0,SNR=5.9						
YKA				pP	**pP**	**21 54 53.4**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=136,slow=3.7,SNR=11						
	comp=Z,0.1nm,0.5s						
YKA	**Yellowknife Ar**	**90.35**	**341**	P	**P**	**21 54 30.9**	**+1.4**
ASAR	**Alice Springs**	**130.37**	**208**	PKP	**PKPdf**	**22 00 40.1**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=151,slow=2.1,SNR=2.5						
ASAR	**Alice Springs**	**130.37**	**208**		**PKPdf**	**22 00 39.8**	**0.0**
WRA	**Warramunga Arr**	**133.38**	**211**	PKP	**PKiKP**	**22 00 46.3**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=143,slow=1.9,SNR=5.3						
ZALV	**Zalesovo Beam**	**141.45**	**24**	PKP	**PKiKP**	**22 01 00.8**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=327,slow=2.4,SNR=2.8						
KSH2	**Kashi**	**144.79**	**51**	PKP	**PKPdf**	**22 01 07.3**	**+1.5**
MKAR	**Makanchi Array**	**145.27**	**35**	PKPbc	**PKPdf**	**22 01 06.8**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=318,slow=3.1,SNR=25						
MKAR				pPKPbc	pPKPab	22 01 31.0	0.0
	comp=Z,1.0nm,0.8s,baz=322,slow=3.3,SNR=3.4						
SONM	**Songino Array**	**152.77**	**6**	PKPbc	**PKiKP**	**22 01 27.3**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=338,slow=3.1,SNR=2.2						
HHC	**Hu-ho-hao-te**	**159.96**	**358**	*eP*	**PKPdf**	**22 01 26.1**	**-1.8**
NJ2	**Nanjing**	**166.57**	**329**	*eP*	**PKPdf**	**22 01 35.5**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PZH	**PanZhiHua**	**170.03**	**53**	PKP	**PKPdf**	**22 01 35.6**	**-1.4**

*ISK **18** 21:41:43.9, 36°.52N × 44°.72E, h5km, ML3.4/6*
*TEH **18** 21:41:46.9, 37°.21N × 44°.99E, h8km ± 42km, ML3.6, Presumed earthquake*

ISC 18 21:41:46.9 ± 1.0, **37°.07N** ± 0°.04 × **45°.13E** ± 0°.04, **h12**km, **n21,**
σ1 **59**/24, **Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.56**	**123**	Pg	**Pb**	**21 41 59.7**	**+1.1**
IAZR	**Azarshahr**	**0.91**	**48**	Pg	**Pg**	**21 42 04.1**	**-0.4**
CUKT	**Cukurca**	**1.23**	**279**	Pn	**Pn**	**21 42 07.2**	**-2.8**
CUKT				Sn	**Sb**	**21 42 24.0**	**-1.9**
ISHB	**Shabestar**	**1.27**	**18**	Pg	**Pn**	**21 42 08.4**	**-2.3**
ITBZ	**Tabriz**	**1.42**	**35**	Pg	**Pn**	**21 42 11.2**	**-1.4**
IMRD	**Marand**	**1.70**	**15**	Pg	**Pn**	**21 42 16.6**	**0.0**
IHSH	**Hashtrud**	**1.72**	**82**	Pn	**Pb**	**21 42 19.3**	**+0.6**
IHRS	**Heris**	**1.96**	**50**	Pn	**Pb**	**21 42 22.9**	**+0.1**
VANB	**Van**	**2.05**	**318**	Pn	**Pb**	**21 42 23.6**	**-0.5**
VANB				Sn	**Sg**	**21 42 52.8**	**0.0**
AKDM	**Akdamar-Van**	**2.12**	**307**	Pn	**Pn**	**21 42 24.2**	**+2.0**
AKDM				Sn	**Sb**	**21 42 53.6**	**+2.1**
ISRB	**Sarab**	**2.16**	**69**	Pn	**Pb**	**21 42 26.6**	**+0.6**
MAKU	**Maku**	**2.31**	**351**	Pn	**Pn**	**21 42 26.7**	**+1.9**
IDHR	**Dehrash**	**2.58**	**156**	Pn	**Pb**	**21 42 34.1**	**+0.9**
GURO	**Guroymak-BITLI**	**2.86**	**302**	Pn	**Pn**	**21 42 33.7**	**+1.2**
ZNJK	**Zanjan**	**2.88**	**97**	Pn	**Pb**	**21 42 38.1**	**-0.3**
MLAZ	**Malazgirt-MUS**	**2.90**	**316**	Pn	**Pn**	**21 42 36.4**	**+3.4**
IGDI	**IGDIR**	**2.91**	**344**	Pn	**Pn**	**21 42 32.6**	**-0.5**
IGHG	**Ghaleghazi**	**2.98**	**156**	Pn	**Pb**	**21 42 39.5**	**-0.5**
AGRB	**Hanur-Agry**	**3.01**	**327**	Pn	**Pb**	**21 42 39.2**	**-1.3**
GLG1	**Gilan-e-Gharb**	**3.02**	**168**	Pn	**Pb**	**21 42 40.2**	**-0.4**
VRTB	**Varto-Mus**	**3.57**	**307**	Pn	**Pn**	**21 42 44.2**	**+2.0**

*IDC **18** 21:46:52.7 ± 6.8, 14°.69S × 167°.26E, h101km ± 69km, mb3.7/6, mbtmp4.0/7, ML4.0/1, Error ellipse: s-maj=57.1km s-min=41.3km az=136.0*
*NEIC **18** 21:46:55.5 ± 2.3, 15°.0S ± 0°.1 × 167°.4E ± 0°.2, h114km ± 11km, mb4.2/12, Error ellipse: s-maj=23.4km s-min=18.4km az=127.0*

ISC 18 21:46:56.1 ± 1.0, **14°.93S** ± 0°.09 × **167°.3E** ± 0°.1, **h129**km, **n25,**
σ1 **30**/26, **mb4.1**/9, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**6.55**	**174**	Pn	**Pn**	**21 48 28.4**	**-1.6**
DZM	**Mont Dzumac**	**7.15**	**186**	P	**Pn**	**21 48 38.4**	**+0.1**
	2.2nm,0.3s,baz=350,slow=18,SNR=14						
DZM				S	**Sn**	**21 49 59.4**	**+1.3**
	2.8nm,0.4s,baz=56,slow=11,SNR=3.2						
	3.8nm,0.3s						
ONTNC	**Ouen Toro**	**7.38**	**186**	Pn	**Pn**	**21 48 38.7**	**-2.5**
PINNC	**Pines Island,**	**7.65**	**179**	Pn	**Pn**	**21 48 44.6**	**-0.2**
EIDS	**Eidsvold**	**18.42**	**233**	Pn	**Pn**	**21 51 04.2**	**+1.0**
EIDS				IAmb	IAmb	21 51 04.8	
	comp=Z,5.4nm,0.7s						
CTA	**Charters Tower**	**20.71**	**253**	P	**P**	**21 51 27.4**	**+0.9**
	comp=Z,4.2nm,0.7s,baz=72,slow=13,SNR=5.7						
	comp=Z,4.2nm,0.7s						
CTAO	**Charters Tower**	**20.71**	**253**	P	**P**	**21 51 27.2**	**+0.9**
RTZ	**Ruatahuna**	**25.09**	**162**	P	**P**	**21 52 08.5**	**-0.4**
RTZ				IAmb	IAmb	21 52 30.0	
	comp=Z,16nm,1.1s						
BKZ	**Black Stump Fm**	**25.46**	**163**	P	**P**	**21 52 12.3**	**+0.1**
BKZ				IAmb	IAmb	21 52 14.7	
	comp=Z,3.9nm,0.9s						
STKA	**Stephens Creek**	**28.89**	**230**	P	**P**	**21 52 44.1**	**+1.3**
	comp=Z,1.9nm,0.5s,baz=42,slow=11,SNR=9.1						
	comp=Z,1.9nm,0.5s						
STKA	**Stephens Creek**	**28.89**	**230**	P	**P**	**21 52 43.9**	**+1.0**
STKA				IAmb	IAmb	21 53 00.8	
	comp=Z,6.4nm,0.8s						
WB0	**Warramunga Arr**	**31.75**	**257**	P	**P**	**21 53 06.6**	**-1.6**
WB0				IAmb	IAmb	21 53 30.4	
	comp=Z,4.7nm,1.1s						
WRA	**Warramunga Arr**	**31.81**	**256**	P	**P**	**21 53 07.2**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=84,slow=9.0,SNR=8.0						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**31.81**	**256**	P	**P**	**21 53 07.8**	**-1.0**
AS31	**Alice Springs**	**32.63**	**249**	P	**P**	**21 53 14.7**	**-1.2**
ASAR	**Alice Springs**	**32.63**	**249**	P	**P**	**21 53 14.9**	**-1.1**
	comp=Z,1.6nm,0.4s,baz=83,slow=8.4,SNR=32						
	comp=Z,1.6nm,0.4s						
ASAR	**Alice Springs**	**32.63**	**249**	P	**P**	**21 53 14.4**	**-1.6**
BBOO	**Buckleboo**	**33.48**	**232**	P	**P**	**21 53 23.9**	**+0.7**
BBOO				IAmb	IAmb	21 53 40.3	
	comp=Z,7.6nm,1.1s						
KNRA	**Kununurra**	**37.15**	**264**	P	**P**	**21 53 53.4**	**-1.4**
FORT	**Forrest**	**39.23**	**239**	P	**P**	**21 54 12.1**	**+0.1**
MBWA	**Marble Bar**	**45.53**	**255**	P	**P**	**21 55 03.3**	**+0.2**
SONM	**Songino Array**	**82.68**	**324**	P	**P**	**21 59 05.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=129,slow=4.1,SNR=1.6						
	comp=Z,0.2nm,0.3s						
H17K	**Granite Mounta**	**83.42**	**13**	P	**P**	**21 59 10.6**	**+2.0**
MKAR	**Makanchi Array**	**97.37**	**316**	P	**P**	**22 00 12.8**	**-2.2**
	comp=Z,0.2nm,0.7s,baz=94,slow=5.0,SNR=4.9						
	comp=Z,0.2nm,0.7s						
MKAR	**Makanchi Array**	**97.37**	**316**	P	**P**	**22 00 15.0**	**+0.1**

MEX 18 22:12:24.5 ± 0.9, **13°.82N** × **93°.31W, h12**km ± 144km, **MD3.8,**
Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**1.66**	**39**	*i* P	Pn	22 12 49.9	-3.7
PATR				*i* S	Sn	22 13 10.2	-4.7
CHUJ	**Union Juarez**	**1.72**	**43**	*e*P	Pn	22 12 50.8	-3.7
CHUJ				*e*S	Sn	22 13 11.4	-5.1
PAVE	**Pavencul**	**1.75**	**39**	*i* P	Pn	22 12 51.6	-3.3
PAVE				*i* S	Sn	22 13 12.7	-4.6
PCIG		**1.88**	**3**	*i* P	Pn	22 12 52.9	-3.5
PCIG				*i* S	Sn	22 13 14.6	-5.3
CCIG	**Comitan**	**2.70**	**25**	*e*P	Pn	22 13 01.6	-6.2
CCIG				*e*S	Sn	22 13 38.9	-1.7
TGIG		**2.95**	**4**	*e*P	Pn	22 13 10.4	-0.8
TGIG				*e*S	Sn	22 13 43.1	-3.4
UXUV	**UXUV**	**3.57**	**347**	*e*P	Pn	22 13 19.7	0.0
UXUV				*e*S	Sn	22 14 00.6	-1.2
CMIG	**Matias Romero**	**3.59**	**335**	*e*P	Pn	22 13 17.9	-2.1
CMIG				*e*S	Sn	22 13 56.8	-5.5

*IDC **18** 22:17:02.5 ± 4.1, 5°.74N × 127°.34E, h81km ± 37km, mb3.2/6, mbtmp3.6/7, MS2.6/1, Error ellipse: s-maj=58.6km s-min=17.2km az=69.0*

ISC 18 22:17:04.0 ± 1.1, **5°.8N** ± 0°.2 × **127°.2E** ± 0°.2, **h100**km, **n7,**
σ1 **19**/8, **mb3.5**/6, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.10**	**308**	P	**Pn**	**22 17 36.6**	**-1.3**
	78nm,0.3s,baz=127,slow=15,SNR=1.5						
DAV				S	**Sn**	**22 18 04.1**	**+0.4**
	108nm,0.3s,baz=140,slow=22,SNR=1.4						
DAV				LR	LR	22 18 46.4	
	comp=Z,135nm,18.1s,baz=138,slow=47						
FITZ	**Fitzroy Crossi**	**23.76**	**184**	P	**P**	**22 22 07.2**	**-0.3**
	1.4nm,0.6s,baz=15,slow=12,SNR=1.7						
	1.4nm,0.6s						
WRA	**Warramunga Arr**	**26.48**	**165**	P	**P**	**22 22 32.5**	**+0.3**
	0.9nm,0.8s,baz=343,slow=10.0,SNR=1.4						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**29.97**	**168**	P	**P**	**22 23 03.3**	**+0.1**
	0.3nm,0.7s,baz=342,slow=6.9,SNR=1.9						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**56.20**	**324**	P	**P**	**22 26 34.9**	**+1.2**
	0.3nm,0.5s,baz=114,slow=6.5,SNR=6.9						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**60.32**	**327**	P	**P**	**22 27 03.9**	**+1.6**
	0.3nm,0.5s,baz=130,slow=6.3,SNR=4.4						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**83.06**	**26**	P	**P**	**22 29 17.4**	**-0.9**
	0.3nm,0.9s,baz=260,slow=5.3,SNR=2.2						
	0.3nm,0.9s						

*BJI **18** 22:17:22.8, 47°.06N × 116°.29E, h9km, mB4.6/6, mb4.0/22, ML4.9/8, Ms4.4/12, Ms7 4.2/12*
*IDC **18** 22:17:23.5 ± 0.6, 46°.93N × 116°.20E, h0km, mb3.9/18, mbtmp3.9/25, ML4.1/6, MS3.3/18, Error ellipse: s-maj=13.5km s-min=10.5km az=177.0*
*NEIC **18** 22:17:25.5 ± 1.7, 46°.93N ± 0°.07 × 116°.16E ± 0°.09, h10km ± 1km, mb4.5/45, Error ellipse: s-maj=12.3km s-min=10.3km az=144.0*

ISC 18 22:17:25.2 ± 0.4, **46°.94N** ± 0°.04 × **116°.28E** ± 0°.04, **h10**km, **n111,**
σ1 **47**/111, **mb4.3**/43, **MS3.2**/11, **2D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XLT	**XiLinHaoTe**	**3.04**	**183**	*e*Pn	**Pn**	**22 18 13.0**	**-0.4**
XLT				*e*Pg	**Pb**	**22 18 19.3**	**-0.1**
XLT				Sg	**Sb**	**22 18 59.9**	**+3.3**
HIA	**Hailar**	**3.29**	**44**		**Pn**	**22 18 16.9**	**+0.1**
HILR	**Hailar Array B**	**3.50**	**40**	Pn	**Pn**	**22 18 19.4**	**-0.3**
	baz=212,slow=12						
HILR				Pg	**Pb**	**22 18 28.8**	**+1.6**
	baz=220,slow=15						
HILR				Lg	Lg	22 19 14.9	
	baz=200,slow=25						
	23nm,0.3s						
ULN	**Ulaanbaatar**	**6.33**	**282**		**Pn**	**22 18 56.1**	**-2.6**
SONM	**Songino Array**	**6.77**	**281**	Pn	**Pn**	**22 19 02.6**	**-2.2**
	1.0nm,0.3s,baz=94,slow=13,SNR=29						
SONM				Pg	**Pb**	**22 19 25.9**	**+2.8**
	2.9nm,0.3s,baz=108,slow=14,SNR=9.6						
SONM				Sn	**Sn**	**22 20 19.5**	**-2.4**
	5.0nm,0.3s,baz=97,slow=21,SNR=5.3						
SONM				Lg	Lg	22 20 56.3	
	21nm,0.3s,baz=100,slow=28,SNR=10						
SONM				LR	LR	22 22 05.1	
	comp=Z,276nm,20.7s,baz=122,slow=42						
	3.3nm,0.5s						
SONM	**Songino Array**	**6.77**	**281**	Pn	**Pn**	**22 19 02.0**	**-2.8**
BJI2	**Beijing**	**6.92**	**181**	Pn	**Pn**	**22 19 06.5**	**-0.1**
BJI2				Sn	**Sn**	**22 20 25.1**	**-0.2**
BJI2				smax	smax		
	comp=N,55nm,0.7s						
BJI2				smax	smax		
	comp=E,55nm,0.8s						
BJT	**Baijiatuau**	**6.92**	**181**	Pn	**Pn**	**22 19 06.0**	**-0.6**
CN2	**Changchun**	**7.17**	**113**	Pn	Pn	22 19 19.4	+9.3
CN2				Pg	Pg	22 19 38.6	-3.9
CN2				smax	smax		
	comp=N,260nm,1.0s						
CN2				smax	smax		
	comp=E,280nm,1.0s						
BNX	**BinXian**	**7.79**	**95**	⇓Pg	**Pg**	**22 19 51.5**	**-2.8**
BNX				Sg	**Sg**	**22 21 30.6**	**-4.5**
BNX				smax	smax		
	comp=N,610nm,0.9s						
BNX				smax	smax		
	comp=E,340nm,1.0s						
HEH	**HeiHe**	**8.09**	**62**	*e*P	**Pn**	**22 19 21.5**	**-1.1**
HEH				S	**Sn**	**22 20 53.3**	**-0.8**
HEH				smax	smax		
	comp=E,420nm,1.1s						
HEH				smax	smax		
	comp=E,310nm,1.0s						
DL2	**Dalian**	**8.93**	**152**	Pg	Pn	22 19 44.4	+10
DL2				Sg	**Sn**	**22 21 22.0**	**+7.2**
DL2				smax	smax		
	comp=N,70nm,1.0s						
DL2				smax	smax		
	comp=E,110nm,0.9s						
TLY	**Talaya**	**9.52**	**305**	Pn	**Pn**	**22 19 40.6**	**-1.7**
	comp=E,1.7nm,0.4s						
TLY				Lg	Lg	22 22 21.7	
TLY				LR	LR	22 23 10.2	
	comp=E,41nm,19.9s,baz=116,slow=37						
KLR	**Kul'dur**	**10.60**	**72**	LR	LR	22 24 31.0	
	comp=E,76nm,18.6s,baz=282,slow=40						
USRK	**Ussuriysk Ar.**	**11.35**	**98**	Pn	**Pn**	**22 20 06.4**	**-0.9**
	comp=E,0.2nm,0.3s,baz=287,slow=15,SNR=2.6						
USRK				Sn	**Sn**	**22 22 15.8**	**+1.8**
	comp=E,0.3nm,0.3s,baz=289,slow=14,SNR=4.5						
USRK				Lg	Lg	22 23 21.6	
	comp=E,0.8nm,0.3s,baz=291,slow=28,SNR=8.5						
	comp=E,0.6nm,0.7s						
LYN	**LuoYang**	**12.70**	**194**	*e*P	**Pn**	**22 20 27.5**	**+1.7**
LYN				S	**Sn**	**22 22 46.8**	**-0.5**
LYN				LR	LR		
	comp=E,840nm,5.8s						
LYN				LR	LR		
	comp=E,1μm,6.9s						
LYN				LR	LR		
	comp=E,670nm,8.1s						
KSRS	**Korea Array**	**12.80**	**134**	Pn	**Pn**	**22 20 27.2**	**0.0**
	comp=E,0.2nm,0.3s,baz=329,slow=12,SNR=5.0						
KSRS				Lg	Lg	22 24 10.1	
	comp=E,0.8nm,0.3s,baz=319,slow=30,SNR=7.8						
KSRS				LR	LR	22 25 46.8	
	comp=E,55nm,18.2s,baz=345,slow=39						
	comp=E,1.7nm,0.8s						
GTA2	**Gaotai**	**14.15**	**244**	*e*P	**Pn**	**22 20 44.9**	**-0.8**
GTA2				pP	P	22 20 48.3	-5.0
GTA2				pmax	pmax		
	comp=E,2.0nm,1.1s						
GTA2				LR	LR		
	comp=E,540nm,7.6s						
GTA2				LR	LR		
	comp=E,680nm,11.6s						
GTA2				LR	LR		
	comp=E,780nm,11.6s						
LZH	**Lanzhou**	**14.27**	**225**	*e*P	**P**	**22 20 56.9**	**+2.1**
LZH				sP	Pn	22 21 06.1	+19
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				LR	LR		
	comp=N,440nm,12.4s						
LZH				LR	LR		
	comp=E,390nm,13.1s						
LZH				LR	LR		
	comp=E,670nm,13.7s						
LZDM	**Lanzhou Array**	**14.45**	**225**	Pn	**Pn**	**22 20 48.0**	**-2.1**
	baz=26,slow=11						
LZDM				Lg	Lg	22 24 59.9	
	baz=61,slow=37						
	comp=Z,1.0nm,0.5s						
NJ2	**Nanjing**	**14.99**	**172**	*e*P	**Pn**	**22 20 57.1**	**0.0**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YAK	**Yakutsk**	**16.95**	**22**	Pn	**Pn**	**22 21 19.2**	**-3.0**
	comp=Z,2.4nm,0.3s,baz=234,slow=15,SNR=4.2						
YAK				Lg	Lg	22 26 16.1	
	comp=Z,0.7nm,0.3s,baz=165,slow=20,SNR=7.7						
	comp=Z,5.7nm,0.4s						
YAK	**Yakutsk**	**16.95**	**22**	Pn	**Pn**	**22 21 22.4**	**+0.3**
ENH	**Enshi**	**17.45**	**200**		**Pn**	**22 21 28.4**	**-0.3**
JNU	**Nakatsue**	**17.71**	**136**	LR	LR	22 28 27.2	
	comp=Z,87nm,18.0s,baz=2.5,slow=37						
ASAJ	**Asahikawa**	**18.62**	**89**	LR	LR	22 29 24.6	
	comp=Z,159nm,20.7s,baz=336,slow=39						
GOMU	**GeErMu**	**19.25**	**244**	P	**P**	**22 21 48.8**	**-1.3**
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GOMU				LR	LR		
	comp=Z,320nm,8.5s						
GOMU				LR	LR		
	comp=Z,180nm,9.8s						
MJAR	**Matsushiro Arr**	**19.32**	**115**	LR	LR	22 28 02.7	
	comp=Z,44nm,19.3s,baz=346,slow=33						
WMQ	**Urumqi**	**20.27**	**272**	*e*P	Pn	22 22 03.6	+0.8
ZAA0	**Zalesovo Array**	**21.10**	**301**	P	**P**	**22 22 09.0**	**-0.6**
ZALV	**Zalesovo Beam**	**21.10**	**301**	P	**P**	**22 22 10.0**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=98,slow=8.3,SNR=5.5						
ZALV				Lg	Lg	22 28 36.0	
	comp=Z,0.1nm,0.3s,baz=90,slow=26,SNR=3.9						
ZALV				LR	LR	22 29 44.4	
	comp=Z,38nm,20.5s,baz=266,slow=35						
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**21.10**	**301**	P	**P**	**22 22 08.7**	**-0.9**
GYA	**Guiyang**	**21.81**	**204**	⇓P	**P**	**22 22 18.9**	**+1.3**
GYA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR	**Makanchi Array**	**23.14**	**282**	P	**P**	**22 22 31.1**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=79,slow=9.7,SNR=10.0						
MKAR				PcP	**PcP**	**22 26 19.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=82,slow=2.1,SNR=7.2						
MKAR				Lg	Lg	22 29 33.5	
	baz=81,slow=32,SNR=6.7						
	comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**23.14**	**282**	P	**P**	**22 22 29.0**	**-2.4**
MAKZ	**Makanchi**	**23.35**	**282**	P	**P**	**22 22 32.9**	**-0.7**
PZH	**PanZhiHua**	**23.41**	**214**	P	**P**	**22 22 35.4**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MA2	**Magadan**	**23.88**	**45**	LR	LR	22 31 50.5	
	comp=Z,64nm,19.1s,baz=286,slow=36						
MA2	**Magadan**	**23.88**	**45**	P	**P**	**22 22 38.8**	**+0.2**
MA2				IAmb	IAmb	22 22 41.3	
	comp=Z,11nm,1.1s						
KURK	**Kurchatov**	**24.90**	**293**	P	**P**	**22 22 46.6**	**-1.4**
KURBB	**Kurchatov Arra**	**24.97**	**292**	P	**P**	**22 22 48.2**	**-0.4**
	comp=Z,4.0nm,0.8s,baz=83,slow=10.0,SNR=27						
KURBB				PcP	**PcP**	**22 26 23.5**	**0.0**
	comp=Z,0.3nm,0.4s,baz=106,slow=6.8,SNR=3.3						
KURBB				LR	LR	22 32 58.4	
	comp=Z,118nm,19.3s,baz=174,slow=38						
	comp=Z,4.0nm,0.8s						
TIXI	**Tiksi**	**25.49**	**9**	LR	LR	22 32 46.9	
	comp=Z,58nm,18.7s,baz=266,slow=36						
TIXI	**Tiksi**	**25.49**	**9**	P	**P**	**22 22 53.5**	**+0.3**
LSA	**Lhasa**	**26.00**	**237**	P	**P**	**22 22 57.1**	**-1.6**
TNCH	**TengChong**	**26.05**	**219**	P	**P**	**22 22 57.8**	**-1.0**
TNCH				pP	pP	22 23 02.5	+0.4
TNCH				pmax	pmax		
	comp=Z,10.0nm,2.4s						
PETK	**Petropavlovsk-**	**27.02**	**61**	LR	LR	22 35 21.3	
	comp=Z,105nm,18.6s,baz=287,slow=40						
AAK	**Ala-Archa**	**29.71**	**277**	P	**P**	**22 23 31.2**	**-0.2**
BVAR	**Borovoye Array**	**29.71**	**299**	P	**P**	**22 23 31.0**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=74,slow=6.2,SNR=2.0						
BVAR				PcP	**PcP**	**22 26 34.6**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=64,slow=3.4,SNR=3.5						
BVAR				LR	LR	22 35 20.2	
	comp=Z,60nm,20.5s,baz=300,slow=36						
	comp=Z,0.3nm,0.5s						
BRDH	**Bariadhala**	**31.30**	**228**	LR	LR	22 38 51.8	
	comp=Z,142nm,19.6s,baz=343,slow=41						
CMAR	**Chiang Mai Arr**	**31.78**	**212**	P	**P**	**22 23 50.5**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=24,slow=8.9,SNR=2.0						
CMAR				LR	LR	22 37 58.0	
	comp=Z,52nm,19.8s,baz=60,slow=39						
	comp=Z,1.9nm,0.3s						
CMAR	**Chiang

F28M	**Old Crow**	**52.41**	**28**	P	**P**		**22 26 38.6**	**+1.3**
F28M				IAmb	IAmb		22 26 43.5	
	comp=Z,7,8nm,1.5s							
KDAK	**Kodiak Island**	**52.58**	**42**	LR	LR		22 51 03.0	
	comp=Z,75nm,19.7s,baz=46,slow=38							
H27K	**Steamboat Moun**	**52.62**	**30**	P	**P**		**22 26 40.1**	**+1.3**
H27K				IAmb	IAmb		22 26 42.8	
	comp=Z,8.4nm,1.2s							
J26L	**Joseph Creek**	**52.83**	**32**	P	**P**		**22 26 40.1**	**-0.3**
J26L				IAmb	IAmb		22 26 43.2	
	comp=Z,4.0nm,1.0s							
I28M	**Miner Creek**	**53.60**	**30**	P	**P**		**22 26 46.5**	**+0.4**
I28M				IAmb	IAmb		22 27 09.8	
	comp=Z,12nm,1.5s							
F30M	**Barrier River**	**53.71**	**27**	P	**P**		**22 26 47.4**	**+0.7**
I29M	**Ogilvie Camp,**	**54.21**	**30**	P	**P**		**22 26 51.9**	**+1.4**
I29M				IAmb	IAmb		22 26 54.0	
	comp=Z,6.2nm,1.0s							
AKASG	**Malin Array Be**	**54.24**	**308**	P	**P**		**22 26 50.7**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=50,slow=8.6,SNR=2.4							
	comp=Z,0.6nm,0.5s							
F31M	**Tsiigehtchic**	**54.44**	**26**	P	**P**		**22 26 52.5**	**+0.5**
F31M				IAmb	IAmb		22 26 55.6	
	comp=Z,9.0nm,1.2s							
K29M	**Barlow Dome**	**55.38**	**31**	P	**P**		**22 26 59.5**	**+0.4**
NOA	**NORSAR Array B**	**56.67**	**326**	P	**P**		**22 27 08.1**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=60,slow=10,SNR=3.5							
	comp=Z,0.7nm,0.7s							
RES	**Resolute Bay**	**56.89**	**9**	P	**P**		**22 27 09.8**	**+0.2**
RES				IAmb	IAmb		22 27 12.7	
	comp=Z,3.2nm,0.9s							
BR131	**Keskin Array S**	**57.91**	**295**	P	**P**		**22 27 17.8**	**+0.3**
BRTR	**Keskin Array B**	**57.91**	**295**	P	**P**		**22 27 17.2**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=70,slow=4.9,SNR=6.4							
	comp=Z,1.1nm,0.8s							
BRTR	**Keskin Array B**	**57.91**	**295**	P	**P**		**22 27 17.9**	**+0.4**
YKA	**Yellowknife Ar**	**63.62**	**24**	P	**P**		**22 27 55.6**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=320,slow=7.0,SNR=16							
	comp=Z,1.0nm,0.8s							
YKAW1	**Yellowknife Wh**	**63.66**	**24**	P	**P**		**22 27 56.7**	**+0.7**
SFJD	**Kangerlussuaq**	**65.96**	**354**	LR	LR		22 55 43.3	
	comp=Z,35nm,19.1s,baz=155,slow=35							
WRA	**Warramunga Arr**	**68.53**	**162**	P	**P**		**22 28 26.9**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=352,slow=6.6,SNR=4.6							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**72.05**	**163**	P	**P**		**22 28 49.4**	**0.0**
	comp=Z,0.6nm,0.9s,baz=351,slow=6.6,SNR=2.5							
	comp=Z,0.6nm,0.9s							
SCHQ	**Schefferville**	**78.57**	**2**	P	**P**		**22 29 26.8**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=355,slow=6.8,SNR=3.7							
	comp=Z,3.4nm,0.9s							
SCHQ	**Schefferville**	**78.57**	**2**	P	**P**		**22 29 26.7**	**+0.2**
ESDC	**Sonseca Array**	**78.66**	**317**	P	**P**		**22 29 27.8**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=38,slow=4.7,SNR=4.4							
	comp=Z,0.6nm,0.8s							
ESDC	**Sonseca Array**	**78.66**	**317**	P	**P**		**22 29 27.5**	**+0.2**
MCMT	**McKenzie Canyo**	**78.89**	**33**	P	**P**		**22 29 29.2**	**+0.4**
PD31	**Pinedale Array**	**81.88**	**32**	P	**P**		**22 29 44.4**	**-0.5**
PDAR	**Pinedale Array**	**81.88**	**32**	P	**P**		**22 29 45.4**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=77,slow=3.2,SNR=3.7							
	comp=Z,0.6nm,0.9s							
PDAR	**Pinedale Array**	**81.88**	**32**	P	**P**		**22 29 44.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**96.50**	**297**	P	**P**		**22 30 54.6**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=30,slow=2.4,SNR=0.9							
	comp=Z,0.1nm,0.4s							
TORD	**Torodi Ar. Bea**	**96.50**	**297**	P	**P**		**22 30 53.4**	**-1.7**
LPAZ	**La Paz**	**149.22**	**8**	PKPbc	**PKPdf**		**22 37 12.5**	**+1.8**
	comp=Z,2.0nm,0.8s,baz=341,slow=3.4,SNR=6.6							

VAO ***18*** *22:21:23.0±1.2,21°.43S×68°.50W,h64km±10km,mb4.4, Presumed earthquake*

SJA ***18*** *22:21:25.8±0.7,21°.58S×68°.43W,h133km±5km,ML3.8, MW3.9*

IDC ***18*** *22:21:26.4±2.1,21°.67S×68°.15W,h98km±18km,mb4.1/3, mbtmp4.0/9,Error ellipse: s-maj=27.4km s-min=16.2km az=108.0*

NEIC ***18*** *22:21:27.7±1.3,21°.58S±0°.04×68°.50W±0°.08,h123km±6km, mb4.0/9,ML3.8(GUC),Error ellipse: s-maj=11.0km s-min=5.5km az=103.0*

GUC ***18*** *22:21:28.9±0.7,21°.55S×68°.54W,h121km±4km,ML4.0*

ISC 18 22:21:26.9±0.6,21°.57S±0°.03×68°.41W±0°.04,h123km±7km, n106,σ1§70/134,mb4.1/3,5C-4D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.81**	**254**		**Pn**	**22 21 48.0**	**+0.3**
PB09				Sn	**Sn**	**22 22 02.5**	**-0.8**
PB09	**IPOC Station P**	**0.81**	**254**	⇑*iP*	**Pn**	**22 21 48.4**	**+0.7**
PB09				*eS*	**Sn**	**22 22 03.1**	**-0.2**
PB09	**IPOC Station P**	**0.81**	**254**	*eP*	**Pn**	**22 21 48.4**	**+0.7**
PB09				*eS*	**Sn**	**22 22 04.3**	**+1.0**
PB09				IAML		22 22 05.5	
	comp=Z,1μm,0.5s						
PB01	**IPOC Station P**	**1.14**	**297**	Pn	**Pn**	**22 21 50.0**	**-0.7**
PB01				Sn	**Sn**	**22 22 07.2**	**-1.5**
PB01	**IPOC Station P**	**1.14**	**297**	⇑*iP*	**Pn**	**22 21 50.6**	**0.0**
PB01				*eS*	**Sn**	**22 22 07.5**	**-1.2**
PB01				IAML		22 22 08.6	
	comp=N,3μm,0.5s						
PB01	**IPOC Station P**	**1.14**	**297**	*eP*	**Pn**	**22 21 50.6**	**0.0**
PB01				IAML		22 22 10.0	
	comp=Z,835nm,0.2s						
PB03	**IPOC Station P**	**1.34**	**249**	Pn	**Pn**	**22 21 52.8**	**-0.1**
PB03				Sn	**Sn**	**22 22 11.2**	**-1.4**
PB07	**IPOC Station P**	**1.39**	**263**	Pn	**Pn**	**22 21 53.0**	**-0.4**
PB07				Sn	**Sn**	**22 22 12.2**	**-1.4**
PB07	**IPOC Station P**	**1.39**	**263**	⇑*iP*	**Pn**	**22 21 53.5**	**+0.1**
PB07				*eS*	**Sn**	**22 22 12.8**	**-0.7**
PB07				IAML		22 22 13.9	
	comp=N,4μm,0.7s						
PB07	**IPOC Station P**	**1.39**	**263**	*eP*	**Pn**	**22 21 53.5**	**+0.1**
PB07				*eS*	**Sn**	**22 22 13.7**	**+0.1**
PB07				IAML		22 22 14.2	
	comp=Z,2μm,0.3s						
AF01	**San Pedro de A**	**1.39**	**171**	Pn	**Pn**	**22 21 55.8**	**+2.2**
AF01	**San Pedro de A**	**1.39**	**171**	*eP*	**Pn**	**22 21 56.0**	**+2.3**
AF01	**San Pedro de A**	**1.39**	**171**	*eP*	**Pn**	**22 21 51.0**	**-2.7**
AF01				*eS*	Sn	22 21 59.9	-14
AF01				IAML		22 22 30.9	
	comp=Z,648nm,1.1s						
PB02	**IPOC Station P**	**1.41**	**280**	Pn	**Pn**	**22 21 53.3**	**-0.3**
PB02	**IPOC Station P**	**1.41**	**280**	⇑*eP*	**Pn**	**22 21 53.5**	**-0.1**
PB02				*eS*	**Sn**	**22 22 13.0**	**-0.9**
PB02				IAML		22 22 14.5	
	comp=E,3μm,0.5s						
PB02	**IPOC Station P**	**1.41**	**280**	*eP*	**Pn**	**22 21 53.5**	**-0.1**
PB02				*eS*	**Sn**	**22 22 14.5**	**+0.6**
PB02				IAML		22 22 18.7	
	comp=Z,2μm,0.5s						
PB06	**IPOC Station P**	**1.56**	**223**	Pn	**Pn**	**22 21 55.6**	**+0.2**
PB06	**IPOC Station P**	**1.56**	**223**	⇓*iP*	**Pn**	**22 21 56.2**	**+0.8**
PB06				*eS*	**Sn**	**22 22 17.1**	**-0.1**
PB06				IAML		22 22 18.3	
	comp=E,2μm,0.3s						
PB06	**IPOC Station P**	**1.56**	**223**	*eP*	**Pn**	**22 21 51.0**	**-4.5**
PB06				*eP*		22 21 56.1	
PB06				*eS*	**Sn**	**22 22 17.8**	**+0.6**
PB06				IAML		22 22 18.4	
	comp=Z,1μm,0.4s						
PB08	**IPOC Station P**	**1.58**	**334**	Pn	**Pn**	**22 21 56.6**	**+0.6**
PB08	**IPOC Station P**	**1.58**	**334**	⇓*iP*	**Pn**	**22 21 57.0**	**+1.1**
PB08				*eS*	**Sn**	**22 22 18.3**	**+0.3**
PB08				IAML		22 22 20.4	
	comp=E,2μm,0.6s						
HMBC	**Humberstone**	**1.89**	**313**	Pn	**Pn**	**22 21 58.7**	**-0.6**
HMBC	**Humberstone**	**1.89**	**313**	⇑*eP*	**Pn**	**22 21 59.0**	**-0.3**
HMBC				*eS*	**Sn**	**22 22 22.6**	**-1.5**
HMBC				IAML		22 22 23.8	
	comp=E,3μm,0.7s						
GO01	**Chusmiza**	**2.03**	**339**	Pn	**Pn**	**22 22 01.9**	**+0.5**
GO01	**Chusmiza**	**2.03**	**339**	⇓*eP*	**Pn**	**22 22 02.2**	**+0.8**
GO01				IAML		22 22 31.8	
	comp=N,2μm,0.2s						
GO01	**Chusmiza**	**2.03**	**339**	*eP*	**Pn**	**22 22 01.9**	**+0.5**
GO01				IAML		22 22 34.1	
	comp=Z,437nm,0.8s						
TA02	**Huaiquique**	**2.07**	**308**	*eP*	**Pn**	**22 22 00.8**	**-0.5**
TA02				IAML		22 22 34.4	
	comp=N,2μm,0.1s						
TA02	**Huaiquique**	**2.07**	**308**	*eP*	**Pn**	**22 22 00.9**	**-0.5**
TA02				*eS*	**Sn**	**22 22 27.9**	**+0.2**
PB05	**IPOC Station P**	**2.10**	**232**	Pn	**Pn**	**22 22 01.7**	**-0.1**
PB05	**IPOC Station P**	**2.10**	**232**	*eP*	**Pn**	**22 22 02.0**	**+0.2**
PB05				*eS*	**Sn**	**22 22 27.0**	**-1.6**
PB05				IAML		22 22 31.8	
	comp=E,632nm,0.4s						
PB05	**IPOC Station P**	**2.10**	**232**	*eP*	**Pn**	**22 22 02.1**	**+0.2**
PB05				*eS*	**Sn**	**22 22 28.5**	**-0.1**
PB05				IAML		22 22 33.2	
	comp=Z,360nm,0.6s						
PB11	**IPOC Station P**	**2.15**	**327**	Pn	**Pn**	**22 22 02.5**	**0.0**
PB11	**IPOC Station P**	**2.15**	**327**	⇓*eP*	**Pn**	**22 22 02.5**	**0.0**
PB11				*eS*	**Sn**	**22 22 28.7**	**-1.0**
PB11				IAML		22 22 30.3	
	comp=E,2μm,0.4s						
PB11	**IPOC Station P**	**2.15**	**327**	*eP*	**Pn**	**22 22 02.7**	**+0.2**
PB11				*eS*	**Sn**	**22 22 23.3**	**-6.5**
PB11				IAML		22 22 32.8	
	comp=Z,840nm,0.4s						
YJA	**Yavi**	**2.75**	**103**	*eP*	**Pn**	**22 22 09.8**	**-0.7**
YJA				*eS*	**Sn**	**22 22 44.3**	**+0.3**
PB10	**IPOC Station P**	**2.77**	**225**	Pn	**Pn**	**22 22 11.0**	**+0.6**
PB10	**IPOC Station P**	**2.77**	**225**	*eP*	**Pn**	**22 22 10.6**	**+0.3**
PB10				IAML		22 22 53.7	
	comp=E,272nm,0.4s						
PB10	**IPOC Station P**	**2.77**	**225**	*eP*	**Pn**	**22 22 10.6**	**+0.3**
PB10				*eS*	**Sn**	**22 22 41.2**	**-2.6**
PB10				IAML		22 22 58.6	
	comp=Z,162nm,0.5s						
HJA	**Humahuaca**	**3.22**	**121**	*eP*	**Pn**	**22 22 15.3**	**-1.2**
SALTA		**3.26**	**145**	*eP*	**Pn**	**22 22 17.5**	**+0.3**
SALTA				*eP*		22 22 23.1	
SALTA				*eP*		22 22 29.2	
SALTA				IAML		22 23 20.4	
	comp=Z,92nm,0.0s						
PB16	**IPOC Station P**	**3.38**	**342**	Pn	**Pn**	**22 22 19.3**	**+0.4**
PB16	**IPOC Station P**	**3.38**	**342**	*eP*	**Pn**	**22 22 19.6**	**+0.7**
PB16	**IPOC Station P**	**3.38**	**342**	*eP*	**Pn**	**22 22 19.6**	**+0.7**
PB16				*eS*	**Sn**	**22 23 00.3**	**+1.4**
PB16				IAML		22 23 03.0	
	comp=Z,109nm,0.4s						
PB12	**IPOC Station P**	**3.45**	**328**	Pn	**Pn**	**22 22 18.1**	**-1.3**
PB12	**IPOC Station P**	**3.45**	**328**	*eP*	**Pn**	**22 22 17.8**	**-1.6**
PB12	**IPOC Station P**	**3.45**	**328**	*eP*	**Pn**	**22 22 17.8**	**-1.6**
PB12				*eS*	**Sn**	**22 22 58.1**	**-1.8**
PB12				IAML		22 23 05.4	
	comp=Z,221nm,0.4s						
PB14	**IPOC Station P**	**3.55**	**211**	Pn	**Pn**	**22 22 20.8**	**-0.1**
PB14	**IPOC Station P**	**3.55**	**211**	*eP*	**Pn**	**22 22 20.9**	**+0.1**
PB14	**IPOC Station P**	**3.55**	**211**	*eP*	**Pn**	**22 22 20.6**	**-0.3**
PB14				*eS*	**Sn**	**22 23 01.5**	**-1.1**
PB14				IAML		22 23 12.6	
	comp=Z,156nm,0.5s						
AP01	**Chacalluta**	**3.67**	**330**	*eP*	**Pn**	**22 22 25.6**	**+3.4**
AP01				*eS*	**Sn**	**22 23 02.1**	**-2.7**
AP01				IAML		22 23 16.4	
	comp=Z,294nm,0.3s						
GO02	**Mina Guanaco**	**3.74**	**197**	Pn	**Pn**	**22 22 23.6**	**+0.3**
GO02	**Mina Guanaco**	**3.74**	**197**	*eP*	**Pn**	**22 22 23.5**	**+0.3**
GO02	**Mina Guanaco**	**3.74**	**197**	*eP*	**Pn**	**22 22 23.9**	**+0.6**
GO02				*eS*	**Sn**	**22 23 08.6**	**+1.7**
GO02				IAML		22 23 38.4	
	comp=Z,177nm,0.6s						
AC01	**Pan de Azucar**	**4.98**	**203**	Pn	**Pn**	**22 22 38.3**	**-1.3**
AC01	**Pan de Azucar**	**4.98**	**203**	*eP*	**Pn**	**22 22 38.4**	**-1.3**
AC01				*eS*	**Sn**	**22 23 32.8**	**-3.4**
AC01				IAML		22 23 52.4	
	comp=Z,55nm,0.7s						
LPAZ	**La Paz**	**5.26**	**3**	P	**Pn**	**22 22 46.0**	**+1.9**
	comp=Z,13nm,0.3s,baz=173,slow=4.3,SNR=74						
LPAZ	**La Paz**	**5.26**	**3**	Pn	**Pn**	**22 22 45.8**	**+1.7**
LPAZ	**La Paz**	**5.26**	**3**	*eP*	**Pn**	**22 22 46.5**	**+2.5**
LPAZ	**La Paz**	**5.26**	**3**	*eP*	Pn	22 22 37.0	-7.0
AC02	**Maricunga**	**5.28**	**187**	Pn	**Pn**	**22 22 44.4**	**+0.2**
AC02	**Maricunga**	**5.28**	**187**	*eP*	**Pn**	**22 22 43.2**	**-1.0**
AC02				*eS*	Sn	22 23 33.5	-11
AC02				IAML		22 23 35.0	
	comp=Z,32nm,0.5s						
GO03	**Copiapo**	**6.22**	**195**	Pn	**Pn**	**22 22 54.7**	**-1.7**
AC05	**El Transito**	**7.43**	**193**	Pn	**Pn**	**22 23 10.5**	**-2.3**
LCO	**Las Campanas**	**7.69**	**195**	Pn	**Pn**	**22 23 13.3**	**-3.2**
SIV	**San Ignacio**	**8.89**	**53**	P	**Pn**	**22 23 31.0**	**-1.5**
	comp=Z,5.4nm,0.5s,baz=237,slow=12,SNR=21						
SIV				S	**Sn**	**22 25 03.8**	**-7.2**
	comp=Z,3.0nm,0.8s,baz=133,slow=23,SNR=8.3						
CO03	**El Pedregal**	**9.46**	**192**	Pn	**Pn**	**22 23 35.4**	**-4.6**
CO02	**Combarbal**	**9.87**	**193**	Pn	Pn	22 23 40.8	-4.9
CFA	**Coronel Fontan**	**9.99**	**179**	P	**Pn**	**22 23 45.6**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=357,slow=15,SNR=6.3						
CFA				S	**Sn**	**22 25 32.4**	**-5.3**
	comp=Z,0.9nm,0.4s,baz=307,slow=20,SNR=1.9						
CO04	**Los Peladeros**	**10.68**	**192**	Pn	**Pn**	**22 23 52.6**	**-4.1**
CPUP	**Villa Florida**	**11.18**	**117**	P	**Pn**	**22 24 00.3**	**-2.9**
	comp=Z,1.0nm,0.6s,baz=194,slow=17,SNR=2.0						
MT02	**Curacav**	**11.89**	**191**	Pn	**Pn**	**22 24 12.3**	**-0.3**
MT01	**Popeta**	**12.50**	**191**	Pn	**Pn**	**22 24 19.7**	**-0.8**
BO01	**Tunca**	**12.99**	**190**	Pn	**Pn**	**22 24 26.8**	**-0.1**
BO02	**Sierra Bellavi**	**13.34**	**188**	Pn	**Pn**	**22 24 32.4**	**+0.9**
GO05	**Hualane**	**13.74**	**192**	Pn	**Pn**	**22 24 37.6**	**+1.0**
TRCB	**Terra Rica**	**14.66**	**98**		**P**	**22 24 53.8**	**+2.4**
BI02	**San Fabin de**	**15.24**	**189**	Pn	**Pn**	**22 24 54.4**	**-1.4**
BI02				IAmb	IAmb	22 24 57.7	
	comp=Z,8.7nm,0.8s						
ITAB	**Concordia**	**15.86**	**114**		**P**	**22 25 06.0**	**+1.4**
ITAB				IAmb	IAmb	22 25 07.7	
	comp=Z,17nm,0.9s						
CPSB	**Cacapava Do Su**	**16.07**	**126**	*eP*	**P**	**22 25 06.7**	**-0.1**
CLDB	**Colider**	**16.10**	**51**	*eP*	**Pn**	**22 25 06.1**	**-0.4**
PLTB	**Pedras Altas**	**16.66**	**131**		**P**	**22 25 14.3**	**+0.9**
PLTB				IAmb	IAmb	22 25 32.3	
	comp=Z,7.0nm,1.0s						
PLTB	**Pedras Altas**	**16.66**	**131**	*eP*	**P**	**22 25 15.0**	**+1.6**
ARAG	**Araguaiana, MT**	**16.77**	**72**	*eP*	**P**	**22 25 14.9**	**+0.2**
TRQA	**Tornquist**	**17.34**	**163**	P	**Pn**	**22 25 22.8**	**+1.4**
FRTB	**Fartura**	**17.51**	**99**	*eP*	**Pn**	**22 25 24.6**	**+1.1**
GO06	**Curarrehue**	**18.15**	**188**	P	**Pn**	**22 25 32.4**	**+1.3**
GO06				IAmb	IAmb	22 25 33.3	
	comp=Z,8.7nm,0.9s						
BB19B	**Bebedouro**	**18.53**	**92**	*eP*	**Pn**	**22 25 34.7**	**-1.1**
SNDB	**Serra Nova Dou**	**18.94**	**62**	*eP*	**Pn**	**22 25 39.2**	**-1.4**
PLCA	**Paso Flores**	**19.19**	**185**	P	**P**	**22 25 41.9**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=2.9,slow=9.8,SNR=2.9						
IPMB	**Ipameri, GO**	**19.34**	**83**	*eP*	**Pn**	**22 25 43.8**	**-1.4**
VAO	**Valinhos**	**19.89**	**98**	P	**P**	**22 25 49.4**	**+0.5**
VAO	**Valinhos**	**19.89**	**98**	*eP*	**P**	**22 25 49.1**	**+0.2**
BDFB	**Brasilia**	**20.20**	**76**	P	**P**	**22 25 52.1**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=233,slow=12,SNR=4.0						
BDFB	**Brasilia**	**20.20**	**76**	P	**P**	**22 25 51.6**	**-0.7**
ITTB	**Itaituba**	**21.06**	**37**	*eP*	**P**	**22 26 01.2**	**-0.3**
SDBA	**SAO DESIDERIO**	**24.23**	**72**	*eP*	**P**	**22 26 34.5**	**+2.0**
BOAV	**Boa Vista**	**25.04**	**19**	P	**P**	**22 26 39.7**	**-0.1**
BOAV				IAmb	IAmb	22 26 49.4	
	comp=Z,4.5nm,1.1s						
DBIC	**Dimbokro**	**68.31**	**73**	P	**P**	**22 32 16.8**	**+1.5**
	comp=Z,3.7nm,0.7s,baz=261,slow=6.1,SNR=5.4						
	comp=Z,3.7nm,0.7s						
DBIC	**Dimbokro**	**68.31**	**73**	P	**P**	**22 32 16.5**	**+1.2**
TORD	**Torodi Ar. Bea**	**76.94**	**70**	P	**P**	**22 33 07.5**	**+1.1**
	comp=Z,3.9nm,0.7s,baz=262,slow=4.4,SNR=42						
	comp=Z,3.9nm,0.7s						
YKA	**Yellowknife Ar**	**91.41**	**340**	P	**P**	**22 34 20.1**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=135,slow=3.7,SNR=17						
	comp=Z,0.8nm,0.7s						
BVAR	**Borovoye Array**	**135.59**	**35**	PKP	**PKiKP**	**22 40 34.8**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=0.0,slow=1.4,SNR=1.8						
KURBB	**Kurchatov Arra**	**141.14**	**34**	PKP	**PKiKP**	**22 40 44.4**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=304,slow=2.1,SNR=2.5						
ZALV	**Zalesovo Beam**	**141.82**	**26**	PKP	**PKiKP**	**22 40 45.7**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=27,slow=3.5,SNR=2.4						
MKAR	**Makanchi Array**	**145.41**	**36**	PKPbc	**PKiKP**	**22 40 52.7**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=323,slow=3.0,SNR=18						
MKAR	**Makanchi Array**	**145.41**	**36**		**PKiKP**	**22 40 52.6**	**-1.8**

IDC ***18*** *22:30:18.4±1.9,43°.07N×105°.18W,h0km,mbtmp3.2/4, ML3.1/3,Error ellipse: s-maj=45.8km s-min=10.1km az=158.0*

NEIC ***18*** *22:30:19.6±1.4,43°.72N±0°.05×105°.18W±0°.06,h0km±1km, ML3.3/54,Error ellipse: s-maj=10.1km s-min=4.7km az=317.0*

ISC 18 22:30:21.1±1.2,43°.71N±0°.06×105°.17W±0°.08,h0km,n72, σ1§02/71,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**63**	Pn	**Pn**	**22 30 41.0**	**-0.5**
K22A	**Casper**	**1.45**	**224**	Pg	**Pn**	**22 30 47.2**	**-1.5**
K22A				IAML		22 31 13.2	
	465nm,0.3s						
K22A				IAML		22 31 14.7	
	408nm,0.3s						
LAO	**LASA Array**	**3.07**	**346**	Pn	**Pn**	**22 31 10.2**	**-0.8**
RLMT	**Red Lodge**	**3.26**	**297**	Pn	**Pn**	**22 31 13.5**	**-0.1**
RLMT				IAML		22 32 04.5	
	96nm,0.4s						
RLMT				IAML		22 32 08.1	
	81nm,0.5s						
BW06	**Boulder Array**	**3.34**	**255**	Pn	**Pn**	**22 31 15.2**	**+0.4**
BW06				IAML		22 32 03.4	
	52nm,0.6s						
BW06				IAML		22 32 04.4	
	51nm,0.3s						
PD31	**Pinedale Array**	**3.34**	**255**	Pn	**Pn**	**22 31 14.9**	**+0.1**
PDAR	**Pinedale Array**	**3.34**	**255**	Pn	**Pn**	**22 31 14.8**	**0.0**
	2.0nm,0.3s,baz=70,slow=16,SNR=60						
PDAR				Lg	Lg	22 31 58.5	
	16nm,0.3s,baz=66,slow=24,SNR=14						
	3.6nm,0.4s						
PDAR	**Pinedale Array**	**3.34**	**255**	Pn	**Pn**	**22 31 15.2**	**+0.4**
HAYD	**Hayden**	**3.54**	**207**	Pn	**Pn**	**22 31 15.7**	**-1.8**
HAYD				IAML		22 32 17.5	
	comp=E,44nm,0.7s						
HAYD				IAML		22 32 25.7	
	comp=N,49nm,1.0s						
OGNE	**Ogallala**	**3.61**	**139**	Pn	**Pn**	**22 31 18.6**	**+0.3**
YNE	**Yellowstone No**	**3.71**	**292**	Pn	**Pn**	**22 31 19.0**	**-0.8**
YNE				IAML		22 32 19.7	
	comp=N,73nm,0.7s						
YMP	**Mirror Lake Pl**	**3.73**	**288**	Pn	**Pn**	**22 31 20.1**	**-0.1**
ISCO	**Idaho Springs**	**3.92**	**185**	Pn	**Pn**	**22 31 22.2**	**-0.6**
LOHW	**Long Hollow**	**3.94**	**271**	Pn	**Pn**	**22 31 22.1**	**-1.0**
H17A	**Grant Village**	**3.96**	**282**	Pn	**Pn**	**22 31 21.8**	**-1.5**
H17A				IAML		22 32 26.2	
	comp=N,38nm,0.4s						
FLWY	**Flagg Ranch**	**4.01**	**277**	Pn	**Pn**	**22 31 23.0**	**-1.0**
FLWY				IAML		22 32 43.9	
	comp=N,39nm,2.6s						
MOOW	**Moose Ponds**	**4.04**	**273**	Pn	**Pn**	**22 31 23.6**	**-0.8**
YPP	**Pitchstone Pla**	**4.11**	**280**	Pn	**Pn**	**22 31 23.0**	**-2.4**
K30B	**Basset**	**4.19**	**102**	Pn	**Pn**	**22 31 26.1**	**-0.2**
YHH	**Holmes Hill**	**4.22**	**287**	Pn	**Pn**	**22 31 25.9**	**-1.0**
O20A	**White River Ci**	**4.24**	**214**	Pn	**Pn**	**22 31 27.2**	**+0.1**
YHL	**Hebgen Lake**	**4.47**	**287**	Pn	**Pn**	**22 31 29.3**	**-1.0**
YHL				IAML		22 32 56.0	
	comp=N,31nm,1.2s						
YHL				IAML		22 32 58.1	
	comp=E,32nm,1.2s						
RDMU	**Red Mountain**	**4.53**	**228**	Pn	**Pn**	**22 31 29.8**	**-1.4**
RDMU				IAML		22 32 48.9	
	comp=N,30nm,1.8s						
RDMU				IAML		22 32 49.9	
	comp=E,27nm,0.9s						
QLMT	**Earthquake Lak**	**4.63**	**286**	Pn	**Pn**	**22 31 31.6**	**-0.9**
Q24A	**Divide**	**4.74**	**180**	Pn	**Pn**	**22 31 32.2**	**-1.9**
BOZ	**Bozeman (W)**	**4.98**	**295**	Pn	**Pn**	**22 31 36.0**	**-1.3**
BOZ				IAML		22 32 54.5	
	comp=E,23nm,1.0s						
BOZ				IAML		22 33 03.4	
	comp=E,15nm,1.0s						
HWUT	**Hardware Ranch**	**5.16**	**248**	Pn	**Pn**	**22 31 38.9**	**-0.9**
HWUT				IAML		22 33 15.6	
	comp=E,24nm,2.4s						
BSUT	**Blindstream Ca**	**5.23**	**235**	Pn	**Pn**	**22 31 40.2**	**-0.6**
BSUT				IAML		22 33 11.0	
	comp=N,11nm,2.0s						
BSUT				IAML		22 33 31.6	
	comp=E,12nm,2.5s						
TCUT	**Toone Canyon**	**5.29**

	0.4nm,0.5s,baz=117,slow=8.3,SNR=1.9								
SONM				pP		**pP**	**22 49 15.0**	**-1.1**
	1.2nm,0.7s,baz=128,slow=6.5,SNR=5.4								
	0.4nm,0.5s								
CMAR	**Chiang Mai Arr**	**41.26**	**273**	LR		LR	23 06 49.6		
	comp=Z,12nm,18.3s,baz=60,slow=36								
WRA	**Warramunga Arr**	**42.85**	**192**	P		**P**	**22 49 29.7**	**+1.3**
	0.5nm,0.9s,baz=13,slow=9.1,SNR=2.2								
WRA				pP		**pP**	**22 49 49.1**	**-1.5**
	0.9nm,0.8s,baz=19,slow=8.8,SNR=4.2								
	0.5nm,0.9s								
ASAR	**Alice Springs**	**46.56**	**191**	P		**P**	**22 49 59.4**	**+1.5**
	0.1nm,0.3s,baz=16,slow=11,SNR=2.2								
ASAR				pP		**pP**	**22 50 18.1**	**-2.3**
	0.3nm,0.6s,baz=4.3,slow=6.6,SNR=2.2								
	0.1nm,0.3s								
ZALV	**Zalesovo Beam**	**53.53**	**321**	P		**P**	**22 50 52.4**	**+2.1**
	0.7nm,0.6s,baz=81,slow=8.9,SNR=3.5								
ZALV				pP		**pP**	**22 51 10.9**	**-2.6**
	1.9nm,0.8s,baz=96,slow=7.6,SNR=5.2								
	0.7nm,0.6s								
MKAR	**Makanchi Array**	**54.06**	**312**	P		**P**	**22 50 55.9**	**+1.6**
	0.3nm,0.7s,baz=94,slow=8.0,SNR=4.1								
MKAR				pP		**pP**	**22 51 15.7**	**-2.0**
	1.0nm,0.8s,baz=90,slow=8.5,SNR=7.9								
	0.3nm,0.7s								
KURBB	**Kurchatov Arra**	**56.86**	**317**	P		**P**	**22 51 15.6**	**+1.3**
	0.9nm,0.7s,baz=96,slow=7.8,SNR=7.6								
KURBB				pP		**pP**	**22 51 35.4**	**-2.4**
	3.1nm,0.8s,baz=95,slow=7.7,SNR=14								
	0.9nm,0.7s								
ILAR	**Eielson Array**	**61.60**	**27**	P		**P**	**22 51 48.0**	**+1.4**
	0.3nm,0.5s,baz=258,slow=6.1,SNR=2.4								
ILAR				pP		**pP**	**22 52 07.5**	**-2.8**
	0.6nm,0.7s,baz=253,slow=5.2,SNR=4.0								
	0.3nm,0.5s								
BVAR	**Borovoye Array**	**62.00**	**319**	P		**P**	**22 51 52.0**	**+2.4**
	1.7nm,0.6s,baz=94,slow=7.3,SNR=10.0								
BVAR				pP		**pP**	**22 52 11.4**	**-2.1**
	4.3nm,0.8s,baz=92,slow=7.2,SNR=13								
	1.7nm,0.6s								
YKA	**Yellowknife Ar**	**76.02**	**28**	P		**P**	**22 53 18.8**	**+2.7**
	0.1nm,0.5s,baz=266,slow=9.8,SNR=1.4								
YKA				pP		**pP**	**22 53 37.1**	**-3.7**
	0.6nm,0.6s,baz=296,slow=6.3,SNR=5.8								
	0.1nm,0.5s								
BRTR	**Keskin Array B**	**89.70**	**313**	pP		pP	22 54 48.4	-4.2	
	0.5nm,0.9s,baz=45,slow=4.5,SNR=2.8								

CATAC ***18*** *22:55:11.9±0.5, 13°N±3°×9°0W±°, h29km±3km, M3.6/16, MLv3.6/16, Error ellipse: s-maj=7.2km s-min=3.9km az=16.5, confirmed*
SNET ***18*** *22:55:11.8±0.7, 13°.12N×89°.55W, h51km, ML3.6, Presumed earthquake*
GCG ***18*** *22:55:13.6±1.1, 13°.25N×89°.61W, h46km±13km, MD4.0, Presumed earthquake*

ISC 18 22:55:13.8±1.7, 13°.16N±0°.08×89°.49W±0°.05, h40km±15km, n41, σ1§20/57, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.36**	**27**		*eP*		**Pn**	**22 55 22.4**	**-0.5**
LALI					*eS*		**Sn**	**22 55 30.5**	**+1.4**
LALI	**Alcalda de L**	**0.36**	**27**		*i* P		**Pn**	**22 55 22.3**	**-0.5**
JAYA	**Jayaque - finc**	**0.49**	**4**		P		**Pn**	**22 55 23.6**	**-1.1**
JAYA	**Jayaque - finc**	**0.49**	**4**		*eP*		**Pn**	**22 55 23.7**	**-0.9**
JAYA					*eS*		**Sn**	**22 55 32.7**	**+0.5**
JAYA	**Jayaque - finc**	**0.49**	**4**		*i* P		**Pn**	**22 55 23.7**	**-0.9**
JAYA					*i* S		**Sn**	**22 55 32.0**	**-0.2**
PANCS	**Alcalda de**	**0.54**	**34**		P		**Pn**	**22 55 24.6**	**-0.6**
PANCS					S		**Sn**	**22 55 33.6**	**+0.4**
PMON	**Piamonte**	**0.57**	**17**		P		**Pn**	**22 55 24.8**	**-0.8**
PMON					S		**Sn**	**22 55 34.9**	**+0.9**
SEMO	**Seminario San**	**0.59**	**26**		S		**Sn**	**22 55 35.5**	**+0.9**
UEES	**Universidad Ev**	**0.60**	**24**		P		**Pn**	**22 55 25.9**	**-0.2**
UEES					S		**Sn**	**22 55 35.4**	**+0.7**
UTEC	**Universidad Te**	**0.60**	**28**		S		**Sn**	**22 55 35.3**	**+0.6**
BOQS	**Boqueron**	**0.60**	**20**		*i* P		**Pn**	**22 55 25.5**	**-0.7**
LFRS	**El Faro**	**0.62**	**42**		*eP*		**Pn**	**22 55 25.7**	**-0.6**
IGN	**Direccin Gen**	**0.63**	**29**		P		**Pn**	**22 55 25.8**	**-0.6**
IGN					S		**Sn**	**22 55 36.5**	**+1.1**
UDBS	**Universidad Do**	**0.64**	**31**		S		**Sn**	**22 55 36.5**	**+1.0**
CEDA	**San Andres**	**0.64**	**8**		*eP*		**Pn**	**22 55 25.1**	**-1.5**
CEVE	**Cerro Verde**	**0.67**	**349**		P		**Pn**	**22 55 26.5**	**-0.7**
CEVE					S		**Sn**	**22 55 37.4**	**+0.7**
CEVE	**Cerro Verde**	**0.67**	**349**		*i* P		**Pn**	**22 55 26.1**	**-1.1**
CEVE					*eS*		**Sn**	**22 55 38.3**	**+1.6**
LBRS	**Las Brisas**	**0.71**	**37**		*eP*		**Pn**	**22 55 27.0**	**-0.6**
PAVA	**Las Pavas**	**0.76**	**44**		P		**Pn**	**22 55 27.9**	**-0.4**
PAVA					S		**Sn**	**22 55 39.8**	**+1.1**
TECO	**Alcaldia de Te**	**0.78**	**62**		S		**Sn**	**22 55 38.8**	**-0.2**
NUBE	**Las Nubes**	**0.79**	**339**		P		**Pn**	**22 55 27.4**	**-1.3**
NUBE	**Las Nubes**	**0.79**	**339**		*eP*		**Pn**	**22 55 27.2**	**-1.3**
NUBE					*eS*		**Sn**	**22 55 39.0**	**-0.3**
NUBE	**Las Nubes**	**0.79**	**339**		*i* P		**Pn**	**22 55 27.3**	**-1.3**
NUBE					*i* S		**Sn**	**22 55 38.0**	**-1.3**
UNIC	**Universidad Ca**	**0.81**	**356**		P		**Pn**	**22 55 29.5**	**+0.6**
FAME	**Alcaldia de Sa**	**0.85**	**323**		P		**Pn**	**22 55 28.0**	**-1.4**
FAME					S		**Sn**	**22 55 39.0**	**-1.6**
LOAL	**Lomas de Alarc**	**0.88**	**341**		P		**Pn**	**22 55 28.9**	**-0.9**
SLOZ	**Alcaldia de Sa**	**0.90**	**341**		P		**Pn**	**22 55 29.4**	**-0.7**
LLGN	**La Laguna**	**1.12**	**28**		P		**Pn**	**22 55 32.9**	**-0.3**
PACA	**Pacayal**	**1.17**	**75**		P		**Pn**	**22 55 33.2**	**-0.7**
PACA					S		**Sn**	**22 55 49.0**	**+0.2**
RANC	**El Ranchito**	**1.20**	**77**		P		**Pn**	**22 55 33.6**	**-0.7**
RANC					S		**Sn**	**22 55 49.5**	**+0.1**
MTO3	**Montecristo**	**1.23**	**6**		P		**Pn**	**22 55 33.8**	**-1.0**
MTO3					S		**Sn**	**22 55 51.1**	**+0.7**
MTO3	**Montecristo**	**1.23**	**6**		*eP*		**Pn**	**22 55 33.9**	**-1.0**
MTO3	**Montecristo**	**1.23**	**6**		*i* P		**Pn**	**22 55 33.8**	**-1.0**
ESQI	**Esquipulas**	**1.39**	**6**		P		**Pn**	**22 55 36.2**	**-0.7**
LCND	**La Caada**	**1.56**	**85**		P		**Pn**	**22 55 38.2**	**-0.9**
SARH	**Santa Rosa de**	**1.75**	**24**		P		**Pn**	**22 55 41.5**	**-0.3**
SARH					S		**Sn**	**22 56 04.0**	**+1.0**
SARH	**Santa Rosa de**	**1.75**	**24**		*i* P		**Pn**	**22 55 41.3**	**-0.5**
CSGN	**Cosiguina Volc**	**1.89**	**95**		P		**Pn**	**22 55 43.1**	**-0.6**
APG	**El Apazote**	**2.06**	**333**		*i* P		**Pn**	**22 55 45.2**	**-1.0**
STG5	**El Palmar, Qui**	**2.19**	**304**		*eP*		Pn	22 55 51.3	+3.5
STG8	**El Palmar, Qui**	**2.22**	**305**		*i* S		**Sn**	**22 56 20.4**	**+5.8**

ISK ***18*** *23:02:19.3, 39°.10N×27°.84E, h8km, ML3.8/23*
AFAD ***18*** *23:02:19.8, 39°.11N×27°.83E, h7km±2km, MW3.9*
THE ***18*** *23:02:21.9, 39°N±2°×27°.8E±°, h21km, M3.3/16, MLh3.3/16*
CFUSG ***18*** *23:02:22.7, 39°.57N×27°.80E, h13km, Mb2.7/1, MD3.5/2, MSH2.7/4*

ISC 18 23:02:19.8±0.8, 39°.11N±0°.02×27°.86E±0°.02, h14km±6km, n109, σ1§09/148, 18C-11D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.23**	**190**		Pg		**Pg**	**23 02 24.3**	**-0.6**
AKS					Sg		**Sg**	**23 02 28.2**	**-0.2**
SOMA	**Soma-Manisa**	**0.26**	**281**		Pg		**Pg**	**23 02 24.9**	**-0.5**
SOMA					Sg		**Sg**	**23 02 28.8**	**-0.4**
STEP	**BALIKESIR_Sava**	**0.29**	**337**		P		**Pg**	**23 02 25.7**	**-0.3**
STEP					S		**Sg**	**23 02 30.5**	**+0.3**
STEP					IAML			23 02 31.0	
	comp=E,2μm,0.4s								
STEP					IAML			23 02 32.0	
	comp=N,1μm,1.0s								
GOMA	**Golmarmara-Man**	**0.40**	**174**		Pg		**Pg**	**23 02 27.9**	**0.0**
GOMA					Sg		**Sg**	**23 02 33.8**	**+0.4**
BALB	**Balikesir**	**0.53**	**1**		Pg		**Pb**	**23 02 30.4**	**-0.5**
BALB					Sg		**Sb**	**23 02 38.5**	**+0.1**
CAMT	**Merkez**	**0.56**	**230**		P		**Pg**	**23 02 30.9**	**0.0**
CAMT					S		**Sg**	**23 02 39.2**	**+1.0**
CAMT					IAML			23 02 42.0	
	comp=E,2μm,0.6s								
CAMT					IAML			23 02 42.0	
	comp=N,2μm,0.2s								
BKES	**Balkesir-Mer**	**0.63**	**5**		P		**Pg**	**23 02 31.6**	**-0.5**
BKES					S		**Sb**	**23 02 41.0**	**-0.2**
BKES					IAML			23 02 44.0	
	comp=E,1μm,1.0s								
BKES					IAML			23 02 45.0	
	comp=N,1μm,0.6s								
ZEDA	**zmir-Bergama**	**0.63**	**257**		P		**Pg**	**23 02 32.1**	**0.0**
ZEDA					S		**Sg**	**23 02 40.8**	**+0.4**
ZEDA					IAML			23 02 41.0	
	comp=E,1μm,0.4s								
ZEDA					IAML			23 02 41.0	
	comp=N,2μm,0.7s								
BALY	**Balya**	**0.66**	**343**		P		**Pg**	**23 02 32.5**	**-0.3**
BALY					S		**Sb**	**23 02 41.7**	**-0.4**
BALY					IAML			23 02 43.0	
	comp=E,2μm,0.4s								
BALY					IAML			23 02 47.0	
	comp=N,3μm,0.3s								
DEMI	**Demirci**	**0.67**	**95**		P		**Pb**	**23 02 33.4**	**+0.1**
BUHA	**Balikesir, Bur**	**0.72**	**303**		P		**Pg**	**23 02 33.8**	**-0.2**
BUHA					S		**Sn**	**23 02 46.4**	**-0.1**
BUHA					IAML			23 02 48.0	
	comp=E,1μm,0.2s								
BUHA					IAML			23 02 48.0	
	comp=N,971nm,0.3s								
IZMD	**zmir-Dikili-**	**0.74**	**261**		P		**Pg**	**23 02 34.2**	**0.0**
IZMD					S		**Sg**	**23 02 43.6**	**-0.3**
IZMD					IAML			23 02 45.0	
	comp=N,798nm,0.5s								
IZMD					IAML			23 02 48.0	
	comp=E,989nm,1.1s								
DKL	**Dikili**	**0.75**	**268**		Pg		**Pg**	**23 02 33.9**	**-0.4**
DST	**Dursunbey**	**0.77**	**50**		Pg		**Pb**	**23 02 34.5**	**-0.5**
BLKS	**Balkesir-Sus**	**0.77**	**6**		P		**Pb**	**23 02 34.8**	**-0.2**
BLKS					S		**Sb**	**23 02 44.7**	**-0.6**
BLKS					IAML			23 02 49.0	
	comp=E,1μm,0.8s								
BLKS					IAML			23 02 54.0	
	comp=N,947nm,0.8s								
YAYO	**Edremit-Balk**	**0.79**	**310**		Pg		**Pg**	**23 02 34.7**	**-0.5**
MANT	**Manisa**	**0.82**	**138**		P		**Pg**	**23 02 35.7**	**-0.1**
MANT					S		**Sb**	**23 02 47.0**	**0.0**
MANT					IAML			23 02 50.0	
	comp=N,2μm,0.7s								
MANT					IAML			23 02 51.0	
	comp=E,2μm,0.5s								
ODEM	**Odemis-Izmir**	**0.85**	**169**		Pg		**Pg**	**23 02 35.9**	**-0.4**
KULA	**Kula-Manisa**	**0.86**	**133**		Pg		**Pg**	**23 02 36.4**	**-0.1**
SMAA	**Simav-Kutahya**	**0.87**	**90**		Pg		**Pb**	**23 02 37.2**	**+0.5**
SUSR	**Susurluk-Balk**	**0.87**	**11**		Pg		**Pg**	**23 02 36.3**	**-0.4**
SIMA	**Simav-Kutahya**	**0.87**	**91**		Pg		**Pb**	**23 02 36.9**	**+0.1**
CMHT	**Manyas**	**0.91**	**5**		P		**Pb**	**23 02 37.5**	**+0.2**
CMHT					S		**Sb**	**23 02 49.3**	**+0.1**
CMHT					IAML			23 02 53.0	
	comp=E,3μm,0.4s								
CMHT					IAML			23 02 53.0	
	comp=N,4μm,0.6s								
BAGT	**Foa**	**0.91**	**241**		P		**Pg**	**23 02 36.9**	**-0.5**
BAGT					S		**Sg**	**23 02 49.5**	**+0.2**
BAGT					IAML			23 02 52.0	
	comp=E,4μm,1.1s								
BAGT					IAML			23 02 52.0	
	comp=N,3μm,0.9s								
AYVA	**Ayvalik**	**0.93**	**283**		P		**Pg**	**23 02 37.8**	**-0.1**
AYVA					S		**Sg**	**23 02 50.0**	**0.0**
AYVA					IAML			23 02 53.0	
	comp=E,2μm,0.6s								
AYVA					IAML			23 02 54.0	
	comp=N,3μm,0.5s								
DUVT	**Torbali**	**0.94**	**200**		P		**Pg**	**23 02 37.5**	**-0.5**
DUVT					S		**Sg**	**23 02 49.8**	**-0.7**
DUVT					IAML			23 02 53.0	
	comp=E,1μm,0.3s								
GONE	**Gonen-Balikesi**	**0.95**	**352**		Pg		**Pb**	**23 02 38.2**	**+0.2**
YENI	**Yenice-Canakka**	**0.96**	**330**		Pg		**Pg**	**23 02 37.9**	**-0.4**
BLCB	**Balcova**	**0.96**	**222**		Pg		**Pg**	**23 02 37.8**	**-0.7**
BLCB	**Balcova**	**0.96**	**222**		P		**Pg**	**23 02 37.7**	**-0.7**
BLCB					S		**Sg**	**23 02 51.6**	**+0.5**
FOCM	**Foa**	**0.97**	**246**		Pg		**Pg**	**23 02 37.8**	**-0.7**
IZMR	**zmir-demi**	**0.97**	**176**		P		**Pg**	**23 02 38.4**	**-0.1**
IZMR					S		**Sg**	**23 02 50.0**	**-1.3**
IZMR					IAML			23 02 53.0	
	comp=N,1μm,0.9s								
IZMR					IAML			23 02 53.0	
	comp=E,2μm,0.6s								
USAK	**Uak-Merkez**	**0.98**	**113**		P		**Pb**	**23 02 38.9**	**+0.2**
USAK					S		**Sg**	**23 02 51.2**	**-0.5**
USAK					IAML			23 02 53.0	
	comp=E,1μm,0.6s								
USAK					IAML			23 02 55.0	
	comp=N,2μm,0.9s								
ATIT	**Gnen**	**1.00**	**347**		P		**Pb**	**23 02 39.3**	**+0.4**
ATIT					S		**Sb**	**23 02 52.3**	**+0.3**
ATIT					IAML			23 02 54.0	
	comp=N,3μm,0.6s								
ATIT					IAML			23 02 55.0	
	comp=E,3μm,0.8s								
KIRA	**zmir-Kiraz**	**1.00**	**155**		P		**Pb**	**23 02 39.5**	**+0.5**
KIRA					S		**Sg**	**23 02 52.2**	**-0.1**
KIRA					IAML			23 02 54.0	
	comp=N,2μm,0.6s								
KIRA					IAML			23 02 55.0	
	comp=E,2μm,0.8s								
SHAP	**Saphane-Kutahy**	**1.06**	**94**		Pn		**Pn**	**23 02 40.5**	**+0.2**
CANM	**Can-anakkale**	**1.10**	**326**		Pn		**Pg**	**23 02 40.9**	**-0.1**
KRBN	**Karaburun**	**1.14**	**244**		Pn		**Pb**	**23 02 41.6**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.16**	**179**		Pn		**Pb**	**23 02 41.5**	**-0.2**
EMET	**Ktahya-Emet**	**1.16**	**76**		P		**Pn**	**23 02 42.6**	**+0.8**
EMET					S		**Sn**	**23 02 57.4**	**-0.1**
EMET					IAML			23 03 00.0	
	comp=E,3μm,0.5s								
EMET					IAML			23 03 02.0	
	comp=N,3μm,0.4s								
NAZL	**Nazilli-Aydin**	**1.19**	**163**		Pn		**Pb**	**23 02 42.2**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.20**	**302**		P		**Pb**	**23 02 42.3**	**0.0**
BAYC					S		**Sb**	**23 02 58.5**	**+0.9**
BAYC					IAML			23 03 00.0	
	comp=E,899nm,0.4s								
BAYC					IAML			23 03 01.0	
	comp=N,919nm,0.3s								
GEDZ	**Gediz**	**1.21**	**93**		Pn		**Pg**	**23 02 43.5**	**+0.4**
ORLT	**Orhaneli**	**1.23**	**40**		P		**Pb**	**23 02 42.7**	**-0.2**
ORLT					S		**Sn**	**23 02 59.3**	**+0.2**
ORLT					IAML			23 03 04.0	
	comp=N,3μm,0.5s								
ORLT					IAML			23 03 08.0	
	comp=E,3μm,0.8s								
PRK	**Paraskevi**	**1.24**	**277**		P		**Pn**	**23 02 43.1**	**+0.4**
PRK					S		**Sb**	**23 02 58.1**	**-0.8**
BAND	**Balkesir-Ban**	**1.26**	**8**		P		**Pg**	**23 02 43.8**	**-0.3**
BAND					S		**Sn**	**23 03 01.3**	**+1.7**
BAND	**Balkesir-Ban**	**1.26**	**8**		P		**Pb**	**23 02 43.3**	**-0.1**
BAND					S		**Sg**	**23 02 59.6**	**-0.9**
BAND					IAML			23 03 02.0	
	comp=N,1μm,0.3s								
BAND					IAML			23 03 02.0	
	comp=E,2μm,0.3s								
GMLD	**Gumuldur**	**1.27**	**216**		Pn		**Pn**	**23 02 43.9**	**+0.9**
KUSD	**Kusadasi-Aydin**	**1.32**	**200**		Pn		**Pn**	**23 02 44.6**	**+0.7**
EZN	**Ezine**	**1.39**	**302**		P		**Pn**	**23 02 45.1**	**+0.4**
EZN					S		**Sn**	**23 03 03.0**	**+0.2**
ULDT	**Uludag**	**1.43**	**43**		P		**Pn**	**23 02 45.4**	**-0.1**
ULDT					S		**Sg**	**23 03 05.8**	**-0.1**
ULDT					IAML			23 03 10.0	
	comp=E,1μm,0.7s								
CESE	**eme**	**1.45**	**238**		Pn		**Pn**	**23 02 46.5**	**+1.0**
CNKL	**anakkale-Mer**	**1.49**	**310**		P		**Pn**	**23 02 46.6**	**+0.5**
GCAM	**G?zelcaml?**	**1.49**	**200**		Pn		**Pn**	**23 02 46.6**	**+0.5**
MADA	**Marmara adas**	**1.50**	**351**		P		**Pn**	**23 02 46.7**	**+0.5**
MADA					S		**Sb**	**23 03 06.5**	**+0.2**
SIGR	**SIGRI**	**1.56**	**274**		P		**Pn**	**23 02 47.2**	**+0.1**
SIGR					S		**Sn**	**23 03 05.3**	**-1.8**
CHOS	**Chios island**	**1.59**	**244**		P		**Pn**	**23 02 47.6**	**+0.1**
CHOS					S		**Sn**	**23 03 06.3**	**-1.5**
SMG	**Samos**	**1.61**	**210**		P		**Pn**	**23 02 47.3**	**-0.5**
SMG					S		**Sn**	**23 03 09.4**	**+1.1**
GADA	**Gvkgeada**	**1.86**	**306**		P		**Pn**	**23 02 51.7**	**+0.5**
GADA					S		**Sn**	**23 03 15.4**	**+0.9**
YER	**Yerkesik**	**2.00**	**170**		P		**Pn**	**23 02 53.6**	**+0.4**
CAVK	**Edirne/Enez-Ca**	**2.05**	**321**		P		**Pn**	**23 02 54.7**	**+0.9**
CAVK					S		**Sb**	**23 03 21.8**	**-0.3**
BODT	**Bodrum**	**2.09**	**192**		P		**Pn**	**23 02 54.7**	**+0.4**
ENEZ	**Enez**	**2.09**	**322**		P		**Pn**	**23 02 55.1**	**+0.8**
LIA	**Limnos Island**	**2.22**	**292**		P		**Pn**	**23 02 56.6**	**+0.5**
SMTH	**Samothraki Isl**	**2.25**	**308**		P		**Pn**	**23 02 56.9**	**+0.2**
ALN	**Alexandroupoli**	**2.27**	**323**		P		**Pn**	**23 02 57.3**	**+0.5**
SILT	**Sile**	**2.46**	**33**		P		**Pn**	**23 03 00.4**	**+1.0**
RDO	**Rodhopi**	**2.71**	**320**		P		**Pn**	**23 03 03.6**	**+0.8**
THAS	**Thassos island**	**2.84**	**303**		P		**Pn**	**23 03 04.7**	**0.0**
THAS					S		**Sn**	**23 03 38.0**	**-0.8**
ARG	**Arkhangelos**	**2.89**	**176**		P		**Pn**	**23 03 05.1**	**-0.3**
KYMI	**Kymi, Euboea I**	**2.98**	**262**		P		**Pn**	**23 03 07.1**	**+0.6**
AOS	**Alonnisos**	**3.10**	**272**		P		**Pn**	**23 03 09.3**	**+1.0**
DIM	**Dimitrovgrad**	**3.41**	**330**		P		**Pn**	**23 03 14.1**	**+1.6**
RZN	**Rozhen**	**3.52**	**318**		P		**Pn**	**23 03 15.4**	**+1.2**
JMB	**Yambol**	**3.53**	**344**		P		**Pn**	**23 03 15.3**	**+1.2**
PLD	**Plovdiv**	**3.85**	**323**		P		**Pn**	**23 03 19.9**	**+1.3**
MMB	**Musomishta**	**3.98**	**309**		P		**Pn**	**23 03 21.7**	**+1.3**
ELND	**Elena**	**4.10**	**339**		↑P		**Pn**	**23 03 23.2**	**+1.1**
LOZB	**Loznitsa**	**4.37**	**348**		↑P		**Pn**	**23 03 26.5**	**+0.8**
PVL	**Pavlikeni**	**4.50**	**334**		P		**Pn**	**23 03 29.1**	**+1.7**
KKB	**Krupnik**	**4.53**	**309**		P		**Pn**	**23 03 29.7**	**+1.8**
VAY	**Valandovo**	**4.62**	**300**		*i* Pg		**Pn**	**23 03 31.2**	**+2.2**
KIRS	**Kirsehir-Merke**	**4.71**	**88**		↑P		**Pn**	**23 03 32.2**	**+1.8**
PLVB	**Pleven**	**4.92**	**331**		↑P		**Pn**	**23 03 34.7**	**+1.4**
VTS	**Vitosha**	**4.96**	**316**		P		**Pn**	**23 03 35.5**	**+1.5**
CFR	**Carcaliu**	**6.07**	**2**		↓P		**Pn**	**23 03 51.0**	**+2.0**
TLCR		**6.12**	**6**		↓P		**Pn**	**23 03 51.9**	**+2.2**
BOVS	**Bovan**	**6.47**	**316**		↑P		**Pn**	**23 03 56.2**	**+1.7**
MLR	**Muntele Rosu**	**6.54**	**348**		↓P		**Pn**	**23 03 57.8**	**+2.2**
VOIR		**6.66**	**343**		↑P		**Pn**	**23 03 58.6**	**+1.4**
ODBI	**Odobesti**	**6.68**	**355**		↑P		**Pn**	**23 03 59.2**	**+1.8**
VLDR	**Vladesti**	**6.73**	**1**		↓P		**Pn**	**23 04 00.4**	**+2.2**
PLOR	**Plostina**	**6.80**	**353**		↓P		**Pn**	**23 04 01.1**	**+2.0**
VRI	**Vrincioaia**	**6.81**	**353**		↑P		**Pn**	**23 04 01.3**	**+2.1**
COVR	**Voineasa-Covas**	**6.84**	**350**		↑P		**Pn**	**23 04 01.9**	**+2.2**
SEV	**Sevastopol'**	**6.95**	**37**		*eP*		**Pn**	**23 04 01.2**	**+0.1**
SEV					pmax		pmax	23 04 09.6	
	comp=Z,2.0nm,0.4s								
SEV					*eS*		**Sn**	**23 05 16.2**	**-3.7**
SEV					smax		smax	23 05 21.0	
	comp=N,2.0nm,0.5s								
SEV					smax		smax	23 05 21.0	
	comp=E,4.0nm,0.5s								
HERR	**Herculane**	**7.05**	**327**		↑P		**Pn**	**23 04 03.3**	**+0.8**
TURR	**Turia**	**7.08**	**350**		↑P		**Pn**	**23 04 05.1**	**+2.2**
DOPR	**Dopca**	**7.09**	**346**		↓P		**Pn**	**23 04 05.2**	**+2.0**
YAL	**Yalta**	**7.14**	**39**		*eS*		**Sn**	**23 05 22.0**	**-2.5**
YAL					smax		smax	23 05 22.2	
	comp=E,8.0nm,0.5s								
YAL					smax		smax	23 05 22.3	
	comp=N,1.0nm,0.4s								
MDVR	**Moldovita**	**7.29**	**323**		↑P		**Pn**	**23 04 06.6**	**+0.7**
ONER	**Baraj Valea Uz**	**7.30**	**352**		↑P		**Pn**	**23 04 07.9**	**+1.9**
GZR	**Gura Zlata**	**7.33**	**331**		↑P		**Pn**	**23 04 07.3**	**+1.0**
TESR	**Tescani**	**7.45**	**354**		↑P		**Pn**	**23 04 10.0**	**+1.9**
SIM	**Simferopol'**	**7.46**	**37**		*eS*		**Sn**	**23 05 29.4**	**-3.2**
SIM					smax		smax	23 05 29.8	
	comp=E,5.0nm,0.5s								
SIM					smax		smax	23 05 29.9	
	comp=N,9.0nm,0.5s								
SUDU	**Sudak**	**7.85**	**40**		*eP*		**Pn**	**23 04 14.7**	**+1.3**
SUDU					pmax		pmax	23 04 24.0	
	comp=Z,3.0nm,0.4s								
SUDU					*eS*		**Sn**	**23 05 38.8**	**-3.2**
SUDU					smax		smax	23 05 43.8	
	comp=N,7.0nm,0.4s								
SUDU					smax		smax	23 05 43.8	
	comp=E,4.0nm,0.6s								
BZS	**Buzias**	**7.98**	**327**		↑P		**Pn**	**23 04 15.9**	**+0.7**
BURAR	**Bucovina Array**	**8.72**	**348**		↓P		**Pn**	**23 04 28.2**	**+2.7**
MORH	**Mrgy, Hungar**	**9.82**	**319**		↑P		**Pn**	**23 04 41.6**	**+1.1**

IDC ***18*** *23:02:28.

IDC ***18*** *23:04:40.9±1.6, 1°.75S×100°.25E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=69.4km s-min=19.9km az=54.0*

DJA ***18*** *23:04:52.1±0.4, 2°.5S×2°×10°0E±°, h29km±3km, M4.0/31, mB5.0/2, mb3.9/6, MLv4.1/31, Mw(mB)4.4/2*

ISC 18 23:04:50.5±0.8, **1°.55S**±0°.05×**100°.39E**±0°.07, **h58**km, **n26, s19 96/26, mb4.1/7, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**0.64**	**7**	P	**Pn**	**23 05 05.4**	**+1.4**
PDSI				S	**Sn**	**23 05 15.4**	**+1.7**
PPI	**Padang Panjang**	**1.08**	**1**	P	**Pn**	**23 05 11.1**	**+1.5**
PPI				S	**Sn**	**23 05 26.0**	**+2.2**
KRJI	**Kerinci**	**1.20**	**117**	P	**Pn**	**23 05 13.3**	**+2.0**
KRJI				S	**Sn**	**23 05 29.4**	**+2.7**
PPSI	**Pulau Pagai**	**1.26**	**197**	P	**Pn**	**23 05 14.3**	**+2.3**
BKNI	**Bangkinang**	**1.97**	**19**	P	**Pn**	**23 05 22.6**	**+1.0**
MASI	**Maura Aman, Be**	**2.44**	**131**	P	**Pn**	**23 05 29.9**	**+1.9**
MNSI	**Mandailing Nat**	**2.46**	**341**	P	**Pn**	**23 05 30.3**	**+2.0**
PBSI	**Pulau Batu**	**2.58**	**305**	P	**Pn**	**23 05 32.0**	**+2.2**
UBSI	**University, Be**	**2.90**	**139**	P	**Pn**	**23 05 37.0**	**+2.8**
KSI	**Kapahiang**	**3.04**	**134**	P	**Pn**	**23 05 38.0**	**+1.8**
MNAI	**Manna**	**3.79**	**137**	P	**Pn**	**23 05 48.9**	**+2.4**
EGSI	**Enggano, Bengk**	**4.22**	**154**	P	**Pn**	**23 05 51.7**	**-0.7**
KCSI	**Kotacane, Aceh** 0.1nm6.1nm,1.2s	**5.67**	**333**	P	**Pn**	**23 06 15.8**	**+3.5**
KULM	**Kulim** 0.1nm23nm,1.7s	**6.80**	**2**	P	**Pn**	**23 06 29.6**	**+1.9**
CMAR	**Chiang Mai Arr** 0.8nm,0.3s,baz=187,slow=10.0,SNR=6.4 0.8nm,0.3s	**19.93**	**356**	P	**P**	**23 09 18.3**	**+0.5**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=299,slow=9.5,SNR=1.8 0.3nm,0.6s	**37.89**	**121**	P	**P**	**23 12 00.5**	**-1.9**
ASAR	**Alice Springs** 0.4nm,0.5s,baz=303,slow=7.9,SNR=8.9 0.4nm,0.5s	**39.21**	**127**	P	**P**	**23 12 11.1**	**-2.4**
SONM	**Songino Array** 1.1nm,0.6s,baz=198,slow=8.3,SNR=4.8 1.1nm,0.6s	**49.46**	**5**	P	**P**	**23 13 34.1**	**-0.9**
MKAR	**Makanchi Array** 1.0nm,0.3s,baz=156,slow=8.9,SNR=14 1.0nm,0.3s	**50.70**	**344**	P	**P**	**23 13 43.7**	**-0.6**
ZALV	**Zalesovo Beam** 1.3nm,0.3s,baz=167,slow=6.7,SNR=6.5 1.3nm,0.3s	**56.80**	**349**	P	**P**	**23 14 27.2**	**-1.5**
BVAR	**Borovoye Array** 3.8nm,0.7s,baz=132,slow=6.3,SNR=6.9 3.8nm,0.7s	**59.90**	**340**	P	**P**	**23 14 49.4**	**-1.0**
H04N2	**CROZET ISLANDS** baz=58,slow=75,SNR=15	**61.39**	**216**	T	T	00 20 53.1	
H04N1	**CROZET ISLANDS** baz=58,slow=75,SNR=16	**61.40**	**216**	T	T	00 20 53.6	
H04N3	**CROZET ISLANDS** baz=58,slow=75,SNR=17	**61.41**	**216**	T	T	00 20 52.3	
BRTR	**Keskin Array B** 0.4nm,0.7s,baz=147,slow=8.2,SNR=2.0 0.4nm,0.7s	**73.31**	**312**	P	**P**	**23 16 15.6**	**-0.7**
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=219,slow=0.7,SNR=2.3	**144.11**	**37**	PKP	**PKPab**	**23 24 18.1**	**-0.1**

SOME ***18*** *23:07:01.8, 39°.12N×71°.52E, h10km*

BJI ***18*** *23:07:02.6, 38°.79N×71°.90E, h10km, mB5.0/11, mb4.4/35, ML4.3/3, Ms4.0/10, Ms7.3 8/12*

IDC ***18*** *23:07:02.3±0.5, 38°.71N×71°.86E, h0km, mb4.3/28, mbtmp4.4/35, ML4.0/7, MS3.7/37, Error ellipse: s-maj=9.9km s-min=8.4km az=147.0*

MOS ***18*** *23:07:04.0±1.3, 38°.85N×71°.86E, h15km, mb4.8/39, Error ellipse: s-maj=4.3km s-min=2.9km az=79.0*

NEIC ***18*** *23:07:05.1±1.5, 38°.93N±0°.03×71°.82E±0°.09, h10km±1km, mb4.6/86, Error ellipse: s-maj=11.5km s-min=5.6km az=271.0*

NNC ***18*** *23:07:09.1±1.9, 39°.27N×71°.77E, h0km, mb5.0, mpv4.6, Error ellipse: s-maj=15.7km s-min=9.7km az=178.0*

ISC 18 23:07:04.3±0.8, **38°.88N**±0°.03×**71°.85E**±0°.03, **h10**km±4km, **n524, s2924/535, mb4.5**/120, **MS3.7**/37, **45C-27D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.60**	**357**	Pg	**Pg**	**23 07 15.2**	**-0.8**
DRK				Sg	**Sg**	**23 07 23.9**	**0.0**
DRK	**Karamyk**	**0.60**	**357**	PG	**Pg**	**23 07 15.2**	**-0.8**
DRK						23 07 23.9	
SFK	**Sufi-Kurgan**	**1.71**	**48**	*e*PN	**Pn**	**23 07 33.5**	**-0.9**
SFK				*e*S	**Sb**	**23 07 58.4**	**+0.8**
OHH	**Osh**	**1.79**	**24**	*i* PN	**Pn**	**23 07 34.1**	**-1.3**
OHH				*i* S	**Sn**	**23 07 58.9**	**+0.6**
SALK	**Salom-Alik**	**2.51**	**37**	*e*PN	**Pn**	**23 07 44.3**	**-1.1**
SALK				*i* S	**Sn**	**23 08 21.0**	**+0.9**
KSH2	**Kashi**	**2.91**	**84**	Pg	**Pb**	**23 07 54.4**	**-2.0**
KSH2				Sn	**Sb**	**23 08 29.8**	**-2.3**
KSH2	comp=N,1μm,1.1s			smax	smax		
KSH2	comp=E,1μm,1.1s			smax	smax		
ARK	**Arkit**	**2.91**	**2**	*e*PN	**Pn**	**23 07 48.7**	**-2.2**
ARLS	**Aral**	**3.52**	**32**	*i* PN	**Pn**	**23 07 58.3**	**-1.0**
ARLS				*e*S	**Sn**	**23 08 41.1**	**-0.1**
IUG	**Iuzhnay**	**3.54**	**338**	*e*PN	**Pb**	**23 08 04.4**	**-2.7**
IUG				*e*S	**Sb**	**23 08 46.8**	**-3.4**
IUG	**Iuzhnay**	**3.54**	**338**	*e*P	**Pb**	**23 08 04.4**	**-2.7**
IUG				*e*S	**Sb**	**23 08 46.9**	**-3.4**
IUG	**Iuzhnay** 1μm,0.5s	**3.54**	**338**	*e*P	**Pb**	**23 08 04.5**	**-2.6**
IUG	2μm,1.1s			*e*S	**Sb**	**23 08 49.7**	**-0.5**
MNAS	**Manas**	**3.63**	**8**	*e*PN	**Pn**	**23 07 59.0**	**-1.8**
UCH	**Uchtor** SNR=89	**3.91**	**30**	P	**Pb**	**23 08 09.7**	**-3.9**
UCH	**Uchtor**	**3.91**	**30**	*e*PN	**Pn**	**23 08 04.0**	**-0.9**
UCH				*i* S	**Sn**	**23 08 50.8**	**-0.3**
MRKS	**Merke** 214nm,0.6s	**4.00**	**15**	Pg	**Pb**	**23 08 11.6**	**-3.3**
MRKS	868nm,0.7s			Lg	Lg	23 09 01.6	
MRKS	**Merke** 214nm,0.6s	**4.00**	**15**	*e*P	**Pb**	**23 08 11.6**	**-3.3**
MRKS	868nm,0.7s			*e*S	**Sb**	**23 09 01.6**	**-1.8**
DZA	**Taraz** 321nm,0.5s	**4.02**	**355**	Pg	**Pb**	**23 08 11.3**	**-4.0**
DZA	756nm,0.8s			Lg	Lg	23 09 01.3	
DZA	**Taraz**	**4.02**	**355**	*e*PN	**Pb**	**23 08 10.8**	**-4.5**
DZA				*e*S	**Sn**	**23 08 58.4**	**+5.2**
DZA	**Taraz**	**4.02**	**355**	*e*P	**Pb**	**23 08 10.8**	**-4.5**
DZA				*e*S	**Sn**	**23 08 58.4**	**+5.2**
DZA	**Taraz** 321nm,0.5s	**4.02**	**355**	*e*P	**Pb**	**23 08 11.3**	**-4.0**
DZA	756nm,0.8s			*e*S	**Sb**	**23 09 01.3**	**-2.7**
EKS2	**Erkin-Say** SNR=111	**4.05**	**21**	P	**Pb**	**23 08 11.5**	**-4.3**
EKS2	**Erkin-Say**	**4.05**	**21**	*i* PN	**Pn**	**23 08 05.2**	**-1.3**
EKS2				*i* S	**Sn**	**23 08 53.0**	**-1.0**
NRN	**Naryn**	**4.08**	**50**	Pn	**Pn**	**23 08 08.0**	**+0.9**
NRN	**Naryn**	**4.08**	**50**	PN	**Pn**	**23 08 08.0**	**+0.9**
AAK	**Ala-Archa** SNR=110	**4.25**	**27**	P	**Pb**	**23 08 14.6**	**-4.7**
AAK	**Ala-Archa** 34nm,0.3s,baz=220,slow=5.8,SNR=201	**4.25**	**27**	Pn	Pb	23 08 14.6	-4.8
AAK	28nm,0.3s,baz=193,slow=14,SNR=16			Pg	**Pg**	**23 08 22.0**	**-3.8**
AAK	19nm,0.3s,baz=332,slow=18,SNR=7.8			Sn	**Sb**	**23 09 08.7**	**-2.1**
AAK	26nm,0.3s,baz=150,slow=20,SNR=7.0 86nm,0.5s			Lg	Lg	23 09 19.2	
AAK	**Ala-Archa**	**4.25**	**27**	Pn	**Pn**	**23 08 12.2**	**+2.9**
AAK	**Ala-Archa** 257nm,1.0s	**4.25**	**27**	⇓Pn	**Pn**	**23 08 13.3**	**+3.9**
AAK	279nm,0.9s			⇓Lg	Lg	23 09 12.6	
AAK	**Ala-Archa** SNR=119	**4.25**	**27**	*i* P	Pb	23 08 14.5	-4.8
AAK	**Ala-Archa**	**4.25**	**27**	⇓*e*PN	**Pn**	**23 08 13.1**	**+3.8**
AAK	comp=Z,42nm,0.4s			pmax	pmax		
AAK	**Ala-Archa**	**4.25**	**27**	P	**Pb**	**23 08 15.1**	**-4.2**
AAK				S	**Sb**	**23 09 05.8**	**-5.0**
KK31	**Karatay Array**	**4.33**	**347**	Pn	**Pn**	**23 08 13.1**	**+2.8**
KK31	**Karatay Array** comp=Z,88nm,0.3s,baz=172,slow=13,SNR=2662	**4.33**	**347**	⇑Pn	**Pn**	**23 08 14.1**	**+3.8**
KK31	comp=Z,187nm,0.6s,baz=166,slow=21,SNR=6.0			⇑Lg	Lg	23 09 10.8	
KK31	**Karatay Array**	**4.33**	**347**	PN	**Pn**	**23 08 13.1**	**+2.8**
KKAR	**Karatay Array**	**4.33**	**347**		**Pn**	**23 08 14.1**	**+3.8**
KKAR	**Karatay Array**	**4.33**	**347**	PN	**Pn**	**23 08 14.1**	**+3.8**
BRLS	**Borolday** comp=Z,120nm,0.4s	**4.41**	**340**	Pg	**Pn**	**23 08 13.9**	**+2.5**
BRLS	comp=Z,204nm,0.5s			Lg	Lg	23 09 05.7	
BRLS	**Borolday**	**4.41**	**340**	*e*PN	**Pn**	**23 08 12.8**	**+1.4**
BRLS	**Borolday**	**4.41**	**340**	*e*P	**Pn**	**23 08 12.8**	**+1.4**
BRLS	**Borolday** comp=Z,120nm,0.4s	**4.41**	**340**	*e*P	**Pn**	**23 08 13.9**	**+2.5**
BRLS	comp=Z,204nm,0.5s			*e*S	**Sn**	**23 09 05.7**	**+2.9**
KBK	**Karagaybulak** SNR=49	**4.44**	**31**	P	Pn	23 08 16.8	+4.8
KBK	**Karagaybulak**	**4.44**	**31**	*e*PN	**Pn**	**23 08 11.2**	**-0.8**
KBK				*e*S	**Sn**	**23 09 03.2**	**-0.6**
FRU1	**Bishkek**	**4.45**	**27**		**Pn**	**23 08 16.5**	**+4.5**
FRU1	**Bishkek**	**4.45**	**27**	PN	**Pn**	**23 08 16.5**	**+4.5**
CHMS	**Chumysh** SNR=210	**4.66**	**27**	P	Pn	23 08 19.9	+5.1
CHMS	**Chumysh**	**4.66**	**27**	*i* PN	**Pn**	**23 08 13.9**	**-0.9**
ULHL	**Ulahol** SNR=19	**4.74**	**44**	P	**Pn**	**23 08 20.4**	**+4.3**
ULHL	**Ulahol**	**4.74**	**44**	*e*PN	**Pn**	**23 08 15.6**	**-0.5**
ULHL				*i* S	**Sn**	**23 09 10.8**	**-0.4**
BOOM	**Boomskoye usch**	**4.76**	**40**	Pn	**Pn**	**23 08 19.0**	**+2.7**
BOOM	**Boomskoye usch**	**4.76**	**40**	PN	**Pn**	**23 08 19.0**	**+2.7**
USP	**Ospenovka** SNR=74	**4.82**	**24**	P	**Pn**	**23 08 21.6**	**+4.6**
USP	**Ospenovka**	**4.82**	**24**	*i* PN	**Pn**	**23 08 15.8**	**-1.2**
KBL	**Kabul**	**4.88**	**208**		**Pn**	**23 08 20.5**	**+2.5**
KBL	**Kabul**	**4.88**	**208**	PN	**Pn**	**23 08 20.5**	**+2.5**
KBL	**Kabul** SNR=120	**4.88**	**208**	P	**Pn**	**23 08 20.7**	**+2.7**
TKM2	**Tokmak 2** SNR=15	**4.93**	**34**	P	**Pn**	**23 08 23.0**	**+4.2**
TKM2	**Tokmak 2**	**4.93**	**34**	*e*PN	**Pn**	**23 08 17.8**	**-0.9**
TKM2				*e*S	**Sn**	**23 09 15.0**	**-1.0**
SGDS	**Sogindy** comp=Z,12nm,0.4s	**5.02**	**24**	Pg	**Pb**	**23 08 33.9**	**+1.5**
SGDS	comp=Z,125nm,0.6s			Lg	Lg	23 09 39.9	
SGDS	**Sogindy**	**5.02**	**24**	*e*P	**Pn**	**23 08 24.4**	**+4.5**
SGDS				*e*S	**Sn**	**23 09 22.6**	**+4.6**
KST	**Kastek** comp=Z,87nm,0.8s	**5.19**	**36**	Pg	**Pb**	**23 08 38.9**	**+3.6**
KST	comp=Z,178nm,0.4s			Lg	Lg	23 09 48.5	
KST	**Kastek** comp=Z,87nm,0.8s	**5.19**	**36**	*e*P	**Pb**	**23 08 38.9**	**+3.6**
KST	comp=Z,178nm,0.4s			*e*S	**Sg**	**23 09 48.5**	**-2.5**
KDJ	**Kajisay**	**5.20**	**50**	*e*PN	**Pn**	**23 08 22.0**	**-0.4**
KDJ				*i* S	**Sn**	**23 09 22.0**	**-0.5**
DGS	**Degeres** comp=Z,35nm,0.8s	**5.27**	**33**	Pg	**Pb**	**23 08 39.5**	**+2.9**
DGS	comp=Z,122nm,0.7s			Lg	Lg	23 09 49.6	
DGS	**Degeres** comp=Z,35nm,0.8s	**5.27**	**33**	*e*P	**Pb**	**23 08 39.5**	**+2.9**
DGS	comp=Z,122nm,0.7s			*e*S	**Sg**	**23 09 49.6**	**-3.9**
NIL	**Nilore**	**5.34**	**167**	Pn	**Pn**	**23 08 25.5**	**+1.3**
NIL	**Nilore**	**5.34**	**167**	PN	**Pn**	**23 08 25.5**	**+1.3**
NIL	**Nilore**	**5.34**	**167**	P	**Pn**	**23 08 27.4**	**+3.1**
SRNI	**Srinagar**	**5.38**	**153**	*e*P	**Pn**	**23 08 24.7**	**-0.1**
SRNI				*e*S	**Sn**	**23 09 24.8**	**-2.1**
MTBS	**Maitube**	**5.48**	**38**	Pg	**Pb**	**23 08 43.7**	**+3.5**
MTBS				Lg	Lg	23 09 56.5	
MTBS	**Maitube** comp=Z,20nm,0.6s	**5.48**	**38**	*e*P	**Pb**	**23 08 43.6**	**+3.5**
MTBS	comp=Z,84nm,0.4s			*e*S	**Sg**	**23 09 56.5**	**-3.7**
IZV	**Izvestkoviy** comp=Z,102nm,0.7s	**5.50**	**40**	Pg	**Pb**	**23 08 41.9**	**+1.4**
IZV	comp=Z,252nm,0.9s			Lg	Lg	23 09 53.1	
IZV	**Izvestkoviy** comp=Z,102nm,0.7s	**5.50**	**40**	*e*P	**Pb**	**23 08 41.9**	**+1.4**
IZV	comp=Z,252nm,0.9s			*e*S	**Sb**	**23 09 53.1**	**+6.5**
KRBS	**Karabastau** comp=Z,51nm,0.6s	**5.61**	**30**	Pg	**Pb**	**23 08 45.4**	**+3.1**
KRBS	comp=Z,131nm,0.6s			Lg	Lg	23 09 59.8	
KRBS	**Karabastau** comp=Z,51nm,0.6s	**5.61**	**30**	*e*P	**Pb**	**23 08 45.4**	**+3.1**
KRBS	comp=Z,131nm,0.6s			*e*S	**Sg**	**23 09 59.8**	**-4.4**
TNSS	**Tian-Shan** comp=Z,14nm,0.6s	**5.67**	**41**	Pg	**Pb**	**23 08 46.6**	**+3.0**
TNSS	comp=Z,38nm,0.9s			Lg	Lg	23 10 01.9	
TNSS	**Tian-Shan**	**5.67**	**41**	*e*PN	**Pn**	**23 08 33.2**	**+4.3**
TNSS	**Tian-Shan**	**5.67**	**41**	*e*P	**Pn**	**23 08 33.2**	**+4.3**
TNSS	**Tian-Shan** comp=Z,14nm,0.6s	**5.67**	**41**	*e*P	**Pb**	**23 08 46.6**	**+3.0**
TNSS	comp=Z,38nm,0.9s			*e*S	**Sg**	**23 10 01.9**	**-4.4**
AAA	**Alma-Ata** comp=Z,65nm,0.6s	**5.78**	**40**	Pg	**Pb**	**23 08 49.6**	**+4.4**
AAA	comp=Z,8.1nm,0.5s			Lg	Lg	23 10 06.9	
AAA	**Alma-Ata**	**5.78**	**40**	*e*PN	**Pn**	**23 08 34.1**	**+4.0**
AAA	**Alma-Ata**	**5.78**	**40**	*e*P	**Pn**	**23 08 34.1**	**+4.0**
AAA	**Alma-Ata** comp=Z,65nm,0.6s	**5.78**	**40**	*e*P	**Pb**	**23 08 49.6**	**+4.4**
AAA	comp=Z,8.1nm,0.5s			*e*S	**Sg**	**23 10 06.9**	**-2.8**
KNDC	**Almaty** comp=Z,109nm,1.1s	**5.81**	**40**	⇑Pn	**Pn**	**23 08 32.7**	**+2.1**
KNDC				⇓Pg	**Pg**	**23 08 51.3**	**-4.2**
KNDC	comp=Z,316nm,0.8s			⇑Lg	Lg	23 10 09.0	
KNDC	**Almaty** comp=Z,632nm,1.3s	**5.81**	**40**	PN	**Pn**	**23 08 34.8**	**+4.2**
KNDC				P	**Pg**	**23 08 53.7**	**-1.8**
MDOK	**Medeo** comp=Z,42nm,1.0s	**5.81**	**41**	Pg	**Pb**	**23 08 49.4**	**+3.6**
MDOK	comp=Z,152nm,0.7s			Lg	Lg	23 10 06.8	
MDOK	**Medeo**	**5.81**	**41**	*e*PN	**Pn**	**23 08 35.2**	**+4.5**
MDOK	**Medeo**	**5.81**	**41**	*e*P	**Pn**	**23 08 35.3**	**+4.5**
KOTS	**Kotyrbulak** comp=Z,80nm,0.8s	**5.89**	**41**	Pg	**Pb**	**23 08 51.5**	**+4.2**
KOTS	comp=Z,321nm,0.8s			Lg	Lg	23 10 10.1	
KOTS	**Kotyrbulak** comp=Z,80nm,0.8s	**5.89**	**41**	*e*P	**Pb**	**23 08 51.5**	**+4.2**
KOTS	comp=Z,321nm,0.8s			*e*S	**Sg**	**23 10 10.1**	**-3.4**
KUU	**Kurty** comp=Z,4.7nm,0.1s	**6.04**	**33**	Pg	**Pb**	**23 08 52.3**	**+2.7**
KUU	comp=Z,59nm,0.7s			Lg	Lg	23 10 11.4	
KUU	**Kurty** comp=Z,4.7nm,0.1s	**6.04**	**33**	*e*P	**Pb**	**23 08 52.3**	**+2.7**
KUU	comp=Z,59nm,0.7s			*e*S	**Sg**	**23 10 11.4**	**-6.7**
KTBS	**Karatobe** comp=Z,44nm,0.5s	**6.04**	**36**	Pg	**Pb**	**23 08 54.0**	**+4.3**
KTBS	comp=Z,89nm,0.9s			Lg	Lg	23 10 14.1	
KTBS	**Karatobe** comp=Z,44nm,0.5s	**6.04**	**36**	*e*P	**Pb**	**23 08 54.0**	**+4.3**
KTBS	comp=Z,89nm,0.9s			*e*S	**Sg**	**23 10 14.1**	**-4.1**
WUS	**Wushi**	**6.11**	**65**	Pn	**Pn**	**23 08 38.3**	**+3.5**
PRZ	**Przheval'sk**	**6.14**	**52**	Pn	**Pn**	**23 08 39.0**	**+3.7**
PRZ	**Przheval'sk**	**6.14**	**52**	PN	**Pn**	**23 08 39.0**	**+3.7**
ALCI	**Alchi Leh**	**6.34**	**136**	*e*P	**Pn**	**23 08 38.1**	**0.0**
ALCI				*e*S	**Sn**	**23 09 46.9**	**-4.0**
ALCI	comp=E,228nm,0.7s			IAML		23 13 11.3	
BTLS	**Baital**	**6.37**	**14**	*e*PN	**Pn**	**23 08 38.2**	**0.0**
SATY	**Saty** comp=E,36nm,0.7s	**6.48**	**48**	Pg	Pb	23 09 02.4	+5.1
SATY	comp=E,70nm,1.1s			Lg	Lg	23 10 28.9	
SATY	**Saty**	**6.48**	**48**	*e*PN	**Pn**	**23 08 44.2**	**+4.3**
SATY	**Saty**	**6.48**	**48**	*e*P	**Pn**	**23 08 44.2**	**+4.3**
JMU	**Jammu**	**6.55**	**157**	*e*P	**Pn**	**23 08 40.5**	**-0.3**
JMU				*e*S	**Sn**	**23 09 53.0**	**-2.7**
KURS	**Kuram** comp=E,18nm,0.6s	**6.63**	**44**	Pg	Pb	23 09 04.6	+4.9
KURS	comp=E,53nm,0.7s			Lg	Lg	23 10 33.0	
KPKS	**Kokpek** comp=E,20nm,0.5s	**6.90**	**46**	Pg	Pb	23 09 09.4	+5.2
KPKS	comp=E,30nm,0.7s			Lg	Lg	23 10 41.3	
KPKS	**Kokpek** comp=E,20nm,0.5s	**6.90**	**46**	*e*P	Pb	23 09 09.4	+5.2
KPKS	comp=E,30nm,0.7s			*e*S	**Sg**	**23 10 41.3**	**-4.3**
UZB	**Uzynbulak** comp=E,15nm,0.7s	**6.90**	**50**	Pg	**Pb**	**23 09 08.9**	**+4.6**
UZB	comp=E,51nm,0.9s			Lg	Lg	23 10 40.9	
UZB	**Uzynbulak**	**6.90**	**50**	*e*PN	**Pn**	**23 08 50.0**	**+4.4**
UZB	**Uzynbulak**	**6.90**	**50**	*e*P	**Pn**	**23 08 50.0**	**+4.4**
UZB	**Uzynbulak** comp=E,15nm,0.7s	**6.90**	**50**	*e*P	**Pb**	**23 09 08.9**	**+4.6**
UZB	comp=E,51nm,0.9s			*e*S	**Sg**	**23 10 40.9**	**-4.7**
ARXS	**Arharly** comp=E,19nm,0.8s	**6.96**	**38**	Pg	Pb	23 09 10.3	+4.9
ARXS	comp=E,88nm,0.7s			Lg	Lg	23 10 43.0	
ARXS	**Arharly**	**6.96**	**38**	*e*PN	**Pn**	**23 08 50.7**	**+4.3**
ARXS	**Arharly** comp=E,19nm,0.8s	**6.96**	**38**	*e*P	Pb	23 09 10.3	+4.9
ARXS	comp=E,88nm,0.7s			*e*S	**Sg**	**23 10 43.0**	**-4.7**
TSSA	**Tissa**	**6.97**	**149**	*e*P	**Pn**	**23 08 49.5**	**+2.8**
TSSA				*e*S	**Sn**	**23 10 01.1**	**-5.2**
SHLS	**Shalkode** comp=E,24nm,0.6s	**7.17**	**51**	Pg	**Pg**	**23 09 20.7**	**-0.8**
SHLS	comp=E,41nm,0.8s			Lg	Lg	23 11 01.2	
SHLS	**Shalkode**	**7.17**	**51**	*e*P	Pn	23 08 56.9	+7.6
SHLS	**Shalkode**	**7.17**	**51**	*e*P	Pn	23 08 57.0	+7.7
SHLS	**Shalkode** comp=E,24nm,0.6s	**7.17**	**51**	*e*P	**Pg**	**23 09 20.7**	**-0.8**
SHLS	comp=E,41nm,0.8s			*e*S	**Sg**	**23 11 01.1**	**+6.8**
PDGK	**Podgornoye** comp=E,9.9nm,0.7s	**7.28**	**50**	⇓Pn	**Pn**	**23 08 53.8**	**+2.9**
PDGK	comp=E,45nm,0.8s			⇑Pg	**Pg**	**23 09 19.4**	**-4.3**
PDGK	comp=E,122nm,0.9s			⇑Lg	Lg	23 10 56.2	
PDGK	**Podgornoye**	**7.28**	**50**	P	**Pn**	**23 08 53.8**	**+2.9**
DHRM	**DHARAMSHALA**	**7.55**	**150**	*e*P	**Pn**	**23 08 55.0**	**+0.4**
DHRM				*e*S	**Sn**	**23 10 14.5**	**-5.9**
DHRM	comp=E,257nm,0.6s			IAML		23 10 32.8	
DHRM	comp=N,350nm,0.6s			IAML		23 10 33.8	
KNOS	**Konyrlen** comp=N,15nm,0.7s	**7.75**	**43**	Pg	**Pg**	**23 09 28.4**	**-4.3**
KNOS	comp=N,55nm,0.8s			Lg	Lg	23 11 13.5	
TDK	**Taldyqorghan**	**7.83**	**37**	*e*P	**Pn**	**23 09 02.9**	**+4.7**
TDK	**Taldyqorghan**	**7.83**	**37**	*e*P	**Pn**	**23 09 02.9**	**+4.7**
KTMS	**Ketmen** comp=N,5.9nm,0.5s	**7.87**	**52**	Pg	Pg	23 09 29.7	-5.3
KTMS	comp=N,9.7nm,0.4s			Lg	Lg	23 11 15.1	
KTMS	**Ketmen** comp=N,5.9nm,0.5s	**7.87**	**52**	*e*P	Pg	23 09 29.7	-5.3
KTMS	comp=N,9.7nm,0.4s			*e*S	**Sg**	**23 11 15.1**	**-1.7**
DJR	**Jarkent** comp=N,14nm,0.9s	**8.06**	**45**	Pg	Pg	23 09 31.6	-7.0
DJR	comp=N,28nm,1.0s			Lg	Lg	23 11 19.8	
DJR	**Jarkent** comp=N,14nm,0.9s	**8.06**	**45**	*e*P	Pg	23 09 31.6	-7.0
DJR	comp=N,28nm,1.0s			*e*S	**Sg**	**23 11 19.8**	**-3.2**
BHK	**Bhakra**	**8.34**	**152**	*e*P	**Pn**	**23 09 07.6**	**+2.2**
BHK				*e*S	**Sn**	**23 10 40.4**	**+0.7**
BHK	comp=E,139nm,0.3s			IAML		23 14 17.9	
BHK	comp=N,295nm,0.6s			IAML		23 14 18.4	
KAPS	**Kapalarasan** comp=N,7.0nm,0.5s	**8.49**	**39**	Pg	Pg	23 09 40.7	-6.0
KAPS	comp=N,22nm,0.8s			Lg	Lg	23 11 34.9	
SMLA	**Simla**	**8.88**	**149**	*e*P	**Pn**	**23 09 11.9**	**-0.8**
SMLA				*e*S	**Sn**	**23 10 46.6**	**-6.2**
SMLA	comp=E,110nm,0.9s			IAML		23 11 01.3	
SMLA	comp=N,283nm,0.4s			IAML		23 11 01.8	
HRA	**Herat**	**8.93**	**243**	Pn	**Pn**	**23 09 13.0**	**-0.5**
JOSI	**Joshimath**	**10.45**	**140**	*e*P	**Pn**	**23 09 34.1**	**-0.3**
JOSI				*e*S	**Sn**	**23 11 22.8**	**-8.9**
JOSI	comp=N,126nm,1.3s			IAML		23 13 40.8	
JOSI	comp=E,130nm,1.2s			IAML		23 14 08.5	
MAKZ	**Makanchi**	**10.86**	**40**	Pn	**Pn**	**23 09 43.4**	**+3.6**
MAKZ	**Makanchi** comp=E,41nm,1.0s	**10.86**	**40**	⇑P	**Pn**	**23 09 44.4**	**+4.6**
MAKZ	**Makanchi**	**10.86**	**40**	P	**Pn**	**23 09 43.4**	**+3.6**
MK31	**Makanchi Array**	**11.01**	**41**	*e*P	**Pn**	**23 09 45.1**	**+3.3**
MK31	**Makanchi Array** comp=E,40nm,1.1s,baz=228,slow=14,SNR=137	**11.01**	**41**	*e*P	**Pn**	**23 09 44.9**	**+3.1**
MKAR	**Makanchi Array** comp=E,0.6nm,0.3s,baz=227,slow=13,SNR=91	**11.01**	**41**	Pn	**Pn**	**23 09 44.9**	**+3.0**
MKAR	baz=220,slow=22			Sn	**Sn**	**23 11 47.4**	**+2.5**
MKAR	comp=E,0.2nm,0.3s,baz=229,slow=28,SNR=3.7			Lg	Lg	23 12 52.4	
MKAR	comp=E,524nm,18.3s,baz=215,slow=39 comp=E,25nm,1.0s			LR	LR	23 14 13.0	
PTH	**Pithoragarh**	**11.56**	**141**	*e*P	**Pn**	**23 09 49.4**	**-0.2**
PTH				*e*S	Sn	23 11 48.5	-10
PTH	comp=N,120nm,1.3s			IAML		23 12 10.2	
PTH	comp=E,114nm,1.0s			IAML		23 12 10.3	
KURBB	**Kurchatov Arra** comp=E,0.2nm,0.3s,baz=214,slow=12,SNR=27	**12.65**	**20**	Pn	**Pn**	**23 10 03.9**	**-0.4**
KURBB	baz=210,slow=23,SNR=1.5			Sn	**Sn**	**23 12 24.4**	**-0.8**
KURBB	comp=E,0.2nm,0.3s,baz=209,slow=29,SNR=5.6			Lg	Lg	23 13 50.2	
KURBB	comp=E,437nm,18.5s,baz=162,slow=38 comp=E,3.0nm,0.8s			LR	LR	23 15 11.7	
KURBB	**Kurchatov Arra** comp=E,8.5nm,0.6s	**12.65**	**20**	⇑P	**Pn**	**23 10 06.0**	**+1.7**
KURBB	**Kurchatov Arra**	**12.65**	**20**	P	**Pn**	**23 10 05.9**	**+1.7**

	comp=Z,27nm,1.3s									
AKTO	**Aktyubinsk**	**15.14**	**324**		Pn		**Pn**	**23 10 37.0**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=133,slow=11,SNR=27									
AKTO					Sn		**Sn**	**23 13 21.6**	**-4.3**
	comp=Z,0.5nm,0.3s,baz=158,slow=19,SNR=4.0									
	comp=Z,16nm,0.7s									
AKTO	**Aktyubinsk**	**15.14**	**324**	⇓	P		**Pn**	**23 10 40.0**	**+1.8**
	comp=Z,78nm,0.9s									
DGZ	**Jazzator, Alta**	**15.51**	**41**	*ce*	P		**Pn**	**23 10 43.8**	**+0.7**
EVN	**Everest**	**16.56**	**127**		Pn		**Pn**	**23 10 50.7**	**-6.6**
ZAA0	**Zalesovo Array**	**17.48**	**26**		Pn		**Pn**	**23 11 07.7**	**-0.3**
ZAA0	**Zalesovo Array**	**17.48**	**26**	⇑	P		**Pn**	**23 11 08.1**	**+0.1**
	comp=Z,16nm,0.8s									
ZALV	**Zalesovo Beam**	**17.48**	**26**		P		**Pn**	**23 11 08.1**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=224,slow=10,SNR=72									
ZALV					Lg		Lg	23 16 24.2		
	comp=Z,0.5nm,0.3s,baz=211,slow=25,SNR=5.8									
ZALV					LR		LR	23 18 16.3		
	comp=Z,304nm,19.9s,baz=234,slow=38									
	comp=Z,19nm,0.6s									
ZALV	**Zalesovo Beam**	**17.48**	**26**		Pn		**Pn**	**23 11 07.6**	**-0.4**
LKRN	**Lenkeran, Azer**	**17.98**	**277**		P		**P**	**23 11 16.3**	**+1.5**
LSA	**Lhasa**	**18.37**	**114**		Pn		**Pn**	**23 11 16.8**	**-2.8**
LSA	**Lhasa**	**18.37**	**114**		P		**Pn**	**23 11 15.9**	**-3.7**
LSA					pmax		pmax			
	comp=Z,7.0nm,0.8s									
LSA	**Lhasa**	**18.37**	**114**		P		**Pn**	**23 11 16.8**	**-2.8**
LSA					pmax		pmax			
	comp=Z,12nm,0.9s									
BANOM	**Banah**	**18.39**	**230**	*i*	P		**Pn**	**23 11 17.1**	**-2.4**
	SNR=11									
SHME	**Shamm**	**18.39**	**231**		P		**Pn**	**23 11 16.9**	**-2.5**
GOMU	**GeErMu**	**18.40**	**91**		P		**Pn**	**23 11 17.9**	**-2.1**
GOMU					pmax		pmax			
	comp=Z,6.0nm,1.0s									
AKT	**Akhty**	**18.59**	**286**	*e*	P		**Pn**	**23 11 23.3**	**+1.3**
AKT					pmax		pmax			
	comp=Z,16nm,0.5s									
AKT					MLR		MLR			
	comp=Z,67nm,7.0s									
MSFE	**Esma-Masafi**	**18.89**	**229**	*i*	P		**P**	**23 11 22.5**	**-2.5**
	SNR=7.7									
SEKA	**Sheki**	**19.00**	**285**		P		**Pn**	**23 11 27.1**	**+0.3**
MNGR	**Mingechevir, A**	**19.10**	**284**		P		**Pn**	**23 11 29.3**	**+1.4**
UOSS	**Minazif**	**19.18**	**228**		P		**P**	**23 11 26.6**	**-1.5**
UOSS	**Minazif**	**19.18**	**228**		P		**P**	**23 11 28.5**	**+0.4**
WSAR	**Wadi Sarin**	**19.24**	**220**		P		**Pn**	**23 11 29.5**	**-0.2**
HATD	**Hatta, Dubai**	**19.31**	**228**		P		**Pn**	**23 11 30.4**	**-0.2**
SVE	**Sverdlovsk**	**19.42**	**341**	*e*	P		**Pn**	**23 11 31.7**	**0.0**
SVE				*e*	S		**S**	**23 15 10.2**	**+0.3**
SVE					pmax		pmax			
	comp=N,25nm,0.7s									
ASHO	**Ashiyiah**	**19.46**	**228**	*i*	P		**P**	**23 11 30.5**	**-0.8**
	SNR=25									
ASHO	**Ashiyiah**	**19.46**	**228**		P		**Pn**	**23 11 32.0**	**-0.5**
	SNR=13									
NAZ	**Nazwa, Dubai**	**19.47**	**229**		P		**Pn**	**23 11 32.9**	**+0.4**
	SNR=6.1									
WBK	**Wadi Bani Khal**	**19.60**	**218**		P		**P**	**23 11 32.9**	**+0.1**
	SNR=5.6									
SOHO	**SOHO**	**19.62**	**226**		P		**Pn**	**23 11 33.9**	**-0.4**
HOQ	**Hoqain**	**19.64**	**223**		P		**P**	**23 11 33.4**	**+0.2**
ARTI	**Arti**	**19.66**	**337**		Pn		**Pn**	**23 11 34.2**	**-0.3**
	comp=N,0.8nm,0.3s,baz=126,slow=3.3,SNR=10									
ARTI					LR		LR	23 20 03.3		
	comp=N,154nm,18.1s,baz=180,slow=39									
	comp=N,43nm,1.1s									
ARTI	**Arti**	**19.66**	**337**		P		**P**	**23 11 33.6**	**+0.5**
ARTI					IAmb		IAmb	23 11 42.3		
	comp=Z,29nm,0.6s									
ARTI	**Arti**	**19.66**	**337**	*c*	*i* P		**Pn**	**23 11 34.5**	**0.0**
ARTI					S		**Sn**	**23 15 17.3**	**+2.2**
ARTI					pmax		pmax			
	comp=Z,25nm,0.9s									
SMDO	**Samad**	**19.68**	**221**		P		**P**	**23 11 34.2**	**+0.5**
GANJ	**Ganja**	**19.68**	**283**		P		**Pn**	**23 11 36.1**	**+1.1**
FAQ	**Al Faqa, Dubai**	**19.69**	**229**		P		**Pn**	**23 11 34.8**	**-0.3**
JLN	**Jalan Bani Buh**	**19.79**	**216**		P		**P**	**23 11 34.9**	**+0.1**
	SNR=7.8									
ALNE	**Al Ain**	**20.13**	**227**	*i*	P		**P**	**23 11 37.3**	**-1.2**
	SNR=38									
ALNE	**Al Ain**	**20.13**	**227**		P		**P**	**23 11 37.7**	**-0.8**
	SNR=15									
AJN	**Ajban**	**20.19**	**230**		P		**P**	**23 11 39.9**	**+0.8**
	SNR=6.2									
JMDO	**Jabal Madar**	**20.23**	**219**		P		**P**	**23 11 39.2**	**-0.4**
	SNR=8.8									
BSY	**Bisya**	**20.38**	**222**		P		**P**	**23 11 41.5**	**+0.2**
NAX	**Nakhchivan**	**20.45**	**279**		P		Pn	23 11 44.2	0.0
GNI	**Garni**	**20.92**	**282**	*c*	*i* P		Pn	23 11 50.0	+0.3
GNI					pmax		pmax			
	comp=Z,60nm,1.3s									
JRN	**Qarnain Island**	**21.23**	**235**		P		**P**	**23 11 49.7**	**-0.8**
MZWR	**Madinat Zayed**	**21.45**	**231**		P		**P**	**23 11 52.3**	**-0.5**
MHTO	**MHTO**	**21.46**	**218**		P		**P**	**23 11 53.7**	**+0.7**
	SNR=11									
SHL	**Shillong**	**21.47**	**122**		P		**P**	**23 11 51.0**	**-2.3**
SHL					IAmb		IAmb	23 12 04.3		
	comp=Z,22nm,1.1s									
SHL	**Shillong**	**21.47**	**122**		P		**P**	**23 11 51.0**	**-2.3**
SHL					pmax		pmax			
	comp=Z,22nm,1.1s									
SHL	**Shillong**	**21.47**	**122**		P		**P**	**23 11 53.6**	**+0.4**
	SNR=7.3									
BELG	**Belogornoye**	**21.53**	**317**		P		**P**	**23 11 54.0**	**+0.6**
	comp=Z,75nm,1.0s,baz=161,slow=0.5,SNR=10									
BELG					LR		LR	23 22 04.4		
	comp=Z,137nm,19.8s,baz=153,slow=42									
	comp=Z,75nm,1.0s									
BELG	**Belogornoye**	**21.53**	**317**	*d*	*i* P		**P**	**23 11 53.4**	**0.0**
BELG					pmax		pmax			
	comp=Z,14nm,1.1s									
KNGR	**Kungurtug, Tuv**	**21.56**	**49**	⇓	*e* P		**P**	**23 11 55.1**	**+1.2**
KNGR					pmax		pmax			
	comp=Z,69nm,1.4s									
GTA2	**Gaotai**	**21.62**	**80**		P		**P**	**23 11 55.6**	**+0.9**
GTA2					pP		sP	23 11 59.8	-0.9	
GTA2					pmax		pmax			
	comp=Z,15nm,1.0s									
GTA2					LR		LR			
	comp=Z,220nm,15.9s									
GTA2					LR		LR			
	comp=Z,310nm,16.7s									
GTA2					LR		LR			
	comp=Z,370nm,19.5s									
NCK	**Nalchik**	**21.70**	**291**	⇑	*e* P		**P**	**23 11 55.8**	**+0.4**
NCK					pmax		pmax			
	comp=Z,35nm,0.8s									
SHMA	**Al-Shehemyia**	**21.84**	**240**		P		**P**	**23 11 56.5**	**-0.5**
	SNR=7.2									
GHWR	**Ruwais**	**21.92**	**233**		P		**P**	**23 11 57.1**	**-0.7**
SAKB	**Bahrain**	**22.05**	**241**		P		**P**	**23 11 58.8**	**-0.4**
KARS	**Kars**	**22.14**	**284**		P		**P**	**23 12 01.5**	**+1.2**
KARS					IAmb		IAmb	23 12 11.4		
	comp=Z,25nm,1.2s									
KARS	**Kars**	**22.14**	**284**		P		**P**	**23 12 01.5**	**+1.2**
KARS					pmax		pmax			
	comp=Z,25nm,1.2s									
GOF	**Gofitskoye**	**22.21**	**295**	*ce*	P		P	23 12 08.2	+7.3	
KBZ	**Khabaz**	**22.22**	**292**		P		**P**	**23 12 00.0**	**-0.9**
	comp=Z,5.0nm,0.8s,baz=116,slow=7.3,SNR=11									
	comp=Z,5.0nm,0.8s									
KBZ	**Khabaz**	**22.22**	**292**	*ce*	P		**P**	**23 12 00.2**	**-0.7**
KBZ					pmax		pmax			
	comp=Z,8.0nm,0.8s									
MZR	**Muzera**	**22.27**	**230**	*i*	P		**P**	**23 11 59.2**	**-2.3**
	SNR=22									
MZR	**Muzera**	**22.27**	**230**		P		**P**	**23 12 00.0**	**-1.6**
	SNR=8.0									
NEUR	**Neytrino**	**22.34**	**291**	⇑	*e* P		**P**	**23 12 04.3**	**+1.8**
NEUR					pmax		pmax			
	comp=Z,9.0nm,0.9s									
KIV	**Kislovodsk**	**22.38**	**292**		P		**P**	**23 12 02.0**	**-0.8**
KIV	**Kislovodsk**	**22.38**	**292**		P		**P**	**23 12 02.8**	**0.0**
KIV	**Kislovodsk**	**22.38**	**292**	*e*	P		**P**	**23 12 02.5**	**-0.3**
KIV				*e*	S		**S**	**23 16 06.6**	**-2.1**
KIV					pmax		pmax			
	comp=Z,11nm,1.1s									
KIV					MLR		MLR			
	comp=Z,71nm,14.0s									
SHA1	**Shidzhatmaz**	**22.39**	**292**	*ce*	P		**P**	**23 12 03.7**	**+0.6**
TRNA	**Turayna**	**22.43**	**237**		P		**P**	**23 12 02.4**	**-1.0**
	SNR=5.3									
GEVA	**Gevas**	**22.47**	**278**		P		**P**	**23 12 03.7**	**-0.2**
SMRA	**Abu-Samra**	**22.68**	**238**		P		**P**	**23 12 04.6**	**-1.3**
	SNR=8.4									

GURO	**Guroymak-BITLI**	**23.22**	**279**		P		**P**	**23 12 13.1**	**+1.4**	
MOY	**Mondy**	**23.98**	**48**	*e*	P		**P**	**23 12 20.2**	**+1.2**	
MOY					pmax		pmax			
	comp=Z,30nm,3.2s									
VSLR	**Vesyoloye**	**24.29**	**291**	⇑	*e* P		**P**	**23 12 25.1**	**+3.3**	
VSLR					pmax		pmax			
	comp=Z,8.0nm,0.8s									
VRH	**Novokhopyorsk**	**24.40**	**310**		*e* P		**P**	**23 12 22.4**	**-0.3**	
VRH					pmax		pmax			
	comp=Z,28nm,0.6s									
KIRV	**Kirov**	**24.43**	**331**	*d*	*i* P		**P**	**23 12 23.7**	**+0.8**	
MARD	**Mardin**	**24.44**	**276**		P		**P**	**23 12 24.0**	**+0.6**	
SOC	**Sochi**	**24.52**	**291**		*e* P		**P**	**23 12 24.1**	**+0.2**	
SOC					*e*			23 12 55.4		
SOC					*e*	PPP	PPP	23 13 06.6		
SOC					*e*	S	**S**	**23 16 43.2**	**-1.1**	
SOC					*e*	SS	**SnSn**	**23 17 32.6**	**+3.9**	
SOC					*e*	SSS	SSS	23 17 47.5		
SOC						MLR	MLR			
	comp=Z,62nm,8.0s									
ZAK	**Zakamensk**	**24.96**	**52**		*e* P		**P**	**23 12 28.7**	**+0.8**	
ZAK					pmax		pmax			
	comp=Z,17nm,1.2s									
SHAO	**Shalim**	**25.13**	**219**		P		**P**	**23 12 29.2**	**-0.4**	
DOK	**Doka**	**25.39**	**222**		P		**P**	**23 12 31.4**	**-0.4**	
LZDM	**Lanzhou Array**	**25.40**	**87**		P		**P**	**23 12 32.7**	**+0.5**	
	comp=Z,3.1nm,0.5s,baz=284,slow=6.0,SNR=13									
	comp=Z,3.1nm,0.5s									
LZH	**Lanzhou**	**25.48**	**86**		*e* P		**P**	**23 12 33.9**	**+1.1**	
LZH					sP		sP	23 12 43.3	+4.5	
LZH					pmax		pmax			
	comp=Z,19nm,1.4s									
LZH					LR		LR			
	comp=Z,250nm,20.6s									
LZH					LR		LR			
	comp=Z,260nm,18.6s									
LZH					LR		LR			
	comp=Z,410nm,20.6s									
TLY	**Talaya**	**25.55**	**50**		LR		LR	23 23 24.9		
	comp=Z,65nm,18.7s,baz=256,slow=38									
TLY	**Talaya**	**25.55**	**50**		P		**P**	**23 12 33.7**	**+0.5**	
TLY	**Talaya**	**25.55**	**50**	⇓	*i* P		**P**	**23 12 34.7**	**+1.6**	
TLY					pmax		pmax			
	comp=Z,6.0nm,0.8s									
VORD	**Divnogorie**	**25.80**	**309**		*e* P		**P**	**23 12 35.1**	**-0.3**	
VORD					pmax		pmax			
	comp=Z,10.0nm,0.6s									
VSR	**Storozhevoye**	**25.94**	**309**		*e* P		**P**	**23 12 36.9**	**+0.2**	
VSR					pmax		pmax			
	comp=Z,10.0nm,0.6s									
ARPR	**Arapgir-MALATY**	**25.97**	**281**		P		**P**	**23 12 36.6**	**-0.6**	
ARPR					IAmb		IAmb	23 12 43.9		
	comp=Z,16nm,1.1s									
VORR	**Voronezh**	**26.04**	**310**		*e* P		**P**	**23 12 34.8**	**-2.8**	
VORR					pmax		pmax			
	comp=Z,14nm,0.4s									
TNCH	**TengChong**	**26.40**	**114**		P		**P**	**23 12 42.1**	**+0.8**	
TNCH					pP		pP	23 12 45.1	-0.5	
TNCH					sP		sP	23 12 47.6	+0.2	
TNCH					pmax		pmax			
	comp=Z,8.0nm,0.4s									
TNCH					pmax		pmax			
	comp=Z,170nm,4.2s									
SONM	**Songino Array**	**26.48**	**59**		P		**P**	**23 12 41.3**	**-0.4**	
	comp=Z,2.8nm,0.8s,baz=263,slow=7.6,SNR=12									
SONM					LR		LR	23 24 14.9		
	comp=Z,369nm,21.7s,baz=284,slow=39									
	comp=Z,2.8nm,0.8s									
SONM	**Songino Array**	**26.48**	**59**		P		**P**	**23 12 42.1**	**+0.3**	
SONM	**Songino Array**	**26.48**	**59**		P		**P**	**23 12 42.1**	**+0.3**	
SONM					pmax		pmax			
	comp=Z,5.0nm,1.2s									
LPSR	**Galich'ya Gora**	**26.48**	**312**		*e* P		**P**	**23 12 41.5**	**-0.1**	
LPSR					pmax		pmax			
	comp=Z,30nm,0.7s									
ABTO	**Aybut**	**26.87**	**222**		P		**P**	**23 12 45.5**	**+0.1**	
	SNR=6.5									
ULN	**Ulaanbaatar**	**26.92**	**59**		P		**P**	**23 12 45.6**	**-0.2**	
ULN	**Ulaanbaatar**	**26.92**	**59**	⇓	*e* P		**P**	**23 12 45.8**	**0.0**	
ULN					pmax		pmax			
	comp=Z,10.0nm,1.4s									
RAYN	**Ar Rayn**	**27.11**	**243**		P		**P**	**23 12 47.3**	**-0.2**	
RAYN					IAmb		IAmb	23 12 50.1		
	comp=Z,10nm,0.8s									
RAYN	**Ar Rayn**	**27.11**	**243**	*i*	P		**P**	**23 12 47.7**	**+0.1**	
	SNR=21									
RAYN	**Ar Rayn**	**27.11**	**243**		P		**P**	**23 12 47.3**	**-0.2**	
RAYN					pmax		pmax			
	comp=Z,11nm,0.8s									
PZH	**PanZhiHua**	**27.90**	**107**		P		**P**	**23 12 55.5**	**+0.8**	
SIM	**Simferopol'**	**28.53**	**295**		*e* P		**P**	**23 13 00.7**	**+0.7**	
SIM					pmax		pmax			
	comp=Z,23nm,0.6s									
SIM					MLR		MLR			
	comp=Z,78nm,16.0s									
OBN	**Obninsk**	**28.62**	**316**		P		**P**	**23 13 00.3**	**-0.4**	
OBN	**Obninsk**	**28.62**	**316**	⇓	P		**P**	**23 13 02.7**	**+2.1**	
OBN	**Obninsk**	**28.62**	**316**		*e* P		**P**	**23 13 01.0**	**+0.3**	
OBN					*e*			23 13 50.3		
OBN					*e*	PPP	PPP	23 14 00.8		
OBN					*e*			23 16 12.4		
OBN					pmax		pmax			
	comp=Z,34nm,1.6s									
OBN					MLR		MLR			
	comp=Z,35nm,7.0s									
ILGA	**Ilgaz**	**29.15**	**287**		P		**P**	**23 13 06.7**	**+0.8**	
ILGA					IAmb		IAmb	23 13 08.6		
	comp=Z,7.7nm,1.0s									
KIRS	**Kirsehir-Merke**	**29.33**	**283**	⇑	P		**P**	**23 13 08.4**	**+1.1**	
BR131	**Keskin Array S**	**29.43**	**284**		P		**P**	**23 13 08.4**	**+0.2**	
BR131	**Keskin Array S**	**29.43**	**284**	⇓	*e* P		**P**	**23 13 09.2**	**+1.0**	
BRTR	**Keskin Array B**	**29.43**	**284**		P		**P**	**23 13 08.9**	**+0.8**	
	comp=Z,2.4nm,0.8s,baz=100,slow=7.5,SNR=15									
BRTR					LR		LR	23 26 55.4		
	comp=Z,50nm,19.0s,baz=64,slow=40									
	comp=Z,2.4nm,0.8s									
BRTR	**Keskin Array B**	**29.43**	**284**		P		**P**	**23 13 08.3**	**+0.1**	
BRTR	**Keskin Array B**	**29.43**	**284**		P		**P**	**23 13 09.0**	**+0.8**	
KLMR	**Klimovskoe**	**29.77**	**328**		*e* P		**P**	**23 13 10.3**	**-0.5**	
KLMR					pmax		pmax			
	comp=Z,31nm,1.4s									
MMAI	**Mount Meron Ar**	**29.94**	**270**		LR		LR	23 26 15.7		
	comp=Z,63nm,18.1s,baz=64,slow=38									
CMAR	**Chiang Mai Arr**	**31.10**	**123**		P		**P**	**23 13 22.4**	**-0.6**	
	comp=Z,0.8nm,0.3s,baz=307,slow=9.9,SNR=6.6									
	comp=Z,0.8nm,0.3s									
CMAR	**Chiang Mai Arr**	**31.10**	**123**		P		**P**	**23 13 22.7**	**-0.3**	
EIL	**Elat**	**31.66**	**264**		LR		LR	23 27 46.6		
	comp=Z,76nm,20.4s,baz=42,slow=39									
BORA	**Eskisehir**	**31.81**	**285**		P		**P**	**23 13 29.7**	**+0.6**	
AKASG	**Malin Array Be**	**32.04**	**306**		P		**P**	**23 13 31.3**	**+0.4**	
	comp=Z,1.4nm,0.5s,baz=80,slow=8.0,SNR=10									
	comp=Z,1.4nm,0.5s									
AKASG	**Malin Array Be**	**32.04**	**306**		P		**P**	**23 13 30.9**	**0.0**	
AKBB	**Malin Array Si**	**32.04**	**306**		P		**P**	**23 13 30.8**	**-0.1**	
AKBB					IAmb		IAmb	23 13 31.8		
	comp=Z,13nm,1.1s									
AKBB	**Malin Array Si**	**32.04**	**306**	⇓	*i* P		**P**	**23 13 30.6**	**-0.3**	
AKBB					pmax		pmax			
	comp=Z,71nm,4.7s									
KIEV	**Kiev**	**32.05**	**306**		P		**P**	**23 13 30.7**	**-0.3**	
KIEV					IAmb		IAmb	23 13 31.8		
	comp=Z,10nm,1.1s									
KIEV	**Kiev**	**32.05**	**306**		P		**P**	**23 13 30.7**	**-0.3**	
KIEV	**Kiev**	**32.05**	**306**		P		**P**	**23 13 30.7**	**-0.3**	
KIEV					pmax		pmax			
	comp=Z,10.0nm,1.1s									
PALK	**Pallekele**	**32.47**	**163**		LR		LR	23 26 56.7		
	comp=Z,147nm,18.7s,baz=349,slow=37									
SORM	**Soroca**	**32.49**	**301**	⇑	P		**P**	**23 13 35.7**	**+0.8**	
SORM	**Soroca**	**32.49**	**301**		P		**P**	**23 13 35.7**	**+0.8**	
TPGR	**Topolog**	**32.58**	**295**	⇑	P		**P**	**23 13 37.6**	**+1.8**	
CFR	**Carcaliu**	**32.76**	**295**	⇓	P		**P**	**23 13 38.6**	**+1.3**	
CFR	**Carcaliu**	**32.76**	**295**		P		**P**	**23 13 38.5**	**+1.3**	
MNK	**Minsk**	**33.33**	**313**	*i*	P		**P**	**23 13 43.2**	**+1.0**	
	comp=E,17nm,1.2s									
MNK					*i* P		**P**	**23 13 43.2**	**+1.0**	
	comp=N,22nm,1.1s									
MNK					*i* P		**P**	**23 13 43.2**	**+1.0**	
	comp=N,19nm,1.0s,baz=100									
MNK					*i* PP		**PP**	**23 14 53.4**	**-4.0**	
MNK					*i* PPP		PPP	23 15 05.8		
MNK					*i* S		**S**	**23 19 03.6**	**+0.9**	
MNK					*i* SS		**SnSn**	**23 21 07.3**	**+4.2**	
MNK					*i* SSS		SSS	23 21 24.0		

MNK					*i* LQ		LQ	23 24 58.6		
MNK					*i* LR		LR	23 27 23.3		
MNK					*i* LRM		MLR	23 28 41.3		
	comp=E,104nm,15.8s									
MNK					*i* LRM		MLR	23 28 41.3		
	comp=N,199nm,18.2s									
MNK					*i* LRM		MLR	23 28 41.3		
	comp=Z,68nm,10.8s									
MNK	**Minsk**	**33.33**	**313**		*i* P		**P**	**23 13 43.2**	**+1.0**	
MNK					*i*			23 14 53.4		
MNK					*i* PPP		PPP	23 15 05.8		
MNK					*i* S		**S**	**23 19 03.5**	**+0.9**	
MNK					*i* SS		**SnSn**	**23 21 07.3**	**+4.2**	
MNK					*i* SSS		SSS	23 21 23.9		
MNK					pmax		pmax			
	comp=Z,19nm,1.0s									
MNK					pmax		pmax			
	comp=E,17nm,1.2s									
MNK					pmax		pmax			
	comp=N,22nm,1.1s									
MNK					MLR		MLR			
	comp=Z,68nm,11.0s									
MNK					MLR		MLR			
	comp=E,104nm,16.0s									
MNK					MLR		MLR			
	comp=N,199nm,18.0s									
MANT	**Manisa**	**33.56**	**283**		P		**P**	**23 13 44.7**	**0.0**	
MANT					IAmb		IAmb	23 13 51.9		
	comp=Z,8.2nm,1.2s									
VRI	**Vrincioaia**	**33.69**	**297**	⇓	P		**P**	**23 13 47.4**	**+2.0**	
VRI	**Vrincioaia**	**33.69**	**297**		P		**P**	**23 13 47.4**	**+2.0**	
TESR	**Tescani**	**33.70**	**298**	⇑	P		**P**	**23 13 46.9**	**+1.4**	
PLOR	**Plostina**	**33.74**	**297**	⇑	P		**P**	**23 13 47.7**	**+1.7**	
PLOR	**Plostina**	**33.74**	**297**		P		**P**	**23 13 47.6**	**+1.7**	
GIRR	**Girov**	**33.77**	**299**	⇓	P		**P**	**23 13 47.5**	**+1.3**	
ONER	**Baraj Valea Uz**	**33.88**	**298**	⇓	P		**P**	**23 13 49.1**	**+2.0**	
NEHR	**Nehoiu**	**34.03**	**296**	⇑	P		**P**	**23 13 50.4**	**+2.0**	
NACGM	**Naroch**	**34.03**	**313**	*e*	P		**P**	**23 13 49.8**	**+1.5**	
	comp=Z,35nm,0.9s,baz=99									
COVR	**Voineasa-Covas**	**34.05**	**297**	⇓	P		**P**	**23 13 50.7**	**+2.0**	
LOZB	**Loznitsa**	**34.06**	**292**	⇑	P		**P**	**23 13 50.3**	**+1.6**	
TURR	**Turia**	**34.17**	**297**	⇑	P		**P**	**23 13 51.2**	**+1.6**	
JOF	**Joensuu**	**34.17**	**328**	*e*	P		**P**	**23 13 50.8**	**+1.4**	
MLR	**Muntele Rosu**	**34.27**	**296**		P		**P**	**23 13 50.9**	**+0.2**	
MLR					IAmb		IAmb	23 14 05.7		
	comp=Z,8.8nm,0.8s									
MLR	**Muntele Rosu**	**34.27**	**296**	⇓	P		**P**	**23 13 52.5**	**+1.8**	
MLR	**Muntele Rosu**	**34.27**	**296**		P		**P**	**23 13 52.4**	**+1.8**	
BURAR	**Bucovina Array**	**34.61**	**300**		P		**P**	**23 13 53.2**	**-0.4**	
BURAR	**Bucovina Array**	**34.61**	**300**	⇓	P		**P**	**23 13 54.9**	**+1.3**	
BURAR	**Bucovina Array**	**34.61**	**300**		P		**P**	**23 13 54.8**	**+1.3**	
BUR08	**Bucovina Ar. S**	**34.62**	**300**		P		**P**	**23 13 54.2**	**+0.6**	
BUR08					IAmb		IAmb	23 13 58.3		
	comp=Z,14nm,1.4s									
ELND	**Elena**	**34.64**	**292**	⇓	P		**P**	**23 13 55.1**	**+1.3**	
VOIR		**34.90**	**296**	⇑	P		**P**	**23 13 57.7**	**+1.6**	
VOIR		**34.90**	**296**		P		**P**	**23 13 57.6**	**+1.6**	
ARR	**Arges**	**35.20**	**296**	⇑	P		**P**	**23 14 00.1**	**+1.5**	
HILR	**Hailar Array B**	**35.40**	**57**		P		**P**	**23 14 01.1**	**+0.9**	
	comp=Z,1.2nm,0.5s,baz=268,slow=5.0,SNR=2.3									
HILR					LR		LR	23 31 07.0		
	comp=Z,45nm,21.0s,baz=235,slow=41									
	comp=Z,1.2nm,0.5s									
ARBE	**Arbavere**	**35.40**	**321**	*e*	P		**P**	**23 14 00.9**	**+0.9**	
KARP	**Karpathos**	**35.48**	**279**		P		**P**	**23 14 02.0**	**+1.0**	
TIA	**Tai'an**	**35.72**	**80**		P		**P**	**23 14 03.8**	**+0.7**	
TIA					pmax		pmax			
	comp=Z,6.0nm,0.9s									
LOT	**Lotru**	**35.79**	**296**	⇑	P		**P**	**23 14 05.7**	**+1.9**	
FINES

YAK pmax pmax
comp=Z,33nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.3s
YAK pmax pmax
comp=E,14nm,1.4s
YAK pmax pmax
comp=Z,255nm,5.9s
YAK pmax pmax
comp=N,52nm,5.2s
YAK pmax pmax
comp=E,97nm,5.7s
YAK smax smax
comp=N,161nm,4.7s
YAK smax smax
comp=E,111nm,4.6s

BRG Berggiesshubel 41.72 306 *i* P **P** **23 14 54.9 +1.7**
BRG Amp 23 14 55.6
comp=Z,12nm,0.8s
BRG Berggiesshubel 41.72 306 P **P** **23 14 56.5 +3.3**
BRG Amp 23 14 57.1
comp=Z,11nm,0.6s
ZVC Zvikov 41.74 304 *eP* **P** **23 14 54.8 +1.4**
CKRC Cesky Krumlov 41.75 303 *eP* **P** **23 14 57.1 +3.5**
CKRC Cesky Krumlov 41.75 303 *eP* **P** **23 14 57.1 +3.5**
MOA Molln 41.93 302 *eP* **P** **23 14 55.9 +0.8**
comp=Z,4.3nm,0.9s
OBKA Obir 41.98 300 *eP* **P** **23 14 56.3 +0.8**
comp=Z,6.7nm,1.2s
FAUS Fauske 42.02 331 *eP* **P** **23 14 56.5 +1.0**
HSKC Hora Svate Kat 42.07 306 *eP* **P** **23 14 59.8 +3.6**
MOR8 Moi Rana 42.09 329 *eP* **P** **23 14 56.1 0.0**
FURI Furi 42.13 234 LR LR 23 34 25.7
comp=Z,93nm,19.9s,baz=28,slow=39
GERES GERESS Array B 42.14 303 P **P** **23 14 57.6 +0.8**
comp=Z,2.4nm,0.5s,baz=67,slow=8.3,SNR=20
comp=Z,2.4nm,0.5s
STEI Steigen 42.17 332 *eP* **P** **23 14 59.1 +2.5**
KHC Kasperske Hory 42.18 304 *eP* **P** **23 14 58.0 +0.9**
KHC Kasperske Hory 42.18 304 *eP* **P** **23 14 58.0 +0.9**
CLL Collm 42.26 307 P **P** **23 14 58.1 +0.5**
CLL IAmb IAmb 23 15 01.4
comp=Z,12nm,0.6s
CLL Collm 42.26 307 *i* P **P** **23 14 58.5 +0.9**
CLL *e* 23 15 09.0
CLL pmax pmax
comp=Z,14nm,0.7s
CLL Collm 42.26 307 *i* P **P** **23 14 58.5 +0.9**
comp=Z,14nm,0.7s
CLL *ex* x 23 15 09.0
BIOA Bad Ischl, Aus 42.38 302 *eP* **P** **23 14 58.9 +0.2**
comp=Z,4.3nm,0.8s
MYKA Terra Mystica 42.57 300 *eP* **P** **23 15 01.4 +1.0**
comp=Z,2.8nm,0.6s
LEIR Leirfjorden 42.61 329 *eP* **P** **23 15 01.2 +1.0**
VAGH Vaagaholmen 42.66 330 *eP* **P** **23 15 01.9 +1.3**
NC405 NORSAR Array S 42.67 322 P **P** **23 15 01.7 +0.8**
CUC Castrocucco 42.67 290 IAmb IAmb 23 15 07.4
comp=Z,12nm,0.8s
KONS Konsvik 42.68 330 *eP* **P** **23 15 01.8 +1.0**
KBA Koelnbreinsper 42.69 301 *eP* **P** **23 15 02.2 +0.8**
comp=Z,1.7nm,0.6s
STOK Stokkvaagen 42.69 329 *eP* **P** **23 15 01.5 +0.6**
NC602 NORSAR Array S 42.73 321 *eP* **P** **23 15 01.9 +0.6**
LOF Lofoten 42.84 332 *eP* **P** **23 15 04.5 +2.4**
NC303 NORSAR Array S 42.84 322 P **P** **23 15 02.2 -0.1**
NB2 NORSAR Subarra 42.91 321 P **P** **23 15 02.9 0.0**
comp=Z,4.3nm,0.5s,baz=93,slow=8.6
NB2 NORSAR Subarra 42.91 321 AMP **P** **23 15 02.9 0.0**
comp=Z,4.3nm,0.5s
NB2 P **P** **23 15 02.9 0.0**
NOA NORSAR Array B 42.91 321 P **P** **23 15 02.9 0.0**
comp=Z,4.1nm,0.5s,baz=92,slow=7.7,SNR=22
NOA LR LR 23 33 37.6
comp=Z,53nm,21.0s,baz=0.0,slow=37
comp=Z,4.1nm,0.5s
LESA Schwarzleotal 43.06 301 *eP* **P** **23 15 04.8 +0.4**
comp=Z,5.3nm,0.9s
NC204 NORSAR Array S 43.14 322 P **P** **23 15 04.7 -0.1**
NC204 IAmb IAmb 23 15 05.7
comp=Z,21nm,1.3s
KLR Kul'dur 43.23 56 LR LR 23 34 13.0
comp=Z,27nm,18.7s,baz=288,slow=38
KLR Kul'dur 43.23 56⇓ *eP* **P** **23 15 04.3 -1.2**
KLR pmax pmax
comp=Z,11nm,1.8s
ABTA Abfaltersbach 43.31 300 *eP* **P** **23 15 06.6 +0.2**
comp=Z,3.6nm,0.9s
TIXI Tiksi 43.32 23 LR LR 23 34 13.1
comp=Z,124nm,18.6s,baz=310,slow=38
TIXI Tiksi 43.32 23 P **P** **23 15 05.8 -0.2**
TIXI IAmb IAmb 23 15 08.2
comp=Z,8.4nm,0.7s
TIXI Tiksi 43.32 23⇓ *eP* **P** **23 15 06.1 +0.2**
TIXI pmax pmax
comp=Z,8.0nm,0.6s
KSRS Korea Array 43.52 74 P **P** **23 15 08.1 +0.1**
comp=Z,2.1nm,0.9s,baz=270,slow=7.2,SNR=4.7
KSRS LR LR 23 35 16.7
comp=Z,119nm,20.6s,baz=285,slow=39
comp=Z,2.1nm,0.9s
KONO Kongsberg 43.69 319 *eP* **P** **23 15 09.7 +0.7**
WTTA Wattenberg 43.79 301 *eP* **P** **23 15 10.2 -0.1**
comp=Z,8.2nm,1.1s
WATA Walderalm 43.82 301 *eP* **P** **23 15 10.6 +0.1**
comp=Z,4.8nm,1.0s
NRCA Norcia 43.82 295 P **P** **23 15 11.1 +0.6**
NRCA IAmb IAmb 23 15 22.6
comp=Z,10nm,1.1s
CTI Castel Tesino 44.04 300 P **P** **23 15 12.0 -0.3**
CTI Castel Tesino 44.04 300 P **P** **23 15 12.0 -0.3**
CTI pmax pmax
comp=Z,4.0nm,0.8s
SQTA Sankt Quirin 44.09 301 *eP* **P** **23 15 12.6 0.0**
comp=Z,6.3nm,1.6s
MOTA Moosalm 44.13 302 *eP* **P** **23 15 12.9 -0.1**
comp=Z,6.8nm,1.0s
FETA Feichten 44.45 301 *eP* **P** **23 15 15.6 +0.1**
comp=Z,8.7nm,1.2s
USRK Ussuriysk Ar. 44.45 63 P **P** **23 15 16.3 +0.9**
comp=Z,1.2nm,0.6s,baz=242,slow=45,SNR=1.9
comp=Z,1.2nm,0.6s
FUORN Ofenpass-Fuorn 44.85 301 P **P** **23 15 19.4 +0.5**
DAVA Damuels 44.95 302 *eP* **P** **23 15 19.5 -0.1**
comp=Z,5.4nm,0.6s
HSPB Hornsund (broa 45.01 345 *eP* **P** **23 15 21.6 +2.1**
DAVOX Davos/Dischmat 45.07 301 LR LR 23 38 00.8
comp=Z,137nm,18.8s,baz=258,slow=41
SPA0 Spitsbergen Ar 45.34 346 *eP* **P** **23 15 23.9 +1.8**
SPITS Spitsbergen Ar 45.34 346 P **P** **23 15 23.6 +1.5**
comp=Z,4.2nm,0.5s,baz=116,slow=11,SNR=16
SPITS LR LR 23 38 24.2
comp=Z,106nm,18.9s,baz=153,slow=41
comp=Z,4.2nm,0.5s
KBS Kingsbay 46.44 347 *eP* **P** **23 15 32.5 +1.7**
KBS Kingsbay 46.44 347 *i* P **P** **23 15 31.5 +0.7**
JNU Nakatsue 47.39 78 LR LR 23 40 15.3
comp=Z,53nm,18.2s,baz=24,slow=42
KEST Kesra 48.95 287 P **P** **23 15 51.1 +0.2**
comp=Z,2.9nm,0.9s,baz=94,slow=10,SNR=1.6
comp=Z,2.9nm,0.9s
KEST Kesra 48.95 287 P **P** **23 15 51.4 +0.5**
KEST IAmb IAmb 23 16 08.4
comp=Z,13nm,1.2s
YSS Yuzhno-Sakhali 50.93 56 *eP* **P** **23 16 06.8 +1.2**
YSS pmax pmax
comp=Z,10.0nm,0.9s
EKA Eskdalemuir Ar 51.06 315 P **P** **23 16 06.6 +0.1**
comp=Z,3.8nm,0.5s,baz=92,slow=8.3,SNR=19
comp=Z,3.8nm,0.5s
MJAR Matsushiro Arr 51.49 71 P **P** **23 16 11.1 +1.0**
comp=Z,1.9nm,0.7s,baz=292,slow=10.0,SNR=5.7
MJAR LR LR 23 38 39.5
comp=Z,41nm,19.4s,baz=349,slow=37
comp=Z,1.9nm,0.7s
MJAR Matsushiro Arr 51.49 71 P **P** **23 16 09.6 -0.5**
NOR Nord 51.59 349 *i* P **P** **23 16 07.4 -2.7**
ASAJ Asahikawa 51.76 60 LR LR 23 39 44.9
comp=Z,130nm,19.4s,baz=310,slow=38
SEY Seymchan 52.08 35⇑ *eP* **P** **23 16 14.7 +0.7**
SEY pmax pmax
comp=Z,2.0nm,1.1s
MA2 Magadan 52.09 39 LR LR 23 39 52.9
comp=Z,53nm,19.0s,baz=338,slow=38
MA2 Magadan 52.09 39⇑ *eP* **P** **23 16 14.2 0.0**
MA2 pmax pmax
comp=Z,6.0nm,1.2s
DAG Danmarks Havn 52.64 343 *i* P **P** **23 16 18.0 0.0**
DAG IAmb IAmb 23 16 19.6
comp=Z,6.6nm,0.7s
MBAR Mbarara 54.44 234 LR LR 23 42 21.8
comp=Z,130nm,18.4s,baz=3.5,slow=39
BILL Bilibino 56.18 27⇑ *iP* **P** **23 16 44.7 +0.8**
BILL pmax pmax
comp=Z,21nm,4.3s
LEM Lembang 56.29 136 LR LR 23 44 21.0
comp=Z,58nm,18.2s,baz=185,slow=40
ESDC Sonseca Array 56.96 297 P **P** **23 16 50.0 +0.1**
comp=Z,1.9nm,0.8s,baz=58,slow=6.9,SNR=9.3
comp=Z,1.9nm,0.8s
ESDC Sonseca Array 56.96 297 P **P** **23 16 49.3 -0.6**
DAV Davao City (W) 57.68 109 LR LR 23 45 27.4
comp=Z,56nm,19.1s,baz=336,slow=40
PETK Petropavlovsk- 57.80 45 P **P** **23 16 56.4 +0.8**
comp=Z,3.2nm,0.8s,baz=254,slow=3.8,SNR=2.6
PETK LR LR 23 42 56.7
comp=Z,90nm,18.4s,baz=2.1,slow=37
comp=Z,3.2nm,0.8s
NEEM North Greenlan 58.85 348 *i* P **P** **23 17 00.3 -2.7**
NEEM IAmb IAmb 23 17 06.0
comp=Z,6.2nm,1.1s
SUMG Summit 59.03 341 **P** **23 17 05.6 +1.2**
SUMG Summit 59.03 341 P **P** **23 17 05.6 +1.2**
SUMG pmax pmax
comp=Z,12nm,0.9s
SUMG Summit 59.03 341 *i* P **P** **23 17 05.0 +0.6**
SUMG IAmb IAmb 23 17 07.4
comp=Z,5.2nm,0.9s
OPO Ambohidratompo 61.65 207 LR LR 23 42 34.6
comp=Z,33nm,18.9s,baz=174,slow=35
C16K Lisburne Hills 64.99 20 P **P** **23 17 43.6 -0.4**
C16K IAmb IAmb 23 17 45.1
comp=Z,5.3nm,0.9s
TORD Torodi Ar. Bea 66.46 268 P **P** **23 17 52.8 -1.5**
comp=Z,1.3nm,0.5s,baz=47,slow=7.6,SNR=15
comp=Z,1.3nm,0.5s
POIN Pond Inlet 66.75 351 P **P** **23 17 56.0 +0.8**
POIN IAmb IAmb 23 18 16.4
comp=Z,4.7nm,1.2s
F17K Baldwin Pennin 67.41 20 IAmb IAmb 23 18 03.7
comp=Z,5.6nm,0.8s
ANM Nome 67.58 23 P **P** **23 18 01.3 +0.7**
ANM Nome 67.58 23 P **P** **23 18 01.3 +0.7**
ANM pmax pmax
comp=Z,14nm,1.4s
LSZ Lusaka 67.59 226 LR LR 23 47 14.9
comp=Z,33nm,18.8s,baz=322,slow=36
D22K Ayikyak River 67.60 16 IAmb IAmb 23 18 03.0
comp=Z,7.2nm,1.1s
G16K Koyuk River 67.88 22 IAmb IAmb 23 18 21.0
comp=Z,5.1nm,1.1s
D23K Nanushuk River 67.95 15 IAmb IAmb 23 18 04.8
comp=Z,4.3nm,1.1s
D25K Kavik River 68.49 14 **P** **23 18 07.2 +0.8**
D25K IAmb IAmb 23 18 08.3
comp=Z,4.9nm,1.0s
G19K Purcell Mounta 68.74 19 IAmb IAmb 23 18 11.6
comp=Z,5.3nm,0.9s
E23K Chandalar 68.93 15 P **P** **23 18 08.7 -0.5**
E23K IAmb IAmb 23 18 13.3
comp=Z,4.0nm,0.9s
COLD Coldfoot 69.50 16 IAmb IAmb 23 18 14.1
comp=Z,5.9nm,1.0s
F25K Christian Rive 70.12 14 P **P** **23 18 17.0 +0.5**
F25K IAmb IAmb 23 18 26.1
comp=Z,3.0nm,0.8s
E28M Babbage River 70.30 12 IAmb IAmb 23 18 33.3
comp=Z,3.8nm,0.9s
ILON Igloolik, Nuna 70.32 350 P **P** **23 18 17.3 -0.2**
BMAR Burnt Mountain 70.47 14 P **P** **23 18 19.1 +0.5**
G24K Hadweenzic Riv 70.52 16 IAmb IAmb 23 18 22.2
comp=Z,3.0nm,0.8s
E29M Blow River 70.75 11 IAmb IAmb 23 18 23.6
comp=Z,2.5nm,0.5s
G26K Porcupine Rive 71.04 14 P **P** **23 18 22.7 +0.7**
G26K IAmb IAmb 23 18 31.0
comp=Z,11nm,1.4s
INK Inuvik 71.45 10 P **P** **23 18 24.7 +0.3**
INK Inuvik 71.45 10 P **P** **23 18 24.7 +0.3**
INK pmax pmax
comp=Z,17nm,1.5s
NEA2 Nenana 71.97 17 IAmb IAmb 23 18 28.7
comp=Z,8.5nm,1.2s
COLA College 72.00 17 P **P** **23 18 29.0 +1.2**
COLA College 72.00 17⇑ *eP* **P** **23 18 27.7 -0.1**
COLA pmax pmax
comp=Z,10.0nm,0.9s
F31M Tsiigehtchic 72.23 10 P **P** **23 18 29.2 +0.1**
F31M IAmb IAmb 23 18 30.4
comp=Z,7.1nm,1.0s
ILAR Eielson Array 72.31 16 P **P** **23 18 29.4 -0.3**
comp=Z,2.1nm,0.8s,baz=316,slow=5.1,SNR=18
ILAR LR LR 23 56 01.1
comp=Z,56nm,18.6s,baz=52,slow=41
comp=Z,2.1nm,0.8s
ILAR Eielson Array 72.31 16 P **P** **23 18 28.8 -0.9**
I28M Miner Creek 73.09 13 IAmb IAmb 23 18 43.9
comp=Z,3.7nm,0.9s
J26L Joseph Creek 73.25 15 P **P** **23 18 36.0 +0.6**
J26L IAmb IAmb 23 18 46.1
comp=Z,4.1nm,1.1s
I29M Ogilvie Camp, 73.46 13 IAmb IAmb 23 19 05.0
comp=Z,5.0nm,0.6s
BCAR Beaver Creek A 74.89 15 P **P** **23 18 45.5 +0.5**
DBIC Dimbokro 75.50 267 LR LR 23 58 17.9
comp=Z,108nm,19.0s,baz=328,slow=41
TSUM Tsumeb 76.91 232 LR LR 23 56 26.0
comp=Z,83nm,18.4s,baz=348,slow=39
KUQ Kuujjuuaa 77.81 340 P **P** **23 19 01.4 -0.1**
KUQ IAmb IAmb 23 19 04.7
comp=Z,6.6nm,0.9s
YKAW3 Yellowknife Wh 78.77 3 IAmb IAmb 23 19 08.0
comp=Z,7.5nm,1.3s
YKA Yellowknife Ar 78.83 3 P **P** **23 19 06.9 -0.2**
comp=Z,1.4nm,0.5s,baz=350,slow=6.0,SNR=24
comp=Z,1.4nm,0.5s
YKA Yellowknife Ar 78.83 3 P **P** **23 19 06.8 -0.4**
YKAW1 Yellowknife Wh 78.85 3 IAmb IAmb 23 19 08.4
comp=Z,5.3nm,0.9s
SCHQ Schefferville 80.17 337 P **P** **23 19 16.2 +1.7**
comp=Z,3.3nm,0.6s,baz=34,slow=5.0,SNR=12
comp=Z,3.3nm,0.6s
SCHQ Schefferville 80.17 337 IAmb IAmb 23 19 18.7
comp=Z,4.3nm,0.7s
FCC Fort Churchill 82.01 353 IAmb IAmb 23 19 25.2
comp=Z,3.8nm,1.0s
WRA Warramunga Arr 82.70 123 P **P** **23 19 26.2 -2.1**
comp=Z,1.8nm,0.5s,baz=324,slow=4.9,SNR=19
comp=Z,1.8nm,0.5s
WRA Warramunga Arr 82.70 123 P **P** **23 19 28.2 -0.1**
ASAR Alice Springs 85.08 126 P **P** **23 19 38.6 -1.9**
comp=Z,0.9nm,0.8s,baz=318,slow=4.9,SNR=6.7
comp=Z,0.9nm,0.8s
ASAR Alice Springs 85.08 126 P **P** **23 19 38.9 -1.6**
ASAR Alice Springs 85.08 126 P **P** **23 19 38.9 -1.6**
FFC Flin Flon 86.61 356 **P** **23 19 47.6 -0.1**
FFC IAmb IAmb 23 19 58.9
comp=Z,9.0nm,1.5s
FFC Flin Flon 86.61 356 P **P** **23 19 47.6 -0.1**
FFC pmax pmax
comp=Z,9.0nm,1.5s
NEW Newport 92.86 6 LR LR 00 07 06.8
comp=Z,38nm,18.7s,baz=128,slow=39
PDAR Pinedale Array 98.72 1 P Pdif 23 20 45.5 +1.2
comp=Z,0.2nm,0.6s,baz=10,slow=7.0,SNR=1.8
comp=Z,0.2nm,0.6s
PDAR Pinedale Array 98.72 1 P Pdif 23 20 44.5 +0.2
TXAR Lajitas Array 112.00 356 Pdiff **Pdif** **23 21 44.8 +1.3**
comp=Z,0.1nm,0.5s,baz=249,slow=3.5,SNR=1.9
AC02 Maricunga 145.33 278 **PKPdf** **23 26 43.4 +0.2**
PLCA Paso Flores 151.19 254 PKPbc **PKiKP** **23 26 58.2 -0.1**
comp=Z,1.3nm,0.5s,baz=345,slow=7.1,SNR=6.1

*IDC **18** 23:11:54.5±0.9, 35°.31N×74°.36E, h0km, mb3.8/13, mbtmp3.9/16, ML3.3/3, MS3.3/4, Error ellipse: s-maj=26.4km s-min=16.3km az=44.0*
*NEIC **18** 23:11:58.2±2.0, 35°.62N±0°.04×74°.5E±0°.1, h10km±1km, mb4.3/12, Error ellipse: s-maj=18.4km s-min=7.5km az=92.0*
ISC 18 23:12:01.1±0.5, **35°.58N**±0°.05×**74°.50E**±0°.06, **h36km, n50,**
σ1s56/53, mb4.0/18, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SRNI	**Srinagar**	**1.54**	**170**	*eP*		**Pn**	**23 12 25.8**	**-0.3**
SRNI				*eS*		**Sn**	**23 12 46.6**	**+1.6**
SRNI					IAML		23 12 53.6	
	comp=N,2μm,0.3s							
SRNI					IAML		23 12 54.8	
	comp=E,2μm,0.2s							
NIL	**Nilore**	**2.18**	**208**		Pn	**Pn**	**23 12 35.0**	**+0.3**
ALCI	**Alchi Leh**	**2.59**	**121**	*eP*		**Pn**	**23 12 38.5**	**-2.2**
ALCI				*eS*		**Sn**	**23 13 09.8**	**-1.4**
ALCI					IAML		23 13 18.0	
	comp=E,1μm,0.4s							
ALCI					IAML		23 13 18.0	
	comp=N,1μm,0.5s							
JMU	**Jammu**	**2.80**	**174**	*eP*		**Pn**	**23 12 43.4**	**+0.1**
JMU				*eS*		**Sn**	**23 13 15.9**	**0.0**
JMU					IAML		23 13 26.8	
	comp=N,1μm,0.6s							
JMU					IAML		23 13 28.0	
	comp=E,2μm,0.8s							
TSSA	**Tissa**	**3.06**	**153**	*eP*		**Pn**	**23 12 48.0**	**+1.0**
TSSA				*eS*		**Sn**	**23 13 24.8**	**+2.4**
TSSA					IAML		23 13 34.9	
	comp=E,588nm,0.4s							
TSSA					IAML		23 13 39.2	
	comp=N,553nm,0.2s							
DHRM	**DHARAMSHALA**	**3.64**	**155**	*eP*		**Pn**	**23 12 54.6**	**-0.5**
DHRM				*eS*		**Sn**	**23 13 36.8**	**0.0**
DHRM					IAML		23 13 50.8	
	comp=E,860nm,0.6s							
DHRM					IAML		23 13 51.0	
	comp=N,952nm,0.6s							
DRK	**Karamyk**	**4.45**	**332**		Pn	**Pn**	**23 13 03.9**	**-2.4**
BHK	**Bhakra**	**4.46**	**159**	*eP*		**Pn**	**23 13 08.4**	**+2.3**
BHK				*eS*		**Sn**	**23 14 01.2**	**+4.5**
BHK					IAML		23 14 03.1	
	comp=N,470nm,0.4s							
BHK					IAML		23 14 03.5	
	comp=E,474nm,0.4s							
KBL	**Kabul**	**4.59**	**259**		Pn	**Pn**	**23 13 09.2**	**+1.1**
SMLA	**Simla**	**4.96**	**153**	*eP*		**Pn**	**23 13 12.1**	**-1.0**
SMLA				*eS*		**Sn**	**23 14 06.1**	**-3.1**
SMLA					IAML		23 14 13.8	
	comp=N,2μm,0.8s							
SMLA					IAML		23 14 14.2	
	comp=E,2μm,0.4s							
NRN	**Naryn**	**5.97**	**11**		Pn	**Pn**	**23 13 29.2**	**+2.1**
TARG	**Taragay, Kyrgy**	**6.67**	**22**		Pn	**Pn**	**23 13 40.2**	**+3.4**
AAK	**Ala-Archa**	**7.05**	**360**		Pn	**Pn**	**23 13 46.3**	**+4.4**
	comp=E,0.5nm,0.3s,baz=192,slow=19,SNR=1.1							
AAK					LR	LR	23 16 35.2	
	comp=E,79nm,20.1s,baz=195,slow=38							
	comp=E,7.7nm,0.8s							
FRU1	**Bishkek**	**7.23**	**1**		Pn	**Pn**	**23 13 44.3**	**+0.2**
PRZ	**Przheval'sk**	**7.54**	**23**		Pn	**Pn**	**23 13 50.8**	**+2.2**
KK31	**Karatay Array**	**8.13**	**339**		Pn	**Pn**	**23 13 56.5**	**+0.1**
KKAR	**Karatay Array**	**8.13**	**339**		Pn	**Pn**	**23 13 56.6**	**+0.1**
EVN	**Everest**	**12.94**	**123**		Pn	Pn	23 14 55.6	-7.4
BVAR	**Borovoye Array**	**17.69**	**352**		P	**Pn**	**23 16 04.8**	**+0.4**
	baz=158,slow=12,SNR=1.0							
	comp=E,1.6nm,0.5s							
HYB	**Hyderabad**	**18.44**	**168**	*eP*		Pn	23 16 22.3	+8.4
AKTO	**Aktyubinsk**	**19.06**	**326**	P		**P**	**23 16 20.2**	**+0.1**
	comp=E,0.5nm,0.3s,baz=110,slow=7.9,SNR=2.4							
AKTO					LR	LR	23 24 17.5	
	comp=E,94nm,20.1s,baz=282,slow=39							
	comp=E,12nm,0.8s							
ZALV	**Zalesovo Beam**	**19.74**	**18**	P		**Pn**	**23 16 29.4**	**+0.2**
	comp=E,5.2nm,0.7s,baz=206,slow=13,SNR=5.0							
	comp=E,5.2nm,0.7s							
ZALV	**Zalesovo Beam**	**19.74**	**18**	P		**Pn**	**23 16 28.9**	**-0.3**
SONM	**Songino Array**	**26.58**	**53**	P		**P**	**23 17 37.2**	**+1.4**
	comp=E,1.4nm,0.8s,baz=258,slow=8.9,SNR=6.8							
	comp=E,1.4nm,0.8s							
CM31	**Chiang Mai Arr**	**27.54**	**122**	P		**P**	**23 17 45.1**	**+0.6**
CM31					IAmb	IAmb	23 17 51.1	
	comp=Z,6.4nm,0.9s							
CMAR	**Chiang Mai Arr**	**27.54**	**122**	P		**P**	**23 17 43.5**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=312,slow=11,SNR=12							
	comp=Z,2.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**27.54**	**122**	P		**P**	**23 17 44.6**	**+0.1**
RAYN	**Ar Rayn**	**27.83**	**252**	P		**P**	**23 17 47.7**	**+0.5**
AKASG	**Malin Array Be**	**35.73**	**309**	P		**P**	**23 18 55.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=106,slow=9.2,SNR=1.6							
	comp=Z,0.6nm,0.6s							
BURAR	**Bucovina Array**	**38.16**	**304**	P		**P**	**23 19 17.5**	**+0.6**
BUR08	**Bucovina Ar. S**	**38.17**	**304**	P		**P**	**23 19 16.9**	**-0.1**
BUR08					IAmb	IAmb	23 19 25.0	
	comp=Z,8.3nm,1.4s							
FINES	**FINESS Array B**	**39.84**	**326**	P		**P**	**23 19 31.0**	**+0.4**
	comp=Z,5.2nm,1.1s,baz=108,slow=8.6,SNR=1.7							
	comp=Z,5.2nm,1.1s							
HFS	**Hagfors**	**45.54**	**322**	P		**P**	**23 20 16.6**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=78,slow=13,SNR=2.2							
	comp=Z,3.7nm,0.8s							
NOA	**NORSAR Array B**	**46.82**	**323**	P		**P**	**23 20 26.7**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=89,slow=7.3,SNR=1.4							
	comp=Z,0.7nm,0.8s							
SPITS	**Spitsbergen Ar**	**49.04**	**347**	P		**P**	**23 20 44.5**	**+0.6**
	comp=Z,26nm,1.2s,baz=116,slow=9.8,SNR=2.4							
KEST	**Kesra**	**52.02**	**290**	LR		LR	23 46 41.4	
	comp=Z,92nm,18.4s,baz=288,slow=40							
ESDC	**Sonseca Array**	**60.39**	**300**	P		**P**	**23 22 06.3**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=48,slow=7.8,SNR=2.3							
	comp=Z,0.5nm,0.8s							
GUMO	**Guam**	**66.33**	**90**	LR		LR	23 50 05.2	
	comp=Z,27nm,21.6s,baz=74,slow=34							
C19K	**Lookout Ridge**	**68.34**	**18**	P		**P**	**23 22 60.0**	**+1.7**
C19K					IAmb	IAmb	23 23 25.9	
	comp=Z,1.6nm,1.0s							
TORD	**Torodi Ar. Bea**	**68.55**	**271**	P		**P**	**23 22 58.6**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=72,slow=4.7,SNR=2.8							
	comp=Z,0.4nm,0.6s							
F15K	**North Star Dit**	**69.25**	**22**	P		**P**	**23 23 05.1**	**+1.2**
C27K	**Jago River**	**71.45**	**13**	P		**P**	**23 23 17.2**	**-0.1**
C27K					IAmb	IAmb	23 23 59.0	
	comp=Z,3.8nm,1.3s							
A36M	**Sachs Harbour**	**71.84**	**6**	P		**P**	**23 23 20.4**	**+0.8**
BMAR	**Burnt Mountain**	**73.14**	**15**	P		**P**	**23 23 27.7**	**+0.2**
ILAR	**Eielson Array**	**74.86**	**17**	P		**P**	**23 23 38.1**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=305,slow=5.5,SNR=4.2							
	comp=Z,0.5nm,0.8s							
G30M	**tAoh Zraii Nji**	**75.11**	**12**	P		**P**	**23 23 38.4**	**-0.6**
G30M					IAmb	IAmb	23 23 41.0	
	comp=Z,3.3nm,1.2s							
I28M	**Miner Creek**	**75.80**	**14**	P		**P**	**23 23 43.2**	**+0.2**
I28M					IAmb	IAmb	23 24 18.4	
	comp=Z,4.1nm,1.4s							
WRA	**Warramunga Arr**	**79.11**	**124**	P		**P**	**23 24 00.2**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=325,slow=5.9,SNR=4.9							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**81.42**	**127**	P		**P**	**23 24 12.7**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=330,slow=4.3,SNR=4.3							
	comp=Z,0.4nm,0.7s							
YKA	**Yellowknife Ar**	**82.00**	**4**	P		**P**	**23 24 15.9**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=344,slow=5.8,SNR=4.1							
	comp=Z,0.3nm,0.7s							

*IDC **18** 23:15:42.0±0.8, 18°.91N×67°.46W, h0km, mb3.9/12, mbtmp3.9/12, Error ellipse: s-maj=23.6km s-min=16.3km az=51.0*
*NEIC **18** 23:15:45.1±2.0, 19°.13N±0°.03×67°.26W±0°.03, h10km±1km, mb4.3/20, ML4.1/45, Md3.8/8(RSPR), Error ellipse: s-maj=5.4km s-min=4.9km az=277.0*
*OSPL **18** 23:15:46.6±1.6, 19°.16N×67°.13W, h4km±19km, ML4.1, Presumed earthquake*
*SDD **18** 23:15:46.6±2.4, 19°.16N×67°.18W, h7km±10km, MD3.5, ML4.1, MW4.2, Presumed earthquake*
*RSPR **18** 23:15:47.6, 19°.11N×67°.31W, h10km±31km, MD3.8/8*
*PTWC **18** 23:15:49, 19°.00N×67°.30W, Ml4.3/18*
ISC 18 23:15:44.9±1.2, **19°.16N**±0°.03×**67°.27W**±0°.03, **h15km**±8km, **n128, σ2s05/177, mb4.2/17, 29C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.70**	**168**		Pg	**Pb**	**23 15 58.9**	**0.0**
AGPR					Sg	**Sg**	**23 16 05.5**	**-2.4**
AGPR					IAML		23 16 11.4	
	7μm,0.3s							
AGPR					IAML		23 16 17.0	
	7μm,0.3s							
AGPR	**Aguadilla, PR**	**0.70**	**168**	P		**Pb**	**23 15 59.1**	**+0.2**

AGPR **Aguadilla, PR** 0.70 168 ⇑ *iP* Pb 23 15 59.2 +0.3
AGPR ⇑ *iS* Sb 23 16 08.5 +0.2
AGPR IAML 23 16 11.2
comp=N,7μm,0.3s
AGPR **Aguadilla, PR** 0.70 168 ⇓ *iP* Pb 23 15 59.1 +0.2
AGPR *eS* Sn 23 16 09.3 -1.6
IDE **Isla Desecheo** 0.79 194 Pg 23 16 00.7 +0.4
IDE Sg 23 16 11.7 +0.9
IDE **Isla Desecheo** 0.79 194 ⇑ *iP* Pg 23 16 00.7 +0.4
IDE *eS* Sg 23 16 11.7 +0.9
PRSN **Puerto Rico Se** 0.94 173 Pg Pb 23 16 02.0 -0.9
PRSN Sg Sb 23 16 14.3 -0.9
PRSN **Puerto Rico Se** 0.94 173 P Pb 23 16 02.8 -0.2
PRSN **Puerto Rico Se** 0.94 173 ⇑ *iP* Pb 23 16 02.8 -0.2
PRSN ⇑ *iS* Sn 23 16 16.7 -0.1
PRSN IAML 23 16 20.0
comp=N,19μm,0.3s
PRSN **Puerto Rico Se** 0.94 173 ⇓ *eP* Pb 23 16 02.7 -0.2
PRSN *eS* Sg 23 16 15.2 -0.4
EMPR **Esperanza - Ma** 0.97 134 Pg 23 16 03.5 -0.3
EMPR Sn 23 16 17.3 -0.2
EMPR **Esperanza - Ma** 0.97 134 P Pn 23 16 04.1 +0.1
EMPR **Esperanza - Ma** 0.97 134 ⇑ *eP* Pg 23 16 03.5 -0.3
EMPR *eS* Sn 23 16 17.3 -0.2
LSP **Las Mesas** 0.99 170 Pb 23 16 03.6 -0.2
LSP Sb 23 16 16.1 -0.6
LSP **Las Mesas** 0.99 170 ⇑ *eP* Pb 23 16 03.6 -0.2
LSP *eS* Sb 23 16 16.1 -0.6
UUPR **Utuado, UPR, P** 1.04 150 Pg Pb 23 16 04.1 -0.5
UUPR Sg Sb 23 16 15.3 -2.7
CRPR **Cabo Rojo, PR** 1.16 172 Pn 23 16 06.3 -0.2
CRPR IAML 23 16 23.3
comp=N,5μm,0.5s
CRPR IAML 23 16 26.5
comp=N,3μm,0.5s
CRPR **Cabo Rojo, PR** 1.16 172 Sb 23 16 20.6 -0.8
CRPR **Cabo Rojo, PR** 1.16 172 P Pn 23 16 06.0 -0.5
CRPR S Sg 23 16 22.8 +0.5
CRPR **Cabo Rojo, PR** 1.16 172 ⇑ *iP* Pg 23 16 06.8 -0.4
CRPR ⇑ *iS* Sg 23 16 21.9 -0.4
CRPR IAML 23 16 26.5
comp=N,4μm,0.4s
CRPR **Cabo Rojo, PR** 1.16 172 ⇓ *iP* Pn 23 16 06.0 -0.5
CRPR *eS* Sb 23 16 20.6 -0.8
CRPR **Cabo Rojo, PR** 1.16 172 *i* P Pb 23 16 06.6 0.0
CRPR *eS* Sg 23 16 22.3 0.0
CRPR IAML 23 16 27.1
comp=Z,4μm,0.5s
ECPR **Experimental S** 1.20 134 Pn 23 16 06.8 -0.4
ECPR IAML 23 16 27.2
comp=Z,6μm,0.3s
ECPR IAML 23 16 27.8
comp=Z,6μm,0.3s
ECPR **Experimental S** 1.20 134 P Pn 23 16 06.7 -0.4
ECPR **Experimental S** 1.20 134 ⇑ *eP* Pn 23 16 06.7 -0.4
ECPR *eS* Sg 23 16 23.1 -0.6
MLPR **Magueyes Islan** 1.20 170 Pn 23 16 06.6 -0.5
MLPR Sg Sb 23 16 18.6 -4.1
MLPR IAML 23 16 30.9
comp=Z,2μm,0.4s
GBPR **Guanica, Bosqu** 1.23 163 Pn 23 16 07.4 -0.2
GBPR Sb 23 16 22.8 -0.8
GBPR **Guanica, Bosqu** 1.23 163 ⇓ *eP* Pn 23 16 07.4 -0.2
GBPR *eS* Sb 23 16 22.8 -0.8
PCDR **Punta Cana, DR** 1.23 239 ⇑ *iP* Pn 23 16 07.7 +0.1
PCDR ⇑ *iS* Sn 23 16 24.6 +0.6
PCDR IAML 23 16 28.0
comp=N,9μm,0.7s
PCDR IAML 23 16 32.4
comp=N,6μm,0.6s
CELP **Cerrillos** 1.26 149 Pn Pn 23 16 07.6 -0.4
CELP IAML 23 16 30.9
comp=N,3μm,0.5s
OBIP **Obispado Ponce** 1.27 150 Pn Pn 23 16 08.2 0.0
OBIP Sb 23 16 22.9 -2.0
OBIP **Obispado Ponce** 1.27 150 P Pn 23 16 08.1 0.0
OBIP **Obispado Ponce** 1.27 150 ⇓ *iP* Pn 23 16 08.0 -0.2
OBIP *eS* Sb 23 16 24.1 -0.7
OBIP **Obispado Ponce** 1.27 150 *i* P Pn 23 16 08.2 0.0
OBIP *eS* Sb 23 16 23.5 -1.4
OBIP IAML 23 16 25.7
comp=Z,2μm,1.1s
GCPR **Guaynabo City** 1.41 127 Pn Pn 23 16 09.8 -0.1
GCPR Sg Sn 23 16 27.0 -1.2
GCPR **Guaynabo City** 1.41 127 P Pb 23 16 10.3 -0.5
GCPR **Guaynabo City** 1.41 127 ⇓ *eP* Pn 23 16 10.1 +0.2
GCPR *eS* Sb 23 16 28.0 -0.6
SJG **San Juan** 1.49 134 Pn Pn 23 16 11.5 +0.4
comp=Z,196nm,0.3s,baz=299,slow=13,SNR=161
SJG Sn Sn 23 16 29.2 -1.0
comp=Z,265nm,0.3s,baz=300,slow=20,SNR=7.6
SJG LR LR 23 17 01.6
comp=Z,740nm,18.4s,baz=306,slow=54
SJG **San Juan** 1.49 134 Pn 23 16 10.7 -0.4
SJG IAML 23 16 38.4
comp=Z,2μm,0.5s
SJG **San Juan** 1.49 134 P Pn 23 16 11.5 +0.4
SJG **San Juan** 1.49 134 ⇑ *iP* Pn 23 16 11.4 +0.4
SJG ⇑ *iS* Sn 23 16 29.0 -1.2
SJG **San Juan** 1.49 134 ⇑ *eP* Pn 23 16 11.5 +0.4
SJG *eS* Sb 23 16 30.5 -0.4
SJG **San Juan** 1.49 134 *i* P Pn 23 16 11.5 +0.4
SJG IAML 23 16 41.5
comp=Z,1μm,0.4s
PDPR **Patillas Dam,** 1.64 134 Pn Pn 23 16 13.6 +0.5
HUMP **Col San Antoni** 1.68 127 Pn 23 16 14.1 +0.3
HUMP Sn 23 16 35.2 +0.2
HUMP **Col San Antoni** 1.68 127 IAML 23 16 44.0
comp=Z,1μm,0.2s
HUMP **Col San Antoni** 1.68 127 P Pn 23 16 13.3 -0.5
HUMP **Col San Antoni** 1.68 127 ⇑ *eP* Pn 23 16 14.1 +0.3
HUMP *eS* Sn 23 16 35.2 +0.2
SMDR **Samana, DR** 1.82 274 Pn 23 16 15.6 0.0
SMDR Sn 23 16 37.9 -0.5
SMDR **Samana, DR** 1.82 274 ⇑ *iP* Pn 23 16 15.6 0.0
SMDR ⇑ *iS* Sn 23 16 39.7 +1.3
SMDR IAML 23 16 50.1
comp=N,1μm,0.6s
SMDR **Samana, DR** 1.82 274 ⇑ *iP* Pn 23 16 15.6 0.0
SMDR *eS* Sn 23 16 37.9 -0.5
DR12 **Loma Pena Alta** 2.03 260 Pn Pn 23 16 19.6 +0.9
HATOM **Hato Mayor del** 2.03 260 ⇑ *iP* Pn 23 16 20.2 +1.6
HATOM ⇑ *iS* Sn 23 16 45.2 +1.4
HATOM IAML 23 16 52.4
comp=N,1μm,0.4s
CUPR **Culebra, Puert** 2.06 114 Pn Pn 23 16 19.4 +0.4
NADR **Nagua** 2.45 275 ⇑ *iP* Pn 23 16 26.7 +2.3
NADR *i* S Sn 23 16 56.5 +2.4
NADR IAML 23 17 16.9
comp=N,5μm,0.7s
SDD **Santo Domingo** 2.60 255 Pn Pn 23 16 27.7 +1.3
SDD **Santo Domingo** 2.60 255 ⇑ *iP* Pn 23 16 28.3 +1.9
SDD ⇑ *iS* Sn 23 17 00.4 +2.6
SDD IAML 23 17 09.5
comp=N,611nm,0.7s
SDD **Santo Domingo** 2.60 255 *i* P Pb 23 16 29.1 -2.1
DR08 **Loma La Naviza** 2.61 266 ⇑ *iP* Pn 23 16 29.1 +2.5
DR08 *i* S Sn 23 16 59.5 +1.4
DR08 IAML 23 17 07.2
comp=N,14μm,0.7s
BANI **BANI** 3.02 256 Pn Pn 23 16 33.9 +1.5
BANI **BANI** 3.02 256 ⇑ *iP* Pn 23 16 35.1 +2.7
BANI ⇑ *iS* Sn 23 17 11.0 +2.6
BANI IAML 23 17 31.8
comp=N,1μm,0.7s
ABDR **Alto Bandera** 3.20 264 ⇑ *iP* Pn 23 16 37.6 +2.6
ABDR ⇑ *iS* Sn 23 17 14.8 +1.8
ABDR IAML 23 17 19.6
comp=N,0.3nm,0.6s
SC01 **Santiago de lo** 3.28 275 Pn Pn 23 16 37.3 +1.5
SC01 **Santiago de lo** 3.28 275 P Pn 23 16 38.6 +2.8
LOPP1 **Punta Rusia, P** 3.77 281 *i* P Pn 23 16 44.0 +1.5
LOPP1 IAML 23 17 55.6
comp=Z,695nm,0.9s
SDDR **Presa de Saban** 3.81 268 Pn Pn 23 16 45.1 +2.0
SDDR **Presa de Saban** 3.81 268 *eP* Pn 23 16 45.6 +2.6
SDDR *eS* Sn 23 17 32.2 +4.6
SDDR **Presa de Saban** 3.81 268 ⇑ *iP* Pn 23 16 45.7 +2.7
SDDR ⇑ *iS* Sn 23 17 28.5 +0.9
SDDR IAML 23 17 49.4
comp=N,746nm,0.5s
SDDR **Presa de Saban** 3.81 268 *i* P Pn 23 16 45.9 +2.9
SDDR IAML 23 17 48.2
comp=Z,744nm,0.6s
PODR **Polo** 3.93 256 *i* P Pn 23 16 47.8 +2.9
LONE3 **El Aguacate, B** 4.00 263 *i* P Pn 23 16 48.9 +3.0
LONE3 IAML 23 17 56.7
comp=Z,251nm,0.7s
LODU1 **El Espartillar** 4.07 259 *i* P Pn 23 16 50.2 +3.6
LODU1 IAML 23 18 01.0
comp=Z,449nm,0.6s
SABA **Saba** 4.12 111 Pn Pn 23 16 48.6 +1.3
SABA IAML 23 17 56.0
comp=E,482nm,1.0s
SABA IAML 23 18 02.0
comp=N,375nm,0.8s
LOVI **El Cajuil, Ovi** 4.12 251 *i* P Pn 23 16 50.9 +3.6
LOVI *eS* Sn 23 17 37.0 +1.7
LOVI IAML 23 17 48.2
comp=Z,176nm,1.0s
GRTK **Grand Turk** 4.32 303 *eP* Pn 23 16 47.5 -2.5
GRTK *eS* Sn 23 17 36.0 -4.0
LOBH **Bahia de las A** 4.34 253 *i* P Pn 23 16 53.8 +3.4
LOBH IAML 23 17 53.5
comp=Z,188nm,2.0s
MASC **Masc** 6.64 280 *eP* Pn 23 17 19.0 -2.9
MASC *eS* Sn 23 18 30.9 -6.4
QMBU **Quimbuelo** 7.18 280 *eP* Pn 23 17 26.5 -2.9
QMBU *eS* Sn 23 18 44.4 -6.4
NMDO **Nuevo Mundo** 7.39 282 Pn Pn 23 17 29.3 -3.0
NMDO **Nuevo Mundo** 7.39 282 *eP* Pn 23 17 29.5 -2.8
NMDO *eS* Sn 23 18 48.8 -7.2
GTBY **Guantanamo Bay** 7.43 277 *eP* Pn 23 17 33.6 +0.7
GTBY *eS* Sn 23 18 50.1 -6.9
BIM **Bigot** 7.52 127 Pn Pn 23 17 34.7 +0.6
MPOM **Morne Pois Mar** 7.72 126 Pn Pn 23 17 38.6 +1.8
RCC **Rio Carpintero** 7.99 277 *eP* Pn 23 17 38.7 -1.8
RCC *eS* Sn 23 19 01.4 -9.2
PINC **Pinares de May** 8.13 281 *eP* Pn 23 17 39.9 -2.6
PINC *eS* Sn 23 19 06.3 -7.8
MARVS **Santiago de Cu** 8.18 277 *eP* Pn 23 17 39.2 -4.0
YAR **Yar** 8.65 280 *eP* Pn 23 17 49.0 -0.5
YAR *eS* Sn 23 19 16.3 -10
CCCC **Cccc** 10.07 283 *eP* Pn 23 18 01.4 -7.6
CCCC *eS* Sn 23 19 43.9 -18
SDV **Santo Domingo** 10.72 198 Pn Pn 23 18 20.6 +2.4
comp=Z,1.4nm,0.3s,baz=13,slow=9.2,SNR=11
SDV Sn Sn 23 20 13.1 -5.0
comp=Z,0.4nm,0.3s,baz=17,slow=18,SNR=1.6
SDV **Santo Domingo** 10.72 198 Pn Pn 23 18 18.6 +0.4
ROSC **El Rosal** 15.81 207 Pn P 23 19 30.2 -1.0
comp=Z,3.3nm,0.3s,baz=62,slow=12,SNR=4.9
Y60A **Bolivia** 17.71 329 P 23 19 53.3 +1.5
Y60A IAmb IAmb 23 20 11.2
comp=Z,30nm,1.0s
BOAV **Boa Vista** 17.92 158 P 23 19 54.8 +0.5
RGRS **Roger Stewart** 17.93 322 P 23 19 55.6 +1.3
RGRS IAmb IAmb 23 20 06.8
comp=Z,49nm,1.0s
NHSC **New Hope** 18.07 323 P 23 19 57.4 +1.7
X58A **Rowland** 18.71 327 P Pn 23 20 05.0 +1.7
X58A IAmb IAmb 23 20 21.6
comp=Z,9.4nm,0.7s
553A **Crawfordville** 19.05 308 P Pn 23 20 08.5 +1.1
W57A **Gilead** 19.51 327 Pn 23 20 14.5 +1.6
TXAR **Lajitas Array** 34.58 294 P P 23 22 33.4 +0.1
comp=Z,1.1nm,1.1s,baz=98,slow=9.0,SNR=5.0
comp=Z,1.1nm,1.1s
TXAR **Lajitas Array** 34.58 294 P P 23 22 35.1 +1.7
TX31 **Lajitas Ar. Si** 34.58 294 P P 23 22 35.7 +2.3
ECSD **EROS Data Cent** 34.71 321 P P 23 22 34.6 +0.4
ECSD IAmb IAmb 23 22 38.0
comp=Z,2.5nm,0.8s
LPAZ **La Paz** 35.23 181 P P 23 22 37.9 -1.8
comp=Z,0.5nm,0.3s,baz=2.3,slow=10,SNR=4.2
comp=Z,0.5nm,0.3s
LPAZ **La Paz** 35.23 181 P P 23 22 38.6 -1.0
LPAZ IAmb IAmb 23 22 50.8
comp=Z,3.7nm,1.2s
PB16 **IPOC Station P** 37.33 184 P P 23 22 54.4 -3.1
PB16 IAmb IAmb 23 22 56.6
comp=Z,3.0nm,0.7s
PB11 **IPOC Station P** 38.75 184 P P 23 23 06.0 -3.0
PB11 IAmb IAmb 23 23 08.0
comp=Z,7.6nm,0.8s
HMBC **Humberstone** 39.28 184 P P 23 23 10.3 -3.0
PB01 **IPOC Station P** 40.01 183 P P 23 23 16.2 -3.2
PB01 IAmb IAmb 23 23 17.2
comp=Z,6.5nm,0.8s
CPUP **Villa Florida** 46.24 168 P P 23 24 05.7 -3.9
comp=Z,1.2nm,0.5s,baz=350,slow=7.9,SNR=4.4
comp=Z,1.2nm,0.5s
CPUP **Villa Florida** 46.24 168 P P 23 24 06.3 -3.3
CPUP IAmb IAmb 23 24 33.1
comp=Z,5.1nm,1.4s
YKA **Yellowknife Ar** 54.10 335 P P 23 25 09.2 +0.3
comp=Z,0.2nm,0.6s,baz=135,slow=8.0,SNR=4.0
comp=Z,0.2nm,0.6s
ESDC **Sonseca Array** 57.64 55 P P 23 25 36.9 +2.1
comp=Z,1.1nm,0.7s,baz=276,slow=6.9,SNR=15
comp=Z,1.1nm,0.7s
ESDC **Sonseca Array** 57.64 55 P P 23 25 35.4 +0.6
EKA **Eskdalemuir Ar** 59.76 37 P P 23 25 50.4 +1.3
comp=Z,2.0nm,0.9s,baz=279,slow=5.5,SNR=1.9
comp=Z,2.0nm,0.9s
TORD **Torodi Ar. Bea** 66.15 84 P P 23 26 33.1 +0.8
comp=Z,0.3nm,0.5s,baz=283,slow=7.1,SNR=2.4
comp=Z,0.3nm,0.5s
TORD **Torodi Ar. Bea** 66.15 84 P P 23 26 32.1 -0.2
SCRK **Sand Creek** 67.13 332 P P 23 26 39.5 +1.6
SCRK IAmb IAmb 23 26 40.1
comp=Z,2.3nm,1.2s
BMAR **Burnt Mountain** 67.60 336 P P 23 26 42.8 +2.1
NOA **NORSAR Array B** 67.86 31 P P 23 26 44.0 +1.6
comp=Z,1.1nm,0.8s,baz=245,slow=7.3,SNR=3.7
comp=Z,1.1nm,0.8s
ILAR **Eielson Array** 68.42 333 P P 23 26 46.0 +0.1
comp=Z,0.5nm,0.8s,baz=120,slow=4.5,SNR=5.2
comp=Z,0.5nm,0.8s
ILAR **Eielson Array** 68.42 333 P P 23 26 46.6 +0.7
KEST **Kesra** 68.42 58 P P 23 26 48.0 +1.5
comp=Z,2.7nm,0.8s,baz=263,slow=8.2,SNR=1.7
comp=Z,2.7nm,0.8s
I23K **Minto, Yukon-K** 69.47 333 P P 23 26 53.5 +1.1
I23K IAmb IAmb 23 27 17.1
comp=Z,2.2nm,0.8s
BWN **Browne** 69.54 332 P P 23 26 52.5 -0.3
ARCES **ARCESS Array B** 73.19 22 P P 23 27 16.2 +1.4
comp=Z,11nm,1.2s,baz=308,slow=2.9,SNR=6.4
comp=Z,11nm,1.2s
FINES **FINESS Array B** 74.95 30 P P 23 27 26.8 +1.6
comp=Z,2.0nm,0.8s,baz=253,slow=5.8,SNR=3.7
comp=Z,2.0nm,0.8s
FINES **FINESS Array B** 74.95 30 P P 23 27 25.5 +0.3
LZDM **Lanzhou Array** 124.52 9 PKP PKPdf 23 34 43.5 -1.0
comp=Z,0.5nm,0.3s,baz=319,slow=4.3,SNR=3.6

IDC ***18*** *23:40:14.8±2.0, 6°.08S×147°.29E, h75km±15km, mb3.7/11, mbtmp4.1/16, Error ellipse: s-maj=26.8km s-min=10.8km az=74.0*
NEIC ***18*** *23:40:15.6±2.2, 6°.1S±0°.1×147°.25E±0°.10, h79km±8km, mb4.5/32, Error ellipse: s-maj=18.3km s-min=9.9km az=219.0*
DJA ***18*** *23:40:17.4±2.1, 6°.5S±12°×14°7E±2°.5, h76km±8km, M4.8/13, mb4.6/13, mB5.4/3, MLv5.0/4, Mw(mB)4.8/3*

ISC 18 23:40:15.1±0.5, **6°.07S**±0°.06×**147°.28E**±0°.08, **h77km**, **n66, σ1s18/71, mb4.4/26, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.32**	**182**	P	**Pn**	**23 41 05.3**	**+0.5**
	121nm,0.3s,baz=32,slow=6.1,SNR=37						
PMG				S	**Sn**	**23 41 42.6**	**-0.5**
	186nm,0.4s,baz=39,slow=22,SNR=8.5						
PMG	**Port Moresby**	**3.32**	**182**		**Pn**	**23 41 05.0**	**+0.2**
PMG	**Port Moresby**	**3.32**	**182**	P	**Pn**	**23 41 04.9**	**+0.1**
JAY	**Jayapura**	**7.44**	**298**	P	**Pn**	**23 42 02.9**	**+1.8**
	17nm,0.4s,baz=131,slow=5.3,SNR=15						
JAY				S	**Sn**	**23 43 25.1**	**+0.9**
	33nm,1.1s,baz=172,slow=19,SNR=1.7						
JAY	**Jayapura**	**7.44**	**298**	P	**Pn**	**23 42 02.9**	**+1.8**
	0.2nm32nm,1.1s						
GENI	**Genyem**	**7.88**	**296**	P	**Pn**	**23 42 09.0**	**+1.9**
	0.5nm90nm,1.1s						
COEN	**Coen**	**8.82**	**207**	Pn	**Pn**	**23 42 19.6**	**-0.3**
SMPI	**Sarmi**	**9.46**	**295**	P	**Pn**	**23 42 30.6**	**+2.0**
	66nm,1.1s						
CTA	**Charters Tower**	**13.97**	**184**	P	**Pn**	**23 43 30.8**	**+1.1**
	3.0nm,0.8s,baz=353,slow=13,SNR=5.1						
CTAO	**Charters Tower**	**13.97**	**184**	P	**Pn**	**23 43 31.6**	**+2.0**
FAKI	**Fak Fak**	**15.30**	**281**	Pn	**Pn**	**23 43 46.4**	**-0.5**
FAKI	**Fak Fak**	**15.30**	**281**	P	**P**	**23 43 48.6**	**-1.4**
	68nm,1.1s						
SIJI	**Sorong**	**16.79**	**287**	P	**Pn**	**23 44 05.2**	**-0.4**
	14nm,0.5s,baz=93,slow=17,SNR=4.4						
WB0	**Warramunga Arr**	**18.50**	**221**	P	**P**	**23 44 24.1**	**-1.2**
WRA	**Warramunga Arr**	**18.66**	**221**	P	**P**	**23 44 26.4**	**-0.7**
	3.0nm,0.8s,baz=42,slow=12,SNR=15						
WRA				PcP	**PcP**	**23 48 52.0**	**-0.9**
	0.5nm,0.5s,baz=48,slow=2.5,SNR=2.9						
WRA				ScP	**ScP**	**23 52 21.6**	**-0.3**
	0.7nm,0.8s,baz=39,slow=2.5,SNR=5.2						
WRA	**Warramunga Arr**	**18.66**	**221**	P	**P**	**23 44 24.6**	**-2.5**
KRAI	**Karang Ratu**	**19.02**	**277**	P	**Pn**	**23 44 32.0**	**-0.5**
	19nm,0.5s						
AAI	**Ambon**	**19.16**	**276**	P	**P**	**23 44 33.5**	**+0.9**
EIDS	**Eidsvold**	**19.54**	**170**	P	**P**	**23 44 35.9**	**-0.6**
KNRA	**Kununurra**	**20.52**	**241**	P	**P**	**23 44 44.9**	**-2.4**
KNRA				IAmb	IAmb	23 45 09.7	
	comp=Z,63nm,1.4s						
AS31	**Alice Springs**	**21.72**	**215**	P	**P**	**23 44 60.0**	**-0.2**
ASAR	**Alice Springs**	**21.72**	**215**	P	**P**	**23 44 59.5**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=47,slow=8.5,SNR=25						
ASAR				ScP	**ScP**	**23 52 29.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=34,slow=3.0,SNR=4.9						
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**21.72**	**215**	P	**P**	**23 44 59.3**	**-0.8**
DZM	**Mont Dzumac**	**24.42**	**133**	P	**P**	**23 45 27.3**	**+0.6**
DZM				IAmb	IAmb	23 45 28.8	
	comp=Z,10nm,0.7s						
ARMA	**Armidale**	**24.57**	**171**	P	**P**	**23 45 29.2**	**+1.2**
ARMA				IAmb	IAmb	23 46 05.2	
	comp=Z,39nm,1.5s						
LUWI	**Luwuk**	**24.96**	**281**	P	**P**	**23 45 32.9**	**+1.3**
STKA	**Stephens Creek**	**26.22**	**191**	P	**P**	**23 45 42.5**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=0.0,slow=10,SNR=1.5						
	comp=Z,1.3nm,0.5s						
TOLI2	**Tolitoli**	**27.40**	**284**	P	**P**	**23 45 51.5**	**-2.2**
TOLI2				IAmb	IAmb	23 45 58.6	
	comp=Z,12nm,0.8s						
THZ	**Tophouse**	**42.23**	**151**	P	**P**	**23 48 03.7**	**+3.0**
MRZ	**Mangatainoka R**	**42.76**	**148**	P	**P**	**23 48 06.1**	**+1.1**
BFZ	**Birch Farm**	**43.12**	**147**	P	**P**	**23 48 08.6**	**+0.7**
KSRS	**Korea Array**	**46.91**	**339**	P	**P**	**23 48 38.8**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=160,slow=9.3,SNR=4.9						
	comp=Z,1.7nm,0.8s						
KULM	**Kulim**	**47.90**	**283**	P	**P**	**23 48 46.1**	**0.0**
CMAR	**Chiang Mai Arr**	**53.53**	**298**	P	**P**	**23 49 28.6**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=131,slow=5.6,SNR=4.0						
	comp=Z,0.5nm,0.3s						
HILR	**Hailar Array B**	**60.35**	**340**	P	**P**	**23 50 15.8**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=141,slow=9.3,SNR=4.4						
	comp=Z,2.8nm,0.7s						
SONM	**Songino Array**	**64.60**	**331**	P	**P**	**23 50 44.0**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=145,slow=5.4,SNR=4.9						
	comp=Z,0.7nm,0.8s						
EVN	**Everest**	**67.37**	**304**	P	**P**	**23 51 03.2**	**-0.2**
EVN				IAmb	IAmb	23 51 06.0	
	comp=Z,2.2nm,0.6s						
MKAR	**Makanchi Array**	**77.72**	**320**	P	**P**	**23 52 03.2**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=99,slow=8.1,SNR=7.9						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**77.72**	**320**	P	**P**	**23 52 02.8**	**-0.9**
K15K	**Wolf Creek Mou**	**78.55**	**22**	P	**P**	**23 52 09.1**	**+1.2**
K15K				IAmb	IAmb	23 52 50.9	
	comp=Z,14nm,1.5s						
ZALV	**Zalesovo Beam**	**79.22**	**328**	P	**P**	**23 52 10.3**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=116,slow=7.0,SNR=5.2						
	comp=Z,1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**79.22**	**328**	P	**P**	**23 52 10.5**	**-1.2**
KURK	**Kurchatov**	**81.43**	**323**	P	**P**	**23 52 22.2**	**-1.4**
KURBB	**Kurchatov Arra**	**81.45**	**323**	P	**P**	**23 52 23.5**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=79,slow=4.8,SNR=4.0						
	comp=Z,0.2nm,0.4s						
G18K	**Tagagawik**	**81.72**	**20**	P	**P**	**23 52 26.3**	**+1.4**
L22K	**Petersville**	**82.89**	**24**	P	**P**	**23 52 30.8**	**-0.3**
L22K				IAmb	IAmb	23 52 56.1	
	comp=Z,8.1nm,1.3s						
E19K	**Redstone River**	**83.09**	**19**	P	**P**	**23 52 32.3**	**+0.3**
E19K				IAmb	IAmb	23 52 37.2	
	comp=Z,5.6nm,1.3s						
C19K	**Lookout Ridge**	**83.34**	**17**	P	**P**	**23 52 34.9**	**+1.6**
C19K				IAmb	IAmb	23 52 36.0	
	comp=Z,4.1nm,0.9s						
D19K	**Kuna River**	**83.41**	**18**	P	**P**	**23 52 34.1**	**+0.4**
D19K				IAmb	IAmb	23 53 13.8	
	comp=Z,6.7nm,1.4s						
SML	**Sawmill**	**83.58**	**26**	P	**P**	**23 52 35.9**	**+1.2**
QSPA	**South Pole Qui**	**83.90**	**180**	P	**P**	**23 52 36.9**	**+0.5**
	comp=Z,2.6nm,0.4s,baz=302,slow=1.4,SNR=3.9						
	comp=Z,2.6nm,0.4s						
WRH	**Wood River Hil**	**84.84**	**23**	P	**P**	**23 52 41.0**	**+0.1**
WRH				IAmb	IAmb	23 52 43.2	
	comp=Z,7.5nm,1.3s						
D22K	**Ayikyak River**	**85.29**	**18**	P	**P**	**23 52 44.5**	**+1.4**
D22K				IAmb	IAmb	23 52 49.7	
	comp=Z,8.5nm,1.5s						
IL31		**85.43**	**23**	P	**P**	**23 52 43.2**	**-0.6**
IL31				IAmb	IAmb	23 52 56.1	
	comp=Z,4.1nm,1.2s						
ILAR	**Eielson Array**	**85.43**	**23**	P	**P**	**23 52 43.6**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=253,slow=5.0,SNR=16						
	comp=Z,1.2nm,0.7s						
ILAR	**Eielson Array**	**85.43**	**23**	P	**P**	**23 52 43.2**	**-0.7**
D23K	**Nanushuk River**	**85.96**	**19**	P	**P**	**23 52 48.1**	**+1.6**
D23K				IAmb	IAmb	23 52 49.4	
	comp=Z,3.4nm,0.9s						
J25K	**Salcha River,**	**85.97**	**24**	P	**P**	**23 52 46.8**	**+0.1**
J25K				IAmb	IAmb	23 53 14.1	
	comp=Z,5.9nm,1.5s						
C23K	**Itkillik River**	**86.40**	**18**	P	**P**	**23 52 49.3**	**+0.8**
BMAR	**Burnt Mountain**	**87.36**	**21**	P	**P**	**23 52 55.1**	**+1.8**
C27K	**Jago River**	**88.49**	**19**	P	**P**	**23 52 59.7**	**+1.1**
H31M	**Peel River**	**90.75**	**24**	P	**P**	**23 53 09.1**	**-0.2**
H31M				IAmb	IAmb	23 53 46.2	
	comp=Z,6.5nm,1.5s						
T35M	**Bob Quinn**	**90.95**	**33**	P	**P**	**23 53 08.6**	**-1.9**
Q56A	**Snyder Ridge,**	**126.82**	**45**	PKPdf	**PKPdf**	**23 59 08.2**	**-2.2**
TORD	**Torodi Ar. Bea**	**145.38**	**284**	PKPbc	**PKPdf**	**23 59 45.2**	**0.0**
	comp=Z,2.0nm,0.7s,baz=139,slow=2.7,SNR=14						
BDFB	**Brasilia**	**153.64**	**145**	PKPbc	**PKiKP**	**00 00 07.1**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=236,slow=7.3,SNR=3.2						

SNET ***18*** *23:45:48.7±1.3, 14°.05N×91°.45W, h52km, ML4.0, Presumed earthquake*
CATAC ***18*** *23:45:49.5±0.5, 14°N±4°×9°1W±°, h40km±6km, M4.1/12, MLv4.1/12, Error ellipse: s-maj=10.8km s-min=3.0km az=32.2, confirmed*
GCG ***18*** *23:45:49.3±1.0, 14°.20N×91°.36W, h68km±6km, MD4.0, ML4.3, Presumed earthquake*

ISC 18 23:45:49.8±1.8, **14°.19N**±0°.09×**91°.37W**±0°.07, **h81km**±10km, **n30, σ1s37/49, Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.21**	**5**	*i* P	**Pn**	**23 46 02.4**	**+0.5**
STG5				*i* S	**Sn**	**23 46 12.5**	**+1.7**
STG2	**El Palmar, Qui**	**0.24**	**359**	*i* P	**Pn**	**23 46 03.1**	**+1.0**
STG2				*i* S	**Sn**	**23 46 13.4**	**+2.3**
STG8	**El Palmar, Qui**	**0.26**	**4**	*i* P	**Pn**	**23 46 03.2**	**+0.8**
STG8				*i* S	**Sn**	**23 46 14.1**	**+2.7**
STG8				IAML		23 46 15.6	
	comp=E,18μm,0.2s						
RTAL	**Retalhuleu**	**0.46**	**316**	P	**Pn**	**23 46 01.8**	**-1.5**
RTAL				S	**Sn**	**23 46 12.3**	**-1.0**
ESSG	**Sabana Grande**	**0.56**	**70**	*i* P	**Pn**	**23 46 02.7**	**-1.6**
ESSG				*i* S	**Sn**	**23 46 13.4**	**-1.5**
SOKI	**Kika Raxquin**	**0.63**	**357**	*i* P	**Pn**	**23 46 04.3**	**-1.0**
SOKI				*i* S	**Sn**	**23 46 16.4**	**-0.3**
SOKI				IAML		23 46 19.6	
	comp=E,8μm,0.3s						
FG16	**Alotenango, Sa**	**0.84**	**84**	*i* P	**Pn**	**23 46 03.1**	**-4.1**
FG16			

HUEH				*i* S		**Sn**	**23 46 26.8**	**+0.5**
HUEH				IAML			23 46 29.8	
	comp=N,3µm,0.6s							
APG	**El Apazote**	**1.19**	**47**	*i* P		**Pn**	**23 46 11.0**	**-0.5**
FAME	**Alcaldia de Sa**	**1.36**	**105**	P		**Pn**	**23 46 12.1**	**-1.3**
FAME				S		**Sn**	**23 46 29.4**	**-1.8**
SLOZ	**Alcaldia de Sa**	**1.55**	**96**	P		**Pn**	**23 46 15.4**	**-0.5**
SLOZ				S		**Sn**	**23 46 36.5**	**+0.9**
LOAL	**Lomas de Alarc**	**1.55**	**97**	P		**Pn**	**23 46 15.6**	**-0.4**
LOAL				S		**Sn**	**23 46 37.0**	**+1.3**
NUBE	**Las Nubes**	**1.57**	**100**	P		**Pn**	**23 46 15.6**	**-0.7**
NUBE				S		**Sn**	**23 46 35.7**	**-0.5**
NUBE	**Las Nubes**	**1.57**	**100**	*i* P		**Pn**	**23 46 15.3**	**-0.9**
NUBE				*i* S		**Sn**	**23 46 35.0**	**-1.2**
CEVE	**Cerro Verde**	**1.73**	**102**	P		**Pn**	**23 46 18.5**	**0.0**
CEVE				S		**Sn**	**23 46 40.8**	**+0.6**
CEVE	**Cerro Verde**	**1.73**	**102**	*e*P		**Pn**	**23 46 18.4**	**0.0**
CEVE				*e*S		**Sn**	**23 46 41.0**	**+0.9**
JAYA	**Jayaque - finc**	**1.94**	**106**	P		**Pn**	**23 46 20.9**	**-0.2**
JAYA	**Jayaque - finc**	**1.94**	**106**	*e*P		**Pn**	**23 46 20.5**	**-0.6**
JAYA				*e*S		**Sn**	**23 46 44.6**	**-0.3**
JAYA	**Jayaque - finc**	**1.94**	**106**	*i* P		**Pn**	**23 46 20.3**	**-0.8**
JAYA				*e*S		**Sn**	**23 46 43.7**	**-1.2**
MTO3	**Montecristo**	**1.96**	**84**	*e*P		**Pn**	**23 46 20.2**	**-1.1**
MTO3	**Montecristo**	**1.96**	**84**	*i* P		**Pn**	**23 46 20.3**	**-1.1**
PMON	**Piamonte**	**2.05**	**103**	P		**Pn**	**23 46 22.8**	**+0.3**
PMON				S		**Sn**	**23 46 48.5**	**+1.0**
BOQS	**Boqueron**	**2.08**	**102**	*e*P		**Pn**	**23 46 23.3**	**+0.2**
LALI	**Alcalda de L**	**2.11**	**109**	S		**Sn**	**23 46 48.6**	**-0.1**
UEES	**Universidad Ev**	**2.12**	**103**	S		**Sn**	**23 46 51.1**	**+2.0**
COEG	**Centro de Oper**	**2.48**	**103**	S		**Sn**	**23 46 59.1**	**+1.3**
PACA	**Pacayal**	**3.04**	**103**	P		**Pn**	**23 46 37.4**	**+1.5**
PACA				S		**Sn**	**23 47 14.5**	**+3.1**

*ISK **19** 00:06:54.1,39˝.10N×27˝.85E,h7km,ML2.7/22*
*THE **19** 00:06:56.1,39˝.N±3˝×2˝.8E±˚,h15km±19km,M2.5/10, MLh2.5/10*

AFAD 19 00:06:54.7,39˝.08N×27˝.84E,h7km±2km**,ML2.8,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.20**	**186**	P	Pg	00 06 59.4	+0.7
AKHS				S	Sg	00 07 02.9	+1.5
AKHS				IAML		00 07 04.0	
	comp=E,2µm,0.2s						
AKS	**Akhisar**	**0.20**	**186**	Pg	Pg	00 06 58.7	0.0
AKS				Sg	Sg	00 07 02.8	+1.4
SOMA	**Soma-Manisa**	**0.25**	**289**	Pg	Pg	00 06 59.5	-0.2
SOMA				Sg	Sg	00 07 03.5	+0.4
STEP	**BALIKESIR_Sava**	**0.32**	**342**	P	Pg	00 07 00.6	-0.3
GOMA	**Golmarmara-Man**	**0.37**	**171**	Pg	Pg	00 07 02.2	+0.3
KTTT	**Salihli**	**0.43**	**153**	P	Pg	00 07 03.3	+0.2
KTTT				S	Sg	00 07 09.0	+0.2
KTTT	**Salihli**	**0.43**	**153**	S	Sg	00 07 09.0	+0.2
CAMT	**Merkez**	**0.53**	**232**	P	Pg	00 07 05.5	+0.7
CAMT				S	Sb	00 07 13.1	-0.9
CAMT	**Merkez**	**0.53**	**232**	Pg	Pg	00 08 45.1	-20
BALB	**Balikesir**	**0.56**	**3**	Pg	Pg	00 07 06.8	+0.2
BALB				Sg	Sg	00 07 13.4	+0.4
ZEDA	**zmir-Bergama**	**0.60**	**260**	P	Pg	00 07 06.5	+0.2
BKES	**Balkesir-Mer**	**0.66**	**6**	P	Pg	00 07 07.7	+0.3
DEMI	**Demirci**	**0.68**	**93**	P	Pg	00 07 08.1	+0.2
BALY	**Balya**	**0.69**	**346**	P	Pg	00 07 08.0	+0.1
IZMD	**zmir-Dikili-**	**0.72**	**263**	P	Pg	00 07 08.8	+0.3
DURS	**Dursunbey**	**0.72**	**43**	P	Pg	00 07 08.0	-0.6
DKL	**Dikili**	**0.73**	**270**	Pg	Pg	00 07 08.8	+0.1
BUHA	**Balikesir, Bur**	**0.73**	**306**	P	Pb	00 07 09.9	+0.2
DST	**Dursunbey**	**0.80**	**49**	Pg	Pg	00 07 09.7	-0.4
YAYO	**Edremit-Balk**	**0.80**	**312**	Pg	Pg	00 07 09.4	-0.7
BLKS	**Balkesir-Sus**	**0.80**	**7**	P	Pg	00 07 10.3	+0.1
MANT	**Manisa**	**0.81**	**136**	P	Pg	00 07 10.4	+0.1
MANT				S	Sg	00 07 20.5	-0.3
ODEM	**Odemis-Izmir**	**0.82**	**167**	Pg	Pb	00 07 11.0	-0.3
KULA	**Kula-Manisa**	**0.85**	**131**	Pg	Pb	00 07 10.8	-0.3
BAGT	**Foa**	**0.88**	**242**	P	Pb	00 07 12.1	-0.2
SMAA	**Simav-Kutahya**	**0.89**	**88**	Pg	Pg	00 07 11.4	-0.3
SIMA	**Simav-Kutahya**	**0.89**	**89**	Pg	Pg	00 07 11.4	-0.4
SUSR	**Susurluk-Balik**	**0.91**	**12**	Pg	Pg	00 07 11.7	-0.4
DUVT	**Torbali**	**0.91**	**200**	P	Pn	00 07 13.4	-0.4
AYVA	**Ayvalik**	**0.92**	**285**	P	Pb	00 07 13.3	+0.3
BLCB	**Balcova**	**0.93**	**222**	Pg	Pb	00 07 13.2	0.0
BLCB	**Balcova**	**0.93**	**222**	P	Pb	00 07 13.3	+0.1
BLCB				S	Sn	00 07 27.6	-0.2
FOCM	**Foa**	**0.94**	**248**	Pg	Pg	00 07 12.9	+0.2
CMHT	**Manyas**	**0.94**	**6**	P	Pg	00 07 12.7	-0.1
IZMR	**zmir-demi**	**0.94**	**175**	P	Pb	00 07 13.8	+0.4
YENI	**Yenice-Canakka**	**0.98**	**332**	Pg	Pg	00 07 13.1	-0.4
GONE	**Gonen-Balikesi**	**0.98**	**353**	Pg	Pg	00 07 13.7	+0.2
KIRA	**zmir-Kiraz**	**0.98**	**153**	P	Pg	00 07 13.7	+0.2
USAK	**Uak-Merkez**	**0.99**	**111**	P	Pg	00 07 13.5	-0.2
ATIT	**Gnen**	**1.03**	**348**	P	Pg	00 07 14.2	-0.3
SHP	**Saphane-Kutahy**	**1.08**	**92**	Pg	Pg	00 07 14.8	-0.6
CANM	**Can-anakkale**	**1.11**	**327**	Pn	Pg	00 07 15.4	-0.7
KRBN	**Karaburun**	**1.11**	**245**	Pn	Pg	00 07 15.6	-0.5
AYDB	**Zeytinkoy-Aydi**	**1.13**	**178**	Pn	Pb	00 07 16.6	0.0
NAZL	**Nazilli-Aydin**	**1.17**	**162**	Pn	Pg	00 07 17.1	0.0
EMET	**Ktahya-Emet**	**1.19**	**75**	P	Pn	00 07 17.7	-0.1
KARB	**zmir-Karabur**	**1.19**	**250**	P	Pg	00 07 15.2	-2.3
BAYC	**CANAKKALE_Bayr**	**1.20**	**304**	P	Pn	00 07 18.0	0.0
GEDZ	**Gediz**	**1.22**	**91**	Pn	Pg	00 07 17.7	-0.5
PRK	**Paraskevi**	**1.23**	**278**	P	Pb	00 07 17.7	-0.6
PRK				S	Sg	00 07 34.2	-0.1
SULTU	**Buldan**	**1.25**	**144**	P	Pb	00 07 18.4	-0.3
ORLT	**Orhaneli**	**1.27**	**40**	P	Pn	00 07 18.2	-0.6
DGB	**zmir**	**1.27**	**217**	P	Pg	00 07 19.2	+0.2
GDZ	**Gediz**	**1.28**	**89**	P	Pn	00 07 18.9	-0.2
KUSD	**Kusadasi-Aydin**	**1.29**	**200**	Pn	Pg	00 07 19.4	0.0
BAND	**Balkesir-Ban**	**1.29**	**9**	P	Pn	00 07 18.7	-0.5
ESEN	**Aydn-Nazilli**	**1.34**	**162**	P	Pb	00 07 20.1	0.0
ZEYE	**Izmir, Urla-Ze**	**1.34**	**232**	P	Pn	00 07 19.2	-0.6
EZN	**Ezine**	**1.39**	**303**	P	Pn	00 07 19.1	-1.5
EZN				S	Sb	00 07 37.7	-1.2
AYDN	**Tasoluk**	**1.41**	**179**	P	Pn	00 07 20.2	-0.7
GCAM	**G?zelcaml?**	**1.45**	**199**	Pn	Pn	00 07 21.7	+0.3
GCAM	**G?zelcaml?**	**1.45**	**199**	P	Pg	00 07 23.5	+0.9
PASA	**Karahalli, USA**	**1.48**	**119**	P	Pg	00 07 23.1	0.0
SIGR	**SIGRI**	**1.55**	**276**	P	Pn	00 07 22.2	-0.5
SIGR				S	Sn	00 07 42.2	-0.8
CHOS	**Chios island**	**1.56**	**244**	P	Pn	00 07 22.0	-0.9
SMG	**Samos**	**1.58**	**210**	P	Pn	00 07 23.5	+0.4
SMG				S	Sb	00 07 44.8	+0.4
GADA	**Gvkgeada**	**1.87**	**307**	P	Pn	00 07 26.7	-0.4
GADA				S	Sn	00 07 50.6	-0.4
BODT	**Bodrum**	**2.05**	**192**	P	Pn	00 07 29.4	-0.3
ENEZ	**Enez**	**2.11**	**322**	P	Pn	00 07 30.0	-0.3
ENEZ				S	Sn	00 07 55.6	-1.2
LIA	**Limnos Island**	**2.21**	**293**	P	Pn	00 07 31.9	0.0
SMTH	**Samothraki Isl**	**2.26**	**309**	P	Pn	00 07 31.9	-0.6
ALN	**Alexandroupoli**	**2.28**	**323**	P	Pn	00 07 32.4	-0.4
ALN				S	Sn	00 08 00.1	-1.1
RDO	**Rodhopi**	**2.72**	**320**	P	Pn	00 07 38.3	-0.5

*ISK **19** 00:07:52.4,38˝.29N×38˝.76E,h5km,ML1.2/4*

AFAD 19 00:07:52.4,38˝.24N×38˝.72E,h7km±3km**,ML1.8,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAYA	**Malatya/Merkez**	**0.25**	**291**	P	Pg	00 07 58.0	+0.6
MAYA				S	Sg	00 08 01.5	+0.8
MAYA				IAML		00 08 02.0	
	comp=N,171nm,0.1s						
MAYA				IAML		00 08 02.0	
	comp=E,328nm,0.2s						
MDYL	**Doganyol-Malat**	**0.26**	**73**	Pg	Pg	00 07 57.9	+0.3
ESGZ	**Sivrice-Elazig**	**0.33**	**54**	Pg	Pg	00 07 59.2	+0.3
ESGZ				Sg	Sg	00 08 03.9	+0.6
ELZG	**Elazig**	**0.33**	**38**	P	Pg	00 07 59.4	+0.4
ELZG				S	Sg	00 08 04.0	+0.6
ELZG				IAML		00 08 04.0	
	comp=N,125nm,0.1s						
ELZG				IAML		00 08 05.0	
	comp=E,108nm,0.1s						
NARI	**Adyaman-Kaht**	**0.35**	**175**	P	Pg	00 07 59.4	+0.1
CNGT	**ngs**	**0.45**	**93**	P	Pg	00 08 01.2	-0.1
CNGT				S	Sg	00 08 07.5	+0.3
SVRC	**Sivrice-ELAZID**	**0.48**	**73**	Pg	Pg	00 08 01.9	+0.2
AZEY	**Adyaman-Merk**	**0.57**	**222**	P	Pb	00 08 04.2	-0.5
AZEY				S	Sg	00 08 11.5	+0.7
AKCD	**Akcadag**	**0.63**	**276**	P	Pb	00 08 05.3	-0.5
AKCD				S	Sg	00 08 13.6	+0.7
AKCD				IAML		00 08 14.0	
	comp=N,117nm,0.2s						
AKCD				IAML		00 08 15.0	
	comp=E,69nm,0.2s						
HANM	**anlurfa/Hi**	**0.67**	**169**	P	Pg	00 08 05.8	+0.5
HANM				S	Sn	00 08 19.1	+0.1
ATAB	**Bozova**	**0.84**	**204**	P	Pn	00 08 10.0	-0.6
ATAB				S	Sb	00 08 21.0	+0.2
HEKM	**Malatya_Hekimh**	**0.88**	**317**	P	Pg	00 08 09.5	+0.2
HEKM				S	Sb	00 08 21.5	-0.6
HEKM				IAML		00 08 23.0	
	comp=N,64nm,0.4s						
HEKM				IAML		00 08 23.0	
	comp=E,67nm,0.4s						
MCKZ	**Bingol**	**0.90**	**13**	P	Pb	00 08 10.8	+0.4
ARPR	**Arapgir-MALATY**	**0.91**	**341**	Pg	Pb	00 08 10.3	-0.3
ARPR				Sg	Sb	00 08 23.3	+0.4
AKCA	**Adyaman/G¶l**	**0.93**	**242**	P	Pb	00 08 11.1	+0.2
AKCA				S	Sn	00 08 24.8	-0.9
AKCA				IAML		00 08 29.0	
	comp=N,17nm,0.8s						
KOVA	**Elazig, Kovanc**	**0.97**	**61**	P	Pb	00 08 11.4	-0.3
SANL	**SANLIURFA_Merk**	**1.08**	**169**	P	Pn	00 08 14.7	+0.7
SANL				S	Sg	00 08 27.6	+0.3
SANL				IAML		00 08 29.0	
	comp=E,21nm,0.5s						
SANL				IAML		00 08 30.0	
	comp=N,38nm,0.7s						
MIMR	**Divri**	**1.21**	**334**	P	Pn	00 08 27.1	+11
GZT	**Gaziantep**	**1.27**	**227**	P	Pg	00 08 18.5	+1.7
SURC	**SANLIURFA_SURC**	**1.36**	**184**	P	Pg	00 08 19.3	+0.9
SURC				S	Sn	00 08 36.3	+0.2
SURC				IAML		00 08 37.0	
	comp=E,9.7nm,0.5s						
SURC				IAML		00 08 38.0	
	comp=N,10nm,0.4s						

*HEL **19** 00:30:18.4±0.5,67˝.90N×20˝.04E,h0km,ML1.6,Explosion*
*UPP **19** 00:30:19.4±0.3,67˝.85N×20˝.21E,h1km±2km,ML2.9, Suspected explosion*
*DNK **19** 00:30:19.4±1.4,67˝.90N×20˝.15E,h0km,ML2.9(UPP), Explosion*

ISC 19 00:30:19.5±0.8,67˚.85N±0˝.02×20˚.22E±0˝.02,h0km,n37, σ0s86/61,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**22**	P	**Pg**	**00 30 21.8**	**+0.1**
	baz=236						
KUA				S	**Sg**	**00 30 23.4**	**+0.3**
KUA	**Kurravaara**	**0.12**	**22**	P	**Pg**	**00 30 21.8**	**+0.1**
	baz=236						
KUA				S	**Sg**	**00 30 23.4**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**265**	P	**Pg**	**00 30 24.0**	**-0.1**
RATU				S	**Sg**	**00 30 27.4**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**265**	P	**Pg**	**00 30 24.0**	**-0.1**
RATU				S	**Sg**	**00 30 27.4**	**+0.3**
NIKU	**Nikkaluokta**	**0.45**	**273**	P	**Pg**	**00 30 27.9**	**-0.2**
NIKU	**Nikkaluokta**	**0.45**	**273**	P	**Pg**	**00 30 27.9**	**-0.2**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**	**00 30 32.6**	**-0.3**
LANU				S	**Sg**	**00 30 41.9**	**+0.1**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**	**00 30 32.6**	**-0.3**
LANU				S	**Sg**	**00 30 41.9**	**+0.1**
LANU	**Lannavaara**	**0.70**	**72**	PG	**Pg**	**00 30 32.4**	**-0.4**
	baz=260						
LANU				SB	**Sg**	**00 30 42.0**	**+0.1**
DUNU	**Dundret**	**0.74**	**169**	P	**Pg**	**00 30 33.3**	**-0.4**
DUNU	**Dundret**	**0.74**	**169**	P	**Pg**	**00 30 33.3**	**-0.4**
MASU	**Masugnsbyn**	**0.78**	**119**	P	**Pg**	**00 30 34.1**	**-0.3**
MASU				S	**Sg**	**00 30 45.2**	**+0.6**
MASU	**Masugnsbyn**	**0.78**	**119**	P	**Pg**	**00 30 34.1**	**-0.3**
MASU				S	**Sg**	**00 30 45.2**	**+0.6**
SALU	**Saltoluokta**	**0.81**	**235**	*e*P	**Pg**	**00 30 34.5**	**-0.4**
SALU	**Saltoluokta**	**0.81**	**235**	P	**Pg**	**00 30 34.5**	**-0.4**
SALU	**Saltoluokta**	**0.81**	**235**	P	**Pg**	**00 30 34.5**	**-0.4**
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*P	**Pg**	**00 30 42.1**	**0.0**
KIF	**Kilpisjarvi**	**1.18**	**10**	PN	**Pg**	**00 30 42.0**	**-0.1**
KIF				smax	smax	00 30 54.2	
	comp=Z,7.8nm,0.2s						
KIF				SN	**Sg**	**00 30 57.6**	**+0.2**
PAJU	**Pajala**	**1.39**	**125**	P	**Pn**	**00 30 44.9**	**-1.2**
PAJU				S	**Sg**	**00 31 04.1**	**+0.1**
PAJU	**Pajala**	**1.39**	**125**	P	**Pn**	**00 30 44.9**	**-1.2**
PAJU				S	**Sg**	**00 31 04.1**	**+0.1**
HEF	**Hetta**	**1.41**	**65**	PG	**Pn**	**00 30 45.3**	**-1.0**
	baz=253						
HEF				smax	smax	00 31 01.9	
	comp=Z,5.5nm,0.2s						
HEF				SB	**Sg**	**00 31 03.8**	**-0.8**
ERTU	**Ertsjaerv**	**1.51**	**149**	P	**Pn**	**00 30 47.1**	**-0.6**
ERTU	**Ertsjaerv**	**1.51**	**149**	P	**Pn**	**00 30 47.1**	**-0.6**
ERTU	**Ertsjaerv**	**1.51**	**149**	PG	**Pn**	**00 30 47.2**	**-0.5**
ERTU				SN	**Sb**	**00 31 08.0**	**0.0**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**00 30 48.0**	**-0.5**
KLF				smax	smax	00 31 07.7	
	comp=Z,2.5nm,0.2s						
KLF				SN	**Sg**	**00 31 10.7**	**+1.1**
KTK1	**Kautokeino**	**1.62**	**42**	PN	**Pn**	**00 30 48.8**	**-0.4**
KTK1				SN	**Sg**	**00 31 11.9**	**+0.6**
HARU	**Harads**	**1.72**	**170**	P	**Pn**	**00 30 50.8**	**+0.2**
HARU				S	**Sg**	**00 31 14.1**	**-0.4**
HARU	**Harads**	**1.72**	**170**	P	**Pn**	**00 30 50.8**	**+0.2**
HARU				S	**Sg**	**00 31 14.1**	**-0.4**
TOF	**Tornio**	**2.40**	**136**	PB	**Pn**	**00 31 01.2**	**+1.2**
TOF				smax	smax	00 31 32.0	
	comp=Z,1.8nm,0.2s						
TOF				SG	**Sb**	**00 31 33.6**	**+0.1**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	**Pn**	**00 31 03.5**	**+1.2**
ARA0				SG	**Sb**	**00 31 36.9**	**-1.5**
RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pn**	**00 31 04.0**	**+1.7**
RNF				SG	**Sb**	**00 31 37.9**	**-0.7**
RAJF	**Raja-Jooseppi**	**3.09**	**74**	PB	**Pn**	**00 31 12.2**	**+2.7**
RAJF				SG	**Sb**	**00 31 52.8**	**-0.6**
KEV	**Kevo**	**3.12**	**49**	PG	**Pb**	**00 31 13.4**	**-2.4**
KEV				SB	**Sn**	**00 31 48.9**	**+1.1**
VRF	**Varrio**	**3.56**	**87**	PG	**Pb**	**00 31 23.1**	**-0.2**
OLKF	**Oulanka, Finla**	**3.90**	**109**	PG	**Pb**	**00 31 30.5**	**+1.4**
MSF	**Maaselka**	**3.98**	**115**	PG	**Pb**	**00 31 31.6**	**+1.1**
KU6	**Riekki**	**4.22**	**111**	PG	**Pb**	**00 31 35.2**	**+0.8**
KU6				SG	**Sg**	**00 32 32.6**	**-2.2**

*IDC **19** 00:40:15.9±1.2,7˝.67S×118˝.91E,h0km,mb3.6/4, mbtmp3.7/7,ML3.4/3,Error ellipse: s-maj=31.0km s-min=16.1km az=80.0*
*DJA **19** 00:40:19.7±0.8,8˚.S±2˚×11˚.9E±˚,h24km±8km,M4.1/19, mb4.5/1,MLv3.9/19*

ISC 19 00:40:17.5±2.0,7˚.69S±0˝.04×118˚.87E±0˝.04,h12km±14km**, n21,σ1s01/27,mb3.7/4,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	**Kabupaten Domp**	**0.98**	**214**	P	**Pb**	**00 40 36.9**	**+0.5**
DBNI				S	**Sg**	**00 40 49.2**	**0.0**
PLAI	**Plampang**	**1.57**	**224**	P	**Pn**	**00 40 45.4**	**+0.3**
PLAI				S	**Sn**	**00 41 04.0**	**-1.4**
WBSI	**Waikabubak, Su**	**2.01**	**165**	P	**Pn**	**00 40 51.8**	**+0.6**
WBSI				S	**Sn**	**00 41 15.8**	**-0.5**
BSSI	**Bau Bau, Buton**	**2.22**	**46**	P	**Pn**	**00 40 55.5**	**+1.3**
TWSI	**Taliwang, Sumb**	**2.23**	**242**	P	**Pn**	**00 40 55.3**	**+1.1**
TWSI				S	**Sn**	**00 41 22.2**	**+0.5**
MKS	**Makassar**	**2.52**	**14**	P	**Pb**	**00 41 01.5**	**-1.3**
KAPI	**Kappang**	**2.80**	**18**	Pn	**Pn**	**00 41 03.8**	**+1.7**
	5.2nm,0.3s,baz=197,slow=7.3,SNR=9.6						
KAPI				Sn	**Sn**	**00 41 35.8**	**+0.1**
	12nm,0.3s,baz=203,slow=22,SNR=5.7						
KAPI				Lg	Lg	00 41 43.0	
	23nm,0.3s,baz=137,slow=19,SNR=4.3						
	12nm,0.3s						
KAPI	**Kappang**	**2.80**	**18**	P	**Pn**	**00 41 03.9**	**+1.8**
EDFI	**Ende, Flores**	**2.98**	**111**	P	**Pn**	**00 41 05.3**	**+0.6**
BASI	**Baing, Sumba**	**3.03**	**146**	P	**Pn**	**00 41 06.9**	**+1.7**
BASI				S	**Sn**	**00 41 41.0**	**-0.4**
KHKI	**Kahang-Kahang**	**3.30**	**258**	P	**Pn**	**00 41 09.7**	**+0.7**
SRBI	**Singaraja**	**3.65**	**264**	P	**Pn**	**00 41 14.1**	**+0.4**
SPSI	**Sidrap Palu**	**3.81**	**14**	P	**Pn**	**00 41 15.5**	**-0.4**
PMSI	**Majene**	**4.16**	**1**	P	**Pn**	**00 41 22.3**	**+1.4**
JAGI	**Jajag, Banyuwa**	**4.74**	**260**	P	**Pn**	**00 41 29.5**	**+0.7**
FITZ	**Fitzroy Crossi**	**12.27**	**148**	Pn	**Pn**	**00 43 11.4**	**-0.7**
	baz=350,slow=11,SNR=2.2						
FITZ				Sn	Sn	00 45 19.4	-9.4
	0.3nm,0.3s,baz=293,slow=13,SNR=7.0						
	3.1nm,1.0s						
WRA	**Warramunga Arr**	**19.32**	**131**	P	**P**	**00 44 42.1**	**-0.5**
	0.3nm,0.3s,baz=305,slow=13,SNR=9.1						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**21.46**	**139**	P	**P**	**00 45 06.3**	**+0.4**
	2.4nm,0.6s,baz=315,slow=9.5,SNR=31						
	2.4nm,0.6s						
SONM	**Songino Array**	**56.37**	**350**	P	**P**	**00 49 57.7**	**-0.9**
	0.3nm,0.4s,baz=166,slow=7.4,SNR=1.2						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**63.24**	**333**	P	**P**	**00 50 46.3**	**+0.5**
	0.4nm,0.5s,baz=149,slow=7.1,SNR=12						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**67.74**	**334**	P	**P**	**00 51 15.8**	**+1.0**
	0.3nm,0.6s,baz=140,slow=5.9,SNR=4.1						
	0.3nm,0.6s						

*RSPR **19** 01:03:54.2,17˝.93N×67˝.02W,h7km,MD3.4/7*
*NEIC **19** 01:03:54.2±1.1,17˝.92N±0˝.03×67˝.01W±0˝.02,h9km±3km, ML3.3/35,Md3.4/7(RSPR),Mwr3.3/9(SLM),Error ellipse: s-maj=4.3km s-min=1.7km az=201.0*
*NEIC **19** 01:03:54,17˝.93N×67˝.02W,h8km,Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr=0.28; Mθθ=0.28; Mφφ=0.00; Mrθ=-0.77; Mθφ=9.26; Mφr=1.63; Fault plane solution: Mo=9.44000×10¹³ NP1:φ=181.00000°, δ=85.00000°, λ=-170.00000°. NP2:φ=90.00000°, δ=80.00000°, λ=-5.00000°. Principal axes: T 9.4384, Plg4.0000°, Azm315.0000°; N -0.0002, Plg79.0000°, Azm207.0000°; P -9.4382, Plg11.0000°, Azm46.0000°;*
*OSPL **19** 01:03:54.3±0.3,18˚.10N×67˚.05W,h12km±25km,ML2.9, Presumed earthquake*
*SDD **19** 01:03:54.3±0.9,17˝.91N×67˝.06W,h13km±4km,MD3.6, ML3.1,MW3.3, Presumed earthquake*

ISC 19 01:03:53.5±1.0,17˚.91N±0˝.05×67˚.02W±0˝.02,h13km±5km**, n42,σ0s67/71,14C-7D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.06**	**336**		**Pg**	**01 03 55.9**	**-0.2**
MLPR				Sg	**Sg**	**01 03 57.0**	**-0.8**
MLPR				IAML		01 03 57.3	
	23µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.13**	**317**	Pg	**Pg**	**01 03 57.1**	**+0.3**
CRPR				Sg	**Sg**	**01 03 58.9**	**-0.2**
CRPR				IAML		01 03 59.9	
	12µm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.13**	**317**	↑*e*Pg	**Pg**	**01 03 57.1**	**+0.3**
CRPR				↑*e*Sg	**Sg**	**01 03 59.1**	**0.0**
CRPR				IAML		01 03 59.3	
	comp=N,16µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.13**	**317**	↑*i*P	**Pg**	**01 03 57.1**	**+0.3**
CRPR				*e*S	**Sg**	**01 03 59.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.13**	**317**	*i* P	**Pg**	**01 03 57.1**	**+0.3**
CRPR				*e*S	**Sg**	**01 03 59.0**	**-0.2**
CRPR				IAML		01 03 59.3	
	comp=Z,14µm,0.9s						
GBPR	**Guanica, Bosqu**	**0.15**	**65**		**Pg**	**01 03 57.4**	**+0.3**
GBPR					**Sg**	**01 04 00.0**	**+0.4**
GBPR	**Guanica, Bosqu**	**0.15**	**65**	↑*e*P	**Pg**	**01 03 57.4**	**+0.3**
GBPR				*e*S	**Sg**	**01 04 00.0**	**+0.4**
LSP	**Las Mesas**	**0.27**	**346**		**Pg**	**01 03 59.5**	**+0.3**
LSP					**Sb**	**01 04 03.8**	**-1.0**
LSP	**Las Mesas**	**0.27**	**346**	↑*e*P	**Pg**	**01 03 59.5**	**+0.3**
LSP				*e*S	**Sb**	**01 04 03.8**	**-1.0**
PRSN	**Puerto Rico Se**	**0.32**	**338**	Pg	**Pg**	**01 04 00.5**	**+0.3**
PRSN				Sg	**Sg**	**01 04 05.2**	**+0.7**
PRSN	**Puerto Rico Se**	**0.32**	**338**	↑*e*Pg	**Pg**	**01 04 00.5**	**+0.3**
PRSN				↑*e*Sg	**Sg**	**01 04 05.3**	**+0.7**
PRSN				IAML		01 04 06.0	
	comp=N,15µm,0.3s						
PRSN	**Puerto

KASI	**Kota Agung**	**1.10**	**37**	P		**Pn**	**01 06 35.9**	**-1.0**
KASI				S		**Sn**	**01 06 49.2**	**-1.8**
LWLI	**Liwa**	**1.40**	**9**	P		**Pn**	**01 06 41.3**	**+0.2**
LWLI				S		**Sn**	**01 06 59.3**	**+0.8**
BLSI	**Bandar Lampung**	**1.75**	**54**	P		**Pn**	**01 06 44.2**	**-1.5**
KLI	**Kotabumi**	**1.85**	**34**	P		**Pn**	**01 06 48.0**	**+0.9**
EGSI	**Enggano, Bengk**	**1.87**	**304**	P		**Pn**	**01 06 47.6**	**+0.2**
MDSI	**Maura Dua**	**1.94**	**10**	P		**Pn**	**01 06 48.6**	**+0.2**
MDSI				S		**Sn**	**01 07 14.0**	**+2.4**
MNAI	**Manna**	**2.21**	**337**			**Pn**	**01 06 52.2**	**0.0**
MNAI				Sn		**Sn**	**01 07 15.4**	**-2.9**
MNAI	**Manna**	**2.21**	**337**	P		**Pn**	**01 06 52.7**	**+0.6**
KSI	**Kapahiang**	**3.01**	**336**	P		**Pn**	**01 07 03.3**	**+0.3**
LEM	**Lembang**	**3.79**	**96**	P		**Pn**	**01 07 16.9**	**+3.1**
	11nm,0.4s,baz=317,slow=23,SNR=1.8							
LEM				S		Sn	01 08 06.0	+8.8
	16nm,0.5s,baz=342,slow=20,SNR=1.4							
BBJI	**Bungbulang**	**3.93**	**106**	Pn		**Pn**	**01 07 16.1**	**+0.3**
BBJI	**Bungbulang**	**3.93**	**106**	P		**Pn**	**01 07 14.7**	**-1.1**
UGM	**Wanagama**	**6.81**	**103**	Pn		**Pn**	**01 07 57.1**	**+1.9**
JAGI	**Jajag, Banyuwa**	**10.44**	**102**	Pn		**Pn**	**01 08 45.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**25.18**	**349**	P		**P**	**01 11 37.6**	**-1.3**
	0.9nm,0.3s,baz=169,slow=9.7,SNR=8.5							
	0.9nm,0.3s							
KNRA	**Kununurra**	**26.12**	**113**	P		**P**	**01 11 48.6**	**+1.1**
NWAO	**Narrogin (SRO)**	**29.18**	**156**	LR		LR	01 25 01.2	
	comp=Z,35nm,18.2s,baz=56,slow=38							
WRA	**Warramunga Arr**	**32.53**	**117**	P		**P**	**01 12 45.0**	**+0.5**
	0.7nm,0.7s,baz=291,slow=8.3,SNR=2.4							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**33.61**	**124**	P		**P**	**01 12 54.5**	**+0.6**
	0.4nm,0.8s,baz=301,slow=9.2,SNR=2.6							
	0.4nm,0.8s							
STKA	**Stephens Creek**	**43.39**	**131**	P		**P**	**01 14 15.2**	**-0.6**
	0.7nm,0.4s,baz=330,slow=17,SNR=1.7							
STKA				pP		**pwP**	**01 14 29.9**	**-0.9**
	2.3nm,0.4s,baz=305,slow=4.9,SNR=3.0							
	0.7nm,0.4s							
KSRS	**Korea Array**	**49.09**	**25**	P		**P**	**01 15 00.3**	**-0.2**
	1.1nm,0.5s,baz=226,slow=9.7,SNR=3.0							
	1.1nm,0.5s							
SONM	**Songino Array**	**54.06**	**2**	P		**P**	**01 15 37.7**	**+0.1**
	2.3nm,0.7s,baz=180,slow=9.0,SNR=19							
	2.3nm,0.7s							
SONM	**Songino Array**	**54.06**	**2**	P		**P**	**01 15 37.4**	**-0.2**
SONM				IAmb		IAmb	01 15 39.5	
	comp=Z,2.2nm,0.8s							
MKAR	**Makanchi Array**	**56.32**	**342**	P		**P**	**01 15 53.9**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=144,slow=8.0,SNR=15							
MKAR				pP		**pP**	**01 16 07.0**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=154,slow=9.0,SNR=4.5							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**56.32**	**342**	P		**P**	**01 15 53.6**	**-0.2**
HILR	**Hailar Array B**	**57.44**	**12**	P		**P**	**01 16 01.1**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=201,slow=7.7,SNR=3.4							
	comp=Z,0.7nm,0.3s							
KKAR	**Karatay Array**	**57.81**	**332**	P		**P**	**01 16 03.6**	**-0.8**
H04N2	**CROZET ISLANDS**	**59.69**	**219**	T		T	02 20 48.7	
	baz=65,slow=75,SNR=21							
H04N1	**CROZET ISLANDS**	**59.70**	**219**	T		T	02 20 47.2	
	baz=65,slow=75,SNR=18							
H04N3	**CROZET ISLANDS**	**59.70**	**219**	T		T	02 20 45.9	
	baz=65,slow=75,SNR=19							
H04S1	**CROZET ISLANDS**	**59.90**	**219**	T		T	02 21 02.2	
	baz=67							
H04S3	**CROZET ISLANDS**	**59.92**	**219**	T		T	02 20 58.9	
	baz=67							
H04S2	**CROZET ISLANDS**	**59.92**	**219**	T		T	02 20 59.6	
	baz=67							
KURBB	**Kurchatov Arra**	**60.87**	**342**	P		**P**	**01 16 25.4**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=158,slow=6.3,SNR=9.9							
KURBB				pP		**pP**	**01 16 38.3**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=157,slow=5.0,SNR=4.0							
	comp=Z,0.8nm,0.7s							
ZALV	**Zalesovo Beam**	**62.23**	**347**	P		**P**	**01 16 34.2**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=160,slow=4.7,SNR=5.5							
ZALV				pP		**pP**	**01 16 46.9**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=183,slow=8.9,SNR=2.8							
	comp=Z,0.8nm,0.3s							
ZALV	**Zalesovo Beam**	**62.23**	**347**	P		**P**	**01 16 33.8**	**-0.7**
BVAR	**Borovoye Array**	**65.64**	**339**	P		**P**	**01 16 57.0**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=148,slow=8.8,SNR=12							
BVAR				pP		**pP**	**01 17 10.0**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=141,slow=9.6,SNR=3.0							
	comp=Z,1.3nm,0.5s							
BORK	**Borovoye**	**65.68**	**339**	P		**P**	**01 16 56.5**	**-0.6**
BORK				IAmb		IAmb	01 16 58.0	
	comp=Z,1.4nm,0.5s							
AB31	**Akbulak array**	**67.33**	**331**	P		**P**	**01 17 07.7**	**0.0**
AB31				IAmb		IAmb	01 17 09.8	
	comp=Z,5.7nm,1.4s							
ABKAR	**Akbulak array**	**67.33**	**331**	P		**P**	**01 17 07.5**	**-0.2**
ARTI	**Arti**	**72.81**	**335**	LR		LR	01 54 53.0	
	comp=Z,33nm,18.7s,baz=288,slow=40							
ARTI	**Arti**	**72.81**	**335**	P		**P**	**01 17 40.8**	**-0.4**
ARTI				IAmb		IAmb	01 17 44.3	
	comp=Z,5.9nm,1.1s							
BURAR	**Bucovina Array**	**87.07**	**318**	P		**P**	**01 18 58.9**	**+0.3**
BUR08	**Bucovina Ar. S**	**87.09**	**318**	P		**P**	**01 18 59.2**	**+0.6**
BUR08				IAmb		IAmb	01 19 02.8	
	comp=Z,2.9nm,1.1s							
FINES	**FINESS Array B**	**89.77**	**332**	P		**P**	**01 19 11.7**	**+0.9**
	comp=Z,5.0nm,0.9s,baz=152,slow=12,SNR=2.5							
FINES				pP		**pwP**	**01 19 26.1**	**-0.8**
	comp=Z,6.4nm,1.1s,baz=168,slow=7.1,SNR=1.7							
	comp=Z,5.0nm,0.9s							
TXAR	**Lajitas Array**	**145.47**	**45**	PKPbc		**PKPab**	**01 25 52.5**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=330,slow=1.5,SNR=7.7							
TXAR				pPKPbc		**pPKPdf**	**01 26 06.7**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=6.2,slow=1.3,SNR=3.8							

DJA 19 01:15:19.7±0.9, 10°S±6″×11°3E±°, h19km±11km, M3.8/20, MLv3.8/20, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.84**	**46**	P	Pn	01 15 49.6	-0.7
JAGI				S	Sn	01 16 10.0	-3.0
BLJI	**Banyuglugur**	**2.14**	**21**	P	Pn	01 15 54.5	+0.1
BLJI				S	Sn	01 16 19.8	-0.6
SNJI	**Sawahan-Nganju**	**2.21**	**332**	P	Pb	01 15 57.8	-1.5
PCJI	**Pacitan**	**2.23**	**314**	P	Pn	01 15 54.2	-1.5
SJI	**Sawahan**	**2.25**	**333**	P	Pn	01 15 56.5	+0.4
ABJI	**Asem Bagus**	**2.40**	**36**	P	Pn	01 15 58.2	+0.2
ABJI				S	Sn	01 16 27.4	+0.5
RTBI	**Rangdo, Negare**	**2.46**	**59**	P	Pn	01 15 59.0	+0.1
RTBI				S	Sn	01 16 29.7	+1.1
IGBI	**Denpasar**	**2.48**	**68**	P	Pn	01 15 58.4	-0.8
NGJI	**Ngawi**	**2.72**	**330**	P	Pn	01 16 01.7	-0.7
NGJI				S	Sn	01 16 37.0	+2.3
SRBI	**Singaraja**	**2.89**	**55**	P	Pn	01 16 04.5	-0.3
UGM	**Wanagama**	**2.91**	**309**	P	Pn	01 16 04.6	-0.4
KMMI	**Kalianget**	**2.92**	**23**	P	Pn	01 16 05.2	+0.1
KHKI	**Kahang-Kahang**	**3.09**	**64**	P	Pn	01 16 09.2	+1.7
KLNI	**Mataram**	**3.50**	**68**	P	Pn	01 16 13.2	0.0
TWSI	**Taliwang, Sumb**	**4.14**	**76**	P	Pn	01 16 22.6	+0.6
PLAI	**Plampang**	**4.99**	**80**	P	Pn	01 16 33.8	+0.2

*IDC **19** 01:33:23.3±3.1, 27°.99S×64°.33E, h0km, mb3.8/5, mbtmp3.8/5, MS3.6/3, Error ellipse: s-maj=97.6km s-min=43.9km az=49.0*

ISC 19 01:33:24.1±2.8, 28°.1S±0°.4×64°.2E±0°.5, h10km, n12, σ1s0.0/6, mb3.9/5, MS3.6/3, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**20.51**	**205**	T	T	01 59 26.2	
	baz=32,slow=75,SNR=80						
H04N1	**CROZET ISLANDS**	**20.51**	**205**	T	T	01 59 25.9	
	baz=32,slow=75,SNR=14						
H04N3	**CROZET ISLANDS**	**20.53**	**205**	T	T	01 59 25.9	
	baz=32,slow=75,SNR=60						
PALK	**Pallekele**	**38.62**	**27**	LR	LR	01 52 23.0	
	comp=Z,5nm,20.2s,baz=178,slow=30						
CMAR	**Chiang Mai Arr**	**57.22**	**40**	P	**P**	**01 43 11.3**	**-0.4**
	0.8nm,0.3s,baz=225,slow=7.1,SNR=5.4						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**62.12**	**103**	P	**P**	**01 43 45.8**	**+0.1**
	0.9nm,1.0s,baz=248,slow=6.6,SNR=5.1						
	0.9nm,1.0s						
AAK	**Ala-Archa**	**71.02**	**8**	LR	LR	02 12 17.0	
	comp=Z,59nm,18.0s,baz=348,slow=33						
KBZ	**Khabaz**	**74.09**	**344**	LR	LR	02 16 45.2	
	comp=Z,28nm,19.3s,baz=356,slow=35						
MKAR	**Makanchi Array**	**76.32**	**13**	P	**P**	**01 45 13.9**	**+0.9**
	0.7nm,1.2s,baz=182,slow=4.2,SNR=1.9						
	0.7nm,1.2s						
KURBB	**Kurchatov Arra**	**79.40**	**9**	P	**P**	**01 45 29.2**	**-0.7**
	0.2nm,0.6s,baz=203,slow=6.9,SNR=2.1						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**83.64**	**12**	P	**P**	**01 45 53.5**	**+1.1**
	0.4nm,0.3s,baz=197,slow=4.5,SNR=1.5						
	0.4nm,0.3s						
YKA	**Yellowknife Ar**	**145.59**	**359**	PKPbc	**PKPdf**	**01 53 01.4**	**-0.5**
	0.4nm,0.7s,baz=342,slow=4.1,SNR=6.5						

*IDC **19** 01:56:45.6±2.7, 6°.22S×130°.36E, h103km±29km, mb3.6/7, mbtmp4.1/11, MS3.1/2, Error ellipse: s-maj=34.5km s-min=19.5km az=77.0*

ISC 19 01:56:46.8±0.8, 6°.16S±0°.07×130°.5E±0°.1, h124km, n17, σ1s90/17, mb3.7/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.66**	**28**	P	**Pn**	**01 57 42.4**	**+0.5**
SIJI	**Sorong**	**5.31**	**8**	P	**Pn**	**01 58 04.5**	**+0.5**
	21nm,0.2s,baz=222,slow=23,SNR=21						
SIJI				S	**Sn**	**01 59 00.9**	**-3.3**
	45nm,0.2s,baz=242,slow=23,SNR=22						
SIJI				LR	LR	02 00 23.9	
	comp=Z,122nm,18.6s,baz=156,slow=40						
DRS	**Darwin Rock St**	**6.25**	**176**	P	**Pn**	**01 58 17.8**	**+1.2**
JAY	**Jayapura**	**10.79**	**71**	P	**Pn**	**01 59 17.9**	**-0.1**
	14nm,0.6s,baz=299,slow=21,SNR=1.9						
FITZ	**Fitzroy Crossi**	**12.78**	**201**	P	**Pn**	**01 59 41.2**	**-2.9**
	2.8nm,0.4s,baz=27,slow=12,SNR=16						
FITZ				S	Sn	02 01 52.3	-13
	5.3nm,0.4s,baz=322,slow=19,SNR=8.3						
WRAB	**Tennant Creek**	**14.20**	**165**	P	**Pn**	**01 59 59.9**	**-2.5**
WRA	**Warramunga Arr**	**14.20**	**165**	P	**Pn**	**01 59 58.8**	**-3.7**
	1.1nm,0.3s,baz=350,slow=13,SNR=13						
WRA				S	Sn	02 02 25.1	-14
	2.6nm,0.5s,baz=350,slow=22,SNR=9.4						
QIS	**Mount Isa**	**16.82**	**149**	P	**P**	**02 00 36.1**	**+1.0**
ASAR	**Alice Springs**	**17.71**	**170**	P	**P**	**02 00 45.2**	**+0.3**
	4.5nm,0.6s,baz=351,slow=10,SNR=40						
ASAR				S	S	02 03 51.6	-11
	0.7nm,0.5s,baz=351,slow=26,SNR=5.1						
CTA	**Charters Tower**	**20.64**	**134**	P	**P**	**02 01 18.4**	**+1.7**
	1.1nm,0.4s,baz=308,slow=12,SNR=3.6						
	1.1nm,0.4s						
JCJ	**Chichijima**	**34.94**	**18**	LR	LR	02 18 07.1	
	comp=Z,49nm,19.1s,baz=114,slow=37						
CMAR	**Chiang Mai Arr**	**39.59**	**309**	P	**P**	**02 04 06.3**	**0.0**
	1.0nm,0.3s,baz=116,slow=8.5,SNR=1.4						
	1.0nm,0.3s						
SONM	**Songino Array**	**57.81**	**341**	P	**P**	**02 06 26.3**	**+1.0**
	0.4nm,0.7s,baz=140,slow=7.0,SNR=1.8						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**67.80**	**326**	P	**P**	**02 07 33.2**	**+1.8**
	2.0nm,0.4s,baz=114,slow=8.2,SNR=64						
	2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**71.06**	**333**	P	**P**	**02 07 52.0**	**+0.8**
	0.5nm,0.3s,baz=114,slow=5.2,SNR=2.3						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**72.06**	**328**	P	**P**	**02 07 58.3**	**+1.0**
	0.6nm,0.5s,baz=126,slow=4.5,SNR=7.0						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**77.62**	**328**	P	**P**	**02 08 29.4**	**+0.1**
	0.3nm,0.4s,baz=117,slow=8.2,SNR=2.6						
	0.3nm,0.4s						

SSNC 19 01:59:36.7±2.4, 20°.65N×75°.19W, h3km±8km, MD2.3, ML1.7, 1C, Presumed earthquake, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOAC	**Moa**	**0.21**	**88**	*i*P	Pg	01 59 41.0	+0.2
MOAC				*e*S	Sg	01 59 44.9	+1.2
MOAC				IAML		01 59 45.0	
	comp=N,422nm,0.1s						
MOAC				IAML		01 59 45.2	
	comp=E,538nm,0.2s						
MOAC	**Moa**	**0.21**	**88**	*e*P	Pg	01 59 41.0	+0.2
MOAC				*e*S	Sg	01 59 44.8	+1.2
MOAC				IAML		01 59 45.2	
	comp=E,545nm,0.1s						
MOAC				IAML		01 59 45.4	
	comp=N,476nm,0.1s						
NMDO	**Nuevo Mundo**	**0.21**	**116**	*e*P	Pg	01 59 41.2	+0.3
NMDO				*e*S	Sg	01 59 45.0	+1.3
NMDO				IAML		01 59 45.7	
	comp=E,211nm,0.1s						
NMDO				IAML		01 59 45.8	
	comp=N,462nm,0.2s						
NMDO	**Nuevo Mundo**	**0.21**	**116**	*e*P	Pg	01 59 41.2	+0.4
NMDO				*e*S	Sg	01 59 44.9	+1.2
NMDO				IAML		01 59 45.7	
	comp=E,193nm,0.1s						
NMDO				IAML		01 59 45.9	
	comp=N,481nm,0.2s						
QMBU	**Quimbuelo**	**0.57**	**142**	*e*P	Pg	01 59 46.9	-0.8
QMBU				*e*S	Sg	01 59 54.9	-0.3
QMBU				IAML		01 59 57.9	
	comp=E,63nm,0.2s						
QMBU				IAML		01 59 58.1	
	comp=N,62nm,0.4s						
QMBU	**Quimbuelo**	**0.57**	**142**	*e*P	Pg	01 59 47.0	-0.7
QMBU				*e*S	Sg	01 59 54.9	-0.3
QMBU				IAML		01 59 57.9	
	comp=E,67nm,0.2s						
QMBU				IAML		01 59 58.0	
	comp=N,63nm,0.4s						
GTBY	**Guantanamo Bay**	**0.73**	**174**	*e*P	Pg	01 59 50.2	-0.4
GTBY				*e*S	Sb	02 00 02.1	-0.3
GTBY				IAML		02 00 05.3	
	comp=N,28nm,0.2s						
GTBY				IAML		02 00 06.4	
	comp=N,20nm,0.3s						
GTBY	**Guantanamo Bay**	**0.73**	**174**	*e*P	Pg	01 59 50.2	-0.5
GTBY				*e*S	Sb	02 00 01.6	-0.8
GTBY				IAML		02 00 04.5	
	comp=N,10nm,0.1s						
GTBY				IAML		02 00 04.6	
	comp=Z,18nm,0.3s						
RCC	**Rio Carpintero**	**0.81**	**216**	*e*P	Pg	01 59 51.2	-1.1
RCC				*e*S	Sg	02 00 01.6	-1.2
RCC				IAML		02 00 03.5	
	comp=N,13nm,0.4s						
RCC				IAML		02 00 04.0	
	comp=E,9.9nm,0.3s						
RCC	**Rio Carpintero**	**0.81**	**216**	*e*P	Pg	01 59 51.1	-1.2
RCC				*e*S	Sg	01 59 59.6	-3.2
HLGC	**Holguin**	**0.85**	**286**	*e*P	Pn	01 59 55.4	-0.2
HLGC				*e*S	Sn	02 00 09.6	+1.0
MARVS	**Santiago de Cu**	**0.93**	**226**	*e*P	Pg	01 59 53.2	-1.4
MARVS				*e*S	Sg	02 00 07.3	+0.6
MARVS				IAML		02 00 08.9	
	comp=E,20nm,0.2s						
MARVS				IAML		02 00 12.6	
	comp=N,20nm,0.7s						
MARVS	**Santiago de Cu**	**0.93**	**226**	*e*P	Pg	01 59 53.0	-1.6
MARVS				*e*S	Sg	02 00 06.2	-0.5
MARVS				IAML		02 00 07.5	
	comp=N,7.7nm,0.2s						
MARVS				IAML		02 00 07.6	
	comp=E,10nm,0.2s						
MASC	**Masc**	**1.02**	**118**	*e*P	Pg	01 59 55.7	-0.5
MASC				*e*S	Sg	02 00 09.9	+0.6
MASC				IAML		02 00 12.4	
	comp=N,16nm,0.2s						
MASC				IAML		02 00 13.2	
	comp=E,20nm,0.1s						
MASC	**Masc**	**1.02**	**118**	*e*P	Pg	01 59 55.6	-0.6
MASC				*e*S	Sb	02 00 11.2	+0.5
MASC				IAML		02 00 13.2	
	comp=E,17nm,0.2s						
MASC				IAML		02 00 13.2	
	comp=N,14nm,0.1s						
YAR	**Yar**	**1.13**	**256**	*e*P	Pg	01 59 56.9	-1.5
YAR	**Yar**	**1.13**	**256**	*e*P	Pg	01 59 56.5	-2.0
YAR				*e*S	Sg	02 00 12.3	-0.9
CHIV	**Chivirico**	**1.33**	**240**	*e*P	Pn	01 59 59.8	-2.4
CHIV				*e*S	Sg	02 00 16.0	-3.6
CHIV				IAML		02 00 19.1	
	comp=E,13nm,0.2s						
CHIV				IAML		02 00 21.3	
	comp=N,10nm,0.2s						
CHIV	**Chivirico**	**1.33**	**240**	*e*P	Pn	01 59 59.4	-2.8
CHIV				*e*S	Sg	02 00 16.1	-3.5
CCCC	**Cccc**	**2.47**	**283**	*e*P	Pn	02 00 10.4	-7.5
CCCC				IAML		02 00 44.7	
	comp=E,2.9nm,0.3s						
CCCC				IAML		02 00 47.4	
	comp=N,2.0nm,0.4s						
CCCC	**Cccc**	**2.47**	**283**	*e*P	Pn	02 00 09.6	-8.3
CCCC				*e*S	Sn	02 00 37.3	-11

*AZER **19** 02:31:16.0, 38°.42N×44°.56E, h11km, ml2.9*
*ISK **19** 02:31:16.7, 38°.40N×44°.48E, h5km, ML3.0/7*
*TEH **19** 02:31:17.9, 38°.48N×44°.53E, h7km±49km, ML2.8, Presumed earthquake*

ISC 19 02:31:17.1±1.2, 38°.43N±0°.03×44°.53E±0°.02, h5km±10km, n33, σ1s71/55, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.86**	**99**	Pg	**Pb**	**02 31 34.0**	**-0.8**
VANB	**Van**	**0.91**	**281**	Pg	**Pg**	**02 31 34.3**	**-0.4**
VANB				Sg	**Sb**	**02 31 47.4**	**-0.6**
MAKU	**Maku**	**0.93**	**7**	Pg	**Pg**	**02 31 34.6**	**-0.5**
IMRD	**Marand**	**0.96**	**72**	Pg	**Pn**	**02 31 36.4**	**-1.1**
NAX	**Nakhchivan**	**1.06**	**45**	P	**Pn**	**02 31 37.9**	**-0.8**
NAX				S	Sn	**02 31 53.8**	**-0.1**
HAKT	**HAKKARI**	**1.09**	**217**	P	**Pb**	**02 31 38.1**	**-0.5**
HAKT				S	Sn	**02 31 55.6**	**+0.9**
AKDM	**Akdamar-Van**	**1.22**	**266**	Pn	**Pg**	**02 31 39.2**	**-1.4**
AKDM				Sn	**Sn**	**02 31 57.6**	**-0.5**
ORD	**Ordubad**	**1.25**	**66**	P	**Pg**	**02 31 41.5**	**+0.4**
ORD				S	**Sn**	**02 31 60.0**	**+1.4**
SBZ	**Shahbuz**	**1.25**	**39**	P	**Pg**	**02 31 41.5**	**+0.3**
SBZ				S	**Sn**	**02 32 00.8**	**+2.1**
ITBZ	**Tabriz**	**1.28**	**98**	Pg	**Pg**	**02 31 41.9**	**+0.1**
HYR	**Heyderabad**	**1.31**	**11**	P	**Pg**	**02 31 42.0**	**-0.4**
HYR				S	**Sn**	**02 32 01.3**	**+1.1**
IAZR	**Azarshahr**	**1.37**	**123**	Pg	**Pg**	**02 31 44.5**	**+1.1**
CUKT	**Cukurca**	**1.39**	**212**	Pn	**Pg**	**02 31 43.8**	**+0.1**
CUKT				Sn	**Sg**	**02 32 03.1**	**+1.4**
IGDI	**IGDIR**	**1.48**	**346**	P	**Pg**	**02 31 45.8**	**+0.2**
IGDI				S	**Sg**	**02 32 08.0**	**+3.2**
AGRB	**Hanur-Agry**	**1.66**	**314**	Pn	**Pb**	**02 31 47.8**	**-0.5**
AGRB				Sn	**Sg**	**02 32 10.7**	**+0.2**
MLAZ	**Malazgirt-MUS**	**1.71**	**295**	Pn	**Pb**	**02 31 48.5**	**-0.6**
GNI	**Garni**	**1.73**	**5**	Pn	**Pg**	**02 31 49.7**	**-0.6**
GURO	**Guroymak-BITLI**	**1.97**	**274**	Pn	**Pb**	**02 31 52.0**	**-1.5**
QRD	**Qoradiz**	**2.41**	**64**	P	**Pb**	**02 32 00.1**	**-0.8**
QRD				S	**Sb**	**02 32 29.0**	**-1.9**
GDB	**GEDABAY**	**2.48**	**22**	P	**Pb**	**02 32 00.1**	**-2.1**
GDB				S	**Sb**	**02 32 32.8**	**-0.3**
ISRB	**Sarab**	**2.54**	**103**	Pn	**Pb**	**02 32 02.4**	**-1.0**
AGDM	**Agdam**	**2.61**	**49**	P	**Pb**	**02 32 02.1**	**-2.3**
AGDM				S	**Sb**	**02 32 34.5**	**-2.3**
GANJ	**Ganja**	**2.61**	**31**	P	**Pb**	**02 32 02.5**	**-2.0**
GANJ				S	**Sb**	**02 32 34.9**	**-1.9**
GRMI	**Germi**	**2.66**	**81**	Pn	**Pb**	**02 32 03.0**	**-2.3**
BLQ	**Beylaqan**	**2.69**	**60**	P	**Pb**	**02 32 03.8**	**-1.9**
BLQ				S	**Sn**	**02 32 35.6**	**+1.7**
QZX	**Qazax, Azerbai**	**2.71**	**14**	P	**Pg**	**02 32 07.3**	**-1.6**
QZX				S	**Sg**	**02 32 47.2**	**+3.2**
YRD	**Yardimli**	**2.94**	**79**	P	**Pg**	**02 32 08.4**	**-1.7**
YRD				S	**Sn**	**02 32 42.1**	**+1.5**
LRK	**Lerik**	**2.99**	**85**	P	**Pn**	**02 32 06.9**	**+1.5**
LRK				S	**Sb**	**02 32 46.1**	**-1.8**
GLBA	**Clilabad**	**3.12**	**74**	P	**Pn**	**02 32 07.2**	**+0.2**
GLBA				S	**Sb**	**02 32 48.4**	**-3.1**
ASTR	**Astara**	**3.34**	**86**	P	**Pb**	**02 32 13.0**	**-3.9**
ASTR				S	**Sn**	**02 32 51.6**	**+1.4**
SEKA	**Sheki**	**3.45**	**36**	P	**Pn**	**02 32 13.9**	**+2.3**
SEKA				S	**Sn**	**02 32 56.0**	**+3.0**
QBL	**Gabala**	**3.58**	**44**	P	**Pn**	**02 32 15.2**	**+1.8**
QBL				S	**Sn**	**02 32 57.9**	**+1.9**
ATGJ	**Altiaghaj**	**4.18**	**53**	S	**Sn**	**02 33 13.3**	**+2.3**

*IDC **19** 02:33:31.4±1.0, 23°.00S×69°.25E, h0km, mb4.0/14, mbtmp4.0/14, MS3.5/10, Error ellipse: s-maj=29.7km s-min=22.0km az=9.0*

ISC 19 02:33:33.6±1.0, 23°.0S±0°.2×69°.3E±0°.2, h14km, n32, σ0s34/15, mb4.0/13, MS3.5/10, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**15.62**	**12**	T	T	02 53 01.6	
	baz=192,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**15.62**	**12**	T	T	02 53 01.9	
	baz=192,slow=76,SNR=18						
H08S3	**Diego Garcia H**	**15.64**	**12**	T	T	02 53 06.2	
	baz=192,slow=76,SNR=131						
H04N2	**CROZET ISLANDS**	**27.05**	**207**

0.3nm,0.8s,baz=349,slow=2.6,SNR=4.2

*IDC **19** 02:36:34.5±0.8, 22°.24N×143°.09E, h0km, mb3.9/12, mbtmp3.9/13, MS3.0/4, Error ellipse: s-maj=26.1km s-min=18.6km az=70.0*

ISC 19 02:36:39.6±0.8, 22°.3N±0°.1×143°.0E±0°.2, h35km, n24, σ0.66/15, mb3.9/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**14.18**	**292**	LR	LR	02 44 15.4	
	comp=Z,54nm,20.1s,baz=228,slow=32						
MJAR	**Matsushiro Arr**	**14.83**	**345**	Pn	**Pn**	**02 40 05.7**	**-1.0**
	1.2nm,0.5s,baz=155,slow=17,SNR=1.1						
KSRS	**Korea Array**	**19.98**	**323**	P	**P**	**02 41 08.6**	**-0.3**
	0.6nm,0.4s,baz=146,slow=12,SNR=5.1						
KSRS				LR	LR	02 48 20.6	
	comp=Z,20nm,18.1s,baz=350,slow=35						
	0.6nm,0.4s						
H11N1	**WAKE ISLAND Hy 22.41**	**92**		T	T	03 04 45.2	
	baz=281,slow=74,SNR=18						
H11N2	**WAKE ISLAND Hy 22.41**	**92**		T	T	03 04 47.0	
	baz=281,slow=74,SNR=14						
H11N3	**WAKE ISLAND Hy 22.42**	**92**		T	T	03 04 46.3	
	baz=281,slow=74,SNR=14						
H11S3	**WAKE ISLAND Hy 22.48**	**95**		T	T	03 04 51.1	
	baz=284,slow=75,SNR=131						
H11S1	**WAKE ISLAND Hy 22.48**	**95**		T	T	03 04 51.7	
	baz=284,slow=75,SNR=110						
H11S2	**WAKE ISLAND Hy 22.49**	**95**		T	T	03 04 52.4	
	baz=284,slow=75,SNR=86						
PETK	**Petropavlovsk-**	**32.76**	**16**	LR	LR	02 56 04.6	
	comp=Z,33nm,19.1s,baz=79,slow=36						
SONM	**Songino Array**	**38.81**	**320**	P	**P**	**02 44 01.9**	**+0.6**
	1.0nm,0.9s,baz=108,slow=4.8,SNR=4.2						
	1.0nm,0.9s						
WRA	**Warramunga Arr**	**42.81**	**192**	P	**P**	**02 44 33.9**	**-0.4**
	0.9nm,0.8s,baz=10,slow=7.9,SNR=5.4						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**46.52**	**192**	P	**P**	**02 45 03.8**	**-0.1**
	0.7nm,0.8s,baz=16,slow=11,SNR=4.8						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**53.68**	**321**	P	**P**	**02 45 58.1**	**+0.3**
	2.1nm,0.8s,baz=108,slow=9.4,SNR=5.8						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**54.21**	**312**	P	**P**	**02 46 02.8**	**+0.9**
	1.1nm,0.8s,baz=90,slow=8.7,SNR=7.5						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**57.02**	**317**	P	**P**	**02 46 22.2**	**+0.4**
	2.9nm,0.6s,baz=95,slow=7.7,SNR=28						
	2.9nm,0.6s						
KDAK	**Kodiak Island**	**57.80**	**35**	LR	LR	03 07 33.5	
	comp=Z,36nm,21.7s,baz=67,slow=32						
ILAR	**Eielson Array**	**61.59**	**27**	P	**P**	**02 46 53.7**	**+0.4**
	0.8nm,0.7s,baz=260,slow=4.7,SNR=9.4						
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**62.15**	**319**	P	**P**	**02 46 58.1**	**+0.9**
	6.0nm,0.8s,baz=91,slow=6.9,SNR=23						
	6.0nm,0.8s						
YKA	**Yellowknife Ar**	**76.01**	**28**	P	**P**	**02 48 23.8**	**+0.8**
	0.6nm,0.6s,baz=297,slow=6.3,SNR=12						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**82.61**	**334**	P	**P**	**02 48 58.4**	**-0.6**
	1.7nm,0.7s,baz=66,slow=6.5,SNR=3.6						
	1.7nm,0.7s						
NVAR	**Mina Array Bea**	**82.89**	**51**	P	**P**	**02 49 00.9**	**-0.3**
	0.5nm,0.7s,baz=288,slow=6.7,SNR=4.2						
	0.5nm,0.7s						
PLCA	**Paso Flores**	**146.23**	**131**	PKPbc	**PKPbc**	**02 56 16.4**	**-0.3**
	1.6nm,1.1s,baz=249,slow=4.6,SNR=3.7						
LPAZ	**La Paz**	**150.02**	**84**	PKPbc	**PKiKP**	**02 56 28.4**	**-0.5**
	0.9nm,0.6s,baz=252,slow=3.2,SNR=4.3						

*LDG **19** 02:38:05.6±0.1, 41°.86N×2°.78E, h5km, Ml2.6/11, Error ellipse: s-maj=2.3km s-min=1.5km az=125.0*
*MDD **19** 02:38:05.5±0.3, 41°.83N×2°.75E, h0km±1km, mb_Lg2.7/40, Error ellipse: s-maj=1.9km s-min=1.4km az=121.0*
*MRB **19** 02:38:05.5±0.4, 41°.84N×2°.77E, h4km±3km, ML2.2/41, Error ellipse: s-maj=1.3km s-min=0.8km az=105.0*

ISC 19 02:38:04.3±0.8, 41°.79N±0°.02×2°.87E±0°.02, h14km±5km, n83, σ1.43/171, 8C-5D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCAS	**Cassa de la Se**	**0.10**	**14**	⇑P	**Pg**	**02 38 07.9**	**+0.3**
CCAS				S	**Sg**	**02 38 09.8**	**+0.1**
BLAN	**Blanes**	**0.12**	**210**	Pg	**Pb**	**02 38 08.6**	**+0.3**
BLAN				Sg	**Sb**	**02 38 11.1**	**+0.1**
BLAN	**Blanes**	**0.12**	**210**	P	**Pb**	**02 38 08.6**	**+0.3**
BLAN				S	**Sb**	**02 38 11.2**	**+0.3**
CGIS	**Girona - Santa**	**0.20**	**349**	⇑Pg	**Pg**	**02 38 08.6**	**-0.3**
CGIS				Sg	**Sb**	**02 38 11.2**	**-2.2**
CGIS	**Girona - Santa**	**0.20**	**349**	⇑P	**Pg**	**02 38 08.6**	**-0.3**
CGIS				S	**Sb**	**02 38 11.2**	**-2.2**
	2μm,0.2s						
CGIR	**Ginora - Unive**	**0.20**	**351**	⇑Pg	**Pg**	**02 38 08.7**	**-0.3**
CGIR				Sg	**Sg**	**02 38 11.2**	**-0.9**
CGIR	**Ginora - Unive**	**0.20**	**351**	⇑P	**Pg**	**02 38 08.7**	**-0.3**
CGIR				S	**Sg**	**02 38 11.2**	**-0.9**
	533nm,0.2s						
CFON	**Fontmartina**	**0.33**	**266**	⇑P	**Pg**	**02 38 10.6**	**-0.5**
CFON				S	**Sg**	**02 38 14.6**	**-1.2**
	563nm,0.2s						
CBEU	**Beuda**	**0.49**	**343**	⇓P	**Pg**	**02 38 13.6**	**-0.6**
CBEU				S	**Sg**	**02 38 19.5**	**-1.3**
	134nm,0.2s						
CPAL	**Palau Saverder**	**0.57**	**22**	⇑P	**Pg**	**02 38 15.6**	**+0.1**
CPAL				S	**Sg**	**02 38 23.7**	**+0.6**
	32nm,0.1s						
CORI	**Orista**	**0.64**	**287**	⇓P	**Pb**	**02 38 15.9**	**-1.4**
CORI				S	**Sg**	**02 38 23.5**	**-2.0**
	94nm,0.2s						
EXRIP	**Ripoll, Girona**	**0.66**	**309**	Pg	**Pb**	**02 38 16.1**	**-1.5**
EXRIP				Sg	**Sg**	**02 38 24.0**	**-1.9**
EJON	**La Jonquera**	**0.66**	**1**	Pg	**Pb**	**02 38 16.9**	**-0.8**
EJON				Sg	**Sg**	**02 38 25.1**	**-1.0**
EJON				*i* IVmb_Lg		02 38 27.3	
FBR	**Fabra**	**0.67**	**237**	P	**Pb**	**02 38 17.5**	**-0.3**
FBR				S	**Sb**	**02 38 26.5**	**-0.4**
	111nm,0.2s						
MTJR	**Montjuic**	**0.68**	**233**	Pg	**Pb**	**02 38 17.6**	**-0.3**
MTJR				Sg	**Sb**	**02 38 26.2**	**-0.9**
MTJR	**Montjuic**	**0.68**	**233**	P	**Pb**	**02 38 17.8**	**-0.1**
MTJR				S	**Sb**	**02 38 27.4**	**+0.3**
	156nm,0.2s						
AVIN	**Avinyo**	**0.68**	**275**	Pg	**Pb**	**02 38 17.0**	**-1.0**
AVIN				Sg	**Sb**	**02 38 24.9**	**-2.3**
AVIN	**Avinyo**	**0.68**	**275**	P	**Pb**	**02 38 17.2**	**-0.8**
AVIN				S	**Sb**	**02 38 25.4**	**-1.8**
	316nm,0.1s						
SJAF	**Saint Jean de**	**0.70**	**1**	P	**Pb**	**02 38 17.5**	**-0.8**
SJAF				S	**Sb**	**02 38 26.5**	**-1.3**
	30nm,0.1s						
CBRU	**Bruguera**	**0.72**	**314**	⇓P	**Pb**	**02 38 17.3**	**-1.4**
CBRU				S	**Sb**	**02 38 26.0**	**-2.5**
EXQUE	**Queralbs**	**0.77**	**317**	P	**Pb**	**02 38 18.3**	**-1.3**
EXQUE				S	**Sb**	**02 38 28.0**	**-2.0**
	68nm,0.2s						
FILF	**Fillols**	**0.81**	**343**	P	**Pb**	**02 38 20.2**	**0.0**
FILF				S	**Sb**	**02 38 30.7**	**-0.3**
	79nm,0.2s						
VALC	**Valcebollere**	**0.86**	**314**	P	**Pb**	**02 38 19.7**	**-1.4**
VALC				S	**Sb**	**02 38 30.4**	**-2.1**
	148nm,0.1s						
CGAR	**Garraf**	**0.87**	**236**	⇑P	**Pb**	**02 38 21.1**	**-0.1**
CGAR				S	**Sb**	**02 38 32.7**	**0.0**
	20nm,0.2s						
LLIS	**Llivia - Polie**	**0.95**	**316**	Pg	**Pb**	**02 38 21.3**	**-1.4**
LLIS				Sg	**Sb**	**02 38 32.7**	**-2.4**
CLLI	**Llivia**	**0.96**	**316**	⇓P	**Pb**	**02 38 21.5**	**-1.3**
CLLI				S	**Sb**	**02 38 33.8**	**-1.7**
	34nm,0.1s						
EMIR	**Miracle**	**1.01**	**278**	Pg	**Pb**	**02 38 23.2**	**-0.5**
EMIR				Sg	**Sb**	**02 38 35.6**	**-1.3**
EMIR				*i* IVmb_Lg		02 38 36.5	
EMIR	**Miracle**	**1.01**	**278**	P	**Pb**	**02 38 23.2**	**-0.5**
EMIR				S	**Sb**	**02 38 35.7**	**-1.3**
	111nm,0.2s						
CARF	**Carcanieres**	**1.09**	**329**	⇓P	**Pb**	**02 38 24.7**	**-0.4**
CARF				S	**Sb**	**02 38 37.8**	**-1.3**
	29nm,0.2s						
ARBS	**La Rabassa**	**1.19**	**304**	P	**Pn**	**02 38 25.8**	**-0.9**
ARBS				S	**Sb**	**02 38 40.9**	**-1.1**
	52nm,0.2s						
EXSEU	**La Seu d''Urge**	**1.20**	**299**	Pg	**Pn**	**02 38 25.6**	**-1.0**
EXSEU				Sg	**Sb**	**02 38 40.9**	**-1.3**
PAND	**Andorre**	**1.23**	**307**	P	**Pn**	**02 38 27.0**	**-0.3**
PAND				S	**Sb**	**02 38 42.7**	**-0.5**
	59nm,0.2s						
CORG	**Organya**	**1.24**	**292**	P	**Pn**	**02 38 26.6**	**-0.6**
CORG				S	**Sb**	**02 38 42.4**	**-1.0**
	26nm,0.3s						
SCOL	**Santa Coloma**	**1.24**	**305**	Pg	**Pn**	**02 38 26.7**	**-0.7**
SCOL				Sg	**Sg**	**02 38 45.7**	**+1.1**
FNEB	**Nbias**	**1.25**	**333**	P	**Pn**	**02 38 27.8**	**+0.3**
FNEB				S	**Sb**	**02 38 43.5**	**-0.3**
	26nm,0.2s						
CLAF	**Gruissan**	**1.36**	**7**	*e*Pn	**Pn**	**02 38 29.6**	**+0.8**
CLAF				*e*Pg	**Pb**	**02 38 30.0**	**+0.5**
CLAF				*e*Sg	**Sb**	**02 38 47.2**	**+0.5**
CLAF				*e*Sn	**Sb**	**02 38 47.7**	**+1.0**
CLAF	**Gruissan**	**1.36**	**7**	P	**Pn**	**02 38 29.6**	**+0.8**
CLAF				S	**Sb**	**02 38 47.7**	**+1.0**
EPOB	**Poblet**	**1.41**	**253**	Pn	**Pn**	**02 38 30.0**	**+0.4**
EPOB				Sn	**Sn**	**02 38 48.0**	**-0.1**
EPOB				*i* IVmb_Lg		02 38 49.1	
EPOB	**Poblet**	**1.41**	**253**	P	**Pn**	**02 38 29.8**	**+0.1**
EPOB				S	**Sn**	**02 38 48.2**	**+0.1**
	21nm,0.3s						
GENF	**Genat**	**1.42**	**318**	P	**Pn**	**02 38 29.9**	**+0.2**
GENF				S	**Sn**	**02 38 47.3**	**-0.8**
CSOR	**Sort**	**1.42**	**295**	P	**Pn**	**02 38 29.6**	**-0.2**
CSOR				S	**Sn**	**02 38 48.3**	**-0.1**
	36nm,0.2s						
CEST	**Esterri de Car**	**1.45**	**305**	P	**Pn**	**02 38 30.2**	**-0.1**
CEST				S	**Sn**	**02 38 48.5**	**-0.7**
	36nm,0.3s						
CTRM	**Tremp**	**1.52**	**285**	Sg	**Sn**	**02 38 50.7**	**0.0**
SALF	**Salau**	**1.58**	**309**	P	**Pn**	**02 38 32.8**	**+0.8**
SALF				S	**Sn**	**02 38 52.8**	**+0.5**
	21nm,0.2s						
CAVN	**Les Avellanes**	**1.59**	**274**	P	**Pn**	**02 38 32.6**	**+0.6**
CAVN				S	**Sn**	**02 38 53.0**	**+0.6**
	89nm,0.4s						
MTLF	**Montolieu**	**1.63**	**343**	*e*Pg	**Pn**	**02 38 33.4**	**+0.8**
MTLF				*e*Sg	**Sn**	**02 38 53.4**	**+0.1**
	20nm,0.2s						
CTRE	**Tremp**	**1.65**	**290**	P	**Pn**	**02 38 33.8**	**+0.8**
CTRE				S	**Sn**	**02 38 55.0**	**+0.9**
	18nm,0.2s						
MLS	**Moulis**	**1.76**	**312**	S	**Sn**	**02 38 57.6**	**+1.0**
	28nm,0.3s						
CARA	**Val d'Aran**	**1.78**	**302**	P	**Pn**	**02 38 35.1**	**+0.3**
CARA				S	**Sn**	**02 38 58.7**	**+1.4**
	18nm,0.4s						
VIES	**Vielha - Hospi**	**1.79**	**301**	Pn	**Pn**	**02 38 34.7**	**-0.1**
VIES				Sn	**Sn**	**02 38 56.5**	**-1.0**
VIES				Sg	**Sb**	**02 38 59.4**	**+0.1**
VIER	**Vielha - Casau**	**1.80**	**301**	Pn	**Pn**	**02 38 35.4**	**+0.3**
VIER				Sn	**Sn**	**02 38 56.8**	**-1.0**
VIER				Sg	**Sb**	**02 38 59.8**	**+0.2**
ETOS	**Mallorca**	**2.02**	**181**	Pn	**Pn**	**02 38 38.0**	**+0.1**
ETOS				Sn	**Sn**	**02 39 00.5**	**-2.3**
ETOS				*i* IVmb_Lg		02 39 15.9	
EBR	**Ebro Roquetas**	**2.04**	**243**	S	**Sb**	**02 39 06.5**	**+0.3**
	36nm,0.5s						
ERTA	**Horta de San J**	**2.08**	**247**	Pn	**Pn**	**02 38 38.8**	**0.0**
ERTA				Sn	**Sn**	**02 39 04.6**	**+0.1**
ERTA				Sg	**Sb**	**02 39 09.8**	**+2.2**
ERTA				*i* IVmb_Lg		02 39 12.4	
ERTA	**Horta de San J**	**2.08**	**247**	P	**Pn**	**02 38 38.8**	**0.0**
ERTA				S	**Sn**	**02 39 07.0**	**+2.4**
	12nm,0.4s						
ERTA				Sg	**Sb**	**02 39 10.5**	**+2.9**
RESF	**Ens**	**2.14**	**299**	S	**Sn**	**02 39 08.0**	**+1.9**
ECHI	**Chisagues Biel**	**2.17**	**295**	Pn	**Pn**	**02 38 40.1**	**-0.1**
ECHI				Sn	**Sn**	**02 39 06.5**	**-0.5**
ECHI				Sg	**Sb**	**02 39 10.2**	**-0.2**
ECHI				*i* IVmb_Lg		02 39 13.0	
ECHI	**Chisagues Biel**	**2.17**	**295**	P	**Pn**	**02 38 40.7**	**+0.5**
ECHI				S	**Sn**	**02 39 08.8**	**+1.8**
	13nm,0.1s						
CMAS	**Mas de Barbera**	**2.20**	**242**	Sg	**Sg**	**02 39 14.8**	**-0.3**
	10nm,0.3s						
EPF	**Esparros**	**2.25**	**304**	*e*Pg	**Pn**	**02 38 42.8**	**+1.6**
EPF				*e*Sg	**Sb**	**02 39 11.5**	**-1.0**
	10nm,0.2s						
VIEF	**Viey**	**2.38**	**298**	S	**Sn**	**02 39 13.2**	**+1.2**
	7.3nm,0.3s						
LASF	**Ste Croix**	**2.40**	**17**	*e*Sg	**Sb**	**02 39 19.4**	**+2.6**
	3.4nm,0.2s						
ESAC	**San Caprasio**	**2.50**	**270**	Pn	**Pn**	**02 38 44.3**	**-0.3**
ESAC				Pg	**Pb**	**02 38 49.5**	**+0.5**
ESAC				Sn	**Sn**	**02 39 14.4**	**-0.5**
ESAC				Sg	**Sb**	**02 39 22.4**	**+2.7**
ESAC				*i* IVmb_Lg		02 39 26.4	
ESAC	**San Caprasio**	**2.50**	**270**	P	**Pn**	**02 38 44.8**	**+0.2**
ESAC				S	**Sn**	**02 39 15.2**	**+0.3**
PYLO	**Lourdes**	**2.53**	**302**	S	**Sn**	**02 39 17.0**	**+1.5**
	5.5nm,0.3s						
ETSF	**Etsaut**	**2.78**	**295**	*e*Pg	**Pb**	**02 38 55.5**	**+1.8**
ETSF				*e*Sg	**Sb**	**02 39 28.5**	**+0.9**
	14nm,0.3s						
EMOS	**Mosqueruela**	**2.90**	**242**	Pn	**Pn**	**02 38 50.5**	**+0.3**
EMOS				Sn	**Sn**	**02 39 24.7**	**-0.2**
EMOS				Sg	**Sb**	**02 39 36.0**	**+4.8**
EMOS				*i* IVmb_Lg		02 39 40.4	
EMOS	**Mosqueruela**	**2.90**	**242**	P	**Pn**	**02 38 50.6**	**+0.3**
EMOS				S	**Sn**	**02 39 26.8**	**+1.9**
	3.3nm,0.4s						
ATE	**Arette**	**2.95**	**297**	P	**Pn**	**02 38 52.0**	**+1.3**
ATE				S	**Sn**	**02 39 27.1**	**+1.2**
	7.6nm,0.3s						
EIBI	**Ibiza**	**2.99**	**203**	Pn	**Pn**	**02 38 50.7**	**-0.6**
EIBI				Sn	**Sn**	**02 39 23.6**	**-3.3**
EIBI				*i* IVmb_Lg		02 39 43.7	
LMR	**La Mourre**	**3.10**	**59**	*e*Pn	**Pn**	**02 38 55.5**	**+2.7**
LMR				*e*Sn	**Sn**	**02 39 27.8**	**-1.8**
	1.2nm,0.2s						
CAF	**Calviac**	**3.19**	**350**	*e*Pg	**Pb**	**02 39 02.2**	**+1.4**
CAF				*e*Sg	**Sb**	**02 39 42.7**	**+3.1**
	4.4nm,0.2s						
E0901	**Celadas (Terue**	**3.29**	**248**	Pn	**Pn**	**02 38 56.0**	**+0.5**
E0901				Sn	**Sn**	**02 39 34.2**	**-0.3**
E0901				Sg	**Sg**	**02 39 48.2**	**-1.8**
E0901				*i* IVmb_Lg		02 39 49.2	
SJPF	**Ste Jean**	**3.31**	**295**	*e*Sg	**Sb**	**02 39 45.0**	**+2.1**
	3.0nm,0.2s						
VIVF	**Saint-Julien-l**	**3.34**	**23**	*e*Sg	**Sg**	**02 39 48.9**	**-2.7**
	1.1nm,0.2s						
LFF	**La Frestale**	**3.52**	**334**	*e*Pg	**Pb**	**02 39 08.1**	**+1.8**
LFF				*e*Sg	**Sb**	**02 39 52.3**	**+3.5**
	9.0nm,0.3s						
EALK	**Alkurruntz**	**3.54**	**295**	Pn	**Pn**	**02 38 59.4**	**+0.5**
EALK				Sn	**Sn**	**02 39 39.4**	**-1.2**
EALK				Sg	**Sb**	**02 39 54.7**	**+5.1**
EALK				*i* IVmb_Lg		02 39 59.5	
ECHE	**Chera**	**3.65**	**234**	Pn	**Pn**	**02 39 00.3**	**-0.1**
ECHE				Sn	**Sn**	**02 39 43.1**	**-0.1**
ECHE				Sg	**Sg**	**02 40 00.2**	**-1.3**
ECHE				*i* IVmb_Lg		02 40 02.2	
RJF	**Les Rejaudoux**	**3.65**	**345**	*e*Pg	**Pb**	**02 39 11.4**	**+2.8**
RJF				*e*Sg	**Sb**	**02 39 56.3**	**+3.5**
	3.0nm,0.3s						
ETOR	**Torete**	**3.83**	**257**	Pn	**Pn**	**02 39 03.6**	**+0.6**
ETOR				Pg	**Pb**	**02 39 13.8**	**+2.0**
ETOR				Sn	**Sn**	**02 39 47.4**	**-0.5**
ETOR				Sg	**Sg**	**02 40 04.9**	**-2.6**
ETOR				*i* IVmb_Lg		02 40 11.1	
EVIV	**Cofrentes, Val**	**3.95**	**232**	Pn	**Pn**	**02 39 04.3**	**-0.1**
EVIV				Sn	**Sn**	**02 39 50.4**	**-0.1**
EVIV				*i* IVmb_Lg		02 40 26.3	
ETOB	**Tobarra**	**4.61**	**229**	Pn	**Pn**	**02 39 13.6**	**0.0**
ETOB				Sn	**Sn**	**02 40 06.5**	**-0.6**
ETOB				*i* IVmb_Lg		02 40 58.3	
PGF	**Pioggiola**	**4.62**	**78**	*e*Pn	**Pn**	**02 39 13.4**	**-0.3**
PGF				*e*Sn	**Sn**	**02 40 02.0**	**-5.2**
	1.0nm,0.2s						

IDC 19 03:04:24.0±2.6, 5°.96S×129°.53E, h160km×39km, mb2.9/1, mbtmp3.7/5, Error ellipse: s-maj=65.2km s-min=16.8km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.35**	**19**	P	**Pn**	**03 05 43.5**	**+1.3**
	7.7nm,0.2s,baz=189,slow=19,SNR=30						
SIJI				S	Sn	03 06 42.7	-0.7
	8.9nm,0.3s,baz=253,slow=19,SNR=8.2						
FITZ	**Fitzroy Crossi**	**12.65**	**197**	P	**Pn**	**03 07 19.2**	**+0.8**
	1.9nm,0.5s,baz=16,slow=11,SNR=11						
FITZ				S	Sn	03 09 32.1	-6.4
	0.6nm,0.3s,baz=47,slow=19,SNR=1.7						
WRA	**Warramunga Arr**	**14.66**	**162**	P	**Pn**	**03 07 44.2**	**+0.3**
	0.3nm,0.3s,baz=337,slow=13,SNR=7.5						
WRA				S	Sn	03 10 23.9	-3.1
	0.2nm,0.4s,baz=352,slow=20,SNR=1.3						
ASAR	**Alice Springs**	**18.10**	**167**	P	P	03 08 22.6	-1.2
	2.1nm,0.5s,baz=350,slow=12,SNR=30						
ASAR				S	S	03 11 33.3	-10
	0.9nm,0.9s,baz=346,slow=18,SNR=4.6						
MKAR	**Makanchi Array**	**67.11**	**327**	P	P	03 15 00.4	+0.1
	0.1nm,0.3s,baz=134,slow=6.2,SNR=1.7						
	0.1nm,0.3s						

HEL 19 03:14:37.1±0.4, 67°.85N×20°.25E, h0km, ML0.8, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.69**	**72**	PG	Pg	03 14 49.8	-0.5
LANU				SG	Sg	03 14 59.2	-0.1
KIF	**Kilpisjarvi**	**1.18**	**10**	PG	Pg	03 14 59.4	-0.3
	baz=191						
KIF				smax	smax	03 15 13.9	
	comp=Z,1.1nm,0.2s						
KIF				SB	Sg	03 15 14.8	-0.2
HEF	**Hetta**	**1.40**	**65**	PG	Pn	03 15 02.1	-1.7
HEF				smax	smax	03 15 19.1	
	comp=Z,0.5nm,0.2s						
HEF				SN	Sn	03 15 24.9	+2.0
ERTU	**Ertsjaerv**	**1.50**	**149**	PG	Pn	03 15 04.5	-0.8
ERTU				SN	Sg	03 15 25.2	-0.1
KLF	**Kolari**	**1.56**	**112**	PG	Pn	03 15 05.0	-1.0
KLF				smax	smax	03 15 23.8	
	comp=Z,0.4nm,0.2s						
KLF				SN	Sn	03 15 26.6	-0.2
KTK1	**Kautokeino**	**1.61**	**42**	PG	Pn	03 15 06.7	-0.1
TOF	**Tornio**	**2.39**	**136**	smax	smax	03 15 47.8	
	comp=Z,0.4nm,0.2s						
RNF	**Rovaniemi**	**2.57**	**116**	SG	Sb	03 15 55.5	-0.5
RAJF	**Raja-Jooseppi**	**3.08**	**74**	PB	Pb	03 15 30.0	-2.7
KEV	**Kevo**	**3.12**	**49**	PN	Pn	03 15 26.5	-0.9
VRF	**Varrio**	**3.56**	**87**	PG	Pb	03 15 40.2	-0.6

HEL 19 03:14:48.1±0.3, 69°.39N×30°.34E, h0km, ML1.2, Explosion, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAJF	**Raja-Jooseppi**	**1.18**	**219**	PG	Pg	03 15 09.6	-1.0
RAJF				SG	Sg	03 15 24.8	-1.0
KEV	**Kevo**	**1.23**	**289**	PG	Pg	03 15 10.4	-1.2
	baz=105						
VRF	**Varrio**	**1.67**	**190**	PG	Pn	03 15 18.3	-0.3
VRF				smax	smax	03 15 38.1	
	comp=Z,0.9nm,0.2s						
ARA0	**ARCESS Array S**	**1.71**	**277**	PN	Pn	03 15 19.3	+0.2
ARA0	**ARCESS Array S**	**1.71**	**277**	PG	Pn	03 15 19.3	+0.2
ARA0				SG	Sn	03 15 41.0	-0.7
KTK1	**Kautokeino**	**2.56**	**265**	PN	Pn	03 15 29.9	-0.9
KTK1				SG	Sb	03 16 06.3	-0.6
HEF	**Hetta**	**2.61**	**251**	smax	smax	03 16 05.1	
	comp=Z,1.0nm,0.2s						
HEF				SG	Sb	03 16 07.8	-0.5
KIF	**Kilpisjarvi**	**3.43**	**268**	SG	Sb	03 16 32.6	+1.0
TOF	**Tornio**	**4.04**	**217**	PN	Pn	03 15 51.1	+0.1
TOF				SG	Sb	03 16 50.5	+1.3

*NNC **19** 03:15:00.1±3.2, 44°.54N×87°.52E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=24.5km s-min=19.1km az=77.0*
*IDC **19** 03:15:02.7±3.3, 44°.29N×86°.87E, h0km, mbtmp3.3/5, ML2.9/4, Error ellipse: s-maj=41.1km s-min=23.0km az=27.0*
*SOME **19** 03:15:20.3, 44°.63N×85°.07E, h5km*

ISC 19 03:15:02.6±1.7, 44°.4N±0°.1×87°.49E±0°.09, h10km, n9, σ2.52/14, 4C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**3.57**	**330**	*e*P	**Pg**	**03 16 13.5**	**+2.6**
	13nm,0.5s						
ZSN				*e*S	**Sb**	**03 16 52.2**	**+3.0**
	19nm,0.5s						
MK31	**Makanchi Array**	**4.37**	**305**	⇓Pn	**Pn**	**03 16 07.5**	**-1.6**
	2.0nm,0.5s,baz=124,slow=14,SNR=85						
MK31				⇑Sn	**Sn**	**03 16 59.3**	**-0.7**
	4.7nm,0.6s,baz=124,slow=23,SNR=4.6						
MK31				⇑Lg	Lg	03 17 16.4	
	12nm,0.5s,baz=116,slow=28,SNR=9.2						
MKAR	**Makanchi Array**	**4.37**	**305**	Pn	**Pn**	**03 16 07.6**	**-1.4**
	1.1nm,0.3s,baz=122,slow=14,SNR=52						
MKAR				Sn	**Sn**	**03 16 58.1**	**-1.9**
	1.9nm,0.3s,baz=126,slow=24,SNR=4.3						
MKAR				Lg	Lg	03 17 13.3	
	3.3nm,0.3

JOTO				*e*S		**Sn**	**03 20 49.8**	**-0.2**
JMK	**Ichinoseki**	**1.62**	**332**	*e*P		**Pn**	**03 20 33.1**	**+0.4**
JYS	**Shirataka**	**1.82**	**293**	*e*P		**Pb**	**03 20 37.4**	**-0.4**
JFY	**Yanaizu**	**1.99**	**267**	*e*P		**Pb**	**03 20 40.8**	**+0.1**
JYK	**Kaneyama**	**2.01**	**314**	*e*P		**Pn**	**03 20 39.2**	**+1.1**
JYK				*e*S		**Sn**	**03 21 02.2**	**-0.7**
JOM	**Ohasama**	**2.07**	**340**	*e*P		**Pn**	**03 20 39.9**	**+0.9**
MJAR	**Matsushiro Arr**	**3.34**	**254**	Pn		**Pn**	**03 20 59.9**	**+3.5**
	0.2nm,0.3s,baz=78,slow=15,SNR=7.7							
MJAR				Sn		**Sb**	**03 21 41.7**	**-2.4**
	0.4nm,0.3s,baz=91,slow=26,SNR=5.2							
	1.4nm,0.3s							
JHJ	**Hachijo jima 2**	**4.82**	**205**	Pn		**Pn**	**03 21 17.9**	**+1.1**
	5.9nm,0.3s,baz=66,slow=20,SNR=1.1							
JHJ				Sn		**Sn**	**03 22 09.2**	**-3.1**
	23nm,0.3s,baz=105,slow=23,SNR=4.7							
	28nm,0.4s							
ASAJ	**Asahikawa**	**6.59**	**3**	Pn		**Pn**	**03 21 42.5**	**+1.5**
	0.5nm,0.3s,baz=200,slow=11,SNR=4.5							
ASAJ				Sn		**Sn**	**03 22 51.0**	**-4.8**
	0.3nm,0.3s,baz=252,slow=20,SNR=1.5							
	1.1nm,0.3s							
USRK	**Ussuriysk Ar.**	**10.20**	**314**	Pn		**Pn**	**03 22 33.3**	**+2.7**
	0.4nm,0.3s,baz=127,slow=10,SNR=2.4							
	3.0nm,0.6s							
JOW	**Kunigami**	**15.88**	**232**	LR		LR	03 30 22.6	
	comp=Z,24nm,19.7s,baz=281,slow=39							
HILR	**Hailar Array B**	**20.14**	**314**	P		Pn	03 24 41.3	+1.2
	0.9nm,0.4s,baz=115,slow=12,SNR=2.4							
	0.9nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**27.87**	**123**	T		T	03 55 04.2	
	baz=315,slow=75,SNR=33							
H11N1	**WAKE ISLAND Hy**	**27.88**	**123**	T		T	03 55 01.2	
	baz=315,slow=75,SNR=30							
H11N3	**WAKE ISLAND Hy**	**27.89**	**123**	T		T	03 55 02.8	
	baz=315,slow=75,SNR=32							
SONM	**Songino Array**	**28.04**	**303**	P		**P**	**03 25 57.2**	**+1.9**
	0.5nm,0.7s,baz=111,slow=9.3,SNR=2.6							
	0.5nm,0.7s							
H11S1	**WAKE ISLAND Hy**	**28.61**	**125**	T		T	03 55 59.0	
	baz=317,slow=76,SNR=39							
H11S3	**WAKE ISLAND Hy**	**28.61**	**125**	T		T	03 56 07.0	
	baz=317,slow=76,SNR=27							
H11S2	**WAKE ISLAND Hy**	**28.63**	**125**	T		T	03 55 60.0	
	baz=317,slow=76,SNR=34							
ZALV	**Zalesovo Beam**	**42.05**	**312**	P		**P**	**03 27 55.8**	**+0.3**
	0.4nm,0.3s,baz=80,slow=11,SNR=1.4							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**44.39**	**302**	P		**P**	**03 28 15.1**	**+0.5**
	0.3nm,0.6s,baz=88,slow=11,SNR=4.8							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**46.19**	**308**	P		**P**	**03 28 30.3**	**+1.5**
	0.5nm,0.3s,baz=82,slow=7.8,SNR=5.6							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**57.64**	**189**	P		**P**	**03 29 54.4**	**0.0**
	1.3nm,0.7s,baz=4.4,slow=6.8,SNR=9.6							
	1.3nm,0.7s							
ASAR	**Alice Springs**	**61.37**	**189**	P		**P**	**03 30 20.7**	**+0.7**
	0.8nm,0.7s,baz=3.4,slow=6.7,SNR=8.9							
	0.8nm,0.7s							
PDAR	**Pinedale Array**	**76.88**	**46**	P		**P**	**03 31 56.0**	**-0.5**
	0.2nm,0.7s,baz=345,slow=5.5,SNR=2.1							
	0.2nm,0.7s							

*IDC **19** 03:26:60.0±4.1,5°.95S×148°.62E,h75^{km}±41^{km},mb3.6/6, mbtmp4.0/8,ML4.2/1, Error ellipse: s-maj=55.1km s-min=25.8km az=110.0*
*NEIC **19** 03:27:03.8±1.6,5°.98S±0°.09×148°.55E±0°.08,h106^{km}±9^{km}, mb4.2/19, Error ellipse: s-maj=14.1km s-min=10.6km az=215.0*

ISC 19 03:26:59.2±0.7,**5°.90S**±0°.08×**148°.7E**±0°.2,**h65**^{km},**n35**, σ1^{s}**06**/37,**mb4.2**/15,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.79**	**203**	P		**Pn**		**03 27 57.0**	**+1.9**
	28nm,0.5s,baz=15,slow=8.6,SNR=8.2								
PMG				S		**Sn**		**03 28 37.6**	**-0.9**
	86nm,0.5s,baz=6.0,slow=17,SNR=18								
PMG	**Port Moresby**	**3.79**	**203**			**Pn**		**03 27 57.4**	**+2.2**
PMG						**Sn**		**03 28 40.0**	**+1.5**
CTAO	**Charters Tower**	**14.30**	**189**	Pn		**Pn**		**03 30 16.7**	**-1.8**
WB0	**Warramunga Arr**	**19.55**	**224**	P		**P**		**03 31 21.6**	**-0.3**
WB0				IAmb		IAmb		03 31 30.2	
	comp=Z,7.1nm,1.1s								
WR8	**Warramunga Arr**	**19.61**	**223**	P		**P**		**03 31 22.3**	**-0.2**
WR8				IAmb		IAmb		03 31 22.8	
	comp=Z,5.7nm,0.5s								
WRA	**Warramunga Arr**	**19.71**	**224**	P		**P**		**03 31 22.5**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=49,slow=11,SNR=30								
	comp=Z,7.1nm,0.7s								
WRA	**Warramunga Arr**	**19.71**	**224**	P		**P**		**03 31 22.1**	**-1.5**
KNRA	**Kununurra**	**21.80**	**242**	P		**P**		**03 31 45.6**	**-0.5**
KNRA				IAmb		IAmb		03 31 47.9	
	comp=Z,17nm,1.2s								
AS31	**Alice Springs**	**22.66**	**217**	P		**P**		**03 31 54.8**	**-0.6**
ASAR	**Alice Springs**	**22.66**	**217**	P		**P**		**03 31 54.8**	**-0.6**
	comp=Z,2.6nm,0.5s,baz=54,slow=9.0,SNR=77								
	comp=Z,2.6nm,0.5s								
ASAR	**Alice Springs**	**22.66**	**217**	P		**P**		**03 31 54.2**	**-1.2**
DZM	**Mont Dzumac**	**23.54**	**135**	P		**P**		**03 32 04.3**	**+0.3**
STKA	**Stephens Creek**	**26.68**	**193**	P		**P**		**03 32 33.1**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=347,slow=8.2,SNR=3.7								
	comp=Z,0.9nm,0.3s								
STKA	**Stephens Creek**	**26.68**	**193**	P		**P**		**03 32 32.1**	**-0.1**
MSWZ	**Moikau Station**	**42.58**	**150**	P		**P**		**03 34 48.4**	**-0.4**
PETK	**Petropavlovsk-**	**59.28**	**6**	P		**P**		**03 36 54.7**	**+0.7**
	comp=Z,4.0nm,1.0s,baz=165,slow=5.8,SNR=4.3								
	comp=Z,4.0nm,1.0s								
PETK	**Petropavlovsk-**	**59.28**	**6**	P		**P**		**03 36 54.5**	**+0.5**
AMKA	**Amchitka**	**62.82**	**21**	P		**P**		**03 37 17.9**	**-0.1**
SONM	**Songino Array**	**65.13**	**330**	P		**P**		**03 37 34.5**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=116,slow=9.8,SNR=3.8								
	comp=Z,0.3nm,0.3s								
SONM	**Songino Array**	**65.13**	**330**	P		**P**		**03 37 33.8**	**+0.4**
L14K	**Kuka Creek**	**76.86**	**22**	P		**P**		**03 38 45.2**	**+1.2**
L14K				IAmb		IAmb		03 39 09.2	
	comp=Z,8.9nm,1.4s								
K15K	**Wolf Creek Mou**	**77.89**	**21**	P		**P**		**03 38 50.0**	**+0.3**
K15K				IAmb		IAmb		03 39 08.1	
	comp=Z,13nm,1.4s								
MKAR	**Makanchi Array**	**78.47**	**320**	P		**P**		**03 38 51.9**	**-1.5**
	comp=Z,0.1nm,0.4s,baz=101,slow=6.6,SNR=2.3								
	comp=Z,0.1nm,0.4s								
MKAR	**Makanchi Array**	**78.47**	**320**	P		**P**		**03 38 51.8**	**-1.6**
G16K	**Koyuk River**	**79.60**	**19**	P		**P**		**03 39 00.1**	**+1.1**
G16K				IAmb		IAmb		03 39 14.0	
	comp=Z,4.4nm,1.4s								
G18K	**Tagagawik**	**81.11**	**19**	P		**P**		**03 39 08.2**	**+1.0**
PPLA	**Purkeypile**	**81.79**	**23**	P		**P**		**03 39 11.6**	**+0.6**
C18K	**Utukok River**	**82.04**	**16**	P		**P**		**03 39 12.2**	**+0.1**
C18K				IAmb		IAmb		03 39 19.7	
	comp=Z,2.5nm,1.3s								
L22K	**Petersville**	**82.17**	**24**	P		**P**		**03 39 11.8**	**-1.1**
L22K				IAmb		IAmb		03 39 46.4	
	comp=Z,11nm,1.4s								
E19K	**Redstone River**	**82.49**	**18**	P		**P**		**03 39 13.7**	**-0.7**
E19K				IAmb		IAmb		03 39 16.1	
	comp=Z,1.7nm,0.7s								
C19K	**Lookout Ridge**	**82.78**	**16**	P		**P**		**03 39 16.6**	**+0.7**
C19K				IAmb		IAmb		03 39 40.9	
	comp=Z,4.7nm,1.4s								
D19K	**Kuna River**	**82.84**	**17**	P		**P**		**03 39 16.6**	**+0.3**
D19K				IAmb		IAmb		03 39 42.5	
	comp=Z,4.1nm,1.3s								
D20K	**Etivluk River**	**83.41**	**17**	P		**P**		**03 39 20.1**	**+0.9**
ILAR	**Eielson Array**	**84.75**	**23**	P		**P**		**03 39 24.7**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=251,slow=4.8,SNR=13								
	comp=Z,0.8nm,0.6s								
ILAR	**Eielson Array**	**84.75**	**23**	P		**P**		**03 39 25.1**	**-0.9**

*UPP **19** 03:41:24.5±0.3,67°.86N×20°.21E,h1^{km}±1^{km},ML2.5, Confirmed Induced event*
*HEL **19** 03:41:26.0±0.3,67°.85N×20°.33E,h0^{km},ML0.9, Suspected explosion*

ISC 19 03:41:24.7±0.9,**67°.85N**±0°.03×**20°.21E**±0°.03,**h0**^{km},**n17**, σ0^{s}**95**/23,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**25**	P		**Pg**		**03 41 26.7**	**-0.2**
KUA				S		**Sg**		**03 41 28.4**	**0.0**
RATU	**Laukkuluspa**	**0.24**	**263**	P		**Pg**		**03 41 29.0**	**-0.2**
RATU				S		**Sg**		**03 41 32.2**	**0.0**
NIKU	**Nikkaluokta**	**0.45**	**272**	P		**Pg**		**03 41 32.9**	**-0.4**
NIKU				S		**Sg**		**03 41 38.9**	**-0.1**
LANU	**Lannavaara**	**0.70**	**73**	S		**Sg**		**03 41 47.0**	**-0.2**
LANU	**Lannavaara**	**0.70**	**73**	PG		**Pg**		**03 41 38.0**	**-0.2**
	baz=258								
LANU				SG		**Sg**		**03 41 46.8**	**-0.4**
DUNU	**Dundret**	**0.75**	**169**	S		**Sg**		**03 41 48.6**	**0.0**
MASU	**Masugnsbyn**	**0.79**	**119**	S		**Sg**		**03 41 50.0**	**0.0**
KIF	**Kilpisjarvi**	**1.18**	**10**	PG		**Pb**		**03 41 48.2**	**+0.2**
	baz=188								
KIF				SG		**Sg**		**03 42 02.7**	**+0.2**
KIF				smax		smax		03 42 02.8	
	comp=Z,1.0nm,0.2s								
HEF	**Hetta**	**1.41**	**65**	smax		smax		03 42 07.2	
	comp=Z,0.6nm,0.2s								
HEF				SG		**Sg**		**03 42 08.5**	**-1.4**
ERTU	**Ertsjaerv**	**1.52**	**148**	PG		**Pn**		**03 41 52.8**	**-0.3**
ERTU				SN		**Sn**		**03 42 13.4**	**-0.1**
KLF	**Kolari**	**1.57**	**112**	smax		smax		03 42 11.9	
	comp=Z,0.8nm,0.2s								
KLF				SN		**Sg**		**03 42 14.7**	**-0.4**
KTK1	**Kautokeino**	**1.61**	**42**	SN		**Sg**		**03 42 17.4**	**+0.9**
TRO	**Tromso**	**1.85**	**346**	SG		**Sb**		**03 42 23.5**	**+0.6**
TOF	**Tornio**	**2.41**	**136**	smax		smax		03 42 36.2	
	comp=Z,0.4nm,0.2s								
TOF				SG		**Sb**		**03 42 38.9**	**-0.1**
ARA0	**ARCESS Array S**	**2.57**	**46**	SG		**Sb**		**03 42 43.1**	**-0.6**
RNF	**Rovaniemi**	**2.58**	**116**	SG		**Sb**		**03 42 43.2**	**-0.8**
MSF	**Maaselka**	**3.99**	**115**	SG		**Sb**		**03 43 28.1**	**+3.6**

*UPP **19** 04:36:38.7±0.0,67°.85N×20°.21E,h0^{km},ML2.7, Confirmed Induced event*
*HEL **19** 04:36:39.7±0.2,67°.88N×20°.22E,h0^{km},ML1.1, Suspected explosion*

ISC 19 04:36:38.8±0.8,**67°.84N**±0°.03×**20°.24E**±0°.03,**h0**^{km},**n19**, σ0^{s}**62**/30,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**17**	P		**Pg**		**04 36 41.1**	**0.0**
KUA				S		**Sg**		**04 36 42.8**	**+0.1**
RATU	**Laukkuluspa**	**0.25**	**267**	P		**Pg**		**04 36 43.3**	**-0.1**
RATU				S		**Sg**		**04 36 47.0**	**+0.4**
NIKU	**Nikkaluokta**	**0.46**	**274**	P		**Pg**		**04 36 47.2**	**-0.3**
NIKU				S		**Sg**		**04 36 53.5**	**+0.1**
LANU	**Lannavaara**	**0.70**	**72**	P		**Pg**		**04 36 52.0**	**-0.1**
LANU				S		**Sg**		**04 37 01.4**	**+0.4**
LANU	**Lannavaara**	**0.70**	**72**	PG		**Pg**		**04 36 52.3**	**+0.2**
LANU				SG		**Sg**		**04 37 01.3**	**+0.2**
DUNU	**Dundret**	**0.73**	**170**	S		**Sg**		**04 37 02.9**	**+0.8**
MASU	**Masugnsbyn**	**0.77**	**119**	P		**Pg**		**04 36 53.6**	**0.0**
KIF	**Kilpisjarvi**	**1.19**	**10**	PN		**Pn**		**04 37 03.4**	**+0.8**
	baz=192								
KIF				smax		smax		04 37 15.7	
	comp=Z,2.2nm,0.2s								
KIF				SB		**Sg**		**04 37 17.1**	**+0.1**
PAJU	**Pajala**	**1.38**	**125**	P		**Pg**		**04 37 04.3**	**-0.8**
PAJU				S		**Sg**		**04 37 22.7**	**-0.2**
HEF	**Hetta**	**1.40**	**64**	PG		**Pn**		**04 37 04.7**	**-0.9**
	baz=248								
HEF				smax		smax		04 37 21.7	
	comp=Z,1.4nm,0.2s								
HEF				SN		**Sb**		**04 37 24.0**	**-0.2**
ERTU	**Ertsjaerv**	**1.50**	**149**	P		**Pn**		**04 37 06.8**	**0.0**
ERTU	**Ertsjaerv**	**1.50**	**149**	PG		**Pb**		**04 37 07.4**	**+0.1**
	baz=326								
ERTU				SG		**Sn**		**04 37 27.5**	**+0.5**
KLF	**Kolari**	**1.55**	**111**	smax		smax		04 37 26.9	
	comp=Z,0.7nm,0.2s								
KLF				SN		**Sg**		**04 37 29.5**	**+0.9**
KTK1	**Kautokeino**	**1.62**	**42**	PN		**Pb**		**04 37 09.3**	**-0.2**
KTK1				SN		**Sg**		**04 37 32.3**	**+1.6**
HARU	**Harads**	**1.71**	**170**	P		**Pn**		**04 37 10.0**	**+0.3**
TRO	**Tromso**	**1.87**	**346**	SN		**Sb**		**04 37 37.2**	**-0.3**
TOF	**Tornio**	**2.39**	**136**	smax		smax		04 37 51.5	
	comp=Z,0.5nm,0.2s								
TOF				SG		**Sb**		**04 37 53.3**	**+0.9**
RNF	**Rovaniemi**	**2.56**	**116**	PB		**Pb**		**04 37 24.0**	**-1.6**
RNF				SG		**Sb**		**04 37 58.1**	**+0.6**
ARA0	**ARCESS Array S**	**2.57**	**46**	SG		**Sb**		**04 37 57.6**	**-0.2**

*IDC **19** 04:37:07.6±8.3,21°.98N×142°.95E,h120^{km}±76^{km}, mb3.5/14, mbtmp3.9/14, MS3.0/3, Error ellipse: s-maj=27.0km s-min=19.1km az=76.0*
*NEIC **19** 04:37:13.5±1.0,22°.10N±0°.1×142°.9E±0°.2,h173^{km}±6^{km}, mb4.1/19, Error ellipse: s-maj=22.1km s-min=17.6km az=66.0*

ISC 19 04:37:10.6±0.7,**21°.9N**±0°.1×**142°.8E**±0°.2,**h150**^{km},**n52**, σ0^{s}**69**/45,**mb4.1**/24,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.14**	**324**	P		**P**		**04 41 33.4**	**+0.4**
	2.2nm,0.7s,baz=151,slow=8.7,SNR=8.1								
KSRS				LR		LR		04 48 09.7	
	comp=Z,9.2nm,19.7s,baz=5.0,slow=33								
	2.2nm,0.7s								
H11N1	**WAKE ISLAND Hy**	**22.59**	**91**	T		T		05 05 08.1	
	baz=281,slow=75,SNR=6.9								
H11N2	**WAKE ISLAND Hy**	**22.59**	**91**	T		T		05 05 11.8	
	baz=281,slow=75,SNR=5.9								
H11N3	**WAKE ISLAND Hy**	**22.61**	**91**	T		T		05 05 09.3	
	baz=281,slow=75,SNR=5.6								
H11S3	**WAKE ISLAND Hy**	**22.64**	**94**	T		T		05 05 10.5	
	baz=284,slow=75,SNR=39								
H11S1	**WAKE ISLAND Hy**	**22.65**	**94**	T		T		05 05 11.3	
	baz=284,slow=75,SNR=26								
H11S2	**WAKE ISLAND Hy**	**22.66**	**94**	T		T		05 05 14.0	
	baz=284,slow=75,SNR=24								
SIJI	**Sorong**	**25.31**	**208**	LR		LR		04 50 17.5	
	comp=Z,86nm,22.0s,baz=160,slow=31								
SONM	**Songino Array**	**38.96**	**320**	P		**P**		**04 44 21.9**	**-0.3**
	0.8nm,0.7s,baz=132,slow=7.0,SNR=5.1								
	0.8nm,0.7s								
SONM	**Songino Array**	**38.96**	**320**	P		**P**		**04 44 21.7**	**-0.4**
WB0	**Warramunga Arr**	**42.25**	**192**	P		**P**		**04 44 48.8**	**-0.4**
WB0				IAmb		IAmb		04 45 05.4	
	comp=Z,6.8nm,1.4s								
WR8	**Warramunga Arr**	**42.41**	**192**	P		**P**		**04 44 51.7**	**+1.2**
WR8				IAmb		IAmb		04 44 55.4	
	comp=Z,7.9nm,1.2s								
WRA	**Warramunga Arr**	**42.43**	**192**	P		**P**		**04 44 50.6**	**0.0**
	comp=Z,0.5nm,0.7s,baz=15,slow=7.6,SNR=1.9								
	comp=Z,0.5nm,0.7s								
WRA	**Warramunga Arr**	**42.43**	**192**	P		**P**		**04 44 50.8**	**+0.1**
ASAR	**Alice Springs**	**46.14**	**191**	P		**P**		**04 45 20.8**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=9.6,slow=8.2,SNR=2.1								
ASAR				LR		LR		05 03 37.6	
	comp=Z,32nm,18.4s,baz=274,slow=34								
	comp=Z,0.3nm,0.7s								
ASAR	**Alice Springs**	**46.14**	**191**	P		**P**		**04 45 21.1**	**+0.9**
ZALV	**Zalesovo Beam**	**53.83**	**322**	P		**P**		**04 46 17.3**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=116,slow=6.8,SNR=7.0								
	comp=Z,1.9nm,0.6s								
ZALV	**Zalesovo Beam**	**53.83**	**322**	P		**P**		**04 46 17.1**	**-0.7**
MKAR	**Makanchi Array**	**54.31**	**313**	P		**P**		**04 46 22.0**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=93,slow=8.9,SNR=10.0								
	comp=Z,0.8nm,0.7s								
MKAR	**Makanchi Array**	**54.31**	**313**	P		**P**		**04 46 21.0**	**-0.4**
KURK	**Kurchatov**	**57.09**	**317**	P		**P**		**04 46 40.6**	**-0.5**
KURK				IAmb		IAmb		04 46 42.7	
	comp=Z,3.1nm,0.8s								
KURBB	**Kurchatov Arra**	**57.14**	**317**	P		**P**		**04 46 41.8**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=96,slow=7.8,SNR=34								
	comp=Z,3.5nm,0.7s								
D22K	**Ayikyak River**	**60.60**	**22**	P		**P**		**04 47 05.0**	**-0.1**
D22K				IAmb		IAmb		04 47 06.9	
	comp=Z,2.3nm,0.8s								
ILAR	**Eielson Array**	**61.99**	**27**	P		**P**		**04 47 13.0**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=264,slow=5.4,SNR=8.0								
	comp=Z,0.6nm,0.7s								
ILAR	**Eielson Array**	**61.99**	**27**	P		**P**		**04 47 13.5**	**-1.0**
BVAR	**Borovoye Array**	**62.29**	**319**	P		**P**		**04 47 17.4**	**+0.7**
	comp=Z,3.9nm,0.6s,baz=86,slow=7.6,SNR=13								
	comp=Z,3.9nm,0.6s								
C27K	**Jago River**	**63.88**	**22**	P		**P**		**04 47 27.1**	**+0.3**
BCAR	**Beaver Creek A**	**64.08**	**29**	P		**P**		**04 47 27.8**	**-0.6**
H27K	**Steamboat Moun**	**64.36**	**26**	P		**P**		**04 47 30.9**	**+0.8**
H27K				IAmb		IAmb		04 47 36.8	
	comp=Z,5.0nm,1.5s								
I28M	**Miner Creek**	**64.98**	**27**	P		**P**		**04 47 34.3**	**+0.1**
F28M	**Old Crow**	**65.10**	**24**	P		**P**		**04 47 35.3**	**+0.4**
E28M	**Babbage River**	**65.27**	**23**	P		**P**		**04 47 36.6**	**+0.7**
E28M				IAmb		IAmb		04 47 37.2	
	comp=Z,2.2nm,1.1s								
M29M	**Somme Creek**	**65.59**	**30**	P		**P**		**04 47 38.2**	**0.0**
G29M	**Pine Creek**	**65.79**	**25**	P		**P**		**04 47 40.3**	**+0.9**
G30M	**tAoh Zraii Nji**	**66.50**	**25**	P		**P**		**04 47 43.9**	**0.0**
G30M				IAmb		IAmb		04 47 51.9	
	comp=Z,5.3nm,1.5s								
F30M	**Barrier River**	**66.66**	**24**	P		**P**		**04 47 45.6**	**+0.8**
F30M				IAmb		IAmb		04 47 49.1	
	comp=Z,5.5nm,1.1s								
H31M	**Peel River**	**67.29**	**26**	P		**P**		**04 47 47.3**	**-1.6**
H31M				IAmb		IAmb		04 48 00.5	
	comp=Z,5.8nm,1.4s								
INK	**Inuvik**	**67.49**	**24**	P		**P**		**04 47 49.8**	**-0.2**
QRZ	**Quartz Range**	**68.26**	**156**	P		**P**		**04 47 54.2**	**-1.0**
P33M	**Teslin, Yukon**	**68.45**	**32**	P		**P**		**04 47 56.2**	**-0.1**
P33M				IAmb		IAmb		04 48 11.6	
	comp=Z,3.5nm,1.2s								
AB31	**Akbulak array**	**69.16**	**316**	P		**P**		**04 48 01.8**	**+1.0**
AB31				IAmb		IAmb		04 48 02.3	
	comp=Z,1.8nm,0.8s								
ABKAR	**Akbulak array**	**69.16**	**316**	P		**P**		**04 48 00.5**	**-0.3**
YKAW3	**Yellowknife Wh**	**76.38**	**28**	P		**P**		**04 48 42.8**	**-0.3**
YKA	**Yellowknife Ar**	**76.41**	**28**	P		**P**		**04 48 43.2**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=298,slow=6.3,SNR=11								
	comp=Z,0.4nm,0.7s								
YKA	**Yellowknife Ar**	**76.41**	**28**	P		**P**		**04 48 42.8**	**-0.5**
ARCES	**ARCESS Array B**	**78.61**	**341**	P		**P**		**04 48 55.5**	**+0.1**
	comp=Z,6.2nm,1.0s,baz=58,slow=5.6,SNR=4.2								
	comp=Z,6.2nm,1.0s								
ARCES	**ARCESS Array B**	**78.61**	**341**	P		**P**		**04 48 55.6**	**+0.3**
FINES	**FINESS Array B**	**82.84**	**334**	P		**P**		**04 49 17.8**	**-0.1**
	comp=Z,3.0nm,1.0s,baz=54,slow=4.9,SNR=3.5								
	comp=Z,3.0nm,1.0s								
FINES	**FINESS Array B**	**82.84**	**334**	P		**P**		**04 49 17.6**	**-0.3**
NVAR	**Mina Array Bea**	**83.26**	**51**	P		**P**		**04 49 22.2**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=283,slow=5.9,SNR=4.2								
	comp=Z,0.5nm,0.7s								
BRTR	**Keskin Array B**	**89.95**	**313**	P		**P**		**04 49 53.6**	**+0.2**
	comp=Z,4.4nm,0.5s,baz=2.9,slow=2.9,SNR=3.8								
	comp=Z,4.4nm,0.5s								
BRTR	**Keskin Array B**	**89.95**	**313**	P		**P**		**04 49 52.1**	**-1.2**

IDC 19 04:43:12.7±1.4,**22°.97S×69°.28E**,**h0**^{km},**mb3.7**/5, **mbtmp3.7**/5,**Error ellipse: s-maj=44.6km s-min=36.0km az=153.0**,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**15.54**	**12**	T		T		05 02 42.4	
	baz=192,slow=76,SNR=4.5								
H08S2	**Diego Garcia H**	**15.54**	**12**	T		T		05 02 42.2	
	baz=192,slow=76,SNR=5.9								
H08S3	**Diego Garcia H**	**15.56**	**12**	T		T		05 02 43.9	
	baz=192,slow=76,SNR=42								
H04N2	**CROZET ISLANDS**	**27.14**	**207**	T		T		05 17 28.1	
	baz=37,slow=74,SNR=139								
H04N1	**CROZET ISLANDS**	**27.14**	**207**	T		T		05 17 25.8	
	baz=37,slow=74,SNR=161								
H04N3	**CROZET ISLANDS**	**27.15**	**207**	T		T		05 17 25.2	
	baz=37,slow=74,SNR=135								
BOSA	**Boshof**	**39.87**	**252**	P		P		04 50 48.4	-0.1
	2.9nm,0.9s,baz=159,slow=14,SNR=2.3								
	2.9nm,0.9s								
ASAR	**Alice Springs**	**58.86**	**105**	P		P		04 53 13.7	-0.1
	0.4nm,0.8s,baz=254,slow=6.8,SNR=2.1								
	0.4nm,0.8s								
MKAR	**Makanchi Array**	**70.42**	**9**	P		P		04 54 28.5	-0.1
	0.7nm

BBOO					IAmb	IAmb	05 19 42.5		
	comp=Z,7.0nm,0.9s								
WR8	**Warramunga Arr**	**49.12**	**260**		P	**P**	**05 19 29.6**	**-1.0**	
WR8					IAmb	IAmb	05 19 38.4		
	comp=Z,8.3nm,1.1s								
AS31	**Alice Springs**	**49.19**	**255**			**P**	**05 19 30.7**	**-0.4**	
AS31					IAmb	IAmb	05 19 31.7		
	comp=Z,5.0nm,1.1s								
ASAR	**Alice Springs**	**49.19**	**255**		P	**P**	**05 19 30.6**	**-0.5**	
	comp=Z,15nm,0.9s,baz=87,slow=8.5,SNR=94								
ASAR					PcP	**PcP**	**05 20 55.6**	**+1.2**	
	comp=Z,1.6nm,0.7s,baz=98,slow=3.4,SNR=1.8								
	comp=Z,15nm,0.9s								
WB0	**Warramunga Arr**	**49.25**	**260**			**P**	**05 19 29.9**	**-1.7**	
WB0					IAmb	IAmb	05 19 54.4		
	comp=Z,6.4nm,0.8s								
WRA	**Warramunga Arr**	**49.28**	**260**		P	**P**	**05 19 30.5**	**-1.2**	
	comp=Z,1.8nm,0.4s,baz=97,slow=7.8,SNR=33								
WRA					PcP	**PcP**	**05 20 55.7**	**+1.0**	
	comp=Z,0.9nm,0.8s,baz=98,slow=3.8,SNR=1.7								
	comp=Z,1.8nm,0.4s								
WRA	**Warramunga Arr**	**49.28**	**260**			**P**	**05 19 29.9**	**-1.9**	
MTN	**Manton Dam**	**53.77**	**268**		P	**P**	**05 20 03.9**	**-1.4**	
FORT	**Forrest**	**53.86**	**246**		P	**P**	**05 20 05.5**	**-0.4**	
FORT					IAmb	IAmb	05 20 14.4		
	comp=Z,5.9nm,0.8s								
KNRA	**Kununurra**	**55.31**	**264**		P	**P**	**05 20 15.5**	**-1.1**	
RPN	**Rapa Nui**	**58.50**	**110**		LR	LR	05 41 31.1		
	comp=Z,132nm,20.1s,baz=309,slow=31								
BATI	**Baumata**	**61.52**	**269**		LR	LR	05 47 32.1		
	comp=Z,176nm,18.2s,baz=336,slow=36								
MORW	**Morawa**	**64.41**	**246**		P	**P**	**05 21 19.1**	**+0.1**	
MORW					IAmb	IAmb	05 21 20.1		
	comp=Z,8.8nm,1.1s								
JYT	**Yasato**	**70.94**	**322**		P	**P**	**05 21 58.8**	**-1.1**	
JAGI	**Jajag, Banyuwa**	**71.00**	**268**		P	**P**	**05 22 00.0**	**-0.9**	
ADK	**Adak**	**71.25**	**358**		P	**P**	**05 22 00.6**	**-0.9**	
MJAR	**Matsushiro Arr**	**72.33**	**321**		P	**P**	**05 22 06.3**	**-2.1**	
	comp=Z,1.2nm,0.3s,baz=151,slow=6.4,SNR=7.0								
	comp=Z,1.2nm,0.3s								
MJAR	**Matsushiro Arr**	**72.33**	**321**		IAmb	IAmb	05 22 14.1		
	comp=Z,2.1nm,0.8s								
LPIG	**La Paz**	**75.03**	**57**		LR	LR	05 50 22.1		
	comp=Z,119nm,18.0s,baz=232,slow=32								
PET	**Petropavlovsk**	**76.35**	**343**		P	**P**	**05 22 29.7**	**-1.7**	
NVAR	**Mina Array Bea**	**77.28**	**41**		P	**P**	**05 22 38.7**	**+1.4**	
	comp=Z,3.3nm,1.1s,baz=225,slow=8.7,SNR=14								
	comp=Z,3.3nm,1.1s								
KSRS	**Korea Array**	**79.35**	**316**		P	**P**	**05 22 48.5**	**0.0**	
	comp=Z,2.0nm,0.9s,baz=149,slow=5.9,SNR=4.7								
	comp=Z,2.0nm,0.9s								
KSAR	**Wonju Array Be**	**79.36**	**316**			**P**	**05 22 48.4**	**-0.2**	
M16K	**Timber Creek**	**81.15**	**7**		P	**P**	**05 22 58.2**	**+0.6**	
M16K					IAmb	IAmb	05 23 00.8		
	comp=Z,13nm,1.1s								
N19K	**Bonanza Creek**	**81.54**	**9**		P	**P**	**05 22 56.7**	**-3.1**	
N19K					IAmb	IAmb	05 23 00.6		
	comp=Z,6.5nm,1.1s								
K15K	**Wolf Creek Mou**	**82.14**	**5**			**P**	**05 23 01.8**	**-1.1**	
TXAR	**Lajitas Array**	**82.74**	**56**		P	**P**	**05 23 10.4**	**+3.5**	
	comp=Z,2.2nm,1.0s,baz=210,slow=7.2,SNR=8.1								
TXAR					LR	LR	05 53 28.5		
	comp=Z,76nm,18.6s,baz=76,slow=31								
	comp=Z,2.2nm,1.0s								
NJ2	**Nanjing**	**82.92**	**307**	*eP*		**P**	**05 23 08.0**	**+0.4**	
NJ2					pmax	pmax			
	comp=Z,4.0nm,0.5s								
NEW	**Newport**	**84.02**	**34**		LR	LR	05 56 37.3		
	comp=Z,196nm,18.1s,baz=160,slow=33								
BNX	**BinXian**	**84.42**	**323**	⇑P		**P**	**05 23 15.5**	**+0.5**	
BNX					pmax	pmax			
	comp=Z,5.0nm,1.1s								
CMIG	**Matias Romero**	**85.04**	**70**		LR	LR	05 53 29.4		
	comp=Z,99nm,19.4s,baz=123,slow=30								
PDAR	**Pinedale Array**	**85.21**	**41**		P	**P**	**05 23 21.4**	**+2.0**	
	comp=Z,0.6nm,0.9s,baz=202,slow=3.2,SNR=4.7								
	comp=Z,0.6nm,0.9s								
G18K	**Tagagawik**	**85.94**	**6**			**P**	**05 23 22.5**	**+0.3**	
CCB	**Clear Creek Bu**	**86.22**	**11**			**P**	**05 23 23.6**	**0.0**	
CCB					IAmb	IAmb	05 23 50.7		
	comp=Z,5.9nm,1.0s								
ILAR	**Eielson Array**	**86.50**	**11**		P	**P**	**05 23 25.2**	**+0.3**	
	comp=Z,1.3nm,1.0s,baz=230,slow=6.0,SNR=16								
	comp=Z,1.3nm,1.0s								
ELIB	**Princess Elisa**	**87.99**	**185**	*dP*		**P**	**05 23 30.9**	**-1.6**	
HNS	**HongShan**	**88.39**	**311**	⇑P		**P**	**05 23 36.6**	**+1.9**	
HNS					pmax	pmax			
	comp=Z,5.0nm,1.1s								
HHC	**Hu-ho-hao-te**	**92.07**	**313**	*eP*		**P**	**05 23 51.3**	**-0.7**	
HHC					pmax	pmax			
	comp=Z,11nm,0.6s								
HHC					pmax	pmax			
	comp=Z,130nm,5.1s								
YKA	**Yellowknife Ar**	**93.83**	**23**		P	**P**	**05 23 59.8**	**+0.4**	
	comp=Z,0.1nm,0.4s,baz=248,slow=5.2,SNR=4.1								
	comp=Z,0.1nm,0.4s								
CMAR	**Chiang Mai Arr**	**94.18**	**288**		P	**P**	**05 24 02.7**	**+0.6**	
	comp=Z,0.5nm,0.3s,baz=115,slow=2.9,SNR=6.2								
CMAR					LR	LR	06 02 35.5		
	comp=Z,16nm,22.0s,baz=295,slow=33								
	comp=Z,0.5nm,0.3s								
PZH	**PanZhiHua**	**94.39**	**296**		P	**P**	**05 24 02.5**	**-0.5**	
MKAR	**Makanchi Array**	**113.93**	**313**		PKiKP	**PKiKP**	**05 29 22.9**	**+1.3**	
	comp=Z,0.2nm,0.6s,baz=119,slow=1.8,SNR=4.7								
BVAR	**Borovoye Array**	**121.32**	**321**		PKP	**PKiKP**	**05 29 36.6**	**+0.9**	
	comp=Z,0.6nm,0.5s,baz=45,slow=2.2,SNR=2.9								
CLL	**Collm**	**148.00**	**353**	*e*	PKPbc	**PKPbc**	**05 30 28.0**	**+0.1**	
CLL				*i*	PKPmax		05 30 40.8		
	comp=Z,21nm,1.4s								
BRG	**Berggiesshubel**	**148.30**	**351**	*e*	PKP	**PKPab**	**05 30 31.8**	**0.0**	
BRG					Amp		05 30 32.9		
	comp=Z,10nm,1.3s								
BRTR	**Keskin Array B**	**149.49**	**317**		PKPbc	**PKiKP**	**05 30 33.7**	**+0.3**	
	comp=Z,2.4nm,0.8s,baz=130,slow=5.1,SNR=12								
BRTR	**Keskin Array B**	**149.49**	**317**			**PKiKP**	**05 30 34.4**	**+0.9**	
KHC	**Kasperske Hory**	**150.05**	**351**	*e*	PKPAB	**PKiKP**	**05 30 36.0**	**+1.9**	
GERES	**GERESS Array B**	**150.31**	**351**		PKPbc	**PKiKP**	**05 30 35.1**	**+0.4**	
	comp=Z,0.4nm,0.5s,baz=64,slow=2.3,SNR=4.2								
CONA	**Conrad Observa**	**150.82**	**348**	*e*	PKP	**PKPbc**	**05 30 33.9**	**-1.3**	
	comp=Z,5.8nm,1.1s								
RONA	**Rosalia, Austr**	**150.95**	**347**	*e*	PKiKP	**PKPbc**	**05 30 34.8**	**-0.6**	
	comp=Z,3.5nm,0.9s								
MMAI	**Mount Meron Ar**	**151.26**	**303**		PKPbc	**PKiKP**	**05 30 39.0**	**+1.8**	
	comp=Z,3.7nm,0.7s,baz=36,slow=12,SNR=3.1								
BIOA	**Bad Ischl, Aus**	**151.45**	**350**	*e*	PKP	**PKPbc**	**05 30 35.5**	**-1.1**	
	comp=Z,3.9nm,1.1s								
KBA	**Koelnbreinsper**	**152.09**	**351**	*e*	PKiKP	**PKPbc**	**05 30 37.4**	**-0.9**	
	comp=Z,0.1nm,0.3s								

GCG ***19*** *05:13:36.2±0.7, 13.˚56N×89.˚01W, h147km±9km, MD4.1, Presumed earthquake*
CATAC ***19*** *05:13:37.6±0.4, 14.˚4N×88.˚9W, h133km±2km, M2.8/23, MLv2.8/23, Error ellipse: s-maj=8.3km s-min=3.4km az=22.0, confirmed*
SNET ***19*** *05:13:38.9±1.6, 13.˚64N×89.˚00W, h129km, ML3.0, Presumed earthquake*

ISC 19 05:13:37.5±1.9, 13.˚55N±0.˚08×89.˚01W±0.˚05, h141km±10km, n47, σ0.˚75/71, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.09**	**326**	*eP*	**Pn**	**05 13 56.5**	**-0.2**
LFRS				*eS*	**Sn**	**05 14 11.8**	**+0.6**
COEG	**Centro de Oper**	**0.14**	**59**	P	**Pn**	**05 13 55.9**	**-0.8**
COEG				S	**Sn**	**05 14 11.5**	**+0.3**
PAVA	**Las Pavas**	**0.18**	**22**	P	**Pn**	**05 13 56.5**	**-0.3**
PAVA				S	**Sn**	**05 14 11.7**	**+0.3**
TECO	**Alcaldia de Te**	**0.22**	**92**	P	**Pn**	**05 13 56.4**	**-0.4**
TECO				S	**Sn**	**05 14 11.3**	**0.0**
UDBS	**Universidad Do**	**0.22**	**320**	P	**Pn**	**05 13 56.8**	**0.0**
UDBS				S	**Sn**	**05 14 12.0**	**+0.5**
IGN	**Direccin Gen**	**0.23**	**317**	P	**Pn**	**05 13 56.8**	**-0.1**
IGN				S	**Sn**	**05 14 11.3**	**-0.2**
SEMO	**Seminario San**	**0.26**	**307**	P	**Pn**	**05 13 56.4**	**-0.5**
SEMO				S	**Sn**	**05 14 11.7**	**0.0**
UEES	**Universidad Ev**	**0.28**	**307**	P	**Pn**	**05 13 56.7**	**-0.3**
UEES				S	**Sn**	**05 14 11.7**	**-0.1**
LALI	**Alcalda de L**	**0.31**	**259**	P	**Pn**	**05 13 56.3**	**-0.7**
LALI				S	**Sn**	**05 14 12.1**	**+0.4**
LALI	**Alcalda de L**	**0.31**	**259**	*eP*	**Pn**	**05 13 56.7**	**-0.3**
LALI				*eS*	**Sn**	**05 14 11.8**	**+0.1**
LALI	**Alcalda de L**	**0.31**	**259**	*i* P	**Pn**	**05 13 56.7**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.31**	**60**	P	**Pn**	**05 13 56.9**	**-0.2**
SCLA				S	**Sn**	**05 14 12.9**	**+1.0**
BOQS	**Boqueron**	**0.33**	**305**	*eP*	**Pn**	**05 13 57.6**	**+0.2**
PMON	**Piamonte**	**0.34**	**299**	P	**Pn**	**05 13 57.6**	**+0.3**
PMON				S	**Sn**	**05 14 13.4**	**+1.2**
JAYA	**Jayaque - finc**	**0.44**	**284**	P	**Pn**	**05 13 57.2**	**-0.5**
JAYA	**Jayaque - finc**	**0.44**	**284**	*eP*	**Pn**	**05 13 57.4**	**-0.4**
JAYA				*eS*	**Sn**	**05 14 13.0**	**0.0**
JAYA	**Jayaque - finc**	**0.44**	**284**	*i* P	**Pn**	**05 13 57.2**	**-0.5**
JAYA				*i* S	**Sn**	**05 14 13.1**	**+0.1**
CEDA	**San Andres**	**0.46**	**304**	P	**Pn**	**05 13 59.2**	**+1.6**
CEDA				S	**Sn**	**05 14 13.0**	**+0.1**
LLGN	**La Laguna**	**0.62**	**6**	P	**Pn**	**05 13 58.0**	**-0.6**
LLGN				S	**Sn**	**05 14 14.1**	**-0.6**
CEVE	**Cerro Verde**	**0.66**	**295**	P	**Pn**	**05 13 59.7**	**+0.6**
CEVE				S	**Sn**	**05 14 15.3**	**-0.1**
CEVE	**Cerro Verde**	**0.66**	**295**	*eS*	**Sn**	**05 14 16.9**	**+1.5**
PACA	**Pacayal**	**0.67**	**96**	P	**Pn**	**05 13 58.9**	**-0.1**
PACA				S	**Sn**	**05 14 16.0**	**+0.8**
UNIC	**Universidad Ca**	**0.68**	**310**	P	**Pn**	**05 13 58.2**	**-0.8**
UNIC				S	**Sn**	**05 14 14.7**	**-0.6**
RANC	**El Ranchito**	**0.71**	**99**	P	**Pn**	**05 13 59.2**	**-0.1**
RANC				S	**Sn**	**05 14 16.5**	**+0.8**
BLLM	**Bellamira**	**0.76**	**98**	*eP*	**Pn**	**05 13 59.4**	**-0.2**
CNRM	**Centro Naciona**	**0.82**	**95**	P	**Pn**	**05 13 59.1**	**-0.8**
CNRM				S	**Sn**	**05 14 16.9**	**0.0**
NUBE	**Las Nubes**	**0.83**	**295**	P	**Pn**	**05 13 59.9**	**-0.3**
NUBE				S	**Sn**	**05 14 17.0**	**-0.4**
NUBE	**Las Nubes**	**0.83**	**295**	*i* P	**Pn**	**05 13 59.8**	**-0.4**
SLOZ	**Alcaldia de Sa**	**0.89**	**302**	P	**Pn**	**05 14 00.2**	**-0.3**
MTO3	**Montecristo**	**0.91**	**338**	P	**Pn**	**05 14 00.5**	**-0.4**
MTO3				S	**Sn**	**05 14 17.7**	**-1.1**
MTO3	**Montecristo**	**0.91**	**338**	*i* P	**Pn**	**05 14 00.4**	**-0.6**
FAME	**Alcaldia de Sa**	**1.02**	**287**	P	**Pn**	**05 14 00.9**	**-0.7**
ESQI	**Esquipulas**	**1.06**	**342**	P	**Pn**	**05 14 01.9**	**-0.2**
ZAFR2	**Estanzuela, Za**	**1.08**	**342**	*i* P	**Pn**	**05 14 06.4**	**+4.2**
LCND	**La Caada**	**1.11**	**102**	P	**Pn**	**05 14 02.1**	**-0.4**
LCND	**La Caada**	**1.11**	**102**	*eP*	**Pn**	**05 14 02.3**	**-0.1**
MARCA	**Marcala la Paz**	**1.12**	**57**	P	**Pn**	**05 14 02.2**	**-0.5**
MARCA	**Marcala la Paz**	**1.12**	**57**	*i* P	**Pn**	**05 14 02.2**	**-0.5**
SARH	**Santa Rosa de**	**1.25**	**11**	P	**Pn**	**05 14 03.6**	**-0.2**
SARH	**Santa Rosa de**	**1.25**	**11**	*i* P	**Pn**	**05 14 03.4**	**-0.4**
CSGN	**Cosiguina Volc**	**1.52**	**112**	S	**Sn**	**05 14 28.9**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.76**	**73**	P	**Pn**	**05 14 09.1**	**-0.3**
APG	**El Apazote**	**2.02**	**316**	*i* P	**Pn**	**05 14 12.4**	**-0.2**
YUSH	**Yuscaran**	**2.14**	**79**	P	**Pn**	**05 14 13.3**	**-0.6**
HERN	**Volcan Telica**	**2.32**	**113**	S	**Sn**	**05 14 45.3**	**-0.3**
LIMN	**Finca el Limon**	**2.62**	**100**	P	**Pn**	**05 14 19.5**	**-0.2**
LIMN				S	**Sn**	**05 14 53.0**	**+0.8**
COPN	**Copaltepe**	**2.72**	**120**	P	**Pn**	**05 14 21.4**	**+0.4**

AFAD 19 05:24:12.0, 37.˚86N×29.˚58E, h7km±6km, ML1.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INCE	**Denizli-Bozkur**	**0.15**	**182**	P	Pg	05 24 14.6	-0.5
INCE				S	Sg	05 24 18.8	+1.7
INCE				IAML		05 24 19.0	
	comp=N,63nm,0.3s						
INCE				IAML		05 24 21.0	
	comp=E,63nm,0.2s						
INCE	**Denizli-Bozkur**	**0.15**	**182**	P	Pg	05 24 14.9	-0.2
INCE				S	Sg	05 24 19.0	+1.9
INCE				IAML		05 24 21.0	
	comp=E,63nm,0.2s						
PASA	**Karahalli, USA**	**0.50**	**351**	P	Pg	05 24 21.3	-0.4
PASA				S	Sb	05 24 29.6	-1.1
PASA				IAML		05 24 32.0	
	comp=E,9.0nm,0.3s						
PASA				IAML		05 24 33.0	
	comp=N,9.7nm,0.2s						
PASA	**Karahalli, USA**	**0.50**	**351**	P	Pg	05 24 21.4	-0.3
PASA				S	Sg	05 24 29.4	+1.2
PASA				IAML		05 24 31.0	
	comp=E,9.3nm,0.5s						
PASA				IAML		05 24 31.0	
	comp=N,8.3nm,0.2s						
KZIL	**AFYON_Kizioren**	**0.60**	**48**	P	Pg	05 24 22.9	-0.6
KZIL				S	Sb	05 24 32.7	-0.9
KZIL				IAML		05 24 35.0	
	comp=E,14nm,0.4s						
KZIL				IAML		05 24 36.0	
	comp=N,14nm,0.4s						
KZIL	**AFYON_Kizioren**	**0.60**	**48**	P	Pg	05 24 22.5	-1.1
KZIL				S	Sb	05 24 33.0	-0.6
KZIL				IAML		05 24 35.0	
	comp=E,14nm,0.4s						
GOLH	**Golhisar**	**0.62**	**182**	P	Pg	05 24 23.2	-0.7
GOLH				IAML		05 24 34.0	
	comp=E,4.6nm,0.7s						
GOLH				S	Sb	05 24 34.2	+0.1
TAVA	**DENIZLI_Tavas**	**0.66**	**234**	P	Pg	05 24 24.2	-0.4
TAVA				IAML		05 24 33.0	
	comp=N,6.0nm,0.9s						
TAVA				S	Sb	05 24 35.1	-0.2
TAVA				IAML		05 24 36.0	
	comp=E,3.5nm,0.6s						

NIED ***19*** *05:27:44.4, 23.˚86N×121.˚61E, h0km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr2.04; Mθθ-0.60; Mφφ-1.44; Mrθ4.63; Mrφ-1.17; Mθφ3.31; Fault plane solution: M0 6.09000×10^15 NP1: φs197.00000°, δ12.00000°, λ55.00000°. NP2: φs53.00000°, δ80.00000°, λ97.00000°.*
JMA ***19*** *05:27:44.4±0.1, 23.˚9N±0.˚2×121.˚6E±0.˚8, h0km, MV4.2/14, TAIWAN REGION*
TAP ***19*** *05:27:45.1, 23.˚87N×121.˚55E, h9km, ML4.8, B*
ASIES ***19*** *05:27:45.5, 23.˚87N×121.˚56E, h7km, Mw4.4, Fault plane solution: NP1: φs122.00000°, δ5.00000°, λ-6.00000°. NP2: φs218.00000°, δ89.00000°, λ-95.00000°.*
NEIC ***19*** *05:27:45.8, 23.˚84N×121.˚58E, h10km*
NEIC ***19*** *05:27:45.7±2.6, 23.˚83N±0.˚02×121.˚59E±0.˚04, h10km±1km, mb4.9/65, Mwr4.5/18, Error ellipse: s-maj=6.3km s-min=3.3km az=297.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr0.47; Mθθ-0.08; Mφφ-0.38; Mrθ4.38; Mrφ-0.33; Mθφ6.28; Fault plane solution: M0 7.67000×10^15 NP1: φs208.99000°, δ1.99000°, λ84.10000°. NP2: φs34.89000°, δ88.02000°, λ90.20000°. Principal axes: T 7.6074, Plg47.0000°, Azm205.0000°; N 0.1247, Plg0.0000°, Azm215.0000°; P -7.7321, Plg43.0000°, Azm125.0000°;*
BJI ***19*** *05:27:45.4, 23.˚87N×121.˚59E, h9km, mB4.8/18, mb4.2/50, ML4.7/7, Ms4.7/61, Ms7 4.6/60*
IDC ***19*** *05:27:49.4±2.5, 23.˚78N×121.˚80E, h44km±23km, mb3.9/19, mbtmp4.2/24, ML3.9/5, MS3.8/24, Error ellipse: s-maj=16.8km s-min=12.6km az=59.0*

ISC 19 05:27:45.9±0.6, 23.˚85N±0.˚01×121.˚59E±0.˚02, h14km±3km, n333, σ1§42/431, mb4.7/62, MS4.0/26, 10C-36D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.02**	**15**	*i* P	**Pg**	**05 27 47.7**	**-0.6**
TEYL				*i* S	**Sg**	**05 27 50.0**	**+0.1**
SHUL	**Shoufeng**	**0.07**	**204**	*i* P	**Pg**	**05 27 48.1**	**-0.6**
SHUL				S	**Sg**	**05 27 50.2**	**-0.3**
HWA	**Hwalien**	**0.13**	**5**	*i* P	**Pg**	**05 27 48.6**	**-0.7**
HWA				*eS*	**Sg**	**05 27 51.3**	**-0.5**
ETM	**Tongmen**	**0.15**	**322**	*i* P	**Pg**	**05 27 48.1**	**-1.6**
ETM				S	**Sg**	**05 27 50.0**	**-2.2**
TEGC	**Jichi Village**	**0.15**	**199**	⇑*i* P	**Pg**	**05 27 49.5**	**-0.1**
TEGC				*eS*	**Sg**	**05 27 52.8**	**+0.7**
ESL	**Shilin**	**0.15**	**257**	⇓*i* P	**Pg**	**05 27 48.0**	**-1.6**
ESL				S	**Sg**	**05 27 49.9**	**-2.4**
TWD	**Chiawan**	**0.23**	**1**	⇓*i* P	**Pg**	**05 27 49.9**	**-1.1**
TWD				S	**Sg**	**05 27 50.5**	**-0.9**
WARBT	**Fenglin Townsh**	**0.23**	**235**	⇓*i* P	**Pg**	**05 27 49.5**	**-1.4**
WARBT				S	**Sg**	**05 27 53.0**	**-1.4**
EGFH	**Guangfu**	**0.23**	**220**	*eP*	**Pg**	**05 27 50.1**	**-0.9**
EGFH				*eS*	**Sg**	**05 27 53.7**	**-0.8**
LXIB	**Xiulin Townshi**	**0.24**	**316**	⇓*i* P	**Pg**	**05 27 49.6**	**-1.6**
LXIB				S	**Sg**	**05 27 52.8**	**-1.9**
ETL	**Fush Village**	**0.31**	**5**	⇓P	**Pg**	**05 27 51.2**	**-1.2**
ETL				*eS*	**Sg**	**05 27 55.6**	**-1.1**
NACB	**Ninganchiao**	**0.32**	**0**		**Pg**	**05 27 51.1**	**-1.5**
NACB				Sg	**Sg**	**05 27 55.5**	**-1.5**
NACB	**Ninganchiao**	**0.32**	**0**	P	**Pg**	**05 27 50.9**	**-1.7**
NACB	**Ninganchiao**	**0.32**	**0**	S	**Sg**	**05 27 55.8**	**-1.3**
NACB	**Ninganchiao**	**0.32**	**0**	⇓*i* P	**Pg**	**05 27 51.3**	**-1.3**
NACB				S	**Sg**	**05 27 55.4**	**-1.7**
ETLH	**Xiulin Townshi**	**0.37**	**344**	⇓P	**Pg**	**05 27 52.0**	**-1.5**
ETLH				*eS*	**Sg**	**05 27 57.1**	**-1.4**
HGSD	**Ruisui**	**0.39**	**204**	*eP*	**Pb**	**05 27 53.9**	**-0.7**
OWD	**Renai**	**0.40**	**285**	⇓*i* P	**Pg**	**05 27 52.5**	**-1.4**
OWD				*eS*	**Sg**	**05 27 57.7**	**-1.6**
EHYH	**Wanrong**	**0.42**	**213**	*eP*	**Pg**	**05 27 53.4**	**-0.9**
EHYH				*eS*	**Sg**	**05 27 59.1**	**-0.8**
WHF	**Hehuan Shan**	**0.42**	**315**	⇓*i* P	**Pg**	**05 27 53.0**	**-1.4**
WHF				S	**Sg**	**05 27 58.4**	**-1.8**
EHY	**Hungye**	**0.42**	**216**	*eP*	**Pg**	**05 27 53.3**	**-1.1**
EHY				*eS*	**Sg**	**05 27 59.1**	**-0.9**
VWDT	**VWDT**	**0.42**	**257**	⇓*i* P	**Pg**	**05 27 53.5**	**-0.9**
VWDT				*eS*	**Sg**	**05 27 58.8**	**-1.3**
WUSB	**Renai**	**0.46**	**288**	⇓*i* P	**Pg**	**05 27 53.9**	**-1.1**
WUSB				S	**Sg**	**05 27 59.7**	**-1.5**
EHP	**Heping Village**	**0.48**	**16**	*eP*	**Pg**	**05 27 54.9**	**-0.6**
EAHA	**Aohua**	**0.50**	**16**	*eP*	**Pg**	**05 27 55.0**	**-0.8**
EAHA				*eS*	**Sg**	**05 28 02.0**	**-0.4**
FUSS	**Fushou**	**0.51**	**321**	⇓P	**Pg**	**05 27 54.9**	**-1.1**
FUSS				*eS*	**Sg**	**05 28 01.9**	**-1.0**
YULB	**Yu-li**	**0.53**	**211**		**Pg**	**05 27 56.0**	**-0.4**
YULB	**Yu-li**	**0.53**	**211**	P	**Pg**	**05 27 55.2**	**-1.1**
YULB	**Yu-li**	**0.53**	**211**	S	**Sg**	**05 28 01.8**	**-1.6**
YULB	**Yu-li**	**0.53**	**211**	*eP*	**Pg**	**05 27 55.3**	**-1.1**
YULB				*eS*	**Sg**	**05 28 02.6**	**-0.8**
ECBN	**Changbin**	**0.55**	**194**	*eP*	**Pb**	**05 27 56.7**	**-0.6**
ECBN				*eS*	**Sb**	**05 28 06.2**	**+1.2**
TWT	**Tachien**	**0.55**	**317**	⇓*i* P	**Pg**	**05 27 56.0**	**-0.9**
TWT				*eS*	**Sg**	**05 28 03.1**	**-1.2**
TWF1	**Yuli**	**0.56**	**209**	*eP*	**Pg**	**05 27 56.0**	**-1.0**
TDCB	**Techi**	**0.56**	**315**	⇓*i* P	**Pg**	**05 27 56.0**	**-1.1**
TDCB				S	**Sg**	**05 28 01.8**	**-1.8**
SSLB	**Suanglung**	**0.59**	**264**		**Pg**	**05 27 56.3**	**-1.2**
SSLB				Sg	**Sg**	**05 28 02.8**	**-2.5**
SSLB	**Suanglung**	**0.59**	**264**	P	**Pg**	**05 27 55.9**	**-1.6**
SSLB	**Suanglung**	**0.59**	**264**	S	**Sg**	**05 28 04.2**	**-1.1**
SSLB	**Suanglung**	**0.59**	**264**	⇓*i* P	**Pg**	**05 27 56.2**	**-1.2**
SSLB				S	**Sg**	**05 28 03.4**	**-1.9**
ENA	**Nanau**	**0.59**	**13**	*eP*	**Pg**	**05 27 57.0**	**-0.6**
ENA				*eS*	**Sb**	**05 28 05.8**	**-0.6**
WPL	**Puli Township**	**0.60**	**286**	*eP*	**Pg**	**05 27 56.8**	**-1.0**
WPL				*eS*	**Sg**	**05 28 04.8**	**-1.0**
NNSB	**Datong**	**0.61**	**342**	⇓*i* P	**Pg**	**05 27 56.7**	**-1.1**
NNSB				S	**Sg**	**05 28 04.3**	**-1.7**
NNS	**Nan Shan**	**0.62**	**341**	⇓P	**Pg**	**05 27 57.0**	**-1.2**
NNS				*eS*	**Sg**	**05 28 05.1**	**-1.3**
SMLT	**Sun Moon Lake**	**0.64**	**273**	⇓*i* P	**Pg**	**05 27 57.3**	**-1.1**
SMLT				*i* S	**Sg**	**05 28 05.8**	**-1.0**
DPDB	**Guoxing**	**0.64**	**287**	P	**Pg**	**05 27 57.5**	**-0.9**
DPDB				*eS*	**Sg**	**05 28 06.3**	**-0.5**
TYC	**Yuchr**	**0.68**	**275**	⇓*i* P	**Pg**	**05 27 57.8**	**-1.3**
TYC				*eS*	**Sg**	**05 28 06.3**	**-1.8**
CHKH	**Chenggong**	**0.68**	**195**	⇓*eP*	**Pb**	**05 27 59.1**	**-0.5**
CHKH				*eS*	**Sn**	**05 28 10.6**	**-1.0**
LATG	**Datong**	**0.69**	**355**	⇓*i* P	**Pg**	**05 27 58.1**	**-1.3**
LATG				*eS*	**Sg**	**05 28 07.6**	**-0.8**
YUS	**Yu-Shan**	**0.69**	**239**	*eP*	**Pg**	**05 27 58.9**	**-0.6**
YUS				*eS*	**Sg**	**05 28 08.3**	**-0.3**
WHYT	**Xinyi Township**	**0.69**	**257**	*eP*	**Pg**	**05 27 58.8**	**-0.7**

TWA	**Mucha**	**1.13**	**360**	*eP*		**Pg**	**05 28 06.7**	**-1.0**
TWA				*eS*		**Sg**	**05 28 21.0**	**-1.3**
CHY	**Chiayi**	**1.13**	**252**	*eP*		**Pn**	**05 28 07.5**	**+0.2**
CHY				*eS*		**Sn**	**05 28 22.6**	**-0.1**
RLNB	**Erlin**	**1.13**	**272**	*eP*		**Pg**	**05 28 05.9**	**-1.8**
RLNB				S		**Sn**	**05 28 22.9**	**+0.2**
TWG	**Pinlang**	**1.13**	**205**			**Pg**	**05 28 05.4**	**-2.3**
TWG	**Pinlang**	**1.13**	**205**	*eP*		**Pg**	**05 28 04.8**	**-2.9**
TWGBT	**Beinan**	**1.13**	**205**	*eP*		**Pg**	**05 28 05.1**	**-2.6**
TIPB	**Shuangxi**	**1.14**	**11**	*eP*		**Pg**	**05 28 06.8**	**-1.1**
TIPB				*eS*		**Sb**	**05 28 22.1**	**-0.1**
TTN	**Taitung**	**1.16**	**201**	*eP*		**Pb**	**05 28 07.5**	**-0.4**
TWK	**Hsinying**	**1.17**	**240**	P		**Pn**	**05 28 08.1**	**+0.1**
TWK				S		**Sn**	**05 28 23.9**	**+0.2**
NCUH	**Zhongli**	**1.17**	**342**⇑	*eP*		**Pn**	**05 28 08.4**	**+0.4**
NCU	**National Centr**	**1.18**	**342**	*eP*		**Pb**	**05 28 06.7**	**-1.4**
NCU				*eS*		**Sb**	**05 28 23.3**	**+0.1**
NTY	**Taoyuan**	**1.18**	**347**	*eP*		**Pn**	**05 28 08.2**	**+0.1**
CHN1	**Nanshi**	**1.18**	**236**	*eP*		**Pn**	**05 28 08.2**	**0.0**
CHN1				S		**Sn**	**05 28 24.2**	**+0.2**
SNST	**Tainan City**	**1.18**	**238**	*eP*		**Pn**	**05 28 10.2**	**+2.1**
SNST				*eS*		**Sn**	**05 28 25.1**	**+1.0**
NHY	**Taipei**	**1.19**	**359**	*eP*		**Pn**	**05 28 08.1**	**0.0**
TAP	**Taipei**	**1.19**	**356**	*eP*		**Pn**	**05 28 08.4**	**+0.3**
TAP				*eS*		**Sb**	**05 28 23.5**	**-0.1**
SGST	**Jiashian**	**1.20**	**231**	*eP*		**Pb**	**05 28 07.6**	**-0.9**
SGST				*eS*		**Sn**	**05 28 24.6**	**+0.1**
WTCT	**Ta-ch'eng**	**1.20**	**271**	*eP*		**Pn**	**05 28 08.4**	**0.0**
WTCT				*eS*		**Sn**	**05 28 24.6**	**+0.1**
TWB1	**Santiao Chiao**	**1.21**	**17**	*eP*		**Pb**	**05 28 08.3**	**-0.3**
TWB1				*eS*		**Sb**	**05 28 23.6**	**-0.6**
NWF	**Wu-fen Shan**	**1.23**	**8**	*eP*		**Pg**	**05 28 09.0**	**-0.6**
NWF				*eS*		**Sg**	**05 28 24.6**	**-1.0**
WFSB	**Wu-fen Shan**	**1.23**	**8**	*eP*		**Pb**	**05 28 08.6**	**-0.4**
WFSB				*eS*		**Sb**	**05 28 24.6**	**-0.2**
WMLT	**Mailiao**	**1.25**	**268**	*eP*		**Pg**	**05 28 09.1**	**-1.0**
TWS1	**Kuangyinshan**	**1.26**	**353**	*eP*		**Pg**	**05 28 09.5**	**-0.6**
TWS1				*eS*		**Sn**	**05 28 26.6**	**+0.8**
SXI1	**Grass Mountain**	**1.27**	**12**	*eP*		**Pn**	**05 28 09.2**	**-0.2**
SXI1				*eS*		**Sn**	**05 28 26.9**	**+0.7**
WSF	**Szhu**	**1.27**	**261**	*eP*		**Pg**	**05 28 09.5**	**-1.0**
WSF				*eS*		**Sn**	**05 28 27.0**	**+0.8**
YM01	**YM01**	**1.29**	**359**	*eP*		**Pb**	**05 28 09.7**	**-0.4**
YM01				S		**Sn**	**05 28 26.8**	**0.0**
WSL	**Shuilin Townsh**	**1.29**	**256**	*eP*		**Pb**	**05 28 09.7**	**-0.3**
WSL				*eS*		**Sn**	**05 28 26.9**	**+0.1**
TNOU	**National Taiwa**	**1.31**	**7**	*eP*		**Pn**	**05 28 09.7**	**-0.1**
TNOU				*eS*		**Sn**	**05 28 27.2**	**+0.1**
ZUZH	**Zhuzihu**	**1.31**	**358**	*eP*		**Pn**	**05 28 09.0**	**-0.9**
ZUZH				*eS*		**Sn**	**05 28 27.4**	**+0.2**
NTST	**Danshui**	**1.32**	**354**	*eP*		**Pg**	**05 28 10.4**	**-0.8**
NTST				*eS*		**Sn**	**05 28 28.7**	**+1.3**
ANP	**Anpu**	**1.33**	**357**	*eP*		**Pn**	**05 28 10.2**	**0.0**
ANP				*eS*		**Sn**	**05 28 28.2**	**+0.3**
YM08	**YM08**	**1.33**	**360**	*eP*		**Pn**	**05 28 09.9**	**-0.3**
CHN8	**Yiju**	**1.36**	**249**	*eP*		**Pn**	**05 28 10.4**	**-0.1**
CHN8				*eS*		**Sg**	**05 28 29.9**	**0.0**
CHN3	**Shinhua**	**1.36**	**236**	*eP*		**Pg**	**05 28 12.4**	**+0.2**
JYNG	**Yonagunijimaku**	**1.37**	**64**	*eP*		**Pn**	**05 28 10.4**	**-0.4**
JYNG				*eS*		**Sn**	**05 28 29.4**	**+0.6**
ECL	**Taimali**	**1.38**	**205**	*eP*		**Pn**	**05 28 08.3**	**-2.5**
SSHA	**Shanhua**	**1.39**	**240**	*eP*		**Pg**	**05 28 12.3**	**-0.4**
SSHA				*eS*		**Sg**	**05 28 31.2**	**+0.4**
SHHT	**Tainan City**	**1.41**	**234**	*eP*		**Pg**	**05 28 13.3**	**+0.3**
SSD	**Sandimen**	**1.41**	**219**	*eP*		**Pn**	**05 28 11.3**	**+0.1**
SSD				*eS*		**Sg**	**05 28 31.6**	**+0.2**
TWV	**Chenhua**	**1.42**	**0**	*eP*		**Pn**	**05 28 11.3**	**-0.1**
YOJ	**Yonaguni jima**	**1.43**	**65**			**Pn**	**05 28 10.7**	**-0.8**
YOJ	**Yonaguni jima**	**1.43**	**65**	P		**Pn**	**05 28 11.3**	**-0.2**
YOJ	**Yonaguni jima**	**1.43**	**65**	P		**Pn**	**05 28 11.6**	**+0.1**
YOJ				*eS*		**Sn**	**05 28 30.5**	**+0.3**
YOJ	**Yonaguni jima**	**1.43**	**65**	P		**Pn**	**05 28 11.1**	**-0.4**
SCLT	**Jiali**	**1.45**	**243**	*eP*		**Pn**	**05 28 11.5**	**-0.2**
SCLT				*eS*		**Sg**	**05 28 32.2**	**-0.4**
TWM1	**Shoushan**	**1.48**	**227**	*eP*		**Pg**	**05 28 14.2**	**-0.2**
SGLT	**Jiouru**	**1.51**	**222**	*eP*		**Pn**	**05 28 12.8**	**+0.2**
MASBT	**Mashibuluo**	**1.52**	**216**	*eP*		**Pn**	**05 28 12.2**	**-0.5**
MASBT				*eS*		**Sg**	**05 28 35.4**	**+0.7**
TSCK	**Chigu Township**	**1.55**	**243**	*eS*		**Sg**	**05 28 35.1**	**-0.7**
EAST	**Anshuo**	**1.61**	**205**	*eP*		**Pn**	**05 28 12.4**	**-1.7**
TAW	**Tawu**	**1.62**	**203**	*eP*		**Pn**	**05 28 14.2**	**+0.2**
TAWH	**Dawu Township**	**1.64**	**203**	*eP*		**Pn**	**05 28 14.7**	**+0.4**
WSSB	**Gushan**	**1.71**	**226**	*eP*		**Pb**	**05 28 16.4**	**-0.9**
SCZT	**Fangliau**	**1.72**	**212**	*eP*		**Pn**	**05 28 16.2**	**+0.7**
LAY	**Lan-yu**	**1.80**	**181**	*eP*		**Pn**	**05 28 13.9**	**-2.8**
PCYT	**Pengchaiyu**	**1.82**	**14**	*eP*		**Pb**	**05 28 17.9**	**-1.3**
LYUB	**Lan-yu**	**1.84**	**180**	*eP*		**Pn**	**05 28 14.3**	**-2.8**
WDGT	**Dungji**	**1.87**	**252**	*eP*		**Pn**	**05 28 17.4**	**-0.2**
WDGT				*eS*		**Sb**	**05 28 42.1**	**-1.0**
PHUB	**P'eng-hu**	**1.88**	**260**	P		**Pn**	**05 28 18.1**	**+0.4**
PNG	**Penghu**	**1.89**	**262**	*eP*		**Pn**	**05 28 17.9**	**+0.1**
PNG				*eS*		**Sn**	**05 28 41.6**	**+0.1**
SMST	**Manzhou Townsh**	**1.95**	**201**	*eP*		**Pn**	**05 28 18.4**	**-0.3**
HEN	**Hengchun**	**2.00**	**203**	*eP*		**Pb**	**05 28 20.6**	**-1.4**
IRIF	**Iriomote-Funau**	**2.01**	**76**	P		**Pn**	**05 28 19.0**	**-0.6**
TWK1	**Hengchun**	**2.03**	**201**	*eP*		**Pn**	**05 28 20.6**	**+0.8**
TWKBT	**Hengchun**	**2.03**	**201**	*eP*		**Pn**	**05 28 19.9**	**+0.1**
HATJ	**Hateruma jima**	**2.04**	**84**	P		**Pn**	**05 28 19.2**	**-0.6**
HATJ				*eS*		**Sn**	**05 28 45.4**	**+0.3**
TSEB	**Hengchuen, Pin**	**2.04**	**198**	*eP*		**Pn**	**05 28 20.8**	**+0.9**
VCHM	**Qimei**	**2.08**	**253**	*eP*		**Pn**	**05 28 20.9**	**+0.4**
VCHM				*eS*		**Sn**	**05 28 46.8**	**+0.5**
JKRS	**Kuro-shima**	**2.24**	**80**	P		**Pn**	**05 28 22.7**	**0.0**
VWUC	**VWUC**	**2.26**	**301**	*eP*		**Pn**	**05 28 22.0**	**-0.9**
VWUC				*eS*		**Sn**	**05 28 49.5**	**-1.2**
JJ	**Ishigaki jima**	**2.39**	**77**	P		**Pn**	**05 28 24.2**	**-0.5**
JISG	**Ishigakijimahi**	**2.59**	**73**	P		**Pn**	**05 28 26.9**	**-0.6**
MATB	**Ma-tsu**	**2.74**	**327**	*eP*		**Pn**	**05 28 28.9**	**-0.6**
QZH2	**Quanzhou**	**2.94**	**292**⇓	*iPn*		**Pn**	**05 28 31.5**	**-0.8**
QZH2					smax	smax		
	comp=N,2μm,1.2s							
QZH2					smax	smax		
	comp=E,2μm,1.1s							
KNM	**Kinmen**	**2.94**	**282**	*eP*		**Pn**	**05 28 33.8**	**+1.5**
KNMB	**Chin-men Tao**	**2.99**	**282**			**Pn**	**05 28 32.4**	**-0.6**
KNMB	**Chin-men Tao**	**2.99**	**282**⇑	*eP*		**Pn**	**05 28 32.4**	**-0.6**
LYJJ	**Jianjiangzhen**	**3.16**	**329**	*eP*		**Pn**	**05 28 34.5**	**-0.8**
MHZQ	**Yeshan**	**3.23**	**314**	*eP*		**Pn**	**05 28 35.6**	**-0.6**
XPSS	**Dashiqiu**	**3.32**	**338**	*eP*		**Pn**	**05 28 36.8**	**-0.7**
XPSS				*eS*		**Sn**	**05 29 17.1**	**+0.3**
AXDP	**Jialang**	**3.46**	**288**	*eP*		**Pn**	**05 28 39.0**	**-0.5**
AXDP				*eS*		**Sn**	**05 29 20.3**	**0.0**
JMJ	**Miyako jima 2**	**3.51**	**73**	*eP*		**Pn**	**05 28 40.4**	**+0.3**
ZPLA	**Ao Xicun**	**3.52**	**272**	*eP*		**Pn**	**05 28 40.0**	**-0.3**
DSXP	**Dongshan**	**3.82**	**269**	*eP*		**Pn**	**05 28 44.4**	**0.0**
SXFK	**Yanhouchang**	**4.39**	**306**	*eP*		**Pn**	**05 28 51.8**	**-0.5**
JOW	**Kunigami**	**6.74**	**62**	P		**Pn**	**05 29 22.9**	**-1.5**
	8.2nm,0.3s,baz=188,slow=11,SNR=11							
JOW					S	**Sn**	**05 30 39.5**	**-1.6**
	12nm,0.7s,baz=234,slow=17,SNR=1.3							
	20nm,0.3s							
JOW	**Kunigami**	**6.74**	**62**			**Pn**	**05 29 22.6**	**-1.8**
JOW	**Kunigami**	**6.74**	**62**	P		**Pn**	**05 29 23.1**	**-1.4**
SSE	**Sheshan**	**7.23**	**357**	Pn		**Pn**	**05 29 31.9**	**+0.7**
SSE				Sn		**Sn**	**05 30 56.6**	**+3.5**
SSE				LR	LR			
	comp=N,1μm,10.5s							
SSE				LR	LR			
	comp=E,290nm,10.4s							
GZH2	**Guangzhou**	**7.28**	**270**	Pn		**Pn**	**05 29 32.8**	**+0.9**
GZH2				Sn		**Sn**	**05 30 56.3**	**+1.9**
GZH2					smax	smax		
	comp=N,330nm,1.0s							
GZH2					smax	smax		
	comp=E,240nm,1.0s							
NJ2	**Nanjing**	**8.52**	**344**⇓	*iP*		**Pn**	**05 29 48.6**	**-0.4**
NJ2				S		**Sn**	**05 31 22.5**	**-2.5**
NJ2					pmax	pmax		
	comp=Z,62nm,0.8s							
NJ2					smax	smax		
	comp=N,430nm,1.2s							
NJ2					smax	smax		
	comp=E,390nm,1.2s							
NJ2					LR	LR		
	comp=N,4μm,10.0s							
NJ2					LR	LR		
	comp=E,2μm,8.6s							
NJ2					LR	LR		
	comp=Z,4μm,9.5s							
CNSH	**ChangSha**	**8.90**	**301**	P		**Pn**	**05 29 54.1**	**-0.1**
CNSH					smax	smax		
	comp=N,410nm,1.4s							
CNSH					smax	smax		
	comp=E,310nm,0.9s							
CNSH					LR	LR		
	comp=Z,4μm,11.1s							
WHN	**Wuhan**	**9.27**	**318**	P		**Pn**	**05 30 00.1**	**+0.8**
WHN				S		**Sn**	**05 31 44.8**	**+1.4**
WHN					LR	LR		
	comp=N,7μm,10.6s							
WHN					LR	LR		
	comp=E,7μm,9.8s							
WHN					LR	LR		
	comp=Z,11μm,9.5s							
GULI	**GuiLin**	**10.32**	**280**	P		**Pn**	**05 30 13.8**	**+0.1**
GULI					LR	LR		
	comp=N,1μm,8.7s							
GULI					LR	LR		
	comp=E,3μm,11.0s							
GULI					LR	LR		
	comp=Z,3μm,11.1s							
QIZ	**Qiongzhong**	**11.94**	**249**	P		**Pn**	**05 30 35.0**	**-0.9**
QIZ				S		**Sn**	**05 32 51.8**	**+2.7**
QIZ					LR	LR		
	comp=N,820nm,14.7s							
QIZ					LR	LR		
	comp=E,460nm,11.5s							
QIZ					LR	LR		
	comp=Z,530nm,13.4s							
JNU	**Nakatsue**	**12.32**	**39**	P		**Pn**	**05 30 41.8**	**+0.7**
	0.3nm,0.3s,baz=169,slow=5.2,SNR=4.1							
JNU					LR	LR	05 36 04.9	
	comp=Z,223nm,18.1s,baz=220,slow=40							
	12nm,1.1s							
TIA	**Tai'an**	**12.91**	**344**	P		**Pn**	**05 30 52.1**	**+3.0**
TIA					pmax	pmax		
	comp=Z,4.0nm,0.6s							
TIA					LR	LR		
	comp=N,2μm,9.3s							
TIA					LR	LR		
	comp=E,1μm,8.9s							
TIA					LR	LR		
	comp=Z,3μm,8.2s							
LYN	**LuoYang**	**13.30**	**325**	P		**Pn**	**05 30 56.0**	**+1.6**
LYN					pmax	pmax		
	comp=Z,7.0nm,0.8s							
LYN					LR	LR		
	comp=N,6μm,8.6s							
LYN					LR	LR		
	comp=E,2μm,8.5s							
LYN					LR	LR		
	comp=Z,6μm,10.3s							
GYA	**Guiyang**	**13.77**	**284**⇓	P		**Pn**	**05 31 02.3**	**+1.4**
GYA				S		**Sn**	**05 33 32.3**	**-1.5**
GYA					pmax	pmax		
	comp=Z,18nm,1.0s							
GYA					pmax	pmax		
	comp=Z,200nm,3.8s							
GYA					LR	LR		
	comp=N,680nm,8.1s							
GYA					LR	LR		
	comp=E,3μm,10.7s							
GYA					LR	LR		
	comp=Z,4μm,10.6s							
KSAR	**Wonju Array Be**	**14.58**	**20**	Pn		**Pn**	**05 31 12.5**	**+0.5**
KSRS	**Korea Array**	**14.61**	**20**	P		**Pn**	**05 31 14.3**	**+2.1**
	1.9nm,0.3s,baz=203,slow=11,SNR=46							
KSRS					LR	LR	05 37 17.3	
	comp=Z,71nm,19.7s,baz=195,slow=39							
	4.5nm,0.7s							
HNS	**HongShan**	**14.74**	**338**⇓	P		**P**	**05 31 17.5**	**-2.6**
HNS				S		S	05 34 07.1	-8.8
HNS					pmax	pmax		
	comp=Z,18nm,1.3s							
HNS					LR	LR		
	comp=N,2μm,10.4s							
HNS					LR	LR		
	comp=E,1μm,11.3s							
HNS					LR	LR		
	comp=Z,2μm,11.9s							
DL2	**Dalian**	**15.01**	**0**	P		**P**	**05 31 24.4**	**+1.3**
DL2				S		**S**	**05 34 21.4**	**0.0**
DL2					pmax	pmax		
	comp=Z,31nm,1.2s							
DL2					pmax	pmax		
	comp=Z,340nm,6.7s							
DL2					LR	LR		
	comp=N,860nm,10.9s							
DL2					LR	LR		
	comp=E,620nm,9.0s							
DL2					LR	LR		
	comp=Z,1μm,11.6s							
XAN	**Xi'an**	**15.02**	**315**	P		**Pn**	**05 31 18.3**	**+0.3**
XAN				S		**Sn**	**05 34 07.8**	**+3.5**
XAN					pmax	pmax		
	comp=Z,6.0nm,0.9s							
XAN					LR	LR		
	comp=Z,2μm,9.8s							
XAN					LR	LR		
	comp=Z,3μm,10.6s							
XAN					LR	LR		
	comp=Z,4μm,9.8s							
BJI2	**Beijing**	**16.76**	**345**	P		**P**	**05 31 45.4**	**+2.9**
BJI2				S		**Sn**	**05 34 48.1**	**+1.8**
BJI2					LR	LR		
	comp=Z,500nm,10.8s							
BJI2					LR	LR		
	comp=Z,210nm,10.3s							
BJI2					LR	LR		
	comp=Z,540nm,12.3s							
KMI2	**Kunming**	**17.20**	**278**	P		**Pn**	**05 31 46.4**	**+0.2**
KMI2					pmax	pmax		
	comp=Z,9.0nm,1.7s							
KMI2					LR	LR		
	comp=Z,630nm,7.3s							
KMI2					LR	LR		
	comp=Z,2μm,9.7s							
KMI2					LR	LR		
	comp=Z,2μm,11.8s							
CD2	**Chengdu**	**17.32**	**298**	P		**P**	**05 31 48.8**	**-0.1**
CD2				S		**Sn**	**05 35 00.9**	**+0.8**
CD2					pmax	pmax		
	comp=Z,20nm,1.0s							
CD2					LR	LR		
	comp=Z,2μm,10.4s							
CD2					LR	LR		
	comp=Z,4μm,9.2s							
CD2					LR	LR		
	comp=Z,5μm,10.0s							
PZH	**PanZhiHua**	**18.16**	**283**	P		**P**	**05 31 58.6**	**+0.3**
HHC	**Hu-ho-hao-te**	**18.93**	**336**	*eP*		**Pn**	**05 32 07.1**	**-0.1**
HHC				sP		sP	05 32 14.3	+2.1
HHC				S		**Sn**	**05 35 39.0**	**+0.1**
HHC				sS		S	05 35 41.5	+0.1
HHC					pmax	pmax		
	comp=Z,230nm,5.2s							
HHC					LR	LR		
	comp=Z,920nm,9.8s							
HHC					LR	LR		
	comp=Z,380nm,10.6s							
HHC					LR	LR		
	comp=Z,750nm,10.6s							
MJAR	**Matsushiro Arr**	**19.10**	**45**	P		**P**	**05 32 06.5**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=237,slow=10,SNR=7.1							
	comp=Z,1.8nm,0.5s							
MJAR	**Matsushiro Arr**	**19.10**	**45**	IAmb		IAmb	05 32 14.6	
	comp=Z,3.9nm,1.1s							
BTO2	**Baotou**	**19.51**	**332**	*eP*		**Pn**	**05 32 19.5**	**+5.3**
BTO2				PP		**PnPn**	**05 32 37.1**	**+9.5**
BTO2				S		S	05 36 07.3	+14
BTO2					pmax	pmax		
	comp=Z,12nm,0.7s							
BTO2					pmax	pmax		
	comp=Z,430nm,5.8s							
BTO2					LR	LR		
	comp=N,4μm,11.8s							
BTO2					LR	LR		
	comp=E,2μm,10.9s							
BTO2					LR	LR		
	comp=Z,6μm,10.4s							
LZH	**Lanzhou**	**19.59**	**313**	*eP*		**Pn**	**05 32 19.3**	**+4.1**
LZH				sP		sP	05 32 25.3	+5.7
LZH					pmax	pmax		
	comp=Z,21nm,1.8s							
LZH					LR	LR		
	comp=Z,1μm,12.4s							
LZH					LR	LR		
	comp=Z,2μm,13.6s							
LZH					LR	LR		
	comp=Z,2μm,12.7s							
LZDM	**Lanzhou Array**	**19.62**	**312**	P		**Pn**	**05 32 17.6**	**+1.9**
	baz=138,slow=11							
LZDM					LR	LR	05 40 33.4	
	comp=Z,467nm,18.1s,baz=165,slow=39							
	comp=Z,8.1nm,0.9s							
XLT	**XiLinHaoTe**	**20.51**	**349**	*eP*		Pn	05 32 28.3	+2.4
XLT				*pP*		*sP*	05 32 32.4	+3.0
XLT				*sP*		*pP*	05 32 34.8	+7.0
XLT				SS		Sn	05 36 37.4	+20
XLT				pmax	pmax			
	comp=Z,11nm,1.5s							
XLT				pmax	pmax			
	comp=Z,120nm,5.0s							
XLT				LR	LR			
	comp=Z,73nm,11.6s							
XLT				LR	LR			
	comp=Z,440nm,12.5s							
XLT				LR	LR			
	comp=Z,800nm,11.1s							
TNCH	**TengChong**	**21.04**	**278**	P		**P**	**05 32 34.3**	**+4.5**
TNCH				PP		**PnPn**	**05 32 53.6**	**+4.9**
TNCH				S		**S**	**05 36 14.8**	**-9.1**
TNCH				SS		**SnSn**	**05 36 53.6**	**+8.5**
TNCH				pmax	pmax			
	comp=Z,20nm,1.8s							
TNCH				pmax	pmax			
	comp=Z,200nm,2.6s							
TNCH				LR	LR			
	comp=Z,850nm,7.6s							
TNCH				LR	LR			
	comp=Z,1μm,9.7s							
TNCH				LR	LR			
	comp=Z,2μm,9.5s							
CHTO	**Chiang Mai**	**21.68**	**261**	P		**P**	**05 32 37.4**	**+0.9**
CHTO	**Chiang Mai**	**21.68**	**261**	P		**P**	**05 32 36.3**	**-0.2**
	comp=Z,10nm,1.8s							
MDJ	**Mudanjiang**	**21.72**	**16**			**P**	**05 32 35.6**	**-1.1**
MDJ	**Mudanjiang**	**21.72**	**16**	P		**P**	**05 32 36.6**	**-0.1**
MDJ					pmax	pmax		
	comp=Z,11nm,1.2s							
CMAR	**Chiang Mai Arr**	**21.78**	**260**	P		**P**	**05 32 39.8**	**+2.1**
	comp=Z,1.0nm,0.2s,baz=61,slow=7.5,SNR=6.6							
CMAR					LR	LR	05 42 21.3	
	comp=Z,168nm,18.1s,baz=70,slow=40							
	comp=Z,1.0nm,0.2s							
CMAR	**Chiang Mai Arr**	**21.78**	**260**			**P**	**05 32 37.3**	**-0.3**
BNX	**BinXian**	**22.34**	**11**⇓	P		**P**	**05 32 44.0**	**+0.6**
BNX					pmax	pmax		
	comp=Z,6.0nm,1.5s							
TOLI2	**Tolitoli**	**22.62**	**182**	P		**P**	**05 32 44.0**	**-2.5**
GTOI	**Gorontalo**	**23.12**	**176**	P		**P**	**05 32 49.4**	**-2.3**
	comp=Z,17nm,1.6s							
MPSI	**Mapaga**	**23.43**	**184**	P		**P**	**05 32 54.3**	**-0.6**
	comp=Z,11nm,0.7s							
LUWI	**Luwuk**	**24.77**	**177**	P		**P**	**05 33 08.5**	**+1.0**
HILR	**Hailar Array B**	**25.70**	**357**	P		**P**	**05 33 16.2**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=165,slow=12,SNR=3.9							
	comp=Z,2.3nm,0.6s							
GOMU	**GeErMu**	**26.16**	**304**	P		**P**	**05 33 20.9**	**+0.5**
GOMU				S		**S**	**05 37 53.1**	**+1.0**
GOMU					pmax	pmax		
	comp=Z,6.0nm,1.4s							
GOMU					LR	LR		
	comp=Z,670nm,10.0s							
GOMU					LR	LR		
	comp=Z,460nm,9.0s							
GOMU					LR	LR		
	comp=Z,910nm,9.9s							
KLR	**Kul'dur**	**26.56**	**15**	LR		LR	05 44 05.1	
	comp=Z,34nm,18.8s,baz=214,slow=37							
ULN	**Ulaanbaatar**	**26.61**	**338**			**P**	**05 33 24.1**	**0.0**
ULN	**Ulaanbaatar**	**26.61**	**338**	P		**P**	**05 33 23.1**	**-1.0**
	comp=Z,28nm,0.8s							
SONM	**Songino Array**	**26.82**	**337**	P		**P**	**05 33 26.8**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=156,slow=9.4,SNR=9.5							
SONM					LR	LR	05 45 22.9	
	comp=Z,281nm,20.8s,baz=143,slow=39							
	comp=Z,2.3nm,0.9s							
SONM	**Songino Array**	**26.82**	**337**			**P**	**05 33 25.7**	**-0.3**
SHL	**Shillong**	**27.02**	**280**	P		**P**	**05 33 28.3**	**+0.2**
SHL				IAmb		IAmb	05 33 37.9	
	comp=Z,16nm,1.0s							
BRDH	**Bariadhala**	**27.52**	**274**	LR		LR	05 46 55.7	
	comp=Z,181nm,19.4s,baz=164,slow=41							
LSA	**Lhasa**	**27.75**	**289**	P		**P**	**05 33 33.8**	**-1.1**
LSA				LR		LR		
	comp=Z,200nm,10.6s							
LSA				LR		LR		
	comp=Z,550nm,10.4s							
LSA				LR		LR		
	comp=Z,690nm,10.3s							
YSS	**Yuzhno-Sakhali**	**28.62**	**31**	P		**P**	**05 33 42.8**	**+1.0**
YSS				IAmb		IAmb	05 33 44.9	
	comp=Z,8.9nm,0.8s							
TLY	**Talaya**	**31.02**	**338**	LR		LR	05 48 05.6	
	comp=Z,126nm,18.6s,baz=140,slow=39							
EVN	**Everest**	**31.48**	**285**	P		**P**	**05 34 09.5**	**+1.3**
EDFI	**Ende, Flores**	**32.40**	**180**	P		**P**	**05 34 11.5**	**-4.1**
WMQ	**Urumqi**	**34.16**	**314**	*eP*		**P**	**05 34 32.9**	**+2.1**
WMQ				S		**S**	**05 39 53.3**	**-3.4**
WMQ				LR		LR		
	comp=Z,560nm,16.9s							
WMQ				LR		LR		
	comp=Z,720nm,10.5s							
WMQ				LR		LR		
	comp=Z,210nm,14.5s							
MKAR	**Makanchi Array**	**38.84**	**316**	P		**P**	**05 35 11.6**	**+0.9**
	comp=Z,2.8nm,0.7s,baz=107,slow=9.5,SNR=18							
MKAR				PcP		**PcP**	**05 37 21.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=96,slow=4.3,SNR=3.6							
MKAR				LR		LR	05 51 52.1	
	comp=Z,92nm,18.9s,baz=31,slow=37							
	comp=Z,2.8nm,0.7s							
MKAR	**Makanchi Array**	**38.84**	**316**			**P**	**05 35 11.1**	**+0.5**
MAKZ	**Makanchi**	**39.04**	**316**			**P

comp=Z,142nm,18.4s,baz=206,slow=37
BVAR Borovoye Array 48.17 321 P P 05 36 26.4 +0.7
comp=Z,1.3nm,0.5s,baz=98,slow=10,SNR=8.1
BVAR PcP PcP 05 37 52.0 -1.0
comp=Z,1.8nm,0.6s,baz=90,slow=4.3,SNR=8.5
comp=Z,1.3nm,0.5s
BORK Borovoye 48.22 321 P 05 36 26.5 +0.4
ASAR Alice Springs 48.72 165 P P 05 36 29.1 -1.2
comp=Z,1.5nm,0.5s,baz=345,slow=7.0,SNR=15
ASAR PcP PcP 05 37 53.6 -1.7
comp=Z,1.8nm,1.0s,baz=318,slow=2.9,SNR=4.1
ASAR LR LR 05 59 07.8
comp=Z,52nm,18.4s,baz=245,slow=39
comp=Z,1.5nm,0.5s
ASAR Alice Springs 48.72 165 P P 05 36 28.8 -1.4
CTA Charters Tower 49.85 149 LR LR 05 56 03.8
comp=Z,58nm,21.3s,baz=30,slow=34
AB31 Akbulak array 53.94 314 P P 05 37 08.9 -0.3
ABKAR Akbulak array 53.94 314 P P 05 37 09.0 -0.2
AKTO Aktyubinsk 55.27 316 LR LR 06 02 30.6
comp=Z,116nm,19.2s,baz=108,slow=38
STKA Stephens Creek 58.62 160 P P 05 37 41.0 -1.7
comp=Z,4.4nm,0.8s,baz=21,slow=6.6,SNR=5.8
comp=Z,4.4nm,0.8s
KIRV Kirov 60.71 325 LR LR 06 07 04.5
comp=Z,179nm,18.4s,baz=69,slow=39
ANM Nome 61.44 28 P 05 38 02.9 +1.2
ANM IAmb IAmb 05 38 09.5
comp=Z,5.1nm,1.2s
G16K Koyuk River 62.77 27 IAmb IAmb 05 38 18.3
comp=Z,5.8nm,1.3s
H17K Granite Mounta 63.80 28 P P 05 38 19.3 +1.9
H17K IAmb IAmb 05 38 26.1
comp=Z,6.2nm,1.1s
D19K Kuna River 64.49 24 IAmb IAmb 05 38 25.1
comp=Z,9.4nm,1.0s
E19K Redstone River 64.84 25 IAmb IAmb 05 38 34.3
comp=Z,6.0nm,0.9s
D20K Etivluk River 65.04 23 IAmb IAmb 05 38 29.3
comp=Z,6.0nm,0.7s
GNI Garni 65.30 305 LR LR 06 10 30.9
comp=Z,56nm,19.4s,baz=51,slow=39
KBZ Khabaz 65.98 309 LR LR 06 09 25.7
comp=Z,32nm,19.0s,baz=7.0,slow=38
G21K Allakaket 66.36 26 IAmb IAmb 05 38 41.8
comp=Z,14nm,1.2s
H21K Melozitna Rive 66.73 27 IAmb IAmb 05 38 44.3
comp=Z,16nm,1.3s
D23K Nanushuk River 67.17 23 IAmb IAmb 05 38 47.1
comp=Z,18nm,1.2s
MLY Manley 67.67 27 P P 05 38 43.1 +0.6
MLY IAmb IAmb 05 38 50.2
comp=Z,15nm,1.2s
E23K Chandalar 67.68 24 IAmb IAmb 05 38 50.2
comp=Z,16nm,1.3s
G23K Bananza Creek 67.72 25 IAmb IAmb 05 38 50.4
comp=Z,11nm,1.1s
L22K Petersville 68.06 30 P P 05 38 45.1 +0.1
L22K IAmb IAmb 05 38 46.3
comp=Z,8.1nm,0.7s
I23K Minto, Yukon-K 68.23 27 P P 05 38 46.9 +1.0
D25K Kavik River 68.64 22 IAmb IAmb 05 38 55.7
comp=Z,15nm,1.2s
G24K Hadweenzic Riv 68.72 25 IAmb IAmb 05 38 56.7
comp=Z,8.5nm,1.0s
E25K Arctic Village 69.16 24 P P 05 38 52.6 +0.8
E25K IAmb IAmb 05 38 59.2
comp=Z,13nm,1.3s
F25K Christian Rive 69.24 24 IAmb IAmb 05 39 00.3
comp=Z,5.7nm,0.9s
ILAR Eielson Array 69.34 27 P P 05 38 51.6 -1.2
comp=Z,1.1nm,0.5s,baz=288,slow=6.3,SNR=26
comp=Z,1.1nm,0.5s
BMAR Burnt Mountain 69.68 24 P P 05 38 56.0 +1.0
F26K Sheenjek River 69.78 24 IAmb IAmb 05 39 03.4
comp=Z,13nm,1.1s
SPITS Spitsbergen Ar 69.89 348 P P 05 38 56.4 +0.4
comp=Z,12nm,1.1s,baz=9.9,slow=9.2,SNR=1.6
comp=Z,12nm,1.1s
ARCES ARCESS Array B 69.99 338 LR LR 06 13 01.8
comp=Z,108nm,18.1s,baz=18,slow=39
D27M Malcolm River 70.53 22 IAmb IAmb 05 39 07.6
comp=Z,16nm,1.2s
J26L Joseph Creek 70.79 27 IAmb IAmb 05 39 08.0
comp=Z,9.4nm,1.2s
G27K Doyon Strip 70.94 25 IAmb IAmb 05 39 10.2
comp=Z,14nm,1.4s
H27K Steamboat Moun 71.15 25 IAmb IAmb 05 39 11.8
comp=Z,22nm,1.3s
E28M Babbage River 71.20 23 IAmb IAmb 05 39 11.0
comp=Z,15nm,1.4s
FINES FINESS Array B 71.92 330 P P 05 39 09.0 +0.5
comp=Z,3.3nm,0.9s,baz=8.6,slow=6.6,SNR=3.8
FINES LR LR 06 13 40.4
comp=Z,204nm,18.5s,baz=41,slow=38
comp=Z,3.3nm,0.9s
BCAR Beaver Creek A 71.95 28 P P 05 39 09.0 +0.2
I28M Miner Creek 72.01 26 P P 05 39 09.9 +0.7
I28M IAmb IAmb 05 39 16.1
comp=Z,21nm,1.5s
F30M Barrier River 72.86 23 IAmb IAmb 05 39 20.3
comp=Z,22nm,1.2s
F31M Tsilgehtchic 73.65 23 P P 05 39 18.5 -0.3
F31M IAmb IAmb 05 39 24.9
comp=Z,15nm,0.9s
BRTR Keskin Array B 73.67 307 P P 05 39 20.4 +0.7
comp=Z,0.7nm,0.6s,baz=121,slow=6.5,SNR=6.1
comp=Z,0.7nm,0.6s
BRTR Keskin Array B 73.67 307 P 05 39 23.9 +4.3
H31M Peel River 74.06 25 IAmb IAmb 05 39 25.5
comp=Z,22nm,1.3s
HFS Hagfors 78.04 331 P P 05 39 44.1 +0.1
comp=Z,3.5nm,0.9s,baz=52,slow=9.3,SNR=2.0
HFS LR LR 06 15 34.2
comp=Z,211nm,18.9s,baz=62,slow=37
comp=Z,3.5nm,0.9s
NOA NORSAR Array B 78.69 332 P P 05 39 47.5 -0.2
comp=Z,1.0nm,0.8s,baz=55,slow=8.1,SNR=1.9
NOA LR LR 06 17 20.7
comp=Z,146nm,18.1s,baz=65,slow=38
comp=Z,1.0nm,0.8s
MODS Modra-Piesok 81.45 319 *eP* **P 05 40 03.0 +0.2**
ZST Bratislava 81.63 319 *eP* **P 05 40 02.6 -1.1**
YKA Yellowknife Ar 83.13 23 P P 05 40 10.8 -0.5
comp=Z,2.0nm,0.8s,baz=316,slow=5.7,SNR=40
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 83.13 23 P P 05 40 10.6 -0.6
GERES GERESS Array B 83.34 321 P P 05 40 13.2 +0.5
comp=Z,0.3nm,0.3s,baz=0.0,slow=4.5,SNR=3.7
comp=Z,0.3nm,0.3s
EKA Eskdalemuir Ar 88.18 332 LR LR 06 24 40.2
comp=Z,293nm,19.3s,baz=21,slow=39
LON Longmire 89.42 38 P P 05 40 43.9 +1.3
LON IAmb IAmb 05 40 58.2
comp=Z,13nm,1.4s
E07A Sunnyside 90.63 37 P P 05 40 47.9 -0.3
E07A IAmb IAmb 05 40 54.7
comp=Z,15nm,1.3s
FRB Frobisher Bay 92.33 4 LR LR 06 25 51.1
comp=Z,72nm,19.2s,baz=120,slow=38
NVAR Mina Array Bea 96.42 43 P P 05 41 15.0 -0.3
comp=Z,0.7nm,0.9s,baz=276,slow=5.5,SNR=3.8
comp=Z,0.7nm,0.9s
NVAR Mina Array Bea 96.42 43 P P 05 41 15.0 -0.3

*FUNV **19** 05:28:17.7, 11°.21N×62°.00W, h5km, MW3.0, Presumed earthquake*
*TRN **19** 05:28:17.4, 11°.21N×61°.88W, h71km, MD3.1, North-west of Trinidad.*
ISC 19 05:28:17.0±2.7, 11°.20N±0°.04×61°.9W±0°.1, h75km±31km, n12, σ0°.43/20, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.61**	**145**	*eS*		**Sn**	**05 28 41.1**	**-0.8**
PSKH	**Kent House, Po**	**0.64**	**144**	*eP*		**Pn**	**05 28 32.0**	**+0.4**
PSKH				*eS*		**Sn**	**05 28 42.2**	**-0.2**
PSMG	**Mucurapo Girls**	**0.64**	**145**	*eP*		**Pn**	**05 28 31.8**	**+0.2**
PSMG				*eS*		**Sn**	**05 28 42.2**	**-0.2**
TRN	**Trinidad (W)**	**0.73**	**138**	*eP*		**Pn**	**05 28 32.7**	**0.0**
TRN				*eS*		**Sn**	**05 28 44.3**	**+0.1**
TRN	**Trinidad (W)**	**0.73**	**138**	*eP*		**Pn**	**05 28 32.8**	**+0.1**
TRN				*eS*		**Sn**	**05 28 44.4**	**+0.1**
GRFF	**Grenada Fort F**	**0.86**	**11**	*eP*		**Pn**	**05 28 34.3**	**+0.2**
GRFF				*eS*		**Sn**	**05 28 46.9**	**+0.1**
GRGR	**Grenville**	**0.96**	**15**	*eP*		**Pn**	**05 28 35.2**	**-0.1**
GRGR				*eS*		**Sn**	**05 28 50.1**	**+1.2**
GRGR	**Grenville**	**0.96**	**15**	*eP*		**Pn**	**05 28 35.2**	**-0.1**
GRGR				*eS*		**Sn**	**05 28 48.7**	**-0.2**
GRW	**Mount Saint Ca**	**0.98**	**14**	*eP*		**Pn**	**05 28 35.6**	**-0.1**
GRW				*eS*		**Sn**	**05 28 49.0**	**-0.6**
GCMP	**Grenada, Carri**	**1.36**	**20**	*eP*		**Pn**	**05 28 40.5**	**+0.1**
GCMP				*eS*		**Sn**	**05 28 57.4**	**-0.5**
PCRV	**Puerto La Cruz**	**2.87**	**250**	*eS*		**Sn**	**05 29 34.1**	**-0.1**
CACV	**CAICARA DEL OR**	**5.83**	**232**	*eS*		Sn	05 30 36.1	-10

*IDC **19** 05:53:05.9±3.0, 10°.28S×111°.95E, h0km, mb3.4/4, mbtmp3.4/4, MS3.1/1, Error ellipse: s-maj=132.4km s-min=24.2km az=49.0*
*DJA **19** 05:53:18.1±0.9, 9°.5S±4°×111°.3E±°, h19km±7km, M3.9/20, MLv3.9/20*
ISC 19 05:53:16.7±1.1, 9°.40S±0°.09×113°.25E±0°.05, h35km, n24, σ1°.73/25, mb3.4/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GMJI	**Gumukmas**	**1.14**	**10**	P		**Pn**	**05 53 36.3**	**+0.2**
JAGI	**Jajag, Banyuwa**	**1.28**	**44**	P		**Pn**	**05 53 38.7**	**+0.5**
JAGI				S		**Sn**	**05 53 54.7**	**+0.6**
BYJI	**Banyuwangi**	**1.60**	**43**	P		**Pn**	**05 53 44.2**	**+1.6**
BLJI	**Banyuglugur**	**1.68**	**12**	P		**Pn**	**05 53 45.8**	**+2.2**
ABJI	**Asem Bagus**	**1.86**	**31**	P		**Pn**	**05 53 47.2**	**+1.0**
RTBI	**Rangdo, Negare**	**1.91**	**61**	P		**Pn**	**05 53 48.7**	**+1.9**
RTBI				S		**Sn**	**05 54 11.2**	**+1.5**
IGBI	**Denpasar**	**1.96**	**73**	P		**Pn**	**05 53 48.8**	**+1.4**
IGBI				S		**Sn**	**05 54 11.0**	**+0.3**
DNP	**Denpasar**	**2.06**	**70**	P		**Pn**	**05 53 50.4**	**+1.5**
SNJI	**Sawahan-Nganju**	**2.19**	**317**	P		**Pn**	**05 53 52.8**	**+2.1**
SJI	**Sawahan**	**2.21**	**318**	P		**Pn**	**05 53 53.0**	**+1.9**
SRBI	**Singaraja**	**2.34**	**56**	P		**Pn**	**05 53 54.5**	**+1.8**
PCJI	**Pacitan**	**2.38**	**300**	P		**Pn**	**05 53 54.8**	**+1.6**
KMMI	**Kalianget**	**2.44**	**17**	P		**Pn**	**05 53 55.9**	**+1.8**
KHKI	**Kahang-Kahang**	**2.54**	**66**	P		**Pn**	**05 53 58.3**	**+2.8**
NGJI	**Ngawi**	**2.69**	**319**	P		Pn	05 54 08.9	+11
KLNI	**Mataram**	**2.97**	**71**	P		**Pn**	**05 54 03.0**	**+1.6**
UGM	**Wanagama**	**3.08**	**298**	P		**Pn**	**05 54 05.5**	**+2.6**
TWSI	**Taliwang, Sumb**	**3.64**	**80**	P		**Pn**	**05 54 12.0**	**+1.3**
PLAI	**Plampang**	**4.50**	**83**	P		**Pn**	**05 54 24.5**	**+2.0**
WRA	**Warramunga Arr**	**22.90**	**120**	P		**P**	**05 58 17.1**	**-0.6**
	0.4nm,0.5s,baz=295,slow=9.5,SNR=4.6							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**24.30**	**128**	P		**P**	**05 58 30.3**	**-0.9**
	0.6nm,0.5s,baz=301,slow=8.7,SNR=12							
	0.6nm,0.5s							
KSRS	**Korea Array**	**48.59**	**16**	LR		LR	06 24 05.0	
	comp=Z,20nm,18.2s,baz=260,slow=37							
SONM	**Songino Array**	**57.31**	**355**	P		**P**	**06 02 59.9**	**-1.3**
	0.4nm,0.5s,baz=168,slow=8.8,SNR=1.8							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**62.39**	**336**	P		**P**	**06 03 34.1**	**-1.9**
	0.1nm,0.4s,baz=142,slow=6.1,SNR=4.5							
	0.1nm,0.4s							

KRSC 19 06:06:05.2±0.8, 55°.30N×163°.09E, h21km±27km, Ml3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.92**	**351**	*eP*		Pb	06 06 22.4	-0.1
KBTR				*eS*		Sb	06 06 34.2	-0.1
KBG	**Krutoberegovo**	**0.98**	**347**	*eP*		Pb	06 06 23.3	-0.1
KBG				*eS*		Sb	06 06 35.9	0.0
MKZ	**Mys Kozlova**	**1.08**	**227**	*eP*		Pb	06 06 26.2	+1.2
BZGR	**Bezymyannyi-Gr**	**1.50**	**296**	*eP*		Pb	06 06 32.0	-0.3
BZGR				*eS*		Sb	06 06 51.0	+0.1
TUMD	**Tumrok D**	**1.54**	**267**	*eP*		Pb	06 06 33.6	+0.7
SMKR	**Semkarok**	**1.57**	**325**	*eP*		Pn	06 06 32.5	+0.6
BZWR	**Bezymyannyi-We**	**1.61**	**295**	*eP*		Pb	06 06 33.8	-0.5
BZWR				*eS*		Sb	06 06 56.0	+1.7
BKI	**Bering**	**1.66**	**92**	*eP*		Pb	06 06 35.6	+0.7
KMNR	**Kamenistaya**	**1.68**	**287**	*eP*		Pb	06 06 35.4	0.0
KMNR				*eS*		Sb	06 06 56.7	+0.5
KLY	**Klyuchi**	**1.71**	**307**	*eP*		Pn	06 06 33.2	-0.4
KOZ	**Kozyrevsk**	**1.97**	**294**	*eP*		Pb	06 06 39.6	-0.7
SRDR	**Sredinnyy**	**2.16**	**300**	*eP*		Pb	06 06 41.9	-1.6
ESO	**Esso**	**2.57**	**286**	*eP*		Pn	06 06 47.1	+1.6
SPN	**Mys Shipunski**	**2.85**	**220**	*eP*		Pn	06 06 51.5	+2.2
SPN				*eS*		Sn	06 07 23.7	+0.8
SDLR	**Sedlovina**	**3.19**	**232**	*eP*		Pn	06 06 57.1	+3.0
SMAR	**Somma**	**3.24**	**233**	*eP*		Pn	06 06 57.7	+2.9
AVH	**Avacha**	**3.26**	**233**	*eP*		Pn	06 06 58.5	+3.4
KRMR	**Karymshinskiy**	**3.83**	**232**	*eP*		Pn	06 07 07.2	+4.4
GRL	**Gorelyy**	**4.04**	**229**	*eP*		Pn	06 07 09.8	+3.9
ASAK	**Asacha**	**4.24**	**229**	*eP*		Pn	06 07 13.1	+4.6

*UPP **19** 06:09:15.4±0.1, 67°.85N×20°.21E, h0km, ML2.5, Confirmed Induced event*
*HEL **19** 06:09:16.0±0.2, 67°.83N×20°.22E, h0km, ML1.1, Suspected explosion*
ISC 19 06:09:15.5±0.9, 67°.83N±0°.03×20°.23E±0°.03, h0km, n17, σ0°.62/27, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**19**	P		**Pg**	**06 09 17.9**	**-0.1**
KUA				S		**Sg**	**06 09 19.6**	**0.0**
RATU	**Laukkuluspa**	**0.24**	**268**	P		**Pg**	**06 09 20.1**	**0.0**
RATU				S		**Sg**	**06 09 23.5**	**+0.3**
NIKU	**Nikkaluokta**	**0.45**	**275**	P		**Pg**	**06 09 23.9**	**-0.2**
NIKU				S		**Sg**	**06 09 30.2**	**+0.2**
LANU	**Lannavaara**	**0.70**	**71**	P		**Pg**	**06 09 28.7**	**-0.2**
LANU				S		**Sg**	**06 09 37.9**	**0.0**
LANU	**Lannavaara**	**0.70**	**71**	PB		**Pg**	**06 09 29.5**	**+0.6**
LANU				SG		**Sg**	**06 09 38.0**	**0.0**
DUNU	**Dundret**	**0.73**	**169**	S		**Sg**	**06 09 39.6**	**+0.8**
SALU	**Saltoluokta**	**0.80**	**236**	P		**Pg**	**06 09 30.5**	**-0.3**
KIF	**Kilpisjarvi**	**1.20**	**10**	PG		**Pg**	**06 09 38.4**	**0.0**
	baz=177							
KIF				smax	smax		06 09 53.6	
	comp=Z,1.6nm,0.2s							
KIF				SG		**Sg**	**06 09 53.6**	**-0.2**
PAJU	**Pajala**	**1.38**	**125**	P		**Pg**	**06 09 41.0**	**-0.9**
HEF	**Hetta**	**1.41**	**64**	smax	smax		06 09 58.8	
	comp=Z,1.0nm,0.2s							
HEF				SB		**Sg**	**06 09 60.0**	**-0.7**
ERTU	**Ertsjaerv**	**1.50**	**148**	PN		**Pn**	**06 09 43.7**	**+0.2**
	baz=319							
ERTU				SN		**Sn**	**06 10 04.2**	**+0.5**
KLF	**Kolari**	**1.56**	**111**	PN		**Pn**	**06 09 44.7**	**+0.3**
KLF				smax	smax		06 10 02.7	
	comp=Z,0.6nm,0.2s							
KLF				SN		**Sb**	**06 10 05.4**	**0.0**
KTK1	**Kautokeino**	**1.62**	**42**	PN		**Pg**	**06 09 46.5**	**-0.1**
KTK1				SN		**Sg**	**06 10 09.7**	**+2.1**
TOF	**Tornio**	**2.39**	**136**	smax	smax		06 10 26.5	
	comp=Z,1.2nm,0.2s							
TOF				SG		**Sb**	**06 10 30.0**	**+0.8**
RNF	**Rovaniemi**	**2.57**	**116**	PG		**Pb**	**06 10 01.6**	**-0.7**
RNF				SG		**Sb**	**06 10 34.4**	**+0.1**
ARA0	**ARCESS Array S**	**2.58**	**46**	SG		**Sb**	**06 10 34.0**	**-0.7**
KEV	**Kevo**	**3.13**	**49**	SG		**Sb**	**06 10 50.1**	**-0.4**

*TRN **19** 06:30:51.7, 18°.21N×66°.90W, h58km, MD0.0*
*NEIC **19** 06:30:53.0±1.3, 17°.90N±0°.04×66°.96W±0°.01, h10km±1km, ML3.5/35, Md3.4/6(RSPR), Error ellipse: s-maj=6.1km s-min=2.6km az=9.0*
*RSPR **19** 06:30:53.2, 17°.92N×66°.97W, h13km, MD3.4/6*
*OSPL **19** 06:30:53.1±0.3, 17°.92N×66°.98W, h18km±16km, ML3.1, Presumed earthquake*
*SDD **19** 06:30:53.3±1.0, 17°.91N×66°.98W, h18km±6km, MD3.3, ML3.1, MW3.6, Presumed earthquake*
ISC 19 06:30:51.9±1.0, 17°.88N±0°.05×66°.95W±0°.02, h19km±2km, n49, σ0°.75/75, 6C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.12**	**37**			**Pg**	**06 30 56.3**	**+0.4**
GBPR						**Sg**	**06 30 58.8**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.12**	**37**	*iP*		**Pg**	**06 30 56.3**	**+0.4**
GBPR				*eS*		**Sg**	**06 30 58.8**	**+0.1**
MLPR	**Magueyes Islan**	**0.12**	**316**			**Pg**	**06 30 56.1**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.20**	**311**			**Pg**	**06 30 57.1**	**+0.2**
CRPR						**Sg**	**06 30 60.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.20**	**311**			IAML		06 31 00.1
	11μm,0.3s							
CRPR						IAML		06 31 00.2
	11μm,0.4s							
CRPR	**Cabo Rojo, PR**	**0.20**	**311**	*ePg*		**Pg**	**06 30 57.1**	**+0.2**
CRPR				*eSg*		**Sg**	**06 30 59.9**	**-0.4**
CRPR						IAML		06 31 00.1
	comp=N,9μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.20**	**311**	*iP*		**Pg**	**06 30 57.1**	**+0.2**
CRPR				*eS*		**Sg**	**06 30 60.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.20**	**311**	*i P*		**Pg**	**06 30 59.9**	**-0.4**
CRPR				*eS*		**Sg**	**06 30 60.0**	**-0.4**
CRPR						IAML		06 31 00.5
	comp=Z,13μm,0.2s							
LSP	**Las Mesas**	**0.32**	**337**			**Pb**	**06 30 59.1**	**0.0**
LSP	**Las Mesas**	**0.32**	**337**	*iP*		**Pb**	**06 30 59.1**	**0.0**
OBIP	**Obispado Ponce**	**0.37**	**64**			**Pb**	**06 31 00.2**	**+0.3**
OBIP						**Sb**	**06 31 05.6**	**+0.2**
OBIP	**Obispado Ponce**	**0.37**	**64**	*iP*		**Pb**	**06 31 00.3**	**+0.3**
OBIP				*eS*		**Sb**	**06 31 06.0**	**+0.6**
OBIP	**Obispado Ponce**	**0.37**	**64**	*i P*		**Pb**	**06 31 00.3**	**+0.3**
OBIP				*eS*		**Sb**	**06 31 05.7**	**+0.4**
OBIP						IAML		06 31 06.0
	comp=Z,2μm,0.2s							
PRSN	**Puerto Rico Se**	**0.38**	**332**			**Pg**	**06 30 60.0**	**0.0**
PRSN						**Sg**	**06 31 05.2**	**-0.2**
PRSN	**Puerto Rico Se**	**0.38**	**332**	IAML			06 31 06.4	
	comp=Z,12μm,0.2s							
PRSN				IAML			06 31 06.5	
	comp=Z,13μm,0.3s							
PRSN	**Puerto Rico Se**	**0.38**	**332**	*ePg*		**Pg**	**06 30 59.9**	**0.0**
PRSN				*eSg*		**Sb**	**06 31 05.5**	**-0.2**
PRSN				IAML			06 31 06.4	
	comp=N,8μm,0.3s							
PRSN	**Puerto Rico Se**	**0.38**	**332**	*iP*		**Pg**	**06 30 60.0**	**0.0**
PRSN				*eS*		**Sg**	**06 31 05.2**	**-0.2**
CELP	**Cerrillos**	**0.41**	**61**			**Pb**	**06 31 00.8**	**+0.3**
CELP				IAML			06 31 07.2	
	comp=N,4μm,0.3s							
CELP				IAML			06 31 07.4	
	comp=N,3μm,0.2s							
UUPR	**Utuado, UPR, P**	**0.43**	**31**			**Pg**	**06 31 00.7**	**-0.1**
AGPR	**Aguadilla, PR**	**0.60**	**346**			**Pb**	**06 31 03.7**	**-0.1**
AGPR				IAML			06 31 11.7	
	comp=N,4μm,0.3s							
AGPR				IAML			06 31 14.5	
	comp=N,2μm,0.3s							
AGPR	**Aguadilla, PR**	**0.60**	**346**	*ePg*		**Pb**	**06 31 03.7**	**-0.1**
AGPR				*eSg*		**Sb**	**06 31 11.4**	**-0.4**
AGPR				IAML			06 31 11.7	
	comp=N,3μm,0.2s							
AGPR	**Aguadilla, PR**	**0.60**	**346**	*iP*		**Pb**	**06 31 03.7**	**-0.1**
AGPR				*eS*		**Sb**	**06 31 11.5**	**-0.4**
IDE	**Isla Desecheo**	**0.71**	**316**			**Pb**	**06 31 05.5**	**0.0**
IDE						**Sb**	**06 31 15.1**	**+0.2**
IDE	**Isla Desecheo**	**0.71**	**316**	*iP*		**Pb**	**06 31 05.5**	**0.0**
IDE				*eS*		**Sb**	**06 31 15.1**	**+0.2**
ECPR	**Experimental S**	**0.71**	**52**			**Pb**	**06 31 05.6**	**-0.1**
ECPR				IAML			06 31 15.8	
	comp=N,4μm,0.2s							
ECPR				IAML			06 31 16.5	
	comp=N,5μm,0.2s							
ECPR	**Experimental S**	**0.71**	**52**	*iP*		**Pb**	**06 31 05.7**	**0.0**
ECPR				*eS*		**Sb**	**06 31 14.7**	**-0.4**
SJG	**San Juan**	**0.80**	**73**			**Pb**	**06 31 07.3**	**+0.2**
SJG	**San Juan**	**0.80**	**73**	*eP*		**Pg**	**06 31 07.5**	**0.0**
SJG				*eS*		**Sg**	**06 31 18.8**	**+0.6**
SJG	**San Juan**	**0.80**	**73**	*ePg*		**Pg**	**06 31 07.5**	**0.0**
SJG				*eSg*		**Sg**	**06 31 18.6**	**+0.4**
SJG	**San Juan**	**0.80**	**73**	*eP*		**Pg**	**06 31 07.5**	**0.0**
SJG				*eS*		**Sg**	**06 31 18.4**	**+0.1**
SJG	**San Juan**	**0.80**	**73**	*i P*		**Pg**	**06 31 07.5**	**0.0**
SJG				*eS*		**Sg**	**06 31 18.3**	**+0.1**
SJG				IAML			06 31 22.0	
	comp=Z,356nm,0.6s							
PDPR	**Patillas Dam,**	**0.90**	**81**			**Pb**	**06 31 09.1**	**+0.3**
GCPR	**Guaynabo City**	**0.93**	**63**			**Pb**	**06 31 09.6**	**+0.2**
GCPR	**Guaynabo City**	**0.93**	**63**			**Sb**	**06 31 21.3**	**-0.1**
GCPR	**Guaynabo City**	**0.93**	**63**	*iP*		**Pb**	**06 31 09.7**	**+0.2**
GCPR				*eS*		**Sb**	**06 31 21.3**	**-0.1**
HUMP	**Col San Antoni**	**1.08**	**76**			**Pn**	**06 31 12.3**	**+0.3**
HUMP						**Sn**	**06 31 26.7**	**+0.2**
HUMP	**Col San Antoni**	**1.08**	**76**	IAML			06 31 29.8	
	comp=Z,650nm,0.3s							
HUMP	**Col San Antoni**	**1.08**	**76**	*iP*		**Pn**	**06 31 12.3**	**+0.3**
HUMP				*eS*		**Sn**	**06 31 26.7**	**+0.2**
PCDR	**Punta Cana, DR**	**1.50**	**295**	*ePg*		**Pb**	**06 31 19.4**	**+0.3**
PCDR				IAML			06 31 42.5	
	comp=N,271nm,0.8s							
CUPR	**Culebra, Puert**	**1.65**	**75**			**Pb**	**06 31 21.3**	**-0.3**
HGY1	**Higuey**	**1.82**	**293**	*ePg*		**Pb**	**06 31 24.4**	**-0.2**
HGY1				IAML			06 31 52.3	
	comp=N,80nm,1.4s							
DR12	**Loma Pena Alta**	**2.48**	**292**			**Pn**	**06 31 33.7**	**+2.5**
HATOM	**Hato Mayor del**	**2.48**	**292**	*ePg*		**Pb**	**06 31 34.4**	**-1.4**
HATOM				IAML			06 32 17.8	
	comp=N,66nm,0.8s							
MBFL	**Flemmings, Mon**	**4.67**	**103**	*eP*		**Pn**	**06 32 02.5**	**+1.2**
MBFL				*eS*		**Sn**	**06 32 54.0**	**-1.0**
MBWH	**Windy Hill**	**4.69**	**103**	*eP*		**Pn**	**06 32 03.2**	**+1.6**
MBWH				*eS*		**Sn**	**06 32 54.9**	**-0.7**
MLYT	**Lee's Yard**	**4.69**	**103**	*eP*		**Pn**	**06 32 01.8**	**0.0**
MLYT				*eS*		**Sn**	**06 32 53.6**	**-2.1**
ANWB	**Willy Bob**	**4.93**	**92**	*eP*		**Pn**	**06 32 04.3**	**-0.6**
ANWB				*eS*		**Sn**	**06 32 57.8**	**-3.6**
ATGZ	**Broadband at L**	**5.31**	**109**	*eP*		**Pn**	**06 32 11.4**	**+1.2**
DSLB	**Salisbury**	**5.83**	**114**	*eP*		**Pn**	**06 32 18.4**	**+1.0**
DSLB				*eS*		**Sn**	**06 33 22.1**	**-1.6**

*UPP **19** 06:40:53.5±0.3, 67°.85N×20°.21E, h0km±1km, ML2.6, Confirmed Induced event*
*HEL **19** 06:40:53.0±0.5, 67°.78N×20°.09E, h0km, ML1.0, Suspected explosion*
ISC 19 06:40:53.4±0.9, 67°.82N±0°.03×20°.22E±0°.02, h0km, n17, σ0°.82/27, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**17**	P		**Pg**	**06 40 55.9**	**-0.2**
	baz=191							
KUA				S

YOTC				S	Sn	06 48 12.5	-0.6
JAMC	**Jamundi, Valle**	**0.79**	**205**	P	Pn	06 48 01.8	-0.5
JAMC				S	Sn	06 48 18.4	-0.6
PLMC	**San Jos del P**	**0.97**	**3**	P	Pn	06 48 02.4	-1.3
PLMC				S	Sn	06 48 21.0	-0.5
ORTC	**Ortega, Tolima**	**1.09**	**91**	P	Pn	06 48 04.3	-0.4
ORTC				S	Sn	06 48 23.2	-0.1
NIZA	**Niza - Manizal**	**1.42**	**38**	P	Pn	06 48 07.4	-0.9
NIZA				S	Sn	06 48 28.2	-1.4
POPC	**Popayan, Colom**	**1.42**	**194**	P	Pn	06 48 07.3	-1.0
POPC				S	Sn	06 48 27.9	-1.8
PIZC	**Pizarro, Choco**	**1.45**	**315**	P	Pn	06 48 08.3	0.0
PIZC				S	Sn	06 48 29.9	+0.2
PRAC	**Prado**	**1.47**	**98**	P	Pn	06 48 08.4	-0.2
PRAC				S	Sn	06 48 30.1	0.0
GARC	**Garzon, Huila**	**1.93**	**154**	P	Pn	06 48 13.3	-0.8
GARC				S	Sn	06 48 39.0	-0.9
CBOC	**Ciudad Bolivar**	**1.95**	**10**	P	Pn	06 48 13.2	-1.1
CBOC				S	Sn	06 48 39.8	-0.5
URMC	**La Uribe, Meta**	**2.07**	**109**	P	Pn	06 48 15.1	-0.5
URMC				S	Sn	06 48 41.8	-0.9
BBAC	**Balboa, Cauca**	**2.10**	**206**	P	Pn	06 48 15.2	-0.9
BBAC				S	Sn	06 48 42.4	-1.2
ROSC	**El Rosal**	**2.21**	**66**	P	Pn	06 48 19.0	+1.4
ROSC				S	Sn	06 48 47.5	+1.4
CVER	**Cruz Verde, Cu**	**2.33**	**75**	P	Pn	06 48 19.3	+0.1
CVER				S	Sn	06 48 49.3	+0.3
CRUC	**La Cruz**	**2.42**	**195**	P	Pn	06 48 20.1	-0.2
CRUC				S	Sn	06 48 50.5	-0.4
FLOC	**Florencia**	**2.43**	**164**	P	Pn	06 48 19.7	-0.3
FLOC				S	Sn	06 48 49.8	-0.8
SOLC	**Bahia Solano**	**2.52**	**335**	P	Pn	06 48 20.2	-0.8
VILC	**Villavicencio,**	**2.65**	**86**	P	Pn	06 48 24.6	+1.8
VILC				S	Sn	06 48 56.6	+1.1
CHIC	**Chingaza**	**2.69**	**75**	P	Pn	06 48 24.3	+0.7
CHIC				S	Sn	06 48 56.9	0.0
SPBC	**San Pablo de B**	**2.83**	**53**	P	Pn	06 48 25.0	-0.2
GCUF	**Volcan Galeras**	**2.87**	**201**	P	Pn	06 48 24.4	-1.6
GCUF				S	Sn	06 48 59.9	-1.2
DBBC	**Dabeiba**	**3.07**	**2**	P	Pn	06 48 27.6	-0.6
DBBC				S	Sn	06 49 05.6	+0.4
PTBC	**PUERTO BERRIO,**	**3.20**	**36**	P	Pn	06 48 28.7	-1.1
PTBC				S	Sn	06 49 06.7	-1.4
PTAC	**Punta Ardita,**	**3.51**	**335**	P	Pn	06 48 32.9	-1.0
PTAC				S	Sn	06 49 12.0	-3.4
RUSC	**La Rusia**	**3.79**	**59**	P	Pn	06 48 37.9	0.0
UREC	**San Jos de Ur**	**3.88**	**12**	P	Pn	06 48 37.2	-1.5
UREC				S	Sn	06 49 23.7	-0.3
BARC	**Barichara**	**4.11**	**50**	P	Pn	06 48 41.3	-0.6
PAC1	**Pacto, Paraso**	**4.39**	**214**	P	Pn	06 48 44.0	-1.5
PAC1				S	Sn	06 49 32.5	-3.7
CAPC	**Capurgana**	**4.78**	**348**	P	Pn	06 48 50.4	-0.2
OCAC	**Ocana**	**5.23**	**35**	P	Pn	06 48 55.1	-1.6
	7.9nm,0.7s						
OCAC				S	Sn	06 49 55.2	-1.1
	7.9nm,0.7s						
SJCC	**San Jacinto, C**	**6.04**	**11**	P	Pn	06 49 06.2	-1.3
	18nm,1.4s						
BCIP	**Isla Barro Col**	**6.25**	**326**	P	Pn	06 49 10.2	-0.1
	42nm,1.7s						
BCIP				S	Sn	06 50 21.4	+0.7
	42nm,1.7s						

FUNV ***19*** *07:09:15.8,6˝.83N×72˚.86W,h159km,MW3.1,Presumed earthquake*
RSNC ***19*** *07:09:17.1±0.0,7˚.1˚×7˚.3W±˚,h141km±1km,M2.2,ML2.1*
ISC 19 07:09:14.2±1.4**,6˚.87N**±0˝.03×**73˚.04W**±0˝.05**, h155**km±8km**, n24,**σ1º**34**/46**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.31**	**207**	P	**Pn**	**07 09 36.2**	**+0.4**
BARC				S	**Sn**	**07 09 50.9**	**-1.3**
PAMC	**Pamplona, Colo**	**0.58**	**36**	P	**Pn**	**07 09 38.9**	**+1.7**
PAMC				S	**Sn**	**07 09 55.4**	**+0.7**
BRJC	**Barrancabermej**	**0.71**	**278**	P	**Pn**	**07 09 37.9**	**+0.6**
BRJC				S	**Sn**	**07 09 54.7**	**-0.2**
RUSC	**La Rusia**	**0.97**	**183**	P	**Pn**	**07 09 40.2**	**+0.3**
RUSC				S	**Sn**	**07 09 58.4**	**-1.1**
RUSC	**La Rusia**	**0.97**	**183**	*eP*	**Pn**	**07 09 40.7**	**+0.8**
RUSC				*eS*	**Sn**	**07 09 58.8**	**-0.7**
CAPV	**Capacho**	**1.22**	**36**	*eP*	**Pn**	**07 09 43.5**	**+1.7**
CAPV				*eS*	**Sn**	**07 10 02.2**	**-0.6**
OCAC	**Ocana**	**1.39**	**349**	P	**Pn**	**07 09 44.3**	**+1.0**
OCAC				S	**Sn**	**07 10 05.8**	**+0.2**
PTBC	**PUERTO BERRIO,**	**1.45**	**257**	P	**Pn**	**07 09 43.0**	**-0.7**
PTBC				S	**Sn**	**07 10 04.3**	**-1.9**
SPBC	**San Pablo de B**	**1.59**	**220**	P	**Pn**	**07 09 45.2**	**0.0**
SPBC				S	**Sn**	**07 10 07.1**	**-1.5**
CHIC	**Chingaza**	**2.33**	**197**	P	**Pn**	**07 09 54.6**	**+0.6**
CHIC				S	**Sn**	**07 10 24.5**	**-0.1**
ROSC	**El Rosal**	**2.38**	**212**	P	**Pn**	**07 09 56.2**	**+1.6**
ROSC				S	**Sn**	**07 10 25.8**	**0.0**
SOCV	**Socops**	**2.58**	**57**	*eP*	**Pn**	**07 09 56.0**	**-0.6**
SOCV				*eS*	**Sn**	**07 10 24.8**	**-4.6**
UREC	**San Jos de Ur**	**2.62**	**290**	P	**Pn**	**07 09 57.2**	**0.0**
UREC				S	**Sn**	**07 10 27.3**	**-3.0**
VILC	**Villavicencio,**	**2.82**	**193**	P	**Pn**	**07 10 00.2**	**+0.5**
VILC				S	**Sn**	**07 10 35.5**	**+0.7**
CBOC	**Ciudad Bolivar**	**3.12**	**251**	P	**Pn**	**07 10 04.4**	**+0.9**
CBOC				S	**Sn**	**07 10 40.6**	**-1.0**
DBBC	**Dabeiba**	**3.15**	**273**	P	**Pn**	**07 10 04.5**	**+0.7**
DBBC				S	**Sn**	**07 10 40.4**	**-1.8**
ARGC	**Ariguani, Magd**	**3.20**	**338**	P	**Pn**	**07 10 07.0**	**+2.6**
ARGC				S	**Sn**	**07 10 45.7**	**+2.4**
PRAC	**Prado**	**3.63**	**210**	P	**Pn**	**07 10 11.1**	**+0.1**
PRAC				S	**Sn**	**07 10 53.3**	**0.0**
ORTC	**Ortega, Tolima**	**3.67**	**217**	P	**Pn**	**07 10 10.9**	**+0.4**
ORTC				S	**Sn**	**07 10 54.6**	**+0.5**
SJCC	**San Jacinto, C**	**3.68**	**325**	P	**Pn**	**07 10 10.3**	**-0.2**
SJCC				S	**Sn**	**07 10 53.2**	**-1.1**
SJCC	**San Jacinto, C**	**3.68**	**325**	*eS*	**Sn**	**07 10 54.3**	**0.0**
PLMC	**San Jos del P**	**3.77**	**239**	P	**Pn**	**07 10 12.3**	**+0.5**
PLMC				S	**Sn**	**07 10 55.6**	**-0.8**
URMC	**La Uribe, Meta**	**3.84**	**200**	P	**Pn**	**07 10 13.6**	**+0.9**
URMC				S	**Sn**	**07 10 58.7**	**+0.6**
CRJC	**Cerrejon, Guaj**	**4.13**	**2**	P	**Pn**	**07 10 16.6**	**+0.2**

SOME ***19*** *07:20:55.2,39˚.93N×77˚.10E,h5km*
KRNET ***19*** *07:20:56.1±0.1,39˚.95N×77˚.16E,h15km,mb3.3*
NNC ***19*** *07:20:56.5±1.0,39˚.96N×77˚.15E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=6.6km s-min=4.8km az=167.0*
ISC 19 07:20:54.4±2.0**,39˚.94N**±0˝.08×**77˚.15E**±0˝.04**, h16**km±15km**, n40,**σ1º**38**/59**, 14C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.61**	**314**	⇑*iP*	**Pg**	**07 21 25.8**	**+0.5**
JNKS				⇑*iS*	**Sg**	**07 21 47.7**	**+1.5**
NRN	**Naryn**	**1.73**	**330**	⇑*iP*	**Pg**	**07 21 27.9**	**+0.3**
NRN				⇑*iS*	**Sg**	**07 21 51.6**	**+1.5**
TARG	**Taragay, Kyrgy**	**1.86**	**15**	⇑*eP*	**Pg**	**07 21 30.3**	**+0.2**
TARG				⇑*iS*	**Sg**	**07 21 55.1**	**+0.9**
KDJ	**Kajisay**	**2.19**	**1**	⇑*eP*	**Pg**	**07 21 35.7**	**-0.7**
KDJ				⇑*eS*	**Sg**	**07 22 03.7**	**-1.1**
ULHL	**Ulahol**	**2.40**	**344**	P	**Pg**	**07 21 40.3**	**-0.2**
	SNR=6.1						
ULHL	**Ulahol**	**2.40**	**344**	⇑*eP*	**Pb**	**07 21 38.6**	**+1.2**
ULHL				⇑*iS*	**Sb**	**07 22 09.1**	**+2.2**
BOOM	**Boomskoye usch**	**2.71**	**341**	⇓*iP*	**Pb**	**07 21 42.6**	**+0.1**
BOOM				⇓*iS*	**Sb**	**07 22 16.4**	**+0.9**
SALK	**Salom-Alik**	**2.71**	**291**	⇑*iP*	**Pb**	**07 21 42.7**	**+0.2**
SALK				⇑*iS*	**Sb**	**07 22 16.9**	**+1.3**
SFK	**Sufi-Kurgan**	**2.80**	**273**	⇑*iP*	**Pb**	**07 21 44.0**	**-0.1**
SFK				⇑*iS*	**Sb**	**07 22 19.0**	**+0.7**
ANVS	**Anan'yevo**	**2.87**	**8**	⇓*eP*	**Pb**	**07 21 44.6**	**-0.7**
ANVS				⇓*eS*	**Sb**	**07 22 20.1**	**-0.1**
ARLS	**Aral**	**2.87**	**313**	⇓*iP*	**Pb**	**07 21 44.9**	**-0.5**
ARLS				⇓*iS*	**Sb**	**07 22 20.7**	**+0.4**
UCH	**Uchtor**	**3.03**	**320**	P	**Pg**	**07 21 52.0**	**-0.4**
	SNR=8.3						
TNSS	**Tian-Shan**	**3.10**	**357**	Pg	**Pg**	**07 21 52.7**	**-1.1**
	3.2nm,0.5s						
TNSS				Lg	Lg	07 22 34.7	
	5.6nm,0.5s						
TNSS	**Tian-Shan**	**3.10**	**357**	*eP*	**Pg**	**07 21 52.7**	**-1.1**
	3.2nm,0.5s						
TNSS				*eS*	**Sg**	**07 22 34.7**	**+0.8**
	5.6nm,0.5s						

KBK	**Karagaybulak**	**3.18**	**329**	P	**Pg**	**07 21 54.9**	**-0.4**
	SNR=13						
TKM2	**Tokmak 2**	**3.20**	**339**	P	**Pg**	**07 21 54.8**	**-0.8**
	SNR=12						
MDOK	**Medeo**	**3.22**	**359**	Pg	**Pg**	**07 21 55.4**	**-0.7**
	12nm,0.5s						
MDOK				Lg	Lg	07 22 38.9	
	25nm,0.6s						
KST	**Kastek**	**3.23**	**344**	Pg	**Pg**	**07 21 55.0**	**-1.1**
KST				Lg	Lg	07 22 38.9	
	15nm,0.5s						
KST	**Kastek**	**3.23**	**344**	*eP*	**Pg**	**07 21 55.0**	**-1.1**
KST				*eS*	**Sg**	**07 22 38.5**	**+0.6**
	15nm,0.5s						
MTBS	**Maitube**	**3.23**	**351**	Pg	**Pg**	**07 21 54.7**	**-1.6**
	4.3nm,0.5s						
MTBS				Lg	Lg	07 22 37.7	
	17nm,0.4s						
MTBS	**Maitube**	**3.23**	**351**	*eP*	**Pg**	**07 21 54.7**	**-1.6**
	4.3nm,0.5s						
MTBS				*eS*	**Sg**	**07 22 37.7**	**-0.5**
	17nm,0.4s						
SATY	**Saty**	**3.26**	**16**	Pg	**Pg**	**07 21 55.8**	**-1.0**
	14nm,0.6s						
SATY				Lg	Lg	07 22 40.3	
	21nm,0.5s						
KOTS	**Kotyrbulak**	**3.29**	**360**	Pg	**Pg**	**07 21 56.6**	**-0.9**
	13nm,0.3s						
KOTS				Lg	Lg	07 22 41.5	
	36nm,0.6s						
KOTS	**Kotyrbulak**	**3.29**	**360**	*eP*	**Pg**	**07 21 56.6**	**-0.9**
	13nm,0.3s						
KOTS				*eS*	**Sg**	**07 22 41.0**	**+0.9**
	36nm,0.6s						
AAK	**Ala-Archa**	**3.35**	**324**	P	**Pg**	**07 21 57.6**	**-1.0**
	SNR=8.3						
AAK	**Ala-Archa**	**3.35**	**324**	⇓Pg	**Pg**	**07 21 57.0**	**-1.6**
	2.1nm,0.5s						
AAK				⇓Lg	Lg	07 22 42.0	
	5.1nm,0.5s						
UZB	**Uzynbulak**	**3.50**	**23**	Pg	**Pg**	**07 21 59.7**	**-1.8**
UZB				Lg	Lg	07 22 46.2	
UZB	**Uzynbulak**	**3.50**	**23**	*eP*	**Pg**	**07 21 59.7**	**-1.8**
UZB				*eS*	**Sg**	**07 22 46.2**	**-0.6**
KURS	**Kuram**	**3.63**	**12**	Pg	**Pg**	**07 22 02.1**	**-1.8**
	5.6nm,0.8s						
KURS				Lg	Lg	07 22 50.4	
	12nm,0.6s						
SHLS	**Shalkode**	**3.66**	**28**	Pg	**Pg**	**07 22 05.5**	**+1.2**
	7.4nm,0.7s						
SHLS				Lg	Lg	07 22 56.2	
	13nm,0.4s						
SHLS	**Shalkode**	**3.66**	**28**	*eP*	**Pg**	**07 22 05.5**	**+1.2**
	7.4nm,0.7s						
SHLS				*eS*	**Sg**	**07 22 56.2**	**+4.5**
	13nm,0.4s						
KPKS	**Kokpek**	**3.71**	**18**	Pg	**Pg**	**07 22 03.6**	**-1.8**
	0.4nm,0.2s						
KPKS				Lg	Lg	07 22 53.1	
	9.9nm,0.4s						
KPKS	**Kokpek**	**3.71**	**18**	*eP*	**Pg**	**07 22 03.5**	**-1.9**
	0.4nm,0.2s						
KPKS				*eS*	**Sg**	**07 22 53.1**	**-0.3**
	9.9nm,0.4s						
EKS2	**Erkin-Say**	**3.72**	**318**	P	**Pb**	**07 21 59.0**	**-0.7**
	SNR=5.8						
PDGK	**Podgornoye**	**3.82**	**27**	⇓Pg	**Pg**	**07 22 04.7**	**-2.7**
	6.8nm,0.7s						
PDGK				⇓Lg	Lg	07 22 56.0	
	17nm,0.7s						
KRBS	**Karabastau**	**3.91**	**344**	Pg	**Pg**	**07 22 07.1**	**-2.2**
	4.5nm,0.5s						
KRBS				Lg	Lg	07 22 59.7	
	2.5nm,0.6s						
KRBS	**Karabastau**	**3.91**	**344**	*eP*	**Pg**	**07 22 07.1**	**-2.2**
	4.5nm,0.5s						
KRBS				*eS*	**Sg**	**07 22 58.9**	**-1.0**
	2.5nm,0.6s						
MRKS	**Merke**	**4.07**	**315**	*eP*	**Pg**	**07 22 10.2**	**-2.0**
	1.4nm,0.3s						
MRKS				*eS*	**Sg**	**07 23 04.9**	**-0.1**
	7.3nm,0.4s						
KNOS	**Konyrlen**	**4.67**	**18**	Pg	**Pg**	**07 22 22.1**	**-1.7**
	2.7nm,0.5s						
KNOS				Lg	Lg	07 23 25.1	
	4.0nm,0.5s						
KK31	**Karatay Array**	**5.90**	**305**	⇓Pg	**Pg**	**07 22 45.5**	**-1.7**
	0.9nm,0.6s,baz=136,slow=16,SNR=4.0						
KK31				⇓Lg	Lg	07 23 58.8	
	0.8nm,0.3s,baz=120,slow=28,SNR=5.2						

IDC ***19*** *07:31:10.4±7.9, 17˚.39S×178˚.71W,h559km±84km,mb3.0/7, mbtmp3.9/7,Error ellipse: s-maj=65.5km s-min=30.5km az=132.0*
ISC 19 07:31:08.9±1.5**, 17˚.4S**±0˝.4×**178˚.7W**±0˝.3**, h547**km**, n9,** σ0º**40/11, mb3.6/7, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**07 37 46.4**	**+0.3**
	1.8nm,0.5s,baz=85,slow=12,SNR=5.8						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**44.49**	**259**	P	**P**	**07 38 32.1**	**-0.1**
	1.1nm,0.5s,baz=94,slow=8.5,SNR=18						
WRA				PcP	**PcP**	**07 40 03.3**	**-0.5**
	0.4nm,0.9s,baz=104,slow=2.3,SNR=1.7						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**44.70**	**254**	P	**P**	**07 38 34.1**	**+0.2**
	10nm,0.6s,baz=92,slow=7.8,SNR=188						
ASAR				PcP	**PcP**	**07 40 03.7**	**-0.8**
	0.2nm,0.4s,baz=90,slow=3.6,SNR=2.2						
	10nm,0.6s						
MJAR	**Matsushiro Arr**	**67.37**	**323**	P	**P**	**07 41 10.0**	**-0.1**
	1.4nm,0.7s,baz=170,slow=5.8,SNR=2.3						
	1.4nm,0.7s						
ILAR	**Eielson Array**	**85.46**	**13**	P	**P**	**07 42 48.8**	**+0.2**
	0.3nm,0.9s,baz=222,slow=3.9,SNR=6.4						
	0.3nm,0.9s						
PDAR	**Pinedale Array**	**87.16**	**44**	P	**P**	**07 42 57.5**	**0.0**
	0.1nm,0.4s,baz=292,slow=4.5,SNR=1.9						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**93.98**	**25**	P	**P**	**07 43 28.2**	**+0.1**
	0.1nm,0.7s,baz=258,slow=5.0,SNR=2.6						
	0.1nm,0.7s						
BRTR	**Keskin Array B**	**144.26**	**315**	PKP	**PKPab**	**07 49 43.6**	**+0.2**
	0.9nm,0.9s,baz=46,slow=4.2,SNR=4.1						
GERES	**GERESS Array B**	**147.07**	**345**	PKPbc	**PKPbc**	**07 49 50.5**	**-0.2**
	0.8nm,0.5s,baz=26,slow=6.0,SNR=2.2						

GCG ***19*** *07:32:07.5±0.8, 13˚.93N×90˚.57W,h79km±10km,MD3.5, Presumed earthquake*
SNET ***19*** *07:32:08.4±2.6, 13˚.86N×90˚.48W,h89km,ML2.7, Presumed earthquake*
ISC 19 07:32:10.6±2.3**, 14˚.0N**±0˝.2×**90˚.38W**±0˝.08**, h86**km±21km**, n12,**σ1º**97/17, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FG16	**Alotenango, Sa**	**0.31**	**335**	*i* P	**Pn**	**07 32 23.2**	**-0.7**
NUBE	**Las Nubes**	**0.59**	**98**	*i* P	**Pn**	**07 32 24.0**	**-1.9**
CEVE	**Cerro Verde**	**0.75**	**102**	*eP*	**Pn**	**07 32 26.3**	**-1.2**
CEVE				*eS*	**Sn**	**07 32 42.2**	**+2.0**
JAYA	**Jayaque - finc**	**0.96**	**110**	*eP*	**Pn**	**07 32 28.0**	**-1.8**
JAYA				*eS*	**Sn**	**07 32 44.9**	**+0.8**
JAYA	**Jayaque - finc**	**0.96**	**110**	*eP*	**Pn**	**07 32 28.0**	**-1.8**
STG5	**El Palmar, Qui**	**1.03**	**294**	*i* P	**Pn**	**07 32 29.8**	**-0.7**
STG8	**El Palmar, Qui**	**1.05**	**296**	*i* P	**Pn**	**07 32 30.8**	**-0.1**
STG8				*i* S	**Sn**	**07 32 48.3**	**+2.3**
STG2	**El Palmar, Qui**	**1.07**	**295**	*i* P	**Pn**	**07 32 31.0**	**0.0**
STG2				*i* S	**Sn**	**07 32 48.6**	**+2.4**
MTO3	**Montecristo**	**1.07**	**67**	*eP*	**Pn**	**07 32 30.8**	**-0.3**
LALI	**Alcalda de L**	**1.14**	**116**	*eP*	**Pn**	**07 32 30.0**	**-1.7**
SOKI	**Kika Raxquin**	**1.29**	**310**	*i* S	**Sn**	**07 32 48.0**	**-3.5**
COEG	**Centro de Oper**	**1.50**	**104**	*eP*	**Pn**	**07 32 36.3**	**+0.1**
COEG				*eS*	**Sn**	**07 32 58.3**	**+2.7**

CRAAG ***19*** *07:32:49.3,36˚.76N×5˚.75E,Ml3.6,Algrie 13km SE El-Aouana*
MDD ***19*** *07:32:52.5±0.9,36˚.75N×5˚.73E,h24km±3.3km,Mb4.4/19, M_mb3.8/19,Error ellipse: s-maj=34.8km s-min=7.9km az=133.0*
ISC 19 07:32:49.6±0.9**, 36˚.80N**±0˝.04×**5˚.71E**±0˝.03**, h18**km**, n37,** σ1º**87/44, 8C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DFRA	**Djebel Bou Aff**	**0.29**	**152**	P	**Pg**	**07 32 55.4**	**-0.6**
CBOS	**Bilal Ibnou Ra**	**0.49**	**91**	P	**Pb**	**07 33 00.3**	**+0.7**
CBHR	**Beni Haroun da**	**0.51**	**117**	P	**Pb**	**07 33 00.4**	**+0.4**
COAT	**Oued Athmania**	**0.73**	**140**	P	**Pn**	**07 33 04.5**	**-0.6**
CAZD	**Ain Tagrout**	**0.77**	**216**	P	**Pb**	**07 33 03.6**	**-0.8**
CKHR	**Kef el Ahmar**	**0.80**	**191**	P	**Pn**	**07 33 06.1**	**0.0**
CASM	**Ain Smara**	**0.83**	**130**	P	**Pn**	**07 33 06.1**	**-0.3**
CKFL	**Kef-Lekhel**	**0.91**	**116**	P	**Pn**	**07 33 07.9**	**+0.3**
CAEH	**'Ain El Ouahch**	**0.92**	**91**	P	**Pn**	**07 33 08.3**	**+0.7**
CTCHA	**Tamokra**	**0.93**	**247**	P	**Pb**	**07 33 06.7**	**-0.4**
CTEI	**Djebel Teioual**	**0.93**	**142**	P	**Pn**	**07 33 08.1**	**+0.3**
CJSR	**Ain Djasser**	**0.96**	**168**	P	**Pn**	**07 33 09.0**	**+0.8**
CSGS	**Sigus**	**1.05**	**129**	P	**Pg**	**07 33 11.3**	**+1.3**
CBST	**Bordj Sabath**	**1.19**	**109**	P	**Pg**	**07 33 13.3**	**+0.7**
ATKB	**Taksebt**	**1.28**	**265**	P	**Pn**	**07 33 12.9**	**+0.3**
CTGD	**Timgad**	**1.43**	**152**	P	**Pg**	**07 33 17.3**	**+0.1**
AKET	**Djebel Ketaf**	**1.65**	**243**	P	**Pb**	**07 33 20.8**	**+1.2**
ABSD	**Ouled Sidi Bra**	**1.83**	**222**	P	**Pn**	**07 33 21.4**	**+1.2**
CRHA	**Rehia**	**1.88**	**123**	P	**Pb**	**07 33 23.2**	**-0.1**
AFRS	**Ain Fares**	**2.31**	**207**	P	**Pn**	**07 33 27.0**	**+0.2**
ADCK	**Dar Chioukh**	**2.63**	**225**	P	**Pn**	**07 33 32.3**	**+1.0**
ETOS	**Mallorca**	**3.73**	**323**	Pn	**Pn**	**07 33 48.1**	**+1.8**
ETOS				Sn	**Sn**	**07 34 25.4**	**-4.5**
ETOS	**Mallorca**	**3.73**	**323**	P	**Pn**	**07 33 47.9**	**+1.5**
ETOS				⇑*i*IVmb_VC		07 33 50.3	
	451nm,SNR=1.5						
ETOS				S	**Sn**	**07 34 25.6**	**-4.3**
EIBI	**Ibiza**	**4.10**	**304**	Pn	**Pn**	**07 33 53.1**	**+1.7**
EIBI				Sn	**Sn**	**07 34 38.3**	**-0.7**
EIBI	**Ibiza**	**4.10**	**304**	P	**Pn**	**07 33 52.7**	**+1.3**
EIBI				⇑*i*IVmb_VC		07 33 59.6	
	459nm,SNR=2.6						
EIBI				S	**Sn**	**07 34 37.2**	**-1.7**
ECOL	**Islas Columbre**	**5.01**	**310**	P	**Pn**	**07 34 04.7**	**+0.8**
CART	**Cartagena**	**5.41**	**280**	Sn	**Sn**	**07 35 12.7**	**+1.5**
EPOB	**Poblet**	**5.80**	**323**	P	**Pn**	**07 34 15.9**	**+1.2**
EPOB				⇑*i*IVmb_VC		07 34 21.1	
	196nm,SNR=1.7						
EPOB				S	**Sn**	**07 35 16.2**	**-4.6**
EVIV	**Cofrentes, Val**	**5.92**	**297**	P	**Pn**	**07 34 18.2**	**+1.7**
EVIV				⇑*i*IVmb_VC		07 34 27.6	
	169nm,SNR=1.4						
ECHE	**Chera**	**5.95**	**300**	Pn	**Pn**	**07 34 18.1**	**+1.3**
ECHE				Sn	**Sn**	**07 35 21.4**	**-3.1**
EMOS	**Mosqueruela**	**6.01**	**308**	P	**Pn**	**07 34 19.3**	**+1.6**
EMOS				⇑*i*IVmb_VC		07 34 23.1	
	165nm,SNR=1.1						
EMOS				S	**Sn**	**07 35 24.1**	**-2.0**
ETOB	**Tobarra**	**6.04**	**290**	Pn	**Pn**	**07 34 20.5**	**+2.4**
ETOB	**Tobarra**	**6.04**	**290**	P	**Pn**	**07 34 20.3**	**+2.3**
ETOB				⇑*i*IVmb_VC		07 34 23.4	
	160nm,SNR=1.4						
EJON	**La Jonquera**	**6.04**	**340**	P	**Pn**	**07 34 19.1**	**+1.0**
EJON				⇑*i*IVmb_VC		07 34 20.0	
	286nm,SNR=1.2						
EMIR	**Miracle**	**6.05**	**329**	P	**Pn**	**07 34 20.6**	**+2.5**
EQES	**Quesada**	**7.07**	**281**	P	**Pn**	**07 34 35.0**	**+2.8**
EQES				⇑*i*IVmb_VC		07 34 41.8	
	148nm,SNR=1.6						
EALK	**Alkurruntz**	**8.47**	**321**	P	**Pn**	**07 34 54.3**	**+2.9**

IDC ***19*** *07:40:24.8±4.0, 10˚.29S×111˚.98E,h0km,mb3.4/4, mbtmp3.4/4,MS3.5/1,Error ellipse: s-maj=186.1km s-min=25.4km az=50.0*
DJA ***19*** *07:40:31.4±0.7, 10˚S±7˚×11˚3E±˚,h10km,M3.8/13, MLv3.8/13*
ISC 19 07:40:33.3±1.2**, 9˚.7S**±0˚.1×**112˚.81E**±0˚.07**, h36**km**, n15,** σ1º**16/16, mb3.5/4, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.51**	**24**	P	**Pn**	**07 40 55.8**	**-2.0**
JAGI	**Jajag, Banyuwa**	**1.77**	**48**	P	**Pn**	**07 41 00.7**	**-0.7**
JAGI				S	**Sn**	**07 41 23.1**	**+0.4**
BLJI	**Banyuglugur**	**2.05**	**22**	P	**Pn**	**07 41 05.9**	**+0.7**
BYJI	**Banyuwangi**	**2.09**	**47**	P	**Pn**	**07 41 06.2**	**+0.4**
SNJI	**Sawahan-Nganju**	**2.14**	**331**	P	**Pn**	**07 41 07.1**	**+0.5**
SJI	**Sawahan**	**2.17**	**331**	P	**Pn**	**07 41 07.1**	**+0.1**
PCJI	**Pacitan**	**

PYL	**PYLOS**	**4.26**	**346**	P		Pn	**08 20 06.5**	**+1.4**
PYL				S		Sn	**08 20 52.9**	**-2.0**
KARP	**Karpathos**	**4.42**	**50**			Pn	**08 20 09.7**	**+2.4**
KARP	**Karpathos**	**4.42**	**50**	P		Pn	**08 20 10.3**	**+3.0**
KARP				S		Sn	**08 21 00.2**	**+1.4**
KARP	**Karpathos**	**4.42**	**50**	Pn		Pn	**08 20 10.3**	**+3.0**
KARP				Sn		Sn	**08 21 01.9**	**+3.1**
ITM	**Ithomi**	**4.50**	**349**			Pn	**08 20 09.6**	**+1.1**
ITM	**Ithomi**	**4.50**	**349**	P		Pn	**08 20 10.3**	**+1.8**
ITM				S		Sn	**08 20 59.9**	**-1.1**
VLX	**Vlachokerasia**	**4.63**	**354**	P		Pn	**08 20 13.5**	**+3.2**
VLX				S		Sn	**08 21 03.5**	**-0.8**
AMT	**Artemida-Makis**	**4.89**	**348**	P		Pn	**08 20 15.6**	**+1.8**
AMT				S		Sn	**08 21 09.4**	**-1.0**
VLY	**Voula,Athens**	**5.12**	**7**	P		Pn	**08 20 18.1**	**+1.1**
VLY				S		Sn	**08 21 13.7**	**-2.4**
GUR	**Goura**	**5.20**	**354**	P		Pn	**08 20 20.3**	**+2.2**
GUR				S		Sn	**08 21 16.9**	**-1.3**
ATHU	**Athens Univers**	**5.24**	**7**	P		Pn	**08 20 19.6**	**+1.1**
ATHU				S		Sn	**08 21 16.0**	**-2.9**
LTK	**Loutraki**	**5.26**	**360**	P		Pn	**08 20 20.1**	**+1.4**
LTK				S		Sn	**08 21 18.4**	**-1.0**
DRO	**Drossia**	**5.29**	**349**	P		Pn	**08 20 20.8**	**+1.5**
KLV	**Kalavryta, Ach**	**5.32**	**353**	P		Pn	**08 20 22.4**	**+2.6**
PTL	**Penteli**	**5.33**	**7**	P		Pn	**08 20 21.5**	**+1.8**
PTL				S		Sn	**08 21 18.4**	**-2.8**
DION	**Dionisos Attik**	**5.36**	**8**	P		Pn	**08 20 21.0**	**+0.7**
DION				S		Sn	**08 21 19.6**	**-2.4**
KARY	**Karystos**	**5.39**	**12**	P		Pn	**08 20 21.2**	**+0.6**
VILL	**Villia**	**5.40**	**2**	P		Pn	**08 20 22.0**	**+1.2**
VILL				S		Sn	**08 21 21.0**	**-2.1**
STFN	**Stefani** 0.5nm53nm,0.7s	**5.43**	**4**	P		Pn	**08 20 21.9**	**+0.8**
ORTH	**Orthonies,Zaky**	**5.43**	**340**	P		Pn	**08 20 22.4**	**+1.3**
RLS	**Riolos of Patr**	**5.44**	**347**	P		Pn	**08 20 23.6**	**+2.3**
RLS				S		Sn	**08 21 22.1**	**-1.9**
ARG	**Arkhangelos**	**5.45**	**49**			Pn	**08 20 23.0**	**+1.6**
AXS	**Araxos** 0.3nm58nm,0.7s	**5.59**	**347**	P		Pn	**08 20 25.9**	**+2.6**
AXS				S		Sn	**08 21 26.3**	**-1.4**
	0.3nm58nm,0.7s							
RTZL	**Ratzakli, Kefa** 0.5nm48nm,0.6s	**5.62**	**342**	P		Pn	**08 20 24.5**	**+0.8**
KALE	**Kalithea** 0.4nm48nm,0.7s	**5.67**	**353**	P		Pn	**08 20 25.8**	**+1.3**
SERG	**Sergoula** 0.3nm55nm,0.7s	**5.70**	**352**	P		Pn	**08 20 26.6**	**+1.7**
EFP	**Efpalio** 0.3nm71nm,0.9s	**5.73**	**351**	P		Pn	**08 20 27.6**	**+2.3**
EFP				S		Sn	**08 21 29.8**	**-1.3**
	0.3nm71nm,0.9s							
DMLN	**Damoulianata-K**	**5.88**	**339**	P		Pn	**08 20 28.8**	**+1.4**
LKR	**Lokris** 0.4nm52nm,0.6s	**5.88**	**360**	P		Pn	**08 20 28.6**	**+1.2**
LKR				S		Sn	**08 21 32.1**	**-2.7**
	0.4nm52nm,0.6s							
ANX	**Ano Chora** 0.6nm96nm,0.6s	**5.89**	**352**	P		Pn	**08 20 29.7**	**+2.1**
ATAL	**Atalanti** 0.2nm41nm,0.6s	**5.92**	**360**	P		Pn	**08 20 29.0**	**+1.0**
ATAL				S		Sn	**08 21 32.6**	**-3.3**
	0.2nm41nm,0.6s							
PVO	**Paravola**	**5.97**	**349**	P		Pn	**08 20 31.5**	**+2.8**
FSK	**Fiskardo** 0.3nm82nm,0.6s	**6.03**	**341**	P		Pn	**08 20 31.0**	**+1.6**
YER	**Yerkesik**	**6.14**	**43**	P		Pn	**08 20 32.9**	**+1.9**
EVGI	**Lefkada island** 0.2nm60nm,0.5s	**6.16**	**342**	P		Pn	**08 20 32.5**	**+1.3**
EVR	**Evrytania** 0.3nm89nm,1.1s	**6.23**	**351**	P		Pn	**08 20 34.6**	**+2.4**
SKY	**Skiros Island** 0.1nm25nm,0.5s	**6.23**	**11**	P		Pn	**08 20 32.8**	**+0.6**
NYDR	**Nydri-Lefkada**	**6.24**	**343**	P		Pn	**08 20 33.8**	**+1.5**
DRAG	**Dragano-Lefkad**	**6.24**	**342**	P		Pn	**08 20 33.4**	**+1.1**
AGG	**Agios Georgios** 0.2nm60nm,0.6s	**6.28**	**355**	P		Pn	**08 20 34.4**	**+1.5**
AGG				S		Sn	**08 21 43.2**	**-1.5**
	0.2nm60nm,0.6s							
MAKR	**Makrakomi, Fth**	**6.29**	**354**	P		Pn	**08 20 35.2**	**+2.3**
MAKR				S		Sn	**08 21 42.4**	**-2.4**
LKD2	**Lefkada island** 0.3nm43nm,0.6s	**6.32**	**343**	P		Pn	**08 20 34.8**	**+1.4**
AMPL	**Ampelaki** 0.4nm43nm,0.6s	**6.33**	**347**	P		Pn	**08 20 35.2**	**+1.7**
TSLK	**Tsoukalades, L**	**6.36**	**343**	P		Pn	**08 20 35.4**	**+1.6**
AOS	**Alonnisos**	**6.44**	**6**	P		Pn	**08 20 35.4**	**+0.3**
AKAS	**Kas**	**6.45**	**56**			Pn	**08 20 36.0**	**+0.7**
TETR	**Tetrakomo, Epi**	**6.73**	**348**	P		Pn	**08 20 40.8**	**+1.8**
THL	**Klokotos Trika**	**6.84**	**353**	P		Pn	**08 20 41.5**	**+1.0**
ELL	**Elmali**	**6.92**	**53**			Pn	**08 20 44.3**	**+2.5**
MANT	**Manisa**	**7.28**	**37**	Pn		Pn	**08 20 47.7**	**+0.9**
KPRO	**Kipourio**	**7.31**	**350**	P		Pn	**08 20 48.4**	**+1.4**
LIT	**Litokhoron**	**7.34**	**357**			Pn	**08 20 48.1**	**+0.7**
KEK	**Kerkira**	**7.42**	**340**	Pn		Pn	**08 20 47.8**	**-0.7**
EZN	**Ezine** 6.5nm,0.6s	**7.54**	**20**	Pn		Pn	**08 20 52.1**	**+2.0**
CEL	**Celeste**	**8.00**	**315**			Pn	**08 20 56.1**	**-0.3**
CEL	**Celeste** 0.2nm588nm36nm,0.6s	**8.00**	**315**	Pn		Pn	**08 20 57.5**	**+1.1**
SCTE	**Santa Cesarea**	**8.17**	**335**	Pn		Pn	**08 20 57.6**	**-1.2**
TIP	**Timpagrande**	**8.18**	**323**			Pn	**08 20 58.5**	**-0.4**
TIP	**Timpagrande** 22nm,1.0s	**8.18**	**323**	Pn		Pn	**08 20 59.7**	**+0.8**
RAFF	**Raffo Rosso**	**8.39**	**304**			Pn	**08 21 01.9**	**+0.1**
ALN	**Alexandroupoli**	**8.48**	**16**			Pn	**08 21 04.1**	**+1.1**
VAE	**Valguarnera** baz=129,slow=13	**8.48**	**306**	Sn		Sn	**08 22 38.7**	**-0.2**
OHR	**Ohrid**	**8.53**	**349**	*i* Pn		Pn	**08 21 04.2**	**+0.5**
VAY	**Valandovo**	**8.56**	**358**	*i* Pn		Pn	**08 21 04.7**	**+0.6**
RDO	**Rodhopi**	**8.61**	**13**			Pn	**08 21 06.1**	**+1.3**
CSS	**Mathiatis**	**8.85**	**73**			Pn	**08 21 09.2**	**+1.1**
CSS	**Mathiatis** 863nm33nm,0.7s	**8.85**	**73**	Pn		Pn	**08 21 10.3**	**+2.2**
CUC	**Castrocucco**	**9.27**	**323**			Pn	**08 21 13.7**	**-0.2**
CTYL	**Yalikoy Yolu**	**9.66**	**24**	Pn		Pn	**08 21 20.9**	**+1.7**
ACER	**Acerenza**	**9.82**	**327**			Pn	**08 21 22.2**	**+0.7**
KZIT	**Kziot**	**9.85**	**98**	P		Pn	**08 21 21.5**	**-0.3**
KZIT				S		Sn	**08 23 07.7**	**-4.8**
OFRI	**`Ofer**	**10.08**	**88**	P		Pn	**08 21 24.4**	**-0.7**
OFRI				S		Sn	**08 23 12.6**	**-5.7**
PDG	**Podgorica**	**10.11**	**344**			Pn	**08 21 25.8**	**+0.4**
SLTI	**Sal'it**	**10.16**	**90**	P		Pn	**08 21 25.5**	**-0.6**
SLTI				S		Sn	**08 23 14.8**	**-5.3**
HNTI	**Hanita**	**10.22**	**85**	P		Pn	**08 21 26.1**	**-0.8**
HNTI				S		Sn	**08 23 13.7**	**-5.3**
KRMI	**Paran Flat**	**10.34**	**102**	P		Pn	**08 21 28.4**	**-0.2**
KRMI				S		Sn	**08 23 19.9**	**-4.6**
YTIR	**Yattir**	**10.36**	**94**	P		Pn	**08 21 28.4**	**-0.5**
YTIR				S		Sn	**08 23 19.9**	**-5.1**
MMC7	**Mount Meron ar**	**10.40**	**85**	P		Pn	**08 21 28.9**	**-0.6**
MMA0B	**Mount Meron ar**	**10.41**	**85**	P		Pn	**08 21 29.0**	**-0.7**
MMA0B				S		Sn	**08 23 20.9**	**-5.5**
MMAI	**Mount Meron Ar** 12nm,0.3s,baz=274,slow=11,SNR=25	**10.41**	**85**	Pn		Pn	**08 21 29.4**	**-0.2**
MMAI				Sn		Sn	08 23 17.1	-9.3
	4.8nm,0.3s,baz=261,slow=14,SNR=2.0							
MMLI	**Mount Malkishu**	**10.46**	**88**	P		Pn	**08 21 29.6**	**-0.7**
MMLI				S		Sn	08 23 21.3	-6.3
PRNI	**Paran**	**10.50**	**100**	P		Pn	**08 21 30.6**	**-0.1**
PRNI				S		Sn	**08 23 23.6**	**-4.9**
DSI	**Dead Sea**	**10.54**	**93**	P		Pn	**08 21 30.9**	**-0.4**
DSI				S		Sn	**08 23 24.4**	**-5.0**
MSBI	**Mazada**	**10.57**	**95**	P		Pn	**08 21 31.1**	**-0.5**
MSBI				S		Sn	**08 23 24.7**	**-5.3**
HMDT	**Nahal Hemdat**	**10.57**	**89**	P		Pn	**08 21 31.1**	**-0.6**
HMDT				S		Sn	**08 23 24.5**	**-5.6**
MBRI	**Mt Berech**	**10.59**	**103**	P		Pn	**08 21 32.1**	**0.0**
MBRI				S		Sn	**08 23 26.7**	**-4.2**
HRFI	**Mount Harif**	**10.62**	**102**	P		Pn	**08 21 32.1**	**-0.3**
HRFI				S		Sn	**08 23 26.7**	**-4.7**
GEM	**Giv'at Ha'Em**	**10.63**	**84**	P		Pn	**08 21 31.7**	**-0.7**
GEM				S		Sn	**08 23 26.1**	**-5.4**
EIL	**Elat** 1.2nm,0.3s,baz=299,slow=14,SNR=8.4	**10.66**	**104**	Pn		Pn	**08 21 33.9**	**+0.8**
EIL				Sn		Sn	**08 23 28.0**	**-4.5**
	1.5nm,0.3s,baz=295,slow=19,SNR=1.9							
EIL				LR		LR	08 26 30.2	
	comp=Z,100nm,20.3s,baz=355,slow=42 12nm,0.6s							
EIL	**Elat**	**10.66**	**104**	P		Pn	**08 21 32.9**	**-0.1**
EIL				S		Sn	**08 23 27.4**	**-5.1**
NATI	**Neve Ativ**	**10.69**	**84**	P		Pn	**08 21 32.8**	**-0.5**
NATI				S		Sn	**08 23 27.7**	**-5.2**
SGRT	**San Giovanni R**	**10.69**	**329**	Pn		Pn	**08 21 32.4**	**-0.9**
GHAJ	**Ghor Haditha**	**10.74**	**94**			Pn	**08 21 35.4**	**+1.3**
GHAJ	**Ghor Haditha**	**10.74**	**94**	P		Pn	**08 21 33.6**	**-0.5**
GHAJ				S		Sn	**08 23 28.9**	**-5.5**
KSHT	**Keshet**	**10.76**	**85**	P		Pn	**08 21 33.7**	**-0.6**
KSHT				S		Sn	**08 23 29.5**	**-5.3**
BR105	**Keskin Array S** 60nm7.6nm,0.8s	**11.02**	**48**	Pn		Pn	**08 21 39.9**	**+2.0**
BR104	**Keskin Array S** 64nm8.6nm,0.8s	**11.02**	**48**	Pn		Pn	**08 21 40.2**	**+2.2**
BR106	**Keskin Array S**	**11.02**	**48**	Pn		Pn	**08 21 40.4**	**+2.4**
BRTR	**Keskin Array B** 0.8nm,0.3s,baz=233,slow=14,SNR=16	**11.03**	**48**	Pn		Pn	**08 21 40.2**	**+2.0**
BRTR				Sn		Sn	**08 23 34.8**	**-6.8**
	0.1nm,0.3s,baz=224,slow=23,SNR=2.6 3.8nm,0.7s							
BRTR	**Keskin Array B**	**11.03**	**48**			Pn	**08 21 39.0**	**+0.8**
BR131	**Keskin Array S**	**11.03**	**48**			Pn	**08 21 39.1**	**+1.0**
KEST	**Kesra** 0.2nm,0.3s,baz=49,slow=19,SNR=2.1	**11.70**	**288**	Sn		Sn	**08 23 49.1**	**-8.9**
KEST				LR		LR	08 26 45.4	
	comp=Z,133nm,18.5s,baz=60,slow=40							
ASF	**Jabal al Asfar** 2.3nm,0.3s,baz=258,slow=9.9,SNR=15	**11.73**	**89**	Pn		Pn	**08 21 48.1**	**+0.4**
ASF				Sn		Sn	08 23 51.7	-7.1
	1.2nm,0.3s,baz=322,slow=19,SNR=2.8 9.1nm,0.4s							
ILGA	**Ilgaz**	**11.90**	**43**	Pn		Pn	**08 21 49.8**	**-0.2**
BNN	**Bunyan**	**12.05**	**56**			Pn	**08 21 53.4**	**+1.3**
NRCA	**Norcia**	**12.74**	**325**			Pn	**08 22 01.5**	**+0.1**
GUMA	**Gualdo di Mace**	**12.81**	**326**	Pn		Pn	**08 22 02.9**	**+0.6**
MLR	**Muntele Rosu** 0.2nm,0.3s,baz=180,slow=1.0,SNR=1.7 0.9nm,0.4s	**12.92**	**9**	Pn		Pn	**08 22 04.6**	**+0.8**
BURAR	**Bucovina Array**	**14.94**	**6**	Pn		Pn	**08 22 31.7**	**+0.3**
BUR08	**Bucovina Ar. S**	**14.96**	**6**	Pn		Pn	**08 22 31.7**	**-0.1**
SOKA	**Soboth** 1.0nm,0.3s	**15.19**	**339**	*e*Pn		Pn	**08 22 32.6**	**-2.2**
OBKA	**Obir** 0.8nm,0.3s	**15.19**	**337**	*e*Pn		Pn	**08 22 33.9**	**-1.0**
PSZ	**Piszkesteto**	**15.33**	**352**	Pn		Pn	**08 22 36.6**	**0.0**
PSZ				IAmb		IAmb	08 22 57.8	
	comp=Z,13nm,1.0s							
PRED	**Cave del Predi**	**15.47**	**335**	Pn		Pn	**08 22 38.0**	**-0.5**
CTI	**Castel Tesino**	**15.90**	**330**	Pn		Pn	**08 22 43.4**	**-0.6**
ABTA	**Abfaltersbach** comp=Z,0.3nm,0.2s	**16.12**	**333**	*e*Pn		Pn	**08 22 46.0**	**-0.9**
MOA	**Molln** comp=Z,2.1nm,0.4s	**16.47**	**339**	*e*Pn		Pn	**08 22 51.3**	**0.0**
LESA	**Schwarzleotal** comp=Z,1.0nm,0.4s	**16.63**	**335**	*e*Pn		Pn	**08 22 53.7**	**+0.4**
FUORN	**Ofenpass-Fuorn**	**16.94**	**329**	P		Pn	**08 22 56.9**	**-0.6**
FETA	**Feichten** comp=Z,5.0nm,1.1s	**17.06**	**330**	*e*Pn		Pn	**08 22 59.2**	**+0.4**
VRAC	**Vranov** comp=Z,0.4nm,0.3s,baz=167,slow=18,SNR=1.4	**17.22**	**346**	P		Pn	**08 22 59.6**	**-1.2**
VRAC				LR		LR	08 32 12.2	
	comp=Z,76nm,18.2s,baz=152,slow=46 comp=Z,2.2nm,0.4s							
DAVOX	**Davos/Dischmat** comp=Z,0.4nm,0.3s,baz=142,slow=19,SNR=4.0	**17.24**	**328**	Pn		Pn	**08 23 00.8**	**-0.3**
DAVOX				Sn		Sn	08 26 00.3	-13
	comp=Z,0.2nm,0.3s,baz=162,slow=20,SNR=2.0							
DAVOX				LR		LR	08 32 06.2	
	comp=Z,112nm,19.0s,baz=85,slow=46 comp=Z,1.0nm,0.6s							
LUBAR	**Lubar, Ukraine**	**17.51**	**10**	pP		P	**08 23 06.3**	**+0.9**
GERES	**GERESS Array B** baz=143,slow=12,SNR=3.7 comp=Z,0.5nm,0.6s	**17.53**	**339**	P		Pn	**08 23 02.8**	**-1.8**
KHC	**Kasperske Hory**	**17.82**	**339**	*e*P		P	**08 23 11.5**	**+2.6**
KIEV	**Kiev**	**18.50**	**12**			P	**08 23 15.1**	**-1.1**
KIEV				IAmb		IAmb	08 23 18.4	
	comp=Z,10nm,0.6s							
AKASG	**Malin Array Be** comp=Z,3.4nm,0.4s,baz=201,slow=11,SNR=30	**18.51**	**12**	P		P	**08 23 15.1**	**-1.3**
AKASG				S		Sn	**08 26 38.0**	**-5.3**
	comp=Z,2.9nm,0.7s,baz=202,slow=23,SNR=5.2							
AKASG				LR		LR	08 30 17.6	
	comp=Z,86nm,18.5s,baz=224,slow=37							
AKASG	**Malin Array Be**	**18.51**	**12**	P		P	**08 23 14.7**	**-1.7**
AKBB	**Malin Array Si**	**18.51**	**12**			P	**08 23 15.4**	**-0.9**
AKBB				IAmb		IAmb	08 23 18.4	
	comp=Z,11nm,0.6s							
KBZ	**Khabaz** comp=Z,0.3nm,0.3s,baz=240,slow=11,SNR=6.3	**19.02**	**49**	P		Pn	**08 23 24.7**	**+1.8**
KBZ				LR		LR	08 31 59.3	
	comp=Z,72nm,19.0s,baz=258,slow=41 comp=Z,3.2nm,0.6s							
CLL	**Collm**	**19.94**	**341**	*e*P		Pn	**08 23 34.0**	**+0.2**
CLL				*ex*		x	08 23 46.0	
PABE	**Paberze**	**22.75**	**1**			P	**08 24 02.2**	**-0.2**
ESDC	**Sonseca Array** comp=Z,4.4nm,1.0s,baz=97,slow=11,SNR=13	**22.79**	**295**	P		P	**08 24 03.9**	**+0.9**
ESDC				LR		LR	08 31 40.1	
	comp=Z,53nm,21.1s,baz=222,slow=34 comp=Z,4.4nm,1.0s							
ESDC	**Sonseca Array**	**22.79**	**295**			P	**08 24 03.0**	**0.0**
PAB	**San Pablo**	**23.06**	**295**	P		P	**08 24 04.7**	**-1.2**
PAB				IAmb		IAmb	08 24 16.7	
	comp=Z,22nm,1.4s							
MD01	**Midelt array s**	**23.33**	**278**	P		P	**08 24 09.9**	**+1.2**
TORD	**Torodi Ar. Bea** comp=Z,2.8nm,0.7s,baz=36,slow=5.7,SNR=21	**27.59**	**230**	P		P	**08 24 48.3**	**+0.7**
TORD				PcP		PcP	**08 28 04.2**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=51,slow=3.3,SNR=2.2 comp=Z,2.8nm,0.7s							
FURI	**Furi** comp=Z,79nm,19.3s,baz=11,slow=39	**27.81**	**145**	LR		LR	08 37 09.0	
HFS	**Hagfors** comp=Z,2.4nm,0.5s,baz=163,slow=10,SNR=10	**28.07**	**350**	P		P	**08 24 52.2**	**+0.6**
HFS				LR		LR	08 37 08.7	
	comp=Z,54nm,18.9s,baz=280,slow=39 comp=Z,2.4nm,0.5s							
FINES	**FINESS Array B** comp=Z,3.4nm,0.7s,baz=187,slow=9.7,SNR=9.4	**28.77**	**3**	P		P	**08 24 58.6**	**+0.9**
FINES				LR		LR	08 39 25.3	
	comp=Z,87nm,18.0s,baz=213,slow=43 comp=Z,3.4nm,0.7s							
FINES	**FINESS Array B**	**28.77**	**3**	P		P	**08 24 57.7**	**0.0**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.7s,baz=158,slow=9.1,SNR=2.1 comp=Z,0.6nm,0.7s	**29.33**	**348**	P		P	**08 25 04.3**	**+1.5**
AB31	**Akbulak array**	**31.98**	**48**			P	**08 25 27.8**	**+1.5**
AB31				IAmb		IAmb	08 25 33.7	
	comp=Z,3.1nm,0.8s							
ABKAR	**Akbulak array**	**31.98**	**48**	P		P	**08 25 28.3**	**+2.0**
ARTI	**Arti** comp=Z,1.5nm,0.4s,baz=241,slow=10,SNR=2.2 comp=Z,1.5nm,0.4s	**33.93**	**35**	P		P	**08 25 44.6**	**+1.4**
MBAR	**Mbarara** comp=Z,87nm,18.0s,baz=48,slow=35	**33.97**	**166**	LR		LR	08 38 56.3	
DBIC	**Dimbokro** comp=Z,4.5nm,0.6s,baz=59,slow=5.9,SNR=6.1	**36.68**	**231**	P		P	**08 26 07.2**	**-0.1**
DBIC				LR		LR	08 43 21.2	
	comp=Z,110nm,20.8s,baz=260,slow=40 comp=Z,4.5nm,0.6s							
DBIC	**Dimbokro**	**36.68**	**231**	P		P	**08 26 07.8**	**+0.5**
DBIC				IAmb		IAmb	08 26 08.6	
	comp=Z,6.5nm,0.8s							
ARCES	**ARCESS Array B** comp=Z,2.1nm,0.6s,baz=184,slow=8.9,SNR=11	**36.85**	**1**	P		P	**08 26 07.8**	**-0.4**
ARCES				LR		LR	08 44 33.6	
	comp=Z,116nm,18.7s,baz=174,slow=42 comp=Z,2.1nm,0.6s							
ARCES	**ARCESS Array B**	**36.85**	**1**	P		P	**08 26 08.5**	**+0.2**
CHGR	**Chuyangaron**	**37.61**	**68**			P	**08 26 17.2**	**+2.1**
KK31	**Karatay Array**	**38.40**	**60**			P	**08 26 23.5**	**+1.8**
KK31				IAmb		IAmb	08 26 28.2	
	comp=Z,7.4nm,0.8s							
KKAR	**Karatay Array**	**38.40**	**60**			P	**08 26 23.6**	**+1.9**
BVAR	**Borovoye Array** comp=Z,0.7nm,0.5s,baz=258,slow=4.3,SNR=4.3 comp=Z,0.7nm,0.5s	**39.30**	**45**	P		P	**08 26 31.3**	**+2.2**
AAK	**Ala-Archa** comp=Z,2.5nm,0.6s,baz=248,slow=10.0,SNR=7.4 comp=Z,2.5nm,0.6s	**41.34**	**61**	P		P	**08 26 48.9**	**+2.5**
AAK	**Ala-Archa**	**41.34**	**61**			P	**08 26 47.7**	**+1.3**
AAK				IAmb		IAmb	08 26 54.9	
	comp=Z,3.9nm,0.8s							
NIL	**Nilore**	**41.70**	**75**			P	**08 26 50.8**	**+1.6**
NIL				IAmb		IAmb	08 26 54.1	
	comp=Z,8.7nm,0.9s							
KSH2	**Kashi**	**42.52**	**66**	P		P	**08 27 00.3**	**+4.3**
KSH2				sP		sP	08 27 06.3	+6.0
KSH2				pmax		pmax		
	comp=Z,3.0nm,0.8s							
NRN	**Naryn**	**42.56**	**63**			P	**08 26 58.1**	**+1.6**
NRN				IAmb		IAmb	08 27 01.4	
	comp=Z,8.2nm,0.9s							
KURBB	**Kurchatov Arra** comp=Z,3.3nm,0.5s,baz=275,slow=8.4,SNR=35	**44.02**	**49**	P		P	**08 27 09.7**	**+1.9**
	comp=Z,3.3nm,0.5s							
KURK	**Kurchatov**	**44.08**	**49**			P	**08 27 09.5**	**+1.2**
KURK				IAmb		IAmb	08 27 19.0	
	comp=Z,4.7nm,0.8s							
WUS	**Wushi**	**45.00**	**62**			P	**08 27 16.8**	**+0.9**
WUS				IAmb		IAmb	08 27 23.6	
	comp=Z,5.4nm,0.9s							
SPITS	**Spitsbergen Ar** comp=Z,10nm,1.0s,baz=178,slow=11,SNR=4.9 comp=Z,10nm,1.0s	**45.61**	**358**	P		P	**08 27 20.7**	**+0.6**
MKAR	**Makanchi Array** comp=Z,3.2nm,0.7s,baz=272,slow=6.5,SNR=36 comp=Z,3.2nm,0.7s	**46.60**	**54**	P		P	**08 27 30.0**	**+1.6**
MKAR	**Makanchi Array**	**46.60**	**54**			P	**08 27 29.3**	**+1.0**
ZAA0	**Zalesovo Array**	**47.95**	**45**			P	**08 27 39.3**	**+0.6**
ZALV	**Zalesovo Beam** comp=Z,3.5nm,0.4s,baz=271,slow=9.1,SNR=18 comp=Z,3.5nm,0.4s	**47.95**	**45**	P		P	**08 27 39.7**	**+1.0**
ZALV	**Zalesovo Beam**	**47.95**	**45**			P	**08 27 39.3**	**+0.6**
LBTB	**Lobatse** comp=Z,50nm,21.1s,baz=342,slow=36	**57.50**	**177**	LR		LR	08 53 30.7	
PALK	**Pallekele** comp=Z,48nm,18.5s,baz=234,slow=36	**59.02**	**102**	LR		LR	08 54 44.3	
TLY	**Talaya** comp=Z,0.9nm,0.3s,baz=297,slow=16	**59.54**	**45**	P		P	**08 29 06.3**	**+2.6**
TLY				LR		LR	09 00 14.5	
	comp=Z,25nm,18.8s,baz=322,slow=42 comp=Z,0.9nm,0.3s							
SONM	**Songino Array** comp=Z,63nm,18.3s,baz=334,slow=40	**62.39**	**49**	LR		LR	09 00 52.7	
SCHQ	**Schefferville** comp=Z,1.0nm,0.6s,baz=68,slow=11,SNR=4.5 comp=Z,1.0nm,0.6s	**63.87**	**320**	P		P	**08 29 32.5**	**-0.3**
TIXI	**Tiksi** comp=Z,46nm,18.5s,baz=324,slow=39	**64.03**	**20**	LR		LR	09 00 37.0	
SUR	**Sutherland** comp=Z,100nm,18.6s,baz=356,slow=36	**64.82**	**182**	LR		LR	08 57 33.8	
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,0.3s,baz=294,slow=6.0,SNR=4.1 comp=Z,1.1nm,0.3s	**68.65**	**81**	P		P	**08 30 05.0**	**+1.0**
LYN	**LuoYang**	**71.89**	**60**	P		P	**08 30 20.5**	**-3.1**
LYN				pmax		pmax		
	comp=Z,4.0nm,0.5s							
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.7s,baz=29,slow=5.8,SNR=3.0 comp=Z,0.2nm,0.7s	**79.17**	**341**	P		P	**08 31 05.8**	**+0.9**
ILAR	**Eielson Array** comp=Z,0.3nm,1.1s,baz=20,slow=3.2,SNR=1.6 comp=Z,0.3nm,1.1s	**82.47**	**356**	P		P	**08 31 22.2**	**-0.3**
BDFB	**Brasilia** comp=Z,1.3nm,0.4s,baz=45,slow=7.1,SNR=3.4 comp=Z,1.3nm,0.4s	**83.14**	**247**	P		P	**08 31 28.0**	**+1.2**
ASAR	**Alice Springs** comp=Z,0.3nm,0.8s,baz=297,slow=1.4,SNR=2.7	**119.36**	**101**	PKP		**PKPdf**	**08 37 50.1**	**-0.2**

NSSP ***19*** *08:19:41.1,39.°08N×43.°98E,h10km,Ms3.7*
ISK ***19*** *08:19:42.9,39.°20N×43.°95E,h5km,ML3.7/7*
AFAD ***19*** *08:19:42.8,39.°15N×43.°93E,h4km±2km,ML3.3*
TEH ***19*** *08:19:42.3,39.°11N×44.°01E,h16km±38km,ML3.3,*
Presumed earthquake
AZER ***19*** *08:19:44.1,39.°13N×44.°01E,h2km,ml3.4*

ISC 19 08:19:42.9±1.1,39.13N±0.02×43.99E±0.01,h1km±10km,
n88,σ1ᵠ10/132,2C-2D,Turkey

Code	Station Name	Δ°	Az°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
VMUR	**Van-Muradiye**	**0.35**	**247**	P	**Pg**	**08 19 49.6**		**-0.1**
VMUR				S	**Sg**	**08 19 54.4**		**0.0**
VMUR				IAML		08 19 55.0		
	comp=N,1μm,0.7s							
VMUR				IAML		08 19 55.0		
	comp=E,5μm,0.5s							
VMUR	**Van-Muradiye**	**0.35**	**247**	Pg	**Pg**	**08 19 49.6**		**-0.1**
OZAP	**Van, Ozalp-Mer**	**0.47**	**180**	P	**Pg**	**08 19 52.5**		**+0.7**
OZAP				S	**Sb**	**08 20 00.7**		**-0.8**
OZAP				IAML		08 20 01.0		
	comp=E,3μm,0.7s							
OZAP				IAML		08 20 09.0		
	comp=N,2μm,1.1s							
DYDN	**Diyadin**	**0.48**	**331**	P	**Pg**	**08 19 51.7**		**-0.4**
DYDN				S	**Sg**	**08 19 58.6**		**+0.3**
DYDN				IAML		08 19 59.0		

IMRD	**Marand**	**1.40**	**107**	Pg		**Pn**	**08 20 08.4**	**-1.3**
ISHB	**Shabestar**	**1.52**	**123**	Pg		**Pn**	**08 20 09.6**	**-1.9**
YOVA	**Hakkari_Yksek**	**1.56**	**171**	P		**Pg**	**08 20 12.9**	**+0.2**
YOVA				IAML			08 20 36.0	
	comp=E,238nm,0.6s							
YOVA				IAML			08 20 40.0	
	comp=N,198nm,0.6s							
ORD	**Ordubad**	**1.57**	**97**	P		**Pn**	**08 20 11.9**	**-0.1**
ORD				S		**Sg**	**08 20 34.2**	**+0.8**
HAKT	**HAKKARI**	**1.58**	**188**	P		**Pb**	**08 20 12.3**	**-0.8**
HAKT				S		**Sg**	**08 20 35.0**	**+1.2**
HAKT				IAML			08 20 39.0	
	comp=N,410nm,0.7s							
HAKT				IAML			08 20 41.0	
	comp=E,414nm,1.3s							
HAKT	**HAKKARI**	**1.58**	**188**	P		**Pg**	**08 20 13.0**	**-0.3**
HAKT				S		**Sg**	**08 20 37.0**	**+3.2**
GURO	**Guroymak-BITLI**	**1.64**	**250**	Pn		**Pb**	**08 20 13.3**	**-0.7**
GURO				Sn		**Sg**	**08 20 36.1**	**+0.6**
PERV	**Siirt/Pervari-**	**1.64**	**224**	P		**Pg**	**08 20 13.9**	**-0.4**
PERV				IAML			08 20 42.0	
	comp=E,441nm,0.7s							
PERV				IAML			08 20 49.0	
	comp=N,269nm,0.7s							
KARS	**Kars**	**1.66**	**335**	Pn		**Pn**	**08 20 12.9**	**-0.4**
BOZK	**Kars-Merkez-Bo**	**1.66**	**332**	P		**Pb**	**08 20 13.8**	**-0.6**
BOZK				S		**Sg**	**08 20 37.0**	**+0.8**
AYRK	**Ayrk**	**1.70**	**54**	*e*P		**Pb**	**08 20 14.4**	**-0.8**
AYRK				*e*S		**Sg**	**08 20 38.8**	**+1.2**
ALVK	**Alvank**	**1.85**	**95**	*e*P		**Pn**	**08 20 16.0**	**+0.2**
ALVK				*e*S		**Sb**	**08 20 40.9**	**-0.2**
HOMI	**Horasan**	**1.85**	**300**	P		**Pb**	**08 20 16.6**	**-1.2**
HOMI				S		**Sg**	**08 20 48.0**	**+5.5**
HOMI				IAML			08 20 52.0	
	comp=E,227nm,0.6s							
HOMI				IAML			08 21 03.0	
	comp=N,256nm,0.9s							
CUKT	**Cukurca**	**1.90**	**189**	Pn		**Pg**	**08 20 18.8**	**-0.6**
ITBZ	**Tabriz**	**1.91**	**117**	Pn		**Pn**	**08 20 16.4**	**-0.4**
SENK	**Senkaya-Erzuru**	**1.91**	**319**	Pn		**Pn**	**08 20 16.9**	**+0.1**
SRTK	**Saratovka**	**1.95**	**7**	*e*P		**Pb**	**08 20 18.4**	**-1.0**
SRTK				*e*S		**Sg**	**08 20 45.6**	**-0.2**
VRTB	**Varto-Mus**	**1.97**	**272**	Pn		**Pb**	**08 20 18.6**	**-1.1**
VRTB	**Varto-Mus**	**1.97**	**272**	P		**Pb**	**08 20 18.6**	**-1.1**
VRTB				IAML			08 21 06.0	
	comp=N,322nm,1.2s							
MUSM	**Mu-Merkez**	**1.98**	**259**	P		**Pb**	**08 20 18.4**	**-1.4**
MUSM				S		**Sg**	**08 20 45.8**	**-0.6**
EGVZ	**Egvard**	**1.98**	**86**	*e*P		**Pb**	**08 20 18.8**	**-1.1**
EGVZ				*e*S		**Sg**	**08 20 46.2**	**-0.5**
LSVT	**Lusahovit**	**2.01**	**27**	*e*P		**Pb**	**08 20 18.4**	**0.0**
LSVT				*e*S		**Sg**	**08 20 46.8**	**-0.8**
GOLE	**Ardahan-G¶le**	**2.02**	**328**	P		**Pb**	**08 20 20.7**	**+0.1**
GDB	**GEDABAY**	**2.09**	**40**	P		**Pb**	**08 20 21.0**	**-0.8**
GDB				S		**Sb**	**08 20 48.6**	**+0.3**
EOLT	**Oltu**	**2.10**	**313**	P		**Pb**	**08 20 21.4**	**-0.6**
IAZR	**Azarshahr**	**2.13**	**132**	Pn		**Pb**	**08 20 21.0**	**-1.4**
BGD	**Bogdanovka**	**2.16**	**352**	P		**Pb**	**08 20 23.1**	**+0.2**
ERZM	**Erzurum**	**2.17**	**292**	P		**Pb**	**08 20 22.8**	**-0.4**
QZX	**Qazax, Azerbai**	**2.20**	**28**	P		**Pb**	**08 20 22.4**	**-1.1**
QZX				S		**Sb**	**08 20 51.9**	**+0.6**
AKDA	**Akdag**	**2.25**	**296**	P		**Pb**	**08 20 24.6**	**+0.1**
AKDA				IAML			08 21 06.0	
	comp=E,258nm,1.2s							
AKDA				IAML			08 21 36.0	
	comp=N,239nm,0.9s							
KZRT	**Kazreti**	**2.28**	**8**	P		**Pn**	**08 20 22.1**	**+0.3**
AHAN	**Ardahan-Merkez**	**2.29**	**333**	P		**Pg**	**08 20 26.1**	**-0.8**
AHAN				IAML			08 21 08.0	
	comp=E,116nm,1.0s							
KARO	**Karliova-Bingo**	**2.29**	**275**	Pn		**Pn**	**08 20 22.5**	**+0.4**
AKH	**Akhalkalaki**	**2.31**	**351**	P		**Pb**	**08 20 25.4**	**-0.1**
GANJ	**Ganja**	**2.35**	**49**	P		**Pb**	**08 20 24.5**	**-1.6**
GANJ				S		**Sb**	**08 20 53.9**	**-1.7**
TRLG	**Trialeti**	**2.41**	**2**	P		**Pb**	**08 20 26.2**	**-1.0**
DDEM	**Demirkent**	**2.46**	**316**	P		**Pb**	**08 20 27.6**	**-0.5**
DGRG	**David-gareji**	**2.55**	**24**	P		**Pb**	**08 20 27.9**	**-1.6**
BNGB	**Bingl**	**2.58**	**268**	Pn		**Pn**	**08 20 27.1**	**+1.1**
QRD	**Qoradiz**	**2.60**	**82**	P		**Pn**	**08 20 27.7**	**+1.6**
QRD				S		**Sn**	**08 20 59.3**	**+0.9**
YEDI	**Yedisu-Bingol**	**2.69**	**278**	Pn		**Pn**	**08 20 28.4**	**+0.9**
VSHL	**Vashlovani**	**2.80**	**41**	P		**Pb**	**08 20 34.5**	**+0.8**
ALIG	**Mtskhetisjvari**	**2.99**	**355**	P		**Pb**	**08 20 38.2**	**+1.2**
CHOM	**Cayeli-Rize**	**3.16**	**309**	Pn		**Pn**	**08 20 34.7**	**+0.8**
ZKTA	**Zakatala**	**3.21**	**38**	P		**Pn**	**08 20 35.4**	**+0.8**
SEKA	**Sheki**	**3.22**	**49**	P		**Pn**	**08 20 36.4**	**+1.7**
CHRG	**Chargali**	**3.28**	**12**	P		**Pn**	**08 20 38.0**	**+2.5**
YRD	**Yardimli**	**3.32**	**92**	P		**Pn**	**08 20 37.5**	**+1.3**
YRD				S		**Sn**	**08 21 17.4**	**+1.2**
LRK	**Lerik**	**3.43**	**97**	P		**Pn**	**08 20 39.4**	**+1.8**
LRK				S		**Sn**	**08 21 19.2**	**+0.3**
GARIG	**Gari**	**3.50**	**354**	P		**Pg**	**08 20 49.0**	**-1.0**
SHTL	**Shatili**	**3.63**	**14**	P		**Pb**	**08 20 46.0**	**-2.0**
XNQ	**Khinaliq**	**3.78**	**56**	P		**Pn**	**08 20 43.0**	**+0.5**
XNQ				S		**Sn**	**08 21 27.9**	**+0.2**
ASTR	**Astara**	**3.79**	**97**	P		**Pn**	**08 20 43.8**	**+1.4**
ASTR				S		**Sn**	**08 21 28.8**	**+1.1**
URFA	**Urfa**	**4.40**	**249**	Pn		**Pn**	**08 20 53.3**	**+2.3**

ASRS ***19*** *08:29:40.0±1.4,53.67N×86.85E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 19 08:29:40.6±2.6,53.68N×87.00E,h0km,mbtmp2.6/2,ML2.4/2,Error ellipse: s-maj=24.2km s-min=14.0km az=72.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.32**	**282**	I	I	08 40 00.0	
	baz=101,slow=346,SNR=3.7						
ZALV	**Zalesovo Beam**	**1.32**	**282**	Pg	Pg	08 30 04.3	-1.6
	1.2nm,0.3s,baz=100,slow=15,SNR=9.6						
ZALV				Lg	Lg	08 30 22.7	
	1.9nm,0.3s,baz=99,slow=26,SNR=9.3						
KURBB	**Kurchatov Arra**	**6.04**	**243**	Pn	Pn	08 31 12.6	+1.4
	0.1nm,0.3s,baz=57,slow=14,SNR=4.1						
KURBB				Lg	Lg	08 32 51.8	
	baz=63,slow=37,SNR=2.5						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**7.53**	**205**	Pn	Pn	08 31 33.0	+1.5
	0.1nm,0.3s,baz=24,slow=12,SNR=6.2						
MKAR				Sn	Sn	08 32 56.5	-1.0
	baz=27,slow=27,SNR=1.8						
MKAR				Lg	Lg	08 33 40.1	
	baz=18,slow=33,SNR=2.2						
	0.1nm,0.4s						

ISU ***19*** *08:34:07,42.18N×69.54E,h5km*
KRNET ***19*** *08:34:09.5±0.1,42.13N×69.64E,mb2.7*
ISC 19 08:34:06.3±2.4,42.21N±0.04×69.48E±0.09,h6km±14km, n12,σ1§23/22,12C-4D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVKS	**Tavaksay**	**0.65**	**169**	P		**Pb**	**08 34 20.3**	**+0.3**
TVKS				S		**Sb**	**08 34 29.7**	**+0.4**
CHRV	**Charvak**	**0.67**	**148**	P		**Pb**	**08 34 20.4**	**0.0**
CHRV				S		**Sb**	**08 34 30.0**	**+0.1**
CHMG	**Chimgan**	**0.77**	**149**	P		**Pb**	**08 34 21.6**	**-0.5**
CHMG				S		**Sb**	**08 34 32.8**	**-0.1**
KK31	**Karatay Array**	**1.17**	**40**	⇓P		**Pb**	**08 34 28.6**	**-0.3**
	0.4nm,0.2s,baz=211,slow=18,SNR=98							
KK31				⇑S		**Sb**	**08 34 42.5**	**-1.8**
	6.1nm,0.2s,baz=215,slow=29,SNR=30							
TRKS	**Terek-Say**	**1.42**	**118**	⇑*e*P		**Pg**	**08 34 33.9**	**+0.5**
TRKS				⇑*i*S		**Sg**	**08 34 51.9**	**+0.1**
ARK	**Arkit**	**1.90**	**102**	⇑*i*P		**Pb**	**08 34 41.6**	**+0.3**
ARK				⇑*i*S		**Sb**	**08 35 05.4**	**+0.1**
MNAS	**Manas**	**2.26**	**82**	⇓*i*P		**Pb**	**08 34 47.3**	**-0.2**
MNAS				⇓*i*S		**Sb**	**08 35 15.0**	**-0.7**
BTK	**Batken**	**2.38**	**154**	⇑*i*P		**Pb**	**08 34 48.7**	**-0.8**
BTK				⇑*i*S		**Sb**	**08 35 17.2**	**-1.9**
FRG	**Fergana**	**2.53**	**136**	S		**Sg**	**08 35 27.9**	**+0.5**
ARSB	**Arslanbob**	**2.77**	**108**	⇑*i*P		**Pb**	**08 34 54.0**	**-2.2**
ARSB				⇑*i*S		**Sn**	**08 35 26.3**	**+1.3**
OHH	**Osh**	**3.00**	**123**	⇑*e*P		**Pb**	**08 34 57.2**	**-3.0**
OHH				⇑*e*S		**Sn**	**08 35 31.8**	**+1.0**
AAK	**Ala-Archa**	**3.74**	**82**	⇓Pg		**Pb**	**08 35 14.0**	**+1.3**
	0.5nm,0.6s							
AAK				⇑Lg	Lg	08 35 59.7	
	1.7nm,1.0s							

ASRS ***19*** *08:46:35.0±2.0,53.71N×90.96E,h0km,M2.9(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 19 08:46:43.8±3.6,53.15N×90.56E,h0km,mbtmp2.7/3, ML2.2/3,Error ellipse: s-maj=30.6km s-min=26.3km az=84.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.51**	**285**	Pn	Pn	08 47 39.3	-0.3
	0.3nm,0.3s,baz=100,slow=16,SNR=8.6						
ZALV				Sn	Sn	08 48 22.6	+0.7
	0.1nm,0.3s,baz=104,slow=24,SNR=3.7						
	1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**7.86**	**256**	Pn	Pn	08 48 37.9	-1.3
	baz=66,slow=14,SNR=4.1						
KURBB				Sn	Sn	08 50 09.4	+0.5
	baz=66,slow=26,SNR=6.4						
KURBB				Lg	Lg	08 50 52.6	
	baz=65,slow=34,SNR=1.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**8.29**	**223**	Pn	Pn	08 48 47.5	+2.2
	0.1nm,0.3s,baz=34,slow=14,SNR=4.7						
MKAR				Sn	Sn	08 50 16.1	-3.5
	baz=37,slow=27,SNR=1.7						
MKAR				Lg	Lg	08 51 08.3	
	baz=36,slow=32,SNR=2.4						
	0.3nm,0.6s						
I34MN	**SONGINO INFRAS**	**11.42**	**112**	I	I	09 53 40.0	
	baz=310,slow=329,SNR=2.4						

NNC ***19*** *09:20:13.9±0.6,44.90N×78.92E,h0km,mb3.2,mpv3.0, Error ellipse: s-maj=4.3km s-min=3.9km az=91.0*
SOME ***19*** *09:20:13.8,44.88N×78.88E,h15km*
ISC 19 09:20:13.9±1.1,44.92N±0.03×78.98E±0.02,h9km±10km, n31,σ0§83/54,5C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TDK	**Taldyqorghan**	**0.41**	**282**	P		**Pg**	**09 20 21.9**	**-0.1**
	56nm,0.2s						
TDK				S		**Sg**	**09 20 27.3**	**-0.2**
	90nm,0.3s						
TDK	**Taldyqorghan**	**0.41**	**282**	*e*P		**Pg**	**09 20 21.9**	**-0.1**
	56nm,0.2s						
TDK				*e*S		**Sg**	**09 20 27.3**	**-0.2**
	90nm,0.3s						
KAPS	**Kapalarasan**	**0.45**	**36**	P		**Pb**	**09 20 24.2**	**+0.1**
	22nm,0.1s						
KAPS				S		**Sb**	**09 20 31.4**	**+0.3**
	61nm,0.2s						
KNOS	**Konyrlen**	**0.58**	**165**	P		**Pg**	**09 20 24.5**	**-0.6**
	12nm,0.1s						
KNOS				S		**Sg**	**09 20 31.9**	**-0.8**
	21nm,0.2s						
DJR	**Jarkent**	**0.83**	**135**	P		**Pg**	**09 20 29.7**	**-0.1**
	6.5nm,0.2s						
DJR				S		**Sg**	**09 20 41.0**	**+0.5**
	14nm,0.3s						
DJR	**Jarkent**	**0.83**	**135**	*e*P		**Pg**	**09 20 29.7**	**-0.1**
	6.5nm,0.2s						
DJR				*e*S		**Sg**	**09 20 41.0**	**+0.5**
	14nm,0.3s						
KPKS	**Kokpek**	**1.47**	**188**	P		**Pn**	**09 20 40.5**	**-0.2**
	0.3nm,0.2s						
KPKS				S		**Sn**	**09 20 59.5**	**-0.6**
	19nm,0.2s						
KPKS	**Kokpek**	**1.47**	**188**	*e*P		**Pn**	**09 20 40.5**	**-0.2**
	0.3nm,0.2s						
KPKS				*e*S		**Sn**	**09 20 59.5**	**-0.6**
	19nm,0.2s						
KURS	**Kuram**	**1.54**	**202**	P		**Pb**	**09 20 41.8**	**-0.9**
	14nm,0.3s						
KURS				S		**Sn**	**09 21 01.4**	**-0.5**
	9.6nm,0.4s						
PDGK	**Podgornoye**	**1.63**	**167**	⇓Pn		**Pn**	**09 20 43.0**	**0.0**
	1.7nm,0.3s						
PDGK				⇑Sn		**Sg**	**09 21 08.4**	**+2.0**
	4.8nm,0.4s						
UZB	**Uzynbulak**	**1.77**	**179**	P		**Pb**	**09 20 46.3**	**-0.3**
	4.7nm,0.3s						
UZB				S		**Sb**	**09 21 09.5**	**+0.5**
	8.4nm,0.5s						
UZB	**Uzynbulak**	**1.77**	**179**	*e*P		**Pb**	**09 20 46.3**	**-0.3**
	4.7nm,0.3s						
UZB				*e*S		**Sb**	**09 21 09.5**	**+0.5**
	8.4nm,0.5s						
KTMS	**Ketmen**	**1.77**	**146**	P		**Pb**	**09 20 46.6**	**-0.1**
	4.1nm,0.2s						
KTMS				S		**Sb**	**09 21 09.5**	**+0.4**
	9.0nm,0.3s						
KTMS	**Ketmen**	**1.77**	**146**	*e*P		**Pb**	**09 20 46.6**	**-0.1**
	4.1nm,0.2s						
KTMS				*e*S		**Sb**	**09 21 09.5**	**+0.4**
	9.0nm,0.3s						
SHLS	**Shalkode**	**1.80**	**169**	P		**Pg**	**09 20 48.7**	**+0.4**
	19nm,0.4s						
SHLS				S		**Sg**	**09 21 13.1**	**+1.4**
	20nm,0.4s						
SHLS	**Shalkode**	**1.80**	**169**	*e*P		**Pg**	**09 20 48.7**	**+0.4**
	19nm,0.4s						
SHLS				*e*S		**Sg**	**09 21 13.1**	**+1.4**
	20nm,0.4s						
SATY	**Saty**	**1.91**	**193**	P		**Pb**	**09 20 48.9**	**0.0**
	14nm,0.4s						
SATY				S		**Sg**	**09 21 14.0**	**-1.1**
	24nm,0.6s						
KTBS	**Karatobe**	**2.04**	**235**	*e*P		**Pb**	**09 20 50.1**	**-1.1**
	7.8nm,0.3s						
KTBS				*e*S		**Sb**	**09 21 15.8**	**-0.9**
	7.3nm,0.3s						
MDOK	**Medeo**	**2.24**	**219**	Pg		**Pb**	**09 20 53.6**	**-1.0**
	6.3nm,0.4s						
MDOK				Lg	Lg	09 21 21.6	
	12nm,0.6s						
TNSS	**Tian-Shan**	**2.38**	**219**	Pg		**Pb**	**09 20 56.6**	**-0.6**
	1.7nm,0.4s						
TNSS				Lg	Lg	09 21 26.7	
	2.1nm,0.3s						
TNSS	**Tian-Shan**	**2.38**	**219**	*e*P		**Pb**	**09 20 56.6**	**-0.6**
	1.7nm,0.4s						
TNSS				*e*S		**Sb**	**09 21 26.7**	**-0.2**
	2.1nm,0.3s						
MTBS	**Maitube**	**2.56**	**227**	Pg		**Pb**	**09 20 59.9**	**-0.2**
	2.8nm,0.3s						
MTBS				Lg	Lg	09 21 32.4	
	12nm,0.4s						
MTBS	**Maitube**	**2.56**	**227**	*e*P		**Pb**	**09 20 59.9**	**-0.2**
	2.8nm,0.3s						
MTBS				*e*S		**Sb**	**09 21 32.4**	**+0.6**
	12nm,0.4s						
KRBS	**Karabastau**	**2.67**	**244**	Pg		**Pb**	**09 21 01.5**	**-0.4**
	2.2nm,0.4s						
KRBS				Lg	Lg	09 21 35.2	
	2.7nm,0.3s						
KRBS	**Karabastau**	**2.67**	**244**	*e*P		**Pb**	**09 21 01.5**	**-0.4**
	2.2nm,0.4s						
KRBS				*e*S		**Sb**	**09 21 35.2**	**+0.5**
	2.7nm,0.3s						
MAKZ	**Makanchi**	**2.82**	**47**	⇑Pg		**Pb**	**09 21 04.7**	**+0.3**
	0.5nm,0.5s						
MAKZ				⇑Lg	Lg	09 21 42.8	
	2.5nm,0.8s						
KST	**Kastek**	**2.87**	**230**	Pg		**Pb**	**09 21 04.7**	**-0.7**
	1.8nm,0.4s						
KST				Lg	Lg	09 21 40.8	
	6.2nm,0.5s						
KST	**Kastek**	**2.87**	**230**	*e*P		**Pb**	**09 21 04.7**	**-0.7**
	1.8nm,0.4s						
KST				*e*S		**Sb**	**09 21 40.8**	**+0.2**
	6.2nm,0.5s						
MK31	**Makanchi Array**	**2.98**	**50**	⇑Pg		**Pb**	**09 21 04.7**	**-2.4**
	0.6nm,0.5s,baz=224,slow=13,SNR=9.7						
MK31				⇓Lg	Lg	09 21 50.3	
	1.3nm,0.5s,baz=233,slow=29,SNR=7.2						
BTLS	**Baital**	**3.50**	**274**	*e*P		**Pb**	**09 21 16.7**	**+0.7**
	1.3nm,0.3s						
BTLS				*e*S		**Sb**	**09 22 01.4**	**+2.8**
	2.6nm,0.4s						
AAK	**Ala-Archa**	**3.97**	**236**	⇑Pg		**Pb**	**09 21 24.9**	**+0.9**
	0.9nm,0.7s						
AAK				⇓Lg	Lg	09 22 18.1	
	2.7nm,1.1s						

IDC ***19*** *09:24:34.6±3.6,28.17N×141.26E,h0km,mb3.7/6,*

mbtmp3.6/7,ML2.8/1,Error ellipse: s-maj=146.1km s-min=21.8km az=74.0
ISC 19 09:24:37.7±3.1,28.4N±0.2×141.8E±0.8,h36km,n7, σ1§65/7,mb3.8/6,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**8.67**	**341**	Pn		**Pb**	**09 26 40.0**	**-0.6**
	0.1nm,0.3s,baz=169,slow=5.3,SNR=5.0						
	0.7nm,0.4s						
SONM	**Songino Array**	**33.55**	**315**	P		**P**	**09 31 13.5**	**-0.6**
	0.4nm,0.4s,baz=112,slow=9.5,SNR=2.0						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**48.58**	**189**	P		**P**	**09 33 17.7**	**0.0**
	0.6nm,0.6s,baz=11,slow=7.9,SNR=6.9						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**49.39**	**309**	P		**P**	**09 33 23.1**	**-0.7**
	0.1nm,0.3s,baz=81,slow=8.9,SNR=1.4						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**51.89**	**314**	P		**P**	**09 33 44.6**	**+2.1**
	0.8nm,0.3s,baz=87,slow=6.2,SNR=6.9						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**52.31**	**189**	P		**P**	**09 33 45.4**	**-0.5**
	0.4nm,0.8s,baz=4.4,slow=7.8,SNR=0.8						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**56.86**	**317**	P		**P**	**09 34 20.9**	**+2.2**
	1.1nm,0.5s,baz=90,slow=8.6,SNR=6.4						
	1.1nm,0.5s						

DNK ***19*** *09:29:35.3±2.1,51.37N×16.52E,h16km±94km,ML2.1, Presumed earthquake*
IDC ***19*** *09:29:36.8±1.4,51.40N×16.35E,h0km,mbtmp3.4/5, ML2.2/3,Error ellipse: s-maj=42.8km s-min=9.7km az=113.0*
VIE ***19*** *09:29:37.2±1.1,51.45N×16.34E,h0km,mb2.6/6,ml2.9/6, Error ellipse: s-maj=8.6km s-min=7.1km az=41.0 62 km NW of Wroclaw Suspected Mining induced.*
PRU ***19*** *09:29:38.9,51.36N×16.24E,h0km*
ISC 19 09:29:35.9±0.7,51.50N±0.03×16.24E±0.03,h0km,n39, σ1§03/67,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**177**	*e*Pg		**Pg**	**09 29 48.5**	**0.0**
KSP				*e*Sg		**Sg**	**09 29 56.2**	**-0.8**
CHVC	**Chvalec**	**0.92**	**187**	*e*PG		**Pg**	**09 29 53.7**	**+0.2**
CHVC				*e*SG		**Sg**	**09 30 05.0**	**-0.5**
	comp=Z,60nm,0.5s							
OSTC	**Ostas**	**0.95**	**181**	*e*PG		**Pg**	**09 29 54.1**	**+0.1**
OSTC				*e*SG		**Sg**	**09 30 06.0**	**-0.2**
UPC	**Upice**	**1.01**	**188**	*e*PG		**Pg**	**09 29 54.7**	**-0.4**
UPC				*e*SG		**Sg**	**09 30 07.7**	**-0.4**
	comp=Z,142nm,0.4s							
DPC	**Dobruska-Polom**	**1.15**	**177**	*e*PG		**Pg**	**09 29 57.4**	**-0.6**
DPC				*e*SG		**Sg**	**09 30 11.6**	**-1.3**
	comp=Z,48nm,0.5s							
PVCC	**Panska Ves**	**1.44**	**228**	*e*PG		**Pb**	**09 30 03.6**	**+0.1**
PVCC				*e*SG		**Sg**	**09 30 22.0**	**0.0**
	comp=Z,178nm,0.4s							
BRG	**Berggiesshubel**	**1.58**	**247**	Pg		**Pg**	**09 30 06.3**	**+0.2**
BRG				Sg		**Sg**	**09 30 27.5**	**+1.0**
BRG				Amp			09 30 28.5	
	comp=Z,37nm,0.3s							
STEB	**Steborice**	**1.85**	**148**	*e*PG		**Pn**	**09 30 09.7**	**+0.9**
STEB				*e*SG		**Sn**	**09 30 32.9**	**+0.1**
	comp=Z,55nm,0.4s							
PRU	**Pruhonice**	**1.86**	**216**	*e*PG		**Pb**	**09 30 10.4**	**-0.3**
PRU				*e*SG		**Sb**	**09 30 34.4**	**-0.1**
	comp=Z,20nm,0.4s							
MORC	**Moravsky Berou**	**1.92**	**154**	*e*PN		**Pn**	**09 30 08.9**	**-0.9**
MORC				*e*SG		**Sn**	**09 30 33.5**	**-1.1**
HSKC	**Hora Svate Kat**	**1.99**	**244**	*e*PG		**Pb**	**09 30 13.1**	**+0.2**
HSKC				*e*SG		**Sb**	**09 30 38.8**	**+0.6**
	comp=Z,42nm,0.3s							
CLL	**Collm**	**2.04**	**266**	*e*Pg		**Pb**	**09 30 14.0**	**+0.2**
CLL				*e*Sg		**Sg**	**09 30 41.0**	**-0.3**
	comp=Z,30nm,0.7s							
OKC	**Ostrava-Krasne**	**2.06**	**143**	*e*PG		**Pb**	**09 30 14.2**	**+0.1**
OKC				*e*SG		**Sn**	**09 30 38.5**	**+0.4**
	comp=Z,37nm,0.6s							
VRAC	**Vranov**	**2.21**	**174**	*e*PN		**Pn**	**09 30 13.2**	**-0.6**
VRAC				*e*SG		**Sb**	**09 30 43.8**	**-0.7**
TREC	**Trest**	**2.26**	**193**	*e*SG		**Sb**	**09 30 45.6**	**-0.5**
KRUC	**Moravsky**	**2.44**	**178**	*e*PN		**Pn**	**09 30 16.3**	**-0.7**
KRUC				*e*SG		**Sb**	**09 30 51.2**	**-0.1**
ZVC	**Zvikov**	**2.44**	**213**	*e*SG		**Sb**	**09 30 52.5**	**+1.1**
OJC	**Ojcow**	**2.59**	**118**	*e*Pg		**Pg**	**09 30 26.9**	**+1.4**
OJC				*e*Sg		**Sg**	**09 30 59.8**	**+0.7**
NKC	**Novy Kostel**	**2.72**	**244**	*e*PN		**Pn**	**09 30 21.1**	**+0.3**
NKC				*e*PG		**Pg**	**09 30 27.5**	**-0.5**
NKC				*e*SG		**Sg**	**09 31 03.1**	**-0.1**
	comp=Z,30nm,0.4s							
JAVC	**Velka Javorina**	**2.80**	**160**	*e*PN		**Pn**	**09 30 21.5**	**-0.5**
KHC	**Kasperske Hory**	**2.92**	**217**	*e*PN		**Pn**	**09 30 24.0**	**+0.4**
KHC				*e*PG		**Pb**	**09 30 29.5**	**+0.6**
KHC				*e*SN		**Sn**	**09 30 55.5**	**-4.0**
KHC				*e*SG		**Sg**	**09 31 11.0**	**+1.3**
CKRC	**Cesky Krumlov**	**2.96**	**206**	*e*SG		**Sb**	**09 31 07.5**	**+1.4**
	comp=Z,27nm,0.8s							
GERES	**GERESS Array B**	**3.12**	**213**	Pn		**Pn**	**09 30 27.3**	**+0.9**
	comp

2.3nm,0.4s

LJU 19 09:33:15.8, 45°.95N × 14°.31E, h0km, ML0.7, 5C, Explosion, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBAS	**Gorenja Brezov**	**0.09**	**96**	⇑*i* Pg	Pg	09 33 17.4	-0.2
GBAS				IAML		09 33 19.9	
	comp=Z,34nm,0.2s						
CRNS	**Crni Vrh**	**0.14**	**345**	⇑*i* Pg	Pg	09 33 18.2	-0.3
CRNS				*i* Sg	Sg	09 33 20.9	+0.6
CRNS				IAML		09 33 22.4	
	comp=Z,18nm,0.1s						
JAVS	**Javornik**	**0.18**	**253**	⇑*i* Pg	Pg	09 33 19.0	-0.3
JAVS				*i* Sg	Sg	09 33 22.1	+0.5
JAVS				IAML		09 33 23.4	
	comp=Z,6.8nm,0.1s						
CEY	**Cerknica**	**0.22**	**159**	⇑*i* Pg	Pg	09 33 19.7	-0.3
CEY				*i* Sg	Sg	09 33 24.2	+1.3
CEY				IAML		09 33 25.4	
	comp=Z,8.9nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.31**	**60**	⇑*i* Pg	Pg	09 33 22.2	+0.4

*WEL **19** 09:34:19.0±0.7, 45°.5S × 3°.16E±°, h65km±6km, M3.0/6, ML2.9/10, MLv3.0/6, Error ellipse: s-maj=6.2km s-min=3.3km az=120.4*

*NOU **19** 09:34:19.4, 44°.95S × 167°.92E, h74km, MLv3.5/13, South Island, New Zealand*

ISC 19 09:34:17.3±1.4, 44°.90S±0°.04 × 167°.77E±0°.05, h94km±8km, n56, σ1°16/82, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.26**	**27**	P	Pn	09 34 30.9	0.0
MSZ				S	Sn	09 34 40.4	-0.6
GLNY	**Glenorchy**	**0.46**	**86**	P	Pn	09 34 32.5	+0.4
GLNY				S	Sn	09 34 42.8	-0.4
TAFS	**Te Anau Fire S**	**0.52**	**184**	P	Pn	09 34 31.7	-0.8
TAFS				S	Sn	09 34 43.1	-0.8
MLZ	**Mavora Lakes**	**0.53**	**152**	P	Pn	09 34 32.6	0.0
MLZ				S	Sn	09 34 43.6	-0.6
QTPS	**Queenstown Pol**	**0.65**	**102**	P	Pn	09 34 34.4	+0.7
QTPS				S	Sn	09 34 45.9	+0.1
DCZ	**Deep Cove**	**0.71**	**217**	P	Pn	09 34 33.6	-0.6
DCZ				S	Sn	09 34 45.0	-1.8
MOSS	**Mossburn Schoo**	**0.83**	**157**	S	Sn	09 34 58.1	+1.0
WKZ	**Wanaka**	**0.89**	**86**	P	Pn	09 34 37.3	+1.2
WKZ				S	Sn	09 34 51.0	+0.8
WHZ	**Wether Hill Ro**	**1.00**	**173**	P	Pn	09 34 37.3	+0.1
WHZ				S	Sn	09 34 51.0	-1.1
WNPS	**Wanaka Nationa**	**1.00**	**79**	P	Pn	09 34 38.5	+1.3
WNPS				S	Sn	09 34 53.8	+1.5
JCZ	**Jackson Bay**	**1.10**	**42**	P	Pn	09 34 39.4	+0.9
JCZ	**Jackson Bay**	**1.10**	**42**	S	Sn	09 34 54.2	-0.3
JCZ	**Jackson Bay**	**1.10**	**42**	P	Pn	09 34 38.9	+0.4
JCZ				S	Sn	09 34 56.8	+2.4
NSBS	**Neils Beach**	**1.11**	**36**	P	Pn	09 34 38.4	-0.1
EAZ	**Earnscleugh**	**1.14**	**107**	P	Pn	09 34 40.2	+1.4
EAZ				S	Sn	09 34 55.6	+0.5
MECS	**Makarora Emerg**	**1.25**	**58**	P	Pn	09 34 41.2	+1.1
RRKS	**Rarakau**	**1.26**	**189**	P	Pn	09 34 40.5	+0.3
RRKS				S	Sn	09 34 57.4	-0.2
ORPS	**Orepuki**	**1.39**	**180**	P	Pn	09 34 41.0	-0.7
ORPS				S	Sn	09 34 59.2	-1.0
PYZ	**Puysegur Point**	**1.48**	**211**	P	Pn	09 34 44.0	+1.1
PYZ	**Puysegur Point**	**1.48**	**211**	S	Sn	09 35 03.5	+1.2
PYZ	**Puysegur Point**	**1.48**	**211**	P	Pn	09 34 43.6	+0.7
TUZ	**Tuapeka**	**1.68**	**129**	P	Pn	09 34 47.0	+1.5
TUZ				S	Sn	09 35 06.3	-0.6
LBZ	**Lake Benmore**	**1.80**	**74**	P	Pn	09 34 47.5	+0.5
LBZ				S	Sn	09 35 09.1	-0.6
SYZ	**Scrubby Hill**	**1.90**	**150**	P	Pn	09 34 49.1	+0.9
SYZ	**Scrubby Hill**	**1.90**	**150**	S	Sn	09 35 11.4	-0.4
SYZ	**Scrubby Hill**	**1.90**	**150**	P	Pn	09 34 49.3	+1.1
SYZ				S	Sn	09 35 11.6	-0.2
APZ	**The Paps**	**1.94**	**175**	P	Pn	09 34 49.3	+0.5
APZ				S	Sn	09 35 13.2	+0.4
FOZ	**Fox Glacier**	**2.01**	**48**	P	Pn	09 34 49.7	0.0
ODZ	**Otahua Downs**	**2.05**	**95**	P	Pn	09 34 50.7	+0.5
ODZ	**Otahua Downs**	**2.05**	**95**	S	Sn	09 35 13.4	-2.0
ODZ	**Otahua Downs**	**2.05**	**95**	P	Pn	09 34 51.0	+0.8
ODZ				S	Sn	09 35 13.6	-1.8
HHSZ	**Highcliff Hill**	**2.22**	**117**	P	Pn	09 34 54.2	+1.7
HHSZ				S	Sn	09 35 20.0	+0.5
TMZ	**Timaru**	**2.37**	**78**	P	Pn	09 34 54.6	+0.1
TMZ				S	Sn	09 35 21.2	-1.8
GCSZ	**Gaunt Creek Bo**	**2.43**	**50**	P	Pn	09 34 55.3	0.0
GCSZ				S	Sn	09 35 25.4	+1.0
ARCZ	**Arundel**	**2.62**	**70**	P	Pn	09 34 57.5	-0.3
ARCZ				S	Sn	09 35 27.7	-1.3
RPZ	**Rata Peaks**	**2.64**	**64**	S	Pn	09 34 57.8	-0.3
RPZ	**Rata Peaks**	**2.64**	**64**	S	Sn	09 35 28.9	-0.5
RPZ	**Rata Peaks**	**2.64**	**64**	P	Pn	09 34 58.0	-0.1
WVZ	**Waitaha Valley**	**2.82**	**51**	P	Pn	09 35 00.2	-0.1
MHCZ	**Mount Hutt**	**3.06**	**65**	P	Pn	09 35 03.2	-0.5
MHCZ				S	Sn	09 35 37.8	-1.6
WACZ	**Wakanui South**	**3.07**	**73**	P	Pn	09 35 03.6	-0.2
WACZ				S	Sn	09 35 38.3	-1.4
INZ	**Inchbonnie**	**3.44**	**52**	P	Pn	09 35 08.8	0.0
OXZ	**Oxford**	**3.46**	**64**	P	Pn	09 35 08.0	-1.0
OXZ				S	Sn	09 35 45.6	-3.4
MQZ	**McQueen's Vall**	**3.71**	**73**	P	Pn	09 35 11.9	-0.4
MQZ				S	Sn	09 35 50.8	-4.2
AKCZ	**Akaroa Harbour**	**3.83**	**76**	P	Pn	09 35 13.8	-0.2
LTZ	**Lake Taylor**	**3.89**	**59**	P	Pn	09 35 13.8	-1.0
OKCZ	**Okains Bay**	**3.98**	**75**	P	Pn	09 35 16.3	+0.3
GVZ	**Greta Valley S**	**4.27**	**65**	P	Pn	09 35 19.4	-0.5
DSZ	**Denniston Nort**	**4.32**	**44**	P	Pn	09 35 20.5	-0.2
THZ	**Tophouse**	**4.89**	**52**	P	Pn	09 35 27.6	-0.8
MRNZ	**Matariki Terra**	**5.06**	**48**	P	Pn	09 35 31.6	+0.9
QRZ	**Quartz Range**	**5.37**	**42**	P	Pn	09 35 35.8	+0.9
QRZ	**Quartz Range**	**5.37**	**42**	P	Pn	09 35 35.5	+0.6
TKNZ	**Takaka Hill**	**5.43**	**46**	P	Pn	09 35 37.5	+1.8
KHEZ	**Kahui Hut**	**7.28**	**42**	P	Pn	09 36 02.7	+1.8
OUZ	**Omahuta**	**10.65**	**27**	P	Pn	09 36 49.3	+2.5

*ASRS **19** 09:35:57.5±0.2, 51°.9N±0°.9 × 8°.9E±°, h10km, MLh3.3/15, Error ellipse: s-maj=2.5km s-min=1.9km az=111.6, confirmed*

*NNC **19** 09:36:02.1±2.8, 52°.05N × 88°.80E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=22.2km s-min=11.4km az=84.0, Suspected Mining explosion.*

ISC 19 09:35:59.6±0.8, 51°.97N±0°.02 × 89°.04E±0°.03, h0km, n24, σ1°30/46, 8C-10D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YALR	**Yailyu, Altay**	**0.91**	**258**	⇑Pg	**Pg**	**09 36 15.8**	**-1.2**
YALR				Sg	**Sg**	**09 36 27.1**	**-1.6**
ARTR	**Artybash**	**1.10**	**262**	⇑Pg	**Pg**	**09 36 19.1**	**-1.5**
ARTR				Sg	**Sg**	**09 36 33.1**	**-1.9**
TEL	**Teeli**	**1.19**	**142**	⇑Pg	**Pg**	**09 36 21.2**	**-1.2**
TEL				Sg	**Sg**	**09 36 36.1**	**-1.8**
ULGR	**Ulagan, Altay**	**1.50**	**207**	⇓Pg	**Pn**	**09 36 26.5**	**-1.4**
ULGR				Sg	**Sg**	**09 36 45.4**	**-2.5**
VEH	**Verkhnyaya Baz**	**1.51**	**31**	Pg	**Pg**	**09 36 27.6**	**-0.9**
VEH				Sg	**Sb**	**09 36 47.3**	**-1.0**
DJO	**Djoy, Khakassi**	**1.57**	**58**	Pg	**Pg**	**09 36 29.0**	**-0.6**
DJO				Sg	**Sg**	**09 36 49.2**	**-0.7**
CERR	**Cheremushki**	**1.71**	**58**	Pg	**Pg**	**09 36 32.2**	**-0.1**
CERR				Sg	**Sg**	**09 36 54.2**	**-0.2**
KIYZ	**Kiyzas, Kuzbas**	**1.77**	**335**	Pg	**Pb**	**09 36 31.9**	**-1.1**
KIYZ				Sg	**Sg**	**09 36 57.6**	**+1.0**
KALT2	**Kaltan 2**	**1.78**	**325**	Pg	**Pb**	**09 36 32.6**	**-0.4**
KALT2				Sg	**Sg**	**09 36 57.0**	**+0.4**
TAIL	**Tailep, Kuzbas**	**1.86**	**324**	Pg	**Pb**	**09 36 33.9**	**-0.5**
TAIL				Sg	**Sg**	**09 36 59.4**	**0.0**
AKAR	**Aktash**	**1.87**	**209**	Pg	**Pn**	**09 36 33.1**	**+0.1**
AKAR				Sg	**Sn**	**09 36 56.5**	**-0.9**
CHBI	**Chibit, Altay**	**1.92**	**211**	Pg	**Pn**	**09 36 34.4**	**+0.8**
CHBI				Sg	**Sn**	**09 36 58.7**	**+0.2**
CUR	**Chagan-Uzun**	**1.92**	**193**	Pg	**Pb**	**09 36 35.5**	**0.0**
CUR				Sg	**Sn**	**09 36 58.7**	**+0.1**
ELT	**Eltsovka**	**2.14**	**308**	Pg	**Pb**	**09 36 38.3**	**-1.0**
ELT				Sg	**Sb**	**09 37 06.0**	**-0.5**
ERU	**Erunakovo, Kuz**	**2.40**	**336**	Pg	**Pg**	**09 36 44.4**	**-1.1**
ERU				Sg	**Sg**	**09 37 14.8**	**-1.7**
DGZ	**Jazzator, Alta**	**2.48**	**205**	Pg	**Pb**	**09 36 45.8**	**+0.6**
DGZ				Sg	**Sb**	**09 37 17.3**	**+0.9**
TUNR	**Tungur**	**2.49**	**224**	Pg	**Pb**	**09 36 45.4**	**+0.2**
TUNR				Sg	**Sb**	**09 37 16.9**	**+0.6**
ARDR	**Aradan**	**2.77**	**75**	Pg	**Pg**	**09 36 52.4**	**-0.2**
UKR	**Ust'-Kan**	**2.86**	**251**	Pg	**Pb**	**09 36 51.1**	**-0.4**
UKR				Sg	**Sb**	**09 37 28.3**	**+1.2**
ZAA0	**Zalesovo Array**	**3.23**	**310**	⇑Pg	**Pb**	**09 36 57.4**	**-0.4**
	2.1nm,0.4s						
ZAA0				⇓Lg	Lg	09 37 37.0	
	21nm,0.7s						
KURK	**Kurchatov**	**6.65**	**263**	⇑Pn	**Pn**	**09 37 39.4**	**+1.0**
	0.8nm,0.6s						
KURK				⇑Sn	**Sn**	**09 38 57.5**	**+2.6**
	1.2nm,0.5s						
KURK				⇑Lg	Lg	09 39 27.3	
	2.2nm,0.7s						
KURBB	**Kurchatov Arra**	**6.73**	**263**	⇓Pn	**Pn**	**09 37 39.7**	**+0.2**
	2.5nm,0.5s						
KURBB				⇓Sn	**Sn**	**09 38 58.4**	**+1.6**
	3.5nm,0.6s						
KURBB				⇓Lg	Lg	09 39 30.0	
	14nm,0.7s						
MK31	**Makanchi Array**	**6.79**	**223**	⇓Pn	**Pn**	**09 37 43.8**	**+3.3**
	2.2nm,0.6s,baz=43,slow=13,SNR=71						
MK31				⇓Sn	**Sn**	**09 39 00.1**	**+1.6**
	1.7nm,0.5s,baz=34,slow=14,SNR=7.3						
MK31				⇓Lg	Lg	09 39 34.7	
	12nm,1.1s,baz=47,slow=30,SNR=4.2						
MAKZ	**Makanchi**	**6.92**	**225**	⇓Pn	**Pn**	**09 37 45.3**	**+3.1**
	1.5nm,0.5s						
MAKZ				⇓Sn	**Sn**	**09 39 02.5**	**+1.0**
	4.3nm,0.6s						
MAKZ				⇑Lg	Lg	09 39 37.7	
	4.5nm,0.7s						

*NEIC **19** 09:36:38.2±1.1, 17°.60N±0°.03 × 119°.9E±0°.1, h10km±1km, mb4.5/32, Error ellipse: s-maj=23.0km s-min=3.5km az=257.0*

*IDC **19** 09:36:43.7±2.4, 17°.58N × 119°.91E, h56km±24km, mb3.7/11, mbtmp4.0/13, ML3.6/1, MS3.2/4, Error ellipse: s-maj=28.7km s-min=11.5km az=68.0*

ISC 19 09:36:41.1±0.5, 17°.63N±0°.06 × 119°.8E±0°.1, h33km, n54, σ1°00/54, mb4.3/24, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.67**	**163**	P	**Pn**	**09 37 37.8**	**+2.1**
	174nm,0.3s,baz=24,slow=20,SNR=0.9						
TGY				S	**Sn**	**09 38 19.7**	**+1.9**
	185nm,0.3s,baz=54,slow=19,SNR=3.4						
YULB	**Yu-li**	**5.89**	**13**	Pn	**Pn**	**09 38 04.9**	**-1.3**
DAV	**Davao City (W)**	**11.91**	**151**	LR	LR	09 45 00.6	
	comp=Z,131nm,20.0s,baz=356,slow=42						
JOW	**Kunigami**	**12.04**	**39**	LR	LR	09 43 47.3	
	comp=Z,104nm,21.5s,baz=199,slow=35						
JNU	**Nakatsue**	**18.35**	**31**	P	**Pn**	**09 40 53.6**	**+0.5**
	0.2nm,0.3s,baz=171,slow=7.8,SNR=2.6						
	5.7nm,0.9s						
LUWI	**Luwuk**	**18.78**	**171**	P	**P**	**09 40 56.4**	**-1.3**
LUWI				IAmb	IAmb	09 40 59.9	
	comp=Z,24nm,0.6s						
BKB	**Balikpapan**	**18.99**	**189**	P	**Pn**	**09 41 00.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**19.87**	**276**	P	**P**	**09 41 10.3**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=87,slow=11,SNR=6.5						
CMAR				LR	LR	09 48 17.4	
	comp=Z,21nm,19.4s,baz=100,slow=35						
CMAR	**Chiang Mai Arr**	**19.87**	**276**	P	**P**	**09 41 09.4**	**-0.3**
KSRS	**Korea Array**	**20.99**	**18**	P	**P**	**09 41 22.0**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=202,slow=11,SNR=7.5						
	comp=Z,1.9nm,0.8s						
EVN	**Everest**	**32.02**	**295**	P	**P**	**09 43 04.3**	**-1.2**
EVN				IAmb	IAmb	09 43 08.9	
	comp=Z,6.4nm,1.3s						
SONM	**Songino Array**	**32.07**	**343**	P	**P**	**09 43 05.3**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=148,slow=8.5,SNR=2.1						
	comp=Z,0.3nm,0.4s						
JKA	**Kamikawa-asahi**	**32.63**	**31**	P	**P**	**09 43 09.7**	**-0.2**
WB0	**Warramunga Arr**	**39.83**	**158**	P	**P**	**09 44 10.4**	**-1.2**
WRAB	**Tennant Creek**	**39.96**	**158**	P	**P**	**09 44 12.1**	**-0.6**
WRAB				IAmb	IAmb	09 44 33.1	
	comp=Z,8.7nm,0.6s						
WRA	**Warramunga Arr**	**39.97**	**158**	P	**P**	**09 44 10.7**	**-2.0**
	comp=Z,1.6nm,0.7s,baz=340,slow=8.3,SNR=12						
WRA				PcP	**PcP**	**09 46 18.7**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=341,slow=3.1,SNR=2.9						
	comp=Z,1.6nm,0.7s						
WRA	**Warramunga Arr**	**39.97**	**158**	P	**P**	**09 44 10.3**	**-2.4**
WR8	**Warramunga Arr**	**40.04**	**158**	P	**P**	**09 44 11.7**	**-1.6**
WR8				IAmb	IAmb	09 44 27.5	
	comp=Z,14nm,1.5s						
MKAR	**Makanchi Array**	**42.41**	**322**	P	**P**	**09 44 33.9**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=123,slow=7.7,SNR=6.5						
	comp=Z,1.2nm,0.9s						
AS31	**Alice Springs**	**43.29**	**161**	P	**P**	**09 44 39.4**	**-0.6**
ASAR	**Alice Springs**	**43.29**	**161**	P	**P**	**09 44 38.9**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=342,slow=7.9,SNR=47						
ASAR				PcP	**PcP**	**09 46 29.1**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=348,slow=3.5,SNR=1.7						
	comp=Z,2.8nm,0.8s						
BOOM	**Boomskoye usch**	**44.69**	**313**	P	**P**	**09 44 50.6**	**-0.5**
BOOM				IAmb	IAmb	09 45 03.2	
	comp=Z,8.0nm,1.5s						
CTA	**Charters Tower**	**45.59**	**144**	P	**P**	**09 44 57.2**	**-1.1**
	comp=Z,3.3nm,0.9s,baz=324,slow=11,SNR=5.4						
	comp=Z,3.3nm,0.9s						
CTAO	**Charters Tower**	**45.59**	**144**	P	**P**	**09 44 57.8**	**-0.5**
CTAO				IAmb	IAmb	09 44 59.4	
	comp=Z,4.3nm,0.9s						
PEA0B	**Petropavlovsk-**	**46.05**	**31**	P	**P**	**09 45 01.6**	**0.0**
PETK	**Petropavlovsk-**	**46.05**	**31**	P	**P**	**09 45 02.1**	**+0.5**
KURK	**Kurchatov**	**46.49**	**325**	P	**P**	**09 45 04.7**	**-0.4**
KURK				IAmb	IAmb	09 45 07.2	
	comp=Z,4.5nm,0.8s						
KURBB	**Kurchatov Arra**	**46.49**	**325**	P	**P**	**09 45 05.8**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=122,slow=8.6,SNR=20						
	comp=Z,2.8nm,0.7s						
KBL	**Kabul**	**48.11**	**301**	P	**P**	**09 45 18.3**	**0.0**
KK31	**Karatay Array**	**48.68**	**312**	P	**P**	**09 45 22.3**	**+0.1**
KK31				IAmb	IAmb	09 45 33.4	
	comp=Z,3.5nm,1.2s						
KKAR	**Karatay Array**	**48.68**	**312**	P	**P**	**09 45 22.9**	**+0.6**
FORT	**Forrest**	**48.78**	**171**	P	**P**	**09 45 22.2**	**-0.8**
FORT				IAmb	IAmb	09 45 49.1	
	comp=Z,5.8nm,0.9s						
INKA	**Innaminka**	**49.45**	**155**	P	**P**	**09 45 28.3**	**+0.1**
BVAR	**Borovoye Array**	**52.08**	**324**	P	**P**	**09 45 50.4**	**+2.6**
	comp=Z,0.4nm,0.5s,baz=118,slow=8.5,SNR=1.8						
	comp=Z,0.4nm,0.5s						
BBOO	**Buckleboo**	**52.51**	**163**	P	**P**	**09 45 50.7**	**-0.4**
STKA	**Stephens Creek**	**53.47**	**157**	P	**P**	**09 45 58.0**	**-0.3**
	comp=Z,5.1nm,0.9s,baz=330,slow=8.1,SNR=6.5						
	comp=Z,5.1nm,0.8s						
STKA	**Stephens Creek**	**53.47**	**157**	P	**P**	**09 45 57.6**	**-0.7**
AB31	**Akbulak array**	**57.25**	**318**	P	**P**	**09 46 26.3**	**+1.0**
AB31				IAmb	IAmb	09 46 46.1	
	comp=Z,4.9nm,1.2s						
ABKAR	**Akbulak array**	**57.25**	**318**	P	**P**	**09 46 26.0**	**+0.7**
CAN	**Canberra**	**59.50**	**152**	P	**P**	**09 46 40.2**	**-1.0**
K15K	**Wolf Creek Mou**	**69.27**	**29**	P	**P**	**09 47 44.9**	**+0.1**
C18K	**Utukok River**	**69.70**	**23**	P	**P**	**09 47 48.9**	**+1.5**
C18K				IAmb	IAmb	09 48 10.4	
	comp=Z,3.9nm,1.4s						
J16K	**Anvik River**	**69.72**	**28**	P	**P**	**09 47 47.9**	**+0.4**
J16K				IAmb	IAmb	09 47 52.5	
	comp=Z,6.4nm,1.4s						
L16K	**Owhat River**	**70.24**	**30**	P	**P**	**09 47 51.3**	**+0.6**
L16K				IAmb	IAmb	09 47 54.6	
	comp=Z,9.7nm,1.4s						
J17K	**VABM Dome**	**70.41**	**28**	P	**P**	**09 47 52.3**	**+0.5**
K17K	**Iditarod**	**70.77**	**29**	P	**P**	**09 47 53.9**	**0.0**
D19K	**Kuna River**	**70.83**	**23**	P	**P**	**09 47 54.9**	**+0.6**
D19K				IAmb	IAmb	09 48 05.0	
	comp=Z,4.2nm,1.1s						
E19K	**Redstone River**	**71.16**	**24**	P	**P**	**09 47 56.0**	**-0.2**
E19K				IAmb	IAmb	09 48 08.4	
	comp=Z,3.7nm,1.1s						
L18K	**Granite Mounta**	**71.54**	**29**	P	**P**	**09 47 59.5**	**+0.9**
L18K				IAmb	IAmb	09 48 24.8	
	comp=Z,5.3nm,1.4s						
FINES	**FINESS Array B**	**76.46**	**330**	P	**P**	**09 48 26.8**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=67,slow=6.1,SNR=1.5						
	comp=Z,1.8nm,0.8s						
FINES	**FINESS Array B**	**76.46**	**330**	P	**P**	**09 48 27.3**	**0.0**
MBAR	**Mbarara**	**89.31**	**269**	LR	LR	10 29 49.4	
	comp=Z,31nm,19.3s,baz=244,slow=36						
YKA	**Yellowknife Ar**	**89.48**	**22**	P	**P**	**09 49 35.1**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=312,slow=5.5,SNR=7.1						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**89.48**	**22**	P	**P**	**09 49 34.7**	**+0.1**

*FCIAR **19** 09:38:20.0, 77°.61N × 6°.49E, h10km*

*NAO **19** 09:38:22.7±0.8, 77°.45N × 7°.95E, h10km, ML3.1*

*DNK **19** 09:38:22.2±4.1, 77°.48N × 7°.74E, h11km±37km, ML3.1, Presumed earthquake*

*IDC **19** 09:38:23.2±0.5, 77°.45N × 7°.32E, h0km, mb3.9/23, mbtmp4.0/29, ML3.3/4, MS3.8/53, Error ellipse: s-maj=11.8km s-min=9.7km az=30.0*

*BER **19** 09:38:24.1±4.0, 77°.64N × 7°.44E, h10km, Mw4.5, ML3.8(NAO), Confirmed Earthquake*

*KOLA **19** 09:38:24.5, 77°.65N × 8°.70E, h0km, ML3.1, Error ellipse: s-maj=6.0km s-min=3.5km az=80.0, Greenland sea, Knipovich ridge, middle*

*NEIC **19** 09:38:24.2±1.6, 77°.45N±0°.08 × 7°.53E±0°.09, h10km±1km, mb4.5/91, Error ellipse: s-maj=13.0km s-min=3.6km az=356.0*

ISC 19 09:38:23.2±0.3, 77°.45N±0°.04 × 7°.26E±0°.03, h10km, n225, σ2°89/196, mb4.4/68, MS3.8/49, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRBA	**Barentsburg A**	**1.61**	**64**	Pb	**Pn**	**09 38 49.5**	**-2.1**
BRBA				Sb	**Sn**	**09 39 05.7**	**-6.6**
BRBA	**Barentsburg A**	**1.61**	**64**	*e*P	**Pn**	**09 38 49.5**	**-2.1**
BRBA				*e*S	**Sn**	**09 39 06.2**	**-6.2**
BRBB	**Barentsburg B**	**1.62**	**63**	Pb	**Pn**	**09 38 49.7**	**-2.0**
BRBB				Sb	**Sn**	**09 39 04.4**	**-8.1**
BRBB	**Barentsburg B**	**1.62**	**63**	*e*P	**Pn**	**09 38 49.7**	**-2.0**
BRBB				*e*		09 39 04.5	
BRBB				*e*S	**Sn**	**09 39 07.7**	**-4.9**
BRBB	**Barentsburg B**	**1.62**	**63**	S	**Sn**	**09 39 04.8**	**-7.8**
BRBB	**Barentsburg B**	**1.62**	**63**	P	**Pn**	**09 38 49.2**	**-2.5**
BRBB				S	**Sn**	**09 39 04.6**	**-8.0**
BRBB	**Barentsburg B**	**1.62**	**63**	P	**Pn**	**09 38 49.3**	**-2.4**
KBS	**Kingsbay**	**1.77**	**31**	Pb	**Pn**	**09 38 51.3**	**-2.5**
KBS				Sb	**Sn**	**09 39 10.1**	**-6.3**
KBS	**Kingsbay**	**1.77**	**31**	*e*P	**Pn**	**09 38 51.5**	**-2.4**
KBS				*e*S	**Sn**	**09 39 10.2**	**-6.3**
KBS				IAML		09 39 13.3	
	comp=Z,468nm,0.5s						
KBS	**Kingsbay**	**1.77**	**31**	S	**Sn**	**09 39 10.2**	**-6.3**
KBS	**Kingsbay**	**1.77**	**31**	P	**Pn**	**09 38 50.8**	**-3.1**
KBS				S	**Sn**	**09 39 09.9**	**-6.5**
KBS	**Kingsbay**	**1.77**	**31**	*i* P	**Pn**	**09 38 52.5**	**-1.4**
KBS				*i* S	**Sn**	**09 39 12.4**	**-4.0**
KBS	**Kingsbay**	**1.77**	**31**	P	**Pn**	**09 38 51.0**	**-2.8**
HSPB	**Hornsund (broa**	**1.89**	**100**	Pb	**Pn**	**09 38 53.2**	**-2.2**
HSPB				Sb	**Sn**	**09 39 13.4**	**-6.0**
HSPB	**Hornsund (broa**	**1.89**	**100**	*e*P	**Pn**	**09 38 53.1**	**-2.4**
HSPB				*e*S	**Sb**	**09 39 20.5**	**-0.9**
HSPB	**Hornsund (broa**	**1.89**	**100**	P	**Pn**	**09 38 53.0**	**-2.4**
SPA0	**Spitsbergen Ar**	**2.07**	**65**	Pb	**Pn**	**09 38 57.0**	**-0.9**
	baz=244,slow=16						
SPA0				Sb	**Sn**	**09 39 20.2**	**-3.5**
	baz=241,slow=28						
SPA0	**Spitsbergen Ar**	**2.07**	**65**	Pb	**Pn**	**09 38 57.0**	**-0.9**
SPA0				Sb	**Sn**	**09 39 20.2**	**-3.5**
SPA0	**Spitsbergen Ar**	**2.07**	**65**	*e*P	**Pb**	**09 38 57.4**	**-3.4**
SPA0				*e*S	**Sb**	**09 39 24.8**	**-1.7**
SPITS	**Spitsbergen Ar**	**2.07**	**65**	Pn	**Pn**	**09 38 56.9**	**-1.0**
	comp=Z,252nm,0.4s,baz=243,slow=13,SNR=3033						
SPITS				Sn	**Sn**	**09 39 20.1**	**-3.7**
	baz=255,slow=28						
SPITS	**Spitsbergen Ar**	**2.07**	**65**	S	**Sn**	**09 39 19.5**	**-4.2**
SPITS	**Spitsbergen Ar**	**2.07**	**65**	P	**Pn**	**09 38 57.0**	**-1.0**
SPITS	**Spitsbergen Ar**	**2.07**	**65**	P	**Pn**	**09 38 56.5**	**-1.4**
SPB2	**Spitsbergen Ar**	**2.07**	**65**			**09 38 57.0**	**-1.0**
BJO1	**Bjornoya**	**4.11**	**130**	Pn	**Pn**	**09 39 24.8**	**-1.1**
BJO1				Sn	**Sn**	**09 40 07.9**	**-5.9**
BJO1	**Bjornoya**	**4.11**	**130**	*e*P	**Pn**	**09 39 25.1**	**-0.8**
BEAR	**Bear

SUMG eS Sn 09 43 28.2 -11
SUMG Summit 12.46 271 *e*P **Pn 09 41 18.6 -1.9**
SUMG eS Sn 09 43 28.2 -11
KVDA Kovda 13.17 131 S Sn 09 43 45.6 -11
KVDA Kovda 13.17 131 P **Pn 09 41 28.9 -1.1**
KULLO Kullorsuaq 15.11 292 *i* P **Pn 09 41 51.0 -5.3**
BORG Borgarnes 15.45 230 LR LR 09 46 24.1
comp=Z,229nm,19.2s,baz=6.6,slow=31
TULEG Thule 16.07 305 *i* P Pn 09 42 00.3 -8.3
UPNV Upernavik 16.12 286 *e* **Pn 09 42 05.0 -4.3**
UPNV Upernavik 16.12 286 *i* P **Pn 09 42 05.1 -4.3**
NC303 NORSAR Array S 16.36 173 P **P 09 42 15.4 0.0**
NC405 NORSAR Array S 16.48 172 **P 09 42 17.5 +0.7**
NB201 NORSAR Array S 16.53 173 **P 09 42 17.5 +0.1**
NOA NORSAR Array B 16.54 173 Pn **Pn 09 42 15.5 +0.7**
baz=354,slow=12,SNR=3.7
NOA LR LR 09 48 00.1
comp=Z,113nm,18.7s,baz=350,slow=35
comp=Z,1.1nm,0.8s
LSH Leshukonskoye 17.16 116 *e*P **P 09 42 22.6 -1.5**
FIA1 FINESS Array S 17.20 148 P **P 09 42 24.3 -0.5**
FIA1 IAmb IAmb 09 42 25.9
comp=Z,32nm,0.9s
FIA0 FINESS Array S 17.21 148 P **Pn 09 42 22.0 -1.2**
baz=353,slow=12
FIA0 FINESS Array S 17.21 148 P **Pn 09 42 22.0 -1.2**
FINES FINESS Array B 17.21 148 P **Pn 09 42 22.1 -1.2**
comp=Z,8.1nm,1.0s,baz=347,slow=12,SNR=7.9
FINES LR LR 09 49 16.0
comp=Z,240nm,18.3s,baz=350,slow=38
FINES FINESS Array B 17.21 148 P **P 09 42 24.0 -0.7**
HFS Hagfors 17.53 169 P **P 09 42 30.2 +1.9**
comp=Z,0.7nm,0.3s,baz=358,slow=8.7,SNR=16
HFS LR LR 09 48 11.7
comp=Z,255nm,20.6s,baz=358,slow=34
comp=Z,6.8nm,0.6s
ANGG Ammassalik, Gr 17.81 253 P **P 09 42 32.1 +0.7**
SFJD Kangerlussuaq 19.44 270 P **P 09 42 49.2 -0.1**
comp=Z,0.7nm,0.3s,baz=33,slow=14,SNR=4.2
SFJD S Sn 09 46 12.4 -16
comp=Z,4.7nm,0.8s,baz=78,slow=14,SNR=1.8
SFJD LR LR 09 49 54.6
comp=Z,261nm,21.7s,baz=26,slow=36
comp=Z,7.4nm,0.8s
SFJD Kangerlussuaq 19.44 270 P **Pn 09 42 50.5 +0.1**
KLMR Klimovskoe 19.71 129 *e*P **Pn 09 42 52.9 -0.8**
POIN Pond Inlet 20.52 302 **P 09 43 01.3 +0.3**
RES Resolute Bay 21.81 316 P **P 09 43 16.9 +2.1**
comp=Z,0.7nm,0.5s,baz=37,slow=11,SNR=5.5
RES S S 09 47 03.4 -12
comp=Z,2.8nm,0.8s,baz=56,slow=12,SNR=5.6
RES LR LR 09 51 33.6
comp=Z,373nm,18.3s,baz=29,slow=36
comp=Z,0.7nm,0.5s
RES Resolute Bay 21.81 316 P **P 09 43 15.8 +1.0**
EKA Eskdalemuir Ar 22.52 196 P **P 09 43 24.3 +1.7**
comp=Z,3.9nm,1.0s,baz=359,slow=12,SNR=3.2
comp=Z,3.9nm,1.0s
NRS Narsarsuaq 23.41 256 P **P 09 43 33.8 +2.1**
NRS IAmb IAmb 09 43 36.0
comp=Z,12nm,0.8s
KIRV Kirov 23.63 119 LR LR 09 53 08.2
comp=Z,183nm,18.3s,baz=338,slow=38
ILON Igloolik, Nuna 23.98 299 **P 09 43 38.6 +1.4**
FRB Frobisher Bay 26.13 282 LR LR 09 55 09.4
comp=Z,336nm,18.3s,baz=60,slow=38
TIXI Tiksi 27.23 36 LR LR 09 56 04.8
comp=Z,53nm,18.4s,baz=9.5,slow=39
TIXI Tiksi 27.23 36 **P 09 44 09.2 +2.6**
TIXI IAmb IAmb 09 44 17.8
comp=Z,8.5nm,1.1s
ARTI Arti 27.46 110 P **P 09 44 10.0 +1.1**
comp=Z,1.7nm,0.6s,baz=338,slow=11,SNR=6.7
ARTI LR LR 09 57 21.4
comp=Z,179nm,18.0s,baz=6.5,slow=42
comp=Z,1.7nm,0.6s
ARTI Arti 27.46 110 P **P 09 44 11.8 +2.9**
ARTI IAmb IAmb 09 44 17.4
comp=Z,10nm,1.0s
MORC Moravsky Berou 28.05 166 P **P 09 44 15.4 +1.1**
AKASG Malin Array Be 28.11 150 P **P 09 44 15.5 +0.8**
comp=Z,2.5nm,0.7s,baz=351,slow=9.5,SNR=5.8
AKASG LR LR 09 55 28.9
comp=Z,284nm,19.2s,baz=352,slow=36
comp=Z,2.5nm,0.7s
VRAC Vranov 28.47 167 LR LR 09 55 24.0
comp=Z,99nm,18.4s,baz=340,slow=36
GERES GERESS Array B 28.82 171 P **P 09 44 23.3 +2.1**
comp=Z,0.4nm,0.4s,baz=355,slow=8.0,SNR=2.0
comp=Z,0.4nm,0.4s
BELG Belogornoye 29.16 125 LR LR 09 56 23.3
comp=Z,338nm,19.4s,baz=303,slow=37
CLF Chambon-Foret 29.59 187 P **P 09 44 29.5 +1.6**
BURAR Bucovina Array 30.76 156 P **P 09 44 38.9 +0.5**
DAVOX Davos/Dischmat 30.79 176 LR LR 09 55 57.1
comp=Z,83nm,20.1s,baz=264,slow=34
KUQ Kuujjuuaa 31.16 276 P **P 09 44 43.1 +1.5**
KUQ IAmb IAmb 09 44 48.9
comp=Z,5.3nm,0.9s
MLR Muntele Rosu 32.93 156 LR LR 09 59 11.5
comp=Z,172nm,20.1s,baz=350,slow=38
AKTO Aktyubinsk 33.00 115 P **P 09 45 00.5 +2.7**
comp=Z,0.7nm,0.2s,baz=317,slow=12,SNR=4.3
AKTO LR LR 10 00 11.3
comp=Z,114nm,19.0s,baz=322,slow=40
comp=Z,0.7nm,0.2s
BVAR Borovoye Array 33.14 100 P **P 09 45 01.1 +2.1**
comp=Z,0.8nm,0.5s,baz=336,slow=10,SNR=5.0
BVAR PcP **PcP 09 47 43.0 +1.4**
comp=Z,1.2nm,0.7s,baz=336,slow=3.2,SNR=3.9
BVAR LR LR 10 01 56.0
comp=Z,263nm,18.4s,baz=338,slow=43
comp=Z,0.8nm,0.5s
F28M Old Crow 33.80 338 P **P 09 45 07.0 +2.3**
SCHQ Schefferville 33.84 272 P **P 09 45 06.3 +1.1**
comp=Z,2.5nm,0.8s,baz=32,slow=15,SNR=4.2
SCHQ LR LR 09 59 23.6
comp=Z,202nm,18.5s,baz=60,slow=37
comp=Z,2.5nm,0.8s
SCHQ Schefferville 33.84 272 P **P 09 45 06.7 +1.5**
SCHQ IAmb IAmb 09 45 07.1
comp=Z,5.9nm,1.1s
BILL Bilibino 34.18 14 **P 09 45 09.9 +1.9**
BILL IAmb IAmb 09 45 20.3
comp=Z,9.1nm,1.0s
BMAR Burnt Mountain 34.34 341 P **P 09 45 09.4 0.0**
C16K Lisburne Hills 34.43 355 **P 09 45 11.2 +1.1**
C16K IAmb IAmb 09 45 19.6
comp=Z,11nm,1.1s
RDOG Red Dog Mine 34.59 354 **P 09 45 12.6 +1.0**
RDOG IAmb IAmb 09 45 21.7
comp=Z,7.9nm,0.9s
F20K Avaraart Lake 35.36 349 P **P 09 45 18.9 +0.9**
ZALV Zalesovo Beam 35.42 85 P **P 09 45 19.6 +0.8**
comp=Z,3.1nm,1.0s,baz=347,slow=12,SNR=5.1
ZALV PcP **PcP 09 47 50.2 +2.1**
comp=Z,1.1nm,0.4s,baz=336,slow=3.2,SNR=5.0
ZALV LR LR 10 02 41.3
comp=Z,74nm,19.3s,baz=318,slow=41
comp=Z,3.1nm,1.0s
ZALV Zalesovo Beam 35.42 85 P **P 09 45 19.0 +0.3**
YKAW3 Yellowknife Wh 35.78 318 P **P 09 45 23.6 +1.9**
YKA Yellowknife Ar 35.84 318 P **P 09 45 24.1 +1.8**
comp=Z,0.7nm,0.7s,baz=18,slow=9.0,SNR=13
YKA PcP **PcP 09 47 50.6 +1.4**
comp=Z,0.3nm,0.8s,baz=15,slow=3.8,SNR=3.6
YKA LR LR 09 59 39.1
comp=Z,213nm,18.1s,baz=354,slow=36
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 35.84 318 P **P 09 45 23.3 +0.9**
FCC Fort Churchill 35.87 299 P **P 09 45 23.8 +1.3**
KBZ Khabaz 36.77 135 P **P 09 45 31.9 +1.5**
comp=Z,1.6nm,0.8s,baz=5.4,slow=4.8,SNR=3.8
KBZ LR LR 10 01 15.2
comp=Z,126nm,18.1s,baz=356,slow=37
comp=Z,1.6nm,0.8s
I23K Minto, Yukon-K 36.92 344 P **P 09 45 33.8 +2.3**
KURK Kurchatov 37.09 93 P **P 09 45 33.0 -0.1**
KURK IAmb IAmb 09 45 41.8
comp=Z,4.8nm,0.8s
ILAR Eielson Array 37.13 342 P **P 09 45 35.9 +2.6**
comp=Z,0.6nm,0.7s,baz=11,slow=8.3,SNR=7.9
ILAR LR LR 10 00 25.7
comp=Z,38nm,18.9s,baz=297,slow=36
comp=Z,0.6nm,0.7s
ILAR Eielson Array 37.13 342 P **P 09 45 34.1 +0.8**
KURBB Kurchatov Arra 37.16 93 P **P 09 45 35.1 +1.5**
comp=Z,1.6nm,0.7s,baz=340,slow=8.1,SNR=7.8
KURBB PcP **PcP 09 47 55.0 +1.6**
comp=Z,1.1nm,0.9s,baz=345,slow=3.4,SNR=4.4
KURBB LR LR 10 03 28.5
comp=Z,111nm,21.5s,baz=178,slow=40
comp=Z,1.6nm,0.7s
ESDC Sonseca Array 38.18 194 P **P 09 45 44.9 +2.5**
comp=Z,1.6nm,0.9s,baz=4.6,slow=6.5,SNR=6.2
comp=Z,1.6nm,0.9s
M30M Minto, Yukon 38.48 334 P **P 09 45 47.6 +2.9**
BR131 Keskin Array S 39.44 147 P **P 09 45 54.1 +1.0**
BRTR Keskin Array B 39.44 147 P **P 09 45 56.1 +2.9**
comp=Z,2.3nm,0.8s,baz=349,slow=7.3,SNR=12
BRTR LR LR 10 04 34.6
comp=Z,58nm,18.4s,baz=351,slow=40
comp=Z,2.3nm,0.8s
BRTR Keskin Array B 39.44 147 P **P 09 45 54.2 +1.1**
GNI Garni 40.56 134 LR LR 10 03 54.1
comp=Z,78nm,18.0s,baz=345,slow=38
BNN Bunyan 40.57 145 **P 09 46 01.8 -0.7**
BNN IAmb IAmb 09 46 15.5
comp=Z,5.7nm,0.8s
ARPR Arapgir-MALATY 40.66 142 P **P 09 46 04.0 +0.8**
ARPR IAmb IAmb 09 46 14.1
comp=Z,10nm,0.9s
MAKZ Makanchi 41.52 92 P **P 09 46 11.2 +1.1**
TLY Talaya 41.55 69 LR LR 10 05 43.6
comp=Z,88nm,18.8s,baz=324,slow=40
MKAR Makanchi Array 41.60 91 P **P 09 46 12.8 +2.0**
comp=Z,1.9nm,0.7s,baz=344,slow=6.6,SNR=12
MKAR PcP **PcP 09 48 08.5 +0.9**
comp=Z,0.4nm,0.6s,baz=347,slow=1.9,SNR=1.8
MKAR LR LR 10 08 10.8
comp=Z,157nm,18.4s,baz=348,slow=43
comp=Z,1.9nm,0.7s
DLBC Dease Lake 41.81 328 LR LR 10 04 34.2
comp=Z,129nm,20.1s,baz=18,slow=38
ULM Lac du Bonnet 44.26 296 LR LR 10 05 13.0
comp=Z,182nm,19.6s,baz=26,slow=36
KDAK Kodiak Island 44.44 345 LR LR 10 04 07.0
comp=Z,142nm,19.1s,baz=25,slow=35
EDM Edmonton 44.55 312 P **P 09 46 35.9 +1.3**
EDM IAmb IAmb 09 46 43.3
comp=Z,15nm,1.1s
MD01 Midelt array s 45.00 194 **P 09 46 39.4 +0.9**
MD31 MD31 45.00 194 P **P 09 46 40.1 +1.7**
MD31 IAmb IAmb 09 46 48.5
comp=Z,10nm,1.1s
E46A Sault Ste Mari 45.59 284 P **P 09 46 44.8 +2.0**
WMQ Urumqi 45.61 87 *e*P **P 09 46 44.6 +1.5**
WMQ pP pwP 09 46 50.3 +1.0
WMQ S **S 09 53 16.4 -8.8**
WMQ LR LR
comp=Z,180nm,15.3s
SONM Songino Array 45.76 68 P **P 09 46 44.7 +0.3**
comp=Z,0.9nm,0.8s,baz=347,slow=5.1,SNR=5.5
SONM PcP **PcP 09 48 24.2 +2.4**
comp=Z,0.7nm,0.8s,baz=320,slow=4.3,SNR=2.3
SONM LR LR 10 08 32.6
comp=Z,67nm,19.7s,baz=350,slow=40
comp=Z,0.9nm,0.8s
SONM Songino Array 45.76 68 P **P 09 46 44.3 -0.1**
ULN Ulaanbaatar 45.87 68 P **P 09 46 46.0 +0.8**
ULN IAmb IAmb 09 46 50.8
comp=Z,5.6nm,1.0s
SADO Sadowa 46.00 279 LR LR 10 06 21.4
comp=Z,289nm,19.5s,baz=18,slow=36
MMAI Mont Meron Ar 46.27 147 LR LR 10 09 59.1
comp=Z,33nm,19.4s,baz=334,slow=41
ASF Jabal al Asfar 47.29 145 LR LR 10 09 46.6
comp=Z,50nm,18.3s,baz=17,slow=40
KSH2 Kashi 47.44 101 P **P 09 47 00.4 +2.8**
KSH2 pmax pmax
comp=Z,2.0nm,0.7s
BBB Bella Bella 47.70 324 LR LR 10 06 44.5
comp=Z,72nm,19.8s,baz=35,slow=36
PETK Petropavlovsk- 48.41 23 LR LR 10 09 29.4
comp=Z,51nm,18.9s,baz=244,slow=39
EIL Elat 49.52 148 LR LR 10 10 38.1
comp=Z,38nm,19.3s,baz=246,slow=39
NEW Newport 49.95 314 LR LR 10 08 31.3
comp=Z,118nm,18.4s,baz=52,slow=36
NEW Newport 49.95 314 IAmb IAmb 09 47 29.9
comp=Z,4.0nm,1.1s
B08A Colville Reser 50.20 316 IAmb IAmb 09 47 28.3
comp=Z,4.9nm,0.9s
ECSD EROS Data Cent 50.64 294 IAmb IAmb 09 47 29.9
comp=Z,7.0nm,1.1s
GNW Green Mountain 51.50 319 IAmb IAmb 09 47 38.3
comp=Z,8.2nm,1.1s
BNX BinXian 51.71 50 ⇑P **P 09 47 30.4 +0.5**
BNX pmax pmax
comp=Z,4.0nm,1.2s
HAWA Hanford 52.15 315 IAmb IAmb 09 47 42.8
comp=Z,5.7nm,0.9s
YMP Mixr Lake Pl 52.21 307 IAmb IAmb 09 47 43.0
comp=Z,4.6nm,0.9s
YHL Hebgen Lake 52.28 308 IAmb IAmb 09 47 38.9
comp=Z,4.7nm,1.1s
GTA2 Gaotai 52.37 77 *e*P **P 09 47 37.8 +2.8**
GTA2 sP pwP 09 47 43.5 +2.2
GTA2 pmax pmax
comp=Z,3.0nm,0.7s
YPP Pitchstone Pla 52.78 307 IAmb IAmb 09 47 48.4
comp=Z,6.2nm,1.1s
G08A Pilot Rock 53.14 315 IAmb IAmb 09 47 50.9
comp=Z,4.1nm,1.0s
BMO Blue Mountains 53.30 313 IAmb IAmb 09 47 50.5
comp=Z,5.3nm,1.1s
HHC Hu-ho-hao-te 53.51 66 *e*P **P 09 47 33.3 -0.1**
HHC pmax pmax
comp=Z,87nm,5.2s
PDAR Pinedale Array 54.02 306 P **P 09 47 47.1 -0.2**
comp=Z,1.0nm,1.0s,baz=14,slow=5.4,SNR=5.4
PDAR LR LR 10 11 11.5
comp=Z,113nm,18.8s,baz=33,slow=36
comp=Z,1.0nm,1.0s
PDAR Pinedale Array 54.02 306 P **P 09 47 47.8 +0.5**
I07A Izee 54.40 315 IAmb IAmb 09 48 08.7
comp=Z,5.5nm,1.2s
GOMU GeErMu 54.46 83 P **P 09 47 50.6 -0.1**
GOMU pmax pmax
comp=Z,6.0nm,0.9s
R40A Maddies Statio 54.99 289 IAmb IAmb 09 48 01.0
comp=Z,8.1nm,1.0s
J05D Fort Rock, OR 55.45 316 IAmb IAmb 09 48 08.4
comp=Z,11nm,1.1s
TKL Tuckaleechee C 55.73 280 LR LR 10 12 12.6
comp=Z,122nm,19.6s,baz=49,slow=36
ELK Elko 56.97 310 LR LR 10 12 50.3
comp=Z,116nm,19.2s,baz=34,slow=36
YBH Yreka Blue Hor 57.19 317 LR LR 10 13 34.7
comp=Z,5.9nm,18.3s,baz=40,slow=37
U38A Gravette 57.22 290 IAmb IAmb 09 48 11.2
comp=Z,3.8nm,0.7s
FCAR Ozark Folk Cen 57.28 288 IAmb IAmb 09 48 22.5
comp=Z,3.7nm,1.0s
OK048 Pawnee Station 57.76 292 P **P 09 48 15.4 +1.5**
Q16A Castle Valley 58.05 306 IAmb IAmb 09 48 26.0
comp=Z,3.4nm,0.8s
PV20 West Nyswonger 58.21 304 IAmb IAmb 09 48 29.6
comp=Z,11nm,1.2s
PV16 Nyswonger Mesa 58.23 304 IAmb IAmb 09 48 29.1
comp=Z,3.0nm,0.9s
PV01 Paradox Valley 58.34 303 IAmb IAmb 09 48 28.3
comp=Z,6.3nm,1.0s
PV13 Radium Mtn., P 58.36 304 IAmb IAmb 09 48 28.1
comp=Z,3.4nm,0.9s
S22A 4UR Ranch, Cre 58.40 302 IAmb IAmb 09 48 28.0
comp=Z,3.2nm,1.1s
PV05 Paradox Valley 58.49 304 IAmb IAmb 09 48 27.9
comp=Z,5.9nm,1.0s
MTPU Mount Pierson 59.08 307 IAmb IAmb 09 48 33.6
comp=Z,6.1nm,1.4s
MVCO Mesa Verde 59.22 303 IAmb IAmb 09 48 34.4
comp=Z,8.5nm,1.1s
NVAR Mina Array Bea 59.73 312 P **P 09 48 29.6 +1.8**
comp=Z,0.4nm,0.7s,baz=13,slow=8.0,SNR=2.6
NVAR LR LR 10 14 41.4
comp=Z,86nm,18.9s,baz=39,slow=36
comp=Z,0.4nm,0.7s
WMOK Wichita Mounta 59.75 294 P **P 09 48 28.7 +0.9**
KSRS Korea Array 59.86 52 LR LR 10 15 34.0
comp=Z,36nm,20.1s,baz=135,slow=37
ANMO Albuquerque 61.04 301 LR LR 10 14 39.3
comp=Z,126nm,19.3s,baz=40,slow=36
MSTX Muleshoe 61.29 297 P **P 09 48 40.0 +1.7**
MSTX IAmb IAmb 09 48 42.4
comp=Z,6.0nm,0.9s
WUAZ Wupatki 61.39 305 IAmb IAmb 09 48 49.7
comp=Z,3.9nm,1.1s
MJAR Matsushiro Arr 62.42 43 P **P 09 48 46.4 +0.6**
comp=Z,2.1nm,1.0s,baz=348,slow=5.2,SNR=4.7
comp=Z,2.1nm,1.0s
NJ2 Nanjing 63.45 62 *e*P **P 09 48 53.0 +0.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
MNHN Monahans 63.84 296 IAmb IAmb 09 49 04.4
comp=Z,3.8nm,0.9s
PFO Pinyon Flats O 64.13 310 LR LR 10 18 36.0
comp=Z,90nm,18.0s,baz=28,slow=38
TORD Torodi Ar. Bea 64.36 186 P **P 09 49 00.8 +1.9**
comp=Z,4.0nm,0.7s,baz=8.5,slow=8.2,SNR=21
comp=Z,4.0nm,0.7s
TORD Torodi Ar. Bea 64.36 186 P **P 09 48 59.7 +0.8**
TORD IAmb IAmb 09 49 01.9
comp=Z,6.0nm,1.1s
TUC Tucson 64.41 304 P **P 09 49 00.9 +1.8**
TUC IAmb IAmb 09 49 08.7
comp=Z,6.8nm,1.4s
ALPN Alpine 64.94 297 P **P 09 49 03.9 +1.2**
PZH PanZhiHua 65.31 80 P **P 09 49 08.3 +3.2**
TX31 Lajitas Ar. Si 65.96 297 P **P 09 49 10.6 +1.3**
TXAR Lajitas Array 65.96 297 P **P 09 49 10.5 +1.2**
comp=Z,0.9nm,0.6s,baz=25,slow=6.5,SNR=10
TXAR LR LR 10 18 35.1
comp=Z,155nm,19.1s,baz=32,slow=37
comp=Z,0.9nm,0.6s
BRDH Bariadhala 66.81 90 LR LR 10 26 01.1
comp=Z,92nm,18.5s,baz=99,slow=43
LPIG La Paz 72.32 302 LR LR 10 22 25.5
comp=Z,64nm,18.7s,baz=10.0,slow=36
CMAR Chiang Mai Arr 72.48 84 P **P 09 49 51.3 +1.6**
comp=Z,1.3nm,0.3s,baz=356,slow=5.5,SNR=5.7
CMAR LR LR 10 26 55.2
comp=Z,52nm,19.0s,baz=90,slow=40
comp=Z,1.3nm,0.3s
CMAR Chiang Mai Arr 72.48 84 P **P 09 49 49.8 +0.1**
CMIG Matias Romero 76.05 286 LR LR 10 28 38.6
comp=Z,56nm,18.7s,baz=100,slow=40
SDV Santo Domingo 78.75 260 LR LR 10 25 19.5
comp=Z,89nm,18.8s,baz=76,slow=36
JTS Las Juntas de 80.51 274 LR LR 10 25 58.6
comp=Z,88nm,21.5s,baz=24,slow=36

DNK 19 09:40:49.8±2.4, 74°.06N×64°.70W, h23^{km}±30^{km}, ML1.8, Presumed earthquake, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULLO	**Kullorsuaq**	**2.10**	**72**	*e*		Sn 09 41 49.0	+0.2
KULLO	**Kullorsuaq**	**2.10**	**72**	*i* P		Pn 09 41 22.0	-1.4
KULLO				*i* S		Sn 09 41 49.0	+0.2
KULLO				IAML		09 41 51.9	
comp=Z,6.4nm,0.6s							
KULLO	**Kullorsuaq**	**2.10**	**72**	*i*		Pb 09 41 27.5	+0.4
TULEG	**Thule**	**2.71**	**339**	*e*		Sn 09 42 04.4	+0.7
TULEG	**Thule**	**2.71**	**339**	*i* P		Pn 09 41 32.8	+1.1
TULEG				*i* S		Sn 09 42 01.7	-2.0
TULEG				IAML		09 42 06.1	
comp=Z,6.0nm,0.9s							
TULEG	**Thule**	**2.71**	**339**	*i*		Pn 09 41 32.8	+1.1
UPNV	**Upernavik**	**2.77**	**113**	*i* S		Sn 09 42 04.0	-1.3
UPNV				IAML		09 42 06.0	
comp=Z,9.6nm,0.7s							

*BJI **19** 09:41:55.7, 13°.01N×146°.87E, h10^{km}, mB4.9/12, mb4.7/47, Ms4.4/5, Ms7.4.3/6*
*IDC **19** 09:41:59.4±0.6, 13°.17N×146°.38E, h0^{km}, mb4.4/23, mbtmp4.4/23, MS3.5/14, Error ellipse: s-maj=16.4km s-min=14.3km az=83.0*
*NEIC **19** 09:42:01.9±1.3, 13°.18N±0°.07×146°.39E±0°.07, h10^{km}±1^{km}, mb4.8/124, Error ellipse: s-maj=12.3km s-min=11.5km az=163.0*

ISC 19 09:42:04.2±0.5, 13°.13N±0°.07×146°.38E±0°.07, h31^{km}, n171, σ0°.95/118, mb4.7/105, MS3.5/12, 1C-2D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.54**	**287**	Pn	**Pn**	**09 42 29.1**	**-0.4**
177nm,0.3s,baz=135,slow=7.1,SNR=55							
GUMO				Sn	**Sn**	**09 42 47.7**	**-0.7**
243nm,0.3s,baz=162,slow=20,SNR=19							
GUMO	**Guam**	**1.54**	**287**		**Pn**	**09 42 28.9**	**-0.5**
GUMO				Sn	**Sn**	**09 42 49.3**	**+0.9**
DPSS	**Saipan**	**2.17**	**345**		**Pn**	**09 42 37.0**	**-1.2**
PATS	**Pohnpei**	**13.31**	**117**	Pn	Pn	09 45 06.3	-4.9
JCJ	**Chichijima**	**14.44**	**345**	LR	LR	09 50 37.4	
comp=Z,208nm,20.2s,baz=87,slow=36							
JAY	**Jayapura**	**16.54**	**200**	LR	LR	09 51 47.5	
comp=Z,105nm,19.0s,baz=294,slow=36							
H11S3	**WAKE ISLAND Hy**	**20.25**	**72**	T	T	10 08 04.2	
baz=255							
H11S1	**WAKE ISLAND Hy**	**20.26**	**72**	T	T	10 08 11.3	
baz=255							
H11S2	**WAKE ISLAND Hy**	**20.26**	**72**	T	T	10 08 00.6	
baz=255							
JHJ	**Hachijo jima 2**	**20.79**	**344**	LR	LR	09 53 58.4	
comp=Z,170nm,19.9s,baz=321,slow=35							
FAKI	**Fak Fak**	**21.24**	**222**	P	**P**	**09 46 47.0**	**-0.9**
FAKI				IAmb	IAmb	09 46 52.8	
comp=Z,53nm,1.0s							
JOW	**Kunigami**	**21.76**	**311**	LR	LR	09 55 38.1	
comp=Z,104nm,18.1s,baz=136,slow=38							
JOW	**Kunigami**	**21.76**	**311**	P	**P**	**09 46 52.2**	**-1.2**
PMG	**Port Moresby**	**22.41**	**178**	P	**P**	**09 46 58.8**	**-1.5**
JMN	**Monobe**	**23.45**	**333**	P	**P**	**09 47 10.2**	**-0.8**
JMN				IAmb	IAmb	09 47 26.7	
comp=Z,25nm,1.0s							
JGF	**Kuroka**	**23.80**	**342**	P	**P**	**09 47 13.5**	**-0.9**
JNU	**Nakatsue**	**24.41**	**327**	P	**P**	**09 47 18.6**	**-1.5**
comp=Z,11nm,0.8s,baz=143,slow=5.9,SNR=6.6							
comp=Z,11nm,0.8s							
MJAR	**Matsushiro Arr**	**24.44**	**344**	P	**P**	**09 47 17.6**	**-2.5**
comp=Z,3.2nm,0.9s,baz=177,slow=11,SNR=6.4							
MJAR				LR	LR	09 55 53.1	
comp=Z,171nm,19.7s,baz=180,slow=34							
comp=Z,3.2nm,0.9s							
MJAR	**Matsushiro Arr**	**24.44**	**344**	P	**P**	**09 47 20.3**	**+0.1**
YULB	**Yu-li**	**25.87**	**297**	P	**P**	**09 47 32.7**	**-0.7**
YULB				IAmb	IAmb	09 47 33.7	
comp=Z,18nm,0.8s							
SSLB	**Suanglung**	**26.30**	**297**	P	**P**	**09 47 36.8**	**-0.4**
SSLB				IAmb	IAmb	09 47 40.2	
comp=Z,29nm,1.1s							
KSRS	**Korea Array**	**29.30**	**329**	P	**P**	**09 48 02.8**	**-1.0**
comp=Z,3.6nm,0.8s,baz=142,slow=9.7,SNR=14							
KSRS				LR	LR	09 59 01.1	
comp=Z,78nm,18.2s,baz=150,slow=35							
comp=Z,3.6nm,0.8s							
ASAJ	**Asahikawa**	**31.05**	**355**	P	**P**	**09 48 19.1**	**-0.2**
comp=Z,4.4nm,0.8s,baz=230,slow=4.3,SNR=4.3							
comp=Z,4.4nm,0.8s							
NJ2	**Nanjing**	**31.48**	**311**	*e*P	**P**	**09 48 24.0**	**+0.8**
NJ2				pmax	pmax		
comp=Z,6.0nm,0.5s							
CTA	**Charters Tower**	**33.01**	**180**	LR	LR	10 00 03.7	
comp=Z,36nm,20.9s,baz=5.5,slow=33							
DL2	**Dalian**	**33.75**	**324**	P	**P**	**09 48 45.9**	**+2.9**
DL2				pmax	pmax		
comp=Z,38nm,1.3s							
WB0	**Warramunga Arr**	**34.76**	**200**		**P**	**09 48 52.1**	**+0.1**
WR8	**Warramunga Arr**	**34.90**	**200**	P	**P**	**09 48 52.7**	**-0.5**
WRA	**Warramunga Arr**	**34.94**	**200**	P	**P**	**09 48 53.2**	**-0.3**
comp=Z,2.4nm,0.8s,baz=20,slow=8.7,SNR=20							
comp=Z,2.4nm,0.8s							
SBUM	**Sibu**	**35.41**	**255**	P	**P**	**09 48 58.1**	**+0.3**
CN2	**Changchun**	**35.46**	**334**	*e*P	**P**	**09 48 58.9**	**+1.2**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
BNX	**BinXian**	**36.26**	**337**	⇑P	**P**	**09 49 04.0**	**-0.6**
BNX				pmax	pmax		
comp=Z,9.0nm,0.7s							
HNS	**HongShan**	**37.17**	**316**	⇓P	**P**	**09 49 13.0**	**+0.6**
HNS				pmax	pmax		
comp=Z,7.0nm,1.3s							
LYN	**LuoYang**	**37.37**	**311**	P	P	09 49 21.1	+7.0
LYN				pmax	pmax		
comp=Z,14nm,0.6s							
KLR	**Kul'dur**	**37.96**	**344**	LR	LR	10 04 37.8	

comp=Z,20nm,18.0s,baz=188,slow=36
ENH Enshi 38.07 303 P 09 49 20.1 -0.1
ENH IAmb IAmb 09 49 21.9
comp=Z,17nm,1.1s
JAGI Jajag, Banyuwa 38.54 238 P P 09 49 25.2 +1.0
AS31 Alice Springs 38.55 199 P P 09 49 24.5 +0.3
ASAR Alice Springs 38.56 199 P P 09 49 24.1 -0.2
comp=Z,0.9nm,0.8s,baz=21,slow=8.6,SNR=9.0
comp=Z,0.9nm,0.8s
ASAR Alice Springs 38.56 199 P P 09 49 24.4 +0.1
HEH HeiHe 40.13 341 *eP* **P 09 49 35.6 -1.5**
HEH pmax pmax
comp=Z,9.0nm,1.0s
DZM Mont Dzumac 40.14 150 *e*LR LR 10 00 29.3
comp=Z,88nm,38.1s
PEA0B Petropavlovsk- 40.88 10 P P 09 49 44.1 +0.8
PETK Petropavlovsk- 40.88 10 P P 09 49 43.8 +0.5
comp=Z,2.1nm,0.6s,baz=187,slow=7.0,SNR=13
comp=Z,2.1nm,0.6s
HHC Hu-ho-hao-te 41.08 319 *eP* **P 09 49 45.5 +0.3**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,150nm,4.8s
HILR Hailar Array B 42.40 334 P P 09 49 56.4 +0.5
comp=Z,7.6nm,0.8s,baz=141,slow=9.3,SNR=8.5
comp=Z,7.6nm,0.8s
KMI2 Kunming 42.74 293 P P 09 50 00.3 +1.1
KMI2 pmax pmax
comp=Z,7.0nm,1.0s
PZH PanZhiHua 43.83 295 P P 09 50 08.4 +0.6
PZH pmax pmax
comp=Z,10.0nm,0.9s
LZH Lanzhou 44.45 309 *eP* **P 09 50 13.8 +1.1**
LZH sP sP 09 50 23.4 +1.6
LZH pmax pmax
comp=Z,18nm,1.4s
LZDM Lanzhou Array 44.52 308 P P 09 50 13.0 -0.5
comp=Z,3.0nm,0.6s,baz=120,slow=8.5,SNR=8.6
comp=Z,3.0nm,0.6s
STKA Stephens Creek 44.99 186 P P 09 50 16.0 -0.8
comp=Z,2.1nm,0.8s,baz=3.8,slow=16,SNR=3.0
comp=Z,2.1nm,0.8s
STKA Stephens Creek 44.99 186 P P 09 50 16.1 -0.7
SHEM Shemya Is, Ala 45.28 23 LR LR 10 11 26.7
comp=Z,60nm,18.4s,baz=280,slow=39
CM31 Chiang Mai Arr 45.85 283 P P 09 50 24.5 +0.6
CM31 IAmb IAmb 09 50 25.7
comp=Z,10nm,1.0s
CMAR Chiang Mai Arr 45.85 283 P P 09 50 24.6 +0.7
comp=Z,5.3nm,0.7s,baz=90,slow=8.1,SNR=28
CMAR PcP **PcP 09 52 02.2 +1.2**
comp=Z,1.5nm,0.3s,baz=96,slow=4.2,SNR=6.0
comp=Z,5.3nm,0.7s
CMAR Chiang Mai Arr 45.85 283 P 09 50 23.9 0.0
MA2 Magadan 46.47 3 P 09 50 27.9 -0.2
MA2 IAmb IAmb 09 50 29.0
comp=Z,10nm,0.8s
TNCH TengChong 46.53 292 ||P **P 09 50 30.0 +0.6**
TNCH sP pP 09 50 35.6 -0.3
TNCH pmax pmax
comp=Z,20nm,0.7s
BBOO Buckleboo 46.74 192 P P 09 50 30.9 +0.4
BBOO IAmb IAmb 09 50 32.7
comp=Z,5.8nm,0.9s
FORT Forrest 47.08 202 P P 09 50 33.9 +0.7
FORT IAmb IAmb 09 50 45.3
comp=Z,10.0nm,1.1s
ULN Ulaanbaatar 47.60 325 P 09 50 37.3 0.0
SONM Songino Array 47.95 324 P P 09 50 39.8 -0.3
comp=Z,1.8nm,0.6s,baz=136,slow=7.9,SNR=12
SONM PcP **PcP 09 52 08.4 +0.4**
comp=Z,0.6nm,0.5s,baz=145,slow=4.5,SNR=1.6
comp=Z,1.8nm,0.6s
SONM Songino Array 47.95 324 P P 09 50 40.3 +0.3
GTA2 Gaotai 48.64 311 *eP* **P 09 50 46.0 +0.5**
GTA2 pP pP 09 50 50.3 -1.7
GTA2 pmax pmax
comp=Z,3.0nm,1.0s
ADK Adak 48.72 30 P P 09 50 45.5 -0.1
YAK Yakutsk 50.28 350 LR LR 10 10 43.5
comp=Z,33nm,21.9s,baz=226,slow=34
YAK Yakutsk 50.28 350 P 09 50 57.4 0.0
GOMU GeErMu 51.49 306 P P 09 51 08.3 +0.8
GOMU pmax pmax
comp=Z,5.0nm,0.9s
TLY Talaya 51.52 327 P P 09 51 06.7 -0.3
PBA Port Blair 52.33 275 P P 09 51 12.8 -0.7
SHL Shillong 52.56 292 P P 09 51 14.9 -0.4
SHL IAmb IAmb 09 51 15.8
comp=Z,7.2nm,0.7s
LSA Lhasa 53.51 297 P P 09 51 23.1 +0.4
LSA Lhasa 53.51 297 P P 09 51 19.8 -2.9
LSA pmax pmax
comp=Z,16nm,0.8s
UNV Unalaska Valle 54.92 32 P P 09 51 31.4 -0.5
BILL Bilibino 56.37 9 P 09 51 42.2 +0.1
WMQ Urumqi 58.51 314 *eP* **P 09 51 59.4 +1.6**
WMQ pmax pmax
comp=Z,9.0nm,0.7s
TIXI Tiksi 59.44 354 P 09 52 02.6 -0.9
L14K Kuka Creek 60.41 25 IAmb IAmb 09 52 12.7
comp=Z,10nm,0.9s
ANM Nome 61.07 22 IAmb IAmb 09 52 16.3
comp=Z,4.3nm,0.7s
ZSN Zaisan 61.24 317 *eP* **P 09 52 17.1 +0.7**
F15K North Star Dit 61.96 21 IAmb IAmb 09 52 22.2
comp=Z,4.8nm,0.8s
G16K Koyuk River 62.60 22 P P 09 52 25.6 +0.5
MKAR Makanchi Array 62.84 316 P P 09 52 27.1 0.0
comp=Z,5.5nm,0.6s,baz=91,slow=8.8,SNR=77
comp=Z,5.5nm,0.6s
MKAR Makanchi Array 62.84 316 P 09 52 27.7 +0.6
ZAA0 Zalesovo Array 62.85 324 P 09 52 27.0 0.0
ZAA0 IAmb IAmb 09 52 27.9
comp=Z,5.4nm,0.7s
ZALV Zalesovo Beam 62.85 324 P P 09 52 26.2 -0.8
comp=Z,5.8nm,0.6s,baz=105,slow=7.0,SNR=21
comp=Z,5.8nm,0.6s
ZALV Zalesovo Beam 62.85 324 P 09 52 26.9 -0.1
J17K VABM Dome 62.87 24 IAmb IAmb 09 52 28.9
comp=Z,4.7nm,0.8s
K17K Iditarod 62.88 25 P 09 52 28.6 +1.6
K17K IAmb IAmb 09 52 29.5
comp=Z,8.5nm,0.8s
MAKZ Makanchi 63.05 316 P 09 52 29.4 +0.9
C16K Lisburne Hills 63.20 18 IAmb IAmb 09 52 30.4
comp=Z,5.8nm,0.9s
G18K Tagagawik 64.18 22 IAmb IAmb 09 52 37.1
comp=Z,4.9nm,0.8s
E18K Tukpahlearik C 64.24 20 IAmb IAmb 09 52 37.9
comp=Z,6.4nm,0.7s
WUS Wushi 64.31 309 IAmb IAmb 09 52 39.4
comp=Z,3.7nm,0.7s
SHLS Shalkode 64.32 312 *eP* **P 09 52 36.0 -1.1**
UZB Uzynbulak 64.64 312 *eP* **P 09 52 39.9 +0.7**
C18K Utukok River 64.68 19 IAmb IAmb 09 52 39.8
comp=Z,3.5nm,0.7s
G19K Purcell Mounta 64.86 22 IAmb IAmb 09 52 41.7
comp=Z,7.2nm,0.7s
K20K Telida 64.91 25 IAmb IAmb 09 52 42.7
comp=Z,8.9nm,0.9s
SATY Saty 65.08 311 *eP* **P 09 52 42.8 +0.7**
comp=Z,4.6nm,1.0s
TDK Taldyqorghan 65.27 314 *eP* **P 09 52 43.8 +0.7**
comp=Z,4.6nm,0.5s
E19K Redstone River 65.40 21 IAmb IAmb 09 52 45.3
comp=Z,5.5nm,0.7s
C19K Lookout Ridge 65.42 19 IAmb IAmb 09 52 45.6
comp=Z,7.8nm,0.9s
D19K Kuna River 65.59 19 IAmb IAmb 09 52 48.6
comp=Z,7.7nm,1.1s
F20K Avraart Lake 65.75 21 IAmb IAmb 09 52 47.2
comp=Z,3.6nm,0.8s
KURK Kurchatov 65.88 320 P 09 52 47.1 +0.3
KURBB Kurchatov Arra 65.92 320 P **P 09 52 47.2 +0.1**
comp=Z,22nm,0.7s,baz=101,slow=6.6,SNR=139
KURBB LR LR 10 23 29.1
comp=Z,98nm,18.1s,baz=172,slow=38
comp=Z,22nm,0.7s
MDOK Medeo 66.08 312 *eP* **P 09 52 49.6 +1.1**
TNSS Tian-Shan 66.14 311 *eP* **P 09 52 50.0 +0.8**
AAA Alma-Ata 66.18 312 *eP* **P 09 52 49.9 +0.8**
H21K Melozitna Rive 66.27 23 IAmb IAmb 09 52 51.1
comp=Z,6.4nm,1.1s
NRN Naryn 66.74 310 IAmb IAmb 09 52 55.0
comp=Z,4.5nm,0.7s
KSH2 Kashi 66.99 307 P **P 09 52 56.3 +1.9**
KSH2 pmax pmax
comp=Z,6.0nm,0.8s
B21K Ikpikpuk River 67.22 19 IAmb IAmb 09 52 56.7
comp=Z,5.5nm,0.7s
I23K Minto, Yukon-K 67.45 24 IAmb IAmb 09 52 58.1
comp=Z,7.9nm,0.8s
D22K Ayikyak River 67.55 20 IAmb IAmb 09 52 59.2
comp=Z,6.1nm,0.6s
E22K Anaktuvuk Pass 67.56 21 IAmb IAmb 09 52 58.9
comp=Z,5.5nm,0.7s
COLD Coldfoot 67.81 22 IAmb IAmb 09 53 00.9
comp=Z,6.7nm,1.0s
AAK Ala-Archa 67.92 311 P 09 53 01.3 +1.0
AAK IAmb IAmb 09 53 02.5
comp=Z,5.1nm,1.1s
H24K Noodor Dome 68.25 24 IAmb IAmb 09 53 16.4
comp=Z,6.8nm,1.1s
ILAR Eielson Array 68.35 25 P **P 09 53 01.5 -0.9**
comp=Z,4.4nm,0.6s,baz=256,slow=6.0,SNR=86
comp=Z,4.4nm,0.6s
C23K Itkillik River 68.59 19 IAmb IAmb 09 53 05.3
comp=Z,5.6nm,0.7s
NIL Nilore 68.88 301 P 09 53 06.9 +0.6
ARSB Arslanbob 69.01 309 P **P 09 53 07.8 +0.6**
DOT Dot Lake 69.28 27 IAmb IAmb 09 53 09.4
comp=Z,4.4nm,1.0s
L26K Log Cabin Wild 69.46 27 IAmb IAmb 09 53 10.8
comp=Z,6.9nm,0.7s
F25K Christian Rive 69.60 22 IAmb IAmb 09 53 12.1
comp=Z,4.7nm,0.9s
J26L Joseph Creek 69.67 26 IAmb IAmb 09 53 14.8
comp=Z,5.0nm,0.7s
D25K Kavik River 69.83 20 IAmb IAmb 09 53 13.2
comp=Z,5.9nm,0.8s
PPT2 Papete2 70.19 114 *e*LR LR 10 14 34.5
comp=Z,58nm,22.5s
PPT2 *e*LR LR 10 14 37.9
comp=Z,80nm,24.0s
DZA Taraz 70.25 311 *eP* **P 09 53 15.7 +1.1**
comp=Z,4.4nm,0.6s
C27K Jago River 70.81 20 IAmb IAmb 09 53 19.3
comp=Z,5.3nm,0.7s
KK31 Karatay Array 70.86 311 P 09 53 18.7 +0.4
KK31 IAmb IAmb 09 53 19.9
comp=Z,8.6nm,0.9s
KKAR Karatay Array 70.86 311 P 09 53 18.7 +0.5
H27K Steamboat Moun 70.86 24 P 09 53 16.1 -1.8
H27K IAmb IAmb 09 53 20.0
comp=Z,7.3nm,0.8s
BVAR Borovoye Array 71.19 322 P **P 09 53 20.4 +0.3**
comp=Z,25nm,0.6s,baz=95,slow=7.9,SNR=134
BVAR LR LR 10 26 00.5
comp=Z,64nm,19.1s,baz=339,slow=37
IUG Iuzhnay 71.22 310 *eP* **P 09 53 21.8 +1.2**
comp=Z,9.1nm,1.1s
BORK Borovoye 71.23 322 P 09 53 20.9 +0.6
BRLS Borolday 71.35 311 *eP* **P 09 53 22.7 +1.4**
DAWY Dawson 71.39 27 IAmb IAmb 09 53 22.7
comp=Z,6.1nm,0.8s
CHM Chimkent 71.53 310 *eP* **P 09 53 23.6 +1.2**
F28M Old Crow 71.76 23 IAmb IAmb 09 53 25.2
comp=Z,4.9nm,0.8s
K29M Barlow Dome 72.17 27 IAmb IAmb 09 53 27.9
comp=Z,9.5nm,0.8s
KBL Kabul 72.32 302 P 09 53 28.3 +0.8
F30M Barrier River 73.31 23 IAmb IAmb 09 53 34.0
comp=Z,9.1nm,0.8s
F31M Tsiigehtchic 74.08 23 IAmb IAmb 09 53 37.7
comp=Z,7.9nm,0.9s
INK Inuvik 74.22 22 IAmb IAmb 09 53 38.9
comp=Z,6.5nm,0.9s
A36M Sachs Harbour 77.10 19 IAmb IAmb 09 53 55.4
comp=Z,7.2nm,0.7s
C36M Paulatuk 77.65 21 IAmb IAmb 09 53 58.4
comp=Z,14nm,1.1s
AB31 Akbulak array 77.86 318 P 09 53 59.0 +0.1
AB31 IAmb IAmb 09 53 59.8
comp=Z,9.5nm,0.8s
ABKAR Akbulak array 77.86 318 P 09 53 58.8 0.0
ARTI Arti 78.08 325 P 09 53 59.9 -0.1
YKAW3 Yellowknife Wh 82.56 27 IAmb IAmb 09 54 24.9
comp=Z,4.4nm,0.7s
YKA Yellowknife Ar 82.58 28 P **P 09 54 24.2 +0.2**
comp=Z,2.7nm,0.7s,baz=289,slow=6.0,SNR=48
comp=Z,2.7nm,0.7s
YKAW1 Yellowknife Wh 82.64 28 IAmb IAmb 09 54 25.7
comp=Z,5.2nm,0.8s
PINE Pine Mountain 82.95 47 P 09 54 28.5 +1.8
PINE IAmb IAmb 09 54 29.1
comp=Z,6.4nm,0.8s
RES Resolute Bay 84.65 14 P **P 09 54 34.3 0.0**
comp=Z,2.2nm,0.8s,baz=278,slow=7.3,SNR=9.7
comp=Z,2.2nm,0.8s
NVAR Mina Array Bea 86.05 52 P **P 09 54 43.3 +0.9**
comp=Z,0.9nm,0.7s,baz=284,slow=5.3,SNR=7.9
comp=Z,0.9nm,0.7s
BCYI Bear Canyon 88.10 45 IAmb IAmb 09 54 55.7
comp=Z,4.5nm,1.2s
V12A Nelson 89.40 54 P 09 55 00.6 +2.2
YHL Hebgen Lake 89.46 44 P 09 55 00.9 +2.1
YHL IAmb IAmb 09 55 02.3
comp=Z,8.7nm,1.1s
KBZ Khabaz 90.52 315 P **P 09 55 02.6 -0.7**
comp=Z,2.1nm,0.9s,baz=90,slow=5.1,SNR=4.8
comp=Z,2.1nm,0.9s
PDAR Pinedale Array 91.24 46 P **P 09 55 06.7 -0.3**
comp=Z,0.2nm,0.6s,baz=299,slow=6.8,SNR=2.7
comp=Z,0.2nm,0.6s
FFC Flin Flon 91.41 33 P **P 09 55 07.8 +0.7**
FFC IAmb IAmb 09 55 08.0
comp=Z,2.9nm,0.8s
FINES FINESS Array B 92.19 335 P **P 09 55 09.7 -0.9**
comp=Z,3.2nm,0.7s,baz=65,slow=4.7,SNR=7.6
comp=Z,3.2nm,0.7s
AKASG Malin Array Be 96.23 325 LR LR 10 39 13.9
comp=Z,24nm,21.8s,baz=267,slow=36
NOA NORSAR Array B 97.99 340 LR LR 10 42 34.1
comp=Z,37nm,18.2s,baz=275,slow=37
BRTR Keskin Array B 98.44 314 P **P 09 55 38.0 -1.8**
comp=Z,0.4nm,0.6s,baz=106,slow=2.1,SNR=3.7
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 136.33 305 PKP **PKPdf 10 01 23.9 +0.1**
comp=Z,0.6nm,1.0s,baz=332,slow=0.3,SNR=4.0
TORD PP **PP 10 04 03.6 -0.4**
comp=Z,0.3nm,0.6s,baz=32,slow=3.7,SNR=3.7
DBIC Dimbokro 145.31 303 PKPbc **PKPdf 10 01 40.5 +0.5**
comp=Z,11nm,0.8s,baz=56,slow=2.6,SNR=10
LPAZ La Paz 146.50 100 PKPbc **PKPbc 10 01 43.8 -0.3**
comp=Z,1.4nm,0.6s,baz=235,slow=2.7,SNR=5.6

IDC ***19*** *09:47:20.0±0.6,0.06×122.97E,h125km±4km,mb4.2/25, mbtmp4.5/27,MS3.1/3,Error ellipse: s-maj=13.8km s-min=7.4km az=71.0*
NEIC ***19*** *09:47:20.4±1.2,0.10S±0.05×122.99E±0.03,h122km±6km, mb4.6/89,Error ellipse: s-maj=8.1km s-min=4.3km az=162.0*
DJA ***19*** *09:47:21.1±0.2,0.2S±2×12.3E±, h100km±5km,M4.7/29, mB5.2/13,mb4.9/20,MLv4.9/29,Mw(mB)4.6/13*
ISC 19 09:47:20.0±0.3,0.12S±0.04×123.03E±0.05,h125km,n372, σ1º**07**/380,**mb4.6**/79,**1C-1D,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.75**	**359**	P		**Pn**	**09 47 40.7**	**+0.4**
LUWI	**Luwuk**	**0.96**	**196**			**Pn**	**09 47 42.2**	**+0.1**
LUWI					Sn	**Sn**	**09 47 58.1**	**-0.7**
LUWI	**Luwuk**	**0.96**	**196**	P		**Pn**	**09 47 41.8**	**-0.3**
LUWI	**Luwuk**	**0.96**	**196**	S		**Sn**	**09 47 57.4**	**-1.4**
LUWI	**Luwuk**	**0.96**	**196**	P		**Pn**	**09 47 41.5**	**-0.6**
MRSI	**Marisa**	**1.24**	**298**	P		**Pn**	**09 47 43.3**	**-1.6**
APSI	**Ampana**	**1.59**	**240**	P		**Pn**	**09 47 49.1**	**+0.3**
MNI	**Manado**	**2.38**	**49**	P		**Pn**	**09 47 59.3**	**+0.7**
TOLI2	**Tolitoli**	**2.56**	**298**			**Pn**	**09 48 00.2**	**-0.6**
TOLI2					Sn	**Sn**	**09 48 30.4**	**-1.7**
TOLI2	**Tolitoli**	**2.56**	**298**	P		**Pn**	**09 48 00.3**	**-0.4**
MPSI	**Mapaga**	**3.16**	**278**	P		**Pn**	**09 48 09.8**	**+1.2**
PCI	**Palu**	**3.29**	**256**	P		**Pn**	**09 48 10.9**	**+0.6**
SANI	**Sanana**	**3.53**	**123**	P		**Pn**	**09 48 12.0**	**-1.4**
SANI	**Sanana**	**3.53**	**123**	P		**Pn**	**09 48 11.7**	**-1.8**
KKSI	**Kolaka, Sulawe**	**4.26**	**199**	P		**Pn**	**09 48 23.6**	**+0.4**
TTSI	**Tana Toraja**	**4.33**	**228**	P		**Pn**	**09 48 24.7**	**+0.6**

TNTI Ternate 4.43 79 Pn 09 48 27.1 +1.7
TNTI Ternate 4.43 79 P **Pn 09 48 26.8 +1.4**
TNTI Ternate 4.43 79 S **Sn 09 49 16.2 0.0**
TNTI Ternate 4.43 79 P **Pn 09 48 25.5 +0.1**
MMSI Mamuju 4.85 238 P **Pn 09 48 31.2 +0.1**
SPSI Sidrap Palu 5.02 220 P **Pn 09 48 34.8 +1.4**
NLAI Namlea 5.12 127 P **Pn 09 48 35.2 +0.5**
PMSI Majene 5.31 231 P **Pn 09 48 38.2 +0.9**
KAPI Kappang 5.87 214 P **Pn 09 48 45.9 +1.2**
72nm,0.4s,baz=31,slow=11,SNR=21
KAPI S **Sn 09 49 49.6 -1.2**
40nm,0.4s,baz=37,slow=20,SNR=12
KAPI LR LR 09 51 14.9
comp=Z,87nm,18.3s,baz=22,slow=40
KAPI Kappang 5.87 214 Pn 09 48 45.3 +0.5
KAPI Kappang 5.87 214 P **Pn 09 48 46.7 +2.0**
KAPI Kappang 5.87 214 P **Pn 09 48 45.9 +1.2**
72nm,0.6s
MKS Makassar 6.19 215 P **Pn 09 48 51.0 +1.9**
0.8nm117nm,0.7s
KRAI Karang Ratu 6.24 121 P **Pn 09 48 51.2 +1.4**
7um104nm,0.8s
AAI Ambon 6.26 125 P **Pn 09 48 51.8 +1.7**
BSSI Bau Bau, Buton 6.50 203 P **Pn 09 48 55.5 +2.2**
158nm,0.6s
MYLDM Lahad Datu 6.94 319 Pn 09 48 59.2 0.0
MYLDM Lahad Datu 6.94 319 P **Pn 09 49 02.5 +3.3**
MYLDM Lahad Datu 6.94 319 S **Sn 09 50 20.8 +4.1**
MYLDM Lahad Datu 6.94 319 P **Pn 09 49 00.2 +1.0**
150nm,0.9s
SWI Sorong 8.27 95 P **Pn 09 49 19.6 +2.5**
43nm,0.7s
SIJI Sorong 8.27 95 P **Pn 09 49 17.0 -0.2**
12nm,0.4s,baz=252,slow=15,SNR=5.5
SIJI S **Sn 09 50 45.2 -3.9**
12nm,0.5s,baz=272,slow=16,SNR=1.9
SIJI Sorong 8.27 95 P **Pn 09 49 18.4 +1.2**
MMRI Maumere 8.50 185 Pn **Pn 09 49 20.6 +0.3**
EDFI Ende, Flores 8.68 189 P **Pn 09 49 23.1 +0.3**
41nm,0.6s
KKM Kota Kinabalu 9.15 312 Pn 09 49 28.4 -0.8
KKM Kota Kinabalu 9.15 312 P **Pn 09 49 32.0 +2.9**
FAKI Fak Fak 9.63 107 Pn **Pn 09 49 35.3 -0.2**
FAKI Fak Fak 9.63 107 P **Pn 09 49 34.7 -0.8**
SOEI Soe 9.66 173 P **Pn 09 49 37.7 +1.7**
MTN Manton Dam 14.98 148 Pn 09 50 46.2 +0.7
MTN IAmb IAmb 09 50 50.5
comp=Z,25nm,0.6s
KNRA Kununurra 16.47 160 Pn 09 51 04.2 +0.3
KNRA IAmb IAmb 09 51 20.9
comp=Z,21nm,0.7s
MNAI Manna 20.49 258 P **P 09 51 48.2 -0.1**
MBWA Marble Bar 21.16 189 P **P 09 51 55.8 +0.4**
PSA00 Pilbara Seismi 21.55 188 P **P 09 51 60.0 +0.4**
PSA00 Pilbara Seismi 21.55 188 P **P 09 51 59.6 0.0**
PSA00 IAmb IAmb 09 52 00.9
comp=Z,13nm,0.8s
WB0 Warramunga Arr 22.48 151 P **P 09 52 09.2 0.0**
WB0 IAmb IAmb 09 52 11.2
comp=Z,31nm,1.0s
WRAB Tennant Creek 22.60 151 P **P 09 52 10.3 -0.1**
WRAB IAmb IAmb 09 52 12.4
comp=Z,24nm,0.8s
WRA Warramunga Arr 22.61 151 P **P 09 52 10.4 0.0**
comp=Z,19nm,0.7s,baz=331,slow=9.7,SNR=102
WRA PcP **PcP 09 55 59.4 +0.1**
comp=Z,0.7nm,0.6s,baz=318,slow=2.8,SNR=3.0
WRA S **S 09 56 07.3 -1.7**
comp=Z,1.0nm,1.0s,baz=318,slow=20,SNR=2.6
WRA ScP **ScP 09 59 25.9 +0.2**
comp=Z,3.4nm,0.7s,baz=331,slow=2.8,SNR=29
comp=Z,19nm,0.7s
WRA Warramunga Arr 22.61 151 P **P 09 52 09.6 -0.9**
WR8 Warramunga Arr 22.70 151 P **P 09 52 11.7 +0.4**
WR8 IAmb IAmb 09 52 13.2
comp=Z,35nm,0.8s
KULM Kulim 22.98 284 P **P 09 52 13.9 -0.2**
TPUB Ta-pu 23.39 354 P **P 09 52 17.4 -0.4**
SSLB Suanglung 23.84 355 P **P 09 52 21.9 0.0**
SSLB IAmb IAmb 09 52 28.2
comp=Z,20nm,0.8s
COEN Coen 24.23 125 P **P 09 52 24.6 -0.8**
AS31 Alice Springs 25.68 156 P **P 09 52 39.6 +1.0**
ASAR Alice Springs 25.68 156 P **P 09 52 39.3 +0.7**
comp=Z,5.5nm,0.6s,baz=328,slow=8.7,SNR=69
ASAR pP **pP 09 53 05.5 +0.1**
comp=Z,6.2nm,0.7s,baz=339,slow=10,SNR=5.1
ASAR PcP **PcP 09 56 06.1 +0.1**
comp=Z,1.4nm,0.3s,baz=333,slow=2.4,SNR=13
ASAR ScP **ScP 09 59 34.1 +0.1**
comp=Z,2.4nm,0.7s,baz=339,slow=2.8,SNR=26
ASAR LR LR 10 02 59.5
comp=Z,34nm,21.1s,baz=297,slow=36
comp=Z,5.5nm,0.6s
ASAR Alice Springs 25.68 156 P **P 09 52 39.8 +1.2**
PMG Port Moresby 25.73 112 P **P 09 52 40.1 +1.0**
comp=Z,21nm,1.1s,baz=280,slow=11,SNR=4.1
comp=Z,21nm,1.1s
PMG Port Moresby 25.73 112 P **P 09 52 39.1 0.0**
PMG IAmb IAmb 09 52 41.7
comp=Z,20nm,1.1s
JOW Kunigami 27.26 10 P **P 09 52 54.9 +2.2**
comp=Z,12nm,0.8s,baz=153,slow=14,SNR=1.9
MORW Morawa 29.55 192 P **P 09 53 13.3 +0.2**
MORW IAmb IAmb 09 53 14.0
comp=Z,14nm,0.9s
CM31 Chiang Mai Arr 30.01 309 P 09 53 16.3 -0.9
CM31 IAmb IAmb 09 53 20.0
comp=Z,15nm,1.1s
CMAR Chiang Mai Arr 30.01 309 P **P 09 53 18.4 +1.2**
comp=Z,5.5nm,0.7s,baz=124,slow=8.3,SNR=26
CMAR ScP **ScP 09 59 46.7 -0.8**
comp=Z,0.6nm,0.3s,baz=127,slow=3.1,SNR=6.7
comp=Z,5.5nm,0.7s
CMAR Chiang Mai Arr 30.01 309 P **P 09 53 16.6 -0.7**
CTA Charters Tower 30.18 133 P **P 09 53 20.5 +1.8**
comp=Z,2.3nm,0.7s,baz=302,slow=9.2,SNR=4.4
CTA ScP **ScP 09 59 49.4 +1.4**
comp=Z,2.7nm,0.8s,baz=304,slow=3.6,SNR=3.6
comp=Z,2.3nm,0.7s
CHTO Chiang Mai 30.22 310 P **P 09 53 18.4 -0.7**
CHTO IAmb IAmb 09 53 21.7
comp=Z,15nm,0.8s
FORT Forrest 30.87 172 P **P 09 53 24.6 0.0**
FORT IAmb IAmb 09 53 26.3
comp=Z,10nm,0.7s
NJ2 Nanjing 32.24 353 *eP* **P 09 53 39.1 +2.5**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
INKA Innaminka 32.30 150 P **P 09 53 38.8 +1.5**
INKA IAmb IAmb 09 53 40.1
comp=Z,8.7nm,0.8s
JCJ Chichijima 32.73 33 P 09 53 39.9 -1.1
ENH Enshi 32.85 338 P **P 09 53 41.7 -0.4**
TNCH TengChong 34.45 318 *eP* **P 09 53 57.4 +1.2**
TNCH pmax pmax
comp=Z,21nm,1.0s
BBOO Buckleboo 34.76 161 P **P 09 53 59.0 +0.5**
BBOO IAmb IAmb 09 54 18.6
comp=Z,9.2nm,1.1s
JMN Monobe 35.17 16 P 09 54 01.3 -0.8
JMN IAmb IAmb 09 54 17.1
comp=Z,15nm,1.1s
LYN LuoYang 35.88 345 P **P 09 54 10.9 +2.9**
LYN pmax pmax
comp=Z,26nm,0.7s
STKA Stephens Creek 36.14 153 P **P 09 54 11.3 +0.9**
comp=Z,6.1nm,0.4s,baz=335,slow=11,SNR=30
STKA PcP **PcP 09 56 33.9 +0.4**
comp=Z,2.5nm,0.7s,baz=350,slow=6.1,SNR=3.8
STKA ScP **ScP 10 00 08.3 -0.3**
comp=Z,2.4nm,0.7s,baz=288,slow=3.2,SNR=4.1
comp=Z,6.1nm,0.4s
STKA Stephens Creek 36.14 153 P **P 09 54 11.4 +1.1**
XAN Xi'an 36.46 340 P **P 09 54 13.8 +0.7**
XAN pmax pmax
comp=Z,20nm,1.0s
EIDS Eidsvold 36.94 135 P **P 09 54 16.7 -0.5**
EIDS IAmb IAmb 09 54 32.8
comp=Z,8.2nm,1.1s
INU Inuyama 37.62 19 P **P 09 54 22.4 -0.4**
KSRS Korea Array 37.66 6 P **P 09 54 23.0 0.0**
comp=Z,0.9nm,0.6s,baz=190,slow=10.0,SNR=4.9
KSRS ScP **ScP 10 00 12.7 -1.3**
comp=Z,1.8nm,1.0s,baz=190,slow=3.8,SNR=6.0
comp=Z,0.9nm,0.6s

JGF Kuroka 37.96 19 P P 09 54 25.7 0.0
HNS HongShan 38.11 349 ⇓P P 09 54 28.8 +1.9
MAJO Matsushiro 39.10 20 P P 09 54 34.2 -0.9
MAJO IAmb IAmb 09 54 34.9
comp=Z,10nm,0.9s
MJAR Matsushiro Arr 39.10 20 P P 09 54 33.6 -1.6
comp=Z,8.5nm,0.8s,baz=194,slow=9.4,SNR=20
MJAR ScP ScP 10 00 18.3 -1.3
comp=Z,4.4nm,1.0s,baz=206,slow=3.0,SNR=8.9
comp=Z,8.5nm,0.8s
MJAR Matsushiro Arr 39.10 20 P P 09 54 34.5 -0.7
MJB9 Matsu-Tunnel 39.10 20 P P 09 54 34.2 -1.0
MJB9 IAmb IAmb 09 54 35.8
comp=Z,11nm,1.0s
SHL Shillong 39.45 313 P P 09 54 38.5 +0.1
SHL IAmb IAmb 09 54 40.7
comp=Z,11nm,0.6s
LZDM Lanzhou Array 40.15 335 P P 09 54 45.0 +0.8
comp=Z,1.5nm,0.5s,baz=158,slow=16,SNR=4.0
comp=Z,1.5nm,0.5s
LZH Lanzhou 40.20 336 eP P 09 54 46.0 +1.6
LZH pP pP 09 55 16.5 +3.9
LZH pmax pmax
comp=Z,12nm,1.5s
BJI2 Beijing 40.43 352 P P 09 54 47.9 +1.8
BJI2 pmax pmax
comp=Z,2.0nm,0.6s
BJT Baijiatuau 40.43 352 P P 09 54 44.0 -2.1
ARMA Armidale 40.59 141 P P 09 54 47.7 0.0
HHC Hu-ho-hao-te 42.08 347 eP P 09 55 03.4 +3.6
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,99nm,5.3s
LSA Lhasa 42.45 317 P P 09 55 02.9 -0.5
CAN Canberra 42.58 148 P P 09 55 03.9 +0.1
TOO Toolangi 42.65 153 P P 09 55 05.5 +1.1
TOO IAmb IAmb 09 55 07.3
comp=Z,8.9nm,0.8s
EVN Everest 44.54 312 P P 09 55 18.6 -1.7
EVN IAmb IAmb 09 55 22.3
comp=Z,14nm,1.1s
GTA2 Gaotai 44.79 334 eP P 09 55 23.3 +1.7
GTA2 pmax pmax
comp=Z,8.0nm,1.0s
USRK Ussuriysk Ar. 44.84 9 P P 09 55 21.6 0.0
comp=Z,6.0nm,0.6s,baz=190,slow=5.4,SNR=7.8
comp=Z,6.0nm,0.6s
MDJ Mudanjiang 44.92 7 P P 09 55 21.1 -1.2
MDJ IAmb IAmb 09 55 22.8
comp=Z,7.1nm,0.7s
BNX BinXian 45.82 4 ⇑P P 09 55 29.5 +0.1
BNX pmax pmax
comp=Z,6.0nm,2.2s
JKA Kamikawa-asahi 47.37 19 P P 09 55 42.3 +0.9
JKA IAmb IAmb 09 55 43.1
comp=Z,12nm,0.8s
DZM Mont Dzumac 47.58 120 P P 09 55 44.4 +0.8
comp=Z,8.5nm,0.8s,baz=295,slow=14,SNR=4.4
comp=Z,8.5nm,0.8s
HILR Hailar Array B 49.56 357 P P 09 55 58.9 +0.6
comp=Z,8.4nm,0.4s,baz=176,slow=10,SNR=17
HILR PcP PcP 09 57 16.8 -1.3
comp=Z,0.8nm,0.3s,baz=176,slow=4.3,SNR=3.6
comp=Z,8.4nm,0.4s
ULN Ulaanbaatar 49.77 346 P P 09 56 00.6 +0.6
ULN IAmb IAmb 09 56 02.8
comp=Z,8.2nm,1.0s
SONM Songino Array 49.90 345 P P 09 56 01.0 +0.1
comp=Z,6.3nm,0.7s,baz=160,slow=8.7,SNR=28
SONM pP pP 09 56 30.8 +0.7
comp=Z,3.2nm,0.7s,baz=164,slow=8.3,SNR=1.9
SONM PcP PcP 09 57 18.7 -0.9
comp=Z,1.7nm,0.6s,baz=172,slow=3.9,SNR=2.7
SONM ScP ScP 10 01 02.2 -1.6
comp=Z,1.1nm,0.9s,baz=151,slow=3.3,SNR=5.1
comp=Z,6.3nm,0.7s
SONM Songino Array 49.90 345 P P 09 56 01.5 +0.6
HEH HeiHe 50.32 4 eP P 09 56 02.9 -1.0
HEH pmax pmax
comp=Z,8.0nm,0.6s
WMQ Urumqi 53.91 329 eP P 09 56 35.0 +4.3
WMQ pmax pmax
comp=Z,14nm,1.1s
KSH2 Kashi 58.37 318 P P 09 57 02.9 +0.3
KSH2 pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 58.73 328 P P 09 57 04.0 -0.7
comp=Z,1.9nm,0.4s,baz=129,slow=8.1,SNR=33
MKAR pP pP 09 57 34.1 -0.6
comp=Z,0.7nm,0.4s,baz=124,slow=7.8,SNR=2.1
MKAR PcP PcP 09 57 50.8 -2.5
comp=Z,1.0nm,0.5s,baz=134,slow=4.4,SNR=5.9
MKAR ScP ScP 10 01 40.5 -1.7
comp=Z,1.4nm,0.8s,baz=126,slow=3.5,SNR=9.1
comp=Z,1.9nm,0.4s
MKAR Makanchi Array 58.73 328 P P 09 57 04.5 -0.2
MAKZ Makanchi 58.90 328 P P 09 57 05.5 -0.5
PEA0B Petropavlovsk- 60.38 23 P P 09 57 16.7 +0.8
PETK Petropavlovsk- 60.38 23 P P 09 57 15.7 -0.3
comp=Z,4.7nm,0.7s,baz=228,slow=8.4,SNR=11
comp=Z,4.7nm,0.7s
PETK Petropavlovsk- 60.38 23 P P 09 57 15.8 -0.1
KBL Kabul 61.04 310 P P 09 57 19.7 -1.3
URZ Urewera 62.42 134 P P 09 57 30.4 +0.5
comp=Z,4.1nm,0.4s,baz=297,slow=7.9,SNR=9.9
comp=Z,4.1nm,0.4s
ZAA0 Zalesovo Array 62.43 336 P P 09 57 28.5 -1.2
ZALV Zalesovo Beam 62.43 336 P P 09 57 28.3 -1.4
comp=Z,1.2nm,0.4s,baz=133,slow=7.5,SNR=7.7
ZALV pP pP 09 57 59.3 -0.6
comp=Z,1.0nm,0.5s,baz=134,slow=8.2,SNR=2.8
comp=Z,1.2nm,0.4s
CHGR Chuyangaron 62.59 315 P P 09 57 30.9 -0.3
CHGR IAmb IAmb 09 57 31.7
comp=Z,12nm,1.0s
KURBB Kurchatov Arra 63.08 330 P P 09 57 33.4 -0.6
comp=Z,4.5nm,0.8s,baz=131,slow=6.0,SNR=29
KURBB pP pP 09 58 04.2 +0.2
comp=Z,0.4nm,0.4s,baz=130,slow=6.3,SNR=2.6
comp=Z,4.5nm,0.8s
KURK Kurchatov 63.09 330 P P 09 57 33.5 -0.6
MA2 Magadan 63.34 15 P P 09 57 36.2 +0.6
KKAR Karatay Array 63.62 320 P P 09 57 37.5 -0.4
CASY Casey 66.62 185 P P 09 57 57.6 +0.9
CASY IAmb IAmb 09 57 58.0
comp=Z,8.1nm,0.6s
BVAR Borovoye Array 68.59 329 P P 09 58 08.7 -0.7
comp=Z,1.2nm,0.6s,baz=134,slow=8.4,SNR=6.6
BVAR pP pP 09 58 38.4 -1.4
comp=Z,1.0nm,0.5s,baz=121,slow=5.6,SNR=2.0
comp=Z,1.2nm,0.6s
BORK Borovoye 68.64 329 P P 09 58 09.4 -0.3
TIXI Tiksi 71.75 2 P P 09 58 27.5 -0.7
TIXI IAmb IAmb 09 58 28.1
comp=Z,7.1nm,0.6s
ABKAR Akbulak array 72.84 322 P P 09 58 35.5 +0.4
ATKA Atka Island 73.74 35 P P 09 58 40.7 +0.3
NIKH Nikolski High 77.07 35 P P 09 59 00.6 +1.3
baz=252
SPIA Saint Paul Isl 77.67 31 P P 09 59 04.2 +1.6
baz=250
P08K Saint George I 77.84 31 P P 09 59 05.3 +1.7
baz=251
UNV Unalaska Valle 78.67 35 P P 09 59 09.0 +0.8
baz=254
AKUT Akutan 79.16 35 P P 09 59 11.3 +0.4
GAMB Gambell 79.39 24 P P 09 59 12.5 +0.6
baz=248
VNDA Vanda 80.13 172 P P 09 59 16.1 +0.3
comp=Z,3.0nm,0.6s,baz=317,slow=8.2,SNR=6.3
comp=Z,3.0nm,0.6s
VNDA Vanda 80.13 172 P P 09 59 16.7 +0.9
FALS False Pass 80.67 34 P P 09 59 19.9 +0.9
baz=256
TNA Tin City 81.55 23 P P 09 59 24.5 +1.1
baz=251
K13K Kusilvak Mount 81.84 27 P P 09 59 25.8 +0.7
baz=254
M13K Dall Lake 82.06 29 P P 09 59 27.3 +1.1
baz=256
F14K Arctic Creek 82.15 23 P P 09 59 28.2 +1.6
baz=252
GEVA Gevas 82.20 309 P P 09 59 27.6 -0.1
ANM Nome 82.27 24 P P 09 59 28.4 +1.2
ANM Nome 82.27 24 P P 09 59 28.8 +1.6
baz=253

SDPT Sand Point 82.43 34 P P 09 59 29.1 +0.8
baz=259
J14K Nanvaranak Lak 82.55 26 P P 09 59 30.2 +1.4
baz=255
L14K Kuka Creek 82.60 28 IAmb IAmb 09 59 31.1
comp=Z,10nm,0.8s
L14K Kuka Creek 82.60 28 P P 09 59 30.1 +1.1
baz=256
N14K Kuskokwak Cree 82.75 29 P P 09 59 31.1 +1.3
baz=257
M14K Bethel 82.80 29 P P 09 59 31.3 +1.3
baz=257,SNR=6.0
CHNA Chernabura Isl 82.83 35 P P 09 59 30.8 +0.5
baz=260
F15K North Star Dit 82.89 23 IAmb IAmb 09 59 32.4
comp=Z,7.7nm,0.9s
F15K North Star Dit 82.89 23 P P 09 59 31.7 +1.2
baz=254
G15K Niukluk 82.94 24 P P 09 59 31.7 +1.0
baz=254,SNR=6.2
L15K Ungalak Mounta 83.24 28 P P 09 59 33.1 +0.8
baz=257
K15K Wolf Creek Mou 83.35 27 P P 09 59 34.0 +1.1
baz=257,SNR=6.4
C16K Lisburne Hills 83.37 21 IAmb IAmb 09 59 35.5
comp=Z,12nm,0.9s
C16K Lisburne Hills 83.37 21 P P 09 59 34.4 +1.6
baz=253,SNR=10
M15K Kasigluk River 83.40 29 P P 09 59 34.2 +1.0
baz=258
O15K Ungalikthiuk R 83.52 30 P P 09 59 35.0 +1.2
baz=259
N15K Kwethluk River 83.58 29 P P 09 59 35.2 +1.1
baz=259
H16K Elim 83.59 25 P P 09 59 35.2 +1.1
baz=256,SNR=22
G16K Koyuk River 83.73 24 IAmb IAmb 09 59 37.0
comp=Z,10nm,0.8s
G16K Koyuk River 83.73 24 P P 09 59 36.0 +1.3
baz=256
J16K Anvik River 83.99 26 P P 09 59 37.5 +1.3
baz=258
D17K Noatak River 84.03 22 P P 09 59 37.5 +1.2
baz=255,SNR=34
I17K Unalakleet 84.08 26 P P 09 59 37.8 +1.3
baz=258
L16K Owhat River 84.18 28 P P 09 59 38.9 +1.8
baz=259
RDOG Red Dog Mine 84.18 21 IAmb IAmb 09 59 39.2
comp=Z,8.1nm,0.7s
RDOG Red Dog Mine 84.18 21 P P 09 59 38.7 +1.7
baz=255,SNR=6.5
C17K DeLong Mountai 84.19 21 P P 09 59 38.3 +1.2
baz=255,SNR=16
N16K Nishlik Lake 84.29 29 P P 09 59 39.4 +1.7
baz=260
M16K Timber Creek 84.30 29 P P 09 59 39.0 +1.3
baz=260
F17K Baldwin Pennin 84.42 23 IAmb IAmb 09 59 41.2
comp=Z,4.2nm,0.7s
F17K Baldwin Pennin 84.42 23 P P 09 59 39.4 +1.2
baz=257
P16K Nushagak River 84.43 31 P P 09 59 39.9 +1.5
baz=260
G17K Kiwalik Mounta 84.44 24 P P 09 59 39.9 +1.5
baz=258
O16K Kokwok River B 84.47 30 P P 09 59 39.8 +1.2
baz=260
H17K Granite Mounta 84.63 25 IAmb IAmb 09 59 42.4
comp=Z,4.9nm,0.7s
H17K Granite Mounta 84.63 25 P P 09 59 40.9 +1.6
baz=258
J17K VABM Dome 84.68 26 P P 09 59 41.2 +1.6
baz=259
L17K Donlin 84.81 28 P P 09 59 41.3 +1.1
baz=260
E18K Tukpahlearik C 84.88 22 IAmb IAmb 09 59 43.5
comp=Z,6.5nm,0.9s
E18K Tukpahlearik C 84.88 22 P P 09 59 42.3 +1.7
baz=257,SNR=6.5
K17K Iditarod 84.91 27 P P 09 59 42.3 +1.5
baz=260
C18K Utukok River 84.94 21 IAmb IAmb 09 59 42.9
comp=Z,5.0nm,0.6s
C18K Utukok River 84.94 21 P P 09 59 42.7 +1.8
baz=257
O17K Koliganek Bris 85.00 30 P P 09 59 42.9 +1.6
baz=261
R17L Mt. Peulik Vol 85.06 32 P P 09 59 42.5 +0.8
baz=262
F18K Selwik 85.08 23 P P 09 59 42.8 +1.3
baz=258
M17K Holitna River 85.09 28 P P 09 59 42.7 +1.0
baz=261
CHIR Chirikof Islan 85.22 34 P P 09 59 43.1 +0.6
baz=263
P17K Kvichak River 85.24 31 P P 09 59 43.3 +0.8
baz=262
H18K Honhosa River 85.32 25 P P 09 59 43.5 +0.7
baz=260
G18K Tagagawik 85.33 24 P P 09 59 43.9 +1.1
baz=259
Q17K Contact Creek 85.40 32 P P 09 59 44.3 +0.8
baz=262
L18K Granite Mounta 85.56 28 P P 09 59 44.6 +0.6
baz=261
C19K Lookout Ridge 85.61 21 P P 09 59 45.1 +0.9
baz=258,SNR=17
N18K Kilae Creek 85.72 29 P P 09 59 45.4 +0.5
baz=262
J18K Innoko River 85.74 26 P P 09 59 45.4 +0.5
baz=261
F19K Shaleruckik Mo 85.85 23 P P 09 59 46.1 +0.8
baz=260
M18K Stony River 85.87 28 P P 09 59 46.7 +1.1
baz=262
GCSA Galena City Sc 85.87 25 P P 09 59 46.6 +1.1
baz=261,SNR=6.0
P18K Big Mountain, 85.88 31 P P 09 59 46.4 +0.7
baz=263
O18K Koktuh Hills 85.95 30 P P 09 59 47.1 +1.1
baz=263
G19K Purcell Mounta 86.01 24 P P 09 59 47.0 +0.8
baz=261,SNR=14
D19K Kuna River 86.02 21 IAmb IAmb 09 59 48.0
comp=Z,7.1nm,0.7s
D19K Kuna River 86.02 21 P P 09 59 47.0 +0.7
baz=260
SII Sitkinak Islan 86.11 33 P P 09 59 47.5 +0.7
baz=264
E19K Redstone River 86.17 22 IAmb IAmb 09 59 48.9
comp=Z,6.1nm,0.7s
E19K Redstone River 86.17 22 P P 09 59 47.6 +0.6
baz=260
J19K Poorman 86.30 26 P P 09 59 48.3 +0.7
baz=262
L19K White Mountain 86.41 28 P P 09 59 48.7 +0.4
baz=263
N19K Bonanza Creek 86.43 29 P P 09 59 49.3 +0.9
baz=263
M19K Big River Lodg 86.60 28 P P 09 59 50.2 +1.1
baz=263
D20K Etivluk River 86.60 21 IAmb IAmb 09 59 50.8
comp=Z,4.2nm,0.8s
D20K Etivluk River 86.60 21 P P 09 59 49.8 +0.7
baz=263
Q19K Cape Douglas, 86.64 31 P P 09 59 50.0 +0.6
baz=264
OHAK Old Harbor 86.67 33 P P 09 59 50.5 +1.0
baz=265
F20K Avaraart Lake 86.68 23 P P 09 59 50.5 +1.1
baz=262
E20K Nigu River 86.69 22 P P 09 59 50.6 +1.1
baz=261
H20K Anolleneega Mo 86.81 24 P P 09 59 51.4 +1.3
baz=263
K20K Telida 86.91 27 P P 09 59 51.9 +1.2
baz=264
KDAK Kodiak Island 87.09 32 P P 09 59 52.4 +0.8
baz=265
M20K Styx River 87.19 28 P P 09 59 52.5 +0.4
baz=265
C21K Knifeblade Rid 87.32 21 P P 09 59 53.6 +1.1
baz=263
B21K Ikpikpuk River 87.44 20 IAmb IAmb 09 59 54.8
comp=Z,4.9nm,0.7s
B21K Ikpikpuk River 87.44 20 P P 09 59 54.1 +1.1
baz=263

G21K Allakaket 87.49 23 P P 09 59 54.2 +0.8
baz=264
E21K Killik River 87.52 22 P P 09 59 54.5 +1.0
baz=264
SPCR Spurr Chakacha 87.57 29 P P 09 59 54.6 +0.7
baz=265
F21K Alatna River 87.57 23 P P 09 59 54.6 +0.8
baz=264
HOM Homer 87.73 30 P P 09 59 55.6 +1.0
baz=266
I21K Tanana 87.99 25 P P 09 59 57.0 +1.2
baz=265
D22K Ayikyak River 88.04 21 P P 09 59 57.3 +1.4
baz=265
CAPN Captain Cook N 88.05 29 P P 09 59 56.9 +0.9
baz=266
BRSE Bradley Lake S 88.19 30 P P 09 59 57.7 +0.9
baz=267
SUA Susitna One 88.29 29 P P 09 59 57.9 +0.5
baz=267
E22K Anaktuvuk Pass 88.29 22 P P 09 59 57.7 +0.5
baz=266
H22K Ishtalitna Cre 88.30 24 P P 09 59 57.9 +0.7
baz=266
BPAW Bear Paw Mtn. 88.34 26 P P 09 59 57.9 +0.5
baz=266
CUT Chulitna 88.57 28 P P 09 59 59.5 +1.0
baz=267
M22K Willow 88.60 28 P P 10 00 00.2 +1.5
baz=267
TRF Thorofare Moun 88.61 27 P P 09 59 59.9 +1.0
baz=267
RC01 Rabbit Creek A 88.76 29 P P 10 00 00.1 +0.7
baz=268
D23K Nanushuk River 88.77 21 P P 10 00 00.3 +0.9
baz=266
C23K Itkillik River 88.84 20 IAmb IAmb 10 00 03.0
comp=Z,10nm,1.1s
C23K Itkillik River 88.84 20 P P 10 00 00.8 +1.2
baz=267
COLD Coldfoot 88.85 23 IAmb IAmb 10 00 01.6
comp=Z,4.0nm,0.7s
COLD Coldfoot 88.85 23 P P 10 00 00.3 +0.5
baz=267
SEW Seward 88.86 30 P P 10 00 00.9 +1.0
baz=268
G23K Bananza Creek 88.89 23 P P 10 00 00.8 +0.8
baz=267
PMR Palmer 89.07 29 P P 10 00 01.9 +1.1
baz=268
I23K Minto, Yukon-K 89.09 25 IAmb IAmb 10 00 02.0
comp=Z,5.6nm,0.8s
I23K Minto, Yukon-K 89.09 25 P P 10 00 01.8 +0.9
baz=268
E23K Chandalar 89.11 22 P P 10 00 01.7 +0.7
baz=268
NEA2 Nenana 89.20 26 P P 10 00 01.5 0.0
baz=268
MCK McKinley 89.23 26 P P 10 00 02.1 +0.4
baz=268
WAT1 Susitna Watana 89.38 27 P P 10 00 02.7 +0.3
baz=269
KNK Knik Glacier 89.39 29 P P 10 00 03.3 +0.9
baz=269
D24K Happy Valley 89.44 21 P P 10 00 03.1 +0.6
baz=268
SML Sawmill 89.45 28 P P 10 00 03.1 +0.4
baz=269
BRTR Keskin Array B 89.60 310 P P 10 00 02.8 -1.3
comp=Z,0.6nm,0.8s,baz=106,slow=5.2,SNR=4.0
BRTR LR LR 10 51 22.2
comp=Z,19nm,18.1s,baz=254,slow=43
comp=Z,0.6nm,0.8s
BRTR Keskin Array B 89.60 310 P P 10 00 02.3 -1.8
H24K Noodor Dome 89.73 24 P P 10 00 04.8 +0.8
H24K IAmb IAmb 10 00 05.9
comp=Z,2.7nm,0.6s
H24K Noodor Dome 89.73 24 P P 10 00 04.7 +0.8
baz=269
M23K Glacier View 89.74 28 P P 10 00 04.9 +0.8
baz=269
WAT6 Susitna Watana 89.75 28 P P 10 00 04.8 +0.6
baz=269
G24K Hadweenzic Riv 89.90 23 P P 10 00 05.2 +0.5
baz=270
DHY Denali Highway 89.92 27 P P 10 00 05.3 +0.2
baz=270
SCM Sheep Creek Mo 89.93 28 P P 10 00 05.7 +0.7
baz=270
HDA Harding Lake 90.11 26 P P 10 00 06.5 +0.8
baz=270
ILAR Eielson Array 90.14 25 P P 10 00 04.2 -1.7
comp=Z,0.7nm,0.6s,baz=257,slow=5.0,SNR=25
comp=Z,0.7nm,0.6s
ILAR Eielson Array 90.14 25 P P 10 00 05.0 -0.9
D25K Kavik River 90.32 21 P P 10 00 07.1 +0.5
D25K Kavik River 90.32 21 P P 10 00 07.8 +1.1
baz=271
Q23K Middleton Isla 90.42 31 P P 10 00 07.3 +0.1
baz=270
M24K Tolsona, Glenn 90.47 28 P P 10 00 07.9 +0.3
baz=271
KLU Klutina 90.60 29 P P 10 00 08.6 +0.4
baz=271
F25K Christian Rive 90.61 23 P P 10 00 08.4 +0.3
baz=271
E25K Arctic Village 90.63 22 P P 10 00 08.2 +0.1
baz=271
PRP Porcupine Dome 90.71 25 P P 10 00 09.4 +0.7
baz=271
PAX Paxson 90.79 27 P P 10 00 09.7 +0.7
baz=271
J25K Salcha River, 90.79 26 P P 10 00 09.3 +0.3
baz=271
RIDG Independent Ri 91.05 26 P P 10 00 11.4 +1.2
baz=272
F26K Sheenjek River 91.18 22 P P 10 00 11.4 +0.8
baz=273
C27K Jago River 91.25 20 IAmb IAmb 10 00 12.7
comp=Z,2.7nm,0.8s
C27K Jago River 91.25 20 P P 10 00 11.7 +0.8
baz=273
BMRM Bremner River 91.25 29 P P 10 00 12.4 +1.2
baz=272
G26K Porcupine Rive 91.36 23 P P 10 00 12.5 +1.1
baz=273
KAIM Kayak Island 91.38 30 P P 10 00 12.5 +0.8
baz=272
SCRK Sand Creek 91.42 26 P P 10 00 12.6 +0.7
baz=273
J26L Joseph Creek 91.58 26 P P 10 00 13.4 +0.7
baz=273
L26K Log Cabin Wild 91.75 27 P P 10 00 14.0 +0.6
baz=273
M26K Nabesna, AK 91.95 28 P P 10 00 15.0 +0.6
baz=274
MCARA McCarthy VSAT 92.00 29 P P 10 00 15.0 +0.4
baz=274
CRQE Cirque 92.00 29 P P 10 00 15.0 +0.3
baz=273
G27K Doyon Strip 92.21 23 P P 10 00 16.4 +0.9
baz=275
D27M Malcolm River 92.25 21 P P 10 00 16.2 +0.6
baz=276
H27K Steamboat Moun 92.31 24 P P 10 00 16.9 +1.0
baz=275
I27K Kandik River 92.33 24 P P 10 00 16.9 +0.9
baz=275
L27K Beaver Creek, 92.44 27 P P 10 00 17.3 +0.7
baz=275
MESA MESA 92.61 30 P P 10 00 18.5 +0.8
baz=274
ARCES ARCESS Array B 92.75 340 P P 10 00 15.8 -2.0
comp=Z,3.1nm,0.9s,baz=96,slow=4.4,SNR=3.6
comp=Z,3.1nm,0.9s
F28M Old Crow 92.82 22 P P 10 00 19.3 +1.1
baz=277
E28M Babbage River 92.83 21 P P 10 00 18.9 +0.6
E28M Babbage River 92.83 21 P P 10 00 18.9 +0.6
baz=277
CTG Chitna Glacier 92.84 29 P P 10 00 19.1 +0.5
baz=275
BVCY Beaver Creek 92.94 28 P P 10 00 19.9 +0.9
baz=275
I28M Miner Creek 93.04 25 P P 10 00 19.6 +0.2
baz=276
YUK3 Moose Creek 93.19 28 P P 10 00 20.3 0.0
baz=276

O28M	**Mount Upton**	**93.42**	**29**	P	**P**	**10 00 21.9**	**+0.5**
	baz=276						
DAWY	**Dawson**	**93.43**	**26**	P	**P**	**10 00 21.5**	**+0.4**
	baz=277						
FINES	**FINESS Array B**	**93.43**	**331**	P	**P**	**10 00 20.4**	**-0.7**
	comp=Z,3.7nm,1.0s,baz=62,slow=3.3,SNR=3.4						
	comp=Z,3.7nm,1.0s						
E29M	**Blow River**	**93.46**	**21**	P	**P**	**10 00 21.5**	**+0.4**
	baz=276						
PINM	**Pinnacle**	**93.46**	**30**	P	**P**	**10 00 22.1**	**+0.7**
	baz=276						
SPB2	**Spitsbergen Ar**	**93.50**	**349**	P	**P**	**10 00 20.5**	**-0.7**
SPITS	**Spitsbergen Ar**	**93.50**	**349**	P	**P**	**10 00 19.6**	**-1.6**
	comp=Z,11nm,0.8s,baz=98,slow=10,SNR=9.4						
	comp=Z,11nm,0.8s						
G29M	**Pine Creek**	**93.62**	**23**	P	**P**	**10 00 22.4**	**+0.4**
	baz=278						
I29M	**Ogilvie Camp,**	**93.72**	**25**	P	**P**	**10 00 23.0**	**+0.5**
	baz=278						
J29N	**Klondike Camp**	**93.89**	**25**	P	**P**	**10 00 23.9**	**+0.7**
	baz=278						
M29M	**Somme Creek**	**94.05**	**27**	P	**P**	**10 00 24.7**	**+0.6**
	baz=278						
YUK4	**Talbot Arm**	**94.10**	**29**	P	**P**	**10 00 25.2**	**+0.7**
	baz=277						
O29M	**Mount Kennedy**	**94.27**	**30**	P	**P**	**10 00 25.7**	**+0.5**
	baz=277						
K29M	**Barlow Dome**	**94.28**	**26**	P	**P**	**10 00 25.5**	**+0.3**
	baz=278						
G30M	**tAoh Zraii Nji**	**94.31**	**23**	P	**P**	**10 00 25.7**	**+0.6**
	baz=280						
F30M	**Barrier River**	**94.37**	**22**	P	**P**	**10 00 25.9**	**+0.5**
	baz=280						
I30M	**Mount Dempster**	**94.55**	**25**	P	**P**	**10 00 26.8**	**+0.5**
	baz=280						
J30M	**Hart River**	**94.67**	**25**	P	**P**	**10 00 27.4**	**+0.4**
	baz=280						
HYT	**Haines Junctio**	**94.72**	**29**	P	**P**	**10 00 27.4**	**+0.1**
	baz=278						
M30M	**Minto, Yukon**	**94.79**	**27**	P	**P**	**10 00 27.8**	**+0.4**
	baz=279						
INK	**Inuvik**	**95.07**	**21**	P	**P**	**10 00 29.2**	**+0.8**
	baz=282						
P30M	**Million Dollar**	**95.09**	**30**	P	**P**	**10 00 29.4**	**+0.6**
	baz=279						
F31M	**Tsiigehtchic**	**95.17**	**22**	P	**P**	**10 00 29.6**	**+0.7**
	baz=282						
H31M	**Peel River**	**95.27**	**24**	P	**P**	**10 00 31.0**	**+1.5**
	baz=282						
O30N	**Mendenhall**	**95.42**	**29**	P	**P**	**10 00 31.0**	**+0.7**
	baz=280						
N31M	**Braeburn, Yuko**	**95.44**	**28**	P	**P**	**10 00 30.9**	**+0.5**
	baz=280						
S31K	**Pelican**	**95.80**	**32**	P	**P**	**10 00 33.1**	**+1.1**
	baz=279						
WHY	**Whitehorse**	**96.02**	**29**	P	**P**	**10 00 33.4**	**+0.2**
	baz=281						
SIT	**Sitka**	**96.43**	**33**	P	**P**	**10 00 35.1**	**+0.2**
	baz=280						
A36M	**Sachs Harbour**	**96.72**	**17**	P	**P**	**10 00 36.5**	**+0.6**
	baz=291						
S32K	**Kilisnoo**	**96.76**	**32**	P	**P**	**10 00 37.4**	**+1.0**
	baz=280						
N32M	**Quiet Lake**	**96.79**	**28**	P	**P**	**10 00 37.5**	**+0.9**
	baz=282						
P32M	**Atlin**	**96.80**	**30**	P	**P**	**10 00 36.6**	**0.0**
	baz=282						
C36M	**Paulatuk**	**98.04**	**19**	P	Pdif	10 00 42.2	+0.3
	baz=292						
R33M	**Jennings River**	**98.21**	**30**	P	Pdif	10 00 43.6	+0.5
	baz=284						
S34M	**Telegraph Cree**	**98.47**	**31**	P	**P**	**10 00 43.8**	**-0.3**
	baz=284						
V35K	**Ketchikan**	**98.80**	**34**	P	Pdif	10 00 45.6	+0.1
	baz=283						
DLBC	**Dease Lake**	**98.92**	**31**	P	Pdif	10 00 46.2	+0.1
	baz=284						
WTLY	**Watson Lake, Y**	**99.09**	**29**	P	**Pdif**	**10 00 46.9**	**0.0**
	baz=286						
T35M	**Bob Quinn**	**99.16**	**32**	P	**Pdif**	**10 00 47.2**	**0.0**
	baz=284						
HFS	**Hagfors**	**99.64**	**331**	P	**Pdif**	**10 00 46.0**	**-3.3**
	comp=Z,2.1nm,0.8s,baz=93,slow=7.2,SNR=1.8						
YKA	**Yellowknife Ar**	**104.50**	**24**	Pdiff	**Pdif**	**10 01 11.6**	**+0.8**
	comp=Z,0.1nm,0.6s,baz=301,slow=5.5,SNR=3.2						
PDAR	**Pinedale Array**	**116.66**	**41**	PKP	**PKPdf**	**10 05 49.5**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=320,slow=1.8,SNR=6.6						
PDAR				PKKPbc	**PKKPbc**	**10 16 18.9**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=129,slow=3.1,SNR=5.3						
ULM	**Lac du Bonnet**	**120.07**	**28**	PKP	**PKPdf**	**10 05 54.8**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=303,slow=4.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**120.47**	**285**	PKP	**PKPdf**	**10 05 57.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=125,slow=1.8,SNR=4.6						
TORD				SKP	**SKPdf**	**10 09 20.9**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=97,slow=2.0,SNR=3.0						
SCHQ	**Schefferville**	**124.86**	**7**	PKP	**PKPdf**	**10 06 04.6**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=18,slow=3.2,SNR=1.8						
TXAR	**Lajitas Array**	**126.86**	**53**	PKP	**PKiKP**	**10 06 10.9**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=283,slow=1.4,SNR=4.5						
PLCA	**Paso Flores**	**137.51**	**165**	PKP	**PKiKP**	**10 06 30.9**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=162,slow=3.2,SNR=3.6						
PLCA				SKPbc	**SKPbc**	**10 09 52.3**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=198,slow=3.2,SNR=5.4						
CPUP	**Villa Florida**	**153.71**	**179**	PKPbc	**PKiKP**	**10 07 05.3**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=201,slow=19,SNR=2.9						
CPUP				PKPab	**PKPab**	**10 07 18.4**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=189,slow=9.6,SNR=5.1						
LPAZ	**La Paz**	**160.33**	**146**	PKPab	**PKPab**	**10 07 45.9**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=161,slow=3.5,SNR=4.2						

*IDC **19** 09:55:11.0±5.2,24°.2S×179°.31E, h523km±50km, mb3.3/3, mbtmp4.3/5, Error ellipse: s-maj=58.6km s-min=36.8km az=21.0*

ISC 19 09:55:10.7±1.5, 24°.2S±0°.1×179°.5E±0°.2, h537km, n26, σ1§13/28, mb3.9/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.21**	**277**	P	**P**	**09 57 51.4**	**-0.1**
	4.1nm,0.7s,baz=74,slow=20,SNR=1.8						
HAZ	**Te Kaha**	**13.58**	**186**	S	**S**	**10 00 29.0**	**-0.4**
URZ	**Urewera**	**14.15**	**188**	P	**P**	**09 58 09.7**	**-1.6**
	8.7nm,0.4s,baz=16,slow=7.4,SNR=12						
MRZ	**Mangatainoka R**	**16.73**	**190**	P	**P**	**09 58 35.3**	**-2.0**
OGWZ	**Otaki Gorge**	**16.95**	**191**	P	**P**	**09 58 38.2**	**-1.2**
CAW	**Cannon Point**	**17.25**	**191**	P	**P**	**09 58 43.0**	**+0.8**
PAWZ	**Paruwai Farm**	**17.45**	**190**	P	**P**	**09 58 44.5**	**+0.4**
MSWZ	**Moikau Station**	**17.52**	**191**	P	**P**	**09 58 43.3**	**-1.3**
QRZ	**Quartz Range**	**17.57**	**198**	P	**P**	**09 58 46.7**	**+1.7**
BHW	**Baring Head**	**17.58**	**192**	P	**P**	**09 58 45.3**	**+0.2**
NNZ	**Nelson**	**17.71**	**195**	P	**P**	**09 58 47.2**	**+0.9**
TUWZ	**Tuamarina**	**17.78**	**194**	P	**P**	**09 58 48.4**	**+1.4**
DSZ	**Denniston Nort**	**18.62**	**198**	P	**P**	**09 58 56.2**	**+1.5**
KHZ	**Kahutara**	**19.81**	**194**	P	**P**	**09 58 56.7**	**+0.3**
GVZ	**Greta Valley S**	**19.45**	**194**	P	**P**	**09 59 02.7**	**+0.5**
LTZ	**Lake Taylor**	**19.46**	**196**	P	**P**	**09 59 02.6**	**+0.3**
INZ	**Inchbonnie**	**19.63**	**198**	P	**P**	**09 59 04.6**	**+0.8**
OXZ	**Oxford**	**20.03**	**196**	P	**P**	**09 59 07.8**	**+0.4**
WVZ	**Waitaha Valley**	**20.15**	**199**	P	**P**	**09 59 10.9**	**+2.4**
MQZ	**McQueen's Vall**	**20.24**	**194**	P	**P**	**09 59 10.4**	**+1.1**
CTA	**Charters Tower**	**31.03**	**271**	P	**P**	**10 00 44.7**	**-0.2**
	2.3nm,0.4s,baz=117,slow=14,SNR=11						
	2.3nm,0.4s						
ASAR	**Alice Springs**	**41.54**	**261**	P	**P**	**10 02 11.3**	**-0.3**
	1.0nm,0.4s,baz=98,slow=8.3,SNR=35						
ASAR				PcP	**PcP**	**10 03 57.5**	**+1.1**
	0.2nm,0.7s,baz=97,slow=4.6,SNR=1.7						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**41.94**	**267**	P	**P**	**10 02 13.5**	**-1.2**
	2.0nm,0.5s,baz=103,slow=8.0,SNR=33						
WRA				PcP	**PcP**	**10 03 58.9**	**+1.2**
	0.3nm,0.8s,baz=104,slow=3.3,SNR=2.1						
	2.0nm,0.5s						
HFS	**Hagfors**	**142.76**	**348**	PKP	**PKPdf**	**10 13 41.4**	**-1.0**
	6.6nm,1.0s,baz=37,slow=3.7,SNR=4.3						
AKASG	**Malin Array Be**	**144.99**	**327**	PKPbc	**PKPab**	**10 13 48.7**	**+0.6**
	0.9nm,0.5s,baz=46,slow=4.1,SNR=6.4						
BRTR	**Keskin Array B**	**147.41**	**307**	PKPbc	**PKiKP**	**10 13 56.2**	**-0.1**
	0.6nm,0.7s,baz=85,slow=3.0,SNR=3.2						

IDC 19 09:55:21.3±20.0, 22°.93S×179°.92E, h398km±194km, mb3.3/3, mbtmp4.1/4, Error ellipse: s-maj=171.2km s-min=46.0km az=26.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.46**	**188**	P	P	09 58 38.4	-0.3
	2.3nm,0.6s,baz=18,slow=16,SNR=0.9						
CTA	**Charters Tower**	**31.41**	**269**	P	P	10 01 08.7	+1.1
	1.9nm,0.4s,baz=94,slow=11,SNR=6.4						
	1.9nm,0.4s						
ASAR	**Alice Springs**	**42.13**	**260**	P	P	10 02 37.3	+0.5
	1.2nm,0.3s,baz=93,slow=7.8,SNR=30						
	1.2nm,0.3s						
WRA	**Warramunga Arr**	**42.41**	**265**	P	P	10 02 37.5	-1.5
	0.7nm,0.3s,baz=98,slow=7.9,SNR=15						
	0.7nm,0.3s						
AKASG	**Malin Array Be**	**144.12**	**328**	PKP	PKPdf	10 14 09.7	-0.4
	0.2nm,0.3s,baz=80,slow=1.0,SNR=1.6						

*DRS **19** 09:56:46.0, 42°.94N×46°.65E, h15km*
*NORS **19** 09:56:47.1, 42°.88N×46°.74E, h2km, MPVA3.9*

MOS 19 09:56:44.7, 42°.90N×46°.70E, h7km, MPVA3.9, 1C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.15**	**40**	*i* Pg	Pg	09 56 49.7	+1.8
DBC				*e*Sg	Sg	09 56 52.6	+2.4
DBC	**Dubki**	**0.15**	**40**	⇓*i* PG	Pg	09 56 49.8	+1.9
KRNR	**Karanay**	**0.17**	**116**	*i* Pg	Pg	09 56 50.3	+2.0
KRNR				*e*Sg	Sg	09 56 53.6	+3.0
KRNR	**Karanay**	**0.17**	**116**	*i* PG	Pg	09 56 50.3	+2.1
DLMR	**Dylym**	**0.17**	**344**	*i* Pg	Pg	09 56 49.7	+1.4
DLMR				*e*Sg	Sg	09 56 52.4	+1.8
DLMR	**Dylym**	**0.17**	**344**	*i* PG	Pg	09 56 49.7	+1.4
UNCR	**Uncukul**	**0.20**	**159**	*i* Pg	Pg	09 56 50.7	+2.0
UNCR				*e*Sg	Sg	09 56 54.4	+2.9
UNCR	**Uncukul**	**0.20**	**159**	*i* PG	Pg	09 56 50.7	+2.0
BUJR	**Buynaksk**	**0.31**	**104**	*i* PG	Pb	09 56 54.0	+1.3
BUJR				*e*S	Sb	09 56 59.4	+1.4
HNZR	**Khunzah**	**0.34**	**177**	*i* PG	Pb	09 56 53.5	+0.2
HNZR				*e*S	Sb	09 56 59.0	0.0
XNZR	**Khunzakh**	**0.36**	**179**	*i* Pg	Pb	09 56 53.5	0.0
XNZR				*e*Sg	Sb	09 56 59.0	-0.4
ARKR	**Arakani**	**0.37**	**143**	*e*Pg	Pb	09 56 54.2	+0.5
ARKR				*e*Sg	Sb	09 57 00.0	+0.4
ARKR	**Arakani**	**0.37**	**143**	*e*PG	Pb	09 56 54.2	+0.5
ARKR				*e*S	Sb	09 57 00.0	+0.3
BTLR	**Botlikh**	**0.42**	**236**	*e*Pg	Pb	09 56 54.1	-0.4
BTLR				*e*Sg	Sb	09 57 00.4	-0.8
BTLR	**Botlikh**	**0.42**	**236**	*e*PG	Pb	09 56 54.2	-0.3
GNBR	**Gunib**	**0.55**	**159**	*i* Pg	Pn	09 56 58.0	-1.1
GNBR				*e*Sg	Sb	09 57 06.4	+1.6
GNBR	**Gunib**	**0.55**	**159**	*i* PG	Pn	09 56 58.0	-1.0
GNBR				*e*S	Sb	09 57 06.4	+1.6
MAK	**Makhachkala**	**0.60**	**84**	*e*Pg	Pn	09 57 00.9	+1.3
MAK				*e*Sg	Sn	09 57 08.3	-1.3
MAK	**Makhachkala**	**0.60**	**84**	*e*PG	Pn	09 57 00.9	+1.3
MAK				*e*S	Sn	09 57 08.3	-1.3
KANR	**Karaman**	**0.65**	**63**	*e*PG	Pb	09 56 58.2	-0.2
KANR				*e*S	Sb	09 57 08.2	+0.5
GROC	**Groznyy**	**0.72**	**295**	*e*Pg	Pb	09 56 59.8	+0.1
GROC				*e*Sg	Sn	09 57 11.6	-1.2
GROC	**Groznyy**	**0.72**	**295**	*e*PG	Pn	09 57 01.9	+0.5
GROC				*i* S	Sn	09 57 12.0	-0.7
GROC				pmax	pmax		
	comp=Z,51nm,1.2s						
GROC				smax	smax		
	comp=Z,58nm,0.2s						
KMKR	**Kumukh**	**0.83**	**159**	*e*Pg	Pn	09 57 02.9	-0.1
KMKR				*e*Sg	Sn	09 57 15.0	-0.5
KMKR	**Kumukh**	**0.83**	**159**	*e*PG	Pn	09 57 02.9	-0.1
KMKR				*e*S	Sn	09 57 15.0	-0.5
SGKR	**Sergokala**	**0.84**	**122**	*e*Pg	Pn	09 57 03.5	+0.6
SGKR				*e*Sg	Sn	09 57 15.8	+0.2
SGKR	**Sergokala**	**0.84**	**122**	*e*PG	Pn	09 57 03.5	+0.6
SGKR				*e*S	Sn	09 57 15.8	+0.3
URKR	**Urkarakh**	**1.01**	**136**	*e*Pg	Pn	09 57 07.1	+1.7
URKR				*e*Sg	Sn	09 57 22.0	+2.0
URKR	**Urkarakh**	**1.01**	**136**	*e*PG	Pn	09 57 07.1	+1.7
URKR				*e*S	Sn	09 57 22.0	+2.0
KMGR	**Komgaron**	**1.35**	**277**	*e*Pg	Pn	09 57 14.9	+4.3
KMGR				*e*Sg	Sn	09 57 33.9	+5.6
KMGR	**Komgaron**	**1.35**	**277**	*e*PG	Pg	09 57 14.9	+4.3
KMGR				*e*S	Sn	09 57 33.9	+5.6
VLKR	**Vladikavkaz**	**1.49**	**276**	*e*Pg	Pg	09 57 13.9	+0.7
VLKR				*e*Sg	Sg	09 57 37.7	+5.2
VLKR	**Vladikavkaz**	**1.49**	**276**	*e*PG	Pg	09 57 14.1	+0.9
VLKR				*e*S	Sg	09 57 37.7	+5.2
DRN	**Derbent**	**1.49**	**125**	⇑*i* PG	Pg	09 57 14.2	+0.9
DRN				pmax	pmax		
	comp=Z,2μm,0.2s						
AKT	**Akhty**	**1.62**	**151**	*e*Pg	Pg	09 57 16.8	+1.1
AKT				*e*Sg	Sg	09 57 38.0	+1.4
AKT	**Akhty**	**1.62**	**151**	*d i* PG	Pg	09 57 17.0	+1.3
AKT				pmax	pmax		
	comp=Z,755nm,2.2s						
BTKR	**Batakoyurt**	**1.64**	**287**	*e*Pg	Pg	09 57 19.6	+3.4
BTKR				*e*Sg	Sg	09 57 43.2	+5.6
BTKR	**Batakoyurt**	**1.64**	**287**	*e*PN	Pg	09 57 19.6	+3.4
BTKR				*e*S	Sg	09 57 43.2	+5.7
TRKR	**Terskaya**	**1.65**	**300**	*e*PN	Pg	09 57 18.6	+2.2
TRKR				*e*S	Sg	09 57 41.6	+3.8
KSMR	**Kasumkent**	**1.68**	**140**	*e*Pg	Pg	09 57 18.4	+1.5
KSMR				*e*Sg	Sg	09 57 41.9	+3.3
KSMR	**Kasumkent**	**1.68**	**140**	*e*PN	Pg	09 57 18.4	+1.5
KSMR				*e*S	Sg	09 57 41.9	+3.3
GUDG	**Gudauri**	**1.69**	**256**	*e*Pg	Pg	09 57 18.9	+1.7
GUDG				*e*S	Sg	09 57 42.7	+3.6
LACR	**Lac**	**1.77**	**268**	*e*Pg	Pg	09 57 18.6	+0.1
LACR				*e*Sg	Sg	09 57 43.8	+2.4
LACR	**Lac**	**1.77**	**268**	*e*PN	Pg	09 57 18.9	+0.4
ARNR	**Ardon**	**1.79**	**280**	*e*Pg	Pg	09 57 20.1	+1.1
ARNR				*e*Sg	Sg	09 57 44.7	+2.5
ARNR	**Ardon**	**1.79**	**280**	*e*PN	Pg	09 57 20.0	+1.0
ARNR				*e*S	Sg	09 57 44.7	+2.5
KORR	**Kora**	**1.94**	**276**	*e*Pg	Pg	09 57 22.0	+0.2
KORR				*e*Sg	Sg	09 57 47.6	+0.7
KORR	**Kora**	**1.94**	**276**	*e*PN	Pg	09 57 22.4	+0.6
PRTR	**Priterechnaya**	**1.96**	**297**	*e*Pg	Pg	09 57 23.3	+1.2
PRTR				*e*Sg	Sg	09 57 49.7	+2.2
PRTR	**Priterechnaya**	**1.96**	**297**	*e*PN	Pg	09 57 23.3	+1.1
PRTR				*e*S	Sg	09 57 49.7	+2.2
STDR	**Stavd-Durt**	**1.98**	**285**	*e*Pg	Pg	09 57 24.4	+1.7
STDR				*e*Sg	Sg	09 57 51.0	+2.6
STDR	**Stavd-Durt**	**1.98**	**285**	*e*PN	Pg	09 57 24.4	+1.7
STDR				*e*S	Sg	09 57 51.0	+2.6
LSNR	**Lesken**	**2.13**	**281**	*e*Pg	Pg	09 57 25.0	-0.6
LSNR				*e*Sg	Sg	09 57 53.5	+0.2
LSNR	**Lesken**	**2.13**	**281**	*e*PN	Pg	09 57 26.1	+0.5
LSNR				*e*S	Sg	09 57 53.4	+0.1
DIGR	**Digorskoe uzhe**	**2.29**	**271**	*e*Pn	Pb	09 57 27.1	+0.6
DIGR				*e*Sn	Sb	09 57 56.2	+1.2
DIGR	**Digorskoe uzhe**	**2.29**	**271**	*e*PN	Pb	09 57 27.0	+0.6
DIGR				*e*S	Sb	09 57 56.2	+1.2
KBTC	**Kuba-Taba**	**2.56**	**292**	*e*Pn	Pb	09 57 30.9	-0.2
KBTC				*e*Sn	Sb	09 58 03.9	+1.1
KBTC	**Kuba-Taba**	**2.56**	**292**	*e*PN	Pb	09 57 30.9	-0.2
KBTC				*e*S	Sb	09 58 03.9	+1.1
PYA1	**Pyatigorsk**	**2.87**	**295**	*e*Pn	Pb	09 57 34.8	-1.4
PYA1				*e*Sn	Sb	09 58 09.0	-2.5
PYA1	**Pyatigorsk**	**2.87**	**295**	*e*PN	Pb	09 57 34.8	-1.4
PYA1				*e*S	Sb	09 58 09.0	-2.5
KBZ	**Khabaz**	**2.89**	**288**	*e*Pn	Pb	09 57 33.9	-2.7
KBZ				*e*Sn	Sb	09 58 10.5	-1.7
KBZ	**Khabaz**	**2.89**	**288**	*e*PN	Pb	09 57 33.9	-2.7
KBZ				*e*S	Sb	09 58 10.5	-1.7
NEUR	**Neytrino**	**2.95**	**278**	*e*Pn	Pb	09 57 35.7	-2.0
NEUR				*e*Sn	Sb	09 58 12.6	-1.4
NEUR	**Neytrino**	**2.95**	**278**	*e*PN	Pb	09 57 35.7	-2.0
NEUR				*e*S	Sb	09 58 12.6	-1.4
BEYR	**Belyy Ugol+**	**3.03**	**293**	*e*Pn	Pb	09 57 36.6	-2.5
BEYR				*e*Sn	Sb	09 58 14.2	-2.1
BEYR	**Belyy Ugol+**	**3.03**	**293**	*e*PN	Pb	09 57 36.6	-2.5
BEYR				*e*S	Sb	09 58 14.2	-2.1
SHA1	**Shidzhatmaz**	**3.06**	**287**	*e*Pn	Pn	09 57 36.2	+2.5
SHA1				*e*Sn	Sb	09 58 14.3	-3.0
SHA1	**Shidzhatmaz**	**3.06**	**287**	*e*PN	Pn	09 57 36.2	+2.4
SHA1				*e*S	Sb	09 58 14.3	-3.0
KIV	**Kislovodsk**	**3.10**	**291**	*e*PN	Pb	09 57 37.4	-2.9
KIV				*e*S	Sb	09 58 15.2	-3.2
GNI	**Garni**	**3.12**	**209**	*e*Pn	Pb	09 57 39.4	-1.2
GNI				*e*Sn	Sb	09 58 18.2	-0.6
GNI	**Garni**	**3.12**	**209**	*i* PN	Pb	09 57 39.9	-0.6
GNI				*i* S	Sb	09 58 17.6	-1.2
GNI				pmax	pmax		
	comp=Z,15nm,1.6s						
GNI				smax	smax		
	comp=Z,15nm,1.6s						

RSNC 19 10:25:50.1±0.0, 5°N±1°×7°6W±°, h86km±2km, M3.1, mb3.9, ML3.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLMC	**San Jos del P**	**0.18**	**339**	P	Pn	10 26 01.9	-0.8
PLMC				S	Sn	10 26 12.0	+0.1
YOTC	**Yotoco, Valle**	**0.76**	**189**	P	Pn	10 26 06.1	-1.0
YOTC				S	Sn	10 26 20.1	+0.5
CMAN1	**Manizales, Cal**	**0.77**	**65**	P	Pn	10 26 07.4	+0.1
CMAN1				S	Sn	10 26 20.6	+0.6
NIZA	**Niza - Manizal**	**0.81**	**67**	P	Pn	10 26 07.0	-0.7
NIZA				S	Sn	10 26 20.5	-0.3
CBOC	**Ciudad Bolivar**	**1.14**	**10**	P	Pn	10 26 10.4	-0.9
CBOC				S	Sn	10 26 26.8	-0.4
PIZC	**Pizarro, Choco**	**1.16**	**281**	P	Pn	10 26 11.2	-0.2
PIZC				S	Sn	10 26 29.1	+1.7
JAMC	**Jamundi, Valle**	**1.58**	**197**	P	Pn	10 26 15.8	-1.2
JAMC				S	Sn	10 26 37.8	+0.6
PRAC	**Prado**	**1.68**	**127**	P	Pn	10 26 17.2	-0.8
PRAC				S	Sn	10 26 39.4	+0.3
SOLC	**Bahia Solano**	**1.89**	**321**	P	Pn	10 26 20.1	-0.7
SOLC				S	Sn	10 26 43.3	-0.8
ROSC	**El Rosal**	**1.90**	**87**	P	Pn	10 26 22.1	+0.9
CVER	**Cruz Verde, Cu**	**2.15**	**96**	P	Pn	10 26 25.4	+0.8
BOG	**Bogota**	**2.15**	**93**	P	Pn	10 26 26.6	+2.1
POPC	**Popayan, Colom**	**2.23**	**192**	P	Pn	10 26 24.5	-1.0
POPC				S	Sn	10 26 52.0	-0.5
DBBC	**Dabeiba**	**2.26**	**0**	P	Pn	10 26 26.1	+0.3
DBBC				S	Sn	10 26 54.3	+1.3
SPBC	**San Pablo de B**	**2.32**	**67**	P	Pn	10 26 26.4	-0.2
SPBC				S	Sn	10 26 53.9	-0.6
URMC	**La Uribe, Meta**	**2.36**	**129**	P	Pn	10 26 25.8	-1.3
URMC				S	Sn	10 26 53.9	-1.5
CHIC	**Chingaza**	**2.48**	**92**	P	Pn	10 26 29.9	+0.9
CHIC				S	Sn	10 26 59.6	+0.9
PTBC	**PUERTO BERRIO,**	**2.50**	**44**	P	Pn	10 26 28.7	-0.2
PTBC				S	Sn	10 26 58.5	-0.2
VILC	**Villavicencio,**	**2.59**	**104**	P	Pn	10 26 30.5	+0.3
GR1C	**Gorgona, Isla**	**2.60**	**228**	P	Pn	10 26 28.4	-1.8
GARC	**Garzon, Huila**	**2.64**	**164**	P	Pn	10 26 29.9	-1.1
GARC				S	Sn	10 27 01.3	-1.0
PTAC	**Punta Ardita,**	**2.87**	**327**	P	Pn	10 26 31.8	-2.0
PTAC				S	Sn	10 27 03.7	-3.7
BBAC	**Balboa, Cauca**	**2.89**	**201**	P	Pn	10 26 34.3	0.0
BBAC				S	Sn	10 27 07.7	-0.5
UREC	**San Jos de Ur**	**3.07**	**13**	P	Pn	10 26 35.9	-0.6
UREC				S	Sn	10 27 13.2	+0.9
APAC	**Apartado, Choc**	**3.16**	**354**	P	Pn	10 26 40.3	+2.5
APAC				S	Sn	10 27 17.4	+2.9
FLOC	**Florencia**	**3.19**	**170**	P	Pn	10 26 36.9	-1.3
CRUC	**La Cruz**	**3.23**	**193**	P	Pn	10 26 39.8	+0.7
CRUC				S	Sn	10 27 16.4	-0.4
BRJC	**Barrancabermej**	**3.31**	**48**	P	Pn	10 26 39.2	-0.6
BRJC				S	Sn	10 27 18.1	-0.1
RUSC	**La Rusia**	**3.33**	**70**	P	Pn	10 26 40.9	+0.5
MACC	**Macarena, Meta**	**3.50**	**137**	P	Pn	10 26 41.0	-1.4
MACC				S	Sn	10 27 19.4	-3.4
BARC	**Barichara**	**3.54**	**59**	P	Pn	10 26 43.4	+0.3
BARC				S	Sn	10 27 24.8	+0.8
GCUF	**Volcan Galeras**	**3.67**	**198**	P	Pn	10 26 43.9	-1.2
GCUF				S	Sn	10 27 26.3	-1.2
PAMC	**Pamplona, Colo**	**4.35**	**53**	P	Pn	10 26 54.

PB05	**IPOC Station P**	**2.15**	**223**	*e*P	**Pn**	**10 36 52.3**	**-0.1**
PB05				*e*S	**Sn**	**10 37 13.3**	**-6.4**
PB05				IAML		10 37 19.5	
	comp=Z,264nm,0.5s						
PB05				*e*S		10 37 23.3	
PB10	**IPOC Station P**	**2.86**	**219**	*e*P	**Pn**	**10 37 02.2**	**+0.8**
PB10				IAML		10 37 52.1	
	comp=E,241nm,0.4s						
PB10	**IPOC Station P**	**2.86**	**219**	*e*P	**Pn**	**10 37 00.8**	**-0.6**
PB10				*e*S	**Sn**	**10 37 35.8**	**+0.1**
PB10				IAML		10 37 49.4	
	comp=Z,140nm,0.7s						
PB16	**IPOC Station P**	**3.06**	**344**	*e*P	**Pn**	**10 37 05.9**	**+1.3**
PB16				IAML		10 37 50.2	
	comp=E,96nm,0.5s						
PB16	**IPOC Station P**	**3.06**	**344**	*e*P	**Pn**	**10 37 05.6**	**+1.0**
PB16				*e*S	**Sn**	**10 37 37.8**	**-3.5**
PB12	**IPOC Station P**	**3.12**	**328**	*e*P	**Pn**	**10 37 04.1**	**-0.8**
PB12				IAML		10 37 51.6	
	comp=E,240nm,0.2s						
PB12	**IPOC Station P**	**3.12**	**328**	*e*P	**Pn**	**10 37 04.5**	**-0.4**
PB12				*e*S	**Sn**	**10 37 40.8**	**-1.2**
PB12				IAML		10 37 54.0	
	comp=Z,118nm,0.3s						
PB14	**IPOC Station P**	**3.71**	**206**	*e*P	**Pn**	**10 37 13.2**	**+0.3**
PB14	**IPOC Station P**	**3.71**	**206**	*e*P	**Pn**	**10 37 13.3**	**+0.3**
PB14				*e*S	Sn	10 37 41.3	-15
PB14				IAML		10 38 05.6	
	comp=Z,116nm,0.3s						
GO02	**Mina Guanaco**	**3.96**	**193**	*e*P	**Pn**	**10 37 16.6**	**+0.4**
GO02	**Mina Guanaco**	**3.96**	**193**	*e*P	**Pn**	**10 37 17.0**	**+0.7**
GO02				*e*S	**Sn**	**10 38 04.0**	**+1.8**
GO02				IAML		10 38 36.6	
	comp=Z,125nm,0.5s						
LPAZ	**La Paz**	**5.00**	**5**	P	**Pn**	**10 37 32.2**	**+1.8**
	comp=Z,11nm,0.4s,baz=186,slow=6.0,SNR=56						
LPAZ				S	**Sn**	**10 38 29.9**	**+2.4**
	comp=Z,2.9nm,0.5s,baz=307,slow=15,SNR=1.3						
LPAZ	**La Paz**	**5.00**	**5**	*e*P	**Pn**	**10 37 33.2**	**+2.8**
AC01	**Pan de Azucar**	**5.17**	**200**	*e*P	**Pn**	**10 37 31.1**	**-1.1**
AC01				*e*S	**Sn**	**10 38 30.4**	**-0.4**
AC01				IAML		10 38 49.2	
	comp=Z,50nm,0.3s						
SIV	**San Ignacio**	**8.87**	**55**	P	**Pn**	**10 38 19.9**	**-2.3**
	comp=Z,16nm,0.4s,baz=240,slow=12,SNR=67						
SIV				S	**Sn**	**10 39 54.7**	**-5.8**
	comp=Z,1.4nm,0.7s,baz=213,slow=17,SNR=3.5						
CFA	**Coronel Fontan**	**10.28**	**178**	P	**Pn**	**10 38 40.0**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=17,slow=16,SNR=2.9						
CFA				S	**Sn**	**10 40 26.7**	**-7.7**
	comp=Z,0.6nm,0.3s,baz=57,slow=20,SNR=1.2						
CPUP	**Villa Florida**	**11.47**	**118**	P	**Pn**	**10 38 54.1**	**-2.9**
	comp=Z,3.2nm,1.0s,baz=211,slow=5.5,SNR=3.2						
PLCA	**Paso Flores**	**19.45**	**184**	P	**Pn**	**10 40 37.9**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=320,slow=22,SNR=1.1						
TORD	**Torodi Ar. Bea**	**77.01**	**70**	P	**P**	**10 47 58.1**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=265,slow=4.5,SNR=12						
	comp=Z,2.2nm,0.7s						
YKA	**Yellowknife Ar**	**91.09**	**340**	P	**P**	**10 49 09.2**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=138,slow=4.0,SNR=11						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**145.29**	**36**	PKPbc	**PKPab**	**10 55 43.0**	**+2.5**
	comp=Z,1.6nm,0.6s,baz=323,slow=3.4,SNR=25						

*IDC **19** 10:37:23.8±1.2,32°.61N×88°.19E,h0km,mb3.6/8, mbtmp3.6/11,ML3.3/3,MS3.1/3,Error ellipse: s-maj=37.9km s-min=18.3km az=58.0*

ISC 19 10:37:28.5±1.2,32°.6N±0°.1×88°.2E±0°.2,h35km,n12, σ1s21/11,mb3.7/7,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.84**	**344**	Pn	**Pn**	**10 40 54.2**	**-1.6**
	baz=146,slow=11,SNR=5.4						
	0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.11**	**143**	P	**Pn**	**10 41 22.9**	**-2.1**
	0.2nm,0.3s,baz=342,slow=9.2,SNR=1.5						
CMAR				LR	LR	10 48 46.2	
	comp=Z,32nm,19.0s,baz=320,slow=40						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**19.34**	**341**	P	**P**	**10 41 50.2**	**-0.5**
	baz=157,slow=12,SNR=6.0						
	0.9nm,0.5s						
SONM	**Songino Array**	**20.51**	**37**	P	**P**	**10 42 04.1**	**+0.6**
	1.0nm,1.0s,baz=228,slow=9.9,SNR=7.5						
	1.0nm,1.0s						
ZALV	**Zalesovo Beam**	**21.44**	**355**	P	**P**	**10 42 12.7**	**-0.7**
	0.9nm,0.7s,baz=188,slow=10.0,SNR=5.4						
ZALV				LR	LR	10 51 47.8	
	comp=Z,51nm,18.6s,baz=38,slow=40						
	0.9nm,0.7s						
KSRS	**Korea Array**	**32.71**	**70**	P	**P**	**10 43 57.9**	**+0.2**
	1.5nm,0.6s,baz=276,slow=8.8,SNR=9.1						
	1.5nm,0.6s						
MMAI	**Mount Meron Ar**	**43.96**	**285**	LR	LR	11 06 29.2	
	comp=Z,41nm,18.7s,baz=208,slow=40						
FINES	**FINESS Array B**	**48.67**	**326**	P	**P**	**10 46 09.9**	**+1.1**
	3.0nm,1.0s,baz=102,slow=8.2,SNR=4.2						
	3.0nm,1.0s						
NOA	**NORSAR Array B**	**55.85**	**325**	P	**P**	**10 47 02.9**	**+0.7**
	1.0nm,0.8s,baz=83,slow=7.2,SNR=2.8						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**68.41**	**133**	P	**P**	**10 48 27.4**	**+0.5**
	0.4nm,0.6s,baz=327,slow=6.3,SNR=7.1						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**70.98**	**136**	P	**P**	**10 48 43.6**	**+1.0**
	0.5nm,0.9s,baz=322,slow=5.8,SNR=4.7						
	0.5nm,0.9s						
YKA	**Yellowknife Ar**	**83.44**	**10**	P	**P**	**10 49 52.9**	**+0.9**
	0.4nm,0.8s,baz=344,slow=5.9,SNR=5.5						
	0.4nm,0.8s						

*DJA **19** 11:01:31.5±0.2,1°.5±2°.×12°.7E±°,h10km,M4.6/31,mB5.2/7, mb5.1/16,MLv4.4/31,Mw(mB)4.6/7*

*NEIC **19** 11:01:33.6±1.4,0°.63S±0°.06×127°.50E±0°.04,h30km±5km, mb4.6/44,Error ellipse: s-maj=8.9km s-min=4.6km az=202.0*

*IDC **19** 11:01:34.7±1.9,0°.70S×127°.61E,h48km±18km,mb3.9/13, mbtmp4.2/14,ML4.3/2,MS3.4/4,Error ellipse: s-maj=17.9km s-min=10.8km az=62.0*

ISC 19 11:01:34.1±0.4,0°.66S±0°.04×127°.51E±0°.06,h41km,n104, σ0s93/108,mb4.5/38,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**354**		**Pn**	**11 01 56.8**	**-0.8**
TNTI	**Ternate**	**1.43**	**354**	P	**Pn**	**11 01 57.0**	**-0.6**
SANI	**Sanana**	**2.05**	**228**	P	**Pn**	**11 02 03.8**	**-2.3**
NLAI	**Namlea**	**2.59**	**189**	P	**Pn**	**11 02 13.4**	**-0.1**
NLAI				S	**Sn**	**11 02 45.1**	**+1.3**
KRAI	**Karang Ratu**	**2.78**	**161**	P	**Pn**	**11 02 17.1**	**+0.9**
MSAI	**Masohi**	**3.02**	**152**	P	**Pn**	**11 02 20.4**	**+1.0**
AAI	**Ambon**	**3.08**	**167**	P	**Pn**	**11 02 21.2**	**+0.9**
MNI	**Manado**	**3.39**	**308**	P	**Pn**	**11 02 23.2**	**-1.3**
SWI	**Sorong**	**3.76**	**93**	P	**Pn**	**11 02 29.5**	**-0.1**
SIJI	**Sorong**	**3.77**	**93**	P	**Pn**	**11 02 30.2**	**+0.5**
	10nm,0.3s,baz=190,slow=23,SNR=22						
SIJI				S	**Sn**	**11 03 11.1**	**-1.7**
	28nm,0.9s,baz=48,slow=23,SNR=1.0						
SIJI				LR	LR	11 04 01.8	
	comp=Z,398nm,20.0s,baz=194,slow=40						
	26nm,0.3s						
SIJI	**Sorong**	**3.77**	**93**	P	**Pn**	**11 02 30.3**	**+0.6**
GTOI	**Gorontalo**	**4.68**	**286**	P	**Pn**	**11 02 44.2**	**+2.0**
LUWI	**Luwuk**	**4.75**	**265**	Pn	**Pn**	**11 02 41.9**	**-1.3**
LUWI	**Luwuk**	**4.75**	**265**	P	**Pn**	**11 02 41.3**	**-1.9**
FAKI	**Fak Fak**	**5.24**	**115**	Pn	**Pn**	**11 02 50.1**	**+0.1**
FAKI	**Fak Fak**	**5.24**	**115**	P	**Pn**	**11 02 49.2**	**-0.8**
	0.3nm62nm,0.7s						
MRSI	**Marisa**	**5.68**	**281**	P	**Pn**	**11 02 55.2**	**-0.8**
	0.2nm50nm,0.6s						
APSI	**Ampana**	**5.86**	**268**	P	**Pn**	**11 02 57.0**	**-1.5**
	1.0nm2μm156nm,0.6s						
KDI	**Kendari**	**5.88**	**236**	P	**Pn**	**11 02 58.1**	**-0.6**
TOLI2	**Tolitoli**	**6.95**	**285**		**Pn**	**11 03 13.2**	**-0.3**
TTSI	**Tana Toraja**	**8.04**	**253**	P	**Pn**	**11 03 28.5**	**+0.1**
	699nm46nm,0.7s						
SPSI	**Sidrap Palu**	**8.40**	**247**	P	**Pn**	**11 03 33.6**	**+0.3**
MMSI	**Mamuju**	**8.82**	**257**	P	**Pn**	**11 03 39.9**	**+0.7**
	41nm,0.7s						
KAPI	**Kappang**	**8.87**	**241**	P	**Pn**	**11 03 40.7**	**+1.0**
	7.7nm,0.3s,baz=74,slow=5.0,SNR=22						
KAPI	**Kappang**	**8.87**	**241**	P	**Pn**	**11 03 39.9**	**+0.1**

MKS	**Makassar**	**9.21**	**240**	P	**Pn**	**11 03 44.3**	**-0.2**
MMRI	**Maumere**	**9.50**	**213**	Pn	**Pn**	**11 03 48.1**	**-0.4**
BATI	**Baumata**	**10.22**	**202**	LR	LR	11 09 35.1	
	comp=Z,156nm,18.3s,baz=210,slow=47						
MYLDM	**Lahad Datu**	**10.71**	**303**	Pn	**Pn**	**11 04 03.5**	**-1.4**
MTN	**Manton Dam**	**12.62**	**164**		**Pn**	**11 04 30.4**	**-0.8**
JAY	**Jayapura**	**13.32**	**98**	LR	LR	11 10 46.8	
	comp=Z,240nm,18.6s,baz=220,slow=42						
KNRA	**Kununurra**	**14.97**	**175**	Pn	**Pn**	**11 05 01.6**	**-1.4**
JAGI	**Jajag, Banyuwa**	**15.40**	**239**	Pn	**Pn**	**11 05 07.9**	**-0.7**
SBUM	**Sibu**	**15.59**	**281**	Pn	**Pn**	**11 05 10.0**	**-1.2**
WB0	**Warramunga Arr**	**20.15**	**161**	P	**P**	**11 06 04.2**	**-0.9**
WRA	**Warramunga Arr**	**20.30**	**161**	P	**P**	**11 06 05.9**	**-0.7**
	2.2nm,0.5s,baz=342,slow=12,SNR=31						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**20.30**	**161**	P	**P**	**11 06 05.0**	**-1.6**
WB2	**Warramunga Arr**	**20.30**	**161**	P	**P**	**11 06 05.8**	**-0.9**
WR8	**Warramunga Arr**	**20.36**	**161**		**P**	**11 06 06.7**	**-0.6**
COEN	**Coen**	**20.37**	**131**		**P**	**11 06 07.6**	**+0.2**
COEN				IAmb	IAmb	11 06 10.0	
	comp=Z,15nm,0.8s						
WR0	**Warramunga Arr**	**20.38**	**161**	P	**P**	**11 06 06.6**	**-0.9**
BBJI	**Bungbulang**	**20.92**	**251**	P	**P**	**11 06 13.2**	**-0.3**
BBJI				IAmb	IAmb	11 06 19.9	
	comp=Z,45nm,1.2s						
MBWA	**Marble Bar**	**21.74**	**200**	P	**P**	**11 06 21.7**	**-0.5**
MBWA				IAmb	IAmb	11 06 23.1	
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**23.69**	**165**		**P**	**11 06 43.0**	**+0.7**
ASAR	**Alice Springs**	**23.70**	**165**	P	**P**	**11 06 42.3**	**0.0**
	comp=Z,7.1nm,0.9s,baz=345,slow=12,SNR=46						
ASAR				PcP	**PcP**	**11 10 25.9**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=341,slow=2.0,SNR=6.4						
ASAR				S	**S**	**11 10 53.7**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=345,slow=19,SNR=4.4						
	comp=Z,7.1nm,0.9s						
ASAR	**Alice Springs**	**23.70**	**165**		**P**	**11 06 42.7**	**+0.4**
YULB	**Yu-li**	**24.66**	**346**	P	**P**	**11 06 49.8**	**-1.3**
YULB				IAmb	IAmb	11 07 27.1	
	comp=Z,28nm,1.4s						
TPUB	**Ta-pu**	**24.74**	**345**	P	**P**	**11 06 50.4**	**-1.5**
GIRL	**Giralia**	**25.38**	**210**	P	**P**	**11 06 57.6**	**-0.1**
CTA	**Charters Tower**	**26.63**	**138**	LR	LR	11 18 45.8	
	comp=Z,71nm,18.3s,baz=68,slow=39						
IPM	**Ipoh**	**26.95**	**281**	P	**P**	**11 07 12.3**	**+0.3**
IPM				IAmb	IAmb	11 07 14.3	
	comp=Z,10nm,0.8s						
KULM	**Kulim**	**27.47**	**283**	P	**P**	**11 07 16.7**	**+0.1**
KULM				IAmb	IAmb	11 07 18.2	
	comp=Z,13nm,1.0s						
RPSI	**Rantau Prapat**	**28.77**	**277**	P	**P**	**11 07 28.2**	**-0.1**
RPSI				IAmb	IAmb	11 07 30.8	
	comp=Z,10nm,0.8s						
FORT	**Forrest**	**29.96**	**179**	P	**P**	**11 07 39.6**	**+1.1**
GSI	**Gununguitoli**	**29.99**	**274**	P	**P**	**11 07 38.0**	**-1.1**
MORW	**Morawa**	**30.29**	**200**	P	**P**	**11 07 42.2**	**+0.6**
MORW				IAmb	IAmb	11 07 59.4	
	comp=Z,14nm,1.1s						
BBOO	**Buckleboo**	**32.98**	**167**	P	**P**	**11 08 04.8**	**-0.3**
BBOO				IAmb	IAmb	11 08 10.9	
	comp=Z,9.1nm,0.8s						
WHN	**Wuhan**	**33.47**	**339**	P	**P**	**11 08 11.5**	**+2.1**
NJ2	**Nanjing**	**33.55**	**347**	*e*P	**P**	**11 08 12.9**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
STKA	**Stephens Creek**	**33.78**	**158**	P	**P**	**11 08 10.0**	**-2.2**
	comp=Z,1.3nm,0.6s,baz=354,slow=7.2,SNR=4.5						
	comp=Z,1.5nm,0.6s						
STKA	**Stephens Creek**	**33.78**	**158**	P	**P**	**11 08 12.2**	**0.0**
CM31	**Chiang Mai Arr**	**33.90**	**306**	P	**P**	**11 08 13.2**	**-0.2**
CM31				IAmb	IAmb	11 08 16.2	
	comp=Z,11nm,1.5s						
CMAR	**Chiang Mai Arr**	**33.90**	**306**	P	**P**	**11 08 13.8**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=128,slow=8.3,SNR=2.7						
CMAR				PcP	**PcP**	**11 10 51.5**	**0.0**
	comp=Z,0.9nm,0.3s,baz=130,slow=3.0,SNR=7.2						
	comp=Z,1.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**33.90**	**306**	P	**P**	**11 08 12.6**	**-0.8**
CHTO	**Chiang Mai**	**34.08**	**306**	P	**P**	**11 08 14.8**	**-0.2**
CHTO				IAmb	IAmb	11 08 14.9	
	comp=Z,7.9nm,1.4s						
ENH	**Enshi**	**35.23**	**332**		**P**	**11 08 24.9**	**+0.1**
ENH				IAmb	IAmb	11 08 32.5	
	comp=Z,7.3nm,0.8s						
PZH	**PanZhiHua**	**36.69**	**319**	P	**P**	**11 08 38.5**	**+1.1**
ARMA	**Armidale**	**37.43**	**144**	P	**P**	**11 08 43.4**	**-0.2**
KSRS	**Korea Array**	**37.93**	**1**	P	**P**	**11 08 48.0**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=163,slow=8.4,SNR=1.6						
	comp=Z,0.5nm,0.6s						
MJAR	**Matsushiro Arr**	**38.33**	**14**	P	**P**	**11 08 50.9**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=186,slow=10,SNR=2.7						
	comp=Z,1.2nm,0.7s						
XAN	**Xi'an**	**38.68**	**335**	P	**P**	**11 08 54.4**	**+0.3**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZDM	**Lanzhou Array**	**42.65**	**331**	P	**P**	**11 09 27.4**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=240,slow=36,SNR=1.6						
LZDM				PcP	**PcP**	**11 11 19.5**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=195,slow=4.6,SNR=4.0						
	comp=Z,0.8nm,0.4s						
LZH	**Lanzhou**	**42.68**	**331**	*e*P	P	11 09 34.4	+7.2
LZH				pP	pP	11 09 37.5	-1.3
LZH				pmax	pmax		
	comp=Z,22nm,1.6s						
SHL	**Shillong**	**43.18**	**310**		**P**	**11 09 31.6**	**+0.2**
SHL				IAmb	IAmb	11 09 33.8	
	comp=Z,9.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**43.79**	**342**	*e*P	**P**	**11 09 38.9**	**+2.9**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,72nm,5.0s						
GTA2	**Gaotai**	**47.35**	**331**	*e*P	**P**	**11 10 05.6**	**+1.4**
GTA2				pP	pP	11 10 10.0	-5.9
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**51.68**	**342**	P	**P**	**11 10 36.4**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=156,slow=6.9,SNR=5.8						
SONM				PcP	**PcP**	**11 11 50.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=162,slow=4.2,SNR=2.2						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**51.68**	**342**	P	**P**	**11 10 36.1**	**-1.0**
PETK	**Petropavlovsk-**	**59.21**	**21**	P	**P**	**11 11 29.7**	**-1.3**
	comp=Z,4.9nm,1.1s,baz=168,slow=3.4,SNR=5.0						
	comp=Z,4.9nm,1.1s						
PETK	**Petropavlovsk-**	**59.21**	**21**	P	**P**	**11 11 31.4**	**+0.4**
TARG	**Taragay, Kyrgy**	**61.55**	**320**		**P**	**11 11 47.8**	**+0.1**
TARG				IAmb	IAmb	11 11 54.0	
	comp=Z,3.1nm,0.9s						
MKAR	**Makanchi Array**	**61.60**	**326**	P	**P**	**11 11 48.2**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=119,slow=8.7,SNR=38						
MKAR				PcP	**PcP**	**11 12 28.8**	**0.0**
	comp=Z,2.2nm,0.7s,baz=126,slow=4.3,SNR=6.9						
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	**61.60**	**326**		**P**	**11 11 47.6**	**+0.1**
MAKZ	**Makanchi**	**61.78**	**326**		**P**	**11 11 48.7**	**0.0**
MAKZ				IAmb	IAmb	11 11 50.6	
	comp=Z,5.5nm,0.9s						
KDJ	**Kajisay**	**62.15**	**320**	P	**P**	**11 11 52.2**	**+0.7**
KDJ				IAmb	IAmb	11 11 58.1	
	comp=Z,4.3nm,0.8s						
YAK	**Yakutsk**	**62.55**	**1**	P	**P**	**11 11 54.1**	**+0.7**
NRN	**Naryn**	**62.59**	**318**	P	**P**	**11 11 55.0**	**+0.4**
NRN				IAmb	IAmb	11 11 57.1	
	comp=Z,3.3nm,0.7s						
AAK	**Ala-Archa**	**64.14**	**319**	P	**P**	**11 12 04.7**	**0.0**
AAK				IAmb	IAmb	11 12 08.3	
	comp=Z,4.5nm,1.1s						
KBL	**Kabul**	**64.83**	**309**		**P**	**11 12 09.6**	**+0.2**
ZAA0	**Zalesovo Array**	**64.84**	**334**		**P**	**11 12 08.7**	**0.0**
ZAA0				IAmb	IAmb	11 12 09.7	
	comp=Z,4.7nm,1.0s						
ZALV	**Zalesovo Beam**	**64.84**	**334**	P	**P**	**11 12 09.0**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=110,slow=6.8,SNR=12						
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**64.84**	**334**		**P**	**11 12 08.3**	**-0.4**
KURBB	**Kurchatov Arra**	**65.84**	**328**	P	**P**	**11 12 15.7**	**+0.4**
	comp=Z,6.3nm,0.7s,baz=128,slow=6.0,SNR=59						
	comp=Z,6.3nm,0.7s						
KURK	**Kurchatov**	**65.85**	**328**		**P**	**11 12 15.3**	**0.0**
CHGR	**Chuyangaron**	**66.19**	**313**	P	**P**	**11 12 18.1**	**+0.2**
KK31	**Karatay Array**	**66.98**	**318**		**P**	**11 12 23.5**	**+0.7**
KK31				IAmb	IAmb	11 12 25.6	
	comp=Z,3.8nm,0.9s						
KKAR	**Karatay Array**	**66.98**	**318**		**P**	**11 12 23.0**	**+0.2**
BVAR	**Borovoye Array**	**71.41**	**328**	P	**P**	**11 12 50.6**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=126,slow=7.5,SNR=22						
	comp=Z,4.3nm,0.8s						
BORK	**Borovoye**	**71.46**	**328**		**P**	**11 12 50.8**	**+0.5**
BORK				IAmb	IAmb	11 12 52.2	
	comp=Z,6.0nm,0.8s						
AB31	**Akbulak array**	**76.03**	**321**		**P**	**11 13 16.6**	**-0.6**
AB31				IAmb	IAmb	11 13 23.3	
	comp=Z,3.5nm,1.0s						
L16K	**Owhat River**	**82.59**	**27**	P	**P**	**11 13 54.0**	**+1.4**
RAYN	**Ar Rayn**	**82.93**	**294**		**P**	**11 13 54.9**	**-0.4**
RAYN				IAmb	IAmb	11 13 56.5	
	comp=Z,3.5nm,0.8s						
GEVA	**Gevas**	**86.04**	**308**		**P**	**11 14 10.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**124.93**	**286**	PKP	**PKPdf**	**11 20 30.6**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=305,slow=1.0,SNR=4.4						

*IDC **19** 11:52:58.1±1.1,5°.50S×130°.47E,h0km,mb3.9/6, mbtmp3.9/8,ML3.6/2,Error ellipse: s-maj=60.2km s-min=22.3km az=65.0*

*NEIC **19** 11:53:04.2±0.9,5°.44S±0°.05×130°.9E±0°.1,h48km±9km, mb4.2/5,Error ellipse: s-maj=18.0km s-min=7.1km az=78.0*

ISC 19 11:53:04.8±0.8,5°.41S±0°.06×130°.9E±0°.1,h68km,n24, σ1s70/21,mb4.0/7,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.59**	**171**	Pn	**Pn**	**11 53 43.8**	**-0.8**
FAKI	**Fak Fak**	**2.82**	**29**	Pn	**Pn**	**11 53 47.0**	**-0.5**
FAKI				Sn	**Sn**	**11 54 20.6**	**+0.1**
SIJI	**Sorong**	**4.52**	**5**	Pn	**Pn**	**11 54 08.9**	**-2.0**
	1.9nm,0.3s,baz=198,slow=20,SNR=8.8						
SIJI				Sn	**Sn**	**11 54 57.8**	**-4.4**
	5.5nm,0.3s,baz=250,slow=23,SNR=11						
	6.8nm,0.2s						
MTN	**Manton Dam**	**7.39**	**178**		**Pn**	**11 54 49.1**	**-1.1**
KNRA	**Kununurra**	**10.42**	**191**	Pn	**Pn**	**11 55 28.9**	**-2.6**
WB0	**Warramunga Arr**	**14.68**	**167**	Pn	Pn	11 56 23.8	-5.2
COEN	**Coen**	**14.79**	**126**	Pn	**Pn**	**11 56 30.3**	**0.0**
WRA	**Warramunga Arr**	**14.84**	**167**	Pn	Pn	11 56 25.8	-5.2
	0.4nm,0.3s,baz=347,slow=14,SNR=13						
WRA				Sn	Sn	11 59 00.0	-14
	0.7nm,0.3s,baz=6.9,slow=22,SNR=9.9						
WRA	**Warramunga Arr**	**14.84**	**167**		Pn	11 56 24.3	-6.7
WR8	**Warramunga Arr**	**14.88**	**167**	Pn	Pn	11 56 27.3	-4.3
AS31	**Alice Springs**	**18.39**	**171**	P	**P**	**11 57 14.1**	**-0.4**
ASAR	**Alice Springs**	**18.39**	**171**	P	**P**	**11 57 13.3**	**-1.2**
	0.3nm,0.3s,baz=353,slow=12,SNR=23						
ASAR				S	Sn	12 00 29.5	-11
	0.6nm,0.5s,baz=355,slow=28,SNR=8.6						
	1.9nm,0.7s						
ASAR	**Alice Springs**	**18.39**	**171**	P	**P**	**11 57 14.3**	**-0.2**
CTA	**Charters Tower**	**20.89**	**136**	P	Pn	11 57 45.2	+0.4
	3.1nm,0.7s,baz=316,slow=12,SNR=6.3						
	3.1nm,0.7s						
CTAO	**Charters Tower**	**20.89**	**136**	P	**P**	**11 57 41.8**	**+0.1**
CTAO				IAmb	IAmb	11 57 49.4	
	comp=Z,6.5nm,0.9s						
SONM	**Songino Array**	**57.23**	**341**	P	**P**	**12 02 47.6**	**+2.4**
	comp=Z,0.3nm,0.5s,baz=169,slow=7.6,SNR=4.0						
	comp=Z,0.3nm,0.5s						
CASY	**Casey**	**62.41**	**189**	P	**P**	**12 03 21.1**	**+0.8**
MKAR	**Makanchi Array**	**67.39**	**326**	P	**P**	**12 03 54.8**	**+1.7**
	comp=Z,1.7nm,0.6s,baz=115,slow=7.5,SNR=18						
	comp=Z,1.7nm,0.6s						
MAKZ	**Makanchi**	**67.58**	**326**	P	**P**	**12 03 55.7**	**+1.4**
MAKZ				IAmb	IAmb	12 03 56.5	
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**70.56**	**333**	P	**P**	**12 04 14.0**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=134,slow=6.2,SNR=2.1						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**70.56**	**333**	P	**P**	**12 04 13.3**	**+0.8**
KURBB	**Kurchatov Arra**	**71.63**	**328**	P	**P**	**12 04 20.5**	**+1.5**
	comp=Z,1.2nm,0.6s,baz=129,slow=5.1,SNR=10						
	comp=Z,1.2nm,0.6s						
KURK	**Kurchatov**	**71.63**	**328**	P	**P**	**12 04 19.5**	**

MT02				eS		Sn	11 53 59.1	-1.1
BO04	**La Punta**	**0.93**	**204**	*i* P		**Pb**	**11 53 46.8**	**-0.7**
BO04				eS		Sn	11 54 00.6	-2.0
MT09	**Talagante**	**0.94**	**228**	*i* P		**Pb**	**11 53 47.5**	**-0.4**
VA06	**Catapilco**	**1.12**	**301**	*eP*		**Pn**	**11 53 51.0**	**-0.3**
VA06				eS		Sn	**11 54 07.6**	**+0.4**
VA06				IAML			11 54 09.2	
	comp=N,4μm,0.4s							
MT01	**Popeta**	**1.17**	**232**	*i* P		**Pn**	**11 53 51.1**	**-0.9**
MT01	**Popeta**	**1.17**	**232**	*eP*		**Pn**	**11 53 51.1**	**-0.9**
MT01				eS		Sn	**11 54 08.0**	**-0.4**
MT01				IAML			11 54 09.1	
	comp=Z,1μm,0.3s							
ASAL	**Salagasta**	**1.23**	**64**	*eP*		**Pn**	**11 53 51.5**	**-1.4**
ASAL				eS		**Sb**	**11 54 07.5**	**-1.6**
VA01	**Torpederas**	**1.26**	**275**	*eP*		**Pg**	**11 53 53.8**	**+0.9**
VA01				IAML			11 54 13.1	
	comp=N,3μm,0.1s							
VA01	**Torpederas**	**1.26**	**275**	*eP*		**Pg**	**11 53 54.0**	**+1.0**
VA01				eS		Sn	**11 54 12.8**	**+2.1**
VA01				IAML			11 54 13.2	
	comp=Z,2μm,0.5s							
CO04	**Los Peladeros**	**1.30**	**327**	*eP*		**Pg**	**11 53 53.9**	**+0.2**
VA05	**Santo Domingo**	**1.33**	**247**	IAML			11 54 22.4	
	comp=E,2μm,0.5s							
BO01	**Tunca**	**1.47**	**212**	*i* P		**Pb**	**11 53 56.0**	**-0.6**
BO01				⇑*iP*		**Pb**	**11 53 56.1**	**-0.6**
BO01	**Tunca**	**1.47**	**212**	*eP*		**Pb**	**11 53 56.1**	**-0.6**
BO01				eS		**Sg**	**11 54 17.6**	**+1.6**
BO01				IAML			11 54 17.8	
	comp=Z,558nm,0.5s							
RTLS	**Leoncito**	**1.52**	**29**	*eP*		**Pb**	**11 53 57.6**	**-0.2**
RTLS				eS		**Sg**	**11 54 18.4**	**+0.7**
RTLS				IAML			11 54 20.6	
	comp=Z,2μm,1.0s							
BO02	**Sierra Bellavi**	**1.73**	**197**	⇓*iP*		**Pb**	**11 54 00.6**	**-0.6**
BO02	**Sierra Bellavi**	**1.73**	**197**	*eP*		**Pb**	**11 54 00.8**	**-0.4**
BO02				eS		**Sg**	**11 54 25.3**	**+0.9**
BO02				IAML			11 54 26.0	
	comp=Z,1μm,0.5s							
ZON	**Zonda**	**2.02**	**38**	*eP*		**Pg**	**11 54 07.0**	**-0.5**
ZON				eS		**Sg**	**11 54 35.1**	**+1.4**
ZON				IAML			11 54 39.2	
	comp=Z,266nm,1.0s							
CO02	**Combarbal**	**2.06**	**339**	*eP*		**Pb**	**11 54 06.6**	**-0.3**
CO02	**Combarbal**	**2.06**	**339**	*eP*		**Pb**	**11 54 06.8**	**-0.1**
CO02				eS		**Sg**	**11 54 36.0**	**+0.9**
CO02				IAML			11 54 39.8	
	comp=Z,624nm,0.6s							
SJA	**San Juan**	**2.10**	**40**	eS		**Sg**	**11 54 37.8**	**+1.7**
SJA				IAML			11 54 41.5	
	comp=Z,438nm,0.3s							
RFA	**San Rafael**	**2.15**	**140**	*eP*		**Pb**	**11 54 07.6**	**-0.7**
RFA				eS		**Sb**	**11 54 36.5**	**+1.2**
RFA				IAML			11 54 44.0	
	comp=Z,635nm,0.5s							
CFA	**Coronel Fontan**	**2.23**	**47**	Pg		**Pb**	**11 54 09.5**	**-0.1**
	comp=Z,24nm,0.3s,baz=229,slow=22,SNR=298							
CFA				Lg		Lg	11 54 38.3	
	comp=Z,64nm,0.3s,baz=239,slow=20,SNR=18							
CFA	**Coronel Fontan**	**2.23**	**47**	*eP*		**Pb**	**11 54 09.6**	**-0.1**
CFA				eS		**Sg**	**11 54 40.3**	**0.0**
CFA				IAML			11 54 43.0	
	comp=Z,351nm,0.2s							
RTLL	**Cerro Villicun**	**2.30**	**39**	*eP*		**Pb**	**11 54 11.1**	**+0.3**
RTLL				eS		**Sg**	**11 54 42.2**	**-0.4**
RTLL				IAML			11 54 44.9	
	comp=Z,712nm,0.7s							
CO03	**El Pedregal**	**2.34**	**349**	*eP*		**Pb**	**11 54 12.3**	**+0.7**
CO03	**El Pedregal**	**2.34**	**349**	*eP*		**Pb**	**11 54 12.3**	**+0.7**
CO03				eS		**Sg**	**11 54 43.0**	**-1.0**
CO03				IAML			11 54 49.6	
	comp=Z,574nm,1.1s							
GO05	**Hualane**	**2.38**	**218**	IAML			11 54 47.4	
	comp=E,942nm,0.3s							
GO05	**Hualane**	**2.38**	**218**	*eP*		**Pb**	**11 54 11.2**	**-1.0**
GO05				eS		**Sg**	**11 54 43.8**	**-1.4**
GO05				IAML			11 54 49.0	
	comp=Z,676nm,0.7s							
ACHE	**Chepes**	**3.56**	**57**	*eP*		**Pn**	**11 54 28.0**	**+3.1**
MRA	**San Martin**	**3.80**	**80**	eS		**Sb**	**11 55 20.6**	**-2.4**
MRA				IAML			11 55 27.1	
	comp=Z,442nm,0.7s							
H03N1	**Juan Fernandez**	**7.34**	**265**	T		T	12 02 11.7	
	baz=86,slow=73,SNR=106							
H03S1	**Juan Fernandez**	**7.35**	**262**	T		T	12 01 41.8	
	baz=84,slow=75,SNR=58							
H03S3	**Juan Fernandez**	**7.35**	**262**	T		T	12 01 43.0	
	baz=84,slow=75,SNR=51							
H03N3	**Juan Fernandez**	**7.35**	**265**	T		T	12 02 10.9	
	baz=86,slow=73,SNR=110							
H03N2	**Juan Fernandez**	**7.36**	**265**	T		T	12 02 12.1	
	baz=86,slow=73,SNR=114							
H03S2	**Juan Fernandez**	**7.37**	**262**	T		T	12 01 43.1	
	baz=84,slow=75,SNR=70							
PLCA	**Paso Flores**	**7.58**	**182**	Pn		**Pn**	**11 55 20.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=3.4,slow=9.5,SNR=5.3							
PLCA				Pg		**Pb**	**11 55 43.5**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=335,slow=8.6,SNR=6.0							
PLCA				Lg		Lg	11 57 27.1	
	comp=Z,0.1nm,0.3s,baz=81,slow=15,SNR=2.4							
PLCA				LR		LR	11 58 31.8	
	comp=Z,259nm,20.6s,baz=15,slow=40							
	comp=Z,0.9nm,0.6s							
CPUP	**Villa Florida**	**13.04**	**62**	Pn		**Pn**	**11 56 34.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=4.4							
CPUP				Lg		Lg	12 00 16.0	
	comp=Z,0.2nm,0.3s,baz=169,slow=20,SNR=1.9							
	comp=Z,2.4nm,0.9s							
LPAZ	**La Paz**	**16.88**	**7**	Pn		**P**	**11 57 28.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=193,slow=7.2,SNR=4.2							
	comp=Z,0.4nm,0.4s							
SIV	**San Ignacio**	**18.95**	**28**	P		**Pn**	**11 57 51.3**	**-0.4**
	baz=181,slow=15,SNR=5.8							
	comp=Z,1.0nm,0.8s							
TXAR	**Lajitas Array**	**69.78**	**329**	P		**P**	**12 04 42.4**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=150,slow=6.9,SNR=4.2							
	comp=Z,0.1nm,0.4s							
DBIC	**Dimbokro**	**73.41**	**70**	P		**P**	**12 05 03.0**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=238,slow=9.5,SNR=3.6							
	comp=Z,2.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**82.43**	**69**	P		**P**	**12 05 52.9**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=238,slow=6.1,SNR=8.2							
	comp=Z,1.8nm,0.8s							
BVAR	**Borovoye Array**	**145.58**	**43**	PKPbc		**PKPab**	**12 13 08.5**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=300,slow=2.8,SNR=2.7							
KURBB	**Kurchatov Arra**	**151.16**	**43**	PKPbc		**PKiKP**	**12 13 23.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=300,slow=2.5,SNR=4.9							
ZALV	**Zalesovo Beam**	**152.65**	**33**	PKPbc		**PKiKP**	**12 13 25.6**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=294,slow=4.7,SNR=5.2							
MKAR	**Makanchi Array**	**155.01**	**49**	PKPbc	PKPdf		12 13 31.3	+8.5
	comp=Z,0.1nm,0.6s,baz=274,slow=3.8,SNR=1.5							
MKAR				PKPab		**PKPab**	**12 13 48.4**	**+1.2**
	comp=Z,0.3nm,1.0s,baz=318,slow=1.9,SNR=1.8							

TAP **19** *11:55:08.0,23.99N×121.00E,h17km,ML4.5,B*
ASIES **19** *11:55:08.5,23.99N×121.01E,h16km,Mw4.0,Fault plane solution: NP1:*φ*s335.00000°,*δ*27.00000°,*λ*56.00000°. NP2:*φ*s192.00000°,*δ*68.00000°,*λ*106.00000°.*
JMA **19** *11:55:08.6±0.2,24.0N±0.3×121.0E±0.9,h11km±4km, MV4.0/17,TAIWAN REGION*
NEIC **19** *11:55:08.1±1.5,23.99N±0.03×121.00E±0.04,h18km±3km, mb4.1/10,Error ellipse: s-maj=6.3km s-min=2.4km az=128.0*
IDC **19** *11:55:11.3±3.4,23.95N×121.15E,h54km±34km,mb3.4/10, mbtmp3.7/13,ML4.1/2,MS3.2/6,Error ellipse: s-maj=22.6km s-min=14.8km az=51.0*
BJI **19** *11:55:11.1,24.14N×120.54E,h16km,mB4.4/3,mb4.2/7, ML3.9/2,Ms4.0/4,Ms7 4.0/5*
ISC 19 11:55:07.9±0.6,23.993N±0.010×121.01E±0.01, h17km±3km,n257,σ0s93/416,mb3.8/16,MS3.1/4,18C-62D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPL	**Puli Township**	**0.05**	**290**	⇑*iP*	**Pg**	**11 55 11.4**	**+0.3**
WPL				*i* S	**Sg**	**11 55 13.5**	**+0.3**
DPDB	**Guoxing**	**0.09**	**297**	⇑P	**Pg**	**11 55 11.8**	**+0.3**
DPDB				*i* S	**Sg**	**11 55 14.6**	**+0.7**
WUSB	**Renai**	**0.10**	**91**	⇓*iP*	**Pg**	**11 55 12.1**	**+0.5**
WUSB				*i* S	**Sg**	**11 55 14.8**	**+0.8**
WCS	**Beigang Elemen**	**0.11**	**305**	⇑P	**Pb**	**11 55 12.0**	**+0.4**
WCS				*i* S	**Sg**	**11 55 14.7**	**+0.6**
SMLT	**Sun Moon Lake**	**0.15**	**223**	⇑*iP*	**Pg**	**11 55 12.5**	**+0.3**
SMLT				*i* S	**Sg**	**11 55 15.4**	**+0.4**
OWD	**Renai**	**0.15**	**104**	⇓P	**Pg**	**11 55 12.8**	**+0.5**
OWD				S	**Sg**	**11 55 15.9**	**+0.7**
TYC	**Yuchr**	**0.17**	**238**	⇑*iP*	**Pg**	**11 55 12.6**	**+0.3**
TYC				*i* S	**Sg**	**11 55 15.6**	**+0.3**
SSLB	**Suanglung**	**0.21**	**195**		**Pg**	**11 55 13.0**	**0.0**
SSLB				Sg	**Sg**	**11 55 16.1**	**-0.4**
SSLB	**Suanglung**	**0.21**	**195**	P	**Pg**	**11 55 13.0**	**0.0**
SSLB	**Suanglung**	**0.21**	**195**	S	**Sg**	**11 55 16.3**	**-0.1**
SSLB	**Suanglung**	**0.21**	**195**	⇑*iP*	**Pg**	**11 55 13.1**	**0.0**
SSLB				*i* S	**Sg**	**11 55 16.3**	**-0.1**
VWDT	**VWDT**	**0.27**	**154**	⇓*iP*	**Pg**	**11 55 14.6**	**+0.8**
VWDT				*i* S	**Sg**	**11 55 18.5**	**+0.7**
WHF	**Hehuan Shan**	**0.28**	**57**	⇓P	**Pb**	**11 55 15.3**	**+0.6**
WHF				S	**Sb**	**11 55 19.8**	**+0.6**
WHP	**Taichung City**	**0.29**	**348**	⇑*iP*	**Pg**	**11 55 14.8**	**+0.5**
WHP				S	**Sb**	**11 55 20.0**	**+0.7**
TDCB	**Techi**	**0.29**	**27**	⇑*iP*	**Pg**	**11 55 14.7**	**+0.3**
TDCB				S	**Sg**	**11 55 18.6**	**-0.1**
WWF	**Wufeng**	**0.29**	**280**	⇓*eP*	**Pb**	**11 55 15.5**	**+0.9**
TWT	**Tachien**	**0.30**	**30**	P	**Pg**	**11 55 14.8**	**+0.3**
TWT				*i* S	**Sg**	**11 55 18.7**	**-0.3**
WNT1	**Nantou City**	**0.32**	**254**	⇓*eP*	**Pb**	**11 55 15.9**	**+0.8**
WNT1				*eS*	**Sb**	**11 55 21.7**	**+1.8**
WNT	**Mingjian**	**0.32**	**249**	⇓*iP*	**Pb**	**11 55 15.8**	**+0.7**
WNT				*eS*	**Sb**	**11 55 21.3**	**+1.3**
FUSS	**Fushou**	**0.33**	**40**	⇓*iP*	**Pg**	**11 55 15.4**	**+0.4**
FUSS				S	**Sg**	**11 55 20.1**	**+0.2**
WHYT	**Xinyi Township**	**0.33**	**206**	⇑P	**Pg**	**11 55 15.3**	**+0.4**
WHYT				S	**Sb**	**11 55 20.8**	**+0.4**
TCU	**Taichung**	**0.34**	**297**	⇓*iP*	**Pb**	**11 55 15.4**	**+0.9**
TCU				*eS*	**Sb**	**11 55 22.3**	**+1.6**
LXIB	**Xiulin Townshi**	**0.37**	**86**	⇓*iP*	**Pg**	**11 55 16.2**	**+0.6**
LXIB				*eS*	**Sb**	**11 55 22.6**	**+1.1**
WYL	**Yuanlin Townsh**	**0.40**	**265**	*eP*	**Pb**	**11 55 17.3**	**+0.9**
WYL				*eS*	**Sb**	**11 55 23.9**	**+1.7**
TWQ1	**Liyutan**	**0.41**	**328**	⇑*iP*	**Pb**	**11 55 17.7**	**+0.9**
TWQ1				S	**Sb**	**11 55 24.1**	**+1.3**
ESL	**Shilin**	**0.42**	**115**	⇓*iP*	**Pg**	**11 55 17.2**	**+0.7**
ESL				*i* S	**Sg**	**11 55 22.9**	**+0.5**
WCHH	**Zhanghua**	**0.42**	**282**	⇓P	**Pb**	**11 55 17.7**	**+0.8**
WCHH				*eS*	**Sb**	**11 55 24.8**	**+1.8**
WCH1	**Changhua City**	**0.43**	**281**	*eP*	**Pb**	**11 55 17.8**	**+0.7**
WCH1				*eS*	**Sb**	**11 55 25.1**	**+1.8**
WARBT	**Fenglin Townsh**	**0.44**	**129**	⇓*iP*	**Pg**	**11 55 17.3**	**+0.4**
WARBT				*eS*	**Sg**	**11 55 22.8**	**-0.1**
ETM	**Tongmen**	**0.44**	**94**	⇓*iP*	**Pg**	**11 55 17.3**	**+0.5**
ETM				*i* S	**Sg**	**11 55 23.6**	**+0.7**
ETLH	**Xiulin Townshi**	**0.48**	**64**	⇓P	**Pg**	**11 55 18.1**	**+0.5**
ETLH				*eS*	**Sg**	**11 55 24.7**	**+0.5**
NSY	**Sanyi**	**0.48**	**331**	*i* P	**Pb**	**11 55 19.1**	**+1.2**
NSY				S	**Sb**	**11 55 26.4**	**+1.7**
WDJ	**Dajia District**	**0.49**	**316**	⇓P	**Pb**	**11 55 19.4**	**+1.4**
WDJ				*eS*	**Sb**	**11 55 27.2**	**+2.3**
CHN5	**Tsauling**	**0.50**	**218**	⇓*iP*	**Pg**	**11 55 18.7**	**+0.7**
CHN5				*i* S	**Sb**	**11 55 26.3**	**+1.0**
EGFH	**Guangfu**	**0.50**	**130**	*eP*	**Pg**	**11 55 18.2**	**+0.3**
EGFH				*eS*	**Sg**	**11 55 24.9**	**+0.2**
YUS	**Yu-Shan**	**0.51**	**186**	P	**Pg**	**11 55 18.4**	**+0.2**
YUS				S	**Sg**	**11 55 25.9**	**+0.8**
WGK	**Gukeng**	**0.51**	**234**	⇓*iP*	**Pb**	**11 55 19.1**	**+0.7**
WGK				*i* S	**Sb**	**11 55 27.4**	**+1.8**
WDL	**Douliou City**	**0.51**	**238**	P	**Pb**	**11 55 19.2**	**+0.7**
WDL				S	**Sb**	**11 55 27.4**	**+1.9**
ALS	**Alishan**	**0.52**	**202**	⇓*iP*	**Pg**	**11 55 19.0**	**+0.6**
ALS				*i* S	**Sb**	**11 55 26.6**	**+0.6**
WDLH	**Douliu**	**0.53**	**235**	⇓P	**Pb**	**11 55 19.4**	**+0.7**
WDLH				*eS*	**Sb**	**11 55 27.4**	**+1.4**
TWD	**Chiawan**	**0.54**	**81**	⇓*iP*	**Pg**	**11 55 19.1**	**+0.4**
TWD				*i* S	**Sg**	**11 55 26.6**	**+0.7**
HWA	**Hwalien**	**0.54**	**92**	⇓P	**Pb**	**11 55 19.7**	**+0.8**
HWA				S	**Sb**	**11 55 27.6**	**+1.2**
SHUL	**Shoufeng**	**0.54**	**112**	⇓P	**Pb**	**11 55 19.7**	**+0.8**
SHUL				S	**Sb**	**11 55 27.3**	**+0.9**
NNSB	**Datong**	**0.55**	**38**	⇓*iP*	**Pg**	**11 55 18.9**	**0.0**
NNSB				*eS*	**Sg**	**11 55 25.9**	**-0.4**
TEYL	**Yanliau Villag**	**0.55**	**103**	⇓P	**Pg**	**11 55 19.6**	**+0.7**
TEYL				*eS*	**Sb**	**11 55 27.5**	**+0.9**
NNS	**Nan Shan**	**0.55**	**36**	⇓*iP*	**Pg**	**11 55 19.1**	**+0.1**
NNS				*eS*	**Sg**	**11 55 26.4**	**0.0**
TEGC	**Jichi Village**	**0.56**	**120**	⇓P	**Pb**	**11 55 20.1**	**+0.9**
TEGC				*eS*	**Sb**	**11 55 28.2**	**+1.3**
EHY	**Hungye**	**0.56**	**150**	P	**Pg**	**11 55 20.4**	**+0.4**
EHY				S	**Sg**	**11 55 26.8**	**+0.2**
NACB	**Ninganchiao**	**0.56**	**71**		**Pg**	**11 55 19.3**	**+0.3**
NACB				Sg	**Sg**	**11 55 27.1**	**+0.5**
NACB	**Ninganchiao**	**0.56**	**71**	P	**Pg**	**11 55 19.2**	**+0.1**
NACB	**Ninganchiao**	**0.56**	**71**	S	**Sb**	**11 55 27.7**	**+0.7**
NACB	**Ninganchiao**	**0.56**	**71**	⇓*iP*	**Pg**	**11 55 19.4**	**+0.3**
NACB				*eS*	**Sg**	**11 55 27.1**	**+0.5**
NMLH	**Miaoli**	**0.58**	**340**	⇓P	**Pb**	**11 55 21.1**	**+1.5**
NMLH				*eS*	**Sb**	**11 55 29.6**	**+2.1**
ETL	**Fush Village**	**0.58**	**73**	P	**Pg**	**11 55 19.7**	**+0.2**
ETL				S	**Sb**	**11 55 28.3**	**+0.7**
EHYH	**Wanrong**	**0.58**	**148**	⇓*eP*	**Pg**	**11 55 19.9**	**+0.4**
EHYH				S	**Sg**	**11 55 27.8**	**+0.5**
WRL	**Guolierlin Hig**	**0.59**	**261**	⇓*eP*	**Pg**	**11 55 20.1**	**+0.5**
RLNB	**Erlin**	**0.61**	**260**	⇓P	**Pg**	**11 55 20.4**	**+0.5**
RLNB				S	**Sb**	**11 55 29.0**	**+0.8**
HGSD	**Ruisui**	**0.62**	**143**	⇓P	**Pb**	**11 55 21.3**	**+0.7**
HGSD				S	**Sg**	**11 55 29.3**	**+0.7**
NSTT	**Nanjuang**	**0.64**	**359**	⇑*iP*	**Pb**	**11 55 21.4**	**+0.9**
NSTT				*i* S	**Sb**	**11 55 30.2**	**+1.1**
NFF	**Wufeng Townshi**	**0.64**	**9**	*eP*	**Pg**	**11 55 21.2**	**+0.6**
NFF				S	**Sb**	**11 55 30.1**	**+0.7**
WTK	**Tuku**	**0.65**	**242**	*eP*	**Pg**	**11 55 21.2**	**+0.6**
WTK				*eS*	**Sb**	**11 55 31.2**	**+1.8**
LIOB	**Emei**	**0.65**	**0**	⇑P	**Pb**	**11 55 21.8**	**+1.0**
LIOB				*i* S	**Sb**	**11 55 30.8**	**+1.2**
YULB	**Yu-li**	**0.65**	**156**		**Pg**	**11 55 21.1**	**+0.3**
YULB				Sg	**Sg**	**11 55 29.4**	**-0.1**
YULB	**Yu-li**	**0.65**	**156**	P	**Pg**	**11 55 21.1**	**+0.3**
YULB	**Yu-li**	**0.65**	**156**	S	**Sb**	**11 55 30.4**	**+0.8**
YULB	**Yu-li**	**0.65**	**156**	⇓P	**Pg**	**11 55 21.0**	**+0.3**
YULB				*eS*	**Sg**	**11 55 29.9**	**+0.4**
WCKO	**Fanlu**	**0.67**	**214**	⇓P	**Pg**	**11 55 21.4**	**+0.3**
WCKO				*eS*	**Sb**	**11 55 31.0**	**+1.0**
CHN2	**Minshiung**	**0.67**	**227**	⇓P	**Pb**	**11 55 21.0**	**+0.7**
CHN2				S	**Sb**	**11 55 31.8**	**+1.7**
WTCT	**Ta-ch'eng**	**0.68**	**259**	*eP*	**Pb**	**11 55 21.5**	**+0.2**
WTCT				*eS*	**Sb**	**11 55 31.9**	**+1.5**
TWF1	**Yuli**	**0.69**	**158**	⇓P	**Pb**	**11 55 21.8**	**+0.3**
TWF1				S	**Sb**	**11 55 31.5**	**+0.8**
NJN	**Zhunan**	**0.70**	**349**	*eP*	**Pg**	**11 55 22.7**	**+1.1**
NJN				*eS*	**Sn**	**11 55 33.0**	**-0.3**
EYUL	**Yuli**	**0.70**	**156**	P	**Pb**	**11 55 22.2**	**+0.6**
EYUL				*eS*	**Sb**	**11 55 31.6**	**+0.6**
LATG	**Datong**	**0.71**	**41**	⇓*iP*	**Pb**	**11 55 21.8**	**-0.1**
LATG				*eS*	**Sg**	**11 55 31.2**	**-0.4**
CHY	**Chiayi**	**0.73**	**228**	⇓P	**Pb**	**11 55 22.5**	**+0.4**
CHY				S	**Sg**	**11 55 33.2**	**+1.3**
EHP	**Heping Village**	**0.74**	**65**	*eP*	**Pb**	**11 55 22.5**	**+0.3**
EHP				*eS*	**Sg**	**11 55 33.3**	**+1.1**
NJD	**Zhudong**	**0.74**	**5**	*eP*	**Pn**	**11 55 23.9**	**+0.3**
NJD				*eS*	**Sn**	**11 55 34.4**	**0.0**
EAHA	**Aohua**	**0.74**	**63**	*eP*	**Pb**	**11 55 22.4**	**+0.4**
EAHA				*eS*	**Sg**	**11 55 33.2**	**+0.9**
CHN4	**Tsaushan**	**0.75**	**211**	⇓P	**Pb**	**11 55 22.8**	**+0.4**
CHN4				*eS*	**Sg**	**11 55 33.7**	**+1.2**
WMLT	**Mailiao**	**0.75**	**256**	*eP*	**Pb**	**11 55 22.6**	**+0.2**
WMLT				*eS*	**Sg**	**11 55 33.7**	**+1.3**
NSK	**Sanguang**	**0.75**	**25**	⇓*iP*	**Pb**	**11 55 22.8**	**+0.2**
NSK				*eS*	**Sb**	**11 55 31.8**	**-0.6**
YHNB	**Yeheng**	**0.75**	**26**		**Pb**	**11 55 22.7**	**+0.2**
YHNB				Sg	**Sb**	**11 55 32.0**	**-0.4**
YHNB	**Yeheng**	**0.75**	**26**	P	**Pb**	**11 55 22.8**	**+0.2**
YHNB	**Yeheng**	**0.75**	**26**	S	**Sb**	**11 55 32.1**	**-0.4**
YHNB	**Yeheng**	**0.75**	**26**	⇓*iP*	**Pb**	**11 55 22.8**	**+0.2**
YHNB				S	**Sb**	**11 55 31.8**	**-0.7**
NDT	**Datong Townshi**	**0.76**	**37**	⇓P	**Pb**	**11 55 22.6**	**0.0**
TPUB	**Ta-pu**	**0.77**	**207**		**Pb**	**11 55 23.0**	**+0.2**
TPUB	**Ta-pu**	**0.77**	**207**	P	**Pb**	**11 55 23.1**	**+0.2**
TPUB	**Ta-pu**	**0.77**	**207**	S	**Sg**	**11 55 34.0**	**+0.6**
TPUB	**Ta-pu**	**0.77**	**207**	⇓*iP*	**Pb**	**11 55 23.1**	**+0.2**
TPUB				S	**Sg**	**11 55 33.9**	**+0.6**
HSN1	**Hsinchu**	**0.78**	**0**	*eP*	**Pn**	**11 55 24.4**	**+0.2**
HSN1				*eS*	**Sn**	**11 55 35.8**	**+0.4**
ECBN	**Changbin**	**0.79**	**149**	⇑*eP*	**Pn**	**11 55 24.4**	**+0.3**
ECBN				*eS*	**Sn**	**11 55 35.9**	**+0.5**
ENA	**Nanau**	**0.79**	**57**	⇓P	**Pb**	**11 55 23.9**	**+0.7**
ENA				*eS*	**Sb**	**11 55 34.5**	**+0.8**
KSHI	**Guanxi Townshi**	**0.79**	**11**	*eP*	**Pg**	**11 55 24.5**	**+1.0**
KSHI				*eS*	**Sn**	**11 55 36.0**	**+0.2**
SBCB	**Hsinchu**	**0.80**	**358**	*eP*	**Pn**	**11 55 24.6**	**+0.3**
SBCB				*eS*	**Sn**	**11 55 36.5**	**+0.7**
ELDTW	**Lidau**	**0.80**	**180**	P	**Pb**	**11 55 23.5**	**+0.1**
ELDTW				*eS*	**Sb**	**11 55 34.5**	**+0.6**
HSN	**Hsinchu**	**0.81**	**357**	*eP*	**Pg**	**11 55 24.7**	**+1.0**
HSN				S	**Sn**	**11 55 37.4**	**+1.4**
WSF	**Szhu**	**0.81**	**244**	*eP*	**Pb**	**11 55 23.4**	**0.0**
WSF				S	**Sg**	**11 55 35.5**	**+1.2**
ENTT	**Nioudou**	**0.82**	**38**	⇓P	**Pb**	**11 55 23.7**	**0.0**
ENTT				*eS*	**Sb**	**11 55 34.7**	**+0.3**
WTP	**Ta-pu**	**0.83**	**206**	*eP*	**Pb**	**11 55 23.9**	**+0.1**
WTP				S	**Sg**	**11 55 35.6**	**+0.5**
EWUT	**Wuta**	**0.83**	**57**	⇓P	**Pb**	**11 55 24.2**	**+0.4**
EWUT				*eS*	**Sb**	**11 55 35.5**	**+0.7**
FULB	**Fuli**	**0.83**	**162**	⇓*eP*	**Pg**	**11 55 25.1**	**+0.9**
FULB				*eS*	**Sn**	**11 55 37.3**	**+0.6**
STYH	**Taoyuan**	**0.85**	**195**	⇓*eP*	**Pb**	**11 55 24.3**	**+0.2**
STYH				*eS*	**Sb**	**11 55 35.9**	**+0.7**
WSL	**Shuilin Townsh**	**0.86**	**237**	*eP*	**Pb**	**11 55 24.5**	**+0.2**
WSL				*eS*	**Sn**	**11 55 37.4**	**+0.1**
EHD	**Haiduan**	**0.86**	**168**	⇑*eP*	**Pg**	**11 55 25.4**	**+0.7**
STYT	**Tauyuan**	**0.86**	**196**	⇓P	**Pb**	**11 55 24.7**	**+0.3**
STYT				*eS*	**Sb**	**11 55 36.3**	**+0.7**
TWK	**Hsinying**	**0.87**	**214**	⇓*iP*	**Pb**	**11 55 24.7**	**+0.2**
TWK				S	**Sg**	**11 55 37.4**	**+1.1**
CHKH	**Chenggong**	**0.87**	**156**	*eP*	**Pg**	**11 55 25.5**	**+0.6**
CHKH				*eS*	**Sn**	**11 55 38.4**	**+0.5**
NWLT	**Wulai**	**0.90**	**30**	⇓*iP*	**Pb**	**11 55 25.2**	**+0.2**
NWLT				*eS*	**Sb**	**11 55 37.2**	**+0.4**
SNST	**Tainan City**	**0.90**	**212**	*eP*	**Pn**	**11 55 26.9**	**+1.1**
NDS	**Dongshan**	**0.91**	**45**	⇓*eP*	**Pb**	**11 55 25.2**	**+0.1**
NDS				*eS*	**Sb**	**11 55 37.6**	**+0.8**
ECS	**Chishang**	**0.91**	**168**	⇑*eP*	**Pg**	**11 55 26.2**	**+0.5**
ECS				S	**Sn**	**11 55 39.4**	**+0.7**
CHN1	**Nanshi**	**0.92**	**209**	*eP*	**Pb**	**11 55 25.5**	**+0.2**
CHN1				S	**Sg**	**11 55 38.4**	**+0.5**
ICHU	**Yijhu**	**0.92**	**227**	*eP*	**Pb**	**11 55 25.8**	**+0.4**
ICHU				S	**Sn**	**11 55 39.5**	**+0.7**
FUSB	**Fushanzhiwuyua**	**0.93**	**34**	⇓P	**Pb**	**11 55 25.6**	**+0.1**
FU

TAWH	**Dawu Township**	**1.65**	**184**	*eP*		**Pn**	**11 55 36.8**	**+0.8**
SCZT	**Fangliau**	**1.65**	**193**	*eP*		**Pn**	**11 55 37.0**	**+0.9**
SCZT				*eS*		**Sb**	**11 55 58.6**	**+0.2**
VWUC	**VWUC**	**1.74**	**305**	⇓*eP*		**Pn**	**11 55 36.0**	**-1.3**
WLCH	**Liuqiu**	**1.74**	**200**	*eP*		**Pb**	**11 55 39.8**	**+0.6**
SLIU	**Shizi**	**1.78**	**186**	*eP*		**Pn**	**11 55 39.2**	**+1.4**
JYNG	**Yonagunijimaku**	**1.82**	**75**	P		**Pn**	**11 55 39.6**	**+1.2**
JYNG				*eS*		**Sb**	**11 56 03.1**	**-0.1**
YOJ	**Yonaguni jima**	**1.88**	**75**			**Pn**	**11 55 40.7**	**+1.4**
YOJ	**Yonaguni jima**	**1.88**	**75**	P		**Pn**	**11 55 40.3**	**+1.0**
YOJ	**Yonaguni jima**	**1.88**	**75**	*eP*		**Pn**	**11 55 40.5**	**+1.2**
YOJ				S		**Sn**	**11 56 04.4**	**+1.8**
YOJ	**Yonaguni jima**	**1.88**	**75**	*eP*		**Pn**	**11 55 40.3**	**+1.0**
YOJ				*eS*		**Sn**	**11 56 04.4**	**+1.8**
PCYT	**Pengchaiyu**	**1.89**	**30**	*eP*		**Pn**	**11 55 40.8**	**+1.5**
SMST	**Manzhou Townsh**	**1.97**	**185**	*eP*		**Pn**	**11 55 41.5**	**+1.0**
SMST				*eS*		**Sn**	**11 56 06.2**	**+1.4**
HEN	**Hengchun**	**2.00**	**187**	*eP*		**Pb**	**11 55 43.1**	**-0.5**
LAY	**Lan-yu**	**2.01**	**166**	*eP*		**Pn**	**11 55 41.3**	**+0.3**
LAY				*eS*		**Sn**	**11 56 07.3**	**+1.6**
PTMZ	**Houxiangcun**	**2.01**	**302**	*eP*		**Pn**	**11 55 39.8**	**-1.2**
TWK1	**Hengchun**	**2.05**	**185**	*eP*		**Pn**	**11 55 43.2**	**+1.6**
LYUB	**Lan-yu**	**2.05**	**165**	*eP*		**Pn**	**11 55 40.8**	**-0.7**
LYUB				S		**Sn**	**11 56 07.6**	**+0.9**
TWKBT	**Hengchun**	**2.05**	**185**	*eP*		**Pn**	**11 55 42.9**	**+1.3**
TWKBT				*eS*		**Sb**	**11 56 09.3**	**-0.6**
TSEB	**Hengchuen, Pin**	**2.09**	**183**	*eP*		**Pn**	**11 55 43.4**	**+1.4**
MATB	**Ma-tsu**	**2.36**	**336**	*eP*		**Pn**	**11 55 44.8**	**-0.9**
KNM	**Kinmen**	**2.39**	**281**	*eP*		**Pn**	**11 55 47.4**	**+1.2**
KNMB	**Chin-men Tao**	**2.44**	**282**			**Pn**	**11 55 46.4**	**-0.5**
KNMB	**Chin-men Tao**	**2.44**	**282**	*eP*		**Pn**	**11 55 46.2**	**-0.7**
IRIF	**Iriomote-Funau**	**2.51**	**82**	P		**Pn**	**11 55 49.1**	**+1.3**
IRIF				S		**Sn**	**11 56 19.0**	**+1.0**
HATJ	**Hateruma jima**	**2.55**	**88**	P		**Pn**	**11 55 49.7**	**+1.2**
HATJ				*eS*		**Sn**	**11 56 21.8**	**+2.6**
JKRS	**Kuro-shima**	**2.75**	**84**	P		**Pn**	**11 55 52.8**	**+1.6**
JKRS				S		**Sn**	**11 56 24.3**	**+0.3**
MHZQ	**Yeshan**	**2.76**	**320**	*eP*		**Pn**	**11 55 51.2**	**-0.1**
LYJJ	**Jianjiangzhen**	**2.79**	**336**	*eP*		**Pn**	**11 55 50.9**	**-0.8**
JIJ	**Ishigaki jima**	**2.88**	**82**	P		**Pn**	**11 55 54.0**	**+1.0**
JIJ				*eS*		**Sn**	**11 56 28.2**	**+1.0**
AXDP	**Jialang**	**2.92**	**289**	*eP*		**Pn**	**11 55 52.8**	**-0.6**
ZPLA	**Ao Xicun**	**2.98**	**269**	⇓P		**Pn**	**11 55 53.9**	**-0.5**
XPSS	**Dashiqiu**	**3.02**	**346**	*eP*		**Pn**	**11 55 54.1**	**-0.8**
JISG	**Ishigakijimahi**	**3.07**	**78**	P		**Pn**	**11 55 56.6**	**+1.1**
JISG				*eS*		**Sn**	**11 56 32.3**	**+0.5**
DSXP	**Dongshan**	**3.30**	**266**	*eP*		**Pn**	**11 55 57.9**	**-0.7**
JTJ	**Tarama**	**3.43**	**78**	P		**Pn**	**11 56 01.8**	**+1.4**
JTJ				S		**Sn**	**11 56 43.8**	**+3.1**
SXFK	**Yanhouchang**	**3.88**	**309**	*eP*		**Pn**	**11 56 06.0**	**-0.8**
JIKM	**Ikemajima**	**3.97**	**76**	*eP*		**Pn**	**11 56 10.8**	**+2.9**
JIKM				*eS*		**Sn**	**11 56 56.8**	**+2.7**
JMJ	**Miyako jima 2**	**3.99**	**77**	P		**Pn**	**11 56 09.6**	**+1.4**
JMJ	**Miyako jima 2**	**3.99**	**77**	*eP*		**Pn**	**11 56 10.2**	**+2.0**
JMJ				*eS*		**Sn**	**11 56 54.9**	**+0.3**
JMJ2	**Miyako jima3**	**4.00**	**78**	*eS*		**Sn**	**11 56 57.3**	**+2.3**
JOW	**Kunigami**	**7.15**	**65**	P		**Pn**	**11 56 52.1**	**+0.4**
	12nm,0.3s,baz=167,slow=11,SNR=64							
JOW				S		**Sn**	**11 58 12.1**	**-0.4**
	3.7nm,0.4s,baz=207,slow=17,SNR=1.1							
	23nm,0.3s							
JOW	**Kunigami**	**7.15**	**65**	P		**Pn**	**11 56 52.1**	**+0.4**
JOW	**Kunigami**	**7.15**	**65**	*eP*		**Pn**	**11 56 52.0**	**+0.4**
XAN	**Xi'an**	**14.55**	**316**	P		**P**	**11 58 40.6**	**+1.1**
XAN				pmax		pmax		
	comp=Z,4.0nm,1.2s							
XAN				LR		LR		
	comp=N,260nm,10.0s							
XAN				LR		LR		
	comp=E,350nm,9.4s							
XAN				LR		LR		
	comp=Z,350nm,9.6s							
KSRS	**Korea Array**	**14.67**	**22**	P		**Pn**	**11 58 35.0**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=200,slow=12,SNR=11							
KSRS				LR		LR	12 03 57.0	
	comp=Z,24nm,21.6s,baz=190,slow=36							
	comp=Z,0.3nm,0.4s							
PZH	**PanZhiHua**	**17.61**	**282**	P		**Pn**	**11 59 12.8**	**+0.1**
HHC	**Hu-ho-hao-te**	**18.58**	**337**	*eP*		**Pn**	**11 59 25.9**	**+1.4**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,67nm,4.9s							
LZDM	**Lanzhou Array**	**19.13**	**313**	P		**Pn**	**11 59 31.9**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=139,slow=14,SNR=4.0							
MJAR	**Matsushiro Arr**	**19.38**	**46**	LR		LR	12 07 16.1	
	comp=Z,61nm,20.2s,baz=206,slow=38							
CMAR	**Chiang Mai Arr**	**21.29**	**259**	P		**P**	**11 59 54.0**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=58,slow=8.6,SNR=5.7							
CMAR				LR		LR	12 09 27.3	
	comp=Z,36nm,19.0s,baz=80,slow=40							
	comp=Z,0.4nm,0.5s							
SONM	**Songino Array**	**26.48**	**338**	P		**P**	**12 00 43.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=155,slow=7.9,SNR=2.1							
SONM				LR		LR	12 12 52.0	
	comp=Z,58nm,20.1s,baz=33,slow=40							
	comp=Z,0.4nm,0.6s							
TLY	**Talaya**	**30.70**	**339**	LR		LR	12 15 18.2	
	comp=Z,46nm,18.5s,baz=336,slow=39							
WMQ	**Urumqi**	**33.67**	**314**	*eP*		**P**	**12 01 49.8**	**+1.9**
WMQ				sP		sP	12 01 57.0	+1.2
WMQ				ScS		ScS	12 12 10.8	-2.1
MTN	**Manton Dam**	**37.92**	**164**	P		**P**	**12 02 22.7**	**-1.8**
MKAR	**Makanchi Array**	**38.37**	**316**	P		**P**	**12 02 28.1**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=110,slow=9.9,SNR=20							
	comp=Z,1.6nm,0.7s							
MAKZ	**Makanchi**	**38.57**	**316**	P		**P**	**12 02 29.3**	**-0.5**
MAKZ				IAmb		IAmb	12 02 37.2	
	comp=Z,2.2nm,1.1s							
ZALV	**Zalesovo Beam**	**40.32**	**327**	P		**P**	**12 02 44.6**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=115,slow=6.5,SNR=2.0							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**40.32**	**327**	P		**P**	**12 02 44.2**	**0.0**
KURK	**Kurchatov**	**42.14**	**320**	P		**P**	**12 02 58.7**	**-0.5**
KURK				IAmb		IAmb	12 03 00.1	
	comp=Z,1.8nm,1.0s							
KURBB	**Kurchatov Arra**	**42.15**	**320**	P		**P**	**12 02 59.3**	**0.0**
	comp=Z,0.3nm,0.2s,baz=82,slow=6.0,SNR=4.1							
	comp=Z,0.3nm,0.2s							
H11N1	**WAKE ISLAND Hy**	**42.66**	**86**	T		T	12 48 20.4	
	baz=283							
H11N2	**WAKE ISLAND Hy**	**42.66**	**86**	T		T	12 48 17.6	
	baz=283							
H11N3	**WAKE ISLAND Hy**	**42.67**	**86**	T		T	12 48 24.5	
	baz=283							
MBWA	**Marble Bar**	**44.90**	**182**	P		**P**	**12 03 20.5**	**-1.2**
MBWA				IAmb		IAmb	12 03 22.9	
	comp=Z,5.9nm,1.0s							
PSA00	**Pilbara Seismi**	**45.31**	**182**	P		**P**	**12 03 23.4**	**-1.5**
WB0	**Warramunga Arr**	**45.41**	**162**	P		**P**	**12 03 23.9**	**-1.8**
WB0				IAmb		IAmb	12 03 31.2	
	comp=Z,4.9nm,1.1s							
WRA	**Warramunga Arr**	**45.56**	**162**	P		**P**	**12 03 24.6**	**-2.4**
	comp=Z,0.6nm,0.4s,baz=343,slow=8.4,SNR=6.4							
WRA				PcP		**PcP**	**12 05 04.1**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=348,slow=3.8,SNR=3.4							
	comp=Z,0.6nm,0.4s							
WRA	**Warramunga Arr**	**45.56**	**162**	P		**P**	**12 03 25.4**	**-1.6**
WR8	**Warramunga Arr**	**45.62**	**162**	P		**P**	**12 03 25.5**	**-2.0**
WR8				IAmb		IAmb	12 03 43.1	
	comp=Z,3.5nm,1.1s							
BVAR	**Borovoye Array**	**47.72**	**321**	P		**P**	**12 03 43.5**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=90,slow=6.1,SNR=2.2							
	comp=Z,0.3nm,0.5s							
AS31	**Alice Springs**	**49.00**	**164**	P		**P**	**12 03 53.3**	**-0.5**
ASAR	**Alice Springs**	**49.00**	**164**	P		**P**	**12 03 52.4**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=345,slow=6.9,SNR=14							
ASAR				PcP		**PcP**	**12 05 16.2**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=342,slow=3.1,SNR=4.3							
	comp=Z,0.5nm,0.3s							
ASAR	**Alice Springs**	**49.00**	**164**	P		**P**	**12 03 52.1**	**-1.7**
AB31	**Akbulak array**	**53.46**	**314**	P		**P**	**12 04 25.4**	**-1.6**
AB31				IAmb		IAmb	12 04 35.6	
	comp=Z,1.0nm,0.9s							
ABKAR	**Akbulak array**	**53.46**	**314**	P		**P**	**12 04 26.6**	**-0.4**
FINES	**FINESS Array B**	**71.53**	**330**	P		**P**	**12 06 27.0**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=86,slow=7.1,SNR=3.7							
	comp=Z,1.2nm,0.7s							
NOA	**NORSAR Array B**	**78.32**	**332**	LR		LR	12 45 21.5	
	comp=Z,52nm,19.9s,baz=330,slow=38							
YKA	**Yellowknife Ar**	**83.20**	**23**	P		**P**	**12 07 30.1**	**-2.8**
	comp=Z,0.2nm,0.6s,baz=309,slow=5.9,SNR=4.2							
	comp=Z,0.2nm,0.6s							

IDC ***19*** *12:05:31.7±9.0, 7°.52S×128°.61E, h163km±94km, mb3.3/2, mbtmp3.8/5, Error ellipse: s-maj=110.7km s-min=29.0km az=44.0*

DJA ***19*** *12:05:32.1±0.5, 7°.5S±5°×12°.9E±°, h135km±17km, M4.2/12, mB4.9/1, mb4.1/3, MLv4.2/12, Mw(mB)4.2/1*

ISC 19 12:05:30.2±1.0, 7°.57S±0°.08×128°.68E±0°.09, h151km, n10, σ1s47/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
KRAI	**Karang Ratu**	**4.24**	**356**	P		**P**	**Pn**	**12 06 34.0**	**+0.4**
SOEI	**Soe**	**4.87**	**243**	P		**P**	**Pn**	**12 06 42.7**	**+0.6**
BATI	**Baumata**	**5.61**	**242**	P		**P**	**Pn**	**12 06 52.9**	**+1.1**
	58nm,0.4s,baz=293,slow=3.3,SNR=18								
BATI				S			**Sn**	**12 07 54.1**	**-1.3**
	29nm,0.3s,baz=190,slow=21,SNR=8.8								
BATI	**Baumata**	**5.61**	**242**	P		**P**	**Pn**	**12 06 53.2**	**+1.5**
	0.4nm2µm59nm,0.5s								
BATI				S			**Sn**	**12 07 54.3**	**-1.1**
	0.4nm2µm59nm,0.5s								
FAKI	**Fak Fak**	**5.83**	**38**	P		**P**	**Pn**	**12 06 54.3**	**-0.4**
	0.2nm43nm,1.3s								
EDFI	**Ende, Flores**	**7.02**	**260**	P		**P**	**Pn**	**12 07 11.1**	**+0.4**
WRA	**Warramunga Arr**	**13.46**	**157**	P		**P**	**Pn**	**12 08 35.7**	**+0.4**
	0.6nm,0.9s,baz=336,slow=10.0,SNR=8.9								
WRA				S			Sn	12 10 57.6	-6.8
	2.0nm,0.6s,baz=339,slow=21,SNR=11								
ASAR	**Alice Springs**	**16.77**	**163**	P		**P**	**Pn**	**12 09 19.0**	**+2.7**
	1.1nm,0.5s,baz=336,slow=10,SNR=36								
ASAR				S			**S**	**12 12 20.2**	**-2.6**
	0.7nm,0.5s,baz=322,slow=16,SNR=7.2								
MKAR	**Makanchi Array**	**68.00**	**328**	P		**P**	**P**	**12 16 12.8**	**-0.3**
	0.3nm,0.4s,baz=129,slow=7.3,SNR=7.5								
	0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**72.32**	**329**	P		**P**	**P**	**12 16 39.0**	**-0.2**
	0.5nm,0.5s,baz=136,slow=5.1,SNR=7.5								
	0.5nm,0.5s								

NOU ***19*** *12:33:02.5, 17°.58S×167°.31E, h0km, MLv4.4/17, Vanuatu Islands*

IDC ***19*** *12:33:05.7±7.9, 17°.90S×168°.28E, h104km±71km, mb3.4/3, mbtmp3.8/4, ML4.1/1, MS3.2/2, Error ellipse: s-maj=64.0km s-min=48.7km az=0.0*

NEIC ***19*** *12:33:05.6±1.0, 17°.7S±0°.1×167°.1E±0°.2, h10km±2km, mb4.3/9, Error ellipse: s-maj=27.6km s-min=18.6km az=91.0*

ISC 19 12:33:03.7±1.0, 17°.56S±0°.09×167°.34E±0°.05, h19km, n29, σ0s99/29, mb4.1/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
DVP	**Devils Point**	**0.82**	**102**	P		**Pb**	**12 33 19.2**	**-0.2**	
DVP	**Devils Point**	**0.82**	**102**	S		**Sb**	**12 33 30.4**	**+0.4**	
RTV	**Rentapao**	**1.06**	**103**	P		**Pn**	**12 33 23.0**	**-0.5**	
RTV	**Rentapao**	**1.06**	**103**	S		**Sb**	**12 33 37.3**	**+0.5**	
MARNC	**Mare, Loyalty**	**3.95**	**171**	Pn		**Pn**	**12 34 04.8**	**+1.4**	
MARNC	**Mare, Loyalty**	**3.95**	**171**	P		**Pn**	**12 34 04.8**	**+1.4**	
KOUNC	**Koumac, New Ca**	**4.15**	**224**	P		**Pn**	**12 34 06.8**	**+0.7**	
DZM	**Mont Dzumac**	**4.56**	**191**	P		**Pn**	**12 34 12.2**	**+0.3**	
	9.3nm,0.3s,baz=76,slow=14,SNR=153								
DZM				S			**Sn**	**12 35 03.1**	**-1.4**
	24nm,0.4s,baz=133,slow=22,SNR=9.9								
	17nm,0.3s								
DZM	**Mont Dzumac**	**4.56**	**191**				**Pn**	**12 34 12.2**	**+0.3**
DZM						Sn	**Sn**	**12 35 02.1**	**-2.4**
DZM	**Mont Dzumac**	**4.56**	**191**	P		**Pn**	**12 34 12.1**	**+0.2**	
ONTNC	**Ouen Toro**	**4.79**	**190**			**Pn**	**12 34 15.6**	**+0.6**	
ONTNC						Sn	**Sn**	**12 35 08.4**	**-1.6**
ONTNC	**Ouen Toro**	**4.79**	**190**	P		**Pn**	**12 34 15.8**	**+0.8**	
OUENC	**Ouen Island, N**	**4.85**	**186**	P		**Pn**	**12 34 17.1**	**+1.3**	
PINNC	**Pines Island,**	**5.03**	**179**	P		**Pn**	**12 34 19.2**	**+1.1**	
CTA	**Charters Tower**	**20.12**	**259**	P		Pn	12 37 40.0	+1.4	
	3.8nm,0.7s,baz=87,slow=12,SNR=8.9								
CTA				LR		LR	12 44 00.2		
	comp=Z,48nm,20.2s,baz=42,slow=31								
	3.8nm,0.7s								
CTAO	**Charters Tower**	**20.12**	**259**	P		**P**	**12 37 36.3**	**-0.4**	
CAN	**Canberra**	**24.07**	**219**	P		**P**	**12 38 18.3**	**+0.3**	
WR8	**Warramunga Arr**	**31.16**	**260**	P		**P**	**12 39 22.0**	**+0.2**	
WR8				IAmb		IAmb	12 39 43.2		
	comp=Z,3.2nm,1.1s								
WB0	**Warramunga Arr**	**31.27**	**261**	P		**P**	**12 39 23.0**	**+0.3**	
WB0				IAmb		IAmb	12 39 35.9		
	comp=Z,2.4nm,0.9s								
WRA	**Warramunga Arr**	**31.32**	**260**	P		**P**	**12 39 23.0**	**-0.1**	
	comp=Z,0.5nm,0.9s,baz=90,slow=9.3,SNR=3.2								
	comp=Z,0.5nm,0.9s								
WRA	**Warramunga Arr**	**31.32**	**260**	P		**P**	**12 39 22.5**	**-0.6**	
ASAR	**Alice Springs**	**31.83**	**253**	P		**P**	**12 39 28.2**	**+0.6**	
	comp=Z,0.8nm,0.6s,baz=79,slow=9.0,SNR=9.6								
	comp=Z,0.8nm,0.6s								
ASAR	**Alice Springs**	**31.83**	**253**	P		**P**	**12 39 27.0**	**-0.6**	
BBOO	**Buckleboo**	**31.98**	**236**	P		**P**	**12 39 27.8**	**-1.0**	
BBOO				IAmb		IAmb	12 39 53.8		
	comp=Z,5.1nm,0.8s								
KNRA	**Kununurra**	**36.98**	**267**	P		**P**	**12 40 12.9**	**+0.7**	
KNRA				IAmb		IAmb	12 40 25.7		
	comp=Z,6.5nm,1.1s								
FORT	**Forrest**	**37.98**	**242**	P		**P**	**12 40 19.6**	**-1.0**	
FORT				IAmb		IAmb	12 40 34.3		
	comp=Z,9.2nm,1.1s								
JCJ	**Chichijima**	**50.66**	**331**	LR		LR	13 02 12.1		
	comp=Z,37nm,20.7s,baz=96,slow=34								
VNDA	**Vanda**	**60.05**	**181**	P		**P**	**12 43 10.3**	**+1.4**	
ARCES	**ARCESS Array B**	**122.99**	**345**	PKP		PKPdf	12 51 49.7	-8.5	
	comp=Z,5.0nm,1.0s,baz=18,slow=6.0,SNR=1.9								

NIED ***19*** *12:53:31.8, 37°.05N×140°.43E, h12km, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.48; Mθθ-0.76; Mφφ0.28; Mrθ0.34; Mθφ-0.83; Mφr0.36; Fault plane solution: M₀1.09000×10¹⁴ NP1: φs285.00000°, δs56.00000°, λ166.00000°. NP2: φs23.00000°, δs79.00000°, λs35.00000°.*

JMA 19 12:53:31.8±0.1, 37°.1N±0°.1×140°.4E±0°.2, h12km±1km, MV3.8/20, 8D, MID FUKUSHIMA PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
JFFD	**Fukushimafurud**	**0.11**	**70**	⇓*i*P		Pg		12 53 34.9	+0.1
JFFD				⇓S		Sg		12 53 56.8	-0.1
ONAJ	**Iwakimizuishiy**	**0.30**	**80**	⇓*i*P		Pg		12 53 38.1	+0.1
ONAJ				⇓S		Sg		12 53 42.5	+0.4
JSB	**Shiboa**	**0.41**	**259**	*i* P		Pg		12 53 40.5	+0.5
JSB				S		Sb		12 53 46.5	-0.8
JHO	**Hitachi**	**0.45**	**166**	⇓*i*P		Pg		12 53 40.5	-0.2
JHO				⇓S		Sg		12 53 46.7	-0.1
JFK	**Kawauchi**	**0.47**	**48**	*i* P		Pg		12 53 41.0	-0.2
JOTO	**OTAMA OYAMA**	**0.51**	**352**	*i* P		Pg		12 53 41.9	0.0
JOTO				S		Sg		12 53 49.0	+0.3
JFY	**Yanaizu**	**0.68**	**302**	⇓*i*P		Pg		12 53 44.6	-0.4
JFY				⇓S		Sg		12 53 53.3	-0.6
JMM	**Marumori**	**0.86**	**20**	*i* P		Pg		12 53 47.6	-0.8
JMM				S		Sg		12 53 59.0	-0.8
JKT	**Katashina**	**0.99**	**254**	P		Pg		12 53 50.3	-0.5
JAG	**Ashikaga**	**1.00**	**232**	*i* P		Pg		12 53 50.0	-1.1
JAG				S		Sg		12 54 03.0	-1.1

IDC 19 13:11:50.4±3.1, 5°.41S×131°.99E, h0km, mb3.5/1, mbtmp3.3/3, ML3.0/2, Error ellipse: s-maj=177.3km s-min=29.7km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
WRA	**Warramunga Arr**	**14.62**	**171**	Pn		Pn		13 15 17.3	-1.4
	baz=350,slow=14,SNR=2.0								
WRA				Sn		Sn		13 18 04.3	+2.7
	baz=350,slow=24,SNR=1.8								
	0.3nm,0.6s								
ASAR	**Alice Springs**	**18.24**	**174**	P		Pn		13 16 05.3	+0.1
	0.1nm,0.3s,baz=1.7,slow=10,SNR=14								
	0.9nm,0.8s								
MKAR	**Makanchi Array**	**68.02**	**326**	P		P		13 22 51.7	+0.1
	0.2nm,0.4s,baz=110,slow=6.0,SNR=4.0								
	0.2nm,0.4s								

KRSC ***19*** *13:12:40.4±1.4, 52°.59N×159°.80E, h51km±16km, Ml3.9*

IDC ***19*** *13:12:41.3±3.9, 52°.88N×160°.02E, h58km±33km, mb3.4/4, mbtmp3.7/4, MS2.6/1, Error ellipse: s-maj=53.1km s-min=30.9km az=11.0*

ISC 19 13:12:40.9±1.1, 52°.59N±0°.05×159°.80E±0°.05, h53km±9km, n43, σ1s78/49, mb3.6/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SPN	**Mys Shipunski**	**0.53**	**15**	*eP*		**Pn**		**13 12 53.4**	**+0.7**
SPN				*eS*		**Sn**		**13 13 01.4**	**+0.3**
NLC	**Nalytchevo**	**0.65**	**335**	*eP*		**Pn**		**13 12 54.6**	**+0.5**
NLC				*eS*		**Sn**		**13 13 04.2**	**+0.5**
DALK	**Dalny**	**0.78**	**305**	*eP*		**Pn**		**13 12 55.9**	**+0.2**
DALK				*eS*		**Sn**		**13 13 05.6**	**-1.0**
RUS	**Russkaya**	**0.80**	**260**	*eP*		**Pn**		**13 12 56.5**	**+0.4**
RUS				*eS*		**Sn**		**13 13 07.4**	**+0.2**
UGLR	**Uglovaya**	**0.86**	**317**	*eP*		**Pn**		**13 12 57.8**	**+0.8**
INSR	**Institute**	**0.87**	**304**	*eP*		**Pn**		**13 12 57.3**	**+0.3**
INSR				*eS*		**Sn**		**13 13 08.3**	**-0.5**
SDLR	**Sedlovina**	**0.89**	**322**	*eP*		**Pn**		**13 12 57.9**	**+0.5**
SMAR	**Somma**	**0.91**	**319**	*eP*		**Pn**		**13 12 58.0**	**+0.3**
AVH	**Avacha**	**0.94**	**317**	*eP*		**Pn**		**13 12 58.9**	**+1.0**
KRER	**Koryakskii**	**0.96**	**319**	*eP*		**Pn**		**13 12 59.3**	**+0.9**
MTVR	**Mutnovka**	**0.99**	**265**	*eP*		**Pn**		**13 12 59.5**	**+0.7**
MTVR				*eS*		**Sn**		**13 13 11.9**	**0.0**
KOK	**Koryaka**	**1.00**	**316**	*eP*		**Pn**		**13 12 59.7**	**+0.9**
KRX	**Arik**	**1.04**	**318**	*eP*		**Pn**		**13 13 00.1**	**+0.7**
KRMR	**Karymshinskiy**	**1.05**	**284**	*eP*		**Pn**		**13 12 59.7**	**+0.4**
KRMR				*eS*		**Sn**		**13 13 12.7**	**-0.2**
GRL	**Gorelyy**	**1.06**	**269**	*eP*		**Pn**		**13 13 00.7**	**+1.2**
ASAK	**Asacha**	**1.18**	**261**	*eP*		**Pn**		**13 13 02.6**	**+1.4**
ASAK				*eS*		**Sn**		**13 13 17.6**	**+1.4**
KDTR	**Khodutka, Kamc**	**1.32**	**234**	*eP*		**Pn**		**13 13 04.4**	**+1.4**
KDTR				*eS*		**Sn**		**13 13 20.2**	**+0.8**
PETK	**Petropavlovsk-**	**1.38**	**293**	P		**Pn**		**13 13 04.8**	**+1.0**
	71nm,0.3s,baz=97,slow=21,SNR=433								
PETK				S		**Sn**		**13 13 22.4**	**+1.4**
	70nm,0.5s,baz=16,slow=23,SNR=5.3								
PETK				LR		LR		13 13 51.8	
	comp=Z,98nm,20.8s,baz=65,slow=50								
KII	**Karymskiy**	**1.47**	**352**	*eP*		**Pn**		**13 13 06.5**	**+1.4**
KII				*eS*		**Sn**		**13 13 24.4**	**+1.2**
GNL	**Ganaly**	**1.58**	**315**	*eP*		**Pn**		**13 13 08.2**	**+1.6**
GNL				*eS*		**Sn**		**13 13 28.3**	**+2.3**
APC	**Apacha**	**1.64**	**283**	*eP*		**Pn**		**13 13 09.2**	**+1.8**
APC				*eS*		**Sn**		**13 13 29.9**	**+2.6**
PAU	**Pauzhetka**	**2.16**	**240**	*eP*		**Pn**		**13 13 16.8**	**+2.3**
MKZ	**Mys Kozlova**	**2.28**	**29**	*eS*		**Sn**		**13 13 43.4**	**+0.4**
TUMD	**Tumrok D**	**2.65**	**7**	*eP*		**Pn**		**13 13 24.4**	**+3.3**
TUMD				*eS*		**Sn**		**13 13 55.3**	**+3.3**
SKR	**Severo-Kuril's**	**2.98**	**232**	*eP*		**Pn**		**13 13 29.9**	**+4.2**
KMNR	**Kamenistaya**	**3.19**	**4**	*eP*		Pn		13 13 33.1	+4.5
ESO	**Esso**	**3.41**	**350**	*eP*		**Pn**		**13 13 34.0**	**+2.4**
KOZ	**Kozyrevsk**	**3.48**	**1**	*eP*		**Pn**		**13 13 35.0**	**+2.5**
KLY	**Klyuchi**	**3.77**	**7**	*eP*		**Pn**		**13

XNQ			S	**Sb**	**13 28 16.1**	**-0.3**
ATGJ	**Altiaghaj**	**3.08 33**	P	**Pb**	**13 27 35.1**	**-3.4**
ATGJ			S	**Sb**	**13 28 16.2**	**-0.3**
SIZA	**Siyzn**	**3.25 30**	P	**Pn**	**13 27 37.0**	**+2.1**
SIZA			S	**Sb**	**13 28 20.2**	**-1.0**
DGRG	**David-gareji**	**3.32 342**	P	**Pb**	**13 27 43.3**	**+0.8**
DGRG			S	**Sg**	**13 28 29.9**	**+0.1**
CHRG	**Chargali**	**4.26 342**	P	**Pb**	**13 27 57.0**	**-1.6**
CHRG			S	**Sb**	**13 28 54.8**	**+4.5**

*TIR **19** 13:41:24.1, 39°.49N×19°.89E, h2km±1km, Md2.2/5, Ml2.5/3*
*ATH **19** 13:41:24.7, 39°.46N×19°.85E, h8km±1km, ML2.4/9, Manual Solution by I.Dede First location: 2020/02/19 13:42:32, This location: 2020/10/24 16:05:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

ISC 19 13:41:25.0±1.1, 39°.46N±0°.03×19°.90E±0°.04, h5km±10km, n22, σ0965/36, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRK1	**kERKIRA**	**0.16**	**4**	P	**Pg**	**13 41 28.3**	**+0.2**
KRK1				S	**Sg**	**13 41 31.3**	**+1.1**
KEK	**Kerkira**	**0.27**	**343**	Pg	**Pg**	**13 41 29.2**	**-0.9**
KEK				Sg	**Sg**	**13 41 33.1**	**-0.6**
KEK				AMd		13 41 59.8	
KEK	**Kerkira**	**0.27**	**343**	P	**Pg**	**13 41 29.9**	**-0.3**
KEK				S	**Sg**	**13 41 33.9**	**+0.2**
IGT	**Igoumenitsa**	**0.34**	**78**	Pg	**Pg**	**13 41 31.2**	**-0.4**
IGT				Sg	**Sg**	**13 41 36.8**	**+0.7**
IGT				AMd		13 42 13.8	
IGT	**Igoumenitsa**	**0.34**	**78**	P	**Pg**	**13 41 31.1**	**-0.5**
IGT				S	**Sg**	**13 41 37.2**	**+1.1**
SRN	**Sarande**	**0.43**	**10**	Pg	**Pg**	**13 41 32.1**	**-1.1**
SRN				Sg	**Sg**	**13 41 39.1**	**+0.2**
SRN				AMd		13 42 10.1	
TSLK	**Tsoukalades, L**	**0.86**	**137**	P	**Pb**	**13 41 42.0**	**-0.5**
TSLK				S	**Sb**	**13 41 54.3**	**-0.1**
LKD2	**Lefkada island**	**0.89**	**138**	Pg	**Pb**	**13 41 42.4**	**-0.5**
LKD2				Sg	**Sn**	**13 41 57.6**	**0.0**
LKD2				AML	AML	13 41 59.5	
	0.7nm,0.3s						
LKD2				AMd		13 42 40.8	
LKD2	**Lefkada island**	**0.89**	**138**	P	**Pb**	**13 41 42.5**	**-0.5**
LKD2				S	**Sb**	**13 41 55.1**	**-0.1**
PRMD	**Pramanda**	**0.93**	**85**	P	**Pb**	**13 41 43.2**	**-0.5**
PRMD				S	**Sb**	**13 41 56.7**	**+0.4**
DRAG	**Dragano-Lefkad**	**0.94**	**146**	P	**Pg**	**13 41 43.0**	**+0.1**
DRAG				S	**Sb**	**13 41 56.0**	**-0.5**
EVGI	**Lefkada island**	**1.02**	**145**	P	**Pg**	**13 41 44.4**	**-0.2**
EVGI				S	**Sb**	**13 41 59.1**	**+0.1**
FSK	**Fiskardo**	**1.12**	**152**	P	**Pg**	**13 41 46.5**	**-0.1**
FSK				S	**Sb**	**13 42 02.2**	**+0.4**
AMPL	**Ampelaki**	**1.15**	**117**	P	**Pg**	**13 41 46.8**	**-0.3**
PENT	**Pentalofos**	**1.20**	**52**	P	**Pn**	**13 41 49.0**	**+0.3**
KPRO	**Kipourio**	**1.23**	**66**	P	**Pn**	**13 41 49.0**	**0.0**
NEST	**Nestorio**	**1.30**	**42**	Pn	**Pn**	**13 41 49.2**	**-0.8**
NEST				Sn	**Sn**	**13 42 08.4**	**+0.6**
NEST				AML	AML	13 42 18.4	
	0.2nm,0.5s						
NEST				AMd		13 42 44.5	
NEST	**Nestorio**	**1.30**	**42**	P	**Pb**	**13 41 50.2**	**+0.2**
KBN	**Korca**	**1.35**	**30**	Sn	**Sn**	**13 42 09.2**	**+0.3**
KBN				AML	AML	13 42 18.4	
	0.3nm,0.8s						
VLS	**Valsamata**	**1.39**	**157**	P	**Pb**	**13 41 51.1**	**-0.3**
RTZL	**Ratzakli, Kefa**	**1.54**	**154**	P	**Pb**	**13 41 53.4**	**-0.6**
NOCI	**Noci**	**2.55**	**302**	Sn	**Sg**	**13 42 48.9**	**+2.1**

*IDC **19** 13:47:34.2±1.1, 1°.62S×139°.51E, h0km, mb3.5/4, mbtmp3.4/5, ML3.4/1, MS3.2/1, Error ellipse: s-maj=33.4km s-min=13.4km az=44.0*

ISC 19 13:47:35.4±1.2, 1.7S±0°.2×139°.6E±0°.2, h10km, n7, σ1§00/6, mb3.6/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.42**	**126**	Pg	**Pg**	**13 48 02.7**	**0.0**
	19nm,0.3s,baz=263,slow=5.4,SNR=136						
JAY				Lg	Lg	13 48 20.8	
	8.5nm,0.3s,baz=291,slow=14,SNR=7.3						
JAY				LR	LR	13 48 56.1	
	comp=Z,130nm,19.4s,baz=52,slow=55						
WRA	**Warramunga Arr**	**18.85**	**195**	P	**Pn**	**13 51 55.6**	**-0.6**
	0.1nm,0.3s,baz=19,slow=11,SNR=5.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**22.53**	**194**	P	**P**	**13 52 36.2**	**+0.6**
	0.3nm,0.7s,baz=31,slow=11,SNR=7.1						
	0.3nm,0.7s						
LEM	**Lembang**	**32.24**	**260**	LR	LR	14 10 49.5	
	comp=Z,44nm,19.2s,baz=224,slow=43						
MKAR	**Makanchi Array**	**69.50**	**322**	P	**P**	**13 58 45.3**	**+1.0**
	0.7nm,0.7s,baz=111,slow=7.7,SNR=7.1						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**73.38**	**324**	P	**P**	**13 59 07.3**	**-0.2**
	0.3nm,0.7s,baz=107,slow=5.0,SNR=4.1						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**78.96**	**325**	P	**P**	**13 59 38.2**	**-1.1**
	0.4nm,0.5s,baz=90,slow=7.8,SNR=2.3						
	0.4nm,0.5s						

*IDC **19** 13:54:44.0±2.5, 5°.97S×144°.80E, h75km±28km, mb3.6/8, mbtmp3.9/11, MS3.1/3, Error ellipse: s-maj=29.5km s-min=18.5km az=53.0*

ISC 19 13:54:42.5±0.8, 6°.01S±0°.08×144°.7E±0°.1, h50km, n13, σ1§57/16, mb4.0/7, MS3.1/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.19**	**144**	P	**Pn**	**13 55 46.7**	**+2.7**
	30nm,0.3s,baz=4.4,slow=6.8,SNR=55						
PMG				S	**Sn**	**13 56 32.0**	**+0.3**
	30nm,0.3s,baz=316,slow=20,SNR=26						
JAY	**Jayapura**	**5.25**	**311**	P	**Pn**	**13 56 00.6**	**+2.0**
	7.8nm,0.7s,baz=230,slow=11,SNR=1.3						
JAY				S	**Sn**	**13 56 58.7**	**+0.9**
	6.1nm,0.5s,baz=328,slow=21,SNR=1.1						
CTA	**Charters Tower**	**14.08**	**174**	P	**P**	**13 58 05.1**	**-0.7**
	0.9nm,0.4s,baz=350,slow=11,SNR=1.8						
CTA				S	**Sn**	**14 00 33.0**	**-1.3**
	0.8nm,0.6s,baz=172,slow=22,SNR=1.6						
WRA	**Warramunga Arr**	**17.10**	**215**	P	**Pn**	**13 58 38.0**	**-0.2**
	1.4nm,0.4s,baz=30,slow=13,SNR=28						
WRA				S	Sn	14 01 34.1	-13
	0.4nm,0.8s,baz=39,slow=23,SNR=1.9						
ASAR	**Alice Springs**	**20.38**	**209**	P	**P**	**13 59 16.6**	**+1.3**
	1.3nm,0.9s,baz=36,slow=10,SNR=13						
ASAR				S	**S**	**14 02 59.4**	**-1.7**
	0.5nm,0.8s,baz=20,slow=27,SNR=3.6						
ASAR				LR	LR	14 06 48.7	
	comp=Z,80nm,18.2s,baz=296,slow=35						
	1.3nm,0.9s						
JOW	**Kunigami**	**36.30**	**335**	LR	LR	14 14 17.8	
	comp=Z,9.6nm,21.0s,baz=30,slow=32						
CMAR	**Chiang Mai Arr**	**51.21**	**299**	P	**P**	**14 03 41.5**	**+0.1**
	0.7nm,0.5s,baz=122,slow=7.7,SNR=5.1						
	0.7nm,0.5s						
PETK	**Petropavlovsk-**	**59.92**	**9**	P	**P**	**14 04 41.7**	**-1.6**
	1.8nm,0.9s,baz=189,slow=7.2,SNR=4.1						
	1.8nm,0.9s						
SONM	**Songino Array**	**63.30**	**332**	P	**P**	**14 05 05.9**	**-0.5**
	0.5nm,0.5s,baz=134,slow=6.2,SNR=2.2						
SONM				LR	LR	14 33 48.6	
	comp=Z,24nm,19.4s,baz=358,slow=37						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**76.03**	**321**	P	**P**	**14 06 24.1**	**-0.6**
	0.6nm,0.3s,baz=97,slow=8.6,SNR=18						
	0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**77.79**	**328**	P	**P**	**14 06 32.7**	**-1.7**
	1.2nm,0.5s,baz=114,slow=5.5,SNR=6.0						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**79.85**	**324**	P	**P**	**14 06 43.4**	**-2.4**
	0.4nm,0.5s,baz=118,slow=4.2,SNR=4.7						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**85.41**	**324**	P	**P**	**14 07 13.6**	**-1.1**
	1.1nm,0.5s,baz=104,slow=6.2,SNR=6.0						
	1.1nm,0.5s						

*IDC **19** 13:55:53.5±4.2, 23°.93N×108°.98W, h0km, mb3.2/2,*

mbtmp3.2/6, ML3.8/3, MS3.3/6, Error ellipse: s-maj=61.1km s-min=13.3km az=162.0
*NEIC **19** 13:55:53.6±1.6, 23°.81N±0°.10×108°.89W±0°.05, h10km±2km, mb4.1/8, Md4.1/13(MEX), Error ellipse: s-maj=16.8km s-min=7.0km az=176.0*
*MEX **19** 13:55:56.1±0.6, 23°.93N×108°.82W, h17km±8km, MD4.1*

ISC 19 13:55:53.7±1.8, 23°.90N±0°.10×108°.91W±0°.05, h12km±15km, n51, σ1§71/49, mb3.4/3, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLBS	**Sierra La Lagu**	**0.98**	**257**		**Pg**	**13 56 12.2**	**-0.4**
SLBS					**Sg**	**13 56 24.5**	**-0.8**
SLBS	**Sierra La Lagu**	**0.98**	**257**	*i* P	**Pg**	**13 56 12.6**	**0.0**
SLBS				*i* S	**Sg**	**13 56 24.8**	**-0.6**
LPIG	**La Paz**	**1.30**	**279**	Pg	**Pn**	**13 56 16.7**	**-1.0**
	60nm,0.3s,baz=72,slow=6.4,SNR=20						
LPIG				Lg	Lg	13 56 32.9	
	244nm,0.3s,baz=334,slow=19,SNR=9.6						
LPIG	**La Paz**	**1.30**	**279**	*i* P	**Pn**	**13 56 17.1**	**-0.5**
LPIG				*i* S	**Sb**	**13 56 33.5**	**-1.2**
TSIG	**Topolobambo**	**1.69**	**356**	*e*P	**Pn**	**13 56 21.1**	**-1.9**
TSIG				*i* S	**Sn**	**13 56 41.1**	**-3.5**
SSIG	**Sanalona**	**1.85**	**60**	*e*P	**Pn**	**13 56 23.0**	**-2.3**
SSIG				*e*S	**Sn**	**13 56 42.8**	**-5.8**
MAIG	**Mazatlaan**	**2.38**	**107**	*e*P	**Pn**	**13 56 33.6**	**+1.0**
PDIG	**Papasquiaro**	**3.39**	**70**	*e*P	**Pn**	**13 56 45.6**	**-1.1**
PDIG				*e*S	**Sn**	**13 57 27.2**	**+0.3**
HPIG		**4.21**	**43**		**Pn**	**13 56 56.7**	**-1.2**
SRIG	**Santa Rosalia**	**4.54**	**319**	Pn	**Pn**	**13 57 02.7**	**+0.4**
HSIG		**5.42**	**341**	Pn	**Pn**	**13 57 15.5**	**+1.2**
ZAIG	**Zacatecas**	**5.93**	**100**	Pn	**Pn**	**13 57 20.7**	**-1.0**
TX31	**Lajitas Ar. Si**	**7.16**	**40**	Pn	**Pn**	**13 57 37.7**	**-0.6**
TXAR	**Lajitas Array**	**7.16**	**40**	Pn	**Pn**	**13 57 39.0**	**+0.7**
	0.4nm,0.3s,baz=210,slow=13,SNR=8.4						
TXAR				Lg	Lg	13 59 39.8	
	0.3nm,0.3s,baz=225,slow=30,SNR=6.4						
TXAR				LR	LR	14 00 35.3	
	comp=Z,204nm,18.4s,baz=220,slow=39						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**7.16**	**40**	Pn	**Pn**	**13 57 40.2**	**+1.9**
319A	**Douglas**	**7.45**	**358**	Pn	**Pn**	**13 57 44.2**	**+1.8**
VHRN	**Van Horn**	**7.69**	**26**	Pn	**Pn**	**13 57 46.9**	**+1.2**
TPB01	**Permian Basin**	**8.36**	**32**	Pn	**Pn**	**13 57 54.6**	**-0.2**
MNTX	**Cornudas Mount**	**8.37**	**21**	Pn	**Pn**	**13 57 56.1**	**+1.3**
TUC	**Tucson**	**8.54**	**349**	Pn	**Pn**	**13 57 59.5**	**+2.3**
121A	**Cookes Peak, D**	**8.65**	**6**	Pn	**Pn**	**13 57 58.9**	**0.0**
GDL2	**Guadalupe Moun**	**9.19**	**25**	Pn	**Pn**	**13 58 07.1**	**+1.0**
DRIO	**Del Rio**	**9.22**	**52**	Pn	**Pn**	**13 58 07.2**	**+0.6**
113A	**Mohawk Valley,**	**9.81**	**335**		**Pn**	**13 58 17.0**	**+2.4**
EF02	**Christine**	**10.49**	**60**	Pn	**Pn**	**13 58 24.0**	**0.0**
GLA	**Glamis**	**10.49**	**332**	Pn	**Pn**	**13 58 27.8**	**+3.7**
BLYC	**Blythe**	**10.97**	**335**		**Pn**	**13 58 33.4**	**+2.8**
ANMO	**Albuquerque**	**11.21**	**10**	LR	LR	14 03 07.7	
	comp=Z,120nm,19.3s,baz=188,slow=39						
POST	**Post**	**11.21**	**34**	Pn	**Pn**	**13 58 35.8**	**+2.0**
PFO	**Pinyon Flats O**	**11.72**	**327**	LR	LR	14 02 29.0	
	comp=Z,81nm,21.0s,baz=138,slow=34						
DKNS	**Dickens**	**11.98**	**34**		**Pn**	**13 58 45.4**	**+1.0**
QSM	**Queen of Sheba**	**13.85**	**332**	Pn	**Pn**	**13 59 10.0**	**+0.1**
S22A	**4UR Ranch, Cre**	**13.91**	**7**	Pn	**Pn**	**13 59 11.9**	**+0.9**
SZCU	**Shurtz Canyon**	**14.11**	**346**	Pn	**Pn**	**13 59 13.7**	**0.0**
CMIG	**Matias Romero**	**14.78**	**115**	LR	LR	14 04 59.5	
	comp=Z,109nm,20.6s,baz=294,slow=37						
P18A	**Preston Nutter**	**15.72**	**356**	Pn	**Pn**	**13 59 36.0**	**+0.7**
P18A				IAmb	IAmb	13 59 52.8	
	comp=Z,13nm,1.2s						
MPU	**Maple Canyon**	**16.23**	**352**	Pn	**Pn**	**13 59 42.7**	**+0.9**
NVAR	**Mina Array Bea**	**16.55**	**333**	Pn	**P**	**13 59 49.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=162,slow=13,SNR=6.0						
	comp=Z,0.1nm,0.5s						
ELK	**Elko**	**17.62**	**344**	P	**P**	**13 59 60.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=189,slow=19,SNR=1.4						
PDAR	**Pinedale Array**	**18.82**	**359**	P	**Pn**	**14 00 15.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=27						
	comp=Z,2.3nm,0.7s						
TEIG	**Tepich**	**19.46**	**97**	P	**P**	**14 00 19.6**	**-0.9**
TEIG				IAmb	IAmb	14 00 40.2	
	comp=Z,31nm,1.2s						
HERN	**Volcan Telica**	**23.74**	**114**	P	**P**	**14 01 05.4**	**-0.7**
HERN				IAmb	IAmb	14 01 14.5	
	comp=Z,47nm,0.8s						
CNGN	**Cerro Negro**	**23.91**	**114**	P	**P**	**14 01 06.8**	**-0.9**
CPCT	**Cooper Cave**	**24.04**	**56**	P	**P**	**14 01 07.7**	**-1.0**
CPCT				IAmb	IAmb	14 01 17.6	
	comp=Z,5.4nm,0.9s						
TKL	**Tuckaleechee C**	**24.68**	**56**	LR	LR	14 11 48.8	
	comp=Z,108nm,19.9s,baz=196,slow=39						
SADO	**Sadowa**	**31.93**	**42**	LR	LR	14 15 49.6	
	comp=Z,111nm,19.1s,baz=354,slow=37						
YKA	**Yellowknife Ar**	**38.77**	**356**	P	**P**	**14 03 18.2**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=178,slow=7.4,SNR=6.1						
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	**47.68**	**339**	P	**P**	**14 04 32.6**	**+2.8**
	comp=Z,0.3nm,0.9s,baz=151,slow=6.9,SNR=4.9						
	comp=Z,0.3nm,0.9s						
H03N2	**Juan Fernandez**	**63.77**	**152**	T	T	15 15 53.9	
	baz=331,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**63.78**	**152**	T	T	15 15 57.1	
	baz=331,slow=77,SNR=6.0						
H03N3	**Juan Fernandez**	**63.79**	**152**	T	T	15 16 14.8	
	baz=331,slow=77,SNR=22						

*JMA **19** 14:02:23.2±0.1, 24°.N±1°.×122°.5E±0°.4, h42km±2km, MV2.5/15, NW OFF ISHIGAKIJIMA IS*
*TAP **19** 14:02:23.7, 24°.16N×122°.50E, h41km, ML3.2, C*

ISC 19 14:02:24.1±1.2, 24°.09N±0°.03×122°.54E±0°.02, h41km±8km, n101, σ1§01/185, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.20**	**280**	P	**Pn**	**14 02 30.8**	**-0.2**
EOS4				S	**Sn**	**14 02 36.4**	**+0.4**
EOS3	**EOS3**	**0.28**	**315**	*i* P	**Pn**	**14 02 31.8**	**-0.3**
EOS3				*i* S	**Sn**	**14 02 38.2**	**+0.5**
EOS2	**EOS2**	**0.43**	**320**	P	**Pn**	**14 02 33.7**	**-0.2**
EOS2				S	**Sn**	**14 02 41.3**	**+0.5**
JYNG	**Yonagunijimaku**	**0.52**	**45**	P	**Pn**	**14 02 34.5**	**-0.6**
JYNG				*e*S	**Sn**	**14 02 42.7**	**-0.2**
YOJ	**Yonaguni jima**	**0.57**	**49**	*e*P	**Pn**	**14 02 35.3**	**-0.5**
YOJ				S	**Sn**	**14 02 43.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.57**	**49**	*i* P	**Pn**	**14 02 35.4**	**-0.5**
YOJ				*i* S	**Sn**	**14 02 44.1**	**0.0**
EAHA	**Aohua**	**0.77**	**289**	P	**Pn**	**14 02 38.0**	**-0.5**
EAHA				*e*S	**Sn**	**14 02 48.6**	**-0.3**
EWUT	**Wuta**	**0.78**	**297**	P	**Pn**	**14 02 37.6**	**-1.1**
ENA	**Nanau**	**0.81**	**295**	P	**Pn**	**14 02 38.3**	**-0.6**
TWC	**Suao**	**0.82**	**310**	*i* P	**Pn**	**14 02 38.0**	**-1.2**
TWC				S	**Sn**	**14 02 48.5**	**-1.6**
ETL	**Fush Village**	**0.84**	**275**	*e*P	**Pn**	**14 02 38.6**	**-0.9**
ETL				*e*S	**Sn**	**14 02 50.2**	**-0.5**
HWA	**Hwalien**	**0.86**	**263**	*e*S	**Sn**	**14 02 50.8**	**-0.3**
TWD	**Chiawan**	**0.86**	**270**	*e*P	**Pn**	**14 02 38.6**	**-1.1**
TWD				*e*S	**Sn**	**14 02 49.7**	**-1.4**
NACB	**Ninganchiao**	**0.87**	**276**	*i* P	**Pn**	**14 02 38.5**	**-1.3**
NACB				S	**Sn**	**14 02 50.2**	**-1.1**
TEYL	**Yanliau Villag**	**0.89**	**256**	*e*P	**Pn**	**14 02 39.5**	**-0.6**
TEYL				*e*S	**Sn**	**14 02 51.6**	**-0.2**
NDS	**Dongshan**	**0.93**	**306**	*i* P	**Pn**	**14 02 40.1**	**-0.6**
NDS				S	**Sn**	**14 02 52.0**	**-0.8**
SHUL	**Shoufeng**	**0.94**	**252**	*e*P	**Pn**	**14 02 40.3**	**-0.5**
SHUL				*e*S	**Sn**	**14 02 52.8**	**-0.3**
ETM	**Tongmen**	**0.96**	**263**	*e*P	**Pn**	**14 02 40.0**	**-1.2**
ETLH	**Xiulin Townshi**	**0.97**	**277**	P	**Pn**	**14 02 40.5**	**-0.9**
ETLH				*e*S	**Sn**	**14 02 53.4**	**-0.7**
TWE	**Neicheng**	**1.02**	**309**	*i* P	**Pn**	**14 02 41.3**	**-0.6**
TWE				S	**Sn**	**14 02 54.2**	**-0.7**
LATG	**Datong**	**1.03**	**296**	*i* P	**Pn**	**14 02 41.5**	**-0.6**
LATG				*e*S	**Sn**	**14 02 55.5**	**+0.1**
LXIB	**Xiulin Townshi**	**1.03**	**267**	P	**Pn**	**14 02 41.1**	**-1.1**
LXIB				*e*S	**Sn**	**14 02 54.6**	**-1.0**
ENTT	**Nioudou**	**1.04**	**302**	P	**Pn**	**14 02 41.9**	**-0.4**
ENTT				*e*S	**Sn**	**14 02 55.7**	**0.0**
TWB1	**Santiao Chiao**	**1.05**	**331**	P	**Pn**	**14 02 41.3**	**-1.0**
TWB1				S	**Sn**	**14 02 54.2**	**-1.5**
ESL	**Shilin**	**1.05**	**255**	*e*P	**Pn**	**14 02 41.1**	**-1.1**
ESL				*e*S	**Sn**	**14 02 54.7**	**-1.0**
NDT	**Datong Townshi**	**1.07**	**299**	*e*P	**Pn**	**14 02 42.3**	**-0.3**
TIPB	**Shuangxi**	**1.10**	**324**	P	**Pn**	**14 02 42.2**	**-0.8**
TIPB				S	**Sn**	**14 02 55.7**	**-1.3**
FUSB	**Fushanzhiwuyua**	**1.10**	**308**	*e*P	**Pn**	**14 02 42.9**	**-0.1**
FUSB				*e*S	**Sn**	**14 02 57.2**	**+0.2**
NNSB	**Datong**	**1.11**	**288**	P	**Pn**	**14 02 42.6**	**-0.7**
NNSB				*e*S	**Sn**	**14 02 56.9**	**-0.5**
IRIF	**Iriomote-Funau**	**1.11**	**77**	*i* P	**Pn**	**14 02 43.0**	**-0.2**
IRIF				S	**Sn**	**14 02 57.7**	**+0.4**
WARBT	**Fenglin Townsh**	**1.12**	**251**	P	**Pn**	**14 02 42.2**	**-1.1**
WARBT				S	**Sn**	**14 02 56.3**	**-1.2**
NNS	**Nan Shan**	**1.12**	**289**	*e*P	**Pn**	**14 02 42.9**	**-0.5**
NNS				*e*S	**Sn**	**14 02 57.6**	**-0.1**
HATJ	**Hateruma jima**	**1.16**	**91**	*e*P	**Pn**	**14 02 44.5**	**+0.7**
HATJ				*e*S	**Sn**	**14 02 60.0**	**+1.6**
WHF	**Hehuan Shan**	**1.17**	**273**	P	**Pn**	**14 02 43.5**	**-0.8**
WHF				*e*S	**Sn**	**14 02 58.4**	**-0.8**
NWLT	**Wulai**	**1.17**	**306**	P	**Pn**	**14 02 43.8**	**-0.2**
NWLT				*e*S	**Sn**	**14 02 59.0**	**+0.2**
SXI1	**Grass Mountain**	**1.17**	**329**	P	**Pn**	**14 02 43.5**	**-0.6**
SXI1				*e*S	**Sn**	**14 02 57.9**	**-1.0**
HGSD	**Ruisui**	**1.18**	**240**	P	**Pn**	**14 02 43.4**	**-0.8**
HGSD				S	**Sn**	**14 02 58.4**	**-0.6**
FUSS	**Fushou**	**1.19**	**278**	P	**Pn**	**14 02 44.0**	**-0.5**
FUSS				*e*S	**Sn**	**14 02 59.1**	**-0.6**
NWF	**Wu-fen Shan**	**1.20**	**325**	*e*P	**Pn**	**14 02 43.9**	**-0.6**
WFSB	**Wu-fen Shan**	**1.20**	**325**	*e*S	**Sn**	**14 02 58.4**	**-1.1**
YHNB	**Yeheng**	**1.21**	**299**	*e*P	**Pn**	**14 02 44.0**	**-0.5**
NSK	**Sanguang**	**1.23**	**299**	P	**Pn**	**14 02 44.4**	**-0.5**
NSK				*e*S	**Sn**	**14 02 59.7**	**-0.6**
EHYH	**Wanrong**	**1.24**	**242**	*e*P	**Pn**	**14 02 44.4**	**-0.6**
EHYH				*e*S	**Sn**	**14 02 59.9**	**-0.6**
TWA	**Mucha**	**1.25**	**316**	*e*P	**Pn**	**14 02 45.3**	**+0.3**
OWD	**Renai**	**1.25**	**264**	P	**Pn**	**14 02 44.4**	**-0.8**
OWD				*e*S	**Sn**	**14 02 59.9**	**-1.1**
EHY	**Hungye**	**1.25**	**243**	*e*P	**Pn**	**14 02 44.2**	**-0.7**
EHY				*e*S	**Sn**	**14 03 00.7**	**-0.2**
ECBN	**Changbin**	**1.26**	**233**	*e*P	**Pn**	**14 02 44.9**	**-0.3**
ECBN				*e*S	**Sn**	**14 02 59.6**	**-1.2**
TWT	**Tachien**	**1.26**	**278**	*e*P	**Pn**	**14 02 45.3**	**0.0**
TWT				*e*S	**Sn**	**14 03 00.7**	**-0.5**
TDCB	**Techi**	**1.27**	**278**	*e*P	**Pn**	**14 02 45.3**	**-0.2**
TDCB				*e*S	**Sn**	**14 03 00.9**	**-0.6**
WUSB	**Renai**	**1.30**	**266**	P	**Pn**	**14 02 45.4**	**-0.5**
WUSB				*e*S	**Sn**	**14 03 01.8**	**-0.4**
VWDT	**VWDT**	**1.32**	**256**	*e*P	**Pn**	**14 02 45.7**	**-0.3**
VWDT				*e*S	**Sn**	**14 03 01.8**	**-0.7**
YULB	**Yu-li**	**1.33**	**239**	P	**Pn**	**14 02 45.5**	**-0.7**
YULB				*e*S	**Sn**	**14 03 01.4**	**-1.3**
JKRS	**Kuro-shima**	**1.35**	**83**	P	**Pn**	**14 02 46.8**	**+0.3**
JKRS				*e*S	**Sn**	**14 03 04.4**	**+1.2**
TWF1	**Yuli**	**1.35**	**238**	P	**Pn**	**14 02 46.0**	**-0.5**
TWF1				*e*S	**Sn**	**14 03 02.6**	**-0.6**
CHKH	**Chenggong**	**1.38**	**230**	*e*P	**Pn**	**14 02 46.2**	**-0.5**
CHKH				*e*S	**Sn**	**14 03 02.3**	**-1.5**
YM01	**YM01**	**1.38**	**320**	*e*P	**Pn**	**14 02 46.4**	**-0.4**
YM01				*e*S	**Sn**	**14 03 02.5**	**-1.4**
ZUZH	**Zhuzihu**	**1.40**	**320**	*e*P	**Pn**	**14 02 46.8**	**-0.5**
ZUZH				*e*S	**Sn**	**14 03 04.6**	**+0.1**
NFF	**Wufeng Townshi**	**1.41**	**293**	*e*P	**Pn**	**14 02 47.8**	**+0.5**
KSHI	**Guanxi Townshi**	**1.42**	**299**	*e*P	**Pn**	**14 02 47.6**	**+0.2**
KSHI				*e*S	**Sn**	**14 03 06.0**	**+1.1**
TWS1	**Kuangyinshan**	**1.44**	**315**	*e*S	**Sn**	**14 03 06.0**	**+0.7**
FULB	**Fuli**	**1.44**	**233**	*e*P	**Pn**	**14 02 46.8**	**-1.0**
FULB				*e*S	**Sn**	**14 03 05.1**	**-0.4**
CHKT	**Chengkung**	**1.46**	**228**	*e*P	**Pn**	**14 02 46.5**	**-1.4**
CHKT				*e*S	**Sn**	**14 03 04.1**	**-1.7**
WHP	**Taichung City**	**1.47**	**278**	*e*P	**Pn**	**14 02 48.5**	**+0.4**
WHP				*e*S	**Sn**	**14 03 06.4**	**+0.2**
SSLB	**Suanglung**	**1.48**	**259**	P	**Pn**	**14 02 48.1**	**-0.2**

TXAR				Lg	Lg	14 11 38.8	
	0.1nm,0.3s,baz=214,slow=29,SNR=5.6						
	0.1nm,0.3s						
NVAR	**Mina Array Bea**	**16.59**	**333**	P	P	14 11 58.7	+7.3
	0.1nm,0.3s,baz=158,slow=11,SNR=1.6						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**18.83**	**358**	P	**Pn**	**14 12 21.4**	**+4.8**
	baz=189,slow=9.3,SNR=7.7						
	0.7nm,0.8s						
H03N2	**Juan Fernandez**	**63.73**	**152**	T	T	15 27 44.6	
	baz=331,slow=77,SNR=5.5						
H03N1	**Juan Fernandez**	**63.74**	**152**	T	T	15 27 38.9	
	baz=331,slow=77,SNR=6.3						
H03N3	**Juan Fernandez**	**63.75**	**152**	T	T	15 27 48.5	
	baz=331,slow=77,SNR=5.5						

*SOME **19** 14:36:48.5, 45°.93N×82°.38E, h5km*
*NNC **19** 14:36:49.3±0.6, 45°.83N×82°.47E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=5.9km s-min=2.0km az=105.0*
*ASRS **19** 14:36:58.7±0.7, 46°.N±4°×8°.3E±°, h5km, MLh3.4/7, Error ellipse: s-maj=7.8km s-min=3.8km az=172.6, confirmed*
ISC 19 14:36:46.7±0.8, **45°.86N**±0°.04×**82°.52E**±0°.04, **h10km, n42, σ2.937/64, 9C-4D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**0.95**	**350**	⇑P			**Pn**	**14 37 07.1**	**+1.0**
	2.3nm,0.3s,baz=163,slow=17,SNR=1326								
MK31				⇑S			**Sn**	**14 37 21.4**	**+1.6**
	9.5nm,0.2s,baz=159,slow=29,SNR=11								
MAKZ	**Makanchi**	**1.02**	**339**	⇓P			**Pn**	**14 37 08.9**	**+1.8**
	4.4nm,0.5s								
MAKZ				⇑S			**Sn**	**14 37 23.9**	**+2.4**
	12nm,0.2s								
MAKZ	**Makanchi**	**1.02**	**339**	Pg			**Pn**	**14 37 08.7**	**+1.7**
MAKZ				Sg			**Sn**	**14 37 23.9**	**+2.4**
ZSN	**Zaisan**	**2.27**	**45**	Pg			**Pg**	**14 37 28.7**	**-1.4**
	4.6nm,0.2s								
ZSN				Lg		Lg		14 37 58.7	
	30nm,0.3s								
ZSN	**Zaisan**	**2.27**	**45**	*e*P			**Pg**	**14 37 28.7**	**-1.4**
	4.6nm,0.2s								
ZSN				*e*S			**Sg**	**14 37 58.7**	**-0.8**
	30nm,0.3s								
KAPS	**Kapalarasan**	**2.29**	**257**	Pg			**Pg**	**14 37 30.7**	**+0.1**
	5.4nm,0.1s								
KAPS				Lg		Lg		14 38 01.4	
	133nm,0.3s								
DJR	**Jarkent**	**2.46**	**233**	Pg			**Pg**	**14 37 33.1**	**-0.7**
	8.4nm,0.4s								
DJR				Lg		Lg		14 38 05.9	
	32nm,0.6s								
DJR	**Jarkent**	**2.46**	**233**	*e*P			**Pg**	**14 37 33.1**	**-0.7**
	8.4nm,0.4s								
DJR				*e*S			**Sg**	**14 38 05.9**	**+0.2**
	32nm,0.6s								
KNOS	**Konyrlen**	**2.80**	**239**	Pg			**Pg**	**14 37 40.2**	**-0.1**
	4.2nm,0.2s								
KNOS				Lg		Lg		14 38 17.6	
	55nm,0.5s								
PDGK	**Podgornoye**	**3.33**	**222**	⇑Pn			**Pb**	**14 37 42.7**	**-3.2**
	2.7nm,0.6s								
PDGK				⇑Pg			**Pg**	**14 37 52.6**	**+2.2**
	3.9nm,0.5s								
PDGK				⇑Lg		Lg		14 38 32.2	
	42nm,0.6s								
SHLS	**Shalkode**	**3.48**	**220**	Pg			**Pb**	**14 37 48.7**	**+0.4**
	4.3nm,0.2s								
SHLS				Lg		Lg		14 38 31.8	
	43nm,0.3s								
SHLS	**Shalkode**	**3.48**	**220**	*e*P			**Pb**	**14 37 48.7**	**+0.4**
	4.3nm,0.2s								
SHLS				*e*S			**Sb**	**14 38 31.9**	**+1.2**
	43nm,0.3s								
KPKS	**Kokpek**	**3.63**	**230**	Pg			**Pg**	**14 37 54.9**	**-1.4**
	0.4nm,0.2s								
KPKS				Lg		Lg		14 38 42.7	
	27nm,0.4s								
KPKS	**Kokpek**	**3.63**	**230**	*e*P			**Pg**	**14 37 54.9**	**-1.4**
	0.4nm,0.2s								
KPKS				*e*S			**Sg**	**14 38 42.7**	**-0.6**
	27nm,0.4s								
UZB	**Uzynbulak**	**3.69**	**224**	Pg			**Pg**	**14 37 56.2**	**-1.2**
UZB				Lg		Lg		14 38 44.6	
UZB	**Uzynbulak**	**3.69**	**224**	*e*P			**Pg**	**14 37 56.1**	**-1.2**
	3.1nm,0.1s								
UZB				*e*S			**Sg**	**14 38 44.5**	**-0.6**
	20nm,0.2s								
ARXS	**Arharly**	**3.71**	**245**	*e*P			**Pg**	**14 37 56.0**	**-1.8**
ARXS				*e*S			**Sg**	**14 38 44.2**	**-1.6**
KURS	**Kuram**	**3.90**	**234**	Pg			**Pg**	**14 38 00.6**	**-0.8**
	7.0nm,1.1s								
KURS				Lg		Lg		14 38 52.7	
	7.3nm,0.4s								
SATY	**Saty**	**4.06**	**228**	Pg			**Pg**	**14 38 03.4**	**-1.1**
	3.4nm,0.3s								
SATY				Lg		Lg		14 38 57.0	
	76nm,0.4s								
KOTS	**Kotyrbulak**	**4.67**	**238**	Pg			**Pg**	**14 38 13.4**	**-2.7**
	2.0nm,0.2s								
KOTS				Lg		Lg		14 39 14.7	
	14nm,0.4s								
KOTS	**Kotyrbulak**	**4.67**	**238**	*e*P			**Pg**	**14 38 13.4**	**-2.7**
	2.0nm,0.2s								
KOTS				*e*S			**Sg**	**14 39 14.7**	**-2.0**
	14nm,0.4s								
KTBS	**Karatobe**	**4.68**	**245**	Pg			**Pg**	**14 38 14.3**	**-1.9**
	1.9nm,0.3s								
KTBS				Lg		Lg		14 39 15.8	
	0.4nm,0.4s								
KTBS	**Karatobe**	**4.68**	**245**	*e*P			**Pg**	**14 38 14.3**	**-1.9**
	1.9nm,0.3s								
KTBS				*e*S			**Sg**	**14 39 15.8**	**-1.0**
	0.4nm,0.4s								
MDOK	**Medeo**	**4.75**	**237**	Pg			**Pg**	**14 38 14.1**	**-3.6**
	2.9nm,0.4s								
MDOK				Lg		Lg		14 39 15.4	
	7.6nm,0.5s								
TUNR	**Tungur**	**5.01**	**29**	Pn			Pn	14 38 07.2	+5.3
TUNR				Sg			**Sg**	**14 39 25.9**	**-1.4**
DGZ	**Jazzator, Alta**	**5.07**	**39**	Pn			Pn	14 38 07.6	+4.7
DGZ				Sg			**Sg**	**14 39 27.4**	**-2.1**
MTBS	**Maitube**	**5.14**	**240**	Pg			**Pg**	**14 38 21.2**	**-3.9**
	0.8nm,0.2s								
MTBS				Lg		Lg		14 39 28.2	
	9.1nm,0.4s								
MTBS	**Maitube**	**5.14**	**240**	*e*P			**Pg**	**14 38 21.2**	**-3.9**
	0.8nm,0.2s								
MTBS				*e*S			**Sg**	**14 39 28.2**	**-3.5**
	9.1nm,0.4s								
UKR	**Ust'-Kan**	**5.30**	**16**	Sg			**Sg**	**14 39 35.6**	**-1.1**
KRBS	**Karabastau**	**5.33**	**249**	Pg			**Pg**	**14 38 25.8**	**-2.9**
	0.6nm,0.5s								
KRBS				Lg		Lg		14 39 35.7	
	1.0nm,0.3s								
KRBS	**Karabastau**	**5.33**	**249**	*e*P			**Pg**	**14 38 25.8**	**-2.9**
	0.6nm,0.5s								
KRBS				*e*S			**Sg**	**14 39 35.7**	**-2.1**
	1.0nm,0.3s								
KURBB	**Kurchatov Arra**	**5.46**	**332**	⇑Pg			**Pg**	**14 38 28.4**	**-2.8**
	1.6nm,0.7s								
KURBB				⇑Sn			**Sn**	**14 39 17.0**	**+6.2**
	3.7nm,0.7s								
KURBB				⇓Lg		Lg		14 39 45.0	
	19nm,0.7s								
KST	**Kastek**	**5.47**	**241**	Pg			**Pg**	**14 38 28.9**	**-2.5**
	0.9nm,0.6s								
KST				Lg		Lg		14 39 40.9	
	7.6nm,0.8s								
KST	**Kastek**	**5.47**	**241**	*e*P			**Pg**	**14 38 28.9**	**-2.5**
	0.9nm,0.6s								
KST				*e*S			**Sg**	**14 39 41.5**	**-0.8**
	7.6nm,0.8s								
DGS	**Degeres**	**5.49**	**244**	Pg			**Pg**	**14 38 28.4**	**-3.3**
	1.7nm,0.5s								
DGS				Lg		Lg		14 39 40.7	
	6.2nm,0.5s								
DGS	**Degeres**	**5.49**	**244**	*e*P			**Pg**	**14 38 28.4**	**-3.3**
	1.7nm,0.5s								
DGS				*e*S			**Sg**	**14 39 40.7**	**-2.1**
	6.2nm,0.5s								
KURK	**Kurchatov**	**5.51**	**333**	⇓Pg			**Pg**	**14 38 28.7**	**-3.5**
	0.5nm,0.7s								
KURK				⇓Sn			**Sn**	**14 39 16.9**	**+4.8**
	0.8nm,0.6s								
KURK				⇑Lg		Lg		14 39 44.8	
	4.4nm,0.6s								
KURK	**Kurchatov**	**5.51**	**333**	S			**Sn**	**14 39 16.9**	**+4.8**
KURK				Sg			**Sg**	**14 39 43.8**	**+0.3**
CHBI	**Chibit, Altay**	**5.57**	**35**	Pn			Pn	14 38 14.5	+4.9
CHBI				S			**Sn**	**14 39 15.6**	**+1.9**
CHBI				Sg			**Sg**	**14 39 44.1**	**-1.2**
AKAR	**Aktash**	**5.62**	**36**	Pn			Pn	14 38 15.2	+4.8
AKAR				S			**Sn**	**14 39 18.1**	**+3.1**
AKAR				Sg			**Sg**	**14 39 46.0**	**-1.0**
CUR	**Chagan-Uzun**	**5.77**	**41**	Pn			Pn	14 38 16.9	+4.5
CUR				Pg			**Pg**	**14 38 38.4**	**+1.2**
CUR				Sg			**Sg**	**14 39 48.4**	**-3.5**
ULGR	**Ulagan, Altay**	**5.99**	**35**	Sg			**Sg**	**14 39 58.0**	**-1.0**

*JMA **19** 14:58:11.3±0.2, 24°.6N±0°.7×122°.1E±0°.4, h67km±3km, MV2.4/13, TAIWAN REGION*
*TAP **19** 14:58:12.2, 24°.63N×122°.03E, h59km, ML3.2, B*
ISC 19 14:58:12.2±1.2, **24°.65N**±0°.02×**122°.10E**±0°.02, **h60**km±5km, **n120, σ0.990/213, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.23**	**260**	P			**Pn**	**14 58 21.4**	**-0.5**
ESAO	**Su ao**	**0.24**	**253**	*e*P			**Pn**	**14 58 21.9**	**0.0**
EGS		**0.25**	**323**	*e*P			**Pn**	**14 58 22.1**	**+0.1**
EOS2	**EOS2**	**0.26**	**151**	P			**Pn**	**14 58 22.3**	**+0.4**
EOS2				*e*S			**Sn**	**14 58 30.1**	**+1.2**
ILA	**Ilan**	**0.34**	**290**	*e*P			**Pn**	**14 58 22.8**	**+0.2**
ILA				*e*S			**Sn**	**14 58 30.6**	**+0.4**
NDS	**Dongshan**	**0.34**	**268**	P			**Pn**	**14 58 22.7**	**0.0**
NDS				*e*S			**Sn**	**14 58 30.1**	**-0.2**
EWUT	**Wuta**	**0.35**	**235**	*i* P			**Pn**	**14 58 22.7**	**0.0**
EWUT				*e*S			**Sn**	**14 58 30.6**	**+0.2**
TWB1	**Santiao Chiao**	**0.37**	**345**	P			**Pn**	**14 58 22.7**	**-0.3**
TWB1				*e*S			**Sn**	**14 58 30.4**	**-0.4**
TWE	**Neicheng**	**0.40**	**281**	*i* P			**Pn**	**14 58 23.2**	**0.0**
TWE				S			**Sn**	**14 58 31.0**	**-0.1**
TIPB	**Shuangxi**	**0.41**	**323**	*i* P			**Pn**	**14 58 23.1**	**-0.2**
TIPB				S			**Sn**	**14 58 30.8**	**-0.5**
EOS3	**EOS3**	**0.41**	**151**	P			**Pn**	**14 58 23.8**	**+0.6**
EOS3				*e*S			**Sn**	**14 58 32.4**	**+1.3**
EAHA	**Aohua**	**0.45**	**226**	P			**Pn**	**14 58 23.4**	**-0.3**
EAHA				S			**Sn**	**14 58 32.4**	**+0.4**
FUSB	**Fushanzhiwuyua**	**0.47**	**284**	*i* P			**Pn**	**14 58 24.1**	**+0.1**
FUSB				S			**Sn**	**14 58 32.6**	**0.0**
ENTT	**Nioudou**	**0.48**	**269**	*i* P			**Pn**	**14 58 24.2**	**+0.2**
ENTT				S			**Sn**	**14 58 33.2**	**+0.6**
SXI1	**Grass Mountain**	**0.49**	**336**	P			**Pn**	**14 58 24.0**	**-0.2**
SXI1				S			**Sn**	**14 58 33.4**	**+0.6**
NWF	**Wu-fen Shan**	**0.51**	**326**	*i* P			**Pn**	**14 58 24.4**	**0.0**
NWF				*i* S			**Sn**	**14 58 32.9**	**-0.3**
WFSB	**Wu-fen Shan**	**0.51**	**326**	*i* P			**Pn**	**14 58 24.3**	**0.0**
WFSB				S			**Sn**	**14 58 32.8**	**-0.3**
LATG	**Datong**	**0.53**	**258**	P			**Pn**	**14 58 24.6**	**0.0**
LATG				*e*S			**Sn**	**14 58 33.9**	**+0.2**
NDT	**Datong Townshi**	**0.53**	**265**	*i* P			**Pn**	**14 58 24.9**	**+0.4**
NDT				S			**Sn**	**14 58 34.1**	**+0.6**
NWLT	**Wulai**	**0.55**	**284**	*i* P			**Pn**	**14 58 24.9**	**+0.1**
NWLT				*e*S			**Sn**	**14 58 33.8**	**-0.2**
EOS4	**EOS4**	**0.56**	**159**	*e*P			**Pn**	**14 58 25.0**	**+0.5**
TWA	**Mucha**	**0.57**	**306**	*i* P			**Pn**	**14 58 24.9**	**-0.1**
TWA				S			**Sn**	**14 58 33.7**	**-0.6**
TNOU	**National Taiwa**	**0.58**	**330**	P			**Pn**	**14 58 24.8**	**-0.2**
TNOU				S			**Sn**	**14 58 34.2**	**-0.2**
NHDH	**Xindian Distri**	**0.60**	**301**	P			**Pn**	**14 58 25.3**	**-0.1**
NHDH				*e*S			**Sn**	**14 58 34.6**	**-0.3**
NHY	**Taipei**	**0.62**	**309**	*e*S			**Sn**	**14 58 35.2**	**0.0**
TATO	**Taipei**	**0.64**	**301**	P			**Pn**	**14 58 25.3**	**-0.5**
TATO	**Taipei**	**0.64**	**301**	S			**Sn**	**14 58 34.8**	**-0.9**
ETL	**Fush Village**	**0.65**	**222**	*e*P			**Pn**	**14 58 25.3**	**-0.7**
YHNB	**Yeheng**	**0.65**	**272**	P			**Pn**	**14 58 25.8**	**-0.2**
YHNB	**Yeheng**	**0.65**	**272**	S			**Sn**	**14 58 36.2**	**+0.1**
YHNB	**Yeheng**	**0.65**	**272**	*e*P			**Pn**	**14 58 26.1**	**+0.1**
YHNB				*e*S			**Sn**	**14 58 36.1**	**+0.1**
NACB	**Ninganchiao**	**0.66**	**224**	P			**Pn**	**14 58 24.5**	**-1.5**
NACB	**Ninganchiao**	**0.66**	**224**	S			**Sn**	**14 58 33.3**	**-2.7**
NACB	**Ninganchiao**	**0.66**	**224**	*i* P			**Pn**	**14 58 25.1**	**-0.9**
NACB				S			**Sn**	**14 58 35.5**	**-0.5**
NSK	**Sanguang**	**0.67**	**273**	P			**Pn**	**14 58 26.3**	**-0.1**
NSK				*e*S			**Sn**	**14 58 36.4**	**0.0**
NNSB	**Datong**	**0.68**	**252**	*i* P			**Pn**	**14 58 26.2**	**-0.2**
NNSB				*e*S			**Sn**	**14 58 36.3**	**-0.5**
YM01	**YM01**	**0.69**	**316**	P			**Pn**	**14 58 26.2**	**-0.2**
YM01				*e*S			**Sn**	**14 58 36.3**	**-0.4**
NNS	**Nan Shan**	**0.69**	**253**	*i* P			**Pn**	**14 58 26.3**	**-0.2**
NNS				*e*S			**Sn**	**14 58 36.6**	**-0.3**
YM08	**YM08**	**0.71**	**320**	*e*P			**Pn**	**14 58 26.1**	**-0.5**
YM08				*e*S			**Sn**	**14 58 36.1**	**-1.0**
ETLH	**Xiulin Townshi**	**0.71**	**232**	*e*P			**Pn**	**14 58 26.1**	**-0.6**
ETLH				*e*S			**Sn**	**14 58 37.0**	**-0.3**
ZUZH	**Zhuzihu**	**0.71**	**316**	P			**Pn**	**14 58 26.3**	**-0.4**
ZUZH				*e*S			**Sn**	**14 58 36.5**	**-0.8**
TWD	**Chiawan**	**0.72**	**219**	*e*P			**Pn**	**14 58 26.2**	**-0.6**
TWD				*e*S			**Sn**	**14 58 37.2**	**-0.2**
ANP	**Anpu**	**0.75**	**316**	P			**Pn**	**14 58 26.8**	**-0.4**
ANP				S			**Sn**	**14 58 37.0**	**-1.1**
TWS1	**Kuangyinshan**	**0.76**	**306**	*i* P			**Pn**	**14 58 27.2**	**0.0**
TWS1				S			**Sn**	**14 58 38.2**	**0.0**
TWY	**Chenhua**	**0.77**	**324**	*e*S			**Sn**	**14 58 38.1**	**-0.3**
NTST	**Danshui**	**0.78**	**311**	*e*P			**Pn**	**14 58 27.4**	**0.0**
NTST				*e*S			**Sn**	**14 58 38.6**	**0.0**
JYNG	**Yonaguni jima**	**0.80**	**104**	*e*P			**Pn**	**14 58 26.9**	**-0.8**
JYNG				*e*S			**Sn**	**14 58 39.0**	**0.0**
HWA	**Hwalien**	**0.80**	**214**	*e*P			**Pn**	**14 58 27.7**	**0.0**
HWA				*e*S			**Sn**	**14 58 39.5**	**+0.4**
KSHI	**Guanxi Townshi**	**0.84**	**279**	*e*P			**Pn**	**14 58 28.9**	**+0.7**
KSHI				*e*S			**Sn**	**14 58 41.0**	**+0.8**
YOJ	**Yonaguni jima**	**0.85**	**102**	P			**Pn**	**14 58 28.2**	**-0.1**
YOJ	**Yonaguni jima**	**0.85**	**102**	S			**Sn**	**14 58 40.1**	**-0.2**
YOJ	**Yonaguni jima**	**0.85**	**102**	*e*P			**Pn**	**14 58 28.3**	**-0.1**
YOJ				*e*S			**Sn**	**14 58 40.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.85**	**102**	*e*P			**Pn**	**14 58 28.5**	**+0.1**
YOJ				*e*S			**Sn**	**14 58 40.9**	**+0.6**
FUSS	**Fushou**	**0.87**	**243**	*e*P			**Pn**	**14 58 28.8**	**0.0**
FUSS				*e*S			**Sn**	**14 58 40.9**	**-0.2**
ETM	**Tongmen**	**0.87**	**219**	*e*P			**Pn**	**14 58 27.6**	**-1.1**
ETM				*e*S			**Sn**	**14 58 39.4**	**-1.4**
LXIB	**Xiulin Townshi**	**0.88**	**225**	*i* P			**Pn**	**14 58 27.9**	**-1.1**
LXIB				*e*S			**Sn**	**14 58 40.3**	**-0.8**
NCU	**National Centr**	**0.89**	**291**	*e*P			**Pn**	**14 58 28.0**	**-0.8**
NCU				*e*S			**Sn**	**14 58 40.6**	**-0.4**
NCUH	**Zhongli**	**0.89**	**291**	*e*P			**Pn**	**14 58 29.1**	**+0.3**
NCUH				*e*S			**Sn**	**14 58 41.8**	**+0.8**
NFF	**Wufeng Townshi**	**0.89**	**269**	*e*P			**Pn**	**14 58 29.1**	**+0.2**
NFF				*e*S			**Sn**	**14 58 41.3**	**+0.1**
TEYL	**Yanliau Villag**	**0.90**	**210**	*e*P			**Pn**	**14 58 28.2**	**-0.8**
TEYL				*e*S			**Sn**	**14 58 40.8**	**-0.5**
WHF	**Hehuan Shan**	**0.91**	**237**	*i* P			**Pn**	**14 58 29.1**	**-0.3**
WHF				S			**Sn**	**14 58 41.4**	**-0.7**
TWT	**Tachien**	**0.93**	**245**	*i* P			**Pn**	**14 58 29.8**	**+0.3**
TWT				S			**Sn**	**14 58 42.2**	**+0.1**
TDCB	**Techi**	**0.94**	**245**	*e*P			**Pn**	**14 58 29.9**	**+0.2**
TDCB				*e*S			**Sn**	**14 58 42.6**	**+0.1**
PCYT	**Pengchaiyu**	**0.98**	**359**	P			**Pn**	**14 58 30.4**	**+0.4**
PCYT				*e*S			**Sn**	**14 58 43.2**	**+0.1**
LIOB	**Emei**	**0.98**	**270**	*e*P			**Pn**	**14 58 30.3**	**+0.2**
LIOB				*e*S			**Sn**	**14 58 44.0**	**+0.8**
SHUL	**Shoufeng**	**0.98**	**210**	*e*P			**Pn**	**14 58 29.4**	**-0.6**
SHUL				*e*S			**Sn**	**14 58 43.1**	**-0.2**
NSTT	**Nanjuang**	**0.99**	**269**	*e*P			**Pn**	**14 58 30.3**	**+0.1**
NSTT				*e*S			**Sn**	**14 58 43.8**	**+0.2**
SBCB	**Hsinchu**	**1.02**	**278**	*e*S			**Sn**	**14 58 44.5**	**+0.4**
ESL	**Shilin**	**1.03**	**216**	*e*P			**Pn**	**14 58 29.1**	**-1.5**
ESL				*e*S			**Sn**	**14 58 42.3**	**-2.0**
TEGC	**Jichi Village**	**1.06**	**209**	*e*P			**Pn**	**14 58 30.9**	**-0.2**
OWD	**Renai**	**1.09**	**231**	*i* P			**Pn**	**14 58 31.1**	**-0.5**
OWD				S			**Sn**	**14 58 45.1**	**-0.8**
WUSB	**Renai**	**1.10**	**234**	*i* P			**Pn**	**14 58 31.6**	**-0.2**
WUSB				*e*S			**Sn**	**14 58 45.9**	**-0.4**
WHP	**Taichung City**	**1.11**	**251**	*i* P			**Pn**	**14 58 32.7**	**+0.9**
WHP				S			**Sn**	**14 58 47.1**	**+0.7**
WARBT	**Fenglin Townsh**	**1.13**	**215**	*i* P			**Pn**	**14 58 30.3**	**-1.7**
WARBT				*e*S			**Sn**	**14 58 43.8**	**-2.9**
EGFH	**Guangfu**	**1.15**	**212**	*e*P			**Pn**	**14 58 30.9**	**-1.4**
EGFH				*e*S			**Sn**	**14 58 45.5**	**-1.6**
NMLH	**Miaoli**	**1.19**	**265**	*e*S			**Sn**	**14 58 48.8**	**+0.6**
WCS	**Beigang Elemen**	**1.23**	**242**	P			**Pn**	**14 58 33.8**	**+0.5**
WCS				*e*S			**Sn**	**14 58 49.9**	**+0.9**
TWQ1	**Liyutan**	**1.24**	**256**	*e*P			**Pn**	**14 58 33.4**	**-0.1**
TWQ1				*e*S			**Sn**	**14 58 50.7**	**+1.4**
VWDT	**VWDT**	**1.25**	**225**	*i* P			**Pn**	**14 58 33.3**	**-0.2**
VWDT				S			**Sn**	**14 58 48.4**	**-1.0**
HGSD	**Ruisui**	**1.30**	**208**	*e*P			**Pn**	**14 58 33.4**	**-0.9**
HGSD				*e*S			**Sn**	**14 58 50.9**	**+0.1**
SMLT	**Sun Moon Lake**	**1.33**	**235**	*e*P			**Pn**	**14 58 35.5**	**+0.7**
SMLT				*e*S			**Sn**	**14 58 52.9**	**+1.3**
EHY	**Hungye**	**1.34**	**212**	*e*P			**Pn**	**14 58 33.1**	**-1.7**
EHY				*e*S			**Sn**	**14 58 48.3**	**-3.4**
EHYH	**Wanrong**	**1.34**	**211**	*e*P			**Pn**	**14 58 34.0**	**-0.8**
EHYH				*e*S			**Sn**	**14 58 49.2**	**-2.4**
SSLB	**Suanglung**	**1.35**	**231**	P			**Pn**	**14 58 34.8**	**-0.1**
SSLB	**Suanglung**	**1.35**	**231**	S			**Sn**	**14 58 52.1**	**+0.1**
SSLB	**Suanglung**	**1.35**	**231**	*e*P			**Pn**	**14 58 35.0**	**0.0**
SSLB				*e*S			**Sn**	**14 58 52.0**	**+0.1**
TYC	**Yuchr**	**1.35**	**237**	*e*P			**Pn**	**14 58 35.9**	**+1.0**
TYC				*e*S			**Sn**	**14 58 53.4**	**+1.5**
YULB	**Yu-li**	**1.45**	**210**	P			**Pn**	**14 58 35.1**	**-1.1**
YULB	**Yu-li**	**1.45**	**210**	*e*P			**Pn**	**14 58 34.8**	**-1.4**
YULB				*e*S			**Sn**	**14 58 51.5**	**-2.7**
ECBN	**Changbin**	**1.45**	**204**	*e*P			**Pn**	**14 58 36.4**	**+0.1**
ECBN				*e*S			**Sn**	**14 58 52.4**	**-1.9**
WHYT	**Xinyi Township**	**1.48**	**230**	*e*P			**Pn**	**14 58 37.2**	**+0.5**
WHYT				*e*S			**Sn**	**14 58 56.4**	**+1.3**
TWF1	**Yuli**	**1.48**	**210**	*e*P			**Pn**	**14 58 35.3**	**-1.4**
WNT	**Mingjian**	**1.50**	**240**	*e*P			**Pn**	**14 58 38.0**	**+1.1**
WNT				*e*S			**Sn**	**14 58 56.8**	**+1.3**
IRIF	**Iriomote-Funau**	**1.52**	**101**	P			**Pn**	**14 58 37.0**	**-0.2**
IRIF				S			**Sn**	**14 58 55.8**	**-0.2**
CHKH	**Chenggong**	**1.58**	**204**	*e*P			**Pn**	**14 58 37.6**	**-0.4**
CHKH				*e*S			**Sn**	**14 58 56.2**	**-0.8**
FULB	**Fuli**	**1.62**	**207**	*e*P			**Pn**	**14 58 38.6**	**0.0**
FULB				*e*S			**Sn**	**14 58 57.9**	**-0.6**
ALS	**Alishan**	**1.63**	**226**	*e*P			**Pn**	**14 58 39.8**	**+0.7**
ALS				*e*S			**Sn**	**14 59 00.8**	**+1.6**
CHN5	**Tsauling**	**1.66**	**231**	*i* P			**Pn**	**14 58 40.0**	**+0.7**
CHN5				S			**Sn**	**14 59 00.9**	**+1.3**
HATJ	**Hateruma jima**	**1.67**	**110**	S			**Sn**	**14 59 00.8**	**+1.3**
WGK	**Gukeng**	**1.70**	**236**	P			**Pn**	**14 58 40.3**	**+0.7**
WDLH	**Douliu**	**1.71**	**236**	*e*P			**Pn**	**14 58 40.6**	**+0.9**
WDLH				*e*S			**Sn**	**14 59 02.0**	**+1.3**
RLNB	**Erlin**	**1.75**	**245**	*e*P			**Pn**	**14 58 40.3**	**0.0**
ELDTW	**Lidau**	**1.75**	**214**	*e*P			**Pn**	**14 58 39.7**	**-0.8**
ELDTW				*e*S			**Sn**	**14 59 00.3**	**-1.6**
JKRS	**Kuro-shima**	**1.79**	**103**	P			**Pn**	**14 58 41.0**	**+0.2**
JKRS				S			**Sn**	**14 59 02.7**	**+0.1**
WCKO	**Fanlu**	**1.82**	**229**	*e*P			**Pn**	**14 58 42.2**	**+1.0**
WCKO				*e*S			**Sn**	**14 59 05.5**	**+2.2**
WTK	**Tuku**	**1.83**	**239**	*e*P			**Pn**	**14 58 41.6**	**+0.3**
CHN4	**Tsaushan**	**1.89**	**227**	*e*P			**Pn**	**14 58 43.8**	**+1.6**
CHN4				*e*S			**Sn**	**14 59 07.0**	**+2.1**
JIJ	**Ishigaki jima**	**1.89**	**98**	P			**Pn**	**14 58 42.0**	**-0.2**
JIJ				S			**Sn**	**14 59 04.0**	**-0.9**
**T

CCB	**Clear Creek Bu**	**146.25**	**314**	PKPdf	**PKPbc**	**15**	**18**	**25.2 -0.6**
E25K	**Arctic Village**	**146.29**	**320**	PKPdf	**PKPbc**	**15**	**18**	**25.2 -0.7**
LZDM	**Lanzhou Array**	**146.47**	**108**	PKPbc	**PKPdf**	**15**	**18**	**25.2 -1.1**
	comp=Z,0.4nm,0.4s,baz=223,slow=5.3,SNR=1.3							
ZALV	**Zalesovo Beam**	**146.59**	**67**	PKPbc	**PKPdf**	**15**	**18**	**24.6 -0.9**
	comp=Z,1.0nm,0.5s,baz=246,slow=4.1,SNR=5.7							

*IDC **19** 15:03:50.0±2.5, 10°.26S×161°.26E, h74km±19km, mb3.3/7, mbtmp3.7/10, Error ellipse: s-maj=25.6km s-min=20.2km az=65.0*
*NOU **19** 15:03:49.5, 10°.37S×161°.10E, h9km, MLv4.3/17, Solomon Islands*
ISC 19 15:03:49.9±0.7, 10°.38S±0°.05×161°.20E±0°.05, h62km, n24, σ1s94/26, mb3.6/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**0.69**	**97**	P	**Pn**	**15 04 04.8**	**+0.5**
HURO	**Huro Makira**	**0.69**	**97**	S	**Sn**	**15 04 16.3**	**+1.6**
HNR	**Honiara**	**1.55**	**307**	P	**Pn**	**15 04 15.7**	**+0.3**
	16nm,0.3s,baz=222,slow=22,SNR=37						
HNR				S	**Sn**	**15 04 34.8**	**+0.2**
	27nm,0.4s,baz=120,slow=20,SNR=18						
NGOA	**Tingoa Renbel**	**1.62**	**224**	P	**Pn**	**15 04 17.3**	**+1.0**
NGOA	**Tingoa Renbel**	**1.62**	**224**	S	**Sn**	**15 04 37.6**	**+1.4**
ALEG	**Aligegeo Malai**	**1.69**	**343**	P	**Pn**	**15 04 18.6**	**+1.3**
ALEG	**Aligegeo Malai**	**1.69**	**343**	S	**Sn**	**15 04 40.4**	**+2.5**
SAVO	**Savo Central**	**1.83**	**312**	P	**Pn**	**15 04 19.7**	**+0.5**
SAVO	**Savo Central**	**1.83**	**312**	S	**Sn**	**15 04 43.2**	**+1.8**
TATA	**Tatamba Isabel**	**2.41**	**325**	P	**Pn**	**15 04 28.2**	**+1.1**
TATA	**Tatamba Isabel**	**2.41**	**325**	S	**Sn**	**15 04 57.8**	**+2.3**
DVP	**Devils Point**	**9.96**	**138**	P	**Pn**	**15 06 13.8**	**+3.4**
DZM	**Mont Dzumac**	**12.67**	**157**	P	**Pn**	**15 06 48.7**	**+1.2**
	4.2nm,0.7s,baz=339,slow=17,SNR=26						
DZM				S	**Sn**	**15 09 04.3**	**-2.6**
	5.8nm,0.9s,baz=307,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**12.67**	**157**	P	**Pn**	**15 06 51.5**	**+4.0**
OUENC	**Ouen Island, N**	**13.14**	**156**	P	**Pn**	**15 06 56.7**	**+3.0**
PMG	**Port Moresby**	**13.87**	**273**	P	**Pn**	**15 07 04.0**	**+0.3**
	4.0nm,0.8s,baz=247,slow=7.7,SNR=1.3						
CTA	**Charters Tower**	**17.34**	**234**	P	**P**	**15 07 49.0**	**+0.5**
	1.4nm,0.6s,baz=5.7,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**27.58**	**247**	P	**P**	**15 09 31.1**	**-0.4**
	0.4nm,0.5s,baz=75,slow=9.2,SNR=7.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**29.18**	**240**	P	**P**	**15 09 45.5**	**-0.3**
	0.2nm,0.7s,baz=63,slow=10,SNR=6.7						
	0.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**67.77**	**295**	P	**P**	**15 14 40.8**	**-0.9**
	0.2nm,0.4s,baz=134,slow=8.6,SNR=1.0						
	0.2nm,0.4s						
SONM	**Songino Array**	**75.53**	**325**	P	**P**	**15 15 27.1**	**-0.8**
	0.7nm,0.6s,baz=134,slow=8.3,SNR=2.9						
	0.7nm,0.6s						
NVAR	**Mina Array Bea**	**89.03**	**51**	P	**P**	**15 16 36.6**	**-2.1**
	0.5nm,0.8s,baz=252,slow=2.9,SNR=2.5						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**90.00**	**318**	P	**P**	**15 16 41.0**	**-1.8**
	0.2nm,0.5s,baz=86,slow=6.3,SNR=4.6						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**96.40**	**48**	P	**P**	**15 17 09.9**	**-2.8**
	0.1nm,0.4s,baz=348,slow=2.4,SNR=1.6						
	0.1nm,0.4s						

*SJA **19** 15:21:55.8±0.6, 32°.81S×69°.53W, h125km±2km, ML3.5, MW3.6*
*GUC **19** 15:21:56.9±0.7, 32°.78S×69°.78W, h143km±3km, ML3.6*
ISC 19 15:21:57.0±1.4, 32°.79S±0°.03×69°.60W±0°.04, h122km±9km, n52, σ0s97/89, 13C, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAL	**Salagasta**	**0.67**	**73**	*eP*	**Pn**	**15 22 15.8**	**-0.6**
ASAL				*eS*	**Sn**	**15 22 30.6**	**-0.5**
MT08	**Bocatoma Ro**	**0.75**	**208**	*eP*	**Pn**	**15 22 17.1**	**-0.2**
MT08				*i* S	**Sn**	**15 22 32.0**	**-0.5**
MT08	**Bocatoma Ro**	**0.75**	**208**	*eP*	**Pn**	**15 22 17.2**	**0.0**
MT08				*eS*	**Sn**	**15 22 32.5**	**-0.1**
MT04	**Ro Olivares**	**0.77**	**216**	*eP*	**Pn**	**15 22 17.2**	**-0.2**
MT04	**Ro Olivares**	**0.77**	**216**	*eP*	**Pn**	**15 22 17.4**	**0.0**
MT04				*eS*	Sn	15 22 44.6	+12
VA03	**San Esteban**	**0.80**	**271**	⇑*iP*	**Pn**	**15 22 17.2**	**-0.3**
VA03				*i* S	**Sn**	**15 22 33.1**	**+0.1**
VA03				IAML		15 22 33.8	
	comp=E,3μm,0.2s						
VA03	**San Esteban**	**0.80**	**271**	*eP*	**Pn**	**15 22 17.3**	**-0.3**
VA03				*eS*	**Sn**	**15 22 33.8**	**+0.8**
VA03				IAML		15 22 34.9	
	comp=Z,873nm,0.4s						
MT10	**Hacienda Santa**	**0.93**	**238**	⇑*iP*	**Pn**	**15 22 18.7**	**0.0**
MT10				*i* S	**Sn**	**15 22 35.4**	**+0.4**
MT10				IAML		15 22 40.3	
	comp=N,1μm,0.3s						
PEL	**Peldehue**	**0.98**	**248**	⇑*iP*	**Pn**	**15 22 18.7**	**-0.4**
PEL				*i* S	**Sn**	**15 22 35.5**	**-0.3**
PEL				IAML		15 22 36.9	
	comp=N,2μm,0.4s						
PEL	**Peldehue**	**0.98**	**248**	*eP*	**Pn**	**15 22 18.4**	**-0.6**
PEL				*eS*	**Sn**	**15 22 36.8**	**+0.9**
PEL				IAML		15 22 36.8	
	comp=Z,696nm,0.2s						
MT14	**Cerro Cal¡n**	**0.99**	**232**	⇑*iP*	**Pn**	**15 22 19.3**	**0.0**
MT14				*eS*	**Sn**	**15 22 36.3**	**+0.2**
MT14				IAML		15 22 37.6	
	comp=N,2μm,0.3s						
MT16	**CCHEN**	**1.01**	**230**	*eP*	**Pn**	**15 22 19.3**	**-0.1**
MT16				*i* S	**Sn**	**15 22 36.3**	**0.0**
RTLS	**Leoncito**	**1.02**	**15**	*eP*	**Pn**	**15 22 20.0**	**+0.2**
RTLS				*eS*	**Sn**	**15 22 37.7**	**+0.8**
RTLS				IAML		15 22 38.6	
	comp=Z,2μm,0.6s						
MT03	**Universidad Ad**	**1.04**	**227**	⇑*iP*	**Pn**	**15 22 19.7**	**0.0**
MT03				*i* S	**Sn**	**15 22 37.1**	**+0.2**
MT03				IAML		15 22 38.9	
	comp=N,2μm,0.2s						
MT03	**Universidad Ad**	**1.04**	**227**	*eP*	**Pn**	**15 22 19.9**	**+0.2**
MT03				*eS*	**Sn**	**15 22 37.8**	**+0.8**
MT03				IAML		15 22 41.2	
	comp=Z,1μm,0.2s						
MT15	**Las Vizcachas**	**1.11**	**223**	*eP*	**Pn**	**15 22 20.5**	**+0.1**
MT15				*eS*	**Sn**	**15 22 38.4**	**+0.3**
MT15				IAML		15 22 42.6	
	comp=E,2μm,0.3s						
MT13	**San Alfonso**	**1.12**	**211**	*eP*	**Pn**	**15 22 20.7**	**+0.2**
MT13				*eS*	**Sn**	**15 22 39.7**	**+1.4**
MT13				IAML		15 22 42.8	
	comp=E,601nm,0.3s						
MT13	**San Alfonso**	**1.12**	**211**	*eP*	**Pn**	**15 22 20.8**	**+0.2**
MT13				*eS*	**Sn**	**15 22 40.6**	**+2.2**
MT13				IAML		15 22 42.9	
	comp=Z,249nm,0.2s						
MT05	**Renca**	**1.13**	**237**	*eP*	**Pn**	**15 22 20.4**	**-0.2**
MT05				*eS*	**Sn**	**15 22 38.4**	**-0.1**
MT05	**Renca**	**1.13**	**237**	*eP*	**Pn**	**15 22 20.6**	**0.0**
MT05				*eS*	**Sn**	**15 22 39.8**	**+1.3**
MT05				IAML		15 22 40.8	
	comp=Z,634nm,0.3s						
ROCH	**El Roble**	**1.20**	**261**	⇑*iP*	**Pn**	**15 22 20.9**	**-0.6**
ROCH				*i* S	**Sn**	**15 22 39.7**	**-0.4**
MT12	**Pirque**	**1.24**	**220**	⇑*iP*	**Pn**	**15 22 21.8**	**+0.1**
MT12				*i* S	**Sn**	**15 22 41.1**	**+0.6**
MT12				IAML		15 22 44.0	
	comp=N,1μm,0.4s						
MT02	**Curacav**	**1.38**	**250**	⇑*iP*	**Pn**	**15 22 22.6**	**-0.6**
MT02				*i* S	**Sn**	**15 22 42.0**	**-1.1**
MT02				IAML		15 22 43.0	
	comp=E,757nm,0.4s						
MT02	**Curacav**	**1.38**	**250**	*eP*	**Pn**	**15 22 22.6**	**-0.6**
MT02				IAML		15 22 45.2	
	comp=Z,469nm,0.3s						
CO04	**Los Peladeros**	**1.38**	**302**	⇑*iP*	**Pn**	**15 22 22.8**	**-0.8**
CO04				*i* S	**Sn**	**15 22 43.1**	**-0.5**
CO04				IAML		15 22 44.9	
	comp=E,1μm,0.2s						
VA06	**Catapilco**	**1.45**	**278**	⇑*iP*	**Pn**	**15 22 22.9**	**-1.1**
VA06				*i* S	**Sn**	**15 22 43.0**	**-1.5**
VA06				IAML		15 22 44.0	
	comp=E,1μm,0.2s						
BO04	**La Punta**	**1.47**	**215**	*eP*	**Pn**	**15 22 24.4**	**+0.1**
BO04				*eS*	**Sn**	**15 22 45.7**	**+0.7**
BO04				IAML		15 22 50.0	
	comp=E,665nm,0.2s						

MT09	**Talagante**	**1.53**	**229**	⇑*iP*	**Pn**	**15**	**22**	**24.6 -0.4**
MT09				*i* S	**Sn**	**15**	**22**	**45.8 -0.5**
MT09				IAML		15	22	47.2
	comp=E,2μm,0.3s							
SJA	**San Juan**	**1.53**	**35**	*eP*	Pn	15	22	10.6 -14
SJA				*eS*	**Sn**	**15**	**22**	**47.0 +0.6**
SJA				IAML		15	22	53.6
	comp=Z,179nm,0.3s							
CFA	**Coronel Fontan**	**1.65**	**45**	*eP*	**Pn**	**15**	**22**	**25.9 -0.5**
CFA				*eS*	**Sn**	**15**	**22**	**48.2 -0.5**
CFA				IAML		15	22	48.6
	comp=Z,163nm,0.1s							
RTLL	**Cerro Villicun**	**1.74**	**34**	*eP*	**Pn**	**15**	**22**	**27.2 -0.3**
RTLL				*eS*	**Sn**	**15**	**22**	**50.4 -0.3**
RTLL				IAML		15	22	55.1
	comp=Z,615nm,1.9s							
VA01	**Torpederas**	**1.74**	**262**	*eP*	**Pn**	**15**	**22**	**26.3 -1.0**
VA01				IAML		15	23	05.1
	comp=Z,367nm,0.8s							
MT01	**Popeta**	**1.75**	**232**	⇑*iP*	**Pn**	**15**	**22**	**26.6 -1.0**
MT01				*i* S	**Sn**	**15**	**22**	**49.5 -1.4**
MT01				IAML		15	22	52.8
	comp=E,530nm,0.3s							
MT01	**Popeta**	**1.75**	**232**	*eP*	**Pn**	**15**	**22**	**26.9 -0.7**
MT01				IAML		15	22	51.2
	comp=Z,264nm,0.3s							
VA05	**Santo Domingo**	**1.90**	**242**	*eP*	**Pn**	**15**	**22**	**28.7 -0.6**
VA05				*i* S	**Sn**	**15**	**22**	**52.0 -2.0**
VA05				IAML		15	22	59.7
	comp=E,817nm,0.4s							
CO02	**Combarbal**	**1.98**	**323**	⇑*iP*	**Pn**	**15**	**22**	**30.1 -0.3**
CO02				*i* S	**Sn**	**15**	**22**	**55.6 -0.3**
CO02	**Combarbal**	**1.98**	**323**	*eP*	**Pn**	**15**	**22**	**30.4 0.0**
CO02				*eS*	**Sn**	**15**	**22**	**57.1 +1.2**
CO02				IAML		15	22	57.4
	comp=Z,613nm,0.2s							
BO01	**Tunca**	**2.03**	**217**	*eP*	**Pn**	**15**	**22**	**30.8 -0.1**
BO01				IAML		15	22	58.3
	comp=Z,202nm,0.7s							
ACAN	**Cantantal**	**2.10**	**77**	*eP*	**Pn**	**15**	**22**	**30.7 -1.2**
CO03	**El Pedregal**	**2.15**	**334**	*eP*	**Pn**	**15**	**22**	**33.1 +0.5**
CO03				*eS*	**Sn**	**15**	**23**	**00.6 +0.8**
CO03				IAML		15	23	03.4
	comp=Z,176nm,0.4s							
RFA	**San Rafael**	**2.19**	**155**	*eP*	**Pn**	**15**	**22**	**32.6 -0.5**
RFA				*eS*	**Sn**	**15**	**22**	**59.5 -1.2**
BO02	**Sierra Bellavi**	**2.23**	**206**	*eP*	**Pn**	**15**	**23**	**34.2 +0.7**
BO02				*eS*	**Sn**	**15**	**23**	**06.0 +4.5**
BO02				IAML		15	23	08.5
	comp=Z,271nm,0.2s							
ACCO	**Cerro Coronel**	**2.24**	**12**	*eP*	**Pn**	**15**	**22**	**34.6 +0.6**
ACCO				*eS*	**Sn**	**15**	**23**	**03.7 +1.6**
AROD	**Rodeo**	**2.61**	**2**	*eP*	**Pn**	**15**	**22**	**40.1 +1.4**
AROD				*eS*	**Sn**	**15**	**23**	**12.9 +2.2**
ACDV	**Cuesta del Vie**	**2.64**	**9**	*eP*	**Pn**	**15**	**22**	**40.3 +1.4**
AVFE	**Valle Fertil**	**2.80**	**41**	*eP*	**Pn**	**15**	**22**	**40.6 -0.3**
AVFE				*eS*	**Sn**	**15**	**23**	**13.8 -0.8**
GO04	**Tololo Observa**	**2.80**	**338**	*eS*	**Sn**	**15**	**23**	**14.1 -0.7**
CO01	**Juntas del Tor**	**2.83**	**351**	*eS*	**Sn**	**15**	**23**	**17.7 +2.1**
GO05	**Hualane**	**2.95**	**221**	*eP*	**Pn**	**15**	**22**	**42.9 +0.2**
GO05				IAML		15	23	25.0
	comp=Z,78nm,0.6s							
ML02	**Panimavida**	**3.33**	**206**	*eP*	Pn	15	23	06.5 +19
ML02				*eP*	Pn	15	23	06.5 +19
ML02				IAML		15	24	42.2
	comp=Z,75nm,0.2s							
AC05	**El Transito**	**3.98**	**351**	*eS*	**Sn**	**15**	**23**	**41.7 -0.8**
AC05				*eS*	**Sn**	**15**	**23**	**41.7 -0.8**
AC05				IAML		15	23	43.0
	comp=Z,27nm,0.2s							
VCA	**Vinchina**	**4.21**	**17**	*eS*	**Sn**	**15**	**23**	**46.1 -2.0**
VCA				IAML		15	23	54.5
	comp=Z,52nm,0.2s							

*DMN **19** 15:28:27.6±0.3, 29°.73N×81°.44E, h10km, Ml4.3/10, Error ellipse: s-maj=11.3km s-min=5.7km az=30.0*
ISC 19 15:28:32.6±1.5, 29°.6N±0°.1×81°.8E±0°.1, h31km, n12, σ1s25/23, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYUN	**Piuthan**	**1.84**	**145**	Pn	**Pn**	**15 29 01.4**	**-0.8**
	baz=140,slow=0.0						
PYUN				Sn	**Sn**	**15 29 26.5**	**+1.9**
	baz=140,slow=0.0						
DANN	**Dangsing**	**2.13**	**126**	Pn	**Pn**	**15 29 06.6**	**+0.2**
	baz=124,slow=0.0						
DANN				Sn	**Sb**	**15 29 34.7**	**-2.2**
	355nm,0.3s,baz=124,slow=0.0						
KOLN	**Koldanda**	**2.43**	**139**	Pn	**Pn**	**15 29 10.3**	**0.0**
	baz=135,slow=0.0						
KOLN				Sn	**Sn**	**15 29 40.5**	**+1.4**
	327nm,0.5s,baz=135,slow=0.0						
GKN	**Gorkha**	**2.97**	**122**	Pn	**Pn**	**15 29 17.6**	**-0.1**
	baz=121,slow=0.0						
GKN				Sn	**Sn**	**15 29 54.3**	**+2.0**
	429nm,0.3s,baz=121,slow=0.0						
DMN	**Daman**	**3.53**	**124**	Pn	**Pn**	**15 29 25.9**	**+0.3**
	baz=122,slow=0.0						
DMN				Sn	**Sn**	**15 30 07.4**	**+1.0**
	145nm,0.4s,baz=122,slow=0.0						
KKN	**Kakani**	**3.56**	**120**	Pn	**Pn**	**15 29 26.3**	**+0.4**
	baz=119,slow=0.0						
KKN				Sn	**Sn**	**15 30 08.2**	**+1.1**
	170nm,0.4s,baz=119,slow=0.0						
PKIN	**Phulchoki**	**3.76**	**122**	Pn	**Pn**	**15 29 26.8**	**-1.9**
	baz=121,slow=0.0						
PKIN				Sn	**Sn**	**15 30 13.5**	**+1.4**
	164nm,0.4s,baz=121,slow=0.0						
PKI	**Pulchoki**	**3.77**	**122**	Pn	**Pn**	**15 29 28.1**	**-0.9**
	baz=121,slow=0.0						
PKI				Sn	**Sn**	**15 30 13.5**	**+1.0**
	137nm,0.4s,baz=121,slow=0.0						
GUN	**Gumba**	**3.97**	**114**	Pn	**Pn**	**15 29 31.7**	**+0.1**
	baz=114,slow=0.0						
GUN				Sn	**Sn**	**15 30 19.4**	**+2.1**
	136nm,0.3s,baz=114,slow=0.0						
RAMN	**Ramite**	**5.00**	**121**	Pn	**Pn**	**15 29 45.1**	**-0.6**
	baz=120,slow=0.0						
RAMN				Sn	**Sn**	**15 30 42.9**	**+0.3**
	90nm,0.2s,baz=120,slow=0.0						
ODAN	**Odare**	**5.65**	**118**	Pn	**Pn**	**15 29 53.8**	**-0.8**
	baz=117,slow=0.0						
ODAN				Sn	**Sn**	**15 30 58.7**	**+0.1**
	29nm,0.2s,baz=117,slow=0.0						
KSH2	**Kashi**	**10.80**	**333**	P	**Pn**	**15 31 05.3**	**0.0**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.6s						

IDC 19 15:29:54.7±2.3, 2°.32N×126°.40E, h0km, mb3.1/3, mbtmp3.2/3, MS3.2/1, Error ellipse: s-maj=195.4km s-min=26.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.45**	**161**	P	P	15 35 04.5	-1.4
	0.3nm,0.4s,baz=339,slow=10,SNR=8.7						
	0.3nm,0.4s						
PMG	**Port Moresby**	**23.74**	**120**	LR	LR	15 46 03.4	
	comp=Z,52nm,18.9s,baz=124,slow=41						
ASAR	**Alice Springs**	**26.84**	**165**	P	P	15 35 38.4	+1.3
	0.3nm,0.9s,baz=345,slow=8.8,SNR=5.6						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**58.53**	**326**	P	P	15 39 52.9	-0.1
	0.1nm,0.5s,baz=119,slow=7.7,SNR=4.1						
	0.1nm,0.5s						

*NNC **19** 15:33:14.3±11.0, 36°.64N×71°.97E, h119km±252km, mb3.0, mpv3.8, Error ellipse: s-maj=94.2km s-min=81.2km az=22.0*
ISC 19 15:33:13.9±3.9, 36°.6N±0°.2×72°.1E±0°.2, h124km, n8, σ0s91/11, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.90**	**18**	P	**Pn**	**15 34 39.3**	**0.0**
	SNR=28						
EKS2	**Erkin-Say**	**6.17**	**11**	P	**Pn**	**15 34 43.2**	**+0.6**
	SNR=6.3						
AAK	**Ala-Archa**	**6.28**	**16**	P	**Pn**	**15 34 44.7**	**+0.5**
	SNR=23						
AAK	**Ala-Archa**	**6.28**	**16**	⇑P	**Pn**	**15 34 44.2**	**0.0**
	2.5nm,0.4s						
AAK				⇓S	**Sn**	**15 35 54.6**	**-0.1**
	24nm,1.1s						
KK31	**Karatay Array**	**6.59**	**350**	⇑P	**Pn**	**15 34 49.1**	**+0.9**
	3.3nm,0.3s,baz=168,slow=12,SNR=53						
KK31				⇑S	**Sn**	**15 36 03.2**	**+1.2**
	3.3nm,0.3s,baz=176,slow=24,SNR=10						
CHMS	**Chumysh**	**6.68**	**17**	P	**Pn**	**15 34 49.8**	**+0.3**
	SNR=6.2						
USP	**Ospenovka**	**6.88**	**15**	P	**Pn**	**15 34 51.9**	**-0.3**
	SNR=7.9						
AB31	**Akbulak array**	**15.43**	**329**	⇑P	**Pn**	**15 36 44.5**	**-0.2**
	0.3nm,0.5s,baz=142,slow=14,SNR=14						
AB31				⇑S	**Sn**	**15 39 33.6**	**-1.9**
	1.8nm,0.8s,baz=154,slow=22,SNR=4.6						

*JMA **19** 15:48:54.2±0.2, 25°.0N±0°.6×123°.5E±0°.3, h20km±4km, MV2.9/10, NW OFF ISHIGAKIJIMA IS*
*IDC **19** 15:48:57.1±1.1, 24°.14N×122°.16E, h0km, mb3.5/5, mbtmp3.6/7, ML2.9/2, Error ellipse: s-maj=40.2km s-min=20.3km az=69.0*
ISC 19 15:48:53.8±2.0, 24°.98N±0°.08×123°.53E±0°.05, h6km±12km, n22, σ0s97/22, mb3.5/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.67**	**164**	P	**Pb**	**15 49 07.7**	**-0.1**
IRIF				S	**Sb**	**15 49 17.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.70**	**222**	P	**Pg**	**15 49 07.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.70**	**222**	P	**Pg**	**15 49 07.0**	**-0.1**
YOJ				S	**Sg**	**15 49 15.8**	**-0.4**
JYNG	**Yonagunijimaku**	**0.74**	**225**	P	**Pg**	**15 49 07.8**	**-0.3**
JYNG				S	**Sg**	**15 49 17.4**	**-0.3**
JISG	**Ishigakijimahi**	**0.81**	**119**	P	**Pb**	**15 49 10.6**	**+0.3**
JIJ	**Ishigaki jima**	**0.83**	**137**	P	**Pb**	**15 49 10.4**	**-0.2**
JKRS	**Kuro-shima**	**0.86**	**149**	P	**Pb**	**15 49 11.1**	**0.0**
JKRS				S	**Sn**	**15 49 23.3**	**-2.0**
HATJ	**Hateruma jima**	**0.95**	**164**	P	**Pg**	**15 49 12.4**	**+0.4**
HATJ				S	**Sb**	**15 49 25.4**	**-0.2**
JTJ	**Tarama**	**1.12**	**107**	P	**Pn**	**15 49 16.2**	**+0.2**
JMJ	**Miyako jima 2**	**1.61**	**95**	P	Pg	15 49 33.4	+8.7
NACB	**Ninganchiao**	**1.93**	**246**	P	**Pn**	**15 49 26.5**	**-0.6**
YHNB	**Yeheng**	**1.98**	**261**	P	**Pn**	**15 49 26.6**	**-1.2**
YULB	**Yu-li**	**2.58**	**233**	P	**Pn**	**15 49 37.5**	**+1.5**
SSLB	**Suanglung**	**2.63**	**244**	P	**Pn**	**15 49 38.7**	**+1.9**
TPUB	**Ta-pu**	**3.13**	**238**	P	**Pn**	**15 49 45.6**	**+2.0**
JOW	**Kunigami**	**4.66**	**66**	Pn	Pg	15 50 28.9	+5.9
	0.6nm,0.3s,baz=301,slow=21,SNR=2.1						
	6.9nm,0.7s						
KSRS	**Korea Array**	**12.99**	**16**	Pn		15 52 17.4	
	0.1nm,0.3s,baz=199,slow=12,SNR=4.9						
	1.0nm,0.8s						
SONM	**Songino Array**	**26.53**	**334**	P	P	15 54 40.0	+7.6
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.2						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**39.28**	**314**	P	**P**	**15 56 23.4**	**+0.1**
	0.3nm,0.6s,baz=108,slow=9.5,SNR=4.2						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**40.77**	**326**	P	P	15 56 40.8	+5.3
	0.5nm,0.5s,baz=107,slow=9.7,SNR=2.0						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**45.88**	**166**	P	**P**	**15 57 17.5**	**+0.4**
	0.9nm,0.7s,baz=347,slow=8.5,SNR=7.9						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**49.39**	**167**	P	**P**	**15 57 44.8**	**+0.4**
	0.3nm,0.6s,baz=346,slow=8.5,SNR=6.2						
	0.3nm,0.6s						

*BJI **19** 15:50:26.9, 43°.23N×144°.24E, h10km, mB4.9/18, mb4.7/60, Ms4.1/13, Ms7.3/15*
*MOS **19** 15:50:30.4±0.9, 43°.27N×143°.90E, h17km, mb4.7/36, Error ellipse: s-maj=6.3km s-min=5.4km az=79.5*
*JMA **19** 15:50:31.4±0.1, 43°.3N±0°.3×144°.0E±0°.3, h5km±2km, MD4.6/20, MV4.3/20, KUSHIRO REGION*
JMA Felt III J1 at KUSHIRO REGION .
*SKHL **19** 15:50:31.2±0.2, 43°.10N×143°.90E, h34km±3km, mb5.1/4*
*NIED **19** 15:50:31.4, 43°.31N×143°.95E, h5km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.05; Mθθ0.31; Mθφ-1.36; Mrθ-0.65; Mθθ0.30; Mθr1.58; Fault plane solution: M₀2.11000×10¹⁵ NP1: φs187.00000°, δ20.00000°, λ117.00000°. NP2: φs339.00000°, δ73.00000°, λ81.00000°.*
*NEIC **19** 15:50:33.8±1.7, 43°.28N±0°.05×143°.82E±0°.09, h24km±4km, mb4.7/153 Error ellipse: s-maj=9.4km s-min=7.5km az=90.0*
*IDC **19** 15:50:34.8±2.8, 43°.30N×143°.94E, h34km±21km, mb4.1/25, mbtmp4.4/33, ML4.0/7, MS3.1/5, Error ellipse: s-maj=13.3km s-min=11.2km az=118.0*
ISC 19 15:50:31.8±0.8, 43°.26N±0°.02×143°.95E±0°.02, h13km±5km, n537, σ1s26/501, mb4.6/129, MS4.0/8, 15C-11D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.14**	**286**	⇓P	**Pb**	**15 50 34.2**	**-2.1**
JAR				A	A	15 50 34.2	
	comp=N,878nm,0.8s,comp=E,1μm,0.7s						
JAR				⇓S	**Sb**	**15 50 37.0**	**-2.2**
JOB	**Onbets**	**0.37**	**193**	P	**Pg**	**15 50 39.6**	**+0.4**
JOB				A	A	15 50 39.6	
	comp=N,259nm,0.9s,comp=E,232nm,0.6s				

NMR *i* S **Sn** **15 51 11.0 -1.9**
NMR Nemuro--Hokkai 1.30 85 *e*P **Pn** **15 50 53.4 -2.2**
NMR *e*S **Sn** **15 51 08.2 -4.7**
ASAJ Asahikawa 1.30 312 Pn **Pb** **15 50 56.1 -0.1**
comp=E,558nm,0.3s,baz=154,slow=14,SNR=2964
ASAJ Sn **Sg** **15 51 13.9 +0.1**
comp=E,183nm,0.3s,baz=358,slow=29,SNR=12
ASAJ LR LR 15 51 40.2
comp=E,349nm,20.7s,baz=48,slow=51
ASAJ Asahikawa 1.30 312 A A 15 50 55.2
comp=N,20nm,3.7s,comp=E,18nm,1.4s
JNBK Urakawa-nobuka 1.32 222 A A 15 50 56.5
comp=N,15nm,2.6s,comp=E,15nm,4.7s
JEM Erimo 1.37 205 P **Pn** **15 50 56.5 -0.1**
JEM Erimo 1.37 205 S **Sb** **15 51 16.5 +1.8**
JSHD Hidakashinhida 1.38 233 A A 15 50 57.5
comp=N,21nm,3.3s,comp=E,25nm,3.7s
YUK Yuzh-Kuril'sk 1.59 60*d i* PN **Pn** **15 50 58.8 -0.8**
YUK *i* S **Sb** **15 51 20.6 -0.4**
YUK pmax pmax
comp=Z,1µm,0.5s
YUK pmax pmax
comp=N,334nm,0.2s
YUK pmax pmax
comp=E,755nm,0.6s
YUK smax smax
comp=N,1µm,0.5s
YUK smax smax
comp=E,2µm,0.6s
YUK Yuzh-Kuril'sk 1.59 60 *i* P **Pn** **15 50 58.8 -0.8**
YUK AMB AMB 15 51 02.5
comp=E,1µm,0.5s
YUK *i* S **Sn** **15 51 17.5 -2.5**
YUK A A 15 51 26.1
comp=E,1µm,0.5s
YUK A A 15 51 26.1
comp=E,2µm,0.5s
JIAM Iburiatsuma 1.62 248 A A 15 51 01.0
comp=N,36nm,5.3s,comp=E,36nm,1.1s
JHR Hokuryu 1.69 287 A A 15 51 01.6
comp=N,19nm,3.6s,comp=E,15nm,3.0s
JISS Ishikarishitsu 1.85 271 A A 15 51 04.1
comp=N,18nm,3.5s,comp=E,12nm,5.5s
JEW Eniwo 1.88 258 A A 15 51 04.8
comp=N,24nm,4.8s,comp=E,21nm,5.4s
JSS Shosan 1.90 308 A A 15 51 04.5
comp=N,13nm,4.2s,comp=E,18nm,4.7s
SHO Shikotan 2.18 73 *e*P **Pg** **15 51 16.3 +2.7**
SHO AMB AMB 15 51 24.1
comp=E,510nm,0.6s
SHO *e*S **Sg** **15 51 42.4 +0.5**
SHO A A 15 51 46.1
comp=E,1µm,0.4s
SHO A A 15 51 46.1
comp=E,1µm,0.4s
JWK2 Keihoku 2.53 325 A A 15 51 13.5
comp=N,6.0nm,4.2s,comp=E,9.0nm,3.2s
JAHD Aomorihigashid 2.78 225 A A 15 51 18.1
comp=N,13nm,1.3s,comp=E,9.0nm,1.6s
KUR Kuril'sk 3.44 54 *e*PN **Pn** **15 51 27.0 +2.0**
KUR *e*S **Sb** **15 52 10.9 -3.2**
KUR pmax pmax
comp=Z,217nm,0.7s
KUR pmax pmax
comp=E,38nm,0.6s
KUR smax smax
comp=N,323nm,0.7s
KUR smax smax
comp=E,163nm,0.4s
KUR Kuril'sk 3.44 54 *e*P **Pn** **15 51 25.2 +0.2**
KUR AMB AMB 15 51 31.5
comp=E,220nm,0.5s
KUR *e*S **Sn** **15 52 05.8 +0.3**
KUR A A 15 52 20.6
comp=E,320nm,0.5s
KUR A A 15 52 20.6
comp=E,160nm,0.5s
YSS Yuzhno-Sakhali 3.79 348 Pn **Pn** **15 51 29.9 +0.1**
YSS Yuzhno-Sakhali 3.79 348 P **Pn** **15 51 30.7 +0.9**
YSS Yuzhno-Sakhali 3.79 348 *e*PN **Pn** **15 51 30.3 +0.5**
YSS *e*S **Sn** **15 52 15.6 +1.4**
YSS pmax pmax
comp=Z,100nm,3.8s
YSS pmax pmax
comp=Z,50nm,0.7s
YSS smax smax
comp=N,500nm,3.2s
YSS smax smax
comp=E,200nm,3.3s
YSS smax smax
comp=N,140nm,0.9s
YSS smax smax
comp=E,120nm,0.7s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS MLR MLR
comp=E,900nm,12.0s
YSS Yuzhno-Sakhali 3.79 348 *e*P **Pn** **15 51 30.3 +0.5**
TEY Ternei 5.58 291 *e*PN Pb 15 52 03.2 -5.7
TEY *e* 15 53 10.8
UGL Uglegorsk 5.96 348 *e*P **Pn** **15 52 00.2 +0.5**
TYV Tymovskoe 7.66 354 *e*PN **Pn** **15 52 25.6 +2.7**
TYV pmax pmax
comp=Z,200nm,4.5s
TYV pmax pmax
comp=Z,10.0nm,0.9s
TYV Tymovskoe 7.66 354 *e*P **Pn** **15 52 25.6 +2.7**
TYV *e*S **Sn** **15 53 50.8 +1.3**
MJB9 Matsu-Tunnel 8.03 215 Pn **Pn** **15 52 29.1 +1.0**
MAJO Matsushiro 8.03 215 Pn **Pn** **15 52 29.0 +0.9**
MAJO Matsushiro 8.03 215 P **Pn** **15 52 31.3 +3.2**
MAJO Matsushiro 8.03 215 *i* PN **Pn** **15 52 29.1 +1.0**
MJAR Matsushiro Arr 8.03 215 Pn **Pn** **15 52 28.8 +0.7**
comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=30
MJAR LR LR 15 56 02.9
comp=Z,169nm,18.4s,baz=351,slow=41
comp=Z,5.8nm,0.5s
MJAR Matsushiro Arr 8.03 215 Pn **Pn** **15 52 28.2 +0.1**
USRK Ussuriysk Ar. 8.71 280 Pn **Pn** **15 52 38.3 +0.8**
comp=Z,0.3nm,0.3s,baz=90,slow=13,SNR=9.3
USRK Sn **Sn** **15 54 12.7 -2.8**
comp=Z,0.3nm,0.3s,baz=102,slow=28,SNR=2.5
comp=Z,3.7nm,0.7s
VLA Vladivostok 8.82 273 *i* PN **Pn** **15 52 41.1 +2.2**
JGF Kuroka 9.19 216 Pn **Pn** **15 52 44.5 +0.5**
JGF Kuroka 9.19 216 P **Pn** **15 52 46.4 +2.4**
INU Inuyama 9.55 216 Pn **Pn** **15 52 49.2 +0.2**
INU Inuyama 9.55 216 P **Pn** **15 52 51.4 +2.5**
PSTR Posyet 9.66 271 *i* PN **Pn** **15 52 50.1 -0.3**
PSTR Posyet 9.66 271 *e*P **Pn** **15 52 50.1 -0.3**
NKL Nikolayevsk 10.13 349 *e*P **Pn** **15 52 57.0 +0.2**
KLR Kul'dur 10.34 309 LR LR 15 57 13.0
comp=Z,24nm,19.0s,baz=122,slow=39
KLR Kul'dur 10.34 309*ce*PN **Pn** **15 53 00.3 +0.6**
KLR pmax pmax
comp=Z,9.0nm,1.3s
KLR Kul'dur 10.34 309 *e*P **Pn** **15 53 00.4 +0.7**
MDJ Mudanjiang 10.45 282 Pn **Pn** **15 53 03.2 +2.0**
MDJ Mudanjiang 10.45 282 P **Pn** **15 53 05.7 +4.5**
MDJ Mudanjiang 10.45 282 P **Pn** **15 53 00.3 -0.9**
MDJ pmax pmax
comp=Z,7.0nm,2.1s
MDJ pmax pmax
comp=Z,280nm,4.1s
JHJ Hachijo jima 2 10.64 199 Pn **Pn** **15 53 05.5 +1.6**
comp=Z,11nm,0.3s,baz=73,slow=20,SNR=4.6
JHJ Sn **Sn** **15 54 55.6 -7.2**
comp=Z,6.8nm,0.3s,baz=78,slow=21,SNR=1.5
comp=Z,113nm,0.9s
SKR Severo-Kuril's 11.14 44 *e*PN **Pn** **15 53 07.1 -3.5**
SKR pmax pmax
comp=Z,600nm,6.6s
SKR MLR MLR
comp=Z,700nm,13.0s
PAU Pauzhetka 11.96 42 *e*P **Pn** **15 53 19.3 -2.6**
BNX BinXian 12.07 288 ⇓P **Pn** **15 53 27.1 +3.7**
BNX S **Sn** **15 55 35.4 -2.5**
BNX pmax pmax
comp=Z,41nm,1.4s
BNX pmax pmax
comp=Z,130nm,6.9s
BNX LR LR
comp=Z,190nm,7.7s
BNX LR LR
comp=Z,380nm,14.0s
BNX LR LR
comp=Z,380nm,12.9s
JMN Monobe 12.35 223 Pn **Pn** **15 53 27.0 -0.4**
HEH HeiHe 13.31 307 *e*P **Pn** **15 53 43.3 +3.1**
HEH pmax pmax
comp=Z,17nm,1.1s
HEH LR LR
comp=Z,600nm,15.0s
HEH LR LR
comp=Z,280nm,12.0s
HEH LR LR
comp=Z,390nm,10.3s
PEA0B Petropavlovsk- 13.44 38 *i* PN **Pn** **15 53 40.7 -1.3**
PETK Petropavlovsk- 13.44 38 Pn **Pn** **15 53 41.5 -0.5**
comp=Z,7.7nm,1.0s,baz=229,slow=6.5,SNR=6.6
PETK LR LR 15 58 50.3
comp=Z,128nm,18.6s,baz=243,slow=37
PETK Petropavlovsk- 13.44 38 Pn **Pn** **15 53 42.9 +0.9**
PETK Petropavlovsk- 13.44 38 PN **Pn** **15 53 42.9 +0.9**
CN2 Changchun 13.44 279 ⇓P **Pn** **15 53 45.6 +3.5**
CN2 epP P 15 53 53.0 +1.5
CN2 *e*S **Sn** **15 56 12.9 +1.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,100nm,10.0s
CN2 LR LR
comp=Z,200nm,10.0s
CN2 LR LR
comp=Z,200nm,11.0s
KSRS Korea Array 13.52 250 Pn **Pn** **15 53 44.9 +1.6**
comp=Z,0.2nm,0.3s,baz=61,slow=12,SNR=20
KSRS LR LR 15 58 23.7
comp=Z,147nm,18.4s,baz=60,slow=35
comp=Z,18nm,1.2s
KS19 Wonju Array Si 13.54 250 Pn **Pn** **15 53 44.0 +0.5**
KSAR Wonju Array Be 13.55 250 Pn **Pn** **15 53 42.6 -1.0**
KSAR Wonju Array Be 13.55 250 P **Pn** **15 53 42.6 -1.0**
PET Petropavlovsk 13.82 40 P **Pn** **15 53 47.7 +0.5**
PET Petropavlovsk 13.82 40 *e*P **P** **15 53 59.2 +3.6**
PET *e*S Sn 15 56 29.0 +8.6
PET pmax pmax
comp=Z,33nm,1.3s
PET MLR MLR
comp=Z,600nm,15.0s
PET MLR MLR
comp=Z,200nm,14.0s
PET Petropavlovsk 13.82 40 *e*P **Pn** **15 53 46.7 -0.5**
JNU Nakatsue 14.41 230 Pn **Pn** **15 53 56.0 +0.5**
comp=Z,0.4nm,0.3s,baz=30,slow=20,SNR=8.2
comp=Z,21nm,0.9s
TJN Taejon 14.47 247 Pn **Pn** **15 53 55.9 -0.3**
TJN Taejon 14.47 247 P **P** **15 54 00.2 -2.7**
TJN Taejon 14.47 247 P **Pn** **15 53 55.9 -0.3**
ZEA Zeya 15.21 319 *e*P **P** **15 54 09.4 -1.6**
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA MLR MLR
comp=N,200nm,16.0s
ZEA MLR MLR
comp=Z,100nm,14.0s
JSU Suzuyama 15.87 227 Pn **Pn** **15 54 13.1 -1.8**
JSU IAmb IAmb 15 54 15.7
comp=Z,42nm,1.1s
MA2 Magadan 16.87 12 Pn **Pn** **15 54 27.9 +0.6**
comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=13
MA2 LR LR 16 00 39.3
comp=Z,42nm,18.5s,baz=204,slow=36
comp=Z,6.0nm,0.8s
MA2 Magadan 16.87 12 **P** **15 54 28.9 -0.5**
MA2 Magadan 16.87 12 P **P** **15 54 30.6 +1.2**
MA2 Magadan 16.87 12*ce*P **Pn** **15 54 27.5 +0.1**
MA2 pmax pmax
comp=Z,14nm,1.3s
HIA Hailar 17.75 298 **Pn** **15 54 38.1 -0.3**
HIA Hailar 17.75 298 P **P** **15 54 42.2 +3.0**
comp=Z,8.2nm,1.9s
HIA Hailar 17.75 298 P **Pn** **15 54 38.1 -0.3**
HIA pmax pmax
comp=Z,4.0nm,0.9s
HILR Hailar Array B 17.80 299 P **Pn** **15 54 39.4 +0.3**
baz=119,slow=17
comp=Z,4.5nm,0.5s
XLT XiLinHaoTe 20.17 281 *e*P **P** **15 55 04.5 -1.4**
XLT pmax pmax
comp=Z,5.0nm,0.9s
XLT pmax pmax
comp=Z,81nm,5.5s
XLT LR LR
comp=Z,260nm,14.3s
XLT LR LR
comp=Z,240nm,13.2s
SEY Seymchan 20.31 11 P **P** **15 55 07.9 +0.7**
comp=Z,3.9nm,0.8s,baz=192,slow=7.5,SNR=8.4
comp=Z,3.9nm,0.8s
SEY Seymchan 20.31 11*ce*P **P** **15 55 06.8 -0.4**
SEY pmax pmax
comp=Z,10.0nm,1.3s
YAK Yakutsk 20.61 341 P **P** **15 55 10.6 +0.2**
comp=Z,11nm,0.5s,baz=130,slow=6.7,SNR=7.9
comp=Z,11nm,0.5s
YAK Yakutsk 20.61 341 **P** **15 55 09.2 -1.2**
YAK Yakutsk 20.61 341 *e*P **P** **15 55 10.2 -0.2**
YAK *e**PP Pn 15 55 13.5 +0.8
YAK *e* 15 55 27.3
YAK *e*PPP PPP 15 55 37.4
YAK *e*S **S** **15 59 01.4 +1.2**
YAK *e**SS **pS** **15 59 11.3 +1.2**
YAK *e*SS **SnSn** **15 59 20.9 +1.6**
YAK *e*SSS SSS 15 59 32.2
YAK pmax pmax
comp=Z,6.0nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK pmax pmax
comp=E,1.0nm,0.7s
YAK pmax pmax
comp=Z,107nm,4.9s
YAK pmax pmax
comp=N,35nm,3.1s
YAK pmax pmax
comp=E,125nm,5.1s
YAK smax smax
comp=N,141nm,6.4s
YAK smax smax
comp=E,113nm,4.6s
BJI2 Beijing 20.97 271 P **P** **15 55 13.3 -1.2**
BJI2 pmax pmax
comp=E,6.0nm,1.1s
BJI2 LR LR
comp=E,100nm,14.3s
BJT Baijiatuau 20.98 271 P **P** **15 55 12.5 -2.1**
BJT Baijiatuau 20.98 271 P **P** **15 55 12.5 -2.1**
BJT pmax pmax
comp=Z,17nm,1.0s
TIA Tai'an 21.74 260 P **P** **15 55 20.4 -2.4**
TIA pmax pmax
comp=Z,4.0nm,0.7s
NJ2 Nanjing 22.72 249 *e*P **P** **15 55 33.3 0.0**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
HNS HongShan 22.98 265 ⇑P **P** **15 55 35.5 -0.5**
HNS pmax pmax
comp=Z,22nm,1.3s
HHC Hu-ho-hao-te 24.09 275 *e*P **P** **15 55 44.6 -2.4**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,98nm,5.3s
BTO2 Baotou 25.34 276 *e*P **P** **15 55 58.8 +0.3**
BTO2 S **S** **16 00 22.5 -1.9**
BTO2 pmax pmax
comp=Z,16nm,0.8s
BTO2 pmax pmax
comp=Z,490nm,4.7s
BTO2 LR LR
comp=Z,360nm,6.7s
BTO2 LR LR
comp=Z,390nm,7.0s
BTO2 LR LR
comp=Z,340nm,10.0s
LYN LuoYang 25.88 261 P **P** **15 56 03.5 +0.3**
LYN pmax pmax
comp=Z,13nm,0.5s
TATO Taipei 25.91 233 P **P** **15 56 05.3 +1.8**
ULN Ulaanbaatar 26.07 293 P **P** **15 56 04.3 -0.8**
ULN Ulaanbaatar 26.07 293*ce*P **P** **15 56 04.4 -0.6**
ULN pmax pmax
comp=Z,12nm,1.3s
ULN Ulaanbaatar 26.07 293 *e*P **P** **15 56 04.4 -0.6**
SONM Songino Array 26.52 293 P **P** **15 56 08.9 -0.1**
comp=Z,4.6nm,0.7s,baz=81,slow=8.6,SNR=32
comp=Z,4.6nm,0.7s
SONM Songino Array 26.52 293 P **P** **15 56 08.1 -0.9**
SONM Songino Array 26.52 293 P **P** **15 56 08.1 -0.9**
SONM pmax pmax
comp=Z,8.0nm,1.0s
WHN Wuhan 26.71 251 ⇑P **P** **15 56 10.9 +0.2**
WHN pmax pmax
comp=Z,72nm,0.7s
BILL Bilibino 27.51 18 *i* P **P** **15 56 14.6 -3.0**
BILL pmax pmax
comp=Z,21nm,3.3s
TPUB Ta-pu 27.70 232 P **P** **15 56 20.4 +0.7**
TPUB IAmb IAmb 15 56 26.8
comp=Z,25nm,1.1s
ZAK Zakamensk 28.44 299 *e*P **P** **15 56 26.0 -0.2**
ZAK pmax pmax
comp=Z,13nm,1.5s
XAN Xi'an 28.69 263 P **P** **15 56 27.8 -0.7**
XAN pmax pmax
comp=Z,7.0nm,0.8s
MOY Mondy 29.86 302 *e*P **P** **15 56 38.5 -0.3**
MOY pmax pmax
comp=Z,22nm,3.0s
ENH Enshi 30.28 256 P **P** **15 56 42.1 -0.5**
H11N2 WAKE ISLAND Hy 30.36 133 T T 16 27 59.3
baz=327,slow=75,SNR=214
H11N1 WAKE ISLAND Hy 30.37 133 T T 16 28 02.7
baz=327,slow=75,SNR=161
H11N3 WAKE ISLAND Hy 30.38 133 T T 16 28 00.6
baz=327,slow=75,SNR=156
H11S1 WAKE ISLAND Hy 31.27 135 T T 16 29 09.3
baz=328,slow=76,SNR=109
H11S3 WAKE ISLAND Hy 31.27 135 T T 16 29 13.9
baz=328,slow=76,SNR=150
H11S2 WAKE ISLAND Hy 31.28 135 T T 16 29 10.5
baz=328,slow=76,SNR=78
LZH Lanzhou 31.46 271 *e*P **P** **15 56 54.3 +1.2**
LZH sP pP 15 57 00.3 +3.0
LZH pmax pmax
comp=Z,17nm,1.8s
LZH LR LR
comp=Z,200nm,18.6s
LZH LR LR
comp=Z,300nm,20.6s
LZH LR LR
comp=Z,340nm,18.2s
LZDM Lanzhou Array 31.62 270 P **P** **15 56 54.6 -0.1**
comp=Z,1.2nm,0.4s,baz=81,slow=3.9,SNR=11
comp=Z,1.2nm,0.4s
SPIA Saint Paul Isl 31.78 48 P **P** **15 56 57.3 +1.9**
baz=264
P08K Saint George I 32.11 49 P **P** **15 56 59.0 +0.6**
baz=266
NIKH Nikolski High 32.43 56 P **P** **15 57 02.4 +1.2**
baz=272
GTA2 Gaotai 33.09 279 *e*P **P** **15 57 07.5 +0.2**
GTA2 sP sP 15 57 18.9 +5.7
GTA2 pmax pmax
comp=Z,5.0nm,1.4s
GTA2 LR LR
comp=Z,190nm,16.3s
GTA2 LR LR
comp=Z,270nm,17.5s
GTA2 LR LR
comp=Z,390nm,15.5s
UNV Unalaska Valle 33.80 54 P **P** **15 57 14.5 +1.3**
baz=273
M11K Mekoryuk 34.24 42 P **P** **15 57 17.0 +0.1**
baz=263
TNA Tin City 34.53 33 P **P** **15 57 19.2 -0.2**
baz=254
F14K Arctic Creek 35.15 34 P **P** **15 57 24.7 0.0**
baz=256
K13K Kusilvak Mount 35.19 40 P **P** **15 57 25.5 +0.4**
K13K Kusilvak Mount 35.19 40 P **P** **15 57 25.1 0.0**
baz=262
ANM Nome 35.33 35 P **P** **15 57 26.0 -0.3**
ANM Nome 35.33 35 P **P** **15 57 26.0 -0.3**
ANM pmax pmax
comp=Z,2.0nm,1.0s
ANM Nome 35.33 35 P **P** **15 57 26.6 +0.2**
baz=258
FALS False Pass 35.56 52 P **P** **15 57 28.7 +0.3**
baz=274
M13K Dall Lake 35.66 43 P **P** **15 57 29.3 +0.1**
baz=266
J14K Nanvaranak Lak 35.81 39 P **P** **15 57 29.6 -0.8**
J14K IAmb IAmb 15 57 37.0
comp=Z,17nm,1.4s
J14K Nanvaranak Lak 35.81 39 P **P** **15 57 30.7 +0.3**
baz=262
F15K North Star Dit 35.88 33 P **P** **15 57 31.1 +0.1**
baz=257
G15K Niukluk 35.98 35 P **P** **15 57 32.5 +0.7**
baz=259
L14K Kuka Creek 36.06 41 P **P** **15 57 33.5 +0.9**
baz=265
C16K Lisburne Hills 36.29 29 P **P** **15 57 34.9 +0.4**
baz=253
M14K Bethel 36.36 42 P **P** **15 57 35.7 +0.6**
M14K IAmb IAmb 15 57 47.9
comp=Z,11nm,0.9s
M14K Bethel 36.36 42 P **P** **15 57 36.6 +1.5**
baz=267
N14K Kuskokwak Cree 36.46 44 P **P** **15 57 37.1 +1.1**
baz=268
O14K Tigyukauivet M 36.65 45 P **P** **15 57 38.4 +0.7**
baz=269
L15K Ungalak Mounta 36.66 41 P **P** **15 57 39.1 +1.4**
baz=266
H16K Elim 36.67 36 P **P** **15 57 38.3 +0.5**
baz=261
K15K Wolf Creek Mou 36.69 40 P **P** **15 57 38.0 0.0**
baz=265
G16K Koyuk River 36.75 34 IAmb IAmb 15 57 41.1
comp=Z,16nm,1.5s
G16K Koyuk River 36.75 34 P **P** **15 57 38.8 +0.3**
baz=260
D17K Noatak River 36.96 30 P **P** **15 57 40.5 +0.3**
baz=256
M15K Kasigluk River 36.98 42 P **P** **15 57 41.1 +0.6**
baz=268
C17K DeLong Mountai 37.12 29 P **P** **15 57 41.6 0.0**
baz=255,SNR=5.9
SDPT Sand Point 37.21 51 P **P** **15 57 43.0 +0.5**
baz=275
J16K Anvik River 37.21 38 P **P** **15 57 42.6 +0.2**
baz=264
I17K Unalakleet 37.24 37 P **P** **15 57 42.4 -0.1**
I17K IAmb IAmb 15 57 45.3
comp=Z,7.5nm,0.8s
I17K Unalakleet 37.24 37 P **P** **15 57 42.8 +0.2**
baz=264
F17K Baldwin Pennin 37.39 33 P **P** **15 57 44.3 +0.5**
baz=260
O15K Ungalikthiuk R 37.39 45 P **P** **15 57 44.8 +0.9**
baz=271
G17K Kiwalik Mounta 37.47 34 P **P** **15 57 44.4 -0.2**
baz=262,SNR=11
L16K Owhat River 37.62 41 P **P** **15 57 46.6 +0.7**
L16K Owhat River 37.62 41 P **P** **15 57 45.9 0.0**
baz=268
H17K Granite Mounta 37.70 35 P **P** **15 57 46.6 0.0**
H17K Granite Mounta 37.70 35 P **P** **15 57 46.7 +0.1**
baz=263,SNR=5.8
CHNA Chernabura Isl 37.77 52 P **P** **15 57 46.9 -0.3**
baz=276
E18K Tukpahlearik C 37.83 31 P **P** **15 57 48.8 +1.2**
E18K Tukpahlearik C 37.83 31 P **P** **15 57 47.7 +0.2**
baz=259
M16K Timber Creek 37.84 42 P **P** **15 57 48.8 +1.0**
baz=269
C18K Utukok River 37.87 29 IAmb IAmb 15 57 50.3
comp=Z,11nm,1.4s
C18K Utukok River 37.87 29 P **P** **15 57 48.2 +0.2**
baz=257

N16K	Nishlik Lake	37.93	43	P	P	15 57 50.1	+1.6		
	baz=270								
GOMU	GeErMu	37.99	276	P	P	15 57 48.3	-1.5		
GOMU				pmax	pmax				
	comp=Z,11nm,1.0s								
PZH	PanZhiHua	38.00	258	P	P	15 57 49.5	-0.2		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.8s								
F18K	Selawik	38.05	33	P	P	15 57 49.9	+0.5		
	baz=261								
L17K	Donlin	38.19	40	P	P	15 57 51.5	+0.8		
	baz=268								
K17K	Iditarod	38.22	39	IAmb	IAmb	15 57 54.0			
	comp=Z,15nm,1.1s								
K17K	Iditarod	38.22	39	P	P	15 57 50.4	-0.5		
	baz=267								
O16K	Kokwok River B	38.27	44	P	P	15 57 52.0	+0.6		
	baz=272								
P16K	Nushagak River	38.34	45	P	P	15 57 52.3	+0.3		
	baz=272								
G18K	Tagagawik	38.35	34	P	P	15 57 51.1	-0.9		
	baz=263,SNR=7.7								
H18K	Honhosa River	38.38	35	P	P	15 57 52.2	-0.1		
	baz=264								
C19K	Lookout Ridge	38.54	29	IAmb	IAmb	15 57 56.4			
	comp=Z,13nm,1.3s								
C19K	Lookout Ridge	38.54	29	P	P	15 57 53.6	-0.1		
	baz=258								
M17K	Holitna River	38.58	41	P	P	15 57 56.0	+2.0		
M17K	Holitna River	38.58	41	P	P	15 57 54.5	+0.5		
	baz=270								
R16K	Pilot Point	38.64	47	P	P	15 57 54.7	+0.2		
	baz=274								
DGZ	Jazzator, Alta	38.65	300	*i* P	P	15 57 55.6	+0.7		
DGZ				pmax	pmax				
	comp=Z,6.0nm,0.9s								
N17K	Nushagak Hills	38.71	43	P	P	15 57 55.4	+0.3		
	baz=271								
O17K	Koliganek Bris	38.77	44	P	P	15 57 55.9	+0.2		
	baz=272								
F19K	Shaleruckik Mo	38.82	32	IAmb	IAmb	15 57 57.5			
	comp=Z,11nm,1.2s								
F19K	Shaleruckik Mo	38.82	32	P	P	15 57 55.3	-0.6		
	baz=263								
D19K	Kuna River	38.95	30	IAmb	IAmb	15 57 59.5			
	comp=Z,18nm,1.2s								
D19K	Kuna River	38.95	30	P	P	15 57 56.5	-0.5		
	baz=260								
L18K	Granite Mounta	38.95	40	IAmb	IAmb	15 58 00.4			
	comp=Z,21nm,1.3s								
L18K	Granite Mounta	38.95	40	P	P	15 57 57.0	0.0		
	baz=269								
J18K	Innoko River	38.97	38	P	P	15 57 56.2	-1.1		
	baz=268								
G19K	Purcell Mounta	39.01	34	P	P	15 57 56.9	-0.6		
	baz=264								
E19K	Redstone River	39.11	32	P	P	15 57 58.2	-0.2		
	baz=262								
P17K	Kvichak River	39.13	45	P	P	15 57 57.9	-0.7		
	baz=273								
R17L	Mt. Peulik Vol	39.29	47	P	P	15 57 59.8	-0.2		
	baz=275								
N18K	Kilae Creek	39.35	42	P	P	15 57 59.9	-0.5		
	baz=272								
M18K	Stony River	39.36	41	P	P	15 57 59.7	-0.8		
	baz=271								
ZAA0	Zalesovo Array	39.44	307		P	15 58 00.7	-0.5		
ZALV	Zalesovo Beam	39.44	307	P	P	15 58 00.9	-0.3		
	comp=Z,3.2nm,0.6s,baz=82,slow=8.4,SNR=20								
ZALV				PcP	PcP	16 00 08.7	-0.3		
	comp=Z,2.6nm,0.8s,baz=103,slow=3.2,SNR=6.0								
	comp=Z,3.2nm,0.6s								
ZALV	Zalesovo Beam	39.44	307	P	P	15 58 00.3	-0.9		
J19K	Poorman	39.48	37	IAmb	IAmb	15 58 03.6			
	comp=Z,13nm,1.2s								
J19K	Poorman	39.48	37	P	P	15 58 01.1	-0.4		
	baz=268								
Q17K	Contact Creek	39.48	46	P	P	15 58 01.4	-0.3		
	baz=275								
D20K	Etivluk River	39.52	30	P	P	15 58 01.2	-0.6		
	baz=262								
E20K	Nigu River	39.61	30	P	P	15 58 02.1	-0.5		
	baz=262								
F20K	Avaraart Lake	39.65	32	P	P	15 58 02.2	-0.6		
	baz=264								
O18K	Koktuh Hills	39.72	44	P	P	15 58 02.6	-1.0		
	baz=274								
P18K	Big Mountain,	39.74	44	P	P	15 58 03.2	-0.5		
	baz=274								
L19K	White Mountain	39.81	40	P	P	15 58 03.2	-1.1		
	baz=271								
H20K	Anotleneega Mo	39.86	35	P	P	15 58 03.0	-1.6		
	baz=267								
CHIR	Chirikof Islan	39.90	50	P	P	15 58 04.4	-0.6		
	baz=278								
A21K	Barrow	39.99	26	P	P	15 58 03.9	-1.7		
	baz=258								
N19K	Bonanza Creek	40.03	42	P	P	15 58 06.6	+0.3		
	baz=273								
M19K	Big River Lodg	40.03	40	P	P	15 58 05.6	-0.6		
	baz=272								
WMQ	Urumqi	40.10	291	*e*P	P	15 58 07.3	+0.3		
WMQ				PcP	PcP	16 00 10.1	-1.3		
WMQ				pmax	pmax				
	comp=Z,18nm,1.3s								
K20K	Telida	40.16	38	P	P	15 58 07.7	+0.5		
K20K	Telida	40.16	38	P	P	15 58 06.8	-0.4		
	baz=270								
C21K	Knifeblade Rid	40.24	29	P	P	15 58 07.3	-0.5		
	baz=263								
B21K	Ikpikpuk River	40.36	28	P	P	15 58 07.5	-1.2		
	baz=262								
E21K	Killik River	40.45	30	P	P	15 58 08.1	-1.5		
	baz=264								
G21K	Allakaket	40.48	33	P	P	15 58 10.1	+0.3		
	baz=267,SNR=5.1								
F21K	Alatna River	40.53	32	P	P	15 58 09.8	-0.5		
	baz=266								
SII	Sitkinak Islan	40.59	49	P	P	15 58 12.2	+1.4		
	baz=278								
Q19K	Cape Douglas,	40.59	45	P	P	15 58 11.6	+0.8		
	baz=276								
M20K	Styx River	40.63	40	P	P	15 58 11.7	+0.6		
	baz=273								
H21K	Melozitna Rive	40.73	35	P	P	15 58 11.9	+0.1		
	baz=269								
CHUM	Lake Minchumin	40.94	37	P	P	15 58 14.3	+0.8		
	baz=271								
D22K	Ayikyak River	40.96	30	P	P	15 58 14.5	+0.7		
	baz=265								
OHAK	Old Harbor	40.99	48	P	P	15 58 14.8	+0.8		
	baz=278								
PPLA	Purkeypile	41.02	39	P	P	15 58 15.3	+0.8		
PPLA	Purkeypile	41.02	39	P	P	15 58 14.9	+0.5		
	baz=273								
I21K	Tanana	41.07	35	P	P	15 58 15.3	+0.7		
	baz=270								
TNCH	TengChong	41.20	259	P	P	15 58 16.8	+0.4		
TNCH				pmax	pmax				
	comp=Z,52nm,1.1s								
TNCH				pmax	pmax				
	comp=Z,180nm,4.2s								
E22K	Anaktuvuk Pass	41.23	31	P	P	15 58 16.5	+0.6		
	baz=267								
STLK	Strandline Lak	41.27	41	P	P	15 58 18.2	+1.8		
KDAK	Kodiak Island	41.28	47	P	P	15 58 16.5	0.0		
	baz=278								
H22K	Ishtalitna Cre	41.33	34	P	P	15 58 17.6	+0.9		
	baz=270								
SKT	Skwentna	41.38	40	P	P	15 58 16.9	-0.4		
	baz=274								
BPAW	Bear Paw Mtn.	41.52	37	P	P	15 58 18.7	+0.3		
	baz=272								
HOM	Homer	41.54	44	P	P	15 58 18.2	-0.3		
	baz=277								
CAPN	Captain Cook N	41.66	42	P	P	15 58 19.1	-0.4		
	baz=276								
D23K	Nanushuk River	41.69	30	IAmb	IAmb	15 58 20.5			
	comp=Z,13nm,1.4s								
D23K	Nanushuk River	41.69	30	P	P	15 58 18.7	-1.0		
	baz=267								
L22K	Petersville	41.70	39	IAmb	IAmb	15 58 22.7			
	comp=Z,30nm,1.5s								
C23K	Itkillik River	41.77	28	P	P	15 58 19.3	-1.0		
	baz=266								
SUA	Susitna One	41.79	41	P	P	15 58 18.8	-2.0		
	baz=275								
COLD	Coldfoot	41.81	32	P	P	15 58 20.2	-0.5		
	baz=269								
TRF	Thorofare Moun	41.86	38	P	P	15 58 20.0	-1.4		
	baz=274								
G23K	Bananza Creek	41.88	33	P	P	15 58 20.8	-0.5		
	baz=270								
CUT	Chulitna	41.94	39	P	P	15 58 20.7	-1.1		
	baz=275								
BRSE	Bradleer Lake S	41.98	43	P	P	15 58 23.1	+0.9		
	baz=277								
E23K	Chandalar	42.05	31	IAmb	IAmb	15 58 25.2			
	comp=Z,19nm,1.4s								
E23K	Chandalar	42.05	31	P	P	15 58 21.4	-1.4		
	baz=269,SNR=7.0								
M22K	Willow	42.06	40	P	P	15 58 23.0	+0.2		
	baz=276								
I23K	Minto, Yukon-K	42.18	35	P	P	15 58 24.8	+1.1		
I23K	Minto, Yukon-K	42.18	35	P	P	15 58 23.5	-0.2		
	baz=272								
NEA2	Nenana	42.33	36	IAmb	IAmb	15 58 36.2			
	comp=Z,7.9nm,0.8s								
NEA2	Nenana	42.33	36	P	P	15 58 24.0	-0.9		
	baz=273,SNR=6.6								
C24K	Franklin Bluff	42.43	28	IAmb	IAmb	15 58 27.5			
	comp=Z,15nm,1.1s								
C24K	Franklin Bluff	42.43	28	P	P	15 58 25.6	-0.1		
	baz=268								
MCK	McKinley	42.44	37	P	P	15 58 25.4	-0.6		
MCK				IAmb	IAmb	15 58 28.4			
	comp=Z,25nm,1.2s								
MCK	McKinley	42.44	37	P	P	15 58 25.4	-0.6		
MCK				pmax	pmax				
	comp=Z,25nm,1.2s								
MCK	McKinley	42.44	37	P	P	15 58 25.7	-0.3		
	baz=274								
E24K	Your Creek	42.47	31	P	P	15 58 24.8	-1.3		
	baz=270								
RND	Redeer	42.51	38	IAmb	IAmb	15 58 28.2			
	comp=Z,24nm,1.0s								
PMR	Palmer	42.55	41	P	P	15 58 26.9	+0.2		
	baz=277								
SEW	Seward	42.58	43	P	P	15 58 27.5	+0.5		
	baz=278								
WAT1	Susitna Watana	42.69	39	P	P	15 58 28.5	+0.5		
	baz=276								
MK31	Makanchi Array	42.74	297	*ce*P	P	15 58 28.1	-0.5		
MKAR	Makanchi Array	42.74	297	P	P	15 58 28.2	-0.3		
	comp=Z,5.5nm,0.8s,baz=84,slow=9.3,SNR=48								
	comp=Z,5.5nm,0.8s								
MKAR	Makanchi Array	42.74	297	P	P	15 58 26.9	-1.7		
WRH	Wood River Hil	42.76	36	P	P	15 58 29.4	+1.0		
WRH				IAmb	IAmb	15 58 31.3			
	comp=Z,21nm,1.4s								
H24K	Noodor Dome	42.77	34	P	P	15 58 28.9	+0.3		
	baz=273								
COLA	College	42.83	36	P	P	15 58 29.6	+0.6		
COLA	College	42.83	36	P	P	15 58 29.6	+0.6		
COLA	College	42.83	36	P	P	15 58 29.6	+0.6		
COLA	College	42.83	36	P	P	15 58 29.4	+0.4		
	baz=274								
CCB	Clear Creek Bu	42.87	36	P	P	15 58 29.2	-0.1		
G24K	Hadweenzic Riv	42.89	33	IAmb	IAmb	15 58 32.9			
	comp=Z,13nm,1.1s								
G24K	Hadweenzic Riv	42.89	33	P	P	15 58 28.2	-1.3		
	baz=272								
SML	Sawmill	42.91	40	P	P	15 58 28.3	-1.5		
	baz=277								
MAKZ	Makanchi	42.94	297	P	P	15 58 28.9	-1.3		
MAKZ				IAmb	IAmb	15 58 33.4			
	comp=Z,12nm,1.1s								
MAKZ	Makanchi	42.94	297	P	P	15 58 28.9	-1.3		
MAKZ				pmax	pmax				
	comp=Z,12nm,1.1s								
WAT6	Susitna Watana	43.09	39	P	P	15 58 30.2	-1.1		
	baz=277								
DHY	Denali Highway	43.20	38	P	P	15 58 30.9	-1.4		
	baz=276								
D25K	Kavik River	43.24	29	P	P	15 58 30.5	-1.9		
	baz=271								
IL31		43.25	36	P	P	15 58 31.9	-0.5		
IL31				IAmb	IAmb	15 58 34.7			
	comp=Z,15nm,1.0s								
ILAR	Eielson Array	43.25	36	P	P	15 58 32.0	-0.4		
	comp=Z,10nm,1.0s,baz=257,slow=5.0,SNR=38								
	comp=Z,10nm,1.0s								
ILAR	Eielson Array	43.25	36	P	P	15 58 31.8	-0.7		
HDA	Harding Lake	43.26	36	IAmb	IAmb	15 58 34.6			
	comp=Z,11nm,1.0s								
HDA	Harding Lake	43.26	36	P	P	15 58 31.8	-0.7		
	baz=275								
SCM	Sheep Creek Mo	43.37	40	P	P	15 58 33.4	-0.2		
	baz=278								
F25K	Christian Rive	43.56	32	P	P	15 58 34.4	-0.6		
	baz=273								
E25K	Arctic Village	43.57	31	P	P	15 58 35.4	+0.4		
	baz=273								
P23K	Montague Islan	43.61	43	P	P	15 58 35.4	+0.1		
	baz=280								
C26K	Camden Bay	43.75	28	P	P	15 58 36.0	-0.3		
	baz=271								
PRP	Porcupine Dome	43.76	35	IAmb	IAmb	15 58 40.3			
	comp=Z,15nm,1.2s								
PRP	Porcupine Dome	43.76	35	P	P	15 58 36.0	-0.7		
	baz=276,SNR=5.1								
K24K	Donnelly Dome	43.83	37	P	P	15 58 36.4	-0.8		
	baz=277								
KURK	Kurchatov	43.87	304	P	P	15 58 36.5	-1.1		
KURK				IAmb	IAmb	15 58 38.1			
	comp=Z,11nm,1.1s								
KURK	Kurchatov	43.87	304	*ce*P	P	15 58 37.0	-0.5		
KURK				pmax	pmax				
	comp=Z,15nm,1.3s								
KURK	Kurchatov	43.87	304	*e*P	P	15 58 37.1	-0.5		
LSA	Lhasa	43.87	270	P	P	15 58 30.8	-7.6		
LSA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
M24K	Tolsona, Glenn	43.88	40	P	P	15 58 37.6	0.0		
	baz=278								
J25K	Salcha River,	43.92	36	P	P	15 58 37.3	-0.6		
	baz=276								
KURBB	Kurchatov Arra	43.95	303	P	P	15 58 37.9	-0.3		
	comp=Z,5.0nm,0.6s,baz=73,slow=8.8,SNR=31								
	comp=Z,5.0nm,0.6s								
BMAR	Burnt Mountain	43.98	32	P	P	15 58 39.4	+1.1		
PAX	Paxson	44.08	38	P	P	15 58 38.6	-0.6		
	baz=278								
KLU	Klutina	44.09	40	P	P	15 58 37.8	-1.5		
	baz=279								
F26K	Sheenjek River	44.13	31	IAmb	IAmb	15 58 42.5			
	comp=Z,16nm,1.4s								
F26K	Sheenjek River	44.13	31	P	P	15 58 39.2	-0.4		
	baz=274								
C27K	Jago River	44.17	29	IAmb	IAmb	15 58 42.0			
	comp=Z,9.4nm,1.1s								
C27K	Jago River	44.17	29	P	P	15 58 38.9	-0.8		
	baz=273								
Q23K	Middleton Isla	44.24	43	P	P	15 58 40.1	-0.3		
	baz=281								
RIDG	Independent Ri	44.25	37	IAmb	IAmb	15 58 52.0			
	comp=Z,8.0nm,0.9s								
RIDG	Independent Ri	44.25	37	P	P	15 58 39.8	-0.8		
	baz=278								
HARP	HAARP	44.30	39	P	P	15 58 40.0	-1.0		
	baz=279								
G26K	Porcupine Rive	44.33	32	IAmb	IAmb	15 58 44.9			
	comp=Z,8.1nm,1.0s								
G26K	Porcupine Rive	44.33	32	P	P	15 58 41.2	+0.1		
	baz=276								
SCRK	Sand Creek	44.60	37	P	P	15 58 42.9	-0.5		
	baz=278,SNR=7.1								
J26L	Joseph Creek	44.70	36	P	P	15 58 43.3	-0.9		
	baz=278								
MENT	Mentasta	44.87	38	IAmb	IAmb	15 58 52.9			
	comp=Z,18nm,1.3s								
MENT	Mentasta	44.87	38	P	P	15 58 47.8	+2.3		
CHTO	Chiang Mai	44.91	252	P	P	15 58 46.5	+0.2		
CHTO				IAmb	IAmb	15 58 47.5			
	comp=Z,6.4nm,0.7s								
CHTO	Chiang Mai	44.91	252	P	P	15 58 47.6	+1.3		
CHTO	Chiang Mai	44.91	252	P	P	15 58 46.5	+0.2		
CHTO				pmax	pmax				
	comp=Z,6.0nm,0.7s								
L26K	Log Cabin Wild	45.03	38	P	P	15 58 46.2	-0.5		
	baz=280,SNR=8.0								
CMAR	Chiang Mai Arr	45.16	251	P	P	15 58 49.0	+0.7		
	comp=Z,2.1nm,0.7s,baz=44,slow=7.2,SNR=21								
	comp=Z,2.1nm,0.7s								
CMAR	Chiang Mai Arr	45.16	251	P	P	15 58 47.7	-0.5		
CMAR	Chiang Mai Arr	45.16	251	*i* P	P	15 58 49.0	+0.7		
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.7s								
D27M	Malcolm River	45.17	29	P	P	15 58 47.6	-0.2		
	baz=276								
G27K	Doyon Strip	45.18	33	P	P	15 58 47.5	-0.4		
	baz=278								
M26K	Nabesna, AK	45.30	39	P	P	15 58 48.6	-0.3		
	baz=281								
H27K	Steamboat Moun	45.31	33	P	P	15 58 48.6	-0.4		
	baz=278								
I27K	Kandik River	45.37	34	P	P	15 58 50.1	+0.7		
	baz=279								
SIJI	Sorong	45.38	198	P	P	15 58 50.6	+0.7		
	comp=Z,11nm,0.9s,baz=326,slow=7.5,SNR=2.2								
	comp=Z,11nm,0.9s								
MCARA	McCarthy VSAT	45.48	40	P	P	15 58 50.3	0.0		
	baz=282								
L27K	Beaver Creek,	45.70	38	P	P	15 58 51.8	-0.3		
	baz=281								
BCAR	Beaver Creek A	45.72	38	P	P	15 58 52.4	+0.2		
E28M	Babbage River	45.75	30	P	P	15 58 52.0	-0.4		
	baz=278								
F28M	Old Crow	45.76	31	P	P	15 58 52.1	-0.4		
	baz=278								
M27K	Edge Creek, AK	45.81	39	P	P	15 58 53.6	+0.4		
	baz=282								
D28M	Stokes Point	45.95	29	P	P	15 58 53.2	-0.6		
	baz=278								
I28M	Miner Creek	46.08	34	IAmb	IAmb	15 58 57.8			
	comp=Z,15nm,1.1s								
I28M	Miner Creek	46.08	34	P	P	15 58 54.4	-0.7		
	baz=280								
MESA	MESA	46.25	42	P	P	15 58 56.2	-0.4		
	baz=284								
BVCY	Beaver Creek	46.27	39	P	P	15 58 55.5	-1.1		
	baz=282								
CTG	Chitna Glacier	46.36	41	P	P	15 58 56.5	-0.9		
	baz=283								
E29M	Blow River	46.38	30	P	P	15 58 56.2	-1.1		
	baz=279								
G29M	Pine Creek	46.59	32	P	P	15 58 58.3	-0.6		
	baz=280								
YUK3	Moose Creek	46.59	39	P	P	15 58 58.8	-0.5		
	baz=283								
I29M	Ogilvie Camp,	46.77	34	P	P	15 59 00.6	+0.2		
I29M	Ogilvie Camp,	46.77	34	P	P	15 59 00.9	+0.5		
	baz=282,SNR=6.5								
O28M	Mount Upton	46.96	41	P	P	15 59 02.2	-0.1		
	baz=284								
YUK8	Steele Glacier	47.03	40	P	P	15 59 03.1	+0.3		
	baz=284								
PINM	Pinnacle	47.10	42	P	P	15 59 03.3	+0.2		
	baz=285								
G30M	tAoh Zraii Nji	47.27	32	P	P	15 59 03.6	-0.7		
	baz=282								
F30M	Barrier River	47.30	31	P	P	15 59 04.2	-0.4		
	baz=282								
L29M	L29M	47.34	37	P	P	15 59 04.5	-0.4		
	baz=284								
M29M	Somme Creek	47.35	38	P	P	15 59 04.7	-0.4		
	baz=284								
K29M	Barlow Dome	47.43	36	IAmb	IAmb	15 59 08.6			
	comp=Z,8.6nm,0.8s								
K29M	Barlow Dome	47.43	36	P	P	15 59 05.5	-0.2		
	baz=284								
YUK4	Talbot Arm	47.54	40	P	P	15 59 06.1	-0.6		
	baz=285								
I30M	Mount Dempster	47.59	34	P	P	15 59 06.4	-0.5		
	baz=283								
TARG	Taragay, Kyrgy	47.63	292	IAmb	IAmb	15 59 15.9			
	comp=Z,4.4nm,0.9s								
J30M	Hart River	47.76	35	P	P	15 59 08.5	+0.2		
	baz=284								
YUK6	Outpost Mounta	47.78	40	P	P	15 59 08.5	-0.1		
	baz=286								
O29M	Mount Kennedy	47.85	41	P	P	15 59 08.4	-0.7		
	baz=286								
INK	Inuvik	47.99	30	P	P	15 59 08.0	-1.8		
INK	Inuvik	47.99	30	P	P	15 59 08.0	-1.8		
INK				pmax	pmax				
	comp=Z,2.0nm,0.7s								
INK	Inuvik	47.99	30	P	P	15 59 08.9	-0.9		
	baz=283								
EVN	Everest	48.00	271	P	P	15 59 09.5	-1.7		
EVN				IAmb	IAmb	15 59 22.1			
	comp=Z,6.4nm,0.7s								
BVAR	Borovoye Array	48.00	309	P	P	15 59 09.8	-0.3		
	comp=Z,1.8nm,0.5s,baz=68,slow=8.3,SNR=9.6								
BVAR				PcP	PcP	16 00 37.9	-0.2		
	comp=Z,1.5nm,0.7s,baz=43,slow=3.0,SNR=4.0								
	comp=Z,1.8nm,0.5s								
BORK	Borovoye	48.04	309	*ce*P	P	15 59 09.9	-0.5		
BORK				pmax	pmax				
	comp=Z,6.0nm,1.3s								
M30M	Minto, Yukon	48.06	38	P	P	15 59 10.2	-0.4		
	baz=286								
F31M	Tsiigehtchic	48.11	31	P	P	15 59 10.1	-0.6		
	baz=284								
HYT	Haines Junctio	48.21	40	P	P	15 59 13.2	+1.4		
HYT	Haines Junctio	48.21	40	P	P	15 59 11.4	-0.4		
	baz=286								
H31M	Peel River	48.27	33	P	P	15 59 11.2	-0.9		
	baz=285								
BOOM	Boomskoye usch	48.56	294	P	P	15 59 14.2	-0.6		
BOOM	Boomskoye usch	48.56	294	P	P	15 59 14.2	-0.6		
BOOM				pmax	pmax				
	comp=Z,16nm,1.2s								
P30M	Million Dollar	48.67	41	P	P	15 59 14.7	-0.6		
	baz=287								
N31M	Braeburn, Yuko	48.83	39	P	P	15 59 15.1	-1.3		
	baz=287								
O30N	Mendenhall	48.89	40	P	P	15 59 16.9	-0.1		
	baz=288								
M31M	Drury Creek, Y	49.24	38	P	P	15 59 19.2	-0.4		
	baz=288								
AAK	Ala-Archa	49.46	295	P	P	15 59 20.9	-0.8		
AAK	Ala-Archa	49.46	295	*ce*P	P	15 59 20.3	-1.4		
AAK				pmax	pmax				
	comp=Z,5.0nm,1.3s								
AAK	Ala-Archa	49.46	295	*e*P	P	15 59 20.3	-1.4		
WHY	Whitehorse	49.49	40	P	P	15 59 20.9	-0.7		
	baz=288								
SKAG	Skagway	49.66	41	P	P	15 59 22.8	0.0		
	baz=289								
S31K	Pelican	49.72	43	P	P	15 59 22.7	-0.4		
	baz=290								
A36M	Sachs Harbour	49.77	24	P	P	15 59 22.2	-1.2		
	baz=287								
N32M	Quiet Lake	50.17	39	P	P	15 59 25.5	-1.1		
	baz=290								
KSH2	Kashi	50.31	290	P	P	15 59 30.5	+2.3		
KSH2				pmax	pmax				
	comp=Z,2.0nm,0.8s								
P32M	Atlin	50.40	41	P	P	15 59 28.3	-0.1		
	baz=290								
R32K	Eaglecrest	50.46	43	P	P	15 59 28.7	-0.2		
	baz=291								
SIT	Sitka	50.49	44	P	P	15 59 28.1	-0.9		
	baz=291								
P33M	Teslin, Yukon	50.61	40

baz=294
ARTI Arti 53.21 316 P P 15 59 48.6 -0.8
ARTI IAmb IAmb 15 59 49.7
comp=Z,7.3nm,0.7s
ARTI Arti 53.21 316c iP P 15 59 48.8 -0.6
ARTI S S 16 07 21.6 +1.9
ARTI SS SS 16 11 01.5 +2.8
ARTI pmax pmax
comp=Z,6.0nm,0.8s
WRGLY Wrigley 53.57 34 P P 15 59 51.2 -0.7
baz=295
NIL Nilore 54.69 285 P P 16 00 00.1 -0.5
NIL Nilore 54.69 285 P P 16 00 00.1 -0.5
NIL pmax pmax
comp=Z,18nm,1.5s
TOAD Toad River Com 54.70 40 P P 15 59 59.3 -0.9
baz=297
SPITS Spitsbergen Ar 54.81 348 P P 15 59 60.0 -0.8
comp=Z,13nm,1.0s,baz=125,slow=15,SNR=2.2
comp=Z,13nm,1.0s
SPITS Spitsbergen Ar 54.81 348 P P 16 00 00.0 -0.8
CHGR Chuyangaron 54.91 293 i P P 16 00 01.9 -0.3
CHGR pmax pmax
comp=Z,18nm,1.1s
AB31 Akbulak array 55.54 308 IAmb IAmb 16 00 06.7
comp=Z,5.3nm,0.7s
ABKAR Akbulak array 55.54 308 P P 16 00 06.0 -0.4
RES Resolute Bay 56.09 16 IAmb IAmb 16 00 12.1
comp=Z,10nm,1.4s
KIRV Kirov 56.53 321ceP P 16 00 12.5 -0.9
KBL Kabul 57.15 288 P P 16 00 16.7 -1.8
KBL IAmb IAmb 16 00 20.0
comp=Z,8.1nm,1.1s
KBL Kabul 57.15 288 P P 16 00 16.7 -1.8
KBL pmax pmax
comp=Z,8.0nm,1.2s
YKAW3 Yellowknife Wh 57.45 33 IAmb IAmb 16 00 22.1
comp=Z,12nm,1.1s
YKA Yellowknife Ar 57.49 33 P P 16 00 20.0 -0.1
comp=Z,5.1nm,1.0s,baz=303,slow=7.9,SNR=40
comp=Z,5.1nm,1.0s
YKA Yellowknife Ar 57.49 33 P P 16 00 21.2 +1.1
YKA Yellowknife Ar 57.49 33 i P P 16 00 20.0 -0.1
YKA pmax pmax
comp=Z,5.0nm,1.0s
BELG Belogornoye 60.64 316 i P P 16 00 42.5 +0.4
BELG pmax pmax
comp=Z,2.0nm,0.9s
ILON Igloolik, Nuna 62.74 17 P P 16 00 55.7 -0.3
BLKN Baker Lake 62.92 25 P P 16 00 57.0 -0.2
BLKN IAmb IAmb 16 00 58.6
comp=Z,9.0nm,1.0s
EDM Edmonton 63.32 41 P P 16 01 01.2 +1.0
EDM Edmonton 63.32 41 P P 16 01 01.2 +1.0
EDM pmax pmax
comp=Z,17nm,1.3s
WB0 Warramunga Arr 63.33 190 P P 16 00 58.9 -1.5
WB0 IAmb IAmb 16 01 07.6
comp=Z,4.8nm,0.9s
WRA Warramunga Arr 63.51 190 P P 16 01 01.0 -0.6
comp=Z,1.6nm,0.6s,baz=8.6,slow=6.7,SNR=14
comp=Z,1.6nm,0.6s
WRA Warramunga Arr 63.51 190 P P 16 01 00.4 -1.2
WRA Warramunga Arr 63.51 190 i P P 16 01 03.2 +1.6
WRA pmax pmax
comp=Z,2.0nm,0.6s
E07A Sunnyside 63.91 50 P P 16 01 05.6 +1.5
E07A IAmb IAmb 16 01 06.9
comp=Z,7.8nm,1.0s
C09A Chrisman Ranch 64.04 48 IAmb IAmb 16 01 07.3
comp=Z,5.7nm,0.9s
FIA1 FINESS Array S 64.23 332 P P 16 01 05.3 -0.6
FINES FINESS Array B 64.23 332 P P 16 01 05.0 -1.0
comp=Z,2.4nm,0.6s,baz=84,slow=5.9,SNR=10
comp=Z,2.4nm,0.6s
FINES FINESS Array B 64.23 332 P P 16 01 04.3 -1.7
FINES FINESS Array B 64.23 332 i P P 16 01 05.0 -1.0
FINES pmax pmax
comp=Z,3.0nm,0.6s
OBN Obninsk 64.31 323⇑eP P 16 01 06.4 -0.1
OBN e 16 03 29.3
OBN eS S 16 09 48.3 +4.5
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,77nm,14.0s
OBN Obninsk 64.31 323 eP P 16 01 06.5 -0.1
NEW Newport 64.39 47 P P 16 01 08.7 +1.4
NEW IAmb IAmb 16 01 09.7
comp=Z,4.0nm,0.8s
NEW Newport 64.39 47 P P 16 01 08.7 +1.4
NEW pmax pmax
comp=Z,4.0nm,0.9s
E09A Wood Farm, Sta 64.88 49 P P 16 01 10.9 +0.4
O03E Paynes Creek 66.52 56 P P 16 01 21.4 +0.1
PLID Pearl Lake 66.94 49 IAmb IAmb 16 01 26.9
comp=Z,10.0nm,1.2s
MSO Missoula 66.97 47 IAmb IAmb 16 01 27.0
comp=Z,6.1nm,1.1s
AS31 Alice Springs 67.23 190 P P 16 01 24.8 -0.9
ASAR Alice Springs 67.23 190 P P 16 01 25.8 0.0
comp=Z,1.0nm,0.7s,baz=4.7,slow=6.4,SNR=16
comp=Z,1.0nm,0.7s
ASAR Alice Springs 67.23 190 P P 16 01 25.1 -0.6
FFC Flin Flon 67.46 35 P P 16 01 26.8 -0.1
FFC IAmb IAmb 16 01 28.9
comp=Z,11nm,1.1s
FFC Flin Flon 67.46 35 P P 16 01 26.8 -0.1
FFC pmax pmax
comp=Z,11nm,1.2s
FCC Fort Churchill 67.59 29 P P 16 01 28.6 +1.0
FCC IAmb IAmb 16 01 29.5
comp=Z,10nm,1.3s
FCC Fort Churchill 67.59 29 P P 16 01 28.6 +1.0
FCC pmax pmax
comp=Z,10.0nm,1.3s
LYMT Lyon Mountain 67.75 46 P P 16 01 29.5 +0.3
KIV Kislovodsk 68.33 310 P P 16 01 31.6 -1.1
KIV Kislovodsk 68.33 310 eP P 16 01 33.1 +0.4
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,33nm,17.0s
KIV Kislovodsk 68.33 310 eP P 16 01 33.3 +0.6
PAHR Pah Rah Range 68.34 56 IAmb IAmb 16 01 36.0
comp=Z,5.4nm,1.1s
KBZ Khabaz 68.36 310 P P 16 01 32.5 -0.2
comp=Z,4.9nm,0.9s,baz=42,slow=5.8,SNR=11
comp=Z,4.9nm,0.9s
KBZ Khabaz 68.36 310 eP P 16 01 32.6 -0.1
MNK Minsk 68.44 326 i P P 16 01 33.7 +0.6
comp=E,8.0nm,0.6s
MNK i P P 16 01 33.7 +0.6
comp=N,5.0nm,0.5s
MNK i P P 16 01 33.7 +0.6
comp=Z,4.0nm,0.6s,baz=45
MNK i PcP PcP 16 01 58.6 +0.3
MNK i PP PP 16 04 04.7 +1.2
MNK i PPP PPP 16 05 43.6
MNK i S S 16 10 36.5 +2.4
MNK i ScS ScS 16 11 33.4 +1.3
MNK i SS SS 16 15 01.4 +4.6
MNK i SSS SSS 16 18 17.6
MNK i LQ LQ 16 26 47.5
MNK i LR LR 16 32 00.5
MNK i LRM MLR 16 34 25.7
comp=N,30nm,10.5s
MNK i LRM MLR 16 34 30.2
comp=Z,58nm,15.2s
MNK i LRM MLR 16 35 25.9
comp=E,116nm,16.9s
MNK Minsk 68.44 326 i P P 16 01 33.6 +0.6
MNK i 16 01 58.6
MNK i 16 04 04.6
MNK i PPP PPP 16 05 43.5
MNK i S S 16 10 36.4 +2.4
MNK i 16 11 33.4
MNK i SS SS 16 15 01.3 +4.6
MNK pmax pmax
comp=Z,4.0nm,0.6s
MNK pmax pmax
comp=E,8.0nm,0.6s
MNK pmax pmax
comp=N,5.0nm,0.5s
MNK MLR MLR
comp=N,30nm,10.0s
MNK MLR MLR
comp=Z,58nm,15.0s
MNK MLR MLR
comp=E,116nm,17.0s
BOZ Bozeman (W) 68.99 47 P P 16 01 36.9 0.0
BOZ IAmb IAmb 16 01 39.9
comp=Z,10.0nm,1.2s
BOZ Bozeman (W) 68.99 47 P P 16 01 36.9 0.0
BOZ pmax pmax
comp=Z,10.0nm,1.2s
NB2 NORSAR Subarra 69.19 338 P P 16 01 36.8 -0.9
comp=Z,1.6nm,0.7s,baz=37,slow=6.5
NOA NORSAR Array B 69.19 338 P P 16 01 36.7 -1.0
comp=Z,1.1nm,0.7s,baz=38,slow=5.4,SNR=4.1
comp=Z,1.1nm,0.7s
HFS Hagfors 69.21 336 P P 16 01 37.1 -0.7
comp=Z,1.6nm,0.5s,baz=46,slow=8.5,SNR=7.5
comp=Z,1.6nm,0.5s
YHL Hebgen Lake 69.72 47 IAmb IAmb 16 01 44.3
comp=Z,5.2nm,1.1s
LHV Little Huntoon 69.79 56 P P 16 01 43.7 +2.1
NVAR Mina Array Bea 69.80 56 P P 16 01 42.2 +0.1
comp=Z,2.1nm,0.9s,baz=273,slow=2.7,SNR=7.7
comp=Z,2.1nm,0.9s
YHH Holmes Hill 69.94 47 P P 16 01 43.0 +0.1
H17A Grant Village 70.34 47 IAmb IAmb 16 01 49.6
comp=Z,7.3nm,1.1s
RLMT Red Lodge 70.55 46 IAmb IAmb 16 01 49.4
comp=Z,11nm,1.4s
AKASG Malin Array Be 70.57 322 P P 16 01 45.3 -0.9
comp=Z,1.9nm,0.7s,baz=43,slow=6.7,SNR=8.2
comp=Z,1.9nm,0.7s
AKBB Malin Array Si 70.57 322ceP P 16 01 45.0 -1.2
AKBB pmax pmax
comp=Z,5.0nm,0.9s
FXWY Fox Creek 70.60 48 IAmb IAmb 16 01 50.1
comp=Z,6.9nm,1.2s
DSP Deep Springs 70.68 57 IAmb IAmb 16 01 55.4
comp=Z,7.6nm,1.3s
MOOW Moose Ponds 70.68 48 IAmb IAmb 16 01 50.6
comp=Z,6.4nm,1.1s
DUG Dugway, Tooele 71.89 52 IAmb IAmb 16 01 57.4
comp=Z,5.3nm,1.1s
CLC China Lake 71.91 58 IAmb IAmb 16 01 56.9
comp=Z,6.1nm,1.2s
BW06 Boulder Array 71.98 48 IAmb IAmb 16 01 57.4
comp=Z,6.8nm,1.2s
PD31 Pinedale Array 71.98 48 IAmb IAmb 16 01 57.4
comp=Z,7.1nm,1.2s
PDAR Pinedale Array 71.98 48 P P 16 01 54.9 -0.5
comp=Z,3.1nm,1.1s,baz=338,slow=1.6,SNR=13
comp=Z,3.1nm,1.1s
PDAR Pinedale Array 71.98 48 P P 16 01 55.1 -0.2
TPNV Topopah Spring 72.00 56 IAmb IAmb 16 01 57.9
comp=Z,7.6nm,1.3s
GURO Guroymak-BITLI 72.21 306 P P 16 01 55.8 -0.8
GURO IAmb IAmb 16 01 58.1
comp=Z,5.9nm,0.6s
GWY Greenwater Val 72.24 57 IAmb IAmb 16 02 03.9
comp=Z,9.7nm,1.4s
QSM Queen of Sheba 72.26 57 IAmb IAmb 16 01 59.8
comp=Z,7.8nm,1.1s
ULM Lac du Bonnet 73.27 35 P P 16 02 02.7 +0.2
comp=Z,2.4nm,0.9s,baz=293,slow=4.5,SNR=3.2
comp=Z,2.4nm,0.9s
ULM Lac du Bonnet 73.27 35 IAmb IAmb 16 02 03.8
comp=Z,12nm,1.4s
RDMU Red Mountain 73.47 50 IAmb IAmb 16 02 06.7
comp=Z,11nm,1.2s
RSSD Black Hills 73.95 44 P P 16 02 06.4 -0.5
RSSD Black Hills 73.95 44 P P 16 02 06.4 -0.5
RSSD pmax pmax
comp=Z,4.0nm,0.9s
HMU Henry Mountain 74.60 52 P P 16 02 12.3 +1.4
HMU IAmb IAmb 16 02 21.4
comp=Z,4.2nm,0.9s
EPLO Experimental L 74.61 35 IAmb IAmb 16 02 11.7
comp=Z,10nm,1.2s
PV23 Carpenter Ridg 75.24 51 IAmb IAmb 16 02 17.4
comp=Z,15nm,1.3s
PV10 Paradox Valley 75.27 51 P P 16 02 16.1 +1.4
PV10 IAmb IAmb 16 02 26.2
comp=Z,9.7nm,0.9s
PV04 Paradox Valley 75.34 51 IAmb IAmb 16 02 18.2
comp=Z,8.2nm,1.2s
PV13 Radium Mtn., P 75.55 51 IAmb IAmb 16 02 18.7
comp=Z,12nm,1.4s
CLL Collm 76.64 331 eP P 16 02 22.0 +0.1
CLL Collm 76.64 331 eP P 16 02 22.0 +0.1
MMAI Mount Meron Ar 79.92 306 P P 16 02 40.4 -0.1
comp=Z,1.2nm,0.6s,baz=108,slow=9.5,SNR=5.7
comp=Z,1.2nm,0.6s
GDL2 Guadalupe Moun 82.34 53 P P 16 02 54.6 +1.1
TXAR Lajitas Array 84.84 54 P P 16 03 06.5 +0.2
comp=Z,1.1nm,0.7s,baz=298,slow=3.1,SNR=8.4
comp=Z,1.1nm,0.7s
NVL N'lazarevskaya 143.77 205 ePKIKP PKiKP 16 10 13.5 +4.9
NVL pmax pmax
comp=Z,61nm,2.2s
CO04 Los Peladeros 150.37 80 PKPbc PKPbc 16 10 22.7 -0.4

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*BJI **19** 15:54:47.2, 11°61N×145°02E, $h10^{km}$, mB5.1/22, mb4.7/70, Ms4.5/41, Ms7 4.3/43*
*IDC **19** 15:54:54.5±0.5, 12°43N×144°39E, $h0^{km}$, mb4.7/33, mbtmp4.6/33, MS4.0/44, Error ellipse: s-maj=15.1km s-min=9.9km az=87.0*
*MOS **19** 15:54:55.3±1.0, 12°42N×144°31E, $h15^{km}$, mb5.1/47, MS4.3/5, Error ellipse: s-maj=10.5km s-min=5.1km az=110.7*
*NEIC **19** 15:54:56.8, 12°46N×144°31E, $h14^{km}$, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.16; $M_{\theta\theta}$1.39; $M_{\phi\phi}$-0.23; $M_{r\theta}$-2.14; $M_{\theta\phi}$-0.44; $M_{\phi r}$-1.09; Fault plane solution: $M_0$2.76000×10^{16} NP1: ϕ_s309.28000°, δ22.48000°, λ-33.20000°. NP2: ϕ_s70.44000°, δ77.91000°, λ-109.10000°. Principal axes: T 2.6113, Plg30.0000°, Azm176.0000°; N 0.2805, Plg19.0000°, Azm75.0000°; P -2.8917, Plg53.0000°, Azm318.0000°;*
*NEIC **19** 15:54:56.8, 12°46N×144°41E, $h14^{km}$*
*NEIC **19** 15:54:56.8±1.7, 12°46N±0°07×144°40E±0°08, $h10^{km}$±1^{km}, mb5.1/248, Mww4.9/8, Error ellipse: s-maj=13.5km s-min=11.7km az=253.0*
*GCMT **19** 15:54:59.8±0.3, 12°39N±0°01×144°41E±0°03, $h19^{km}$±1^{km}, MW4.9/78, Moment Tensor Solution. s25,c32; s78,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.52±.14; $M_{\theta\theta}$2.31±.09; $M_{\phi\phi}$-0.79±.10; $M_{r\theta}$0.71±.18; $M_{\theta\phi}$-0.62±.07; $M_{\phi r}$1.07±.23; Best double couple: $M_0$2.48400×10^{16} NP1: ϕ_s132.00000°, δ49.00000°, λ-38.00000°. NP2: ϕ_s250.00000°, δ62.00000°, λ-132.00000°. Principal axes: T 2.4970, Plg8.0000°, Azm8.0000°; N -0.0290, Plg36.0000°, Azm273.0000°; P -2.4700, Plg53.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **19** 15:55:00.6±0.8, 12°N±3°×14°4E±°, $h39^{km}$±7^{km}, M5.2/75, mb5.3/75, mB5.8/25, MLv4.7/1, Mw(mB)5.3/25*
ISC 19 15:54:57.0±0.5**, 12°40N**±0°03**×144°43E**±0°05**, h14**^{km}±2^{km}**, h15**^{km}**:pP-P, n510,** σ1s**36**/436**, mb5.1**/243**, MS4.1**/66**,**
14C-2D, South of Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 1.26 20 Pn Pb 15 55 20.3 -0.2
3μm,0.3s,baz=167,slow=0.8,SNR=162
GUMO Sn Sg 15 55 36.9 -0.8
4μm,0.3s,baz=181,slow=23,SNR=13
GUMO Guam 1.26 20 P Pb 15 55 20.3 -0.2
GUMO Guam 1.26 20 S Sg 15 55 37.8 +0.1
DPSS Saipan 3.12 25 Pn 15 55 46.7 +1.0
PATS Pohnpei 14.76 111 Pn Pn 15 58 22.4 -3.0
JCJ Chichijima 14.78 352 LR LR 16 02 43.6
comp=Z,210nm,20.3s,baz=156,slow=32
JAY Jayapura 15.27 194 LR LR 16 02 58.9
comp=Z,1μm,20.2s,baz=13,slow=32
GENI Genyem 15.48 196 P Pn 15 58 34.9 -0.1
GENI Genyem 15.48 196 P P 15 58 37.8 -1.6
MWPI Manokwari, Pap 16.78 219 P P 15 58 55.3 +1.4
90nm,1.3s
WAMI Wamena 17.14 200 P P 15 59 01.2 +3.3
3μm115nm,1.0s
RKPI Ransiki, Papua 17.16 217 P Pn 15 58 57.1 +0.6
47nm,0.7s
RABL Rabaul 18.18 155 P P 15 59 10.9 +1.5
SIJI Sorong 18.56 226 LR LR 16 06 13.1
comp=Z,640nm,18.4s,baz=68,slow=37
SIJI Sorong 18.56 226 P Pn 15 59 16.1 +2.3
FAKI Fak Fak 19.44 219 P Pn 15 59 24.5 +0.1
JOW Kunigami 20.89 316 P P 15 59 39.5 +0.6
5.8nm,0.4s,baz=126,slow=23,SNR=17
JOW LR LR 16 06 03.2
comp=Z,389nm,21.6s,baz=136,slow=32
5.8nm,0.4s
JOW Kunigami 20.89 316 Pn Pn 15 59 41.1 -0.3
JOW IAmb IAmb 15 59 47.8
comp=Z,79nm,0.7s
JOW Kunigami 20.89 316 P Pn 15 59 40.7 -0.7
JHJ Hachijo jima 2 21.06 349 LR LR 16 07 25.1
comp=Z,357nm,19.0s,baz=178,slow=36
PMG Port Moresby 21.83 173 P P 15 59 48.5 -0.5
comp=Z,28nm,0.8s,baz=7.1,slow=5.9,SNR=5.8
PMG LR LR 16 06 48.0
comp=Z,276nm,20.6s,baz=12,slow=33
PMG ScP ScP 16 07 30.3 +4.3
comp=Z,5.7nm,0.5s,baz=344,slow=7.4,SNR=7.9
comp=Z,28nm,0.8s
PMG Port Moresby 21.83 173 P 15 59 48.6 -0.5
PMG Port Moresby 21.83 173ceP P 15 59 48.8 -0.3
PMG pmax pmax
comp=Z,58nm,1.7s
PMG Port Moresby 21.83 173 P P 15 59 50.3 +1.2
comp=Z,45nm,0.9s
MNI Manado 22.26 242 P P 15 59 55.0 +1.3
comp=Z,5μmcomp=Z,153nm,0.8s
H11S3 WAKE ISLAND Hy 22.29 71 T T 16 23 04.3
baz=258,slow=75,SNR=62
H11S1 WAKE ISLAND Hy 22.30 71 T T 16 23 03.8
baz=258,slow=75,SNR=58
H11S2 WAKE ISLAND Hy 22.30 71 T T 16 23 04.9
baz=258,slow=75,SNR=65
KRAI Karang Ratu 22.31 227 P P 15 59 56.5 +2.3
comp=Z,69nm,1.0s
AAI Ambon 22.71 226 P P 15 59 59.4 +0.9
comp=Z,2μmcomp=Z,155nm,0.9s
H11N1 WAKE ISLAND Hy 22.76 68 T T 16 23 38.5
baz=255,slow=75,SNR=278
H11N2 WAKE ISLAND Hy 22.77 68 T T 16 23 39.3
baz=255,slow=75,SNR=205
H11N3 WAKE ISLAND Hy 22.78 68 T T 16 23 36.1
baz=255,slow=75,SNR=260
TGY Tagaytay City 22.93 277 P P 16 00 00.2 -0.7
comp=Z,191nm,0.3s,baz=160,slow=20,SNR=3.8
JSU Suzuyama 22.97 328 P 16 00 01.6 +0.5
JSU IAmb IAmb 16 00 07.4
comp=Z,47nm,0.9s
JSU Suzuyama 22.97 328 P P 16 00 04.8 +3.7
JMN Monobe 23.32 337 P 16 00 04.9 +0.2
JMN IAmb IAmb 16 00 17.0
comp=Z,49nm,1.1s
JMN Monobe 23.32 337 P P 16 00 08.4 +3.7
INU Inuyama 23.82 345 P 16 00 09.0 -0.5
INU Inuyama 23.82 345 P P 16 00 13.3 +3.8
JGF Kuroka 23.97 346 P P 16 00 08.1 -2.9
JGF Kuroka 23.97 346 P P 16 00 14.6 +3.6
JNU Nakatsue 24.07 331 P P 16 00 10.9 -1.1
comp=Z,33nm,0.8s,baz=160,slow=4.5,SNR=27
comp=Z,33nm,0.8s
SAUI Saumlaki 24.09 213 P P 16 00 13.7 +1.5
YULB Yu-li 24.54 300 P P 16 00 15.5 -0.9
YULB IAmb IAmb 16 00 22.9
comp=Z,37nm,0.8s
YULB Yu-li 24.54 300 P P 16 00 18.3 +1.9
MJAR Matsushiro Arr 24.68 348 P P 16 00 16.4 -1.1
comp=Z,21nm,1.0s,baz=172,slow=9.7,SNR=18
MJAR PcP PcP 16 03 54.6 -0.1
comp=Z,0.8nm,0.5s,baz=166,slow=3.2,SNR=1.8
MJAR S S 16 04 38.1 -0.8
comp=Z,0.8nm,0.7s,baz=155,slow=11,SNR=2.8
MJAR LR LR 16 09 32.0
comp=Z,446nm,18.4s,baz=169,slow=36
comp=Z,21nm,1.0s
MJAR Matsushiro Arr 24.68 348 P 16 00 16.0 -1.6
MAJO Matsushiro 24.69 348 P P 16 00 16.6 -1.0
MAJO IAmb IAmb 16 00 22.5
comp=Z,40nm,0.9s
MAJO Matsushiro 24.69 348 P P 16 00 18.2 +0.6
MAJO Matsushiro 24.69 348 P P 16 00 16.6 -1.0
MAJO pmax pmax
comp=Z,40nm,0.9s
MJB9 Matsu-Tunnel 24.69 348 P 16 00 17.6 0.0
MJB9 IAmb IAmb 16 00 23.5
comp=Z,40nm,0.9s
SSLB Suanglung 24.98 300 P 16 00 20.0 -0.4
SSLB IAmb IAmb 16 00 27.6
comp=Z,38nm,0.7s
SSLB Suanglung 24.98 300 P P 16 00 20.1 -0.3
YHNB Yeheng 24.99 303 P P 16 00 19.6 -0.8
MRSI Marisa 25.25 244 P P 16 00 24.0 +1.1
comp=Z,2μmcomp=Z,217nm,0.9s
LUWI Luwuk 25.31 240 P 16 00 22.8 -0.6
LUWI Luwuk 25.31 240 P P 16 00 22.8 -0.6
LUWI Luwuk 25.31 240 P P 16 00 22.5 -0.9
JTU Tsushima 25.92 331 P P 16 00 32.2 +3.5
TOLI2 Tolitoli 25.98 246 P P 16 00 28.6 -1.0
TOLI2 IAmb IAmb 16 00 48.0
comp=Z,48nm,1.0s
TOLI2 Tolitoli 25.98 246 P P 16 00 30.7 +1.1
COEN Coen 26.21 183 P P 16 00 31.9 +0.4
comp=Z,64nm,0.9s
COEN Coen 26.21 183 P 16 00 31.8 +0.3
COEN IAmb IAmb 16 00 32.8
comp=Z,54nm,0.9s
COEN Coen 26.21 183 P P 16 00 32.0 +0.4
MYLDM Lahad Datu 26.59 257 P P 16 00 36.7 +1.7
MYLDM Lahad Datu 26.59 257 P P 16 00 36.2 +1.2
MYLDM Lahad Datu 26.59 257 P P 16 00 34.6 -0.4
comp=Z,89nm,1.4s
HNR Honiara 26.61 144 LR LR 16 11 07.7
comp=Z,19nm,19.0s,baz=44,slow=36
MPSI Mapaga 27.12 246 P P 16 00 39.4 -0.4
comp=Z,19nm,0.8s
KDU Kakadu 27.60 206 P P 16 00 42.8 -1.2
PCI Palu 27.76 243 P P 16 00 46.5 +1.0
comp=Z,2μmcomp=Z,28nm,1.2s
TARAI Tarakan 28.06 253 P P 16 00 48.3 +0.1
MTN Manton Dam 28.33 208 P P 16 00 50.6 0.0
comp=Z,54nm,0.8s
MTN Manton Dam 28.33 208 IAmb IAmb 16 00 51.0
comp=Z,35nm,0.8s
TJN Taejon 28.39 330 P P 16 00 54.3 +3.4
KSRS Korea Array 29.00 332 P P 16 00 55.5 -0.8
comp=Z,2.5nm,0.7s,baz=143,slow=9.7,SNR=12
KSRS PcP PcP 16 04 06.6 +1.8
comp=Z,2.6nm,1.0s,baz=157,slow=2.7,SNR=7.2
KSRS ScP ScP 16 07 46.8 +0.7
comp=Z,4.5nm,1.1s,baz=167,slow=3.4,SNR=12
comp=Z,2.5nm,0.7s
KSAR Wonju Array Be 29.01 332 P P 16 00 56.9 +0.5
KSAR Wonju Array Be 29.01 332 P P 16 00 56.9 +0.5
SOEI Soe 29.76 223 P P 16 01 01.3 -2.1
SOEI IAmb IAmb 16 02 06.1
comp=Z,77nm,1.6s
MTSU Mount Surprise 30.34 180 P P 16 01 09.4 +1.0
comp=Z,16nm,0.9s
MTSU Mount Surprise 30.34 180 P P 16 01 09.4 +1.0
BATI Baumata 30.49 223 LR LR 16 15 29.4
comp=Z,197nm,18.2s,baz=58,slow=40
NJ2 Nanjing 30.57 314 eP P 16 01 11.0 +0.7
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
JKA Kamikawa-asahi 31.65 357 IAmb IAmb 16 01 33.0
comp=Z,66nm,1.7s
ASAJ Asahikawa 31.65 357 P P 16 01 19.8 +0.1
comp=Z,4.9nm,0.6s,baz=182,slow=9.4,SNR=8.5
ASAJ LR LR 16 12 54.9
comp=Z,254nm,22.0s,baz=171,slow=34
comp=Z,4.9nm,0.6s
AUAYR Ayr State High 31.91 175 P P 16 01 22.3 +0.1
KNRA Kununurra 31.91 209 P P 16 01 22.2 0.0
comp=Z,37nm,0.9s
KNRA Kununurra 31.91 209 P P 16 01 22.5 +0.2
KNRA IAmb IAmb 16 01 23.3
comp=Z,27nm,0.8s
CTA Charters Tower 32.33 177 LR LR 16 14 14.7
comp=Z,174nm,18.7s,baz=7.0,slow=36
CTA Charters Tower 32.33 177 P P 16 01 26.2 +0.3
CTAO Charters Tower 32.33 177 P P 16 01 25.9 +0.1
CTAO IAmb IAmb 16 01 27.4

comp=Z,25nm,0.8s
CTAO Charters Tower 32.33 177 P **P** **16 01 26.2 +0.3**
CTAO Charters Tower 32.33 177 P **P** **16 01 26.0 +0.1**
CTAO pmax pmax
comp=Z,25nm,0.8s
QIS Mount Isa 33.09 188 P **P** **16 01 32.8 +0.2**
comp=Z,39nm,0.9s
QIS Mount Isa 33.09 188 P **P** **16 01 32.8 +0.2**
WHN Wuhan 33.15 308 P **P** **16 01 33.6 +0.6**
WHN sP **sP** **16 01 37.9 +0.1**
WHN pmax pmax
comp=Z,32nm,0.8s
DL2 Dalian 33.27 327 P **P** **16 01 37.1 +3.2**
DL2 S **S** **16 06 58.9 +5.1**
DL2 pmax pmax
comp=Z,61nm,0.9s
DL2 pmax pmax
comp=Z,290nm,9.1s
DL2 LR LR
comp=Z,350nm,17.0s
DL2 LR LR
comp=Z,390nm,19.0s
DL2 LR LR
comp=Z,440nm,19.7s
SBUM Sibu 33.39 255 P **P** **16 01 35.4 +0.1**
SBUM IAmb IAmb 16 01 39.6
comp=Z,36nm,1.6s
SBUM Sibu 33.39 255 P **P** **16 01 36.0 +0.7**
SBUM Sibu 33.39 255 P **P** **16 01 35.9 +0.7**
comp=Z,12nm,0.8s
USRK Ussuriysk Ar. 33.45 344 P **P** **16 01 35.0 -0.4**
comp=Z,2.1nm,0.6s,baz=163,slow=7.2,SNR=6.2
comp=Z,2.1nm,0.6s
WRAB Tennant Creek 33.62 197 P **P** **16 01 37.1 0.0**
WRAB Tennant Creek 33.62 197 P **P** **16 01 37.2 0.0**
WRAB Tennant Creek 33.62 197 *ce*P **P** **16 01 37.6 +0.4**
WRAB pmax pmax
comp=Z,53nm,0.7s
WRA Warramunga Arr 33.63 197 P **P** **16 01 37.1 -0.2**
comp=Z,46nm,0.7s,baz=21,slow=9.6,SNR=109
WRA Warramunga Arr 33.63 197 P **P** **16 01 36.2 -1.1**
QIZ Qiongzhong 33.90 286 P **P** **16 01 39.8 +0.1**
QIZ S **S** **16 07 05.6 +1.6**
QIZ LR LR
comp=Z,340nm,17.1s
QIZ LR LR
comp=Z,600nm,18.2s
QIZ LR LR
comp=Z,690nm,19.1s
TIA Tai'an 34.15 319 P **P** **16 01 45.3 +3.6**
TIA pmax pmax
comp=Z,16nm,0.8s
TIA LR LR
comp=Z,300nm,15.8s
TIA LR LR
comp=Z,480nm,16.5s
TIA LR LR
comp=Z,490nm,14.4s
YSS Yuzhno-Sakhali 34.48 358 P **P** **16 01 43.8 -0.5**
YSS Yuzhno-Sakhali 34.48 358 P **P** **16 01 44.6 +0.3**
YSS Yuzhno-Sakhali 34.48 358 *e*P **P** **16 01 44.2 -0.1**
YSS *e* 16 04 14.5
YSS *e*S **S** **16 07 11.8 -0.5**
YSS *e*SS **SnSn** **16 09 26.1 +2.8**
YSS pmax pmax
comp=Z,10.0nm,0.7s
YSS smax smax
comp=N,200nm,4.9s
YSS smax smax
comp=E,200nm,4.5s
YSS MLR MLR
comp=Z,300nm,18.0s
YSS MLR MLR
comp=N,200nm,17.0s
YSS MLR MLR
comp=E,300nm,18.0s
MDJ Mudanjiang 34.53 341 P **P** **16 01 47.1 +2.2**
MDJ Mudanjiang 34.53 341 P **P** **16 01 46.5 +1.6**
MDJ pmax pmax
comp=E,3.0nm,0.9s
MDJ pmax pmax
comp=E,180nm,5.2s
CN2 Changchun 35.31 336 *e*P **P** **16 01 53.8 +2.2**
CN2 *es*P pwP 16 01 59.9 +0.3
CN2 *e*S **S** **16 07 27.3 +2.1**
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 pmax pmax
comp=E,200nm,5.0s
CN2 LR LR
comp=E,200nm,11.0s
CN2 LR LR
comp=E,200nm,11.0s
CN2 LR LR
comp=E,400nm,12.0s
AUNRC North Rockhamp 36.02 170 P **P** **16 01 58.1 +0.2**
BNX BinXian 36.25 340 ⇑P **P** **16 01 58.9 -0.7**
BNX pP **sP** **16 02 03.3 -1.0**
BNX pmax pmax
comp=E,6.0nm,1.4s
HNS HongShan 36.42 318 ⇓P **P** **16 02 00.9 -0.3**
HNS S **S** **16 07 45.5 +3.1**
HNS pmax pmax
comp=E,65nm,0.9s
HNS LR LR
comp=E,390nm,15.1s
HNS LR LR
comp=E,260nm,15.9s
HNS LR LR
comp=E,410nm,17.5s
LYN LuoYang 36.43 313 P **P** **16 02 02.0 +0.7**
LYN pP sP 16 02 05.9 -0.2
LYN pmax pmax
comp=E,71nm,0.8s
LYN LR LR
comp=E,680nm,15.1s
LYN LR LR
comp=E,480nm,18.7s
LYN LR LR
comp=E,470nm,18.2s
ENH Enshi 36.88 304 IAmb IAmb 16 02 08.2
comp=Z,29nm,1.0s
ENH Enshi 36.88 304 P **P** **16 02 05.2 -0.1**
BJI2 Beijing 37.11 323 P **P** **16 02 09.6 +2.6**
BJI2 S **S** **16 07 58.5 +5.6**
BJI2 pmax pmax
comp=Z,24nm,0.8s
BJI2 LR LR
comp=Z,150nm,20.2s
BJI2 LR LR
comp=Z,130nm,17.7s
BJI2 LR LR
comp=Z,160nm,19.3s
BJT Baijiatuau 37.11 323 IAmb IAmb 16 02 12.5
comp=Z,36nm,0.8s
BJT Baijiatuau 37.11 323 P **P** **16 02 10.2 +3.2**
ASAR Alice Springs 37.29 196 P **P** **16 02 08.8 +0.1**
comp=Z,16nm,0.7s,baz=18,slow=12,SNR=109
comp=Z,16nm,0.7s
ASAR Alice Springs 37.29 196 P **P** **16 02 08.6 -0.2**
ASAR Alice Springs 37.29 196 P **P** **16 02 08.6 -0.2**
AUALC St Philip's Co 37.32 196 P **P** **16 02 09.6 +0.6**
TIY Taiyuan 38.09 317 P **P** **16 02 16.3 +0.8**
TIY pmax pmax
comp=Z,24nm,0.8s
EIDS Eidsvold 38.09 170 P **P** **16 02 15.3 -0.1**
comp=Z,15nm,1.4s
EIDS Eidsvold 38.09 170 P **P** **16 02 15.6 +0.1**
GYA Guiyang 38.10 297 ⇓P **P** **16 02 16.8 +1.0**
GYA S **S** **16 08 07.5 -1.1**
GYA pmax pmax
comp=Z,11nm,1.0s
GYA pmax pmax
comp=Z,130nm,3.1s
GYA LR LR
comp=Z,210nm,18.4s
GYA LR LR
comp=Z,380nm,16.7s
GYA LR LR
comp=Z,550nm,19.0s
KLR Kul'dur 38.20 347 LR LR 16 17 23.5
comp=Z,67nm,19.7s,baz=155,slow=35
KLR Kul'dur 38.20 347 *i* P **P** **16 02 16.3 +0.2**
KLR pmax pmax
comp=Z,13nm,0.9s
TYV Tymovskoe 38.39 358 *e*P **P** **16 02 18.5 +0.8**
TYV pmax pmax
comp=Z,10.0nm,0.7s
TYV pmax pmax
comp=Z,200nm,3.3s
QLP Quilpie 38.74 180 P **P** **16 02 20.3 -0.6**
comp=Z,71nm,0.9s
QLP Quilpie 38.74 180 P **P** **16 02 20.5 -0.4**
XAN Xi'an 38.81 310 P **P** **16 02 21.0 -0.5**
XAN S **S** **16 08 19.4 +0.5**
XAN pmax pmax
comp=Z,13nm,0.9s
XAN pmax pmax
comp=Z,120nm,4.3s
XAN LR LR
comp=Z,310nm,16.5s
XAN LR LR
comp=Z,460nm,16.3s
XAN LR LR
comp=Z,560nm,16.1s
GRNR Gornyy 38.82 352 *e*P **P** **16 02 20.3 -1.1**
GRNR MLR MLR
comp=E,120nm,14.0s
GRNR MLR MLR
comp=N,110nm,18.0s
GRNR MLR MLR
comp=Z,170nm,16.0s
TPI Tanjungpandan 39.51 250 P **P** **16 02 28.6 +1.0**
comp=Z,82nm,1.0s
XLT XiLinHaoTe 39.74 328 *e*P **P** **16 02 29.5 +0.2**
XLT pP sP 16 02 33.1 -0.9
XLT sP pwP 16 02 36.6 -0.6
XLT sS sS 16 08 48.8 +10
XLT pmax pmax
comp=Z,7.0nm,0.7s
XLT pmax pmax
comp=Z,82nm,4.3s
XLT LR LR
comp=Z,26nm,14.9s
XLT LR LR
comp=Z,230nm,15.1s
XLT LR LR
comp=Z,310nm,17.8s
HEH HeiHe 40.25 343 *e*P **P** **16 02 31.8 -1.4**
HEH PcP **PcP** **16 04 36.5 -0.5**
HEH pmax pmax
comp=Z,50nm,0.9s
HEH LR LR
comp=Z,170nm,16.4s
HEH LR LR
comp=Z,490nm,15.6s
HEH LR LR
comp=Z,410nm,18.3s
TW1H Toowoomba 1 Ha 40.37 170 P **P** **16 02 36.0 +1.4**
WRKA Warakurna 40.40 203 P **P** **16 02 34.8 0.0**
comp=Z,24nm,0.8s
HHC Hu-ho-hao-te 40.40 321 *e*P **P** **16 02 35.3 +0.5**
HHC sP pwP 16 02 41.8 -0.9
HHC PP **PP** **16 04 09.1 +1.2**
HHC S **S** **16 08 40.3 -2.5**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,5.9s
HHC LR LR
comp=Z,260nm,17.0s
HHC LR LR
comp=Z,260nm,17.9s
HHC LR LR
comp=Z,220nm,16.2s
MBWA Marble Bar 41.24 216 P **P** **16 02 41.9 +0.1**
BTO2 Baotou 41.40 319 *e*P **P** **16 02 43.3 +0.2**
BTO2 pP **sP** **16 02 47.4 -0.5**
BTO2 S **S** **16 08 59.5 +1.7**
BTO2 pmax pmax
comp=Z,20nm,0.7s
BTO2 pmax pmax
comp=Z,190nm,5.8s
BTO2 LR LR
comp=Z,290nm,7.0s
BTO2 LR LR
comp=Z,740nm,10.6s
BTO2 LR LR
comp=Z,910nm,15.3s
PSAC2 Pilbara Seismi 41.46 216 P **P** **16 02 43.2 -0.3**
comp=Z,43nm,0.9s
PSAC1 Pilbara Seismi 41.49 216 P **P** **16 02 44.4 +0.5**
comp=Z,31nm,1.0s,comp=Z,0.0nm
PSA00 Pilbara Seismi 41.50 216 P **P** **16 02 44.3 +0.3**
comp=Z,42nm,1.1s
PSA00 Pilbara Seismi 41.50 216 P **P** **16 02 43.6 -0.3**
PSA00 Pilbara Seismi 41.50 216 P **P** **16 02 44.2 +0.3**
PSAB3 Pilbara Seismi 41.51 216 P **P** **16 02 43.5 -0.5**
comp=Z,39nm,1.4s
CD2 Chengdu 41.76 303 P **P** **16 02 45.5 -0.6**
CD2 pmax pmax
comp=Z,50nm,0.8s
PETK Petropavlovsk- 41.97 12 P **P** **16 02 47.5 +0.1**
comp=Z,2.1nm,0.8s,baz=145,slow=6.7,SNR=6.9
PETK PcP **PcP** **16 04 42.6 +0.1**
comp=Z,3.6nm,0.8s,baz=52,slow=4.3,SNR=6.0
PETK LR LR 16 21 35.3
comp=Z,103nm,18.4s,baz=194,slow=38
comp=Z,2.1nm,0.8s
HIA Hailar 42.04 336 P **P** **16 02 45.4 -2.7**
HIA Hailar 42.04 336 P **P** **16 02 45.4 -2.7**
HIA pmax pmax
comp=Z,12nm,0.7s
HILR Hailar Array B 42.27 336 P **P** **16 02 50.1 +0.1**
comp=Z,4.9nm,0.6s,baz=140,slow=9.5,SNR=9.8
HILR ScP **ScP** **16 08 32.5 -1.5**
comp=Z,0.7nm,0.5s,baz=144,slow=5.3,SNR=7.9
comp=Z,4.9nm,0.6s
PZH PanZhiHua 42.42 296 P **P** **16 02 51.4 -0.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
MDSI Maura Dua 43.38 250 P **P** **16 02 59.5 +0.2**
comp=Z,30nm,1.6s
LZH Lanzhou 43.44 310 *e*P **P** **16 03 00.3 +0.5**
LZH sP pwP 16 03 08.9 +1.3
LZH pmax pmax
comp=Z,25nm,1.8s
LZH LR LR
comp=Z,200nm,18.6s
LZH LR LR
comp=Z,300nm,20.6s
LZH LR LR
comp=Z,340nm,18.2s
ZEA Zeya 43.44 345 *e*P **P** **16 02 58.1 -1.2**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=Z,200nm,18.0s
LZDM Lanzhou Array 43.50 310 P **P** **16 03 00.1 -0.4**
comp=Z,2.1nm,0.4s,baz=120,slow=8.7,SNR=14
comp=Z,2.1nm,0.4s
IPM Ipoh 43.59 263 P **P** **16 03 01.4 +0.3**
IPM Ipoh 43.59 263 P **P** **16 03 01.5 +0.3**
IPM Ipoh 43.59 263 P **P** **16 02 58.8 -2.4**
comp=Z,31nm,1.2s
LWLI Liwa 43.70 249 P **P** **16 02 58.8 -3.3**
comp=Z,110nm,0.9s
CMSA Cobar Meteorol 43.70 178 P **P** **16 03 01.4 -0.2**
comp=Z,21nm,1.4s
CMSA Cobar Meteorol 43.70 178 P **P** **16 03 01.8 +0.2**
KULM Kulim 43.78 265 P **P** **16 03 03.0 +0.4**
KULM IAmb IAmb 16 03 04.7
comp=Z,32nm,0.9s
KULM Kulim 43.78 265 P **P** **16 03 03.3 +0.7**
KULM Kulim 43.78 265 P **P** **16 03 04.0 +1.4**
comp=Z,45nm,1.0s
STKA Stephens Creek 44.10 183 P **P** **16 03 04.8 -0.1**
comp=Z,87nm,1.1s
STKA Stephens Creek 44.10 183 P **P** **16 03 03.8 -1.1**
comp=Z,10nm,0.9s,baz=355,slow=9.7,SNR=9.6
STKA LR LR 16 21 38.2
comp=Z,188nm,19.8s,baz=21,slow=36
comp=Z,10nm,0.9s
STKA Stephens Creek 44.10 183 P **P** **16 03 05.0 +0.2**
STKA Stephens Creek 44.10 183 P **P** **16 03 04.8 -0.1**
CM31 Chiang Mai Arr 44.17 284 P **P** **16 03 06.1 +0.4**
CM31 Chiang Mai Arr 44.17 284 P **P** **16 03 05.9 +0.2**
SNR=12
CMAR Chiang Mai Arr 44.17 284 P **P** **16 03 06.0 +0.3**
comp=Z,11nm,0.8s,baz=86,slow=6.2,SNR=80
CMAR PcP **PcP** **16 04 51.5 +0.9**
comp=Z,3.4nm,0.8s,baz=94,slow=2.3,SNR=5.3
CMAR LR LR 16 20 59.5
comp=Z,229nm,19.2s,baz=90,slow=36
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 44.17 284 P **P** **16 03 05.1 -0.6**
CMAR Chiang Mai Arr 44.17 284 *i* P **P** **16 03 06.0 +0.3**
CMAR pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 44.18 284 P **P** **16 03 02.2 -3.6**
KSI Kapahiang 44.52 252 P **P** **16 03 09.8 +1.2**
MASI Maura Aman, Be 44.67 253 P **P** **16 03 10.4 +0.6**
MSVF Nonsavu 44.70 131 P **P** **16 03 11.4 +1.4**
MSVF Nonsavu 44.70 131 P **P** **16 03 12.3 +2.3**
MSVF Nonsavu 44.70 131 P **P** **16 03 11.4 +1.4**
MSVF pmax pmax
comp=Z,117nm,1.8s
TNCH TengChong 45.05 293 P **P** **16 03 12.8 -0.1**
TNCH S **S** **16 09 50.9 -0.9**
TNCH pmax pmax
comp=Z,60nm,1.0s
TNCH pmax pmax
comp=Z,280nm,5.7s
TNCH LR LR
comp=Z,220nm,17.0s
TNCH LR LR
comp=Z,230nm,12.7s
TNCH LR LR
comp=Z,500nm,16.0s
PPI Padang Panjang 45.52 257 P **P** **16 03 15.7 -0.8**
comp=Z,36nm,0.9s
PDSI Padang 45.59 256 P **P** **16 03 15.6 -1.5**
comp=Z,37nm,0.8s
BBOO Buckleboo 45.66 190 P **P** **16 03 16.8 -0.4**
comp=Z,57nm,0.8s
BBOO Buckleboo 45.66 190 P **P** **16 03 16.9 -0.4**
BBOO Buckleboo 45.66 190 P **P** **16 03 17.2 0.0**
AUJCS Jamestown Cent 45.68 187 P **P** **16 03 17.9 +0.5**
FORT Forrest 45.72 200 P **P** **16 03 18.2 +0.4**
comp=Z,20nm,0.9s
FORT Forrest 45.72 200 P **P** **16 03 18.4 +0.7**
FORT IAmb IAmb 16 03 18.8
comp=Z,13nm,0.8s
HTT Hallett 45.87 186 P **P** **16 03 19.8 +0.8**
PSI Prapat 46.03 262 P **P** **16 03 20.8 +0.1**
MEEK Meekatharra 46.20 213 P **P** **16 03 21.1 -0.6**
comp=Z,18nm,1.4s
KCSI Kotacane, Aceh 46.97 263 P **P** **16 03 27.5 -0.5**
comp=Z,421nmcomp=Z,62nm,0.9s
ULN Ulaanbaatar 47.12 326 P **P** **16 03 29.2 +0.3**
ULN IAmb IAmb 16 03 34.9
comp=Z,15nm,0.8s
ULN Ulaanbaatar 47.12 326 *ce*P **P** **16 03 29.9 +1.1**
ULN pmax pmax
comp=Z,15nm,0.8s
ULN Ulaanbaatar 47.12 326 P **P** **16 03 28.6 -0.3**
ULN Ulaanbaatar 47.12 326 P **P** **16 03 29.9 +1.1**
comp=Z,74nm,0.9s
MA2 Magadan 47.33 4 P **P** **16 03 30.0 0.0**
comp=Z,4.9nm,0.6s,baz=172,slow=7.8,SNR=15
MA2 LR LR 16 21 35.9
comp=Z,82nm,21.9s,baz=201,slow=34
comp=Z,4.9nm,0.6s
MA2 Magadan 47.33 4 P **P** **16 03 29.5 -0.5**
MA2 Magadan 47.33 4 P **P** **16 03 30.3 +0.2**
MA2 Magadan 47.33 4 *ce*P **P** **16 03 30.2 +0.2**
MA2 pmax pmax
comp=Z,6.0nm,0.7s
MA2 Magadan 47.33 4 P **P** **16 03 29.8 -0.2**
comp=Z,11nm,0.8s
AUMAR Marden Senior 47.34 186 P **P** **16 03 31.9 +1.5**
SONM Songino Array 47.46 326 P **P** **16 03 31.8 +0.3**
comp=Z,8.4nm,0.8s,baz=139,slow=7.1,SNR=20
SONM PcP **PcP** **16 05 01.1 -0.6**
comp=Z,2.0nm,0.8s,baz=128,slow=2.8,SNR=3.5
SONM ScP **ScP** **16 08 55.9 +0.3**
comp=Z,0.4nm,0.4s,baz=146,slow=3.7,SNR=1.9
SONM LR LR 16 24 52.9
comp=Z,237nm,18.1s,baz=138,slow=38
comp=Z,8.4nm,0.8s
SONM Songino Array 47.46 326 P **P** **16 03 31.4 -0.1**
SONM IAmb IAmb 16 03 39.6
comp=Z,9.5nm,0.7s
AUMBR Murray Bridge 47.52 186 P **P** **16 03 32.2 +0.4**
GSI Gunungsitoli 47.72 260 P **P** **16 03 32.4 -1.4**
GSI Gunungsitoli 47.72 260 P **P** **16 03 32.7 -1.1**
GSI Gunungsitoli 47.72 260 P **P** **16 03 32.5 -1.3**
comp=Z,2µmcomp=Z,88nm,0.9s
GTA2 Gaotai 47.72 313 *e*P **P** **16 03 33.4 -0.2**
GTA2 sP sP 16 03 38.1 -0.3
GTA2 pmax pmax
comp=Z,11nm,1.0s
GTA2 LR LR
comp=Z,190nm,14.3s
GTA2 LR LR
comp=Z,280nm,13.5s
GTA2 LR LR
comp=Z,390nm,15.1s
KMBL Kambalda 48.60 206 P **P** **16 03 39.7 -0.5**
MORE Moreh 48.79 291 IAmb IAmb 16 03 41.2
comp=Z,16nm,0.9s
ARPS Mount Arapiles 48.96 183 P **P** **16 03 43.0 +0.1**
comp=Z,17nm,1.4s
MORW Morawa 49.51 213 P **P** **16 03 47.2 0.0**
comp=Z,54nm,0.9s
MORW Morawa 49.51 213 P **P** **16 03 47.2 0.0**
MORW Morawa 49.51 213 P **P** **16 03 47.5 +0.2**
BLDU Ballidu 50.39 211 P **P** **16 03 53.8 -0.1**
comp=Z,51nm,0.9s
BLDU Ballidu 50.39 211 P **P** **16 03 54.0 0.0**
GOMU GeErMu 50.40 307 P **P** **16 03 53.8 -0.7**
GOMU PcP **PcP** **16 05 12.8 -0.1**
GOMU S **S** **16 11 05.3 -2.5**
GOMU pmax pmax
comp=Z,6.0nm,0.9s
ZAK Zakamensk 50.59 327 *e*P **P** **16 03 53.7 -1.7**
ZAK pmax pmax
comp=Z,10.0nm,1.2s
KLBR Kellerberrin 50.67 210 P **P** **16 03 56.0 0.0**
comp=Z,82nm,0.9s
KLBR Kellerberrin 50.67 210 P **P** **16 03 56.0 0.0**
YAK Yakutsk 50.69 351 P **P** **16 03 56.3 +0.5**
comp=Z,53nm,0.8s,baz=137,slow=6.7,SNR=15
YAK LR LR 16 24 32.3
comp=Z,225nm,18.7s,baz=112,slow=35
comp=Z,53nm,0.8s
YAK Yakutsk 50.69 351 P **P** **16 03 54.8 -0.9**
YAK Yakutsk 50.69 351 *e*P **P** **16 03 55.7 0.0**
YAK *e*'PP **sP** **16 04 00.1 -0.1**
YAK *e* 16 05 12.8
YAK *e* 16 05 50.0
YAK *e*PPP PPP 16 06 48.4
YAK *e*S **S** **16 11 11.4 +1.2**
YAK *e* 16 13 41.0
YAK *e*SS **SS** **16 14 47.4 +2.8**
YAK *e*SSS SSS 16 16 11.5
YAK pmax pmax
comp=Z,35nm,1.4s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=Z,222nm,8.0s
YAK pmax pmax
comp=N,64nm,4.5s
YAK pmax pmax
comp=E,74nm,3.6s
YAK smax smax
comp=E,81nm,6.3s
YAK smax smax
comp=N,94nm,5.3s
YAK MLR MLR
comp=N,108nm,15.0s
YAK MLR MLR
comp=E,80nm,14.0s
SEY Seymchan 50.78 5 P **P** **16 03 57.0 +0.6**
comp=E,5.0nm,0.9s,baz=180,slow=5.6,SNR=15
SEY LR LR 16 24 07.1
comp=E,170nm,21.1s,baz=176,slow=34
comp=E,5.0nm,0.9s
SEY Seymchan 50.78 5 *ce*P **P** **16 03 57.1 +0.6**
SEY pmax pmax
comp=Z,10.0nm,1.3s
SHL Shillong 51.08 293 IAmb IAmb 16 04 02.1
comp=Z,28nm,0.9s
BRDH Bariadhala 51.13 289 LR LR 16 25 40.0
comp=Z,174nm,20.0s,baz=156,slow=36
TLY Talaya 51.13 329 LR LR 16 23 57.9

comp=Z,70nm,21.9s,baz=120,slow=34
AUKUL **Kulin High Sch** 51.37 209 P **P** 16 04 01.5 +0.2
MUN **Mundaring** 51.74 211 P **P** 16 04 03.9 -0.2
comp=Z,36nm,1.0s
NWAO **Narrogin (SRO)** 52.02 209 LR LR 16 27 52.9
comp=Z,166nm,18.6s,baz=342,slow=38
LSA **Lhasa** 52.16 298 P **P** 16 04 03.9 -4.1
LSA pmax pmax
comp=Z,7.0nm,0.8s
MOY **Mondy** 52.50 327 eP **P** 16 04 13.2 +3.5
MOY pmax pmax
comp=Z,11nm,1.4s
RAO **Raoul Island** 55.09 139 LR LR 16 25 36.5
comp=Z,224nm,20.3s,baz=318,slow=33
EVN **Everest** 55.78 295 IAmb IAmb 16 04 37.2
comp=Z,17nm,1.2s
BILL **Bilibino** 57.40 10 P **P** 16 04 44.6 -0.1
BILL **Bilibino** 57.40 10 ceP **P** 16 04 44.4 -0.3
BILL pmax pmax
comp=Z,10.0nm,1.7s
WMQ **Urumqi** 57.65 314 eP **P** 16 04 49.5 +2.5
WMQ LR LR
comp=Z,160nm,23.8s
URZ **Urewera** 58.95 150 LR LR 16 26 45.0
comp=Z,148nm,21.1s,baz=334,slow=32
RTZ **Ruatahuna** 59.17 151 P **P** 16 04 58.0 +0.5
BKZ **Black Stump Fm** 59.37 151 P **P** 16 04 59.3 +0.4
BKZ IAmb IAmb 16 05 00.1
comp=Z,17nm,0.8s
BKZ **Black Stump Fm** 59.37 151 P **P** 16 04 59.3 +0.4
DGZ **Jazzator, Alta** 59.48 321 i P **P** 16 04 59.9 +0.1
DGZ pmax pmax
comp=Z,13nm,0.9s
TIXI **Tiksi** 59.97 354 LR LR 16 31 32.3
comp=Z,43nm,21.1s,baz=178,slow=37
TIXI **Tiksi** 59.97 354 P **P** 16 05 02.8 +0.3
TIXI **Tiksi** 59.97 354 ceP **P** 16 05 04.5 +2.0
TIXI pmax pmax
comp=Z,4.0nm,1.0s
ZSN **Zaisan** 60.49 318 eP **P** 16 05 06.7 +0.2
ZSN **Zaisan** 60.49 318 eP **P** 16 05 06.8 +0.2
RPZ **Rata Peaks** 60.90 158 LR LR 16 27 32.7
comp=Z,302nm,20.9s,baz=4.0,slow=32
DCZ **Deep Cove** 61.14 162 P **P** 16 05 11.0 +0.2
ODZ **Otahua Downs** 61.91 159 P **P** 16 05 17.4 +1.4
MK31 **Makanchi Array** 62.05 317 ceP **P** 16 05 16.9 -0.2
MKAR **Makanchi Array** 62.05 317 P **P** 16 05 16.8 -0.3
comp=Z,5.5nm,0.8s,baz=93,slow=9.1,SNR=53
MKAR LR LR 16 35 29.8
comp=Z,108nm,18.1s,baz=58,slow=39
comp=Z,5.5nm,0.8s
MKAR **Makanchi Array** 62.05 317 P **P** 16 05 16.7 -0.5
MKAR **Makanchi Array** 62.05 317 i P **P** 16 05 16.7 -0.5
MKAR pmax pmax
comp=Z,6.0nm,0.8s
MAKZ **Makanchi** 62.26 317 P **P** 16 05 18.2 -0.4
MAKZ IAmb IAmb 16 05 25.7
comp=Z,14nm,0.7s
MAKZ **Makanchi** 62.26 317 P **P** 16 05 18.2 -0.4
MAKZ pmax pmax
comp=Z,14nm,0.7s
ZAA0 **Zalesovo Array** 62.34 325 P **P** 16 05 17.6 -1.3
ZALV **Zalesovo Beam** 62.34 325 P **P** 16 05 18.4 -0.5
comp=Z,4.2nm,0.6s,baz=107,slow=7.6,SNR=14
ZALV PcP **PcP** 16 05 57.3 -1.2
comp=Z,4.4nm,0.5s,baz=127,slow=4.8,SNR=8.2
ZALV LR LR 16 32 14.9
comp=Z,138nm,20.3s,baz=106,slow=36
comp=Z,4.2nm,0.6s
ZALV **Zalesovo Beam** 62.34 325 P **P** 16 05 17.9 -1.0
ANM **Nome** 62.45 22 P **P** 16 05 18.9 -0.6
ANM **Nome** 62.45 22 P **P** 16 05 18.9 -0.6
ANM pmax pmax
comp=Z,4.0nm,0.9s
SHLS **Shalkode** 63.39 312 eP **P** 16 05 24.3 -2.0
SHLS pmax pmax
comp=Z,11nm,1.2s
SHLS **Shalkode** 63.39 312 eP **P** 16 05 24.3 -2.0
comp=Z,11nm,1.2s
HYB **Hyderabad** 63.59 283 eP **P** 16 05 27.4 -0.5
UZB **Uzynbulak** 63.71 312 eP **P** 16 05 28.5 +0.1
UZB pmax pmax
comp=Z,7.0nm,1.0s
UZB **Uzynbulak** 63.71 312 eP **P** 16 05 28.6 +0.1
comp=Z,7.3nm,1.0s
SATY **Saty** 64.14 312 eP **P** 16 05 31.4 +0.2
SATY pmax pmax
comp=Z,9.0nm,1.0s
SATY **Saty** 64.14 312 eP **P** 16 05 31.5 +0.2
comp=Z,8.9nm,1.0s
K17K **Iditarod** 64.36 25 IAmb IAmb 16 05 47.1
comp=Z,13nm,0.9s
TDK **Taldyqorghan** 64.41 314 eP **P** 16 05 33.1 +0.3
TDK **Taldyqorghan** 64.41 314 eP **P** 16 05 33.1 +0.3
TARG **Taraagay, Kyrgy** 64.43 310 IAmb IAmb 16 05 37.7
comp=Z,16nm,1.6s
KDJ **Kajisay** 64.94 311 IAmb IAmb 16 05 44.0
comp=Z,16nm,0.9s
MDOK **Medeo** 65.14 312 eP **P** 16 05 37.8 0.0
MDOK **Medeo** 65.14 312 eP **P** 16 05 37.9 0.0
TNSS **Tian-Shan** 65.20 312 eP **P** 16 05 38.4 -0.1
TNSS **Tian-Shan** 65.20 312 eP **P** 16 05 38.5 -0.1
KURK **Kurchatov** 65.22 320 P **P** 16 05 37.1 -0.8
KURK **Kurchatov** 65.22 320 ceP **P** 16 05 36.9 -1.0
KURK pmax pmax
comp=Z,30nm,1.3s
KURK **Kurchatov** 65.22 320 P **P** 16 05 36.3 -1.6
AAA **Alma-Ata** 65.25 312 eP **P** 16 05 38.6 +0.2
AAA pmax pmax
comp=Z,4.0nm,0.4s
AAA **Alma-Ata** 65.25 312 eP **P** 16 05 38.7 +0.3
comp=Z,4.4nm,0.4s
KURBB **Kurchatov Arra** 65.26 320 P **P** 16 05 37.4 -0.8
comp=Z,6.4nm,0.3s,baz=104,slow=6.4,SNR=94
KURBB S **S** 16 14 22.0 +0.8
comp=Z,0.2nm,0.2s,baz=100,slow=8.3,SNR=4.5
KURBB LR LR 16 34 46.2
comp=Z,233nm,19.1s,baz=174,slow=37
comp=Z,6.4nm,0.3s
KDAK **Kodiak Island** 65.30 32 LR LR 16 31 01.1
comp=Z,81nm,22.0s,baz=239,slow=33
H18K **Honhosa River** 65.36 23 IAmb IAmb 16 06 56.9
comp=Z,34nm,2.0s
E18K **Tukpahlearik C** 65.59 20 IAmb IAmb 16 06 13.8
comp=Z,8.0nm,0.8s
KSH2 **Kashi** 65.92 307 P **P** 16 05 43.3 +0.4
KSH2 pmax pmax
comp=Z,7.0nm,1.7s
G19K **Purcell Mounta** 66.26 22 IAmb IAmb 16 06 17.8
comp=Z,7.7nm,0.8s
E19K **Redstone River** 66.76 21 IAmb IAmb 16 06 19.3
comp=Z,17nm,1.1s
D19K **Kuna River** 66.92 20 IAmb IAmb 16 06 19.1
comp=Z,9.0nm,0.8s
SGDS **Sogindy** 66.93 312 eP **P** 16 05 49.6 +0.4
AAK **Ala-Archa** 66.96 311 LR LR 16 37 21.2
comp=Z,111nm,18.7s,baz=80,slow=38
AAK **Ala-Archa** 66.96 311 P **P** 16 05 48.6 -1.0
AAK **Ala-Archa** 66.96 311 ceP **P** 16 05 48.7 -0.8
AAK pmax pmax
comp=Z,6.0nm,1.3s
AAK **Ala-Archa** 66.96 311 P **P** 16 05 47.1 -2.4
F20K **Avaraart Lake** 67.13 22 IAmb IAmb 16 06 20.0
comp=Z,13nm,1.2s
NIL **Nilore** 67.63 301 P **P** 16 05 52.7 -1.1
NIL **Nilore** 67.63 301 P **P** 16 05 52.7 -1.1
NIL pmax pmax
comp=Z,33nm,0.9s
D22K **Ayikyak River** 68.89 20 IAmb IAmb 16 06 25.8
comp=Z,25nm,1.5s
DZA **Taraz** 69.30 311 eP **P** 16 06 04.5 +0.5
DZA **Taraz** 69.30 311 eP **P** 16 06 04.6 +0.5
D23K **Nanushuk River** 69.60 20 IAmb IAmb 16 06 19.8
comp=Z,16nm,1.1s
E23K **Chandalar** 69.68 21 IAmb IAmb 16 06 45.5
comp=Z,11nm,0.9s
H24K **Noodor Dome** 69.69 24 IAmb IAmb 16 06 21.0
comp=Z,42nm,1.9s
ILAR **Eielson Array** 69.82 25 P **P** 16 06 04.8 -2.0
comp=Z,1.7nm,0.4s,baz=253,slow=5.7,SNR=55
ILAR LR LR 16 37 14.1
comp=Z,41nm,18.4s,baz=278,slow=36
comp=Z,1.7nm,0.4s
ILAR **Eielson Array** 69.82 25 P **P** 16 06 05.9 -0.9
ILAR **Eielson Array** 69.82 25 P **P** 16 06 05.9 -0.9
KK31 **Karatay Array** 69.91 311 P **P** 16 06 06.7 -1.1
KK31 IAmb IAmb 16 06 10.4
comp=Z,12nm,1.1s
KK31 **Karatay Array** 69.91 311 P **P** 16 06 06.7 -1.1
KK31 pmax pmax
comp=Z,13nm,1.1s
KKAR **Karatay Array** 69.91 311 P **P** 16 06 06.7 -1.1
KKAR **Karatay Array** 69.91 311 P **P** 16 06 06.7 -1.1
C23K **Itkillik River** 69.91 20 IAmb IAmb 16 06 33.5
comp=Z,19nm,1.2s
IUG **Iuzhnay** 70.24 310 eP **P** 16 06 10.2 +0.3
IUG pmax pmax
comp=Z,5.0nm,0.8s
IUG **Iuzhnay** 70.24 310 eP **P** 16 06 10.3 +0.3
comp=Z,4.6nm,0.8s
BRLS **Boroldoy** 70.41 311 eP **P** 16 06 11.7 +0.9
BRLS **Boroldoy** 70.41 311 eP **P** 16 06 11.8 +0.9
C24K **Franklin Bluff** 70.51 20 IAmb IAmb 16 06 13.2
comp=Z,16nm,1.2s
CHM **Chimkent** 70.56 311 eP **P** 16 06 12.2 +0.4
CHM pmax pmax
comp=Z,11nm,1.0s
CHM **Chimkent** 70.56 311 eP **P** 16 06 12.3 +0.4
comp=Z,11nm,1.0s
BVAR **Borovoye Array** 70.59 322 P **P** 16 06 11.1 -0.7
comp=Z,13nm,0.5s,baz=100,slow=7.7,SNR=41
BVAR LR LR 16 38 44.8
comp=Z,263nm,18.4s,baz=100,slow=37
comp=Z,13nm,0.5s
BORK **Borovoye** 70.64 322 P **P** 16 06 11.0 -1.0
BORK **Borovoye** 70.64 322 ceP **P** 16 06 11.4 -0.6
BORK pmax pmax
comp=Z,15nm,0.6s
DOT **Dot Lake** 70.78 27 IAmb IAmb 16 06 26.3
comp=Z,32nm,1.6s
CHGR **Chuyangaron** 70.90 307 i P **P** 16 06 14.2 +0.2
CHGR pmax pmax
comp=Z,37nm,1.1s
KBL **Kabul** 71.10 302 P **P** 16 06 14.0 -1.5
KBL IAmb IAmb 16 06 17.4
comp=Z,22nm,1.0s
KBL **Kabul** 71.10 302 P **P** 16 06 14.0 -1.5
KBL pmax pmax
comp=Z,22nm,1.0s
KBL **Kabul** 71.10 302 P **P** 16 06 14.8 -0.7
SNR=13
KBL S **S** 16 15 28.4 -3.6
E25K **Arctic Village** 71.16 22 IAmb IAmb 16 06 30.6
comp=Z,33nm,1.8s
J26L **Joseph Creek** 71.16 26 IAmb IAmb 16 06 48.1
comp=Z,45nm,2.0s
I28M **Miner Creek** 72.84 25 IAmb IAmb 16 07 13.8
comp=Z,33nm,1.8s
F28M **Old Crow** 73.17 23 IAmb IAmb 16 06 38.0
comp=Z,20nm,1.6s
L29M **L29M** 73.35 28 IAmb IAmb 16 06 43.2
comp=Z,14nm,0.9s
HYT **Haines Junctio** 73.45 30 P **P** 16 06 29.5 +0.6
K29M **Barlow Dome** 73.69 27 IAmb IAmb 16 06 32.9
comp=Z,14nm,1.0s
G30M **tAoh Zrail Nji** 74.51 24 IAmb IAmb 16 06 38.8
comp=Z,20nm,1.2s
F30M **Barrier River** 74.73 23 IAmb IAmb 16 06 37.8
comp=Z,21nm,0.9s
N32M **Quiet Lake** 75.61 30 IAmb IAmb 16 06 43.5
comp=Z,23nm,1.0s
INK **Inuvik** 75.62 22 LR LR 16 38 58.6
comp=Z,56nm,20.6s,baz=5.0,slow=35
INK **Inuvik** 75.62 22 P **P** 16 06 40.6 -0.6
INK **Inuvik** 75.62 22 P **P** 16 06 40.6 -0.6
INK pmax pmax
comp=Z,8.0nm,1.0s
P33M **Teslin, Yukon** 75.74 31 IAmb IAmb 16 06 44.1
comp=Z,18nm,1.1s
R33M **Jennings River** 76.69 32 IAmb IAmb 16 07 18.1
comp=Z,40nm,1.6s
HRA **Herat** 76.72 303 IAmb IAmb 16 06 51.2
comp=Z,13nm,1.0s
ABKAR **Akbulak array** 77.13 318 P **P** 16 06 48.6 -1.6
ARTI **Arti** 77.60 325 P **P** 16 06 51.3 -1.3
ARTI IAmb IAmb 16 06 57.8
comp=Z,17nm,1.2s
ARTI **Arti** 77.60 325 c iP **P** 16 06 52.3 -0.3
ARTI 16 09 41.8
ARTI S **S** 16 16 44.4 +0.7
ARTI pmax pmax
comp=Z,9.0nm,1.1s
WTLY **Watson Lake, Y** 77.75 31 IAmb IAmb 16 06 55.9
comp=Z,17nm,0.8s
AKTO **Aktyubinsk** 78.28 319 LR LR 16 41 21.6
comp=Z,132nm,21.9s,baz=130,slow=36
A36M **Sachs Harbour** 78.41 19 IAmb IAmb 16 06 58.9
comp=Z,13nm,0.8s
C36M **Paulatuk** 79.03 21 IAmb IAmb 16 07 02.5
comp=Z,27nm,1.6s
JLN **Jalan Bani Buh** 80.87 291 P **P** 16 07 10.6 -0.6
WBK **Wadi Bani Khal** 81.20 291 P **P** 16 07 12.9 0.0
WBK S **S** 16 17 18.4 -4.8
BIDO **Bidbid** 81.81 292 P **P** 16 07 17.1 +1.0
SNR=9.1
SMDO **Samad** 81.96 292 P **P** 16 07 17.0 0.0
JMDO **Jabal Madar** 82.03 291 P **P** 16 07 16.9 -0.4
MHTO **MHTO** 82.40 290 P **P** 16 07 18.5 -0.8
SNR=8.8
HOQ **Hoqain** 82.53 292 P **P** 16 07 19.3 -0.7
SNR=8.2
BSY **Bisya** 82.78 292 P **P** 16 07 20.9 -0.4
BANOM **Banah** 83.02 295 P **P** 16 07 23.0 +0.5
MDH **Madha** 83.14 294 P **P** 16 07 24.3 +1.3
SOHO **SOHO** 83.14 293 P **P** 16 07 22.9 -0.1
MASF **Masafi** 83.25 294 P **P** 16 07 24.4 +0.8
SNR=5.8
UOSS **Minazif** 83.28 294 P **P** 16 07 22.8 -1.1
UOSS IAmb IAmb 16 07 26.5
comp=Z,18nm,1.2s
UOSS **Minazif** 83.28 294 P **P** 16 07 22.5 -1.3
HATD **Hatta, Dubai** 83.37 294 P **P** 16 07 24.3 0.0
ASHO **Ashiyiah** 83.46 294 P **P** 16 07 28.0 +3.2
SNR=7.1
ALNE **Al Ain** 83.85 293 P **P** 16 07 26.9 +0.2
SNR=6.3
YBH **Yreka Blue Hor** 83.98 49 LR LR 16 40 12.0
comp=Z,7.2nm,18.3s,baz=276,slow=32
YBH **Yreka Blue Hor** 83.98 49 IAmb IAmb 16 07 38.8
comp=Z,18nm,1.2s
YKAW3 **Yellowknife Wh** 84.09 27 P **P** 16 07 27.1 -0.1
YKAW3 IAmb IAmb 16 07 28.9
comp=Z,22nm,1.6s
YKA **Yellowknife Ar** 84.11 27 P **P** 16 07 27.6 +0.4
comp=Z,1.5nm,0.4s,baz=294,slow=5.8,SNR=28
comp=Z,1.5nm,0.4s
YKA **Yellowknife Ar** 84.11 27 P **P** 16 07 26.8 -0.4
WIFE **Three Sisters-** 84.16 46 P **P** 16 07 28.7 +0.5
WIFE IAmb IAmb 16 07 39.0
comp=Z,16nm,1.0s
YKAW1 **Yellowknife Wh** 84.17 27 IAmb IAmb 16 07 29.2
comp=Z,22nm,1.6s
O02D **Mt. Diablo Mer** 84.22 50 IAmb IAmb 16 07 42.9
comp=Z,21nm,1.2s
BELG **Belogornoye** 84.40 322 LR LR 16 46 11.5
comp=Z,165nm,19.8s,baz=79,slow=36
BELG **Belogornoye** 84.40 322 i P **P** 16 07 29.4 +0.5
BELG pmax pmax
comp=Z,5.0nm,0.9s
PINE **Pine Mountain** 84.84 46 IAmb IAmb 16 07 37.5
comp=Z,15nm,0.9s
O03E **Paynes Creek** 84.94 50 IAmb IAmb 16 07 46.1
comp=Z,19nm,1.1s
E07A **Sunnyside** 85.00 44 IAmb IAmb 16 07 42.8
comp=Z,13nm,1.1s
WAH2 **Wahluke Slope** 85.15 43 P **P** 16 07 33.2 +0.3
WAH2 IAmb IAmb 16 07 43.2
comp=Z,11nm,0.9s
SPITS **Spitsbergen Ar** 85.15 351 P **P** 16 07 32.2 -0.1
comp=Z,8.2nm,0.9s,baz=12,slow=4.3,SNR=1.6
comp=Z,8.2nm,0.9s
ORV **Oroville** 85.32 51 IAmb IAmb 16 07 45.7
comp=Z,26nm,1.5s
MHC **Mount Hamilton** 85.67 53 IAmb IAmb 16 07 48.1
comp=Z,22nm,1.1s
C09A **Chrisman Ranch** 85.76 42 IAmb IAmb 16 07 47.5
comp=Z,12nm,0.9s
RES **Resolute Bay** 85.80 13 LR LR 16 47 47.4
comp=Z,54nm,19.6s,baz=14,slow=37
RES **Resolute Bay** 85.80 13 IAmb IAmb 16 07 37.2
comp=Z,15nm,0.8s
AFDM **Forest Hills D** 85.85 51 IAmb IAmb 16 07 48.0
comp=Z,18nm,1.3s
MZR **Muzera** 86.10 293 P **P** 16 07 37.1 -0.9
SNR=9.8
KLMR **Klimovskoe** 86.39 332 eP **P** 16 07 36.7 -2.0
KLMR pmax pmax
comp=Z,16nm,1.5s
DOK **Doka** 86.40 288 P **P** 16 07 38.7 -0.9
SNR=5.9
NEW **Newport** 86.40 41 LR LR 16 41 46.8
comp=Z,77nm,19.6s,baz=341,slow=32
APA **Apatity** 86.42 339 eP **P** 16 07 39.9 +1.2
APA pmax pmax
comp=Z,10.0nm,1.2s
APA MLR MLR
comp=Z,1μm,5.1s
CMB **Columbia Colle** 86.50 52 IAmb IAmb 16 07 51.2
comp=Z,20nm,1.5s
RBK **Rabkut** 86.55 287 P **P** 16 07 40.1 -0.3
WVOR **Wild Horse Val** 86.79 47 IAmb IAmb 16 07 52.5
comp=Z,26nm,1.4s
AKT **Akhty** 86.84 312 eP **P** 16 07 41.0 -0.5
AKT e 16 11 03.1
AKT pmax pmax
comp=Z,40nm,1.5s
AKT MLR MLR
comp=Z,93nm,6.0s
PNTR **Pine Nut** 86.86 51 IAmb IAmb 16 07 54.1
comp=Z,10nm,0.8s
PAHR **Pah Rah Range** 86.88 50 IAmb IAmb 16 07 52.9
comp=Z,30nm,1.6s
F10A **Beach Ranch, E** 86.91 44 IAmb IAmb 16 07 54.1
comp=Z,27nm,1.7s
MDPB **Devils Postpil** 87.59 52 IAmb IAmb 16 07 57.0
comp=Z,13nm,1.3s
PLID **Pearl Lake** 87.97 44 P **P** 16 07 46.3 -0.7
PLID IAmb IAmb 16 07 57.2
comp=Z,7.9nm,0.9s
NVAR **Mina Array Bea** 88.00 51 P **P** 16 07 47.5 +0.2
comp=Z,7.9nm,0.9s,baz=262,slow=6.1,SNR=23
comp=Z,7.9nm,0.9s
ARCES **ARCESS Array B** 88.08 342 P **P** 16 07 45.6 -1.1
comp=Z,2.5nm,0.8s,baz=35,slow=6.5,SNR=5.4
comp=Z,2.5nm,0.8s
ARCES **ARCESS Array B** 88.08 342 P **P** 16 07 45.5 -1.3
SMRA **Abu-Samra** 88.11 295 P **P** 16 07 49.4 +1.6
VRH **Novokhopyorsk** 88.25 322 eP **P** 16 07 45.2 -2.6
VRH pmax pmax
comp=Z,20nm,0.8s
CWC **Cottonwood Cre** 88.66 53 IAmb IAmb 16 07 52.7
comp=Z,12nm,1.3s
TPO **Tropico Hills** 88.93 55 IAmb IAmb 16 08 04.2
comp=Z,15nm,0.9s
TULEG **Thule** 89.09 7 IAmb IAmb 16 07 52.8
comp=Z,9.1nm,1.0s
CLC **China Lake** 89.19 54 IAmb IAmb 16 08 04.4
comp=Z,17nm,1.2s
LRMC **Laurel Mtn Rad** 89.21 54 IAmb IAmb 16 08 05.3
comp=Z,15nm,1.0s
GNI **Garni** 89.37 311 LR LR 16 53 58.6
comp=Z,28nm,18.0s,baz=25,slow=40
LPSR **Galich'ya Gora** 89.44 324 eP **P** 16 07 51.6 -1.8
LPSR pmax pmax
comp=Z,20nm,0.7s
HLID **Hailey** 89.48 45 P **P** 16 07 54.0 -0.1
VORR **Voronezh** 89.59 323 eP P 16 07 48.7 -5.5
VORR pmax pmax
comp=Z,50nm,0.4s
KBZ **Khabaz** 89.69 315 P **P** 16 07 53.2 -1.6
comp=Z,4.7nm,1.0s,baz=84,slow=2.8,SNR=3.8
KBZ LR LR 16 54 08.9
comp=Z,123nm,18.1s,baz=48,slow=40
comp=Z,4.7nm,1.0s
VSR **Storozhevoye** 89.77 323 eP **P** 16 07 52.3 -2.7
VSR pmax pmax
comp=Z,7.0nm,0.6s
KIV **Kislovodsk** 89.77 315 eP **P** 16 07 54.2 -1.2
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV **Kislovodsk** 89.77 315 P **P** 16 07 54.8 -0.6
VORD **Divnogorie** 89.77 322 eP **P** 16 07 51.8 -3.2
VORD pmax pmax
comp=Z,10.0nm,1.0s
GWY **Greenwater Val** 89.83 53 IAmb IAmb 16 08 08.1
comp=Z,14nm,1.0s
OBN **Obninsk** 89.86 327 ceP **P** 16 07 54.4 -0.9
OBN ePPP PPP 16 13 23.4
OBN eS **S** 16 18 40.8 -6.4
OBN pmax pmax
comp=Z,8.0nm,1.0s
OBN MLR MLR
comp=Z,156nm,18.0s
GSC **Goldstone, Bar** 89.95 54 IAmb IAmb 16 08 08.8
comp=Z,23nm,1.2s
BCYI **Bear Canyon** 89.96 45 IAmb IAmb 16 08 08.0
comp=Z,28nm,1.6s
VNDA **Vanda** 90.31 176 LR LR 16 43 52.7
comp=Z,50nm,20.7s,baz=312,slow=32
PFO **Pinyon Flats O** 90.67 55 LR LR 16 48 11.3
comp=Z,33nm,18.1s,baz=256,slow=35
PMD **Palm Desert** 90.72 55 IAmb IAmb 16 08 10.3
comp=Z,13nm,1.1s
ERBR **Yeremizino-Bor** 90.73 317 eP **P** 16 07 58.0 -1.7
ERBR e*PP **pP** 16 08 03.0 +0.4
ERBR eS **SKSac** 16 18 27.7 -3.5
ERBR e 16 18 45.5
ERBR pmax pmax
comp=Z,24nm,0.8s
ERBR MLR MLR
comp=Z,192nm,19.0s
BAR **Barrett** 90.74 56 IAmb IAmb 16 08 02.1
comp=Z,8.9nm,1.0s
BOZ **Bozeman (W)** 90.77 43 IAmb IAmb 16 08 11.2
comp=Z,17nm,1.6s
MTPC **Mountain Pass** 90.89 53 IAmb IAmb 16 08 13.3
comp=Z,11nm,1.1s
LABN **Labinsk** 90.91 316 eP **P** 16 08 00.1 -0.4
LABN e*PP **pP** 16 08 04.0 +0.5
LABN e 16 18 45.2
LABN pmax pmax
comp=Z,30nm,0.6s
SHPR **Sheep Range** 90.91 52 IAmb IAmb 16 08 13.7
comp=Z,11nm,1.3s
BLKN **Baker Lake** 91.04 22 P **P** 16 08 00.1 -0.5
BLKN IAmb IAmb 16 08 01.3
comp=Z,9.5nm,1.0s
HVU **Hansel Valley** 91.16 47 IAmb IAmb 16 08 16.0
comp=Z,13nm,1.1s
PSUT **Pine Spring** 91.33 50 IAmb IAmb 16 08 16.6
comp=Z,8.9nm,1.0s
YUH **Yuha Desert** 91.36 56 IAmb IAmb 16 08 05.1
comp=Z,16nm,1.2s
BC3 **Big Chuckawall** 91.46 55 P **P** 16 08 03.6 +0.1
BC3 IAmb IAmb 16 08 15.9
comp=Z,13nm,1.1s
ESJX **Sierra Juarez** 91.51 57 IAmb IAmb 16 08 14.6
comp=Z,11nm,1.2s
IRM **Iron Mountain** 91.57 55 IAmb IAmb 16 08 06.4
comp=Z,14nm,1.0s
DUG **Dugway, Tooele** 91.61 48 IAmb IAmb 16 08 16.0
comp=Z,13nm,1.2s
FXWY **Fox Creek** 91.80 45 IAmb IAmb 16 08 16.6
comp=Z,12nm,1.8s
CCUT **Cedar City** 91.99 51 IAmb IAmb 16 08 18.0
comp=Z,13nm,1.4s
AHID **Auburn Hatcher** 92.03 46 IAmb IAmb 16 08 19.6
comp=Z,14nm,1.4s
FINES **FINESS Array B** 92.06 335 P **P** 16 08 03.5 -1.9
comp=Z,3.6nm,0.5s,baz=68,slow=4.6,SNR=40
comp=Z,3.6nm,0.5s
FINES **FINESS Array B** 92.06 335 P **P** 16 08 03.1 -2.3
ILON **Igloolik, Nuna** 92.29 15 IAmb IAmb 16 08 06.6
comp=Z,6.1nm,0.8s
W13A **Hualapai Mount** 92.30 53 IAmb IAmb 16 08 20.0
comp=Z,16nm,1.3s
FFC **Flin Flon** 93.04 32 P **P** 16 08 10.0 -0.2
FFC IAmb IAmb 16 08 11.8
comp=Z,8.6nm,0.9s
FFC **Flin Flon** 93.04 32 P **P** 16 08 10.0 -0.2
FFC pmax pmax
comp=Z,9.0nm,1.0s
ANN **Anapa** 93.07 317 eP **P** 16 08 06.8 -3.7
ANN e*PP **PcP** 16 08 11.6 +0.5
ANN pmax pmax
comp=Z,29nm,0.8s
PDAR **Pinedale Array** 93.11 45 P **P** 16 08 10.5 -0.5
comp=Z,0.2nm,0.4s,baz=316,slow=1.9,SNR=2.7
comp=Z,0.2nm,0.4s

PDAR	**Pinedale Array**	**93.11**	**45**	P		**P**	**16 08 11.9**	**+0.9**
U15A	**North Rim**	**93.15**	**52**	IAmb		IAmb	16 08 25.7	
	comp=Z,7.2nm,1.1s							
Y14A	**Wickenburg**	**93.34**	**54**	IAmb		IAmb	16 08 14.6	
	comp=Z,12nm,1.0s							
LAO	**LASA Array**	**93.91**	**41**	P		**P**	**16 08 14.2**	**-0.2**
WUAZ	**Wupatki**	**94.14**	**52**	IAmb		IAmb	16 08 27.7	
	comp=Z,12nm,1.2s							
MNK	**Minsk**	**94.67**	**328**	*i* P		**P**	**16 08 17.8**	**+0.2**
	comp=E,8.0nm,0.5s							
MNK				*i* P		**P**	**16 08 17.8**	**+0.2**
	comp=N,8.0nm,0.4s							
MNK				*i* P		**P**	**16 08 17.8**	**+0.2**
	comp=Z,8.0nm,0.7s,baz=61							
MNK				*i* PP		**PP**	**16 12 06.0**	**+0.6**
MNK				*i* PPP		PPP	16 14 07.4	
MNK				*i* S		**SKSac**	**16 18 53.0**	**+0.3**
MNK				*i* PS		**PS**	**16 20 49.0**	**+1.5**
MNK				*i* SS		**SS**	**16 25 56.3**	**+3.4**
MNK				*i* SSS		SSS	16 29 38.5	
MNK				*i* LQ		LQ	16 46 38.9	
MNK				*i* LR		LR	16 52 18.4	
MNK	**Minsk**	**94.67**	**328**	*i* P		**P**	**16 08 17.8**	**+0.2**
MNK				*i*			16 12 05.9	
MNK				*i* PPP		PPP	16 14 07.4	
MNK				*i* S		**SKSac**	**16 18 53.0**	**+0.3**
MNK				*i* PS		**PS**	**16 20 49.0**	**+1.5**
MNK				*i* SS		**SS**	**16 25 56.3**	**+3.4**
MNK				*i* SSS		SSS	16 29 38.4	
MNK				pmax		pmax		
	comp=Z,8.0nm,0.7s							
MNK				pmax		pmax		
	comp=N,8.0nm,0.4s							
MNK				pmax		pmax		
	comp=E,8.0nm,0.5s							
MNK				MLR		MLR		
	comp=E,85nm,16.0s							
MNK				MLR		MLR		
	comp=N,98nm,18.0s							
FCC	**Fort Churchill**	**94.81**	**26**	IAmb		IAmb	16 08 19.7	
	comp=Z,14nm,1.2s							
PV03	**Paradox Valley**	**95.15**	**49**	IAmb		IAmb	16 08 33.5	
	comp=Z,7.1nm,1.1s							
PV12	**Saucer Basin,**	**95.17**	**49**	IAmb		IAmb	16 08 36.1	
	comp=Z,11nm,1.0s							
PV02	**Paradox Valley**	**95.25**	**49**	IAmb		IAmb	16 08 32.2	
	comp=Z,9.9nm,1.1s							
AKASG	**Malin Array Be**	**95.74**	**325**	P		**P**	**16 08 21.0**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=18,slow=29,SNR=1.7							
	comp=Z,0.4nm,0.4s							
AKBB	**Malin Array Si**	**95.74**	**325**	*i* P		**P**	**16 08 22.9**	**+0.3**
BR131	**Keskin Array S**	**97.56**	**313**	P		**P**	**16 08 30.2**	**-1.1**
BRTR	**Keskin Array B**	**97.56**	**313**	P		**P**	**16 08 29.7**	**-1.6**
	comp=Z,1.2nm,0.8s,baz=78,slow=2.8,SNR=7.6							
	comp=Z,1.2nm,0.8s							
BRTR	**Keskin Array B**	**97.56**	**313**	P		**P**	**16 08 28.5**	**-2.9**
BRTR	**Keskin Array B**	**97.56**	**313**	*i* P		**P**	**16 08 29.3**	**-2.0**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
HFS	**Hagfors**	**97.72**	**337**	P		**P**	**16 08 29.0**	**-2.4**
	comp=Z,1.6nm,0.6s,baz=99,slow=2.0,SNR=7.1							
	comp=Z,1.6nm,0.6s							
NOA	**NORSAR Array B**	**98.00**	**339**	LR		LR	16 55 40.3	
	comp=Z,47nm,18.2s,baz=50,slow=37							
MAW	**Mawson**	**98.17**	**203**	LR		LR	16 49 47.2	
	comp=Z,79nm,19.1s,baz=96,slow=34							
ULM	**Lac du Bonnet**	**98.46**	**34**	P		**P**	**16 08 33.8**	**-1.2**
	comp=Z,1.3nm,0.4s,baz=355,slow=3.2,SNR=3.3							
	comp=Z,1.3nm,0.4s							
TXAR	**Lajitas Array**	**102.38**	**56**	P		**Pdif**	**16 08 53.0**	**0.0**
	comp=Z,0.5nm,0.9s,baz=247,slow=2.6,SNR=3.5							
TXAR	**Lajitas Array**	**102.38**	**56**			**Pdif**	**16 08 53.5**	**+0.5**
TXAR	**Lajitas Array**	**102.38**	**56**	*i* P		**Pdif**	**16 08 53.5**	**+0.5**
NVL	**N'lazarevskaya**	**114.86**	**196**	*i* PKIKP		PKPdf	16 13 37.3	+0.6
NVL				*e*			16 14 35.7	
NVL				*e*PPP		PPP	16 17 01.0	
NVL				*e*			16 20 49.5	
NVL				*e*SS		SS	16 30 32.4	+3.3
NVL				*e*SSS		SSS	16 34 48.1	
NVL				pmax		pmax		
	comp=Z,10.0nm,0.8s							
NVL				MLR		MLR		
	comp=Z,442nm,21.0s							
ESDC	**Sonseca Array**	**120.43**	**332**	PKP		**PKiKP**	**16 13 48.6**	**0.0**
	comp=Z,0.9nm,0.9s,baz=18,slow=1.4,SNR=5.2							
ESDC	**Sonseca Array**	**120.43**	**332**	PKPdf		**PKiKP**	**16 13 48.3**	**-0.3**
MVO	**Moncorvo**	**120.54**	**335**	*e*PKP		**PKiKP**	**16 13 49.8**	**+1.0**
PVIS	**Viseu**	**121.27**	**336**	*e*PKP		**PKiKP**	**16 13 50.5**	**+0.3**
MTE	**Manteigas**	**121.39**	**335**	*e*PKP		**PKiKP**	**16 13 51.5**	**+1.0**
PCBR	**Castelo Branco**	**121.83**	**335**	*e*PKP		**PKiKP**	**16 13 52.6**	**+1.3**
PCAS	**Casmilo, Conde**	**122.07**	**336**	*e*PKP		**PKiKP**	**16 13 52.7**	**+1.0**
PMRV	**Marv??o**	**122.14**	**334**	*e*PKP		**PKiKP**	**16 13 52.9**	**+1.0**
PSARD	**Sardoal**	**122.32**	**335**	*e*PKP		**PKiKP**	**16 13 53.0**	**+0.8**
PMTG	**Montargil**	**122.80**	**335**	*e*PKP		**PKPdf**	**16 13 52.0**	**-1.0**
PARRA	**Arraiolos**	**122.93**	**335**	*e*PKP		**PKiKP**	**16 13 54.3**	**+0.8**
PBAR	**Barrancos**	**123.04**	**333**	*e*PKP		**PKiKP**	**16 13 54.3**	**+0.6**
PBEJ	**Beja**	**123.52**	**334**	*e*PKP		**PKiKP**	**16 13 55.4**	**+0.8**
TORD	**Torodi Ar. Bea**	**135.17**	**303**	PKP		**PKPdf**	**16 14 17.4**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=165,slow=0.9,SNR=5.3							
TORD				SKPbc		**SKPbc**	**16 17 48.6**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=7.9,slow=1.5,SNR=4.5							
PLCA	**Paso Flores**	**138.33**	**139**	PKP		**PKPdf**	**16 14 23.1**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=242,slow=1.6,SNR=6.1							
AC05	**El Transito**	**143.81**	**122**	PKPpre		PKPpre	16 14 26.3	
DBIC	**Dimbokro**	**144.07**	**300**	PKP		PKPbc	16 14 31.1	-0.1
	comp=Z,13nm,0.6s,baz=77,slow=4.0,SNR=16							
DBIC	**Dimbokro**	**144.07**	**300**	PKPdf		PKPbc	16 14 31.0	-0.2
GO03	**Copiapo**	**144.24**	**120**	PKPdf		PKPbc	16 14 32.3	+0.8
LPAZ	**La Paz**	**148.24**	**101**	PKPbc		**PKPbc**	**16 14 44.0**	**-0.4**
	comp=Z,14nm,0.8s,baz=317,slow=2.6,SNR=45							
LPAZ	**La Paz**	**148.24**	**101**	PKPbc		**PKPdf**	**16 14 42.2**	**+1.2**
CPUP	**Villa Florida**	**155.29**	**127**	PKP		**PKPdf**	**16 14 50.4**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=243,slow=4.4,SNR=3.2							
CPUP				PKPab		**PKPab**	**16 15 15.5**	**-0.2**
	comp=Z,3.0nm,1.0s,baz=306,slow=7.2,SNR=4.4							

*IDC **19** 15:59:17.2±0.8, 12°.54N×144°.19E, h0km, mb3.9/13, mbtmp3.9/13, Error ellipse: s-maj=24.6km s-min=15.8km az=115.0*

*NEIC **19** 15:59:18.9±1.4, 12°.45N±0°.09×144°.3E±0°.1, h10km±1km, mb4.6/20, Error ellipse: s-maj=23.3km s-min=14.7km az=106.0*

ISC 19 15:59:21.1±0.5, 12°.44N±0°.07×144°.3E±0°.1, h30km, n44, σ0s71s/45, mb4.4/25, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.28**	**27**	P		Pn	**Pn**	**15 59 42.4**	**-0.6**
	193nm,0.3s,baz=189,slow=13,SNR=11								
GUMO						Sn	**Sn**	**15 59 58.8**	**-0.4**
	219nm,0.3s,baz=23,slow=23,SNR=6.8								
GUMO	**Guam**	**1.28**	**27**	Pn		**Pn**	**Pn**	**15 59 42.8**	**-0.3**
TWG	**Pinlang**	**24.37**	**298**	P		**P**	**P**	**16 04 35.6**	**-1.2**
TWG				IAmb		IAmb	IAmb	16 05 13.6	
	comp=Z,30nm,1.3s								
LUWI	**Luwuk**	**25.20**	**239**	P		**P**	**P**	**16 04 44.4**	**0.0**
KNRA	**Kununurra**	**31.87**	**209**	P		**P**	**P**	**16 05 44.7**	**+0.8**
KNRA				IAmb		IAmb	IAmb	16 06 06.2	
	comp=Z,19nm,1.5s								
CTAO	**Charters Tower**	**32.38**	**177**	P		**P**	**P**	**16 05 48.8**	**+0.5**
WB0	**Warramunga Arr**	**33.45**	**197**	P		**P**	**P**	**16 05 57.7**	**0.0**
WB0				IAmb		IAmb	IAmb	16 05 58.9	
	comp=Z,3.8nm,0.7s								
WRA	**Warramunga Arr**	**33.63**	**197**	P		**P**	**P**	**16 06 00.1**	**+0.9**
	comp=Z,3.2nm,0.7s,baz=21,slow=9.7,SNR=11								
	comp=Z,3.2nm,0.7s								
WRA	**Warramunga Arr**	**33.63**	**197**	P		**P**	**P**	**16 05 57.5**	**-1.7**
AS31	**Alice Springs**	**37.29**	**196**	P		**P**	**P**	**16 06 30.2**	**-0.5**
ASAR	**Alice Springs**	**37.29**	**196**	P		**P**	**P**	**16 06 31.6**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=19,slow=9.9,SNR=7.7								
	comp=Z,1.7nm,0.6s								
ASAR	**Alice Springs**	**37.29**	**196**	P		**P**	**P**	**16 06 31.0**	**+0.3**
EIDS	**Eidsvold**	**38.16**	**170**	P		**P**	**P**	**16 06 37.7**	**-0.3**
EIDS				IAmb		IAmb	IAmb	16 07 00.9	
	comp=Z,18nm,1.4s								
CMAR	**Chiang Mai Arr**	**44.01**	**284**	P		**P**	**P**	**16 07 25.6**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=113,slow=8.2,SNR=4.4								
	comp=Z,1.2nm,0.8s								
CMAR	**Chiang Mai Arr**	**44.01**	**284**	P		**P**	**P**	**16 07 26.9**	**+0.5**
BBOO	**Buckleboo**	**45.67**	**190**	P		**P**	**P**	**16 07 38.4**	**-0.8**
SONM	**Songino Array**	**47.34**	**326**	P		**P**	**P**	**16 07 52.4**	**0.0**
	comp=Z,0.3nm,0.5s,baz=134,slow=6.2,SNR=1.7								
	comp=Z,0.3nm,0.5s								
RTZ	**Ruatahuna**	**59.28**	**150**	P		**P**	**P**	**16 09 19.7**	**-0.4**
BKZ	**Black Stump Fm**	**59.48**	**151**	P		**P**	**P**	**16 09 21.3**	**-0.2**
MKAR	**Makanchi Array**	**61.92**	**317**	P		**P**	**P**	**16 09 38.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=90,slow=8.4,SNR=4.7								
	comp=Z,0.4nm,0.5s								
MKAR	**Makanchi Array**	**61.92**	**317**	P		**P**	**P**	**16 09 38.9**	**+0.8**
MAKZ	**Makanchi**	**62.13**	**317**	P		**P**	**P**	**16 09 40.0**	**+0.6**
ZALV	**Zalesovo Beam**	**62.22**	**325**	P		**P**	**P**	**16 09 40.4**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=116,slow=9.8,SNR=1.9								
	comp=Z,0.5nm,0.4s								
P18K	**Big Mountain,**	**64.53**	**30**	P		**P**	**P**	**16 09 54.1**	**-1.0**
KURK	**Kurchatov**	**65.09**	**320**	P		**P**	**P**	**16 09 59.2**	**+0.3**
KURK				IAmb		IAmb	IAmb	16 10 12.4	
	comp=Z,2.6nm,0.8s								
KURBB	**Kurchatov Arra**	**65.13**	**320**	P		**P**	**P**	**16 09 59.2**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=103,slow=6.7,SNR=5.3								
	comp=Z,1.5nm,0.5s								
D20K	**Etivluk River**	**67.52**	**20**	P		**P**	**P**	**16 10 14.2**	**0.0**
D20K				IAmb		IAmb	IAmb	16 10 16.8	
	comp=Z,6.1nm,1.3s								
D22K	**Ayikyak River**	**68.90**	**20**	P		**P**	**P**	**16 10 24.6**	**+1.7**
D22K				IAmb		IAmb	IAmb	16 10 48.9	
	comp=Z,6.4nm,1.4s								
E22K	**Anaktuvuk Pass**	**68.94**	**21**	P		**P**	**P**	**16 10 22.8**	**-0.4**
E22K				IAmb		IAmb	IAmb	16 11 03.3	
	comp=Z,3.4nm,1.2s								
KKAR	**Karatay Array**	**69.77**	**311**	P		**P**	**P**	**16 10 28.7**	**-0.1**
ILAR	**Eielson Array**	**69.85**	**25**	P		**P**	**P**	**16 10 28.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=253,slow=5.7,SNR=4.5								
	comp=Z,0.3nm,0.6s								
BVAR	**Borovoye Array**	**70.47**	**322**	P		**P**	**P**	**16 10 32.2**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=111,slow=9.0,SNR=4.4								
	comp=Z,1.5nm,0.5s								
BORK	**Borovoye**	**70.51**	**322**	P		**P**	**P**	**16 10 33.7**	**+0.7**
BORK				IAmb		IAmb	IAmb	16 10 46.8	
	comp=Z,2.3nm,0.6s								
BMAR	**Burnt Mountain**	**71.38**	**23**	P		**P**	**P**	**16 10 39.6**	**+1.5**
F30M	**Barrier River**	**74.75**	**23**	P		**P**	**P**	**16 10 57.6**	**-0.4**
F30M				IAmb		IAmb	IAmb	16 11 19.0	
	comp=Z,5.9nm,1.4s								
AB31	**Akbulak array**	**77.00**	**318**	P		**P**	**P**	**16 11 11.5**	**+0.3**
ABKAR	**Akbulak array**	**77.00**	**318**	P		**P**	**P**	**16 11 11.2**	**0.0**
YKA	**Yellowknife Ar**	**84.14**	**27**	P		**P**	**P**	**16 11 49.3**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=295,slow=6.4,SNR=3.8								
	comp=Z,0.2nm,0.5s								
SPITS	**Spitsbergen Ar**	**85.09**	**351**	P		**P**	**P**	**16 11 54.0**	**+0.3**
	comp=Z,20nm,1.1s,baz=310,slow=5.3,SNR=2.1								
ARCES	**ARCESS Array B**	**88.00**	**342**	P		**P**	**P**	**16 12 08.5**	**+0.4**
	comp=Z,20nm,1.2s,baz=20,slow=5.9,SNR=3.7								
NVAR	**Mina Array Bea**	**88.09**	**51**	P		**P**	**P**	**16 12 10.8**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=293,slow=5.5,SNR=3.0								
	comp=Z,0.4nm,0.6s								
FINES	**FINESS Array B**	**91.95**	**335**	P		**P**	**P**	**16 12 26.6**	**0.0**
	comp=Z,2.6nm,0.9s,baz=74,slow=6.9,SNR=3.4								
	comp=Z,2.6nm,0.9s								
PDAR	**Pinedale Array**	**93.18**	**45**	P		**P**	**P**	**16 12 33.6**	**+0.5**
	comp=Z,0.4nm,1.0s,baz=250,slow=8.2,SNR=1.1								
	comp=Z,0.4nm,1.0s								
LPAZ	**La Paz**	**148.40**	**101**	PKPbc		**PKiKP**	**PKiKP**	**16 19 08.1**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=294,slow=2.6,SNR=4.3								

*SOME **19** 16:14:49.9, 39°.90N×77°.17E, h10km*

*NNC **19** 16:14:52.9±1.1, 39°.97N×77°.13E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=7.5km s-min=6.3km az=164.0*

*KRNET **19** 16:14:52.5±0.1, 40°.00N×77°.02E, h17km, mb3.6*

ISC 19 16:14:54.4±1.4, 40°.03N±0°.06×77°.01E±0°.03, h10km, n67, σ1s71s/103, 31C-18D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.47**	**315**	*e*P		P	**Pn**	**16 15 20.0**	**-1.3**
JNKS						S	**Sn**	**16 15 40.3**	**-0.5**
NRN	**Naryn**	**1.60**	**332**	*e*P		P	**Pn**	**16 15 22.6**	**-0.6**
NRN						S	**Sn**	**16 15 44.7**	**+0.6**
TARG	**Taragay, Kyrgy**	**1.80**	**19**	*e*P		P	**Pn**	**16 15 26.1**	**+0.1**
TARG						S	**Sb**	**16 15 50.9**	**+0.2**
KDJ	**Kajisay**	**2.11**	**3**	*e*P		P	**Pn**	**16 15 30.7**	**+0.8**
KDJ						S	**Sb**	**16 15 58.6**	**-0.5**
ULHL	**Ulahol**	**2.29**	**346**	P			**Pb**	**16 15 35.1**	**-0.9**
	SNR=35								
ULHL	**Ulahol**	**2.29**	**346**	*e*P		P	**Pn**	**16 15 33.4**	**+0.9**
ULHL						S	**Sb**	**16 16 03.3**	**-1.2**
SALK	**Salom-Alik**	**2.58**	**290**	*e*P		P	**Pn**	**16 15 37.2**	**+0.7**
SALK						S	**Sn**	**16 16 09.9**	**+1.9**
BOOM	**Boomskoye usch**	**2.59**	**342**	*e*P		P	**Pn**	**16 15 37.4**	**+0.8**
BOOM						S	**Sn**	**16 16 10.5**	**+2.2**
PRZ	**Przheval'sk**	**2.67**	**23**	*e*P		P	**Pn**	**16 15 38.7**	**+1.0**
PRZ						S	**Sn**	**16 16 12.5**	**+2.3**
SFK	**Sufi-Kurgan**	**2.70**	**271**	*e*P		P	**Pn**	**16 15 38.7**	**+0.6**
SFK						S	**Sn**	**16 16 12.5**	**+1.6**
ARLS	**Aral**	**2.74**	**313**	*e*P		P	**Pn**	**16 15 39.4**	**+0.8**
ARLS						S	**Sn**	**16 16 13.7**	**+1.8**
ANVS	**Anan'yevo**	**2.80**	**10**	*e*P		P	**Pn**	**16 15 40.4**	**+0.9**
ANVS						S	**Sn**	**16 16 15.3**	**+1.9**
UCH	**Uchtor**	**2.90**	**320**	P		P	**Pb**	**16 15 43.4**	**-3.1**
	SNR=40								
UCH	**Uchtor**	**2.90**	**320**	*e*P		P	**Pn**	**16 15 41.9**	**+0.8**
UCH						S	**Sn**	**16 16 18.1**	**+1.9**
TNSS	**Tian-Shan**	**3.01**	**359**	Pg			**Pb**	**16 15 49.4**	**+1.1**
	6.7nm,0.4s								
TNSS				Lg		Lg	Lg	16 16 32.0	
	9.4nm,0.2s								
TNSS	**Tian-Shan**	**3.01**	**359**	*e*P			**Pb**	**16 15 48.2**	**-0.1**
	6.7nm,0.4s								
TNSS				*e*S			**Sg**	**16 16 29.8**	**-1.3**
	9.4nm,0.2s								
IZV	**Izvestkoviy**	**3.02**	**354**	Pg			**Pb**	**16 15 48.1**	**-0.3**
	8.9nm,0.3s								
IZV				Lg		Lg	Lg	16 16 29.3	
	27nm,0.3s								
IZV	**Izvestkoviy**	**3.02**	**354**	*e*P			**Pb**	**16 15 48.1**	**-0.3**
	8.9nm,0.3s								
IZV				*e*S			**Sg**	**16 16 29.3**	**-2.2**
	27nm,0.3s								
KBK	**Karagaybulak**	**3.05**	**330**	P			**Pn**	**16 15 45.5**	**+2.5**
	SNR=28								
KBK	**Karagaybulak**	**3.05**	**330**	*e*P			**Pn**	**16 15 43.8**	**+0.8**
KBK				*e*S			**Sn**	**16 16 21.4**	**+1.7**
TKM2	**Tokmak 2**	**3.08**	**340**	P			**Pn**	**16 15 45.8**	**+2.4**
	SNR=26								
TKM2	**Tokmak 2**	**3.08**	**340**	*e*P			**Pn**	**16 15 44.4**	**+1.0**
TKM2				*e*S			**Sn**	**16 16 22.2**	**+1.8**
KST	**Kastek**	**3.12**	**346**	Pg			**Pg**	**16 15 51.9**	**-2.2**
	9.0nm,0.3s								
KST				Lg		Lg	Lg	16 16 35.6	
	29nm,0.3s								
KST	**Kastek**	**3.12**	**346**	*e*P			**Pg**	**16 15 51.9**	**-2.2**
	9.0nm,0.3s								
KST				*e*S			**Sg**	**16 16 35.6**	**+1.1**
	29nm,0.3s								
MTBS	**Maitube**	**3.13**	**352**	Pg			**Pb**	**16 15 50.9**	**+0.6**
	7.7nm,0.4s								
MTBS				Lg		Lg	Lg	16 16 34.7	
	32nm,0.3s								
MTBS	**Maitube**	**3.13**	**352**	*e*P			**Pb**	**16 15 50.9**	**+0.6**
	7.7nm,0.4s								
MTBS				*e*S			**Sg**	**16 16 34.7**	**-0.4**
	32nm,0.3s								
MDOK	**Medeo**	**3.13**	**0**	Pg			**Pb**	**16 15 51.4**	**+1.1**
	16nm,0.2s								
MDOK				Lg		Lg	Lg	16 16 34.4	
	77nm,0.5s								
KNDC	**Almaty**	**3.19**	**359**	Pg			**Pb**	**16 15 52.0**	**+0.7**
	23nm,0.5s								
KNDC				Lg		Lg	Lg	16 16 37.0	
	63nm,0.5s								
SATY	**Saty**	**3.21**	**19**	Pg			**Pb**	**16 15 51.6**	**+0.1**
	17nm,0.5s								
SATY				Lg		Lg	Lg	16 16 35.7	
	33nm,0.3s								
KOTS	**Kotyrbulak**	**3.21**	**1**	Pg			**Pb**	**16 15 53.0**	**+1.4**
	12nm,0.2s								
KOTS				Lg		Lg	Lg	16 16 37.5	
	64nm,0.5s								
KOTS	**Kotyrbulak**	**3.21**	**1**	*e*P			**Pb**	**16 15 53.0**	**+1.4**
	12nm,0.2s								
KOTS				*e*S			**Sg**	**16 16 37.5**	**+0.1**
	64nm,0.5s								
AAK	**Ala-Archa**	**3.23**	**325**	P			**Pn**	**16 15 47.8**	**+2.5**
	SNR=17								
AAK	**Ala-Archa**	**3.23**	**325**	Pn			**Pn**	**16 15 47.6**	**+2.3**
	2.1nm,0.5s								
AAK				Lg		Lg	Lg	16 16 37.9	
	27nm,1.1s								
AAK	**Ala-Archa**	**3.23**	**325**	*e*P			**Pn**	**16 15 46.3**	**+1.0**
AAK				*e*S			**Sn**	**16 16 25.5**	**+1.6**
OHH	**Osh**	**3.27**	**280**	*e*P			**Pn**	**16 15 46.7**	**+0.8**
OHH				*e*S			**Sn**	**16 16 26.1**	**+1.2**
ARSB	**Arslanbob**	**3.33**	**294**	*e*P			**Pn**	**16 15 47.6**	**+0.9**
ARSB				*e*S			**Sn**	**16 16 27.7**	**+1.3**
CHMS	**Chumysh**	**3.42**	**331**	P			**Pn**	**16 15 50.4**	**+2.5**
	SNR=12								
CHMS	**Chumysh**	**3.42**	**331**	*e*P			**Pn**	**16 15 48.9**	**+1.0**
CHMS				*e*S			**Sn**	**16 16 30.1**	**+1.6**
UZB	**Uzynbulak**	**3.46**	**25**	Pg			**Pb**	**16 15 56.0**	**+0.1**
	4.5nm,0.3s								
UZB				Lg		Lg	Lg	16 16 42.3	
	19nm,0.4s								
UZB	**Uzynbulak**	**3.46**	**25**	*e*P			**Pb**	**16 15 56.0**	**+0.1**
	4.5nm,0.3s								
UZB				*e*S			**Sg**	**16 16 42.3**	**-3.4**
	19nm,0.4s								
KURS	**Kuram**	**3.57**	**14**	Pg			**Pb**	**16 15 58.6**	**+1.0**
	11nm,0.6s								
KURS				Lg		Lg	Lg	16 16 46.8	
	14nm,0.7s								
EKS2	**Erkin-Say**	**3.59**	**318**	P			**Pn**	**16 15 53.1**	**+2.9**
	SNR=26								
EKS2	**Erkin-Say**	**3.59**	**318**	*e*P			**Pn**	**16 15 51.2**	**+1.0**
EKS2				*e*S			**Sn**	**16 16 34.1**	**+1.4**
SHLS	**Shalkode**	**3.63**	**30**	Pg			**Pg**	**16 16 03.1**	**-0.8**
	5.0nm,0.3s								
SHLS				Lg		Lg	Lg	16 16 55.0	
	26nm,0.3s								
SHLS	**Shalkode**	**3.63**	**30**	*e*P			**Pg**	**16 16 01.8**	**-2.1**
	5.0nm,0.3s								
SHLS				*e*S			**Sg**	**16 16 53.0**	**+2.1**
	26nm,0.3s								
KPKS	**Kokpek**	**3.66**	**19**	Pg			**Pb**	**16 15 59.8**	**+0.6**
	0.3nm,0.2s								
KPKS				Lg		Lg	Lg	16 16 48.9	
	15nm,0.5s								
KPKS	**Kokpek**	**3.66**	**19**	*e*P			**Pb**	**16 15 59.8**	**+0.6**
	0.3nm,0.2s								
KPKS				*e*S			**Sg**	**16 16 49.1**	**-2.8**
	15nm,0.5s								
KTBS	**Karatobe**	**3.69**	**356**	Pg			**Pb**	**16 16 01.6**	**+1.8**
	8.1nm,0.3s								
KTBS				Lg		Lg	Lg	16 16 51.9	
	0.1nm,0.3s								
KTBS	**Karatobe**	**3.69**	**356**	*e*P			**Pb**	**16 16 01.6**	**+1.8**
	8.1nm,0.3s								
KTBS				*e*S			**Sg**	**16 16 52.4**	**-0.6**
	0.1nm,0.3s								
USP	**Ospenovka**	**3.75**	**331**	P			**Pn**	**16 15 55.1**	**+2.7**
	SNR=6.5								
USP	**Ospenovka**	**3.75**	**331**	*e*P			**Pn**	**16 15 53.4**	**+1.0**
USP				*e*S			**Sn**	**16 16 37.8**	**+1.3**
PDGK	**Podgornoye**	**3.79**	**29**	Pn			**Pn**	**16 15 52.8**	**-0.1**
	0.8nm,0.5s								
PDGK				Pg			**Pb**	**16 16 00.6**	**-0.8**
	5.2nm,0.4s								
PDGK				Lg		Lg	Lg	16 16 53.1	
	30nm,1.0s								
KRBS	**Karabastau**	**3.80**	**345**	Pg			**Pb**	**16 16 03.4**	**+1.7**
	7.0nm,0.5s								
KRBS				Lg		Lg	Lg	16 16 55.4	
	14nm,0.4s								
KRBS	**Karabastau**	**3.80**	**345**	*e*P			**Pb**	**16 16 02.9**	**+1.2**
	7.0nm,0.5s								
KRBS				*e*S			**Sg**	**16

KUR A A 16 20 06.2
comp=E,150nm,0.5s
KUR A A 16 20 06.2
comp=E,110nm,0.5s
PAU Pauzhetka 4.61 32 *e*P **Pn 16 19 19.6 -1.7**
PAU AMB AMB 16 19 26.5
comp=E,20nm,0.3s
PAU *e*S **Sn 16 20 08.9 -5.5**
PAU A A 16 20 13.3
comp=E,140nm,0.3s
PAU A A 16 20 13.3
comp=E,130nm,0.3s
YUK Yuzh-Kuril'sk 6.09 236 *e*PN **Pn 16 19 38.0 -2.9**
YUK *i* S **Sn 16 20 45.1 -4.5**
YUK pmax pmax
comp=Z,139nm,0.4s
YUK pmax pmax
comp=N,22nm,0.6s
YUK pmax pmax
comp=E,24nm,0.4s
YUK smax smax
comp=E,79nm,0.2s
YUK smax smax
comp=N,184nm,0.3s
YUK Yuzh-Kuril'sk 6.09 236 *e*P **Pn 16 19 38.2 -2.7**
YUK AMB AMB 16 19 38.6
comp=N,140nm,0.4s
YUK *i* S **Sn 16 20 46.2 -3.4**
YUK A A 16 20 51.6
comp=N,130nm,0.3s
YUK A A 16 20 51.6
comp=N,80nm,0.3s
PEA0B Petropavlovsk- 6.29 27 Pn Pn 16 19 38.5 -5.0
PEA0B Petropavlovsk- 6.29 27 PN Pn 16 19 38.5 -5.0
PETK Petropavlovsk- 6.29 27 P **Pn 16 19 41.5 -2.1**
comp=N,1.4nm,0.5s,baz=183,slow=11,SNR=7.9
PETK S **Sn 16 20 52.5 -1.9**
comp=N,6.2nm,1.0s,baz=237,slow=24,SNR=1.7
PETK Petropavlovsk- 6.29 27 Pn Pn 16 19 38.0 -5.5
RUSJ Misakicho 6.40 239 *e*PN **Pn 16 19 45.0 0.0**
RUSJ *i* S **Sn 16 20 56.2 -0.8**
GLVR Golovnino 6.47 236 *e*PN **Pn 16 19 42.5 -3.4**
GLVR *i* S **Sn 16 20 51.4 -7.2**
GLVR pmax pmax
comp=Z,65nm,0.4s
GLVR pmax pmax
comp=N,30nm,0.3s
GLVR pmax pmax
comp=E,28nm,0.3s
GLVR smax smax
comp=N,103nm,0.1s
GLVR smax smax
comp=E,170nm,0.3s
GLVR Golovnino 6.47 236 *e*P **Pn 16 19 42.6 -3.4**
GLVR AMB AMB 16 19 44.7
comp=E,70nm,0.4s
GLVR *i* S **Sn 16 20 51.4 -7.2**
GLVR A A 16 21 03.4
comp=E,100nm,0.2s
GLVR A A 16 21 03.4
comp=E,170nm,0.2s
PET Petropavlovsk 6.54 32 Pn **Pn 16 19 48.1 +1.2**
PET Petropavlovsk 6.54 32 *e*PN **Pn 16 19 47.1 +0.2**
PET *e*S **Sn 16 20 53.4 -6.9**
PET smax smax
comp=N,20nm,0.5s
PET smax smax
comp=E,26nm,0.6s
PET Petropavlovsk 6.54 32 *e*P **Pn 16 19 44.4 -2.5**
PET AMB AMB 16 20 28.4
comp=E,30nm,0.5s
PET *e*S **Sn 16 20 54.0 -6.3**
PET A A 16 20 55.8
comp=E,20nm,0.4s
PET A A 16 20 55.8
comp=E,20nm,0.4s
JRA Rausu 6.57 239 *e*P **Pn 16 19 44.6 -2.7**
NEM2 Nemuro 2 6.59 232 *e*P Pn 16 19 42.5 -5.1
NEM2 *e*S Sn 16 20 51.0 -11
NMR Nemuro--Hokkai 6.59 232 *e*PN Pn 16 19 42.5 -5.2
NMR Nemuro--Hokkai 6.59 232 *e*P Pn 16 19 42.5 -5.2
YSS Yuzhno-Sakhali 6.94 268 Pn **Pn 16 19 51.9 -0.3**
YSS Yuzhno-Sakhali 6.94 268 *i* PN **Pn 16 19 53.9 +1.7**
YSS Yuzhno-Sakhali 6.94 268 *e*P **Pn 16 19 52.2 0.0**
JNK Nakash 7.01 238 *e*P **Pn 16 19 50.3 -3.0**
JTKR Abashiri--Toko 7.27 243 *e*P **Pn 16 19 54.4 -2.2**
UGL Uglegorsk 7.37 285 *e*P **Pn 16 19 57.7 -0.2**
UGL AMB AMB 16 20 02.8
comp=E,30nm,0.5s
JAK Akkeshi 7.40 234 *e*P Pn 16 19 53.1 -5.3
JAK *e*S Sn 16 21 11.1 -10
TYV Tymovskoe 7.45 300 *e*PN **Pn 16 20 02.2 +3.2**
TYV pmax pmax
comp=Z,9.0nm,0.9s
TYV pmax pmax
comp=Z,300nm,4.8s
TYV Tymovskoe 7.45 300 *e*P **Pn 16 19 59.2 +0.2**
TYV *e*S **Sn 16 21 22.0 -0.1**
JAR Ashorobuto 7.74 239 *e*P **Pn 16 19 60.0 -3.0**
JAR *e*S **Sn 16 21 24.5 -4.8**
JOB Onbets 7.95 237 *e*P Pn 16 20 01.1 -4.6
JOB *e*S Sn 16 21 24.9 -9.3
JKA Kamikawa-asahi 8.00 248 Pn **Pn 16 20 06.0 -0.4**
JKA Kamikawa-asahi 8.00 248 *e*P **Pn 16 20 06.3 -0.1**
ASAJ Asahikawa 8.00 248 P **Pn 16 20 06.3 -0.1**
comp=Z,12nm,0.8s,baz=72,slow=12,SNR=25
ASAJ S **Sn 16 21 33.2 -2.3**
comp=Z,2.8nm,0.6s,baz=38,slow=32,SNR=1.0
JKK2 Kamakawa 2 8.03 246 *e*P **Pn 16 20 05.6 -1.2**
JCH Churui 8.40 237 *e*P Pn 16 20 06.9 -4.8
JCH *e*S Sn 16 21 34.5 -11
JNBK Urakawa-nobuka 8.96 237 *e*P Pn 16 20 14.1 -5.1
JNBK *e*S Sn 16 21 46.2 -12
NKL Nikolayevsk 9.56 310 *e*P **Pn 16 20 27.4 +0.3**
JANG Nango 10.94 233 *e*P Pn 16 20 38.0 -7.4
JANG *e*S Sn 16 22 27.9 -18
JTH Tanohata 11.07 230 *e*S Sn 16 22 33.9 -15
MA2 Magadan 12.04 355 P **Pn 16 20 58.7 -1.0**
comp=Z,0.8nm,0.3s,baz=176,slow=7.3,SNR=7.9
KLR Kul'dur 14.13 284 *ce*P **P 16 21 30.0 +0.5**
KLR pmax pmax
comp=Z,2.0nm,1.7s
KLR Kul'dur 14.13 284 *e*P **Pn 16 21 26.4 -0.1**
USRK Ussuriysk Ar. 14.95 264 P **Pn 16 21 36.7 0.0**
comp=Z,1.5nm,0.4s,baz=71,slow=13,SNR=12
SEY Seymchan 15.35 359 P **Pn 16 21 39.4 -2.1**
comp=Z,0.7nm,0.3s,baz=199,slow=13,SNR=4.6
SEY Seymchan 15.35 359 *i* P **Pn 16 21 40.5 -1.0**
SEY pmax pmax
comp=Z,2.0nm,1.3s
SEY Seymchan 15.35 359 *e*P **Pn 16 21 40.5 -1.0**
MJB9 Matsu-Tunnel 15.51 230 P 16 21 45.4 +0.5
MAJO Matsushiro 15.51 230 Pn **Pn 16 21 44.1 +0.4**
MAJO Matsushiro 15.51 230 P **Pn 16 21 44.2 +0.4**
MAJO pmax pmax
comp=Z,6.0nm,1.0s
MJAR Matsushiro Arr 15.51 230 P **Pn 16 21 44.0 +0.2**
comp=Z,2.0nm,0.7s,baz=52,slow=10,SNR=4.9
MJAR Matsushiro Arr 15.51 230 P P 16 21 45.3 +0.4
MJAR Matsushiro Arr 15.51 230 P **P 16 21 45.3 +0.4**
MJAR pmax pmax
comp=Z,2.0nm,1.1s
JGF Kuroka 16.68 230 P 16 21 57.2 -0.6
HEH HeiHe 16.93 288 *e*P **Pn 16 22 01.8 +0.9**
HEH pmax pmax
comp=Z,12nm,0.9s
ZEA Zeya 17.32 300 *e*P **Pn 16 22 05.5 0.0**
ZEA Zeya 17.32 300 *e*P **Pn 16 22 05.5 0.0**
BNX BinXian 17.58 273 ⇓P **P 16 22 06.3 -1.2**
BNX pmax pmax
comp=Z,5.0nm,1.7s
YAK Yakutsk 19.51 326 *ce*P **Pn 16 22 31.2 0.0**
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK Yakutsk 19.51 326 *e*P **Pn 16 22 31.3 0.0**
KSRS Korea Array 20.94 250 P **P 16 22 44.8 +0.9**
comp=Z,7.9nm,0.8s,baz=56,slow=10,SNR=32
comp=Z,7.9nm,0.8s
KS19 Wonju Array Si 20.95 250 P **P 16 22 44.7 +0.7**
KS19 IAmb IAmb 16 22 53.5
comp=Z,10nm,1.1s
BILL Bilibino 21.58 14 P **P 16 22 49.7 -0.8**
BILL Bilibino 21.58 14 *i* P **P 16 22 51.2 +0.7**
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL Bilibino 21.58 14 *e*P **P 16 22 51.2 +0.7**
HILR Hailar Array B 21.92 287 P **P 16 22 52.7 -1.6**
comp=Z,1.1nm,0.3s,baz=80,slow=10,SNR=7.3
comp=Z,1.1nm,0.3s
JNU Nakatsue 22.06 237 P **P 16 22 54.8 -1.0**
comp=Z,4.4nm,0.8s,baz=94,slow=6.9,SNR=2.5
JNU S **S 16 26 46.6 -1.9**
comp=Z,6.0nm,0.9s,baz=48,slow=2.8,SNR=4.3
comp=Z,4.4nm,0.8s
XLT XiLinHaoTe 25.80 275 *e*P **P 16 23 31.8 +1.7**
XLT pmax pmax
comp=Z,8.0nm,0.6s
XLT pmax pmax
comp=Z,200nm,6.1s
TIK Tiksi 26.58 343 *e*P **P 16 23 36.2 -0.5**
TIXI Tiksi 26.59 343 P **P 16 23 36.2 -0.6**
TIXI IAmb IAmb 16 23 37.1
comp=Z,2.6nm,0.5s
TIXI Tiksi 26.59 343 P **P 16 23 36.2 -0.6**
TIXI pmax pmax
comp=Z,3.0nm,0.5s
C16K Lisburne Hills 29.38 30 P **P 16 24 01.5 -0.1**
C16K IAmb IAmb 16 24 02.9
comp=Z,2.4nm,0.9s
H11N2 WAKE ISLAND Hy 30.06 153 T T 16 55 52.9
baz=341,slow=76,SNR=560
H11N1 WAKE ISLAND Hy 30.07 153 T T 16 56 15.2
baz=341,slow=76,SNR=435
H11N3 WAKE ISLAND Hy 30.08 153 T T 16 56 15.4
baz=341,slow=76,SNR=357
F17K Baldwin Pennin 30.26 35 P **P 16 24 10.3 +1.0**
SONM Songino Array 30.92 288 P **P 16 24 15.8 +0.2**
comp=Z,0.3nm,0.3s,baz=105,slow=3.3,SNR=2.9
comp=Z,0.3nm,0.3s
C18K Utukok River 30.94 31 P **P 16 24 15.2 -0.3**
C18K IAmb IAmb 16 24 17.1
comp=Z,1.9nm,0.7s
H18K Honhosa River 31.13 38 P **P 16 24 17.8 +0.7**
G18K Tagagawik 31.15 36 P **P 16 24 17.5 +0.2**
H11S1 WAKE ISLAND Hy 31.15 154 T T 16 57 42.4
baz=341
H11S3 WAKE ISLAND Hy 31.16 154 T T 16 57 30.2
baz=341,slow=74
H11S2 WAKE ISLAND Hy 31.17 154 T T 16 57 26.6
baz=341,slow=74
C19K Lookout Ridge 31.64 30 P **P 16 24 22.4 +0.8**
TLY Talaya 31.66 296 *ce*P **P 16 24 22.7 +0.8**
TLY pmax pmax
comp=Z,6.0nm,2.5s
TLY Talaya 31.66 296 *e*P **P 16 24 22.7 +0.8**
F19K Shaleruckik Mo 31.70 35 P **P 16 24 22.1 +0.1**
G19K Purcell Mounta 31.83 36 P **P 16 24 23.8 +0.6**
D19K Kuna River 31.98 32 P **P 16 24 25.2 +0.7**
D19K IAmb IAmb 16 24 28.5
comp=Z,2.5nm,0.9s
E19K Redstone River 32.05 34 P **P 16 24 25.6 +0.5**
F20K Avaraart Lake 32.53 35 P **P 16 24 29.8 +0.5**
D20K Etiviuk River 32.57 32 P **P 16 24 30.3 +0.7**
D20K IAmb IAmb 16 24 31.5
comp=Z,4.6nm,0.8s
G21K Allakaket 33.32 36 P **P 16 24 37.7 +1.5**
G21K IAmb IAmb 16 24 60.0
comp=Z,2.3nm,1.1s
B21K Ikpikpuk River 33.48 30 P **P 16 24 38.0 +0.6**
B21K IAmb IAmb 16 24 39.9
comp=Z,6.0nm,0.9s
H21K Melozitna Rive 33.50 38 P **P 16 24 38.4 +0.6**
E24K Your Creek 35.43 34 P **P 16 24 55.8 +1.4**
E24K IAmb IAmb 16 24 56.0
comp=Z,2.2nm,0.5s
XAN Xi'an 35.46 264 P **P 16 24 55.3 +0.3**
XAN pmax pmax
comp=Z,14nm,0.8s
ILAR Eielson Array 35.96 39 P **P 16 24 59.5 +0.7**
comp=Z,0.6nm,0.8s,baz=274,slow=9.4,SNR=5.7
comp=Z,0.6nm,0.8s
D25K Kavik River 36.30 32 P **P 16 25 02.0 +0.3**
D25K IAmb IAmb 16 25 03.4
comp=Z,2.9nm,0.7s
BMAR Burnt Mountain 36.88 35 P **P 16 25 07.9 +1.2**
ENH Enshi 37.39 258 P **P 16 25 11.0 -0.4**
ENH IAmb IAmb 16 25 13.5
comp=Z,4.0nm,0.5s
LZH Lanzhou 37.73 271 *e*P **P 16 25 16.5 +2.2**
LZH pmax pmax
comp=Z,19nm,1.4s
LZDM Lanzhou Array 37.90 270 P **P 16 25 16.8 +0.8**
comp=Z,0.6nm,0.3s,baz=18,slow=5.2,SNR=4.4
comp=Z,0.6nm,0.3s
H27K Steamboat Moun 38.13 37 P **P 16 25 18.8 +1.6**
GTA2 Gaotai 38.70 278 *e*P **P 16 25 23.3 +0.9**
GTA2 pmax pmax
comp=Z,3.0nm,1.0s
G30M tAoh Zraii Nji 40.16 35 P **P 16 25 35.1 +1.1**
INK Inuvik 40.99 33 P **P 16 25 41.8 +1.1**
INK Inuvik 40.99 33 P **P 16 25 41.8 +1.1**
INK pmax pmax
comp=Z,1.0nm,1.0s
ZAA0 Zalesovo Array 41.99 305 P **P 16 25 48.8 -0.2**
ZAA0 IAmb IAmb 16 25 49.3
comp=Z,2.9nm,0.7s
ZALV Zalesovo Beam 41.99 305 P **P 16 25 48.8 -0.3**
comp=Z,3.3nm,0.5s,baz=67,slow=7.5,SNR=15
ZALV PcP **PcP 16 27 41.5 +0.3**
comp=Z,0.8nm,0.4s,baz=86,slow=3.2,SNR=3.3
comp=Z,3.3nm,0.5s
ZALV Zalesovo Beam 41.99 305 P **P 16 25 48.3 -0.7**
DGZ Jazzator, Alta 42.06 298 *i* P **P 16 25 48.7 -1.2**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
A36M Sachs Harbour 43.14 27 P **P 16 26 00.5 +2.4**
A36M IAmb IAmb 16 26 01.0
comp=Z,7.0nm,0.7s
MK31 Makanchi Array 46.42 297 *ce*P **P 16 26 24.3 -0.1**
MKAR Makanchi Array 46.42 297 P **P 16 26 24.2 -0.2**
comp=Z,1.5nm,0.5s,baz=67,slow=7.7,SNR=34
MKAR PcP **PcP 16 27 57.9 +1.3**
comp=Z,0.3nm,0.5s,baz=58,slow=2.9,SNR=2.4
comp=Z,1.5nm,0.5s
MAKZ Makanchi 46.60 297 P **P 16 26 24.6 -1.2**
MAKZ IAmb IAmb 16 26 27.2
comp=Z,2.7nm,1.1s
MAKZ Makanchi 46.60 297 P **P 16 26 24.6 -1.2**
MAKZ pmax pmax
comp=Z,3.0nm,1.1s
KURK Kurchatov 46.77 303 P **P 16 26 26.5 -0.5**
KURK IAmb IAmb 16 26 27.6
comp=Z,8.2nm,0.8s
KURK Kurchatov 46.77 303 *ce*P **P 16 26 26.5 -0.5**
KURK pmax pmax
comp=Z,9.0nm,0.8s
KURK Kurchatov 46.77 303 *e*P **P 16 26 26.5 -0.5**
KURBB Kurchatov Arra 46.86 303 P **P 16 26 27.6 -0.1**
comp=Z,6.2nm,0.7s,baz=67,slow=8.3,SNR=43
KURBB PcP **PcP 16 27 57.3 -0.7**
comp=Z,0.1nm,0.4s,baz=76,slow=3.9,SNR=1.9
comp=Z,6.2nm,0.7s
RES Resolute Bay 50.05 19 P **P 16 26 52.7 +0.9**
RES IAmb IAmb 16 26 54.8
comp=Z,1.9nm,0.6s
RES Resolute Bay 50.05 19 P **P 16 26 52.7 +0.9**
RES pmax pmax
comp=Z,2.0nm,0.6s
LSA Lhasa 50.09 272 P **P 16 26 55.5 +2.2**
LSA Lhasa 50.09 272 P **P 16 26 49.3 -4.0**
LSA pmax pmax
comp=Z,15nm,0.6s
LSA Lhasa 50.09 272 P **P 16 26 55.5 +2.2**
LSA pmax pmax
comp=Z,11nm,0.6s
BVAR Borovoye Array 50.20 309 P **P 16 26 53.5 +0.3**
comp=Z,4.8nm,0.4s,baz=55,slow=7.9,SNR=49
BVAR PcP **PcP 16 28 10.5 +0.4**
comp=Z,0.6nm,0.4s,baz=90,slow=5.2,SNR=2.4
comp=Z,4.8nm,0.4s
BORK Borovoye 50.22 309 P **P 16 26 53.3 -0.1**
BORK IAmb IAmb 16 26 54.8
comp=Z,4.4nm,0.8s
BORK Borovoye 50.22 309 *ce*P **P 16 26 53.7 +0.3**
BORK pmax pmax
comp=Z,5.0nm,1.3s
YKA Yellowknife Ar 50.31 37 P **P 16 26 54.7 +0.8**
comp=Z,0.2nm,0.6s,baz=302,slow=8.1,SNR=4.6
comp=Z,0.2nm,0.6s
WUS Wushi 51.20 292 P **P 16 27 01.9 +0.8**
WUS IAmb IAmb 16 27 02.1
comp=Z,2.6nm,0.7s
CHTO Chiang Mai 52.19 256 P **P 16 27 10.2 +1.8**
CHTO IAmb IAmb 16 27 10.8
comp=Z,6.5nm,0.9s
CHTO Chiang Mai 52.19 256 P **P 16 27 10.2 +1.8**
CHTO pmax pmax
comp=Z,7.0nm,1.0s
CMAR Chiang Mai Arr 52.44 256 P **P 16 27 11.5 +1.2**
comp=Z,1.8nm,0.7s,baz=35,slow=7.2,SNR=15
comp=Z,1.8nm,0.7s
CMAR Chiang Mai Arr 52.44 256 *ce*P **P 16 27 12.1 +1.8**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
BOOM Boomskoye usch 52.52 295 P **P 16 27 10.8 0.0**
BOOM IAmb IAmb 16 27 22.1
comp=Z,3.3nm,1.0s
BOOM Boomskoye usch 52.52 295 P **P 16 27 10.8 0.0**
BOOM pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 53.32 296 P **P 16 27 16.5 -0.2**
AAK IAmb IAmb 16 27 17.9
comp=Z,1.9nm,0.7s
AAK Ala-Archa 53.32 296 *ce*P **P 16 27 16.0 -0.7**
AAK pmax pmax
comp=Z,1.0nm,1.0s
AAK Ala-Archa 53.32 296 *e*P **P 16 27 16.0 -0.7**
EVN Everest 54.12 274 P **P 16 27 24.7 +1.4**
ARTI Arti 54.38 317 P **P 16 27 23.7 -0.2**
ARTI Arti 54.38 317 *c i*P **P 16 27 24.3 +0.4**
ARTI *PP **pP 16 27 58.6 +1.1**
ARTI S **S 16 34 52.0 +1.8**
ARTI SS **SS 16 38 31.6 -2.1**
ARTI pmax pmax
comp=Z,10.0nm,1.5s
KSH2 Kashi 54.66 292 P **P 16 27 27.5 +1.0**
KSH2 pmax pmax
comp=Z,3.0nm,1.1s
ARSB Arslanbob 55.00 295 P **P 16 27 29.2 +0.4**
ARSB IAmb IAmb 16 27 49.9
comp=Z,1.1nm,0.6s
ARSB Arslanbob 55.00 295 P **P 16 27 29.2 +0.4**
ARSB pmax pmax
comp=Z,1.0nm,0.6s
KKAR Karatay Array 55.46 298 P **P 16 27 31.9 0.0**
KKAR Karatay Array 55.46 298 P **P 16 27 31.9 0.0**
ARCES ARCESS Array B 56.98 341 P **P 16 27 42.8 +0.4**
comp=Z,0.8nm,0.4s,baz=23,slow=6.6,SNR=4.5
comp=Z,0.8nm,0.4s
KIRV Kirov 56.99 323 *ce*P **P 16 27 43.2 +0.7**
AB31 Akbulak array 57.76 309 P **P 16 27 48.1 +0.1**
AB31 IAmb IAmb 16 27 49.7
comp=Z,3.0nm,1.1s
ABKAR Akbulak array 57.76 309 P **P 16 27 48.1 +0.1**
CHGR Chuyangaron 58.95 295 P **P 16 27 56.9 +0.3**
CHGR Chuyangaron 58.95 295 *i* P **P 16 27 56.8 +0.2**
CHGR pmax pmax
comp=Z,6.0nm,1.0s
NIL Nilore 59.50 288 P **P 16 28 02.3 +1.9**
NIL Nilore 59.50 288 P **P 16 28 02.3 +1.9**
NIL pmax pmax
comp=Z,8.0nm,0.7s
SUMG Summit 59.84 4 P **P 16 28 03.5 +1.0**
SUMG Summit 59.84 4 P **P 16 28 03.5 +1.0**
SUMG pmax pmax
comp=Z,6.0nm,0.5s
KBL Kabul 61.62 291 P **P 16 28 15.3 +0.4**
KBL Kabul 61.62 291 P **P 16 28 15.3 +0.4**
KBL pmax pmax
comp=Z,4.0nm,0.7s
H17A Grant Village 62.72 53 P **P 16 28 21.5 -0.6**
FIA1 FINESS Array S 63.19 334 P **P 16 28 24.8 +0.1**
FINES FINESS Array B 63.19 334 P **P 16 28 24.9 +0.3**
comp=Z,5.1nm,0.4s,baz=35,slow=7.5,SNR=99
comp=Z,5.1nm,0.4s
FINES FINESS Array B 63.19 334 P **P 16 28 24.8 +0.1**
FINES FINESS Array B 63.19 334 *ce*P **P 16 28 25.0 +0.3**
FINES pmax pmax
comp=Z,5.0nm,0.4s
PDAR Pinedale Array 64.35 54 P **P 16 28 33.5 +0.6**
comp=Z,0.4nm,0.8s,baz=315,slow=0.6,SNR=4.0
comp=Z,0.4nm,0.8s
OBN Obninsk 64.51 325 ⇑ *e*P **P 16 28 34.7 +1.4**
OBN *e**PP **pP 16 29 07.9 -0.1**
OBN *e* 16 30 55.1
OBN *e*S **S 16 36 52.2 -7.9**
OBN pmax pmax
comp=Z,7.0nm,1.1s
OBN Obninsk 64.51 325 *e*P **P 16 28 34.7 +1.4**
NC303 NORSAR Array S 67.16 341 P **P 16 28 51.4 +1.1**
NB2 NORSAR Subarra 67.36 341 P **P 16 28 52.5 +1.0**
comp=Z,3.5nm,0.5s,baz=26,slow=6.5
NOA NORSAR Array B 67.36 341 P **P 16 28 52.2 +0.7**
comp=Z,6.0nm,0.7s,baz=26,slow=6.3,SNR=28
comp=Z,6.0nm,0.7s
HFS Hagfors 67.59 339 P **P 16 28 53.7 +0.8**
comp=Z,11nm,0.4s,baz=49,slow=6.5,SNR=89
PABE Paberze 68.67 332 P **P 16 29 00.6 +0.9**
KIV Kislovodsk 70.09 314 *e*P **P 16 29 10.9 +2.1**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KBZ Khabaz 70.15 314 P **P 16 29 10.1 +1.0**
comp=Z,2.7nm,0.6s,baz=113,slow=3.5,SNR=16
comp=Z,2.7nm,0.6s
AKASG Malin Array Be 70.74 326 P **P 16 29 12.7 +0.2**
comp=Z,4.0nm,0.3s,baz=36,slow=6.3,SNR=16
comp=Z,4.0nm,0.3s
AKASG Malin Array Be 70.74 326 P **P 16 29 13.0 +0.5**
AKASG IAmb IAmb 16 29 13.8
comp=Z,2.1nm,0.8s
AKASG Malin Array Be 70.74 326 *ce*P **P 16 29 12.6 +0.1**
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKBB Malin Array Si 70.74 326 P **P 16 29 12.7 +0.2**
AKBB IAmb IAmb 16 29 13.2
comp=Z,7.4nm,1.0s
AKBB Malin Array Si 70.74 326 *ce*P **P 16 29 12.0 -0.5**
AKBB pmax pmax
comp=Z,4.0nm,0.9s
KIEV Kiev 70.75 326 ⇓P **P 16 29 13.0 +0.4**
KIEV Kiev 70.75 326 P **P 16 29 12.9 +0.4**
KIEV IAmb IAmb 16 29 13.2
comp=Z,6.7nm,1.0s
KIEV Kiev 70.75 326 ⇓P **P 16 29 13.0 +0.4**
ASAR Alice Springs 72.99 198 P **P 16 29 27.2 +1.1**
comp=Z,3.0nm,0.6s,baz=10,slow=6.4,SNR=6.2
comp=Z,0.3nm,0.6s
SORM Soroca 73.15 325 ⇓P **P 16 29 27.2 +0.3**
SORM Soroca 73.15 325 ⇓P **P 16 29 27.2 +0.3**
BUR08 Bucovina Ar. S 74.76 326 P **P 16 29 37.6 +1.1**
BURAR Bucovina Array 74.78 326 ⇑P **P 16 29 37.6 +1.1**
BURAR Bucovina Array 74.78 326 P **P 16 29 37.3 +0.8**
BURAR Bucovina Array 74.78 326 ⇑P **P 16 29 37.6 +1.1**
GIRR Girov 74.84 325 ⇓P **P 16 29 38.0 +1.2**
VLDR Vladesti 75.13 324 ⇑P **P 16 29 39.8 +1.4**
TESR Tescani 75.15 325 ⇓P **P 16 29 39.3 +0.8**
TLCR 75.37 323 ⇑P **P 16 29 41.3 +1.5**
TLCR 75.37 323 ⇑P **P 16 29 41.3 +1.5**
ONER Baraj Valea Uz 75.39 325 ⇑P **P 16 29 41.0 +1.1**
EKA Eskdalemuir Ar 75.46 346 P **P 16 29 40.9 +0.7**
comp=Z,1.6nm,0.5s,baz=22,slow=5.5,SNR=6.8
comp=Z,1.6nm,0.5s
MORC Moravsky Berou 75.60 332 ⇓P **P 16 29 42.7 +1.6**
CLL Collm 75.61 335 *i* P **P 16 29 42.2 +1.1**
CLL Collm 75.61 335 *i* P **P 16 29 42.2 +1.1**
VRI Vrincioaia 75.65 324 ⇑P **P 16 29 42.7 +1.3**
VRI Vrincioaia 75.65 324 ⇑P **P 16 29 42.7 +1.3**
CFR Carcaliu 75.65 323 ⇑P **P 16 29 42.2 +0.8**
CFR Carcaliu 75.65 323 ⇑P **P 16 29 42.2 +0.8**
JURR Jurilovca 75.69 322 ⇓P **P 16 29 43.0 +1.5**
PLOR Plostina 75.69 324 ⇓P **P 16 29 43.9 +2.2**
PLOR Plostina 75.69 324 ⇓P **P 16 29 43.9 +2.2**
BZK Bozkurt 75.72 318 ⇓P **P 16 29 43.6 +1.7**
TURR Turia 75.77 325 ⇑P **P 16 29 43.3 +1.1**
TPGR Topolog 75.80 323 ⇑P **P 16 29 43.5 +1.2**
OZUR 75.83 325 ⇓P **P 16 29 44.6 +2.1**
COVR Voineasa-Covas 75.87 325 ⇓P **P 16 29 44.2 +1.5**
ARPR Arapgir-MALATY 75.90 313 P **P 16 29 44.5 +1.3**
ARPR IAmb IAmb 16 29 46.3
comp=Z,7.3nm,0.8s
DOPR Dopca 76.09 325 ⇓P **P 16 29 46.1 +2.2**
TIRR Tirgusor 76.13 323 ⇓P **P 16 29 45.1 +1.0**
TIRR Tirgusor 76.13 323 ⇓P **P 16 29 45.1 +1.0**
CIDE Kastamonu/Cide 76.26 318 ⇓P **P 16 29 45.8 +0.9**

MLR	**Muntele Rosu**	**76.27**	**325**	⇑P		**P**	**16 29 46.8**	**+1.7**
MLR	**Muntele Rosu**	**76.27**	**325**	P		**P**	**16 29 46.1**	**+1.0**
MLR	**Muntele Rosu**	**76.27**	**325**	⇑P		**P**	**16 29 46.8**	**+1.7**
ISR	**Istrita**	**76.34**	**324**	⇑P		**P**	**16 29 47.6**	**+2.2**
ISR	**Istrita**	**76.34**	**324**	⇑P		**P**	**16 29 47.6**	**+2.2**
MARR	**Marisel-Cluj**	**76.35**	**327**	⇓P		**P**	**16 29 46.4**	**+1.0**
VOIR		**76.66**	**325**	⇑P		**P**	**16 29 48.6**	**+1.4**
VOIR		**76.66**	**325**	⇑P		**P**	**16 29 48.6**	**+1.4**
ARR	**Arges**	**76.88**	**325**	⇑P		**P**	**16 29 50.6**	**+2.1**
TXAR	**Lajitas Array**	**77.19**	**61**	P		**P**	**16 29 50.9**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=295,slow=3.8,SNR=8.0							
	comp=Z,0.6nm,0.6s							
BNN	**Bunyan**	**77.30**	**315**	P		**P**	**16 29 52.2**	**+1.2**
BNN				IAmb		IAmb	16 29 53.5	
	comp=Z,7.5nm,0.9s							
GZR	**Gura Zlata**	**77.56**	**327**	⇓P		**P**	**16 29 53.4**	**+1.1**
GZR	**Gura Zlata**	**77.56**	**327**	⇓P		**P**	**16 29 53.4**	**+1.1**
GERES	**GERESS Array B**	**77.61**	**334**	P		**P**	**16 29 53.8**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=19,slow=8.5,SNR=3.7							
	comp=Z,0.7nm,0.5s							
BR131	**Keskin Array S**	**77.66**	**316**	P		**P**	**16 29 54.3**	**+1.3**
BR131				IAmb		IAmb	16 29 55.3	
	comp=Z,4.7nm,0.9s							
BR131	**Keskin Array S**	**77.66**	**316**	*i* P		**P**	**16 29 52.7**	**-0.3**
BRTR	**Keskin Array B**	**77.66**	**316**	P		**P**	**16 29 54.2**	**+1.3**
	comp=Z,3.5nm,0.8s,baz=68,slow=4.1,SNR=23							
	comp=Z,3.5nm,0.8s							
BRTR	**Keskin Array B**	**77.66**	**316**	P		**P**	**16 29 53.1**	**+0.1**
BZS	**Buzias**	**77.80**	**327**	⇑P		**P**	**16 29 54.9**	**+1.4**
BZS	**Buzias**	**77.80**	**327**	⇑P		**P**	**16 29 54.9**	**+1.4**
KIRS	**Kirsehir-Merke**	**78.00**	**316**	⇑P		**P**	**16 29 56.1**	**+1.3**
MMAI	**Mount Meron Ar**	**82.13**	**311**	P		**P**	**16 30 18.6**	**+1.5**
	comp=Z,1.3nm,0.5s,baz=23,slow=11,SNR=5.8							
	comp=Z,1.3nm,0.5s							
H03N2	**Juan Fernandez**	**138.89**	**89**	T		T	19 12 31.5	
	baz=309,slow=74							
H03N1	**Juan Fernandez**	**138.91**	**89**	T		T	19 13 03.9	
	baz=309							
H03N3	**Juan Fernandez**	**138.91**	**89**	T		T	19 12 48.1	
	baz=309,slow=74							

NOU 19 16:20:31.3, 15°.69S×166°.86E, h25km, MLv4.7/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**5.42**	**206**	P	Pn	16 21 51.3	+0.8
KOUNC	**Koumac, New Ca**	**5.42**	**206**	S	Sn	16 22 52.8	+0.7
DZM	**Mont Dzumac**	**6.36**	**183**	P	Pn	16 22 03.4	-0.2
ONTNC	**Ouen Toro**	**6.59**	**180**	P	Pn	16 22 06.6	-0.1
OUENC	**Ouen Island, N**	**6.69**	**180**	P	Pn	16 22 08.2	+0.1
PINNC	**Pines Island,**	**6.91**	**175**	P	Pn	16 22 11.7	+0.7
NGOA	**Tingoa Renbel**	**7.78**	**301**	P	Pn	16 22 23.1	+0.1

*AEIC **19** 16:41:16.4±0.7, 53°.63N±0°.09×165°.7W±0°.1, h65km±7km, Error ellipse: s-maj=15.7km s-min=5.6km az=145.0*

NEIC 19 16:41:17.1±0.7, 53°.7N±0°.1×165°.8W±0°.2, h70km±12km, mb3.8/8, ML3.7/16, ML3.3(AEIC), Error ellipse: s-maj=24.1km s-min=5.1km az=148.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKBBA	**Akutan Broad B**	**0.41**	**348**		Pn	16 41 29.0	-0.2
AKBBA					Sn	16 41 38.4	+0.5
ZRO	**Akutan Zero**	**0.41**	**344**		Pn	16 41 29.1	-0.1
ZRO					Sn	16 41 38.5	+0.5
AKMO	**Akutan Morgan**	**0.42**	**342**		Pn	16 41 29.1	0.0
AKMO					Sn	16 41 38.8	+0.7
AHB	**Akutan Harbor**	**0.42**	**358**		Pn	16 41 29.1	-0.2
AKUT	**Akutan**	**0.44**	**1**		Pn	16 41 29.1	-0.3
AKUT					Sn	16 41 38.4	+0.1
AKUT				IAML		16 41 39.5	
	comp=N,3μm,0.4s						
AKUT				IAML		16 41 40.0	
	comp=E,4μm,0.1s						
AKV	**Akutan Volcano**	**0.44**	**347**		Pn	16 41 29.3	-0.2
AKSA	**Akutan Strait**	**0.44**	**7**		Pn	16 41 29.0	-0.4
AKSA					Sn	16 41 38.6	+0.2
UNV	**Unalaska Valle**	**0.45**	**290**	Pn	Pn	16 41 29.2	-0.2
UNV				Sn	Sn	16 41 38.8	+0.4
UNV				IAML		16 41 40.2	
	comp=N,4μm,0.4s						
UNV				IAML		16 41 40.7	
	comp=E,3μm,0.3s						
AKRB	**Akutan Reef Bi**	**0.47**	**339**		Pn	16 41 29.5	-0.1
AKRB					Sn	16 41 40.0	+1.2
LVA	**Lava Point**	**0.49**	**343**	Pn	Pn	16 41 29.5	-0.3
LVA				Sn	Sn	16 41 39.1	-0.1
LVA				IAML		16 41 40.6	
	comp=E,3μm,0.5s						
MNAT	**Makushin Natee**	**0.56**	**290**		Pn	16 41 30.6	0.0
MGOD	**Makushin Gods**	**0.65**	**279**		Pn	16 41 31.7	+0.2
MGOD					Sn	16 41 43.2	+1.1
MAPS	**Pakushin South**	**0.69**	**280**		Pn	16 41 32.0	+0.1
MAPS					Sn	16 41 43.8	+1.0
OKFG	**Magazine Ridge**	**1.30**	**258**		Pn	16 41 39.6	+0.2
OKRE	**Okmok R'deer P**	**1.43**	**264**		Pn	16 41 41.1	0.0
SSBA	**Shishaldin**	**1.46**	**41**		Pn	16 41 41.4	-0.1
SSBA					Sn	16 42 00.2	+0.3
OKSP	**Okmok Steeple**	**1.56**	**254**		Pn	16 41 42.8	-0.1
ISNN	**Isanotski Nort**	**1.64**	**45**		Pn	16 41 44.4	+0.5
ISNN					Sn	16 42 05.8	+1.6
FALS	**False Pass**	**1.81**	**49**	Pn	Pn	16 41 46.4	+0.2
NIKH	**Nikolski High**	**1.98**	**250**	Pn	Pn	16 41 48.3	-0.1
NIKH				IAML		16 42 13.7	
	comp=N,246nm,0.6s						
DT1	**Dutton Round H**	**2.49**	**54**		Pn	16 41 55.3	0.0
DTNA	**Dutton South F**	**2.53**	**53**		Pn	16 41 56.0	+0.2
DOL	**Dolgoi Island**	**2.71**	**56**		Pn	16 41 58.6	+0.2
DOL					Sn	16 42 30.3	+0.2
HAG	**Hague Volcano**	**2.79**	**53**		Pn	16 41 59.9	+0.5
SDPT	**Sand Point**	**3.51**	**60**	Pn	Pn	16 42 08.2	-1.0
SDPT				IAML		16 43 09.3	
	comp=N,79nm,1.4s						
P08K	**Saint George I**	**3.62**	**325**	Pn	Pn	16 42 10.8	+0.1
P08K				IAML		16 42 46.6	
	comp=N,154nm,1.3s						
CNBA	**Chernabura Isl**	**3.81**	**70**	Pn	Pn	16 42 13.0	-0.2
SPIA	**Saint Paul Isl**	**4.32**	**326**	Pn	Pn	16 42 20.9	+0.7
O14K	**Tigyukauivet M**	**6.11**	**22**	Pn	Pn	16 42 45.3	+0.7
O15K	**Unggalikthiuk R**	**6.41**	**29**	Pn	Pn	16 42 49.0	+0.2
PLK4	**Peulik 4**	**6.63**	**50**	Pn	Pn	16 42 51.5	-0.5
N14K	**Kuskokwak Cree**	**6.64**	**18**	Pn	Pn	16 42 51.7	-0.1
M11K	**Mekoryuk**	**6.71**	**358**	Pn	Pn	16 42 53.1	+0.2
M13K	**Dall Lake**	**6.87**	**10**	Pn	Pn	16 42 56.5	+1.6
P16K	**Nushagak River**	**6.88**	**36**	Pn	Pn	16 42 54.5	-0.6
N15K	**Kwethluk River**	**7.20**	**23**	Pn	Pn	16 43 00.5	+1.0
O16K	**Kokwok River B**	**7.27**	**33**	Pn	Pn	16 43 01.4	+0.8
M14K	**Bethel**	**7.37**	**15**	Pn	Pn	16 43 02.2	+0.3
ACHA	**Angle Creek He**	**7.41**	**48**	Pn	Pn	16 43 02.7	+0.2
P17K	**Kvichak River**	**7.56**	**39**	Pn	Pn	16 43 05.8	+1.3
L14K	**Kuka Creek**	**7.84**	**11**	Pn	Pn	16 43 08.6	+0.2
OHAK	**Old Harbor**	**7.93**	**59**	Pn	Pn	16 43 07.2	-2.3
P18K	**Big Mountain,**	**8.16**	**41**	Pn	Pn	16 43 13.5	+0.9
M16K	**Timber Creek**	**8.22**	**24**	Pn	Pn	16 43 13.7	+0.3
K13K	**Kusilvak Mount**	**8.28**	**4**	Pn	Pn	16 43 15.0	+0.7
N17K	**Nushagak Hills**	**8.29**	**31**	Pn	Pn	16 43 15.1	+0.7
O18K	**Koktuh Hills**	**8.47**	**39**	Pn	Pn	16 43 17.8	+0.9
Q19K	**Cape Douglas,**	**8.54**	**47**	Pn	Pn	16 43 17.2	-0.7
L16K	**Owhat River**	**8.71**	**20**	Pn	Pn	16 43 20.1	-0.1
K15K	**Wolf Creek Mou**	**8.91**	**13**	Pn	Pn	16 43 23.8	+0.9
SYI	**Shuyak Island**	**8.95**	**51**	Pn	Pn	16 43 22.2	-1.1
N19K	**Bonanza Creek**	**9.39**	**36**	Pn	Pn	16 43 30.6	+1.0
K17K	**Iditarod**	**9.86**	**21**	Pn	Pn	16 43 37.1	+1.3
CNPM	**China Poot**	**9.91**	**48**	Pn	Pn	16 43 34.7	-1.8
L19K	**White Mountain**	**10.29**	**30**	Pn	Pn	16 43 41.6	-0.1
J17K	**VABM Dome**	**10.33**	**17**	Pn	Pn	16 43 42.5	+0.2
SLKM	**Skilak Lake**	**10.85**	**45**	Pn	Pn	16 43 47.7	-1.8
SUA	**Susitna One**	**11.19**	**40**	Pn	Pn	16 43 51.9	-2.2
GHO	**Glory Hole Cre**	**12.08**	**41**	Pn	Pn	16 44 04.1	-2.0
SCM	**Sheep Creek Mo**	**12.75**	**43**	Pn	Pn	16 44 11.9	-3.3
KLU	**Klutina**	**13.16**	**46**	Pn	Pn	16 44 17.3	-3.6
H21K	**Melozitna Rive**	**13.63**	**23**	Pn	Pn	16 44 27.3	+0.3
N25K	**Chitina, Valde**	**13.78**	**46**	Pn	Pn	16 44 25.5	-3.6
GLB	**Gilahina Butte**	**14.06**	**48**	Pn	Pn	16 44 29.2	-3.5
H22K	**Ishtalitna Cre**	**14.16**	**25**	P	P	16 44 38.7	-0.8
MCARA	**McCarthy VSAT**	**14.38**	**49**	Pn	Pn	16 44 35.1	-1.7
CTGM	**Chitina Glacie**	**15.01**	**51**	P	P	16 44 48.9	-0.1
O28M	**Mount Upton**	**15.48**	**53**	Pn	Pn	16 44 50.3	-1.1
J26L	**Joseph Creek**	**15.63**	**37**	Pn	Pn	16 44 53.5	+0.6
H27K	**Steamboat Moun**	**17.31**	**34**		Pn	16 45 12.8	-1.0
H27K				IAmb	IAmb	16 45 20.5	
	comp=Z,4.0nm,1.1s						
I28M	**Miner Creek**	**17.44**	**37**		Pn	16 45 15.0	-0.5
P33M	**Teslin, Yukon**	**18.97**	**57**	P	P	16 45 32.9	+0.3
P33M				IAmb	IAmb	16 45 38.8	
	comp=Z,12nm,1.3s						
H31M	**Peel River**	**19.68**	**40**	P	P	16 45 37.5	-2.7
H31M				IAmb	IAmb	16 45 42.9	
	comp=Z,9.5nm,1.4s						
YKAW3	**Yellowknife Wh**	**27.72**	**51**	P	P	16 46 58.3	-0.2
YKAW3				IAmb	IAmb	16 47 05.0	
	comp=Z,4.2nm,1.4s						

*NAO **19** 16:44:37.8±0.6, 77°.54N×7°.70E, h10km, ML2.8*
*BER **19** 16:44:39.8±2.8, 77°.69N×7°.40E, h10km, Mw3.6, ML2.9(NAO), Confirmed Earthquake*
*IDC **19** 16:44:39.1±1.2, 77°.56N×7°.68E, h0km, mb3.6/5, mbtmp3.7/8, ML2.8/3, MS3.6/33, Error ellipse: s-maj=19.2km s-min=14.9km az=130.0*
*FCIAR **19** 16:44:40.0, 77°.41N×7°.51E, h10km*
*KOLA **19** 16:44:40.4, 77°.71N×8°.54E, h0km, ML2.5, Error ellipse: s-maj=18.6km s-min=12.1km az=60.0, Greenland sea, Knipovich ridge, middle*
*DNK **19** 16:44:41.4±4.1, 77°.44N×7°.93E, h36km±33km, ML2.4, Presumed earthquake*

ISC 19 16:44:37.7±2.0, 77°.55N±0°.05×7°.35E±0°.05, h4km±14km, n82, σ2°.77/70, mb3.3/4, MS3.5/31, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRBA	**Barentsburg A**	**1.55**	**67**	Pb	**Pn**	**16 45 04.3**	**-1.6**
BRBA				Sb	**Sn**	**16 45 21.0**	**-5.4**
BRBA	**Barentsburg A**	**1.55**	**67**	*eP*	**Pn**	**16 45 04.2**	**-1.7**
BRBA				*eS*	**Sn**	**16 45 21.0**	**-5.4**
BRBB	**Barentsburg B**	**1.56**	**66**	Pb	**Pn**	**16 45 04.3**	**-1.7**
BRBB	**Barentsburg B**	**1.56**	**66**	*eP*	**Pn**	**16 45 04.4**	**-1.7**
BRBB	**Barentsburg B**	**1.56**	**66**	P	**Pn**	**16 45 04.2**	**-1.8**
BRBB				S	**Sn**	**16 45 19.7**	**-6.9**
KBS	**Kingsbay**	**1.68**	**32**	Pb	**Pn**	**16 45 07.0**	**-0.7**
KBS				Sb	**Sn**	**16 45 25.1**	**-4.4**
KBS	**Kingsbay**	**1.68**	**32**	*eP*	**Pn**	**16 45 06.5**	**-1.1**
KBS				*eS*	**Sn**	**16 45 24.7**	**-4.8**
KBS				IAML		16 45 30.1	
	comp=Z,94nm,0.3s						
KBS	**Kingsbay**	**1.68**	**32**	P	**Pn**	**16 45 06.3**	**-1.3**
KBS				S	**Sn**	**16 45 25.6**	**-3.9**
KBS	**Kingsbay**	**1.68**	**32**	*i* P	**Pg**	**16 45 09.1**	**-0.6**
KBS				*i* S	**Sn**	**16 45 25.8**	**-3.7**
HSPB	**Hornsund (broa**	**1.90**	**103**	Pn	**Pn**	**16 45 08.1**	**-2.6**
HSPB	**Hornsund (broa**	**1.90**	**103**	*eP*	**Pn**	**16 45 08.1**	**-2.6**
HSPB				IAML		16 45 32.1	
	comp=Z,28nm,0.4s						
HSPB	**Hornsund (broa**	**1.90**	**103**	*eP*	**Pn**	**16 45 08.4**	**-2.2**
HSPB				*eS*	**Sn**	**16 45 32.3**	**-2.7**
SPA0	**Spitsbergen Ar**	**2.01**	**67**	Pn	**Pn**	**16 45 11.8**	**-0.5**
	baz=251,slow=16						
SPA0				Sn	**Sn**	**16 45 35.5**	**-2.3**
	baz=261,slow=28						
SPA0	**Spitsbergen Ar**	**2.01**	**67**	Pn	**Pn**	**16 45 11.8**	**-0.5**
SPA0				Sn	**Sn**	**16 45 35.5**	**-2.3**
SPA0	**Spitsbergen Ar**	**2.01**	**67**	*eP*	**Pn**	**16 45 09.8**	**-2.4**
SPA0				*eS*	**Sn**	**16 45 35.5**	**-2.3**
SPITS	**Spitsbergen Ar**	**2.01**	**67**	Pn	**Pn**	**16 45 11.8**	**-0.5**
	baz=243,slow=13						
SPITS				Sn	**Sn**	**16 45 35.3**	**-2.5**
	baz=237,slow=23						
SPITS	**Spitsbergen Ar**	**2.01**	**67**	P	**Pn**	**16 45 11.6**	**-0.7**
SPITS				S	**Sn**	**16 45 35.2**	**-2.6**
HOPEN	**Hopen**	**4.11**	**96**	Pn	**Pn**	**16 45 40.1**	**-0.9**
HOPEN				Sn	**Sn**	**16 46 22.7**	**-6.7**
HOPEN	**Hopen**	**4.11**	**96**	*eP*	**Pn**	**16 45 39.2**	**-1.8**
HOPEN				*e*		16 46 22.6	
HOPEN				*eS*	**Sn**	**16 46 24.7**	**-4.7**
HOPEN				IAML		16 46 26.2	
	comp=Z,14nm,0.2s						
DAG	**Danmarks Havn**	**5.82**	**275**	*eP*	**Pn**	**16 46 03.5**	**-1.0**
DAG				*eS*	**Sn**	**16 47 03.8**	**-7.7**
DAG	**Danmarks Havn**	**5.82**	**275**	*i* P	**Pn**	**16 46 03.6**	**-1.0**
DAG				*i* S	**Sn**	**16 47 05.1**	**-6.4**
DAG				IAML		16 47 06.2	
	comp=Z,66nm,0.8s						
NOR	**Nord**	**5.90**	**324**	Pn	**Pn**	**16 46 06.1**	**+0.5**
NOR	**Nord**	**5.90**	**324**	*eP*	**Pn**	**16 46 05.3**	**-0.3**
NOR	**Nord**	**5.90**	**324**	*i* P	**Pn**	**16 46 04.9**	**-0.7**
NOR				*i* S	**Sn**	**16 47 11.7**	**-1.8**
DBG	**Daneborg**	**7.40**	**258**	Pn	**Pn**	**16 46 25.0**	**-1.1**
DBG				Sn	**Sn**	16 47 41.7	-8.7
DBG	**Daneborg**	**7.40**	**258**	*eP*	**Pn**	**16 46 25.1**	**-1.0**
DBG				*eS*	Sn	16 47 41.5	-8.9
DBG	**Daneborg**	**7.40**	**258**	*i* P	**Pn**	**16 46 25.3**	**-0.9**
DBG				*i* S	Sn	16 47 42.4	-8.0
DBG				IAML		16 47 43.9	
	comp=Z,4.4nm,0.6s						
ZFI2	**Zemlya Franca-**	**8.08**	**48**	*eP*	**Pn**	**16 46 37.0**	**+1.5**
ZFI2				*eS*	**Sn**	**16 48 08.8**	**+1.7**
OMEGA	**Omega**	**8.09**	**48**	*eP*	**Pn**	**16 46 37.0**	**+1.4**
OMEGA				*eS*	**Sn**	**16 48 08.8**	**+1.5**
KIF	**Kilpisjarvi**	**9.38**	**149**	*eP*	Pn	16 46 51.1	-2.2
ARA0	**ARCESS Array S**	**9.49**	**138**	Pn	Pn	16 46 52.5	-2.3
	baz=324,slow=11						
ARA0				Sn	Sn	16 48 29.9	-12
	baz=336,slow=22						
ARA0	**ARCESS Array S**	**9.49**	**138**	*eP*	**Pn**	**16 46 53.6**	**-1.2**
ARA0				Sn	Sn	16 48 29.9	-12
ARCES	**ARCESS Array B**	**9.49**	**138**	Pn	**Pn**	**16 46 53.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=326,slow=12,SNR=12						
ARCES				Sn	Sn	16 48 32.2	-9.5
	comp=Z,0.2nm,0.3s,baz=342,slow=23,SNR=2.3						
ARCES				LR	LR	16 50 28.8	
	comp=Z,133nm,19.1s,baz=327,slow=37						
	comp=Z,4.0nm,0.7s						
VADS	**Vadso**	**9.56**	**129**	*eP*	**Pn**	**16 46 54.9**	**-1.0**
LOF	**Lofoten**	**9.63**	**166**	*eP*	**Pn**	**16 46 56.6**	**-0.1**
KTK1	**Kautokeino**	**9.66**	**144**	*eP*	**Pn**	**16 46 56.0**	**-1.2**
STEI	**Steigen**	**9.93**	**162**	*eP*	**Pn**	**16 47 00.4**	**-0.5**
HEF	**Hetta**	**10.29**	**144**	*eP*	**Pn**	**16 47 04.4**	**-1.4**
SCO	**Scoresbysund**	**10.58**	**244**	*i* S	Sn	16 48 60.0	-8.5
SCO	**Scoresbysund**	**10.58**	**244**	*eS*	Sn	16 48 55.0	-13
SALU	**Saltoluokta**	**10.72**	**156**	*eP*	**Pn**	**16 47 13.0**	**+1.2**
VAGH	**Vaagaholmen**	**11.02**	**168**	*eP*	**Pn**	**16 47 14.8**	**-0.9**
KONS	**Konsvik**	**11.24**	**168**	*eP*	**Pn**	**16 47 18.8**	**+0.1**
NEEM	**North Greenlan**	**12.21**	**298**	*i* P	**Pn**	**16 47 29.3**	**-2.9**
NEEM				*i* S	Sn	16 49 34.8	-14
NEEM	**North Greenlan**	**12.21**	**298**	*i* P	**Pn**	**16 47 29.3**	**-2.9**
NEEM				*i* S	Sn	16 49 34.8	-14
NEEM				IAML		16 49 43.8	
	comp=Z,7.3nm,1.0s						
SUMG	**Summit**	**12.47**	**270**	*i* P	**Pn**	**16 47 37.2**	**+1.3**
SUMG	**Summit**	**12.47**	**270**	*i* P	**Pn**	**16 47 35.5**	**-0.5**
SUMG				IAML		16 49 50.0	
	comp=Z,3.7nm,0.8s						
BORG	**Borgarnes**	**15.53**	**230**	LR	LR	16 52 29.7	
	comp=Z,129nm,21.1s,baz=347,slow=30						
FINES	**FINESS Array B**	**17.28**	**149**	Pn	**Pn**	**16 48 38.1**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=358,slow=14,SNR=4.5						
	comp=Z,3.3nm,0.9s						
HFS	**Hagfors**	**17.63**	**169**	P	**Pn**	**16 48 46.5**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=353,slow=7.8,SNR=4.8						
	comp=Z,2.1nm,0.8s						
RES	**Resolute Bay**	**21.75**	**315**	LR	LR	16 57 49.7	
	comp=Z,166nm,18.9s,baz=16,slow=36						
FRB	**Frobisher Bay**	**26.12**	**282**	LR	LR	17 01 15.9	
	comp=Z,188nm,18.1s,baz=62,slow=38						
AKASG	**Malin Array Be**	**28.18**	**150**	LR	LR	17 01 43.1	
	comp=Z,91nm,20.3s,baz=358,slow=36						
BELG	**Belogornoye**	**29.21**	**126**	LR	LR	17 02 19.6	
	comp=Z,166nm,20.1s,baz=294,slow=36						
MLR	**Muntele Rosu**	**33.02**	**156**	LR	LR	17 05 36.7	
	comp=Z,116nm,18.4s,baz=34,slow=38						
AKTO	**Aktyubinsk**	**33.03**	**115**	LR	LR	17 09 37.3	
	comp=Z,29nm,18.6s,baz=144,slow=45						
BVAR	**Borovoye Array**	**33.14**	**100**	LR	LR	17 06 36.7	
	comp=Z,106nm,20.4s,baz=341,slow=40						
ZALV	**Zalesovo Beam**	**35.39**	**85**	LR	LR	17 09 06.2	
	comp=Z,63nm,18.1s,baz=352,slow=42						
YKA	**Yellowknife Ar**	**35.78**	**318**	P	**P**	**16 51 39.0**	**+1.9**
	comp=Z,0.1nm,0.4s,baz=18,slow=9.1,SNR=5.7						
YKA				LR	LR	17 07 40.2	
	comp=Z,63nm,18.7s,baz=75,slow=39						
	comp=Z,0.1nm,0.4s						
KBZ	**Khabaz**	**36.83**	**135**	LR	LR	17 07 11.3	
	comp=Z,82nm,19.3s,baz=6.5,slow=37						
KURBB	**Kurchatov Arra**	**37.15**	**93**	P	**P**	**16 51 50.8**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=335,slow=8.2,SNR=4.2						
KURBB				LR	LR	17 09 21.7	
	comp=Z,82nm,20.8s,baz=190,slow=40						
	comp=Z,0.5nm,0.8s						
BRTR	**Keskin Array B**	**39.52**	**148**	P	**P**	**16 52 12.5**	**+3.4**
	comp=Z,0.8nm,0.9s,baz=350,slow=6.4,SNR=5.2						
BRTR				LR	LR	17 09 35.0	
	comp=Z,42nm,21.0s,baz=56,slow=38						
	comp=Z,0.8nm,0.9s						
GNI	**Garni**	**40.62**	**134**	LR	LR	17 09 42.4	
	comp=Z,62nm,18.1s,baz=338,slow=37						
TLY	**Talaya**	**41.49**	**69**	LR	LR	17 12 24.5	
	comp=Z,30nm,18.0s,baz=346,slow=40						
MKAR	**Makanchi Array**	**41.58**	**91**	P	**P**	**16 52 27.9**	**+1.9**
	comp=Z,1.6nm,1.0s,baz=344,slow=5.4,SNR=9.3						
MKAR				LR	LR	17 14 33.8	
	comp=Z,65nm,18.2s,baz=311,slow=43						
	comp=Z,1.6nm,1.0s						
DLBC	**Dease Lake**	**41.73**	**328**	LR	LR	17 10 12.5	
	comp=Z,76nm,18.2s,baz=32,slow=37						
AAK	**Ala-Archa**	**43.86**	**101**	LR	LR	17 12 29.4	
	comp=Z,66nm,21.9s,baz=356,slow=38						
ULM	**Lac du Bonnet**	**44.23**	**296**	LR	LR	17 10 07.5	
	comp=Z,115nm,18.4s,baz=22,slow=34						
KDAK	**Kodiak Island**	**44.35**	**345**	LR	LR	17 13 14.1	
	comp=Z,60nm,18.4s,baz=48,slow=39						
SONM	**Songino Array**	**45.70**	**68**	LR	LR	17 14 35.7	
	comp=Z,63nm,18.8s,baz=26,slow=39						
SADO	**Sadowa**	**46.00**	**279**	LR	LR	17 11 26.2	
	comp=Z,119nm,18.2s,baz=344,slow=35						
NEW	**Newport**	**49.89**	**314**	LR	LR	17 14 16.4	
	comp=Z,65nm,18.2s,baz=78,slow=36						
PDAR	**Pinedale Array**	**53.98**	**306**	LR	LR	17 16 31.3	
	comp=Z,54nm,20.7s,baz=50,slow=35						
TKL	**Tuckaleechee C**	**55.73**	**280**	LR	LR	17 18 27.1	
	comp=Z,88nm,18.2s,baz=86,slow=36						
ELK	**Elko**	**56.91**	**310**	LR	LR	17 20 07.5	
	comp=Z,49nm,19.2s,baz=88,slow=37						
NVAR	**Mina Array Bea**	**59.67**	**312**	LR	LR	17 23 48.8	
	comp=Z,47nm,18.2s,baz=99,slow=39						
KSRS	**Korea Array**	**59.78**	**52**	LR	LR	17 24 19.2	
	comp=Z,17nm,19.7s,baz=190,slow=40						
PFO	**Pinyon Flats O**	**64.08**	**310**	LR	LR	17 23 45.9	
	comp=Z,60nm,18.6s,baz=15,slow=37						
TORD	**Torodi Ar. Bea**	**64.47**	**186**	P	**P**	**16 55 16.4**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=329,slow=3.7,SNR=5.0						
	comp=Z,1.0nm,0.7s						
LPIG	**La Paz**	**72.28**	**302**	LR	LR	17 28 56.5	
	comp=Z,54nm,18.4s,baz=20,slow=37						
CMAR	**Chiang Mai Arr**	**72.45**	**84**	LR	LR	17 33 11.3	
	comp=Z,20nm,19.2s,baz=90,slow=40						
CMIG	**Matias Romero**	**76.04**	**286**	LR	LR	17 34 10.6	
	comp=Z,52nm,18.4s,baz=165,slow=39						

IDC 19 16:45:15.1±1.6, 3°.16N×125°.66E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=132.9km s-min=19.1km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.12**	**180**	P	P	16 50 02.0	+0.5
	1.4nm,0.5s,baz=6.3,slow=9.2,SNR=9.9						
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**24.49**	**160**	P	P	16 50 36.4	+0.2
	0.4nm,0.3s,baz=337,slow=9.4,SNR=14						

FITZ	**Fitzroy Crossi**	**12.58**	**198**	P		Pn	17 25 24.4	+0.3
	2.3nm,1.0s,baz=19,slow=11,SNR=7.3							
FITZ				S		Sn	17 27 34.6	-7.9
	1.0nm,0.7s,baz=74,slow=4.1,SNR=1.3							
WRA	**Warramunga Arr**	**14.48**	**162**	P		Pn	17 25 48.6	-0.1
	0.1nm,0.3s,baz=330,slow=13,SNR=7.5							
WRA				S		Sn	17 28 15.8	-13
	0.1nm,0.3s,baz=48,slow=14,SNR=7.6							
ASAR	**Alice Springs**	**17.93**	**167**	P		P	17 26 29.4	-1.1
	0.5nm,1.0s,baz=341,slow=9.4,SNR=7.1							
ASAR				S		S	17 29 40.0	-11
	0.4nm,1.1s,baz=332,slow=23,SNR=2.0							
MKAR	**Makanchi Array**	**67.32**	**327**	P		P	17 33 12.3	+0.2
	0.2nm,0.7s,baz=120,slow=5.2,SNR=3.6							
	0.2nm,0.7s							

*DJA **19** 17:37:10.9±0.7,4˚S±5˚×15˚0E±˚, h70km±6km, M5.2/28, mb4.8/28, mB5.3/3, MLv5.4/1, Mw(mB)4.7/3*
*NEIC **19** 17:37:35.9±2.2,5.59S±0.07˚×149.03E±0.08, h173km±7km, mb4.8/32, Error ellipse: s-maj=12.6km s-min=9.5km az=110.0*
*IDC **19** 17:37:36.5±1.3,5.65S×148.97E, h186km±11km, mb3.9/15, mbtmp4.4/18, MS2.9/2, Error ellipse: s-maj=15.8km s-min=8.3km az=107.0*

ISC 19 17:37:38.3±0.4,5.66S±0.05×148.82E±0.07, h200km, n112, σ1§59/102, mb4.6/43, 2C-2D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BULU	**Kimbe**	**1.49**	**85**	P		**Pn**	**17 38 13.8**	**+1.9**
BULU	**Kimbe**	**1.49**	**85**	S		**Sn**	**17 38 37.7**	**-0.2**
RABL	**Rabaul**	**3.64**	**66**			Pn	17 38 29.3	-6.4
MANU	**Manus Island**	**3.88**	**338**			**Pn**	**17 38 36.5**	**-2.1**
PMG	**Port Moresby**	**4.07**	**204**	P		**Pn**	**17 38 39.8**	**-1.2**
	192nm,0.5s,baz=45,slow=5.7,SNR=187							
PMG				S		**Sn**	**17 39 28.6**	**-1.7**
	649nm,1.0s,baz=65,slow=20,SNR=3.8							
PMG	**Port Moresby**	**4.07**	**204**			**Pn**	**17 38 39.6**	**-1.4**
PMG	**Port Moresby**	**4.07**	**204**	P		**Pn**	**17 38 39.4**	**-1.6**
PMG	**Port Moresby**	**4.07**	**204**	S		**Sn**	**17 39 27.7**	**-2.5**
PMG	**Port Moresby**	**4.07**	**204**	P		**Pn**	**17 38 39.8**	**-1.2**
PMG	**Port Moresby**	**4.07**	**204**	S		**Sn**	**17 39 27.8**	**-2.5**
PMG	**Port Moresby**	**4.07**	**204**	P		**Pn**	**17 38 39.7**	**-1.2**
JAY	**Jayapura**	**8.68**	**291**	P		**Pn**	**17 39 39.9**	**-0.6**
	12nm,0.8s,baz=101,slow=19,SNR=1.6							
COEN	**Coen**	**9.94**	**214**			**Pn**	**17 39 58.3**	**+1.5**
COEN	**Coen**	**9.94**	**214**	P		**Pn**	**17 39 57.7**	**+0.8**
COEN	**Coen**	**9.94**	**214**	S		**Sn**	**17 41 46.1**	**-2.0**
MTSU	**Mount Surprise**	**13.15**	**199**	P		**Pn**	**17 40 39.5**	**+1.7**
CTA	**Charters Tower**	**14.56**	**190**	P		**Pn**	**17 40 55.5**	**+0.4**
	14nm,1.0s,baz=2.9,slow=9.7,SNR=14							
CTA				LR		LR	17 46 42.0	
	comp=Z,33nm,18.6s,baz=32,slow=37							
CTA	**Charters Tower**	**14.56**	**190**	P		**P**	**17 40 57.7**	**+1.4**
CTAO	**Charters Tower**	**14.56**	**190**			**P**	**17 40 56.1**	**-0.2**
CTAO	**Charters Tower**	**14.56**	**190**	P		**P**	**17 40 56.6**	**+0.3**
KMPI	**Kaimana, Papua**	**15.20**	**277**	P		Pn	17 40 53.4	-10
MWPI	**Manokwari, Pap**	**15.48**	**287**	P		P	17 40 53.5	-13
	59nm,0.8s							
FAKI	**Fak Fak**	**16.75**	**279**	P		P	17 41 12.4	-8.2
	55nm,1.5s							
QIS	**Mount Isa**	**17.30**	**210**	P		**Pn**	**17 41 28.4**	**+0.2**
SIJI	**Sorong**	**18.16**	**285**	P		P	17 41 23.9	-12
MTN	**Manton Dam**	**18.85**	**247**			**P**	**17 41 44.3**	**+0.8**
DRS	**Darwin Rock St**	**18.93**	**248**	P		**P**	**17 41 45.5**	**+1.2**
EIDS	**Eidsvold**	**19.72**	**174**	P		**Pn**	**17 41 58.1**	**+1.4**
WB0	**Warramunga Arr**	**19.84**	**224**	P		**P**	**17 41 54.8**	**+0.7**
WR8	**Warramunga Arr**	**19.90**	**223**	P		**P**	**17 41 55.7**	**+1.0**
MSAI	**Masohi**	**19.96**	**276**	P		P	17 41 47.9	-7.6
	53nm,0.7s							
WRAB	**Tennant Creek**	**19.98**	**223**	P		**P**	**17 41 56.4**	**+0.8**
WRAB	**Tennant Creek**	**19.98**	**223**	P		**P**	**17 41 56.7**	**+1.1**
WRA	**Warramunga Arr**	**20.00**	**223**	P		**P**	**17 41 56.4**	**+0.6**
	24nm,0.6s,baz=48,slow=11,SNR=251							
WRA				S		**S**	**17 45 32.4**	**+2.7**
	4.9nm,0.8s,baz=46,slow=20,SNR=4.7							
	24nm,0.6s							
WRA	**Warramunga Arr**	**20.00**	**223**	P		**P**	**17 41 55.1**	**-0.7**
QLP	**Quilpie**	**21.26**	**191**	P		**P**	**17 42 12.5**	**+3.4**
NLAI	**Namlea**	**21.79**	**275**	P		P	17 42 05.8	-8.8
	39nm,1.2s							
KNRA	**Kununurra**	**22.06**	**242**			**P**	**17 42 17.0**	**-0.2**
KNRA				IAmb		IAmb	17 42 19.9	
	comp=Z,17nm,0.6s							
TNTI	**Ternate**	**22.36**	**286**	P		P	17 42 10.7	-9.3
	comp=Z,27nm,1.8s							
AS31	**Alice Springs**	**22.95**	**217**			**P**	**17 42 26.9**	**+1.6**
ASAR	**Alice Springs**	**22.95**	**217**	P		**P**	**17 42 26.8**	**+1.4**
	comp=Z,9.2nm,0.6s,baz=54,slow=8.2,SNR=383							
ASAR				S		**S**	**17 46 23.8**	**+3.4**
	comp=Z,2.6nm,0.8s,baz=31,slow=20,SNR=6.8							
ASAR				ScP		**ScP**	**17 49 29.7**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=28,slow=2.6,SNR=3.2							
ASAR				LR		LR	17 53 18.7	
	comp=Z,47nm,20.2s,baz=203,slow=41							
	comp=Z,9.2nm,0.6s							
ASAR	**Alice Springs**	**22.95**	**217**			**P**	**17 42 26.5**	**+1.1**
AUALC	**St Philip's Co**	**22.98**	**217**	P		**P**	**17 42 27.5**	**+1.9**
SANI	**Sanana**	**23.06**	**278**	P		P	17 42 15.5	-11
	comp=Z,9.8nm,0.7s							
INKA	**Innaminka**	**23.26**	**198**			**P**	**17 42 29.5**	**+1.4**
INKA				IAmb		IAmb	17 42 31.4	
	comp=Z,22nm,1.6s							
DZM	**Mont Dzumac**	**23.59**	**135**	P		**P**	**17 42 30.4**	**-0.8**
	comp=Z,38nm,0.6s,baz=305,slow=12,SNR=63							
	comp=Z,38nm,0.6s							
DZM	**Mont Dzumac**	**23.59**	**135**			**P**	**17 42 29.9**	**-1.3**
ONTNC	**Ouen Toro**	**23.75**	**136**	P		**P**	**17 42 30.7**	**-1.9**
ONTNC				IAmb		IAmb	17 42 32.9	
	comp=Z,25nm,0.8s							
ARMA	**Armidale**	**24.77**	**174**	P		**P**	**17 42 43.2**	**+1.3**
ARMA				IAmb		IAmb	17 42 43.4	
	comp=Z,40nm,1.6s							
MNI	**Manado**	**24.97**	**286**	P		P	17 42 33.3	-10
	comp=Z,44nm,1.0s							
GTOI	**Gorontalo**	**26.52**	**283**	P		P	17 42 48.4	-9.3
	comp=Z,40nm,1.3s							
MMRI	**Maumere**	**26.54**	**262**	P		**P**	**17 42 52.9**	**-5.0**
EDFI	**Ende, Flores**	**27.09**	**262**	P		**P**	**17 42 57.5**	**-5.4**
	comp=Z,13nm,1.1s							
MRSI	**Marisa**	**27.52**	**282**	P		P	17 42 56.3	-10
	comp=Z,12nm,1.1s							
MBWA	**Marble Bar**	**32.12**	**239**	P		**P**	**17 43 47.5**	**+0.4**
MBWA	**Marble Bar**	**32.12**	**239**	P		**P**	**17 43 47.8**	**+0.7**
PSA00	**Pilbara Seismi**	**32.20**	**238**	P		**P**	**17 43 48.1**	**+0.3**
MORW	**Morawa**	**38.76**	**229**	P		**P**	**17 44 44.2**	**+0.7**
MORW				IAmb		IAmb	17 45 13.5	
	comp=Z,71nm,1.9s							
QRZ	**Quartz Range**	**40.95**	**152**	P		**P**	**17 45 02.3**	**+0.9**
URZ	**Urewera**	**41.38**	**146**	P		**P**	**17 45 03.6**	**-1.3**
	comp=Z,1.8nm,0.4s,baz=2.6,slow=22,SNR=1.6							
	comp=Z,1.8nm,0.4s							
MRNZ	**Matariki Terra**	**41.51**	**153**	P		**P**	**17 45 06.7**	**+0.8**
THZ	**Tophouse**	**41.86**	**153**	P		**P**	**17 45 08.3**	**-0.5**
THZ				IAmb		IAmb	17 45 45.4	
	comp=Z,57nm,1.7s							
TCW	**Tory Channel**	**42.07**	**151**	P		**P**	**17 45 11.2**	**+0.7**
MJAR	**Matsushiro Arr**	**43.14**	**347**	P		**P**	**17 45 19.2**	**0.0**
	comp=Z,2.9nm,0.8s,baz=170,slow=7.1,SNR=7.3							
	comp=Z,2.9nm,0.8s							
KSRS	**Korea Array**	**47.12**	**337**	P		**P**	**17 45 51.2**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=155,slow=8.6,SNR=14							
	comp=Z,2.1nm,0.5s							
NJ2	**Nanjing**	**47.13**	**325**	*e*P		**P**	**17 45 53.3**	**+2.8**
NJ2				pmax		pmax		
	comp=Z,2.0nm,0.5s							
TIA	**Tai'an**	**51.16**	**327**	P		**P**	**17 46 21.3**	**+0.2**
TIA				pmax		pmax		
	comp=Z,6.0nm,0.8s							
USRK	**Ussuriysk Ar.**	**51.90**	**345**	P		**P**	**17 46 27.0**	**+0.6**
	comp=Z,5.0nm,0.7s,baz=173,slow=7.6,SNR=8.1							
	comp=Z,5.0nm,0.7s							
MDJ	**Mudanjiang**	**52.95**	**343**	P		**P**	**17 46 35.2**	**+1.1**
HNS	**HongShan**	**53.35**	**326**	⇑P		**P**	**17 46 37.9**	**+0.8**
HNS				pmax		pmax		
	comp=Z,7.0nm,1.2s							
BNX	**BinXian**	**54.63**	**342**	⇑P		**P**	**17 46 47.1**	**+0.9**
BNX				pmax		pmax		
	comp=Z,6.0nm,0.8s							
PZH	**PanZhiHua**	**55.68**	**307**	P		**P**	**17 46 57.1**	**+2.8**
HHC	**Hu-ho-hao-te**	**57.52**	**327**	*e*P		**P**	**17 47 09.6**	**+2.7**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,79nm,5.0s							
HEH	**HeiHe**	**58.69**	**344**	*e*P		**P**	**17 47 14.8**	**+0.1**
HEH				pmax		pmax		
	comp=Z,11nm,0.7s							
PETK	**Petropavlovsk-**	**59.03**	**6**	P		**P**	**17 47 17.0**	**0.0**
	comp=Z,8.1nm,0.7s,baz=156,slow=5.9,SNR=28							
	comp=Z,8.1nm,0.7s							
PETK	**Petropavlovsk-**	**59.03**	**6**	P		**P**	**17 47 16.9**	**-0.1**
HILR	**Hailar Array B**	**60.52**	**339**	P		**P**	**17 47 27.5**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=148,slow=10,SNR=5.8							
	comp=Z,3.1nm,0.6s							
SONM	**Songino Array**	**65.01**	**330**	P		**P**	**17 47 57.2**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=149,slow=4.6,SNR=10							
	comp=Z,1.3nm,0.5s							
SONM	**Songino Array**	**65.01**	**330**	P		**P**	**17 47 57.5**	**+0.4**
MA2	**Magadan**	**65.05**	**1**	P		**P**	**17 47 56.3**	**-0.6**
MA2				IAmb		IAmb	17 47 57.9	
	comp=Z,10.0nm,0.9s							
MA2	**Magadan**	**65.05**	**1**	P		**P**	**17 47 56.6**	**-0.3**
MA2				x		x	17 48 57.2	
WMQ	**Urumqi**	**73.73**	**319**	*e*P		**P**	**17 48 53.6**	**+3.1**
BILL	**Bilibino**	**74.56**	**7**	P		**P**	**17 48 54.9**	**+0.2**
BILL	**Bilibino**	**74.56**	**7**	⇓P		**P**	**17 48 55.4**	**+0.7**
BILL				x		x	17 49 55.2	
BILL				x		x	17 49 56.6	
M14K	**Bethel**	**76.47**	**22**	IAmb		IAmb	17 49 07.0	
	comp=Z,13nm,1.0s							
ACHA	**Angle Creek He**	**77.73**	**27**	P		**P**	**17 49 12.5**	**-0.4**
ACHA				IAmb		IAmb	17 50 43.8	
	comp=Z,44nm,1.8s							
ANM	**Nome**	**77.81**	**18**	P		**P**	**17 49 13.8**	**+0.7**
MKAR	**Makanchi Array**	**78.40**	**320**	P		**P**	**17 49 16.5**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=97,slow=7.4,SNR=7.4							
	comp=Z,0.8nm,0.8s							
MKAR	**Makanchi Array**	**78.40**	**320**	P		**P**	**17 49 16.2**	**-0.6**
MAKZ	**Makanchi**	**78.61**	**320**	P		**P**	**17 49 17.1**	**-0.8**
ZALV	**Zalesovo Beam**	**79.70**	**327**	P		**P**	**17 49 22.0**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=105,slow=6.8,SNR=4.4							
	comp=Z,1.1nm,0.6s							
ZALV	**Zalesovo Beam**	**79.70**	**327**	P		**P**	**17 49 22.0**	**-1.6**
CNPM	**China Post**	**80.23**	**27**	P		**P**	**17 49 26.3**	**-0.1**
SUA	**Susitna One**	**81.38**	**25**	P		**P**	**17 49 30.8**	**-1.8**
SUA				IAmb		IAmb	17 52 20.5	
	comp=Z,52nm,1.9s							
PPLA	**Purkeypile**	**81.50**	**23**	P		**P**	**17 49 31.7**	**-1.5**
L22K	**Petersville**	**81.89**	**24**	P		**P**	**17 49 33.7**	**-1.4**
L22K				IAmb		IAmb	17 50 59.6	
	comp=Z,57nm,2.0s							
KTH	**Kantishna Hill**	**82.33**	**23**	P		**P**	**17 49 36.0**	**-1.4**
KTH				IAmb		IAmb	17 49 54.2	
	comp=Z,66nm,1.9s							
SML	**Sawmill**	**82.56**	**25**	P		**P**	**17 49 37.8**	**-0.8**
RND	**Reindeer**	**83.08**	**24**	P		**P**	**17 49 39.7**	**-1.6**
RND				IAmb		IAmb	17 49 40.7	
	comp=Z,13nm,0.7s							
MCK	**McKinley**	**83.20**	**23**	IAmb		IAmb	17 49 41.2	
	comp=Z,14nm,0.9s							
M24K	**Tolsona, Glenn**	**83.61**	**25**	P		**P**	**17 49 44.2**	**+0.2**
CCB	**Clear Creek Bu**	**84.05**	**23**	P		**P**	**17 49 44.7**	**-1.4**
CCB				IAmb		IAmb	17 50 41.7	
	comp=Z,22nm,1.8s							
QSPA	**South Pole Qui**	**84.30**	**180**	P		**P**	**17 49 47.9**	**+0.3**
IL31		**84.46**	**23**	P		**P**	**17 49 46.2**	**-2.0**
ILAR	**Eielson Array**	**84.46**	**23**	P		**P**	**17 49 45.9**	**-2.3**
	comp=Z,4.1nm,0.7s,baz=250,slow=5.1,SNR=57							
	comp=Z,4.1nm,0.7s							
ILAR	**Eielson Array**	**84.46**	**23**	P		**P**	**17 49 46.2**	**-2.0**
BMAR	**Burnt Mountain**	**86.44**	**21**	P		**P**	**17 49 57.6**	**-0.3**
BVAR	**Borovoye Array**	**87.57**	**324**	P		**P**	**17 50 02.6**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=116,slow=6.8,SNR=3.9							
	comp=Z,0.6nm,0.7s							
ELIB	**Princess Elisa**	**94.99**	**195**	*d*P		**P**	**17 50 37.8**	**0.0**
YKA	**Yellowknife Ar**	**98.03**	**28**	P		**P**	**17 50 50.3**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=278,slow=5.8,SNR=5.3							
	comp=Z,0.3nm,0.8s							
IRM	**Iron Mountain**	**98.14**	**56**	P		**P**	**17 50 49.2**	**-3.5**
IRM				IAmb		IAmb	17 50 53.5	
	comp=Z,5.9nm,1.0s							
TORD	**Torodi Ar. Bea**	**146.76**	**285**	PKPbc		**PKPbc**	**17 56 57.3**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=72,slow=3.1,SNR=6.8							

*ISK **19** 17:39:27.5,36˚.99N×28˚.26E, h7km, ML3.3/27*
*AFAD **19** 17:39:27.8,36˚.98N×28˚.26E, h7km±2km, ML3.0*
*THE **19** 17:39:28.2,37˚N±4˚×2˚8E±˚, h8km±5km, M3.3/6, MLh3.3/6*
*GII **19** 17:39:28.0±0.0,36˚.726N±0˚.001×28˚.280E±0˚.001, h0km, Mws3.6, confirmed*
*ATH **19** 17:39:29.8,36˚.99N×28˚.26E, h17km±1km, ML3.1/6, Manual Solution by I.Dede First location: 2020/02/19 17:41:03, This location: 2020/02/19 17:51:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 19 17:39:28.0±0.8,36.99N±0.02×28.29E±0.02, h13km±5km, n87, σ1§48/131, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YER	**Yerkesik**	**0.15**	**359**	Pg		**Pg**	**17 39 31.2**	**-0.5**
YER				Sg		**Sg**	**17 39 33.7**	**-0.7**
YER	**Yerkesik**	**0.15**	**359**	P		**Pg**	**17 39 31.2**	**-0.5**
YER				S		**Sg**	**17 39 33.8**	**-0.5**
TURN	**Turunc**	**0.21**	**189**	Pg		**Pg**	**17 39 32.4**	**-0.3**
TURN				Sg		**Sg**	**17 39 35.9**	**0.0**
TURN	**Turunc**	**0.21**	**189**	P		**Pg**	**17 39 32.4**	**-0.3**
TURN				S		**Sg**	**17 39 36.2**	**+0.3**
TURN				IAML			17 39 37.0	
	comp=N,6μm,0.4s							
TURN				IAML			17 39 40.0	
	comp=E,4μm,0.4s							
MULA	**Mugla, Merkez-**	**0.27**	**6**	P		**Pg**	**17 39 33.6**	**-0.2**
MULA				S		**Sg**	**17 39 38.0**	**+0.3**
MULA				IAML			17 39 38.0	
	comp=N,2μm,0.2s							
MULA				IAML			17 39 40.0	
	comp=E,4μm,0.4s							
DALY	**Dalyan (Mula)**	**0.34**	**120**	Pg		**Pg**	**17 39 34.9**	**0.0**
DALY				Sg		**Sg**	**17 39 40.6**	**+1.0**
RDI1	**Rhodes Town Ha**	**0.54**	**185**	P		**Pb**	**17 39 40.5**	**+1.2**
RDI1				S		**Sb**	**17 39 47.7**	**+0.8**
RODB	**Rodos**	**0.54**	**186**	P		**Pb**	**17 39 40.5**	**+1.1**
RODB				S		**Sb**	**17 39 48.4**	**+1.3**
DATC	**Datca-Mugla**	**0.55**	**246**	Pg		**Pg**	**17 39 38.4**	**-0.4**
SABU	**Mula-Dalaman**	**0.57**	**106**	P		**Pg**	**17 39 39.5**	**+0.3**
SABU				S		**Sg**	**17 39 48.1**	**+1.3**
SABU				IAML			17 39 50.0	
	comp=E,632nm,0.8s							
SABU				IAML			17 39 52.0	
	comp=N,940nm,0.8s							
DAT	**Datca**	**0.62**	**246**	Pg		**Pg**	**17 39 39.8**	**-0.4**
DNZT	**Denizli-Tavas-**	**0.66**	**64**	P		**Pg**	**17 39 41.3**	**+0.4**
DNZT				S		**Sb**	**17 39 51.8**	**+1.2**
DNZT				IAML			17 39 55.0	
	comp=N,760nm,0.6s							
BDRM	**Kayabasi**	**0.68**	**277**	P		**Pg**	**17 39 40.8**	**-0.4**
BDRM				S		**Sb**	**17 39 52.1**	**+1.1**
BDRM				IAML			17 39 55.0	
	comp=E,928nm,0.3s							
TAVA	**DENIZLI_Tavas**	**0.69**	**46**	P		**Pg**	**17 39 41.2**	**-0.3**
TAVA				S		**Sg**	**17 39 51.6**	**+0.9**
TAVA				IAML			17 39 55.0	
	comp=N,732nm,0.5s							
TAVA				IAML			17 39 56.0	
	comp=E,538nm,0.6s							
FETY	**Fethiye**	**0.73**	**118**	Pg		**Pg**	**17 39 42.2**	**0.0**
FETY	**Fethiye**	**0.73**	**118**	P		**Pg**	**17 39 41.7**	**-0.6**
FETY				S		**Sg**	**17 39 52.3**	**+0.5**
FETY	**Fethiye**	**0.73**	**118**	P		**Pb**	**17 39 43.0**	**+0.4**
FETY				S		**Sn**	**17 39 55.8**	**+0.7**
YAZI	**Mula-Dat§a-**	**0.73**	**246**	P		**Pg**	**17 39 41.9**	**-0.4**
YAZI				S		**Sb**	**17 39 54.1**	**+1.5**
YAZI				IAML			17 39 56.0	
	comp=N,794nm,0.3s							
YAZI				IAML			17 39 57.0	
	comp=E,497nm,0.4s							
AYDN	**Tasoluk**	**0.75**	**334**	P		**Pg**	**17 39 42.3**	**-0.2**
AYDN				S		**Sg**	**17 39 52.4**	**0.0**
AYDN				IAML			17 39 55.0	
	comp=E,1μm,0.5s							
AYDN				IAML			17 39 57.0	
	comp=N,1μm,0.7s							
ARG	**Arkhangelos**	**0.78**	**190**	Pg		**Pg**	**17 39 42.4**	**-0.8**
ARG	**Arkhangelos**	**0.78**	**190**	P		**Pg**	**17 39 42.7**	**-0.5**
ARG				S		**Sb**	**17 39 55.4**	**+1.5**
ARG	**Arkhangelos**	**0.78**	**190**	P		**Pb**	**17 39 44.2**	**+0.7**
ARG				S		**Sb**	**17 39 55.0**	**+1.0**
BODT	**Bodrum**	**0.78**	**276**	Pg		**Pg**	**17 39 43.2**	**-0.1**
BODT	**Bodrum**	**0.78**	**276**	P		**Pn**	**17 39 44.5**	**-0.4**
BODT				S		**Sn**	**17 39 56.3**	**-0.2**
ESEN	**Aydn-Nazilli**	**0.81**	**4**	P		**Pg**	**17 39 43.2**	**-0.6**
ESEN				S		**Sg**	**17 39 54.7**	**+0.3**
ESEN				IAML			17 39 58.0	
	comp=N,657nm,0.2s							
ESEN				IAML			17 39 58.0	
	comp=E,877nm,0.3s							
CAME	**Cameli-Denizli**	**0.81**	**93**	Pg		**Pg**	**17 39 44.2**	**+0.3**
YKAV	**Yalikavak-Bodr**	**0.82**	**280**	Pg		**Pg**	**17 39 43.4**	**-0.5**
CAEL	**Denizli, Camel**	**0.84**	**80**	P		**Pb**	**17 39 45.3**	**+0.8**
CAEL				IAML			17 40 03.0	
	comp=E,953nm,0.7s							
CAEL				IAML			17 40 09.0	
	comp=N,546nm,0.4s							
DIDI	**Didim-Aydin**	**0.92**	**295**	Pg		**Pg**	**17 39 45.3**	**-0.6**
IZZE	**Mula-Seydike**	**0.93**	**126**	P		**Pg**	**17 39 45.8**	**-0.3**
IZZE				S		**Sn**	**17 40 00.9**	**+0.8**
IZZE				IAML			17 40 07.0	
	comp=N,1μm,0.4s							
IZZE				IAML			17 40 10.0	
	comp=E,526nm,0.4s							
APMY	**Acipayam-Deniz**	**0.94**	**59**	Pg		**Pg**	**17 39 46.1**	**-0.2**
DDIM	**Aydin, Didim**	**0.96**	**300**	P		**Pg**	**17 39 46.0**	**-0.6**
DDIM				S		**Sn**	**17 40 02.8**	**+2.2**
DDIM				IAML			17 40 07.0	
	comp=E,1μm,0.8s							
DDIM				IAML			17 40 12.0	
	comp=N,824nm,0.6s							
NAZL	**Nazilli-Aydin**	**0.98**	**0**	Pg		**Pg**	**17 39 46.4**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**342**	Pg		**Pg**	**17 39 46.9**	**-0.6**
KLNA	**Kalymnos**	**1.05**	**269**	P		**Pn**	**17 39 49.4**	**+1.0**
KLNA				S		**Sb**	**17 40 01.9**	**+0.1**
GCAM	**G?zelcaml?**	**1.10**	**311**	Pn		**Pg**	**17 39 48.4**	**-0.8**
KUSD	**Kusadasi-Aydin**	**1.18**	**318**	Pn		**Pg**	**17 39 50.1**	**-0.7**
ODEM	**Odemis-Izmir**	**1.30**	**353**	Pn		**Pn**	**17 39 52.3**	**+0.3**
AKAS	**Kas**	**1.30**	**125**	Pn		**Pn**	**17 39 52.8**	**+0.8**
ELL	**Elmali**	**1.32**	**100**	Pn		**Pb**	**17 39 53.5**	**+0.7**
KSL	**Kastellorizon**	**1.34**	**128**	P		**Pg**	**17 39 54.0**	**+0.3**
KSL				S		**Sg**	**17 40 12.1**	**+0.9**
SMG	**Samos**	**1.36**	**302**	P		**Pn**	**17 39 53.0**	**+0.3**
SMG	**Samos**	**1.36**	**302**	P		**Pb**	**17 39 53.4**	**0.0**
SMG				S		**Sn**	**17 40 11.7**	**+1.0**
KRL1	**Karlovasi Samo**	**1.49**	**303**	P		**Pb**	**17 39 55.7**	**+0.1**
KRL1				S		**Sn**	**17 40 13.6**	**-0.3**
DEMR	**Demre-Antalya**	**1.50**	**119**	Pn		**Pb**	**17 39 56.4**	**+0.6**
GMLD	**Gumuldur**	**1.54**	**315**	Pn		**Pn**	**17 39 55.9**	**+0.7**
KULA	**Kula-Manisa**	**1.55**	**11**	Pn		**Pn**	**17 39 56.0**	**+0.5**
KARP	**Karpathos**	**1.70**	**213**	Pn		**Pn**	**17 39 58.1**	**+0.7**
KARP	**Karpathos**	**1.70**	**213**	P		**Pn**	**17 39 57.9**	**+0.4**
KARP	**Karpathos**	**1.70**	**213**	P		**Pn**	**17 39 58.6**	**+1.2**
KARP				S		**Sn**	**17 40 20.2**	**+1.1**
BLCB	**Balcova**	**1.71**	**325**	Pn		**Pn**	**17 39 58.1**	**+0.6**
BLCB	**Balcova**	**1.71**	**325**	P		**Pn**	**17 39 57.7**	**+0.1**
GOMA	**Golmarmara-Man**	**1.74**	**350**	Pn		**Pn**	**17 39 58.8**	**+0.8**
AKS	**Akhisar**	**1.93**	**349**	Pn		**Pn**	**17 40 01.3**	**+0.8**
ISP	**Isparta**	**1.97**	**64**	P		**Pb**	**17 40 04.9**	**+1.1**
ISP				S		**Sn**	**17 40 27.3**	**+1.5**
KRBN	**Karaburun**	**2.11**	**320**	Pn		**Pn**	**17 40 03.8**	**+0.8**
FOCM	**Foa**	**2.12**	**325**	Pn		**Pn**	**17 40 04.1**	**+1.0**
SOMA	**Soma-Manisa**	**2.25**	**345**	Pn		**Pn**	**17 40 05.7**	**+0.8**
DKL	**Dikili**	**2.35**	**333**	Pn		**Pn**	**17 40 07.3**	**+1.0**
ZKR	**Zakros**	**2.51**	**223**	Pn		**Pn**	**17 40 09.9**	**+1.4**
PRK	**Paraskev

*TAP **19** 17:53:30.9,24°.15N×122°.87E,h53km,ML2.5,D*
*JMA **19** 17:53:31.2±0.1,24°.2N±2°.×122°.8E±0°.6,h57km±3km,*
MV1.3/11,NW OFF ISHIGAKIJIMA IS
ISC 19 17:53:31.7±1.3,24°.07N±0°.09×122°.84E±0°.03,h47km±17km,
n29,σ1s07/52,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
JYNG	**Yonagunijimaku**	**0.40**	**15**	P			**Pn**	**17 53 41.0**	**-0.6**
JYNG				eS			**Sn**	**17 53 48.2**	**-0.3**
YOJ	**Yonaguni jima**	**0.42**	**22**	eP			**Pn**	**17 53 41.3**	**-0.6**
YOJ				eS			**Sn**	**17 53 48.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.42**	**22**	eP			**Pn**	**17 53 40.3**	**-1.6**
YOJ				eS			**Sn**	**17 53 48.5**	**-0.6**
EOS4	**EOS4**	**0.48**	**277**	eP			**Pn**	**17 53 42.4**	**+0.3**
EOS4				eS			**Sn**	**17 53 50.7**	**+1.1**
EOS3	**EOS3**	**0.52**	**295**	P			**Pn**	**17 53 43.4**	**+0.5**
EOS3				S			**Sn**	**17 53 52.8**	**+1.8**
EOS2	**EOS2**	**0.65**	**303**	eP			**Pn**	**17 53 45.0**	**+0.4**
EOS2				eS			**Sn**	**17 53 56.4**	**+2.5**
IRIF	**Iriomote-Funau**	**0.86**	**72**	eP			**Pn**	**17 53 47.4**	**-0.1**
IRIF				eS			**Sn**	**17 53 59.0**	**+0.1**
HATJ	**Hateruma jima**	**0.89**	**90**	eP			**Pn**	**17 53 48.4**	**+0.6**
JKRS	**Kuro-shima**	**1.09**	**81**	eP			**Pn**	**17 53 51.4**	**+0.9**
JKRS				eS			**Sn**	**17 54 06.1**	**+1.7**
NACB	**Ninganchiao**	**1.14**	**276**	eP			**Pn**	**17 53 50.8**	**-0.5**
NACB				eS			**Sn**	**17 54 04.7**	**-1.0**
JIJ	**Ishigaki jima**	**1.23**	**76**	eP			**Pn**	**17 53 52.4**	**0.0**
JIJ				eS			**Sn**	**17 54 07.9**	**0.0**
ETLH	**Xiulin Townshi**	**1.24**	**277**	eP			**Pn**	**17 53 52.2**	**-0.5**
ETLH				eS			**Sn**	**17 54 07.7**	**-0.8**
LXIB	**Xiulin Townshi**	**1.30**	**268**	eP			**Pn**	**17 53 53.2**	**-0.4**
LXIB				eS			**Sn**	**17 54 08.8**	**-1.1**
WARBT	**Fenglin Townsh**	**1.37**	**256**	eP			**Pn**	**17 53 53.5**	**-0.9**
WARBT				eS			**Sn**	**17 54 10.1**	**-1.3**
HGSD	**Ruisui**	**1.41**	**246**	eP			**Pn**	**17 53 53.4**	**-1.6**
HGSD				eS			**Sn**	**17 54 10.9**	**-1.5**
JISG	**Ishigakijimahi**	**1.44**	**69**	eP			**Pn**	**17 53 55.0**	**-0.4**
JISG				eS			**Sn**	**17 54 12.5**	**-0.7**
EHYH	**Wanrong**	**1.48**	**248**	eP			**Pn**	**17 53 55.4**	**-0.5**
EHYH				eS			**Sn**	**17 54 13.4**	**-0.6**
EHY	**Hungye**	**1.49**	**248**	eP			**Pn**	**17 53 55.6**	**-0.5**
EHY				eS			**Sn**	**17 54 13.5**	**-1.0**
OWD	**Renai**	**1.52**	**266**	eP			**Pn**	**17 53 56.4**	**-0.2**
OWD				eS			**Sn**	**17 54 14.3**	**-1.0**
YULB	**Yu-li**	**1.56**	**245**	P			**Pn**	**17 53 56.8**	**-0.3**
YULB				S			**Sn**	**17 54 15.2**	**-0.9**
WUSB	**Renai**	**1.57**	**268**	eP			**Pn**	**17 53 57.5**	**+0.2**
WUSB				eS			**Sn**	**17 54 16.3**	**-0.2**
TWF1	**Yuli**	**1.58**	**244**	P			**Pn**	**17 53 57.0**	**-0.2**
TWF1				eS			**Sn**	**17 54 15.9**	**-0.7**
VWDT	**VWDT**	**1.58**	**259**	eP			**Pn**	**17 53 57.5**	**+0.3**
VWDT				eS			**Sn**	**17 54 16.4**	**-0.2**
FULB	**Fuli**	**1.66**	**239**	eS			**Sn**	**17 54 17.5**	**-1.0**
SSLB	**Suanglung**	**1.74**	**261**	eP			**Pn**	**17 53 59.5**	**-0.1**
ELDTW	**Lidau**	**1.88**	**243**	eP			**Pn**	**17 54 00.7**	**-0.9**
ALS	**Alishan**	**1.94**	**254**	eP			**Pn**	**17 54 03.5**	**+1.0**
WCKO	**Fanlu**	**2.14**	**253**	eS			**Sn**	**17 54 32.9**	**+2.6**
TPUB	**Ta-pu**	**2.16**	**250**	eP			**Pn**	**17 54 07.6**	**+2.3**
TPUB				eS			**Sn**	**17 54 32.8**	**+1.9**

IDC 19 18:23:47.5±7.0,16°.74S×172°.10W,h0km,mb3.5/2,
mbtmp3.5/2,MS2.7/1,Error ellipse: s-maj=372.8km
s-min=45.9km az=144.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
PPT	**Papeete**	**21.54**	**95**	LR			LR	18 35 10.5	
	comp=Z,22nm,19.7s,baz=240,slow=32								
WRA	**Warramunga Arr**	**50.77**	**258**	P			P	18 32 49.1	-0.7
	0.4nm,0.8s,baz=96,slow=7.2,SNR=1.9								
	0.4nm,0.8s								
ASAR	**Alice Springs**	**50.90**	**253**	P			P	18 32 51.0	+0.2
	0.7nm,0.7s,baz=87,slow=7.2,SNR=18								
	0.7nm,0.7s								
GERES	**GERESS Array B**	**147.63**	**353**	PKPbc			PKPbc	18 43 32.9	-1.1
	0.7nm,0.6s,baz=11,slow=1.0,SNR=4.6								
BRTR	**Keskin Array B**	**147.98**	**321**	PKPbc			PKPbc	18 43 35.1	-0.3
	0.8nm,0.8s,baz=67,slow=3.2,SNR=5.9								

*KOLA **19** 18:41:02.9,77°.41N×10°.46E,h0km,ML2.0,Error ellipse:*
s-maj=15.7km s-min=7.6km az=90.0,Greenland sea
BER 19 18:40:58.5±2.2,77°.53N×8°.21E,h10km,Mw3.1,
Confirmed Earthquake,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
BRBA	**Barentsburg A**	**1.38**	**64**	eP			Pn	18 41 22.0	-1.8
BRBA				eS			Sb	18 41 38.7	-3.3
BRBB	**Barentsburg B**	**1.39**	**63**	eP			Pn	18 41 22.2	-1.7
BRBB				eS			Sn	18 41 39.6	-2.7
BRBB	**Barentsburg B**	**1.39**	**63**	P			Pn	18 41 23.4	-0.5
BRBB				S			Sn	18 41 37.2	-5.1
KBS	**Kingsbay**	**1.60**	**27**	eP			Pn	18 41 25.0	-1.7
KBS				eS			Sn	18 41 42.7	-4.7
KBS				IAML				18 41 44.9	
	comp=Z,10.0nm,0.3s								
HSPB	**Hornsund (broa**	**1.71**	**104**	eP			Pn	18 41 25.9	-2.3
HSPB				IAML			S	18 41 45.7	-4.4
	comp=Z,7.1nm,0.1s								
HSPB				eS			S	18 41 45.7	-4.4
HSPB	**Hornsund (broa**	**1.71**	**104**	P			Pn	18 41 25.8	-2.4
HSPB				S			Sn	18 41 41.2	-8.9
SPA0	**Spitsbergen Ar**	**1.84**	**65**	eP			Pn	18 41 29.6	-0.6
SPA0				eS			Sn	18 41 52.6	-0.9
SPA0				IAML				18 41 55.0	
	comp=Z,40nm,0.3s								
SPITS	**Spitsbergen Ar**	**1.84**	**65**	P			Pn	18 41 29.4	-0.7
SPITS				S			Sn	18 41 51.5	-2.0
HOPEN	**Hopen**	**3.92**	**97**	eP			Pn	18 41 57.5	-1.1
HOPEN				eS			Sn	18 42 40.0	-4.5
HOPEN				IAML				18 42 43.6	
	comp=Z,7.5nm,0.2s								

IDC 19 18:45:25.9±9.2,4°.85S×153°.31E,h225km±59km,mb2.7/3,
mbtmp3.4/4,Error ellipse: s-maj=113.4km
s-min=40.7km az=103.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
PMG	**Port Moresby**	**7.59**	**233**	P			Pn	18 47 13.7	-0.3
	8.7nm,0.3s,baz=42,slow=12,SNR=16								
PMG				S			S	18 48 41.9	+1.4
	6.4nm,0.6s,baz=107,slow=15,SNR=2.1								
WRA	**Warramunga Arr**	**23.79**	**229**	P			P	18 50 18.5	+0.1
	0.3nm,0.4s,baz=54,slow=9.7,SNR=10								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**26.45**	**223**	P			P	18 50 42.2	-0.3
	0.3nm,0.8s,baz=53,slow=9.0,SNR=6.2								
	0.3nm,0.8s								
MKAR	**Makanchi Array**	**80.70**	**319**	P			P	18 57 14.3	+0.2
	0.1nm,0.5s,baz=108,slow=4.7,SNR=1.7								
	0.1nm,0.5s								

*NEIC **19** 18:48:11.0±0.8,17°.75N±0°.04×66°.84W±0°.02,h10km±2km,*
ML3.1/35,Md3.1/7(RSPR),Error ellipse: s-maj=6.8km
s-min=3.1km az=17.0
*SDD **19** 18:48:10.7±0.7,17°.68N×66°.92W,h20km±11km,MD3.3,*
ML2.9,MW3.6,Presumed earthquake
*RSPR **19** 18:48:11.9,17°.80N×66°.86W,h8km±1km,MD3.1/7*
*OSPL **19** 18:48:12.1±0.3,17°.78N×66°.86W,h10km±6km,ML2.6,*
Presumed earthquake
ISC 19 18:48:11.3±1.3,17°.80N±0°.06×66°.84W±0°.03,h18km±3km,
n38,σ0s34/63,4C-9D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
GBPR	**Guanica, Bosqu**	**0.18**	**349**				**Pg**	**18 48 16.0**	**0.0**
GBPR							**Sg**	**18 48 18.9**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.18**	**349**		↓	*iP*	**Pg**	**18 48 16.0**	**0.0**
GBPR				eS			**Sg**	**18 48 18.9**	**-0.1**
MLPR	**Magueyes Islan**	**0.26**	**312**				**Pg**	**18 48 17.1**	**0.0**
MLPR				IAML				18 48 21.0	
	2μm,0.5s								
MLPR				IAML				18 48 21.5	
	3μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.33**	**309**				**Pg**	**18 48 18.2**	**-0.1**
CRPR							**Sg**	**18 48 22.8**	**-0.3**
CRPR				IAML				18 48 23.4	
	2μm,0.4s								
CRPR				IAML				18 48 23.7	
	2μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.33**	**309**		↑	*ePg*	**Pg**	**18 48 18.2**	**-0.1**
CRPR					↑	*eSg*	**Sg**	**18 48 22.7**	**-0.3**
CRPR				IAML				18 48 23.1	
	comp=E,2μm,0.6s								
CRPR				IAML				18 48 25.2	
	comp=N,1μm,0.3s								
CRPR	**Cabo Rojo, PR**	**0.33**	**309**		↑	*iP*	**Pg**	**18 48 18.2**	**-0.1**
CRPR						*eS*	**Sg**	**18 48 22.8**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.33**	**309**			*i P*	**Pg**	**18 48 18.2**	**-0.1**
CRPR						*eS*	**Sg**	**18 48 22.8**	**-0.3**
CRPR				IAML				18 48 23.3	
	comp=Z,1μm,0.4s								
OBIP	**Obispado Ponce**	**0.33**	**43**				**Pg**	**18 48 18.6**	**+0.2**
OBIP							**Sg**	**18 48 23.4**	**+0.2**
OBIP	**Obispado Ponce**	**0.33**	**43**		↓	*iP*	**Pb**	**18 48 18.7**	**-0.1**
OBIP						*eS*	**Sb**	**18 48 23.8**	**+0.1**
OBIP	**Obispado Ponce**	**0.33**	**43**			*i P*	**Pb**	**18 48 18.7**	**0.0**
OBIP						*eS*	**Sb**	**18 48 23.5**	**-0.2**
OBIP				IAML				18 48 24.4	
	comp=Z,315nm,0.5s								
CELP	**Cerrillos**	**0.37**	**43**				**Pb**	**18 48 19.3**	**-0.1**
CELP						Sg	**Sg**	**18 48 24.5**	**+0.1**
CELP				IAML				18 48 25.7	
	comp=Z,2μm,0.4s								
CELP				IAML				18 48 25.9	
	comp=Z,2μm,0.3s								
LSP	**Las Mesas**	**0.44**	**328**				**Pg**	**18 48 20.2**	**-0.2**
LSP							**Sg**	**18 48 26.6**	**+0.2**
LSP	**Las Mesas**	**0.44**	**328**		↓	*iP*	**Pg**	**18 48 20.2**	**-0.2**
LSP						*eS*	**Sg**	**18 48 26.6**	**+0.2**
UUPR	**Utuado, UPR, P**	**0.47**	**15**	Pg			**Pg**	**18 48 20.5**	**-0.3**
PRSN	**Puerto Rico Se**	**0.51**	**325**				**Pg**	**18 48 21.1**	**-0.4**
PRSN	**Puerto Rico Se**	**0.51**	**325**				**Sb**	**18 48 29.2**	**+0.6**
PRSN	**Puerto Rico Se**	**0.51**	**325**		↓	*ePg*	**Pg**	**18 48 21.3**	**-0.2**
PRSN				IAML				18 48 30.3	
	comp=E,948nm,0.2s								
PRSN				IAML				18 48 33.8	
	comp=N,2μm,0.2s								
PRSN	**Puerto Rico Se**	**0.51**	**325**		↓	*eP*	**Pg**	**18 48 21.1**	**-0.4**
PRSN						*eS*	**Sb**	**18 48 29.2**	**+0.6**
ECPR	**Experimental S**	**0.69**	**41**				**Pb**	**18 48 24.4**	**-0.4**
ECPR						Sg	**Sb**	**18 48 33.6**	**-0.4**
ECPR				IAML				18 48 35.9	
	comp=N,880nm,0.2s								
ECPR				IAML				18 48 39.3	
	comp=N,1μm,0.2s								
ECPR	**Experimental S**	**0.69**	**41**		↓	*eP*	**Pb**	**18 48 24.5**	**-0.3**
ECPR						*eS*	**Sg**	**18 48 34.1**	**0.0**
AGPR	**Aguadilla, PR**	**0.71**	**339**				**Pb**	**18 48 24.6**	**-0.5**
AGPR				IAML				18 48 36.6	
	comp=N,557nm,0.3s								
AGPR	**Aguadilla, PR**	**0.71**	**339**		↑	*eP*	**Pb**	**18 48 24.7**	**-0.5**
AGPR						*eSg*	**Sg**	**18 48 35.6**	**+0.8**
AGPR				IAML				18 48 36.5	
	comp=N,556nm,0.2s								
AGPR				IAML				18 48 45.9	
	comp=E,388nm,0.1s								
AGPR	**Aguadilla, PR**	**0.71**	**339**		↑	*iP*	**Pb**	**18 48 24.7**	**-0.5**
AGPR						*eS*	**Sg**	**18 48 35.1**	**+0.3**
SJG	**San Juan**	**0.73**	**65**				**Pb**	**18 48 25.3**	**-0.1**
SJG				IAML				18 48 38.7	
	comp=E,610nm,0.3s								
SJG	**San Juan**	**0.73**	**65**			*ePg*	**Pb**	**18 48 25.4**	**-0.1**
SJG						*eSg*	**Sn**	**18 48 36.8**	**-0.6**
SJG	**San Juan**	**0.73**	**65**		↓	*eP*	**Pb**	**18 48 25.4**	**-0.1**
SJG						*eS*	**Sg**	**18 48 35.8**	**+0.5**
SJG	**San Juan**	**0.73**	**65**			*i P*	**Pb**	**18 48 25.5**	**+0.1**
SJG				IAML				18 48 38.2	
	comp=Z,228nm,0.7s								
EMPR	**Esperanza - Ma**	**0.74**	**24**				**Pb**	**18 48 25.7**	**+0.1**
EMPR							**Sg**	**18 48 35.8**	**+0.2**
EMPR	**Esperanza - Ma**	**0.74**	**24**		↑	*eP*	**Pb**	**18 48 25.7**	**+0.1**
EMPR						*eS*	**Sg**	**18 48 35.8**	**+0.2**
PDPR	**Patillas Dam,**	**0.81**	**74**				**Pb**	**18 48 27.0**	**+0.1**
PDPR				IAML				18 48 41.1	
	comp=Z,419nm,0.6s								
GCPR	**Guaynabo City**	**0.88**	**55**				**Pb**	**18 48 28.1**	**0.0**
GCPR						Sg	**Sb**	**18 48 39.8**	**+0.2**
GCPR	**Guaynabo City**	**0.88**	**55**		↓	*eP*	**Pb**	**18 48 27.6**	**-0.5**
GCPR						*eS*	**Sb**	**18 48 39.3**	**-0.3**
HUMP	**Col San Antoni**	**1.01**	**70**				**Pb**	**18 48 30.1**	**-0.1**
HUMP						Sg	**Sb**	**18 48 42.6**	**-0.4**
HUMP	**Col San Antoni**	**1.01**	**70**		↓	*eP*	**Pb**	**18 48 30.1**	**-0.1**
HUMP						*eS*	**Sb**	**18 48 42.8**	**-0.4**
CUPR	**Culebra, Puert**	**1.57**	**71**	Pn			**Pb**	**18 48 39.3**	**-0.4**
DR12	**Loma Pena Alta**	**2.60**	**293**	Pn			**Pn**	**18 48 52.7**	**+0.2**
HATOM	**Hato Mayor del**	**2.60**	**293**			*ePg*	**Pn**	**18 48 53.8**	**+1.3**
HATOM				IAML				18 49 36.2	
	comp=E,28nm,0.5s								
HATOM				IAML				18 49 36.7	
	comp=N,33nm,1.8s								
SDDR	**Presa de Saban**	**4.38**	**286**	Pn			**Pn**	**18 49 17.3**	**+0.3**

*IDC **19** 19:26:20.5±1.7,2°.58N×128°.16E,h0km,mb3.4/5,*
mbtmp3.4/5,Error ellipse: s-maj=157.6km s-min=19.0km
az=70.0
*DJA **19** 19:26:27.8±1.3,2°.N±3°.×12°.6E±°.,h27km±12km,M3.3/8,*
MLv3.3/8
ISC 19 19:26:27.9±1.0,1°.8N±0°.1×126°.5E±0°.1,h47km,n8,σ1s33/9,
mb3.4/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
TNTI	**Ternate**	**1.36**	**139**	P			**Pn**	**19 26 50.2**	**-0.2**
TNTI				S			**Sn**	**19 27 06.9**	**-0.4**
MNI	**Manado**	**1.68**	**258**	P			**Pn**	**19 26 54.3**	**-0.5**
LBMI	**Labuha**	**2.64**	**157**	P			**Pn**	**19 27 07.6**	**-0.4**
WRA	**Warramunga Arr**	**22.95**	**161**	P			**P**	**19 31 28.2**	**-0.2**
	0.7nm,0.6s,baz=344,slow=9.9,SNR=22								
	0.7nm,0.6s								
ASAR	**Alice Springs**	**26.33**	**165**	P			**P**	**19 32 01.0**	**+1.4**
	0.4nm,0.7s,baz=342,slow=11,SNR=9.5								
	0.4nm,0.7s								
SONM	**Songino Array**	**49.03**	**342**	P			**P**	**19 35 08.4**	**-1.9**
	0.2nm,0.5s,baz=164,slow=7.5,SNR=2.1								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**58.99**	**326**	P			**P**	**19 36 24.2**	**+1.4**
	0.2nm,0.3s,baz=123,slow=7.8,SNR=14								
	0.2nm,0.3s								
KURBB	**Kurchatov Arra**	**63.22**	**328**	P			**P**	**19 36 52.8**	**+1.5**
	0.2nm,0.4s,baz=130,slow=6.1,SNR=8.4								
	0.2nm,0.4s								

*NEIC **19** 19:49:00.5±2.5,43°.66N±0°.06×105°.20W±0°.06,h0km±1km,*
ML3.0/50,Error ellipse: s-maj=10.5km s-min=6.3km
az=332.0
*IDC **19** 19:49:00.0±2.5,43°.33N×105°.24W,h0km,mbtmp3.5/2,*
ML3.5/2,Error ellipse: s-maj=56.9km s-min=8.8km
az=154.0
ISC 19 19:48:59.7±1.0,43°.59N±0°.05×105°.41W±0°.04,h0km,n30,
σ2s16/28,Wyoming

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
RSSD	**Black Hills**	**1.13**	**61**				**Pg**	**19 49 22.6**	**+1.3**
K22A	**Casper**	**1.24**	**221**				**Pn**	**19 49 26.6**	**+2.1**
PD31	**Pinedale Array**	**3.14**	**256**	Pn			**Pb**	**19 49 56.5**	**-0.1**
PDAR	**Pinedale Array**	**3.14**	**256**	Pn			**Pb**	**19 49 55.6**	**-0.9**
	4.4nm,0.3s,baz=66,slow=15,SNR=48								
PDAR							Pg	**19 50 00.3**	**+0.4**
	4.7nm,0.3s,baz=72,slow=17,SNR=29								
PDAR							Lg	19 50 41.3	
	6.2nm,0.3s,baz=79,slow=29,SNR=19								
	2.2nm,0.3s								
PDAR	**Pinedale Array**	**3.14**	**256**				**Pb**	**19 49 56.3**	**-0.3**
PDAR							**Sg**	**19 50 40.2**	**-0.4**
BW06	**Boulder Array**	**3.14**	**256**				**Pb**	**19 49 55.8**	**-0.8**
LAO	**LASA Array**	**3.15**	**350**				**Pn**	**19 49 52.2**	**+1.6**
LAO				IAML				19 50 56.2	
	64nm,1.1s								
RLMT	**Red Lodge**	**3.16**	**300**				**Pb**	**19 49 55.2**	**-1.6**
RLMT				IAML				19 50 52.9	
	30nm,0.4s								
HAYD	**Hayden**	**3.36**	**205**	Pn			**Pb**	**19 49 57.2**	**-3.2**
HAYD				IAML				19 51 04.3	
	comp=N,30nm,1.0s								
HAYD				IAML				19 51 04.7	
	comp=E,32nm,0.9s								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
YNE	**Yellowstone No**	**3.59**	**295**				**Pb**	**19 50 01.2**	**-3.0**
YNE				IAML				19 51 03.3	
	comp=N,30nm,0.8s								
YNE				IAML				19 51 05.8	
	comp=E,23nm,0.8s								
YMP	**Mirror Lake Pl**	**3.60**	**290**				**Pb**	**19 50 02.1**	**-2.3**
OGNE	**Ogallala**	**3.64**	**135**				**Pn**	**19 49 59.0**	**+1.5**
LOHW	**Long Hollow**	**3.77**	**272**				**Pn**	**19 50 02.9**	**+3.5**
LOHW				IAML				19 51 08.8	
	comp=E,17nm,1.1s								
ISCO	**Idaho Springs**	**3.79**	**182**	Pn			**Pn**	**19 50 02.0**	**+2.3**
ISCO				IAML				19 51 11.7	
	comp=E,18nm,0.9s								
H17A	**Grant Village**	**3.81**	**284**				**Pn**	**19 50 02.4**	**+2.4**
H17A				IAML				19 51 08.2	
	comp=N,19nm,1.1s								
H17A				IAML				19 51 09.1	
	comp=E,20nm,1.2s								
FLWY	**Flagg Ranch**	**3.85**	**279**				**Pg**	**19 50 15.2**	**+1.6**
MOOW	**Moose Ponds**	**3.87**	**274**				**Pb**	**19 50 06.3**	**-2.7**
YNR	**Norris Junctio**	**3.95**	**288**	Pn			**Pn**	**19 50 01.9**	**0.0**
YNR				IAML				19 51 21.7	
	comp=E,16nm,1.0s								
YNR				IAML				19 52 19.4	
	comp=N,16nm,4.7s								
YPP	**Pitchstone Pla**	**3.95**	**282**				**Pb**	**19 50 07.4**	**-3.0**
YPP				IAML				19 51 17.9	
	comp=E,17nm,3.9s								
YPP				IAML				19 51 40.5	
	comp=N,16nm,4.2s								
O20A	**White River Ci**	**4.05**	**212**	Pn			**Pn**	**19 50 04.0**	**+0.9**
O20A				IAML				19 51 34.1	
	comp=N,24nm,2.2s								
YHH	**Holmes Hill**	**4.09**	**289**				**Pb**	**19 50 09.4**	**-3.3**
AHID	**Auburn Hatcher**	**4.24**	**261**				Pg	19 50 27.2	+6.2
AHID				IAML				19 51 23.9	
	comp=N,22nm,1.1s								
RDMU	**Red Mountain**	**4.32**	**227**				**Pn**	**19 50 07.9**	**+1.0**
RDMU				IAML				19 51 29.9	
	comp=E,20nm,1.3s								
RDMU				IAML				19 51 45.5	
	comp=N,15nm,1.2s								
YHL	**Hebgen Lake**	**4.33**	**289**				**Pb**	**19 50 13.0**	**-3.9**
YHL				IAML				19 51 26.1	
	comp=N,19nm,1.0s								
YHL				IAML				19 51 37.6	
	comp=E,16nm,1.3s								
E28A	**Huff**	**4.48**	**47**				**Pn**	**19 50 08.8**	**-0.1**
BOZ	**Bozeman (W)**	**4.87**	**296**	IAML				19 51 41.0	
	comp=E,9.7nm,3.5s								
BOZ				IAML				19 51 55.0	
	comp=E,10nm,4.8s								
BSUT	**Blindstream Ca**	**5.01**	**234**	IAML				19 51 44.2	
	comp=E,9.9nm,3.9s								
BSUT				IAML				19 53 07.6	
	comp=N,9.5nm,4.0s								
EGMT	**Eagleton**	**5.37**	**327**				**Pn**	**19 50 23.5**	**+2.3**
I10CA	**LAC DU BONNET**	**9.22**	**41**	I			I	20 45 10.0	
	baz=222,slow=333,SNR=0.3								
ULM	**Lac du Bonnet**	**9.32**	**41**	Pn			**Pn**	**19 51 15.5**	**+0.2**
	comp=N,1.0nm,0.3s,baz=231,slow=13,SNR=7.6								
ULM				Lg			Lg	19 53 47.2	
	comp=N,0.2nm,0.3s,baz=330,slow=5.3,SNR=4.1								
	comp=N,1.8nm,0.3s								

IDC 19 19:50:45.5±3.0,7°.25S×128°.67E,h175km±41km,mb2.8/1,
mbtmp3.4/5,Error ellipse: s-maj=61.1km s-min=21.1km
az=91.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
SIJI	**Sorong**	**6.85**	**22**	P			Pn	19 52 24.4	+0.6
	7.5nm,0.7s,baz=305,slow=16,SNR=1.7								
SIJI				S			Sn	19 53 30.1	-11
	7.2nm,0.8s,baz=181,slow=24,SNR=1.3								
FITZ	**Fitzroy Crossi**	**11.18**	**195**	P			Pn	19 53 19.5	-1.1
	2.5nm,0.9s,baz=9.5,slow=12,SNR=8.1								
FITZ				S			Sn	19 55 15.3	-9.4
	1.0nm,0.7s,baz=64,slow=22,SNR=1.2								
WRA	**Warramunga Arr**	**13.77**	**157**	P			Pn	19 53 53.4	-0.2
	0.5nm,1.0s,baz=340,slow=12,SNR=9.6								
WRA				S			Sn	19 56 18.4	-8.4
	0.3nm,0.4s,baz=332,slow=22,SNR=7.6								
ASAR	**Alice Springs**	**17.08**	**163**	P			Pn	19 54 34.6	+0.4
	0.3nm,0.5s,baz=335,slow=9.2,SNR=8.9								
ASAR				S			S	19 57 42.7	+0.4
	0.2nm,0.8s,baz=2.0,slow=29,SNR=1.6								
MKAR	**Makanchi Array**	**67.72**	**327**	P			P	20 01 24.0	-0.1
	0.1nm,0.3s,baz=128,slow=7.2,SNR=5.9								
	0.1nm,0.3s								

*NEIC **19** 20:31:07.2±1.4,18°.6S±0°.1×175°.77W±0°.09,h201km±7km,*
mb4.4/18,Error ellipse: s-maj=19.2km s-min=12.7km
az=168.0
*IDC **19** 20:31:12.3±3.

KSRS Korea Array 77.03 317 P P 20 42 39.0 +1.9
comp=Z,1.1nm,0.7s,baz=129,slow=5.3,SNR=5.8
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 78.30 43 P P 20 42 45.4 +0.9
comp=Z,1.8nm,0.8s,baz=222,slow=9.7,SNR=8.0
comp=Z,1.8nm,0.8s
F10A Beach Ranch, E 83.33 37 P P 20 43 11.0 +0.3
F10A IAmb IAmb 20 43 12.4
comp=Z,3.8nm,0.8s
TXAR Lajitas Array 84.32 57 P P 20 43 17.3 +1.1
comp=Z,0.7nm,0.8s,baz=217,slow=6.1,SNR=6.0
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 84.32 57 P P 20 43 14.7 -1.4
ILAR Eielson Array 86.16 12 P P 20 43 23.9 -0.4
comp=Z,0.7nm,0.6s,baz=228,slow=5.6,SNR=8.4
comp=Z,0.7nm,0.6s
ILAR Eielson Array 86.16 12 P P 20 43 23.7 -0.6
PDAR Pinedale Array 86.24 42 P P 20 43 25.3 -0.3
comp=Z,0.2nm,0.5s,baz=180,slow=1.5,SNR=4.6
comp=Z,0.2nm,0.5s
PDAR Pinedale Array 86.24 42 P P 20 43 24.8 -0.7
YKA Yellowknife Ar 94.05 24 P P 20 44 01.4 +0.2
comp=Z,0.1nm,0.3s,baz=244,slow=5.4,SNR=4.3
comp=Z,0.1nm,0.3s
BVAR Borovoye Array 119.10 321 PKP PKPdf 20 49 30.0 -1.0
comp=Z,0.7nm,0.5s,baz=117,slow=2.1,SNR=5.5
ARCES ARCESS Array B 127.57 351 PKP PKPdf 20 49 45.9 -0.9
comp=Z,3.5nm,1.0s,baz=0.0,slow=2.9,SNR=6.0
FINES FINESS Array B 134.67 345 PKP PKPdf 20 50 00.2 -0.2
comp=Z,1.9nm,0.8s,baz=38,slow=3.4,SNR=5.3
SORM Soroca 144.76 332 ⇓P PKPab 20 50 15.8 -2.7
PURM Purcari 145.20 328 ⇑P PKPbc 20 50 20.3 +0.4
LODK Lodwar 145.99 247 PKPdf PKPdf 20 50 23.3 +1.0
BNN Bunyan 146.09 313 PKPdf PKPdf 20 50 21.5 -0.4
BURAR Bucovina Array 146.51 334 ⇑P PKPbc 20 50 24.6 +0.5
TPGR Topolog 147.09 328 ⇑P PKPdf 20 50 22.6 -0.6
BRTR Keskin Array B 147.17 316 PKPbc PKPbc 20 50 26.1 -0.1
comp=Z,0.0nm,0.7s,baz=134,slow=4.3,SNR=14
BRTR Keskin Array B 147.17 316 PKPbc 20 50 25.7 -0.5
MORC Moravsky Berou 147.27 344 ⇓P PKPbc 20 50 26.6 +0.6
KIRS Kirsehir-Merke 147.28 315 ⇓P PKPbc 20 50 26.7 +0.3
MARR Marisel-Cluj 148.12 335 ⇓P PKPbc 20 50 28.8 +0.4
DRGR 148.19 336 ⇓P PKPbc 20 50 28.6 +0.1
VOIR 148.28 332 ⇑P PKPbc 20 50 29.2 +0.3
SAHE Sakarya_HENDEK 148.32 320 ⇑P PKPab 20 50 42.0 +9.3
ARR Arges 148.53 332 ⇑P PKPbc 20 50 30.7 +1.2
MMAI Mount Meron Ar 148.73 303 PKPbc PKPbc 20 50 31.1 +0.7
comp=Z,1.7nm,0.5s,baz=46,slow=7.2,SNR=10
GERES GERESS Array B 149.03 348 PKPbc PKPbc 20 50 30.5 -0.1
comp=Z,1.0nm,0.6s,baz=351,slow=1.8,SNR=6.5
WLF Walferdange 149.12 358 PKPbc PKPbc 20 50 31.2 +0.5
BORA Eskisehir 149.14 319 PKPbc PKPbc 20 50 30.8 -0.4
GZR Gura Zlata 149.30 334 ⇓P PKPbc 20 50 32.4 +0.9
BZS Buzias 149.59 336 ⇓P PKPbc 20 50 32.0 0.0
MOA Molln 149.85 347 *i* PKP **PKPbc 20 50 32.9 +0.3**
comp=Z,1.0nm,0.5s
HERR Herculane 149.87 334 ⇓P PKPbc 20 50 33.4 +0.7
PLVB Pleven 150.04 329 ⇑P PKPbc 20 50 33.7 +0.5
ARSA Arzberg 150.12 345 *i* PKP **PKPdf 20 50 29.6 +1.6**
comp=Z,0.3nm,0.2s
BIOA Bad Ischl, Aus 150.14 347 *i* PKP **PKPbc 20 50 34.0 +0.7**
comp=Z,0.9nm,0.4s
LESA Schwarzkopfal 150.59 348 *i* PKP **PKPbc 20 50 35.1 +0.6**
comp=Z,0.5nm,0.2s
KBA Koelnbreinsper 150.78 347 *i* PKP **PKPbc 20 50 34.5 -0.6**
comp=Z,1.8nm,0.4s
WATA Walderalm 150.87 350 *i* PKP **PKPbc 20 50 35.1 -0.1**
comp=Z,1.8nm,0.4s
WTTA Wattenberg 150.93 350 *i* PKP **PKPbc 20 50 35.3 -0.1**
comp=Z,4.1nm,0.3s
MOTA Moosalm 150.94 350 *e*PKP **PKPbc 20 50 35.2 -0.2**
comp=Z,0.6nm,0.3s
SQTA Sankt Quirin 151.04 350 *e*PKP **PKPbc 20 50 35.8 +0.2**
comp=Z,2.5nm,0.6s
ABTA Abfaltersbach 151.27 348 *i* PKP **PKPbc 20 50 35.6 -0.5**
comp=Z,5.1nm,0.5s
FETA Feichten 151.31 351 *e*PKP **PKPbc 20 50 36.3 0.0**
comp=Z,0.8nm,0.4s
ESDC Sonseca Array 157.97 17 PKPab PKPab 20 51 13.9 +0.4
comp=Z,1.3nm,1.1s,baz=330,slow=4.5,SNR=4.7
ESDC Sonseca Array 157.97 17 PKPab 20 51 13.3 -0.1

*IDC **19** 20:52:50.0±9.3,24°.86S×179°.55E,h371km±92km,mb3.4/5, mbtmp4.2/6, Error ellipse: s-maj=49.4km s-min=44.9km az=36.0*
*NEIC **19** 20:52:58.4±1.7,25°.5S±0°.1×179°.9E±0°.1,h500km±10km, mb4.5/20, Error ellipse: s-maj=20.2km s-min=18.8km az=156.0*
ISC 19 20:52:58.2±0.8,25°.46S±0°.09×179°.8E±0°.1,h500km,n36, σ0s81/36,mb4.2/10,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.27**	**153**	P	**P**	**P**	**20 54 18.5**	**-0.2**
URZ	**Urewera**	**12.97**	**190**	P	**P**	**P**	**20 55 47.1**	**+0.2**
	4.3nm,0.6s,baz=253,slow=3.1,SNR=9.9							
URZ				S		**S**	**20 58 07.0**	**+1.1**
	7.2nm,0.6s,baz=358,slow=22,SNR=5.8							
RTZ	**Ruatahuna**	**13.34**	**190**	P	**P**	**P**	**20 55 52.0**	**+1.2**
RTZ				S		**S**	**20 58 11.4**	**-1.8**
MRZ	**Mangatainoka R**	**15.57**	**192**	P	**P**	**P**	**20 56 13.7**	**-0.5**
MRZ				IAmb	IAmb	IAmb	20 56 49.6	
	comp=Z,26nm,1.5s							
MSWZ	**Moikau Station**	**16.37**	**192**	P	**P**	**P**	**20 56 22.8**	**+0.3**
TCW	**Tory Channel**	**16.38**	**195**	P	**P**	**P**	**20 56 22.4**	**-0.2**
QRZ	**Quartz Range**	**16.49**	**200**	P	**P**	**P**	**20 56 23.7**	**-0.1**
THZ	**Tophouse**	**17.25**	**198**	P	**P**	**P**	**20 56 32.0**	**+0.6**
THZ				IAmb	IAmb	IAmb	20 56 49.0	
	comp=Z,35nm,1.5s							
DSZ	**Denniston Nort**	**17.55**	**200**	P	**P**	**P**	**20 56 36.4**	**+2.1**
DSZ				IAmb	IAmb	IAmb	20 56 57.2	
	comp=Z,27nm,1.1s							
KHZ	**Kahutara**	**17.70**	**196**	P	**P**	**P**	**20 56 36.6**	**+1.1**
LTZ	**Lake Taylor**	**18.37**	**198**	P	**P**	**P**	**20 56 42.4**	**+0.6**
LTZ				IAmb	IAmb	IAmb	20 56 56.8	
	comp=Z,12nm,1.2s							
EIDS	**Eidsvold**	**25.96**	**264**	P	**P**	**P**	**20 57 50.8**	**+0.5**
EIDS				IAmb	IAmb	IAmb	20 57 56.6	
	comp=Z,13nm,1.4s							
CTAO	**Charters Tower**	**31.37**	**273**			**P**	**20 58 37.6**	**+0.1**
CTAO				IAmb	IAmb	IAmb	20 58 38.7	
	comp=Z,8.6nm,0.6s							
STKA	**Stephens Creek**	**34.03**	**250**	P	**P**	**P**	**20 59 01.1**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=95,slow=13,SNR=3.0							
	comp=Z,1.2nm,0.5s							
STKA	**Stephens Creek**	**34.03**	**250**	P	**P**	**P**	**20 58 59.9**	**-0.2**
STKA				IAmb	IAmb	IAmb	20 59 05.1	
	comp=Z,40nm,1.4s							
INKA	**Innaminka**	**34.94**	**257**	P	**P**	**P**	**20 59 07.8**	**+0.1**
COEN	**Coen**	**36.25**	**281**	P	**P**	**P**	**20 59 18.7**	**-0.1**
COEN				IAmb	IAmb	IAmb	20 59 41.0	
	comp=Z,13nm,1.4s							
BBOO	**Buckleboo**	**38.72**	**249**	P	**P**	**P**	**20 59 38.8**	**-0.1**
BBOO				IAmb	IAmb	IAmb	20 59 40.9	
	comp=Z,22nm,1.4s							
AS31	**Alice Springs**	**41.66**	**262**	P	**P**	**P**	**21 00 02.0**	**-0.6**
ASAR	**Alice Springs**	**41.66**	**262**	P	**P**	**P**	**21 00 02.5**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=93,slow=7.5,SNR=34							
	comp=Z,1.3nm,0.4s							
ASAR	**Alice Springs**	**41.66**	**262**	P	**P**	**P**	**21 00 01.6**	**-0.9**
WR8	**Warramunga Arr**	**42.03**	**268**	P	**P**	**P**	**21 00 04.5**	**-1.0**
WB0	**Warramunga Arr**	**42.18**	**268**	P	**P**	**P**	**21 00 05.8**	**-0.9**
WRA	**Warramunga Arr**	**42.18**	**268**	P	**P**	**P**	**21 00 05.8**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=100,slow=6.2,SNR=34							
	comp=Z,1.0nm,0.3s							
WRA	**Warramunga Arr**	**42.18**	**268**	P	**P**	**P**	**21 00 05.7**	**-1.0**
KNRA	**Kununurra**	**48.55**	**271**	P	**P**	**P**	**21 00 55.4**	**-0.2**
KNRA				IAmb	IAmb	IAmb	21 01 23.6	
	comp=Z,32nm,1.5s							
MJAR	**Matsushiro Arr**	**73.10**	**326**	P	**P**	**P**	**21 03 36.8**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=146,slow=6.3,SNR=6.0							
	comp=Z,2.5nm,0.9s							
PMSA	**Palmer Station**	**77.54**	**157**	P	**P**	**P**	**21 04 01.5**	**0.0**
SHEM	**Shemya Is, Ala**	**78.01**	**356**	P	**P**	**P**	**21 04 03.5**	**-0.6**
SMY	**Shemya**	**78.01**	**356**	P	**P**	**P**	**21 04 03.5**	**-0.6**
KSRS	**Korea Array**	**79.35**	**320**	P	**P**	**P**	**21 04 12.4**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=134,slow=6.0,SNR=5.7							
	comp=Z,1.2nm,0.7s							
PETK	**Petropavlovsk-**	**80.57**	**347**	P	**P**	**P**	**21 04 18.5**	**+0.8**
NOA	**NORSAR Array B**	**143.59**	**351**	PKhKP	PKPpre	PKPpre	21 11 32.9	
	comp=Z,0.8nm,0.7s,baz=21,slow=3.9,SNR=4.1							
HFS	**Hagfors**	**144.04**	**348**	PKhKP	PKPpre	PKPpre	21 11 34.9	
	comp=Z,12nm,1.1s,baz=48,slow=4.9,SNR=12							
MMAI	**Mount Meron Ar**	**148.18**	**292**	PKPbc	**PKiKP**	**PKiKP**	**21 11 49.1**	**0.0**
	comp=Z,0.4nm,0.3s,baz=116,slow=3.4,SNR=1.8							
BRTR	**Keskin Array B**	**148.38**	**305**	PKPbc	**PKPab**	**PKPab**	**21 11 52.8**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=81,slow=3.1,SNR=5.9							

*JMA **19** 20:54:39.7±0.2,24°.N±2°.×122°.6E±0°.6,h85km±1km, MV2.7/15,NW OFF ISHIGAKIJIMA IS*
*TAP **19** 20:54:39.4,24°.49N×122°.55E,h88km,ML3.5,B*
ISC 19 20:54:39.0±1.3,24°.50N±0°.03×122°.59E±0°.03,h92km±7km, n98,σ0s87/179,3C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.33**	**98**	*i* P		**Pn**	**20 54 52.9**	**+0.1**
JYNG					S	**Sn**	**20 55 02.2**	**-0.9**
EOS3	**EOS3**	**0.33**	**230**	*i* P		**Pn**	**20 54 53.4**	**+0.8**
EOS3					S	**Sn**	**20 55 04.1**	**+1.3**
EOS2	**EOS2**	**0.34**	**257**	*i* P		**Pn**	**20 54 53.3**	**+0.5**
EOS2					*i* S	**Sn**	**20 55 03.8**	**+0.9**
YOJ	**Yonaguni jima**	**0.38**	**95**	*e*P		**Pn**	**20 54 53.2**	**0.0**
YOJ					*e*S	**Sn**	**20 55 02.8**	**-0.9**
YOJ	**Yonaguni jima**	**0.38**	**95**	⇑*i*P		**Pn**	**20 54 53.2**	**0.0**
YOJ					S	**Sn**	**20 55 03.0**	**-0.7**
EOS4	**EOS4**	**0.45**	**214**	*e*P		**Pn**	**20 54 53.4**	**+0.2**
EOS4					*i* S	**Sn**	**20 55 04.3**	**+0.5**
TWC	**Suao**	**0.69**	**280**	⇑*i*P		**Pn**	**20 54 55.4**	**-0.2**
TWC					S	**Sn**	**20 55 06.7**	**-1.3**
EGS		**0.69**	**300**	*i* P		**Pn**	**20 54 56.1**	**+0.5**
EGS					S	**Sn**	**20 55 07.2**	**-0.8**
EWUT	**Wuta**	**0.74**	**266**	*e*P		**Pn**	**20 54 57.1**	**+1.0**
EWUT					*e*S	**Sn**	**20 55 08.6**	**-0.4**
TWB1	**Santiao Chiao**	**0.75**	**313**	*i* P		**Pn**	**20 54 56.2**	**+0.1**
TWB1					*e*S	**Sn**	**20 55 07.8**	**-1.2**
NTC	**Toucheng**	**0.78**	**297**	*e*P		**Pn**	**20 54 56.5**	**0.0**
NTC					S	**Sn**	**20 55 09.7**	**+0.1**
EAHA	**Aohua**	**0.80**	**258**	*e*S		**Sn**	**20 55 10.0**	**+0.2**
NDS	**Dongshan**	**0.81**	**280**	*e*P		**Pn**	**20 54 57.0**	**+0.2**
NDS					*e*S	**Sn**	**20 55 09.2**	**-0.9**
ILA	**Ilan**	**0.81**	**289**	*e*P		**Pn**	**20 54 57.2**	**+0.4**
ILA					*i* S	**Sn**	**20 55 09.5**	**-0.7**
TIPB	**Shuangxi**	**0.84**	**304**	P		**Pn**	**20 54 57.3**	**+0.1**
TIPB					*i* S	**Sn**	**20 55 09.6**	**-1.2**
TWE	**Neicheng**	**0.87**	**285**	P		**Pn**	**20 54 57.8**	**+0.4**
TWE					S	**Sn**	**20 55 10.6**	**-0.6**
SXI1	**Grass Mountain**	**0.88**	**313**	⇓*i*P		**Pn**	**20 54 58.0**	**+0.3**
SXI1					*e*S	**Sn**	**20 55 11.2**	**-0.4**
NWF	**Wu-fen Shan**	**0.93**	**308**	P		**Pn**	**20 54 58.8**	**+0.6**
NWF					*i* S	**Sn**	**20 55 11.7**	**-1.0**
WFSB	**Wu-fen Shan**	**0.93**	**308**	⇓P		**Pn**	**20 54 58.7**	**+0.6**
WFSB					*i* S	**Sn**	**20 55 12.0**	**-0.5**
ENTT	**Nioudou**	**0.94**	**279**	*i* P		**Pn**	**20 54 59.1**	**+0.8**
ENTT					S	**Sn**	**20 55 13.0**	**+0.3**
ETL	**Fush Village**	**0.94**	**249**	*e*P		**Pn**	**20 54 58.4**	**+0.1**
ETL					S	**Sn**	**20 55 12.0**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.95**	**286**	P		**Pn**	**20 54 58.8**	**+0.4**
FUSB					*e*S	**Sn**	**20 55 13.4**	**+0.5**
NACB	**Ninganchiao**	**0.96**	**251**	P		**Pn**	**20 54 58.4**	**-0.1**
NACB					S	**Sn**	**20 55 12.3**	**-0.8**
LATG	**Datong**	**0.97**	**272**	P		**Pn**	**20 54 59.1**	**+0.5**
LATG					*e*S	**Sn**	**20 55 13.2**	**-0.1**
NDT	**Datong Townshi**	**0.99**	**276**	P		**Pn**	**20 54 59.6**	**+0.9**
NDT					*e*S	**Sn**	**20 55 12.8**	**-0.7**
TNOU	**National Taiwa**	**0.99**	**311**	*e*P		**Pn**	**20 54 59.3**	**+0.5**
TNOU					*e*S	**Sn**	**20 55 14.0**	**+0.5**
TWD	**Chiawan**	**1.00**	**246**	*e*P		**Pn**	**20 54 58.8**	**0.0**
TWD					S	**Sn**	**20 55 12.9**	**-0.8**
NWLT	**Wulai**	**1.03**	**286**	*i* P		**Pn**	**20 54 59.5**	**+0.3**
NWLT					*i* S	**Sn**	**20 55 13.5**	**-0.9**
TWA	**Mucha**	**1.03**	**298**	*i* P		**Pn**	**20 54 59.8**	**+0.5**
TWA					*e*S	**Sn**	**20 55 13.7**	**-0.8**
HWA	**Hwalien**	**1.04**	**240**	*e*P		**Pn**	**20 54 59.3**	**0.0**
HWA					S	**Sn**	**20 55 14.8**	**+0.2**
IRIF	**Iriomote-Funau**	**1.05**	**99**	*i* P		**Pn**	**20 54 59.8**	**+0.3**
IRIF					S	**Sn**	**20 55 14.6**	**-0.1**
ETLH	**Xiulin Townshi**	**1.05**	**254**	*e*P		**Pn**	**20 55 00.4**	**+0.8**
ETLH					S	**Sn**	**20 55 14.0**	**-1.0**
TEYL	**Yanliau Villag**	**1.10**	**236**	*e*P		**Pn**	**20 55 00.1**	**+0.1**
TEYL					*e*S	**Sn**	**20 55 16.0**	**+0.1**
NNSB	**Datong**	**1.10**	**267**	*e*P		**Pn**	**20 55 00.6**	**+0.4**
NNSB					*e*S	**Sn**	**20 55 14.4**	**-1.7**
NNS	**Nan Shan**	**1.11**	**267**	*e*P		**Pn**	**20 55 00.7**	**+0.5**
NNS					S	**Sn**	**20 55 15.3**	**-1.0**
YHNB	**Yeheng**	**1.12**	**279**	P		**Pn**	**20 55 01.1**	**+0.7**
YHNB					*i* S	**Sn**	**20 55 16.2**	**-0.2**
YM01	**YM01**	**1.13**	**305**	⇓P		**Pn**	**20 55 00.8**	**+0.4**
YM01					*i* S	**Sn**	**20 55 16.0**	**-0.5**
ETM	**Tongmen**	**1.13**	**242**	P		**Pn**	**20 55 00.4**	**0.0**
ETM					S	**Sn**	**20 55 16.0**	**-0.6**
NSK	**Sanguang**	**1.14**	**279**	⇑*i*P		**Pn**	**20 55 01.2**	**+0.7**
NSK					S	**Sn**	**20 55 15.4**	**-1.3**
YM08	**YM08**	**1.14**	**307**	*e*P		**Pn**	**20 55 00.8**	**+0.3**
YM08					S	**Sn**	**20 55 16.3**	**-0.4**
ZUZH	**Zhuzihu**	**1.16**	**305**	*i* P		**Pn**	**20 55 01.1**	**+0.3**
ZUZH					S	**Sn**	**20 55 16.2**	**-0.9**
LXIB	**Xiulin Townshi**	**1.18**	**246**	*e*P		**Pn**	**20 55 01.4**	**+0.3**
LXIB					S	**Sn**	**20 55 16.8**	**-0.9**
SHUL	**Shoufeng**	**1.18**	**233**	*i* P		**Pn**	**20 55 01.2**	**+0.3**
SHUL					*i* S	**Sn**	**20 55 16.8**	**-0.6**
TWY	**Chenhua**	**1.19**	**311**	*i* P		**Pn**	**20 55 01.9**	**+0.8**
ANP	**Anpu**	**1.19**	**305**	*e*P		**Pn**	**20 55 01.6**	**+0.5**
HATJ	**Hateruma jima**	**1.19**	**111**	*e*P		**Pn**	**20 55 02.0**	**+0.9**
HATJ					*e*S	**Sn**	**20 55 18.4**	**+0.7**
PCYT	**Pengchaiyu**	**1.22**	**337**	P		**Pn**	**20 55 01.9**	**+0.5**
TWS1	**Kuangyinshan**	**1.23**	**300**	⇓*i*P		**Pn**	**20 55 02.0**	**+0.6**
TWS1					*i* S	**Sn**	**20 55 18.0**	**-0.4**
NTST	**Danshui**	**1.23**	**303**	*e*P		**Pn**	**20 55 02.2**	**+0.6**
NTST					*i* S	**Sn**	**20 55 18.5**	**-0.1**
TEGC	**Jichi Village**	**1.24**	**231**	*e*P		**Pn**	**20 55 02.0**	**+0.4**
TEGC					S	**Sn**	**20 55 18.8**	**+0.1**
FUSS	**Fushou**	**1.25**	**259**	P		**Pn**	**20 55 03.1**	**+1.0**
FUSS					*e*S	**Sn**	**20 55 19.8**	**+0.3**
ESL	**Shilin**	**1.26**	**238**	*e*P		**Pn**	**20 55 01.9**	**0.0**
ESL					*e*S	**Sn**	**20 55 18.2**	**-0.4**
WHF	**Hehuan Shan**	**1.26**	**254**	*e*P		**Pn**	**20 55 03.0**	**+0.7**
WHF					S	**Sn**	**20 55 19.3**	**-0.6**
TWT	**Tachien**	**1.31**	**260**	*i* P		**Pn**	**20 55 04.0**	**+1.3**
TWT					*i* S	**Sn**	**20 55 20.8**	**+0.2**
JKRS	**Kuro-shima**	**1.32**	**101**	*i* P		**Pn**	**20 55 03.4**	**+0.8**
JKRS					*e*S	**Sn**	**20 55 20.9**	**+0.4**
KSHI	**Guanxi Townshi**	**1.32**	**282**	P		**Pn**	**20 55 03.8**	**+1.2**
KSHI					S	**Sn**	**20 55 21.1**	**+0.7**
TDCB	**Techi**	**1.33**	**260**	*e*P		**Pn**	**20 55 04.1**	**+1.2**
TDCB					*i* S	**Sn**	**20 55 20.6**	**-0.3**
EGFH	**Guangfu**	**1.35**	**232**	*e*P		**Pn**	**20 55 01.9**	**-1.1**
WARBT	**Fenglin Townsh**	**1.35**	**235**	*i* P		**Pn**	**20 55 02.9**	**-0.1**
WARBT					*i* S	**Sn**	**20 55 20.1**	**-1.0**
NFF	**Wufeng Townshi**	**1.35**	**276**	*i* P		**Pn**	**20 55 04.0**	**+1.0**
NFF					*i* S	**Sn**	**20 55 22.6**	**+1.4**
OWD	**Renai**	**1.40**	**248**	P		**Pn**	**20 55 04.7**	**+0.9**
OWD					*e*S	**Sn**	**20 55 21.7**	**-0.8**
JIJ	**Ishigaki jima**	**1.42**	**95**	*i* P		**Pn**	**20 55 04.1**	**+0.3**
JIJ					S	**Sn**	**20 55 21.9**	**-0.8**
WUSB	**Renai**	**1.44**	**250**	P		**Pn**	**20 55 05.2**	**+1.0**
WUSB					*i* S	**Sn**	**20 55 22.8**	**-0.5**
LIOB	**Emei**	**1.44**	**276**	P		**Pn**	**20 55 05.2**	**+1.1**
NSTT	**Nanjuang**	**1.45**	**276**	*e*P		**Pn**	**20 55 05.3**	**+1.0**
NSTT					*i* S	**Sn**	**20 55 23.1**	**-0.3**
HGSD	**Ruisui**	**1.46**	**227**	*e*P		**Pn**	**20 55 04.6**	**+0.2**
HGSD					S	**Sn**	**20 55 23.4**	**-0.2**
EHYH	**Wanrong**	**1.52**	**229**	*e*P		**Pn**	**20 55 05.5**	**+0.5**
EHYH					*e*S	**Sn**	**20 55 23.8**	**-1.0**
WHP	**Taichung City**	**1.52**	**262**	*e*P		**Pn**	**20 55 07.0**	**+1.9**
WHP					S	**Sn**	**20 55 25.7**	**+0.7**
VWDT	**VWDT**	**1.52**	**241**	P		**Pn**	**20 55 06.0**	**+1.0**
VWDT					S	**Sn**	**20 55 25.0**	**+0.2**
EHY	**Hungye**	**1.52**	**230**	P		**Pn**	**20 55 05.1**	**-0.1**
EHY					*e*S	**Sn**	**20 55 23.9**	**-1.1**
JISG	**Ishigakijimahi**	**1.57**	**86**	*i* P		**Pn**	**20 55 06.1**	**+0.4**
ECBN	**Changbin**	**1.57**	**222**	P		**Pn**	**20 55 06.0**	**+0.3**
ECBN					S	**Sn**	**20 55 25.3**	**-0.7**
YULB	**Yu-li**	**1.62**	**227**	*i* P		**Pn**	**20 55 06.4**	**0.0**
YULB					*e*S	**Sn**	**20 55 26.2**	**-0.9**
EYUL	**Yuli**	**1.63**	**226**	*e*P		**Pn**	**20 55 07.4**	**+0.9**
NMLH	**Miaoli**	**1.64**	**272**	*e*P		**Pn**	**20 55 08.0**	**+1.3**
TWF1	**Yuli**	**1.64**	**226**	P		**Pn**	**20 55 06.7**	**0.0**
TWF1					*e*S	**Sn**	**20 55 26.8**	**-1.0**
SSLB	**Suanglung**	**1.65**	**245**	*e*P		**Pn**	**20 55 08.7**	**+1.9**
SSLB					*e*S	**Sn**	**20 55 28.4**	**+0.4**
SMLT	**Sun Moon Lake**	**1.66**	**249**	*e*P		**Pn**	**20 55 08.9**	**+1.9**
SMLT					*e*S	**Sn**	**20 55 29.0**	**+0.7**
TYC	**Yuchr**	**1.69**	**250**	*e*P		**Pn**	**20 55 09.5**	**+2.2**
TYC					*i* S	**Sn**	**20 55 30.2**	**+1.5**
CHKH	**Chenggong**	**1.70**	**220**	*e*P		**Pn**	**20 55 08.0**	**+0.6**
CHKH					S	**Sn**	**20 55 27.4**	**-1.5**
FULB	**Fuli**	**1.76**	**223**	*e*P		**Pn**	**20 55 08.5**	**+0.3**
FULB					S	**Sn**	**20 55 30.2**	**-0.1**
CHKT	**Chengkung**	**1.79**	**219**	*i* P		**Pn**	**20 55 08.3**	**-0.3**
CHKT					*i* S	**Sn**	**20 55 29.2**	**-1.8**
ECS	**Chishang**	**1.88**	**222**	*e*P		**Pn**	**20 55 10.6**	**+0.9**
WCHH	**Zhanghua**	**1.90**	**258**	*e*S		**Sn**	**20 55 35.1**	**+1.5**
JTJ	**Tarama**	**1.93**	**85**	*e*P		**Pn**	**20 55 11.0**	**+0.7**
ELDTW	**Lidau**	**1.94**	**228**	P		**Pn**	**20 55 11.2**	**+0.5**
ELDTW					S	**Sn**	**20 55 33.7**	**-1.1**
LDUT	**Ludao**	**2.09**	**210**	*i* P		**Pn**	**20 55 12.2**	**-0.2**
WRL	**Guolierlin Hig**	**2.11**	**254**	*e*S		**Sn**	**20 55 39.0**	**+0.6**
STYH	**Taoyuan**	**2.12**	**232**	*e*P		**Pn**	**20 55 14.8**	**+1.9**
STYH					*i* S	**Sn**	**20 55 40.2**	**+1.4**
TWGBT	**Beinan**	**2.17**	**220**	P		**Pn**	**20 55 13.8**	**+0.3**
TWGBT					*e*S	**Sn**	**20 55 39.0**	**-1.0**
TWG	**Pinlang**	**2.17**	**220**	*i* P		**Pn**	**20 55 13.7**	**+0.1**
TWG					S	**Sn**	**20 55 39.0**	**-1.0**
LAY	**Lan-yu**	**2.63**	**202**	*i* P		**Pn**	**20 55 19.1**	**-0.5**
LYUB	**Lan-yu**	**2.65**	**201**	P		**Pn**	**20 55 19.3**	**-0.6**
SNJT	**Kaohsiung City**	**2.70**	**230**	*e*P		**Pn**	**20 55 22.1**	**+1.5**
VWUC	**VWUC**	**2.90**	**280**	*i* P		**Pn**	**20 55 23.4**	**+0.2**
VWUC					S	**Sn**	**20 55 54.7**	**-2.5**
SMST	**Manzhou Townsh**	**2.95**	**214**	P		**Pn**	**20 55 24.8**	**+0.9**
SMST					*e*S	**Sn**	**20 55 58.1**	**-0.3**
PTMZ	**Houxiangcun**	**3.20**	**280**	*i* P		**Pn**	**20 55 27.6**	**+0.3**
PTMZ					S	**Sn**	**20 56 02.0**	**-2.5**
KNMB	**Chin-men Tao**	**3.83**	**270**	*e*P		**Pn**	**20 55 36.5**	**+0.8**
KNMB					*e*S	**Sn**	**20 56 16.7**	**-3.0**

*NEIC **19** 20:54:44.8±0.8,31°.980N±0°.010×102°.31W±0°.01, h7km±3km,mb_Lg3.3/127,ML3.2/20,Error ellipse: s-maj=1.9km s-min=1.3km az=111.0*
*TXNET **19** 20:54:44.3,32°.0N±0°.6×102°.3W±0°.5,h7km,ML3.6/30, Error ellipse: s-maj=1.0km s-min=0.6km az=145.2,final*
ISC 19 20:54:44.4±0.9,31°.98N±0°.02×102°.31W±0°.02,h10km±8km, n131,σ0s85/146,3C-23D,Western Texas

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ODSA	**Odessa**	**0.25**	**305**			**Pg**	**20 54 49.2**	**-0.3**
ODSA					IAML		20 54 53.4	
	3μm,0.3s							
ODSA	**Odessa**	**0.25**	**305**	⇑P		**Pg**	**20 54 49.4**	**-0.2**
ODSA					S	**Sg**	**20 54 53.1**	**0.0**
TMB06	**Greenwood**	**0.43**	**90**	⇓P		**Pg**	**20 54 53.0**	**+0.1**
TMB06					S	**Sg**	**20 54 59.1**	**+0.5**
TMB04	**Seminole**	**0.67**	**347**	⇑P		**Pg**	**20 54 57.0**	**-0.3**
TMB04					S	**Sg**	**20 55 06.0**	**-0.1**
MNHN	**Monahans**	**0.74**	**212**			**Pg**	**20 54 58.2**

SAND	**Sanderson**	**2.02**	**175**			**Pn**	**20 55 19.4**	**+0.7**
MSTX	**Muleshoe**	**2.03**	**349**			**Pn**	**20 55 20.3**	**+1.4**
MSTX				IAmb_Lg			20 55 48.7	
	comp=Z,206nm,0.9s							
MSTX	**Muleshoe**	**2.03**	**349**	P		**Pn**	**20 55 20.3**	**+1.4**
DKNS	**Dickens**	**2.05**	**34**			**Pn**	**20 55 20.0**	**+0.9**
DKNS				IAmb_Lg			20 55 54.2	
	comp=Z,214nm,0.7s							
DKNS	**Dickens**	**2.05**	**34**	P		**Pn**	**20 55 20.3**	**+1.2**
APMT	**Aspermont**	**2.28**	**53**			**Pn**	**20 55 22.8**	**+0.5**
ABTX	**Abilene, Hawle**	**2.35**	**73**			**Pn**	**20 55 23.9**	**+0.8**
VHRN	**Van Horn**	**2.58**	**243**			**Pn**	**20 55 27.5**	**+1.1**
VHRN				IAmb_Lg			20 56 11.7	
	comp=Z,76nm,0.8s							
JCT	**Junction City**	**2.61**	**124**			**Pn**	**20 55 27.8**	**+1.0**
MNTX	**Cornudas Mount**	**2.63**	**265**			**Pn**	**20 55 28.8**	**+1.8**
TX31	**Lajitas Ar. Si**	**2.88**	**204**			**Pn**	**20 55 31.7**	**+1.1**
TXAR	**Lajitas Array**	**2.88**	**204**			**Pn**	**20 55 31.8**	**+1.3**
BRDY	**Brady**	**2.90**	**103**			**Pn**	**20 55 31.4**	**+0.6**
DRIO	**Del Rio**	**2.93**	**150**			**Pn**	**20 55 32.1**	**+1.0**
DRIO				IAmb_Lg			20 56 22.9	
	comp=Z,111nm,0.7s							
AMTX	**Amarillo**	**2.95**	**10**			**Pn**	**20 55 32.4**	**+1.0**
PH02	**Texas Public H**	**3.42**	**5**	IAmb_Lg			20 56 40.1	
	comp=Z,135nm,0.7s							
PLPT	**Palo Pinto**	**3.48**	**75**			**Pn**	**20 55 38.4**	**-0.3**
PLPT				IAmb_Lg			20 56 43.2	
	comp=Z,103nm,0.7s							
SMWD	**Samnorwood**	**3.56**	**28**			**Pn**	**20 55 42.7**	**+2.8**
HNDO	**Hondo**	**3.57**	**132**			**Pn**	**20 55 40.7**	**+0.8**
EPT	**El Paso**	**3.58**	**268**			**Pn**	**20 55 40.0**	**-0.1**
WTFS	**Witchita Falls**	**3.69**	**60**			**Pn**	**20 55 41.3**	**-0.3**
WMOK	**Wichita Mounta**	**4.04**	**46**	Pn		**Pn**	**20 55 46.8**	**+0.4**
WMOK				IAmb_Lg			20 56 53.6	
	comp=Z,108nm,0.9s							
WMOK	**Wichita Mounta**	**4.04**	**46**	Pg		**Pb**	**20 55 57.0**	**+1.4**
WHTX	**Lake Whitney,**	**4.12**	**89**			**Pn**	**20 55 47.2**	**-0.3**
WHTX						**Pb**	**20 55 58.4**	**+1.3**
FW06	**Azle**	**4.14**	**75**			**Pb**	**20 55 59.6**	**+2.3**
FW06				IAmb_Lg			20 57 04.0	
	comp=Z,54nm,0.7s							
FW13	**Cleburne**	**4.15**	**84**			**Pb**	**20 55 59.8**	**+2.2**
FW13				IAmb_Lg			20 57 03.0	
	comp=Z,89nm,0.8s							
435B	**Jarrell**	**4.21**	**105**			**Pn**	**20 55 49.1**	**+0.4**
CRNM	**Carthage**	**4.21**	**299**			**Pb**	**20 55 58.1**	**-0.6**
Y22A	**Socorro**	**4.38**	**298**			**Pb**	**20 56 02.4**	**+0.8**
833A	**Chaparral WMA,**	**4.43**	**145**	Pn		**Pn**	**20 55 50.8**	**-0.9**
833A						**Pb**	**20 56 02.1**	**-0.3**
833A				IAmb_Lg			20 57 07.3	
	comp=Z,67nm,0.7s							
RTBA	**Rita Blanca**	**4.46**	**356**			**Pn**	**20 55 53.6**	**+1.2**
RTBA						**Pb**	**20 56 03.4**	**+0.3**
RTBA				IAmb_Lg			20 57 14.7	
	comp=Z,67nm,1.0s							
Z35A	**Perchaven, San**	**4.47**	**71**			**Pb**	**20 56 04.4**	**+1.3**
Z35A				IAmb_Lg			20 57 17.3	
	comp=Z,80nm,0.9s							
LENM	**Lemitar**	**4.49**	**300**			**Pb**	**20 56 04.3**	**+0.9**
SBM	**South Baldy**	**4.56**	**297**			**Pb**	**20 56 06.8**	**+2.1**
ANMO	**Albuquerque**	**4.56**	**312**			**Pb**	**20 56 05.1**	**+0.3**
ANMO				IAmb_Lg			20 57 14.2	
	comp=Z,61nm,1.0s							
ANMO	**Albuquerque**	**4.56**	**312**			**Pb**	**20 56 05.1**	**+0.3**
ANMO				IAmb_Lg			20 57 14.2	
	comp=Z,64nm,1.0s							
ANMO	**Albuquerque**	**4.56**	**312**	Pg		**Pb**	**20 56 05.2**	**+0.5**
ANMO	**Albuquerque**	**4.56**	**312**	IAmb_Lg			20 57 12.3	
	comp=Z,77nm,1.1s							
EF02	**Christine**	**4.56**	**133**			**Pb**	**20 56 06.0**	**+1.4**
EF02				IAmb_Lg			20 57 10.9	
	comp=Z,169nm,0.8s							
X34A	**Smith Ranch, M**	**4.57**	**54**			**Pn**	**20 55 53.8**	**+0.1**
X34A						**Pb**	**20 56 05.2**	**+0.4**
121A	**Cookes Peak, D**	**4.67**	**278**			**Pn**	**20 55 56.3**	**+1.0**
121A				IAmb_Lg			20 57 20.1	
	comp=Z,68nm,1.0s							
ELIS	**Ellis County**	**4.73**	**30**			**Pn**	**20 55 54.9**	**-1.1**
ELIS				IAmb_Lg			20 57 15.7	
	comp=Z,74nm,0.7s							
T25A	**Trinidad**	**5.43**	**342**			**Pn**	**20 56 06.4**	**+0.7**
T25A				IAmb_Lg			20 57 44.3	
	comp=Z,34nm,0.9s							
237A	**Washetta, Mont**	**5.52**	**88**			**Pg**	**20 56 26.2**	**-4.0**
W35A	**Tecumseh**	**5.53**	**54**	IAmb_Lg			20 57 51.3	
	comp=Z,36nm,0.7s							
OK029	**Liberty Lake**	**5.55**	**45**	IAmb_Lg			20 57 46.7	
	comp=Z,66nm,0.7s							
CROK	**Carrier**	**5.76**	**37**	IAmb_Lg			20 57 48.8	
	comp=Z,52nm,0.8s							
HPIG		**5.81**	**211**	IAmb_Lg			20 57 55.3	
	comp=Z,40nm,0.9s							
HKT	**Hockley**	**5.92**	**108**	IAmb_Lg			20 58 07.5	
	comp=Z,55nm,1.2s							
OK052	**Battle Ridge R**	**6.08**	**47**	IAmb_Lg			20 58 05.4	
	comp=Z,50nm,0.8s							
DEOK	**Depew**	**6.18**	**50**	IAmb_Lg			20 58 03.9	
	comp=Z,46nm,0.8s							
QUOK	**Quay**	**6.25**	**46**	IAmb_Lg			20 58 11.8	
	comp=Z,33nm,0.8s							
Z38A	**Mt. Pleasant**	**6.31**	**76**	IAmb_Lg			20 58 21.4	
	comp=Z,57nm,0.8s							
BLOK	**Blackwell**	**6.36**	**40**	IAmb_Lg			20 58 10.8	
	comp=Z,38nm,1.1s							
KAN01	**Argonia South**	**6.38**	**35**	IAmb_Lg			20 58 21.8	
	comp=Z,38nm,0.9s							
NATX	**Nacogdoches**	**6.51**	**90**	IAmb_Lg			20 58 27.6	
	comp=Z,44nm,0.8s							
T35A	**Sooner Cattle**	**6.87**	**43**	IAmb_Lg			20 58 39.3	
	comp=Z,52nm,1.0s							
KSCO	**Kaye Shedlock'**	**7.03**	**358**	IAmb_Lg			20 58 41.1	
	comp=Z,43nm,0.9s							
R32A	**Long Quarter,**	**7.07**	**24**	IAmb_Lg			20 58 49.3	
	comp=Z,54nm,0.7s							
CBKS	**Cedar Bluff**	**7.14**	**16**	IAmb_Lg			20 58 48.9	
	comp=Z,43nm,0.8s							
WLAR	**White Oak Lake**	**7.92**	**75**	IAmb_Lg			20 59 06.1	
	comp=Z,35nm,0.7s							
HHAR	**Hobbs**	**8.16**	**56**	IAmb_Lg			20 59 10.4	
	comp=Z,24nm,0.8s							
PV05	**Paradox Valley**	**8.25**	**319**	IAmb_Lg			20 59 08.4	
	comp=Z,20nm,1.2s							
PV18	**Skein Mesa, Pa**	**8.27**	**321**	IAmb_Lg			20 59 17.3	
	comp=Z,21nm,1.0s							
PV20	**West Nyswonger**	**8.37**	**321**	IAmb_Lg			20 59 12.0	
	comp=Z,23nm,1.3s							
KSU1	**Kansas State U**	**8.49**	**32**	IAmb_Lg			20 59 38.1	
	comp=Z,37nm,1.0s							
HMU	**Henry Mountain**	**9.12**	**313**	IAmb_Lg			20 59 37.4	
	comp=Z,16nm,0.9s							

*IDC **19** 21:04:24.1±0.9,3˚.26N×132˚.71E,h0km,mb3.9/12, mbtmp3.9/13,ML3.5/1,MS3.0/10,Error ellipse: s-maj=39.7km s-min=13.7km az=81.0*

*NEIC **19** 21:04:25.7±1.1,3˚.29N±0˚.09×132˚.8E±0˚.1,h10km±1km, mb4.4/20,Error ellipse: s-maj=21.0km s-min=15.1km az=88.0*

ISC 19 21:04:25.3±0.7,3˚27N±0˚.07×132˚7E±0˚.1,h10km,n54, σ0s56/44,mb4.3/22,MS2.9/8,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.37**	**200**	Pn	**Pn**	**21 05 32.8**	**+1.1**
	2.8nm,0.3s,baz=22,slow=18,SNR=9.3						
SIJI				Sn	**Sn**	**21 06 22.0**	**-0.7**
	1.0nm,0.3s,baz=263,slow=18,SNR=1.4						
SIJI				LR	LR	21 06 59.7	
	comp=Z,111nm,18.4s,baz=101,slow=36 5.4nm,0.3s						
FAKI	**Fak Fak**	**6.16**	**185**	Pn	**Pn**	**21 05 55.9**	**-0.5**
DAV	**Davao City (W)**	**8.07**	**298**	LR	LR	21 10 12.6	
	comp=Z,104nm,18.8s,baz=354,slow=43						
TOLI2	**Tolitoli**	**12.14**	**260**	Pn	**Pn**	**21 07 18.2**	**-0.3**
SBUM	**Sibu**	**20.52**	**268**		**P**	**21 09 03.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.36**	**198**	P	**P**	**21 09 23.9**	**+0.3**
	5.7nm,0.9s,baz=63,slow=4.7,SNR=4.2 5.7nm,0.9s						
WB0	**Warramunga Arr**	**22.95**	**176**	P	**P**	**21 09 29.8**	**-0.1**
WB0				IAmb	IAmb	21 09 57.0	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**23.12**	**176**	P	**P**	**21 09 31.4**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=356,slow=11,SNR=6.0 comp=Z,0.3nm,0.5s						
JOW	**Kunigami**	**23.82**	**350**	LR	LR	21 17 03.0	
	comp=Z,35nm,21.3s,baz=270,slow=32						
CTA	**Charters Tower**	**26.73**	**151**	LR	LR	21 20 27.7	
	comp=Z,49nm,18.5s,baz=221,slow=36						
ASAR	**Alice Springs**	**26.79**	**178**	P	**P**	**21 10 06.2**	**+0.5**
	comp=Z,0.8nm,1.0s,baz=13,slow=9.4,SNR=4.5						
ASAR				LR	LR	21 21 31.2	
	comp=Z,57nm,18.4s,baz=355,slow=38 comp=Z,0.8nm,1.0s						
ASAR	**Alice Springs**	**26.79**	**178**	P	**P**	**21 10 05.5**	**-0.3**
JNU	**Nakatsue**	**29.75**	**357**	LR	LR	21 19 59.1	
	comp=Z,22nm,20.8s,baz=178,slow=31						
RPSI	**Rantau Prapat**	**33.78**	**270**	P	**P**	**21 11 07.9**	**+0.2**
KSRS	**Korea Array**	**34.31**	**353**	LR	LR	21 25 18.9	
	comp=Z,15nm,19.4s,baz=205,slow=37						
GSI	**Gunungsitoli**	**35.19**	**268**	P	**P**	**21 11 19.8**	**-0.2**
STKA	**Stephens Creek**	**35.95**	**167**	P	**P**	**21 11 26.8**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=319,slow=9.4,SNR=4.3						
STKA				LR	LR	21 28 09.3	
	comp=Z,37nm,19.6s,baz=54,slow=40 comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**36.36**	**297**	P	**P**	**21 11 30.6**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=113,slow=6.8,SNR=6.2						
CMAR				LR	LR	21 27 41.1	
	comp=Z,16nm,18.6s,baz=110,slow=38 comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**36.36**	**297**	P	**P**	**21 11 30.1**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**36.50**	**63**	T	T	21 49 47.4	
	baz=249,slow=75,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**36.51**	**63**	T	T	21 49 54.8	
	baz=249,slow=75,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**36.52**	**63**	T	T	21 49 50.7	
	baz=249,slow=75,SNR=4.1						
H11N1	**WAKE ISLAND Hy**	**37.12**	**61**	T	T	21 50 34.2	
	baz=248,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**37.13**	**61**	T	T	21 50 34.7	
	baz=248,slow=75,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**37.13**	**61**	T	T	21 50 35.6	
	baz=248,slow=75,SNR=6.6						
SHL	**Shillong**	**45.07**	**303**	P	**P**	**21 12 42.2**	**+0.2**
SHL				IAmb	IAmb	21 12 43.1	
	comp=Z,4.0nm,0.7s						
HILR	**Hailar Array B**	**47.43**	**349**	P	**P**	**21 13 00.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=203,slow=31,SNR=1.6 comp=Z,0.3nm,0.3s						
ULN	**Ulaanbaatar**	**49.63**	**337**		**P**	**21 13 17.1**	**-0.1**
ULN				IAmb	IAmb	21 13 19.0	
	comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**49.86**	**337**	P	**P**	**21 13 19.5**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=145,slow=8.0,SNR=10						
SONM				PcP	**PcP**	**21 14 39.3**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=131,slow=4.0,SNR=2.4 comp=Z,1.7nm,0.9s						
SONM	**Songino Array**	**49.86**	**337**	P	**P**	**21 13 18.9**	**0.0**
EVN	**Everest**	**50.16**	**304**	P	**P**	**21 13 20.8**	**-1.2**
EVN				IAmb	IAmb	21 13 23.9	
	comp=Z,4.2nm,0.9s						
TLY	**Talaya**	**54.02**	**338**	LR	LR	21 37 09.2	
	comp=Z,16nm,20.9s,baz=32,slow=36						
MKAR	**Makanchi Array**	**61.45**	**323**	P	**P**	**21 14 42.8**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=117,slow=7.9,SNR=25 comp=Z,2.7nm,0.8s						
MKAR	**Makanchi Array**	**61.45**	**323**		**P**	**21 14 42.3**	**+0.2**
MAKZ	**Makanchi**	**61.65**	**323**		**P**	**21 14 43.9**	**+0.4**
MAKZ				IAmb	IAmb	21 14 45.0	
	comp=Z,4.6nm,1.0s						
ZAA0	**Zalesovo Array**	**63.83**	**331**	P	**P**	**21 14 57.1**	**-0.6**
ZAA0				IAmb	IAmb	21 14 58.6	
	comp=Z,4.5nm,1.1s						
ZALV	**Zalesovo Beam**	**63.83**	**331**	P	**P**	**21 14 57.4**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=104,slow=6.3,SNR=10 comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**63.83**	**331**		**P**	**21 14 56.9**	**-0.8**
KURK	**Kurchatov**	**65.44**	**326**		**P**	**21 15 08.6**	**+0.3**
KURBB	**Kurchatov Arra**	**65.45**	**325**	P	**P**	**21 15 08.5**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=118,slow=5.8,SNR=36 comp=Z,3.9nm,0.7s						
BVAR	**Borovoye Array**	**71.04**	**326**	P	**P**	**21 15 44.0**	**+0.5**
	comp=Z,4.2nm,0.8s,baz=101,slow=7.7,SNR=20 comp=Z,4.2nm,0.8s						
BORK	**Borovoye**	**71.09**	**326**		**P**	**21 15 43.7**	**-0.1**
HRA	**Herat**	**72.10**	**305**		**P**	**21 15 50.2**	**-0.3**
HRA				IAmb	IAmb	21 15 52.6	
	comp=Z,3.5nm,1.2s						
AB31	**Akbulak array**	**76.34**	**320**	P	**P**	**21 16 14.6**	**0.0**
AB31				IAmb	IAmb	21 16 15.7	
	comp=Z,2.8nm,0.9s						
ABKAR	**Akbulak array**	**76.34**	**320**	P	**P**	**21 16 14.6**	**0.0**
C19K	**Lookout Ridge**	**79.11**	**20**	P	**P**	**21 16 29.1**	**-0.7**
D19K	**Kuna River**	**79.42**	**21**	P	**P**	**21 16 30.3**	**-1.1**
ILAR	**Eielson Array**	**82.95**	**25**	P	**P**	**21 16 51.8**	**+1.6**
	comp=Z,0.5nm,0.9s,baz=246,slow=3.8,SNR=3.2 comp=Z,0.5nm,0.9s						
BMAR	**Burnt Mountain**	**84.18**	**23**	P	**P**	**21 16 56.9**	**+0.3**
J26L	**Joseph Creek**	**84.35**	**26**	P	**P**	**21 16 57.2**	**-0.3**
J26L				IAmb	IAmb	21 17 11.3	
	comp=Z,2.1nm,1.2s						
I28M	**Miner Creek**	**85.93**	**25**	P	**P**	**21 17 05.1**	**-0.4**
RAYN	**Ar Rayn**	**86.18**	**293**	P	**P**	**21 17 07.7**	**+0.1**
RAYN				IAmb	IAmb	21 17 09.2	
	comp=Z,4.7nm,0.9s						
ESDC	**Sonseca Array**	**121.66**	**322**	PKP	**PKPdf**	**21 23 19.5**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=39,slow=2.9,SNR=2.0						
TORD	**Torodi Ar. Bea**	**128.75**	**290**	PKP	**PKPdf**	**21 23 33.8**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=55,slow=5.8,SNR=3.2						

IDC 19 21:14:02.5±1.5,6˚.59N×125˚.01E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=31.6km s-min=10.3km az=130.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.74**	**50**	Pg	Pg	21 14 17.1	+0.4
	220nm,0.3s,baz=259,slow=16,SNR=26						
DAV				Lg	Lg	21 14 26.9	
	349nm,0.3s,baz=288,slow=20,SNR=11						
FITZ	**Fitzroy Crossi**	**24.54**	**179**	P	P	21 19 24.8	+0.8
	1.3nm,0.6s,baz=5.5,slow=7.8,SNR=1.7 1.3nm,0.6s						
WRA	**Warramunga Arr**	**27.92**	**161**	P	P	21 19 54.3	-0.3
	0.2nm,0.4s,baz=342,slow=9.1,SNR=1.8 0.2nm,0.4s						
ASAR	**Alice Springs**	**31.30**	**164**	P	P	21 20 24.0	-0.5
	0.2nm,0.3s,baz=342,slow=6.8,SNR=4.9 0.2nm,0.3s						
MKAR	**Makanchi Array**	**54.24**	**325**	P	P	21 23 29.9	-0.3
	0.2nm,0.6s,baz=122,slow=8.8,SNR=2.9 0.2nm,0.6s						

*NEIC **19** 21:20:54.7±1.1,48˚.38N±0˚.08×4˚.5W±0˚.1,h10km±2km, ML3.7/4,Error ellipse: s-maj=16.8km s-min=11.8km az=240.0*

*BGS **19** 21:20:54.2±1.6,48˚.20N×4˚.66W,h10km,ML3.2,MLJ3.2*

*LDG **19** 21:20:56.8±0.1,48˚.40N×4˚.35W,h2km,Md3.0/2,MlJ3.7/34, Error ellipse: s-maj=2.7km s-min=2.4km az=176.0*

*STR **19** 21:20:56.8±0.0,48˚.41N±0˚.06×4˚.44W±0˚.08,h10km, mb3.8/12,LOCSAT earthModelID haslach_taup-2.11 preliminary*

ISC 19 21:20:56.5±0.8,48˚35N±0˚.02×4˚31W±0˚.03,h16km±5km, n108,σ2s36/192,5D,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMF	**Camaret-sur-Me**	**0.22**	**248**	Pg	**Pg**	**21 21 00.7**	**-0.8**
CAMF				Sg	**Sg**	**21 21 03.4**	**-1.6**
OLIV	**Plomelin**	**0.45**	**166**	Pg	**Pb**	**21 21 06.6**	**+0.7**
OLIV				Sg	**Sg**	**21 21 13.5**	**+2.1**
LOCF	**Locquirec - 29**	**0.53**	**52**	Pg	**Pg**	**21 21 07.4**	**+0.4**
LOCF				Sg	**Sg**	**21 21 15.4**	**+1.3**
ROSF	**Rostrenen**	**0.69**	**91**	*e*Pg	**Pg**	**21 21 11.3**	**+1.3**
ROSF				*e*Sg	**Sg**	**21 21 20.8**	**+1.7**
ROSF	**Rostrenen**	**0.69**	**91**	*e*P	**Pg**	**21 21 11.3**	**+1.3**
ROSF				IAML		21 21 23.4	
	comp=N,555nm,0.4s						
ROSF				IAML		21 21 24.8	
	comp=E,291nm,0.2s						
ROSF	**Rostrenen**	**0.69**	**91**	Pg	**Pg**	**21 21 11.1**	**+1.2**
ROSF				Sg	**Sg**	**21 21 21.5**	**+2.4**
PLOF	**Ploemeur**	**0.85**	**136**	Pg	**Pb**	**21 21 14.4**	**+1.5**
PLOF				Sg	**Sb**	**21 21 27.0**	**+3.0**
QUIF	**Quistinic**	**0.88**	**119**	*e*Pg	**Pg**	**21 21 14.7**	**+1.1**
QUIF				*e*Sg	**Sg**	**21 21 27.0**	**+1.9**
	comp=E,679nm,0.2s						
SGMF	**Saint Gilles**	**1.17**	**94**	*e*Pn	**Pn**	**21 21 18.4**	**+0.1**
SGMF				*e*Pg	**Pb**	**21 21 20.3**	**+1.9**
SGMF				*e*Sg	**Sb**	**21 21 33.7**	**+0.3**
	comp=E,275nm,0.2s						
GUEF	**Guhenno - 56**	**1.21**	**112**	Pn	**Pn**	**21 21 19.5**	**+0.7**
GUEF				Pg	**Pg**	**21 21 21.3**	**+1.4**
GUEF				Sg	**Sn**	**21 21 38.2**	**+3.3**
PLEF	**Pleven - 22200**	**1.32**	**83**	Pn	**Pn**	**21 21 20.6**	**+0.3**
PLEF				Pg	**Pb**	**21 21 22.7**	**+1.7**
PLEF				Sn	**Sn**	**21 21 40.7**	**+3.1**
BEGF	**Beganne - 5601**	**1.56**	**118**	Pn	**Pn**	**21 21 24.2**	**+0.6**
BEGF				Pg	**Pb**	**21 21 27.2**	**+2.2**
BEGF				Sn	**Sb**	**21 21 48.4**	**+3.9**
JSA	**Saint Aubin**	**1.64**	**59**	*e*P	**Pn**	**21 21 26.5**	**+1.6**
JSA				*e*S	**Sn**	**21 21 48.5**	**+3.0**
JSA				IAML		21 21 49.4	
	comp=E,172nm,0.2s						
JSA				IAML		21 21 56.7	
	comp=N,211nm,0.5s						
JSA	**Saint Aubin**	**1.64**	**59**	Pn	**Pn**	**21 21 25.6**	**+0.9**
JSA				Pg	**Pb**	**21 21 27.3**	**+1.0**
JSA				Sn	**Sb**	**21 21 49.0**	**+2.2**
JLP	**Les Platons**	**1.71**	**58**	*e*P	**Pn**	**21 21 25.4**	**-0.2**
JDC	**Jersey Dam (Cr**	**1.71**	**60**	*e*P	**Pn**	**21 21 27.4**	**+1.7**
JDC				*e*S	**Sb**	**21 21 51.4**	**+2.5**
JDC				IAML		21 21 53.3	
	comp=N,1μm,0.2s						
JDC				IAML		21 21 56.0	
	comp=E,697nm,0.2s						
JDG	**Jersey Dam (Ga**	**1.72**	**60**	*e*P	**Pn**	**21 21 27.4**	**+1.6**
JDG				*e*S	**Sb**	**21 21 51.3**	**+2.3**
JDG				IAML		21 21 53.4	
	comp=N,163nm,0.2s						
JDG				IAML		21 21 55.1	
	comp=E,90nm,0.3s						
CCA1	**Carnmenellis**	**1.93**	**342**	*e*P	**Pn**	**21 21 27.9**	**-0.8**
CCA1	**Carnmenellis**	**1.93**	**342**	Pn	**Pn**	**21 21 26.8**	**-1.9**
LOUF	**Saint-Loup**	**2.03**	**80**	Pn	**Pn**	**21 21 30.5**	**+0.4**
LOUF				Pg	**Pb**	**21 21 35.1**	**+2.1**
LOUF				Sn	**Sn**	**21 21 56.4**	**+1.2**
LOUF				Sg	**Sb**	**21 22 01.9**	**+3.8**
SBD	**Saint Breward**	**2.23**	**354**	*e*P	**Pn**	**21 21 31.0**	**-1.8**
SBD				IAML		21 22 09.7	
	comp=N,88nm,0.3s						
SBD				IAML		21 22 10.4	
	comp=E,134nm,0.5s						
GRR	**Gorron**	**2.30**	**88**	*e*Pn	**Pn**	**21 21 34.4**	**+0.6**
GRR				*e*Pg	**Pg**	**21 21 41.0**	**+0.4**
GRR				*e*Sg	**Sb**	**21 22 09.4**	**+3.6**
	comp=E,162nm,0.2s						
FLN	**La Foliniere**	**2.57**	**79**	*e*Pn	**Pn**	**21 21 38.0**	**+0.5**
FLN				*e*Pg	**Pb**	**21 21 45.5**	**+3.2**
FLN				*e*Sg	**Sb**	**21 22 18.2**	**+4.5**
	comp=E,182nm,0.3s						
HTL	**Hartland**	**2.65**	**358**	*e*P	**Pn**	**21 21 39.1**	**+0.6**
HTL				IAML		21 22 22.8	
	comp=N,63nm,0.5s						
HTL				IAML		21 22 26.0	
	comp=E,87nm,0.5s						
HTL	**Hartland**	**2.65**	**358**	Pn	**Pn**	**21 21 37.4**	**-1.1**
HTL				Sg	**Sg**	**21 22 19.0**	**-2.4**
LDF	**La Druitiere**	**2.79**	**84**	*e*Pn	**Pn**	**21 21 41.5**	**+0.9**
LDF				*e*Pg	**Pg**	**21 21 49.7**	**-0.3**
LDF				*e*Sn	**Sn**	**21 22 13.8**	**-0.2**
LDF				*e*Sg	**Sb**	**21 22 25.0**	**+5.0**
	comp=E,106nm,0.2s						
SOMF	**Saint-Ouen-de-**	**2.91**	**89**	Pn	**Pn**	**21 21 42.7**	**+0.6**
SOMF				Pg	**Pg**	**21 21 52.2**	**-0.1**
SOMF				Sn	**Sn**	**21 22 18.1**	**+1.3**
SOMF				Sg	**Sb**	**21 22 29.8**	**+6.5**
GIZF	**Gizeux - Indre**	**3.18**	**106**	Pn	**Pn**	**21 21 46.7**	**+0.9**
GIZF				Sg	**Sg**	**21 22 41.0**	**+2.5**
TSDF	**Thoir-sur-Di**	**3.25**	**99**	Pn	**Pn**	**21 21 48.3**	**+1.5**
TSDF				Sg	**Sg**	**21 22 42.8**	**+1.9**
MFF	**Saint Martin d**	**3.32**	**120**	*e*Pn	**Pn**	**21 21 49.1**	**+1.3**
MFF				*e*Pg	**Pg**	**21 22 00.0**	**-0.1**
MFF				*e*Sg	**Sb**	**21 22 41.8**	**+6.6**
	comp=E,45nm,0.2s						
MFF				*e*Sg	**Sb**	**21 22 41.8**	**+6.6**
	comp=E,54nm,0.3s						
MFF	**Saint Martin d**	**3.32**	**120**	Pn	**Pn**	**21 21 49.1**	**+1.3**
MCH1	**Michaelchurch**	**3.74**	**12**	Pn	**Pn**	**21 21 52.2**	**-1.4**
MCH1				Sn	**Sn**	**21 22 34.0**	**-3.4**
CLEV	**Clevilliers**	**3.80**	**85**	Pn	**Pn**	**21 21 55.3**	**+1.0**
CLEV				Sn	**Sn**	**21 22 40.1**	**+1.5**
CLEV				Sg	**Sg**	**21 22 59.6**	**+1.2**
CLMF	**Criteuil-la-Ma**	**3.99**	**134**	Pn	**Pn**	**21 21 58.

DOU	**Dourbes**	**6.09**	**70**	Pn		**Pn**	**21 22 25.8**	**0.0**	
SLVF	**La Salvetat-Pe**	**6.12**	**130**	Pn		**Pn**	**21 22 26.5**	**+0.2**	
LABF	**Labassere**	**6.13**	**148**	Pn		**Pn**	**21 22 26.1**	**-0.3**	
UCC	**Uccle**	**6.14**	**63**	Pn		**Pn**	**21 22 25.8**	**-0.8**	
COLF	**Collangettes**	**6.17**	**114**	Pn		**Pn**	**21 22 27.0**	**+0.1**	
CANF	**Canfranc**	**6.19**	**153**	Pn		**Pn**	**21 22 26.9**	**-0.5**	
MEZF	**Maizieres J'vi**	**6.23**	**85**	*e*Pn		**Pn**	**21 22 27.5**	**-0.3**	
MEZF				*e*Sn		**Sn**	**21 23 33.2**	**-5.4**	
MEZF				*e*Sg		Sb	21 24 10.4	+12	
	comp=E,21nm,0.5s								
GIVF	**Givet**	**6.23**	**70**	*e*Pn		**Pn**	**21 22 26.8**	**-1.0**	
GIVF				*e*Sn		**Sn**	**21 23 34.3**	**-4.3**	
GIVF				*e*Sg		**Sg**	**21 24 10.4**	**-5.9**	
	comp=E,13nm,0.4s								
EPF	**Esparros**	**6.24**	**147**	*e*Pn		**Pn**	**21 22 27.9**	**0.0**	
EPF				*e*Sn		**Sn**	**21 23 34.2**	**-4.7**	
	comp=E,5.1nm,0.2s								
SFTF	**Sexfontaines**	**6.24**	**88**	*e*Pn		**Pn**	**21 22 27.8**	**-0.1**	
SFTF				*e*Sn		**Sn**	**21 23 34.0**	**-4.9**	
SFTF				*e*Sg		Sb	21 24 10.6	+11	
	comp=E,16nm,0.3s								
BMRD	**Maredsous**	**6.24**	**68**	*d*P		**Pn**	**21 22 27.9**	**0.0**	
BMRD				*d*S		**Sn**	**21 23 35.6**	**-3.3**	
ECHI	**Chisagues Biel**	**6.51**	**149**	Pn		**Pn**	**21 22 32.5**	**+0.7**	
MELF	**Melles**	**6.53**	**145**	Pn		**Pn**	**21 22 31.6**	**-0.3**	
MLS	**Moulis**	**6.59**	**143**	Pn		**Pn**	**21 22 33.5**	**+0.8**	
FAHY	**Fahy-L¨s-Autr**	**6.62**	**94**	Pn		**Pn**	**21 22 32.5**	**-0.6**	
MTLF	**Montolieu**	**6.77**	**135**	*e*Pn		**Pn**	**21 22 35.7**	**+0.5**	
MTLF				*e*Sn		**Sn**	**21 23 48.4**	**-3.6**	
	comp=E,3.6nm,0.5s								
MTLF	**Montolieu**	**6.77**	**135**	Pn		**Pn**	**21 22 35.7**	**+0.5**	
SALF	**Salau**	**6.79**	**143**	Pn		**Pn**	**21 22 35.9**	**+0.3**	
SSB	**Saint Sauveur**	**6.80**	**114**	Pn		**Pn**	**21 22 36.1**	**+0.4**	
SSB	**Saint Sauveur**	**6.80**	**114**	Pn		**Pn**	**21 22 36.3**	**+0.5**	
DUNF	**Dun**	**6.84**	**139**	Pn		**Pn**	**21 22 36.9**	**+0.7**	
GENF	**Genat**	**6.90**	**141**	Pn		**Pn**	**21 22 37.6**	**+0.6**	
CEST	**Esterri de Car**	**6.96**	**144**	Pn		**Pn**	**21 22 37.6**	**-0.2**	
WLF	**Walferdange**	**7.00**	**75**	*d*P		**Pn**	**21 22 38.3**	**-0.1**	
EKB	**Eskdalemuir**	**7.03**	**5**	Pn		**Pn**	**21 22 36.9**	**-1.7**	
MEM	**Membach**	**7.09**	**68**	*d*P		**Pn**	**21 22 38.5**	**-1.0**	
MEM				*d*S		**Sn**	**21 23 57.5**	**-2.3**	
LASF	**Ste Croix**	**7.10**	**124**	*e*Pn		**Pn**	**21 22 39.9**	**+0.2**	
LASF				*e*Sg		**Sg**	**21 24 41.7**	**-2.4**	
	comp=E,24nm,0.6s								
VIVF	**Saint-Julien-l**	**7.11**	**116**	*e*Pn		**Pn**	**21 22 40.9**	**+1.1**	
VIVF				*e*Sn		**Sn**	**21 24 00.0**	**-0.2**	
VIVF				*e*Sg		**Sg**	**21 24 41.1**	**-3.3**	
	comp=E,7.1nm,0.4s								
HAU	**Haudompre**	**7.13**	**89**	*e*Pn		**Pn**	**21 22 39.0**	**-1.2**	
HAU				*e*Sg		**Sg**	**21 24 39.8**	**-5.5**	
	comp=E,9.9nm,0.3s								
CABF	**La Chapelle**	**7.26**	**100**	*e*Pn		**Pn**	**21 22 42.2**	**+0.3**	
CABF				*e*Sn		**Sn**	**21 23 58.9**	**-5.1**	
	comp=E,5.5nm,0.6s								
HINF	**Hinteralfeld**	**7.50**	**90**	*e*Pn		**Pn**	**21 22 43.9**	**-1.3**	
HINF				*e*Sg		**Sg**	**21 24 52.3**	**-4.6**	
	comp=E,14nm,0.4s								
ECH	**Echery**	**7.65**	**87**	Pn		**Pn**	**21 22 47.1**	**-0.2**	
CDF	**Champ du Feu**	**7.71**	**85**	*e*Pn		**Pn**	**21 22 46.5**	**-1.7**	
CDF				*e*Sg			21 24 58.5		
	comp=E,9.6nm,0.5s								
CORI	**Orista**	**7.80**	**143**	Pn		**Pn**	**21 22 49.5**	**+0.2**	
ORIF	**Oris-en-Rattie**	**7.81**	**112**	*e*Pn		**Pn**	**21 22 50.9**	**+1.4**	
LPL	**La Plagne**	**8.07**	**106**	*e*Pn		**Pn**	**21 22 52.4**	**-0.8**	
LPG	**La Plagne**	**8.09**	**107**	*e*Pn		**Pn**	**21 22 55.2**	**+1.6**	
SENIN	**Lac Senin/Sane**	**8.13**	**100**	Pn		**Pn**	**21 22 54.1**	**0.0**	
SMRF	**Simiane la Rot**	**8.13**	**119**	*e*Pn		**Pn**	**21 22 55.5**	**+1.5**	
BFO	**Black Forest**	**8.42**	**85**	Pn		**Pn**	**21 22 57.8**	**0.0**	
ESDC	**Sonseca Array**	**8.68**	**178**	Pn		**Pn**	**21 22 59.8**	**-1.7**	
PAB	**San Pablo**	**8.80**	**180**	Pn		**Pn**	**21 23 02.3**	**-0.9**	
FUORN	**Ofenpass-Fuorn**	**10.02**	**95**	Pn		**Pn**	**21 23 20.5**	**+0.5**	

*ISK **19** 21:24:14.9, 35˚.10N×27˚.90E, h13km, ML2.7/15*
*GII **19** 21:24:15.4±0.0, 34˚.793N±0˚.003×27˚.842E±0˚.001, h0km, Mws2.9, confirmed*
*ATH **19** 21:24:16.9, 35˚.27N×27˚.67E, h12km±3km, ML2.6/6, Manual Solution by E.Daskalaki First location: 2020/02/19 21:25:07, This location: 2020/02/20 07:02:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **19** 21:24:18.5, 35˚N±47˚×2˚8E±4˚1, h1km±27km, M2.4/4, MLh2.4/4*

ISC 19 21:24:13.5±1.3, 35˚.08N±0˚.04×27˚.83E±0˚.03, h12km±11km, n35, σ1§37/49, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.72**	**311**	Pg	**Pn**	**21 24 29.9**	**+0.4**
KARP				Sg	**Sn**	**21 24 40.9**	**+0.5**
KARP	**Karpathos**	**0.72**	**311**	P	**Pg**	**21 24 28.2**	**+0.8**
KARP				S	**Sg**	**21 24 38.5**	**-0.7**
KARP	**Karpathos**	**0.72**	**311**	P	**Pg**	**21 24 26.8**	**-0.6**
KARP				S	**Sg**	**21 24 33.5**	**-3.3**
ARG	**Arkhangelos**	**1.16**	**12**	Pn	**Pg**	**21 24 37.3**	**+1.5**
ARG	**Arkhangelos**	**1.16**	**12**	P	**Pb**	**21 24 36.2**	**+0.7**
ARG				S	**Sb**	**21 24 48.2**	**-2.2**
ARG	**Arkhangelos**	**1.16**	**12**	P	**Pg**	**21 24 36.3**	**+0.5**
ARG				S	**Sb**	**21 24 49.9**	**-0.6**
ZKR	**Zakros**	**1.32**	**272**	Pn	**Pg**	**21 24 40.6**	**+1.7**
ZKR	**Zakros**	**1.32**	**272**	P	**Pg**	**21 24 42.1**	**+3.3**
ZKR	**Zakros**	**1.32**	**272**	P	**Pg**	**21 24 39.6**	**+0.7**
ZKR				S	**Sn**	**21 24 54.9**	**-0.4**
STIA	**Sitia Lasithi**	**1.43**	**275**	P	**Pb**	**21 24 40.5**	**+0.5**
DAT	**Datca**	**1.66**	**353**	Pn	**Pb**	**21 24 44.4**	**+0.4**
TURN	**Turunc**	**1.72**	**11**	Pn	**Pb**	**21 24 45.2**	**+0.1**
NPS	**Neapolis**	**1.82**	**276**	P	**Pg**	**21 24 49.5**	**+1.0**
NPS	**Neapolis**	**1.82**	**276**	P	**Pb**	**21 24 46.9**	**+0.1**
AKAS	**Kas**	**1.85**	**51**	Pn	**Pn**	**21 24 46.2**	**+1.1**
FETY	**Fethiye**	**1.86**	**33**	Pn	**Pn**	**21 24 46.3**	**+1.3**
DALY	**Dalyan (Mula)**	**1.86**	**21**	Pn	**Pn**	**21 24 46.6**	**+1.5**
BODT	**Bodrum**	**2.02**	**348**	Pn	**Pb**	**21 24 49.6**	**-0.6**
YER	**Yerkesik**	**2.08**	**10**	Pn	**Pn**	**21 24 49.9**	**+1.6**
YER	**Yerkesik**	**2.08**	**10**	P	**Pb**	**21 24 50.5**	**-0.8**
CAME	**Cameli-Denizli**	**2.21**	**32**	Pn	**Pn**	**21 24 51.1**	**+1.0**
MLSB	**Milas**	**2.21**	**359**	Pn	**Pn**	**21 24 51.4**	**+1.4**
ELL	**Elmali**	**2.37**	**45**	Pn	**Pn**	**21 24 53.8**	**+1.5**
IDI	**Anoyia**	**2.41**	**276**	P	**Pb**	**21 24 56.5**	**-0.5**
APMY	**Acipayam-Deniz**	**2.67**	**26**	Pn	**Pn**	**21 24 58.3**	**+2.0**
SMG	**Samos**	**2.74**	**343**	P	**Pn**	**21 24 57.9**	**+0.6**
KORT	**Korkueli**	**2.80**	**46**	Pn	**Pn**	**21 24 59.9**	**+1.6**
CSS	**Mathiatis**	**4.52**	**90**	P	**Pn**	**21 25 23.6**	**+1.8**
CSS				S	**Sn**	**21 26 17.1**	**+2.9**
KZIT	**Kziot**	**6.91**	**125**	P	**Pn**	**21 25 55.1**	**+0.5**
KZIT				S	**Sn**	**21 27 11.9**	**-1.3**
HMDT	**Nahal Hemdat**	**7.01**	**112**	P	**Pn**	**21 25 56.3**	**+0.4**
HMDT				S	**Sn**	**21 27 15.2**	**-0.4**
DSI	**Dead Sea**	**7.23**	**117**	P	**Pn**	**21 25 59.3**	**+0.4**
DSI				S	**Sn**	**21 27 20.0**	**-0.9**
MSBI	**Mazada**	**7.34**	**119**	P	**Pn**	**21 26 00.9**	**+0.3**
MSBI				S	**Sn**	**21 27 22.9**	**-0.8**
PRNI	**Paran**	**7.67**	**126**	P	**Pn**	**21 26 05.1**	**+0.1**
PRNI				S	**Sn**	**21 27 30.2**	**-1.6**
HRFI	**Mount Harif**	**7.89**	**128**	P	**Pn**	**21 26 08.1**	**0.0**
HRFI				S	**Sn**	**21 27 35.7**	**-1.7**
EIL	**Elat**	**8.09**	**130**	P	**Pn**	**21 26 11.1**	**+0.4**
EIL				S	**Sn**	**21 27 39.7**	**-2.4**

*NEIC **19** 21:38:00.7±1.5, 43˚.68N±0˚.08×128˚.5W±0˚.1, h10km±1km, mb4.5/69, ML3.6/80, Mww4.9/67, Error ellipse: s-maj=13.8km s-min=8.0km az=48.0*
*IDC **19** 21:38:03.1±0.9, 43˚.79N×128˚.20W, h0km, mb3.8/16, mbtmp3.8/23, ML3.6/7, MS4.1/67, Error ellipse: s-maj=20.7km s-min=10.3km az=37.0*
*GCMT **19** 21:38:05.7±0.2, 43˚.66N±0˚.01×128˚.51W±0˚.01, h17km±1km, MW5.0/114, Moment Tensor Solution. s33,c44; s114,c171; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.48±.10; Mθθ=2.13±.09; Mφφ=2.61±.09; Mrθ=0.46±.24; Mθφ=-2.48±.08; Mφr=0.26±.22; Best double couple: M☉3.47000×10^16 NP1:φs=202.00000°, δ81.00000°, λ=-1.00000°. NP2:φs=292.00000°, δ89.00000°, λ=-171.00000°. Principal axes: T 3.7120, Plg6.0000°, Azm67.0000°; N -0.4870, Plg81.0000°, Azm297.0000°; P -3.2290, Plg7.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **19** 21:38:06.7, 43˚.72N×128˚.19W, h12km, Moment Tensor Solution. Duration: 18s Moment tensor: Scale 1016Nm; Mrr=0.41; Mθθ=1.58; Mφφ=1.99; Mrθ=0.09; Mθφ=-1.91; Mφr=0.19; Fault plane solution: M☉2.64000×10^16 NP1: φs=201.60000°, δ87.19000°, λ2.55000°. NP2:φs=111.47000°, δ87.45000°, λ177.19000°. Principal axes: T 2.8271, Plg4.0000°, Azm67.0000°; N -0.4209, Plg86.0000°, Azm249.0000°; P -2.4062, Plg0.0000°, Azm157.0000°;*
*NEIC **19** 21:38:06.7, 43˚.72N×127˚.91W, h12km*

ISC 19 21:38:02.4±0.6, 43˚.75N±0˚.07×128˚.30W±0˚.07, h10km, n229, σ1§59/174, mb4.4/41, MS4.2/63, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J01E	**Myrtle Point**	**3.23**	**99**		**Pn**	**21 38 51.3**	**-1.9**
J01E				IAML		21 39 35.0	
	comp=E,108nm,0.8s						
I02E	**Swisshome, OR**	**3.23**	**82**		**Pn**	**21 38 52.1**	**-1.1**
KBO	**Bosley Butte**	**3.36**	**116**	Pn	**Pn**	**21 38 53.5**	**-1.6**
KBO				IAML		21 39 58.5	
	comp=N,96nm,4.4s						
K02D	**Willamette Mer**	**3.54**	**106**		**Pn**	**21 38 56.3**	**-1.3**
K02D				IAML		21 39 40.6	
	comp=E,80nm,0.7s						
I03D	**Drain, OR**	**3.59**	**89**		**Pn**	**21 38 57.8**	**-0.3**
I03D				IAML		21 39 48.6	
	comp=E,73nm,2.1s						
COR	**Corvallis**	**3.69**	**75**		**Pn**	**21 38 59.3**	**-0.2**
COR				IAML		21 40 03.7	
	comp=E,72nm,1.9s						
L02F	**Cave Junction**	**3.83**	**113**		**Pn**	**21 39 00.8**	**-0.7**
BUCK	**Buck Mountain**	**3.86**	**81**		**Pn**	**21 39 01.5**	**-0.4**
BUCK				IAML		21 40 18.5	
	comp=E,92nm,2.1s						
BUCK				IAML		21 41 34.9	
	comp=N,61nm,2.2s						
G03D	**McMinnville, O**	**3.89**	**66**		**Pn**	**21 39 02.6**	**+0.4**
G03D				IAML		21 39 37.3	
	comp=E,60nm,0.9s						
G03D				IAML		21 40 07.0	
	comp=N,83nm,1.3s						
F03A	**Seaside**	**4.02**	**55**		**Pn**	**21 39 04.3**	**+0.3**
H04D	**Lebanon**	**4.08**	**77**		**Pn**	**21 39 05.2**	**+0.5**
H04D				IAML		21 40 00.9	
	comp=E,62nm,1.7s						
H04D				IAML		21 40 28.8	
	comp=N,61nm,1.9s						
RADR	**Rader Ridge**	**4.16**	**48**		**Pn**	**21 39 06.1**	**+0.1**
RADR				IAML		21 41 32.2	
	comp=E,68nm,2.1s						
RADR				IAML		21 41 53.7	
	comp=N,91nm,4.8s						
BBOR	**Butler Butte**	**4.19**	**100**		**Pn**	**21 39 06.7**	**+0.2**
BBOR				IAML		21 40 01.3	
	comp=E,57nm,0.6s						
BBOR				IAML		21 40 03.4	
	comp=N,60nm,1.1s						
I04A	**Tendick Farm,**	**4.26**	**87**		**Pn**	**21 39 07.8**	**+0.4**
I04A				IAML		21 40 06.8	
	comp=N,48nm,1.2s						
I04A				IAML		21 40 07.2	
	comp=E,71nm,2.1s						
G04A	**Mulino**	**4.41**	**69**		**Pn**	**21 39 09.8**	**+0.4**
F04D	**Rainier, OR**	**4.42**	**56**		**Pn**	**21 39 10.2**	**+0.7**
KHMM	**Horse Mountain**	**4.44**	**129**		**Pn**	**21 39 09.5**	**-0.4**
KHMM				IAML		21 41 35.7	
	comp=N,42nm,3.4s						
KHMM				IAML		21 41 56.2	
	comp=E,46nm,3.2s						
H04A	**Detroit Lake**	**4.49**	**76**		**Pn**	**21 39 10.9**	**+0.4**
H04A				IAML		21 39 49.9	
	comp=N,34nm,0.4s						
H04A				IAML		21 40 01.6	
	comp=E,33nm,1.0s						
J04A	**Umpqua Nationa**	**4.53**	**94**		**Pn**	**21 39 12.2**	**+1.0**
YBH	**Yreka Blue Hor**	**4.58**	**114**	Pn	**Pn**	**21 39 13.0**	**+1.2**
	baz=329,slow=12,SNR=9.8						
YBH				LR	LR	21 40 01.1	
	comp=E,8.6nm,20.4s,baz=288,slow=26						
YBH				Sn	**Sn**	**21 40 07.3**	**+2.2**
	baz=351,slow=19,SNR=6.6						
YBH	**Yreka Blue Hor**	**4.58**	**114**		**Pn**	**21 39 11.7**	**-0.1**
WISH	**Wishkah**	**4.64**	**42**		**Pn**	**21 39 13.7**	**+1.2**
WISH				IAML		21 40 35.4	
	comp=N,60nm,3.3s						
WISH				IAML		21 42 15.5	
	comp=E,62nm,4.3s						
L04D	**Klamath Falls**	**4.65**	**107**		**Pn**	**21 39 13.0**	**+0.2**
L04D				IAML		21 40 11.3	
	comp=E,49nm,1.9s						
L04D				IAML		21 40 12.1	
	comp=N,55nm,1.5s						
M02C	**Callahan**	**4.66**	**118**		**Pn**	**21 39 12.2**	**-0.6**
WIFE	**Three Sisters-**	**4.69**	**84**		**Pn**	**21 39 14.3**	**+0.9**
WIFE				IAML		21 40 15.0	
	comp=E,57nm,2.6s						
WIFE				IAML		21 40 39.4	
	comp=N,44nm,3.4s						
NLWA	**Neilton Lookou**	**4.79**	**39**		**Pn**	**21 39 15.6**	**+1.0**
KHBM	**Hayfork Bally**	**4.87**	**128**		**Pn**	**21 39 14.4**	**-1.5**
FL2	**Flat Top 2**	**4.88**	**58**		**Pn**	**21 39 17.4**	**+1.4**
KMRM	**Mail Ridge**	**4.91**	**134**		**Pn**	**21 39 16.0**	**-0.3**
KMRM				IAML		21 40 22.4	
	comp=N,30nm,3.7s						
KMRM				IAML		21 42 10.1	
	comp=E,29nm,4.8s						
K04D	**Chiloquin, OR**	**4.91**	**101**	Pn	**Pn**	**21 39 15.9**	**-0.5**
HOOD	**Mount Hood Mea**	**5.00**	**69**		**Pn**	**21 39 18.7**	**+1.1**
I05D	**Terrebonne, OR**	**5.05**	**81**		**Pn**	**21 39 17.7**	**-0.6**
I05D				IAML		21 40 37.1	
	comp=E,43nm,4.1s						
I05D				IAML		21 41 32.9	
	comp=N,42nm,4.5s						
J05D	**Fort Rock, OR**	**5.16**	**93**		**Pn**	**21 39 20.1**	**+0.3**
J05D				IAML		21 40 34.3	
	comp=E,31nm,4.0s						
J05D				IAML		21 40 54.7	
	comp=N,36nm,4.8s						
G05A	**Wamic**	**5.21**	**71**		**Pn**	**21 39 21.6**	**+1.2**
PINE	**Pine Mountain**	**5.33**	**87**		**Pn**	**21 39 22.5**	**+0.3**
GNW	**Green Mountain**	**5.41**	**43**		**Pn**	**21 39 24.3**	**+1.2**
O02D	**Mt. Diablo Mer**	**5.44**	**129**		**Pn**	**21 39 23.5**	**-0.1**
LON	**Longmire**	**5.48**	**54**		**Pn**	**21 39 25.4**	**+1.3**
K05A	**Summer Lake**	**5.50**	**98**		**Pn**	**21 39 25.1**	**+0.5**
D05A	**Enumclaw**	**5.61**	**50**		**Pn**	**21 39 27.6**	**+1.7**
CLRS	**Cowichan Lake**	**5.84**	**28**		**Pn**	**21 39 28.8**	**-0.2**
O03E	**Paynes Creek**	**5.94**	**123**		**Pn**	**21 39 29.4**	**-1.1**
PGC	**Sidney**	**5.95**	**33**		**Pn**	**21 39 30.9**	**+0.5**
A04D	**Lummi Island**	**6.31**	**36**		**Pn**	**21 39 35.3**	**-0.1**
MXC	**Moxie City**	**6.33**	**61**		**Pn**	**21 39 36.6**	**+0.9**
F07A	**Phinny Hill Vi**	**6.33**	**67**		**Pn**	**21 39 36.1**	**+0.4**
I07A	**Izee**	**6.36**	**84**		**Pn**	**21 39 37.0**	**+0.7**
LTY	**Liberty**	**6.41**	**54**		**Pn**	**21 39 37.9**	**+1.0**
ORV	**Oroville**	**6.59**	**127**		**Pn**	**21 39 38.5**	**-0.8**
E07A	**Sunnyside**	**6.60**	**62**		**Pn**	**21 39 40.2**	**+0.7**
CBB	**Campbell River**	**6.60**	**17**		**Pn**	**21 39 39.4**	**-0.1**
HAWA	**Hanford**	**6.75**	**64**		**Pn**	**21 39 42.4**	**+0.9**
G08A	**Pilot Rock**	**6.85**	**74**		**Pn**	**21 39 43.7**	**+0.7**
WAH2	**Wahluke Slope**	**6.86**	**61**		**Pn**	**21 39 44.3**	**+1.3**
BMO	**Blue Mountains**	**7.96**	**78**		**Pn**	**21 39 58.7**	**+0.5**
LLLB	**Lillooet**	**8.13**	**30**		**Pn**	**21 40 00.9**	**+0.4**
CMB	**Columbia Colle**	**8.27**	**131**		**Pn**	**21 40 02.0**	**-0.4**
BBB	**Bella Bella**	**8.45**	**1**	Pn	**Pn**	**21 40 05.4**	**+0.7**
	comp=N,0.6nm,0.3s,baz=188,slow=14,SNR=8.3						
BBB				Sn	**Sn**	**21 41 38.8**	**-1.2**
	comp=N,0.2nm,0.3s,baz=199,slow=18,SNR=2.2						
	comp=N,22nm,1.1s						
BBB	**Bella Bella**	**8.45**	**1**		**Pn**	**21 40 03.3**	**-1.4**
NEW	**Newport**	**8.99**	**56**	Pn	**Pn**	**21 40 14.0**	**+1.7**
	comp=N,1.0nm,0.3s,baz=254,slow=13,SNR=8.3						
NEW				LR	LR	21 43 39.2	
	comp=N,3μm,20.7s,baz=242,slow=38						
	comp=N,4.2nm,0.5s						
NEW	**Newport**	**8.99**	**56**		**Pn**	**21 40 13.1**	**+0.8**
NVAR	**Mina Array Bea**	**9.22**	**122**	Pn	**Pn**	**21 40 19.6**	**+4.0**
	comp=N,0.2nm,0.3s,baz=293,slow=14,SNR=26						
NVAR				LR	LR	21 43 45.3	
	comp=N,1μm,19.9s,baz=304,slow=37						
	comp=N,4.2nm,0.8s						
HLID	**Hailey**	**10.07**	**86**		**Pn**	**21 40 27.5**	**+0.3**
ELK	**Elko**	**10.14**	**103**	Pn	**Pn**	**21 40 32.1**	**+4.0**
	comp=N,0.1nm,0.3s,baz=308,slow=10,SNR=6.9						
	comp=N,1.4nm,0.7s						
MCMT	**McKenzie Canyo**	**11.13**	**79**	Pn	**Pn**	**21 40 41.6**	**-0.1**
LRM	**Limekiln Ridge**	**11.45**	**74**	Pn	**Pn**	**21 40 46.5**	**+0.3**
LYMT	**Lyon Mountain**	**11.71**	**68**	Pn	**Pn**	**21 40 50.4**	**+0.7**
YHL	**Hebgen Lake**	**12.32**	**79**	Pn	**Pn**	**21 40 58.0**	**0.0**
SHPR	**Sheep Range**	**12.38**	**121**	Pn	**Pn**	**21 40 58.0**	**-0.8**
YHH	**Holmes Hill**	**12.55**	**79**	Pn	**Pn**	**21 41 02.0**	**+0.7**
H17A	**Grant Village**	**12.77**	**81**	Pn	**Pn**	**21 41 04.6**	**+0.4**
EDM	**Edmonton**	**13.69**	**41**		**Pn**	**21 41 16.7**	**+0.2**
PFO	**Pinyon Flats O**	**13.69**	**134**	LR	LR	21 46 17.8	
	comp=N,1μm,18.6s,baz=319,slow=36						
PD31	**Pinedale Array**	**13.70**	**88**		**Pn**	**21 41 17.4**	**+0.6**
PDAR	**Pinedale Array**	**13.70**	**88**	Pn	**Pn**	**21 41 20.9**	**+4.1**
	baz=272,slow=12,SNR=8.3						
PDAR				LR	LR	21 46 50.8	
	comp=N,1μm,19.5s,baz=269,slow=39						
	comp=N,1.4nm,0.9s						
PDAR	**Pinedale Array**	**13.70**	**88**		**Pn**	**21 41 17.1**	**+0.3**
BLYC	**Blythe**	**14.65**	**128**		**Pn**	**21 41 29.8**	**+0.2**
DLBC	**Dease Lake**	**14.75**	**356**	Pn	**P**	**21 41 34.5**	**-2.6**
	comp=N,0.3nm,0.3s,baz=169,slow=19,SNR=3.2						
DLBC				LR	LR	21 46 29.7	
	comp=N,923nm,18.3s,baz=134,slow=34						
	comp=N,1.3nm,0.3s						
ESJX	**Sierra Juarez**	**15.23**	**136**		**Pn**	**21 41 35.8**	**-1.8**
ESJX				IAmb	IAmb	21 41 41.8	
	comp=Z,36nm,1.8s						
WUAZ	**Wupatki**	**15.39**	**117**	Pn	**Pn**	**21 41 40.2**	**+0.4**
Y14A	**Wickenburg**	**15.40**	**124**	Pn	**Pn**	**21 41 40.4**	**+0.6**
PV23	**Carpenter Ridg**	**15.46**	**103**	Pn	**Pn**	**21 41 41.6**	**+0.9**
PV10	**Paradox Valley**	**15.48**	**104**	Pn	**Pn**	**21 41 41.7**	**+0.8**
PV10				IAmb	IAmb	21 41 44.5	
	comp=Z,15nm,1.3s						
113A	**Mohawk Valley,**	**15.80**	**129**		**P**	**21 41 47.1**	**-1.7**
LAO	**LASA Array**	**15.82**	**72**	Pn	**Pn**	**21 41 46.7**	**+1.5**
LAO				IAmb	IAmb	21 41 51.1	
	comp=Z,62nm,1.9s						
HAYD	**Hayden**	**15.93**	**94**	P	**P**	**21 41 49.0**	**-1.4**
W18A	**Petrified Fore**	**16.70**	**115**	P	**P**	**21 41 58.2**	**-0.8**
PIX	**Pinacate**	**16.88**	**131**		**Pn**	**21 41 58.8**	**+0.1**
S22A	**4UR Ranch, Cre**	**17.32**	**103**		**Pn**	**21 42 04.7**	**+0.3**
ISCO	**Idaho Springs**	**17.36**	**95**	Pn	**Pn**	**21 42 04.5**	**-0.5**
RSSD	**Black Hills**	**17.47**	**80**		**Pn**	**21 42 06.3**	**0.0**
TUC	**Tucson**	**17.87**	**124**		**Pn**	**21 42 08.4**	**-2.7**
SDCO	**Great Sand Dun**	**18.26**	**101**	P	**Pn**	**21 42 16.0**	**-0.1**
MMPY	**Sheldon Lake,**	**18.99**	**356**	P	**P**	**21 42 22.9**	**-1.0**
ANMO	**Albuquerque**	**19.00**	**110**	P	**Pn**	**21 42 25.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=289,slow=10,SNR=3.5						
	comp=Z,0.7nm,0.5s						
ANMO	**Albuquerque**	**19.00**	**110**	P	**P**	**21 42 22.9**	**-1.5**
Y22A	**Socorro**	**19.24**	**113**	P	**P**	**21 42 26.9**	**0.0**
121A	**Cookes Peak, D**	**19.58**	**118**		**P**	**21 42 30.3**	**-0.4**
121A				IAmb	IAmb	21 42 42.6	
	comp=Z,22nm,1.5s						
E28A	**Huff**	**19.63**	**72**		**P**	**21 42 31.2**	**+0.2**
WRGLY	**Wrigley**	**19.72**	**7**	P	**P**	**21 42 31.0**	**-0.8**
HSIG		**20.21**	**131**	P	**P**	**21 42 33.7**	**-3.8**
HSIG				IAmb	IAmb	21 42 49.0	
	comp=Z,6.8nm,0.7s						
FFC	**Flin Flon**	**20.27**	**48**		**P**	**21 42 37.6**	**-0.2**
FFC				IAmb	IAmb	21 42 42.8	
	comp=Z,20nm,0.9s						
YKA	**Yellowknife Ar**	**20.41**	**18**	P	Pn	21 42 41.3	-0.1
	comp=Z,3.1nm,0.8s,baz=213,slow=11,SNR=20						
YKA				LR	LR	21 49 11.4	
	comp=Z,174nm,21.1s,baz=120,slow=33						
	comp=Z,3.1nm,0.8s						
YKA	**Yellowknife Ar**	**20.41**	**18**		**P**	**21 42 39.3**	**0.0**
YKAW1	**Yellowknife Wh**	**20.43**	**19**		**P**	**21 42 38.5**	**-1.0**
YKAW3	**Yellowknife Wh**	**20.47**	**18**		**P**	**21 42 39.5**	**-0.5**
YKAW3				IAmb	IAmb	21 42 55.1	
	comp=Z,13nm,1

comp=Z,6.3nm,0.9s
G18K Tagagawik 27.74 334 P 21 43 49.9 -0.9
G18K IAmb IAmb 21 44 31.1
comp=Z,9.0nm,1.1s
F17K Baldwin Pennin 28.91 333 P 21 43 58.4 -2.8
F17K IAmb IAmb 21 44 28.3
comp=Z,20nm,1.4s
C16K Lisburne Hills 31.26 334 P 21 44 21.3 -0.6
FPAL Fort Paine 34.04 91 P P 21 44 46.9 +0.3
RES Resolute Bay 34.41 15 P P 21 44 48.6 -0.7
RES IAmb IAmb 21 45 07.1
comp=Z,6.8nm,0.9s
ILON Igloolik, Nuna 34.80 27 P 21 44 51.5 -1.2
CMIG Matias Romero 38.76 123 LR LR 22 02 00.2
comp=Z,164nm,21.8s,baz=336,slow=37
FRB Frobisher Bay 38.78 38 P P 21 45 28.6 +1.9
comp=Z,3.2nm,0.8s,baz=272,slow=11,SNR=6.7
FRB LR LR 22 01 34.9
comp=Z,314nm,19.2s,baz=272,slow=36
comp=Z,3.2nm,0.8s
SCHQ Schefferville 40.33 52 LR LR 22 02 09.0
comp=Z,262nm,21.4s,baz=277,slow=36
BILL Bilibino 41.26 329 P 21 45 44.6 -2.7
BILL IAmb IAmb 21 46 00.0
comp=Z,7.6nm,1.2s
SFJD Kangerlussuaq 46.02 32 LR LR 22 04 26.6
comp=Z,304nm,19.0s,baz=279,slow=34
SEY Seymchan 47.61 323 LR LR 22 06 23.3
comp=Z,265nm,18.1s,baz=104,slow=36
PETK Petropavlovsk- 47.92 309 P P 21 46 43.4 +2.7
comp=Z,3.6nm,0.9s,baz=97,slow=11,SNR=4.0
PETK LR LR 22 03 29.6
comp=Z,84nm,21.2s,baz=75,slow=32
comp=Z,3.6nm,0.9s
PETK Petropavlovsk- 47.92 309 P P 21 46 38.9 -1.8
MA2 Magadan 49.37 319 LR LR 22 06 34.3
comp=Z,222nm,19.5s,baz=80,slow=35
TIXI Tiksi 52.95 337 LR LR 22 10 19.7
comp=Z,286nm,20.6s,baz=76,slow=37
SPITS Spitsbergen Ar 56.47 8 LR LR 22 12 56.3
comp=Z,216nm,18.9s,baz=338,slow=37
YAK Yakutsk 57.55 327 LR LR 22 10 43.1
comp=Z,181nm,22.0s,baz=88,slow=34
SJG San Juan 57.66 96 LR LR 22 15 08.3
comp=Z,77nm,18.1s,baz=158,slow=39
BORG Borgarnes 57.88 29 LR LR 22 13 25.1
comp=Z,237nm,19.0s,baz=108,slow=37
H11N3 WAKE ISLAND Hy 58.54 268 T T 22 51 25.1
baz=49,slow=75,SNR=464
H11N2 WAKE ISLAND Hy 58.54 268 T T 22 51 14.0
baz=49,slow=75,SNR=409
H11N1 WAKE ISLAND Hy 58.56 268 T T 22 51 21.5
baz=49,slow=75,SNR=315
H11S1 WAKE ISLAND Hy 59.47 267 T T 22 52 20.3
baz=50,slow=75,SNR=362
H11S2 WAKE ISLAND Hy 59.48 267 T T 22 52 21.1
baz=50,slow=75,SNR=264
H11S3 WAKE ISLAND Hy 59.49 267 T T 22 52 18.1
baz=50,slow=75,SNR=257
SDV Santo Domingo 60.74 107 LR LR 22 17 13.9
comp=Z,92nm,19.0s,baz=50,slow=39
ASAJ Asahikawa 60.91 305 LR LR 22 09 38.2
comp=Z,58nm,21.9s,baz=48,slow=31
ROSC El Rosal 61.15 113 LR LR 22 20 02.9
comp=Z,170nm,18.2s,baz=89,slow=41
KLR Kul'dur 64.01 314 LR LR 22 14 09.3
comp=Z,14nm,21.3s,baz=50,slow=34
PPT Papeete 64.06 203 LR LR 22 09 08.1
comp=Z,34nm,21.6s,baz=7.0,slow=29
ARCES ARCESS Array B 65.40 10 LR LR 22 18 40.5
comp=Z,99nm,18.5s,baz=333,slow=37
ATAH Atahualpa 67.78 125 LR LR 22 16 20.6
comp=Z,159nm,19.1s,baz=27,slow=34
MJAR Matsushiro Arr 68.11 300 P P 21 49 05.8 +3.4
comp=Z,0.9nm,0.7s,baz=40,slow=9.0,SNR=2.2
comp=Z,0.9nm,0.7s
NOA NORSAR Array B 70.51 20 P P 21 49 18.7 +1.8
comp=Z,1.3nm,0.9s,baz=334,slow=5.9,SNR=3.2
NOA LR LR 22 18 55.7
comp=Z,88nm,19.6s,baz=295,slow=35
comp=Z,1.3nm,0.9s
RAR Rarotonga 70.80 211 LR LR 22 12 27.5
comp=Z,149nm,20.5s,baz=18,slow=29
EKA Eskdalemuir Ar 70.90 30 LR LR 22 18 34.7
comp=Z,153nm,19.8s,baz=288,slow=34
JCJ Chichijima 71.48 290 LR LR 22 15 13.6
comp=Z,69nm,20.3s,baz=106,slow=31
RPN Rapa Nui 72.64 162 LR LR 22 13 14.7
comp=Z,123nm,21.5s,baz=40,slow=29
FINES FINESS Array B 73.12 13 LR LR 22 22 07.4
comp=Z,96nm,18.4s,baz=337,slow=36
TLY Talaya 74.87 329 LR LR 22 23 16.1
comp=Z,198nm,19.1s,baz=30,slow=36
JNU Nakatsue 74.90 301 LR LR 22 26 45.9
comp=Z,42nm,18.0s,baz=42,slow=39
MDP Montagnes des 76.13 96 LR LR 22 24 34.6
comp=Z,213nm,20.5s,baz=68,slow=37
SONM Songino Array 76.88 326 P P 21 49 56.3 +1.6
comp=Z,0.9nm,0.9s,baz=46,slow=3.8,SNR=5.5
SONM LR LR 22 24 00.6
comp=Z,185nm,18.2s,baz=30,slow=36
comp=Z,0.9nm,0.9s
SONM Songino Array 76.88 326 P P 21 49 50.8 -3.8
KIRV Kirov 78.02 1 LR LR 22 26 10.7
comp=Z,94nm,21.5s,baz=357,slow=37
GUMO Guam 78.47 278 LR LR 22 21 02.8
comp=Z,70nm,18.5s,baz=62,slow=33
ZALV Zalesovo Beam 78.64 341 P P 21 50 07.3 +3.1
comp=Z,0.4nm,0.6s,baz=6.9,slow=4.9,SNR=3.8
ZALV LR LR 22 27 05.7
comp=Z,118nm,18.1s,baz=27,slow=37
comp=Z,0.4nm,0.6s
ZALV Zalesovo Beam 78.64 341 P P 21 50 03.1 -1.0
HHC Hu-ho-hao-te 80.04 318 eP P 21 50 15.4 +3.2
HHC pmax pmax
comp=Z,7.0nm,0.5s
HHC pmax pmax
comp=Z,100nm,5.7s
ARTI Arti 80.08 356 LR LR 22 27 33.8
comp=Z,76nm,19.7s,baz=18,slow=37
LPAZ La Paz 81.13 123 P P 21 50 20.6 +1.7
comp=Z,0.9nm,0.3s,baz=345,slow=7.0,SNR=5.4
comp=Z,0.9nm,0.3s
LPAZ La Paz 81.13 123 P P 21 50 17.5 -1.4
LPAZ IAmb IAmb 21 50 27.2
comp=Z,5.8nm,1.1s
GERES GERESS Array B 81.95 24 P P 21 50 23.6 +1.4
comp=Z,0.3nm,0.6s,baz=343,slow=3.1,SNR=2.2
GERES LR LR 22 27 16.2
comp=Z,77nm,18.2s,baz=312,slow=36
comp=Z,0.3nm,0.6s
BVAR Borovoye Array 82.27 349 P P 21 50 25.3 +1.6
comp=Z,0.4nm,0.5s,baz=351,slow=4.5,SNR=1.9
BVAR LR LR 22 32 02.4
comp=Z,109nm,18.1s,baz=13,slow=39
comp=Z,0.4nm,0.5s
VRAC Vranov 82.36 22 LR LR 22 26 25.8
comp=Z,62nm,21.5s,baz=324,slow=35
DAVOX Davos/Dischmat 82.57 28 LR LR 22 26 52.9
comp=Z,131nm,18.7s,baz=305,slow=36
NJ2 Nanjing 82.82 308 eP P 21 50 30.8 +3.9
NJ2 pmax pmax
comp=Z,1.0nm,0.6s
ESDC Sonseca Array 82.95 40 P P 21 50 29.5 +1.9
comp=Z,0.7nm,1.1s,baz=327,slow=5.6,SNR=1.6
ESDC LR LR 22 24 00.6
comp=Z,105nm,19.8s,baz=286,slow=33
comp=Z,0.7nm,1.1s
KURK Kurchatov 83.05 343 P P 21 50 25.1 -2.6
KURK IAmb IAmb 21 50 38.8
comp=Z,4.4nm,1.1s
KURBB Kurchatov Arra 83.15 343 P P 21 50 29.7 +1.4
comp=Z,0.4nm,0.6s,baz=15,slow=4.7,SNR=2.8
KURBB LR LR 22 30 48.5
comp=Z,83nm,18.5s,baz=161,slow=38
comp=Z,0.4nm,0.6s
HNR Honiara 83.59 251 LR LR 22 19 37.4
comp=Z,13nm,21.9s,baz=146,slow=30
AKASG Malin Array Be 83.92 14 LR LR 22 28 20.6
comp=Z,85nm,19.2s,baz=350,slow=36
SIV San Ignacio 85.34 117 LR LR 22 33 16.3
comp=Z,139nm,18.8s,baz=61,slow=39
MKAR Makanchi Array 85.87 339 P P 21 50 43.5 +1.3
comp=Z,0.6nm,1.0s,baz=353,slow=3.5,SNR=3.3
MKAR LR LR 22 31 17.4
comp=Z,146nm,19.0s,baz=11,slow=37
comp=Z,0.6nm,1.0s
MKAR Makanchi Array 85.87 339 P P 21 50 41.7 -0.6
MAKZ Makanchi 85.94 340 P 21 50 41.5 -1.1
MAKZ IAmb IAmb 21 50 54.5
comp=Z,3.9nm,1.1s
AKTO Aktyubinsk 86.04 356 LR LR 22 31 28.5
comp=Z,49nm,19.8s,baz=318,slow=37
AB31 Akbulak array 87.10 355 P P 21 50 46.0 -2.1
AB31 IAmb IAmb 21 51 09.6
comp=Z,3.9nm,1.1s
ABKAR Akbulak array 87.10 355 P P 21 50 45.5 -2.6
LZDM Lanzhou Array 87.67 320 LR LR 22 31 54.8
comp=Z,120nm,18.2s,baz=55,slow=37
MDT Midelt 88.10 45 LR LR 22 29 07.3
comp=Z,72nm,18.2s,baz=276,slow=35
MLR Muntele Rosu 88.25 18 LR LR 22 29 04.1
comp=Z,85nm,21.4s,baz=335,slow=35
AAK Ala-Archa 91.61 343 LR LR 22 35 18.2
comp=Z,142nm,18.2s,baz=28,slow=38
KEST Kesra 92.01 33 LR LR 22 31 08.8
comp=Z,166nm,20.2s,baz=314,slow=35
VAE Valguarnera 92.36 29 LR LR 22 34 20.4
comp=Z,127nm,18.1s,baz=352,slow=37
PMG Port Moresby 92.52 259 LR LR 22 25 43.6
comp=Z,117nm,20.7s,baz=90,slow=31
KBZ Khabaz 92.55 6 LR LR 22 36 35.8
comp=Z,75nm,18.2s,baz=356,slow=38
BDFB Brasilia 93.83 108 LR LR 22 36 57.6
comp=Z,95nm,20.0s,baz=335,slow=38
BRTR Keskin Array B 95.32 14 LR LR 22 37 09.2
comp=Z,50nm,18.4s,baz=316,slow=37
URZ Urewera 95.41 220 LR LR 22 26 23.4
comp=Z,122nm,21.0s,baz=40,slow=30
GNI Garni 96.25 5 LR LR 22 36 33.6
comp=Z,43nm,21.8s,baz=348,slow=36

*KRNET **19** 21:41:40.2±0.1, 42°.13N×71°.90E, h26km, mb3.4*
*SOME **19** 21:41:41.3, 42°.08N×72°.00E, h15km*
*NNC **19** 21:41:42.7±0.4, 42°.25N×71°.98E, h0km, mb3.6, mpv3.6, Error ellipse: s-maj=5.6km s-min=1.6km az=4.0*
*KNET **19** 21:41:43.1±0.3, 42°.16N×72°.14E, h7km±2km, ml2.9, Error ellipse: s-maj=3.9km s-min=2.2km az=169.0*
*ISU **19** 21:41:46, 42°.08N×72°.02E, h17km*
ISC 19 21:41:40.7±1.0, **42°.14N**±0°.02×**72°.01E**±0°.01, **h7**km±9km, **n76**, σ1**s18**/135, **45C-29D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.34**	**185**	↑	*eP*		**Pg**	**21 41 47.5**	**+0.1**
ARK				↑	*eS*		**Sg**	**21 41 52.6**	**+0.7**
MNAS	**Manas**	**0.51**	**47**	↑	*eP*		**Pb**	**21 41 51.7**	**-0.3**
MNAS				↑	*eS*		**Sb**	**21 41 59.8**	**+0.2**
TRKS	**Terek-Say**	**0.89**	**227**	↑	*eP*		**Pg**	**21 41 56.6**	**-1.1**
TRKS				↑	*eS*		**Sg**	**21 42 08.1**	**-1.2**
DZA	**Taraz** 40nm,0.1s	**0.90**	**327**		P		**Pg**	**21 41 58.0**	**0.0**
DZA					S		**Sg**	**21 42 09.7**	**0.0**
DZA	**Taraz.** 148nm,0.2s 40nm,0.1s	**0.90**	**327**		*eP*		**Pg**	**21 41 58.0**	**0.0**
DZA					*eS*		**Sb**	**21 42 10.0**	**-0.9**
KSNS	**Kasansay** 148nm,0.2s	**1.04**	**201**		P		**Pb**	**21 42 00.4**	**-0.7**
KSNS					S		**Sb**	**21 42 14.5**	**-0.5**
MRKS	**Merke** 27nm,0.3s	**1.09**	**56**		P		**Pn**	**21 42 02.3**	**-0.1**
MRKS					S		**Sn**	**21 42 17.7**	**0.0**
MRKS	**Merke** 154nm,0.2s 27nm,0.3s	**1.09**	**56**		*eP*		**Pn**	**21 42 02.3**	**-0.1**
MRKS					*eS*		**Sn**	**21 42 17.7**	**0.0**
ARSB	**Arslanbob**	**1.09**	**138**	↓	*eP*		**Pb**	**21 42 01.4**	**-0.6**
ARSB				↓	*eS*		**Sb**	**21 42 16.7**	**+0.2**
EKS2	**Erkin-Say** 9.4nm,0.1s,SNR=34	**1.41**	**68**	↑	P		**Pg**	**21 42 08.1**	**+0.4**
EKS2				↑	S		**Sg**	**21 42 27.8**	**+1.8**
EKS2	**Erkin-Say** 33nm,0.2s	**1.41**	**68**	↓	*eP*		**Pb**	**21 42 07.5**	**+0.1**
EKS2				↓	*eS*		**Sg**	**21 42 27.1**	**+1.1**
KK31	**Karatay Array** 8.1nm,0.3s,baz=132,slow=17,SNR=167	**1.47**	**312**		P		**Pn**	**21 42 07.3**	**-0.2**
KK31				↑	S		**Sg**	**21 42 27.4**	**-0.3**
IUG	**luzhnay** 249nm,0.2s	**1.47**	**271**		P		**Pg**	**21 42 09.3**	**+0.5**
IUG					S		**Sg**	**21 42 29.3**	**+1.5**
IUG	**luzhnay** 198nm,0.2s 249nm,0.2s	**1.47**	**271**		*eP*		**Pg**	**21 42 09.3**	**+0.5**
IUG					*eS*		**Sg**	**21 42 29.3**	**+1.5**
CHMG	**Chimgan**	**1.60**	**249**		P		**Pn**	**21 42 08.7**	**-0.8**
CHMG					S		**Sn**	**21 42 30.0**	**-0.5**
CHRV	**Charvak**	**1.61**	**253**		P		**Pb**	**21 42 10.2**	**-0.6**
CHRV					S		**Sb**	**21 42 32.1**	**+0.7**
OHH	**Osh**	**1.72**	**160**	↑	*eP*		**Pn**	**21 42 11.2**	**+0.2**
OHH				↑	*eS*		**Sn**	**21 42 33.7**	**+0.4**
ARLS	**Aral**	**1.75**	**98**	↑	*eP*		**Pb**	**21 42 12.7**	**-0.5**
ARLS				↑	*eS*		**Sb**	**21 42 36.2**	**+0.8**
FRG	**Fergana**	**1.77**	**186**		P		**Pg**	**21 42 14.6**	**0.0**
FRG					S		**Sg**	**21 42 37.8**	**+0.2**
CHM	**Chimkent** 131nm,0.2s	**1.79**	**277**		*eP*		**Pg**	**21 42 14.7**	**-0.3**
CHM					*eS*		**Sg**	**21 42 39.0**	**+0.7**
BRLS	**Borolday** 5.3nm,0.2s	**1.83**	**300**		P		**Pg**	**21 42 15.8**	**0.0**
BRLS					S		**Sg**	**21 42 40.1**	**+0.5**
BRLS	**Borolday** 74nm,0.3s 5.3nm,0.2s	**1.83**	**300**		*eP*		**Pg**	**21 42 15.8**	**0.0**
BRLS					*eS*		**Sg**	**21 42 40.1**	**+0.5**
MINT	**Mingtut** 74nm,0.3s	**1.84**	**205**		S		**Sg**	**21 42 41.3**	**+1.4**
TVKS	**Tavaksay**	**1.85**	**253**		P		**Pb**	**21 42 13.9**	**-0.9**
TVKS					S		**Sb**	**21 42 38.7**	**+0.6**
SALK	**Salom-Alik**	**1.85**	**132**	↓	*eP*		**Pn**	**21 42 13.7**	**+0.7**
SALK				↓	*eS*		**Sb**	**21 42 38.1**	**-0.3**
UCH	**Uchtor** 10.0nm,0.2s,SNR=39	**1.86**	**86**	↓	P		**Pg**	**21 42 16.4**	**0.0**
UCH				↑	S		**Sg**	**21 42 41.9**	**+1.3**
UCH	**Uchtor** 83nm,0.3s	**1.86**	**86**	↑	*eP*		**Pb**	**21 42 14.5**	**-0.8**
UCH				↑	*eS*		**Sb**	**21 42 39.4**	**+0.4**
AAK	**Ala-Archa** 14nm,0.2s,SNR=46	**1.91**	**74**	↓	P		**Pg**	**21 42 17.1**	**-0.2**
AAK				↓	S		**Sg**	**21 42 43.1**	**+1.1**
AAK	**Ala-Archa** 37nm,0.3s 4.8nm,0.4s	**1.91**	**74**	↓	Pn		**Pg**	**21 42 17.2**	**-0.1**
AAK				↑	Sn		**Sg**	**21 42 42.6**	**+0.6**
AAK	**Ala-Archa** 5.5nm,0.5s	**1.91**	**74**	↑	*eP*		**Pb**	**21 42 14.9**	**-1.0**
AAK				↑	*eS*		**Sb**	**21 42 40.0**	**0.0**
FRU1	**Bishkek**	**2.05**	**70**	↑	*eP*		**Pb**	**21 42 16.8**	**-1.5**
FRU1				↑	*eS*		**Sb**	**21 42 43.2**	**-0.9**
USP	**Ospenovka** 36nm,0.3s,SNR=68	**2.16**	**58**	↑	P		**Pb**	**21 42 20.7**	**+0.7**
USP				↑	S		**Sg**	**21 42 50.1**	**+0.2**
USP	**Ospenovka** 158nm,0.3s	**2.16**	**58**	↓	*eP*		**Pn**	**21 42 18.1**	**+1.1**
USP				↓	*eS*		**Sb**	**21 42 45.6**	**-1.4**
CHMS	**Chumysh** 8.5nm,0.2s,SNR=22	**2.20**	**66**	↓	P		**Pb**	**21 42 21.7**	**+0.9**
CHMS				↑	S		**Sg**	**21 42 52.0**	**+0.6**
CHMS	**Chumysh** 48nm,0.2s	**2.20**	**66**	↓	*eP*		**Pb**	**21 42 18.9**	**-1.9**
CHMS				↓	*eS*		**Sb**	**21 42 46.9**	**-1.4**
KBK	**Karagaybulak** 15nm,0.2s,SNR=28	**2.24**	**76**	↑	P		**Pb**	**21 42 22.2**	**+0.7**
KBK				↑	S		**Sg**	**21 42 52.6**	**+0.1**
KBK	**Karagaybulak** 107nm,0.3s	**2.24**	**76**	↑	*eP*		**Pn**	**21 42 19.5**	**+1.2**
KBK				↑	*eS*		**Sb**	**21 42 48.1**	**-1.4**
BTK	**Batken**	**2.27**	**204**	↑	*eP*		**Pn**	**21 42 18.1**	**-0.5**
BTK				↑	*eS*		**Sn**	**21 42 45.6**	**-1.2**
SGDS	**Sogindy** 12nm,0.1s	**2.33**	**55**		Pg		**Pg**	**21 42 25.3**	**-0.1**
SGDS					Lg		Lg	21 42 56.6	
NZBK	**Nazarbek** 82nm,0.4s	**2.35**	**248**		P		**Pg**	**21 42 25.4**	**-0.3**
NZBK					S		**Sg**	**21 42 56.8**	**+0.7**
SFK	**Sufi-Kurgan**	**2.41**	**151**	↑	*eP*		**Pn**	**21 42 21.2**	**+0.5**
SFK				↑	*eS*		**Sn**	**21 42 50.8**	**+0.3**
DRK	**Karamyk**	**2.66**	**183**	↓	*eP*		**Pn**	**21 42 24.1**	**-0.1**
DRK				↓	*eS*		**Sn**	**21 42 56.0**	**-0.9**
TKM2	**Tokmak 2** 10nm,0.2s,SNR=23	**2.77**	**72**	↑	P		**Pb**	**21 42 29.5**	**-1.0**
TKM2	**Tokmak 2**	**2.77**	**72**	↓	*eP*		**Pn**	**21 42 26.8**	**+1.2**
TKM2				↓	*eS*		**Sn**	**21 43 00.7**	**+1.4**
JNKS	**Jany-Kuch**	**2.92**	**111**	↑	*eP*		**Pn**	**21 42 29.2**	**+1.4**
JNKS				↑	*eS*		**Sn**	**21 43 04.8**	**+1.5**
BOOM	**Boomskoye usch**	**2.94**	**82**	↓	*eP*		**Pn**	**21 42 29.2**	**+1.3**
BOOM				↓	*eS*		**Sn**	**21 43 04.8**	**+1.3**
DGS	**Degeres** 6.7nm,0.3s	**2.99**	**67**		Pg		**Pg**	**21 42 36.6**	**-1.3**
DGS					Lg		Lg	21 43 16.0	
DGS	**Degeres** 46nm,0.5s 6.7nm,0.3s	**2.99**	**67**		*eP*		**Pg**	**21 42 36.6**	**-1.3**
DGS					*eS*		**Sg**	**21 43 16.0**	**-0.6**
KST	**Kastek** 46nm,0.5s 8.0nm,0.3s	**3.06**	**71**		Pg		**Pg**	**21 42 37.8**	**-1.4**
KST					Lg		Lg	21 43 18.1	
KST	**Kastek** 66nm,0.5s 8.0nm,0.3s	**3.06**	**71**		*eP*		**Pg**	**21 42 37.8**	**-1.4**
KST					*eS*		**Sg**	**21 43 18.1**	**-0.8**
NRN	**Naryn**	**3.07**	**102**	↑	*eP*		**Pn**	**21 42 30.7**	**+0.9**
NRN				↑	*eS*		**Sn**	**21 43 07.5**	**+0.5**
KRBS	**Karabastau** 32nm,0.2s 4.5nm,0.4s	**3.11**	**59**		Pg		**Pg**	**21 42 38.8**	**-1.5**
KRBS					Lg		Lg	21 43 19.6	
KRBS	**Karabastau** 23nm,0.4s 4.5nm,0.4s	**3.11**	**59**		*eP*		**Pg**	**21 42 38.8**	**-1.5**
KRBS					*eS*		**Sg**	**21 43 19.6**	**-1.0**
ULHL	**Ulahol** 18nm,0.1s	**3.15**	**87**	↑	*eP*		**Pn**	**21 42 32.2**	**+1.4**
ULHL				↑	*eS*		**Sn**	**21 43 10.0**	**+1.2**
MTBS	**Maitube** 2.3nm,0.2s	**3.41**	**72**		Pg		**Pg**	**21 42 44.5**	**-1.4**
MTBS					Lg		Lg	21 43 29.4	
MTBS	**Maitube** 28nm,0.4s 2.3nm,0.2s	**3.41**	**72**		*eP*		**Pg**	**21 42 44.5**	**-1.4**
MTBS					*eS*		**Sg**	**21 43 29.4**	**-0.7**
IZV	**Izvestkoviy** 28nm,0.7s 6.4nm,0.4s	**3.52**	**74**		Pg		**Pg**	**21 42 46.5**	**-1.5**
IZV					Lg		Lg	21 43 32.6	
IZV	**Izvestkoviy** 18nm,0.1s 6.4nm,0.4s	**3.52**	**74**		*eP*		**Pg**	**21 42 46.5**	**-1.5**
IZV					*eS*		**Sg**	**21 43 32.6**	**-1.0**
KUU	**Kurty** 4.5nm,0.1s	**3.63**	**60**		Pg		**Pg**	**21 42 49.1**	**-1.0**
KUU					Lg		Lg	21 43 37.4	
KUU	**Kurty** 18nm,0.1s 4.5nm,0.1s	**3.63**	**60**		*eP*		**Pg**	**21 42 49.1**	**-1.0**
KUU					*eS*		**Sg**	**21 43 37.4**	**+0.2**
TNSS	**Tian-Shan** 18nm,0.1s 1.1nm,0.3s	**3.76**	**75**		Pg		**Pg**	**21 42 51.0**	**-1.6**
TNSS					Lg		Lg	21 43 40.3	
TNSS	**Tian-Shan** 4.5nm,0.5s 1.1nm,0.3s	**3.76**	**75**		*eP*		**Pg**	**21 42 51.0**	**-1.6**
TNSS					*eS*		**Sg**	**21 43 40.3**	**-1.0**
KTBS	**Karatobe** 4.5nm,0.5s 2.1nm,0.2s	**3.78**	**64**		Pg		**Pg**	**21 42 50.5**	**-2.5**
KTBS					Lg		Lg	21 43 40.5	
KTBS	**Karatobe** 0.1nm,0.4s 2.1nm,0.2s	**3.78**	**64**		*eP*		**Pg**	**21 42 50.5**	**-2.5**
KTBS					*eS*		**Sg**	**21 43 40.5**	**-1.4**
KDJ	**Kajisay** 0.1nm,0.4s	**3.85**	**88**	↑	*eP*		**Pn**	**21 42 42.0**	**+1.6**
KDJ				↑	*eS*		**Sn**	**21 43 26.9**	**+0.9**
MDOK	**Medeo** 5.7nm,0.3s	**3.86**	**73**		Pg		**Pg**	**21 42 52.7**	**-1.8**
MDOK					Lg		Lg	21 43 42.9	
CHGR	**Chuyangaron** 19nm,0.5s	**4.10**	**213**	↓	*eP*		**Pn**	**21 42 43.4**	**-0.4**
CHGR				↓	*eS*		**Sn**	**21 43 29.3**	**-2.8**
TARG	**Taragay, Kyrgy**	**4.34**	**93**	↓	*eP*		**Pn**	**21 42 48.8**	**+1.3**
TARG				↓	*eS*		**Sn**	**21 43 38.8**	**+0.2**
PRZ	**Przheval'sk**	**4.75**	**84**	↓	*eP*		**Pn**	**21 42 54.4**	**+1.5**
PRZ				↓	*eS*		**Sn**	**21 43 48.3**	**0.0**
SATY	**Saty** 4.4nm,0.3s	**4.81**	**77**		Pg		**Pg**	**21 43 11.2**	**-1.6**
SATY					Lg		Lg	21 44 14.6	
KPKS	**Kokpek** 8.1nm,0.5s 0.8nm,0.3s	**5.09**	**73**		Pg		**Pg**	**21 43 15.8**	**-2.3**
KPKS					Lg		Lg	21 44 23.3	
KPKS	**Kokpek** 6.6nm,0.5s 0.8nm,0.3s	**5.09**	**73**		*eP*		**Pg**	**21 43 15.8**	**-2.3**
KPKS					*eS*		**Sg**	**21 44 23.2**	**-0.8**
UZB	**Uzynbulak** 6.6nm,0.5s 3.1nm,0.2s	**5.27**	**77**		*eP*		**Pg**	**21 43 18.8**	**-2.8**
UZB					*eS*		**Sg**	**21 44 28.0**	**-1.9**
PDGK	**Podgornoye** 8.2nm,0.3s 1.7nm,0.6s	**5.64**	**75**	↑	Pg		**Pb**	**21 43 23.2**	**+3.8**
PDGK				↓	Lg		Lg	21 44 41.9	
MAKZ	**Makanchi** 9.3nm,1.0s 0.4nm,0.4s	**8.52**	**53**	↑	Pn		**Pn**	**21 43 46.2**	**+1.8**
MAKZ				↑	Lg		Lg	21 46 16.5	
MK31	**Makanchi Array** 1.8nm,0.7s 0.6nm,0.5s,baz=236,slow=12,SNR=58	**8.70**	**54**	↑	Pn		**Pn**	**21 43 50.1**	**+3.2**
MK31				↓	Lg		Lg	21 46 22.0	
	1.0nm,0.5s								

*MEX **19** 21:54:32.4±1.1, 15°.38N×93°.90W, h57km±29km, MD4.1*
*GCG **19** 21:54:32.3±1.8, 15°.54N×93°.74W, h38km±34km, MD4.1, Presumed earthquake*
ISC 19 21:54:29.3±1.3, **15°.42N**±0°.05×**93°.81W**±0°.03, **h87**km±12km, **n26**, σ2**s29**/45, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCIG		**0.63**	**64**		*i* P		**Pn**	**21 54 45.4**	**+0.5**
PCIG					*e*S		**Sn**	**21 54 55.3**	**-1.2**
CARR	**Arriaga**	**0.83**	**353**		*e*P		**Pn**	**21 54 47.7**	**+0.8**
CARR					*e*S		**Sn**	**21 54 59.7**	**-0.3**
TGIG		**1.50**	**26**		*e*P		**Pn**	**21 54 55.5**	**+0.4**
TGIG					*e*S		**Sn**	**21 55 11.7**	**-2.8**
TGIG		**1.50**	**26**		*i* P		**Pn**	**21 54 55.5**	**+0.4**
TGIG					*i* S		**Sn**	**21 55 11.5**	**-3.0**
PATR	**El Naranjo**	**1.55**	**101**		*e*P		**Pn**	**21 54 57.4**	**+1.6**
PATR					*e*S		**Sn**	**21 55 16.9**	**+1.1**
THIG		**1.57**	**109**		*e*P		**Pn**	**21 54 57.1**	**+1.2**
THIG					*e*S		**Sn**	**21 55 17.1**	**+1.1**
PAVE	**Pavencul**	**1.59**	**98**		*e*P		**Pn**	**21 54 58.2**	**+1.9**
PAVE					*e*S		**Sn**	**21 55 18.0**	**+1.3**
CHUJ	**Union Juarez**	**1.67**	**101**		*e*P		**Pn**	**21 54 59.3**	**+2.0**
CHUJ					*e*S		**Sn**	**21 55 20.0**	**+1.4**
SMCA	**Catarina**	**1.77**	**108**		*i* P		**Pn**	**21 55 00.0**	**+1.7**
CCIG	**Comitan**	**1.82**	**62**		*e*P		**Pn**	**21 55 01.6**	**+2.3**
CCIG					*e*S		**Sn**	**21 55 21.6**	**-0.4**
CCIG	**Comitan**	**1.82**	**62**		*i* P		**Pn**	**21 55 01.7**	**+2.5**
UXUV	**UXUV**	**1.91**	**350**		*e*P		**Pn**	**21 55 01.9**	**+1.6**
UXUV					*e*S		**Sn**	**21 55 20.3**	**-3.6**
CMIG	**Matias Romero**	**1.96**	**328**		*e*P		**Pn**	**21 55 02.7**	**+1.8**
CMIG					*e*S		**Sn**	**21 55 23.7**	**-1.2**
HUIG	**Huatulco**	**2.24**	**279**		*e*P		**Pn**	**21 55 04.8**	**+0.1**
HUIG					*e*S		**Sn**	**21 55 30.4**	**-1.3**
HUIG	**Huatulco**	**2.24**	**279**		*e*P		**Pn**	**21 55 07.4**	**+2.7**
STG2	**El Palmar, Qui**	**2.55**	**112**		*i* P		**Pn**	**21 55 07.3**	**-1.6**
STG2					*e*S		**Sn**	**21 55 32.5**	**-6.6**
STG8	**El Palmar, Qui**	**2.56**	**112**		*i* P		**Pn**	**21 55 07.4**	**-1.8**
STG5	**El Palmar, Qui**	**2.58**	**113**		*i* P		**Pn**	**21 55 07.6**	**-1.7**
APG	**El Apazote**	**3.25**	**97**		*i* P		**Pn**	**21 55 21.6**	**+3.1**
VHO	**Vista Hermosa**	**3.25**	**301**		*e*P		**Pn**	**21 55 18.9**	**+0.5**
VHO					*e*S	

TOIG	**Toxpalan**	**4.10**	**311**	*eP*	**Pn**	**21 55 31.8**	**+2.0**
TOIG				*eS*	**Sn**	**21 56 17.0**	**+0.3**
PNIG	**Pinotepa**	**4.27**	**284**	*eP*	**Pn**	**21 55 33.9**	**+1.9**
SCIG	**Sabancuy**	**4.33**	**35**	*eP*	**Pn**	**21 55 35.7**	**+2.9**
SCIG				*eS*	**Sn**	**21 56 17.2**	**-4.8**
FTIG	**Fresnillo de T**	**4.83**	**301**	*eP*	**Pn**	**21 55 41.5**	**+1.8**
FTIG				*eS*	**Sn**	**21 56 34.4**	**0.0**

IDC ***19*** *22:05:43.5±1.6, 11°.37S×119°.20E, h0km, mb3.7/3, mbtmp3.7/8, ML3.5/5, Error ellipse: s-maj=52.1km s-min=21.2km az=49.0*

ISC 19 22:05:45.9±0.8, 11°.45S±0°.06×119°.37E±0°.07, h21km, n17, σ3.980/21, mb4.0/4, South of Sumba

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**3.04**	**329**	P	**Pn**	**22 06 33.2**	**+0.3**
BATI	**Baumata**	**4.39**	**74**	Pn	**Pn**	**22 06 53.6**	**+2.2**
	1.3nm,0.3s,baz=104,slow=17,SNR=3.5						
BATI				Sn	**Sn**	**22 07 45.6**	**+3.5**
	11nm,0.3s,baz=229,slow=14,SNR=6.3						
	15nm,0.7s						
SOEI	**Soe**	**5.10**	**71**	P	Pn	22 07 07.1	+5.9
JAGI	**Jajag, Banyuwa**	**5.93**	**299**	P	**Pn**	**22 07 09.8**	**-2.8**
KAPI	**Kappang**	**6.41**	**3**	Pn	**Pn**	**22 07 18.8**	**-0.3**
	1.0nm,0.3s,baz=207,slow=16,SNR=1.7						
KAPI				Sn	**Sn**	**22 08 28.8**	**-2.8**
	4.2nm,0.3s,baz=42,slow=20,SNR=6.8						
	7.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**8.97**	**138**	Pn	**Pn**	**22 07 57.0**	**+2.7**
	1.0nm,0.3s,baz=329,slow=11,SNR=6.3						
FITZ				Sn	**Sn**	**22 09 30.9**	**-3.8**
	0.9nm,0.3s,baz=174,slow=20,SNR=2.7						
	5.1nm,0.6s						
MBWA	**Marble Bar**	**9.66**	**178**	P	**Pn**	**22 08 04.5**	**+0.7**
PSA00	**Pilbara Seismi**	**10.08**	**177**	P	**Pn**	**22 08 10.5**	**+1.0**
MEEK	**Meekatharra**	**15.12**	**183**	P	**Pn**	**22 09 18.2**	**-0.3**
WRA	**Warramunga Arr**	**16.69**	**122**	Pn	**Pn**	**22 09 39.3**	**+0.7**
	0.1nm,0.3s,baz=301,slow=14,SNR=5.6						
WRA				Sn	**Sn**	**22 12 34.8**	**-8.8**
	0.2nm,0.3s,baz=295,slow=22,SNR=5.1						
	0.4nm,0.6s						
MORW	**Morawa**	**17.80**	**190**	P	**Pn**	**22 09 52.2**	**-0.3**
ASAR	**Alice Springs**	**18.41**	**133**	P	**Pn**	**22 10 03.2**	**+3.2**
	0.2nm,0.3s,baz=311,slow=12,SNR=19						
ASAR				S	**Sn**	**22 13 16.4**	**-8.8**
	0.5nm,0.6s,baz=312,slow=24,SNR=4.8						
	1.1nm,0.7s						
BLDU	**Ballidu**	**19.23**	**187**	P	**Pn**	**22 10 09.6**	**-0.3**
NWAO	**Narrogin (SRO)**	**21.47**	**185**	P	**P**	**22 10 39.0**	**+6.0**
	2.9nm,0.3s,baz=2.0,slow=12,SNR=9.4						
NWAO				S	S	22 14 17.1	-13
	4.0nm,0.6s,baz=301,slow=22,SNR=1.4						
SONM	**Songino Array**	**60.14**	**350**	P	**P**	**22 15 52.3**	**+0.3**
	0.3nm,0.5s,baz=164,slow=7.5,SNR=2.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.79**	**333**	P	**P**	**22 16 36.1**	**+0.2**
	0.8nm,0.5s,baz=140,slow=6.7,SNR=16						
	0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**71.45**	**339**	P	**P**	**22 17 04.0**	**-0.6**
	0.6nm,0.6s,baz=145,slow=5.3,SNR=2.5						
	0.6nm,0.6s						

SCB ***19*** *22:31:51.5±1.3, 22°.69S×67°.60W, h122km±33km, ML3.3/3, Error ellipse: s-maj=5.1km s-min=4.3km az=0.0*

IDC ***19*** *22:32:00.9±8.6, 20°.90S×65°.68W, h367km±74km, mb2.9/1, mbtmp3.5/2, Error ellipse: s-maj=136.3km s-min=89.7km az=17.0*

ISC 19 22:31:49.6±1.5, 22°.66S±0°.07×67°.59W±0°.07, h167km, n12, σ1.958/14, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB06	**IPOC Station P**	**1.83**	**268**	Pg	**Pn**	**22 32 23.2**	**-0.9**
MOCB	**Mochara**	**2.29**	**53**	Pg	**Pn**	**22 32 30.1**	**+0.5**
MOCB				Sg	**Sn**	**22 32 59.9**	**-0.6**
MOCB				IAML		22 33 02.7	
	146nm,0.5s						
PB01	**IPOC Station P**	**2.39**	**312**	Pg	**Pn**	**22 32 31.4**	**+1.0**
PB02	**IPOC Station P**	**2.52**	**302**	Pg	**Pn**	**22 32 33.4**	**+1.4**
PB02				Sg	**Sn**	**22 33 04.1**	**-0.7**
PB02				IAML		22 33 20.9	
	100nm,0.3s						
PB08	**IPOC Station P**	**2.90**	**330**	Pg	**Pn**	**22 32 38.7**	**+1.8**
GO02	**Mina Guanaco**	**3.09**	**216**	Pg	**Pn**	**22 32 39.6**	**+0.5**
PB14	**IPOC Station P**	**3.24**	**232**	Pg	**Pn**	**22 32 42.3**	**+1.4**
GO01	**Chusmiza**	**3.33**	**333**	Pg	**Pn**	**22 32 43.6**	**+1.2**
PB11	**IPOC Station P**	**3.47**	**326**	Pg	**Sn**	**22 32 44.5**	**+0.7**
PB11				Sg	**Sn**	**22 33 25.0**	**-0.9**
PB11				IAML		22 33 36.4	
	68nm,0.3s						
LPAZ	**La Paz**	**6.36**	**355**	P	**Pn**	**22 33 23.6**	**+1.7**
	2.8nm,0.4s,baz=174,slow=9.2,SNR=14						
LPAZ				S	**Sn**	**22 34 30.9**	**-3.4**
	0.6nm,0.4s,baz=224,slow=18,SNR=1.1						
TORD	**Torodi Ar. Bea**	**76.60**	**69**	P	P	22 42 59.6	-23
	0.2nm,0.3s,baz=246,slow=6.0,SNR=5.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**145.82**	**38**	PKP	PKPdf	22 50 51.5	-17
	0.1nm,0.4s,baz=318,slow=1.9,SNR=1.8						

IDC 19 23:05:39.3±1.3, 3°.11S×127°.67E, h0km, mb3.5/3, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=42.8km s-min=24.0km az=68.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.22**	**58**	Pn	Pn	23 06 44.4	-0.6
	7.3nm,0.3s,baz=223,slow=23,SNR=19						
SIJI				Sn	Sn	23 07 29.9	-5.2
	2.0nm,0.3s,baz=147,slow=24,SNR=1.5						
	21nm,0.3s						
WRA	**Warramunga Arr**	**17.95**	**159**	P	Pn	23 09 50.5	-0.1
	0.2nm,0.3s,baz=336,slow=12,SNR=8.5						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**21.31**	**164**	P	P	23 10 28.6	+0.7
	0.7nm,0.3s,baz=345,slow=12,SNR=14						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**63.72**	**327**	P	P	23 16 12.7	-0.2
	0.3nm,0.6s,baz=122,slow=8.0,SNR=4.2						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**68.00**	**329**	P	P	23 16 40.3	-0.1
	0.4nm,0.6s,baz=138,slow=6.1,SNR=5.3						
	0.4nm,0.6s						

JSN ***19*** *23:06:21.3±2.0, 16°.97N×81°.15W, h0km±999km, MW4.6, Presumed earthquake*

SSNC 19 23:06:29.0±2.4, 18°.98N×80°.96W, h20km±74km, MD3.6, ML2.5, Presumed earthquake, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCCY	**Blossom Villag**	**1.08**	**50**	*eP*	Pn	23 06 47.7	-1.3
LCCY				*eS*	Sb	23 06 56.4	-6.2
CBCY	**The Bluff, Cay**	**1.37**	**56**	*eP*	Pn	23 06 51.2	-1.8
CBCY				*eS*	Sn	23 07 04.9	-5.6
CBCY				*eSg*	Sb	23 07 10.1	-0.9
CBCY				IAML		23 07 12.2	
	comp=N,124nm,0.3s						
CBCY				IAML		23 07 13.2	
	comp=E,41nm,0.3s						
MGV	**Manicaragua**	**3.25**	**16**	*eP*	Pn	23 07 16.9	-2.0
MTDJ	**Mount Denham**	**3.34**	**102**	*eP*	Pn	23 07 18.1	-2.1
CAIB	**Caibarien**	**3.77**	**21**	*eP*	Pn	23 07 23.9	-2.1
CAIB				*eS*	Sn	23 08 09.5	-0.2
STH	**Stony Hill**	**4.04**	**102**	*i P*	Pn	23 07 26.1	-3.7

IDC ***19*** *23:16:52.1±0.9, 18°.92N×81°.23W, h0km, mb3.9/14, mbtmp3.9/18, ML3.4/4, MS3.8/45, Error ellipse: s-maj=22.8km s-min=18.5km az=173.0*

NEIC ***19*** *23:16:53.2±2.0, 18°.86N±0°.06×81°.16W±0°.06, h10km±1km, mb4.4/46, Error ellipse: s-maj=11.0km s-min=9.7km az=214.0*

JSN ***19*** *23:16:54.6±1.3, 19°.72N×80°.96W, h50km±999km, MD4.6, MW4.6, Presumed earthquake*

SSNC ***19*** *23:17:03.3±2.4, 19°.37N×80°.48W, h64km±22km, MD4.3, ML2.9, Presumed earthquake*

ISC 19 23:16:52.2±0.4, 18°.83N±0°.05×81°.14W±0°.05, h10km, n144, σ1.945/118, mb4.4/29, MS3.8/40, 1C-1D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCCY	**Blossom Villag**	**1.30**	**50**	*eP*	**Pn**	**23 17 15.5**	**-1.0**
LCCY				IAML		23 17 27.5	
	comp=N,602nm,0.6s						
LCCY				IAML		23 17 27.9	
	comp=E,626nm,0.4s						
CBCY	**The Bluff, Cay**	**1.59**	**55**	*eP*	**Pn**	**23 17 18.7**	**-1.7**
CBCY				*eS*	Sn	23 17 27.6	-13
CBCY				IAML		23 17 29.7	
	comp=E,433nm,0.6s						
CBCY				IAML		23 17 31.3	
	comp=N,380nm,0.5s						
MGV	**Manicaragua**	**3.44**	**18**	*eP*	**Pn**	**23 17 44.4**	**-1.6**
MTDJ	**Mount Denham**	**3.47**	**99**		**Pn**	**23 17 46.2**	**-0.2**
MTDJ				Sn	**Sn**	**23 18 24.2**	**-3.4**
MTDJ	**Mount Denham**	**3.47**	**99**	*eP*	**Pn**	**23 17 46.0**	**-0.5**
MTDJ				*i P*	**Pn**	**23 17 46.0**	**-0.5**
MTDJ				*eS*	**Sn**	**23 18 21.9**	**-5.8**
MTDJ				*eSg*	Sb	23 18 26.8	-9.4
MTDJ	**Mount Denham**	**3.47**	**99**	*ǁ iP*	**Pn**	**23 17 46.7**	**+0.2**
CCCC	**Cccc**	**3.95**	**53**	*eP*	**Pn**	**23 17 52.7**	**-0.3**
LMGC	**Las Mercedes**	**4.09**	**72**	*eP*	**Pn**	**23 17 54.0**	**-0.8**
STH	**Stony Hill**	**4.18**	**100**	*ǁ iP*	**Pn**	**23 17 56.6**	**+0.5**
CAMR	**Camarioca**	**4.22**	**357**		**Pn**	**23 17 56.9**	**+0.3**
CAMR	**Camarioca**	**4.22**	**357**	*eP*	**Pn**	**23 17 56.1**	**-0.5**
HOJ	**Hope**	**4.25**	**100**	*i P*	**Pn**	**23 17 57.8**	**+0.8**
SOR	**Soroa**	**4.31**	**336**		**Pn**	**23 17 58.6**	**+0.6**
CHIV	**Chivirico**	**4.60**	**75**		**Pn**	**23 18 03.7**	**+1.8**
CHIV	**Chivirico**	**4.60**	**75**	*eP*	**Pn**	**23 18 03.2**	**+1.3**
YAR	**Yar**	**4.76**	**70**	*eP*	**Pn**	**23 18 01.9**	**-2.2**
RCC	**Rio Carpintero**	**5.26**	**76**	*eP*	**Pn**	**23 18 08.6**	**-2.4**
PINC	**Pinares de May**	**5.30**	**71**	*eP*	**Pn**	**23 18 10.3**	**-1.2**
GTBY	**Guantanamo Bay**	**5.79**	**78**	*eP*	**Pn**	**23 18 16.0**	**-2.3**
NMDO	**Nuevo Mundo**	**6.05**	**72**		**Pn**	**23 18 23.6**	**+1.8**
MASC	**Masc**	**6.65**	**77**	*eP*	**Pn**	**23 18 29.0**	**-1.1**
TEIG	**Tepich**	**6.87**	**283**		**Pn**	**23 18 31.2**	**-2.0**
061Z	**Ochoppi**	**7.01**	**2**		**Pn**	**23 18 35.3**	**+0.3**
061Z	**Ochoppi**	**7.01**	**2**	*eP*	**Pn**	**23 18 35.0**	**+0.1**
BOAB	**BOACO BROADBAN**	**7.70**	**215**	Pn	**Pn**	**23 18 43.7**	**-0.7**
MTO3	**Montecristo**	**9.03**	**242**		**Pn**	**23 19 04.0**	**+1.1**
JTS	**Las Juntas de**	**9.26**	**204**	Pn	**Pn**	**23 19 08.7**	**+2.8**
	comp=N,0.9nm,0.3s,baz=12,slow=20,SNR=2.0						
JTS				LR	LR	23 22 42.2	
	comp=N,768nm,18.2s,baz=60,slow=38						
	comp=N,4.5nm,0.5s						
JTS	**Las Juntas de**	**9.26**	**204**		**Pn**	**23 19 07.8**	**+1.9**
SDDR	**Presa de Saban**	**9.32**	**87**	Pn	**Pn**	**23 19 08.3**	**+1.4**
APG	**El Apazote**	**9.70**	**248**	Pn	**Pn**	**23 19 13.6**	**+1.4**
	comp=N,0.1nm,0.3s,baz=86,slow=16,SNR=9.3						
APG				Sn	**Sn**	**23 20 55.2**	**-6.2**
	baz=93,slow=16,SNR=1.1						
	comp=N,0.6nm,0.4s						
BANI	**BANI**	**10.23**	**91**	Pn	**Pn**	**23 19 20.8**	**+1.5**
656A	**Willston**	**10.57**	**353**		**Pn**	**23 19 22.9**	**-0.9**
CCIG	**Comitan**	**10.79**	**258**	Pn	**Pn**	**23 19 28.2**	**+1.2**
DR12	**Loma Pena Alta**	**11.13**	**88**	Pn	**Pn**	**23 19 32.4**	**+0.7**
TIGA	**Tifton**	**12.75**	**350**		**Pn**	**23 19 52.7**	**-0.9**
352A	**Blakely**	**13.05**	**346**	Pn	**Pn**	**23 19 56.2**	**-1.6**
CMIG	**Matias Romero**	**13.20**	**265**	Pn	**Pn**	**23 19 59.0**	**-0.8**
	comp=N,0.1nm,0.3s,baz=273,slow=12,SNR=1.5						
CMIG				Sn	Sn	23 22 17.5	-9.2
	comp=N,0.3nm,0.3s,baz=37,slow=22,SNR=1.7						
CMIG				LR	LR	23 25 06.8	
	comp=N,277nm,18.2s,baz=82,slow=38						
	comp=N,0.9nm,0.3s						
152A	**Waverly Hall**	**14.15**	**348**		**Pn**	**23 20 11.5**	**-1.3**
SDV	**Santo Domingo**	**14.19**	**133**	Pn	**Pn**	**23 20 12.5**	**-1.1**
	comp=N,1.8nm,0.3s,baz=354,slow=21,SNR=6.6						
SDV				LR	LR	23 26 18.7	
	comp=N,459nm,18.9s,baz=314,slow=40						
SDV	**Santo Domingo**	**14.19**	**133**		**Pn**	**23 20 12.4**	**-1.2**
SJG	**San Juan**	**14.24**	**90**	LR	LR	23 25 09.4	
	comp=N,233nm,21.8s,baz=287,slow=35						
GOGA	**Godfrey**	**14.67**	**352**		**Pn**	**23 20 18.1**	**-1.8**
LRAL	**Lakeview Retre**	**15.09**	**341**		**Pn**	**23 20 24.7**	**-0.9**
ROSC	**El Rosal**	**15.41**	**154**	LR	LR	23 26 19.0	
	comp=N,467nm,21.9s,baz=354,slow=36						
BG3	**Lake Jocassee**	**16.18**	**355**	Pn	**Pn**	**23 20 37.6**	**-2.2**
BG3				IAmb	IAmb	23 21 06.7	
	comp=Z,25nm,1.1s						
X48A	**Hartselle**	**16.43**	**342**		**Pn**	**23 20 43.7**	**+0.8**
CPCT	**Cooper Cave**	**16.83**	**350**	Pn	**Pn**	**23 20 48.2**	**+0.2**
V53A	**Saluda**	**16.84**	**355**		**Pn**	**23 20 48.3**	**+0.1**
TKL	**Tuckaleechee C**	**16.93**	**353**	Pn	**Pn**	**23 20 47.6**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=175,slow=11,SNR=6.2						
TKL				LR	LR	23 26 54.3	
	comp=Z,298nm,19.9s,baz=173,slow=36						
	comp=Z,6.6nm,0.8s						
TKL	**Tuckaleechee C**	**16.93**	**353**		**Pn**	**23 20 47.8**	**-1.4**
TKL				IAmb	IAmb	23 21 07.9	
	comp=Z,44nm,1.1s						
HKT	**Hockley**	**17.35**	**312**		**Pn**	**23 20 53.5**	**-1.0**
V48A	**Smith Brothers**	**17.58**	**345**	P	**Pn**	**23 20 57.8**	**+0.4**
Z41A	**Richland Creek**	**17.76**	**326**		**P**	**23 21 01.5**	**+1.0**
TZTN	**Tazewell**	**17.78**	**354**		**Pn**	**23 21 00.8**	**+0.9**
TZTN				IAmb	IAmb	23 21 28.9	
	comp=Z,21nm,1.0s						
U49A	**Red Boiling Sp**	**18.09**	**348**		**P**	**23 21 05.3**	**+1.3**
WVT	**Waverly**	**18.22**	**342**	P	**P**	**23 21 06.3**	**+0.8**
OTAV	**Otavalo**	**18.66**	**172**	P	**Pn**	**23 21 12.6**	**+1.3**
435B	**Jarrell**	**19.07**	**312**	P	**P**	**23 21 13.4**	**-1.5**
435B				IAmb	IAmb	23 21 23.9	
	comp=Z,31nm,1.1s						
WHAR	**Wooly Hollow**	**19.14**	**331**	P	**P**	**23 21 16.0**	**+0.3**
WHAR				IAmb	IAmb	23 21 35.9	
	comp=Z,25nm,1.2s						
HNDO	**Hondo**	**19.66**	**306**	P	**P**	**23 21 20.7**	**-0.7**
HNDO				IAmb	IAmb	23 21 40.6	
	comp=Z,20nm,1.2s						
BRDY	**Brady**	**20.35**	**311**		**P**	**23 21 29.4**	**+0.5**
BRDY				IAmb	IAmb	23 21 52.7	
	comp=Z,16nm,1.0s						
ZAIG	**Zacatecas**	**20.41**	**285**	P	**P**	**23 21 29.6**	**-0.3**
CCM	**Cathedral Cave**	**21.09**	**337**	P	**P**	**23 21 35.4**	**-1.4**
CCM				IAmb	IAmb	23 21 59.2	
	comp=Z,19nm,1.0s						
S39A	**Bolivar**	**21.60**	**333**	P	**P**	**23 21 42.9**	**+0.5**
S39A				IAmb	IAmb	23 21 55.1	
	comp=Z,20nm,0.9s						
DEOK	**Depew**	**21.71**	**324**		**P**	**23 21 43.3**	**-0.2**
WMOK	**Wichita Mounta**	**22.29**	**319**	P	**P**	**23 21 49.6**	**-0.1**
WMOK				IAmb	IAmb	23 22 27.9	
	comp=Z,21nm,1.4s						
APMT	**Aspermont**	**22.29**	**314**		**P**	**23 21 49.4**	**-0.4**
APMT				IAmb	IAmb	23 22 06.7	
	comp=Z,13nm,0.9s						
TXAR	**Lajitas Array**	**23.03**	**301**	P	**P**	**23 21 56.3**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=116,slow=8.6,SNR=7.1						
TXAR				LR	LR	23 32 36.1	
	comp=Z,41nm,19.8s,baz=102,slow=41						
	comp=Z,1.1nm,0.9s						
TXAR	**Lajitas Array**	**23.03**	**301**	P	**P**	**23 21 56.1**	**-1.7**
SADO	**Sadowa**	**25.92**	**3**	LR	LR	23 32 07.3	
	comp=Z,258nm,18.9s,baz=208,slow=35						
ATAH	**Atahualpa**	**25.94**	**174**	LR	LR	23 33 11.3	
	comp=Z,178nm,19.8s,baz=18,slow=38						
BOAV	**Boa Vista**	**25.97**	**127**	P	**P**	**23 22 25.6**	**+0.3**
BOAV				IAmb	IAmb	23 22 29.3	
	comp=Z,22nm,1.4s						
T25A	**Trinidad**	**27.36**	**317**		**P**	**23 22 38.1**	**+0.2**
LPIG	**La Paz**	**27.62**	**286**	LR	LR	23 35 01.9	
	comp=Z,104nm,20.4s,baz=52,slow=40						
ECSD	**EROS Data Cent**	**28.04**	**336**		**P**	**23 22 43.5**	**-0.2**
ECSD				IAmb	IAmb	23 22 53.1	
	comp=Z,11nm,1.1s						
ISCO	**Idaho Springs**	**29.70**	**320**	P	**P**	**23 22 59.0**	**+0.1**
ISCO				IAmb	IAmb	23 23 09.9	
	comp=Z,8.0nm,1.1s						
MDP	**Montagnes des**	**30.96**	**113**	LR	LR	23 35 16.9	
	comp=Z,177nm,22.0s,baz=122,slow=36						
ULM	**Lac du Bonnet**	**33.49**	**343**	P	**P**	**23 23 32.1**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=165,slow=3.8,SNR=3.5						
ULM				LR	LR	23 36 33.0	
	comp=Z,202nm,18.6s,baz=157,slow=35						
	comp=Z,0.5nm,0.3s						
PD31	**Pinedale Array**	**33.85**	**321**	P	**P**	**23 23 35.1**	**-0.2**
PDAR	**Pinedale Array**	**33.85**	**321**	P	**P**	**23 23 36.0**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=136,slow=7.2,SNR=14						
PDAR				LR	LR	23 38 49.5	
	comp=Z,41nm,20.3s,baz=110,slow=39						
	comp=Z,1.7nm,0.8s						

PDAR	**Pinedale Array**	**33.85**	**321**	P	**P**	**23 23 35.5**	**+0.3**
PSUT	**Pine Spring**	**34.51**	**312**	P	**P**	**23 23 40.8**	**-0.2**
PSUT				IAmb	IAmb	23 24 08.1	
	comp=Z,5.8nm,0.9s						
PFO	**Pinyon Flats O**	**34.75**	**302**	LR	LR	23 40 20.0	
	comp=Z,38nm,19.5s,baz=114,slow=41						
MOOW	**Moose Ponds**	**35.13**	**322**		**P**	**23 23 45.4**	**-0.8**
MOOW				IAmb	IAmb	23 23 56.8	
	comp=Z,6.7nm,0.9s						
TPNV	**Topopah Spring**	**35.64**	**308**	P	**P**	**23 23 51.2**	**+0.5**
TPNV				IAmb	IAmb	23 24 01.4	
	comp=Z,6.1nm,1.1s						
ELK	**Elko**	**36.44**	**314**	P	**P**	**23 23 58.7**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=109,slow=2.2,SNR=6.2						
ELK				LR	LR	23 40 27.2	
	comp=Z,97nm,21.2s,baz=134,slow=39						
	comp=Z,1.3nm,0.7s						
ELK	**Elko**	**36.44**	**314**	P	**P**	**23 23 58.2**	**+0.6**
ELK				IAmb	IAmb	23 24 08.7	
	comp=Z,5.2nm,1.0s						
MCMT	**McKenzie Canyo**	**36.99**	**322**	P	**P**	**23 24 02.4**	**+0.2**
LPAZ	**La Paz**	**37.17**	**159**	LR	LR	23 40 46.7	
	comp=Z,77nm,18.7s,baz=349,slow=38						
HLID	**Hailey**	**37.26**	**319**		**P**	**23 24 03.6**	**-0.8**
HLID				IAmb	IAmb	23 24 15.7	
	comp=Z,7.9nm,1.1s						
SCHQ	**Schefferville**	**37.57**	**14**	P	**P**	**23 24 08.1**	**+1.5**
	comp=Z,6.1nm,1.0s,baz=202,slow=8.1,SNR=3.8						
SCHQ				LR	LR	23 39 49.0	
	comp=Z,207nm,19.3s,baz=196,slow=37						
	comp=Z,6.1nm,1.0s						
SCHQ	**Schefferville**	**37.57**	**14**	P	**P**	**23 24 06.8**	**+0.2**
NVAR	**Mina Array Bea**	**37.69**	**309**	P	**P**	**23 24 09.4**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=135,slow=7.3,SNR=4.2						
	comp=Z,0.8nm,0.8s						
PLID	**Pearl Lake**	**39.02**	**320**		**P**	**23 24 19.5**	**+0.2**
PLID				IAmb	IAmb	23 24 29.6	
	comp=Z,12nm,1.1s						
WVOR	**Wild Horse Val**	**39.47**	**315**	P	**P**	**23 24 22.7**	**-0.3**
WVOR				IAmb	IAmb	23 24 34.4	
	comp=Z,14nm,1.1s						
SIV	**San Ignacio**	**39.84**	**149**	LR	LR	23 42 37.2	
	comp=Z,163nm,19.0s,baz=332,slow=39						
GO01	**Chusmiza**	**40.01**	**162**	P	**P**	**23 24 28.2**	**+0.2**
GO01				IAmb	IAmb	23 24 53.3	
	comp=Z,9.7nm,1.1s						
NEW	**Newport**	**41.34**	**324**	P	**P**	**23 24 38.3**	**0.0**
	comp=Z,0.9nm,0.5s,baz=140,slow=7.6,SNR=1.9						
NEW				PcP	**PcP**	**23 26 38.2**	**+1.6**
	comp=Z,1.3nm,0.5s,baz=146,slow=3.6,SNR=2.4						
NEW				LR	LR	23 43 46.1	
	comp=Z,90nm,18.4s,baz=120,slow=39						
	comp=Z,0.9nm,0.5s						
YBH	**Yreka Blue Hor**	**42.00**	**312**	P	**P**	**23 24 43.5**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=167,slow=3.0,SNR=4.4						
YBH				LR	LR	23 44 52.6	
	comp=Z,7.8nm,18.4s,baz=98,slow=40						
H04A	**Detroit Lake**	**42.75**	**316**	P	**P**	**23 24 50.0**	**+0.2**
FRB	**Frobisher Bay**	**45.70**	**8**	LR	LR	23 44 21.9	
	comp=Z,221nm,19.8s,baz=186,slow=36						
BDFB	**Brasilia**	**47.29**	**134**	LR	LR	23 47 38.9	
	comp=Z,145nm,18.0s,baz=317,slow=39						
YKA	**Yellowknife Ar**	**49.38**	**340**	P	**P**	**23 25 41.9**	**+0.1**
	comp=Z,0.8nm,1.1s,baz=139,slow=7.5,SNR=6.0						
YKA				LR	LR	23 46 51.9	
	comp=Z,99nm,19.2s,baz=328,slow=37						
	comp=Z,0.8nm,1.1s						
BBB	**Bella Bella**	**49.41**	**324**	LR	LR	23 48 29.7	
	comp=Z,50nm,18.2s,baz=111,slow=38						
CPUP	**Villa Florida**	**50.49**	**152**	LR	LR	23 49 18.0	
	comp=Z,97nm,20.7s,baz=12,slow=38						
SFJD	**Kangerlussuaq**	**52.00**	**15**	LR	LR	23 49 00.9	
	comp=Z,149nm,18.4s,baz=210,slow=37						
DLBC	**Dease Lake**	**53.10**	**330**	LR	LR	23 49 58.4	
	comp=Z,116nm,18.4s,baz=112,slow=38						
RES	**Resolute Bay**	**56.38**	**356**	P	**P**	**23 26 33.8**	**+0.6**
RES				IAmb	IAmb	23 26 42.5	
	comp=Z,4.9nm,0.9s						
A36M	**Sachs Harbour**	**58.91**	**345**	P	**P**	**23 26 51.5**	**+0.5**
INK	**Inuvik**	**59.16**	**340**	LR	LR	23 50 50.3	
	comp=Z,77nm,21.7s,baz=329,slow=34						
INK	**Inuvik**	**59.16**	**340**	P	**P**	**23 26 53.2**	**+0.3**
BORG	**Borgarnes**	**60.39**	**25**	LR	LR	23 53 03.8	
	comp=Z,56nm,18.2s,baz=304,slow=36						
E29M	**Blow River**	**60.64**	**339**	P	**P**	**23 27 04.3**	**+1.2**
F28M	**Old Crow**	**61.01**	**338**	P	**P**	**

SMST			*i* S		**Sb**	**23 48 40.2**	**-1.5**
TWKBT	**Hengchun**	**0.61**	**263**	*e*P	**Pb**	**23 48 33.5**	**-0.6**
TWKBT				S	**Sb**	**23 48 41.1**	**-1.4**
TWK1	**Hengchun**	**0.61**	**263**	*e*P	**Pb**	**23 48 33.3**	**-0.9**
TWK1				*e*S	**Sb**	**23 48 41.1**	**-1.5**
TAWH	**Dawu Township**	**0.62**	**301**	*e*P	**Pb**	**23 48 32.9**	**-1.5**
TAWH				*e*S	**Sb**	**23 48 40.5**	**-2.4**
TAW	**Tawu**	**0.62**	**303**	*e*P	**Pb**	**23 48 33.6**	**-0.8**
TAW				*e*S	**Sb**	**23 48 40.1**	**-2.8**
SLIU	**Shizi**	**0.65**	**288**	P	**Pb**	**23 48 33.4**	**-1.3**
LDUT	**Ludao**	**0.65**	**0**	*e*P	**Pb**	**23 48 33.7**	**-1.1**
LDUT				*e*S	**Sb**	**23 48 43.0**	**-0.6**
HEN	**Hengchun**	**0.67**	**269**	*e*P	**Pb**	**23 48 34.1**	**-1.1**
HEN				S	**Sb**	**23 48 43.1**	**-1.2**
EAST	**Anshuo**	**0.68**	**303**	*e*P	**Pb**	**23 48 33.8**	**-1.5**
EAST				*e*S	**Sb**	**23 48 41.7**	**-2.7**
ECL	**Taimali**	**0.74**	**321**	*e*P	**Pb**	**23 48 35.4**	**-1.0**
ECL				*e*S	**Sb**	**23 48 44.9**	**-1.4**
TTN	**Taitung**	**0.79**	**338**	*e*P	**Pb**	**23 48 37.3**	**+0.2**
SCZT	**Fangliau**	**0.86**	**294**	*e*P	**Pb**	**23 48 36.8**	**-1.5**
SCZT				*e*S	**Sb**	**23 48 47.9**	**-1.5**
TWGBT	**Beinan**	**0.87**	**336**	*e*P	**Pb**	**23 48 37.3**	**-1.3**
TWGBT				*e*S	**Sb**	**23 48 49.4**	**-0.5**
TWG	**Pinlang**	**0.88**	**336**	*e*P	**Pb**	**23 48 37.9**	**-0.7**
TWG				*e*S	**Sb**	**23 48 49.0**	**-1.0**
LONT	**Longtian**	**0.94**	**341**	*e*P	**Pb**	**23 48 38.7**	**-1.0**
SSPT	**Xinbi**	**0.95**	**299**	*e*P	**Pb**	**23 48 39.4**	**-0.4**
MASBT	**Mashibuluo**	**0.97**	**308**	*e*P	**Pb**	**23 48 38.5**	**-1.7**
TSMG	**Majia**	**1.02**	**312**	*e*P	**Pb**	**23 48 40.8**	**-0.2**
SSD	**Sandimen**	**1.06**	**313**	*e*P	**Pn**	**23 48 42.3**	**+1.6**
ECS	**Chishang**	**1.10**	**348**	*e*P	**Pn**	**23 48 43.3**	**+2.1**
CHKH	**Chenggong**	**1.17**	**357**	*e*P	**Pn**	**23 48 42.1**	**-0.1**
FULB	**Fuli**	**1.19**	**352**	*e*P	**Pn**	**23 48 42.5**	**0.0**
SLGT	**Liugui**	**1.23**	**322**	*e*P	**Pn**	**23 48 44.6**	**+1.5**
SLGT				*e*S	**Sb**	**23 49 01.6**	**+1.6**
STYH	**Taoyuan**	**1.31**	**331**	*e*P	**Pn**	**23 48 45.7**	**+1.5**
STYH				*e*S	**Sb**	**23 49 03.2**	**+0.8**
SGST	**Jiashian**	**1.34**	**323**	*e*P	**Pn**	**23 48 45.3**	**+0.8**
SGST				*e*S	**Sn**	**23 49 02.9**	**+1.7**
TWF1	**Yuli**	**1.34**	**353**	*e*P	**Pn**	**23 48 45.2**	**+0.7**
TWF1				*e*S	**Sb**	**23 49 04.0**	**+0.8**
YULB	**Yu-li**	**1.38**	**354**	*e*P	**Pn**	**23 48 46.0**	**+0.9**
CHN1	**Nanshi**	**1.45**	**324**	*e*P	**Pb**	**23 48 49.0**	**+0.8**
CHN1				*e*S	**Sb**	**23 49 07.4**	**+1.0**
WTP	**Ta-pu**	**1.45**	**327**	*e*P	**Pb**	**23 48 48.9**	**+0.5**
WTP				*e*S	**Sb**	**23 49 06.8**	**+0.3**
HGSD	**Ruisui**	**1.47**	**359**	*e*P	**Pn**	**23 48 47.5**	**+1.2**
HGSD				*e*S	**Sb**	**23 49 08.6**	**+1.7**
EHY	**Hungye**	**1.49**	**355**	*e*P	**Pn**	**23 48 47.8**	**+1.2**
EHY				*e*S	**Sb**	**23 49 09.0**	**+1.5**
TPUB	**Ta-pu**	**1.49**	**329**	*e*P	**Pn**	**23 48 48.9**	**+2.2**
TPUB				*e*S	**Sb**	**23 49 08.5**	**+0.9**
TWK	**Hsinying**	**1.54**	**324**	*e*P	**Pn**	**23 48 49.6**	**+2.4**
TWK				*e*S	**Sb**	**23 49 10.1**	**+1.2**
ALS	**Alishan**	**1.61**	**338**	*e*P	**Pb**	**23 48 51.4**	**+0.3**
ALS				*e*S	**Sb**	**23 49 12.6**	**+1.5**
WARBT	**Fenglin Townsh**	**1.69**	**358**	*e*P	**Pn**	**23 48 50.2**	**+0.7**
TSCK	**Chigu Township**	**1.70**	**312**	*e*P	**Pn**	**23 48 50.9**	**+1.4**
TSCK				*e*S	**Sn**	**23 49 11.8**	**+1.6**
CHN5	**Tsauling**	**1.73**	**335**	*e*P	**Pb**	**23 48 53.0**	**-0.1**
CHN5				*e*S	**Sb**	**23 49 14.2**	**-0.3**
VWDT	**VWDT**	**1.75**	**350**	*e*P	**Pn**	**23 48 51.9**	**+1.7**
CHY	**Chiayi**	**1.76**	**327**	*e*P	**Pn**	**23 48 51.9**	**+1.6**
CHY				*e*S	**Sn**	**23 49 13.8**	**+2.1**
WHYT	**Xinyi Township**	**1.76**	**342**	*e*P	**Pn**	**23 48 50.2**	**-0.2**
SHUL	**Shoufeng**	**1.76**	**3**	*e*P	**Pn**	**23 48 52.1**	**+1.7**
SHUL				*e*S	**Sb**	**23 49 14.3**	**-1.0**
SSLB	**Suanglung**	**1.82**	**345**	*e*P	**Pn**	**23 48 53.4**	**+2.1**
WSL	**Shuilin Townsh**	**1.88**	**323**	*e*P	**Pn**	**23 48 53.6**	**+1.6**
WSL				*e*S	**Sn**	**23 49 16.9**	**+2.2**
SMLT	**Sun Moon Lake**	**1.93**	**344**	*e*P	**Pb**	**23 48 55.9**	**-0.6**
SMLT				S	**Sb**	**23 49 19.5**	**-0.6**
OWD	**Renai**	**1.95**	**352**	*e*P	**Pn**	**23 48 55.2**	**+2.2**
OWD				*e*S	**Sb**	**23 49 18.3**	**-2.4**
TYC	**Yuchr**	**1.96**	**344**	*e*P	**Pn**	**23 48 55.5**	**+2.5**
TYC				*e*S	**Sb**	**23 49 20.8**	**-0.1**
WNT	**Mingjian**	**1.99**	**339**	*e*P	**Pn**	**23 48 55.5**	**+2.1**
WNT				*e*S	**Sb**	**23 49 20.4**	**-1.3**
WUSB	**Renai**	**1.99**	**351**	P	**Pn**	**23 48 56.2**	**+2.5**
WUSB				*e*S	**Sb**	**23 49 19.9**	**-2.1**
TWD	**Chiawan**	**2.06**	**3**	*e*P	**Pn**	**23 48 55.0**	**+0.6**
WDGT	**Dungji**	**2.08**	**307**	*e*P	**Pn**	**23 48 54.9**	**+0.3**
WDGT				*e*S	**Sn**	**23 49 18.5**	**-1.0**
WCS	**Beigang Elemen**	**2.09**	**346**	*e*P	**Pb**	**23 48 58.0**	**-1.2**
WHF	**Hehuan Shan**	**2.13**	**355**	*e*P	**Pb**	**23 48 59.0**	**-1.0**
NACB	**Ninganchiao**	**2.15**	**3**	*e*P	**Pn**	**23 48 56.8**	**+1.1**
NACB				*e*S	**Sb**	**23 49 24.6**	**-1.8**
ETLH	**Xiulin Townshi**	**2.18**	**0**	*e*P	**Pn**	**23 48 58.5**	**+2.3**
ETLH				*e*S	**Sb**	**23 49 25.0**	**-2.3**
FUSS	**Fushou**	**2.23**	**355**	*e*P	**Pb**	**23 49 00.1**	**-1.5**
EOS4	**EOS4**	**2.24**	**20**	*e*P	**Pn**	**23 48 58.5**	**+1.9**
PHUB	**P'eng-hu**	**2.29**	**311**	*e*P	**Pn**	**23 48 57.6**	**-0.1**
PHUB				*e*S	**Sn**	**23 49 24.1**	**-0.8**
WHP	**Taichung City**	**2.30**	**348**	*e*P	**Pn**	**23 49 00.6**	**+2.8**
WHP				*e*S	**Sb**	**23 49 29.0**	**-1.9**
EOS3	**EOS3**	**2.39**	**19**	*e*P	**Pn**	**23 49 00.6**	**+1.8**
EOS3				*e*S	**Sb**	**23 49 29.4**	**-3.8**
NNSB	**Datong**	**2.40**	**358**	*e*P	**Pn**	**23 49 02.2**	**+2.9**
NNS	**Nan Shan**	**2.41**	**358**	*e*P	**Pn**	**23 49 02.8**	**-1.9**
LATG	**Datong**	**2.51**	**1**	*e*P	**Pn**	**23 49 03.2**	**+2.5**
ENTT	**Nioudou**	**2.61**	**2**	*e*P	**Pn**	**23 49 05.1**	**+3.0**
NFF	**Wufeng Townshi**	**2.62**	**353**	*e*P	**Pn**	**23 49 05.9**	**+3.6**
NFF				*e*S	**Sb**	**23 49 37.7**	**-2.4**
YHNB	**Yeheng**	**2.64**	**358**	*e*P	**Pn**	**23 49 05.1**	**+2.6**
YHNB				*e*S	**Sb**	**23 49 36.9**	**-3.7**
LIOB	**Emei**	**2.65**	**351**	*e*P	**Pn**	**23 49 05.5**	**+2.9**
NSK	**Sanguang**	**2.65**	**358**	*e*P	**Pn**	**23 49 05.4**	**+2.8**
NSK				*e*S	**Sb**	**23 49 37.0**	**-3.8**
FUSB	**Fushanzhiwuyua**	**2.73**	**2**	*e*P	**Pb**	**23 49 07.7**	**-2.5**
FUSB				*e*S	**Sb**	**23 49 39.3**	**-3.9**
NWLT	**Wulai**	**2.75**	**1**	*e*P	**Pn**	**23 49 07.7**	**+3.7**
NWLT				*e*S	**Sb**	**23 49 40.2**	**-3.4**
TIPB	**Shuangxi**	**2.96**	**6**	*e*P	**Pn**	**23 49 09.6**	**+2.7**
HATJ	**Hateruma jima**	**2.96**	**46**	*e*P	**Pn**	**23 49 08.4**	**+1.5**
HATJ				*e*S	**Sn**	**23 49 41.6**	**+0.2**
SXI1	**Grass Mountain**	**3.09**	**7**	*e*P	**Pn**	**23 49 10.7**	**+2.1**
IRIF	**Iriomote-Funau**	**3.11**	**42**	*e*P	**Pn**	**23 49 10.7**	**+1.8**
IRIF				*e*S	**Sn**	**23 49 44.9**	**-0.1**
JKRS	**Kuro-shima**	**3.22**	**46**	*e*P	**Pn**	**23 49 12.2**	**+1.9**
JIJ	**Ishigaki jima**	**3.40**	**46**	*e*P	**Pn**	**23 49 14.2**	**+1.4**
PTMZ	**Houxiangcun**	**3.70**	**325**	*e*P	**Pn**	**23 49 17.4**	**+0.4**
ZPLA	**Ao Xicun**	**3.92**	**300**	*e*P	**Pn**	**23 49 20.3**	**+0.3**
AXDP	**Jialang**	**4.30**	**312**	*e*P	**Pn**	**23 49 25.9**	**+0.6**

MEX 20 00:13:22.9±0.4, 16°.47N×98°.53W, h15km±6km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.39**	**102**	*i* P	Pg	00 13 29.7	-1.2
PNIG				*e*S	Sg	00 13 35.4	-0.9
MGIG	**Malinaltepec**	**0.76**	**352**	*e*P	Pg	00 13 35.2	-2.6
MGIG				*e*S	Sg	00 13 45.0	-2.9
YOIG	**Yosondua**	**1.02**	**68**	*e*P	Pb	00 13 39.2	-3.2
YOIG				*e*S	Sb	00 13 51.2	-4.5
TXIG	**Tlaxiaco**	**1.06**	**43**	*e*P	Pb	00 13 40.0	-3.3
TXIG				*e*S	Sb	00 13 52.8	-4.2
TLIG	**Tlapa**	**1.08**	**358**	*e*P	Pb	00 13 40.3	-3.2
TLIG				*e*S	Sb	00 13 54.0	-3.5
PEIG	**Puerto Escondi**	**1.41**	**109**	*e*P	Pn	00 13 45.6	-2.4
PEIG				*e*S	Sn	00 14 03.6	-2.7
FTIG	**Fresnillo de T**	**1.48**	**15**	*e*P	Pn	00 13 45.6	-3.5
FTIG				*e*S	Sn	00 14 03.4	-4.8
HLIG	**Huajuapan de L**	**1.52**	**27**	*e*P	Pn	00 13 46.3	-3.5
HLIG				*e*S	Sn	00 14 04.5	-4.9
TOIG	**Toxpalan**	**2.14**	**41**	*e*P	Pn	00 13 55.5	-2.6
TOIG				*e*S	Sn	00 14 21.0	-3.5

*GII **20** 00:13:44.4±0.0, 39°.027N±0°.005×39°.327E±0°.001, h0km, Mws3.7, confirmed*
*ISK **20** 00:13:54.8, 38°.28N×38°.75E, h5km, ML3.8/21*
*IDC **20** 00:13:55.5±1.2, 38°.31N×38°.77E, h0km, mb3.5/5, mbtmp3.4/12, ML3.2/6, MS2.8/4, Error ellipse: s-maj=20.9km s-min=11.5km az=166.0*
*AFAD **20** 00:13:55.3, 38°.28N×38°.75E, h7km±2km, MW3.6*
ISC 20 00:13:55.6±1.0, 38°.26N±0°.02×38°.75E±0°.02, h5km±8km, n65, σ1s88/85, mb3.7/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDYL	**Doganyol-Malat**	**0.23**	**77**	Pg	**Pg**	**00 14 00.1**	**0.0**
MDYL				Sg	**Sg**	**00 14 03.8**	**+0.6**
MAYA	**Malatya/Merkez**	**0.27**	**283**	P	**Pg**	**00 14 00.7**	**-0.1**
MAYA				IAML		00 14 05.0	
	comp=N,2μm,0.4s						
MAYA				IAML		00 14 05.0	
	comp=E,2μm,0.5s						
MAYA				S	**Sg**	**00 14 05.1**	**+0.7**
ESGZ	**Sivrice-Elazig**	**0.29**	**56**	Pg	**Pg**	**00 14 01.2**	**-0.2**
ESGZ				Sg	**Sg**	**00 14 05.6**	**+0.3**
ELZG	**Elazig**	**0.29**	**38**	P	**Pg**	**00 14 01.2**	**-0.2**
ELZG				S	**Sb**	**00 14 05.6**	**-3.2**
ELZG				IAML		00 14 06.0	
	comp=N,2μm,0.6s						
ELZG				IAML		00 14 06.0	
	comp=E,2μm,0.5s						
NARI	**Adyaman-Kaht**	**0.38**	**179**	P	**Pg**	**00 14 03.3**	**+0.3**
NARI				S	**Sg**	**00 14 09.0**	**+1.0**
NARI				IAML		00 14 10.0	
	comp=E,3μm,0.5s						
NARI				IAML		00 14 15.0	
	comp=N,4μm,0.7s						
SVRC	**Sivrice-ELAZID**	**0.45**	**75**	Pg	**Pg**	**00 14 03.8**	**-0.5**
SVRC				Sg	**Sb**	**00 14 10.9**	**-2.4**
KAHTU	**Kahta**	**0.47**	**194**	P	**Pg**	**00 14 04.9**	**+0.2**
KAHTU				S	**Sg**	**00 14 12.4**	**+1.6**
KAHTU				IAML		00 14 16.0	
	comp=N,5μm,0.4s						
KAHTU				IAML		00 14 19.0	
	comp=E,5μm,0.8s						
ESIJ	**Sivrice-Elazig**	**0.47**	**67**	Pg	**Pg**	**00 14 04.5**	**-0.3**
ESIJ				Sg	**Sb**	**00 14 11.8**	**-2.2**
ELZ	**Elazig**	**0.55**	**40**	P	**Pg**	**00 14 05.8**	**-0.5**
ELZ				S	**Sb**	**00 14 14.0**	**-2.3**
ELZ				IAML		00 14 14.0	
	comp=N,4μm,0.6s						
ELZ				IAML		00 14 14.0	
	comp=E,4μm,0.5s						
AZEY	**Adyaman-Merk**	**0.60**	**222**	P	**Pg**	**00 14 07.7**	**+0.4**
AZEY				S	**Sg**	**00 14 17.2**	**+2.1**
AZEY				IAML		00 14 20.0	
	comp=N,3μm,0.3s						
AZEY				IAML		00 14 21.0	
	comp=E,4μm,0.4s						
AKCD	**Akcadag**	**0.66**	**273**	P	**Pg**	**00 14 07.9**	**-0.4**
AKCD				S	**Sb**	**00 14 18.0**	**-1.2**
AKCD				IAML		00 14 19.0	
	comp=E,8μm,0.4s						
AKCD				IAML		00 14 20.0	
	comp=N,2μm,0.3s						
HANM	**anlurfa/Hi**	**0.69**	**172**	P	**Pg**	**00 14 09.2**	**+0.3**
HANM				S	**Sg**	**00 14 18.9**	**+1.1**
HANM				IAML		00 14 23.0	
	comp=N,4μm,0.4s						
HANM				IAML		00 14 23.0	
	comp=E,4μm,0.6s						
MDNT	**Maden**	**0.74**	**80**	P	**Pg**	**00 14 09.4**	**-0.5**
MDNT				S	**Sb**	**00 14 20.5**	**-1.1**
MDNT				IAML		00 14 22.0	
	comp=N,1μm,0.5s						
MDNT				IAML		00 14 27.0	
	comp=E,1μm,0.6s						
URFA	**Urfa**	**0.82**	**176**	Pg	**Pg**	**00 14 11.5**	**+0.1**
URFA				Sg	**Sg**	**00 14 23.5**	**+1.4**
MCKZ	**Bingol**	**0.87**	**11**	P	**Pg**	**00 14 11.2**	**-1.2**
MCKZ				S	**Sb**	**00 14 23.8**	**-1.6**
MCKZ				IAML		00 14 24.0	
	comp=E,3μm,0.3s						
MCKZ				IAML		00 14 25.0	
	comp=N,2μm,0.4s						
HEKM	**Malatya_Hekimh**	**0.88**	**315**	P	**Pg**	**00 14 11.6**	**-0.9**
HEKM				IAML		00 14 24.0	
	comp=E,7μm,0.4s						
HEKM				S	**Sb**	**00 14 24.4**	**-1.1**
HEKM				IAML		00 14 25.0	
	comp=N,5μm,0.5s						
ARPR	**Arapgir-MALATY**	**0.89**	**339**	Pg	**Pb**	**00 14 12.2**	**-1.5**
KOVA	**Elazig, Kovanc**	**0.94**	**62**	P	**Pb**	**00 14 13.6**	**-1.0**
KOVA				S	**Sn**	**00 14 30.9**	**+1.3**
KOVA				IAML		00 14 33.0	
	comp=N,390nm,0.5s						
KOVA				IAML		00 14 39.0	
	comp=E,862nm,0.7s						
TNCL	**Tunceli-Merkez**	**1.05**	**36**	P	**Pg**	**00 14 14.4**	**-1.4**
TNCL				S	**Sn**	**00 14 30.5**	**-1.7**
TNCL				IAML		00 14 32.0	
	comp=N,1μm,0.8s						
TNCL				IAML		00 14 35.0	
	comp=E,2μm,0.6s						
DYBB	**Diyarbakir**	**1.14**	**105**	Pn	**Pg**	**00 14 17.3**	**-0.1**
ILIC	**ilic-Erzincan**	**1.20**	**353**	Pn	**Pb**	**00 14 17.7**	**-1.2**
ERZN	**Erzincan**	**1.52**	**29**	Pn	**Pb**	**00 14 23.3**	**-1.1**
KHMN	**Narli-Kahraman**	**1.54**	**236**	Pn	**Pn**	**00 14 23.5**	**-0.2**
GAZ	**Gaziantep**	**1.64**	**229**	Pn	**Pn**	**00 14 25.3**	**+0.1**
KMRS	**Kahramanmaras**	**1.65**	**243**	Pn	**Pn**	**00 14 24.9**	**-0.4**
BNGB	**Bingl**	**1.67**	**64**	Pn	**Pb**	**00 14 25.7**	**-1.3**
YEDI	**Yedisu-Bingol**	**1.82**	**49**	Pn	**Pn**	**00 14 27.6**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.84**	**275**	Pn	**Pn**	**00 14 28.4**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.93**	**93**	Pn	**Pn**	**00 14 29.1**	**-0.1**
KARO	**Karlova-Bingo**	**2.08**	**59**	Pn	**Pn**	**00 14 31.3**	**0.0**
SVSK	**Karacayir**	**2.14**	**321**	Pn	**Pn**	**00 14 31.9**	**-0.1**
VRTB	**Varto-Mus**	**2.29**	**66**	Pn	**Pn**	**00 14 34.5**	**+0.2**
BAYT	**Aydıntepe-Bayb**	**2.38**	**26**	Pn	**Pn**	**00 14 35.9**	**+0.4**
GURO	**Guroymak-BITLI**	**2.59**	**83**	Pn	**Pn**	**00 14 38.1**	**-0.3**
MLAZ	**Malazgirt-MUS**	**3.10**	**72**	Pn	**Pn**	**00 14 46.0**	**+0.7**
BRTR	**Keskin Array B**	**4.24**	**292**	Pn	**Pn**	**00 15 02.0**	**+0.9**
	2.3nm,0.3s,baz=127,slow=13,SNR=40						
BRTR				Lg	Lg	00 16 10.9	
	1.1nm,0.3s,baz=123,slow=27,SNR=4.1 6.8nm,0.5s						
BEIL	**Beino**	**4.25**	**210**	*e*P	**Pn**	**00 15 00.4**	**-0.7**
HWQ	**Hawqa**	**4.58**	**211**	*e*P	**Pn**	**00 15 05.4**	**-0.2**
ZAHL	**Zahle**	**4.97**	**209**	*e*P	**Pn**	**00 15 12.1**	**+1.0**
GNI	**Garni**	**5.02**	**66**	Pn	**Pn**	**00 15 12.8**	**+1.1**
	0.4nm,0.3s,baz=319,slow=9.3,SNR=2.0						
GNI				LR	LR	00 17 28.5	
	comp=Z,44nm,21.2s,baz=261,slow=43 1.1nm,0.5s						
BHL	**Bhannes**	**5.02**	**211**	*e*P	**Pn**	**00 15 12.2**	**+0.5**
DQRL	**Deir Qamar**	**5.23**	**211**	*e*P	**Pn**	**00 15 15.3**	**+0.7**
RCY	**Rachaya**	**5.31**	**207**	*e*P	**Pn**	**00 15 17.0**	**+1.2**
QRWL	**Qaraoun**	**5.33**	**209**	*e*P	**Pn**	**00 15 16.8**	**+0.9**
CSS	**Mathiatis**	**5.47**	**235**	P	**Pn**	**00 15 18.8**	**+1.0**
NATI	**Neve Ativ**	**5.56**	**207**	P	**Pn**	**00 15 20.6**	**+1.6**
NATI				S	**Sb**	**00 16 36.4**	**-3.8**
GEM	**Giv'at Ha'Em**	**5.63**	**207**	P	**Pn**	**00 15 22.6**	**+2.6**
GEM				S	**Sb**	**00 16 36.6**	**-5.7**
KSHT	**Keshet**	**5.79**	**205**	P	**Pn**	**00 15 23.9**	**+1.6**
KSHT				S	**Sb**	**00 16 40.9**	**-5.9**
MMA0B	**Mount Meron ar**	**5.91**	**209**	P	**Pn**	**00 15 25.8**	**+2.0**
MMA0B				S	**Sb**	**00 16 45.1**	**-5.0**
MMAI	**Mount Meron Ar**	**5.91**	**209**	Pn	**Pn**	**00 15 24.9**	**+1.0**
	3.3nm,0.3s,baz=36,slow=13,SNR=15						
MMAI				Lg	Lg	00 16 60.0	
	6.3nm,0.3s,baz=36,slow=27,SNR=5.4						
MMAI				LR	LR	00 17 39.0	
	comp=Z,67nm,20.5s,baz=354,slow=38 2.2nm,0.5s						
HNTI	**Hanita**	**5.93**	**210**	P	**Pn**	**00 15 25.3**	**+1.1**
ASF	**Jabal al Asfar**	**6.26**	**195**	Pn	**Pn**	**00 15 29.2**	**+0.4**
	0.4nm,0.3s,baz=4.8,slow=20,SNR=6.3						
ASF				Lg	Lg	00 17 10.6	
	2.8nm,0.3s,baz=275,slow=20,SNR=4.2 3.5nm,0.7s						
KBZ	**Khabaz**	**6.29**	**29**	Pn	**Pn**	**00 15 29.9**	**+0.9**
	0.4nm,0.6s,baz=218,slow=12,SNR=1.3						
KVAR	**Kislovodsk Arr**	**6.42**	**26**	Pn	**Pn**	**00 15 33.7**	**+2.8**
	baz=248,slow=11 1.0nm,0.8s						
MMLI	**Mount Malkishu**	**6.42**	**206**	P	**Pn**	**00 15 32.9**	**+2.1**
MMLI				S	**Sb**	**00 16 57.2**	**-7.8**
HMDT	**Nahal Hemdat**	**6.55**	**205**	P	**Pn**	**00 15 34.6**	**+1.9**
SALP	**Salfit**	**6.83**	**206**	P	**Pn**	**00 15 38.9**	**+2.3**
EIL	**Elat**	**9.13**	**201**	Lg	Lg	00 18 42.7	
	0.2nm,0.3s,baz=37,slow=18,SNR=2.6						
MLR	**Muntele Rosu**	**11.96**	**311**	LR	LR	00 22 25.4	
	comp=Z,65nm,19.6s,baz=28,slow=43						
AKTO	**Aktyubinsk**	**18.31**	**42**	P	**P**	**00 18 11.5**	**+1.0**
	0.1nm,0.3s,baz=248,slow=8.0,SNR=6.9						
AKTO				LR	LR	00 27 10.3	
	comp=Z,45nm,18.0s,baz=127,slow=44						
	2.0nm,0.8s						
GERES	**GERESS Array B**	**20.92**	**308**	P	Pn	00 18 40.2	-1.3
	1.3nm,0.8s,baz=127,slow=10,SNR=6.7 1.3nm,0.8s						
ARTI	**Arti**	**22.35**	**29**	P	**P**	**00 18 54.6**	**+0.4**
	1.7nm,0.7s,baz=207,slow=13,SNR=3.5 1.7nm,0.7s						
FINES	**FINESS Array B**	**24.51**	**345**	P	**P**	**00 19 17.2**	**+1.5**
	1.9nm,0.9s,baz=193,slow=7.4,SNR=5.2 1.9nm,0.9s						
MKAR	**Makanchi Array**	**32.84**	**61**	P	**P**	**00 20 31.4**	**+1.3**
	0.7nm,0.7s,baz=272,slow=7.0,SNR=9.0 0.7nm,0.7s						
ESDC	**Sonseca Array**	**33.02**	**286**	P	**P**	**00 20 33.6**	**+1.8**
	0.4nm,0.6s,baz=68,slow=8.3,SNR=5.8 0.4nm,0.6s						

TRN 20 00:14:26.6, 17°.44N×62°.04W, h14km, MD3.5, South-west of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.34**	**46**	*e*P	Pb	00 14 35.7	+1.3
ANWB				*e*S	Sb	00 14 40.6	+1.0
SKI	**Saint Kitts**	**0.68**	**261**	*e*P	Pn	00 14 43.0	+1.2
SKI				*e*S	Sn	00 14 53.3	+1.2
MBFL	**Flemmings, Mon**	**0.70**	**194**	*e*P	Pn	00 14 43.3	+1.1
MBFL				*e*S	Sn	00 14 53.5	+0.7
MBWH	**Windy Hill**	**0.70**	**192**	*e*P	Pn	00 14 43.2	+1.0
MBWH				*e*S	Sn	00 14 53.5	+0.7
SEUS	**St. Eustatius**	**0.90**	**274**	*e*P	Pn	00 14 47.2	+2.4
SEUS				*e*S	Sn	00 15 00.8	+3.2
SMRT	**St. Maarten**	**1.16**	**302**	*e*P	Pg	00 14 50.4	+1.5
SMRT				*e*S	Sg	00 15 06.1	+2.0
SABA	**Saba**	**1.16**	**279**	*e*S	Sg	00 15 07.5	+3.4
DHSZ	**Broadband at M**	**1.19**	**167**	*e*P	Pg	00 14 50.6	+1.1
DHSZ				*e*S	Sg	00 15 07.1	+2.2
ATGZ	**Broadband at L**	**1.37**	**167**	*e*P	Pg	00 14 53.2	+0.4
ATGZ				*e*S	Sg	00 15 12.5	+1.9
MMLZ	**Guadeloupe Bro**	**1.43**	**166**	*e*P	Pg	00 14 54.6	+0.5
MMLZ				*e*S	Sg	00 15 13.7	+1.1
DSDZ	**La Diserade, G**	**1.46**	**140**	*e*P	Pb	00 14 53.5	+0.1
DSDZ				*e*S	Sg	00 15 13.7	+0.2
TBG	**Guadaloupe-3**	**1.62**	**166**	*e*P	Pb	00 14 56.9	+0.7
TBG				*e*S	Sg	00 15 19.6	+0.8
DSLB	**Salisbury**	**2.07**	**163**	*e*P	Pb	00 15 03.9	-0.1
DSLB				*e*S	Sb	00 15 30.3	+0.6

*IDC **20** 00:19:13.1±2.9, 1°.20N×98°.21E, h0km, mb3.8/5, mbtmp3.9/6, ML4.5/1, Error ellipse: s-maj=134.3km s-min=20.4km az=57.0*
*DJA **20** 00:19:30.2±0.3, 2°.1N±2°×9°.9E±°, h122km±3km, M4.2/23, mB5.6/2, mb5.0/2, MLv3.8/23, Mw(mB)5.1/2*
ISC 20 00:19:29.9±0.9, 1°.91N±0°.05×99°.00E±0°.08, h100km, n17, σ2s43/17, mb4.0/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.89**	**355**	P	**Pn**	**00 19 51.4**	**+2.1**
PSI				S	**Sn**	**00 20 07.3**	**+3.4**
MNSI	**Mandailing Nat**	**1.25**	**152**	P	**Pn**	**00 19 55.5**	**+2.4**
MNSI				S	**Sn**	**00 20 14.8**	**+4.2**
GSI	**Gunungsitoli**	**1.54**	**247**	P	**Pn**	**00 19 58.4**	**+1.7**
KCSI	**Kotacane, Aceh**	**2.02**	**323**	P	**Pn**	**00 20 04.9**	**+2.1**
PBSI	**Pulau Batu**	**2.08**	**200**	P	**Pn**	**00 20 04.8**	**+1.3**
PBSI				S	**Sn**	**00 20 30.6**	**+1.5**
PDSI	**Padang**	**3.16

MHEZ	**Mangahewa**	**0.46**	**156**	P	**Pb**	**00 30 52.4**	**-0.5**
MHEZ				S	**Sg**	**00 30 58.7**	**+0.8**
INHS	**Inglewood High**	**0.51**	**170**	P	**Pg**	**00 30 52.8**	**+0.2**
DREZ	**Durham Road**	**0.54**	**170**	P	**Pg**	**00 30 53.4**	**+0.1**
DREZ				S	**Sg**	**00 31 00.3**	**-0.2**
HIZ	**Hauiti**	**0.62**	**77**	P	**Pn**	**00 30 56.7**	**-0.8**
HIZ	**Hauiti**	**0.62**	**77**	S	**Sn**	**00 31 06.5**	**-0.9**
HIZ	**Hauiti**	**0.62**	**77**	P	**Pn**	**00 30 56.8**	**-0.6**
HIZ				S	**Sn**	**00 31 06.4**	**-1.1**
NBEZ	**Newall Road No**	**0.64**	**195**	P	**Pb**	**00 30 55.4**	**-0.4**
NBEZ				S	**Sg**	**00 31 03.9**	**+0.5**
KHEZ	**Kahui Hut**	**0.64**	**184**	P	**Pg**	**00 30 55.1**	**-0.1**
KHEZ	**Kahui Hut**	**0.64**	**184**	S	**Sg**	**00 31 03.7**	**0.0**
KHEZ	**Kahui Hut**	**0.64**	**184**	P	**Pg**	**00 30 55.2**	**-0.1**
PREZ	**Palmer Road**	**0.69**	**175**	P	**Pb**	**00 30 56.5**	**-0.3**
PREZ				S	**Sb**	**00 31 06.2**	**-0.1**
VRZ	**Vera Road**	**0.71**	**132**	P	**Pb**	**00 30 56.7**	**-0.3**
VRZ				S	**Sg**	**00 31 06.2**	**+0.4**
NMEZ	**Namu Road**	**0.78**	**192**	P	**Pb**	**00 30 57.9**	**-0.3**
NMEZ				S	**Sg**	**00 31 07.9**	**0.0**
OPSS	**Opunake Primar**	**0.81**	**192**	S	**Sb**	**00 31 09.6**	**-0.3**
LREZ	**Lake Rotokare**	**0.84**	**163**	P	**Pb**	**00 30 59.2**	**-0.2**
TKHS	**Te Kuiti High**	**0.90**	**70**	P	**Pn**	**00 31 01.9**	**+0.6**
TKHS				S	**Sn**	**00 31 15.5**	**+1.2**
TUHS	**Taumarunui Hig**	**0.94**	**103**	S	**Sb**	**00 31 14.2**	**+0.8**
TWVZ	**Taurewa**	**1.14**	**112**	P	**Pb**	**00 31 04.2**	**-0.3**
TWVZ				S	**Sg**	**00 31 18.9**	**-0.5**
PKVZ	**Pokaka**	**1.18**	**123**	P	**Pb**	**00 31 04.8**	**-0.2**
PKVZ				S	**Sn**	**00 31 20.9**	**-0.3**
TLZ	**Tolley Road**	**1.19**	**75**	P	**Pg**	**00 31 06.7**	**+1.1**
COVZ	**Chateau Observ**	**1.27**	**116**	P	**Pn**	**00 31 06.4**	**0.0**
WTVZ	**West Tongariro**	**1.27**	**112**	P	**Pb**	**00 31 06.6**	**0.0**
WTVZ				S	**Sb**	**00 31 23.2**	**+0.2**
NNVZ	**North Ngauruho**	**1.29**	**112**	P	**Pb**	**00 31 07.0**	**-0.1**
NNVZ				S	**Sg**	**00 31 24.1**	**-0.2**
WATZ	**Wairara**	**1.30**	**93**	P	**Pg**	**00 31 07.9**	**+0.3**
FWVZ	**Far West T-bar**	**1.30**	**118**	P	**Pn**	**00 31 06.9**	**-0.1**
FWVZ				S	**Sb**	**00 31 24.1**	**+0.1**
KRVZ	**Karewarewa**	**1.30**	**110**	P	**Pg**	**00 31 07.4**	**-0.2**
KRVZ				S	**Sg**	**00 31 24.3**	**-0.2**
NGZ	**Ngauruhoe**	**1.30**	**114**	P	**Pn**	**00 31 06.9**	**0.0**
NGZ				S	**Sg**	**00 31 24.1**	**-0.4**
KATZ	**Kakaramea**	**1.30**	**105**	P	**Pg**	**00 31 07.7**	**-0.1**
KATZ				S	**Sn**	**00 31 25.2**	**+0.8**
WAZ	**Wanganui**	**1.31**	**148**	P	**Pb**	**00 31 07.1**	**-0.1**
MTVZ	**Mangateitei**	**1.31**	**124**	P	**Pn**	**00 31 07.0**	**+0.1**
MAVZ	**Matarangi**	**1.31**	**118**	P	**Pn**	**00 31 07.2**	**0.0**
MAVZ				S	**Sg**	**00 31 24.6**	**-0.3**
TRVZ	**Turoa**	**1.31**	**120**	P	**Pn**	**00 31 07.2**	**0.0**
TRVZ				S	**Sn**	**00 31 27.1**	**+0.3**
NTVZ	**North Tongarir**	**1.32**	**110**	P	**Pg**	**00 31 08.0**	**-0.2**
WHVZ	**Whangaehu Hut**	**1.33**	**119**	P	**Pg**	**00 31 08.2**	**-0.2**
WHVZ				S	**Sn**	**00 31 25.3**	**0.0**
OTVZ	**Oturere**	**1.34**	**113**	P	**Pb**	**00 31 07.8**	**-0.1**
OTVZ				S	**Sn**	**00 31 25.5**	**+0.2**
RATZ	**Rangitukua**	**1.34**	**100**	P	**Pg**	**00 31 08.5**	**0.0**
TMVZ	**Te Maari**	**1.35**	**111**	P	**Pb**	**00 31 08.1**	**0.0**
ETVZ	**East Tongariro**	**1.36**	**111**	P	**Pb**	**00 31 08.4**	**+0.2**
WNVZ	**Wahianoa**	**1.36**	**120**	P	**Pn**	**00 31 08.0**	**+0.2**
TUVZ	**Tukino**	**1.37**	**117**	P	**Pb**	**00 31 08.6**	**+0.1**
KUTZ	**Kaahu Road**	**1.38**	**84**	P	**Pg**	**00 31 09.5**	**+0.3**
RITZ	**Rihia Road**	**1.43**	**104**	P	**Pg**	**00 31 10.3**	**+0.2**
TOZ	**Tahuroa Road**	**1.45**	**51**	P	**Pg**	**00 31 10.7**	**+0.2**
WHTZ	**Whakaora**	**1.47**	**91**	P	**Pg**	**00 31 11.3**	**+0.3**
MOVZ	**Moawhango**	**1.50**	**121**	P	**Pb**	**00 31 10.5**	**-0.2**
WPRZ	**Whakapapatarin**	**1.64**	**86**	P	**Pb**	**00 31 13.1**	**+0.2**
AWAZ	**Awhitu Peninsu**	**1.65**	**16**	P	**Pg**	**00 31 13.0**	**-0.6**
KMRZ	**Kaimai**	**1.67**	**52**	P	**Pg**	**00 31 14.3**	**+0.5**
KBAZ	**Karaka Road Bo**	**1.68**	**23**	P	**Pg**	**00 31 15.2**	**+0.3**
UTU	**Utuhina**	**1.73**	**75**	P	**Pb**	**00 31 14.6**	**+0.2**
HSRZ	**Hossack Road**	**1.73**	**79**	P	**Pb**	**00 31 14.7**	**+0.1**
NGRZ	**Ngongotaha**	**1.75**	**72**	P	**Pb**	**00 31 14.8**	**0.0**
HRRZ	**Handcock Road**	**1.75**	**82**	P	**Pg**	**00 31 16.5**	**+0.2**
WTAZ	**Waiatarua**	**1.76**	**13**	P	**Pb**	**00 31 15.4**	**+0.4**
MKAZ	**Moumakai**	**1.77**	**29**	P	**Pb**	**00 31 15.3**	**+0.2**
KARZ	**Kaharoa**	**1.82**	**70**	P	**Pb**	**00 31 16.4**	**+0.5**
OHWZ	**Ohakea**	**1.82**	**149**	P	**Pb**	**00 31 16.1**	**+0.1**
ETAZ	**East Tamaki Re**	**1.82**	**22**	P	**Pb**	**00 31 16.3**	**+0.2**
HLRZ	**Highlands Stat**	**1.83**	**78**	P	**Pg**	**00 31 17.7**	**-0.1**
MRHZ	**Matea Rd**	**1.84**	**96**	P	**Pb**	**00 31 15.5**	**-0.8**
EPAZ	**Eden Park BICE**	**1.85**	**17**	P	**Pg**	**00 31 18.0**	**-0.2**
HBAZ	**Herne Bay Bore**	**1.87**	**16**	P	**Pg**	**00 31 17.9**	**-0.7**
OMRZ	**Omania**	**1.88**	**74**	P	**Pg**	**00 31 19.3**	**+0.5**
RVAZ	**Riverhead Bore**	**1.92**	**12**	P	**Pb**	**00 31 17.4**	**-0.3**
BKZ	**Black Stump Fm**	**1.95**	**106**	P	**Pb**	**00 31 17.6**	**-0.7**
BKZ	**Black Stump Fm**	**1.95**	**106**	P	**Sg**	**00 31 45.7**	**+0.3**
BKZ	**Black Stump Fm**	**1.95**	**106**	P	**Pb**	**00 31 17.3**	**-0.9**
TARZ	**Mount Tarawera**	**1.95**	**78**	P	**Pb**	**00 31 18.8**	**+0.5**
TGRZ	**Tauranga**	**1.95**	**62**	P	**Pb**	**00 31 17.8**	**-0.5**
KWHZ	**Kaweka Forest**	**1.98**	**114**	P	**Pb**	**00 31 18.1**	**-0.7**
MBAZ	**Motutapu North**	**1.99**	**19**	P	**Pb**	**00 31 18.2**	**-0.6**
TSZ	**Takapari Road**	**2.02**	**134**	P	**Pb**	**00 31 19.9**	**+0.4**
KRHZ	**Kereru**	**2.04**	**120**	P	**Pb**	**00 31 19.2**	**-0.5**
WIAZ	**Waiheke Island**	**2.04**	**25**	P	**Pb**	**00 31 19.1**	**-0.6**
PNHZ	**Pukenui**	**2.07**	**128**	P	**Pb**	**00 31 19.3**	**-1.0**
OPRZ	**Ohinepanea**	**2.11**	**68**	P	**Pb**	**00 31 20.3**	**-0.6**
ABAZ	**Army Bay**	**2.13**	**17**	P	**Pb**	**00 31 20.3**	**-1.1**
DUWZ	**D'Urville Isla**	**2.15**	**183**	P	**Pn**	**00 31 18.4**	**0.0**
MTHZ	**Maungataniwha**	**2.17**	**96**	P	**Pb**	**00 31 20.8**	**-1.1**
NMHZ	**Naumai**	**2.17**	**103**	P	**Pb**	**00 31 21.5**	**-0.5**
MCHZ	**McNeill Hill**	**2.19**	**112**	P	**Pb**	**00 31 22.2**	**0.0**
MYRZ	**Mayor Island**	**2.19**	**52**	P	**Pg**	**00 31 24.6**	**0.0**
RTZ	**Ruatahuna**	**2.27**	**90**	P	**Pb**	**00 31 23.1**	**-0.6**
KIW	**Kapiti Island**	**2.30**	**164**	P	**Pn**	**00 31 21.4**	**+0.9**
DVHZ	**Dannevirke**	**2.31**	**136**	P	**Pb**	**00 31 23.9**	**-0.4**
KUZ	**Kuaotunu**	**2.31**	**35**	P	**Pb**	**00 31 22.7**	**-1.6**
KUZ	**Kuaotunu**	**2.31**	**35**	P	**Pn**	**00 31 22.2**	**+1.6**
WPHZ	**Waipukurau**	**2.31**	**128**	P	**Pb**	**00 31 24.2**	**-0.2**
MRZ	**Mangatainoka R**	**2.31**	**150**	P	**Pb**	**00 31 24.0**	**-0.4**
OGWZ	**Otaki Gorge**	**2.32**	**159**	P	**Pn**	**00 31 22.5**	**+1.8**
ARHZ	**Aropaoanui**	**2.35**	**106**	P	**Pb**	**00 31 25.3**	**+0.2**
RAHZ	**Arahi**	**2.37**	**97**	P	**Pg**	**00 31 26.7**	**-1.3**
PRWZ	**Pori Road**	**2.40**	**143**	P	**Pb**	**00 31 25.4**	**-0.4**
URZ	**Urewera**	**2.41**	**82**	P	**Pb**	**00 31 25.9**	**-0.2**
URZ	**Urewera**	**2.41**	**82**	P	**Pb**	**00 31 27.3**	**+1.2**
KAHZ	**Kahuranaki**	**2.45**	**119**	P	**Pb**	**00 31 26.8**	**0.0**
QRZ	**Quartz Range**	**2.48**	**208**	P	**Pn**	**00 31 22.4**	**-0.6**
QRZ	**Quartz Range**	**2.48**	**208**	P	**Pn**	**00 31 22.4**	**-0.6**
HOWZ	**Holdsworth Sta**	**2.50**	**154**	P	**Pb**	**00 31 26.6**	**-1.0**
TKNZ	**Takaka Hill**	**2.53**	**200**	P	**Pn**	**00 31 23.8**	**+0.1**
TIWZ	**Tintock**	**2.54**	**147**	P	**Pb**	**00 31 25.5**	**-0.7**
PRHZ	**Porangahau**	**2.55**	**130**	P	**Pb**	**00 31 28.0**	**-0.5**
SNGZ	**Shannon Statio**	**2.55**	**94**	P	**Pb**	**00 31 28.7**	**+0.2**
TCW	**Tory Channel**	**2.56**	**177**	P	**Pn**	**00 31 24.6**	**+0.6**
PXZ	**Pawanui**	**2.56**	**123**	P	**Pg**	**00 31 31.4**	**-0.4**
CAW	**Cannon Point**	**2.57**	**163**	P	**Pb**	**00 31 26.5**	**-2.2**
NNZ	**Nelson**	**2.62**	**192**	P	**Pn**	**00 31 25.2**	**+0.4**
RAGZ	**Rawiri**	**2.62**	**88**	P	**Pb**	**00 31 30.3**	**+0.6**
BFZ	**Birch Farm**	**2.63**	**141**	P	**Pb**	**00 31 28.0**	**-1.8**
BFZ	**Birch Farm**	**2.63**	**141**	P	**Pb**	**00 31 29.0**	**-0.8**
GRZ	**Great Barrier**	**2.64**	**25**	P	**Pn**	**00 31 27.0**	**+1.8**
SNZO	**South Karori**	**2.70**	**170**	P	**Pn**	**00 31 27.2**	**+1.3**
WCZ	**Waipu Caves**	**2.72**	**5**	P	**Pn**	**00 31 28.3**	**+2.1**
MWZ	**Matawai**	**2.73**	**84**	P	**Pb**	**00 31 30.1**	**-1.3**
MTW	**Mount Morrison**	**2.73**	**157**	P	**Pb**	**00 31 30.0**	**-1.5**
TUWZ	**Tuamarina**	**2.77**	**182**	P	**Pn**	**00 31 27.9**	**+0.9**
CPWZ	**Castlepoint**	**2.79**	**145**	P	**Pg**	**00 31 35.3**	**-0.7**
BHW	**Baring Head**	**2.82**	**106**	P	**Pn**	**00 31 29.4**	**+1.7**
TMWZ	**Te Maipa**	**2.82**	**151**	P	**Pn**	**00 31 32.2**	**-0.8**
MSWZ	**Moikau Station**	**2.90**	**162**	P	**Pn**	**00 31 31.0**	**+2.2**
RUGZ	**Raukumara Rang**	**2.91**	**77**	P	**Pb**	**00 31 33.0**	**-1.7**
PAWZ	**Paruwai Farm**	**2.92**	**160**	P	**Pb**	**00 31 32.6**	**-2.1**
MRNZ	**Matariki Terra**	**2.92**	**200**	P	**Pn**	**00 31 29.4**	**+0.3**
TKGZ	**Te Karaka**	**2.96**	**87**	P	**Pb**	**00 31 35.4**	**-0.1**
TRWZ	**Traveller**	**3.01**	**156**	P	**Pb**	**00 31 35.1**	**-1.1**
HAZ	**Te Kaha**	**3.05**	**74**	P	**Pb**	**00 31 35.2**	**-1.7**
BSWZ	**Blackbirch Sta**	**3.06**	**183**	P	**Pn**	**00 31 31.9**	**+0.9**
CMWZ	**Cape Campbell**	**3.09**	**178**	P	**Pn**	**00 31 34.2**	**+2.7**
TWGZ	**Tauwhareparae**	**3.10**	**82**	P	**Pb**	**00 31 37.3**	**-0.5**
THZ	**Tophouse**	**3.23**	**196**	P	**Pn**	**00 31 34.0**	**+0.6**
CNGZ	**Carnagh Statio**	**3.24**	**88**	P	**Pb**	**00 31 37.6**	**-2.6**
PUZ	**Puketiti**	**3.33**	**81**	P	**Pb**	**00 31 39.3**	**-2.6**
OUZ	**Omahuta**	**3.45**	**353**	P	**Pn**	**00 31 38.6**	**+2.3**
OUZ	**Omahuta**	**3.45**	**353**	P	**Pn**	**00 31 38.7**	**+2.5**
WMGZ	**Waiomatatini S**	**3.51**	**78**	P	**Pb**	**00 31 43.1**	**-1.8**
DSZ	**Denniston Nort**	**3.54**	**209**	P	**Pn**	**00 31 37.7**	**0.0**
KHZ	**Kahutara**	**3.78**	**186**	P	**Pn**	**00 31 42.1**	**+1.3**
KHZ	**Kahutara**	**3.78**	**186**	P	**Pn**	**00 31 42.2**	**+1.3**
LTZ	**Lake Taylor**	**4.35**	**198**	P	**Pn**	**00 31 50.3**	**+1.6**
GVZ	**Greta Valley S**	**4.38**	**190**	P	**Pn**	**00 31 50.1**	**+1.0**
WVZ	**Waitaha Valley**	**5.09**	**209**	P	**Pn**	**00 31 58.9**	**+0.1**
OKCZ	**Okains Bay**	**5.12**	**188**	P	**Pn**	**00 31 58.9**	**-0.5**
MHCZ	**Mount Hutt**	**5.23**	**200**	P	**Pn**	**00 32 00.7**	**-0.1**
AKCZ	**Akaroa Harbour**	**5.29**	**189**	P	**Pn**	**00 32 00.9**	**-0.7**
GCSZ	**Gaunt Creek Bo**	**5.46**	**210**	P	**Pn**	**00 32 05.6**	**+1.8**
RPZ	**Rata Peaks**	**5.55**	**203**	P	**Pn**	**00 32 07.1**	**+1.9**
RPZ	**Rata Peaks**	**5.55**	**203**	P	**Pn**	**00 32 07.1**	**+1.9**
FOZ	**Fox Glacier**	**5.84**	**212**	P	**Pn**	**00 32 09.1**	**0.0**
JCZ	**Jackson Bay**	**6.72**	**215**	P	**Pn**	**00 32 23.3**	**+2.0**
JCZ	**Jackson Bay**	**6.72**	**215**	P	**Pn**	**00 32 22.2**	**+0.8**

IDC ***20*** *00:32:28.3±2.7, 35°.13N×23°.86E, h0km, mb3.6/4, mbtmp3.5/8, ML3.0/4, Error ellipse: s-maj=56.7km s-min=22.0km az=9.0*

ATH ***20*** *00:32:30.3, 35°.20N×23°.84E, h7km±1km, ML3.5/7, Manual Solution by A.Moschou First location: 2020/02/20 00:33:29, This location: 2020/02/20 00:47:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

NEIC ***20*** *00:32:32.4±1.6, 35°.27N±0°.08×23°.96E±0°.04, h10km±2km, mb3.6/2, Error ellipse: s-maj=14.6km s-min=3.0km az=200.0*

ISC 20 00:32:30.2±1.0, **35°.19N**±0°.03×**23°.85E**±0°.03, **h9**km±7km, **n41**, σ0**96**/54, **mb3.6**/4, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.19**	**285**	P		**Pg**	**00 32 33.9**	**-0.3**
KNDR				S		**Sg**	**00 32 36.5**	**-0.5**
IMMV	**Iera Moni Meta**	**0.29**	**21**	P		**Pg**	**00 32 36.0**	**0.0**
IMMV				S		**Sg**	**00 32 39.7**	**-0.3**
CHNB	**Souda**	**0.35**	**30**	P		**Pg**	**00 32 37.3**	**+0.2**
CHNB				S		**Sg**	**00 32 41.8**	**+0.1**
CH01	**Chania**	**0.36**	**22**	P		**Pg**	**00 32 37.5**	**+0.3**
CH01				S		**Sg**	**00 32 42.5**	**+0.5**
VAM	**Vamos**	**0.36**	**52**	P		**Pg**	**00 32 37.2**	**-0.1**
VAM				S		**Sg**	**00 32 43.0**	**+0.9**
CHAN	**Chania**	**0.37**	**25**	P		**Pg**	**00 32 37.8**	**+0.4**
CHAN				S		**Sg**	**00 32 41.9**	**-0.4**
GVD	**Gavdhos**	**0.40**	**151**	P		**Pg**	**00 32 38.3**	**+0.3**
GVD				S		**Sg**	**00 32 44.1**	**+0.9**
ANKY	**Antikythira Is**	**0.81**	**327**	P		**Pg**	**00 32 45.5**	**-0.4**
ANKY				S		**Sg**	**00 32 55.9**	**-0.7**
IDI	**Anoyia**	**0.85**	**83**	Pg		**Pg**	**00 32 45.7**	**-1.0**
IDI				Sg		**Sg**	**00 32 56.8**	**-1.0**
IDI	**Anoyia**	**0.85**	**83**	P		**Pb**	**00 32 47.1**	**-0.2**
IDI				S		**Sg**	**00 32 57.8**	**0.0**
MHLO	**Agia Marina, M**	**1.56**	**16**	P		**Pn**	**00 32 58.8**	**+0.6**
MHLO				S		**Sn**	**00 33 18.5**	**-0.1**
VLI	**Veliai**	**1.70**	**334**	P		**Pn**	**00 33 00.5**	**+0.4**
VLI				S		**Sn**	**00 33 22.2**	**+0.3**
THERA	**Ancient Thera,**	**1.77**	**48**	P		**Pn**	**00 33 01.4**	**+0.3**
THERA				S		**Sb**	**00 33 24.6**	**-0.6**
ITM	**Ithomi**	**2.53**	**322**	Pn		**Pn**	**00 33 13.0**	**+1.5**
KARP	**Karpathos**	**2.73**	**81**	Pn		**Pn**	**00 33 13.6**	**-0.7**
ARG	**Arkhangelos**	**3.63**	**72**	Pn		**Pn**	**00 33 27.1**	**+0.6**
AKAS	**Kas**	**4.79**	**76**	Pn		**Pn**	**00 33 43.6**	**+0.8**
LIT	**Litokhoron**	**5.02**	**348**	Pn		**Pn**	**00 33 47.0**	**+1.2**
ELL	**Elmali**	**5.15**	**71**	Pn		**Pn**	**00 33 49.7**	**+2.1**
KEK	**Kerkira**	**5.55**	**326**	Pn		**Pn**	**00 33 54.3**	**+1.3**
RDO	**Rodhopi**	**6.10**	**12**	Pn		**Pn**	**00 34 00.5**	**0.0**
TIP	**Timpagrande**	**6.92**	**307**	Pn		**Pn**	**00 34 11.7**	**-0.3**
CSS	**Mathiatis**	**7.77**	**89**	Pn		**Pn**	**00 34 22.6**	**-0.9**
RAFF	**Raffo Rosso**	**7.94**	**288**	Pn		**Pn**	**00 34 25.3**	**-0.5**
CUC	**Castrocucco**	**7.98**	**309**	Pn		**Pn**	**00 34 26.7**	**+0.3**
PDG	**Podgorica**	**8.07**	**335**	Pn		**Pn**	**00 34 28.2**	**+0.6**
BR131	**Keskin Array S**	**9.00**	**57**	Pn		**Pn**	**00 34 41.4**	**+0.9**
BRTR	**Keskin Array B**	**9.00**	**57**	Pn		**Pn**	**00 34 42.5**	**+2.0**
	0.2nm,0.3s,baz=238,slow=16,SNR=10 1.6nm,0.8s							
BRTR	**Keskin Array B**	**9.00**	**57**	Pn		**Pn**	**00 34 41.4**	**+0.9**
MMAI	**Mount Meron Ar**	**9.82**	**99**	Pn		**Pn**	**00 34 49.2**	**-2.5**
	0.7nm,0.3s,baz=324,slow=14,SNR=4.8							
MMAI				Sn		Sn	00 36 32.4	-10
	0.2nm,0.3s,baz=273,slow=24,SNR=1.3 0.8nm,0.5s							
GHAJ	**Ghor Haditha**	**10.54**	**108**	Pn		**Pn**	**00 35 02.1**	**+0.7**
NRCA	**Norcia**	**11.31**	**316**	Pn		**Pn**	**00 35 15.1**	**+3.0**
ARSA	**Arzberg**	**13.57**	**335**	Pn		**Pn**	**00 35 42.7**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**15.34**	**322**			**P**	**00 36 11.1**	**-0.8**
FUORN					IAmb	IAmb	00 36 19.4	
	comp=Z,5.2nm,1.1s							
GERES	**GERESS Array B**	**15.57**	**334**	Pn		**Pn**	**00 36 10.3**	**+0.3**
	baz=144,slow=13,SNR=2.3 comp=Z,0.4nm,0.5s							
GEVA	**Gevas**	**15.71**	**73**			**Pn**	**00 36 14.1**	**+2.2**
GEVA					IAmb	IAmb	00 36 22.7	
	comp=Z,1.8nm,0.9s							
KBZ	**Khabaz**	**16.98**	**54**	P		**Pn**	**00 36 27.2**	**-0.6**
	baz=247,slow=15,SNR=1.1 comp=Z,0.3nm,0.4s							
ESDC	**Sonseca Array**	**22.50**	**290**	P		**P**	**00 37 29.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=80,slow=11,SNR=4.7 comp=Z,0.4nm,0.7s							
FINES	**FINESS Array B**	**26.32**	**2**	P		**P**	**00 38 05.6**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=188,slow=10,SNR=1.8 comp=Z,2.0nm,0.9s							
EKA	**Eskdalemuir Ar**	**27.41**	**326**	P		**P**	**00 38 15.7**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=124,slow=7.8,SNR=3.4 comp=Z,0.9nm,0.7s							
MKAR	**Makanchi Array**	**44.65**	**56**	P		**P**	**00 40 43.1**	**0.0**
	comp=Z,0.6nm,0.6s,baz=270,slow=7.5,SNR=13 comp=Z,0.6nm,0.6s							

IDC ***20*** *00:48:08.7±0.6,26°.88N×143°.78E, h0km, mb4.3/26, mbtmp4.3/30, ML3.9/4, MS3.2/12, Error ellipse: s-maj=16.0km s-min=14.2km az=48.0*

BJI ***20*** *00:48:09.1,26°.89N×143°.51E, h6km, mB4.8/13, mb4.6/55, Ms4.1/4, Ms7 3.8/4*

NEIC ***20*** *00:48:11.1±0.8,26°.95N±0°.10×143°.71E±0°.07, h10km±1km, mb4.6/60, Error ellipse: s-maj=16.2km s-min=11.3km az=180.0*

NIED ***20*** *00:48:11.4,27°.12N×143°.84E, h48km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^15Nm; Mrr=0.94; Mθθ=0.97; Mφφ=-0.03; Mrθ=1.45; Mθφ=-0.49; Mφr=0.20; Fault plane solution: M0 1.81000×10^15 NP1: φs=128.00000°,δ=20.00000°,λ=-63.00000°. NP2: φs=280.00000°,δ=73.00000°,λ=-99.00000°.*

JMA ***20*** *00:48:11.4±0.1,27°.1N±0°.6×143°.8E±0°.5, h48km, MV4.2/19, NEAR CHICHIJIMA ISLAND*

ISC 20 00:48:14.6±0.5, **27°.09N**±0°.06×**143°.69E**±0°.06, **h35**km, **n144**, σ1**9**15/147, **mb4.5**/67, **MS3.4**/9, **2C-1D**, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.34**	**271**	P		**Pn**	**00 48 36.3**	**-0.6**
CBIJ				S		**Sn**	**00 48 54.4**	**+1.0**
JCJ	**Chichijima**	**1.34**	**271**	Pn		**Pn**	**00 48 35.6**	**-1.2**
	58nm,0.3s,baz=316,slow=15,SNR=16							
JCJ				Sn		**Sn**	**00 48 51.9**	**-1.5**
	122nm,0.3s,baz=275,slow=22,SNR=8.8							
JCJ				LR		LR	00 49 03.8	
	comp=Z,179nm,19.1s,baz=120,slow=38							
JCJ	**Chichijima**	**1.34**	**271**			**Pn**	**00 48 36.2**	**-0.6**
JCJ						**Sn**	**00 48 54.0**	**+0.6**
JHH2	**Haha-jima-NKT2**	**1.42**	**252**	*eP*		**Pn**	**00 48 37.4**	**-0.6**
JHH2				S		**Sn**	**00 48 56.7**	**+1.2**
JHJ2	**Mitsune**	**6.88**	**332**	Pn		**Pn**	**00 49 52.5**	**-0.4**
JHJ2	**Mitsune**	**6.88**	**332**	*eP*		**Pn**	**00 49 52.7**	**-0.3**
JHJ	**Hachijo jima 2**	**6.90**	**332**	Pn		**Pn**	**00 49 52.0**	**-1.2**
	5.7nm,0.3s,baz=55,slow=22,SNR=1.9							
JHJ				Sn		**Sn**	**00 51 05.6**	**-4.8**
	18nm,0.3s,baz=72,slow=18,SNR=5.0 68nm,0.9s							
BSO1	**Boso 1**	**7.89**	**344**	*eP*		**Pn**	**00 50 04.9**	**-1.5**
BSO1				*eS*		**Sn**	**00 51 31.2**	**-3.0**
BSO3	**Boso 3**	**8.16**	**341**	*eP*		**Pn**	**00 50 10.2**	**0.0**
JYN	**Shimodo**	**9.46**	**334**	*eP*		**Pn**	**00 50 29.0**	**+0.5**
JRY	**Ryogami san**	**9.79**	**337**	*eP*		**Pn**	**00 50 32.5**	**-0.5**
JRY				*eS*		**Sn**	**00 52 17.4**	**-4.2**
JGF	**Kuroka**	**10.06**	**329**	Pn		**Pn**	**00 50 37.7**	**+1.0**
MJAR	**Matsushiro Arr**	**10.51**	**335**	Pn		**Pn**	**00 50 42.3**	**-0.5**
	0.6nm,0.3s,baz=158,slow=11,SNR=31							
MJAR				Sn		**Sn**	**00 52 36.5**	**-2.8**
	0.1nm,0.3s,baz=142,slow=24,SNR=5.2							
MJAR				LR		LR	00 55 16.3	
	comp=Z,46nm,20.7s,baz=169,slow=40 16nm,0.8s							
MJAR	**Matsushiro Arr**	**10.51**	**335**			**Pn**	**00 50 41.0**	**-1.7**
MAJO	**Matsushiro**	**10.51**	**335**			**Pn**	**00 50 40.2**	**-2.6**
KSRS	**Korea Array**	**16.84**	**312**	P		**P**	**00 52 09.4**	**-0.1**
	0.5nm,0.3s,baz=122,slow=11,SNR=26							
KSRS				LR		LR	00 58 25.6	
	comp=Z,34nm,18.8s,baz=85,slow=36 10nm,0.8s							
KSAR	**Wonju Array Be**	**16.86**	**312**	Pn		**Pn**	**00 52 07.8**	**-0.1**
KS19	**Wonju Array Si**	**16.91**	**312**			**Pn**	**00 52 08.8**	**+0.3**
ASAJ	**Asahikawa**	**17.02**	**357**	LR		LR	00 58 54.1	
	comp=Z,57nm,20.6s,baz=334,slow=38							
USRK	**Ussuriysk Ar.**	**19.51**	**334**	P		**Pn**	**00 52 40.9**	**+0.7**
	0.6nm,0.3s,baz=156,slow=10,SNR=8.7 3.7nm,0.5s							
YHNB	**Yeheng**	**20.22**	**268**	P		**P**	**00 52 44.5**	**-2.2**
YHNB				IAmb		IAmb	00 53 05.0	
	comp=Z,41nm,1.3s							
SSLB	**Suanglung**	**20.79**	**266**			**P**	**00 52 51.8**	**-1.1**
SSLB				IAmb		IAmb	00 52 57.8	
	comp=Z,39nm,0.8s							
MDJ	**Mudanjiang**	**20.84**	**331**	P		**P**	**00 52 54.9**	**+1.7**
MDJ				pmax		pmax		
	comp=Z,13nm,1.6s							
NJ2	**Nanjing**	**22.14**	**289**	*eP*		**P**	**00 53 07.9**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.7s							
BNX	**BinXian**	**22.68**	**329**	⇑P		**P**	**00 53 14.3**	**+1.3**
BNX				pmax		pmax		
	comp=Z,13nm,1.1s							
WHN	**Wuhan**	**25.90**	**285**	P		**P**	**00 53 44.5**	**+1.1**
WHN				pmax		pmax		
	comp=Z,58nm,0.7s						

comp=Z,3.6nm,0.8s
COLD Coldfoot 56.10 25 P P 00 57 50.7 +0.7
COLD IAmb IAmb 00 57 52.6
comp=Z,4.1nm,0.8s
BOOM Boomskoye usch 56.32 305 P P 00 57 53.2 +0.9
BOOM IAmb IAmb 00 58 00.1
comp=Z,7.1nm,0.9s
NRN Naryn 56.42 303 P P 00 57 53.6 +0.5
SCM Sheep Creek Mo 56.61 32 P P 00 57 53.7 -0.2
E24K Your Creek 56.90 25 P P 00 57 57.1 +1.3
E24K IAmb IAmb 00 57 58.2
comp=Z,6.3nm,0.7s
ILAR Eielson Array 57.08 29 P P 00 57 56.5 -0.5
comp=Z,2.2nm,0.9s,baz=260,slow=5.7,SNR=19
ILAR PcP **PcP 00 58 50.9 -0.7**
comp=Z,0.8nm,0.8s,baz=281,slow=3.5,SNR=4.8
comp=Z,2.2nm,0.9s
ILAR Eielson Array 57.08 29 P P 00 57 56.3 -0.7
KSH2 Kashi 57.10 301 P P 00 57 59.4 +1.6
KSH2 pmax pmax
comp=Z,6.0nm,0.6s
AAK Ala-Archa 57.36 305 P 00 57 59.1 -0.5
BMAR Burnt Mountain 58.28 26 P P 00 58 06.6 +1.0
STKA Stephens Creek 58.67 182 P P 00 58 05.5 -2.9
comp=Z,1.8nm,0.7s,baz=325,slow=10,SNR=3.9
comp=Z,1.8nm,0.7s
ARSB Arslanbob 58.68 304 P P 00 58 09.3 +0.5
BVAR Borovoye Array 58.95 318 P P 00 58 11.6 +1.3
comp=Z,4.0nm,0.5s,baz=88,slow=6.4,SNR=23
comp=Z,4.0nm,0.5s
BORK Borovoye 58.99 318 P 00 58 11.4 +0.8
BCAR Beaver Creek A 59.23 31 P P 00 58 12.3 +0.2
DRK Karamyk 59.91 302 P P 00 58 17.8 +0.3
DRK IAmb IAmb 00 58 19.3
comp=Z,5.5nm,0.9s
NIL Nilore 60.08 295 P 00 58 18.6 +0.1
KK31 Karatay Array 60.17 306 P 00 58 19.6 +0.7
KKAR Karatay Array 60.17 306 P 00 58 19.7 +0.7
BTK Batken 60.53 303 P 00 58 21.5 -0.1
BTK IAmb IAmb 00 58 23.4
comp=Z,8.2nm,1.3s
CHGR Chuyangaron 62.10 301 P 00 58 32.7 +0.5
KBL Kabul 63.22 297 P 00 58 40.1 +0.2
ARTI Arti 65.35 322 P 00 58 53.5 +0.3
DLBC Dease Lake 65.44 35 LR LR 01 24 15.0
comp=Z,40nm,21.8s,baz=132,slow=33
AB31 Akbulak array 66.06 315 P 00 58 58.6 +0.8
ABKAR Akbulak array 66.06 315 P 00 58 58.6 +0.8
HRA Herat 68.63 299 P 00 59 15.2 +0.5
HRA IAmb IAmb 00 59 16.9
comp=Z,6.2nm,0.9s
SPITS Spitsbergen Ar 70.62 350 P P **00 59 27.1 +1.1**
comp=Z,9.8nm,1.1s,baz=53,slow=6.1,SNR=1.3
comp=Z,9.8nm,1.1s
YKA Yellowknife Ar 71.51 29 P P **00 59 31.9 +0.4**
comp=Z,0.9nm,0.8s,baz=296,slow=6.7,SNR=12
comp=Z,0.9nm,0.8s
ARCES ARCESS Array B 73.98 341 P P **00 59 47.4 +1.3**
comp=Z,5.4nm,0.9s,baz=74,slow=8.9,SNR=5.4
comp=Z,5.4nm,0.9s
ARCES ARCESS Array B 73.98 341 P P 00 59 47.2 +1.0
B08A Colville Reser 74.62 43 P P 00 59 50.6 +0.3
B08A IAmb IAmb 00 59 51.5
comp=Z,4.1nm,0.9s
KCPM Cahto Peak 75.21 53 P P 00 59 54.4 +0.4
KCPM IAmb IAmb 00 59 55.6
comp=Z,9.1nm,1.0s
N02D Trinity Center 75.32 51 P 00 59 55.3 +0.8
N02D IAmb IAmb 01 00 18.0
comp=Z,5.2nm,1.2s
NEEM North Greenlan 75.32 3 *i* P P **00 59 53.6 -0.6**
PINE Pine Mountain 75.41 48 P 00 59 55.8 +0.7
PINE IAmb IAmb 00 59 57.2
comp=Z,5.2nm,0.8s
UOSS Minazif 76.97 291 P 01 00 04.1 +0.1
UOSS IAmb IAmb 01 00 08.7
comp=Z,4.0nm,0.8s
CMB Columbia Colle 78.16 53 P 01 00 10.4 -0.2
CMB IAmb IAmb 01 00 11.7
comp=Z,3.8nm,0.8s
FINES FINESS Array B 78.54 334 P P **01 00 13.4 +1.3**
comp=Z,1.2nm,0.5s,baz=58,slow=5.1,SNR=18
comp=Z,1.2nm,0.5s
FINES FINESS Array B 78.54 334 P P 01 00 13.1 +1.0
KBZ Khabaz 78.99 313 P P 01 00 16.4 +1.5
comp=Z,6.7nm,0.8s,baz=140,slow=2.9,SNR=19
comp=Z,6.7nm,0.8s
KIV Kislovodsk 79.02 314 P P 01 00 15.9 +0.7
KIV IAmb IAmb 01 00 20.3
comp=Z,9.2nm,0.9s
NVAR Mina Array Bea 79.47 52 P P 01 00 18.4 +0.4
comp=Z,1.6nm,0.7s,baz=289,slow=5.3,SNR=9.2
comp=Z,1.6nm,0.7s
BCYI Bear Canyon 80.08 45 P P 01 00 21.6 +0.4
SUMG Summit 80.59 1 P P 01 00 24.6 +1.0
SUMG Summit 80.59 1 *i* P P **01 00 24.0 +0.4**
TPNV Topopah Spring 81.59 53 P P 01 00 29.1 -0.3
MOOW Moose Ponds 82.03 45 P P 01 00 31.8 +0.2
RLMT Red Lodge 82.25 43 P P 01 00 33.3 +0.6
DUG Dugway, Tooele 82.43 49 P P 01 00 33.5 -0.1
DUG IAmb IAmb 01 00 34.7
comp=Z,3.3nm,0.6s
PABE Paberze 83.05 330 P P 01 00 37.0 +0.7
PDAR Pinedale Array 83.27 45 P P 01 00 38.0 -0.1
comp=Z,0.4nm,0.5s,baz=319,slow=1.1,SNR=7.2
comp=Z,0.4nm,0.5s
PDAR Pinedale Array 83.27 45 P P 01 00 37.8 -0.3
AKASG Malin Array Be 83.41 324 P P 01 00 38.0 -0.3
comp=Z,3.8nm,0.7s,baz=50,slow=5.1,SNR=7.7
comp=Z,3.8nm,0.7s
HFS Hagfors 83.95 337 P P 01 00 40.8 0.0
comp=Z,1.4nm,0.6s,baz=52,slow=4.7,SNR=2.1
comp=Z,1.4nm,0.6s
NOA NORSAR Array B 84.11 339 P P 01 00 41.6 -0.1
comp=Z,1.7nm,0.9s,baz=40,slow=5.0,SNR=3.5
comp=Z,1.7nm,0.9s
BZK Bozkurt 85.54 315 P P 01 00 49.4 +0.2
BZK IAmb IAmb 01 01 15.2
comp=Z,5.4nm,0.8s
SFJD Kangerlussuaq 85.59 6 P P 01 00 49.7 +0.8
comp=Z,11nm,0.8s,baz=359,slow=1.4,SNR=4.8
comp=Z,11nm,0.8s
RAYN Ar Rayn 86.37 294 P P 01 00 53.8 0.0
RAYN IAmb IAmb 01 00 56.6
comp=Z,4.9nm,0.8s
BR131 Keskin Array S 86.98 313 P 01 00 55.7 -0.9
BR131 IAmb IAmb 01 00 57.8
comp=Z,2.6nm,0.8s
BRTR Keskin Array B 86.98 313 P P 01 00 56.6 0.0
comp=Z,2.1nm,0.8s,baz=105,slow=3.5,SNR=16
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 86.98 313 P P 01 00 56.0 -0.6
BURAR Bucovina Array 87.36 323 P P 01 00 57.6 -0.6
STHS Stebnicka Huta 88.24 327 *eP* P **01 01 02.3 0.0**
MMAI Mount Meron Ar 89.39 307 P P 01 01 08.1 0.0
comp=Z,0.8nm,0.6s,baz=58,slow=4.3,SNR=1.1
comp=Z,0.8nm,0.6s
TXAR Lajitas Array 94.53 54 P P 01 01 32.6 +0.6
comp=Z,0.3nm,0.6s,baz=325,slow=6.3,SNR=3.5
comp=Z,0.3nm,0.6s
LPAZ La Paz 148.63 77 PKPbc **PKPbc 01 07 59.6 +0.2**
comp=Z,2.3nm,0.5s,baz=337,slow=1.7,SNR=13

IDC 20 00:55:28.8±2.6,5°**94S**×130°**22E**,**h0**km,**mb3.9**/1,
mbtmp3.8/3,**ML3.7**/2,**Error ellipse: s-maj=188.8km s-min=30.0km az=70.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.48**	**164**	Pn	Pn	00 58 54.9	-0.3
	0.2nm,0.3s,baz=345,slow=14,SNR=7.1						
WRA				Sn	Sn	01 01 25.6	-11
	0.4nm,0.3s,baz=334,slow=24,SNR=2.1						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**17.98**	**169**	P	Pn	00 59 40.5	+0.2
	0.7nm,0.3s,baz=340,slow=9.7,SNR=35						
	2.3nm,0.4s						
MKAR	**Makanchi Array**	**67.46**	**326**	P	P	01 06 26.5	0.0
	0.4nm,0.3s,baz=125,slow=5.9,SNR=16						
	0.4nm,0.3s						

*KRSC **20** 01:14:31.0±0.6,52°.95N×158°.80E,h124km±4km,Ml3.8*
*MOS **20** 01:14:31.1±0.7,52°.99N×158°.76E,h123km,mb3.6/5,Error ellipse: s-maj=17.4km s-min=7.4km az=88.2*

ISC 20 01:14:32.3±0.8,**53°.00N**±0°.04×**158°.81E**±0°.05,**h124**km±5km,
n60,σ0°**63**/97,**mb3.6**/5,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DALK	**Dalny**	**0.05**	**317**	PN	Pn	**01 14 48.6**	**-0.5**
DALK				S	Sn	**01 15 01.7**	**-0.2**
DALK	**Dalny**	**0.05**	**317**	*e*P	Pn	**01 14 48.7**	**-0.5**
DALK				*e*S	Sn	**01 15 01.7**	**-0.2**
PET	**Petropavlovsk**	**0.10**	**286**	PN	Pn	**01 14 48.6**	**-0.5**
PET				S	Sn	**01 15 01.6**	**-0.3**
PET	**Petropavlovsk**	**0.10**	**286**	*e*P	Pn	**01 14 48.7**	**-0.5**
PET				*e*S	Sn	**01 15 01.7**	**-0.3**
INSR	**Institute**	**0.14**	**300**	PN	Pn	**01 14 48.9**	**-0.3**
INSR				S	Sn	**01 15 02.0**	**-0.1**
INSR	**Institute**	**0.14**	**300**	*e*P	Pn	**01 14 48.9**	**-0.3**
INSR				*e*S	Sn	**01 15 02.0**	**-0.1**
UGLR	**Uglovaya**	**0.21**	**3**	PN	Pn	**01 14 49.5**	**-0.1**
UGLR				S	Sn	**01 15 03.1**	**+0.5**
UGLR	**Uglovaya**	**0.21**	**3**	*e*P	Pn	**01 14 49.6**	**-0.1**
UGLR				*e*S	Sn	**01 15 03.2**	**+0.5**
SMAR	**Somma**	**0.27**	**359**	PN	Pn	**01 14 49.6**	**-0.3**
SMAR				S	Sn	**01 15 03.3**	**+0.1**
SMAR	**Somma**	**0.27**	**359**	*e*P	Pn	**01 14 49.7**	**-0.3**
SMAR				*e*S	Sn	**01 15 03.3**	**+0.1**
AVH	**Avacha**	**0.27**	**351**	PN	Pn	**01 14 49.8**	**+0.1**
AVH				S	Sn	**01 15 03.7**	**+0.8**
AVH	**Avacha**	**0.27**	**351**	*e*P	Pn	**01 14 49.8**	**+0.1**
AVH				*e*S	Sn	**01 15 03.8**	**+0.8**
SDLR	**Sedlovina**	**0.28**	**9**	PN	Pn	**01 14 49.6**	**-0.2**
SDLR				S	Sn	**01 15 03.3**	**+0.2**
SDLR	**Sedlovina**	**0.28**	**9**	*e*P	Pn	**01 14 49.6**	**-0.2**
SDLR				*e*S	Sn	**01 15 03.3**	**+0.2**
KRER	**Koryakskii**	**0.31**	**354**	PN	Pn	**01 14 49.9**	**-0.1**
KRER				S	Sn	**01 15 03.7**	**+0.3**
KRER	**Koryakskii**	**0.31**	**354**	*e*P	Pn	**01 14 50.0**	**-0.1**
KRER				*e*S	Sn	**01 15 03.7**	**+0.3**
KOK	**Koryaka**	**0.31**	**341**	PN	Pn	**01 14 49.8**	**-0.1**
KOK				S	Sn	**01 15 03.6**	**+0.4**
KOK	**Koryaka**	**0.31**	**341**	*e*P	Pn	**01 14 49.8**	**-0.1**
KOK				*e*S	Sn	**01 15 03.6**	**+0.4**
NLC	**Nalytchevo**	**0.37**	**62**	PN	Pn	**01 14 49.4**	**-0.5**
NLC				S	Sn	**01 15 04.2**	**+0.9**
NLC	**Nalytchevo**	**0.37**	**62**	*e*P	Pn	**01 14 49.5**	**-0.5**
NLC				*e*S	Sn	**01 15 04.3**	**+0.9**
KRX	**Arik**	**0.38**	**345**	PN	Pn	**01 14 50.0**	**-0.2**
KRX	**Arik**	**0.38**	**345**	*e*P	Pn	**01 14 50.1**	**-0.2**
KRMR	**Karymshinskiy**	**0.44**	**248**	PN	Pn	**01 14 49.4**	**-0.9**
KRMR				S	Sn	**01 15 03.3**	**-0.6**
KRMR	**Karymshinskiy**	**0.44**	**248**	*e*P	Pn	**01 14 49.5**	**-0.9**
KRMR				*e*S	Sn	**01 15 03.4**	**-0.6**
RUS	**Russkaya**	**0.59**	**198**	PN	Pn	**01 14 50.4**	**-0.9**
RUS				S	Sn	**01 15 04.9**	**-0.6**
RUS	**Russkaya**	**0.59**	**198**	*e*P	Pn	**01 14 50.4**	**-0.9**
RUS				*e*S	Sn	**01 15 05.0**	**-0.6**
GRL	**Gorelyy**	**0.63**	**225**	PN	Pn	**01 14 51.6**	**-0.1**
GRL				S	Sn	**01 15 07.3**	**+1.0**
GRL	**Gorelyy**	**0.63**	**225**	*e*P	Pn	**01 14 51.6**	**-0.1**
GRL				*e*S	Sn	**01 15 07.3**	**+1.0**
MTVR	**Mutnovka**	**0.64**	**217**	PN	Pn	**01 14 51.4**	**-0.4**
MTVR				S	Sn	**01 15 07.3**	**+0.9**
MTVR	**Mutnovka**	**0.64**	**217**	*e*P	Pn	**01 14 51.5**	**-0.4**
MTVR				*e*S	Sn	**01 15 07.4**	**+0.9**
PEA0B	**Petropavlovsk-**	**0.68**	**280**	PN	Pn	**01 14 51.0**	**-0.9**
PEA0B				S	Sn	**01 15 05.8**	**-0.9**
SPN	**Mys Shipunski**	**0.74**	**82**	PN	Pn	**01 14 52.1**	**-0.2**
SPN	**Mys Shipunski**	**0.74**	**82**	*e*P	Pn	**01 14 52.2**	**-0.2**
ASAK	**Asacha**	**0.83**	**222**	PN	Pn	**01 14 52.9**	**-0.3**
ASAK				S	Sn	**01 15 09.4**	**+0.5**
ASAK	**Asacha**	**0.83**	**222**	*e*P	Pn	**01 14 53.0**	**-0.3**
ASAK				*e*S	Sn	**01 15 09.5**	**+0.5**
GNL	**Ganaly**	**0.87**	**324**	PN	Pn	**01 14 52.7**	**-0.8**
GNL				S	Sn	**01 15 08.8**	**-0.8**
GNL	**Ganaly**	**0.87**	**324**	*e*P	Pn	**01 14 52.8**	**-0.8**
GNL				*e*S	Sn	**01 15 09.0**	**-0.8**
APC	**Apacha**	**1.00**	**267**	PN	Pn	**01 14 54.0**	**-0.6**
APC	**Apacha**	**1.00**	**267**	*e*P	Pn	**01 14 54.0**	**-0.6**
KII	**Karymskiy**	**1.11**	**20**	PN	Pn	**01 14 55.9**	**+0.1**
KII	**Karymskiy**	**1.11**	**20**	*e*P	Pn	**01 14 56.0**	**+0.1**
KDTR	**Khodutka, Kamc**	**1.27**	**201**	PN	Pn	**01 14 56.5**	**-0.9**
KDTR				S	Sn	**01 15 14.9**	**-1.5**
KDTR	**Khodutka, Kamc**	**1.27**	**201**	*e*P	Pn	**01 14 56.5**	**-0.9**
KDTR				*e*S	Sn	**01 15 14.9**	**-1.5**
PAU	**Pauzhetka**	**1.96**	**219**	PN	Pn	**01 15 06.2**	**+0.7**
PAU	**Pauzhetka**	**1.96**	**219**	*e*P	Pn	**01 15 06.2**	**+0.7**
MKZ	**Mys Kozlova**	**2.33**	**47**	PN	Pn	**01 15 09.8**	**-0.2**
MKZ				S	Sn	**01 15 37.8**	**-1.2**
MKZ	**Mys Kozlova**	**2.33**	**47**	*e*P	Pn	**01 15 09.9**	**-0.2**
MKZ				*e*S	Sn	**01 15 37.9**	**-1.2**
SKR	**Severo-Kuril's**	**2.85**	**217**	*i* PN	Pn	**01 15 16.3**	**-0.5**
SKR	**Severo-Kuril's**	**2.85**	**217**	*e*P	Pn	**01 15 16.6**	**-0.1**
ESO	**Esso**	**2.94**	**359**	PN	Pn	**01 15 17.4**	**-0.4**
ESO	**Esso**	**2.94**	**359**	*e*P	Pn	**01 15 17.4**	**-0.4**
MA2	**Magadan**	**7.96**	**329**	*i* PN	Pn	**01 16 24.1**	**-1.0**
MA2				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SEY	**Seymchan**	**10.52**	**344**	*i* PN	Pn	**01 17 00.0**	**+0.5**
SEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL	**Bilibino**	**15.51**	**11**	*i* P	P	**01 18 04.9**	**-0.7**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.2s						
YAK	**Yakutsk**	**17.92**	**312**	*i* P	Pn	**01 18 32.8**	**-0.4**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIXI	**Tiksi**	**22.85**	**336**	*i* P	P	**01 19 25.7**	**+1.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ULN	**Ulaanbaatar**	**32.76**	**282**	*i* P	P	**01 20 54.3**	**+1.0**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TLY	**Talaya**	**33.03**	**290**	*i* P	P	**01 20 55.9**	**+0.4**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	**Ala-Archa**	**54.42**	**295**	*i* P	P	**01 23 45.6**	**-0.9**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBZ	**Khabaz**	**69.07**	**316**	*i* P	P	**01 25 24.9**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						

*IDC **20** 01:19:37.6±2.1,38°.25N×13°.62E,h0km,mb3.6/2,*
mbtmp3.5/3,ML2.8/1,MS3.1/4,Error ellipse: s-maj=88.1km s-min=26.5km az=139.0
*ROM **20** 01:19:37.3±0.1,37°.845N±0°.004×13°.945E±0°.003,*
h7km,ML3.4/63,Error ellipse: s-maj=0.3km s-min=0.2km az=341.0

ISC 20 01:19:37.4±0.8,**37°.92N**±0°.04×**13°.96E**±0°.02,**h15**km±4km,
n35,σ1°**17**/39,**12C-1D,Sicily**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSLB	**Castelbuono**	**0.08**	**80**	⇑P	Pg	**01 19 40.2**	**-0.3**
CSLB				S	Sg	**01 19 43.2**	**+0.6**
GIB	**Gibilmanna**	**0.09**	**40**	⇑P	Pb	**01 19 41.2**	**+0.5**
GIB				S	Sb	**01 19 44.7**	**+1.9**
GIB				AML	AML		
	comp=E,15400μm,0.9s						
GIB				AML	AML		
	comp=N,22050μm,0.5s						
PETRA	**Petralia Sopra**	**0.15**	**125**	⇑P	Pg	**01 19 40.2**	**-1.4**
PETRA				S	Sg	**01 19 43.1**	**-1.2**
PLLN	**Pollina**	**0.16**	**65**	⇑P	Pb	**01 19 41.9**	**-0.3**
PLLN				S	Sb	**01 19 46.6**	**+1.1**
PLLN				AML	AML		
	comp=N,13900μm,1.6s						
PLLN				AML	AML		
	comp=N,13900μm,0.4s						
PLLN				AML	AML		
	comp=E,14415μm,0.9s						
ALJA	**Alia**	**0.23**	**223**	⇑P	Pg	**01 19 40.9**	**-1.8**
ALJA				S	Sg	**01 19 44.9**	**-1.3**
RESU	**Resuttano**	**0.29**	**164**	⇑P	Pg	**01 19 41.8**	**-1.7**
RESU				S	Sg	**01 19 46.7**	**-1.0**
SOLUN	**Solunto**	**0.37**	**297**	⇑P	Pn	**01 19 46.0**	**-2.4**
SOLUN				S	Sb	**01 19 52.9**	**+1.5**
SOLUN				AML	AML		
	comp=E,6790μm,0.6s						
SOLUN				AML	AML		
	comp=N,4960μm,0.5s						
SOLUN				AML	AML		
	comp=E,6790μm,1.4s						
MCT	**Mte Cammarata**	**0.39**	**221**	P	Pg	**01 19 45.1**	**-0.2**
MCT				S	Sg	**01 19 51.8**	**+1.1**
CMDO	**Montedoro**	**0.47**	**193**	P	Pg	**01 19 46.6**	**-0.2**
MSFR	**San Fratello**	**0.52**	**77**	⇑P	Pn	**01 19 48.3**	**-2.0**
MSFR				AML	AML		
	comp=E,2235μm,0.9s						
MSFR				AML	AML		
	comp=N,2615μm,1.4s						
MSFR				AML	AML		
	comp=E,2235μm,1.1s						
CORL	**Corleone**	**0.52**	**267**	⇓P	Pb	**01 19 47.7**	**-0.6**
CORL				AML	AML		
	comp=E,4920μm,0.5s						
CORL				AML	AML		
	comp=N,5635μm,1.3s						
CORL				AML	AML		
	comp=N,5635μm,0.7s						
CORL				AML	AML		
	comp=E,4920μm,1.5s						
CAGR	**Agira**	**0.53**	**125**	P	Pg	**01 19 48.2**	**+0.3**
MPG	**Monte Pellegri**	**0.53**	**297**	P	Pn	**01 19 49.1**	**-1.3**
MPG				AML	AML		
	comp=E,2105μm,1.1s						
MPG				AML	AML		
	comp=N,1420μm,1.1s						
MPG				AML	AML		
	comp=N,1420μm,0.9s						
GALF	**Gagliano Caste**	**0.53**	**113**	⇑P	Pg	**01 19 48.1**	**+0.2**
GALF				AML	AML		
	comp=E,1278μm,0.6s						
GALF				AML	AML		
	comp=E,10010μm,0.7s						
GALF				AML	AML		
	comp=E,1277μm,0.6s						
GALF				AML	AML		
	comp=N,1575μm,0.6s						
GALF				AML	AML		
	comp=N,12950μm,0.6s						
GALF				AML	AML		
	comp=N,1575μm,0.6s						
GALF				AML	AML		
	comp=E,10010μm,1.3s						
GALF				AML	AML		
	comp=E,1277μm,0.6s						
CLTB	**Caltabellotta**	**0.68**	**240**	P	Pg	**01 19 50.7**	**0.0**
CLTB				AML	AML		
	comp=E,16300μm,0.6s						
CLTB				AML	AML		
	comp=N,35100μm,0.7s						
IACL	**Alicudi**	**0.69**	**27**	⇑P	Pn	01 19 52.8	+0.1
IACL				AML	AML		
	comp=N,4350μm,0.7s						
IACL				AML	AML		
	comp=E,4205μm,1.6s						
EPZF	**Pizzo Felice**	**0.72**	**98**	⇑P	Pn	**01 19 52.5**	**-0.7**
EPZF				AML	AML		
	comp=E,4770μm,0.6s						
EPZF				AML	AML		
	comp=E,4770μm,1.4s						
EPZF				AML	AML		
	comp=N,4835μm,0.8s						
MUCR	**Ucria**	**0.74**	**80**	⇑P	Pn	**01 19 52.0**	**-1.4**
MUCR				AML	AML		
	comp=E,3120μm,0.9s						
MUCR				AML	AML		
	comp=N,2680μm,1.5s						
MUCR				AML	AML		
	comp=N,2680μm,0.5s						
CRJA	**Costa Raja**	**0.76**	**261**	P	Pn	**01 19 52.9**	**-0.8**
CRJA				AML	AML		
	comp=N,3265μm,0.6s						
CRJA				AML	AML		
	comp=E,3650μm,0.8s						
CRJA				AML	AML		
	comp=N,3265μm,1.4s						
CLTA	**Licata**	**0.76**	**180**	P	Pg	**01 19 51.5**	**-0.7**
CLTA				AML	AML		
	comp=E,1032μm,0.6s						
CLTA				AML	AML		
	comp=N,1305μm,0.9s						
CLTA				AML	AML		
	comp=N,1305μm,1.1s						
CLTA				AML	AML		
	comp=E,1032μm,1.4s						
RAFF	**Raffo Rosso**	**0.77**	**155**	P	Pg	**01 19 52.2**	**-0.2**
RAFF				AML	AML		
	comp=E,1810μm,1.2s						
RAFF				AML	AML		
	comp=N,1810μm,0.8s						
RAFF				AML	AML		
	comp=E,1810μm,0.8s						
ESML	**S. M. di Licod**	**0.79**	**112**	P	Pb	**01 19 53.1**	**+0.2**
ESML				AML	AML		
	comp=E,3345μm,1.2s						
ESML				AML	AML		
	comp=E,3345μm,0.8s						
ESML				AML	AML		
	comp=N,3595μm,0.7s						
MBFT	**Monte Bonifato**	**0.79**	**272**	P	Pn	**01 19 52.5**	**-1.6**
EMSG	**Monte Spagnolo**	**0.79**	**97**	P	Pn	**01 19 53.6**	**-0.7**
EMSG				AML	AML		
	comp=N,5205μm,0.5s						
EMSG				AML	AML		
	comp=N,5205μm,1.5s						
EMSG				AML	AML		
	comp=E,7380μm,0.6s						
ECHR	**Santa Chiara**	**0.80**	**107**	P	Pb	**01 19 53.5**	**+0.5**
MMGO	**Monte Magaggia**	**0.82**	**252**	P	Pn	**01 19 53.6**	**-0.8**
MFNL	**Monte Finestre**	**0.83**	**261**	P	Pn	**01 19 53.7**	**-0.9**
ESLN	**Serra La Nave**	**0.84**	**106**	P	Pb	**01 19 54.0**	**+0.1**
GEA	**GELA**	**0.91**	**162**	P	Pg	**01 19 54.1**	**-1.0**
KEST	**Kesra**	**4.29**	**241**	Pn	Pn	**01 20 44.1**	**+1.8**
	comp=E,0.5nm,0.3s,baz=80,slow=6.8,SNR=6.4						
KEST				Sn	Sn	**01 21 33.8**	**+1.6**
	comp=E,0.3nm,0.3s,baz=70,slow=21,SNR=3.8						
KEST				LR	LR	01 22 39.4	
	comp=E,119nm,19.4s,baz=9.7,slow=43						
	comp=E,7.0nm,1.0s						
VRAC	**Vranov**	**11.54**	**9**	LR	LR	01 27 53.3	
	comp=E,107nm,18.1s,baz=213,slow=44						
MLR	**Muntele Rosu**	**11.72**	**46**	LR	LR	01 27 39.7	
	comp=E,57nm,18.0s,baz=250,slow=41						
FINES	**FINESS Array B**	**24.73**	**14**	P	P	**01 24 58.0**	**+0.1**
	comp=E,2.9nm,1.0s,baz=201,slow=7.4,SNR=5.0						
	comp=E,2.9nm,1.0s						
DBIC	**Dimbokro**	**35.49**	**213**	LR	LR	01 43 31.0	
	comp=E,63nm,18.2s,baz=252,slow=40						
MKAR	**Makanchi Array**	**49.81**	**57**	P	P	01 28 32.2	+2.7
	comp=E,0.3nm,0.7s,baz=286,slow=6.5,SNR=4.0						
	comp=E,0.3nm,0.7s						

*IDC **20** 01:46:35.0±1.1,35°.16N×27°.86E,h0km,mb3.4/6,*
mbtmp3.4/11,ML3.0/4,Error ellipse: s-maj=25.0km s-min=17.5km az=160.0
*ATH **20** 01:46:39.4,35°.28N×27°.74E,h10km±2km,ML2.9/6,*
Manual Solution by F.Xalaris First location: 2020/02/20 01:48:14, This location: 2021/11/18 07:44:41 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km

ISC 20 01:46:38.6±0.7,**35°.18N**±0°.06×**27°.89E**±0°.04,**h28**km,**n21**,
σ1°**50**/27,**mb3.2**/5,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.69**	**302**	P	Pb	**01 46 50.1**	**-2.1**
KARP				S	Sb	**01 46 57.2**	**-4.3**
ARG	**Arkhangelos**	**1.05**	**11**	P	Pn	**01 46 58.4**	**+0.9**
ARG				S	Sn	**01 47 11.6**	**+0.5**
ZKR	**Zakros**	**1.37**	**268**	P	Pb	**01 47 03.6**	**+0.1**
ZKR				S	Sb	**01 47 20.0**	**-0.7**
SIT2	**Siteia**	**1.46**	**271**	P	Pn	**01 47 03.8**	**+0.8**
STIA	**Sitia Lasithi**	**1.47**	**271**	P	Pb	**01 47 04.2**	**-1.0**
THERA	**Ancient Thera,**	**2.29**	**302**	P	Pn	**01 47 14.9**	**+0.4**
IDI	**Anoyia**	**2.45**	**273**	P	Pn	**01 47 17.9**	**+1.1**
SMG	**Samos**	**2.66**	**342**	P	Pn	**01 47 21.1**	**+1.5**
IMMV	**Iera Moni Meta**	**3.21**	**276**	P	Pn	**01 47 28.7**	**+1.7**
BRTR	**Keskin Array B**	**6.44**	**44**	Pn	Pn	**01 48 11.8**	**+0.1**
	0.1nm,0.3s,baz=218,slow=15,SNR=5.6						
BRTR				Sn	Sn	**01 49 25.7**	**+1.4**
	0.2nm,0.3s,baz=211,slow=24,SNR=5.0						

	0.7nm,0.7s							
MMAI	**Mount Meron Ar**	**6.60**	**107**	Pn	**Pn**	**01 48 12.2**	**-1.7**
	1.4nm,0.3s,baz=323,slow=14,SNR=12							
MMAI				Sn	**Sn**	**01 49 27.0**	**-1.2**
	1.8nm,0.3s,baz=274,slow=23,SNR=6.1							
	0.6nm,0.3s							
ASF	**Jabal al Asfar**	**8.09**	**109**	Sn	**Sn**	**01 50 04.7**	**-0.1**
	0.1nm,0.3s,baz=115,slow=18,SNR=1.9							
EIL	**Elat**	**8.12**	**131**	Pn	**Pn**	**01 48 33.0**	**-1.5**
	0.4nm,0.3s,baz=267,slow=3.5,SNR=6.6							
EIL				Sn	Sn	01 49 58.8	-6.5	
	1.0nm,0.3s,baz=14,slow=14,SNR=4.4							
	4.3nm,0.8s							
KBZ	**Khabaz**	**14.38**	**49**	Pn	**P**	**01 50 04.8**	**-2.0**
	baz=182,slow=10,SNR=5.1							
	1.1nm,1.0s							
GERES	**GERESS Array B**	**17.21**	**327**	P	**Pn**	**01 50 37.1**	**+0.2**
	0.5nm,0.8s,baz=138,slow=13,SNR=1.8							
ESDC	**Sonseca Array**	**25.61**	**290**	P	**P**	**01 52 04.9**	**-0.7**
	0.4nm,0.8s,baz=85,slow=9.3,SNR=7.9							
	0.4nm,0.8s							
FINES	**FINESS Array B**	**26.31**	**358**	P	**P**	**01 52 12.2**	**+0.6**
	1.0nm,0.8s,baz=177,slow=11,SNR=1.1							
	1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**32.26**	**234**	P	**P**	**01 53 05.5**	**+0.7**
	0.9nm,0.7s,baz=25,slow=5.7,SNR=7.6							
	0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**39.37**	**51**	P	**P**	**01 54 06.7**	**+1.2**
	0.2nm,0.5s,baz=270,slow=8.5,SNR=2.5							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**41.90**	**57**	P	**P**	**01 54 28.2**	**+1.8**
	0.3nm,0.5s,baz=279,slow=7.6,SNR=6.4							
MKAR				PcP	**PcP**	**01 56 22.6**	**+0.9**	
	0.2nm,0.6s,baz=270,slow=1.4,SNR=2.1							
	0.3nm,0.5s							
ILAR	**Eielson Array**	**80.29**	**358**	P	**P**	**01 58 48.1**	**+1.6**
	0.2nm,0.8s,baz=18,slow=6.3,SNR=2.2							
	0.2nm,0.8s							

*ISK **20** 01:46:50.4, 37.°03N×28.°47E, h4km, ML2.2/13*
AFAD 20 01:46:50.3, 37.°02N×28.°45E, h7km±3km, ML1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.18**	**311**	Pg	Pg	01 46 54.8	+0.8
YER				Sg	Sg	01 46 58.2	+1.8
DALY	**Dalyan (Mula)**	**0.26**	**141**	Pg	Pg	01 46 56.2	+0.8
DALY				Sg	Sb	01 47 00.2	-1.4
MULA	**Mugla, Merkez-**	**0.26**	**336**	P	Pg	01 46 56.2	+0.8
MULA				S	Sb	01 47 00.6	-1.5
MULA				IAML		01 47 01.0	
	comp=E,272nm,0.3s						
TURN	**Turunc**	**0.29**	**215**	P	Pg	01 46 56.3	+0.3
TURN				S	Sb	01 47 01.9	-1.1
TURN				IAML		01 47 02.0	
	comp=N,153nm,0.5s						
TURN				IAML		01 47 02.0	
	comp=E,140nm,0.6s						
SABU	**Mula-Dalaman**	**0.46**	**115**	P	Pg	01 46 59.1	0.0
SABU				S	Sg	01 47 06.2	+1.1
DNZT	**Denizli-Tavas-**	**0.53**	**60**	P	Pg	01 47 01.2	+0.7
DNZT				S	Sg	01 47 08.4	+1.0
TAVA	**DENIZLI_Tavas**	**0.58**	**39**	P	Pg	01 47 01.4	-0.1
TAVA				S	Sg	01 47 09.7	+0.6
CAME	**Cameli-Denizli**	**0.69**	**96**	Pg	Pg	01 47 03.9	+0.4
CAME				Sg	Sb	01 47 14.1	-0.3
DAT	**Datca**	**0.76**	**248**	Pg	Pb	01 47 05.9	0.0
ESEN	**Aydn-Nazilli**	**0.78**	**354**	P	Pg	01 47 05.1	-0.3
ESEN				S	Sg	01 47 16.1	+0.6
AYDN	**Tasoluk**	**0.79**	**325**	P	Pg	01 47 05.5	+0.1
AYDN				S	Sg	01 47 16.4	+0.7
APMY	**Acipayam-Deniz**	**0.82**	**56**	Pg	Pb	01 47 06.6	-0.3
BODT	**Bodrum**	**0.92**	**273**	Pg	Pn	01 47 09.3	-0.3
AYDB	**Zeytinkoy-Aydi**	**1.03**	**334**	Pg	Pb	01 47 10.4	-0.1
GCAM	**G?zelcaml?**	**1.19**	**305**	Pn	Pn	01 47 13.8	+0.5
ELL	**Elmali**	**1.20**	**103**	Pn	Pn	01 47 13.9	+0.3
ODEM	**Odemis-Izmir**	**1.29**	**347**	Pn	Pb	01 47 15.0	0.0
KULA	**Kula-Manisa**	**1.50**	**6**	Pn	Pb	01 47 18.6	0.0
KORT	**Korkueli**	**1.52**	**90**	Pn	Pg	01 47 19.3	-0.1
GORD	**Gordes-Manisa**	**1.90**	**354**	Pn	Pb	01 47 24.4	-0.9

*WEL **20** 01:49:37.6±0.6, 31.°5±7.°1×17.°9W±1.°7, h373km±8km, M4.5/11, mB4.8/10, ML4.7/1, MLv5.1/11, Mw(mB)4.0/10, Error ellipse: s-maj=23.2km s-min=4.1km az=111.9*
*NEIC **20** 01:49:39.0±1.0, 30.°93S±0.°08×179.°9W±0.°2, h359km±7km, mb4.1/9, Error ellipse: s-maj=24.2km s-min=10.9km az=103.0*
*IDC **20** 01:49:39.2±4.2, 30.°88S×179.°78W, h370km±41km, mb3.0/4, mbtmp4.0/5, Error ellipse: s-maj=46.0km s-min=26.7km az=3.0*
ISC 20 01:49:38.5±0.6, 30.°98S±0.°06×179.°7W±0.°1, h370km, n80, σ1§94/109, mb3.9/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.28**	**42**	P	**Pn**	**01 50 33.6**	**0.0**
GLKZ				S	**S**	**01 51 10.1**	**-7.9**
RAO	**Raoul Island**	**2.29**	**42**	Pn	**Pn**	**01 50 33.9**	**+0.2**
RAO				Sn	**S**	**01 51 17.2**	**-0.9**
MXZ	**Matakaoa Point**	**6.78**	**194**	Pn	**Pn**	**01 51 18.9**	**+0.2**
MXZ	**Matakaoa Point**	**6.78**	**194**	P	**P**	**01 51 22.6**	**+2.9**
MXZ				S	**S**	**01 52 38.7**	**-1.6**
WMGZ	**Waiomatatini S**	**7.01**	**193**	P	**Pn**	**01 51 21.6**	**+0.4**
WMGZ				S	**S**	**01 52 45.6**	**+0.5**
OUZ	**Omahuta**	**7.07**	**231**	P	**P**	**01 51 26.5**	**+3.4**
HAZ	**Te Kaha**	**7.08**	**197**	P	**Pn**	**01 51 21.7**	**-0.5**
HAZ				S	**S**	**01 52 46.4**	**-0.3**
PKGZ	**Pakihiroa**	**7.12**	**195**	P	**Pn**	**01 51 22.4**	**-0.2**
PKGZ				S	**S**	**01 52 47.9**	**+0.3**
PUZ	**Puketiti**	**7.28**	**193**	P	**Pn**	**01 51 23.8**	**-0.6**
PUZ				S	**S**	**01 52 48.6**	**-2.4**
RUGZ	**Raukumara Rang**	**7.31**	**197**	P	**Pn**	**01 51 25.4**	**+0.5**
RUGZ				S	**S**	**01 52 53.5**	**+1.8**
MBAZ	**Motutapu North**	**7.34**	**217**	P	**P**	**01 51 30.9**	**+4.7**
TWGZ	**Tauwhareparae**	**7.44**	**195**	P	**P**	**01 51 30.5**	**+3.2**
TWGZ				S	**S**	**01 52 54.5**	**+0.2**
CNGZ	**Carnagh Statio**	**7.69**	**193**	P	**Pn**	**01 51 29.3**	**+0.1**
CNGZ				S	S	01 52 52.2	-7.5
MWZ	**Matawai**	**7.70**	**197**	P	**Pn**	**01 51 28.5**	**-0.8**
TKGZ	**Te Karaka**	**7.72**	**195**	P	**Pn**	**01 51 28.7**	**-0.8**
TKGZ				S	**S**	**01 52 58.8**	**-1.4**
URZ	**Urewera**	**7.74**	**199**	P	**Pn**	**01 51 30.7**	**+1.0**
	30nm,0.3s,baz=290,slow=2.9,SNR=37						
URZ				S	**S**	**01 52 59.5**	**-1.1**
	62nm,0.4s,baz=68,slow=22,SNR=25						
URZ	**Urewera**	**7.74**	**199**	P	**Pn**	**01 51 28.5**	**-1.2**
URZ				S	**S**	**01 52 58.5**	**-2.0**
TOZ	**Tahuroa Road**	**7.83**	**209**		**Pn**	**01 51 30.9**	**+0.1**
TOZ	**Tahuroa Road**	**7.83**	**209**	P	**P**	**01 51 36.3**	**+4.5**
RAGZ	**Rawiri**	**7.88**	**197**	P	**Pn**	**01 51 30.7**	**-0.7**
RAGZ				S	**S**	**01 53 03.0**	**-0.7**
MUGZ	**Murupara**	**8.04**	**200**	P	**P**	**01 51 36.1**	**+1.0**
MUGZ				S	**S**	**01 53 06.9**	**-0.2**
RTZ	**Ruatahuna**	**8.11**	**199**		**Pn**	**01 51 32.7**	**-1.3**
RAHZ	**Arahi**	**8.36**	**198**	P	**Pn**	**01 51 37.8**	**+0.9**
RAHZ				S	**S**	**01 53 14.3**	**+0.3**
MHGZ	**Mahia Peninsul**	**8.40**	**193**	P	**Pn**	**01 51 39.2**	**+1.8**
MHGZ				S	**S**	**01 53 11.5**	**-3.2**
WHHZ	**Waihua**	**8.47**	**197**	P	**Pn**	**01 51 40.1**	**+1.8**
WHHZ				S	**S**	**01 53 15.8**	**-0.6**
MRHZ	**Matea Rd**	**8.47**	**201**	P	**Pn**	**01 51 38.7**	**+0.3**
MRHZ				S	**S**	**01 53 13.3**	**-3.3**
NMHZ	**Naumai**	**8.60**	**199**	P	**Pn**	**01 51 38.8**	**-1.1**
NMHZ				S	**S**	**01 53 17.2**	**-2.2**
ARHZ	**Aropaoanui**	**8.71**	**197**	P	**Pn**	**01 51 41.7**	**+0.6**
ARHZ				S	**S**	**01 53 18.9**	**-2.6**
BKZ	**Black Stump Fm**	**8.76**	**200**	P	**Pn**	**01 51 39.7**	**-2.0**
HIZ	**Hauiti**	**8.77**	**210**	Pn	**Pn**	**01 51 41.5**	**-0.3**
MCHZ	**McNeill Hill**	**8.96**	**198**	P	**Pn**	**01 51 44.8**	**+0.8**
MCHZ				S	**S**	**01 53 24.3**	**-2.6**
KWHZ	**Kaweka Forest**	**9.02**	**200**	P	**Pn**	**01 51 45.2**	**+0.5**
KWHZ				S	**S**	**01 53 26.6**	**-1.7**
NGZ	**Ngauruhoe**	**9.05**	**204**	P	**Pn**	**01 51 47.0**	**+1.7**
NGZ				S	**S**	**01 53 30.6**	**+1.3**
KRHZ	**Kereru**	**9.23**	**199**	P	**Pn**	**01 51 46.2**	**-1.1**
KRHZ				S	**S**	**01 53 29.8**	**-3.1**
KAHZ	**Kahuranaki**	**9.24**	**197**	P	**Pn**	**01 51 46.2**	**-1.2**
KAHZ				S	**S**	**01 53 30.2**	**-2.9**
PNHZ	**Pukenui**	**9.53**	**200**	P	**Pn**	**01 51 48.2**	**-2.6**
PNHZ				S	**S**	**01 53 35.6**	**-3.8**

WPHZ	**Waipukurau**	**9.61**	**198**	P	**Pn**	**01 51 53.3**	**+1.7**
PRHZ	**Porangahau**	**9.74**	**197**	P	**Pn**	**01 51 52.6**	**-0.7**
PRHZ				S	**S**	**01 53 40.0**	**-3.9**
DVHZ	**Dannevirke**	**9.90**	**199**	P	**Pn**	**01 51 53.5**	**-1.6**
DVHZ				S	**S**	**01 53 42.4**	**-4.8**
MRZ	**Mangatainoka R**	**10.40**	**200**	P	**Pn**	**01 51 58.9**	**-2.1**
TCW	**Tory Channel**	**11.32**	**204**	P	**P**	**01 52 11.1**	**-0.5**
TUWZ	**Tuamarina**	**11.64**	**205**	P	**P**	**01 52 16.0**	**+1.0**
NNZ	**Nelson**	**11.66**	**207**	P	**P**	**01 52 15.7**	**+0.4**
MRNZ	**Matariki Terra**	**12.06**	**208**	P	**P**	**01 52 20.3**	**+0.5**
THZ	**Tophouse**	**12.31**	**207**	P	**P**	**01 52 23.0**	**+0.5**
KHZ	**Kahutara**	**12.65**	**204**	P	**P**	**01 52 24.3**	**-1.9**
KHZ				S	**S**	**01 54 38.1**	**-7.1**
NIUE	**Niue**	**14.76**	**39**	P	**P**	**01 52 45.0**	**-4.6**
ARMA	**Armidale**	**24.68**	**264**	P	**P**	**01 54 26.3**	**-1.2**
ARMA				IAmb	IAmb	01 54 51.1	
	comp=Z,22nm,1.4s						
CTAO	**Charters Tower**	**32.50**	**281**	P	**P**	**01 55 36.2**	**0.0**
STKA	**Stephens Creek**	**32.96**	**258**	P	**P**	**01 55 41.7**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=91,slow=8.0,SNR=3.9						
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**32.96**	**258**	P	**P**	**01 55 38.8**	**-1.3**
STKA				IAmb	IAmb	01 55 57.4	
	comp=Z,34nm,1.5s						
BBOO	**Buckleboo**	**37.44**	**255**	P	**P**	**01 56 16.1**	**-1.8**
BBOO				IAmb	IAmb	01 56 22.9	
	comp=Z,16nm,1.4s						
ASAR	**Alice Springs**	**41.66**	**268**	P	**P**	**01 56 52.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=112,slow=8.4,SNR=2.9						
ASAR				PcP	**PcP**	**01 58 41.3**	**0.0**
	comp=Z,0.2nm,0.4s,baz=97,slow=4.1,SNR=1.9						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**41.66**	**268**	P	**P**	**01 56 51.0**	**-1.5**
ASAR					**PcP**	**01 58 40.0**	**-1.3**
WR8	**Warramunga Arr**	**42.56**	**274**	P	**P**	**01 56 59.4**	**-0.3**
WR8				IAmb	IAmb	01 57 14.1	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**42.70**	**274**	P	**P**	**01 57 00.0**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=111,slow=8.2,SNR=10						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**42.70**	**274**	P	**P**	**01 56 60.0**	**-0.8**
WB0	**Warramunga Arr**	**42.73**	**274**	P	**P**	**01 56 59.8**	**-1.2**
WB0				IAmb	IAmb	01 57 19.8	
	comp=Z,10nm,1.3s						
SBA	**Scott Base**	**47.36**	**184**	P	**P**	**01 57 38.5**	**+2.4**
CASY	**Casey**	**53.96**	**208**	P	**P**	**01 58 26.1**	**+1.1**
NVAR	**Mina Array Bea**	**89.63**	**44**	P	**P**	**02 01 57.4**	**+2.1**
	comp=Z,0.4nm,0.9s,baz=216,slow=4.5,SNR=2.0						
	comp=Z,0.4nm,0.9s						
TARG	**Taragay, Kyrgy**	**118.64**	**304**		**PKPdf**	**02 07 42.6**	**-0.8**
KURBB	**Kurchatov Arra**	**120.46**	**314**	PKP	**PKPdf**	**02 07 45.9**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=115,slow=2.1,SNR=12						
BVAR	**Borovoye Array**	**125.82**	**316**	PKP	**PKPdf**	**02 07 56.9**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=63,slow=1.9,SNR=5.9						
KBZ	**Khabaz**	**144.24**	**303**	PKP	PKPbc	02 08 30.4	+0.6
	comp=Z,0.9nm,0.4s,baz=90,slow=1.0,SNR=11						
FINES	**FINESS Array B**	**145.18**	**339**	PKPbc	**PKPdf**	**02 08 32.1**	**+0.5**
	comp=Z,4.3nm,0.4s,baz=59,slow=4.1,SNR=68						
KOPT	**Kop Dagi**	**146.33**	**297**	PKPab	**PKPab**	**02 08 38.7**	**+0.4**
NC303	**NORSAR Array S**	**148.89**	**350**	PKPbc	**PKPbc**	**02 08 42.6**	**+0.3**
NB2	**NORSAR Subarra1**	**149.09**	**350**	PKP	**PKPbc**	**02 08 43.1**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=16,slow=2.6						
NOA	**NORSAR Array B**	**149.09**	**350**	PKPbc	**PKPbc**	**02 08 42.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=24,slow=4.5,SNR=5.6						
NAO01	**NORSAR Array S**	**149.32**	**350**	PKPab	**PKPab**	**02 08 49.6**	**+0.2**
HFS	**Hagfors**	**149.50**	**347**	PKPbc	**PKPbc**	**02 08 43.7**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=45,slow=2.4,SNR=14						
BNN	**Bunyan**	**149.99**	**295**	PKPbc	**PKPbc**	**02 08 46.2**	**+0.4**
MMAI	**Mount Meron Ar**	**150.28**	**283**	PKPbc	**PKiKP**	**02 08 47.8**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=79,slow=8.7,SNR=5.4						
PABE	**Paberze**	**150.33**	**333**	PKPbc	**PKiKP**	**02 08 46.8**	**+0.3**
AKASG	**Malin Array Be**	**150.87**	**321**	PKPbc	**PKPbc**	**02 08 47.2**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=49,slow=3.4,SNR=7.3						
BZK	**Bozkurt**	**150.97**	**302**	PKPbc	**PKPbc**	**02 08 48.5**	**+0.6**
BRTR	**Keskin Array B**	**151.61**	**297**	PKPbc	**PKPbc**	**02 08 49.5**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=103,slow=3.8,SNR=11						
BRTR	**Keskin Array B**	**151.61**	**297**		**PKPbc**	**02 08 49.6**	**0.0**
TORD	**Torodi Ar. Bea**	**162.21**	**184**	PKPab	**PKPab**	**02 09 46.6**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=143,slow=4.5,SNR=1.4						

*IDC **20** 01:54:56.7±1.4, 32.°79N×23.°01E, h0km, mb3.5/6, mbtmp3.5/11, ML2.6/3, MS3.5/1, Error ellipse: s-maj=34.2km s-min=19.4km az=159.0*
*GII **20** 01:55:11.6±0.0, 32.°89N±0.°04×23.°748E±0.°003, h0km, Mws3.5, confirmed*
ISC 20 01:54:59.8±2.1, 32.°8N±0.°2×23.°3E±0.°1, h10km, n23, σ1§93/28, mb3.6/5, Near coast of Libya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSS	**Mathiatis**	**8.59**	**73**	P	**Pn**	**01 57 07.4**	**+3.3**
CSS				S	**Sn**	**01 58 43.0**	**+2.0**
VAE	**Valguarnera**	**8.64**	**305**	Pn	Pn	01 57 02.6	-2.3
	0.9nm,0.3s,baz=37,slow=23,SNR=2.5						
	7.8nm,0.8s						
KZIT	**Kziot**	**9.61**	**99**	P	**Pn**	**01 57 20.6**	**+2.4**
KZIT				S	**Sn**	**01 59 06.6**	**+0.3**
AMAZ	**Amatzia**	**9.91**	**94**	P	**Pn**	**01 57 24.4**	**+2.0**
AMAZ				S	**Sn**	**01 59 12.6**	**-1.0**
SALP	**Salfit**	**10.06**	**91**	P	**Pn**	**01 57 26.0**	**+1.6**
MMA0B	**Mount Meron ar**	**10.15**	**86**	P	**Pn**	**01 57 27.4**	**+1.6**
MMA0B				S	**Sn**	**01 59 18.9**	**-0.8**
MMAI	**Mount Meron Ar**	**10.15**	**86**	Pn	**Pn**	**01 57 26.9**	**+1.2**
	2.1nm,0.4s,baz=283,slow=11,SNR=19						
MMAI				Sn	**Sn**	**01 59 15.7**	**-4.1**
	0.7nm,0.3s,baz=273,slow=25,SNR=1.6						
MMLI	**Mount Malkishu**	**10.21**	**89**	P	**Pn**	**01 57 27.9**	**+1.4**
MMLI				S	**Sn**	**01 59 19.0**	**-2.1**
DSI	**Dead Sea**	**10.29**	**94**	P	**Pn**	**01 57 29.3**	**+1.7**
DSI				S	**Sn**	**01 59 21.1**	**-1.9**
HMDT	**Nahal Hemdat**	**10.32**	**90**	P	**Pn**	**01 57 29.4**	**+1.5**
HMDT				S	**Sn**	**01 59 21.9**	**-1.7**
MSBI	**Mazada**	**10.32**	**95**	P	**Pn**	**01 57 29.7**	**+1.8**
MSBI				S	**Sn**	**01 59 21.3**	**-2.4**
GEM	**Giv'at Ha'Em**	**10.37**	**85**	P	**Pn**	**01 57 29.8**	**+1.3**
HRFI	**Mount Harif**	**10.39**	**102**	P	**Pn**	**01 57 30.7**	**+1.8**
BRTR	**Keskin Array B**	**10.79**	**48**	Pn	**Pn**	**01 57 36.8**	**+2.3**
	0.1nm,0.3s,baz=225,slow=14,SNR=3.7						
BRTR				Lg	Lg	02 00 39.9	
	0.3nm,0.3s,baz=263,slow=17,SNR=9.6						
	0.3nm,0.4s						
AKASG	**Malin Array Be**	**18.37**	**12**	P	**Pn**	**01 59 13.0**	**-1.6**
	0.2nm,0.3s,baz=203,slow=10,SNR=2.8						
KBZ	**Khabaz**	**18.78**	**49**	P	**P**	**01 59 18.2**	**-0.8**
	baz=222,slow=12,SNR=1.4						
	0.7nm,0.8s						
ESDC	**Sonseca Array**	**22.98**	**295**	P	P	01 59 60.0	-4.7
	0.6nm,1.0s,baz=92,slow=8.9,SNR=2.6						
	0.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**27.83**	**230**	P	P	02 00 45.5	-4.0
	0.3nm,0.6s,baz=33,slow=8.3,SNR=4.9						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**28.68**	**3**	P	**P**	**02 00 55.2**	**-1.4**
	2.2nm,0.9s,baz=187,slow=8.3,SNR=2.2						
	2.2nm,0.9s						
KURBB	**Kurchatov Arra**	**43.78**	**49**	P	**P**	**02 03 06.1**	**+0.6**
	0.3nm,0.3s,baz=273,slow=8.3,SNR=6.8						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**46.34**	**54**	P	**P**	**02 03 27.2**	**+1.2**
	0.2nm,0.5s,baz=264,slow=8.1,SNR=5.3						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**47.72**	**45**	P	**P**	**02 03 36.9**	**+0.3**
	0.5nm,0.3s,baz=281,slow=9.8,SNR=2.7						
	0.5nm,0.3s						
SFJD	**Kangerlussuaq**	**54.00**	**332**	LR	LR	02 30 30.0	
	comp=Z,48nm,19.2s,baz=162,slow=40						

*KRNET **20** 02:05:26.6±0.1, 42.°13N×71.°92E, h30km, mb2.8*
*NNC **20** 02:05:28.1±0.7, 42.°17N×71.°94E, h0km, mb3.0, mpv3.1, Error ellipse: s-maj=8.0km s-min=2.5km az=5.0*
*SOME **20** 02:05:28.0, 42.°10N×71.°98E, h15km*
*KNET **20** 02:05:29.7±0.5, 42.°16N×72.°14E, h5km±2km, ml2.4, Error ellipse: s-maj=6.6km s-min=3.5km az=153.0*
ISC 20 02:05:26.8±1.1, 42.°15N±0.°03×71.°99E±0.°02, h6km±10km, n36, σ0§90/69, 24C-22D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.35**	**184**	⇑*i*P	**Pg**	**02 05 34.2**	**+0.6**
ARK				⇑*e*S	**Sg**	**02 05 39.5**	**+1.3**
MNAS	**Manas**	**0.51**	**48**	⇑*e*P	**Pb**	**02 05 37.9**	**-0.3**
MNAS				⇑*e*S	**Sb**	**02 05 46.0**	**0.0**

TRKS	**Terek-Say**	**0.89**	**226**	⇑*e*P	**Pg**	**02 05 43.2**	**-0.6**
TRKS				⇑*e*S	**Sg**	**02 05 54.9**	**-0.4**
MRKS	**Merke**	**1.09**	**56**	P	**Pn**	**02 05 49.3**	**+0.6**
	6.4nm,0.2s						
MRKS				S	**Sn**	**02 06 04.2**	**0.0**
	54nm,0.4s						
MRKS	**Merke**	**1.09**	**56**	*e*P	**Pn**	**02 05 49.3**	**+0.6**
	4.6nm,0.2s						
MRKS				*e*S	**Sn**	**02 06 04.2**	**0.0**
	54nm,0.2s						
ARSB	**Arslanbob**	**1.11**	**138**	⇓*e*P	**Pg**	**02 05 47.6**	**-0.4**
ARSB				⇓*i*S	**Sg**	**02 06 02.7**	**+0.3**
EKS2	**Erkin-Say**	**1.42**	**68**	⇑P	**Pb**	**02 05 54.5**	**+0.7**
	3.3nm,0.1s,SNR=7.8						
EKS2				⇑S	**Sn**	**02 06 14.2**	**+1.9**
	10nm,0.2s						
EKS2	**Erkin-Say**	**1.42**	**68**	⇑*i*P	**Pb**	**02 05 53.5**	**-0.2**
EKS2				⇑*e*S	**Sn**	**02 06 12.8**	**+0.5**
KK31	**Karatay Array**	**1.45**	**312**	P	**Pn**	**02 05 54.0**	**+0.4**
	1.9nm,0.2s,baz=216,slow=0.2,SNR=77						
KK31				S	**Sn**	**02 06 13.8**	**+0.9**
	6.6nm,0.2s,baz=119,slow=28,SNR=11						
IUG	**luzhnay**	**1.46**	**271**	P	**Pn**	**02 05 54.4**	**+0.6**
	19nm,0.2s						
IUG				S	**Sb**	**02 06 13.1**	**-0.1**
	70nm,0.3s						
IUG	**luzhnay**	**1.46**	**271**	*e*P	**Pn**	**02 05 54.4**	**+0.6**
	19nm,0.2s						
IUG				*e*S	**Sb**	**02 06 13.1**	**-0.1**
	70nm,0.2s						
OHH	**Osh**	**1.73**	**160**	⇓*e*P	**Pn**	**02 05 57.2**	**-0.2**
OHH				⇓*i*S	**Sn**	**02 06 19.4**	**-0.4**
ARLS	**Aral**	**1.76**	**99**	⇓*i*P	**Pn**	**02 05 58.5**	**+0.5**
ARLS				⇓*e*S	**Sb**	**02 06 21.7**	**-0.3**
BRLS	**Borolday**	**1.82**	**300**	P	**Pb**	**02 06 00.6**	**+0.1**
	1.1nm,0.2s						
BRLS				S	**Sb**	**02 06 23.8**	**+0.2**
	34nm,0.4s						
BRLS	**Borolday**	**1.82**	**300**	*e*P	**Pb**	**02 06 00.6**	**+0.1**
	1.1nm,0.2s						
BRLS				*e*S	**Sb**	**02 06 23.8**	**+0.2**
	34nm,0.4s						
SALK	**Salom-Alik**	**1.87**	**132**	⇓*i*P	**Pn**	**02 05 59.6**	**+0.2**
SALK				⇓*e*S	**Sn**	**02 06 23.5**	**+0.1**
UCH	**Uchtor**	**1.88**	**87**	⇑P	**Pg**	**02 06 02.9**	**+0.2**
	3.4nm,0.1s,SNR=18						
UCH				⇓S	**Sg**	**02 06 29.0**	**+1.9**
	27nm,0.3s						
UCH	**Uchtor**	**1.88**	**87**	⇓*i*P	**Pn**	**02 06 00.4**	**+0.6**
UCH				⇓*e*S	**Sb**	**02 06 24.8**	**-0.8**
AAK	**Ala-Archa**	**1.92**	**74**	⇓P	**Pg**	**02 06 03.8**	**+0.2**
	4.3nm,0.2s,SNR=14						
AAK				⇑S	**Sg**	**02 06 29.7**	**+1.4**
	12nm,0.3s						
AAK	**Ala-Archa**	**1.92**	**74**	⇑Pn	**Pg**	**02 06 03.5**	**-0.1**
	1.5nm,0.4s						
AAK				⇑Sn	**Sg**	**02 06 29.3**	**+0.9**
	4.8nm,0.5s						
AAK	**Ala-Archa**	**1.92**	**74**	⇑*i*P	**Pn**	**02 06 00.8**	**+0.7**
AAK				⇑*e*S	**Sb**	**02 06 25.5**	**-1.0**
USP	**Ospenovka**	**2.16**	**58**	⇓P	**Pg**	**02 06 07.5**	**-0.7**
	9.4nm,0.2s,SNR=24						
USP				⇑S	**Sg**	**02 06 36.9**	**+0.7**
	46nm,0.2s						
USP	**Ospenovka**	**2.16**	**58**

MAKZ				⇓Lg	Lg	02 25 32.7		
	22nm,0.7s							
DJR	**Jarkent**	**5.26**	**279**	*e*P	**Pn**	**02 24 29.9**	**+0.2**	
	1.3nm,0.2s							
DJR				*e*S	**Sn**	**02 25 28.2**	**-1.2**	
	4.1nm,0.3s							
PDGK	**Podgornoye**	**5.50**	**268**	⇑Pn	**Pn**	**02 24 31.9**	**-1.2**	
	4.5nm,0.8s							
PDGK				⇑Pg	**Pb**	**02 24 50.9**	**+2.5**	
	12nm,1.1s							
PDGK				⇓Sn	**Sn**	**02 25 34.2**	**-1.3**	
	14nm,0.7s							
PDGK				⇑Lg	Lg	02 25 60.0		
	93nm,1.3s							
KURBB	**Kurchatov Arra**	**9.01**	**323**	Pn	**Pn**	**02 25 20.2**	**-0.8**	
	0.2nm,0.3s,baz=133,slow=14,SNR=11							
KURBB				Sn	**Sn**	**02 26 59.0**	**-2.4**	
	0.4nm,0.3s,baz=265,slow=32,SNR=6.6							
KURBB				Lg	Lg	02 27 53.1		
	0.2nm,0.3s,baz=140,slow=30,SNR=6.6							
	0.5nm,0.3s							
KURBB	**Kurchatov Arra**	**9.01**	**323**	⇑Pn	**Pn**	**02 25 19.6**	**-1.4**	
	1.9nm,0.5s							
KURBB				⇓Sn	**Sn**	**02 27 02.2**	**+0.9**	
	20nm,0.7s							
KURBB				⇓Lg	Lg	02 27 50.6		
	25nm,0.7s							
KURK	**Kurchatov**	**9.04**	**324**	⇑Pn	**Pn**	**02 25 19.8**	**-1.6**	
	0.5nm,0.5s							
KURK				⇑Sn	**Sn**	**02 27 00.9**	**-1.1**	
	3.3nm,0.5s							
KURK				⇑Lg	Lg	02 27 50.0		
	6.5nm,0.9s							
AAK	**Ala-Archa**	**9.23**	**268**	Pn	**Pn**	**02 25 24.2**	**-0.1**	
	0.1nm,0.3s,baz=96,slow=10,SNR=2.4							
AAK				Lg	Lg	02 28 02.4		
	0.1nm,0.3s,baz=23,slow=21,SNR=1.6							
	0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**10.34**	**353**	Pn	**Pn**	**02 25 38.2**	**-1.0**	
	0.2nm,0.3s,baz=173,slow=12,SNR=5.5							
ZALV				Sn	**Sn**	**02 27 30.2**	**-3.7**	
	1.2nm,0.3s,baz=167,slow=26,SNR=10.0							
	0.9nm,0.3s							
SONM	**Songino Array**	**14.11**	**66**	Pn	**Pn**	**02 26 29.9**	**-1.1**	
	0.5nm,0.3s,baz=244,slow=9.5,SNR=3.5							
	1.1nm,0.6s							
BVAR	**Borovoye Array**	**14.43**	**316**	Pn	**Pn**	**02 26 32.0**	**-3.1**	
	baz=125,slow=12,SNR=2.9							
BVAR				Lg	Lg	02 30 45.3		
	baz=129,slow=30,SNR=2.2							
	0.4nm,0.6s							
HFS	**Hagfors**	**45.55**	**318**	P	**P**	**02 31 29.9**	**+0.1**	
	3.5nm,1.1s,baz=93,slow=5.8,SNR=1.9							
	3.5nm,1.1s							
NOA	**NORSAR Array B**	**46.52**	**319**	P	**P**	**02 31 37.6**	**+0.2**	
	0.6nm,0.8s,baz=76,slow=7.8,SNR=2.6							
	0.6nm,0.8s							
INK	**Inuvik**	**64.24**	**16**	LR	LR	03 06 06.5		
	comp=Z,45nm,18.4s,baz=330,slow=40							
ESDC	**Sonseca Array**	**64.65**	**301**	P	**P**	**02 33 48.4**	**+0.4**	
	0.4nm,1.0s,baz=66,slow=6.0,SNR=2.0							
	0.4nm,1.0s							
WRA	**Warramunga Arr**	**76.76**	**135**	P	**P**	**02 35 02.7**	**+1.0**	
	0.4nm,0.6s,baz=331,slow=4.4,SNR=7.9							
	0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**77.70**	**276**	P	**P**	**02 35 07.1**	**-0.2**	
	0.4nm,0.6s,baz=51,slow=2.2,SNR=4.7							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**79.66**	**137**	P	**P**	**02 35 18.7**	**+0.9**	
	0.4nm,0.6s,baz=333,slow=5.8,SNR=5.6							
	0.4nm,0.6s							

VIE ***20*** *03:10:12.1±0.3,50.°20N×19.°02E,h0km,mb2.5/6,ml2.9/6, Error ellipse: s-maj=4.2km s-min=1.7km az=168.0 6 km SSE of Katowice Suspected Mining induced.*
PRU ***20*** *03:10:12.0,50.°27N×18.°98E,h0km*
IPEC ***20*** *03:10:12.0±0.1,50.°20N×19.°05E,h1km,ML3.1/6,Error ellipse: s-maj=1.6km s-min=0.6km az=173.0*
IDC ***20*** *03:10:13.3±0.8,50.°11N×19.°06E,h0km,mb3.5/1, mbtmp3.5/7,ML2.7/6,MS3.2/1,Error ellipse: s-maj=14.0km s-min=6.8km az=148.0*

ISC 20 03:10:10.2±0.6,50.°30N±0.°03×19.°12E±0.°02,h0km,n58, σ1§68/100,10C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
OJC	**Ojcow**	**0.45**	**100**	*e*Pg	**Pb**	**03 10 21.5**	**+0.6**	
OJC				*e*Sg	**Sb**	**03 10 28.4**	**+0.2**	
RAC	**Raciborz**	**0.63**	**250**	*e*PG	**Pb**	**03 10 24.3**	**+0.2**	
RAC				*e*SG	**Sb**	**03 10 32.9**	**-0.6**	
OKC	**Ostrava-Krasne**	**0.78**	**234**	*e*PG	**Pg**	**03 10 25.6**	**+0.5**	
OKC				*e*SG	**Sg**	**03 10 35.2**	**+0.1**	
	comp=Z,120nm,0.6s							
STEB	**Steborice**	**0.94**	**248**	*e*PG	**Pg**	**03 10 28.7**	**+0.5**	
STEB				*e*SG	**Sg**	**03 10 40.2**	**-0.1**	
	comp=Z,267nm,0.5s							
ANAC	**Anensky vrch**	**1.14**	**259**	*e*Pg	**Pb**	**03 10 33.0**	**+0.2**	
	baz=83							
ANAC				*e*Sg	**Sg**	**03 10 46.4**	**-0.4**	
	602nm,0.6s,baz=83							
MORC	**Moravsky Berou**	**1.14**	**243**	⇑P	**Pg**	**03 10 32.3**	**+0.2**	
MORC				⇑S	**Sb**	**03 10 47.7**	**-0.6**	
MORC	**Moravsky Berou**	**1.14**	**243**	*e*Pg	**Pg**	**03 10 32.1**	**0.0**	
	baz=66							
MORC				*e*Sg	**Sg**	**03 10 45.4**	**-1.4**	
	308nm,0.7s,baz=66							
NIE	**Niedzica**	**1.17**	**139**	*e*Pg	**Pb**	**03 10 33.5**	**+0.2**	
NIE				*e*Sg	**Sn**	**03 10 49.7**	**-0.8**	
LANS	**Liptovska Anna**	**1.17**	**169**	*e*PG	**Pb**	**03 10 33.1**	**-0.2**	
LANS				*e*SG	**Sg**	**03 10 47.7**	**-0.1**	
LANS				*e*LG	Lg	03 10 50.4		
MAUC	**Maruska**	**1.25**	**222**	*e*PG	**Pg**	**03 10 34.2**	**0.0**	
MAUC				*e*SG	**Sg**	**03 10 49.6**	**-0.8**	
LOSC	**Losov**	**1.31**	**240**	*e*Pg	**Pg**	**03 10 35.2**	**-0.2**	
	baz=61							
LOSC				*e*Sg	**Sg**	**03 10 50.6**	**-1.8**	
	205nm,0.5s,baz=61							
STHS	**Stebnicka Huta**	**1.64**	**122**	*e*PG	**Pb**	**03 10 40.8**	**-0.4**	
STHS				*e*SG	**Sg**	**03 11 06.0**	**+3.3**	
STHS				*e*LG	Lg	03 11 13.9		
JAVC	**Velka Javorina**	**1.72**	**214**	*e*Pn	**Pn**	**03 10 41.4**	**0.0**	
	baz=33							
JAVC	**Velka Javorina**	**1.72**	**214**	*e*PN	**Pn**	**03 10 41.5**	**0.0**	
DPC	**Dobruska-Polom**	**1.79**	**273**	*e*PG	**Pn**	**03 10 43.1**	**+0.7**	
DPC				*e*SG	**Sn**	**03 11 06.2**	**+0.3**	
	comp=Z,170nm,0.5s							
OSTC	**Ostas**	**1.87**	**279**	*e*PG	**Pn**	**03 10 44.7**	**+1.2**	
OSTC				*e*SG	**Sn**	**03 11 08.8**	**+0.9**	
	comp=Z,88nm,1.2s							
KSP	**Ksiaz**	**1.88**	**288**	*e*Pg	**Pg**	**03 10 48.0**	**+1.7**	
KSP				*e*Sg	**Sg**	**03 11 12.0**	**+1.3**	
VRAC	**Vranov**	**1.91**	**240**	Pn	**Pn**	**03 10 44.9**	**+0.9**	
	11nm,0.3s,baz=60,slow=14,SNR=75							
VRAC				Lg	Lg	03 11 09.1		
	12nm,0.3s,baz=143,slow=21,SNR=16							
VRAC	**Vranov**	**1.91**	**240**	⇑P	**Pb**	**03 10 45.2**	**-0.8**	
VRAC				⇑S	**Sn**	**03 11 09.2**	**+0.4**	
VRAC	**Vranov**	**1.91**	**240**	*e*Pn	**Pn**	**03 10 44.3**	**+0.3**	
	baz=60							
VRAC				*e*Sg	**Sn**	**03 11 09.4**	**+0.7**	
	63nm,0.7s,baz=60							
VRAC	**Vranov**	**1.91**	**240**	*e*PN	**Pn**	**03 10 44.4**	**+0.4**	
VRAC				*e*SG	**Sn**	**03 11 09.5**	**+0.7**	
KECS	**Kecovo**	**2.02**	**153**	*e*PN	**Pn**	**03 10 45.4**	**-0.2**	
KECS				*e*SN	**Sn**	**03 11 09.7**	**-1.9**	
KECS				*e*LG	Lg	03 11 21.5		
KRUC	**Moravsky**	**2.16**	**236**	*e*Pn	**Pn**	**03 10 47.7**	**+0.3**	
	baz=56							
KRUC				*e*Sg	**Sb**	**03 11 17.0**	**-0.4**	
	61nm,0.6s,baz=56							
MODS	**Modra-Piesok**	**2.27**	**213**	*e*PN	**Pn**	**03 10 49.6**	**+0.6**	
MODS				*e*SG	**Sb**	**03 11 19.6**	**-1.1**	
MODS				*e*LG	Lg	03 11 24.4		
PSZ	**Piszkesteto**	**2.44**	**168**	⇑P	**Pn**	**03 10 51.5**	**+0.2**	
ZST	**Bratislava**	**2.48**	**213**	*e*SN	**Sn**	**03 11 21.8**	**-1.1**	
SRO	**Srobarova**	**2.54**	**192**	*e*SG	**Sg**	**03 11 31.4**	**-0.4**	
SRO				*e*LG	Lg	03 11 40.4		
PRU	**Pruhonice**	**2.96**	**266**	*e*PG	**Pb**	**03 11 04.7**	**+0.9**	
PRU				*e*SG	**Sb**	**03 11 41.6**	**+1.1**	
	comp=Z,27nm,0.6s							
PRA	**Prague**	**3.02**	**267**	*e*SG	**Sb**	**03 11 44.1**	**+1.9**	
	55nm,0.6s							
CONA	**Conrad Observa**	**3.19**	**223**	*i* Pn	**Pn**	**03 11 01.3**	**-0.4**	
	0.7nm,0.3s							
CONA				*i* Sn	**Sn**	**03 11 38.5**	**-2.0**	
	6.8nm,0.4s							
RONA	**Rosalia, Austr**	**3.19**	**217**	*i* Pn	**Pn**	**03 11 01.5**	**-0.2**	
	1.8nm,0.3s							
RONA				*i* Sn	**Sn**	**03 11 38.6**	**-1.9**	
	2.7nm,0.2s							
BRG	**Berggiesshubel**	**3.35**	**282**	Pg	**Pg**	**03 11 14.4**	**0.0**	
BRG				Sg	**Sg**	**03 11 57.5**	**-0.2**	
BRG				Amp		03 12 04.1		
	comp=Z,20nm,0.5s							
CKRC	**Cesky Krumlov**	**3.46**	**247**	*e*PN	**Pn**	**03 11 05.8**	**+0.4**	
CKRC				*e*PG	**Pb**	**03 11 13.0**	**+0.6**	
CKRC				*e*SG	**Sb**	**03 11 56.9**	**+2.0**	
	comp=Z,34nm,0.7s							
KHC	**Kasperske Hory**	**3.78**	**254**	*e*PN	**Pn**	**03 11 10.0**	**+0.3**	
KHC				*e*PG	**Pb**	**03 11 20.0**	**+2.2**	
KHC				*e*SN	**Sn**	**03 11 52.0**	**-2.9**	
KHC				*e*SG	**Sb**	**03 12 05.0**	**+0.9**	
GERES	**GERESS Array B**	**3.81**	**250**	Pn	**Pn**	**03 11 11.6**	**+1.3**	
	comp=Z,0.1nm,0.3s,baz=64,slow=18,SNR=10							
GERES				Pg	**Pb**	**03 11 20.7**	**+2.3**	
	comp=Z,0.2nm,0.3s,baz=70,slow=16,SNR=14							
GERES				Lg	Lg	03 12 11.5		
	comp=Z,0.6nm,0.3s,baz=68,slow=29,SNR=7.2							
	comp=Z,1.0nm,0.4s							
ARSA	**Arzberg**	**3.87**	**219**	*e*Pn	**Pn**	**03 11 10.7**	**-0.2**	
	comp=Z,4.1nm,0.6s							
ARSA				*e*Sn	**Sn**	**03 11 56.1**	**-0.9**	
	comp=Z,4.4nm,0.6s							
CLL	**Collm**	**4.01**	**287**	*e*Pg	**Pg**	**03 11 28.0**	**+1.0**	
CLL				*e*Sg	**Sg**	**03 12 17.0**	**-1.9**	
	comp=Z,32nm,0.9s							
MOA	**Molln**	**4.02**	**234**	*i* Pn	**Pn**	**03 11 13.5**	**+0.5**	
	comp=Z,1.0nm,0.5s							
MOA				*e*Sn	**Sn**	**03 11 59.3**	**-1.6**	
	comp=Z,2.3nm,0.3s							
MORH	**Mrgy, Hungar**	**4.10**	**185**	⇓P	**Pn**	**03 11 14.0**	**-0.1**	
DRGR		**4.24**	**144**	⇑P	**Pn**	**03 11 17.0**	**+0.9**	
NKC	**Novy Kostel**	**4.28**	**272**	*e*SG	**Sg**	**03 12 23.6**	**-4.0**	
	comp=Z,16nm,0.5s							
BIOA	**Bad Ischl, Aus**	**4.45**	**236**	*e*Pn	**Pn**	**03 11 19.1**	**+0.1**	
	comp=Z,1.3nm,0.3s							
BIOA				*i* Sn	**Sn**	**03 12 10.2**	**-1.2**	
	comp=Z,3.6nm,0.4s							
MARR	**Marisel-Cluj**	**4.50**	**142**	⇑P	**Pn**	**03 11 20.5**	**+0.8**	
MARR				⇑S	**Sn**	**03 12 11.2**	**-1.4**	
BURAR	**Bucovina Array**	**4.83**	**121**	⇑P	**Pn**	**03 11 26.0**	**+1.7**	
BZS	**Buzias**	**4.97**	**159**	⇑P	**Pn**	**03 11 26.9**	**+0.8**	
LESA	**Schwarzleotal**	**5.13**	**238**	*e*Pn	**Pn**	**03 11 28.4**	**0.0**	
	comp=Z,0.3nm,0.2s							
LESA				*e*Sn	**Sn**	**03 12 26.1**	**-2.1**	
	comp=Z,4.6nm,0.7s							
GZR	**Gura Zlata**	**5.49**	**152**	⇓P	**Pn**	**03 11 34.4**	**+1.2**	
BLEU	**Blekinge**	**6.33**	**343**	*i* P	**Pn**	**03 11 46.3**	**+1.6**	
BLEU				*i* S	**Sn**	**03 12 55.5**	**-2.2**	
AKASG	**Malin Array Be**	**6.46**	**83**	Pn	**Pn**	**03 11 47.8**	**+1.3**	
	comp=Z,1.0nm,0.3s,baz=269,slow=11,SNR=1.7							
AKASG				Sn	**Sn**	**03 13 00.5**	**-0.4**	
	comp=Z,0.7nm,0.3s,baz=263,slow=22,SNR=1.5							
AKASG				Lg	Lg	03 13 41.3		
	comp=Z,1.1nm,0.3s,baz=265,slow=25,SNR=4.6							
	comp=Z,0.4nm,0.4s							
NACGM	**Naroch**	**6.56**	**42**	*e*P	**Pb**	**03 12 01.4**	**-3.8**	
	comp=Z,6.0nm,0.7s,baz=230							
BJUU	**Bjuv**	**6.84**	**330**	*i* P	**Pn**	**03 11 53.5**	**+1.8**	
BJUU				*e*S	**Sn**	**03 13 03.4**	**-6.9**	
DEL	**Delary**	**6.93**	**335**	*i* P	**Pn**	**03 11 54.2**	**+1.3**	
DEL				*i* S	**Sn**	**03 13 07.6**	**-4.8**	
DAVOX	**Davos/Dischmat**	**7.07**	**244**	Pn	**Pn**	**03 11 56.0**	**+1.0**	
	comp=Z,0.3nm,0.3s,baz=54,slow=8.7,SNR=3.1							
DAVOX				Lg	Lg	03 13 54.5		
	comp=Z,0.6nm,0.3s,baz=220,slow=23,SNR=2.8							
	comp=Z,1.4nm,0.4s							
HFS	**Hagfors**	**10.33**	**345**	Pn	**Pn**	**03 12 40.8**	**+1.3**	
	comp=Z,0.1nm,0.3s,baz=150,slow=9.3,SNR=1.4							
HFS				Sn	**Sn**	**03 14 31.6**	**-4.2**	
	comp=Z,0.2nm,0.3s,baz=167,slow=26,SNR=2.1							
	comp=Z,5.8nm,1.2s							
FINES	**FINESS Array B**	**11.83**	**17**	Pn	**Pn**	**03 12 59.2**	**-0.8**	
	comp=Z,0.3nm,0.3s,baz=199,slow=10,SNR=6.7							
FINES				Sn	**Sn**	**03 15 06.9**	**-5.6**	
	comp=Z,0.2nm,0.3s,baz=202,slow=22,SNR=1.6							
	comp=Z,1.3nm,0.4s							
ARCES	**ARCESS Array B**	**19.54**	**7**	Pn	**Pn**	**03 14 41.4**	**+1.2**	
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=5.5							
	comp=Z,0.7nm,0.5s							
BVAR	**Borovoye Array**	**31.37**	**65**	P	**P**	**03 16 34.6**	**+2.3**	
	comp=Z,0.4nm,0.6s,baz=298,slow=7.4,SNR=2.2							
	comp=Z,0.4nm,0.6s							
TIXI	**Tiksi**	**48.77**	**23**	LR	LR	03 42 43.4		
	comp=Z,24nm,18.7s,baz=220,slow=40							

SOME ***20*** *03:12:59.0,45.°53N×78.°58E,h0km*
KRNET 20 03:12:57.9±0.1,41.°39N×75.°75E,h14km,mb2.3,16C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
NRN	**Naryn**	**0.19**	**77**	⇑*i*P	Pg	03 13 01.4	-1.2	
NRN				⇑*e*S	Sg	03 13 04.0	-1.7	
JNKS	**Jany-Kuch**	**0.35**	**196**	⇑*e*P	Pg	03 13 04.5	-0.6	
JNKS				⇑*e*S	Sg	03 13 09.4	-0.6	
ULHL	**Ulahol**	**0.93**	**23**	⇑*i*P	Pg	03 13 15.6	-0.3	
ULHL				⇑*e*S	Sb	03 13 28.5	+0.2	
BOOM	**Boomskoye usch**	**1.11**	**7**	⇓*i*P	Pb	03 13 18.8	-0.2	
BOOM				⇓*e*S	Sg	03 13 34.0	+0.2	
ARLS	**Aral**	**1.17**	**294**	⇓*e*P	Pb	03 13 19.7	-0.3	
ARLS				⇓*i*S	Sg	03 13 35.6	-0.1	
UCH	**Uchtor**	**1.25**	**313**	⇑*i*P	Pn	03 13 21.4	+0.1	
UCH				⇑*i*S	Sg	03 13 38.4	+0.1	
KDJ	**Kajisay**	**1.30**	**55**	⇑*e*P	Pb	03 13 22.3	+0.1	
KDJ				⇑*e*S	Sg	03 13 40.1	+0.2	
KBK	**Karagaybulak**	**1.40**	**335**	⇑*i*P	Pb	03 13 23.9	0.0	
KBK				⇑*e*S	Sg	03 13 42.9	-0.2	
TKM2	**Tokmak 2**	**1.54**	**356**	⇑*i*P	Pb	03 13 26.3	+0.1	
TKM2				⇑*e*S	Sg	03 13 47.1	-0.3	
SALK	**Salom-Alik**	**1.54**	**252**	⇓*e*P	Pb	03 13 26.5	+0.2	
SALK				⇓*i*S	Sg	03 13 47.2	-0.4	
TARG	**Taragay, Kyrgy**	**1.58**	**77**	⇑*e*P	Pb	03 13 27.1	0.0	
TARG				⇑*e*S	Sg	03 13 48.4	-0.4	
KTBS	**Karatobe**	**2.42**	**16**	*e*P	Pg	03 13 43.1	-1.2	
	2.2nm,0.5s							
KTBS				*e*S	Sg	03 14 15.0	-0.7	
	0.2nm,0.1s							
SHLS	**Shalkode**	**3.27**	**56**	*e*P	Pn	03 13 47.5	-1.3	
	1.0nm,0.2s							
SHLS				*e*S	Sn	03 14 22.3	-5.4	
	3.6nm,0.2s							

IDC ***20*** *03:34:00.8±10.0,24.°45S×179.°46E,h596km±130km, mb2.7/3,mbtmp3.7/3, Error ellipse: s-maj=234.6km s-min=53.3km az=171.0*
ISC 20 03:34:00.9±3.1,24.°5S±1.°×179.°4E±0.°5,h600km,n7,σ0§64/6, mb3.3/3,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ASAR	**Alice Springs**	**41.46**	**261**	P	**P**	**03 40 57.3**	**+0.2**	
	0.3nm,0.3s,baz=91,slow=7.3,SNR=7.4							
	0.3nm,0.3s							
WRA	**Warramunga Arr**	**41.85**	**267**	P	**P**	**03 41 00.0**	**-0.1**	
	1.1nm,0.5s,baz=104,slow=7.8,SNR=11							
	1.1nm,0.5s							
TXAR	**Lajitas Array**	**91.03**	**58**	P	**P**	**03 46 02.8**	**+0.2**	
	0.2nm,0.7s,baz=236,slow=4.6,SNR=2.1							
	0.2nm,0.7s							
FINES	**FINESS Array B**	**138.52**	**341**	PKhKP	PKPpre	03 52 11.8		
	3.1nm,1.1s,baz=45,slow=2.2,SNR=4.1							
HFS	**Hagfors**	**142.69**	**348**	PKP	**PKPdf**	**03 52 25.3**	**-0.9**	
	1.5nm,0.4s,baz=48,slow=2.1,SNR=20							
AKASG	**Malin Array Be**	**144.89**	**327**	PKPbc	**PKPbc**	**03 52 31.6**	**+0.5**	
	0.4nm,0.3s,baz=52,slow=4.8,SNR=2.5							
BRTR	**Keskin Array B**	**147.30**	**307**	PKPbc	**PKiKP**	**03 52 39.8**	**-0.1**	
	0.1nm,0.4s,baz=68,slow=3.9,SNR=4.2							

NEIC ***20*** *03:39:24.7±1.7,15.°52N±0.°02×95.°05W±0.°04,h35km±2km, mb4.0/8,Md4.4/64(MEX),Error ellipse: s-maj=6.1km s-min=3.1km az=256.0*
MEX ***20*** *03:39:25.7±0.4,15.°52N×95.°02W,h16km,MD4.4*
ISC 20 03:39:21.3±2.3,15.°50N±0.°05×95.°03W±0.°03,h10km±17km, n46,σ1§63/73,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
HUIG	**Huatulco**	**1.07**	**285**		**Pb**	**03 39 42.4**	**+0.4**	
HUIG					**Sb**	**03 39 55.6**	**-0.4**	
HUIG	**Huatulco**	**1.07**	**285**	*e*P	**Pb**	**03 39 42.4**	**+0.4**	
HUIG				*e*S	**Sb**	**03 39 55.6**	**-0.4**	
CARR	**Arriaga**	**1.31**	**55**	*e*P	**Pn**	**03 39 44.1**	**-1.5**	
CARR				*e*S	**Sn**	**03 39 59.0**	**-4.1**	
CMIG	**Matias Romero**	**1.59**	**5**	*i* P	**Pn**	**03 39 48.2**	**-1.3**	
CMIG				*e*S	**Sn**	**03 40 06.8**	**-3.3**	
PCIG		**1.76**	**83**		**Pn**	**03 39 52.0**	**+0.2**	
PCIG		**1.76**	**83**	*e*P	**Pn**	**03 39 52.0**	**+0.2**	
PCIG				*e*S	**Sn**	**03 40 12.3**	**-1.9**	
UXUV	**UXUV**	**2.00**	**25**		**Pn**	**03 39 55.2**	**+0.1**	
UXUV					**Sn**	**03 40 18.4**	**-1.8**	
UXUV	**UXUV**	**2.00**	**25**	*e*P	**Pn**	**03 39 55.2**	**+0.1**	
UXUV				*e*S	**Sn**	**03 40 18.4**	**-1.8**	
PEIG	**Puerto Escondi**	**2.10**	**284**		**Pn**	**03 39 57.2**	**+0.7**	
PEIG	**Puerto Escondi**	**2.10**	**284**	*e*P	**Pn**	**03 39 57.2**	**+0.7**	
PEIG				*e*S	**Sn**	**03 40 19.9**	**-2.8**	
TGIG		**2.23**	**55**		**Pn**	**03 40 00.2**	**+1.9**	
TGIG					**Sn**	**03 40 26.1**	**0.0**	
TGIG		**2.23**	**55**	*e*P	**Pn**	**03 40 00.2**	**+1.9**	
TGIG				*e*S	**Sn**	**03 40 26.1**	**0.0**	
PATR	**El Naranjo**	**2.72**	**98**		**Pn**	**03 40 06.3**	**+1.0**	
PATR					**Sn**	**03 40 37.7**	**-0.8**	
PATR	**El Naranjo**	**2.72**	**98**	*e*P	**Pn**	**03 40 06.3**	**+1.0**	
PATR				*e*S	**Sn**	**03 40 37.7**	**-0.8**	
PAVE	**Pavencul**	**2.77**	**96**		**Pn**	**03 40 07.3**	**+1.4**	
PAVE					**Sn**	**03 40 39.1**	**-0.5**	
PAVE	**Pavencul**	**2.77**	**96**	*e*P	**Pn**	**03 40 07.3**	**+1.4**	
PAVE				*e*S	**Sn**	**03 40 39.1**	**-0.5**	
YOIG	**Yosondua**	**2.77**	**300**		**Sn**	**03 40 39.6**	**0.0**	
YOIG	**Yosondua**	**2.77**	**300**	*e*P	**Pb**	**03 40 09.4**	**-1.7**	
YOIG				*e*S	**Sn**	**03 40 39.6**	**0.0**	
CHUJ	**Union Juarez**	**2.85**	**98**	*e*P	**Pn**	**03 40 07.8**	**+0.8**	
CHUJ				*e*S	**Sn**	**03 40 40.8**	**-0.8**	
CCIG	**Comitan**	**2.89**	**74**		**Pn**	**03 40 08.5**	**+0.9**	
CCIG					**Sn**	**03 40 40.8**	**-1.7**	
CCIG	**Comitan**	**2.89**	**74**	*e*P	**Pn**	**03 40 10.2**	**+2.6**	
CCIG				*e*S	**Sn**	**03 40 44.4**	**+2.0**	
PNIG	**Pinotepa**	**3.11**	**287**		**Pn**	**03 40 11.9**	**+1.4**	
PNIG	**Pinotepa**	**3.11**	**287**	*e*P	**Pn**	**03 40 11.9**	**+1.4**	
PNIG				*e*S	**Sn**	**03 40 43.8**	**-3.9**	
TXIG	**Tlaxiaco**	**3.15**	**304**		**Sn**	**03 40 49.3**	**+0.1**	
TXIG	**Tlaxiaco**	**3.15**	**304**	*e*P	**Pb**	**03 40 15.5**	**-2.2**	
TXIG				*e*S	**Sn**	**03 40 49.3**	**+0.1**	
TOIG	**Toxpalan**	**3.24**	**323**	*e*P	**Pb**	**03 40 19.1**	**+0.2**	
TOIG				*e*S	**Sn**	**03 40 52.2**	**+1.3**	
HUEH	**Huehuetenango**	**3.41**	**93**	Pn	**Pn**	**03 40 15.5**	**+0.8**	
HLIG	**Huajuapan de L**	**3.53**	**311**		**Sn**	**03 40 56.5**	**-1.7**	
HLIG	**Huajuapan de L**	**3.53**	**311**	*e*P	**Pn**	**03 40 20.5**	**+4.1**	
HLIG				*e*S	**Sn**	**03 40 56.5**	**-1.7**	
TPIG	**Tehuac#an**	**3.66**	**323**		**Pn**	**03 40 20.4**	**+2.2**	
TPIG	**Tehuac#an**	**3.66**	**323**	*e*P	**Pn**	**03 40 20.4**	**+2.2**	
TPIG				*e*S	**Sn**	**03 41 02.9**	**+1.3**	
FTIG	**Fresnillo de T**	**3.82**	**309**		**Pn**	**03 40 22.1**	**+1.8**	
FTIG					**Sn**	**03 41 04.3**	**-1.0**	
FTIG	**Fresnillo de T**	**3.82**	**309**	*e*P	**Pn**	**03 40 22.1**	**+1.8**	
FTIG				*e*S	**Sn**	**03 41 04.3**	**-1.0**	
TLIG	**Tlapa**	**3.96**	**302**		**Pn**	**03 40 23.2**	**+0.9**	
TLIG	**Tlapa**	**3.96**	**302**	*e*P	Pn	03 40 27.1	+4.8	
TLIG				*e*S	**Sn**	**03 41 08.1**	**-0.9**	
JAUV	**Jalcomulco**	**4.20**	**336**	*e*P	**Pn**	**03 40 25.1**	**-0.4**	
JAUV				*e*S	**Sn**	**03 41 18.1**	**+3.4**	
PPM	**Popocatepetl**	**4.94**	**316**	*

Azm59.0000°; P -6.5548, Plg63.0000°, Azm236.0000°;
*SDD **20** 03:52:50.6±2.2, 17°.76N×66°.93W, h18^{km}±24^{km}, MD3.6, ML3.7, MW4.0, Presumed earthquake*
*NEIC **20** 03:52:51, 17°.86N×66°.87W, h20^{km}*
*OSPL **20** 03:52:52.0±0.4, 17°.84N×66°.89W, h10^{km}±4^{km}, ML3.4, Presumed earthquake*
*RSPR **20** 03:52:52.2, 17°.88N×66°.90W, h11^{km}, MD3.6/9*

ISC 20 03:52:50.3±0.9, 17°.78N±0'.04×66°.90W±0'.02, h15^{km}±6^{km}, n85, σ1^{s}36/118, mb3.6/7, 16C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.19**	**6**			**Pg**	**03 52 55.1**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.19**	**6**	⇑	*i*P	**Pg**	**03 52 55.1**	**+0.2**
MLPR	**Magueyes Islan**	**0.23**	**323**		Pg	**Pg**	**03 52 56.1**	**+0.6**
MLPR					Sg	**Sg**	**03 52 59.3**	**+0.3**
MLPR					IAML		03 52 60.0	
	30μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.30**	**318**		Pg	**Pg**	**03 52 57.2**	**+0.7**
CRPR					Sg	**Sg**	**03 53 00.8**	**-0.2**
CRPR					IAML		03 53 01.4	
	29μm,0.3s							
CRPR					IAML		03 53 02.5	
	20μm,0.4s							
CRPR	**Cabo Rojo, PR**	**0.30**	**318**	*e*	Pg	**Pg**	**03 52 57.4**	**+0.7**
CRPR				⇓	*e*Sg	**Sg**	**03 53 00.7**	**-0.2**
CRPR					IAML		03 53 01.4	
	comp=N,25μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.30**	**318**	⇑	*i*P	**Pg**	**03 52 57.2**	**+0.7**
CRPR					*e*S	**Sg**	**03 53 01.2**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.30**	**318**	*i*	P	**Pg**	**03 52 57.3**	**+0.7**
CRPR					*e*S	**Sg**	**03 53 00.8**	**-0.2**
CRPR					IAML		03 53 02.0	
	comp=Z,20μm,0.4s							
OBIP	**Obispado Ponce**	**0.38**	**47**		Pg	**Pg**	**03 52 57.9**	**-0.1**
OBIP					Sg	**Sg**	**03 53 02.9**	**-0.5**
OBIP	**Obispado Ponce**	**0.38**	**47**	⇓	*e*P	**Pg**	**03 52 58.1**	**+0.1**
OBIP					*e*S	**Sg**	**03 53 02.9**	**-0.5**
OBIP	**Obispado Ponce**	**0.38**	**47**	*i*	P	**Pg**	**03 52 58.2**	**+0.1**
OBIP					*e*S	**Sg**	**03 53 02.9**	**-0.5**
OBIP					IAML		03 53 03.2	
	comp=Z,4μm,0.7s							
CELP	**Cerrillos**	**0.42**	**46**		Pg	**Pg**	**03 52 58.6**	**-0.2**
CELP					Sg	**Sg**	**03 53 04.2**	**-0.4**
CELP					IAML		03 53 04.8	
	comp=Z,14μm,0.4s							
CELP					IAML		03 53 05.0	
	comp=Z,11μm,0.6s							
LSP	**Las Mesas**	**0.43**	**336**			**Pg**	**03 52 59.0**	**0.0**
LSP	**Las Mesas**	**0.43**	**336**	⇓	*i*P	**Pg**	**03 52 59.0**	**0.0**
PRSN	**Puerto Rico Se**	**0.49**	**332**		Pg	**Pg**	**03 52 59.9**	**-0.1**
PRSN					Sg	**Sg**	**03 53 06.3**	**-0.3**
PRSN					IAML		03 53 06.3	
	comp=Z,20μm,0.3s							
PRSN					IAML		03 53 09.0	
	comp=Z,20μm,0.3s							
PRSN	**Puerto Rico Se**	**0.49**	**332**	*e*	Pg	**Pg**	**03 53 00.2**	**+0.1**
PRSN				⇑	*e*Sg	**Sg**	**03 53 06.9**	**+0.2**
PRSN					IAML		03 53 08.4	
	comp=N,11μm,0.4s							
PRSN	**Puerto Rico Se**	**0.49**	**332**	⇑	*i*P	**Pg**	**03 53 00.0**	**-0.1**
PRSN					*e*S	**Sg**	**03 53 06.4**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.50**	**20**		Pg	**Pg**	**03 52 59.4**	**-0.8**
UUPR					Sg	**Sg**	**03 53 04.8**	**-2.1**
AGPR	**Aguadilla, PR**	**0.71**	**344**		Pg	**Pb**	**03 53 03.3**	**-1.1**
AGPR					Sg	**Sg**	**03 53 12.0**	**-1.6**
AGPR					IAML		03 53 12.4	
	comp=N,5μm,0.5s							
AGPR	**Aguadilla, PR**	**0.71**	**344**	*e*	Pg	**Pb**	**03 53 03.6**	**-0.9**
AGPR				⇑	*e*Sg	**Sg**	**03 53 12.2**	**-1.4**
AGPR					IAML		03 53 12.2	
	comp=N,3μm,0.3s							
AGPR	**Aguadilla, PR**	**0.71**	**344**	⇑	*i*P	**Pb**	**03 53 03.4**	**-1.0**
AGPR					*e*S	**Sg**	**03 53 12.0**	**-1.6**
ECPR	**Experimental S**	**0.74**	**44**		Pg	**Pb**	**03 53 03.7**	**-1.2**
ECPR					Sg	**Sb**	**03 53 12.4**	**-2.5**
ECPR					IAML		03 53 14.8	
	comp=N,5μm,0.2s							
ECPR	**Experimental S**	**0.74**	**44**	⇑	*e*P	**Pb**	**03 53 04.0**	**-0.9**
ECPR					*e*S	**Sb**	**03 53 13.8**	**-1.0**
EMPR	**Esperanza - Ma**	**0.78**	**27**			**Pb**	**03 53 04.8**	**-0.7**
EMPR						**Sb**	**03 53 14.3**	**-1.5**
EMPR	**Esperanza - Ma**	**0.78**	**27**	⇑	*e*P	**Pb**	**03 53 04.8**	**-0.7**
EMPR					*e*S	**Sb**	**03 53 14.3**	**-1.5**
SJG	**San Juan**	**0.79**	**65**	LR		LR	03 53 03.8	
	comp=N,54nm,19.6s,baz=280,slow=19							
SJG					Pg	**Pb**	**03 53 05.2**	**-0.5**
	comp=N,121nm,0.3s,baz=251,slow=17,SNR=236							
SJG					Lg	Lg	03 53 15.0	
	comp=N,335nm,0.3s,baz=358,slow=13,SNR=29							
SJG	**San Juan**	**0.79**	**65**		Sg	**Sb**	**03 53 13.7**	**-2.4**
SJG	**San Juan**	**0.79**	**65**		IAML		03 53 19.3	
	comp=N,3μm,0.6s							
SJG					IAML		03 53 19.3	
	comp=N,2μm,0.7s							
SJG	**San Juan**	**0.79**	**65**	*e*	P	**Pb**	**03 53 05.5**	**-0.2**
SJG	**San Juan**	**0.79**	**65**	⇑	*e*Pg	**Pb**	**03 53 05.4**	**-0.2**
SJG				⇓	*e*Sg	**Sb**	**03 53 15.9**	**-0.2**
SJG	**San Juan**	**0.79**	**65**	⇓	*e*P	**Pb**	**03 53 05.1**	**-0.5**
SJG					*e*S	**Sb**	**03 53 15.8**	**-0.4**
SJG	**San Juan**	**0.79**	**65**	*i*	P	**Pb**	**03 53 05.3**	**-0.4**
SJG					*e*S	**Sb**	**03 53 15.5**	**-0.6**
SJG					IAML		03 53 19.0	
	comp=Z,2μm,0.8s							
IDE	**Isla Desecheo**	**0.81**	**318**			**Pb**	**03 53 05.6**	**-0.5**
IDE						**Sb**	**03 53 16.0**	**-0.9**
IDE	**Isla Desecheo**	**0.81**	**318**	⇑	*e*P	**Pb**	**03 53 05.6**	**-0.5**
IDE					*e*S	**Sb**	**03 53 16.0**	**-0.9**
PDPR	**Patillas Dam,**	**0.87**	**74**		Pg	**Pb**	**03 53 06.8**	**-0.2**
PDPR					Sg	**Sb**	**03 53 17.9**	**-0.6**
GCPR	**Guaynabo City**	**0.94**	**56**		Pg	**Pb**	**03 53 07.2**	**-1.0**
GCPR					Sg	**Sb**	**03 53 18.7**	**-1.8**
GCPR	**Guaynabo City**	**0.94**	**56**	⇑	*e*P	**Pb**	**03 53 07.3**	**-1.0**
GCPR					*e*S	**Sb**	**03 53 19.5**	**-1.0**
HUMP	**Col San Antoni**	**1.06**	**70**			**Pb**	**03 53 09.8**	**-0.6**
HUMP					Sg	**Sb**	**03 53 22.4**	**-1.7**
HUMP					IAML		03 53 26.8	
	comp=Z,3μm,0.6s							
HUMP					IAML		03 53 26.9	
	comp=Z,3μm,0.4s							
HUMP	**Col San Antoni**	**1.06**	**70**	⇓	*e*P	**Pb**	**03 53 09.8**	**-0.6**
HUMP					*e*S	**Sb**	**03 53 23.8**	**-0.3**
PCDR	**Punta Cana, DR**	**1.59**	**298**	⇑	*e*Pg	**Pn**	**03 53 18.0**	**+0.1**
PCDR					IAML		03 53 52.1	
	comp=N,1μm,0.7s							
CUPR	**Culebra, Puert**	**1.62**	**71**			**Pn**	**03 53 19.3**	**+0.9**
HIDR	**Higuey Centro**	**1.91**	**295**	⇓	*e*Pg	**Pb**	**03 53 24.0**	**-0.8**
HIDR				⇓	*e*Sg	**Sb**	**03 53 47.4**	**-1.0**
HIDR					IAML		03 53 52.9	
	comp=N,502nm,0.2s							
HIDR	**Higuey Centro**	**1.91**	**295**	⇑	*e*P	**Pn**	**03 53 23.7**	**+1.4**
DR12	**Loma Pena Alta**	**2.56**	**293**		Pn	**Pn**	**03 53 32.7**	**+1.3**
HATOM	**Hato Mayor del**	**2.56**	**293**	⇓	*e*Pg	**Pn**	**03 53 33.9**	**+2.5**
HATOM				⇑	*e*Sg	**Sb**	**03 54 06.8**	**-0.5**
HATOM					IAML		03 54 16.5	
	comp=N,452nm,0.6s							
SMDR	**Samana, DR**	**2.64**	**305**			**Pb**	**03 53 37.3**	**0.0**
SMDR	**Samana, DR**	**2.64**	**305**	⇑	*e*Pg	**Pb**	**03 53 36.8**	**-0.5**
SMDR				⇑	*e*Sg	**Sb**	**03 54 09.3**	**-0.3**
SMDR					IAML		03 54 24.6	
	comp=N,536nm,0.7s							
SMDR	**Samana, DR**	**2.64**	**305**	⇓	*e*P	**Pb**	**03 53 37.3**	**0.0**
DR08	**Loma La Naviza**	**3.19**	**292**		*e*Pg	**Pn**	**03 53 42.5**	**+2.5**
DR08				⇑	*e*Sg	**Sb**	**03 54 26.1**	**+0.6**
DR08					IAML		03 54 30.5	
	comp=N,2μm,0.3s							
BANI	**BANI**	**3.34**	**281**		Pn	**Pn**	**03 53 43.4**	**+1.2**
SABA	**Saba**	**3.49**	**92**		Pn	**Pn**	**03 53 44.1**	**0.0**
SFDR	**San Fco. de Ma**	**3.51**	**296**		*e*Pg	**Pb**	**03 53 49.9**	**-2.2**
SFDR				⇓	*e*Sg	**Sb**	**03 54 33.9**	**-0.6**
SFDR					IAML		03 54 50.9	
	comp=N,664nm,0.9s							
ABDR	**Alto Bandera**	**3.69**	**287**		*e*Pg	**Pb**	**03 53 52.2**	**-3.1**
ABDR					IAML		03 55 28.9	
	comp=N,0.3nm,0.7s							
SKI	**Saint Kitts**	**3.99**	**96**		*e*P	**Pn**	**03 53 53.3**	**+2.3**
SDDR	**Presa de Saban**	**4.33**	**287**			**Pb**	**03 54 02.1**	**-4.2**
SDDR	**Presa de Saban**	**4.33**	**287**		*e*P	**Pb**	**03 54 01.9**	**-4.4**
SDDR	**Presa de Saban**	**4.33**	**287**	⇑	*e*P	**Pb**	**03 54 02.1**	**-4.2**
MBFL	**Flemmings, Mon**	**4.59**	**102**		*e*P	**Pn**	**03 53 59.9**	**+0.5**
MLYT	**Lee's Yard**	**4.62**	**103**		*e*P	**Pn**	**03 54 00.8**	**+1.1**
ANWB	**Willy Bob**	**4.88**	**91**		*e*P	**Pn**	**03 54 05.2**	**+2.0**
DHSZ	**Broadband at M**	**5.14**	**106**		*e*P	**Pn**	**03 54 07.4**	**+0.6**
DHSZ					x	x	03 55 04.3	
ATGZ	**Broadband at L**	**5.23**	**108**		*e*P	**Pn**	**03 54 07.9**	**-0.1**
CBE	**Ff, Capester**	**5.34**	**108**		Pn	**Pn**	**03 54 08.7**	**-1.0**
TBG	**Guadaloupe-3**	**5.38**	**110**		*e*P	**Pn**	**03 54 08.5**	**-1.7**
DSLB	**Salisbury**	**5.75**	**113**		*e*P	**Pn**	**03 54 14.5**	**-0.7**
DSLB					x	x	03 55 18.6	
DSDZ	**La Diserade, G**	**5.77**	**104**		*e*P	**Pn**	**03 54 16.6**	**+1.1**
BIM	**Bigot**	**6.47**	**119**		Pn	**Pn**	**03 54 24.7**	**-0.5**
BIM	**Bigot**	**6.47**	**119**		*e*P	**Pn**	**03 54 25.1**	**-0.1**
BIM					x	x	03 55 35.3	
MPOM	**Morne Pois Mar**	**6.69**	**119**		Pn	**Pn**	**03 54 28.6**	**+0.5**
SLBI	**Saint Lucia, B**	**6.82**	**122**		*e*P	**Pn**	**03 54 30.3**	**+0.5**
SLBI					x	x	03 55 42.2	
SDV	**Santo Domingo**	**9.56**	**203**		Pn	**Pn**	**03 55 09.5**	**+1.8**
	comp=N,0.9nm,0.3s,baz=25,slow=14,SNR=3.7							
SDV					Sn	**Sn**	**03 56 50.5**	**-4.6**
	comp=N,1.4nm,0.3s,baz=301,slow=20,SNR=4.0							
	comp=N,2.5nm,0.3s							
SDV	**Santo Domingo**	**9.56**	**203**		Pn	**Pn**	**03 55 08.6**	**+0.9**
MTDJ	**Mount Denham**	**10.13**	**274**		Pn	**Pn**	**03 55 16.1**	**+0.7**
ROSC	**El Rosal**	**14.77**	**210**		Pn	**Pn**	**03 56 21.8**	**+2.6**
	comp=N,1.0nm,0.3s,baz=102,slow=20,SNR=4.7							
	comp=N,3.1nm,0.4s							
SIUN	**Universidad Ur**	**17.67**	**259**		Pn	**Pn**	**03 56 54.2**	**-1.9**
SIUN					IAmb	IAmb	03 57 24.1	
	comp=Z,6.4nm,1.1s							
V55A	**Taylorsville**	**22.02**	**328**		P	**P**	**03 57 43.6**	**-0.6**
BG3	**Lake Jocassee**	**22.31**	**323**		P	**P**	**03 57 45.0**	**-2.3**
BG3					IAmb	IAmb	03 58 09.3	
	comp=Z,10nm,1.2s							
TXAR	**Lajitas Array**	**35.47**	**296**		P	**P**	**03 59 47.7**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=111,slow=9.2,SNR=9.6							
	comp=Z,0.6nm,0.7s							
CPUP	**Villa Florida**	**44.83**	**168**		P	**P**	**04 01 04.0**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=339,slow=7.6,SNR=4.5							
	comp=Z,0.7nm,0.4s							
CPUP	**Villa Florida**	**44.83**	**168**		IAmb	IAmb	04 01 11.3	
	comp=Z,1.2nm,0.8s							
NVAR	**Mina Array Bea**	**49.10**	**306**		P	**P**	**04 01 38.8**	**+1.1**
	comp=Z,0.1nm,0.5s,baz=70,slow=9.7,SNR=2.4							
	comp=Z,0.1nm,0.5s							
YKA	**Yellowknife Ar**	**55.49**	**335**		P	**P**	**04 02 24.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=108,slow=6.5,SNR=5.3							
	comp=Z,0.2nm,0.5s							
ESDC	**Sonseca Array**	**58.16**	**54**		P	**P**	**04 02 45.0**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=262,slow=7.1,SNR=4.4							
	comp=Z,0.5nm,0.8s							
ESDC	**Sonseca Array**	**58.16**	**54**		IAmb	IAmb	04 02 53.7	
	comp=Z,0.4nm,0.9s							
TORD	**Torodi Ar. Bea**	**65.96**	**83**		P	**P**	**04 03 38.0**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=267,slow=7.7,SNR=1.2							
	comp=Z,0.3nm,0.8s							
ILAR	**Eielson Array**	**69.80**	**333**		P	**P**	**04 04 00.6**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=91,slow=5.6,SNR=6.5							
	comp=Z,0.3nm,0.7s							

*IDC **20** 03:53:04.0±0.6, 35°.32N×140°.33E, h0^{km}, mb4.2/25, mbtmp4.2/32, ML3.4/5, MS3.5/18, Error ellipse: s-maj=14.5km s-min=12.5km az=99.0*
*MOS **20** 03:53:06.2±0.9, 35°.34N×140°.38E, h28^{km}, mb4.5/23, Error ellipse: s-maj=10.8km s-min=6.0km az=113.8*
*JMA **20** 03:53:08.3±0.2, 35°.4N±0'.4×140°.3E±0'.8, h28^{km}±1^{km}, MD4.3/20, MV4.0/20, KUJUKURI COAST BOSO PEN*
JMA Felt IV J1 at KUJUKURI COAST BOSO PEN .
*NIED **20** 03:53:08.3, 35°.40N×140°.31E, h28^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.51; $M_{\theta\theta}$-1.25; $M_{\phi\phi}$-0.27; $M_{r\theta}$1.47; $M_{\theta\phi}$-0.81; $M_{\phi r}$0.97; Fault plane solution: $M_0$2.38000×10^{15} NP1: ϕ_s244.00000°, δ21.00000°, λ96.00000°. NP2:ϕ_s58.00000°, δ69.00000°, λ88.00000°.*
*NEIC **20** 03:53:10.0±2.7, 35°.33N±0'.05×140°.47E±0'.08, h35^{km}±2^{km}, mb4.5/50 Error ellipse: s-maj=11.8km s-min=9.1km az=79.0*

ISC 20 03:53:08.2±0.7, 35°.33N±0'.03×140°.36E±0'.04, h26^{km}±4^{km}, n196, σ1^{s}13/181, mb4.4/66, MS3.6/15, 8C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCCN	**Chibachonan**	**0.11**	**300**		P	**Pb**	**03 53 13.3**	**+0.2**
JCCN					A	A	03 53 13.3	
	comp=N,1μm,0.4s,comp=E,975nm,0.3s							
JCCN					S	**Sb**	**03 53 17.8**	**+1.4**
KTR	**Katsuura**	**0.18**	**190**		P	**Pb**	**03 53 14.4**	**+0.6**
KTR					*e*S	**Sb**	**03 53 19.0**	**+1.5**
JKUC	**kamogawauchiur**	**0.21**	**217**	*i*	P	**Pb**	**03 53 14.6**	**+0.5**
JKUC					A	A	03 53 14.6	
	comp=N,81nm,0.9s,comp=E,48nm,1.3s							
JKUC					*e*S	**Sb**	**03 53 19.3**	**+1.2**
JSMT	**Sammumatsuo**	**0.32**	**13**	⇓	*i*P	**Pb**	**03 53 15.5**	**-0.2**
JSMT					A	A	03 53 15.5	
	comp=N,109nm,0.9s,comp=E,180nm,0.6s							
JSMT				⇓	*e*S	**Sb**	**03 53 21.1**	**+0.4**
BSO4	**Boso 4**	**0.34**	**182**		P	**Pn**	**03 53 17.3**	**-0.1**
TATJ	**Tateyama 2**	**0.48**	**232**		A	A	03 53 18.4	
	comp=N,32nm,1.9s,comp=E,65nm,2.2s							
BSO3	**Boso 3**	**0.54**	**166**	⇓	P	**Pn**	**03 53 20.3**	**+0.3**
JYO	**Yokosk**	**0.57**	**260**		A	A	03 53 19.3	
	comp=N,55nm,0.8s,comp=E,79nm,1.0s							
TOK	**Tokyo**	**0.60**	**307**		A	A	03 53 19.0	
	comp=N,43nm,0.9s,comp=E,59nm,0.6s							
JIHU	**Itakohorinouch**	**0.65**	**12**		A	A	03 53 19.9	
	comp=N,77nm,1.4s,comp=E,43nm,0.9s							
BSO1	**Boso 1**	**0.84**	**143**	⇓	P	**Pn**	**03 53 23.7**	**-0.2**
JYT	**Yasato**	**0.91**	**352**		A	A	03 53 23.8	
	comp=N,14nm,0.5s,comp=E,21nm,0.4s							
JIM2	**Oshima 3**	**0.97**	**232**	⇓	P	**Pn**	**03 53 25.1**	**-1.1**
JIM2					A	A	03 53 25.1	
	comp=N,23nm,0.4s,comp=E,14nm,0.5s							
JSGW	**Sagamiharawaka**	**0.98**	**287**		A	A	03 53 25.1	
	comp=N,7.0nm,1.3s,comp=E,8.0nm,1.4s							
JHYU	**Hitachinakayam**	**1.03**	**10**		A	A	03 53 25.9	
	comp=N,7.0nm,0.5s,comp=E,8.0nm,1.0s							
JOD2	**Odawara 2**	**1.04**	**267**	*e*	P	**Pn**	**03 53 26.3**	**-0.9**
JOD2					*e*S	**Sn**	**03 53 39.5**	**-1.4**
JHTM	**Izuhatsuma**	**1.16**	**252**		A	A	03 53 28.8	
	comp=N,13nm,0.4s,comp=E,15nm,0.4s							
JAG	**Ashikaga**	**1.32**	**326**		A	A	03 53 30.2	
	comp=N,6.0nm,0.7s,comp=E,4.0nm,3.5s							
JIZS	**Izushimoda**	**1.36**	**244**		A	A	03 53 31.9	
	comp=N,5.0nm,1.5s,comp=E,6.0nm,1.1s							
JFNN	**Fujinakano**	**1.37**	**265**		A	A	03 53 31.7	
	comp=N,7.0nm,5.1s,comp=E,9.0nm,3.8s							
JMYK	**Miyake Tsubota**	**1.43**	**208**		A	A	03 53 33.6	
	comp=N,10.0nm,0.5s,comp=E,8.0nm,0.7s							
JSB	**Shiboa**	**1.68**	**348**		A	A	03 53 35.6	
	comp=N,6.0nm,1.3s,comp=E,8.0nm,4.0s							
JKT	**Katashina**	**1.69**	**328**		A	A	03 53 35.8	
	comp=N,7.0nm,0.4s,comp=E,7.0nm,0.6s							
JSG	**Sagara**	**1.90**	**251**		Pn	**Pn**	**03 53 40.0**	**+1.1**
MJAR	**Matsushiro Arr**	**2.12**	**305**		Pn	**Pn**	**03 53 41.8**	**-0.2**
	comp=E,4.2nm,0.3s,baz=97,slow=12,SNR=73							
MJAR					Sn	**Sb**	**03 54 10.6**	**-1.4**
	comp=E,7.5nm,0.3s,baz=207,slow=16,SNR=3.5							
	comp=E,62nm,0.6s							
MJAR	**Matsushiro Arr**	**2.12**	**305**		Pn	**Pn**	**03 53 42.2**	**+0.2**
MAJO	**Matsushiro**	**2.12**	**305**		Pn	**Pn**	**03 53 41.3**	**-0.8**
MAJO	**Matsushiro**	**2.12**	**305**	*i*	P	**Pn**	**03 53 42.2**	**+0.1**
MJB9	**Matsu-Tunnel**	**2.13**	**305**		Pn	**Pn**	**03 53 42.0**	**-0.1**
JHJ	**Hachijo jima 2**	**2.25**	**192**		Pn	**Pn**	**03 53 43.2**	**-0.6**
	comp=E,819nm,0.3s,baz=49,slow=3.3,SNR=105							
JHJ					LR	LR	03 54 01.6	
	comp=E,132nm,20.9s,baz=92,slow=26							
JHJ					Sn	**Sn**	**03 54 08.8**	**-1.9**
	comp=E,465nm,0.3s,baz=286,slow=18,SNR=15							
JHJ2	**Mitsune**	**2.25**	**192**		Pn	**Pn**	**03 53 43.2**	**-0.6**
JGF	**Kuroka**	**2.46**	**277**		Pn	**Pn**	**03 53 47.3**	**+0.6**
INU	**Inuyama**	**2.73**	**271**		Pn	**Pn**	**03 53 51.0**	**+0.6**
JMN	**Monobe**	**5.58**	**255**		Pn	**Pn**	**03 54 30.7**	**+1.1**
JNU	**Nakatsue**	**8.15**	**257**		Pn	**Pn**	**03 55 04.5**	**-0.4**
	comp=E,0.3nm,0.3s,baz=56,slow=15,SNR=2.4							
JNU					LR	LR	03 58 42.9	
	comp=E,404nm,18.4s,baz=84,slow=42							
	comp=E,4.7nm,0.9s							
JCJ	**Chichijima**	**8.35**	**169**		Pn	**Pn**	**03 55 05.6**	**-2.1**
	comp=E,71nm,0.4s,baz=278,slow=16,SNR=11							
JCJ					Sn	**Sn**	**03 56 37.7**	**-3.4**
	comp=E,19nm,0.3s,baz=282,slow=21,SNR=4.2							
JCJ					LR	LR	03 58 37.2	
	comp=E,123nm,18.1s,baz=102,slow=40							
JCJ	**Chichijima**	**8.35**	**169**		Pn	**Pn**	**03 55 05.9**	**-1.8**
ASAJ	**Asahikawa**	**8.95**	**10**		Pn	**Pn**	**03 55 14.9**	**-0.8**
	comp=E,1.8nm,0.3s,baz=218,slow=7.1,SNR=5.3							
	comp=E,5.9nm,0.4s							
ASAJ	**Asahikawa**	**8.95**	**10**		P	**Pn**	**03 55 14.4**	**-1.3**
JKA	**Kamikawa-asahi**	**8.95**	**10**			**Pn**	**03 55 14.4**	**-1.3**
KSRS	**Korea Array**	**10.25**	**286**		Pn	**Pn**	**03 55 34.3**	**+0.8**
	comp=E,0.1nm,0.3s,baz=100,slow=13,SNR=9.1							
KSRS					LR	LR	03 59 33.1	
	comp=E,307nm,19.1s,baz=95,slow=38							
	comp=E,1.0nm,0.7s							
USRK	**Ussuriysk Ar.**	**10.95**	**327**		Pn	**Pn**	**03 55 42.9**	**-0.2**
	comp=E,0.1nm,0.3s,baz=127,slow=15,SNR=5.2							
	comp=E,2.0nm,0.7s							
YSS	**Yuzhno-Sakhali**	**11.76**	**8**	*e*	P	**Pn**	**03 55 53.1**	**-1.0**
YSS				*e*	S	**Sn**	**03 58 02.1**	**-2.3**
YSS					MLR	MLR		
	comp=Z,500nm,15.0s							
YSS					MLR	MLR		
	comp=E,400nm,19.0s							
BNX	**BinXian**	**14.30**	**321**	⇓	P	**Pn**	**03 56 27.1**	**-1.9**
BNX					pmax	pmax		
	comp=Z,3.0nm,1.3s							
KLR	**Kul'dur**	**15.27**	**338**		LR	LR	04 02 22.7	
	comp=Z,40nm,18.3s,baz=164,slow=37							
KLR	**Kul'dur**	**15.27**	**338**	*i*	P	**Pn**	**03 56 41.7**	**-0.2**
KLR					pmax	pmax		
	comp=Z,1.0nm,1.0s							
TYV	**Tymovskoe**	**15.62**	**5**	*e*	P	**P**	**03 56 50.9**	**+0.5**
TYV					pmax	pmax		
	comp=Z,6.0nm,1.2s							
TYV					pmax	pmax		
	comp=Z,100nm,2.7s							
HEH	**HeiHe**	**17.64**	**332**	*e*	P	**Pn**	**03 57 06.4**	**-5.7**
HEH					LR	LR		
	comp=N,280nm,15.1s							
HEH					LR	LR		
	comp=E,100nm,13.0s							
HEH					LR	LR		
	comp=E,270nm,15.0s							
NJ2	**Nanjing**	**18.18**	**266**	*e*	P	**P**	**03 57 19.3**	**+0.3**
NJ2					pmax	pmax		
	comp=Z,2.0nm,0.5s							
ZEA	**Zeya**	**20.58**	**337**	*e*	P	**P**	**03 57 45.4**	**+0.4**
ZEA					pmax	pmax		
	comp=Z,10.0nm,0.7s							
ZEA					MLR	MLR		
	comp=Z,100nm,17.0s							
HILR	**Hailar Array B**	**20.72**	**320**		P	**P**	**03 57 44.0**	**-2.6**
	comp=Z,2.8nm,0.7s,baz=108,slow=12,SNR=2.3							
	comp=Z,2.8nm,0.7s							
HNS	**HongShan**	**20.74**	**283**	⇓	P	**P**	**03 57 46.0**	**-0.8**
HNS					pmax	pmax		
	comp=Z,4.0nm,0.7s							
HNS					LR	LR		
	comp=E,140nm,17.5s							
HNS					LR	LR		
	comp=Z,200nm,15.1s							
PETK	**Petropavlovsk-**	**21.59**	**29**		P	**P**	**03 57 54.0**	**-1.9**
	comp=Z,4.1nm,0.9s,baz=207,slow=4.5,SNR=4.1							
PETK					LR	LR	04 06 36.3	
	comp=Z,77nm,20.3s,baz=223,slow=38							
	comp=Z,4.1nm,0.9s							
PETK	**Petropavlovsk-**	**21.59**	**29**		P	**P**	**03 57 54.3**	**-1.6**
HHC	**Hu-ho-hao-te**	**23.27**	**292**	*e*	P	**P**	**03 58 12.9**	**-0.9

comp=Z,93nm,18.2s,baz=36,slow=37
comp=Z,1.8nm,0.5s
MKAR Makanchi Array 44.32 303 P **P** **04 01 15.6 -0.4**
MKAR Makanchi Array 44.32 303*ce*P **P** **04 01 15.8 -0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MAKZ Makanchi 44.53 303 P **P** **04 01 16.9 -0.7**
MAKZ Makanchi 44.53 303 P **P** **04 01 17.0 -0.7**
MAKZ pmax pmax
comp=Z,4.0nm,1.1s
C16K Lisburne Hills 44.61 26 **P** **04 01 17.9 +0.1**
C16K lAmb lAmb 04 01 29.8
comp=Z,8.6nm,0.9s
C18K Utukok River 46.18 26 P **P** **04 01 30.8 +0.4**
C18K lAmb lAmb 04 01 42.5
comp=Z,4.0nm,0.7s
KURK Kurchatov 46.33 309 P **P** **04 01 31.5 -0.3**
KURK Kurchatov 46.33 309*ce*P **P** **04 01 31.3 -0.5**
KURK pmax pmax
comp=Z,22nm,0.8s
KURBB Kurchatov Arra 46.39 309 P **P** **04 01 31.7 -0.6**
comp=Z,11nm,0.7s,baz=85,slow=8.2,SNR=81
KURBB LR LR 04 21 20.0
comp=Z,79nm,18.9s,baz=189,slow=37
comp=Z,11nm,0.7s
G18K Tagagawik 46.55 30 **P** **04 01 33.2 -0.1**
C19K Lookout Ridge 46.86 25 **P** **04 01 36.6 +0.8**
C19K lAmb lAmb 04 01 55.1
comp=Z,15nm,1.4s
E19K Redstone River 47.38 28 P **P** **04 01 40.7 +0.9**
E19K lAmb lAmb 04 01 50.4
comp=Z,3.7nm,0.7s
TARG Taragay, Kyrgy 48.41 297 P **P** **04 01 48.7 +0.1**
TARG lAmb lAmb 04 01 49.9
comp=Z,3.9nm,0.8s
TARG Taragay, Kyrgy 48.41 297 P **P** **04 01 48.7 +0.1**
TARG pmax pmax
comp=Z,4.0nm,0.8s
B21K Ikpikpuk River 48.69 25 P **P** **04 01 51.0 +1.2**
B21K lAmb lAmb 04 02 02.0
comp=Z,5.4nm,0.7s
MTN Manton Dam 48.70 192 P **P** **04 01 51.2 +0.8**
PPLA Purkeypile 49.06 34 P **P** **04 01 53.9 +1.0**
E22K Anaktuvuk Pass 49.51 27 P **P** **04 01 57.2 +1.0**
E22K lAmb lAmb 04 02 08.4
comp=Z,3.1nm,0.7s
BPAW Bear Paw Mtn. 49.62 32 P **P** **04 01 57.1 0.0**
BPAW lAmb lAmb 04 02 04.4
comp=Z,4.6nm,1.1s
E23K Chandalar 50.33 27 P **P** **04 02 03.2 +0.8**
E23K lAmb lAmb 04 02 15.7
comp=Z,5.8nm,1.1s
I23K Minto, Yukon-K 50.33 31 P **P** **04 02 03.5 +1.1**
I23K lAmb lAmb 04 02 37.9
comp=Z,7.3nm,1.5s
AAK Ala-Archa 50.56 299 LR LR 04 23 50.1
comp=Z,73nm,19.1s,baz=48,slow=36
AAK Ala-Archa 50.56 299 P **P** **04 02 04.5 -0.2**
AAK lAmb lAmb 04 02 14.1
comp=Z,2.7nm,0.8s
AAK Ala-Archa 50.56 299*ce*P **P** **04 02 04.8 +0.1**
AAK pmax pmax
comp=Z,3.0nm,1.3s
GHO Glory Hole Cre 50.59 36 P **P** **04 02 05.2 +0.6**
KSH2 Kashi 50.74 295 P **P** **04 02 04.3 -1.8**
KSH2 sP pP 04 02 15.5 +1.4
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
WRH Wood River Hil 50.88 32 P **P** **04 02 07.9 +1.3**
WRH lAmb lAmb 04 02 44.1
comp=Z,10nm,1.4s
H24K Noodor Dome 50.95 30 P **P** **04 02 08.3 +1.1**
H24K lAmb lAmb 04 02 30.2
comp=Z,6.1nm,1.2s
BVAR Borovoye Array 51.10 313 P **P** **04 02 07.8 -0.6**
comp=Z,1.0nm,0.6s,baz=76,slow=7.6,SNR=2.1
comp=Z,1.0nm,0.6s
BORK Borovoye 51.14 313 *i* P **P** **04 02 09.2 +0.5**
BORK pmax pmax
comp=Z,3.0nm,0.9s
IL31 51.39 32 P **P** **04 02 10.8 +0.4**
IL31 lAmb lAmb 04 02 22.8
comp=Z,7.7nm,1.2s
ILAR Eielson Array 51.39 32 P **P** **04 02 10.6 +0.1**
comp=Z,1.9nm,0.8s,baz=267,slow=5.9,SNR=22
comp=Z,1.9nm,0.8s
ILAR Eielson Array 51.39 32 P **P** **04 02 10.8 +0.4**
ARSB Arslanbob 52.00 298 P **P** **04 02 15.1 -0.5**
ARSB Arslanbob 52.00 298 P **P** **04 02 15.1 -0.5**
ARSB pmax pmax
comp=Z,14nm,0.4s
BMAR Burnt Mountain 52.24 28 P **P** **04 02 18.0 +1.2**
F26K Sheenjek River 52.39 28 P **P** **04 02 18.8 +0.9**
F26K lAmb lAmb 04 02 31.3
comp=Z,3.3nm,0.8s
DOT Dot Lake 52.70 33 P **P** **04 02 20.7 +0.5**
DOT lAmb lAmb 04 02 58.0
comp=Z,3.6nm,1.1s
MENT Mentasta 52.92 34 P **P** **04 02 22.0 +0.1**
KK31 Karatay Array 53.25 301 P **P** **04 02 24.4 -0.1**
KK31 lAmb lAmb 04 02 34.0
comp=Z,4.5nm,0.8s
KK31 Karatay Array 53.25 301 P **P** **04 02 24.5 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 53.25 301 P **P** **04 02 24.7 +0.1**
KKAR Karatay Array 53.25 301 P **P** **04 02 24.7 +0.1**
BCAR Beaver Creek A 53.78 33 P **P** **04 02 29.1 +0.8**
WR8 Warramunga Arr 55.26 187 P **P** **04 02 39.0 -0.3**
WRA Warramunga Arr 55.26 187 P **P** **04 02 38.7 -0.6**
comp=Z,4.7nm,0.5s,baz=1.6,slow=7.5,SNR=44
comp=Z,4.7nm,0.5s
WRA Warramunga Arr 55.26 187 P **P** **04 02 38.7 -0.6**
M29M Somme Creek 55.40 34 P **P** **04 02 40.7 +0.7**
M29M lAmb lAmb 04 03 02.7
comp=Z,6.2nm,1.1s
CHGR Chuyangaron 55.63 296 P **P** **04 02 41.9 -0.1**
CHGR Chuyangaron 55.63 296 *i* P **P** **04 02 42.1 0.0**
CHGR pmax pmax
comp=Z,13nm,0.8s
I30M Mount Dempster 55.77 30 **P** **04 02 43.8 +1.1**
I30M lAmb lAmb 04 03 10.7
comp=Z,14nm,1.4s
INK Inuvik 56.29 26 P **P** **04 02 46.3 +0.2**
comp=Z,1.0nm,0.8s,baz=285,slow=6.7,SNR=4.4
comp=Z,1.0nm,0.8s
INK Inuvik 56.29 26 P **P** **04 02 46.6 +0.5**
ARTI Arti 57.18 319 P **P** **04 02 52.4 -0.3**
ARTI Arti 57.18 319*c* *i* P **P** **04 02 53.3 +0.6**
ARTI 04 05 00.5
ARTI S **S** **04 10 51.1 +4.7**
ARTI SS **SS** **04 14 38.2 +3.2**
ARTI pmax pmax
comp=Z,9.0nm,1.4s
A36M Sachs Harbour 58.16 21 P **P** **04 03 00.5 +1.2**
A36M lAmb lAmb 04 03 11.5
comp=Z,6.2nm,0.8s
AB31 Akbulak array 58.39 311 P **P** **04 03 00.9 -0.4**
AB31 lAmb lAmb 04 03 10.6
comp=Z,7.1nm,1.1s
ABKAR Akbulak array 58.39 311 P **P** **04 03 01.0 -0.3**
AS31 Alice Springs 58.99 187 P **P** **04 03 05.9 +0.3**
AS31 lAmb lAmb 04 03 11.3
comp=Z,1.8nm,0.4s
ASAR Alice Springs 58.99 187 P **P** **04 03 04.8 -0.9**
comp=Z,1.1nm,0.5s,baz=18,slow=12,SNR=25
comp=Z,1.1nm,0.5s
ASAR Alice Springs 58.99 187 P **P** **04 03 05.3 -0.3**
C36M Paulatuk 59.33 24 P **P** **04 03 07.2 -0.3**
C36M lAmb lAmb 04 03 19.1
comp=Z,2.4nm,0.7s
KIRV Kirov 61.09 323 LR LR 04 31 44.9
comp=Z,106nm,19.3s,baz=344,slow=38
ARCES ARCESS Array B 65.29 339 LR LR 04 35 02.5
comp=Z,66nm,20.3s,baz=1.5,slow=39
YKA Yellowknife Ar 65.71 29 P **P** **04 03 50.2 0.0**
comp=Z,0.5nm,0.8s,baz=309,slow=7.5,SNR=6.6
comp=Z,0.5nm,0.8s
YKA Yellowknife Ar 65.71 29 P **P** **04 03 49.6 -0.6**
YKA Yellowknife Ar 65.71 29 P **P** **04 03 49.6 -0.6**
FORT Forrest 66.77 192 P **P** **04 03 57.8 +0.6**
OBN Obninsk 68.95 323 *i* P **P** **04 04 08.9 -1.9**
OBN *i* 04 04 24.2
OBN *i* 04 06 40.6
OBN pmax pmax

comp=Z,4.0nm,0.9s
FINES FINESS Array B 69.92 332 P **P** **04 04 16.2 -0.5**
comp=Z,2.8nm,0.8s,baz=51,slow=6.1,SNR=6.7
comp=Z,2.8nm,0.8s
FINES FINESS Array B 69.92 332 P **P** **04 04 16.4 -0.2**
FINES FINESS Array B 69.92 332*ce*P **P** **04 04 16.5 -0.2**
FINES pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 71.36 311 P **P** **04 04 25.6 -0.2**
comp=Z,2.2nm,0.9s,baz=59,slow=3.1,SNR=6.8
comp=Z,2.2nm,0.9s
KBZ Khabaz 71.36 311 *i* P **P** **04 04 26.3 +0.5**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KIV Kislovodsk 71.38 311 *e*P **P** **04 04 26.3 +0.3**
KIV pmax pmax
comp=Z,7.0nm,1.1s
SHA1 Shidzhatmaz 71.51 311 *i* P **P** **04 04 27.2 +0.2**
SUMG Summit 72.39 360 P **P** **04 04 33.5 +1.5**
SUMG Summit 72.39 360 P **P** **04 04 33.5 +1.5**
SUMG pmax pmax
comp=Z,3.0nm,1.0s
O02D Mt. Diablo Mer 72.83 53 P **P** **04 04 35.4 +0.5**
O02D lAmb lAmb 04 04 55.0
comp=Z,5.6nm,1.4s
JTMT Jette 73.82 43 P **P** **04 04 41.2 +0.6**
AKASG Malin Array Be 75.12 322 P **P** **04 04 46.0 -1.8**
comp=Z,1.6nm,0.6s,baz=49,slow=6.1,SNR=7.9
comp=Z,1.6nm,0.6s
AKASG Malin Array Be 75.12 322 P **P** **04 04 48.5 +0.6**
AKBB Malin Array Si 75.12 322*ce*P **P** **04 04 46.8 -1.0**
AKBB pmax pmax
comp=Z,4.0nm,1.0s
HFS Hagfors 75.28 335 P **P** **04 04 48.5 -0.1**
comp=Z,2.9nm,1.0s,baz=52,slow=9.5,SNR=1.4
comp=Z,2.9nm,1.0s
NB2 NORSAR Subarra 75.42 337 P **P** **04 04 49.4 -0.1**
comp=Z,1.1nm,0.8s,baz=41,slow=5.9
NOA NORSAR Array B 75.42 337 P **P** **04 04 49.4 -0.1**
comp=Z,1.5nm,0.8s,baz=41,slow=5.8,SNR=4.4
NOA LR LR 04 41 12.7
comp=Z,43nm,19.1s,baz=280,slow=38
comp=Z,1.5nm,0.8s
CMB Columbia Colle 75.56 54 P **P** **04 04 51.7 +1.0**
CMB Columbia Colle 75.56 54 P **P** **04 04 51.7 +1.0**
CMB pmax pmax
comp=Z,1.0nm,0.6s
LRM Limekiln Ridge 75.97 44 P **P** **04 04 53.9 +0.8**
DLMT Dillon 76.16 44 P **P** **04 04 55.1 +1.0**
DLMT lAmb lAmb 04 04 58.6
comp=Z,3.4nm,0.9s
NVAR Mina Array Bea 76.70 52 P **P** **04 04 58.6 +1.2**
comp=Z,0.9nm,0.7s,baz=292,slow=5.6,SNR=7.5
comp=Z,0.9nm,0.7s
MOOW Moose Ponds 78.19 44 P **P** **04 05 06.5 +0.9**
BURAR Bucovina Array 79.11 321 P **P** **04 05 10.1 -0.4**
BRTR Keskin Array B 79.34 311 P **P** **04 05 12.4 +0.5**
comp=Z,0.9nm,0.8s,baz=131,slow=3.8,SNR=7.3
comp=Z,0.9nm,0.8s
BRTR Keskin Array B 79.34 311 P **P** **04 05 11.4 -0.5**
BRTR Keskin Array B 79.34 311*ce*P **P** **04 05 12.6 +0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BW06 Boulder Array 79.47 45 P **P** **04 05 13.6 +0.9**
PDAR Pinedale Array 79.47 45 P **P** **04 05 13.4 +0.7**
comp=Z,0.8nm,0.6s,baz=270,slow=1.8,SNR=14
comp=Z,0.8nm,0.6s
PDAR Pinedale Array 79.47 45 P **P** **04 05 12.9 +0.2**
PV10 Paradox Valley 82.55 48 P **P** **04 05 30.6 +1.4**
PV19 Morning Glory 82.62 48 P **P** **04 05 30.0 +0.4**
TXAR Lajitas Array 91.84 52 P **P** **04 06 14.5 +0.1**
comp=Z,0.5nm,0.8s,baz=305,slow=2.2,SNR=4.4
comp=Z,0.5nm,0.8s
TXAR Lajitas Array 91.84 52 P **P** **04 06 14.2 -0.2**
TXAR Lajitas Array 91.84 52 P **P** **04 06 14.2 -0.2**
NVL N'lazarevskaya 135.39 202 *e*PKIKP **PKPdf** **04 12 21.9 -2.7**
NVL pmax pmax
comp=Z,67nm,3.0s
H03N2 Juan Fernandez 147.66 98 T T 06 57 49.0
baz=289,slow=76,SNR=7.3
H03N3 Juan Fernandez 147.67 98 T T 06 57 40.6
baz=289,slow=76,SNR=9.5
H03N1 Juan Fernandez 147.68 98 T T 06 57 46.3
baz=289,slow=76,SNR=9.1

MOS ***20*** *04:01:40.7±0.9,57.46S×26.07W,h66km,mb5.4/8,Error ellipse: s-maj=20.7km s-min=12.1km az=104.5*
NEIC ***20*** *04:01:42.4±1.3,57.49S±0.10×26.1W±0.2,h67km±4km, mb5.2/54,Error ellipse: s-maj=15.3km s-min=12.3km az=215.0*
IDC ***20*** *04:01:44.3±0.6,57.48S×26.10W,h87km±5km,mb4.7/13, mbtmp5.0/15,MS3.9/27,Error ellipse: s-maj=14.5km s-min=11.5km az=72.0*
GCMT ***20*** *04:01:45.4±0.3,57.79S±0.02×25.60W±0.05,h75km±5km, MW4.9/84,Moment Tensor Solution. s17,c18; s84,c101; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.52±.20; Mθθ-2.02±.19; Mφφ1.51±.18; Mrθ1.88±.08; Mθφ-1.33±.17; Mφr-0.98±.08; Best double couple: Mo3.09400×10¹⁶ NP1:φs209.00000°,δ46.00000°,λ9.00000°. NP2: φs113.00000°,δ84.00000°,λ135.00000°. Principal axes: T 3.0460, Plg35.0000°, Azm61.0000°; N 0.1010, Plg45.0000°, Azm286.0000°; P -3.1420, Plg24.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 04:01:43.7±0.4, 57.53S±0.06×26.09W±0.06, h83km±3km, h83km:pP-P, n280, σ0.94/269, mb5.1/38, 12C-7D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
HOPE	**Hope Point**	**6.69**	**295**	Pn		**Pn**	**04 03 17.1**	**-2.0**
HOPE	**Hope Point**	**6.69**	**295**	P		**Pn**	**04 03 17.1**	**-2.0**
VNA1	**Neumayer--Stat**	**15.19**	**157**	⇓P		**Pn**	**04 05 13.7**	**+0.4**
	comp=Z,214nm,0.9s							
VNA3	**Neumayer Olymp**	**15.39**	**160**	⇓P		**Pn**	**04 05 14.2**	**-1.6**
	comp=Z,92nm,0.6s							
VNA3				⇓S		Sn	04 07 53.9	-11
VNA2	**Neumayer--Watz**	**15.59**	**157**	⇓P		**Pn**	**04 05 18.5**	**+0.2**
	comp=Z,53nm,0.6s,baz=324,slow=13							
VNA2				⇓S		Sn	04 08 00.9	-9.1
	baz=322,slow=20							
SNAA	**Sanae**	**17.14**	**155**	⇓P		**Pn**	**04 05 37.6**	**0.0**
	comp=Z,1μm,0.4s							
SNAA				⇑S		Sn	04 08 37.6	-10
SNAA	**Sanae**	**17.14**	**155**	P		**Pn**	**04 05 38.1**	**+0.5**
	comp=Z,33nm,0.4s,baz=320,slow=14,SNR=87							
SNAA				S		Sn	04 08 36.5	-11
	comp=Z,4.0nm,0.5s,baz=145,slow=23,SNR=2.8							
SNAA				LR		LR	04 10 50.4	
	comp=Z,417nm,18.1s,baz=320,slow=32							
SNAA	**Sanae**	**17.14**	**155**			**Pn**	**04 05 37.9**	**+0.3**
SNAA	**Sanae**	**17.14**	**155***ce*	P		**Pn**	**04 05 37.8**	**+0.3**
SNAA				pmax	pmax			
	comp=Z,73nm,1.0s							
EFI	**East Falkland**	**19.30**	**274**	P		**Pn**	**04 06 04.0**	**+0.4**
EFI				lAmb	lAmb		04 06 11.0	
	comp=Z,128nm,1.4s							
EFI	**East Falkland**	**19.30**	**274**	*i* P		**P**	**04 06 03.0**	**+1.3**
EFI				pmax	pmax			
	comp=Z,63nm,1.1s							
PMSA	**Palmer Station**	**19.43**	**232**	P		**P**	**04 06 03.3**	**+0.3**
	comp=Z,30nm,0.8s,baz=99,slow=7.5,SNR=6.4							
PMSA				LR		LR	04 12 21.7	
	comp=Z,379nm,19.5s,baz=106,slow=33							
PMSA	**Palmer Station**	**19.43**	**232**	P		**P**	**04 06 04.6**	**+1.6**
NVL	**N'lazarevskaya**	**20.70**	**145**	*e*P		**P**	**04 06 14.9**	**-1.8**
NVL				pmax	pmax			
	comp=Z,48nm,0.8s							
USHA	**Ushuaia**	**23.44**	**258**	LR		LR	04 14 11.3	
	comp=Z,290nm,18.0s,baz=108,slow=32							
MG02	**Cerro Sombrero**	**24.77**	**262**	P		**P**	**04 06 57.6**	**+0.3**
GO09	**Cerro Castillo**	**27.19**	**263**	P		**P**	**04 07 18.2**	**-1.0**
GO09				lAmb	lAmb		04 07 32.9	
	comp=Z,144nm,1.8s							
GO08	**Villa O'Higgin**	**28.87**	**268**			**P**	**04 07 34.3**	**+0.2**
COYC	**Coyhaique**	**30.39**	**273**			**P**	**04 07 48.1**	**+0.5**
AY01	**Puyuhuapi**	**31.45**	**274**	P		**P**	**04 07 57.4**	**+0.5**
PLTB	**Pedras Altas**	**31.94**	**312**			**P**	**04 08 01.2**	**-0.1**
PLTB				lAmb	lAmb		04 08 05.5	
	comp=Z,19nm,0.7s							
PLTB	**Pedras Altas**	**31.94**	**312**	*e*P		**P**	**04 08 01.6**	**+0.2**

QSPA South Pole Qui 32.72 180 P **P** **04 08 09.0 +1.0**
comp=Z,100nm,0.5s,baz=197,slow=1.2,SNR=146
QSPA LR LR 04 20 56.0
comp=Z,188nm,20.6s,baz=190,slow=35
comp=Z,100nm,0.5s
QSPA South Pole Qui 32.72 180 **P** **04 08 08.6 +0.5**
QSPA South Pole Qui 32.72 180 P **P** **04 08 09.2 +1.1**
PLCA Paso Flores 32.87 281 P **P** **04 08 09.3 -0.2**
comp=Z,3.2nm,0.6s,baz=125,slow=6.0,SNR=17
comp=Z,3.2nm,0.6s
PLCA Paso Flores 32.87 281 **P** **04 08 09.3 -0.2**
LR05 Currie 34.00 280 **P** **04 08 19.5 +0.3**
LR05 lAmb lAmb 04 08 23.5
comp=Z,60nm,1.6s
GO06 Curarrehue 34.19 282 P **P** **04 08 20.0 -1.0**
VAO Valinhos 37.67 327 P **P** **04 08 52.2 +1.5**
VAO lAmb lAmb 04 08 53.0
comp=Z,27nm,1.2s
VAO Valinhos 37.67 327 *e*P **P** **04 08 52.8 +2.1**
CPUP Villa Florida 38.24 311 P **P** **04 08 55.0 -0.5**
comp=Z,7.7nm,0.8s,baz=158,slow=8.5,SNR=12
CPUP LR LR 04 24 29.2
comp=Z,126nm,18.6s,baz=106,slow=36
comp=Z,7.7nm,0.8s
CPUP Villa Florida 38.24 311 **P** **04 08 55.0 -0.5**
CPUP Villa Florida 38.24 311 P **P** **04 08 55.0 -0.5**
CPUP Villa Florida 38.24 311 P **P** **04 08 55.1 -0.4**
CPUP pP **pP** **04 09 12.5 -1.9**
ALF01 Guarapari-ES 38.40 338 *e*P **P** **04 08 58.9 +2.1**
MAW Mawson 38.60 142 P **P** **04 08 58.1 +0.1**
comp=Z,16nm,0.9s,baz=229,slow=9.3,SNR=2.1
MAW LR LR 04 23 45.1
comp=Z,116nm,20.0s,baz=262,slow=34
comp=Z,16nm,0.9s
BSCB Bom Sucesso 38.97 332 *e*P **P** **04 09 03.1 +1.3**
RIB01 Linhares ES 39.60 339 *e*P **P** **04 09 08.5 +1.6**
TRCB Terra Rica 39.67 320 *e*P **P** **04 09 07.9 +0.4**
BB19B Bebedouro 39.95 326 *e*P **P** **04 09 11.6 +1.8**
SJMB Sao Joao De Ma 40.35 338 *e*P **P** **04 09 14.2 +1.1**
AMBA Amambai (Brazi 40.40 317 *e*P **P** **04 09 13.4 -0.1**
SUR Sutherland 40.48 72 LR LR 04 21 54.8
comp=Z,276nm,19.7s,baz=217,slow=30
CO01 Juntas del Tor 40.95 293 P **P** **04 09 17.9 -0.4**
DIAM Diamantina, MG 41.30 334 *e*P **P** **04 09 22.4 +1.3**
GUA01 Guaratinga, BA 42.15 340 *e*P **P** **04 09 29.1 +1.2**
MURT Porto Murtinho 42.55 314 *e*P **P** **04 09 31.2 +0.2**
GRHM Grahamstown, E 42.68 78 P **P** **04 09 30.1 -1.9**
GRHM lAmb lAmb 04 09 33.1
comp=Z,111nm,1.9s
IPMB Ipameri, GO 42.78 328 *e*P **P** **04 09 33.9 +0.9**
AQDB Aquidauana 42.90 317 P **P** **04 09 33.1 -0.7**
AC02 Maricunga 43.08 297 **P** **04 09 35.1 -0.8**
AC02 lAmb lAmb 04 10 29.7
comp=Z,24nm,0.8s
CMC01 Camacan, BA 43.30 341 *e*P **P** **04 09 38.2 +1.1**
JANB Januaria 44.57 334 *e*P **P** **04 09 48.1 +0.7**
BDFB Brasilia 44.95 329 P **P** **04 09 50.5 0.0**
comp=Z,5.1nm,0.6s,baz=148,slow=6.6,SNR=10
BDFB LR LR 04 25 46.4
comp=Z,180nm,19.4s,baz=14,slow=32
comp=Z,5.1nm,0.6s
BDFB Brasilia 44.95 329 P **P** **04 09 51.1 +0.7**
BDFB Brasilia 44.95 329 P **P** **04 09 51.1 +0.7**
BDFB pmax pmax
comp=Z,26nm,1.6s
VNDA Vanda 45.12 182 P **P** **04 09 52.5 +1.6**
comp=Z,35nm,0.7s,baz=190,slow=6.6,SNR=74
VNDA pP **pP** **04 10 12.1 +1.9**
comp=Z,13nm,0.6s,baz=196,slow=7.4,SNR=3.9
VNDA LR LR 04 27 19.3
comp=Z,89nm,21.3s,baz=183,slow=34
comp=Z,35nm,0.7s
VNDA Vanda 45.12 182 P **P** **04 09 52.6 +1.6**
VNDA lAmb lAmb 04 09 53.4
comp=Z,38nm,0.7s
VNDA Vanda 45.12 182 P **P** **04 09 52.6 +1.6**
VNDA pmax pmax
comp=Z,38nm,0.7s
VNDA Vanda 45.12 182 P **P** **04 09 52.8 +1.8**
VNDA pP **pP** **04 10 09.5 -0.7**
VNDA sP **sP** **04 10 17.9 -1.4**
PP1B Ponte de Pedra 45.26 320 *e*P **P** **04 09 53.0 +0.3**
BOSA Boshof 45.78 73 P **P** **04 09 56.6 -0.3**
comp=Z,41nm,0.8s,baz=212,slow=7.2,SNR=74
BOSA LR LR 04 25 00.6
comp=Z,206nm,21.5s,baz=204,slow=30
comp=Z,41nm,0.8s
BOSA Boshof 45.78 73 **P** **04 09 56.9 0.0**
BOSA lAmb lAmb 04 09 57.8
comp=Z,54nm,0.9s
BOSA Boshof 45.78 73 P **P** **04 09 56.9 0.0**
BOSA pmax pmax
comp=Z,54nm,0.9s
BOSA Boshof 45.78 73 P **P** **04 09 57.0 0.0**
BOSA pP **pP** **04 10 14.5 -1.3**
BOSA sP **pwP** **04 10 22.2 +1.5**
AF01 San Pedro de A 45.94 301 **P** **04 09 59.1 +0.7**
AF01 lAmb lAmb 04 10 02.2
comp=Z,35nm,0.6s
ARAG Araguaiana, MT 46.01 324 *e*P **P** **04 09 59.9 +1.2**
CCD Concordia, Ant 46.11 169 P **P** **04 09 59.7 +0.4**
CCD x x 04 10 19.6
H04S2 CROZET ISLANDS 46.41 112 T T 05 00 41.6
baz=225,slow=75,SNR=55
H04S3 CROZET ISLANDS 46.42 112 T T 05 00 39.9
baz=225,slow=75,SNR=26
H04S1 CROZET ISLANDS 46.43 112 T T 05 00 40.8
baz=225,slow=75,SNR=33
WIN Windhoek 46.78 60 P **P** **04 10 04.0 -0.9**
WIN lAmb lAmb 04 10 26.9
comp=Z,32nm,1.5s
WIN Windhoek 46.78 60 P **P** **04 10 04.0 -0.9**
WIN pmax pmax
comp=Z,32nm,1.5s
H04N3 CROZET ISLANDS 46.82 111 T T 05 01 34.7
baz=230
H04N1 CROZET ISLANDS 46.83 111 T T 05 01 27.8
baz=230
H04N2 CROZET ISLANDS 46.84 111 T T 05 01 29.5
baz=230
SALV Santo Antonio 47.11 320 *e*P **P** **04 10 07.6 +0.3**
SDBA SAO DESIDERIO 47.26 335 *e*P **P** **04 10 09.4 +0.8**
KOOLE Kule 47.89 64 P **P** **04 10 12.9 -0.5**
KOOLE lAmb lAmb 04 10 14.4
comp=Z,50nm,0.8s
KOOLE Kule 47.89 64 *i* P **P** **04 10 12.8 -0.7**
PTLB Pontes e Lacer 48.78 316 **P** **04 10 19.9 -0.3**
PTLB lAmb lAmb 04 10 23.8
comp=Z,13nm,0.8s
PTLB Pontes e Lacer 48.78 316 *e*P **P** **04 10 20.1 -0.1**
LBTB Lobatse 48.89 71 LR LR 04 26 52.1
comp=Z,133nm,21.6s,baz=210,slow=31
LBTB Lobatse 48.89 71 **P** **04 10 20.4 -0.7**
LBTB Lobatse 48.89 71 P **P** **04 10 20.4 -0.7**
LBTB pmax pmax
comp=Z,47nm,0.8s
LBTB Lobatse 48.89 71 P **P** **04 10 21.1 0.0**
KGCAE Kacgae 48.99 66 P **P** **04 10 21.6 -0.2**
KGCAE Kacgae 48.99 66 *i* P **P** **04 10 21.4 -0.4**
SIV San Ignacio 49.03 313 LR LR 04 31 21.0
comp=Z,106nm,20.0s,baz=114,slow=36
GO01 Chusmiza 49.24 302 P **P** **04 10 23.2 -1.0**
H10S2 ASCENSION HYDR 49.26 15 T T 05 04 11.3
baz=188,slow=74,SNR=72
H10S3 ASCENSION HYDR 49.26 15 T T 05 04 11.8
baz=32,slow=74,SNR=76
SNDB Serra Nova Dou 49.37 327 *e*P **P** **04 10 26.1 +1.4**
GRTLG Ghanzi 49.77 64 *i* P **P** **04 10 26.8 -1.0**
KDWAN Kaudwane 49.77 69 *i* P **P** **04 10 27.0 -0.8**
TSUM Tsumeb 49.91 59 LR LR 04 26 47.1
comp=Z,84nm,21.1s,baz=160,slow=30
TSUM Tsumeb 49.91 59 P **P** **04 10 28.5 -0.4**
TSUM lAmb lAmb 04 10 30.4
comp=Z,20nm,1.0s
TSUM Tsumeb 49.91 59 P **P** **04 10 28.9 0.0**
TSUM pP **pP** **04 10 46.2 -1.8**
H10N1 ASCENSION HYDR 50.38 15 T T 05 05 36.0
baz=188,slow=74,SNR=8.3
H10N3 ASCENSION HYDR 50.38 15 T T 05 05 35.4
baz=188,slow=74,SNR=42
LPHEP Lephephe 50.39 70 *i* P **P** **04 10 32.3 -0.1**
H10N2 ASCENSION HYDR 50.39 15 T T 05 05 36.9
baz=188,slow=74,SNR=29
PB16 IPOC Station P 50.55 302 P **P** **04 10 34.0 -0.3**
PB16 lAmb lAmb 04 11 20.8

comp=Z,28nm,1.8s
SMTB Santa Maria do 51.33 332 *e*P **P 04 10 40.8 +1.3**
KHWEE KHWEE 51.36 69 P **P 04 10 39.5 -0.3**
KHWEE KHWEE 51.36 69 *i* P **P 04 10 39.3 -0.4**
PDRB Porto dos Gac 51.45 320 *e*P **P 04 10 40.2 -0.2**
VILB Vilhena 51.47 316 **P 04 10 40.3 -0.2**
VILB IAmb IAmb 04 10 44.0
comp=Z,18nm,0.7s
VILB Vilhena 51.47 316 *e*P **P 04 10 40.5 0.0**
NBPV Pedro Velho 51.49 348 *e*P **P 04 10 41.2 +0.6**
LPAZ La Paz 51.73 305 P **P 04 10 42.9 -0.2**
comp=Z,21nm,0.7s,baz=177,slow=6.1,SNR=67
LPAZ LR LR 04 34 36.5
comp=Z,80nm,20.3s,baz=68,slow=38
comp=Z,21nm,0.7s
LPAZ La Paz 51.73 305 P **P 04 10 42.1 -1.0**
LPAZ IAmb IAmb 04 10 46.5
comp=Z,20nm,0.7s
LPAZ La Paz 51.73 305 *e*P **P 04 10 42.1 -1.0**
LPAZ La Paz 51.73 305 *e*P **P 04 10 43.2 +0.1**
LPAZ La Paz 51.73 305 P **P 04 10 44.2 +1.1**
LPAZ pP **pP 04 11 00.9 -1.9**
LPAZ sP **pwP 04 11 08.5 +2.5**
CLDB Colider 51.83 322 *e*P **P 04 10 43.2 +0.1**
XAUDM Khaudum 52.24 62 *i* P **P 04 10 46.4 0.0**
CASY Casey 52.31 159 P **P 04 10 46.4 +0.3**
NBPA Parau_RN 52.36 346 *e*P **P 04 10 48.4 +1.3**
SOOWA Sowa 52.91 68 *i* P **P 04 10 51.1 -0.1**
BROLN Tlhalogang 53.02 70 *i* P **P 04 10 51.5 -0.6**
NBPS Pedro II - PI 54.35 341 *e*P **P 04 11 03.1 +1.4**
KSANE Kasane 54.72 66 **P 04 11 04.7 +0.2**
KSANE IAmb IAmb 04 11 06.4
comp=Z,45nm,0.9s
KSANE Kasane 54.72 66 *i* P **P 04 11 04.4 -0.1**
NPGB Novo Progresso 55.27 324 *e*P **P 04 11 08.8 +0.5**
ITTB Itaituba 57.91 324 *e*P **P 04 11 27.4 +0.4**
LSZ Lusaka 58.37 67 LR LR 04 32 41.1
comp=Z,114nm,21.2s,baz=211,slow=32
LSZ Lusaka 58.37 67 P **P 04 11 29.9 -0.5**
LSZ IAmb IAmb 04 11 31.6
comp=Z,27nm,0.9s
LSZ Lusaka 58.37 67 P **P 04 11 29.9 -0.5**
LSZ pmax pmax
comp=Z,27nm,0.9s
LSZ Lusaka 58.37 67 P **P 04 11 30.5 +0.1**
LSZ pP **pP 04 11 48.1 -2.0**
LSZ x x 04 11 52.0
NNA Nana 59.49 298 *i* P **P 04 11 36.3 -1.8**
NNA pmax pmax
comp=Z,22nm,1.1s
MACA Manacapuru-AM 60.69 319 **P 04 11 45.8 -0.4**
MACA IAmb IAmb 04 11 46.8
comp=Z,60nm,1.4s
TEFE Tefe 61.82 315 *e*P **P 04 11 53.6 -0.2**
RPN Rapa Nui 64.00 260 LR LR 04 35 15.3
comp=Z,28nm,21.9s,baz=112,slow=31
BOAV Boa Vista 65.82 322 **P 04 12 19.8 -0.3**
BOAV IAmb IAmb 04 12 20.7
comp=Z,19nm,0.9s
BOAV Boa Vista 65.82 322 *e*P **P 04 12 20.2 +0.1**
DBIC Dimbokro 66.28 23 P **P 04 12 23.3 +0.4**
comp=Z,23nm,0.9s,baz=212,slow=6.6,SNR=23
DBIC pP **pP 04 12 45.1 +2.0**
comp=Z,8.2nm,0.6s,baz=203,slow=7.7,SNR=4.0
DBIC LR LR 04 34 05.0
comp=Z,118nm,21.9s,baz=200,slow=29
comp=Z,23nm,0.9s
DBIC Dimbokro 66.28 23 P **P 04 12 23.2 +0.4**
DBIC IAmb IAmb 04 12 24.3
comp=Z,41nm,1.2s
DBIC Dimbokro 66.28 23 P **P 04 12 23.4 +0.4**
DBIC sP **pwP 04 12 47.9 +0.4**
EDA Edea 67.73 40 **P 04 12 31.8 -0.3**
EDA IAmb IAmb 04 12 33.6
comp=Z,22nm,1.1s
OTAV Otavalo 70.98 303 P **P 04 12 52.5 -0.3**
OTAV Otavalo 70.98 303 P **P 04 12 52.5 -0.3**
OTAV pmax pmax
comp=Z,24nm,1.7s
MBAR Mbarara 72.31 61 LR LR 04 40 34.0
comp=Z,40nm,21.7s,baz=223,slow=32
MBAR Mbarara 72.31 61 P **P 04 13 01.0 +0.6**
MBAR IAmb IAmb 04 13 04.5
comp=Z,34nm,1.6s
MBAR Mbarara 72.31 61 *i* P **P 04 13 00.1 -0.3**
MBAR Mbarara 72.31 61 P **P 04 13 03.2 +2.8**
ROSC El Rosal 73.29 309 LR LR 04 46 09.8
comp=Z,149nm,19.4s,baz=78,slow=36
TORD Torodi Ar. Bea 74.06 28 P **P 04 13 11.1 +0.7**
comp=Z,53nm,0.7s,baz=196,slow=6.1,SNR=350
TORD pP **pP 04 13 33.0 +2.1**
comp=Z,27nm,0.7s,baz=204,slow=8.8,SNR=9.0
comp=Z,53nm,0.7s
TORD Torodi Ar. Bea 74.06 28 P **P 04 13 11.1 +0.7**
TORD IAmb IAmb 04 13 12.2
comp=Z,28nm,0.8s
KIBK Kibwezi 74.38 69 P **P 04 13 14.1 +1.6**
SDV Santo Domingo 75.48 314 P **P 04 13 19.1 +0.2**
comp=Z,3.4nm,0.4s,baz=173,slow=8.1,SNR=4.8
SDV LR LR 04 49 12.4
comp=Z,61nm,19.0s,baz=97,slow=38
comp=Z,3.4nm,0.4s
MLZ Mavora Lakes 76.79 190 P **P 04 13 25.7 -0.2**
LODK Lodwar 78.03 64 P **P 04 13 34.1 +1.0**
LTZ Lake Taylor 78.88 194 P **P 04 13 38.1 +0.6**
LTZ IAmb IAmb 04 14 30.3
comp=Z,70nm,1.7s
GDHS Morne Mazeau, 79.26 325 P **P 04 13 39.7 0.0**
TAU Tasmania Unive 79.78 175 P **P 04 13 42.0 -0.2**
TAU Tasmania Unive 79.78 175 P **P 04 13 42.1 -0.2**
TAU pmax pmax
comp=Z,184nm,1.9s
THZ Tophouse 79.80 194 P **P 04 13 43.4 +0.8**
THZ IAmb IAmb 04 13 48.5
comp=Z,20nm,0.8s
SMRT St. Maarten 81.34 325 P **P 04 13 50.1 -0.6**
SJG San Juan 82.39 322 LR LR 04 52 56.3
comp=Z,57nm,18.5s,baz=166,slow=37
TAM Tamanrasset 84.28 29 P **P 04 14 07.3 +1.2**
TAM Tamanrasset 84.28 29 P **P 04 14 07.3 +1.2**
TAM pmax pmax
comp=Z,19nm,0.3s
NWAO Narrogin (SRO) 84.74 150 LR LR 04 49 21.6
comp=Z,58nm,19.4s,baz=80,slow=34
TBI Tubuai 86.61 230 *e*LR LR 04 41 42.3
comp=Z,930nm,34.8s
STKA Stephens Creek 90.34 170 P **P 04 14 35.3 0.0**
comp=Z,2.6nm,0.8s,baz=169,slow=8.1,SNR=5.2
STKA pP **pP 04 14 57.8 +1.1**
comp=Z,3.1nm,0.8s,baz=129,slow=9.0,SNR=3.8
comp=Z,2.6nm,0.8s
STKA Stephens Creek 90.34 170 P **P 04 14 35.7 +0.4**
STKA Stephens Creek 90.34 170 *i* P **P 04 14 34.6 -0.7**
PPT2 Papeete2 91.78 233 *e*LR LR 04 44 12.7
comp=Z,276nm,29.8s
PPT2 *e*LR LR 04 44 14.6
comp=Z,387nm,29.0s
PPT Papeete 91.80 233 LR LR 04 46 15.2
comp=Z,56nm,21.5s,baz=158,slow=29
MDT Midelt 91.80 18 LR LR 04 52 59.5
comp=Z,88nm,19.3s,baz=224,slow=34
RAR Rarotonga 92.57 222 LR LR 04 47 31.6
comp=Z,35nm,21.2s,baz=264,slow=30
ASAR Alice Springs 97.39 162 P **P 04 15 07.4 -0.5**
comp=Z,1.3nm,0.7s,baz=184,slow=3.8,SNR=21
ASAR PP **PP 04 19 02.9 -1.8**
comp=Z,0.7nm,0.7s,baz=184,slow=7.1,SNR=5.4
ASAR PKKPbc **PKKPdf 04 31 44.0 +0.9**
comp=Z,0.4nm,0.6s,baz=18,slow=2.0,SNR=6.6
comp=Z,1.3nm,0.7s
ASAR Alice Springs 97.39 162 P **P 04 15 07.2 -0.7**
KEST Kesra 97.58 28 LR LR 04 52 25.5
comp=Z,101nm,21.9s,baz=262,slow=31
ESDC Sonseca Array 98.61 17 LR LR 04 58 03.8
comp=Z,94nm,18.2s,baz=234,slow=34
WRA Warramunga Arr 101.11 161 P **Pdif 04 15 24.0 -0.5**
comp=Z,0.4nm,0.5s,baz=199,slow=4.8,SNR=6.8
WRA PKKPbc **PKKPbc 04 31 33.1 +1.1**
comp=Z,0.3nm,0.5s,baz=358,slow=2.9,SNR=5.7
WRA Warramunga Arr 101.11 161 **Pdif 04 15 25.0 +0.6**
WRA Warramunga Arr 101.11 161 *i* P **Pdif 04 15 25.0 +0.6**
KIV Kislovodsk 116.19 49 *e*PKIKP **PKiKP 04 20 16.5 +0.1**
KIV pmax pmax
comp=Z,5.0nm,1.0s
SCHQ Schefferville 116.77 335 PKP **PKPdf 04 20 16.6 -0.4**
comp=Z,2.2nm,0.6s,baz=180,slow=4.0,SNR=5.2
SCHQ Schefferville 116.77 335 **PKiKP 04 20 18.0 +0.9**
PV14 Lion Creek, Pa 117.93 298 **PKPdf 04 20 19.0 -1.2**
RSSD Black Hills 120.20 305 **PKPdf 04 20 24.2 -0.1**
RSSD Black Hills 120.20 305 PKiKP **PKPdf 04 20 24.2 -0.1**
TCUT Toone Canyon 121.22 298 **PKiKP 04 20 27.0 +0.4**
HFS Hagfors 121.43 22 PKP **PKPdf 04 20 24.8 -1.0**
comp=Z,11nm,1.3s,baz=186,slow=4.3,SNR=1.3
PDAR Pinedale Array 121.64 301 PKP **PKPdf 04 20 26.3 -0.8**
comp=Z,0.4nm,0.5s,baz=127,slow=4.6,SNR=8.5
PDAR Pinedale Array 121.64 301 **PKPdf 04 20 26.8 -0.3**
HWUT Hardware Ranch 121.68 299 **PKiKP 04 20 27.9 +0.5**
ULM Lac du Bonnet 121.73 315 PKP **PKPdf 04 20 25.8 -0.9**
comp=Z,1.2nm,0.3s,baz=152,slow=3.3,SNR=6.1
NVAR Mina Array Bea 122.52 291 PKP **PKiKP 04 20 30.1 +1.0**
comp=Z,0.7nm,0.6s,baz=50,slow=2.9,SNR=5.7
LOHW Long Hollow 122.77 301 **PKiKP 04 20 29.8 +0.3**
MOOW Moose Ponds 122.94 301 **PKiKP 04 20 30.5 +0.7**
FXWY Fox Creek 122.99 300 **PKiKP 04 20 30.4 +0.5**
OBN Obninsk 123.15 38 *i* PKiKP **PKPdf 04 20 28.8 -0.4**
OBN pmax pmax
comp=Z,7.0nm,0.8s
LAO LASA Array 123.17 306 **PKiKP 04 20 30.0 +0.1**
FLWY Flagg Ranch 123.18 301 **PKiKP 04 20 30.6 +0.4**
CMAR Chiang Mai Arr 123.98 110 PKP **PKPdf 04 20 32.1 0.0**
comp=Z,2.0nm,0.2s,baz=228,slow=3.7,SNR=13
CMAR Chiang Mai Arr 123.98 110 **PKPdf 04 20 31.9 -0.2**
CMAR Chiang Mai Arr 123.98 110 *c* iPKiKP **PKPdf 04 20 31.7 -0.3**
CMAR pmax pmax
comp=Z,2.0nm,0.2s
YHL Hebgen Lake 123.99 301 **PKiKP 04 20 32.6 +0.7**
CHGR Chuyangaron 124.22 71 *i* PKiKP **PKPdf 04 20 29.9 -2.1**
AFDM Forest Hills D 124.26 290 **PKiKP 04 20 33.2 +1.0**
BELG Belogornoye 124.94 46 *i* PKiKP **PKiKP 04 20 32.9 -0.2**
DLMT Dillon 125.03 301 **PKiKP 04 20 34.7 +0.9**
EVN Evenset 125.34 93 **PKPdf 04 20 35.0 -0.2**
FINES FINESS Array B 125.41 28 PKP **PKPdf 04 20 32.9 -0.4**
comp=Z,6.3nm,0.7s,baz=201,slow=1.2,SNR=35
FINES FINESS Array B 125.41 28 **PKPdf 04 20 33.3 0.0**
FINES FINESS Array B 125.41 28 *c* iPKiKP **PKPdf 04 20 33.4 0.0**
FINES pmax pmax
comp=Z,6.0nm,0.7s
Q03E Paynes Creek 125.70 290 **PKiKP 04 20 36.0 +0.9**
FFC Flin Flon 127.56 315 **PKiKP 04 20 38.4 +0.1**
FFC Flin Flon 127.56 315 PKiKP **PKiKP 04 20 38.4 +0.1**
ABKAR Akbulak array 127.71 56 **PKiKP 04 20 38.3 +0.1**
FCC Fort Churchill 127.83 322 **PKPdf 04 20 38.1 0.0**
FCC Fort Churchill 127.83 322 PKiKP **PKPdf 04 20 38.1 0.0**
KSH2 Kashi 127.89 75 PKP **PKiKP 04 20 40.5 +0.8**
KKAR Karatay Array 128.22 68 **PKPdf 04 20 39.5 +0.1**
KKAR Karatay Array 128.22 68 PKiKP **PKPdf 04 20 39.5 +0.1**
KLMR Klimovskoe 128.69 35 *e*PKiKP **PKPdf 04 20 38.0 -1.7**
KLMR pmax pmax
comp=Z,22nm,1.2s
AAK Ala-Archa 129.89 71 **PKiKP 04 20 43.6 0.0**
AAK Ala-Archa 129.89 71 *c* iPKiKP **PKiKP 04 20 43.8 +0.2**
AAK pmax pmax
comp=Z,3.0nm,0.7s
KIRV Kirov 130.28 42 *c* iPKiKP **PKiKP 04 20 43.9 +0.3**
PZH PanZhiHua 132.08 108 PKP **PKPdf 04 20 47.5 +0.1**
ARCES ARCESS Array B 132.09 22 PKP **PKPdf 04 20 45.6 -0.3**
comp=Z,2.8nm,0.6s,baz=222,slow=1.2,SNR=9.0
ARTI Arti 132.13 48 *i* PKiKP **PKiKP 04 20 48.3 +0.9**
ARTI 04 23 12.2
ILON Igloolik, Nuna 132.82 336 **PKPdf 04 20 47.7 +0.5**
BORK Borovoye 135.04 58 **PKiKP 04 20 54.3 +0.9**
BORK Borovoye 135.04 58 *c* iPKiKP **PKiKP 04 20 54.2 +0.8**
BORK pmax pmax
comp=Z,11nm,2.5s
BVAR Borovoye Array 135.06 58 PKP **PKPdf 04 20 51.2 -0.8**
comp=Z,3.7nm,0.7s,baz=232,slow=1.7,SNR=14
TULEG Thule 136.53 347 **PKPdf 04 20 53.7 -0.4**
CD2 Chengdu 136.67 106 PKP **PKPdf 04 20 55.5 -0.3**
MK31 Makanchi Array 136.77 72 *c* iPKiKP **PKiKP 04 20 58.1 +0.9**
MKAR Makanchi Array 136.77 72 PKhKP PKPpre 04 20 44.1
comp=Z,0.2nm,0.5s,baz=234,slow=4.7,SNR=3.9
MKAR PKP **PKPdf 04 20 55.9 +0.5**
comp=Z,0.8nm,0.7s,baz=248,slow=1.4,SNR=7.3
MKAR SKPbc **SKPbc 04 24 18.6 -1.8**
comp=Z,0.7nm,0.6s,baz=216,slow=1.9,SNR=7.4
MKAR PKKPbc 04 29 27.0
comp=Z,0.5nm,1.0s,baz=25,slow=4.0,SNR=3.8
MKAR Makanchi Array 136.77 72 *c* iPKiKP **PKiKP 04 20 57.2 0.0**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
KURBB Kurchatov Arra 137.38 66 PKhKP PKPpre 04 20 45.6
comp=Z,0.2nm,0.4s,baz=37,slow=35,SNR=1.6
KURBB PKP **PKPdf 04 20 56.1 -0.2**
comp=Z,0.8nm,0.5s,baz=231,slow=2.4,SNR=6.5
KURBB SKPbc **SKPbc 04 24 19.6 -2.4**
comp=Z,0.9nm,0.8s,baz=237,slow=3.3,SNR=6.4
KURK Kurchatov 137.48 65 PKPpre 04 20 45.6
KURK **PKPdf 04 20 56.1 -0.4**
KURK Kurchatov 137.48 65 *i* PKiKP **PKPdf 04 20 56.4 -0.1**
WMQ Urumqi 137.60 79 *e*PKP **PKPdf 04 20 57.4 +0.3**
YKA Yellowknife Ar 137.67 316 PKP **PKPdf 04 20 56.6 +0.1**
comp=Z,7.3nm,0.9s,baz=129,slow=1.3,SNR=52
YKA PP **PP 04 23 44.9 -0.2**
comp=Z,0.2nm,0.5s,baz=118,slow=5.5,SNR=4.4
YKA SKPbc **SKPbc 04 24 20.9 -1.6**
comp=Z,1.0nm,0.5s,baz=130,slow=2.8,SNR=10
YKA Yellowknife Ar 137.67 316 **PKPdf 04 20 56.8 +0.3**
YKA Yellowknife Ar 137.67 316 PKiKP **PKPdf 04 20 56.8 +0.3**
LZDM Lanzhou Array 140.56 101 PKP **PKPdf 04 21 01.3 -1.8**
comp=Z,1.3nm,0.3s,baz=204,slow=3.2,SNR=2.0
GTA2 Gaotai 141.06 94 PKP **PKPdf 04 21 03.1 -0.5**
DGZ Jazzator, Alta 141.27 72 *i* PKiKP **PKPdf 04 21 02.6 -1.1**
XAN Xi'an 141.81 108 PKP **PKiKP 04 21 07.9 -0.1**
ZALV Zalesovo Beam 142.46 65 PKhKP PKPpre 04 21 00.2
comp=Z,1.4nm,0.4s,baz=230,slow=3.7,SNR=7.8
ZALV Zalesovo Beam 142.46 65 PKPpre 04 21 01.2
ZALV Zalesovo Beam 142.46 65 PKiKP **PKPdf 04 21 01.2 -4.3**
LYN LuoYang 144.01 112 *e*PKP PKPbc 04 21 07.0 0.0
C36M Paulatuk 144.47 323 **PKPdf 04 21 08.8 +0.2**
NJ2 Nanjing 145.05 122 *e*P **PKPdf 04 21 11.0 +0.3**
NJ2 pmax pmax
comp=Z,380nm,0.7s
A36M Sachs Harbour 145.79 327 **PKPdf 04 21 10.2 -0.5**
HNS HongShan 147.37 111 ⇑PKPbc **PKPbc 04 21 17.3 +0.3**
TIA Tai'an 147.63 115 P **PKPbc 04 21 17.9 +0.1**
TIA pmax pmax
comp=Z,18nm,0.7s
DAWY Dawson 148.22 310 **PKPbc 04 21 18.9 +0.3**
HHC Hu-ho-hao-te 148.33 103 *e*P **PKPdf 04 21 15.3 -0.8**
BCAR Beaver Creek A 148.89 307 **PKPdf 04 21 15.5 -0.7**
VRDI Verde Repeater 148.97 304 **PKPbc 04 21 21.5 +0.7**
MOY Mondy 149.47 78 *e*PKP2 **PKPbc 04 21 22.4 +0.2**
MOY pmax pmax
comp=Z,23nm,1.6s
ZAK Zakamensk 149.99 82 *e*PKHKP PKPpre 04 21 22.6
ZAK pmax pmax
comp=Z,22nm,1.5s
BJT Baijiatuan 150.10 109 **PKiKP 04 21 24.5 -0.2**
BJT Baijiatuan 150.10 109 PKiKP **PKiKP 04 21 24.5 -0.2**
BJI2 Beijing 150.10 109 P **PKPbc 04 21 24.4 +0.5**
BJI2 pmax pmax
comp=Z,6.0nm,1.0s
SONM Songino Array 150.19 88 PKPbc **PKPbc 04 21 24.1 0.0**
comp=Z,12nm,0.8s,baz=226,slow=3.0,SNR=36
ULN Ulaanbaatar 150.56 89 **PKPbc 04 21 25.1 +0.1**
ULN Ulaanbaatar 150.56 89 *c* iPKiKP **PKPbc 04 21 24.1 -0.9**
ULN pmax pmax
comp=Z,13nm,1.7s
TLY Talaya 150.88 80 PKPbc **PKPbc 04 21 25.5 0.0**
TLY Talaya 150.88 80 *c* iPKiKP **PKiKP 04 21 25.9 -0.1**
TLY pmax pmax
comp=Z,19nm,1.3s
JNU Nakatsue 150.99 137 PKPbc **PKPbc 04 21 25.8 -0.5**
comp=Z,8.4nm,0.8s,baz=166,slow=4.2,SNR=5.4
BMAR Burnt Mountain 151.18 315 **PKiKP 04 21 26.7 +0.5**
ILAR Eielson Array 151.54 309 PKPbc **PKPbc 04 21 26.7 +0.2**
comp=Z,37nm,1.1s,baz=107,slow=0.5,SNR=93
ILAR Eielson Array 151.54 309 **PKPdf 04 21 17.6 -2.6**
COLA College 151.97 309 **PKiKP 04 21 27.8 0.0**
COLA College 151.97 309 PKiKP **PKiKP 04 21 27.8 0.0**
XLT XiLinHaoTe 152.85 104 *e*PKPbc **PKPbc 04 21 29.8 -0.5**
KSRS Korea Array 153.61 128 PKPbc **PKPbc 04 21 31.9 0.0**
comp=Z,1.0nm,0.5s,baz=195,slow=2.3,SNR=6.9
KSRS PKPab **PKPab 04 21 45.2 +0.3**
comp=Z,0.9nm,0.6s,baz=221,slow=4.5,SNR=5.3
HILR Hailar Array B 158.38 97 PKPab **PKPab 04 22 05.6 +0.3**
comp=Z,1.7nm,0.5s,baz=235,slow=5.1,SNR=3.8
BNX BinXian 159.91 115 ⇓P **PKPdf 04 21 30.1 -1.9**
BNX pmax pmax
comp=Z,6.0nm,1.5s
PETK Petropavlovsk- 175.07 208 PKPab **PKPab 04 23 19.7 +1.1**
comp=Z,3.1nm,0.9s,baz=174,slow=6.6,SNR=2.0

SJA 20 04:09:11.2±0.7, 31.71S×66.96W, h124km±3km, ML3.7, MW3.7, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACAN	**Cantantal**	**0.59**	**199**	*e*P	Pn	04 09 31.0	+0.7
ACAN				IAML		04 09 47.7	
	comp=Z,4μm,0.7s						
ACHE	**Chepes**	**0.60**	**25**	*e*P	Pn	04 09 31.5	+0.9
ACHE				*e*S	Sn	04 09 46.4	+1.3
CFA	**Coronel Fontan**	**1.09**	**275**	*e*P	Pn	04 09 35.1	+0.6
CFA				*e*S	Sn	04 09 53.0	+0.7
CFA				IAML		04 09 54.7	
	comp=Z,548nm,0.5s						
AVFE	**Valle Fertil**	**1.13**	**338**	*e*P	Pn	04 09 36.0	+1.0
AVFE				*e*S	Sn	04 09 53.8	+0.7
AVFE				IAML		04 09 56.1	
	comp=Z,640nm,0.2s						
MRA	**San Martin**	**1.27**	**124**	*e*P	Pn	04 09 37.5	+1.0
MRA				*e*S	Sn	04 09 56.7	+1.0
MRA				IAML		04 09 57.0	
	comp=Z,554nm,0.2s						
RTLL	**Cerro Villicun**	**1.35**	**286**	*e*P	Pn	04 09 37.9	+0.6
RTLL				*e*S	Sn	04 09 57.6	+0.6
RTLL				IAML		04 10 00.1	
	comp=Z,837nm,0.3s						
SJA	**San Juan**	**1.38**	**277**	*e*P	Pn	04 09 38.6	+1.0
SJA				IAML		04 10 10.7	
	comp=Z,282nm,0.3s						
ASAL	**Salagasta**	**1.81**	**241**	*e*P	Pn	04 09 43.7	+1.0
RTLS	**Leoncito**	**1.99**	**267**	*e*P	Pn	04 09 46.1	+1.1
RTLS				*e*S	Sn	04 10 11.9	+1.0
RTLS				IAML		04 10 12.5	
	comp=Z,540nm,0.3s						
TCA	**Tanti**	**2.06**	**80**	*e*P	Pn	04 09 46.3	+0.7
TCA				*e*S	Sn	04 10 12.2	+0.2
TCA				IAML		04 10 13.3	
	comp=Z,404nm,0.7s						
ACCO	**Cerro Coronel**	**2.12**	**301**	*e*P	Pn	04 09 47.9	+1.1
ACCO				*e*S	Sn	04 10 06.7	-7.2
ACLC	**CERRO LA CRUZ**	**2.28**	**0**	*e*P	Pn	04 09 49.0	+0.4
ACLC				*e*S	Sn	04 10 15.7	-1.5
ACLC				IAML		04 10 17.3	
	comp=Z,357nm,0.2s						
MT08	**Bocatoma Ro**	**3.10**	**235**	*e*P	Pn	04 10 00.7	+1.5
MT08				*e*P		04 10 00.8	
MT08				*e*S	Sn	04 10 40.8	+4.5
VCA	**Vinchina**	**3.15**	**340**	*e*P	Pn	04 10 00.8	+1.0
VCA				*e*S	Sn	04 10 38.5	+1.1
VCA				IAML		04 10 42.5	
	comp=Z,336nm,0.2s						
MT04	**Ro Olivares**	**3.17**	**237**	*e*P	Pn	04 10 01.5	+1.5
MT04				*e*S	Sn	04 10 40.8	+3.1
CO01	**Juntas del Tor**	**3.20**	**302**	*e*P	Pn	04 10 02.5	+2.0
CO01				*e*S	Sn	04 10 39.1	+0.6
CO01				IAML		04 10 42.5	
	comp=Z,176nm,0.3s						
VA03	**San Esteban**	**3.22**	**250**	*e*P	Pn	04 10 01.7	+1.2
RFA	**San Rafael**	**3.30**	**202**	*e*P	Pn	04 10 01.8	+0.1
RFA				*e*S	Sn	04 10 39.7	-0.9
RFA				IAML		04 10 41.3	
	comp=Z,157nm,0.4s						
CO03	**El Pedregal**	**3.31**	**284**	*e*P	Pn	04 10 03.1	+1.4
CO03				*e*S	Sn	04 10 41.2	+0.4
CO03				IAML		04 10 43.1	
	comp=Z,183nm,0.3s						
PEL	**Peldehue**	**3.46**	**245**	*e*P	Pn	04 09 59.2	-4.4
PEL				IAML		04 10 49.0	
	comp=Z,59nm,1.5s						
MT13	**San Alfonso**	**3.46**	**233**	*e*P	Pn	04 10 04.8	+1.1
MT03	**Universidad Ad**	**3.48**	**238**	*e*P	Pn	04 10 05.0	+1.0
MT03				*e*S	Sn	04 10 51.3	+6.4
CO02	**Combarbal**	**3.49**	**277**	*e*P	Pn	04 10 05.1	+1.0
CO02				*e*S	Sn	04 10 45.9	+0.8
CO02				IAML		04 10 46.7	
	comp=Z,182nm,0.6s						
MT05	**Renca**	**3.60**	**241**	*e*P	Pn	04 10 06.4	+0.8
GO04	**Tololo Observa**	**3.64**	**294**	*e*P	Pn	04 10 07.9	+1.7
GO04				*e*S	Sn	04 10 49.1	+0.4
AC04	**Llanos de Chal**	**4.99**	**313**	*e*S	Sn	04 11 19.7	-1.2
GO03	**Copiapo**	**4.99**	**324**	*e*P	Pn	04 10 25.0	+0.8
GO03				IAML		04 11 24.3	
	comp=Z,43nm,0.8s						

IDC 20 04:16:30.3±0.6, 23.70S×176.50W, h0km, mb4.3/11, mbtmp4.3/12, ML4.4/1, MS3.5/15, Error ellipse: s-maj=29.2km s-min=19.0km az=139.0
NEIC 20 04:16:36.6±1.9, 23.84S±0.04×176.17W±0.08, h40km±6km, mb4.7/26, Error ellipse: s-maj=12.0km s-min=3.8km az=62.0

ISC 20 04:16:35.1±3.6, 23.9S±0.1×176.25W±0.09, h33km±24km, n85, σ1.914/69, mb4.5/22, MS3.5/14, 1C-3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.58**	**52**	Pn	**Pn**	**04 18 20.6**	**-2.8**
MSVF	**Nonsavu**	**8.10**	**318**		**Pn**	**04 18 33.2**	**+2.6**
URZ	**Urewera**	**15.42**	**200**	Pn	**Pn**	**04 20 11.7**	**+1.5**
	1.5nm,0.3s,baz=22,slow=1.8,SNR=10						
URZ				Sn	Sn	04 22 49.2	-11
	0.4nm,0.3s,baz=305,slow=20,SNR=1.7						
	4.6nm,0.3s						
RAR	**Rarotonga**	**15.46**	**83**	LR	LR	04 24 48.1	
	comp=Z,129nm,21.0s,baz=266,slow=32						
OUENC	**Ouen Island, N**	**15.62**	**272**	Pn	**Pn**	**04 20 14.1**	**+1.2**
RTZ	**Ruatahuna**	**15.79**	**200**	Pn	**Pn**	**04 20 16.9**	**+1.7**
DZM	**Mont Dzumac**	**16.04**	**273**	Pn	**Pn**	**04 20 17.5**	**-0.9**
	0.1nm,0.3s,baz=104,slow=19,SNR=1.4						
DZM				LR	LR	04 24 12.0	
	comp=Z,74nm,19.8s,baz=92,slow=29						
DZM	**Mont Dzumac**	**16.04**	**273**	Pn	**P**	**04 20 20.1**	**-1.4**
RPZ	**Rata Peaks**	**22.38**	**205**	LR	LR	04 28 37.5	
	comp=Z,74nm,21.4s,baz=271,slow=32						
PPT	**Papeete**	**25.70**	**81**	LR	LR	04 31 43.2	
	comp=Z,77nm,19.1s,baz=262,slow=35						
HNR	**Honiara**	**26.88**	**298**	LR	LR	04 31 09.5	
	comp=Z,6.3nm,21.2s,baz=194,slow=33						
CTA	**Charters Tower**	**34.90**	**269**	LR	LR	04 35 51.0	
	comp=Z,44nm,21.4s,baz=220,slow=34						
CTAO	**Charters Tower**	**34.90**	**269**		**P**	**04 23 24.1**	**+0.1**
CTAO				IAmb	IAmb	04 23 24.8	
	comp=Z,13nm,0.8s						
STKA	**Stephens Creek**	**37.92**	**248**	P	**P**	**04 23 48.9**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=106,slow=12,SNR=5.5						
STKA				PcP	**PcP**	**04 26 06.1**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=140,slow=4.6,SNR=3.3						
STKA				LR	LR	04 37 48.5	
	comp=Z,147nm,19.3s,baz=57,slow=34						
	comp=Z,2.4nm,0.6s						
STKA	**Stephens Creek**	**37.92**	**248**	P	**P**	**04 23 49.5**	**0.0**
STKA					**PcP**	**04 26 05.4**	**+0.2**
AS31	**Alice Springs**	**45.42**	**260**	P	**P**	**04 24 50.1**	**-1.0**
ASAR	**Alice Springs**	**45.42**	**260**	P	**P**	**04 24 49.2**	**-2.0**
	comp=Z,1.8nm,0.7s,baz=91,slow=8.1,SNR=23						
ASAR				PcP	**PcP**	**04 26 29.9**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=116,slow=3.9,SNR=13						
ASAR				LR	LR	04 42 41.0	
	comp=Z,104nm,19.6s,baz=150,slow=35						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**45.42**	**260**	P	**P**	**04 24 49.5**	**-1.6**
ASAR					**PcP**	**04 26 29.3**	**-0.8**
WB0	**Warramunga Arr**	**45.82**	**265**	P	**P**	**04 24 52.6**	**-1.7**
WB0				IAmb	IAmb	04 24 54.0	
	comp=Z,5.3nm,0.7s						
WRA	**Warramunga Arr**	**45.83**	**265**	P	**P**	**04 24 52.0**	**-2.4**
	comp=Z,3.9nm,0.7s,baz=103,slow=8.4,SNR=27						
WRA				PcP	**PcP**	**04 26 31.5**	**0.0**
	comp=Z,2.2nm,0.9s,baz=101,slow=3.4,SNR=5.5	

FITZ	**Fitzroy Crossi**	**54.25**	**264**	LR	LR	04 48 54.7	
	comp=Z,92nm,18.6s,baz=199,slow=36						
RPN	**Rapa Nui**	**59.84**	**109**	LR	LR	04 46 27.9	
	comp=Z,13nm,20.0s,baz=339,slow=30						
MORW	**Morawa**	**60.10**	**249**	P	**P**	**04 26 37.7**	**-1.8**
MORW				IAmb	IAmb	04 26 50.4	
	comp=Z,9.6nm,1.1s						
KAPI	**Kappang**	**64.23**	**276**	LR	LR	04 55 22.5	
	comp=Z,30nm,18.1s,baz=122,slow=36						
QSPA	**South Pole Qui**	**66.22**	**180**	P	**P**	**04 27 20.7**	**+1.1**
	comp=Z,3.4nm,0.7s,baz=28,slow=1.5,SNR=4.6						
	comp=Z,3.4nm,0.7s						
QSPA	**South Pole Qui**	**66.22**	**180**	P	**P**	**04 27 19.9**	**+0.3**
QSPA				IAmb	IAmb	04 27 32.9	
	comp=Z,3.2nm,0.6s						
MJAR	**Matsushiro Arr**	**73.87**	**323**	LR	LR	04 54 10.0	
	comp=Z,20nm,21.2s,baz=147,slow=31						
LPIG	**La Paz**	**79.77**	**58**	LR	LR	04 58 24.1	
	comp=Z,39nm,18.1s,baz=190,slow=32						
VTX	**Valle De La Tr**	**79.79**	**49**	P	**P**	**04 28 40.1**	**-0.2**
VTX				IAmb	IAmb	04 29 20.7	
	comp=Z,9.8nm,1.3s						
PETK	**Petropavlovsk-**	**79.93**	**344**	P	**P**	**04 28 39.9**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=160,slow=5.6,SNR=4.5						
	comp=Z,3.3nm,0.8s						
PETK	**Petropavlovsk-**	**79.93**	**344**	P	**P**	**04 28 41.4**	**+0.9**
KSRS	**Korea Array**	**80.47**	**318**	LR	LR	04 57 40.5	
	comp=Z,12nm,21.9s,baz=110,slow=31						
PFO	**Pinyon Flats O**	**80.64**	**47**	LR	LR	04 59 44.0	
	comp=Z,44nm,18.5s,baz=222,slow=32						
O02D	**Mt. Diablo Mer**	**80.85**	**39**	P	**P**	**04 28 48.0**	**+2.1**
O02D				IAmb	IAmb	04 29 03.8	
	comp=Z,5.7nm,1.1s						
MDPB	**Devils Postpil**	**81.41**	**42**	P	**P**	**04 28 49.7**	**+0.5**
NVAR	**Mina Array Bea**	**82.39**	**42**	P	**P**	**04 28 55.5**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=227,slow=8.9,SNR=6.1						
	comp=Z,0.7nm,0.7s						
H03S2	**Juan Fernandez**	**82.77**	**124**	T	T	06 00 04.9	
	baz=244,slow=74,SNR=30						
H03S1	**Juan Fernandez**	**82.78**	**124**	T	T	06 00 04.1	
	baz=244,slow=74,SNR=35						
H03S3	**Juan Fernandez**	**82.79**	**124**	T	T	06 00 04.5	
	baz=244,slow=74,SNR=45						
H03N2	**Juan Fernandez**	**82.93**	**123**	T	T	06 00 06.4	
	baz=250,slow=72,SNR=109						
H03N3	**Juan Fernandez**	**82.93**	**123**	T	T	06 00 11.2	
	baz=250,slow=72,SNR=129						
H03N1	**Juan Fernandez**	**82.94**	**123**	T	T	06 00 08.2	
	baz=250,slow=72,SNR=88						
J05D	**Fort Rock, OR**	**83.78**	**37**		**P**	**04 29 03.1**	**+1.9**
J05D				IAmb	IAmb	04 29 18.6	
	comp=Z,7.7nm,1.1s						
X16A	**Lo Mia Camp, P**	**84.51**	**49**		**P**	**04 29 06.4**	**+1.2**
X16A				IAmb	IAmb	04 29 20.6	
	comp=Z,3.7nm,1.1s						
U15A	**North Rim**	**85.06**	**47**		**P**	**04 29 10.3**	**+2.3**
U15A				IAmb	IAmb	04 29 25.9	
	comp=Z,3.3nm,1.0s						
MA2	**Magadan**	**87.45**	**344**	P	**P**	**04 29 18.7**	**-0.2**
	comp=Z,2.5nm,0.4s,baz=148,slow=9.8,SNR=3.8						
	comp=Z,2.5nm,0.4s						
MA2	**Magadan**	**87.45**	**344**	P	**P**	**04 29 18.9**	**0.0**
MA2				IAmb	IAmb	04 29 36.7	
	comp=Z,3.6nm,0.6s						
TXAR	**Lajitas Array**	**87.53**	**57**	P	**P**	**04 29 20.9**	**+0.8**
	comp=Z,1.2nm,1.0s,baz=200,slow=6.1,SNR=7.9						
	comp=Z,1.2nm,1.0s						
TXAR	**Lajitas Array**	**87.53**	**57**	P	**P**	**04 29 21.2**	**+1.1**
ANMO	**Albuquerque**	**88.27**	**50**	LR	LR	05 03 18.9	
	comp=Z,52nm,19.3s,baz=198,slow=32						
SEY	**Seymchan**	**90.01**	**346**	P	**P**	**04 29 29.8**	**-1.0**
	comp=Z,0.9nm,0.2s,baz=132,slow=11,SNR=4.0						
	comp=Z,0.9nm,0.2s						
PDAR	**Pinedale Array**	**90.32**	**43**	P	**P**	**04 29 33.0**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=232,slow=1.7,SNR=4.9						
	comp=Z,0.9nm,1.0s						
ILAR	**Eielson Array**	**91.24**	**12**	P	**P**	**04 29 36.6**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=216,slow=6.1,SNR=4.1						
	comp=Z,0.8nm,1.0s						
ILAR	**Eielson Array**	**91.24**	**12**	P	**P**	**04 29 37.1**	**+0.6**
E18K	**Tukpahlearik C**	**91.76**	**6**		**P**	**04 29 39.5**	**+0.6**
E19K	**Redstone River**	**92.15**	**7**	P	**P**	**04 29 41.6**	**+0.9**
E19K				IAmb	IAmb	04 29 42.7	
	comp=Z,3.5nm,1.0s						
D19K	**Kuna River**	**93.05**	**7**		**P**	**04 29 46.1**	**+1.2**
D19K				IAmb	IAmb	04 29 52.0	
	comp=Z,5.8nm,1.4s						
D20K	**Etivluk River**	**93.42**	**7**	P	**P**	**04 29 47.5**	**+0.9**
ZALV	**Zalesovo Beam**	**114.11**	**320**	PKiKP	PKPdf	04 35 09.4	-1.3
	comp=Z,0.4nm,0.4s,baz=180,slow=0.1,SNR=5.1						
MKAR	**Makanchi Array**	**114.66**	**312**	PKP	PKPdf	04 35 10.7	-1.4
	comp=Z,0.3nm,0.7s,baz=70,slow=4.7,SNR=4.7						
KURK	**Kurchatov**	**117.55**	**316**		**PKPdf**	**04 35 16.6**	**-0.8**
KURBB	**Kurchatov Arra**	**117.59**	**316**	PKP	**PKPdf**	**04 35 16.4**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=82,slow=2.0,SNR=6.3						
SCHQ	**Schefferville**	**120.28**	**39**	PKP	**PKPdf**	**04 35 22.4**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=262,slow=6.1,SNR=4.0						
BVAR	**Borovoye Array**	**122.68**	**319**	PKP	**PKPdf**	**04 35 26.8**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=85,slow=3.0,SNR=6.8						
HFS	**Hagfors**	**143.10**	**352**	PKhKP	PKPpre	04 36 00.8	
	comp=Z,1.4nm,0.5s,baz=64,slow=3.4,SNR=16						
AKASG	**Malin Array Be**	**146.73**	**330**	PKPbc	**PKPdf**	**04 36 12.4**	**+0.7**
	comp=Z,4.4nm,0.5s,baz=44,slow=3.8,SNR=22						
KIEV	**Kiev**	**146.74**	**330**	ǁP	**PKPbc**	**04 36 13.1**	**-0.4**
BRTR	**Keskin Array B**	**150.25**	**309**	PKPbc	**PKPbc**	**04 36 22.7**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=140,slow=4.9,SNR=20						
BURAR	**Bucovina Array**	**150.77**	**330**	ǁP	**PKiKP**	**04 36 25.1**	**+0.3**
MMAI	**Mount Meron Ar**	**150.80**	**295**	PKPbc	**PKPbc**	**04 36 24.6**	**0.0**
	comp=Z,6.2nm,0.7s,baz=104,slow=1.7,SNR=6.2						
TESR	**Tescani**	**150.86**	**327**	⇑P	**PKiKP**	**04 36 24.6**	**-0.3**
OSTC	**Ostas**	**151.65**	**343**	*e*PKP	**PKiKP**	**04 36 26.7**	**+0.3**
STEB	**Steborice**	**151.76**	**341**	*e*PKP	**PKiKP**	**04 36 27.0**	**+0.4**
DPC	**Dobruska-Polom**	**151.81**	**343**	*e*PKP	**PKiKP**	**04 36 27.4**	**+0.6**
BRG	**Berggiesshubel**	**151.91**	**346**	*e*P	**PKiKP**	**04 36 27.3**	**+0.4**
BRG				Amp		04 36 28.5	
	comp=Z,6.6nm,0.9s						
PVCC	**Panska Ves**	**152.09**	**345**	*e*PKP	**PKiKP**	**04 36 28.4**	**+1.1**
MAUC	**Maruska**	**152.25**	**340**	*e*PKP	**PKiKP**	**04 36 27.9**	**+0.2**
MARR	**Marisel-Cluj**	**152.43**	**330**	ǁP	**PKiKP**	**04 36 28.5**	**+0.2**
CKRC	**Cesky Krumlov**	**153.74**	**344**	*e*PKP	**PKiKP**	**04 36 31.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**169.16**	**169**	PKPab	**PKPab**	**04 37 51.9**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=212,slow=5.5,SNR=6.3						

*IDC **20** 04:55:52.0±1.2,3˚13N×126˚26E, h0km, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=100.5km s-min=17.3km az=68.0*

*NEIC **20** 04:56:09.3±1.4,2˚76N±0˚10×125˚77E±0˚03, h135km±9km, mb4.5/16, Error ellipse: s-maj=13.9km s-min=4.6km az=175.0*

*DJA **20** 04:56:12.4±0.4,3˚N±2˚×12˚6E±˚, h110km±5km, M4.7/18, mB5.5/5, mb5.0/6, MLv4.5/18, Mw(mB)4.9/5*

ISC 20 04:56:09.8±0.6, 2.72N±0˚06×125.82E±0˚06, h150km, n40, σ1s44/45, mb4.3/12, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.00**	**343**	P	**Pn**	**04 56 34.1**	**-0.5**
SGSI				S	**Sn**	**04 56 53.1**	**-0.5**
MNI	**Manado**	**1.60**	**218**	P	**Pn**	**04 56 39.5**	**-1.0**
GAMI	**Galela, Maluku**	**2.15**	**114**	P	**Pn**	**04 56 46.6**	**-0.2**
TNTI	**Ternate**	**2.48**	**141**	Pn	**Pn**	**04 56 50.0**	**-0.6**
TNTI				Sn	**Sn**	**04 57 20.3**	**-1.9**
TNTI	**Ternate**	**2.48**	**141**	P	**Pn**	**04 56 49.8**	**-0.9**
TNTI				S	**Sn**	**04 57 20.5**	**-1.7**
GTOI	**Gorontalo**	**3.49**	**234**	P	**Pn**	**04 57 06.9**	**+3.5**
MRSI	**Marisa**	**4.47**	**240**	P	**Pn**	**04 57 16.5**	**+0.3**
SANI	**Sanana**	**4.74**	**178**	P	**Pn**	**04 57 16.7**	**-3.1**
LUWI	**Luwuk**	**4.82**	**219**	Pn	**Pn**	**04 57 19.3**	**-1.5**
TOLI2	**Tolitoli**	**5.28**	**252**		**Pn**	**04 57 25.5**	**-1.5**
NLAI	**Namlea**	**6.06**	**168**	P	**Pn**	**04 57 36.2**	**-1.1**
	265nm,0.7s						
KRAI	**Karang Ratu**	**6.53**	**157**	P	**Pn**	**04 57 44.1**	**+0.5**
	0.9nm6um181nm,1.0s						
FAKI	**Fak Fak**	**8.53**	**131**	Pn	**Pn**	**04 58 11.0**	**+0.7**
SBUM	**Sibu**	**13.59**	**269**		**P**	**04 59 21.6**	**+1.1**
MTN	**Manton Dam**	**16.34**	**161**	Pn	**Pn**	**04 59 48.2**	**-2.5**
KNRA	**Kununurra**	**18.51**	**171**		**Pn**	**05 00 15.8**	**-0.9**
KNRA				IAmb	IAmb	05 00 17.2	
	comp=Z,10nm,0.8s						
UGM	**Wanagama**	**18.56**	**235**	Pn	**Pn**	**05 00 16.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**20.69**	**180**	P	**P**	**05 00 38.5**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=18,slow=8.3,SNR=14						
	comp=Z,2.1nm,0.4s						
BBJI	**Bungbulang**	**20.76**	**241**	P	**P**	**05 00 39.9**	**+0.8**
BBJI				IAmb	IAmb	05 00 42.1	
	comp=Z,21nm,0.8s						
WB0	**Warramunga Arr**	**23.88**	**160**	P	**P**	**05 01 10.3**	**+0.5**
WB0				IAmb	IAmb	05 01 11.3	
	comp=Z,13nm,0.4s						
COEN	**Coen**	**23.89**	**134**	P	**P**	**05 01 10.8**	**+0.9**
WRA	**Warramunga Arr**	**24.02**	**160**	P	**P**	**05 01 11.4**	**+0.4**
	comp=Z,3.0nm,0.4s,baz=339,slow=10,SNR=65						
WRA				S	**S**	**05 05 22.6**	**+5.2**
	comp=Z,0.9nm,0.8s,baz=330,slow=20,SNR=5.2						
	comp=Z,3.0nm,0.4s						
WRA	**Warramunga Arr**	**24.02**	**160**	P	**P**	**05 01 10.9**	**-0.1**
WB2	**Warramunga Arr**	**24.03**	**160**	P	**P**	**05 01 11.1**	**0.0**
WB2				IAmb	IAmb	05 01 13.3	
	comp=Z,12nm,0.8s						
WR8	**Warramunga Arr**	**24.09**	**160**	P	**P**	**05 01 12.2**	**+0.5**
WR8				IAmb	IAmb	05 01 13.9	
	comp=Z,6.3nm,0.6s						
WR0	**Warramunga Arr**	**24.11**	**160**	P	**P**	**05 01 12.7**	**+0.9**
WR0				IAmb	IAmb	05 01 14.7	
	comp=Z,18nm,1.4s						
MBWA	**Marble Bar**	**24.47**	**194**	P	**P**	**05 01 12.8**	**-2.2**
MBWA				IAmb	IAmb	05 01 31.4	
	comp=Z,29nm,1.5s						
AS31	**Alice Springs**	**27.38**	**164**	P	**P**	**05 01 42.0**	**+0.7**
ASAR	**Alice Springs**	**27.38**	**164**	P	**P**	**05 01 42.2**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=345,slow=7.5,SNR=13						
ASAR				PcP	**PcP**	**05 04 58.1**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=349,slow=2.4,SNR=4.4						
	comp=Z,0.5nm,0.3s						
ASAR	**Alice Springs**	**27.38**	**164**	P	**P**	**05 01 41.0**	**-0.2**
FORT	**Forrest**	**33.38**	**176**	P	**P**	**05 02 34.7**	**+0.8**
FORT				IAmb	IAmb	05 02 35.4	
	comp=Z,4.6nm,0.7s						
LYN	**LuoYang**	**34.02**	**340**	P	P	05 02 45.3	+5.8
LYN				pmax	pmax		
	comp=Z,11nm,0.6s						
NWAO	**Narrogin (SRO)**	**36.37**	**192**	P	**P**	**05 02 60.0**	**+0.4**
STKA	**Stephens Creek**	**37.53**	**158**	P	**P**	**05 03 09.6**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=324,slow=7.6,SNR=3.3						
	comp=Z,1.6nm,0.8s						
STKA	**Stephens Creek**	**37.53**	**158**	P	**P**	**05 03 09.5**	**+0.1**
EVN	**Everest**	**44.87**	**308**	P	**P**	**05 04 10.0**	**-0.2**
MKAR	**Makanchi Array**	**57.87**	**326**	P	**P**	**05 05 45.3**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=124,slow=7.4,SNR=30						
MKAR				PcP	**sP**	**05 06 36.7**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=127,slow=3.6,SNR=7.3						
	comp=Z,0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**62.10**	**328**	P	**P**	**05 06 14.4**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=129,slow=6.1,SNR=5.4						
	comp=Z,0.6nm,0.5s						
AB31	**Akbulak array**	**72.36**	**321**	P	**P**	**05 07 18.6**	**-0.7**
ABKAR	**Akbulak array**	**72.36**	**321**	P	**P**	**05 07 19.0**	**-0.3**

RSNC 20 05:08:49.9±1.0, 2˚S±3˚×7˚8W±˚, h16km±8km, M3.0, mb4.1, ML2.3, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COHC	**Cochancay**	**1.64**	**257**	P	Pg	05 09 21.0	-0.5
COHC				S	Sg	05 09 43.5	+0.5
CASC	**Dorado de Casc**	**2.24**	**8**	P	Pn	05 09 28.0	+1.5
CASC				S	Sb	05 09 56.1	-1.7
OTAV	**Otavalo**	**2.46**	**341**	P	Pn	05 09 29.3	-0.5
CUSE	**Cuicocha Este**	**2.50**	**343**	P	Pn	05 09 30.3	-0.1
BONI	**La Bonita**	**2.54**	**3**	P	Pn	05 09 31.6	+0.9
PAC1	**Pacto, Paraso**	**2.61**	**334**	P	Pn	05 09 30.5	-1.1
CMBC	**Cumbal**	**3.03**	**357**	P	Pn	05 09 39.0	+1.4
PPLP	**Puerto Lpez**	**3.17**	**280**	P	Pn	05 09 35.6	-3.6
PPLP				S	Sn	05 10 08.9	-7.9
MCRA	**Macar, Loja**	**3.22**	**226**	P	Pn	05 09 40.1	+0.2
MCRA				S	Sn	05 10 18.7	+0.7
GCUF	**Volcan Galeras**	**3.32**	**5**	P	Pn	05 09 41.7	0.0
PTLC	**Puerto Leguiza**	**3.64**	**52**	P	Pn	05 09 46.9	+1.3
PTLC				S	Sn	05 10 28.2	0.0
CRUC	**La Cruz**	**3.71**	**11**	P	Pn	05 09 47.4	+0.5
BBAC	**Balboa, Cauca**	**4.11**	**6**	P	Pn	05 09 50.3	-2.1
FLOC	**Florencia**	**4.17**	**29**	P	Pn	05 09 52.7	-0.2
POPC	**Popayan, Colom**	**4.71**	**12**	P	Pn	05 09 59.1	-1.5
POPC				S	Sn	05 10 55.6	+0.5
GARC	**Garzon, Huila**	**4.77**	**27**	P	Pn	05 10 01.2	-0.3
JAMC	**Jamundi, Valle**	**5.37**	**10**	P	Pn	05 10 06.9	-2.7
	8.7nm,1.1s						
MACC	**Macarena, Meta**	**5.68**	**42**	P	Pn	05 10 13.4	-0.3
	11nm,0.8s						
YOTC	**Yotoco, Valle**	**6.18**	**12**	P	Pn	05 10 15.6	-5.1
URMC	**La Uribe, Meta**	**6.24**	**32**	P	Pn	05 10 21.6	+0.2
	56nm,0.8s						
PRAC	**Prado**	**6.40**	**26**	P	Pn	05 10 22.2	-1.5
	9.5nm,1.3s						
CHIC	**Chingaza**	**7.75**	**30**	P	Pn	05 10 42.5	0.0

*ASRS **20** 05:19:18.0±1.5,54˚64N×83˚61E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 20 05:19:19.3±1.7, 54.66N×83.78E, h0km, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=14.8km s-min=10.4km az=14.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**139**	I	I	05 24 52.6	
	0.2nm,0.9s,baz=318,slow=321,SNR=6.7						
ZALV	**Zalesovo Beam**	**0.93**	**139**	Pg	Pg	05 19 36.7	-0.5
	2.7nm,0.3s,baz=318,slow=16,SNR=25						
ZALV				Lg	Lg	05 19 50.6	
	9.2nm,0.3s,baz=321,slow=29,SNR=26						
KURBB	**Kurchatov Arra**	**5.15**	**220**	Lg	Lg	05 22 05.6	
	baz=43,slow=30						
MKAR	**Makanchi Array**	**7.93**	**187**	Pn	Pn	05 21 16.2	+0.4
	0.1nm,0.3s,baz=9.2,slow=12,SNR=4.2						
MKAR				Lg	Lg	05 23 32.0	
	0.1nm,0.3s,baz=12,slow=28,SNR=3.1						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**8.09**	**264**	Pn	Pn	05 21 16.9	-1.0
	baz=66,slow=15,SNR=4.2						
	0.7nm,0.3s						
ARTI	**Arti**	**14.46**	**287**	Pn	Pn	05 22 45.8	+0.7
	0.4nm,0.3s,baz=80,slow=11,SNR=3.5						
	1.0nm,0.3s						

*IDC **20** 05:33:07.4±2.2, 1˚25N×126˚76E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=187.1km s-min=27.3km az=66.0*

*DJA **20** 05:33:21.6±0.5, 1˚N±3˚×12˚7E±˚, h90km±9km, M3.9/13, mb4.2/1, MLv3.8/13*

ISC 20 05:33:20.2±1.1, 1˚26N±0˚07×127˚24E±0˚07, h103km, n8, σ1s77/11, mb3.6/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**0.80**	**44**	P	**Pn**	**05 33 39.8**	**+1.0**
GAMI				S	**Sn**	**05 33 54.9**	**+2.1**
MNI	**Manado**	**2.40**	**274**	P	**Pn**	**05 33 58.4**	**+0.2**
MNI				S	**Sn**	**05 34 27.4**	**+0.1**
SANI	**Sanana**	**3.52**	**201**	P	**Pn**	**05 34 14.3**	**+1.3**
SANI				S	**Sn**	**05 34 53.2**	**-0.6**
GTOI	**Gorontalo**	**4.27**	**262**	P	**Pn**	**05 34 24.6**	**+1.5**
LUWI	**Luwuk**	**5.02**	**243**	P	**Pn**	**05 34 36.3**	**+3.1**
WRA	**Warramunga Arr**	**22.20**	**162**	P	**P**	**05 38 07.2**	**-1.0**
	2.2nm,0.5s,baz=340,slow=11,SNR=23						
	2.2nm,0.5s						
ASAR	**Alice Springs**	**25.61**	**166**	P	**P**	**05 38 39.2**	**-1.0**
	0.3nm,0.6s,baz=348,slow=8.7,SNR=2.0						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.86**	**326**	P	**P**	**05 43 13.2**	**-1.9**
	0.2nm,0.4s,baz=126,slow=8.0,SNR=4.1						
	0.2nm,0.4s						

*TAP **20** 06:17:41.7,25˚45N×122˚35E, h165km, ML3.3, D*

*JMA **20** 06:17:42.6±0.5,25˚N±3˚×12˚3E±˚, h157km±4km, MV2.4/11, NW OFF ISHIGAKIJIMA IS*

ISC 20 06:17:40.7±2.6, 25.29N±0.08×122.51E±0.04, h170km±16km, n51, σ1s04/78, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCYT	**Pengchaiyu**	**0.52**	**311**	P	**Pn**	**06 18 03.9**	**-0.5**
PCYT				*e*S	**Sn**	**06 18 20.4**	**-2.4**
TWB1	**Santiao Chiao**	**0.55**	**240**	*i* P	**Pn**	**06 18 05.6**	**+1.0**
TWB1				S	**Sn**	**06 18 21.7**	**-1.2**
SXI1	**Grass Mountain**	**0.61**	**252**	P	**Pn**	**06 18 06.3**	**+1.3**
EGS		**0.69**	**230**	*i* P	**Pn**	**06 18 06.1**	**+0.7**
WFSB	**Wu-fen Shan**	**0.70**	**252**	*e*P	**Pn**	**06 18 06.2**	**+0.8**
WFSB				S	**Sn**	**06 18 22.4**	**-1.9**
TIPB	**Shuangxi**	**0.70**	**243**	*e*P	**Pn**	**06 18 06.4**	**+0.9**
TIPB				*e*S	**Sn**	**06 18 25.5**	**+1.1**
TWY	**Chenhua**	**0.83**	**269**	*e*P	**Pn**	**06 18 06.3**	**+0.2**
NHY	**Taipei**	**0.89**	**254**	*e*P	**Pn**	**06 18 06.5**	**-0.1**
NHY				*e*S	**Sn**	**06 18 26.8**	**+0.3**
EOS2	**EOS2**	**0.90**	**196**	*e*P	**Pn**	**06 18 07.5**	**+0.9**
EOS2				*e*S	**Sn**	**06 18 27.4**	**+0.9**
TWC	**Suao**	**0.91**	**222**	*e*S	**Sn**	**06 18 25.3**	**-1.4**
JYNG	**Yonagunijimaku**	**0.92**	**155**	*e*P	**Pn**	**06 18 07.0**	**+0.1**
YOJ	**Yonaguni jima**	**0.94**	**151**	*e*P	**Pn**	**06 18 07.2**	**+0.2**
NHDH	**Xindian Distri**	**0.95**	**250**	*e*P	**Pn**	**06 18 09.5**	**+2.4**
TWE	**Neicheng**	**0.95**	**234**	P	**Pn**	**06 18 07.5**	**+0.4**
NDS	**Dongshan**	**0.97**	**228**	*e*P	**Pn**	**06 18 07.4**	**+0.1**
NDS				*e*S	**Sn**	**06 18 28.6**	**+1.0**
TATO	**Taipei**	**0.98**	**252**	*e*P	**Pn**	**06 18 07.9**	**+0.6**
TATO				S	**Sn**	**06 18 25.9**	**-1.7**
FUSB	**Fushanzhiwuyua**	**0.99**	**238**	P	**Pn**	**06 18 08.2**	**+0.7**
FUSB				S	**Sn**	**06 18 29.4**	**+1.4**
EOS3	**EOS3**	**1.01**	**190**	P	**Pn**	**06 18 08.2**	**+0.8**
EOS3				S	**Sn**	**06 18 29.0**	**+1.0**
NWLT	**Wulai**	**1.05**	**241**	*e*S	**Sn**	**06 18 29.4**	**+0.6**
ENTT	**Nioudou**	**1.07**	**233**	P	**Pn**	**06 18 09.5**	**+1.4**
ENTT				S	**Sn**	**06 18 29.9**	**+0.8**
LATG	**Datong**	**1.17**	**230**	*e*P	**Pn**	**06 18 10.3**	**+1.4**
LATG				*e*S	**Sn**	**06 18 31.3**	**+0.6**
EOS4	**EOS4**	**1.18**	**189**	*e*P	**Pn**	**06 18 09.4**	**+0.9**
EOS4				*e*S	**Sn**	**06 18 29.7**	**-0.3**
YHNB	**Yeheng**	**1.20**	**239**	*e*P	**Pn**	**06 18 09.7**	**+0.5**
YHNB				*e*S	**Sn**	**06 18 30.8**	**-0.3**
NSK	**Sanguang**	**1.21**	**240**	*e*P	**Pn**	**06 18 09.8**	**+0.5**
NSK				*e*S	**Sn**	**06 18 30.6**	**-0.6**
NNSB	**Datong**	**1.34**	**230**	P	**Pn**	**06 18 11.1**	**+0.6**
NNSB				S	**Sn**	**06 18 33.0**	**-0.3**
NNSH	**Datong**	**1.34**	**230**	*i* P	**Pn**	**06 18 11.1**	**+0.6**
NNSH				S	**Sn**	**06 18 32.3**	**-1.0**
ETL	**Fush Village**	**1.38**	**216**	*e*P	**Pn**	**06 18 10.9**	**+0.1**
ETL				*e*S	**Sn**	**06 18 33.2**	**-0.8**
NACB	**Ninganchiao**	**1.39**	**217**	P	**Pn**	**06 18 10.6**	**-0.2**
NACB				*e*S	**Sn**	**06 18 32.4**	**-1.7**
NFF	**Wufeng Townshi**	**1.42**	**243**	*e*P	**Pn**	**06 18 12.8**	**+1.6**
NFF				S	**Sn**	**06 18 34.3**	**-0.4**
ETLH	**Xiulin Townshi**	**1.43**	**221**	*e*P	**Pn**	**06 18 11.8**	**+0.5**
ETLH				*e*S	**Sn**	**06 18 33.5**	**-1.3**
TWD	**Chiawan**	**1.46**	**215**	*e*P	**Pn**	**06 18 11.6**	**+0.1**
TWD				S	**Sn**	**06 18 33.6**	**-1.7**
LIOB	**Emei**	**1.50**	**245**	*e*S	**Sn**	**06 18 35.6**	**-0.3**
NSTT	**Nanjuang**	**1.52**	**245**	*e*S	**Sn**	**06 18 35.9**	**-0.3**
FUSS	**Fushou**	**1.55**	**228**	*e*P	**Pn**	**06 18 13.8**	**+1.2**
FUSS				*e*S	**Sn**	**06 18 36.7**	**-0.6**
TDCB	**Techi**	**1.60**	**230**	*e*S	**Sn**	**06 18 37.9**	**-0.2**
WHF	**Hehuan Shan**	**1.61**	**225**	*e*S	**Sn**	**06 18 38.0**	**-0.7**
LXIB	**Xiulin Townshi**	**1.61**	**219**	*e*P	**Pn**	**06 18 13.1**	**-0.1**
LXIB				*e*S	**Sn**	**06 18 36.4**	**-1.8**
HATJ	**Hateruma jima**	**1.70**	**136**	*e*P	**Pn**	**06 18 14.3**	**+0.4**
JKRS	**Kuro-shima**	**1.72**	**127**	*e*P	**Pn**	**06 18 14.8**	**+0.7**
JKRS				*e*S	**Sn**	**06 18 39.0**	**-0.9**
SHUL	**Shoufeng**	**1.73**	**210**	*e*S	**Sn**	**06 18 38.9**	**-1.1**
JIJ	**Ishigaki jima**	**1.75**	**121**	*e*P	**Pn**	**06 18 14.7**	**+0.3**

WSRZ **White Island S** 4.51 225 P Pn 06 36 40.5 +1.2
WSRZ S Sn 06 37 35.0 +3.6
RUGZ Raukumara Rang 4.55 218 P Pn 06 36 40.2 +0.1
RUGZ S Sn 06 37 35.3 +2.6
TWGZ Tauwhareparae 4.57 214 P Pn 06 36 40.4 +0.1
TWGZ S Sn 06 37 37.5 +4.4
CNGZ Carnagh Statio 4.73 210 P Pn 06 36 42.5 +0.1
CNGZ S Sn 06 37 40.9 +4.1
TKGZ Te Karaka 4.84 213 P Pn 06 36 46.3 +2.3
TKGZ S Sn 06 37 38.7 -1.1
WHRZ Whale Island 4.85 224 P Pn 06 36 45.3 +1.2
MWZ Matawai 4.91 216 P Pn 06 36 44.6 -0.4
MWZ S Sn 06 37 43.2 +1.8
KUZ Kuaotunu 5.04 241 P Pn 06 36 48.5 +1.7
KUZ Kuaotunu 5.04 241 P Pn 06 36 48.4 +1.7
GRZ Great Barrier 5.05 247 P Pn 06 36 48.2 +1.4
URZ Urewera 5.07 220 Pn Pn 06 36 46.6 -0.4
86nm,0.3s,baz=241,slow=4.2,SNR=315
URZ S Sn 06 37 47.2 +2.0
98nm,0.3s,baz=155,slow=17,SNR=14
432nm,0.3s
URZ Urewera 5.07 220 P Pn 06 36 47.7 +0.7
URZ S Sn 06 37 44.8 -0.4
GLKZ Green Lake 5.19 8 P Pn 06 36 43.0 -5.8
GLKZ S Sn 06 37 39.4 -8.9
RAO Raoul Island 5.20 8 Pn Pn 06 36 45.7 -3.2
630nm,0.3s,baz=183,slow=22,SNR=6.7
RAO S Sn 06 37 41.6 -7.0
158nm,0.3s,baz=111,slow=21,SNR=6.5
RAO Raoul Island 5.20 8
RAO Raoul Island 5.20 8 P Pn 06 36 46.4 -2.5
RTZ Ruatahuna 5.40 218 Pn 06 36 46.4 -2.5
RTZ Ruatahuna 5.40 218 P Pn 06 36 51.4 -0.3
RTZ S Sn 06 36 51.8 +0.1
KNZ Kokohu 5.40 211 P Pn 06 36 54.3 +0.7
TOZ Tahuroa Road 5.40 211 P Pn 06 36 50.0 -1.6
WCZ Waipu Caves 5.69 233 P Pn 06 36 57.6 +2.0
TLZ Tolley Road 5.83 253 P Pn 06 36 59.8 +2.3
BKZ Black Stump Fm 6.02 228 P Pn 06 37 01.2 +1.0
BKZ Black Stump Fm 6.07 217 P Pn 06 37 00.8 0.0
BKZ Black Stump Fm 6.07 217 P Pn 06 37 00.3 -0.6
BKZ S Sn 06 38 10.8 +0.9
OUZ Omahuta 6.32 261 P Pn 06 37 06.5 +2.3
OUZ Omahuta 6.32 261 P Pn 06 37 06.1 +1.9
NGZ Ngauruhoe 6.54 222 P Pn 06 37 07.6 +0.1
NGZ S Sn 06 38 22.3 +0.5
HIZ Hauiti 6.55 230 P Pn 06 37 08.8 +1.3
HIZ Hauiti 6.55 230 P Pn 06 37 08.0 +0.5
PXZ Pawanui 6.59 211 P Pn 06 37 06.4 -1.6
PXZ S Sn 06 38 20.8 -1.9
VRZ Vera Road 6.99 226 P Pn 06 37 14.9 +1.4
TSZ Takapari Road 7.02 215 P Pn 06 37 12.6 -1.2
TSZ S Sn 06 38 30.6 -2.7
WAZ Wanganui 7.29 221 P Pn 06 37 18.6 +1.0
WAZ S Sn 06 38 39.7 -0.3
BFZ Birch Farm 7.39 211 P Pn 06 37 16.7 -2.3
BFZ Birch Farm 7.39 211 S Sn 06 38 41.1 -1.4
BFZ Birch Farm 7.39 211 P Pn 06 37 15.7 -3.3
BFZ S Sn 06 38 41.7 -0.8
KHEZ Kahui Hut 7.55 228 P Pn 06 37 23.7 +2.5
MRZ Mangatainoka R 7.67 214 P Pn 06 37 19.7 -3.1
MRZ S Sn 06 38 45.3 -4.0
SNZO South Karori 8.59 215 P Pn 06 37 32.5 -2.9
NNZ Nelson 9.19 220 P Pn 06 37 40.1 -3.5
NNZ S Sn 06 39 21.9 -4.8
QRZ Quartz Range 9.40 225 P Pn 06 37 42.0 -4.5
QRZ Quartz Range 9.40 225 P Pn 06 37 42.0 -4.5
QRZ S Sn 06 39 25.4 -6.4
CTZ Chatham Island 9.46 170 P Pn 06 37 45.6 -1.6
CTZ Chatham Island 9.46 170 S Sn 06 39 27.4 -5.7
CTZ Chatham Island 9.46 170 P Pn 06 37 45.3 -1.9
CTZ S Sn 06 39 27.1 -6.0
THZ Tophouse 9.83 219 P Pn 06 37 47.8 -4.6
THZ S Sn 06 39 35.7 -6.7
KHZ Kahutara 10.00 215 P Pn 06 37 50.8 -3.9
KHZ Kahutara 10.00 215 P Pn 06 37 50.8 -3.9
KHZ S Sn 06 39 37.1 -9.4
DSZ Denniston Nort 10.41 223 P Pn 06 37 55.1 -5.4
DSZ S Sn 06 39 48.0 -8.7
GVZ Greta Valley S 10.66 214 P Pn 06 38 00.4 -3.3
LTZ Lake Taylor 10.89 217 P Pn 06 38 03.3 -3.6
INZ Inchbonnie 11.28 220 P Pn 06 38 09.8 -2.4
OXZ Oxford 11.41 216 P Pn 06 38 09.9 -4.1
MQZ McQueen's Vall 11.41 213 P Pn 06 38 09.1 -4.9
WVZ Waitaha Valley 11.89 220 P Pn 06 38 19.4 -1.2
RPZ Rata Peaks 12.18 217 Pn Pn 06 38 20.0 -4.6
6.8nm,0.3s,baz=8.7,slow=1.8,SNR=26
RPZ Sn Sn 06 40 27.1 -13
6.5nm,0.3s,baz=5.0,slow=18,SNR=5.5
RPZ Rata Peaks 12.18 217 P Pn 06 38 21.1 -3.4
RPZ Rata Peaks 12.18 217 P Pn 06 38 21.2 -3.3
TMZ Timaru 12.69 215 P Pn 06 38 26.1 -5.5
FOZ Fox Glacier 12.70 221 P Pn 06 38 29.5 -2.1
LBZ Lake Benmore 13.10 217 P Pn 06 38 32.9 -4.2
ODZ Otahua Downs 13.36 214 P Pn 06 38 35.6 -5.1
JCZ Jackson Bay 13.61 221 P Pn 06 38 43.6 -0.6
JCZ Jackson Bay 13.61 221 P Pn 06 38 43.3 -0.9
WKZ Wanaka 14.00 218 P Pn 06 38 46.0 -3.4
HHSZ Highcliff Hill 14.02 212 P Pn 06 38 47.4 -2.4
EAZ Earnscleugh 14.14 217 P Pn 06 38 48.3 -3.0
MSZ Milford Sound 14.47 221 P Pn 06 38 52.9 -2.9
TUZ Tuapeka 14.51 214 P Pn 06 38 54.0 -2.4
MLZ Mavora Lakes 14.83 219 P Pn 06 38 57.9 -2.9
SYZ Scrubby Hill 15.18 213 P Pn 06 39 05.8 +0.5
SYZ Scrubby Hill 15.18 213 P Pn 06 39 05.6 +0.3
WHZ Wether Hill Ro 15.28 217 P Pn 06 39 03.6 -3.1
APZ The Paps 15.93 215 P Pn 06 39 14.4 -0.8
PYZ Puysegur Point 16.11 215 P Pn 06 39 14.8 -2.8
MSVF Nonsavu 16.86 350 Pn 06 39 24.0 -3.2
MSVF Nonsavu 16.86 350 P Pn 06 39 25.8 -1.4
MSVF Nonsavu 16.86 350 ‖ *i*P Pn 06 39 24.6 -2.6
MARNC Mare, Loyalty 17.35 315 Pn 06 39 34.1 +0.9
MARNC IAmb IAmb 06 39 38.8
comp=Z,130nm,0.9s
MARNC Mare, Loyalty 17.35 315 P Pn 06 39 34.4 +1.1
OUENC Ouen Island, N 17.38 310 P P 06 39 36.9 +2.0
TAVE Taveuni 17.67 356 P Pn 06 39 38.0 +0.8
ONTNC Ouen Toro 17.71 309 Pn 06 39 38.5 +0.8
ONTNC Ouen Toro 17.71 309 P P 06 39 40.1 +1.6
DZM Mont Dzumac 17.88 310 LR LR 06 45 40.7
comp=Z,5µm,18.2s,baz=147,slow=35
DZM Mont Dzumac 17.88 310 Pn 06 39 41.1 +1.2
DZM Mont Dzumac 17.88 310 P P 06 39 41.6 +1.0
DGTI Dogotuki 18.09 355 P Pn 06 39 42.7 +0.2
DVP Devils Point 20.30 322 P P 06 40 07.2 +0.3
KOUNC Koumac, New Ca 20.36 308 P P 06 40 09.0 +1.3
RAR Rarotonga 21.30 57 LR LR 06 48 28.8
comp=Z,487nm,18.5s,baz=234,slow=36
AFI Afiamalu 21.38 19 P P 06 40 17.7 -1.0
GC1S Gold Coast 1 S 24.44 277 P P 06 40 52.4 +2.6
MGCD Mangrove Creek 25.00 264 P P 06 40 57.9 +3.0
comp=Z,81nm,0.9s
ARMA Armidale 25.25 271 P P 06 40 60.0 +2.7
comp=Z,35nm,1.0s
ARMA Armidale 25.25 271 P 06 40 57.4 +0.2
ARMA Armidale 25.25 271 P P 06 40 58.8 +1.5
AUBSH Beerwah State 25.41 280 P P 06 40 59.8 +1.3
AUPHS Peel High Scho 25.67 269 P P 06 41 02.0 +1.0
TW1H Toowoomba 1 Ha 25.93 277 P P 06 41 05.5 +2.1
CAN Canberra 26.39 259 P P 06 41 06.9 -0.6
CAN Canberra 26.39 259 P P 06 41 06.9 -0.6
CAN pmax pmax
comp=Z,17nm,0.8s
YNG Young 27.03 261 P P 06 41 15.8 +2.6
comp=Z,28nm,1.5s
AUDCS Dubbo College 27.26 265 P P 06 41 16.7 +1.4
EIDS Eidsvold 27.56 281 P P 06 41 18.9 +0.9
comp=Z,47nm,1.0s
EIDS Eidsvold 27.56 281 P 06 41 18.4 +0.4
EIDS IAmb IAmb 06 41 20.3
comp=Z,27nm,0.7s
EIDS Eidsvold 27.56 281 P P 06 41 18.7 +0.7
TAU Tasmania Unive 27.64 242 P P 06 41 18.0 -0.6
TAU IAmb IAmb 06 41 20.7
comp=Z,36nm,0.8s
TAU Tasmania Unive 27.64 242 P P 06 41 18.0 -0.6
TAU pmax pmax
comp=Z,36nm,0.8s
CORO Coronation Par 27.65 245 P P 06 41 20.9 +2.3
MOO Moorlands 27.69 243 P P 06 41 19.5 +0.4
comp=Z,119nm,0.8s
MOO Moorlands 27.69 243 P P 06 41 19.5 +0.4

AULRC Lightning Ridg 28.57 271 P P 06 41 28.4 +1.4
AUBRN Burnie High Sc 28.59 246 P P 06 41 28.4 +1.4
AUNRC North Rockhamp 28.94 284 P P 06 41 30.9 +0.6
TOO Toolangi 28.97 253 P P 06 41 32.6 +2.1
comp=Z,9.9nm,1.0s
TOO Toolangi 28.97 253 P P 06 41 30.3 -0.2
TOO Toolangi 28.97 253 P P 06 41 30.3 -0.2
TOO pmax pmax
comp=Z,7.0nm,0.8s
CMSA Cobar Meteorol 29.85 265 P P 06 41 39.1 +0.8
CMSA Cobar Meteorol 29.85 265 P P 06 41 39.0 +0.7
BRAT Ballarat 30.21 253 P P 06 41 43.5 +2.1
AUMTC Mt Clear Colle 30.24 253 P P 06 41 43.0 +1.3
PPT Papeete 31.00 65 LR LR 06 54 50.0
comp=Z,620nm,18.4s,baz=242,slow=37
ARPS Mount Arapiles 31.96 254 P P 06 41 58.2 +1.3
comp=Z,36nm,0.9s
QLP Quilpie 32.67 274 P P 06 42 04.2 +0.9
comp=Z,125nm,0.8s
QLP Quilpie 32.67 274 P P 06 42 03.7 +0.4
STKA Stephens Creek 33.13 263 P P 06 42 08.1 +0.9
comp=Z,93nm,1.0s
STKA Stephens Creek 33.13 263 P P 06 42 06.9 -0.3
comp=Z,14nm,0.9s,baz=99,slow=9.9,SNR=24
STKA PcP PcP 06 44 49.7 -0.4
comp=Z,14nm,0.8s,baz=103,slow=3.3,SNR=9.0
comp=Z,14nm,0.9s
STKA Stephens Creek 33.13 263 P 06 42 06.9 -0.3
STKA Stephens Creek 33.13 263 P P 06 42 07.8 +0.6
STKA Stephens Creek 33.13 263 ‖ *i*P P 06 42 08.1 +0.9
CTA Charters Tower 34.02 286 ScP ScP 06 48 36.5 -0.5
comp=Z,9.2nm,1.1s,baz=152,slow=2.3,SNR=4.8
CTA LR LR 06 55 11.8
comp=Z,814nm,18.9s,baz=98,slow=35
CTAO Charters Tower 34.02 286 P 06 42 13.7 -1.3
CTAO Charters Tower 34.02 286 P P 06 42 15.1 +0.1
CTAO Charters Tower 34.02 286 P P 06 42 13.7 -1.3
CTAO pmax pmax
comp=Z,52nm,0.7s
AUMBR Murray Bridge 34.27 257 P P 06 42 18.4 +1.3
HTT Hallett 34.93 259 P P 06 42 23.2 +0.3
comp=Z,17nm,1.2s
HTT Hallett 34.93 259 P P 06 42 23.2 +0.3
INKA Innaminka 35.12 270 P 06 42 23.3 -1.2
INKA IAmb IAmb 06 42 27.4
comp=Z,38nm,0.8s
MTSU Mount Surprise 36.61 287 P P 06 42 37.2 -0.2
BBOO Buckleboo 37.41 259 P 06 42 42.8 -1.3
BBOO IAmb IAmb 06 42 45.5
comp=Z,37nm,0.8s
BBOO Buckleboo 37.41 259 P P 06 42 43.6 -0.5
QIS Mount Isa 39.14 280 P P 06 42 58.1 -0.7
PMG Port Moresby 39.90 301 LR LR 06 57 56.7
comp=Z,2µm,18.5s,baz=157,slow=34
PMG Port Moresby 39.90 301 P 06 43 03.3 -1.8
PMG IAmb IAmb 06 43 21.6
comp=Z,34nm,0.8s
PMG Port Moresby 39.90 301 P P 06 43 05.7 +0.6
PMG Port Moresby 39.90 301 P P 06 43 05.5 +0.4
PMG Port Moresby 39.90 301 ‖ *i*P P 06 43 04.3 -0.8
PMG pmax pmax
comp=Z,20nm,0.9s
COEN Coen 39.92 291 P P 06 43 03.3 -1.9
COEN Coen 39.92 291 P P 06 43 05.1 -0.2
ASAR Alice Springs 42.40 272 P P 06 43 24.6 -1.1
comp=Z,42nm,0.6s,baz=116,slow=7.7,SNR=450
ASAR PcP PcP 06 45 17.8 -1.0
comp=Z,18nm,0.6s,baz=120,slow=3.6,SNR=11
ASAR ScP ScP 06 49 08.4 -0.4
comp=Z,1.2nm,0.8s,baz=123,slow=3.4,SNR=3.1
ASAR S S 06 49 41.2 -5.4
comp=Z,5.4nm,0.9s,baz=116,slow=15,SNR=9.0
ASAR LR LR 07 00 37.9
comp=Z,1µm,18.3s,baz=118,slow=36
comp=Z,42nm,0.6s
AUALC St Philip's Co 42.40 272 P P 06 43 24.6 -1.1
WB1 Warramunga Ar. 43.73 277 P P 06 43 34.8 -1.7
WRAB Tennant Creek 43.74 277 P P 06 43 33.8 -2.7
WRAB Tennant Creek 43.74 277 P P 06 43 35.2 -1.4
WRAB Tennant Creek 43.74 277 *d i*P P 06 43 35.1 -1.5
WRAB pmax pmax
comp=Z,62nm,0.9s
WRA Warramunga Arr 43.75 277 P P 06 43 34.7 -1.9
comp=Z,82nm,0.8s,baz=119,slow=7.6,SNR=449
WRA PcP PcP 06 45 22.1 -1.2
comp=Z,10nm,0.7s,baz=127,slow=3.1,SNR=5.9
WRA ScP ScP 06 49 13.4 -0.9
comp=Z,1.1nm,0.7s,baz=114,slow=3.4,SNR=3.0
WRA S S 06 49 59.9 -6.5
comp=Z,4.9nm,1.0s,baz=116,slow=15,SNR=6.6
comp=Z,82nm,0.8s
WRA Warramunga Arr 43.75 277 P 06 43 34.6 -1.9
VNDA Vanda 44.04 186 P P 06 43 41.8 +3.6
comp=Z,3.7nm,0.8s,baz=14,slow=8.0,SNR=3.0
comp=Z,3.7nm,0.8s
FORT Forrest 44.51 259 P 06 43 41.5 -1.1
FORT IAmb IAmb 06 45 25.7
comp=Z,31nm,0.7s
JAY Jayapura 49.27 301 LR LR 07 03 21.0
comp=Z,456nm,20.3s,baz=156,slow=34
GENI Genyem 49.60 301 P P 06 44 22.0 -0.4
GENI Genyem 49.60 301 P P 06 44 22.1 -0.4
MTN Manton Dam 50.09 283 P 06 44 24.1 -2.1
KNRA Kununurra 50.48 278 P 06 44 27.4 -1.7
DRS Darwin Rock St 50.51 283 P P 06 44 27.9 -1.4
CASY Casey 51.30 209 P P 06 44 35.0 +0.4
FITZ Fitzroy Crossi 51.81 273 LR LR 07 06 33.5
comp=Z,2µm,18.2s,baz=111,slow=36
NWAO Narrogin (SRO) 52.46 252 LR LR 07 06 53.8
comp=Z,510nm,18.0s,baz=122,slow=36
NWAO Narrogin (SRO) 52.46 252 P P 06 44 42.5 -1.3
NWAO IAmb IAmb 06 44 44.2
comp=Z,24nm,0.9s
NWAO Narrogin (SRO) 52.46 252 P P 06 44 42.5 -1.3
NWAO pmax pmax
comp=Z,24nm,0.9s
KLBR Kellerberrin 52.52 254 P P 06 44 43.2 -1.1
MUN Mundaring 53.60 253 P P 06 44 51.0 -1.3
MEEK Meekatharra 53.74 260 P P 06 44 50.9 -2.5
MORW Morawa 54.85 256 P 06 44 59.6 -1.8
MORW IAmb IAmb 06 45 01.5
comp=Z,26nm,0.8s
MORW Morawa 54.85 256 P P 06 44 59.9 -1.5
PSA00 Pilbara Seismi 54.95 266 P P 06 45 00.4 -1.8
PSA00 Pilbara Seismi 54.95 266 P 06 45 00.4 -1.8
PSA00 IAmb IAmb 06 46 02.9
comp=Z,14nm,0.7s
PSA00 Pilbara Seismi 54.95 266 P P 06 44 59.6 -2.6
FAKI Fak Fak 55.22 293 P P 06 45 02.9 -1.3
comp=Z,108nm,1.3s
FAKI Fak Fak 55.22 293 P P 06 45 02.6 -1.6
comp=Z,106nm,0.8s
MBWA Marble Bar 55.23 267 P 06 45 02.3 -1.9
MBWA Marble Bar 55.23 267 P P 06 45 02.5 -1.7
QSPA South Pole Qui 55.70 180 P P 06 45 09.6 +2.4
comp=Z,56nm,0.9s,baz=33,slow=2.0,SNR=30
comp=Z,56nm,0.9s
QSPA South Pole Qui 55.70 180 P 06 45 09.6 +2.4
SIJI Sorong 57.29 295 LR LR 07 09 08.5
comp=Z,535nm,19.7s,baz=154,slow=35
SIJI Sorong 57.29 295 P P 06 45 17.8 -1.2
comp=Z,2µmcomp=Z,47nm,0.9s
SWI Sorong 57.30 295 P P 06 45 19.8 +0.8
SOEI Soe 57.38 281 P 06 45 18.1 -1.7
SOEI Soe 57.38 281 P P 06 45 19.4 -0.3
SOEI Soe 57.38 281 P P 06 45 20.2 +0.5
comp=Z,107nm,0.9s
BATI Baumata 57.61 280 LR LR 07 10 53.0
comp=Z,1µm,18.2s,baz=150,slow=37
BATI Baumata 57.61 280 P P 06 45 22.4 +1.1
comp=Z,97nm,0.8s
KRAI Karang Ratu 57.92 290 P P 06 45 21.7 -1.7
RPN Rapa Nui 59.08 103 LR LR 07 07 15.1
comp=Z,381nm,18.1s,baz=239,slow=32
EDFI Ende, Flores 60.04 280 P P 06 45 36.5 -1.8
comp=Z,42nm,0.9s
SANI Sanana 60.58 290 P P 06 45 40.2 -1.7
SANI Sanana 60.58 290 P P 06 45 40.2 -1.7
DBNI Kabupaten Domp 62.93 279 P P 06 45 59.2 +1.5
PLAI Plampang 63.19 278 P P 06 45 58.1 -1.3
PLAI Plampang 63.19 278 P P 06 45 58.5 -0.9
KAPI Kappang 63.75 283 LR LR 07 15 45.1
comp=Z,420nm,18.3s,baz=124,slow=38
KAPI Kappang 63.75 283 *eP* P 06 46 00.4 -2.7
KAPI pmax pmax
comp=Z,25nm,1.0s
TWSI Taliwang, Sumb 63.97 277 P P 06 46 03.4 -1.2
JAGI Jajag, Banyuwa 66.36 276 P 06 46 18.0 -2.1
JAGI Jajag, Banyuwa 66.36 276 P P 06 46 18.7 -1.4
JAGI Jajag, Banyuwa 66.36 276 P P 06 46 19.2 -0.9
GMJI Gumukmas 67.05 276 P P 06 46 23.5 -1.0
MAW Mawson 68.33 201 P P 06 46 33.4 +1.6
comp=Z,23nm,1.0s,baz=115,slow=6.9,SNR=3.2
MAW LR LR 07 15 51.7
comp=Z,652nm,18.4s,baz=118,slow=35
comp=Z,23nm,1.0s
SNJI Sawahan-Nganju 68.71 275 P P 06 46 35.5 +0.3
PMSA Palmer Station 68.89 155 LR LR 07 10 37.0
comp=Z,237nm,19.1s,baz=213,slow=30
PCJI Pacitan 68.96 274 P P 06 46 36.0 -0.5
UGM Wanagama 69.65 274 P P 06 46 40.0 -0.9
KPJI Karang Pucung 71.29 274 P P 06 46 49.4 -1.4
CMJI Cimerak 71.44 273 P P 06 46 50.7 -1.0
BBJI Bungbulang 72.27 273 P 06 46 55.1 -1.7
BBJI Bungbulang 72.27 273 P P 06 46 54.7 -2.1
BBJI Bungbulang 72.27 273 P P 06 46 55.1 -1.7
DBJI Dramaga 73.52 273 P P 06 47 02.8 -1.3
SNAA Sanae 74.17 179 LR LR 07 17 39.6
comp=Z,316nm,18.4s,baz=214,slow=34
NVL N'lazarevskaya 74.84 184 *eP* P 06 47 11.0 +0.1
NVL *e* 06 47 24.7
NVL *e* 06 49 58.1
NVL *e*PPP PPP 06 51 43.7
NVL *e*S S 06 56 48.6 +2.0
NVL *e*SS SS 07 01 37.5 +4.0
NVL *e*SSS SSS 07 04 59.6
NVL pmax pmax
comp=Z,16nm,1.1s
NVL MLR MLR
comp=Z,539nm,17.0s
AY03 Cochrane 75.23 137 IAmb IAmb 06 47 29.8
comp=Z,16nm,0.9s
KLSI 76.22 274 P P 06 47 17.2 -2.5
COYC Coyhaique 76.49 136 P 06 47 22.9 +2.1
COYC IAmb IAmb 06 47 34.3
comp=Z,22nm,0.8s
MDSI Maura Dua 76.79 274 P P 06 47 19.9 -3.1
JHJ Hachijo jima 2 77.63 325 LR LR 07 21 58.7
comp=Z,124nm,18.1s,baz=129,slow=36
LL02 Futaleuf 78.02 134 P 06 47 31.0 +1.6
LL02 IAmb IAmb 06 47 42.6
comp=Z,18nm,0.8s
H03N3 Juan Fernandez 79.02 123 T T 08 14 35.8
baz=238,slow=72,SNR=14
H03N2 Juan Fernandez 79.03 123 T T 08 14 40.6
baz=238,slow=72,SNR=7.1
H03N1 Juan Fernandez 79.04 123 T T 08 14 31.5
baz=238,slow=72,SNR=9.0
MASI Maura Aman, Be 79.14 274 P P 06 47 34.2 -1.9
PLCA Paso Flores 80.26 133 P P 06 47 43.8 +1.9
comp=Z,8.5nm,1.1s,baz=244,slow=5.2,SNR=9.9
PLCA PKiKP PKiKP 06 53 08.1 -2.9
comp=Z,2.8nm,1.2s,baz=295,slow=0.9,SNR=3.1
comp=Z,8.5nm,1.1s
PLCA Paso Flores 80.26 133 P 06 47 43.3 +1.5
PLCA IAmb IAmb 06 47 46.8
comp=Z,25nm,1.4s
INU Inuyama 80.77 325 P P 06 47 43.3 -1.0
MJAR Matsushiro Arr 81.18 326 P P 06 47 44.6 -1.9
comp=Z,8.4nm,0.9s,baz=164,slow=5.6,SNR=14
MJAR LR LR 07 21 08.7
comp=Z,82nm,18.8s,baz=183,slow=34
comp=Z,8.4nm,0.9s
MJAR Matsushiro Arr 81.18 326 P 06 47 45.3 -1.2
MJAR Matsushiro Arr 81.18 326 P P 06 47 45.3 -1.2
MJAR pmax pmax
comp=Z,8.0nm,1.1s
MAJO Matsushiro 81.18 326 P P 06 47 45.0 -1.5
MAJO Matsushiro 81.18 326 P P 06 47 45.2 -1.3
MAJO Matsushiro 81.18 326 ‖ *i*P P 06 47 45.1 -1.4
MAJO pmax pmax
comp=Z,9.0nm,0.9s
BKNI Bangkinang 82.08 276 P P 06 47 52.4 +0.6
BKNI Bangkinang 82.08 276 P P 06 47 54.5 +2.7
BI02 San Fabin de 82.27 129 IAmb IAmb 06 47 59.8
comp=Z,14nm,1.1s
MNSI Mandailing Nat 83.54 275 P P 06 47 56.6 -2.8
RPSI Rantau Prapat 85.16 277 P P 06 48 04.1 -3.5
RPSI IAmb IAmb 06 48 05.8
comp=Z,10nm,0.9s
PSI Prapat 85.22 277 P P 06 48 05.1 -2.9
PSI Prapat 85.22 277 P P 06 48 04.1 -3.9
PSI pmax pmax
comp=Z,10.0nm,0.9s
PSI Prapat 85.22 277 P P 06 48 05.5 -2.5
GSI Gunungsitoli 85.48 275 P P 06 48 08.5 -0.7
GSI Gunungsitoli 85.48 275 P P 06 48 09.0 -0.2
ASAJ Asahikawa 85.70 333 LR LR 07 21 39.3
comp=Z,257nm,20.0s,baz=50,slow=32
TJN Taejon 86.49 319 P 06 48 12.2 -1.4
TJN Taejon 86.49 319 P P 06 48 14.0 +0.4
TJN Taejon 86.49 319 P P 06 48 12.2 -1.4
TJN pmax pmax
comp=Z,75nm,0.9s
KSRS Korea Array 86.99 320 P P 06 48 15.1 -0.9
comp=Z,6.1nm,0.6s,baz=142,slow=5.8,SNR=13
KSRS LR LR 07 26 55.2
comp=Z,57nm,18.0s,baz=175,slow=36
comp=Z,6.1nm,0.6s
KSAR Wonju Array Be 87.00 320 P P 06 48 15.7 -0.4
KSAR Wonju Array Be 87.00 320 P P 06 48 15.7 -0.4
SHEM Shemya Is, Ala 87.00 356 LR LR 07 23 57.9
comp=Z,466nm,18.2s,baz=107,slow=34
TRQA Tornquist 87.07 135 P P 06 48 18.1 +1.3
TRQA Tornquist 87.07 135 P P 06 48 18.1 +1.3
TRQA pmax pmax
comp=Z,74nm,2.0s
LPIG La Paz 87.21 58 LR LR 07 20 31.4
comp=Z,237nm,19.4s,baz=232,slow=31
SKR Severo-Kuril's 87.59 344 *ceP* P 06 48 19.6 +1.1
YSS Yuzhno-Sakhali 88.08 335 P 06 48 21.8 +0.8
YSS Yuzhno-Sakhali 88.08 335 P P 06 48 21.6 +0.6
YSS Yuzhno-Sakhali 88.08 335 *eP* P 06 48 19.8 -1.2
YSS *eS* S 06 58 58.4 -5.5
YSS pmax pmax
comp=Z,400nm,5.8s
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,500nm,18.0s
YSS MLR MLR
comp=N,200nm,16.0s
YSS MLR MLR
comp=E,200nm,17.0s
NJ2 Nanjing 88.37 311 *eP* P 06 48 23.6 +0.8
NJ2 pmax pmax
comp=E,7.0nm,0.5s
ESJX Sierra Juarez 88.63 49 IAmb IAmb 06 48 40.1
comp=Z,12nm,1.1s
DPP Dos Picos Cty 88.69 48 IAmb IAmb 06 49 07.8
comp=Z,14nm,1.2s
ELS Elsinore Mount 88.84 47 IAmb IAmb 06 48 38.8
comp=Z,11nm,1.1s
MHC Mount Hamilton 88.99 42 IAmb IAmb 06 48 51.7
comp=Z,9.8nm,0.9s
BFSC Mount Baldy Ra 89.11 47 IAmb IAmb 06 48 39.8
comp=Z,12nm,0.9s
BORC Borrego Spring 89.19 48 IAmb IAmb 06 48 59.8
comp=Z,16nm,1.3s
TPO Tropico Hills 89.21 46 IAmb IAmb 06 48 41.1
comp=Z,18nm,1.1s
PET Petropavlovsk 89.27 347 P P 06 48 26.6 +0.2
PET Petropavlovsk 89.27 347 P P 06 48 26.8 +0.4
PET Petropavlovsk 89.27 347 *eP* P 06 48 27.1 +0.7
PET *e* 06 59 01.8
PET *eS* S 06 59 16.3 +1.5
PET pmax pmax
comp=Z,69nm,0.9s
PET pmax pmax
comp=Z,100nm,12.9s
PET MLR MLR
comp=Z,200nm,20.0s
VES Vestal, Richgr 89.37 45 IAmb IAmb 06 49 03.1
comp=Z,16nm,1.0s
PFO Pinyon Flats O 89.40 48 LR LR 07 23 50.1
comp=Z,386nm,18.3s,baz=225,slow=32
PFO Pinyon Flats O 89.40 48 P P 06 48 29.7 +1.9
PFO IAmb IAmb 06 48 57.4
comp=Z,33nm,1.8s
PFO Pinyon Flats O 89.40 48 P P 06 48 29.7 +1.9

PFO pmax pmax
comp=Z,33nm,1.8s
PMD Palm Desert 89.48 48 P 06 48 29.6 +1.6
PMD IAmb IAmb 06 48 52.4
comp=Z,14nm,1.4s
PEA0B Petropavlovsk- 89.54 346⇑ *i*P **P 06 48 28.6 +0.9**
PETK Petropavlovsk- 89.54 346 P **P 06 48 27.8 0.0**
comp=Z,91nm,0.7s,baz=120,slow=6.8,SNR=106
PETK LR LR 07 21 09.3
comp=Z,146nm,21.9s,baz=155,slow=31
ISA Isabella, Lake 89.61 45 IAmb IAmb 06 48 42.8
comp=Z,10nm,1.1s
MNRC McLaughlin Min 89.66 41 IAmb IAmb 06 48 59.9
comp=Z,13nm,1.1s
KMPM Mount Pierce 89.90 39 IAmb IAmb 06 48 45.8
comp=Z,16nm,1.0s
KMRM Mail Ridge 89.97 39 IAmb IAmb 06 48 53.4
comp=Z,16nm,1.3s
GLA Glamis 90.03 49 IAmb IAmb 06 48 46.6
comp=Z,20nm,1.1s
BC3 Big Chuckawall 90.05 48 IAmb IAmb 06 48 45.1
comp=Z,11nm,1.0s
USRK Ussuriysk Ar. 90.15 327 P **P 06 48 31.1 +0.3**
comp=Z,8.4nm,0.7s,baz=213,slow=3.1,SNR=6.6
comp=Z,8.4nm,0.7s
CMB Columbia Colle 90.18 42 P 06 48 32.8 +1.6
CMB Columbia Colle 90.18 42 P **P 06 48 32.8 +1.6**
CMB pmax pmax
comp=Z,11nm,1.3s
GSC Goldstone, Bar 90.34 46 IAmb IAmb 06 48 46.3
comp=Z,11nm,1.0s
AFDM Forest Hills D 90.51 41 P 06 48 34.1 +1.4
KHBM Hayfork Bally 90.55 39 IAmb IAmb 06 49 07.2
comp=Z,13nm,1.2s
IRM Iron Mountain 90.58 48 IAmb IAmb 06 48 55.3
comp=Z,16nm,1.1s
214A Organ Pipe Nat 90.58 51 P **P 06 48 34.4 +1.2**
BLYC Blythe 90.69 49 IAmb IAmb 06 48 49.4
comp=Z,21nm,1.4s
QSM Queen of Sheba 90.76 46 IAmb IAmb 06 48 56.9
comp=Z,15nm,1.4s
O03E Paynes Creek 91.03 40 IAmb IAmb 06 49 00.1
comp=Z,13nm,1.0s
GWY Greenwater Val 91.03 46 IAmb IAmb 06 49 11.8
comp=Z,22nm,2.0s
N02D Trinity Center 91.04 39 P 06 48 37.1 +2.0
N02D IAmb IAmb 06 49 09.2
comp=Z,7.3nm,0.9s
SHOC Shoshone, Teco 91.07 46 IAmb IAmb 06 49 03.2
comp=Z,8.9nm,0.9s
M02C Callahan 91.27 39 IAmb IAmb 06 48 59.5
comp=Z,13nm,1.1s
LHV Little Huntoon 91.39 43 IAmb IAmb 06 48 50.3
comp=Z,7.8nm,1.0s
L02F Cave Junction 91.44 38 IAmb IAmb 06 48 51.9
comp=Z,15nm,1.4s
TYV Tymovskoe 91.47 337 *e*P **P 06 48 37.5 +0.7**
TYV pmax pmax
comp=Z,9.0nm,1.4s
TYV pmax pmax
comp=Z,100nm,2.6s
M03C McCloud 91.56 39 IAmb IAmb 06 48 52.9
comp=Z,12nm,0.8s
MDJ Mudanjiang 91.56 326 P **P 06 48 37.9 +0.5**
MDJ Mudanjiang 91.56 326 P **P 06 48 37.1 -0.3**
MDJ pmax pmax
comp=Z,8.0nm,1.0s
YBH Yreka Blue Hor 91.59 38 LR LR 07 24 40.7
comp=Z,13nm,18.8s,baz=242,slow=32
YBH Yreka Blue Hor 91.59 38 P 06 48 39.4 +1.6
YBH Yreka Blue Hor 91.59 38 P **P 06 48 39.4 +1.6**
YBH pmax pmax
comp=Z,5.0nm,0.9s
NVAR Mina Array Bea 91.62 43 P **P 06 48 39.9 +1.7**
comp=Z,1.5nm,1.0s,baz=216,slow=6.9,SNR=8.5
NVAR LR LR 07 25 08.0
comp=Z,268nm,18.6s,baz=226,slow=32
comp=Z,1.5nm,1.0s
K02D Willamette Mer 91.81 37 IAmb IAmb 06 48 50.7
comp=Z,13nm,1.0s
TUC Tucson 92.12 52 P 06 48 42.5 +2.1
TUC Tucson 92.12 52 P **P 06 48 42.5 +2.1**
TUC pmax pmax
comp=Z,6.0nm,0.9s
L04D Klamath Falls 92.15 38 IAmb IAmb 06 49 02.8
comp=Z,15nm,1.1s
TIA Tai'an 92.23 313 P **P 06 48 39.8 -0.9**
TIA pmax pmax
comp=Z,17nm,1.1s
TIA LR LR
comp=Z,140nm,13.5s
TIA LR LR
comp=Z,200nm,10.6s
TIA LR LR
comp=Z,260nm,18.0s
I03D Drain, OR 92.70 37 IAmb IAmb 06 48 56.4
comp=Z,14nm,1.1s
NNA Nana 92.94 107 LR LR 07 21 17.5
comp=Z,271nm,21.8s,baz=234,slow=30
CN2 Changchun 92.94 323 P **P 06 48 43.0 -0.8**
CN2 pP sP 06 48 46.4 -2.4
CN2 SKS **SKSac 06 59 14.8 -1.9**
CN2 pmax pmax
comp=Z,20nm,0.7s
I04A Tendick Farm, 93.24 37 IAmb IAmb 06 49 16.9
comp=Z,8.1nm,1.0s
K05A Summer Lake 93.24 39 IAmb IAmb 06 49 04.8
comp=Z,11nm,0.9s
BUCK Buck Mountain 93.25 37 IAmb IAmb 06 48 59.7
comp=Z,16nm,1.1s
ENH Enshi 93.33 305 P **P 06 48 44.3 -1.7**
BNX BinXian 93.43 326 ⇑P **P 06 48 45.4 -0.6**
BNX pmax pmax
comp=Z,6.0nm,1.0s
WIFE Three Sisters- 93.73 37 IAmb IAmb 06 49 06.3
comp=Z,11nm,0.8s
PINE Pine Mountain 93.98 38 IAmb IAmb 06 49 02.5
comp=Z,11nm,0.9s
H04A Detroit Lake 93.99 37 P 06 48 50.0 +1.3
H04A IAmb IAmb 06 49 01.6
comp=Z,8.5nm,1.0s
CMAR Chiang Mai Arr 94.11 289 P **P 06 48 50.1 +0.4**
comp=Z,1.9nm,0.4s,baz=158,slow=3.7,SNR=7.4
CMAR PP **PP 06 52 33.0 -3.5**
comp=Z,1.6nm,0.3s,baz=139,slow=7.1,SNR=12
CMAR LR LR 07 33 54.1
comp=Z,80nm,19.3s,baz=115,slow=37
comp=Z,1.9nm,0.4s
CMAR Chiang Mai Arr 94.11 289 *i*P **P 06 48 48.4 -1.4**
CMAR Chiang Mai Arr 94.11 289 *i*P **P 06 48 51.0 +1.2**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
KLR Kul'dur 94.17 330 LR LR 07 30 03.4
comp=Z,50nm,18.4s,baz=190,slow=35
KLR Kul'dur 94.17 330⇓ *i*P **P 06 48 49.4 +0.1**
KLR pmax pmax
comp=Z,2.0nm,1.4s
WVOR Wild Horse Val 94.22 40 IAmb IAmb 06 49 23.7
comp=Z,11nm,1.4s
KDAK Kodiak Island 94.46 14 LR LR 07 24 00.9
comp=Z,165nm,21.6s,baz=195,slow=31
HNS HongShan 94.47 313 ⇑P **P 06 48 51.0 0.0**
HNS SKS **SKSac 06 59 29.1 +3.8**
HNS S **S 07 00 03.0 +0.5**
HNS pmax pmax
comp=Z,5.0nm,1.3s
HNS LR LR
comp=Z,220nm,12.7s
HNS LR LR
comp=Z,220nm,17.5s
ATAH Atahualpa 94.50 102 LR LR 07 25 15.6
comp=Z,157nm,18.0s,baz=125,slow=32
CMIG Matias Romero 94.61 73 LR LR 07 24 07.6
comp=Z,122nm,18.5s,baz=194,slow=31
TXAR Lajitas Array 95.09 58 P **P 06 48 55.5 +1.2**
comp=Z,0.9nm,0.9s,baz=232,slow=4.1,SNR=8.7
TXAR LR LR 07 25 29.1
comp=Z,177nm,18.9s,baz=248,slow=32
comp=Z,0.9nm,0.9s
TXAR Lajitas Array 95.09 58 P **P 06 48 54.8 +0.6**
TXAR Lajitas Array 95.09 58 P **P 06 48 54.8 +0.6**
ALPN Alpine 95.73 57 IAmb IAmb 06 49 16.8
comp=Z,10nm,1.4s
E07A Sunnyside 96.48 37 IAmb IAmb 06 49 13.2
comp=Z,4.6nm,0.9s
PZH PanZhiHua 96.57 298 P **P 06 49 01.8 +0.8**
ANMO Albuquerque 96.58 52 LR LR 07 27 01.0
comp=Z,214nm,18.1s,baz=222,slow=32
ANMO Albuquerque 96.58 52⇓ *i*P **P 06 49 03.3 +2.3**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
BBB Bella Bella 96.94 29 LR LR 07 27 45.2
comp=Z,90nm,18.9s,baz=224,slow=32
MA2 Magadan 96.99 345 LR LR 07 33 25.3
comp=Z,168nm,18.0s,baz=161,slow=36
MA2 Magadan 96.99 345⇓ *i*P **P 06 49 01.6 -0.3**
MA2 pmax pmax
comp=Z,5.0nm,1.0s
LPAZ La Paz 97.08 115 P Pdif 06 49 07.8 +3.4
comp=Z,1.0nm,0.8s,baz=186,slow=6.2,SNR=3.7
comp=Z,1.0nm,0.8s
CD2 Chengdu 97.66 302 *e*P **P 06 49 06.5 +0.7**
CPUP Villa Florida 97.98 129 LR LR 07 25 14.0
comp=Z,154nm,21.7s,baz=245,slow=30
HHC Hu-ho-hao-te 98.54 314 *e*P Pdif 06 49 11.9 +2.3
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,110nm,5.0s
HHC LR LR
comp=Z,110nm,12.8s
JTS Las Juntas de 98.87 84 LR LR 07 26 04.2
comp=Z,163nm,19.1s,baz=202,slow=31
NEW Newport 99.00 37 LR LR 07 27 14.3
comp=Z,433nm,19.6s,baz=218,slow=31
PDAR Pinedale Array 99.48 44 PKKPbc PKKPbc 07 05 40.9 +3.7
comp=Z,0.9nm,0.9s,baz=92,slow=3.4,SNR=4.4
PDAR LR LR 07 30 11.2
comp=Z,177nm,18.6s,baz=214,slow=33
HILR Hailar Array B 99.78 325 LR LR 07 30 59.5
comp=Z,78nm,21.1s,baz=145,slow=34
ILAR Eielson Array 101.98 13 P **Pdif 06 49 24.1 -0.1**
comp=Z,0.7nm,0.8s,baz=210,slow=6.6,SNR=5.1
ILAR PP **PP 06 53 36.2 +0.1**
comp=Z,1.7nm,1.0s,baz=224,slow=7.0,SNR=5.6
YKA Yellowknife Ar 109.34 26 PKiKP **PKiKP 06 54 00.5 +0.3**
comp=Z,0.5nm,0.6s,baz=256,slow=2.0,SNR=8.4
YKA PKKPbc **PKKPbc 07 05 06.2 -1.3**
comp=Z,0.4nm,0.7s,baz=32,slow=3.6,SNR=4.1
WMQ Urumqi 115.15 307 *e*PKP **PKiKP 06 54 13.3 +1.3**
FCC Fort Churchill 116.13 35 **PKPdf 06 54 13.4 +0.1**
FCC Fort Churchill 116.13 35 PKIKP **PKPdf 06 54 13.4 +0.1**
DGZ Jazzator, Alta 117.60 313⇑ *i*PKIKP **PKPdf 06 54 16.4 -0.3**
MK31 Makanchi Array 119.80 309⇑ *i*PKIKP **PKPdf 06 54 20.2 -0.6**
MKAR Makanchi Array 119.80 309 PKP **PKPdf 06 54 19.7 -1.1**
comp=Z,5.2nm,0.8s,baz=82,slow=1.3,SNR=47
MKAR PKKPbc PKKPbc 07 04 39.3 +8.3
comp=Z,0.3nm,0.5s,baz=277,slow=4.0,SNR=5.9
MKAR Makanchi Array 119.80 309 **PKPdf 06 54 20.2 -0.5**
MKAR Makanchi Array 119.80 309 PKIKP **PKPdf 06 54 20.3 -0.5**
MAKZ Makanchi 120.01 308 **PKPdf 06 54 20.4 -0.8**
MAKZ Makanchi 120.01 308 PKIKP **PKPdf 06 54 20.4 -0.8**
ZALV Zalesovo Beam 120.55 317 PKP **PKPdf 06 54 20.6 -1.3**
comp=Z,4.7nm,0.7s,baz=140,slow=1.4,SNR=22
ZALV Zalesovo Beam 120.55 317 **PKPdf 06 54 20.9 -1.0**
RES Resolute Bay 121.27 18 **PKPdf 06 54 23.1 +0.3**
RES Resolute Bay 121.27 18 PKIKP **PKPdf 06 54 23.1 +0.3**
KSH2 Kashi 121.82 298 PKP **PKPdf 06 54 25.3 +0.2**
ULHL Ulahol 122.38 302 P **PKPdf 06 54 26.6 +0.4**
SNR=6.2
TKM2 Tokmak 2 123.05 302 P **PKPdf 06 54 27.0 -0.4**
SNR=12
KURK Kurchatov 123.29 312 **PKPdf 06 54 27.0 -0.3**
KURK Kurchatov 123.29 312⇑ *i*PKIKP **PKPdf 06 54 27.0 -0.3**
KURBB Kurchatov Arra 123.33 312 PKP **PKPdf 06 54 26.4 -1.0**
comp=Z,12nm,0.8s,baz=116,slow=1.9,SNR=78
KURBB SKP **SKPdf 06 58 03.9 +1.9**
comp=Z,1.9nm,0.9s,baz=106,slow=2.3,SNR=4.8
KBK Karagaybulak 123.42 302 P **PKPdf 06 54 27.9 -0.2**
SNR=5.7
UCH Uchtor 123.59 301 P **PKPdf 06 54 28.9 +0.1**
SNR=16
CHMS Chumysh 123.66 302 P **PKPdf 06 54 28.4 0.0**
SNR=8.6
AAK Ala-Archa 123.73 302 P **PKPdf 06 54 28.6 -0.1**
SNR=8.0
AAK Ala-Archa 123.73 302 **PKPdf 06 54 29.0 +0.3**
AAK Ala-Archa 123.73 302⇑ *i*PKIKP **PKPdf 06 54 28.8 +0.1**
USP Ospenovka 123.92 303 P **PKPdf 06 54 28.9 0.0**
SNR=7.3
EKS2 Erkin-Say 124.24 302 P **PKPdf 06 54 30.0 +0.4**
SNR=9.1
LSZ Lusaka 124.32 212 **PKiKP 06 54 32.1 +1.2**
LSZ Lusaka 124.32 212 PKIKP **PKiKP 06 54 32.1 +1.2**
KBL Kabul 125.11 291 **PKPdf 06 54 32.0 +0.3**
KBL Kabul 125.11 291 PKIKP **PKPdf 06 54 32.0 +0.3**
E62A Clayton Lake 126.56 54 **PKiKP 06 54 35.3 +1.1**
KKAR Karatay Array 126.67 301 **PKPdf 06 54 34.6 +0.5**
KKAR Karatay Array 126.67 301 PKIKP **PKPdf 06 54 34.6 +0.5**
TULEG Thule 127.81 16 *i*P **PKPdf 06 54 34.4 -0.9**
BVAR Borovoye Array 128.75 314 PKP **PKPdf 06 54 37.4 -0.3**
comp=Z,7.4nm,0.7s,baz=94,slow=2.1,SNR=30
BORK Borovoye 128.80 314 **PKPdf 06 54 37.9 +0.1**
BORK Borovoye 128.80 314⇑ *i*PKIKP **PKPdf 06 54 37.7 -0.1**
KIBK Kibwezi 129.67 231 **PKPdf 06 54 42.5 +1.6**
NEEM North Greenlan 131.27 13 *i*P **PKPdf 06 54 41.5 -0.8**
UPNV Upernavik 132.06 20 *i*P **PKPdf 06 54 43.3 -0.1**
ABKAR Akbulak array 134.93 308 **PKPdf 06 54 51.3 +1.8**
SPITS Spitsbergen Ar 135.65 356 PKP **PKPdf 06 54 50.5 +0.3**
comp=Z,10nm,0.7s,baz=63,slow=3.8,SNR=7.4
ARTI Arti 135.80 318 **PKPdf 06 54 50.7 -0.2**
ARTI Arti 135.80 318 PKIKP **PKPdf 06 54 50.7 -0.2**
DAG Danmarks Havn 136.60 7 *i*P **PKPdf 06 54 50.5 -1.4**
SUMG Summit 136.74 16 *i*P **PKPdf 06 54 53.4 +0.6**
KIRV Kirov 140.17 322⇑ *i*PKIKP **PKPdf 06 54 58.4 -0.4**
ARCES ARCESS Array B 142.35 346 PKhKP PKPpre 06 54 58.0
comp=Z,12nm,0.7s,baz=22,slow=2.8,SNR=25
ARCES ARCESS Array B 142.35 346 **PKPdf 06 55 00.1 -2.4**
ARCES ARCESS Array B 142.35 346 PKIKP **PKPdf 06 55 00.1 -2.4**
BELG Belogornoye 142.56 313 *e*PKIKP **PKPdf 06 55 02.9 -0.4**
AKT Akhty 143.01 295 *e*PKIKP **PKPdf 06 55 04.4 -0.3**
AKT *e* 06 58 13.2
AKT pmax pmax
comp=Z,11nm,0.6s
JETT Jettan, Norway 143.24 349 *e*P **PKPdf 06 55 04.3 +0.2**
TRO Tromso 143.39 350 *e*P PKPab 06 55 01.5 +1.1
KLMR Klimovskoe 143.92 329 *e*PKIKP **PKPab 06 55 02.6 -0.1**
KLMR pmax pmax
comp=Z,38nm,1.1s
GNI Garni 145.17 292 **PKPbc 06 55 07.9 -0.3**
GNI Garni 145.17 292 PKIKP **PKPbc 06 55 07.9 -0.3**
STEI Steigen 145.49 351 *e*P **PKPdf 06 55 08.1 +0.1**
LOF Lofoten 145.51 352 *e*P **PKPdf 06 55 07.9 -0.1**
FAUS Fauske 146.00 350 *e*P **PKPdf 06 55 09.4 +0.5**
VRH Novokhopyorsk 146.39 312 *e*PKP2 **PKPdf 06 55 10.2 +0.2**
VRH pmax pmax
comp=Z,146nm,0.8s
GOF Gofitskoye 146.46 301 *ce*PKP2 **PKPdf 06 55 11.8 +1.4**
KARS Kars 146.47 293 **PKPdf 06 55 12.6 +1.8**
KARS Kars 146.47 293 PKP2 **PKPdf 06 55 12.6 +1.8**
KBZ Khabaz 146.63 299 PKPbc **PKPdf 06 55 11.2 +0.6**
comp=Z,27nm,0.9s,baz=63,slow=3.3,SNR=48
KBZ Khabaz 146.63 299⇑ *i*PKP2 **PKPdf 06 55 11.9 +1.2**
KIV Kislovodsk 146.78 299 *i*PKP2 **PKPdf 06 55 12.3 +1.2**
KIV pmax pmax
comp=Z,25nm,1.1s
SHA1 Shidzhatmaz 146.81 299⇑ *i*PKP2 **PKPdf 06 55 12.9 +1.6**
VAGH Vaagaholmen 146.88 351 *e*P **PKPdf 06 55 12.1 +1.7**
KONS Konsvik 147.12 351 *e*P **PKPbc 06 55 13.3 +0.4**
MOS Moscow 147.17 322 *i*PKP2 **PKPdf 06 55 13.0 +1.8**
MOS pmax pmax
comp=Z,161nm,0.8s
MOR8 Moi Rana 147.25 350 *e*P **PKPdf 06 55 12.6 +1.5**
STOK Stokkvaagen 147.29 351 *e*P **PKPdf 06 55 13.3 +2.2**
LEIR Leirfjorden 147.49 351 *e*P **PKPbc 06 55 14.2 +0.1**
LPSR Galich'ya Gora 147.65 316 *e*PKP2 **PKPdf 06 55 14.1 +2.0**
LPSR pmax pmax
comp=Z,123nm,0.9s
VORR Voronezh 147.78 314 *e*PKIKP **PKPdf 06 55 13.0 +0.7**
VORR pmax pmax
comp=Z,104nm,0.6s
VORD Divnogorie 147.93 313 *e*PKP2 **PKPdf 06 55 14.5 +1.9**
VORD pmax pmax
comp=Z,70nm,1.0s
VSR Storozhevoye 147.93 313 *e*PKP2 **PKPdf 06 55 14.9 +2.3**
VSR pmax pmax
comp=Z,110nm,1.1s
OBN Obninsk 147.99 321 **PKPbc 06 55 16.1 +0.5**
OBN Obninsk 147.99 321⇓ *i*PKP2 **PKPdf 06 55 15.2 +2.6**
OBN pmax pmax
comp=Z,82nm,1.0s
LABN Labinsk 148.14 301 *i*PKP2 **PKPbc 06 55 18.1 +1.6**
LABN pmax pmax
comp=Z,36nm,0.7s
ERBR Yeremizino-Bor 148.20 303 *i*PKP2 **PKPdf 06 55 15.9 +2.6**
ERBR pmax pmax
comp=Z,42nm,0.9s
EDA Edea 148.40 197 **PKPbc 06 55 18.7 +0.6**
KOPT Kop Dagi 148.41 292 **PKPbc 06 55 18.5 +0.8**
FINES FINESS Array B 148.63 337 PKPbc **PKPbc 06 55 16.9 -0.3**
comp=Z,70nm,0.6s,baz=49,slow=4.2,SNR=216
FINES FINESS Array B 148.63 337 **PKPdf 06 55 15.9 +2.4**
SOC Sochi 148.95 299 *e*PKIKP **PKPdf 06 55 14.7 +0.2**
SOC *e* 06 58 47.6
SOC *e*PPP PPP 07 02 07.2
SOC *e*SS SS 07 17 51.4 -9.3
SOC MLR MLR
comp=Z,98nm,17.0s
NSS Namsos 149.15 351 *e*P **PKPbc 06 55 18.7 +0.3**
ANN Anapa 150.45 301 *i*PKIKP **PKPbc 06 55 21.1 -1.1**
ANN pmax pmax
comp=Z,79nm,0.7s
MOL Molde 151.54 354 *e*P **PKPbc 06 55 24.6 +0.5**
MMAI Mount Meron Ar 151.60 277 PKPbc **PKPbc 06 55 25.7 +0.3**
comp=Z,31nm,0.6s,baz=74,slow=6.2,SNR=31
DBIC Dimbokro 151.82 167 PKP **PKPdf 06 55 21.6 +1.6**
comp=Z,4.4nm,0.8s,baz=215,slow=4.6,SNR=4.3
DBIC PKPbc **PKPbc 06 55 26.7 +0.4**
comp=Z,15nm,0.8s,baz=220,slow=1.5,SNR=11
DBIC PKPab **PKPab 06 55 36.1 +1.0**
comp=Z,18nm,0.8s,baz=196,slow=3.7,SNR=5.2
BNN Bunyan 151.97 289 **PKPbc 06 55 25.1 -1.1**
AKN Aaknes 151.98 354 *e*P **PKPbc 06 55 24.1 -1.2**
NB2 NORSAR Subarra 152.59 349 PKP **PKPbc 06 55 26.3 -0.4**
comp=Z,39nm,1.0s,baz=17,slow=2.6
NB2 NORSAR Subarra 152.59 349 AMP **PKPbc 06 55 26.3 -0.4**
comp=Z,39nm,1.0s
NB2 PKP **PKPbc 06 55 26.3 -0.4**
NOA NORSAR Array B 152.59 349 PKPbc **PKPbc 06 55 26.5 -0.2**
comp=Z,11nm,0.6s,baz=14,slow=4.1,SNR=48
MNK Minsk 152.61 325 *i*PKIKP **PKPbc 06 55 28.1 +1.2**
comp=E,45nm,0.8s
MNK *i*PKIKP **PKPbc 06 55 28.1 +1.2**
comp=N,19nm,0.8s
MNK *i*PKIKP **PKPbc 06 55 28.1 +1.2**
comp=Z,30nm,0.8s,baz=53
MNK *i*SKP **SKPdf 06 58 44.8 -7.5**
MNK *i*PKS **PKSdf 06 58 51.7 -2.4**
MNK *i*PP **PP 06 59 12.5 +2.2**
MNK *i*PPP PPP 07 02 47.5
MNK *i*SKS SKSdf 07 03 13.3 +47
MNK *i*SS **SS 07 18 46.8 +6.9**
MNK *i*SSS SSS 07 24 35.5
MNK Minsk 152.61 325 *i*PKIKP **PKPbc 06 55 28.0 +1.2**
MNK *i* 06 59 12.4
MNK *i*PPP PPP 07 02 47.5
MNK pmax pmax
comp=Z,30nm,0.8s
MNK pmax pmax
comp=N,19nm,0.8s
MNK pmax pmax
comp=E,45nm,0.8s
FOO Floro 152.69 356 *e*P **PKPbc 06 55 27.9 +1.1**
NC602 NORSAR Array S 152.83 349 *e*P **PKPbc 06 55 27.1 0.0**
HFS Hagfors 153.01 346 PKPbc **PKPbc 06 55 27.2 -0.4**
comp=E,22nm,0.7s,baz=5.7,slow=1.4,SNR=26
HFS PKPab **PKPab 06 55 37.4 -1.6**
comp=E,37nm,0.6s,baz=56,slow=3.8,SNR=34
BZK Bozkurt 153.27 296 **PKPbc 06 55 29.0 +0.3**
SKAR Skarslia 153.32 352 *e*P **PKPbc 06 55 29.0 +0.7**
CSS Mathiatis 153.65 280 **PKPbc 06 55 29.0 -0.8**
BRTR Keskin Array B 153.68 291 PKP **PKPdf 06 55 21.2 -0.9**
comp=E,0.6nm,0.5s,baz=150,slow=5.3,SNR=5.5
BRTR PKPbc **PKPbc 06 55 28.8 -1.1**
comp=E,14nm,0.8s,baz=141,slow=3.1,SNR=60
BRTR Keskin Array B 153.68 291 **PKPdf 06 55 23.0 +0.9**
PABE Paberze 153.69 330 **PKPbc 06 55 28.9 -0.2**
AKASG Malin Array Be 153.94 317 PKP **PKPdf 06 55 21.3 -0.6**
comp=E,4.6nm,0.8s,baz=59,slow=2.2,SNR=4.3
AKASG PKPbc **PKPbc 06 55 29.3 -0.6**
comp=E,11nm,0.7s,baz=65,slow=2.4,SNR=23
AKASG PKPab **PKPab 06 55 41.2 -2.1**
comp=E,11nm,0.7s,baz=49,slow=3.6,SNR=14
AKASG Malin Array Be 153.94 317 **PKPdf 06 55 24.9 +3.0**
KIEV Kiev 153.96 317 **PKPbc 06 55 29.7 -0.2**
KIEV Kiev 153.96 317 PKIKP **PKPbc 06 55 29.7 -0.2**
KONO Kongsberg 154.16 350 **PKPab 06 55 44.1 +0.3**
KONO Kongsberg 154.16 350 *e*P **PKPbc 06 55 30.6 +0.5**
KONO Kongsberg 154.16 350 PKP2 **PKPab 06 55 44.1 +0.3**
MDUB Mudurnu 155.51 293 PKPdf 06 55 33.7 +9.1
BURAR Bucovina Array 157.71 313 **PKPab 06 55 59.0 -0.7**
KARP Karpathos 158.73 280 **PKPab 06 56 03.5 -0.9**
TORD Torodi Ar. Bea 158.82 181 PKP **PKPdf 06 55 30.4 +1.0**
comp=E,1.7nm,1.0s,baz=173,slow=2.7,SNR=5.0
TORD PKPab **PKPab 06 56 06.5 +1.6**
comp=E,5.7nm,1.0s,baz=160,slow=3.3,SNR=4.7
EKA Eskdalemuir Ar 158.87 7 PKPab **PKPab 06 56 03.7 -0.4**
comp=E,4.1nm,0.8s,baz=345,slow=2.8,SNR=6.0
BSEG Bad Segeberg 159.46 345 *e*PKPab **PKPab 06 56 06.8 0.0**
baz=30,slow=4.4
LANS Liptovska Anna 160.03 323 *e*PKP2 **PKPab 06 56 13.3 +3.7**
LANS Liptovska Anna 160.03 323 *e*PKP **PKPab 06 56 13.3 +3.7**
MORC Moravsky Berou 160.51 327 *e*PKP **PKPab 06 56 10.6 +1.0**
DPC Dobruska-Polom 160.62 330 *e*PKPAB **PKPab 06 56 12.4 +0.3**
DPC *ep*PKP **sPKPab 06 56 17.7 +0.6**
DPC Dobruska-Polom 160.62 330 *e*PKP2 **PKPab 06 56 12.4 +0.3**
FLTG Flechtingen 160.71 341 *e*PKPab **PKPab 06 56 11.6 -0.6**
baz=30,slow=4.4
ASSE Asse, Remlinge 161.03 342 *e*PKPab **PKPab 06 56 13.4 -0.2**
baz=30,slow=4.4
CLL Collm 161.08 337 *e*PKIKP **PKPdf 06 55 32.0 +1.2**
CLL *i* 06 56 13.0
CLL pmax pmax
comp=Z,20nm,0.8s
CLL Collm 161.08 337 *e*PKPdf **PKPdf 06 55 32.0 +1.2**
CLL *i*PKPab **PKPab 06 56 13.0 -0.9**
comp=Z,20nm,0.8s
CLL *i* pPKPab **sPKPab 06 56 17.1 -1.9**
JAVC Velka Javorina 161.10 325 *e*PKP **PKPab 06 56 14.3 0.0**
BRG Berggiesshubel 161.12 334 *e*PKPab **PKPab 06 56 14.0 -0.2**
BRG Amp 06 56 21.9
comp=Z,9.5nm,1.0s
VRAC Vranov 161.28 327 *e*PKP **PKPab 06 56 14.0 -1.0**
CLZ Clausthal 161.38 342 *e*PKPab **PKPab 06 56 15.2 -0.1**
baz=30,slow=4.4
IBBN Ibbenburen 161.51 347 *e*PKPab **PKPab 06 56 15.7 -0.1**
baz=30,slow=4.4
KRUC Moravsky 161.55 327 *e*PKP **PKPab 06 56 15.1 -1.0**
MODS Modra-Piesok 161.63 324 *e*PKP2 **PKPab 06 56 16.9 +0.4**
MODS Modra-Piesok 161.63 324 *e*PKP **PKPab 06 56 16.9 +0.4**
ZST Bratislava 161.83 324 *e*PKP2 **PKPab 06 56 21.8 +4.4**
ZST Bratislava 161.83 324 *e*PKP **PKPab 06 56 21.8 +4.4**
MOX Moxa 162.09 338 *e*PKPab **PKPab 06 56 18.1 -0.3**
baz=30,slow=4.4
NKC Novy Kostel 162.18 336 *e*PKPAB **PKPab 06 56 18.9 0.0**
NKC Novy Kostel 162.18 336 *e*PKP2 **PKPab 06 56 18.9 0.0**
RONA Rosalia, Austr 162.57 324 *i*PKP **PKPab 06 56 22.1 +1.4**
comp=Z,6.4nm,0.7s
CONA Conrad Observa 162.62 325 *i*PKP **PKPab 06 56 20.3 -0.7**
comp=Z,7.7nm,0.9s
KHC Kasperske Hory 162.68 332 *e*PKPDF **PKPdf 06 55 31.5 -1.1**
KHC Kasperske Hory 162.68 332 *e*PKIKP **PKPdf 06 55 31.5 -1.1**
GERES GERESS Array B 162.86 331 PKP **PKPdf 06 55 34.0 +1.2**
comp=Z,0.2nm,0.3s,baz=24,slow=4.9,SNR=2.2
GERES PKPab **PKPab 06 56 20.8 -1.2**
comp=Z,2.9nm,0.8s,baz=30,slow=6.2,SNR=3.7
ARSA Arzberg 163.26 324 *ep*PKP **PKPab 06 56 26.0 +2.3**
comp=Z,3.7nm,0.7s
MOA Molln 163.40 328 *i*pPKP **PKPab 06 56 26.8 +2.5**
comp=Z,8.7nm,1.1s
MEM Membach 163.44 349 *d*PKP **PKPab 06 56 23.6 -0.6**
BSTI Sart Tilman 163.53 350 *d*PKP **PKPab 06 56 24.9 +0.2**
BHOU Houvegnez 163.69 349 *d*PKP **PKPab 06 56 25.2 -0.2**
BCLA Clavier 163.73 351 *d*PKP **PKPab 06 56 25.5 -0.1**
BGES Gesves 163.79 351 *d*PKP **PKPab 06 56 25.6 -0.2**
BIOA Bad Ischl, Aus 163.79 329 *e*PKP **PKPab 06 56 26.3 +0.3**
comp=Z,4.5nm,0.6s
SOKA Soboth 163.90 324 *e*PKP **PKPab 06 56 27.9 +1.2**
comp=Z,3.2nm,1.0s
BMRD Maredsous 163.91 352 *d*PKP **PKPab 06 56 26.1 -0.3**
RCHB Rochefort 164.00 351 *d*PKP **PKPab 06 56 27.0 +0.2**
DOU Dourbes 164.14 352 *d*PKP **PKPab 06 56 27.4 +0.1**
OBKA Obir 164.25 324 *e*PKP **PKPab 06 56 28.6 +0.4**
comp=Z,5.7nm,1.1s
WLF Walferdange 164.34 348 **PKPab 06 56 27.5 -0.7**

WLF	Walferdange	164.34	348	PKP2	PKPab	06 56 27.5	-0.7
WLF	Walferdange	164.34	348	*d*PKP	PKPab	06 56 27.5	-0.7
KBA	Koelnbreinsper	164.39	328	*i* pPKP	PKPab	06 56 31.4	+2.5
	comp=Z,6.5nm,0.7s						
LESA	Schwarzleotal	164.41	330	*i* pPKP	PKPab	06 56 31.1	+2.3
	comp=Z,5.0nm,0.6s						
MYKA	Terra Mystica	164.60	326	*e*pPKP	PKPab	06 56 32.5	+2.9
	comp=Z,3.0nm,0.6s						
WATA	Walderalm	164.92	332	*e*PKP	PKPab	06 56 32.2	+1.0
	comp=Z,7.4nm,0.8s						
WTTA	Wattenberg	164.96	332	*e*PKP	PKPab	06 56 32.6	+1.2
	comp=Z,4.4nm,0.6s						
ABTA	Abfaltersbach	165.01	329	*i* PKP	PKPab	06 56 32.1	+0.6
	comp=Z,3.4nm,0.7s						
MOTA	Moosalm	165.10	333	*i* PKP	PKPab	06 56 33.8	+1.9
	comp=Z,6.1nm,0.8s						
RETA	Reutte	165.10	334	*e*PKP	PKPab	06 56 32.0	+0.1
	comp=Z,6.4nm,0.8s						
BFO	Black Forest	165.12	341		PKPab	06 56 31.2	-0.6
BFO	Black Forest	165.12	341	PKP2	PKPab	06 56 31.2	-0.6
BFO	Black Forest	165.12	341	*e*PKPab	PKPab	06 56 31.4	-0.4
	baz=30,slow=4.4						
SQTA	Sankt Quirin	165.16	333	*e*PKP	PKPab	06 56 33.7	+1.6
	comp=Z,4.5nm,0.6s						
FETA	Feichten	165.51	333	*e*PKP	PKPab	06 56 34.0	+0.3
	comp=Z,7.7nm,0.8s						
ECH	Echery	165.52	344		PKPab	06 56 32.8	-0.7
ECH	Echery	165.52	344	PKP2	PKPab	06 56 32.8	-0.7
DAVA	Damuels	165.58	336	*i* PKP	PKPab	06 56 34.2	+0.1
	comp=Z,1.1nm,0.9s						
FUORN	Ofenpass-Fuorn	166.02	333		PKPab	06 56 36.8	+0.7
CLF	Chambon-Foret	166.38	357		PKPab	06 56 38.3	+1.0
TUE	Stuetta	166.47	335		PKPab	06 56 38.4	+0.4
SENIN	Lac Senin/Sane	167.21	341		PKPab	06 56 41.4	+0.1
TAM	Tamanrasset	167.82	199		PKPdf	06 55 38.2	+0.4
TAM	Tamanrasset	167.82	199	PKIKP	PKPdf	06 55 38.3	+0.4
ESDC	Sonseca Array	173.32	37	PKP	PKPdf	06 55 39.8	-0.5
	comp=Z,1.6nm,1.0s,baz=335,slow=3.1,SNR=6.7						

IDC ***20*** *06:42:22.5±0.6,54.51S×5.46E,h0km,mb4.5/11, mbtmp4.6/12,ML5.0/1,MS4.3/26,Error ellipse: s-maj=22.4km s-min=17.0km az=77.0*

NEIC ***20*** *06:42:24.9±0.9,54.6S±0.1×5.4E±0.2,h10km±1km, mb5.0/26,Error ellipse: s-maj=21.7km s-min=19.9km az=122.0*

GCMT ***20*** *06:42:24.9±0.2,54.57S±0.01×5.65E±0.04,h12km±1km, MW4.9/99,Moment Tensor Solution. s30,c37; s99,c134; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.26±.16; Mθθ=3.45±.12; Mφφ=-1.20±.12; Mrθ=0.17±.27; Mrφ=-1.15±.08; Mθφ=0.45±.39; Best double couple: Mo3.10200×10^16 NP1:ϕs=126.00000°,δ50.00000°,λ-56.00000°. NP2: ϕs=260.00000°,δ51.00000°,λ-123.00000°. Principal axes: T 3.7200, Plg1.0000°, Azm13.0000°; N -1.2450, Plg25.0000°, Azm283.0000°; P -2.4850, Plg65.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 06:42:24.0±0.4,54.52S±0.08×5.49E±0.10,h10km,n97, σ1§23/59,mb4.9/18,MS4.4/27,1C-4D,Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNA1	Neumayer--Stat	17.30	195	⇓P		Pn	06 46 24.5	-0.6
	comp=Z,40nm,0.4s							
VNA2	Neumayer--Watz	17.41	194	⇓P		Pn	06 46 26.9	+0.3
	comp=Z,32nm,0.3s,baz=23,slow=15							
SNAA	Sanae	17.59	189	⇓P		P	06 46 30.2	+0.3
	comp=Z,2μm,0.8s							
SNAA	Sanae	17.59	189	P		P	06 46 29.4	-0.4
	comp=Z,5.1nm,0.3s,baz=7.9,slow=13,SNR=23							
SNAA				LR		LR	06 51 59.1	
	comp=Z,1μm,19.0s,baz=27,slow=33							
	comp=Z,84nm,0.7s							
SNAA	Sanae	17.59	189			Pn	06 46 27.8	-1.1
SNAA					IAmb	IAmb	06 46 32.3	
	comp=Z,115nm,0.8s							
VNA3	Neumayer Olymp	18.04	196	S		Sn	06 49 41.6	-14
VNA3	Neumayer Olymp	18.04	196	⇓P		P	06 46 34.9	+0.1
	comp=Z,66nm,0.6s							
SUR	Sutherland	24.67	32	LR		LR	06 54 54.9	
	comp=Z,680nm,21.0s,baz=198,slow=30							
MAW	Mawson	29.44	139	LR		LR	06 58 55.4	
	comp=Z,262nm,19.2s,baz=287,slow=34							
BOSA	Boshof	29.61	37	P		P	06 48 29.6	+0.3
	comp=Z,3.1nm,0.9s,baz=208,slow=11,SNR=3.7							
BOSA				LR		LR	06 57 50.5	
	comp=Z,812nm,21.6s,baz=202,slow=31							
	comp=Z,3.1nm,0.9s							
BOSA	Boshof	29.61	37	P		P	06 48 29.5	+0.3
H04S2	CROZET ISLANDS	29.91	95	T		T	07 20 20.4	
	baz=238,slow=75,SNR=76							
H04S3	CROZET ISLANDS	29.91	95	T		T	07 20 18.8	
	baz=238,slow=75,SNR=58							
H04S1	CROZET ISLANDS	29.93	95	T		T	07 20 20.4	
	baz=238,slow=75,SNR=115							
H04N3	CROZET ISLANDS	30.21	93	T		T	07 20 50.7	
	baz=241,slow=74							
H04N1	CROZET ISLANDS	30.22	93	T		T	07 20 47.8	
	baz=241							
H04N2	CROZET ISLANDS	30.23	93	T		T	07 20 56.0	
	baz=241,slow=74							
LBTB	Lobatse	33.04	35	LR		LR	06 59 53.6	
	comp=Z,475nm,21.0s,baz=199,slow=32							
PMSA	Palmer Station	34.77	225	P		P	06 49 14.4	+0.4
QSPA	South Pole Qui	35.71	180	P		P	06 49 22.5	+0.2
	comp=Z,19nm,0.7s,baz=229,slow=4.1,SNR=13							
	comp=Z,19nm,0.7s							
QSPA	South Pole Qui	35.71	180			P	06 49 22.6	+0.2
TSUM	Tsumeb	36.46	19	LR		LR	07 01 34.2	
	comp=Z,776nm,20.6s,baz=152,slow=32							
TSUM	Tsumeb	36.46	19	P		P	06 49 29.9	+0.8
PAF	Port-aux-Franc	38.97	110	P		P	06 49 50.8	+0.9
LSZ	Lusaka	42.97	33	LR		LR	07 06 21.3	
	comp=Z,570nm,18.6s,baz=194,slow=34							
GO08	Villa O'Higgin	46.62	244	P		P	06 50 52.0	0.0
GO08					IAmb	IAmb	06 51 02.3	
	comp=Z,20nm,1.4s							
VNDA	Vanda	47.40	173	P		P	06 50 58.1	+0.5
	comp=Z,10.0nm,0.7s,baz=207,slow=5.9,SNR=14							
	comp=Z,10.0nm,0.7s							
VNDA	Vanda	47.40	173	P		P	06 50 58.7	+1.0
VNDA					IAmb	IAmb	06 50 59.3	
	comp=Z,13nm,0.8s							
TRQA	Tornquist	47.54	261	P		P	06 50 58.8	-0.5
H10S2	ASCENSION HYDR	48.21	333	T		T	07 42 47.3	
	baz=164,slow=74,SNR=22							
H10S3	ASCENSION HYDR	48.22	333	T		T	07 42 47.6	
	baz=56,slow=74,SNR=24							
LL02	Futaleuf	49.64	249			P	06 51 15.7	+0.3
LL02					IAmb	IAmb	06 51 17.9	
	comp=Z,21nm,1.4s							
VAO	Valinhos	49.98	287			P	06 51 19.4	+1.2
PLCA	Paso Flores	50.58	253	P		P	06 51 22.1	-0.5
	comp=Z,2.5nm,0.7s,baz=117,slow=2.6,SNR=6.1							
	comp=Z,2.5nm,0.7s							
CPUP	Villa Florida	53.31	275	P		P	06 51 42.7	-0.3
	comp=Z,5.5nm,1.1s,baz=135,slow=9.8,SNR=6.7							
	comp=Z,5.5nm,1.1s							
CPUP	Villa Florida	53.31	275			P	06 51 43.2	+0.2
CPUP					IAmb	IAmb	06 51 52.6	
	comp=Z,19nm,1.4s							
BI02	San Fabin de	53.81	256	P		P	06 51 46.7	0.0
BO02	Sierra Bellavi	54.87	258	P		P	06 51 55.0	+0.6
BO02					IAmb	IAmb	06 52 21.4	
	comp=Z,21nm,1.2s							
BDFB	Brasilia	56.51	292	P		P	06 52 06.7	+0.3
	comp=Z,7.7nm,0.7s,baz=134,slow=5.4,SNR=16							
	comp=Z,7.7nm,0.7s							
BDFB	Brasilia	56.51	292			P	06 52 07.0	+0.5
BDFB					IAmb	IAmb	06 52 07.3	
	comp=Z,16nm,0.9s							
MBAR	Mbarara	57.61	30	LR		LR	07 15 16.6	
	comp=Z,425nm,18.6s,baz=172,slow=34							
CO01	Juntas del Tor	58.00	262	P		P	06 52 17.8	+0.8
CO01					IAmb	IAmb	06 52 32.2	
	comp=Z,19nm,1.5s							
RCBR	Riachuelo	58.86	310	LR		LR	07 12 15.0	
	comp=Z,122nm,21.1s,baz=104,slow=30							
AC05	El Transito	58.96	263	P		P	06 52 23.8	+0.2
AC05					IAmb	IAmb	06 52 24.9	
	comp=Z,21nm,1.4s							
LCO	Las Campanas	59.07	263	P		P	06 52 24.4	-0.1
AC02	Maricunga	59.80	265			P	06 52 31.0	+1.2
AC02					IAmb	IAmb	06 52 44.0	
	comp=Z,16nm,1.3s							
DBIC	Dimbokro	61.58	348	P		P	06 52 41.0	-0.3
	comp=Z,7.0nm,0.7s,baz=170,slow=7.7,SNR=7.0							
DBIC				LR		LR	07 12 52.0	
	comp=Z,246nm,19.8s,baz=198,slow=30							
	comp=Z,7.0nm,0.7s							
DBIC	Dimbokro	61.58	348	P		P	06 52 41.5	+0.2
DBIC					IAmb	IAmb	06 52 42.4	
	comp=Z,11nm,0.8s							
PTLB	Pontes e Lacer	62.87	282			P	06 52 50.3	+0.3
PB07	IPOC Station P	64.16	268	P		P	06 52 59.2	+0.4
PB07					IAmb	IAmb	06 53 00.7	
	comp=Z,9.0nm,1.0s							
PB16	IPOC Station P	66.58	271	P		P	06 53 14.6	-0.4
LPAZ	La Paz	67.39	274	P		P	06 53 20.2	0.0
	comp=Z,5.9nm,0.8s,baz=139,slow=5.1,SNR=18							
	comp=Z,5.9nm,0.8s							
LPAZ	La Paz	67.39	274			P	06 53 20.6	+0.3
LPAZ					IAmb	IAmb	06 53 21.8	
	comp=Z,9.1nm,0.9s							
TORD	Torodi Ar. Bea	67.48	356	P		P	06 53 19.7	-0.2
	comp=Z,1.9nm,0.9s,baz=192,slow=5.7,SNR=7.7							
TORD				LR		LR	07 17 26.7	
	comp=Z,128nm,20.1s,baz=158,slow=31							
	comp=Z,1.9nm,0.9s							
FURI	Furi	69.07	35	LR		LR	07 22 31.7	
	comp=Z,441nm,18.8s,baz=181,slow=35							
H01W2	Cape Leeuwin H	71.97	125	T		T	08 13 34.1	
	baz=216,slow=75,SNR=19							
H01W3	Cape Leeuwin H	71.98	125	T		T	08 13 35.1	
	baz=216,slow=75,SNR=19							
H01W1	Cape Leeuwin H	71.98	125	T		T	08 13 35.2	
	baz=216,slow=75,SNR=19							
MDP	Montagnes des	76.42	300	LR		LR	07 24 02.6	
	comp=Z,204nm,19.2s,baz=121,slow=33							
RPZ	Rata Peaks	81.36	169	LR		LR	07 28 51.9	
	comp=Z,157nm,21.9s,baz=160,slow=34							
STKA	Stephens Creek	86.01	144	P		P	06 55 04.8	+0.4
	comp=Z,2.9nm,0.8s,baz=172,slow=4.7,SNR=6.2							
	comp=Z,2.9nm,0.8s							
OTAV	Otavalo	86.66	275			P	06 55 07.6	-0.8
URZ	Urewera	87.31	173	LR		LR	07 31 01.9	
	comp=Z,111nm,20.7s,baz=164,slow=33							
MDT	Midelt	87.42	352	LR		LR	07 32 06.1	
	comp=Z,173nm,18.0s,baz=192,slow=34							
EIL	Elat	87.62	25	LR		LR	07 33 24.2	
	comp=Z,438nm,18.6s,baz=184,slow=35							
ROSC	El Rosal	88.01	281	LR		LR	07 31 07.2	
	comp=Z,318nm,20.5s,baz=129,slow=33							
SDV	Santo Domingo	89.23	286	LR		LR	07 33 44.9	
	comp=Z,211nm,18.2s,baz=143,slow=35							
KEST	Kesra	89.95	3	LR		LR	07 33 04.8	
	comp=Z,85nm,19.5s,baz=328,slow=34							
ASAR	Alice Springs	90.45	134	P		P	06 55 24.8	-1.0
	comp=Z,1.4nm,0.9s,baz=205,slow=5.3,SNR=6.3							
	comp=Z,1.4nm,0.9s							
ASF	Jabal al Asfar	90.50	26	LR		LR	07 34 16.9	
	comp=Z,231nm,20.1s,baz=203,slow=34							
MMAI	Mount Meron Ar	90.92	25	LR		LR	07 35 29.8	
	comp=Z,219nm,18.4s,baz=164,slow=35							
IDI	Anoyia	91.00	16	LR		LR	07 37 13.2	
	comp=Z,113nm,19.0s,baz=183,slow=36							
ESDC	Sonseca Array	94.18	353	P		P	06 55 42.2	-0.2
ESDC					IAmb	IAmb	06 55 50.3	
	comp=Z,5.3nm,1.1s							
SJG	San Juan	94.38	295	LR		LR	07 35 08.0	
	comp=Z,109nm,18.3s,baz=218,slow=34							
RAO	Raoul Island	96.52	177	LR		LR	07 34 25.7	
	comp=Z,63nm,21.6s,baz=114,slow=32							
BRTR	Keskin Array B	96.94	22	LR		LR	07 39 29.7	
	comp=Z,116nm,21.8s,baz=139,slow=35							
TBI	Tubuai	99.51	203	*e*LR		LR	07 28 18.4	
	comp=Z,1μm,37.0s							
TBI				*e*LR		LR	07 28 23.5	
	comp=Z,902nm,31.0s							
DZM	Mont Dzumac	101.98	162	*e*LR		LR	07 29 48.8	
	comp=Z,138nm,20.8s							
PPT2	Papeete2	105.08	205	*e*LR		LR	07 30 59.8	
	comp=Z,163nm,24.8s							
PPT2				*e*LR		LR	07 31 03.8	
	comp=Z,174nm,30.2s							
BRG	Berggiesshubel	105.27	6	P		Pdif	06 56 28.1	-3.6
BRG				Amp			06 56 29.0	
	comp=Z,5.2nm,0.8s							
TAOE	Nuku Hiva Isla	110.57	217	*e*LR		LR	07 33 41.1	
	comp=Z,333nm,29.3s							
PZH	PanZhiHua	114.68	79	PKP		PKiKP	07 01 06.8	+2.5
CD2	Chengdu	119.17	77	PKP		PKiKP	07 01 13.5	+0.7
BVAR	Borovoye Array	119.88	39	PKP		PKiKP	07 01 14.6	+1.2
	comp=Z,0.6nm,0.5s,baz=211,slow=4.7,SNR=2.5							
MKAR	Makanchi Array	119.93	51	PKP		PKiKP	07 01 14.0	+0.2
	comp=Z,0.3nm,0.7s,baz=222,slow=1.9,SNR=2.8							
WMQ	Urumqi	120.23	56	*e*PKP		PKiKP	07 01 16.8	+2.3
WMQ				LR		LR		
	comp=Z,180nm,24.7s							
TXAR	Lajitas Array	124.27	274	PKP		PKPdf	07 01 22.0	-0.6
	comp=Z,0.6nm,0.9s,baz=142,slow=0.8,SNR=5.5							
NJ2	Nanjing	128.71	87	*e*P		PKiKP	07 01 32.6	+1.0
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
HHC	Hu-ho-hao-te	130.68	74	*e*P		PKPdf	07 01 31.4	-3.1
ULM	Lac du Bonnet	134.16	299	PKP		PKPdf	07 01 40.6	0.0
	comp=Z,1.5nm,0.6s,baz=104,slow=4.2,SNR=3.7							
XLT	XiLinHaoTe	135.21	74	*e*PKP		PKPdf	07 01 37.6	-5.3
PDAR	Pinedale Array	137.01	282	PKP		PKPdf	07 01 45.9	-0.6
	comp=Z,1.0nm,0.9s,baz=197,slow=1.2,SNR=4.6							
NVAR	Mina Array Bea	139.25	271	PKP		PKPdf	07 01 50.5	-0.3
	comp=Z,0.3nm,0.6s,baz=92,slow=4.6,SNR=4.2							
BNX	BinXian	142.73	79	⇑P		PKPdf	07 01 55.0	-1.5
BNX				pmax		pmax		
	comp=Z,6.0nm,2.5s							
HEH	HeiHe	145.17	73	*e*P		PKPbc	07 01 58.6	-1.6
HEH				pmax		pmax		
	comp=Z,4.0nm,1.1s							
HEH				LR		LR		
	comp=N,180nm,14.7s							
HEH				LR		LR		
	comp=E,150nm,16.6s							
HEH				LR		LR		
	comp=Z,310nm,15.1s							
YKA	Yellowknife Ar	148.80	309	PKPbc		PKPbc	07 02 09.7	-0.5
	comp=Z,5.0nm,0.8s,baz=87,slow=1.9,SNR=90							
ILAR	Eielson Array	162.84	318	PKPab		PKPab	07 03 14.4	+0.3
	comp=Z,1.7nm,0.8s,baz=47,slow=4.1,SNR=16							

IDC ***20*** *06:59:32.2±4.2,0.76N×97.19E,h0km,mb3.6/4, mbtmp3.6/4,MS4.0/6,Error ellipse: s-maj=170.8km s-min=25.0km az=59.0*

DJA ***20*** *06:59:36.1±0.8,1.1N±4.4×9.7E±.1,h20km±3km,M4.0/13, MLv4.0/13*

ISC 20 06:59:36.0±1.4,0.82N±0.09×97.2E±0.1,h25km,n27, σ0§68/10,mb3.6/4,MS4.3/5,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GSI	Gunungsitoli	0.64	41	P		Pb	06 59 49.1	+0.5
PBSI	Pulau Batu	1.42	128	P		Pn	07 00 00.5	+0.3
PBSI				S		Sn	07 00 18.0	-0.1
MNSI	Mandailing Nat	2.42	90	P		Pn	07 00 14.5	+0.5
MNSI				S		Sn	07 00 42.2	-0.7
KCSI	Kotacane, Aceh	2.76	13	P		Pn	07 00 18.3	-0.3
PPI	Padang Panjang	3.48	111	P		Pb	07 00 43.4	+6.5
CMAR	Chiang Mai Arr	17.62	6	LR		LR	07 11 12.5	
	comp=Z,61nm,18.5s,baz=100,slow=40							
H08S2	Diego Garcia H	25.99	251	T		T	07 32 03.9	
	baz=72,slow=76,SNR=68							
H08S3	Diego Garcia H	26.00	251	T		T	07 32 04.2	
	baz=72,slow=76,SNR=422							
H08S1	Diego Garcia H	26.01	251	T		T	07 32 06.7	
	baz=72,slow=76,SNR=46							
H01W3	Cape Leeuwin H	38.91	158	T		T	07 48 08.9	
	baz=333,slow=76,SNR=4.6							
H01W2	Cape Leeuwin H	38.92	158	T		T	07 48 12.8	
	baz=333,slow=76,SNR=4.9							
H01W1	Cape Leeuwin H	38.93	158	T		T	07 48 14.6	
	baz=333,slow=76,SNR=4.6							
WRA	Warramunga Arr	41.87	122	P		P	07 07 23.2	-1.3
	0.6nm,0.8s,baz=298,slow=8.1,SNR=3.9							
	0.6nm,0.8s							
ASAR	Alice Springs	43.20	127	P		P	07 07 35.2	-0.2
	0.8nm,0.6s,baz=298,slow=8.2,SNR=10							
	0.8nm,0.6s							
SONM	Songino Array	47.51	8	P		P	07 08 09.5	+0.3
	0.3nm,0.5s,baz=187,slow=11,SNR=2.2							
	0.3nm,0.5s							
MKAR	Makanchi Array	47.60	346	P		P	07 08 10.2	+0.4
	0.4nm,0.4s,baz=160,slow=8.8,SNR=8.6							
	0.4nm,0.4s							
JCJ	Chichijima	50.48	55	LR		LR	07 31 12.2	
	comp=Z,69nm,18.1s,baz=119,slow=38							
H04N2	CROZET ISLANDS	61.43	214	T		T	08 16 27.7	
	baz=54,slow=75,SNR=355							
H04N1	CROZET ISLANDS	61.45	214	T		T	08 16 28.4	
	baz=54,slow=75,SNR=314							
H04N3	CROZET ISLANDS	61.45	214	T		T	08 16 29.9	
	baz=54,slow=75,SNR=291							
GNI	Garni	61.54	316	LR		LR	07 40 48.3	
	comp=Z,167nm,19.6s,baz=200,slow=40							
H04S1	CROZET ISLANDS	61.77	214	T		T	08 16 54.4	
	baz=53,slow=75,SNR=8.3							
H04S3	CROZET ISLANDS	61.78	214	T		T	08 16 49.6	
	baz=53,slow=75,SNR=10							
H04S2	CROZET ISLANDS	61.79	214	T		T	08 16 57.1	
	baz=53,slow=75,SNR=8.5							
KBZ	Khabaz	64.33	319	LR		LR	07 41 10.6	
	comp=Z,194nm,21.3s,baz=206,slow=39							
TSUM	Tsumeb	80.42	250	LR		LR	07 46 17.0	
	comp=Z,212nm,18.4s,baz=150,slow=35							
ARCES	ARCESS Array B	82.88	340	LR		LR	07 52 24.7	
	comp=Z,173nm,19.0s,baz=46,slow=38							

MDD 20 07:01:42.3±0.3,40.02N×0.55W,h18km±7km,mb_Lg2.0/9, Error ellipse: s-maj=4.0km s-min=2.1km az=145.0, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EMOS	Mosqueruela	0.35	10	Pg		Pg	07 01 49.0	-0.9
EMOS				Sg		Sg	07 01 54.0	-1.1
ECHE	Chera	0.53	217	Pg		Pg	07 01 52.5	-0.5
ECHE				Sg		Sg	07 01 58.7	-1.5
ECHE				*i* IVmb_Lg			07 02 06.6	
E0901	Celadas (Terue	0.64	317	Pg		Pg	07 01 53.5	-1.5
E0901				Sg		Sg	07 02 01.1	-2.6
EVIV	Cofrentes, Val	0.87	211	Pg		Pg	07 01 59.1	-0.1
EVIV				Sg		Sb	07 02 08.1	-2.0
ECOL	Islas Columbre	0.96	97	Pg		Pn	07 02 00.7	-0.2
ECOL				Sg		Sg	07 02 13.4	-0.1
ERTA	Horta de San J	1.16	35	Pg		Pg	07 02 04.3	-0.4
ERTA				Sg		Sb	07 02 18.4	-0.1
ETOR	Torete	1.40	305	Pg		Pb	07 02 08.1	+0.1
ETOB	Tobarra	1.57	210	Sg		Sb	07 02 30.5	0.0
EIBI	Ibiza	1.77	123	Pn		Pn	07 02 10.9	-1.1
EIBI				Sn		Sn	07 02 30.0	-3.2
EIBI				*i* IVmb_Lg			07 03 24.0	
EPOB	Poblet	1.82	42	Pg		Pb	07 02 14.6	-0.6
EPOB				Sg		Sb	07 02 37.6	-0.1

IDC ***20*** *07:12:04.6±1.6,26.85N×143.60E,h0km,mb3.5/5, mbtmp3.5/6,ML3.3/1,Error ellipse: s-maj=36.8km s-min=21.5km az=57.0*

ISC 20 07:12:09.2±1.4,27.0N±0.1×143.6E±0.1,h35km,n7, σ1§11/8,mb3.6/5,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCJ	Chichijima	1.31	277	Pn		Pn	07 12 30.2	-0.8
	7.9nm,0.3s,baz=320,slow=23,SNR=14							
JCJ				Sn		Sn	07 12 47.7	+0.5
	28nm,0.3s,baz=274,slow=22,SNR=8.6							
MJAR	Matsushiro Arr	10.62	336	Pn		Pn	07 14 37.6	-1.2
	0.2nm,0.3s,baz=163,slow=11,SNR=6.3							
	1.0nm,0.4s							
WRA	Warramunga Arr	47.48	192	P		P	07 20 40.4	-0.5
	0.7nm,0.7s,baz=15,slow=8.2,SNR=5.5							
	0.7nm,0.7s							
ASAR	Alice Springs	51.20	191	P		P	07 21 08.8	-0.4
	0.4nm,0.9s,baz=8.7,slow=7.8,SNR=3.5							
	0.4nm,0.9s							
MKAR	Makanchi Array	51.57	310	P		P	07 21 13.0	+1.2
	0.2nm,0.5s,baz=92,slow=6.1,SNR=3.7							
	0.2nm,0.5s							
KURBB	Kurchatov Arra	54.07	314	P		P	07 21 31.5	+1.3
	0.3nm,0.4s,baz=92,slow=8.6,SNR=7.2							
	0.3nm,0.4s							
BVAR	Borovoye Array	59.03	318	P		P	07 22 06.0	+0.6
	0.3nm,0.4s,baz=89,slow=4.4,SNR=2.4							
	0.3nm,0.4s							

TAP ***20*** *07:18:01.8,24.06N×122.77E,h22km,ML4.5,D*
JMA ***20*** *07:18:02.0±0.2,24.1N±1.1×122.8E±0.6,h27km±3km, MD4.2/14,MV4.1/14,NW OFF ISHIGAKIJIMA IS*
JMA Felt I J1 at NW OFF ISHIGAKIJIMA IS .
IDC ***20*** *07:18:06.2±3.0,24.22N×122.91E,h70km±30km,mb3.5/10, mbtmp3.8/11,MS3.6/1,Error ellipse: s-maj=18.7km s-min=16.2km az=59.0*

ISC 20 07:17:58.5±1.0,23.88N±0.02×122.87E±0.02,h17km±7km, n195,σ1§18/331,mb3.7/9,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EOS4	EOS4	0.56	296	*e*P		Pg	07 18 10.7	+1.1
EOS4				*e*S		Sg	07 18 15.6	-1.4
JYNG	Yonagunijimaku	0.58	7	P		Pb	07 18 10.7	+0.5
JYNG				A		A	07 18 10.7	
	comp=N,71nm,0.4s,comp=E,25nm,0.7s

NTC	**Toucheng**	**1.36**	**316**	P		**Pn**	07 18 23.4	**+0.6**	**WGK**	**Gukeng**	**2.12**	**265**	*e*P		**Pb**	07 18 35.3	**-1.2**
NTC				*e*S		**Sn**	07 18 39.2	**-1.2**	WGK				*e*S		**Sb**	07 19 03.4	**+0.8**
WARBT	**Fenglin Townsh**	**1.37**	**264**	P		**Pb**	07 18 23.8	**+0.1**	**WCHH**	**Zhanghua**	**2.12**	**276**	P		**Pb**	07 18 36.9	**+0.3**
WARBT				*e*S		**Sn**	07 18 39.5	**-1.0**	WCHH				S		**Sb**	07 19 03.1	**+0.5**
HGSD	**Ruisui**	**1.38**	**254**	*i* P		**Pb**	07 18 24.0	**+0.2**	**TPUB**	**Ta-pu**	**2.13**	**255**	P		**Pb**	07 18 36.9	**+0.2**
HGSD				*e*S		**Sb**	07 18 42.1	**+1.0**	**TPUB**	**Ta-pu**	**2.13**	**255**	S		**Sb**	07 19 02.5	**-0.4**
TWE	**Neicheng**	**1.38**	**308**	*i* P		**Pb**	07 18 24.1	**+0.2**	**TPUB**	**Ta-pu**	**2.13**	**255**	P		**Pb**	07 18 37.1	**+0.4**
TWE				S		**Sn**	07 18 39.7	**-1.2**	TPUB				*e*S		**Sb**	07 19 03.6	**+0.7**
TWB1	**Santiao Chiao**	**1.38**	**325**	P		**Pn**	07 18 23.3	**+0.2**	**WCH1**	**Changhua City**	**2.13**	**276**	*e*P		**Pb**	07 18 37.3	**+0.6**
TWB1				*e*S		**Sn**	07 18 37.1	**-3.9**	WCH1				*e*S		**Sb**	07 19 02.7	**-0.1**
LATG	**Datong**	**1.39**	**298**	*i* P		**Pb**	07 18 24.7	**+0.6**	**WDL**	**Douliou City**	**2.14**	**266**	*e*P		**Pg**	07 18 38.9	**-0.7**
LATG				S		**Sn**	07 18 40.9	**-0.4**	WDL				*e*S		**Sb**	07 19 03.9	**+0.9**
ENTT	**Nioudou**	**1.41**	**303**	P		**Pb**	07 18 24.8	**+0.4**	**WDLH**	**Douliu**	**2.14**	**266**	P		**Pb**	07 18 37.4	**+0.5**
ENTT				*e*S		**Sn**	07 18 41.7	**0.0**	WDLH				*e*S		**Sb**	07 19 04.1	**+0.9**
ECBN	**Changbin**	**1.41**	**247**	P		**Pg**	07 18 25.1	**-0.7**	**WTP**	**Ta-pu**	**2.16**	**254**	P		**Pb**	07 18 37.6	**+0.4**
ECBN				S		**Sb**	07 18 42.4	**+0.2**	WTP				*e*S		**Sb**	07 19 04.7	**+0.9**
NDT	**Datong Townshi**	**1.43**	**301**	P		**Pb**	07 18 25.6	**+0.8**	**ECL**	**Taimali**	**2.17**	**235**	*e*P		**Pb**	07 18 35.6	**-1.8**
NDT				S		**Sn**	07 18 42.1	**-0.1**	**LAY**	**Lan-yu**	**2.19**	**214**	*e*P		**Pb**	07 18 36.2	**-1.6**
EHYH	**Wanrong**	**1.45**	**255**	*i* P		**Pg**	07 18 25.7	**-0.7**	LAY				*e*S		**Sn**	07 19 01.4	**+0.4**
EHYH				S		**Sb**	07 18 44.2	**+1.1**	**LYUB**	**Lan-yu**	**2.21**	**213**	*i* P		**Pb**	07 18 36.1	**-1.9**
TIPB	**Shuangxi**	**1.45**	**319**	P		**Pn**	07 18 24.4	**+0.5**	LYUB				S		**Sn**	07 19 01.6	**+0.3**
TIPB				S		**Sn**	07 18 40.7	**-1.9**	**CHN2**	**Minshiung**	**2.22**	**262**	*e*P		**Pb**	07 18 39.4	**+1.2**
FUSB	**Fushanzhiwuyua**	**1.46**	**307**	P		**Pb**	07 18 25.7	**+0.3**	CHN2				*e*S		**Sb**	07 19 06.5	**+1.2**
FUSB				S		**Sn**	07 18 42.5	**-0.6**	**SLGT**	**Liugui**	**2.22**	**247**	*e*P		**Pb**	07 18 38.6	**+0.3**
EHY	**Hungye**	**1.46**	**256**	P		**Pb**	07 18 25.7	**+0.4**	SLGT				*e*S		**Sb**	07 19 05.5	**0.0**
EHY				S		**Sb**	07 18 43.9	**+0.3**	**SGST**	**Jiashian**	**2.24**	**250**	P		**Pb**	07 18 39.0	**+0.4**
NNSB	**Datong**	**1.46**	**292**	*i* P		**Pb**	07 18 25.6	**+0.3**	SGST				S		**Sb**	07 19 07.8	**+1.7**
NNSB				S		**Sb**	07 18 44.4	**+0.6**	**CHN1**	**Nanshi**	**2.25**	**253**	P		**Pb**	07 18 39.6	**+0.7**
NNS	**Nan Shan**	**1.48**	**293**	P		**Pb**	07 18 25.9	**+0.3**	CHN1				S		**Sb**	07 19 07.3	**+0.8**
NNS				S		**Sn**	07 18 44.0	**+0.6**	**TWK**	**Hsinying**	**2.27**	**255**	P		**Pb**	07 18 39.3	**+0.3**
WHF	**Hehuan Shan**	**1.49**	**281**	P		**Pb**	07 18 26.3	**+0.2**	TWK				S		**Sb**	07 19 07.0	**+0.2**
WHF				S		**Sn**	07 18 44.8	**+0.6**	**SNST**	**Tainan City**	**2.27**	**254**	*e*P		**Pg**	07 18 41.3	**-0.1**
JISG	**Ishigakijimahi**	**1.50**	**61**	*i* P		**Pg**	07 18 27.0	**-0.4**	**CHY**	**Chiayi**	**2.27**	**261**	P		**Pb**	07 18 39.3	**+0.2**
CHKH	**Chenggong**	**1.51**	**244**	P		**Pb**	07 18 26.1	**-0.1**	CHY				S		**Sb**	07 19 06.7	**-0.2**
CHKH				*e*S		**Sn**	07 18 44.0	**-0.1**	**WTK**	**Tuku**	**2.28**	**266**	P		**Pb**	07 18 40.0	**+0.8**
SXI1	**Grass Mountain**	**1.51**	**324**	*i* P		**Pn**	07 18 25.2	**+0.2**	WTK				*e*S		**Sb**	07 19 08.2	**+1.1**
SXI1				*i* S		**Sn**	07 18 42.4	**-1.9**	**WRL**	**Guolierlin Hig**	**2.28**	**271**	P		**Pb**	07 18 39.0	**-0.2**
EYUL	**Yuli**	**1.52**	**250**	*e*P		**Pg**	07 18 26.9	**-0.9**	WRL				S		**Sb**	07 19 06.5	**-0.6**
YULB	**Yu-li**	**1.52**	**252**	P		**Pb**	07 18 26.6	**+0.4**	**RLNB**	**Erlin**	**2.30**	**271**	P		**Pb**	07 18 39.4	**-0.1**
YULB	**Yu-li**	**1.52**	**252**	S		**Sb**	07 18 45.8	**+0.6**	RLNB				S		**Sb**	07 19 07.9	**+0.3**
YULB	**Yu-li**	**1.52**	**252**	P		**Pb**	07 18 26.7	**+0.5**	**SSD**	**Sandimen**	**2.34**	**242**	*e*P		**Pb**	07 18 40.5	**+0.2**
YULB				S		**Sb**	07 18 45.2	**0.0**	SSD				*e*S		**Sb**	07 19 08.0	**-0.9**
FUSS	**Fushou**	**1.53**	**284**	P		**Pb**	07 18 27.2	**+0.6**	**TSMG**	**Majia**	**2.35**	**241**	*e*P		**Pg**	07 18 41.6	**-2.1**
FUSS				*e*S		**Sn**	07 18 45.9	**+0.9**	TSMG				*e*S		**Sb**	07 19 06.9	**-2.3**
TWF1	**Yuli**	**1.53**	**250**	P		**Pb**	07 18 26.9	**+0.4**	**WTCT**	**Ta-ch'eng**	**2.37**	**270**	*e*S		**Sn**	07 19 07.7	**+2.4**
TWF1				*e*S		**Sg**	07 18 46.8	**-1.2**	**EAST**	**Anshuo**	**2.38**	**232**	P		**Pb**	07 18 39.2	**-1.8**
NWLT	**Wulai**	**1.54**	**306**	*i* P		**Pb**	07 18 27.1	**+0.5**	EAST				*e*S		**Sb**	07 19 07.7	**-2.3**
NWLT				S		**Sn**	07 18 44.7	**-0.1**	**JMJ**	**Miyako jima 2**	**2.40**	**67**	P		**Pb**	07 18 41.1	**-0.2**
NWF	**Wu-fen Shan**	**1.55**	**320**	P		**Pn**	07 18 26.0	**+0.6**	**MASBT**	**Mashibuluo**	**2.41**	**239**	P		**Pb**	07 18 40.2	**-1.2**
NWF				*e*S		**Sn**	07 18 44.0	**-1.1**	MASBT				*e*S		**Sb**	07 19 09.9	**-1.0**
WFSB	**Wu-fen Shan**	**1.55**	**320**	*i* P		**Sn**	07 18 25.9	**+0.6**	**CHN3**	**Shinhua**	**2.43**	**251**	*e*S		**Sb**	07 19 13.4	**+1.9**
WFSB				S		**Sn**	07 18 43.1	**-1.9**	**WSF**	**Szhu**	**2.44**	**265**	*e*P		**Pb**	07 18 41.7	**-0.2**
OWD	**Renai**	**1.55**	**273**	*i* P		**Pb**	07 18 27.0	**+0.1**	WSF				*e*S		**Sb**	07 19 11.5	**-0.1**
OWD				S		**Sn**	07 18 45.4	**+0.1**	**WSL**	**Shuilin Townsh**	**2.44**	**262**	P		**Pb**	07 18 41.2	**-0.8**
YHNB	**Yeheng**	**1.57**	**300**	P		**Pb**	07 18 27.6	**+0.3**	WSL				S		**Sb**	07 19 11.3	**-0.6**
YHNB	**Yeheng**	**1.57**	**300**	S		**Sn**	07 18 46.8	**+1.0**	**TWM1**	**Shoushan**	**2.48**	**246**	*e*P		**Pb**	07 18 44.0	**+1.4**
YHNB	**Yeheng**	**1.57**	**300**	P		**Pb**	07 18 27.5	**+0.2**	TWM1				*e*S		**Sg**	07 19 17.7	**-0.6**
YHNB				S		**Sn**	07 18 46.2	**+0.5**	**SSHA**	**Shanhua**	**2.48**	**253**	*e*S		**Sb**	07 19 14.4	**+1.5**
CHKT	**Chengkung**	**1.58**	**241**	P		**Pb**	07 18 27.1	**-0.2**	**CHN8**	**Yiju**	**2.49**	**258**	S		**Sb**	07 19 12.5	**-0.8**
CHKT				S		**Sn**	07 18 45.8	**0.0**	**SLIU**	**Shizi**	**2.52**	**230**	P		**Pb**	07 18 41.5	**-1.8**
VWDT	**VWDT**	**1.59**	**266**	*i* P		**Pb**	07 18 27.8	**+0.4**	SLIU				*e*S		**Sb**	07 19 11.7	**-2.4**
VWDT				S		**Sb**	07 18 47.3	**+0.1**	**SSPT**	**Xinbi**	**2.53**	**237**	*e*P		**Pb**	07 18 43.2	**-0.3**
NSK	**Sanguang**	**1.59**	**300**	*e*P		**Pb**	07 18 27.7	**+0.2**	SSPT				*e*S		**Sb**	07 19 13.0	**-1.3**
NSK				S		**Sn**	07 18 46.5	**+0.3**	**SCLT**	**Jiali**	**2.55**	**255**	*e*S		**Sb**	07 19 13.8	**-1.2**
TWT	**Tachien**	**1.59**	**284**	P		**Pb**	07 18 28.4	**+0.8**	**SCZT**	**Fangliau**	**2.55**	**235**	*e*P		**Pb**	07 18 42.7	**-1.2**
TWT				*e*S		**Sn**	07 18 46.4	**0.0**	SCZT				*e*S		**Sb**	07 19 14.4	**-0.6**
FULB	**Fuli**	**1.59**	**245**	P		**Pb**	07 18 27.4	**-0.1**	**SMST**	**Manzhou Townsh**	**2.63**	**226**	*e*P		**Pb**	07 18 43.5	**-1.7**
FULB				*e*S		**Sb**	07 18 47.5	**+0.1**	SMST				*e*S		**Sn**	07 19 15.5	**+1.8**
WUSB	**Renai**	**1.61**	**275**	*i* P		**Pb**	07 18 27.9	**+0.1**	**TSCK**	**Chigu Township**	**2.65**	**255**	P		**Pb**	07 18 44.3	**-1.3**
WUSB				S		**Sb**	07 18 47.9	**0.0**	TSCK				*e*S		**Sb**	07 19 16.0	**-1.9**
TDCB	**Techi**	**1.61**	**284**	*e*P		**Pb**	07 18 28.3	**+0.5**	**TSEB**	**Hengchuen, Pin**	**2.67**	**223**	*e*P		**Pb**	07 18 46.6	**+0.7**
TDCB				S		**Sn**	07 18 48.0	**+1.3**	TSEB				*e*S		**Sb**	07 19 17.8	**-0.7**
TWA	**Mucha**	**1.61**	**313**	P		**Pn**	07 18 27.3	**+1.1**	**KAU**	**Kaohsiung**	**2.69**	**242**	*e*P		**Pb**	07 18 44.5	**-1.8**
TWA				S		**Sn**	07 18 46.1	**-0.4**	**TWKBT**	**Hengchun**	**2.70**	**225**	*e*P		**Pb**	07 18 44.8	**-1.6**
TNOU	**National Taiwa**	**1.61**	**322**	*i* P		**Pn**	07 18 26.6	**+0.3**	TWKBT				*e*S		**Sb**	07 19 16.9	**-2.3**
TNOU				S		**Sn**	07 18 44.5	**-2.2**	**TWK1**	**Hengchun**	**2.70**	**225**	*e*P		**Pb**	07 18 45.7	**-0.7**
NHDH	**Xindian Distri**	**1.64**	**312**	*e*P		**Pb**	07 18 29.3	**+1.1**	TWK1				*e*S		**Sb**	07 19 17.0	**-2.3**
NHDH				*e*S		**Sn**	07 18 47.1	**0.0**	**HEN**	**Hengchun**	**2.71**	**227**	*e*P		**Pb**	07 18 47.5	**+1.0**
NHY	**Taipei**	**1.66**	**315**	*e*P		**Pn**	07 18 27.9	**+1.1**	HEN				*e*S		**Sb**	07 19 17.0	**-2.4**
NHY				*e*S		**Sn**	07 18 45.9	**-1.8**	**WLCH**	**Liuqiu**	**2.75**	**237**	*e*P		**Pb**	07 18 46.2	**-1.0**
TATO	**Taipei**	**1.67**	**311**	P		**Pb**	07 18 29.5	**+0.7**	WLCH				*e*S		**Sg**	07 19 23.7	**-3.2**
TATO	**Taipei**	**1.67**	**311**	S		**Sn**	07 18 49.5	**+1.5**	**TWP**	**Hsiaoliuchiu**	**2.76**	**237**	*e*P		**Pg**	07 18 50.4	**-1.1**
TAP	**Taipei**	**1.70**	**313**	*e*S		**Sn**	07 18 48.5	**-0.2**	TWP				*e*S		**Sg**	07 19 25.0	**-2.4**
ECS	**Chishang**	**1.70**	**243**	*e*P		**Pg**	07 18 31.5	**+0.3**	**WDGT**	**Dungji**	**3.01**	**259**	*e*P		**Pb**	07 18 48.6	**-3.1**
ECS				*e*S		**Sg**	07 18 52.2	**-1.2**	WDGT				*e*S		**Sn**	07 19 23.2	**+2.2**
YM01	**YM01**	**1.73**	**317**	*i* P		**Pn**	07 18 28.9	**+1.0**	**PHUB**	**P'eng-hu**	**3.04**	**264**	P		**Pn**	07 18 49.9	**+3.0**
YM01				S		**Sn**	07 18 48.8	**-0.8**	PHUB				S		**Sn**	07 19 24.0	**+2.1**
YM08	**YM08**	**1.75**	**319**	*e*P		**Pb**	07 18 29.6	**-0.6**	**PNG**	**Penghu**	**3.05**	**265**	*i* P		**Pn**	07 18 48.8	**+2.8**
SSLB	**Suanglung**	**1.75**	**268**	P		**Pb**	07 18 30.1	**-0.2**	PNG				S		**Sn**	07 19 24.0	**+1.9**
SSLB	**Suanglung**	**1.75**	**268**	S		**Sb**	07 18 53.4	**+1.3**	**VCHM**	**Qimei**	**3.22**	**259**	P		**Pn**	07 18 51.2	**+2.9**
SSLB	**Suanglung**	**1.75**	**268**	*e*P		**Pb**	07 18 30.2	**-0.1**	VCHM				S		**Sn**	07 19 28.3	**+1.9**
LDUT	**Ludao**	**1.76**	**227**	P		**Pb**	07 18 30.0	**-0.3**	**VWUC**	**VWUC**	**3.31**	**290**	*e*S		**Sn**	07 19 27.9	**-0.5**
LDUT				S		**Sb**	07 18 50.9	**-1.2**	**MATB**	**Ma-tsu**	**3.49**	**311**	P		**Pn**	07 18 52.8	**+0.8**
ZUZH	**Zhuzihu**	**1.76**	**317**	P		**Pn**	07 18 28.8	**+0.5**	**PTMZ**	**Houxiangcun**	**3.61**	**290**	*e*P		**Pn**	07 18 54.6	**+1.0**
ZUZH				*e*S		**Sn**	07 18 48.4	**-1.9**	PTMZ				*e*S		**Sn**	07 19 33.4	**-2.4**
NFF	**Wufeng Townshi**	**1.77**	**296**	P		**Pb**	07 18 30.9	**+0.4**	**LYJJ**	**Jianjiangzhen**	**3.88**	**314**	P		**Pn**	07 18 58.5	**+1.1**
NFF				*e*S		**Sb**	07 18 52.9	**+0.5**	LYJJ				*e*S		**Sn**	07 19 40.7	**-1.7**
KSHI	**Guanxi Townshi**	**1.79**	**301**	P		**Pb**	07 18 31.4	**+0.6**	**XPSS**	**Dashiqiu**	**3.89**	**322**	*e*P		**Pn**	07 18 57.8	**+0.3**
KSHI				S		**Sb**	07 18 53.0	**+0.1**	XPSS				*e*S		**Sn**	07 19 39.4	**-3.4**
ANP	**Anpu**	**1.79**	**317**	*e*P		**Pb**	07 18 31.1	**+0.2**	**KNM**	**Kinmen**	**4.09**	**278**	P		**Pn**	07 19 03.6	**+3.4**
TWS1	**Kuangyinshan**	**1.80**	**313**	*e*P		**Pb**	07 18 31.4	**+0.4**	KNM				*e*S		**Sn**	07 19 48.8	**+1.1**
TWS1				*e*S		**Sn**	07 18 51.8	**+0.6**	**MHZQ**	**Yeshan**	**4.13**	**303**	*e*P		**Pn**	07 19 01.2	**+0.9**
WCS	**Beigang Elemen**	**1.80**	**276**	*e*P		**Pb**	07 18 31.1	**-0.1**	**KNMB**	**Chin-men Tao**	**4.13**	**279**	P		**Pn**	07 19 02.2	**+1.3**
WCS				*e*S		**Sn**	07 18 52.0	**+0.8**	KNMB				*e*S		**Sn**	07 19 48.9	**0.0**
SMLT	**Sun Moon Lake**	**1.80**	**271**	P		**Pb**	07 18 31.1	**-0.1**	**AXDP**	**Jialang**	**4.58**	**284**	*e*P		**Pn**	07 19 08.6	**+1.5**
SMLT				*e*S		**Sb**	07 18 53.2	**-0.3**	AXDP				*e*S		**Sn**	07 20 00.2	**+0.3**
TWY	**Chenhua**	**1.81**	**321**	*e*P		**Pn**	07 18 29.9	**+1.0**	**ZPLA**	**Ao Xicun**	**4.68**	**272**	*e*P		**Pn**	07 19 10.6	**+2.2**
TWY				S		**Sn**	07 18 50.7	**-0.8**	**DSXP**	**Dongshan**	**4.99**	**269**	*e*P		**Pn**	07 19 15.6	**+3.0**
NTST	**Danshui**	**1.82**	**315**	*e*P		**Pn**	07 18 29.7	**+0.6**	DSXP				*e*S		**Sn**	07 20 08.0	**-1.9**
ELDTW	**Lidau**	**1.83**	**248**	*e*P		**Pb**	07 18 31.0	**-0.6**	**SXFK**	**Yanhouchang**	**5.36**	**299**	*e*P		**Pn**	07 19 19.4	**+1.6**
ELDTW				*e*S		**Sn**	07 18 52.9	**+0.7**	**JOW**	**Kunigami**	**5.71**	**58**	P		**Pn**	07 19 24.4	**+1.8**
JTJ	**Tarama**	**1.84**	**65**	P		**Pg**	07 18 32.6	**-1.3**	comp=E,15nm,0.3s,baz=178,slow=11,SNR=14									
JTJ				A		A	07 18 32.6		JOW				S		**Sn**	07 20 29.2	**+1.5**
comp=N,8.0nm,1.2s,comp=E,8.0nm,1.3s									comp=E,6.3nm,0.3s,baz=198,slow=19,SNR=0.9									
TYC	**Yuchr**	**1.84**	**271**	*e*P		**Pb**	07 18 31.6	**-0.1**	**JOW**	**Kunigami**	**5.71**	**58**	P		**Pn**	07 19 24.4	**+1.8**
WHYT	**Xinyi Township**	**1.85**	**265**	*e*P		**Pb**	07 18 32.3	**+0.3**	**KSRS**	**Korea Array**	**14.21**	**17**	P		**P**	07 21 22.6	**-3.7**
WHYT				*e*S		**Sg**	07 18 57.2	**-1.1**	comp=E,5.4nm,0.6s,baz=200,slow=12,SNR=22									
LIOB	**Emei**	**1.86**	**295**	P		**Pb**	07 18 32.4	**+0.3**	**MJAR**	**Matsushiro Arr**	**18.28**	**43**	LR		LR	07 29 45.2		
LIOB				*e*S		**Sb**	07 18 55.7	**+0.7**	comp=E,190nm,18.2s,baz=220,slow=39									
NSTT	**Nanjuang**	**1.86**	**294**	*i* P		**Pb**	07 18 32.3	**+0.2**	**LZDM**	**Lanzhou Array**	**20.48**	**310**	P		**P**	07 22 36.8	**+0.9**
NSTT				S		**Sn**	07 18 54.3	**+1.5**	comp=E,0.8nm,0.3s,baz=137,slow=8.9,SNR=3.8									
LONT	**Longtian**	**1.86**	**239**	*e*P		**Pb**	07 18 32.3	**+0.1**	comp=E,0.8nm,0.3s									
LONT				*e*S		**Sb**	07 18 55.8	**+0.6**	**CMAR**	**Chiang Mai Arr**	**22.94**	**261**	P		**P**	07 23 06.1	**+4.0**
NCU	**National Centr**	**1.88**	**306**	P		**Pb**	07 18 31.9	**-0.5**	comp=E,0.9nm,0.3s,baz=71,slow=9.4,SNR=5.9									
NCU				*e*S		**Sn**	07 18 53.8	**+0.6**	comp=E,0.9nm,0.3s									
NCUH	**Zhongli**	**1.88**	**306**	P		**Pb**	07 18 33.1	**+0.6**	**SONM**	**Songino Array**	**27.27**	**335**	P		**P**	07 23 41.2	**-0.8**
NCUH				*e*S		**Sn**	07 18 54.9	**+1.6**	comp=E,1.0nm,0.6s,baz=148,slow=8.7,SNR=3.7									
PCYT	**Pengchaiyu**	**1.89**	**338**	P		**Pn**	07 18 31.1	**+1.0**	comp=E,1.0nm,0.6s									
PCYT				S		**Sn**	07 18 51.8	**-1.7**	**MKAR**	**Makanchi Array**	**39.63**	**316**	P		**P**	07 25 29.0	**-0.3**
ALS	**Alishan**	**1.93**	**260**	*i* P		**Pb**	07 18 33.5	**+0.1**	comp=E,1.0nm,0.7s,baz=106,slow=10,SNR=11									
ALS				*e*S		**Sn**	07 18 54.5	**-0.3**	comp=E,1.0nm,0.7s									
TTN	**Taitung**	**1.94**	**235**	*e*P		**Pb**	07 18 33.5	**+0.2**	**KURBB**	**Kurchatov Arra**	**43.34**	**320**	P		**P**	07 25 58.8	**-0.8**
TTN				*e*S		**Sb**	07 18 57.8	**+0.6**	comp=E,0.3nm,0.5s,baz=108,slow=8.9,SNR=1.5									
SBCB	**Hsinchu**	**1.94**	**298**	P		**Pg**	07 18 35.6	**-0.3**	comp=E,0.3nm,0.5s									
SBCB				*e*S		**Sn**	07 18 56.5	**+1.7**	**WRA**	**Warramunga Arr**	**44.97**	**165**	P		**P**	07 26 16.2	**+3.2**
TWGBT	**Beinan**	**1.95**	**238**	P		**Pb**	07 18 32.7	**-0.9**	comp=E,2.1nm,0.8s,baz=346,slow=8.5,SNR=9.3									
TWGBT	**Beinan**	**1.95**	**238**	S		**Sb**	07 18 58.0	**+0.3**	comp=E,2.1nm,0.8s									
TWGBT	**Beinan**	**1.95**	**238**	P		**Pb**	07 18 32.9	**-0.7**	**ASAR**	**Alice Springs**	**48.46**	**166**	P		P	07 26 44.9	+4.6
TWGBT				*e*S		**Sb**	07 18 57.9	**+0.3**	comp=E,1.3nm,0.5s,baz=347,slow=7.2,SNR=24									
TWG	**Pinlang**	**1.96**	**238**	*i* P		**Pb**	07 18 33.0	**-0.8**	comp=E,1.3nm,0.5s									
TWG				S		**Sb**	07 18 57.6	**-0.2**	**ILAR**	**Eielson Array**	**68.78**	**27**	P		**P**	07 28 59.9	**-1.5**
HSN	**Hsinchu**	**1.96**	**298**	*e*P		**Pn**	07 18 31.4	**+0.4**	comp=E,0.2nm,0.5s,baz=274,slow=5.3,SNR=8.3									
HSN				*e*S		**Sn**	07 18 53.7	**-1.5**	comp=E,0.2nm,0.5s									
TWQ1	**Liyutan**	**1.97**	**284**	*i* P		**Pb**	07 18 34.3	**+0.3**	**FINES**	**FINESS Array B**	**72.48**	**330**	P		**P**	07 29 24.0	**0.0**
TWQ1				S		**Sb**	07 18 59.0	**+0.7**	comp=E,2.1nm,0.8s,baz=72,slow=6.2,SNR=3.4									
WNT	**Mingjian**	**2.00**	**271**	P		**Pb**	07 18 35.3	**+0.8**	comp=E,2.1nm,0.8s									
WNT				S		**Sb**	07 18 59.7	**+0.6**	**YKA**	**Yellowknife Ar**	**82.65**	**23**	P		**P**	07 30 20.4	**-0.3**
NMLH	**Miaoli**	**2.01**	**290**	*e*P		**Pb**	07 18 34.9	**+0.3**	comp=E,0.5nm,0.8s,baz=312,slow=6.3,SNR=8.0									
NMLH				*e*S		**Sn**	07 18 58.3	**+1.9**	comp=E,0.5nm,0.8s									
TCU	**Taichung**	**2.02**	**278**	P		**Pb**	07 18 35.4	**+0.5**										
TCU				S		**Sb**	07 19 00.2	**+0.5**										
CHN5	**Tsauling**	**2.03**	**263**	*i* P		**Pb**	07 18 35.4	**+0.5**										
CHN5				*e*S		**Sb**	07 18 59.9	**0.0**										
STYH	**Taoyuan**	**2.04**	**250**	P		**Pb**	07 18 35.0	**-0.3**										
STYH				S		**Sb**	07 19 00.2	**-0.1**										
WDJ	**Dajia District**	**2.09**	**283**	*e*P		**Pb**	07 18 35.5	**-0.5**										
WDJ				*e*S		**Sb**	07 19 01.5	**-0.1**										
WCKO	**Fanlu**	**2.12**	**259**	P		**Pb**	07 18 37.6	**+1.0**										
WCKO				*e*S		**Sb**	07 19 03.7	**+1.1**										

*IDC **20** 07:21:46.7±1.4, 16°.02S×177°.66E, h0km, mb3.9/7, mbtmp3.9/7, MS3.5/10, Error ellipse: s-maj=100.6km s-min=20.7km az=149.0*

ISC 20 07:21:52.0±1.4, 16°.0S±0°.6×177°.6E±0°.4, h35km, n19, σ1§07/7, mb3.9/7, MS3.5/10, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
DZM	**Mont Dzumac**	**12.13**	**238**	*e*LR		LR	07 28 01.6		
226nm,24.6s									
HNR	**Honiara**	**18.39**	**289**	LR		LR	07 32 39.7		
comp=Z,6.5nm,19.4s,baz=248,slow=35									
RAR	**Rarotonga**	**22.07**	**107**	LR		LR	07 33 55.1		
comp=Z,63nm,19.8s,baz=250,slow=33									
CTA	**Charters Tower**	**30.03**	**257**	LR		LR	07 38 31.8		
comp=Z,85nm,18.5s,baz=220,slow=33									
PPT2	**Papeete2**	**31.47**	**98**	*e*LR		LR	07 36 22.3		
200nm,23.2s									
PPT2				*e*LR		LR	07 36 29.3		
216nm,25.5s									
TBI	**Tubuai**	**31.83**	**109**	*e*LR		LR	07 36 33.4		
1μm,30.2s									
STKA	**Stephens Creek**	**36.28**	**238**	P		**P**	**07 28 51.8**	**-0.5**	
1.4nm,0.7s,baz=37,slow=7.0,SNR=3.0									
1.4nm,0.7s									
WRA	**Warramunga Arr**	**41.23**	**258**	P		**P**	**07 29 33.4**	**-0.5**	
0.8nm,0.8s,baz=85,slow=8.2,SNR=4.9									
0.8nm,0.8s									
ASAR	**Alice Springs**	**41.65**	**252**	P		**P**	**07 29 38.8**	**+1.3**	
2.2nm,0.8s,baz=79,slow=8.8,SNR=18									
ASAR					LR	LR	07 45 49.4		
comp=Z,67nm,18.7s,baz=98,slow=35									
2.2nm,0.8s									
MJAR	**Matsushiro Arr**	**64.13**	**325**	LR		LR	07 55 01.4		
comp=Z,39nm,20.6s,baz=174,slow=31									
JNU	**Nakatsue**	**66.14**	**318**	LR		LR	07 59 02.0		
comp=Z,39nm,19.2s,baz=221,slow=34									
RPN	**Rapa Nui**	**68.06**	**113**	LR		LR	07 53 27.9		
comp=Z,21nm,21.3s,baz=282,slow=28									
KSRS	**Korea Array**	**70.76**	**320**	LR		LR	07 58 29.6		
comp=Z,28nm,21.7s,baz=90,slow=31									
NVAR	**Mina Array Bea**	**80.79**	**46**	P		**P**	**07 34 02.8**	**+0.3**	
0.8nm,0.8s,baz=238,slow=8.2,SNR=6.3									
0.8nm,0.8s									
BBB	**Bella Bella**	**82.56**	**30**	LR		LR	08 04 15.1		
comp=Z,55nm,18.9s,baz=104,slow=31				

SNAA	**Sanae**	**18.22**	**155**	P	**P**	**07 45 20.7**	**+0.8**
SNAA				IAmb	IAmb	07 45 22.1	
	comp=Z,16nm,0.4s						
EFI	**East Falkland**	**18.45**	**273**	P	**P**	**07 45 22.9**	**+0.4**
MG02	**Cerro Sombrero**	**24.09**	**262**	P	**P**	**07 46 20.1**	**+1.1**
GO09	**Cerro Castillo**	**26.50**	**263**	P	**P**	**07 46 39.7**	**-0.9**
GO09				IAmb	IAmb	07 47 17.0	
	comp=Z,31nm,1.4s						
AY01	**Puyuhuapi**	**30.59**	**274**	P	**P**	**07 47 16.1**	**-0.7**
AY01				IAmb	IAmb	07 47 19.3	
	comp=Z,17nm,1.1s						
PLTB	**Pedras Altas**	**30.80**	**313**	*eP*	**P**	**07 47 19.3**	**+0.4**
PSAL	**Palomas, Salto**	**33.07**	**308**	*eP*	**P**	**07 47 38.7**	**+0.1**
QSPA	**South Pole Qui**	**33.53**	**180**	P	**P**	**07 47 45.0**	**+2.5**
	comp=Z,3.0nm,0.4s,baz=193,slow=2.9,SNR=3.9						
	comp=Z,3.0nm,0.4s						
QSPA	**South Pole Qui**	**33.53**	**180**	P	**P**	**07 47 44.2**	**+1.7**
VAO	**Valinhos**	**36.55**	**329**	P	**P**	**07 48 09.2**	**+0.6**
VAO				IAmb	IAmb	07 48 10.1	
	comp=Z,24nm,1.2s						
CPUP	**Villa Florida**	**37.11**	**312**	P	**P**	**07 48 12.8**	**-0.3**
	comp=Z,6.0nm,0.7s,baz=159,slow=9.6,SNR=19						
	comp=Z,6.0nm,0.7s						
CPUP	**Villa Florida**	**37.11**	**312**		**P**	**07 48 12.9**	**-0.3**
CPUP				IAmb	IAmb	07 48 13.3	
	comp=Z,8.3nm,0.9s						
CPUP	**Villa Florida**	**37.11**	**312**	*eP*	**P**	**07 48 13.2**	**0.0**
BSCB	**Bom Sucesso**	**37.88**	**333**	*eP*	**P**	**07 48 20.3**	**+0.5**
TRCB	**Terra Rica**	**38.54**	**321**	*eP*	**P**	**07 48 25.5**	**+0.3**
RIB01	**Linhares ES**	**38.56**	**340**	*eP*	**P**	**07 48 25.8**	**+0.4**
BB19B	**Bebedouro**	**38.84**	**328**	*eP*	**P**	**07 48 28.5**	**+0.7**
BSFB	**Barra de Sao F**	**39.12**	**340**	*eP*	**P**	**07 48 30.6**	**+0.6**
AMBA	**Amambai (Brazi**	**39.26**	**318**	*eP*	**P**	**07 48 30.7**	**-0.5**
SJMB	**Sao Joao De Ma**	**39.31**	**339**	*eP*	**P**	**07 48 31.9**	**+0.4**
CO02	**Combarbal**	**39.37**	**292**	P	**P**	**07 48 31.2**	**-1.0**
DIAM	**Diamantina, MG**	**40.22**	**336**	*eP*	**P**	**07 48 39.7**	**+0.4**
PMNB	**Patos De Minas**	**40.66**	**332**	*eP*	**P**	**07 48 43.3**	**+0.4**
LCO	**Las Campanas**	**40.98**	**294**	P	**P**	**07 48 45.6**	**0.0**
LCO				IAmb	IAmb	07 49 14.5	
	comp=Z,14nm,1.2s						
SUR	**Sutherland**	**41.01**	**75**	P	**P**	**07 48 45.8**	**+0.1**
SUR				IAmb	IAmb	07 49 16.0	
	comp=Z,36nm,1.4s						
GUA01	**Guaratinga, BA**	**41.12**	**342**	*eP*	**P**	**07 48 46.7**	**+0.2**
MURT	**Porto Murtinho**	**41.41**	**315**	*eP*	**P**	**07 48 48.0**	**-0.8**
IPMB	**Ipameri, GO**	**41.67**	**330**	*eP*	**P**	**07 48 51.4**	**+0.4**
AQDB	**Aquidauana**	**41.78**	**318**	*eP*	**P**	**07 48 51.0**	**-0.7**
JANB	**Januaria**	**43.50**	**336**	*eP*	**P**	**07 49 05.8**	**+0.1**
BDFB	**Brasilia**	**43.85**	**331**	P	**P**	**07 49 09.2**	**+0.7**
	comp=Z,5.9nm,0.7s,baz=151,slow=2.0,SNR=11						
	comp=Z,5.9nm,0.7s						
BDFB	**Brasilia**	**43.85**	**331**	P	**P**	**07 49 08.9**	**+0.3**
ARAG	**Araguaiana, MT**	**44.88**	**326**	*eP*	**P**	**07 49 17.2**	**+0.6**
VNDA	**Vanda**	**45.89**	**183**	P	**P**	**07 49 26.1**	**+2.3**
SDBA	**SAO DESIDERIO**	**46.19**	**336**	*eP*	**P**	**07 49 26.2**	**-0.8**
BOSA	**Boshof**	**46.33**	**76**	P	**P**	**07 49 27.3**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=211,slow=6.5,SNR=8.9						
	comp=Z,2.6nm,0.7s						
BOSA	**Boshof**	**46.33**	**76**	P	**P**	**07 49 27.0**	**-1.1**
PTLB	**Pontes e Lacer**	**47.64**	**317**	P	**P**	**07 49 37.5**	**-0.5**
PTLB				IAmb	IAmb	07 49 39.6	
	comp=Z,9.7nm,1.0s						
PTLB	**Pontes e Lacer**	**47.64**	**317**	*eP*	**P**	**07 49 38.1**	**0.0**
GO01	**Chusmiza**	**48.13**	**303**	P	**P**	**07 49 42.2**	**-0.2**
GO01				IAmb	IAmb	07 49 48.1	
	comp=Z,8.1nm,0.7s						
SNDB	**Serra Nova Dou**	**48.26**	**328**	*eP*	**P**	**07 49 43.5**	**+0.7**
KOOLE	**Kule**	**48.27**	**66**	P	**P**	**07 49 42.4**	**-0.7**
LBTB	**Lobatse**	**49.40**	**73**	P	**P**	**07 49 51.1**	**-0.4**
LBTB				IAmb	IAmb	07 49 52.1	
	comp=Z,10nm,0.8s						
KGCAE	**Kacgae**	**49.41**	**68**	P	**P**	**07 49 51.0**	**-0.6**
KGCAE				IAmb	IAmb	07 49 52.3	
	comp=Z,25nm,0.9s						
PB16	**IPOC Station P**	**49.43**	**303**	P	**P**	**07 49 52.2**	**-0.2**
GRTLG	**Ghanzi**	**50.15**	**66**	P	**P**	**07 49 56.3**	**-0.9**
GRTLG				IAmb	IAmb	07 49 57.2	
	comp=Z,8.7nm,0.5s						
TSUM	**Tsumeb**	**50.19**	**61**	P	**P**	**07 49 56.8**	**-0.8**
SMTB	**Santa Maria do**	**50.24**	**334**	*eP*	**P**	**07 49 58.5**	**+0.7**
PDRB	**Porto dos Gac**	**50.32**	**322**	*eP*	**P**	**07 49 58.0**	**-0.4**
VILB	**Vilhena**	**50.33**	**317**	*eP*	**P**	**07 49 59.3**	**+0.8**
LPAZ	**La Paz**	**50.60**	**305**	P	**P**	**07 50 02.3**	**+1.1**
	comp=Z,18nm,0.4s,baz=151,slow=5.9,SNR=60						
	comp=Z,18nm,0.4s						
LPAZ	**La Paz**	**50.60**	**306**		**P**	**07 50 01.8**	**+0.5**
LPAZ	**La Paz**	**50.60**	**306**	*eP*	**P**	**07 50 02.0**	**+0.8**
CLDB	**Colider**	**50.70**	**323**	*eP*	**P**	**07 50 01.2**	**0.0**
ITTB	**Itaituba**	**56.79**	**326**	*eP*	**P**	**07 50 45.3**	**0.0**
MACA	**Manacapuru-AM**	**59.55**	**321**	P	**P**	**07 51 04.5**	**-0.1**
MACA				IAmb	IAmb	07 51 21.5	
	comp=Z,7.4nm,0.8s						
TEFE	**Tefe**	**60.67**	**316**	*eP*	**P**	**07 51 12.0**	**-0.1**
BOAV	**Boa Vista**	**64.69**	**323**	*eP*	**P**	**07 51 38.3**	**-0.3**
DBIC	**Dimbokro**	**65.86**	**25**	P	**P**	**07 51 46.0**	**0.0**
	comp=Z,1.9nm,0.4s,baz=216,slow=6.3,SNR=4.4						
	comp=Z,1.9nm,0.4s						
DBIC	**Dimbokro**	**65.86**	**25**	P	**P**	**07 51 45.8**	**-0.3**
DBIC				IAmb	IAmb	07 52 24.5	
	comp=Z,10.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.74**	**30**	P	**P**	**07 52 34.7**	**+0.7**
	comp=Z,5.2nm,0.6s,baz=195,slow=5.8,SNR=27						
	comp=Z,5.2nm,0.6s						
SDV	**Santo Domingo**	**74.34**	**316**	P	**P**	**07 52 37.5**	**-0.3**
SDV				IAmb	IAmb	07 52 39.2	
	comp=Z,9.5nm,0.8s						
SDV	**Santo Domingo**	**74.34**	**316**	*eP*	**P**	**07 52 38.5**	**+0.7**
ASAR	**Alice Springs**	**98.41**	**163**	P	Pdif	07 54 38.2	+1.0
	comp=Z,0.2nm,0.4s,baz=188,slow=4.3,SNR=4.2						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**120.53**	**302**	PKP	**PKPdf**	**07 59 47.8**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=163,slow=1.3,SNR=2.4						
NVAR	**Mina Array Bea**	**121.47**	**293**	PKP	**PKiKP**	**07 59 52.0**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=196,slow=1.1,SNR=4.1						
FINES	**FINESS Array B**	**125.07**	**28**	PKP	**PKPdf**	**07 59 56.6**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=149,slow=7.8,SNR=3.8						
YKA	**Yellowknife Ar**	**136.53**	**318**	PKP	**PKPdf**	**08 00 18.9**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=115,slow=2.1,SNR=12						
KURBB	**Kurchatov Arra**	**137.77**	**66**	PKP	**PKPdf**	**08 00 21.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=228,slow=2.4,SNR=1.7						
ILAR	**Eielson Array**	**150.40**	**311**	PKPbc	**PKPbc**	**08 00 48.5**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=132,slow=1.6,SNR=37						
SONM	**Songino Array**	**150.97**	**88**	PKPbc	**PKiKP**	**08 00 50.9**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=216,slow=2.2,SNR=5.5						
HILR	**Hailar Array B**	**159.28**	**96**	PKPab	**PKPab**	**08 01 34.0**	**0.0**
	comp=Z,1.2nm,0.5s,baz=238,slow=4.9,SNR=5.0						

*JMA **20** 07:41:33.6±0.3,36°.2N±0°.6×14°.2E±°, h69km,MV3.1/32, FAR E OFF IBARAKI PREF*
*IDC **20** 07:41:49.3±6.1,35°.85N×140°.44E, h91km±36km, mb3.3/5, mbtmp3.6/6, Error ellipse: s-maj=95.1km s-min=13.0km az=70.0*

ISC 20 07:41:36.3±1.2, 36°.20N±0°.05×141°.79E±0°.10, h23km, n24, σ1s76/21, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.98**	**279**	P	**Pb**	**07 41 53.9**	**-0.8**
JHYU				*eS*	**Sn**	**07 42 09.9**	**+2.1**
JHO	**Hitachi**	**1.07**	**293**	P	**Pn**	**07 41 54.6**	**-1.3**
JFK	**Kawauchi**	**1.38**	**328**	P	**Pn**	**07 41 58.7**	**-1.5**
BSO1	**Boso 1**	**1.68**	**203**	P	**Pn**	**07 42 02.0**	**-1.7**
BSO1				S	**Sn**	**07 42 24.2**	**0.0**
BSO3	**Boso 3**	**1.74**	**217**	*eP*	**Pn**	**07 42 03.8**	**-1.1**
JOTO	**OTAMA OYAMA**	**1.79**	**320**	P	**Pn**	**07 42 05.8**	**0.0**
JMM	**Marumori**	**1.85**	**335**	P	**Pn**	**07 42 05.7**	**-0.9**
JAG	**Ashikaga**	**1.90**	**278**	P	**Pn**	**07 42 06.8**	**-0.5**
JRY	**Ryogami san**	**2.34**	**266**	P	**Pn**	**07 42 13.0**	**-0.5**
JOD2	**Odawara 2**	**2.39**	**248**	P	**Pn**	**07 42 13.8**	**-0.2**
JYN	**Shimob**	**2.73**	**256**	P	**Pn**	**07 42 19.2**	**+0.5**
MJAR	**Matsushiro Arr**	**2.91**	**278**	P	**Pn**	**07 42 21.4**	**+0.2**
	11nm,0.5s,baz=98,slow=9.0,SNR=36						
JHJ	**Hachijo jima 2**	**3.49**	**209**	P	**Pn**	**07 42 31.2**	**+2.1**
	47nm,0.3s,baz=252,slow=20,SNR=7.5						
JHJ				S	**Sn**	**07 43 04.8**	**-4.9**
	116nm,0.4s,baz=70,slow=24,SNR=9.1						
H11N2	**WAKE ISLAND Hy 27.46**	**120**		T	T	08 15 51.8	
	baz=312,slow=75,SNR=6.0						
H11N1	**WAKE ISLAND Hy 27.47**	**120**		T	T	08 15 50.7	
	baz=312,slow=75,SNR=5.7						
H11N3	**WAKE ISLAND Hy 27.48**	**120**		T	T	08 15 51.2	
	baz=312,slow=75,SNR=5.6						
H11S1	**WAKE ISLAND Hy 28.16**	**122**		T	T	08 16 44.8	
	baz=314,slow=75,SNR=9.8						
H11S3	**WAKE ISLAND Hy 28.16**	**122**		T	T	08 16 44.8	
	baz=314,slow=75,SNR=7.4						
H11S2	**WAKE ISLAND Hy 28.17**	**122**		T	T	08 16 44.2	
	baz=314,slow=75,SNR=5.6						
SONM	**Songino Array**	**28.51**	**305**	P	**P**	**07 47 30.2**	**+0.2**
	0.8nm,0.6s,baz=116,slow=10,SNR=3.8						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**44.82**	**303**	P	**P**	**07 49 48.1**	**-0.3**
	0.6nm,0.7s,baz=87,slow=9.2,SNR=6.9						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**46.76**	**309**	P	**P**	**07 50 02.4**	**-1.1**
	0.5nm,0.4s,baz=76,slow=8.0,SNR=3.2						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**56.28**	**188**	P	**P**	**07 51 16.8**	**+1.7**
	0.2nm,0.4s,baz=3.2,slow=7.4,SNR=5.0						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**60.01**	**188**	P	**P**	**07 51 44.0**	**+2.9**
	0.2nm,0.6s,baz=7.3,slow=10,SNR=3.0						
	0.2nm,0.6s						

*SOF **20** 07:51:54.5,41°.84N±0°.01×22°.90E±0°.01, h2km±72km, MD2.7/7*
*SKO **20** 07:51:55.2,41°.83N×22°.89E, h15km, ML2.3*
*BEO **20** 07:51:56.2±0.3,41°.83N×22°.86E, h5km±2km, ML2.4/6*

ISC 20 07:51:55.2±1.1, 41°.83N±0°.02×22°.89E±0°.03, h3km±10km, n22, σ0s60/50, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.18**	**88**	*i* Pg	**Pg**	**07 51 57.5**	**-1.1**
KKB				Sg	**Sg**	**07 52 01.2**	**+0.3**
VAY	**Valandovo**	**0.57**	**205**	*i* Pg	**Pb**	**07 52 07.2**	**-0.6**
VAY				*i* Sg	**Sg**	**07 52 14.2**	**+0.8**
VAY				*e*Lg	Lg	07 52 14.6	
	comp=E,88nm,0.6s						
VAY				*e*Lg	Lg	07 52 16.6	
	comp=N,84nm,0.2s						
MMB	**Musomishta**	**0.70**	**114**	Pg	**Pg**	**07 52 08.8**	**+0.2**
MMB				Sg	**Sg**	**07 52 18.2**	**+0.5**
BOSS	**Bosilegrad**	**0.73**	**335**	*e*Pg	**Pg**	**07 52 09.3**	**+0.1**
BOSS				*e*Sg	**Sg**	**07 52 19.4**	**+0.8**
PLNA	**Plana**	**0.75**	**32**	Pg	**Pg**	**07 52 09.7**	**+0.1**
PLNA				Sg	**Sg**	**07 52 20.3**	**+0.9**
VTS	**Vitosha**	**0.82**	**18**	Pg	**Pg**	**07 52 10.6**	**-0.4**
VTS				Sg	**Sg**	**07 52 21.6**	**-0.1**
VTS	**Vitosha**	**0.82**	**18**	*e*Pg	**Pg**	**07 52 10.5**	**-0.4**
VTS				*e*Sg	**Sg**	**07 52 21.3**	**-0.4**
SRS	**Serrai**	**0.89**	**144**	*e*Pg	**Pg**	**07 52 12.2**	**0.0**
SRS				*e*Sg	**Sg**	**07 52 24.3**	**+0.6**
BLSH	**Balsha**	**1.06**	**16**	*i* Pg	**Pg**	**07 52 15.5**	**0.0**
BLSH				Sg	**Sb**	**07 52 30.2**	**-0.4**
PGB	**Panagyurishte**	**1.17**	**54**	Pg	**Pg**	**07 52 17.3**	**-0.3**
PGB				Sg	**Sb**	**07 52 33.9**	**+0.2**
BARS	**Barje**	**1.27**	**321**	*e*Pg	**Pg**	**07 52 19.3**	**-0.1**
BARS				*e*Sg	**Sb**	**07 52 36.2**	**-0.2**
RZN	**Rozhen**	**1.39**	**95**	Pg	**Pn**	**07 52 21.2**	**-0.4**
RZN				Sg	**Sn**	**07 52 41.1**	**+0.5**
PLD	**Plovdiv**	**1.42**	**77**	*e*Pg	**Pg**	**07 52 22.5**	**+0.2**
PLD				*e*Sg	**Sg**	**07 52 41.6**	**+0.9**
ZAPS	**Zavoj**	**1.45**	**352**	*e*Pg	**Pb**	**07 52 22.6**	**-0.3**
ZAPS				*e*Sg	**Sg**	**07 52 43.2**	**+1.4**
MPEP	**Malo Peshtene**	**1.64**	**22**	*e*P	**Pg**	**07 52 26.8**	**+0.1**
MPEP				S	**Sg**	**07 52 49.3**	**+1.3**
BLKB	**Belogradchik**	**1.79**	**355**	*e*Pn	**Pb**	**07 52 28.1**	**-0.6**
BLKB				*e*Sn	**Sb**	**07 52 51.5**	**-0.2**
SELS	**Selova**	**1.91**	**317**	*e*Pn	**Pn**	**07 52 29.2**	**+0.6**
SELS				*e*Pg	**Pg**	**07 52 31.2**	**-0.5**
SELS				*e*Sn	**Sb**	**07 52 54.1**	**-0.8**
SELS				*e*Sg	**Sg**	**07 52 56.4**	**0.0**
BOVS	**Bovan**	**2.00**	**334**	*e*Pn	**Pn**	**07 52 30.3**	**+0.4**
BOVS				*e*Pg	**Pb**	**07 52 31.7**	**-0.5**
BOVS				*e*Sn	**Sn**	**07 52 55.8**	**+0.3**
BOVS				*e*Sg	**Sg**	**07 52 59.9**	**+0.4**
ZAGS	**Zajecar**	**2.04**	**346**	*e*Pn	**Pn**	**07 52 31.0**	**+0.6**
ZAGS				*e*Pg	**Pb**	**07 52 33.1**	**+0.3**
ZAGS				*e*Sn	**Sn**	**07 52 56.9**	**+0.6**
ZAGS				*e*Sg	**Sg**	**07 53 01.5**	**+0.9**
MDVR	**Moldovita**	**3.07**	**344**	*e*Pn	**Pn**	**07 52 44.8**	**+0.2**
MDVR				*e*Sn	**Sn**	**07 53 21.4**	**-0.5**
MDVR				*e*Sg	**Sg**	**07 53 32.7**	**-1.1**
DIVS	**Divibare**	**3.11**	**318**	*e*Pn	**Pn**	**07 52 45.9**	**+0.7**
GZR	**Gura Zlata**	**3.56**	**359**	*e*Pn	**Pn**	**07 52 51.3**	**-0.1**
GZR				*e*Sn	**Sn**	**07 53 33.3**	**-0.7**

*IDC **20** 07:58:28.3±2.8, 6°.09S×130°.50E, h113km±36km, mb3.7/2, mbtmp4.1/6, Error ellipse: s-maj=82.6km s-min=20.7km az=87.0*
*DJA **20** 07:58:30.6±0.7, 6°.5S±5°×13°.1E±°, h169km±6km, M4.5/9, mB5.3/2, mb4.7/2, MLv4.4/9, Mw(mB)4.7/2*

ISC 20 07:58:29.3±0.9, 6°.02S±0°.07×130°.74E±0°.08, h150km, n13, σ3s39/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.70**	**331**	P	**Pn**	**07 59 02.5**	**+1.5**
BNDI				S	**Sn**	**07 59 26.5**	**+1.1**
MSAI	**Masohi**	**3.21**	**326**	S	**Sn**	**07 59 56.2**	**-1.9**
FAKI	**Fak Fak**	**3.42**	**26**	P	**Pn**	**07 59 23.4**	**+1.3**
KRAI	**Karang Ratu**	**3.56**	**319**	P	**Pn**	**07 59 25.2**	**+1.4**
KMPI	**Kaimana, Papua**	**3.77**	**52**	P	**Pn**	**07 59 29.2**	**+2.7**
SIJI	**Sorong**	**5.14**	**6**	P	**Pn**	**07 59 44.8**	**+0.2**
	20nm,0.2s,baz=298,slow=23,SNR=10						
SIJI				S	**Sn**	**08 00 35.3**	**-8.1**
	33nm,0.2s,baz=111,slow=23,SNR=4.5						
SIJI	**Sorong**	**5.14**	**6**	P	**Pn**	**07 59 45.3**	**+0.7**
RKPI	**Ransiki, Papua**	**5.64**	**38**	P	**Pn**	**07 59 53.2**	**+2.0**
FITZ	**Fitzroy Crossi**	**13.00**	**202**	P	**Pn**	**08 01 26.1**	**-2.4**
	5.0nm,0.4s,baz=33,slow=11,SNR=37						
FITZ				S	Sn	08 03 39.6	-13
	7.3nm,0.3s,baz=174,slow=20,SNR=8.7						
WRA	**Warramunga Arr**	**14.28**	**166**	P	**Pn**	**08 01 43.6**	**-1.2**
	1.4nm,0.3s,baz=350,slow=13,SNR=34						
WRA				S	Sn	08 04 11.6	-12
	5.2nm,0.6s,baz=332,slow=23,SNR=10						
ASAR	**Alice Springs**	**17.81**	**170**	P	**P**	**08 02 29.6**	**+3.0**
	1.4nm,0.4s,baz=352,slow=11,SNR=38						
ASAR				S	**S**	**08 05 38.1**	**-5.7**
	3.4nm,0.7s,baz=349,slow=24,SNR=10						
MKAR	**Makanchi Array**	**67.82**	**326**	P	**P**	**08 09 14.0**	**+2.8**
	1.3nm,0.4s,baz=137,slow=7.6,SNR=20						
	1.3nm,0.4s						
KURBB	**Kurchatov Arra**	**72.07**	**328**	P	**P**	**08 09 39.1**	**+2.2**
	0.5nm,0.5s,baz=126,slow=5.0,SNR=4.9						
	0.5nm,0.5s						

*SJA **20** 07:58:38.2±0.8, 35°.43S×72°.77W, h22km±3km, ML3.6, MW3.8*
*GUC **20** 07:58:40.9±0.7, 35°.52S×72°.62W, h34km±2km, ML3.9*

ISC 20 07:58:39.1±1.6, 35°.47S±0°.03×72°.67W±0°.06, h10km±11km, n45, σ1s75/65, 3C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Hualane**	**0.76**	**53**	*i* P	**Pg**	**07 58 54.7**	**+0.9**
GO05				*e*S	**Sb**	**07 59 05.9**	**+1.0**
GO05	**Hualane**	**0.76**	**53**	*e*P	**Pg**	**07 58 54.0**	**+0.2**
GO05				*e*S	**Sb**	**07 59 06.1**	**+1.2**
GO05				IAML		07 59 07.1	
	comp=Z,2µm,0.8s						
ML02	**Panimavida**	**1.06**	**106**	⇓*i* P	**Pb**	**07 58 59.7**	**+0.1**
ML02				*i* S	**Sb**	**07 59 13.1**	**-0.5**
ML02				IAML		07 59 17.6	
	comp=E,7µm,0.5s						
ML02	**Panimavida**	**1.06**	**106**	*e*P	**Pb**	**07 58 59.7**	**+0.1**
ML02				*e*S	**Sg**	**07 59 14.4**	**+1.1**
ML02				IAML		07 59 22.4	
	comp=Z,4µm,0.3s						
BI05	**Punta Hualpn**	**1.34**	**198**	*i* P	**Pn**	**07 59 04.2**	**+0.2**
BI05				IAML		07 59 25.8	
	comp=N,5µm,0.3s						
BI05	**Punta Hualpn**	**1.34**	**198**	*e*P	**Pn**	**07 59 03.9**	**0.0**
BI05				IAML		07 59 24.4	
	comp=Z,1µm,0.7s						
BI02	**San Fabin de**	**1.64**	**137**	*i* P	**Pn**	**07 59 08.2**	**+0.1**
BI02				*e*S	**Sn**	**07 59 28.2**	**-1.2**
BI02				IAML		07 59 29.4	
	comp=N,2µm,0.7s						
BI02	**San Fabin de**	**1.64**	**137**	*e*P	**Pn**	**07 59 07.5**	**-0.6**
BI02				IAML		07 59 34.0	
	comp=Z,1µm,0.6s						
BO01	**Tunca**	**1.69**	**51**	⇑*i*P	**Pn**	**07 59 09.2**	**+0.5**
BO01				*e*S	**Sb**	**07 59 31.4**	**-0.2**
BO01	**Tunca**	**1.69**	**51**	*e*P	**Pn**	**07 59 08.5**	**-0.2**
BO01				*e*S	**Sn**	**07 59 27.7**	**-2.7**
BO01				IAML		07 59 34.7	
	comp=Z,467nm,0.9s						
BO02	**Sierra Bellavi**	**1.69**	**67**	⇑*e*P	**Pn**	**07 59 09.2**	**+0.4**
BO02				IAML		07 59 36.6	
	comp=E,4µm,0.3s						
BO02	**Sierra Bellavi**	**1.69**	**67**	*e*P	**Pn**	**07 59 09.6**	**+0.8**
BO02				*e*S	**Sg**	**07 59 33.0**	**-0.4**
BO02				IAML		07 59 38.5	
	comp=Z,2µm,0.2s						
MT01	**Popeta**	**1.98**	**37**	*e*P	**Pn**	**07 59 12.6**	**-0.1**
MT01	**Popeta**	**1.98**	**37**	*e*P	**Pn**	**07 59 12.7**	**-0.1**
MT01				*e*S	**Sn**	**07 59 38.7**	**+1.0**
MT01				IAML		07 59 47.7	
	comp=Z,348nm,0.6s						
VA05	**Santo Domingo**	**2.01**	**26**	*e*P	**Pn**	**07 59 12.8**	**-0.2**
MT09	**Talagante**	**2.19**	**40**	*e*P	**Pn**	**07 59 16.1**	**+0.5**
MT09				IAML		07 59 53.7	
	comp=N,1µm,0.3s						
BO04	**La Punta**	**2.25**	**50**	*e*P	**Pn**	**07 59 17.0**	**+0.6**
BO04				IAML		07 59 53.0	
	comp=N,448nm,0.4s						
MT02	**Curacav**	**2.54**	**30**	*e*P	**Pn**	**07 59 20.2**	**-0.3**
MT02	**Curacav**	**2.54**	**30**	*e*P	**Pn**	**07 59 20.3**	**-0.2**
MT02				*e*S	**Sg**	**08 00 02.8**	**+2.0**
MT02				IAML		08 00 02.9	
	comp=Z,124nm,0.4s						
MT15	**Las Vizcachas**	**2.58**	**44**	*e*P	**Pn**	**07 59 21.9**	**+0.8**
MT15				IAML		08 00 08.1	
	comp=N,885nm,0.2s						
LMEL	**Las Melosas**	**2.60**	**52**	*e*P	**Pn**	**07 59 22.3**	**+1.0**
LMEL				IAML		08 00 03.5	
	comp=N,356nm,0.3s						
MT13	**San Alfonso**	**2.61**	**50**	*e*P	**Pn**	**07 59 22.5**	**+1.0**
MT13				IAML		08 00 05.9	
	comp=E,446nm,0.4s						
MT13	**San Alfonso**	**2.61**	**50**	*e*P	**Pn**	**07 59 22.7**	**+1.2**
MT13				*e*S	**Sn**	**07 59 54.7**	**+1.3**
MT13				IAML		08 00 08.9	
	comp=Z,230nm,0.3s						
MT05	**Renca**	**2.62**	**38**	*e*P	**Pn**	**07 59 22.6**	**+1.1**
MT05				IAML		08 00 08.2	
	comp=E,647nm,0.3s						
MT05	**Renca**	**2.62**	**38**	*e*P	**Pn**	**07 59 22.3**	**+0.8**
MT05				*e*P	**Pn**	**07 59 22.7**	**+1.1**
MT05				IAML		08 00 13.6	
	comp=Z,227nm,1.2s						
MT03	**Universidad Ad**	**2.66**	**43**	*e*P	**Pn**	**07 59 22.8**	**+0.6**
MT03				IAML		08 00 09.4	
	comp=N,620nm,0.7s						
MT03	**Universidad Ad**	**2.66**	**43**	*e*P	Pn	07 59 17.7	-4.4
MT03				*e*P	Pb	07 59 22.7	-4.1
MT03				*e*S	**Sn**	**07 59 57.2**	**+2.7**
MT03				IAML		08 00 07.7	
	comp=Z,439nm,0.6s						
CANA	**Caviahue**	**2.74**	**152**	*e*P	**Pb**	**07 59 26.9**	**-1.3**
CANA				*e*S	**Sb**	**08 00 02.2**	**+0.2**
MT10	**Hacienda Santa**	**2.81**	**39**	⇓*e*P	**Pn**	**07 59 24.8**	**+0.5**
MT10				IAML		08 00 11.9	
	comp=E,722nm,0.1s						
PEL	**Peldehue**	**2.84**	**36**	*e*P	**Pn**	**07 59 26.0**	**+1.4**
PEL				IAML		08 00 23.4	
	comp=E,238nm,0.2s						
ROCH	**El Roble**	**2.85**	**29**	*e*P	**Pn**	**07 59 25.3**	**+0.5**
ROCH				IAML		08 00 25.8	
	comp=N,506nm,0.4s						
MT04	**Ro Olivares**	**2.94**	**46**	*e*P	**Pn

KURBB			⇑Sn		**Sn**	**08 35 22.2**	**+1.0**
	47nm,1.1s						
KURBB			⇓Lg		Lg	08 36 06.7	
	65nm,1.1s						
MK31	**Makanchi Array**	**8.63 220**	Pn		**Pn**	**08 34 00.8**	**-0.3**
	0.9nm,0.5s,baz=44,slow=10,SNR=20						
MK31			⇓Sn		**Sn**	**08 35 39.8**	**+0.7**
	2.8nm,0.7s,baz=32,slow=24,SNR=4.5						
MK31			⇓Lg		Lg	08 36 31.3	
	36nm,1.3s,baz=38,slow=30,SNR=4.0						
MKAR	**Makanchi Array**	**8.63 220**	Pn		**Pn**	**08 34 01.2**	**+0.2**
	0.4nm,0.3s,baz=38,slow=13,SNR=23						
MKAR			Sn		**Sn**	**08 35 40.0**	**+1.0**
	0.2nm,0.3s,baz=37,slow=24,SNR=6.6						
MKAR			Lg		Lg	08 36 31.6	
	0.3nm,0.3s,baz=38,slow=33,SNR=6.3						
	1.6nm,0.6s						
MAKZ	**Makanchi**	**8.74 221**	⇑Sn		**Sn**	**08 35 42.9**	**+1.1**
	4.3nm,0.8s						
MAKZ			⇑Lg		Lg	08 36 30.7	
	16nm,1.2s						
I34MN	**SONGINO INFRAS**	**11.73 114**	I		I	09 37 50.0	
	baz=309,slow=326,SNR=1.4						
BVAR	**Borovoye Array**	**11.96 275**	Pn		**Pn**	**08 34 48.4**	**+1.7**
	baz=74,slow=15,SNR=2.7						
	0.3nm,0.4s						

IDC 20 08:32:48.9±18.0, 25°.80S×179°.65E, h630km±225km, mb2.5/3, mbtmp3.7/4, Error ellipse: s-maj=214.7km s-min=47.9km az=22.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.61 189**		P	P	08 35 34.0	+0.7
	2.5nm,0.5s,baz=36,slow=2.8,SNR=5.6						
URZ				S	S	08 38 00.1	+12
	6.5nm,1.0s,baz=56,slow=2.7,SNR=1.9						
STKA	**Stephens Creek**	**33.76 251**		P	P	08 38 38.9	-1.9
	0.7nm,0.5s,baz=99,slow=13,SNR=1.7						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**41.45 263**		P	P	08 39 43.9	+0.7
	0.2nm,0.3s,baz=94,slow=8.1,SNR=4.6						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**42.00 268**		P	P	08 39 47.9	+0.4
	0.6nm,0.4s,baz=103,slow=7.9,SNR=14						
	0.6nm,0.4s						
HFS	**Hagfors**	**144.33 348**		PKP	PKPdf	08 51 13.3	-0.8
	1.4nm,0.7s,baz=75,slow=6.7,SNR=4.4						

*IDC **20** 08:51:18.2±0.8, 14°.57N×146°.94E, h0km, mb4.1/14, mbtmp4.1/15, ML4.4/1, Error ellipse: s-maj=22.8km s-min=17.3km az=114.0*
*NEIC **20** 08:51:20.2±1.7, 14°.50N±0°.08×147°.01E±0°.04, h10km±1km, mb4.6/19, Error ellipse: s-maj=13.2km s-min=5.6km az=172.0*

ISC 20 08:51:22.9±0.6, 14°.54N±0°.08×146°.95E±0°.08, h33km, n41, σ0°.83/42, mb4.4/25, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**1.32 302**		Pn	**Pb**	**08 51 46.2**	**-1.0**
GUMO	**Guam**	**2.23 245**		Pn	**Pn**	**08 51 56.9**	**-0.6**
	97nm,0.3s,baz=92,slow=5.2,SNR=23						
GUMO				Sn	**Sn**	**08 52 25.1**	**+1.1**
	52nm,0.3s,baz=222,slow=18,SNR=4.2						
	204nm,0.3s						
GUMO	**Guam**	**2.23 245**			**Pn**	**08 51 57.3**	**-0.3**
RABL	**Rabaul**	**19.31 164**		P	**P**	**08 55 43.6**	**-1.8**
JOW	**Kunigami**	**21.29 308**		P	**P**	**08 56 06.6**	**-0.3**
JOW				IAmb	IAmb	08 56 35.6	
	comp=Z,40nm,1.4s						
FAKI	**Fak Fak**	**22.65 221**		P	**P**	**08 56 22.7**	**+1.2**
FAKI				IAmb	IAmb	08 56 24.2	
	comp=Z,32nm,1.1s						
KSRS	**Korea Array**	**28.41 327**		P	**P**	**08 57 13.2**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=145,slow=9.4,SNR=6.2						
	comp=Z,1.0nm,0.8s						
WB0	**Warramunga Arr**	**36.26 200**		P	**P**	**08 58 22.8**	**-0.5**
WB0				IAmb	IAmb	08 58 51.6	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**36.44 200**		P	**P**	**08 58 24.4**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=21,slow=9.3,SNR=6.4						
	comp=Z,1.1nm,0.9s						
AS31	**Alice Springs**	**40.05 199**		P	**P**	**08 58 55.1**	**-0.2**
ASAR	**Alice Springs**	**40.05 199**		P	**P**	**08 58 55.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=20,slow=10,SNR=5.7						
	comp=Z,0.3nm,0.5s						
DZM	**Mont Dzumac**	**41.10 152**		P	**P**	**08 59 04.1**	**+0.1**
DZM				IAmb	IAmb	08 59 33.2	
	comp=Z,8.2nm,1.1s						
LZDM	**Lanzhou Array**	**44.11 307**		P	**P**	**08 59 29.8**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=145,slow=5.4,SNR=6.1						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.09 282**		P	**P**	**08 59 45.1**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=83,slow=6.6,SNR=4.7						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.09 282**		P	**P**	**08 59 43.9**	**-0.4**
ULN	**Ulaanbaatar**	**46.79 324**		P	**P**	**08 59 49.8**	**+0.3**
ULN				IAmb	IAmb	09 00 06.1	
	comp=Z,4.5nm,1.3s						
SONM	**Songino Array**	**47.15 323**		P	**P**	**08 59 52.9**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=136,slow=6.5,SNR=5.1						
	comp=Z,1.1nm,0.7s						
BBOO	**Buckleboo**	**48.22 192**		P	**P**	**09 00 01.2**	**+0.7**
O15K	**Ungalikthiuk R**	**59.18 29**		P	**P**	**09 01 21.1**	**+0.7**
K17K	**Iditarod**	**61.38 25**		P	**P**	**09 01 37.2**	**+1.7**
H17K	**Granite Mounta**	**61.76 23**		P	**P**	**09 01 38.9**	**+0.9**
F17K	**Baldwin Pennin**	**62.02 21**		P	**P**	**09 01 41.3**	**+1.6**
F17K				IAmb	IAmb	09 01 59.9	
	comp=Z,2.1nm,0.9s						
ZALV	**Zalesovo Beam**	**62.05 324**		P	**P**	**09 01 39.4**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=101,slow=7.5,SNR=0.7						
	comp=Z,0.8nm,0.3s						
MKAR	**Makanchi Array**	**62.22 315**		P	**P**	**09 01 42.0**	**+0.5**
	comp=Z,2.9nm,0.4s,baz=91,slow=8.1,SNR=44						
	comp=Z,2.9nm,0.4s						
MKAR	**Makanchi Array**	**62.22 315**		P	**P**	**09 01 41.4**	**-0.1**
MAKZ	**Makanchi**	**62.44 315**		P	**P**	**09 01 42.9**	**0.0**
MAKZ				IAmb	IAmb	09 01 44.2	
	comp=Z,5.2nm,0.6s						
H18K	**Honhosa River**	**62.45 23**		P	**P**	**09 01 43.3**	**+0.7**
H18K				IAmb	IAmb	09 02 05.6	
	comp=Z,10.0nm,1.5s						
KURK	**Kurchatov**	**65.17 319**		P	**P**	**09 02 00.8**	**0.0**
KURK				IAmb	IAmb	09 02 01.4	
	comp=Z,7.7nm,0.8s						
KURBB	**Kurchatov Arra**	**65.22 319**		P	**P**	**09 02 00.7**	**-0.4**
	comp=Z,12nm,0.8s,baz=98,slow=6.8,SNR=68						
	comp=Z,12nm,0.8s						
ILAR	**Eielson Array**	**66.85 25**		P	**P**	**09 02 10.2**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=249,slow=5.8,SNR=6.9						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**66.85 25**		P	**P**	**09 02 11.8**	**+0.4**
BVAR	**Borovoye Array**	**70.44 321**		P	**P**	**09 02 34.3**	**+0.3**
	comp=Z,2.5nm,0.6s,baz=94,slow=7.6,SNR=15						
	comp=Z,2.5nm,0.6s						
BORK	**Borovoye**	**70.49 321**		P	**P**	**09 02 34.3**	**+0.1**
BORK				IAmb	IAmb	09 02 35.4	
	comp=Z,4.0nm,0.8s						
INK	**Inuvik**	**72.72 23**		P	**P**	**09 02 48.9**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=271,slow=1.0,SNR=3.7						
	comp=Z,0.8nm,0.8s						
INK	**Inuvik**	**72.72 23**		P	**P**	**09 02 48.1**	**+0.8**
AB31	**Akbulak array**	**77.20 318**		P	**P**	**09 03 13.3**	**-0.3**
AB31				IAmb	IAmb	09 03 48.8	
	comp=Z,2.1nm,0.6s						
ABKAR	**Akbulak array**	**77.20 318**		P	**P**	**09 03 13.3**	**-0.3**
YKA	**Yellowknife Ar**	**81.09 28**		P	**P**	**09 03 35.2**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=291,slow=6.3,SNR=4.7						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**91.15 336**		P	**P**	**09 04 23.6**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=149,slow=4.0,SNR=4.1						
	comp=Z,2.2nm,0.8s						
DBIC	**Dimbokro**	**144.99 305**		PKP	**PKPdf**	**09 10 57.7**	**-0.1**
	comp=Z,5.5nm,0.6s,baz=85,slow=3.1,SNR=7.1						
LPAZ	**La Paz**	**146.16 98**		PKPbc	**PKiKP**	**09 11 03.8**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=207,slow=4.5,SNR=3.8						

*ISK **20** 08:54:40.1, 39°.12N×27°.81E, h7km, ML3.3/36*
*AFAD **20** 08:54:40.0, 39°.12N×27°.88E, h7km±3km, ML3.5*
*THE **20** 08:54:43.0, 39°N±3°×2°.8E±°, h20km±17km, M3.1/8, MLh3.1/8*

ISC 20 08:54:40.5±0.9, 39°.11N±0°.02×27°.82E±0°.02, h12km±7km, n63, σ0°.58/74, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOMA	**Soma-Manisa**	**0.22 281**		Pg	**Pg**	**08 54 45.1**	**-0.2**
SOMA				Sg	**Sg**	**08 54 48.5**	**-0.1**
AKHS	**Akhisar**	**0.23 181**		P	**Pg**	**08 54 45.5**	**0.0**
AKHS				S	**Sg**	**08 54 50.0**	**+1.1**
AKS	**Akhisar**	**0.23 181**		Pg	**Pg**	**08 54 44.9**	**-0.6**
AKS				Sg	**Sg**	**08 54 49.1**	**+0.2**
STEP	**BALIKESIR_Sava**	**0.27 344**		P	**Pg**	**08 54 45.5**	**-0.7**
STEP				IAML		08 54 51.0	
	comp=E,10μm,0.4s						
STEP				S	**Sb**	**08 54 51.0**	**-1.0**
GOMD	**Gordes-Manisa**	**0.35 126**		Pg	**Pg**	**08 54 47.8**	**+0.3**
GOMA	**Golmarmara-Man**	**0.41 169**		Pg	**Pg**	**08 54 48.7**	**0.0**
GOMA				Sg	**Sb**	**08 54 55.3**	**-0.6**
BALB	**Balikesir**	**0.53 5**		Pg	**Pb**	**08 54 51.1**	**-0.6**
CAMT	**Merkez**	**0.54 227**		P	**Pb**	**08 54 51.7**	**-0.1**
CAMT				S	**Sb**	**08 55 00.3**	**+0.8**
DEMI	**Demirci**	**0.70 95**		P	**Pg**	**08 54 54.1**	**-0.1**
DKL	**Dikili**	**0.71 267**		Pg	**Pb**	**08 54 54.4**	**-0.4**
YAYO	**Edremit-Balk**	**0.76 311**		Pg	**Pg**	**08 54 54.7**	**-0.6**
DST	**Dursunbey**	**0.79 52**		Pg	**Pg**	**08 54 55.6**	**-0.3**
MANT	**Manisa**	**0.85 137**		P	**Pg**	**08 54 55.5**	**-1.5**
ODEM	**Odemis-Izmir**	**0.86 166**		Pg	**Pb**	**08 54 57.6**	**+0.2**
SUSR	**Susurluk-Balik**	**0.87 14**		Pg	**Pg**	**08 54 57.2**	**-0.2**
BAGT	**Foa**	**0.88 239**		P	**Pb**	**08 54 57.5**	**-0.1**
BAGT				IAML		08 55 13.0	
	comp=N,1μm,0.7s						
BAGT				IAML		08 55 13.0	
	comp=E,2μm,0.8s						
KULA	**Kula-Manisa**	**0.89 132**		Pg	**Pg**	**08 54 57.0**	**-0.7**
AYVA	**Ayvalik**	**0.90 283**		P	**Pb**	**08 54 57.9**	**-0.1**
SMAA	**Simav-Kutahya**	**0.91 90**		Pg	**Pb**	**08 54 58.2**	**0.0**
SIMA	**Simav-Kutahya**	**0.91 92**		Pg	**Pb**	**08 54 58.2**	**0.0**
YENI	**Yenice-Canakka**	**0.94 332**		Pg	**Pb**	**08 54 58.4**	**-0.2**
DUVT	**Torbali**	**0.94 198**		P	**Pb**	**08 54 58.9**	**+0.3**
DUVT				S	**Sn**	**08 55 12.3**	**-0.4**
FOCM	**Foa**	**0.94 245**		Pg	**Pg**	**08 54 58.2**	**-0.4**
GONE	**Gonen-Balikesi**	**0.94 354**		Pg	**Pb**	**08 54 58.4**	**-0.3**
BLCB	**Balcova**	**0.95 220**		Pg	**Pb**	**08 54 58.6**	**-0.2**
BLCB	**Balcova**	**0.95 220**		P	**Pb**	**08 54 58.6**	**-0.2**
BLCB				S	**Sg**	**08 55 10.2**	**-0.9**
ATIT	**Gnen**	**0.99 349**		P	**Pg**	**08 54 58.6**	**-1.0**
USAK	**Uak-Merkez**	**1.02 113**		P	**Pg**	**08 54 59.6**	**-0.5**
CANM	**Can-anakkale**	**1.07 327**		Pg	**Pb**	**08 55 01.2**	**+0.2**
SHAP	**Saphane-Kutahy**	**1.10 94**		Pn	**Pb**	**08 55 01.2**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.17 177**		Pn	**Pb**	**08 55 02.7**	**0.0**
NAZL	**Nazilli-Aydin**	**1.21 162**		Pn	**Pg**	**08 55 03.2**	**-0.5**
PRK	**Paraskevi**	**1.21 277**		P	**Pn**	**08 55 03.6**	**+0.4**
PRK				S	**Sn**	**08 55 19.6**	**+0.1**
KCTX	**Karacabey (Bur**	**1.22 20**		Pn	**Pg**	**08 55 03.6**	**-0.5**
EDC	**Edincik**	**1.23 2**		Pn	**Pn**	**08 55 03.9**	**+0.4**
GEDZ	**Gediz**	**1.24 93**		Pn	**Pg**	**08 55 04.7**	**+0.3**
ORLT	**Orhaneli**	**1.25 42**		Pn	**Pg**	**08 55 04.5**	**-0.1**
GMLD	**Gumuldur**	**1.25 215**		Pn	**Pg**	**08 55 05.1**	**+0.5**
DGB	**zmir**	**1.29 215**		P	**Pg**	**08 55 04.8**	**-0.5**
SULTU	**Buldan**	**1.29 145**		P	**Pn**	**08 55 03.8**	**-0.7**
TVSB	**Tavsanli**	**1.32 75**		Pn	**Pg**	**08 55 05.5**	**-0.4**
KRBG	**Karabiga-Canak**	**1.34 343**		Pn	**Pb**	**08 55 05.4**	**-0.1**
ZEYE	**Izmir, Ürla-Ze**	**1.35 230**		P	**Pn**	**08 55 04.8**	**-0.3**
EZN	**Ezine**	**1.36 302**		Pn	**Pg**	**08 55 06.1**	**-0.5**
EZN	**Ezine**	**1.36 302**		P	**Pg**	**08 55 06.3**	**-0.3**
EZN				S	**Sg**	**08 55 24.5**	**+0.3**
GCAM	**G?zelcaml?**	**1.48 198**		Pn	**Pb**	**08 55 07.9**	**-0.1**
LPK	**Lapseki**	**1.50 327**		Pn	**Pb**	**08 55 08.1**	**-0.1**
MRMT	**Marmara Adasi**	**1.50 354**		Pn	**Pb**	**08 55 08.4**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.50 33**		Pn	**Pb**	**08 55 08.0**	**-0.3**
PASA	**Karahalli, USA**	**1.51 120**		P	**Pn**	**08 55 07.9**	**+0.4**
SIGR	**SIGRI**	**1.53 274**		Pn	**Pb**	**08 55 08.2**	**-0.5**
SIGR	**SIGRI**	**1.53 274**		P	**Pn**	**08 55 07.5**	**0.0**
BOZC	**Bozcaada**	**1.55 299**		Pn	**Pb**	**08 55 08.8**	**-0.3**
SMG	**Samos**	**1.60 209**		P	**Pn**	**08 55 08.3**	**-0.3**
MLSB	**Milas**	**1.82 181**		Pn	**Pn**	**08 55 12.7**	**+1.1**
GADA	**Gvkgeada**	**1.83 307**		P	**Pn**	**08 55 12.7**	**+1.0**
YER	**Yerkesik**	**2.01 169**		Pn	**Pn**	**08 55 15.4**	**+1.1**
YER	**Yerkesik**	**2.01 169**		P	**Pn**	**08 55 13.8**	**-0.5**
BODT	**Bodrum**	**2.09 191**		P	**Pn**	**08 55 14.9**	**-0.4**
LIA	**Limnos Island**	**2.18 292**		P	**Pn**	**08 55 17.4**	**+0.8**
LIA				S	**Sn**	**08 55 44.5**	**+1.0**
SMTH	**Samothraki Isl**	**2.22 308**		P	**Pn**	**08 55 18.2**	**+1.1**
ALN	**Alexandroupoli**	**2.24 323**		P	**Pn**	**08 55 19.0**	**+1.7**
FETY	**Fethiye**	**2.67 158**		P	**Pn**	**08 55 23.5**	**+0.2**

IDC 20 09:18:22.2±6.8, 1°.73N×99°.59E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=376.4km s-min=25.5km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.32 124**		P	P	09 26 00.9	-0.9
	0.6nm,0.3s,baz=299,slow=8.4,SNR=19						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**41.84 129**		P	P	09 26 15.0	+0.7
	0.1nm,0.3s,baz=300,slow=7.7,SNR=3.2						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**47.35 344**		P	P	09 26 57.9	-0.1
	0.6nm,0.3s,baz=159,slow=8.5,SNR=18						
	0.6nm,0.3s						

HEL 20 09:28:35.3±0.2, 65°.88N×24°.37E, h0km, ML1.0, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOF	**Tornio**	**0.21 355**		PG	Pg	09 28 38.2	-1.0
	baz=172						
KALU	**Kalix**	**0.42 268**		PG	Pg	09 28 42.9	-0.3
KALU				SG	Sg	09 28 47.9	-0.7
RNF	**Rovaniemi**	**0.99 41**		PG	Pg	09 28 54.1	-0.2
	baz=226						
RNF				SN	Sn	09 29 11.0	-0.1
RANF	**Ranua**	**1.00 81**		PG	Pg	09 28 53.1	-1.3
	baz=264						
RANF				SB	Sg	09 29 06.9	-0.5
OUL	**Oulu**	**1.02 141**		PG	Pg	09 28 53.2	-1.5
OUL				SG	Sg	09 29 06.7	-1.2
ERTU	**Ertsjaerv**	**1.12 309**		PG	Pg	09 28 55.9	-0.8
ERTU				SG	Sg	09 29 10.1	-1.0
KLF	**Kolari**	**1.38 353**		PG	Pg	09 28 59.7	-1.9
KLF				smax	smax	09 29 16.8	
	comp=Z,0.7nm,0.2s						
KLF				SG	Sg	09 29 17.4	-2.0
OBF0	**Syolatti, Pyha**	**1.39 182**		smax	smax	09 29 17.0	
	comp=Z,0.8nm,0.2s						
OBF0				SG	Sg	09 29 18.5	-1.2
OUF	**Merijarvi**	**1.52 174**		PN	Pn	09 29 03.4	-0.4
	baz=351						
OUF				smax	smax	09 29 20.9	
	comp=Z,1.1nm,0.2s						
OUF				SN	Sg	09 29 22.7	-1.5
KU2	**Taivalkoski**	**1.60 94**		PN	Pn	09 29 04.9	+0.1
	baz=276						
KU2				SG	Sn	09 29 24.1	-2.1
MSF	**Maaselka**	**1.92 87**		PG	Pb	09 29 10.6	-0.5
	baz=274						
MSF				SG	Sn	09 29 34.3	+0.3
OLKF	**Oulanka, Finla**	**2.10 75**		smax	smax	09 29 37.5	
	comp=Z,0.5nm,0.2s						
OLKF				SG	Sn	09 29 38.6	+0.3
KU6	**Riekki**	**2.27 84**		PB	Pn	09 29 14.0	0.0
KU6				smax	smax	09 29 42.4	
	comp=Z,0.3nm,0.2s						
KU6				SG	Sn	09 29 43.3	+0.8
HEF	**Hetta**	**2.56 354**		smax	smax	09 29 50.7	
	comp=Z,0.9nm,0.2s						
HEF				SG	Sb	09 29 54.0	0.0

*AEIC **20** 09:32:52.0±1.0, 64°.93N±0°.03×149°.06W±0°.04, h24km±7km, Error ellipse: s-maj=3.8km s-min=2.4km az=204.0*
*NEIC **20** 09:32:52, 64°.96N×149°.08W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr-1.12; Mθθ0.44; Mφφ0.68; Mrθ0.54; Mθφ-0.91; Mφr0.35; Fault plane solution: M0 1.48000×10^14 NP1:φs292.00000°, δ54.00000°, λ-127.00000°. NP2:φs165.00000°, δ50.00000°, λ-50.00000°. Principal axes: T 1.4808, Plg2.0000°, Azm48.0000°; N -0.0002, Plg29.0000°, Azm317.0000°; P -1.4806, Plg60.0000°, Azm142.0000°;*

NEIC 20 09:32:52.0±1.1, 64°.94N±0°.02×149°.07W±0°.06, h25km±10km, ML3.5/110, ML3.3(AEIC), Mwr3.4/22(SLM) Error ellipse: s-maj=4.1km s-min=1.3km az=118.0, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23K	**Minto, Yukon-K**	**0.24 329**			Pb	09 32 58.2	0.0
I23K				Sg	Sb	09 33 02.2	-0.2
I23K				IAML		09 33 02.6	
	comp=N,8μm,0.5s						
NEA2	**Nenana**	**0.35 180**			Pb	09 32 59.9	0.0
NEA2				Sg	Sb	09 33 04.9	-0.3
NEA2				IAML		09 33 05.5	
	comp=N,5μm,0.3s						
MDM	**Murphy Dome**	**0.36 87**			Pb	09 32 59.9	0.0
MDM					Sb	09 33 05.0	-0.3
COLA	**College**	**0.52 97**			Pb	09 33 02.6	+0.1
COLA	**College**	**0.52 97**			Sb	09 33 09.6	-0.2
CCB	**Clear Creek Bu**	**0.62 118**			Pb	09 33 04.3	+0.2
CCB				Sg	Sb	09 33 12.2	-0.2
CCB				IAML		09 33 14.0	
	comp=N,3μm,0.3s						
WRH	**Wood River Hil**	**0.63 138**			Pb	09 33 04.5	+0.1
WRH				IAML		09 33 13.7	
	comp=E,3μm,0.5s						
WRH				IAML		09 33 14.1	
	comp=N,2μm,0.5s						
WRH	**Wood River Hil**	**0.63 138**			Sb	09 33 13.3	+0.4
IL31		**0.95 100**			Pn	09 33 09.6	0.0
IL31		**0.95 100**			Sn	09 33 22.3	0.0
ILAR	**Eielson Array**	**0.95 100**			Pb	09 33 10.2	+0.4
H24K	**Noodor Dome**	**1.03 28**			Pn	09 33 10.8	0.0
H24K	**Noodor Dome**	**1.03 28**		IAML		09 33 26.2	
	comp=N,1μm,0.5s						
H24K				IAML		09 33 26.4	
	comp=E,1μm,0.3s						
HDA	**Harding Lake**	**1.06 120**			Pn	09 33 10.8	-0.4
BPAW	**Bear Paw Mtn.**	**1.19 225**			Pn	09 33 12.6	-0.4
MCK	**McKinley**	**1.22 177**			Pn	09 33 13.5	+0.1
MCK				IAML		09 33 31.8	
	comp=N,1μm,0.5s						
MCK	**McKinley**	**1.22 177**			Sb	09 33 30.1	+0.5
I21K	**Tanana**	**1.26 282**			Pn	09 33 14.3	+0.4
I21K				IAML		09 33 33.2	
	comp=N,652nm,0.7s						
H22K	**Ishtalitna Cre**	**1.36 316**			Pn	09 33 15.8	+0.4
RND	**Reindeer**	**1.55 176**			Pn	09 33 18.4	+0.5
RND				IAML		09 33 41.6	
	comp=E,543nm,0.5s						
TRF	**Thorofare Moun**	**1.59 200**			Pn	09 33 18.7	0.0
PRP	**Porcupine Dome**	**1.60 67**			Pn	09 33 18.8	0.0
KTH	**Kantishna Hill**	**1.61 211**			Pn	09 33 18.8	-0.1
KTH				IAML		09 33 53.2	
	comp=E,436nm,0.8s						
KTH				IAML		09 33 54.6	
	comp=N,502nm,0.9s						
J25K	**Salcha River,**	**1.62 100**			Pn	09 33 18.5	-0.4
H21K	**Melozitna Rive**	**1.73 296**			Pn	09 33 20.3	-0.1
H21K				IAML		09 33 46.7	
	comp=E,468nm,0.3s						
CHUM	**Lake Minchumin**	**1.77 234**			Pn	09 33 20.4	-0.5
G23K	**Bananza Creek**	**1.82 348**			Pb	09 33 23.6	-1.0
G24K	**Hadweenzic Riv**	**1.88 20**			Pn	09 33 22.8	+0.2
G24K				IAML		09 33 51.1	
	comp=N,368nm,0.8s						
G24K				IAML		09 33 57.2	
	comp=E,434nm,0.7s						
WAT7	**Susitna Watana**	**2.12 177**			Pn	09 33 26.3	+0.4
WAT7					Pn	09 33 26.6	+0.7
WAT1	**Susitna Watana**	**2.13 174**			Pn	09 33 26.1	+0.1
RIDG	**Independent Ri**	**2.20 121**			Pn	09 33 26.2	-0.7
RIDG				IAML		09 34 03.9	
	comp=E,242nm,0.6s						
RIDG				IAML		09 34 05.7	
	comp=N,378nm,0.7s						
FYU	**Fort Yukon**	**2.27 42**			Pn	09 33 27.9	+0.1
FYU				IAML		09 34 07.7	
	comp=E,298nm,0.4s						
COLD	**Coldfoot**	**2.34 349**			Pn	09 33 29.2	+0.4
COLD					Pn	09 33 29.3	+0.5
COLD	**Coldfoot**	**2.34 349**		IAML		09 34 09.9	
	comp=E,188nm,0.6s						
J26L	**Joseph Creek**	**2.40 98**			Pn	09 33 29.6	-0.2
SCRK	**Sand Creek**	**2.41 111**			Pn	09 33 29.1	-0.8
SCRK				IAML		09 34 07.5	
	comp=N,214nm,0.7s						
SCRK				IAML		09 34 09.5	
	comp=E,289nm,0.4s						
G21K	**Allakaket**	**2.42 313**			Pn	09 33 30.4	+0.5
G21K	**Allakaket**	**2.42 313**		IAML		09 34 08.7	
	comp=N,198nm,0.5s						
G21K				IAML		09 34 12.3	
	comp=E,266nm,0.8s						
WAT6	**Susitna Watana**	**2.44 165**			Pn	09 33 30.9	+0.5
PPLA	**Purkeypile**	**2.48 215**			Pn	09 33 30.6	-0.2
PPLA				IAML		09 34 13.8	
	comp=E,263nm,0.5s						
PPLA				IAML		09 34 19.9	
	comp=N,222nm,0.9s						
H20K	**Anotleneega Mo**	**2.51 285**			Pn	09 33 30.8	-0.4
PAX	**Paxson**	**2.54 140**			Pn	09 33 32.1	+0.5
**D

	comp=E,86nm,0.6s							
F20K	**Avaraart Lake**	**3.45**	**311**			Pn	09 33 45.4	+1.4
E25K	**Arctic Village**	**3.48**	**22**	Pn		Pn	09 33 45.0	+0.5
E25K				IAML			09 34 45.9	
	comp=N,79nm,0.7s							
E25K				IAML			09 34 48.7	
	comp=E,83nm,0.9s							
G19K	**Purcell Mounta**	**3.55**	**293**	IAML			09 34 46.1	
	comp=E,79nm,0.7s							
G19K				IAML			09 34 47.1	
	comp=N,111nm,0.3s							
KNK	**Knik Glacier**	**3.56**	**175**			Pn	09 33 47.0	+1.5
G27K	**Doyon Strip**	**3.57**	**55**			Pn	09 33 45.2	-0.5
M20K	**Styx River**	**3.58**	**213**			Pn	09 33 46.1	+0.3
SUA	**Susitna One**	**3.58**	**193**			Pn	09 33 46.9	+1.0
J18K	**Innoko River**	**3.66**	**250**			Pn	09 33 46.2	-0.7
J18K	**Innoko River**	**3.66**	**250**	IAML			09 34 54.9	
	comp=E,106nm,0.7s							
STLK	**Strandline Lak**	**3.68**	**201**			Pn	09 33 48.3	+1.1
BC01	**Beaver Creek A**	**3.70**	**117**			Pn	09 33 46.1	-1.5
L27K	**Beaver Creek,**	**3.70**	**117**			Pn	09 33 46.2	-1.4
L27K	**Beaver Creek,**	**3.70**	**117**	IAML			09 34 48.5	
	comp=N,98nm,0.5s							
L27K				IAML			09 34 51.9	
	comp=E,90nm,0.5s							
KLU	**Klutina**	**3.75**	**156**			Pn	09 33 49.6	+1.5
KLU						Pn	09 33 49.9	+1.8
L19K	**White Mountain**	**3.79**	**226**			Pn	09 33 48.6	-0.1
I28M	**Miner Creek**	**3.88**	**78**			Pn	09 33 50.2	+0.1
I28M	**Miner Creek**	**3.88**	**78**	IAML			09 34 59.1	
	comp=E,92nm,0.7s							
RC01	**Rabbit Creek A**	**3.88**	**185**			Pn	09 33 51.8	+1.9
SPCG	**Spurr Capps Gl**	**3.90**	**201**			Pn	09 33 51.3	+1.0
N25K	**Chitina, Valde**	**3.91**	**147**			Pn	09 33 51.6	+1.1
N25K						Pn	09 33 52.1	+1.6
H18K	**Honhosa River**	**3.95**	**277**			Pn	09 33 51.5	+0.6
SPCN	**Chakachatna No**	**3.99**	**202**			Pn	09 33 52.8	+1.3
SPU	**Mount Spurr**	**4.01**	**201**			Pn	09 33 52.9	+1.1
E21K	**Killik River**	**4.02**	**333**			Pn	09 33 53.3	+1.4
F19K	**Shaleruckik Mo**	**4.04**	**302**			Pn	09 33 53.0	+0.9
F19K	**Shaleruckik Mo**	**4.04**	**302**	IAML			09 35 02.8	
	comp=E,47nm,1.0s							
G18K	**Tagagawik**	**4.12**	**288**			Pn	09 33 54.3	+1.1
D22K	**Ayikyak River**	**4.20**	**342**			Pn	09 33 55.9	+1.6
D24K	**Happy Valley**	**4.23**	**1**			Pn	09 33 56.9	+2.2
DAWY	**Dawson**	**4.27**	**98**			Pn	09 33 55.0	-0.4
E20K	**Nigu River**	**4.37**	**323**			Pn	09 33 58.5	+1.7
E27K	**Coleen River**	**4.41**	**39**			Pn	09 33 56.9	-0.4
BMRM	**Bremner River**	**4.48**	**151**			Pn	09 33 59.4	+1.2
D25K	**Kavik River**	**4.52**	**12**			Pn	09 34 00.3	+1.6
F28M	**Old Crow**	**4.58**	**50**			Pn	09 33 59.1	-0.4
H17K	**Granite Mounta**	**4.61**	**275**			Pn	09 33 59.8	-0.2
J17K	**VABM Dome**	**4.65**	**255**			Pn	09 33 59.4	-1.0
K17K	**Iditarod**	**4.66**	**246**			Pn	09 33 59.9	-0.8
F18K	**Selawik**	**4.67**	**296**			Pn	09 34 01.1	+0.4
C21K	**Knifeblade Rid**	**4.79**	**335**			Pn	09 34 03.9	+1.6
C24K	**Franklin Bluff**	**4.80**	**2**			Pn	09 34 04.1	+1.6
D20K	**Etivluk River**	**4.82**	**325**			Pn	09 34 04.4	+1.6
PTPK	**Patty Peak**	**4.82**	**138**			Pn	09 34 04.9	+1.9
G17K	**Kiwalik Mounta**	**4.91**	**282**			Pn	09 34 04.3	+0.3
BALM	**Baldy**	**4.97**	**139**			Pn	09 34 06.8	+1.7
BALM						Pn	09 34 07.0	+1.9
L17K	**Donlin**	**5.00**	**240**			Pn	09 34 04.2	-1.1
D19K	**Kuna River**	**5.06**	**319**			Pn	09 34 07.2	+1.1
KIAG	**Kiagna River**	**5.06**	**140**			Pn	09 34 08.2	+1.9
TGL	**Tana Glacier**	**5.08**	**143**	Pn		Pn	09 34 07.5	+1.0
K29M	**Barlow Dome**	**5.13**	**97**			Pn	09 34 07.7	-0.1
C27K	**Jago River**	**5.14**	**21**			Pn	09 34 08.4	+1.2
L29M	**L29M**	**5.15**	**106**			Pn	09 34 06.9	-0.5
I17K	**Unalakleet**	**5.15**	**263**			Pn	09 34 07.9	+0.5
BARN	**Barnard Glacie**	**5.15**	**136**			Pn	09 34 10.2	+2.6
B21K	**Ikpikpuk River**	**5.17**	**338**			Pn	09 34 08.9	+1.4
M17K	**Holitna River**	**5.20**	**231**			Pn	09 34 07.4	-0.6
C26K	**Camden Bay**	**5.25**	**16**			Pn	09 34 09.9	+1.3
E28M	**Babbage River**	**5.26**	**41**			Pn	09 34 08.1	-0.8
E18K	**Tukpahlearik C**	**5.29**	**303**			Pn	09 34 10.6	+1.3
N18K	**Kilae Creek**	**5.30**	**219**			Pn	09 34 09.8	+0.4
J16K	**Anvik River**	**5.32**	**257**			Pn	09 34 09.2	-0.6
CTGM	**Chitina Glacie**	**5.33**	**135**	Pn		Pn	09 34 11.8	+1.9
M29M	**Somme Creek**	**5.34**	**113**			Pn	09 34 09.0	-1.1
D27M	**Malcolm River**	**5.35**	**33**			Pn	09 34 10.2	+0.1
I30M	**Mount Dempster**	**5.37**	**81**			Pn	09 34 10.4	-0.2
J30M	**Hart River**	**5.46**	**88**			Pn	09 34 12.2	+0.4
CNPM	**China Poot**	**5.53**	**192**	Pn		Pn	09 34 14.8	+2.2
LOGN	**Logan Glacier**	**5.54**	**135**	Pn		Pn	09 34 15.8	+3.0
G16K	**Koyuk River**	**5.62**	**281**			Pn	09 34 13.9	+0.2
E29M	**Blow River**	**5.62**	**47**			Pn	09 34 13.4	-0.4
G30M	**tAoh Zraii Nji**	**5.63**	**63**			Pn	09 34 13.2	-0.9
L16K	**Owhat River**	**5.70**	**240**	Pn		Pn	09 34 14.2	-0.7
M16K	**Timber Creek**	**5.98**	**233**			Pn	09 34 18.0	-0.8
C18K	**Utukok River**	**6.06**	**313**			Pn	09 34 20.1	+0.2
K15K	**Wolf Creek Mou**	**6.16**	**250**			Pn	09 34 20.4	-0.8
H31M	**Peel River**	**6.21**	**75**			Pn	09 34 21.1	-0.9
N31M	**Braeburn, Yuko**	**6.93**	**114**	Pn		Pn	09 34 32.3	+0.4
ANM	**Nome**	**6.99**	**274**	Pn		Pn	09 34 32.9	+0.3
KARR	**Katmai Rainbow**	**7.00**	**205**			Pn	09 34 34.3	+1.5
O30N	**Mendenhall**	**7.26**	**119**	Pn		Pn	09 34 36.1	-0.2
C36M	**Paulatuk**	**10.62**	**54**	Pn		Pn	09 35 21.3	-0.9

BJI ***20*** *09:54:00.5,5˝.14N×125˝.79E,h200km,mB5.0/43,mb4.9/87*
MOS ***20*** *09:54:05.3±1.0,5˝.66N×125˝.49E,h204km,mb4.9/41,Error ellipse: s-maj=8.5km s-min=4.4km az=114.3*
GCMT ***20*** *09:54:06.9±0.1,5˝.66N±0˝.01×125˝.64E±0˝.01,h196km, MW5.5/155, Moment Tensor Solution. s114,c178; s155,c265; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.14±.02; Mθθ0.06±.02; Mφφ-1.20±.03; Mrθ-0.98±.02; Mθφ0.40±.02; Mφr0.99±.02; Best double couple: Mo1.86700×10¹⁷ NP1:ϕs184.00000°,δ25.00000°, λ128.00000°. NP2:ϕs323.00000°,δ70.00000°,λ74.00000°. Principal axes: T 1.8730, Plg61.0000°, Azm208.0000°; N -0.0080, Plg15.0000°, Azm329.0000°; P -1.8610, Plg24.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***20*** *09:54:06.9,5˝.57N×125˝.56E,h210km*
NEIC ***20*** *09:54:06.9,5˝.67N×125˝.76E,h210km,Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10¹⁷Nm; Mrr1.00; Mθθ-0.08; Mφφ-0.91; Mrθ-0.64; Mθφ0.44; Mφr1.10; Fault plane solution: Mo1.65000×10¹⁷ NP1: ϕs163.42000°,δ20.12000°,λ101.62000°. NP2: ϕs331.07000°,δ70.31000°,λ85.78000°. Principal axes: T 1.5997, Plg64.0000°, Azm234.0000°; N 0.0939, Plg4.0000°, Azm332.0000°; P -1.6936, Plg25.0000°, Azm64.0000°;*
IDC ***20*** *09:54:06.5±0.4,5˝.67N×125˝.51E,h203km±3km,mb4.7/36, mbtmp5.2/39,MS4.1/20 Error ellipse: s-maj=10.0km s-min=5.4km az=77.0*
NEIC ***20*** *09:54:07.3±2.2,5˝.59N±0˝.02×125˝.55E±0˝.08,h201km±3km, mb5.0/239,Mww5.4/34,Error ellipse: s-maj=11.7km s-min=2.5km az=79.0*
GFZ ***20*** *09:54:07.8,5˝.66N×125˝.63E,h200km,MW5.4,Moment Tensor Solution. s55 Moment tensor: Mrr0.97; Mθθ0.00; Mφφ-0.97; Mrθ-0.61; Mθφ0.50; Mφr0.73; Fault plane solution: NP1:ϕs172.00000°,δ26.00000°, λ115.00000°. NP2:ϕs325.00000°,δ66.00000°,λ78.00000°. Principal axes: T 1.3600, Plg67.0000°, Azm214.0000°; N 0.1500, Plg11.0000°, Azm330.0000°; P -1.5200, Plg20.0000°, Azm64.0000°;*
DJA ***20*** *09:54:09.1±0.3,5˝N±2˝×12˝6E±˝,h183km±3km,M5.3/54, mB5.8/51,mb5.8/54,MLv6.2/18,Mw(mB)5.4/51, MwMwp4.9/21,Mwp5.2/21*
ISC 20 09:54:06.8±0.2,5˝.58N±0˝.03×125˝.62E±0˝.04,h208km±1km, h208km:pP-P,n979,σ1955/1074,mb5.0/239,43C-20D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.48**	**358**	P		**Pn**	**09 54 40.4**	**-0.7**
	6μm,0.5s,baz=158,slow=1.2,SNR=174							
DAV				S		**S**	**09 55 05.2**	**-2.4**
	9μm,0.5s,baz=214,slow=20,SNR=20							
DAV				LR		LR	09 55 19.2	
	comp=Z,5μm,19.3s,baz=164,slow=52							
DAV	**Davao City (W)**	**1.48**	**358**			**Pn**	**09 54 39.8**	**-1.3**
DAV	**Davao City (W)**	**1.48**	**358**	P		**Pn**	**09 54 40.5**	**-0.7**
DAV						S	**09 55 08.1**	**+0.5**
DAV	**Davao City (W)**	**1.48**	**358**	P		**Pn**	**09 54 40.4**	**-0.7**
DAV						S	**09 55 07.9**	**+0.3**
DAV	**Davao City (W)**	**1.48**	**358**	P		**Pn**	**09 54 40.0**	**-1.1**
SGSI	**Sangihe**	**1.88**	**183**	P		**Pn**	**09 54 44.5**	**-0.3**
SGSI						S	**09 55 12.6**	**-1.5**
MNI	**Manado**	**4.18**	**191**	P		**Pn**	**09 55 12.1**	**+0.9**
TNTI	**Ternate**	**5.08**	**160**			**Pn**	**09 55 21.5**	**-1.1**
TNTI					Sn	S	**09 56 17.0**	**-5.0**
TNTI	**Ternate**	**5.08**	**160**	P		**Pn**	**09 55 21.8**	**-0.7**
TNTI						S	**09 56 20.0**	**-2.0**
GTOI	**Gorontalo**	**5.56**	**208**	P		**Pn**	**09 55 29.2**	**+0.6**
	14nm7μm39μm5μm,1.1s							
MRSI	**Marisa**	**6.26**	**216**	P		**Pn**	**09 55 39.2**	**+1.6**
	6.1nm7μm18μm2μm,1.0s							
TOLI2	**Tolitoli**	**6.56**	**228**			**Pn**	**09 55 40.9**	**-0.6**
MYLDM	**Lahad Datu**	**7.10**	**267**			**Pn**	**09 55 49.6**	**+1.1**
MYLDM	**Lahad Datu**	**7.10**	**267**	P		**Pn**	**09 55 51.6**	**+3.1**
	4.9nm16μm1μm,1.3s							
LUWI	**Luwuk**	**7.17**	**203**	Pn		**Pn**	**09 55 50.5**	**+1.2**
LUWI	**Luwuk**	**7.17**	**203**	P		**Pn**	**09 55 51.4**	**+2.1**
	9.9nm16μm2μm,0.9s							
APSI	**Ampana**	**7.57**	**212**	P		**Pn**	**09 55 57.9**	**+3.3**
	11nm27μm4μm,1.1s							
SANI	**Sanana**	**7.59**	**177**	P		**Pn**	**09 55 51.6**	**-3.2**
MPSI	**Mapaga**	**7.73**	**228**	P		**Pn**	**09 55 58.4**	**+1.7**
TARAI	**Tarakan**	**8.33**	**255**	P		**Pn**	**09 56 08.5**	**+4.0**
	672nm,0.9s							
SWI	**Sorong**	**8.52**	**138**	P		**Pn**	**09 56 08.0**	**+1.1**
	4μm5μm471nm,1.0s							
SIJI	**Sorong**	**8.53**	**138**	P		**Pn**	**09 56 08.1**	**+1.0**
	228nm,0.7s,baz=352,slow=12,SNR=57							
SIJI						S	**09 57 40.2**	**-3.0**
	91nm,0.7s,baz=119,slow=22,SNR=5.9							
SIJI	**Sorong**	**8.53**	**138**	P		**Pn**	**09 56 07.8**	**+0.7**
PCI	**Palu**	**8.65**	**222**	P		**Pn**	**09 56 12.7**	**+4.1**
	2.0nm7μm642nm,0.9s							
NLAI	**Namlea**	**8.88**	**170**	P		**Pn**	**09 56 10.3**	**-1.3**
KRAI	**Karang Ratu**	**9.26**	**163**	P		**Pn**	**09 56 16.6**	**+0.1**
KKM	**Kota Kinabalu**	**9.37**	**273**			**Pn**	**09 56 17.8**	**-0.2**
KKM	**Kota Kinabalu**	**9.37**	**273**	P		**Pn**	**09 56 19.1**	**+1.1**
MSAI	**Masohi**	**9.46**	**160**	P		**Pn**	**09 56 20.1**	**+1.0**
	15μm1μm,0.6s							
AAI	**Ambon**	**9.56**	**164**	P		**Pn**	**09 56 19.7**	**-0.6**
TGY	**Tagaytay City**	**9.64**	**332**	P		**Pn**	**09 56 25.0**	**+3.5**
	143nm,0.5s,baz=299,slow=4.7,SNR=4.5							
TGY	**Tagaytay City**	**9.64**	**332**	P		**Pn**	**09 56 25.0**	**+3.5**
TTSI	**Tana Toraja**	**10.35**	**214**	P		**Pn**	**09 56 33.1**	**+2.6**
	3μm6μm711nm,0.8s							
KKSI	**Kolaka, Sulawe**	**10.47**	**202**	P		**Pn**	**09 56 31.9**	**-0.2**
	2μm3μm308nm,0.8s							
MMSI	**Mamuju**	**10.60**	**219**	P		**P**	**09 56 37.6**	**-2.9**
	196nm,0.6s							
MWPI	**Manokwari, Pap**	**10.61**	**127**	P		**Pn**	**09 56 36.1**	**+2.3**
	6μm488nm,1.3s							
FAKI	**Fak Fak**	**10.73**	**142**			**Pn**	**09 56 35.6**	**+0.2**
FAKI	**Fak Fak**	**10.73**	**142**	P		**Pn**	**09 56 36.7**	**+1.3**
	3μm7μm815nm,1.0s							
BNDI	**Bandanaira**	**10.91**	**157**	P		**Pn**	**09 56 38.4**	**+0.7**
BKB	**Balikpapan**	**11.05**	**232**			**Pn**	**09 56 38.7**	**-0.8**
BKB	**Balikpapan**	**11.05**	**232**	P		**P**	**09 56 42.7**	**-2.8**
	5μm8μm919nm,1.0s							
RKPI	**Ransiki, Papua**	**11.07**	**129**	P		**P**	**09 56 42.9**	**-2.8**
	3μm288nm,0.9s							
SPSI	**Sidrap Palu**	**11.14**	**212**	P		**Pn**	**09 56 42.6**	**+1.9**
	3μm264nm,0.9s							
PMSI	**Majene**	**11.24**	**217**	P		**Pn**	**09 56 43.4**	**+1.5**
	3μm303nm,0.9s							
KAPI	**Kappang**	**12.05**	**209**	P		**Pn**	**09 56 53.4**	**+1.2**
	137nm,0.6s,baz=32,slow=4.8,SNR=38							
KAPI	**Kappang**	**12.05**	**209**	Pn		**Pn**	**09 56 52.3**	**+0.1**
KAPI	**Kappang**	**12.05**	**209**	P		**Pn**	**09 56 53.5**	**+1.3**
KAPI						S	**09 59 08.4**	**+2.5**
KAPI	**Kappang**	**12.05**	**209**	P		**Pn**	**09 56 53.5**	**+1.3**
KMPI	**Kaimana, Papua**	**12.22**	**139**	P		**Pn**	**09 56 55.5**	**+1.1**
	9μm1μm,0.9s							
MKS	**Makassar**	**12.36**	**210**	P		**P**	**09 56 59.4**	**-0.6**
	4μm480nm,0.9s							
BAKI	**Biak**	**12.44**	**122**	P		**P**	**09 56 59.3**	**-1.7**
	7μm911nm,1.1s							
MTKI	**Muara Teweh, K**	**12.52**	**239**	P		**P**	**09 57 02.3**	**+0.5**
	3μm14μm338nm,0.9s							
BSSI	**Bau Bau, Buton**	**12.72**	**204**	P		**Pn**	**09 57 02.3**	**+1.6**
	3μm277nm,0.8s							
SRPI	**Serui, Papua**	**12.93**	**125**	P		**P**	**09 57 06.8**	**+0.4**
MMRI	**Maumere**	**14.52**	**193**			**Pn**	**09 57 22.4**	**-0.6**
SAUI	**Saumlaki**	**14.61**	**157**			**Pn**	**09 57 23.9**	**-0.2**
SOEI	**Soe**	**15.29**	**185**			**P**	**09 57 33.2**	**+0.5**
BATI	**Batumata**	**15.80**	**187**	P		**Pn**	**09 57 39.7**	**+1.1**
	2μm,0.7s,baz=342,slow=1.0,SNR=59							
BATI					S	**S**	**10 00 33.2**	**-0.4**
	559nm,0.6s,baz=138,slow=18,SNR=7.3							
JAY	**Jayapura**	**17.07**	**118**	P		**Pn**	**09 57 54.3**	**+0.5**
	471nm,0.9s,baz=266,slow=4.9,SNR=42							
JAY					S	**S**	**10 01 00.4**	**+0.8**
	58nm,0.9s,baz=206,slow=21,SNR=11							
JAGI	**Jajag, Banyuwa**	**18.05**	**219**			**P**	**09 58 02.7**	**-0.1**
YULB	**Yu-li**	**18.19**	**347**	P		**P**	**09 58 01.4**	**-2.9**
SSLB	**Suanglung**	**18.65**	**347**			**P**	**09 58 07.3**	**-2.6**
YOJ	**Yonaguni jima**	**18.94**	**353**			**P**	**09 58 13.8**	**+1.4**
YOJ	**Yonaguni jima**	**18.94**	**353**	P		**P**	**09 58 13.8**	**+1.4**
MTN	**Manton Dam**	**19.10**	**163**	P		**P**	**09 58 15.3**	**+1.1**
	comp=Z,463nm,0.5s							
MTN	**Manton Dam**	**19.10**	**163**			**P**	**09 58 14.3**	**+0.1**
KDU	**Kakadu**	**19.38**	**159**	P		**P**	**09 58 18.4**	**+1.2**
	comp=Z,519nm,0.8s							
YHNB	**Yeheng**	**19.41**	**348**			**P**	**09 58 16.7**	**-0.9**
SMRI	**Semarang**	**19.67**	**231**	P		**P**	**09 58 20.6**	**+0.3**
TATO	**Taipei**	**19.69**	**349**	P		**P**	**09 58 20.6**	**+0.3**
UGM	**Wanagama**	**20.16**	**228**			**P**	**09 58 25.9**	**+0.3**
QIZ	**Qiongzhong**	**20.38**	**312**	P		**P**	**09 58 28.3**	**+0.4**
QIZ					sP	**sP**	**09 59 29.3**	**+1.5**
QIZ					S	**S**	**10 02 04.1**	**-0.5**
QIZ				pmax	pmax			
	comp=Z,48nm,1.5s							
QIZ				pmax	pmax			
	comp=Z,560nm,6.5s							
QZH2	**Quanzhou**	**20.40**	**341**	P		**P**	**09 58 29.3**	**+1.3**
QZH2				PP		**pP**	**09 59 04.0**	**+1.1**
QZH2				S		**S**	**10 02 04.3**	**-0.6**
QZH2				pmax	pmax			
	comp=Z,52nm,0.8s							
QZH2				LR	LR			
	comp=Z,580nm,16.0s							
GUMO	**Guam**	**20.56**	**66**	P		**P**	**09 58 30.6**	**+0.7**
	comp=Z,490nm,1.0s,baz=149,slow=5.9,SNR=7.5							
	comp=Z,490nm,1.0s							
GUMO	**Guam**	**20.56**	**66**			**P**	**09 58 29.5**	**-0.3**
JMZ	**Minamidaito 2**	**20.83**	**14**	P		**P**	**09 58 33.2**	**+0.6**
JOW	**Kunigami**	**21.29**	**7**	P		**P**	**09 58 37.8**	**+0.5**
	comp=Z,92nm,0.8s,baz=192,slow=8.4,SNR=24							
JOW					S	**S**	**10 02 16.5**	**-4.2**
	comp=Z,8.0nm,0.8s,baz=43,slow=29,SNR=7.4							
	comp=Z,92nm,0.8s							
JOW	**Kunigami**	**21.29**	**7**			**P**	**09 58 38.1**	**+0.8**
KNRA	**Kununurra**	**21.35**	**172**	P		**P**	**09 58 38.6**	**+0.6**
	comp=Z,1μm,0.7s							
KNRA	**Kununurra**	**21.35**	**172**			**P**	**09 58 38.6**	**+0.6**
GZH2	**Guangzhou**	**21.35**	**329**	P		**P**	**09 58 37.8**	**-0.2**
GZH2				sP		**sP**	**09 59 40.6**	**+0.9**
GZH2				S		**S**	**10 02 19.1**	**-2.6**
GZH2				pmax	pmax			
	comp=Z,140nm,1.0s							
LEM	**Lembang**	**21.79**	**236**	P		**P**	**09 58 44.3**	**+1.5**
	comp=Z,1μm,0.9s,baz=67,slow=8.5,SNR=110							
BBJI	**Bungbulang**	**22.12**	**234**			**P**	**09 58 45.6**	**-0.3**
PMBI	**Palembang**	**22.48**	**248**	P		**P**	**09 58 51.2**	**+2.2**
MANU	**Manus Island**	**23.00**	**109**	P		**P**	**09 58 55.4**	**+1.7**
FITZ	**Fitzroy Crossi**	**23.53**	**180**	P		**P**	**09 58 59.2**	**+0.8**
	comp=Z,400nm,0.5s,baz=0.7,slow=7.6,SNR=715							
FITZ					S	**S**	**10 02 56.2**	**-0.7**
	comp=Z,20nm,0.8s,baz=108,slow=16,SNR=1.5							
GULI	**GuiLin**	**24.45**	**325**	P		**P**	**09 59 07.8**	**+1.0**
GULI					S	**S**	**10 03 14.8**	**+3.3**
GULI				pmax	pmax			
	comp=Z,28nm,1.2s							
GULI				LR	LR			
	comp=Z,1μm,16.3s							
GULI				LR	LR			
	comp=Z,1μm,17.1s							
GULI				LR	LR			
	comp=Z,750nm,15.3s							
IPM	**Ipoh**	**24.53**	**269**			**P**	**09 59 07.4**	**-0.2**
KULM	**Kulim**	**24.86**	**271**			**P**	**09 59 10.6**	**0.0**
BKNI	**Bangkinang**	**25.09**	**259**	P		**P**	**09 59 13.7**	**+1.0**
COEN	**Coen**	**26.08**	**138**			**P**	**09 59 21.6**	**0.0**
COEN				IAmb		IAmb	09 59 33.4	
	comp=Z,44nm,0.8s							
PMG	**Port Moresby**	**26.12**	**125**	P		**P**	**09 59 22.2**	**+0.3**
	comp=Z,13nm,0.6s,baz=307,slow=5.2,SNR=4.7							
	comp=Z,13nm,0.6s							
PMG	**Port Moresby**	**26.12**	**125**	P		**P**	**09 59 22.7**	**+0.8**
PMG				IAmb		IAmb	09 59 28.5	
	comp=Z,47nm,1.0s							
PMG	**Port Moresby**	**26.12**	**125**	⇓*i* P		**P**	**09 59 22.2**	**+0.3**
PMG				pmax		pmax		
	comp=Z,18nm,0.9s							
JCJ	**Chichijima**	**26.59**	**35**	P		**P**	**09 59 26.5**	**+0.5**
WB0	**Warramunga Arr**	**26.62**	**161**			**P**	**09 59 26.1**	**-0.3**
WRAB	**Tennant Creek**	**26.77**	**162**	P		**P**	**09 59 27.6**	**-0.1**
WRAB	**Tennant Creek**	**26.77**	**162**	*ce*P		**P**	**09 59 27.9**	**+0.2**
WRAB				pmax		pmax		
	comp=Z,230nm,1.3s							
PSI	**Prapat**	**26.77**	**265**	P		**P**	**09 59 27.9**	**0.0**
PSI				pmax		pmax		
	comp=Z,124nm,1.0s							
WRA	**Warramunga Arr**	**26.77**	**162**	P		**P**	**09 59 27.7**	**0.0**
	comp=Z,86nm,0.7s,baz=340,slow=8.9,SNR=219							
WRA				S		**S**	**10 03 46.5**	**-1.8**
	comp=Z,19nm,0.8s,baz=338,slow=15,SNR=7.8							
	comp=Z,86nm,0.7s							
WRA	**Warramunga Arr**	**26.77**	**162**	P		**P**	**09 59 27.4**	**-0.3**
WRA				IAmb		IAmb	09 59 29.6	
	comp=Z,20nm,0.9s							
WRA	**Warramunga Arr**	**26.77**	**162**	*i* P		**P**	**09 59 27.2**	**-0.5**
WRA				pmax		pmax		
	comp=Z,86nm,0.7s							
RPSI	**Rantau Prapat**	**26.78**	**265**			**P**	**09 59 27.9**	**0.0**
WHN	**Wuhan**	**27.00**	**338**	P		**P**	**09 59 30.3**	**+0.7**
WHN				pP		**pP**	**10 00 12.5**	**+1.0**
WHN				PcP		**PcP**	**10 02 46.6**	**+0.9**
WHN				S		**S**	**10 03 47.9**	**-3.7**
WHN				ScP		**ScP**	**10 06 05.3**	**-1.0**
WHN				ScS		**ScS**	**10 09 58.9**	**+1.2**
WHN				pmax		pmax		
	comp=Z,76nm,0.9s							
NJ2	**Nanjing**	**27.09**	**347**	*e*P		**P**	**09 59 30.8**	**+0.5**
NJ2				pP		**pP**	**10 00 09.6**	**-2.7**
NJ2				ScP		**ScP**	**10 06 07.5**	**+1.0**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
MBWA	**Marble Bar**	**27.19**	**192**			**P**	**09 59 31.7**	**+0.3**
MBWA	**Marble Bar**	**27.19**	**192**	P		**P**	**09 59 31.7**	**+0.3**
GYA	**Guiyang**	**27.55**	**321**	⇓P		**P**	**09 59 35.8**	**+1.1**
GYA				S		**S**	**10 04 03.9**	**+3.4**
GYA				pmax		pmax		
	comp=Z,20nm,1.3s							
PSA00	**Pilbara Seismi**	**27.57**	**192**	P		**P**	**09 59 35.1**	**+0.3**
PSA00	**Pilbara Seismi**	**27.57**	**192**			**P**	**09 59 34.8**	**0.0**
PSA00				IAmb		IAmb	09 59 37.3	
	comp=Z,778nm,1.4s							
GSI	**Gunungsitoli**	**28.31**	**262**			**P**	**09 59 40.9**	**-0.6**
ENH	**Enshi**	**28.89**	**330**	P		**P**	**09 59 45.9**	**-0.5**
CM31	**Chiang Mai Arr**	**29.01**	**298**	P		**P**	**09 59 48.0**	**+0.4**
CM31				IAmb		IAmb	09 59 55.0	
	comp=Z,34nm,1.1s							
CM31	**Chiang Mai Arr**	**29.01**	**298**	P		**P**	**09 59 50.0**	**+2.4**
	SNR=9.9							
CMAR	**Chiang Mai Arr**	**29.01**	**298**	P		**P**	**09 59 48.0**	**+0.3**
	comp=Z,11nm,0.9s,baz=117,slow=7.1,SNR=40							
CMAR				PcP		**PcP**	**10 02 51.2**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=189,slow=1.5,SNR=4.4							
CMAR				ScP		**ScP**	**10 06 13.9**	**+1.1**
	comp=Z,23nm,1.0s,baz=133,slow=1.6,SNR=34							
CMAR				PKiKP		**PKiKP**	**10 10 24.8

XAN comp=Z,220nm,0.9s pmax pmax
XAN comp=Z,420nm,3.8s LR LR
XAN comp=Z,500nm,13.9s LR LR
XAN comp=Z,660nm,15.1s LR LR
XAN comp=Z,630nm,17.0s LR LR
XAN Xi'an 32.28 333 P **P** **10 00 14.8 -1.4**
XAN pP **pP** **10 00 59.5 +0.8**
XAN PcP **PcP** **10 02 59.3 0.0**
TNCH TengChong 32.39 310 P **P** **10 00 17.6 +0.2**
TNCH pP pP 10 00 59.3 -0.9
TNCH PcP **PcP** **10 03 00.9 +0.9**
TNCH S **S** **10 05 15.8 -0.7**
TNCH ScP **ScP** **10 06 24.3 +0.2**
TNCH SS **SS** **10 07 27.8 -14**
TNCH comp=Z,19nm,0.5s pmax pmax
TNCH comp=Z,140nm,3.6s pmax pmax
CD2 Chengdu 32.51 323 P **P** **10 00 18.3 +0.1**
CD2 S **S** **10 05 14.1 -3.8**
CD2 sS sS 10 06 36.8 +4.0
CD2 comp=Z,70nm,0.9s pmax pmax
CD2 comp=Z,870nm,14.5s LR LR
CD2 comp=Z,730nm,15.9s LR LR
CTA Charters Tower 32.59 142 P **P** **10 00 20.7 +1.7**
comp=Z,53nm,1.0s,baz=319,slow=9.9,SNR=56
CTA PcP **PcP** **10 03 01.4 +1.0**
comp=Z,22nm,1.0s,baz=339,slow=4.4,SNR=3.2
CTA ScP **ScP** **10 06 25.8 +1.1**
comp=Z,24nm,1.0s,baz=321,slow=2.9,SNR=6.1
comp=Z,53nm,1.0s
CTAO Charters Tower 32.59 142 **P** **10 00 19.8 +0.8**
CTAO IAmb IAmb 10 00 22.2
comp=Z,63nm,0.9s
CTAO Charters Tower 32.59 142 P **P** **10 00 19.8 +0.8**
CTAO pmax pmax
comp=Z,63nm,1.0s
MAJO Matsushiro 32.91 19 P **P** **10 00 20.8 -0.8**
MAJO Matsushiro 32.91 19 P **P** **10 00 20.8 -0.8**
MAJO pmax pmax
comp=Z,23nm,1.0s
MJAR Matsushiro Arr 32.91 19 P **P** **10 00 20.7 -0.9**
comp=Z,16nm,0.8s,baz=194,slow=9.4,SNR=49
MJAR ScP **ScP** **10 06 25.9 +0.4**
comp=Z,7.0nm,1.0s,baz=197,slow=4.1,SNR=9.4
MJAR P3KPbc 10 31 37.3
comp=Z,3.3nm,1.0s,baz=14,slow=4.3,SNR=6.5
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 32.91 19 **P** **10 00 20.6 -0.9**
MJAR **ScP** **10 06 26.2 +0.8**
MJB9 Matsu-Tunnel 32.91 19 P **P** **10 00 21.5 -0.1**
PBA Port Blair 33.04 283 *e*P **P** **10 00 23.3 +0.3**
PBA *e*P **P** **10 00 24.2 +1.2**
PBA IAmb IAmb 10 01 41.8
PBA comp=Z,25nm,0.9s eS **S** **10 05 29.5 +3.1**
DGPR DIGLIPUR 33.10 286 IAmb IAmb 09 59 11.6
DGPR comp=Z,23nm,0.5s *e*P **P** **10 00 24.6 +1.2**
DGPR *e*S **S** **10 05 29.5 +2.3**
HNS HongShan 33.20 344 ⇓P **P** **10 00 23.5 -0.6**
HNS pP **pP** **10 01 05.1 -2.0**
HNS PcP **PcP** **10 03 03.8 +2.1**
HNS S **S** **10 05 25.5 -2.8**
HNS ScP **ScP** **10 06 27.4 +1.0**
HNS ScS **ScS** **10 10 29.1 +1.7**
HNS pmax pmax
comp=Z,57nm,1.2s
HNS LR LR
comp=Z,340nm,15.9s
HNS LR LR
comp=Z,350nm,17.5s
HNS LR LR
comp=Z,380nm,20.7s
DL2 Dalian 33.37 354 P **P** **10 00 25.6 +0.1**
DL2 pP **pP** **10 01 07.1 -1.1**
DL2 S **S** **10 05 30.3 -0.5**
DL2 pmax pmax
comp=Z,70nm,0.8s
DL2 pmax pmax
comp=Z,240nm,5.0s
BJI2 Beijing 35.33 347 P **P** **10 00 41.6 -0.7**
BJI2 pP **pP** **10 01 26.0 +0.2**
BJI2 PcP **PcP** **10 03 09.6 +1.8**
BJI2 S **S** **10 05 58.0 -2.9**
BJI2 ScP **ScP** **10 06 34.6 +0.6**
BJI2 sS **sS** **10 07 16.4 0.0**
BJI2 ScS **ScS** **10 10 41.0 +2.3**
BJI2 pmax pmax
comp=Z,29nm,1.1s
BJI2 pmax pmax
comp=Z,72nm,3.5s
BJT Baijiatuan 35.33 347 IAmb IAmb 10 00 44.2
comp=Z,76nm,1.1s
MORW Morawa 35.66 194 **P** **10 00 44.6 -0.7**
SAIH SAIHA 35.72 301 *e*P **P** **10 00 44.6 -1.4**
SAIH IAmb IAmb 10 00 57.3
comp=Z,24nm,0.5s
SAIH eS **S** **10 06 09.4 +1.8**
IMP Imphal 35.91 306 *e*P **P** **10 00 46.5 -1.1**
IMP IAmb IAmb 10 00 52.9
comp=Z,15nm,0.3s
IMP eS **S** **10 06 11.0 +0.7**
SNY Shenyang 36.14 357 ⇓P **P** **10 00 49.3 +0.2**
SNY pP **pP** **10 01 32.3 0.0**
SNY sP **sP** **10 01 55.0 -1.0**
SNY S **S** **10 06 13.0 -0.1**
SNY pmax pmax
comp=Z,38nm,1.1s
SNY pmax pmax
comp=Z,170nm,3.5s
SNY LR LR
comp=Z,350nm,16.7s
SNY LR LR
comp=Z,310nm,9.6s
SNY LR LR
comp=Z,460nm,15.1s
MOKO MOKOCHONG 36.15 308 *e*P **P** **10 00 49.3 -0.4**
MOKO IAmb IAmb 10 01 00.7
comp=Z,29nm,1.3s
INKA Innaminka 36.20 157 **P** **10 00 50.9 +1.1**
FORT Forrest 36.23 176 **P** **10 00 50.8 +0.7**
LZDM Lanzhou Array 36.33 329 P **P** **10 00 51.1 -0.2**
comp=Z,55nm,1.0s,baz=158,slow=9.3,SNR=49
LZDM PcP **PcP** **10 03 11.5 +0.1**
comp=Z,16nm,0.8s,baz=179,slow=7.3,SNR=6.4
LZDM ScP **ScP** **10 06 37.9 -0.3**
comp=Z,35nm,1.0s,baz=160,slow=4.7,SNR=20
comp=Z,55nm,1.0s
LZH Lanzhou 36.36 330 *e*P **P** **10 00 51.8 +0.5**
LZH pP pP 10 01 36.4 +1.9
LZH sP sP 10 01 55.8 -2.5
LZH PcP **PcP** **10 03 12.9 +1.6**
LZH S **S** **10 06 13.3 -3.7**
LZH ScP **ScP** **10 06 38.5 +0.4**
LZH sS sS 10 07 31.8 -1.0
LZH pmax pmax
comp=Z,410nm,1.5s
LZH pmax pmax
comp=Z,410nm,4.9s
LZH LR LR
comp=Z,540nm,15.6s
LZH LR LR
comp=Z,460nm,14.6s
LZH LR LR
comp=Z,560nm,16.2s
SILR SILCHAR 36.81 305 *e*P **P** **10 00 55.0 -0.1**
SILR IAmb IAmb 10 01 53.5
comp=Z,27nm,0.5s
HHC Hu-ho-hao-te 37.31 342 *e*P **P** **10 00 59.5 +0.3**
HHC pP pP 10 01 41.8 -1.1
HHC PP **PnPn** **10 02 32.9 +0.5**
HHC S **S** **10 06 27.8 -3.4**
HHC sS sS 10 07 50.8 +3.6
HHC ScS **ScS** **10 10 47.4 -2.6**
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,50nm,4.2s
TEZP TEZPUR 37.65 307 *e*P **P** **10 01 02.6 +0.6**
TEZP IAmb IAmb 10 01 08.6
comp=Z,29nm,1.0s
TEZP eS **S** **10 06 35.4 -1.0**
AGT Agartala 37.74 302 *e*P **P** **10 01 03.6 +0.7**
AGT IAmb IAmb 10 02 18.1
comp=Z,3μm,0.1s
BTO2 Baotou 37.75 340 *e*P **P** **10 01 04.4 +1.5**
BTO2 pP **pP** **10 01 47.5 +1.0**
BTO2 sP **sP** **10 02 11.8 +1.5**
BTO2 PP **PP** **10 02 33.4 -0.4**
BTO2 S **S** **10 06 40.8 +2.9**
BTO2 sS **sS** **10 07 52.8 -1.2**
BTO2 pmax pmax
comp=Z,16nm,0.6s
BTO2 pmax pmax
comp=Z,160nm,4.9s
BTO2 LR LR
comp=Z,980nm,14.7s
BTO2 LR LR
comp=Z,520nm,13.9s
BTO2 LR LR
comp=Z,620nm,10.3s
SHL Shillong 37.91 305 P **P** **10 01 04.9 +0.4**
SNR=21
CN2 Changchun 38.07 360 P **P** **10 01 05.4 +0.1**
CN2 pP pP 10 01 48.8 +0.1
CN2 PcP **PcP** **10 03 16.0 -0.1**
CN2 S **S** **10 06 43.3 +1.1**
CN2 sS sS 10 07 59.3 +0.8
CN2 SS **SS** **10 09 34.8 -4.2**
CN2 pmax pmax
comp=Z,10.0nm,1.5s
CN2 LR LR
comp=Z,240nm,14.0s
CN2 LR LR
comp=Z,40nm,14.0s
CN2 LR LR
comp=Z,250nm,17.0s
USRK Ussuriysk Ar. 38.87 7 P **P** **10 01 13.0 +1.0**
comp=Z,7.3nm,0.7s,baz=166,slow=5.5,SNR=10
comp=Z,7.3nm,0.7s
MDJ Mudanjiang 39.04 5 P **P** **10 01 15.1 +1.7**
MDJ PP **PnPn** **10 02 52.3 -0.1**
MDJ S **S** **10 06 57.6 +0.8**
MDJ SS **SS** **10 09 52.1 -6.2**
MDJ ScS **ScS** **10 11 00.8 +1.2**
MDJ pmax pmax
comp=Z,10.0nm,1.1s
MDJ LR LR
comp=Z,310nm,14.9s
MDJ LR LR
comp=Z,330nm,13.1s
MDJ LR LR
comp=Z,480nm,18.2s
XLT XiLinHaoTe 39.08 349 *e*P **P** **10 01 13.4 -0.5**
XLT pP pP 10 01 57.0 -0.7
XLT PcP **PcP** **10 03 20.9 +1.5**
XLT ScP **ScP** **10 06 48.8 +0.7**
XLT S **S** **10 06 54.0 -3.6**
XLT ScS **ScS** **10 11 00.6 +0.5**
XLT pmax pmax
comp=Z,33nm,1.1s
XLT pmax pmax
comp=Z,85nm,4.5s
XLT LR LR
comp=Z,410nm,16.4s
XLT LR LR
comp=Z,210nm,10.3s
NWAO Narrogin (SRO) 39.12 191 P **P** **10 01 15.2 +1.1**
comp=Z,430nm,1.0s,baz=18,slow=7.5,SNR=93
NWAO Narrogin (SRO) 39.12 191 P **P** **10 01 14.7 +0.5**
NWAO Narrogin (SRO) 39.12 191 P **P** **10 01 15.3 +1.1**
NWAO Narrogin (SRO) 39.12 191 P **P** **10 01 15.0 +0.8**
NWAO PcP **PcP** **10 03 20.4 +0.8**
BBOO Buckleboo 39.45 166 P **P** **10 01 17.8 +0.9**
EIDS Eidsvold 39.48 142 IAmb IAmb 10 01 19.1
comp=Z,54nm,1.1s
BNX BinXian 40.03 2 ⇑P **P** **10 01 21.9 +0.3**
BNX pP **pP** **10 02 04.6 -0.9**
BNX sP **sP** **10 02 25.0 -4.1**
BNX S **S** **10 07 13.0 +1.4**
BNX pmax pmax
comp=Z,14nm,1.0s
BNX pmax pmax
comp=Z,150nm,4.7s
BNX LR LR
comp=Z,240nm,17.7s
BNX LR LR
comp=Z,410nm,19.1s
BNX LR LR
comp=Z,270nm,17.6s
STKA Stephens Creek 40.24 159 P **P** **10 01 25.0 +1.5**
comp=Z,245nm,0.8s,baz=334,slow=8.4,SNR=204
STKA PP **PP** **10 03 00.3 -0.5**
comp=Z,58nm,0.8s,baz=343,slow=11,SNR=3.8
STKA ScP **ScP** **10 06 54.2 +1.5**
comp=Z,22nm,0.8s,baz=337,slow=4.8,SNR=5.7
STKA S **S** **10 07 11.4 -3.6**
comp=Z,47nm,1.2s,baz=30,slow=13,SNR=7.4
comp=Z,245nm,0.8s
STKA Stephens Creek 40.24 159 P **P** **10 01 25.0 +1.5**
LSA Lhasa 40.40 311 IAmb IAmb 10 02 15.1
comp=Z,84nm,1.4s
GTA2 Gaotai 41.04 329 P **P** **10 01 29.8 -0.3**
GTA2 pP pP 10 02 15.3 +1.1
GTA2 PcP **PcP** **10 03 27.0 +1.1**
GTA2 ScP **ScP** **10 06 56.0 0.0**
GTA2 S **S** **10 07 27.3 +0.4**
GTA2 sS sS 10 08 48.8 +4.9
GTA2 ScS **ScS** **10 11 09.4 -2.7**
GTA2 pmax pmax
comp=Z,33nm,1.2s
GTA2 pmax pmax
comp=Z,180nm,10.4s
GTA2 LR LR
comp=Z,310nm,17.1s
GTA2 LR LR
comp=Z,310nm,16.3s
GTA2 LR LR
comp=Z,310nm,18.1s
ASAJ Asahikawa 41.18 19 LR LR 10 18 23.3
comp=Z,160nm,21.8s,baz=188,slow=35
ASAJ Asahikawa 41.18 19 P **P** **10 01 32.4 +1.4**
ASAJ pmax pmax
comp=Z,117nm,1.7s
JKA Kamikawa-asahi 41.18 19 P **P** **10 01 32.4 +1.4**
JKA IAmb IAmb 10 02 21.6
comp=Z,117nm,1.7s
GOMU GeErMu 41.56 321 P **P** **10 01 34.8 +0.1**
GOMU PcP **PcP** **10 03 29.3 +1.3**
GOMU S **S** **10 07 35.6 +0.4**
GOMU sS sS 10 08 51.0 -1.3
GOMU SS **SS** **10 10 50.4 +1.6**
GOMU pmax pmax
comp=Z,37nm,1.2s
H11S3 WAKE ISLAND Hy 42.05 69 T T 10 46 27.5
baz=257,slow=75,SNR=14
H11S1 WAKE ISLAND Hy 42.06 69 T T 10 46 30.8
baz=257,slow=75,SNR=14
H11S2 WAKE ISLAND Hy 42.06 69 T T 10 46 25.3
baz=257,slow=75,SNR=20
H11N1 WAKE ISLAND Hy 42.51 67 T T 10 48 25.0
baz=254,slow=75,SNR=20
H11N2 WAKE ISLAND Hy 42.52 67 T T 10 48 31.3
baz=254,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 42.52 67 T T 10 48 30.1
baz=254,slow=75,SNR=14
EVN Everest 43.02 306 P **P** **10 01 46.0 -0.8**
EVN IAmb IAmb 10 01 59.5
comp=Z,108nm,1.3s
VIS Vishakhapatnam 43.03 290 *e*P **P** **10 01 46.5 +0.1**
VIS IAmb IAmb 10 01 48.7
comp=Z,40nm,1.1s
RAGD RAYAGADA 43.23 292 *e*P **P** **10 01 48.6 +0.6**
RAGD IAmb IAmb 10 01 55.9
comp=Z,68nm,1.2s
RAGD eS **S** **10 08 02.2 +3.0**
ARMA Armidale 43.61 147 **P** **10 01 52.5 +1.6**
YSS Yuzhno-Sakhali 43.78 17 **P** **10 01 52.5 +0.6**
YSS IAmb IAmb 10 01 54.9
comp=Z,43nm,1.3s
YSS Yuzhno-Sakhali 43.78 17 *e*P **P** **10 01 51.8 -0.1**
YSS *e**PP **pP** **10 02 37.1 +0.7**
YSS *e* 10 03 35.2
YSS *e*S **S** **10 08 07.3 +0.8**
YSS *e*SS **ScS** **10 11 28.9 +0.5**
YSS *e*SSS SSS 10 12 21.9
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,400nm,15.0s
YSS MLR MLR
comp=N,200nm,13.0s
HIA Hailar 43.82 354 IAmb IAmb 10 01 54.4
comp=Z,83nm,1.2s
HILR Hailar Array B 44.10 355 P **P** **10 01 55.0 +0.6**
comp=Z,38nm,0.9s,baz=172,slow=12,SNR=28
HILR PcP **PcP** **10 03 34.8 -1.0**
comp=Z,34nm,1.0s,baz=160,slow=4.8,SNR=8.4
HILR ScP **ScP** **10 07 08.5 +0.5**
comp=Z,24nm,1.0s,baz=158,slow=4.7,SNR=12
comp=Z,38nm,0.9s
HEH HeiHe 44.55 2 ⇑P **P** **10 01 58.8 +0.9**
HEH ScP **ScP** **10 07 09.8 +0.1**
HEH S **S** **10 08 15.9 -1.5**
HEH ScS **ScS** **10 11 31.8 -1.4**
HEH pmax pmax
comp=Z,41nm,1.2s
HEH pmax pmax
comp=Z,310nm,5.6s
ULN Ulaanbaatar 45.03 342 **P** **10 02 01.6 -0.4**
ULN Ulaanbaatar 45.03 342 *ce*P **P** **10 02 01.9 0.0**
ULN pmax pmax
comp=Z,46nm,1.7s
ULN Ulaanbaatar 45.03 342 P **P** **10 02 02.0 0.0**
ULN Ulaanbaatar 45.03 342 P **P** **10 02 02.0 0.0**
ULN pP **pP** **10 02 48.4 +1.4**
ULN sP **sP** **10 03 13.4 +2.9**
ULN PcP **PcP** **10 03 40.4 +1.2**
SONM Songino Array 45.21 342 P **P** **10 02 02.1 -1.2**
comp=Z,11nm,1.0s,baz=160,slow=9.2,SNR=27
SONM PcP **PcP** **10 03 40.2 +0.4**
comp=Z,21nm,1.0s,baz=173,slow=2.6,SNR=9.7
SONM ScP **ScP** **10 07 12.4 -0.3**
comp=Z,9.4nm,1.0s,baz=157,slow=4.5,SNR=12
SONM LR LR 10 21 37.7
comp=Z,256nm,21.2s,baz=162,slow=37
comp=Z,11nm,1.0s
SONM Songino Array 45.21 342 P **P** **10 02 03.1 -0.2**
SONM Songino Array 45.21 342 IAmb IAmb 10 03 41.7
comp=Z,26nm,1.0s
SONM **ScP** **10 07 12.7 +0.1**
MGBR Mount Gambier 45.28 163 **P** **10 02 06.3 +2.5**
MGBR IAmb IAmb 10 02 07.8
comp=Z,68nm,0.7s
CAN Canberra 46.25 153 **P** **10 02 14.0 +2.5**
CAN Canberra 46.25 153 P **P** **10 02 14.0 +2.5**
CAN pmax pmax
comp=Z,140nm,0.8s
CAN Canberra 46.25 153 P **P** **10 02 14.3 +2.7**
CAN PcP **PcP** **10 03 45.7 +2.1**
TOO Toolangi 46.75 158 **P** **10 02 18.1 +2.7**
TOO IAmb IAmb 10 02 20.1
comp=Z,144nm,1.4s
TOO Toolangi 46.75 158 P **P** **10 02 18.1 +2.7**
TOO pmax pmax
comp=Z,144nm,1.4s
TYV Tymovskoe 47.33 15 *e*P **P** **10 02 20.9 +1.3**
TYV pmax pmax
comp=Z,7.0nm,1.2s
TYV pmax pmax
comp=Z,100nm,4.3s
CIT Chita 47.36 350 *e*P **P** **10 02 20.6 +0.7**
CIT *e* 10 03 42.8
CIT *e* 10 05 08.2
CIT pmax pmax
comp=Z,89nm,1.3s
HYB Hyderabad 47.47 288 *e*P **P** **10 02 21.2 -0.1**
MILA Mila 47.77 154 P **P** **10 02 25.3 +2.0**
KOD Kodaikanal 47.89 279 *e*P **P** **10 02 24.2 -0.6**
KOD IAmb IAmb 10 02 27.3
comp=Z,58nm,1.4s
KOD eS **S** **10 09 07.0 +0.4**
ZEA Zeya 48.03 1 *e*P **P** **10 02 25.4 +0.5**
ZEA *e* 10 03 07.6
ZEA eS **S** **10 09 09.0 +2.1**
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA smax smax
comp=N,100nm,3.9s
ZAK Zakamensk 48.43 341 *e*P **P** **10 02 26.8 -1.4**
ZAK pmax pmax
comp=Z,10.0nm,1.7s
DZM Mont Dzumac 48.50 126 LR LR 10 22 55.5
comp=Z,2μm,21.7s,baz=246,slow=36
DZM Mont Dzumac 48.50 126 IAmb IAmb 10 02 41.5
comp=Z,69nm,1.2s
TLY Talaya 49.44 342 LR LR 10 24 16.0
comp=Z,169nm,21.3s,baz=138,slow=37
TLY Talaya 49.44 342 P **P** **10 02 36.3 +0.6**
TLY Talaya 49.44 342 *ce*P **P** **10 02 36.6 +0.8**
TLY pmax pmax
comp=Z,36nm,1.7s
IRK Irkutsk 49.75 343 *e*P **P** **10 02 36.4 -1.6**
IRK pmax pmax
comp=Z,48nm,1.9s
MOY Mondy 50.28 340 *e*P **P** **10 02 42.5 +0.3**
MOY pmax pmax
comp=Z,61nm,2.0s
WMQ Urumqi 50.59 325 *e*P **P** **10 02 45.4 +0.8**
WMQ pP pP 10 03 26.6 -3.8
WMQ ScP **ScP** **10 07 36.1 +0.6**
WMQ pmax pmax
comp=Z,40nm,1.5s
WMQ pmax pmax
comp=Z,190nm,4.9s
MOO Moorlands 51.67 160 P **P** **10 02 54.8 +2.3**
TAU Tasmania Unive 52.12 160 P **P** **10 02 58.7 +2.9**
TAU Tasmania Unive 52.12 160 P **P** **10 02 58.7 +2.9**
TAU pmax pmax
comp=Z,116nm,1.2s
PEA0B Petropavlovsk- 54.16 23 IAmb IAmb 10 03 39.2
comp=Z,50nm,1.2s
PEA0B Petropavlovsk- 54.16 23 ⇑*i*P **P** **10 03 10.8 +0.2**
PETK Petropavlovsk- 54.16 23 P **P** **10 03 11.7 +1.2**
comp=Z,12nm,0.6s,baz=182,slow=2.8,SNR=34
PETK LR LR 10 26 21.6
comp=Z,133nm,20.3s,baz=210,slow=36
comp=Z,12nm,0.6s
PETK Petropavlovsk- 54.16 23 P **P** **10 03 11.9 +1.3**
PETK Petropavlovsk- 54.16 23 P **P** **10 03 11.9 +1.3**
ZSN Zaisan 54.36 327 *i* P **P** **10 03 12.3 +0.1**
ZSN eS **S** **10 10 35.4 +1.4**
WUS Wushi 54.46 318 IAmb IAmb 10 03 14.8
comp=Z,60nm,1.4s
PET Petropavlovsk 54.48 24 *e*P **P** **10 03 13.2 +0.4**
PET *e**PP **pP** **10 03 59.0 -0.4**
PET *e**SP **sP** **10 04 22.6 +0.2**
PET *e*S **S** **10 10 37.3 +2.2**
PET *e**SS **sS** **10 11 58.5 +2.7**
PET pmax pmax
comp=Z,23nm,0.9s
PET MLR MLR
comp=Z,200nm,16.0s
SHLS Shalkode 55.23 320 *c i*P **P** **10 03 16.7 -1.9**
SHLS pmax pmax
comp=Z,39nm,1.2s
SHLS Shalkode 55.23 320 ⇑*i*P **P** **10 03 16.8 -1.9**
MK31 comp=Z,39nm,1.2s
MK31 Makanchi Array 55.42 325 *ce*P **P** **10 03 19.8 +0.1**
MK31 *i* *PP **pP** **10 04 06.1 -0.4**
MKAR Makanchi Array 55.42 325 P **P** **10 03 18.8 -1.0**
comp=Z,15nm,0.8s,baz=120,slow=7.2,SNR=79
MKAR PcP **PcP** **10 04 16.0 -1.4**
comp=Z,9.6nm,0.6s,baz=123,slow=4.0,SNR=5.4
MKAR ScP **ScP** **10 07 54.6 -1.8**
comp=Z,5.5nm,0.8s,baz=115,slow=5.5,SNR=6.4
MKAR S **S** **10 10 48.4 +0.4**
comp=Z,0.8nm,0.6s,baz=116,slow=13,SNR=4.9
MKAR PKPPKP P'P'df 10 33 13.2 -9.4
comp=Z,1.7nm,1.1s,baz=274,slow=3.5,SNR=8.8
comp=Z,15nm,0.8s
UZB Uzynbulak 55.51 320 *c i*P **P** **10 03 20.5 -0.1**
UZB pmax pmax
comp=Z,26nm,1.2s
UZB Uzynbulak 55.51 320 ⇑*i*P **P** **10 03 20.6 -0.1**
comp=Z,26nm,1.2s
MAKZ Makanchi 55.60 325 P **P** **10 03 20.3 -0.8**

MAKZ IAmb IAmb 10 03 23.0
comp=Z,54nm,1.1s
MAKZ Makanchi 55.60 325 ⇑P P 10 03 20.5 -0.5
MAKZ Makanchi 55.60 325 P **P 10 03 20.5 -0.5**
TARG Taragay, Kyrgy 55.65 318 IAmb IAmb 10 03 33.3
comp=Z,41nm,1.3s
SATY Saty 55.86 319 *i* P **P 10 03 23.3 +0.2**
KPKS Kokpek 55.88 320 *eP* **P 10 03 23.2 +0.1**
KPKS Kokpek 55.88 320 *eP* **P 10 03 23.3 +0.1**
NIL Nilore 55.93 307 P **P 10 03 23.8 +0.1**
NIL Nilore 55.93 307 P **P 10 03 23.8 +0.1**
NIL pmax pmax
comp=Z,93nm,1.2s
KSH2 Kashi 56.11 314 P **P 10 03 25.3 +0.4**
KSH2 pP pP 10 04 12.8 +1.0
KSH2 S **S 10 10 57.3 -0.4**
KSH2 sS sS 10 12 17.1 -1.7
KSH2 pmax pmax
comp=Z,35nm,1.2s
KDJ Kajisay 56.24 318 IAmb IAmb 10 03 27.6
comp=Z,31nm,0.9s
YAK Yakutsk 56.41 2 P **P 10 03 27.4 +1.0**
YAK Yakutsk 56.41 2*c* *i*P **P 10 03 27.2 +0.8**
YAK *e**PP **pP 10 04 12.0 -0.7**
YAK *e* 10 04 22.6
YAK *e* 10 05 32.9
YAK *e*S **S 10 11 02.7 +2.2**
YAK *e* 10 12 51.8
YAK pmax pmax
comp=Z,160nm,1.0s
YAK pmax pmax
comp=E,18nm,1.3s
YAK pmax pmax
comp=N,64nm,1.2s
YAK pmax pmax
comp=Z,36nm,1.5s
YAK pmax pmax
comp=N,32nm,1.8s
YAK pmax pmax
comp=E,23nm,1.8s
YAK smax smax
comp=N,454nm,1.9s
YAK smax smax
comp=E,227nm,1.8s
MSVF Nonsavu 56.69 115⇑ *i*P **P 10 03 31.4 +2.2**
MSVF *i* *PP **pP 10 04 14.0 -1.2**
MSVF pmax pmax
comp=Z,11nm,1.1s
NRN Naryn 56.74 317 IAmb IAmb 10 03 30.9
comp=Z,72nm,1.8s
MDOK Medeo 56.79 319 *i* P **P 10 03 29.9 +0.2**
MDOK *e*S **S 10 11 07.2 +0.7**
TDK Taldyqorghan 56.79 322 *eP* **P 10 03 29.7 +0.2**
TDK pmax pmax
comp=Z,56nm,1.4s
TDK Taldyqorghan 56.79 322 *eP* **P 10 03 29.8 +0.2**
comp=Z,56nm,1.4s
TNSS Tian-Shan 56.80 319 *eP* **P 10 03 30.0 -0.1**
TNSS Tian-Shan 56.80 319 *eP* **P 10 03 30.0 -0.1**
ULHL Ulahol 56.92 318 P **P 10 03 31.6 +0.9**
SNR=18
MA2 Magadan 57.20 15 P **P 10 03 32.3 +0.3**
MA2 IAmb IAmb 10 04 26.8
comp=Z,20nm,0.9s
MA2 Magadan 57.20 15 P **P 10 03 32.3 +0.3**
MA2 pmax pmax
comp=Z,20nm,0.9s
BOOM Boomskoye usch 57.23 318 IAmb IAmb 10 03 34.3
comp=Z,52nm,1.5s
KUU Kurty 57.58 320 *eP* **P 10 03 35.4 +0.4**
KUU pmax pmax
comp=Z,36nm,1.2s
KUU Kurty 57.58 320 *eP* **P 10 03 35.5 +0.4**
comp=Z,36nm,1.2s
TKM2 Tokmak 2 57.64 318 P **P 10 03 36.5 +0.7**
SNR=20
UCH Uchtor 58.08 317 P **P 10 03 39.0 0.0**
SNR=54
CHMS Chumysh 58.23 318 P **P 10 03 40.0 +0.4**
SNR=7.8
AAK Ala-Archa 58.26 318 P **P 10 03 40.6 +0.7**
SNR=12
AAK Ala-Archa 58.26 318 P **P 10 03 40.8 +0.9**
AAK Ala-Archa 58.26 318 *i* P **P 10 03 39.9 -0.1**
SNR=13
AAK Ala-Archa 58.26 318⇑ *i*P **P 10 03 38.1 -1.8**
AAK pmax pmax
comp=Z,24nm,1.2s
ZALV Zalesovo Beam 58.45 333 P **P 10 03 38.0 -2.8**
comp=Z,6.5nm,0.5s,baz=86,slow=4.8,SNR=24
ZALV PKPPKP **P'P'df 10 33 15.4 -2.1**
comp=Z,1.1nm,0.7s,baz=264,slow=1.5,SNR=4.7
comp=Z,6.5nm,0.5s
ZALV Zalesovo Beam 58.45 333 *i* P **P 10 03 39.0 -1.8**
ZALV pmax pmax
comp=Z,6.0nm,0.5s
SGDS Sogindy 58.51 318 *eP* **P 10 03 41.8 +0.3**
USP Ospenovka 58.51 318 P **P 10 03 42.1 +0.6**
SNR=17
SEM Semipalatinsk 58.56 328 *eP* **P 10 03 42.8 +0.9**
SEM Semipalatinsk 58.56 328 *eP* **P 10 03 42.9 +0.9**
EKS2 Erkin-Say 58.75 317 P **P 10 03 44.3 +1.0**
SNR=20
DRK Karamyk 58.95 313 IAmb IAmb 10 03 46.5
comp=Z,43nm,0.8s
KBL Kabul 59.53 307 P **P 10 03 48.5 -0.3**
KBL IAmb IAmb 10 03 49.9
comp=Z,31nm,0.8s
KBL Kabul 59.53 307 P **P 10 03 48.6 -0.3**
KBL pmax pmax
comp=Z,31nm,0.8s
KBL Kabul 59.53 307 P **P 10 03 48.8 -0.1**
SNR=15
KURBB Kurchatov Arra 59.60 327 P **P 10 03 47.4 -1.3**
comp=Z,29nm,0.8s,baz=124,slow=6.0,SNR=95
KURBB PKPPKP P'P'df 10 33 06.0 -10
comp=Z,3.8nm,1.1s,baz=273,slow=3.8,SNR=12
comp=Z,29nm,0.8s
KURK Kurchatov 59.60 327 P **P 10 03 47.6 -1.1**
KURK Kurchatov 59.60 327⇑ *i*P **P 10 03 48.2 -0.5**
KURK *i* *PP **pP 10 04 36.4 +0.1**
KURK pmax pmax
comp=Z,64nm,0.9s
KURK Kurchatov 59.60 327 P **P 10 03 47.6 -1.1**
SEY Seymchan 60.50 14⇑ *i*P **P 10 03 56.3 +1.7**
SEY pmax pmax
comp=Z,14nm,1.1s
DZA Taraz 60.50 317 *eP* **P 10 03 55.3 +0.2**
DZA pmax pmax
comp=Z,15nm,0.8s
DZA Taraz 60.50 317 *eP* **P 10 03 55.3 +0.2**
comp=Z,16nm,0.8s
CHGR Chuyangaron 60.62 312 P **P 10 03 55.5 -0.6**
CHGR Chuyangaron 60.62 312 P **P 10 03 55.5 -0.6**
CHGR pmax pmax
comp=Z,72nm,1.3s
OUZ Omahuta 60.65 136 P **P 10 03 58.6 +2.4**
IUG Iuzhnay 61.13 316 *eP* **P 10 03 59.4 -0.1**
IUG pmax pmax
comp=Z,22nm,0.6s
IUG Iuzhnay 61.13 316 *eP* **P 10 03 59.4 -0.1**
comp=Z,22nm,0.6s
KK31 Karatay Array 61.14 317 P **P 10 03 58.5 -0.9**
KK31 IAmb IAmb 10 04 00.3
comp=Z,30nm,1.0s
KK31 Karatay Array 61.14 317 P **P 10 03 58.5 -0.9**
KK31 pmax pmax
comp=Z,30nm,1.0s
KKAR Karatay Array 61.14 317 P **P 10 03 58.0 -1.4**
KKAR Karatay Array 61.14 317 P **P 10 03 58.0 -1.4**
CHM Chimkent 61.49 316 *eP* **P 10 04 01.9 +0.2**
CHM Chimkent 61.49 316 *eP* **P 10 04 01.9 +0.2**
BRLS Borolday 61.57 316*c* *i*P **P 10 04 02.2 -0.1**
BRLS Borolday 61.57 316⇑ *i*P **P 10 04 02.2 -0.1**
BRZS Berezniki 62.55 325 *eP* **P 10 04 09.1 +0.5**
BRZS Berezniki 62.55 325 *eP* **P 10 04 09.2 +0.5**
MKAZ Moumakai 62.72 137 P **P 10 04 12.4 +2.5**
MSZ Milford Sound 62.77 147 P **P 10 04 12.5 +2.4**
JCZ Jackson Bay 62.85 146 P **P 10 04 12.7 +2.0**
DCZ Deep Cove 62.89 148 P **P 10 04 13.1 +2.2**
QRZ Quartz Range 63.05 142 P **P 10 04 14.0 +1.9**
FOZ Fox Glacier 63.08 145 P **P 10 04 14.3 +2.2**
DSZ Denniston Nort 63.15 143 P **P 10 04 14.9 +2.1**
HIZ Hauiti 63.26 138 P **P 10 04 15.3 +1.9**
HIZ Hauiti 63.26 138 P **P 10 04 16.1 +2.7**

TOZ Tahuroa Road 63.28 137 P **P 10 04 15.0 +1.5**
TOZ IAmb IAmb 10 04 17.7
comp=Z,37nm,1.0s
WVZ Waitaha Valley 63.32 144 P **P 10 04 14.9 +1.1**
MLZ Mavora Lakes 63.33 148 P **P 10 04 15.1 +1.2**
WKZ Wanaka 63.46 147 P **P 10 04 17.2 +2.5**
INZ Inchbonnie 63.52 144 P **P 10 04 17.5 +2.4**
VRZ Vera Road 63.52 139 P **P 10 04 17.7 +2.6**
MRNZ Matariki Terra 63.53 142 P **P 10 04 16.3 +1.1**
WHZ Wether Hill Ro 63.59 148 P **P 10 04 16.4 +1.0**
NNZ Nelson 63.81 142 P **P 10 04 17.4 +0.5**
LBZ Lake Benmore 63.82 146 P **P 10 04 18.5 +1.4**
THZ Tophouse 63.83 142 P **P 10 04 18.1 +0.9**
EAZ Earnscleugh 63.88 147 P **P 10 04 18.3 +0.9**
RPZ Rata Peaks 63.90 145 P **P 10 04 19.1 +1.5**
DUWZ D'Urville Isla 63.91 141 P **P 10 04 19.1 +1.4**
WAZ Wanganui 64.01 139 P **P 10 04 21.3 +2.9**
LTZ Lake Taylor 64.05 143 P **P 10 04 20.4 +1.8**
WTVZ West Tongariro 64.06 139 P **P 10 04 21.4 +2.6**
NNVZ North Ngauruho 64.09 139 P **P 10 04 21.7 +2.6**
NGZ Ngauruhoe 64.10 139 P **P 10 04 21.7 +2.5**
TRVZ Turoa 64.13 139 P **P 10 04 22.3 +2.8**
SNVZ South Ngauruho 64.13 139 P **P 10 04 21.8 +2.4**
OTVZ Oturere 64.14 139 P **P 10 04 21.9 +2.5**
TMVZ Te Maari 64.14 138 P **P 10 04 22.1 +2.7**
ETVZ East Tongariro 64.15 138 P **P 10 04 21.8 +2.4**
WNVZ Wahianoa 64.18 139 P **P 10 04 22.2 +2.5**
OXZ Oxford 64.23 144 P **P 10 04 20.3 +0.6**
APZ The Paps 64.23 149 P **P 10 04 20.7 +1.0**
TUWZ Tuamarina 64.28 141 P **P 10 04 21.3 +1.3**
TMZ Timaru 64.28 145 P **P 10 04 22.6 +2.5**
RAO Raoul Island 64.30 126 LR LR 10 32 14.0
comp=Z,92nm,19.2s,baz=302,slow=36
MOVZ Moawhango 64.33 139 P **P 10 04 21.9 +1.3**
TCW Tory Channel 64.36 141 P **P 10 04 21.4 +0.8**
ODZ Otahua Downs 64.49 146 P **P 10 04 22.5 +1.1**
TUZ Tuapeka 64.52 148 P **P 10 04 22.8 +1.3**
KIW Kapiti Island 64.57 140 P **P 10 04 23.0 +1.0**
KHZ Kahutara 64.59 143 P **P 10 04 22.6 +0.6**
NGCH Negor - Chabah 64.59 295 P **P 10 04 22.9 +0.5**
GVZ Greta Valley S 64.61 143 P **P 10 04 23.5 +1.4**
URZ Urewera 64.64 137 P **P 10 04 23.1 +0.7**
BKZ Black Stump Fm 64.69 138 P **P 10 04 23.9 +1.1**
OGWZ Otaki Gorge 64.71 140 P **P 10 04 23.4 +0.5**
RTZ Ruatahuna 64.73 137 P **P 10 04 24.3 +1.1**
MTHZ Maungataniwha 64.76 136 P **P 10 04 24.5 +1.2**
KWHZ Kaweka Forest 64.78 138 P **P 10 04 25.0 +2.6**
CAW Cannon Point 64.80 141 P **P 10 04 23.6 +0.2**
TSZ Takapari Road 64.81 139 P **P 10 04 24.6 +1.0**
MQZ McQueen's Vall 64.82 144 P **P 10 04 24.4 +0.9**
BHW Baring Head 64.84 141 P **P 10 04 23.7 0.0**
HAZ Te Kaha 64.84 136 P **P 10 04 25.1 +1.4**
KRHZ Kereru 64.86 139 P **P 10 04 25.0 +1.2**
POWZ Post Office Ro 64.86 140 P **P 10 04 24.5 +0.7**
NMHZ Naumai 64.86 138 P **P 10 04 26.3 +2.3**
RUGZ Raukumara Rang 64.88 136 P **P 10 04 24.7 +0.5**
MRZ Mangatainoka R 64.88 140 P **P 10 04 24.3 +0.3**
PNHZ Pukenui 64.89 139 P **P 10 04 25.0 +0.9**
RAHZ Arahi 64.95 138 P **P 10 04 26.0 +1.4**
MWZ Matawai 64.96 137 P **P 10 04 25.6 +1.0**
MCHZ McNeill Hill 64.97 138 P **P 10 04 26.6 +2.0**
HOWZ Holdsworth Sta 64.97 140 P **P 10 04 25.0 +0.4**
SNGZ Shannon Statio 65.06 137 P **P 10 04 27.1 +1.9**
DVHZ Dannevirke 65.07 139 P **P 10 04 26.1 +0.9**
ARHZ Aropaoanui 65.07 138 P **P 10 04 27.2 +2.0**
PRWZ Pori Road 65.08 140 P **P 10 04 26.2 +0.9**
MSWZ Moikau Station 65.08 141 P **P 10 04 26.2 +0.9**
MTW Mount Morrison 65.10 140 P **P 10 04 26.6 +1.2**
PKGZ Pakihiroa 65.10 136 P **P 10 04 27.0 +1.5**
MXZ Matakaoa Point 65.11 136 P **P 10 04 28.5 +3.0**
WPHZ Waipukurau 65.12 139 P **P 10 04 27.3 +1.7**
BVAR Borovoye Array 65.18 327 P **P 10 04 24.8 -0.9**
comp=Z,25nm,0.9s,baz=128,slow=9.6,SNR=52
BVAR PKP2bc **P'P'bc 10 33 10.5 -1.7**
comp=Z,1.8nm,0.9s,baz=298,slow=3.2,SNR=8.2
comp=Z,25nm,0.9s
PAWZ Paruwai Farm 65.18 141 P **P 10 04 26.6 +0.7**
TWGZ Tauwhareparae 65.19 137 P **P 10 04 27.9 +1.8**
BORK Borovoye 65.22 327 P **P 10 04 24.9 -1.0**
BORK Borovoye 65.22 327⇑ *i*P **P 10 04 25.4 -0.6**
BORK *i* *PP **pP 10 05 14.3 -0.1**
BORK pmax pmax
comp=Z,48nm,0.9s
BORK Borovoye 65.22 327 P **P 10 04 25.0 -1.0**
BORK pP **pP 10 05 13.9 -0.5**
KAHZ Kahuranaki 65.27 139 P **P 10 04 28.3 +1.8**
RIGZ Rimuhau 65.30 137 P **P 10 04 28.0 +1.2**
WMGZ Waiomatatini S 65.31 136 P **P 10 04 27.8 +1.1**
TMWZ Te Maipa 65.32 140 P **P 10 04 27.8 +1.0**
BFZ Birch Farm 65.32 140 P **P 10 04 28.1 +1.3**
BFZ Birch Farm 65.32 140 P **P 10 04 27.3 +0.5**
PUZ Puketiti 65.33 136 P **P 10 04 27.8 +0.9**
TRWZ Traveller 65.35 141 P **P 10 04 28.2 +1.2**
PXZ Pawanui 65.38 139 P **P 10 04 28.4 +1.2**
KNZ Kokohu 65.40 138 P **P 10 04 27.9 +0.6**
CNGZ Carnagh Statio 65.50 137 P **P 10 04 29.3 +1.3**
MHGZ Mahia Peninsul 65.62 138 P **P 10 04 30.4 +1.6**
JLN Jalan Bani Buh 65.90 292 P **P 10 04 29.8 -1.1**
SNR=8.1
TIXI Tiksi 66.02 1 P **P 10 04 30.1 -0.6**
TIXI Tiksi 66.02 1⇑ *i*P **P 10 04 30.9 +0.2**
TIXI *i* *PP **pP 10 05 17.2 -1.7**
TIXI pmax pmax
comp=Z,79nm,1.0s
TIXI Tiksi 66.02 1 P **P 10 04 30.6 -0.1**
TIXI PcP **PcP 10 04 57.2 -2.4**
WBK Wadi Bani Khal 66.33 292 P **P 10 04 32.7 -1.0**
SNR=7.0
WSAR Wadi Sarin 66.69 293 P **P 10 04 35.3 -0.6**
SNR=11
JMDO Jabal Madar 67.12 292 P **P 10 04 37.4 -1.3**
SNR=13
BIDO Bidbid 67.17 293 P **P 10 04 38.7 -0.2**
SNR=16
MHTO MHTO 67.17 290 P **P 10 04 38.1 -0.8**
SNR=15
SMDO Samad 67.21 293 P **P 10 04 38.4 -0.9**
SNR=5.4
DQM DQM 67.53 289 P **P 10 04 41.1 -0.1**
SNR=16
HOQ Hoqain 67.92 293 P **P 10 04 43.0 -0.7**
SNR=12
BSY Bisya 67.97 292 P **P 10 04 43.2 -0.9**
SNR=6.8
BILL Bilibino 68.06 15 P **P 10 04 44.7 +1.0**
BILL Bilibino 68.06 15⇑ *i*P **P 10 04 44.1 +0.4**
BILL pmax pmax
comp=Z,10.0nm,1.0s
SOHO SOHO 68.67 294 P **P 10 04 47.3 -0.9**
SOHO SOHO 68.67 294 P **P 10 04 47.7 -0.5**
BANOM Banah 68.99 296 *i* P **P 10 04 49.0 -1.3**
SNR=23
BANOM Banah 68.99 296 P **P 10 04 49.9 -0.4**
UOSS Minazif 69.01 294 P **P 10 04 50.1 -0.3**
HATD Hatta, Dubai 69.07 294 *i* P **P 10 04 49.5 -1.2**
SNR=10
HATD Hatta, Dubai 69.07 294 P **P 10 04 50.6 -0.2**
SNR=10
MSFE Esma-Masafi 69.08 295 *i* P **P 10 04 50.8 -0.1**
SNR=8.2
MASF Masafi 69.08 295 P **P 10 04 51.3 +0.5**
SNR=8.6
ASHO Ashiyiah 69.13 294 *i* P **P 10 04 50.2 -1.0**
SNR=16
ASHO Ashiyiah 69.13 294 P **P 10 04 50.1 -1.0**
SNR=12
SHME Shamm 69.14 296 *i* P **P 10 04 50.8 -0.3**
SNR=6.6
SHME Shamm 69.14 296 P **P 10 04 51.4 +0.3**
SNR=5.9
SHAO Shalim 69.29 287 *i* P **P 10 04 52.2 0.0**
SNR=8.5
SHAO Shalim 69.29 287 P **P 10 04 52.2 0.0**
ALNE Al Ain 69.38 293 *i* P **P 10 04 51.7 -0.9**
SNR=6.5
ALNE Al Ain 69.38 293 P **P 10 04 52.7 +0.1**
SNR=17
NAZ Nazwa, Dubai 69.51 294 P **P 10 04 53.1 -0.4**
NAZ Nazwa, Dubai 69.51 294 P **P 10 04 53.6 +0.2**
SNR=5.9
FAQ Al Faqa, Dubai 69.56 294 P **P 10 04 54.0 +0.3**
SNR=5.2
ASUD Al Ashush, Dub 69.79 294 *i* P **P 10 04 54.9 -0.3**
SNR=7.2
ASUD Al Ashush, Dub 69.79 294 P **P 10 04 55.1 -0.1**
SNR=6.7
UMZA Um Al Zommool 69.85 292 P **P 10 04 55.6 +0.1**
DMTO DMTO 69.93 287 P **P 10 04 55.4 -0.7**
AB31 Akbulak array 70.03 321 P **P 10 04 54.8 -1.3**
ABKAR Akbulak array 70.03 321 P **P 10 04 54.4 -1.7**
AJN Ajban 70.10 294 *i* P **P 10 04 56.2 -0.8**
SNR=5.1
AJN Ajban 70.10 294 P **P 10 04 56.9 -0.1**
SNR=7.2
RBK Rabkut 70.64 287 P **P 10 05 00.3 -0.1**
SNR=6.5
DOK Doka 70.72 288 P **P 10 04 59.1 -1.7**
SNR=12
NIKH Nikolski High 70.95 36 P **P 10 05 02.3 +0.7**
baz=253
MZWR Madinat Zayed 71.07 293 P **P 10 05 03.0 +0.1**
MZR Muzera 71.41 292 *i* P **P 10 05 03.9 -1.1**
SNR=15
MZR Muzera 71.41 292 P **P 10 05 04.3 -0.6**
SNR=29
SPIA Saint Paul Isl 71.49 31 P **P 10 05 05.5 +0.8**
baz=251
ABTO Aybut 71.50 286 P **P 10 05 04.6 -1.1**
SNR=14
P08K Saint George I 71.66 32 P **P 10 05 06.1 +0.4**
baz=252
JRN Qarnain Island 72.06 294 P **P 10 05 08.1 -0.7**
CASY Casey 72.52 186 P **P 10 05 11.7 +1.2**
UNV Unalaska Valle 72.55 35 P **P 10 05 11.3 +0.3**
baz=255
ARTI Arti 72.88 328 LR LR 10 39 07.3
comp=Z,168nm,18.4s,baz=62,slow=37
ARTI Arti 72.88 328 P **P 10 05 11.0 -1.9**
ARTI IAmb IAmb 10 05 12.7
comp=Z,20nm,0.6s
ARTI Arti 72.88 328*c* *i*P **P 10 05 11.4 -1.6**
ARTI *PP **pP 10 05 58.5 -4.0**
ARTI S S **10 14 18.3 -3.7**
ARTI pmax pmax
comp=Z,26nm,1.1s
ARTI Arti 72.88 328 P **P 10 05 10.8 -2.2**
GAMB Gambell 73.17 24 P **P 10 05 15.4 +1.0**
GAMB Gambell 73.17 24 P **P 10 05 15.1 +0.6**
baz=248
TRNA Turayna 73.54 294 P **P 10 05 16.6 -0.9**
SHMA Al-Shehemyia 73.79 295 P **P 10 05 19.0 +0.1**
SMRA Abu-Samra 73.89 294 P **P 10 05 18.9 -0.6**
SNR=5.2
SAKB Bahrain 74.18 295 P **P 10 05 21.2 0.0**
M11K Mekoryuk 74.48 29 P **P 10 05 22.5 +0.4**
baz=254
FALS False Pass 74.54 35 P **P 10 05 23.6 +0.9**
baz=258
TNA Tin City 75.33 23 P **P 10 05 27.9 +1.0**
baz=251
K13K Kusilvak Mount 75.63 27 P **P 10 05 30.2 +1.5**
baz=255
M13K Dall Lake 75.85 29 P **P 10 05 31.0 +1.0**
baz=256
F14K Arctic Creek 75.93 24 P **P 10 05 31.2 +0.8**
baz=252
ANM Nome 76.05 25 P **P 10 05 31.5 +0.5**
baz=253
SDPT Sand Point 76.30 34 P **P 10 05 32.9 +0.3**
baz=260
J14K Nanvaranak Lak 76.33 27 P **P 10 05 33.3 +0.6**
baz=255
L14K Kuka Creek 76.39 28 IAmb IAmb 10 05 36.8
comp=Z,23nm,1.1s
L14K Kuka Creek 76.39 28 P **P 10 05 33.5 +0.5**
baz=256
N14K Kuskokwak Cree 76.55 30 P **P 10 05 34.6 +0.7**
baz=258
M14K Bethel 76.60 29 P **P 10 05 35.1 +0.9**
baz=257
O14K Tigyukauivet M 76.62 30 P **P 10 05 35.8 +1.4**
baz=258
F15K North Star Dit 76.67 24 P **P 10 05 35.5 +0.9**
baz=254
CHNA Chernabura Isl 76.71 35 P **P 10 05 36.2 +1.2**
baz=261
G15K Niukluk 76.72 24 P **P 10 05 35.7 +0.9**
baz=254
L15K Ungalak Mounta 77.02 28 P **P 10 05 37.7 +1.1**
baz=258
K15K Wolf Creek Mou 77.14 27 P **P 10 05 38.2 +1.0**
baz=257
C16K Lisburne Hills 77.16 21 IAmb IAmb 10 05 40.3
comp=Z,23nm,1.1s
C16K Lisburne Hills 77.16 21 P **P 10 05 38.2 +1.0**
baz=252
M15K Kasigluk River 77.20 29 P **P 10 05 38.9 +1.3**
baz=258
AKT Akhty 77.26 311 *eP* **P 10 05 37.3 -1.2**
AKT *e* 10 05 47.0
AKT *e**PP **pP 10 06 25.8 -2.8**
AKT *e**SP **sP 10 06 46.0 -4.8**
AKT *e* 10 06 34.0
AKT *e*S **S 10 15 10.9 -0.2**
AKT *e* 10 15 35.3
AKT pmax pmax
comp=Z,44nm,1.6s
O15K Ungalikthiuk R 77.33 31 P **P 10 05 39.4 +1.0**
baz=260
H16K Elim 77.37 25 P **P 10 05 39.8 +1.4**
baz=256
N15K Kwethluk River 77.38 30 P **P 10 05 39.9 +1.2**
baz=259
G16K Koyuk River 77.51 24 P **P 10 05 40.5 +1.4**
baz=256
MAK Makhachkala 77.52 313 *eP* **P 10 05 38.8 -0.9**
MAK *e**PP **pP 10 06 26.0 -3.6**
MAK *e**SP **sP 10 06 47.4 -4.3**
MAK *e* 10 08 35.4
MAK *e*S **S 10 15 13.2 -0.4**
MAK *e*SS **SS 10 20 19.4 +1.9**
MAK pmax pmax
comp=Z,134nm,1.5s
J16K Anvik River 77.77 26 P **P 10 05 42.0 +1.3**
baz=258
RAR Rarotonga 77.77 113 LR LR 10 35 58.4
comp=Z,52nm,20.3s,baz=290,slow=32
D17K Noatak River 77.81 22 P **P 10 05 42.0 +1.2**
baz=255,SNR=34
I17K Unalakleet 77.86 26 IAmb IAmb 10 05 44.5
comp=Z,75nm,1.9s
I17K Unalakleet 77.86 26 P **P 10 05 42.2 +1.1**
baz=258
L16K Owhat River 77.97 28 IAmb IAmb 10 07 17.3
comp=Z,73nm,1.7s
L16K Owhat River 77.97 28 P **P 10 05 43.0 +1.2**
baz=259
RDOG Red Dog Mine 77.97 21 IAmb IAmb 10 05 45.1
comp=Z,28nm,1.4s
RDOG Red Dog Mine 77.97 21 P **P 10 05 42.7 +1.0**
baz=255,SNR=7.3
C17K DeLong Mountai 77.99 21 P **P 10 05 43.1 +1.2**
baz=254
KIRV Kirov 78.08 329 LR LR 10 43 58.5
comp=Z,177nm,18.2s,baz=118,slow=38
KIRV Kirov 78.08 329⇑ *i*P **P 10 05 41.4 -1.0**
N16K Nishlik Lake 78.09 29 P **P 10 05 43.5 +1.0**
baz=260
M16K Timber Creek 78.09 29 P **P 10 05 43.9 +1.4**
baz=260
F17K Baldwin Pennin 78.20 23 P **P 10 05 44.3 +1.4**
baz=257
G17K Kiwalik Mounta 78.22 24 P **P 10 05 44.5 +1.3**
baz=258
P16K Nushagak River 78.24 31 P **P 10 05 44.4 +1.0**
baz=261
R16K Pilot Point 78.24 32 P **P 10 05 44.1 +0.8**
baz=262
O16K Kokwok River B 78.28 30 P **P 10 05 45.0 +1.5**
baz=261
BELG Belogornoye 78.28 322⇑ *i*P **P 10 05 43.7 0.0**
BELG pmax pmax
comp=Z,9.0nm,0.9s
H17K Granite Mounta 78.41 25 P **P 10 05 45.5 +1.3**
baz=258
J17K VABM Dome 78.47 26 IAmb IAmb 10 06 37.9
comp=Z,56nm,1.8s
J17K VABM Dome 78.47 26 P **P 10 05 46.5 +2.0**
baz=259
L17K Donlin 78.59 28 P **P 10 05 47.2 +1.9**

baz=260
E18K **Tukpahlearik C** 78.67 22 P P 10 05 47.6 +2.0
baz=257
K17K **Iditarod** 78.69 27 IAmb IAmb 10 05 49.7
comp=Z,31nm,1.0s
K17K **Iditarod** 78.69 27 P P 10 05 47.6 +1.8
baz=260
C18K **Utukok River** 78.74 21 P P 10 05 47.7 +1.7
baz=256
RAYN **Ar Rayn** 78.75 293 P P 10 05 44.8 -2.1
RAYN IAmb IAmb 10 05 47.2
comp=Z,37nm,0.9s
RAYN **Ar Rayn** 78.75 293 *i* P P 10 05 45.8 -1.2
SNR=24
RAYN **Ar Rayn** 78.75 293 ⇑P P 10 05 46.0 -1.0
RAYN **Ar Rayn** 78.75 293 P P 10 05 45.5 -1.4
RAYN **Ar Rayn** 78.75 293 P P 10 05 45.6 -1.4
RAYN pP **pP** 10 06 37.4 +0.8
RAYN sP **sP** 10 06 59.3 +0.7
O17K **Koliganek Bris** 78.80 30 P P 10 05 48.0 +1.6
baz=262
F18K **Selawik** 78.86 23 P P 10 05 48.5 +1.9
baz=258,SNR=10.0
N17K **Nushagak Hills** 78.87 29 P P 10 05 48.4 +1.7
baz=262
Q16K **King Salmon** 78.88 31 P P 10 05 48.6 +1.8
baz=262
M17K **Holitna River** 78.88 29 P P 10 05 48.4 +1.6
baz=261
R17L **Mt. Peulik Vol** 78.90 32 P P 10 05 48.5 +1.5
baz=263
P17K **Kvichak River** 79.06 31 P P 10 05 49.2 +1.5
baz=262
CHIR **Chirikof Islan** 79.09 34 P P 10 05 49.2 +1.2
baz=264
H18K **Honhosa River** 79.09 25 P P 10 05 49.9 +1.9
baz=260
G18K **Tagagawik** 79.11 24 P P 10 05 49.4 +1.4
baz=259
Q17K **Contact Creek** 79.22 32 P P 10 05 49.8 +0.9
baz=263
C19K **Lookout Ridge** 79.41 21 IAmb IAmb 10 05 53.4
comp=Z,29nm,1.1s
C19K **Lookout Ridge** 79.41 21 P P 10 05 51.5 +1.9
baz=258
GNI **Garni** 79.46 310 P P 10 05 50.5 -0.1
GNI IAmb IAmb 10 06 47.3
comp=Z,29nm,1.1s
GNI **Garni** 79.46 310 P P 10 05 51.1 +0.5
GNI **Garni** 79.46 310 P P 10 05 50.5 -0.1
GNI pmax pmax
comp=Z,29nm,1.2s
GNI **Garni** 79.46 310 P P 10 05 50.0 -0.7
GNI **Garni** 79.46 310 P P 10 05 51.1 +0.5
comp=Z,20nm,1.0s
N18K **Kilae Creek** 79.52 29 P P 10 05 52.2 +1.9
baz=263
J18K **Innoko River** 79.52 27 IAmb IAmb 10 06 48.1
comp=Z,45nm,1.9s
J18K **Innoko River** 79.52 27 P P 10 05 52.0 +1.7
baz=262
F19K **Shaleruckik Mo** 79.63 23 P P 10 05 52.9 +2.1
baz=260
GCSA **Galena City Sc** 79.65 25 P P 10 05 52.9 +2.0
baz=261,SNR=8.0
M18K **Stony River** 79.66 29 P P 10 05 53.3 +2.2
baz=263
P18K **Big Mountain,** 79.70 31 P P 10 05 53.0 +1.7
baz=264
O18K **Koktuh Hills** 79.76 30 P P 10 05 53.1 +1.5
baz=264
G19K **Purcell Mounta** 79.79 24 IAmb IAmb 10 05 55.1
comp=Z,23nm,1.1s
G19K **Purcell Mounta** 79.79 24 P P 10 05 53.7 +2.1
baz=261
D19K **Kuna River** 79.81 21 IAmb IAmb 10 05 55.0
comp=Z,18nm,0.6s
D19K **Kuna River** 79.81 21 P P 10 05 53.5 +1.7
baz=259
E19K **Redstone River** 79.95 22 IAmb IAmb 10 05 56.1
comp=Z,41nm,1.1s
E19K **Redstone River** 79.95 22 P P 10 05 54.8 +2.3
baz=260
SII **Sitkinak Islan** 79.96 34 P P 10 05 54.5 +1.7
baz=265
J19K **Poorman** 80.08 26 P P 10 05 55.1 +1.8
baz=262
L19K **White Mountain** 80.20 28 IAmb IAmb 10 05 57.7
comp=Z,22nm,1.1s
L19K **White Mountain** 80.20 28 P P 10 05 55.7 +1.7
baz=263
N19K **Bonanza Creek** 80.22 29 P P 10 05 55.7 +1.5
baz=264
O19K **Port Alsworth** 80.24 30 P P 10 05 55.8 +1.7
baz=264
M19K **Big River Lodg** 80.39 28 P P 10 05 55.4 +0.5
baz=264
D20K **Etivluk River** 80.39 21 IAmb IAmb 10 05 58.2
comp=Z,28nm,1.0s
D20K **Etivluk River** 80.39 21 P P 10 05 56.4 +1.6
baz=261
Q19K **Cape Douglas,** 80.46 31 P P 10 05 56.6 +1.2
baz=265
F20K **Avaraart Lake** 80.47 23 P P 10 05 56.2 +1.0
baz=262
E20K **Nigu River** 80.47 22 P P 10 05 57.0 +1.7
baz=261
OHAK **Old Harbor** 80.51 33 P P 10 05 57.1 +1.5
baz=266
H20K **Anotleneega Mo** 80.59 25 P P 10 05 57.5 +1.6
baz=263
K20K **Telida** 80.69 27 IAmb IAmb 10 06 00.4
comp=Z,25nm,1.1s
K20K **Telida** 80.69 27 P P 10 05 58.8 +2.3
baz=264,SNR=6.1
P19K **Oil Pt** 80.73 31 P P 10 05 58.8 +1.9
baz=265
KARS **Kars** 80.74 310 IAmb IAmb 10 06 00.3
comp=Z,36nm,1.0s
PYA1 **Pyatigorsk** 80.78 314 ⇓*i* P P 10 05 56.7 -0.7
A21K **Barrow** 80.83 19 P P 10 05 58.4 +1.4
baz=260
ABPO **Ambohimpanom** 80.90 250 P P 10 05 57.3 -1.4
ABPO IAmb IAmb 10 05 59.7
comp=Z,24nm,1.1s
ABPO **Ambohimpanom** 80.90 250 P P 10 05 57.3 -1.4
ABPO pmax pmax
comp=Z,24nm,1.1s
KBZ **Khabaz** 80.92 313 P P 10 05 57.1 -0.9
comp=Z,11nm,1.0s,baz=143,slow=3.8,SNR=15
comp=Z,11nm,1.0s
KBZ **Khabaz** 80.92 313 *ce* P P 10 05 58.3 +0.2
KDAK **Kodiak Island** 80.93 32 P P 10 05 57.0 -0.8
comp=Z,15nm,0.7s,baz=42,slow=1.4,SNR=8.9
comp=Z,15nm,0.7s
KDAK **Kodiak Island** 80.93 32 P P 10 05 57.3 -0.5
KDAK **Kodiak Island** 80.93 32 P P 10 05 57.3 -0.5
KDAK pmax pmax
comp=Z,270nm,1.8s
KDAK **Kodiak Island** 80.93 32 P P 10 05 59.8 +1.9
baz=266
M20K **Styx River** 80.98 28 IAmb IAmb 10 06 01.9
comp=Z,18nm,0.8s
M20K **Styx River** 80.98 28 P P 10 05 59.9 +1.7
baz=265
RED **Redoubt Volcan** 81.03 30 IAmb IAmb 10 06 03.6
comp=Z,25nm,0.9s
NEUR **Neytrino** 81.05 313 ⇑*i* P P 10 06 00.5 +1.4
NEUR pmax pmax
comp=Z,12nm,1.1s
KIV **Kislovodsk** 81.07 313 P P 10 05 58.4 -0.7
KIV **Kislovodsk** 81.07 313 *eP* P 10 05 59.7 +0.6
KIV pmax pmax
comp=Z,20nm,1.0s
KIV **Kislovodsk** 81.07 313 P P 10 05 59.3 +0.2
comp=Z,21nm,0.9s
Q20K **Shuyak Island** 81.08 32 P P 10 06 00.5 +1.8
baz=266
SHA1 **Shidzhatmaz** 81.09 313 ⇑*i* P P 10 05 59.5 +0.2
C21K **Knifeblade Rid** 81.11 21 P P 10 06 00.1 +1.5
baz=262,SNR=8.1
B21K **Ikpikpuk River** 81.23 20 IAmb IAmb 10 06 02.7
comp=Z,26nm,0.8s
B21K **Ikpikpuk River** 81.23 20 P P 10 06 01.2 +2.0
baz=262
G21K **Allakaket** 81.27 24 IAmb IAmb 10 06 04.4
comp=Z,20nm,0.9s
G21K **Allakaket** 81.27 24 P P 10 06 01.3 +1.8
baz=264
E21K **Killik River** 81.31 22 IAmb IAmb 10 06 03.0
comp=Z,27nm,1.0s
E21K **Killik River** 81.31 22 P P 10 06 01.5 +1.8
baz=263
F21K **Alatna River** 81.36 23 P P 10 06 01.9 +1.9
baz=264
SPCR **Spurr Chakacha** 81.36 29 P P 10 06 01.1 +0.9
baz=266
H21K **Melozitna Rive** 81.47 24 P P 10 06 02.1 +1.5
baz=265,SNR=8.8
PPLA **Purkeypile** 81.50 27 P P 10 06 01.8 +0.9
baz=266
CHUM **Lake Minchumin** 81.52 26 P P 10 06 02.4 +1.6
baz=265
HOM **Homer** 81.54 31 P P 10 06 02.3 +1.2
baz=267
SKT **Skwentna** 81.74 28 IAmb IAmb 10 06 04.9
comp=Z,24nm,1.0s
SKT **Skwentna** 81.74 28 P P 10 06 03.5 +1.5
baz=266,SNR=6.3
VOI **Vohitsoka** 81.77 247 IAmb IAmb 10 06 04.0
comp=Z,54nm,1.1s
VOI **Vohitsoka** 81.77 247 P P 10 06 02.2 -1.0
I21K **Tanana** 81.77 25 IAmb IAmb 10 06 05.9
comp=Z,41nm,1.4s
I21K **Tanana** 81.77 25 P P 10 06 03.8 +1.7
baz=266,SNR=11
D22K **Ayikyak River** 81.83 21 IAmb IAmb 10 06 06.0
comp=Z,48nm,1.8s
D22K **Ayikyak River** 81.83 21 P P 10 06 04.0 +1.6
baz=264
ATD **Arta Tunnel** 81.84 281 IAmb IAmb 10 06 05.5
comp=Z,36nm,1.1s
ATD **Arta Tunnel** 81.84 281 P P 10 06 04.9 +1.3
SNR=5.6
CAPN **Captain Cook N** 81.85 29 P P 10 06 04.2 +1.6
baz=267
VRH **Novokhopyorsk** 81.86 321 *eP* P 10 06 00.8 -2.1
VRH pmax pmax
comp=Z,37nm,0.8s
BRSE **Bradley Lake S** 82.00 31 P P 10 06 04.9 +1.4
baz=267
H22K **Ishtalitna Cre** 82.07 24 IAmb IAmb 10 06 07.8
comp=Z,54nm,1.6s
H22K **Ishtalitna Cre** 82.07 24 P P 10 06 05.0 +1.3
baz=266
E22K **Anaktuvuk Pass** 82.08 22 P P 10 06 05.4 +1.6
baz=265
SUA **Susitna One** 82.08 29 IAmb IAmb 10 06 06.3
comp=Z,36nm,1.0s
SUA **Susitna One** 82.08 29 P P 10 06 05.6 +1.6
baz=267,SNR=6.4
FOMA **Nahampoana Res** 82.11 244 P P 10 06 03.6 -1.1
FOMA IAmb IAmb 10 06 06.4
comp=Z,34nm,0.9s
KTH **Kantishna Hill** 82.12 27 IAmb IAmb 10 06 07.2
comp=Z,30nm,1.2s
BPAW **Bear Paw Mtn.** 82.12 26 IAmb IAmb 10 06 07.3
comp=Z,47nm,1.1s
BPAW **Bear Paw Mtn.** 82.12 26 P P 10 06 05.7 +1.7
baz=267,SNR=16
L22K **Petersville** 82.13 28 IAmb IAmb 10 06 06.5
comp=Z,35nm,1.0s
SLKM **Skilak Lake** 82.29 30 IAmb IAmb 10 06 07.9
comp=Z,37nm,0.9s
CUT **Chulitna** 82.35 28 P P 10 06 06.4 +1.2
baz=267
TRF **Thorofare Moun** 82.39 27 IAmb IAmb 10 06 10.0
comp=Z,33nm,1.1s
TRF **Thorofare Moun** 82.39 27 P P 10 06 07.0 +1.4
baz=267,SNR=7.8
M22K **Wilow** 82.39 29 P P 10 06 07.0 +1.6
baz=268,SNR=9.2
MARD **Mardin** 82.55 307 IAmb IAmb 10 06 08.4
comp=Z,21nm,1.0s
RC01 **Rabbit Creek A** 82.55 29 IAmb IAmb 10 06 09.1
comp=Z,26nm,0.8s
RC01 **Rabbit Creek A** 82.55 29 P P 10 06 07.3 +1.0
baz=268,SNR=5.0
D23K **Nanushuk River** 82.56 21 P P 10 06 08.0 +1.8
baz=266,SNR=17
COLD **Coldfoot** 82.63 23 IAmb IAmb 10 06 10.5
comp=Z,39nm,1.2s
COLD **Coldfoot** 82.63 23 P P 10 06 08.1 +1.5
baz=267,SNR=24
SEW **Seward** 82.66 30 P P 10 06 08.0 +1.1
baz=268
G23K **Bananza Creek** 82.67 24 IAmb IAmb 10 06 10.9
comp=Z,51nm,1.3s
G23K **Bananza Creek** 82.67 24 P P 10 06 08.8 +1.9
baz=267
KOPT **Kop Dagi** 82.72 310 IAmb IAmb 10 06 12.9
comp=Z,40nm,1.3s
PMR **Palmer** 82.86 29 IAmb IAmb 10 06 10.2
comp=Z,34nm,1.1s
PMR **Palmer** 82.86 29 P P 10 06 09.4 +1.6
baz=269,SNR=6.5
I23K **Minto, Yukon-K** 82.87 25 P P 10 06 09.1 +1.3
baz=268,SNR=34
E23K **Chandalar** 82.90 22 IAmb IAmb 10 06 12.1
comp=Z,58nm,1.1s
E23K **Chandalar** 82.90 22 P P 10 06 09.8 +1.8
baz=267
NEA2 **Nenana** 82.98 26 IAmb IAmb 10 06 12.2
comp=Z,32nm,1.0s
NEA2 **Nenana** 82.98 26 P P 10 06 10.2 +1.8
baz=268,SNR=15
MCK **McKinley** 83.01 27 P P 10 06 09.7 +1.1
baz=268,SNR=18
RND **Reindeer** 83.04 27 IAmb IAmb 10 06 11.0
comp=Z,25nm,0.8s
WAT1 **Susitna Watana** 83.16 27 P P 10 06 10.4 +0.9
baz=269
KNK **Knik Glacier** 83.18 29 P P 10 06 10.9 +1.4
baz=269,SNR=7.7
SOC **Sochi** 83.22 313 *eP* P 10 06 08.9 -1.2
SOC *e* 10 09 24.3
SOC *eS* **SKSac** 10 16 10.8 -1.7
SOC *eSS* **SS** 10 21 44.9 +2.6
SOC *eSSS* SSS 10 25 10.5
D24K **Happy Valley** 83.23 21 IAmb IAmb 10 06 13.4
comp=Z,64nm,1.2s
D24K **Happy Valley** 83.23 21 P P 10 06 11.6 +2.0
baz=268
SML **Sawmill** 83.25 28 IAmb IAmb 10 06 13.2
comp=Z,33nm,1.0s
SML **Sawmill** 83.25 28 P P 10 06 11.6 +1.7
baz=269
KLMR **Klimovskoe** 83.26 331 *eP* P 10 06 07.8 -2.1
KLMR pmax pmax
comp=Z,98nm,1.1s
C24K **Franklin Bluff** 83.30 20 P P 10 06 12.0 +2.0
baz=268
VORD **Divnogorie** 83.39 321 *eP* P 10 06 09.3 -1.5
VORD pmax pmax
comp=Z,10.0nm,0.8s
WRH **Wood River Hil** 83.40 26 IAmb IAmb 10 06 12.9
comp=Z,32nm,1.0s
VORR **Voronezh** 83.44 321 *eP* P 10 06 08.9 -2.1
VORR pmax pmax
comp=Z,50nm,0.4s
VSR **Storozhevoye** 83.47 321 *eP* P 10 06 09.9 -1.3
VSR pmax pmax
comp=Z,10.0nm,0.5s
COLA **College** 83.51 25 P P 10 06 11.9 +0.9
COLA **College** 83.51 25 ⇓P P 10 06 12.4 +1.3
COLA **College** 83.51 25 P P 10 06 12.9 +1.8
baz=269
H24K **Noodor Dome** 83.51 24 IAmb IAmb 10 06 15.8
comp=Z,34nm,1.1s
H24K **Noodor Dome** 83.51 24 P P 10 06 13.3 +2.1
baz=269,SNR=18
CCB **Clear Creek Bu** 83.52 26 IAmb IAmb 10 06 13.3
comp=Z,38nm,1.2s
WAT6 **Susitna Watana** 83.53 28 P P 10 06 13.1 +1.6
baz=270,SNR=13
M23K **Glacier View** 83.53 29 P P 10 06 12.4 +1.1
baz=270
LPSR **Galich'ya Gora** 83.60 322 *eP* P 10 06 10.5 -1.3
LPSR pmax pmax
comp=Z,29nm,1.0s
G24K **Hadweenzic Riv** 83.68 24 IAmb IAmb 10 06 15.8
comp=Z,45nm,1.0s
G24K **Hadweenzic Riv** 83.68 24 P P 10 06 13.6 +1.6
baz=269
P23K **Montague Islan** 83.69 30 P P 10 06 13.5 +1.4
baz=270
DHY **Denali Highway** 83.70 27 P P 10 06 13.5 +1.1
baz=270
SCM **Sheep Creek Mo** 83.72 28 P P 10 06 13.6 +1.2
baz=270
HDA **Harding Lake** 83.89 26 IAmb IAmb 10 06 15.2
comp=Z,19nm,0.8s
HDA **Harding Lake** 83.89 26 P P 10 06 14.2 +1.1
baz=270,SNR=11
ILAR **Eielson Array** 83.92 26 P P 10 06 12.8 -0.4
comp=Z,16nm,1.1s,baz=260,slow=5.1,SNR=76
ILAR PKKPbc **PKKPbc** 10 24 26.3 -3.9
comp=Z,2.9nm,1.1s,baz=147,slow=2.2,SNR=10
ILAR PKPPKP **P'P'df** 10 32 31.1 -2.5
comp=Z,1.2nm,1.1s,baz=286,slow=0.7,SNR=4.5
comp=Z,16nm,1.1s
ILAR **Eielson Array** 83.92 26 P P 10 06 12.7 -0.6
D25K **Kavik River** 84.11 21 IAmb IAmb 10 06 17.5
comp=Z,34nm,1.2s
D25K **Kavik River** 84.11 21 P P 10 06 15.5 +1.3
baz=270
Q23K **Middleton Isla** 84.23 31 P P 10 06 16.3 +1.5
baz=271
M24K **Tolsona, Glenn** 84.27 28 P P 10 06 16.3 +1.2
baz=271
MOS **Moscow** 84.30 325 *eP* P 10 06 12.9 -2.4
MOS *e**PP **pP** 10 07 01.5 -4.4
MOS *eS* **SKSac** 10 16 14.6 -4.3
MOS pmax pmax
comp=Z,72nm,1.1s
F25K **Christian Rive** 84.40 23 P P 10 06 17.3 +1.6
baz=271
KLU **Klutina** 84.40 29 P P 10 06 17.3 +1.5
baz=271
K24K **Donnelly Dome** 84.41 26 IAmb IAmb 10 08 22.7
comp=Z,46nm,1.1s
K24K **Donnelly Dome** 84.41 26 P P 10 06 17.1 +1.4
baz=271
ARPR **Arapgir-MALATY** 84.42 309 IAmb IAmb 10 06 19.6
comp=Z,43nm,1.2s
E25K **Arctic Village** 84.42 22 IAmb IAmb 10 06 20.2
comp=Z,58nm,1.4s
E25K **Arctic Village** 84.42 22 P P 10 06 17.6 +1.9
baz=271,SNR=22
DIV **Divide** 84.48 29 IAmb IAmb 10 06 19.4
comp=Z,37nm,1.0s
PRP **Porcupine Dome** 84.48 25 P P 10 06 17.4 +1.2
baz=271
EYAK **Cordova Ski Ar** 84.50 30 P P 10 06 17.8 +1.7
baz=272
PAX **Paxson** 84.57 27 IAmb IAmb 10 07 08.2
comp=Z,35nm,1.5s
PAX **Paxson** 84.57 27 P P 10 06 18.7 +2.1
baz=272,SNR=5.3
J25K **Salcha River,** 84.57 26 P P 10 06 17.5 +0.9
baz=272,SNR=8.5
FYU **Fort Yukon** 84.58 24 IAmb IAmb 10 06 20.3
comp=Z,44nm,1.1s
C26K **Camden Bay** 84.61 20 P P 10 06 18.8 +2.2
baz=272
HARP **HAARP** 84.73 28 P P 10 06 18.6 +1.3
baz=272
BMAR **Burnt Mountain** 84.81 23 P P 10 06 18.9 +1.2
BMAR pP **pP** 10 07 07.1 -0.5
RIDG **Independent Ri** 84.83 27 IAmb IAmb 10 06 20.5
comp=Z,32nm,1.2s
RIDG **Independent Ri** 84.83 27 P P 10 06 19.7 +1.8
baz=272,SNR=5.9
OBN **Obninsk** 84.92 325 P P 10 06 16.9 -1.5
OBN **Obninsk** 84.92 325 ⇑*i* P P 10 06 17.4 -1.0
OBN *i* *PP **pP** 10 07 03.8 -5.3
OBN *i* 10 09 37.4
OBN pmax pmax
comp=Z,56nm,1.0s
OBN **Obninsk** 84.92 325 P P 10 06 16.3 -2.1
comp=Z,69nm,1.2s
F26K **Sheenjek River** 84.97 23 P P 10 06 20.4 +2.0
baz=272
N25K **Chitina, Valde** 85.03 29 P P 10 06 20.5 +1.6
baz=272
C27K **Jago River** 85.04 21 IAmb IAmb 10 06 22.6
comp=Z,31nm,1.2s
C27K **Jago River** 85.04 21 P P 10 06 20.7 +1.9
baz=273
BMRM **Bremner River** 85.05 29 P P 10 06 20.5 +1.5
baz=273
MAW **Mawson** 85.10 200 P P 10 06 19.5 +0.6
comp=Z,50nm,1.0s,baz=54,slow=6.5,SNR=12
comp=Z,50nm,1.0s
G26K **Porcupine Rive** 85.14 23 IAmb IAmb 10 07 16.2
comp=Z,28nm,1.2s
G26K **Porcupine Rive** 85.14 23 P P 10 06 20.9 +1.7
baz=273
KAIM **Kayak Island** 85.19 30 P P 10 06 21.0 +1.4
baz=273
SCRK **Sand Creek** 85.20 26 IAmb IAmb 10 07 43.5
comp=Z,32nm,1.6s
SCRK **Sand Creek** 85.20 26 P P 10 06 20.9 +1.1
baz=273
J26L **Joseph Creek** 85.36 26 P P 10 06 21.9 +1.4
baz=273,SNR=8.3
VNDA **Vanda** 85.39 173 P P 10 06 20.9 +0.6
comp=Z,31nm,1.1s,baz=298,slow=7.1,SNR=12
VNDA LR LR 10 45 03.1
comp=Z,75nm,20.5s,baz=324,slow=36
comp=Z,31nm,1.1s
VNDA **Vanda** 85.39 173 P P 10 06 20.6 +0.4
VNDA IAmb IAmb 10 06 22.3
comp=Z,45nm,1.1s
VNDA **Vanda** 85.39 173 P P 10 06 20.8 +0.6
L26K **Log Cabin Wild** 85.54 27 P P 10 06 22.7 +1.3
baz=274
APA **Apatity** 85.73 337 ⇓*eP* P 10 06 19.1 -3.1
APA pmax pmax
comp=Z,19nm,1.2s
APA MLR MLR
comp=Z,850nm,6.4s
MCARA **McCarthy VSAT** 85.79 29 P P 10 06 23.2 +0.6
baz=274
CRQE **Cirque** 85.80 29 P P 10 06 23.2 +0.4
baz=274
E27K **Coleen River** 85.90 22 IAmb IAmb 10 07 18.1
comp=Z,28nm,1.4s
E27K **Coleen River** 85.90 22 P P 10 06 23.1 0.0
baz=275
G27K **Doyon Strip** 85.99 23 P P 10 06 24.3 +0.8
baz=275
D27M **Malcolm River** 86.04 21 IAmb IAmb 10 07 18.2
comp=Z,20nm,1.2s
D27M **Malcolm River** 86.04 21 P P 10 06 24.0 +0.2
baz=275
H27K **Steamboat Moun** 86.09 24 IAmb IAmb 10 07 18.8
comp=Z,55nm,2.0s
H27K **Steamboat Moun** 86.09 24 P P 10 06 24.8 +0.8
baz=275
I27K **Kandik River** 86.10 25 IAmb IAmb 10 07 20.8
comp=Z,42nm,1.2s
I27K **Kandik River** 86.10 25 P P 10 06 24.8 +0.6
baz=275
FURI **Furi** 86.14 279 LR LR 10 46 21.1
comp=Z,79nm,18.3s,baz=145,slow=36
L27K **Beaver Creek,** 86.23 27 P P 10 06 24.9 +0.2
baz=275
M27K **Edge Creek, AK** 86.26 28 P P 10 06 25.7 +0.6
baz=275
BNN **Bunyan** 86.37 309 IAmb IAmb 10 06 28.0
comp=Z,30nm,1.1s
MESA **MESA** 86.41 30 P P 10 06 25.7 -0.2
baz=275
F28M **Old Crow** 86.60 22 IAmb IAmb 10 06 29.2
comp=Z,14nm,0.8s
F28M **Old Crow** 86.60 22 P P 10 06 26.9 +0.5
baz=276
E28M **Babbage River** 86.62 21 P P 10 06 27.3 +0.8
baz=277
CTG **Chitna Glacier** 86.64 29 P P 10 06 27.3 +0.3
baz=275
BVCY **Beaver Creek** 86.73 28 P P 10 06 27.5 +0.3
baz=276
PPT **Papeete** 86.73 108 LR LR 10 37 59.4
comp=Z,41nm,21.9s,baz=278,slow=30
D28M **Stokes Point** 86.81 21 P P 10 06 28.4 +1.0
baz=277
I28M **Miner Creek** 86.82 25 P P 10 06 28.5 +0.9
baz=276
YUK3 **Moose Creek** 86.98 28 P P 10 06 29.0 +0.3
baz=276
DAWY **Dawson** 87.21 26 P P 10 06 29.9 +0.5

baz=277
O28M Mount Upton 87.22 29 P P 10 06 30.3 +0.4
baz=276
E29M Blow River 87.24 22 P P 10 06 30.3 +0.8
baz=278
PINM Pinnacle 87.27 30 P P 10 06 30.8 +1.0
baz=276
YUK8 Steele Glacier 87.37 29 P P 10 06 31.4 +0.8
baz=277
G29M Pine Creek 87.40 23 IAmb IAmb 10 06 32.9
comp=Z,32nm,1.0s
G29M Pine Creek 87.40 23 P P 10 06 31.2 +0.9
baz=278
I29M Ogilvie Camp, 87.50 25 P P 10 06 31.7 +0.9
baz=278
J29N Klondike Camp 87.67 26 IAmb IAmb 10 07 58.3
comp=Z,52nm,2.0s
J29N Klondike Camp 87.67 26 P P 10 06 32.9 +1.2
baz=278
KIBK Kibwezi 87.81 267 P P 10 06 32.4 -1.1
KIBK Kibwezi 87.81 267 P P 10 06 34.3 +0.8
SNR=9.3
M29M Somme Creek 87.83 28 P P 10 06 33.4 +0.8
baz=278
KIRS Kirsehir-Merke 87.84 309 ⇑P P 10 06 32.0 -1.1
PUL Pulkovo 87.89 330 ⇓*i*P P 10 06 32.2 -0.5
PUL pmax pmax
comp=Z,74nm,0.8s
L29M L29M 87.89 27 P P 10 06 33.6 +0.9
baz=278
YUK4 Talbot Arm 87.90 29 P P 10 06 33.1 +0.2
baz=278
BR104 Keskin Array S 88.00 310 P P 10 06 32.5 -1.4
comp=Z,112nmcomp=Z,15nm,0.9s
BR131 Keskin Array S 88.00 310 IAmb IAmb 10 06 36.1
comp=Z,15nm,0.8s
BR131 Keskin Array S 88.00 310 ⇓*i*P P 10 06 32.3 -1.6
BR131 Keskin Array S 88.00 310 P P 10 06 32.6 -1.3
SNR=15
BRTR Keskin Array B 88.00 310 P P 10 06 31.8 -2.1
comp=Z,10nm,0.8s,baz=120,slow=4.7,SNR=43
comp=Z,10nm,0.8s
BRTR Keskin Array B 88.00 310 P P 10 06 30.9 -2.9
BRTR Keskin Array B 88.00 310 *i*P P 10 06 32.0 -1.9
BRTR pmax pmax
comp=Z,11nm,0.8s
BR106 Keskin Array S 88.02 310 P P 10 06 32.5 -1.4
comp=Z,84nmcomp=Z,12nm,0.9s
BR105 Keskin Array S 88.02 310 P P 10 06 32.6 -1.4
comp=Z,107nmcomp=Z,16nm,0.9s
K29M Barlow Dome 88.06 26 P P 10 06 34.4 +0.8
baz=279
O29M Mount Kennedy 88.07 30 P P 10 06 34.6 +0.9
baz=278
YUK6 Outpost Mounta 88.09 29 P P 10 06 34.2 +0.3
baz=278
G30M tAoh Zraii Nji 88.09 23 P P 10 06 34.2 +0.6
baz=280
F30M Barrier River 88.15 22 IAmb IAmb 10 06 36.2
comp=Z,16nm,1.0s
F30M Barrier River 88.15 22 P P 10 06 34.8 +1.0
baz=280
I30M Mount Dempster 88.33 25 P P 10 06 35.5 +0.7
baz=280
ARCES ARCESS Array B 88.34 340 P P 10 06 32.8 -1.9
comp=Z,24nm,1.0s,baz=68,slow=6.7,SNR=10.0
ARCES PKiKP **PKiKP** 10 11 34.5 0.0
comp=Z,3.4nm,1.1s,baz=66,slow=2.2,SNR=4.4
ARCES PKKPbc **PKKPbc** 10 24 16.6 -3.2
comp=Z,2.8nm,0.9s,baz=242,slow=4.5,SNR=5.5
ARCES LR LR 10 51 18.4
comp=Z,121nm,18.8s,baz=87,slow=39
comp=Z,24nm,1.0s
ARCES ARCESS Array B 88.34 340 P P 10 06 33.2 -1.4
ARCES IAmb IAmb 10 06 34.6
comp=Z,52nm,1.3s
ARCES ARCESS Array B 88.34 340 P P 10 06 33.3 -1.4
ARCES pmax pmax
comp=Z,52nm,1.3s
J30M Hart River 88.45 25 IAmb IAmb 10 06 41.0
comp=Z,30nm,1.9s
J30M Hart River 88.45 25 P P 10 06 36.9 +1.5
baz=280
SPITS Spitsbergen Ar 88.46 349 P P 10 06 33.7 -1.4
comp=Z,23nm,0.8s,baz=90,slow=7.9,SNR=27
comp=Z,23nm,0.8s
HYT Haines Junctio 88.52 29 P P 10 06 37.0 +1.2
baz=279
M30M Minto, Yukon 88.58 27 P P 10 06 37.4 +1.4
baz=279
MAYO Mayo, Yukon 88.81 26 P P 10 06 38.4 +1.4
baz=280
INK Inuvik 88.85 21 P P 10 06 36.7 -0.4
comp=Z,7.4nm,1.0s,baz=301,slow=5.0,SNR=15
comp=Z,7.4nm,1.0s
INK Inuvik 88.85 21 IAmb IAmb 10 06 39.1
comp=Z,17nm,1.2s
INK Inuvik 88.85 21 P P 10 06 38.3 +1.3
baz=282
G31M Satah River 88.86 23 IAmb IAmb 10 06 39.0
comp=Z,22nm,1.1s
G31M Satah River 88.86 23 P P 10 06 38.5 +1.4
baz=282
P30M Million Dollar 88.89 30 P P 10 06 38.6 +1.0
baz=279
F31M Tsiigehtchic 88.95 22 IAmb IAmb 10 06 39.3
comp=Z,15nm,1.1s
F31M Tsiigehtchic 88.95 22 P P 10 06 38.5 +0.9
baz=282
H31M Peel River 89.05 24 IAmb IAmb 10 06 40.9
comp=Z,21nm,1.4s
H31M Peel River 89.05 24 P P 10 06 38.9 +0.8
baz=282
O30N Mendenhall 89.21 29 P P 10 06 39.9 +0.9
baz=280
N31M Braeburn, Yuko 89.23 28 P P 10 06 40.1 +1.1
baz=280
S31K Pelican 89.62 32 P P 10 06 42.2 +1.4
baz=280
FINES FINESS Array B 89.69 332 P P 10 06 39.3 -1.8
comp=Z,12nm,0.8s,baz=72,slow=6.2,SNR=23
FINES LR LR 10 49 08.7
comp=Z,180nm,18.2s,baz=62,slow=37
comp=Z,12nm,0.8s
FINES FINESS Array B 89.69 332 P P 10 06 38.8 -2.3
AK09 Malin Array Si 89.75 321 P P 10 06 40.1 -1.5
M31M Drury Creek, Y 89.75 27 P P 10 06 42.5 +1.1
baz=282
AK08 Malin Array Si 89.76 321 P P 10 06 40.2 -1.5
AK10 Malin Array Si 89.77 321 P P 10 06 40.2 -1.5
AKASG Malin Array Be 89.77 321 P P 10 06 39.4 -2.3
comp=Z,1.4nm,0.5s,baz=70,slow=4.5,SNR=8.8
comp=Z,1.4nm,0.5s
AKASG Malin Array Be 89.77 321 P P 10 06 39.9 -1.8
AKASG Malin Array Be 89.77 321 *i*P P 10 06 40.2 -1.5
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 89.77 321 ⇓*i*P P 10 06 40.2 -1.5
AKBB pmax pmax
comp=Z,8.0nm,1.1s
AKBB Malin Array Si 89.77 321 P P 10 06 40.2 -1.5
AK01 Malin Array Si 89.78 321 P P 10 06 39.9 -1.8
KIEV Kiev 89.78 321 ⇑P P 10 06 40.4 -1.4
KIEV Kiev 89.78 321 P P 10 06 39.6 -2.1
KIEV Kiev 89.78 321 ⇑P P 10 06 40.4 -1.4
KIEV Kiev 89.78 321 P P 10 06 40.2 -1.6
AK02 Malin Array Si 89.79 321 P P 10 06 40.1 -1.7
AK04 Malin Array Si 89.80 321 P P 10 06 39.8 -2.1
AK06 Malin Array Si 89.80 321 P P 10 06 40.2 -1.7
AK07 Malin Array Si 89.81 321 P P 10 06 40.3 -1.6
AK11 Malin Array Si 89.81 321 P P 10 06 40.4 -1.5
WHY Whitehorse 89.82 29 IAmb IAmb 10 06 45.4
comp=Z,28nm,1.0s
WHY Whitehorse 89.82 29 P P 10 06 43.0 +1.1
baz=281
SKAG Skagway 89.82 30 P P 10 06 42.9 +1.1
baz=281
AK12 Malin Array Si 89.82 321 P P 10 06 40.4 -1.6
MNK Minsk 89.98 325 *i*P P 10 06 43.6 +1.0
comp=E,5.0nm,0.7s
MNK *i*P P 10 06 43.6 +1.0
comp=N,17nm,0.9s
MNK *i*P P 10 06 43.6 +1.0
comp=Z,29nm,0.9s,baz=80
MNK *i*pP **pP** 10 07 33.0 -0.8
MNK *i*sP **sP** 10 07 57.6 +2.1
MNK *i*PP **PP** 10 10 19.3 +0.9
MNK *i*PPP PPP 10 12 17.4
MNK *i*S **SKSac** 10 16 54.6 +1.0
MNK *i*sS **pS** 10 18 25.3 +2.8
MNK *i*PS **PnS** 10 18 52.7 +0.3
MNK *i*SS **SS** 10 23 23.4 +3.2
MNK *i*SSS SSS 10 27 01.1
MNK *i*LQ LQ 10 43 12.5
MNK *i*LR LR 10 48 08.3
MNK Minsk 89.98 325 *i*P **P** 10 06 43.6 +1.0
MNK *i**PP **pP** 10 07 33.0 -0.8
MNK *i**SP **sP** 10 07 57.6 +2.1
MNK *i* 10 10 19.2
MNK *i*PPP PPP 10 12 17.4
MNK *i*S **SKSac** 10 16 54.5 +1.0
MNK *i**SS **pS** 10 18 25.3 +2.8
MNK *i*PS **PnS** 10 18 52.6 +0.3
MNK *i*SS **SS** 10 23 23.4 +3.2
MNK *i*SSS SSS 10 27 01.1
MNK pmax pmax
comp=Z,29nm,0.9s
MNK pmax pmax
comp=E,5.0nm,0.7s
MNK pmax pmax
comp=N,17nm,0.9s
SIT Sitka 90.27 33 P P 10 06 45.3 +1.4
baz=281
R32K Eaglecrest 90.46 31 P P 10 06 46.0 +1.2
baz=281
A36M Sachs Harbour 90.56 17 P P 10 06 46.7 +1.8
baz=290
N32M Quiet Lake 90.58 28 IAmb IAmb 10 06 48.2
comp=Z,22nm,0.8s
N32M Quiet Lake 90.58 28 P P 10 06 47.0 +1.7
baz=283
S32K Killisnoo 90.59 32 P P 10 06 47.2 +1.9
baz=281
P32M Atlin 90.60 30 P P 10 06 47.0 +1.6
baz=282
LUBAR Lubar, Ukraine 90.82 320 P P 10 06 44.8 -1.8
P33M Teslin, Yukon 90.91 29 P P 10 06 48.6 +1.6
baz=283
NOR Nord 91.16 355 *i*P P 10 06 45.5 -2.1
NOR IAmb IAmb 10 06 48.8
comp=Z,41nm,1.0s
Q32M Nakina River 91.47 30 P P 10 06 51.6 +1.9
baz=283
U33K Whale Pass 91.65 33 P P 10 06 52.4 +2.1
baz=282
CRAG Craig 91.79 34 P P 10 06 52.4 +1.5
baz=282
C36M Paulatuk 91.85 19 IAmb IAmb 10 07 45.7
comp=Z,31nm,1.8s
C36M Paulatuk 91.85 19 P P 10 06 52.2 +1.3
baz=291
KMPD K-Pdol'skiy 91.90 319 P P 10 06 48.3 -3.3
WRAK Wrangell Islan 92.00 33 P P 10 06 52.7 +0.8
baz=283
R33M Jennings River 92.01 30 P P 10 06 53.8 +1.6
baz=284
VRI Vrincioaia 92.20 316 ⇑P P 10 06 52.5 -0.7
VRI Vrincioaia 92.20 316 ⇑P P 10 06 52.5 -0.7
PLOR Plostina 92.26 316 ⇓P P 10 06 52.9 -0.5
PLOR Plostina 92.26 316 ⇓P P 10 06 52.9 -0.5
S34M Telegraph Cree 92.30 31 P P 10 06 55.1 +1.8
baz=284
ONER Baraj Valea Uz 92.35 317 ⇑P P 10 06 53.6 -0.2
NEHR Negreanu 92.58 316 ⇓P P 10 06 55.0 +0.1
TURR Turia 92.66 317 ⇑P P 10 06 54.3 -1.0
V35K Ketchikan 92.66 34 P P 10 06 56.9 +1.9
baz=284
DLBC Dease Lake 92.73 31 P P 10 06 55.1 -0.3
comp=Z,7.0nm,1.1s,baz=248,slow=6.8,SNR=6.3
comp=Z,7.0nm,1.1s
DLBC Dease Lake 92.73 31 P P 10 06 56.9 +1.5
baz=285
MLR Muntele Rosu 92.81 316 ⇑P P 10 06 55.5 -0.5
MLR Muntele Rosu 92.81 316 IAmb IAmb 10 06 56.2
comp=Z,12nm,1.0s
MLR Muntele Rosu 92.81 316 ⇑P P 10 06 55.6 -0.5
WTLY Watson Lake, Y 92.88 29 P P 10 06 57.5 +1.5
baz=286
BURAR Bucovina Array 92.90 318 ⇑P P 10 06 55.3 -1.1
BURAR Bucovina Array 92.90 318 P P 10 06 54.8 -1.7
BURAR Bucovina Array 92.90 318 ⇑P P 10 06 55.3 -1.1
T35M Bob Quinn 92.99 32 P P 10 06 58.0 +1.5
baz=285
ARR Arges 93.74 316 ⇑P P 10 06 60.0 -0.4
SYO Syowa Base 93.74 201 ⇓*e*P P 10 06 59.3 -0.3
SYO Syowa Base 93.74 201 ⇓*i*P P 10 07 02.2 +3.6
WRGLY Wrigley 94.29 25 *i*P P 10 07 03.5 +1.2
baz=291
MARR Marisel-Cluj 94.49 318 ⇓P P 10 07 03.0 -0.8
MBAR Mbarara 94.92 270 LR LR 10 49 26.2
comp=Z,70nm,18.7s,baz=69,slow=35
DAG Danmarks Havn 95.28 352 *i*P P 10 07 04.4 -2.2
DAG IAmb IAmb 10 07 07.2
comp=Z,59nm,1.0s
QSPA South Pole Qui 95.47 180 P P 10 07 07.4 -0.4
comp=Z,22nm,1.0s,baz=336,slow=2.6,SNR=13
QSPA LR LR 10 51 00.1
comp=Z,95nm,19.6s,baz=319,slow=36
comp=Z,22nm,1.0s
QSPA South Pole Qui 95.47 180 P P 10 07 08.0 +0.2
BBB Bella Bella 95.48 36 LR LR 10 46 46.9
comp=Z,47nm,19.7s,baz=236,slow=33
HFS Hagfors 95.88 332 P P 10 07 06.4 -3.2
comp=Z,6.3nm,0.8s,baz=107,slow=3.6,SNR=14
HFS PKKPbc **PKKPdf** 10 23 55.7 -4.1
comp=Z,1.3nm,0.7s,baz=198,slow=2.7,SNR=4.5
BOVS Bovan 96.17 315 ⇓P P 10 07 10.1 -1.3
RES Resolute Bay 96.20 10 P P 10 07 11.2 +0.5
comp=Z,4.3nm,0.9s,baz=306,slow=6.0,SNR=15
comp=Z,4.3nm,0.9s
RES Resolute Bay 96.20 10 IAmb IAmb 10 07 12.8
comp=Z,9.0nm,1.1s
NB2 NORSAR Subarra 96.65 334 P P 10 07 11.5 -1.7
comp=Z,18nm,1.0s,baz=67,slow=4.6
NB2 NORSAR Subarra 96.65 334 P P 10 07 11.5 -1.7
NB2 AMP 10 07 11.5
comp=Z,18nm,1.0s
NOA NORSAR Array B 96.65 334 P P 10 07 11.1 -2.1
comp=Z,5.5nm,0.8s,baz=66,slow=4.5,SNR=10
NOA PKKPbc **PKKPdf** 10 24 00.2 +1.7
comp=Z,1.1nm,0.8s,baz=274,slow=5.1,SNR=3.3
NOA LR LR 10 56 23.3
comp=Z,77nm,18.1s,baz=315,slow=39
comp=Z,5.5nm,0.8s
NEEM North Greenlan 97.07 359 *i*P Pdif 10 07 15.8 +0.6
NEEM IAmb IAmb 10 07 17.5
comp=Z,20nm,0.9s
DBG Daneborg 97.54 351 *i*P P 10 07 15.3 -1.5
DBG IAmb IAmb 10 07 18.2
comp=Z,16nm,0.8s
VRAC Vranov 98.01 321 LR LR 10 55 58.1
comp=Z,105nm,18.1s,baz=33,slow=38
YKAW3 Yellowknife Wh 98.24 24 IAmb IAmb 10 08 46.1
comp=Z,11nm,1.1s
YKA Yellowknife Ar 98.28 24 P Pdif 10 07 20.9 +0.5
comp=Z,2.1nm,0.9s,baz=300,slow=5.6,SNR=30
YKA PKKPbc **PKKPbc** 10 23 50.3 -3.4
comp=Z,0.3nm,0.6s,baz=102,slow=2.4,SNR=6.4
comp=Z,2.1nm,0.9s
YKA Yellowknife Ar 98.28 24 *i*P Pdif 10 07 21.7 +1.3
YKA pmax pmax
comp=Z,2.0nm,0.9s
LSZ Lusaka 98.60 255 LR LR 10 49 21.1
comp=Z,163nm,20.1s,baz=118,slow=34
BRG Berggiesshubel 99.11 323 ⇓*i*Pif 10 07 24.7
BRG Amp 10 07 25.0
comp=Z,6.0nm,0.7s
CLL Collm 99.50 324 *i*P **Pdif** 10 07 25.7 -0.4
CLL *e* 10 13 46.0
CLL Collm 99.50 324 *i*Pdif **Pdif** 10 07 25.7 -0.4
CLL *e*PP **PP** 10 11 30.0 -2.1
GERES GERESS Array B 99.96 322 P **Pdif** 10 07 27.2 -1.2
comp=Z,1.6nm,0.9s,baz=90,slow=5.3,SNR=5.2
comp=Z,1.6nm,0.9s
NVAR Mina Array Bea 106.49 47 PKKPbc PKKPbc 10 23 28.0 -1.1
comp=Z,1.4nm,0.7s,baz=118,slow=3.2,SNR=11
PDAR Pinedale Array 110.68 40 PKKPbc PKKPbc 10 23 12.5 -3.7
comp=Z,2.9nm,0.9s,baz=121,slow=3.6,SNR=16
PDAR PKKPab **PKKPab** 10 23 23.6 -3.3
comp=Z,3.7nm,0.8s,baz=133,slow=3.0,SNR=15
ULM Lac du Bonnet 113.86 28 PKKPbc PKKPbc 10 23 03.1 -2.5
comp=Z,2.3nm,0.8s,baz=118,slow=5.8,SNR=3.0
EPLO Experimental L 115.25 27 PKPdf **PKPdf** 10 12 23.7 +0.1
ESDC Sonseca Array 115.35 319 **PKiKP** 10 12 23.4 -0.8
MVO Moncorvo 116.48 322 *e*PKPdf **PKiKP** 10 12 28.3 +1.9
ANMO Albuquerque 116.58 46 **PKPdf** 10 12 26.2 -0.7
PGAV Gavieira, Arco 116.76 323 *e*PKPdf **PKiKP** 10 12 27.3 +0.3
PCAB Cabril 116.77 323 *e*PKPdf **PKiKP** 10 12 28.8 +1.9
POLO Lamas de Olo 116.82 322 *e*PKPdf **PKiKP** 10 12 28.6 +1.6
PVRL Vila Real 116.83 322 *e*PKPdf **PKiKP** 10 12 28.7 +1.7
MTE Manteigas 117.24 321 **PKPdf** 10 12 26.1 -1.8
MTE Manteigas 117.24 321 *e*PKPdf **PKiKP** 10 12 28.4 +0.6
PVIS Viseu 117.27 322 *e*PKPdf **PKiKP** 10 12 28.7 +0.8
PCBR Castelo Branco 117.52 321 *e*PKPdf **PKiKP** 10 12 28.9 +0.5
PMRV Marv??o 117.70 320 *e*PKPdf **PKiKP** 10 12 29.0 +0.3
PCAS Casmilo, Conde 118.03 321 *e*PKPdf **PKiKP** 10 12 29.6 +0.2
PSARD Sardoal 118.09 321 *e*PKPdf **PKiKP** 10 12 30.6 +1.1
PESTR Estremoz 118.14 320 *e*PKPdf **PKiKP** 10 12 30.8 +1.2
PBAR Barrancos 118.17 319 *e*PKPdf **PKiKP** 10 12 31.1 +1.4
PMTG Montargil 118.43 320 *e*PKPdf **PKiKP** 10 12 31.1 +1.0
PARRA Arraiolos 118.46 320 *e*PKPdf **PKiKP** 10 12 31.1 +0.9
EVO Evora 118.61 320 *e*PKPdf **PKiKP** 10 12 32.0 +1.5
MOE Montemor 118.83 320 *e*PKPdf **PKiKP** 10 12 32.5 +1.6
SCHQ Schefferville 118.92 8 PKP **PKPdf** 10 12 30.6 +0.1
comp=Z,2.2nm,0.3s,baz=304,slow=1.6,SNR=9.2
PCVE Castro Verde 119.13 319 *e*PKPdf **PKiKP** 10 12 32.9 +1.4
MESJ Messejana 119.13 319 *e*PKPdf **PKiKP** 10 12 33.1 +1.6
MD01 Midelt array s 119.38 313 **PKPdf** 10 12 32.0 -0.3
MORF Marmelete 119.72 319 *e*PKPdf **PKiKP** 10 12 34.5 +1.7
TORD Torodi Ar. Bea 121.29 289 PKP **PKPdf** 10 12 35.3 -0.9
comp=Z,8.9nm,0.7s,baz=234,slow=1.1,SNR=43
TORD SKP **SKPdf** 10 15 49.7 -2.3
comp=Z,3.3nm,0.8s,baz=40,slow=2.6,SNR=6.0
TORD PKKPab **PKKPab** 10 22 39.3 -0.4
comp=Z,2.9nm,1.2s,baz=219,slow=3.7,SNR=4.7
TX31 Lajitas Ar. Si 121.32 51 **PKiKP** 10 12 36.4 +0.2
TXAR Lajitas Array 121.32 51 PKP **PKiKP** 10 12 36.4 +0.2
comp=Z,2.4nm,0.9s,baz=256,slow=0.8,SNR=17
TXAR PKKPab **PKKPbc** 10 22 38.8 +0.2
comp=Z,4.3nm,1.1s,baz=107,slow=5.2,SNR=12
TXAR Lajitas Array 121.32 51 **PKPdf** 10 12 36.1 +0.1
WVT Waverly 128.00 34 **PKPdf** 10 12 48.4 -0.1
WVT Waverly 128.00 34 PKIKP **PKPdf** 10 12 48.4 -0.1
DBIC Dimbokro 129.10 283 PKP **PKPdf** 10 12 51.0 -0.2
comp=Z,14nm,1.0s,baz=125,slow=1.9,SNR=8.1
DBIC SKPbc SKPbc 10 15 52.6 -0.1
comp=Z,28nm,1.0s,baz=132,slow=2.9,SNR=13
SSPA Standing Stone 129.19 23 **PKPdf** 10 12 50.6 -0.1
COYC Coyhaique 137.29 162 **PKPdf** 10 13 06.4 +0.7
PLCA Paso Flores 142.11 160 PKhKP PKPpre 10 13 10.8
comp=Z,7.7nm,0.8s,baz=250,slow=2.8,SNR=22
PLCA SKPbc **SKiKP** 10 16 33.6 -0.6
comp=Z,13nm,1.2s,baz=226,slow=3.5,SNR=5.6
PLCA Paso Flores 142.11 160 **PKPdf** 10 13 12.3 -2.4
PLCA Paso Flores 142.11 160 PKIKP **PKPdf** 10 13 12.3 -2.4
PLCA Paso Flores 142.11 160 *e*P **PKPdf** 10 13 12.9 -1.8
BOAB BOACO BROADBAND 144.11 60 PKPbc 10 13 17.4 0.0
TRQA Tornquist 146.94 169 **PKPbc** 10 13 24.6 -0.7
TRQA Tornquist 146.94 169 PKP2 **PKPbc** 10 13 24.6 -0.7
TRQA Tornquist 146.94 169 ⇓*e*P **PKPbc** 10 13 25.8 +0.5
ACAN Cantantal 150.87 157 *e*P **PKiKP** 10 13 35.9 -0.1
ACAN *e*P **PKPbc** 10 13 38.1 +2.7
ACAN *e*P **PKPab** 10 13 38.4 -4.9
RTLL Cerro Villicun 151.17 154 ⇓*e*P **PKPbc** 10 13 36.2 0.0
MRA San Martin 151.27 160 *e*P **PKPbc** 10 13 36.7 +0.3
ACCO Cerro Coronel 151.54 153 *e*P **PKPdf** 10 13 38.6 +0.8
LCO Las Campanas 152.04 148 **PKPdf** 10 13 31.5 -0.2
LCO Las Campanas 152.04 148 PKIKP **PKPdf** 10 13 31.5 -0.2
ACHE Chepes 152.06 157 *e*P **PKPdf** 10 13 32.5 +1.0
AVFE Valle Fertil 152.18 155 *e*P **PKiKP** 10 13 39.5 -0.7
TCA Tanti 152.64 161 *e*P **PKPdf** 10 13 31.5 -0.8
TCA *e*P **PKPbc** 10 13 34.8 -4.7
TCA *e*P **PKiKP** 10 13 40.5 +0.8
ACLC CERRO LA CRUZ 153.47 155 *e*P **PKPdf** 10 13 36.2 +2.5
VCA Vinchina 153.50 152 *e*P **PKiKP** 10 13 43.0 +1.3
AANI Anillaco 154.01 154 *e*P **PKiKP** 10 13 43.8 +1.1
TINO Tinogasta 154.37 152 *e*P **PKPdf** 10 13 36.7 +1.8
FSA Cafayete 156.76 153 *e*P **PKPdf** 10 13 40.3 +2.0
CPUP Villa Florida 159.17 173 PKP **PKPdf** 10 13 41.8 +0.9
comp=Z,10nm,1.1s,baz=248,slow=2.4,SNR=12
CPUP PKPab **PKPab** 10 14 19.8 +1.1
comp=Z,29nm,1.0s,baz=190,slow=4.2,SNR=21
SJMB Sao Joao De Ma 161.68 223 *e*P **PKPdf** 10 13 43.3 -0.6
LPAZ La Paz 162.82 129 PKP **PKPdf** 10 13 47.8 +2.0
comp=Z,20nm,1.2s,baz=337,slow=1.9,SNR=26
LPAZ PKPab **PKPab** 10 14 37.4 +1.5
comp=Z,10nm,0.9s,baz=207,slow=2.4,SNR=9.3
LPAZ La Paz 162.82 129 *e*P **PKPdf** 10 13 44.9 -1.0
IPMB Ipameri, GO 166.28 206 *e*P **PKPdf** 10 13 48.4 +0.3
JANB Januaria 166.34 226 *e*P **PKPdf** 10 13 48.6 +0.4
BDFB Brasilia 168.21 212 PKP **PKPdf** 10 13 49.5 -0.1
comp=Z,13nm,1.0s,baz=124,slow=1.1,SNR=13
BDFB PKPab **PKPab** 10 14 58.9 0.0
comp=Z,24nm,1.1s,baz=139,slow=3.3,SNR=9.8
BDFB Brasilia 168.21 212 **PKPab** 10 14 58.8 -0.1
PTLB Pontes e Lacer 169.13 155 *e*P **PKPdf** 10 13 49.6 -0.5
SMTB Santa Maria do 172.52 244 *e*P **PKPdf** 10 13 51.2 -0.8
ITTB Itaituba 178.19 48 *e*P **PKPdf** 10 13 53.6 +0.1

*IDC **20** 10:25:35.0±8.8, 27.64S×177.88W, h156km±79km, mb3.4/3, mbtmp3.9/4, Error ellipse: s-maj=56.8km s-min=46.5km az=7.0*
ISC 20 10:25:38.5±2.0, 27.9S±0.1×177.8W±0.4, h200km, n6, σ1s30/8, mb3.4/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	ISC
URZ	**Urewera**	**11.22**	**201**	P		**Pn**	**10 28 13.9 +0.5**
	4.0nm,0.8s,baz=298,slow=17,SNR=1.4						
URZ				S		**Sn**	**10 30 17.5 -0.9**
	3.1nm,0.3s,baz=104,slow=22,SNR=9.1						
ASAR	**Alice Springs**	**43.50**	**264**	P		**P**	**10 33 22.9 +0.4**
	0.7nm,0.9s,baz=89,slow=7.1,SNR=6.3						
ASAR				PcP		**PcP**	**10 35 08.7 +1.9**
	1.1nm,1.2s,baz=114,slow=4.8,SNR=4.3						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**44.26**	**269**	P		**P**	**10 33 27.8 -0.8**
	1.1nm,0.8s,baz=107,slow=8.2,SNR=6.8						
	1.1nm,0.8s						
MJAR	**Matsushiro Arr**	**76.28**	**325**	P		**P**	**10 37 05.3 +0.2**
	2.0nm,0.7s,baz=157,slow=5.8,SNR=5.5						
	2.0nm,0.7s						
HFS	**Hagfors**	**146.80**	**350**	PKPbc		**PKPab**	**10 44 56.4 -1.7**
	0.6nm,0.7s,baz=64,slow=6.8,SNR=5.6						
BRTR	**Keskin Array B**	**151.48**	**303**	PKPbc		**PKiKP**	**10 45 09.2 -0.2**
	0.6nm,0.6s,baz=132,slow=2.1,SNR=4.2						

*IDC **20** 10:30:03.5±1.0, 26.89N×143.79E, h0km, mb3.7/8, mbtmp3.8/10, ML3.5/2, Error ellipse: s-maj=25.0km s-min=19.9km az=66.0*
*NEIC **20** 10:30:06.4±1.1, 27.05N±0.06×143.53E±0.08, h10km±1km, mb4.2/11, Error ellipse: s-maj=13.5km s-min=8.6km az=130.0*
*JMA **20** 10:30:07.1±0.2, 27°N±1'×14°4E±', h37km, NEAR CHICHIJIMA ISLAND*
ISC 20 10:30:09.7±0.9, 27.13N±0.08×143.64E±0.08, h35km, n35, σ1s53/41, mb4.1/15, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	ISC
CBIJ	**Chichi jima**	**1.30**	**269**	*e*P		**Pn**	**10 30 31.5 +0.1**
CBIJ				*e*S		**Sn**	**10 30 48.7 +1.1**
JCJ	**Chichijima**	**1.30**	**269**	Pn		**Pn**	**10 30 30.6 -0.8**
	17nm,0.3s,baz=263,slow=24,SNR=16						
JCJ				Sn		**Sn**	**10 30 48.6 +1.1**
	107nm,0.3s,baz=287,slow=20,SNR=9.4						
JCJ	**Chichijima**	**1.30**	**269**			**Pn**	**10 30 29.2 -2.2**
JCJ				Sn		**Sn**	**10 30 43.2 -4.4**
JHH2	**Haha-jima-NKT2**	**1.40**	**250**	*e*P		**Pn**	**10 30 32.5 -0.2**
JHH2				*e*S		**Sn**	**10 30 51.7 +1.7**
JHJ2	**Mitsune**	**6.82**	**332**	Pn		**Pn**	**10 31 47.0 -0.2**
JHJ	**Hachijo jima 2**	**6.84**	**332**	Pn		**Pn**	**10 31 46.0 -1.6**
	8.1nm,0.3s,baz=262,slow=23,SNR=9.5						
JHJ				Sn		**Sn**	**10 33 00.7 -3.5**
	3.1nm,0.3s,baz=280,slow=18,SNR=2.0						
JYN	**Shimob**	**9.41**	**334**	*e*P		**Pn**	**10 32 24.3 +1.4**
JRY	**Ryogami san**	**9.74**	**337**	*e*P		**Pn**	**10 32 27.7 +0.4**
JAG	**Ashikaga**	**9.93**	**340**	*e*P		**Pn**	**10 32 29.1 -0.7**
JGF	**Kuroka**	**10.01**	**329**	Pn		**Pn**	**10 32 30.1 -0.9**
MJAR	**Matsushiro Arr**	**10.46**	**335**	Pn		**Pn**	**10 32 37.0 -0.1**
	0.6nm,0.3s,baz=164,slow=12,SNR=33						
	3.0nm,0.3s						
MJAR	**Matsushiro Arr**	**10.46**	**335**			**Pn**	**10 32 36.6 -0.6**
MAJO	**Matsushiro**	**10.46**	**335**	Pn		**Pn**	**10 32 36.4 -0.8**

MJB9	**Matsu-Tunnel**	**10.46**	**335**	Pn	**Pn**	**10 32 36.8**	**-0.4**
KSRS	**Korea Array**	**16.79**	**312**	P	**P**	**10 34 03.8**	**-0.2**
	0.1nm,0.3s,baz=121,slow=11,SNR=12						
	2.2nm,0.7s						
SONM	**Songino Array**	**35.59**	**316**	P	**P**	**10 37 06.1**	**+2.1**
	0.5nm,0.5s,baz=119,slow=9.0,SNR=2.4						
	0.5nm,0.5s						
WR8	**Warramunga Arr**	**47.64**	**192**	P	**P**	**10 38 40.4**	**-2.2**
WR8				IAmb	IAmb	10 39 11.3	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**47.66**	**192**	P	**P**	**10 38 40.0**	**-2.7**
	comp=Z,1.9nm,1.0s,baz=13,slow=8.5,SNR=5.6						
	comp=Z,1.9nm,1.0s						
F15K	**North Star Dit**	**50.10**	**25**	P	**P**	**10 39 02.0**	**+1.0**
F15K				IAmb	IAmb	10 39 07.5	
	comp=Z,2.2nm,1.1s						
C16K	**Lisburne Hills**	**50.97**	**22**	P	**P**	**10 39 07.8**	**+0.3**
C16K				IAmb	IAmb	10 39 21.0	
	comp=Z,2.5nm,1.1s						
ASAR	**Alice Springs**	**51.37**	**191**	P	**P**	**10 39 08.1**	**-2.9**
	comp=Z,0.2nm,0.7s,baz=6.0,slow=6.4,SNR=3.6						
	comp=Z,0.2nm,0.7s						
MKAR	**Makanchi Array**	**51.45**	**310**	P	**P**	**10 39 13.0**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=87,slow=9.7,SNR=14						
MKAR				PcP	**PcP**	**10 40 26.0**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=104,slow=3.7,SNR=1.2						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**51.45**	**310**	P	**P**	**10 39 12.6**	**+1.0**
H17K	**Granite Mounta**	**51.67**	**27**	P	**P**	**10 39 13.6**	**+0.7**
K17K	**Iditarod**	**51.69**	**30**	P	**P**	**10 39 13.9**	**+0.8**
E18K	**Tukpahlearik C**	**52.26**	**24**	P	**P**	**10 39 17.4**	**+0.2**
E18K				IAmb	IAmb	10 39 24.2	
	comp=Z,4.0nm,1.2s						
H18K	**Honhosa River**	**52.36**	**27**	P	**P**	**10 39 17.5**	**-0.5**
H18K				IAmb	IAmb	10 39 35.9	
	comp=Z,5.0nm,1.4s						
O18K	**Koktuh Hills**	**52.51**	**34**	P	**P**	**10 39 20.6**	**+1.4**
C18K	**Utukok River**	**52.52**	**22**	P	**P**	**10 39 20.1**	**+0.9**
C18K				IAmb	IAmb	10 39 45.0	
	comp=Z,4.6nm,1.4s						
KURK	**Kurchatov**	**53.89**	**314**	P	**P**	**10 39 29.8**	**+0.4**
KURK				IAmb	IAmb	10 39 32.1	
	comp=Z,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**53.95**	**314**	P	**P**	**10 39 31.4**	**+1.6**
	comp=Z,1.1nm,0.5s,baz=90,slow=8.0,SNR=20						
	comp=Z,1.1nm,0.5s						
ILAR	**Eielson Array**	**57.06**	**29**	P	**P**	**10 39 51.0**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=280,slow=5.7,SNR=4.8						
	comp=Z,0.5nm,0.8s						
BVAR	**Borovoye Array**	**58.90**	**318**	P	**P**	**10 40 04.8**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=88,slow=5.8,SNR=7.2						
	comp=Z,1.1nm,0.4s						
KKAR	**Karatay Array**	**60.12**	**306**	P	**P**	**10 40 15.1**	**+1.4**
NVAR	**Mina Array Bea**	**79.47**	**52**	P	**P**	**10 42 13.6**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=266,slow=4.0,SNR=3.9						
	comp=Z,0.3nm,0.5s						

*UPP **20** 10:43:16.4±2.9,64.°60N×31.°01E,h2km,ML2.0,Presumed earthquake*
*HEL **20** 10:43:17.9±0.2,64.°79N×30.°76E,h0km,ML2.1,Suspected explosion*
*KOLA **20** 10:43:17.6,64.°68N×30.°71E,h0km,ML2.5,Error ellipse: s-maj=15.3km s-min=12.0km az=170.0,Kostomuksha, Karelia*
*IDC **20** 10:43:19.6±2.6,64.°76N×30.°61E,h0km,mbtmp3.1/3, ML2.1/3,Error ellipse: s-maj=41.4km s-min=9.6km az=102.0*

ISC 20 10:43:17.8±0.9,64.°84N±0.°02×30.°69E±0.°04,h0km,n47, σ1§70/67,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.70**	**208**	PG	**Pg**	**10 43 30.4**	**-0.8**
RMF				SG	**Sg**	**10 43 39.0**	**-1.3**
RMF				*smax*	*smax*	10 43 39.2	
	comp=Z,33nm,0.2s						
KU1	**Kurvinen**	**0.87**	**327**	PG	**Pg**	**10 43 34.6**	**+0.1**
KU6	**Riekki**	**1.24**	**345**	PB	**Pg**	**10 43 41.3**	**-0.1**
	baz=164						
KU6				*smax*	*smax*	10 43 57.0	
	comp=Z,10nm,0.2s						
KU6				SB	**Sg**	**10 43 58.7**	**+1.2**
MSF	**Maaselka**	**1.28**	**328**	PG	**Pg**	**10 43 42.1**	**-0.1**
	baz=147						
MSF				SN	**Sb**	**10 44 01.6**	**+1.9**
KU2	**Taivalkoski**	**1.35**	**311**	PG	**Pn**	**10 43 43.4**	**-0.5**
OLKF	**Oulanka, Finla**	**1.58**	**341**	PG	**Pn**	**10 43 47.5**	**+0.5**
OLKF				*smax*	*smax*	10 44 06.9	
	comp=Z,9.2nm,0.2s						
NIF	**Nilsia**	**1.93**	**222**	PG	**Pn**	**10 43 52.4**	**+0.7**
	baz=44						
NIF				*smax*	*smax*	10 44 14.7	
	comp=Z,12nm,0.2s						
NIF				SG	**Sn**	**10 44 17.2**	**+0.6**
JOF	**Joensuu**	**1.95**	**172**	*e*P	**Pn**	**10 43 51.3**	**-0.7**
JOF	**Joensuu**	**1.95**	**172**	PG	**Pn**	**10 43 51.4**	**-0.7**
RANF	**Ranua**	**2.01**	**308**	PG	**Pn**	**10 43 54.7**	**+1.8**
	baz=128						
RANF				SG	**Sn**	**10 44 20.7**	**+1.9**
OUL	**Oulu**	**2.05**	**279**	PG	**Pn**	**10 43 55.1**	**+1.6**
	baz=98						
OUL				SB	**Sn**	**10 44 21.3**	**+1.5**
KVDA	**Kovda**	**2.07**	**25**	P	**Pn**	**10 43 54.5**	**+0.8**
KVDA				S	**Sb**	**10 44 23.5**	**+1.2**
OUF	**Merijarvi**	**2.61**	**262**	PB	**Pn**	**10 44 02.7**	**+1.6**
OUF				*smax*	*smax*	10 44 35.6	
	comp=Z,20nm,0.2s						
OUF				SB	**Sb**	**10 44 37.6**	**-0.4**
RNF	**Rovaniemi**	**2.63**	**315**	PN	**Pn**	**10 44 02.5**	**+1.1**
	baz=128						
RNF				SG	**Sb**	**10 44 39.6**	**+1.2**
OBF0	**Syolatti, Pyha**	**2.80**	**266**	PB	**Pn**	**10 44 05.3**	**+1.6**
OBF0				*smax*	*smax*	10 44 41.1	
	comp=Z,9.2nm,0.2s						
OBF0				SG	**Sb**	**10 44 44.1**	**+0.9**
SUF	**Sumiainen**	**2.93**	**226**	*e*P	**Pn**	**10 44 07.7**	**+2.2**
SUF	**Sumiainen**	**2.93**	**226**	PB	**Pn**	**10 44 07.9**	**+2.4**
SUF				*smax*	*smax*	10 44 43.7	
	comp=Z,3.1nm,0.2s						
APA0	**Apatity Array**	**2.93**	**18**	P	**Pn**	**10 44 07.0**	**+1.4**
APA0				S	**Sn**	**10 44 42.9**	**+1.5**
TOF	**Tornio**	**2.94**	**298**	PB	**Pb**	**10 44 09.6**	**-1.3**
TOF				*smax*	*smax*	10 44 45.5	
	comp=Z,3.5nm,0.2s						
TOF				SG	**Sb**	**10 44 49.4**	**+2.2**
VRF	**Varrio**	**2.96**	**352**	PB	**Pn**	**10 44 07.4**	**+1.5**
VRF				*smax*	*smax*	10 44 46.5	
	comp=Z,4.0nm,0.2s						
OBF8	**Ulkokalla**	**3.17**	**264**	PN	**Pn**	**10 44 10.4**	**+1.6**
KALU	**Kalix**	**3.24**	**292**	P	**Pn**	**10 44 11.1**	**+1.4**
KALU	**Kalix**	**3.24**	**292**	PN	**Pn**	**10 44 11.7**	**+1.9**
KALU				SG	**Sg**	**10 45 01.3**	**-0.4**
RUF	**Ruokolahti**	**3.52**	**194**	PN	**Pn**	**10 44 14.4**	**+0.8**
KLF	**Kolari**	**3.65**	**314**	PN	**Pn**	**10 44 16.7**	**+1.3**
KLF				SB	**Sb**	**10 45 06.7**	**-1.1**
KEF	**Keuruu**	**3.74**	**227**	*e*P	**Pn**	**10 44 18.3**	**+1.7**
KEF	**Keuruu**	**3.74**	**227**	PN	**Pn**	**10 44 18.5**	**+1.9**
	baz=45						
RAJF	**Raja-Jooseppi**	**3.77**	**347**	PN	**Pn**	**10 44 18.5**	**+1.4**
PAJU	**Pajala**	**3.80**	**309**	P	**Pn**	**10 44 19.0**	**+1.5**
PAJU				S	**Sn**	**10 45 04.6**	**+1.8**
SJUU	**Sjulsmark**	**3.89**	**284**	P	**Pn**	**10 44 20.1**	**+1.4**
ERTU	**Ertsjaerv**	**3.91**	**300**	P	**Pn**	**10 44 20.1**	**+1.1**
ERTU	**Ertsjaerv**	**3.91**	**300**	PN	**Pn**	**10 44 21.2**	**+2.1**
ERTU				SG	**Sg**	**10 45 21.8**	**-1.5**
VAF	**Ylistaro**	**3.97**	**247**	*e*P	**Pn**	**10 44 21.5**	**+1.7**
VAF	**Ylistaro**	**3.97**	**247**	PB	**Pb**	**10 44 25.4**	**-3.1**
FIA0	**FINESS Array S**	**4.00**	**214**	PN	**Pn**	**10 44 20.8**	**+0.6**
FIA0				SB	**Sn**	**10 45 13.1**	**+5.5**
FINES	**FINESS Array B**	**4.00**	**214**	Pn	**Pn**	**10 44 20.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=34,slow=14,SNR=6.6						
FINES				Lg	Lg	10 45 21.1	
	comp=Z,1.8nm,0.3s,baz=32,slow=29,SNR=11						
	comp=Z,0.4nm,0.3s						
HARU	**Harads**	**4.26**	**293**	P	**Pn**	**10 44 24.8**	**+1.1**
ODEU	**Stanfors**	**4.32**	**269**	P	**Pn**	**10 44 24.3**	**-0.3**
UMAU	**Umeaa**	**4.46**	**262**	P	**Pn**	**10 44 25.4**	**-1.0**
UMAU	**Umeaa**	**4.46**	**262**	SG	**Sg**	**10 45 38.0**	**-2.7**
HEF	**Hetta**	**4.55**	**325**	PN	**Pn**	**10 44 29.9**	**+2.1**
HEF				SG	**Sg**	**10 45 40.4**	**-3.2**
VJF	**Virojoki**	**4.55**	**200**	SG	**Sb**	**10 45 36.8**	**+3.2**
ARCES	**ARCESS Array B**	**5.13**	**339**	Pn	**Pn**	**10 44 36.5**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=156,slow=14,SNR=31						
ARCES				Sn	**Sn**	**10 45 32.5**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=154,slow=25,SNR=1.9						
ARCES				Lg	Lg	10 45 57.0	
	comp=Z,0.6nm,0.3s,baz=150,slow=35,SNR=8.0						
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**5.13**	**339**	P	**Pn**	**10 44 36.2**	**+0.5**
ARCES				S	**Sn**	**10 45 35.3**	**-0.2**
VADS	**Vadso**	**5.33**	**355**	P	**Pn**	**10 44 40.1**	**+1.7**
VADS				S	**Sn**	**10 45 40.4**	**0.0**
I43RU	**DUBNA INFRASON**	**8.74**	**156**	I	I	11 35 00.0	
	baz=347,slow=327,SNR=2.1						
HFS	**Hagfors**	**9.15**	**247**	Pn	**Pn**	**10 45 29.3**	**-1.6**
	baz=46,slow=12,SNR=1.6						
HFS				Lg	Lg	10 48 01.7	
	comp=Z,0.3nm,0.3s,baz=54,slow=27,SNR=5.0						
	comp=Z,2.7nm,1.0s						

*IDC **20** 10:50:12.2±1.9,21.°67N×143.°11E,h299km±18km, mb3.6/24,mbtmp4.3/28,Error ellipse: s-maj=14.6km s-min=10.2km az=80.0*
*NEIC **20** 10:50:13.9±1.3,21.°69N±0.°05×143.°1E±0.°1,h308km±7km, mb4.1/48,Error ellipse: s-maj=17.9km s-min=6.9km az=85.0*

ISC 20 10:50:13.5±0.5,21.°72N±0.°06×143.°08E±0.°10,h311km,n85, σ1§03/81,mb4.1/44,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.41**	**352**	P	**Pn**	**10 51 34.6**	**-1.5**
	107nm,0.4s,baz=290,slow=22,SNR=35						
JCJ				S	**S**	**10 52 39.6**	**-3.1**
	74nm,0.4s,baz=287,slow=23,SNR=8.0						
JCJ	**Chichijima**	**5.41**	**352**		**Pn**	**10 51 35.5**	**-0.6**
JHJ	**Hachijo jima 2**	**11.72**	**346**	P	**Pn**	**10 52 51.4**	**-1.1**
	98nm,0.9s,baz=60,slow=22,SNR=6.4						
JHJ				S	**S**	**10 54 59.6**	**-3.5**
	22nm,0.4s,baz=9.7,slow=18,SNR=1.0						
JMN	**Monobe**	**14.46**	**328**	Pn	**Pn**	**10 53 26.9**	**+1.7**
JGF	**Kuroka**	**14.71**	**341**	P	**P**	**10 53 27.1**	**+0.3**
JSU	**Suzuyama**	**14.90**	**313**	P	**P**	**10 53 30.0**	**+1.0**
MJAR	**Matsushiro Arr**	**15.36**	**345**	P	**P**	**10 53 33.3**	**-0.6**
	0.6nm,0.3s,baz=150,slow=5.4,SNR=7.5						
MJAR				S	**S**	**10 56 18.7**	**-1.5**
	0.8nm,0.6s,baz=174,slow=26,SNR=2.0						
MJAR	**Matsushiro Arr**	**15.36**	**345**	P	**P**	**10 53 33.9**	**-0.1**
MAJO	**Matsushiro**	**15.36**	**345**	P	**P**	**10 53 34.3**	**+0.3**
MAJO				IAmb	IAmb	10 53 45.0	
	comp=Z,12nm,1.1s						
MJB9	**Matsu-Tunnel**	**15.37**	**345**	P	**P**	**10 53 35.4**	**+1.4**
MJB9				IAmb	IAmb	10 53 46.0	
	comp=Z,11nm,1.1s						
JNU	**Nakatsue**	**15.68**	**319**	P	**Pn**	**10 53 39.3**	**-0.2**
	comp=Z,11nm,0.7s,baz=44,slow=5.7,SNR=6.2						
YHNB	**Yeheng**	**20.16**	**283**	P	**P**	**10 54 25.9**	**+0.4**
KSRS	**Korea Array**	**20.43**	**323**	P	**P**	**10 54 28.1**	**+0.1**
	comp=Z,5.1nm,0.6s,baz=147,slow=8.9,SNR=46						
	comp=Z,5.7nm,0.6s						
KSAR	**Wonju Array Be**	**20.45**	**323**	P	**P**	**10 54 29.2**	**+1.0**
KS19	**Wonju Array Si**	**20.50**	**323**	P	**P**	**10 54 29.2**	**+0.5**
KS19				IAmb	IAmb	10 54 29.7	
	comp=Z,6.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**24.22**	**340**	P	**P**	**10 55 03.0**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=171,slow=13,SNR=5.7						
	comp=Z,1.8nm,0.7s						
HEH	**HeiHe**	**31.03**	**340**	*e*P	**P**	**10 56 03.4**	**+0.5**
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ENH	**Enshi**	**31.28**	**293**	P	**P**	**10 56 05.2**	**-0.2**
ENH				IAmb	IAmb	10 56 11.3	
	comp=Z,15nm,1.4s						
HILR	**Hailar Array B**	**33.35**	**332**	P	**P**	**10 56 23.4**	**+0.3**
	comp=Z,6.6nm,0.6s,baz=128,slow=9.6,SNR=6.2						
	comp=Z,6.6nm,0.6s						
LZDM	**Lanzhou Array**	**37.04**	**301**	P	**P**	**10 56 55.5**	**+0.6**
	comp=Z,2.6nm,0.4s,baz=149,slow=6.9,SNR=9.7						
	comp=Z,2.6nm,0.4s						
SONM	**Songino Array**	**39.26**	**321**	P	**P**	**10 57 13.5**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=130,slow=7.9,SNR=6.7						
	comp=Z,0.9nm,0.4s						
SONM	**Songino Array**	**39.26**	**321**	P	**P**	**10 57 13.2**	**+0.4**
KNRA	**Kununurra**	**39.73**	**202**	P	**P**	**10 57 15.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**41.47**	**274**	P	**P**	**10 57 31.1**	**0.0**
	comp=Z,0.7nm,0.3s,baz=76,slow=6.6,SNR=6.6						
	comp=Z,0.7nm,0.3s						
CTAO	**Charters Tower**	**41.67**	**176**	P	**P**	**10 57 32.1**	**-0.4**
WB0	**Warramunga Arr**	**42.10**	**192**	P	**P**	**10 57 35.0**	**-1.0**
WB0				IAmb	IAmb	10 57 41.6	
	comp=Z,17nm,1.4s						
WR8	**Warramunga Arr**	**42.26**	**192**	P	**P**	**10 57 36.4**	**-0.9**
WR8				IAmb	IAmb	10 57 56.2	
	comp=Z,23nm,1.5s						
WRAB	**Tennant Creek**	**42.27**	**192**	P	**P**	**10 57 36.5**	**-0.9**
WRAB				IAmb	IAmb	10 57 54.2	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**42.28**	**192**	P	**P**	**10 57 36.7**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=17,slow=9.7,SNR=39						
	comp=Z,3.0nm,0.7s						
WRA	**Warramunga Arr**	**42.28**	**192**	P	**P**	**10 57 35.9**	**-1.6**
AS31	**Alice Springs**	**45.99**	**192**	P	**P**	**10 58 05.1**	**-1.6**
ASAR	**Alice Springs**	**45.99**	**192**	P	**P**	**10 58 05.1**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=12,slow=9.0,SNR=8.3						
	comp=Z,0.5nm,0.6s						
BILL	**Bilibino**	**48.52**	**11**		**P**	**10 58 26.4**	**+1.0**
INKA	**Innaminka**	**49.23**	**183**	P	**P**	**10 58 30.0**	**-1.2**
EVN	**Evenset**	**51.06**	**289**	P	**P**	**10 58 46.5**	**+0.6**
STKA	**Stephens Creek**	**53.31**	**182**	P	**P**	**10 59 00.6**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=339,slow=9.3,SNR=4.1						
	comp=Z,1.6nm,0.4s						
STKA	**Stephens Creek**	**53.31**	**182**	IAmb	IAmb	10 59 07.6	
	comp=Z,37nm,1.4s						
ZAA0	**Zalesovo Array**	**54.13**	**322**		**P**	**10 59 07.5**	**+0.6**
ZALV	**Zalesovo Beam**	**54.13**	**322**	P	**P**	**10 59 07.3**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=103,slow=7.4,SNR=9.7						
ZALV				PcP	**PcP**	**11 00 06.7**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=121,slow=4.2,SNR=6.9						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**54.13**	**322**		**P**	**10 59 06.6**	**-0.4**
ANM	**Nome**	**54.44**	**25**	P	**P**	**10 59 10.1**	**+1.1**
MKAR	**Makanchi Array**	**54.61**	**313**	P	**P**	**10 59 11.2**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=91,slow=9.3,SNR=26						
MKAR				PcP	**PcP**	**11 00 09.3**	**0.0**
	comp=Z,0.8nm,0.6s,baz=80,slow=3.7,SNR=7.5						
	comp=Z,1.7nm,0.6s						
MAKZ	**Makanchi**	**54.82**	**313**	P	**P**	**10 59 12.8**	**+0.7**
O15K	**Ungalikthiuk R**	**54.87**	**32**	P	**P**	**10 59 13.1**	**+1.0**
F15K	**North Star Dit**	**55.22**	**23**	P	**P**	**10 59 15.8**	**+1.3**
K17K	**Iditarod**	**56.66**	**28**	P	**P**	**10 59 25.7**	**+1.0**
H17K	**Granite Mounta**	**56.73**	**25**	P	**P**	**10 59 26.7**	**+1.5**
H17K				IAmb	IAmb	10 59 27.4	
	comp=Z,4.2nm,1.1s						
KURK	**Kurchatov**	**57.39**	**317**		**P**	**10 59 30.2**	**+0.2**
KURK				IAmb	IAmb	10 59 30.8	
	comp=Z,3.4nm,0.8s						
KURBB	**Kurchatov Arra**	**57.44**	**317**	P	**P**	**10 59 30.7**	**+0.3**
	comp=Z,4.7nm,0.5s,baz=95,slow=7.6,SNR=36						
KURBB				PcP	**PcP**	**11 00 19.4**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=96,slow=5.7,SNR=1.7						
	comp=Z,4.7nm,0.5s						
C19K	**Lookout Ridge**	**58.43**	**21**		**P**	**10 59 38.6**	**+1.6**
C19K				IAmb	IAmb	10 59 39.4	
	comp=Z,3.7nm,0.6s						
D22K	**Ayikyak River**	**60.70**	**22**	IAmb	IAmb	10 59 54.7	
	comp=Z,6.7nm,0.5s						
E23K	**Chandalar**	**61.59**	**23**	IAmb	IAmb	11 00 01.0	
	comp=Z,7.0nm,1.3s						
ILAR	**Eielson Array**	**62.06**	**27**	P	**P**	**11 00 00.9**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=260,slow=5.4,SNR=29						
	comp=Z,1.4nm,0.6s						
D24K	**Happy Valley**	**62.11**	**22**	P	**P**	**11 00 03.2**	**+1.6**
D24K				IAmb	IAmb	11 00 04.5	
	comp=Z,3.8nm,0.8s						
BVAR	**Borovoye Array**	**62.59**	**319**	P	**P**	**11 00 05.7**	**+0.6**
	comp=Z,8.8nm,0.4s,baz=96,slow=7.9,SNR=62						
	comp=Z,8.8nm,0.4s						
BORK	**Borovoye**	**62.63**	**320**		**P**	**11 00 06.1**	**+0.8**
BMRM	**Bremner River**	**62.68**	**32**	P	**P**	**11 00 06.7**	**+1.1**
KK31	**Karatay Array**	**62.96**	**308**		**P**	**11 00 08.4**	**+0.6**
KK31				IAmb	IAmb	11 00 09.2	
	comp=Z,3.6nm,0.8s						
KKAR	**Karatay Array**	**62.96**	**308**		**P**	**11 00 08.2**	**+0.4**
D25K	**Kavik River**	**63.00**	**22**	IAmb	IAmb	11 00 09.8	
	comp=Z,5.0nm,0.7s						
I28M	**Miner Creek**	**65.05**	**27**	P	**P**	**11 00 22.1**	**+1.2**
ABKAR	**Akbulak array**	**69.46**	**316**		**P**	**11 00 48.9**	**+0.3**
A36M	**Sachs Harbour**	**70.05**	**19**	IAmb	IAmb	11 00 53.1	
	comp=Z,5.1nm,0.9s						
SPITS	**Spitsbergen Ar**	**75.79**	**350**	P	**P**	**11 01 25.3**	**+0.1**
	comp=Z,4.5nm,0.7s,baz=55,slow=6.0,SNR=4.0						
	comp=Z,4.5nm,0.7s						
YKAW3	**Yellowknife Wh**	**76.45**	**28**	IAmb	IAmb	11 01 30.2	
	comp=Z,2.7nm,0.7s						
YKA	**Yellowknife Ar**	**76.48**	**28**	P	**P**	**11 01 29.6**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=297,slow=6.3,SNR=28						
	comp=Z,1.4nm,0.6s						
YKA	**Yellowknife Ar**	**76.48**	**28**	P	**P**	**11 01 29.3**	**+0.1**
YKAW1	**Yellowknife Wh**	**76.54**	**28**	IAmb	IAmb	11 01 31.1	
	comp=Z,4.5nm,0.9s						
ARCES	**ARCESS Array B**	**78.87**	**341**	P	**P**	**11 01 42.7**	**+0.4**
	comp=Z,4.2nm,0.5s,baz=70,slow=8.5,SNR=23						
	comp=Z,4.2nm,0.5s						
KBZ	**Khabaz**	**82.28**	**314**	P	**P**	**11 02 01.3**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=113,slow=4.9,SNR=10						
	comp=Z,3.3nm,0.8s						
FINES	**FINESS Array B**	**83.11**	**334**	P	**P**	**11 02 03.6**	**-1.0**
	comp=Z,3.9nm,0.5s,baz=64,slow=4.6,SNR=47						
	comp=Z,3.9nm,0.5s						
NVAR	**Mina Array Bea**	**83.21**	**51**	P	**P**	**11 02 06.3**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=270,slow=5.3,SNR=12						
	comp=Z,1.4nm,0.7s						
ILON	**Igloolik, Nuna**	**83.65**	**15**	P	**P**	**11 02 07.2**	**0.0**
ILON				IAmb	IAmb	11 02 45.9	
	comp=Z,6.8nm,1.5s						
BCYI	**Bear Canyon**	**84.25**	**45**	P	**P**	**11 02 12.1**	**+1.0**
BCYI				IAmb	IAmb	11 02 15.5	
	comp=Z,1.8nm,1.2s						
ELK	**Elko**	**84.48**	**48**	P	**P**	**11 02 13.3**	**+1.0**
ELK				IAmb	IAmb	11 02 14.5	
	comp=Z,2.4nm,0.9s						
YHL	**Hebgen Lake**	**85.46**	**43**	IAmb	IAmb	11 02 19.2	
	comp=Z,4.4nm,0.8s						
AKASG	**Malin Array Be**	**87.43**	**324**	P	**P**	**11 02 24.5**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=57,slow=4.6,SNR=4.3						
	comp=Z,0.4nm,0.3s						
AKASG	**Malin Array Be**	**87.43**	**324**	IAmb	IAmb	11 02 54.1	
	comp=Z,5.2nm,1.5s						
PDAR	**Pinedale Array**	**87.44**	**45**	P	**P**	**11 02 27.2**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=188,slow=3.0,SNR=3.7						
	comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**87.44**	**45**	P	**P**	**11 02 26.7**	**+0.1**
HFS	**Hagfors**	**88.67**	**337**	P	**P**	**11 02 30.3**	**-1.4**
	comp=Z,1.9nm,0.5s,baz=87,slow=3.3,SNR=17						
	comp=Z,1.9nm,0.5s						
HAYD	**Hayden**	**90.02**	**46**	IAmb	IAmb	11 02 41.0	
	comp=Z,3.5nm,0.7s						
BRTR	**Keskin Array B**	**90.25**	**313**	P	**P**	**11 02 38.4**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=35,slow=4.5,SNR=3.8						
	comp=Z,0.6nm,0.7s						
PLCA	**Paso Flores**	**145.85**	**131**	PKPbc	**PKPbc**	**11 09 17.2**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=220,slow=5.7,SNR=6.1						
LPAZ	**La Paz**	**150.04**	**85**	PKPbc	**PKiKP**	**11 09 29.9**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=30,slow=1.0,SNR=6.4						

WEL 20 10:56:42.9±1.3,34.°5S±9.°×17.°9W±1.°7,h33km,ML3.7/12, MLv3.8/6,Error ellipse: s-maj=23.4km s-min=9.5km az=108.8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKGZ	**Pakihiroa**	**4.47**	**208**	P	Pn	10 57 48.3	0.0
PKGZ				S	Sn	10 58 39.9	+0.6
HAZ	**Te Kaha**	**4.50**	**211**	P	Pn	10 57 50.4	+1.7
HAZ				S	Sn	10 58 40.1	+0.2
PUZ	**Puketiti**	**4.59**	**205**	P	Pn	10 57 48.6	-1.4
PUZ				S	Sn	10 58 43.2	+1.0
RUGZ	**Raukumara Rang**	**4.72**	**210**	P	Pn	10 57 53.1	+1.2
RUGZ				S	Sn	10 58 46.8	+1.2
TWGZ	**Tauwhareparae**	**4.78**	**207**	P	Pn	10 57 54.0	-1.6
TWGZ				S	Sn	10 58 48.5	+1.5
CNGZ	**Carnagh Statio**	**4.98**	**203**	P	Pn	10 57 55.4	+0.1
CNGZ				S	Sn	10 58 52.8	+1

JIJ	**Ishigaki jima**	**0.96**	**125**	P	Pn	11 49 46.4	0.0
JIJ				S	Sn	11 50 02.1	-0.4
HATJ	**Hateruma jima**	**0.98**	**151**	*eS*	Sn	11 50 03.1	+0.1
JISG	**Ishigakijimahi**	**0.99**	**109**	P	Pn	11 49 46.9	+0.2
JISG				S	Sn	11 50 03.6	+0.5
JTJ	**Tarama**	**1.32**	**102**	*eP*	Pn	11 49 50.7	+0.5
JTJ				*eS*	Sn	11 50 10.1	+0.8

*NEIC **20** 11:52:11.1±1.0, 19°.1S±0°.1×177°.6W±0°.2, h589km±8km, mb4.2/21, Error ellipse: s-maj=21.6km s-min=15.7km az=92.0*
*IDC **20** 11:52:12.8±2.7, 19°.32S×177°.65W, h610km±34km, mb3.2/9, mbtmp4.1/10, Error ellipse: s-maj=32.6km s-min=15.4km az=153.0*

ISC 20 11:52:09.5±0.7, 19°.2S±0°.1×177°.6W±0°.1, h570km, n40, σ1s07/41, mb4.0/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
MSVF	**Nonsavu**	**4.38**	**289**	P	**P**		**11 53 38.6**	**+2.8**
URZ	**Urewera**	**19.55**	**193**	P	**P**		**11 55 58.8**	**-1.5**
	4.3nm,0.8s,baz=144,slow=19,SNR=1.8							
WHZ	**Wether Hill Ro**	**29.19**	**201**	P	**P**		**11 57 26.4**	**+0.8**
CTA	**Charters Tower**	**34.02**	**262**	P	**P**		**11 58 07.7**	**+0.5**
	1.6nm,0.6s,baz=80,slow=8.9,SNR=3.7 1.6nm,0.6s							
CTAO	**Charters Tower**	**34.02**	**262**	P	**P**		**11 58 07.9**	**+0.7**
CTAO				IAmb	IAmb		11 58 33.6	
	comp=Z,10.0nm,1.5s							
STKA	**Stephens Creek**	**38.72**	**243**	P	**P**		**11 58 46.5**	**+1.0**
	comp=Z,2.5nm,0.5s,baz=95,slow=11,SNR=7.9 comp=Z,2.5nm,0.5s							
STKA	**Stephens Creek**	**38.72**	**243**	P	**P**		**11 58 46.4**	**+0.8**
INKA	**Innaminka**	**39.00**	**249**	P	**P**		**11 58 49.0**	**+1.1**
BBOO	**Buckleboo**	**43.48**	**242**	P	**P**		**11 59 23.7**	**+0.4**
BBOO				IAmb	IAmb		11 59 24.2	
	comp=Z,12nm,0.8s							
WB0	**Warramunga Arr**	**45.15**	**261**	P	**P**		**11 59 36.0**	**-0.3**
WB0				IAmb	IAmb		12 00 17.4	
	comp=Z,13nm,1.4s							
WRAB	**Tennant Creek**	**45.17**	**261**	P	**P**		**11 59 36.3**	**-0.2**
WRAB				IAmb	IAmb		12 00 03.6	
	comp=Z,6.9nm,1.3s							
WRA	**Warramunga Arr**	**45.18**	**261**	P	**P**		**11 59 36.3**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=98,slow=7.4,SNR=83							
WRA				PcP	**PcP**		**12 01 04.6**	**0.0**
	comp=Z,0.4nm,0.3s,baz=94,slow=3.7,SNR=5.1 comp=Z,1.1nm,0.3s							
WRA	**Warramunga Arr**	**45.18**	**261**	IAmb	IAmb		11 59 36.5	
	comp=Z,0.2nm,0.8s							
AS31	**Alice Springs**	**45.20**	**255**	P	**P**		**11 59 37.2**	**+0.4**
ASAR	**Alice Springs**	**45.21**	**255**	P	**P**		**11 59 36.9**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=87,slow=8.3,SNR=31							
ASAR				S	**S**		**12 05 32.0**	**-3.8**
	comp=Z,0.8nm,0.7s,baz=90,slow=15,SNR=7.1 comp=Z,3.1nm,0.5s							
MTN	**Manton Dam**	**49.55**	**269**	P	**P**		**12 00 08.9**	**-0.3**
FORT	**Forrest**	**50.17**	**246**	P	**P**		**12 00 13.3**	**-0.3**
FORT				IAmb	IAmb		12 00 28.1	
	comp=Z,7.0nm,0.9s							
KNRA	**Kununurra**	**51.14**	**265**	P	**P**		**12 00 20.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**53.59**	**261**	P	**P**		**12 00 38.4**	**0.0**
	comp=Z,2.3nm,0.5s,baz=135,slow=5.5,SNR=23 comp=Z,2.3nm,0.5s							
SOEI	**Soe**	**56.86**	**271**	P	**P**		**12 01 01.7**	**+0.5**
SOEI				IAmb	IAmb		12 01 11.1	
	comp=Z,22nm,1.0s							
PSA00	**Pilbara Seismi**	**58.35**	**256**	P	**P**		**12 01 10.9**	**-0.2**
PSA00				IAmb	IAmb		12 01 11.5	
	comp=Z,6.9nm,0.7s							
MBWA	**Marble Bar**	**58.52**	**256**	P	**P**		**12 01 12.0**	**-0.3**
MBWA				IAmb	IAmb		12 01 18.6	
	comp=Z,25nm,1.5s							
PETK	**Petropavlovsk-**	**75.11**	**345**	P	**P**		**12 02 53.0**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=128,slow=8.8,SNR=5.6 comp=Z,1.7nm,0.8s							
PETK	**Petropavlovsk-**	**75.11**	**345**	P	**P**		**12 02 52.8**	**-0.7**
PMSA	**Palmer Station**	**82.33**	**157**	P	**P**		**12 03 32.4**	**+0.7**
TXAR	**Lajitas Array**	**86.03**	**57**	P	**P**		**12 03 52.1**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=210,slow=7.2,SNR=5.2 comp=Z,0.3nm,0.6s							
TXAR	**Lajitas Array**	**86.03**	**57**	P	**P**		**12 03 50.3**	**-0.4**
CCB	**Clear Creek Bu**	**86.66**	**12**	P	**P**		**12 03 52.0**	**-0.7**
I23K	**Minto, Yukon-K**	**86.80**	**12**	P	**P**		**12 03 52.5**	**-0.8**
IL31		**86.96**	**13**	P	**P**		**12 03 53.2**	**-0.8**
IL31				IAmb	IAmb		12 04 34.7	
	comp=Z,11nm,1.5s							
ILAR	**Eielson Array**	**86.96**	**13**	P	**P**		**12 03 53.2**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=236,slow=5.1,SNR=17 comp=Z,0.5nm,0.6s							
H22K	**Ishtalitna Cre**	**87.11**	**10**	P	**P**		**12 03 54.0**	**-0.9**
H22K				IAmb	IAmb		12 04 29.4	
	comp=Z,7.5nm,1.5s							
D22K	**Ayikyak River**	**89.65**	**9**	P	**P**		**12 04 06.5**	**-0.1**
D22K				IAmb	IAmb		12 04 16.0	
	comp=Z,4.4nm,1.4s							
CMAR	**Chiang Mai Arr**	**90.04**	**289**	P	**P**		**12 04 10.8**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=112,slow=2.1,SNR=5.8 comp=Z,0.5nm,0.3s							
CMAR	**Chiang Mai Arr**	**90.04**	**289**	P	**P**		**12 04 07.9**	**-1.7**
BVAR	**Borovoye Array**	**118.32**	**320**	PKP	**PKPdf**		**12 09 51.4**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=112,slow=2.1,SNR=5.5							
ARCES	**ARCESS Array B**	**127.71**	**350**	PKP	**PKPdf**		**12 10 09.2**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=34,slow=2.2,SNR=5.4							
BR131	**Keskin Array S**	**146.23**	**314**	PKPbc	**PKPdf**		**12 10 45.3**	**+0.4**
BRTR	**Keskin Array B**	**146.23**	**314**	PKPbc	**PKPbc**		**12 10 46.4**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=139,slow=6.5,SNR=4.8							
GERES	**GERESS Array B**	**149.04**	**345**	PKPbc	**PKPbc**		**12 10 53.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=262,slow=5.1,SNR=5.3							

KRSC 20 12:04:45.5±2.2, 48°.39N×156°.58E, h16km±34km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
SKR	**Severo-Kuril's**	**2.32**	**353**	*eP*	Pn		12 05 23.5	+0.5
SKR				*eS*	Sn		12 05 51.1	-0.1
PAU	**Pauzhetka**	**3.09**	**3**	*eP*	Pb		12 05 37.3	-2.8
PAU				*eS*	Sb		12 06 15.0	-2.5
KDTR	**Khodutka, Kamc**	**3.56**	**15**	*eP*	Pn		12 05 43.6	+3.5
KDTR				*eS*	Sb		12 06 26.6	-4.5
ASAK	**Asacha**	**4.09**	**11**	*eP*	Pn		12 05 51.9	+4.4
ASAK				*eS*	Sn		12 06 39.8	+4.8
MTVR	**Mutnovka**	**4.23**	**13**	*eP*	Pn		12 05 53.4	+4.0
MTVR				*eS*	Sn		12 06 44.0	+5.5
RUS	**Russkaya**	**4.24**	**16**	*eP*	Pn		12 05 53.0	+3.6
RUS				*eS*	Sn		12 06 43.3	+4.8
GRL	**Gorelyy**	**4.28**	**12**	*eP*	Pn		12 05 54.6	+4.5
GRL				*eS*	Sb		12 06 46.0	-5.9
KRMR	**Karymshinskiy**	**4.56**	**12**	*eP*	Pn		12 05 59.0	+5.2
APC	**Apacha**	**4.56**	**4**	*eP*	Pn		12 05 58.0	+4.2
PET	**Petropavlovsk**	**4.83**	**15**	*eS*	Sn		12 06 59.7	+6.7
DALK	**Dalny**	**4.85**	**16**	*eP*	Pn		12 06 02.4	+4.6
UGLR	**Uglovaya**	**5.04**	**16**	*eP*	Pn		12 06 05.5	+5.0
AVH	**Avacha**	**5.07**	**15**	*eP*	Pn		12 06 05.9	+5.0
KOK	**Koryaka**	**5.08**	**14**	*eP*	Pn		12 06 06.4	+5.3
SMAR	**Somma**	**5.08**	**15**	*eP*	Pn		12 06 05.9	+4.6
SDLR	**Sedlovina**	**5.11**	**16**	*eP*	Pn		12 06 06.0	+4.5
KRER	**Koryakskii**	**5.11**	**15**	*eP*	Pn		12 06 06.3	+4.6
KRX	**Arik**	**5.15**	**14**	*eP*	Pn		12 06 07.4	+5.4
SPN	**Mys Shipunski**	**5.20**	**24**	*eP*	Pn		12 06 08.0	+5.4
GNL	**Ganaly**	**5.39**	**9**	*eP*	Pn		12 06 09.0	+3.7
MKZ	**Mys Kozlova**	**6.96**	**26**	*eP*	Pn		12 06 29.9	+3.1

MEX 20 12:05:37.8±0.3, 14°.78N×93°.53W, h16km±32km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
PCIG		**0.97**	**18**	*eP*	Pb		12 05 52.9	-3.3
PCIG				*eS*	Sb		12 06 04.8	-4.0
PATR	**El Naranjo**	**1.30**	**75**	*eP*	Pn		12 05 57.7	-3.8
PATR				*eS*	Sb		12 06 13.5	-5.1
PAVE	**Pavencul**	**1.38**	**72**	*eP*	Pn		12 05 59.1	-3.5
PAVE				*eS*	Sn		12 06 15.7	-4.8
CHUJ	**Union Juarez**	**1.41**	**77**	*eP*	Pn		12 05 59.8	-3.2
CHUJ				*eS*	Sn		12 06 16.4	-5.1
CARR	**Arriaga**	**1.50**	**346**	*eP*	Pn		12 06 01.2	-2.9
CARR				*eS*	Sn		12 06 18.9	-4.5
TGIG		**2.03**	**11**	*eP*	Pn		12 06 09.0	-2.4
TGIG				*eS*	Sn		12 06 33.0	-3.4
CMIG	**Matias Romero**	**2.64**	**331**	*eP*	Pn		12 06 17.2	-2.5
CMIG				*eS*	Sn		12 06 44.6	-6.9

DNK 20 12:26:24.2±2.6, 58°.35N×13°.86E, h0km±20km, Presumed earthquake, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
FKPU	**Falk**	**0.20**	**201**	P	Pg		12 26 26.3	-1.8
FKPU				S	Sg		12 26 29.1	-1.6
NASU	**Vaermlandsnaes**	**0.68**	**329**	P	Pg		12 26 36.0	-1.1
ASKU	**Askersund**	**0.74**	**42**	P	Pg		12 26 36.3	-2.2
BORU	**Boraas**	**0.92**	**219**	P	Pg		12 26 39.8	-2.1
VANU	**Vaenersborg**	**0.95**	**279**	P	Pg		12 26 41.3	-1.1
EKSU	**Eksjoe**	**1.09**	**135**	P	Pg		12 26 41.3	-3.8
TJOU	**Tjoern**	**1.23**	**256**	*i* P	Pg		12 26 45.3	-2.4
TJOU				*i* S	Sg		12 27 01.7	-1.8
TJOU	**Tjoern**	**1.23**	**256**	P	Pg		12 26 45.7	-2.0
FINU	**Finntorp**	**1.28**	**326**	P	Pg		12 26 46.8	-1.9
NRAU	**Nora**	**1.37**	**26**	P	Pg		12 26 47.9	-2.4
ONAU	**Onsala**	**1.41**	**228**	*i* P	Pn		12 26 50.2	-0.8
ONAU				*i* S	Sb		12 27 09.7	-0.1
ONAU	**Onsala**	**1.41**	**228**	P	Pn		12 26 49.2	-1.9
VXJU	**Vaexsjoe**	**1.55**	**158**	P	Pn		12 26 49.7	-3.2
STRU	**Stroemstad**	**1.56**	**297**	*i* P	Pn		12 26 51.5	-1.6
STRU				*eS*	Sg		12 27 14.3	+0.2
STRU	**Stroemstad** baz=127	**1.56**	**297**	P	Pn		12 26 51.9	-1.2
VSTU	**Vaestervik**	**1.58**	**115**	P	Pn		12 26 49.7	-3.7
ESKU	**Eskilstuna**	**1.59**	**55**	P	Pn		12 26 50.9	-2.6
UDD	**Uddeholm**	**1.75**	**356**	P	Pn		12 26 54.8	-1.0
BJUU	**Bjuv**	**2.33**	**192**	*eS*	Sn		12 27 32.8	-0.2

*IDC **20** 12:33:01.9±2.1, 28°.46N×142°.74E, h0km, mb3.9/8, mbtmp3.9/10, ML3.2/2, MS2.8/4, Error ellipse: s-maj=66.3km s-min=14.8km az=82.0*
*NEIC **20** 12:33:04.2±1.3, 28°.45N±0°.06×142°.7E±0°.2, h10km±1km, mb4.5/18, Error ellipse: s-maj=22.6km s-min=9.6km az=97.0*

ISC 20 12:33:05.5±0.9, 28°.48N±0°.07×142°.7E±0°.2, h25km, n39, σ1s17/35, mb4.4/16, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
JCJ	**Chichijima**	**1.46**	**199**	P	Pn	**Pn**	**12 33 29.9**	**-0.4**
	14nm,0.3s,baz=274,slow=23,SNR=7.7							
JCJ					Sn	**Sn**	**12 33 48.0**	**-0.6**
	99nm,0.3s,baz=81,slow=23,SNR=22							
JCJ	**Chichijima**	**1.46**	**199**			**Pn**	**12 33 29.2**	**-1.1**
MJAR	**Matsushiro Arr**	**8.89**	**336**	Pn		**Pn**	**12 35 10.0**	**-2.4**
	0.2nm,0.3s,baz=140,slow=15,SNR=10 2.4nm,0.7s							
MJAR	**Matsushiro Arr**	**8.89**	**336**			**Pn**	**12 35 09.7**	**-2.8**
MAJO	**Matsushiro**	**8.89**	**336**	Pn		**Pn**	**12 35 10.4**	**-2.0**
MJB9	**Matsu-Tunnel**	**8.89**	**336**	Pn		**Pn**	**12 35 11.4**	**-1.1**
JNU	**Nakatsue**	**11.17**	**297**	LR		LR	12 39 42.7	
	comp=Z,68nm,18.2s,baz=131,slow=36							
JOW	**Kunigami**	**12.90**	**266**	LR		LR	12 40 52.5	
	comp=Z,36nm,18.9s,baz=154,slow=36							
JEW	**Eniwo**	**14.36**	**356**	Pn		**Pn**	**12 36 24.4**	**-2.8**
KSRS	**Korea Array**	**15.29**	**310**	Pn		**Pn**	**12 36 41.7**	**+2.1**
	0.1nm,0.3s,baz=116,slow=12,SNR=7.2							
KSRS					LR	LR	12 42 31.1	
	comp=Z,29nm,18.4s,baz=130,slow=37 1.3nm,0.7s							
YULB	**Yu-li**	**19.91**	**260**	P		**Pn**	**12 37 36.3**	**-0.8**
YULB					IAmb	IAmb	12 38 09.3	
	comp=Z,33nm,1.4s							
SSLB	**Suanglung**	**20.08**	**262**	P	Pn		12 37 38.1	-1.1
SSLB					IAmb	IAmb	12 37 55.6	
	comp=Z,36nm,1.5s							
SONM	**Songino Array**	**34.06**	**315**	P		**P**	**12 39 48.2**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=129,slow=7.3,SNR=5.3 comp=Z,1.1nm,0.8s							
SONM	**Songino Array**	**34.06**	**315**		IAmb	IAmb	12 39 50.0	
	comp=Z,2.1nm,1.1s							
CMAR	**Chiang Mai Arr**	**41.18**	**266**	LR	LR		12 58 06.8	
	comp=Z,11nm,19.2s,baz=190,slow=36							
MTN	**Manton Dam**	**42.58**	**197**	P		**P**	**12 40 59.3**	**-0.3**
WB0	**Warramunga Arr**	**48.64**	**190**	P		**P**	**12 41 47.9**	**+0.4**
ZALV	**Zalesovo Beam**	**48.76**	**318**	P		**P**	**12 41 47.7**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=100,slow=7.9,SNR=4.8 comp=Z,0.8nm,0.4s							
ZALV	**Zalesovo Beam**	**48.76**	**318**	P		**P**	**12 41 48.5**	**+0.4**
WRAB	**Tennant Creek**	**48.80**	**190**	P		**P**	**12 41 49.0**	**+0.2**
WRAB					IAmb	IAmb	12 42 21.0	
	comp=Z,8.7nm,1.4s							
WRA	**Warramunga Arr**	**48.82**	**190**	P		**P**	**12 41 48.9**	**0.0**
	comp=Z,3.1nm,0.8s,baz=12,slow=8.3,SNR=26 comp=Z,3.1nm,0.8s							
WRA	**Warramunga Arr**	**48.82**	**190**	P		**P**	**12 41 47.7**	**-1.1**
MKAR	**Makanchi Array**	**49.97**	**309**	P		**P**	**12 41 57.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=89,slow=8.2,SNR=6.8 comp=Z,0.7nm,0.8s							
GSI	**Gunungsitoli**	**50.84**	**246**	P		**P**	**12 42 04.6**	**+0.2**
H18K	**Honhosa River**	**51.54**	**28**	P		**P**	**12 42 09.8**	**+0.8**
H18K					IAmb	IAmb	12 42 22.2	
	comp=Z,6.8nm,1.4s							
C19K	**Lookout Ridge**	**52.30**	**23**	P		**P**	**12 42 15.5**	**+0.8**
C19K					IAmb	IAmb	12 42 28.3	
	comp=Z,2.8nm,0.8s							
KURK	**Kurchatov**	**52.36**	**314**			**P**	**12 42 15.3**	**0.0**
KURK					IAmb	IAmb	12 42 17.0	
	comp=Z,7.6nm,1.1s							
KURBB	**Kurchatov Arra**	**52.42**	**314**	P		**P**	**12 42 16.2**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=90,slow=6.9,SNR=22 comp=Z,2.7nm,0.7s							
AS31	**Alice Springs**	**52.53**	**190**	P		**P**	**12 42 17.2**	**+0.3**
ASAR	**Alice Springs**	**52.54**	**190**	P		**P**	**12 42 16.5**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=11,slow=7.3,SNR=7.9 comp=Z,0.2nm,0.4s							
D20K	**Etivluk River**	**53.20**	**23**	P		**P**	**12 42 20.8**	**-0.5**
D20K					IAmb	IAmb	12 42 23.5	
	comp=Z,7.1nm,1.2s							
D22K	**Ayikyak River**	**54.62**	**24**	P		**P**	**12 42 32.5**	**+0.8**
D24K	**Happy Valley**	**56.04**	**24**	P		**P**	**12 42 43.2**	**+1.3**
D24K					IAmb	IAmb	12 42 44.6	
	comp=Z,7.8nm,1.4s							
C24K	**Franklin Bluff**	**56.17**	**23**	P		**P**	**12 42 44.1**	**+1.3**
C24K					IAmb	IAmb	12 42 44.5	
	comp=Z,8.9nm,1.3s							
BVAR	**Borovoye Array**	**57.35**	**317**	P		**P**	**12 42 52.1**	**+0.7**
	comp=Z,2.7nm,0.7s,baz=93,slow=7.6,SNR=10 comp=Z,2.7nm,0.7s							
AB31	**Akbulak array**	**64.47**	**314**			**P**	**12 43 40.0**	**+0.1**
AB31					IAmb	IAmb	12 43 42.6	
	comp=Z,2.4nm,0.7s							
ABKAR	**Akbulak array**	**64.47**	**314**			**P**	**12 43 40.5**	**+0.6**
RAYN	**Ar Rayn**	**85.02**	**294**	P		**P**	**12 45 39.8**	**+0.4**
BRTR	**Keskin Array B**	**85.40**	**313**	P		**P**	**12 45 42.5**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=48,slow=2.1,SNR=2.0 comp=Z,0.5nm,0.7s							

*NNC **20** 12:44:51.4±5.1, 39°.75N×75°.74E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=35.4km s-min=26.9km az=154.0*
*KRNET **20** 12:44:53.4±0.1, 39°.96N×75°.41E, h10km, mb3.0*
*SOME **20** 12:44:56.0, 40°.13N×75°.60E, h5km*

ISC 20 12:44:51.7±2.0, 39°.94N±0°.08×75°.49E±0°.04, h1km±13km, n31, σ0s92/50, 17C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
JNKS	**Jany-Kuch**	**1.12**	**5**	↑*iP*		**Pn**	**12 45 14.6**	**-0.2**
JNKS				↑*iS*		**Sn**	**12 45 30.0**	**-0.9**
SFK	**Sufi-Kurgan**	**1.53**	**273**	↑*iP*		**Pg**	**12 45 21.2**	**+0.2**
SFK				↑*iS*		**Sg**	**12 45 41.4**	**+0.6**
NRN	**Naryn**	**1.54**	**14**	↑*iP*		**Pg**	**12 45 22.2**	**+0.9**
NRN				↑*iS*		**Sg**	**12 45 43.2**	**+1.9**
SALK	**Salom-Alik**	**1.58**	**307**	↓*iP*		**Pg**	**12 45 22.2**	**+0.1**
SALK				↓*iS*		**Sg**	**12 45 43.2**	**+0.6**
ARLS	**Aral**	**2.11**	**336**	↑*iP*		**Pg**	**12 45 31.3**	**-0.9**
ARLS				↑*iS*		**Sg**	**12 45 59.1**	**-0.5**
ARSB	**Arslanbob**	**2.36**	**307**	↑*eP*		**Pb**	**12 45 34.6**	**-0.5**
ARSB				↑*eS*		**Sb**	**12 46 04.4**	**-0.3**
ULHL	**Ulahol**	**2.37**	**14**	↑*iP*		**Pb**	**12 45 35.5**	**+0.1**
ULHL				↑*iS*		**Sb**	**12 46 06.4**	**+1.1**
KDJ	**Kajisay**	**2.53**	**30**	↑*eP*		**Pb**	**12 45 38.0**	**-0.1**
KDJ				↑*iS*		**Sb**	**12 46 10.8**	**+0.9**
BOOM	**Boomskoye usch**	**2.57**	**7**	↑*eP*		**Pb**	**12 45 38.2**	**-0.5**
BOOM				↑*eS*		**Sb**	**12 46 10.9**	**0.0**
AAK	**Ala-Archa**	**2.80**	**345**	↑Pn		**Pb**	**12 45 42.2**	**-0.4**
	4.0nm,0.4s							
AAK					↓Sn	**Sg**	**12 46 21.9**	**+0.3**
	6.4nm,0.5s							
KST	**Kastek**	**3.12**	**6**	Pg		**Pg**	**12 45 51.1**	**-0.4**
	6.9nm,0.3s							
KST					Lg	Lg	12 46 32.4	
	37nm,0.6s							
KST	**Kastek**	**3.12**	**6**	*eP*		**Pg**	**12 45 51.1**	**-0.4**
	6.6nm,0.1s							
KST				*eS*		**Sg**	**12 46 32.4**	**+0.4**
	35nm,0.9s							
IZV	**Izvestkoviy**	**3.21**	**15**	Pg		**Pb**	**12 45 50.7**	**+1.1**
	6.3nm,0.4s							
IZV					Lg	Lg	12 46 31.7	
	27nm,0.6s							
IZV	**Izvestkoviy**	**3.21**	**15**	*eP*		**Pb**	**12 45 50.7**	**+1.1**
	5.8nm,0.4s							
IZV				*eS*		**Sb**	**12 46 31.7**	**+2.5**
	1.4nm,0.1s							
MTBS	**Maitube**	**3.27**	**12**	Pg		**Pg**	**12 45 54.2**	**-0.1**
	2.8nm,0.2s							
MTBS					Lg	Lg	12 46 37.6	
	16nm,0.5s							
MTBS	**Maitube**	**3.27**	**12**	*eP*		**Pg**	**12 45 54.2**	**-0.1**
	0.9nm,0.3s							
MTBS				*eS*		**Sg**	**12 46 37.6**	**+1.0**
	17nm,0.5s							
MRKS	**Merke**	**3.28**	**329**	Pg		**Pg**	**12 45 54.3**	**-0.3**
	6.0nm,0.4s							
MRKS					Lg	Lg	12 46 37.5	
	23nm,0.7s							
MRKS	**Merke**	**3.28**	**329**	*eP*		**Pg**	**12 45 54.3**	**-0.3**
	4.9nm,0.5s							
MRKS				*eS*		**Sg**	**12 46 37.5**	**+0.5**
	20nm,0.8s							
TNSS	**Tian-Shan**	**3.28**	**19**	Pg		**Pg**	**12 45 53.9**	**-0.7**
	0.7nm,0.1s							
TNSS					Lg	Lg	12 46 37.1	
	3.7nm,0.4s							
TNSS	**Tian-Shan**	**3.28**	**19**	*eP*		**Pg**	**12 45 53.9**	**-0.7**
	2.0nm,0.3s							
TNSS				*eS*		**Sg**	**12 46 37.1**	**-0.1**
	3.6nm,0.8s							
DGS	**Degeres**	**3.31**	**4**	Pg		**Pg**	**12 45 54.8**	**-0.3**
	4.5nm,0.5s							
DGS					Lg	Lg	12 46 38.8	
	12nm,0.6s							
DGS	**Degeres**	**3.31**	**4**	*eP*		**Pg**	**12 45 54.8**	**-0.3**
	4.5nm,0.7s							
DGS				*eS*		**Sg**	**12 46 38.8**	**+0.9**
	14nm,0.7s							
MDOK	**Medeo**	**3.43**	**19**	Pg		**Pg**	**12 45 56.1**	**-1.3**
	4.4nm,0.5s							
MDOK					Lg	Lg	12 46 41.0	
	20nm,0.9s							
KOTS	**Kotyrbulak**	**3.51**	**20**	Pg		**Pg**	**12 45 58.0**	**-0.9**
	3.4nm,0.4s							
KOTS					Lg	Lg	12 46 44.4	
	45nm,1.0s							
KOTS	**Kotyrbulak**	**3.51**	**20**	*eP*		**Pg**	**12 45 58.0**	**-0.9**
	3.4nm,0.4s							
KOTS				*eS*		**Sg**	**12 46 44.4**	**0.0**
	45nm,1.0s							
KRBS	**Karabastau**	**3.76**	**2**	Pg		**Pg**	**12 46 02.3**	**-1.4**
	4.0nm,0.3s							
KRBS					Lg	Lg	12 46 51.8	
	1.8nm,0.6s							
KRBS	**Karabastau**	**3.76**	**2**	*eP*		**Pg**	**12 46 02.3**	**-1.4**
	4.0nm,0.3s							
KRBS				*eS*		**Sg**	**12 46 51.8**	**-0.5**
	1.8nm,0.6s							
SATY	**Saty**	**3.81**	**34**	Pg		**Pg**	**12 46 02.9**	**-1.8**
	1.8nm,0.4s							
SATY					Lg	Lg	12 46 52.9	
	8.1nm,0.3s							
KTBS	**Karatobe**	**3.87**	**13**	Pg		**Pg**	**12 46 04.3**	**-1.6**
	3.0nm,0.5s							
KTBS					Lg	Lg	12 46 55.7	
	0.4nm,0.2s							
KTBS	**Karatobe**	**3.87**	**13**	*eP*		**Pg**	**12 46 04.3**	**-1.6**
	2.9nm,0.4s							
KTBS				*eS*		**Sg**	**12 46 55.6**	**-0.5**
	0.3nm,0.3s							
KK31	**Karatay Array**	**4.89**	**312**	Pg		**Pg**	**12 46 25.1**	**-0.4**
	0.4nm,0.3s,baz=142,slow=16,SNR=7.6							
KK31					↓Lg	Lg	12 47 33.0	
	1.2nm,0.4s,baz=140,slow=30,SNR=4.7							

**IDC 20 12:53:

OWD	**Renai**	**0.36**	**283**	‖	*e*P	**Pg**	**13 16 21.6**	**-0.2**
WHF	**Hehuan Shan**	**0.38**	**315**	‖	P	**Pg**	**13 16 22.1**	**-0.3**
HGSD	**Ruisui**	**0.40**	**198**		*e*P	**Pg**	**13 16 22.7**	**+0.2**
VWDT	**VWDT**	**0.40**	**253**	‖	P	**Pg**	**13 16 22.5**	**0.0**
WUSB	**Renai**	**0.42**	**287**		P	**Pg**	**13 16 23.0**	**+0.1**
EHY	**Hungye**	**0.42**	**211**		*e*P	**Pg**	**13 16 22.3**	**-0.6**
JOW	**Kunigami**	**6.75**	**63**		P	**Pn**	**13 17 52.9**	**-0.9**
	2.1nm,0.3s,baz=133,slow=21,SNR=11 4.6nm,0.3s							
TGY	**Tagaytay City**	**9.73**	**184**		LR	LR	13 23 13.7	
	comp=Z,199nm,19.8s,baz=238,slow=43							
KSRS	**Korea Array**	**14.60**	**20**		Pn	**P**	**13 19 48.1**	**+0.4**
	0.1nm,0.3s,baz=202,slow=11,SNR=9.5							
MKAR	**Makanchi Array**	**38.80**	**316**		P	**P**	**13 23 41.4**	**+1.8**
	0.2nm,0.5s,baz=115,slow=10,SNR=4.1 0.2nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**42.16**	**87**		T	T	14 09 04.4	
	baz=283,slow=75,SNR=14							
H11N2	**WAKE ISLAND Hy**	**42.16**	**87**		T	T	14 09 03.0	
	baz=283,slow=75,SNR=13							
H11N3	**WAKE ISLAND Hy**	**42.18**	**87**		T	T	14 09 06.1	
	baz=283,slow=75,SNR=7.6							
H11S3	**WAKE ISLAND Hy**	**42.28**	**88**		T	T	14 09 11.8	
	baz=284,slow=75,SNR=77							
H11S1	**WAKE ISLAND Hy**	**42.29**	**88**		T	T	14 09 12.4	
	baz=284,slow=75,SNR=20							
H11S2	**WAKE ISLAND Hy**	**42.30**	**88**		T	T	14 09 13.1	
	baz=284,slow=75,SNR=25							
WRA	**Warramunga Arr**	**45.29**	**163**		P	**P**	**13 24 32.0**	**-0.8**
	0.3nm,0.5s,baz=345,slow=8.5,SNR=4.9 0.3nm,0.5s							
YKA	**Yellowknife Ar**	**83.12**	**23**		P	**P**	**13 28 40.2**	**-0.3**
	0.3nm,0.8s,baz=312,slow=5.8,SNR=6.4 0.3nm,0.8s							

JMA ***20*** *13:16:15.6±0.1,23°.8N±0°.4×12°.2E±°, h9km±3km, MV3.2/15, TAIWAN REGION*
TAP ***20*** *13:16:15.8,23°.87N×121°.55E,h10km,ML4.1,C*
ISC 20 13:16:16.0±0.8,23°.85N±0°.01×121°.60E±0°.02,h13km±4km, n178,σ0°56/294,10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.01**	**356**	P	**Pg**	**13 16 18.5**	**+0.3**
TEYL				*i* S	**Sg**	**13 16 20.5**	**+0.8**
SHUL	**Shoufeng**	**0.07**	**207**	P	**Pg**	**13 16 18.8**	**+0.2**
SHUL				*i* S	**Sg**	**13 16 21.1**	**+0.7**
HWA	**Hwalien**	**0.12**	**3**	*e*P	**Pg**	**13 16 19.5**	**+0.3**
HWA				*e*S	**Sg**	**13 16 22.3**	**+0.8**
ETM	**Tongmen**	**0.15**	**319**	P	**Pg**	**13 16 19.0**	**-0.5**
ETM				*i* S	**Sg**	**13 16 21.0**	**-1.1**
TEGC	**Jichi Village**	**0.15**	**201**	P	**Sg**	**13 16 20.2**	**+0.6**
TEGC				S	**Sb**	**13 16 23.4**	**-0.5**
ESL	**Shilin**	**0.16**	**255**	‖ *i*P	**Pg**	**13 16 18.9**	**-0.7**
ESL				S	**Sg**	**13 16 20.8**	**-1.5**
TWD	**Chiawan**	**0.23**	**359**	*e*P	**Pg**	**13 16 21.2**	**+0.4**
TWD				S	**Sg**	**13 16 24.1**	**0.0**
WARBT	**Fenglin Townsh**	**0.24**	**235**	*e*P	**Pg**	**13 16 20.8**	**-0.2**
WARBT				S	**Sg**	**13 16 23.2**	**-1.2**
LXIB	**Xiulin Townshi**	**0.24**	**314**	‖ P	**Pg**	**13 16 20.6**	**-0.5**
LXIB				S	**Sg**	**13 16 23.3**	**-1.3**
EGFH	**Guangfu**	**0.24**	**221**	*e*P	**Pg**	**13 16 21.1**	**0.0**
EGFH				*e*S	**Sg**	**13 16 24.2**	**-0.3**
ETL	**Fush Village**	**0.30**	**4**	*e*P	**Pg**	**13 16 22.6**	**+0.3**
ETL				S	**Sg**	**13 16 26.4**	**0.0**
NACB	**Ninganchiao**	**0.32**	**359**	P	**Pg**	**13 16 21.9**	**-0.6**
NACB	**Ninganchiao**	**0.32**	**359**	S	**Sg**	**13 16 26.3**	**-0.5**
NACB	**Ninganchiao**	**0.32**	**359**	‖ P	**Pg**	**13 16 22.2**	**-0.2**
NACB				S	**Sg**	**13 16 26.0**	**-0.9**
ETLH	**Xiulin Townshi**	**0.37**	**343**	*e*P	**Pg**	**13 16 23.3**	**-0.1**
ETLH				*e*S	**Sg**	**13 16 28.0**	**-0.4**
HGSD	**Ruisui**	**0.39**	**204**	*e*P	**Pb**	**13 16 24.5**	**-0.3**
OWD	**Renai**	**0.40**	**285**	*e*P	**Pg**	**13 16 23.7**	**-0.3**
OWD				*e*S	**Sg**	**13 16 28.5**	**-0.9**
WHF	**Hehuan Shan**	**0.42**	**314**	*e*P	**Pg**	**13 16 24.0**	**-0.5**
WHF				*e*S	**Sg**	**13 16 29.2**	**-1.1**
EHYH	**Wanrong**	**0.43**	**213**	*e*P	**Pg**	**13 16 24.4**	**-0.1**
EHYH				*e*S	**Sg**	**13 16 30.1**	**-0.1**
EHY	**Hungye**	**0.43**	**216**	*e*P	**Pg**	**13 16 24.2**	**-0.2**
VWDT	**VWDT**	**0.43**	**257**	*e*P	**Pg**	**13 16 24.4**	**-0.1**
VWDT				*e*S	**Sg**	**13 16 29.4**	**-0.8**
WUSB	**Renai**	**0.46**	**287**	*e*P	**Pg**	**13 16 24.7**	**-0.4**
WUSB				*e*S	**Sg**	**13 16 30.6**	**-0.7**
EAHA	**Aohua**	**0.49**	**15**	*e*P	**Pg**	**13 16 25.8**	**+0.2**
EAHA				*e*S	**Sb**	**13 16 33.5**	**-0.1**
FUSS	**Fushou**	**0.51**	**320**	*e*P	**Pg**	**13 16 25.9**	**-0.1**
FUSS				*e*S	**Sg**	**13 16 32.3**	**-0.6**
YULB	**Yu-li**	**0.54**	**211**	P	**Pg**	**13 16 26.5**	**0.0**
YULB	**Yu-li**	**0.54**	**211**	S	**Sg**	**13 16 33.3**	**-0.4**
YULB	**Yu-li**	**0.54**	**211**	*e*P	**Pg**	**13 16 26.2**	**-0.3**
YULB				*e*S	**Sg**	**13 16 33.2**	**-0.4**
ECBN	**Changbin**	**0.55**	**194**	*e*P	**Pb**	**13 16 27.3**	**-0.3**
ECBN				S	**Sb**	**13 16 36.3**	**+1.0**
TWT	**Tachien**	**0.56**	**316**	*e*P	**Pg**	**13 16 27.0**	**+0.1**
TWT				S	**Sg**	**13 16 33.9**	**-0.4**
TDCB	**Techi**	**0.57**	**315**	‖ P	**Pg**	**13 16 27.0**	**-0.1**
TDCB				S	**Sg**	**13 16 33.4**	**-1.3**
TWF1	**Yuli**	**0.57**	**209**	*e*P	**Pb**	**13 16 27.6**	**-0.2**
TWF1				*e*S	**Sg**	**13 16 35.2**	**+0.5**
ENA	**Nanau**	**0.59**	**13**	*e*P	**Pb**	**13 16 28.6**	**+0.5**
SSLB	**Suanglung**	**0.59**	**264**	P	**Pg**	**13 16 27.1**	**-0.5**
SSLB	**Suanglung**	**0.59**	**264**	S	**Sg**	**13 16 35.0**	**-0.5**
SSLB	**Suanglung**	**0.59**	**264**	P	**Pg**	**13 16 27.2**	**-0.3**
SSLB				S	**Sg**	**13 16 34.5**	**-1.0**
NNSB	**Datong**	**0.60**	**341**	‖ P	**Pg**	**13 16 27.7**	**-0.2**
NNSB				S	**Sg**	**13 16 35.2**	**-0.7**
WPL	**Puli Township**	**0.61**	**285**	P	**Pg**	**13 16 27.8**	**0.0**
WPL				S	**Sg**	**13 16 35.5**	**-0.4**
EWUT	**Wuta**	**0.61**	**15**	*e*P	**Pg**	**13 16 27.9**	**0.0**
NNS	**Nan Shan**	**0.62**	**341**	‖ P	**Pg**	**13 16 27.9**	**-0.2**
NNS				*e*S	**Sg**	**13 16 35.7**	**-0.6**
DPDB	**Guoxing**	**0.64**	**286**	*e*P	**Pg**	**13 16 28.4**	**-0.1**
DPDB				*e*S	**Sg**	**13 16 37.0**	**0.0**
SMLT	**Sun Moon Lake**	**0.64**	**273**	*e*P	**Pg**	**13 16 28.4**	**-0.1**
SMLT				S	**Sg**	**13 16 36.4**	**-0.6**
WCS	**Beigang Elemen**	**0.66**	**288**	*e*P	**Pg**	**13 16 28.5**	**-0.4**
WCS				*e*S	**Sg**	**13 16 37.4**	**-0.1**
TYC	**Yuchr**	**0.68**	**274**	*e*P	**Pg**	**13 16 28.9**	**-0.3**
TYC				*e*S	**Sg**	**13 16 36.8**	**-1.4**
LATG	**Datong**	**0.68**	**354**	P	**Pg**	**13 16 29.2**	**-0.1**
LATG				S	**Sg**	**13 16 38.2**	**-0.1**
CHKH	**Chenggong**	**0.69**	**196**	*e*P	**Pb**	**13 16 29.9**	**+0.1**
CHKH				*e*S	**Sn**	**13 16 40.9**	**-1.1**
YUS	**Yu-Shan**	**0.69**	**239**	*e*P	**Pg**	**13 16 29.7**	**+0.1**
WHYT	**Xinyi Township**	**0.70**	**257**	*e*P	**Pg**	**13 16 29.4**	**-0.2**
WHYT				S	**Sg**	**13 16 38.0**	**-0.8**
EOS4	**EOS4**	**0.71**	**68**	*e*P	**Pb**	**13 16 30.4**	**+0.4**
EOS4				*e*S	**Sn**	**13 16 41.7**	**-0.3**
FULB	**Fuli**	**0.71**	**203**	*e*P	**Pb**	**13 16 30.4**	**+0.2**
NDT	**Datong Townshi**	**0.75**	**354**	P	**Pg**	**13 16 30.5**	**0.0**
NDT				*e*S	**Sg**	**13 16 39.6**	**-0.8**
ESAO	**Su ao**	**0.75**	**17**	*e*P	**Pb**	**13 16 31.0**	**0.0**
CHKT	**Chengkung**	**0.78**	**196**	*e*P	**Pb**	**13 16 31.5**	**0.0**
CHKT				*e*S	**Sn**	**13 16 43.8**	**-0.5**
ENTT	**Nioudou**	**0.78**	**358**	*e*P	**Pg**	**13 16 31.2**	**0.0**
ENTT				*e*S	**Sb**	**13 16 42.0**	**-0.1**
NDS	**Dongshan**	**0.78**	**8**	*e*P	**Pb**	**13 16 31.5**	**0.0**
NDS				*e*S	**Sg**	**13 16 41.4**	**-0.1**
EOS3	**EOS3**	**0.79**	**57**	*e*P	**Pn**	**13 16 32.9**	**-0.4**
TWC	**Suao**	**0.79**	**17**	*e*P	**Pg**	**13 16 31.2**	**0.0**
TWC				*e*S	**Sb**	**13 16 42.3**	**+0.2**
ALS	**Alishan**	**0.80**	**245**	*e*P	**Pb**	**13 16 32.0**	**0.0**
ALS				*e*S	**Sg**	**13 16 42.4**	**+0.2**
EOS2	**EOS2**	**0.81**	**46**	*e*P	**Pn**	**13 16 32.9**	**0.0**
ECS	**Chishang**	**0.83**	**205**	*e*P	**Pn**	**13 16 33.1**	**-0.4**
WNT	**Mingjian**	**0.84**	**272**	*e*P	**Pb**	**13 16 33.0**	**+0.5**
WNT				*e*S	**Sb**	**13 16 44.1**	**+0.5**
YHNB	**Yeheng**	**0.84**	**346**	P	**Pg**	**13 16 32.1**	**-0.1**
YHNB	**Yeheng**	**0.84**	**346**	S	**Sg**	**13 16 43.0**	**-0.2**
YHNB	**Yeheng**	**0.84**	**346**	‖ *i*P	**Pb**	**13 16 32.4**	**-0.1**
YHNB				S	**Sg**	**13 16 42.4**	**-0.8**
WNT1	**Nantou City**	**0.84**	**274**	*e*P	**Pb**	**13 16 33.0**	**+0.5**
NSK	**Sanguang**	**0.85**	**345**	‖ *i*P	**Pg**	**13 16 32.5**	**+0.1**
NSK				S	**Sg**	**13 16 42.7**	**-0.8**
ELDTW	**Lidau**	**0.85**	**219**	*e*P	**Pg**	**13 16 31.5**	**-0.9**
ELDTW				*e*S	**Sg**	**13 16 42.8**	**-0.7**
TWE	**Neicheng**	**0.87**	**4**	*e*P	**Pg**	**13 16 32.7**	**0.0**
TWE				*e*S	**Sg**	**13 16 44.1**	**+0.1**
CHN5	**Tsauling**	**0.88**	**253**	*e*P	**Pb**	**13 16 33.6**	**+0.3**
CHN5				S	**Sb**	**13 16 45.3**	**+0.3**
NFF	**Wufeng Townshi**	**0.89**	**331**	*e*P	**Pg**	**13 16 33.2**	**0.0**
NFF				*e*S	**Sg**	**13 16 44.1**	**-0.8**
TCU	**Taichung**	**0.89**	**289**	*e*P	**Pn**	**13 16 33.9**	**-0.4**
TCU				*e*S	**Sb**	**13 16 45.9**	**+0.7**
TWQ1	**Liyutan**	**0.90**	**303**	*e*P	**Pb**	**13 16 33.9**	**+0.4**
FUSB	**Fushanzhiwuyua**	**0.90**	**359**	‖ P	**Pg**	**13 16 33.5**	**+0.1**
FUSB				*e*S	**Sg**	**13 16 45.1**	**-0.1**
ILA	**Ilan**	**0.92**	**8**	*e*P	**Pg**	**13 16 33.7**	**0.0**
ILA				*e*S	**Sn**	**13 16 46.9**	**-0.9**
NWLT	**Wulai**	**0.92**	**355**	*e*P	**Pg**	**13 16 33.4**	**-0.4**
NWLT				*e*S	**Sg**	**13 16 45.2**	**-0.7**
WYL	**Yuanlin Townsh**	**0.94**	**277**	*e*P	**Pn**	**13 16 34.8**	**-0.1**
NSTT	**Nanjuang**	**0.95**	**325**	*e*P	**Pg**	**13 16 34.5**	**+0.3**
NSTT				*e*S	**Sg**	**13 16 45.6**	**-1.1**
LIOB	**Emei**	**0.95**	**326**	*e*P	**Pn**	**13 16 35.0**	**-0.1**
LIOB				*e*S	**Sb**	**13 16 47.0**	**+0.1**
WGK	**Gukeng**	**0.96**	**260**	*e*P	**Pn**	**13 16 35.1**	**-0.2**
WGK				*e*S	**Sn**	**13 16 48.8**	**0.0**
WCHH	**Zhanghua**	**0.98**	**283**	*e*P	**Pn**	**13 16 35.4**	**-0.1**
WCHH				*e*S	**Sn**	**13 16 49.1**	**-0.1**
WDL	**Douliou City**	**0.98**	**262**	*e*P	**Pn**	**13 16 35.6**	**+0.1**
WDL				*e*S	**Sn**	**13 16 49.5**	**+0.2**
WDLH	**Douliu**	**0.99**	**261**	*e*P	**Pn**	**13 16 35.4**	**-0.2**
WDLH				*e*S	**Sn**	**13 16 49.4**	**0.0**
WCH1	**Changhua City**	**0.99**	**283**	*e*P	**Pg**	**13 16 35.2**	**+0.2**
WCH1				*e*S	**Sg**	**13 16 48.7**	**+0.8**
KSHI	**Guanxi Townshi**	**1.00**	**337**	*e*P	**Pn**	**13 16 35.9**	**+0.1**
KSHI				*e*S	**Sg**	**13 16 48.9**	**+0.7**
WCKO	**Fanlu**	**1.00**	**246**	*e*P	**Pg**	**13 16 35.5**	**+0.2**
WCKO				*e*S	**Sg**	**13 16 49.0**	**+0.6**
NMLH	**Miaoli**	**1.00**	**313**	*e*P	**Pn**	**13 16 36.3**	**+0.4**
NMLH				*e*S	**Sg**	**13 16 48.8**	**+0.3**
WDJ	**Dajia District**	**1.00**	**300**	*e*P	**Pn**	**13 16 36.2**	**+0.4**
STYH	**Taoyuan**	**1.02**	**228**	*e*P	**Pb**	**13 16 35.4**	**0.0**
STYH				*e*S	**Sb**	**13 16 48.8**	**+0.1**
EGS		**1.03**	**17**	*e*P	**Pn**	**13 16 36.1**	**-0.1**
STYT	**Tauyuan**	**1.03**	**229**	*e*P	**Pb**	**13 16 35.6**	**-0.2**
STYT				*e*S	**Sg**	**13 16 49.7**	**+0.3**
LONT	**Longtian**	**1.04**	**205**	*e*P	**Pb**	**13 16 35.3**	**-0.5**
TPUB	**Ta-pu**	**1.05**	**238**	P	**Pn**	**13 16 36.5**	**+0.1**
TPUB	**Ta-pu**	**1.05**	**238**	S	**Sg**	**13 16 50.4**	**+0.6**
TPUB	**Ta-pu**	**1.05**	**238**	P	**Pg**	**13 16 36.3**	**+0.1**
TPUB				*e*S	**Sg**	**13 16 50.0**	**+0.2**
CHN4	**Tsaushan**	**1.05**	**242**	*e*P	**Pn**	**13 16 36.5**	**0.0**
CHN4				*e*S	**Sn**	**13 16 50.9**	**-0.1**
HSN1	**Hsinchu**	**1.06**	**330**	*e*P	**Pn**	**13 16 37.1**	**+0.5**
CHN2	**Minshiung**	**1.08**	**253**	*e*P	**Pn**	**13 16 36.8**	**0.0**
CHN2				*e*S	**Sn**	**13 16 52.1**	**+0.4**
WTP	**Ta-pu**	**1.09**	**236**	*e*P	**Pn**	**13 16 36.9**	**-0.1**
WTP				S	**Sn**	**13 16 51.7**	**-0.3**
SBCB	**Hsinchu**	**1.09**	**329**	*e*P	**Pg**	**13 16 37.8**	**+0.8**
SBCB				*e*S	**Sn**	**13 16 52.8**	**+0.8**
HSN	**Hsinchu**	**1.10**	**329**	*e*P	**Pg**	**13 16 37.7**	**+0.4**
HSN				*e*S	**Sn**	**13 16 52.7**	**+0.3**
WRL	**Guolierlin Hig**	**1.12**	**273**	*e*P	**Pn**	**13 16 37.4**	**0.0**
WRL				*e*S	**Sg**	**13 16 52.3**	**+0.1**
TATO	**Taipei**	**1.12**	**355**	P	**Pg**	**13 16 37.6**	**0.0**
TATO	**Taipei**	**1.12**	**355**	S	**Sg**	**13 16 52.4**	**+0.2**
TATO	**Taipei**	**1.12**	**355**	P	**Pn**	**13 16 37.4**	**0.0**
TATO				S	**Sb**	**13 16 51.6**	**-0.2**
WTK	**Tuku**	**1.12**	**262**	*e*P	**Pg**	**13 16 37.8**	**+0.2**
TWA	**Mucha**	**1.12**	**359**	*e*P	**Pb**	**13 16 37.0**	**-0.3**
TWA				*e*S	**Sb**	**13 16 51.8**	**0.0**
TIPB	**Shuangxi**	**1.13**	**10**	*e*P	**Pn**	**13 16 37.7**	**+0.1**
TIPB				*e*S	**Sb**	**13 16 51.7**	**-0.4**
CHY	**Chiayi**	**1.13**	**252**	*e*P	**Pg**	**13 16 37.8**	**0.0**
CHY				*e*S	**Sn**	**13 16 53.5**	**+0.4**
RLNB	**Erlin**	**1.14**	**272**	*e*P	**Sn**	**13 16 37.6**	**0.0**
RLNB				*e*S	**Sn**	**13 16 53.0**	**-0.1**
TWGBT	**Beinan**	**1.14**	**205**	P	**Pb**	**13 16 36.6**	**-0.9**
TWGBT	**Beinan**	**1.14**	**205**	*e*P	**Pb**	**13 16 36.7**	**-0.8**
TWG	**Pinlang**	**1.14**	**205**	*e*P	**Pb**	**13 16 36.6**	**-0.9**
TTN	**Taitung**	**1.17**	**201**	*e*P	**Pg**	**13 16 38.8**	**+0.3**
NCUH	**Zhongli**	**1.17**	**341**	*e*P	**Pg**	**13 16 39.1**	**+0.6**
NCUH				*e*S	**Sn**	**13 16 56.1**	**+2.1**
TWK	**Hsinying**	**1.18**	**240**	*e*P	**Pg**	**13 16 38.5**	**-0.1**
TWK				S	**Sn**	**13 16 54.3**	**+0.1**
LDUT	**Ludao**	**1.18**	**186**	*e*P	**Pn**	**13 16 37.8**	**-0.5**
TAP	**Taipei**	**1.18**	**356**	*e*P	**Pb**	**13 16 38.3**	**0.0**
CHN1	**Nanshi**	**1.19**	**236**	*e*P	**Pg**	**13 16 38.7**	**-0.1**
CHN1				*e*S	**Sg**	**13 16 55.2**	**+0.9**
SNST	**Tainan City**	**1.19**	**238**	*e*P	**Pg**	**13 16 40.0**	**+1.1**
WTCT	**Ta-ch'eng**	**1.21**	**271**	*e*P	**Pg**	**13 16 39.1**	**-0.1**
WTCT				*e*S	**Sg**	**13 16 55.9**	**+1.0**
SGST	**Jiashian**	**1.21**	**231**	*e*P	**Pb**	**13 16 39.0**	**0.0**
SGST				S	**Sn**	**13 16 55.0**	**0.0**
NWF	**Wu-fen Shan**	**1.22**	**8**	P	**Pg**	**13 16 39.6**	**+0.1**
NWF				*e*S	**Sg**	**13 16 55.9**	**+0.4**
WFSB	**Wu-fen Shan**	**1.22**	**8**	*e*P	**Pg**	**13 16 39.8**	**+0.3**
WFSB				*e*S	**Sg**	**13 16 56.0**	**+0.6**
SLGT	**Liugui**	**1.22**	**226**	*e*P	**Pg**	**13 16 39.6**	**0.0**
SLGT				*e*S	**Sg**	**13 16 56.2**	**+0.7**
TWS1	**Kuangyinshan**	**1.25**	**352**	*e*P	**Pg**	**13 16 40.0**	**-0.1**
TWS1				*e*S	**Sg**	**13 16 57.8**	**+1.4**
SXI1	**Grass Mountain**	**1.26**	**11**	*e*P	**Pg**	**13 16 40.1**	**-0.1**
WSF	**Szhu**	**1.28**	**261**	*e*P	**Pb**	**13 16 39.9**	**0.0**
WSF				*e*S	**Sg**	**13 16 57.4**	**+0.2**
YM01	**YM01**	**1.29**	**359**	*e*P	**Pb**	**13 16 40.0**	**-0.1**
TNOU	**National Taiwa**	**1.30**	**7**	*e*P	**Pg**	**13 16 40.7**	**-0.2**
TNOU				*e*S	**Sg**	**13 16 58.7**	**+0.8**
WSL	**Shuilin Townsh**	**1.30**	**256**	*e*P	**Pg**	**13 16 40.8**	**-0.2**
WSL				*e*S	**Sg**	**13 16 59.1**	**+1.2**
ZUZH	**Zhuzihu**	**1.30**	**358**	*e*P	**Pn**	**13 16 39.9**	**-0.1**
ZUZH				*e*S	**Sg**	**13 16 57.9**	**-0.1**
ICHU	**Yijhu**	**1.31**	**248**	*e*P	**Pg**	**13 16 41.1**	**0.0**
ICHU				*e*S	**Sg**	**13 16 58.6**	**+0.6**
NTST	**Danshui**	**1.31**	**354**	*e*P	**Pg**	**13 16 41.0**	**-0.2**
YM08	**YM08**	**1.33**	**360**	*e*P	**Pg**	**13 16 41.4**	**-0.2**
YM08				*e*S	**Sn**	**13 16 58.0**	**+0.1**
ANP	**Anpu**	**1.33**	**357**	*e*P	**Pb**	**13 16 40.9**	**0.0**
JYNG	**Yonagunijimaku**	**1.37**	**64**	P	**Pn**	**13 16 39.9**	**-0.9**
CHN8	**Yiju**	**1.37**	**249**	*e*P	**Pn**	**13 16 41.1**	**+0.3**
CHN8				*e*S	**Sb**	**13 16 59.0**	**+0.1**
CHN3	**Shinhua**	**1.37**	**236**	*e*P	**Pb**	**13 16 41.6**	**0.0**
ECL	**Taimali**	**1.38**	**206**	*e*P	**Pn**	**13 16 40.6**	**-0.4**
SCST	**Cishan**	**1.40**	**227**	*e*P	**Pg**	**13 16 42.8**	**-0.1**
SSHA	**Shanhua**	**1.40**	**240**	*e*P	**Pg**	**13 16 42.8**	**-0.1**
SSHA				*e*S	**Sg**	**13 17 01.7**	**+0.6**
SSD	**Sandimen**	**1.42**	**219**	*e*P	**Pb**	**13 16 42.3**	**+0.1**
SSD				*e*S	**Sg**	**13 17 03.0**	**+0.3**
YOJ	**Yonaguni jima**	**1.43**	**65**	P	**Pn**	**13 16 41.8**	**+0.2**
YOJ	**Yonaguni jima**	**1.43**	**65**	P	**Pn**	**13 16 41.6**	**0.0**
YOJ	**Yonaguni jima**	**1.43**	**65**	P	**Pn**	**13 16 41.4**	**-0.2**
YOJ				*e*S	**Sg**	**13 17 01.3**	**-0.6**
TSMG	**Majia**	**1.44**	**218**	*e*P	**Pb**	**13 16 42.9**	**+0.2**
SCLT	**Jiali**	**1.46**	**243**	*e*P	**Pn**	**13 16 41.8**	**-0.2**
SCLT				*e*S	**Sg**	**13 17 02.3**	**-0.6**
TWM1	**Shoushan**	**1.49**	**227**	*e*P	**Pg**	**13 16 45.3**	**+0.7**
TWM1				*e*S	**Sg**	**13 17 07.2**	**+3.2**
MASBT	**Mashibuluo**	**1.52**	**216**	*e*P	**Pn**	**13 16 43.5**	**+0.5**
MASBT				*e*S	**Sg**	**13 17 04.7**	**-0.3**
TSCK	**Chigu Township**	**1.56**	**243**	*e*P	**Pn**	**13 16 44.0**	**+0.6**
TSCK				*e*S	**Sb**	**13 17 04.9**	**+0.5**
EAST	**Anshuo**	**1.62**	**205**	*e*P	**Pb**	**13 16 45.6**	**-0.2**
TAWH	**Dawu Township**	**1.64**	**204**	*e*P	**Pn**	**13 16 45.2**	**+0.6**
SSPT	**Xinbi**	**1.66**	**215**	*e*P	**Pb**	**13 16 46.8**	**+0.3**
LYUB	**Lan-yu**	**1.84**	**180**	*e*P	**Pn**	**13 16 47.2**	**-0.2**
WDGT	**Dungji**	**1.88**	**252**	*e*P	**Pn**	**13 16 48.6**	**+0.7**
WDGT				*e*S	**Sn**	**13 17 11.5**	**+0.2**
PHUB	**P'eng-hu**	**1.89**	**260**	P	**Pn**	**13 16 48.5**	**+0.5**
PHUB				S	**Sb**	**13 17 13.3**	**-0.6**
PNG	**Penghu**	**1.90**	**262**	*e*P	**Pn**	**13 16 48.0**	**-0.1**
PNG				*e*S	**Sn**	**13 17 12.8**	**+1.0**
SMST	**Manzhou Townsh**	**1.96**	**201**	*e*P	**Pn**	**13 16 49.0**	**+0.1**
HEN	**Hengchun**	**2.00**	**204**	*e*P	**Pb**	**13 16 51.3**	**-1.0**
IRIF	**Iriomote-Funau**	**2.00**	**76**	P	**Pn**	**13 16 49.2**	**-0.3**
HATJ	**Hateruma jima**	**2.03**	**84**	P	**Pn**	**13 16 49.5**	**-0.4**
HATJ				*e*S	**Sn**	**13 17 14.6**	**-0.6**
TWKBT	**Hengchun**	**2.04**	**201**	*e*P	**Pb**	**13 16 52.0**	**-0.9**
VCHM	**Qimei**	**2.09**	**253**	*e*P	**Pn**	**13 16 51.7**	**+1.0**
VCHM				*e*S	**Sb**	**13 17 18.9**	**-0.8**
JKRS	**Kuro-shima**	**2.24**	**80**	P	**Pn**	**13 16 53.5**	**+0.7**
VWUC	**VWUC**	**2.26**	**300**	‖ P	**Pn**	**13 16 52.5**	**-0.6**
VWUC				*e*S	**Sn**	**13 17 20.6**	**-0.4**
JIJ	**Ishigaki jima**	**2.38**	**77**	P	**Pn**	**13 16 54.3**	**-0.5**
PTMZ	**Houxiangcun**	**2.55**	**298**	*e*P	**Pn**	**13 16 56.8**	**-0.3**
PTMZ				*e*S	**Sn**	**13 17 27.1**	**-0.9**
JISG	**Ishigakijimahi**	**2.58**	**73**	P	**Pn**	**13 16 57.0**	**-0.5**
JISG				*e*S	**Sn**	**13 17 27.7**	**-1.1**
MATB	**Ma-tsu**	**2.74**	**327**	*e*P	**Pn**	**13 17 00.1**	**+0.5**
MATB				*e*S	**Sn**	**13 17 31.9**	**-0.7**
JTJ	**Tarama**	**2.94**	**74**	*e*P	**Pn**	**13 17 03.0**	**+0.5**
JTJ				S	**Sn**	**13 17 38.7**	**+1.1**
KNM	**Kinmen**	**2.95**	**282**	*e*P	**Pn**	**13 17 04.3**	**+1.7**
KNMB	**Chin-men Tao**	**3.00**	**282**	*e*P	**Pn**	**13 17 03.4**	**+0.2**
KNMB				*e*S	**Sn**	**13 17 38.0**	**-1.0**
LYJJ	**Jianjiangzhen**	**3.16**	**329**	*e*P	**Pn**	**13 17 06.1**	**+0.7**
MHZQ	**Yeshan**	**3.23**	**314**	*e*P	**Pn**	**13 17 06.9**	**+0.4**
MHZQ				*e*S	**Sn**	**13 17 44.5**	**-0.4**
XPSS	**Dashiqiu**	**3.32**	**338**	*e*P	**Pn**	**13 17 08.1**	**+0.5**
XPSS				*e*S	**Sn**	**13 17 46.8**	**-0.2**
AXDP	**Jialang**	**3.47**	**288**	*e*P	**Pn**	**13 17 09.8**	**+0.1**
ZPLA	**Ao Xicun**	**3.52**	**272**	*e*P	**Pn**	**13 17 10.6**	**+0.1**
ZPLA				*e*S	**Sn**	**13 17 52.2**	**+0.2**
DSXP	**Dongshan**	**3.83**	**269**	*e*P	**Pn**	**13 17 15.1**	**+0.4**
DSXP				*e*S	**Sn**	**13 17 58.9**	**-0.7**
SXFK	**Yanhouchang**	**4.39**	**306**	*e*P	**Pn**	**13 17 22.3**	**-0.1**

IDC 20 13:51:32.2±1.8,6°.55S×125°.17E,h0km,mb3.4/1, mbtmp3.5/3,ML3.5/2,Error ellipse: s-maj=196.4km s-min=29.0km az=61.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.01**	**147**	Pn	Pn	13 55 20.7	+1.6
	0.1nm,0.3s,baz=330,slow=9.3,SNR=6.5 1.1nm,1.1s						
ASAR	**Alice Springs**	**18.98**	**155**

comp=Z,4.9nm,0.8s
ULN Ulaanbaatar 51.30 338 P P 14 11 53.4 +0.2
SONM Songino Array 51.52 338 P P 14 11 55.8 +0.9
comp=Z,0.8nm,0.6s,baz=148,slow=7.9,SNR=5.6
comp=Z,0.8nm,0.6s
SONM Songino Array 51.52 338 P P 14 11 53.9 -0.9
PETK Petropavlovsk- 55.45 18 LR LR 14 32 40.4
comp=Z,16nm,21.8s,baz=201,slow=32
WMQ Urumqi 58.10 323 *e*P P 14 12 48.3 +5.8
WMQ pmax pmax
comp=Z,32nm,0.9s
MKAR Makanchi Array 62.91 323 P P 14 13 16.3 +1.2
comp=Z,4.1nm,0.7s,baz=116,slow=8.0,SNR=45
comp=Z,4.1nm,0.7s
MKAR Makanchi Array 62.91 323 P P 14 13 15.8 +0.7
MAKZ Makanchi 63.10 323 P 14 13 16.7 +0.3
KSH2 Kashi 64.10 313 P P 14 13 24.8 +1.5
KSH2 pmax pmax
comp=Z,3.0nm,1.0s
ZALV Zalesovo Beam 65.41 331 P P 14 13 31.7 +0.3
comp=Z,1.5nm,0.6s,baz=104,slow=6.3,SNR=8.6
comp=Z,1.5nm,0.6s
KURK Kurchatov 66.94 326 P 14 13 40.2 -1.0
KURBB Kurchatov Arra 66.95 326 P P 14 13 42.3 +1.0
comp=Z,5.3nm,0.8s,baz=118,slow=5.8,SNR=46
comp=Z,5.3nm,0.8s
KKAR Karatay Array 69.03 316 P 14 13 55.1 +0.5
RAR Rarotonga 69.59 113 LR LR 14 38 20.4
comp=Z,26nm,21.3s,baz=42,slow=31
BVAR Borovoye Array 72.54 326 P P 14 14 16.9 +1.2
comp=Z,2.9nm,0.6s,baz=115,slow=6.7,SNR=18
comp=Z,2.9nm,0.6s
BORK Borovoye 72.59 326 P 14 14 16.2 +0.3
C19K Lookout Ridge 80.77 20 P 14 15 02.5 +0.5
C19K IAmb IAmb 14 15 05.7
comp=Z,4.9nm,1.0s
E19K Redstone River 81.05 22 P P 14 15 04.7 +1.2
E19K IAmb IAmb 14 15 07.1
comp=Z,4.1nm,1.0s
E22K Anaktuvuk Pass 83.21 21 P P 14 15 14.9 +0.1
E22K IAmb IAmb 14 15 22.8
comp=Z,5.1nm,1.1s
ILAR Eielson Array 84.54 25 P P 14 15 20.6 -0.9
comp=Z,1.0nm,0.8s,baz=273,slow=4.9,SNR=9.5
comp=Z,1.0nm,0.8s
KBZ Khabaz 88.92 314 P P 14 15 44.6 +1.2
comp=Z,0.5nm,0.4s,baz=45,slow=5.7,SNR=1.7
comp=Z,0.5nm,0.4s
MODS Modra-Piesok 105.55 321 *e*PDIFF **Pdif 14 16 59.6 +0.9**

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*IDC **20** 14:10:05.3±0.6, 1˚.43S×103˚.52W, h0km, mb4.5/12, mbtmp4.5/12, MS3.8/22, Error ellipse: s-maj=23.9km s-min=17.2km az=70.0*
*NEIC **20** 14:10:06.2±2.0, 1˚.4S±0˚.1×103˚.4W±0˚.1, h10km±1km, mb4.8/253, Error ellipse: s-maj=23.3km s-min=18.6km az=259.0*
*GCMT **20** 14:10:09.2±0.4, 1˚.21S±0˚.02×103˚.36W±0˚.04, h18km, MW4.8/102, Moment Tensor Solution. s25,c35; s102,c121; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-2.38±.14; Mθθ1.75±.09; Mϕϕ0.62±.10; Mrθ-0.14±.22; Mθϕ-0.75±.06; Mrϕ0.43±.32; Best double couple: M0 2.29500×10^16^ NP1:ϕs290.00000°, δ41.00000°, λ-100.00000°. NP2:ϕs124.00000°, δ49.00000°, λ-81.00000°. Principal axes: T 2.1490, Plg4.0000°, Azm207.0000°; N 0.2910, Plg7.0000°, Azm298.0000°; P -2.4410, Plg82.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 14:10:06.1±0.5, 1˚.35S±0˚.09×103˚.35W±0˚.10, h10km, n429, σ1§10/307, mb4.8/126, MS3.8/23, 1D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**19.37**	**14**	P	P	**14 14 28.8**	**-3.5**
CMIG	**Matias Romero**	**20.14**	**24**	P	Pn	14 14 42.3	-0.1
	4.3nm,1.0s,baz=204,slow=8.7,SNR=4.8						
CMIG				LR	LR	14 20 40.7	
	comp=Z,584nm,20.8s,baz=172,slow=31						
	4.3nm,1.0s						
APG	**El Apazote**	**20.65**	**38**	P	Pn	14 14 49.5	+0.8
	1.2nm,0.9s,baz=220,slow=18,SNR=10						
CCIG	**Comitan**	**20.72**	**32**	P	P	**14 14 46.0**	**-1.2**
CCIG				IAmb	IAmb	14 14 58.3	
	comp=Z,119nm,1.6s						
MTO3	**Montecristo**	**20.90**	**41**	P	P	**14 14 47.6**	**-1.4**
JTS	**Las Juntas de**	**21.66**	**57**	LR	LR	14 20 51.5	
	comp=Z,408nm,21.9s,baz=242,slow=30						
JTS	**Las Juntas de**	**21.66**	**57**	P	P	**14 14 56.9**	**-0.2**
TGUH	**Tegucigalpa,Un**	**22.09**	**46**	P	P	**14 15 01.3**	**-0.6**
PETF	**Flores**	**22.50**	**36**	P	P	**14 15 07.4**	**+1.4**
PETF				IAmb	IAmb	14 15 12.8	
	comp=Z,35nm,0.8s						
ZAIG	**Zacatecas**	**23.98**	**2**	P	P	**14 15 18.5**	**-2.8**
ZAIG				IAmb	IAmb	14 15 28.5	
	comp=Z,37nm,1.2s						
OTAV	**Otavalo**	**24.95**	**87**		P	**14 15 29.5**	**-1.0**
OTAV				IAmb	IAmb	14 15 36.1	
	comp=Z,20nm,1.2s						
ATAH	**Atahualpa**	**25.53**	**104**	LR	LR	14 23 03.1	
	comp=Z,70nm,20.2s,baz=311,slow=30						
LPIG	**La Paz**	**26.18**	**345**	LR	LR	14 23 10.8	
	comp=Z,148nm,21.5s,baz=160,slow=30						
HPIG		**28.21**	**356**	P	P	**14 15 58.1**	**-1.3**
HPIG				IAmb	IAmb	14 16 04.8	
	comp=Z,21nm,1.4s						
ROSC	**El Rosal**	**29.65**	**78**	LR	LR	14 25 50.1	
	comp=Z,323nm,21.3s,baz=257,slow=32						
TX31	**Lajitas Ar. Si**	**30.51**	**359**		P	**14 16 19.7**	**0.0**
TXAR	**Lajitas Array**	**30.51**	**359**	P	P	**14 16 22.1**	**+2.3**
	comp=Z,3.0nm,0.9s,baz=184,slow=15,SNR=8.3						
TXAR				PcP	PcP	**14 19 20.3**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=142,slow=0.8,SNR=4.1						
TXAR				LR	LR	14 26 59.0	
	comp=Z,345nm,22.0s,baz=178,slow=33						
	comp=Z,3.0nm,0.9s						
TXAR	**Lajitas Array**	**30.51**	**359**	P	P	**14 16 19.2**	**-0.6**
TXAR				PcP	PcP	**14 19 19.7**	**+0.8**
DRIO	**Del Rio**	**30.71**	**5**	P	P	**14 16 20.3**	**-1.1**
DRIO				IAmb	IAmb	14 16 27.1	
	comp=Z,9.7nm,1.0s						
HNDO	**Hondo**	**30.95**	**7**	P	P	**14 16 22.5**	**-1.0**
SAND	**Sanderson**	**31.15**	**2**	P	P	**14 16 25.0**	**-0.4**
SAND				IAmb	IAmb	14 16 31.0	
	comp=Z,18nm,1.1s						
JCT	**Junction City**	**31.83**	**6**	P	P	**14 16 30.0**	**-1.3**
JCT				IAmb	IAmb	14 16 36.4	
	comp=Z,14nm,0.8s						
MNHN	**Monahans**	**32.51**	**1**	P	P	**14 16 37.4**	**+0.1**
MNHN				IAmb	IAmb	14 16 41.7	
	comp=Z,13nm,1.4s						
BRDY	**Brady**	**32.72**	**7**		P	**14 16 35.9**	**-3.2**
BRDY				IAmb	IAmb	14 16 43.8	
	comp=Z,19nm,1.3s						
GDL2	**Guadalupe Moun**	**33.38**	**358**		P	**14 16 42.2**	**-2.8**
121A	**Cookes Peak, D**	**33.96**	**353**		P	**14 16 46.4**	**-3.7**
SDV	**Santo Domingo**	**34.15**	**72**	P	P	**14 16 54.9**	**+2.9**
	comp=Z,9.4nm,1.0s,baz=236,slow=6.2,SNR=6.8						
SDV				LR	LR	14 29 18.5	
	comp=Z,134nm,18.2s,baz=248,slow=34						
	comp=Z,9.4nm,1.0s						
SDV	**Santo Domingo**	**34.15**	**72**	P	P	**14 16 50.4**	**-1.6**
SDV				IAmb	IAmb	14 16 55.8	
	comp=Z,16nm,1.2s						
DUN6	**Lazy B Ranch**	**34.15**	**351**	P	P	**14 16 50.9**	**-0.8**
PLPT	**Palo Pinto**	**34.31**	**8**	P	P	**14 16 51.6**	**-1.2**
MSTX	**Muleshoe**	**35.13**	**1**	P	P	**14 16 58.6**	**-1.5**
WTFS	**Witchita Falls**	**35.23**	**7**		P	**14 16 60.0**	**-0.9**
GLA	**Glamis**	**35.89**	**343**	P	P	**14 17 04.5**	**-2.1**
GLA				IAmb	IAmb	14 17 10.0	
	comp=Z,16nm,1.0s						
ANMO	**Albuquerque**	**36.22**	**356**	LR	LR	14 29 59.2	
	comp=Z,91nm,21.9s,baz=176,slow=33						
ANMO	**Albuquerque**	**36.22**	**356**		P	**14 17 08.9**	**-0.6**
ANMO				IAmb	IAmb	14 17 14.2	
	comp=Z,16nm,1.6s						
ANMO	**Albuquerque**	**36.22**	**356**	P	P	**14 17 09.3**	**-0.2**
ANMO				IAmb	IAmb	14 17 14.2	
	comp=Z,15nm,1.6s						
W35A	**Tecumseh**	**36.81**	**9**	P	P	**14 17 11.2**	**-3.2**
PFO	**Pinyon Flats O**	**36.90**	**342**	LR	LR	14 28 46.2	
	comp=Z,76nm,19.2s,baz=128,slow=30						
PFO	**Pinyon Flats O**	**36.90**	**342**	P	P	**14 17 12.8**	**-2.5**
PFO				IAmb	IAmb	14 17 21.0	
	comp=Z,16nm,1.1s						
IRM	**Iron Mountain**	**37.02**	**344**	IAmb	IAmb	14 17 19.5	
	comp=Z,22nm,1.5s						
W13A	**Hualapai Mount**	**37.58**	**346**		P	**14 17 21.1**	**-0.1**
OK052	**Battle Ridge R**	**37.65**	**9**	IAmb	IAmb	14 17 26.0	
	comp=Z,31nm,1.1s						
LPAZ	**La Paz**	**37.73**	**115**	P	P	**14 17 25.4**	**+2.3**
	comp=Z,1.9nm,0.6s,baz=296,slow=9.1,SNR=5.5						
	comp=Z,1.9nm,0.6s						
LPAZ	**La Paz**	**37.73**	**115**	P	P	**14 17 22.3**	**-0.9**
BFSC	**Mount Baldy Ra**	**37.87**	**341**	IAmb	IAmb	14 17 29.2	
	comp=Z,22nm,1.3s						
MWC	**Mount Wilson**	**37.99**	**340**	IAmb	IAmb	14 17 27.7	
	comp=Z,13nm,0.9s						
T25A	**Trinidad**	**38.30**	**359**	IAmb	IAmb	14 17 33.0	
	comp=Z,36nm,1.5s						
HHAR	**Hobbs**	**38.45**	**12**	IAmb	IAmb	14 17 32.8	
	comp=Z,18nm,1.2s						
MVCO	**Mesa Verde**	**38.66**	**353**	IAmb	IAmb	14 17 33.3	
	comp=Z,21nm,1.1s						
SDCO	**Great Sand Dun**	**38.95**	**357**	P	P	**14 17 32.7**	**-0.1**
S22A	**4UR Ranch, Cre**	**39.03**	**356**	IAmb	IAmb	14 17 39.3	
	comp=Z,22nm,1.3s						
H03N2	**Juan Fernandez**	**39.29**	**147**	T	T	14 59 29.9	
	baz=322,slow=78,SNR=3.7						
H03N1	**Juan Fernandez**	**39.30**	**147**	T	T	14 59 26.6	
	baz=322,slow=78,SNR=46						
H03N3	**Juan Fernandez**	**39.30**	**147**	T	T	14 59 26.2	
	baz=322,slow=78,SNR=49						
PV01	**Paradox Valley**	**39.58**	**354**	IAmb	IAmb	14 17 43.6	
	comp=Z,20nm,1.3s						
PV20	**West Nyswonger**	**39.83**	**353**	P	P	**14 17 38.8**	**-1.2**
S39A	**Bolivar**	**39.94**	**12**	IAmb	IAmb	14 17 45.3	
	comp=Z,38nm,1.3s						
V48A	**Smith Brothers**	**39.99**	**21**	IAmb	IAmb	14 17 46.7	
	comp=Z,19nm,1.1s						
GO02	**Mina Guanaco**	**40.27**	**129**	P	P	**14 17 41.9**	**-2.1**
GO02				IAmb	IAmb	14 18 51.5	
	comp=Z,22nm,1.4s						
CGM3	**Cape Girardeau**	**40.49**	**17**	IAmb	IAmb	14 17 50.0	
	comp=Z,21nm,1.1s						
MLPR	**Magueyes Islan**	**40.56**	**60**	P	P	**14 17 45.8**	**-0.3**
ISCO	**Idaho Springs**	**41.00**	**357**	IAmb	IAmb	14 17 53.1	
	comp=Z,31nm,1.7s						
TKL	**Tuckaleechee C**	**41.10**	**25**	LR	LR	14 36 42.6	
	comp=Z,63nm,18.4s,baz=186,slow=39						
P17A	**Butcher Ranch,**	**41.19**	**351**	IAmb	IAmb	14 17 57.7	
	comp=Z,25nm,1.5s						
O20A	**White River Ci**	**41.53**	**354**	IAmb	IAmb	14 17 59.8	
	comp=Z,29nm,1.2s						
P38A	**Dawn**	**41.76**	**11**	IAmb	IAmb	14 18 00.1	
	comp=Z,26nm,1.3s						
NVAR	**Mina Array Bea**	**41.91**	**342**	P	P	**14 17 59.6**	**+2.3**
	comp=Z,5.0nm,1.1s,baz=168,slow=8.7,SNR=20						
NVAR				PcP	PcP	**14 19 54.8**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=166,slow=4.9,SNR=3.8						
NVAR				LR	LR	14 30 53.0	
	comp=Z,67nm,21.7s,baz=118,slow=30						
	comp=Z,5.0nm,1.1s						
OGNE	**Ogallala**	**42.11**	**1**	IAmb	IAmb	14 18 01.7	
	comp=Z,28nm,1.0s						
PNTR	**Pine Nut**	**42.92**	**341**	IAmb	IAmb	14 18 09.2	
	comp=Z,14nm,0.8s						
CVS	**Carmen Viney**	**43.25**	**338**	IAmb	IAmb	14 18 10.8	
	comp=Z,14nm,0.9s						
ELK	**Elko**	**43.27**	**347**	LR	LR	14 33 02.8	
	comp=Z,114nm,19.2s,baz=90,slow=32						
HWUT	**Hardware Ranch**	**43.40**	**351**	IAmb	IAmb	14 18 12.4	
	comp=Z,14nm,1.1s						
MNRC	**McLaughlin Min**	**43.72**	**338**	IAmb	IAmb	14 18 15.2	
	comp=Z,11nm,0.9s						
SUTB	**Sutter Butte**	**43.79**	**339**	IAmb	IAmb	14 18 15.1	
	comp=Z,15nm,0.8s						
K22A	**Casper**	**43.89**	**357**	IAmb	IAmb	14 18 18.1	
	comp=Z,24nm,1.2s						
ORV	**Oroville**	**43.98**	**340**	IAmb	IAmb	14 18 17.3	
	comp=Z,14nm,1.0s						
HOPS	**Hopland Field**	**44.05**	**338**	IAmb	IAmb	14 18 17.9	
	comp=Z,32nm,1.4s						
BW06	**Boulder Array**	**44.27**	**353**	IAmb	IAmb	14 18 18.7	
	comp=Z,23nm,1.4s						
PD31	**Pinedale Array**	**44.27**	**353**	IAmb	IAmb	14 18 18.7	
	comp=Z,23nm,1.4s						
PDAR	**Pinedale Array**	**44.27**	**353**	P	P	**14 18 17.8**	**+1.5**
	comp=Z,7.7nm,1.0s,baz=166,slow=7.2,SNR=36						
	comp=Z,7.7nm,1.0s						
PDAR	**Pinedale Array**	**44.27**	**353**		P	**14 18 13.9**	**-2.3**
KCPM	**Cahto Peak**	**44.85**	**338**	IAmb	IAmb	14 18 24.3	
	comp=Z,15nm,1.0s						
LOHW	**Long Hollow**	**45.23**	**353**	IAmb	IAmb	14 18 26.4	
	comp=Z,18nm,1.4s						
RSSD	**Black Hills**	**45.27**	**359**		P	**14 18 24.8**	**+0.6**
RSSD				IAmb	IAmb	14 18 26.9	
	comp=Z,19nm,1.0s						
ECSD	**EROS Data Cent**	**45.28**	**7**		P	**14 18 22.8**	**-1.3**
FXWY	**Fox Creek**	**45.31**	**352**	IAmb	IAmb	14 18 28.3	
	comp=Z,15nm,1.4s						
KMRM	**Mail Ridge**	**45.36**	**338**	IAmb	IAmb	14 18 28.4	
	comp=Z,18nm,1.1s						
MOOW	**Moose Ponds**	**45.38**	**352**	IAmb	IAmb	14 18 27.5	
	comp=Z,12nm,1.4s						
KHBM	**Hayfork Bally**	**45.56**	**339**	IAmb	IAmb	14 18 29.8	
	comp=Z,8.3nm,1.0s						
KMPM	**Mount Pierce**	**45.69**	**338**	IAmb	IAmb	14 18 30.8	
	comp=Z,11nm,0.9s						
M03C	**McCloud**	**45.72**	**340**	IAmb	IAmb	14 18 29.8	
	comp=Z,11nm,0.8s						
HLID	**Hailey**	**45.80**	**349**	IAmb	IAmb	14 18 31.4	
	comp=Z,7.0nm,0.9s						
PTLB	**Pontes e Lacer**	**45.80**	**110**		P	**14 18 29.7**	**+1.2**
KHMM	**Horse Mountain**	**45.94**	**338**	IAmb	IAmb	14 18 32.8	
	comp=Z,8.7nm,0.9s						
MFID	**Camas Ranch**	**45.95**	**347**	IAmb	IAmb	14 18 32.3	
	comp=Z,6.2nm,0.7s						
M02C	**Callahan**	**46.08**	**340**	IAmb	IAmb	14 18 33.1	
	comp=Z,9.9nm,0.8s						
YMP	**Mirror Lake Pl**	**46.29**	**353**	IAmb	IAmb	14 18 44.9	
	comp=Z,17nm,1.2s						
YMR	**Madison River**	**46.31**	**352**	IAmb	IAmb	14 18 36.6	
	comp=Z,17nm,1.2s						
YBH	**Yreka Blue Hor**	**46.33**	**340**	LR	LR	14 36 05.8	
	comp=Z,6.2nm,19.7s,baz=304,slow=34						
YBH	**Yreka Blue Hor**	**46.33**	**340**		P	**14 18 30.6**	**-1.9**
BCYI	**Bear Canyon**	**46.34**	**350**	IAmb	IAmb	14 18 35.9	
	comp=Z,11nm,1.0s						
YHB	**Horse Butte**	**46.43**	**352**	IAmb	IAmb	14 18 36.5	
	comp=Z,11nm,1.0s						
YHL	**Hebgen Lake**	**46.52**	**352**	IAmb	IAmb	14 18 37.5	
	comp=Z,15nm,1.0s						
YNE	**Yellowstone No**	**46.53**	**353**	IAmb	IAmb	14 18 39.0	
	comp=Z,10nm,1.1s						
RLMT	**Red Lodge**	**46.57**	**354**	IAmb	IAmb	14 18 37.2	
	comp=Z,12nm,1.0s						
L04D	**Klamath Falls**	**46.63**	**341**	IAmb	IAmb	14 18 37.2	
	comp=Z,11nm,1.0s						
K05A	**Summer Lake**	**46.64**	**342**	IAmb	IAmb	14 18 40.7	
	comp=Z,12nm,1.0s						
N53A	**Lisbon**	**46.70**	**24**	P	P	**14 18 36.0**	**+0.7**
L02F	**Cave Junction**	**46.98**	**339**	IAmb	IAmb	14 18 39.9	
	comp=Z,5.6nm,0.8s						
DLMT	**Dillon**	**47.23**	**351**	IAmb	IAmb	14 18 42.1	
	comp=Z,14nm,1.4s						
J05D	**Fort Rock, OR**	**47.25**	**342**	IAmb	IAmb	14 18 45.3	
	comp=Z,11nm,1.2s						
K02D	**Willamette Mer**	**47.52**	**340**	IAmb	IAmb	14 18 44.8	
	comp=Z,11nm,1.0s						
PLID	**Pearl Lake**	**47.58**	**348**	IAmb	IAmb	14 18 44.2	
	comp=Z,6.7nm,0.9s						
SSPA	**Standing Stone**	**47.80**	**26**	P	P	**14 18 44.8**	**+1.0**
WIFE	**Three Sisters-**	**48.13**	**342**	IAmb	IAmb	14 18 49.4	
	comp=Z,11nm,1.0s						
PPT	**Papeete**	**48.18**	**248**	LR	LR	14 33 18.3	
	comp=Z,115nm,21.8s,baz=100,slow=29						
I05D	**Terrebonne, OR**	**48.24**	**343**	IAmb	IAmb	14 18 50.2	
	comp=Z,13nm,1.2s						
H04A	**Detroit Lake**	**48.81**	**342**	IAmb	IAmb	14 18 53.7	
	comp=Z,14nm,0.9s						
G06A	**Carlson Farm,**	**48.86**	**344**	IAmb	IAmb	14 18 54.4	
	comp=Z,8.5nm,1.1s						
F07A	**Phinny Hill Vi**	**49.27**	**345**	IAmb	IAmb	14 19 00.7	
	comp=Z,15nm,1.2s						
EGMT	**Eagleton**	**49.49**	**354**	IAmb	IAmb	14 18 59.0	
	comp=Z,15nm,1.0s						
HAWA	**Hanford**	**49.63**	**345**	IAmb	IAmb	14 19 00.6	
	comp=Z,8.4nm,0.8s						
E07A	**Sunnyside**	**49.87**	**345**	IAmb	IAmb	14 19 02.6	
	comp=Z,14nm,1.3s						
WAH2	**Wahluke Slope**	**49.98**	**345**	IAmb	IAmb	14 19 03.0	
	comp=Z,12nm,1.0s						
EPH	**Ephrata**	**50.55**	**346**	IAmb	IAmb	14 19 09.7	
	comp=Z,11nm,1.2s						
C09A	**Chrisman Ranch**	**50.65**	**347**	IAmb	IAmb	14 19 08.0	
	comp=Z,29nm,1.9s						
SADO	**Sadowa**	**50.72**	**22**	LR	LR	14 40 51.3	
	comp=Z,87nm,18.6s,baz=162,slow=36						
NEW	**Newport**	**50.84**	**348**	IAmb	IAmb	14 19 08.9	
	comp=Z,14nm,1.1s						
ULM	**Lac du Bonnet**	**51.80**	**6**	P	P	**14 19 14.3**	**+0.2**
	comp=Z,17nm,0.9s,baz=190,slow=8.4,SNR=24						
ULM				LR	LR	14 40 27.1	
	comp=Z,100nm,19.9s,baz=193,slow=35						
	comp=Z,17nm,0.9s						
FFC	**Flin Flon**	**55.89**	**1**		P	**14 19 43.9**	**-0.1**
FFC				IAmb	IAmb	14 19 47.9	
	comp=Z,12nm,1.2s						
E62A	**Clayton Lake**	**56.26**	**27**	IAmb	IAmb	14 19 49.7	
	comp=Z,17nm,1.1s						
BDFB	**Brasilia**	**56.35**	**108**	P	P	**14 19 49.3**	**+1.2**
	comp=Z,5.6nm,0.7s,baz=284,slow=8.6,SNR=8.0						
	comp=Z,5.6nm,0.7s						
BDFB	**Brasilia**	**56.35**	**108**	P	P	**14 19 47.5**	**-0.6**
FCC	**Fort Churchill**	**60.38**	**6**		P	**14 20 16.1**	**+0.9**
V35K	**Ketchikan**	**61.05**	**342**	P	P	**14 20 21.0**	**+1.1**
	baz=148						
CRAG	**Craig**	**61.65**	**341**	P	P	**14 20 25.8**	**+1.9**
	baz=146						
T35M	**Bob Quinn**	**62.06**	**344**	P	P	**14 20 28.5**	**+1.7**
	baz=150						
WRAK	**Wrangell Islan**	**62.19**	**342**	P	P	**14 20 28.6**	**+1.0**
	baz=147						
T33K	**Petersburg**	**62.71**	**342**	P	P	**14 20 32.3**	**+1.2**
	baz=147						
S34M	**Telegraph Cree**	**63.10**	**344**	P	P	**14 20 34.4**	**+0.7**
	baz=149						
DLBC	**Dease Lake**	**63.26**	**345**	P	P	**14 20 36.0**	**+1.2**
	baz=150						
SCHQ	**Schefferville**	**63.53**	**23**	P	P	**14 20 37.0**	**+0.3**
	comp=Z,6.3nm,0.9s,baz=243,slow=4.8,SNR=4.1						
SCHQ				LR	LR	14 48 04.9	
	comp=Z,84nm,18.6s,baz=180,slow=36						
	comp=Z,6.3nm,0.9s						
SCHQ	**Schefferville**	**63.53**	**23**	P	P	**14 20 36.6**	**0.0**
SIT	**Sitka**	**63.65**	**341**	P	P	**14 20 38.4**	**+1.1**
	baz=144						
S32K	**Killisnoo**	**63.75**	**342**	P	P	**14 20 38.4**	**+0.4**
	baz=145						
YKA	**Yellowknife Ar**	**64.24**	**354**	P	P	**14 20 41.5**	**+0.3**
	comp=Z,7.7nm,0.9s,baz=169,slow=5.8,SNR=90						
YKA				LR	LR	14 48 16.4	
	comp=Z,108nm,19.2s,baz=114,slow=36						
	comp=Z,7.7nm,0.9s						
Q32M	**Nakina River**	**64.31**	**344**	P	P	**14 20 42.9**	**+1.0**
	baz=148						
R33M	**Jennings River**	**64.33**	**345**	P	P	**14 20 43.0**	**+1.0**
	baz=149						
R32K	**Eaglecrest**	**64.39**	**342**	P	P	**14 20 42.9**	**+0.7**
	baz=145						
WTLY	**Watson Lake, Y**	**64.41**	**346**	P	P	**14 20 43.4**	**+1.0**
	baz=152						
S31K	**Pelican**	**64.67**	**341**	P	P	**14 20 44.8**	**+0.8**
	baz=144						
P32M	**Atlin**	**65.25**	**344**	P	P	**14 20 49.3**	**+1.5**
	baz=147						
P33M	**Teslin, Yukon**	**65.52**	**344**	P	P	**14 20 50.7**	**+1.0**
	baz=148						
WRGLY	**Wrigley**	**66.15**	**350**	P	P	**14 20 54.6**	**+1.1**
	baz=158						
N32M	**Quiet Lake**	**66.38**	**345**	P	P	**14 20 56.3**	**+1.2**
	baz=148						
WHY	**Whitehorse**	**66.46**	**344**	P	P	**14 20 57.0**	**+1.3**
	baz=146						
P30M	**Million Dollar**	**66.63**	**342**	P	P	**14 20 57.6**	**+0.8**
	baz=143						
O30N	**Mendenhall**	**66.90**	**343**	P	P	**14 20 59.1**	**+0.7**
	baz=144						
O29M	**Mount Kennedy**	**67.27**	**342**	P	P	**14 21 01.5**	**+0.6**
	baz=142						
HYT	**Haines Junctio**	**67.36**	**343**	P	P	**14 21 02.3**	**+0.9**
	baz=143						
M31M	**Drury Creek, Y**	**67.61**	**345**	P	P	**14 21 04.1**	**+1.2**
	baz=146						
PINM	**Pinnacle**	**67.64**	**341**	P	P	**14 21 04.2**	**+1.0**
	baz=140						
YUK6	**Outpost Mounta**	**67.71**	**342**	P	P	**14 21 05.0**	**+1.2**
	baz=142						
YUK4	**Talbot Arm**	**68.11**	**343**	P	P	**14 21 07.9**	**+1.6**
	baz=142						
O28M	**Mount Upton**	**68.14**	**342**	P	P	**14 21 07.6**	**+1.1**
	baz=140						
MESA	**MESA**	**68.27**	**340**	P	P	**14 21 08.4**	**+1.1**
	baz=138						
YUK8	**Steele Glacier**	**68.40**	**342**	P	P	**14 21 09.3**	**+1.1**
	baz=141						
M30M	**Minto, Yukon**	**68.56**	**344**	P	P	**14 21 09.9**	**+1.0**
	baz=144						
CTG	**Chitna Glacier**	**68.66**	**341**	P	P	**14 21 10.8**	**+1.2**
	baz=139						
M29M	**Somme Creek**	**68.92**	**343**	P	P	**14 21 12.3**	**+1.1**
	baz=142						
KAIM	**Kayak Island**	**68.94**	**339**	P	P	**14 21 12.0**	**+0.8**
	baz=136						
YUK3	**Moose Creek**	**68.99**	**342**	P	P	**14 21 12.4**	**+0.6**
	baz=140						
CRQE	**Cirque**	**69.07**	**340**	P	P	**14 21 12.1**	**-0.1**
	baz=137						
MAYO	**Mayo, Yukon**	**69.15**	**345**	P	P	**14 21 13.5**	**+1.0**
	baz=145						
L29M	**L29M**	**69.36**	**344**	P	P	**14 21 15.2**	**+1.3**
	baz=143						
MCARA	**McCarthy VSAT**	**69.51**	**341**	P	P	**14 21 15.9**	**+1.1**
	baz=137						
BVCY	**Beaver Creek**	**69.61**	**342**	P	P	**14 21 16.2**	**+0.8**
	baz=140						
BMRM	**Bremner River**	**69.74**	**340**	P	P	**14 21 17.0**	**+0.8**
	baz=136						
K29M	**Barlow Dome**	**69.78**	**345**	IAmb	IAmb	14 21 18.7	
	comp=Z,12nm,0.9s						
K29M	**Barlow Dome**	**69.78**	**345**	P	P	**14 21 17.3**	**+0.8**
	baz=144						

SCM	Sheep Creek Mo baz=133	71.29 340	P	P	14 21 26.4	+0.7
M23K	Glacier View baz=133	71.40 339	P	P	14 21 27.1	+0.8
KNK	Knik Glacier baz=132	71.41 339	P	P	14 21 26.6	+0.3
PAX	Paxson baz=135	71.46 341	P	P	14 21 27.0	+0.3
HOM	Homer baz=128	71.48 336	P	P	14 21 26.9	+0.1
G31M	Satah River baz=148	71.54 348	P	P	14 21 27.3	+0.4
SML	Sawmill baz=132	71.62 339	P	P	14 21 27.7	0.0
RC01	Rabbit Creek A baz=131	71.66 338	P	P	14 21 28.0	+0.2
I28M	Miner Creek comp=Z,11nm,1.4s	71.69 345	IAmb	IAmb	14 21 59.1	
I28M	Miner Creek baz=142	71.69 345	P	P	14 21 29.1	+1.1
SCRK	Sand Creek baz=137	71.72 342	P	P	14 21 28.9	+0.6
RIDG	Independent Ri baz=136	71.81 342	P	P	14 21 29.2	+0.4
Q19K	Cape Douglas, baz=126	71.86 335	P	P	14 21 29.4	+0.2
F31M	Tsiigehtchic comp=Z,12nm,1.3s	71.87 348	IAmb	IAmb	14 21 30.9	
F31M	Tsiigehtchic baz=148,SNR=5.6	71.87 348	P	P	14 21 29.6	+0.6
WAT6	Susitna Watana baz=133	71.94 340	P	P	14 21 30.0	+0.3
C36M	Paulatuk baz=158	71.95 352	P	P	14 21 30.2	+0.8
J26L	Joseph Creek comp=Z,9.1nm,1.1s	71.98 343	IAmb	IAmb	14 21 31.6	
J26L	Joseph Creek baz=138	71.98 343	P	P	14 21 30.0	+0.2
CAPN	Captain Cook N baz=129	71.99 338	P	P	14 21 29.6	-0.2
G30M	tAoh Zraii Nji baz=146	72.02 347	P	P	14 21 30.8	+0.9
P19K	Oil Pt baz=127	72.12 336	P	P	14 21 31.2	+0.4
K24K	Donnelly Dome baz=135	72.15 342	P	P	14 21 31.6	+0.8
DHY	Denali Highway baz=134	72.16 341	P	P	14 21 32.2	+1.2
M22K	Willow baz=130	72.23 339	P	P	14 21 32.0	+0.8
I27K	Kandik River comp=Z,9.6nm,1.0s	72.25 344	IAmb	IAmb	14 21 33.4	
I27K	Kandik River baz=140	72.25 344	P	P	14 21 32.2	+0.7
SUA	Susitna One baz=130	72.27 338	P	P	14 21 32.0	+0.3
R17L	Mt. Peulik Vol baz=123	72.31 333	P	P	14 21 32.2	+0.3
G29M	Pine Creek baz=144	72.38 346	P	P	14 21 33.1	+1.0
WAT1	Susitna Watana baz=132	72.38 340	P	P	14 21 32.8	+0.5
CHNA	Chernabura Isl baz=120	72.40 330	P	P	14 21 32.9	+0.5
F30M	Barrier River comp=Z,11nm,1.1s	72.44 348	IAmb	IAmb	14 21 34.1	
F30M	Barrier River baz=146	72.44 348	P	P	14 21 33.7	+1.3
Q17K	Contact Creek baz=124	72.45 334	P	P	14 21 32.9	+0.1
INK	Inuvik comp=Z,14nm,1.1s	72.56 349	IAmb	IAmb	14 21 35.1	
INK	Inuvik baz=149,SNR=10	72.56 349	P	P	14 21 34.4	+1.2
J25K	Salcha River, baz=136	72.60 342	P	P	14 21 34.3	+0.8
SPCR	Spurr Chakacha baz=128	72.66 338	P	P	14 21 34.3	+0.3
CUT	Chulitna baz=130	72.70 339	P	P	14 21 34.6	+0.6
H27K	Steamboat Moun baz=140	72.71 345	P	P	14 21 34.9	+0.8
P18K	Big Mountain, baz=125	72.80 335	P	P	14 21 35.4	+0.6
R16K	Pilot Point baz=122	72.83 333	P	P	14 21 35.3	+0.5
O19K	Port Alsworth baz=126	72.89 336	P	P	14 21 36.0	+0.9
SKT	Skwentna baz=129	72.89 338	P	P	14 21 35.9	+0.7
HDA	Harding Lake baz=134	72.94 342	P	P	14 21 36.0	+0.5
Q16K	King Salmon baz=123	73.01 334	P	P	14 21 36.5	+0.5
O18K	Koktuh Hills baz=125	73.05 335	P	P	14 21 36.2	0.0
SDPT	Sand Point baz=119	73.10 330	P	P	14 21 36.6	+0.1
MCK	McKinley baz=132	73.12 341	P	P	14 21 37.1	+0.6
IL31	comp=Z,8.7nm,0.8s	73.17 342	IAmb	IAmb	14 21 38.0	
ILAR	Eielson Array comp=Z,6.1nm,0.8s,baz=152,slow=5.5,SNR=73 comp=Z,6.1nm,0.8s	73.17 342	P	P	14 21 36.9	+0.1
ILAR	Eielson Array	73.17 342		P	14 21 36.7	-0.1
G27K	Doyon Strip baz=140	73.19 345	P	P	14 21 37.9	+1.0
P17K	Kvichak River baz=124	73.20 335	P	P	14 21 38.0	+0.9
PRP	Porcupine Dome comp=Z,12nm,0.9s	73.29 343	IAmb	IAmb	14 21 39.3	
PRP	Porcupine Dome baz=136	73.29 343	P	P	14 21 38.2	+0.5
N19K	Bonanza Creek baz=126	73.31 337	P	P	14 21 38.0	+0.1
WRH	Wood River Hil WRH comp=Z,17nm,1.2s	73.34 341	IAmb	P IAmb	14 21 38.9 14 21 39.9	+1.0
F28M	Old Crow baz=142	73.37 346	P	P	14 21 38.9	+1.0
TRF	Thorofare Moun baz=131	73.39 340	P	P	14 21 38.7	+0.3
M20K	Styx River baz=128	73.43 338	P	P	14 21 38.9	+0.4
E29M	Blow River baz=144	73.54 347	P	P	14 21 39.9	+0.9
COLA	College baz=133	73.54 342	P	P	14 21 38.9	-0.1
KTH	Kantishna Hill comp=Z,12nm,1.0s	73.67 340	IAmb	IAmb	14 21 41.2	
PPLA	Purkeypile baz=129	73.70 339	P	P	14 21 40.3	+0.1
NEA2	Nenana baz=132	73.74 341	P	P	14 21 40.4	+0.3
P16K	Nushagak River baz=122	73.79 334	P	P	14 21 41.0	+0.5
O17K	Koliganek Bris baz=123	73.80 335	P	P	14 21 41.1	+0.5
N18K	Kilae Creek baz=125	73.80 336	P	P	14 21 41.0	+0.3
G26K	Porcupine Rive baz=138	73.85 345	P	P	14 21 41.7	+0.9
BPAW	Bear Paw Mtn. baz=130	74.05 340	P	P	14 21 43.0	+1.0
E28M	Babbage River baz=142	74.08 347	P	P	14 21 42.9	+0.8
O16K	Kokwok River B baz=122	74.13 334	P	P	14 21 43.2	+0.6
I23K	Minto, Yukon-K comp=Z,10nm,1.1s	74.20 342	IAmb	IAmb	14 21 44.8	
I23K	Minto, Yukon-K baz=132	74.20 342	P	P	14 21 43.7	+0.9
H24K	Noodor Dome	74.21 343		P	14 21 42.8	-0.2
H24K	Noodor Dome baz=134	74.21 343	P	P	14 21 43.5	+0.5
E27K	Coleen River comp=Z,8.2nm,1.2s	74.23 346	IAmb	IAmb	14 21 44.9	
E27K	Coleen River baz=140	74.23 346	P	P	14 21 43.6	+0.6
M18K	Stony River baz=125	74.24 337	P	P	14 21 43.3	+0.2
N17K	Nushagak Hills baz=123	74.25 335	P	P	14 21 43.3	+0.1
L19K	White Mountain baz=126	74.26 338	P	P	14 21 43.2	-0.1
CHUM	Lake Minchumin baz=129	74.36 340	P	P	14 21 44.0	+0.2
FALS	False Pass baz=116	74.37 329	P	P	14 21 43.2	-0.8
D28M	Stokes Point baz=143	74.48 348	P	P	14 21 45.2	+0.9
F26K	Sheenjek River baz=138,SNR=6.0	74.50 345	P	P	14 21 44.9	+0.3
A36M	Sachs Harbour comp=Z,10nm,0.9s	74.55 353	IAmb	IAmb	14 21 46.4	
A36M	Sachs Harbour baz=158	74.55 353	P	P	14 21 46.0	+1.3
K20K	Telida comp=Z,13nm,0.9s	74.66 339	IAmb	IAmb	14 21 46.6	
K20K	Telida baz=127	74.66 339	P	P	14 21 45.7	+0.1
O15K	Ungalikthiuk R baz=121	74.67 334	P	P	14 21 45.8	+0.1
G24K	Hadweenzic Riv baz=134	74.69 343	P	P	14 21 47.0	+1.3
F25K	Christian Rive comp=Z,6.7nm,0.8s	74.81 344	IAmb	IAmb	14 21 48.8	
F25K	Christian Rive baz=136,SNR=8.8	74.81 344	P	P	14 21 47.0	+0.6
M17K	Holitna River baz=123	74.83 336	P	P	14 21 47.2	+0.6
N16K	Nishlik Lake baz=122	74.89 335	P	P	14 21 47.2	+0.2
D27M	Malcolm River baz=141	74.90 347	P	P	14 21 47.6	+0.7
L18K	Granite Mounta baz=124	74.99 337	P	P	14 21 47.4	-0.1
I21K	Tanana baz=129	75.07 341	P	P	14 21 48.1	+0.3
E25K	Arctic Village baz=136,SNR=8.2	75.18 345	P	P	14 21 48.9	+0.4
M16K	Timber Creek baz=122	75.25 335	P	P	14 21 49.4	+0.4
H22K	Ishtalitna Cre comp=Z,7.7nm,1.0s	75.33 342	IAmb	IAmb	14 21 50.9	
H22K	Ishtalitna Cre baz=130,SNR=6.0	75.33 342	P	P	14 21 49.8	+0.4
O14K	Tigyukauivet M baz=119	75.36 333	P	P	14 21 49.8	+0.2
G23K	Bananza Creek baz=132	75.44 343	P	P	14 21 51.0	+0.9
L17K	Donlin baz=123	75.57 337	P	P	14 21 50.7	-0.1
J19K	Poorman baz=126	75.60 339	P	P	14 21 51.7	+0.7
UNV	Unalaska Valle baz=113	75.60 327	P	P	14 21 50.9	-0.3
H21K	Melozitna Rive baz=129	75.63 341	P	P	14 21 52.1	+0.9
J18K	Innoko River baz=124	75.70 338	P	P	14 21 52.3	+0.7
M15K	Kasigluk River baz=120	75.81 335	P	P	14 21 53.0	+0.7
L16K	Owhat River baz=122	75.82 336	P	P	14 21 53.2	+0.9
C27K	Jago River baz=138	75.82 346	P	P	14 21 53.6	+1.4
COLD	Coldfoot baz=132,SNR=8.2	75.84 343	P	P	14 21 53.3	+1.0
N14K	Kuskokwak Cree baz=119	75.87 334	P	P	14 21 53.2	+0.7
K17K	Iditarod baz=123	75.89 337	P	P	14 21 53.3	+0.7
E24K	Your Creek baz=133	75.92 344	P	P	14 21 53.7	+0.9
RES	Resolute Bay	76.10 2		P	14 21 54.1	+0.5
H20K	Anotleneega Mo baz=127	76.22 340	P	P	14 21 55.9	+1.4
E23K	Chandalar baz=132	76.23 344	P	P	14 21 55.7	+1.1
D25K	Kavik River comp=Z,8.6nm,0.9s	76.25 346	IAmb	IAmb	14 21 56.5	
D25K	Kavik River baz=136	76.25 346	P	P	14 21 55.7	+1.1
C26K	Camden Bay baz=137	76.32 346	P	P	14 21 56.4	+1.4
M14K	Bethel baz=119	76.39 334	P	P	14 21 56.2	+0.7
G21K	Nilakaket baz=128,SNR=6.8	76.39 342	P	P	14 21 55.7	+0.2
GCSA	Galena City Sc baz=125	76.48 339	P	P	14 21 57.2	+1.3
NIKH	Nikolski High baz=111	76.58 326	P	P	14 21 56.3	-0.5
L15K	Ungalak Mounta baz=120	76.64 335	P	P	14 21 58.3	+1.4
D24K	Happy Valley baz=133	76.75 345	P	P	14 21 58.9	+1.4
F21K	Alatna River comp=Z,13nm,1.1s	76.82 342	IAmb	IAmb	14 22 00.5	
F21K	Alatna River baz=128	76.82 342	P	P	14 21 59.0	+1.1
M13K	Dall Lake baz=118	76.83 334	P	P	14 21 58.8	+0.8
E22K	Anaktuvuk Pass baz=130	76.90 343	P	P	14 21 59.3	+0.9
K15K	Wolf Creek Mou baz=120	76.95 336	P	P	14 21 59.5	+0.7
L14K	Kuka Creek baz=118	76.98 335	P	P	14 21 59.6	+0.8
J16K	Anvik River baz=121	77.08 337	P	P	14 22 00.3	+0.9
C24K	Franklin Bluff comp=Z,15nm,1.1s	77.11 345	IAmb	IAmb	14 22 01.2	
C24K	Franklin Bluff baz=134	77.11 345	P	P	14 22 00.9	+1.5
D23K	Nanushuk River comp=Z,12nm,1.2s	77.12 344	IAmb	IAmb	14 22 02.2	
D23K	Nanushuk River baz=131	77.12 344	P	P	14 22 00.9	+1.4
H18K	Honhosa River baz=123	77.23 339	P	P	14 22 00.7	+0.4
G19K	Purcell Mounta baz=125,SNR=7.2	77.34 340	P	P	14 22 01.5	+0.7
F20K	Avaraart Lake comp=Z,10nm,0.9s	77.42 341	IAmb	IAmb	14 22 03.8	
F20K	Avaraart Lake baz=126	77.42 341	P	P	14 22 02.6	+1.4
I17K	Unalakleet baz=121	77.42 338	P	P	14 22 01.4	+0.2
SFJD	Kangerlussuaq comp=Z,76nm,18.1s,baz=194,slow=37	77.50 19	LR	LR	14 57 39.1	
D22K	Ayikyak River baz=129	77.62 344	P	P	14 22 03.8	+1.4
H17K	Teranme Mounta baz=122	77.67 339	P	P	14 22 03.3	+0.6
E21K	Killik River comp=Z,10nm,1.0s	77.72 343	IAmb	IAmb	14 22 04.8	
E21K	Killik River baz=128	77.72 343	P	P	14 22 03.6	+0.7
G18K	Tagagawik comp=Z,6.8nm,1.1s	77.74 340	IAmb	IAmb	14 22 05.9	
G18K	Tagagawik baz=123	77.74 340	P	P	14 22 03.8	+0.8
F19K	Shaleruckik Mo baz=124	77.96 341	P	P	14 22 05.4	+1.2
J14K	Nanvaranak Lak baz=118	78.00 336	P	P	14 22 05.0	+0.5
K13K	Kusilvak Mount baz=117	78.09 335	P	P	14 22 05.8	+0.8
M11K	Mekoryuk baz=115	78.09 333	P	P	14 22 05.5	+0.4
E19K	Redstone River comp=Z,7.5nm,0.8s	78.13 341	IAmb	IAmb	14 22 07.5	
E19K	Redstone River baz=125	78.13 341	P	P	14 22 06.2	+1.0
G17K	Kiwalik Mounta baz=121	78.23 339	P	P	14 22 07.2	+1.4
P08K	Saint George I baz=111	78.25 329	P	P	14 22 07.0	+1.0
E20K	Nigu River baz=126,SNR=5.5	78.27 342	P	P	14 22 06.9	+0.8
H16K	Elim baz=119	78.38 338	P	P	14 22 07.8	+1.2
C21K	Knifeblade Rid baz=127	78.39 343	P	P	14 22 08.1	+1.5
F18K	Selawik baz=122	78.46 340	P	P	14 22 08.0	+1.1
B21K	Ikpikpuk River comp=Z,7.0nm,1.1s	78.62 344	IAmb	IAmb	14 22 09.9	
B21K	Ikpikpuk River baz=128	78.62 344	P	P	14 22 09.2	+1.4
D20K	Etivluk River baz=126	78.66 343	P	P	14 22 09.1	+1.0
G16K	Koyuk River baz=120	78.79 339	P	P	14 22 10.1	+1.2
SPIA	Saint Paul Isl baz=111	78.81 329	P	P	14 22 09.4	+0.3
F17K	Baldwin Pennin comp=Z,7.7nm,1.1s	78.92 340	IAmb	IAmb	14 22 11.6	
F17K	Baldwin Pennin baz=121	78.92 340	P	P	14 22 10.8	+1.3
D19K	Kuna River comp=Z,10nm,1.1s	78.99 342	IAmb	IAmb	14 22 12.2	
D19K	Kuna River baz=124	78.99 342	P	P	14 22 10.9	+0.9
E18K	Tukpahlearik C comp=Z,9.9nm,1.0s	79.21 341	IAmb	IAmb	14 22 13.7	
E18K	Tukpahlearik C baz=122	79.21 341	P	P	14 22 12.0	+0.9
G15K	Niukluk baz=118,SNR=7.1	79.23 338	P	P	14 22 12.4	+1.1
ANM	Nome comp=Z,10nm,1.1s	79.55 337	IAmb	IAmb	14 22 15.6	
ANM	Nome baz=116,SNR=7.0	79.55 337	P	P	14 22 14.3	+1.3
C19K	Lookout Ridge comp=Z,12nm,1.1s	79.78 342	IAmb	IAmb	14 22 17.7	
C19K	Lookout Ridge baz=123,SNR=9.0	79.78 342	P	P	14 22 15.9	+1.6
F15K	North Star Dit comp=Z,9.5nm,1.3s	79.78 338	IAmb	IAmb	14 22 17.9	
F15K	North Star Dit baz=117,SNR=5.5	79.78 338	P	P	14 22 16.0	+1.7
C18K	Utukok River comp=Z,7.3nm,0.9s	80.03 342	IAmb	IAmb	14 22 18.0	
C18K	Utukok River baz=121	80.03 342	P	P	14 22 16.7	+1.1
D17K	Noatak River baz=119	80.17 340	P	P	14 22 17.7	+1.4
A21K	Barrow baz=126	80.18 345	P	P	14 22 17.5	+1.3
RDOG	Red Dog Mine baz=119	80.28 341	P	P	14 22 18.1	+1.1
F14K	Arctic Creek baz=116	80.31 338	P	P	14 22 18.2	+1.1
C17K	DeLong Mountai baz=119	80.58 341	P	P	14 22 19.7	+1.1
TNA	Tin City baz=114	80.95 338	P	P	14 22 21.9	+1.3
URZ	Urewera comp=Z,49nm,20.8s,baz=102,slow=30	80.95 232	LR	LR	14 49 55.0	
RTZ	RTZ comp=Z,10nm,0.8s	81.08 231	P IAmb	P IAmb	14 22 20.6 14 23 32.9	-1.4
C16K	Lisburne Hills comp=Z,8.9nm,0.9s	81.19 341	IAmb	IAmb	14 22 24.9	
C16K	Lisburne Hills baz=117	81.19 341	P	P	14 22 23.7	+1.9
GAMB	Gambell baz=110	81.78 335	P	P	14 22 26.8	+1.8
SUMG	Summit	83.94 16		P	14 22 37.1	+0.6
BORG	Borgarnes comp=Z,39nm,19.0s,baz=327,slow=34	87.80 25	LR	LR	15 00 15.0	
QSPA	South Pole Qui comp=Z,13nm,1.1s,baz=114,slow=4.3,SNR=7.0 comp=Z,13nm,1.1s	88.69 180	P	P	14 22 59.4	-0.3
QSPA	South Pole Qui	88.69 180	P	P	14 22 59.4	-0.3
H11N3	WAKE ISLAND Hy baz=92,slow=74,SNR=26	90.20 290	T	T	16 02 51.2	
H11N2	WAKE ISLAND Hy baz=92,slow=74,SNR=28	90.22 290	T	T	16 02 52.3	
H11N1	WAKE ISLAND Hy baz=92,slow=74,SNR=26	90.22 290	T	T	16 02 51.1	
H11S2	WAKE ISLAND Hy baz=94,slow=74,SNR=13	90.37 288	T	T	16 03 05.9	
H11S1	WAKE ISLAND Hy baz=94,slow=74,SNR=7.5	90.37 288	T	T	16 03 14.1	
H11S3	WAKE ISLAND Hy baz=94,slow=74,SNR=11	90.39 288	T	T	16 03 09.6	
SPITS	Spitsbergen Ar comp=Z,89nm,18.9s,baz=232,slow=36	97.18 10	LR	LR	15 07 36.5	
ASAR	Alice Springs comp=Z,0.7nm,0.7s,baz=126,slow=2.1,SNR=9.4	119.11 242	PKP	PKPdf	14 28 56.2	-0.1
ASAR	Alice Springs	119.11 242	PKPdf	PKiKP	14 28 56.5	+0.2
WRA	Warramunga Arr comp=Z,2.0nm,0.8s,baz=98,slow=2.0,SNR=18	119.66 246	PKP	PKiKP	14 28 57.4	-0.1
WRA	Warramunga Arr	119.66 246	PKPdf	PKPdf	14 28 55.6	-1.8
BRTR	Keskin Array B comp=Z,2.0nm,0.8s,baz=230,slow=1.0,SNR=9.0	125.36 40	PKP	PKiKP	14 29 09.0	+0.6
SONM	Songino Array comp=Z,0.5nm,0.7s,baz=293,slow=1.1,SNR=3.7	127.02 335	PKP	PKiKP	14 29 12.2	+0.8
ZALV	Zalesovo Beam comp=Z,0.9nm,0.6s,baz=20,slow=2.2,SNR=5.0	127.14 354	PKP	PKPdf	14 29 10.3	-0.4
KBZ	Khabaz comp=Z,1.5nm,0.9s,baz=0.0,slow=0.0,SNR=6.9	128.22 31	PKP	PKiKP	14 29 15.3	+1.6
BVAR	Borovoye Array comp=Z,1.3nm,0.6s,baz=304,slow=2.4,SNR=7.9	128.24 5	PKP	PKiKP	14 29 14.6	+1.1
HHC	Hu-ho-hao-te	129.58 326	*eP*	PKPdf	14 29 11.0	-5.0
NJ2	Nanjing	129.88 312	*eP*	PKPdf	14 29 15.3	-1.3
NJ2	NJ2 comp=Z,4.0nm,0.7s		pmax	pmax		
KURBB	Kurchatov Arra comp=Z,2.1nm,1.2s,baz=6.0,slow=1.7,SNR=6.7	130.88 358	PKP	PKiKP	14 29 18.6	-0.3
MKAR	Makanchi Array comp=Z,0.2nm,0.4s,baz=183,slow=24,SNR=6.5	134.47 355	PKP	PKPdf	14 29 24.6	-0.4
WMQ	Hutmqi	136.58 348	*e*PKP	PKPdf	14 29 28.8	-0.2
PZH	PanZhiHua	145.25 318	PKPbc	PKPdf	14 29 45.1	-0.1
KMI2	Kunming	145.44 315	∥PKPbc	PKPab	14 29 46.3	+0.5
CHTO	Chiang Mai	152.09 310	PKPdf	PKPdf	14 29 56.7	+0.4
CM31	Chiang Mai Arr	152.29 309	PKPbc	PKiKP	14 30 04.7	+1.0
CMAR	Chiang Mai Arr comp=Z,1.8nm,1.1s,baz=343,slow=1.3,SNR=7.6	152.29 309	PKP	PKPdf	14 29 57.2	+0.6
CMAR	CMAR comp=Z,7.2nm,0.9s,baz=33,slow=1.8,SNR=39		PKPbc	pPKPbc	14 30 04.8	-0.8

IDC ***20*** *14:12:50.0±3.0,27.68N×57.03E,h0km,mb3.6/6, mbtmp3.6/6,MS3.7/1,Error ellipse: s-maj=69.3km s-min=27.8km az=155.0*

TEH ***20*** *14:12:54.5,28.11N×56.88E,h6km±121km,ML3.3, Presumed earthquake*

DSN ***20*** *14:12:55.9±1.2,27.87N×57.38E,h10km,ML3.0/7,Error ellipse: s-maj=43.8km s-min=8.9km az=124.0*

ISC 20 14:12:55.6±0.8, 27.90N±0.04×56.94E±0.05, h24km, n27, σ2s11/28, mb3.5/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	Bandar-abas	0.57	218	Pg	Pn	14 13 09.6	+1.3
KHNJ	Kahnooj	0.68	86	Pg	Pn	14 13 09.9	+0.2
GENO	Geno	0.84	234	Pg	Pn	14 13 13.3	+1.1
NGRK	Negar Kerman	1.75	354	Pg	Pn	14 13 25.1	+0.3
KBAM	BAM	1.81	47	Pg	Pn	14 13 26.8	+1.4
SHME	Shamm	1.98	201	P	Pb	14 13 31.1	+0.2
SHME				S	Sb	14 13 59.7	+4.6
CHMN	Cheshme madani	2.02	15	Pn	Pn	14 13 29.7	+1.2
BANOM	Banah	2.05	196	P	Pb	14 13 32.0	-0.2
BANOM				S	Sb	14 13 59.3	+1.9
LAR1	LAR	2.29	265	Pn	Pb	14 13 35.7	-0.5
KHGB	Koh Gabri	2.50	351	Pn	Pn	14 13 36.5	+1.5
KRM1	Kerman Provinc	2.61	6	Pn	Pn	14 13 37.8	+1.3
MSFE	Esma-Masafi	2.63	196	P	Pb	14 13 39.3	-2.7
MDH	Madha	2.66	193	P	Pb	14 13 40.2	-2.3
UOSS	Minazif	3.02	193	Pn	Pb	14 13 48.0	-0.7
NAZ	Nazwa, Dubai	3.12	202	P	Pb	14 13 47.1	-3.3
ASHO	Ashiyiah	3.30	194	P	Pb	14 13 49.4	-4.1
BSRN	Basiran	4.47	25	Pn	Pn	14 14 04.4	+2.3
SRVN	Saravan	4.87	95	Pn	Pn	14 14 12.2	+4.7
IRAM	Ramesheh	5.55	316	Pn	Pn	14 14 18.1	+1.1
ZNGN	Zangian	6.75	310	Pn	Pn	14 14 34.6	+1.2
BRTR	Keskin Array B 0.6nm,0.7s,baz=122,slow=11,SNR=3.0 0.6nm,0.7s	22.60	307	P	P	14 17 53.9	-0.7
BVAR	Borovoye Array 0.7nm,0.6s,baz=218,slow=9.4,SNR=4.0 0.7nm,0.6s	27.01	18	P	P	14 18 35.0	-0.6
MKAR	Makanchi Array 0.4nm,0.8s,baz=220,slow=8.7,SNR=2.9 0.4nm,0.8s	27.41	40	P	P	14 18 37.9	-1.4
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=252,slow=8.9,SNR=4.0 0.4nm,0.3s	33.08	30	P	P	14 19 28.9	-0.3
FINES	FINESS Array B 1.0nm,0.7s,baz=137,slow=9.4,SNR=4.5 1.0nm,0.7s	39.35	337	P	P	14 20 23.1	+0.3
TORD	Torodi Ar. Bea 0.3nm,0.4s,baz=60,slow=7.9,SNR=4.1 0.3nm,0.4s	53.37	266	P	P	14 22 12.1	-1.4
LEM	Lembang comp=Z,67nm,19.9s,baz=207,slow=37	59.87	117	LR	LR	14 49 19.4	

*IDC **20** 14:28:03.8±2.4,29°.84N×130°.77E,h64km±21km,mb3.4/8, mbtmp3.7/13,Error ellipse: s-maj=34.4km s-min=21.3km az=134.0*
*JMA **20** 14:28:03.5±0.1,30°.0N±0°.4×130°.6E±0°.4,h49km,MV3.4/29, NEAR AMAMI-OSHIMA ISLAND*
ISC 20 14:28:02.7±1.1,29°.87N±0°.06×130°.64E±0°.08,h48km±9km, n24,σ1°.946/32,mb3.5/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYAK	**Yakushimahirau**	**0.39**	**344**	*i* P	**Pn**	**14 28 12.3**	**-0.3**
JYAK				S	**Sn**	**14 28 18.8**	**-0.7**
JMTN	**Minamitane**	**0.58**	**23**	*i* P	**Pn**	**14 28 14.8**	**0.0**
JMTN				S	**Sn**	**14 28 23.5**	**0.0**
JNN	**Nakanoshima**	**0.66**	**268**	*i* P	**Pn**	**14 28 16.6**	**+0.7**
JNN				*e*S	**Sn**	**14 28 26.3**	**+0.9**
JKC	**Kuchinoerabu**	**0.70**	**327**	*i* P	**Pn**	**14 28 16.2**	**-0.2**
JTN	**Tanegashima 3**	**0.84**	**21**	*i* P	**Pn**	**14 28 18.4**	**+0.1**
JTSR	**Tashiro 2**	**1.32**	**11**	P	**Pn**	**14 28 25.0**	**+0.2**
JTSR				S	**Sn**	**14 28 41.0**	**-0.3**
JTAJ	**Takarajima**	**1.44**	**241**	P	**Pn**	**14 28 28.3**	**+1.9**
JSU	**Suzuyama**	**1.64**	**355**	*i* P	**Pn**	**14 28 28.9**	**-0.3**
JSU				*e*S	**Sn**	**14 28 48.2**	**-1.0**
JZK	**Kikaishima**	**1.65**	**201**	P	**Pn**	**14 28 32.2**	**+2.9**
JAM	**Amami Oshima**	**1.71**	**212**	P	**Pn**	**14 28 32.4**	**+2.3**
JNAR	**Kushima--Naru**	**1.74**	**18**	P	**Pn**	**14 28 31.4**	**+0.9**
JNAR				*e*S	**Sn**	**14 28 52.8**	**+1.2**
JNU	**Nakatsue**	**3.25**	**4**	P	**Pn**	**14 28 52.5**	**+1.2**
	28nm,0.9s,baz=6.3,slow=15,SNR=29						
JNU				S	**Sn**	**14 29 28.5**	**-0.2**
	13nm,0.6s,baz=283,slow=21,SNR=3.5						
JOW	**Kunigami**	**3.67**	**215**	P	**Pn**	**14 28 58.2**	**+1.2**
	5.5nm,0.3s,baz=87,slow=21,SNR=13						
JOW				S	**Sn**	**14 29 34.4**	**-4.6**
	12nm,0.3s,baz=36,slow=27,SNR=3.7						
KSRS	**Korea Array**	**7.90**	**344**	P	**Pn**	**14 29 56.6**	**+1.6**
	0.7nm,0.5s,baz=168,slow=12,SNR=6.2						
MJAR	**Matsushiro Arr**	**9.19**	**42**	P	**Pn**	**14 30 14.1**	**+1.3**
	1.1nm,0.6s,baz=239,slow=14,SNR=4.8						
ASAJ	**Asahikawa**	**17.11**	**30**	P	**Pn**	**14 31 57.7**	**-0.7**
	4.0nm,0.8s,baz=225,slow=8.6,SNR=1.7						
HILR	**Hailar Array B**	**21.33**	**340**	P	**P**	**14 32 44.6**	**-1.0**
	1.3nm,0.5s,baz=146,slow=10,SNR=2.0						
	1.3nm,0.5s						
LZDM	**Lanzhou Array**	**23.38**	**292**	P	**P**	**14 33 09.3**	**+1.7**
	0.6nm,0.3s,baz=106,slow=11,SNR=1.4						
	0.6nm,0.3s						
SONM	**Songino Array**	**25.87**	**321**	P	**P**	**14 33 30.8**	**+0.8**
	0.9nm,0.6s,baz=141,slow=11,SNR=6.5						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**40.83**	**308**	P	**P**	**14 35 40.1**	**+0.5**
	0.4nm,0.6s,baz=89,slow=11,SNR=8.1						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**43.80**	**313**	P	**P**	**14 36 03.8**	**+0.2**
	0.2nm,0.4s,baz=93,slow=8.4,SNR=2.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**49.06**	**316**	P	**P**	**14 36 45.3**	**+0.4**
	1.0nm,0.5s,baz=98,slow=11,SNR=7.3						
	1.0nm,0.5s						
ILAR	**Eielson Array**	**60.24**	**29**	P	**P**	**14 38 05.1**	**-0.6**
	0.3nm,0.8s,baz=282,slow=7.5,SNR=4.5						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**70.75**	**330**	P	**P**	**14 39 12.1**	**-1.5**
	6.6nm,1.2s,baz=76,slow=4.9,SNR=3.4						
	6.6nm,1.2s						

*AUST **20** 15:02:45.7±0.3,20°.S±3°×113°.4E±°,h10km,ML3.1/4,Error ellipse: s-maj=7.2km s-min=6.4km az=40.9*
*IDC **20** 15:02:47.1±1.9,20°.07S×134°.72E,h0km,mbtmp3.5/2, ML3.5/2,Error ellipse: s-maj=11.3km s-min=4.1km az=106.0*
ISC 20 15:02:45.2±0.8,19°.84S±0°.06×133°.92E±0°.05,h12km,n16, σ1°.67/24,Northern Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**0.41**	**105**	Pg	**Pg**	**15 02 54.1**	**+0.8**
	16nm,0.3s,baz=110,slow=31,SNR=1083						
WRA				Lg	Lg	15 02 59.8	
	69nm,0.3s,baz=328,slow=32,SNR=25						
WRAB	**Tennant Creek**	**0.42**	**104**	P	**Pg**	**15 02 53.8**	**+0.3**
WRAB				S	**Sg**	**15 02 58.3**	**-0.7**
WR8	**Warramunga Arr**	**0.56**	**102**	P	**Pg**	**15 02 56.4**	**+0.3**
WR0	**Warramunga Arr**	**0.60**	**102**	P	**Pg**	**15 02 57.1**	**+0.2**
ASAR	**Alice Springs**	**3.81**	**180**	Pn	**Pn**	**15 03 46.9**	**+3.1**
	3.4nm,0.3s,baz=9.2,slow=6.9,SNR=160						
ASAR				Sn	**Sn**	**15 04 28.8**	**+0.2**
	1.8nm,0.3s,baz=2.6,slow=28,SNR=5.1						
ASAR				Lg	Lg	15 04 41.0	
	6.1nm,0.3s,baz=3.6,slow=31,SNR=7.1						
	3.4nm,0.3s						
QIS	**Mount Isa**	**5.39**	**99**	P	**Pn**	**15 04 07.6**	**+2.2**
	comp=Z,8.0nm,2.9s,comp=Z,0.0nm						
QIS				S	**Sn**	**15 05 06.2**	**-1.3**
KNRA	**Kununurra**	**6.42**	**309**	P	**Pn**	**15 04 22.7**	**+3.0**
	comp=Z,66nm,2.3s,comp=Z,0.2nm						
KNRA				S	**Sn**	**15 05 31.9**	**-1.0**
KDU	**Kakadu**	**7.24**	**349**	P	**Pn**	**15 04 32.1**	**+1.2**
	comp=Z,17nm,2.5s,comp=Z,0.1nm						
KDU				S	**Sn**	**15 05 51.4**	**-1.7**
WRKA	**Warakurna**	**7.34**	**224**	P	**Pn**	**15 04 32.7**	**+0.4**
	comp=Z,3.3nm,2.3s,comp=Z,0.0nm						
WRKA				S	**Sn**	**15 05 53.2**	**-2.3**
MTN	**Manton Dam**	**7.45**	**339**	P	**Pn**	**15 04 34.1**	**+0.4**
	comp=Z,54nm,2.5s,comp=Z,0.2nm						
MTN				S	**Sn**	**15 05 55.8**	**-2.5**
OOD	**Oodnadatta**	**8.09**	**169**	P	**Pn**	**15 04 43.6**	**+1.1**
OOD				S	**Sn**	**15 06 12.1**	**-1.8**
MULG	**Mulgathing**	**10.40**	**179**	P	**Pn**	**15 05 14.0**	**-0.3**
	comp=Z,5.3nm,1.7s,comp=Z,0.0nm						
LCRK	**Leigh Creek**	**11.26**	**161**	P	**Pn**	**15 05 25.4**	**-0.6**
	comp=Z,4.4nm,2.9s						
FORT	**Forrest**	**12.11**	**205**	P	**Pn**	**15 05 36.9**	**-0.8**
	comp=Z,6.0nm,0.5s						
YAPP	**Yappala Statio**	**12.61**	**163**	P	**Pn**	**15 05 43.9**	**-0.6**
STKA	**Stephens Creek**	**13.83**	**152**	Pn	**Pn**	**15 05 58.1**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=332,slow=17,SNR=5.0						
STKA				Sn	Sn	15 08 23.9	-11
	comp=Z,0.2nm,0.3s,baz=44,slow=18,SNR=2.2						
	comp=Z,1.2nm,0.6s						

*ISK **20** 15:16:04.6,39°.00N×27°.87E,h2km,ML3.8/25*
*AFAD **20** 15:16:05.3,38°.98N×27°.87E,h7km±2km,MW3.6*
*THE **20** 15:16:06.6,39°.N±2°×2°.8E±°,h8km±9km,M3.7/9,MLh3.7/9*
ISC 20 15:16:05.4±0.8,38°.98N±0°.02×27°.87E±0°.02,h10km±6km, n81,σ0°.963/106,17C-5D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.11**	**201**	P	**Pg**	**15 16 08.1**	**0.0**
AKHS				S	**Sg**	**15 16 10.7**	**+0.5**
AKS	**Akhisar**	**0.11**	**201**	Pg	**Pg**	**15 16 07.6**	**-0.6**
AKS				Sg	**Sg**	**15 16 10.2**	**0.0**
GORD	**Gordes-Manisa**	**0.26**	**107**	Pg	**Pg**	**15 16 10.6**	**0.0**
GORD				Sg	**Sg**	**15 16 15.0**	**+0.9**
GOMA	**Golmarmara-Man**	**0.28**	**172**	Pg	**Pg**	**15 16 11.2**	**+0.2**
GOMA				Sg	**Sb**	**15 16 16.3**	**-0.9**
SOMA	**Soma-Manisa**	**0.31**	**304**	Pg	**Pg**	**15 16 11.3**	**-0.3**
SOMA				Sg	**Sg**	**15 16 16.7**	**+0.9**
KTTT	**Salihli**	**0.34**	**149**	P	**Pg**	**15 16 12.3**	**0.0**
KTTT				S	**Sg**	**15 16 17.1**	**+0.3**
STEP	**BALIKESIR_Sava**	**0.41**	**344**	P	**Pg**	**15 16 13.3**	**-0.1**
STEP				S	**Sg**	**15 16 19.9**	**+1.0**
CAMT	**Merkez**	**0.49**	**242**	P	**Pb**	**15 16 15.8**	**-0.3**
CAMT				S	**Sb**	**15 16 22.8**	**-0.5**
ZEDA	**zmir-Bergama**	**0.61**	**269**	P	**Pg**	**15 16 17.7**	**+0.4**
ZEDA				S	**Sb**	**15 16 26.5**	**-0.4**
BALB	**Balikesir**	**0.66**	**1**	Pg	**Pg**	**15 16 17.8**	**-0.3**
BALB				Sg	**Sb**	**15 16 27.8**	**-0.3**
DEMI	**Demirci**	**0.67**	**85**	P	**Pg**	**15 16 18.4**	**0.0**
ODEM	**Odemis-Izmir**	**0.73**	**167**	Pg	**Pg**	**15 16 19.4**	**0.0**
IZMD	**zmir-Dikili-**	**0.73**	**270**	P	**Pb**	**15 16 20.0**	**-0.2**
IZMD				S	**Sb**	**15 16 29.8**	**-0.5**
MANT	**Manisa**	**0.73**	**132**	P	**Pg**	**15 16 19.2**	**-0.4**
MANT				S	**Sb**	**15 16 30.7**	**+0.2**
BKES	**Balkesir-Mer**	**0.75**	**4**	P	**Pg**	**15 16 19.8**	**-0.1**
BKES				S	**Sg**	**15 16 30.0**	**+0.3**
DKL	**Dikili**	**0.75**	**277**	Pg	**Pg**	**15 16 20.0**	**+0.1**
KULA	**Kula-Manisa**	**0.78**	**127**	Pg	**Pg**	**15 16 19.9**	**-0.5**
BUHA	**Balikesir, Bur**	**0.80**	**310**	P	**Pg**	**15 16 21.0**	**+0.1**
DUVT	**Torbali**	**0.83**	**203**	P	**Pb**	**15 16 21.5**	**-0.3**
DUVT				S	**Sb**	**15 16 32.6**	**-0.4**
IZMR	**zmir-demi**	**0.85**	**175**	P	**Pb**	**15 16 21.9**	**-0.3**
IZMR				S	**Sg**	**15 16 33.0**	**+0.2**
DST	**Dursunbey**	**0.85**	**43**	Pg	**Pg**	**15 16 21.9**	**+0.1**
BAGT	**Foa**	**0.86**	**248**	P	**Pb**	**15 16 22.6**	**+0.3**
BAGT				S	**Sb**	**15 16 34.3**	**+0.4**
SIMA	**Simav-Kutahya**	**0.88**	**83**	Pg	**Pg**	**15 16 22.4**	**+0.1**
SMAA	**Simav-Kutahya**	**0.88**	**82**	Pg	**Pg**	**15 16 22.4**	**+0.1**
YAYO	**Edremit-Balk**	**0.88**	**316**	Pg	**Pg**	**15 16 22.1**	**-0.2**
BLCB	**Balcova**	**0.88**	**227**	Pg	**Pg**	**15 16 22.2**	**-0.1**
BLCB	**Balcova**	**0.88**	**227**	P	**Pg**	**15 16 22.4**	**+0.1**
BLCB				S	**Sb**	**15 16 34.7**	**+0.2**
KIRA	**zmir-Kiraz**	**0.89**	**152**	P	**Pb**	**15 16 22.9**	**-0.2**
KIRA				S	**Sb**	**15 16 35.0**	**0.0**
FOCM	**Foa**	**0.93**	**253**	Pg	**Pb**	**15 16 23.5**	**0.0**
SUSR	**Susurluk-Balik**	**0.99**	**10**	Pg	**Pg**	**15 16 24.0**	**-0.5**
SHAP	**Saphane-Kutahy**	**1.06**	**87**	Pg	**Pb**	**15 16 25.8**	**-0.1**
YENI	**Yenice-Canakka**	**1.07**	**333**	Pg	**Pg**	**15 16 25.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.07**	**353**	Pg	**Pg**	**15 16 25.9**	**-0.1**
NAZL	**Nazilli-Aydin**	**1.07**	**162**	Pn	**Pg**	**15 16 25.8**	**-0.2**
KRBN	**Karaburun**	**1.10**	**250**	Pn	**Pg**	**15 16 26.3**	**-0.2**
GMLD	**Gumuldur**	**1.17**	**220**	Pn	**Pn**	**15 16 28.3**	**+0.5**
CANM	**Can-anakkale**	**1.20**	**329**	Pn	**Pg**	**15 16 28.4**	**-0.1**
GEDZ	**Gediz**	**1.21**	**87**	Pn	**Pn**	**15 16 28.6**	**+0.2**
KUSD	**Kusadasi-Aydin**	**1.21**	**202**	Pn	**Pg**	**15 16 28.4**	**-0.2**
PRK	**Paraskevi**	**1.27**	**282**	P	**Pn**	**15 16 29.3**	**+0.2**
PRK				S	**Sg**	**15 16 46.2**	**0.0**
GCAM	**G?zelcaml?**	**1.37**	**201**	Pn	**Pg**	**15 16 31.9**	**+0.1**
BAND	**Balkesir-Ban**	**1.38**	**7**	⇑P	**Pb**	**15 16 31.5**	**+0.1**
CESE	**eme**	**1.39**	**242**	Pn	**Pg**	**15 16 31.9**	**-0.1**
EZN	**Ezine**	**1.46**	**306**	P	**Pn**	**15 16 31.8**	**0.0**
EZN				S	**Sn**	**15 16 51.3**	**+0.4**
SMG	**Samos**	**1.51**	**213**	P	**Pn**	**15 16 32.1**	**+0.2**
SMG				S	**Sg**	**15 16 53.8**	**-0.1**
SIGR	**SIGRI**	**1.58**	**279**	P	**Pn**	**15 16 33.4**	**0.0**
SIGR				S	**Sn**	**15 16 54.5**	**+0.6**
YER	**Yerkesik**	**1.88**	**170**	P	**Pn**	**15 16 37.5**	**-0.1**
YER				S	**Sb**	**15 17 02.6**	**-0.7**
GADA	**Gvkgeada**	**1.94**	**309**	P	**Pn**	**15 16 39.0**	**+0.6**
GADA				S	**Sn**	**15 17 03.7**	**+0.9**
BODT	**Bodrum**	**1.97**	**193**	P	**Pn**	**15 16 39.9**	**+1.1**
BODT				S	**Sb**	**15 17 05.5**	**-0.4**
CAVK	**Edirne/Enez-Ca**	**2.15**	**323**	⇑P	**Pn**	**15 16 39.7**	**-1.6**
ENEZ	**Enez**	**2.19**	**324**	P	**Pn**	**15 16 42.3**	**+0.5**
ENEZ				S	**Sn**	**15 17 11.1**	**+2.1**
LIA	**Limnos Island**	**2.27**	**295**	P	**Pn**	**15 16 43.4**	**+0.5**
SMTH	**Samothraki Isl**	**2.33**	**310**	P	**Pn**	**15 16 44.1**	**+0.3**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**15 16 44.5**	**+0.2**
SILT	**Silе**	**2.56**	**32**	⇑P	**Pb**	**15 16 50.3**	**-1.0**
DIM	**Dimitrovgrad**	**3.52**	**331**	*e*P	**Pg**	**15 17 11.2**	**-1.6**
RZN	**Rozhen**	**3.61**	**320**	*i* P	**Pb**	**15 17 02.1**	**+0.6**
JMB	**Yambol**	**3.65**	**344**	*e*P	**Pg**	**15 17 15.3**	**0.0**
PLD	**Plovdiv**	**3.95**	**324**	*e*P	**Pn**	**15 17 06.8**	**+0.7**
MMB	**Musomishta**	**4.06**	**310**	*e*P	**Pn**	**15 17 09.2**	**+1.6**
ELND	**Elena**	**4.22**	**340**	⇑P	**Pn**	**15 17 09.2**	**-0.5**
KKB	**Krupnik**	**4.61**	**310**	S	**Sn**	**15 18 07.7**	**-0.9**
KIRS	**Kirsehir-Merke**	**4.71**	**86**	⇑P	Pb	15 17 22.6	-5.6
VTS	**Vitosha**	**5.05**	**317**	*e*P	**Pn**	**15 17 22.7**	**+1.4**
TIRR	**Tirgusor**	**5.49**	**4**	⇓P	**Pn**	**15 17 27.6**	**+0.5**
TPGR	**Topolog**	**5.88**	**4**	⇓P	**Pn**	**15 17 33.7**	**+1.1**
CFR	**Carcaliu**	**6.19**	**2**	⇑P	**Pn**	**15 17 37.0**	**+0.2**
BOVS	**Bovan**	**6.56**	**317**	⇑P	**Pn**	**15 17 39.9**	**-2.0**
MLR	**Muntele Rosu**	**6.66**	**348**	⇑P	**Pn**	**15 17 43.2**	**-0.1**
VOIR		**6.78**	**343**	⇑P	**Pn**	**15 17 44.1**	**-0.8**
VRI	**Vrincioaia**	**6.93**	**353**	⇓P	**Pn**	**15 17 47.0**	**+0.1**
COVR	**Voineasa-Covas**	**6.97**	**350**	⇑P	**Pn**	**15 17 47.4**	**-0.1**
LOT	**Lotru**	**7.14**	**336**	⇓P	**Pn**	**15 17 48.1**	**-0.9**
HERR	**Herculane**	**7.16**	**327**	⇑P	**Pn**	**15 17 48.9**	**-1.1**
TURR	**Turia**	**7.20**	**350**	⇓P	**Pn**	**15 17 50.6**	**-0.1**
DOPR	**Dopca**	**7.21**	**346**	⇑P	**Pn**	**15 17 50.9**	**0.0**
MDVR	**Moldovita**	**7.39**	**324**	⇑P	**Pn**	**15 17 51.9**	**-1.4**
ONER	**Baraj Valea Uz**	**7.43**	**352**	⇑P	**Pn**	**15 17 54.3**	**+0.5**
GZR	**Gura Zlata**	**7.43**	**331**	⇑P	**Pn**	**15 17 52.7**	**-1.2**
TESR	**Tescani**	**7.58**	**354**	⇑P	**Pn**	**15 17 55.9**	**+0.1**
BURAR	**Bucovina Array**	**8.84**	**348**	⇑P	**Pn**	**15 18 12.9**	**-0.3**

MEX 20 15:48:10.3±1.0,16°.18N×97°.61W,h34km±19km,MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEIG	**Puerto Escondi**	**0.47**	**112**	*e*P	Pb	15 48 18.7	-1.8
PEIG				*e*S	Sb	15 48 25.5	-2.2
PNIG	**Pinotepa**	**0.55**	**293**	*e*P	Pn	15 48 20.1	-1.6
PNIG				*e*S	Sb	15 48 27.8	-1.7
YOIG	**Yosondua**	**0.68**	**5**	*e*P	Pn	15 48 21.6	-2.2
YOIG				*e*S	Sn	15 48 30.2	-3.1
TXIG	**Tlaxiaco**	**1.08**	**352**	*e*P	Pn	15 48 27.3	-2.0
TXIG				*e*S	Sn	15 48 40.5	-2.8
VHO	**Vista Hermosa**	**1.22**	**43**	*e*P	Pn	15 48 30.4	-0.7
VHO				*e*S	Sn	15 48 45.4	-1.3
OXBJ	**Oaxaca**	**1.22**	**44**	*e*P	Pb	15 48 29.2	+4.1
OXBJ				*e*S	Sb	15 48 52.9	+4.2
OXLC	**Oaxaca**	**1.23**	**44**	*e*P	Pn	15 48 29.9	-1.5
OXLC				*e*S	Sn	15 48 44.9	-2.1
MGIG	**Malinaltepec**	**1.44**	**317**	*e*P	Pn	15 48 33.7	-0.5
MGIG				*e*S	Sn	15 48 50.6	-1.5
HUIG	**Huatulco**	**1.50**	**106**	*e*P	Pn	15 48 33.7	-1.1
HUIG				*e*S	Sn	15 48 50.9	-2.3
CRIG	**Cruz Grande**	**1.57**	**291**	*e*P	Pn	15 48 34.8	-0.9
CRIG				*e*S	Sn	15 48 54.1	-0.8
HLIG	**Huajuapan de L**	**1.65**	**353**	*e*P	Pn	15 48 35.2	-2.0
HLIG				*e*S	Sn	15 48 56.7	-0.7
TLIG	**Tlapa**	**1.66**	**326**	*e*P	Pn	15 48 36.4	-0.8
TLIG				*e*S	Sn	15 48 56.1	-1.2
FTIG	**Fresnillo de T**	**1.79**	**344**	*e*P	Pn	15 48 38.1	-0.9
FTIG				*e*S	Sn	15 48 58.4	-2.2
TOIG	**Toxpalan**	**1.98**	**15**	*e*P	Pn	15 48 41.1	-0.4
TOIG				*e*S	Sn	15 49 05.4	+0.2
TPIG	**Tehuac#an**	**2.24**	**6**	*e*S	Sb	15 49 17.0	-0.7
MEIG	**Mezcala**	**2.59**	**312**	*e*S	Sb	15 49 28.4	-2.3
PLIG	**Platanillo**	**2.85**	**321**	*e*P	Pn	15 48 54.9	+1.3

*SOME **20** 15:51:25.5,42°.57N×76°.68E,h15km*
*KRNET **20** 15:51:25.4±0.1,42°.55N×76°.70E,h20km,mb3.6*
*NNC **20** 15:51:25.3±0.3,42°.56N×76°.67E,h0km,mb3.5,mpv3.8, Error ellipse: s-maj=2.3km s-min=1.5km az=161.0*
*KNET **20** 15:51:26.8±0.3,42°.56N×76°.56E,h15km±1km,ml2.7,Error ellipse: s-maj=2.2km s-min=1.3km az=88.0*
ISC 20 15:51:25.7±1.0,42°.57N±0°.02×76°.68E±0°.01,h8km±9km, n80,σ1°.914/144,41C-27D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**0.46**	**225**	⇓P	**Pg**	**15 51 34.9**	**+0.2**
	53nm,0.1s,SNR=27						
ULHL				⇑S	**Sg**	**15 51 41.4**	**+0.8**
	529nm,0.1s						
ULHL	**Ulahol**	**0.46**	**225**	⇑*e*P	**Pg**	**15 51 34.8**	**+0.2**
ULHL				⇑*e*S	**Sg**	**15 51 41.3**	**+0.8**
IZV	**Izvestkoviy**	**0.47**	**354**	P	**Pg**	**15 51 35.0**	**+0.1**
	253nm,0.2s						
IZV				S	**Sb**	**15 51 42.1**	**-1.5**
	1µm,0.2s						
IZV	**Izvestkoviy**	**0.47**	**354**	*e*P	**Pg**	**15 51 35.0**	**+0.1**
	253nm,0.2s						
IZV				*e*S	**Sb**	**15 51 42.1**	**-1.5**
	1µm,0.2s						
TNSS	**Tian-Shan**	**0.51**	**23**	P	**Pg**	**15 51 35.6**	**-0.1**
	60nm,0.1s						
TNSS				S	**Sg**	**15 51 42.5**	**0.0**
	284nm,0.3s						
TNSS	**Tian-Shan**	**0.51**	**23**	*e*P	**Pg**	**15 51 35.6**	**-0.1**
	60nm,0.1s						
TNSS				*e*S	**Sg**	**15 51 42.5**	**0.0**
	284nm,0.3s						
BOOM	**Boomskoye usch**	**0.55**	**262**	⇑*e*P	**Pg**	**15 51 36.5**	**+0.1**
BOOM				⇑*e*S	**Sg**	**15 51 44.3**	**+0.6**
KDJ	**Kajisay**	**0.57**	**139**	⇑*e*P	**Pg**	**15 51 36.4**	**-0.4**
KDJ				⇑*e*S	**Sg**	**15 51 44.2**	**-0.1**
MTBS	**Maitube**	**0.59**	**342**	P	**Pg**	**15 51 37.2**	**0.0**
	355nm,0.1s						
MTBS				S	**Sg**	**15 51 45.6**	**+0.6**
	504nm,0.2s						
MTBS	**Maitube**	**0.59**	**342**	*e*P	**Pg**	**15 51 37.2**	**0.0**
	355nm,0.1s						
MTBS				*e*S	**Sg**	**15 51 45.5**	**+0.6**
	496nm,0.4s						
MDOK	**Medeo**	**0.66**	**24**	Pg	**Pg**	**15 51 38.0**	**-0.4**
	150nm,0.3s						
MDOK				Lg	Lg	15 51 46.9	
	1µm,0.3s						
AAA	**Alma-Ata**	**0.67**	**15**	P	**Pb**	**15 51 38.8**	**-0.9**
	435nm,0.1s						
AAA				S	**Sb**	**15 51 48.2**	**-0.9**
	111nm,0.1s						
AAA	**Alma-Ata**	**0.67**	**15**	*e*P	**Pb**	**15 51 38.8**	**-0.9**
	435nm,0.1s						
AAA				*e*S	**Sb**	**15 51 48.2**	**-0.9**
	111nm,0.1s						
KNDC	**Almaty**	**0.69**	**18**	⇑P	**Pg**	**15 51 39.0**	**0.0**
	79nm,0.2s						
KNDC				⇓S	**Sb**	**15 51 48.9**	**-0.8**
	1µm,0.3s						
KST	**Kastek**	**0.71**	**312**	P	**Pg**	**15 51 39.4**	**0.0**
	63nm,0.3s						
KST				S	**Sb**	**15 51 49.5**	**-1.0**
	374nm,0.3s						
KST	**Kastek**	**0.71**	**312**	*e*P	**Pg**	**15 51 39.4**	**0.0**
	63nm,0.3s						
KST				*e*S	**Sb**	**15 51 49.5**	**-1.0**
	374nm,0.3s						
KOTS	**Kotyrbulak**	**0.74**	**25**	P	**Pg**	**15 51 39.8**	**-0.2**
	182nm,0.1s						
KOTS				S	**Sb**	**15 51 50.2**	**-1.1**
	2µm,0.2s						
KOTS	**Kotyrbulak**	**0.74**	**25**	*e*P	**Pg**	**15 51 39.8**	**-0.2**
KOTS				*e*S	**Sb**	**15 51 50.2**	**-1.1**
KOTS	**Kotyrbulak**	**0.74**	**25**	*e*P	**Pg**	**15 51 39.8**	**-0.2**
	182nm,0.1s						
KOTS				*e*S	**Sb**	**15 51 50.2**	**-1.1**
	2µm,0.2s						
ANVS	**Anan'yevo**	**0.76**	**73**	⇓*e*P	**Pg**	**15 51 39.5**	**-0.9**
ANVS				⇓*e*S	**Sg**	**15 51 49.6**	**-0.7**
TKM2	**Tokmak 2**	**0.87**	**294**	⇑P	**Pg**	**15 51 42.1**	**-0.4**
	45nm,0.1s,SNR=78						
TKM2				⇑S	**Sb**	**15 51 54.6**	**-0.6**
	326nm,0.1s						
TKM2	**Tokmak 2**	**0.87**	**294**	⇑*i*P	**Pg**	**15 51 42.2**	**-0.3**
TKM2				⇑*e*S	**Sb**	**15 51 54.5**	**-0.6**
DGS	**Degeres**	**0.95**	**316**	P	**Pb**	**15 51 43.6**	**-0.8**
	14nm,0.1s						
DGS				S	**Sb**	**15 51 56.0**	**-1.3**
	116nm,0.3s						
DGS	**Degeres**	**0.95**	**316**	*e*P	**Pb**	**15 51 43.6**	**-0.8**
	14nm,0.1s						
DGS				*e*S	**Sb**	**15 51 56.0**	**-1.3**
	102nm,0.5s						
KTBS	**Karatobe**	**1.15**	**0**	P	**Pb**	**15 51 47.0**	**-0.8**
	54nm,0.2s						
KTBS				S	**Sn**	**15 52 02.5**	**-1.6**
	0.2nm,0.1s						
KTBS	**Karatobe**	**1.15**	**0**	*e*P	**Pb**	**15 51 47.0**	**-0.8**
	54nm,0.2s						
KTBS				*e*S	**Sn**	**15 52 02.5**	**-1.6**
	0.2nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.18**	**135**	⇑*e*P	**Pb**	**15 51 47.0**	**-1.7**
TARG				⇑*i*S	**Sb**	**15 52 02.5**	**-1.8**
NRN	**Naryn**	**1.24**	**204**	⇑*i*P	**Pn**	**15 51 48.6**	**-1.0**
NRN				⇑*i*S	**Sg**	**15 52 05.6**	**0.0**
PRZ	**Przheval'sk**	**1.27**	**93**	⇑*i*P	**Pn**	**15 51 48.4**	**-1.6**
PRZ				⇑*i*S	**Sb**	**15 52 05.1**	**-1.6**
KBK	**Karagaybulak**	**1.28**	**275**	⇑P	**Pb**	**15 51 49.7**	**-0.5**
	28nm,0.1s,SNR=108						
KBK				⇓S	**Sg**	**15 52 06.7**	**-0.2**
	130nm,0.2s						
KBK	**Karagaybulak**	**1.28**	**275**

PDGK				⇑Sn		**Sb**	**15 52 33.3**	**0.0**	
	22nm,0.5s								
MRKS	**Merke**	**2.55**	**275**	Pg		**Pb**	**15 52 11.3**	**-0.6**	
	16nm,0.2s								
MRKS				Lg		Lg	15 52 44.4		
	112nm,0.2s								
MRKS	**Merke**	**2.55**	**275**	*eP*		**Pb**	**15 52 11.2**	**-0.6**	
	16nm,0.2s								
MRKS				*eS*		**Sb**	**15 52 44.1**	**+0.7**	
	112nm,0.2s								
KNOS	**Konyrlen**	**2.56**	**45**	Pg		**Pb**	**15 52 11.1**	**-0.8**	
	6.5nm,0.3s								
KNOS				Lg		Lg	15 52 43.8		
	82nm,0.2s								
SALK	**Salom-Alik**	**2.72**	**233**	⇓*iP*		**Pn**	**15 52 10.7**	**+0.8**	
SALK				⇓*iS*		**Sn**	**15 52 43.8**	**+0.8**	
TDK	**Taldyqorghan**	**2.74**	**27**	Pg		**Pb**	**15 52 14.8**	**-0.1**	
	14nm,0.2s								
TDK				Lg		Lg	15 52 50.1		
	130nm,0.3s								
TDK	**Taldyqorghan**	**2.74**	**27**	*eP*		**Pb**	**15 52 14.8**	**-0.1**	
	7.6nm,0.2s								
TDK				*eS*		**Sb**	**15 52 50.1**	**+1.4**	
	130nm,0.3s								
KTMS	**Ketmen**	**2.83**	**71**	Pg		**Pb**	**15 52 15.7**	**-0.9**	
	0.9nm,0.1s								
KTMS				Lg		Lg	15 52 51.7		
	6.6nm,0.1s								
KTMS	**Ketmen**	**2.83**	**71**	*eP*		**Pb**	**15 52 15.7**	**-0.9**	
	0.9nm,0.1s								
KTMS				*eS*		**Sb**	**15 52 51.7**	**+0.2**	
	6.6nm,0.1s								
ARSB	**Arslanbob**	**3.02**	**247**	⇓*eP*		**Pn**	**15 52 15.0**	**+1.0**	
ARSB				⇓*eS*		**Sn**	**15 52 51.2**	**+0.7**	
MNAS	**Manas**	**3.09**	**270**	⇓*iP*		**Pn**	**15 52 16.0**	**+1.1**	
MNAS				⇓*eS*		**Sn**	**15 52 52.8**	**+0.8**	
BTLS	**Baital**	**3.12**	**323**	*eP*		**Pb**	**15 52 21.8**	**+0.3**	
	7.2nm,0.2s								
BTLS				*eS*		**Sb**	**15 53 01.8**	**+2.1**	
	20nm,0.7s								
KAPS	**Kapalarasan**	**3.34**	**35**	Pg		**Pb**	**15 52 25.2**	**0.0**	
	3.5nm,0.1s								
KAPS				Lg		Lg	15 53 07.7		
	83nm,0.2s								
SFK	**Sufi-Kurgan**	**3.50**	**224**	⇑*iP*		**Pn**	**15 52 21.4**	**+0.8**	
SFK				⇑*eS*		**Sn**	**15 53 02.6**	**+0.3**	
ARK	**Arkit**	**3.59**	**259**	⇑*eP*		**Pn**	**15 52 23.0**	**+1.3**	
ARK				⇑*eS*		**Sn**	**15 53 04.8**	**+0.5**	
KK31	**Karatay Array**	**4.57**	**279**	Pg		**Pb**	**15 52 48.9**	**+2.8**	
	0.5nm,0.2s,baz=95,slow=15,SNR=17								
KK31				Lg		Lg	15 53 47.6		
	4.0nm,0.3s,baz=94,slow=30,SNR=18								
MAKZ	**Makanchi**	**5.68**	**40**	⇓Lg		Lg	15 54 23.9		
	4.6nm,1.1s								
MK31	**Makanchi Array**	**5.82**	**42**	Pn		**Pn**	**15 52 54.0**	**+1.7**	
	0.4nm,0.4s,baz=219,slow=16,SNR=14								
MK31				⇑Lg		Lg	15 54 29.9		
	1.9nm,0.6s,baz=224,slow=31,SNR=5.0								
KURBB	**Kurchatov Arra**	**8.16**	**8**	⇓Lg		Lg	15 55 47.2		
	5.7nm,0.6s								
KURK	**Kurchatov**	**8.26**	**9**	⇓Lg		Lg	15 55 47.5		
	2.5nm,0.9s								

IDC 20 15:51:43.4±9.7,**21°.57N**×**142°.38E, h0**km**, mb3.6/5, mbtmp3.6/5, MS2.5/1, Error ellipse: s-maj=414.8km s-min=32.7km az=76.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**23.01**	**90**	T	T	16 20 00.3	
	baz=276,slow=74						
H11N2	**WAKE ISLAND Hy**	**23.01**	**90**	T	T	16 19 59.8	
	baz=276,slow=74						
H11N3	**WAKE ISLAND Hy**	**23.02**	**90**	T	T	16 20 01.5	
	baz=276						
H11S3	**WAKE ISLAND Hy**	**23.03**	**93**	T	T	16 19 58.5	
	baz=284,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**23.04**	**93**	T	T	16 19 59.2	
	baz=284,slow=75,SNR=25						
H11S2	**WAKE ISLAND Hy**	**23.05**	**93**	T	T	16 19 59.9	
	baz=284,slow=75,SNR=24						
CMAR	**Chiang Mai Arr**	**40.84**	**274**	LR	LR	16 17 26.9	
	comp=Z,5.4nm,18.6s,baz=145,slow=38						
ASAR	**Alice Springs**	**45.71**	**191**	P	P	16 00 06.3	-0.2
	0.8nm,1.2s,baz=8.2,slow=7.3,SNR=1.7						
	0.8nm,1.2s						
ZALV	**Zalesovo Beam**	**53.85**	**322**	P	P	16 01 07.7	-0.4
	0.4nm,0.4s,baz=100,slow=8.1,SNR=1.9						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**54.24**	**313**	P	P	16 01 11.5	+0.4
	0.4nm,0.8s,baz=106,slow=7.7,SNR=3.4						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**57.11**	**317**	P	P	16 01 30.9	-0.8
	0.4nm,0.7s,baz=91,slow=7.8,SNR=6.2						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**62.29**	**320**	P	P	16 02 07.8	+0.5
	1.0nm,0.5s,baz=82,slow=6.3,SNR=5.7						
	1.0nm,0.5s						

*IDC **20** 16:37:32.5*±*6.4, 6°.85S*×*156°.55E, h90*km±*52*km*, mb3.7/10, mbtmp4.0/11, ML1.7/1, MS3.6/1, Error ellipse: s-maj=57.4km s-min=22.1km az=119.0*

ISC 20 16:37:33.6±1.7,**6°.9S**±0°.3×**156°.5E**±0°.3,**h100**km**, n18, σ0**§**67/11, mb4.0/10, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.58**	**254**	P	**Pn**	**16 39 48.5**	**-0.1**
	0.4nm,0.3s,baz=86,slow=13,SNR=3.3						
	12nm,0.8s						
WRA	**Warramunga Arr**	**25.12**	**237**	P	**P**	**16 42 50.2**	**+0.7**
	1.0nm,0.4s,baz=59,slow=9.3,SNR=14						
	1.0nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**27.12**	**22**	T	T	17 11 05.3	
	baz=202,slow=76						
H11S2	**WAKE ISLAND Hy**	**27.13**	**22**	T	T	17 11 05.7	
	baz=202,slow=76						
H11S1	**WAKE ISLAND Hy**	**27.14**	**22**	T	T	17 11 06.3	
	baz=202,slow=76						
ASAR	**Alice Springs**	**27.39**	**230**	P	**P**	**16 43 10.2**	**+0.4**
	0.3nm,0.3s,baz=60,slow=9.7,SNR=24						
	0.3nm,0.3s						
H11N1	**WAKE ISLAND Hy**	**28.32**	**21**	T	T	17 12 34.2	
	baz=202,slow=76						
H11N3	**WAKE ISLAND Hy**	**28.33**	**21**	T	T	17 12 37.9	
	baz=202,slow=76						
H11N2	**WAKE ISLAND Hy**	**28.34**	**21**	T	T	17 12 39.9	
	baz=202,slow=76						
FITZ	**Fitzroy Crossi**	**32.07**	**247**	P	**P**	**16 43 50.9**	**-0.4**
	3.3nm,0.7s,baz=75,slow=9.5,SNR=10						
	3.3nm,0.7s						
LEM	**Lembang**	**48.51**	**267**	LR	LR	17 08 59.2	
	comp=Z,68nm,20.2s,baz=306,slow=39						
KSRS	**Korea Array**	**51.52**	**331**	P	**P**	**16 46 29.6**	**+0.4**
	1.1nm,0.7s,baz=152,slow=8.4,SNR=5.9						
	1.1nm,0.7s						
PETK	**Petropavlovsk-**	**59.74**	**1**	P	**P**	**16 47 27.8**	**0.0**
	2.3nm,0.9s,baz=150,slow=6.8,SNR=4.9						
	2.3nm,0.9s						
ILAR	**Eielson Array**	**82.70**	**21**	P	**P**	**16 49 44.8**	**-1.2**
	0.3nm,0.6s,baz=246,slow=5.2,SNR=5.4						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**84.28**	**318**	P	**P**	**16 49 55.1**	**+0.7**
	1.0nm,0.6s,baz=100,slow=6.2,SNR=13						
	1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**84.90**	**326**	P	**P**	**16 49 57.1**	**-0.2**
	1.2nm,0.6s,baz=102,slow=5.1,SNR=5.5						
	1.2nm,0.6s						
BVAR	**Borovoye Array**	**93.08**	**323**	P	**P**	**16 50 35.9**	**-0.3**
	0.5nm,0.7s,baz=85,slow=6.5,SNR=4.3						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**95.52**	**28**	P	**P**	**16 50 48.0**	**+0.9**
	0.3nm,0.7s,baz=274,slow=5.0,SNR=7.0						
	0.3nm,0.7s						

*UCR **20** 17:21:36.5*±*0.8, 10°.61N*×*85°.28W, h4km*±*2km, MW4.5, Fault plane solution: NP1:*ϕ*s56.41000°, δ71.94000°, λ-8.74000°., Presumed earthquake*

*CATAC **20** 17:21:37.4*±*0.2, 11°.N*±*2°*×*.8°.5W*±*°, h6km*±*1km, M4.1/19, MLv4.1/19, Error ellipse: s-maj=4.7km s-min=2.5km az=46.3, confirmed*

ISC 20 17:21:37.4±0.9,**10°.60N**±0°.02×**85°.25W**±0°.02,**h11**km±6km**, n110, σ0**§**45/125, 31C-15D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HORNC	**Hornillas**	**0.14**	**30**	⇓*eP*	**Pg**	**17 21 40.7**	**0.0**
HORNC				*eS*	**Sg**	**17 21 43.1**	**0.0**
MESS	**Mesas**	**0.15**	**20**	⇓*eP*	**Pg**	**17 21 41.1**	**+0.1**
ELVJ	**El Viejo (Barb**	**0.16**	**208**	⇓*eP*	**Pb**	**17 21 43.2**	**+0.7**
GPS2	**Hotel Rincn d**	**0.19**	**327**	⇓*eP*	**Pg**	**17 21 41.5**	**-0.1**
GPS2				*eS*	**Sg**	**17 21 44.3**	**-0.1**
ERIA	**Liberia**	**0.19**	**282**	⇑*eP*	**Pg**	**17 21 41.8**	**+0.2**
INVE	**Universidad In**	**0.22**	**123**	⇑*eP*	**Pg**	**17 21 42.6**	**+0.6**
CNAS	**Canas**	**0.22**	**137**	⇑*eP*	**Pg**	**17 21 42.8**	**+0.7**
VRLE	**La Escondida,**	**0.22**	**329**	⇓*eP*	**Pg**	**17 21 42.1**	**-0.1**
TIMP	**Tierras Morena**	**0.23**	**93**	⇑*eP*	**Pg**	**17 21 42.6**	**+0.3**
VORI	**VORI**	**0.24**	**336**	⇓*eP*	**Pg**	**17 21 42.4**	**-0.2**
LAPC	**Finca la Perla**	**0.25**	**313**	⇑*eP*	**Pg**	**17 21 42.5**	**-0.2**
VMAR	**Armenia, Volca**	**0.25**	**31**	⇓*eP*	**Pg**	**17 21 43.0**	**+0.3**
PLVR	**Palo Verde**	**0.27**	**203**	⇓*eP*	**Pg**	**17 21 43.0**	**0.0**
TENO	**El Achiote**	**0.29**	**68**	⇑*eP*	**Pg**	**17 21 42.9**	**-0.4**
BUAI	**Buenos Aires**	**0.29**	**343**	⇓*eP*	**Pg**	**17 21 43.2**	**-0.3**
ALIBA	**Liberia Airpor**	**0.29**	**270**	⇑*eP*	**Pg**	**17 21 43.5**	**+0.1**
TILA	**Tilaran**	**0.30**	**115**	⇑*eP*	**Pg**	**17 21 44.1**	**+0.5**
ELI1	**Hacienda Flor**	**0.30**	**279**	P	**Pg**	**17 21 43.5**	**-0.1**
ELI1	**Hacienda Flor**	**0.30**	**279**	⇑*eP*	**Pg**	**17 21 43.5**	**-0.1**
PEJA	**Penjamo Buenos**	**0.30**	**348**	⇓*eP*	**Pg**	**17 21 43.7**	**0.0**
DELF	**Filadelfia**	**0.34**	**244**	⇑*eP*	**Pg**	**17 21 44.0**	**-0.1**
QUEB	**Quebradon, Cot**	**0.35**	**85**	⇑*eP*	**Pg**	**17 21 44.9**	**+0.5**
CHIK	**Chiripa**	**0.37**	**114**	⇑*eP*	**Pg**	**17 21 45.3**	**+0.5**
UPAL	**Upala**	**0.38**	**38**	P	**Pg**	**17 21 45.4**	**+0.4**
UPAL	**Upala**	**0.38**	**38**	⇓*eP*	**Pg**	**17 21 45.4**	**+0.4**
UPAL				*eS*	**Sb**	**17 21 51.9**	**-0.2**
JTS	**Las Juntas de**	**0.42**	**136**	P	**Pg**	**17 21 45.7**	**-0.1**
JTS	**Las Juntas de**	**0.42**	**136**	⇑*eP*	**Pg**	**17 21 45.8**	**+0.1**
JUNT	**Juntas**	**0.42**	**138**	⇑*eP*	**Pg**	**17 21 45.8**	**+0.1**
SACU	**Santa Cruz**	**0.47**	**225**	*eP*	**Pg**	**17 21 46.6**	**0.0**
TABAC	**Tabacon**	**0.48**	**101**	⇑*eP*	**Pg**	**17 21 47.6**	**+0.7**
MTEVE	**Monteverde**	**0.50**	**124**	*eP*	**Pg**	**17 21 47.4**	**+0.2**
NICO	**Nicoya**	**0.50**	**203**	⇓*eP*	**Pg**	**17 21 47.1**	**-0.1**
JUD3	**Juan Diaz 3**	**0.51**	**214**	⇓*eP*	**Pg**	**17 21 47.5**	**0.0**
CASO	**Castillo**	**0.53**	**108**	⇑*eP*	**Pg**	**17 21 48.2**	**+0.4**
ARE1	**Arenal 1**	**0.54**	**104**	⇑*eP*	**Pb**	**17 21 48.6**	**-0.3**
REZ	**Monterrey de S**	**0.54**	**97**	*eP*	**Pb**	**17 21 48.8**	**-0.3**
CEDE	**Laguna Cedeo**	**0.55**	**101**	⇑*eP*	**Pb**	**17 21 48.9**	**-0.2**
VACR	**Volcan Arenal**	**0.57**	**102**	⇑*eP*	**Pg**	**17 21 49.2**	**+0.6**
FORC	**Fortuna**	**0.58**	**103**	⇑*eP*	**Pg**	**17 21 49.3**	**+0.5**
NYURE	**Nandayure**	**0.59**	**181**	*iP*	**Pg**	**17 21 48.7**	**-0.4**
NYURE				*eP*	**Pg**	**17 21 48.7**	**-0.4**
LCRUZ	**La Cruz**	**0.61**	**322**	⇑*eP*	**Pg**	**17 21 49.1**	**-0.3**
CARN	**Rivas**	**0.65**	**335**	P	**Pg**	**17 21 50.3**	**+0.2**
CARN				S	**Sb**	**17 22 00.6**	**+0.8**
CARN	**Rivas**	**0.65**	**335**	⇓*eP*	**Pg**	**17 21 50.2**	**+0.2**
JCR1	**Jicaral**	**0.75**	**170**	⇑*eP*	**Pg**	**17 21 51.8**	**+0.2**
INDI	**Punta indio, G**	**0.77**	**199**	P	**Pg**	**17 21 51.9**	**-0.4**
ROBF	**Roble, Puntare**	**0.79**	**141**	*eP*	**Pg**	**17 21 52.4**	**-0.4**
ARZA	**Esparza**	**0.83**	**136**	*eP*	**Pg**	**17 21 52.9**	**-0.5**
PAQE	**Paquera**	**0.83**	**158**	*eP*	**Pg**	**17 21 53.0**	**-0.6**
COVE	**Coope Vega, Sa**	**0.84**	**81**	P	**Pg**	**17 21 53.1**	**-0.6**
RAMO	**San Ramon**	**0.92**	**123**	*eP*	**Pg**	**17 21 55.0**	**-0.2**
ZARE	**Zarcero**	**0.94**	**116**	*eP*	**Pb**	**17 21 56.0**	**+0.2**
PALD	**Palmares**	**0.96**	**124**	*eP*	**Pb**	**17 21 55.6**	**-0.6**
ITAL	**Pital**	**0.97**	**98**	*eP*	**Pb**	**17 21 55.5**	**-0.8**
OROT	**Orotina**	**0.98**	**134**	*eP*	**Pb**	**17 21 56.2**	**-0.3**
NARAN	**Naranjo de Ala**	**0.99**	**120**	*eP*	**Pb**	**17 21 56.7**	**0.0**
JAPN	**AI SSO del Vol**	**1.02**	**335**	P	**Pb**	**17 21 57.0**	**-0.1**
JAPN	**AI SSO del Vol**	**1.02**	**335**	*eP*	**Pb**	**17 21 57.0**	**-0.1**
MORN	**AI O del Volca**	**1.02**	**337**	P	**Pb**	**17 21 56.8**	**-0.4**
ARTO	**Ro Cuarto**	**1.04**	**104**	*eP*	**Pb**	**17 21 56.7**	**-0.9**
ATEO	**Atenas**	**1.05**	**126**	*eP*	**Pb**	**17 21 57.2**	**-0.5**
VPS8	**V Peas**	**1.07**	**113**	*eP*	**Pb**	**17 21 58.0**	**-0.2**
UELA	**Alajuela**	**1.17**	**119**	*eP*	**Pb**	**17 21 59.1**	**-0.7**
BELE	**Belen**	**1.21**	**120**	*eP*	**Pn**	**17 21 59.7**	**-0.7**
SANTA	**Santa Ana**	**1.23**	**122**	*eP*	**Pn**	**17 22 00.1**	**-0.6**
HEME	**Heredia, Merce**	**1.25**	**119**	*eP*	**Pg**	**17 22 01.6**	**+0.2**
ACOS	**Acosta**	**1.33**	**127**	*eP*	**Pn**	**17 22 01.6**	**-0.5**
LUPE	**Guadalupe**	**1.34**	**119**	*eP*	**Pn**	**17 22 02.0**	**-0.2**
ECI	**Escuela Centro**	**1.34**	**119**	*eP*	**Pn**	**17 22 02.1**	**-0.2**
AMPA	**Desamparados**	**1.36**	**121**	*eP*	**Pn**	**17 22 02.1**	**-0.4**
ACON	**Acoyapa**	**1.37**	**3**	P	**Pn**	**17 22 01.7**	**-0.8**
ACON				S	**Sb**	**17 22 20.4**	**-0.1**
NADN	**Granada**	**1.38**	**326**	P	**Pg**	**17 22 04.5**	**+0.5**
NADN				S	**Sb**	**17 22 21.4**	**+0.4**
NADN	**Granada**	**1.38**	**326**	⇓*eP*	**Pg**	**17 22 04.5**	**+0.5**
TRIO	**Tres Rios**	**1.41**	**119**	*eP*	**Pn**	**17 22 02.6**	**-0.6**
PICV	**PH. Pirrs**	**1.41**	**133**	*eP*	**Pn**	**17 22 02.7**	**-0.5**
PILE	**Guapiles**	**1.48**	**105**	⇑*eP*	**Pn**	**17 22 04.3**	**+0.2**
TRT2	**Tortugero**	**1.49**	**91**	P	**Sg**	**17 22 25.3**	**-0.3**
TRT2				S	**Sg**	**17 22 25.3**	**-0.1**
TRT2	**Tortugero**	**1.49**	**91**	⇑*eP*	**Pn**	**17 22 03.7**	**-0.4**
LCR2	**La Lucha 2**	**1.49**	**125**	S	**Sb**	**17 22 24.2**	**-0.1**
TAGO	**Cartago**	**1.49**	**119**	*eP*	**Pb**	**17 22 05.3**	**0.0**
VICA	**Volcano Irazu**	**1.51**	**114**	⇑*eP*	**Pn**	**17 22 04.9**	**+0.1**
PITB	**Pirrs, San**	**1.52**	**127**	*eP*	**Pn**	**17 22 04.7**	**-0.1**
RAZU	**San Marcos de**	**1.52**	**128**	*eP*	**Pn**	**17 22 04.6**	**-0.1**
RAFA	**San Farael, Vo**	**1.55**	**114**	*eP*	**Pn**	**17 22 05.7**	**+0.4**
REPA	**Paraso**	**1.56**	**119**	*eP*	**Pn**	**17 22 05.5**	**+0.3**
PCAYA	**Pacayas**	**1.57**	**115**	*eP*	**Pb**	**17 22 06.1**	**-0.4**
CVTQ	**Turrialba Volc**	**1.57**	**112**	⇑*eP*	**Pn**	**17 22 06.1**	**+0.5**
CVTR	**Volcan Turrial**	**1.57**	**111**	⇑*eP*	**Pn**	**17 22 05.9**	**+0.3**
VTR0	**Volcan Turrial**	**1.57**	**111**	⇑*eP*	**Pn**	**17 22 06.0**	**+0.4**
CVTV	**Tajo**	**1.59**	**112**	*eP*	**Pn**	**17 22 06.3**	**+0.5**
NANN	**Nandasmo**	**1.59**	**327**	P	**Pn**	**17 22 06.0**	**+0.4**
NANN				S	**Sg**	**17 22 28.5**	**-0.1**
PIEC	**Cerro El Cedra**	**1.60**	**127**	*eP*	**Pn**	**17 22 05.9**	**+0.1**
ABRB	**Las Abras (San**	**1.61**	**111**	⇑*eP*	**Pn**	**17 22 06.6**	**+0.5**
VTCV	**VTCV, Calle Va**	**1.61**	**112**	⇑*eP*	**Pn**	**17 22 06.6**	**+0.5**
SABN	**Sabanita**	**1.62**	**327**	P	**Pn**	**17 22 04.4**	**-1.6**
TURIB	**Turrialba**	**1.68**	**114**	*eP*	**Pb**	**17 22 07.7**	**-0.8**
MAS3	**AI N del Volca**	**1.69**	**327**	P	**Pn**	**17 22 06.4**	**-0.5**
MAS3				S	**Sn**	**17 22 28.9**	**+0.3**
RVLA	**Villa Bonita**	**1.70**	**106**	*eP*	**Pb**	**17 22 08.2**	**-0.6**
LCOCO	**El Coco**	**1.74**	**107**	*eP*	**Pn**	**17 22 08.2**	**+0.6**
BUS1	**Rivas**	**1.80**	**125**	⇑*eP*	**Pn**	**17 22 09.0**	**+0.1**
UNAN	**Cigeo UNAN**	**1.81**	**326**	P	**Pn**	**17 22 08.9**	**+0.3**
UNAN				S	**Sb**	**17 22 32.8**	**-0.6**
BOAB	**BOACO BROADBAN**	**1.89**	**347**	P	**Pn**	**17 22 10.0**	**+0.3**
BOAB				S	**Sb**	**17 22 35.1**	**-0.5**
SAPS	**Ciudad Sandino**	**1.93**	**324**	P	**Pn**	**17 22 10.8**	**+0.5**
SAPS				S	**Sb**	**17 22 36.6**	**-0.3**
COPN	**Copaltepe**	**2.05**	**320**	P	**Pn**	**17 22 11.7**	**-0.2**
COPN	**Copaltepe**	**2.05**	**320**	*eP*	**Pn**	**17 22 11.3**	**-0.6**
SAJE	**San Jernim**	**2.12**	**126**	*eP*	**Pn**	**17 22 13.7**	**+0.8**
OCHAL	**Ojochal**	**2.17**	**133**	P	**Pn**	**17 22 14.8**	**+1.3**
OCHAL				S	**Sb**	**17 22 43.8**	**+0.2**
CNGA	**AI SSO del Vol**	**2.37**	**323**	P	**Pn**	**17 22 16.8**	**+0.5**
CNGN	**Cerro Negro**	**2.37**	**323**	*eP*	**Pn**	**17 22 16.7**	**+0.4**
DRK0	**Durika**	**2.38**	**124**	*eP*	**Pn**	**17 22 16.6**	**0.0**
HOYN	**AI Sur del Vol**	**2.52**	**322**	P	**Pn**	**17 22 18.7**	**+0.2**
HOYN				S	**Sn**	**17 22 50.2**	**+1.0**

IDC 20 17:23:57.0±6.9,**4°.28S**×**151°.66E, h98**km±49km**, mb3.1/5, mbtmp3.5/6, Error ellipse: s-maj=91.1km s-min=30.4km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.78**	**221**	P	Pn	17 25 33.3	-0.7
	3.6nm,0.6s,baz=23,slow=15,SNR=1.5						
PMG				S	Sn	17 26 52.4	+2.7
	13nm,1.1s,baz=309,slow=8.5,SNR=3.2						
WRA	**Warramunga Arr**	**22.97**	**226**	P	P	17 28 53.0	-0.3
	0.6nm,0.6s,baz=52,slow=9.5,SNR=17						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**25.80**	**220**	P	P	17 29 18.6	-0.5
	0.2nm,0.4s,baz=46,slow=8.9,SNR=5.0						
	0.2nm,0.4s						
SONM	**Songino Array**	**65.28**	**328**	P	P	17 34 28.1	-0.5
	0.2nm,0.5s,baz=134,slow=4.2,SNR=1.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**79.19**	**319**	P	P	17 35 52.2	+0.9
	0.3nm,0.6s,baz=102,slow=6.1,SNR=4.5						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**88.15**	**323**	P	P	17 36 36.1	-0.7
	0.4nm,0.5s,baz=106,slow=6.1,SNR=3.8						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**149.07**	**288**	PKPbc	PKPbc	17 43 34.9	0.0
	0.2nm,0.3s,baz=72,slow=3.6,SNR=2.6						

*BJI **20** 17:35:30.6, 29°.79N*×*141°.08E, h141km, mB4.7/15, mb4.6/61*

*MOS **20** 17:35:33.1*±*0.9, 29°.83N*×*140°.32E, h112km, mb5.0/44, Error ellipse: s-maj=8.7km s-min=3.9km az=111.6*

*NIED **20** 17:35:34.4, 29°.84N*×*140°.91E, h162km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{16}*Nm; Mrr=0.44; Mθθ=0.84; Mϕϕ=1.28; Mrθ=0.65; Mθϕ=1.35; Mϕr=0.75; Fault plane solution: Mo*^{1}*.92000*×*10*^{16} *NP1:*ϕ*s21.00000°, δ64.00000°, λ3.00000°. NP2:*ϕ*s290.00000°, δ88.00000°, λ154.00000°.*

*JMA **20** 17:35:34.4*±*0.1, 30°N*±*1°*×*14°1E*±*°, h162km, MV4.9/40, MW4.9/40, NEAR TORISHIMA IS*

*IDC **20** 17:35:35.1*±*0.6, 29°.72N*×*140°.38E, h123km*±*5km, mb4.3/27, mbtmp4.7/31, MS3.2/6, Error ellipse: s-maj=12.4km s-min=7.4km az=64.0*

*NEIC **20** 17:35:35.6*±*2.0, 29°.76N*±*0°.06*×*140°.48E*±*0°.10, h129km*±*5km, mb4.6/173, Error ellipse: s-maj=12.3km s-min=8.0km az=74.0*

*GCMT **20** 17:35:39.6*±*0.6, 29°.90N*±*0°.03*×*140°.60E*±*0°.04, h132km*±*5km, MW4.9/66, Moment Tensor Solution. s9,c9; s66,c96; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; Mrr=0.30*±*.11; Mθθ=1.25*±*.12; Mϕϕ=1.55*±*.13; Mrθ=0.51*±*.09; Mθϕ=2.19*±*.12; Mϕr=0.97*±*.09; Best double couple: Mo2.83200*×*10*^{16} *NP1:*ϕ*s108.00000°, δ67.00000°, λ-173.00000°. NP2:*ϕ*s15.00000°, δ84.00000°, λ-23.00000°. Principal axes: T 2.8720, Plg11.0000°, Azm63.0000°; N -0.0810, Plg66.0000°, Azm180.0000°; P -2.7920, Plg21.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 17:35:35.9±0.4,**29°.76N**±0°.04×**140°.51E**±0°.05,**h136**km±2km**, h136**km**:pP-P, n458,** σ**1**§**41/448, mb4.7/172, 62C-26D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.04**	**150**	P	**Pn**	**17 36 22.1**	**-1.2**
CBIJ				*eS*	**Sn**	**17 36 57.6**	**-2.2**
JCJ	**Chichijima**	**3.04**	**150**	P	**Pn**	**17 36 21.5**	**-1.8**
	2µm,0.3s,baz=306,slow=24,SNR=1434						
JCJ				S	**Sn**	**17 36 56.9**	**-3.0**
	3µm,0.4s,baz=299,slow=23,SNR=8.1						
JCJ				LR	LR	17 37 18.3	
	comp=Z,374nm,21.9s,baz=64,slow=34						
JCJ	**Chichijima**	**3.04**	**150**		**Pn**	**17 36 22.1**	**-1.2**
JCJ				Sn	**Sn**	**17 36 58.1**	**-1.7**
JHCJ	**Hachijojimakas**	**3.36**	**350**	*eP*	**Pn**	**17 36 27.3**	**-0.1**
JHCJ				*eS*	**Sn**	**17 37 04.2**	**-3.0**
JHJ2	**Mitsune**	**3.39**	**350**		**Pn**	**17 36 28.0**	**+0.2**
JHJ2	**Mitsune**	**3.39**	**350**	*eP*	**Pn**	**17 36 28.0**	**+0.2**
JHJ	**Hachijo jima 2**	**3.40**	**350**	P	**Pn**	**17 36 28.1**	**+0.1**
	812nm,0.3s,baz=87,slow=22,SNR=114						
JHJ				S	**Sn**	**17 37 03.6**	**-4.6**
	560nm,0.3s,baz=92,slow=22,SNR=5.6						
JHH2	**Haha-jima-NKT2**	**3.45**	**154**	P	**Pn**	**17 36 27.7**	**-0.9**
JMKN	**Mikurajimanish**	**4.19**	**350**	*eP*	**Pn**	**17 36 37.9**	**

BNX BinXian 18.98 331 ⇑P **P** **17 39 45.1 -1.6**
BNX pmax pmax
comp=Z,21nm,1.1s
UGL Uglegorsk 19.33 3 *e*P **Pn** **17 39 52.4 -0.5**
UGL pmax pmax
comp=Z,140nm,1.0s
KLR Kul'dur 20.56 343 ⇑*i*P **P** **17 40 02.7 -1.0**
KLR *i* *PP **pP** **17 40 27.4 -0.5**
KLR pmax pmax
comp=Z,39nm,0.8s
TIA Tai'an 20.62 294 P **P** **17 40 04.4 -0.1**
TIA pmax pmax
comp=Z,15nm,1.1s
TYV Tymovskoe 21.14 4 *e*P **P** **17 40 12.0 +2.1**
TYV *e*S **S** **17 44 01.5 +4.4**
TYV pmax pmax
comp=Z,200nm,3.8s
TYV pmax pmax
comp=Z,30nm,0.8s
TYV smax smax
comp=N,100nm,4.6s
TYV smax smax
comp=E,200nm,4.6s
TYV smax smax
comp=N,9.0nm,1.6s
TYV smax smax
comp=E,6.0nm,1.6s
GRNR Gornyy 21.21 353 ⇓*i*P **P** **17 40 11.4 +0.8**
GRNR *e*S **S** **17 43 59.8 +1.4**
GRNR pmax pmax
comp=E,3.0nm,1.0s
GRNR pmax pmax
comp=N,6.0nm,0.7s
GRNR pmax pmax
comp=Z,8.0nm,0.8s
GRNR smax smax
comp=N,1.0nm,1.0s
BJI2 Beijing 22.37 304 P **P** **17 40 24.0 +1.2**
BJI2 S **S** **17 44 13.9 -4.8**
BJI2 pmax pmax
comp=N,2.0nm,0.4s
BJT Baijiatuau 22.37 304 **P** **17 40 20.9 -1.9**
BJT Baijiatuau 22.37 304 P **P** **17 40 20.9 -1.9**
BJT pmax pmax
comp=Z,14nm,1.2s
WHN Wuhan 22.62 279 P **P** **17 40 25.9 +0.6**
WHN pmax pmax
comp=Z,64nm,0.9s
HEH HeiHe 22.73 338 *e*P **P** **17 40 24.5 -1.6**
HEH S **S** **17 44 27.0 +2.7**
HEH ScP **ScP** **17 47 38.0 -0.4**
HEH pmax pmax
comp=Z,71nm,1.0s
HNS HongShan 22.76 296 ⇑P **P** **17 40 26.3 -0.3**
HNS pmax pmax
comp=Z,8.0nm,1.6s
NKL Nikolayevsk 23.37 0 *e*P **P** **17 40 32.3 +0.3**
NKL *e*S **S** **17 44 34.1 -0.3**
NKL pmax pmax
comp=E,145nm,1.0s
NKL pmax pmax
comp=N,78nm,1.2s
NKL pmax pmax
comp=Z,270nm,1.2s
NKL smax smax
comp=E,242nm,7.0s
NKL smax smax
comp=N,189nm,2.3s
XLT XiLinHaoTe 24.00 313 *e*P **P** **17 40 36.8 -1.2**
XLT PP **PnPn** **17 41 17.8 +1.8**
XLT pmax pmax
comp=N,7.0nm,1.0s
XLT pmax pmax
comp=N,130nm,7.7s
LYN LuoYang 24.18 289 P **P** **17 40 41.8 +2.2**
LYN pmax pmax
comp=N,11nm,1.2s
HIA Hailar 25.07 327 **P** **17 40 47.0 -0.6**
HIA IAmb IAmb 17 40 48.3
comp=Z,14nm,0.9s
HIA Hailar 25.07 327 P **P** **17 40 47.0 -0.6**
HIA pmax pmax
comp=Z,14nm,0.9s
HILR Hailar Array B 25.27 327 P **P** **17 40 49.0 -0.5**
comp=Z,3.3nm,0.3s,baz=123,slow=11,SNR=17
HILR ScP **ScP** **17 47 46.1 +0.6**
comp=Z,0.6nm,0.4s,baz=134,slow=8.5,SNR=3.7
comp=Z,3.3nm,0.3s
ZEA Zeya 25.83 342 *e*P **P** **17 40 55.0 +0.6**
ZEA pmax pmax
comp=N,40nm,0.9s
ZEA pmax pmax
comp=Z,100nm,0.9s
H11N2 WAKE ISLAND Hy 25.91 107 T T 18 06 42.7
baz=297,slow=75,SNR=7.6
H11N1 WAKE ISLAND Hy 25.91 107 T T 18 06 44.8
baz=297,slow=75,SNR=5.6
H11N3 WAKE ISLAND Hy 25.93 107 T T 18 06 43.0
baz=297,slow=75,SNR=6.6
HHC Hu-ho-hao-te 25.97 303 *e*P **P** **17 40 56.8 +0.9**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,70nm,5.6s
HHC LR LR
comp=Z,270nm,16.2s
HHC LR LR
comp=Z,140nm,16.2s
HHC LR LR
comp=Z,140nm,17.0s
ENH Enshi 26.82 279 **P** **17 41 03.5 -0.1**
ENH IAmb IAmb 17 41 05.3
comp=Z,12nm,0.9s
XAN Xi'an 27.09 287 P **P** **17 41 05.0 -1.0**
XAN pP pP 17 41 35.3 +1.1
XAN pmax pmax
comp=Z,26nm,1.0s
XAN pmax pmax
comp=Z,100nm,3.8s
MA2 Magadan 30.62 10 LR LR 17 55 44.5
comp=Z,39nm,18.5s,baz=160,slow=39
MA2 Magadan 30.62 10 P **P** **17 41 37.5 +0.6**
MA2 Magadan 30.62 10*d* P **P** **17 41 37.8 +1.0**
MA2 pmax pmax
comp=Z,39nm,0.9s
ULN Ulaanbaatar 31.39 315 P **P** **17 41 43.3 -0.7**
ULN IAmb IAmb 17 41 44.6
comp=Z,14nm,1.2s
ULN Ulaanbaatar 31.39 315 ⇑*i*P **P** **17 41 43.7 -0.3**
ULN pmax pmax
comp=Z,10.0nm,1.1s
LZDM Lanzhou Array 31.40 291 P **P** **17 41 43.8 -0.7**
comp=Z,1.0nm,0.3s,baz=105,slow=10.0,SNR=5.6
comp=Z,1.0nm,0.3s
SONM Songino Array 31.79 314 P **P** **17 41 46.5 -1.0**
comp=Z,2.8nm,0.5s,baz=117,slow=8.4,SNR=23
SONM PcP **PcP** **17 44 36.4 +1.1**
comp=Z,0.8nm,0.6s,baz=135,slow=2.5,SNR=2.6
SONM ScP **ScP** **17 48 05.6 -0.4**
comp=Z,1.5nm,1.0s,baz=122,slow=2.7,SNR=5.5
comp=Z,2.8nm,0.5s
SONM Songino Array 31.79 314 P **P** **17 41 46.0 -1.4**
YAK Yakutsk 33.05 351 LR LR 17 54 45.2
comp=Z,43nm,19.6s,baz=320,slow=35
YAK Yakutsk 33.05 351 P **P** **17 41 57.6 -0.5**
YAK Yakutsk 33.05 351*d* P **P** **17 41 57.9 -0.2**
YAK pmax pmax
comp=Z,55nm,1.0s
SEY Seymchan 34.06 10 ⇓*i*P **P** **17 42 07.7 +0.9**
SEY pmax pmax
comp=Z,13nm,0.9s
PZH PanZhiHua 34.23 274 P **P** **17 42 09.0 +0.1**
PZH pmax pmax
comp=Z,10.0nm,0.9s
ZAK Zakamensk 34.65 317 *e*P **P** **17 42 11.2 -1.0**
ZAK pmax pmax
comp=Z,9.0nm,1.6s
GTA2 Gaotai 34.66 297 *e*P **P** **17 42 11.0 -1.4**
GTA2 ScP **ScP** **17 48 16.5 +0.3**
GTA2 pmax pmax
comp=Z,2.0nm,1.0s
TLY Talaya 34.95 319 LR LR 17 56 06.3
comp=Z,74nm,20.1s,baz=112,slow=35
TLY Talaya 34.95 319 P **P** **17 42 13.8 -1.0**
TLY IAmb IAmb 17 42 16.4
comp=Z,10nm,1.1s

TLY Talaya 34.95 319*ce*P **P** **17 42 15.3 +0.6**
TLY pmax pmax
comp=Z,9.0nm,1.3s
MOY Mondy 36.47 318 *e*P **P** **17 42 26.8 -0.9**
KNGR Kungurtug, Tuv 38.19 315 ⇓*i*P **P** **17 42 42.2 -0.1**
KNGR pmax pmax
comp=Z,2.0nm,1.0s
GOMU GeErMu 38.58 292 P **P** **17 42 45.1 -1.0**
GOMU PcP **PcP** **17 44 55.4 -0.4**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
CHTO Chiang Mai 39.23 264 P **P** **17 42 51.5 +0.3**
CHTO Chiang Mai 39.23 264 P **P** **17 42 51.5 +0.3**
CHTO pmax pmax
comp=Z,30nm,0.8s
CM31 Chiang Mai Arr 39.38 263 P **P** **17 42 53.8 +1.3**
CM31 IAmb IAmb 17 42 55.6
comp=Z,13nm,0.7s
CMAR Chiang Mai Arr 39.38 263 P **P** **17 42 53.6 +1.2**
comp=Z,6.8nm,0.8s,baz=61,slow=6.1,SNR=85
CMAR ScP **ScP** **17 48 35.1 +1.0**
comp=Z,0.5nm,0.7s,baz=37,slow=3.0,SNR=5.3
comp=Z,6.8nm,0.8s
BILL Bilibino 41.22 14 **P** **17 43 08.2 +1.3**
BILL IAmb IAmb 17 43 09.2
comp=Z,21nm,1.1s
BILL Bilibino 41.22 14 ⇑*i*P **P** **17 43 08.4 +1.4**
BILL *i* *PP **pP** **17 43 35.4 -1.1**
BILL pmax pmax
comp=Z,14nm,0.9s
TIXI Tiksi 42.42 355 **P** **17 43 16.5 -0.1**
TIXI IAmb IAmb 17 43 17.8
comp=Z,12nm,0.9s
TIXI Tiksi 42.42 355 ⇓*i*P **P** **17 43 16.8 +0.2**
TIXI pmax pmax
comp=Z,13nm,1.0s
SHL Shillong 43.02 277 P **P** **17 43 22.7 +0.4**
SHL IAmb IAmb 17 43 53.3
comp=Z,8.5nm,0.3s
SHL Shillong 43.02 277 P **P** **17 43 22.7 +0.4**
SHL pmax pmax
comp=Z,8.0nm,0.3s
WMQ Urumqi 43.85 304 *e*P **P** **17 43 28.8 +0.2**
WMQ pmax pmax
comp=Z,16nm,0.9s
DGZ Jazzator, Alta 44.37 312 ⇑*i*P **P** **17 43 33.0 +0.2**
DGZ pmax pmax
comp=Z,13nm,1.0s
ZSN Zaisan 45.91 309 *e*P **P** **17 43 44.6 -0.2**
ZSN Zaisan 45.91 309 *e*P **P** **17 43 44.6 -0.2**
ZAA0 Zalesovo Array 46.52 318 P **P** **17 43 48.7 -0.8**
ZALV Zalesovo Beam 46.52 318 P **P** **17 43 48.7 -0.7**
comp=Z,3.8nm,0.5s,baz=103,slow=6.5,SNR=24
ZALV PcP **PcP** **17 45 22.2 +0.7**
comp=Z,4.1nm,0.3s,baz=109,slow=3.5,SNR=14
ZALV ScP **ScP** **17 49 01.4 -0.9**
comp=Z,3.0nm,0.7s,baz=109,slow=3.5,SNR=9.1
comp=Z,3.8nm,0.5s
ZALV Zalesovo Beam 46.52 318 P **P** **17 43 48.2 -1.2**
ZALV **PcP** **17 45 22.0 +0.5**
ZALV **ScP** **17 49 01.7 -0.6**
MK31 Makanchi Array 47.66 308*c* *i*P **P** **17 43 57.6 -0.8**
MKAR Makanchi Array 47.66 308 P **P** **17 43 57.5 -0.9**
comp=Z,10nm,0.9s,baz=91,slow=8.9,SNR=86
MKAR PcP **PcP** **17 45 26.8 +1.1**
comp=Z,0.9nm,0.3s,baz=78,slow=5.6,SNR=6.9
MKAR ScP **ScP** **17 49 06.5 -0.7**
comp=Z,2.1nm,0.8s,baz=81,slow=5.0,SNR=10
comp=Z,10nm,0.9s
MKAR Makanchi Array 47.66 308 P **P** **17 43 57.4 -1.1**
MAKZ Makanchi 47.88 308 P **P** **17 43 59.6 -0.5**
MAKZ IAmb IAmb 17 44 01.3
comp=Z,18nm,1.3s
MAKZ Makanchi 47.88 308 P **P** **17 43 59.6 -0.5**
MAKZ pmax pmax
comp=Z,18nm,1.3s
SEM Semipalatinsk 49.04 313 *e*P **P** **17 44 08.9 -0.2**
SEM pmax pmax
comp=Z,11nm,1.0s
SEM Semipalatinsk 49.04 313 *e*P **P** **17 44 08.9 -0.2**
comp=Z,11nm,1.0s
WRA Warramunga Arr 49.77 188 P **P** **17 44 15.6 +0.8**
comp=Z,1.2nm,0.3s,baz=7.1,slow=8.2,SNR=14
WRA pP **pP** **17 44 43.6 -1.5**
comp=Z,17nm,0.7s,baz=11,slow=8.2,SNR=7.5
WRA ScP **ScP** **17 49 16.5 +0.1**
comp=Z,2.8nm,1.0s,baz=4.7,slow=4.8,SNR=5.5
comp=Z,1.2nm,0.3s
WRA Warramunga Arr 49.77 188 P **P** **17 44 15.0 +0.3**
SHLS Shalkode 49.86 303 *e*P **P** **17 44 12.7 -2.7**
SHLS Shalkode 49.86 303 *e*P **P** **17 44 12.8 -2.7**
KURK Kurchatov 50.08 313 **P** **17 44 15.5 -1.3**
KURK IAmb IAmb 17 44 17.4
comp=Z,13nm,0.8s
KURK Kurchatov 50.08 313 ⇑*i*P **P** **17 44 16.1 -0.7**
KURK pmax pmax
comp=Z,21nm,1.0s
KURBB Kurchatov Arra 50.14 313 P **P** **17 44 16.4 -0.8**
comp=Z,4.2nm,0.3s,baz=90,slow=7.6,SNR=5.9
comp=Z,4.2nm,0.3s
UZB Uzynbulak 50.18 303 *e*P **P** **17 44 17.4 -0.4**
UZB Uzynbulak 50.18 303 *e*P **P** **17 44 17.5 -0.4**
WUS Wushi 50.26 301 IAmb IAmb 17 44 20.3
comp=Z,14nm,1.3s
KPKS Kokpek 50.39 304 *e*P **P** **17 44 19.3 -0.1**
KPKS Kokpek 50.39 304 *e*P **P** **17 44 19.4 -0.1**
TDK Taldyqorghan 50.45 306 *e*P **P** **17 44 19.4 -0.3**
TDK Taldyqorghan 50.45 306 *e*P **P** **17 44 19.4 -0.3**
SATY Saty 50.64 303 *e*P **P** **17 44 20.8 -0.5**
SATY Saty 50.64 303 *e*P **P** **17 44 20.8 -0.5**
G18K Tagagawik 51.37 27 IAmb IAmb 17 45 10.5
comp=Z,8.8nm,1.4s
MDOK Medeo 51.62 303 *e*P **P** **17 44 28.3 -0.3**
MDOK Medeo 51.62 303 *e*P **P** **17 44 28.4 -0.3**
TNSS Tian-Shan 51.70 303 *e*P **P** **17 44 29.0 -0.5**
TNSS Tian-Shan 51.70 303 *e*P **P** **17 44 29.0 -0.5**
E19K Redstone River 52.29 26 IAmb IAmb 17 44 40.1
comp=Z,6.0nm,0.8s
BOOM Boomskoye usch 52.51 303 IAmb IAmb 17 44 36.2
comp=Z,5.2nm,0.8s
NRN Naryn 52.63 301 IAmb IAmb 17 44 37.1
comp=Z,6.0nm,0.9s
K20K Telida 52.85 31 P **P** **17 44 38.1 +0.8**
K20K IAmb IAmb 17 44 41.5
comp=Z,8.9nm,0.9s
SGDS Sogindy 53.33 304 *e*P **P** **17 44 40.9 -0.2**
KSH2 Kashi 53.35 299 P **P** **17 44 42.1 +0.7**
KSH2 pmax pmax
comp=Z,8.0nm,0.7s
AS31 Alice Springs 53.50 188 **P** **17 44 43.0 +0.6**
ASAR Alice Springs 53.50 188 P **P** **17 44 43.0 +0.6**
comp=Z,0.8nm,0.7s,baz=360,slow=4.1,SNR=18
ASAR pP **pP** **17 45 11.6 -1.6**
comp=Z,2.6nm,0.8s,baz=3.9,slow=4.9,SNR=4.2
comp=Z,0.8nm,0.7s
ASAR Alice Springs 53.50 188 P **P** **17 44 42.8 +0.5**
AAK Ala-Archa 53.55 303 P **P** **17 44 42.4 -0.4**
comp=Z,2.0nm,0.4s,baz=148,slow=3.8,SNR=9.5
comp=Z,2.0nm,0.4s
AAK Ala-Archa 53.55 303 **P** **17 44 41.8 -1.0**
AAK IAmb IAmb 17 44 43.9
comp=Z,4.7nm,0.8s
BRZS Berezniki 53.91 312 *e*P **P** **17 44 45.0 -0.2**
BRZS Berezniki 53.91 312 *e*P **P** **17 44 45.0 -0.2**
E22K Anaktuvuk Pass 54.44 25 P **P** **17 44 49.8 +1.0**
ARSB Arslanbob 54.88 302 IAmb IAmb 17 44 53.7
comp=Z,17nm,1.2s
BVAR Borovoye Array 55.09 316 P **P** **17 44 53.4 -0.3**
comp=Z,25nm,0.8s,baz=93,slow=7.7,SNR=158
BVAR ScP **ScP** **17 49 38.6 -0.6**
comp=Z,1.4nm,0.9s,baz=79,slow=7.5,SNR=3.3
comp=Z,25nm,0.8s
BORK Borovoye 55.13 316 **P** **17 44 53.5 -0.4**
BORK Borovoye 55.13 316 P **P** **17 44 53.5 -0.4**
BORK pmax pmax
comp=Z,33nm,0.9s
DZA Taraz 55.80 304 *e*P **P** **17 44 58.6 -0.3**
DZA Taraz 55.80 304 *e*P **P** **17 44 58.7 -0.3**
ILAR Eielson Array 56.11 30 P **P** **17 45 01.6 +1.0**
comp=Z,1.1nm,0.8s,baz=263,slow=7.2,SNR=13
ILAR pP **pP** **17 45 30.6 -1.2**
comp=Z,1.2nm,0.9s,baz=262,slow=6.5,SNR=3.0
comp=Z,1.1nm,0.8s
ILAR Eielson Array 56.11 30 P **P** **17 45 01.4 +0.7**
KKAR Karatay Array 56.35 304 **P** **17 45 02.1 -0.7**

KKAR Karatay Array 56.35 304 P **P** **17 45 02.1 -0.7**
BTK Batken 56.75 301 IAmb IAmb 17 45 06.2
comp=Z,6.4nm,1.0s
E25K Arctic Village 56.76 26 IAmb IAmb 17 45 51.7
comp=Z,10nm,1.4s
BRLS Borolday 56.85 304 *e*P **P** **17 45 06.9 +0.6**
BRLS Borolday 56.85 304 *e*P **P** **17 45 06.9 +0.6**
IUG Iuzhnay 56.89 303 *e*P **P** **17 45 06.5 -0.2**
IUG pmax pmax
comp=Z,13nm,0.8s
IUG Iuzhnay 56.89 303 *e*P **P** **17 45 06.6 -0.2**
comp=Z,13nm,0.8s
CHM Chimkent 57.16 303 *e*P **P** **17 45 08.4 -0.1**
CHM pmax pmax
comp=Z,5.0nm,0.5s
CHM Chimkent 57.16 303 *e*P **P** **17 45 08.4 -0.1**
comp=Z,5.1nm,0.5s
I30M Mount Dempster 60.54 29 IAmb IAmb 17 45 35.3
comp=Z,7.6nm,1.2s
STKA Stephens Creek 61.31 179 P **P** **17 45 39.5 +2.6**
comp=Z,1.7nm,0.6s,baz=357,slow=18,SNR=2.9
STKA pP **pP** **17 46 07.3 -1.3**
comp=Z,2.6nm,0.7s,baz=351,slow=8.0,SNR=3.6
STKA Stephens Creek 61.31 179 P **P** **17 45 39.2 +2.3**
STKA Stephens Creek 61.31 179 ⇑*i*P **P** **17 45 39.5 +2.6**
STKA *i* *PP **pwP** **17 46 11.0 -1.4**
ARTI Arti 61.53 321 P **P** **17 45 38.0 -0.2**
ARTI Arti 61.53 321*d* *i*P **P** **17 45 38.1 -0.2**
ARTI **17 46 15.2**
ARTI S **S** **17 53 48.1 -0.8**
ARTI SS **SS** **17 57 52.0 +0.3**
ARTI pmax pmax
comp=Z,40nm,1.0s
AB31 Akbulak array 62.19 313 **P** **17 45 42.2 -0.6**
ABKAR Akbulak array 62.19 313 P **P** **17 45 42.0 -0.8**
A36M Sachs Harbour 63.30 20 IAmb IAmb 17 45 53.0
comp=Z,10nm,0.8s
C36M Paulatuk 64.37 23 P **P** **17 45 58.1 +1.4**
C36M IAmb IAmb 17 45 59.0
comp=Z,9.9nm,0.9s
HRA Herat 64.92 297 P **P** **17 46 01.2 0.0**
KIRV Kirov 65.67 325*d* *i*P **P** **17 46 06.1 +0.8**
BELG Belogornoye 68.69 319*d* *i*P **P** **17 46 24.6 +0.1**
BELG pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 69.54 329 *e*P **P** **17 46 28.8 -0.8**
KLMR pmax pmax
comp=Z,50nm,0.9s
RES Resolute Bay 69.82 13 P **P** **17 46 32.4 +1.2**
comp=Z,8.2nm,0.8s,baz=324,slow=5.7,SNR=24
comp=Z,8.2nm,0.8s
RES Resolute Bay 69.82 13 IAmb IAmb 17 46 33.6
comp=Z,12nm,0.9s
YKAW3 Yellowknife Wh 70.47 28 P **P** **17 46 36.5 +1.2**
YKA Yellowknife Ar 70.51 28 P **P** **17 46 36.9 +1.4**
comp=Z,1.6nm,0.8s,baz=299,slow=6.6,SNR=19
comp=Z,1.6nm,0.8s
YKA Yellowknife Ar 70.51 28 P **P** **17 46 36.1 +0.6**
ARCES ARCESS Array B 70.54 340 P **P** **17 46 36.5 +0.9**
comp=Z,15nm,0.8s,baz=69,slow=7.8,SNR=21
comp=Z,15nm,0.8s
ARCES ARCESS Array B 70.54 340 P **P** **17 46 36.3 +0.7**
YKAW1 Yellowknife Wh 70.56 28 P **P** **17 46 37.0 +1.2**
TULEG Thule 72.39 7 IAmb IAmb 17 46 49.5
comp=Z,15nm,0.9s
VRH Novokhopyorsk 72.52 319 *e*P **P** **17 46 47.5 -0.2**
VRH pmax pmax
comp=Z,40nm,0.8s
MOS Moscow 72.68 325 *e*P **P** **17 46 48.6 0.0**
MOS pmax pmax
comp=Z,63nm,0.8s
AKT Akhty 72.89 308 *e*P **P** **17 46 50.3 0.0**
AKT *e* 17 47 06.3
AKT *e**PP **pP** **17 47 15.9 -7.1**
AKT *e* 17 49 36.6
AKT pmax pmax
comp=Z,37nm,0.9s
LPSR Galich'ya Gora 73.44 321 *e*P **P** **17 46 53.3 +0.1**
LPSR pmax pmax
comp=Z,50nm,1.0s
OBN Obninsk 73.51 324 ⇑P **P** **17 46 54.2 +0.8**
OBN Obninsk 73.51 324 P **P** **17 46 52.8 -0.7**
OBN Obninsk 73.51 324*d* *i*P **P** **17 46 53.9 +0.5**
OBN *i* 17 47 05.6
OBN *i* 17 47 18.6
OBN pmax pmax
comp=Z,48nm,0.9s
OBN Obninsk 73.51 324 P **P** **17 46 54.2 +0.8**
comp=Z,58nm,1.0s
VORR Voronezh 73.72 320 *e*P **P** **17 46 54.1 -0.7**
VORR pmax pmax
comp=Z,40nm,0.4s
VSR Storozhevoye 73.95 320 *e*P **P** **17 46 56.1 -0.1**
VSR pmax pmax
comp=Z,30nm,0.6s
VORD Divnogorie 74.00 320 *e*P **P** **17 46 56.2 -0.2**
VORD pmax pmax
comp=Z,20nm,0.4s
PUL Pulkovo 74.09 330*ce*P **P** **17 46 58.7 +2.0**
PUL pmax pmax
comp=Z,65nm,0.8s
I03D Drain, OR 74.19 49 IAmb IAmb 17 47 01.6
comp=Z,9.7nm,0.9s
BUCK Buck Mountain 74.20 48 IAmb IAmb 17 47 02.5
comp=Z,14nm,0.9s
K02D Willamette Mer 74.42 50 P **P** **17 47 00.8 +1.6**
POIN Pond Inlet 74.48 11 P **P** **17 47 00.2 +1.4**
POIN IAmb IAmb 17 47 01.1
comp=Z,9.3nm,1.1s
H04A Detroit Lake 74.50 47 P **P** **17 46 59.1 -0.4**
B08A Colville Reser 74.59 43 IAmb IAmb 17 47 03.4
comp=Z,5.6nm,0.7s
I04A Tendick Farm, 74.75 48 IAmb IAmb 17 47 04.3
comp=Z,7.1nm,0.8s
MXC Moxie City 74.83 45 IAmb IAmb 17 47 04.7
comp=Z,7.5nm,0.9s
FINES FINESS Array B 74.91 333 P **P** **17 47 02.1 +0.7**
comp=Z,20nm,0.5s,baz=70,slow=5.0,SNR=227
comp=Z,20nm,0.5s
FINES FINESS Array B 74.91 333 P **P** **17 47 01.7 +0.3**
FINES FINESS Array B 74.91 333 *i* P **P** **17 47 02.2 +0.7**
FINES pmax pmax
comp=Z,20nm,0.5s
WIFE Three Sisters- 75.02 48 **P** **17 47 02.3 -0.5**
WIFE IAmb IAmb 17 47 06.4
comp=Z,8.6nm,0.9s
KBZ Khabaz 75.12 312 P **P** **17 47 03.6 +0.6**
comp=Z,13nm,0.8s,baz=88,slow=3.4,SNR=41
comp=Z,13nm,0.8s
KBZ Khabaz 75.12 312 ⇑*i*P **P** **17 47 04.1 +1.1**
KBZ pmax pmax
comp=Z,15nm,0.9s
KIV Kislovodsk 75.16 312 ⇑P **P** **17 47 04.4 +1.0**
KIV Kislovodsk 75.16 312 P **P** **17 47 03.1 -0.2**
KIV IAmb IAmb 17 47 05.8
comp=Z,16nm,0.8s
KIV Kislovodsk 75.16 312 *e*P **P** **17 47 03.9 +0.5**
KIV pmax pmax
comp=Z,18nm,1.1s
KIV Kislovodsk 75.16 312 P **P** **17 47 04.2 +0.8**
comp=Z,17nm,1.1s
J04A Umpqua Nationa 75.20 49 IAmb IAmb 17 47 07.4
comp=Z,14nm,0.7s
SHA1 Shidzhatmaz 75.28 312 ⇑*i*P **P** **17 47 05.1 +0.8**
NEUR Neytrino 75.46 312 ⇓*i*P **P** **17 47 07.7 +2.4**
NEUR *i* *PP **pP** **17 47 37.9 -0.4**
NEUR pmax pmax
comp=Z,3.0nm,1.2s
C09A Chrisman Ranch 75.48 43 IAmb IAmb 17 47 08.2
comp=Z,8.0nm,0.6s
GNI Garni 75.51 308 P **P** **17 47 03.8 -1.8**
GNI IAmb IAmb 17 47 19.7
comp=Z,12nm,1.1s
GNI Garni 75.51 308 ⇓*i*P **P** **17 47 06.7 +1.1**
GNI *i* *PP **pP** **17 47 37.9 -0.8**
GNI pmax pmax
comp=Z,5.0nm,0.9s
GNI Garni 75.51 308 P **P** **17 47 06.0 +0.4**
comp=Z,8.7nm,0.9s
L04D Klamath Falls 75.53 50 IAmb IAmb 17 47 19.2
comp=Z,11nm,0.8s
EDM Edmonton 75.57 37 IAmb IAmb 17 47 08.1
comp=Z,6.8nm,0.8s
PINE Pine Mountain 75.70 48 IAmb IAmb 17 47 10.6
comp=Z,13nm,0.8s

ERBR	**Yeremizino-Bor**	**75.74**	**315**	*eP*		**P**	**17 47 06.2**	**-0.3**
ERBR				*eS*		**S**	**17 56 39.9**	**+2.8**
ERBR				pmax	pmax			
	comp=Z,23nm,1.2s							
J05D	**Fort Rock, OR**	**75.75**	**48**	IAmb	IAmb		17 47 10.6	
	comp=Z,12nm,1.1s							
LABN	**Labinsk**	**76.09**	**314**	*eP*		**P**	**17 47 08.3**	**-0.3**
LABN				*eS*		**S**	**17 56 35.2**	**-5.8**
LABN				pmax	pmax			
	comp=Z,19nm,0.6s							
K05A	**Summer Lake**	**76.23**	**49**	IAmb	IAmb		17 47 14.0	
	comp=Z,12nm,1.1s							
VSU	**Vasula**	**76.35**	**330**	*ceP*		**P**	**17 47 10.0**	**+0.3**
VSU				pmax	pmax			
	comp=Z,55nm,1.0s							
ILON	**Igloolik, Nuna**	**76.47**	**14**	IAmb	IAmb		17 47 12.3	
	comp=Z,13nm,1.3s							
MNRC	**McLaughlin Min**	**76.97**	**53**	IAmb	IAmb		17 47 18.0	
	comp=Z,9.2nm,1.1s							
J08A	**Circle Bar Ran**	**77.49**	**47**	IAmb	IAmb		17 47 19.7	
	comp=Z,6.0nm,0.6s							
GEVA	**Gevas**	**77.51**	**307**	IAmb	IAmb		17 47 18.4	
	comp=Z,11nm,1.3s							
SUMG	**Summit**	**77.94**	**360**	IAmb	IAmb		17 47 22.1	
	comp=Z,10nm,1.0s							
ANN	**Anapa**	**78.06**	**315**	*eP*		**P**	**17 47 18.3**	**-1.3**
ANN				*e*PP		**pP**	**17 47 51.8**	**-0.8**
ANN				*eS*		**S**	**17 56 56.9**	**-5.4**
ANN				pmax	pmax			
	comp=Z,43nm,1.0s							
MNK	**Minsk**	**78.11**	**327**	*i* P		**P**	**17 47 21.0**	**+1.4**
MNK	comp=E,19nm,0.9s							
	comp=N,16nm,0.9s			*i* P		**P**	**17 47 21.0**	**+1.4**
MNK				*i* P		**P**	**17 47 21.0**	**+1.4**
	comp=Z,33nm,0.6s,baz=55							
MNK				*i* pP		**pwP**	**17 47 55.8**	**+0.5**
MNK				*i* sP		**sP**	**17 48 11.0**	**+3.7**
MNK				*i* PP		**PP**	**17 50 19.6**	**+2.3**
MNK				*i* PPP	PPP		17 52 08.2	
MNK				*i* S		**S**	**17 57 05.2**	**+2.8**
MNK				*i* PS		**SKSac**	**17 57 19.3**	**-1.7**
MNK				*i* *SS		**sS**	**17 58 05.9**	**+5.7**
MNK				pmax	pmax			
	comp=Z,33nm,0.6s							
MNK				pmax	pmax			
	comp=N,16nm,0.9s							
MNK				pmax	pmax			
	comp=E,19nm,0.9s							
MPK	**Martis Peak**	**78.43**	**51**	IAmb	IAmb		17 47 26.1	
	comp=Z,8.6nm,1.1s							
AKASG	**Malin Array Be**	**79.60**	**323**	P		**P**	**17 47 28.2**	**+0.3**
	comp=Z,7.3nm,0.3s,baz=53,slow=5.2,SNR=53							
	comp=Z,7.3nm,0.3s							
AKASG	**Malin Array Be**	**79.60**	**323**	P		**P**	**17 47 27.0**	**-0.8**
AKASG				IAmb	IAmb		17 47 29.4	
	comp=Z,13nm,1.0s							
AKASG	**Malin Array Be**	**79.60**	**323**	*i* P		**P**	**17 47 28.2**	**+0.3**
AKASG				pmax	pmax			
	comp=Z,8.0nm,0.3s							
AKBB	**Malin Array Si**	**79.60**	**323**	⇓*i* P		**P**	**17 47 28.3**	**+0.4**
AKBB				pmax	pmax			
	comp=Z,22nm,0.9s							
KIEV	**Kiev**	**79.62**	**323**	P		**P**	**17 47 27.2**	**-0.7**
KIEV	**Kiev**	**79.62**	**323**	P		**P**	**17 47 27.2**	**-0.7**
KIEV				pmax	pmax			
	comp=Z,33nm,1.1s							
NVAR	**Mina Array Bea**	**80.03**	**51**	P		**P**	**17 47 32.5**	**+1.7**
	comp=Z,2.3nm,0.6s,baz=294,slow=5.8,SNR=14							
	comp=Z,2.3nm,0.6s							
FFC	**Flin Flon**	**80.26**	**31**	P		**P**	**17 47 30.0**	**-1.3**
FFC	**Flin Flon**	**80.26**	**31**	P		**P**	**17 47 30.0**	**-1.3**
FFC				pmax	pmax			
	comp=Z,5.0nm,0.9s							
ARPR	**Arapgir-MALATY**	**80.36**	**310**	IAmb	IAmb		17 47 51.0	
	comp=Z,8.1nm,1.0s							
HFS	**Hagfors**	**80.40**	**336**	P		**P**	**17 47 32.5**	**+0.6**
	comp=Z,17nm,0.8s,baz=73,slow=5.9,SNR=37							
	comp=Z,17nm,0.8s							
NB2	**NORSAR Subarra**	**80.59**	**338**	P		**P**	**17 47 33.2**	**+0.1**
	comp=Z,6.6nm,0.8s,baz=42,slow=5.3							
NOA	**NORSAR Array B**	**80.59**	**338**	P		**P**	**17 47 33.5**	**+0.5**
	comp=Z,13nm,0.9s,baz=43,slow=5.3,SNR=23							
NOA				PP		**PP**	**17 50 37.2**	**-0.5**
	comp=Z,4.0nm,1.0s,baz=46,slow=7.7,SNR=4.9							
	comp=Z,13nm,0.9s							
SUW	**Suwalki**	**80.61**	**328**	*eP*		**P**	**17 47 34.0**	**+0.8**
LUBAR	**Lubar, Ukraine**	**80.82**	**323**	P		**P**	**17 47 34.0**	**-0.4**
RNPP9	**Sopachiv**	**80.90**	**325**	P		**P**	**17 47 34.9**	**+0.1**
NE56	**Odesa**	**80.95**	**319**	P		**P**	**17 47 34.2**	**-1.0**
RNPP8	**Varash**	**80.96**	**325**	P		**P**	**17 47 35.2**	**+0.1**
BAL3X	**Bal3x, Balta**	**80.97**	**321**	P		**P**	**17 47 35.8**	**+0.5**
RNPP5	**Staryi Chortor**	**81.01**	**325**	P		**P**	**17 47 35.5**	**+0.1**
SORM	**Soroca**	**81.54**	**321**	⇑P		**P**	**17 47 38.8**	**+0.5**
SORM	**Soroca**	**81.54**	**321**	⇑P		**P**	**17 47 38.8**	**+0.5**
STRU	**Stroemstad**	**82.08**	**336**	*i* P		**P**	**17 47 40.7**	**-0.1**
TPNV	**Topopah Spring**	**82.18**	**52**	IAmb	IAmb		17 47 45.0	
	comp=Z,6.8nm,0.7s							
QSM	**Queen of Sheba**	**82.27**	**53**	IAmb	IAmb		17 47 45.3	
	comp=Z,6.3nm,0.9s							
BLEU	**Blekinge**	**82.29**	**332**	*i* P		**P**	**17 47 42.4**	**+0.4**
GWY	**Greenwater Val**	**82.29**	**53**	IAmb	IAmb		17 47 45.4	
	comp=Z,6.4nm,0.8s							
BORU	**Boraas**	**82.53**	**335**	*i* P		**P**	**17 47 43.5**	**+0.3**
TJOU	**Tjoern**	**82.66**	**335**	*i* P		**P**	**17 47 43.7**	**-0.2**
RAYN	**Ar Rayn**	**82.74**	**293**	P		**P**	**17 47 44.8**	**-0.2**
RAYN	**Ar Rayn**	**82.74**	**293**	⇓P		**P**	**17 47 44.3**	**-0.7**
DEL	**Delary**	**82.94**	**333**	*i* P		**P**	**17 47 45.4**	**+0.1**
TLCR		**83.00**	**319**	⇑P		**P**	**17 47 46.7**	**+0.8**
TLCR		**83.00**	**319**	⇑P		**P**	**17 47 46.7**	**+0.8**
ONAU	**Onsala**	**83.02**	**335**	*i* P		**P**	**17 47 46.1**	**+0.4**
VLDR	**Vladesti**	**83.03**	**319**	⇑P		**P**	**17 47 47.5**	**+1.5**
BEL	**Belsk**	**83.12**	**327**	*eP*		**P**	**17 47 47.4**	**+1.1**
BR131	**Keskin Array S**	**83.12**	**312**	*c*P		**P**	**17 47 47.6**	**+0.8**
BRTR	**Keskin Array B**	**83.12**	**312**	P		**P**	**17 47 47.6**	**+0.8**
	comp=Z,10nm,0.9s,baz=89,slow=4.0,SNR=42							
	comp=Z,10nm,0.9s							
BRTR	**Keskin Array B**	**83.12**	**312**	P		**P**	**17 47 46.8**	**0.0**
PRAR	**RASCA**	**83.16**	**321**	⇓P		**P**	**17 47 46.9**	**+0.2**
SCTR	**Scanteiesti**	**83.18**	**319**	⇑P		**P**	**17 47 47.8**	**+1.0**
TATR	**Tatarca**	**83.19**	**319**	⇑P		**P**	**17 47 48.4**	**+1.5**
JURR	**Jurilovca**	**83.21**	**318**	⇓P		**P**	**17 47 47.8**	**+0.9**
KIRS	**Kirsehir-Merke**	**83.26**	**311**	⇓P		**P**	**17 47 49.0**	**+1.5**
PDAR	**Pinedale Array**	**83.35**	**44**	P		**P**	**17 47 49.9**	**+1.8**
	comp=Z,0.9nm,0.9s,baz=197,slow=1.5,SNR=6.5							
	comp=Z,0.9nm,0.9s							
PDAR	**Pinedale Array**	**83.35**	**44**	P		**P**	**17 47 47.8**	**-0.3**
CFR	**Carcaliu**	**83.39**	**319**	⇑P		**P**	**17 47 48.4**	**+0.5**
CFR	**Carcaliu**	**83.39**	**319**	⇑P		**P**	**17 47 48.4**	**+0.5**
TPGR	**Topolog**	**83.42**	**318**	⇓P		**P**	**17 47 48.8**	**+0.8**
TESR	**Tescani**	**83.44**	**321**	⇓P		**P**	**17 47 49.0**	**+0.9**
BSD	**Bornholm Skovb**	**83.48**	**332**	IAmb	IAmb		17 47 49.5	
	comp=Z,54nm,1.0s							
BSD	**Bornholm Skovb**	**83.48**	**332**	*i* P		**P**	**17 47 47.9**	**-0.3**
PANC	**Panciu**	**83.54**	**320**	⇑P		**P**	**17 47 50.3**	**+1.6**
BURAR	**Bucovina Array**	**83.55**	**322**	⇑P		**P**	**17 47 49.3**	**+0.5**
BURAR	**Bucovina Array**	**83.55**	**322**	P		**P**	**17 47 49.4**	**+0.5**
BURAR	**Bucovina Array**	**83.55**	**322**	⇑P		**P**	**17 47 49.3**	**+0.5**
BJUU	**Bjuv**	**83.56**	**333**	*i* P		**P**	**17 47 48.7**	**+0.2**
KWP	**Kalwaria Pacla**	**83.60**	**325**	*eP*		**P**	**17 47 50.2**	**+1.3**
TIRR	**Tirgusor**	**83.66**	**318**	⇑P		**P**	**17 47 50.2**	**+1.0**
TIRR	**Tirgusor**	**83.66**	**318**	⇑P		**P**	**17 47 50.2**	**+1.0**
ODBI	**Odobesti**	**83.66**	**320**	⇑P		**P**	**17 47 49.1**	**-0.1**
ONER	**Baraj Valea Uz**	**83.69**	**320**	⇑P		**P**	**17 47 50.2**	**+0.8**
GKP	**Gorka Klasztor**	**83.78**	**330**	*eP*		**P**	**17 47 50.2**	**+0.5**
VRI	**Vrincioaia**	**83.78**	**320**	⇑P		**P**	**17 47 50.6**	**+0.6**
VRI	**Vrincioaia**	**83.78**	**320**	⇑P		**P**	**17 47 50.6**	**+0.6**
PLOR	**Plostina**	**83.83**	**320**	⇑P		**P**	**17 47 51.1**	**+0.9**
PLOR	**Plostina**	**83.83**	**320**	⇑P		**P**	**17 47 51.1**	**+0.9**
TURR	**Turia**	**84.06**	**320**	⇓P		**P**	**17 47 52.8**	**+1.4**
COVR	**Voineasa-Covas**	**84.08**	**320**	⇑P		**P**	**17 47 52.5**	**+1.1**
ICOR	**Ion Corvin**	**84.21**	**318**	⇑P		**P**	**17 47 53.7**	**+1.6**
NEHR	**Nehoiu**	**84.29**	**320**	⇓P		**P**	**17 47 54.2**	**+1.7**
ISR	**Istrita**	**84.33**	**319**	⇑P		**P**	**17 47 54.5**	**+1.7**
ISR	**Istrita**	**84.33**	**319**	⇑P		**P**	**17 47 54.5**	**+1.7**
BMR	**Baia Mare**	**84.42**	**323**	⇑P		**P**	**17 47 54.1**	**+1.0**
BMR	**Baia Mare**	**84.42**	**323**	⇑P		**P**	**17 47 54.1**	**+1.0**
MLR	**Muntele Rosu**	**84.44**	**320**	⇑P		**P**	**17 47 54.0**	**+0.6**
MLR	**Muntele Rosu**	**84.44**	**320**	⇑P		**P**	**17 47 54.0**	**+0.6**
DOPR	**Dopca**	**84.46**	**321**	⇑P		**P**	**17 47 54.8**	**+1.4**
BC3	**Big Chuckawall**	**84.47**	**54**	IAmb	IAmb		17 47 56.7	
	comp=Z,7.6nm,1.2s							
STHS	**Stebnicka Huta**	**84.47**	**325**	*eP*		**P**	**17 47 53.9**	**+0.6**
STHS				pmax	pmax			
	comp=Z,12nm,0.9s							
STHS	**Stebnicka Huta**	**84.47**	**325**	*eP*		**P**	**17 47 53.9**	**+0.6**
P17A	**Butcher Ranch,**	**84.47**	**47**	IAmb	IAmb		17 47 57.0	
	comp=Z,6.9nm,0.7s							
RDMU	**Red Mountain**	**84.59**	**46**	IAmb	IAmb		17 47 58.0	
	comp=Z,7.6nm,0.8s							
OJC	**Ojcow**	**84.65**	**326**	*eP*		**P**	**17 47 55.1**	**+0.9**
P18A	**Preston Nutter**	**84.70**	**47**	IAmb	IAmb		17 47 59.2	
	comp=Z,5.4nm,0.7s							
SULR		**84.76**	**319**	⇑P		**P**	**17 47 54.9**	**+0.1**
SRU	**San Rafael Swe**	**84.81**	**48**	IAmb	IAmb		17 47 58.2	
	comp=Z,8.8nm,0.7s							
NIE	**Niedzica**	**84.93**	**325**	*eP*		**P**	**17 47 55.9**	**+0.2**
VOIR		**84.98**	**320**	⇑P		**P**	**17 47 56.2**	**+0.2**
VOIR		**84.98**	**320**	⇑P		**P**	**17 47 56.2**	**+0.2**
BORA	**Eskisehir**	**85.07**	**313**	IAmb	IAmb		17 47 57.9	
	comp=Z,7.6nm,0.9s							
U15A	**North Rim**	**85.15**	**51**	IAmb	IAmb		17 48 22.2	
	comp=Z,6.8nm,0.4s							
MARR	**Marisel-Cluj**	**85.25**	**322**	⇑P		**P**	**17 47 58.4**	**+1.0**
HMU	**Henry Mountain**	**85.33**	**49**	IAmb	IAmb		17 48 00.8	
	comp=Z,6.5nm,0.7s							
LANS	**Liptovska Anna**	**85.52**	**326**	*eP*		**P**	**17 48 00.1**	**+1.5**
LANS				pmax	pmax			
	comp=Z,8.0nm,1.3s							
LANS	**Liptovska Anna**	**85.52**	**326**	*eP*		**P**	**17 48 00.1**	**+1.5**
O20A	**White River Ci**	**85.67**	**46**	IAmb	IAmb		17 48 02.5	
	comp=Z,5.2nm,0.8s							
STEB	**Steborice**	**85.81**	**327**	*eP*		**P**	**17 48 00.8**	**+0.8**
KSP	**Ksiaz**	**85.87**	**328**	*eP*		**P**	**17 48 01.1**	**+0.8**
MORC	**Moravsky Berou**	**86.03**	**327**	⇑P		**P**	**17 48 01.4**	**+0.3**
MORC	**Moravsky Berou**	**86.03**	**327**	IAmb	IAmb		17 48 02.6	
	comp=Z,9.8nm,0.9s							
MORC	**Moravsky Berou**	**86.03**	**327**	⇑P		**P**	**17 48 01.4**	**+0.3**
MORC	**Moravsky Berou**	**86.03**	**327**	*eP*		**P**	**17 48 01.4**	**+0.3**
ELND	**Elena**	**86.04**	**318**	⇑P		**P**	**17 48 01.8**	**+0.6**
PV21	**Cone Mtn., Par**	**86.12**	**47**	IAmb	IAmb		17 48 05.4	
	comp=Z,8.0nm,0.7s							
PSZ	**Piszkesteto**	**86.12**	**325**	⇑P		**P**	**17 48 02.3**	**+0.6**
PSZ	**Piszkesteto**	**86.12**	**325**	IAmb	IAmb		17 48 03.3	
	comp=Z,13nm,1.1s							
PSZ	**Piszkesteto**	**86.12**	**325**	⇑P		**P**	**17 48 02.3**	**+0.6**
CHVC	**Chvalec**	**86.16**	**328**	*eP*		**P**	**17 48 02.4**	**+0.7**
CHVC	**Chvalec**	**86.16**	**328**	*eP*		**P**	**17 48 02.4**	**+0.7**
PV14	**Lion Creek, Pa**	**86.20**	**48**	IAmb	IAmb		17 48 05.3	
	comp=Z,8.8nm,0.8s							
DPC	**Dobruska-Polom**	**86.20**	**328**	*eP*		**P**	**17 48 03.0**	**+1.0**
DPC	**Dobruska-Polom**	**86.20**	**328**	*eP*		**P**	**17 48 03.0**	**+1.0**
UPC	**Upice**	**86.23**	**328**	*eP*		**P**	**17 48 02.8**	**+0.7**
UPC	**Upice**	**86.23**	**328**	*eP*		**P**	**17 48 02.8**	**+0.7**
GZR	**Gura Zlata**	**86.25**	**321**	⇑P		**P**	**17 48 02.4**	**0.0**
GZR	**Gura Zlata**	**86.25**	**321**	⇑P		**P**	**17 48 02.4**	**0.0**
PV16	**Nyswonger Mesa**	**86.30**	**48**	IAmb	IAmb		17 48 06.2	
	comp=Z,4.9nm,0.8s							
PV05	**Paradox Valley**	**86.32**	**48**	IAmb	IAmb		17 48 06.0	
	comp=Z,6.1nm,0.7s							
PV11	**David Mesa, Pa**	**86.34**	**48**	IAmb	IAmb		17 48 07.6	
	comp=Z,8.1nm,0.9s							
PV18	**Skein Mesa, Pa**	**86.35**	**48**	IAmb	IAmb		17 48 06.4	
	comp=Z,12nm,0.9s							
PV12	**Saucer Basin,**	**86.37**	**48**	IAmb	IAmb		17 48 06.9	
	comp=Z,9.1nm,0.8s							
PV03	**Paradox Valley**	**86.38**	**48**	IAmb	IAmb		17 48 06.2	
	comp=Z,5.8nm,1.0s							
PV13	**Radium Mtn., P**	**86.45**	**48**	IAmb	IAmb		17 48 06.4	
	comp=Z,4.3nm,0.7s							
PV02	**Paradox Valley**	**86.48**	**48**	IAmb	IAmb		17 48 06.4	
	comp=Z,5.4nm,0.7s							
PLVB	**Pleven**	**86.48**	**319**	⇑P		**P**	**17 48 04.8**	**+1.4**
JAVC	**Velka Javorina**	**86.59**	**326**	*eP*		**P**	**17 48 05.3**	**+1.4**
HERR	**Herculane**	**86.78**	**321**	⇓P		**P**	**17 48 04.9**	**+0.1**
VRAC	**Vranov**	**86.80**	**327**	P		**P**	**17 48 05.2**	**+0.3**
	comp=Z,12nm,0.9s,baz=52,slow=4.5,SNR=12							
	comp=Z,12nm,0.9s							
VRAC	**Vranov**	**86.80**	**327**	⇑P		**P**	**17 48 06.0**	**+1.1**
VRAC	**Vranov**	**86.80**	**327**	⇑P		**P**	**17 48 06.0**	**+1.1**
VRAC	**Vranov**	**86.80**	**327**	*eP*		**P**	**17 48 05.3**	**+0.5**
PVCC	**Panska Ves**	**86.88**	**329**	*eP*		**P**	**17 48 06.0**	**+0.8**
PVCC	**Panska Ves**	**86.88**	**329**	*eP*		**P**	**17 48 06.0**	**+0.8**
BRG	**Berggiesshubel**	**86.91**	**329**	*i* P		**P**	**17 48 06.0**	**+0.6**
BRG				Amp			17 48 06.8	
	comp=Z,7.0nm,0.9s							
BRG	**Berggiesshubel**	**86.91**	**329**	P		P	17 48 11.3	+6.0
BRG				Amp			17 48 12.6	
	comp=Z,3.5nm,0.8s							
CLL	**Collm**	**87.01**	**330**	IAmb	IAmb		17 48 07.4	
	comp=Z,14nm,1.1s							
CLL	**Collm**	**87.01**	**330**	*i* P		**P**	**17 48 05.6**	**-0.2**
CLL				*eS*		**SKSac**	**17 58 17.0**	**-3.2**
CLL				pmax	pmax			
	comp=Z,15nm,1.1s							
CLL	**Collm**	**87.01**	**330**	*i* P		**P**	**17 48 05.6**	**-0.2**
	comp=Z,15nm,1.1s							
CLL				*e*PP		**PP**	**17 51 29.0**	**-1.1**
CLL				*eS*		**SKSac**	**17 58 17.0**	**-3.2**
KRUC	**Moravsky**	**87.06**	**327**	*eP*		**P**	**17 48 06.5**	**+0.4**
MODS	**Modra-Piesok**	**87.11**	**326**	*eP*		**P**	**17 48 07.6**	**+1.2**
MODS				pmax	pmax			
	comp=Z,21nm,1.1s							
MODS	**Modra-Piesok**	**87.11**	**326**	*eP*		**P**	**17 48 07.6**	**+1.2**
MDVR	**Moldovita**	**87.22**	**321**	⇓P		**P**	**17 48 07.0**	**-0.1**
TREC	**Trest**	**87.33**	**328**	*eP*		**P**	**17 48 07.8**	**+0.4**
TREC	**Trest**	**87.33**	**328**	*eP*		**P**	**17 48 07.8**	**+0.4**
ZVC	**Zvikov**	**87.82**	**328**	*eP*		**P**	**17 48 10.2**	**+0.5**
MORH	**Mrgy, Hungar**	**87.90**	**324**	⇑P		**P**	**17 48 10.2**	**+0.1**
BOVS	**Bovan**	**87.97**	**320**	⇑P		**P**	**17 48 10.4**	**-0.1**
RONA	**Rosalia, Austr**	**88.06**	**326**	*i* PcP		**P**	**17 48 11.7**	**+0.8**
	comp=Z,9.6nm,1.0s							
CONA	**Conrad Observa**	**88.11**	**326**	*i* PcP		**PcP**	**17 48 12.1**	**-0.8**
	comp=Z,11nm,0.9s							
CKRC	**Cesky Krumlov**	**88.21**	**328**	*eP*		**P**	**17 48 12.0**	**+0.4**
CKRC	**Cesky Krumlov**	**88.21**	**328**	*eP*		**P**	**17 48 12.0**	**+0.4**
KHC	**Kasperske Hory**	**88.32**	**328**	*eP*		**P**	**17 48 12.0**	**-0.2**
KHC	**Kasperske Hory**	**88.32**	**328**	*eP*		**P**	**17 48 12.0**	**-0.2**
GEC2	**GERESS Array S**	**88.47**	**328**	IAmb	IAmb		17 48 13.9	
	comp=Z,9.2nm,0.8s							
GERES	**GERESS Array B**	**88.47**	**328**	P		**P**	**17 48 12.9**	**0.0**
	comp=Z,5.7nm,0.7s,baz=38,slow=5.0,SNR=33							
	comp=Z,5.7nm,0.7s							
ARSA	**Arzberg**	**88.74**	**326**	IAmb	IAmb		17 48 15.6	
	comp=Z,7.8nm,1.1s							
ARSA	**Arzberg**	**88.74**	**326**	*i* PcP		**P**	**17 48 14.5**	**+0.3**
	comp=Z,7.2nm,1.1s							
MOA	**Molln**	**88.92**	**327**	*i* PcP		**P**	**17 48 15.6**	**+0.7**
	comp=Z,6.8nm,1.0s							
BIOA	**Bad Ischl, Aus**	**89.33**	**327**	*i* PcP		**PcP**	**17 48 17.7**	**-0.5**
	comp=Z,15nm,1.1s							
PERS	**Pernice**	**89.37**	**326**	*eP*		**P**	**17 48 17.2**	**0.0**
SOKA	**Soboth**	**89.39**	**326**	*i* PcP		**P**	**17 48 17.5**	**+0.2**
	comp=Z,15nm,0.9s,SNR=6.5							
EKA	**Eskdalemuir Ar**	**89.71**	**340**	P		**P**	**17 48 18.7**	**+0.2**
	comp=Z,4.3nm,0.9s,baz=46,slow=3.9,SNR=5.6							
	comp=Z,4.3nm,0.9s							
OBKA	**Obir**	**89.74**	**326**	*i* PcP		**P**	**17 48 18.1**	**-0.8**
	comp=Z,7.6nm,0.8s							
PDKS	**Podkum**	**89.84**	**325**	*eP*		**P**	**17 48 19.2**	**-0.1**
ANMO	**Albuquerque**	**89.88**	**49**	⇓*i* P		**P**	**17 48 21.4**	**+1.4**
ANMO				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KBA	**Koelnbreinsper**	**89.91**	**327**	*e*PcP		**P**	**17 48 19.7**	**-0.1**
	comp=Z,10nm,1.0s							
LESA	**Schwarzleotal**	**89.97**	**328**	*i* PcP		**P**	**17 48 20.4**	**+0.4**
	comp=Z,15nm,0.7s,SNR=6.1							
MYKA	**Terra Mystica**	**90.09**	**327**	*i* P		**P**	**17 48 20.0**	**-0.6**
	comp=Z,6.5nm,0.5s							
CRNS	**Crni Vrh**	**90.19**	**326**	*eP*		**P**	**17 48 20.0**	**-0.9**
ABTA	**Abfaltersbach**	**90.54**	**327**	*i* P		**P**	**17 48 22.2**	**-0.5**
	comp=Z,28nm,1.0s,SNR=8.0							
WATA	**Walderalm**	**90.55**	**328**	*i* PcP		**P**	**17 48 22.9**	**+0.2**
	comp=Z,9.1nm,1.0s							
WTTA	**Wattenberg**	**90.58**	**328**	*i* PcP		**P**	**17 48 23.2**	**+0.2**
	comp=Z,8.6nm,0.9s							
MOTA	**Moosalm**	**90.76**	**328**	*i* PcP		**P**	**17 48 23.8**	**+0.1**
	comp=Z,12nm,0.9s							
SQTA	**Sankt Quirin**	**90.80**	**328**	*i* PcP		**P**	**17 48 24.1**	**+0.2**
	comp=Z,12nm,1.0s							
RETA	**Reutte**	**90.81**	**329**	*i* PcP		**P**	**17 48 24.0**	**+0.2**
	comp=Z,13nm,1.0s							
FETA	**Feichten**	**91.17**	**328**	*i* PcP		**P**	**17 48 25.6**	**-0.1**
	comp=Z,17nm,0.9s							
BFO	**Black Forest**	**91.25**	**330**	P		**P**	**17 48 25.7**	**-0.1**
BFO	**Black Forest**	**91.25**	**330**	P		**P**	**17 48 25.7**	**-0.1**
BFO				pmax	pmax			
	comp=Z,18nm,0.9s							
DAVA	**Damuels**	**91.36**	**329**	*i* PcP		**P**	**17 48 26.8**	**+0.3**
	comp=Z,28nm,0.9s,SNR=8.2							
MNTX	**Cornudas Mount**	**92.55**	**51**	IAmb	IAmb		17 48 35.2	
	comp=Z,2.2nm,0.7s							
VHRN	**Van Horn**	**93.38**	**52**	IAmb	IAmb		17 48 39.3	
	comp=Z,3.2nm,0.8s							
TX31	**Lajitas Ar. Si**	**95.17**	**52**	IAmb	IAmb		17 49 24.3	
	comp=Z,3.1nm,1.1s							
TXAR	**Lajitas Array**	**95.17**	**52**	P		**P**	**17 48 46.2**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=293,slow=1.7,SNR=9.3							
TXAR				pP		**pP**	**17 49 17.9**	**-0.2**
	comp=Z,2.8nm,1.0s,baz=310,slow=2.8,SNR=3.5							
	comp=Z,1.3nm,0.6s							
TXAR	**Lajitas Array**	**95.17**	**52**	P		**P**	**17 48 44.2**	**-0.1**
FURI	**Furi**	**95.75**	**284**	LR	LR		18 34 18.6	
	comp=Z,252nm,19.1s,baz=48,slow=37							
ESDC	**Sonseca Array**	**103.42**	**333**	PP		**PP**	**17 53 33.1**	**-4.2**
	comp=Z,2.2nm,1.0s,baz=29,slow=7.0,SNR=4.9							
TORD	**Torodi Ar. Bea**	**121.72**	**311**	PKP		**PKiKP**	**17 54 14.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=73,slow=2.5,SNR=5.5							
TORD	**Torodi Ar. Bea**	**121.72**	**311**			**PKPdf**	**17 54 12.4**	**-2.0**
LPAZ	**La Paz**	**150.53**	**69**	PKPbc		**PKiKP**	**17 55 15.0**	**+1.3**
	comp=Z,3.9nm,0.7s,baz=324,slow=1.7,SNR=14							
LPAZ	**La Paz**	**150.53**	**69**			**PKPdf**	**17 55 09.2**	**+1.8**
LPAZ	**La Paz**	**150.53**	**69**	PKIKP		**PKPdf**	**17 55 09.3**	**+1.8**
PB11	**IPOC Station P**	**150.94**	**77**	PKPbc		**PKiKP**	**17 55 15.6**	**+1.8**
PLCA	**Paso Flores**	**152.51**	**122**	PKPbc		**PKiKP**	**17 55 17.1**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=295,slow=2.3,SNR=7.1							
CPUP	**Villa Florida**	**163.89**	**82**	PKPab		**PKPab**	**17 56 18.4**	**+1.7**
	comp=Z,2.1nm,0.8s,baz=270,slow=6.4,SNR=4.8							

NAO ***20*** *17:36:53.6±0.6, 77°.55N×7°.50E, h10km, ML2.6*
IDC ***20*** *17:36:54.6±0.8, 77°.43N×7°.49E, h0km, mb3.6/10, mbtmp3.6/15, ML2.7/4, MS3.6/6, Error ellipse: s-maj=16.1km s-min=13.7km az=70.0*
KOLA ***20*** *17:36:54.3, 77°.63N×8°.33E, h0km, ML2.5, Error ellipse: s-maj=18.6km s-min=15.3km az=30.0, Greenland sea, Knipovich ridge, middle*
BER ***20*** *17:36:56.3±3.5, 77°.55N×7°.36

comp=Z,0.7nm,0.7s
FRB Frobisher Bay 26.17 282 LR LR 17 52 21.8
comp=Z,73nm,18.3s,baz=68,slow=35
AKASG Malin Array Be 28.16 150 P **P** **17 42 46.5 -0.1**
AKASG LR LR 17 53 22.8
comp=Z,136nm,18.2s,baz=320,slow=35
comp=Z,0.4nm,0.4s
MLR Muntele Rosu 32.99 156 LR LR 17 57 45.4
comp=Z,148nm,18.2s,baz=320,slow=38
BVAR Borovoye Array 33.09 100 P **P** **17 43 32.9 +2.7**
comp=Z,0.4nm,0.6s,baz=328,slow=7.5,SNR=3.4
comp=Z,0.4nm,0.6s
YKA Yellowknife Ar 35.82 318 P **P** **17 43 54.8 +1.1**
comp=Z,0.3nm,0.6s,baz=14,slow=8.9,SNR=5.7
comp=Z,0.3nm,0.6s
KBZ Khabaz 36.80 136 P **P** **17 44 04.3 +2.1**
comp=Z,1.0nm,0.8s,baz=343,slow=8.6,SNR=2.7
comp=Z,1.0nm,0.8s
ILAR Eielson Array 37.06 342 P **P** **17 44 07.0 +2.8**
comp=Z,0.3nm,0.7s,baz=6.2,slow=7.6,SNR=4.3
comp=Z,0.3nm,0.7s
KURBB Kurchatov Arra 37.10 93 P **P** **17 44 06.5 +1.8**
comp=Z,3.1nm,0.2s,baz=340,slow=7.5,SNR=5.4
ESDC Sonseca Array 38.28 194 P **P** **17 44 15.7 +0.8**
comp=Z,0.2nm,0.4s,baz=9.2,slow=10,SNR=1.6
comp=Z,0.2nm,0.4s
BRTR Keskin Array B 39.48 148 P **P** **17 44 26.3 +1.2**
comp=Z,0.3nm,0.4s,baz=343,slow=7.5,SNR=2.7
comp=Z,0.3nm,0.4s
TORD Torodi Ar. Bea 64.47 186 P **P** **17 47 31.5 +0.4**
comp=Z,0.8nm,0.7s,baz=336,slow=5.5,SNR=4.3
comp=Z,0.8nm,0.7s
DBIC Dimbokro 71.14 193 P **P** **17 48 14.2 +1.2**
comp=Z,2.6nm,0.7s,baz=357,slow=8.6,SNR=2.4
comp=Z,2.6nm,0.7s
OPO Ambohidratompo 98.65 142 LR LR 18 36 44.1
comp=Z,133nm,19.2s,baz=192,slow=36

PRU 20 17:46:25.6,50°.28N×19°.12E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STEB	**Steborice**	**0.93**	**249**	*e*	**Sg**	17 46 56.2	+0.6
MORC	**Moravsky Berou**	**1.14**	**244**	*e*	**Pg**	17 46 47.1	-0.2
MORC				e	Sg	17 47 01.7	-0.3
LANS	**Liptovska Anna**	**1.15**	**169**	*e*	**Pg**	17 46 44.9	-2.8
LANS				e	Sg	17 46 58.6	-4.0
LANS				e	Lg	17 46 59.1	
DPC	**Dobruska-Polom**	**1.79**	**273**	e	Sb	17 47 22.4	0.0

NNC ***20*** *17:46:33.9±0.6,42°.89N×79°.57E,h0km,mb3.6,mpv2.4, Error ellipse: s-maj=3.4km s-min=2.0km az=131.0*
SOME ***20*** *17:46:33.4,42°.82N×79°.55E,h5km*
ISC 20 17:46:33.9±3.1,42°.9N±0°.1×79°.6E±0°.1,h9km±13km,n9, σ0s.52/18,3C-1D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.30**	**340**	P	**Pb**	**17 46 41.2**	**-0.3**
	5.3nm,0.1s						
SHLS				S	**Sb**	**17 46 46.6**	**+0.1**
	37nm,0.1s						
SHLS	**Shalkode**	**0.30**	**340**	*e*P	**Pb**	**17 46 41.1**	**-0.3**
	5.3nm,0.1s						
SHLS				*e*S	**Sb**	**17 46 46.6**	**+0.1**
	37nm,0.1s						
PDGK	**Podgornoye**	**0.46**	**350**	⇑P	**Pg**	**17 46 42.7**	**-0.2**
	0.6nm,0.2s						
PDGK				⇑S	**Sg**	**17 46 49.0**	**+0.1**
	0.6nm,0.2s						
UZB	**Uzynbulak**	**0.50**	**302**	P	**Pg**	**17 46 43.7**	**0.0**
	3.0nm,0.2s						
UZB				S	**Sg**	**17 46 51.2**	**+0.8**
	4.6nm,0.1s						
UZB	**Uzynbulak**	**0.50**	**302**	*e*P	**Pg**	**17 46 43.7**	**0.0**
	3.6nm,0.2s						
UZB				*e*S	**Sg**	**17 46 51.2**	**+0.8**
	4.6nm,0.1s						
KPKS	**Kokpek**	**0.89**	**311**	P	**Pg**	**17 46 50.5**	**-0.5**
	0.3nm,0.1s						
KPKS				S	**Sg**	**17 47 02.6**	**-0.1**
	1.1nm,0.1s						
KPKS	**Kokpek**	**0.89**	**311**	*e*P	**Pg**	**17 46 50.5**	**-0.5**
	0.3nm,0.1s						
KPKS				*e*S	**Sg**	**17 47 02.6**	**-0.1**
	4.0nm,0.5s						
SATY	**Saty**	**0.90**	**282**	P	**Pb**	**17 46 51.0**	**-0.7**
	0.5nm,0.1s						
SATY				S	**Sb**	**17 47 03.6**	**-0.2**
	3.3nm,0.1s						
KNDC	**Almaty**	**1.96**	**281**	⇑Pn	**Pn**	**17 47 08.2**	**+0.8**
	7.2nm,0.4s						
KNDC				⇓Sn	**Sb**	**17 47 34.0**	**-0.4**
	7.8nm,0.5s						

FCIAR ***20*** *17:53:00.0,77°.05N×8°.34E,h10km*
NAO ***20*** *17:53:04.8±0.5,77°.56N×7°.65E,h10km,ML2.6*
BER ***20*** *17:53:04.8±2.9,77°.46N×7°.44E,h10km,Mw3.5, ML3.1(NAO),Confirmed Earthquake*
KOLA ***20*** *17:53:05.3,77°.54N×8°.70E,h0km,ML2.1,Error ellipse: s-maj=5.9km s-min=3.5km az=70.0,Greenland sea,Knipovich ridge, middle*
ISC 20 17:53:01.1±1.6,77°.48N±0°.05×7°.30E±0°.04,h10km±12km, n34,σ1s94/55,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRBA	**Barentsburg A**	**1.59**	**65**	Pb	**Pg**	**17 53 31.0**	**-0.4**
BRBA				Sb	**Sn**	**17 53 48.7**	**-1.0**
BRBA	**Barentsburg A**	**1.59**	**65**	*e*P	**Pg**	**17 53 31.1**	**-0.4**
BRBA				IAML		17 53 48.1	
	comp=Z,83nm,0.2s						
BRBA				*e*S	**Sn**	**17 53 48.1**	**-1.6**
BRBB	**Barentsburg B**	**1.59**	**64**	Pb	**Pg**	**17 53 31.1**	**-0.5**
BRBB				Sb	**Sn**	**17 53 49.4**	**-0.5**
BRBB	**Barentsburg B**	**1.59**	**64**	*e*P	**Pg**	**17 53 31.1**	**-0.5**
BRBB				*e*Pg	**Pb**	**17 53 33.5**	**+2.9**
BRBB	**Barentsburg B**	**1.59**	**64**	P	**Pg**	**17 53 30.8**	**-0.8**
BRBB				S	**Sn**	**17 53 46.5**	**-3.4**
KBS	**Kingsbay**	**1.74**	**31**	Pb	**Pb**	**17 53 32.9**	**-0.3**
KBS				Sb	**Sn**	**17 53 53.4**	**-0.2**
KBS	**Kingsbay**	**1.74**	**31**	*e*P	**Pb**	**17 53 32.8**	**-0.3**
KBS				*e*S	**Sn**	**17 53 53.3**	**-0.2**
KBS				IAML		17 53 57.3	
	comp=Z,42nm,0.5s						
KBS	**Kingsbay**	**1.74**	**31**	P	**Pb**	**17 53 32.6**	**-0.5**
KBS				S	**Sn**	**17 53 53.2**	**-0.3**
KBS	**Kingsbay**	**1.74**	**31**	*i* P	**Pg**	**17 53 33.4**	**-1.1**
KBS				*i* S	**Sn**	**17 53 53.2**	**-0.3**
HSPB	**Hornsund (broa**	**1.89**	**101**	Pn	**Pb**	**17 53 34.9**	**-0.8**
HSPB	**Hornsund (broa**	**1.89**	**101**	*e*P	**Pb**	**17 53 34.8**	**-0.8**
HSPB				*e*S	**Sn**	**17 53 54.6**	**-2.7**
HSPB				IAML		17 53 57.9	
	comp=Z,19nm,0.4s						
HSPB	**Hornsund (broa**	**1.89**	**101**	*e*P	**Pb**	**17 53 34.7**	**-0.9**
HSPB				*e*S	**Sn**	**17 53 56.1**	**-1.1**
HSPB	**Hornsund (broa**	**1.89**	**101**	P	**Pb**	**17 53 34.6**	**-1.0**
HSPB				S	**Sn**	**17 53 54.5**	**-2.7**
SPA0	**Spitsbergen Ar**	**2.05**	**66**	Pn	**Pg**	**17 53 38.5**	**-1.8**
	baz=248,slow=16						
SPA0				Sn	**Sb**	**17 54 02.7**	**-1.1**
	baz=250,slow=28						
SPA0	**Spitsbergen Ar**	**2.05**	**66**	Pn	**Pg**	**17 53 38.5**	**-1.8**
SPA0				Sn	**Sb**	**17 54 02.7**	**-1.1**
SPA0	**Spitsbergen Ar**	**2.05**	**66**	*e*P	**Pb**	**17 53 37.6**	**-0.7**
SPA0				*e*S	**Sb**	**17 54 03.2**	**-0.6**
SPITS	**Spitsbergen Ar**	**2.05**	**66**	P	**Pb**	**17 53 38.3**	**0.0**
SPITS				S	**Sn**	**17 54 01.4**	**+0.3**
HOPEN	**Hopen**	**4.11**	**95**	Pn	**Pn**	**17 54 06.3**	**+2.5**
HOPEN				Sn	**Sn**	**17 54 51.0**	**-0.8**
HOPEN	**Hopen**	**4.11**	**95**	*e*P	**Pn**	**17 54 06.0**	**+2.2**
HOPEN				*e*S	**Sn**	**17 54 50.8**	**-1.1**
HOPEN				IAML		17 54 53.3	
	comp=Z,13nm,0.1s						
DAG	**Danmarks Havn**	**5.81**	**276**	*e*P	**Pn**	**17 54 28.9**	**+1.7**
DAG				*e*S	**Sn**	**17 55 29.0**	**-4.8**
DAG	**Danmarks Havn**	**5.81**	**276**	*e*	**Pn**	**17 54 26.3**	**-1.0**
	baz=70,slow=18						
DAG				*i* P	Pb	17 54 29.2	-13
DAG				*i*		17 55 28.8	
DAG				IAML		17 55 32.8	
	comp=Z,17nm,0.4s						
NOR	**Nord**	**5.95**	**325**	Pn	**Pn**	**17 54 31.5**	**+2.4**
NOR	**Nord**	**5.95**	**325**	*e*P	**Pn**	**17 54 31.1**	**+2.0**
NOR	**Nord**	**5.95**	**325**	*i* P	**Pn**	**17 54 29.7**	**+0.6**
NOR				IAML		17 55 38.0	
	comp=Z,1.7nm,0.4s						
DBG	**Daneborg**	**7.37**	**259**	Pn	**Pn**	**17 54 52.0**	**+3.4**
DBG				Sn	Sn	17 56 05.7	-6.4
DBG	**Daneborg**	**7.37**	**259**	*e*P	**Pn**	**17 54 52.0**	**+3.4**
DBG				*e*S	**Sn**	**17 56 07.3**	**-4.8**
DBG	**Daneborg**	**7.37**	**259**	*i* P	**Pn**	**17 54 51.8**	**+3.2**
DBG				IAML		17 56 11.9	
	comp=Z,2.1nm,0.3s						
ZFI2	**Zemlya Franca-**	**8.13**	**47**	*e*P	**Pn**	**17 54 58.7**	**-0.3**
ZFI2				*e*S	**Sn**	**17 56 31.5**	**+0.8**
OMEGA	**Omega**	**8.14**	**48**	*e*P	**Pn**	**17 55 01.2**	**+2.0**
OMEGA				*e*S	**Sn**	**17 56 31.5**	**+0.5**
SCO	**Scoresbysund**	**10.54**	**244**	*e*	Pn	17 55 43.5	+12
NEEM	**North Greenlan**	**12.23**	**298**	*i* P	**Pn**	**17 55 55.4**	**+0.1**
NEEM	**North Greenlan**	**12.23**	**298**	*i* P	**Pn**	**17 55 55.4**	**+0.1**
SUMG	**Summit**	**12.46**	**271**	*i* P	**Pn**	**17 56 02.0**	**+3.4**
SUMG	**Summit**	**12.46**	**271**	*i* P	**Pn**	**17 56 02.0**	**+3.4**

MOS ***20*** *18:01:33.1±1.0,34°.49N×85°.68E,h9km,mb5.2/45, MS4.7/15,Error ellipse: s-maj=5.7km s-min=3.1km az=121.1*
IDC ***20*** *18:01:33.2±0.4,34°.44N×85°.66E,h0km,mb4.6/30, mbtmp4.7/36,ML4.1/6,MS4.5/64,Error ellipse: s-maj=15.0km s-min=9.9km az=30.0*
NDI ***20*** *18:01:35.0±2.5,34°.55N×85°.66E,h9km,g9km,ML5.0, MW5.0*
NEIC ***20*** *18:01:35.3±1.7,34°.52N±0°.07×85°.70E±0°.09,h10km±1km, mb5.1/179,Error ellipse: s-maj=13.1km s-min=10.8km az=48.0*
BJI ***20*** *18:01:36.6,34°.59N×85°.70E,h9km,mB5.2/49,mb4.8/71, Ms5.0/84,Ms7 5.0/81*
GCMT ***20*** *18:01:38.3±0.1,34°.47N±0°.01×85°.72E±0°.01,h26km, MW5.3/131,Moment Tensor Solution. s79,c113; s131,c238; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=0.38±.03; Mθθ=0.91±.02; Mφφ=1.28±.02; Mrθ=-0.01±.04; Mθφ=0.43±.02; Mφr=0.07±.04; Best double couple: Mo1.17800×10^17 NP1:φ=56.00000°,δ=87.00000°, λ=0.00000°. NP2:φ=326.00000°,δ=90.00000°,λ=177.00000°. Principal axes: T 1.3660, Plg2.0000°, Azm281.0000°; N -0.3790, Plg87.0000°, Azm146.0000°; P -0.9900, Plg2.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 18:01:35.4±0.5,34°.47N±0°.03×85°.62E±0°.03,h13km±2km, h13km:pP-P,n831,σ1s66/836,mb5.0/209,MS4.7/91, 34C-27D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOSI	**Joshimath**	**6.43**	**234**	*e*P	**Pn**	**18 03 11.2**	**+1.2**
JOSI				*e*S	**Sn**	**18 04 20.2**	**-3.2**
EVN	**Everest**	**6.57**	**171**		**Pn**	**18 03 14.7**	**+2.4**
LSA	**Lhasa**	**6.68**	**134**	Pn	**Pn**	**18 03 15.9**	**+2.3**
LSA	**Lhasa**	**6.68**	**134**	Pn	**Pn**	**18 03 14.3**	**+0.7**
LSA				smax	smax		
	comp=N,120nm,2.2s						
LSA				smax	smax		
	comp=E,96nm,2.4s						
LSA	**Lhasa**	**6.68**	**134**	P	**Pn**	**18 03 15.9**	**+2.3**
PTH	**Pithoragarh**	**6.70**	**225**	*e*P	**Pn**	**18 03 15.0**	**+1.4**
PTH				*e*S	**Sn**	**18 04 26.5**	**-3.3**
PTH				IAML		18 05 32.2	
	comp=N,1μm,0.3s						
PTH				IAML		18 05 39.6	
	comp=E,1μm,1.8s						
KLP	**Kalpa**	**6.85**	**247**	*e*P	**Pn**	**18 03 15.8**	**0.0**
KLP				*e*S	**Sn**	**18 04 30.6**	**-3.1**
ALCI	**Alchi Leh**	**6.98**	**270**	*e*P	**Pn**	**18 03 17.8**	**+0.1**
ALCI				*e*S	**Sn**	**18 04 31.6**	**-5.6**
ALCI				IAML		18 05 47.4	
	comp=N,2μm,3.1s						
ALCI				IAML		18 05 58.0	
	comp=E,2μm,2.9s						
DDI	**Dehra Dun**	**7.61**	**239**	*e*P	**Pn**	**18 03 26.4**	**+0.3**
DDI				*e*S	**Sn**	**18 04 47.5**	**-4.7**
DDI				IAML		18 06 09.1	
	comp=N,825nm,4.3s						
DDI				IAML		18 06 19.6	
	comp=E,925nm,6.8s						
BRCI	**Bahraich**	**7.69**	**208**	*e*P	**Pn**	**18 03 27.6**	**+0.4**
BRCI				*e*S	**Sn**	**18 04 52.1**	**-2.1**
BRCI				IAML		18 08 00.5	
	comp=N,912nm,6.8s						
GOMU	**GeErMu**	**7.71**	**74**	Pn	**Pn**	**18 03 31.1**	**+3.4**
GOMU				LR	LR		
	comp=N,28μm,12.5s						
GOMU				LR	LR		
	comp=N,8μm,9.8s						
GOMU				LR	LR		
	comp=N,13μm,10.2s						
TSSA	**Tissa**	**8.06**	**261**	*e*P	**Pn**	**18 03 33.0**	**+0.6**
TSSA				*e*S	**Sn**	**18 04 58.4**	**-5.0**
DHRM	**DHARAMSHALA**	**8.10**	**257**	*e*P	**Pn**	**18 03 31.1**	**-1.8**
DHRM				*e*S	**Sn**	**18 04 58.2**	**-6.3**
DHRM				IAML		18 06 37.5	
	comp=N,1μm,5.3s						
DHRM				IAML		18 06 46.3	
	comp=E,2μm,5.1s						
BHK	**Bhakra**	**8.35**	**251**	*e*P	Pn	18 03 29.7	-6.4
BHK				*e*S	Sn	18 04 55.6	-15
BHK				IAML		18 06 27.7	
	comp=N,297nm,7.3s						
WUS	**Wushi**	**8.41**	**325**		**Pn**	**18 03 37.2**	**+0.2**
MERT	**Meerut**	**8.66**	**233**	*e*P	**Pn**	**18 03 39.5**	**-0.9**
MERT				*e*S	**Sn**	**18 05 13.1**	**-4.9**
MERT				IAML		18 06 25.7	
	comp=N,852nm,0.5s						
SRNI	**Srinagar**	**8.96**	**270**	*e*P	**Pn**	**18 03 43.6**	**-1.0**
SRNI				*e*S	**Sn**	**18 05 18.7**	**-6.9**
BISR	**Bishrakh**	**9.12**	**232**	*e*P	**Pn**	**18 03 46.5**	**-0.2**
BISR				*e*S	**Sn**	**18 05 21.6**	**-7.6**
BISR				IAML		18 05 37.4	
	comp=N,280nm,0.5s						
BISR				IAML		18 06 44.2	
	comp=E,6μm,3.6s						
JMU	**Jammu**	**9.15**	**262**	*e*P	**Pn**	**18 03 46.2**	**-0.9**
JMU				*e*S	**Sn**	**18 05 24.6**	**-5.4**
JMU				IAML		18 07 36.6	
	comp=N,205nm,10.5s						
JMU				IAML		18 07 45.8	
	comp=E,264nm,8.2s						
NPLP	**NPLP New Delhi**	**9.26**	**233**	*e*P	**Pn**	**18 03 49.6**	**+1.0**
NPLP				*e*S	**Sn**	**18 05 27.2**	**-5.3**
KSH2	**Kashi**	**9.31**	**303**	P	**Pn**	**18 03 53.0**	**+3.6**
KSH2				sP		18 04 03.8	
KSH2				S	Sn	18 05 43.8	+10
KSH2				pmax	pmax		
	comp=E,24nm,1.9s						
KSH2				LR	LR		
	comp=E,9μm,11.3s						
KSH2				LR	LR		
	comp=E,12μm,9.6s						
BHGR	**Bahadurgarh**	**9.38**	**234**	*e*P	**Pn**	**18 03 51.3**	**+1.0**
BHGR				*e*S	Sn	18 05 26.1	-10
BHGR				IAML		18 05 34.8	
	comp=N,505nm,0.1s						
BHGR				IAML		18 06 52.2	
	comp=E,2μm,12.2s						
WMQ	**Urumqi**	**9.48**	**9**	P	**Pn**	**18 03 53.6**	**+2.0**
WMQ				sP		18 03 59.4	
WMQ				pmax	pmax		
	comp=E,71nm,1.1s						
WMQ				pmax	pmax		
	comp=E,600nm,6.5s						
WMQ				LR	LR		
	comp=E,7μm,12.7s						
WMQ				LR	LR		
	comp=E,4μm,7.9s						
WMQ				LR	LR		
	comp=E,3μm,15.3s						
TARG	**Taragay, Kyrgy**	**9.51**	**322**		**Pn**	**18 03 51.9**	**-0.4**
TARG	**Taragay, Kyrgy**	**9.51**	**322**	P	**Pn**	**18 03 51.9**	**-0.4**
ALBI	**Allahabad**	**9.71**	**201**	*e*P	**Pn**	**18 03 55.1**	**+0.4**
PRZ	**Przheval'sk**	**9.80**	**327**		**Pn**	**18 03 56.8**	**+0.7**
PRZ	**Przheval'sk**	**9.80**	**327**	P	**Pn**	**18 03 56.8**	**+0.7**
SHLS	**Shalkode**	**9.91**	**333**	*e*P	**Pn**	**18 03 56.6**	**-1.0**
SHLS				*e*S	**Sn**	**18 05 47.0**	**-1.8**
SHLS	**Shalkode**	**9.91**	**333**	*e*P	**Pn**	**18 03 56.7**	**-1.0**
SHLS				*e*S	**Sn**	**18 05 47.1**	**-1.8**
SHLS				*e*LQ	LQ	18 06 47.2	
TEZP	**TEZPUR**	**9.97**	**140**	*e*P	**Pn**	**18 03 59.0**	**+0.6**
TEZP				*e*S	**Sn**	**18 05 42.8**	**-7.4**
UZB	**Uzynbulak**	**10.07**	**331**	*e*P	**Pn**	**18 04 00.8**	**+1.0**
UZB				*e*S	**Sn**	**18 05 54.8**	**+2.0**
UZB	**Uzynbulak**	**10.07**	**331**	*e*P	**Pn**	**18 04 00.9**	**+1.0**
UZB				*e*S	**Sn**	**18 05 54.8**	**+2.0**
UZB				*e*LQ	LQ	18 06 57.2	
ITAN	**ITANAGAR**	**10.09**	**134**	*e*P	**Pn**	**18 04 00.1**	**+0.2**
ITAN				*e*S	**Sn**	**18 05 45.4**	**-7.6**
ITAN				IAML		18 07 39.9	
	comp=E,20μm,7.7s						
ITAN				IAML		18 08 31.1	
	comp=N,179nm,3.3s						
KDJ	**Kajisay**	**10.12**	**322**	Pn	**Pn**	**18 04 02.2**	**+1.7**
KDJ	**Kajisay**	**10.12**	**322**	P	**Pn**	**18 04 02.2**	**+1.7**
SATY	**Saty**	**10.26**	**329**	*e*P	**Pn**	**18 04 03.3**	**+1.0**
SATY				*e*S	**Sn**	**18 05 59.3**	**+2.1**
SATY	**Saty**	**10.26**	**329**	*e*P	**Pn**	**18 04 03.3**	**+1.0**
SATY				*e*S	**Sn**	**18 05 59.4**	**+2.1**
SATY				*e*LQ	LQ	18 07 03.0	
NRN	**Naryn**	**10.29**	**315**		**Pn**	**18 04 04.7**	**+1.7**
NRN	**Naryn**	**10.29**	**315**	P	**Pn**	**18 04 04.7**	**+1.7**
NIL	**Nilore**	**10.29**	**269**		**Pn**	**18 04 02.7**	**-0.1**
NIL	**Nilore**	**10.29**	**269**	P	**Pn**	**18 04 02.7**	**-0.1**
SHL	**Shillong**	**10.40**	**147**		**Pn**	**18 04 02.3**	**-2.1**
SHL	**Shillong**	**10.40**	**147**	*e*P	**Pn**	**18 04 03.1**	**-1.2**
SHL				*e*S	**Sn**	**18 05 54.5**	**-6.3**
SHL				IAML		18 07 40.8	
	comp=E,147nm,6.8s						
SHL				IAML		18 08 32.0	
	comp=N,980nm,8.5s						
SHL	**Shillong**	**10.40**	**147**	P	**Pn**	**18 04 02.3**	**-2.1**
SHL	**Shillong**	**10.40**	**147**	P	**Pn**	**18 04 04.6**	**+0.2**
	SNR=12						
KPKS	**Kokpek**	**10.48**	**331**	*e*P	**Pn**	**18 04 06.0**	**+0.7**
KPKS				*e*S	**Sn**	**18 06 04.2**	**+1.6**
KPKS	**Kokpek**	**10.48**	**331**	*e*P	**Pn**	**18 04 06.0**	**+0.7**
KPKS				*e*S	**Sn**	**18 06 04.2**	**+1.6**
KPKS				*e*LQ	LQ	18 07 09.1	
ULHL	**Ulahol**	**10.69**	**319**	P	**Pn**	**18 04 10.6**	**+2.2**
	SNR=45						
TNSS	**Tian-Shan**	**10.90**	**324**	*e*P	**Pn**	**18 04 12.2**	**+0.8**
TNSS				*e*S	**Sn**	**18 06 15.5**	**+2.0**
TNSS	**Tian-Shan**	**10.90**	**324**	*e*P	**Pn**	**18 04 12.2**	**+0.8**
TNSS				*e*S	**Sn**	**18 06 15.5**	**+2.0**
MDOK	**Medeo**	**10.95**	**325**	*e*P	**Pn**	**18 04 12.8**	**+1.0**
MDOK				*e*S	**Sn**	**18 06 16.4**	**+2.1**
MDOK	**Medeo**	**10.95**	**325**	*e*P	**Pn**	**18 04 12.9**	**+1.0**
MDOK				*e*S	**Sn**	**18 06 16.5**	**+2.1**
BOOM	**Boomskoye usch**	**11.02**	**319**		**Pn**	**18 04 13.7**	**+0.8**
BOOM	**Boomskoye usch**	**11.02**	**319**	P	**Pn**	**18 04 13.7**	**+0.8**
MOKO	**MOKOCHONG**	**11.17**	**134**	*e*P	**Pn**	**18 04 15.1**	**+0.1**
MOKO				*e*S	Sn	18 06 10.4	-9.4
MOKO				IAML		18 07 57.6	
	comp=E,11μm,28.6s						
MOKO				IAML		18 08 27.3	
	comp=N,172nm,13.1s						
KOHI	**KOHIMA**	**11.40**	**138**	*e*P	**Pn**	**18 04 18.1**	**0.0**
KOHI				*e*S	Sn	18 06 15.7	-10
KOHI				IAML		18 08 03.5	
	comp=N,90nm,7.0s						
KOHI				IAML		18 08 06.0	
	comp=E,19μm,14.9s						
TKM2	**Tokmak 2**	**11.51**	**320**	P	**Pn**	**18 04 20.8**	**+1.3**
	SNR=36						
UCH	**Uchtor**	**11.65**	**315**	P	**Pn**	**18 04 23.6**	**+1.8**
	SNR=31						
KBK	**Karagaybulak**	**11.68**	**318**	P	**Pn**	**18 04 23.8**	**+1.9**
	SNR=35						
TDK	**Taldyqorghan**	**11.89**	**334**	*e*P	**Pn**	**18 04 25.4**	**+0.9**
TDK	**Taldyqorghan**	**11.89**	**334**	*e*P	**Pn**	**18 04 25.4**	**+0.9**
AAK	**Ala-Archa**	**11.92**	**316**	P	**Pn**	**18 04 27.6**	**+2.4**
	SNR=34						
AAK	**Ala-Archa**	**11.92**	**316**	Pn	**Pn**	**18 04 26.6**	**+1.5**
AAK	comp=E,1.8nm,0.3s,baz=126,slow=8.1,SNR=113			LR	LR	18 09 23.6	
	comp=E,3μm,19.6s,baz=136,slow=39 comp=E,21nm,0.6s						
AAK	**Ala-Archa**	**11.92**	**316**		**Pn**	**18 04 26.9**	**+1.7**
AAK	**Ala-Archa**	**11.92**	**316**	*e*P	**Pn**	**18 04 28.2**	**+3.0**
AAK				pmax	pmax		
	comp=Z,48nm,1.3s						
AAK	**Ala-Archa**	**11.92**	**316**	P	**Pn**	**18 04 27.3**	**+2.1**
AAK				P	**Pn**	**18 04 27.3**	**+2.1**
AAK				S	**Sn**	**18 06 42.1**	**+4.0**
AAK				S	**Sn**	**18 06 42.1**	**+4.0**
FRU1	**Bishkek**	**11.96**	**317**		**Pn**	**18 04 26.1**	**+0.6**
FRU1	**Bishkek**	**11.96**	**317**	P	**Pn**	**18 04 26.1**	**+0.6**
CHMS	**Chumysh**	**12.01**	**318**	P	**Pn**	**18 04 27.9**	**+1.6**
	SNR=6.6						
IMP	**Imphal**	**12.02**	**141**	*e*P	**Pn**	**18 04 27.0**	**+0.5**
IMP				*e*S	Sn	18 06 30.1	-10
IMP				IAML		18 08 19.5	
	comp=N,559nm,3.8s						
IMP				IAML		18 08 34.1	
	comp=E,419nm,3.0s						
ARSB	**Arslanbob**	**12.10**	**308**		**Pn**	**18 04 28.8**	**+1.3**
ARSB	**Arslanbob**	**12.10**	**308**	P	**Pn**	**18 04 28.8**	**+1.3**
DRK	**Karamyk**	**12.13**	**298**	Pn	**Pn**	**18 04 27.9**	**-0.2**
DRK	**Karamyk**	**12.13**	**298**	P	**Pn**	**18 04 27.9**	**-0.2**
USP	**Ospenovka**	**12.33**	**319**	P	**Pn**	**18 04 31.5**	**+0.9**
	SNR=5.6						
EKS2	**Erkin-Say**	**12.35**	**315**	P	**Pn**	**18 04 33.4**	**+2.4**
	SNR=54						
GTA2	**Gaotai**	**12.36**	**62**	*e*P	**Pn**	**18 04 30.5**	**-0.7**
GTA2				S	**Sn**	**18 06 47.1**	**-1.8**
GTA2				pmax	pmax		
	comp=E,5.0nm,1.2s						
GTA2				pmax	pmax		
	comp=E,350nm,10.4s						
GTA2				LR	LR		
	comp=E,29μm,17.1s						
GTA2				LR	LR		
	comp=E,7μm,15.9s						
GTA2				LR	LR		
	comp=E,8μm,12.7s						
MKAR	**Makanchi Array**	**12.57**	**349**	Pn	**Pn**	**18 04 33.3**	**-0.6**
	comp=E,0.9nm,0.3s,baz=164,slow=13,SNR=247						
MKAR				LR	LR	18 10 27.1	
	comp=E,2μm,21.9s,baz=162,slow=42 comp=E,48nm,1.0s						
MKAR	**Makanchi Array**	**12.57**	**349**	*i* P	**Pn**	**18 04 33.7**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,48nm,1.0s						
MK31	**Makanchi Array**	**12.57**	**349**	*de*P	**

IUG **luzhnay** 14.43 307 *e*P Pn **18 05 00.9 +1.6**
IUG **luzhnay** 14.43 307 *e*P Pn **18 05 00.9 +1.6**
KK31 **Karatay Array** 14.58 311 Pn **18 05 01.0 -0.4**
KK31 **Karatay Array** 14.58 311 P Pn **18 05 01.0 -0.4**
KKAR **Karatay Array** 14.58 311 Pn **18 05 00.3 -1.1**
KKAR **Karatay Array** 14.58 311 P Pn **18 05 00.3 -1.1**
TNCH **TengChong** 14.62 127 P Pn **18 05 01.3 -0.8**
TNCH pP P 18 05 06.9 -1.6
TNCH S **Sn** **18 07 43.3 -0.8**
TNCH pmax pmax
comp=N,32nm,1.5s
TNCH pmax pmax
comp=N,260nm,3.9s
TNCH LR LR
comp=N,7μm,11.6s
TNCH LR LR
comp=N,6μm,9.9s
TNCH LR LR
comp=N,7μm,16.1s
LZDM **Lanzhou Array** 14.86 79 Pn **Pn** **18 05 03.1 -2.3**
baz=246,slow=11
LZDM LR LR 18 11 51.0
comp=N,681nm,19.5s,baz=220,slow=42
comp=N,1.1nm,0.4s
BRLS **Borolday** 14.97 309 *e*P Pn **18 05 07.7 +1.1**
BRLS **Borolday** 14.97 309 *e*P Pn **18 05 07.8 +1.1**
LZH **Lanzhou** 14.98 79 *e*P Pn 18 05 02.0 -4.9
LZH sP P 18 05 13.3 +0.9
LZH S **Sn** **18 07 56.0 +3.3**
LZH pmax pmax
comp=Z,15nm,1.5s
LZH pmax pmax
comp=Z,240nm,4.5s
LZH LR LR
comp=N,7μm,14.6s
LZH LR LR
comp=E,4μm,14.0s
LZH LR LR
comp=Z,3μm,14.6s
DGZ **Jazzator, Alta** 15.28 4*d i*P **Pn** **18 05 10.4 -0.4**
CD2 **Chengdu** 15.68 98 P **Pn** **18 05 15.5 -0.6**
CD2 S **Sn** **18 08 08.5 -1.2**
CD2 pmax pmax
comp=Z,130nm,1.0s
CD2 pmax pmax
comp=Z,360nm,4.0s
CD2 LR LR
comp=Z,6μm,8.2s
CD2 LR LR
comp=Z,8μm,8.4s
PZH **PanZhiHua** 15.99 115 P **Pn** **18 05 19.1 -1.1**
PZH S **S** **18 08 27.3 -4.1**
PZH pmax pmax
comp=Z,60nm,1.7s
PZH pmax pmax
comp=Z,470nm,4.4s
PZH LR LR
comp=Z,3μm,8.6s
PZH LR LR
comp=Z,3μm,8.0s
SEM **Semipalatinsk** 16.41 348 *e*P **Pn** **18 05 25.8 +0.4**
SEM **Semipalatinsk** 16.41 348 *e*P **Pn** **18 05 25.9 +0.4**
KURBB **Kurchatov Arra** 16.95 344 Pn **Pn** **18 05 30.4 -1.8**
comp=Z,0.6nm,0.3s,baz=158,slow=11,SNR=101
KURBB LR LR 18 12 42.7
comp=Z,2μm,20.9s,baz=158,slow=39
comp=Z,132nm,1.1s
KURK **Kurchatov** 17.02 345 **Pn** **18 05 31.2 -1.8**
KURK **Kurchatov** 17.02 345⇑ *e*P **Pn** **18 05 31.5 -1.5**
KURK pmax pmax
comp=Z,246nm,1.3s
KURK **Kurchatov** 17.02 345 P **Pn** **18 05 33.8 +0.8**
KURK P **Pn** **18 05 33.8 +0.8**
KURK S **S** **18 08 47.2 -4.6**
KURK S **S** **18 08 47.2 -4.6**
KMI2 **Kunming** 17.51 117 ⇑P **Pn** **18 05 38.9 -0.6**
KMI2 PP **PnPn** **18 05 56.8 +7.1**
KMI2 S **Sn** **18 08 54.4 0.0**
KMI2 pmax pmax
comp=Z,72nm,0.5s
KMI2 pmax pmax
comp=Z,450nm,5.1s
KMI2 LR LR
comp=Z,4μm,15.1s
KMI2 LR LR
comp=Z,3μm,12.6s
HYB **Hyderabad** 18.12 202 *e*P **P** **18 05 48.1 +0.9**
KNGR **Kungurtug, Tuv** 18.32 25*d i*P **P** **18 05 50.6 +1.4**
KNGR pmax pmax
comp=Z,145nm,1.0s
XAN **Xi'an** 19.26 85 P **P** **18 05 59.3 -0.4**
XAN S **Sn** **18 09 30.9 -5.6**
XAN pmax pmax
comp=Z,75nm,1.1s
XAN pmax pmax
comp=Z,2μm,3.6s
XAN LR LR
comp=Z,11μm,15.1s
XAN LR LR
comp=Z,4μm,15.8s
XAN LR LR
comp=Z,4μm,12.4s
HRA **Herat** 19.28 276 P **Pn** **18 06 01.9 +0.8**
HRA IAmb IAmb 18 06 07.5
comp=Z,137nm,1.6s
ZAA0 **Zalesovo Array** 19.48 359 P **P** **18 06 01.3 -0.5**
ZAA0 IAmb IAmb 18 06 03.4
comp=Z,138nm,1.1s
ZALV **Zalesovo Beam** 19.48 359 P **P** **18 06 01.4 -0.5**
comp=Z,1.6nm,0.3s,baz=182,slow=10,SNR=229
ZALV LR LR 18 14 55.2
comp=Z,2μm,20.1s,baz=188,slow=41
comp=Z,94nm,1.0s
ZALV **Zalesovo Beam** 19.48 359 P **P** **18 06 02.3 +0.5**
ZALV **Zalesovo Beam** 19.48 359 *i* P **P** **18 06 02.0 +0.1**
ZALV pmax pmax
comp=Z,94nm,1.0s
CHTO **Chiang Mai** 19.59 139 P **P** **18 06 03.1 -0.2**
CHTO **Chiang Mai** 19.59 139 P **P** **18 06 03.1 -0.2**
CHTO pmax pmax
comp=Z,34nm,0.8s
CHTO **Chiang Mai** 19.59 139 P **Pn** **18 06 04.3 -0.3**
CHTO S **S** **18 09 43.4 -0.8**
CHTO **Chiang Mai** 19.59 139 P **Pn** **18 06 04.5 -0.1**
comp=Z,48nm,0.7s
GYA **Guiyang** 19.80 108 ⇑P **P** **18 06 06.1 +0.5**
GYA S **S** **18 09 46.5 -2.0**
GYA pmax pmax
comp=Z,130nm,1.3s
CM31 **Chiang Mai Arr** 19.88 140 P **Pn** **18 06 07.7 -0.5**
CM31 IAmb IAmb 18 06 15.8
comp=Z,77nm,1.0s
CM31 **Chiang Mai Arr** 19.88 140 P **Pn** **18 06 07.6 -0.5**
SNR=44
CMAR **Chiang Mai Arr** 19.88 140 P **P** **18 06 06.8 +0.3**
comp=Z,0.3nm,0.3s,baz=322,slow=10,SNR=161
comp=Z,36nm,1.0s
CMAR **Chiang Mai Arr** 19.88 140 P **P** **18 06 06.4 -0.1**
CMAR **Chiang Mai Arr** 19.88 140 *i* P **Pn** **18 06 07.5 -0.6**
CMAR pmax pmax
comp=Z,36nm,1.0s
BTO2 **Baotou** 20.18 65 *e*P **P** **18 06 09.5 -0.3**
BTO2 PP **PnPn** **18 06 28.9 +2.7**
BTO2 S **S** **18 09 51.8 -4.3**
BTO2 pmax pmax
comp=Z,18nm,1.1s
BTO2 pmax pmax
comp=Z,2μm,5.8s
BTO2 LR LR
comp=Z,4μm,16.2s
BTO2 LR LR
comp=Z,6μm,13.4s
MOY **Mondy** 20.46 28 *e*P **P** **18 06 13.6 +0.9**
MOY pmax pmax
comp=Z,143nm,1.8s
ZAK **Zakamensk** 20.48 34 *e*P **P** **18 06 13.0 +0.1**
ZAK pmax pmax
comp=Z,79nm,1.4s
SONM **Songino Array** 20.48 43 P **P** **18 06 14.1 +1.1**
comp=Z,42nm,1.0s,baz=236,slow=11,SNR=128
SONM PcP **PcP** **18 10 24.3 -0.2**
comp=Z,1.6nm,0.9s,baz=214,slow=2.5,SNR=4.0
SONM LR LR 18 14 49.1
comp=Z,2μm,21.0s,baz=236,slow=39
comp=Z,42nm,1.0s
SONM **Songino Array** 20.48 43 P **P** **18 06 13.4 +0.4**

SONM IAmb IAmb 18 06 18.8
comp=Z,114nm,1.3s
ENH **Enshi** 20.58 95 **P** **18 06 13.8 -0.2**
ENH IAmb IAmb 18 06 19.3
comp=Z,91nm,0.9s
ULN **Ulaanbaatar** 20.88 44 P **P** **18 06 17.6 +0.4**
ULN IAmb IAmb 18 06 22.5
comp=Z,144nm,1.4s
ULN **Ulaanbaatar** 20.88 44*de*P **P** **18 06 18.1 +0.9**
ULN pmax pmax
comp=Z,160nm,1.7s
ULN **Ulaanbaatar** 20.88 44 P **P** **18 06 17.2 -0.1**
ULN S **S** **18 10 10.0 +0.3**
ULN **Ulaanbaatar** 20.88 44 P **P** **18 06 17.3 +0.1**
comp=Z,6μmcomp=Z,320nm,1.5s
HHC **Hu-ho-hao-te** 21.46 65 *e*P **P** **18 06 24.3 +0.7**
HHC pP pP 18 06 28.0 -0.8
HHC sP sP 18 06 31.0 -0.4
HHC PP **PnPn** **18 06 50.5 +6.8**
HHC S **S** **18 10 18.5 -2.9**
HHC sS Sn 18 10 23.6 -5.9
HHC pmax pmax
comp=Z,38nm,1.2s
HHC pmax pmax
comp=Z,650nm,4.3s
HHC LR LR
comp=Z,4μm,17.9s
HHC LR LR
comp=Z,5μm,15.3s
BVAR **Borovoye Array** 21.48 334 P **P** **18 06 24.4 +0.9**
comp=Z,21nm,0.6s,baz=134,slow=11,SNR=146
BVAR PcP **PcP** **18 10 26.1 0.0**
comp=Z,2.2nm,0.8s,baz=134,slow=4.2,SNR=4.6
comp=Z,21nm,0.6s
BORK **Borovoye** 21.53 334 P **P** **18 06 24.5 +0.5**
BORK IAmb IAmb 18 06 26.4
comp=Z,111nm,1.3s
BORK **Borovoye** 21.53 334*ce*P **P** **18 06 25.0 +1.0**
BORK pmax pmax
comp=Z,142nm,1.7s
TLY **Talaya** 21.56 32 LR LR 18 15 25.7
comp=Z,2μm,21.9s,baz=220,slow=39
TLY **Talaya** 21.56 32 P **P** **18 06 24.7 +0.3**
TLY **Talaya** 21.56 32*d i*P **P** **18 06 25.6 +1.1**
TLY pmax pmax
comp=Z,38nm,1.0s
TLY **Talaya** 21.56 32 P **P** **18 06 25.7 +1.3**
TLY S **S** **18 10 24.2 +1.1**
TIY **Taiyuan** 21.88 74 P **P** **18 06 27.6 -0.5**
TIY S **S** **18 10 29.9 +0.3**
TIY pmax pmax
comp=Z,50nm,0.9s
TIY pmax pmax
comp=Z,200nm,3.5s
TIY LR LR
comp=Z,5μm,9.6s
TIY LR LR
comp=Z,3μm,9.1s
LYN **LuoYang** 22.11 82 P **P** **18 06 31.3 +0.9**
LYN pP pP 18 06 35.5 -0.2
LYN sP sP 18 06 39.3 +1.1
LYN PP **PnPn** **18 06 56.8 +4.4**
LYN S **S** **18 10 31.8 -2.0**
LYN sS pS 18 10 40.0 -1.6
LYN pmax pmax
comp=Z,35nm,1.6s
LYN pmax pmax
comp=Z,680nm,3.9s
LYN LR LR
comp=Z,4μm,13.7s
LYN LR LR
comp=Z,3μm,10.0s
NGCH **Negor - Chabah** 23.04 253 P **P** **18 06 42.1 +1.8**
NGCH S **S** **18 10 53.5 +2.7**
GULI **GuiLin** 23.28 106 P **P** **18 06 42.9 +0.1**
GULI S **S** **18 10 52.8 -2.1**
GULI pmax pmax
comp=Z,51nm,1.2s
GULI pmax pmax
comp=Z,670nm,3.9s
GULI LR LR
comp=Z,3μm,10.2s
GULI LR LR
comp=Z,2μm,11.4s
HNS **HongShan** 23.69 74 ⇑P **P** **18 06 47.4 +0.6**
HNS S **S** **18 11 00.9 -0.5**
HNS pmax pmax
comp=Z,55nm,1.2s
HNS pmax pmax
comp=Z,600nm,4.7s
HNS LR LR
comp=Z,2μm,11.4s
HNS LR LR
comp=Z,2μm,10.0s
AB31 **Akbulak array** 24.01 316 P **P** **18 06 50.1 +0.4**
ABKAR **Akbulak array** 24.01 316 P **P** **18 06 49.8 +0.1**
CNSH **ChangSha** 24.12 98 P **P** **18 06 50.8 -0.1**
CNSH S **S** **18 11 10.5 +2.2**
CNSH pmax pmax
comp=Z,13nm,1.3s
CNSH LR LR
comp=Z,1μm,9.0s
CNSH LR LR
comp=Z,2μm,11.2s
WHN **Wuhan** 24.51 91 P **P** **18 06 54.8 +0.4**
WHN pP **pP** **18 06 58.9 -1.1**
WHN S **S** **18 11 17.8 +3.2**
WHN pmax pmax
comp=Z,100nm,1.1s
WHN pmax pmax
comp=Z,920nm,3.4s
WHN LR LR
comp=Z,5μm,6.0s
WHN LR LR
comp=Z,9μm,31.5s
BJI2 **Beijing** 24.87 68 P **P** **18 06 58.8 +1.1**
BJI2 PcP **PcP** **18 10 34.3 +0.9**
BJI2 S **S** **18 11 20.3 -0.1**
BJI2 pmax pmax
comp=Z,8.0nm,1.0s
BJI2 pmax pmax
comp=Z,200nm,3.5s
BJI2 LR LR
comp=Z,1μm,16.8s
BJI2 LR LR
comp=Z,2μm,13.3s
XLT **XiLinHaoTe** 25.30 59 *e*P **P** **18 07 02.9 +1.3**
XLT S **S** **18 11 27.8 +0.5**
XLT pmax pmax
comp=Z,35nm,1.2s
XLT pmax pmax
comp=Z,520nm,3.6s
XLT LR LR
comp=Z,530nm,12.8s
XLT LR LR
comp=Z,2μm,12.4s
XLT LR LR
comp=Z,4μm,11.1s
AKTO **Aktyubinsk** 25.67 317 LR LR 18 17 17.2
comp=Z,914nm,21.0s,baz=198,slow=37
TIA **Tai'an** 25.70 77 P **P** **18 07 05.0 -0.3**
TIA S **S** **18 11 23.0 -11**
TIA pmax pmax
comp=Z,22nm,1.2s
TIA pmax pmax
comp=Z,270nm,3.8s
TIA LR LR
comp=Z,3μm,12.0s
TIA LR LR
comp=Z,4μm,12.0s
JLN **Jalan Bani Buh** 26.05 249 P **P** **18 07 11.1 +2.6**
SNR=9.2
JLN P **P** **18 07 11.1 +2.6**
SNR=9.2
WSAR **Wadi Sarin** 26.07 252 P **P** **18 07 10.6 +1.8**
SNR=6.8
WSAR S **S** **18 11 43.6 +3.9**
WBK **Wadi Bani Khal** 26.14 250 P **P** **18 07 12.4 +3.0**
WBK P **P** **18 07 12.4 +3.0**
QIZ **Qiongzhong** 26.44 119 P **P** **18 07 18.8 +6.7**
QIZ S **S** **18 11 53.6 +8.0**
QIZ LR LR
comp=Z,1μm,16.6s
QIZ LR LR
comp=Z,2μm,16.9s
QIZ LR LR
comp=Z,670nm,16.4s
CIT **Chita** 26.62 40 *e*P **P** **18 07 14.0 +0.5**
CIT *e* 18 08 15.2
CIT *e* 18 10 37.8
CIT pmax pmax
comp=Z,40nm,4.8s
SMDO **Samad** 26.62 252 P **P** **18 07 17.6 +3.8**
SNR=6.3
BANOM **Banah** 26.66 259 P **P** **18 07 16.4 +2.4**
BANOM P **P** **18 07 16.4 +2.4**
JMDO **Jabal Madar** 26.94 251 P **P** **18 07 19.0 +2.4**
MASF **Masafi** 27.02 258 P **P** **18 07 20.4 +3.2**
SNR=5.8
ASHO **Ashiyiah** 27.41 257 P **P** **18 07 24.0 +3.2**
SNR=6.7
PALK **Pallekele** 27.44 191 LR LR 18 19 19.2
comp=Z,619nm,18.8s,baz=24,slow=39
BSY **Bisya** 27.45 252 P **P** **18 07 24.4 +3.1**
BSY P **P** **18 07 24.4 +3.1**
MHTO **MHTO** 27.81 248 P **P** **18 07 25.5 +1.2**
SNR=8.3
NJ2 **Nanjing** 27.83 86 *e*P **P** **18 07 24.6 +0.2**
NJ2 S **S** **18 12 08.8 +1.6**
NJ2 sS **sS** **18 12 15.6 -1.0**
NJ2 pmax pmax
comp=Z,6.0nm,0.7s
NJ2 pmax pmax
comp=Z,170nm,4.3s
NJ2 LR LR
comp=Z,2μm,8.5s
NJ2 LR LR
comp=Z,2μm,10.0s
SVE **Sverdlovsk** 28.08 330 *e*P **P** **18 07 27.8 +1.4**
SVE MLR MLR
comp=E,2μm,13.0s
ARTI **Arti** 28.75 328 LR LR 18 20 21.8
comp=E,1μm,18.2s,baz=130,slow=39
ARTI **Arti** 28.75 328 P **P** **18 07 32.3 -0.1**
ARTI **Arti** 28.75 328*d i*P **P** **18 07 32.6 +0.2**
ARTI 18 10 44.0
ARTI S **S** **18 12 20.8 -0.4**
ARTI pmax pmax
comp=Z,21nm,1.4s
ARTI MLR MLR
comp=Z,794nm,12.0s
UMZA **Um Al Zommool** 29.08 254 P **P** **18 07 36.9 +1.3**
UMZA P **P** **18 07 36.9 +1.3**
DL2 **Dalian** 29.09 71 P **P** **18 07 39.6 +4.0**
DL2 S **S** **18 12 34.1 +7.1**
DL2 pmax pmax
comp=Z,20nm,0.6s
DL2 LR LR
comp=Z,3μm,14.9s
DL2 LR LR
comp=Z,3μm,17.0s
HILR **Hailar Array B** 29.20 48 P **P** **18 07 37.2 +0.6**
comp=Z,2.2nm,0.6s,baz=218,slow=9.1,SNR=5.9
HILR PcP **PcP** **18 10 44.0 +0.4**
comp=Z,6.7nm,1.0s,baz=185,slow=8.9,SNR=3.9
HILR LR LR 18 20 20.4
comp=Z,1μm,19.4s,baz=150,slow=39
comp=Z,2.2nm,0.6s
MZWR **Madinat Zayed** 29.60 257 P **P** **18 07 41.9 +1.7**
MZWR P **P** **18 07 41.9 +1.7**
SSE **Sheshan** 30.00 86 P **P** **18 07 42.3 -1.4**
SSE S **S** **18 12 40.3 -1.1**
SSE pmax pmax
comp=Z,8.0nm,1.1s
SSE pmax pmax
comp=Z,220nm,8.6s
SSE LR LR
comp=N,2μm,14.3s
SSE LR LR
comp=E,2μm,13.6s
MZR **Muzera** 30.29 256 P **P** **18 07 46.5 +0.1**
MZR P **P** **18 07 46.5 +0.1**
AKT **Akhty** 30.49 295 *e*P **P** **18 07 50.7 +2.5**
AKT *e* 18 08 48.3
AKT *e*PPP PPP 18 08 57.7
AKT *e* 18 10 46.2
AKT *e*S **S** **18 12 49.4 +0.2**
AKT *e* 18 14 34.2
AKT pmax pmax
comp=Z,26nm,1.2s
AKT MLR MLR
comp=Z,890nm,15.0s
SNY **Shenyang** 30.55 65 ⇑P **P** **18 07 48.6 +0.1**
SNY S **S** **18 12 50.8 +0.9**
SNY pmax pmax
comp=Z,16nm,0.9s
SNY pmax pmax
comp=Z,170nm,5.4s
SNY LR LR
comp=Z,1μm,13.6s
SNY LR LR
comp=Z,3μm,19.0s
MAK **Makhachkala** 30.71 297*c i*P **P** **18 07 47.4 -2.5**
MAK *e*S **S** **18 12 47.8 -4.5**
MAK pmax pmax
comp=Z,56nm,0.7s
MAK MLR MLR
comp=Z,1μm,11.0s
CN2 **Changchun** 32.01 61 P **P** **18 08 01.5 +0.2**
CN2 pP pP 18 08 05.3 -1.7
CN2 S **S** **18 13 09.8 -2.8**
CN2 SS **SnSn** **18 15 00.8 -0.9**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 LR LR
comp=Z,2μm,18.0s
CN2 LR LR
comp=Z,4μm,11.0s
BELG **Belogornoye** 32.41 315 LR LR 18 22 12.9
comp=Z,1μm,19.3s,baz=101,slow=38
BELG **Belogornoye** 32.41 315*d i*P **P** **18 08 05.1 +0.3**
BELG pmax pmax
comp=Z,7.0nm,1.1s
GNI **Garni** 32.79 292 LR LR 18 24 39.2
comp=Z,646nm,18.9s,baz=82,slow=42
GNI **Garni** 32.79 292 P **P** **18 08 11.4 +3.0**
GNI IAmb IAmb 18 08 28.4
comp=Z,29nm,0.9s
GNI **Garni** 32.79 292*c i*P **P** **18 08 12.1 +3.7**
GNI pmax pmax
comp=Z,24nm,1.2s
GNI **Garni** 32.79 292 P **P** **18 08 10.6 +2.1**
GNI P **P** **18 08 10.6 +2.1**
BNX **BinXian** 33.53 58 ⇓P **P** **18 08 14.8 +0.2**
BNX S **S** **18 13 40.6 +4.3**
BNX pmax pmax
comp=Z,16nm,1.2s
BNX pmax pmax
comp=Z,130nm,5.8s
BNX LR LR
comp=Z,2μm,9.9s
BNX LR LR
comp=Z,2μm,10.8s
PSI **Prapat** 33.86 156 P **P** **18 08 17.4 -0.4**
PSI pmax pmax
comp=Z,36nm,1.6s
PSI **Prapat** 33.86 156 P **P** **18 08 20.5 +2.7**
comp=Z,13nm,1.3s
RPSI **Rantau Prapat** 33.96 156 P **P** **18 08 17.4 -1.1**
RPSI IAmb IAmb 18 08 23.3
comp=Z,36nm,1.6s
KIRV **Kirov** 33.99 326 LR LR 18 21 45.2
comp=Z,604nm,18.8s,baz=123,slow=36
KIRV **Kirov** 33.99 326*d i*P **P** **18 08 19.0 +0.6**
GOF **Gofitskoye** 34.04 301*ce*P **P** **18 08 21.7 +2.6**
KBZ **Khabaz** 34.10 299 P **P** **18 08 20.4 +0.9**
comp=Z,1.5nm,1.0s,baz=301,slow=17,SNR=4.2
comp=Z,1.5nm,1.0s
KS19 **Wonju Array Si** 34.12 72 P **P** **18 08 17.8 -2.0**
KSAR **Wonju Array Be** 34.14 73 P **P** **18 08 18.7 -1.3**
KSAR **Wonju Array Be** 34.14 73 P **P** **18 08 18.7 -1.3**
KSRS **Korea Array** 34.16 73 P **P** **18 08 19.4 -0.8**
comp=Z,2.5nm,0.5s,baz=265,slow=8.1,SNR=15
KSRS PcP **PcP** **18 10 56.5 -0.6**
comp=Z,1.1nm,0.8s,baz=277,slow=2.4,SNR=5.3
KSRS LR LR 18 23 37.8
comp=Z,1μm,19.3s,baz=280,slow=39
comp=Z,2.5nm,0.5s
HEH **HeiHe** 34.17 50 *e*P **P** **18 08 20.5 +0.4**
HEH pP **pP** **18 08 25.3 -0.5**
HEH S **S** **18 13 50.6 +4.6**

HEH pmax pmax
comp=Z,11nm,1.3s
HEH LR LR
comp=Z,3μm,12.5s
HEH LR LR
comp=Z,4μm,12.1s
NEUR Neytrino 34.24 298⇓ *e*P **P 18 08 23.3 +2.3**
NEUR pmax pmax
comp=Z,11nm,1.5s
GEVA Gevas 34.26 289 P 18 08 23.7 +2.5
KIV Kislovodsk 34.26 299 *e*P **P 18 08 20.8 -0.3**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,720nm,16.0s
KIV Kislovodsk 34.26 299 P **P 18 08 23.6 +2.5**
comp=Z,5.4nm,0.9s
SHA1 Shidzhatmaz 34.27 299 *ce*P **P 18 08 23.4 +2.0**
GSI Gunungsitoli 34.83 159 P 18 08 26.8 +0.6
GSI Gunungsitoli 34.83 159 P **P 18 08 29.7 +3.5**
comp=Z,37nm,1.4s
ZEA Zeya 34.91 44 *e*P **P 18 08 27.5 +1.0**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA MLR MLR
comp=E,1μm,14.0s
ZEA MLR MLR
comp=Z,1μm,13.0s
MDJ Mudanjiang 35.02 60 IAmb IAmb 18 08 33.5
comp=Z,70nm,1.8s
MDJ Mudanjiang 35.02 60 P **P 18 08 28.3 +0.8**
MDJ S **S 18 14 02.4 +3.2**
MDJ SS **SnSn 18 16 19.8 +5.1**
MDJ pmax pmax
comp=Z,14nm,1.1s
MDJ LR LR
comp=Z,900nm,16.9s
MDJ LR LR
comp=Z,2μm,11.3s
VRH Novokhopyorsk 35.66 312 *e*P **P 18 08 33.3 +0.3**
VRH pmax pmax
comp=Z,33nm,1.1s
LABN Labinsk 35.68 300 *e*P **P 18 08 35.0 +1.8**
LABN pmax pmax
comp=Z,18nm,0.6s
ERBR Yeremizino-Bor 35.87 302 *e*P **P 18 08 35.5 +0.6**
ERBR pmax pmax
comp=Z,9.0nm,0.7s
ERBR MLR MLR
comp=Z,889nm,17.0s
PSTR Posyet 35.91 63⇑ *e*P **P 18 08 35.8 +0.6**
KOPT Kop Dagi 36.05 292 IAmb IAmb 18 08 45.6
comp=Z,25nm,1.2s
MARD Mardin 36.18 288 IAmb IAmb 18 08 48.9
comp=Z,43nm,1.5s
SOC Sochi 36.41 298 *e*P **P 18 08 40.7 +1.2**
SOC *e* 18 10 06.6
SOC *e*PPP PPP 18 10 18.2
SOC *e*S **S 18 14 23.0 +2.4**
SOC *e*SS **SnSn 18 16 52.3 +3.9**
SOC *e*SSS SSS 18 17 07.3
SOC pmax pmax
comp=Z,18nm,1.0s
SOC MLR MLR
comp=Z,1μm,19.0s
RAYN Ar Rayn 36.53 263 P **P 18 08 40.7 -0.2**
RAYN Ar Rayn 36.53 263 P **P 18 08 41.9 +1.1**
RAYN Ar Rayn 36.53 263 P **P 18 08 41.7 +0.9**
VLA Vladivostok 36.69 62⇑ *e*P **P 18 08 41.1 -0.8**
VLA pmax pmax
comp=Z,39nm,1.1s
USRK Ussuriysk Ar. 36.73 61 P **P 18 08 42.5 +0.3**
comp=Z,12nm,1.1s,baz=266,slow=7.3,SNR=10.0
comp=Z,12nm,1.1s
KLR Kul'dur 36.80 52 LR LR 18 25 27.3
comp=Z,201nm,18.7s,baz=267,slow=39
KLR Kul'dur 36.80 52 *de*P **P 18 08 42.8 +0.1**
KLR pmax pmax
comp=Z,16nm,0.9s
VORD Divnogorie 37.13 311 *e*P **P 18 08 45.8 +0.2**
VORD pmax pmax
comp=Z,20nm,0.6s
VSR Storozhevoye 37.25 311 *e*P **P 18 08 46.8 +0.3**
VSR pmax pmax
comp=Z,20nm,0.9s
JOW Kunigami 37.26 90 LR LR 18 26 13.1
comp=Z,675nm,19.3s,baz=294,slow=40
VORR Voronezh 37.29 312 *e*P **P 18 08 46.4 -0.5**
VORR pmax pmax
comp=Z,20nm,0.4s
JNU Nakatsue 37.40 79 LR LR 18 24 51.8
comp=Z,832nm,18.1s,baz=292,slow=37
LPSR Galich'ya Gora 37.62 313 *e*P **P 18 08 50.3 +0.7**
LPSR pmax pmax
comp=Z,35nm,0.8s
TGY Tagaytay City 37.77 114 LR LR 18 24 57.9
comp=Z,497nm,21.2s,baz=58,slow=37
PDSI Padang 37.85 155 P **P 18 08 54.7 +2.7**
comp=Z,914nmcomp=Z,22nm,0.7s
ANN Anapa 38.02 301 *e*P **P 18 08 53.4 +0.3**
ANN pmax pmax
comp=Z,31nm,0.9s
ANN MLR MLR
comp=Z,1μm,17.0s
MOS Moscow 38.98 318 *e*P **P 18 09 01.2 +0.1**
MOS *e* 18 10 31.5
MOS pmax pmax
comp=Z,104nm,1.4s
MOS MLR MLR
comp=Z,500nm,13.0s
YAK Yakutsk 39.04 31 LR LR 18 24 14.3
comp=Z,490nm,19.2s,baz=240,slow=35
YAK Yakutsk 39.04 31 P **P 18 09 00.8 -0.7**
YAK IAmb IAmb 18 09 04.2
comp=Z,30nm,0.8s
YAK Yakutsk 39.04 31 *e*P **P 18 09 01.1 -0.3**
YAK *e* 18 10 32.3
YAK *e* 18 11 11.5
YAK *e*S **S 18 15 00.7 +0.7**
YAK *e* 18 19 09.6
YAK pmax pmax
comp=Z,35nm,1.2s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,15nm,1.3s
YAK pmax pmax
comp=Z,173nm,4.3s
YAK pmax pmax
comp=E,90nm,4.0s
YAK smax smax
comp=N,91nm,4.1s
YAK smax smax
comp=E,54nm,4.4s
YAK MLR MLR
comp=Z,677nm,14.0s
YAK MLR MLR
comp=N,537nm,14.0s
YAK MLR MLR
comp=E,356nm,13.0s
OBN Obninsk 39.45 317 LR LR 18 26 48.8
comp=E,654nm,20.7s,baz=38,slow=38
OBN Obninsk 39.45 317 *e*P **P 18 09 05.8 +0.9**
OBN *i* 18 10 35.8
OBN *i* PPP PPP 18 10 58.6
OBN *i* 18 11 11.5
OBN *i* S **S 18 14 59.0 -7.3**
OBN pmax pmax
comp=Z,55nm,1.3s
OBN MLR MLR
comp=Z,592nm,17.0s
KLMR Klimovskoe 39.49 326 *e*P **P 18 09 05.0 -0.3**
KLMR pmax pmax
comp=Z,65nm,1.3s
KLMR MLR MLR
comp=Z,893nm,14.0s
GRNR Gornyy 39.94 50⇓ *i*P **P 18 09 09.5 +0.4**
GRNR pmax pmax
comp=N,8.0nm,1.2s
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=N,1μm,10.0s
GRNR MLR MLR
comp=E,910nm,10.0s
GRNR MLR MLR
comp=Z,1μm,12.0s
ASF Jabal al Asfar 40.47 281 LR LR 18 29 39.3
comp=Z,656nm,19.1s,baz=73,slow=42
MASI Maura Aman, Be 40.55 154 P **P 18 09 17.1 +2.5**
comp=Z,47nm,1.1s
KSI Kapahiang 41.15 154 P P 18 09 24.4 +4.9
BR131 Keskin Array S 41.31 293 *ci*P **P 18 09 22.3 +1.5**
BR131 Keskin Array S 41.31 293 P **P 18 09 21.6 +0.8**
BR131 P **P 18 09 21.6 +0.8**
BRTR Keskin Array B 41.31 293 P **P 18 09 21.9 +1.0**
comp=Z,4.2nm,1.1s,baz=96,slow=7.6,SNR=14
BRTR PcP **PcP 18 11 18.8 -0.5**
comp=Z,1.7nm,1.0s,baz=113,slow=3.3,SNR=2.7
comp=Z,4.2nm,1.1s
BRTR Keskin Array B 41.31 293 P **P 18 09 20.8 -0.1**
BR104 Keskin Array S 41.32 293 P **P 18 09 21.9 +1.1**
comp=Z,47nmcomp=Z,4.0nm,1.2s
BR106 Keskin Array S 41.33 293 P **P 18 09 22.0 +1.0**
comp=Z,41nmcomp=Z,4.3nm,0.9s
BR105 Keskin Array S 41.33 293 P **P 18 09 23.2 +2.2**
comp=Z,54nmcomp=Z,4.5nm,1.0s
MJB9 Matsu-Tunnel 42.42 71 P **P 18 09 30.0 +0.2**
MAJO Matsushiro 42.42 71 *ce*P **P 18 09 28.8 -1.0**
MAJO pmax pmax
comp=Z,8.0nm,1.1s
MJAR Matsushiro Arr 42.42 71 P **P 18 09 29.0 -0.8**
comp=Z,7.0nm,1.0s,baz=282,slow=9.9,SNR=14
MJAR PcP **PcP 18 11 21.9 -0.8**
comp=Z,2.6nm,0.7s,baz=261,slow=3.6,SNR=6.3
MJAR LR LR 18 27 57.0
comp=Z,936nm,19.3s,baz=296,slow=37
comp=Z,7.0nm,1.0s
MJAR Matsushiro Arr 42.42 71 P **P 18 09 29.1 -0.7**
PURM Purcari 43.23 304 P **P 18 09 37.0 +0.9**
comp=Z,35nm,0.8s
AK09 Malin Array Si 43.45 310 P **P 18 09 37.8 0.0**
AK08 Malin Array Si 43.46 310 P **P 18 09 38.6 +0.6**
AK10 Malin Array Si 43.47 310 P **P 18 09 38.6 +0.6**
AKASG Malin Array Be 43.48 310 P **P 18 09 38.1 0.0**
comp=Z,2.6nm,0.6s,baz=76,slow=6.5,SNR=22
AKASG PP **PcP 18 11 24.9 -1.1**
comp=Z,0.2nm,0.3s,baz=80,slow=11,SNR=4.4
AKASG LR LR 18 29 24.9
comp=Z,822nm,19.1s,baz=84,slow=38
comp=Z,2.6nm,0.6s
AKASG Malin Array Be 43.48 310 P **P 18 09 38.7 +0.6**
AKASG Malin Array Be 43.48 310 *i*P **P 18 09 39.0 +0.9**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 43.48 310 IAmb IAmb 18 09 39.8
comp=Z,41nm,1.4s
AKBB Malin Array Si 43.48 310 *de*P **P 18 09 38.7 +0.6**
AKBB Malin Array Si 43.48 310 P **P 18 09 38.7 +0.6**
AK03 Malin Array Si 43.48 310 P **P 18 09 38.7 +0.5**
AK01 Malin Array Si 43.49 310 P **P 18 09 38.8 +0.6**
KIEV Kiev 43.49 310⇓ P **P 18 09 39.0 +0.8**
KIEV Kiev 43.49 310 P **P 18 09 37.9 -0.3**
KIEV IAmb IAmb 18 09 39.8
comp=Z,34nm,1.4s
KIEV Kiev 43.49 310 P **P 18 09 39.0 +0.8**
KIEV Kiev 43.49 310 P **P 18 09 38.7 +0.5**
comp=Z,80nm,1.2s
AK02 Malin Array Si 43.49 310 P **P 18 09 38.8 +0.6**
AK05 Malin Array Si 43.50 310 P **P 18 09 38.8 +0.5**
AK07 Malin Array Si 43.50 309 P **P 18 09 38.8 +0.5**
AK06 Malin Array Si 43.50 310 P **P 18 09 38.8 +0.5**
AK11 Malin Array Si 43.52 310 P **P 18 09 39.0 +0.6**
AK04 Malin Array Si 43.52 310 P **P 18 09 39.0 +0.6**
AK12 Malin Array Si 43.53 310 P **P 18 09 39.1 +0.6**
TIXI Tiksi 43.53 18 LR LR 18 29 05.1
comp=Z,1μm,20.4s,baz=254,slow=38
TIXI Tiksi 43.53 18 P **P 18 09 37.2 -1.0**
TIXI Tiksi 43.53 18 *de*P **P 18 09 37.7 -0.5**
TIXI pmax pmax
comp=Z,107nm,1.7s
AK23 Malin Array Si 43.55 310 P **P 18 09 39.2 +0.6**
AK15 Malin Array Si 43.55 310 P **P 18 09 39.2 +0.5**
AK16 Malin Array Si 43.56 310 P **P 18 09 39.3 +0.5**
AK22 Malin Array Si 43.58 310 P **P 18 09 39.5 +0.6**
AK18 Malin Array Si 43.58 310 P **P 18 09 39.5 +0.6**
AK13 Malin Array Si 43.59 310 P **P 18 09 39.6 +0.6**
AK17 Malin Array Si 43.59 310 P **P 18 09 39.6 +0.6**
AK21 Malin Array Si 43.60 310 P **P 18 09 39.6 +0.5**
AK19 Malin Array Si 43.62 310 P **P 18 09 39.8 +0.6**
AK20 Malin Array Si 43.62 310 P **P 18 09 39.8 +0.6**
TYV Tymovskoe 43.89 50 *e*P **P 18 09 42.0 +0.6**
TYV *e*S **S 18 16 13.9 +1.7**
TYV pmax pmax
comp=Z,13nm,1.3s
TYV pmax pmax
comp=Z,100nm,3.8s
TYV smax smax
comp=N,200nm,3.4s
TYV smax smax
comp=E,200nm,3.4s
SORM Soroca 44.15 306⇑ P **P 18 09 44.3 +0.8**
SORM Soroca 44.15 306 P **P 18 09 44.3 +0.8**
YSS Yuzhno-Sakhali 44.15 56 *e*P **P 18 09 43.0 -0.5**
YSS *e*S **S 18 16 14.1 -2.0**
YSS *e*SS **SS 18 19 30.5 -3.0**
YSS pmax pmax
comp=Z,200nm,5.3s
YSS pmax pmax
comp=Z,50nm,0.9s
YSS MLR MLR
comp=Z,1μm,14.0s
ASAJ Asahikawa 44.35 60 LR LR 18 29 01.1
comp=Z,1μm,18.6s,baz=287,slow=37
MNK Minsk 44.37 315 *i* P **P 18 09 46.6 +1.4**
comp=E,10.0nm,0.9s
MNK *i* P **P 18 09 46.6 +1.4**
comp=N,22nm,0.9s
MNK *i* P **P 18 09 46.6 +1.4**
comp=Z,17nm,0.6s,baz=93
MNK *i* PP **PcP 18 11 29.3 +0.4**
MNK *i* PPP PPP 18 12 04.3
MNK *i* S **S 18 16 19.7 +0.6**
MNK *i* SS **SS 18 19 38.4 +0.7**
MNK *i* SSS SSS 18 20 17.7
MNK *i* LQ LQ 18 25 04.5
MNK *i* LR LR 18 27 16.2
MNK *i* LRM MLR 18 30 12.4
comp=E,1μm,15.9s
MNK *i* LRM MLR 18 30 18.7
comp=Z,790nm,15.1s
MNK *i* LRM MLR 18 31 46.7
comp=N,742nm,16.2s
MNK Minsk 44.37 315 *i* P **P 18 09 46.6 +1.4**
MNK *i* 18 11 29.3
MNK *i* 18 11 31.8
MNK *i* PPP PPP 18 12 04.3
MNK *i* S **S 18 16 19.7 +0.6**
MNK *i* SS **SS 18 19 38.3 +0.7**
MNK pmax pmax
comp=E,10.0nm,0.9s
MNK pmax pmax
comp=Z,17nm,0.6s
MNK pmax pmax
comp=N,22nm,0.9s
MNK MLR MLR
comp=E,1μm,16.0s
MNK MLR MLR
comp=Z,790nm,15.0s
MNK MLR MLR
comp=N,742nm,16.0s
LUBAR Lubar, Ukraine 44.44 309 P **P 18 09 46.4 +0.5**
MI28 Mi28,Pidlybu 44.47 310 P **P 18 09 45.4 -0.6**
JHJ Hachijo jima 2 44.58 76 LR LR 18 28 42.6
comp=N,295nm,18.6s,baz=270,slow=37
SCTR Scanteiesti 44.61 303⇓ P **P 18 09 49.5 +2.3**
ELL Elmali 44.81 290 IAmb IAmb 18 10 05.4
comp=Z,44nm,1.3s
NACGM Naroch 45.02 316 *e*P **P 18 09 51.5 +1.1**
comp=E,31nm,1.3s
VSU Vasula 45.28 321 *ci*P **P 18 09 52.2 -0.2**
VSU pmax pmax
comp=Z,55nm,1.1s
HORU Horodok 45.35 308 P **P 18 09 54.2 +1.1**
KMPD K-Podol'skiy 45.37 307 P **P 18 09 53.1 -0.2**
TESR Tescani 45.45 304 P **P 18 09 54.7 +0.8**
comp=Z,15nm,2.3s
VRI Vrincioaia 45.47 303⇑ P **P 18 09 56.0 +1.9**
VRI Vrincioaia 45.47 303 P **P 18 09 56.0 +1.9**
VRI Vrincioaia 45.47 303 P **P 18 09 55.4 +1.3**
comp=Z,16nm,1.2s
PLOR Plostina 45.52 303⇑ P **P 18 09 56.5 +1.8**
PLOR Plostina 45.52 303 P **P 18 09 56.4 +1.8**
RNPP9 Sopachiv 45.57 311 P **P 18 09 55.8 +1.0**
RNPP5 Staryi Chortor 45.58 311 P **P 18 09 55.8 +0.9**
RNPP8 Varash 45.59 311 P **P 18 09 55.9 +0.9**
ONER Baraj Valea Uz 45.64 304⇓ P **P 18 09 57.3 +1.8**
ISR Istrita 45.70 302 P **P 18 09 57.1 +1.1**
comp=Z,41nm,1.3s
COVR Voineasa-Covas 45.84 303⇓ P **P 18 09 59.2 +2.2**
TURR Turia 45.94 303⇑ P **P 18 10 00.1 +2.2**
FINES FINESS Array B 45.95 325 P **P 18 09 58.2 +0.6**
comp=Z,6.8nm,0.6s,baz=94,slow=8.3,SNR=35
FINES LR LR 18 30 05.1
comp=Z,720nm,20.0s,baz=96,slow=37
comp=Z,6.8nm,0.6s
LEM Lembang 46.04 149 LR LR 18 32 26.6
comp=Z,519nm,18.1s,baz=318,slow=40
MLR Muntele Rosu 46.06 303 LR LR 18 32 09.2
comp=Z,1μm,21.2s,baz=67,slow=40
MLR Muntele Rosu 46.06 303⇑ P **P 18 10 01.3 +2.4**
MLR Muntele Rosu 46.06 303 IAmb IAmb 18 10 05.5
comp=Z,33nm,1.1s
MLR Muntele Rosu 46.06 303 P **P 18 10 01.3 +2.4**
MLR Muntele Rosu 46.06 303 P **P 18 10 00.8 +1.8**
comp=Z,31nm,0.8s
OZUR 46.09 303⇓ P **P 18 10 00.5 +1.5**
BURAR Bucovina Array 46.30 306⇓ P **P 18 10 01.8 +1.0**
BURAR Bucovina Array 46.30 306 P **P 18 10 01.6 +0.9**
BURAR Bucovina Array 46.30 306 P **P 18 10 01.7 +1.0**
KSV Kosov 46.32 307 P **P 18 10 00.9 +0.1**
DOPR Dopca 46.38 303⇑ P **P 18 10 03.3 +1.9**
PABE Paberze 46.65 316 P **P 18 10 03.6 +0.4**
STNU Starunia 46.65 307 P **P 18 10 04.1 +0.7**
MPSI Mapaga 46.69 129 P **P 18 10 06.2 +2.2**
comp=Z,626nmcomp=Z,13nm,1.4s
VOIR 46.69 303⇑ P **P 18 10 05.3 +1.4**
VOIR 46.69 303 P **P 18 10 05.2 +1.4**
VOIR 46.69 303 P **P 18 10 04.9 +1.0**
SUW Suwalki 47.12 314 *e*P **P 18 10 08.2 +1.2**
LOT Lotru 47.58 303⇑ P **P 18 10 12.3 +1.4**
KWP Kalwaria Pacla 47.73 309 *e*P **P 18 10 13.2 +1.4**
ARCES ARCESS Array B 47.77 336 P **P 18 10 11.9 +0.2**
comp=Z,8.5nm,0.6s,baz=88,slow=7.5,SNR=37
ARCES LR LR 18 31 46.5
comp=Z,872nm,18.7s,baz=104,slow=38
comp=Z,8.5nm,0.6s
ARCES ARCESS Array B 47.77 336 P **P 18 10 12.2 +0.4**
ARCES ARCESS Array B 47.77 336 P **P 18 10 12.2 +0.4**
ARCES pmax pmax
comp=Z,28nm,1.1s
MARR Marisel-Cluj 47.84 305⇓ P **P 18 10 14.4 +1.6**
GZR Gura Zlata 48.28 303⇑ P **P 18 10 17.3 +1.1**
GZR Gura Zlata 48.28 303 P **P 18 10 17.3 +1.1**
MA2 Magadan 48.57 38 LR LR 18 32 06.1
comp=Z,769nm,20.7s,baz=266,slow=38
MA2 Magadan 48.57 38 P **P 18 10 18.0 -0.1**
MA2 IAmb IAmb 18 10 19.9
comp=Z,29nm,1.2s
MA2 Magadan 48.57 38 *di*P **P 18 10 18.6 +0.4**
MA2 pmax pmax
comp=Z,29nm,1.2s
JCJ Chichijima 48.62 83 LR LR 18 33 14.5
comp=Z,293nm,18.2s,baz=314,slow=39
BZS Buzias 49.04 303⇑ P **P 18 10 23.2 +1.2**
BZS Buzias 49.04 303 P **P 18 10 23.1 +1.2**
IDI Anoyia 49.12 289 LR LR 18 35 06.3
comp=Z,369nm,21.3s,baz=94,slow=41
MDVR Moldovita 49.13 302⇑ P **P 18 10 24.5 +1.8**
NIE Niedzica 49.31 309 *e*P **P 18 10 26.3 +2.3**
KECS Kecovo 49.33 307 *e*P **P 18 10 24.9 +0.8**
KECS Kecovo 49.33 307 *e*P **P 18 10 24.9 +0.8**
SEY Seymchan 49.45 34 LR LR 18 30 36.5
comp=Z,769nm,18.2s,baz=276,slow=35
SEY Seymchan 49.45 34⇓ *e*P **P 18 10 24.7 -0.1**
SEY pmax pmax
comp=Z,23nm,0.9s
OJC Ojcow 49.52 310 *e*P **P 18 10 26.8 +1.2**
GKP Gorka Klasztor 50.71 314 *e*P **P 18 10 36.5 +2.0**
KAPI Kappang 50.77 134 LR LR 18 35 21.0
comp=Z,281nm,18.7s,baz=297,slow=40
SRO Srobarova 50.87 307 *e*P **P 18 10 38.2 +2.4**
SRO Srobarova 50.87 307 *e*P **P 18 10 38.2 +2.4**
MORH Mrgy, Hungar 50.97 305⇑ P **P 18 10 37.6 +1.0**
MORC Moravsky Berou 51.03 309⇓ P **P 18 10 38.6 +1.6**
MORC Moravsky Berou 51.03 309 IAmb IAmb 18 10 39.5
comp=Z,37nm,1.5s
MORC Moravsky Berou 51.03 309 P **P 18 10 38.6 +1.6**
MORC Moravsky Berou 51.03 309 P **P 18 10 38.5 +1.5**
JAVC Velka Javorina 51.10 308 *e*P **P 18 10 40.1 +2.5**
MODS Modra-Piesok 51.45 308 *e*P **P 18 10 41.5 +1.3**
MODS Modra-Piesok 51.45 308 *e*P **P 18 10 41.5 +1.3**
KSP Ksiaz 51.64 311 *e*P **P 18 10 43.5 +2.0**
DPC Dobruska-Polom 51.71 310 *e*P **P 18 10 44.3 +2.2**
DPC Dobruska-Polom 51.71 310 *e*P **P 18 10 44.3 +2.2**
VRAC Vranov 51.72 309 LR LR 18 35 13.8
comp=Z,692nm,18.9s,baz=84,slow=39
VRAC Vranov 51.72 309⇑ P **P 18 10 43.8 +1.6**
VRAC Vranov 51.72 309 P **P 18 10 43.8 +1.6**
VRAC Vranov 51.72 309 *e*P **P 18 10 43.5 +1.3**
OSTC Ostas 51.74 310 *e*P **P 18 10 44.3 +2.0**
OSTC Ostas 51.74 310 *e*P **P 18 10 44.3 +2.0**
CHVC Chvalec 51.83 311 *e*P **P 18 10 44.1 +1.1**
CHVC Chvalec 51.83 311 *e*P **P 18 10 44.1 +1.1**
KRUC Moravsky 51.89 309 *e*P **P 18 10 45.2 +1.7**
HFS Hagfors 51.97 323 P **P 18 10 44.3 +0.5**
comp=Z,9.4nm,0.7s,baz=99,slow=9.2,SNR=11
HFS LR LR 18 36 14.0
comp=Z,361nm,21.4s,baz=88,slow=40
comp=Z,9.4nm,0.7s
RONA Rosalia, Austr 52.23 307 *i* P **P 18 10 47.0 +0.9**
comp=Z,8.7nm,1.3s
SPITS Spitsbergen Ar 52.29 346 P **P 18 10 46.7 +0.7**
comp=Z,7.9nm,0.8s,baz=111,slow=11,SNR=3.4
SPITS LR LR 18 36 01.6
comp=Z,986nm,20.7s,baz=124,slow=40
comp=Z,7.9nm,0.8s
CONA Conrad Observa 52.47 307 *i* P **P 18 10 49.0 +1.1**
comp=Z,12nm,1.2s
NC405 NORSAR Array S 52.86 324 P **P 18 10 50.9 +0.4**
PRU Pruhonice 52.90 310 *e*P **P 18 10 52.7 +1.8**
PRU Pruhonice 52.90 310 *e*P **P 18 10 52.7 +1.8**
PETK Petropavlovsk- 52.94 46 P **P 18 10 50.6 -0.6**
comp=Z,2.4nm,0.9s,baz=281,slow=3.2,SNR=5.7
PETK LR LR 18 34 32.2
comp=Z,777nm,18.3s,baz=278,slow=37
comp=Z,2.4nm,0.9s
BRG Berggiesshubel 53.10 311 *e*P **P 18 10 53.6 +1.3**
BRG Amp 18 10 54.8
comp=Z,14nm,1.1s
BRG Berggiesshubel 53.10 311 P P 18 10 58.5 +6.1
BRG Amp 18 11 00.2
comp=Z,8.8nm,0.9s
NB2 NORSAR Subarra 53.11 324 P **P 18 10 51.8 -0.6**
comp=Z,5.1nm,0.8s,baz=84,slow=7.4
NOA NORSAR Array B 53.11 324 P **P 18 10 52.2 -0.2**
comp=Z,11nm,1.0s,baz=84,slow=7.3,SNR=15
NOA LR LR 18 34 23.4
comp=Z,775nm,18.9s,baz=105,slow=37
comp=Z,11nm,1.0s
CKRC Cesky Krumlov 53.29 309 *e*P **P 18 10 54.5 +0.7**
CKRC Cesky Krumlov 53.29 309 *e*P **P 18 10 54.5 +0.7**
SOKA Soboth 53.30 306 *i* P **P 18 10 54.2 +0.2**
comp=Z,14nm,1.5s
NC204 NORSAR Array S 53.31 324 P **P 18 10 53.6 -0.3**
PET Petropavlovsk 53.52 46⇑ *e*P **P 18 10 53.9 -1.5**
PET pmax pmax
comp=Z,44nm,1.6s
MOA Molln 53.53 307 *i* P **P 18 10 55.2 -0.5**
comp=Z,16nm,1.8s
CLL Collm 53.59 312 *i* P **P 18 10 56.8 +0.8**
CLL *e**PP **pP 18 11 02.0 +0.1**
CLL *i* *SP **sP 18 11 04.2 0.0**
CLL Collm 53.59 312 *i* P **P 18 10 56.8 +0.8**
CLL *e*pP **pP 18 11 02.0 +0.1**
CLL *i* sP **sP 18 11 04.2 0.0**
CLL *e*SS SKiKP 18 22 24.0 +13
CLL *e*SSS SSS 18 24 06.0
GERES GERESS Array B 53.68 309 P **P 18 10 57.9 +1.1**
comp=Z,2.8nm,0.8s,baz=79,slow=6.9,SNR=18
GERES LR LR 18 37 21.6
comp=Z,853nm,18.2s,baz=82,slow=40
comp=Z,2.8nm,0.8s
KHC Kasperske Hory 53.69 309 *e*P **P 18 10 58.0 +1.2**
KHC Kasperske Hory 53.69 309 *e*P **P 18 10 58.0 +1.2**

BIOA	**Bad Ischl, Aus**	53.98	307	*i*	P		P	18 10 59.5	+0.5			
	comp=Z,4.7nm,1.0s											
MYKA	**Terra Mystica**	54.24	306	*e*	P		P	18 11 01.0	+0.1			
	comp=Z,2.6nm,0.6s											
KBA	**Koelnbreinsper**	54.33	307	*e*	P		P	18 11 01.4	-0.3			
	comp=Z,3.8nm,0.9s											
LESA	**Schwarzleotal**	54.68	307	*e*	P		P	18 11 05.1	+1.0			
	comp=Z,19nm,2.0s											
ABTA	**Abfaltersbach**	54.96	307	*e*	P		P	18 11 06.6	+0.4			
	comp=Z,4.2nm,1.1s											
BILL	**Bilibino**	55.08	27		P		P	18 11 06.6	0.0			
BILL					IAmb		IAmb	18 11 08.0				
	comp=Z,21nm,1.3s											
BILL	**Bilibino**	55.08	27	*d i*	P		P	18 11 07.0	+0.5			
BILL					pmax		pmax					
	comp=Z,19nm,1.3s											
SIJI	**Sorong**	55.32	120		P		P	18 11 09.2	+0.2			
	comp=Z,9.7nm,0.8s,baz=301,slow=5.9,SNR=4.2											
	comp=Z,9.7nm,0.8s											
WTTA	**Wattenberg**	55.41	307	*e*	P		P	18 11 09.2	-0.2			
	comp=Z,12nm,1.3s											
WATA	**Walderalm**	55.42	307	*e*	P		P	18 11 08.6	-0.9			
	comp=Z,4.3nm,1.1s											
SQTA	**Sankt Quirin**	55.70	307	*e*	P		P	18 11 12.9	+1.4			
	comp=Z,7.2nm,1.2s											
MOTA	**Moosalm**	55.73	308	*e*	P		P	18 11 11.9	+0.1			
	comp=Z,7.2nm,1.1s											
LODK	**Lodwar**	55.90	248				P	18 11 14.6	+1.4			
LODK					IAmb		IAmb	18 11 21.1				
	comp=Z,29nm,2.0s											
LODK	**Lodwar**	55.90	248		P		P	18 11 16.9	+3.6			
	SNR=6.3											
RETA	**Reutte**	55.92	308	*i*	P		P	18 11 13.6	+0.6			
	comp=Z,18nm,1.5s											
FETA	**Feichten**	56.07	307	*i*	P		P	18 11 14.6	+0.4			
	comp=Z,5.3nm,1.1s											
VAE	**Valguarnera**	56.42	295		LR		LR	18 39 08.1				
	comp=Z,253nm,20.4s,baz=58,slow=40											
DAVA	**Damuels**	56.55	308	*e*	P		P	18 11 17.5	-0.2			
	comp=Z,4.6nm,1.0s											
DAVOX	**Davos/Dischmat**	56.69	307		LR		LR	18 38 28.8				
	comp=Z,737nm,19.8s,baz=60,slow=39											
GUMO	**Guam**	57.16	96		LR		LR	18 37 11.5				
	comp=Z,181nm,20.3s,baz=296,slow=37											
BATI	**Baumata**	57.23	134		LR		LR	18 39 10.2				
	comp=Z,452nm,18.6s,baz=312,slow=40											
SOEI	**Soe**	57.23	133		P		P	18 11 21.9	-0.8			
SOEI	**Soe**	57.23	133		P		P	18 11 34.0	+11			
KMBO	**Kilima Mbogo**	57.47	242	*e*	P		P	18 11 23.9	-0.7			
KIBK	**Kibwezi**	57.72	241		P		P	18 11 26.3	+0.2			
KIBK					IAmb		IAmb	18 11 31.0				
	comp=Z,36nm,1.8s											
NOR	**Nord**	57.90	350	*i*	P		P	18 11 26.2	-0.3			
NOR					IAmb		IAmb	18 11 27.7				
	comp=Z,31nm,1.2s											
DOU	**Dourbes**	59.07	312	*d*	P		P	18 11 36.3	+1.2			
JMIC	**Jan Mayen**	59.15	338		LR		LR	18 39 06.5				
	comp=Z,448nm,18.7s,baz=76,slow=38											
DAG	**Danmarks Havn**	59.91	345	*i*	P		P	18 11 39.0	-1.5			
DAG					IAmb		IAmb	18 11 41.2				
	comp=Z,7.6nm,0.7s											
DBG	**Daneborg**	61.27	343	*i*	P		P	18 11 48.0	-1.7			
DBG					IAmb		IAmb	18 11 51.5				
	comp=Z,12nm,0.8s											
EKA	**Eskdalemuir Ar**	61.81	320		P		P	18 11 53.8	+0.1			
	comp=Z,14nm,1.1s,baz=70,slow=7.2,SNR=6.1											
EKA					LR		LR	18 43 24.2				
	comp=Z,744nm,19.8s,baz=74,slow=41											
	comp=Z,14nm,1.1s											
MBAR	**Mbarara**	62.00	248		LR		LR	18 40 52.9				
	comp=Z,334nm,19.2s,baz=52,slow=38											
MBAR	**Mbarara**	62.00	248		P		P	18 11 54.9	-0.9			
MBAR					IAmb		IAmb	18 12 06.3				
	comp=Z,7.3nm,0.7s											
MBAR	**Mbarara**	62.00	248		P		P	18 11 54.9	-0.9			
MBAR					pmax		pmax					
	comp=Z,7.0nm,0.7s											
MBAR	**Mbarara**	62.00	248		P		P	18 11 55.9	+0.1			
JAY	**Jayapura**	63.39	114		LR		LR	18 43 14.7				
	comp=Z,118nm,18.1s,baz=308,slow=40											
MBWA	**Marble Bar**	64.13	144		P		P	18 12 10.1	+0.6			
PSA00	**Pilbara Seismi**	64.54	145				P	18 12 12.1	0.0			
PSAC2	**Pilbara Seismi**	64.56	145		P		P	18 12 14.1	+1.8			
	comp=Z,22nm,2.2s											
FITZ	**Fitzroy Crossi**	64.67	137		LR		LR	18 44 13.5				
	comp=Z,145nm,19.4s,baz=322,slow=40											
GAMB	**Gambell**	64.90	29		P		P	18 12 13.6	-0.4			
	baz=297											
C16K	**Lisburne Hills**	65.01	23		P		P	18 12 14.2	-0.4			
	baz=300											
NEEM	**North Greenlan**	65.28	350	*i*	P		P	18 12 15.7	-0.9			
NEEM					IAmb		IAmb	18 12 17.9				
	comp=Z,28nm,0.8s											
TNA	**Tin City**	65.49	26		IAmb		IAmb	18 12 22.0				
	comp=Z,16nm,1.3s											
TNA	**Tin City**	65.49	26		P		P	18 12 16.9	-0.8			
	baz=299											
C17K	**DeLong Mountai**	65.59	22		P		P	18 12 17.7	-0.7			
	baz=302											
A21K	**Barrow**	65.84	18		P		P	18 12 19.2	-0.7			
	baz=307											
RDOG	**Red Dog Mine**	65.90	23		P		P	18 12 20.1	-0.4			
	baz=303											
D17K	**Noatak River**	66.03	23		P		P	18 12 20.7	-0.6			
	baz=303											
C18K	**Utukok River**	66.10	22		IAmb		IAmb	18 12 36.7				
	comp=Z,15nm,1.2s											
C18K	**Utukok River**	66.10	22		P		P	18 12 20.9	-0.9			
	baz=304											
F14K	**Arctic Creek**	66.11	26		P		P	18 12 21.4	-0.4			
	baz=301											
C19K	**Lookout Ridge**	66.32	21		IAmb		IAmb	18 12 24.6				
	comp=Z,23nm,1.4s											
C19K	**Lookout Ridge**	66.32	21		P		P	18 12 22.7	-0.5			
	baz=305											
SUMG	**Summit**	66.56	344		P		P	18 12 24.6	-0.5			
SUMG	**Summit**	66.56	344		P		P	18 12 24.6	-0.5			
SUMG					pmax		pmax					
	comp=Z,65nm,1.2s											
SUMG	**Summit**	66.56	344	*i*	P		P	18 12 23.8	-1.3			
SUMG					IAmb		IAmb	18 12 26.7				
	comp=Z,63nm,1.2s											
F15K	**North Star Dit**	66.58	25		IAmb		IAmb	18 12 27.0				
	comp=Z,17nm,1.1s											
F15K	**North Star Dit**	66.58	25		P		P	18 12 24.7	-0.2			
	baz=302											
ANM	**Nome**	66.93	26				P	18 12 26.9	-0.2			
ANM					IAmb		IAmb	18 12 29.3				
	comp=Z,13nm,1.1s											
ANM	**Nome**	66.93	26		P		P	18 12 26.9	-0.2			
ANM					pmax		pmax					
	comp=Z,13nm,1.1s											
ANM	**Nome**	66.93	26		P		P	18 12 27.3	+0.3			
	baz=302,SNR=8.3											
E18K	**Tukpahlearik C**	66.98	23		IAmb		IAmb	18 12 29.2				
	comp=Z,12nm,0.9s											
E18K	**Tukpahlearik C**	66.98	23		P		P	18 12 27.3	0.0			
	baz=305,SNR=15											
D19K	**Kuna River**	67.12	21		IAmb		IAmb	18 12 29.2				
	comp=Z,22nm,1.2s											
D19K	**Kuna River**	67.12	21		P		P	18 12 27.6	-0.7			
	baz=306											
G15K	**Niukluk**	67.18	26		P		P	18 12 28.0	-0.6			
	baz=303											
F17K	**Baldwin Pennin**	67.33	24		P		P	18 12 29.4	-0.1			
	baz=305											
B21K	**Ikpikpuk River**	67.42	19		P		P	18 12 29.9	-0.2			
	baz=309											
G16K	**Koyuk River**	67.55	25		IAmb		IAmb	18 12 34.6				
	comp=Z,18nm,1.0s											
G16K	**Koyuk River**	67.55	25		P		P	18 12 30.5	-0.5			
	baz=304											
C21K	**Knifeblade Rid**	67.67	20		P		P	18 12 31.3	-0.4			
	baz=309											
F18K	**Selawik**	67.76	23		P		P	18 12 32.2	-0.1			
	baz=306,SNR=14											
E20K	**Nigu River**	67.83	21		P		P	18 12 32.5	-0.4			
	baz=308											
E19K	**Redstone River**	68.01	22		IAmb		IAmb	18 12 47.2				
	comp=Z,12nm,1.0s											
E19K	**Redstone River**	68.01	22		P		P	18 12 33.5	-0.4			
	baz=308											
H16K	**Elim**	68.02	25		P		P	18 12 33.5	-0.4			
	baz=304,SNR=11											
G17K	**Kiwalik Mounta**	68.07	24		P		P	18 12 33.8	-0.5			
	baz=305											
TULEG	**Thule**	68.10	354				P	18 12 32.2	-2.0			
TULEG							IAmb	IAmb	18 12 34.4			
	comp=Z,13nm,0.9s											
TULEG	**Thule**	68.10	354	*i*	P		P	18 12 32.7	-1.5			
TULEG					IAmb		IAmb	18 12 34.4				
	comp=Z,10nm,0.7s											
F19K	**Shaleruckik Mo**	68.22	22		IAmb		IAmb	18 12 37.6				
	comp=Z,10nm,1.1s											
F19K	**Shaleruckik Mo**	68.22	22		P		P	18 12 34.9	-0.3			
	baz=307											
MEEK	**Meekatharra**	68.34	148		P		P	18 12 37.3	+0.8			
	comp=Z,17nm,1.2s											
E21K	**Killik River**	68.35	20		P		P	18 12 35.5	-0.5			
	baz=310											
D22K	**Ayikyak River**	68.42	19		IAmb		IAmb	18 12 38.1				
	comp=Z,14nm,0.9s											
D22K	**Ayikyak River**	68.42	19		P		P	18 12 36.1	-0.4			
	baz=311,SNR=7.5											
KULLO	**Kullorsuaq**	68.49	350	*i*	P		P	18 12 36.2	-0.5			
KULLO					IAmb		IAmb	18 12 37.2				
	comp=Z,35nm,1.1s											
G18K	**Tagagawik**	68.51	23		IAmb		IAmb	18 12 37.7				
	comp=Z,14nm,1.4s											
G18K	**Tagagawik**	68.51	23		P		P	18 12 36.8	-0.2			
	baz=307											
J14K	**Nanvaranak Lak**	68.60	28		IAmb		IAmb	18 12 38.8				
	comp=Z,22nm,1.4s											
J14K	**Nanvaranak Lak**	68.60	28		P		P	18 12 37.1	-0.5			
	baz=304											
K13K	**Kusilvak Mount**	68.62	29		P		P	18 12 37.4	-0.4			
	baz=303											
H17K	**Granite Mounta**	68.66	25		P		P	18 12 37.9	-0.1			
	baz=306											
ESDC	**Sonseca Array**	68.72	304		P		P	18 12 38.6	-0.2			
	comp=Z,2.8nm,0.9s,baz=49,slow=6.2,SNR=12											
ESDC					LR		LR	18 45 14.5				
	comp=Z,244nm,19.1s,baz=46,slow=38											
	comp=Z,2.8nm,0.9s											
ESDC	**Sonseca Array**	68.72	304		P		P	18 12 37.6	-1.2			
F20K	**Avaraart Lake**	68.72	22		P		P	18 12 38.3	0.0			
	baz=309											
SPIA	**Saint Paul Isl**	68.74	35		P		P	18 12 38.0	-0.6			
	baz=301											
M11K	**Mekoryuk**	68.84	30		P		P	18 12 38.6	-0.5			
	baz=303											
G19K	**Purcell Mounta**	68.86	23		IAmb		IAmb	18 12 43.9				
	comp=Z,9.9nm,1.0s											
G19K	**Purcell Mounta**	68.86	23		P		P	18 12 39.2	-0.1			
	baz=308,SNR=6.3											
C24K	**Franklin Bluff**	68.90	18		P		P	18 12 38.9	-0.5			
C24K					IAmb		IAmb	18 12 43.6				
	comp=Z,14nm,0.9s											
C24K	**Franklin Bluff**	68.90	18		P		P	18 12 39.0	-0.3			
	baz=314											
D23K	**Nanushuk River**	68.91	19		IAmb		IAmb	18 12 40.3				
	comp=Z,20nm,1.3s											
D23K	**Nanushuk River**	68.91	19		P		P	18 12 39.2	-0.3			
	baz=312											
I17K	**Unalakleet**	69.00	26		IAmb		IAmb	18 12 42.5				
	comp=Z,17nm,0.9s											
I17K	**Unalakleet**	69.00	26		P		P	18 12 39.2	-0.9			
	baz=306,SNR=8.1											
H18K	**Honhosa River**	69.06	24		P		P	18 12 39.5	-1.0			
	baz=307											
E22K	**Anaktuvuk Pass**	69.16	20		IAmb		IAmb	18 12 41.7				
	comp=Z,20nm,1.3s											
E22K	**Anaktuvuk Pass**	69.16	20		P		P	18 12 40.3	-0.8			
	baz=312,SNR=9.3											
D24K	**Happy Valley**	69.27	18		P		P	18 12 41.1	-0.6			
	baz=314											
F21K	**Alatna River**	69.29	21		P		P	18 12 41.1	-0.8			
	baz=311											
J16K	**Anvik River**	69.39	26		P		P	18 12 42.5	-0.1			
	baz=306,SNR=11											
MORW	**Morawa**	69.43	152		P		P	18 12 44.8	+1.7			
	comp=Z,26nm,1.6s											
K15K	**Wolf Creek Mou**	69.63	27		P		P	18 12 43.5	-0.6			
	baz=306											
C26K	**Camden Bay**	69.68	17		P		P	18 12 44.0	-0.2			
	baz=317											
L14K	**Kuka Creek**	69.74	29		P		P	18 12 44.6	-0.1			
	baz=305											
G21K	**Allakaket**	69.74	22		IAmb		IAmb	18 12 46.6				
	comp=Z,12nm,0.9s											
G21K	**Allakaket**	69.74	22		P		P	18 12 44.5	-0.2			
	baz=311											
D25K	**Kavik River**	69.76	17		IAmb		IAmb	18 12 46.3				
	comp=Z,15nm,1.1s											
D25K	**Kavik River**	69.76	17		P		P	18 12 44.3	-0.6			
	baz=316											
GCSA	**Galena City Sc**	69.80	24		P		P	18 12 44.9	-0.1			
	baz=309											
E23K	**Chandalar**	69.82	19		P		P	18 12 44.3	-1.0			
	baz=314											
UPNV	**Upernavik**	69.84	349	*i*	P		P	18 12 43.2	-2.0			
UPNV					IAmb		IAmb	18 12 45.6				
	comp=Z,30nm,1.3s											
J17K	**VABM Dome**	69.88	26		P		P	18 12 45.1	-0.4			
	baz=307											
H20K	**Anotleneega Mo**	69.98	23		P		P	18 12 46.0	-0.2			
	baz=310,SNR=5.1											
M13K	**Dall Lake**	70.00	30		P		P	18 12 45.7	-0.6			
	baz=305											
L15K	**Ungalak Mounta**	70.01	28		P		P	18 12 46.3	-0.1			
	baz=306											
E24K	**Your Creek**	70.11	19		P		P	18 12 47.0	0.0			
	baz=315											
C27K	**Jago River**	70.18	16		IAmb		IAmb	18 12 52.1				
	comp=Z,16nm,0.8s											
C27K	**Jago River**	70.18	16		P		P	18 12 47.3	0.0			
	baz=318											
COLD	**Coldfoot**	70.23	20				P	18 12 47.2	-0.4			
COLD					IAmb		IAmb	18 12 50.5				
	comp=Z,16nm,1.0s											
COLD	**Coldfoot**	70.23	20		P		P	18 12 47.7	+0.1			
	baz=313,SNR=8.3											
M14K	**Bethel**	70.37	29		P		P	18 12 48.5	-0.1			
	baz=306											
H21K	**Melozitna Rive**	70.53	22		IAmb		IAmb	18 12 51.1				
	comp=Z,14nm,1.0s											
H21K	**Melozitna Rive**	70.53	22		P		P	18 12 49.1	-0.4			
	baz=312,SNR=7.5											
K17K	**Iditarod**	70.57	26		P		P	18 12 49.6	-0.2			
	baz=308,SNR=9.3											
G23K	**Bananza Creek**	70.64	20		P		P	18 12 50.0	-0.2			
	baz=314											
J18K	**Innoko River**	70.67	25		IAmb		IAmb	18 12 52.4				
	comp=Z,16nm,0.9s											
J18K	**Innoko River**	70.67	25		P		P	18 12 50.3	-0.1			
	baz=309											
J19K	**Poorman**	70.71	24		IAmb		IAmb	18 12 52.8				
	comp=Z,17nm,1.3s											
J19K	**Poorman**	70.71	24		P		P	18 12 50.6	0.0			
	baz=310											
L16K	**Owhat River**	70.76	27		P		P	18 12 51.0	0.0			
	baz=308											
H22K	**Ishtalitna Cre**	70.80	21		P		P	18 12 50.9	-0.3			
	baz=313											
E25K	**Arctic Village**	70.84	18		P		P	18 12 51.2	-0.2			
	baz=317,SNR=8.2											
M15K	**Kasigluk River**	70.91	28		P		P	18 12 51.6	-0.2			
	baz=307											
L17K	**Donlin**	70.94	27		P		P	18 12 52.3	+0.2			
	baz=308											
N14K	**Kuskokwak Cree**	70.97	29		P		P	18 12 51.9	-0.3			
	baz=306											
BLDU	**Ballidu**	71.06	152		P		P	18 12 55.2	+2.1			
	comp=Z,23nm,1.3s											
D27M	**Malcolm River**	71.10	16		IAmb		IAmb	18 12 57.2				
	comp=Z,14nm,1.1s											
D27M	**Malcolm River**	71.10	16		P		P	18 12 52.7	-0.3			
	baz=321											
I21K	**Tanana**	71.10	22		IAmb		IAmb	18 12 59.7				
	comp=Z,14nm,1.2s											
I21K	**Tanana**	71.10	22		P		P	18 12 52.9	-0.1			
	baz=312											
RES	**Resolute Bay**	71.12	0		LR		LR	18 46 32.6				
	comp=Z,667nm,19.1s,baz=13,slow=38											
F25K	**Christian Rive**	71.21	18		P		P	18 12 53.4	-0.3			
	baz=317,SNR=11											
WRAB	**Tennant Creek**	71.23	132		P		P	18 12 54.7	+0.3			
WRAB	**Tennant Creek**	71.23	132		P		P	18 12 54.7	+0.3			
WRAB					pmax		pmax					
	comp=Z,63nm,1.3s											
WRA	**Warramunga Arr**	71.23	132		P		P	18 12 54.5	+0.1			
	comp=Z,16nm,1.0s,baz=316,slow=7.9,SNR=73											
	comp=Z,16nm,1.0s											
WRA	**Warramunga Arr**	71.23	132		P		P	18 12 53.8	-0.6			
G24K	**Hadweenzic Riv**	71.37	20		IAmb		IAmb	18 12 56.3				
	comp=Z,13nm,0.9s											
G24K	**Hadweenzic Riv**	71.37	20		P		P	18 12 53.9	-0.7			
	baz=316											
M16K	**Timber Creek**	71.38	28		P		P	18 12 54.6	-0.1			
	baz=308											
N15K	**Kwethluk River**	71.46	29		P		P	18 12 55.2	0.0			
	baz=307											
L18K	**Granite Mounta**	71.47	26		IAmb		IAmb	18 12 57.6				
	comp=Z,18nm,1.0s											
L18K	**Granite Mounta**	71.47	26		P		P	18 12 55.5	+0.2			
	baz=310,SNR=5.7											
F26K	**Sheenjek River**	71.52	18		P		P	18 12 55.5	0.0			
	baz=318,SNR=5.9											
D28M	**Stokes Point**	71.53	15		P		P	18 12 55.1	-0.3			
	baz=322											
O14K	**Tigyukauivet M**	71.54	30		P		P	18 12 54.5	-1.2			
	baz=307											
BMAR	**Burnt Mountain**	71.61	18				P	18 12 56.4	+0.3			
NIKH	**Nikolski High**	71.64	38		P		P	18 12 56.3	-0.2			
	baz=303											
K20K	**Telida**	71.65	24		IAmb		IAmb	18 13 09.6				
	comp=Z,45nm,1.9s											
K20K	**Telida**	71.65	24		P		P	18 12 55.0	-1.4			
	baz=311											
A36M	**Sachs Harbour**	71.65	10		P		P	18 12 56.0	-0.2			
	baz=333,SNR=21											
WRKA	**Warakurna**	71.71	140		P		P	18 12 57.6	+0.5			
	comp=Z,15nm,1.3s											
M17K	**Holitna River**	71.72	27		IAmb		IAmb	18 13 00.8				
	comp=Z,25nm,1.1s											
M17K	**Holitna River**	71.72	27		P		P	18 12 56.6	-0.1			
	baz=309											
E27K	**Coleen River**	71.77	17		P		P	18 12 55.8	-1.2			
	baz=320											
N16K	**Nishlik Lake**	71.79	28		P		P	18 12 56.6	-0.6			
	baz=308											
H24K	**Noodor Dome**	71.87	20		P		P	18 12 57.1	-0.6			
	baz=316,SNR=5.2											
CHUM	**Lake Minchumin**	71.88	23		P		P	18 12 57.0	-0.6			
	baz=312											
E28M	**Babbage River**	71.92	16		P		P	18 12 57.4	-0.5			
	baz=322											
I23K	**Minto, Yukon-K**	71.93	21		P		P	18 12 57.6	-0.4			
	baz=315,SNR=6.3											
MUN	**Mundaring**	72.09	153		P		P	18 13 01.5	+2.2			
	comp=Z,26nm,1.7s											
L19K	**White Mountain**	72.15	25		P		P	18 12 58.3	-1.1			
	baz=311,SNR=10											
BPAW	**Bear Paw Mtn.**	72.16	23		P		P	18 12 58.4	-1.1			
	baz=314											
G26K	**Porcupine Rive**	72.17	18		P		P	18 12 58.9	-0.5			
	baz=319,SNR=7.7											
O15K	**Ungalikthiuk R**	72.17	29		P		P	18 12 59.2	-0.4			
	baz=308											
M18K	**Stony River**	72.25	26		P		P	18 12 59.8	-0.2			
	baz=310											
UNV	**Unalaska Valle**	72.33	36		P		P	18 13 00.1	-0.5			
	baz=304											
N17K	**Nushagak Hills**	72.37	27		P		P	18 12 60.0	-0.7			
	baz=310											
NEA2	**Nenana**	72.41	22		IAmb		IAmb	18 13 02.1				
	comp=Z,24nm,1.0s											
NEA2	**Nenana**	72.41	22		P		P	18 13 00.4	-0.4			
	baz=315,SNR=12											
E29M	**Blow River**	72.46	16		IAmb		IAmb	18 13 02.8				
	comp=Z,16nm,0.9s											
E29M	**Blow River**	72.46	16		P		P	18 13 00.9	-0.3			
	baz=323											
M19K	**Big River Lodg**	72.50	25		P		P	18 13 01.2	-0.3			
	baz=311											
POIN	**Pond Inlet**	72.52	355				P	18 13 00.9	-0.5			
POIN					IAmb		IAmb	18 13 02.0				
	comp=Z,15nm,1.2s											
KTH	**Kantishna Hill**	72.56	23		IAmb		IAmb	18 13 03.2				
	comp=Z,19nm,1.1s											
COLA	**College**	72.58	21	*e*	P		P	18 13 01.4	-0.4			
COLA					pmax		pmax					
	comp=Z,21nm,0.9s											
COLA	**College**	72.58	21

O19K	Port Alsworth baz=312	73.66	27	P	P	18 13 07.9	-0.4	
SPCR	Spurr Chakacha baz=313	73.75	25	P	P	18 13 08.3	-0.7	
Q16K	King Salmon baz=310	73.77	29	P	P	18 13 08.3	-0.7	
I27K	Kandik River comp=Z,20nm,1.4s	73.77	19	IAmb	IAmb	18 13 35.5		
I27K	Kandik River baz=321	73.77	19	P	P	18 13 08.9	-0.1	
AS31	Alice Springs	73.79	135		P	18 13 08.8	-0.8	
ASAR	Alice Springs comp=Z,15nm,0.9s,baz=319,slow=5.6,SNR=39	73.79	135	P	P	18 13 09.5	-0.1	
ASAR	comp=Z,127nm,18.5s,baz=316,slow=41 comp=Z,15nm,0.9s			LR	LR	18 51 48.1		
ASAR	Alice Springs	73.79	135		P	18 13 08.9	-0.7	
WAT1	Susitna Watana baz=316	73.83	23	P	P	18 13 09.2	-0.2	
P18K	Big Mountain, baz=311	73.85	28	P	P	18 13 09.2	-0.3	
K24K	Donnelly Dome baz=318,SNR=8.5	73.98	21	P	P	18 13 09.7	-0.5	
G30M	tAoh Zraii Nji comp=Z,24nm,1.1s	73.98	16	IAmb	IAmb	18 13 11.2		
G30M	tAoh Zraii Nji baz=325,SNR=5.4	73.98	16	P	P	18 13 10.1	-0.1	
SUA	Susitna One baz=314	74.07	25	P	P	18 13 10.3	-0.6	
M22K	Willow baz=315	74.08	24	P	P	18 13 10.7	-0.1	
R16K	Pilot Point baz=310	74.11	30	P	P	18 13 10.1	-0.9	
F31M	Tsiigehtchic comp=Z,33nm,1.4s	74.14	15	IAmb	IAmb	18 13 11.4		
F31M	Tsiigehtchic baz=327,SNR=5.6	74.14	15	P	P	18 13 10.6	-0.3	
C36M	Paulatuk baz=335,SNR=23	74.21	11	P	P	18 13 10.8	-0.5	
SDPT	Sand Point baz=308	74.26	33	P	P	18 13 11.4	-0.5	
WAT6	Susitna Watana baz=316	74.27	23	P	P	18 13 11.1	-1.0	
RIDG	Independent Ri baz=319,SNR=5.6	74.30	21	P	P	18 13 11.8	-0.3	
I28M	Miner Creek comp=Z,41nm,1.9s	74.33	18	IAmb	IAmb	18 15 32.2		
I28M	Miner Creek baz=322	74.33	18	P	P	18 13 12.0	-0.3	
Q17K	Contact Creek baz=311	74.34	29	P	P	18 13 12.0	-0.5	
SCRK	Sand Creek comp=Z,20nm,1.0s	74.37	20	IAmb	IAmb	18 13 13.5		
SCRK	Sand Creek baz=319,SNR=11	74.37	20	P	P	18 13 12.2	-0.4	
CAPN	Captain Cook N baz=314	74.42	25	P	P	18 13 12.4	-0.3	
P19K	Oil Pt baz=313	74.44	27	P	P	18 13 11.8	-1.1	
G31M	Satah River baz=327	74.46	15	P	P	18 13 12.2	-0.7	
PMR	Palmer baz=316	74.53	24	P	P	18 13 12.7	-0.7	
R17L	Mt. Peulik Vol baz=311	74.57	30	P	P	18 13 13.0	-0.8	
SML	Sawmill baz=316	74.64	23	P	P	18 13 13.8	-0.3	
RC01	Rabbit Creek A baz=315	74.68	24	P	P	18 13 14.2	-0.1	
PAX	Paxson baz=318	74.69	22	P	P	18 13 14.1	-0.4	
Q19K	Cape Douglas, baz=313	74.77	28	P	P	18 13 14.2	-0.6	
I29M	Ogilvie Camp, baz=324	74.81	18	P	P	18 13 14.7	-0.3	
M23K	Glacier View baz=317	74.85	23	P	P	18 13 15.1	-0.2	
KNK	Knik Glacier baz=316	74.88	24	P	P	18 13 15.3	-0.2	
SCM	Sheep Creek Mo baz=317	74.95	23	P	P	18 13 16.3	+0.3	
CHNA	Chernabura Isl baz=309	74.99	33	P	P	18 13 15.1	-1.0	
QIS	Mount Isa comp=Z,27nm,1.1s	75.02	128	P	P	18 13 17.9	+1.2	
HOM	Homer baz=314	75.02	26	P	P	18 13 15.6	-0.6	
M24K	Tolsona, Glenn baz=318	75.12	22	P	P	18 13 15.9	-1.0	
O22K	Cooper Landing baz=315	75.12	25	P	P	18 13 16.5	-0.3	
HARP	HAARP baz=319	75.22	22	P	P	18 13 17.1	-0.3	
L26K	Log Cabin Wild baz=320	75.28	21	P	P	18 13 17.4	-0.4	
BRSE	Bradley Lake S baz=315	75.29	26	P	P	18 13 17.0	-0.9	
H31M	Peel River comp=Z,19nm,1.0s	75.39	16	IAmb	IAmb	18 13 19.2		
H31M	Peel River baz=327,SNR=7.7	75.39	16	P	P	18 13 17.6	-0.7	
I30M	Mount Dempster comp=Z,15nm,0.8s	75.40	17	IAmb	IAmb	18 13 22.3		
I30M	Mount Dempster baz=325	75.40	17	P	P	18 13 17.7	-0.8	
Q20K	Shuyak Island baz=314	75.47	27	P	P	18 13 17.5	-1.4	
SEW	Seward baz=316	75.49	25	P	P	18 13 18.5	-0.4	
J29N	Klondike Camp comp=Z,16nm,1.1s	75.57	18	IAmb	IAmb	18 13 20.7		
J29N	Klondike Camp baz=324	75.57	18	P	P	18 13 18.9	-0.5	
DAWY	Dawson comp=Z,19nm,1.1s	75.57	19	IAmb	IAmb	18 13 20.4		
DAWY	Dawson baz=323,SNR=6.7	75.57	19	P	P	18 13 19.1	-0.4	
KLU	Klutina baz=318	75.65	23	P	P	18 13 20.1	+0.1	
L27K	Beaver Creek, comp=Z,18nm,1.0s	75.70	20	IAmb	IAmb	18 13 22.0		
L27K	Beaver Creek, baz=321	75.70	20	P	P	18 13 19.8	-0.4	
BCAR	Beaver Creek A	75.71	20		P	18 13 20.1	-0.1	
M26K	Nabesna, AK baz=320	75.87	21	P	P	18 13 21.2	0.0	
J30M	Hart River comp=Z,12nm,0.8s	75.94	17	IAmb	IAmb	18 13 25.8		
J30M	Hart River baz=325	75.94	17	P	P	18 13 21.3	-0.4	
KDAK	Kodiak Island baz=314	75.97	28	P	P	18 13 21.7	0.0	
N25K	Chitina, Valde baz=319	75.99	22	P	P	18 13 21.9	0.0	
CHIR	Chirikof Islan baz=312	76.07	31	P	P	18 13 22.3	0.0	
OHAK	Old Harbor baz=313	76.08	29	P	P	18 13 22.3	0.0	
SII	Sitkinak Islan baz=313	76.17	30	P	P	18 13 22.9	-0.1	
M27K	Edge Creek, AK comp=Z,24nm,1.1s	76.23	21	IAmb	IAmb	18 13 27.3		
M27K	Edge Creek, AK baz=321	76.23	21	P	P	18 13 23.2	-0.2	
K29M	Barlow Dome baz=324,SNR=6.3	76.24	18	P	P	18 13 23.1	-0.3	
P23K	Montague Islan baz=317	76.27	24	P	P	18 13 23.5	+0.1	
EYAK	Cordova Ski Ar baz=318	76.42	23	P	P	18 13 24.5	+0.2	
BMRM	Bremner River baz=319	76.47	23	P	P	18 13 24.5	-0.1	
MTSU	Mount Surprise comp=Z,7.0nm,1.2s	76.47	123	P	P	18 13 23.4	-1.8	
BVCY	Beaver Creek baz=322	76.48	20	P	P	18 13 24.1	-0.5	
MCARA	McCarthy VSAT baz=320	76.65	22	P	P	18 13 25.5	0.0	
L29M	L29M baz=324	76.68	19	P	P	18 13 25.5	-0.3	
MAYO	Mayo, Yukon baz=326	76.86	18	P	P	18 13 26.8	+0.1	
Q23K	Middleton Isla baz=318	77.05	24	P	P	18 13 27.1	-0.8	
YUK3	Moose Creek baz=322	77.11	21	P	P	18 13 28.4	0.0	
CRQE	Cirque baz=320	77.11	22	P	P	18 13 28.2	-0.2	
M29M	Somme Creek baz=324	77.13	19	P	P	18 13 28.3	-0.2	
KAIM	Kayak Island baz=320	77.32	23	P	P	18 13 29.7	+0.3	
KSANE	Kasane	77.47	238		P	18 13 29.5	-1.3	
KSANE	comp=Z,15nm,1.1s			IAmb	IAmb	18 13 38.1		
M30M	Minto, Yukon baz=325	77.47	19	P	P	18 13 30.4	+0.2	
CTG	Chitna Glacier baz=322	77.49	21	P	P	18 13 30.6	+0.1	
BGLC	Bering Glacier baz=320	77.54	23	P	P	18 13 30.3	-0.2	
TORD	Torodi Ar. Bea comp=Z,4.4nm,0.8s,baz=39,slow=1.6,SNR=16	77.73	278	P	P	18 13 31.9	-0.5	
TORD	comp=Z,261nm,20.7s,baz=57,slow=38 comp=Z,4.4nm,0.8s			LR	LR	18 51 00.6		
TORD	Torodi Ar. Bea	77.73	278	P	P	18 13 31.1	-1.3	
MESA	MESA baz=321	77.92	22	P	P	18 13 32.4	-0.5	
YUK4	Talbot Arm baz=324	77.97	20	P	P	18 13 32.8	-0.4	
O28M	Mount Upton baz=323	77.98	21	P	P	18 13 32.7	-0.7	
N30M	Aishikik Lake baz=325	78.31	19	P	P	18 13 35.1	+0.1	
YUK6	Outpost Mounta baz=324	78.38	20	P	P	18 13 35.8	+0.2	
M31M	Drury Creek, Y comp=Z,21nm,1.1s	78.41	18	IAmb	IAmb	18 13 36.7		
M31M	Drury Creek, Y baz=327,SNR=5.3	78.41	18	P	P	18 13 35.1	-0.3	
PINM	Pinnacle baz=323	78.50	22	P	P	18 13 35.6	-0.5	
N31M	Braebuurn, Yuko baz=326,SNR=5.4	78.65	19	P	P	18 13 36.9	+0.2	
HYT	Haines Junctio comp=Z,20nm,0.9s	78.72	20	IAmb	IAmb	18 13 42.4		
HYT	Haines Junctio baz=325	78.72	20	P	P	18 13 37.6	+0.4	
MMPY	Sheldon Lake, baz=330	78.81	16	P	P	18 13 38.3	+0.6	
O29M	Mount Kennedy baz=324	78.84	21	P	P	18 13 37.9	-0.1	
CTA	Charters Tower comp=Z,65nm,21.3s,baz=252,slow=38	79.14	123	LR	LR	18 51 18.2		
CTAO	Charters Tower	79.14	123		P	18 13 38.6	-1.4	
CTAO	comp=Z,22nm,1.1s			IAmb	IAmb	18 13 44.6		
CTAO	Charters Tower	79.14	123	P	P	18 13 38.6	-1.4	
CTAO	comp=Z,22nm,1.1s			pmax	pmax			
O30N	Mendenhall baz=326	79.16	19	P	P	18 13 39.5	-0.1	
P30M	Million Dollar baz=325	79.45	20	P	P	18 13 40.9	-0.3	
WHY	Whitehorse baz=327	79.58	19	P	P	18 13 41.9	-0.1	
N32M	Quiet Lake baz=328	79.63	18	P	P	18 13 42.0	-0.2	
FRB	Frobisher Bay comp=Z,455nm,21.7s,baz=20,slow=38	79.99	349	LR	LR	18 52 22.0		
TGTN	Hyland Airport baz=332	80.46	16	P	P	18 13 46.5	-0.1	
SKAG	Skagway baz=327	80.46	20	P	P	18 13 46.5	-0.1	
P33M	Teslin, Yukon comp=Z,19nm,1.1s	80.50	18	IAmb	IAmb	18 13 48.2		
P33M	Teslin, Yukon baz=329	80.50	18	P	P	18 13 46.6	-0.4	
P32M	Atlin baz=328	80.80	19	P	P	18 13 49.3	+0.8	
S31K	Pelican baz=326	81.45	21	P	P	18 13 52.6	+0.7	
R33M	Jennings River baz=330	81.69	18	P	P	18 13 53.1	-0.2	
Q32M	Nakina River baz=329	81.72	19	P	P	18 13 53.3	-0.3	
YKAW3	Yellowknife Wh comp=Z,15nm,1.1s	81.94	9	IAmb	IAmb	18 13 55.0		
BBOO	Buckleboo comp=Z,26nm,1.6s	81.99	139	P	P	18 13 55.8	+0.8	
YKA	Yellowknife Ar comp=Z,3.9nm,0.9s,baz=338,slow=5.6,SNR=37 comp=Z,3.9nm,0.9s	82.01	9	P	P	18 13 53.7	-1.0	
YKA	Yellowknife Ar	82.01	9	P	P	18 13 53.0	-1.7	
YKA	Yellowknife Ar	82.01	9	*i* P	P	18 13 54.2	-0.5	
YKA	comp=Z,4.0nm,0.9s			pmax	pmax			
LBTB	Lobatse	82.09	233		P	18 13 55.6	-0.2	
LBTB	comp=Z,17nm,1.1s			IAmb	IAmb	18 13 59.9		
LBTB	Lobatse	82.09	233	P	P	18 13 55.6	-0.2	
LBTB	comp=Z,17nm,1.1s			pmax	pmax			
QLP	Quilpie	82.27	130	P	P	18 13 57.5	+1.0	
S32K	Killisnoo baz=328	82.36	21	P	P	18 13 56.0	-0.6	
SIT	Sitka baz=327	82.48	21	P	P	18 13 56.9	-0.4	
GRTLG	Ghanzi comp=Z,12nm,1.1s	82.61	238	IAmb	IAmb	18 14 05.2		
DLBC	Dease Lake baz=331	82.76	18	P	P	18 13 57.8	-1.1	
S34M	Telegraph Cree baz=330	82.93	19	P	P	18 13 59.4	-0.3	
TSUM	Tsumeb comp=Z,299nm,18.2s,baz=50,slow=37	83.81	242	LR	LR	18 52 39.7		
WRAK	Wrangell Islan baz=329	83.89	20	P	P	18 14 04.3	-0.3	
U33K	Whale Pass baz=329	83.93	21	P	P	18 14 04.8	0.0	
T35M	Bob Quinn baz=331	83.98	19	P	P	18 14 05.2	+0.1	
HTT	Hallett	84.03	138	P	P	18 14 09.0	+3.4	
STKA	Stephens Creek comp=Z,50nm,0.9s	84.42	135	P	P	18 14 07.6	0.0	
STKA	Stephens Creek comp=Z,5.4nm,0.9s,baz=323,slow=9.2,SNR=8.0	84.42	135	P	P	18 14 07.3	-0.2	
STKA	comp=Z,299nm,21.4s,baz=313,slow=38 comp=Z,5.4nm,0.9s			LR	LR	18 55 33.1		
STKA	Stephens Creek	84.42	135	*i* P	P	18 14 07.2	-0.3	
CRAG	Craig baz=329	84.48	21	P	P	18 14 07.2	-0.4	
BOSA	Boshof comp=Z,4.4nm,1.0s,baz=47,slow=5.1,SNR=7.8	84.79	230	P	P	18 14 08.6	-1.1	
BOSA	comp=Z,126nm,18.6s,baz=60,slow=35 comp=Z,4.4nm,1.0s			LR	LR	18 50 57.3		
V35K	Ketchikan baz=330	85.04	20	P	P	18 14 09.8	-0.6	
EIDS	Eidsvold comp=Z,20nm,1.1s	85.97	124	P	P	18 14 16.3	+0.9	
CMSA	Cobar Meteorol comp=Z,25nm,0.8s	86.63	132	P	P	18 14 18.8	+0.3	
DBIC	Dimbokro comp=Z,17nm,1.0s,baz=98,slow=4.5,SNR=8.1	86.66	276	P	P	18 14 19.2	0.0	
DBIC	comp=Z,354nm,19.0s,baz=78,slow=38 comp=Z,17nm,1.0s			LR	LR	18 55 50.4		
DBIC	Dimbokro	86.66	276	P	P	18 14 19.9	+0.7	
FCC	Fort Churchill comp=Z,18nm,1.4s	87.12	360	IAmb	IAmb	18 14 20.8		
SCHQ	Schefferville comp=Z,4.4nm,0.9s,baz=36,slow=8.5,SNR=3.1 comp=Z,4.4nm,0.9s	87.95	344	P	P	18 14 23.3	-1.5	
ARPS	Mount Arapiles	88.10	138	P	P	18 14 28.9	+3.4	
FFC	Flin Flon	90.93	4		P	18 14 37.7	-1.0	
FFC	comp=Z,9.8nm,1.1s			IAmb	IAmb	18 14 39.1		
FFC	Flin Flon	90.93	4	P	P	18 14 37.7	-1.0	
FFC	comp=Z,10.0nm,1.1s			pmax	pmax			
DZM	Mont Dzumac comp=Z,374nm,28.8s	95.06	113	*e*LR	LR	18 45 38.2		
ULM	Lac du Bonnet comp=Z,1.3nm,0.5s,baz=320,slow=18,SNR=2.9 comp=Z,1.3nm,0.5s	95.64	1	P	P	18 14 59.4	-1.0	
ULM	Lac du Bonnet comp=Z,12nm,1.5s	95.64	1	IAmb	IAmb	18 15 49.2		
TXAR	Lajitas Array comp=Z,0.7nm,0.7s,baz=356,slow=3.9,SNR=3.1	115.94	9	PKP	PKPdf	18 20 18.7	+0.3	
PPT2	Papeete2 comp=Z,261nm,38.2s	128.25	86	*e*LR	LR	19 00 53.0		
PPT2				*e*LR	LR	19 00 54.8		
	comp=Z,375nm,31.5s							
TBI	Tubuai comp=Z,898nm,29.0s	131.05	92	*e*LR	LR	19 02 12.7		
TBI	comp=Z,1μm,38.5s			*e*LR	LR	19 02 14.7		
PTLB	Pontes e Lacer	143.11	292		PKPab	18 21 05.6	+0.6	
PLTB	Pedras Altas	145.90	263		PKPdf	18 21 13.0	-1.0	
CPUP	Villa Florida comp=Z,2.0nm,0.6s,baz=74,slow=7.0,SNR=4.8	147.17	274	PKPbc	PKPbc	18 21 18.5	-0.1	
CPUP	Villa Florida	147.17	274		PKPdf	18 21 14.6	-1.7	
LPAZ	La Paz comp=Z,4.2nm,1.0s,baz=67,slow=3.8,SNR=4.7	150.30	301	PKP	PKPdf	18 21 22.8	+0.4	
LPAZ	comp=Z,10nm,1.1s,baz=30,slow=2.9,SNR=9.1			PKPbc	PKPbc	18 21 27.0	-0.6	
LPAZ	La Paz	150.30	301		PKPdf	18 21 21.5	-0.9	
LPAZ	La Paz	150.30	301	PKIKP	PKPdf	18 21 21.5	-0.9	
PB16	IPOC Station P	152.64	300		PKPbc	18 21 32.6	-0.4	
GO01	Chusmiza	153.26	297		PKPbc	18 21 34.1	0.0	

CATAC ***20*** *18:04:26.1±0.6, 13˚N±3˚×9˚0W±˚, h15km±3km, M3.4/17, MLv3.4/17, Error ellipse: s-maj=6.1km s-min=4.9km az=30.7, confirmed*
SNET ***20*** *18:04:26.0±1.2, 13˚.18N×89˚.98W, h27km±9km, ML3.3, Presumed earthquake*
GCG ***20*** *18:04:28.1±0.7, 13˚.31N×90˚.01W, h31km±6km, MD3.7, Presumed earthquake*

ISC 20 18:04:28.8±2.1, 13˚.25N±0˚.09×89˚.87W±0˚.06, h30km±12km, n42, σ1s10/63, 3C, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAYA	Jayaque - finc	0.57	46	P	Pn	18 04 40.3	-0.8
JAYA	Jayaque - finc	0.57	46	*e*P	Pn	18 04 40.3	-0.8
JAYA				*e*S	Sn	18 04 49.9	+0.2
JAYA	Jayaque - finc	0.57	46	*i* P	Pn	18 04 40.4	-0.8
JAYA				*i* S	Sn	18 04 49.8	+0.2
LALI	Alcalda de L	0.59	66	P	Pn	18 04 40.2	-0.9
LALI				S	Sb	18 04 49.2	+0.5
FAME	Alcaldia de Sa	0.60	347	P	Pn	18 04 39.9	-1.4
FAME				S	Sn	18 04 48.7	-1.4
CEVE	Cerro Verde	0.62	23	P	Pn	18 04 41.0	-0.9
CEVE				S	Sn	18 04 52.1	+1.2
CEVE	Cerro Verde	0.62	23	*e*P	Pn	18 04 40.9	-0.9
SBLS	San Blas	0.63	23	*e*P	Pn	18 04 41.1	-0.8
NUBE	Las Nubes	0.65	8	P	Pn	18 04 41.0	-1.2
NUBE	Las Nubes	0.65	8	*e*P	Pn	18 04 41.2	-1.0
NUBE				*e*S	Sn	18 04 51.4	-0.1
NUBE	Las Nubes	0.65	8	*i* P	Pn	18 04 41.1	-1.2
NUBE				*i* S	Sn	18 04 51.0	-0.5
SNJE	San Jose	0.67	23	*e*P	Pn	18 04 41.6	-0.8
RTR	El Retiro	0.68	19	*e*P	Pn	18 04 42.0	-0.5
PMON	Piamonte	0.71	50	P	Pn	18 04 42.3	-0.6
PMON				S	Sn	18 04 54.3	+1.4
PMON	Piamonte	0.71	50	*e*P	Pn	18 04 42.5	-0.5
CEDA	San Andres	0.72	40	P	Pn	18 04 42.2	-0.7
CEDA				S	Sn	18 04 54.7	+1.6
LOAL	Lomas de Alarc	0.75	7	P	Pn	18 04 43.1	-0.3
LOAL				S	Sn	18 04 54.4	+0.7
LOAL	Lomas de Alarc	0.75	7	*e*P	Pn	18 04 43.5	+0.1
BOQS	Boqueron	0.75	50	*e*P	Pn	18 04 43.0	-0.6
PANCS	Alcalda de	0.76	62	P	Pn	18 04 42.3	-1.3
PANCS				S	Sb	18 04 54.3	+0.5
UEES	Universidad Ev	0.77	53	S	Sn	18 04 55.0	+0.7
SLOZ	Alcaldia de Sa	0.77	6	P	Pn	18 04 43.3	-0.5
SLOZ				S	Sn	18 04 55.3	+0.9
LOMA	Loma Larga	0.79	60	P	Pn	18 04 42.8	-1.2
LOMA				S	Sn	18 04 55.5	+0.7
LOMA	Loma Larga	0.79	60	*e*P	Pn	18 04 43.0	-1.0
UNIC	Universidad Ca	0.79	23	S	Sn	18 04 56.0	+1.2
LFRS	El Faro	0.87	65	*e*P	Pn	18 04 44.4	-0.8
LFRS				*e*S	Sb	18 04 57.3	+0.5
RBDL	Robledal	0.88	12	*e*P	Pb	18 04 44.9	-0.7
LFU	La Fuente	0.89	56	*e*P	Pb	18 04 44.9	-0.8
PAVA	Las Pavas	1.02	63	P	Pb	18 04 47.2	-0.7
PAVA				S	Sb	18 05 02.2	+1.2
COEG	Centro de Oper	1.03	69	P	Pn	18 04 46.8	-0.5
COEG				S	Sn	18 05 01.7	+0.9
TECO	Alcaldia de Te	1.10	75	P	Pn	18 04 47.2	-1.0
TECO				S	Sn	18 05 03.2	+0.8
SCLA	Alcaldia de Sa	1.20	68	P	Pn	18 04 49.3	-0.3
FG8	Yepocapa, Chim	1.20	326	*i* S	Sb	18 05 11.2	+4.8
MTO3	Montecristo	1.24	24	P	Pb	18 04 50.5	-1.3
MTO3				S	Sb	18 05 08.3	+0.7
MTO3	Montecristo	1.24	24	*e*P	Pb	18 04 50.6	-1.3
MTO3	Montecristo	1.24	24	*i* P	Pb	18 04 50.5	-1.3
LLGN	La Laguna	1.28	45	P	Pn	18 04 50.8	+0.1
LLGN				S	Sb	18 05 09.1	+0.7
P5NO	Presa 5 de nov	1.31	56	P	Pn	18 04 50.9	-0.1
P5NO				S	Sb	18 05 09.6	+0.5
PACA	Pacayal	1.52	82	P	Pn	18 04 53.7	-0.4
PACA	Pacayal	1.52	82	*e*P	Pn	18 04 53.9	-0.2
RANC	El Ranchito	1.55	83	P	Pn	18 04 53.9	-0.6
RANC				S	Sn	18 05 15.2	+1.5
APG	El Apazote	1.83	342	*i* P	Pn	18 04 57.2	-1.3

BER 20 18:08:43.1±2.9, 77˚.48N×7˚.93E, h10km, Mw2.4, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRBB	Barentsburg B	1.47	62	*e*P	Pn	18 09 08.5	-1.1
BRBB				*i*		18 09 10.3	
BRBB				*e*S	Sn	18 09 26.1	-2.8
BRBB	Barentsburg B	1.47	62	*i*	Pb	18 09 10.3	-0.1
KBS	Kingsbay	1.67	28	*e*P	Pn	18 09 10.0	-2.3
KBS				*e*S	Sn	18 09 28.9	-4.9
KBS				IAML		18 09 31.7	
	comp=Z,2.6nm,0.4s						
HSPB	Hornsund (broa	1.76	102	*e*P	Pn	18 09 11.9	-1.6
HSPB				*e*S	Sn	18 09 30.9	-5.0
HSPB				IAML		18 09 33.1	
	comp=Z,2.2nm,0.2s						
SPA0	Spitsbergen Ar	1.92	65	*e*P	Pn	18 09 15.5	-0.3
SPA0				*e*S	Sn	18 09 38.9	-1.1
SPA0				IAML		18 09 41.9	
	comp=Z,3.9nm,0.5s						

BER 20 18:11:04.5±1.9, 77˚.58N×7˚.52E, h10km, Mw2.3, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRBB	Barentsburg B	1.51	67	*e*P	Pn	18 11 30.7	-0.8
KBS	Kingsbay	1.63	32	*e*P	Pn	18 11 31.7	-1.4
KBS				*e*S	Sn	18 11 49.9	-4.2
HSPB	Hornsund (broa	1.87	104	*e*P	Pn	18 11 33.3	-3.1
SPA0	Spitsbergen Ar	1.96	68	*e*P	Pn	18 11 36.6	-1.2
SPA0				*e*S	Sn	18 11 59.7	-2.7
SPA0				IAML		18 12 02.8	
	comp=Z,2.3nm,0.4s						

IDC ***20*** *18:11:00.3±0.5, 34˚.41N×85˚.69E, h0km, mb4.3/28, mbtmp4.3/34, ML3.9/6, Error ellipse: s-maj=13.7km s-min=11.2km az=27.0*
MOS ***20*** *18:11:00.7±1.4, 34˚.44N×85˚.71E, h9km, mb4.8/27, Error ellipse: s-maj=7.2km s-min=4.2km az=118.3*
NDI ***20*** *18:11:02.6±2.5, 34˚.52N×85˚.71E, h23km, ML4.5, MW4.6*
BJI ***20*** *18:11:02.9, 34˚.47N×85˚.71E, h6km, mb4.4/47, Ms4.2/1, Ms7 4.1/2*
NEIC ***20*** *18:11:03.0±2.0, 34˚.55N±0˚.07×85˚.78E±0˚.10, h10km±1km, mb4.6/71, Error ellipse: s-maj=14.9km s-min=11.3km az=234.0*

ISC 20 18:11:05.4±0.3, 34˚.34N±0˚.04×85˚.65E±0˚.04, h35km, n236, σ1s72/231, mb4.5/79, 18C-7D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOSI	Joshimath	6.38	235	*e*P	Pn	18 12 36.2	-0.9
JOSI				IAML		18 12 58.8	
	comp=N,442nm,0.4s						
JOSI				IAML		18 13 14.3	
	comp=E,364nm,0.9s						
JOSI				*e*S	Sn	18 13 44.5	-4.3
EVN	Everest	6.44	171		Pn	18 12 42.4	+4.2
LSA	Lhasa	6.57	133		Pn	18 12 40.0	+0.1
LSA	Lhasa	6.57	133	Pn	Pn	18 12 42.3	+2.4
LSA	Lhasa	6.57	133	P	Pn	18 12 40.0	+0.1

PTH Pithoragarh 6.62 226 *e*P **Pn** **18 12 42.7 +2.4**
PTH *e*S **Sn** **18 13 52.6 -2.1**
PTH IAML 18 14 56.7
comp=N,316nm,2.2s
PTH IAML 18 15 05.3
comp=E,334nm,6.1s
KLP Kalpa 6.82 248 *e*P **Pn** **18 12 41.6 -1.6**
KLP IAML 18 12 58.1
comp=E,232nm,1.2s
KLP IAML 18 13 09.5
comp=N,226nm,1.1s
KLP *e*S **Sn** **18 13 55.8 -4.0**
ALCI Alchi Leh 7.01 271 *e*P **Pn** **18 12 45.4 -0.5**
ALCI IAML 18 12 59.0
comp=E,253nm,0.1s
ALCI IAML 18 12 59.5
comp=N,333nm,0.1s
ALCI *e*S **Sn** **18 13 58.5 -6.0**
GTK Tadong 7.44 159 *e*P **Pn** **18 12 51.3 -0.3**
GTK *e*S **Sn** **18 14 11.9 -2.9**
GTK IAML 18 14 33.5
comp=N,316nm,2.0s
BRCI Bahraich 7.59 208 *e*P **Pn** **18 12 52.9 -0.6**
BRCI *e*S **Sn** **18 14 14.7 -3.6**
BRCI IAML 18 19 16.9
comp=N,361nm,0.4s
BRCI IAML 18 19 18.4
comp=E,258nm,0.8s
GOMU GeErMu 7.72 73 Pn **Pn** **18 12 57.3 +1.6**
TSSA Tissa 8.06 262 *e*P **Pn** **18 13 01.0 +0.8**
TSSA *e*S **Sn** **18 14 22.7 -7.6**
TSSA IAML 18 16 20.6
comp=N,222nm,4.9s
TSSA IAML 18 16 52.5
comp=E,318nm,6.1s
DHRM DHARAMSHALA 8.10 258 *e*P **Pn** **18 12 58.8 -1.9**
DHRM IAML 18 13 21.6
comp=N,231nm,0.4s
DHRM IAML 18 13 22.4
comp=E,273nm,0.4s
DHRM *e*S **Sn** **18 14 23.8 -7.4**
WUS Wushi 8.53 325 **Pn** **18 13 04.7 -1.8**
WMQ Urumqi 9.61 9 P **Pn** **18 13 21.3 +0.1**
TARG Taragay, Kyrgy 9.63 322 **Pn** **18 13 20.3 -1.5**
TARG Taragay, Kyrgy 9.63 322 P **Pn** **18 13 20.3 -1.5**
PRZ Przheval'sk 9.92 327 Pn **Pn** **18 13 25.3 -0.3**
PRZ Przheval'sk 9.92 327 P **Pn** **18 13 25.3 -0.3**
KDJ Kajisay 10.24 322 **Pn** **18 13 30.2 +0.3**
KDJ Kajisay 10.24 322 P **Pn** **18 13 30.3 +0.3**
SHL Shillong 10.27 147 *e*P **Pn** **18 13 29.5 -1.0**
SHL IAML 18 15 16.4
comp=E,226nm,0.4s
SHL *e*S **Sn** **18 15 18.4 -6.0**
SHL IAML 18 15 40.1
comp=N,321nm,0.1s
NIL Nilore 10.32 270 **Pn** **18 13 30.3 -0.6**
NIL Nilore 10.32 270 P **Pn** **18 13 30.3 -0.6**
NRN Naryn 10.40 316 **Pn** **18 13 32.9 +0.5**
NRN Naryn 10.40 316 P **Pn** **18 13 32.9 +0.5**
ULHL Ulahol 10.81 320 P **Pn** **18 13 37.5 -0.3**
SNR=18
MOKO MOKOCHONG 11.06 134 *e*P **Pn** **18 13 39.1 -2.1**
MOKO *e*S Sn 18 15 34.4 -9.4
MOKO IAML 18 15 54.9
comp=E,111nm,1.4s
MOKO IAML 18 17 26.9
comp=N,114nm,2.1s
BOOM Boomskoye usch 11.14 320 **Pn** **18 13 41.3 -1.0**
BOOM Boomskoye usch 11.14 320 P **Pn** **18 13 41.3 -1.0**
KOHI KOHIMA 11.28 137 *e*P **Pn** **18 13 41.6 -2.6**
KOHI IAML 18 15 23.4
comp=E,237nm,0.5s
KOHI *e*S Sn 18 15 38.5 -11
KOHI IAML 18 17 20.6
comp=N,212nm,2.7s
TKM2 Tokmak 2 11.62 320 P **Pn** **18 13 50.5 +1.6**
SNR=11
UCH Uchtor 11.77 315 P **Pn** **18 13 51.0 -0.1**
SNR=12
KBK Karagaybulak 11.79 318 P **Pn** **18 13 53.8 +2.5**
SNR=9.1
IMP Imphal 11.90 141 *e*P **Pn** **18 13 50.4 -2.3**
IMP *e*S Sn 18 15 54.7 -10
IMP IAML 18 16 17.0
comp=N,341nm,8.4s
IMP IAML 18 19 22.4
comp=E,228nm,0.4s
AAK Ala-Archa 12.04 317 P **Pn** **18 13 54.2 -0.4**
SNR=13
AAK Ala-Archa 12.04 317 Pn **Pn** **18 13 54.5 0.0**
comp=E,0.9nm,0.3s,baz=125,slow=8.0,SNR=40
comp=E,12nm,0.7s
AAK Ala-Archa 12.04 317 **Pn** **18 13 54.1 -0.4**
FRU1 Bishkek 12.07 318 **Pn** **18 13 53.6 -1.3**
FRU1 Bishkek 12.07 318 P **Pn** **18 13 53.6 -1.3**
ARSB Arslanbob 12.20 309 Pn **Pn** **18 13 56.4 -0.3**
ARSB Arslanbob 12.20 309 P **Pn** **18 13 56.4 -0.3**
GTA2 Gaotai 12.40 61 *e*P **Pn** **18 13 59.8 +0.3**
GTA2 pP P 18 14 03.5 -7.6
GTA2 pmax pmax
comp=E,5.0nm,1.4s
EKS2 Erkin-Say 12.46 315 P **Pn** **18 14 01.0 +0.7**
SNR=9.7
MORE Moreh 12.57 141 **Pn** **18 14 01.7 -0.1**
MK31 Makanchi Array 12.70 349*d* *i*P **Pn** **18 14 03.4 -0.1**
MKAR Makanchi Array 12.70 349 Pn **Pn** **18 14 01.0 -2.5**
comp=E,0.4nm,0.3s,baz=155,slow=15,SNR=42
comp=E,6.4nm,0.7s
MKAR Makanchi Array 12.70 349 **Pn** **18 14 01.1 -2.4**
MKAR Makanchi Array 12.70 349 P **Pn** **18 14 01.1 -2.4**
MAKZ Makanchi 12.77 349 **Pn** **18 14 03.1 -1.2**
MAKZ Makanchi 12.77 349 P **Pn** **18 14 03.1 -1.2**
BTK Batken 13.13 300 **Pn** **18 14 09.1 -0.2**
BTK Batken 13.13 300 P **Pn** **18 14 09.1 -0.2**
KBL Kabul 13.71 276 **Pn** **18 14 16.4 -1.1**
KBL Kabul 13.71 276 P **Pn** **18 14 16.4 -1.1**
CHGR Chuyangaron 13.95 293 **Pn** **18 14 19.2 -1.4**
CHGR Chuyangaron 13.95 293 P **Pn** **18 14 19.2 -1.4**
TNCH TengChong 14.52 126 *e*P **Pn** **18 14 31.1 +2.6**
TNCH pP P 18 14 37.3 +2.6
TNCH pmax pmax
comp=E,32nm,1.0s
KK31 Karatay Array 14.69 311 **Pn** **18 14 30.8 +0.3**
KK31 Karatay Array 14.69 311 P **Pn** **18 14 30.8 +0.3**
KKAR Karatay Array 14.69 311 Pn **Pn** **18 14 29.5 -1.1**
KKAR Karatay Array 14.69 311 P **Pn** **18 14 29.5 -1.1**
LZDM Lanzhou Array 14.86 79 Pn **Pn** **18 14 32.0 -1.1**
baz=263,slow=12
comp=E,0.4nm,0.3s
LZH Lanzhou 14.98 78 *e*P **P** **18 14 40.3 +0.6**
LZH pmax pmax
comp=E,22nm,1.6s
DGZ Jazzator, Alta 15.41 4⇓ *i*P **Pn** **18 14 39.0 -1.2**
PZH PanZhiHua 15.91 115 P **P** **18 14 49.8 -0.3**
PZH pmax pmax
comp=E,10.0nm,1.4s
KURBB Kurchatov Arra 17.09 344 P **Pn** **18 15 00.6 -0.8**
comp=E,0.3nm,0.3s,baz=161,slow=11,SNR=24
comp=E,18nm,1.1s
KURK Kurchatov 17.16 345 **Pn** **18 15 01.1 -1.1**
KURK Kurchatov 17.16 345⇓ *i*P **P** **18 15 03.3 -0.2**
KURK pmax pmax
comp=Z,33nm,1.1s
KMI2 Kunming 17.43 117 P **P** **18 15 08.5 +1.5**
KMI2 sP pP 18 15 15.3 -2.3
KMI2 pmax pmax
comp=E,31nm,0.7s
HYB Hyderabad 18.01 202 *e*P **P** **18 15 16.4 +3.2**
KNGR Kungurtug, Tuv 18.43 24⇑ *i*P **Pn** **18 15 18.3 +0.3**
KNGR pmax pmax
comp=Z,23nm,1.0s
XAN Xi'an 19.25 84 P **P** **18 15 25.8 -1.0**
XAN pmax pmax
comp=Z,30nm,0.9s
HRA Herat 19.32 277 **Pn** **18 15 31.1 +2.1**
CHTO Chiang Mai 19.47 139 **Pn** **18 15 30.1 -0.5**
CHTO Chiang Mai 19.47 139 P **Pn** **18 15 30.1 -0.5**
CHTO pmax pmax
comp=Z,11nm,0.9s
ZAA0 Zalesovo Array 19.62 359 **P** **18 15 28.7 -1.9**
ZALV Zalesovo Beam 19.62 359 P **P** **18 15 29.5 -1.0**
comp=Z,0.4nm,0.3s,baz=184,slow=10,SNR=20
comp=Z,8.3nm,0.7s
ZALV Zalesovo Beam 19.62 359 **P** **18 15 28.9 -1.7**

GYA Guiyang 19.73 108⇑ P **Pn** **18 15 33.6 -0.2**
GYA pmax pmax
comp=Z,21nm,1.0s
CM31 Chiang Mai Arr 19.76 140 IAmb IAmb 18 15 39.4
comp=Z,21nm,0.8s
CMAR Chiang Mai Arr 19.76 140 P **P** **18 15 32.8 +0.4**
comp=Z,0.2nm,0.3s,baz=325,slow=11,SNR=69
CMAR PcP **PcP** **18 19 50.8 +0.9**
comp=Z,0.8nm,0.8s,baz=305,slow=2.8,SNR=5.6
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 19.76 140 **Pn** **18 15 34.9 +0.8**
CMAR Chiang Mai Arr 19.76 140 *e*P **Pn** **18 15 34.3 +0.2**
BTO2 Baotou 20.22 64 *e*P Pn 18 15 38.9 -0.6
BTO2 S Sn 18 19 26.1 0.0
BTO2 pmax pmax
comp=Z,12nm,0.5s
ENH Enshi 20.54 95 **P** **18 15 40.4 -0.5**
ENH IAmb IAmb 18 15 42.1
comp=Z,17nm,0.8s
MOY Mondy 20.57 28 *e*P **P** **18 15 41.1 0.0**
SONM Songino Array 20.57 43 P **P** **18 15 40.8 -0.3**
comp=Z,6.0nm,0.8s,baz=234,slow=12,SNR=22
SONM PcP **PcP** **18 19 51.4 +0.2**
comp=Z,0.7nm,0.7s,baz=156,slow=1.8,SNR=3.9
comp=Z,6.0nm,0.8s
SONM Songino Array 20.57 43 P **P** **18 15 38.9 -2.2**
SONM Songino Array 20.57 43 *e*P **P** **18 15 41.3 +0.2**
SONM pmax pmax
comp=Z,6.0nm,0.9s
ZAK Zakamensk 20.58 33 *e*P **P** **18 15 39.2 -2.0**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
ULN Ulaanbaatar 20.95 43 **P** **18 15 45.0 -0.3**
ULN Ulaanbaatar 20.95 43⇑ *i*P **P** **18 15 45.3 0.0**
ULN pmax pmax
comp=Z,9.0nm,1.1s
HHC Hu-ho-hao-te 21.50 65 *e*P **P** **18 15 51.8 +0.6**
HHC pmax pmax
comp=Z,14nm,1.0s
BVAR Borovoye Array 21.62 334 P **P** **18 15 52.3 +0.1**
comp=Z,13nm,0.8s,baz=141,slow=11,SNR=41
BVAR PcP **PcP** **18 19 53.1 +0.2**
comp=Z,0.4nm,0.6s,baz=124,slow=2.6,SNR=3.1
comp=Z,13nm,0.8s
BORK Borovoye 21.66 334 **P** **18 15 51.1 -1.5**
BORK IAmb IAmb 18 15 56.2
comp=Z,13nm,0.8s
BORK Borovoye 21.66 334⇓ *i*P **P** **18 15 52.9 +0.3**
BORK pmax pmax
comp=Z,14nm,0.9s
TLY Talaya 21.66 31*ce*P **P** **18 15 53.8 +1.0**
TLY pmax pmax
comp=Z,5.0nm,1.3s
LYN LuoYang 22.10 82 P **P** **18 15 57.8 +0.2**
LYN pmax pmax
comp=Z,15nm,0.9s
HNS HongShan 23.71 74⇑ P **P** **18 16 15.3 +1.3**
HNS pmax pmax
comp=Z,14nm,0.9s
ABKAR Akbulak array 24.12 316 **P** **18 16 17.4 -0.4**
BJT Baijiatuau 24.90 68 **P** **18 16 25.1 +0.2**
BJT IAmb IAmb 18 16 26.7
comp=Z,7.0nm,0.7s
BJT Baijiatuau 24.90 68 P **P** **18 16 25.1 +0.2**
BJT pmax pmax
comp=Z,7.0nm,0.7s
BJI2 Beijing 24.90 68 P **P** **18 16 25.8 +0.9**
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
XLT XiLinHaoTe 25.35 59 *e*P **P** **18 16 28.6 -0.5**
XLT pmax pmax
comp=Z,11nm,1.0s
NJ2 Nanjing 27.81 85 *e*P **P** **18 16 52.3 +1.0**
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
ARTI Arti 28.87 328*c* *i*P **P** **18 17 03.1 +2.6**
ARTI 18 17 54.1
ARTI S **S** **18 21 52.6 +4.4**
ARTI SS **SnSn** **18 23 11.7 -0.1**
ARTI pmax pmax
comp=Z,19nm,2.0s
CN2 Changchun 32.05 61 P **P** **18 17 28.4 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
GNI Garni 32.86 292 **P** **18 17 38.8 +2.7**
GNI Garni 32.86 292⇑ *i*P **P** **18 17 40.0 +3.9**
GNI pmax pmax
comp=Z,10.0nm,1.1s
BNX BinXian 33.58 57⇓ P **P** **18 17 41.9 -0.1**
BNX pmax pmax
comp=Z,6.0nm,1.0s
KARS Kars 34.11 293 P **P** **18 17 48.9 +2.0**
KARS Kars 34.11 293 P **P** **18 17 48.9 +2.0**
KARS pmax pmax
comp=Z,13nm,0.6s
KIRV Kirov 34.12 326⇑ *i*P **P** **18 17 46.4 -0.1**
KSAR Wonju Array Be 34.15 72 P **P** **18 17 45.9 -1.2**
KSAR Wonju Array Be 34.15 72 P **P** **18 17 45.9 -1.2**
KSRS Korea Array 34.18 72 P **P** **18 17 45.8 -1.6**
comp=Z,0.9nm,0.6s,baz=279,slow=8.3,SNR=6.3
comp=Z,0.9nm,0.6s
KSRS Korea Array 34.18 72 *e*P **P** **18 17 46.9 -0.4**
KSRS pmax pmax
comp=Z,1.0nm,0.6s
NEUR Neytrino 34.32 298⇓ *i*P **P** **18 17 52.3 +3.6**
NEUR pmax pmax
comp=Z,1.0nm,1.3s
GEVA Gevas 34.32 289 **P** **18 17 51.8 +3.0**
GEVA IAmb IAmb 18 17 54.9
comp=Z,15nm,1.4s
GSI Gunungsitoli 34.70 159 P **P** **18 17 53.9 +1.9**
GURO Guroymak-BITLI 35.09 290 P **P** **18 17 55.6 +0.2**
GURO IAmb IAmb 18 18 01.8
comp=Z,12nm,1.2s
VRH Novokhopyorsk 35.77 312 *e*P **P** **18 18 02.5 +1.7**
VRH pmax pmax
comp=Z,10.0nm,1.3s
MARD Mardin 36.25 288 **P** **18 18 07.6 +2.3**
MARD IAmb IAmb 18 18 10.9
comp=Z,16nm,1.0s
USRK Ussuriysk Ar. 36.78 60 P **P** **18 18 09.7 +0.1**
comp=Z,1.9nm,0.6s,baz=262,slow=3.9,SNR=4.9
comp=Z,1.9nm,0.6s
KLR Kul'dur 36.86 52⇑ *i*P **P** **18 18 10.1 -0.1**
KLR pmax pmax
comp=Z,4.0nm,0.9s
VORD Divnogorie 37.24 311 *e*P **P** **18 18 14.5 +1.1**
VORD pmax pmax
comp=Z,20nm,1.4s
VSR Storozhevoye 37.36 311 *e*P **P** **18 18 14.0 -0.4**
VSR pmax pmax
comp=Z,9.0nm,0.9s
VORR Voronezh 37.40 312 *e*P **P** **18 18 12.5 -2.2**
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 37.73 313 *e*P **P** **18 18 19.0 +1.5**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
ARPR Arapgir-MALATY 37.89 291 IAmb IAmb 18 18 25.7
comp=Z,10nm,1.0s
YAK Yakutsk 39.14 31 P **P** **18 18 28.3 -1.0**
comp=Z,7.9nm,0.6s,baz=286,slow=0.6,SNR=5.4
comp=Z,7.9nm,0.6s
YAK Yakutsk 39.14 31 **P** **18 18 27.9 -1.4**
YAK IAmb IAmb 18 18 29.1
comp=Z,8.8nm,0.7s
YAK Yakutsk 39.14 31*d* *i*P **P** **18 18 28.2 -1.0**
YAK pmax pmax
comp=Z,6.0nm,0.8s
OBN Obninsk 39.56 317⇑ *i*P **P** **18 18 34.1 +1.3**
OBN pmax pmax
comp=Z,8.0nm,1.1s
KLMR Klimovskoe 39.62 326 *e*P **P** **18 18 34.2 +1.0**
KLMR pmax pmax
comp=Z,15nm,1.1s
ILGA Ilgaz 41.13 295 P **18 18 52.0 +5.7**
BR131 Keskin Array S 41.39 293 **P** **18 18 50.1 +1.8**
BR131 IAmb IAmb 18 18 53.1
comp=Z,10.0nm,1.2s
BR131 Keskin Array S 41.39 293*c* *i*P **P** **18 18 50.2 +1.8**
BRTR Keskin Array B 41.39 293 P **P** **18 18 49.4 +1.0**
comp=Z,3.1nm,0.9s,baz=84,slow=6.4,SNR=14
BRTR PcP **PcP** **18 20 46.6 +0.5**
comp=Z,0.5nm,0.5s,baz=134,slow=4.2,SNR=3.2
comp=Z,3.1nm,0.9s
BRTR Keskin Array B 41.39 293 **P** **18 18 49.7 +1.3**

BRTR Keskin Array B 41.39 293 *e*P **P** **18 18 52.7 +4.3**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
MJAR Matsushiro Arr 42.44 71 P **P** **18 18 56.4 -0.4**
comp=Z,1.9nm,0.8s,baz=288,slow=8.2,SNR=4.7
MJAR PcP **PcP** **18 20 49.4 0.0**
comp=Z,1.3nm,0.7s,baz=246,slow=3.2,SNR=4.3
comp=Z,1.9nm,0.8s
MJAR Matsushiro Arr 42.44 71 IAmb IAmb 18 18 57.4
comp=Z,2.2nm,1.1s
MJA0 Matsu Arr-Jizo 42.47 71 *e*P **P** **18 18 57.9 +0.8**
MJA0 pmax pmax
comp=Z,1.0nm,0.6s
MDUB Mudurnu 43.11 295 P **P** **18 19 02.1 -0.3**
AKASG Malin Array Be 43.59 310 P **P** **18 19 05.6 -0.3**
comp=Z,0.9nm,0.5s,baz=79,slow=6.0,SNR=8.0
comp=Z,0.9nm,0.5s
AKASG Malin Array Be 43.59 310 IAmb IAmb 18 19 09.0
comp=Z,3.8nm,1.2s
AKASG Malin Array Be 43.59 310 *e*P **P** **18 19 08.6 +2.7**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 43.59 310 P **P** **18 19 05.5 -0.3**
AKBB IAmb IAmb 18 19 09.8
comp=Z,6.2nm,0.6s
AKBB Malin Array Si 43.59 310⇑ *i*P **P** **18 19 09.0 +3.1**
KIEV Kiev 43.60 310 P **P** **18 19 05.2 -0.8**
KIEV IAmb IAmb 18 19 09.8
comp=Z,5.5nm,0.6s
KIEV Kiev 43.60 310 P **P** **18 19 05.2 -0.8**
KIEV pmax pmax
comp=Z,6.0nm,0.6s
TIXI Tiksi 43.65 18 P **P** **18 19 04.9 -1.1**
comp=Z,4.1nm,0.3s,baz=252,slow=4.0,SNR=45
comp=Z,4.1nm,0.3s
TIXI Tiksi 43.65 18 **P** **18 19 04.0 -2.1**
TIXI IAmb IAmb 18 19 07.1
comp=Z,18nm,1.3s
TIXI Tiksi 43.65 18⇑ *i*P **P** **18 19 05.0 -1.1**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
BORA Eskisehir 43.78 294 P **P** **18 19 08.5 +0.8**
BORA IAmb IAmb 18 19 12.6
comp=Z,5.6nm,0.9s
VSU Vasula 45.40 321*ce*P **P** **18 19 22.8 +2.6**
VSU pmax pmax
comp=Z,32nm,1.7s
FINES FINESS Array B 46.07 325 P **P** **18 19 25.3 -0.1**
comp=Z,3.8nm,0.7s,baz=91,slow=8.0,SNR=7.8
comp=Z,3.8nm,0.7s
FINES FINESS Array B 46.07 325 *i* P **P** **18 19 28.2 +2.7**
FINES pmax pmax
comp=Z,4.0nm,0.7s
MLR Muntele Rosu 46.16 303 P **P** **18 19 27.7 +1.1**
MLR IAmb IAmb 18 19 32.1
comp=Z,9.8nm,1.0s
MLR Muntele Rosu 46.16 303 P **P** **18 19 27.7 +1.1**
MLR pmax pmax
comp=Z,10.0nm,1.0s
BURAR Bucovina Array 46.39 306 P **P** **18 19 30.4 +2.0**
BUR08 Bucovina Ar. S 46.40 306 P **P** **18 19 28.5 0.0**
ARCES ARCESS Array B 47.90 336 P **P** **18 19 38.6 -1.0**
comp=Z,4.4nm,0.8s,baz=67,slow=4.1,SNR=6.6
comp=Z,4.4nm,0.8s
ARCES ARCESS Array B 47.90 336 P **P** **18 19 38.6 -1.0**
ARCES pmax pmax
comp=Z,15nm,1.4s
MA2 Magadan 48.66 38 P **P** **18 19 45.5 -0.2**
comp=Z,3.2nm,0.8s,baz=255,slow=3.5,SNR=4.8
comp=Z,3.2nm,0.8s
MA2 Magadan 48.66 38 P **P** **18 19 43.7 -2.0**
MA2 IAmb IAmb 18 19 50.9
comp=Z,5.6nm,1.1s
MA2 Magadan 48.66 38⇑ *i*P **P** **18 19 47.7 +2.0**
MA2 pmax pmax
comp=Z,5.0nm,1.0s
SEY Seymchan 49.55 34 P **P** **18 19 52.4 0.0**
comp=Z,4.4nm,0.6s,baz=260,slow=6.8,SNR=32
comp=Z,4.4nm,0.6s
SEY Seymchan 49.55 34⇑ *i*P **P** **18 19 52.8 +0.4**
SEY pmax pmax
comp=Z,5.0nm,0.9s
HFS Hagfors 52.09 323 P **P** **18 20 11.3 -0.3**
comp=Z,7.0nm,0.7s,baz=106,slow=9.4,SNR=9.0
comp=Z,7.0nm,0.7s
PETK Petropavlovsk- 53.01 46 P **P** **18 20 17.8 -0.7**
comp=Z,0.9nm,0.7s,baz=272,slow=6.5,SNR=1.8
comp=Z,0.9nm,0.7s
NB2 NORSAR Subarra 53.23 324 P **P** **18 20 19.5 -0.6**
comp=Z,15nm,1.1s,baz=84,slow=7.4
NOA NORSAR Array B 53.23 324 P **P** **18 20 19.4 -0.6**
comp=Z,4.7nm,0.9s,baz=84,slow=7.2,SNR=7.6
comp=Z,4.7nm,0.9s
NOA NORSAR Array B 53.23 324 *e*P **P** **18 20 19.9 -0.2**
NOA pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 53.70 312 *e*P **P** **18 20 26.0 +2.4**
CLL Collm 53.70 312 *e*P **P** **18 20 26.0 +2.4**
GERES GERESS Array B 53.78 309 P **P** **18 20 24.7 +0.3**
comp=Z,1.8nm,0.7s,baz=78,slow=7.4,SNR=8.6
comp=Z,1.8nm,0.7s
GERES GERESS Array B 53.78 309 *e*P **P** **18 20 27.9 +3.5**
GERES pmax pmax
comp=Z,2.0nm,0.7s
BILL Bilibino 55.19 27⇑ *i*P **P** **18 20 34.3 +0.2**
BILL pmax pmax
comp=Z,4.0nm,1.1s
EKA Eskdalemuir Ar 61.93 320 P **P** **18 21 22.9 +1.7**
comp=Z,1.9nm,0.7s,baz=68,slow=6.2,SNR=2.0
comp=Z,1.9nm,0.7s
C16K Lisburne Hills 65.12 23 IAmb IAmb 18 21 43.1
comp=Z,4.2nm,0.8s
NEEM North Greenlan 65.41 351 *i* P **P** **18 21 40.5 -3.8**
F15K North Star Dit 66.69 25 IAmb IAmb 18 21 53.2
comp=Z,6.3nm,1.2s
SUMG Summit 66.70 344 P **P** **18 21 52.3 -0.4**
SUMG Summit 66.70 344 P **P** **18 21 52.3 -0.4**
SUMG pmax pmax
comp=Z,13nm,1.2s
SUMG Summit 66.70 344 *i* P **P** **18 21 53.0 +0.3**
G16K Koyuk River 67.66 25 IAmb IAmb 18 22 02.8
comp=Z,4.9nm,1.0s
E19K Redstone River 68.12 22 IAmb IAmb 18 22 04.3
comp=Z,2.9nm,0.8s
D22K Ayikyak River 68.54 19 IAmb IAmb 18 22 04.8
comp=Z,6.0nm,1.1s
ESDC Sonseca Array 68.82 304 P **P** **18 22 05.8 -0.4**
comp=Z,1.6nm,0.9s,baz=58,slow=6.1,SNR=7.1
comp=Z,1.6nm,0.9s
D23K Nanushuk River 69.03 19 P **P** **18 22 06.6 -0.3**
D23K IAmb IAmb 18 22 07.4
comp=Z,2.6nm,0.7s
F21K Alatna River 69.40 21 IAmb IAmb 18 22 12.4
comp=Z,8.1nm,1.2s
D25K Kavik River 69.88 17 IAmb IAmb 18 22 13.0
comp=Z,7.4nm,1.1s
C27K Jago River 70.30 16 IAmb IAmb 18 22 15.8
comp=Z,4.4nm,0.8s
COLD Coldfoot 70.35 20 P **P** **18 22 14.4 -0.7**
COLD IAmb IAmb 18 22 16.8
comp=Z,3.8nm,0.9s
WB0 Warramunga Arr 71.02 132 **P** **18 22 20.1 +0.2**
WRA Warramunga Arr 71.12 132 P **P** **18 22 21.4 +0.9**
comp=Z,7.1nm,0.6s,baz=325,slow=6.3,SNR=74
comp=Z,7.1nm,0.6s
WRA Warramunga Arr 71.12 132 P **P** **18 22 20.8 +0.4**
F25K Christian Rive 71.33 18 P **P** **18 22 21.4 +0.2**
F25K IAmb IAmb 18 22 24.7
comp=Z,4.0nm,1.0s
A36M Sachs Harbour 71.78 10 IAmb IAmb 18 22 24.2
comp=Z,6.3nm,0.8s
NEA2 Nenana 72.52 22 P **P** **18 22 28.3 +0.1**
E29M Blow River 72.58 16 IAmb IAmb 18 22 32.5
comp=Z,8.5nm,1.4s
COLA College 72.69 21⇑ *i*P **P** **18 22 29.1 -0.1**
COLA pmax pmax
comp=Z,7.0nm,0.9s
IL31 73.05 21 IAmb IAmb 18 22 31.2
comp=Z,3.4nm,0.8s
ILAR Eielson Array 73.05 21 P **P** **18 22 30.4 -1.0**
comp=Z,2.9nm,0.8s,baz=308,slow=5.0,SNR=28
ILAR PP **PP** **18 25 11.5 -2.1**
comp=Z,1.5nm,0.9s,baz=308,slow=7.8,SNR=10
comp=Z,2.9nm,0.8s
LSZ Lusaka 73.59 238 P **P** **18 22 36.1 +0.7**
comp=Z,1.5nm,0.5s,baz=34,slow=6.9,SNR=5.4
comp=Z,1.5nm,0.5s

LSZ	**Lusaka**	**73.59**	**238**	P		**P**	**18 22 35.9**	**+0.5**
AS31	**Alice Springs**	**73.67**	**135**			**P**	**18 22 35.9**	**+0.2**
ASAR	**Alice Springs**	**73.68**	**135**	P		**P**	**18 22 36.5**	**+0.9**
	comp=Z,7.4nm,0.9s,baz=322,slow=5.9,SNR=51							
	comp=Z,7.4nm,0.9s							
ASAR	**Alice Springs**	**73.68**	**135**			**P**	**18 22 35.7**	**+0.1**
K24K	**Donnelly Dome**	**74.09**	**21**	P		**P**	**18 22 36.6**	**-0.9**
C36M	**Paulatuk**	**74.34**	**11**	IAmb	IAmb		18 22 46.1	
	comp=Z,15nm,1.5s							
SCRK	**Sand Creek**	**74.49**	**20**			**P**	**18 22 38.8**	**-1.2**
SCRK				IAmb	IAmb		18 22 40.6	
	comp=Z,5.3nm,0.8s							
I30M	**Mount Dempster**	**75.52**	**17**	IAmb	IAmb		18 22 45.9	
	comp=Z,5.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**77.77**	**278**	P		**P**	**18 22 59.2**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=36,slow=1.9,SNR=14							
	comp=Z,3.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**77.77**	**278**	P		**P**	**18 23 01.5**	**+2.2**
TORD				IAmb	IAmb		18 23 02.7	
	comp=Z,3.0nm,0.8s							
INKA	**Innaminka**	**80.81**	**133**	IAmb	IAmb		18 23 17.8	
	comp=Z,4.6nm,0.8s							
YKA	**Yellowknife Ar**	**82.14**	**9**	P		**P**	**18 23 21.2**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=338,slow=5.5,SNR=12							
	comp=Z,1.1nm,0.9s							
YKA	**Yellowknife Ar**	**82.14**	**9**	P		**P**	**18 23 21.0**	**-1.1**
YKAW1	**Yellowknife Wh**	**82.16**	**9**	IAmb	IAmb		18 23 22.2	
	comp=Z,3.9nm,0.9s							
STKA	**Stephens Creek**	**84.31**	**135**	P		**P**	**18 23 34.1**	**+0.4**
	comp=Z,6.5nm,0.9s,baz=336,slow=9.3,SNR=7.2							
	comp=Z,6.5nm,0.9s							
STKA	**Stephens Creek**	**84.31**	**135**			**P**	**18 23 34.0**	**+0.4**
STKA	**Stephens Creek**	**84.31**	**135**	P		**P**	**18 23 34.0**	**+0.4**
STKA				pmax	pmax			
	comp=Z,27nm,1.0s							
BOSA	**Boshof**	**84.72**	**230**	P		**P**	**18 23 36.2**	**+0.2**
	comp=Z,4.0nm,0.9s,baz=55,slow=5.1,SNR=3.2							
	comp=Z,4.0nm,0.9s							
BOSA	**Boshof**	**84.72**	**230**	P		**P**	**18 23 36.4**	**+0.4**
BOSA	**Boshof**	**84.72**	**230**	P		**P**	**18 23 36.4**	**+0.4**
BOSA				pmax	pmax			
	comp=Z,9.0nm,1.1s							
EIDS	**Eidsvold**	**85.87**	**124**	P		**P**	**18 23 42.8**	**+1.2**
DBIC	**Dimbokro**	**86.70**	**276**	P		**P**	**18 23 46.5**	**+0.5**
	comp=Z,7.8nm,0.9s,baz=62,slow=5.3,SNR=5.8							
	comp=Z,7.8nm,0.9s							
DBIC	**Dimbokro**	**86.70**	**276**	IAmb	IAmb		18 23 50.2	
	comp=Z,12nm,1.1s							
DBIC	**Dimbokro**	**86.70**	**276**	P		**P**	**18 23 46.5**	**+0.5**
DBIC				pmax	pmax			
	comp=Z,12nm,1.1s							
CPUP	**Villa Florida**	**147.20**	**274**	PKPbc		**PKPbc**	**18 30 46.1**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=37,slow=5.1,SNR=4.2							
CPUP	**Villa Florida**	**147.20**	**274**			**PKPbc**	**18 30 44.8**	**-0.4**
CPUP	**Villa Florida**	**147.20**	**274**	PKP2		**PKPbc**	**18 30 44.8**	**-0.4**
LPAZ	**La Paz**	**150.39**	**301**	PKPbc		**PKPbc**	**18 30 54.1**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=27,slow=4.5,SNR=4.6							

PRU ***20*** *18:11:55.4,51.˚45N×16.˚08E, h0km*
VIE 20 18:11:54.8±0.7, 51.˚43N×16.˚58E, h0km, mb2.4/2, ml2.4/2, Error ellipse: s-maj=6.9km s-min=3.9km az=122.0 48 km NW of Wroclaw Suspected Mining induced., Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61**	**198**	*e*Pg	Pg	18 12 06.6	+0.1
KSP				*e*Sg	Sb	18 12 16.0	-1.4
OSTC	**Ostas**	**0.90**	**195**	*e*PG	Pg	18 12 12.0	0.0
OSTC				*e*SG	Sg	18 12 24.6	+0.9
CHVC	**Chvalec**	**0.90**	**202**	*e*PG	Pg	18 12 11.4	-0.6
CHVC				*e*SG	Sg	18 12 23.5	-0.2
	comp=Z,22nm,0.5s						
UPC	**Upice**	**0.99**	**202**	*e*PG	Pg	18 12 12.6	-1.1
UPC				*e*SG	Sg	18 12 26.0	-0.5
	comp=Z,26nm,0.3s						
DPC	**Dobruska-Polom**	**1.09**	**189**	*e*PG	Pg	18 12 15.3	-0.3
DPC				*e*SG	Sg	18 12 30.0	+0.3
	comp=Z,8.8nm,0.4s						
PVCC	**Panska Ves**	**1.56**	**236**	*e*PG	Pn	18 12 19.3	-4.4
PVCC				*e*SG	Sn	18 12 38.4	-6.2
	comp=Z,38nm,0.2s						
STEB	**Steborice**	**1.67**	**153**	*e*PG	Pg	18 12 27.9	+1.1
STEB				*e*SG	Sg	18 12 54.3	+5.8
	comp=Z,19nm,0.6s						
BRG	**Berggiesshubel**	**1.75**	**253**	Pg	Pn	18 12 21.9	-4.5
BRG				Sg	Sn	18 12 42.2	-7.2
BRG				Amp		18 12 43.9	
	comp=Z,12nm,0.4s						
MORC	**Moravsky Berou**	**1.76**	**159**	*e*PN	Pn	18 12 26.5	-0.1
MORC				*e*SG	Sg	18 12 55.2	+3.9
PRU	**Pruhonice**	**1.94**	**223**	*e*PG	Pn	18 12 27.1	-1.8
PRU				*e*SG	Sn	18 12 51.3	-2.7
VRAC	**Vranov**	**2.12**	**180**	*e*PN	Pn	18 12 30.8	-0.7
VRAC				*e*SG	Sg	18 13 03.1	+0.3
HSKC	**Hora Svate Kat**	**2.15**	**249**	*e*PG	Pn	18 12 28.4	-3.5
HSKC				*e*SG	Sn	18 12 53.6	-5.7
TREC	**Trest**	**2.25**	**199**	*e*PG	Pb	18 12 35.0	-1.2
TREC				*e*SG	Sb	18 13 04.4	-0.1
CLL	**Collm**	**2.25**	**268**	*e*Pn	Pn	18 12 27.0	-6.2
CLL				*i* Pg	Pb	18 12 29.7	-6.5
CLL				*i* x	x	18 12 32.7	
CLL				*e*Sg	Sn	18 12 56.0	-5.6
	comp=Z,8.0nm,0.6s						
KRUC	**Moravsky**	**2.37**	**183**	*e*PN	Pn	18 12 34.1	-0.8
KRUC				*e*SG	Sg	18 13 10.2	-0.6
OJC	**Ojcow**	**2.37**	**119**	*e*Pg	Pg	18 12 44.4	+4.2
OJC				*e*Sg	Sg	18 13 18.9	+8.1
ZVC	**Zvikov**	**2.51**	**218**	*e*PN	Pn	18 12 33.9	-2.9
ZVC				*e*PG	Pb	18 12 38.4	-2.3
ZVC				*e*SG	Sb	18 13 10.7	-1.4
NKC	**Novy Kostel**	**2.88**	**247**	*e*PG	Pn	18 12 44.2	+2.3
LANS	**Liptovska Anna**	**2.93**	**140**	*e*PG	Pg	18 12 54.1	+3.1
LANS				*e*SG	Sg	18 13 35.8	+6.8
CKRC	**Cesky Krumlov**	**2.99**	**210**	*e*PN	Pn	18 12 41.4	-2.0
CKRC				*e*PG	Pb	18 12 47.4	-1.5
CKRC				*e*SG	Sb	18 13 24.8	-1.2
KHC	**Kasperske Hory**	**3.00**	**221**	*e*PN	Pn	18 12 40.0	-3.6
KHC				*e*SG	Sb	18 13 25.0	-1.2
MODS	**Modra-Piesok**	**3.09**	**171**	*e*PG	Pg	18 12 54.8	+0.9
MODS				*e*SG	Sg	18 13 36.2	+2.3
CONA	**Conrad Observa**	**3.53**	**188**	*i* Pn	Pn	18 12 50.4	-0.5
	comp=Z,0.3nm,0.1s						
CONA				*e*Sn	Sn	18 13 34.9	+1.5
	comp=Z,0.9nm,0.3s						
MOA	**Molln**	**3.88**	**204**	*i* Pn	Pn	18 12 54.1	-1.6
	comp=Z,0.4nm,0.1s						
MOA				*i* Sn	Sn	18 13 43.2	+1.2
	comp=Z,0.6nm,0.2s						

NNC ***20*** *18:21:38.5±0.4,42.˚66N×70.˚79E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=3.1km s-min=2.4km az=75.0*
KRNET ***20*** *18:21:39.6±0.1,42.˚69N×70.˚98E, h1km, mb2.4*
SOME ***20*** *18:21:40.6,42.˚77N×70.˚83E, h15km*
ISC 20 18:21:39.0±1.2, 42.˚66N±0.˚03×70.˚80E±0.˚02, h3km±12km, n21, σ1§45/44, 15C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.49**	**334**	||P	**Pg**	**18 21 48.5**	**+0.2**
	3.0nm,0.2s,baz=269,slow=1.3,SNR=1015							
KK31				⇑S	**Sg**	**18 21 54.9**	**+0.2**
	24nm,0.2s,baz=151,slow=25,SNR=5.0							
IUG	**luzhnay**	**0.77**	**228**	P	**Pb**	**18 21 53.6**	**-1.5**
	8.1nm,0.1s							
IUG				P	**Pb**	**18 21 53.6**	**-1.5**
	7.9nm,0.1s							
IUG				S	**Sg**	**18 22 03.7**	**0.0**
	72nm,0.2s							
IUG				S	**Sb**	**18 22 03.9**	**-2.0**
	83nm,0.3s							
IUG	**luzhnay**	**0.77**	**228**	*e*P	**Pb**	**18 21 55.3**	**+0.2**
	12nm,0.2s							
IUG				*e*S	**Sg**	**18 22 05.4**	**+1.7**
	58nm,0.3s							
BRLS	**Boroldav**	**0.80**	**298**	P	**Pg**	**18 21 54.6**	**+0.4**
	1.6nm,0.1s							
BRLS				P	**Pg**	**18 21 54.7**	**+0.4**
	1.6nm,0.2s							
BRLS				S	**Sg**	**18 22 05.2**	**+0.5**
	5.5nm,0.1s							
BRLS				S	**Sb**	**18 22 05.8**	**-0.9**
	9.7nm,0.1s							
BRLS	**Boroldav**	**0.80**	**298**	*e*P	**Pn**	**18 21 57.4**	**+0.2**
BRLS				*e*S	**Sn**	**18 22 08.3**	**-1.3**
BRLS	**Boroldav**	**0.80**	**298**	*e*P	**Pg**	**18 21 54.8**	**+0.5**
	2.2nm,0.6s							
BRLS				*e*S	**Sg**	**18 22 05.0**	**+0.4**
	9.7nm,0.1s							
TRKS	**Terek-Say**	**1.16**	**167**	⇑*i*P	**Pn**	**18 22 03.1**	**+0.8**
TRKS				⇑*i*S	**Sn**	**18 22 20.4**	**+1.7**
ARK	**Arkit**	**1.22**	**135**	⇑*i*P	**Pn**	**18 22 01.6**	**-1.5**
ARK				⇑*i*S	**Sb**	**18 22 17.7**	**-1.3**
MNAS	**Manas**	**1.27**	**97**	⇑*i*P	**Pn**	**18 22 01.2**	**-2.6**
MNAS				⇑*i*S	**Sb**	**18 22 17.2**	**-3.3**
MRKS	**Merke**	**1.79**	**87**	P	**Pn**	**18 22 11.1**	**+0.2**
	4.7nm,0.3s							
MRKS				P	**Pb**	**18 22 11.4**	**-1.1**
	4.7nm,0.3s							
MRKS				S	**Sb**	**18 22 34.3**	**-1.1**
	11nm,0.3s							
MRKS				S	**Sn**	**18 22 34.5**	**+0.3**
	6.8nm,0.3s							
MRKS	**Merke**	**1.79**	**87**	*e*P	**Pb**	**18 22 12.4**	**-0.1**
	2.8nm,0.3s							
MRKS				*e*S	**Sb**	**18 22 34.9**	**-0.5**
	6.2nm,0.3s							
EKS2	**Erkin-Say**	**2.20**	**89**	⇑*e*P	**Pn**	**18 22 17.5**	**+1.0**
EKS2				⇑*i*S	**Sb**	**18 22 45.2**	**-1.9**
AAK	**Ala-Archa**	**2.73**	**89**	⇑Pg	**Pb**	**18 22 30.1**	**+1.6**
	0.4nm,0.4s							
AAK				⇑Lg	Lg	18 23 03.3		
	0.8nm,0.4s							
ARLS	**Aral**	**2.74**	**106**	⇑*e*P	**Pn**	**18 22 25.4**	**+1.5**
ARLS				⇑*i*S	**Sn**	**18 22 58.5**	**+0.9**
SALK	**Salom-Alik**	**2.88**	**127**	⇑*e*P	**Pn**	**18 22 27.5**	**+1.6**
SALK				⇑*i*S	**Sn**	**18 23 02.8**	**+1.7**
BTLS	**Baital**	**3.34**	**44**	Pg	**Pb**	**18 22 37.5**	**-1.4**
	2.0nm,0.2s							
BTLS				Lg	Lg	18 23 18.2		
	3.6nm,0.2s							
BTLS	**Baital**	**3.34**	**44**	*e*P	**Pb**	**18 22 39.0**	**+0.2**
	1.2nm,0.5s							
BTLS				*e*S	**Sb**	**18 23 20.5**	**+0.7**
	3.0nm,0.4s							
DGS	**Degeres**	**3.70**	**79**	Pg	**Pb**	**18 22 46.4**	**+1.4**
	1.5nm,0.3s							
DGS				Lg	Lg	18 23 33.9		
	3.3nm,0.4s							
DGS	**Degeres**	**3.70**	**79**	*e*P	**Pb**	**18 22 46.4**	**+1.4**
	1.5nm,0.3s							
DGS				*e*S	**Sg**	**18 23 33.9**	**-3.8**
	3.6nm,0.6s							
KRBS	**Karabastau**	**3.71**	**72**	Pg	**Pb**	**18 22 45.7**	**+0.5**
	1.0nm,0.3s							
KRBS				Lg	Lg	18 23 32.7		
	0.6nm,0.3s							
KRBS	**Karabastau**	**3.71**	**72**	*e*P	**Pb**	**18 22 45.7**	**+0.5**
	1.0nm,0.3s							
KRBS				*e*S	**Sb**	**18 23 32.7**	**+2.0**
	0.6nm,0.2s							

IDC ***20*** *18:21:42.3±1.2,26.˚58S×114.˚92W, h0km, mb4.0/4, mbtmp4.0/4, MS3.8/2, Error ellipse: s-maj=70.3km s-min=32.3km az=50.0*
ISC 20 18:21:44.9±1.2, 26.˚7S±0.˚3×115.˚0W±0.˚4, h18km, n21, σ0§72/10, mb3.9/4, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03N2	**Juan Fernandez**	**31.84**	**111**	T	T	19 01 28.7	
	baz=277,slow=74,SNR=168						
H03N3	**Juan Fernandez**	**31.85**	**111**	T	T	19 01 29.9	
	baz=277,slow=74,SNR=237						
H03N1	**Juan Fernandez**	**31.86**	**111**	T	T	19 01 29.8	
	baz=277,slow=74,SNR=361						
PLCA	**Paso Flores**	**39.16**	**123**	P	**P**	**18 29 11.9**	**+0.2**
	6.9nm,1.0s,baz=281,slow=8.3,SNR=6.5						
	6.9nm,1.0s						
ATAH	**Atahualpa**	**39.85**	**68**	LR	LR	18 41 30.7	
	comp=Z,98nm,19.7s,baz=229,slow=30						
JTS	**Las Juntas de**	**46.94**	**42**	LR	LR	18 44 33.1	
	comp=Z,133nm,21.1s,baz=198,slow=29						
NVAR	**Mina Array Bea**	**64.84**	**357**	P	**P**	**18 32 24.1**	**+1.3**
	0.4nm,0.5s,baz=196,slow=6.4,SNR=1.2						
	0.4nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**88.17**	**292**	T	T	20 12 23.9	
	baz=119						
H11S1	**WAKE ISLAND Hy**	**88.19**	**292**	T	T	20 12 23.9	
	baz=119,slow=74						
H11S3	**WAKE ISLAND Hy**	**88.19**	**292**	T	T	20 12 25.5	
	baz=119,slow=74						
H11N3	**WAKE ISLAND Hy**	**88.59**	**293**	T	T	20 12 51.5	
	baz=121,slow=74						
H11N1	**WAKE ISLAND Hy**	**88.61**	**293**	T	T	20 12 56.3	
	baz=121,slow=74						
H11N2	**WAKE ISLAND Hy**	**88.61**	**293**	T	T	20 12 57.3	
	baz=121						
YKA	**Yellowknife Ar**	**88.86**	**0**	P	**P**	**18 34 36.3**	**-1.0**
	0.4nm,0.6s,baz=181,slow=4.3,SNR=5.0						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**94.46**	**347**	P	**P**	**18 35 02.9**	**-0.3**
	0.4nm,0.8s,baz=181,slow=7.8,SNR=3.1						
	0.4nm,0.8s						
SONM	**Songino Array**	**141.45**	**314**	PKP	**PKPdf**	**18 41 14.6**	**-0.2**
	0.8nm,0.9s,baz=70,slow=1.7,SNR=5.3						
CMAR	**Chiang Mai Arr**	**147.66**	**262**	PKPbc	**PKPbc**	**18 41 29.6**	**+0.6**
	0.5nm,0.6s,baz=118,slow=2.2,SNR=4.7						
ZALV	**Zalesovo Beam**	**149.06**	**337**	PKPbc	**PKPbc**	**18 41 31.3**	**-0.2**
	1.7nm,0.7s,baz=26,slow=3.4,SNR=8.8						
BRTR	**Keskin Array B**	**150.89**	**56**	PKPbc	**PKPbc**	**18 41 36.1**	**-0.6**
	2.5nm,0.9s,baz=298,slow=1.6,SNR=11						
BVAR	**Borovoye Array**	**153.37**	**353**	PKPbc	**PKPbc**	**18 41 41.6**	**0.0**
	0.7nm,0.6s,baz=29,slow=3.3,SNR=4.0						
KURBB	**Kurchatov Arra**	**153.93**	**340**	PKPbc	**PKPbc**	**18 41 43.0**	**+0.1**
	0.7nm,0.6s,baz=31,slow=1.2,SNR=2.1						

IDC ***20*** *18:29:27.1±1.8,34.˚43N×85.˚92E, h0km, mb3.2/4, mbtmp3.2/7, ML2.5/2, Error ellipse: s-maj=64.6km s-min=21.6km az=66.0*
ISC 20 18:29:32.4±1.5, 34.˚6N±0.˚2×86.˚1E±0.˚3, h35km, n7, σ1§09/7, mb3.5/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.51**	**348**	Pn	**Pn**	**18 32 26.8**	**-1.0**
	baz=160,slow=14,SNR=4.1						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**16.93**	**343**	P	**Pn**	**18 33 25.7**	**-0.7**
	baz=154,slow=12,SNR=2.3						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**19.74**	**141**	P	**P**	**18 33 59.5**	**+0.3**
	0.6nm,0.4s,baz=328,slow=11,SNR=5.7						
SONM	**Songino Array**	**20.11**	**43**	P	**Pn**	**18 34 05.7**	**+0.6**
	0.1nm,0.4s,baz=237,slow=10,SNR=1.7						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**21.53**	**334**	P	**P**	**18 34 19.9**	**+1.6**
	0.4nm,0.7s,baz=139,slow=11,SNR=4.1						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**71.03**	**132**	P	**P**	**18 40 46.4**	**-0.5**
	0.4nm,0.6s,baz=319,slow=6.4,SNR=4.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**73.60**	**135**	P	**P**	**18 41 01.9**	**-0.3**
	0.5nm,1.0s,baz=315,slow=7.8,SNR=2.7						
	0.5nm,1.0s						

DJA ***20*** *18:51:16.7±0.5,2.˚N±3.˚×12.˚7E±.˚, h92km±9km, M3.9/14, mB4.9/1, mb4.1/3, MLv3.9/14, Mw(mB)4.2/1*
IDC ***20*** *18:51:18.4±3.6, 1.˚85N×127.˚25E, h124km±38km, mb3.2/6, mbtmp3.6/8, Error ellipse: s-maj=47.2km s-min=16.4km az=73.0*
ISC 20 18:51:15.5±0.9, 1.˚98N±0.˚09×127.˚2E±0.˚1, h100km, n15, σ1§76/14, mb3.5/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**173**	P	**Pn**	**18 51 39.7**	**+1.4**
SGSI	**Sangihe**	**2.40**	**315**	S	**Sn**	**18 52 21.5**	**-0.7**
MNI	**Manado**	**2.44**	**257**	S	**Sn**	**18 52 23.0**	**-0.3**
SANI	**Sanana**	**4.19**	**197**	P	**Pn**	**18 52 16.1**	**-1.2**
GTOI	**Gorontalo**	**4.42**	**252**	P	**Pn**	**18 52 22.0**	**+1.6**
SIJI	**Sorong**	**4.94**	**125**	P	Pn	18 52 29.8	+2.3
	7.1nm,0.8s,baz=254,slow=16,SNR=1.8						
NLAI	**Namlea**	**5.18**	**181**	P	**Pn**	**18 52 31.0**	**+0.2**
	1µm57nm,1.1s						
BATI	**Baumata**	**12.61**	**196**	P	**Pn**	**18 54 13.1**	**+1.6**
	8.4nm,0.3s,baz=116,slow=6.0,SNR=5.3						
FITZ	**Fitzroy Crossi**	**20.01**	**184**	P	Pn	18 55 40.0	-3.0
	3.0nm,1.0s,baz=13,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**22.88**	**163**	P	**P**	**18 56 09.4**	**-1.4**
	0.7nm,0.4s,baz=341,slow=10,SNR=28						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.31**	**166**	P	**P**	**18 56 41.2**	**-0.8**
	0.2nm,0.3s,baz=342,slow=8.0,SNR=11						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**36.33**	**159**	P	**P**	**18 58 09.9**	**+0.1**
	1.9nm,0.6s,baz=339,slow=9.4,SNR=5.3						
	1.9nm,0.6s						
SONM	**Songino Array**	**49.10**	**342**	P	**P**	**18 59 54.7**	**+1.7**
	0.2nm,0.4s,baz=134,slow=4.2,SNR=2.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**19 01 08.0**	**+1.3**
	0.3nm,0.5s,baz=119,slow=7.3,SNR=5.9						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.47**	**328**	P	**P**	**19 01 35.5**	**+0.6**
	0.7nm,0.6s,baz=130,slow=6.3,SNR=11						
KURBB				pP	**sP**	**19 02 05.5**	**-4.1**
	0.4nm,0.8s,baz=128,slow=6.5,SNR=4.1						
	0.7nm,0.6s						

BJI ***20*** *18:57:33.2,53.˚72N×160.˚54E, h37km, mB5.9/56, mb5.9/96, Ms5.8, Ms7 5.7/99*
KRSC ***20*** *18:57:34.5±1.2,53.˚44N×160.˚92E, h52km±17km, Mc6.0, Ml6.4, Felt [V] at cape Shipunskiy; [IV-V] at kordon Kronoki, MGeoES-1; [IV] at HMS Semyachik, kordon Uzon, kordon Tsentralnyi, Petropavlovsk, Pionersky, Noviy, Nagorniy, the country "Mechta", Elizovo, Vulkanniy, Viluchinsk, Nikolaevka, Termalniy, river Karimshina (stationary KF GS); [III-IV] at kordon Cape Nalichevo, Korjaki, Zeleniy, Paratunka, Lesnoy, Milkovo; [III] at Sokoch; [II] at lighthouse Krugliy, Kluchi; Felt at the country "Druzhba", Ribachiy, Razdolniy, Malka, Ust-Kamchatsk.*
NEIC ***20*** *18:57:36,53.˚64N×160.˚77E, h36km*
NEIC ***20*** *18:57:36.1±1.9,53.˚70N±0.˚09×160.˚68E±0.˚09, h32km±1km, mb5.9/1037, Ms_20 5.4/553, Mwb5.7/145, Mww5.8/32, Error ellipse: s-maj=15.3km s-min=8.4km az=163.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.00; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$-3.40; $M_{r\theta}$1.43; $M_{\theta\phi}$-0.99; $M_{\phi r}$1.79; Fault plane solution: $M_0$4.49000×10^{17} NP1:ϕ_s27.52000°, δ60.26000°, λ99.30000°. NP2:ϕ_s189.24000°, δ31.03000°, λ74.20000°. Principal axes: T 4.6836, Plg73.0000°, Azm321.0000°; N -0.4050, Plg8.0000°, Azm203.0000°; P -4.2786, Plg15.0000°, Azm111.0000°;*
GFZ ***20*** *18:57:36.7,53.˚59N×160.˚51E, h38km, MW5.7, Moment Tensor Solution. s21 Moment tensor: M_{rr}3.20; $M_{\theta\theta}$-0.87; $M_{\phi\phi}$-2.33; $M_{r\theta}$1.71; $M_{\theta\phi}$-2.43; $M_{\phi r}$2.53; Fault plane solution: NP1:ϕ_s220.00000°, δ25.00000°, λ95.00000°. NP2:ϕ_s35.00000°, δ65.00000°, λ88.00000°. Principal axes: T 4.3100, Plg70.0000°, Azm300.0000°; N 0.9300, Plg2.0000°, Azm35.0000°; P -5.2400, Plg20.0000°, Azm126.0000°;*
NEIC ***20*** *18:57:36.8,53.˚63N×160.˚76E, h39km*
NEIC ***20*** *18:57:36,53.˚44N×160.˚94E, h36km, Moment Tensor Solution. Duration: 3§7 Moment tensor: Scale 10^{17}Nm; M_{rr}4.32; $M_{\theta\theta}$-2.17; $M_{\phi\phi}$-2.16; $M_{r\theta}$1.26; $M_{\theta\phi}$-2.37; $M_{\phi r}$2.73; Fault plane solution: $M_0$5.36000×10^{17} NP1: ϕ_s236.43000°, δ29.73000°, λ109.91000°. NP2: ϕ_s33.79000°, δ62.20000°, λ78.99000°. Principal axes: T 5.3411, Plg71.0000°, Azm280.0000°; N 0.0278, Plg10.0000°, Azm39.0000°; P -5.3690, Plg17.0000°, Azm132.0000°;*
IDC ***20*** *18:57:36.1±1.1,53.˚65N×160.˚49E, h33km±7km, mb5.8/40, mbtmp6.1/44, ML5.7/3, MS5.3/89 Error ellipse: s-maj=9.6km s-min=8.1km az=124.0*
IPGP ***20*** *18:57:36.0,53.˚64N×160.˚78E, h40km, Mw5.8, Fault plane solution: NP1:ϕ_s222.00000°, δ31.00000°, λ91.00000°. NP2:ϕ_s41.00000°, δ59.00000°, λ89.00000°.*
ISC-PP ***20*** *18:57:36,53.˚70N×160.˚68E, h27km, Mwppsm6.0, Moment Tensor Solution. s54 Moment tensor: Scale 10^{18}Nm; M_{rr}0.88±.17; $M_{\theta\theta}$-0.16±.15; $M_{\phi\phi}$0.25±.11; $M_{r\theta}$-0.02±.10; $M_{\theta\phi}$-0.06±.11; $M_{\phi r}$0.25±.23; Fault plane solution: $M_0$1.43000×10^{18} NP1:ϕ_s121.90000°, δ45.80000°, λ98.70000°. NP2:ϕ_s289.50000°, δ44.90000°, λ81.10000°.*
MOS ***20*** *18:57:37.4±1.1,53.˚54N×160.˚55E, h69km, mb6.4/78, MS5.6/62 Error ellipse: s-maj=5.0km s-min=2.9km az=88.7*
PTWC ***20*** *18:57:38,53.˚60N×160.˚70E, h37km, Mwp5.8/7*
GCMT ***20*** *18:57:40.2±0.1,53.˚44N±0.˚01×160.˚98E±0.˚01, h47km, MW5.8/153, Moment Tensor Solution. s153,c316; s151,c450; Duration: 2§1 Moment tensor: Scale 10^{17} Nm; M_{rr}6.27±.06; $M_{\theta\theta}$-1.77±.05; $M_{\phi\phi}$-4.50±.05; $M_{r\theta}$2.30±.05; $M_{\theta\phi}$-3.32±.04; $M_{\phi r}$2.83±.05; Best double couple: $M_0$7.45100×10^{17} NP1:ϕ_s211.00000°, δ30.00000°, λ85.00000°. NP2:ϕ_s37.00000°, δ60.00000°, λ93.00000°. Principal axes: T 7.2310, Plg75.0000°, Azm315.0000°; N 0.4400, Plg3.0000°, Azm215.0000°; P -7.6710, Plg15.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
BGR ***20*** *18:57:45.4,54.˚68N×159.˚69E, h33km, mb6.7, mB_BB6.9, Ms5.5*
**ISC 20 18:57:37.0±0.3, 53.

TUMD	**Tumrok D**	**1.67**	**358**		PN	**Pn**	**18 58 05.0**	**+1.2**
TUMD					S	**Sn**	**18 58 25.8**	**+1.7**
TUMD	**Tumrok D**	**1.67**	**358**	*eP*	**Pn**	**18 58 05.1**	**+1.2**
TUMD				*eS*	**Sn**	**18 58 25.9**	**+1.7**
I44RU	**PETROPAVLOVSK-**	**1.73**	**257**		Pn	**Pn**	**18 58 07.3**	**+2.6**
	baz=78,slow=27							
PEA0B	**Petropavlovsk-**	**1.74**	**257**			**Pn**	**18 58 07.5**	**+2.8**
PEA0B	**Petropavlovsk-**	**1.74**	**257**	*d i*	PN	**Pn**	**18 58 07.8**	**+3.0**
PEA0B	**Petropavlovsk-**	**1.74**	**257**		P	**Pn**	**18 58 07.9**	**+3.1**
PETK	**Petropavlovsk-**	**1.74**	**257**		Pn	**Pn**	**18 58 07.8**	**+3.0**
	3µm,0.3s,baz=73,slow=16							
PETK	**Petropavlovsk-**	**1.74**	**257**			**Pn**	**18 58 07.5**	**+2.7**
PETK	**Petropavlovsk-**	**1.74**	**257**		PN	**Pn**	**18 58 07.5**	**+2.7**
MTVR	**Mutnovka**	**1.76**	**234**		PN	**Pn**	**18 58 06.9**	**+1.8**
MTVR	**Mutnovka**	**1.76**	**234**	*eP*		**Pn**	**18 58 07.0**	**+1.8**
GRL	**Gorelyy**	**1.77**	**237**		PN	**Pn**	**18 58 07.5**	**+2.2**
GRL	**Gorelyy**	**1.77**	**237**	*i*	P	**Pn**	**18 58 07.6**	**+2.2**
ASAK	**Asacha**	**1.96**	**235**		PN	**Pn**	**18 58 10.3**	**+2.5**
ASAK	**Asacha**	**1.96**	**235**	*i*	P	**Pn**	**18 58 10.3**	**+2.5**
APC	**Apacha**	**2.11**	**254**		PN	**Pn**	**18 58 13.6**	**+3.9**
APC	**Apacha**	**2.11**	**254**	*eP*		**Pn**	**18 58 13.7**	**+3.9**
APC				*eS*		**Sn**	**18 58 42.0**	**+7.3**
KMNR	**Kamenistaya**	**2.23**	**356**		PN	**Pn**	**18 58 14.3**	**+2.7**
KMNR	**Kamenistaya**	**2.23**	**356**	*i*	P	**Pn**	**18 58 14.3**	**+2.7**
KDTR	**Khodutka, Kamc**	**2.28**	**222**		PN	**Pn**	**18 58 13.7**	**+1.6**
KDTR					S	**Sn**	**18 58 41.9**	**+3.0**
KDTR	**Khodutka, Kamc**	**2.28**	**222**	*eP*		**Pn**	**18 58 13.8**	**+1.6**
KDTR				*eS*		**Sn**	**18 58 41.9**	**+3.0**
BZP	**Bezymyannyi-Pe**	**2.38**	**0**		PN	**Pn**	**18 58 16.0**	**+2.3**
BZP	**Bezymyannyi-Pe**	**2.38**	**0**	*eP*		**Pn**	**18 58 16.1**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**2.41**	**2**		PN	**Pn**	**18 58 16.5**	**+2.5**
BZGR					S	**Sn**	**18 58 46.2**	**+3.8**
BZGR	**Bezymyannyi-Gr**	**2.41**	**2**	*eP*		**Pn**	**18 58 16.6**	**+2.5**
BZGR				*eS*		**Sn**	**18 58 46.2**	**+3.8**
KIRR	**Kirishev**	**2.42**	**358**		PN	**Pn**	**18 58 16.7**	**+2.5**
KIRR	**Kirishev**	**2.42**	**358**	*eP*		**Pn**	**18 58 16.8**	**+2.5**
BZWR	**Bezymyannyi-We**	**2.43**	**360**		PN	**Pn**	**18 58 17.2**	**+2.8**
BZWR	**Bezymyannyi-We**	**2.43**	**360**	*eP*		**Pn**	**18 58 17.2**	**+2.8**
ZLN	**Zelenaya**	**2.49**	**4**		PN	**Pn**	**18 58 17.8**	**+2.7**
ZLN	**Zelenaya**	**2.49**	**4**	*eP*		**Pn**	**18 58 17.9**	**+2.7**
KOZ	**Kozyrevsk**	**2.55**	**352**		PN	**Pn**	**18 58 18.5**	**+2.6**
KOZ	**Kozyrevsk**	**2.55**	**352**	*eP*		**Pn**	**18 58 18.5**	**+2.6**
LGNR	**Loginova**	**2.55**	**2**		PN	**Pn**	**18 58 19.6**	**+3.4**
LGNR	**Loginova**	**2.55**	**2**	*i*	P	**Pn**	**18 58 19.6**	**+3.4**
CIRR	**Tsirk**	**2.59**	**3**		PN	**Pn**	**18 58 19.3**	**+2.8**
CIRR	**Tsirk**	**2.59**	**3**	*eP*		**Pn**	**18 58 19.3**	**+2.8**
ESO	**Esso**	**2.62**	**337**		PN	**Pn**	**18 58 18.9**	**+2.2**
ESO	**Esso**	**2.62**	**337**	*eP*		**Pn**	**18 58 19.0**	**+2.2**
KLY	**Klyuchi**	**2.78**	**2**		PN	**Pn**	**18 58 21.2**	**+2.2**
KLY					S	**Sn**	**18 58 54.3**	**+3.0**
KLY	**Klyuchi**	**2.78**	**2**	*eP*		**Pn**	**18 58 21.3**	**+2.2**
KLY				*eS*		**Sn**	**18 58 54.4**	**+3.0**
SRDR	**Sredinnyy**	**2.83**	**351**		PN	**Pn**	**18 58 21.7**	**+2.0**
SRDR	**Sredinnyy**	**2.83**	**351**	*eP*		**Pn**	**18 58 21.7**	**+2.0**
KBTR	**Krutoberegovo**	**2.99**	**26**		PN	**Pn**	**18 58 22.3**	**+0.5**
KBTR	**Krutoberegovo**	**2.99**	**26**	*eP*		**Pn**	**18 58 22.4**	**+0.5**
KBG	**Krutoberegovo**	**3.00**	**24**		PN	**Pn**	**18 58 23.2**	**+1.2**
KBG					S	**Sn**	**18 58 59.1**	**+2.4**
KBG	**Krutoberegovo**	**3.00**	**24**	*eP*		**Pn**	**18 58 23.3**	**+1.2**
KBG				*eS*		**Sn**	**18 58 59.2**	**+2.4**
PAU	**Pauzhetka**	**3.07**	**229**		PN	**Pn**	**18 58 26.2**	**+3.3**
PAU					S	**Sn**	**18 59 01.3**	**+3.0**
PAU	**Pauzhetka**	**3.07**	**229**	*eP*		**Pn**	**18 58 26.3**	**+3.3**
PAU				*eS*		**Sn**	**18 59 01.3**	**+3.0**
SMKR	**Semkarok**	**3.10**	**10**		PN	**Pn**	**18 58 25.6**	**+2.1**
SMKR	**Semkarok**	**3.10**	**10**	*eP*		**Pn**	**18 58 25.6**	**+2.1**
BKI	**Bering**	**3.60**	**60**		PN	**Pn**	**18 58 28.4**	**-1.8**
BKI	**Bering**	**3.60**	**60**	*eP*		**Pn**	**18 58 28.4**	**-1.8**
BKI				*eS*		**Sn**	**18 59 04.8**	**-6.7**
SKR	**Severo-Kuril's**	**3.94**	**225**	*i*	PN	Pn	18 58 40.1	+5.2
SKR				*eS*		**Sn**	**18 59 27.0**	**+7.3**
SKR				pmax	pmax			
	comp=Z,3µm,0.6s							
SKR				smax	smax			
	comp=E,40µm,0.6s							
SKR				smax	smax			
	comp=N,56µm,0.8s							
SKR	**Severo-Kuril's**	**3.94**	**225**	*eP*		**Pn**	**18 58 37.9**	**+3.1**
SKR				*eS*		**Sn**	**18 59 24.7**	**+4.9**
TIGL	**Tigil**	**4.36**	**347**		PN	**Pn**	**18 58 43.5**	**+2.8**
TIGL	**Tigil**	**4.36**	**347**	*eP*		**Pn**	**18 58 43.6**	**+2.8**
PALN	**Palana**	**5.58**	**357**		PN	**Pn**	**18 59 00.3**	**+3.0**
PALN	**Palana**	**5.58**	**357**	*eP*		**Pn**	**18 59 00.3**	**+3.0**
OSSR	**Ossora**	**5.90**	**13**		PN	**Pn**	**18 59 04.6**	**+2.9**
OSSR	**Ossora**	**5.90**	**13**	*eP*		**Pn**	**18 59 04.6**	**+2.9**
TILK	**Tilichiki**	**7.58**	**22**		PN	**Pn**	**18 59 26.0**	**+1.3**
TILK	**Tilichiki**	**7.58**	**22**	*eP*		**Pn**	**18 59 26.0**	**+1.3**
TILK				*eS*		**Sn**	**19 00 49.4**	**+0.3**
MA2	**Magadan**	**8.09**	**322**		Pn	**Pn**	**18 59 34.6**	**+2.8**
	comp=N,22nm,0.3s,baz=132,slow=9.3,SNR=144							
MA2					LR	LR	19 03 15.5	
	comp=N,42µm,18.1s,baz=130,slow=42							
	comp=N,784nm,0.8s							
MA2	**Magadan**	**8.09**	**322**			**Pn**	**18 59 33.8**	**+2.0**
MA2	**Magadan**	**8.09**	**322**		P	**Pn**	**18 59 35.0**	**+3.2**
MA2	**Magadan**	**8.09**	**322**	*j e*	PN	**Pn**	**18 59 34.4**	**+2.6**
MA2				pmax	pmax			
	comp=Z,229nm,0.6s							
MA2				MLR	MLR			
	comp=Z,39µm,17.0s							
MA2	**Magadan**	**8.09**	**322**		P	**Pn**	**18 59 34.4**	**+2.6**
SHEM	**Shemya Is, Ala**	**8.21**	**90**		Pn	**Pn**	**18 59 31.8**	**-1.6**
	comp=Z,62nm,0.3s,baz=154,slow=2.2,SNR=36							
SHEM					Sn	**Sn**	**19 00 58.1**	**-6.7**
	comp=Z,59nm,0.3s,baz=238,slow=22,SNR=6.4							
	comp=Z,190nm,0.2s							
SHEM	**Shemya Is, Ala**	**8.21**	**90**			**Pn**	**18 59 31.5**	**-2.0**
SMY	**Shemya**	**8.21**	**90**			**Pn**	**18 59 31.4**	**-2.1**
SMY	**Shemya**	**8.21**	**90**		P	**Pn**	**18 59 32.0**	**-1.4**
SMY	**Shemya**	**8.21**	**90**		PN	**Pn**	**18 59 31.4**	**-2.1**
SMY	**Shemya**	**8.21**	**90**		P	**Pn**	**18 59 31.8**	**-1.6**
KMSK	**Kamenskaya**	**9.45**	**16**		PN	**Pn**	**18 59 53.3**	**+3.1**
KMSK	**Kamenskaya**	**9.45**	**16**	*eP*		**Pn**	**18 59 53.4**	**+3.1**
SEY	**Seymchan**	**10.34**	**339**		Pn	**Pn**	**19 00 05.8**	**+3.4**
	comp=Z,2.1nm,0.3s,baz=139,slow=12,SNR=100							
SEY					LR	LR	19 04 36.8	
	comp=Z,40µm,18.6s,baz=150,slow=41							
SEY	**Seymchan**	**10.34**	**339**	*j e*	PN	**Pn**	**19 00 04.8**	**+2.3**
SEY				pmax	pmax			
	comp=Z,87nm,1.0s							
SEY				MLR	MLR			
	comp=Z,29µm,16.0s							
OKH	**Okha**	**10.46**	**277**	*d i*	PN	**Pn**	**19 00 01.5**	**-2.7**
OKH				pmax	pmax			
	comp=Z,2µm,9.1s							
OKH				MLR	MLR			
	comp=Z,20µm,14.0s							
OKH				MLR	MLR			
	comp=N,24µm,14.0s							
OKH				MLR	MLR			
	comp=E,24µm,16.0s							
TYV	**Tymovskoe**	**11.28**	**263**	*e*	PN	Pn	19 00 22.9	+7.5
TYV				*eS*		Sn	19 02 32.1	+12
TYV				pmax	pmax			
	comp=Z,790nm,1.1s							
TYV				pmax	pmax			
	comp=Z,3µm,2.1s							
TYV				smax	smax			
	comp=N,52nm,1.2s							
TYV				smax	smax			
	comp=E,75nm,1.2s							
TYV				smax	smax			
	comp=N,2µm,4.5s							
TYV				smax	smax			
	comp=E,4µm,4.5s							
TYV				MLR	MLR			
	comp=Z,18µm,18.0s							
TYV				MLR	MLR			
	comp=E,17µm,18.0s							
AMKA	**Amchitka**	**11.66**	**93**		Pn	**Pn**	**19 00 19.2**	**-1.4**
KUR	**Kuril'sk**	**11.69**	**230**	*d i*	PN	**Pn**	**19 00 21.3**	**+0.3**
KUR				*eS*		**Sn**	**19 02 35.9**	**+6.0**
KUR				pmax	pmax			
	comp=Z,503nm,0.8s							
KUR				MLR	MLR			
	comp=Z,14µm,19.0s							
KUR				MLR	MLR			
	comp=N,10µm,18.0s							
KUR				MLR	MLR			
	comp=E,8µm,17.0s							
NKL	**Nikolayevsk**	**11.86**	**276**	*e*	PN	**Pn**	**19 00 27.3**	**+4.0**
NKL				pmax	pmax			
	comp=N,3µm,1.3s							
NKL				pmax	pmax			
	comp=E,825nm,1.3s							
NKL				pmax	pmax			
	comp=Z,3µm,1.4s							
NKL				MLR	MLR			
	comp=E,22µm,12.0s							
NKL				MLR	MLR			
	comp=N,51µm,17.0s							
NKL				MLR	MLR			
	comp=Z,77µm,19.0s							
UGL	**Uglegorsk**	**12.37**	**256**	*de*	PN	**P**	**19 00 36.8**	**-4.2**
UGL				pmax	pmax			
	comp=Z,9µm,2.7s							
UGL				pmax	pmax			
	comp=Z,1µm,1.1s							
UGL				MLR	MLR			
	comp=Z,16µm,14.0s							
UGL				MLR	MLR			
	comp=N,17µm,13.0s							
UGL				MLR	MLR			
	comp=E,15µm,13.0s							
YSS	**Yuzhno-Sakhali**	**13.12**	**247**			**Pn**	**19 00 44.6**	**+4.2**
YSS	**Yuzhno-Sakhali**	**13.12**	**247**	*de*	PN	**Pn**	**19 00 44.6**	**+4.2**
YSS				pmax	pmax			
	comp=N,450nm,1.1s							
YSS				pmax	pmax			
	comp=E,660nm,1.1s							
YSS				pmax	pmax			
	comp=Z,500nm,1.1s							
YSS				pmax	pmax			
	comp=Z,3µm,3.4s							
YSS				pmax	pmax			
	comp=N,2µm,4.2s							
YSS				pmax	pmax			
	comp=E,3µm,3.1s							
YSS				MLR	MLR			
	comp=Z,21µm,20.0s							
YSS				MLR	MLR			
	comp=N,14µm,17.0s							
YSS				MLR	MLR			
	comp=E,11µm,19.0s							
YSS	**Yuzhno-Sakhali**	**13.12**	**247**		P	**P**	**19 00 45.1**	**-4.3**
YSS	**Yuzhno-Sakhali**	**13.12**	**247**	*eP*		**Pn**	**19 00 44.5**	**+4.0**
YUK	**Yuzh-Kuril'sk**	**13.53**	**231**	*eP*		**Pn**	**19 00 45.2**	**-0.9**
YUK				*i*	S	**Sn**	**19 03 14.3**	**-0.4**
YUK				pmax	pmax			
	comp=N,895nm,0.5s							
YUK				pmax	pmax			
	comp=E,372nm,0.5s							
YUK				pmax	pmax			
	comp=Z,3µm,0.5s							
YUK				pmax	pmax			
	comp=Z,4µm,1.1s							
YUK	**Yuzh-Kuril'sk**	**13.53**	**231**	*eP*		**Pn**	**19 00 45.4**	**-0.6**
KIWB	**Kanaga Island**	**13.64**	**88**			**Pn**	**19 00 44.5**	**-3.1**
RUSJ	**Misakicho**	**13.76**	**233**	*eP*		**Pn**	**19 00 49.1**	**-0.2**
RUSJ				*i*	S	**Sn**	**19 03 17.5**	**-3.0**
ADK	**Adak**	**13.91**	**88**		Pn	Pn	19 00 46.4	-4.9
ADK	**Adak**	**13.91**	**88**		P	**Pn**	**19 00 48.3**	**-3.0**
ADK	**Adak**	**13.91**	**88**		P	Pn	19 00 46.4	-4.9
GLVR	**Golovnino**	**13.91**	**231**	*eP*		**Pn**	**19 00 49.4**	**-1.9**
GLVR					S	**Sn**	**19 03 19.9**	**-4.2**
GLVR				pmax	pmax			
	comp=Z,1µm,0.6s							
GLVR				pmax	pmax			
	comp=N,294nm,0.3s							
GLVR				pmax	pmax			
	comp=E,221nm,0.5s							
GLVR				pmax	pmax			
	comp=Z,2µm,1.6s							
NMR	**Nemuro--Hokkai**	**14.10**	**230**	*eP*		**Pn**	**19 00 49.5**	**-4.4**
NMR				*i*	S	**Sn**	**19 03 20.9**	**-7.8**
BILL	**Bilibino**	**14.81**	**8**			**Pn**	**19 01 04.3**	**+1.2**
BILL	**Bilibino**	**14.81**	**8**	*ce*	P	**Pn**	**19 01 03.7**	**+0.6**
BILL				pmax	pmax			
	comp=Z,68nm,1.0s							
BILL				MLR	MLR			
	comp=Z,10µm,16.0s							
BILL	**Bilibino**	**14.81**	**8**	*eP*		**Pn**	**19 01 03.9**	**+0.8**
BILI	**Bilibino, Chuk**	**14.84**	**9**	*eP*		**Pn**	**19 01 04.4**	**+0.9**
GRNR	**Gornyy**	**15.02**	**269**	*i*	P	**P**	**19 01 11.0**	**+0.4**
GRNR				*eS*		**S**	**19 04 00.1**	**-6.6**
GRNR				pmax	pmax			
	comp=E,180nm,1.2s							
GRNR				pmax	pmax			
	comp=N,80nm,1.3s							
GRNR				pmax	pmax			
	comp=Z,190nm,1.1s							
GRNR				smax	smax			
	comp=E,20nm,0.8s							
GRNR				MLR	MLR			
	comp=E,5µm,15.0s							
GRNR				MLR	MLR			
	comp=N,7µm,18.0s							
GRNR				MLR	MLR			
	comp=Z,8µm,16.0s							
JKA	**Kamikawa-asahi**	**15.06**	**238**			**P**	**19 01 09.0**	**-2.0**
JKA				IAmb	IAmb	IAmb	19 01 13.6	
	comp=Z,2µm,1.1s							
JKA	**Kamikawa-asahi**	**15.06**	**238**		P	**Pn**	**19 01 08.3**	**+1.8**
ASAJ	**Asahikawa**	**15.06**	**238**		Pn	**Pn**	**19 01 08.4**	**+1.9**
	comp=Z,27nm,0.3s,baz=63,slow=10,SNR=288							
ASAJ					Sn	**S**	**19 04 03.2**	**-4.3**
	comp=Z,2.3nm,0.3s,baz=189,slow=32,SNR=0.9							
ASAJ					LR	LR	19 06 26.1	
	comp=Z,17µm,20.6s,baz=48,slow=35							
	comp=Z,1µm,1.0s							
ASAJ	**Asahikawa**	**15.06**	**238**		P	**P**	**19 01 09.0**	**-2.0**
ASAJ				pmax	pmax			
	comp=Z,2µm,1.1s							
ATKA	**Atka Island**	**15.31**	**85**			**Pn**	**19 01 07.0**	**-2.6**
SPIA	**Saint Paul Isl**	**16.95**	**66**		P	**Pn**	**19 01 30.0**	**-0.5**
	baz=270							
P08K	**Saint George I**	**17.35**	**68**		P	**Pn**	**19 01 35.4**	**0.0**
	baz=272							
GAMB	**Gambell**	**17.56**	**43**		P	**Pn**	**19 01 38.1**	**+0.2**
GAMB	**Gambell**	**17.56**	**43**		P	**P**	**19 01 38.5**	**+0.1**
	baz=247,SNR=25							
GAMB					S	**S**	**19 04 56.8**	**-1.3**
	baz=247							
GAMB	**Gambell**	**17.56**	**43**		P	**P**	**19 01 38.4**	**-0.1**
TEY	**Ternei**	**17.70**	**251**	*eP*		**P**	**19 01 41.6**	**+1.5**
NIKH	**Nikolski High**	**18.27**	**79**		P	**P**	**19 01 44.5**	**-1.9**
NIKH					IAmb	IAmb	19 01 52.9	
	comp=Z,1µm,1.7s							
NIKH	**Nikolski High**	**18.27**	**79**		P	**Pn**	**19 01 46.6**	**-0.2**
	baz=284							
NIKH					S	**Sn**	**19 05 06.9**	**-2.7**
	baz=284							
NIKH	**Nikolski High**	**18.27**	**79**		P	**Pn**	**19 01 47.5**	**+0.8**
YAK	**Yakutsk**	**18.34**	**310**		P	**Pn**	**19 01 47.7**	**+0.2**
	comp=Z,9µm,0.6s,baz=93,slow=3.2,SNR=2366							
YAK					Sn	**S**	**19 05 12.9**	**-1.1**
	comp=Z,4.7nm,0.3s,baz=7.0,slow=22,SNR=1.5							
YAK					LR	LR	19 09 33.4	
	comp=Z,20µm,19.9s,baz=120,slow=39							
YAK	**Yakutsk**	**18.34**	**310**		P	**Pn**	**19 01 48.4**	**+0.9**
YAK	**Yakutsk**	**18.34**	**310**	*c i*	P	**Pn**	**19 01 47.4**	**0.0**
YAK				*eS*		**S**	**19 05 14.9**	**+1.0**
YAK				pmax	pmax			
	comp=Z,7µm,0.8s							
YAK				pmax	pmax			
	comp=E,2µm,1.0s							
YAK				pmax	pmax			
	comp=N,509nm,0.9s							
YAK				pmax	pmax			
	comp=Z,1µm,0.9s							
YAK				pmax	pmax			
	comp=N,328nm,0.9s							
YAK				pmax	pmax			
	comp=E,924nm,1.1s							
YAK				smax	smax			
	comp=E,1µm,2.6s							
YAK				smax	smax			
	comp=N,128nm,0.9s							
YAK				MLR	MLR			
	comp=Z,16µm,12.0s							
YAK				MLR	MLR			
	comp=N,2µm,15.0s							
YAK				MLR	MLR			
	comp=E,12µm,15.0s							
YAK	**Yakutsk**	**18.34**	**310**		P	**Pn**	**19 01 47.5**	**0.0**
YAK	**Yakutsk**	**18.34**	**310**	*eP*		**Pn**	**19 01 47.7**	**+0.2**
KLR	**Kul'dur**	**18.40**	**268**		LR	LR	19 09 52.8	
	comp=E,4µm,18.3s,baz=72,slow=40							
KLR	**Kul'dur**	**18.40**	**268**	*c i*	P	**Pn**	**19 01 50.3**	**+2.0**
KLR				pmax	pmax			
	comp=Z,237nm,1.1s							
KLR				MLR	MLR			
	comp=Z,15µm,18.0s							
OKFG	**Magazine Ridge**	**18.72**	**78**		P	**Pn**	**19 01 54.1**	**+1.9**
MAPS	**Pakushin South**	**19.20**	**76**		P	**Pn**	**19 01 57.7**	**-0.2**
M11K	**Mekoryuk**	**19.23**	**56**		P	**Pn**	**19 01 57.6**	**-0.5**
	baz=264,SNR=11							
M11K					S	**Sn**	**19 05 32.3**	**-0.3**
	baz=264							
MGOD	**Makushin Gods**	**19.24**	**76**		P	**Pn**	**19 01 58.1**	**-0.3**
MNAT	**Makushin Natee**	**19.33**	**76**		P	**Pn**	**19 01 58.9**	**-0.5**
UNV	**Unalaska Valle**	**19.44**	**76**		P	**P**	**19 01 59.6**	**+0.4**
UNV				IAmb	IAmb	IAmb	19 02 01.8	
	comp=Z,724nm,1.5s							
UNV	**Unalaska Valle**	**19.44**	**76**		P	**Pn**	**19 02 00.1**	**-0.6**
	baz=283,SNR=6.3							
UNV					S	**S**	**19 05 35.0**	**-1.2**
	baz=283							
UNV	**Unalaska Valle**	**19.44**	**76**		P	**Pn**	**19 02 00.9**	**+0.2**
ZEA	**Zeya**	**19.63**	**284**	*eP*		**Pn**	**19 02 02.6**	**-0.3**
ZEA				*eS*		S	19 05 26.9	-13
ZEA				pmax	pmax			
	comp=E,600nm,1.4s							
ZEA				pmax	pmax			
	comp=N,200nm,1.6s							
ZEA				pmax	pmax			
	comp=Z,1µm,1.3s							
ZEA				pmax	pmax			
	comp=E,320nm,0.9s							
ZEA				pmax	pmax			
	comp=N,120nm,1.0s							
ZEA				pmax	pmax			
	comp=Z,690nm,0.9s							
ZEA				smax	smax			
	comp=N,2µm,12.2s							
ZEA				smax	smax			
	comp=E,1µm,8.4s							
ZEA				MLR	MLR			
	comp=E,6µm,16.0s							
ZEA				MLR	MLR			
	comp=Z,7µm,17.0s							
TNA	**Tin City**	**19.75**	**40**		P	**Pn**	**19 02 03.5**	**-0.8**
	baz=247							
TNA					S	**Sn**	**19 05 43.7**	**-1.3**
	baz=247							
AKUT	**Akutan**	**19.80**	**75**		P	**P**	**19 02 02.0**	**-1.1**
AKUT					IAmb	IAmb	19 02 15.7	
	comp=Z,702nm,1.3s							
K13K	**Kusilvak Mount**	**20.18**	**52**		P	**P**	**19 02 07.9**	**+0.8**
	baz=261,SNR=31							
K13K					S	**S**	**19 05 50.5**	**-0.2**
	baz=261							
F14K	**Arctic Creek**	**20.34**	**41**		P	**P**	**19 02 09.9**	**+1.0**
	baz=250,SNR=32							
F14K					S	**S**	**19 05 54.3**	**+0.5**
	baz=250							
ANM	**Nome**	**20.44**	**44**		P	**P**	**19 02 10.7**	**+0.7**
	baz=253,SNR=33							
ANM					S	**S**	**19 05 55.7**	**-0.2**
	baz=253							
HEH	**HeiHe**	**20.58**	**274**	*eP*		**P**	**19 02 11.9**	**+0.3**
HEH				sP		**pP**	**19 02 25.1**	**+2.3**
HEH				S		**S**	**19 05 59.3**	**+0.4**
HEH				PcS		**PcS**	**19 09 58.4**	**+0.2**
HEH				ScS		**ScS**	**19 13 36.1**	**+0.3**
HEH				pmax	pmax			
	comp=Z,1µm,1.0s							
HEH				pmax	pmax			
	comp=Z,3µm,4.6s							
HEH				LR	LR			
	comp=Z,8µm,14.1s							
HEH				LR	LR			
	comp=Z,13µm,16.9s							
HEH				LR	LR			
	comp=Z,19µm,18.0s							
M13K	**Dall Lake**	**20.65**	**56**		IAMs_20	IAMs_20	19 09 16.8	
	comp=Z,13µm,22.0s							
M13K	**Dall Lake**	**20.65**	**56**		P	**P**	**19 02 13.1**	**+0.9**
	baz=267,SNR=18							
M13K					S	**S**	**19 06 01.2**	**+1.3**
	baz=267							
J14K	**Nanvaranak Lak**	**20.82**	**49**		P	**P**	**19 02 14.3**	**+0.3**
	baz=260,SNR=62							
J14K					S	**S**	**19 06 03.9**	**+0.7**
	baz=260							
USRK	**Ussuriysk Ar.**	**20.83**	**255**		P	**P**	**19 02 13.6**	**-0.7**
	comp=Z,496nm,1.1s,baz=59,slow=7.4,SNR=92							
USRK					S	Sn	19 06 08.2	-3.2
	comp=Z,15nm,0.8s,baz=55,slow=20,SNR=2.3							
USRK					ScP	**ScP**	**19 09 57.4**	**+3.8**
	comp=Z,6.3nm,0.7s,baz=48,slow=6.4,SNR=4.6							
	comp=Z,496nm,1.1s							
FALS	**False Pass**	**21.00**	**72**		P	**P**	**19 02 17.2**	**+1.1**
	baz=281							
FALS					S	**S**	**19 06 05.1**	**-2.0**
	baz=281							
L14K	**Kuka Creek**	**21.04**	**54**		P	**P**	**19 02 17.2**	**+0.8**
	baz=265,SNR=32							
L14K					S	**S**	**19 06 09.5**	**+1.7**
	baz=265							
F15K	**North Star Dit**	**21.07**	**41**		P	**P**	**19 02 17.8**	**+1.0**
	baz=251,SNR=74							
F15K					S	**S**	**19 06 09.4**	**+0.9**
	baz=251							
G15K	**Niukluk**	**21.11**	**43**		P	**P**	**19 02 18.0**	**+0.8**
	baz=254,SNR=40							
G15K					S	**S**	**19 06 11.4**	**+2.3**
	baz=254							
M14K	**Bethel**	**21.35**	**55**		P	**P**	**19 02 20.5**	**+0.8**
	baz=267,SNR=22							
M14K					S	**S**	**19 06 16.7**	**+2.8**
	baz=267							
N14K	**Kuskokwak Cree**	**21.46**	**58**		P	**P**	**19 02 21.4**	**+0.4**
	baz=270,SNR=10							
N14K					S	**S**	**19 06 17.6**	**+1.5**
	baz=270							
VLA	**Vladivostok**	**21.55**	**253**	*de*	P	**P**	**19 02 22.2**	**+0.1**
VLA				pmax	pmax			
	comp=Z,292nm,0.9s							
VLA				MLR	MLR			
	comp=Z,12µm,17.0s							
L15K	**Ungalak Mounta**	**21.64**	**53**		P	**P**	**19

N15K	**Kwethluk River**	**22.26**	**57**	IAMs_20	IAMs_20	19 11 17.5			
	comp=Z,10µm,20.0s								
N15K	**Kwethluk River**	**22.26**	**57**	P	**P**	**19 02 29.7**	**+0.1**		
	baz=270,SNR=36								
N15K				S	**S**	**19 06 31.8**	**+0.5**		
	baz=270								
I17K	**Unalakleet**	**22.28**	**47**	IAmb	IAmb	19 02 48.7			
	comp=Z,479nm,1.4s								
I17K	**Unalakleet**	**22.28**	**47**	P	**P**	**19 02 29.9**	**+0.3**		
	baz=260,SNR=64								
I17K				S	**S**	**19 06 32.9**	**+1.4**		
	baz=260								
D17K	**Noatak River**	**22.34**	**37**	P	**P**	**19 02 30.1**	**-0.3**		
	baz=249,SNR=96								
D17K				S	**S**	**19 06 33.7**	**+1.1**		
	baz=249								
O15K	**Ungalikthiuk R**	**22.43**	**59**	P	**P**	**19 02 30.6**	**-0.8**		
	baz=273,SNR=13								
O15K				S	**S**	**19 06 34.1**	**-0.1**		
	baz=273								
PSTR	**Posyet**	**22.47**	**253**	‖ *e*P	**P**	**19 02 30.4**	**-1.5**		
RDOG	**Red Dog Mine**	**22.53**	**36**	P	**P**	**19 02 33.0**	**+0.5**		
RDOG				IAmb	IAmb	19 02 35.6			
	comp=Z,460nm,1.2s								
RDOG	**Red Dog Mine**	**22.53**	**36**	P	**P**	**19 02 32.4**	**-0.1**		
	baz=248,SNR=79								
RDOG				S	**S**	**19 06 36.8**	**+0.8**		
	baz=248								
SDPT	**Sand Point**	**22.56**	**70**	P	**P**	**19 02 32.1**	**-0.7**		
SDPT	**Sand Point**	**22.56**	**70**	P	**P**	**19 02 32.1**	**-0.7**		
	baz=282								
L16K	**Owhat River**	**22.60**	**53**	P	**P**	**19 02 32.9**	**-0.3**		
	baz=267,SNR=25								
L16K				S	**S**	**19 06 37.4**	**+0.2**		
	baz=267								
C17K	**DeLong Mountai**	**22.60**	**35**	P	**P**	**19 02 33.0**	**-0.2**		
	baz=247,SNR=111								
C17K				S	**S**	**19 06 38.7**	**+1.5**		
	baz=247								
G17K	**Kiwalik Mounta**	**22.61**	**43**	P	**P**	**19 02 33.4**	**0.0**		
	baz=257,SNR=75								
G17K				S	**S**	**19 06 38.2**	**+0.8**		
	baz=257								
F17K	**Baldwin Pennin**	**22.62**	**40**	P	**P**	**19 02 33.4**	**+0.1**		
	baz=254,SNR=118								
F17K				S	**S**	**19 06 39.1**	**+1.7**		
	baz=254								
BNX	**BinXian**	**22.65**	**263**	⇑P	**P**	**19 02 33.6**	**-0.3**		
BNX				sP	**sP**	**19 02 48.4**	**-2.8**		
BNX				PcP	**PcP**	**19 06 26.3**	**+1.5**		
BNX				S	**S**	**19 06 38.9**	**+0.6**		
BNX				pmax	pmax				
	comp=Z,820nm,1.2s								
BNX				pmax	pmax				
	comp=Z,4µm,3.8s								
BNX				LR	LR				
	comp=Z,9µm,16.0s								
BNX				LR	LR				
	comp=Z,11µm,14.8s								
BNX				LR	LR				
	comp=Z,14µm,16.8s								
TIXI	**Tiksi**	**22.79**	**335**	LR	LR	19 12 35.0			
	comp=Z,18µm,18.1s,baz=143,slow=40								
TIXI	**Tiksi**	**22.79**	**335**	P	**P**	**19 02 34.1**	**-1.0**		
TIXI				IAmb	IAmb	19 02 55.8			
	comp=Z,931nm,1.1s								
TIXI	**Tiksi**	**22.79**	**335**	IAMs_20	IAMs_20	19 12 21.1			
	comp=Z,12µm,18.0s								
TIXI	**Tiksi**	**22.79**	**335**	*ce*P	**P**	**19 02 33.6**	**-1.4**		
TIXI				pmax	pmax				
	comp=Z,861nm,1.3s								
TIXI				MLR	MLR				
	comp=Z,17µm,18.0s								
H17K	**Granite Mounta**	**22.80**	**44**	P	**P**	**19 02 35.2**	**-0.1**		
	baz=259,SNR=51								
H17K				S	**S**	**19 06 41.0**	**+0.4**		
	baz=259								
M16K	**Timber Creek**	**22.82**	**55**	IAMs_20	IAMs_20	19 10 37.4			
	comp=Z,12µm,22.0s								
M16K	**Timber Creek**	**22.82**	**55**	P	**P**	**19 02 35.6**	**+0.1**		
	baz=269,SNR=17								
M16K				S	**S**	**19 06 41.2**	**+0.1**		
	baz=269								
N16K	**Nishlik Lake**	**22.92**	**56**	P	**P**	**19 02 36.9**	**+0.4**		
	baz=271,SNR=29								
N16K				S	**S**	**19 06 42.4**	**-0.3**		
	baz=271								
J17K	**VABM Dome**	**22.92**	**49**	P	**P**	**19 02 36.7**	**+0.1**		
	baz=263								
J17K				S	**S**	**19 06 44.5**	**+1.8**		
	baz=263								
MJB9	**Matsu-Tunnel**	**23.02**	**231**	P	**P**	**19 02 40.5**	**+2.7**		
MJAR	**Matsushiro Arr**	**23.02**	**231**	P	**P**	**19 02 38.7**	**+0.9**		
	comp=Z,2µm,1.0s,baz=24,slow=9.9,SNR=1049								
MJAR				PcP	**PcP**	**19 06 26.3**	**+0.6**		
	comp=Z,32nm,0.9s,baz=94,slow=0.5,SNR=4.6								
MJAR				ScP	**ScP**	**19 10 01.9**	**+2.6**		
	comp=Z,8.9nm,1.2s,baz=46,slow=0.8,SNR=4.3								
MJAR				LR	LR	19 13 04.4			
	comp=Z,6µm,21.6s,baz=40,slow=40								
MJAR				PKiKP	**PKiKP**	**19 14 09.8**	**-0.1**		
	comp=Z,3.3nm,0.8s,baz=239,slow=1.3,SNR=7.6								
MJAR				P3KPbc		19 36 05.8			
	comp=Z,3.6nm,1.0s,baz=219,slow=1.0,SNR=5.9								
	comp=Z,2µm,1.0s								
MJAR	**Matsushiro Arr**	**23.02**	**231**		**ScP**	**19 10 00.5**	**+1.2**		
MJAR	**Matsushiro Arr**	**23.02**	**231**	P	**P**	**19 02 39.6**	**+1.8**		
MJAR	**Matsushiro Arr**	**23.02**	**231**	P	**P**	**19 02 39.6**	**+1.8**		
MJAR						19 06 26.3			
MJAR				pmax	pmax				
	comp=Z,2µm,1.0s								
MAJO	**Matsushiro**	**23.02**	**231**	P	**P**	**19 02 39.8**	**+2.0**		
MAJO	**Matsushiro**	**23.02**	**231**	P	**P**	**19 02 39.3**	**+1.5**		
MAJO	**Matsushiro**	**23.02**	**231**	*c i*P	**P**	**19 02 38.7**	**+0.9**		
MAJO				pmax	pmax				
	comp=Z,1µm,0.9s								
E18K	**Tukpahlearik C**	**23.15**	**38**	P	**P**	**19 02 38.8**	**0.0**		
	baz=252,SNR=108								
E18K				S	**S**	**19 06 45.8**	**-0.5**		
	baz=252								
CHNA	**Chernabura Isl**	**23.17**	**71**	P	**P**	**19 02 39.4**	**+0.3**		
	baz=283								
CNBA	**Chernabura Isl**	**23.17**	**71**	P	**P**	**19 02 38.3**	**-0.8**		
CNBA				IAMs_20	IAMs_20	19 12 07.2			
	comp=Z,11µm,21.0s								
L17K	**Donlin**	**23.18**	**52**	P	**P**	**19 02 39.7**	**+0.6**		
	baz=267,SNR=24								
L17K				S	**S**	**19 06 47.7**	**+0.8**		
	baz=267								
K17K	**Iditarod**	**23.21**	**50**	P	**P**	**19 02 39.5**	**0.0**		
	baz=266								
K17K				S	**S**	**19 06 48.9**	**+1.5**		
	baz=266								
F18K	**Selawik**	**23.28**	**40**	P	**P**	**19 02 40.2**	**+0.2**		
	baz=255,SNR=99								
F18K				S	**S**	**19 06 50.3**	**+1.9**		
	baz=255								
O16K	**Kokwok River B**	**23.29**	**58**	P	**P**	**19 02 40.0**	**-0.2**		
	baz=273,SNR=11								
O16K				S	**S**	**19 06 48.8**	**+0.2**		
	baz=273								
C18K	**Utukok River**	**23.34**	**35**	P	**P**	**19 02 40.7**	**-0.1**		
	baz=249								
C18K				S	**S**	**19 06 49.6**	**0.0**		
	baz=249								
P16K	**Nushagak River**	**23.38**	**60**	P	**P**	**19 02 40.7**	**-0.3**		
	baz=275,SNR=13								
P16K				S	**S**	**19 06 53.2**	**+3.0**		
	baz=275								
H18K	**Honhosa River**	**23.48**	**44**	IAmb	IAmb	19 02 59.4			
	comp=Z,329nm,1.2s								
H18K	**Honhosa River**	**23.48**	**44**	P	**P**	**19 02 42.1**	**+0.1**		
	baz=260,SNR=104								
H18K				S	**S**	**19 06 53.8**	**+1.9**		
	baz=260								
G18K	**Tagagawik**	**23.51**	**42**	P	**P**	**19 02 42.2**	**0.0**		
	baz=258,SNR=106								
G18K				S	**S**	**19 06 53.8**	**+1.5**		
	baz=258								
M17K	**Holitna River**	**23.57**	**54**	IAmb	IAmb	19 02 48.7			
	comp=Z,437nm,1.2s								
M17K	**Holitna River**	**23.57**	**54**	P	**P**	**19 02 43.5**	**+0.6**		
	baz=270,SNR=45								
M17K				S	**S**	**19 06 55.1**	**+1.9**		
	baz=270								
N17K	**Nushagak Hills**	**23.70**	**56**	P	**P**	**19 02 44.1**	**0.0**		
	baz=272,SNR=14								
N17K				S	**S**	**19 06 58.0**	**+2.7**		
	baz=272								
R16K	**Pilot Point**	**23.76**	**63**	P	**P**	**19 02 44.2**	**-0.4**		
	baz=278								
O17K	**Koliganek Bris**	**23.78**	**58**	P	**P**	**19 02 44.9**	**0.0**		
	baz=274,SNR=18								
O17K				S	**S**	**19 06 59.6**	**+3.0**		
	baz=274								
J18K	**Innoko River**	**23.99**	**49**	IAMs_20	IAMs_20	19 12 35.5			
	comp=Z,8µm,19.0s								
J18K	**Innoko River**	**23.99**	**49**	P	**P**	**19 02 46.9**	**+0.1**		
	baz=266,SNR=85								
J18K				S	**S**	**19 06 59.3**	**-0.7**		
	baz=266								
GCSA	**Galena City Sc**	**24.05**	**45**	P	**P**	**19 02 46.8**	**-0.5**		
	baz=262,SNR=23								
GCSA				S	**S**	**19 06 58.7**	**-2.1**		
	baz=262								
C19K	**Lookout Ridge**	**24.05**	**34**	IAmb	IAmb	19 03 03.2			
	comp=Z,883nm,1.2s								
C19K				IAMs_20	IAMs_20	19 12 30.1			
	comp=Z,11µm,21.0s								
C19K	**Lookout Ridge**	**24.05**	**34**	P	**P**	**19 02 47.6**	**+0.3**		
	baz=250								
C19K				S	**S**	**19 07 00.2**	**-0.7**		
	baz=250								
F19K	**Shaleruckik Mo**	**24.06**	**40**	IAmb	IAmb	19 02 49.0			
	comp=Z,778nm,1.7s								
F19K	**Shaleruckik Mo**	**24.06**	**40**	P	**P**	**19 02 47.2**	**-0.1**		
	baz=257,SNR=151								
F19K				S	**S**	**19 07 00.8**	**-0.2**		
	baz=257								
Q16K	**King Salmon**	**24.10**	**60**	P	**P**	**19 02 47.8**	**0.0**		
	baz=276								
Q16K				S	**S**	**19 07 04.0**	**+2.2**		
	baz=276								
P17K	**Kvichak River**	**24.16**	**59**	IAmb	IAmb	19 03 09.4			
	comp=Z,288nm,1.2s								
P17K	**Kvichak River**	**24.16**	**59**	P	**P**	**19 02 48.4**	**+0.1**		
	baz=276,SNR=13								
P17K				S	**S**	**19 07 03.1**	**+0.3**		
	baz=276								
G19K	**Purcell Mounta**	**24.18**	**42**	IAmb	IAmb	19 02 50.0			
	comp=Z,613nm,1.8s								
G19K	**Purcell Mounta**	**24.18**	**42**	P	**P**	**19 02 48.2**	**-0.2**		
	baz=259,SNR=111								
G19K				S	**S**	**19 07 02.5**	**-0.6**		
	baz=259								
JGF	**Kuroka**	**24.18**	**231**	IAmb	IAmb	19 02 54.6			
	comp=Z,707nm,1.1s								
JGF	**Kuroka**	**24.18**	**231**	P	**P**	**19 02 50.9**	**+2.1**		
N18K	**Kilae Creek**	**24.33**	**55**	IAMs_20	IAMs_20	19 11 34.3			
	comp=Z,10µm,22.0s								
N18K	**Kilae Creek**	**24.33**	**55**	P	**P**	**19 02 50.1**	**+0.2**		
	baz=273,SNR=18								
N18K				S	**S**	**19 07 06.3**	**+0.8**		
	baz=273								
M18K	**Stony River**	**24.34**	**53**	P	**P**	**19 02 50.4**	**+0.5**		
	baz=271,SNR=13								
M18K				S	**S**	**19 07 05.9**	**+0.2**		
	baz=271								
D19K	**Kuna River**	**24.36**	**36**	P	**P**	**19 02 50.3**	**+0.1**		
	baz=253								
D19K				S	**S**	**19 07 06.5**	**+0.5**		
	baz=253								
R17L	**Mt. Peulik Vol**	**24.40**	**63**	P	**P**	**19 02 51.8**	**+1.3**		
	baz=279,SNR=15								
R17L				S	**S**	**19 07 06.1**	**-0.6**		
	baz=279								
PLK4	**Peulik 4**	**24.40**	**63**	IAmb	IAmb	19 03 12.8			
	comp=Z,252nm,0.9s								
E19K	**Redstone River**	**24.41**	**39**	IAmb	IAmb	19 03 10.6			
	comp=Z,260nm,0.9s								
E19K	**Redstone River**	**24.41**	**39**	P	**P**	**19 02 50.6**	**+0.1**		
	baz=256,SNR=140								
E19K				S	**S**	**19 07 07.4**	**+0.7**		
	baz=256								
J19K	**Poorman**	**24.51**	**47**	P	**P**	**19 02 51.5**	**0.0**		
	baz=265,SNR=35								
J19K				S	**S**	**19 07 08.3**	**-0.1**		
	baz=265								
INU	**Inuyama**	**24.55**	**232**	P	**P**	**19 02 54.0**	**+1.9**		
Q17K	**Contact Creek**	**24.56**	**61**	P	**P**	**19 02 53.0**	**+1.0**		
	baz=278,SNR=16								
Q17K				S	**S**	**19 07 08.1**	**-1.3**		
	baz=278								
O18K	**Koktuh Hills**	**24.73**	**57**	IAMs_20	IAMs_20	19 12 25.1			
	comp=Z,8µm,20.0s								
O18K	**Koktuh Hills**	**24.73**	**57**	P	**P**	**19 02 54.0**	**+0.5**		
	baz=275								
O18K				S	**S**	**19 07 11.9**	**0.0**		
	baz=275								
P18K	**Big Mountain,**	**24.76**	**59**	P	**P**	**19 02 53.8**	**0.0**		
	baz=276,SNR=9.6								
P18K				S	**S**	**19 07 12.2**	**-0.3**		
	baz=276								
L19K	**White Mountain**	**24.79**	**52**	P	**P**	**19 02 54.1**	**0.0**		
	baz=270,SNR=18								
L19K				S	**S**	**19 07 12.2**	**-0.8**		
	baz=270								
CN2	**Changchun**	**24.89**	**261**	P	**P**	**19 02 53.8**	**-1.3**		
CN2				pP	pP	19 03 05.3	-2.1		
CN2				PP	**PnPn**	**19 03 31.6**	**+2.2**		
CN2				S	**S**	**19 07 10.5**	**-4.2**		
CN2				sS	sS	19 07 29.8	-5.3		
CN2				SS	**SnSn**	**19 08 09.8**	**+4.2**		
CN2				pmax	pmax				
	comp=Z,310nm,1.0s								
CN2				pmax	pmax				
	comp=Z,870nm,6.5s								
CN2				LR	LR				
	comp=Z,7µm,17.0s								
CN2				LR	LR				
	comp=Z,13µm,17.0s								
CN2				LR	LR				
	comp=Z,15µm,16.0s								
F20K	**Avaraart Lake**	**24.89**	**40**	P	**P**	**19 02 55.0**	**+0.1**		
	baz=259								
F20K				S	**S**	**19 07 14.9**	**+0.5**		
	baz=259								
H20K	**Anotleneega Mo**	**24.98**	**44**	P	**P**	**19 02 55.5**	**-0.2**		
	baz=263,SNR=78								
H20K				S	**S**	**19 07 16.2**	**+0.3**		
	baz=263								
E20K	**Nigu River**	**24.99**	**37**	P	**P**	**19 02 55.8**	**0.0**		
	baz=256,SNR=124								
E20K				S	**S**	**19 07 16.1**	**0.0**		
	baz=256								
N19K	**Bonanza Creek**	**25.02**	**55**	P	**P**	**19 02 56.4**	**+0.2**		
	baz=273,SNR=18								
N19K				S	**S**	**19 07 17.1**	**+0.4**		
	baz=273								
M19K	**Big River Lodg**	**25.02**	**52**	P	**P**	**19 02 56.5**	**+0.4**		
	baz=271								
M19K				S	**S**	**19 07 16.5**	**0.0**		
	baz=271								
O19K	**Port Alsworth**	**25.14**	**56**	IAMs_20	IAMs_20	19 12 49.1			
	comp=Z,8µm,20.0s								
O19K	**Port Alsworth**	**25.14**	**56**	P	**P**	**19 02 57.4**	**+0.2**		
	baz=275,SNR=14								
O19K				S	**S**	**19 07 18.5**	**+0.1**		
	baz=275								
CHIR	**Chirikof Islan**	**25.15**	**67**	P	**P**	**19 02 57.5**	**+0.2**		
CHIR				IAmb	IAmb	19 03 18.5			
	comp=Z,941nm,1.7s								
CHIR				IAMs_20	IAMs_20	19 12 07.4			
	comp=Z,11µm,22.0s								
CHIR	**Chirikof Islan**	**25.15**	**67**	P	**P**	**19 02 56.6**	**-0.7**		
	baz=283								
K20K	**Telida**	**25.17**	**49**	P	**P**	**19 02 57.9**	**+0.4**		
	baz=268								
K20K				S	**S**	**19 07 20.2**	**+1.2**		
	baz=268								
JHJ2	**Mitsune**	**25.20**	**224**	P	**P**	**19 02 59.8**	**+1.9**		
HILR	**Hailar Array B**	**25.41**	**278**	P	**P**	**19 02 59.3**	**-0.5**		
	comp=Z,135nm,0.5s,baz=74,slow=11,SNR=262								
HILR				PcP	**PcP**	**19 06 32.1**	**+1.3**		
	comp=Z,35nm,0.8s,baz=85,slow=3.4,SNR=4.1								
HILR				LR	LR	19 14 22.4			
	comp=Z,11µm,18.1s,baz=75,slow=40								
	comp=Z,135nm,0.5s								
HIA	**Hailar**	**25.53**	**277**	IAMs_20	IAMs_20	19 14 15.5			
	comp=Z,13µm,18.0s								
M20K	**Styx River**	**25.61**	**52**	IAMs_20	IAMs_20	19 12 48.2			
	comp=Z,9µm,21.0s								
M20K	**Styx River**	**25.61**	**52**	P	**P**	**19 03 02.3**	**+0.7**		
	baz=272								
M20K				S	**S**	**19 07 25.0**	**-1.1**		
	baz=272								
Q19K	**Cape Douglas,**	**25.63**	**59**	IAmb	IAmb	19 03 31.5			
	comp=Z,433nm,1.3s								
Q19K	**Cape Douglas,**	**25.63**	**59**	P	**P**	**19 03 02.0**	**+0.4**		
	baz=278								
G21K	**Allakaket**	**25.67**	**42**	IAmb	IAmb	19 03 23.7			
	comp=Z,260nm,1.0s								
G21K	**Allakaket**	**25.67**	**42**	P	**P**	**19 03 01.9**	**-0.1**		
	baz=262,SNR=92								
G21K				S	**S**	**19 07 27.0**	**+0.2**		
	baz=262								
C21K	**Knifeblade Rid**	**25.71**	**35**	P	**P**	**19 03 02.7**	**+0.4**		
	baz=255,SNR=219								
C21K				S	**S**	**19 07 26.8**	**-0.5**		
	baz=255								
P19K	**Oil Pt**	**25.74**	**58**	IAMs_20	IAMs_20	19 13 35.0			
	comp=Z,9µm,20.0s								
P19K	**Oil Pt**	**25.74**	**58**	P	**P**	**19 03 03.1**	**+0.4**		
	baz=277								
SII	**Sitkinak Islan**	**25.77**	**65**	IAmb	IAmb	19 03 20.2			
	comp=Z,1µm,1.9s								
SII				IAMs_20	IAMs_20	19 14 43.7			
	comp=Z,9µm,22.0s								
SII	**Sitkinak Islan**	**25.77**	**65**	P	**P**	**19 03 04.0**	**+1.1**		
SII	**Sitkinak Islan**	**25.77**	**65**	P	**P**	**19 03 03.1**	**+0.1**		
	baz=283								
A21K	**Barrow**	**25.78**	**30**	P	**P**	**19 03 02.7**	**-0.2**		
	baz=249,SNR=38								
A21K				S	**S**	**19 07 27.8**	**-0.5**		
	baz=249								
F21K	**Alatna River**	**25.79**	**40**	P	**P**	**19 03 02.9**	**-0.1**		
	baz=261,SNR=142								
F21K				S	**S**	**19 07 29.5**	**+0.9**		
	baz=261								
E21K	**Killik River**	**25.83**	**37**	P	**P**	**19 03 03.4**	**0.0**		
	baz=258								
E21K				S	**S**	**19 07 27.6**	**-1.7**		
	baz=258								
H21K	**Melozitna Rive**	**25.86**	**44**	P	**P**	**19 03 03.6**	**-0.1**		
	baz=265,SNR=64								
H21K				S	**S**	**19 07 30.4**	**+0.6**		
	baz=265								
B21K	**Ikpikpuk River**	**25.89**	**34**	P	**P**	**19 03 04.3**	**+0.4**		
	baz=255								
B21K				S	**S**	**19 07 29.0**	**-1.0**		
	baz=255								
CHUM	**Lake Minchumin**	**25.97**	**48**	P	**P**	**19 03 05.1**	**+0.5**		
	baz=269								
CHUM				S	**S**	**19 07 31.3**	**-0.1**		
	baz=269								
PPLA	**Purkeypile**	**26.02**	**50**	IAmb	IAmb	19 03 24.5			
	comp=Z,332nm,1.3s								
PPLA	**Purkeypile**	**26.02**	**50**	P	**P**	**19 03 06.3**	**+0.9**		
	baz=271,SNR=20								
PPLA				S	**S**	**19 07 33.2**	**+0.6**		
	baz=271								
SPCR	**Spurr Chakacha**	**26.09**	**54**	P	**P**	**19 03 06.4**	**+0.4**		
	baz=274,SNR=9.3								
SPCR				S	**S**	**19 07 34.2**	**+0.5**		
	baz=274								
OHAK	**Old Harbor**	**26.11**	**63**	P	**P**	**19 03 06.0**	**0.0**		
	baz=282,SNR=11								
HHU	**Hamhung**	**26.11**	**252**	P	**P**	**19 03 06.2**	**+0.1**		
HHU				S	**S**	**19 07 36.8**	**+2.7**		
HHU				AmB					
	comp=Z,512nm,1.0s								
HHU				AMS	AMS				
	comp=Z,2µm,13.1s								
I21K	**Tanana**	**26.16**	**45**	P	**P**	**19 03 06.8**	**+0.4**		
	baz=266,SNR=34								
I21K				S	**S**	**19 07 35.1**	**+0.6**		
	baz=266								
Q20K	**Shuyak Island**	**26.32**	**60**	P	**P**	**19 03 07.3**	**-0.6**		
	baz=280								
SKT	**Skwentna**	**26.36**	**52**	IAMs_20	IAMs_20	19 13 12.0			
	comp=Z,8µm,21.0s								
SKT	**Skwentna**	**26.36**	**52**	P	**P**	**19 03 08.2**	**-0.1**		
	baz=273,SNR=9.7								
SKT				S	**S**	**19 07 37.7**	**-0.1**		
	baz=273								
KDAK	**Kodiak Island**	**26.37**	**62**	P	**P**	**19 03 06.6**	**-1.8**		
KDAK	**Kodiak Island**	**26.37**	**62**	‖ *e*P	**P**	**19 03 10.0**	**+1.7**		
KDAK				pmax	pmax				
	comp=Z,153nm,1.3s								
KDAK	**Kodiak Island**	**26.37**	**62**	P	**P**	**19 03 08.5**	**+0.2**		
	baz=281								
KDAK				S	**S**	**19 07 36.4**	**-1.5**		
	baz=281								
D22K	**Ayikyak River**	**26.38**	**36**	P	**P**	**19 03 08.5**	**+0.1**		
	baz=258,SNR=78								
D22K				S	**S**	**19 07 37.4**	**-0.6**		
	baz=258								
H22K	**Ishtalitna Cre**	**26.46**	**43**	P	**P**	**19 03 09.5**	**+0.3**		
	baz=266,SNR=52								
H22K				S	**S**	**19 07 41.5**	**+2.2**		
	baz=266								
HOM	**Homer**	**26.54**	**57**	P	**P**	**19 03 10.3**	**+0.5**		
	baz=278								
BPAW	**Bear Paw Mtn.**	**26.55**	**47**	P	**P**	**19 03 10.2**	**+0.2**		
	baz=270,SNR=34								
BPAW				S	**S**	**19 07 42.6**	**+1.8**		
	baz=270								
E22K	**Anaktuvuk Pass**	**26.56**	**38**	P	**P**	**19 03 10.0**	**-0.1**		
	baz=261,SNR=156								
E22K				S	**S**	**19 07 41.0**	**+0.1**		
	baz=261								
KTH	**Kantishna Hill**	**26.59**	**49**	IAMs_20	IAMs_20	19 14 16.3			
	comp=Z,8µm,19.0s								
CAPN	**Captain Cook N**	**26.65**	**55**	P	**P**	**19 03 11.2**	**+0.4**		
	baz=276								
SUA	**Susitna One**	**26.77**	**53**	P	**P**	**19 03 11.8**	**-0.3**		
	baz=275,SNR=7.9								
SUA				S	**S**	**19 07 44.8**	**+0.3**		
	baz=275								
TRF	**Thorofare Moun**	**26.87**	**49**	P	**P**	**19 03 12.9**	**-0.1**		
	baz=272,SNR=33								
TRF				S	**S**	**19 07 47.4**	**+1.3**		
	baz=272								
BRLK	**Bradley Lake**	**26.91**	**57**	IAmb	IAmb	19 03 17.2			
	comp=Z,360nm,1.8s								
BRLK				IAMs_20	IAMs_20	19 14 23.5			
	comp=Z,8µm,20.0s								
CUT	**Chulitna**	**26.93**	**51**	IAmb	IAmb	19 03 38.3			
	comp=Z,190nm,1.0s								
CUT	**Chulitna**	**26.93**	**51**	P	**P**	**19 03 12.6**	**-0.7**		
	baz=274,SNR=6.7								
CUT				S	**S**	**19 07 46.2**	**-0.4**		
	baz=274								
BRSE	**Bradley Lake S**	**26.98**	**57**	P	**P**	**19 03 13.5**	**-0.3**		
	baz=278								
M22K	**Willow**	**27.05**	**53**	P	**P**	**19 03 13.9**	**-0.5**		
	baz=275								
COLD	**Coldfoot**	**27.05**	**40**	P	**P**	**19 03 14.3**	**-0.1**		
	baz=264,SNR=60								
COLD				S	**S**	**19 07 47.9**	**-0.6**		
	baz=264								
G23K	**Bananza Creek**	**27.07**	**42**	P	**P**	**19 03 14.4**	**-0.2**		
	baz=265,SNR=48								
G23K		

RC01					S	**S**	**19 07 51.8**	**-0.8**
	baz=277								
JMN	**Monobe**	**27.37**	**234**		P	**P**	**19 03 20.2**	**+2.6**
E23K	**Chandalar**	**27.37**	**39**		IAmb	IAmb	19 03 19.6	
	comp=Z,154nm,0.8s								
E23K	**Chandalar**	**27.37**	**39**		P	**P**	**19 03 17.6**	**+0.2**
	baz=263,SNR=199								
E23K					S	**S**	**19 07 53.9**	**+0.2**
	baz=263								
O22K	**Cooper Landing**	**27.38**	**55**		IAMs_20	IAMs_20	19 14 41.9	
	comp=Z,9µm,20.0s								
O22K	**Cooper Landing**	**27.38**	**55**		P	**P**	**19 03 17.2**	**-0.2**
	baz=278								
NEA2	**Nenana**	**27.39**	**46**		P	**P**	**19 03 17.4**	**0.0**
	baz=270,SNR=46								
NEA2					S	**S**	**19 07 54.0**	**+0.1**
	baz=270								
MCK	**McKinley**	**27.47**	**48**		P	**P**	**19 03 17.8**	**-0.4**
	baz=272,SNR=39								
MCK					S	**S**	**19 07 53.8**	**-1.4**
	baz=272								
RND	**Reindeer**	**27.52**	**49**		IAmb	IAmb	19 03 20.0	
	comp=Z,163nm,1.0s								
RND					IAMs_20	IAMs_20	19 14 27.9	
	comp=Z,7µm,20.0s								
PMR	**Palmer**	**27.53**	**53**		P	**P**	**19 03 18.7**	**0.0**
	baz=276,SNR=8.7								
PMR					S	**S**	**19 07 56.4**	**+0.3**
	baz=276								
SEW	**Seward**	**27.57**	**56**		IAMs_20	IAMs_20	19 14 55.3	
	comp=Z,10µm,19.0s								
SEW	**Seward**	**27.57**	**56**		P	**P**	**19 03 18.4**	**-0.6**
	baz=279								
KSRS	**Korea Array**	**27.62**	**248**		P	**P**	**19 03 20.9**	**+1.1**
	comp=Z,99nm,1.0s,baz=42,slow=9.3,SNR=126								
KSRS					PcP	**PcP**	**19 06 37.0**	**+1.0**
	comp=Z,39nm,0.9s,baz=350,slow=2.4,SNR=13								
KSRS					ScP	**ScP**	**19 10 13.7**	**+1.3**
	comp=Z,6.4nm,1.0s,baz=40,slow=2.4,SNR=6.0								
KSRS					LR	LR	19 14 02.7		
	comp=Z,8µm,19.2s,baz=45,slow=36								
KSRS					P3KPbc		19 35 42.5		
	comp=Z,0.9nm,0.6s,baz=230,slow=3.1,SNR=5.3								
	comp=Z,99nm,1.0s								
KSAR	**Wonju Array Be**	**27.65**	**248**		P	**P**	**19 03 21.0**	**+1.0**
KSAR	**Wonju Array Be**	**27.65**	**248**		P	**P**	**19 03 21.0**	**+1.0**
WAT1	**Susitna Watana**	**27.69**	**50**		P	**P**	**19 03 19.9**	**-0.3**
	baz=274								
WAT1					S	**S**	**19 07 56.7**	**-2.1**
	baz=274								
SUJ	**Sinuiju**	**27.74**	**256**		P	**P**	**19 03 21.2**	**+0.5**
SUJ					AmB				
	comp=Z,1µm,1.9s								
E24K	**Your Creek**	**27.79**	**39**		P	**P**	**19 03 21.4**	**+0.3**
	baz=264								
E24K					S	**S**	**19 08 00.2**	**-0.1**
	baz=264								
D24K	**Happy Valley**	**27.80**	**36**		P	**P**	**19 03 21.3**	**+0.2**
	baz=262								
D24K					S	**S**	**19 08 01.1**	**+0.9**
	baz=262								
WRH	**Wood River Hil**	**27.82**	**47**		IAmb	IAmb	19 03 23.3	
	comp=Z,180nm,0.9s								
KNK	**Knik Glacier**	**27.87**	**53**		IAmb	IAmb	19 03 23.8	
	comp=Z,167nm,1.0s								
KNK					IAMs_20	IAMs_20	19 14 02.4		
	comp=Z,9µm,22.0s								
KNK	**Knik Glacier**	**27.87**	**53**		P	**P**	**19 03 21.3**	**-0.6**
	baz=277,SNR=21								
KNK					S	**S**	**19 08 00.9**	**-0.8**
	baz=277								
SML	**Sawmill**	**27.89**	**52**		IAmb	IAmb	19 03 24.1	
	comp=Z,219nm,1.0s								
SML	**Sawmill**	**27.89**	**52**		P	**P**	**19 03 21.7**	**-0.3**
	baz=276,SNR=26								
SML					S	**S**	**19 08 00.1**	**-1.8**
	baz=276								
H24K	**Noodor Dome**	**27.90**	**44**		IAMs_20	IAMs_20	19 14 20.9	
	comp=Z,7µm,21.0s								
H24K	**Noodor Dome**	**27.90**	**44**		P	**P**	**19 03 22.4**	**+0.4**
	baz=269,SNR=29								
H24K					S	**S**	**19 08 03.1**	**+1.1**
	baz=269								
COLA	**College**	**27.91**	**46**		P	**P**	**19 03 21.3**	**-0.7**
COLA	**College**	**27.91**	**46**		P	**P**	**19 03 22.8**	**+0.7**
COLA	**College**	**27.91**	**46**	*ce*	P	**P**	**19 03 21.8**	**-0.3**
COLA					pmax	pmax		
	comp=Z,122nm,0.9s								
COLA	**College**	**27.91**	**46**		P	**P**	**19 03 22.0**	**0.0**
	baz=271								
COLA					S	**S**	**19 08 01.4**	**-0.6**
	baz=271								
C24K	**Franklin Bluff**	**27.93**	**35**		P	**P**	**19 03 22.1**	**-0.1**
	baz=261								
C24K					S	**S**	**19 08 01.4**	**-0.8**
	baz=261								
CIT	**Chita**	**28.05**	**286**	*e*	P	**P**	**19 03 23.4**	**-0.1**
CIT				*e*			19 03 40.2		
CIT				*e*			19 03 51.4		
CIT				*e*			19 04 10.6		
CIT				*e*			19 04 34.2		
CIT				*e*			19 06 35.8		
CIT				*e*			19 08 06.8		
CIT					pmax	pmax			
	comp=Z,393nm,1.5s								
G24K	**Hadweenzic Riv**	**28.09**	**42**		IAmb	IAmb	19 03 25.8		
	comp=Z,180nm,0.8s								
G24K	**Hadweenzic Riv**	**28.09**	**42**		P	**P**	**19 03 24.0**	**+0.3**
	baz=268,SNR=153								
G24K					S	**S**	**19 08 05.9**	**+1.1**
	baz=268								
WAT6	**Susitna Watana**	**28.09**	**51**		P	**P**	**19 03 22.7**	**-1.2**
	baz=275,SNR=14								
WAT6					S	**S**	**19 08 05.3**	**+0.1**
	baz=275								
M23K	**Glacier View**	**28.18**	**52**		P	**P**	**19 03 24.5**	**0.0**
	baz=277,SNR=5.3								
M23K					S	**S**	**19 08 06.9**	**+0.6**
	baz=277								
DHY	**Denali Highway**	**28.21**	**49**		IAmb	IAmb	19 03 42.5		
	comp=Z,214nm,1.4s								
DHY	**Denali Highway**	**28.21**	**49**		P	**P**	**19 03 24.5**	**-0.5**
	baz=275,SNR=22								
DHY					S	**S**	**19 08 06.9**	**-0.2**
	baz=275								
INCN	**Inchon**	**28.31**	**249**		P	**P**	**19 03 26.1**	**+0.2**
INCN					IAmb	IAmb	19 03 32.2		
	comp=Z,167nm,0.9s								
INCN	**Inchon**	**28.31**	**249**		P	**P**	**19 03 26.1**	**+0.2**
INCN					pmax	pmax			
	comp=Z,167nm,1.0s								
INCN					MLR	MLR			
	comp=Z,5µm,19.0s								
INCN	**Inchon**	**28.31**	**249**		P	**P**	**19 03 26.3**	**+0.3**
INCN					S	**S**	**19 08 06.3**	**-2.6**
HDA	**Harding Lake**	**28.31**	**47**		P	**P**	**19 03 25.3**	**-0.4**
	baz=272,SNR=25								
ILAR	**Eielson Array**	**28.32**	**46**		P	**P**	**19 03 24.9**	**-0.9**
	comp=Z,92nm,0.8s,baz=261,slow=7.4,SNR=451								
ILAR					PcP	**PcP**	**19 06 37.4**	**+0.1**
	comp=Z,19nm,0.9s,baz=288,slow=3.2,SNR=11								
ILAR					ScP	**ScP**	**19 10 13.5**	**-0.7**
	comp=Z,2.5nm,1.0s,baz=251,slow=2.8,SNR=4.1								
ILAR					PKiKP	**PKiKP**	**19 14 11.5**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=293,slow=2.9,SNR=5.6								
ILAR					LR	LR	19 14 32.9		
	comp=Z,4µm,21.9s,baz=258,slow=36								
ILAR					P3KPbc		19 35 45.5		
	comp=Z,2.8nm,0.9s,baz=89,slow=3.6,SNR=18								
	comp=Z,92nm,0.8s								
ILAR	**Eielson Array**	**28.32**	**46**			**ScP**	**19 10 13.6**	**-0.5**
ILAR	**Eielson Array**	**28.32**	**46**		P	**P**	**19 03 25.9**	**+0.1**
SCM	**Sheep Creek Mo**	**28.36**	**52**		IAmb	IAmb	19 03 28.3	
	comp=Z,161nm,0.9s								
SCM					IAMs_20	IAMs_20	19 14 04.2		
	comp=Z,7µm,21.0s								
SCM	**Sheep Creek Mo**	**28.36**	**52**		P	**P**	**19 03 26.0**	**-0.2**
	baz=277,SNR=16								
SCM					S	**S**	**19 08 08.8**	**-0.5**
	baz=277								
HJU	**Haeju**	**28.43**	**251**		P	**P**	**19 03 27.1**	**+0.1**
HJU					S	**S**	**19 08 13.4**	**+2.7**
HJU					AmB				
	comp=Z,465nm,1.4s								
HJU					AMS	AMS			
	comp=Z,4µm,14.2s								
P23K	**Montague Islan**	**28.60**	**56**		IAMs_20	IAMs_20	19 15 27.7		
	comp=Z,10µm,20.0s								
P23K	**Montague Islan**	**28.60**	**56**		P	**P**	**19 03 28.0**	**-0.3**
	baz=280								
D25K	**Kavik River**	**28.69**	**36**		IAmb	IAmb	19 03 30.9		
	comp=Z,237nm,0.8s								
D25K	**Kavik River**	**28.69**	**36**		P	**P**	**19 03 28.8**	**-0.2**
	baz=264,SNR=363								
D25K					S	**S**	**19 08 12.7**	**-1.6**
	baz=264								
TJN	**Taejon**	**28.71**	**247**		P	**P**	**19 03 30.1**	**+0.7**
TJN	**Taejon**	**28.71**	**247**		P	**P**	**19 03 30.1**	**+0.7**
TJN					pmax	pmax			
	comp=Z,1µm,1.5s								
F25K	**Christian Rive**	**28.83**	**40**		P	**P**	**19 03 30.9**	**+0.5**
	baz=268,SNR=58								
F25K					S	**S**	**19 08 16.8**	**+0.1**
	baz=268								
K24K	**Donnelly Dome**	**28.86**	**48**		IAMs_20	IAMs_20	19 16 05.6		
	comp=Z,7µm,20.0s								
K24K	**Donnelly Dome**	**28.86**	**48**		P	**P**	**19 03 31.2**	**+0.6**
	baz=275,SNR=20								
M24K	**Tolsona, Glenn**	**28.86**	**51**		IAmb	IAmb	19 04 04.6		
	comp=Z,251nm,1.1s								
M24K	**Tolsona, Glenn**	**28.86**	**51**		P	**P**	**19 03 31.1**	**+0.4**
	baz=277,SNR=7.0								
PRP	**Porcupine Dome**	**28.88**	**44**		IAmb	IAmb	19 03 33.8		
	comp=Z,162nm,0.9s								
PRP	**Porcupine Dome**	**28.88**	**44**		P	**P**	**19 03 31.0**	**+0.2**
	baz=272,SNR=160								
PRP					S	**S**	**19 08 17.1**	**-0.4**
	baz=272								
E25K	**Arctic Village**	**28.89**	**39**		IAmb	IAmb	19 03 33.0		
	comp=Z,222nm,1.2s								
E25K	**Arctic Village**	**28.89**	**39**		P	**P**	**19 03 31.5**	**+0.7**
	baz=267,SNR=105								
E25K					S	**S**	**19 08 18.7**	**+1.2**
	baz=267								
HIN	**Hinchinbrook I**	**28.97**	**55**		IAMs_20	IAMs_20	19 15 52.5		
	comp=Z,8µm,20.0s								
FYU	**Fort Yukon**	**28.98**	**42**		IAmb	IAmb	19 03 33.7		
	comp=Z,161nm,0.9s								
J25K	**Salcha River,**	**28.98**	**46**		IAmb	IAmb	19 03 52.4		
	comp=Z,256nm,1.7s								
J25K	**Salcha River,**	**28.98**	**46**		P	**P**	**19 03 30.3**	**-1.4**
	baz=274,SNR=25								
JTU	**Tsushima**	**29.00**	**242**		P	**P**	**19 03 34.0**	**+1.9**
KLU	**Klutina**	**29.07**	**53**		IAMs_20	IAMs_20	19 14 50.0		
	comp=Z,7µm,20.0s								
KLU	**Klutina**	**29.07**	**53**		P	**P**	**19 03 32.7**	**+0.1**
	baz=279,SNR=10								
KLU					S	**S**	**19 08 21.1**	**+0.5**
	baz=279								
PAX	**Paxson**	**29.08**	**50**		IAMs_20	IAMs_20	19 15 36.4		
	comp=Z,6µm,19.0s								
PAX	**Paxson**	**29.08**	**50**		P	**P**	**19 03 32.2**	**-0.4**
	baz=276,SNR=11								
PAX					S	**S**	**19 08 20.6**	**-0.1**
	baz=276								
DIV	**Divide**	**29.20**	**53**		IAMs_20	IAMs_20	19 15 05.4		
	comp=Z,8µm,20.0s								
Q23K	**Middleton Isla**	**29.24**	**57**		P	**P**	**19 03 34.4**	**+0.5**
	baz=282								
BMAR	**Burnt Mountain**	**29.24**	**40**		P	**P**	**19 03 34.3**	**+0.4**
C26K	**Camden Bay**	**29.26**	**35**		P	**P**	**19 03 34.8**	**+0.8**
	baz=264								
C26K					S	**S**	**19 08 23.4**	**+0.3**
	baz=264								
RIDG	**Independent Ri**	**29.28**	**48**		IAMs_20	IAMs_20	19 16 18.6		
	comp=Z,7µm,19.0s								
RIDG	**Independent Ri**	**29.28**	**48**		P	**P**	**19 03 33.2**	**-1.2**
	baz=276,SNR=31								
HARP	**HAARP**	**29.30**	**51**		P	**P**	**19 03 34.8**	**+0.3**
	baz=278,SNR=5.3								
EYAK	**Cordova Ski Ar**	**29.31**	**54**		IAMs_20	IAMs_20	19 14 46.4		
	comp=Z,11µm,22.0s								
EYAK	**Cordova Ski Ar**	**29.31**	**54**		P	**P**	**19 03 33.9**	**-0.7**
	baz=280								
JNU	**Nakatsue**	**29.34**	**238**		LR	LR	19 16 54.3		
	comp=Z,2µm,19.5s,baz=41,slow=39								
F26K	**Sheenjek River**	**29.41**	**40**		P	**P**	**19 03 36.4**	**+1.0**
	baz=269,SNR=50								
F26K					S	**S**	**19 08 26.7**	**+1.0**
	baz=269								
G26K	**Porcupine Rive**	**29.55**	**41**		IAmb	IAmb	19 03 38.9		
	comp=Z,153nm,1.1s								
G26K	**Porcupine Rive**	**29.55**	**41**		P	**P**	**19 03 37.4**	**+0.8**
	baz=271,SNR=101								
G26K					S	**S**	**19 08 29.0**	**+1.3**
	baz=271								
SCRK	**Sand Creek**	**29.64**	**47**		P	**P**	**19 03 36.6**	**-1.0**
	baz=276,SNR=63								
SCRK					S	**S**	**19 08 27.2**	**-2.3**
	baz=276								
DOT	**Dot Lake**	**29.64**	**48**		IAMs_20	IAMs_20	19 16 49.0		
	comp=Z,7µm,19.0s								
C27K	**Jago River**	**29.65**	**36**		IAmb	IAmb	19 03 40.0		
	comp=Z,226nm,0.9s								
C27K					IAMs_20	IAMs_20	19 17 17.3		
	comp=Z,6µm,20.0s								
C27K	**Jago River**	**29.65**	**36**		P	**P**	**19 03 37.8**	**+0.3**
	baz=266,SNR=241								
C27K					S	**S**	**19 08 29.4**	**+0.1**
	baz=266								
N25K	**Chitina, Valde**	**29.68**	**52**		P	**P**	**19 03 37.9**	**0.0**
	baz=280,SNR=6.1								
N25K					S	**S**	**19 08 31.0**	**+0.9**
	baz=280								
JCJ	**Chichijima**	**29.70**	**214**		LR	LR	19 17 35.2		
	comp=Z,597nm,19.3s,baz=14,slow=40								
JCJ	**Chichijima**	**29.70**	**214**		IAmb	IAmb	19 03 41.3		
	comp=Z,481nm,1.0s								
BMRM	**Bremner River**	**29.79**	**53**		IAMs_20	IAMs_20	19 15 34.7		
	comp=Z,8µm,20.0s								
BMRM	**Bremner River**	**29.79**	**53**		P	**P**	**19 03 40.0**	**+1.2**
	baz=281,SNR=8.4								
BMRM					S	**S**	**19 08 32.8**	**+1.0**
	baz=281								
RAGM	**Ragged Mountai**	**29.86**	**55**		IAMs_20	IAMs_20	19 16 31.7		
	comp=Z,12µm,20.0s								
L26K	**Log Cabin Wild**	**30.04**	**49**		IAMs_20	IAMs_20	19 16 26.3		
	comp=Z,7µm,19.0s								
L26K	**Log Cabin Wild**	**30.04**	**49**		P	**P**	**19 03 42.2**	**+1.2**
	baz=278,SNR=9.0								
L26K					S	**S**	**19 08 36.4**	**+0.8**
	baz=278								
GLB	**Gilahina Butte**	**30.08**	**52**		IAmb	IAmb	19 04 16.8		
	comp=Z,209nm,1.6s								
KAIM	**Kayak Island**	**30.09**	**55**		P	**P**	**19 03 41.2**	**-0.3**
	baz=282								
DL2	**Dalian**	**30.19**	**257**		P	**P**	**19 03 42.3**	**-0.2**
DL2					PP	**PnPn**	**19 04 45.5**	**+4.1**
DL2					PcP	**PcP**	**19 06 43.8**	**+1.3**
DL2					S	**S**	**19 08 36.5**	**-1.8**
DL2					PcS	**PcS**	**19 10 25.3**	**-0.7**
DL2					pmax	pmax			
	comp=Z,320nm,0.9s								
DL2					pmax	pmax			
	comp=Z,950nm,7.6s								
DL2					LR	LR			
	comp=Z,13µm,16.8s								
DL2					LR	LR			
	comp=Z,8µm,16.2s								
DL2					LR	LR			
	comp=Z,17µm,21.5s								
VRDI	**Verde Repeater**	**30.29**	**53**		IAmb	IAmb	19 04 04.2		
	comp=Z,225nm,1.8s								
VRDI					IAMs_20	IAMs_20	19 15 18.9		
	comp=Z,6µm,22.0s								
M26K	**Nabesna, AK**	**30.29**	**50**		IAmb	IAmb	19 04 18.6		
	comp=Z,182nm,1.3s								
M26K	**Nabesna, AK**	**30.29**	**50**		P	**P**	**19 03 44.2**	**+0.9**
	baz=279,SNR=22								
M26K					S	**S**	**19 08 40.6**	**+1.0**
	baz=279								
BERG	**Berg Lake**	**30.34**	**54**		IAMs_20	IAMs_20	19 16 56.0		
	comp=Z,11µm,20.0s								
E27K	**Coleen River**	**30.37**	**39**		P	**P**	**19 03 44.8**	**+0.8**
	baz=270								
E27K					S	**S**	**19 08 42.2**	**+1.5**
	baz=270								
G27K	**Doyon Strip**	**30.39**	**42**		P	**P**	**19 03 44.9**	**+0.8**
	baz=273,SNR=36								
G27K					S	**S**	**19 08 42.4**	**+1.3**
	baz=273								
XLT	**XiLinHaoTe**	**30.40**	**270**	*e*	P	**P**	**19 03 44.3**	**-0.2**
XLT					PP	**PnPn**	**19 04 47.3**	**+3.1**
XLT					S	**S**	**19 08 36.0**	**-5.8**
XLT					SS	**SnSn**	**19 10 19.4**	**-0.8**
XLT					pmax	pmax			
	comp=Z,140nm,1.2s								
XLT					LR	LR			
	comp=Z,6µm,16.4s								
XLT					LR	LR			
	comp=Z,10µm,18.6s								
MCARA	**McCarthy VSAT**	**30.46**	**52**		P	**P**	**19 03 45.2**	**+0.4**
	baz=281								
MCARA					S	**S**	**19 08 44.7**	**+2.5**
	baz=281								
H27K	**Steamboat Moun**	**30.48**	**43**		IAmb	IAmb	19 03 51.2		
	comp=Z,196nm,1.2s								
H27K	**Steamboat Moun**	**30.48**	**43**		P	**P**	**19 03 45.8**	**+0.8**
	baz=274,SNR=71								
H27K					S	**S**	**19 08 45.1**	**+2.6**
	baz=274								
I27K	**Kandik River**	**30.49**	**44**		P	**P**	**19 03 45.6**	**+0.5**
	baz=275,SNR=14								
I27K					S	**S**	**19 08 42.7**	**0.0**
	baz=275								
CRQM	**Cirque**	**30.53**	**54**		IAmb	IAmb	19 03 48.5		
	comp=Z,160nm,1.1s								
CRQM					IAMs_20	IAMs_20	19 15 49.0		
	comp=Z,12µm,21.0s								
CRQE	**Cirque**	**30.55**	**54**		P	**P**	**19 03 46.1**	**+0.4**
	baz=282,SNR=7.4								
CRQE					S	**S**	**19 08 44.9**	**+1.0**
	baz=282								
D27M	**Malcolm River**	**30.60**	**37**		P	**P**	**19 03 46.7**	**+0.7**
	baz=269								
D27M					S	**S**	**19 08 44.3**	**-0.1**
	baz=269								
TGL	**Tana Glacier**	**30.68**	**54**		IAMs_20	IAMs_20	19 15 53.3		
	comp=Z,12µm,21.0s								
L27K	**Beaver Creek,**	**30.72**	**49**		IAmb	IAmb	19 03 50.2		
	comp=Z,177nm,0.9s								
L27K					IAMs_20	IAMs_20	19 17 59.4		
	comp=Z,7µm,18.0s								
L27K	**Beaver Creek,**	**30.72**	**49**		P	**P**	**19 03 48.2**	**+1.2**
	baz=279,SNR=81								
L27K					S	**S**	**19 08 46.6**	**+0.4**
	baz=279								
BCAR	**Beaver Creek A**	**30.74**	**49**		P	**P**	**19 03 48.0**	**+0.8**
M27K	**Edge Creek, AK**	**30.81**	**50**		IAmb	IAmb	19 03 51.4		
	comp=Z,140nm,1.0s								
M27K	**Edge Creek, AK**	**30.81**	**50**		P	**P**	**19 03 48.8**	**+0.8**
	baz=280,SNR=38								
M27K					S	**S**	**19 08 48.3**	**+0.4**
	baz=280								
F28M	**Old Crow**	**31.04**	**40**		P	**P**	**19 03 50.7**	**+0.8**
F28M					IAmb	IAmb	19 03 52.2		
	comp=Z,129nm,0.9s								
F28M	**Old Crow**	**31.04**	**40**		P	**P**	**19 03 50.7**	**+0.8**
	baz=273,SNR=94								
F28M					S	**S**	**19 08 52.1**	**+0.8**
	baz=273								
E28M	**Babbage River**	**31.13**	**38**		IAMs_20	IAMs_20	19 17 04.1		
	comp=Z,7µm,21.0s								
E28M	**Babbage River**	**31.13**	**38**		P	**P**	**19 03 51.3**	**+0.7**
	baz=272								
E28M					S	**S**	**19 08 52.8**	**+0.3**
	baz=272								
BARN	**Barnard Glacie**	**31.17**	**53**		IAMs_20	IAMs_20	19 16 11.3		
	comp=Z,7µm,22.0s								
GRNC	**Granite Creek**	**31.20**	**53**		IAMs_20	IAMs_20	19 15 58.1		
	comp=Z,9µm,22.0s								
I28M	**Miner Creek**	**31.21**	**44**		IAMs_20	IAMs_20	19 16 13.1		
	comp=Z,6µm,21.0s								
I28M	**Miner Creek**	**31.21**	**44**		P	**P**	**19 03 51.7**	**+0.3**
	baz=277,SNR=39								
I28M					S	**S**	**19 08 53.8**	**-0.2**
	baz=277								
MESA	**MESA**	**31.23**	**54**		IAMs_20	IAMs_20	19 16 50.8		
	comp=Z,9µm,20.0s								
BVCY	**Beaver Creek**	**31.27**	**50**		P	**P**	**19 03 52.7**	**+0.8**
	baz=281,SNR=23								
BVCY					S	**S**	**19 08 56.0**	**+1.1**
	baz=281								
CTG	**Chitna Glacier**	**31.35**	**53**		P	**P**	**19 03 52.9**	**+0.2**
	baz=283,SNR=9.3								
CTGM	**Chitina Glacie**	**31.35**	**53**		IAMs_20	IAMs_20	19 16 03.7		
	comp=Z,9µm,22.0s								
D28M	**Stokes Point**	**31.39**	**36**		P	**P**	**19 03 53.6**	**+0.8**
	baz=271								
D28M					S	**S**	**19 08 58.6**	**+2.0**
	baz=271								
LOGN	**Logan Glacier**	**31.54**	**53**		IAMs_20	IAMs_20	19 16 20.8		
	comp=Z,8µm,22.0s								
YUK3	**Moose Creek**	**31.58**	**51**		P	**P**	**19 03 55.2**	**+0.3**
	baz=282,SNR=14								
YUK3					S	**S**	**19 09 00.7**	**+0.6**
	baz=282								
DAWY	**Dawson**	**31.63**	**47**		P	**P**	**19 03 54.8**	**-0.2**
	baz=279,SNR=23								
DAWY					S	**S**	**19 08 59.4**	**-1.1**
	baz=279								
E29M	**Blow River**	**31.74**	**38**		IAMs_20	IAMs_20	19 18 53.4		
	comp=Z,6µm,20.0s								
E29M	**Blow River**	**31.74**	**38**		P	**P**	**19 03 56.7**	**+0.7**
	baz=274,SNR=80								
E29M					S	**S**	**19 09 03.3**	**+1.2**
	baz=274								
G29M	**Pine Creek**	**31.82**	**41**		P	**P**	**19 03 57.7**	**+1.1**
	baz=276								
G29M					S	**S**	**19 09 04.8**	**+1.5**
	baz=276								
I29M	**Ogilvie Camp,**	**31.89**	**44**		IAMs_20	IAMs_20	19 16 22.5		
	comp=Z,6µm,22.0s								
I29M	**Ogilvie Camp,**	**31.89**	**44**		P	**P**	**19 03 57.1**	**-0.2**
	baz=278,SNR=44								
I29M					S	**S**	**19 09 04.9**	**+0.3**
	baz=278								
O28M	**Mount Upton**	**31.94**	**53**		IAMs_20	IAMs_20	19 16 45.3		
	comp=Z,7µm,21.0s								
O28M	**Mount Upton**	**31.94**	**53**		S	**S**	**19 09 06.4**	**+0.5**
	baz=284								
YUK8	**Steele Glacier**	**32.02**	**52**		P	**P**	**19 03 59.1**	**+0.4**
	baz=284								
YUK8					S	**S**	**19 09 08.2**	**+1.2**
	baz=284								
J29N	**Klondike Camp**	**32.07**	**46**		P	**P**	**19 03 59.1**	**+0.1**
	baz=280,SNR=7.6								
J29N					S	**S**	**19 09 07.6**	**+0.1**
	baz=280								
PCA	**Pinnacle**	**32.08**	**54**		IAMs_20	IAMs_20	19 16 57.1		
	comp=Z,9µm,21.0s								
PINM	**Pinnacle**	**32.08**	**54**		P	**P**	**19 03 59.3**	**+0.2**
	baz=285								
M29M	**Somme Creek**	**32.35**	**49**		IAMs_20	IAMs_20	19 18 35.4		
	comp

BJI2					LR	LR				
	comp=Z,3μm,15.7s									
BJI2					LR	LR				
	comp=Z,6μm,15.9s									
BJT	**Baijiatuao**	**32.68**	**264**		IAMs_20	IAMs_20	19 18 49.7			
	comp=Z,8μm,18.0s									
BJT	**Baijiatuao**	**32.68**	**264**		IAmb	IAmb	19 04 10.3			
	comp=Z,102nm,0.8s									
BJT	**Baijiatuao**	**32.68**	**264**		P	**P**	**19 04 04.0**	**-0.5**		
BJT					pP	**pP**	**19 04 12.7**	**-4.3**		
BJT					sP	**sP**	**19 04 17.4**	**-5.3**		
BJT					PcP	**PcP**	**19 06 50.3**	**+1.2**		
I30M	**Mount Dempster**	**32.72**	**44**		IAmb	IAmb	19 04 10.2			
	comp=Z,95nm,0.9s									
I30M					IAMs_20	IAMs_20	19 17 10.1			
	comp=Z,6μm,22.0s									
I30M	**Mount Dempster**	**32.72**	**44**		P	**P**	**19 04 05.0**	**+0.3**		
	baz=280,SNR=65									
I30M					S	**S**	**19 09 17.1**	**-0.4**		
	baz=280									
YUK6	**Outpost Mounta**	**32.76**	**52**		P	**P**	**19 04 05.5**	**+0.3**		
	baz=285									
O29M	**Mount Kennedy**	**32.83**	**53**		IAMs_20	IAMs_20	19 17 24.0			
	comp=Z,8μm,21.0s									
O29M	**Mount Kennedy**	**32.83**	**53**		P	**P**	**19 04 06.3**	**+0.6**		
	baz=286									
J30M	**Hart River**	**32.85**	**45**		P	**P**	**19 04 06.5**	**+0.7**		
	baz=281									
M30M	**Minto, Yukon**	**33.08**	**49**		IAMs_20	IAMs_20	19 18 46.8			
	comp=Z,8μm,20.0s									
M30M	**Minto, Yukon**	**33.08**	**49**		P	**P**	**19 04 08.4**	**+0.6**		
	baz=284,SNR=14									
M30M					S	**S**	**19 09 27.3**	**+4.3**		
	baz=284									
HYT	**Haines Junctio**	**33.20**	**52**		P	**P**	**19 04 09.8**	**+0.9**		
	baz=286,SNR=12									
HYT					S	**S**	**19 09 26.4**	**+1.3**		
	baz=286									
IRK	**Irkutsk**	**33.21**	**291**	*e*	P	**P**	**19 04 08.7**	**-0.3**		
IRK				*e*			19 05 29.6			
IRK				*e*			19 14 23.1			
IRK					pmax	pmax				
	comp=Z,414nm,1.0s									
N30M	**Aishikik Lake**	**33.22**	**51**		P	**P**	**19 04 10.4**	**+1.4**		
	baz=285									
N30M					S	**S**	**19 09 28.0**	**+2.7**		
	baz=285									
MAYO	**Mayo, Yukon**	**33.24**	**47**		IAmb	IAmb	19 05 18.0			
	comp=Z,73nm,0.7s									
MAYO	**Mayo, Yukon**	**33.24**	**47**		P	**P**	**19 04 09.8**	**+0.6**		
	baz=283									
G31M	**Satah River**	**33.28**	**41**		P	**P**	**19 04 10.1**	**+0.8**		
	baz=279									
G31M					S	**S**	**19 09 26.0**	**+0.1**		
	baz=279									
INK	**Inuvik**	**33.36**	**38**		LR	LR	19 19 37.8			
	comp=Z,3μm,21.3s,baz=284,slow=40									
INK	**Inuvik**	**33.36**	**38**		P	**P**	**19 04 10.7**	**+0.6**		
INK					IAmb	IAmb	19 04 12.3			
	comp=Z,187nm,1.0s									
INK	**Inuvik**	**33.36**	**38**		P	**P**	**19 04 10.7**	**+0.6**		
INK					pmax	pmax				
	comp=Z,187nm,1.0s									
INK	**Inuvik**	**33.36**	**38**		P	**P**	**19 04 11.1**	**+1.0**		
	baz=278,SNR=112									
INK					S	**S**	**19 09 27.3**	**+0.1**		
	baz=278									
F31M	**Tsiigehtchic**	**33.41**	**40**		IAmb	IAmb	19 04 12.2			
	comp=Z,132nm,0.8s									
F31M	**Tsiigehtchic**	**33.41**	**40**		P	**P**	**19 04 11.2**	**+0.8**		
	baz=279,SNR=105									
F31M					S	**S**	**19 09 28.5**	**+0.7**		
	baz=279									
H31M	**Peel River**	**33.45**	**43**		IAMs_20	IAMs_20	19 18 24.2			
	comp=Z,5μm,21.0s									
H31M	**Peel River**	**33.45**	**43**		P	**P**	**19 04 11.3**	**+0.4**		
	baz=281									
H31M					S	**S**	**19 09 29.1**	**+0.5**		
	baz=281									
ULN	**Ulaanbaatar**	**33.65**	**282**		P	**P**	**19 04 13.6**	**+0.6**		
ULN					IAmb	IAmb	19 04 15.1			
	comp=Z,150nm,0.9s									
ULN	**Ulaanbaatar**	**33.65**	**282**	*c*	*i*P	**P**	**19 04 13.0**	**0.0**		
ULN					pmax	pmax				
	comp=Z,193nm,1.0s									
ULN	**Ulaanbaatar**	**33.65**	**282**		P	**P**	**19 04 13.0**	**0.0**		
ULN					P	**P**	**19 04 13.0**	**0.0**		
ULN					S	**S**	**19 09 27.7**	**-4.7**		
ULN					S	**S**	**19 09 27.7**	**-4.7**		
ULN	**Ulaanbaatar**	**33.65**	**282**		P	**P**	**19 04 12.6**	**-0.4**		
	comp=Z,7μmcomp=Z,775nm,1.0s									
ULN	**Ulaanbaatar**	**33.65**	**282**		P	**P**	**19 04 13.1**	**+0.1**		
ULN					pP	**pP**	**19 04 22.4**	**-3.1**		
ULN					PcP	**PcP**	**19 06 53.2**	**+1.3**		
P30M	**Million Dollar**	**33.66**	**53**		P	**P**	**19 04 13.5**	**+0.6**		
	baz=287									
TLY	**Talaya**	**33.80**	**290**		LR	LR	19 19 10.7			
	comp=Z,13μm,18.7s,baz=44,slow=38									
TLY	**Talaya**	**33.80**	**290**		P	**P**	**19 04 15.9**	**+1.8**		
TLY					IAmb	IAmb	19 04 16.7			
	comp=Z,91nm,0.9s									
TLY	**Talaya**	**33.80**	**290**	*c*	*i*P	**P**	**19 04 14.4**	**+0.3**		
TLY					pmax	pmax				
	comp=Z,241nm,1.7s									
TLY	**Talaya**	**33.80**	**290**		P	**P**	**19 04 14.5**	**+0.3**		
TLY					P	**P**	**19 04 14.5**	**+0.3**		
TLY					S	**S**	**19 09 30.5**	**-3.9**		
TLY					S	**S**	**19 09 30.5**	**-3.9**		
TLY	**Talaya**	**33.80**	**290**		P	**P**	**19 04 14.7**	**+0.6**		
TLY					pP	**pP**	**19 04 23.4**	**-3.3**		
TLY					PcP	**PcP**	**19 06 54.0**	**+1.9**		
N31M	**Braeburn, Yuko**	**33.82**	**51**		IAMs_20	IAMs_20	19 19 24.4			
	comp=Z,5μm,19.0s									
N31M	**Braeburn, Yuko**	**33.82**	**51**		P	**P**	**19 04 15.3**	**+1.0**		
	baz=286									
O30N	**Mendenhall**	**33.88**	**52**		IAMs_20	IAMs_20	19 17 47.0			
	comp=Z,6μm,21.0s									
O30N	**Mendenhall**	**33.88**	**52**		P	**P**	**19 04 15.9**	**+1.1**		
	baz=287,SNR=9.3									
O30N					S	**S**	**19 09 35.1**	**-0.4**		
	baz=287									
SONM	**Songino Array**	**34.05**	**283**		P	**P**	**19 04 16.7**	**+0.2**		
	comp=Z,130nm,0.7s,baz=63,slow=7.0,SNR=484									
SONM					PcP	**PcP**	**19 06 54.7**	**+1.6**		
	comp=Z,106nm,0.8s,baz=84,slow=1.4,SNR=18									
SONM					ScP	**ScP**	**19 10 34.4**	**+0.7**		
	comp=Z,8.3nm,0.7s,baz=60,slow=1.5,SNR=4.6									
SONM					PKiKP	**PKiKP**	**19 14 17.1**	**+0.5**		
	comp=Z,3.3nm,0.9s,baz=129,slow=2.0,SNR=3.7									
SONM					LR	LR	19 19 34.1			
	comp=Z,16μm,19.0s,baz=64,slow=39									
SONM					P3KP		19 36 51.3			
	comp=Z,0.6nm,0.7s,baz=235,slow=2.4,SNR=3.9									
	comp=Z,130nm,0.7s									
SONM	**Songino Array**	**34.05**	**283**		P	**P**	**19 04 16.9**	**+0.5**		
SONM					IAmb	IAmb	19 04 18.9			
	comp=Z,135nm,0.8s									
SONM						**PcP**	**19 06 54.0**	**+1.0**		
H11N2	**WAKE ISLAND Hy**	**34.10**	**169**		T	T	19 40 38.2			
	baz=353,slow=76,SNR=1522									
H11N3	**WAKE ISLAND Hy**	**34.12**	**169**		T	T	19 40 35.1			
	baz=353,slow=76,SNR=2095									
H11N1	**WAKE ISLAND Hy**	**34.12**	**169**		T	T	19 40 49.7			
	baz=353,slow=76,SNR=2577									
M31M	**Drury Creek, Y**	**34.26**	**49**		IAmb	IAmb	19 04 41.5			
	comp=Z,98nm,1.1s									
M31M					IAMs_20	IAMs_20	19 19 51.0			
	comp=Z,8μm,20.0s									
M31M	**Drury Creek, Y**	**34.26**	**49**		P	**P**	**19 04 19.2**	**+1.3**		
	baz=286,SNR=23									
M31M					S	**S**	**19 09 44.0**	**+2.8**		
	baz=286									
WHY	**Whitehorse**	**34.48**	**52**		IAmb	IAmb	19 04 38.5			
	comp=Z,483nm,1.6s									
WHY	**Whitehorse**	**34.48**	**52**		P	**P**	**19 04 21.6**	**+1.6**		
	baz=288,SNR=12									
WHY					S	**S**	**19 09 47.6**	**+2.8**		
	baz=288									
ZAK	**Zakamensk**	**34.60**	**289**	*e*	P	**P**	**19 04 20.9**	**-0.2**		
ZAK					pmax	pmax				
	comp=Z,121nm,1.5s									
TIA	**Tai'an**	**34.64**	**258**		P	**P**	**19 04 21.3**	**-0.2**		
TIA					S	**S**	**19 09 41.0**	**-6.6**		
TIA					pmax	pmax				
	comp=Z,200nm,1.0s									
TIA					pmax	pmax				
	comp=Z,840nm,3.9s									
TIA					LR	LR				
	comp=Z,9μm,21.6s									
TIA					LR	LR				
	comp=Z,8μm,19.6s									
TIA					LR	LR				
	comp=Z,15μm,21.1s									
SKAG	**Skagway**	**34.65**	**54**		IAmb	IAmb	19 04 43.1			
	comp=Z,370nm,1.8s									
SKAG	**Skagway**	**34.65**	**54**		P	**P**	**19 04 22.6**	**+1.3**		
	baz=289									
S31K	**Pelican**	**34.71**	**57**		P	**P**	**19 04 22.6**	**+0.7**		
	baz=291									
S31K					S	**S**	**19 09 50.2**	**+2.0**		
	baz=291									
HHC	**Hu-ho-hao-te**	**34.90**	**269**	*e*	P	**P**	**19 04 23.8**	**-0.1**		
HHC					pP	pP	19 04 33.1	-3.4		
HHC					PP	**PnPn**	**19 05 41.4**	**-0.1**		
HHC					S	**S**	**19 09 49.8**	**-2.0**		
HHC					sS	sS	19 10 11.1	-1.4		
HHC					SS	**SnSn**	**19 12 11.5**	**+2.1**		
HHC					pmax	pmax				
	comp=Z,71nm,1.0s									
HHC					pmax	pmax				
	comp=Z,790nm,4.3s									
HHC					LR	LR				
	comp=Z,5μm,17.0s									
HHC					LR	LR				
	comp=Z,5μm,18.6s									
HHC					LR	LR				
	comp=Z,7μm,16.2s									
N32M	**Quiet Lake**	**35.16**	**51**		P	**P**	**19 04 26.7**	**+0.8**		
	baz=288									
N32M					S	**S**	**19 09 55.8**	**+0.5**		
	baz=288									
HNS	**HongShan**	**35.25**	**262**	⇑	P	**P**	**19 04 27.0**	**+0.2**		
HNS					PcP	**PcP**	**19 06 58.8**	**+2.3**		
HNS					S	**S**	**19 10 05.0**	**+8.1**		
HNS					ScP	**ScP**	**19 10 41.5**	**+3.5**		
HNS					PcS	**PcS**	**19 10 45.8**	**+2.3**		
HNS					ScS	**ScS**	**19 14 43.5**	**+1.3**		
HNS					pmax	pmax				
	comp=Z,530nm,1.2s									
HNS					LR	LR				
	comp=Z,2μm,15.9s									
HNS					LR	LR				
	comp=Z,12μm,17.0s									
HNS					LR	LR				
	comp=Z,13μm,17.7s									
MOY	**Mondy**	**35.28**	**292**	*e*	P	**P**	**19 04 27.2**	**+0.1**		
MOY					pmax	pmax				
	comp=Z,209nm,1.4s									
H11S1	**WAKE ISLAND Hy**	**35.29**	**170**		T	T	19 41 47.9			
	baz=352,slow=76,SNR=320									
H11S3	**WAKE ISLAND Hy**	**35.30**	**170**		T	T	19 41 46.0			
	baz=352,slow=76,SNR=695									
H11S2	**WAKE ISLAND Hy**	**35.31**	**170**		T	T	19 41 31.8			
	baz=352,slow=76,SNR=264									
P32M	**Atlin**	**35.38**	**53**		IAMs_20	IAMs_20	19 19 02.3			
	comp=Z,7μm,20.0s									
P32M	**Atlin**	**35.38**	**53**		P	**P**	**19 04 28.6**	**+0.9**		
	baz=290									
R32K	**Eaglecrest**	**35.45**	**56**		P	**P**	**19 04 29.6**	**+1.3**		
	baz=291									
SIT	**Sitka**	**35.50**	**58**		P	**P**	**19 04 29.4**	**+0.7**		
	baz=292									
MMPY	**Sheldon Lake,**	**35.53**	**48**		IAmb	IAmb	19 04 48.2			
	comp=Z,154nm,1.4s									
MMPY	**Sheldon Lake,**	**35.53**	**48**		P	**P**	**19 04 30.2**	**+1.2**		
	baz=288,SNR=24									
MMPY					S	**S**	**19 10 01.8**	**+0.9**		
	baz=288									
P33M	**Teslin, Yukon**	**35.59**	**52**		IAMs_20	IAMs_20	19 18 38.0			
	comp=Z,9μm,22.0s									
P33M	**Teslin, Yukon**	**35.59**	**52**		P	**P**	**19 04 30.8**	**+1.2**		
	baz=290,SNR=10									
P33M					S	**S**	**19 10 04.3**	**+2.3**		
	baz=290									
A36M	**Sachs Harbour**	**35.62**	**31**		IAmb	IAmb	19 04 32.4			
	comp=Z,212nm,0.8s									
A36M	**Sachs Harbour**	**35.62**	**31**		P	**P**	**19 04 30.6**	**+1.1**		
	baz=279,SNR=212									
A36M					S	**S**	**19 10 02.6**	**+0.8**		
	baz=279									
S32K	**Killisnoo**	**35.72**	**57**		P	**P**	**19 04 32.4**	**+1.8**		
	baz=292									
JOW	**Kunigami**	**35.77**	**235**		LR	LR	19 21 29.9			
	comp=Z,3μm,18.5s,baz=40,slow=40									
BTO2	**Baotou**	**35.97**	**270**	*e*	P	**P**	**19 04 33.6**	**+0.5**		
BTO2					sP	**sP**	**19 04 52.6**	**+1.2**		
BTO2					PP	**PP**	**19 05 55.6**	**+0.3**		
BTO2					S	**S**	**19 10 09.3**	**+1.1**		
BTO2					pmax	pmax				
	comp=Z,880nm,1.0s									
BTO2					pmax	pmax				
	comp=Z,4μm,4.3s									
BTO2					LR	LR				
	comp=Z,13μm,16.1s									
BTO2					LR	LR				
	comp=Z,13μm,18.6s									
BTO2					LR	LR				
	comp=Z,27μm,18.2s									
SSE	**Sheshan**	**36.06**	**247**		P	**P**	**19 04 33.8**	**+0.1**		
SSE					S	**S**	**19 10 11.3**	**+1.9**		
SSE					pmax	pmax				
	comp=Z,61nm,1.0s									
SSE					pmax	pmax				
	comp=Z,450nm,3.5s									
SSE					LR	LR				
	comp=Z,2μm,17.2s									
SSE					LR	LR				
	comp=Z,810nm,17.2s									
SSE	**Sheshan**	**36.06**	**247**		P	**P**	**19 04 35.0**	**+1.3**		
SSE					PcP	**PcP**	**19 07 00.4**	**+1.4**		
Q32M	**Nakina River**	**36.30**	**54**		IAMs_20	IAMs_20	19 21 10.6			
	comp=Z,4μm,18.0s									
Q32M	**Nakina River**	**36.30**	**54**		P	**P**	**19 04 37.2**	**+1.4**		
	baz=292									
TIY	**Taiyuan**	**36.39**	**264**		P	**P**	**19 04 36.9**	**+0.3**		
TIY					S	**S**	**19 10 18.3**	**+3.8**		
TIY					pmax	pmax				
	comp=Z,150nm,1.1s									
TIY					pmax	pmax				
	comp=Z,790nm,4.5s									
TIY					LR	LR				
	comp=Z,6μm,18.4s									
TIY					LR	LR				
	comp=Z,5μm,22.2s									
TIY					LR	LR				
	comp=Z,7μm,19.2s									
C36M	**Paulatuk**	**36.54**	**35**		P	**P**	**19 04 38.5**	**+1.1**		
	baz=284,SNR=302									
C36M					S	**S**	**19 10 15.8**	**-0.2**		
	baz=284									
NJ2	**Nanjing**	**36.64**	**251**	⇑	*i*P	**P**	**19 04 38.8**	**+0.1**		
NJ2					sP	**sP**	**19 04 56.8**	**-0.1**		
NJ2					PcP	**PcP**	**19 07 02.1**	**+1.4**		
NJ2					ScP	**ScP**	**19 10 45.1**	**+2.0**		
NJ2					ScS	**ScS**	**19 14 51.3**	**+1.4**		
NJ2					pmax	pmax				
	comp=Z,87nm,0.9s									
NJ2					pmax	pmax				
	comp=Z,580nm,3.5s									
NJ2					LR	LR				
	comp=Z,4μm,19.4s									
NJ2					LR	LR				
	comp=Z,4μm,15.6s									
NJ2					LR	LR				
	comp=Z,7μm,19.4s									
R33M	**Jennings River**	**36.76**	**53**		IAMs_20	IAMs_20	19 19 23.8			
	comp=Z,9μm,21.0s									
R33M	**Jennings River**	**36.76**	**53**		P	**P**	**19 04 41.3**	**+1.7**		
	baz=292,SNR=17									
T33K	**Petersburg**	**36.79**	**57**		P	**P**	**19 04 40.9**	**+1.2**		
	baz=294									
U33K	**Whale Pass**	**37.00**	**59**		P	**P**	**19 04 43.6**	**+2.2**		
	baz=295									
U33K					S	**S**	**19 10 23.6**	**+0.4**		
	baz=295									
TGTN	**Hyland Airport**	**37.22**	**49**		P	**P**	**19 04 44.8**	**+1.4**		
	baz=291,SNR=16									
S34M	**Telegraph Cree**	**37.25**	**55**		P	**P**	**19 04 43.9**	**+0.3**		
	baz=294,SNR=6.4									
WRAK	**Wrangell Islan**	**37.26**	**58**		P	**P**	**19 04 44.6**	**+0.9**		
	baz=295									
CRAG	**Craig**	**37.27**	**59**		P	**P**	**19 04 45.0**	**+1.2**		
	baz=296									
WTLY	**Watson Lake, Y**	**37.51**	**51**		P	**P**	**19 04 46.9**	**+1.1**		
	baz=292,SNR=5.2									
DLBC	**Dease Lake**	**37.58**	**54**		LR	LR	19 20 36.2			
	comp=Z,3μm,21.3s,baz=283,slow=37									
DLBC	**Dease Lake**	**37.58**	**54**		P	**P**	**19 04 48.5**	**+2.0**		
	baz=294,SNR=17									
DLBC					S	**S**	**19 10 35.6**	**+3.4**		
	baz=294									
KNGR	**Kungurtug, Tuv**	**37.72**	**292**	*c*	*i*P	**P**	**19 04 48.1**	**+0.3**		
KNGR					pmax	pmax				
	comp=Z,113nm,1.0s									
T35M	**Bob Quinn**	**38.07**	**56**		IAMs_20	IAMs_20	19 19 47.5			
	comp=Z,6μm,22.0s									
T35M	**Bob Quinn**	**38.07**	**56**		P	**P**	**19 04 52.1**	**+1.5**		
	baz=295,SNR=14									
V35K	**Ketchikan**	**38.10**	**59**		P	**P**	**19 04 52.5**	**+1.7**		
	baz=296									
V35K					S	**S**	**19 10 43.4**	**+3.4**		
	baz=296									
LYN	**LuoYang**	**38.52**	**260**		P	**P**	**19 04 55.0**	**+0.4**		
LYN					sP	sP	19 05 13.0	+0.1		
LYN					PP	**PnPn**	**19 06 29.1**	**+3.5**		
LYN					S	**S**	**19 10 43.8**	**-3.0**		
LYN					pmax	pmax				
	comp=Z,200nm,1.2s									
LYN					pmax	pmax				
	comp=Z,850nm,4.0s									
LYN					LR	LR				
	comp=Z,8μm,21.0s									
LYN					LR	LR				
	comp=Z,8μm,22.0s									
LYN					LR	LR				
	comp=Z,10μm,22.0s									
U35K	**Hyder**	**38.65**	**58**		IAMs_20	IAMs_20	19 21 05.8			
	comp=Z,4μm,21.0s									
WRGLY	**Wrigley**	**38.69**	**45**		IAmb	IAmb	19 05 35.0			
	comp=Z,400nm,1.9s									
WRGLY	**Wrigley**	**38.69**	**45**		P	**P**	**19 04 58.1**	**+2.5**		
	baz=292,SNR=8.6									
WRGLY					S	**S**	**19 10 50.5**	**+1.9**		
	baz=292									
KOTAN	**Kotaneelee Air**	**39.67**	**49**		P	**P**	**19 05 06.1**	**+2.2**		
	baz=295									
KOTAN					S	**S**	**19 10 59.8**	**-3.7**		
	baz=295									
WHN	**Wuhan**	**40.33**	**254**	⇑	*i*P	**P**	**19 05 09.3**	**-0.3**		
WHN					PcP	**PcP**	**19 07 14.3**	**+2.0**		
WHN					ScP	**ScP**	**19 11 00.4**	**+3.2**		
WHN					S	**S**	**19 11 10.4**	**-3.5**		
WHN					ScS	**ScS**	**19 15 11.9**	**+0.6**		
WHN					pmax	pmax				
	comp=Z,430nm,0.9s									
WHN					pmax	pmax				
	comp=Z,3μm,3.7s									
WHN					LR	LR				
	comp=Z,14μm,17.2s									
WHN					LR	LR				
	comp=Z,8μm,17.9s									
WHN					LR	LR				
	comp=Z,16μm,17.1s									
YOJ	**Yonaguni jima**	**40.37**	**239**		P	**P**	**19 05 09.1**	**-0.9**		
YOJ					IAmb	IAmb	19 05 10.2			
	comp=Z,199nm,0.7s									
YOJ	**Yonaguni jima**	**40.37**	**239**		P	**P**	**19 05 09.1**	**-0.9**		
YOJ					pmax	pmax				
	comp=Z,199nm,0.7s									
TATO	**Taipei**	**40.73**	**241**		P	**P**	**19 05 15.6**	**+2.6**		
TATO					IAmb	IAmb	19 05 18.2			
	comp=Z,240nm,0.8s									
TATO	**Taipei**	**40.73**	**241**		IAMs_20	IAMs_20	19 21 53.2			
	comp=Z,5μm,20.0s									
TATO	**Taipei**	**40.73**	**241**		P	**P**	**19 05 14.5**	**+1.5**		
XAN	**Xi'an**	**40.98**	**263**	⇑	P	**P**	**19 05 14.3**	**-0.7**		
XAN					sP	pP	19 05 27.6	-0.2		
XAN					PP	**PP**	**19 06 52.8**	**+2.8**		
XAN					PcP	**PcP**	**19 07 15.8**	**+1.4**		
XAN					ScP	**ScP**	**19 11 02.4**	**+2.6**		
XAN					S	**S**	**19 11 22.3**	**-1.3**		
XAN					ScS	**ScS**	**19 15 14.5**	**-0.8**		
XAN					pmax	pmax				
	comp=Z,100nm,1.2s									
XAN					pmax	pmax				
	comp=Z,810nm,4.1s									
XAN					LR	LR				
	comp=Z,11μm,16.5s									
XAN					LR	LR				
	comp=Z,18μm,15.8s									
XAN					LR	LR				
	comp=Z,23μm,16.2s									
YHNB	**Yeheng**	**41.04**	**241**		IAMs_20	IAMs_20	19 22 14.4			
	comp=Z,5μm,20.0s									
NACB	**Ninganchiao**	**41.33**	**240**		IAMs_20	IAMs_20	19 22 24.2			
	comp=Z,5μm,22.0s									
BBB	**Bella Bella**	**41.45**	**62**		LR	LR	19 20 30.0			
	comp=Z,6μm,21.9s,baz=294,slow=33									
GUMO	**Guam**	**41.74**	**203**		LR	LR	19 21 41.3			
	comp=Z,2μm,19.1s,baz=34,slow=34									
SSLB	**Suanglung**	**41.98**	**241**		IAmb	IAmb	19 05 29.7			
	comp=Z,374nm,1.1s									
SSLB					IAMs_20	IAMs_20	19 22 45.4			
	comp=Z,7μm,22.0s									
YULB	**Yu-li**	**42.13**	**240**		P	**P**	**19 05 25.9**	**+1.4**		
YULB					IAmb	IAmb	19 05 30.3			
	comp=Z,700nm,1.5s									
YULB					IAMs_20	IAMs_20	19 23 11.2			
	comp=Z,4μm,21.0s									
QZH2	**Quanzhou**	**42.29**	**244**		P	**P**	**19 05 26.9**	**+1.1**		
QZH2					S	**S**	**19 11 45.5**	**+2.4**		
QZH2					pmax	pmax				
	comp=Z,330nm,0.8s									
QZH2					pmax	pmax				
	comp=Z,2μm,3.9s									
QZH2					LR	LR				
	comp=Z,3μm,16.8s									
QZH2					LR	LR				
	comp=Z,4μm,19.5s									
QZH2					LR	LR				
	comp=Z,3μm,21.3s									
TPUB	**Ta-pu**	**42.55**	**241**		IAMs_20	IAMs_20	19 23 13.4			
	comp=Z,7μm,22.0s									
LZH	**Lanzhou**	**42.59**	**269**		P	**P**	**19 05 29.1**	**+0.7**		
LZH					PP	**PP**	**19 07 09.8**	**+2.2**		
LZH					PcP	**PcP**	**19 07 21.6**	**+1.7**		
LZH					ScP	**ScP**	**19 11 10.1**	**+3.7**		
LZH					S	**S**	**19 11 46.3**	**-1.4**		
LZH					ScS	**ScS**	**19 15 25.0**	**-0.3**		
LZH					pmax	pmax				
	comp=Z,420nm,1.8s									
LZH					pmax	pmax				
	comp=Z,2μ

comp=Z,190nm,0.7s
LZDM Lanzhou Array 42.77 269 P **P** **19 05 30.8 +0.8**
comp=Z,107nm,0.6s,baz=18,slow=1.9,SNR=176
LZDM PcP **PcP** **19 07 22.7 +2.0**
comp=Z,51nm,0.9s,baz=66,slow=3.6,SNR=3.6
LZDM ScP **ScP** **19 11 09.5 +2.2**
comp=Z,10nm,0.8s,baz=58,slow=5.6,SNR=7.8
LZDM LR LR 19 25 25.9
comp=Z,8μm,18.8s,baz=45,slow=39
comp=Z,107nm,0.6s
GTA2 Gaotai 42.79 276 ⇑P **P** **19 05 30.5 +0.6**
GTA2 sP pP 19 05 44.3 +1.6
GTA2 PP **PP** **19 07 11.8 +2.2**
GTA2 PcP **PcP** **19 07 22.3 +1.9**
GTA2 ScP **ScP** **19 11 10.3 +3.2**
GTA2 PcS **PcS** **19 11 14.5 +1.7**
GTA2 S **S** **19 11 48.3 -2.2**
GTA2 ScS **ScS** **19 15 25.8 -0.6**
GTA2 pmax pmax
comp=Z,1μm,0.9s
GTA2 pmax pmax
comp=Z,2μm,10.0s
GTA2 LR LR
comp=Z,9μm,15.5s
GTA2 LR LR
comp=Z,8μm,15.1s
GTA2 LR LR
comp=Z,7μm,16.7s
KNMB Chin-men Tao 42.79 244 IAmb IAmb 19 05 32.5
comp=Z,286nm,1.2s
RES Resolute Bay 42.82 22 LR LR 19 27 16.3
comp=Z,1μm,18.9s,baz=309,slow=42
RES Resolute Bay 42.82 22 IAmb IAmb 19 05 31.7
comp=Z,150nm,0.9s
CNSH ChangSha 42.91 253 P **P** **19 05 31.1 +0.3**
CNSH S **S** **19 11 50.4 -1.8**
CNSH pmax pmax
comp=Z,62nm,1.0s
CNSH LR LR
comp=Z,4μm,17.1s
CNSH LR LR
comp=Z,4μm,18.6s
CNSH LR LR
comp=Z,4μm,18.8s
DGZ Jazzator, Alta 43.70 296*c iP* **P** **19 05 37.1 0.0**
DGZ pmax pmax
comp=Z,335nm,0.9s
CBB Campbell River 44.07 63 P **P** **19 05 40.2 +0.3**
NOR Nord 45.09 359 *i* P **P** **19 05 47.5 -0.2**
NOR IAmb IAmb 19 05 49.7
comp=Z,29nm,0.8s
CLRS Cowichan Lake 45.43 64 P **P** **19 05 51.5 +0.8**
GZH2 Guangzhou 46.02 248 P **P** **19 05 56.8 +1.1**
GZH2 PcP **PcP** **19 07 33.1 +1.6**
GZH2 S **S** **19 12 36.8 -0.6**
GZH2 pmax pmax
comp=Z,270nm,0.8s
GZH2 LR LR
comp=Z,4μm,18.2s
GZH2 LR LR
comp=Z,2μm,15.1s
GZH2 LR LR
comp=Z,7μm,18.3s
CD2 Chengdu 46.26 264 P **P** **19 05 57.8 +0.2**
CD2 pP pP 19 06 06.3 -4.2
CD2 sP sP 19 06 14.0 -2.0
CD2 PcP **PcP** **19 07 33.4 +1.0**
CD2 PP **PP** **19 07 47.4 +0.8**
CD2 S **S** **19 12 37.4 -3.4**
CD2 pmax pmax
comp=Z,320nm,0.8s
CD2 pmax pmax
comp=Z,1μm,5.5s
CD2 LR LR
comp=Z,7μm,17.2s
CD2 LR LR
comp=Z,8μm,15.3s
CD2 LR LR
comp=Z,10μm,17.0s
ZSN Zaisan 46.40 295*c iP* **P** **19 05 57.8 -0.6**
ZSN Zaisan 46.40 295⇑ *iP* **P** **19 05 57.9 -0.6**
NLWA Neilton Lookou 46.42 65 IAMs_20 IAMs_20 19 22 00.3
comp=Z,3μm,22.0s
TULEG Thule 46.46 14 IAmb IAmb 19 06 00.0
comp=Z,208nm,0.8s
TULEG Thule 46.46 14 *i* P **P** **19 05 57.4 -1.1**
KBS Kingsbay 46.47 352 IAMs_20 IAMs_20 19 25 37.9
comp=Z,3μm,19.0s
KBS Kingsbay 46.47 352 *eP* **P** **19 06 00.2 +1.7**
KBS IVMs_BB IVMs_BB 19 25 37.6
comp=Z,2μm,18.7s
KBS Kingsbay 46.47 352 *i* P **P** **19 05 58.4 -0.1**
GULI GuiLin 46.59 253 P **P** **19 05 59.9 -0.3**
GULI PcP **PcP** **19 07 35.9 +2.4**
GULI S **S** **19 12 41.9 -3.7**
GULI pmax pmax
comp=Z,270nm,1.0s
GULI pmax pmax
comp=Z,550nm,4.2s
GULI LR LR
comp=Z,3μm,18.1s
GULI LR LR
comp=Z,3μm,21.1s
GULI LR LR
comp=Z,5μm,20.1s
WISH Wishkah 46.64 66 IAmb IAmb 19 06 29.8
comp=Z,119nm,1.2s
SPA0 Spitsbergen Ar 46.74 350 *eP* **P** **19 06 01.3 +0.6**
SPITS Spitsbergen Ar 46.74 350 P **P** **19 06 00.2 -0.4**
comp=Z,873nm,0.8s,baz=57,slow=8.4,SNR=740
SPITS PcP **PcP** **19 07 34.2 +0.9**
SPITS comp=Z,155nm,1.0s,baz=58,slow=7.0,SNR=3.3
LR LR 19 26 30.0
comp=Z,3μm,18.1s,baz=26,slow=37
comp=Z,873nm,0.8s
SPB2 Spitsbergen Ar 46.74 350 P **P** **19 06 00.7 0.0**
HKPS Hong Kong Po S 46.85 247 IAMs_20 IAMs_20 19 26 53.2
comp=Z,4μm,19.0s
WMQ Urumqi 47.06 289 ⇑P **P** **19 06 04.1 +0.4**
WMQ pP pP 19 06 16.6 -0.1
WMQ PcP **PcP** **19 07 36.0 +1.0**
WMQ PP **PP** **19 07 57.6 +3.1**
WMQ PcS **PcS** **19 11 30.5 +0.4**
WMQ S **S** **19 12 53.5 +1.5**
WMQ pmax pmax
comp=Z,380nm,0.9s
WMQ pmax pmax
comp=Z,1μm,4.9s
WMQ LR LR
comp=Z,11μm,18.3s
WMQ LR LR
comp=Z,12μm,16.1s
WMQ LR LR
comp=Z,13μm,17.7s
WMQ Urumqi 47.06 289 P **P** **19 06 04.3 +0.6**
WMQ x x 19 06 16.2
WMQ PcP **PcP** **19 07 35.9 +0.9**
HOPEN Hopen 47.16 347 *eP* **P** **19 06 04.2 +0.3**
HOPEN IAmb IAmb 19 06 05.8
comp=Z,125nm,0.7s
HOPEN *eS* **S** **19 12 53.1 +0.6**
F03A Seaside 47.48 67 IAmb IAmb 19 06 42.0
comp=Z,197nm,1.4s
D05A Enumclaw 47.56 64 IAmb IAmb 19 06 41.7
comp=Z,144nm,1.2s
KURK Kurchatov 47.71 302 **PcP** **19 07 38.3 +1.2**
KURK **ScP** **19 11 30.2 +3.1**
KURK Kurchatov 47.71 302 P **P** **19 06 07.2 -1.4**
KURK Kurchatov 47.71 302 P **P** **19 06 08.1 -0.5**
KURK 19 07 38.3
KURK Kurchatov 47.71 302 P **P** **19 06 07.5 -1.1**
KURK P **P** **19 06 07.5 -1.1**
KURK S **S** **19 12 55.4 -5.5**
KURK S **S** **19 12 55.4 -5.5**
KURK Kurchatov 47.71 302 P **P** **19 06 07.7 -0.9**
KURK PcP **PcP** **19 07 38.2 +1.2**
POIN Pond Inlet 47.76 20 P **P** **19 06 08.3 -0.4**
POIN IAmb IAmb 19 06 10.3
comp=Z,247nm,1.3s
NEEM North Greenlan 47.81 9 *i* P **P** **19 06 09.4 0.0**
NEEM IAmb IAmb 19 06 11.5
comp=Z,652nm,0.8s
KURBB Kurchatov Arra 47.81 302 P **P** **19 06 08.1 -1.3**
comp=Z,418nm,0.6s,baz=57,slow=7.6,SNR=808
KURBB PcP **PcP** **19 07 38.3 +0.8**
comp=Z,50nm,0.7s,baz=53,slow=3.4,SNR=6.4
KURBB ScP **ScP** **19 11 30.2 +2.7**
comp=Z,6.9nm,0.9s,baz=68,slow=4.0,SNR=3.6
KURBB PKiKP **PKiKP** **19 14 28.6 +0.1**
comp=Z,1.4nm,0.7s,baz=69,slow=1.6,SNR=2.1
KURBB LR LR 19 27 45.4
comp=Z,13μm,18.6s,baz=58,slow=38
KURBB PKPPKP **P'P'df** **19 37 23.1 -2.3**
comp=Z,0.2nm,0.2s,baz=282,slow=3.8,SNR=4.2
KURBB P4KPbc 19 43 50.2
comp=Z,6.7nm,0.8s,baz=53,slow=3.8,SNR=45
comp=Z,418nm,0.6s
KURBB Kurchatov Arra 47.81 302 P **P** **19 06 08.2 -1.1**
GYA Guiyang 47.84 258 ⇑P **P** **19 06 10.0 0.0**
GYA S **S** **19 13 01.0 -2.5**
GYA pmax pmax
comp=Z,120nm,1.0s
GYA LR LR
comp=Z,3μm,17.7s
GYA LR LR
comp=Z,4μm,22.6s
GYA LR LR
comp=Z,8μm,20.3s
HSPB Hornsund (broa 47.87 350 *eP* **P** **19 06 07.8 -1.6**
HSPB *eL* L 19 27 09.7
HSPB Hornsund (broa 47.87 350 *eP* **P** **19 06 10.3 +0.9**
GOMU GeErMu 47.90 276 P **P** **19 06 09.9 -0.7**
GOMU PcP **PcP** **19 07 40.8 +2.3**
GOMU S **S** **19 13 05.4 +0.7**
GOMU pmax pmax
comp=Z,360nm,1.0s
GOMU LR LR
comp=Z,4μm,14.5s
GOMU LR LR
comp=Z,5μm,17.1s
GOMU LR LR
comp=Z,6μm,17.5s
MK31 Makanchi Array 48.19 296 *i* P **P** **19 06 11.5 -0.9**
MK31 pmax pmax
comp=Z,326nm,0.9s
MKAR Makanchi Array 48.19 296 P **P** **19 06 11.2 -1.2**
comp=Z,181nm,0.8s,baz=57,slow=6.9,SNR=946
MKAR PcP **PcP** **19 07 39.7 +0.7**
comp=Z,32nm,0.8s,baz=64,slow=8.2,SNR=2.6
MKAR ScP **ScP** **19 11 31.5 +2.3**
comp=Z,13nm,1.0s,baz=42,slow=2.3,SNR=4.7
MKAR LR LR 19 27 05.2
comp=Z,3μm,21.8s,baz=36,slow=37
MKAR P3KP 19 36 19.1
comp=Z,0.7nm,0.9s,baz=149,slow=0.8,SNR=5.2
MKAR PKPPKP **P'P'df** **19 37 20.9 -3.6**
comp=Z,0.9nm,1.0s,baz=174,slow=1.2,SNR=3.9
MKAR P4KPbc 19 43 50.4
comp=Z,3.5nm,0.8s,baz=41,slow=3.5,SNR=27
comp=Z,181nm,0.8s
MKAR Makanchi Array 48.19 296 *i* P **P** **19 06 11.1 -1.2**
MKAR pmax pmax
comp=Z,177nm,0.8s
EDM Edmonton 48.30 53 IAmb IAmb 19 06 15.0
comp=Z,144nm,0.7s
MAKZ Makanchi 48.35 296 P **P** **19 06 12.1 -1.5**
MAKZ IAMs_20 IAMs_20 19 27 35.7
comp=Z,6μm,21.0s
MAKZ Makanchi 48.35 296 P **P** **19 06 11.9 -1.7**
COR Corvallis 48.46 68 P **P** **19 06 12.8 -1.6**
COR IAmb IAmb 19 06 49.9
comp=Z,75nm,1.1s
COR Corvallis 48.46 68 IAMs_20 IAMs_20 19 23 01.9
comp=Z,4μm,22.0s
COR Corvallis 48.46 68 P **P** **19 06 12.8 -1.6**
COR pmax pmax
comp=Z,75nm,1.1s
COR MLR MLR
comp=Z,4μm,22.0s
BLKN Baker Lake 48.59 34 P **P** **19 06 15.0 0.0**
EPH Ephrata 48.73 63 IAmb IAmb 19 06 43.5
comp=Z,163nm,1.5s
H04D Lebanon 48.81 68 IAmb IAmb 19 07 08.4
comp=Z,79nm,1.1s
BUCK Buck Mountain 48.88 68 IAmb IAmb 19 06 52.8
comp=Z,83nm,1.1s
HOOD Mount Hood Mea 48.90 66 IAmb IAmb 19 06 39.2
comp=Z,140nm,0.8s
J01E Myrtle Point 49.02 70 IAmb IAmb 19 07 02.1
comp=Z,85nm,1.0s
E07A Sunnyside 49.09 64 IAmb IAmb 19 06 46.0
comp=Z,100nm,1.4s
G05A Wamic 49.14 66 IAmb IAmb 19 07 01.8
comp=Z,125nm,1.0s
C09A Chrisman Ranch 49.15 62 IAmb IAmb 19 06 47.6
comp=Z,93nm,1.3s
ILON Igloolik, Nuna 49.30 24 P **P** **19 06 20.5 0.0**
ILON IAmb IAmb 19 06 22.5
comp=Z,335nm,1.2s
HAWA Hanford 49.37 64 IAmb IAmb 19 06 48.8
comp=Z,157nm,1.6s
I04A Tendick Farm, 49.46 68 IAmb IAmb 19 07 45.9
comp=Z,71nm,0.9s
NEW Newport 49.47 61 LR LR 19 25 10.1
comp=Z,3μm,21.4s,baz=302,slow=34
NEW Newport 49.47 61 IAMs_20 IAMs_20 19 24 58.9
comp=Z,3μm,21.0s
F07A Phinny Hill Vi 49.48 65 IAmb IAmb 19 06 25.2
comp=Z,88nm,1.0s
BJO1 Bjornoya 49.67 347 *eP* **P** **19 06 23.9 +0.6**
BJO1 IAmb IAmb 19 06 25.1
comp=Z,569nm,1.0s
BJO1 IAMs_20 IAMs_20 19 29 22.4
comp=Z,3μm,20.1s
KULLO Kullorsuaq 49.70 12 *i* P **P** **19 06 24.3 +0.8**
DAG Danmarks Havn 49.96 360⇓ *iP* **P** **19 06 24.3 -1.1**
DAG IAmb IAmb 19 06 26.9
comp=Z,234nm,0.8s
J04A Umpqua Nationa 49.98 69 IAmb IAmb 19 07 01.7
comp=Z,115nm,0.9s
E09A Wood Farm, Sta 50.04 63 IAmb IAmb 19 06 29.0
comp=Z,82nm,0.9s
TGY Tagaytay City 50.16 234 LR LR 19 28 14.0
comp=Z,1μm,20.8s,baz=312,slow=37
KRPM Rodgers 50.27 72 IAMs_20 IAMs_20 19 23 58.5
comp=Z,4μm,21.0s
PINE Pine Mountain 50.27 67 IAmb IAmb 19 07 49.9
comp=Z,88nm,1.0s
BVA0 Borovoye Array 50.31 308 P **P** **19 06 27.5 -0.9**
BVAR Borovoye Array 50.31 308 P **P** **19 06 27.2 -1.2**
comp=Z,244nm,0.5s,baz=59,slow=7.9,SNR=832
BVAR PcP **PcP** **19 07 47.4 +0.8**
comp=Z,50nm,0.6s,baz=74,slow=2.3,SNR=6.1
BVAR ScP **ScP** **19 11 39.5 +1.4**
comp=Z,4.9nm,0.8s,baz=62,slow=3.7,SNR=3.1
BVAR LR LR 19 30 08.9
comp=Z,9μm,19.4s,baz=56,slow=39
BVAR P3KP 19 36 17.3
comp=Z,0.6nm,0.8s,baz=325,slow=2.3,SNR=3.6
BVAR PKPPKP **P'P'df** **19 37 18.1 -4.2**
comp=Z,0.6nm,0.8s,baz=249,slow=1.2,SNR=1.5
BVAR P4KPbc 19 44 00.8
comp=Z,5.1nm,0.8s,baz=62,slow=4.0,SNR=33
comp=Z,244nm,0.5s
BORK Borovoye 50.33 308 P **P** **19 06 26.9 -1.6**
BORK Borovoye 50.33 308*c iP* **P** **19 06 27.3 -1.3**
BORK pmax pmax
comp=Z,380nm,1.0s
BORK MLR MLR
comp=Z,9μm,18.0s
J05D Fort Rock, OR 50.44 68 IAmb IAmb 19 07 04.2
comp=Z,110nm,1.1s
JCC Jacoby Creek, 50.49 72 IAmb IAmb 19 07 14.8
comp=Z,146nm,1.6s
JCC IAMs_20 IAMs_20 19 24 02.9
comp=Z,3μm,22.0s
L04D Klamath Falls 50.54 70 IAmb IAmb 19 06 52.2
comp=Z,150nm,1.2s
KHMM Horse Mountain 50.62 72 IAmb IAmb 19 06 37.9
comp=Z,98nm,1.2s
YBH Yreka Blue Hor 50.63 70 LR LR 19 24 30.1
comp=Z,361nm,21.6s,baz=298,slow=32
PZH PanZhiHua 50.70 262 P **P** **19 06 31.4 -0.4**
PZH PcP **PcP** **19 07 49.5 +1.0**
PZH ScP **ScP** **19 11 43.0 +2.6**
PZH S **S** **19 13 40.0 -3.6**
PZH ScS **ScS** **19 16 15.8 -2.6**
PZH pmax pmax
comp=Z,120nm,0.9s
PZH pmax pmax
comp=Z,800nm,4.7s
PZH LR LR
comp=Z,3μm,14.9s
PZH LR LR
comp=Z,2μm,16.5s
PZH LR LR
comp=Z,5μm,15.1s
M02C Callahan 50.78 71 IAMs_20 IAMs_20 19 23 47.4
comp=Z,5μm,22.0s
K05A Summer Lake 51.00 68 IAmb IAmb 19 07 52.4
comp=Z,101nm,0.9s
KMI2 Kunming 51.12 260 ⇑P **P** **19 06 35.6 +0.4**
KMI2 PcP **PcP** **19 07 51.5 +1.3**
KMI2 ScP **ScP** **19 11 45.4 +3.1**
KMI2 S **S** **19 13 47.1 -2.6**
KMI2 pmax pmax
comp=Z,130nm,1.3s
KMI2 pmax pmax
comp=Z,1μm,7.2s
KMI2 LR LR
comp=Z,5μm,16.9s
KMI2 LR LR
comp=Z,6μm,18.1s
KMI2 LR LR
comp=Z,7μm,19.4s
N02D Trinity Center 51.14 71 IAMs_20 IAMs_20 19 24 30.0
comp=Z,4μm,21.0s
BRZS Berezniki 51.15 304 *eP* **P** **19 06 34.2 -0.6**
BRZS Berezniki 51.15 304 *eP* **P** **19 06 34.3 -0.6**
TDK Taldyqorghan 51.42 296*c iP* **P** **19 06 36.3 -0.6**
TDK pmax pmax
comp=Z,158nm,0.7s
TDK MLR MLR
comp=Z,4μm,14.0s
TDK Taldyqorghan 51.42 296⇑ *iP* **P** **19 06 36.4 -0.5**
comp=Z,158nm,0.7s
TDK LR LR 19 29 08.6
comp=Z,4μm,13.7s
UPNV Upernavik 51.44 13 *i* P **P** **19 06 37.3 +0.7**
BMO Blue Mountains 51.56 64 IAMs_20 IAMs_20 19 25 30.3
comp=Z,3μm,21.0s
O02D Mt. Diablo Mer 51.63 72 IAMs_20 IAMs_20 19 24 18.8
comp=Z,5μm,22.0s
VADS Vadso 51.72 341 *eP* **P** **19 06 38.7 0.0**
QIZ Qiongzhong 51.84 249 IAMs_20 IAMs_20 19 29 14.1
comp=Z,3μm,20.0s
QIZ Qiongzhong 51.84 249 P **P** **19 06 42.4 +2.2**
QIZ PP **PP** **19 08 41.3 +3.0**
QIZ S **S** **19 14 01.5 +2.4**
QIZ pmax pmax
comp=Z,570nm,1.1s
QIZ pmax pmax
comp=Z,2μm,4.2s
QIZ LR LR
comp=Z,2μm,18.0s
QIZ LR LR
comp=Z,2μm,16.7s
QIZ LR LR
comp=Z,3μm,18.5s
PDGK Podgornoye 51.94 294 P **P** **19 06 40.7 -0.2**
HATC Hat Creek Radi 51.95 71 IAMs_20 IAMs_20 19 25 21.3
comp=Z,3μm,20.0s
MSO Missoula 52.04 60 IAmb IAmb 19 07 08.1
comp=Z,138nm,1.4s
MSO IAMs_20 IAMs_20 19 26 08.0
comp=Z,3μm,22.0s
SHLS Shalkode 52.06 294*c iP* **P** **19 06 39.5 -2.3**
SHLS pmax pmax
comp=Z,127nm,0.7s
SHLS Shalkode 52.06 294⇑ *iP* **P** **19 06 39.5 -2.3**
comp=Z,127nm,0.7s
PLID Pearl Lake 52.10 63 IAMs_20 IAMs_20 19 26 57.7
comp=Z,3μm,21.0s
O03E Paynes Creek 52.10 71 IAmb IAmb 19 07 13.1
comp=Z,90nm,1.0s
SVE Sverdlovsk 52.13 317*ceP* **P** **19 06 42.0 +0.1**
SVE pmax pmax
comp=N,79nm,1.0s
SVE MLR MLR
comp=E,6μm,15.0s
ARXS Arharly 52.25 296 *eP* **P** **19 06 42.8 -0.4**
HOPS Hopland Field 52.26 73 IAMs_20 IAMs_20 19 25 38.8
comp=Z,3μm,20.0s
KPKS Kokpek 52.28 294 *eP* **P** **19 06 42.9 -0.5**
KPKS *eS* **S** **19 14 04.9 -0.1**
KPKS Kokpek 52.28 294 *eP* **P** **19 06 43.0 -0.5**
KPKS *eS* **S** **19 14 05.0 -0.1**
UZB Uzynbulak 52.31 294*c iP* **P** **19 06 43.0 -0.7**
UZB *eS* **S** **19 14 05.1 -0.4**
UZB Uzynbulak 52.31 294⇑ *iP* **P** **19 06 43.0 -0.7**
UZB *eS* **S** **19 14 05.2 -0.4**
HAMF Hammerfest 52.32 343 *eP* **P** **19 06 42.5 -0.6**
HAMF *eS* **S** **19 14 04.2 -0.3**
LVZ Lovozero 52.39 337 P **P** **19 06 42.5 -1.3**
LVZ Lovozero 52.39 337*deP* **P** **19 06 43.2 -0.6**
LVZ pmax pmax
comp=Z,398nm,0.8s
LVZ MLR MLR
comp=Z,7μm,20.0s
WVOR Wild Horse Val 52.44 67 IAMs_20 IAMs_20 19 25 23.1
comp=Z,4μm,22.0s
DBG Daneborg 52.44 0 *i* P **P** **19 06 43.3 -0.8**
KEV Kevo 52.48 341 P **P** **19 06 43.9 -0.4**
KEV IAmb IAmb 19 06 45.5
comp=Z,153nm,0.7s
KEV IAMs_20 IAMs_20 19 32 28.3
comp=Z,3μm,20.0s
KEV Kevo 52.48 341 P **P** **19 06 43.9 -0.4**
KEV pmax pmax
comp=Z,153nm,0.7s
KEV MLR MLR
comp=Z,3μm,20.0s
FFC Flin Flon 52.53 46 P **P** **19 06 44.9 -0.1**
FFC IAmb IAmb 19 07 57.2
comp=Z,92nm,0.9s
FFC Flin Flon 52.53 46 IAMs_20 IAMs_20 19 30 08.0
comp=Z,2μm,19.0s
FFC Flin Flon 52.53 46 P **P** **19 06 44.9 -0.1**
FFC pmax pmax
comp=Z,92nm,0.9s
FFC MLR MLR
comp=Z,2μm,19.0s
FFC Flin Flon 52.53 46 P **P** **19 06 45.6 +0.6**
FFC PcP **PcP** **19 07 56.1 +1.4**
MNRC McLaughlin Min 52.70 73 IAmb IAmb 19 07 05.0
comp=Z,170nm,1.4s
MNRC IAMs_20 IAMs_20 19 25 35.3
comp=Z,3μm,20.0s
SATY Saty 52.71 294*c iP* **P** **19 06 46.0 -0.6**
SATY *eS* **S** **19 14 10.6 -0.3**
SATY pmax pmax
comp=Z,104nm,1.1s
SATY Saty 52.71 294⇑ *iP* **P** **19 06 46.0 -0.6**
comp=Z,104nm,1.1s
SATY *eS* **S** **19 14 10.6 -0.3**
ORV Oroville 52.78 72 IAMs_20 IAMs_20 19 25 28.3
comp=Z,3μm,22.0s
SUTB Sutter Butte 52.84 72 IAmb IAmb 19 07 04.6
comp=Z,143nm,1.6s
APA Apatity 52.94 337⇓ *iP* **P** **19 06 46.2 -1.6**
APA *i* 19 07 54.8
APA *i* S **S** **19 14 08.3 -4.8**
APA *i* 19 16 32.4
APA pmax pmax
comp=Z,171nm,1.0s
APA MLR MLR
comp=Z,9μm,20.6s
ARA0 ARCESS Array S 52.94 342 *eP* **P** **19 06 47.5 -0.3**
ARCES ARCESS Array B 52.94 342 P **P** **19 06 47.0 -0.9**
comp=Z,285nm,0.8s,baz=40,slow=7.7,SNR=285
ARCES PcP **PcP** **19 07 57.1 +1.0**
comp=Z,65nm,0.0,baz=22,slow=4.3,SNR=6.0
ARCES LR LR 19 34 06.5
comp=Z,2μm,20.1s,baz=36,slow=42
comp=Z,285nm,0.8s
ARCES ARCESS Array B 52.94 342 P **P** **19 06 46.9 -0.9**
ARCES ARCESS Array B 52.94 342 P **P** **19 06 46.9 -0.9**
ARCES 19 07 57.1
ARCES pmax pmax
comp=Z,359nm,1.0s
MCCM Marconi Confer 52.95 74 IAMs_20 IAMs_20 19 25 54.0
comp=Z,3μm,20.0s
NUUG Nuugaatsiaq 52.96 13 *i* P **P** **19 06 47.1 -0.8**
FCC Fort Churchill 52.98 39 IAmb IAmb 19 06 50.0
comp=Z,241nm,0.9s
PRZ Przheval'sk 53.10 294 IAmb IAmb 19 06 52.0
comp=Z,230nm,1.0s
KUU Kurty 53.26 296 *eP* **P** **19 06 50.1 -0.5**

KUU MLR MLR
comp=Z,3μm,17.0s
KUU Kurty 53.26 296 *eP* **P 19 06 50.1 -0.5**
KUU LR LR 19 30 27.5
comp=Z,3μm,16.8s
ARTI Arti 53.34 317 LR LR 19 32 21.3
comp=Z,9μm,20.1s,baz=42,slow=39
ARTI Arti 53.34 317 P **P 19 06 49.8 -1.1**
ARTI Arti 53.34 317*c iP* **P 19 06 50.1 -0.8**
ARTI *PP **sP** 19 07 10.4 +0.8
ARTI 19 07 57.1
ARTI S **S** **19 14 19.1 +0.2**
ARTI 19 16 34.3
ARTI SS **SS** **19 17 54.4 -4.0**
ARTI pmax pmax
comp=Z,305nm,0.9s
ARTI MLR MLR
comp=Z,9μm,20.0s
MDOK Medeo 53.37 295 *eP* **P 19 06 50.8 -0.8**
MDOK *eS* **S** **19 14 19.5 -0.5**
MDOK Medeo 53.37 295 *eP* **P 19 06 50.8 -0.8**
MDOK *eS* **S** **19 14 19.6 -0.5**
MDOK LR LR 19 30 35.2
EGMT Eagleton 53.38 57 IAMs_20 IAMs_20 19 28 16.4
comp=Z,4μm,22.0s
AAA Alma-Ata 53.41 295 *eP* **P 19 06 51.2 -0.5**
AAA pmax pmax
comp=Z,257nm,1.2s
AAA MLR MLR
comp=Z,6μm,15.0s
AAA Alma-Ata 53.41 295 *eP* **P 19 06 51.2 -0.5**
comp=Z,257nm,1.2s
AAA LR LR 19 30 33.5
comp=Z,6μm,14.7s
SUMG Summit 53.49 7 P **P 19 06 52.6 +0.3**
SUMG Summit 53.49 7 *i P* **P 19 06 51.2 -1.0**
SUMG IAmb IAmb 19 06 55.1
comp=Z,636nm,0.9s
TNSS Tian-Shan 53.51 295 *eP* **P 19 06 51.9 -1.0**
TNSS Tian-Shan 53.51 295 *eP* **P 19 06 52.0 -1.0**
LKP Lekhapani 53.58 268 *eP* P 19 06 45.6 -7.5
LKP IAmb IAmb 19 07 35.0
comp=Z,23nm,0.6s
LKP *eS* **S** **19 14 21.4 -1.5**
TNCH TengChong 53.71 264 P **P** **19 06 55.3 +1.0**
TNCH sP sP 19 07 11.8 -1.2
TNCH PcP **PcP** **19 08 01.1 +1.2**
TNCH PP **PP** **19 08 57.4 +2.1**
TNCH ScP **ScP** **19 11 57.3 +3.8**
TNCH S **S** **19 14 26.3 +1.3**
TNCH ScS **ScS** **19 16 38.8 -0.8**
TNCH pmax pmax
comp=Z,170nm,0.9s
TNCH pmax pmax
comp=Z,1μm,3.5s
TNCH LR LR
comp=Z,2μm,19.3s
TNCH LR LR
comp=Z,1μm,17.6s
TNCH LR LR
comp=Z,4μm,21.5s
MPK Martis Peak 53.78 71 IAmb IAmb 19 07 34.4
comp=Z,173nm,1.2s
KTK1 Kautokeino 53.81 342 *eP* **P 19 06 54.0 -0.2**
JETT Jettan, Norway 53.83 344 *eP* **P 19 06 54.1 -0.3**
JRSC Jasper Ridge 53.83 74 IAmb IAmb 19 07 12.4
comp=Z,95nm,1.1s
SAATT Saattut 53.84 13 *i P* **P 19 06 54.2 -0.1**
TARG Taragay, Kyrgy 53.93 293 IAmb IAmb 19 07 10.4
comp=Z,112nm,0.9s
HLID Hailey 53.97 64 IAMs_20 IAMs_20 19 26 45.1
comp=Z,2μm,21.0s
WELL Weller Preserv 53.98 72 IAMs_20 IAMs_20 19 26 40.5
comp=Z,2μm,20.0s
TRO Tromso 54.00 344 *eP* **P 19 06 55.1 -0.4**
PNTR Pine Nut 54.17 71 IAmb IAmb 19 07 15.7
comp=Z,111nm,0.8s
MHC Mount Hamilton 54.21 74 IAmb IAmb 19 07 15.7
comp=Z,166nm,1.6s
DAV Davao City (W) 54.28 224 P **P** **19 07 00.3 +2.0**
comp=Z,145nm,0.4s,baz=62,slow=1.9,SNR=11
DAV LR LR 19 31 30.9
comp=Z,953nm,18.7s,baz=54,slow=37
comp=Z,145nm,0.4s
DAV Davao City (W) 54.28 224 P **P** **19 07 00.1 +1.8**
DAV Davao City (W) 54.28 224 P **P** **19 07 00.8 +2.5**
TKM2 Tokmak 2 54.32 296 P **P** **19 06 57.8 -0.7**
SNR=69
BOOM Boomskoye usch 54.43 295 IAmb IAmb 19 07 03.4
comp=Z,252nm,1.0s
ULHL Ulahol 54.43 295 P **P** **19 06 59.5 +0.2**
SNR=130
SGDS Sogindy 54.48 297 *eP* **P** **19 06 59.0 -0.5**
SAQQ Saqqaq 54.54 13 *i P* **P** **19 06 59.2 -0.2**
ADZR Andozero 54.61 333*c iP* **P** **19 06 59.5 -0.5**
ADZR S **S** **19 14 35.7 -0.1**
ADZR SS **SS** **19 18 18.4 +0.3**
ADZR pmax pmax
comp=Z,634nm,0.8s
ADZR MLR MLR
comp=Z,8μm,19.0s
LSA Lhasa 54.65 273 IAmb IAmb 19 07 03.8
comp=Z,152nm,0.8s
LSA IAMs_20 IAMs_20 19 32 41.8
comp=Z,3μm,21.0s
LSA Lhasa 54.65 273 P **P** **19 06 58.8 -2.6**
LSA pmax pmax
comp=Z,190nm,0.8s
LSA LR LR
comp=Z,2μm,17.3s
LSA LR LR
comp=Z,2μm,15.9s
LSA LR LR
comp=Z,3μm,20.0s
LSA Lhasa 54.65 273 P **P** **19 07 02.4 +1.0**
USP Ospenovka 54.67 297 P **P** **19 07 00.3 -0.5**
SNR=257
CHMS Chumysh 54.72 296 P **P** **19 07 00.6 -0.7**
SNR=94
KBK Karagaybulak 54.85 296 P **P** **19 07 01.9 -0.5**
SNR=124
YHB Horse Butte 54.86 61 IAmb IAmb 19 07 29.4
comp=Z,62nm,0.8s
FRU1 Bishkek 54.91 296 IAmb IAmb 19 07 04.1
comp=Z,195nm,0.8s
JORH JORHAT 54.97 268 *eP* **P** **19 06 58.4 -4.7**
JORH IAmb IAmb 19 07 07.8
comp=Z,40nm,1.1s
ITAN ITANAGAR 54.99 269 *eP* P 19 06 57.8 -5.5
ITAN IAmb IAmb 19 07 06.8
comp=Z,31nm,0.6s
ITAN *eS* **S** **19 14 38.8 -3.0**
GDH Godhavn 55.01 14 *i P* **P** **19 07 03.2 +0.3**
YMR Madison River 55.03 61 IAmb IAmb 19 07 38.0
comp=Z,75nm,1.0s
BBGB Big Mountain B 55.09 74 IAmb IAmb 19 07 22.4
comp=Z,210nm,1.1s
AAK Ala-Archa 55.11 296 P **P** **19 07 03.7 -0.5**
SNR=212
AAK Ala-Archa 55.11 296 LR LR 19 32 03.2
comp=Z,10μm,19.0s,baz=34,slow=38
AAK Ala-Archa 55.11 296 P **P** **19 07 03.4 -0.8**
AAK IAmb IAmb 19 07 05.9
comp=Z,276nm,1.2s
AAK Ala-Archa 55.11 296 *i P* **P** **19 07 03.5 -0.7**
SNR=268
AAK Ala-Archa 55.11 296 *i P* **P** **19 07 03.7 -0.5**
AAK pmax pmax
comp=Z,187nm,1.1s
AAK MLR MLR
comp=Z,9μm,18.0s
AAK Ala-Archa 55.11 296 P **P** **19 07 02.4 -1.8**
AAK S **S** **19 14 37.5 -5.9**
AAK Ala-Archa 55.11 296 P **P** **19 07 03.9 -0.3**
AAK sP **pP** **19 07 17.3 -0.1**
AAK PcP **PcP** **19 08 05.6 +0.6**
NRN Naryn 55.12 294 IAmb IAmb 19 08 07.6
comp=Z,165nm,1.2s
MOKO MOKOCHONG 55.13 268 *eP* P 19 06 58.4 -6.1
MOKO IAmb IAmb 19 07 08.4
comp=Z,18nm,0.9s
MOKO *eS* **S** **19 14 40.6 -3.4**
YNM Yellowstone No 55.13 60 IAmb IAmb 19 07 50.9
comp=Z,88nm,1.2s
YNR Norris Junctio 55.15 60 IAmb IAmb 19 07 10.7
comp=Z,114nm,1.3s
KIRV Kirov 55.19 323 LR LR 19 33 47.0
comp=Z,12μm,19.0s,baz=40,slow=39
KIRV Kirov 55.19 323*c iP* **P** **19 07 04.0 -0.2**
YFT Old Faithful 55.25 61 P **P** **19 07 06.8 +1.5**
YFT IAmb IAmb 19 07 09.3
comp=Z,53nm,0.7s
YNE Yellowstone No 55.30 60 P **P** **19 07 05.8 +0.2**
NVAR Mina Array Bea 55.36 71 P **P** **19 07 07.5 +1.4**
comp=Z,24nm,0.8s,baz=296,slow=6.8,SNR=115
NVAR LR LR 19 27 33.0
comp=Z,3μm,21.8s,baz=292,slow=32
NVAR PKPPKP **P'P'df** **19 37 13.3 -0.9**
comp=Z,2.6nm,0.9s,baz=167,slow=3.9,SNR=5.1
NVAR P4KPbc 19 44 24.2
comp=Z,1.0nm,0.7s,baz=300,slow=4.2,SNR=5.1
comp=Z,24nm,0.8s
LHV Little Huntoon 55.37 71 IAmb IAmb 19 07 42.4
comp=Z,154nm,1.1s
HULI Fort Hunter Li 55.37 75 IAmb IAmb 19 07 32.7
comp=Z,71nm,0.8s
UCH Uchtor 55.38 296 P **P** **19 07 05.9 -0.6**
SNR=74
ILULI Ilulissat 55.39 13 *i P* **P** **19 07 04.0 -1.5**
H17A Grant Village 55.42 61 IAmb IAmb 19 07 27.8
comp=Z,74nm,0.9s
ELK Elko 55.45 67 LR LR 19 28 04.6
comp=Z,4μm,21.6s,baz=326,slow=33
ELK Elko 55.45 67 IAMs_20 IAMs_20 19 27 08.8
comp=Z,5μm,22.0s
EKS2 Erkin-Say 55.47 297 P **P** **19 07 06.4 -0.4**
SNR=220
PMPB Monarch Peak 55.48 74 IAmb IAmb 19 07 57.3
comp=Z,74nm,1.0s
JNW Jan Mayen West 55.49 356 *eP* **P** **19 07 08.6 +2.4**
JMIC Jan Mayen 55.53 356 LR LR 19 29 47.7
comp=Z,2μm,20.3s,baz=30,slow=35
FLWY Flagg Ranch 55.58 61 IAmb IAmb 19 07 42.8
comp=Z,87nm,0.9s
RLMT Red Lodge 55.60 59 IAmb IAmb 19 07 27.8
comp=Z,117nm,1.1s
RLMT IAMs_20 IAMs_20 19 31 20.1
comp=Z,2μm,21.0s
Q09A Carvers 55.70 70 IAmb IAmb 19 08 00.5
comp=Z,94nm,1.0s
KOHI KOHIMA 55.82 268 *eP* P 19 07 03.7 -5.7
KOHI IAmb IAmb 19 07 13.7
comp=Z,20nm,0.6s
KOHI *eS* **S** **19 14 48.8 -4.4**
TEZP TEZPUR 55.93 270 *eP* P 19 07 04.1 -6.0
TEZP IAmb IAmb 19 07 13.9
comp=Z,28nm,1.0s
TEZP *eS* **S** **19 14 53.0 -1.4**
LAO LASA Array 56.05 56 IAmb IAmb 19 07 13.3
comp=Z,154nm,1.1s
LAO IAMs_20 IAMs_20 19 30 13.9
comp=Z,4μm,22.0s
HVU Hansel Valley 56.07 64 IAmb IAmb 19 07 39.4
comp=Z,115nm,1.3s
STEI Steigen 56.12 345 *eP* **P** **19 07 10.8 0.0**
LOF Lofoten 56.19 346 *eP* **P** **19 07 11.6 +0.2**
SCO Scoresbysund 56.27 1 IAmb IAmb 19 07 14.2
comp=Z,116nm,0.9s
SCO Scoresbysund 56.27 1 *i P* **P** **19 07 12.2 +0.3**
AHID Auburn Hatcher 56.28 62 IAMs_20 IAMs_20 19 29 34.2
comp=Z,2μm,21.0s
TIN Tinemaha, Big 56.36 72 IAmb IAmb 19 08 13.5
comp=Z,84nm,0.8s
SPUT South Promonto 56.58 64 IAmb IAmb 19 07 43.0
comp=Z,130nm,1.3s
IMP Imphal 56.58 267 *eP* P 19 07 08.5 -6.3
IMP IAmb IAmb 19 07 16.7
comp=Z,32nm,0.7s
IMP *eS* **S** **19 15 00.7 -2.5**
DZA Taraz 56.61 298 *eP* **P** **19 07 14.2 -0.5**
DZA Taraz 56.61 298 *eP* **P** **19 07 14.2 -0.5**
FAUS Fauske 56.62 345 *eP* **P** **19 07 14.5 +0.2**
FAUS IAmb IAmb 19 07 15.6
comp=Z,312nm,0.7s
FAUS IAMs_20 IAMs_20 19 35 53.0
comp=Z,2μm,14.6s
KLMR Klimovskoe 56.69 330*c iP* **P** **19 07 14.6 -0.4**
KLMR S **S** **19 14 59.4 -4.1**
KLMR pmax pmax
comp=Z,659nm,0.9s
KLMR MLR MLR
comp=Z,7μm,15.0s
VES Vestal, Richgr 56.73 73 IAmb IAmb 19 07 33.7
comp=Z,281nm,1.6s
MORE Moh 56.82 266 IAmb IAmb 19 07 18.8
comp=Z,93nm,0.9s
MORE IAMs_20 IAMs_20 19 35 45.7
comp=Z,3μm,18.0s
ARSB Arslanbob 56.83 296 IAmb IAmb 19 07 19.8
comp=Z,126nm,0.8s
HWUT Hardware Ranch 56.84 64 IAmb IAmb 19 07 19.9
comp=Z,74nm,0.8s
HWUT IAMs_20 IAMs_20 19 28 40.1
comp=Z,2μm,22.0s
KK31 Karatay Array 56.89 299 IAmb IAmb 19 07 19.3
comp=Z,144nm,0.9s
KK31 Karatay Array 56.89 299 *i P* **P** **19 07 15.7 -1.0**
KKAR Karatay Array 56.89 299 P **P** **19 07 15.1 -1.6**
KKAR Karatay Array 56.89 299 P **P** **19 07 15.1 -1.6**
GUWA GUWAHATI 56.91 270 *eP* P 19 07 11.4 -5.6
GUWA IAML 19 07 18.2
comp=Z,29nm,0.6s
GUWA *eS* **S** **19 15 03.0 -4.3**
KSH2 Kashi 56.95 292 P **P** **19 07 17.3 -0.1**
KSH2 S **S** **19 15 05.3 -2.6**
KSH2 pmax pmax
comp=Z,210nm,0.9s
KSH2 LR LR
comp=Z,5μm,17.5s
KSH2 LR LR
comp=Z,4μm,19.2s
KSH2 LR LR
comp=Z,7μm,18.6s
FRB Frobisher Bay 57.00 24 LR LR 19 33 13.4
comp=Z,2μm,21.9s,baz=326,slow=38
BW06 Bodir Array 57.09 61 IAmb IAmb 19 07 24.0
comp=Z,146nm,1.3s
PD31 Pinedale Array 57.09 61 IAmb IAmb 19 07 24.0
comp=Z,132nm,1.2s
PDAR Pinedale Array 57.09 61 P **P** **19 07 19.0 +0.6**
comp=Z,37nm,0.7s,baz=321,slow=2.9,SNR=201
PDAR PKPPKP **P'P'df** **19 37 12.6 +0.4**
comp=Z,2.5nm,1.0s,baz=64,slow=3.4,SNR=8.9
comp=Z,37nm,0.7s
PDAR Pinedale Array 57.09 61 P **P** **19 07 18.5 +0.1**
DUG Dugway, Tooele 57.16 66 IAmb IAmb 19 07 47.2
comp=Z,87nm,1.0s
DUG IAMs_20 IAMs_20 19 28 30.0
comp=Z,2μm,22.0s
ISA Isabella, Lake 57.21 73 IAMs_20 IAMs_20 19 29 31.6
comp=Z,2μm,19.0s
SHL Shillong 57.26 269 IAmb IAmb 19 07 20.7
comp=Z,190nm,0.8s
SHL Shillong 57.26 269 *eP* P 19 07 13.8 -6.0
SHL IAmb IAmb 19 07 20.9
comp=Z,33nm,0.8s
SHL Shillong 57.26 269 P **P** **19 07 19.5 -0.2**
SNR=86
BRLS Boroldav 57.29 299 *eP* **P** **19 07 20.4 +0.8**
BRLS Boroldav 57.29 299 *eP* **P** **19 07 20.4 +0.8**
SFJD Kangerlussuaq 57.52 14 LR LR 19 33 21.2
comp=Z,3μm,21.1s,baz=346,slow=37
SFJD Kangerlussuaq 57.52 14 P **P** **19 07 20.1 -0.7**
SFJD Kangerlussuaq 57.52 14 P **P** **19 07 20.1 -0.7**
SFJD pmax pmax
comp=Z,348nm,1.2s
SFJD Kangerlussuaq 57.52 14 *i P* **P** **19 07 20.1 -0.7**
VAGH Vaagaholmen 57.53 345 *eP* **P** **19 07 21.1 +0.3**
FURC Furnace Creek, 57.55 71 IAmb IAmb 19 07 49.8
comp=Z,134nm,1.0s
TPNV Topopah Spring 57.55 71 IAmb IAmb 19 07 49.8
comp=Z,95nm,1.2s
TPNV IAMs_20 IAMs_20 19 29 54.7
comp=Z,3μm,20.0s
CLC China Lake 57.60 72 IAmb IAmb 19 07 39.6
comp=Z,117nm,1.4s
AB31 Akbulak array 57.70 310 IAmb IAmb 19 07 25.5
comp=Z,156nm,1.2s
AB31 Akbulak array 57.70 310 *i P* **P** **19 07 21.8 -0.5**
ABKAR Akbulak array 57.70 310 P **P** **19 07 20.8 -1.5**
AKTO Aktyubinsk 57.71 312 LR LR 19 35 12.5
comp=Z,7μm,19.5s,baz=43,slow=39
AKTO PKPPKP 19 37 11.8
comp=Z,1.8nm,0.8s,baz=266,slow=3.8,SNR=4.7
AKTO Aktyubinsk 57.71 312 P **P** **19 07 22.2 -0.2**
KONS Konsvik 57.77 345 *eP* **P** **19 07 21.4 -1.0**
IUG luzhnay 57.81 299*c iP* **P** **19 07 22.7 -0.6**
IUG *eS* **S** **19 15 18.7 -0.4**
IUG pmax pmax
comp=Z,94nm,0.7s
IUG luzhnay 57.81 299⇑ *iP* **P** **19 07 22.8 -0.6**
comp=Z,94nm,0.7s
IUG *eS* **S** **19 15 18.7 -0.4**
GWY Greenwater Val 57.86 71 IAmb IAmb 19 07 41.5
comp=Z,136nm,1.3s
MOR8 Moi Rana 57.87 344 *eP* **P** **19 07 22.2 -1.0**
PRN Pahroc Range 57.90 69 IAmb IAmb 19 07 52.4
comp=Z,67nm,0.9s
QSM Queen of Sheba 57.91 72 IAmb IAmb 19 07 41.8
comp=Z,102nm,1.2s
TPO Tropico Hills 57.91 74 IAmb IAmb 19 07 52.0
comp=Z,95nm,1.2s
GTK Tadong 57.91 273 *eP* P 19 07 18.2 -6.1
GTK IAmb IAmb 19 07 27.6
comp=Z,35nm,0.7s
CHM Chimkent 57.92 299 *eP* **P** **19 07 23.4 -0.5**
CHM pmax pmax
comp=Z,161nm,1.1s
CHM MLR MLR
comp=Z,2μm,17.0s
CHM Chimkent 57.92 299 *eP* **P** **19 07 23.5 -0.5**
comp=Z,161nm,1.1s
CHM LR LR 19 33 18.1
comp=Z,2μm,16.9s
MPU Maple Canyon 57.93 65 IAmb IAmb 19 07 52.6
comp=Z,119nm,1.2s
CCCA Chr Cany lake 57.94 72 IAmb IAmb 19 07 27.4
comp=Z,86nm,0.8s
STOK Stokkvaagen 57.94 345 *eP* **P** **19 07 24.0 +0.4**
RABL Rabaul 57.94 190 P **P** **19 07 25.2 +0.8**
BSUT Blindstream Ca 58.03 64 IAmb IAmb 19 07 53.6
comp=Z,304nm,1.8s
LEIR Leirfjorden 58.13 345 *eP* **P** **19 07 25.1 +0.1**
BAKI Biak 58.20 209 P **P** **19 07 28.3 +2.1**
comp=Z,5μmcomp=Z,523nm,1.0s
CHTO Chiang Mai 58.24 258 P **P** **19 07 27.1 +0.6**
CHTO IAmb IAmb 19 07 29.3
comp=Z,165nm,0.7s
CHTO IAMs_20 IAMs_20 19 34 38.3
comp=Z,4μm,20.0s
CHTO Chiang Mai 58.24 258 P **P** **19 07 27.1 +0.6**
CHTO pmax pmax
comp=Z,165nm,0.7s
CHTO MLR MLR
comp=Z,4μm,20.0s
CHTO Chiang Mai 58.24 258 P **P** **19 07 28.0 +1.5**
CHTO P **P** **19 07 28.0 +1.5**
CHTO S **S** **19 15 22.9 -2.0**
CHTO S **S** **19 15 22.9 -2.0**
CHTO Chiang Mai 58.24 258 P **P** **19 07 27.5 +1.0**
comp=Z,4μmcomp=Z,4μmcomp=Z,281nm,1.1s
CHTO pP **pP** **19 07 33.2 -6.5**
comp=Z,4μmcomp=Z,4μmcomp=Z,281nm,1.1s
JAY Jayapura 58.26 203 P **P** **19 07 28.2 +1.6**
comp=Z,53nm,0.9s,baz=305,slow=0.3,SNR=7.0
JAY LR LR 19 29 16.1
comp=Z,920nm,21.9s,baz=12,slow=33
comp=Z,53nm,0.9s
SHOC Shoshone, Teco 58.29 71 IAmb IAmb 19 08 19.8
comp=Z,102nm,1.1s
ULM Lac du Bonnet 58.33 47 P **P** **19 07 27.1 +0.3**
comp=Z,410nm,1.3s,baz=314,slow=6.7,SNR=111
ULM PcP **PcP** **19 08 18.1 +0.8**
comp=Z,51nm,0.8s,baz=307,slow=4.5,SNR=3.9
ULM LR LR 19 33 52.8
comp=Z,5μm,20.0s,baz=318,slow=37
ULM PKPPKP **P'P'df** **19 37 12.3 +1.7**
comp=Z,6.4nm,0.9s,baz=148,slow=3.8,SNR=4.9
comp=Z,410nm,1.3s
ULM Lac du Bonnet 58.33 47 IAmb IAmb 19 07 28.7
comp=Z,162nm,1.0s
ULM Lac du Bonnet 58.33 47*c iP* **P** **19 07 26.9 +0.2**
MDND Maddock 58.40 51 IAMs_20 IAMs_20 19 33 35.2
comp=Z,3μm,21.0s
PASC Pasadena Art C 58.44 74 IAmb IAmb 19 07 45.1
comp=Z,206nm,1.9s
GENI Genyem 58.46 204 P **P** **19 07 29.7 +1.7**
comp=Z,4μmcomp=Z,273nm,1.0s
MWC Mount Wilson 58.47 74 IAmb IAmb 19 07 45.8
comp=Z,95nm,1.2s
TCRU Three Creeks R 58.48 67 IAmb IAmb 19 08 21.6
comp=Z,67nm,0.9s
EVN Everest 58.51 275 IAmb IAmb 19 07 30.4
comp=Z,152nm,0.7s
CM31 Chiang Mai Arr 58.52 258 IAmb IAmb 19 07 36.0
comp=Z,150nm,0.8s
CM31 Chiang Mai Arr 58.52 258 P **P** **19 07 30.1 +1.7**
SNR=81
CMAR Chiang Mai Arr 58.52 258 P **P** **19 07 30.1 +1.7**
comp=Z,104nm,0.8s,baz=27,slow=6.9,SNR=516
CMAR PcP **PcP** **19 08 20.4 +2.0**
comp=Z,37nm,0.9s,baz=6.7,slow=1.7,SNR=4.8
CMAR ScP **ScP** **19 12 18.6 +4.0**
comp=Z,4.8nm,0.8s,baz=25,slow=4.4,SNR=5.7
CMAR LR LR 19 35 07.0
comp=Z,3μm,19.2s,baz=40,slow=38
CMAR PKPPKP **P'P'df** **19 37 11.6 +5.3**
comp=Z,1.9nm,0.9s,baz=226,slow=4.2,SNR=5.5
CMAR P4KPbc 19 44 38.5
comp=Z,4.5nm,0.9s,baz=16,slow=4.2,SNR=29
comp=Z,104nm,0.8s
CMAR Chiang Mai Arr 58.52 258 P **P** **19 07 29.6 +1.2**
CMAR Chiang Mai Arr 58.52 258 *i P* **P** **19 07 30.1 +1.7**
CMAR pmax pmax
comp=Z,109nm,0.8s
RDMU Red Mountain 58.64 63 IAmb IAmb 19 07 35.3
comp=Z,191nm,1.3s
TMUT Trail Mountain 58.67 65 IAmb IAmb 19 08 21.6
comp=Z,66nm,0.9s
K22A Casper 58.74 60 IAmb IAmb 19 07 48.6
comp=Z,159nm,1.4s
P17A Butcher Ranch, 58.80 65 IAmb IAmb 19 07 58.7
comp=Z,218nm,1.7s
SRPI Serui, Papua 58.81 209 P **P** **19 07 31.6 +1.2**
AGT Agartala 58.90 269 *eP* **P** **19 07 26.4 -4.5**
AGT IAmb IAmb 19 07 42.6
comp=Z,35nm,1.5s
AGT *eS* **S** **19 15 29.6 -3.8**
SAIH SAIHA 58.92 266 *eP* P 19 07 25.8 -5.6
SAIH IAmb IAmb 19 07 33.0
comp=Z,35nm,0.2s
SAIH *eS* **S** **19 15 29.7 -4.3**
P18A Preston Nutter 58.95 64 IAmb IAmb 19 08 22.8
comp=Z,102nm,1.1s
RSSD Black Hills 58.95 57 P **P** **19 07 31.5 +0.1**
RSSD IAmb IAmb 19 07 33.7
comp=Z,175nm,0.8s
RSSD Black Hills 58.95 57 IAMs_20 IAMs_20 19 31 26.8
comp=Z,4μm,22.0s
RSSD Black Hills 58.95 57 P **P** **19 07 31.5 +0.1**
RSSD pmax pmax
comp=Z,175nm,0.9s
RSSD MLR MLR
comp=Z,4μm,22.0s
RSSD Black Hills 58.95 57 P **P** **19 07 32.2 +0.8**
RKPI Ransiki, Papua 59.09 211 P **P** **19 07 34.3 +2.0**
comp=Z,137nm,0.9s
MYLDM Lahad Datu 59.09 231 P **P** **19 07 35.2 +2.8**
comp=Z,4μmcomp=Z,4μmcomp=Z,198nm,1.2s
SRU San Rafael Swe 59.17 65 IAmb IAmb 19 08 00.9
comp=Z,111nm,0.9s
LCMT Little Creek M 59.19 68 IAmb IAmb 19 08 01.4
comp=Z,80nm,1.1s
BELO BELONIA 59.27 268 *eP* P 19 07 26.5 -7.1
BELO *eS* **S** **19 15 35.8 -2.3**
TNTI Ternate 59.30 219 P **P** **19 07 35.0 +1.2**
TNTI IAmb IAmb 19 07 36.3
comp=Z,142nm,1.0s
TNTI Ternate 59.30 219 P **P** **19 07 35.0 +1.2**
comp=Z,2μmcomp=Z,131nm,0.9s
PKCU Pink Cliffs 59.39 67 IAmb IAmb 19 07 38.7
comp=Z,55nm,1.0s
KKM Kota Kinabalu 59.42 234 P **P** **19 07 36.9 +2.1**
KKM Kota Kinabalu 59.42 234 P **P** **19 07 37.2 +2.4**
comp=Z,4μmcomp=Z,232nm,1.4s
KNB Kanab 59.42 68 IAmb IAmb 19 08 25.3
comp=Z,126nm,1.0s
SWI Sorong 59.42 215 P **P** **19 07 36.9 +2.3**
comp=Z,5μmcomp=Z,344nm,1.2s

SIJI Sorong 59.42 215 P **P** **19 07 36.2 +1.5**
comp=Z,250nm,1.0s,baz=7.5,slow=7.6,SNR=56
SIJI LR LR 19 32 25.1
comp=Z,616nm,19.7s,baz=24,slow=35
comp=Z,250nm,1.0s
SIJI Sorong 59.42 215 P **P** **19 07 36.4 +1.7**
comp=Z,2μmcomp=Z,4μmcomp=Z,303nm,1.1s
ALCI Alchi Leh 59.57 287 *e*P P 19 07 30.9 -5.0
ALCI IAmb IAmb 19 07 43.6
comp=N,24nm,0.7s
ALCI *e*S **S** **19 15 37.5 -5.1**
BRDH Bariadhala 59.58 267 LR LR 19 37 27.4
comp=N,3μm,19.2s,baz=39,slow=40
O20A White River Ci 59.66 63 IAmb IAmb 19 08 22.3
comp=Z,91nm,1.0s
EPLO Experimental L 59.70 46 IAmb IAmb 19 07 37.9
comp=Z,168nm,0.9s
DANC Danby, Needles 59.70 72 IAmb IAmb 19 08 07.4
comp=Z,134nm,1.4s
DNR Dunn Ranch,Anz 59.77 74 IAmb IAmb 19 07 59.1
comp=Z,158nm,1.5s
AGMN Agassiz Nation 59.78 49 IAmb IAmb 19 07 38.5
comp=Z,150nm,0.9s
AGMN IAMs_20 IAMs_20 19 35 03.6
comp=Z,3μm,21.0s
NSS Namsos 59.78 345 *e*P **P** **19 07 36.9 +0.4**
FINES FINESS Array B 59.81 337 P **P** **19 07 36.5 -0.2**
comp=Z,493nm,0.6s,baz=31,slow=8.2,SNR=2266
FINES PKPPKP **P'P'df** **19 37 10.1 +1.0**
comp=Z,5.5nm,0.8s,baz=195,slow=5.1,SNR=5.9
comp=Z,493nm,0.6s
PFO Pinyon Flats O 59.83 73 LR LR 19 30 15.6
comp=Z,2μm,20.8s,baz=298,slow=33
PFO Pinyon Flats O 59.83 73 *e*P **P** **19 07 37.1 -0.4**
PFO Pinyon Flats O 59.83 73 *c i*P **P** **19 07 37.6 +0.1**
PFO pmax pmax
comp=Z,28nm,0.9s
HAYD Hayden 59.90 62 IAmb IAmb 19 07 58.3
comp=Z,95nm,1.4s
HMU Henry Mountain 59.90 66 IAmb IAmb 19 08 06.0
comp=Z,152nm,0.9s
NUUK Nuuk 59.99 16 *i* P **P** **19 07 38.1 +0.2**
WAMI Wamena 60.07 205 P **P** **19 07 42.5 +3.5**
comp=Z,3μmcomp=Z,3μmcomp=Z,184nm,0.8s
U15A North Rim 60.14 68 IAmb IAmb 19 08 28.1
comp=Z,78nm,1.1s
IRM Iron Mountain 60.19 72 IAmb IAmb 19 07 57.6
comp=Z,134nm,1.4s
PUL Pulkovo 60.19 334 *de*P **P** **19 07 39.9 +0.6**
PUL pmax pmax
comp=Z,1μm,1.0s
PUL MLR MLR
comp=Z,6μm,19.0s
ANGG Ammassalik, Gr 60.37 9 P **P** **19 07 39.7 -0.8**
ANGG Ammassalik, Gr 60.37 9 *i* P **P** **19 07 39.1 -1.4**
PV23 Carpenter Ridg 60.46 64 IAmb IAmb 19 08 09.1
comp=Z,170nm,0.9s
PV14 Lion Creek, Pa 60.52 65 IAmb IAmb 19 08 10.1
comp=Z,124nm,1.3s
PV22 Blue Mesa, Par 60.52 64 IAmb IAmb 19 08 10.1
comp=Z,222nm,1.5s
BELG Belogornoye 60.54 320 PKPPKP 19 37 06.2
comp=Z,9.7nm,0.9s,baz=171,slow=4.3,SNR=5.7
BELG LR LR 19 37 09.4
comp=Z,15μm,18.1s,baz=34,slow=39
BELG Belogornoye 60.54 320 *c i*P **P** **19 07 41.0 -0.9**
BELG pmax pmax
comp=Z,120nm,1.0s
BELG MLR MLR
comp=Z,2μm,17.0s
PV04 Paradox Valley 60.56 64 IAmb IAmb 19 08 10.4
comp=Z,189nm,1.4s
PV16 Nyswonger Mesa 60.62 65 IAmb IAmb 19 08 10.7
comp=Z,188nm,1.2s
PV11 David Mesa, Pa 60.65 65 IAmb IAmb 19 08 10.3
comp=Z,176nm,1.2s
CBX Cerro Bola 60.66 75 IAmb IAmb 19 07 46.4
comp=Z,69nm,1.0s
PV18 Skein Mesa, Pa 60.67 65 IAmb IAmb 19 08 10.4
comp=Z,231nm,1.1s
PV07 Paradox Valley 60.67 64 IAmb IAmb 19 08 10.3
comp=Z,93nm,1.2s
PV12 Saucer Basin, 60.67 64 IAmb IAmb 19 08 11.4
comp=Z,244nm,1.2s
PV05 Paradox Valley 60.69 65 IAmb IAmb 19 07 46.4
comp=Z,94nm,0.7s
PV03 Paradox Valley 60.70 65 IAmb IAmb 19 08 10.5
comp=Z,102nm,1.0s
PV13 Radium Mtn., P 60.78 65 IAmb IAmb 19 08 11.2
comp=Z,169nm,1.2s
CHGR Chuyangaron 60.79 296 P **P** **19 07 42.7 -1.1**
CHGR Chuyangaron 60.79 296 *c i*P **P** **19 07 42.8 -1.1**
CHGR pmax pmax
comp=Z,462nm,0.9s
CHGR MLR MLR
comp=Z,23μm,19.0s
PV02 Paradox Valley 60.79 64 IAmb IAmb 19 08 12.1
comp=Z,187nm,1.1s
PV15 Paradox Valley 60.83 64 IAmb IAmb 19 08 30.1
comp=Z,159nm,1.3s
BLYC Blythe 60.83 72 IAmb IAmb 19 08 30.5
comp=Z,54nm,0.9s
YUH Yuha Desert 60.84 74 P **P** **19 07 44.3 0.0**
JOSI Joshimath 60.87 283 *e*S **S** **19 15 55.8 -3.2**
KLP Kalpa 60.91 284 *e*P P 19 07 40.2 -5.0
KLP IAmb IAmb 19 07 47.3
comp=Z,24nm,0.8s
KLP *e*S **S** **19 15 55.9 -3.9**
PV01 Paradox Valley 60.93 64 P **P** **19 07 46.0 +0.9**
FAKI Fak Fak 61.02 213 P **P** **19 07 46.7 +1.1**
FAKI Fak Fak 61.02 213 P **P** **19 07 47.3 +1.7**
comp=Z,3μmcomp=Z,241nm,1.4s
JMUI Jamui 61.11 273 *e*P **P** **19 07 42.4 -3.8**
JMUI IAmb IAmb 19 07 47.5
comp=Z,29nm,0.8s
TARAI Tarakan 61.15 231 P **P** **19 07 48.0 +1.5**
comp=Z,4μmcomp=Z,269nm,0.9s
TSSA Tissa 61.16 287 *e*P P 19 07 40.2 -6.5
TSSA IAmb IAmb 19 07 48.3
comp=Z,24nm,1.1s
TSSA *e*S **S** **19 15 58.8 -3.8**
GTOI Gorontalo 61.16 224 P **P** **19 07 47.2 +0.7**
comp=Z,3μmcomp=Z,153nm,1.0s
GLA Glamis 61.17 73 IAmb IAmb 19 08 14.4
comp=Z,103nm,1.2s
SUSD Miller 61.20 53 IAmb IAmb 19 07 48.2
comp=Z,182nm,1.0s
SUSD IAMs_20 IAMs_20 19 36 35.4
comp=Z,3μm,20.0s
PTH Pithoragarh 61.21 282 *e*P P 19 07 41.3 -5.7
PTH IAmb IAmb 19 07 51.0
comp=Z,40nm,0.3s
PTH *e*S **S** **19 15 59.8 -3.5**
ISCO Idaho Springs 61.28 61 IAmb IAmb 19 08 15.1
comp=Z,105nm,1.1s
ISCO IAMs_20 IAMs_20 19 33 31.0
comp=Z,3μm,22.0s
WUAZ Wupatki 61.31 68 IAmb IAmb 19 08 15.9
comp=Z,122nm,1.4s
WUAZ IAMs_20 IAMs_20 19 31 40.0
comp=Z,4μm,20.0s
LGTI Lohaghat 61.41 281 *e*P **P** **19 07 44.3 -4.1**
LGTI IAmb IAmb 19 07 52.5
comp=Z,30nm,0.7s
LGTI *e*S **S** **19 16 01.9 -4.0**
F33A 5 Mile Ranch, 61.42 51 IAMs_20 IAMs_20 19 34 13.1
comp=Z,3μm,21.0s
MOS Moscow 61.42 327 *e*P **P** **19 07 47.1 -0.7**
MOS *e* 19 09 59.7
MOS *e*S **S** **19 16 02.9 -1.9**
MOS *e*SS **SS** **19 20 03.3 -1.8**
MOS pmax pmax
comp=Z,690nm,0.9s
MOS MLR MLR
comp=Z,4μm,17.0s
MOS MLR MLR
comp=N,3μm,18.0s
MOS MLR MLR
comp=E,3μm,18.0s
DHRM DHARAMSHALA 61.51 286 *e*P P 19 07 42.6 -6.4
DHRM IAmb IAmb 19 07 53.3
comp=Z,28nm,0.7s
DHRM *e*S **S** **19 16 01.0 -6.1**
Y14A Wickenburg 61.56 71 IAmb IAmb 19 08 17.1
comp=Z,73nm,1.2s
MVCO Mesa Verde 61.65 65 IAMs_20 IAMs_20 19 31 03.1
comp=Z,3μm,22.0s

TOLI2 Tolitoli 61.68 227 P **P** **19 07 50.9 +0.8**
MRSI Marisa 61.75 225 P **P** **19 07 52.3 +1.8**
comp=Z,3μmcomp=Z,7μmcomp=Z,609nm,1.1s
SMLA Simla 61.83 285 *e*P P 19 07 44.9 -6.1
SMLA IAmb IAmb 19 07 53.2
comp=Z,21nm,0.7s
SMLA *e*S **S** **19 16 07.0 -3.8**
KUQ Kuujjuaa 61.85 27 IAmb IAmb 19 07 51.1
comp=Z,124nm,1.3s
JMU Jammu 61.95 288 *e*P **P** **19 07 47.5 -4.2**
JMU IAmb IAmb 19 07 53.9
comp=Z,26nm,0.8s
JMU *e*S **S** **19 16 07.2 -5.1**
EYMN Ely 61.97 46 IAmb IAmb 19 07 53.3
comp=Z,191nm,0.9s
BORG Borgarnes 62.04 1 LR LR 19 33 47.9
comp=Z,1μm,20.7s,baz=355,slow=35
BORG Borgarnes 62.04 1 P **P** **19 07 52.9 +1.1**
BORG Borgarnes 62.04 1 P **P** **19 07 52.9 +1.1**
BORG pmax pmax
comp=Z,341nm,1.1s
Q24A Divide 62.14 62 IAMs_20 IAMs_20 19 34 00.4
comp=Z,3μm,21.0s
S22A 4UR Ranch, Cre 62.15 64 IAMs_20 IAMs_20 19 31 29.0
comp=Z,3μm,22.0s
BOK Bokaro 62.17 273 *e*P P 19 07 47.4 -6.0
BOK IAmb IAmb 19 07 54.3
comp=Z,18nm,0.8s
BOK *e*S **S** **19 16 12.2 -3.0**
NIL Nilore 62.20 290 P **P** **19 07 53.1 -0.4**
NIL Nilore 62.20 290 P **P** **19 07 53.1 -0.4**
NIL pmax pmax
comp=Z,487nm,0.9s
NIL MLR MLR
comp=Z,12μm,20.0s
VSU Vasula 62.26 335 *c i*P **P** **19 07 52.4 -1.0**
VSU pmax pmax
comp=Z,1μm,1.0s
VSU MLR MLR
comp=Z,5μm,18.0s
OBN Obninsk 62.28 327 LR LR 19 37 40.3
comp=Z,6μm,21.1s,baz=330,slow=39
OBN Obninsk 62.28 327 ||P **P** **19 07 53.2 -0.3**
OBN Obninsk 62.28 327 P **P** **19 07 52.5 -1.0**
OBN Obninsk 62.28 327 *c i*P **P** **19 07 52.9 -0.6**
OBN *i* 19 08 31.5
OBN *i* SS SS 19 20 26.3 +7.8
OBN pmax pmax
comp=Z,587nm,1.0s
OBN MLR MLR
comp=Z,6μm,21.0s
OBN Obninsk 62.28 327 P **P** **19 07 52.5 -1.0**
comp=Z,6μmcomp=Z,568nm,1.0s
OBN Obninsk 62.28 327 P **P** **19 07 53.0 -0.6**
OBN pP **pP** **19 08 02.9 -4.0**
OGNE Ogallala 62.28 58 IAMs_20 IAMs_20 19 32 57.0
comp=Z,2μm,22.0s
MOL Molde 62.30 346 *e*P **P** **19 07 54.3 +0.8**
TBO Thunder Bay 62.32 45 IAmb IAmb 19 07 55.2
comp=Z,122nm,1.1s
SANI Sanana 62.42 220 P **P** **19 07 55.1 +0.1**
SANI Sanana 62.42 220 P **P** **19 07 55.4 +0.4**
comp=Z,3μmcomp=Z,4μmcomp=Z,346nm,1.0s
MSAI Masohi 62.54 216 P **P** **19 07 57.6 +1.8**
comp=Z,2μmcomp=Z,187nm,1.4s
DOMB Dombas 62.58 345 *e*P **P** **19 07 55.8 +0.3**
DOMB IAmb IAmb 19 07 56.7
comp=Z,652nm,0.9s
KRAI Karang Ratu 62.70 217 P **P** **19 07 59.7 +2.8**
comp=Z,159nm,1.2s
HNR Honiara 62.72 181 LR LR 19 30 28.9
comp=Z,134nm,21.9s,baz=86,slow=31
HNR Honiara 62.72 181 IAMs_20 IAMs_20 19 30 05.8
comp=Z,3μm,22.0s
AKN Aaknes 62.75 346 *e*P **P** **19 07 57.8 +1.1**
MPSI Mapaga 62.76 227 P **P** **19 07 58.8 +1.6**
comp=Z,3μmcomp=Z,3μmcomp=Z,213nm,1.2s
LUWI Luwuk 62.78 223 P **P** **19 07 56.9 -0.5**
LUWI Luwuk 62.78 223 P **P** **19 07 57.4 0.0**
comp=Z,4μmcomp=Z,469nm,1.0s
X18A Snowflake 62.83 68 IAmb IAmb 19 08 26.1
comp=Z,86nm,1.1s
ECSD EROS Data Cent 62.85 53 IAMs_20 IAMs_20 19 34 42.0
comp=Z,4μm,22.0s
ECSD EROS Data Cent 62.85 53 IAmb IAmb 19 07 59.3
comp=Z,133nm,0.9s
SDCO Great Sand Dun 62.86 63 IAmb IAmb 19 08 18.2
comp=Z,110nm,1.6s
SDCO IAMs_20 IAMs_20 19 32 41.4
comp=Z,2μm,22.0s
NLAI Namlea 63.10 218 P **P** **19 08 00.8 +1.3**
comp=Z,3μmcomp=Z,127nm,1.0s
AAI Ambon 63.12 217 P **P** **19 08 01.0 +1.4**
comp=Z,4μmcomp=Z,434nm,1.1s
APSI Ampana 63.12 225 P **P** **19 08 01.6 +1.9**
comp=Z,4μmcomp=Z,417nm,1.1s
NB2 NORSAR Subarra 63.19 344 P **P** **19 07 59.7 +0.1**
comp=Z,564nm,0.8s,baz=23,slow=6.9
NB2 NORSAR Subarra 63.19 344 P **P** **19 07 59.7 +0.1**
NB2 AMP 19 07 59.7
comp=Z,564nm,0.8s
NOA NORSAR Array B 63.19 344 P **P** **19 07 59.3 -0.3**
comp=Z,556nm,0.9s,baz=21,slow=6.6,SNR=811
NOA PKPPKP **P'P'df** **19 36 59.5 -4.3**
comp=Z,3.1nm,1.0s,baz=180,slow=2.6,SNR=3.8
comp=Z,556nm,0.9s
BNDI Bandanaira 63.30 215 P **P** **19 08 01.2 +0.4**
comp=Z,3μmcomp=Z,538nm,1.4s
IVI Ivigtut 63.35 15 P **P** **19 08 00.4 -0.2**
IVI Ivigtut 63.35 15 *i* P **P** **19 08 00.0 -0.6**
NC602 NORSAR Array S 63.42 344 *e*P **P** **19 08 01.2 +0.2**
KSCO Kaye Shedlock' 63.42 60 IAmb IAmb 19 08 03.9
comp=Z,131nm,1.1s
ALBI Allahabad 63.45 277 *e*P **P** **19 07 58.6 -3.2**
ALBI IAmb IAmb 19 08 04.0
comp=Z,36nm,0.6s
SPMN Marine on St. 63.48 49 IAmb IAmb 19 08 03.4
comp=Z,188nm,0.9s
SPMN IAMs_20 IAMs_20 19 37 37.5
comp=Z,2μm,20.0s
LPSR Galich'ya Gora 63.57 325 *e*P **P** **19 08 01.0 -1.2**
LPSR *e*S **S** **19 16 29.0 -2.9**
LPSR pmax pmax
comp=Z,492nm,0.8s
LPSR pmax pmax
comp=Z,500nm,0.8s
LPSR smax smax
comp=E,500nm,3.6s
FOO Floro 63.57 347 *e*P **P** **19 08 02.8 +0.8**
HFS Hagfors 63.60 342 P **P** **19 08 02.0 -0.3**
comp=E,168nm,0.5s,baz=36,slow=5.5,SNR=778
HFS LR LR 19 40 14.9
comp=E,3μm,18.4s,baz=25,slow=40
comp=E,168nm,0.5s
PMG Port Moresby 63.72 195 P **P** **19 08 04.7 +1.2**
comp=E,87nm,0.9s,baz=5.6,slow=6.5,SNR=18
PMG LR LR 19 33 32.2
comp=E,564nm,20.1s,baz=349,slow=34
PMG PKPPKP P'P'df 19 37 02.5 +10
comp=E,16nm,1.0s,baz=150,slow=6.6,SNR=3.1
comp=E,87nm,0.9s
PMG Port Moresby 63.72 195 P **P** **19 08 04.2 +0.8**
PMG IAmb IAmb 19 08 05.8
comp=Z,126nm,0.9s
PMG Port Moresby 63.72 195 *c i*P **P** **19 08 04.1 +0.6**
PMG pmax pmax
comp=Z,119nm,1.0s
PMG Port Moresby 63.72 195 P **P** **19 08 04.3 +0.8**
comp=Z,2μmcomp=Z,147nm,1.1s
VRH Novokhopyorsk 63.72 322 *c i*P **P** **19 08 01.8 -1.4**
VRH pmax pmax
comp=Z,280nm,0.7s
NRS Narsarsuaq 63.80 14 IAmb IAmb 19 08 09.1
comp=Z,210nm,1.1s
NRS Narsarsuaq 63.80 14 *i* P **P** **19 08 03.0 -0.6**
HYA Hoyanger 63.84 346 *e*P **P** **19 08 04.1 +0.3**
KBL Kabul 63.88 293 P **P** **19 08 02.7 -2.2**
KBL Kabul 63.88 293 P **P** **19 08 02.7 -2.2**
KBL pmax pmax
comp=Z,226nm,1.0s
KBL Kabul 63.88 293 P **P** **19 08 02.6 -2.2**
SNR=111
KBL P **P** **19 08 02.6 -2.2**
SNR=111
KBL S **S** **19 16 31.1 -5.7**
KBL S **S** **19 16 31.1 -5.7**

T25A Trinidad 63.89 62 IAmb IAmb 19 08 11.1
comp=Z,86nm,1.2s
T25A IAMs_20 IAMs_20 19 33 24.6
comp=Z,2μm,22.0s
PCI Palu 63.89 227 P **P** **19 08 04.6 -0.2**
comp=Z,4μmcomp=Z,460nm,1.0s
SKAR Skarslia 63.99 345 *e*P **P** **19 08 05.9 +1.0**
TUC Tucson 64.01 70 P **P** **19 08 05.8 +0.3**
TUC Tucson 64.01 70 P **P** **19 08 05.8 +0.3**
TUC pmax pmax
comp=Z,33nm,1.2s
SUE Sulen 64.13 347 *e*P **P** **19 08 06.4 +0.6**
I37A Lemond, Waseca 64.14 50 IAMs_20 IAMs_20 19 36 15.9
comp=Z,3μm,20.0s
VORR Voronezh 64.24 324 ⇑ *i*P **P** **19 08 05.4 -1.2**
VORR pmax pmax
comp=Z,150nm,0.8s
L34A Svendsen Farm, 64.31 54 IAMs_20 IAMs_20 19 34 59.5
comp=Z,4μm,22.0s
OSL Oslo 64.31 344 *e*P **P** **19 08 07.4 +0.5**
ANMO Albuquerque 64.43 65 LR LR 19 33 05.5
comp=Z,3μm,22.0s,baz=318,slow=33
ANMO Albuquerque 64.43 65 P **P** **19 08 08.2 -0.2**
ANMO IAMs_20 IAMs_20 19 32 54.1
comp=Z,3μm,22.0s
ANMO Albuquerque 64.43 65 *ce*P **P** **19 08 09.0 +0.6**
KUDL Kundal 64.45 283 *e*P P 19 08 00.6 -7.6
KUDL IAmb IAmb 19 08 11.1
comp=Z,26nm,1.0s
KUDL *e*S **S** **19 16 39.6 -3.8**
SBUM Sibu 64.48 236 IAmb IAmb 19 08 21.6
comp=Z,127nm,0.7s
SBUM Sibu 64.48 236 P **P** **19 08 11.0 +2.4**
comp=Z,3μmcomp=Z,195nm,0.8s
G40A Rib Lake 64.61 48 IAmb IAmb 19 08 10.5
comp=Z,144nm,1.1s
G40A IAMs_20 IAMs_20 19 37 02.2
comp=Z,3μm,20.0s
VSR Storozhevoye 64.63 324 *i* P **P** **19 08 08.3 -0.8**
VSR pmax pmax
comp=Z,280nm,0.8s
ASK Askoy 64.63 347 *e*P **P** **19 08 10.0 +1.1**
ASK IAmb IAmb 19 08 10.7
comp=Z,805nm,0.9s
BER Bergen 64.71 347 *e*P **P** **19 08 10.5 +1.1**
BER IAmb IAmb 19 08 11.6
comp=Z,1μm,1.0s
KONO Kongsberg 64.77 344 P **P** **19 08 10.5 +0.6**
KONO Kongsberg 64.77 344 *e*P **P** **19 08 10.7 +0.7**
KONO Kongsberg 64.77 344 *ce*P **P** **19 08 10.0 +0.1**
KONO pmax pmax
comp=Z,762nm,1.3s
DUN6 Lazy B Ranch 64.78 69 IAmb IAmb 19 08 38.8
comp=Z,214nm,1.3s
VORD Divnogorie 64.79 323 ⇑ *i*P **P** **19 08 09.3 -0.9**
VORD pmax pmax
comp=Z,290nm,0.9s
Y22A Socorro 64.91 67 IAmb IAmb 19 08 39.9
comp=Z,122nm,1.2s
ODD1 Odda 64.98 346 *e*P **P** **19 08 12.2 +0.9**
CBKS Cedar Bluff 65.05 58 IAmb IAmb 19 08 13.5
comp=Z,118nm,0.9s
CBKS IAMs_20 IAMs_20 19 36 56.2
comp=Z,3μm,22.0s
STRU Stroemstad 65.08 343 *i* P **P** **19 08 12.4 +0.4**
SCHQ Schefferville 65.14 28 P **P** **19 08 12.4 0.0**
comp=Z,93nm,0.7s,baz=343,slow=5.0,SNR=107
SCHQ PKPPKP **P'P'df** **19 36 57.1 -3.2**
comp=Z,19nm,1.1s,baz=135,slow=1.8,SNR=6.7
comp=Z,93nm,0.7s
SCHQ Schefferville 65.14 28 IAmb IAmb 19 08 13.7
comp=Z,136nm,0.9s
RTBA Rita Blanca 65.30 62 IAmb IAmb 19 08 15.7
comp=Z,124nm,1.1s
MNK Minsk 65.42 332 *i* P **P** **19 08 15.1 +0.9**
comp=E,378nm,0.6s
MNK *i* P **P** **19 08 15.1 +0.9**
comp=N,112nm,0.6s
MNK *i* P **P** **19 08 15.1 +0.9**
comp=Z,1μm,0.7s,baz=29
MNK *i* PcP **PcP** **19 08 46.5 +0.6**
MNK *i* PP **PP** **19 10 39.3 +1.4**
MNK *i* PPP PPP 19 12 12.5
MNK *i* S **S** **19 17 01.2 +6.5**
MNK *i* PS **PnS** **19 17 13.2 -5.7**
MNK *i* SS **SS** **19 21 12.5 +5.0**
MNK *i* SSS SSS 19 24 22.2
MNK *i* LQ LQ 19 32 14.8
MNK *i* LR LR 19 36 52.0
MNK *i* LRM MLR 19 40 30.9
comp=E,3μm,15.7s
MNK *i* LRM MLR 19 40 30.9
comp=Z,4μm,15.8s
MNK *i* LRM MLR 19 40 34.0
comp=N,2μm,14.0s
MNK Minsk 65.42 332 *i* P **P** **19 08 15.1 +0.9**
MNK *i* 19 08 46.4
MNK *i* 19 10 39.3
MNK *i* PPP PPP 19 12 12.4
MNK *i* S **S** **19 17 01.2 +6.5**
MNK *i* PS **PnS** **19 17 13.1 -5.7**
MNK *i* SS **SS** **19 21 12.5 +5.0**
MNK pmax pmax
comp=N,112nm,0.6s
MNK pmax pmax
comp=Z,1μm,0.7s
MNK pmax pmax
comp=E,378nm,0.6s
MNK MLR MLR
comp=Z,4μm,16.0s
MNK MLR MLR
comp=E,3μm,16.0s
MNK MLR MLR
comp=N,2μm,14.0s
BLS5 Blasjo 65.47 346 *e*P **P** **19 08 15.6 +1.0**
BLS5 IAmb IAmb 19 08 16.2
comp=Z,473nm,0.8s
BLS5 IAMs_20 IAMs_20 19 42 17.1
comp=Z,4μm,9.5s
BKB Balikpapan 65.51 229 P **P** **19 08 16.1 +0.8**
BKB Balikpapan 65.51 229 P **P** **19 08 16.7 +1.4**
319A Douglas 65.55 70 IAmb IAmb 19 08 43.7
comp=Z,112nm,1.1s
LRW Lerwick 65.73 350 *e*P **P** **19 08 16.6 +0.5**
LRW IAmb IAmb 19 08 18.4
comp=Z,154nm,0.7s
TTSI Tana Toraja 65.82 226 P **P** **19 08 18.3 +1.0**
KMY Karmoy 65.85 346 *e*P **P** **19 08 18.0 +1.2**
SCIA State Center 65.86 52 IAMs_20 IAMs_20 19 37 50.5
comp=Z,3μm,20.0s
R32A Long Quarter, 65.86 58 IAMs_20 IAMs_20 19 37 40.8
comp=Z,3μm,22.0s
MMSI Mamuju 65.89 227 P **P** **19 08 18.1 +0.3**
comp=Z,3μmcomp=Z,5μmcomp=Z,512nm,1.1s
TJOU Tjoern 65.95 342 *i* P **P** **19 08 17.6 0.0**
KKSI Kolaka, Sulawe 66.07 223 P **P** **19 08 20.7 +1.8**
comp=Z,3μmcomp=Z,3μmcomp=Z,213nm,1.0s
SAUI Saumlaki 66.09 212 P **P** **19 08 21.3 +2.3**
comp=Z,3μmcomp=Z,6μmcomp=Z,560nm,1.4s
BORU Boraas 66.12 342 *i* P **P** **19 08 18.8 +0.2**
DGPR DIGLIPUR 66.20 260 IAmb IAmb 19 07 56.4
comp=Z,15nm,0.7s
DGPR *e*P **P** **19 08 15.6 -4.2**
DGPR *e*S **S** **19 17 03.1 -2.1**
E46A Sault Ste Mari 66.24 43 IAmb IAmb 19 08 20.2
comp=Z,194nm,1.0s
E46A IAMs_20 IAMs_20 19 38 19.3
comp=Z,4μm,21.0s
I42A Draeger Farm, 66.26 48 IAmb IAmb 19 08 21.1
comp=Z,160nm,0.9s
I42A IAMs_20 IAMs_20 19 38 12.9
comp=Z,3μm,20.0s
HOMB Homborsund 66.26 344 *e*P **P** **19 08 20.4 +0.9**
HOMB Homborsund 66.26 344 *i* P **P** **19 08 19.4 -0.1**
H43A Windswept, Lux 66.30 47 IAmb IAmb 19 08 21.4
comp=Z,202nm,0.9s
HSIG 66.39 73 IAmb IAmb 19 08 48.7
comp=Z,87nm,1.4s
KSU1 Kansas State U 66.39 56 IAmb IAmb 19 08 21.3
comp=Z,76nm,0.8s
SNART Snartemo 66.40 345 *e*P **P** **19 08 22.1 +1.7**
SNART Snartemo 66.40 345 *i* P **P** **19 08 21.0 +0.6**
JFWS Jewell Farm 66.43 49 IAmb IAmb 19 08 21.7
comp=Z,100nm,0.8s
JFWS IAMs_20 IAMs_20 19 36 42.6
comp=Z,3μm,21.0s

ONAU Onsala 66.50 342 *i* P **P** 19 08 21.0 -0.1
PH02 Texas Public H 66.51 62 IAmb IAmb 19 08 23.4
comp=Z,131nm,1.5s
PMSI Majene 66.62 226 P **P** **19 08 23.1 +0.7**
comp=Z,3μmcomp=Z,3μmcomp=Z,191nm,1.3s
L40A Anamosa 66.66 50 IAMs_20 IAMs_20 19 38 59.6
comp=Z,3μm,20.0s
SPSI Sidrap Palu 66.67 225 P **P** **19 08 24.6 +1.9**
comp=Z,3μmcomp=Z,4μmcomp=Z,336nm,1.4s
KHAM Kharkiv 66.67 324 P **P** **19 08 23.0 +0.6**
N38A Joes South For 66.71 53 IAMs_20 IAMs_20 19 36 38.2
comp=Z,4μm,22.0s
FABU Falkenberg 66.72 341 *i* P **P** **19 08 22.3 -0.2**
BLEU Blekinge 66.76 339 *i* P **P** **19 08 22.5 -0.3**
EPT El Paso 66.80 68 IAMs_20 IAMs_20 19 34 48.8
comp=Z,2μm,22.0s
AJM Ajmer 66.83 283 *e*P P 19 08 18.4 -5.3
AJM IAmb IAmb 19 08 25.6
comp=Z,29nm,0.5s
AJM *e*S **S** **19 17 10.2 -2.4**
OVD Ostervraa, Den 66.88 343 ‖ *i* P **P** **19 08 24.1 +0.6**
DEL Delary 67.00 341 *i* P **P** **19 08 24.0 -0.3**
AMTX Amarillo 67.04 62 IAmb IAmb 19 08 27.0
comp=Z,117nm,1.4s
AMTX IAMs_20 IAMs_20 19 34 34.0
comp=Z,3μm,22.0s
SUW Suwalki 67.13 334 *e*P **P** **19 08 25.0 -0.2**
SUW *e*L L 19 40 58.4
MSTX Muleshoe 67.16 64 IAmb IAmb 19 08 27.7
comp=Z,106nm,1.1s
KAN08 Anthony NE Sta 67.16 58 IAmb IAmb 19 10 30.0
comp=Z,101nm,0.8s
ELIS Ellis County 67.31 60 IAmb IAmb 19 08 28.4
comp=Z,146nm,1.3s
GOET G??ttrup 67.32 343 *i* P **P** **19 08 27.2 +0.9**
GOET IAmb IAmb 19 08 28.9
comp=Z,703nm,0.8s
KAN01 Argonia South 67.32 58 IAmb IAmb 19 08 27.9
comp=Z,123nm,0.8s
OK038 West end E0370 67.34 59 IAmb IAmb 19 08 28.1
comp=Z,119nm,0.9s
GLMI Grayling 67.36 44 IAMs_20 IAMs_20 19 41 23.9
comp=Z,3μm,20.0s
K43A Burlington 67.46 48 IAMs_20 IAMs_20 19 40 27.7
comp=Z,3μm,20.0s
MNTX Cornudas Mount 67.47 67 IAmb IAmb 19 08 55.8
comp=Z,91nm,1.1s
MNTX IAMs_20 IAMs_20 19 35 23.7
comp=Z,2μm,20.0s
P38A Dawn 67.49 53 IAMs_20 IAMs_20 19 38 05.6
comp=Z,3μm,22.0s
PBA Port Blair 67.53 259 *e*P **P** **19 08 23.8 -4.4**
PBA IAmb IAmb 19 08 31.0
comp=Z,31nm,1.3s
PBA *e*S **S** **19 17 15.8 -5.3**
PBA Port Blair 67.53 259 P **P** **19 08 29.2 +1.0**
SNR=12
BJUU Bjuv 67.54 341 *i* P **P** **19 08 28.3 +0.6**
BHPL Bhopal 67.61 279 *e*P P 19 08 23.1 -5.7
BHPL IAmb IAmb 19 08 30.4
comp=Z,29nm,1.2s
BHPL *e*S **S** **19 17 16.8 -5.4**
BIGH Upper Bighouse 67.61 351 *e*P **P** **19 08 29.0 +0.8**
BIGH IAmb IAmb 19 08 30.5
comp=Z,133nm,0.7s
KAPI Kappang 67.62 225 LR LR 19 37 18.2
comp=Z,300nm,21.6s,baz=30,slow=35
KAPI Kappang 67.62 225 P **P** **19 08 30.3 +1.6**
KAPI IAmb IAmb 19 08 31.8
comp=Z,223nm,1.3s
KAPI Kappang 67.62 225 *c* *i* P **P** **19 08 30.1 +1.4**
KAPI pmax pmax
comp=Z,121nm,1.1s
KAPI Kappang 67.62 225 P **P** **19 08 30.3 +1.6**
KAPI P **P** **19 08 30.3 +1.6**
KAPI S **S** **19 17 23.3 +1.2**
KAPI S **S** **19 17 23.3 +1.2**
KAPI Kappang 67.62 225 P **P** **19 08 30.5 +1.8**
KAPI Kappang 67.62 225 P **P** **19 08 30.5 +1.8**
SMWD Samnorwood 67.62 61 IAmb IAmb 19 08 31.2
comp=Z,219nm,1.1s
HRA Herat 67.66 298 IAmb IAmb 19 08 31.0
comp=Z,104nm,0.9s
CROK Carrier 67.71 59 IAmb IAmb 19 08 30.1
comp=Z,114nm,1.0s
LUNU Lund 67.87 341 *i* P **P** **19 08 30.1 +0.3**
MUD Monsted U'grnd 67.88 343 *i* P **P** **19 08 30.4 +0.6**
MUD IAmb IAmb 19 08 32.3
comp=Z,254nm,0.8s
N41A Harden Midland 67.90 51 IAMs_20 IAMs_20 19 37 24.4
comp=Z,3μm,21.0s
MKS Makassar 67.92 225 P **P** **19 08 32.9 +2.3**
comp=Z,5μmcomp=Z,395nm,1.3s
COP Copenhagen 68.02 341 *i* P **P** **19 08 31.5 +0.8**
BSD Bornholm Skovb 68.05 340 *i* P **P** **19 08 31.2 +0.2**
BSD IAmb IAmb 19 08 33.4
comp=Z,366nm,0.9s
MAK Makhachkala 68.06 313 *d* *i* P **P** **19 08 31.3 +0.1**
MAK *e* 19 11 01.5
MAK *e*PPP PPP 19 12 38.9
MAK *e*S **S** **19 17 27.3 +0.4**
MAK pmax pmax
comp=Z,187nm,0.8s
T35A Sooner Cattle 68.14 57 IAmb IAmb 19 08 32.6
comp=Z,69nm,1.0s
T35A IAMs_20 IAMs_20 19 39 08.9
comp=Z,3μm,22.0s
KULM Kulim 68.17 248 P **P** **19 08 34.3 +2.0**
KULM IAmb IAmb 19 08 35.7
comp=Z,259nm,1.1s
KULM Kulim 68.17 248 P **P** **19 08 33.2 +1.0**
comp=Z,5μmcomp=Z,268nm,1.2s
GOF Gofitskoye 68.23 317 *c* *i* P **P** **19 08 32.2 -0.1**
GOF *e*S **S** **19 17 27.9 -1.0**
P40A Paris 68.27 53 IAMs_20 IAMs_20 19 37 58.3
comp=Z,3μm,21.0s
OK048 Pawnee Station 68.31 58 IAmb IAmb 19 08 33.8
comp=Z,68nm,1.1s
OK048 IAMs_20 IAMs_20 19 39 16.4
comp=Z,3μm,22.0s
BSSI Bau Bau, Buton 68.33 223 P **P** **19 08 33.6 +0.4**
comp=Z,3μmcomp=Z,6μmcomp=Z,543nm,1.1s
AK23 Malin Array Si 68.34 329 P **P** **19 08 32.4 -0.4**
AK03 Malin Array Si 68.34 329 P **P** **19 08 32.4 -0.4**
128A Castleberry Fa 68.34 64 IAmb IAmb 19 08 35.3
comp=Z,57nm,1.1s
VIS Vishakhapatnam 68.35 271 *e*P P 19 08 27.9 -5.5
VIS IAML 19 08 35.9
comp=Z,28nm,0.5s
VIS *e*S **S** **19 17 27.4 -3.5**
AK21 Malin Array Si 68.35 329 P **P** **19 08 32.0 -0.9**
AK22 Malin Array Si 68.36 329 P **P** **19 08 32.1 -0.8**
AK04 Malin Array Si 68.36 329 P **P** **19 08 32.1 -0.9**
AKASG Malin Array Be 68.36 329 P **P** **19 08 32.4 -0.6**
comp=Z,284nm,0.6s,baz=30,slow=6.0,SNR=448
AKASG PKiKP **PKiKP** **19 14 55.8 +2.6**
comp=Z,3.9nm,0.9s,baz=31,slow=1.3,SNR=2.4
AKASG PKPPKP **P'P'df** **19 36 52.7 -1.9**
comp=Z,1.2nm,0.7s,baz=225,slow=2.6,SNR=6.2
AKASG LR LR 19 41 52.6
comp=Z,9μm,20.0s,baz=25,slow=39
comp=Z,284nm,0.6s
AKASG Malin Array Be 68.36 329 P **P** **19 08 32.6 -0.3**
AKASG Malin Array Be 68.36 329 *i* P **P** **19 08 32.4 -0.6**
AKASG pmax pmax
comp=Z,287nm,0.6s
AKBB Malin Array Si 68.36 329 *c* *i* P **P** **19 08 32.4 -0.6**
AKBB Malin Array Si 68.36 329 P **P** **19 08 32.1 -0.9**
DKNS Dickens 68.37 63 IAmb IAmb 19 08 35.2
comp=Z,73nm,0.9s
KIEV Kiev 68.37 329 P **P** **19 08 32.2 -0.8**
KIEV Kiev 68.37 329 *i* P **P** **19 08 32.2 -0.8**
SNR=366
KIEV Kiev 68.37 329 P **P** **19 08 32.3 -0.8**
KIEV pmax pmax
comp=Z,529nm,0.9s
KIEV MLR MLR
comp=Z,9μm,20.0s
KIEV Kiev 68.37 329 P **P** **19 08 32.1 -0.9**
comp=Z,24μmcomp=Z,3μm,0.9s
AK01 Malin Array Si 68.37 329 P **P** **19 08 32.2 -0.9**
AK20 Malin Array Si 68.39 329 P **P** **19 08 32.5 -0.7**
AK18 Malin Array Si 68.39 329 P **P** **19 08 32.5 -0.7**
BBKI Banjar Baru 68.39 230 P **P** **19 08 34.3 +0.7**
AK15 Malin Array Si 68.40 329 P **P** **19 08 32.5 -0.7**

AK11 Malin Array Si 68.40 329 P **P** **19 08 32.5 -0.7**
AK02 Malin Array Si 68.41 329 P **P** **19 08 32.6 -0.7**
AK19 Malin Array Si 68.41 329 P **P** **19 08 32.6 -0.7**
AK08 Malin Array Si 68.41 329 P **P** **19 08 32.6 -0.7**
AK09 Malin Array Si 68.42 329 P **P** **19 08 32.7 -0.6**
AK16 Malin Array Si 68.43 329 P **P** **19 08 32.7 -0.7**
AK17 Malin Array Si 68.43 329 P **P** **19 08 32.7 -0.7**
AK12 Malin Array Si 68.43 329 P **P** **19 08 32.8 -0.6**
AK05 Malin Array Si 68.44 329 P **P** **19 08 32.8 -0.7**
AK10 Malin Array Si 68.44 329 P **P** **19 08 32.8 -0.7**
MCD Coleburn Disti 68.45 351 *e*P P **19 08 34.0 +0.6**
MCD IAmb IAmb 19 08 35.8
comp=Z,246nm,0.7s
AK14 Malin Array Si 68.46 329 P **P** **19 08 32.9 -0.7**
AK06 Malin Array Si 68.47 329 P **P** **19 08 33.0 -0.7**
AK13 Malin Array Si 68.49 329 P **P** **19 08 33.1 -0.7**
AK07 Malin Array Si 68.50 329 P **P** **19 08 33.2 -0.6**
OK029 Liberty Lake 68.53 59 IAmb IAmb 19 08 35.7
comp=Z,120nm,1.1s
POST Post 68.53 63 IAmb IAmb 19 08 36.3
comp=Z,68nm,0.9s
J47A Sunmer 68.56 46 IAMs_20 IAMs_20 19 38 30.7
comp=Z,3μm,21.0s
PECS Pecos 68.56 66 IAmb IAmb 19 09 02.3
comp=Z,87nm,1.4s
QUOK Quay 68.62 58 IAmb IAmb 19 08 36.0
comp=Z,82nm,1.1s
IPM Ipoh 68.63 247 P **P** **19 08 36.3 +1.1**
IPM IAMs_20 IAMs_20 19 38 42.2
comp=Z,2μm,21.0s
IPM Ipoh 68.63 247 P **P** **19 08 35.7 +0.5**
comp=Z,3μmcomp=Z,5μmcomp=Z,367nm,1.2s
MI28 MI28,Pidlybu 68.63 330 P **P** **19 08 33.6 -1.1**
M44A Midewin, Midew 68.64 49 IAMs_20 IAMs_20 19 41 05.0
comp=Z,3μm,20.0s
WMOK Wichita Mounta 68.67 60 IAmb IAmb 19 08 37.5
comp=Z,144nm,0.9s
129A Stewart Farms, 68.67 64 IAmb IAmb 19 08 36.9
comp=Z,23nm,1.0s
ODSA Odessa 68.69 65 IAmb IAmb 19 08 37.4
comp=Z,83nm,1.1s
TPB06 Permian Basin 68.69 65 IAmb IAmb 19 09 02.4
comp=Z,52nm,1.1s
ERBR Yeremizino-Bor 68.70 319 *e*P **P** **19 08 34.8 -0.4**
ERBR *e**PP **pP** **19 08 49.6 +0.8**
ERBR *e*S **S** **19 17 33.7 -0.8**
ERBR pmax pmax
comp=Z,334nm,1.1s
ERBR MLR MLR
comp=N,18μm,17.0s
ERBR MLR MLR
comp=Z,14μm,17.0s
ERBR MLR MLR
comp=E,11μm,17.0s
OK052 Battle Ridge R 68.71 58 IAmb IAmb 19 08 36.6
comp=Z,108nm,1.0s
OK052 IAMs_20 IAMs_20 19 39 30.0
comp=Z,2μm,21.0s
RNPP9 Sopachiv 68.72 331 P **P** **19 08 34.7 -0.5**
SSRD Sdr. Stenderup 68.73 343 *i* P **P** **19 08 36.0 +0.9**
HDIL Hopedale 68.74 50 IAMs_20 IAMs_20 19 39 05.6
comp=Z,3μm,21.0s
RNPP2 Kostyukhnivka 68.80 331 P **P** **19 08 36.0 +0.3**
RNPP8 Varash 68.80 331 P **P** **19 08 35.2 -0.5**
OKCSW OKLAHOMA CITY 68.84 59 IAmb IAmb 19 08 37.9
comp=Z,212nm,1.0s
COEN Coen 68.85 198 P **P** **19 08 37.5 +1.2**
COEN IAmb IAmb 19 08 38.8
comp=Z,220nm,1.0s
RNPP5 Staryi Chortor 68.89 331 P **P** **19 08 35.4 -0.8**
RGN Rugen 68.91 340 *e*P **P** **19 08 37.7 +1.4**
comp=Z,2μm,0.9s,baz=18,slow=6.0
TPB01 Permian Basin 68.93 66 IAmb IAmb 19 09 02.9
comp=Z,42nm,1.0s
BUKO Buck Lake 68.95 41 IAmb IAmb 19 08 37.4
comp=Z,228nm,1.2s
DEOK Depew 68.98 58 IAmb IAmb 19 08 38.5
comp=Z,162nm,1.0s
DRUM Mains of Drumt 69.04 350 *e*P **P** **19 08 37.3 +0.2**
DRUM IAmb IAmb 19 08 40.2
comp=Z,310nm,1.0s
APMT Aspermont 69.06 62 IAmb IAmb 19 08 39.2
comp=Z,90nm,0.9s
S39A Bolivar 69.11 55 IAMs_20 IAMs_20 19 38 21.4
comp=Z,3μm,21.0s
R40A Maddies Statio 69.14 54 IAmb IAmb 19 08 39.2
comp=Z,210nm,0.9s
AKT Akhty 69.16 312 *e*P **P** **19 08 37.8 -0.5**
AKT *e**SP **sP** **19 08 58.5 +1.3**
AKT *e* 19 09 01.9
AKT *e* 19 11 10.0
AKT *e*PPP PPP 19 12 57.2
AKT *e*S **S** **19 17 39.2 -1.1**
AKT *e* 19 18 33.2
AKT *e*SS **SS** **19 22 06.2 0.0**
AKT pmax pmax
comp=Z,198nm,0.7s
MNHN Monahans 69.18 65 IAmb IAmb 19 08 40.4
comp=Z,63nm,0.7s
TPB05 Hovey Rd 69.20 66 IAmb IAmb 19 09 05.8
comp=Z,132nm,1.4s
229A Bryant Ranch, 69.21 64 IAmb IAmb 19 08 40.7
comp=Z,46nm,1.2s
GKP Gorka Klasztor 69.26 337 *e*P **P** **19 08 39.3 +0.8**
GKP *e*L L 19 36 22.3
X34A Smith Ranch, M 69.26 60 IAmb IAmb 19 08 41.1
comp=Z,137nm,1.2s
R9F13 Warsaw-Wawer 69.28 335 *e*P **P** **19 08 39.5 +0.9**
KVAR Kislovodsk Arr 69.28 317 LR LR 19 43 27.6
comp=Z,5μm,19.6s,baz=286,slow=40
TUL3 Leonard 69.28 57 IAmb IAmb 19 08 40.3
comp=Z,162nm,1.0s
TUL3 IAMs_20 IAMs_20 19 39 55.3
comp=Z,3μm,22.0s
KIV Kislovodsk 69.28 317 ⇑P **P** **19 08 39.3 +0.3**
KIV Kislovodsk 69.28 317 P **P** **19 08 39.0 0.0**
KIV Kislovodsk 69.28 317 *i* P **P** **19 08 38.9 0.0**
SNR=52
KIV Kislovodsk 69.28 317 *e*P **P** **19 08 39.0 0.0**
KIV *e* 19 11 11.1
KIV *e*S **S** **19 17 41.8 +0.2**
KIV pmax pmax
comp=Z,352nm,4.3s
KIV pmax pmax
comp=Z,111nm,1.0s
KIV MLR MLR
comp=Z,4μm,17.0s
KIV Kislovodsk 69.28 317 P **P** **19 08 39.0 0.0**
KIV S **S** **19 17 37.1 -4.6**
KIV Kislovodsk 69.28 317 P **P** **19 08 39.0 0.0**
comp=Z,2μmcomp=Z,110nm,0.7s
W35A Tecumseh 69.33 59 IAmb IAmb 19 08 40.9
comp=Z,152nm,0.9s
MYKOM Kota Tinggi 69.34 243 IAmb IAmb 19 08 45.2
comp=Z,153nm,0.9s
MYKOM Kota Tinggi 69.34 243 P **P** **19 08 41.1 +1.6**
comp=Z,3μmcomp=Z,221nm,1.1s
P43A Skaggs, Pawnee 69.36 51 IAMs_20 IAMs_20 19 38 41.2
comp=Z,2μm,21.0s
KBZ Khabaz 69.39 317 P **P** **19 08 39.8 +0.3**
comp=Z,172nm,1.0s,baz=54,slow=3.7,SNR=329
KBZ PKPPKP **P'P'df** **19 36 49.4 -3.1**
comp=Z,3.6nm,1.1s,baz=96,slow=1.1,SNR=4.1
KBZ LR LR 19 43 37.5
comp=Z,6μm,19.5s,baz=21,slow=40
comp=Z,172nm,1.0s
KBZ Khabaz 69.39 317 *c* *i* P **P** **19 08 39.7 +0.3**
KBZ pmax pmax
comp=Z,220nm,1.0s
KBZ MLR MLR
comp=Z,6μm,19.0s
RLO Rose Lookout 69.47 57 IAmb IAmb 19 08 41.3
comp=Z,86nm,0.9s
SHA1 Shidzhatmaz 69.48 317 *c* *i* P **P** **19 08 40.4 +0.1**
LUBAR Lubar, Ukraine 69.50 330 P **P** **19 08 39.4 -0.7**
LABN Labinsk 69.50 319 *e*P **P** **19 08 39.8 -0.4**
LABN *e**PP **pP** **19 08 54.9 +1.2**
LABN *e*S **S** **19 17 37.9 -6.1**
LABN pmax pmax
comp=Z,203nm,0.9s
LABN MLR MLR
comp=N,17μm,17.0s
LABN MLR MLR
comp=E,5μm,15.0s
LABN MLR MLR
comp=Z,11μm,18.0s

U38A Gravette 69.57 56 IAmb IAmb 19 08 41.7
comp=Z,108nm,0.9s
WTFS Witchita Falls 69.59 61 IAmb IAmb 19 08 42.3
comp=Z,83nm,1.0s
SADO Sadowa 69.62 41 LR LR 19 40 29.5
comp=Z,2μm,21.2s,baz=346,slow=37
SADO Sadowa 69.62 41 IAmb IAmb 19 08 41.1
comp=Z,114nm,1.2s
SGCY Sterling City 69.62 64 IAmb IAmb 19 08 43.0
comp=Z,101nm,1.1s
ICQ Pointe Anglais 69.69 31 IAmb IAmb 19 08 42.6
comp=Z,116nm,1.0s
TPRI Tanjung Pinang 69.72 242 P **P** **19 08 43.1 +1.2**
comp=Z,4μmcomp=Z,4μmcomp=Z,222nm,1.3s
BEL Belsk 69.72 335 *e*P **P** **19 08 42.6 +1.2**
BEL *e*L L 19 42 38.0
BTDF Bukit Timah Da 69.75 243 P **P** **19 08 43.4 +1.4**
comp=Z,3μmcomp=Z,2μmcomp=Z,157nm,1.2s
LDAQ Lac Daran 69.77 34 IAmb IAmb 19 08 43.2
comp=Z,184nm,0.9s
AAM Ann Arbor 69.81 45 IAMs_20 IAMs_20 19 40 45.0
comp=Z,3μm,20.0s
CCM Cathedral Cave 69.82 53 P **P** **19 08 41.7 -0.5**
CCM IAmb IAmb 19 08 43.5
comp=Z,216nm,1.1s
CCM Cathedral Cave 69.82 53 P **P** **19 08 41.7 -0.5**
CCM pmax pmax
comp=Z,216nm,1.1s
CCM MLR MLR
comp=Z,4μm,22.0s
ABTX Abilene, Hawle 69.86 62 IAmb IAmb 19 08 44.4
comp=Z,138nm,1.0s
ABTX IAMs_20 IAMs_20 19 38 07.6
comp=Z,2μm,21.0s
K50A Casco 69.86 44 IAmb IAmb 19 08 44.9
comp=Z,152nm,0.9s
K50A IAMs_20 IAMs_20 19 42 11.2
comp=Z,2μm,20.0s
SFIN Lafayette 69.88 49 IAmb IAmb 19 08 43.5
comp=Z,123nm,0.9s
MMRI Maumere 69.90 221 P **P** **19 08 43.3 +0.4**
comp=Z,3μmcomp=Z,5μmcomp=Z,230nm,1.0s
HHAR Hobbs 69.91 56 IAmb IAmb 19 08 43.8
comp=Z,176nm,0.8s
LAWE Loch Awe, Argy 69.96 352 *e*P **P** **19 08 43.3 +0.5**
LAWE IAmb IAmb 19 08 45.6
comp=Z,256nm,0.8s
MGMO Mountain Grove 70.04 54 IAmb IAmb 19 08 44.5
comp=Z,101nm,0.8s
BSEG Bad Segeberg 70.08 342 *e*P **P** **19 08 44.5 +1.0**
comp=Z,438nm,1.0s,baz=18,slow=6.0
N47A Urbana 70.09 48 IAmb IAmb 19 08 44.5
comp=Z,177nm,0.9s
N47A IAMs_20 IAMs_20 19 41 01.4
comp=Z,3μm,20.0s
TRQ Mont Tremblant 70.11 37 IAmb IAmb 19 08 44.9
comp=Z,249nm,1.1s
SOEI Soe 70.16 218 P **P** **19 08 44.7 +0.1**
SOEI Soe 70.16 218 P **P** **19 08 45.3 +0.7**
comp=Z,3μmcomp=Z,216nm,1.3s
Q44A Meyer Farm, Va 70.19 51 IAmb IAmb 19 08 45.8
comp=Z,210nm,1.0s
Q44A IAMs_20 IAMs_20 19 42 31.1
comp=Z,2μm,20.0s
EDFI Ende, Flores 70.22 221 P **P** **19 08 44.9 -0.1**
comp=Z,3μmcomp=Z,177nm,1.3s
TX31 Lajitas Ar Si 70.23 67 IAmb IAmb 19 08 47.3
comp=Z,54nm,0.7s
TXAR Lajitas Array 70.23 67 P **P** **19 08 45.7 +0.7**
comp=Z,37nm,0.6s,baz=299,slow=4.6,SNR=170
TXAR PKPPKP **P'P'df** **19 36 42.9 -7.0**
comp=Z,4.3nm,1.0s,baz=147,slow=7.5,SNR=11
comp=Z,37nm,0.6s
LHMI Lhok Sumawe 70.29 251 P **P** **19 08 47.4 +2.0**
comp=Z,728nm,0.9s
PLPT Palo Pinto 70.41 61 IAmb IAmb 19 08 47.4
comp=Z,116nm,1.0s
DELO Deloro Mine 70.42 40 IAmb IAmb 19 08 46.5
comp=Z,119nm,1.0s
LMQ La Malbaie 70.44 34 IAmb IAmb 19 08 47.3
comp=Z,267nm,1.1s
LPIG La Paz 70.51 76 LR LR 19 37 13.4
comp=Z,425nm,19.4s,baz=302,slow=34
HORU Horodok 70.52 330 P **P** **19 08 46.1 -0.3**
Z35A Perchaven, San 70.56 60 IAmb IAmb 19 08 47.9
comp=Z,83nm,1.0s
CMBY CAMPBELL BAY 70.57 255 *e*P P 19 08 41.5 -5.6
CMBY IAmb IAmb 19 08 48.8
comp=Z,34nm,1.0s
SAND Sanderson 70.60 66 IAmb IAmb 19 09 14.7
comp=Z,115nm,1.3s
ANN Anapa 70.64 321 *e*P **P** **19 08 46.0 -1.1**
ANN *e*S **S** **19 17 55.0 -2.2**
ANN pmax pmax
comp=Z,50nm,0.7s
ANN MLR MLR
comp=Z,5μm,17.0s
ANN MLR MLR
comp=E,6μm,18.0s
ANN MLR MLR
comp=N,10μm,18.0s
EKA Eskdalemuir Ar 70.66 350 P **P** **19 08 47.6 +0.5**
comp=N,177nm,0.6s,baz=22,slow=5.6,SNR=491
comp=N,177nm,0.6s
BAL3X Bal3x, Balta 70.67 327 P **P** **19 08 46.8 -0.5**
LVV L'vov 70.68 332 P **P** **19 08 46.0 -1.3**
ESK Eskdalemuir 70.68 350 P **P** **19 08 47.8 +0.6**
ESK Eskdalemuir 70.68 350 P **P** **19 08 47.8 +0.6**
ESK pmax pmax
comp=Z,480nm,1.0s
T42A Van Buren 70.71 54 IAmb IAmb 19 08 48.7
comp=Z,98nm,1.0s
T42A IAMs_20 IAMs_20 19 38 45.9
comp=Z,3μm,22.0s
OLIL Olney 70.75 50 IAmb IAmb 19 08 49.3
comp=Z,206nm,1.1s
RUE Ruedersdorf 70.76 339 *e*P **P** **19 08 48.9 +1.2**
comp=Z,1μm,0.9s,baz=18,slow=6.0
VSLR Vesyoloye 70.76 318 *c* *i* P **P** **19 08 47.9 0.0**
VSLR pmax pmax
comp=Z,325nm,1.1s
VSLR MLR MLR
comp=Z,4μm,16.0s
GORT1 Trebel 70.78 341 *e*P **P** **19 08 49.2 +1.4**
comp=Z,1μm,1.2s,baz=18,slow=6.0
SOC Sochi 70.79 319 *c* *i* P **P** **19 08 46.9 -1.1**
SOC *e* 19 11 23.0
SOC *e*S **S** **19 17 57.6 -1.4**
SOC *e*SS **SS** **19 22 32.4 +1.6**
SOC *e*SSS SSS 19 25 35.8
SOC pmax pmax
comp=Z,61nm,0.7s
SOC MLR MLR
comp=Z,10μm,18.0s
BATI Baumata 70.80 219 P **P** **19 08 48.2 -0.2**
comp=Z,2μmcomp=Z,160nm,1.1s
TSI Tuntungan 70.80 249 P **P** **19 08 49.5 +1.0**
M50A Fremont 70.81 45 IAmb IAmb 19 08 49.9
comp=Z,144nm,0.9s
M50A IAMs_20 IAMs_20 19 41 15.5
comp=Z,3μm,20.0s
DSRI Dabo 70.87 241 P **P** **19 08 50.8 +1.9**
comp=Z,4μmcomp=Z,6μmcomp=Z,410nm,1.2s
SORM Soroca 70.89 328 ⇑P **P** **19 08 48.5 -0.2**
SORM Soroca 70.89 328 P **P** **19 08 48.4 -0.2**
SORM Soroca 70.89 328 P **P** **19 08 48.0 -0.6**
comp=Z,9μmcomp=Z,1μm,0.8s
WBO Williamsburg 70.89 38 IAmb IAmb 19 08 49.1
comp=Z,100nm,0.9s
NEWG New Galloway 70.98 351 *e*P **P** **19 08 49.5 +0.5**
NEWG IAmb IAmb 19 08 51.7
comp=Z,138nm,0.8s
BSI Banda Aceh 71.01 253 P **P** **19 08 50.5 +0.7**
EDMD Edmundbyers 71.03 349 *e*P **P** **19 08 49.9 +0.6**
EDMD IAmb IAmb 19 08 51.6
comp=Z,92nm,0.8s
SLBS Sierra La Lagu 71.04 76 P **P** **19 08 49.8 -0.2**
SLBS Sierra La Lagu 71.04 76 IAMs_20 IAMs_20 19 33 14.1
comp=Z,2μm,22.0s
S44A Carbondale 71.05 52 IAMs_20 IAMs_20 19 38 53.9
comp=Z,2μm,20.0s
MNTQ Montreal, Queb 71.07 37 IAmb IAmb 19 08 50.5
comp=Z,155nm,1.0s
KMPD K-Podol'skiy 71.09 330 P **P** **19 08 48.8 -1.0**
KMPD P **P** **19 08 48.6 -1.2**
BLO Bloomington 71.11 49 IAmb IAmb 19 08 51.2
comp=Z,194nm,1.1s

FCAR	**Ozark Folk Cen**	**71.12**	**55**	IAmb	IAmb	19 08 51.1			
	comp=Z,174nm,0.8s								
PECO	**Prince Edward**	**71.15**	**40**	IAmb	IAmb	19 08 50.9			
	comp=Z,166nm,1.0s								
CGM3	**Cape Girardeau**	**71.18**	**52**	IAmb	IAmb	19 08 51.8			
	comp=Z,244nm,1.6s								
PSI	**Prapat**	**71.18 248**		P	**P**	**19 08 51.4**	**+0.5**		
KWP	**Kalwaria Pacla**	**71.22 333**		*e*P	**P**	**19 08 51.5**	**+0.9**		
KWP				*e*L	L	19 44 09.4			
KWP	**Kalwaria Pacla**	**71.22 333**		P	**P**	**19 08 51.4**	**+0.9**		
	comp=Z,14µmcomp=Z,1µm,1.0s								
KCSI	**Kotacane, Aceh**	**71.23 250**		P	**P**	**19 08 49.3**	**-1.8**		
FW13	**Cleburne**	**71.23**	**61**	IAmb	IAmb	19 08 52.4			
	comp=Z,87nm,1.0s								
TPI	**Tanjungpandan**	**71.24 237**		P	**P**	**19 08 51.8**	**+0.7**		
	comp=Z,3µmcomp=Z,5µmcomp=Z,349nm,1.3s								
BRDY	**Brady**	**71.24**	**63**	IAmb	IAmb	19 08 52.7			
	comp=Z,75nm,1.0s								
O49A	**Covington**	**71.25**	**47**	IAmb	IAmb	19 08 52.1			
	comp=Z,262nm,1.1s								
O49A				IAMs_20	IAMs_20	19 41 27.2			
	comp=Z,3µm,21.0s								
RPSI	**Rantau Prapat**	**71.27 248**		IAmb	IAmb	19 08 53.0			
	comp=Z,100nm,0.8s								
D62A	**Allapoint, All**	**71.27**	**33**	IAmb	IAmb	19 08 52.5			
	comp=Z,169nm,0.8s								
GAL1	**Galloway**	**71.27 351**		*e*P	**P**	**19 08 51.5**	**+0.7**		
GAL1				IAmb	IAmb	19 08 53.5			
	comp=Z,173nm,0.8s								
GDLE	**Glaisdale, N Y**	**71.30 349**		*e*P	**P**	**19 08 51.4**	**+0.5**		
GDLE				IAmb	IAmb	19 08 54.3			
	comp=Z,204nm,0.9s								
IDGL	**Inch Island, C**	**71.30 353**		P	**P**	**19 08 51.9**	**+1.0**		
IDGL	**Inch Island, C**	**71.30 353**		*e*P	**P**	**19 08 52.0**	**+1.0**		
MORS	**Morshin**	**71.33 332**		P	**P**	**19 08 51.8**	**+0.5**		
DBNI	**Kabupaten Domp**	**71.36 225**		P	**P**	**19 08 52.2**	**+0.4**		
DRBR	**Darabani**	**71.37 329**		⇑P	**P**	**19 08 51.3**	**-0.2**		
P48A	**Milroy**	**71.37**	**48**	IAMs_20	IAMs_20	19 43 08.2			
	comp=Z,3µm,20.0s								
MLSI	**Meulaboh, Aceh**	**71.38 251**		P	**P**	**19 08 50.7**	**-1.3**		
	comp=Z,5µmcomp=Z,304nm,0.9s								
KESW	**Keswick, Cumbr**	**71.39 350**		*e*P	**P**	**19 08 52.6**	**+1.1**		
RETH	**Rethem/Aller,**	**71.39 342**		*e*P	**P**	**19 08 52.6**	**+1.1**		
	comp=Z,699nm,1.1s,baz=18,slow=6.0								
J55A	**Hilton**	**71.40**	**41**	IAmb	IAmb	19 08 52.5			
	comp=Z,227nm,1.0s								
J55A				IAMs_20	IAMs_20	19 42 57.8			
	comp=Z,2µm,18.0s								
SHIU	**Shidnytsya**	**71.40 332**		P	**P**	**19 08 52.1**	**+0.4**		
M52A	**Chesterland**	**71.41**	**44**	IAmb	IAmb	19 08 53.3			
	comp=Z,260nm,1.0s								
M52A				IAMs_20	IAMs_20	19 43 26.2			
	comp=Z,2µm,19.0s								
FLTG	**Flechtingen**	**71.42 341**		*e*P	**P**	**19 08 52.3**	**+0.5**		
	comp=Z,707nm,1.0s,baz=18,slow=6.0								
HYB	**Hyderabad**	**71.43 274**		*e*P	**P**	**19 08 53.9**	**+1.5**		
HYB				*e*PcP	**PcP**	**19 09 13.0**	**+1.2**		
HYB				*e*PP	**PP**	**19 11 32.6**	**+1.6**		
HYB				*e*S	**S**	**19 18 11.1**	**+3.8**		
JCT	**Junction City**	**71.44**	**64**	IAmb	IAmb	19 09 13.7			
	comp=Z,82nm,0.9s								
JCT				IAMs_20	IAMs_20	19 37 23.7			
	comp=Z,3µm,22.0s								
OJC	**Ojcow**	**71.45 335**		*e*P	**P**	**19 08 52.9**	**+0.9**		
OJC				*e*L	L	19 42 17.6			
OJC	**Ojcow**	**71.45 335**		P	**P**	**19 08 52.0**	**0.0**		
	comp=Z,6µmcomp=Z,438nm,1.2s								
LONY	**Lake Ozonia**	**71.48**	**38**	IAmb	IAmb	19 08 52.7			
	comp=Z,94nm,1.0s								
LONY				IAMs_20	IAMs_20	19 43 22.8			
	comp=Z,2µm,20.0s								
PPBI	**Pangkal Pinang**	**71.50 239**		P	**P**	**19 08 54.7**	**+2.0**		
WHTX	**Lake Whitney,**	**71.50**	**61**	IAmb	IAmb	19 08 54.1			
	comp=Z,110nm,1.0s								
WHTX				IAMs_20	IAMs_20	19 43 16.1			
	comp=Z,2µm,20.0s								
WHAR	**Wooly Hollow**	**71.52**	**55**	IAmb	IAmb	19 08 53.8			
	comp=Z,226nm,1.1s								
E62A	**Clayton Lake**	**71.52**	**34**	IAMs_20	IAMs_20	19 42 43.9			
	comp=Z,3µm,19.0s								
STNU	**Starunia**	**71.54 331**		P	**P**	**19 08 52.5**	**-0.1**		
GNI	**Garni**	**71.56 313**		LR	LR	19 45 07.1			
	comp=Z,5µm,20.3s,baz=37,slow=40								
GNI	**Garni**	**71.56 313**		P	**P**	**19 08 53.9**	**+0.9**		
GNI	**Garni**	**71.56 313**		P	**P**	**19 08 53.9**	**+0.9**		
GNI	**Garni**	**71.56 313**	*c*	*i*P	**P**	**19 08 54.0**	**+0.9**		
GNI				pmax	pmax				
	comp=Z,252nm,1.3s								
GNI				MLR	MLR				
	comp=Z,6µm,21.0s								
GNI	**Garni**	**71.56 313**		P	**P**	**19 08 52.4**	**-0.6**		
GNI	**Garni**	**71.56 313**		P	**P**	**19 08 53.0**	**0.0**		
	comp=Z,3µmcomp=Z,199nm,1.1s								
WSI	**Waingapu**	**71.61 222**			**P**	**19 08 53.9**	**+0.7**		
	comp=Z,6µmcomp=Z,402nm,1.1s								
ASSE	**Asse, Remlinge**	**71.72 341**		*e*P	**P**	**19 08 54.5**	**+1.0**		
	comp=Z,994nm,1.1s,baz=18,slow=6.0								
ASSE				*e*S	S	19 17 58.1	**-11**		
	baz=19,slow=5.9								
KSV	**Kosov**	**71.73 330**		P	**P**	**19 08 53.3**	**-0.4**		
KSP	**Ksiaz**	**71.73 337**		*e*P	**P**	**19 08 54.3**	**+0.6**		
KSP				*e*L	L	19 38 16.7			
KSP	**Ksiaz**	**71.73 337**		P	**P**	**19 08 53.8**	**+0.1**		
	comp=Z,6µmcomp=Z,705nm,1.0s								
KIS	**Kishinev**	**71.75 327**		⇑P	**P**	**19 08 53.6**	**-0.3**		
KIS	**Kishinev**	**71.75 327**		P	**P**	**19 08 53.5**	**-0.3**		
KIS	**Kishinev**	**71.75 327**		P	**P**	**19 08 52.6**	**-1.2**		
	comp=Z,4µmcomp=Z,546nm,0.9s								
TPTI		**71.77 250**		P	**P**	**19 08 53.9**	**-0.5**		
Z38A	**Mt. Pleasant**	**71.78**	**59**	IAmb	IAmb	19 08 55.6			
	comp=Z,114nm,0.9s								
Z38A				IAMs_20	IAMs_20	19 41 49.4			
	comp=Z,3µm,21.0s								
STHS	**Stebnicka Huta**	**71.81 333**		*e*P	**P**	**19 08 54.4**	**+0.2**		
STHS				pmax	pmax				
	comp=Z,279nm,0.9s								
STHS	**Stebnicka Huta**	**71.81 333**		*e*P	**P**	**19 08 54.4**	**+0.2**		
PURM	**Purcari**	**71.82 327**		⇑P	**P**	**19 08 54.2**	**0.0**		
PURM	**Purcari**	**71.82 327**		P	**P**	**19 08 53.8**	**-0.4**		
	comp=Z,9µmcomp=Z,1µm,0.8s								
DRIO	**Del Rio**	**71.83**	**65**	IAmb	IAmb	19 09 12.9			
	comp=Z,79nm,1.1s								
HPK	**Haverah Park**	**71.85 349**		*e*P	**P**	**19 08 55.4**	**+1.1**		
HPK				IAmb	IAmb	19 08 57.2			
	comp=Z,610nm,0.8s								
IOMK	**Kirk Michael**	**71.86 351**		*e*P	**P**	**19 08 55.0**	**+0.6**		
IOMK				IAmb	IAmb	19 08 57.1			
	comp=Z,89nm,0.7s								
KARS	**Kars**	**71.88 315**		IAmb	IAmb	19 09 16.7			
	comp=Z,92nm,0.9s								
T45A	**Paducah**	**71.88**	**52**	IAMs_20	IAMs_20	19 40 10.0			
	comp=Z,2µm,20.0s								
PLAI	**Plampang**	**71.88 225**		P	**P**	**19 08 54.6**	**-0.3**		
	comp=Z,4µmcomp=Z,412nm,1.0s								
X40A	**Basin Creek Fa**	**71.89**	**56**	IAmb	IAmb	19 08 56.3			
	comp=Z,114nm,1.1s								
WBSI	**Waikabubak, Su**	**71.95 223**		P	**P**	**19 08 55.0**	**-0.4**		
	comp=Z,3µmcomp=Z,229nm,0.9s								
KMMI	**Kalianget**	**71.96 229**		P	**P**	**19 08 57.0**	**+1.6**		
	comp=Z,8µmcomp=Z,738nm,1.1s								
J57A	**Williamstown**	**71.98**	**40**	IAmb	IAmb	19 08 55.9			
	comp=Z,196nm,1.2s								
RAC	**Raciborz**	**71.98 336**		*e*P	**P**	**19 08 56.4**	**+1.3**		
RAC				AMS	AMS	19 44 28.0			
	comp=Z,6.0nm,17.5s								
RAC	**Raciborz**	**71.98 336**		*e*P	**P**	**19 08 56.4**	**+1.3**		
RAC				MLR	MLR				
	comp=Z,6µm,17.5s								
WCI	**Wyandotte Cave**	**71.98**	**50**	P	**P**	**19 08 54.8**	**-0.6**		
WCI				IAmb	IAmb	19 08 56.9			
	comp=Z,243nm,0.9s								
WCI	**Wyandotte Cave**	**71.98**	**50**	P	**P**	**19 08 54.8**	**-0.6**		
WCI				pmax	pmax				
	comp=Z,243nm,0.9s								
WCI				MLR	MLR				
	comp=Z,4µm,20.0s								
WCI	**Wyandotte Cave**	**71.98**	**50**	P	**P**	**19 08 55.6**	**+0.2**		
IASR	**Iasi**	**71.98 328**		⇑P	**P**	**19 08 55.7**	**+0.5**		
BASI	**Baing, Sumba**	**72.00 222**		P	**P**	**19 08 55.6**	**0.0**		
	comp=Z,694nm,1.4s								
MEZ	**Mezhgor'ye**	**72.00 332**		P	**P**	**19 08 55.5**	**+0.2**		
OSTC	**Ostas**	**72.02 337**		*e*P	**P**	**19 08 56.7**	**+1.3**		
OSTC				AMS	AMS	19 46 50.0			
	comp=Z,4µm,15.7s								
OSTC	**Ostas**	**72.02 337**		*e*P	**P**	**19 08 56.7**	**+1.3**		
OSTC				MLR	MLR				
	comp=Z,4µm,15.7s								
CHVC	**Chvalec**	**72.03 337**		*e*P	**P**	**19 08 56.7**	**+1.2**		
CHVC				AMS	AMS	19 45 30.0			
	comp=Z,4µm,19.7s								
CHVC	**Chvalec**	**72.03 337**		*e*P	**P**	**19 08 56.7**	**+1.2**		
CHVC				MLR	MLR				
	comp=Z,4µm,19.7s								
CLL	**Collm**	**72.03 339**		IAMs_20	IAMs_20	19 44 06.4			
	comp=Z,3µm,21.0s								
CLL	**Collm**	**72.03 339**	⇑	*i*P	**P**	**19 08 56.1**	**+0.7**		
CLL				*i* S	**S**	**19 18 14.5**	**+1.4**		
CLL				pmax	pmax				
	comp=Z,1µm,1.0s								
CLL				MLR	MLR				
	comp=Z,3µm,20.4s								
CLL	**Collm**	**72.03 339**		P	**P**	**19 08 55.6**	**+0.2**		
	comp=Z,12µmcomp=Z,1µm,1.0s								
CLL	**Collm**	**72.03 339**	⇑	*i*P	**P**	**19 08 56.1**	**+0.7**		
	comp=Z,1µm,1.0s								
CLL				*e*PP	**PP**	**19 11 36.0**	**+0.9**		
CLL				*i* S	**S**	**19 18 14.5**	**+1.4**		
CLL				*e*PPS	PPS	19 19 06.0			
CLL				*e*SS	**SS**	**19 22 54.0**	**+4.7**		
CLL				*e*SSS	SSS	19 26 06.0			
CLL				*ex*	x	19 27 12.0			
CLL				*e*SSSS		19 27 42.0			
CLL				AMS	AMS	19 43 00.0			
	comp=Z,3µm,20.4s								
CLL	**Collm**	**72.03 339**		*e*P	**P**	**19 08 56.0**	**+0.5**		
	comp=Z,1µm,0.9s,baz=18,slow=6.0								
BATG	**Bathurst New B**	**72.05**	**31**	IAmb	IAmb	19 08 57.4			
	comp=Z,190nm,1.1s								
CLZ	**Clausthal**	**72.06 341**		*e*P	**P**	**19 08 56.9**	**+1.3**		
	comp=Z,1µm,1.0s,baz=18,slow=6.0								
NIE	**Niedzica**	**72.06 334**		*e*P	**P**	**19 08 56.6**	**+1.0**		
NIE				*e*L	L	19 44 08.3			
NIE	**Niedzica**	**72.06 334**		P	**P**	**19 08 56.2**	**+0.5**		
	comp=Z,2µmcomp=Z,116nm,1.1s								
BKNI	**Bangkinang**	**72.08 245**		P	**P**	**19 08 57.5**	**+1.3**		
BKNI	**Bangkinang**	**72.08 245**		P	**P**	**19 08 57.8**	**+1.6**		
IBBN	**Ibbenburen**	**72.09 343**		*e*P	**P**	**19 08 56.8**	**+1.1**		
	comp=Z,896nm,0.9s,baz=18,slow=6.0								
UPC	**Upice**	**72.11 337**		*e*P	**P**	**19 08 57.3**	**+1.4**		
UPC				AMS	AMS	19 46 50.0			
	comp=Z,4µm,15.9s								
UPC	**Upice**	**72.11 337**		*e*P	**P**	**19 08 57.3**	**+1.4**		
UPC				MLR	MLR				
	comp=Z,4µm,15.9s								
PAOC	**Oil Creek Stat**	**72.12**	**43**	IAmb	IAmb	19 08 57.3			
	comp=Z,229nm,1.1s								
BHUJ	**Bhuj**	**72.14 285**		*e*P	P	19 08 50.8	**-5.6**		
BHUJ				IAmb	IAmb	19 08 58.8			
	comp=Z,20nm,0.3s								
BHUJ				*e*S	**S**	**19 18 08.7**	**-6.4**		
NCB	**Newcomb**	**72.17**	**38**	IAmb	IAmb	19 08 57.3			
	comp=Z,108nm,1.0s								
DPC	**Dobruska-Polom**	**72.19 337**		*e*P	**P**	**19 08 57.5**	**+1.1**		
DPC				AMS	AMS	19 45 40.0			
	comp=Z,3µm,18.2s								
DPC	**Dobruska-Polom**	**72.19 337**		*e*P	**P**	**19 08 57.5**	**+1.1**		
DPC				MLR	MLR				
	comp=Z,3µm,18.2s								
DPC	**Dobruska-Polom**	**72.19 337**		P	**P**	**19 08 57.6**	**+1.1**		
	comp=Z,6µmcomp=Z,505nm,1.6s								
OKC	**Ostrava-Krasne**	**72.22 335**		*e*P	**P**	**19 08 58.2**	**+1.6**		
OKC				AMS	AMS	19 44 00.0			
	comp=Z,4µm,14.8s								
OKC	**Ostrava-Krasne**	**72.22 335**		*e*P	**P**	**19 08 58.2**	**+1.6**		
OKC				MLR	MLR				
	comp=Z,4µm,14.8s								
STEB	**Steborice**	**72.22 336**		*e*P	**P**	**19 08 57.8**	**+1.2**		
BRG	**Berggiesshubel**	**72.23 338**		*e*P	**P**	**19 08 57.2**	**+0.6**		
	comp=Z,482nm,1.0s,baz=18,slow=6.0								
BRG				*e*S	**S**	**19 18 11.1**	**-4.4**		
	baz=19,slow=5.9								
BRG	**Berggiesshubel**	**72.23 338**	⇑	*i*P	**P**	**19 08 57.3**	**+0.6**		
BRG				Amp		19 08 58.9			
	comp=Z,473nm,1.0s								
BRG	**Berggiesshubel**	**72.23 338**		S	**S**	**19 18 17.0**	**+1.5**		
N53A	**Lisbon**	**72.24**	**44**	IAmb	IAmb	19 08 58.2			
	comp=Z,288nm,1.1s								
N53A				IAMs_20	IAMs_20	19 40 26.1			
	comp=Z,3µm,22.0s								
PRAR	**RASCA**	**72.24 329**		⇑P	**P**	**19 08 56.7**	**-0.1**		
UZHM	**Uzhgorod**	**72.24 332**		P	**P**	**19 08 56.9**	**+0.2**		
ILTH	**Belurgan, Co L**	**72.25 352**		P	**P**	**19 08 56.9**	**+0.3**		
RAKU	**Rahkiv**	**72.25 331**		P	**P**	**19 08 56.3**	**-0.6**		
MUKU	**Mukachevo**	**72.29 332**		P	**P**	**19 08 56.4**	**-0.6**		
BRIU	**Brid**	**72.30 332**		P	**P**	**19 08 57.5**	**+0.4**		
HOLU	**Holmets**	**72.31 332**		P	**P**	**19 08 57.1**	**0.0**		
BURAR	**Bucovina Array**	**72.32 330**		⇑P	**P**	**19 08 57.5**	**+0.2**		
BURAR	**Bucovina Array**	**72.32 330**		P	**P**	**19 08 57.9**	**+0.6**		
BURAR	**Bucovina Array**	**72.32 330**		P	**P**	**19 08 57.5**	**+0.2**		
JMBI	**JAMBI**	**72.34 241**		P	**P**	**19 08 59.8**	**+2.1**		
K57A	**Scipio Center**	**72.36**	**40**	IAmb	IAmb	19 08 58.2			
	comp=Z,149nm,1.1s								
NEUB	**Neuenburg**	**72.38 340**		*e*P	**P**	**19 08 58.4**	**+0.9**		
	comp=Z,628nm,0.8s,baz=18,slow=6.0								
WLAR	**White Oak Lake**	**72.38**	**57**	IAmb	IAmb	19 08 59.6			
	comp=Z,211nm,1.1s								
435B	**Jarrell**	**72.39**	**62**	IAmb	IAmb	19 08 59.7			
	comp=Z,101nm,1.2s								
VT1	**Waterbury**	**72.39**	**37**	IAMs_20	IAMs_20	19 43 50.4			
	comp=Z,2µm,20.0s								
P51A	**Williamsport**	**72.39**	**47**	IAmb	IAmb	19 08 58.7			
	comp=Z,192nm,1.2s								
VASR	**Vaslui**	**72.39 328**		⇓P	**P**	**19 08 58.5**	**+0.8**		
KHKI	**Kahang-Kahang**	**72.40 227**		P	**P**	**19 08 58.0**	**0.0**		
	comp=Z,3µmcomp=Z,5µmcomp=Z,463nm,1.3s								
G62A	**West of Eustis**	**72.40**	**35**	IAmb	IAmb	19 08 59.8			
	comp=Z,279nm,1.1s								
G62A				IAMs_20	IAMs_20	19 42 25.3			
	comp=Z,3µm,21.0s								
LBWR	**Ladybower, Pea**	**72.41 349**		*e*P	**P**	**19 08 58.7**	**+1.1**		
LBWR				IAmb	IAmb	19 09 00.9			
	comp=Z,520nm,0.9s								
GTTG	**Gottingen**	**72.42 341**		*e*P	**P**	**19 08 58.7**	**+1.0**		
	comp=Z,593nm,0.9s,baz=18,slow=6.0								
PVCC	**Panska Ves**	**72.42 338**		*e*P	**P**	**19 08 58.8**	**+1.0**		
PVCC				AMS	AMS	19 42 00.0			
	comp=Z,4µm,22.0s								
PVCC	**Panska Ves**	**72.42 338**		*e*P	**P**	**19 08 58.8**	**+1.0**		
PVCC				MLR	MLR				
	comp=Z,4µm,22.0s								
MORC	**Moravsky Berou**	**72.42 336**		⇑P	**P**	**19 08 58.9**	**+1.0**		
MORC	**Moravsky Berou**	**72.42 336**		P	**P**	**19 08 58.9**	**+1.0**		
MORC	**Moravsky Berou**	**72.42 336**	⇑	*i*P	**P**	**19 08 58.7**	**+0.8**		
KORU	**Korolevo**	**72.43 332**		P	**P**	**19 08 57.9**	**0.0**		
PAMR	**Moraine State**	**72.43**	**44**	IAmb	IAmb	19 08 59.3			
	comp=Z,181nm,1.0s								
R49A	**Shelbyville**	**72.44**	**49**	IAmb	IAmb	19 08 59.7			
	comp=Z,178nm,1.0s								
MNSI	**Mandailing Nat**	**72.48 246**		P	**P**	**19 08 57.2**	**-1.4**		
J59A	**Piesco**	**72.50**	**39**	IAmb	IAmb	19 08 58.9			
	comp=Z,113nm,1.0s								
J59A				IAMs_20	IAMs_20	19 41 45.8			
	comp=Z,2µm,21.0s								
BERU	**Beregovo**	**72.50 332**		P	**P**	**19 08 58.3**	**0.0**		
ABJI	**Asem Bagus**	**72.50 229**		P	**P**	**19 09 00.1**	**+1.5**		
	comp=Z,213nm,0.9s								
RICC	**Richard**	**72.51 338**		*e*P	**P**	**19 08 59.7**	**+1.4**		
GIRR	**Girov**	**72.52 329**		⇓P	**P**	**19 08 59.0**	**+0.6**		
LANS	**Liptovska Anna**	**72.52 334**		*e*P	**P**	**19 09 00.3**	**+1.9**		
TRSU	**Trosnyk**	**72.54 332**		P	**P**	**19 08 59.5**	**+1.0**		
O53A	**New Philadelph**	**72.55**	**45**	IAmb	IAmb	19 08 59.9			
	comp=Z,277nm,1.0s								
MSVF	**Nonsavu**	**72.57 162**		P	**P**	**19 09 00.3**	**+1.3**		
MSVF	**Nonsavu**	**72.57 162**		P	**P**	**19 09 00.3**	**+1.3**		
MSVF				pmax	pmax				
	comp=Z,59nm,1.2s								
F64A	**Sherman**	**72.57**	**33**	IAmb	IAmb	19 09 00.1			
	comp=Z,170nm,0.9s								
F64A				IAMs_20	IAMs_20	19 43 44.7			
	comp=Z,2µm,20.0s								
HSKC	**Hora Svate Kat**	**72.60 339**		*e*P	**P**	**19 09 00.2**	**+1.3**		
HSKC				AMS	AMS	19 46 00.0			
	comp=Z,4µm,17.9s								
T47A	**Sharon Grove**	**72.62**	**51**	IAMs_20	IAMs_20	19 40 41.5			
	comp=Z,3µm,21.0s								
Q51A	**Peebles**	**72.64**	**47**	IAmb	IAmb	19 09 00.7			
	comp=Z,195nm,1.0s								
DRLN	**Deer Lake**	**72.66**	**25**	IAmb	IAmb	19 09 00.7			
	comp=Z,188nm,1.7s								
WME	**Myndd Eilian**	**72.69 351**		*e*P	**P**	**19 08 59.9**	**+0.7**		
MAUC	**Maruska**	**72.74 335**		*e*P	**P**	**19 09 00.9**	**+1.2**		
BLJI	**Banyuglugur**	**72.75 229**		P	**P**	**19 09 00.1**	**0.0**		
	comp=Z,4µmcomp=Z,198nm,1.0s								
H62A	**Milan**	**72.75**	**36**	IAMs_20	IAMs_20	19 43 49.4			
	comp=Z,3µm,20.0s								
LBNH	**Lisbon**	**72.77**	**37**	IAmb	IAmb	19 09 01.8			
	comp=Z,167nm,1.1s								
LBNH				IAMs_20	IAMs_20	19 43 53.9			
	comp=Z,3µm,20.0s								
BMR	**Baia Mare**	**72.77 331**		⇑P	**P**	**19 09 01.0**	**+1.1**		
BMR	**Baia Mare**	**72.77 331**		P	**P**	**19 09 00.9**	**+1.1**		
STNC	**Stoke**	**72.77 349**		*e*P	**P**	**19 09 01.1**	**+1.3**		
STNC				IAmb	IAmb	19 09 02.7			
	comp=Z,217nm,1.0s								
RTBI	**Rangdo, Negare**	**72.78 228**		P	**P**	**19 08 59.9**	**-0.4**		
	comp=Z,258nm,1.3s								
BIR	**Birlad**	**72.78 328**		⇑P	**P**	**19 09 01.1**	**+1.1**		
BIR	**Birlad**	**72.78 328**		P	**P**	**19 09 01.0**	**+1.1**		
PKME	**Peaks-Kenny Pk**	**72.78**	**34**	IAmb	IAmb	19 09 01.8			
	comp=Z,135nm,1.1s								
R50A	**Paris**	**72.83**	**48**	IAmb	IAmb	19 09 02.0			
	comp=Z,187nm,0.9s								
R50A				IAMs_20	IAMs_20	19 41 33.7			
	comp=Z,3µm,22.0s								
PMBI	**Palembang**	**72.85 240**		P	**P**	**19 09 02.1**	**+1.4**		
DNP	**Denpasar**	**72.85 227**		P	**P**	**19 08 59.2**	**-1.5**		
	comp=Z,705nm,0.9s								
KECS	**Kecovo**	**72.86 333**		*e*P	**P**	**19 09 01.7**	**+1.2**		
KECS				pmax	pmax				
	comp=Z,224nm,0.9s								
KECS	**Kecovo**	**72.86 333**		*e*P	**P**	**19 09 01.7**	**+1.2**		
TESR	**Tescani**	**72.87 329**		⇑P	**P**	**19 09 00.6**	**+0.1**		
TESR	**Tescani**	**72.87 329**		P	**P**	**19 08 59.7**	**-0.8**		
	comp=Z,8µmcomp=Z,781nm,0.9s								
PRA	**Prague**	**72.88 338**		*e*P	**P**	**19 09 02.4**	**+1.9**		
PRA	**Prague**	**72.88 338**		*e*P	**P**	**19 09 02.4**	**+1.9**		
STBN	**Sutton Boningt**	**72.91 349**		*e*P	**P**	**19 09 01.6**	**+1.0**		
STBN				IAmb	IAmb	19 09 04.0			
	comp=Z,367nm,0.9s								
PRU	**Pruhonice**	**72.93 338**		*e*P	**P**	**19 09 02.2**	**+1.4**		
PRU				AMS	AMS	19 45 20.0			
	comp=Z,4µm,17.1s								
PRU	**Pruhonice**	**72.93 338**		*e*P	**P**	**19 09 02.2**	**+1.4**		
PRU				MLR	MLR				
	comp=Z,4µm,17.1s								
MOX	**Moxa**	**72.94 340**		*e*P	**P**	**19 09 02.0**	**+1.1**		
	comp=Z,621nm,0.9s,baz=18,slow=6.0								
MOX				*e*L	L	19 44 22.8			
	comp=Z,3µm,21.4s								
O54A	**Avella**	**72.95**	**44**	IAmb	IAmb	19 09 02.5			
	comp=Z,294nm,1.1s								
O54A				IAMs_20	IAMs_20	19 44 24.0			
	comp=Z,2µm,18.0s								
PLN	**Plauen**	**72.98 339**		*e*P	**P**	**19 09 02.2**	**+1.0**		
	comp=Z,207nm,1.0s,baz=18,slow=6.0								
WVT	**Waverly**	**72.98**	**52**	P	**P**	**19 09 01.2**	**-0.1**		
WVT				IAmb	IAmb	19 09 03.1			
	comp=Z,203nm,0.8s								
WVT				IAMs_20	IAMs_20	19 40 32.1			
	comp=Z,3µm,21.0s								
WVT	**Waverly**	**72.98**	**52**	P	**P**	**19 09 01.2**	**-0.1**		
WVT				pmax	pmax				
	comp=Z,203nm,0.9s								
WVT				MLR	MLR				
	comp=Z,3µm,21.0s								
TANN	**Tannenbergstha**	**72.99 339**		*e*P	**P**	**19 09 02.3**	**+1.1**		
	comp=Z,503nm,1.2s,baz=18,slow=6.0								
IGBI	**Denpas

VRI Vrincioaia 73.42 328 P **P** **19 09 03.4 -0.4**
comp=Z,4µmcomp=Z,249nm,0.9s
SCHLR Schela 73.42 327 ⇑P **P** **19 09 04.4 +0.7**
PDSI Padang 73.42 245 P **P** **19 09 03.3 -0.9**
comp=Z,2µmcomp=Z,162nm,0.9s
TRY Troy 73.44 39 IAMs_20 IAMs_20 19 42 35.7
comp=Z,2µm,20.0s
MLDN Muldoon 73.45 62 IAmb IAmb 19 09 06.1
comp=Z,138nm,1.0s
PLOR Plostina 73.46 328 ⇑P **P** **19 09 04.6 +0.6**
PLOR Plostina 73.46 328 P **P** **19 09 04.6 +0.6**
MANZ Manzenberg 73.47 339 *e*P **P** **19 09 05.0 +1.0**
comp=Z,110nm,1.0s,baz=18,slow=6.0
MANZ *e*S SKiKP 19 18 43.0 +13
baz=19,slow=5.9
KOPT Kop Dagi 73.47 316 IAmb IAmb 19 09 11.8
comp=Z,167nm,0.8s
TURR Turia 73.47 329 ⇑P **P** **19 09 05.3 +1.1**
LTVH Ltavrtes, Hu 73.48 332 ⇑P **P** **19 09 05.6 +1.5**
OZUR 73.51 329 ⇑P **P** **19 09 05.2 +0.9**
ZVC Zvikov 73.53 338 *e*P **P** **19 09 05.4 +1.1**
ZVC AMS AMS 19 46 30.0
comp=Z,3µm,20.8s
PSZ Piszkesteto 73.54 334 ⇑P **P** **19 09 05.8 +1.3**
PSZ Piszkesteto 73.54 334 P **P** **19 09 05.8 +1.3**
OXF Oxford 73.54 54 IAMs_20 IAMs_20 19 41 17.9
comp=Z,2µm,20.0s
BOSR Bodos 73.56 329 ⇑P **P** **19 09 06.0 +1.4**
SJI Sawahan 73.57 231 P **P** **19 09 05.4 +0.3**
comp=Z,4µmcomp=Z,271nm,1.8s
CFR Carcaliu 73.58 327 ⇑P **P** **19 09 04.9 +0.2**
CFR Carcaliu 73.58 327 P **P** **19 09 04.9 +0.2**
SSPA Standing Stone 73.59 43 P **P** **19 09 04.6 -0.3**
SSPA IAmb IAmb 19 09 06.2
comp=Z,261nm,1.2s
SSPA Standing Stone 73.59 43 IAMs_20 IAMs_20 19 43 15.9
comp=Z,2µm,20.0s
SMRI Semarang 73.59 233 P **P** **19 09 05.9 +0.8**
comp=Z,8µmcomp=Z,683nm,1.2s
COVR Voineasa-Covas 73.60 329 ⇑P **P** **19 09 06.1 +1.2**
CJR Cluj-Napoca 73.61 331 ⇑P **P** **19 09 05.9 +1.0**
CJR Cluj-Napoca 73.61 331 P **P** **19 09 05.9 +1.0**
MCWV Mont Chateau 73.61 44 IAMs_20 IAMs_20 19 43 54.5
comp=Z,2µm,18.0s
SNJI Sawahan-Nganju 73.62 231 P **P** **19 09 06.3 +0.9**
comp=Z,203nm,0.8s
U49A Red Boiling Sp 73.62 50 IAmb IAmb 19 09 06.7
comp=Z,186nm,1.0s
U49A IAMs_20 IAMs_20 19 43 34.9
comp=Z,3µm,21.0s
T50A Nancy 73.64 49 IAmb IAmb 19 09 06.8
comp=Z,234nm,1.1s
KSPA Keystone Colle 73.65 41 IAmb IAmb 19 09 06.0
comp=Z,90nm,1.0s
ROTZ Rotzenmuhle 73.65 339 *e*P **P** **19 09 06.2 +1.1**
comp=Z,151nm,1.1s,baz=18,slow=6.0
ROTZ *e*S **S** **19 18 37.2 +5.6**
baz=19,slow=5.9
S51A Beattyville 73.68 48 IAmb IAmb 19 09 06.8
comp=Z,134nm,1.0s
S51A IAMs_20 IAMs_20 19 42 00.4
comp=Z,3µm,21.0s
JURR Jurilovca 73.70 326 ⇓P **P** **19 09 06.1 +0.6**
BISRR Bisoca 73.71 328 ⇑P **P** **19 09 07.1 +1.5**
LMN Caledonia Moun 73.71 31 IAmb IAmb 19 09 07.0
comp=Z,147nm,0.9s
CLTN Cedars of Leba 73.71 51 IAmb IAmb 19 09 07.4
comp=Z,156nm,0.9s
GGN Saint George 73.72 33 IAmb IAmb 19 09 07.0
comp=Z,227nm,1.0s
DOPR Dopca 73.74 329 ⇑P **P** **19 09 06.9 +1.2**
Q54A Coxs Mills 73.76 45 IAmb IAmb 19 09 07.4
comp=Z,355nm,1.3s
V48A Smith Brothers 73.77 51 IAmb IAmb 19 09 07.6
comp=Z,263nm,1.0s
V48A IAMs_20 IAMs_20 19 40 16.9
comp=Z,3µm,22.0s
TPGR Topolog 73.78 327 ⇓P **P** **19 09 06.3 +0.4**
GRER 73.78 328 ⇑P **P** **19 09 07.7 +1.8**
MARR Marisel-Cluj 73.78 331 ⇑P **P** **19 09 06.6 +0.6**
BORR Bors 73.78 332 ⇑P **P** **19 09 07.5 +1.6**
735A Kenedy 73.79 63 IAMs_20 IAMs_20 19 39 31.7
comp=Z,2µm,20.0s
MODS Modra-Piesok 73.79 335 *e*P **P** **19 09 07.5 +1.6**
MODS pmax pmax
comp=Z,927nm,1.0s
MODS Modra-Piesok 73.79 335 *e*P **P** **19 09 07.5 +1.6**
DRGR 73.79 331 ⇑P **P** **19 09 06.7 +0.6**
DRGR 73.79 331 P **P** **19 09 06.6 +0.6**
MDRS Chennai 73.82 270 *e*P **P** **19 09 02.0 -4.5**
MDRS IAmb IAmb 19 09 08.5
comp=Z,44nm,0.6s
MDRS *e*S **SKiKP** **19 18 32.6 +1.4**
KRJI Kerinci 73.88 243 P **P** **19 09 08.1 +1.2**
EMMW East Machias 73.89 33 IAmb IAmb 19 09 08.1
comp=Z,172nm,0.9s
EMMW IAMs_20 IAMs_20 19 42 42.6
comp=Z,2µm,20.0s
N58A Sunbury 73.89 42 IAmb IAmb 19 09 07.6
comp=Z,183nm,1.1s
N58A IAMs_20 IAMs_20 19 45 02.7
comp=Z,2µm,20.0s
MDB Medias 73.89 330 ⇑P **P** **19 09 08.0 +1.5**
MDB Medias 73.89 330 P **P** **19 09 08.0 +1.5**
PBSI Pulau Batu 73.90 247 P **P** **19 09 07.9 +1.0**
comp=Z,7µmcomp=Z,516nm,1.3s
BEBN Eben Emael 73.91 344 *d*P **P** **19 09 07.2 +0.7**
comp=Z,528nm,0.0s
IWEX Carrickbyrne, 73.93 352 P **P** **19 09 07.4 +0.8**
IWEX Carrickbyrne, 73.93 352 *e*P **P** **19 09 07.5 +1.0**
GRF Grafenberg Arr 73.93 340 *e*P **P** **19 09 08.2 +1.5**
comp=Z,1µm,0.9s,baz=18,slow=6.0
GRF *e*L L 19 45 02.4
comp=Z,3µm,21.5s
MCH1 Michaelchurch 73.94 349 *e*P **P** **19 09 07.2 +0.5**
MCH1 IAmb IAmb 19 09 09.4
comp=Z,208nm,0.8s
NEHR Nehoiu 73.95 328 ⇑P **P** **19 09 08.1 +1.1**
KHC Kasperske Hory 73.95 338 *e*P **P** **19 09 07.0 +0.1**
KHC *ex* x 19 09 25.5
KHC Kasperske Hory 73.95 338 *e*P **P** **19 09 07.0 +0.1**
KHC *e* 19 09 25.5
HKT Hockley 73.96 61 P **P** **19 09 06.9 -0.2**
HKT IAMs_20 IAMs_20 19 41 28.0
comp=Z,2µm,20.0s
HKT Hockley 73.96 61 *c**e*P **P** **19 09 07.9 +0.8**
HKT pmax pmax
comp=Z,55nm,1.1s
TNS Taunus Mts 73.97 342 *e*P **P** **19 09 08.1 +1.1**
comp=Z,496nm,0.8s,baz=18,slow=6.0
MLR Muntele Rosu 74.00 329 LR LR 19 45 39.6
comp=Z,7µm,20.1s,baz=34,slow=39
MLR Muntele Rosu 74.00 329 ⇑P **P** **19 09 08.0 +0.7**
MLR Muntele Rosu 74.00 329 P **P** **19 09 08.0 +0.7**
MLR Muntele Rosu 74.00 329 P **P** **19 09 07.4 +0.1**
comp=Z,7µmcomp=Z,810nm,0.7s
ZST Bratislava 74.00 335 *e*P **P** **19 09 09.3 +2.1**
ZST pmax pmax
comp=Z,73nm,1.1s
ZST Bratislava 74.00 335 *e*P **P** **19 09 09.2 +2.1**
Y45A Yeager Farm, C 74.00 54 IAMs_20 IAMs_20 19 41 32.2
comp=Z,3µm,22.0s
BSZH Besenyszg 74.01 333 ⇑P **P** **19 09 08.7 +1.5**
K62A Royalston 74.02 38 IAmb IAmb 19 09 08.9
comp=Z,110nm,1.2s
K62A IAMs_20 IAMs_20 19 43 34.2
comp=Z,3µm,22.0s
143A Socs Landing, 74.03 56 IAmb IAmb 19 09 10.2
comp=Z,193nm,1.0s
MEM Membach 74.03 343 *d*P **P** **19 09 08.0 +0.8**
comp=Z,1µm,1.0s
BTNL Ternell 74.03 343 *d*P **P** **19 09 08.1 +0.8**
comp=Z,879nm,0.9s
L61B Northampton 74.05 38 IAMs_20 IAMs_20 19 42 51.8
comp=Z,2µm,21.0s
GURO Guroymak-BITLI 74.05 314 IAmb IAmb 19 09 25.9
comp=Z,159nm,1.1s
SRO Srobarova 74.05 335 *e*P **P** **19 09 09.0 +1.6**
SRO pmax pmax
comp=Z,459nm,1.0s
SRO Srobarova 74.05 335 *e*P **P** **19 09 09.0 +1.6**
STRD Stroud 74.06 349 *e*P **P** **19 09 08.2 +0.8**
STRD IAmb IAmb 19 09 10.4
comp=Z,196nm,0.8s
MONM Monmouth 74.07 349 *e*P **P** **19 09 08.4 +1.0**
MONM IAmb IAmb 19 09 10.4
comp=Z,348nm,0.9s
CKRC Cesky Krumlov 74.08 338 *e*P **P** **19 09 08.8 +1.2**
CKRC AMS AMS 19 43 00.0
comp=Z,4µm,21.2s
CKRC Cesky Krumlov 74.08 338 *e*P **P** **19 09 08.8 +1.2**
CKRC MLR MLR
comp=Z,4µm,21.2s
WET Wettzell 74.10 339 *e*P **P** **19 09 09.0 +1.3**
comp=Z,673nm,0.9s,baz=18,slow=6.0
UCC Uccle 74.12 345 *d*P **P** **19 09 08.1 +0.4**
comp=Z,210nm,1.0s
KNRA Kununurra 74.13 212 IAmb IAmb 19 09 10.7
comp=Z,269nm,1.1s
BSTI Sart Tilman 74.13 344 *d*P **P** **19 09 08.9 +1.1**
comp=Z,170nm,1.1s
TIRR Tirgusor 74.13 326 ⇑P **P** **19 09 08.6 +0.6**
TIRR Tirgusor 74.13 326 P **P** **19 09 08.5 +0.6**
TIRR Tirgusor 74.13 326 P **P** **19 09 07.2 -0.7**
comp=Z,5µmcomp=Z,602nm,1.0s
ISR Istrita 74.15 328 ⇑P **P** **19 09 09.1 +0.9**
ISR Istrita 74.15 328 P **P** **19 09 09.0 +0.9**
ISR Istrita 74.15 328 P **P** **19 09 08.5 +0.4**
comp=Z,8µmcomp=Z,862nm,0.9s
CTJI Waduk Cacaban 74.16 234 P **P** **19 09 09.2 +0.8**
comp=Z,412nm,1.2s
GEC2 GERESS Array S 74.20 338 *e*P **P** **19 09 09.4 +1.0**
comp=Z,382nm,0.8s,baz=18,slow=6.0
GEC2 *e*S **S** **19 18 36.7 -1.2**
baz=19,slow=5.9
GERES GERESS Array B 74.20 338 P **P** **19 09 09.2 +0.8**
comp=Z,197nm,0.7s,baz=35,slow=4.9,SNR=787
GERES PKPPKP P'P'df 19 36 36.4 -8.3
comp=Z,0.2nm,0.5s,baz=153,slow=4.4,SNR=3.6
GERES LR LR 19 47 55.1
comp=Z,4µm,18.2s,baz=30,slow=41
comp=Z,197nm,0.7s
PCJI Pacitan 74.25 231 P **P** **19 09 09.4 +0.5**
ELSH Elham, Standar 74.26 347 *e*P **P** **19 09 10.0 +1.5**
ELSH IAmb IAmb 19 09 11.2
comp=Z,289nm,1.0s
SWN1 Swindon 74.28 349 *e*P **P** **19 09 09.9 +1.2**
SWN1 IAmb IAmb 19 09 11.8
comp=Z,633nm,0.8s
BHOU Houvegnez 74.28 343 *d*P **P** **19 09 09.9 +1.2**
comp=Z,468nm,1.1s
UGM Wanagama 74.31 232 P **P** **19 09 09.7 +0.4**
comp=Z,394nm,1.3s
VOIR 74.33 329 ⇑P **P** **19 09 10.3 +1.1**
VOIR 74.33 329 P **P** **19 09 10.2 +1.1**
VOIR 74.33 329 P **P** **19 09 09.3 +0.1**
comp=Z,5µmcomp=Z,594nm,0.9s
YOGI Yogyakarta 74.33 232 P **P** **19 09 09.3 -0.1**
comp=Z,856nm,1.1s
BCLA Clavier 74.33 344 *d*P **P** **19 09 09.8 +0.8**
comp=Z,344nm,1.1s
BCLA *dx* x 19 09 21.7
CTA Charters Tower 74.35 194 P **P** **19 09 10.1 +0.7**
comp=Z,149nm,0.9s,baz=3.0,slow=6.7,SNR=148
CTA LR LR 19 39 48.5
comp=Z,508nm,19.2s,baz=28,slow=34
comp=Z,149nm,0.9s
CTAO Charters Tower 74.35 194 P **P** **19 09 09.9 +0.6**
CTAO IAmb IAmb 19 09 11.5
comp=Z,198nm,0.9s
CTAO Charters Tower 74.35 194 P **P** **19 09 09.9 +0.6**
CTAO pmax pmax
comp=Z,197nm,1.0s
CTAO MLR MLR
comp=Z,800nm,21.0s
MASI Maura Aman, Be 74.35 242 P **P** **19 09 09.9 +0.3**
BZK Bozkurt 74.36 321 ⇑P **P** **19 09 09.4 +0.1**
BZK Bozkurt 74.36 321 IAmb IAmb 19 09 19.5
comp=Z,97nm,0.9s
BZK Bozkurt 74.36 321 P **P** **19 09 09.0 -0.3**
comp=Z,2µmcomp=Z,118nm,0.9s
CVDA Cernavoda 74.36 327 ⇑P **P** **19 09 10.6 +1.3**
TNR Turnu Rosu 74.37 330 ⇑P **P** **19 09 10.3 +1.0**
TNR Turnu Rosu 74.37 330 P **P** **19 09 10.3 +1.0**
KLSI 74.37 239 P **P** **19 09 10.2 +0.5**
KSCT Kent School, K 74.37 39 P **P** **19 09 08.3 -1.1**
KSCT IAmb IAmb 19 09 10.4
comp=Z,86nm,1.1s
EFOR EFORIE 74.39 326 ⇑P **P** **19 09 10.2 +0.7**
WOL Wolverton 74.40 348 *e*P **P** **19 09 10.1 +0.8**
BGES Gesves 74.40 344 *d*P **P** **19 09 10.4 +1.0**
comp=Z,359nm,1.0s
HRV Adam Dziewonsk 74.41 37 P **P** **19 09 09.2 -0.4**
HRV IAmb IAmb 19 09 11.3
comp=Z,174nm,1.1s
HRV Adam Dziewonsk 74.41 37 IAMs_20 IAMs_20 19 43 43.3
comp=Z,2µm,21.0s
HRV Adam Dziewonsk 74.41 37 P **P** **19 09 09.2 -0.4**
HRV pmax pmax
comp=Z,174nm,1.1s
HRV MLR MLR
comp=Z,2µm,21.0s
Q56A Snyder Ridge, 74.41 44 IAmb IAmb 19 09 11.2
comp=Z,202nm,1.1s
Q56A IAMs_20 IAMs_20 19 45 09.5
comp=Z,2µm,18.0s
KLI Kotabumi 74.45 239 P **P** **19 09 10.3 +0.2**
MDSI Maura Dua 74.48 239 P **P** **19 09 09.8 -0.5**
comp=Z,3µmcomp=Z,348nm,1.1s
MTUR Matau 74.51 329 ⇓P **P** **19 09 11.7 +1.5**
MTUR Matau 74.51 329 P **P** **19 09 11.7 +1.5**
ARR Arges 74.52 329 ⇑P **P** **19 09 11.9 +1.6**
P57A Homestead Farm 74.52 43 IAmb IAmb 19 09 11.7
comp=Z,167nm,1.1s
BMRD Maredsous 74.53 344 *d*P **P** **19 09 10.9 +0.7**
comp=Z,498nm,1.0s
S54A Dingess, Becki 74.55 46 IAmb IAmb 19 09 12.0
comp=Z,136nm,0.9s
S54A IAMs_20 IAMs_20 19 46 05.3
comp=Z,2µm,20.0s
CONA Conrad Observa 74.55 336 *i* P **P** **19 09 12.0 +1.6**
comp=Z,227nm,0.7s,SNR=173
KPJI Karang Pucung 74.56 234 P **P** **19 09 10.5 -0.2**
comp=Z,3µmcomp=Z,223nm,1.3s
DEV Deva 74.56 331 ⇓P **P** **19 09 11.7 +1.2**
DEV Deva 74.56 331 P **P** **19 09 11.6 +1.2**
KSI Kapahiang 74.60 241 P **P** **19 09 11.0 -0.1**
comp=Z,5µmcomp=Z,367nm,0.8s
WES Weston 74.60 37 IAmb IAmb 19 09 12.3
comp=Z,187nm,1.0s
WES IAMs_20 IAMs_20 19 46 13.4
comp=Z,2µm,20.0s
RCHB Rochefort 74.60 344 *d*P **P** **19 09 11.1 +0.5**
comp=Z,312nm,1.1s
TZTN Tazewell 74.61 49 IAmb IAmb 19 09 12.7
comp=Z,184nm,1.1s
VAL Valentia 74.61 354 P **P** **19 09 11.6 +1.1**
VAL Valentia 74.61 354 P **P** **19 09 11.6 +1.1**
SULR 74.63 328 ⇑P **P** **19 09 11.4 +0.6**
ICOR Ion Corvin 74.64 327 ⇓P **P** **19 09 11.8 +1.0**
LEHL Lehliu 74.64 328 ⇑P **P** **19 09 11.5 +0.6**
MANR Mangalia 74.64 326 ⇑P **P** **19 09 11.5 +0.6**
R55A Marlinton 74.66 45 IAmb IAmb 19 09 12.9
comp=Z,299nm,1.0s
RONA Rosalia, Austr 74.66 336 *i* P **P** **19 09 12.7 +1.7**
comp=Z,175nm,0.8s,SNR=159
TNG Tangerang 74.68 236 P **P** **19 09 12.2 +0.8**
BLSI Bandar Lampung 74.69 238 P **P** **19 09 11.3 -0.2**
comp=Z,2µmcomp=Z,4µmcomp=Z,464nm,1.0s
BCX Boston College 74.70 37 IAmb IAmb 19 09 12.8
comp=Z,126nm,1.0s
BCX IAMs_20 IAMs_20 19 30 37.0
comp=Z,1µm,20.0s
LOT Lotru 74.70 330 ⇓P **P** **19 09 11.9 +0.5**
X48A Hartselle 74.72 52 IAmb IAmb 19 09 12.6
comp=Z,145nm,1.0s
X48A IAMs_20 IAMs_20 19 41 00.1
comp=Z,3µm,22.0s
HBVL Hebbronville 74.74 65 IAmb IAmb 19 09 15.2
comp=Z,148nm,0.9s
MVL Millersville 74.75 42 IAmb IAmb 19 09 12.8
comp=Z,117nm,1.0s
LEM Lembang 74.76 235 P **P** **19 09 12.6 +0.5**
comp=Z,162nm,0.9s,baz=83,slow=4.4,SNR=22
LEM LR LR 19 44 27.2
comp=Z,551nm,21.2s,baz=14,slow=38
comp=Z,162nm,0.9s
LEM Lembang 74.76 235 P **P** **19 09 12.6 +0.5**
comp=Z,2µmcomp=Z,160nm,0.9s
DOU Dourbes 74.76 344 *d*P **P** **19 09 12.1 +0.6**
comp=Z,308nm,1.0s
CICN Ciocanesti 74.82 327 ⇓P **P** **19 09 12.1 +0.2**
CIDE Kastamonu/Cide 74.82 322 ⇑P **P** **19 09 12.1 +0.1**
TOKA Tokat 74.83 319 IAmb IAmb 19 09 15.9
comp=Z,70nm,0.9s
PAL Palisades 74.84 40 IAmb IAmb 19 09 13.1
comp=Z,251nm,1.1s
MPLH Magyarpolny 74.84 335 P **P** **19 09 12.9 +0.9**
comp=Z,32µmcomp=Z,3µm,1.2s
UBSI University, Be 74.86 242 P **P** **19 09 12.4 -0.1**
VBMS Vicksburg 74.86 56 IAmb IAmb 19 09 14.5
comp=Z,226nm,1.0s
VBMS IAMs_20 IAMs_20 19 42 42.8
comp=Z,3µm,22.0s
SBJI Serang 74.89 237 P **P** **19 09 12.4 -0.2**
comp=Z,6µmcomp=Z,480nm,1.3s
WSPT Westport, CT 74.91 39 IAmb IAmb 19 09 13.3
comp=Z,143nm,1.1s
W50A Signal Mountai 74.92 51 IAmb IAmb 19 09 14.1
comp=Z,246nm,0.9s
WLF Walferdange 74.92 343 P **P** **19 09 12.9 +0.5**
WLF Walferdange 74.92 343 IAmb IAmb 19 09 15.2
comp=Z,294nm,1.0s
WLF Walferdange 74.92 343 *d*P **P** **19 09 12.9 +0.5**
comp=Z,161nm,1.2s
WLF Walferdange 74.92 343 *e*P **P** **19 09 13.6 +1.2**
comp=Z,293nm,1.0s,baz=18,slow=6.0
PSN Preselentsi 74.95 326 P **P** **19 09 13.6 +0.9**
DBJI Dramaga 74.95 236 P **P** **19 09 13.4 +0.4**
comp=Z,6µmcomp=Z,532nm,1.2s
MARNC Mare, Loyalty 74.99 173 IAmb IAmb 19 09 18.9
comp=Z,184nm,1.1s
LWLI Liwa 75.00 239 P **P** **19 09 12.9 -0.5**
CPNY Central Park 75.00 40 IAmb IAmb 19 09 14.2
comp=Z,257nm,1.1s
MOA Molln 75.00 337 *i* P **P** **19 09 14.2 +1.2**
comp=Z,132nm,0.7s,SNR=84
MNAI Manna 75.01 241 P **P** **19 09 13.3 -0.1**
comp=Z,4µmcomp=Z,442nm,0.9s
GZR Gura Zlata 75.05 331 ⇑P **P** **19 09 13.8 +0.5**
GZR Gura Zlata 75.05 331 P **P** **19 09 13.8 +0.5**
SDMD Soldier's Deli 75.06 42 IAmb IAmb 19 09 14.6
comp=Z,114nm,1.0s
N62A Caumsett State 75.07 39 IAmb IAmb 19 09 14.3
comp=Z,152nm,1.0s
N62A IAMs_20 IAMs_20 19 44 56.9
comp=Z,2µm,20.0s
CPCT Cooper Cave 75.07 50 IAmb IAmb 19 09 15.0
comp=Z,195nm,0.9s
GBN Guysborough 75.10 29 IAmb IAmb 19 09 15.8
comp=Z,333nm,1.4s
SGRR Singureni 75.13 328 ⇓P **P** **19 09 13.6 -0.1**
ARPR Arappgir-MALATY 75.14 317 IAmb IAmb 19 09 18.8
comp=Z,281nm,1.4s
L64A Middleborough 75.16 37 IAmb IAmb 19 09 15.6
comp=Z,265nm,1.0s
L64A IAMs_20 IAMs_20 19 45 21.4
comp=Z,2µm,19.0s
HUMR Humele 75.17 329 ⇓P **P** **19 09 13.4 -0.5**
BZS Buzias 75.18 331 ⇑P **P** **19 09 14.3 +0.3**
BZS Buzias 75.18 331 P **P** **19 09 14.3 +0.3**
HAL Halifax 75.18 31 IAmb IAmb 19 09 15.5
comp=Z,155nm,0.9s
TIM Timisoara 75.18 332 ⇓P **P** **19 09 15.4 +1.4**
TIM Timisoara 75.18 332 P **P** **19 09 15.4 +1.4**
M63A Gales Ferry 75.19 38 IAmb IAmb 19 09 15.2
comp=Z,237nm,1.1s
M63A IAMs_20 IAMs_20 19 43 38.1
comp=Z,3µm,21.0s
KASI Kota Agung 75.20 239 P **P** **19 09 13.1 -1.4**
comp=Z,2µmcomp=Z,284nm,1.0s
STU Stuttgart 75.21 341 *e*P **P** **19 09 15.1 +0.9**
comp=Z,1µm,1.0s,baz=18,slow=6.0
PPSI Pulau Pagai 75.22 244 P **P** **19 09 15.3 +0.7**
146A Union 75.24 55 IAMs_20 IAMs_20 19 43 32.8
comp=Z,3µm,21.0s
TKL Tuckaleechee C 75.24 49 LR LR 19 43 60.0
comp=Z,4µm,20.0s,baz=332,slow=37
TKL Tuckaleechee C 75.24 49 IAmb IAmb 19 09 16.0
comp=Z,108nm,0.9s
Z47A Carrollton 75.26 54 IAMs_20 IAMs_20 19 41 00.4
comp=Z,3µm,22.0s
ARSA Arzberg 75.27 336 *i* P **P** **19 09 16.1 +1.6**
comp=Z,195nm,0.7s,SNR=170
BBJI Bungbulang 75.30 235 P **P** **19 09 14.9 -0.2**
BIOA Bad Ischl, Aus 75.30 338 *i* P **P** **19 09 15.8 +1.1**
comp=Z,90nm,0.6s,SNR=82
NGCH Negor - Chabah 75.30 293 P **P** **19 09 15.2 +0.2**
SNR=18
FPAL Fort Paine 75.32 51 IAmb IAmb 19 09 16.4
comp=Z,178nm,0.9s
FUR Furstenfeldbru 75.37 339 *e*P **P** **19 09 16.4 +1.3**
comp=Z,755nm,0.9s,baz=18,slow=6.0
U54A Nelsons Funny 75.40 47 IAmb IAmb 19 09 17.1
comp=Z,280nm,1.1s
BLA Blacksburg 75.43 46 IAmb IAmb 19 09 17.2
comp=Z,223nm,1.1s
BLA IAMs_20 IAMs_20 19 44 07.5
comp=Z,3µm,20.0s
MORH Mrgy, Hungar 75.44 334 ⇑P **P** **19 09 15.8 +0.3**
MORH Mrgy, Hungar 75.44 334 P **P** **19 09 15.2 -0.3**
comp=Z,3µmcomp=Z,264nm,1.1s
COPA Copaceanca 75.45 328 ⇑P **P** **19 09 15.4 -0.1**
DZM Mont Dzumac 75.47 174 LR LR 19 37 47.2
comp=Z,2µm,21.0s,baz=6.5,slow=32
DZM Mont Dzumac 75.47 174 IAmb IAmb 19 09 19.8
comp=Z,200nm,1.2s
Y49A Blount Mountai 75.51 52 IAmb IAmb 19 09 17.2
comp=Z,141nm,0.8s
Y49A IAMs_20 IAMs_20 19 41 47.0
comp=Z,3µm,21.0s
SBD Saint Breward 75.53 350 *e*P **P** **19 09 16.9 +1.0**
BANR Banloc 75.53 332 ⇑P **P** **19 09 17.1 +1.1**
RAZG Razgrad 75.55 327 ⇑P **P** **19 09 16.3 +0.2**
M65A Busby, Falmout 75.56 37 IAMs_20 IAMs_20 19 47 09.9
comp=Z,2µm,21.0s
M65A Busby, Falmout 75.56 37 P **P** **19 09 16.9 +0.6**
baz=331
AVR AVREN 75.57 326 P **P** **19 09 17.6 +1.3**
NEF NEVSHA 75.57 327 P **P** **19 09 17.0 +0.7**
SRE Strehaia 75.58 330 ⇑P **P** **19 09 16.9 +0.5**
SRE Strehaia 75.58 330 P **P** **19 09 16.8 +0.5**
HERR Herculane 75.62 331 ⇑P **P** **19 09 16.8 +0.3**
PRD Provadia 75.62 327 P **P** **19 09 17.4 +0.9**
W52A Murphy 75.64 50 IAmb IAmb 19 09 18.5
comp=Z,230nm,1.1s
P61A Hammonton 75.64 41 IAmb IAmb 19 09 18.3
comp=Z,259nm,1.0s
P61A IAMs_20 IAMs_20 19 47 32.2
comp=Z,1µm,20.0s
X51A Calhoun 75.65 51 IAmb IAmb 19 09 18.4
comp=Z,265nm,1.1s
X51A IAMs_20 IAMs_20 19 42 01.6
comp=Z,3µm,22.0s
V53A Saluda 75.67 49 IAmb IAmb 19 09 18.7
comp=Z,227nm,1.3s
LOZB Loznitsa 75.70 327 ⇑P **P** **19 09 17.4 +0.3**
ONTNC Ouen Toro 75.70 174 IAmb IAmb 19 09 20.8
comp=Z,181nm,1.2s
ONTNC IAMs_20 IAMs_20 19 37 41.0
comp=Z,2µm,22.0s
GOA Goa 75.75 277 *e*P P 19 09 11.7 -6.0
GOA *e*S **S** **19 18 52.6 -3.2**
LESA Schwarzleotal 75.77 338 *i* P **P** **19 09 18.8 +1.4**
comp=Z,187nm,0.8s,SNR=173
DJES Djerdap 75.78 330 ⇑P **P** **19 09 17.5 0.0**
BFO Black Forest 75.80 341 P **P** **19 09 18.2 +0.6**
BFO Black Forest 75.80 341 P **P** **19 09 18.2 +0.6**
BFO pmax pmax
comp=Z,415nm,0.9s
BFO Black Forest 75.80 341 *e*P **P** **19 09 18.5 +0.9**
comp=Z,452nm,1.0s,baz=18,slow=6.0
BFO *e*S **S** **19 18 59.0 +3.3**
baz=19,slow=5.9
VLAD Vladila 75.82 329 ⇑P **P** **19 09 18.0 +0.3**
R58B Mineral 75.86 44 IAmb IAmb 19 09 19.8
comp=Z,248nm,1.1s
CBN Corbin Frederi 75.87 43 IAMs_20 IAMs_20 19 44 14.1
comp=Z,2µm,20.0s
LRAL Lakeview Retre 75.91 53 IAmb IAmb 19 09 19.2
comp=Z,80nm,0.8s
LRAL IAMs_20 IAMs_20 19 41 55.4
comp=Z,3µm,22.0s
MDVR Moldovita 75.91 331 ⇑P **P** **19 09 18.6 +0.3**
SOKA Soboth 75.92 336 *i* P **P** **19 09 19.6 +1.3**
comp=Z,276nm,0.7s,SNR=328
KBA Koelnbreinsper 75.94 338 *i* P **P** **19 09 20.4 +1.8**

comp=Z,902nm,0.7s,SNR=888
PERS Pernice 75.94 336 *i* P P 19 09 19.6 +1.2
CCA1 Carnmenellis 75.95 351 *eP* P 19 09 18.9 +0.6
SZH Strazhitsa 75.99 328 P P 19 09 18.3 -0.4
SZH Strazhitsa 75.99 328 P P 19 09 19.0 +0.3
PUNG Punghina 76.01 330 ⇑P P 19 09 18.8 0.0
346A Big Creek Wild 76.05 56 IAmb IAmb 19 09 21.5
comp=Z,229nm,0.9s
346A IAMs_20 IAMs_20 19 43 52.5
comp=Z,3µm,21.0s
UBR Ueberruh 76.07 340 *eP* P 19 09 20.4 +1.3
comp=Z,786nm,1.1s,baz=18,slow=6.0
UBR *eS* S 19 18 58.2 -0.6
baz=19,slow=5.9
WATA Walderalm 76.09 339 *i* P P 19 09 20.7 +1.4
comp=Z,256nm,0.7s,SNR=196
RETA Reutte 76.12 339 *i* P P 19 09 20.6 +1.1
comp=Z,221nm,0.7s,SNR=123
BAIL Bailesti 76.12 330 ⇓P P 19 09 20.2 +0.8
WTTA Wattenberg 76.15 339 *i* P P 19 09 21.2 +1.5
comp=Z,366nm,0.7s,SNR=213
U56A King 76.17 47 IAmb IAmb 19 09 21.4
comp=Z,289nm,1.2s
U56A IAMs_20 IAMs_20 19 44 40.2
comp=Z,3µm,20.0s
BG3 Lake Jocassee 76.18 49 IAmb IAmb 19 09 21.6
comp=Z,294nm,1.0s
MOTA Moosalm 76.18 339 *i* P P 19 09 21.1 +1.2
comp=Z,431nm,0.8s,SNR=282
OBKA Obir 76.20 337 *i* P P 19 09 21.2 +1.2
comp=Z,442nm,0.8s,SNR=307
EGSI Enggano, Bengk 76.20 241 P P 19 09 20.1 -0.1
V55A Taylorsville 76.22 47 IAmb IAmb 19 09 21.7
comp=Z,170nm,1.1s
SQTA Sankt Quirin 76.28 339 *i* P P 19 09 21.7 +1.3
comp=Z,519nm,0.7s,SNR=250
MYKA Terra Mystica 76.30 337 *i* P P 19 09 21.5 +1.0
comp=Z,78nm,0.7s,SNR=143
PLVB Pleven 76.31 329 ⇑P P 19 09 20.8 +0.4
ELND Elena 76.32 327 ⇑P P 19 09 20.7 +0.2
BNN Bunyan 76.34 319 IAmb IAmb 19 09 24.0
comp=Z,94nm,0.9s
PVL Pavlikeni 76.37 328 P P 19 09 20.9 +0.1
VALD Valchedram 76.40 329 P P 19 09 20.9 -0.1
BR106 Keskin Array S 76.44 321 P P 19 09 21.6 +0.1
comp=Z,767nmcomp=Z,96nm,1.0s
BR131 Keskin Array S 76.44 321 IAmb IAmb 19 09 23.5
comp=Z,88nm,0.8s
BR131 Keskin Array S 76.44 321 *c i* P P 19 09 21.5 +0.1
BR131 Keskin Array S 76.44 321 P P 19 09 21.8 +0.3
SNR=80
BRTR Keskin Array B 76.44 321 P P 19 09 21.6 0.0
comp=Z,45nm,0.6s,baz=56,slow=3.4,SNR=229
BRTR LR LR 19 49 45.4
comp=Z,2µm,18.9s,baz=24,slow=41
comp=Z,45nm,0.6s
BRTR Keskin Array B 76.44 321 P P 19 09 21.3 -0.2
ABTA Abfaltersbach 76.44 338 *i* P P 19 09 22.3 +1.0
comp=Z,620nm,0.8s,SNR=431
BR104 Keskin Array S 76.45 321 P P 19 09 21.3 -0.2
comp=Z,817nmcomp=Z,92nm,1.0s
BR105 Keskin Array S 76.45 321 P P 19 09 21.3 -0.3
comp=Z,910nmcomp=Z,118nm,1.0s
DAVA Damuels 76.49 340 *i* P P 19 09 22.7 +1.0
comp=Z,216nm,0.9s,SNR=121
JMB Yambol 76.50 327 P P 19 09 22.1 +0.5
JMB Yambol 76.50 327 P P 19 09 22.0 +0.4
FETA Feichten 76.57 339 *i* P P 19 09 23.6 +1.5
comp=Z,395nm,0.7s,SNR=192
WRAB Tennant Creek 76.58 205 P P 19 09 23.1 +0.9
WRAB Tennant Creek 76.58 205 *c i* P P 19 09 23.0 +0.9
WRAB pmax pmax
comp=Z,306nm,1.0s
WRAB Tennant Creek 76.58 205 P P 19 09 23.0 +0.9
WRA Warramunga Arr 76.59 205 P P 19 09 22.9 +0.7
comp=Z,203nm,0.9s,baz=17,slow=5.8,SNR=264
WRA PKiKP PKiKP 19 15 06.0 +0.2
comp=Z,2.6nm,0.9s,baz=347,slow=1.8,SNR=4.1
WRA PKKPbc PKKPbc 19 28 33.9 +1.6
comp=Z,0.7nm,0.7s,baz=221,slow=1.8,SNR=6.7
WRA PKPPKP P'P'df 19 36 36.0 +4.8
comp=Z,2.4nm,1.0s,baz=204,slow=2.4,SNR=5.4
comp=Z,203nm,0.9s
WRA Warramunga Arr 76.59 205 P P 19 09 22.6 +0.4
WRA Warramunga Arr 76.59 205 *i* P P 19 09 21.6 -0.6
WRA pmax pmax
comp=Z,204nm,0.9s
Y52A Lilburn 76.60 51 IAmb IAmb 19 09 23.9
comp=Z,154nm,0.9s
JSA Saint Aubin 76.61 348 *eP* P 19 09 22.9 +0.9
JSA IAmb IAmb 19 09 24.5
comp=Z,318nm,0.8s
MPEP Malo Peshtene 76.61 329 P P 19 09 22.6 +0.4
CRES Cresnjevec Ost 76.62 336 *i* P P 19 09 23.1 +0.9
LJU Ljubljana 76.64 336 *i* P P 19 09 22.9 +0.6
SILT Sile 76.64 324 ⇑P P 19 09 23.1 +0.7
KLYT Kilyos 76.76 325 P P 19 09 23.2 +0.1
comp=Z,6µmcomp=Z,567nm,1.1s
KMSC Kings Mountain 76.77 48 IAmb IAmb 19 09 24.5
comp=Z,211nm,1.1s
PAULI Pauline 76.82 48 IAmb IAmb 19 09 24.8
comp=Z,156nm,1.2s
CTYL Yalikoy Yolu 76.82 325 P P 19 09 23.3 -0.1
comp=Z,3µmcomp=Z,272nm,1.0s
T59A Double "B" Far 76.84 44 IAmb IAmb 19 09 25.3
comp=Z,268nm,1.2s
T59A IAMs_20 IAMs_20 19 46 43.0
comp=Z,2µm,18.0s
KIRS Kirsehir-Merke 76.85 320 ⇑P P 19 09 24.2 +0.5
CIMO Cimolais 76.87 338 IAmb IAmb 19 09 27.9
comp=Z,128nm,0.7s
SABO M.te Sabotino 76.92 337 IAmb IAmb 19 09 26.6
comp=Z,245nm,1.0s
BOVS Bovan 76.96 331 ⇑P P 19 09 24.2 +0.1
DAVOX Davos/Dischmat 76.98 340 LR LR 19 49 31.0
comp=Z,2µm,18.8s,baz=16,slow=40
HODGE Hodges 77.12 49 IAmb IAmb 19 09 26.8
comp=Z,185nm,1.0s
250A Grady 77.12 53 IAmb IAmb 19 09 26.8
comp=Z,297nm,1.2s
BLY Banja Luka 77.19 334 ⇑P P 19 09 25.8 +0.3
DIM Dimitrovgrad 77.21 327 P P 19 09 26.5 +1.0
DIM Dimitrovgrad 77.21 327 P P 19 09 26.6 +1.0
SKDS Skadanscina 77.23 337 *eP* P 19 09 26.0 +0.3
GAZ Gaziantep 77.24 317 IAmb IAmb 19 09 31.4
comp=Z,107nm,0.8s
PGB Panagyurishte 77.24 328 P P 19 09 26.3 +0.5
GOGA Godfrey 77.25 50 IAmb IAmb 19 09 27.3
comp=Z,94nm,1.1s
152A Waverly Hall 77.29 52 IAmb IAmb 19 09 27.3
comp=Z,216nm,1.1s
152A IAMs_20 IAMs_20 19 46 52.0
comp=Z,3µm,19.0s
MALK Mahakanadarawa 77.33 267 P P 19 09 27.0 +0.4
W57A Gilead 77.35 47 IAmb IAmb 19 09 27.8
comp=Z,222nm,1.1s
TUE Stuetta 77.38 340 IAMs_20 IAMs_20 19 46 16.0
comp=Z,3µm,22.0s
TUE Stuetta 77.38 340 P P 19 09 27.8 +1.1
comp=Z,39µmcomp=Z,5µm,0.8s
PLD Plovdiv 77.39 328 P P 19 09 27.1 +0.6
PLD Plovdiv 77.39 328 P P 19 09 27.4 +0.8
FITZ Fitzroy Crossi 77.41 214 LR LR 19 43 18.0
comp=Z,264nm,21.6s,baz=14,slow=35
BRAL Brewton 77.41 54 IAmb IAmb 19 09 29.3
comp=Z,247nm,0.9s
VTS Vitosha 77.43 329 P P 19 09 27.4 +0.3
VTS Vitosha 77.43 329 P P 19 09 27.6 +0.6
SHME Shamm 77.46 297 *i* P P 19 09 26.6 -0.6
SNR=39
SHME Shamm 77.46 297 P P 19 09 27.2 0.0
SNR=89
SHME S S 19 19 08.9 -5.5
BANOM Banah 77.47 297 *i* P P 19 09 26.9 -0.4
SNR=240
BANOM Banah 77.47 297 P P 19 09 27.0 -0.4
BORA Eskisehir 77.48 323 IAmb IAmb 19 09 29.1
comp=Z,221nm,1.0s
PLNA Plana 77.50 329 P P 19 09 28.5 +1.1
JSC Jenkinsville 77.52 48 IAmb IAmb 19 09 28.8
comp=Z,146nm,1.0s
BIRD Birdtown, Kers 77.57 48 IAmb IAmb 19 09 29.1
comp=Z,178nm,1.0s
KDZ Kurdzhali 77.67 327 P P 19 09 26.4 -1.7
RZN Rozhen 77.80 328 P P 19 09 29.8 +0.7
RZN Rozhen 77.80 328 P P 19 09 29.9 +0.7
BAND Balkesir-Ban 77.89 325 ⇑P P 19 09 30.2 +0.8
SENIN Lac Senin/Sane 77.89 341 IAmb IAmb 19 09 32.1
comp=Z,272nm,1.1s
PLE Pljevlja 77.91 332 ⇑*i* P P 19 09 30.3 +0.7
MDH Madha 77.98 296 *i* P P 19 09 28.8 -1.4
SNR=28
MDH Madha 77.98 296 P P 19 09 28.9 -1.2
SNR=31
MDH S S 19 19 12.7 -7.3
MASF Masafi 77.99 296 P P 19 09 29.7 -0.6
SNR=48
MASF S S 19 19 13.7 -6.6
MSFE Esma-Masafi 78.00 296 *i* P P 19 09 29.7 -0.6
SNR=40
RDO Rodhopi 78.04 327 P P 19 09 30.3 +0.2
ALN Alexandroupoli 78.09 326 P P 19 09 30.8 +0.3
Y57A Sumter 78.13 48 IAmb IAmb 19 09 32.1
comp=Z,123nm,0.8s
PALK Pallekele 78.13 266 LR LR 19 47 48.9
comp=Z,2µm,20.6s,baz=41,slow=39
PALK Pallekele 78.13 266 P P 19 09 31.9 +0.8
PALK Pallekele 78.13 266 IAMs_20 IAMs_20 19 47 37.4
comp=Z,2µm,21.0s
PALK Pallekele 78.13 266 *i* P P 19 09 31.8 +0.6
SNR=133
PALK Pallekele 78.13 266 *d i* P P 19 09 30.8 -0.4
PALK pmax pmax
comp=Z,1µm,0.9s
PALK MLR MLR
comp=Z,2µm,19.0s
PALK Pallekele 78.13 266 P P 19 09 32.1 +1.0
PALK S S 19 19 17.1 -4.8
PALK Pallekele 78.13 266 P P 19 09 30.7 -0.4
comp=Z,2µmcomp=Z,5µmcomp=Z,601nm,1.0s
UMQ Umm Al-Quwin 78.13 297 *i* P P 19 09 31.4 +0.4
SNR=19
UMQ Umm Al-Quwin 78.13 297 P P 19 09 31.4 +0.4
SNR=18
KKB Krupnik 78.17 329 P P 19 09 31.1 +0.2
KKB Krupnik 78.17 329 P P 19 09 31.9 +0.9
352A Blakely 78.17 53 IAmb IAmb 19 09 32.7
comp=Z,180nm,0.9s
352A IAMs_20 IAMs_20 19 43 04.7
comp=Z,3µm,21.0s
IVA Berane 78.19 332 ⇑*i* P P 19 09 31.9 +0.8
ENEZ Enez 78.20 326 P P 19 09 31.6 +0.5
CAVK Edirne/Enez-Ca 78.24 326 ⇑P P 19 09 31.8 +0.5
MMB Musomishta 78.25 328 P P 19 09 31.5 +0.1
MMB Musomishta 78.25 328 P P 19 09 32.3 +0.9
V61A Roper 78.26 44 IAMs_20 IAMs_20 19 43 49.4
comp=Z,3µm,22.0s
UOSS Minazif 78.31 296 P P 19 09 31.1 -0.9
UOSS Minazif 78.31 296 IAMs_20 IAMs_20 19 50 13.8
comp=Z,2µm,22.0s
UOSS Minazif 78.31 296 *i* P P 19 09 31.0 -0.9
SNR=41
UOSS Minazif 78.31 296 P P 19 09 31.3 -0.7
UOSS S S 19 19 18.1 -5.5
KOME Kolasin 78.31 332 ⇑*i* P P 19 09 32.2 +0.4
WSAR Wadi Sarin 78.36 293 LR LR 19 48 04.4
comp=Z,21nm,21.8s,baz=75,slow=39
WSAR Wadi Sarin 78.36 293 P P 19 09 32.7 +0.4
SNR=49
WSAR S S 19 19 19.3 -4.9
NVR Nevrokopi 78.39 328 P P 19 09 32.9 +0.7
BIDO Bidbid 78.41 294 P P 19 09 32.7 +0.1
SNR=29
PVY Plav 78.42 331 ⇑*i* P P 19 09 33.1 +0.6
HATD Hatta, Dubai 78.45 296 *i* P P 19 09 32.3 -0.4
SNR=125
HATD Hatta, Dubai 78.45 296 P P 19 09 33.0 +0.2
SNR=88
HATD S S 19 19 20.6 -4.5
451A Vernon 78.50 54 IAMs_20 IAMs_20 19 47 26.2
comp=Z,2µm,21.0s
KAVA Kavala 78.50 328 P P 19 09 33.2 +0.5
BRY Bratogost 78.54 332 ⇑*i* P P 19 09 33.1 0.0
NKME Niksic 78.55 332 ⇑*i* P P 19 09 33.0 -0.1
SKO Skopje 78.56 330 *i* P P 19 09 34.4 +1.3
NAZ Nazwa, Dubai 78.57 297 *i* P P 19 09 32.8 -0.6
SNR=55
NAZ Nazwa, Dubai 78.57 297 P P 19 09 32.8 -0.6
SNR=50
NAZ S S 19 19 21.3 -5.1
ASHO Ashiyiah 78.60 296 *i* P P 19 09 33.0 -0.6
SNR=128
ASHO Ashiyiah 78.60 296 P P 19 09 33.1 -0.5
SNR=71
SMTH Samothraki Isl 78.65 327 P P 19 09 32.9 -0.7
WBK Wadi Bani Khal 78.68 293 P P 19 09 34.8 +0.7
SNR=75
SRS Serrai 78.69 328 P P 19 09 34.1 +0.3
CEME Cevo 78.76 332 ⇑*i* P P 19 09 34.2 -0.1
PDG Podgorica 78.78 332 ⇑*i* P P 19 09 34.5 +0.3
SOHO SOHO 78.78 295 *i* P P 19 09 33.3 -1.3
SNR=15
THAS Thassos island 78.79 327 P P 19 09 34.8 +0.4
FAQ Al Faqa, Dubai 78.80 296 *i* P P 19 09 33.7 -0.9
SNR=36
FAQ Al Faqa, Dubai 78.80 296 P P 19 09 34.0 -0.7
SNR=45
JLN Jalan Bani Buh 78.80 292 P P 19 09 35.3 +0.6
SNR=131
HOQ Hoqain 78.81 294 P P 19 09 34.4 -0.4
SNR=74
HOQ S S 19 19 24.4 -4.6
VAY Valandovo 78.82 329 *i* P P 19 09 35.3 +0.8
SMDO Samad 78.82 294 P P 19 09 35.1 +0.1
SNR=66
KNT Kendrikon 78.86 329 P P 19 09 35.2 +0.4
EZN Ezine 78.97 326 P P 19 09 35.5 +0.2
EZN Ezine 78.97 326 P P 19 09 35.1 -0.2
comp=Z,5µmcomp=Z,481nm,1.1s
HCY Herceg Novi 78.97 332 ⇑*i* P P 19 09 35.4 0.0
BUM Brajici-Budva 79.00 332 ⇑*i* P P 19 09 35.8 +0.2
EIDS Eidsvold 79.00 189 IAmb IAmb 19 09 38.4
comp=Z,113nm,1.0s
ASUD Al Ashush, Dub 79.04 297 *i* P P 19 09 35.3 -0.7
SNR=89
ASUD Al Ashush, Dub 79.04 297 P P 19 09 35.7 -0.2
SNR=41
ASUD S S 19 19 26.5 -4.8
RGRS Roger Stewart 79.16 48 IAmb IAmb 19 09 38.4
comp=Z,512nm,1.1s
GRG Griva 79.20 329 P P 19 09 37.4 +0.7
ULC Ulcinj 79.21 332 ⇑*i* P P 19 09 37.0 +0.3
AJN Ajban 79.27 297 *i* P P 19 09 36.3 -0.9
SNR=39
AJN Ajban 79.27 297 P P 19 09 36.4 -0.8
SNR=69
AJN S S 19 19 27.7 -6.1
ALNE Al Ain 79.27 296 *i* P P 19 09 36.5 -0.7
SNR=122
ALNE Al Ain 79.27 296 P P 19 09 37.0 -0.3
SNR=101
ALNE S S 19 19 28.6 -5.2
ISP Isparta 79.27 322 ‖*eP* P 19 09 37.5 +0.3
ISP pmax pmax
comp=Z,399nm,1.7s
ISP MLR MLR
comp=Z,8µm,19.0s
OUR Ouranopolis 79.27 328 P P 19 09 36.4 -0.6
LIA Limnos Island 79.28 327 P P 19 09 36.9 -0.1
HORT Hortiatis 79.31 328 P P 19 09 37.0 -0.3
THE Thessaloniki 79.32 328 P P 19 09 36.9 -0.3
JMDO Jabal Madar 79.35 293 P P 19 09 37.9 +0.2
SNR=142
VLC Villacollemand 79.37 339 P P 19 09 38.2 +0.7
TRD Trivandrum 79.39 270 *eP* P 19 09 32.7 -5.2
TRD IAmb IAmb 19 09 40.5
comp=Z,18nm,1.4s
TRD *eS* S 19 19 29.3 -5.9
PLG Polygyros 79.41 328 P P 19 09 37.8 0.0
SSB Saint Sauveur 79.44 343 P P 19 09 39.3 +1.4
PRK Paraskevi 79.50 326 P P 19 09 38.3 0.0
BSY Bisya 79.54 294 P P 19 09 38.8 +0.1
SNR=162
OHR Ohrid 79.54 330 *i* P P 19 09 39.2 +0.6
SIGR SIGRI 79.67 326 P P 19 09 38.9 -0.3
LIT Litokhoron 79.96 329 P P 19 09 40.0 -0.7
KZN Kozani 79.99 329 P P 19 09 40.8 -0.3
KBN Korca 80.00 330 P P 19 09 40.9 -0.1
BLCB Balcova 80.01 325 P P 19 09 40.3 -0.8
JRN Qarnain Island 80.09 299 P P 19 09 40.8 -0.9
SNR=18
NEST Nestorio 80.11 330 P P 19 09 41.1 -0.6
456A Hilliard 80.17 51 IAmb IAmb 19 09 44.3
comp=Z,286nm,1.0s
HWQ Hawqa 80.25 316 *eP* P 19 09 42.1 -0.5
AS31 Alice Springs 80.26 205 IAmb IAmb 19 09 45.1
comp=Z,57nm,0.8s
ASAR Alice Springs 80.27 205 P P 19 09 43.9 +1.5
comp=Z,216nm,0.9s,baz=17,slow=5.5,SNR=888
ASAR PKiKP PKiKP 19 15 11.2 -0.1
comp=Z,4.0nm,0.8s,baz=12,slow=2.6,SNR=4.8
ASAR PKKPbc PKKPbc 19 28 26.1 +1.9
comp=Z,4.6nm,0.8s,baz=199,slow=2.0,SNR=33
ASAR PKPPKP P'P'df 19 36 29.8 +5.1
comp=Z,3.3nm,0.9s,baz=183,slow=2.2,SNR=9.4
ASAR LR LR 19 44 51.7
comp=Z,400nm,20.5s,baz=16,slow=35
comp=Z,216nm,0.9s
ASAR Alice Springs 80.27 205 P P 19 09 44.3 +1.9
ASAR Alice Springs 80.27 205 P P 19 09 44.3 +1.9
PENT Pentalofos 80.28 330 P P 19 09 42.3 -0.3
SHMA Al-Shehemyia 80.33 301 P P 19 09 42.2 -0.7
SNR=6.4
AOS Alonnisos 80.36 327 P P 19 09 42.7 -0.2
AQU L'Aquila 80.39 336 P P 19 09 44.2 +1.1
AQU L'Aquila 80.39 336 P P 19 09 44.0 +0.9
comp=Z,7µmcomp=Z,578nm,0.9s
KPRO Kipourio 80.44 329 P P 19 09 42.7 -0.7
SAKB Bahrain 80.44 301 P P 19 09 42.5 -1.1
SAKB S S 19 19 39.7 -6.4
ELL Elmali 80.45 322 IAmb IAmb 19 09 45.6
comp=Z,303nm,1.0s
MZWR Madinat Zayed 80.51 297 P P 19 09 42.9 -1.1
MZWR S S 19 19 40.1 -6.8
MHTO MHTO 80.53 292 P P 19 09 44.3 +0.2
SNR=174
MHTO S S 19 19 42.3 -4.9
THL Klokotos Trika 80.59 329 P P 19 09 42.7 -1.5
UNM Universidad Na 80.61 70 IAMs_20 IAMs_20 19 48 21.9
comp=Z,1µm,20.0s
UMZA Um Al Zommool 80.67 296 P P 19 09 44.3 -0.5
UMZA S S 19 19 41.4 -7.1
SMG Samos 80.69 324 P P 19 09 43.7 -1.1
BHL Bhannes 80.69 316 *eP* P 19 09 43.9 -1.0
CSS Mathiatis 80.71 318 P P 19 09 44.9 0.0
comp=Z,4µmcomp=Z,444nm,1.4s
KYMI Kymi, Euboea I 80.78 327 P P 19 09 44.6 -0.6
JAN Janina 80.86 330 P P 19 09 46.1 +0.4
GHWR Ruwais 80.88 298 P P 19 09 45.2 -0.7
GHWR S S 19 19 44.2 -6.4
PRMD Pramanda 80.91 329 P P 19 09 46.8 +0.9
SRN Sarande 80.91 330 P P 19 09 45.8 -0.1
TETR Tetrakomo, Epi 81.02 329 P P 19 09 46.9 +0.3
KSL Kastellorizon 81.10 322 P P 19 09 47.2 +0.3
TRNA Turayna 81.11 300 P P 19 09 48.0 +0.8
SNR=8.9
TRNA S S 19 19 45.9 -7.2
LKR Lokris 81.12 328 P P 19 09 45.8 -1.2
IGT Igoumenitsa 81.14 330 P P 19 09 46.9 -0.2
EVR Evrytania 81.25 329 P P 19 09 46.9 -0.9
SMRA Abu-Samra 81.31 300 P P 19 09 47.5 -0.6
SNR=20
SMRA S S 19 19 48.2 -6.9
MZR Muzera 81.34 297 *i* P P 19 09 47.9 -0.5
SNR=332
MZR Muzera 81.34 297 P P 19 09 48.0 -0.4
SNR=90
MZR S S 19 19 50.7 -4.9
DION Dionisos Attik 81.34 327 P P 19 09 47.4 -0.8
STFN Stefani 81.38 327 P P 19 09 48.0 -0.4
PTL Penteli 81.39 327 P P 19 09 47.0 -1.5
AMPL Ampelaki 81.43 329 P P 19 09 48.9 +0.3
MAGU Magoula 81.47 327 P P 19 09 47.8 -1.1
ATHU Athens Univers 81.49 327 P P 19 09 47.2 -1.8
ATH Athens Observa 81.50 327 P P 19 09 47.5 -1.5
ANX Ano Chora 81.51 328 P P 19 09 48.6 -0.6
MMAI Mount Meron Ar 81.57 316 P P 19 09 49.9 +0.3
comp=Z,45nm,0.5s,baz=23,slow=9.2,SNR=101
MMAI LR LR 19 51 16.9
comp=Z,2µm,21.0s,baz=4.5,slow=40
comp=Z,45nm,0.5s
ARG Arkhangelos 81.57 323 P P 19 09 48.5 -0.9
VLY Voula,Athens 81.59 327 P P 19 09 47.8 -1.6
PVO Paravola 81.61 329 P P 19 09 49.3 -0.3
DQM DQM 81.62 292 P P 19 09 49.7 -0.2
SNR=12
KALE Kalithea 81.63 328 P P 19 09 48.4 -1.4
SERG Sergoula 81.63 328 P P 19 09 48.4 -1.4
ASF Jabal al Asfar 81.67 314 LR LR 19 50 53.4
comp=Z,4µm,21.2s,baz=26,slow=39
EFP Efpalio 81.67 328 P P 19 09 49.7 -0.2
LKD2 Lefkada island 81.72 329 P P 19 09 49.9 -0.3
NYDR Nydri-Lefkada 81.78 329 P P 19 09 50.1 -0.4
AST1 Astakos 81.82 329 P P 19 09 50.8 +0.1
EVGI Lefkada island 81.88 329 P P 19 09 50.5 -0.5
KLV Kalavryta, Ach 81.94 328 P P 19 09 50.6 -0.8
RAR Rarotonga 81.96 143 LR LR 19 39 04.7
comp=Z,1µm,20.9s,baz=328,slow=30
GUR Goura 81.98 328 P P 19 09 50.5 -1.2
AXS Araxos 82.05 329 P P 19 09 51.4 -0.5
RLS Riolos of Patr 82.14 329 P P 19 09 52.4 0.0
DRO Drossia 82.17 328 P P 19 09 52.8 +0.3
MBWA Marble Bar 82.30 218 P P 19 09 53.7 +0.5
MBWA IAmb IAmb 19 09 55.3
comp=Z,251nm,1.0s
MBWA Marble Bar 82.30 218 P P 19 09 54.3 +1.0
MBWA S S 19 20 04.9 -0.2
TLIG Tlapa 82.37 71 IAmb IAmb 19 10 18.4
comp=Z,246nm,1.8s
EJON La Jonquera 82.47 343 P P 19 09 55.8 +1.7
VLX Vlachokerasia 82.49 328 P P 19 09 53.6 -0.8
TIP Timpagrande 82.49 332 P P 19 09 54.2 -0.1
comp=Z,7µmcomp=Z,766nm,1.3s
KARP Karpathos 82.52 323 P P 19 09 53.3 -1.1
KARP Karpathos 82.52 323 P P 19 09 53.4 -1.1
comp=Z,7µmcomp=Z,861nm,0.9s
PSA00 Pilbara Seismi 82.64 218 P P 19 09 56.0 +1.0
PSA00 IAmb IAmb 19 09 57.0
comp=Z,199nm,1.1s
DWPF Disney Wildern 82.64 52 P P 19 09 55.4 +0.3
DWPF IAmb IAmb 19 09 57.6
comp=Z,200nm,0.8s
INKA Innaminka 82.74 198 IAmb IAmb 19 09 58.4
comp=Z,116nm,0.9s
PPT Papeete 82.76 133 LR LR 19 39 13.6
comp=Z,2µm,20.9s,baz=320,slow=30
GHAJ Ghor Haditha 82.98 315 IAmb IAmb 19 09 59.8
comp=Z,186nm,0.9s
HMDM Hanimaadhoo 83.02 272 P P 19 09 58.5 +1.3
SNR=5.6
HMDM Hanimaadhoo 83.02 272 P P 19 09 56.8 -0.4
NPS Neapolis 83.32 324 P P 19 09 56.8 -1.8
IDI Anoyia 83.55 325 P P 19 09 58.4 -1.5
IDI Anoyia 83.55 325 LR LR 19 51 51.8
comp=Z,1µm,18.5s,baz=35,slow=39
IDI Anoyia 83.55 325 IAmb IAmb 19 10 08.3
comp=Z,156nm,0.8s
CEL Celeste 83.59 333 P P 19 09 58.8 -1.2
IMMV Iera Moni Meta 83.70 326 P P 19 09 59.2 -1.3
ARMA Armidale 83.96 188 IAmb IAmb 19 10 05.0
comp=Z,97nm,1.1s
VSL Villasalto 84.04 338 IAMs_20 IAMs_20 19 50 57.5
comp=Z,2µm,21.0s
SHAO Shalim 84.21 292 *i* P P 19 10 03.0 -0.4
SNR=14
SHAO Shalim 84.21 292 P P 19 10 02.6 -0.7
GVD Gavdhos 84.23 325 P P 19 10 02.1 -1.1
PGAV Gavieira, Arco 84.39 352 *eP* P 19 10 05.1 +1.1
PGAV *i* IAmb IAmb 19 10 08.8
comp=Z,470nm,1.6s
PBRG Braganca 84.40 350 *eP* P 19 10 05.2 +1.1
PBRG *i* IAmb IAmb 19 10 08.9
comp=Z,428nm,1.4s
RAO Raoul Island 84.55 161 LR LR 19 42 02.9
comp=Z,1µm,19.3s,baz=311,slow=32
DOK Doka 84.55 294 P P 19 10 04.6 -0.5
SNR=26
DOK S SKSac 19 20 19.7 -5.4
PCAB Cabril 84.62 351 *eP* P 19 10 06.3 +1.2
PCAB *i* IAmb IAmb 19 10 09.8
comp=Z,359nm,1.5s
EIL Elat 84.66 315 LR LR 19 53 05.4
comp=Z,4µm,20.7s,baz=30,slow=39
MAHO Mahon 84.71 342 P P 19 10 05.9 +0.4
MAHO Mahon 84.71 342 IAmb IAmb 19 10 08.5

	comp=Z,158nm,1.0s						
MAHO				IAMs_20	IAMs_20	19 51 07.5	
	comp=Z,2µm,22.0s						
VAE	**Valguarnera**	**84.72 334**	LR	LR		19 53 20.1	
	comp=Z,2µm,18.9s,baz=36,slow=40						
COCO	**West Island**	**84.81 242**	P	**P**		**19 10 07.3 +1.1**	
COCO	**West Island**	**84.81 242**	P	**P**		**19 10 07.3 +1.1**	
COCO			pmax	pmax			
	comp=Z,799nm,1.6s						
COCO	**West Island**	**84.81 242**	P	**P**		**19 10 06.4 +0.2**	
	comp=Z,159nm,1.3s						
DMTO	**DMTO**	**84.84 293**	P	**P**		**19 10 05.4 -1.1**	
POLO	**Lamas de Olo**	**84.93 351**	*e*P	**P**		**19 10 07.9 +1.1**	
POLO			*i* IAmb	IAmb		19 10 11.6	
	comp=Z,261nm,1.4s						
PVRL	**Vila Real**	**85.02 351**	*e*P	**P**		**19 10 08.2 +1.1**	
PVRL			*i* IAmb	IAmb		19 10 12.5	
	comp=Z,822nm,1.3s						
RAYN	**Ar Rayn**	**85.02 303**	P	**P**		**19 10 07.2 -0.2**	
RAYN	**Ar Rayn**	**85.02 303**	*i* P	**P**		**19 10 07.2 -0.2**	
	SNR=264						
RAYN	**Ar Rayn**	**85.02 303**	P	**P**		**19 10 07.2 -0.2**	
RAYN			pmax	pmax			
	comp=Z,244nm,0.9s						
RAYN			MLR	MLR			
	comp=Z,4µm,20.0s						
RAYN	**Ar Rayn**	**85.02 303**	P	**P**		**19 10 07.5 +0.1**	
RAYN			S	**SKSac**		**19 20 21.9 -6.3**	
RAYN	**Ar Rayn**	**85.02 303**	P	**P**		**19 10 07.4 -0.1**	
RAYN			PcP	**PcP**		**19 10 11.3 +0.7**	
MVO	**Moncorvo**	**85.06 351**	*e*P	**P**		**19 10 08.3 +0.9**	
MVO			*i* IAmb	IAmb		19 10 12.2	
	comp=Z,585nm,1.5s						
ETOS	**Mallorca**	**85.09 343**	P	**P**		**19 10 08.5 +1.0**	
PTO	**Porto**	**85.23 352**	*e*P	**P**		**19 10 09.4 +1.3**	
PTO			*i* IAmb	IAmb		19 10 12.9	
	comp=Z,437nm,1.5s						
RBK	**Rabkut**	**85.42 293**	P	**P**		**19 10 08.7 -0.7**	
	SNR=12						
UCM	**Universidad Co**	**85.48 348**	P	**P**		**19 10 09.8 +0.3**	
PVIS	**Viseu**	**85.59 351**	*e*P	**P**		**19 10 11.3 +1.2**	
GIRL	**Giralia**	**85.76 222**	IAmb	IAmb		19 10 13.7	
	comp=Z,103nm,0.9s						
TEIG	**Tepich**	**85.82 61**	P	**P**		**19 10 10.9 -0.5**	
TEIG			IAmb	IAmb		19 10 13.4	
	comp=Z,95nm,1.4s						
TEIG			IAMs_20	IAMs_20		19 50 31.5	
	comp=Z,1µm,22.0s						
MTE	**Manteigas**	**85.87 351**	*e*P	**P**		**19 10 12.6 +1.2**	
MTE			*i* IAmb	IAmb		19 10 16.1	
	comp=Z,366nm,1.6s						
ECHE	**Chera**	**85.88 346**	P	**P**		**19 10 11.7 +0.3**	
BBSR	**BB Station**	**85.89 37**	P	**P**		**19 10 11.9 +0.3**	
BBSR			IAmb	IAmb		19 10 13.5	
	comp=Z,162nm,1.1s						
BBSR			IAMs_20	IAMs_20		19 44 58.5	
	comp=Z,1µm,21.0s						
ABTO	**Aybut**	**86.04 294**	S	**SKSac**		**19 20 29.6 -5.1**	
ESDC	**Sonseca Array**	**86.20 348**	P	**P**		**19 10 13.6 +0.5**	
	comp=Z,187nm,0.9s,baz=0.8,slow=5.1,SNR=141						
ESDC			PKKPbc	**PKKPbc**		**19 28 10.5 +1.7**	
	comp=Z,2.2nm,0.8s,baz=207,slow=1.2,SNR=10.0						
ESDC			PKPPKP	**P'P'df**		**19 36 15.7 -7.0**	
	comp=Z,0.9nm,0.9s,baz=181,slow=3.3,SNR=4.1						
	comp=Z,187nm,0.9s						
ESDC	**Sonseca Array**	**86.20 348**	P	**P**		**19 10 12.6 -0.4**	
PCAS	**Casmilo, Conde**	**86.30 352**	*e*P	**P**		**19 10 14.2 +0.7**	
PCAS			*i* IAmb	IAmb		19 10 18.2	
	comp=Z,335nm,1.4s						
SOR	**Soroa**	**86.36 56**	IAmb	IAmb		19 10 16.1	
	comp=Z,157nm,1.7s						
PAB	**San Pablo**	**86.37 348**	P	**P**		**19 10 14.5 +0.5**	
PAB	**San Pablo**	**86.37 348**	P	**P**		**19 10 14.5 +0.5**	
PAB			pmax	pmax			
	comp=Z,179nm,0.9s						
PCBR	**Castelo Branco**	**86.42 351**	*e*P	**P**		**19 10 14.0 0.0**	
PCBR			*i* IAmb	IAmb		19 10 19.5	
	comp=Z,317nm,1.3s						
STKA	**Stephens Creek**	**86.63 196**	P	**P**		**19 10 16.1 +1.3**	
	comp=Z,128nm,0.8s,baz=351,slow=6.3,SNR=176						
STKA			PKKPbc	**PKKPbc**		**19 28 11.6 +2.1**	
	comp=Z,4.7nm,0.8s,baz=89,slow=5.9,SNR=6.9						
STKA			LR	LR		19 46 25.3	
	comp=Z,1µm,21.4s,baz=6.7,slow=34						
	comp=Z,128nm,0.8s						
STKA	**Stephens Creek**	**86.63 196**	*c i*P	**P**		**19 10 16.0 +1.1**	
PSARD	**Sardoal**	**86.72 351**	*e*P	**P**		**19 10 15.8 +0.3**	
PSARD			*i* IAmb	IAmb		19 10 19.9	
	comp=Z,146nm,1.4s						
PMRV	**Marv??o**	**86.82 351**	*e*P	**P**		**19 10 16.4 +0.3**	
PMRV			*i* IAmb	IAmb		19 10 21.5	
	comp=Z,141nm,1.5s						
PSBE	**So Bento**	**86.86 352**	*e*P	**P**		**19 10 16.7 +0.4**	
PSBE			*i* IAmb	IAmb		19 10 37.3	
	comp=Z,123nm,1.3s						
CCIG	**Comitan**	**86.98 67**	IAmb	IAmb		19 10 20.4	
	comp=Z,114nm,1.0s						
PMTG	**Montargil**	**87.25 351**	*e*P	**P**		**19 10 18.0 -0.1**	
PMTG			*i* IAmb	IAmb		19 10 23.6	
	comp=Z,112nm,1.1s						
PESTR	**Estremoz**	**87.39 351**	IAmb	IAmb		19 10 22.8	
	comp=Z,132nm,1.2s						
PESTR	**Estremoz**	**87.39 351**	*e*P	**P**		**19 10 19.2 +0.3**	
PESTR			*i* IAmb	IAmb		19 10 23.6	
	comp=Z,122nm,1.6s						
PMAFR	**Mafra**	**87.46 352**	*e*P	**P**		**19 10 19.6 +0.5**	
PMAFR			*i* IAmb	IAmb		19 10 24.7	
	comp=Z,204nm,1.2s						
PARRA	**Arraiolos**	**87.49 351**	*e*P	**P**		**19 10 19.3 0.0**	
PARRA			*i* IAmb	IAmb		19 10 20.8	
	comp=Z,87nm,1.1s						
KEST	**Kesra**	**87.65 337**	P	**P**		**19 10 20.8 +0.6**	
	comp=Z,72nm,0.7s,baz=71,slow=0.9,SNR=107						
KEST			LR	LR		19 54 38.6	
	comp=Z,3µm,20.8s,baz=18,slow=39						
	comp=Z,72nm,0.7s						
KEST	**Kesra**	**87.65 337**	IAmb	IAmb		19 10 23.9	
	comp=Z,170nm,1.2s						
KEST	**Kesra**	**87.65 337**	P	**P**		**19 10 20.4 +0.2**	
	SNR=14						
LIS	**Lisbon**	**87.68 352**	*e*P	**P**		**19 10 20.4 +0.3**	
LIS			IAmb	IAmb		19 10 23.5	
	comp=Z,105nm,0.8s						
LIS	**Lisbon**	**87.68 352**	*e*P	**P**		**19 10 22.1 +1.9**	
LIS			*i* IAmb	IAmb		19 10 23.4	
	comp=Z,174nm,1.2s						
EVO	**Evora**	**87.77 351**	P	**P**		**19 10 20.6 0.0**	
EVO	**Evora**	**87.77 351**	*e*P	**P**		**19 10 20.8 +0.2**	
EVO			*i* IAmb	IAmb		19 10 25.4	
	comp=Z,97nm,1.9s						
MOE	**Montemor**	**87.81 351**	*e*P	**P**		**19 10 20.7 -0.1**	
MOE			*i* IAmb	IAmb		19 10 24.5	
	comp=Z,107nm,1.3s						
CART	**Cartagena**	**87.84 345**	P	**P**		**19 10 22.3 +1.3**	
PBAR	**Barrancos**	**88.03 350**	*e*P	**P**		**19 10 22.2 +0.4**	
PBAR			*i* IAmb	IAmb		19 10 27.5	
	comp=Z,128nm,1.0s						
PBEJ	**Beja**	**88.25 351**	*e*P	**P**		**19 10 23.4 +0.5**	
PBEJ			*i* IAmb	IAmb		19 10 24.8	
	comp=Z,88nm,1.1s						
CAIB	**Caibarien**	**88.34 53**	IAmb	IAmb		19 10 25.3	
	comp=Z,69nm,1.0s						
MESJ	**Messejana**	**88.47 351**	*e*P	**P**		**19 10 24.3 +0.3**	
MESJ			IAmb	IAmb		19 10 25.8	
	comp=Z,37nm,1.1s						
MESJ	**Messejana**	**88.47 351**	*e*P	**P**		**19 10 24.3 +0.3**	
MESJ			*i* IAmb	IAmb		19 10 28.7	
	comp=Z,70nm,1.4s						
MESJ	**Messejana**	**88.47 351**	*e*P	**P**		**19 10 24.3 +0.3**	
BBOO	**Buckleboo**	**88.57 200**	IAmb	IAmb		19 10 26.2	
	comp=Z,122nm,1.2s						
PCVE	**Castro Verde**	**88.66 351**	*e*P	**P**		**19 10 25.6 +0.7**	
PCVE			*i* IAmb	IAmb		19 10 29.2	
	comp=Z,147nm,1.3s						
PTEO	**Sao Teotonio**	**88.81 351**	*e*P	**P**		**19 10 26.0 +0.5**	
PVAQ	**Vaqueiros**	**88.86 351**	IAmb	IAmb		19 10 28.7	
	comp=Z,118nm,1.1s						
PVAQ	**Vaqueiros**	**88.86 351**	*e*P	**P**		**19 10 26.4 +0.6**	
PVAQ			*i* IAmb	IAmb		19 10 27.8	
	comp=Z,127nm,1.1s						
PBDV	**Barranco-do-Ve**	**89.04 351**	*e*P	**P**		**19 10 28.5 +1.8**	
PBDV			*i* IAmb	IAmb		19 10 32.7	
	comp=Z,137nm,1.2s						
MORF	**Marmelete**	**89.04 351**	*e*P	**P**		**19 10 27.0 +0.3**	
MORF			IAmb	IAmb		19 10 29.8	
	comp=Z,98nm,1.2s						
MORF	**Marmelete**	**89.04 351**	IAmb	IAmb		19 10 49.3	
	comp=Z,114nm,1.3s						
MORF	**Marmelete**	**89.04 351**	*e*P	**P**		**19 10 27.1 +0.3**	
MORF			*i* IAmb	IAmb		19 10 29.2	
	comp=Z,106nm,1.3s						
MORF	**Marmelete**	**89.04 351**	*e*P	**P**		**19 10 27.0 +0.3**	
EMAL	**Malaga-Limoner**	**89.13 348**	P	**P**		**19 10 27.0 -0.1**	
PFVI	**Vila Bisbo**	**89.23 351**	*e*P	**P**		**19 10 28.1 +0.6**	
PFVI			*i* IAmb	IAmb		19 10 29.9	
	comp=Z,127nm,1.3s						
CNIL	**Conil**	**89.71 349**	P	**P**		**19 10 31.1 +1.3**	
ESQI	**Esquipulas**	**89.92 65**	IAmb	IAmb		19 12 44.0	
	comp=Z,80nm,0.7s						
MTO3	**Montecristo**	**90.04 65**	IAmb	IAmb		19 12 43.0	
	comp=Z,41nm,0.5s						
MORW	**Morawa**	**90.86 218**	IAmb	IAmb		19 10 36.4	
	comp=Z,118nm,1.1s						
TGUH	**Tegucigalpa,Un**	**91.45 64**	IAMs_20	IAMs_20		19 47 11.8	
	comp=Z,1µm,22.0s						
TOZ	**Tahuroa Road**	**91.82 168**	IAmb	IAmb		19 10 41.9	
	comp=Z,63nm,1.1s						
TOZ			IAMs_20	IAMs_20		19 43 26.4	
	comp=Z,1µm,21.0s						
CHIV	**Chivirico**	**91.94 52**	IAmb	IAmb		19 10 42.4	
	comp=Z,123nm,1.1s						
NMDO	**Nuevo Mundo**	**92.11 51**	IAmb	IAmb		19 10 43.3	
	comp=Z,87nm,1.0s						
IFR	**Ifrane**	**92.41 348**	P	**P**		**19 10 41.9 -0.8**	
URZ	**Urewera**	**92.55 167**	LR	LR		19 46 02.5	
	comp=Z,1µm,21.7s,baz=4.0,slow=31						
AVE	**Averroes**	**92.89 350**	P	**P**		**19 10 44.4 -0.2**	
AVE	**Averroes**	**92.89 350**	IAmb	IAmb		19 10 46.3	
	comp=Z,83nm,1.0s						
AVE			IAMs_20	IAMs_20		20 00 51.0	
	comp=Z,2µm,20.0s						
MTDJ	**Mount Denham**	**92.91 54**	IAMs_20	IAMs_20		19 53 42.0	
	comp=Z,2µm,21.0s						
MD01	**Midelt array s**	**93.01 348**	P	**P**		**19 10 44.8 -0.5**	
MD31	**MD31**	**93.01 348**	IAmb	IAmb		19 10 47.5	
	comp=Z,45nm,1.3s						
MDT	**Midelt**	**93.04 347**	LR	LR		19 56 56.3	
	comp=Z,808nm,20.4s,baz=36,slow=38						
SIUN	**Universidad Ur**	**93.07 62**	IAmb	IAmb		19 10 47.6	
	comp=Z,94nm,2.0s						
BKZ	**Black Stump Fm**	**93.36 168**	IAMs_20	IAMs_20		19 48 27.1	
	comp=Z,1µm,21.0s						
PMPS	**Porto Santo**	**93.72 357**	*e*P	**P**		**19 10 49.9 +1.5**	
NWAO	**Narrogin (SRO)**	**93.93 215**	LR	LR		19 49 49.8	
	comp=Z,210nm,21.5s,baz=40,slow=33						
NWAO	**Narrogin (SRO)**	**93.93 215**	P	**P**		**19 10 48.9 -0.1**	
NWAO			IAmb	IAmb		19 10 50.4	
	comp=Z,93nm,1.1s						
NWAO	**Narrogin (SRO)**	**93.93 215**	P	**P**		**19 10 48.9 -0.1**	
NWAO			pmax	pmax			
	comp=Z,93nm,1.2s						
PMOZ	**Porto Moniz, M**	**93.98 358**	*e*P	**P**		**19 10 50.2 +0.4**	
PMAR	**Madeira**	**94.07 358**	*e*P	**P**		**19 10 51.0 +0.8**	
QRZ	**Quartz Range**	**94.56 171**	IAMs_20	IAMs_20		19 46 36.1	
	comp=Z,2µm,22.0s						
MRZ	**Mangatainoka R**	**94.72 169**	IAMs_20	IAMs_20		19 49 26.2	
	comp=Z,2µm,20.0s						
SDDR	**Presa de Saban**	**95.16 48**	IAmb	IAmb		19 10 57.2	
	comp=Z,32nm,0.9s						
SDDR			IAMs_20	IAMs_20		19 53 05.2	
	comp=Z,2µm,22.0s						
TIO	**Tiouine**	**95.22 349**	P	**P**		**19 10 54.9 -0.6**	
BHW	**Baring Head**	**95.38 169**	IAMs_20	IAMs_20		19 46 47.6	
	comp=Z,2µm,22.0s						
DSZ	**Denniston Nort**	**95.40 172**	IAMs_20	IAMs_20		19 47 04.5	
	comp=Z,2µm,21.0s						
JTS	**Las Juntas de**	**95.83 64**	LR	LR		19 59 31.9	
	comp=Z,215nm,18.1s,baz=325,slow=39						
ATD	**Arta Tunnel**	**96.45 299**	LR	LR		19 59 30.2	
	comp=Z,257nm,20.6s,baz=25,slow=38						
ATD	**Arta Tunnel**	**96.45 299**	P	**P**		**19 11 02.2 +1.0**	
	SNR=10						
RPZ	**Rata Peaks**	**97.30 172**	LR	LR		19 50 28.5	
	comp=Z,2µm,20.5s,baz=7.0,slow=33						
MQZ	**McQueen's Vall**	**97.42 171**	IAMs_20	IAMs_20		19 46 46.0	
	comp=Z,2µm,21.0s						
SJG	**San Juan**	**98.15 44**	LR	LR		19 56 40.9	
	comp=Z,512nm,21.9s,baz=335,slow=36						
SJG	**San Juan**	**98.15 44**	IAMs_20	IAMs_20		20 00 31.3	
	comp=Z,995nm,21.0s						
ODZ	**Otahua Downs**	**98.59 173**	IAMs_20	IAMs_20		19 50 07.8	
	comp=Z,2µm,19.0s						
SMRT	**St. Maarten**	**99.45 42**	IAMs_20	IAMs_20		19 54 24.8	
	comp=Z,1µm,22.0s						
MSEY	**Mahe Island**	**102.67 279**	IAMs_20	IAMs_20		20 00 33.0	
	comp=Z,2µm,20.0s						
SDV	**Santo Domingo**	**104.29 53**	IAMs_20	IAMs_20		20 02 00.6	
	comp=Z,1µm,21.0s						
TORD	**Torodi Ar. Bea**	**111.15 338**	Pdiff	**Pdif**		**19 12 09.7 +3.0**	
	comp=Z,3.9nm,0.8s,baz=333,slow=2.9,SNR=11						
TORD			PKiKP	**PKiKP**		**19 16 06.2 +0.8**	
	comp=Z,13nm,0.9s,baz=356,slow=2.2,SNR=19						
TORD			PP	**PP**		**19 16 43.0 -0.9**	
	comp=Z,39nm,0.8s,baz=353,slow=5.5,SNR=12						
TORD			PKKPbc	**PKKPbc**		**19 27 00.4 +1.0**	
	comp=Z,3.1nm,0.9s,baz=214,slow=5.4,SNR=8.4						
TORD			PKKPab	**PKKPab**		**19 27 11.5 -2.5**	
	comp=Z,5.8nm,1.0s,baz=212,slow=7.0,SNR=8.6						
TORD			SKKPbc	SKKPbc		19 30 26.7 -8.7	
	comp=Z,2.2nm,1.0s,baz=193,slow=5.5,SNR=4.5						
ATAH	**Atahualpa**	**113.89 68**	PKKPab	PKKPab		19 27 02.1 +1.8	
	comp=Z,12nm,0.9s,baz=158,slow=1.7,SNR=7.2						
OPO	**Ambohidratompo**	**118.56 277**	PKP	**PKiKP**		**19 16 19.8 +0.2**	
	comp=Z,4.0nm,0.9s,baz=306,slow=7.7,SNR=5.1						
NNA	**Nana**	**118.73 70**	IAMs_20	IAMs_20		19 57 41.9	
	comp=Z,856nm,20.0s						
DBIC	**Dimbokro**	**118.76 343**	PKP	**PKiKP**		**19 16 20.8 +0.7**	
	comp=Z,60nm,0.9s,baz=50,slow=1.8,SNR=48						
DBIC			PP	**PP**		**19 17 36.4 -1.1**	
	comp=Z,26nm,1.0s,baz=55,slow=7.2,SNR=6.7						
DBIC			PKKPbc	**PKKPbc**		**19 26 35.7 +2.4**	
	comp=Z,2.9nm,0.8s,baz=217,slow=6.7,SNR=4.7						
DBIC	**Dimbokro**	**118.76 343**		**PKPdf**		**19 16 19.9 -0.1**	
DBIC	**Dimbokro**	**118.76 343**	PKIKP	**PKPdf**		**19 16 19.9 -0.1**	
ABPO	**Ambohimpanom**	**118.89 277**		**PKiKP**		**19 16 20.4 +0.2**	
ABPO	**Ambohimpanom**	**118.89 277**	PKIKP	**PKiKP**		**19 16 20.5 +0.2**	
ABPO			MLR	MLR			
	comp=Z,1µm,21.0s						
ITTB	**Itaituba**	**122.73 44**	*e*P	**PKiKP**		**19 16 28.2 +0.4**	
NPGB	**Novo Progresso**	**125.30 45**	*e*P	**PKiKP**		**19 16 33.3 +0.4**	
LSZ	**Lusaka**	**126.72 297**	PKP	**PKiKP**		**19 16 36.7 +1.0**	
	comp=Z,38nm,0.9s,baz=42,slow=2.1,SNR=58						
LSZ	**Lusaka**	**126.72 297**		**PKiKP**		**19 16 35.9 +0.2**	
LSZ	**Lusaka**	**126.72 297**	PKIKP	**PKiKP**		**19 16 35.9 +0.2**	
LSZ			MLR	MLR			
	comp=Z,2µm,20.0s						
LPAZ	**La Paz**	**127.04 65**	PKP	**PKiKP**		**19 16 37.5 +0.5**	
	comp=Z,19nm,0.8s,baz=356,slow=3.7,SNR=36						
LPAZ			PKKPbc	PKKPbc		19 26 05.5	
	comp=Z,3.6nm,0.8s,baz=193,slow=5.2,SNR=5.1						
LPAZ	**La Paz**	**127.04 65**	*e*P	**PKiKP**		**19 16 37.3 +0.4**	
NBPS	**Pedro II - PI**	**127.81 28**	*e*P	**PKiKP**		**19 16 38.0 0.0**	
VILB	**Vilhena**	**128.30 54**	*e*P	**PKiKP**		**19 16 39.7 +0.9**	
CLDB	**Colider**	**128.52 48**	*e*P	**PKiKP**		**19 16 39.5 +0.3**	
PDRB	**Porto dos Gac**	**128.76 50**	*e*P	**PKiKP**		**19 16 39.9 +0.2**	
HMBC	**Humberstone**	**129.32 69**	IAMs_20	IAMs_20		20 22 08.5	
	comp=Z,962nm,21.0s						
PB08	**IPOC Station P**	**129.62 68**	PKP	**PKPdf**		**19 16 41.0 0.0**	
SMTB	**Santa Maria do**	**130.03 37**	*e*P	**PKiKP**		**19 16 42.8 +0.4**	
NBPA	**Parau_RN**	**130.23 23**	*e*P	**PKPdf**		**19 16 41.1 -0.8**	
RCBR	**Riachuelo**	**130.59 22**		**PKPdf**		**19 16 42.9 +0.3**	
RCBR	**Riachuelo**	**130.59 22**	PKIKP	**PKPdf**		**19 16 42.9 +0.3**	
VNDA	**Vanda**	**130.79 180**	PKP	**PKiKP**		**19 16 42.9 +1.0**	
	comp=Z,15nm,0.8s,baz=325,slow=4.8,SNR=17						
VNDA			SKPbc	**SKPab**		**19 20 02.8 +1.8**	
	comp=Z,7.2nm,0.9s,baz=296,slow=6.6,SNR=4.5						
VNDA	**Vanda**	**130.79 180**		**PKiKP**		**19 16 42.6 +0.7**	
PTLB	**Pontes e Lacer**	**130.96 55**		**PKiKP**		**19 16 43.7 -0.4**	
PTLB	**Pontes e Lacer**	**130.96 55**	*e*P	**PKiKP**		**19 16 44.5 +0.4**	
NBPV	**Pedro Velho**	**131.29 21**	*e*P	**PKiKP**		**19 16 44.8 -0.1**	
SNDB	**Serra Nova Dou**	**131.43 43**	*e*P	**PKiKP**		**19 16 45.3 +0.2**	
BROLN	**Tlhalogang**	**131.95 294**	*i* P	**PKiKP**		**19 16 46.0 0.0**	
SOOWA	**Sowa**	**132.12 295**	*i* P	**PKiKP**		**19 16 46.9 +0.5**	
PB14	**IPOC Station P**	**132.45 73**	PKP	**PKPdf**		**19 16 46.2 +0.1**	
SALV	**Santo Antonio**	**132.99 51**	*e*P	**PKiKP**		**19 16 48.0 -0.1**	
XAUDM	**Khaudum**	**133.01 302**	*i* P	**PKiKP**		**19 16 49.0 +0.7**	
KHWEE	**KHWEE**	**133.66 295**	*i* P	**PKiKP**		**19 16 49.2 -0.3**	
ARAG	**Araguaiana, MT**	**134.56 46**	*e*P	**PKiKP**		**19 16 51.8 +0.4**	
LPHEP	**Lephephe**	**134.58 293**	*i* P	**PKiKP**		**19 16 51.7 +0.4**	
PP1B	**Ponte de Pedra**	**134.85 51**	*e*P	**PKiKP**		**19 16 51.9 -0.1**	
KDWAN	**Kaudwane**	**135.25 295**	*i* P	**PKiKP**		**19 16 52.3 -0.4**	
GRTLG	**Ghanzi**	**135.43 300**	*i* P	**PKiKP**		**19 16 53.0 -0.1**	
TSUM	**Tsumeb**	**135.43 306**	PKhKP	PKPpre		19 16 44.7	
	comp=Z,18nm,1.1s,baz=353,slow=1.5,SNR=14						
TSUM			PKP	**PKiKP**		**19 16 53.3 +0.1**	
	comp=Z,36nm,0.9s,baz=86,slow=2.2,SNR=19						
TSUM			SKPbc	**SKPbc**		**19 20 20.8 +2.2**	
	comp=Z,8.3nm,0.9s,baz=28,slow=5.8,SNR=4.7						
TSUM	**Tsumeb**	**135.43 306**		**PKPdf**		**19 16 45.3 -6.4**	
LCO	**Las Campanas**	**135.61 77**		**PKPdf**		**19 16 52.2 +0.3**	
LCO	**Las Campanas**	**135.61 77**	PKIKP	**PKPdf**		**19 16 52.2 +0.3**	
BDFB	**Brasilia**	**136.07 42**	PKhKP	PKPpre		19 16 46.2	
	comp=Z,10nm,0.9s,baz=147,slow=2.2,SNR=5.8						
BDFB			PKP	**PKiKP**		**19 16 54.0 -0.6**	
	comp=Z,36nm,0.9s,baz=73,slow=1.5,SNR=22						
KGCAE	**Kacgae**	**136.13 298**	*i* P	**PKiKP**		**19 16 54.1 -0.5**	
BDQN	**Bodoquena, MS**	**136.40 55**	*e*P	**PKPdf**		**19 16 52.8 -0.5**	
AQDB	**Aquidauana**	**136.93 54**	*e*P	**PKiKP**		**19 16 56.4 +0.3**	
MURT	**Porto Murtinho**	**136.99 57**	*e*P	**PKiKP**		**19 16 55.5 -0.7**	
KOOLE	**Kule**	**137.30 300**	*i* P	**PKPdf**		**19 16 55.4 +0.3**	
IPMB	**Ipameri, GO**	**138.11 43**	*e*P	**PKiKP**		**19 16 57.8 -0.8**	
CMC01	**Camacan, BA**	**138.78 30**	*e*P	**PKiKP**		**19 16 58.9 -1.0**	
MT16	**CCHEN**	**138.92 82**		**PKPdf**		**19 16 58.3 +0.7**	
BOSA	**Boshof**	**139.03 289**	PKhKP	PKPpre		19 16 50.5	
	comp=Z,19nm,1.0s,baz=35,slow=1.7,SNR=14						
BOSA			PKP	**PKiKP**		**19 16 59.1 -1.1**	
	comp=Z,66nm,1.0s,baz=64,slow=1.8,SNR=18						
BOSA			PP	**PP**		**19 19 53.2 +2.0**	
	comp=Z,21nm,1.1s,baz=72,slow=6.1,SNR=3.2						
TRCB	**Terra Rica**	**140.38 52**	*e*P	**PKPdf**		**19 17 00.4 -0.2**	
MAW	**Mawson**	**140.49 217**	PKhKP	PKPpre		19 16 54.2	
	comp=Z,27nm,1.0s,baz=326,slow=0.5,SNR=3.9						
MAW			PKP	**PKPdf**		**19 17 00.5 +1.2**	
	comp=Z,39nm,0.8s,baz=113,slow=1.8,SNR=8.3						
CPUP	**Villa Florida**	**140.99 61**	PKhKP	PKPpre		19 16 56.1	
	comp=Z,5.0nm,0.7s,baz=316,slow=2.6,SNR=11						
CPUP			PKP	**PKPdf**		**19 17 02.0 +0.5**	
	comp=Z,21nm,0.9s,baz=318,slow=2.4,SNR=13						
CPUP	**Villa Florida**	**140.99 61**	PKIKP	**PKPdf**		**19 17 02.0 +0.5**	
SJMB	**Sao Joao De Ma**	**141.39 34**	*e*P	**PKPdf**		**19 17 02.2 -0.2**	
QSPA	**South Pole Qui**	**143.28 180**	PKhKP	PKPpre		19 17 00.0	
	comp=Z,158nm,0.8s,baz=0.8,slow=1.1,SNR=133						
QSPA			SKPbc	**SKiKP**		**19 20 39.2 -0.3**	
	comp=Z,53nm,1.1s,baz=146,slow=2.8,SNR=4.9						
PLCA	**Paso Flores**	**143.76 90**	PKP	**PKPdf**		**19 17 05.2 -0.9**	
	comp=Z,70nm,0.9s,baz=293,slow=3.9,SNR=33						
PLCA			SKPbc	**SKPbc**		**19 20 40.8 +0.2**	
	comp=Z,19nm,1.1s,baz=300,slow=4.5,SNR=3.8						
PLCA	**Paso Flores**	**143.76 90**	*e*P	**PKPdf**		**19 17 07.2 +1.1**	
DUB01	**Friburgo-RJ**	**144.09 38**	*e*P	**PKPdf**		**19 17 08.1 +0.9**	
PET01	**Itanhaem-SP**	**144.10 47**	*e*P	**PKPdf**		**19 17 08.5 +1.4**	
CAM01	**Campos-RJ**	**144.11 37**	*e*P	**PKPdf**		**19 17 08.0 +0.8**	
ITAB	**Concordia**	**144.37 56**	*e*P	**PKiKP**		**19 17 09.5 -1.5**	
SUR	**Sutherland**	**144.37 290**	PKP	**PKPdf**		**19 17 07.8 +0.2**	
	comp=Z,192nm,1.0s,baz=356,slow=1.1,SNR=43						
SUR	**Sutherland**	**144.37 290**		**PKPdf**		**19 17 08.0 +0.4**	
LL02	**Futaleuf**	**144.47 95**		**PKPdf**		**19 17 07.1 -0.1**	
CPSB	**Cacapava Do Su**	**146.28 60**	*e*P	**PKPbc**		**19 17 11.8 -0.1**	

MRZ	**Mangatainoka R**	**7.77 205**	P	Pn	19 11 01.1	-1.4

*NEIC **20** 19:09:25.1±0.5,5°.5S±0°.1×147°.6E±0°.3, h150km±14km, mb4.4/7, Error ellipse: s-maj=40.9km s-min=17.0km az=109.0*
*IDC **20** 19:09:25.7±5.5,5°.72S×147°.59E, h157km±58km, mb3.4/3, mbtmp4.0/5, Error ellipse: s-maj=80.7km s-min=30.2km az=137.0*
ISC 20 19:09:25.1±1.3,**5°.6S**±0°.1×**147°.5E**±0°.2,**h150**km,**n14,** σ1§**36**/16,**mb3.6**/4,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.77 185**		P		**Pn**	**19 10 23.2**	**+0.8**
	25nm,0.3s,baz=357,slow=12,SNR=57							
PMG				S		**Sn**	**19 11 06.3**	**-0.6**
	15nm,0.3s,baz=245,slow=22,SNR=8.0							
PMG	**Port Moresby**	**3.77 185**				**Pn**	**19 10 23.6**	**+1.2**
COEN	**Coen**	**9.31 207**		Pn		**Pn**	**19 11 38.4**	**+2.4**
COEN				Sn		**Sn**	**19 13 15.8**	**-3.4**
MTN	**Manton Dam**	**17.66 245**		P		**P**	**19 13 21.0**	**+0.3**
MTN				IAmb		IAmb	19 13 54.5	
	comp=Z,45nm,1.4s							
WB0	**Warramunga Arr**	**18.97 221**		P		**P**	**19 13 35.8**	**+0.7**
WB0				IAmb		IAmb	19 13 40.0	
	comp=Z,28nm,1.5s							
WR8	**Warramunga Arr**	**19.04 220**		P		**P**	**19 13 36.6**	**+0.8**
WR8				IAmb		IAmb	19 13 37.7	
	comp=Z,30nm,1.5s							
WRA	**Warramunga Arr**	**19.13 221**		P		**P**	**19 13 37.0**	**+0.2**
	comp=Z,4.4nm,0.5s,baz=48,slow=12,SNR=17							
WRA	**Warramunga Arr**	**19.13 221**		P		**P**	**19 13 36.0**	**-0.9**
KNRA	**Kununurra**	**20.92 240**		P		**P**	**19 13 55.6**	**-0.4**
KNRA				IAmb		IAmb	19 13 59.6	
	comp=Z,25nm,1.1s							
AS31	**Alice Springs**	**22.20 215**		P		**P**	**19 14 10.1**	**+0.7**
AS31				IAmb		IAmb	19 14 34.7	
	comp=Z,1.8nm,0.8s							
ASAR	**Alice Springs**	**22.20 215**		P		**P**	**19 14 09.8**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=42,slow=10,SNR=5.1							
	comp=Z,2.4nm,0.7s							
FITZ	**Fitzroy Crossi**	**24.68 238**		P		**P**	**19 14 32.5**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=62,slow=9.7,SNR=8.1							
	comp=Z,3.3nm,0.6s							
SUA	**Susitna One**	**81.91 25**		P		**P**	**19 21 26.6**	**-1.1**
ILAR	**Eielson Array**	**84.95 23**		P		**P**	**19 21 42.5**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=252,slow=4.7,SNR=2.1							
	comp=Z,0.3nm,0.8s							

*IDC **20** 19:13:59.1±1.6,6°.56S×128°.33E, h258km±19km, mb3.0/2, mbtmp4.0/7, Error ellipse: s-maj=23.3km s-min=17.1km az=98.0*
ISC 20 19:13:57.9±0.9,**6°.64S**±0°.07×**128°.5E**±0°.1,**h250**km,**n7,** σ2§**20**/11,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.97 233**		P		**Pn**	**19 15 26.6**	**+0.9**
	32nm,0.3s,baz=93,slow=3.9,SNR=26							
BATI				S		**S**	**19 16 34.6**	**-1.4**
	16nm,0.3s,baz=56,slow=20,SNR=6.4							
SIJI	**Sorong**	**6.35 26**		P		**Pn**	**19 15 32.0**	**+1.4**
	3.8nm,0.6s,baz=198,slow=19,SNR=9.3							
SIJI				S		**S**	**19 16 42.4**	**-2.3**
	9.1nm,0.8s,baz=343,slow=7.6,SNR=3.5							
FITZ	**Fitzroy Crossi**	**11.73 194**		P		**Pn**	**19 16 40.8**	**+2.6**
	6.7nm,1.0s,baz=25,slow=11,SNR=16							
FITZ				S		**S**	**19 18 46.7**	**-2.6**
	1.4nm,0.4s,baz=342,slow=14,SNR=1.7							
WRA	**Warramunga Arr**	**14.38 157**		P		**Pn**	**19 17 11.7**	**+0.9**
	1.6nm,0.4s,baz=332,slow=12,SNR=17							
WRA				S		**S**	**19 19 47.1**	**-3.0**
	0.3nm,0.6s,baz=331,slow=24,SNR=1.8							
ASAR	**Alice Springs**	**17.71 164**		P		**P**	**19 17 49.6**	**+2.1**
	4.7nm,0.4s,baz=341,slow=12,SNR=40							
MKAR	**Makanchi Array**	**67.12 327**		P		**P**	**19 24 24.3**	**-0.6**
	0.3nm,0.4s,baz=121,slow=6.6,SNR=9.1							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**71.44 329**		P		**P**	**19 24 50.2**	**-0.8**
	0.3nm,0.5s,baz=123,slow=4.9,SNR=4.7							
	0.3nm,0.5s							

*PDG **20** 19:30:10.5±0.6,43°.33N×17°.12E, h13km, ML2.7/11, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*
*BEO **20** 19:30:11.3±0.4,43°.41N×17°.14E, h1km±2km, ML2.7/6*
ISC 20 19:30:09.9±0.9,**43°.38N**±0°.02×**17°.11E**±0°.02,**h7**km±6km, **n63,** σ1§**09**/99,**5C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MAKA	**Makarska**	**0.11 215**		*i* Pg		**Pg**	**19 30 13.3**	**+0.9**
MAKA				Sg		**Sg**	**19 30 16.2**	**+2.2**
RICI	**Ricice**	**0.12 9**		*i* Pg		**Pg**	**19 30 11.4**	**-1.1**
RICI				Sg		**Sg**	**19 30 12.7**	**-1.6**
HVAR	**Hvar**	**0.52 248**		*e*Pg		**Pb**	**19 30 20.3**	**-1.1**
HVAR				Sg		**Sb**	**19 30 29.3**	**+0.2**
LSTV	**Lastovo**	**0.63 195**		*i* Pg		**Pg**	**19 30 22.1**	**-1.1**
LSTV				Sg		**Sn**	**19 30 33.1**	**-2.4**
STON	**Ston**	**0.67 139**		*e*Pg		**Pg**	**19 30 22.0**	**-0.7**
STON				Sg		**Sb**	**19 30 31.8**	**-1.4**
STON	**Ston**	**0.67 139**		*e*Pg		**Pg**	**19 30 22.2**	**-0.5**
STON				*e*Sg		**Sb**	**19 30 32.9**	**-0.3**
KIJV	**Kijevo**	**0.81 321**		*e*Pg		**Pg**	**19 30 24.6**	**-0.8**
KIJV				Sg		**Sb**	**19 30 37.1**	**-0.3**
DBRK	**Dubrovnik**	**1.04 133**		*e*Pg		**Pg**	**19 30 28.7**	**-1.1**
DBRK				Sg		**Sb**	**19 30 43.5**	**-0.5**
ZIRJ	**Zirje**	**1.10 285**		*i* Pg		**Pb**	**19 30 30.5**	**-0.7**
ZIRJ				Sg		**Sn**	**19 30 46.9**	**-0.2**
TREB	**Trebinje**	**1.12 126**		*e*Pg		**Pg**	**19 30 30.4**	**-1.1**
TREB				*e*Sg		**Sn**	**19 30 48.4**	**+0.7**
MORI	**Morici**	**1.13 296**		*e*Pg		**Pg**	**19 30 30.9**	**-0.7**
MORI				Sg		**Sn**	**19 30 48.5**	**+0.8**
BRY	**Bratogost**	**1.15 114**	⇑	*i* Pg		**Pb**	**19 30 31.7**	**-0.5**
BRY				*i* Sg		**Sn**	**19 30 48.5**	**-0.1**
BLY	**Banja Luka**	**1.37 2**		*e*Pg		**Pg**	**19 30 36.1**	**-0.1**
BLY				*e*Sg		**Sn**	**19 30 54.9**	**+1.1**
HCY	**Herceg Novi**	**1.38 132**	⇑	*i* Pg		**Pn**	**19 30 34.9**	**-0.6**
HCY				*i* Sg		**Sn**	**19 30 56.4**	**+2.4**
NKME	**Niksic**	**1.48 114**	⇑	*i* Pg		**Pn**	**19 30 37.0**	**0.0**
NKME				*i* Sg		**Sn**	**19 30 58.2**	**+1.5**
UDBI	**Udbina**	**1.50 320**		*e*Pn		**Pb**	**19 30 37.9**	**-0.2**
UDBI				Sg		**Sg**	**19 30 58.4**	**+0.1**
CEME	**Cevo**	**1.57 121**		*e*Pg		**Pn**	**19 30 37.6**	**-0.6**
CEME				*i* Sg		**Sg**	**19 31 00.9**	**+0.7**
DUGI	**Dugi Otok**	**1.61 293**		*i* Pn		**Pb**	**19 30 39.1**	**-0.7**
DUGI				Sn		**Sg**	**19 31 02.8**	**+1.2**
PLE	**Pljevlja**	**1.66 91**		*e*Pn		**Pg**	**19 30 41.1**	**-0.7**
PLE				*e*Sn		**Sb**	**19 31 02.3**	**+0.2**
PLE	**Pljevlja**	**1.66 91**		*e*Pn		**Pg**	**19 30 41.1**	**-0.7**
BUM	**Brajici-Budva**	**1.70 129**	⇓	*i* Pn		**Pn**	**19 30 39.5**	**-0.5**
BUM				*e*Sn		**Sb**	**19 31 02.8**	**-0.2**
BBLS	**Lazi&#263i**	**1.74 73**		*e*Pg		**Pb**	**19 30 42.0**	**-0.1**
BBLS				*e*Sg		**Sg**	**19 31 06.8**	**+1.1**
KOME	**Kolasin**	**1.84 106**	⇑	*i* Pn		**Pb**	**19 30 43.9**	**0.0**
KOME				*e*Sn		**Sb**	**19 31 06.7**	**-0.4**
KOME	**Kolasin**	**1.84 106**		*e*Pn		**Pg**	**19 30 44.9**	**-0.3**
PDG	**Podgorica**	**1.84 120**	⇓	*i* Pn		**Pn**	**19 30 42.4**	**+0.5**
PDG				*i* Sn		**Sg**	**19 31 07.8**	**-1.2**
PDG	**Podgorica**	**1.84 120**		*e*Pn		**Pg**	**19 30 44.7**	**-0.5**
PLIT	**Plitvice**	**1.84 325**		*e*Pn		**Pb**	**19 30 43.4**	**-0.5**
PLIT				Sn		**Sb**	**19 31 07.6**	**+0.5**
DRME	**Dracevica, Mon**	**1.94 127**		*e*Pn		**Pb**	**19 30 45.3**	**-0.2**
NVLJ	**Novalja**	**2.00 307**		*i* Pn		**Pb**	**19 30 45.6**	**-1.0**
NVLJ				Sn		**Sb**	**19 31 11.9**	**+0.2**
SJES	**Sjenica**	**2.09 92**		*e*Pg		**Pb**	**19 30 47.9**	**-0.3**
SJES				*e*Sg		**Sg**	**19 31 16.7**	**-0.5**
BEY	**Berane**	**2.10 103**		*e*Pn		**Pb**	**19 30 48.7**	**+0.4**
IVA	**Berane**	**2.10 103**	⇑	*i* Pn		**Pb**	**19 30 48.7**	**+0.4**
IVA				*e*Sn		**Sn**	**19 31 12.6**	**+0.6**
ULC	**Ulcinj**	**2.12 131**	⇓	*i* Pn		**Pn**	**19 30 45.8**	**+0.1**
ULC				*i* Sn		**Sb**	**19 31 13.7**	**-1.4**
RABC	**Rab**	**2.17 310**		*e*Pn		**Pn**	**19 30 47.8**	**+1.5**
DIVS	**Divibare**	**2.21 70**		*e*Pn		**Pn**	**19 30 47.7**	**+0.7**
IVAS	**Ivanjica**	**2.23 84**		*e*Pn		**Pn**	**19 30 48.6**	**+1.4**
IVAS				*e*Sn		**Sn**	**19 31 16.2**	**+1.2**
PVY	**Plav**	**2.23 110**		*e*Pn		**Pn**	**19 30 47.1**	**-0.3**
PVY				*e*Sn		**Sn**	**19 31 16.2**	**+0.9**
MOSL	**Moslavina**	**2.25 354**		*e*Pn		**Pn**	**19 30 47.4**	**-0.1**
MOSL				Sn		**Sn**	**19 31 16.3**	**+0.8**

BOJS	**Bojanci**	**2.51 329**	*i* Pn	**Pb**	**19 30 53.4**	**-1.9**
BOJS			*e*Sn	**Sb**	**19 31 25.6**	**-0.7**
BOJS	**Bojanci**	**2.51 329**	*e*Pn	**Pb**	**19 30 53.3**	**-1.9**
OZLJ	**Ozalj**	**2.53 333**	*i* Pn	**Pn**	**19 30 51.2**	**-0.1**
OZLJ			Sn	**Sn**	**19 31 23.4**	**+1.1**
TRUS	**Trudelj**	**2.53 69**	*e*Pn	**Pn**	**19 30 51.9**	**+0.5**
GBRS	**Gornja Briga**	**2.71 323**	*i* Pn	**Pb**	**19 30 57.2**	**-1.5**
SELS	**Selova**	**2.93 92**	*e*Pn	**Pn**	**19 30 58.6**	**+1.7**
SELS			*e*Sn	**Sn**	**19 31 33.8**	**+1.4**
CEY	**Cerknica**	**3.04 322**	*e*Pn	**Pn**	**19 31 00.8**	**+2.4**
BARS	**Barje**	**3.49 98**	*e*Pn	**Pn**	**19 31 06.7**	**+2.1**
BARS			*e*Sn	**Sn**	**19 31 47.1**	**+0.9**
PERS	**Pernice**	**3.55 337**	*i* Pn	**Pn**	**19 31 07.4**	**+2.0**
SOKA	**Soboth**	**3.61 337**	*i* Pn	**Pn**	**19 31 08.2**	**+1.9**
	1.4nm,0.2s					
OBKA	**Obir**	**3.62 331**	*i* Pn	**Pn**	**19 31 07.4**	**+1.0**
	1.0nm,0.3s					
ARSA	**Arzberg**	**4.03 344**	*i* Pn	**Pn**	**19 31 13.3**	**+1.3**
	3.5nm,0.3s					
ZAPS	**Zavoj**	**4.03 90**	*e*Pn	**Pn**	**19 31 13.8**	**+1.7**
RONA	**Rosalia, Austr**	**4.36 353**	*i* Pn	**Pn**	**19 31 17.4**	**+0.9**
	1.6nm,0.5s					
KBA	**Koelnbreinsper**	**4.55 326**	*i* Pn	**Pn**	**19 31 19.3**	**0.0**
	0.5nm,0.3s					
CONA	**Conrad Observa**	**4.63 350**	*e*Pn	**Pn**	**19 31 21.9**	**+1.6**
	1.0nm,0.3s					
ABTA	**Abfaltersbach**	**4.68 318**	*i* Pn	**Pn**	**19 31 21.1**	**+0.1**
	0.8nm,0.3s					
MOA	**Molln**	**4.89 337**	*i* Pn	**Pn**	**19 31 26.4**	**+2.5**
	1.4nm,0.3s					
BIOA	**Bad Ischl, Aus**	**4.95 332**	*i* Pn	**Pn**	**19 31 24.9**	**+0.2**
	1.6nm,0.3s					
MODS	**Modra-Piesok**	**5.00 1**	*e*PN	**Pn**	**19 31 24.9**	**-0.4**
MODS			*e*SN	**Sn**	**19 32 21.4**	**-1.9**
LESA	**Schwarzleotal**	**5.11 324**	*i* Pn	**Pn**	**19 31 27.7**	**+0.8**
	2.7nm,0.3s					
WTTA	**Wattenberg**	**5.47 317**	*e*Pn	**Pn**	**19 31 33.7**	**+1.7**
	1.0nm,0.2s					
WATA	**Walderalm**	**5.55 317**	*e*Pn	**Pn**	**19 31 33.1**	**0.0**
	1.4nm,0.4s					
SQTA	**Sankt Quirin**	**5.66 315**	*i* Pn	**Pn**	**19 31 34.9**	**+0.3**
	2.1nm,0.4s					
FETA	**Feichten**	**5.79 311**	*i* Pn	**Pn**	**19 31 37.2**	**+0.8**
	0.6nm,0.4s					

DJA 20 19:32:24.5±0.4,**10°.S**±5°.×**11°.9E**±°,**h10**km,**M3.7**/12, **mb3.8**/3,**MLv3.7**/12,**Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.39 58**		P		Pg	19 32 32.7	+0.5
WSI	**Waingapu**	**1.23 82**		P		Pn	19 32 47.1	-0.7
WSI				S		Sb	19 33 03.8	-0.1
DBNI	**Kabupaten Domp**	**1.53 331**		P		Pn	19 32 51.6	-0.3
BASI	**Baing, Sumba**	**1.54 104**		P		Pn	19 32 50.8	-1.2
PLAI	**Plampang**	**1.62 309**		P		Pn	19 32 52.0	-1.2
EDFI	**Ende, Flores**	**2.82 67**		P		Pn	19 33 09.4	-0.3
KHKI	**Kahang-Kahang**	**3.71 293**		P		Pn	19 33 22.2	+0.2
BSSI	**Bau Bau, Buton**	**3.95 21**		P		Pn	19 33 25.6	+0.4
BATI	**Baumata**	**4.55 95**		P		Pn	19 33 33.7	+0.2
SOEI	**Soe**	**5.13 89**		P		Pn	19 33 42.7	+1.1
	17nm,1.3s							

IDC 20 19:39:32.5±7.9,**5°.08S**×**145°.81E**,**h227**km±85km,**mb2.8**/2, **mbtmp3.3**/4,**Error ellipse: s-maj=106.9km s-min=30.7km az=103.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.50 163**		P		Pn	19 40 42.3	+0.8
	6.9nm,0.5s,baz=348,slow=9.3,SNR=2.0							
PMG				S		S	19 41 36.3	+0.3
	11nm,0.4s,baz=158,slow=19,SNR=14							
WRA	**Warramunga Arr**	**18.52 216**		P		P	19 43 31.8	-0.5
	0.2nm,0.3s,baz=39,slow=9.5,SNR=5.9							
ASAR	**Alice Springs**	**21.75 211**		P		P	19 44 06.7	+0.3
	0.4nm,0.7s,baz=40,slow=7.1,SNR=5.6							
	0.4nm,0.7s							
ILAR	**Eielson Array**	**85.11 23**		P		P	19 51 42.5	-0.1
	0.4nm,0.8s,baz=261,slow=5.9,SNR=2.5							
	0.4nm,0.8s							

*JMA **20** 19:53:21.7±0.1,30°.N±1°.×14°.1E±°, h53km, MV4.0/22, NEAR TORISHIMA IS*
*IDC **20** 19:53:24.8±0.9,29°.89N×141°.05E, h81km±8km, mb3.3/8, mbtmp3.6/11, Error ellipse: s-maj=29.0km s-min=15.0km az=77.0*
ISC 20 19:53:24.0±0.7,**30°.07N**±0°.05×**141°.2E**±0°.1,**h78**km,**n23,** σ2§**47**/27,**mb3.6**/10,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.70 333**		*e*S		**Sn**	**19 54 35.0**	**-1.9**
CBIJ	**Chichi jima**	**3.08 164**		*e*P		**Pn**	**19 54 10.2**	**-0.2**
CBIJ				*e*S		**Sn**	**19 54 45.6**	**-0.5**
JCJ	**Chichijima**	**3.08 164**		P		**Pn**	**19 54 08.4**	**-2.0**
	42nm,0.6s,baz=306,slow=22,SNR=9.0							
JCJ				S		**Sn**	**19 54 42.1**	**-4.1**
	76nm,0.5s,baz=294,slow=22,SNR=6.5							
JHCJ	**Hachijojimakas**	**3.23 338**		*e*S		**Sn**	**19 54 45.3**	**-4.6**
JHJ2	**Mitsune**	**3.27 339**		*e*S		**Sn**	**19 54 45.5**	**-5.1**
JHJ	**Hachijo jima 2**	**3.28 338**		P		**Pn**	**19 54 13.2**	**+0.1**
	54nm,0.4s,baz=101,slow=20,SNR=1.3							
JHJ				S		**Sn**	**19 54 46.7**	**-4.4**
	131nm,0.5s,baz=235,slow=22,SNR=5.9							
BSO1	**Boso 1**	**4.58 357**		*e*P		**Pn**	**19 54 30.2**	**-0.1**
BSO1				*e*S		**Sn**	**19 55 20.7**	**-1.2**
BSO4	**Boso 4**	**4.97 352**		*e*S		**Sn**	**19 55 29.9**	**-2.2**
JHO	**Hitachi**	**6.55 355**		*e*P		**Pn**	**19 54 57.0**	**-0.7**
JHO				*e*S		**Sn**	**19 56 06.2**	**-4.7**
MJAR	**Matsushiro Arr**	**6.93 339**		P		**Pn**	**19 55 04.4**	**+1.5**
	1.1nm,0.4s,baz=149,slow=13,SNR=9.4							
MJAR				S		**Sn**	**19 56 19.8**	**-0.5**
	1.2nm,0.6s,baz=139,slow=12,SNR=1.1							
H11N2	**WAKE ISLAND Hy**	**25.40 108**		T		T	20 26 09.9	
	baz=300,slow=75,SNR=4.4							
H11N1	**WAKE ISLAND Hy**	**25.41 108**		T		T	20 26 06.2	
	baz=300,slow=75,SNR=2.6							
H11N3	**WAKE ISLAND Hy**	**25.42 108**		T		T	20 26 08.7	
	baz=300,slow=75,SNR=6.7							
SONM	**Songino Array**	**32.03 313**		P		**P**	**19 59 44.3**	**+1.2**
	0.2nm,0.5s,baz=120,slow=8.8,SNR=1.7							
SONM				pP		**pP**	**20 00 03.3**	**+2.4**
	0.1nm,0.4s,baz=113,slow=12,SNR=1.8							
	0.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**40.04 263**		P		**P**	**20 00 50.3**	**-1.4**
	0.5nm,0.7s,baz=67,slow=8.5,SNR=6.0							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**47.97 308**		pP		pP	20 02 13.9	+0.8
	0.1nm,0.5s,baz=89,slow=8.1,SNR=1.5							
WRA	**Warramunga Arr**	**50.16 188**		P		**P**	**20 02 10.9**	**-0.9**
	0.4nm,0.5s,baz=6.0,slow=7.6,SNR=10							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**53.89 188**		P		**P**	**20 02 38.4**	**-1.0**
	0.2nm,0.8s,baz=359,slow=4.9,SNR=11							
	0.2nm,0.5s							
BVAR	**Borovoye Array**	**55.31 316**		P		**P**	**20 02 49.7**	**+0.3**
	0.4nm,0.6s,baz=79,slow=7.5,SNR=2.5							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**55.54 30**		P		**P**	**20 02 53.0**	**+2.1**
	0.3nm,0.7s,baz=282,slow=7.5,SNR=2.1							
ILAR				pP		**pwP**	**20 03 13.4**	**-0.7**
	0.9nm,0.8s,baz=275,slow=7.8,SNR=5.2							
	0.3nm,0.7s							
FINES	**FINESS Array B**	**74.92 333**		P		**P**	**20 04 57.2**	**+1.0**
	1.9nm,0.8s,baz=38,slow=6.5,SNR=6.1							
FINES				pP		**pP**	**20 05 18.3**	**+2.6**
	4.1nm,1.1s,baz=54,slow=9.7,SNR=1.7							
	1.9nm,0.8s							
NVAR	**Mina Array Bea**	**79.35 52**		pP		pP	20 05 46.3	+5.1
	0.8nm,0.6s,baz=273,slow=3.4,SNR=4.0							
BRTR	**Keskin Array B**	**83.38 312**		P		**P**	**20 05 43.3**	**+0.4**
	0.9nm,0.7s,baz=72,slow=6.6,SNR=5.6							
	0.9nm,0.7s							

*NEIC **20** 20:04:19.5±1.5, 18°.9S±0°.2×175°.14W±0°.07, h241km±9km, mb4.2/13, Error ellipse: s-maj=27.8km s-min=7.3km az=192.0*
*IDC **20** 20:04:26.1±10.0, 18°.49S×175°.67W, h277km±86km, mb3.4/8, mbtmp4.0/9, Error ellipse: s-maj=73.9km s-min=29.9km az=120.0*

ISC 20 20:04:19.8±0.6,**19°.0S**±0°.2×**175°.09W**±0°.08,**h250**km,**n31,** σ1§**22**/29,**mb3.9**/12,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.89 92**		P		**Pn**	**20 05 34.7**	**+0.4**
NIUE				Sn		**S**	**20 06 31.0**	**-2.6**
MSVF	**Nonsavu**	**6.62 279**				**Pn**	**20 05 54.4**	**-1.5**
DZM	**Mont Dzumac**	**17.57 257**		P		**Pn**	**20 08 09.1**	**-1.4**
	4.5nm,0.9s,baz=87,slow=18,SNR=2.5							
DZM	**Mont Dzumac**	**17.57 257**		IAmb		IAmb	20 08 33.5	
	comp=Z,11nm,1.3s							
CTAO	**Charters Tower**	**36.40 262**		P		**P**	**20 11 00.2**	**-0.7**
CTAO				IAmb		IAmb	20 11 01.7	
	comp=Z,5.1nm,0.6s							
STKA	**Stephens Creek**	**40.93 243**		P		**P**	**20 11 41.4**	**+3.1**
	comp=Z,0.7nm,0.4s,baz=68,slow=11,SNR=1.8							
	comp=Z,0.7nm,0.4s							
STKA	**Stephens Creek**	**40.93 243**		IAmb		IAmb	20 12 12.1	
	comp=Z,11nm,1.0s							
BBOO	**Buckleboo**	**45.69 242**		P		**P**	**20 12 15.8**	**-0.3**
BBOO				IAmb		IAmb	20 12 52.0	
	comp=Z,12nm,1.2s							
WR8	**Warramunga Arr**	**47.40 260**		P		**P**	**20 12 27.8**	**-1.8**
WB0	**Warramunga Arr**	**47.52 260**		P		**P**	**20 12 29.9**	**-0.6**
WB0				IAmb		IAmb	20 12 30.6	
	comp=Z,17nm,1.4s							
WRA	**Warramunga Arr**	**47.55 260**		P		**P**	**20 12 29.9**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=98,slow=6.8,SNR=52							
	comp=Z,1.6nm,0.4s							
WRA	**Warramunga Arr**	**47.55 260**		IAmb		IAmb	20 12 30.2	
	comp=Z,0.2nm,0.7s							
AS31	**Alice Springs**	**47.55 255**		P		**P**	**20 12 30.9**	**+0.1**
ASAR	**Alice Springs**	**47.55 255**		P		**P**	**20 12 30.4**	**-0.3**
	comp=Z,7.7nm,0.6s,baz=88,slow=8.5,SNR=167							
ASAR				PcP		**PcP**	**20 13 58.4**	**+1.8**
	comp=Z,1.0nm,0.6s,baz=95,slow=3.4,SNR=8.8							
	comp=Z,7.7nm,0.6s							
MTN	**Manton Dam**	**51.92 268**		P		**P**	**20 13 02.4**	**-1.2**
KNRA	**Kununurra**	**53.52 264**		P		**P**	**20 13 14.6**	**-0.7**
SOEI	**Soe**	**59.22 270**		P		**P**	**20 13 56.0**	**+0.4**
MJAR	**Matsushiro Arr**	**70.65 322**		P		**P**	**20 15 08.0**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=131,slow=8.9,SNR=4.2							
	comp=Z,1.0nm,0.6s							
MJAR	**Matsushiro Arr**	**70.65 322**		IAmb		IAmb	20 15 47.6	
	comp=Z,5.1nm,1.4s							
KSRS	**Korea Array**	**77.59 317**		P		**P**	**20 15 49.0**	**+0.6**
	comp=Z,6.0nm,0.7s,baz=139,slow=9.0,SNR=4.1							
	comp=Z,6.0nm,0.7s							
G18K	**Tagagawik**	**85.50 7**		P		**P**	**20 16 30.4**	**+1.3**
G18K				IAmb		IAmb	20 17 04.7	
	comp=Z,4.9nm,1.5s							
SEY	**Seymchan**	**85.53 346**		P		**P**	**20 16 29.3**	**0.0**
	comp=Z,0.5nm,0.5s,baz=107,slow=19,SNR=1.8							
	comp=Z,0.5nm,0.5s							
ILAR	**Eielson Array**	**86.23 12**		P		**P**	**20 16 33.2**	**+0.6**
	comp=Z,0.8nm,1.0s,baz=230,slow=6.0,SNR=7.8							
	comp=Z,0.8nm,1.0s							
ILAR	**Eielson Array**	**86.23 12**		P		**P**	**20 16 33.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**92.20 289**		P		**P**	**20 17 00.8**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=126,slow=3.4,SNR=4.4							
	comp=Z,0.3nm,0.7s							
KURK	**Kurchatov**	**114.70 318**				**PKiKP**	**20 22 30.8**	**+0.5**
KURBB	**Kurchatov Arra**	**114.76 318**		PKP		**PKiKP**	**20 22 30.8**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=87,slow=2.1,SNR=4.8							
BVAR	**Borovoye Array**	**119.64 321**		PKP		**PKiKP**	**20 22 41.0**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=118,slow=3.2,SNR=6.0							
BRTR	**Keskin Array B**	**147.73 316**		PKPbc		**PKiKP**	**20 23 36.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=127,slow=4.0,SNR=4.6							
GERES	**GERESS Array B**

BATI Baumata 6.76 239 P Pn 20 26 05.5 +0.3
RKPI Ransiki, Papua 6.96 42 P Pn 20 26 06.7 -1.0
MWPI Manokwari, Pap 7.32 38 P Pn 20 26 12.3 -0.2
KDI Kendari 7.46 292 P Pn 20 26 17.3 +3.0
MMRI Maumere 7.50 255 Pn 20 26 16.4 +1.6
MMRI Maumere 7.50 255 P Pn 20 26 16.3 +1.5
2.3nm8µm47µm408nm,0.5s
TNTI Ternate 7.80 344 Pn 20 26 20.4 +1.4
TNTI Ternate 7.80 344 P Pn 20 26 20.2 +1.3
2.2nm4µm5µm412nm,0.7s
EDFI Ende, Flores 8.05 255 P Pn 20 26 23.6 +1.4
7µm283nm,0.8s
SRPI Serui, Papua 8.24 54 P Pn 20 26 23.4 -1.3
10µm763nm,0.6s
KKSI Kolaka, Sulawe 8.29 288 P Pn 20 26 28.5 +3.2
BAKI Biak 8.56 50 P Pn 20 26 30.0 +1.1
LUWI Luwuk 8.85 310 Pn 20 26 34.3 +1.6
LUWI Luwuk 8.85 310 P Pn 20 26 37.0 +4.3
269nm,1.3s
KNRA Kununurra 8.89 185 P Pn 20 26 31.1 -2.1
comp=Z,1µm,0.5s,comp=Z,0.0nm
KNRA Kununurra 8.89 185 Pn 20 26 30.8 -2.5
BSSI Bau Bau, Buton 9.04 273 P Pn 20 26 37.5 +2.2
comp=Z,6µmcomp=Z,9µmcomp=Z,573nm,1.5s
MNI Manado 9.42 330 P Pn 20 26 42.7 +2.4
BASI Baing, Sumba 9.53 248 P Pn 20 26 41.1 -0.6
WAMI Wamena 9.54 73 P Pn 20 26 44.2 +2.3
comp=Z,804nm,0.7s
WSI Waingapu 9.62 252 P Pn 20 26 43.2 +0.4
APSI Ampana 9.81 306 P Pn 20 26 49.2 +3.8
comp=Z,6µmcomp=Z,266nm,0.8s
KAPI Kappang 9.92 280 P Pn 20 26 47.1 +0.3
comp=Z,45nm,0.7s,baz=104,slow=7.8,SNR=12
KAPI Kappang 9.92 280 Pn 20 26 49.4 +2.6
KAPI Kappang 9.92 280 P Pn 20 26 49.6 +2.8
comp=Z,60nm,0.8s
KAPI Kappang 9.92 280 ⇑*i*P Pn 20 26 48.1 +1.3
KAPI Kappang 9.92 280 P Pn 20 26 49.7 +2.9
SPSI Sidrap Palu 10.14 285 P Pn 20 26 52.9 +3.1
comp=Z,4µmcomp=Z,5µmcomp=Z,462nm,1.0s
MKS Makassar 10.16 278 P Pn 20 26 54.2 +4.2
comp=Z,4µmcomp=Z,249nm,0.8s
TTSI Tana Toraja 10.39 290 P P 20 26 58.1 -3.5
comp=Z,4µmcomp=Z,9µmcomp=Z,392nm,0.8s
WBSI Waikabubak, Su 10.47 253 P Pn 20 26 53.4 -0.6
comp=Z,11µmcomp=Z,423nm,1.0s
MRSI Marisa 10.47 313 P Pn 20 26 58.1 +4.0
comp=Z,4µmcomp=Z,4µmcomp=Z,433nm,1.1s
MMPI Merauke 10.85 100 P Pn 20 26 58.3 -0.7
PMSI Majene 11.09 286 P P 20 27 06.9 -2.7
comp=Z,4µmcomp=Z,9µmcomp=Z,888nm,1.2s
SGSI Sangihe 11.14 339 P Pn 20 27 04.9 +2.1
DBNI Kabupaten Domp 11.29 261 P Pn 20 27 04.3 -0.4
comp=Z,179nm,0.4s
PCI Palu 11.32 301 P P 20 27 10.4 -1.7
GENI Genyem 11.35 69 P Pn 20 27 06.3 +0.8
comp=Z,4µmcomp=Z,469nm,0.6s
MMSI Mamuju 11.37 290 P P 20 27 10.3 -2.3
TOLI2 Tolitoli 11.75 311 Pn Pn 20 27 13.9 +3.2
PLAI Plampang 11.86 259 P Pn 20 27 10.2 -1.9
comp=Z,7µmcomp=Z,301nm,0.4s
JAY Jayapura 11.88 70 P Pn 20 27 13.2 +0.9
comp=Z,66nm,0.6s,baz=232,slow=8.9,SNR=6.9
JAY S Sn 20 29 20.6 -3.6
comp=Z,72nm,0.5s,baz=111,slow=23,SNR=8.2
JAY LR LR 20 33 17.2
comp=Z,1µm,19.7s,baz=268,slow=45
FITZ Fitzroy Crossi 11.89 198 P Pn 20 27 09.5 -3.0
comp=Z,159nm,0.4s,baz=32,slow=11,SNR=438
FITZ S Sn 20 29 14.3 -10
comp=Z,254nm,0.4s,baz=73,slow=10,SNR=11
FITZ LR LR 20 32 38.2
comp=Z,1µm,19.1s,baz=2.5,slow=41
MPSI Mapaga 11.95 306 P P 20 27 17.1 -2.1
WB0 Warramunga Arr 13.74 161 Pn Pn 20 27 31.7 -4.3
BKB Balikpapan 13.77 293 P P 20 27 41.5 +2.1
BKB Balikpapan 13.77 293 P P 20 27 41.5 +2.1
comp=Z,7µmcomp=Z,13µmcomp=Z,1µm,1.0s
WRAB Tennant Creek 13.89 161 Pn Pn 20 27 33.1 -4.7
WRAB Tennant Creek 13.89 161 P Pn 20 27 33.1 -4.7
WRA Warramunga Arr 13.89 161 P Pn 20 27 33.5 -4.4
comp=Z,150nm,1.0s,baz=352,slow=12,SNR=271
WRA S Sn 20 30 01.0 -11
comp=Z,460nm,0.8s,baz=341,slow=22,SNR=8.7
WRA Warramunga Arr 13.89 161 Pn Pn 20 27 34.6 -3.3
WRA Warramunga Arr 13.89 161 P Pn 20 27 34.6 -3.3
WB2 Warramunga Arr 13.90 161 P Pn 20 27 33.4 -4.5
KHKI Kahang-Kahang 13.93 263 P P 20 27 40.9 -0.2
comp=Z,179nm,0.5s
DAV Davao City (W) 14.31 344 P P 20 27 45.3 -0.1
comp=Z,140nm,0.4s,baz=203,slow=7.7,SNR=6.7
DAV S S 20 30 28.6 +1.4
comp=Z,138nm,0.3s,baz=65,slow=23,SNR=3.6
DNP Denpasar 14.35 261 P P 20 27 46.7 +0.9
IGBI Denpasar 14.43 261 P Pn 20 27 45.6 +0.9
comp=Z,13µmcomp=Z,592nm,0.5s
RTBI Rangdo, Negare 14.59 262 P P 20 27 48.9 +0.4
comp=Z,170nm,0.9s
BBKI Banjar Baru 15.03 282 P P 20 27 55.2 +1.9
comp=Z,18µmcomp=Z,2µm,1.3s
COEN Coen 15.17 119 Pn 20 27 51.5 -2.2
COEN Coen 15.17 119 P Pn 20 27 54.1 +0.3
comp=Z,315nm,1.4s
ABJI Asem Bagus 15.24 265 P P 20 27 57.4 +1.7
comp=Z,373nm,1.0s
JAGI Jajag, Banyuwa 15.37 263 Pn 20 27 53.4 -2.9
JAGI Jajag, Banyuwa 15.37 263 P P 20 27 57.1 0.0
comp=Z,245nm,0.4s
JAGI Jajag, Banyuwa 15.37 263 P Pn 20 27 55.3 -1.0
KMMI Kalianget 15.49 268 P P 20 28 01.7 +3.3
comp=Z,6µmcomp=Z,5µmcomp=Z,299nm,0.9s
TARAI Tarakan 15.62 310 P P 20 28 02.2 +2.3
comp=Z,6µmcomp=Z,8µmcomp=Z,536nm,0.8s
BLJI Banyuglugur 15.87 266 P P 20 28 04.1 +1.4
comp=Z,6µmcomp=Z,367nm,0.5s
MYLDM Lahad Datu 16.21 317 P Pn 20 28 07.6 +1.1
MYLDM Lahad Datu 16.21 317 P Pn 20 28 09.6 +3.1
comp=Z,321nm,1.1s
MYLDM Lahad Datu 16.21 317 P Pn 20 28 10.2 +3.7
comp=Z,5µmcomp=Z,321nm,1.1s
QIS Mount Isa 16.81 146 P P 20 28 12.9 -0.1
comp=Z,270nm,0.8s
MBWA Marble Bar 17.18 213 P P 20 28 16.5 -0.5
comp=Z,122nm,0.9s
MBWA Marble Bar 17.18 213 P P 20 28 16.6 -0.4
MBWA Marble Bar 17.18 213 P Pn 20 28 18.1 0.0
comp=Z,70nm,0.9s
AS31 Alice Springs 17.31 167 P P 20 28 18.6 +0.1
ASAR Alice Springs 17.31 167 P P 20 28 18.8 +0.3
comp=Z,854nm,0.9s,baz=344,slow=8.6,SNR=1322
ASAR S S 20 31 23.6 -6.4
comp=Z,111nm,0.9s,baz=360,slow=27,SNR=6.5
ASAR LR LR 20 35 42.0
comp=Z,3µm,19.3s,baz=340,slow=39
ASAR ScP ScP 20 36 12.0 +0.9
comp=Z,19nm,0.8s,baz=13,slow=1.3,SNR=3.3
ASAR P3KPbc 21 03 05.0
comp=Z,0.6nm,0.8s,baz=145,slow=3.4,SNR=4.5
ASAR Alice Springs 17.31 167 P Pn 20 28 19.1 -0.6
ASAR Alice Springs 17.31 167 P Pn 20 28 19.1 -0.6
AUALC St Philip's Co 17.33 167 P Pn 20 28 19.6 -0.3
comp=Z,2µm,1.0s
PSA00 Pilbara Seismi 17.46 212 P P 20 28 20.4 +0.4
comp=Z,392nm,1.2s
PSA00 Pilbara Seismi 17.46 212 P P 20 28 20.5 +0.4
PSA00 Pilbara Seismi 17.46 212 P Pn 20 28 21.3 -0.2
PSA00 Pilbara Seismi 17.46 212 P Pn 20 28 21.4 0.0
comp=Z,392nm,1.2s
PMG Port Moresby 17.61 100 P P 20 28 21.6 -0.2
comp=Z,58nm,0.8s,baz=282,slow=11,SNR=18
PMG S S 20 31 29.8 -6.4
comp=Z,30nm,0.4s,baz=217,slow=22,SNR=6.1
PMG LR LR 20 37 15.2
comp=Z,1µm,18.7s,baz=282,slow=44
PMG Port Moresby 17.61 100 P P 20 28 21.8 0.0
PMG Port Moresby 17.61 100 P Pn 20 28 24.6 +1.2
comp=Z,165nm,0.9s
PMG Port Moresby 17.61 100 P Pn 20 28 24.3 +1.0
comp=Z,165nm,0.9s
PMG Port Moresby 17.61 100 ⇓*i*P Pn 20 28 24.5 +1.2
PMG pmax pmax
comp=Z,90nm,1.2s
PMG Port Moresby 17.61 100 P Pn 20 28 23.6 +0.3
comp=Z,161nm,0.9s
SJI Sawahan 17.68 266 P P 20 28 23.2 +0.5
comp=Z,6µmcomp=Z,213nm,0.7s

SNJI Sawahan-Nganju 17.69 266 P Pn 20 28 24.5 +0.1
comp=Z,5µmcomp=Z,254nm,0.9s
NGJI Ngawi 17.98 267 P Pn 20 28 27.6 0.0
comp=Z,179nm,1.2s
WRKA Warakurna 18.21 184 P P 20 28 29.2 +0.9
comp=Z,287nm,1.0s,comp=Z,0.0nm
MTSU Mount Surprise 18.29 129 P P 20 28 29.9 +0.7
MTSU Mount Surprise 18.29 129 P P 20 28 30.1 +0.9
comp=Z,161nm,0.7s
PCJI Pacitan 18.29 264 P P 20 28 29.7 +0.5
comp=Z,6µmcomp=Z,441nm,1.3s
MANU Manus Island 18.35 76 Pn 20 28 31.3 -0.7
KKM Kota Kinabalu 18.43 313 P P 20 28 31.5 +0.7
KKM Kota Kinabalu 18.43 313 P Pn 20 28 32.9 -0.1
comp=Z,486nm,1.0s
KKM Kota Kinabalu 18.43 313 P Pn 20 28 32.1 -0.9
comp=Z,5µmcomp=Z,486nm,1.0s
UGM Wanagama 18.92 265 P P 20 28 35.5 -0.7
SMRI Semarang 18.99 268 P Pn 20 28 38.5 -1.0
SMRI Semarang 18.99 268 P Pn 20 28 38.7 -0.8
comp=Z,186nm,0.9s
SMRI Semarang 18.99 268 P Pn 20 28 39.4 -0.1
comp=Z,183nm,0.8s
SBUM Sibu 19.59 297 P P 20 28 44.8 +1.5
SBUM Sibu 19.59 297 P Pn 20 28 47.4 +0.8
comp=Z,168nm,1.2s
SBUM Sibu 19.59 297 P Pn 20 28 46.6 0.0
comp=Z,168nm,1.2s
CTJI Waduk Cacaban 20.24 268 P P 20 28 51.4 +1.1
comp=Z,222nm,0.8s
KPJI Karang Pucung 20.49 267 P P 20 28 53.1 +0.2
comp=Z,3µmcomp=Z,277nm,0.7s
CTA Charters Tower 20.92 131 P P 20 28 57.4 -0.1
comp=Z,71nm,0.8s,baz=299,slow=9.8,SNR=85
CTA S S 20 32 40.8 -0.4
comp=Z,17nm,0.7s,baz=300,slow=18,SNR=2.1
comp=Z,71nm,0.8s
CTA Charters Tower 20.92 131 P P 20 28 58.3 +0.8
CTAO Charters Tower 20.92 131 P P 20 28 57.8 +0.4
CTAO Charters Tower 20.92 131 P P 20 28 57.9 +0.4
comp=Z,47nm,1.0s
CTAO Charters Tower 20.92 131 P P 20 28 57.8 +0.4
GIRL Giralia 21.62 222 P P 20 29 13.2 +8.3
GIRL Giralia 21.62 222 P P 20 29 06.1 +1.2
BBJI Bungbulang 21.76 267 P P 20 29 05.0 -1.5
BBJI IAmb IAmb 20 29 12.0
comp=Z,153nm,0.8s
BBJI Bungbulang 21.76 267 P P 20 29 05.8 -0.8
comp=Z,221nm,0.8s
BBJI Bungbulang 21.76 267 P P 20 29 05.7 -0.8
comp=Z,223nm,0.7s
LEM Lembang 21.80 269 P P 20 29 06.5 -0.4
comp=Z,353nm,0.8s,baz=65,slow=11,SNR=27
LEM S S 20 32 52.3 -4.3
comp=Z,20nm,0.9s,baz=335,slow=20,SNR=1.7
comp=Z,353nm,0.8s
TPI Tanjungpandan 22.19 279 P P 20 29 12.5 +1.7
MEEK Meekatharra 22.34 207 P P 20 29 12.4 +0.3
comp=Z,146nm,1.1s
MEEK Meekatharra 22.34 207 P P 20 29 12.4 +0.3
comp=Z,146nm,1.1s
DBJI Dramaga 22.66 269 P P 20 29 14.9 -0.3
comp=Z,4µmcomp=Z,139nm,0.8s
INKA Innaminka 23.40 154 P P 20 29 21.9 +0.2
PPBI Pangkal Pinang 23.80 280 P P 20 29 28.0 +2.5
XMI Christmas Isla 23.89 260 P P 20 29 28.7 +2.4
comp=Z,215nm,1.1s
FORT Forrest 23.93 183 P P 20 29 26.3 -0.2
comp=Z,200nm,0.8s,comp=Z,0.0nm
FORT Forrest 23.93 183 P P 20 29 26.6 +0.1
QLP Quilpie 24.15 146 P P 20 29 30.0 +1.4
QLP Quilpie 24.15 146 P P 20 29 29.0 +0.4
comp=Z,392nm,1.1s
KLI Kotabumi 24.65 273 P P 20 29 34.8 +1.5
comp=Z,2µmcomp=Z,105nm,0.8s
KLSI 24.80 273 P P 20 29 35.8 +1.2
KASI Kota Agung 24.95 271 P P 20 29 35.4 -0.6
comp=Z,95nm,0.9s
PMBI Palembang 24.99 278 P P 20 29 36.2 -0.1
PMBI Palembang 24.99 278 P P 20 29 39.3 +3.0
comp=Z,502nm,1.2s
PMBI Palembang 24.99 278 P P 20 29 40.2 +3.9
comp=Z,3µmcomp=Z,320nm,0.9s
GUMO Guam 25.30 37 LR LR 20 39 10.0
comp=Z,388nm,21.2s,baz=220,slow=35
MDSI Maura Dua 25.36 274 P P 20 29 40.0 +0.3
LWLI Liwa 25.43 273 P P 20 29 41.2 +0.8
comp=Z,2µmcomp=Z,130nm,0.9s
KMBL Kambalda 25.51 195 P P 20 29 42.0 +1.2
comp=Z,51nm,1.0s
MORW Morawa 25.59 208 P P 20 29 42.2 +0.6
comp=Z,69nm,1.2s
MORW Morawa 25.59 208 P P 20 29 41.9 +0.3
MORW Morawa 25.59 208 P P 20 29 42.6 +1.0
comp=Z,69nm,1.2s
DSRI Dabo 25.70 283 P P 20 29 45.6 +2.9
comp=Z,2µmcomp=Z,81nm,1.0s
AUNRC North Rockhamp 26.04 132 P P 20 29 46.7 +1.0
comp=Z,65nm,1.0s
TPRI Tanjung Pinang 26.13 286 P P 20 29 48.5 +1.9
comp=Z,3µmcomp=Z,98nm,1.2s
BBOO Buckleboo 26.61 168 P P 20 29 49.5 -1.1
BBOO IAmb IAmb 20 29 51.9
comp=Z,109nm,0.9s
BBOO Buckleboo 26.61 168 P P 20 29 50.5 -0.1
comp=Z,137nm,0.9s
BLDU Ballidu 26.61 205 P P 20 29 52.1 +1.4
comp=Z,63nm,1.2s
BLDU Ballidu 26.61 205 P P 20 29 52.4 +1.7
comp=Z,63nm,1.1s
GD1S Gladstone Soft 26.80 132 P P 20 29 54.1 +1.6
BTDF Bukit Timah Da 26.98 286 P P 20 29 56.4 +2.2
comp=Z,46nm,1.8s
BTDF Bukit Timah Da 26.98 286 P P 20 29 55.6 +1.4
MYKOM Kota Tinggi 27.04 287 P P 20 29 55.8 +1.1
MYKOM IAmb IAmb 20 30 37.6
comp=Z,82nm,1.2s
MYKOM Kota Tinggi 27.04 287 P P 20 29 57.1 +2.4
comp=Z,96nm,2.8s
MYKOM Kota Tinggi 27.04 287 P P 20 29 55.8 +1.1
KLBR Kelberrin 27.05 203 P P 20 29 55.2 +0.6
comp=Z,86nm,0.9s
KLBR Kellerberrin 27.05 203 P P 20 29 55.2 +0.6
comp=Z,86nm,0.9s
STKA Stephens Creek 27.39 157 P P 20 29 57.3 -0.3
comp=Z,558nm,0.9s
STKA Stephens Creek 27.39 157 P P 20 29 57.1 -0.5
comp=Z,78nm,0.7s,baz=338,slow=8.0,SNR=190
comp=Z,78nm,0.7s
STKA Stephens Creek 27.39 157 P P 20 29 57.1 -0.5
STKA Stephens Creek 27.39 157 P P 20 29 57.5 -0.1
comp=Z,28nm,0.9s
STKA Stephens Creek 27.39 157*d*iP P 20 29 57.5 -0.1
MASI Maura Aman, Be 27.46 276 P P 20 30 00.1 +1.6
EIDS Eidsvold 27.66 134 P P 20 29 58.8 -1.3
comp=Z,27nm,2.2s
EIDS Eidsvold 27.66 134 P P 20 29 59.3 -0.8
EIDS IAmb IAmb 20 30 52.0
comp=Z,124nm,1.8s
EIDS Eidsvold 27.66 134 P P 20 30 00.4 +0.3
comp=Z,27nm,2.2s
AUKUL Kulin High Sch 27.88 201 P P 20 30 02.6 +0.6
comp=Z,44nm,1.1s
HTT Hallett 27.91 163 P P 20 30 02.9 +0.5
comp=Z,31nm,1.1s
HTT Hallett 27.91 163 P P 20 30 02.3 0.0
comp=Z,77nm,1.1s
MUN Mundaring 28.01 205 P P 20 30 03.9 +0.7
comp=Z,32nm,1.1s
NWAO Nyngin (SRO) 28.44 202 P P 20 30 07.2 +0.3
comp=Z,12nm,0.5s,baz=41,slow=7.0,SNR=26
NWAO LR LR 20 41 57.4
comp=Z,847nm,20.0s,baz=330,slow=37
comp=Z,12nm,0.5s
NWAO Narrogin (SRO) 28.44 202 P P 20 30 07.4 +0.5
NWAO Narrogin (SRO) 28.44 202 P P 20 30 08.5 +1.5
comp=Z,19nm,1.2s
NWAO Narrogin (SRO) 28.44 202 P P 20 30 07.4 +0.5
NWAO pmax pmax
comp=Z,399nm,1.7s
AULRC Lightning Ridg 28.45 145 P P 20 30 07.8 +0.7
comp=Z,202nm,0.9s
CMSA Cobar Meteorol 28.89 151 P P 20 30 11.3 +0.4
comp=Z,210nm,1.0s
AUMAR Marden Senior 29.21 165 P P 20 30 15.6 +1.9
comp=Z,175nm,0.9s
PDSI Padang 29.60 280 P P 20 30 17.6 +0.1

comp=Z,40nm,0.8s
AUMBR Murray Bridge 29.61 164 P P 20 30 18.1 +0.8
comp=Z,274nm,0.9s
TW1H Toowoomba 1 Ha 29.65 137 P P 20 30 18.8 +1.0
comp=Z,93nm,0.9s
PPI Padang Panjang 29.76 281 P P 20 30 19.0 +0.1
comp=Z,3µmcomp=Z,148nm,1.0s
AUBSH Beerwah State 29.90 135 P P 20 30 20.5 +0.6
comp=Z,84nm,1.1s
HNR Honiara 30.19 97 LR LR 20 42 10.1
comp=Z,33nm,21.9s,baz=344,slow=35
IPM Ipoh 30.60 291 P P 20 30 25.9 -0.5
IPM IAmb IAmb 20 30 30.4
comp=Z,52nm,0.8s
IPM Ipoh 30.60 291 P P 20 30 29.2 +2.9
comp=Z,70nm,1.2s
IPM Ipoh 30.60 291 P P 20 30 27.9 +1.6
comp=Z,69nm,1.2s
MNSI Mandailing Nat 30.85 283 P P 20 30 28.9 +0.4
comp=Z,181nm,0.9s
AUDCS Dubbo College 30.94 147 P P 20 30 29.6 +0.5
comp=Z,427nm,0.8s
TPUB Ta-pu 31.14 344 P P 20 30 29.6 -1.2
KULM Kulim 31.25 292 P P 20 30 32.7 +0.7
comp=Z,111nm,1.1s
KULM Kulim 31.25 292 P P 20 30 32.3 +0.3
comp=Z,1µmcomp=Z,111nm,1.1s
ARMA Armidale 31.34 141 P P 20 30 34.5 +1.7
ARMA Armidale 31.34 141 IAmb IAmb 20 30 35.4
comp=Z,45nm,0.8s
ARMA Armidale 31.34 141 P P 20 30 34.5 +1.7
comp=Z,66nm,1.0s
AUPHS Peel High Scho 31.38 143 P P 20 30 34.3 +1.4
comp=Z,86nm,0.9s
PBSI Pulau Batu 31.92 281 P P 20 30 38.3 +0.5
comp=Z,3µmcomp=Z,60nm,1.2s
RPSI Rantau Prapat 32.00 286 IAmb IAmb 20 30 45.4
comp=Z,51nm,0.8s
PSI Prapat 32.03 286 P P 20 30 38.7 -0.3
comp=Z,72nm,0.8s
PSI Prapat 32.03 286 P P 20 30 38.0 -1.0
comp=Z,2µmcomp=Z,67nm,0.8s
QIZ Qiongzhong 32.17 323 P P 20 30 41.8 +1.8
QIZ S S 20 35 39.9 -0.3
QIZ sS sS 20 36 41.4 -0.7
QIZ LR LR
comp=Z,960nm,16.8s
QIZ LR LR
comp=Z,1µm,18.8s
QIZ LR LR
comp=Z,730nm,22.1s
YHNB Yeheng 32.25 346 P P 20 30 40.1 -0.5
YHNB IAmb IAmb 20 30 51.9
comp=Z,166nm,1.7s
MGBR Mount Gambier 32.40 164 P P 20 30 43.0 +1.3
YNG Young 32.45 150 P P 20 30 43.7 +1.4
comp=Z,210nm,0.9s
GSI Gunungsitoli 32.92 283 P P 20 30 45.0 -1.6
GSI Gunungsitoli 32.92 283 P P 20 30 46.5 -0.1
comp=Z,153nm,0.8s
GSI Gunungsitoli 32.92 283 P P 20 30 45.3 -1.3
comp=Z,2µmcomp=Z,151nm,0.8s
MGCD Mangrove Creek 33.05 146 P P 20 30 50.5 +3.1
MGCD Mangrove Creek 33.05 146 P P 20 30 49.9 +2.5
comp=Z,118nm,0.8s
SYDH Sydney Hard Ro 33.25 147 P P 20 30 51.5 +2.3
comp=Z,64nm,0.9s
QZH2 Quanzhou 33.28 342 P P 20 30 48.6 -0.9
QZH2 S S 20 35 54.6 -2.7
QZH2 pmax pmax
comp=Z,70nm,0.7s
BRAT Ballarat 33.31 159 P P 20 30 51.2 +1.6
comp=Z,47nm,0.7s
KCSI Kotacane, Aceh 33.34 287 P P 20 30 50.8 +0.5
AUMTC Mt Clear Colle 33.35 159 P P 20 30 51.6 +1.7
comp=Z,51nm,1.7s
JOW Kunigami 33.42 358 LR LR 20 43 30.7
comp=Z,343nm,20.9s,baz=152,slow=34
JOW Kunigami 33.42 358 P P 20 30 52.2 +1.5
comp=Z,112nm,1.1s
AUMTS Mt Stromlo 33.57 151 P P 20 30 53.3 +1.3
comp=Z,243nm,0.9s
CAN Canberra 33.57 151 P P 20 30 53.3 +1.3
comp=Z,211nm,0.9s
CAN Canberra 33.57 151 P P 20 30 53.6 +1.6
comp=Z,323nm,0.9s
CAN Canberra 33.57 151 P P 20 30 53.2 +1.3
AUDAR Maramalan Coll 33.58 150 P P 20 30 54.1 +2.0
comp=Z,122nm,1.1s
AUMHS Melrose High S 33.64 150 P P 20 30 54.0 +1.4
comp=Z,232nm,0.9s
CNB Canberra Magne 33.74 150 P P 20 30 55.0 +1.5
comp=Z,86nm,1.0s
WOLH Wollongong Har 33.81 147 P P 20 30 56.1 +2.1
comp=Z,151nm,0.9s
TPTI 33.83 286 P P 20 30 55.3 +0.8
TOO Toolangi 33.91 157 P P 20 30 56.7 +1.8
comp=Z,31nm,1.9s
AUSMG Snowy Mountain 34.27 152 P P 20 30 59.8 +1.7
comp=Z,103nm,0.8s
LHMI Lhok Sumawe 34.67 289 P P 20 31 02.3 +0.6
comp=Z,187nm,0.8s
LHMI Lhok Sumawe 34.67 289 P P 20 31 01.1 -0.6
comp=Z,3µmcomp=Z,189nm,0.8s
MLSI Meulaboh, Aceh 34.87 287 P P 20 31 02.3 -1.1
comp=Z,166nm,0.6s
MILA Mila 35.04 152 P P 20 31 06.2 +1.6
BSI Banda Aceh 36.31 289 P P 20 31 15.0 -0.7
GULI GuiLin 36.94 330 P P 20 31 22.6 +1.8
GULI S S 20 36 50.8 -2.5
GULI pmax pmax
comp=Z,34nm,1.3s
GULI LR LR
comp=Z,750nm,16.6s
GULI LR LR
comp=Z,750nm,21.6s
GULI LR LR
comp=Z,790nm,16.9s
CORO Coronation Par 37.92 158 P P 20 31 31.8 +3.0
comp=Z,70nm,1.0s
JSU Suzuyama 38.07 1 P P 20 31 30.8 +0.6
DZM Mont Dzumac 38.68 117 *e*P P 20 31 35.1 -0.6
comp=Z,26nm,0.8s
DZM *e*pP pP 20 32 09.3 -2.5
comp=Z,53nm,1.4s
DZM *e*SS SS 20 40 16.3 -1.4
comp=Z,3µm,33.6s
DZM *e*LR LR 20 42 26.0
comp=Z,1µm,26.7s
DZM Mont Dzumac 38.68 117 P P 20 31 36.0 +0.3
DZM IAmb IAmb 20 31 37.8
comp=Z,112nm,2.0s
DZM Mont Dzumac 38.68 117 P P 20 31 37.2 +1.5
comp=Z,24nm,0.8s
MOO Moorlands 38.80 159 P P 20 31 38.6 +2.4
comp=Z,169nm,1.5s
MOO Moorlands 38.80 159 P P 20 31 38.6 +2.4
CM31 Chiang Mai Arr 39.25 310 IAmb IAmb 20 31 42.9
comp=Z,81nm,1.0s
CM31 Chiang Mai Arr 39.25 310 P P 20 31 41.5 +1.2
SNR=28
CM31 S S 20 37 28.8 +0.5
CMAR Chiang Mai Arr 39.25 310 P P 20 31 41.0 +0.6
comp=Z,35nm,0.7s,baz=140,slow=7.4,SNR=223
CMAR PcP PcP 20 33 47.0 +1.1
comp=Z,8.1nm,0.8s,baz=129,slow=3.0,SNR=7.9
CMAR ScP ScP 20 37 19.6 +1.2
comp=Z,3.5nm,1.0s,baz=157,slow=3.5,SNR=7.2
comp=Z,35nm,0.7s
CMAR Chiang Mai Arr 39.25 310 P P 20 31 40.4 +0.1
CHTO Chiang Mai 39.47 311 P P 20 31 43.1 +1.0
CHTO IAmb IAmb 20 31 44.6
comp=Z,86nm,0.8s
CHTO Chiang Mai 39.47 311 P P 20 31 42.5 +0.4
comp=Z,69nm,1.0s
CHTO Chiang Mai 39.47 311 P P 20 31 43.1 +1.0
CHTO pmax pmax
comp=Z,86nm,0.9s
CHTO Chiang Mai 39.47 311 P P 20 31 42.8 +0.7
CHTO S S 20 37 29.5 -2.0
CHTO Chiang Mai 39.47 311 P P 20 31 42.5 +0.4
comp=Z,1µmcomp=Z,115nm,1.0s
CHTO Chiang Mai 39.47 311 P P 20 31 42.8 +0.7
CHTO PcP PcP 20 33 48.7 +2.1
JNU Nakatsue 39.69 2 LR LR 20 47 58.7
comp=Z,564nm,19.2s,baz=199,slow=36
GYA Guiyang 39.81 327 ⇓P P 20 31 46.0 +1.1

GYA pmax pmax
comp=Z,24nm,0.9s
WHN Wuhan 39.87 339 ⇑*i*P **P** **20 31 46.0 +0.9**
WHN pP **pP** **20 32 21.9 +1.1**
WHN S **S** **20 37 36.3 -0.7**
WHN SS **SS** **20 40 43.8 +2.9**
WHN pmax pmax
comp=Z,850nm,2.0s
WHN pmax pmax
comp=Z,1μm,3.0s
NJ2 Nanjing 39.93 346 *e*P **P** **20 31 46.6 +0.9**
NJ2 pP **pP** **20 32 22.0 +0.8**
NJ2 S **S** **20 37 37.1 -0.9**
NJ2 pmax pmax
comp=Z,41nm,0.7s
NJ2 pmax pmax
comp=Z,260nm,4.7s
JMN Monobe 40.48 6 IAmb IAmb 20 31 52.5
comp=Z,82nm,1.3s
JMN Monobe 40.48 6 P **P** **20 31 51.3 +1.1**
comp=Z,63nm,1.5s
JHJ Hachijo jima 2 40.84 13 LR LR 20 46 55.1
comp=Z,975nm,18.6s,baz=183,slow=33
KMI2 Kunming 41.08 322 ⇑P **P** **20 31 56.4 +0.9**
KMI2 pP pP 20 32 31.8 +0.7
KMI2 sP sP 20 32 52.8 +3.0
KMI2 S **S** **20 37 54.6 -1.1**
KMI2 pmax pmax
comp=Z,26nm,1.9s
KMI2 pmax pmax
comp=Z,330nm,4.1s
KMI2 LR LR
comp=Z,420nm,17.0s
KMI2 LR LR
comp=Z,440nm,16.7s
KMI2 LR LR
comp=Z,700nm,20.2s
ENH Enshi 41.56 333 P **P** **20 31 59.1 -0.1**
ENH pP **pP** **20 32 35.2 +0.3**
PZH PanZhiHua 42.69 322 P **P** **20 32 08.0 -0.4**
PZH sP **sP** **20 33 04.8 +1.9**
PZH S **S** **20 38 12.0 -7.1**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,320nm,3.8s
PZH LR LR
comp=Z,310nm,21.2s
PZH LR LR
comp=Z,330nm,20.0s
PZH LR LR
comp=Z,550nm,20.9s
JGF Kuroka 42.78 9 P **P** **20 32 08.5 -0.3**
JGF Kuroka 42.78 9 P **P** **20 32 09.3 +0.4**
comp=Z,24nm,1.3s
TJN Taejon 42.97 357 P **P** **20 32 11.5 +1.2**
TJN Taejon 42.97 357 P **P** **20 32 11.9 +1.6**
comp=Z,210nm,1.6s
TJN Taejon 42.97 357 P **P** **20 32 11.5 +1.2**
TJN pmax pmax
comp=Z,194nm,1.0s
TNCH TengChong 43.73 317 P **P** **20 32 17.0 +0.1**
TNCH pP pP 20 32 52.1 -0.7
TNCH PcP **PcP** **20 34 01.3 +0.5**
TNCH S **S** **20 38 34.1 -0.4**
TNCH sS sS 20 39 38.9 +0.3
TNCH pmax pmax
comp=Z,48nm,2.0s
TNCH pmax pmax
comp=Z,400nm,3.4s
MAJO Matsushiro 43.84 10 P **P** **20 32 16.9 -0.4**
MAJO Matsushiro 43.84 10 P **P** **20 32 17.2 -0.1**
comp=Z,42nm,1.1s
MAJO Matsushiro 43.84 10*c* *i*P **P** **20 32 17.0 -0.4**
MAJO *i* *PP **pP** **20 32 54.0 +0.3**
MAJO pmax pmax
comp=Z,29nm,0.9s
MJAR Matsushiro Arr 43.84 10 P **P** **20 32 16.3 -1.0**
comp=Z,21nm,0.8s,baz=187,slow=9.4,SNR=47
MJAR ScP **ScP** **20 37 35.7 -0.6**
comp=Z,3.3nm,0.9s,baz=177,slow=6.4,SNR=4.6
MJAR LR LR 20 48 18.2
comp=Z,304nm,21.9s,baz=204,slow=33
comp=Z,21nm,0.8s
MJAR Matsushiro Arr 43.84 10 P **P** **20 32 16.7 -0.6**
MJAR Matsushiro Arr 43.84 10 P **P** **20 32 16.7 -0.6**
MJAR pmax pmax
comp=Z,12nm,1.1s
KSAR Wonju Array Be 44.01 358 P **P** **20 32 19.4 +0.8**
KSAR Wonju Array Be 44.01 358 P **P** **20 32 19.4 +0.8**
KSRS Korea Array 44.02 358 P **P** **20 32 18.9 +0.3**
comp=Z,7.3nm,0.8s,baz=178,slow=11,SNR=44
KSRS pP **pP** **20 32 56.3 +1.5**
comp=Z,3.6nm,0.8s,baz=184,slow=6.9,SNR=3.0
KSRS PcP **PcP** **20 34 01.6 +0.4**
comp=Z,2.3nm,0.8s,baz=177,slow=4.7,SNR=1.9
KSRS ScP **ScP** **20 37 38.6 +1.7**
comp=Z,1.0nm,0.7s,baz=182,slow=4.6,SNR=3.2
comp=Z,7.3nm,0.8s
KS19 Wonju Array Si 44.07 358 P **P** **20 32 20.1 +0.9**
INCN Inchon 44.11 357 P **P** **20 32 20.7 +1.2**
INCN S **S** **20 38 37.3 -1.9**
LYN LuoYang 44.16 340 P **P** **20 32 20.9 +1.0**
LYN pP pP 20 32 56.8 +0.7
LYN sP sP 20 33 15.4 +0.7
LYN PP **PP** **20 34 07.6 +1.1**
LYN S **S** **20 38 37.3 -2.7**
LYN SS **SS** **20 42 02.9 -1.1**
LYN pmax pmax
comp=Z,55nm,1.3s
LYN pmax pmax
comp=Z,450nm,10.6s
TIA Tai'an 44.32 346 P **P** **20 32 21.4 +0.2**
TIA pP **pP** **20 32 55.3 -2.0**
TIA sP **sP** **20 33 12.6 -3.4**
TIA pmax pmax
comp=Z,210nm,5.5s
TIA LR LR
comp=Z,230nm,11.4s
TIA LR LR
comp=Z,170nm,12.9s
TIA LR LR
comp=Z,480nm,17.1s
CD2 Chengdu 44.88 328 P **P** **20 32 26.3 +0.6**
CD2 S **S** **20 38 45.8 -4.8**
CD2 SS **SS** **20 42 16.6 +0.6**
CD2 pmax pmax
comp=Z,20nm,0.6s
XAN Xi'an 45.05 336 P **P** **20 32 26.5 -0.5**
XAN pP pP 20 33 03.3 -0.1
XAN PcP **PcP** **20 34 06.8 +1.8**
XAN ScP **ScP** **20 37 42.5 +1.1**
XAN S **S** **20 38 49.4 -3.6**
XAN pmax pmax
comp=Z,91nm,0.9s
XAN pmax pmax
comp=Z,570nm,2.6s
XAN LR LR
comp=Z,390nm,16.0s
XAN LR LR
comp=Z,400nm,14.6s
XAN LR LR
comp=Z,400nm,16.1s
XAN Xi'an 45.05 336 P **P** **20 32 27.1 0.0**
XAN pP **pP** **20 33 03.2 -0.2**
XAN PcP **PcP** **20 34 06.8 +1.8**
DL2 Dalian 46.04 351 P **P** **20 32 35.8 +1.2**
DL2 pP **pP** **20 33 12.1 +1.1**
DL2 sP **sP** **20 33 31.5 +1.9**
DL2 S **S** **20 39 05.3 -1.5**
DL2 pmax pmax
comp=Z,53nm,1.0s
DL2 pmax pmax
comp=Z,410nm,6.8s
HNS HongShan 46.08 344 ⇑P **P** **20 32 35.1 +0.2**
HNS pP **pP** **20 33 11.8 +0.4**
HNS ScP **ScP** **20 37 45.0 -0.5**
HNS S **S** **20 39 04.3 -3.2**
HNS pmax pmax
comp=Z,72nm,1.1s
HNS LR LR
comp=Z,270nm,14.2s
HNS LR LR
comp=Z,320nm,14.2s
SAIH SAIHA 46.13 310 *e*P P 20 32 29.8 -6.0
SAIH IAmb IAmb 20 32 37.7
comp=Z,46nm,0.5s
SAIH *e*S **S** **20 39 03.1 -5.9**
MORE Moreh 46.18 313 IAmb IAmb 20 32 37.8
comp=Z,48nm,1.1s
IMP Imphal 46.79 313 *e*P P 20 32 35.5 -5.4
IMP IAML 20 32 47.9
comp=Z,48nm,0.1s
IMP *e*S **S** **20 39 12.5 -5.7**
TIY Taiyuan 47.05 341 P **P** **20 32 43.9 +1.3**
TIY sP **sP** **20 33 38.1 +0.3**
TIY S **S** **20 39 21.0 -0.5**
TIY pmax pmax
comp=Z,55nm,0.5s
TIY pmax pmax
comp=Z,350nm,9.9s
KOHI KOHIMA 47.22 315 *e*P P 20 32 37.4 -6.9
KOHI IAmb IAmb 20 32 45.3
comp=Z,41nm,0.8s
KOHI *e*S **S** **20 39 18.5 -5.9**
BRDH Bariadhala 47.26 309 LR LR 20 54 34.4
comp=Z,300nm,20.3s,baz=141,slow=38
MOKO MOKOCHONG 47.31 315 *e*P P 20 32 39.4 -5.5
MOKO IAmb IAmb 20 32 47.5
comp=Z,53nm,0.9s
MOKO *e*S **S** **20 39 19.9 -5.8**
BJI2 Beijing 48.17 346 P **P** **20 32 51.4 +0.3**
BJI2 pP **pP** **20 33 28.5 +0.6**
BJI2 sP **sP** **20 33 44.8 -1.6**
BJI2 S **S** **20 39 34.4 -2.6**
BJI2 pmax pmax
comp=Z,40nm,0.7s
BJI2 pmax pmax
comp=Z,170nm,4.3s
BJT Baijiatuan 48.17 346 P **P** **20 32 51.6 +0.6**
BJT pP **pP** **20 33 27.9 +0.1**
BJT PcP **PcP** **20 34 17.9 +2.1**
TEZP TEZPUR 48.70 314 *e*P P 20 32 49.6 -5.7
TEZP IAmb IAmb 20 32 57.5
comp=Z,41nm,1.1s
TEZP *e*S **S** **20 39 40.6 -4.3**
SHL Shillong 48.73 313 P **P** **20 32 56.5 +0.7**
SNR=16
LZDM Lanzhou Array 48.96 332 P **P** **20 32 58.3 +0.6**
comp=Z,13nm,0.5s,baz=171,slow=10,SNR=61
LZDM PcP **PcP** **20 34 19.3 +0.1**
comp=Z,3.5nm,0.5s,baz=193,slow=5.6,SNR=2.6
LZDM ScP **ScP** **20 37 60.0 +1.8**
comp=Z,0.5nm,0.3s,baz=123,slow=7.1,SNR=3.8
comp=Z,13nm,0.5s
LZH Lanzhou 49.00 332 P **P** **20 32 58.3 +0.6**
LZH pP pP 20 33 35.8 +1.2
LZH sP sP 20 33 52.5 -0.6
LZH ScP **ScP** **20 37 59.8 +1.7**
LZH S **S** **20 39 45.4 -3.8**
LZH pmax pmax
comp=Z,95nm,1.6s
LZH pmax pmax
comp=Z,590nm,4.7s
LZH LR LR
comp=Z,560nm,14.6s
LZH LR LR
comp=Z,350nm,16.5s
LZH LR LR
comp=Z,620nm,15.9s
PSTR Posyet 49.20 1 ⇓*i*P **P** **20 33 00.4 +1.6**
PSTR *i* *PP **pP** **20 33 36.0 -0.1**
PSTR pmax pmax
comp=Z,4.0nm,0.8s
VLA Vladivostok 49.70 2 ⇑*i*P **P** **20 33 04.8 +2.2**
VLA *i* *PP **pP** **20 33 41.7 +1.8**
VLA pmax pmax
comp=Z,50nm,1.0s
HHC Hu-ho-hao-te 50.19 342 *e*P **P** **20 33 07.3 +0.7**
HHC pP pP 20 33 43.0 -0.6
HHC S **S** **20 40 03.4 -2.1**
HHC SS **SS** **20 43 39.3 -2.1**
HHC pmax pmax
comp=Z,36nm,1.2s
HHC pmax pmax
comp=Z,500nm,6.6s
DHUB DHUBRI 50.38 312 *e*P P 20 33 01.9 -6.2
DHUB IAmb IAmb 20 33 09.9
comp=Z,24nm,0.7s
DHUB *e*S **S** **20 40 04.3 -4.0**
CN2 Changchun 50.47 356 P **P** **20 33 08.9 +0.4**
CN2 pP pP 20 33 48.3 +2.8
CN2 PP **PP** **20 35 08.3 +2.3**
CN2 S **S** **20 40 09.6 +0.6**
CN2 sS sS 20 41 18.5 +3.9
CN2 SS **SS** **20 43 44.8 -0.6**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 LR LR
comp=Z,280nm,16.0s
CN2 LR LR
comp=Z,240nm,16.0s
CN2 LR LR
comp=Z,310nm,14.0s
BTO2 Baotou 50.63 341 *e*P **P** **20 33 10.0 +0.1**
BTO2 pP **pP** **20 33 49.5 +2.5**
BTO2 S **S** **20 40 11.1 -0.5**
BTO2 pmax pmax
comp=Z,38nm,1.3s
BTO2 pmax pmax
comp=Z,270nm,4.4s
BTO2 LR LR
comp=Z,380nm,10.0s
BTO2 LR LR
comp=Z,290nm,5.8s
BTO2 LR LR
comp=Z,550nm,16.1s
PALK Pallekele 50.70 285 LR LR 20 55 52.1
comp=Z,196nm,21.1s,baz=105,slow=37
PALK Pallekele 50.70 285 P **P** **20 33 10.4 -0.3**
PALK IAmb IAmb 20 33 14.2
comp=Z,124nm,1.7s
PALK Pallekele 50.70 285 P **P** **20 33 11.1 +0.3**
PALK Pallekele 50.70 285 ⇑*i*P **P** **20 33 11.5 +0.7**
PALK pmax pmax
comp=Z,40nm,1.1s
PALK Pallekele 50.70 285 P **P** **20 33 11.7 +0.9**
PALK Pallekele 50.70 285 P **P** **20 33 11.5 +0.7**
USRK Ussuriysk Ar. 50.78 2 P **P** **20 33 11.2 +0.5**
comp=Z,18nm,0.6s,baz=192,slow=7.8,SNR=26
USRK pP **pP** **20 33 47.1 -1.0**
comp=Z,4.8nm,0.6s,baz=184,slow=5.7,SNR=2.2
comp=Z,18nm,0.6s
MLZ Mavora Lakes 50.91 146 P **P** **20 33 13.0 +1.2**
QRZ Quartz Range 51.12 138 P **P** **20 33 15.2 +1.7**
QRZ IAmb IAmb 20 33 16.6
comp=Z,58nm,0.9s
QRZ Quartz Range 51.12 138 P **P** **20 33 14.7 +1.3**
WHZ Wether Hill Ro 51.13 146 P **P** **20 33 14.2 +0.8**
WHZ IAmb IAmb 20 33 15.5
comp=Z,40nm,0.7s
WHZ Wether Hill Ro 51.13 146 P **P** **20 33 13.9 +0.4**
MDJ Mudanjiang 51.15 0 P **P** **20 33 14.0 +0.5**
MDJ pmax pmax
comp=Z,41nm,1.5s
LBZ Lake Benmore 51.53 143 IAmb IAmb 20 34 40.7
comp=Z,160nm,1.7s
LBZ Lake Benmore 51.53 143 P **P** **20 33 17.5 +1.0**
MRNZ Matariki Terra 51.55 139 P **P** **20 33 17.8 +1.1**
RPZ Rata Peaks 51.68 142 LR LR 20 54 51.1
comp=Z,436nm,19.3s,baz=69,slow=35
RPZ Rata Peaks 51.68 142 P **P** **20 33 18.1 +0.6**
APZ The Paps 51.73 147 P **P** **20 33 18.6 +0.6**
LSA Lhasa 51.73 316 P **P** **20 33 16.0 -2.7**
LSA pmax pmax
comp=Z,26nm,0.7s
LSA Lhasa 51.73 316 *i* P **P** **20 33 19.8 +1.1**
SNR=28
LSA Lhasa 51.73 316 P **P** **20 33 19.7 +0.9**
VIS Vishakhapatnam 51.73 299 *e*P P 20 33 11.8 -6.5
VIS IAmb IAmb 20 33 21.3
comp=Z,59nm,1.3s
VIS ⇓*e*S **S** **20 40 23.1 -4.1**
THZ Tophouse 51.83 139 P **P** **20 33 19.1 +0.4**
NNZ Nelson 51.87 138 P **P** **20 33 19.1 +0.1**
XLT XiLinHaoTe 51.89 348 *e*P **P** **20 33 18.8 -0.3**
XLT pP pP 20 33 57.3 +0.9
XLT S **S** **20 40 23.6 -5.0**
XLT pmax pmax
comp=Z,55nm,0.9s
XLT pmax pmax
comp=Z,400nm,4.5s
MHCZ Mount Hutt 51.90 142 P **P** **20 33 20.2 +1.0**
LTZ Lake Taylor 51.94 141 P **P** **20 33 20.6 +1.1**
ASAJ Asahikawa 52.00 12 LR LR 20 55 12.5
comp=Z,247nm,20.4s,baz=184,slow=36
DUWZ D'Urville Isla 52.03 138 P **P** **20 33 21.7 +1.5**
RAGD RAYAGADA 52.26 301 *e*P **P** **20 33 17.9 -4.3**
RAGD IAML 20 33 29.4
comp=Z,55nm,1.0s
RAGD *e*S **S** **20 40 29.7 -4.6**
BNX BinXian 52.31 358 ⇓P **P** **20 33 22.4 +0.3**
BNX pP **pP** **20 34 00.4 +0.9**
BNX pmax pmax
comp=Z,23nm,1.6s
BNX pmax pmax
comp=Z,210nm,8.0s
BNX LR LR
comp=Z,320nm,22.7s
BNX LR LR
comp=Z,250nm,13.5s
BNX LR LR
comp=Z,410nm,20.1s
TUWZ Tuamarina 52.34 138 P **P** **20 33 23.3 +0.8**
WTVZ West Tongariro 52.41 135 P **P** **20 33 25.7 +2.5**
NNVZ North Ngauruho 52.43 135 P **P** **20 33 25.7 +2.3**
FWVZ Far West T-bar 52.44 135 P **P** **20 33 26.6 +3.0**
NGZ Ngauruhoe 52.44 135 P **P** **20 33 25.1 +1.6**
TCW Tory Channel 52.46 138 P **P** **20 33 23.2 -0.1**
TCW Tory Channel 52.46 138 P **P** **20 33 23.6 +0.2**
OTVZ Oturere 52.48 135 P **P** **20 33 25.1 +1.3**
TMVZ Te Maari 52.49 135 P **P** **20 33 26.3 +2.5**
ETVZ East Tongariro 52.50 135 P **P** **20 33 26.4 +2.5**
GVZ Greta Valley S 52.51 140 P **P** **20 33 24.3 +0.5**
KHZ Kahutara 52.56 140 P **P** **20 33 24.9 +0.8**
MOVZ Moawhango 52.65 135 P **P** **20 33 25.4 +0.5**
KIW Kapiti Island 52.72 137 P **P** **20 33 25.8 +0.5**
MDRS Chennai 52.81 292 *e*P P 20 33 19.9 -6.4
MDRS IAmb IAmb 20 33 28.8
comp=Z,54nm,0.9s
MDRS *e*S **S** **20 40 36.9 -4.9**
OGWZ Otaki Gorge 52.87 137 P **P** **20 33 26.6 +0.1**
BHW Baring Head 52.95 138 P **P** **20 33 26.5 -0.4**
BKZ Black Stump Fm 53.06 135 P **P** **20 33 28.8 +0.8**
TSZ Takapari Road 53.08 136 P **P** **20 33 28.6 +0.7**
MRZ Mangatainoka R 53.08 137 P **P** **20 33 28.1 +0.2**
URZ Urewera 53.13 133 P **P** **20 33 28.4 0.0**
HOWZ Holdsworth Sta 53.14 137 P **P** **20 33 28.5 0.0**
PNHZ Pukenui 53.18 136 P **P** **20 33 29.1 +0.4**
KRHZ Kereru 53.18 135 P **P** **20 33 29.2 +0.5**
MTHZ Maungataniwha 53.18 134 P **P** **20 33 30.2 +1.4**
RTZ Ruatahuna 53.19 134 IAmb IAmb 20 34 46.9
comp=Z,96nm,1.6s
MSWZ Moikau Station 53.20 138 P **P** **20 33 28.2 -0.6**
NMHZ Naumai 53.26 135 P **P** **20 33 31.3 +2.0**
DVHZ Dannevirke 53.32 136 P **P** **20 33 30.0 +0.3**
HAZ Te Kaha 53.42 133 P **P** **20 33 31.4 +0.9**
RUGZ Raukumara Rang 53.43 133 P **P** **20 33 30.9 +0.2**
MWZ Matawai 53.47 133 P **P** **20 33 31.6 +0.8**
TRWZ Traveller 53.49 138 P **P** **20 33 31.4 +0.4**
TMWZ Te Maipa 53.49 137 P **P** **20 33 31.7 +0.7**
BFZ Birch Farm 53.55 137 P **P** **20 33 32.3 +0.9**
KAHZ Kahuranaki 53.60 135 P **P** **20 33 33.8 +2.0**
GTA2 Gaotai 53.65 331 P **P** **20 33 33.0 +0.8**
GTA2 pP pP 20 34 10.6 +0.9
GTA2 S **S** **20 40 50.0 -2.8**
GTA2 ScS **ScS** **20 43 00.9 -3.6**
GTA2 pmax pmax
comp=Z,46nm,1.0s
GTA2 pmax pmax
comp=Z,530nm,10.5s
GTA2 LR LR
comp=Z,360nm,14.3s
GTA2 LR LR
comp=Z,400nm,14.7s
GTA2 LR LR
comp=Z,370nm,15.5s
GOMU GeErMu 53.76 325 P **P** **20 33 33.9 +0.5**
GOMU S **S** **20 40 53.0 -1.9**
GOMU pmax pmax
comp=Z,6.0nm,0.8s
EVN Everest 53.81 312 IAmb IAmb 20 33 36.3
comp=Z,38nm,0.6s
PUZ Puketiti 53.89 133 P **P** **20 33 34.1 +0.2**
WMGZ Waiomatatini S 53.91 132 P **P** **20 33 35.2 +1.2**
CNGZ Carnagh Statio 54.02 133 P **P** **20 33 37.1 +2.3**
RAO Raoul Island 54.19 121 LR LR 20 54 08.9
comp=Z,169nm,21.1s,baz=23,slow=31
KOD Kodaikanal 54.56 288 *e*P P 20 33 34.3 -5.2
KOD IAmb IAmb 20 33 41.5
comp=Z,36nm,0.5s
KOD *e*S **S** **20 40 59.4 -6.7**
YSS Yuzhno-Sakhali 54.75 11 P **P** **20 33 40.4 +0.6**
YSS Yuzhno-Sakhali 54.75 11 *e*P **P** **20 33 40.9 +1.1**
YSS *e*S **S** **20 41 04.7 -2.3**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS pmax pmax
comp=Z,300nm,4.6s
KLR Kul'dur 55.80 2 LR LR 20 57 24.4
comp=Z,45nm,21.4s,baz=186,slow=35
KLR Kul'dur 55.80 2 ⇑*i*P **P** **20 33 47.7 +0.4**
KLR *i* *PP **pP** **20 34 26.5 +1.2**
KLR pmax pmax
comp=Z,31nm,1.0s
HYB Hyderabad 55.83 296 *e*P **P** **20 33 48.8 +0.7**
HYB *e*pP **pP** **20 34 26.8 +0.9**
UGL Uglegorsk 56.68 10 *e*P **P** **20 33 55.3 +1.8**
UGL *e*S **S** **20 41 31.7 -0.7**
UGL pmax pmax
comp=Z,100nm,0.8s
HILR Hailar Array B 56.74 352 P **P** **20 33 54.6 +0.6**
comp=Z,9.4nm,0.4s,baz=158,slow=8.4,SNR=23
comp=Z,9.4nm,0.4s
HEH HeiHe 56.82 358 *e*P **P** **20 33 54.5 0.0**
HEH pP **pP** **20 34 32.4 -0.1**
HEH S **S** **20 41 29.8 -4.4**
HEH pmax pmax
comp=Z,71nm,1.0s
ULN Ulaanbaatar 57.91 342 P **P** **20 34 03.6 +1.2**
ULN Ulaanbaatar 57.91 342 P **P** **20 34 03.6 +1.2**
ULN pmax pmax
comp=Z,70nm,0.8s
ULN Ulaanbaatar 57.91 342 P **P** **20 34 03.7 +1.3**
ULN S **S** **20 41 49.1 +0.1**
ULN Ulaanbaatar 57.91 342 P **P** **20 34 03.9 +1.5**
ULN pP **pP** **20 34 42.0 +1.5**
SONM Songino Array 58.09 342 P **P** **20 34 04.7 +1.1**
comp=Z,18nm,0.7s,baz=155,slow=8.0,SNR=118
SONM S **S** **20 41 46.2 -5.0**
comp=Z,3.3nm,1.3s,baz=170,slow=10,SNR=6.0
SONM PKPPKP **P'P'df** **21 03 46.7 +4.5**
comp=Z,1.1nm,0.9s,baz=0.0,slow=1.4,SNR=5.9
comp=Z,18nm,0.7s
SONM Songino Array 58.09 342 P **P** **20 34 04.3 +0.7**
SONM IAmb IAmb 20 34 06.6
comp=Z,71nm,1.3s
TYV Tymovskoe 58.50 10 *e*P **P** **20 34 08.2 +2.0**
TYV *e*S **S** **20 41 58.9 +2.8**
TYV pmax pmax
comp=Z,12nm,1.1s
TYV pmax pmax
comp=Z,200nm,3.5s
TYV smax smax
comp=N,500nm,4.8s
TYV smax smax
comp=E,400nm,4.8s
CIT Chita 60.14 349 *e*P **P** **20 34 19.0 +1.5**
CIT *e* 20 34 57.6
CIT *e* 20 36 39.6
CIT *e* 20 38 02.4
CIT *e* 20 42 30.0
CIT pmax pmax
comp=Z,106nm,2.1s
ZEA Zeya 60.31 358 *e*P **P** **20 34 20.0 +1.5**
ZEA *e* 20 34 59.0
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,70nm,0.9s
ZAK Zakamensk 61.31 341 *e*P **P** **20 34 25.6 +0.1**
ZAK *e* 20 35 03.8
ZAK *e* 20 42 32.5
ZAK pmax pmax

ZAK comp=Z,57nm,2.0s pmax pmax
TLY **Talaya** 62.32 342 P **P** **20 34 33.5 +1.3**
TLY comp=Z,35nm,2.2s IAmb IAmb 20 34 35.2
TLY **Talaya** 62.32 342 P **P** **20 34 32.7 +0.5**
TLY comp=Z,31nm,0.9s S **S** **20 42 46.3 +1.5**
IRK **Irkutsk** 62.63 343 *eP* **P** **20 34 34.8 +0.6**
IRK *e* 20 35 13.0
IRK *eS* **S** **20 42 51.8 +3.2**
IRK comp=Z,156nm,1.4s pmax pmax
WMQ **Urumqi** 62.97 327 *eP* **P** **20 34 37.8 +1.1**
WMQ pP pP 20 35 15.5 +0.1
WMQ comp=Z,48nm,1.1s pmax pmax
WMQ comp=Z,610nm,4.3s pmax pmax
MOY **Mondy** 63.16 340 *eP* **P** **20 34 39.2 +1.4**
MOY comp=Z,144nm,1.8s pmax pmax
KNGR **Kungurtug, Tuv** 63.50 338⇑ *iP* **P** **20 34 41.4 +1.3**
KNGR comp=Z,29nm,0.9s pmax pmax
PEA0B **Petropavlovsk-** 64.24 18 P **P** **20 34 45.0 +0.3**
PEA0B comp=Z,43nm,1.1s IAmb IAmb 20 34 47.2
PEA0B **Petropavlovsk-** 64.24 18 P **P** **20 34 45.0 +0.3**
PEA0B comp=Z,43nm,1.1s pmax pmax
PETK **Petropavlovsk-** 64.24 18 P **P** **20 34 45.7 +1.0**
PETK comp=Z,18nm,0.8s,baz=181,slow=4.0,SNR=21 LR LR 21 01 10.9
comp=Z,51nm,21.5s,baz=200,slow=34
comp=Z,18nm,0.8s
PET **Petropavlovsk** 64.47 19 *ceP* **P** **20 34 48.9 +2.7**
PET comp=Z,29nm,1.7s pmax pmax
PET **Petropavlovsk** 64.47 19 P **P** **20 34 47.0 +0.8**
comp=Z,30nm,1.3s
NIL **Nilore** 66.74 311 P **P** **20 35 01.5 +0.3**
NIL comp=Z,33nm,0.6s IAmb IAmb 20 35 04.2
NIL **Nilore** 66.74 311 P **P** **20 35 01.5 +0.3**
NIL comp=Z,33nm,0.6s pmax pmax
ZSN **Zaisan** 66.85 329 *c iP* **P** **20 35 02.8 +1.2**
ZSN **Zaisan** 66.85 329⇑ *iP* **P** **20 35 02.9 +1.2**
DGZ **Jazzator, Alta** 67.10 332 *c iP* **P** **20 35 04.5 +1.2**
DGZ comp=Z,97nm,1.1s pmax pmax
SHLS **Shalkode** 67.27 323 *c iP* **P** **20 35 03.8 -0.7**
SHLS comp=Z,21nm,0.8s pmax pmax
SHLS **Shalkode** 67.27 323⇑ *iP* **P** **20 35 03.8 -0.7**
comp=Z,21nm,0.8s
UZB **Uzynbulak** 67.53 322 *eP* **P** **20 35 07.0 +0.9**
UZB comp=Z,30nm,1.1s pmax pmax
UZB **Uzynbulak** 67.53 322 *eP* **P** **20 35 07.1 +0.9**
comp=Z,30nm,1.1s
KSH2 **Kashi** 67.65 317 P **P** **20 35 07.6 +0.6**
KSH2 PcP **PcP** **20 35 34.8 +2.1**
KSH2 sP sP 20 36 05.5 +1.5
KSH2 comp=Z,17nm,0.8s pmax pmax
KSH2 comp=Z,320nm,3.7s pmax pmax
MK31 **Makanchi Array** 67.80 327 *c iP* **P** **20 35 08.3 +0.7**
MKAR **Makanchi Array** 67.80 327 P **P** **20 35 08.6 +1.0**
comp=Z,35nm,0.3s,baz=116,slow=8.3,SNR=1023
comp=Z,35nm,0.3s
MKAR **Makanchi Array** 67.80 327 P **P** **20 35 08.1 +0.5**
SATY **Saty** 67.86 322 *c iP* **P** **20 35 09.2 +1.0**
SATY comp=Z,22nm,0.6s pmax pmax
SATY **Saty** 67.86 322⇑ *iP* **P** **20 35 09.2 +1.0**
comp=Z,22nm,0.6s
KPKS **Kokpek** 67.92 322 *eP* **P** **20 35 09.5 +1.0**
KPKS **Kokpek** 67.92 322 *eP* **P** **20 35 09.5 +1.0**
MAKZ **Makanchi** 67.98 327 P **P** **20 35 09.4 +0.7**
MAKZ **Makanchi** 67.98 327 P **P** **20 35 09.4 +0.7**
MAKZ comp=Z,218nm,1.6s pmax pmax
MAKZ **Makanchi** 67.98 327 P **P** **20 35 09.6 +0.9**
MA2 **Magadan** 68.26 11 P **P** **20 35 10.0 -0.1**
MA2 comp=Z,38nm,1.0s IAmb IAmb 20 35 12.9
MA2 **Magadan** 68.26 11 *c iP* **P** **20 35 11.4 +1.3**
MA2 comp=Z,29nm,1.0s pmax pmax
MA2 **Magadan** 68.26 11 P **P** **20 35 10.8 +0.7**
comp=Z,667nmcomp=Z,49nm,1.6s
NRN **Naryn** 68.51 319 IAmb IAmb 20 35 15.2
comp=Z,83nm,1.8s
YAK **Yakutsk** 68.59 0 P **P** **20 35 12.4 +0.2**
YAK **Yakutsk** 68.59 0 *eP* **P** **20 35 12.5 +0.4**
YAK *e* 20 35 36.9
YAK *e*PP **pP** **20 35 52.6 +1.1**
YAK *e* 20 37 44.7
YAK *eS* **S** **20 44 02.0 +1.5**
YAK *e* 20 44 52.5
YAK *eSS* **SS** **20 48 25.7 -2.8**
YAK comp=Z,196nm,0.9s pmax pmax
YAK comp=E,12nm,1.2s pmax pmax
YAK comp=N,39nm,1.1s pmax pmax
YAK comp=Z,119nm,3.3s pmax pmax
YAK comp=N,51nm,3.9s pmax pmax
YAK comp=E,65nm,4.2s smax smax
YAK comp=E,90nm,1.7s smax smax
YAK comp=N,84nm,1.8s
YAK **Yakutsk** 68.59 0 P **P** **20 35 12.6 +0.5**
YAK PcP **PcP** **20 35 37.0 +1.1**
YAK pP **pP** **20 35 52.4 +0.9**
TNSS **Tian-Shan** 68.75 321 *eP* **P** **20 35 14.7 +0.6**
TNSS **Tian-Shan** 68.75 321 *eP* **P** **20 35 14.7 +0.6**
MDOK **Medeo** 68.75 321 *eP* **P** **20 35 14.7 +1.0**
MDOK **Medeo** 68.75 321 *eP* **P** **20 35 14.8 +1.0**
AAA **Alma-Ata** 68.86 321 *eP* **P** **20 35 15.4 +1.1**
AAA comp=Z,22nm,0.6s pmax pmax
AAA **Alma-Ata** 68.86 321 *eP* **P** **20 35 15.4 +1.1**
comp=Z,22nm,0.6s
TDK **Taldyqorghan** 68.94 324 *c iP* **P** **20 35 15.8 +1.1**
TDK comp=Z,48nm,1.1s pmax pmax
TDK **Taldyqorghan** 68.94 324⇑ *iP* **P** **20 35 15.8 +1.1**
comp=Z,48nm,1.1s
BOOM **Boomskoye usch** 69.09 320 IAmb IAmb 20 35 19.6
comp=Z,42nm,0.8s
TKM2 **Tokmak 2** 69.53 321 P **P** **20 35 20.6 +2.0**
SNR=27
KUU **Kurty** 69.58 322 *eP* **P** **20 35 19.7 +1.1**
KUU comp=Z,27nm,0.9s pmax pmax
KUU **Kurty** 69.58 322 *eP* **P** **20 35 19.8 +1.1**
comp=Z,27nm,0.9s
KBK **Karagaybulak** 69.81 320 P **P** **20 35 22.5 +2.2**
SNR=34
UCH **Uchtor** 69.87 320 P **P** **20 35 22.7 +1.6**
SNR=64
AAK **Ala-Archa** 70.09 320 P **P** **20 35 24.0 +2.0**
SNR=14
AAK **Ala-Archa** 70.09 320 P **P** **20 35 23.5 +1.5**
comp=Z,36nm,0.7s,baz=134,slow=5.6,SNR=140
comp=Z,36nm,0.7s
AAK **Ala-Archa** 70.09 320 P **P** **20 35 23.2 +1.2**
AAK comp=Z,40nm,0.8s IAmb IAmb 20 35 25.9
AAK **Ala-Archa** 70.09 320 *i* P **P** **20 35 23.5 +1.5**
SNR=82
AAK **Ala-Archa** 70.09 320 *c iP* **P** **20 35 23.3 +1.3**
AAK comp=Z,49nm,1.0s pmax pmax
AAK **Ala-Archa** 70.09 320 P **P** **20 35 22.2 +0.2**
AAK **Ala-Archa** 70.09 320 P **P** **20 35 23.5 +1.5**

CHMS **Chumysh** 70.11 320 P **P** **20 35 23.5 +1.6**
SNR=22
SHEM **Shemya Is, Ala** 70.27 27 LR LR 21 02 18.6
comp=Z,185nm,20.4s,baz=116,slow=32
KBL **Kabul** 70.29 310 P **P** **20 35 24.2 +0.8**
KBL **Kabul** 70.29 310 P **P** **20 35 24.2 +0.8**
KBL comp=Z,27nm,0.9s pmax pmax
KBL **Kabul** 70.29 310 P **P** **20 35 23.5 +0.1**
SNR=17
KBL S **S** **20 44 19.3 -2.6**
USP **Ospenovka** 70.40 321 P **P** **20 35 24.9 +1.2**
SNR=95
SGDS **Sogindy** 70.41 321 *eP* **P** **20 35 24.9 +1.1**
EKS2 **Erkin-Say** 70.56 320 P **P** **20 35 26.4 +1.6**
SNR=76
SEM **Semipalatinsk** 71.08 329 *eP* **P** **20 35 28.9 +1.0**
SEM comp=Z,37nm,1.0s pmax pmax
SEM **Semipalatinsk** 71.08 329 *eP* **P** **20 35 28.9 +1.0**
comp=Z,37nm,1.0s
ZAA0 **Zalesovo Array** 71.19 334 IAmb IAmb 20 35 29.8
comp=Z,93nm,1.0s
ZALV **Zalesovo Beam** 71.19 334 P **P** **20 35 28.1 0.0**
comp=Z,44nm,0.7s,baz=121,slow=4.9,SNR=186
ZALV S **S** **20 44 27.5 -3.6**
comp=Z,1.5nm,0.7s,baz=126,slow=20,SNR=6.7
comp=Z,44nm,0.7s
ZALV **Zalesovo Beam** 71.19 334 P **P** **20 35 27.7 -0.4**
SEY **Seymchan** 71.66 11⇑ *iP* **P** **20 35 31.7 +0.9**
SEY comp=Z,51nm,0.9s pmax pmax
KURBB **Kurchatov Arra** 72.09 329 P **P** **20 35 34.3 +0.7**
comp=Z,60nm,0.7s,baz=130,slow=4.8,SNR=381
KURBB pP **pP** **20 36 13.6 +0.3**
comp=Z,14nm,1.0s,baz=130,slow=5.3,SNR=2.0
KURBB S **S** **20 44 37.3 -4.2**
comp=Z,0.5nm,0.8s,baz=123,slow=11,SNR=5.2
comp=Z,60nm,0.7s
KURK **Kurchatov** 72.10 329 pP 20 36 13.6 +0.2
KURK **Kurchatov** 72.10 329 P **P** **20 35 34.6 +0.9**
KURK **Kurchatov** 72.10 329 *c iP* **P** **20 35 34.4 +0.7**
KURK comp=Z,105nm,1.0s pmax pmax
KURK **Kurchatov** 72.10 329 P **P** **20 35 34.2 +0.6**
KURK S **S** **20 44 41.1 -0.5**
DZA **Taraz** 72.25 319 *eP* **P** **20 35 35.9 +1.1**
DZA comp=Z,46nm,1.0s pmax pmax
DZA **Taraz** 72.25 319 *eP* **P** **20 35 36.0 +1.1**
comp=Z,46nm,1.0s
VNDA **Vanda** 72.73 173 P **P** **20 35 37.3 +0.4**
comp=Z,5.7nm,0.7s,baz=319,slow=7.5,SNR=12
VNDA LR LR 21 06 00.4
comp=Z,580nm,20.5s,baz=223,slow=34
comp=Z,5.7nm,0.7s
VNDA **Vanda** 72.73 173 P **P** **20 35 37.4 +0.4**
VNDA **Vanda** 72.73 173 P **P** **20 35 37.4 +0.4**
VNDA comp=Z,69nm,2.0s pmax pmax
IUG **luzhnay** 72.77 318 *c iP* **P** **20 35 38.9 +0.9**
IUG comp=Z,26nm,0.5s pmax pmax
IUG **luzhnay** 72.77 318⇑ *iP* **P** **20 35 39.0 +0.9**
comp=Z,26nm,0.5s
KK31 **Karatay Array** 72.88 319 IAmb IAmb 20 35 41.1
comp=Z,62nm,1.1s
KKAR **Karatay Array** 72.88 319 P **P** **20 35 39.0 +0.5**
KKAR **Karatay Array** 72.88 319 P **P** **20 35 39.0 +0.5**
CHM **Chimkent** 73.13 318 *eP* **P** **20 35 41.1 +1.1**
CHM comp=Z,48nm,0.9s pmax pmax
CHM **Chimkent** 73.13 318 *eP* **P** **20 35 41.1 +1.1**
comp=Z,48nm,0.9s
BRLS **Boroldoy** 73.29 319 *eP* **P** **20 35 41.9 +1.0**
BRLS comp=Z,38nm,1.1s pmax pmax
BRLS **Boroldoy** 73.29 319 *eP* **P** **20 35 42.0 +1.0**
comp=Z,38nm,1.1s
NGCH **Negor - Chabah** 73.71 299 P **P** **20 35 44.2 +0.5**
SNR=5.6
JLN **Jalan Bani Buh** 74.42 295 P **P** **20 35 48.4 +0.5**
SNR=8.0
BRZS **Berezniki** 74.88 326 *eP* **P** **20 35 51.3 +1.3**
BRZS **Berezniki** 74.88 326 *eP* **P** **20 35 51.3 +1.3**
WBK **Wadi Bani Khal** 74.92 295 P **P** **20 35 51.1 +0.3**
SNR=7.7
WSAR **Wadi Sarin** 75.38 296 P **P** **20 35 53.9 +0.5**
SNR=13
MHTO **MHTO** 75.45 294 P **P** **20 35 53.7 -0.1**
SNR=14
HRA **Herat** 75.47 308 IAmb IAmb 20 35 56.5
comp=Z,50nm,1.1s
DQM **DQM** 75.60 292 P **P** **20 35 54.8 +0.1**
SNR=5.1
JMDO **Jabal Madar** 75.64 295 P **P** **20 35 55.0 +0.1**
SNR=11
SMDO **Samad** 75.85 296 P **P** **20 35 55.4 -0.8**
SNR=10
BIDO **Bidbid** 75.89 296 P **P** **20 35 57.1 +0.8**
SNR=23
BSY **Bisya** 76.54 295 P **P** **20 36 00.1 +0.1**
SNR=9.0
HOQ **Hoqain** 76.64 296 P **P** **20 36 00.8 +0.3**
SNR=25
SOHO **SOHO** 77.46 296 *i* P **P** **20 36 05.9 +0.9**
SNR=13
SOHO **SOHO** 77.46 296 P **P** **20 36 05.5 +0.5**
BVAR **Borovoye Array** 77.64 328 P **P** **20 36 06.0 +0.5**
comp=Z,42nm,0.8s,baz=126,slow=7.5,SNR=165
comp=Z,42nm,0.8s
BVAR **Borovoye Array** 77.64 328 P **P** **20 36 06.0 +0.5**
BORK **Borovoye** 77.69 328 P **P** **20 36 06.0 +0.3**
BORK IAmb IAmb 20 36 08.3
comp=Z,71nm,0.8s
BORK **Borovoye** 77.69 328⇑ *iP* **P** **20 36 06.4 +0.7**
BORK comp=Z,78nm,0.9s pmax pmax
BORK **Borovoye** 77.69 328 P **P** **20 36 06.4 +0.7**
BORK PcP **PcP** **20 36 16.1 +1.0**
MDH **Madha** 77.93 298 P **P** **20 36 07.3 -0.3**
MDH **Madha** 77.93 298 P **P** **20 36 07.4 -0.3**
MDH S **S** **20 45 43.6 -3.6**
UOSS **Minazif** 77.94 297 *i* P **P** **20 36 08.4 +0.7**
SNR=10
UOSS **Minazif** 77.94 297 P **P** **20 36 07.8 +0.1**
HATD **Hatta, Dubai** 77.97 297 *i* P **P** **20 36 08.4 +0.5**
SNR=11
HATD **Hatta, Dubai** 77.97 297 P **P** **20 36 08.3 +0.3**
SNR=9.5
HATD S **S** **20 45 47.6 -0.1**
ASHO **Ashiyiah** 78.00 297 *i* P **P** **20 36 09.2 +1.0**
SNR=9.2
ASHO **Ashiyiah** 78.00 297 P **P** **20 36 08.9 +0.7**
SNR=9.6
MSFE **Esma-Masafi** 78.07 298 *i* P **P** **20 36 09.4 +0.9**
SNR=6.6
MASF **Masafi** 78.07 298 P **P** **20 36 08.9 +0.4**
SNR=5.1
MASF S **S** **20 45 47.8 -1.0**
BANOM **Banah** 78.08 298 P **P** **20 36 09.6 +1.1**
ALNE **Al Ain** 78.14 296 *i* P **P** **20 36 09.8 +0.9**
SNR=8.1
ALNE **Al Ain** 78.14 296 P **P** **20 36 08.8 0.0**
SNR=11
RBK **Rabkut** 78.20 289 P **P** **20 36 09.1 -0.3**
SHME **Shamm** 78.25 298 *i* P **P** **20 36 10.7 +1.4**
SNR=6.0
SHME **Shamm** 78.25 298 P **P** **20 36 09.8 +0.5**
TIXI **Tiksi** 78.26 360 LR LR 21 09 07.3
comp=Z,220nm,21.9s,baz=199,slow=34
TIXI **Tiksi** 78.26 360 P **P** **20 36 07.8 -0.6**
TIXI **Tiksi** 78.26 360⇓ *iP* **P** **20 36 08.8 +0.4**
TIXI comp=Z,26nm,0.9s pmax pmax
UMZA **Um Al Zommool** 78.37 295 P **P** **20 36 09.9 -0.3**
NAZ **Nazwa, Dubai** 78.42 297 *i* P **P** **20 36 10.9 +0.6**
SNR=8.2
NAZ **Nazwa, Dubai** 78.42 297 P **P** **20 36 10.5 +0.1**
SNR=11
NAZ S **S** **20 45 52.6 +0.1**
FAQ **Al Faqa, Dubai** 78.43 297 *i* P **P** **20 36 11.2 +0.7**
SNR=8.3
FAQ **Al Faqa, Dubai** 78.43 297 P **P** **20 36 10.7 +0.2**
SNR=13
FAQ S **S** **20 45 50.0 -2.5**

DOK **Doka** 78.48 290 P **P** **20 36 09.5 -1.4**
SNR=5.6
UMQ **Umm Al-Quwin** 78.55 298 *i* P **P** **20 36 12.7 +1.7**
SNR=5.2
ASUD **Al Ashush, Dub** 78.64 297 *i* P **P** **20 36 12.8 +1.3**
SNR=9.6
ASUD **Al Ashush, Dub** 78.64 297 P **P** **20 36 12.4 +0.8**
SNR=11
NIKH **Nikolski High** 78.89 33 P **P** **20 36 13.8 +1.5**
baz=243
AJN **Ajban** 78.93 297 *i* P **P** **20 36 13.6 +0.5**
SNR=7.5
AJN **Ajban** 78.93 297 P **P** **20 36 12.9 -0.2**
SNR=8.1
AJN S **S** **20 45 55.3 -2.5**
BILL **Bilibino** 78.99 13⇓ *iP* **P** **20 36 13.7 +1.2**
BILL comp=Z,4.0nm,1.1s pmax pmax
ABTO **Aybut** 79.02 289 P **P** **20 36 14.1 +0.3**
SNR=12
TBI **Tubuai** 79.08 112 *eP* **P** **20 36 17.1 +3.1**
comp=Z,860nm,26.2s
TBI *eS* **S** **20 45 57.2 -2.3**
TBI comp=Z,2μm,36.0s *eLR* LR 21 00 57.2
TBI comp=Z,1μm,27.2s
PPT2 **Papeete2** 79.30 107 *eS* **S** **20 45 58.1 -4.0**
comp=Z,125nm,21.8s
PPT2 *eSS* **SS** **20 51 10.5 -2.4**
comp=Z,908nm,32.2s
PPT2 *eLR* LR 21 01 08.3
comp=Z,412nm,28.8s
PPT2 *eLR* LR 21 01 15.4
comp=Z,289nm,31.2s
MZR **Muzera** 79.95 295 *i* P **P** **20 36 19.9 +1.2**
SNR=8.1
MZR **Muzera** 79.95 295 P **P** **20 36 18.8 +0.1**
SNR=11
SPIA **Saint Paul Isl** 80.17 29 P **P** **20 36 19.8 +0.7**
baz=241
P08K **Saint George I** 80.23 29 P **P** **20 36 20.1 +0.7**
baz=242
UNV **Unalaska Valle** 80.54 33 P **P** **20 36 22.4 +1.3**
baz=245
ABPO **Ambohimpanom** 80.61 252 P **P** **20 36 22.1 -0.5**
ABPO **Ambohimpanom** 80.61 252 P **P** **20 36 22.1 -0.5**
ABPO comp=Z,28nm,1.3s pmax pmax
GHWR **Ruwais** 80.69 296 P **P** **20 36 22.7 +0.2**
VOI **Vohitsoka** 80.83 249 P **P** **20 36 24.2 +0.6**
VOI comp=Z,58nm,1.1s IAmb IAmb 20 36 26.6
JRN **Qarnain Island** 80.91 297 P **P** **20 36 23.9 +0.2**
AB31 **Akbulak array** 82.06 322 IAmb IAmb 20 36 33.3
comp=Z,41nm,0.8s
ABKAR **Akbulak array** 82.06 322 P **P** **20 36 29.5 +0.2**
TRNA **Turayna** 82.32 296 P **P** **20 36 31.8 +0.6**
TRNA S **S** **20 46 30.5 -2.5**
FALS **False Pass** 82.61 32 P **P** **20 36 33.1 +1.1**
baz=247
SMRA **Abu-Samra** 82.67 296 P **P** **20 36 33.4 +0.5**
SMRA S **S** **20 46 35.0 -1.6**
SHMA **Al-Shehemyia** 82.76 297 P **P** **20 36 33.9 +0.5**
GAMB **Gambell** 82.87 23 IAmb IAmb 20 36 36.0
comp=Z,84nm,1.8s
GAMB **Gambell** 82.87 23 P **P** **20 36 34.8 +1.7**
baz=239
QSPA **South Pole Qui** 83.21 180 P **P** **20 36 34.9 -0.2**
comp=Z,8.0nm,0.7s,baz=312,slow=2.6,SNR=10
comp=Z,8.0nm,0.7s
QSPA **South Pole Qui** 83.21 180 P **P** **20 36 35.9 +0.8**
M11K **Mekoryuk** 83.52 27 P **P** **20 36 38.2 +1.6**
baz=244
AKTO **Aktyubinsk** 83.63 322 P **P** **20 36 38.1 +0.7**
comp=Z,27nm,0.5s,baz=103,slow=6.0,SNR=42
comp=Z,27nm,0.5s
SVE **Sverdlovsk** 84.35 329 *eP* **P** **20 36 42.0 +1.2**
SVE comp=E,48nm,1.1s pmax pmax
SDPT **Sand Point** 84.36 33 P **P** **20 36 42.1 +1.2**
baz=250
CHNA **Chernabura Isl** 84.66 33 P **P** **20 36 44.0 +1.6**
baz=250
M13K **Dall Lake** 84.82 27 P **P** **20 36 44.6 +1.5**
baz=247
K13K **Kusilvak Mount** 84.86 26 P **P** **20 36 44.4 +1.2**
baz=245
TNA **Tin City** 85.17 22 P **P** **20 36 46.6 +1.9**
baz=242
O14K **Tigyukauivet M** 85.35 29 P **P** **20 36 47.2 +1.4**
baz=248
ARTI **Arti** 85.36 328 P **P** **20 36 45.7 -0.2**
ARTI **Arti** 85.36 328 *d iP* **P** **20 36 46.6 +0.7**
ARTI *PP **pP** **20 37 24.1 -3.4**
ARTI PPP PPP 20 41 59.3
ARTI S **SKSac** **20 46 55.8 +1.2**
ARTI SS **SS** **20 52 41.8 +0.6**
ARTI comp=Z,89nm,0.8s pmax pmax
ARTI **Arti** 85.36 328 P **P** **20 36 46.5 +0.6**
ARTI PcP **PcP** **20 36 49.0 +0.3**
N14K **Kuskokwak Cree** 85.40 28 P **P** **20 36 47.7 +1.7**
baz=248
L14K **Kuka Creek** 85.49 27 P **P** **20 36 48.0 +1.6**
baz=247
M14K **Bethel** 85.59 27 IAmb IAmb 20 36 49.5
comp=Z,52nm,0.8s
M14K **Bethel** 85.59 27 P **P** **20 36 48.3 +1.5**
baz=248
J14K **Nanvaranak Lak** 85.67 25 P **P** **20 36 48.9 +1.6**
baz=246
ANM **Nome** 85.69 23 P **P** **20 36 49.4 +2.0**
baz=244
F14K **Arctic Creek** 85.72 22 P **P** **20 36 49.2 +1.7**
baz=244
O15K **Ungalikthiuk R** 86.02 29 P **P** **20 36 50.7 +1.6**
baz=250
L15K **Ungalak Mounta** 86.14 26 P **P** **20 36 51.2 +1.6**
baz=248
M15K **Kasigluk River** 86.15 28 P **P** **20 36 51.2 +1.6**
baz=249
N15K **Kwethluk River** 86.24 28 P **P** **20 36 51.6 +1.5**
baz=250
K15K **Wolf Creek Mou** 86.36 26 P **P** **20 36 52.3 +1.7**
baz=248
G15K **Niukluk** 86.39 23 P **P** **20 36 52.0 +1.2**
baz=246
F15K **North Star Dit** 86.45 22 P **P** **20 36 52.4 +1.3**
baz=245
R16K **Pilot Point** 86.61 31 P **P** **20 36 53.1 +1.1**
baz=252
P16K **Nushagak River** 86.86 30 P **P** **20 36 54.3 +1.1**
baz=251
H16K **Elim** 86.95 24 P **P** **20 36 54.7 +1.2**
baz=247,SNR=6.8
N16K **Nishlik Lake** 86.96 28 P **P** **20 36 55.2 +1.5**
baz=251
O16K **Kokwok River B** 86.99 29 P **P** **20 36 55.1 +1.3**
baz=251
L16K **Owhat River** 87.05 27 IAmb IAmb 20 36 56.4
comp=Z,25nm,0.9s
L16K **Owhat River** 87.05 27 P **P** **20 36 55.5 +1.5**
baz=250
M16K **Timber Creek** 87.05 28 P **P** **20 36 55.7 +1.6**
baz=250
J16K **Anvik River** 87.12 25 P **P** **20 36 56.5 +2.2**
baz=249
G16K **Koyuk River** 87.20 23 P **P** **20 36 56.4 +1.8**
baz=247
R17L **Mt. Peulik Vol** 87.25 31 P **P** **20 36 56.5 +1.3**
baz=253
RAYN **Ar Rayn** 87.26 294 P **P** **20 36 56.8 +0.8**
RAYN **Ar Rayn** 87.26 294 *i* P **P** **20 36 56.7 +0.8**
SNR=88
RAYN **Ar Rayn** 87.26 294 P **P** **20 36 56.8 +0.8**
RAYN comp=Z,68nm,0.9s pmax pmax
RAYN **Ar Rayn** 87.26 294 P **P** **20 36 56.3 +0.3**
RAYN S **SKSac** **20 47 03.7 -4.1**
I17K **Unalakleet** 87.29 25 P **P** **20 36 56.8 +1.7**
baz=249,SNR=11
C16K **Lisburne Hills** 87.30 20 P **P** **20 36 56.5 +1.4**
baz=244
O17K **Koliganek Bris** 87.53 29 P **P** **20 36 57.7 +1.3**
baz=252
P17K **Kvichak River** 87.68 30 P **P** **20 36 57.7 +0.7**
baz=253

Q17K	**Contact Creek**	87.68	31	P	P	20 36 58.2	+0.9
	baz=253						
N17K	**Nushagak Hills**	87.72	28	P	P	20 36 59.0	+1.7
	baz=252						
L17K	**Donlin**	87.72	27	P	P	20 36 58.6	+1.4
	baz=251						
J17K	**VABM Dome**	87.80	25	P	P	20 36 59.4	+1.8
	baz=250						
D17K	**Noatak River**	87.84	21	P	P	20 36 58.3	+0.6
	baz=246,SNR=45						
M17K	**Holitna River**	87.87	27	IAmb	IAmb	20 37 01.1	
	comp=Z,27nm,1.1s						
M17K	**Holitna River**	87.87	27	P	P	20 36 59.5	+1.5
	baz=252						
G17K	**Kiwalik Mounta**	87.90	23	P	P	20 36 59.7	+1.7
	baz=249						
K17K	**Iditarod**	87.91	26	P	P	20 36 59.8	+1.7
	baz=251,SNR=9.4						
H17K	**Granite Mounta**	87.99	24	P	P	20 37 00.0	+1.6
	baz=249						
F17K	**Baldwin Pennin**	88.01	22	P	P	20 36 59.9	+1.5
	baz=248						
RDOG	**Red Dog Mine**	88.04	20	P	P	20 36 59.6	+1.0
	baz=247,SNR=5.9						
C17K	**DeLong Mountai**	88.12	20	P	P	20 37 00.0	+1.1
	baz=246						
ATD	**Arta Tunnel**	88.14	282	P	P	20 37 00.7	+0.4
	SNR=5.3						
P18K	**Big Mountain,**	88.33	30	P	P	20 37 01.1	+0.9
	baz=254						
AKT	**Akhty**	88.36	312	*e*P	P	20 37 01.8	+0.9
AKT				*e**PP	pP	20 37 41.3	-0.9
AKT				*e*S	SKSac	20 47 13.5	-0.4
AKT				pmax	pmax		
	comp=Z,86nm,1.0s						
N18K	**Kilae Creek**	88.38	28	P	P	20 37 01.4	+1.0
	baz=253						
O18K	**Koktuh Hills**	88.47	29	P	P	20 37 01.7	+0.9
	baz=254						
ELIB	**Princess Elisa**	88.58	197	*d*P	P	20 37 03.1	+1.7
ELIB				*d*pP	pwP	20 37 46.0	-2.7
E18K	**Tukpahlearik C**	88.61	21	P	P	20 37 03.1	+1.8
	baz=249						
M18K	**Stony River**	88.64	28	P	P	20 37 03.0	+1.4
	baz=253						
F18K	**Selawik**	88.67	22	P	P	20 37 03.1	+1.6
	baz=250						
H18K	**Honnosa River**	88.68	24	P	P	20 37 02.9	+1.2
	baz=251						
OHAK	**Old Harbor**	88.74	32	P	P	20 37 02.9	+0.8
	baz=256						
G18K	**Tagagawik**	88.81	23	P	P	20 37 03.5	+1.2
	baz=251						
J18K	**Innoko River**	88.83	26	P	P	20 37 02.9	+0.4
	baz=252						
C18K	**Utukok River**	88.86	20	P	P	20 37 03.3	+0.7
	baz=248						
Q19K	**Cape Douglas,**	88.99	30	P	P	20 37 03.6	+0.3
	baz=255						
N19K	**Bonanza Creek**	89.08	28	P	P	20 37 04.7	+0.9
	baz=254						
GCSA	**Galena City Sc**	89.15	24	P	P	20 37 05.0	+1.2
	baz=252						
KDAK	**Kodiak Island**	89.25	32	LR	LR	21 12 23.6	
	comp=Z,190nm,20.9s,baz=230,slow=32						
KDAK	**Kodiak Island**	89.25	32	P	P	20 37 06.1	+1.6
	baz=256						
L19K	**White Mountain**	89.28	27	P	P	20 37 05.7	+1.1
	baz=254						
P19K	**Oil Pt**	89.38	30	P	P	20 37 05.6	+0.5
	baz=256						
M19K	**Big River Lodg**	89.41	27	P	P	20 37 06.2	+1.0
	baz=254						
J19K	**Poorman**	89.45	25	P	P	20 37 06.8	+1.5
	baz=253						
F19K	**Shaleruckik Mo**	89.45	22	P	P	20 37 06.1	+0.9
	baz=251						
G19K	**Purcell Mounta**	89.50	23	P	P	20 37 07.0	+1.5
	baz=252						
Q20K	**Shuyak Island**	89.54	31	P	P	20 37 07.1	+1.2
	baz=256						
C19K	**Lookout Ridge**	89.56	20	P	P	20 37 07.2	+1.4
	baz=250						
E19K	**Redstone River**	89.85	22	P	P	20 37 08.4	+1.3
	baz=252						
D19K	**Kuna River**	89.86	21	P	P	20 37 08.2	+1.0
	baz=251						
K20K	**Telida**	89.94	26	P	P	20 37 09.0	+1.3
	baz=255						
M20K	**Styx River**	89.98	28	P	P	20 37 08.9	+0.9
	baz=256						
HOM	**Homer**	90.16	30	P	P	20 37 09.4	+0.7
	baz=257						
H20K	**Anotleneega Mo**	90.17	24	P	P	20 37 10.0	+1.3
	baz=254						
SPCR	**Spurr Chakacha**	90.25	28	P	P	20 37 09.9	+0.7
	baz=256						
F20K	**Avaraart Lake**	90.29	22	P	P	20 37 10.0	+0.9
	baz=253						
GNI	**Garni**	90.37	310	P	P	20 37 11.3	+1.0
	comp=Z,9.1nm,0.9s,baz=161,slow=3.5,SNR=10.0						
GNI				LR	LR	21 26 32.1	
	comp=Z,150nm,18.1s,baz=219,slow=41						
	comp=Z,9.1nm,0.9s						
GNI	**Garni**	90.37	310	P	P	20 37 11.2	+0.8
GNI				IAmb	IAmb	20 37 49.5	
	comp=Z,27nm,1.0s						
GNI	**Garni**	90.37	310	*c* ⇑*i*P	P	20 37 11.5	+1.1
GNI				pmax	pmax		
	comp=Z,17nm,1.3s						
GNI	**Garni**	90.37	310	P	P	20 37 11.4	+1.0
	comp=Z,31nm,1.0s						
BELG	**Belogornoye**	90.41	323	⇑*i*P	P	20 37 10.2	+0.2
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
E20K	**Nigu River**	90.47	21	P	P	20 37 10.7	+0.6
	baz=253						
KIRV	**Kirov**	90.62	329	⇑*i*P	P	20 37 11.4	+0.6
PPLA	**Purkeypile**	90.65	27	P	P	20 37 11.6	+0.5
	baz=256						
SKT	**Skwentna**	90.74	28	P	P	20 37 11.9	+0.4
	baz=257						
CHUM	**Lake Minchumin**	90.83	26	P	P	20 37 12.3	+0.6
	baz=256						
G21K	**Allakaket**	90.99	23	P	P	20 37 13.4	+0.9
	baz=255						
SUA	**Susitna One**	90.99	28	IAmb	IAmb	20 38 18.6	
	comp=Z,56nm,1.7s						
SUA	**Susitna One**	90.99	28	P	P	20 37 13.4	+0.7
	baz=258						
H21K	**Melozitna Rive**	91.05	24	P	P	20 37 14.0	+1.2
	baz=256						
F21K	**Alatna River**	91.18	22	P	P	20 37 14.9	+1.6
	baz=255						
C21K	**Knifeblade Rid**	91.22	20	P	P	20 37 14.4	+1.0
	baz=254						
KIBK	**Kibwezi**	91.24	268	P	P	20 37 13.7	-1.2
	SNR=5.3						
A21K	**Barrow**	91.24	18	P	P	20 37 14.4	+0.9
	baz=252						
I21K	**Tanana**	91.27	24	P	P	20 37 14.0	+0.2
	baz=257						
O22K	**Cooper Landing**	91.28	29	P	P	20 37 14.5	+0.6
	baz=258						
E21K	**Killik River**	91.31	21	P	P	20 37 14.5	+0.6
	baz=255						
SEW	**Seward**	91.34	30	P	P	20 37 14.4	+0.3
	baz=259						
M22K	**Willow**	91.35	28	P	P	20 37 15.3	+1.2
	baz=258						
B21K	**Ikpikpuk River**	91.40	20	P	P	20 37 15.1	+0.9
	baz=254						
CUT	**Chulitna**	91.41	27	P	P	20 37 14.4	0.0
	baz=258						
BPAW	**Bear Paw Mtn.**	91.45	26	P	P	20 37 14.8	+0.1
	baz=258						
TRF	**Thorofare Moun**	91.62	26	P	P	20 37 15.4	-0.3
	baz=258						
H22K	**Ishtalitna Cre**	91.68	24	P	P	20 37 16.5	+0.9
	baz=257						
KARS	**Kars**	91.70	311	IAmb	IAmb	20 37 19.5	
	comp=Z,33nm,1.0s						
PMR	**Palmer**	91.78	28	P	P	20 37 16.6	+0.5
	baz=259						
D22K	**Ayikyak River**	91.88	21	P	P	20 37 17.7	+1.2
	baz=256						
E22K	**Anaktuvuk Pass**	92.02	22	P	P	20 37 18.1	+0.9
	baz=257						
KNK	**Knik Glacier**	92.06	28	P	P	20 37 18.5	+1.0
	baz=260						
SML	**Sawmill**	92.19	28	P	P	20 37 19.4	+1.3
	baz=260						
KBZ	**Khabaz**	92.22	314	P	P	20 37 19.1	+0.4
	comp=Z,7.0nm,0.8s,baz=121,slow=3.4,SNR=29						
KBZ				LR	LR	21 24 51.9	
	comp=Z,162nm,19.9s,baz=179,slow=39						
	comp=Z,7.0nm,0.8s						
KBZ	**Khabaz**	92.22	314	⇑*i*P	P	20 37 18.9	+0.3
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RND	**Reindeer**	92.24	26	IAmb	IAmb	20 37 19.0	
	comp=Z,26nm,0.8s						
MCK	**McKinley**	92.27	26	IAmb	IAmb	20 37 19.2	
	comp=Z,19nm,1.0s						
MCK	**McKinley**	92.27	26	P	P	20 37 19.0	+0.5
	baz=259,SNR=5.2						
WAT1	**Susitna Watana**	92.27	27	P	P	20 37 18.7	+0.2
	baz=260						
GOF	**Gofitskoye**	92.29	315	*ce*P	P	20 37 19.5	+0.6
NEUR	**Neytrino**	92.31	313	⇓*i*P	P	20 37 21.1	+1.8
NEUR				pmax	pmax		
	comp=Z,9.0nm,1.5s						
P23K	**Montague Islan**	92.33	30	P	P	20 37 19.0	+0.2
	baz=260						
I23K	**Minto, Yukon-K**	92.35	25	P	P	20 37 19.1	+0.4
	baz=259						
NEA2	**Nenana**	92.37	25	IAmb	IAmb	20 37 52.6	
	comp=Z,49nm,1.9s						
NEA2	**Nenana**	92.37	25	P	P	20 37 19.3	+0.5
	baz=259						
G23K	**Bananza Creek**	92.39	23	P	P	20 37 19.6	+0.7
	baz=258						
SHA1	**Shidzhatmaz**	92.40	314	⇑*i*P	P	20 37 20.7	+0.9
KIV	**Kislovodsk**	92.40	314	P	P	20 37 19.4	-0.2
KIV	**Kislovodsk**	92.40	314	*e*P	P	20 37 19.9	+0.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV	**Kislovodsk**	92.40	314	P	P	20 37 19.9	+0.3
	comp=Z,8.8nm,1.2s						
COLD	**Coldfoot**	92.42	23	IAmb	IAmb	20 37 21.0	
	comp=Z,12nm,0.8s						
COLD	**Coldfoot**	92.42	23	P	P	20 37 19.4	+0.4
	baz=258						
M23K	**Glacier View**	92.47	28	P	P	20 37 20.7	+1.3
	baz=260						
WAT6	**Susitna Watana**	92.60	27	P	P	20 37 20.0	-0.1
	baz=260						
D23K	**Nanushuk River**	92.60	21	P	P	20 37 20.8	+0.9
	baz=258						
SCM	**Sheep Creek Mo**	92.67	28	P	P	20 37 21.2	+0.8
	baz=261						
WRH	**Wood River Hil**	92.76	25	IAmb	IAmb	20 37 21.8	
	comp=Z,19nm,1.0s						
Q23K	**Middleton Isla**	92.77	31	P	P	20 37 21.5	+0.8
	baz=261						
E23K	**Chandalar**	92.81	22	P	P	20 37 21.4	+0.4
	baz=259						
C23K	**Itkillik River**	92.81	20	IAmb	IAmb	20 37 22.4	
	comp=Z,17nm,0.9s						
C23K	**Itkillik River**	92.81	20	P	P	20 37 21.2	+0.5
	baz=258,SNR=8.1						
DHY	**Denali Highway**	92.84	27	IAmb	IAmb	20 37 22.7	
	comp=Z,14nm,0.9s						
DHY	**Denali Highway**	92.84	27	P	P	20 37 22.6	+1.3
	baz=261						
CCB	**Clear Creek Bu**	92.91	25	IAmb	IAmb	20 37 22.2	
	comp=Z,22nm,0.9s						
COLA	**College**	92.93	25	⇑*i*P	P	20 37 20.4	-1.0
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
COLA	**College**	92.93	25	P	P	20 37 22.1	+0.8
	baz=260						
H24K	**Hoodoo Dome**	93.08	24	P	P	20 37 22.1	-0.1
	baz=260						
MARD	**Mardin**	93.09	307	P	P	20 37 22.5	-0.5
MARD				IAmb	IAmb	20 37 25.1	
	comp=Z,25nm,0.7s						
E24K	**Your Creek**	93.22	22	P	P	20 37 23.3	+0.5
	baz=260						
EYAK	**Cordova Ski Ar**	93.23	30	P	P	20 37 23.6	+0.7
	baz=262						
HDA	**Harding Lake**	93.24	26	IAmb	IAmb	20 37 23.8	
	comp=Z,16nm,0.9s						
HDA	**Harding Lake**	93.24	26	P	P	20 37 23.2	+0.3
	baz=261,SNR=6.8						
M24K	**Tolsona, Glenn**	93.25	28	P	P	20 37 23.7	+0.7
	baz=262						
KLU	**Klutina**	93.28	29	P	P	20 37 23.9	+0.7
	baz=262						
D24K	**Happy Valley**	93.29	21	P	P	20 37 23.4	+0.4
	baz=260						
ILAR	**Eielson Array**	93.32	25	P	P	20 37 22.1	-1.2
	comp=Z,5.9nm,0.7s,baz=268,slow=4.3,SNR=59						
ILAR				PKKPbc	PKKPdf	20 54 31.1	+0.3
	comp=Z,0.5nm,0.9s,baz=1.1,slow=4.4,SNR=4.2						
ILAR				LR	LR	21 12 53.5	
	comp=Z,181nm,21.9s,baz=223,slow=31						
	comp=Z,5.9nm,0.7s						
G24K	**Hadweenzic Riv**	93.38	23	P	P	20 37 24.0	+0.5
	baz=261						
C24K	**Franklin Bluff**	93.44	20	IAmb	IAmb	20 37 25.3	
	comp=Z,20nm,1.1s						
C24K	**Franklin Bluff**	93.44	20	P	P	20 37 24.2	+0.6
	baz=260,SNR=6.2						
KOPT	**Kop Dagi**	93.59	310	IAmb	IAmb	20 37 34.0	
	comp=Z,18nm,0.8s						
K24K	**Donnelly Dome**	93.66	26	P	P	20 37 25.4	+0.5
	baz=262						
PAX	**Paxson**	93.69	27	P	P	20 37 25.3	+0.3
	baz=262						
HARP	**HAARP**	93.76	28	P	P	20 37 26.2	+0.9
	baz=263						
KAIM	**Kayak Island**	93.81	30	P	P	20 37 25.7	+0.1
	baz=263						
BMRM	**Bremner River**	93.84	29	P	P	20 37 25.7	-0.1
	baz=263						
VRH	**Novokhopyorsk**	93.87	321	*e*P	P	20 37 25.2	-0.8
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
N25K	**Chitina, Valde**	93.92	29	P	P	20 37 25.9	-0.3
	baz=263						
J25K	**Salcha River,**	93.94	26	P	P	20 37 26.3	+0.1
	baz=263						
PRP	**Porcupine Dome**	94.00	25	P	P	20 37 26.6	0.0
	baz=262						
RIDG	**Independent Ri**	94.06	26	IAmb	IAmb	20 37 28.3	
	comp=Z,20nm,1.0s						
RIDG	**Independent Ri**	94.06	26	P	P	20 37 26.0	-0.7
	baz=263						
D25K	**Kavik River**	94.18	21	P	P	20 37 27.9	+0.7
	baz=262						
F25K	**Christian Rive**	94.22	23	P	P	20 37 28.1	+0.7
	baz=262						
FYU	**Fort Yukon**	94.25	24	IAmb	IAmb	20 38 53.0	
	comp=Z,38nm,1.3s						
E25K	**Arctic Village**	94.31	22	IAmb	IAmb	20 37 29.9	
	comp=Z,20nm,1.2s						
E25K	**Arctic Village**	94.31	22	P	P	20 37 28.8	+1.0
	baz=263,SNR=8.5						
DOT	**Dot Lake**	94.40	27	IAmb	IAmb	20 37 29.6	
	comp=Z,14nm,0.8s						
SCRK	**Sand Creek**	94.47	26	IAmb	IAmb	20 40 23.3	
	comp=Z,29nm,1.7s						
SCRK	**Sand Creek**	94.47	26	P	P	20 37 28.7	0.0
	baz=264						
SOC	**Sochi**	94.50	313	*e*P	P	20 37 29.7	+0.6
SOC				*e*		20 41 17.5	
SOC				*e*PPP	PPP	20 43 31.1	
SOC				*e*S	SKSac	20 47 48.9	+0.6
SOC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CRQE	**Cirque**	94.55	29	P	P	20 37 28.7	-0.4
	baz=264						
LODK	**Lodwar**	94.57	273	P	P	20 37 29.7	-0.5
BMAR	**Burnt Mountain**	94.61	23	P	P	20 37 29.5	+0.4
L26K	**Log Cabin Wild**	94.66	27	P	P	20 37 30.7	+1.2
	baz=264						
M26K	**Nabesna, AK**	94.76	28	P	P	20 37 29.8	-0.1
	baz=264						
C26K	**Camden Bay**	94.77	20	P	P	20 37 31.2	+1.5
	baz=263						
F26K	**Sheenjek River**	94.80	22	P	P	20 37 31.7	+1.7
	baz=264,SNR=8.3						
G26K	**Porcupine Rive**	94.86	23	P	P	20 37 31.2	+1.0
	baz=264,SNR=11						
I26K	**Coal Creek Min**	94.96	25	P	P	20 37 31.1	+0.4
	baz=265						
MESA	**MESA**	95.06	30	P	P	20 37 32.1	+0.5
	baz=265						
C27K	**Jago River**	95.15	21	P	P	20 37 33.1	+1.5
	baz=264						
M27K	**Edge Creek, AK**	95.27	28	P	P	20 37 32.5	+0.1
	baz=266						
L27K	**Beaver Creek,**	95.35	27	P	P	20 37 33.2	+0.6
	baz=266						
BCAR	**Beaver Creek A**	95.37	27	P	P	20 37 32.8	+0.1
VORD	**Divnogorie**	95.38	321	*e*P	P	20 37 32.2	-0.7
VORD				pmax	pmax		
	comp=Z,30nm,1.1s						
CTG	**Chitna Glacier**	95.42	29	P	P	20 37 33.8	+0.7
	baz=266						
VSR	**Storozhevoye**	95.47	321	*e*P	P	20 37 32.6	-0.8
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORR	**Voronezh**	95.48	321	*e*P	P	20 37 32.4	-1.0
VORR				pmax	pmax		
	comp=Z,20nm,0.4s						
I27K	**Kandik River**	95.62	25	P	P	20 37 35.6	+1.8
	baz=266						
G27K	**Doyon Strip**	95.69	23	P	P	20 37 35.8	+1.7
	baz=266						
H27K	**Steamboat Moun**	95.70	24	P	P	20 37 36.0	+1.8
	baz=266						
LPSR	**Galich'ya Gora**	95.71	322	*e*P	P	20 37 33.5	-0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BVCY	**Beaver Creek**	95.75	28	P	P	20 37 36.2	+1.7
	baz=266						
E27K	**Coleen River**	95.80	22	P	P	20 37 36.4	+1.9
	baz=266						
KLMR	**Klimovskoe**	95.88	331	*e*P	P	20 37 33.2	-1.8
KLMR				pmax	pmax		
	comp=Z,41nm,1.2s						
YUK3	**Moose Creek**	95.90	29	P	P	20 37 36.7	+1.3
	baz=267						
PINM	**Pinnacle**	95.91	30	P	P	20 37 36.7	+1.5
	baz=267						
O28M	**Mount Upton**	95.97	30	P	P	20 37 37.4	+1.6
	baz=267						
D27M	**Malcolm River**	96.09	21	P	P	20 37 37.4	+1.5
	baz=267						
YUK8	**Steele Glacier**	96.21	29	P	P	20 37 37.5	+0.7
	baz=267						
I28M	**Miner Creek**	96.31	25	P	P	20 37 38.4	+1.3
	baz=268						
F28M	**Old Crow**	96.42	23	IAmb	IAmb	20 37 39.0	
	comp=Z,8.3nm,0.8s						
F28M	**Old Crow**	96.42	23	P	P	20 37 39.0	+1.6
	baz=268						
DAWY	**Dawson**	96.49	26	IAmb	IAmb	20 37 39.7	
	comp=Z,20nm,1.0s						
DAWY	**Dawson**	96.49	26	P	P	20 37 39.3	+1.5
	baz=268						
E28M	**Babbage River**	96.58	22	P	P	20 37 39.4	+1.3
	baz=268						
O29M	**Mount Kennedy**	96.75	30	P	P	20 37 39.3	+0.1
	baz=268						
M29M	**Somme Creek**	96.86	28	P	P	20 37 40.9	+1.3
	baz=268						
GHAJ	**Ghor Haditha**	96.88	301	IAmb	IAmb	20 37 42.8	
	comp=Z,15nm,0.8s						
D28M	**Stokes Point**	96.89	21	P	P	20 37 40.7	+1.4
	baz=269						
I29M	**Ogilvie Camp,**	96.99	25	IAmb	IAmb	20 37 41.6	
	comp=Z,14nm,0.9s						
I29M	**Ogilvie Camp,**	96.99	25	P	P	20 37 41.2	+1.2
	baz=269						
L29M	**L29M**	97.03	27	P	Pdif	20 37 41.1	+0.8
	baz=269						
G29M	**Pine Creek**	97.13	23	P	Pdif	20 37 41.9	+1.3
	baz=270						
MMAI	**Mount Meron Ar**	97.13	302	P	Pdif	20 37 42.0	+0.6
	comp=Z,8.2nm,0.8s,baz=48,slow=10,SNR=8.4						
	comp=Z,8.2nm,0.8s						
E29M	**Blow River**	97.18	22	P	Pdif	20 37 42.1	+1.3
	baz=270						
OBN	**Obninsk**	97.22	325	⇑*i*P	P	20 37 40.0	-1.2
OBN				pmax	pmax		
	comp=Z,16nm,0.9s						
OBN	**Obninsk**	97.22	325	P	P	20 37 40.7	-0.5
	comp=Z,35nm,2.6s						
HYT	**Haines Junctio**	97.29	30	P	Pdif	20 37 42.5	+0.8
	baz=269						
K29M	**Barlow Dome**	97.31	27	P	Pdif	20 37 42.2	+0.5
	baz=270						
N30M	**Aishikik Lake**	97.50	29	P	Pdif	20 37 43.4	+0.9
	baz=270						
P30M	**Million Dollar**	97.56	30	P	Pdif	20 37 43.6	+0.9
	baz=270						
M30M	**Minto, Yukon**	97.64	28	P	Pdif	20 37 44.1	+1.1
	baz=270						
EPYK	**Eagle Plains**	97.65	24	P	Pdif	20 37 44.0	+1.0
	baz=271						
I30M	**Mount Dempster**	97.80	25	P	Pdif	20 37 45.0	+1.2
	baz=271						
J30M	**Hart River**	97.83	26	P	Pdif	20 37 45.1	+1.2
	baz=271						
G30M	**tAoh Zraii Nji**	97.84	23	IAmb	IAmb	20 37 44.7	
	comp=Z,9.2nm,0.9s						
G30M	**tAoh Zraii Nji**	97.84	23	P	Pdif	20 37 45.1	+1.3
	baz=271						
S31K	**Pelican**	97.92	32	P	Pdif	20 37 45.4	+1.1
	baz=270						
O30N	**Mendenhall**	97.98	30	P	Pdif	20 37 45.8	+1.2
	baz=270						
F30M	**Barrier River**	97.99	23	P	Pdif	20 37 45.6	+1.2
	baz=272						
SKAG	**Skagway**	98.38	31	P	Pdif	20 37 46.8	+0.5
	baz=271						
SIT	**Sitka**	98.42	33	P	Pdif	20 37 47.2	+0.7
	baz=270						
WHY	**Whitehorse**	98.58	30	P	Pdif	20 37 48.5	+1.2
	baz=271						
H31M	**Peel River**	98.63	24	P	Pdif	20 37 48.7	+1.3
	baz=273						
MBAR	**Mbarara**	98.69	268	*ce*P	Pdif	20 37 50.6	+1.6
MBAR				pmax	pmax		
	comp=Z,6.0nm,1.7s						
F31M	**Tsiigehtchic**	98.78	23	P	Pdif	20 37 49.0	+1.1
	baz=274						
INK	**Inuvik**	98.81	22	P	Pdif	20 37 48.5	+0.5
	baz=274						
S32K	**Killisnoo**	98.82	33	P	Pdif	20 37 49.3	+1.1
	baz=271						
R32K	**Eaglecrest**	98.83	32	P	Pdif	20 37 49.6	+1.3
	baz=271						
BR104	**Keskin Array S**	98.83	309	P	P	20 37 48.7	-0.3
	comp=Z,5.4nm,0.8s						
BRTR	**Keskin Array B**	98.84	309	P	P	20 37 48.6	-0.4
	comp=Z,3.3nm,0.8s,baz=131,slow=6.4,SNR=25						
BRTR				PP	PP	20 41 52.1	-0.7
	comp=Z,1.1nm,0.9s,baz=112,slow=7.3,SNR=3.6						
BRTR				LR	LR	21 28 07.3	
	comp=Z,213nm,21.3s,baz=186,slow=39						
	comp=Z,3.3nm,0.8s						
BRTR	**Keskin Array B**	98.84	309	P	P	20 37 48.9	-0.1
BRTR	**Keskin Array B**	98.84	309	P	P	20 37 48.9	-0.1
BR105	**Keskin Array S**	98.85	309	P	P	20 37 49.1	0.0
	comp=Z,5.6nm,0.8s						
BR106	**Keskin Array S**	98.85	309	P	P	20 37 48.7	-0.4
	comp=Z,4.0nm,0.8s						
P32M	**Atlin**	99.20	31	P	Pdif	20 37 50.7	+0.6
	baz=272						
U33K	**Whale Pass**	99.66	34	P	Pdif	20 37 52.9	+0.9
	baz=272						
CRAG	**Craig**	99.68	35	P	Pdif	20 37 52.6	+0.4
	baz=272						
Q32M	**Nakina River**	99.97	31	P	Pdif	20 37 53.7	0.0
	baz=273						
WRAK	**Wrangell Islan**	100.08	34	P	Pdif	20 37 53.7	-0.2
	baz=273						
MMPY	**Sheldon Lake,**	100.19	28	P	Pdif	20 37 54.4	-0.1
	baz=275						
V35K	**Ketchikan**	100.55	35	P	Pdif	20 37 56.1	+0.1

comp=Z,0.9nm,0.3s,baz=94,slow=7.9,SNR=13
WTLY Watson Lake, Y 101.64 30 P **Pdif 20 38 01.6 +0.7**
baz=277
AK09 Malin Array Si 101.72 320 P **Pdif 20 38 00.8 -0.6**
AKASG Malin Array Be 101.75 320 P **Pdif 20 38 01.4 -0.1**
comp=Z,1.4nm,0.6s,baz=76,slow=4.5,SNR=7.3
AKBB Malin Array Si 101.75 320 P **Pdif 20 38 00.4 -1.1**
AK01 Malin Array Si 101.76 320 P **Pdif 20 38 00.4 -1.2**
AK02 Malin Array Si 101.77 320 P **Pdif 20 38 00.8 -0.8**
C36M Paulatuk 102.05 20 P **Pdif 20 38 02.8 +0.4**
baz=283
MNK Minsk 102.26 324 *i* P **Pdif 20 38 04.7 +1.0**
comp=E,6.0nm,0.7s
MNK *i* P **Pdif 20 38 04.7 +1.0**
comp=N,7.0nm,0.8s
MNK *i* P **Pdif 20 38 04.7 +1.0**
comp=Z,10.0nm,0.7s,baz=84
MNK *i* pP **pPdif 20 38 47.4 +1.7**
MNK *i* sP **sPdif 20 39 05.5 +2.3**
MNK *i* PP **PP 20 42 19.4 +1.4**
MNK *i* PPP PPP 20 44 30.3
MNK *i* SKS 20 48 07.2
MNK *i* S **SKSac 20 48 27.6 +0.8**
MNK *i* sS SKKSac 20 49 46.3 +40
MNK *i* SP **SP 20 51 09.2 +2.9**
MNK *i* PS **PS 20 51 26.6 -1.4**
MNK *i* SS **SS 20 56 45.4 +3.8**
MNK *i* SSS SSS 21 00 40.5
MNK Minsk 102.26 324 *i* P **Pdif 20 38 04.6 +1.0**
MNK *i* 20 42 19.3
MNK *i* PPP PPP 20 44 30.2
MNK *i* S **SKSac 20 48 27.6 +0.8**
MNK *i* *SS SKKSac 20 49 37.9 +32
MNK *i* SS **SS 20 56 50.2 +8.7**
MNK pmax pmax
comp=N,9.0nm,0.8s
MNK pmax pmax
comp=Z,13nm,0.7s
MNK pmax pmax
comp=E,9.0nm,0.7s
FINES FINESS Array B 102.36 331 P **Pdif 20 38 03.4 -0.5**
comp=E,2.0nm,0.8s,baz=108,slow=0.6,SNR=8.9
FINES PKiKP **PKiKP 20 42 25.2 +0.5**
comp=E,2.0nm,0.8s,baz=101,slow=2.8,SNR=7.1
LUBAR Lubar, Ukraine 102.75 320 P **Pdif 20 38 06.4 +0.4**
KMPD K-Podol'skiy 103.72 318 P **Pdif 20 38 09.9 -0.4**
YKA Yellowknife Ar 107.73 26 Pdiff **Pdif 20 38 28.8 +1.0**
comp=E,0.2nm,0.6s,baz=294,slow=5.6,SNR=4.0
YKA PKiKP **PKiKP 20 42 35.0 +0.4**
comp=E,0.9nm,0.8s,baz=305,slow=2.3,SNR=12
YKA PKKPbc **PKKPbc 20 53 50.5 -0.9**
comp=E,0.6nm,0.8s,baz=96,slow=2.3,SNR=8.3
HFS Hagfors 108.56 332 Pdiff **Pdif 20 38 31.0 -0.5**
comp=E,21nm,1.3s,baz=93,slow=10,SNR=4.6
NB2 NORSAR Subarra109.38 333 P **Pdif 20 38 34.9 -0.4**
comp=Z,6.6nm,1.2s,baz=68,slow=4.4
NB2 NORSAR Subarra109.38 333 P **Pdif 20 38 34.9 -0.4**
NB2 AMP 20 38 34.9
comp=Z,6.6nm,1.2s
NOA NORSAR Array B 109.38 333 Pdiff **Pdif 20 38 34.5 -0.7**
comp=Z,2.1nm,0.9s,baz=54,slow=1.5,SNR=4.2
ARSA Arzberg 111.18 318 *e*PKiKP **PKiKP 20 42 43.2 +1.6**
comp=Z,3.3nm,1.0s
NVAR Mina Array Bea 111.49 51 PKiKP **PKiKP 20 42 44.3 +1.5**
comp=Z,0.4nm,0.3s,baz=322,slow=2.7,SNR=5.7
GERES GERESS Array B 111.97 320 PKiKP **PKiKP 20 42 43.5 +0.4**
comp=Z,2.3nm,0.6s,baz=48,slow=2.0,SNR=15
KBA Koelnbreinsper 112.67 318 *e*PKiKP **PKiKP 20 42 46.6 +2.0**
comp=Z,3.5nm,0.9s
LESA Schwarzleotal 113.01 319 *i* PKiKP **PKiKP 20 42 45.9 +0.8**
comp=Z,4.2nm,0.8s
ABTA Abfaltersbach 113.30 318 *i* PKiKP **PKiKP 20 42 45.6 -0.2**
comp=Z,6.6nm,0.8s
WTTA Wattenberg 113.74 319 *i* PKP **PKiKP 20 42 46.8 +0.1**
comp=Z,11nm,0.7s
WATA Walderalm 113.76 319 *i* PKP **PKiKP 20 42 47.3 +0.6**
comp=Z,6.6nm,0.8s
SQTA Sankt Quirin 114.03 319 *i* PKP PKPdf 20 42 46.5 -0.7
comp=Z,8.5nm,1.7s
MOTA Moosalm 114.06 319 *i* PKP **PKiKP 20 42 48.0 +0.7**
comp=Z,7.1nm,0.7s
FETA Feichten 114.40 319 *i* PKiKP **PKiKP 20 42 48.8 +0.8**
comp=Z,3.4nm,0.8s
DAVA Damuels 114.87 319 *i* PKP PKPdf 20 42 49.0 +0.1
comp=Z,4.5nm,0.4s
DAVOX Davos/Dischmat 115.03 319 PKP **PKiKP 20 42 48.9 -0.3**
comp=Z,2.8nm,0.5s,baz=138,slow=3.5,SNR=9.7
TUE Stuetta 115.47 319 **PKiKP 20 42 49.7 -0.4**
MOOW Moose Ponds 115.92 44 **PKiKP 20 42 52.7 +1.6**
LOHW Long Hollow 116.06 45 **PKiKP 20 42 52.5 +1.2**
SENIN Lac Senin/Sane 116.85 319 **PKPdf 20 42 52.3 -0.4**
PDAR Pinedale Array 117.03 45 PKP **PKiKP 20 42 53.8 +0.5**
comp=Z,2.3nm,0.6s,baz=278,slow=0.4,SNR=29
PDAR PKKPbc **PKKPbc 20 53 20.1 -0.1**
comp=Z,0.4nm,0.7s,baz=37,slow=4.1,SNR=4.0
PDAR Pinedale Array 117.03 45 **PKPdf 20 42 53.3 0.0**
BNI Bardonecchia 117.70 318 **PKiKP 20 42 54.7 +0.3**
BNI Bardonecchia 117.70 318 PKiKP **PKiKP 20 42 54.7 +0.3**
KEST Kesra 118.34 307 PKP **PKPdf 20 42 55.7 -0.1**
comp=Z,5.8nm,0.7s,baz=3.2,slow=2.8,SNR=12
KEST PP **PP 20 44 13.3 -0.9**
comp=Z,3.0nm,0.9s,baz=101,slow=5.2,SNR=3.9
EKA Eskdalemuir Ar 118.76 331 PKP **PKiKP 20 42 56.5 +0.6**
comp=Z,2.2nm,0.6s,baz=30,slow=3.9,SNR=6.8
RSSD Black Hills 120.37 42 **PKPdf 20 42 59.5 -0.1**
RSSD Black Hills 120.37 42 PKiKP **PKPdf 20 42 59.5 -0.1**
ULM Lac du Bonnet 122.49 33 PKP **PKPdf 20 43 02.7 -0.5**
comp=Z,5.7nm,0.4s,baz=315,slow=1.9,SNR=15
ULM Lac du Bonnet 122.49 33 **PKPdf 20 43 02.9 -0.3**
ULM Lac du Bonnet 122.49 33 PKiKP **PKPdf 20 43 02.9 -0.3**
EPLO Experimental L 123.96 32 **PKiKP 20 43 06.3 -0.1**
TXAR Lajitas Array 125.18 59 PKP **PKiKP 20 43 09.9 +0.4**
comp=Z,1.4nm,0.4s,baz=155,slow=2.4,SNR=12
TXAR Lajitas Array 125.18 59 **PKiKP 20 43 09.4 -0.1**
ESDC Sonseca Array 127.04 315 PKP **PKiKP 20 43 12.8 -0.1**
comp=Z,3.1nm,1.1s,baz=12,slow=2.8,SNR=10.0
ESDC PP **PP 20 45 14.1 +1.6**
comp=Z,0.7nm,0.8s,baz=77,slow=6.5,SNR=4.2
ESDC Sonseca Array 127.04 315 **PKPdf 20 43 12.2 -0.1**
TORD Torodi Ar. Bea 128.34 281 PKP **PKPdf 20 43 15.7 +0.3**
comp=Z,8.5nm,0.8s,baz=61,slow=3.4,SNR=42
TORD Torodi Ar. Bea 128.34 281 **PKPdf 20 43 15.3 -0.1**
PVRL Vila Real 128.82 319 *e*PKPdf **PKiKP 20 43 18.4 +2.1**
POLO Lamas de Olo 128.82 319 *e*PKPdf **PKiKP 20 43 18.2 +1.8**
MTE Manteigas 129.14 318 *e*PKPdf **PKiKP 20 43 18.7 +1.6**
MTE *ex* x 20 46 24.3
PLCA Paso Flores 129.24 160 PKP **PKPdf 20 43 16.7 +0.1**
comp=Z,3.0nm,0.9s,baz=208,slow=9.5,SNR=4.6
PLCA SKPbc SKPbc 20 46 22.8 +0.7
comp=Z,5.6nm,1.0s,baz=211,slow=4.3,SNR=8.0
PLCA Paso Flores 129.24 160 PKPdf **PKiKP 20 43 18.1 +0.8**
PLCA Paso Flores 129.24 160 PKiKP **PKiKP 20 43 18.1 +0.8**
PCBR Castelo Branco 129.37 317 *e*PKPdf **PKiKP 20 43 19.2 +1.8**
PCBR *ex* x 20 46 24.3
PMRV Marv??o 129.51 317 *e*PKPdf **PKiKP 20 43 19.6 +1.8**
PMRV *ex* x 20 46 24.3
JFWS Jewell Farm 129.78 38 **PKiKP 20 43 17.8 -0.3**
JFWS Jewell Farm 129.78 38 PKiKP **PKiKP 20 43 17.8 -0.3**
PBAR Barrancos 129.85 315 *e*PKPdf **PKiKP 20 43 20.7 +2.2**
PBAR *ex* x 20 46 26.0
PESTR Estremoz 129.91 316 *e*PKPdf **PKiKP 20 43 20.0 +1.4**
PSARD Sardoal 129.95 317 *ex* x 20 46 26.7
PCAS Casmilo, Conde 129.95 318 *ex* x 20 46 26.3
MDT Midelt 130.23 308 PKP **PKiKP 20 43 20.1 +0.6**
comp=Z,2.9nm,0.6s,baz=61,slow=0.2,SNR=7.1
MDT SKPbc **SKPbc 20 46 26.9 +1.0**
comp=Z,4.4nm,0.8s,baz=84,slow=5.4,SNR=6.4
PARRA Arraiolos 130.25 316 *e*PKPdf **PKiKP 20 43 21.1 +1.9**
PARRA *ex* x 20 46 27.7
PMTG Montargil 130.25 317 *ex* x 20 46 27.0
SCHQ Schefferville 130.29 12 PKP **PKiKP 20 43 18.9 +0.1**
comp=Z,4.1nm,0.9s,baz=304,slow=3.6,SNR=3.8
SCHQ SKPbc **SKPbc 20 46 25.8 +0.5**
comp=Z,12nm,0.8s,baz=353,slow=3.4,SNR=11
EVO Evora 130.36 316 *ex* x 20 46 28.0
PBEJ Beja 130.50 315 *ex* x 20 46 28.8
MOE Montemor 130.60 316 *e*PKPdf **PKPdf 20 43 17.1 -1.9**
MOE *ex* x 20 46 29.1
PCVE Castro Verde 130.81 315 *ex* x 20 46 29.4
MESJ Messejana 130.83 315 *ex* x 20 46 29.0
PBDV Barranco-do-Ve 130.91 314 *ex* x 20 46 31.9
CCM Cathedral Cave 131.70 44 **PKPdf 20 43 21.3 +0.2**
CCM Cathedral Cave 131.70 44 PKiKP **PKPdf 20 43 21.3 +0.2**
DBIC Dimbokro 134.75 273 PKP **PKPdf 20 43 28.1 +0.6**
comp=Z,15nm,0.8s,baz=94,slow=1.4,SNR=13
DBIC SKPbc **SKPbc 20 46 42.4 +0.4**
comp=Z,7.6nm,0.8s,baz=117,slow=3.6,SNR=6.5
GO02 Mina Guanaco 143.19 150 PKPbc 20 43 41.8 +1.3
CPUP Villa Florida 146.43 169 PKPbc **PKPdf 20 43 48.8 +0.6**
comp=Z,17nm,1.1s,baz=206,slow=4.0,SNR=14
CPUP SKPbc **SKiKP 20 47 12.8 0.0**
comp=Z,8.9nm,0.9s,baz=174,slow=4.4,SNR=5.6
CPUP Villa Florida 146.43 169 **PKPbc 20 43 49.8 +0.1**
PB11 IPOC Station P 147.55 145 **PKPdf 20 43 50.0 -0.4**
CAIB Caibarien 147.94 58 **PKiKP 20 43 55.7 0.0**
LPAZ La Paz 151.16 143 PKP **PKPdf 20 43 57.2 +0.4**
comp=Z,6.2nm,1.0s,baz=270,slow=4.0,SNR=9.0
LPAZ PKPbc **PKiKP 20 44 03.9 +0.5**
comp=Z,6.2nm,1.0s,baz=265,slow=0.8,SNR=15
LPAZ La Paz 151.16 143 *e*P **PKPdf 20 43 59.3 +2.4**
PTLB Pontes e Lacer 156.30 159 **PKPdf 20 44 03.7 +0.3**
BDFB Brasilia 157.61 186 PKP **PKPdf 20 44 06.2 +1.0**
comp=Z,1.3nm,0.4s,baz=184,slow=3.3,SNR=3.1

*IDC **20** 21:21:17.0±2.0, 6°.03S×151°.81E, h0km, mb3.8/4, mbtmp3.9/5, ML2.1/1, Error ellipse: s-maj=113.5km s-min=26.1km az=130.0*
ISC 20 21:21:23.3±2.3, 5°.7S±0°.8×151°.3E±0°.8, h35km, n6, σ0s70/7, mb3.7/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.51**	**227**	Pn		**Pn**		**21 22 43.4**	**+0.5**
	3.9nm,0.3s,baz=45,slow=8.6,SNR=6.4								
PMG				Sn		**Sn**		**21 23 44.1**	**-0.9**
	5.8nm,0.3s,baz=167,slow=23,SNR=6.7								
	16nm,0.7s								
WRA	**Warramunga Arr**	**21.73**	**228**	P		**P**		**21 26 11.7**	**0.0**
	1.8nm,0.9s,baz=56,slow=11,SNR=8.8								
	1.8nm,0.9s								
ASAR	**Alice Springs**	**24.48**	**221**	P		**P**		**21 26 39.5**	**0.0**
	2.0nm,0.9s,baz=57,slow=8.9,SNR=16								
	2.0nm,0.9s								
FITZ	**Fitzroy Crossi**	**27.90**	**242**	P		**P**		**21 27 11.0**	**+0.7**
	2.5nm,0.7s,baz=52,slow=8.5,SNR=2.2								
	2.5nm,0.7s								
ILAR	**Eielson Array**	**83.54**	**22**	P		**P**		**21 33 47.2**	**-0.2**
	0.6nm,0.9s,baz=249,slow=5.3,SNR=4.7								
	0.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**149.10**	**286**	PKPbc		**PKiKP**		**21 41 09.7**	**-0.6**
	1.3nm,0.8s,baz=82,slow=2.9,SNR=9.0								

*IDC **20** 21:23:17.9±1.2, 2°.08N×126°.59E, h0km, mb3.8/6, mbtmp3.8/6, MS3.2/1, Error ellipse: s-maj=104.4km s-min=17.5km az=70.0*
*NEIC **20** 21:23:25.9±1.2, 2°.0N±0°.1×126°.59E±0°.09, h55km±9km, mb4.2/10, Error ellipse: s-maj=17.4km s-min=8.4km az=217.0*
ISC 20 21:23:24.3±0.7, 2°.08N±0°.09×126°.6E±0°.1, h47km, n24, σ1s13/24, mb4.0/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.51**	**149**				**Pn**	**21 23 49.4**	**+0.5**
LUWI	**Luwuk**	**4.93**	**231**	Pn		**Pn**	**Pn**	**21 24 36.9**	**+1.1**
TOLI2	**Tolitoli**	**5.89**	**261**	Pn		**Pn**	**Pn**	**21 24 48.9**	**-0.2**
MYLDM	**Lahad Datu**	**8.65**	**291**	Pn		**Pn**	**Pn**	**21 25 29.2**	**+2.2**
TGY	**Tagaytay City**	**13.19**	**335**	LR		LR	LR	21 32 03.9	
	comp=Z,101nm,18.6s,baz=98,slow=40								
MTN	**Manton Dam**	**15.49**	**163**	Pn		**Pn**	**Pn**	**21 26 59.3**	**-0.6**
MTN				IAmb		IAmb	IAmb	21 27 00.7	
	comp=Z,33nm,1.4s								
KNRA	**Kununurra**	**17.77**	**173**	P		**P**	**P**	**21 27 28.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**20.07**	**183**	P		**P**	**P**	**21 27 53.7**	**-0.2**
	comp=Z,4.5nm,1.1s,baz=14,slow=8.3,SNR=1.3								
	comp=Z,4.5nm,1.1s								
TPUB	**Ta-pu**	**21.87**	**345**	P		**P**	**P**	**21 28 10.2**	**-3.1**
WB0	**Warramunga Arr**	**23.02**	**161**	P		**P**	**P**	**21 28 24.7**	**-0.8**
WB0				IAmb		IAmb	IAmb	21 28 44.3	
	comp=Z,19nm,1.4s								
WRA	**Warramunga Arr**	**23.17**	**161**	P		**P**	**P**	**21 28 26.2**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=339,slow=11,SNR=21								
	comp=Z,2.5nm,0.6s								
WRA	**Warramunga Arr**	**23.17**	**161**	P		**P**	**P**	**21 28 24.9**	**-2.1**
WR8	**Warramunga Arr**	**23.23**	**161**	P		**P**	**P**	**21 28 26.5**	**-1.1**
WR8				IAmb		IAmb	IAmb	21 29 00.9	
	comp=Z,14nm,1.4s								
ASAR	**Alice Springs**	**26.56**	**165**	P		**P**	**P**	**21 28 57.4**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=339,slow=9.3,SNR=7.7								
ASAR				PcP		**PcP**		**21 32 22.5**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=355,slow=2.6,SNR=4.7								
	comp=Z,0.6nm,0.4s								
ASAR	**Alice Springs**	**26.56**	**165**	P		**P**	**P**	**21 28 57.8**	**-0.3**
BBOO	**Buckleboo**	**35.84**	**166**	P		**P**	**P**	**21 30 18.5**	**-1.1**
STKA	**Stephens Creek**	**36.65**	**158**	P		**P**	**P**	**21 30 27.1**	**+0.5**
SONM	**Songino Array**	**48.81**	**342**	P		**P**	**P**	**21 32 04.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=156,slow=6.5,SNR=7.0								
	comp=Z,0.3nm,0.4s								
SONM	**Songino Array**	**48.81**	**342**	P		**P**	**P**	**21 32 05.6**	**+0.6**
SONM				IAmb		IAmb	IAmb	21 32 29.5	
	comp=Z,1.6nm,1.3s								
MKAR	**Makanchi Array**	**58.83**	**326**	P		**P**	**P**	**21 33 18.5**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=119,slow=8.0,SNR=14								
	comp=Z,0.3nm,0.3s								
PLWZ	**Palliser**	**61.87**	**140**	P		**P**	**P**	**21 33 38.9**	**-0.1**
KURBB	**Kurchatov Arra**	**63.05**	**328**	P		**P**	**P**	**21 33 46.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=128,slow=6.3,SNR=8.2								
	comp=Z,0.6nm,0.5s								
KURK	**Kurchatov**	**63.06**	**328**	P		**P**	**P**	**21 33 47.3**	**+0.6**
KURK				IAmb		IAmb	IAmb	21 33 47.7	
	comp=Z,1.1nm,0.5s								
ABKAR	**Akbulak array**	**73.34**	**321**	P		**P**	**P**	**21 34 51.3**	**+0.1**

*OMAN **20** 21:38:22.6±0.1, 27°.93N×55°.00E, h4km±1km, mb3.0/6, ml3.7/18, Error ellipse: s-maj=1.6km s-min=0.7km az=17.0*
*IDC **20** 21:38:26.0±2.5, 27°.14N×55°.15E, h0km, mb3.5/7, mbtmp3.6/9, ML3.3/2, Error ellipse: s-maj=51.1km s-min=25.7km az=160.0*
*DSN **20** 21:38:26.2±1.2, 27°.64N×54°.76E, h10km, ML3.2/13, Error ellipse: s-maj=14.2km s-min=5.0km az=17.0*
*TEH **20** 21:38:29.6, 27°.26N×54°.91E, h9km±21km, ML3.5, Presumed earthquake*
ISC 20 21:38:30.3±1.2, 27°.32N±0°.04×54°.82E±0°.04, h17km±9km, n71, σ1s64/78, mb3.4/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.53**	**312**	Pg		**Pg**	**Pb**	**21 38 41.5**	**+0.3**
LAR1				Sg		**Sn**		**21 38 50.8**	**-0.9**
GENO	**Geno**	**1.21**	**86**	Pg		**Pn**		**21 38 52.1**	**-0.5**
KHL1	**Khalili_Fars**	**1.39**	**284**	Pg		**Pn**		**21 38 58.0**	**+1.0**
IBND	**Bandar-abas**	**1.54**	**85**	Pg		**Pn**		**21 38 57.5**	**+0.6**
JHRM	**Jahrom**	**1.62**	**318**	Pg		**Pg**		**21 39 01.2**	**-0.2**
SHME	**Shamm**	**1.73**	**136**	*e*P		**Pn**		**21 38 59.6**	**+0.1**
	SNR=18								
SHME				S		**Sg**		**21 39 26.2**	**+0.1**
SHME	**Shamm**	**1.73**	**136**	P		**Pn**		**21 38 59.0**	**-0.6**
	SNR=18								
SHME				S		**Sg**		**21 39 26.5**	**+0.5**
BANOM	**Banah**	**1.92**	**136**	*e*P		**Pn**		**21 39 02.6**	**+0.4**
	SNR=28								
BANOM				S		**Sg**		**21 39 31.4**	**-0.7**
BANOM	**Banah**	**1.92**	**136**	P		**Pn**		**21 39 02.9**	**+0.7**
BANOM				S		**Sg**		**21 39 32.8**	**+0.6**
MASF	**Masafi**	**2.28**	**148**	P		**Pn**		**21 39 08.4**	**+1.2**
MSFE	**Esma-Masafi**	**2.29**	**148**	P		**Pn**		**21 39 08.6**	**+1.3**
MDH	**Madha**	**2.41**	**146**	P		**Pn**		**21 39 10.9**	**+2.0**
MDH	**Madha**	**2.41**	**146**	P		**Pn**		**21 39 09.6**	**+0.7**
NAZ	**Nazwa, Dubai**	**2.44**	**162**	P		**Pn**		**21 39 11.7**	**+2.4**
NAZ				S		**Sg**		**21 39 48.0**	**-0.7**
KHNJ	**Kahnooj**	**2.64**	**76**	Pn		**Pn**		**21 39 13.7**	**+1.6**
FAQ	**Al Faqa, Dubai**	**2.65**	**165**	P		**Pb**		**21 39 15.3**	**-2.0**
UOSS	**Minazif**	**2.67**	**152**	P		**Pn**		**21 39 14.0**	**+1.5**
UOSS	**Minazif**	**2.67**	**152**	P		**Pn**		**21 39 13.8**	**+1.3**
UOSS	**Minazif**	**2.67**	**152**	Pn		**Pn**		**21 39 13.2**	**+0.7**
ASUD	**Al Ashush, Dub**	**2.72**	**170**	P		**Pn**		**21 39 15.6**	**+2.5**
AJN	**Ajban**	**2.75**	**177**	P		**Pn**		**21 39 16.1**	**+2.5**
HATD	**Hatta, Dubai**	**2.75**	**154**	P		**Pn**		**21 39 15.9**	**+2.3**
ASHO	**Ashiyiah**	**2.85**	**157**	*i* P		**Pn**		**21 39 16.4**	**+1.4**
	SNR=20								
ASHO	**Ashiyiah**	**2.85**	**157**	P		**Pn**		**21 39 16.2**	**+1.2**
	SNR=20								
ASHO				S		**Sb**		**21 39 57.2**	**+1.9**
DSBU	**Dashti - Bushe**	**3.32**	**289**	Pn		**Pb**		**21 39 25.6**	**-3.1**
ALNE	**Al Ain**	**3.35**	**165**	P		**Pn**		**21 39 23.0**	**+1.0**
ALNE	**Al Ain**	**3.35**	**165**	P		**Pn**		**21 39 23.7**	**+1.8**
KHGB	**Koh Gabri**	**3.38**	**25**	Pn		**Pn**		**21 39 25.2**	**+2.7**
CHMN	**Cheshme madani**	**3.49**	**43**	Pn		**Pn**		**21 39 25.7**	**+1.6**
SOHO	**SOHO**	**3.52**	**154**	P		**Pn**		**21 39 24.6**	**+0.3**
SOHO	**SOHO**	**3.52**	**154**	P		**Pn**		**21 39 25.1**	**+0.8**
MZWR	**Madinat Zayed**	**3.64**	**194**	P		**Pn**		**21 39 28.2**	**+2.4**
KBAM	**BAM**	**3.69**	**60**	Pn		**Pn**		**21 39 28.3**	**+1.8**
SHMA	**Al-Shehemyia**	**3.74**	**248**	P		**Pn**		**21 39 27.2**	**-0.1**
	SNR=9.6								
SHMA				S		**Sb**		**21 40 18.0**	**-3.0**
GHWR	**Ruwais**	**3.77**	**208**	P		**Pn**		**21 39 29.6**	**+1.9**
KRM1	**Kerman Provinc**	**3.84**	**34**	Pn		**Pn**		**21 39 31.2**	**+2.5**
ZRDN	**Zarand Kerman**	**3.94**	**22**	Pn		**Pn**		**21 39 32.5**	**+2.4**
IMEH	**Mehriz**	**4.07**	**358**	Pn		**Pn**		**21 39 35.2**	**+3.2**
TRNA	**Turayna**	**4.14**	**232**	P		**Pn**		**21 39 34.4**	**+1.7**
	SNR=11								
IBAF	**Bafgh**	**4.31**	**9**	Pn		**Pn**		**21 39 37.7**	**+2.5**
HOQ	**Hoqain**	**4.35**	**148**	P		**Pn**		**21 39 35.2**	**-0.4**
HOQ	**Hoqain**	**4.35**	**148**	Pn		**Pn**		**21 39 37.0**	**+1.4**
SMRA	**Abu-Samra**	**4.41**	**235**	P		**Pn**		**21 39 37.4**	**+1.0**
TAFT	**Taft - Yazd**	**4.43**	**353**	Pn		**Pn**		**21 39 40.3**	**+3.4**
MZR	**Muzera**	**4.46**	**196**	P		**Pn**		**21 39 38.2**	**+1.0**
MZR	**Muzera**	**4.46**	**196**	P		**Pn**		**21 39 38.7**	**+1.6**
UMZA	**Um Al Zommool**	**4.59**	**176**	P		**Pn**		**21 39 40.2**	**+1.3**
BIDO	**Bidbid**	**4.82**	**141**	P		**Pn**		**21 39 40.9**	**-1.1**
IRAM	**Ramesheh**	**4.96**	**335**	Pn		**Pn**		**21 39 47.5**	**+3.4**
BSY	**Bisya**	**5.04**	**154**	P		**Pn**		**21 39 46.2**	**+1.1**
SMIO	**Samad**	**5.15**	**145**	P		**Pn**		**21 39 47.0**	**+0.2**
SMDO				S		**Sn**		**21 40 47.4**	**+1.5**
WSAR	**Wadi Sarin**	**5.33**	**139**	P		**Pn**		**21 39 49.0**	**-0.1**
CHBR	**Chabahar**	**5.36**	**107**	Pn		**Pn**		**21 39 50.0**	**+0.5**
JMDO	**Jabal Madar**	**5.76**	**148**	P		**Pn**		**21 39 55.0**	**0.0**
NGCH	**Negor - Chabah**	**6.00**	**108**	P		**Pn**		21 39 52.9	-5.3
KBD	**Kabd**	**6.55**	**288**	P		**Pn**		21 39 58.9	-6.9
JLN	**Jalan Bani Buh**	**6.62**	**140**	P		**Pn**		**21 40 05.7**	**-1.2**
SRVN	**Saravan**	**6.74**	**88**	Pn		**Pn**		**21 40 09.9**	**+1.3**
MHTO	**MHTO**	**6.92**	**155**	P		**Pn**		**21 40 11.6**	**+0.6**
	SNR=11								
DOK	**Doka**	**8.68**	**184**	P		**Pn**		**21 40 36.3**	**+1.1**
RAYN	**Ar Rayn**	**9.23**	**248**	P		**Pn**		**21 40 42.1**	**-0.5**
ABTO	**Aybut**	**10.01**	**188**	P		**Pn**		**21 40 55.8**	**+2.3**
GNI	**Garni**	**15.29**	**329**	Pn		**P**		**21 42 10.3**	**+0.1**
	0.2nm,0.3s,baz=104,slow=4.2,SNR=2.5								
	3.1nm,0.8s								
KBZ	**Khabaz**	**19.00**	**333**	P		**Pn**		**21 42 54.4**	**+2.6**
	0.1nm,0.3s,baz=120,slow=11,SNR=5.2								
	1.7nm,0.9s								
BRTR	**Keskin Array B**	**21.50**	**311**	P		**P**		**21 43 19.6**	**+1.2**
	0.8nm,0.9s,baz=97,slow=20,SNR=5.4								
	0.8nm,0.9s								
BVAR	**Borovoye Array**	**28.18**	**20**	P		**P**		**21 44 20.6**	**-1.1**
	0.3nm,0.5s,baz=194,slow=9.8,SNR=2.5								
	0.3nm,0.5s								
MKAR	**Makanchi Array**	**29.07**	**41**	P		**P**		**21 44 26.7**	**-3.1**
	0.2nm,0.7s,baz=220,slow=12,SNR=2.3								
	0.2nm,0.7s								
ZALV	**Zalesovo Beam**	**34.55**	**31**	P		**P**		**21 45 16.9**	**-0.8**
	0.6nm,0.4s,baz=226,slow=10,SNR=4.6								
	0.6nm,0.4s								
FINES	**FINESS Array B**	**39.18**	**339**	P		**P**		**21 45 56.6**	**-0.3**
	2.0nm,0.8s,baz=138,slow=12,SNR=6.2								
	2.0nm,0.8s								
ESDC	**Sonseca Array**	**49.75**	**300**	P		**P**		**21 47 22.1**	**+0.2**
	0.3nm,0.6s,baz=80,slow=7.2,SNR=2.2								
	0.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**51.44**	**265**	P		**P**		**21 47 35.9**	**+1.0**
	0.5nm,0.7s,baz=70,slow=7.1,SNR=4.3								
	0.5nm,0.7s								

IDC 20 22:19:16.6±2.8, 6°.98S×129°.70E, h91km±39km, mb3.3/1, mbtmp3.8/5, Error ellipse: s-maj=68.5km s-min=22.5km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.27**	**15**	P		P	Pn	22 20 46.5	-0.1
	4.9nm,0.3s,baz=62,slow=23,SNR=18								
SIJI				S		Sn		22 21 51.1	-5.7
	5.7nm,0.2s,baz=242,slow=23,SNR=8.9								
FITZ	**Fitzroy Crossi**	**11.74**	**199**	P		P	Pn	22 22 01.9	+0.8
	1.0nm,0.2s,baz=18,slow=12,SNR=20								
FITZ				S		Sn		22 24 04.9	-5.4
	1.4nm,0.3s,baz=205,slow=20,SNR=7.0								
WRA	**Warramunga Arr**	**13.65**	**161**	P		P	Pn	22 22 24.7	-1.8
	0.8nm,0.3s,baz=341,slow=14,SNR=19								
WRA				S		Sn		22 24 48.9	-7.9
	1.8nm,0.5s,baz=335,slow=22,SNR=9.7								
ASAR	**Alice Springs**	**17.08**	**167**	P		P	P	22 23 10.

IGT	**Igoumenitsa**	**0.99**	**199**	*e*Pg	**Pg**	**23 00 14.7**	**+0.3**
KEK	**Kerkira**	**1.05**	**224**	P	**Pg**	**23 00 14.9**	**-0.7**
TIR	**Tirane**	**1.10**	**323**	Pn	**Pb**	**23 00 17.0**	**+0.2**
TIR				AML	AML	23 00 40.4	
	comp=N,0.2nm,0.5s						
TETR	**Tetrakomo, Epi**	**1.20**	**160**	P	**Pg**	**23 00 17.9**	**-0.4**
TETR				S	**Sb**	**23 00 34.4**	**+0.4**
PHP	**Peshkopia**	**1.23**	**349**	Pn	**Pg**	**23 00 18.3**	**-0.8**
PHP				Sn	**Sn**	**23 00 36.0**	**+0.1**
PHP				AML	AML	23 00 39.5	
	comp=N,0.6nm,0.3s						
THL	**Klokotos Trika**	**1.32**	**133**	Pn	**Pn**	**23 00 19.5**	**-0.6**
THL				Sn	**Sn**	**23 00 39.1**	**+1.1**
THL	**Klokotos Trika**	**1.32**	**133**	P	**Pn**	**23 00 19.7**	**-0.5**
THL	**Klokotos Trika**	**1.32**	**133**	P	**Pn**	**23 00 19.4**	**-0.8**
THL				S	**Sb**	**23 00 37.0**	**-0.6**
GRG	**Griva**	**1.34**	**68**	P	**Pn**	**23 00 19.9**	**-0.5**
GRG	**Griva**	**1.34**	**68**	P	**Pn**	**23 00 19.8**	**-0.7**
GRG				S	**Sb**	**23 00 38.1**	**-0.1**
LIT	**Litokhoron**	**1.38**	**105**	P	**Pn**	**23 00 21.2**	**+0.2**
LIT	**Litokhoron**	**1.38**	**105**	P	**Pn**	**23 00 20.9**	**-0.1**
SKO	**Skopje**	**1.58**	**19**	*i* Pn	**Pb**	**23 00 25.2**	**+0.3**
SKO				*i* Sn	**Sg**	**23 00 46.7**	**+0.4**
VAY	**Valandovo**	**1.62**	**58**	*i* Pn	**Pn**	**23 00 24.3**	**+0.1**
VAY				*i* Sn	**Sg**	**23 00 46.9**	**-0.4**
VAY				*e*Lg	Lg	23 00 49.4	
	comp=N,38nm,0.6s						
VAY				*e*Lg	Lg	23 00 49.9	
	comp=E,31nm,0.5s						
KNT	**Kendrikon**	**1.77**	**66**	P	**Pn**	**23 00 26.0**	**-0.3**
SDA	**Shkodra**	**1.84**	**329**	Pn	**Pb**	**23 00 29.6**	**+0.4**
DRME	**Dracevica, Mon**	**2.08**	**326**	*e*Pg	**Pb**	**23 00 32.9**	**-0.5**
PDG	**Podgorica**	**2.26**	**331**	*e*Pg	**Pb**	**23 00 35.7**	**-0.7**
PDG				*e*Sg	**Sg**	**23 01 06.8**	**-1.1**
BOSS	**Bosilegrad**	**2.40**	**32**	*e*Pn	**Pn**	**23 00 35.4**	**+0.4**
BARS	**Barje**	**2.47**	**18**	*e*Pn	**Pn**	**23 00 35.8**	**-0.2**
KOME	**Kolasin**	**2.55**	**339**	*e*Pg	**Pb**	**23 00 41.2**	**-0.3**
SELS	**Selova**	**2.76**	**6**	*e*Pn	**Pn**	**23 00 39.5**	**-0.4**
VTS	**Vitosha**	**2.84**	**40**	*e*Pg	**Pn**	**23 00 43.0**	**+1.8**
SJES	**Sjenica**	**2.85**	**348**	*e*Pn	**Pn**	**23 00 42.6**	**+1.4**
ZAPS	**Zavoj**	**3.13**	**26**	*e*Pn	**Pn**	**23 00 44.4**	**-0.7**
BOVS	**Bovan**	**3.24**	**12**	*e*Pn	**Pn**	**23 00 46.4**	**-0.1**
ZAGS	**Zajecar**	**3.52**	**18**	*e*Pn	**Pn**	**23 00 50.8**	**+0.5**

BJI ***20*** *23:13:58.3, 26°.88N×140°.42E, h463km, mB4.6/13, mb4.6/56*

NEIC ***20*** *23:13:60.0±1.5, 27°.03N±0°.10×140°.3E±0°.1, h439km±7km, mb4.3/224, Error ellipse: s-maj=15.4km s-min=13.8km az=101.0*

IDC ***20*** *23:13:59.0±0.7, 27°.03N×140°.33E, h438km±6km, mb3.8/26, mbtmp4.6/32, Error ellipse: s-maj=11.0km s-min=8.3km az=75.0*

JMA ***20*** *23:13:59.2±0.1, 27°.N±2'×14°.1E±', h445km, MV4.5/39, W OFF OGASAWARA*

ISC 20 23:13:58.8±0.5, 27°.03N±0°.05×140°.42E±0°.06, h436km±5km, n397, σ1§15/429, mb4.3/163, 1D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.57**	**87**	P	**P**	**23 14 55.8**	**-0.1**
CBIJ				*e*S	**S**	**23 15 40.2**	**-1.9**
JCJ	**Chichijima**	**1.57**	**87**	P	**P**	**23 14 54.8**	**-1.0**
	1µm,0.4s,baz=290,slow=12,SNR=431						
JCJ				S	**S**	**23 15 37.9**	**-4.2**
	779nm,0.3s,baz=98,slow=23,SNR=8.1						
JCJ	**Chichijima**	**1.57**	**87**		**P**	**23 14 55.7**	**-0.1**
JCJ				S	**S**	**23 15 40.9**	**-1.2**
JCJ	**Chichijima**	**1.57**	**87**	P	**P**	**23 14 55.9**	**+0.1**
JHH2	**Haha-jima-NKT2**	**1.61**	**104**	P	**P**	**23 14 56.6**	**+0.6**
JHH2				A	A	23 14 56.6	
	comp=N,9.0nm,0.3s,comp=E,9.0nm,0.3s						
JHH2				*e*S	**S**	**23 15 41.1**	**-1.3**
JAOM	**Aogashimamukai**	**5.45**	**354**	*e*P	**P**	**23 15 27.9**	**+1.1**
JHJ2	**Mitsune**	**6.08**	**355**	P	**P**	**23 15 33.9**	**+0.6**
JHJ2	**Mitsune**	**6.08**	**355**	P	**P**	**23 15 34.5**	**+1.2**
JHJ2	**Mitsune**	**6.08**	**355**	*e*P	**P**	**23 15 33.9**	**+0.6**
JHJ	**Hachijo jima 2**	**6.09**	**355**	P	**P**	**23 15 33.3**	**-0.1**
	comp=E,588nm,0.3s,baz=134,slow=6.6,SNR=23						
JHJ				S	**S**	**23 16 46.6**	**-4.3**
	comp=E,169nm,0.4s,baz=84,slow=23,SNR=1.3						
TTO1	**TONANKAI O.B.S**	**7.28**	**335**	*e*P	**P**	**23 15 48.5**	**+2.6**
BSO1	**Boso 1**	**7.62**	**3**	*e*P	**P**	**23 15 49.7**	**+0.5**
BSO1				*e*S	**S**	**23 17 18.7**	**-1.1**
BSO3	**Boso 3**	**7.75**	**1**	*e*P	**P**	**23 15 50.8**	**-0.2**
BSO3				*e*S	**S**	**23 17 20.2**	**-2.7**
JIE	**Ise**	**8.01**	**337**	*e*P	**P**	**23 15 56.0**	**+2.1**
JAI	**Aioi**	**8.48**	**324**	P	**P**	**23 16 01.5**	**+2.3**
JNY	**Yasuok**	**8.59**	**346**	*e*P	**P**	**23 16 01.1**	**+0.7**
JYN	**Shimob**	**8.59**	**350**	*e*P	**P**	**23 16 00.7**	**+0.2**
JMN	**Monobe**	**8.75**	**321**		**P**	**23 16 04.6**	**+2.5**
JMN	**Monobe**	**8.75**	**321**	P	**P**	**23 16 04.6**	**+2.5**
JMN	**Monobe**	**8.75**	**321**	P	**P**	**23 16 04.6**	**+2.5**
JEG	**Eigenji**	**8.79**	**338**	P	**P**	**23 16 05.3**	**+2.7**
INU	**Inuyama**	**8.79**	**341**	P	**P**	**23 16 03.4**	**+1.0**
INU	**Inuyama**	**8.79**	**341**	P	**P**	**23 16 03.5**	**+1.0**
JTO	**Tosashimizu**	**8.80**	**313**	*e*P	**P**	**23 16 05.0**	**+2.3**
JGF	**Kuroka**	**8.94**	**344**	P	**P**	**23 16 04.6**	**+0.3**
JGF	**Kuroka**	**8.94**	**344**	P	**P**	**23 16 04.7**	**+0.5**
JRY	**Ryogami san**	**9.05**	**352**	*e*P	**P**	**23 16 05.1**	**-0.3**
MJAR	**Matsushiro Arr**	**9.67**	**349**	P	**P**	**23 16 11.2**	**-1.0**
	comp=E,12nm,0.4s,baz=165,slow=9.4,SNR=42						
MJAR				S	**S**	**23 18 00.8**	**-1.3**
	comp=E,2.5nm,0.5s,baz=170,slow=21,SNR=4.5						
MJAR	**Matsushiro Arr**	**9.67**	**349**	P	**P**	**23 16 11.6**	**-0.6**
MAJO	**Matsushiro**	**9.67**	**349**		**P**	**23 16 11.9**	**-0.3**
MAJO	**Matsushiro**	**9.67**	**349**	P	**P**	**23 16 12.9**	**+0.7**
MJB9	**Matsu-Tunnel**	**9.67**	**349**	P	**P**	**23 16 13.0**	**+0.8**
JSU	**Suzuyama**	**9.78**	**299**	P	**P**	**23 16 13.4**	**0.0**
JHS	**Saijyo**	**10.12**	**324**	*e*P	**P**	**23 16 19.3**	**+2.1**
JNU	**Nakatsue**	**10.26**	**309**	P	**P**	**23 16 19.4**	**+0.7**
	comp=E,5.9nm,0.3s,baz=125,slow=7.7,SNR=16						
JNU				S	**S**	**23 18 15.1**	**+1.0**
	comp=E,9.7nm,0.9s,baz=171,slow=17,SNR=2.1						
JOW	**Kunigami**	**10.84**	**272**	P	**P**	**23 16 25.8**	**+0.6**
	comp=E,17nm,0.4s,baz=109,slow=16,SNR=9.4						
JOW	**Kunigami**	**10.84**	**272**	P	**P**	**23 16 26.6**	**+1.4**
JOW	**Kunigami**	**10.84**	**272**	*e*P	**P**	**23 16 26.7**	**+1.5**
JOI	**OKI**	**11.07**	**328**	*e*P	**P**	**23 16 30.9**	**+3.4**
KSRS	**Korea Array**	**14.81**	**318**	P	**P**	**23 17 07.8**	**-0.3**
	comp=E,5.4nm,0.7s,baz=131,slow=11,SNR=17						
KSRS				S	**S**	**23 19 44.5**	**-0.2**
	comp=E,0.3nm,0.3s,baz=153,slow=16,SNR=1.3						
KS19	**Wonju Array Si**	**14.88**	**318**	P	**P**	**23 17 08.5**	**-0.3**
YOJ	**Yonaguni jima**	**15.90**	**265**	P	**P**	**23 17 19.3**	**-0.5**
TATO	**Taipei**	**17.15**	**267**	P	**P**	**23 17 32.1**	**-1.0**
NACB	**Ninganchiao**	**17.22**	**265**	P	**P**	**23 17 32.2**	**-1.7**
YHNB	**Yeheng**	**17.31**	**266**	P	**P**	**23 17 33.1**	**-1.8**
YULB	**Yu-li**	**17.68**	**262**	P	**P**	**23 17 37.4**	**-1.4**
SSLB	**Suanglung**	**17.88**	**264**		**P**	**23 17 40.6**	**-0.3**
SSLB	**Suanglung**	**17.88**	**264**	P	**P**	**23 17 41.2**	**+0.3**
TWG	**Pinlang**	**18.04**	**261**	P	**P**	**23 17 40.7**	**-1.8**
TPUB	**Ta-pu**	**18.30**	**263**	P	**P**	**23 17 43.8**	**-1.3**
USRK	**Ussuriysk Ar.**	**18.44**	**341**	P	**P**	**23 17 47.0**	**+0.8**
	comp=E,7.3nm,0.7s,baz=162,slow=9.8,SNR=12						
USRK				S	**S**	**23 20 54.2**	**+1.6**
	comp=E,1.5nm,0.6s,baz=163,slow=16,SNR=4.0						
KNMB	**Chin-men Tao**	**20.01**	**268**		**P**	**23 18 00.7**	**-0.4**
SZP	**Santa**	**20.72**	**247**	P	**P**	**23 18 08.6**	**+0.9**
WHN	**Wuhan**	**23.10**	**285**	P	**P**	**23 18 28.9**	**-0.2**
WHN				pmax	pmax		
	comp=E,68nm,0.8s						
HNS	**HongShan**	**24.02**	**302**	⇓P	**P**	**23 18 36.6**	**-0.6**
HNS				pmax	pmax		
	comp=E,20nm,0.9s						
LYN	**LuoYang**	**25.10**	**294**	P	**P**	**23 18 46.4**	**-0.6**
LYN				pmax	pmax		
	comp=E,28nm,0.9s						
HEH	**HeiHe**	**25.24**	**340**	*e*P	**P**	**23 18 48.4**	**+0.4**
HEH				S	**S**	**23 22 41.5**	**+0.3**
HEH				ScP	**ScP**	**23 25 04.4**	**-0.2**
HEH				pmax	pmax		
	comp=E,17nm,0.8s						
ENH	**Enshi**	**27.30**	**284**		**P**	**23 19 05.3**	**-1.2**
HHC	**Hu-ho-hao-te**	**27.48**	**307**	*e*P	**P**	**23 19 08.0**	**-0.1**
HHC				pmax	pmax		
	comp=E,11nm,0.6s						
HHC				pmax	pmax		
	comp=E,110nm,5.3s						
HILR	**Hailar Array B**	**27.56**	**330**	P	**P**	**23 19 08.5**	**-0.1**
	comp=E,2.7nm,0.6s,baz=140,slow=12,SNR=5.1						
HILR				ScP	**ScP**	**23 25 10.7**	**-0.9**
	comp=E,2.0nm,0.7s,baz=179,slow=7.2,SNR=3.7						
	comp=E,2.7nm,0.6s						
XAN	**Xi'an**	**27.94**	**292**	P	**P**	**23 19 11.8**	**-0.3**
XAN				pP	pwP	23 20 43.9	+10
XAN				pmax	pmax		
	comp=E,28nm,1.0s						
FAKI	**Fak Fak**	**30.80**	**196**	P	**P**	**23 19 37.0**	**-0.3**
LZH	**Lanzhou**	**32.30**	**295**	*e*P	**P**	**23 19 50.0**	**-0.1**
LZH				pP	pP	23 21 08.8	+1.6
LZH				pmax	pmax		
	comp=E,24nm,1.5s						
LZDM	**Lanzhou Array**	**32.40**	**295**	P	**P**	**23 19 50.6**	**-0.6**
	comp=E,8.7nm,0.6s,baz=132,slow=6.6,SNR=24						
LZDM				PcP	**PcP**	**23 22 26.7**	**+0.3**
	comp=E,2.0nm,0.5s,baz=94,slow=2.0,SNR=4.6						
	comp=E,8.7nm,0.6s						
MA2	**Magadan**	**33.31**	**10**	P	**P**	**23 19 59.0**	**+0.8**
	comp=E,11nm,1.6s						
SONM	**Songino Array**	**33.69**	**317**	P	**P**	**23 20 01.0**	**-0.8**
	comp=E,1.9nm,0.9s,baz=128,slow=8.0,SNR=12						
SONM				pP	**pP**	**23 21 20.5**	**+1.2**
	comp=E,0.2nm,0.4s,baz=111,slow=7.9,SNR=1.7						
SONM				PcP	**PcP**	**23 22 29.6**	**+0.1**
	comp=E,1.2nm,0.5s,baz=123,slow=2.5,SNR=10						
SONM				ScP	**ScP**	**23 25 31.2**	**-1.0**
	comp=E,0.9nm,0.9s,baz=161,slow=2.4,SNR=5.3						
	comp=E,1.9nm,0.9s						
SONM	**Songino Array**	**33.69**	**317**	P	**P**	**23 20 01.8**	**+0.1**
KMI2	**Kunming**	**33.81**	**275**	P	**P**	**23 20 03.6**	**+0.4**
KMI2				pmax	pmax		
	comp=E,20nm,0.8s						
PZH	**PanZhiHua**	**34.45**	**278**	P	**P**	**23 20 08.3**	**-0.2**
PZH				pmax	pmax		
	comp=E,30nm,0.8s						
GTA2	**Gaotai**	**35.91**	**301**	P	**P**	**23 20 20.1**	**-0.5**
GTA2				PcP	**PcP**	**23 22 36.4**	**+0.1**
GTA2				pmax	pmax		
	comp=E,13nm,1.0s						
SEY	**Seymchan**	**36.76**	**9**	P	**P**	**23 20 28.2**	**+1.1**
	comp=E,2.7nm,0.5s,baz=188,slow=5.4,SNR=9.5						
	comp=E,2.7nm,0.5s						
CHTO	**Chiang Mai**	**38.93**	**267**		**P**	**23 20 45.4**	**-0.3**
CHTO				IAmb	IAmb	23 20 46.3	
	comp=E,12nm,0.8s						
CM31	**Chiang Mai Arr**	**39.05**	**266**	P	**P**	**23 20 44.4**	**-2.3**
CM31				IAmb	IAmb	23 20 47.6	
	comp=E,15nm,1.1s						
CMAR	**Chiang Mai Arr**	**39.05**	**266**	P	**P**	**23 20 46.8**	**+0.1**
	comp=E,4.1nm,0.5s,baz=57,slow=8.5,SNR=30						
CMAR				PcP	**PcP**	**23 22 46.4**	**+0.1**
	comp=E,1.3nm,0.3s,baz=97,slow=4.0,SNR=5.5						
	comp=E,4.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**39.05**	**266**		**P**	**23 20 45.6**	**-1.0**
GOMU	**GeErMu**	**39.60**	**295**	P	**P**	**23 20 51.0**	**-0.3**
GOMU				PcP	**PcP**	**23 22 48.4**	**+0.2**
GOMU				pmax	pmax		
	comp=E,29nm,0.9s						
MTN	**Manton Dam**	**40.65**	**194**		**P**	**23 20 59.2**	**-0.3**
COEN	**Coen**	**40.83**	**176**	P	**P**	**23 21 01.8**	**+0.9**
COEN				IAmb	IAmb	23 21 42.8	
	comp=E,14nm,1.2s						
MYKOM	**Kota Tinggi**	**43.11**	**241**	P	**P**	**23 21 20.2**	**+1.0**
LSA	**Lhasa**	**43.18**	**286**	P	**P**	**23 21 20.5**	**+0.3**
LSA				IAmb	IAmb	23 21 22.7	
	comp=E,5.5nm,0.7s						
SHL	**Shillong**	**43.33**	**279**	P	**P**	**23 21 19.9**	**-1.1**
JAGI	**Jajag, Banyuwa**	**43.52**	**219**	P	**P**	**23 21 21.6**	**-0.8**
KULM	**Kulim**	**43.61**	**247**	P	**P**	**23 21 23.5**	**+0.4**
IPM	**Ipoh**	**43.76**	**246**	P	**P**	**23 21 24.2**	**-0.1**
WMQ	**Urumqi**	**45.34**	**306**	*e*P	**P**	**23 21 37.1**	**+0.8**
WMQ				pmax	pmax		
	comp=E,23nm,0.9s						
RPSI	**Rantau Prapat**	**46.49**	**246**	P	**P**	**23 21 45.0**	**-0.4**
WB0	**Warramunga Arr**	**46.88**	**188**	P	**P**	**23 21 48.4**	**+0.1**
WR8	**Warramunga Arr**	**47.06**	**188**	P	**P**	**23 21 49.7**	**+0.2**
WRA	**Warramunga Arr**	**47.06**	**188**	P	**P**	**23 21 49.1**	**-0.5**
	comp=E,10nm,0.6s,baz=5.1,slow=7.6,SNR=96						
WRA				pP	**pP**	**23 23 14.9**	**+1.6**
	comp=E,1.7nm,0.5s,baz=8.6,slow=7.9,SNR=2.4						
WRA				ScP	**ScP**	**23 26 23.8**	**-1.1**
	comp=E,2.0nm,0.7s,baz=1.0,slow=4.1,SNR=9.7						
	comp=E,10nm,0.6s						
WRA	**Warramunga Arr**	**47.06**	**188**	P	**P**	**23 21 48.9**	**-0.7**
EVN	**Everest**	**47.24**	**284**	P	**P**	**23 21 52.0**	**+0.3**
EVN				IAmb	IAmb	23 21 53.3	
	comp=E,12nm,0.9s						
GSI	**Gunungsitoli**	**48.39**	**245**	P	**P**	**23 21 59.8**	**0.0**
ZAA0	**Zalesovo Array**	**48.51**	**319**	P	**P**	**23 21 59.8**	**-0.3**
ZAA0				IAmb	IAmb	23 22 00.4	
	comp=E,8.8nm,0.8s						
ZAA0					**PcP**	**23 23 17.9**	**-0.3**
ZALV	**Zalesovo Beam**	**48.51**	**319**	P	**P**	**23 21 59.1**	**-1.0**
	comp=E,7.7nm,0.6s,baz=100,slow=7.2,SNR=38						
ZALV				PcP	**PcP**	**23 23 17.6**	**-0.5**
	comp=E,7.7nm,0.7s,baz=116,slow=3.5,SNR=18						
ZALV				ScP	**ScP**	**23 26 29.3**	**-1.3**
	comp=E,0.4nm,0.4s,baz=116,slow=3.4,SNR=2.3						
	comp=E,7.7nm,0.6s						
ZALV	**Zalesovo Beam**	**48.51**	**319**	P	**P**	**23 21 59.8**	**-0.3**
ZALV					**PcP**	**23 23 17.8**	**-0.4**
M11K	**Mekoryuk**	**48.96**	**32**	P	**P**	**23 22 03.4**	**+0.1**
M11K				IAmb	IAmb	23 22 34.1	
	comp=E,15nm,1.4s						
MKAR	**Makanchi Array**	**49.31**	**310**	P	**P**	**23 22 05.8**	**-0.4**
	comp=E,5.6nm,0.8s,baz=92,slow=9.1,SNR=58						
MKAR				PcP	**PcP**	**23 23 20.9**	**-0.4**
	comp=E,3.0nm,0.7s,baz=84,slow=5.4,SNR=10						
MKAR				ScP	**ScP**	**23 26 33.5**	**-0.7**
	comp=E,0.7nm,0.6s,baz=80,slow=5.5,SNR=6.2						
	comp=E,5.6nm,0.8s						
MKAR	**Makanchi Array**	**49.31**	**310**	P	**P**	**23 22 06.2**	**0.0**
MKAR					**PcP**	**23 23 21.4**	**+0.1**
MAKZ	**Makanchi**	**49.52**	**310**	P	**P**	**23 22 06.1**	**-1.7**
MAKZ				IAmb	IAmb	23 22 08.9	
	comp=E,15nm,1.1s						
TNA	**Tin City**	**50.11**	**25**	P	**P**	**23 22 11.3**	**-0.5**
ANM	**Nome**	**50.73**	**27**	P	**P**	**23 22 18.1**	**+1.7**
AS31	**Alice Springs**	**50.79**	**188**	P	**P**	**23 22 17.5**	**+0.1**
ASAR	**Alice Springs**	**50.79**	**188**	P	**P**	**23 22 17.2**	**-0.2**
	comp=E,1.6nm,0.6s,baz=359,slow=5.0,SNR=25						
ASAR				pP	**pP**	**23 23 45.4**	**+2.6**
	comp=E,0.5nm,0.6s,baz=17,slow=8.6,SNR=1.2						
ASAR				ScP	**ScP**	**23 26 39.4**	**-1.4**
	comp=E,0.7nm,0.5s,baz=15,slow=4.5,SNR=5.3						
	comp=E,1.6nm,0.6s						
L14K	**Kuka Creek**	**50.88**	**31**	P	**P**	**23 22 19.9**	**+2.4**
J14K	**Nanvaranak Lak**	**50.89**	**29**	P	**P**	**23 22 19.4**	**+1.9**
N14K	**Kuskokwak Cree**	**51.00**	**33**	P	**P**	**23 22 20.2**	**+1.8**
O14K	**Tigyukauivet M**	**51.06**	**34**	P	**P**	**23 22 19.8**	**+1.0**
O14K				IAmb	IAmb	23 22 54.1	
	comp=E,25nm,1.3s						
M14K	**Bethel**	**51.07**	**32**	P	**P**	**23 22 20.9**	**+2.0**
M14K				IAmb	IAmb	23 22 21.7	
	comp=E,16nm,1.1s						
F15K	**North Star Dit**	**51.42**	**26**		**P**	**23 22 23.1**	**+1.7**
WUS	**Wushi**	**51.62**	**302**	P	**P**	**23 22 24.1**	**+0.6**
K15K	**Wolf Creek Mou**	**51.66**	**30**	P	**P**	**23 22 25.2**	**+2.0**
K15K				IAmb	IAmb	23 22 26.5	
	comp=E,13nm,1.3s						
O15K	**Ungalikthiuk R**	**51.77**	**34**	P	**P**	**23 22 25.4**	**+1.4**
O15K				IAmb	IAmb	23 22 52.8	
	comp=E,32nm,1.4s						
N15K	**Kwethluk River**	**51.84**	**33**	P	**P**	**23 22 26.1**	**+1.5**
N15K				IAmb	IAmb	23 22 47.6	
	comp=E,20nm,1.4s						
KURK	**Kurchatov**	**51.91**	**315**	P	**P**	**23 22 25.1**	**-0.1**
KURK				IAmb	IAmb	23 22 25.8	
	comp=E,18nm,0.8s						
KURBB	**Kurchatov Arra**	**51.97**	**314**	P	**P**	**23 22 25.3**	**-0.3**
	comp=E,20nm,0.7s,baz=93,slow=7.7,SNR=219						
KURBB				PcP	**PcP**	**23 23 29.8**	**-1.3**
	comp=E,2.5nm,0.7s,baz=97,slow=3.7,SNR=5.8						
	comp=E,20nm,0.7s						
PRZ	**Przheval'sk**	**52.14**	**304**	P	**P**	**23 22 28.1**	**+0.8**
PRZ				IAmb	IAmb	23 22 29.4	
	comp=E,23nm,0.8s						
C16K	**Lisburne Hills**	**52.15**	**22**	P	**P**	**23 22 27.9**	**+1.3**
G16K	**Koyuk River**	**52.22**	**26**	P	**P**	**23 22 28.4**	**+1.2**
J16K	**Anvik River**	**52.34**	**29**	P	**P**	**23 22 30.2**	**+2.1**
L16K	**Owhat River**	**52.47**	**31**	P	**P**	**23 22 30.2**	**+1.1**
M16K	**Timber Creek**	**52.56**	**32**	P	**P**	**23 22 31.4**	**+1.7**
M16K				IAmb	IAmb	23 22 32.8	
	comp=E,20nm,1.4s						
TARG	**Taragay, Kyrgy**	**52.64**	**303**		**P**	**23 22 31.5**	**+0.3**
TARG				IAmb	IAmb	23 22 33.0	
	comp=Z,10nm,1.0s						
P16K	**Nushagak River**	**52.67**	**35**	P	**P**	**23 22 32.3**	**+1.7**
O16K	**Kokwok River B**	**52.72**	**34**	P	**P**	**23 22 32.3**	**+1.4**
O16K				IAmb	IAmb	23 22 55.8	
	comp=Z,21nm,1.4s						
RDOG	**Red Dog Mine**	**52.91**	**23**	P	**P**	**23 22 33.7**	**+1.5**
RDOG				IAmb	IAmb	23 22 34.8	
	comp=Z,7.6nm,0.8s						
F17K	**Baldwin Pennin**	**52.98**	**25**	P	**P**	**23 22 34.6**	**+2.0**
J17K	**VABM Dome**	**53.03**	**29**	P	**P**	**23 22 35.5**	**+2.4**
H17K	**Granite Mounta**	**53.07**	**27**	P	**P**	**23 22 35.2**	**+1.8**
KDJ	**Kajisay**	**53.07**	**304**	P	**P**	**23 22 34.2**	**+0.2**
K17K	**Iditarod**	**53.22**	**30**	P	**P**	**23 22 36.6**	**+2.1**
K17K				IAmb	IAmb	23 22 37.6	
	comp=Z,13nm,0.7s						
N17K	**Nushagak Hills**	**53.32**	**33**	P	**P**	**23 22 37.4**	**+2.1**
N17K				IAmb	IAmb	23 22 50.5	
	comp=Z,23nm,1.4s						
M17K	**Holitna River**	**53.36**	**32**	P	**P**	**23 22 37.5**	**+2.0**
M17K				IAmb	IAmb	23 23 13.6	
	comp=Z,18nm,1.4s						
E18K	**Tukpahlearik C**	**53.52**	**24**	P	**P**	**23 22 38.6**	**+2.0**
C18K	**Utukok River**	**53.71**	**23**	P	**P**	**23 22 39.6**	**+1.6**
H18K	**Honhosa River**	**53.76**	**27**	P	**P**	**23 22 40.3**	**+2.0**
G18K	**Tagagawik**	**53.83**	**26**	P	**P**	**23 22 39.8**	**+0.9**
L18K	**Granite Mounta**	**53.86**	**31**	P	**P**	**23 22 41.2**	**+2.1**
BOOM	**Boomskoye usch**	**53.95**	**304**	P	**P**	**23 22 40.8**	**+0.5**
BOOM				IAmb	IAmb	23 22 41.7	
	comp=Z,8.7nm,0.7s						
N18K	**Kilae Creek**	**53.98**	**33**	P	**P**	**23 22 41.6**	**+1.6**
N18K				IAmb	IAmb	23 23 01.4	
	comp=Z,19nm,1.4s						
NRN	**Naryn**	**54.02**	**303**	P	**P**	**23 22 41.2**	**+0.2**
J18K	**Innoko River**	**54.08**	**30**	P	**P**	**23 22 41.5**	**+0.8**
P18K	**Big Mountain,**	**54.13**	**35**	P	**P**	**23 22 42.1**	**+1.0**
P18K				IAmb	IAmb	23 22 44.9	
	comp=Z,16nm,1.4s						
O18K	**Koktuh Hills**	**54.20**	**34**	P	**P**	**23 22 42.8**	**+1.2**
O18K				IAmb	IAmb	23 23 03.7	
	comp=Z,42nm,1.5s						
SII	**Sitkinak Islan**	**54.41**	**38**	P	**P**	**23 22 42.9**	**-0.1**
C19K	**Lookout Ridge**	**54.41**	**22**	P	**P**	**23 22 44.7**	**+1.8**
F19K	**Shaleruckik Mo**	**54.42**	**25**	P	**P**	**23 22 43.9**	**+1.0**
G19K	**Purcell Mounta**	**54.51**	**26**	P	**P**	**23 22 45.5**	**+1.8**
KSH2	**Kashi**	**54.63**	**300**	P	**P**	**23 22 46.1**	**+1.0**
KSH2				pmax	pmax		
	comp=Z,14nm,0.8s						
J19K	**Poorman**	**54.66**	**29**	P	**P**	**23 22 46.1**	**+1.4**
KBK	**Karagaybulak**	**54.67**	**305**	P	**P**	**23 22 46.0**	**+0.7**
SNR=10							
N19K	**Bonanza Creek**	**54.68**	**33**	P	**P**	**23 22 46.1**	**+1.1**
N19K				IAmb	IAmb	23 23 22.8	
	comp=Z,20nm,1.4s						
L19K	**White Mountain**	**54.70**	**31**	P	**P**	**23 22 47.0**	**+1.9**
L19K				IAmb	IAmb	23 22 49.5	
	comp=Z,16nm,1.5s						
D19K	**Kuna River**	**54.74**	**23**	P	**P**	**23 22 46.6**	**+1.4**
DZM	**Mont Dzumac**	**54.92**	**150**	P	**P**	**23 22 48.4**	**+1.2**
DZM				IAmb	IAmb	23 22 49.9	
	comp=Z,8.1nm,0.9s						
USP	**Ospenovka**	**54.93**	**305**	P	**P**	**23 22 47.3**	**+0.2**
SNR=7.2							
OHAK	**Old Harbor**	**54.94**	**37**	P	**P**	**23 22 49.5**	**+2.7**
AAK	**Ala-Archa**	**55.00**	**305**	P	**P**	**23 22 48.1**	**+0.4**
SNR=7.6							
AAK	**Ala-Archa**	**55.00**	**305

SCRK IAmb IAmb 23 23 21.4
comp=Z,9.2nm,0.6s
F26K Sheenjek River 59.77 25 P P 23 23 22.1 +2.2
PALK Pallekele 59.80 262 P P 23 23 20.9 -0.1
PALK IAmb IAmb 23 23 21.3
comp=Z,28nm,1.2s
GLB Gilahina Butte 59.88 33 P P 23 23 21.6 +0.9
GLB IAmb IAmb 23 23 41.1
comp=Z,33nm,1.5s
G26K Porcupine Rive 59.89 26 P P 23 23 22.5 +1.9
MENT Mentasta 59.89 31 P P 23 23 22.0 +1.3
MENT IAmb IAmb 23 23 23.0
comp=Z,6.1nm,0.6s
C27K Jago River 60.02 23 P P 23 23 23.4 +1.9
C27K IAmb IAmb 23 23 24.1
comp=Z,8.3nm,0.7s
L26K Log Cabin Wild 60.06 31 P P 23 23 23.6 +1.7
L26K IAmb IAmb 23 23 24.1
comp=Z,9.4nm,0.6s
VRDI Verde Repeater 60.06 33 P P 23 23 23.2 +1.0
I26K Coal Creek Min 60.12 28 P P 23 23 22.8 +0.6
I26K IAmb IAmb 23 23 58.1
comp=Z,11nm,1.4s
M26K Nabesna, AK 60.24 31 P P 23 23 24.3 +1.2
M26K IAmb IAmb 23 23 52.1
comp=Z,15nm,1.4s
MCARA McCarthy VSAT 60.26 33 P P 23 23 24.8 +1.6
TGL Tana Glacier 60.38 33 P P 23 23 24.8 +0.6
KBL Kabul 60.64 296 P 23 23 26.0 -0.5
KBL Kabul 60.64 296 P P 23 23 26.7 +0.1
SNR=20
G27K Doyon Strip 60.73 26 P P 23 23 27.1 +0.8
E27K Coleen River 60.75 25 P P 23 23 28.3 +1.9
L27K Beaver Creek, 60.75 31 P P 23 23 27.6 +1.1
L27K IAmb IAmb 23 23 52.0
comp=Z,12nm,1.4s
M27K Edge Creek, AK 60.76 31 P P 23 23 28.2 +1.5
M27K IAmb IAmb 23 24 07.3
comp=Z,20nm,1.4s
I27K Kandik River 60.76 28 P P 23 23 27.9 +1.3
BCAR Beaver Creek A 60.77 31 P P 23 23 28.2 +1.6
D27M Malcolm River 60.98 24 IAmb IAmb 23 23 30.5
comp=Z,5.7nm,0.8s
F28M Old Crow 61.41 25 IAmb IAmb 23 23 33.4
comp=Z,5.8nm,0.7s
I28M Miner Creek 61.47 28 P P 23 23 32.6 +1.4
I28M IAmb IAmb 23 23 33.3
comp=Z,3.9nm,0.6s
EPYK Eagle Plains 62.72 27 P P 23 23 41.0 +1.7
EPYK IAmb IAmb 23 23 41.7
comp=Z,13nm,0.8s
G30M tAoh Zraii Nji 62.86 26 IAmb IAmb 23 23 42.3
comp=Z,15nm,1.2s
HYT Haines Junctio 62.98 33 P P 23 23 43.0 +1.7
M30M Minto, Yukon 63.09 31 P P 23 23 43.3 +1.4
ARTI Arti 63.62 322 P 23 23 44.9 -0.4
N31M Braeburn, Yuko 63.72 32 P P 23 23 47.6 +1.7
INK Inuvik 63.74 24 P P 23 23 45.9 +0.1
F31M Tsiigehtchic 63.77 25 P P 23 23 46.5 +0.5
F31M IAmb IAmb 23 23 59.0
comp=Z,14nm,1.5s
AB31 Akbulak array 64.02 314 P 23 23 47.6 -0.4
AB31 IAmb IAmb 23 23 48.6
comp=Z,12nm,0.9s
ABKAR Akbulak array 64.02 314 P 23 23 47.6 -0.4
M31M Drury Creek, Y 64.26 31 P P 23 23 50.9 +1.6
M31M IAmb IAmb 23 23 51.4
comp=Z,4.4nm,0.7s
MMPY Sheldon Lake, 65.61 30 P P 23 23 59.5 +1.6
MMPY IAmb IAmb 23 24 25.5
comp=Z,16nm,1.5s
HRA Herat 66.09 298 P 23 24 02.1 +0.3
C36M Paulatuk 66.91 23 P P 23 24 06.4 +0.6
SPITS Spitsbergen Ar 70.17 350 P P 23 24 25.9 +0.3
comp=Z,3.3nm,0.6s,baz=116,slow=5.7,SNR=30
comp=Z,3.3nm,0.6s
RES Resolute Bay 72.49 13 P P 23 24 39.6 +0.3
WBK Wadi Bani Khal 72.83 287 P P 23 24 42.2 -0.1
YKAW3 Yellowknife Wh 72.91 28 P 23 24 42.2 +0.2
YKAW3 IAmb IAmb 23 24 43.4
comp=Z,5.3nm,0.9s
YKA Yellowknife Ar 72.94 28 P P 23 24 42.5 +0.3
comp=Z,3.3nm,0.8s,baz=299,slow=6.5,SNR=37
comp=Z,3.3nm,0.8s
YKA Yellowknife Ar 72.94 28 P P 23 24 42.3 +0.2
YKAW1 Yellowknife Wh 73.00 28 P 23 24 43.1 +0.7
YKAW1 IAmb IAmb 23 24 43.9
comp=Z,5.9nm,0.7s
ARCES ARCESS Array B 73.08 341 P P 23 24 43.3 +0.4
comp=Z,6.0nm,0.6s,baz=70,slow=8.4,SNR=26
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 73.08 341 P P 23 24 43.4 +0.5
BIDO Bidbid 73.19 288 P P 23 24 45.1 +0.8
SMDO Samad 73.44 288 P P 23 24 45.4 -0.5
JMDO Jabal Madar 73.66 287 P P 23 24 46.5 -0.6
BANOM Banah 73.81 291 P P 23 24 48.1 +0.1
HOQ Hoqain 73.86 289 P P 23 24 47.5 -0.7
SHME Shamm 73.90 291 P P 23 24 49.1 +0.8
SNR=7.2
MASF Masafi 74.14 291 P P 23 24 49.6 -0.2
BSY Bisya 74.28 288 P P 23 24 50.1 -0.5
SNR=7.1
SOHO SOHO 74.30 289 P P 23 24 50.9 +0.2
MHTO MHTO 74.31 286 P P 23 24 50.1 -0.7
HATD Hatta, Dubai 74.37 290 P P 23 24 51.3 +0.2
ASHO Ashiyiah 74.49 290 P P 23 24 51.8 0.0
ALNE Al Ain 74.99 290 P P 23 24 54.3 -0.4
G04A Mulino 76.01 46 P P 23 24 55.8 -4.1
UMZA Um Al Zommool 76.02 289 P P 23 24 59.6 -0.7
KBO Bosley Butte 76.07 50 P P 23 25 01.6 +1.2
KBO IAmb IAmb 23 25 14.6
comp=Z,15nm,1.4s
B08A Colville Reser 76.64 42 P P 23 25 04.1 +0.7
B08A IAmb IAmb 23 25 05.6
comp=Z,5.4nm,0.8s
KBZ Khabaz 76.90 312 P P 23 25 04.8 0.0
comp=Z,9.9nm,0.8s,baz=100,slow=4.9,SNR=27
comp=Z,9.9nm,0.8s
WIFE Three Sisters- 76.91 47 P P 23 25 06.9 +1.7
WIFE IAmb IAmb 23 25 07.9
comp=Z,4.9nm,0.8s
KIV Kislovodsk 76.94 313 P P 23 25 05.2 0.0
KIV IAmb IAmb 23 25 07.5
comp=Z,11nm,1.0s
KIV Kislovodsk 76.94 313 P P 23 25 05.7 +0.5
comp=Z,10nm,1.6s
KHMM Horse Mountain 76.95 51 P P 23 25 07.0 +1.6
KHMM IAmb IAmb 23 25 08.1
comp=Z,3.9nm,0.9s
GNI Garni 77.14 309 P P 23 25 06.9 +0.5
comp=Z,7.7nm,1.0s
YBH Yreka Blue Hor 77.30 50 P P 23 25 09.0 +1.8
YBH IAmb IAmb 23 25 10.0
comp=Z,3.7nm,0.8s
FINES FINESS Array B 77.31 333 P P 23 25 06.5 -0.2
comp=Z,25nm,0.5s,baz=69,slow=5.3,SNR=257
comp=Z,25nm,0.5s
MZR Muzera 77.32 289 P P 23 25 07.0 -0.6
M02C Callahan 77.34 50 P P 23 25 08.8 +1.4
L04D Klamath Falls 77.36 49 P P 23 25 08.8 +1.2
L04D IAmb IAmb 23 25 10.0
comp=Z,4.2nm,0.7s
PINE Pine Mountain 77.60 47 P 23 25 10.8 +1.8
J05D Fort Rock, OR 77.62 48 P 23 25 10.0 +0.9
J05D IAmb IAmb 23 25 11.9
comp=Z,4.8nm,0.8s
M03C McCloud 77.89 50 P P 23 25 11.7 +1.3
M03C IAmb IAmb 23 25 12.9
comp=Z,9.5nm,0.8s
NEW Newport 78.01 42 P P 23 25 11.6 +0.7
K05A Summer Lake 78.09 48 P P 23 25 11.9 +0.2
K05A IAmb IAmb 23 25 14.4
comp=Z,8.3nm,0.9s
DOK Doka 78.57 285 P P 23 25 13.3 -1.1
ORV Oroville 79.06 51 P P 23 25 17.6 +1.0
ORV IAmb IAmb 23 25 19.8
comp=Z,6.4nm,1.5s
GEVA Gevas 79.10 307 P P 23 25 16.6 -0.5
GEVA IAmb IAmb 23 25 18.4
comp=Z,8.6nm,1.2s
BMO Blue Mountains 79.46 45 P 23 25 19.2 +0.4
BMO IAmb IAmb 23 25 21.2
comp=Z,4.0nm,0.8s
BEKR Beckworth 79.71 51 P P 23 25 20.7 +0.3
GURO Guroymak-BITLI 79.72 308 P P 23 25 21.0 +0.7
GURO IAmb IAmb 23 25 21.9
comp=Z,7.0nm,0.9s
ABTO Aybut 79.82 284 P P 23 25 20.2 -0.9
KOPT Kop Dagi 80.13 310 P P 23 25 23.1 +0.4
KOPT IAmb IAmb 23 25 24.8
comp=Z,10nm,1.3s
PLID Pearl Lake 80.17 44 P P 23 25 23.8 +1.0
MPK Martis Peak 80.19 51 P P 23 25 22.8 -0.3
MPK IAmb IAmb 23 25 25.4
comp=Z,12nm,1.4s
PAHR Pah Rah Range 80.45 50 P 23 25 25.0 +0.8
PAHR IAmb IAmb 23 25 26.3
comp=Z,3.9nm,0.8s
PNTR Pine Nut 80.58 51 P P 23 25 26.0 +1.0
PNTR IAmb IAmb 23 25 27.5
comp=Z,4.9nm,0.8s
MFID Camas Ranch 81.08 46 P P 23 25 27.7 +0.3
MFID IAmb IAmb 23 25 29.8
comp=Z,4.4nm,0.8s
MARD Mardin 81.16 307 P 23 25 28.2 +0.3
MARD IAmb IAmb 23 25 29.2
comp=Z,10nm,0.8s
PABE Paberze 81.62 329 P 23 25 29.3 -0.4
AK03 Malin Array Si 81.72 323 P P 23 25 29.6 -0.8
AKASG Malin Array Be 81.74 323 P P 23 25 29.9 -0.6
comp=Z,10.0nm,0.6s,baz=53,slow=5.3,SNR=41
comp=Z,10.0nm,0.6s
AKASG Malin Array Be 81.74 323 P P 23 25 29.4 -1.1
AKASG IAmb IAmb 23 25 31.0
comp=Z,8.2nm,1.1s
AKBB Malin Array Si 81.74 323 P 23 25 29.9 -0.5
AKBB Malin Array Si 81.74 323 P P 23 25 29.1 -1.3
AK01 Malin Array Si 81.75 323 P P 23 25 29.5 -1.0
KIEV Kiev 81.75 323 P 23 25 30.2 -0.3
KIEV Kiev 81.75 323 P P 23 25 29.1 -1.4
comp=Z,108nm,0.7s
AK09 Malin Array Si 81.75 323 P P 23 25 29.5 -1.0
NVAR Mina Array Bea 81.79 51 P P 23 25 32.4 +1.1
comp=Z,2.4nm,0.6s,baz=296,slow=5.3,SNR=18
comp=Z,2.4nm,0.6s
AK19 Malin Array Si 81.84 323 P P 23 25 29.9 -1.1
AK13 Malin Array Si 81.87 323 P P 23 25 30.1 -1.0
LRM Limekiln Ridge 81.98 42 P P 23 25 32.8 +0.6
ARPR Arapgir-MALATY 82.04 310 P 23 25 32.1 -0.3
MI28 Mish,Pidlybu 82.43 324 P P 23 25 32.3 -1.7
DSP Deep Springs 82.52 52 P P 23 25 35.8 +1.1
DSP IAmb IAmb 23 25 37.5
comp=Z,5.3nm,1.2s
TOKA Tokat 82.70 312 P P 23 25 34.9 -0.7
TOKA IAmb IAmb 23 25 37.0
comp=Z,11nm,1.3s
HFS Hagfors 82.86 336 P P 23 25 35.1 -0.9
comp=Z,11nm,0.6s,baz=97,slow=3.7,SNR=39
comp=Z,11nm,0.6s
NC405 NORSAR Array S 82.86 338 P 23 25 35.1 -0.9
SUW Suwalki 82.88 328 P P 23 25 35.3 -0.9
NC303 NORSAR Array S 82.90 338 P P 23 25 36.2 +0.1
LUBAR Lubar, Ukraine 82.95 323 P P 23 25 35.7 -1.0
BAL3X Bal3x, Balta 83.03 321 P P 23 25 36.1 -1.0
NC204 NORSAR Array S 83.06 338 P P 23 25 36.6 -0.5
RNPP9 Sopachiv 83.08 325 P P 23 25 36.6 -0.7
NB2 NORSAR Subarra 83.08 338 P P 23 25 35.8 -1.4
comp=Z,5.1nm,0.5s,baz=49,slow=4.6
NB2 NORSAR Subarra 83.08 338 P P 23 25 35.8 -1.4
NB2 AMP 23 25 35.8
comp=Z,5.1nm,0.5s
NOA NORSAR Array B 83.08 338 P P 23 25 36.2 -0.9
comp=Z,9.2nm,0.6s,baz=46,slow=4.8,SNR=31
comp=Z,9.2nm,0.6s
QLMT Earthquake Lak 83.11 43 P P 23 25 38.1 +0.2
RNPP8 Varash 83.14 325 P P 23 25 37.0 -0.6
RAYN Ar Rayn 83.73 293 P 23 25 41.0 -0.2
RAYN Ar Rayn 83.73 293 P P 23 25 41.5 +0.3
HVU Hansel Valley 83.85 46 P P 23 25 41.9 +0.3
HVU IAmb IAmb 23 25 44.1
comp=Z,3.1nm,0.7s
H17A Grant Village 83.86 43 P P 23 25 43.1 +1.4
H17A IAmb IAmb 23 25 46.0
comp=Z,6.9nm,1.1s
TPNV Topopah Spring 83.93 52 P P 23 25 43.0 +0.9
TPNV IAmb IAmb 23 25 44.1
comp=Z,5.4nm,0.8s
FLWY Flagg Ranch 83.95 43 P P 23 25 42.2 +0.1
FLWY IAmb IAmb 23 25 45.4
comp=Z,4.5nm,0.8s
QSM Queen of Sheba 83.97 53 P 23 25 43.6 +1.5
QSM IAmb IAmb 23 25 44.2
comp=Z,5.9nm,0.7s
GWY Greenwater Val 84.00 52 P P 23 25 43.5 +1.0
GWY IAmb IAmb 23 25 44.4
comp=Z,4.4nm,0.8s
PSUT Pine Spring 84.79 49 P P 23 25 47.1 +0.8
BRTR Keskin Array B 84.89 312 P P 23 25 45.6 -1.1
comp=Z,2.8nm,1.0s,baz=90,slow=3.9,SNR=11
comp=Z,2.8nm,1.0s
BRTR Keskin Array B 84.89 312 P 23 25 45.9 -0.9
BR104 Keskin Array S 84.90 312 P P 23 25 45.7 -1.0
comp=Z,3.2nm,0.9s
BR106 Keskin Array S 84.90 312 P P 23 25 45.7 -1.1
comp=Z,45.5nmcomp=Z,3.8nm,1.2s
BR105 Keskin Array S 84.91 312 P P 23 25 45.8 -1.0
comp=Z,51nmcomp=Z,4.4nm,0.9s
PDAR Pinedale Array 85.36 44 P P 23 25 49.8 +0.7
comp=Z,0.7nm,0.6s,baz=235,slow=5.2,SNR=3.7
comp=Z,0.7nm,0.6s
PFO Pinyon Flats O 85.41 55 P P 23 25 50.0 +0.7
PFO IAmb IAmb 23 25 51.4
comp=Z,4.9nm,0.8s
PMD Palm Desert 85.45 55 P P 23 25 49.8 +0.4
PMD IAmb IAmb 23 25 51.3
comp=Z,5.4nm,0.8s
MORS Morshin 85.46 324 P P 23 25 48.5 -0.6
TESR Tescani 85.50 321 P P 23 25 48.6 -0.8
comp=Z,11nm,1.1s
BUR08 Bucovina Ar. S 85.64 322 P 23 25 49.9 -0.3
BUR08 IAmb IAmb 23 25 50.8
comp=Z,4.2nm,0.8s
BURAR Bucovina Array 85.65 322 P P 23 25 50.1 -0.1
BURAR IAmb IAmb 23 25 51.0
comp=Z,4.5nm,0.8s
SHIU Shidnytsya 85.68 324 P P 23 25 49.5 -0.7
KWP Kalwaria Pacla 85.78 325 P P 23 25 49.9 -0.8
comp=Z,19nm,1.4s
RAKU Rahkiv 85.98 323 P P 23 25 50.4 -1.3
KECS Kecovo 87.64 325 eP P 23 26 00.3 +0.8
LANS Liptovska Anna 87.73 326 eP P 23 26 00.3 +0.3
STEB Steborice 88.05 327 eP P 23 26 01.0 -0.4
PV10 Paradox Valley 88.08 47 P P 23 26 03.4 +1.2
PV10 IAmb IAmb 23 26 04.3
comp=Z,6.1nm,0.8s
KSP Ksiaz 88.15 328 P P 23 26 01.3 -0.6
comp=Z,11nm,2.2s
PV19 Morning Glory 88.15 47 P P 23 26 03.5 +1.0
PV19 IAmb IAmb 23 26 04.3
comp=Z,5.3nm,0.7s
MORC Moravsky Berou 88.27 327 eP P 23 26 02.0 -0.5
CHVC Chvalec 88.44 328 eP P 23 26 03.0 -0.2
DPC Dobruska-Polom 88.47 328 eP P 23 26 03.4 0.0
DPC Dobruska-Polom 88.47 328 P P 23 26 03.4 0.0
JAVC Velka Javorina 88.81 326 eP P 23 26 05.8 +0.7
VRAC Vranov 89.04 327 eP P 23 26 05.7 -0.4
PVCC Panska Ves 89.17 329 eP P 23 26 06.7 +0.1
SRO Srobarova 89.18 325 eP P 23 26 06.7 0.0
SRO ePP PP 23 29 45.4 +1.7
KRUC Moravsky 89.30 327 eP P 23 26 06.9 -0.4
MODS Modra-Piesok 89.33 326 eP P 23 26 08.7 +1.3
PRU Pruhonice 89.55 328 eP P 23 26 07.8 -0.6
TREC Trnesi 89.58 328 eP P 23 26 08.1 -0.5
RONA Rosalia, Austr 90.27 326 ePcP PcP 23 26 11.9 -0.8
comp=Z,5.1nm,0.8s
CONA Conrad Observa 90.33 326 i PcP P 23 26 12.1 -0.1
comp=Z,3.8nm,0.7s,SNR=4.5
CKRC Cesky Krumlov 90.47 328 eP P 23 26 12.1 -0.6
KHC Kasperske Hory 90.60 328 eP P 23 26 12.5 -0.8
GERES GERESS Array B 90.74 328 P P 23 26 13.0 -1.0
comp=Z,2.5nm,0.7s,baz=39,slow=5.1,SNR=16
comp=Z,2.5nm,0.7s
ARSA Arzberg 90.96 326 eP P 23 26 14.5 -0.6
comp=Z,2.0nm,0.9s
BIOA Bad Ischl, Aus 91.58 327 ePcP PcP 23 26 17.8 -0.7
comp=Z,1.8nm,0.6s
SOKA Soboth 91.60 326 i P P 23 26 17.4 -0.6
comp=Z,5.2nm,0.8s,SNR=7.3
TASM ASL Pad, Albuq 91.72 49 P P 23 26 21.2 +2.2
TASM IAmb IAmb 23 26 21.9
comp=Z,1.9nm,0.8s
OBKA Obir 91.96 326 P P 23 26 18.7 -1.0
comp=Z,3.6nm,0.8s,SNR=4.1
LESA Schwarzleotal 92.23 327 i P P 23 26 20.2 -0.7
comp=Z,4.5nm,0.6s,SNR=5.9
MYKA Terra Mystica 92.32 326 i P P 23 26 20.0 -1.4
comp=Z,3.2nm,0.5s
WATA Walderalm 92.82 328 eP P 23 26 22.6 -1.1
comp=Z,2.5nm,0.6s
WTTA Wattenberg 92.84 328 eP P 23 26 22.7 -1.2
comp=Z,2.2nm,0.6s
MOTA Moosalm 93.04 328 eP P 23 26 23.3 -1.4
comp=Z,2.4nm,0.7s
SQTA Sankt Quirin 93.08 328 i P P 23 26 23.9 -1.0
comp=Z,4.5nm,0.7s
FETA Feichten 93.45 328 i P P 23 26 25.4 -1.2
comp=Z,3.3nm,0.7s
FUORN Ofenpass-Fuorn 93.96 328 P P 23 26 28.5 -0.6
TXAR Lajitas Array 96.89 52 P P 23 26 43.2 +0.6
comp=Z,0.8nm,0.7s,baz=298,slow=2.7,SNR=3.8
comp=Z,0.8nm,0.7s
TORD Torodi Ar. Bea 123.43 310 PKP PKPdf 23 32 05.7 -0.4
comp=Z,1.6nm,0.5s,baz=39,slow=3.5,SNR=19
DBIC Dimbokro 132.54 310 PKP PKPdf 23 32 23.3 -0.2
comp=Z,4.1nm,0.7s,baz=90,slow=3.4,SNR=3.8
PLCA Paso Flores 151.05 126 PKPbc PKiKP 23 33 02.4 +0.5
comp=Z,4.8nm,0.5s,baz=236,slow=3.0,SNR=27
LPAZ La Paz 151.46 74 PKPbc PKiKP 23 33 04.2 +0.1
comp=Z,6.1nm,0.7s,baz=350,slow=2.4,SNR=23

*IDC **20** 23:35:25.8±6.1, 60.73S×29.03W, h0km, mb4.0/1, mbtmp4.1/2, ML4.0/1, MS3.4/1, Error ellipse: s-maj=263.7km s-min=49.7km az=79.0*
ISC 20 23:35:26.5±3.5, 60.8S±0.4×2.9W±.1, h10km, n20, σ0.65/8, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.00**	**148**	⇑P		**Pn**	**23 38 30.7**	**-0.3**
	comp=Z,2.3nm,0.2s							
VNA3	**Neumayer Olymp**	**13.04**	**151**	⇑P		**Pn**	**23 38 31.5**	**0.0**
	comp=Z,2.6nm,0.2s							
VNA2	**Neumayer--Watz**	**13.40**	**148**	⇑P		**Pn**	**23 38 35.8**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=304,slow=15							
SNAA	**Sanae**	**15.03**	**147**	⇑P		**Pn**	**23 38 59.8**	**+1.1**
	comp=Z,59nm,0.6s							
SNAA	**Sanae**	**15.03**	**147**	Pn		**Pn**	**23 38 59.2**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=309,slow=16,SNR=8.8							
	comp=Z,3.5nm,0.5s							
PLCA	**Paso Flores**	**32.16**	**290**	LR		LR	23 53 27.1	
	comp=Z,58nm,18.7s,baz=158,slow=34							
H04S2	**CROZET ISLANDS**	**46.72**	**111**	T		T	00 33 52.8	
	baz=223,slow=75,SNR=56							
H04S3	**CROZET ISLANDS**	**46.73**	**111**	T		T	00 33 53.6	
	baz=223,slow=75,SNR=50							
H04S1	**CROZET ISLANDS**	**46.74**	**111**	T		T	00 33 50.1	
	baz=223,slow=75,SNR=64							
H10S2	**ASCENSION HYDR**	**52.91**	**18**	T		T	00 41 36.8	
	baz=32,slow=74,SNR=6.8							
H10S3	**ASCENSION HYDR**	**52.92**	**18**	T		T	00 41 36.6	
	baz=188,slow=74,SNR=5.7							
H10N1	**ASCENSION HYDR**	**54.03**	**18**	T		T	00 43 02.4	
	baz=186							
H10N3	**ASCENSION HYDR**	**54.03**	**18**	T		T	00 43 04.2	
	baz=186							
H10N2	**ASCENSION HYDR**	**54.05**	**18**	T		T	00 43 10.3	
	baz=186							
TORD	**Torodi Ar. Bea**	**77.77**	**31**	P		**P**	**23 47 23.4**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=189,slow=5.4,SNR=12							
	comp=Z,0.7nm,0.5s							
H01W2	**Cape Leeuwin H**	**80.03**	**150**	T		T	01 15 48.2	
	baz=199,slow=75,SNR=4.5							
H01W1	**Cape Leeuwin H**	**80.04**	**150**	T		T	01 15 51.2	
	baz=199,slow=75,SNR=3.9							
H01W3	**Cape Leeuwin H**	**80.04**	**150**	T		T	01 15 49.9	
	baz=199,slow=75,SNR=4.5							
ZALV	**Zalesovo Beam**	**145.24**	**71**	PKPbc		**PKPdf**	**23 55 03.2**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=217,slow=4.5,SNR=2.3							
SONM	**Songino Array**	**151.69**	**97**	PKPbc		**PKiKP**	**23 55 20.5**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=207,slow=1.0,SNR=4.5							

*NEIC **20** 23:58:08.7±1.0, 16.78S±0.08×72.09W±0.10, h66km±14km, mb4.4/6, Error ellipse: s-maj=13.5km s-min=11.1km az=70.0*
*IDC **20** 23:58:10.1±2.4, 16.43S×71.89W, h82km±21km, mb3.6/8, mbtmp4.0/11, MS3.7/1, Error ellipse: s-maj=28.6km s-min=18.7km az=39.0*
ISC 20 23:58:09.3±0.5, 16.66S±0.08×72.01W±0.08, h92km, n59, σ1.89/51, mb3.9/10, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**2.33**	**137**			**Pn**	**23 58 44.2**	**-1.8**
PB12	**IPOC Station P**	**2.52**	**141**			**Pn**	**23 58 46.9**	**-1.7**
PB18	**Visviri**	**2.59**	**111**			**Pn**	**23 58 50.2**	**+0.2**
PB16	**IPOC Station P**	**2.92**	**125**			**Pn**	**23 58 52.8**	**-1.5**
LPAZ	**La Paz**	**3.74**	**85**	P		**Pn**	**23 59 06.2**	**+0.7**
	22nm,0.4s,baz=311,slow=4.9,SNR=91							
PB11	**IPOC Station P**	**3.81**	**144**			**Pn**	**23 59 04.2**	**-1.8**
GO01	**Chusmiza**	**4.02**	**139**			**Pn**	**23 59 08.0**	**-1.1**
HMBC	**Humberstone**	**4.13**	**151**			**Pn**	**23 59 08.1**	**-2.1**
PB08	**IPOC Station P**	**4.40**	**142**			**Pn**	**23 59 12.7**	**-1.5**
PB01	**IPOC Station P**	**4.98**	**152**			**Pn**	**23 59 19.7**	**-2.0**
PB02	**IPOC Station P**	**5.05**	**157**			**Pn**	**23 59 20.8**	**-2.0**
PB07	**IPOC Station P**	**5.43**	**159**			**Pn**	**23 59 26.0**	**-1.9**
PB09	**IPOC Station P**	**5.74**	**153**			**Pn**	**23 59 30.8**	**-1.4**
PB03	**IPOC Station P**	**5.77**	**159**			**Pn**	**23 59 30.7**	**-1.9**
PB05	**IPOC Station P**	**6.40**	**165**			**Pn**	**23 59 38.7**	**-2.4**
PB06	**IPOC Station P**	**6.44**	**159**			**Pn**	**23 59 39.5**	**-2.2**
NNA	**Nana**	**6.59**	**314**	P		**Pn**	**23 59 43.0**	**-0.7**
	46nm,0.8s,baz=158,slow=9.3,SNR=16							
NNA				S		**Sn**	**00 00 56.1**	**-1.3**
	33nm,0.6s,baz=30,slow=24,SNR=3.6							
NNA	**Nana**	**6.59**	**314**			**Pn**	**23 59 44.4**	**+0.6**
PB10	**IPOC Station P**	**6.96**	**169**			**Pn**	**23 59 46.1**	**-2.5**
PB14	**IPOC Station P**	**8.07**	**170**			**Pn**	**00 00 01.2**	**-2.9**
GO02	**Mina Guanaco**	**8.76**	**165**			**Pn**	**00 00 11.5**	**-2.0**
AC01	**Pan de Azucar**	**9.54**	**172**	Pn		**Pn**	**00 00 21.0**	**-2.8**
AC02	**Maricunga**	**10.48**	**166**			**Pn**	**00 00 35.6**	**-1.4**
GO03	**Copiapo**	**11.01**	**172**	Pn		**Pn**	**00 00 42.0**	**-1.9**
AC04	**Llanos de Chal**	**11.53**	**176**	Pn		**Pn**	**00 00 47.0**	**-3.8**
VILB	**Vilhena**	**12.00**	**74**			**Pn**	**00 00 54.4**	**-2.9**
AC05	**El Transito**	**12.23**	**173**	Pn		**Pn**	**00 00 58.2**	**-2.1**
LCO	**Las Campanas**	**12.36**	**175**	Pn		**Pn**	**00 00 59.6**	**-2.5**
CFA	**Coronel Fontan**	**15.27**	**168**	P		**P**	**00 01 42.8**	**0.0**
	2.5nm,0.7s,baz=348,slow=11,SNR=7.6							
H03N1	**Juan Fernandez**	**17.83**	**199**	T		T	00 20 16.9	
	baz=22,slow=73,SNR=1322							
H03N2	**Juan Fernandez**	**17.84**	**199**	T		T	00 20 17.9	
	baz=22,slow=73,SNR=1393							
H03N3	**Juan Fernandez**	**17.85**	**199**	T		T	00 20 15.7	
	baz=22,slow=73,SNR=1524							
TRCB	**Terra Rica**	**19.23**	**112**	P		**Pn**	**00 02 30.0**	**+1.7**
TRCB				IAmb	IAmb		00 02 41.3	
	comp=Z,18nm,0.5s							
ITAB	**Concordia**	**21.20**	**123**	P		**P**	**00 02 48.5**	**+0.9**
ITAB				IAmb	IAmb		00 03 18.6	
	comp=Z,15nm,1.0s							
BOAV	**Boa Vista**	**22.07**	**32**	P		**P**	**00 02 54.3**	**-2.7**
PLTB	**Pedras Altas**	**22.49**	**135**	P		**P**	**00 03 02.1**	**+0.9**
PLTB				IAmb	IAmb		00 03 34.3	
	comp=Z,35nm,1.4s							
TRQA	**Tornquist**	**23.07**	**159**	P		**P**	**00 03 10.5**	**+3.4**
PLCA	**Paso Flores**	**24.02**	**177**	P		**P**	**00 03 19.3**	**+3.6**
	comp=Z,2.0nm,0.8s,baz=275,slow=3.7,SNR=3.2							
	comp=Z,2.0nm,0.8s							
MDP	**Montagnes des**	**28.88**	**43**	LR		LR	00 15 31.8	
	comp=Z,193nm,19.9s,baz=116,slow=36							
TXAR	**Lajitas Array**	**54.99**	**326**	P		**P**	**00 07 30.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=122,slow=11,SNR=1.7							
	comp=Z,0.3nm,0.5s							
PDAR	**Pinedale Array**	**68.47**	**331**	P		**P**	**00 09 03.0**	**+1.1**
	comp=Z,0.1nm,0.5s,baz=120,slow=6.4,SNR=1.6							
	comp=Z,0.1nm,0.5s							
ULM	**Lac du Bonnet**	**69.86**	**344**	P		**P**	**00 09 10.4**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=163,slow=11,SNR=2.2							
	comp=Z,1.4nm,0.6s							
DBIC	**Dimbokro**	**70.32**	**76**	P		**P**	**00 09 13.5**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=283,slow=9.1,SNR=4.9							
	comp=Z,2.4nm,0.5s							
YNE	**Yellowstone No**	**70.42**	**332**	P		**P**	**00 09 15.9**	**+2.0**
YNE				IAmb	IAmb		00 09 17.2	
	comp=Z,3.7nm,1.0s							
TORD	**Torodi Ar. Bea**	**78.61**	**73**	P		**P**	**00 10 01.6**	**0.0**

comp=Z,2.7nm,0.7s,baz=267,slow=3.9,SNR=19
comp=Z,2.7nm,0.7s
ESDC Sonseca Array 84.53 46 P **P** **00 10 33.6 +1.2**
comp=Z,0.6nm,0.7s,baz=238,slow=5.3,SNR=5.3
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 85.68 342 P **P** **00 10 38.8 +1.3**
comp=Z,0.8nm,0.7s,baz=137,slow=4.3,SNR=18
comp=Z,0.8nm,0.7s
H11N3 WAKE ISLAND Hyd 24.17 283 T T 02 33 55.0
baz=99,slow=74,SNR=4.4
H11N2 WAKE ISLAND Hyd 24.19 283 T T 02 33 55.6
baz=99,slow=74,SNR=6.8
H11N1 WAKE ISLAND Hyd 24.19 283 T T 02 34 05.2
baz=99,slow=74,SNR=2.6
H11S2 WAKE ISLAND Hyd 24.20 281 T T 02 34 05.8
baz=99,slow=75,SNR=10
H11S1 WAKE ISLAND Hyd 24.21 281 T T 02 34 02.4
baz=99,slow=75,SNR=6.6
H11S3 WAKE ISLAND Hyd 24.22 281 T T 02 34 09.7
baz=99,slow=75,SNR=7.9
WRA Warramunga Arr 135.36 216 PKP **PKiKP** **00 17 22.6 +1.7**
comp=Z,0.6nm,0.7s,baz=131,slow=2.0,SNR=2.6
ZALV Zalesovo Beam 138.65 21 PKP **PKiKP** **00 17 26.2 -0.3**
comp=Z,1.7nm,0.6s,baz=290,slow=2.1,SNR=9.7
KURBB Kurchatov Arra 138.70 28 PKP **PKPdf** **00 17 23.6 -0.9**
comp=Z,0.3nm,0.7s,baz=296,slow=3.2,SNR=1.9
MKAR Makanchi Array 143.17 30 PKP **PKPdf** **00 17 31.5 -1.2**
comp=Z,0.3nm,0.6s,baz=312,slow=3.4,SNR=6.2
HILR Hailar Array B 145.82 346 PKPbc **PKiKP** **00 17 40.5 -0.9**
comp=Z,3.4nm,0.5s,baz=39,slow=2.2,SNR=19
SONM Songino Array 148.88 2 PKP **PKPdf** **00 17 42.4 -0.1**
SONM PKPbc **PKiKP** **00 17 49.1 +1.2**
comp=Z,1.3nm,0.5s,baz=318,slow=1.9,SNR=13

*IDC **20** 23:59:13.2±4.1,6.99N×126.30E,h24km±26km, mb3.8/16, mbtmp4.0/16,MS3.4/1,Error ellipse: s-maj=33.8km s-min=12.2km az=68.0*
*NEIC **20** 23:59:15.7±1.6,6.96N±0.09×126.15E±0.09,h39km±8km, mb4.3/9, Error ellipse: s-maj=13.1km s-min=12.7km az=139.0*
ISC 20 23:59:16.7±0.6,6.93N±0.08×126.1E±0.1,h53km,n31, σ0s83/33,mb3.9/21,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
DAV	**Davao City (W)**	**0.49**	**287**	Pg		**Pn**		**23 59 26.9**	**-1.2**
	612nm,0.3s,baz=243,slow=2.3,SNR=56								
DAV				Lg		Lg		23 59 37.3	
	2µm,0.3s,baz=99,slow=23,SNR=12								
DAV	**Davao City (W)**	**0.49**	**287**			**Pn**		**23 59 27.1**	**-1.0**
TOLI2	**Tolitoli**	**7.81**	**223**	Pn		**Pn**		**00 01 07.9**	**0.0**
TGY	**Tagaytay City**	**8.72**	**325**	LR		LR		00 04 38.1	
	comp=Z,243nm,19.4s,baz=91,slow=37								
KNRA	**Kununurra**	**22.62**	**173**	P		**P**		**00 04 13.8**	**+0.5**
BBJI	**Bungbulang**	**23.27**	**232**	P		**P**		**00 04 19.1**	**-0.8**
BBJI				IAmb		IAmb		00 04 37.4	
	comp=Z,22nm,1.3s								
FITZ	**Fitzroy Crossi**	**24.87**	**181**	P		**P**		**00 04 34.2**	**-0.3**
	comp=Z,1.9nm,0.4s,baz=15,slow=6.6,SNR=6.7								
	comp=Z,1.9nm,0.4s								
WRA	**Warramunga Arr**	**27.92**	**163**	P		**P**		**00 05 01.0**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=343,slow=10,SNR=7.3								
WRA				PcP		**PcP**		**00 08 17.1**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=350,slow=2.0,SNR=4.7								
	comp=Z,1.0nm,0.7s								
WRA	**Warramunga Arr**	**27.92**	**163**	P		**P**		**00 05 00.4**	**-1.7**
WR8	**Warramunga Arr**	**27.98**	**163**	P		**P**		**00 05 01.6**	**-1.0**
WR8				IAmb		IAmb		00 05 08.4	
	comp=Z,16nm,1.5s								
ASAR	**Alice Springs**	**31.36**	**166**	P		**P**		**00 05 32.2**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=346,slow=8.6,SNR=13								
ASAR				PcP		**PcP**		**00 08 25.8**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=340,slow=2.4,SNR=7.9								
	comp=Z,1.0nm,0.4s								
LZDM	**Lanzhou Array**	**35.41**	**328**	P		**P**		**00 06 09.2**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=121,slow=14,SNR=3.8								
	comp=Z,0.4nm,0.3s								
NWAO	**Narrogin (SRO)**	**40.51**	**191**	P		**P**		**00 06 50.7**	**0.0**
	comp=Z,6.4nm,0.9s,baz=20,slow=9.0,SNR=2.4								
	comp=Z,6.4nm,0.9s								
STKA	**Stephens Creek**	**41.34**	**160**	P		**P**		**00 06 57.5**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=353,slow=8.2,SNR=6.6								
	comp=Z,2.3nm,0.6s								
SONM	**Songino Array**	**44.07**	**341**	P		**P**		**00 07 19.6**	**0.0**
	comp=Z,0.3nm,0.5s,baz=149,slow=11,SNR=3.6								
SONM				PcP		**PcP**		**00 09 04.7**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=150,slow=3.2,SNR=2.5								
	comp=Z,0.3nm,0.5s								
SONM	**Songino Array**	**44.07**	**341**	IAmb		IAmb		00 07 22.1	
	comp=Z,0.8nm,1.1s								
MKAR	**Makanchi Array**	**54.57**	**324**	P		**P**		**00 08 39.4**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=118,slow=8.2,SNR=29								
MKAR				PcP		**PcP**		**00 09 43.3**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=115,slow=4.0,SNR=3.8								
	comp=Z,1.2nm,0.5s								
MKAR	**Makanchi Array**	**54.57**	**324**	P		**P**		**00 08 39.7**	**0.0**
MAKZ	**Makanchi**	**54.76**	**324**	P		**P**		**00 08 42.5**	**+1.5**
MAKZ				IAmb		IAmb		00 09 01.0	
	comp=Z,3.0nm,1.4s								
ZALV	**Zalesovo Beam**	**57.45**	**332**	P		**P**		**00 09 00.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=150,slow=9.5,SNR=2.1								
	comp=Z,0.3nm,0.3s								
ZALV	**Zalesovo Beam**	**57.45**	**332**	P		**P**		**00 09 01.6**	**+1.5**
KURK	**Kurchatov**	**58.71**	**327**	P		**P**		**00 09 08.7**	**-0.2**
KURK				IAmb		IAmb		00 09 11.9	
	comp=Z,4.9nm,1.2s								
KURBB	**Kurchatov Arra**	**58.71**	**327**	P		**P**		**00 09 08.5**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=123,slow=7.2,SNR=13								
	comp=Z,0.9nm,0.6s								
BVAR	**Borovoye Array**	**64.30**	**326**	P		**P**		**00 09 47.5**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=94,slow=7.5,SNR=4.7								
	comp=Z,0.4nm,0.5s								
ILAR	**Eielson Array**	**82.52**	**26**	P		**P**		**00 11 32.5**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=236,slow=5.3,SNR=6.1								
	comp=Z,0.3nm,0.7s								
D25K	**Kavik River**	**82.70**	**21**	P		**P**		**00 11 34.5**	**0.0**
D25K				IAmb		IAmb		00 11 46.1	
	comp=Z,0.9nm,0.9s								
SPITS	**Spitsbergen Ar**	**87.23**	**349**	P		**P**		**00 11 56.9**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=114,slow=6.5,SNR=2.3								
	comp=Z,3.2nm,0.7s								
FINES	**FINESS Array B**	**88.72**	**332**	P		**P**		**00 12 04.0**	**-0.3**
	comp=Z,5.4nm,1.2s,baz=90,slow=1.0,SNR=5.6								
	comp=Z,5.4nm,1.2s								
AKASG	**Malin Array Be**	**89.00**	**321**	P		**P**		**00 12 06.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=78,slow=1.3,SNR=1.8								
	comp=Z,0.2nm,0.3s								
YKA	**Yellowknife Ar**	**96.88**	**24**	P		**P**		**00 12 42.0**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=305,slow=6.0,SNR=5.3								
	comp=Z,0.2nm,0.6s								
YKA	**Yellowknife Ar**	**96.88**	**24**	P		**P**		**00 12 40.5**	**-1.5**

*RSPR **20** 23:59:40.9, 17.94N×66.77W, h5km, MD3.3/7*
*OSPL **20** 23:59:41.9±0.7, 17.92N×66.77W, h1km±999km, ML2.8, Presumed earthquake*
*SDD **20** 23:59:41.5±1.1, 17.94N×66.77W, h20km±11km, MD3.7, ML2.9, MW3.4, Presumed earthquake*
*NEIC **20** 23:59:41.1±1.1, 17.99N±0.06×66.765W±0.007, h10km±1km, ML3.2/35, Md3.3/7(RSPR), Error ellipse: s-maj=9.5km s-min=2.4km az=175.0*
ISC 20 23:59:40.9±0.9, 17.96N±0.04×66.77W±0.02, h14km±5km, n43, σ0s48/71, 16C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
GBPR	**Guanica, Bosqu**	**0.11**	**280**				**Pg**	**23 59 43.9**	**-0.2**
GBPR							**Sg**	**23 59 45.7**	**-0.6**
GBPR	**Guanica, Bosqu**	**0.11**	**280**	⇓	*eP*		**Pg**	**23 59 43.9**	**-0.2**
GBPR					*eS*		**Sg**	**23 59 45.7**	**-0.6**
OBIP	**Obispado Ponce**	**0.18**	**61**				**Pg**	**23 59 45.1**	**0.0**
OBIP					Sg		**Sg**	**23 59 47.9**	**0.0**
OBIP	**Obispado Ponce**	**0.18**	**61**	⇓	*eP*		**Pg**	**23 59 45.1**	**0.0**
OBIP					*eS*		**Sg**	**23 59 48.1**	**+0.2**
OBIP	**Obispado Ponce**	**0.18**	**61**		*i* P		**Pg**	**23 59 45.1**	**0.0**
OBIP					*eS*		**Sg**	**23 59 48.0**	**0.0**
OBIP					IAML			23 59 48.2	
	comp=Z,4µm,0.6s								
CELP	**Cerrillos**	**0.21**	**57**				**Pg**	**23 59 45.8**	**+0.1**
CELP					Sg		**Sg**	**23 59 49.1**	**+0.2**
CELP					IAML			23 59 50.5	
	comp=Z,3µm,0.2s								
MLPR	**Magueyes Islan**	**0.26**	**273**				**Pg**	**23 59 46.5**	**0.0**
MLPR					Sg		**Sg**	**23 59 50.7**	**+0.4**
MLPR					IAML			23 59 51.7	
	comp=Z,3µm,0.2s								
MLPR					IAML			23 59 52.7	
	comp=Z,2µm,0.3s								
UUPR	**Utuado, UPR, P**	**0.30**	**9**				**Pg**	**23 59 46.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.33**	**279**				**Pg**	**23 59 47.5**	**-0.1**
CRPR					IAML			23 59 56.0	
	comp=Z,1µm,0.3s								
CRPR					IAML			23 59 59.3	
	comp=Z,2µm,0.6s								
CRPR	**Cabo Rojo, PR**	**0.33**	**279**				**Sb**	**23 59 53.3**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.33**	**279**	⇓	*eP*		**Pg**	**23 59 47.5**	**-0.1**
CRPR				⇑	*eSg*		**Sg**	**23 59 52.8**	**+0.6**
CRPR					IAML			23 59 54.5	
	comp=N,2µm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.33**	**279**	⇑	*eP*		**Pg**	**23 59 47.7**	**0.0**
CRPR					*eS*		**Sb**	**23 59 53.3**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.33**	**279**		*i* P		**Pg**	**23 59 47.7**	**0.0**
CRPR					*eS*		**Sg**	**23 59 52.5**	**+0.3**
CRPR					IAML			23 59 56.0	
	comp=Z,958nm,0.8s								
LSP	**Las Mesas**	**0.37**	**306**				**Pg**	**23 59 48.5**	**0.0**
LSP							**Sb**	**23 59 55.3**	**+0.2**
LSP	**Las Mesas**	**0.37**	**306**	⇓	*eP*		**Pg**	**23 59 48.5**	**0.0**
LSP					*eS*		**Sb**	**23 59 55.3**	**+0.2**
PRSN	**Puerto Rico Se**	**0.44**	**306**				**Pg**	**23 59 49.5**	**-0.2**
PRSN					IAML			00 00 00.9	
	comp=Z,4µm,0.2s								
PRSN	**Puerto Rico Se**	**0.44**	**306**				**Sb**	**23 59 56.7**	**-0.4**
PRSN	**Puerto Rico Se**	**0.44**	**306**	⇑	*ePg*		**Pg**	**23 59 49.5**	**-0.2**
PRSN				⇑	*eSg*		**Sb**	**23 59 56.7**	**-0.4**
PRSN					IAML			23 59 58.2	
	comp=N,3µm,0.2s								
PRSN	**Puerto Rico Se**	**0.44**	**306**	⇑	*eP*		**Pg**	**23 59 49.5**	**-0.2**
PRSN					*eS*		**Sb**	**23 59 56.7**	**-0.4**
ECPR	**Experimental S**	**0.53**	**47**				**Pg**	**23 59 51.1**	**-0.2**
ECPR							**Sg**	**23 59 58.0**	**-0.3**
ECPR					IAML			00 00 00.7	
	comp=N,2µm,0.2s								
ECPR					IAML			00 00 04.5	
	comp=N,2µm,0.2s								
ECPR	**Experimental S**	**0.53**	**47**	⇑	*eP*		**Pg**	**23 59 51.1**	**-0.2**
ECPR					*eS*		**Sb**	**23 59 59.6**	**+0.1**
EMPR	**Esperanza - Ma**	**0.56**	**24**				**Pg**	**23 59 52.0**	**0.0**
EMPR							**Sg**	**23 59 59.9**	**+0.3**
EMPR	**Esperanza - Ma**	**0.56**	**24**	⇑	*eP*		**Pg**	**23 59 52.0**	**0.0**
EMPR					*eS*		**Sg**	**23 59 59.9**	**+0.3**
AGPR	**Aguadilla, PR**	**0.60**	**327**				**Pg**	**23 59 52.3**	**-0.4**
AGPR					IAML			00 00 05.2	
	comp=N,868nm,0.7s								
AGPR					IAML			00 00 06.7	
	comp=N,1µm,0.7s								
AGPR	**Aguadilla, PR**	**0.60**	**327**	⇓	*eP*		**Pg**	**23 59 52.3**	**-0.4**
AGPR				⇑	*eSg*		**Sb**	**00 00 01.3**	**-0.4**
AGPR					IAML			00 00 01.8	
	comp=N,928nm,0.4s								
AGPR	**Aguadilla, PR**	**0.60**	**327**	⇑	*eP*		**Pg**	**23 59 52.4**	**-0.4**
AGPR					*eS*		**Sb**	**00 00 02.8**	**+1.1**
SJG	**San Juan**	**0.61**	**75**		Pg		**Pg**	**23 59 52.8**	**0.0**
SJG					IAML			00 00 01.9	
	comp=N,695nm,0.6s								
SJG	**San Juan**	**0.61**	**75**		*eP*		**Pg**	**23 59 52.9**	**0.0**
SJG	**San Juan**	**0.61**	**75**	⇓	*ePg*		**Pg**	**23 59 52.8**	**0.0**
SJG				⇑	*eSg*		**Sb**	**00 00 01.4**	**-0.4**
SJG	**San Juan**	**0.61**	**75**	⇑	*eP*		**Pg**	**23 59 52.9**	**0.0**
SJG					*eS*		**Sb**	**00 00 01.7**	**-0.1**
SJG	**San Juan**	**0.61**	**75**		*i* P		**Pg**	**23 59 52.9**	**0.0**
SJG					*eS*		**Sb**	**00 00 01.6**	**-0.1**
SJG					IAML			00 00 05.1	
	comp=Z,496nm,0.8s								
PDPR	**Patillas Dam,**	**0.71**	**85**				**Pg**	**23 59 54.6**	**-0.1**
PDPR					IAML			00 00 05.2	
	comp=Z,442nm,0.7s								
GCPR	**Guaynabo City**	**0.74**	**62**				**Sg**	**00 00 04.7**	**-0.4**
GCPR	**Guaynabo City**	**0.74**	**62**				**Pg**	**23 59 54.9**	**-0.4**
GCPR	**Guaynabo City**	**0.74**	**62**	⇑	*eP*		**Pg**	**23 59 54.9**	**-0.4**
GCPR					*eS*		**Sg**	**00 00 04.7**	**-0.4**
IDE	**Isla Desecheo**	**0.80**	**303**				**Pg**	**23 59 55.7**	**-0.6**
IDE							**Sb**	**00 00 07.2**	**-0.1**
IDE	**Isla Desecheo**	**0.80**	**303**	⇑	*eP*		**Pg**	**23 59 55.7**	**-0.6**
IDE					*eS*		**Sb**	**00 00 07.2**	**-0.1**
HUMP	**Col San Antoni**	**0.89**	**78**				**Pg**	**23 59 57.5**	**-0.7**
HUMP							**Sg**	**00 00 08.7**	**-1.2**
HUMP	**Col San Antoni**	**0.89**	**78**	⇑	*eP*		**Pg**	**23 59 57.5**	**-0.7**
HUMP					*eS*		**Sg**	**00 00 09.8**	**-0.1**
CUPR	**Culebra, Puert**	**1.46**	**76**				**Pb**	**00 00 07.9**	**+0.1**
PCDR	**Punta Cana, DR**	**1.63**	**290**	⇓	*eP*		**Pn**	**00 00 09.0**	**-0.2**
PCDR					IAML			00 00 42.0	
	comp=N,199nm,0.9s								
DR12	**Loma Pena Alta**	**2.62**	**289**		Pn		**Pn**	**00 00 25.2**	**+2.3**
HATOM	**Hato Mayor del**	**2.62**	**289**	⇑	*eP*		**Pb**	**00 00 26.6**	**-1.0**
HATOM					IAML			00 01 05.3	
	comp=N,31nm,0.9s								

*SJA **21** 00:03:37.0±1.1,22.06S×70.11W,h75km, ML3.2, MW3.5*
*GUC **21** 00:03:38.9±0.8,22.08S×70.01W,h73km±4km, ML3.2*
ISC 21 00:03:37.9±1.3,22.05S±0.03×70.09W±0.07,h82km±7km, n32,σ1s39/51,1C-5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
PB03	**IPOC Station P**	**0.32**	**89**	*i* P		**Pn**		**00 03 50.8**	**+0.1**
PB03					*eS*	**Sn**		**00 03 59.2**	**-0.9**
PB03					IAML			00 04 00.4	
	comp=E,3µm,0.1s								
PB03	**IPOC Station P**	**0.32**	**89**		*eP*	**Pn**		**00 03 50.1**	**-0.6**
PB03					*eS*	**Sn**		**00 03 59.5**	**-0.6**
PB03					IAML			00 04 01.0	
	comp=Z,2µm,0.2s								
PB07	**IPOC Station P**	**0.38**	**31**	*i* P		**Pn**		**00 03 51.5**	**+0.4**
PB07					*eS*	**Sn**		**00 04 00.7**	**-0.2**
PB07					IAML			00 04 01.3	
	comp=N,4µm,0.1s								
PB07	**IPOC Station P**	**0.38**	**31**		*eP*	**Pn**		**00 03 51.0**	**-0.1**
PB07					*eS*	**Sn**		**00 04 01.0**	**+0.1**
PB07					IAML			00 04 01.2	
	comp=Z,2µm,0.2s								
PB02	**IPOC Station P**	**0.75**	**14**	⇓	*iP*	**Pn**		**00 03 55.1**	**+0.7**
PB02					*eS*	**Sn**		**00 04 07.0**	**+0.3**
PB02					IAML			00 04 07.9	
	comp=E,4µm,0.4s								
PB02	**IPOC Station P**	**0.75**	**14**		*eP*	Pn		00 03 49.4	-5.0
PB02					*eP*			00 03 54.6	
PB02					*eP*			00 03 54.9	
PB02					*eS*	**Sn**		**00 04 07.3**	**+0.7**
PB02					IAML			00 04 08.0	
	comp=Z,2µm,0.1s								
PB05	**IPOC Station P**	**0.80**	**187**	⇑	*iP*	**Pn**		**00 03 55.9**	**+0.9**
PB05					*eS*	**Sn**		**00 04 08.0**	**+0.4**
PB05					IAML			00 04 08.4	
	comp=E,933nm,0.2s								
PB05	**IPOC Station P**	**0.80**	**187**		*eP*	**Pn**		**00 03 55.2**	**+0.3**
PB05					*eS*	**Sn**		**00 04 08.2**	**+0.6**
PB05					IAML			00 04 08.4	
	comp=Z,268nm,0.2s								
PB06	**IPOC Station P**	**0.81**	**144**	⇓	*iP*	**Pn**		**00 03 55.0**	**-0.1**
PB06					*eS*	**Sn**		**00 04 06.7**	**-1.1**
PB06					IAML			00 04 07.1	
	comp=E,760nm,0.2s								
PB06	**IPOC Station P**	**0.81**	**144**		*eP*	**Pn**		**00 03 54.9**	**-0.1**
PB06					*eS*	**Sn**		**00 04 07.3**	**-0.5**
PB06					IAML			00 04 09.0	
	comp=Z,431nm,0.1s								
PB09	**IPOC Station P**	**0.83**	**72**	*i* P		**Pn**		**00 03 55.6**	**+0.3**
PB09					IAML			00 04 08.8	
	comp=N,1µm,0.1s								
PB09	**IPOC Station P**	**0.83**	**72**		*eP*	**Pn**		**00 03 55.4**	**+0.1**
PB09					*eS*	**Sn**		**00 04 08.5**	**+0.3**
PB09					IAML			00 04 08.7	
	comp=Z,1µm,0.2s								
PB01	**IPOC Station P**	**1.15**	**29**	⇓	*iP*	**Pn**		**00 03 59.5**	**+0.4**
PB01					*eS*	**Sn**		**00 04 14.4**	**-0.4**
PB01					IAML			00 04 15.4	
	comp=E,958nm,0.2s								
PB01	**IPOC Station P**	**1.15**	**29**		*eP*	**Pn**		**00 03 59.4**	**+0.4**
PB01					*eS*	**Sn**		**00 04 15.3**	**+0.5**
PB01					IAML			00 04 15.4	
	comp=Z,861nm,0.2s								
PB10	**IPOC Station P**	**1.51**	**196**	⇓	*iP*	**Pn**		**00 04 04.2**	**+0.7**
PB10	**IPOC Station P**	**1.51**	**196**		*eP*	**Pn**		**00 04 03.6**	**+0.1**
PB10					*eS*	**Sn**		**00 04 22.9**	**0.0**
HMBC	**Humberstone**	**1.78**	**6**		*eP*	**Pn**		**00 04 07.6**	**+0.6**
HMBC					IAML			00 04 34.6	
	comp=N,247nm,0.5s								
AF01	**San Pedro de A**	**1.98**	**117**		*eP*	**Pn**		**00 04 11.6**	**+1.6**
AF01					IAML			00 04 53.2	
	comp=Z,237nm,0.5s								
PB08	**IPOC Station P**	**2.10**	**25**	⇓	*iP*	**Pn**		**00 04 12.4**	**+0.9**
PB08					IAML			00 04 39.2	
	comp=N,132nm,0.3s								
PB08	**IPOC Station P**	**2.10**	**25**		*eP*	**Pn**		**00 04 12.2**	**+0.7**
PB08					*eS*	**Sn**		**00 04 38.6**	**+1.6**
PB11	**IPOC Station P**	**2.32**	**10**		*eP*	**Pn**		**00 04 14.4**	**+0.1**
PB11					IAML			00 04 44.0	
	comp=N,98nm,0.3s								
PB11	**IPOC Station P**	**2.32**	**10**		*eP*	**Pn**		**00 04 14.3**	**+0.1**
PB11					*eS*	**Sn**		**00 04 43.2**	**+1.1**
PB11					IAML			00 04 44.1	
	comp=Z,60nm,0.3s								
GO01	**Chusmiza**	**2.52**	**20**		*eP*	**Pn**		**00 04 17.9**	**+0.6**
GO01	**Chusmiza**	**2.52**	**20**		*eP*	**Pn**		**00 04 18.1**	**+0.8**
GO01					*eP*			00 04 18.1	
GO01					*eS*	**Sn**		**00 04 39.0**	**-8.3**
GO01					IAML			00 04 49.6	
	comp=Z,60nm,0.3s								
PB14	**IPOC Station P**	**2.58**	**186**		*eP*	**Pn**		**00 04 17.5**	**-0.4**
PB14	**IPOC Station P**	**2.58**	**186**		*eP*	**Pn**		**00 04 18.1**	**+0.2**
PB14					*eS*	Sn		00 04 36.4	-12
PB14					IAML			00 04 48.0	
	comp=Z,37nm,0.2s								
GO02	**Mina Guanaco**	**3.13**	**172**		*eP*	**Pn**		**00 04 25.6**	**+0.3**
GO02					*eS*	**Sn**		**00 05 02.6**	**+0.7**
GO02					IAML			00 05 06.2	
	comp=Z,51nm,0.2s								
PB12	**IPOC Station P**	**3.43**	**356**		*eP*	**Pn**		**00 04 29.3**	**0.0**
PB12					IAML			00 05 10.1	
	comp=E,36nm,0.3s								
PB12	**IPOC Station P**	**3.43**	**356**		*eP*	**Pn**		**00 04 29.7**	**+0.4**
PB12					*eS*	**Sn**		**00 05 09.1**	**+0.2**
PB12					IAML			00 05 09.2	
	comp=Z,28nm,0.5s								
PB16	**IPOC Station P**	**3.74**	**9**		*eP*	**Pn**		**00 04 35.0**	**+1.1**
PB16					*eS*	Sn		00 05 00.1	-17
AC01	**Pan de Azucar**	**4.10**	**186**		*eP*	**Pn**		**00 04 37.2**	**-1.1**
AC01					*eS*	**Sn**		**00 05 24.1**	**-1.0**
AC01					IAML			00 05 58.2	
	comp=Z,16nm,1.6s								
AC02	**Maricunga**	**4.84**	**170**		*eP*	**Pn**		**00 04 49.4**	**+0.6**
AC02					*eS*	Sn		00 05 56.9	+13

IDC 21 00:03:48.0±5.3,24.12S×150.38E,h0km,mbtmp3.4/4, ML3.1/4,Error ellipse: s-maj=47.5km s-min=26.5km az=83.0,Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
CTA	**Charters Tower**	**5.54**	**316**	Pn		Pn		00 05 12.6	+0.8
	0.3nm,0.3s,baz=136,slow=16,SNR=2.0								
CTA						Sn		00 06 16.4	0.0
	0.3nm,0.3s,baz=65,slow=19,SNR=3.1								
CTA				Lg		Lg		00 06 43.6	
	1.5nm,0.3s,baz=224,slow=16,SNR=6.2								
	0.7nm,0.3s								
STKA	**Stephens Creek**	**10.95**	**223**	Pn		Pn		00 06 25.2	-0.7
	0.1nm,0.3s,baz=50,slow=7.9,SNR=1.4								
STKA						Sn		00 08 23.4	-5.7
	0.3nm,0.3s,baz=312,slow=17,SNR=3.2								
STKA				Lg		Lg		00 09 35.9	
	0.1nm,0.3s,baz=64,slow=18,SNR=1.3								
	0.5nm,0.4s								
ASAR	**Alice Springs**	**15.08**	**268**	Pn		Pn		00 07 21.1	-1.3
	0.1nm,0.3s,baz=97,slow=13,SNR=8.4								
ASAR						Sn		00 10 11.0	+0.7
	0.1nm,0.3s,baz=90,slow=22,SNR=1.8								
ASAR				Lg		Lg		00 11 49.2	
	baz=94,slow=30,SNR=2.0								
	1.1nm,0.7s								
WRA	**Warramunga Arr**	**15.44**	**283**	Pn		Pn		00 07 29.0	+1.7
	0.1nm,0.3s,baz=105,slow=11,SNR=2.5								
WRA				Lg		Lg		00 11 58.3	
	0.1nm,0.3s,baz=111,slow=25,SNR=1.9								
	0.6nm,0.8s								

IDC 21 00:14:13.7±68.0,24.83S×177.70W,h425km±318km, mb3.6/4,mbtmp4.4/5,Error ellipse: s-maj=776.7km s-min=109.6km az=82.0,South of Fiji Islands

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

BBOO	**Buckleboo**	**35.05**	**228**	P		**P**	**00 24 12.6**	**-0.2**
BBOO				IAmb		IAmb	00 24 28.5	
	comp=Z,13nm,1.1s							
KNRA	**Kununurra**	**37.07**	**260**	P		**P**	**00 24 30.1**	**0.0**
KNRA				IAmb		IAmb	00 24 39.9	
	comp=Z,24nm,1.4s							
FORT	**Forrest**	**40.43**	**236**	P		**P**	**00 24 57.9**	**0.0**
FORT				IAmb		IAmb	00 24 58.8	
	comp=Z,8.2nm,0.8s							
PSA00	**Pilbara Seismi**	**45.82**	**251**	P		**P**	**00 25 41.0**	**-0.1**
PSA00				IAmb		IAmb	00 25 45.4	
	comp=Z,23nm,1.5s							
MBWA	**Marble Bar**	**45.90**	**252**	P		**P**	**00 25 41.6**	**-0.1**
PETK	**Petropavlovsk-**	**65.12**	**354**	P		**P**	**00 27 58.9**	**+1.0**
	comp=Z,2.7nm,0.9s,baz=153,slow=5.3,SNR=2.9							
	comp=Z,2.7nm,0.9s							
CMAR	**Chiang Mai Arr**	**73.32**	**293**	P		**P**	**00 28 49.5**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=112,slow=6.2,SNR=10							
	comp=Z,1.6nm,0.3s							
LZDM	**Lanzhou Array**	**76.05**	**312**	P		**P**	**00 29 06.1**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=106,slow=3.2,SNR=5.0							
	comp=Z,0.7nm,0.4s							
QSPA	**South Pole Qui**	**78.20**	**180**	P		**P**	**00 29 15.7**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=327,slow=4.2,SNR=4.3							
	comp=Z,2.2nm,0.5s							
J16K	**Anvik River**	**78.97**	**14**	P		**P**	**00 29 20.6**	**+0.6**
K17K	**Iditarod**	**79.08**	**16**	P		**P**	**00 29 21.1**	**+0.6**
K17K				IAmb		IAmb	00 29 31.2	
	comp=Z,7.2nm,1.2s							
L18K	**Granite Mounta**	**79.11**	**17**	P		**P**	**00 29 21.0**	**+0.2**
L18K				IAmb		IAmb	00 29 27.0	
	comp=Z,5.8nm,1.4s							
SONM	**Songino Array**	**79.86**	**323**	P		**P**	**00 29 26.1**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=143,slow=7.0,SNR=5.8							
	comp=Z,0.5nm,0.5s							
SONM	**Songino Array**	**79.86**	**323**	P		**P**	**00 29 25.2**	**-0.1**
J18K	**Innoko River**	**80.11**	**16**	P		**P**	**00 29 26.3**	**+0.2**
F15K	**North Star Dit**	**80.18**	**12**	P		**P**	**00 29 26.4**	**-0.1**
ILAR	**Eielson Array**	**83.92**	**18**	P		**P**	**00 29 45.2**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=245,slow=4.9,SNR=23							
	comp=Z,1.4nm,0.6s							
ILAR	**Eielson Array**	**83.92**	**18**	P		**P**	**00 29 44.9**	**-1.0**
MKAR	**Makanchi Array**	**94.75**	**317**	P		**P**	**00 30 37.1**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=92,slow=6.5,SNR=24							
	comp=Z,2.1nm,0.7s							
MKAR	**Makanchi Array**	**94.75**	**317**	P		**P**	**00 30 37.4**	**-0.3**
KURBB	**Kurchatov Arra**	**97.90**	**320**	P		**P**	**00 30 49.7**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=113,slow=7.1,SNR=1.8							
	comp=Z,0.1nm,0.4s							
SCHQ	**Schefferville**	**120.14**	**33**	PP		**PP**	**00 37 35.2**	**+1.7**
	comp=Z,1.0nm,0.3s,baz=264,slow=19,SNR=6.2							
FINES	**FINESS Array B**	**122.84**	**339**	PKhKP		PKPpre	00 35 57.5	
	comp=Z,5.2nm,1.0s,baz=29,slow=3.2,SNR=4.2							
FINES				PKP		**PKPdf**	**00 36 10.0**	**-0.6**
	comp=Z,4.9nm,1.0s,baz=221,slow=11,SNR=2.1							
KEST	**Kesra**	**148.62**	**323**	PKPbc		**PKPbc**	**00 37 02.8**	**0.0**
	comp=Z,4.3nm,1.0s,baz=14,slow=4.2,SNR=4.1							
ESDC	**Sonseca Array**	**151.05**	**345**	PKPbc		**PKPbc**	**00 37 07.5**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=25,slow=3.4,SNR=4.6							
ESDC				PKPab		**PKPab**	**00 37 16.2**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=25,slow=3.3,SNR=7.1							

*IDC **21** 00:44:01.2±1.0, 15°.04N×120°.36E, h111km±10km, mb3.3/7, mbtmp3.7/7, MS2.9/3, Error ellipse: s-maj=58.9km s-min=15.7km az=59.0*

ISC 21 00:43:54.4±1.1, 14°.6N±0°.2×119°.3E±0°.1, h36km, n10, σ0°78/8, mb3.6/6, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGY	**Tagaytay City**	**1.67**	**105**	P		**Pn**	**00 44 21.6**	**+0.5**
TGY				S		**Sn**	**00 44 41.0**	**-0.3**
	1μm,0.3s,baz=27,slow=22,SNR=7.6							
CMAR	**Chiang Mai Arr**	**19.88**	**284**	P		Pn	00 48 33.8	+9.3
	0.8nm,0.3s,baz=101,slow=9.2,SNR=1.4							
CMAR				LR		LR	00 57 25.5	
	comp=Z,25nm,18.4s,baz=125,slow=39							
	0.8nm,0.3s							
KSRS	**Korea Array**	**24.07**	**17**	LR		LR	00 58 33.2	
	comp=Z,21nm,20.1s,baz=335,slow=37							
KLR	**Kul'dur**	**36.07**	**14**	LR		LR	01 06 55.0	
	comp=Z,22nm,18.6s,baz=326,slow=39							
WRA	**Warramunga Arr**	**37.34**	**156**	P		**P**	**00 51 03.1**	**-0.5**
	1.4nm,0.7s,baz=338,slow=9.1,SNR=12							
	1.4nm,0.7s							
ASAR	**Alice Springs**	**40.59**	**159**	P		**P**	**00 51 31.0**	**+0.3**
	0.8nm,0.6s,baz=338,slow=6.9,SNR=14							
	0.8nm,0.6s							
MKAR	**Makanchi Array**	**44.54**	**324**	P		**P**	**00 52 04.0**	**+1.4**
	0.1nm,0.5s,baz=123,slow=7.1,SNR=1.7							
	0.1nm,0.5s							
ZALV	**Zalesovo Beam**	**47.68**	**333**	P		**P**	**00 52 26.9**	**-0.2**
	0.2nm,0.3s,baz=156,slow=7.4,SNR=2.2							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**48.72**	**326**	P		**P**	**00 52 34.7**	**-0.6**
	0.4nm,0.7s,baz=127,slow=8.6,SNR=4.6							
	0.4nm,0.7s							
FINES	**FINESS Array B**	**78.88**	**331**	P		**P**	**00 55 53.2**	**-0.5**
	3.1nm,1.0s,baz=50,slow=6.5,SNR=5.0							
	3.1nm,1.0s							

*IDC **21** 00:49:12.3±2.2, 17°.06S×177°.15W, h370km±21km, mb3.7/16, mbtmp4.4/17, Error ellipse: s-maj=19.8km s-min=12.2km az=144.0*
*NEIC **21** 00:49:15.7±2.6, 17°.0S±0°.1×177°.12W±0°.10, h391km±7km, mb4.3/72, Error ellipse: s-maj=21.4km s-min=12.7km az=165.0*

ISC 21 00:49:15.3±0.4, 17°.10S±0°.08×177°.18W±0°.07, h400km, n144, σ1§00/144, mb4.3/54, 12C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.59**	**261**	Pn		**Pn**	**00 50 35.1**	**+1.8**
NIUE	**Niue**	**7.18**	**107**			**Pn**	**00 51 00.3**	**-0.7**
MARNC	**Mare, Loyalty**	**14.62**	**250**			**P**	**00 52 21.1**	**-2.6**
DZM	**Mont Dzumac**	**16.20**	**250**	P		**P**	**00 52 41.3**	**+0.4**
	2.9nm,0.6s,baz=56,slow=15,SNR=6.0							
DZM	**Mont Dzumac**	**16.20**	**250**	P		**P**	**00 52 39.9**	**-0.9**
URZ	**Urewera**	**21.67**	**192**	P		**P**	**00 53 32.5**	**-2.3**
	3.3nm,0.3s,baz=26,slow=17,SNR=9.3							
URZ				S		**S**	**00 57 02.1**	**-4.0**
	2.5nm,0.5s,baz=0.0,slow=20,SNR=1.1							
	3.3nm,0.3s							
CTA	**Charters Tower**	**34.74**	**259**	P		**P**	**00 55 29.1**	**-0.9**
	1.4nm,0.4s,baz=61,slow=3.0,SNR=3.1							
	1.4nm,0.4s							
CTAO	**Charters Tower**	**34.74**	**259**	P		**P**	**00 55 29.1**	**-0.9**
COEN	**Coen**	**38.28**	**269**	P		**P**	**00 55 59.4**	**-0.1**
COEN				IAmb		IAmb	00 56 06.9	
	comp=Z,25nm,1.5s							
TOO	**Toolangi**	**38.58**	**231**	P		**P**	**00 56 02.7**	**+0.9**
STKA	**Stephens Creek**	**40.04**	**241**	P		**P**	**00 56 14.1**	**+0.4**
	comp=Z,3.7nm,0.5s,baz=95,slow=10,SNR=17							
	comp=Z,3.7nm,0.5s							
STKA	**Stephens Creek**	**40.04**	**241**	P		**P**	**00 56 14.2**	**+0.4**
HATHI	**Halema'uma'u T**	**42.21**	**32**	P		**P**	**00 56 29.6**	**-1.7**
JAY	**Jayapura**	**43.82**	**285**	P		**P**	**00 56 45.3**	**+1.1**
	comp=Z,16nm,0.6s,baz=73,slow=11,SNR=2.2							
	comp=Z,16nm,0.6s							
BBOO	**Buckleboo**	**44.82**	**240**	P		**P**	**00 56 51.4**	**-0.3**
BBOO				IAmb		IAmb	00 56 52.2	
	comp=Z,9.8nm,0.8s							
WB0	**Warramunga Arr**	**45.90**	**259**	P		**P**	**00 56 59.6**	**-0.6**
WRA	**Warramunga Arr**	**45.93**	**259**	P		**P**	**00 56 59.6**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=90,slow=7.7,SNR=9.8							
WRA				ScP		**ScP**	**01 01 46.8**	**+2.7**
	comp=Z,1.7nm,0.8s,baz=92,slow=3.8,SNR=6.1							
	comp=Z,0.6nm,0.4s							
WRA	**Warramunga Arr**	**45.93**	**259**	P		**P**	**00 57 00.1**	**-0.5**
AS31	**Alice Springs**	**46.14**	**253**			**P**	**00 57 01.5**	**-0.6**
ASAR	**Alice Springs**	**46.14**	**253**	P		**P**	**00 57 01.2**	**-0.9**
	comp=Z,4.8nm,0.4s,baz=88,slow=8.0,SNR=68							
ASAR				PcP		**PcP**	**00 58 30.2**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=98,slow=3.4,SNR=2.6							
ASAR				ScP		**ScP**	**01 01 48.0**	**+3.1**
	comp=Z,0.9nm,0.6s,baz=92,slow=4.0,SNR=10							
	comp=Z,4.8nm,0.4s							
ASAR	**Alice Springs**	**46.14**	**253**	P		**P**	**00 57 01.1**	**-1.0**
FORT	**Forrest**	**51.41**	**244**	P		**P**	**00 57 41.5**	**+0.1**
FAKI	**Fak Fak**	**51.58**	**280**	P		**P**	**00 57 42.5**	**-0.4**
KNRA	**Kununurra**	**51.74**	**263**	P		**P**	**00 57 43.2**	**-0.8**
KNRA				IAmb		IAmb	00 57 55.4	
	comp=Z,30nm,1.2s							
FITZ	**Fitzroy Crossi**	**54.32**	**260**	P		**P**	**00 58 03.3**	**+0.7**
	comp=Z,1.9nm,0.5s,baz=123,slow=7.6,SNR=8.6							
	comp=Z,1.9nm,0.5s							
SOEI	**Soe**	**57.24**	**269**	P		**P**	**00 58 24.0**	**+0.7**
VNDA	**Vanda**	**61.35**	**185**	P		**P**	**00 58 51.5**	**+1.6**
VNDA				IAmb		IAmb	00 59 34.5	
	comp=Z,20nm,1.4s							
GIRL	**Giralia**	**64.25**	**253**	P		**P**	**00 59 09.8**	**+0.1**
ADK	**Adak**	**68.69**	**0**	P		**P**	**00 59 36.3**	**-0.5**
QSPA	**South Pole Qui**	**72.95**	**180**	P		**P**	**01 00 03.4**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=19,slow=1.6,SNR=3.9							
	comp=Z,3.0nm,0.6s							
PETK	**Petropavlovsk-**	**73.21**	**344**	P		**P**	**01 00 03.0**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=183,slow=6.9,SNR=2.7							
	comp=Z,2.0nm,0.7s							
KMRM	**Mail Ridge**	**75.65**	**39**	P		**P**	**01 00 19.0**	**+1.1**
O02D	**Mt. Diablo Mer**	**76.19**	**40**	P		**P**	**01 00 22.1**	**+1.2**
O02D				IAmb		IAmb	01 00 23.0	
	comp=Z,5.3nm,0.8s							
KHBM	**Hayfork Bally**	**76.21**	**39**	P		**P**	**01 00 21.9**	**+0.7**
YUH	**Yuha Desert**	**76.64**	**49**	P		**P**	**01 00 24.2**	**+0.7**
MDPB	**Devils Postpil**	**77.09**	**44**	P		**P**	**01 00 26.7**	**+0.5**
CLC	**China Lake**	**77.10**	**46**	P		**P**	**01 00 27.1**	**+1.1**
SLBS	**Sierra La Lagu**	**77.15**	**60**	P		**P**	**01 00 27.8**	**+1.2**
YBH	**Yreka Blue Hor**	**77.17**	**39**	P		**P**	**01 00 27.0**	**+0.7**
YBH				IAmb		IAmb	01 00 28.1	
	comp=Z,7.1nm,1.4s							
K02D	**Willamette Mer**	**77.19**	**37**	P		**P**	**01 00 26.7**	**+0.3**
P16K	**Nushagak River**	**77.47**	**10**	P		**P**	**01 00 26.7**	**-0.7**
DSP	**Deep Springs**	**77.68**	**44**			**P**	**01 00 30.4**	**+1.4**
DSP				IAmb		IAmb	01 00 31.0	
	comp=Z,3.2nm,0.8s							
L04D	**Klamath Falls**	**77.70**	**38**	P		**P**	**01 00 30.0**	**+0.7**
FURC	**Furnace Creek,**	**77.95**	**46**	P		**P**	**01 00 30.7**	**+0.1**
FURC				IAmb		IAmb	01 00 41.4	
	comp=Z,11nm,1.5s							
IRM	**Iron Mountain**	**77.97**	**48**	P		**P**	**01 00 31.3**	**+0.5**
IRM				IAmb		IAmb	01 00 32.8	
	comp=Z,4.9nm,1.0s							
NVAR	**Mina Array Bea**	**78.04**	**43**	P		**P**	**01 00 31.9**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=244,slow=7.0,SNR=11							
	comp=Z,2.3nm,0.7s							
TPNV	**Topopah Spring**	**78.62**	**46**	P		**P**	**01 00 35.1**	**+0.7**
TPNV				IAmb		IAmb	01 00 35.9	
	comp=Z,3.6nm,0.7s							
J05D	**Fort Rock, OR**	**78.97**	**38**			**P**	**01 00 37.1**	**+0.9**
J05D				IAmb		IAmb	01 00 37.7	
	comp=Z,6.1nm,1.0s							
PINE	**Pine Mountain**	**79.44**	**38**			**P**	**01 00 38.9**	**+0.2**
PINE				IAmb		IAmb	01 00 40.4	
	comp=Z,4.3nm,0.9s							
BRLK	**Bradley Lake**	**79.52**	**13**	P		**P**	**01 00 37.8**	**-0.8**
M17K	**Holitna River**	**79.81**	**10**	P		**P**	**01 00 40.4**	**+0.4**
M17K				IAmb		IAmb	01 00 41.3	
	comp=Z,9.6nm,1.0s							
K15K	**Wolf Creek Mou**	**80.09**	**7**	P		**P**	**01 00 42.6**	**+1.1**
K15K				IAmb		IAmb	01 00 43.3	
	comp=Z,6.6nm,0.9s							
CN2	**Changchun**	**80.11**	**322**	P		**P**	**01 00 41.3**	**-0.7**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
TUC	**Tucson**	**80.28**	**52**			**P**	**01 00 44.6**	**+1.3**
TUC				IAmb		IAmb	01 00 45.8	
	comp=Z,5.6nm,1.0s							
SLKM	**Skilak Lake**	**80.34**	**13**	P		**P**	**01 00 42.3**	**-0.6**
I07A	**Izee**	**80.45**	**38**	P		**P**	**01 00 44.1**	**+0.2**
X16A	**Lo Mia Camp, P**	**80.77**	**50**	P		**P**	**01 00 47.0**	**+1.0**
G08A	**Pilot Rock**	**81.46**	**37**	P		**P**	**01 00 49.5**	**+0.3**
G08A				IAmb		IAmb	01 00 50.5	
	comp=Z,5.6nm,1.4s							
DUN6	**Lazy B Ranch**	**81.67**	**52**	P		**P**	**01 00 52.4**	**+1.8**
MTPU	**Mount Pierson**	**81.97**	**46**	P		**P**	**01 00 53.2**	**+0.9**
121A	**Cookes Peak, D**	**82.66**	**53**	P		**P**	**01 00 57.3**	**+1.6**
121A				IAmb		IAmb	01 00 58.2	
	comp=Z,3.5nm,0.7s							
BARN	**Barnard Glacie**	**82.92**	**17**	P		**P**	**01 00 55.8**	**-0.6**
CTGM	**Chitina Glacie**	**82.93**	**17**	P		**P**	**01 00 55.5**	**-0.9**
TMUT	**Trail Mountain**	**83.24**	**46**	P		**P**	**01 00 59.6**	**+1.0**
TMUT				IAmb		IAmb	01 01 00.7	
	comp=Z,5.5nm,0.9s							
HLID	**Hailey**	**83.26**	**41**			**P**	**01 00 59.3**	**+0.8**
C09A	**Chrisman Ranch**	**83.28**	**36**	P		**P**	**01 00 58.2**	**-0.1**
HVU	**Hansel Valley**	**83.40**	**43**			**P**	**01 00 59.8**	**+0.6**
HVU				IAmb		IAmb	01 01 00.5	
	comp=Z,3.6nm,0.8s							
T35M	**Bob Quinn**	**83.51**	**24**	P		**P**	**01 00 58.4**	**-0.9**
S34M	**Telegraph Cree**	**83.85**	**23**	P		**P**	**01 01 01.9**	**+1.0**
TCUT	**Toone Canyon**	**83.97**	**44**	P		**P**	**01 01 02.4**	**+0.2**
TCUT				IAmb		IAmb	01 01 03.8	
	comp=Z,5.1nm,0.7s							
VHRN	**Van Horn**	**84.10**	**55**			**P**	**01 01 04.4**	**+1.4**
VHRN				IAmb		IAmb	01 01 05.4	
	comp=Z,4.4nm,0.7s							
PV10	**Paradox Valley**	**84.31**	**47**	P		**P**	**01 01 04.4**	**+0.4**
PV10				IAmb		IAmb	01 01 21.0	
	comp=Z,11nm,1.4s							
WRH	**Wood River Hil**	**84.33**	**12**	P		**P**	**01 01 01.9**	**-1.2**
WRH				IAmb		IAmb	01 01 03.7	
	comp=Z,7.2nm,1.0s							
PV20	**West Nyswonger**	**84.35**	**47**	P		**P**	**01 01 05.2**	**+1.1**
PV20				IAmb		IAmb	01 01 07.5	
	comp=Z,13nm,1.4s							
DOT	**Dot Lake**	**84.50**	**14**	P		**P**	**01 01 03.3**	**-0.7**
DOT				IAmb		IAmb	01 01 03.9	
	comp=Z,6.1nm,0.8s							
HDA	**Harding Lake**	**84.51**	**13**	P		**P**	**01 01 03.2**	**-0.8**
CCB	**Clear Creek Bu**	**84.55**	**12**			**P**	**01 01 03.2**	**-1.0**
CCB				IAmb		IAmb	01 01 03.8	
	comp=Z,6.4nm,0.6s							
BCAR	**Beaver Creek A**	**84.56**	**15**	P		**P**	**01 01 04.5**	**+0.2**
TX31	**Lajitas Ar. Si**	**84.58**	**57**			**P**	**01 01 06.7**	**+1.4**
TX31				IAmb		IAmb	01 01 08.2	
	comp=Z,9.1nm,1.1s							
TXAR	**Lajitas Array**	**84.58**	**57**	P		**P**	**01 01 06.7**	**+1.4**
	comp=Z,3.6nm,0.8s,baz=217,slow=6.1,SNR=11							
	comp=Z,3.6nm,0.8s							
SCRK	**Sand Creek**	**84.79**	**14**	P		**P**	**01 01 04.9**	**-0.7**
SCRK				IAmb		IAmb	01 01 05.9	
	comp=Z,4.1nm,0.9s							
IL31		**84.84**	**13**	P		**P**	**01 01 04.8**	**-0.8**
IL31				IAmb		IAmb	01 01 27.1	
	comp=Z,12nm,1.5s							
ILAR	**Eielson Array**	**84.84**	**13**	P		**P**	**01 01 04.5**	**-1.2**
	comp=Z,2.0nm,0.4s,baz=225,slow=5.2,SNR=36							
	comp=Z,2.0nm,0.4s							
ALPN	**Alpine**	**85.00**	**56**	P		**P**	**01 01 08.9**	**+1.5**
ALPN				IAmb		IAmb	01 01 09.2	
	comp=Z,3.5nm,0.8s							
YHL	**Hebgen Lake**	**85.91**	**41**			**P**	**01 01 12.7**	**+1.0**
YHL				IAmb		IAmb	01 01 14.0	
	comp=Z,4.2nm,0.9s							
PDAR	**Pinedale Array**	**85.97**	**43**	P		**P**	**01 01 11.9**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=216,slow=3.5,SNR=9.0							
	comp=Z,0.5nm,0.5s							
DRIO	**Del Rio**	**87.08**	**58**			**P**	**01 01 17.8**	**+0.5**
DRIO				IAmb		IAmb	01 01 19.4	
	comp=Z,6.8nm,0.8s							
HHC	**Hu-ho-hao-te**	**87.55**	**314**	*e*P		**P**	**01 01 21.3**	**+1.9**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,150nm,5.5s							
PZH	**PanZhiHua**	**89.81**	**298**	P		**P**	**01 01 31.3**	**+1.0**
ELIB	**Princess Elisa**	**90.09**	**186**	*d*P		**P**	**01 01 30.6**	**-0.1**
	comp=Z,3.9nm,0.8s							
INK	**Inuvik**	**90.81**	**15**	P		**P**	**01 01 32.1**	**-1.6**
	comp=Z,1.7nm,1.0s,baz=158,slow=5.4,SNR=4.7							
	comp=Z,1.7nm,1.0s							
PLCA	**Paso Flores**	**91.03**	**133**	P		**P**	**01 01 37.3**	**+1.5**
	comp=Z,3.2nm,1.1s,baz=191,slow=5.2,SNR=3.9							
	comp=Z,3.2nm,1.1s							
VNA3	**Neumayer Olymp**	**91.46**	**176**	⇑P		**P**	**01 01 37.3**	**+0.3**
	comp=Z,1.7nm,0.4s							
VNA2	**Neumayer--Watz**	**91.92**	**177**	⇓P		**P**	**01 01 39.9**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=186,slow=5.5							
YKA	**Yellowknife Ar**	**93.11**	**24**	P		**P**	**01 01 42.7**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=255,slow=4.8,SNR=9.4							
	comp=Z,0.5nm,0.7s							
A36M	**Sachs Harbour**	**95.41**	**14**	P		**P**	**01 01 54.4**	**-0.4**
A36M				IAmb		IAmb	01 01 55.0	
	comp=Z,3.6nm,0.8s							
BVAR	**Borovoye Array**	**116.95**	**321**	PKP		**PKPdf**	**01 07 12.3**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=100,slow=1.8,SNR=13							
ARCES	**ARCESS Array B**	**125.72**	**350**	PKP		**PKPdf**	**01 07 28.5**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=44,slow=2.1,SNR=5.0							
BOSA	**Boshof**	**129.64**	**206**	PKP		**PKiKP**	**01 07 39.6**	**+0.4**
	comp=Z,1.7nm,1.0s,baz=127,slow=18,SNR=1.2							
FINES	**FINESS Array B**	**132.72**	**345**	PKP		**PKPdf**	**01 07 42.9**	**0.0**
	comp=Z,1.8nm,0.8s,baz=46,slow=4.0,SNR=4.1							
BNN	**Bunyan**	**143.96**	**314**	PKPdf		PKPbc	01 08 02.8	-0.3
OJC	**Ojcow**	**144.25**	**341**	PKPbc		PKPbc	01 08 03.1	-0.4
BURAR	**Bucovina Array**	**144.43**	**334**	⇑P		PKPbc	01 08 03.7	-0.6
ONER	**Baraj Valea Uz**	**144.89**	**331**	⇑P		**PKPab**	**01 08 06.1**	**0.0**
CLL	**Collm**	**144.92**	**349**	*i* PKPbc		**PKPdf**	**01 08 05.1**	**-0.3**
	comp=Z,9.0nm,0.7s							
TPGR	**Topolog**	**144.97**	**328**	⇓P		**PKPab**	**01 08 05.9**	**-0.6**
BR131	**Keskin Array S**	**145.03**	**316**			**PKPab**	**01 08 06.3**	**-0.7**
BRTR	**Keskin Array B**	**145.03**	**316**	PKPbc		PKPbc	01 08 06.1	-0.4
	comp=Z,0.8nm,0.5s,baz=111,slow=3.2,SNR=3.6							
VRI	**Vrincioaia**	**145.08**	**330**	⇑P		**PKPab**	**01 08 06.4**	**-0.4**
LANS	**Liptovska Anna**	**145.29**	**341**	*e*PKP		**PKPab**	**01 08 07.8**	**+0.2**
LODK	**Lodwar**	**145.29**	**251**	PKPdf		**PKPbc**	**01 08 07.8**	**-0.2**
DOPR	**Dopca**	**145.62**	**332**	⇑P		**PKPab**	**01 08 08.3**	**-0.7**
MLR	**Muntele Rosu**	**145.73**	**331**	⇑P		**PKPdf**	**01 08 07.4**	**+0.2**
MARR	**Marisel-Cluj**	**146.05**	**335**	⇑P		**PKPbc**	**01 08 09.0**	**-0.3**
DRGR		**146.12**	**335**	⇑P		**PKPbc**	**01 08 08.4**	**-1.0**
KRUC	**Moravsky**	**146.26**	**344**	*e*PKP		**PKPbc**	**01 08 09.1**	**-0.5**
ARR	**Arges**	**146.42**	**332**	⇑P		**PKPbc**	**01 08 10.5**	**+0.2**
MODS	**Modra-Piesok**	**146.64**	**342**	*e*PKP		**PKPab**	**01 08 11.8**	**-1.1**
MMAI	**Mount Meron Ar**	**146.67**	**305**	PKPbc		**PKPbc**	**01 08 10.9**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=66,slow=4.9,SNR=11							
GERES	**GERESS Array B**	**147.12**	**347**	PKPbc		**PKPbc**	**01 08 12.3**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=7.2,slow=2.5,SNR=4.4							
GZR	**Gura Zlata**	**147.22**	**334**	⇑P		**PKPbc**	**01 08 12.0**	**-0.5**
CONA	**Conrad Observa**	**147.44**	**344**	*i* PKP		**PKPbc**	**01 08 13.2**	**+0.2**
	comp=Z,4.0nm,0.6s							
RONA	**Rosalia, Austr**	**147.53**	**343**	*e*PKP		**PKPbc**	**01 08 13.5**	**+0.3**
	comp=Z,3.8nm,0.8s							
BIOA	**Bad Ischl, Aus**	**148.22**	**346**	*i* PKP		**PKPbc**	**01 08 14.7**	**-0.2**
	comp=Z,2.7nm,0.8s							
LESA	**Schwarzleotal**	**148.69**	**347**	*i* PKP		**PKPbc**	**01 08 15.6**	**-0.6**
	comp=Z,1.4nm,0.5s							
KBA	**Koelnbreinsper**	**148.86**	**346**	*i* PKP		**PKPbc**	**01 08 15.5**	**-1.3**
	comp=Z,3.4nm,0.6s,SNR=4.1							
RETA	**Reutte**	**149.00**	**350**	*e*PKP		**PKPbc**	**01 08 16.8**	**-0.2**
	comp=Z,13nm,1.9s							
WTTA	**Wattenberg**	**149.05**	**348**	*e*PKP		**PKPbc**	**01 08 17.0**	**-0.3**
	comp=Z,8.6nm,0.7s,SNR=6.5							
MOTA	**Moosalm**	**149.07**	**349**	*e*PKP		**PKPbc**	**01 08 16.6**	**-0.7**
	comp=Z,8.1nm,1.2s							
BOVS	**Bovan**	**149.08**	**333**	⇑P		**PKPbc**	**01 08 16.2**	**-1.0**
SQTA	**Sankt Quirin**	**149.17**	**349**	*i* PKP		**PKPbc**	**01 08 17.0**	**-0.5**
	comp=Z,3.2nm,0.7s,SNR=4.1							
MYKA	**Terra Mystica**	**149.22**	**345**	*e*PKP		**PKPbc**	**01 08 16.2**	**-1.3**
	comp=Z,2.3nm,0.5s							
DAVA	**Damuels**	**149.34**	**351**	*e*PKP		**PKPbc**	**01 08 17.2**	**-0.

CTJI	**Waduk Cacaban**	**1.83**	**60**	P		**Pn**	**00 57 47.1**	**+2.1**
TNG	**Tangerang**	**1.97**	**332**	P		**Pn**	**00 57 49.2**	**+2.3**
SBJI	**Serang**	**2.29**	**321**	P		**Pn**	**00 57 53.0**	**+1.7**
UGM	**Wanagama**	**2.92**	**90**			**Pn**	**00 58 00.5**	**+0.7**
UGM	**Wanagama**	**2.92**	**90**	P		**Pn**	**00 58 01.6**	**+1.8**
SMRI	**Semarang**	**2.97**	**73**			**Pn**	**00 58 02.1**	**+1.6**
SMRI	**Semarang**	**2.97**	**73**	P		**Pn**	**00 58 03.7**	**+3.2**
BLSI	**Bandar Lampung**	**3.44**	**317**	P		**Pn**	**00 58 10.2**	**+3.3**
PCJI	**Pacitan**	**3.57**	**95**	P		**Pn**	**00 58 10.3**	**+1.5**
KASI	**Kota Agung**	**3.88**	**308**	P		**Pn**	**00 58 15.1**	**+2.1**
NGJI	**Ngawi**	**3.89**	**82**	P		Pn	00 58 18.3	+5.2
KLJ	**Kotabumi**	**4.07**	**318**	P		Pn	00 58 24.5	+8.9
SNJI	**Sawahan-Nganju**	**4.14**	**88**	P		**Pn**	**00 58 19.4**	**+2.6**
SJI	**Sawahan**	**4.15**	**88**	P		**Pn**	**00 58 18.7**	**+1.9**
KLSI		**4.28**	**318**	P		**Pn**	**00 58 20.9**	**+2.4**
TBJI	**Tambak Boyo**	**4.37**	**76**	P		**Pn**	**00 58 22.3**	**+2.5**
MDSI	**Maura Dua**	**4.80**	**315**	P		**Pn**	**00 58 28.1**	**+2.4**
TPI	**Tanjungpandan** 92nm,0.7s	**5.13**	**1**	P		**Pn**	**00 58 33.2**	**+3.0**
MNAI	**Manna**	**5.80**	**307**	Pn		**Pn**	**00 58 38.7**	**-0.6**
MNAI	**Manna** 1.1nm5µm141nm,1.3s	**5.80**	**307**	P		**Pn**	**00 58 41.5**	**+2.2**
PPBI	**Pangkal Pinang**	**5.90**	**346**	P		**Pn**	**00 58 43.5**	**+2.8**
BLJI	**Banyuglugur** 0.5nm62nm,0.6s	**5.96**	**89**	P		**Pn**	**00 58 45.0**	**+3.4**
JAGI	**Jajag, Banyuwa**	**6.53**	**95**			**Pn**	**00 58 50.9**	**+1.6**
JAGI	**Jajag, Banyuwa** 0.6nm92nm,0.8s	**6.53**	**95**	P		**Pn**	**00 58 51.7**	**+2.4**
ABJI	**Asem Bagus** 0.5nm115nm,0.6s	**6.59**	**89**	P		**Pn**	**00 58 54.0**	**+3.8**
MASI	**Maura Aman, Be**	**7.12**	**311**	P		Pn	00 59 06.2	+8.7
KHKI	**Kahang-Kahang**	**7.96**	**94**	P		**Pn**	**00 59 12.4**	**+3.5**
KLNI	**Mataram** 26nm,0.5s	**8.45**	**94**	P		**Pn**	**00 59 17.0**	**+1.4**
TWSI	**Taliwang, Sumb** 47nm,0.7s	**9.24**	**96**	P		**Pn**	**00 59 28.7**	**+2.2**
PLAI	**Plampang**	**10.13**	**96**	P		**Pn**	**00 59 40.2**	**+1.5**
KAPI	**Kappang** 3.8nm,0.5s,baz=177,slow=23,SNR=1.4	**12.43**	**77**	P		**Pn**	**01 00 12.4**	**+2.3**
KAPI				LR		LR	01 05 30.3	
	comp=Z,160nm,19.9s,baz=258,slow=40							
GSI	**Gunungsitoli**	**13.55**	**312**			Pn	01 00 19.9	-5.4
BATI	**Baumata** 20nm,0.4s,baz=346,slow=3.0,SNR=5.8	**16.05**	**99**	P		**Pn**	**01 00 58.4**	**+0.4**
BATI				S		**Sn**	**01 03 52.9**	**-2.1**
	14nm,0.6s,baz=274,slow=18,SNR=1.5							
SOEI	**Soe**	**16.59**	**98**			**Pn**	**01 01 06.3**	**+1.5**
SOEI				IAmb		IAmb	01 01 29.4	
	comp=Z,43nm,0.8s							
MYLDM	**Lahad Datu**	**16.97**	**40**			**Pn**	**01 01 06.7**	**-2.8**
MYLDM				IAmb		IAmb	01 01 32.6	
	comp=Z,45nm,0.9s							
MBWA	**Marble Bar**	**17.63**	**140**	P		**Pn**	**01 01 16.4**	**-1.2**
PSA00	**Pilbara Seismi**	**18.01**	**140**	P		**P**	**01 01 22.2**	**+0.2**
PSA00	**Pilbara Seismi**	**18.01**	**140**	P		**P**	**01 01 22.4**	**+0.4**
PSA00				IAmb		IAmb	01 01 53.2	
	comp=Z,7.6nm,1.1s							
FITZ	**Fitzroy Crossi**	**20.28**	**122**	P		**P**	**01 01 48.1**	**+1.2**
	comp=Z,7.6nm,0.7s,baz=292,slow=7.0,SNR=16							
FITZ				S		S	01 05 18.3	-13
	comp=Z,3.3nm,0.9s,baz=195,slow=14,SNR=2.0							
	comp=Z,7.6nm,0.7s							
KNRA	**Kununurra**	**22.11**	**112**	P		**P**	**01 02 07.9**	**+1.4**
KNRA				IAmb		IAmb	01 02 36.4	
	comp=Z,20nm,1.1s							
MTN	**Manton Dam**	**23.67**	**104**	P		**P**	**01 02 22.7**	**+0.3**
MTN				IAmb		IAmb	01 02 51.6	
	comp=Z,23nm,1.1s							
FAKI	**Fak Fak**	**25.05**	**80**	P		**P**	**01 02 33.6**	**-1.4**
H01W3	**Cape Leeuwin H** baz=347,slow=74	**27.50**	**168**	T		T	01 32 32.9	
H01W1	**Cape Leeuwin H** baz=347	**27.52**	**168**	T		T	01 32 43.1	
H01W2	**Cape Leeuwin H** baz=347,slow=74	**27.52**	**168**	T		T	01 32 31.1	
CMAR	**Chiang Mai Arr**	**27.56**	**342**	P		**P**	**01 02 55.0**	**-2.5**
	comp=Z,0.7nm,0.3s,baz=168,slow=9.6,SNR=5.3							
CMAR				PcP		**PcP**	**01 06 14.3**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=154,slow=2.2,SNR=6.0							
CMAR				LR		LR	01 13 43.3	
	comp=Z,66nm,19.2s,baz=165,slow=36							
	comp=Z,0.7nm,0.3s							
WRA	**Warramunga Arr**	**28.54**	**118**	P		**P**	**01 03 06.5**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=290,slow=7.9,SNR=5.4							
WRA				PcP		**PcP**	**01 06 17.2**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=301,slow=1.9,SNR=6.4							
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**29.69**	**125**	P		**P**	**01 03 17.7**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=299,slow=9.2,SNR=6.1							
ASAR				PcP		**PcP**	**01 06 20.3**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=304,slow=1.7,SNR=8.4							
ASAR				ScP		**ScP**	**01 09 55.1**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=295,slow=2.9,SNR=4.0							
ASAR				LR		LR	01 14 30.5	
	comp=Z,52nm,21.5s,baz=278,slow=35							
	comp=Z,0.8nm,0.8s							
PALK	**Pallekele**	**30.76**	**299**	LR		LR	01 14 53.3	
	comp=Z,69nm,18.7s,baz=134,slow=34							
PZH	**PanZhiHua**	**34.68**	**351**	P		**P**	**01 04 00.0**	**-0.3**
H08S2	**Diego Garcia H** baz=93,slow=76,SNR=7.1	**34.76**	**268**	T		T	01 41 01.0	
H08S3	**Diego Garcia H** baz=93,slow=76,SNR=41	**34.77**	**268**	T		T	01 41 08.1	
H08S1	**Diego Carcia H** baz=93,slow=76,SNR=30	**34.78**	**268**	T		T	01 41 08.1	
CTA	**Charters Tower**	**39.32**	**112**	P		**P**	**01 04 40.1**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=320,slow=19,SNR=2.2							
CTA				PcP		**PcP**	**01 06 47.6**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=256,slow=4.2,SNR=1.9							
CTA				LR		LR	01 20 57.1	
	comp=Z,45nm,21.8s,baz=224,slow=36							
	comp=Z,2.3nm,0.8s							
STKA	**Stephens Creek**	**39.60**	**132**	P		**P**	**01 04 43.0**	**+1.2**
	comp=Z,8.1nm,0.7s,baz=305,slow=8.8,SNR=16							
STKA				PcP		**PcP**	**01 06 48.1**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=328,slow=5.6,SNR=3.1							
STKA				LR		LR	01 23 03.6	
	comp=Z,44nm,18.9s,baz=214,slow=39							
	comp=Z,8.1nm,0.7s							
STKA	**Stephens Creek**	**39.60**	**132**	P		**P**	**01 04 43.1**	**+1.2**
EVN	**Everest**	**40.93**	**331**			**P**	**01 04 50.2**	**-3.3**
NJ2	**Nanjing**	**41.18**	**15**	*eP*		**P**	**01 04 54.5**	**-0.3**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
XAN	**Xi'an**	**41.75**	**2**	P		**P**	**01 05 00.3**	**+0.8**
XAN				pmax		pmax		
	comp=Z,6.0nm,0.7s							
LYN	**LuoYang**	**42.49**	**6**	P		**P**	**01 05 08.6**	**+3.1**
LYN				pmax		pmax		
	comp=Z,12nm,0.6s							
LYN				LR		LR		
	comp=N,240nm,8.8s							
LYN				LR		LR		
	comp=E,290nm,7.9s							
LYN				LR		LR		
	comp=Z,300nm,11.3s							
HNS	**HongShan**	**45.57**	**8**	⇓P		**P**	**01 05 29.0**	**-1.1**
JNU	**Nakatsue**	**46.45**	**27**	LR		LR	01 28 40.8	
	comp=Z,93nm,18.1s,baz=342,slow=41							
GTA2	**Gaotai**	**47.72**	**352**	*eP*		**P**	**01 05 46.4**	**-0.7**
GTA2				PcP		**PcP**	**01 07 16.0**	**+0.4**
HHC	**Hu-ho-hao-te**	**48.67**	**4**	*eP*		**P**	**01 05 55.1**	**+0.8**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,140nm,5.1s							
KSRS	**Korea Array**	**48.98**	**22**	P		**P**	**01 05 56.0**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=208,slow=41,SNR=1.9							
KSRS				LR		LR	01 28 07.7	
	comp=Z,22nm,18.2s,baz=335,slow=38							
	comp=Z,0.6nm,0.3s							
SONM	**Songino Array**	**55.52**	**359**	P		**P**	**01 06 44.4**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=177,slow=8.3,SNR=9.1							
SONM				LR		LR	01 33 53.5	
	comp=Z,66nm,18.7s,baz=204,slow=40							
	comp=Z,1.1nm,0.5s							
KBL	**Kabul** SNR=6.5	**55.78**	**322**	P		**P**	**01 06 45.5**	**-1.8**
JLN	**Jalan Bani Buh**	**55.86**	**303**	P		**P**	**01 06 48.9**	**+1.0**
BNX	**BinXian**	**56.30**	**17**	⇓P		**P**	**01 06 50.3**	**-0.2**
BNX				pmax		pmax		
	comp=Z,5.0nm,0.7s							
MHTO	**MHTO**	**56.56**	**301**	P		**P**	**01 06 52.9**	**0.0**
MHTO				S		**S**	**01 14 48.2**	**+7.5**
WSAR	**Wadi Sarin**	**57.00**	**304**	P		**P**	**01 06 57.1**	**+1.1**
NRN	**Naryn**	**57.02**	**332**			**P**	**01 06 54.5**	**-1.7**
NRN				IAmb		IAmb	01 06 56.1	
	comp=Z,4.9nm,0.9s							
SMDO	**Samad**	**57.39**	**304**	P		**P**	**01 06 59.5**	**+0.6**
BIDO	**Bidbid**	**57.54**	**304**	P		**P**	**01 07 00.7**	**+0.9**
DRK	**Karamyk**	**57.64**	**328**	P		**P**	**01 06 58.2**	**-2.4**
DRK				IAmb		IAmb	01 07 03.6	
	comp=Z,4.8nm,0.6s							
BOOM	**Boomskoye usch**	**57.88**	**333**	P		**P**	**01 06 59.4**	**-2.6**
BOOM				IAmb		IAmb	01 07 01.9	
	comp=Z,4.5nm,0.8s							
BSY	**Bisya**	**57.96**	**303**	P		**P**	**01 07 03.3**	**+0.5**
HILR	**Hailar Array B**	**58.22**	**9**	P		**P**	**01 07 02.1**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=183,slow=8.7,SNR=1.9							
	comp=Z,0.4nm,0.3s							
HOQ	**Hoqain**	**58.23**	**304**	P		**P**	**01 07 05.4**	**+0.8**
ARSB	**Arslanbob**	**58.39**	**330**	P		**P**	**01 07 03.1**	**-2.5**
ARSB				IAmb		IAmb	01 07 05.7	
	comp=Z,5.4nm,0.7s							
BTK	**Batken**	**58.58**	**327**	P		**P**	**01 07 04.7**	**-2.1**
BTK				IAmb		IAmb	01 07 07.1	
	comp=Z,3.4nm,0.6s							
AAK	**Ala-Archa**	**58.66**	**332**	P		**P**	**01 07 06.8**	**-0.7**
DOK	**Doka**	**58.94**	**297**	P		**P**	**01 07 09.5**	**-0.1**
MKAR	**Makanchi Array**	**58.94**	**340**	P		**P**	**01 07 06.9**	**-2.3**
	comp=Z,3.0nm,0.5s,baz=158,slow=7.7,SNR=60							
	comp=Z,3.0nm,0.5s							
SOHO	**SOHO**	**59.11**	**304**	P		**P**	**01 07 10.9**	**+0.1**
ABTO	**Aybut**	**59.22**	**296**	P		**P**	**01 07 12.0**	**+0.3**
ALNE	**Al Ain**	**59.72**	**304**	P		**P**	**01 07 15.4**	**+0.4**
UOSS	**Minazif**	**59.74**	**305**	P		**P**	**01 07 15.0**	**-0.1**
ASHO	**Ashiyiah** SNR=9.1	**59.74**	**304**	P		**P**	**01 07 15.5**	**+0.4**
HATD	**Hatta, Dubai**	**59.75**	**305**	P		**P**	**01 07 15.4**	**+0.3**
MDH	**Madha**	**59.82**	**305**	P		**P**	**01 07 14.8**	**-0.8**
MASF	**Masafi**	**59.97**	**305**	P		**P**	**01 07 17.2**	**+0.6**
BANOM	**Banah**	**60.10**	**306**	P		**P**	**01 07 16.9**	**-0.7**
FAQ	**Al Faqa, Dubai** SNR=5.8	**60.15**	**304**	P		**P**	**01 07 18.3**	**+0.4**
NAZ	**Nazwa, Dubai**	**60.20**	**305**	P		**P**	**01 07 18.6**	**+0.4**
SHME	**Shamm**	**60.28**	**306**	P		**P**	**01 07 18.4**	**-0.3**
ASUD	**Al Ashush, Dub**	**60.32**	**304**	P		**P**	**01 07 19.7**	**+0.6**
AJN	**Ajban**	**60.57**	**304**	P		**P**	**01 07 20.6**	**-0.1**
KK31	**Karatay Array**	**60.94**	**330**			**P**	**01 07 21.1**	**-1.8**
KKAR	**Karatay Array**	**60.94**	**330**	P		**P**	**01 07 21.4**	**-1.5**
H04N2	**CROZET ISLANDS** baz=69,slow=75	**60.95**	**221**	T		T	02 14 10.9	
H04N1	**CROZET ISLANDS** baz=69,slow=75	**60.96**	**221**	T		T	02 14 09.8	
H04N3	**CROZET ISLANDS** baz=69,slow=75	**60.96**	**221**	T		T	02 14 08.4	
KURBB	**Kurchatov Arra**	**63.51**	**340**	P		**P**	**01 07 38.1**	**-1.8**
	comp=Z,1.5nm,0.4s,baz=153,slow=6.3,SNR=27							
KURBB				LR		LR	01 37 37.3	
	comp=Z,122nm,19.9s,baz=170,slow=38							
	comp=Z,1.5nm,0.4s							
KURK	**Kurchatov**	**63.55**	**340**			**P**	**01 07 38.3**	**-1.9**
KURK				IAmb		IAmb	01 07 41.1	
	comp=Z,6.3nm,1.0s							
KURK	**Kurchatov**	**63.55**	**340**	P		**P**	**01 07 38.2**	**-2.0**
TRNA	**Turayna** SNR=9.5	**63.77**	**302**	P		**P**	**01 07 42.2**	**0.0**
SMRA	**Abu-Samra**	**64.10**	**302**	P		**P**	**01 07 44.4**	**+0.1**
ZAA0	**Zalesovo Array**	**64.56**	**345**			**P**	**01 07 44.5**	**-2.3**
ZAA0				IAmb		IAmb	01 07 46.9	
	comp=Z,2.8nm,0.4s							
ZALV	**Zalesovo Beam**	**64.56**	**345**	P		**P**	**01 07 44.7**	**-2.1**
	comp=Z,2.8nm,0.3s,baz=154,slow=6.7,SNR=20							
ZALV				LR		LR	01 40 45.7	
	comp=Z,205nm,18.1s,baz=329,slow=40							
	comp=Z,2.8nm,0.3s							
ZALV	**Zalesovo Beam**	**64.56**	**345**			**P**	**01 07 44.2**	**-2.5**
THZ	**Tophouse**	**66.41**	**132**	P		**P**	**01 08 01.1**	**+2.0**
BVAR	**Borovoye Array**	**68.43**	**337**	P		**P**	**01 08 09.9**	**-1.6**
	comp=Z,6.4nm,0.4s,baz=147,slow=8.3,SNR=60							
	comp=Z,6.4nm,0.4s							
BORK	**Borovoye**	**68.48**	**337**			**P**	**01 08 09.9**	**-1.8**
BORK				IAmb		IAmb	01 08 11.8	
	comp=Z,6.8nm,0.5s							
AB31	**Akbulak array**	**70.49**	**329**			**P**	**01 08 23.4**	**-0.9**
ABKAR	**Akbulak array**	**70.49**	**329**			**P**	**01 08 23.2**	**-1.1**
GNI	**Garni**	**75.01**	**315**	LR		LR	01 46 31.2	
	comp=Z,63nm,18.0s,baz=339,slow=39							
MA2	**Magadan**	**75.54**	**21**	LR		LR	01 45 19.4	
	comp=Z,38nm,18.0s,baz=325,slow=38							
ARTI	**Arti**	**75.74**	**334**			**P**	**01 08 54.4**	**-0.8**
GURO	**Guroymak-BITLI**	**76.32**	**313**	P		**P**	**01 08 59.1**	**+0.1**
GURO				IAmb		IAmb	01 09 01.2	
	comp=Z,4.1nm,0.6s							
KARS	**Kars**	**76.36**	**315**			**P**	**01 08 58.8**	**-0.4**
KBZ	**Khabaz**	**77.71**	**318**	P		**P**	**01 09 06.4**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=115,slow=5.5,SNR=9.6							
	comp=Z,3.3nm,0.8s							
LSZ	**Lusaka**	**77.77**	**256**			**P**	**01 09 08.8**	**+1.2**
LSZ				IAmb		IAmb	01 09 09.4	
	comp=Z,3.5nm,0.6s							
KIV	**Kislovodsk**	**77.94**	**318**			**P**	**01 09 08.3**	**+0.3**
ASF	**Jabal al Asfar**	**78.15**	**305**	LR		LR	01 49 52.3	
	comp=Z,41nm,18.0s,baz=264,slow=40							
EIL	**Elat**	**79.05**	**302**	LR		LR	01 45 18.8	
	comp=Z,92nm,18.5s,baz=242,slow=36							
BOSA	**Boshof**	**79.54**	**242**	P		**P**	**01 09 18.3**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=101,slow=5.2,SNR=7.2							
	comp=Z,1.3nm,0.5s							
MMAI	**Mount Meron Ar**	**79.60**	**306**	P		**P**	**01 09 18.7**	**+1.5**
	comp=Z,2.1nm,0.5s,baz=81,slow=8.9,SNR=6.4							
	comp=Z,2.1nm,0.5s							
TIXI	**Tiksi**	**80.65**	**7**			**P**	**01 09 19.2**	**-2.7**
BR131	**Keskin Array S**	**82.86**	**312**			**P**	**01 09 33.2**	**-1.4**
BRTR	**Keskin Array B**	**82.86**	**312**	P		**P**	**01 09 34.0**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=137,slow=7.1,SNR=13							
	comp=Z,1.9nm,0.6s							
AKASG	**Malin Array Be**	**88.77**	**321**	P		**P**	**01 10 03.5**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=86,slow=4.7,SNR=6.3							
	comp=Z,0.5nm,0.4s							
BUR08	**Bucovina Ar. S**	**90.69**	**318**	P		**P**	**01 10 12.9**	**+0.4**
BUR08				IAmb		IAmb	01 10 32.0	
	comp=Z,7.8nm,1.4s							
LIT	**Litokhoron**	**91.31**	**310**	P		**P**	**01 10 13.8**	**-1.6**
FINES	**FINESS Array B**	**92.85**	**332**	P		**P**	**01 10 21.8**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=103,slow=6.1,SNR=6.7							
	comp=Z,2.4nm,0.8s							
SPITS	**Spitsbergen Ar**	**97.95**	**348**	P		**P**	**01 10 44.0**	**-0.9**
	comp=Z,3.6nm,0.8s,baz=163,slow=6.0,SNR=1.5							
	comp=Z,3.6nm,0.8s							
HFS	**Hagfors**	**98.75**	**330**	P		Pdif	01 10 49.6	+0.7
	comp=Z,3.9nm,0.9s,baz=116,slow=3.4,SNR=6.8							
	comp=Z,3.9nm,0.9s							
NOA	**NORSAR Array B**	**99.96**	**331**	LR		LR	02 03 12.8	
	comp=Z,33nm,19.0s,baz=350,slow=40							
YKA	**Yellowknife Ar**	**117.52**	**21**	PKP		**PKPdf**	**01 15 54.6**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=0.7,slow=2.4,SNR=14							
PDAR	**Pinedale Array**	**132.39**	**37**	PKP		**PKPdf**	**01 16 24.5**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=123,slow=1.5,SNR=5.2							
PDAR				SKP		**SKPab**	**01 19 49.9**	**+2.5**
	comp=Z,0.1nm,0.5s,baz=313,slow=2.1,SNR=3.6							
SCHQ	**Schefferville**	**133.00**	**356**	PKP		**PKiKP**	**01 16 25.6**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=4.7,slow=4.3,SNR=5.5							
LONY	**Lake Ozonia**	**143.39**	**3**	PKPdf		PKPbc	01 16 41.0	-0.3
TXAR	**Lajitas Array**	**143.73**	**50**	PKP		PKPbc	01 16 44.3	+1.4
	comp=Z,0.6nm,0.5s,baz=312,slow=1.8,SNR=4.6							
APMT	**Aspermont**	**144.01**	**41**			**PKPdf**	**01 16 44.9**	**-0.7**
P43A	**Skaggs, Pawnee**	**144.89**	**23**	PKPdf		PKPbc	01 16 46.4	+0.4
MMNY	**Mt. Morris Dam**	**144.99**	**7**	PKPdf		PKiKP	01 17 01.1	+10
N47A	**Urbana**	**145.11**	**18**	PKPdf		**PKPab**	**01 16 46.2**	**-0.5**
RLO	**Rose Lookout**	**145.13**	**33**	PKPdf		**PKPab**	**01 16 47.3**	**+0.3**
K57A	**Scipio Center**	**145.14**	**5**	PKPdf		**PKPab**	**01 16 46.5**	**-0.3**
AC02	**Maricunga**	**145.30**	**185**	PKPdf		**PKPab**	**01 16 50.0**	**+1.5**
TRY	**Troy**	**145.31**	**2**	PKPbc		**PKPdf**	**01 16 47.7**	**+0.2**
K62A	**Royalston**	**145.39**	**360**	PKPbc		**PKPab**	**01 16 47.6**	**-0.1**
CCM	**Cathedral Cave**	**145.51**	**27**			**PKPbc**	**01 16 48.0**	**-0.1**
BINY	**Binghamton**	**145.72**	**5**			**PKPdf**	**01 16 48.4**	**+0.2**
P46A	**Rosedale**	**145.77**	**21**			**PKPab**	**01 16 49.1**	**-0.1**
FVM	**French Village**	**145.93**	**26**	PKPdf		**PKPdf**	**01 16 48.8**	**+0.2**
PAOC	**Oil Creek Stat**	**145.93**	**10**	PKPdf		**PKPbc**	**01 16 49.1**	**-0.2**
JCT	**Junction City**	**145.94**	**45**	PKPdf		**PKPab**	**01 16 51.6**	**+1.3**
DRIO	**Del Rio**	**145.95**	**47**			**PKPab**	**01 16 50.9**	**+0.6**
N51A	**Ashland**	**145.97**	**14**	PKPdf		**PKPdf**	**01 16 48.8**	**+0.2**
BRDY	**Brady**	**146.01**	**43**			**PKPbc**	**01 16 50.1**	**+0.2**
L64A	**Middleborough**	**146.09**	**358**	PKPdf		**PKPbc**	**01 16 49.4**	**-0.3**
O49A	**Covington**	**146.15**	**16**	PKPdf		**PKPbc**	**01 16 49.9**	**-0.1**
BDFB	**Brasilia**	**146.35**	**226**	PKPbc		**PKPab**	**01 16 52.7**	**+0.5**
	comp=Z,3.8nm,0.6s,baz=131,slow=4.2,SNR=10							
WVT	**Waverly**	**148.59**	**24**			**PKPbc**	**01 16 57.0**	**+0.1**

NNC 21 01:07:44.3±2.7, 36.75N×70.45E, h102km±51km, mb3.0, mpv3.5, 3C-1D, Error ellipse: s-maj=21.4km s-min=20.5km az=6.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 4.6nm,0.3s,baz=182,slow=11,SNR=118	**6.34**	**0**	⇑P		Pn		01 09 15.4	+0.3
KK31				⇑S		Sn		01 10 26.3	+0.2
	1.4nm,0.3s,baz=192,slow=26,SNR=7.9								
AAK	**Ala-Archa** 0.5nm,0.4s	**6.65**	**27**	⇑P		Pn		01 09 19.2	-0.3
AAK				⇓S		Sn		01 10 35.0	+1.1
	0.7nm,0.4s								
MK31	**Makanchi Array** 0.7nm,0.6s,baz=217,slow=10,SNR=4.2	**13.35**	**38**	P		Pn		01 10 48.9	-0.7
AB31	**Akbulak array** 0.2nm,0.3s,baz=167,slow=11,SNR=10	**14.65**	**332**	P		Pn		01 11 07.0	+0.7

*ANF **21** 01:16:11.6±0.3, 65.32N×133.93W, h3km±2km, ML3.6/45, Error ellipse: s-maj=1.8km s-min=1.1km az=88.0*
*PGC **21** 01:16:12.0±0.1, 65.34N×133.69W, h0km, ML3.5/36, 176km northeast of Keno, Yt Northern Yukon Territory, Canada*

ISC 21 01:16:10.4±0.7, 65.33N±0.02×133.72W±0.03, h10km, n131, σ1.81/216, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H31M	**Peel River** baz=160	**0.54**	**332**	P		**Pb**		**01 16 21.7**	**-0.3**
H31M				S		**Sg**		**01 16 28.3**	**+0.3**
	baz=160								
H31M	**Peel River**	**0.54**	**332**	P		**Pb**		**01 16 22.2**	**+0.2**
H31M				S		**Sb**		**01 16 29.5**	**-0.4**
I30M	**Mount Dempster** baz=84,SNR=207	**1.12**	**266**	P		**Pg**		**01 16 31.2**	**-0.8**
I30M				S		**Sg**		**01 16 45.8**	**-0.7**
	baz=84								
I30M	**Mount Dempster**	**1.12**	**266**	P		**Pn**		**01 16 31.9**	**-0.3**
I30M				S		**Sb**		**01 16 46.5**	**-0.2**
J30M	**Hart River** baz=53,SNR=291	**1.35**	**237**	P		**Pn**		**01 16 35.1**	**-0.2**
J30M				S		**Sb**		**01 16 51.4**	**-1.7**
	baz=53								
J30M	**Hart River**	**1.35**	**237**	P		**Pg**		**01 16 35.8**	**-0.4**
J30M				S		**Sg**		**01 16 53.9**	**+0.3**
EPYK	**Eagle Plains** baz=131,SNR=43	**1.62**	**312**	P		**Pb**		**01 16 40.2**	**-0.1**
EPYK				S		**Sg**		**01 17 01.8**	**-0.5**
	baz=131								
EPYK	**Eagle Plains**	**1.62**	**312**	Pn		**Pg**		**01 16 40.6**	**-0.7**
EPYK				Sn		**Sg**		**01 17 03.1**	**+0.8**
I29M	**Ogilvie Camp,** baz=89,SNR=9.9	**1.92**	**273**	Pb		**Pb**		**01 16 45.6**	**0.0**
I29M				S		**Sb**		**01 17 08.8**	**-0.7**
	baz=89								
I29M	**Ogilvie Camp,**	**1.92**	**273**	Pn		**Pg**		**01 16 46.0**	**-1.2**
I29M				Sn		**Sb**		**01 17 10.0**	**+0.4**
G30M	**tAoh Zraii Nji** baz=150,SNR=210	**1.94**	**330**	P		**Pb**		**01 16 45.0**	**-0.9**
G30M				S		**Sb**		**01 17 10.5**	**+0.3**
	baz=150								
G30M	**tAoh Zraii Nji**	**1.94**	**330**	Pn		**Pb**		**01 16 45.5**	**-0.4**
G30M				Sn		**Sb**		**01 17 10.7**	**+0.6**
MAYO	**Mayo, Yukon** baz=26	**1.98**	**209**	Pb

	baz=86						
I26K				S	Sn	01 17 58.7	+1.2
	baz=86						
N31M	**Braeburn, Yuko**	**3.97**	**194**	P	Pn	01 17 12.3	+1.0
	baz=12,SNR=31						
N31M				S	Sn	01 18 00.5	+2.6
	baz=12						
N31M	**Braeburn, Yuko**	**3.97**	**194**	Pn	Pn	01 17 12.7	+1.4
N31M				Sn	Sn	01 17 59.5	+1.6
E28M	**Babbage River**	**4.00**	**328**	P	Pn	01 17 13.1	+1.4
	baz=144						
E28M				S	Sn	01 17 59.4	+0.8
	baz=144						
E28M	**Babbage River**	**4.00**	**328**	Pn	Pn	01 17 13.1	+1.4
N30M	**Aishikik Lake**	**4.17**	**203**	P	Pn	01 17 15.2	+1.2
	baz=19						
N30M				S	Sn	01 18 04.2	+1.4
	baz=19						
N30M	**Aishikik Lake**	**4.17**	**203**	Pn	Pn	01 17 15.6	+1.5
N30M				Sn	Sn	01 18 04.1	+1.2
N32M	**Quiet Lake**	**4.21**	**176**	P	Pn	01 17 16.3	+1.7
	baz=355						
N32M				S	Sn	01 18 05.6	+1.9
	baz=355						
N32M	**Quiet Lake**	**4.21**	**176**	Pn	Pn	01 17 16.0	+1.5
L27K	**Beaver Creek,**	**4.21**	**241**	P	Pn	01 17 15.6	+1.0
	baz=53,SNR=32						
L27K				Sb	Sb	01 18 19.0	+3.6
	baz=53						
L27K	**Beaver Creek,**	**4.21**	**241**	Pn	Pn	01 17 16.2	+1.6
L27K				Sg	Sg	01 18 23.0	-2.5
E27K	**Coleen River**	**4.24**	**316**	P	Pn	01 17 15.9	+1.0
	baz=130						
E27K				S	Sn	01 18 04.2	-0.2
	baz=130						
E27K	**Coleen River**	**4.24**	**316**	Pn	Pn	01 17 17.2	+2.2
E27K				Sn	Sn	01 18 05.2	+0.8
BVCY	**Beaver Creek**	**4.31**	**230**	P	Pn	01 17 17.1	+1.2
	baz=43,SNR=72						
BVCY				S	Sn	01 18 08.1	+2.0
	baz=43						
BVCY	**Beaver Creek**	**4.31**	**230**	Pn	Pn	01 17 17.7	+1.8
G26K	**Porcupine Rive**	**4.40**	**296**	P	Pn	01 17 18.5	+1.4
	baz=108,SNR=8.8						
G26K	**Porcupine Rive**	**4.40**	**296**	Pn	Pn	01 17 18.9	+1.8
G26K				Sn	Sn	01 18 07.7	-0.6
D28M	**Stokes Point**	**4.46**	**336**	P	Pn	01 17 19.7	+1.8
	baz=153						
D28M				S	Sn	01 18 12.1	+2.4
	baz=153						
D28M	**Stokes Point**	**4.46**	**336**	Pn	Pn	01 17 19.7	+1.8
TGTN	**Hyland Airport**	**4.53**	**145**	Sb	Sg	01 18 30.9	-4.9
	baz=329						
TGTN	**Hyland Airport**	**4.53**	**145**	Sn	Sn	01 18 12.4	+0.6
TGTN				Sg	Sg	01 18 32.4	-3.4
YUK4	**Talbot Arm**	**4.58**	**211**	P	Pn	01 17 19.3	-0.5
	baz=26,SNR=9.4						
YUK4	**Talbot Arm**	**4.58**	**211**	Pn	Pn	01 17 19.9	+0.2
SCRK	**Sand Creek**	**4.62**	**258**	P	Pn	01 17 21.4	+1.1
	baz=68						
SCRK				Sb	Sb	01 18 29.7	+2.6
	baz=68						
YUK3	**Moose Creek**	**4.67**	**223**	P	Pn	01 17 22.6	+1.5
	baz=37,SNR=38						
YUK3				S	Sn	01 18 17.0	+1.7
	baz=37						
YUK3	**Moose Creek**	**4.67**	**223**	Pn	Pn	01 17 23.1	+2.1
YUK3				Sg	Sg	01 18 37.9	-2.3
M27K	**Edge Creek, AK**	**4.68**	**234**	P	Pn	01 17 22.5	+1.3
	baz=46						
M27K				Sb	Sb	01 18 33.5	+4.5
	baz=46						
O30N	**Mendenhall**	**4.70**	**194**	P	Pn	01 17 22.7	+1.4
	baz=11,SNR=39						
O30N				S	Sn	01 18 18.1	+2.1
	baz=11						
O30N	**Mendenhall**	**4.70**	**194**	Pn	Pn	01 17 22.4	+1.0
O30N				Sn	Sn	01 18 16.4	+0.5
WHY	**Whitehorse**	**4.72**	**187**	P	Pn	01 17 23.6	+2.0
	baz=5.0						
WHY				Sb	Sg	01 18 36.2	-5.5
	baz=5.0						
WHY	**Whitehorse**	**4.72**	**187**	Pn	Pn	01 17 23.3	+1.7
YUK2	**White River**	**4.77**	**225**	Pn	Pn	01 17 24.0	+1.6
DOT	**Dot Lake**	**4.78**	**254**	Sn	Sn	01 18 17.3	-0.5
F26K	**Sheenjek River**	**4.80**	**304**	P	Pn	01 17 23.9	+1.2
	baz=116,SNR=9.8						
F26K				S	Sn	01 18 17.8	-0.4
	baz=116						
F26K	**Sheenjek River**	**4.80**	**304**	Pn	Pn	01 17 23.6	+1.0
L26K	**Log Cabin Wild**	**4.80**	**246**	P	Pn	01 17 24.3	+1.6
	baz=57						
L26K				Sb	Sb	01 18 37.0	+4.6
	baz=57						
D27M	**Malcolm River**	**4.83**	**328**	P	Pn	01 17 25.2	+2.1
	baz=142						
D27M				S	Sn	01 18 19.9	+0.9
	baz=142						
D27M	**Malcolm River**	**4.83**	**328**	Pn	Pn	01 17 25.4	+2.4
HYT	**Haines Junctio**	**4.84**	**203**	P	Pn	01 17 25.1	+1.8
	baz=18,SNR=8.7						
HYT				S	Sn	01 18 21.3	+1.9
	baz=18						
HYT	**Haines Junctio**	**4.84**	**203**	Pn	Pn	01 17 25.1	+1.8
HYT				Sg	Sg	01 18 43.1	-2.5
YUK6	**Outpost Mounta**	**4.88**	**208**	P	Pn	01 17 25.3	+1.3
	baz=23,SNR=16						
YUK6				Sb	Sb	01 18 40.6	+5.8
	baz=23						
YUK6	**Outpost Mounta**	**4.88**	**208**	Pn	Pn	01 17 25.5	+1.5
YUK6				Sg	Sg	01 18 43.2	-3.8
PRP	**Porcupine Dome**	**4.93**	**278**	P	Pn	01 17 24.8	+0.2
	baz=87						
PRP				S	Sn	01 18 21.2	-0.5
	baz=87						
WRGLY	**Wrigley**	**4.94**	**111**	P	Pn	01 17 26.9	+2.4
	baz=299,SNR=9.0						
J25K	**Salcha River,**	**5.00**	**267**	P	Pn	01 17 26.1	+0.6
	baz=77						
M26K	**Nabesna, AK**	**5.05**	**239**	P	Pn	01 17 26.8	+0.8
	baz=50,SNR=19						
RIDG	**Independent Ri**	**5.06**	**257**	S	Sn	01 18 26.0	+1.3
	baz=67						
P33M	**Teslin, Yukon**	**5.16**	**175**	P	Pn	01 17 29.0	+1.4
	baz=355,SNR=24						
P33M	**Teslin, Yukon**	**5.16**	**175**	Pn	Pn	01 17 29.3	+1.6
YUK7	**Dusty Glacier**	**5.22**	**205**	Pn	Pn	01 17 31.1	+2.4
YUK7				Sn	Sn	01 18 29.6	+0.6
F25K	**Christian Rive**	**5.29**	**301**	P	Pn	01 17 30.5	+1.1
	baz=110						
F25K	**Christian Rive**	**5.29**	**301**	Pn	Pn	01 17 30.2	+0.8
K24K	**Donnelly Dome**	**5.42**	**259**	P	Pn	01 17 32.3	+1.1
	baz=68						
P30M	**Million Dollar**	**5.44**	**197**	P	Pn	01 17 33.0	+1.6
	baz=14						
P30M	**Million Dollar**	**5.44**	**197**	Pn	Pn	01 17 33.4	+1.9
P30M				Sn	Sn	01 18 34.0	0.0
O28M	**Mount Upton**	**5.44**	**216**	Pn	Pn	01 17 34.1	+2.4
O28M				Sg	Sg	01 19 02.0	-2.8
E25K	**Arctic Village**	**5.47**	**306**	P	Pn	01 17 33.1	+1.3
	baz=116,SNR=16						
E25K	**Arctic Village**	**5.47**	**306**	Pn	Pn	01 17 32.8	+1.0
E25K				Sn	Sn	01 18 34.7	0.0
C36M	**Paulatuk**	**5.49**	**38**	P	Pn	01 17 33.6	+1.6
	baz=228						
O29M	**Mount Kennedy**	**5.51**	**206**	Pn	Pn	01 17 34.9	+2.3
CTGM	**Chitina Glacie**	**5.58**	**222**	Pn	Pn	01 17 35.0	+1.6
CTGM				Sn	Sn	01 18 37.0	-0.6
CTG	**Chitna Glacier**	**5.58**	**222**	P	Pn	01 17 34.7	+1.3
	baz=34,SNR=10						
LOGN	**Logan Glacier**	**5.60**	**220**	Pn	Pn	01 17 36.0	+2.2
PAX	**Paxson**	**5.66**	**251**	Pn	Pn	01 17 36.3	+1.8
PAX				Sn	Sn	01 18 39.0	-0.5
PTPK	**Patty Peak**	**5.73**	**228**	Pn	Pn	01 17 38.1	+2.5
PTPK				Sn	Sn	01 18 40.7	-0.7
MCARA	**McCarthy VSAT**	**5.76**	**231**	Pn	Pn	01 17 38.4	+2.6
MCARA				Sg	Sg	01 19 10.5	-4.6
P32M	**Atlin**	**5.76**	**180**	Pn	Pn	01 17 37.0	+1.0
C27K	**Jago River**	**5.77**	**323**	P	Pn	01 17 38.4	+2.4
	baz=134						
C27K	**Jago River**	**5.77**	**323**	Pn	Pn	01 17 38.1	+2.2
BALM	**Baldy**	**5.81**	**226**	Pn	Pn	01 17 38.6	+2.0
BALM				Sn	Sn	01 18 41.7	-1.6
GRNC	**Granite Creek**	**5.88**	**222**	Pn	Pn	01 17 39.7	+2.0
GRNC				Sn	Sn	01 18 44.4	-0.9
R33M	**Jennings River**	**6.09**	**167**	P	Pn	01 17 42.4	+1.9
	baz=348,SNR=6.4						
R33M	**Jennings River**	**6.09**	**167**	Pn	Pn	01 17 41.7	+1.2
R33M				Sn	Sn	01 18 49.1	-1.2
C26K	**Camden Bay**	**6.28**	**322**	P	Pn	01 17 45.8	+2.9
	baz=132						
C26K	**Camden Bay**	**6.28**	**322**	Pn	Pn	01 17 44.9	+2.0
D25K	**Kavik River**	**6.32**	**315**	Pn	Pn	01 17 45.5	+2.0
D25K				Sn	Sn	01 18 52.8	-2.8
MESA	**MESA**	**6.40**	**220**	Sn	Sn	01 18 56.4	-1.5
Q32M	**Nakina River**	**6.43**	**173**	Pn	Pn	01 17 46.1	+0.9
E24K	**Your Creek**	**6.47**	**302**	P	Pn	01 17 46.6	+1.0
	baz=109						
E23K	**Chandalar**	**6.87**	**301**	P	Pn	01 17 52.2	+1.1
	baz=106						
A36M	**Sachs Harbour**	**7.36**	**21**	P	Pn	01 17 59.7	+2.1
	baz=209,SNR=22						
A36M	**Sachs Harbour**	**7.36**	**21**	Pn	Pn	01 17 59.4	+1.8
S34M	**Telegraph Cree**	**7.55**	**169**	Pn	Pn	01 18 02.5	+2.2
S34M				Sn	Sn	01 19 21.8	-3.9
KUKN	**Kugluktuk,NWT**	**7.82**	**63**	Pn	Pn	01 18 04.5	+0.5

NEIC ***21*** *01:31:08.9±1.3, 17°.8S±0°.2×178°.5W±0°.1, h568km±10km, mb4.2/22, Error ellipse: s-maj=23.2km s-min=15.0km az=157.0*
IDC ***21*** *01:31:08.7±7.5, 17°.10S×179°.03W, h547km±92km, mb3.2/6, mbtmp4.1/7, Error ellipse: s-maj=94.3km s-min=33.1km az=153.0*
ISC 21 01:31:07.4±0.6**, 17°.7S**±0°.2×**178°.58W**±0°.09**, h547**km**, n34,** σ1§**19**/34**, mb4.1**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.21**	**269**	P		**P**	**01 32 27.2**	**+3.5**
NIUE	**Niue**	**8.32**	**101**	P		**P**	**01 33 08.4**	**+0.1**
DZM	**Mont Dzumac**	**14.74**	**250**	P		**P**	**01 34 13.7**	**-0.8**
	2.5nm,0.7s,baz=85,slow=16,SNR=2.1							
DZM	**Mont Dzumac**	**14.74**	**250**	P		**P**	**01 34 17.2**	**+2.8**
EIDS	**Eidsvold**	**29.19**	**250**	P		**P**	**01 36 24.0**	**-1.1**
EIDS				IAmb		IAmb	01 36 43.1	
	comp=Z,5.1nm,1.1s							
ARMA	**Armidale**	**29.90**	**239**	P		**P**	**01 36 31.6**	**+0.2**
ARMA				IAmb		IAmb	01 36 41.9	
	comp=Z,7.3nm,0.6s							
RABL	**Rabaul**	**31.64**	**292**	P		**P**	**01 36 46.2**	**-0.1**
CTAO	**Charters Tower**	**33.32**	**260**	P		**P**	**01 36 60.0**	**-0.6**
CTAO				IAmb		IAmb	01 37 02.2	
	comp=Z,5.3nm,1.1s							
COEN	**Coen**	**36.94**	**270**	P		**P**	**01 37 30.8**	**+0.1**
COEN				IAmb		IAmb	01 37 31.9	
	comp=Z,9.8nm,1.1s							
TOO	**Toolangi**	**37.17**	**231**	P		**P**	**01 37 32.4**	**+0.1**
TOO				IAmb		IAmb	01 37 33.1	
	comp=Z,3.1nm,0.8s							
TAOE	**Nuku Hiva Isla**	**38.35**	**82**	P		**P**	**01 37 41.9**	**-0.5**
STKA	**Stephens Creek**	**38.59**	**241**	P		**P**	**01 37 44.0**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=91,slow=10,SNR=6.8							
	comp=Z,4.5nm,0.8s							
STKA	**Stephens Creek**	**38.59**	**241**	P		**P**	**01 37 44.0**	**+0.1**
INKA	**Innaminka**	**38.67**	**248**	P		**P**	**01 37 44.8**	**+0.2**
BBOO	**Buckleboo**	**43.36**	**241**	P		**P**	**01 38 21.4**	**-0.4**
BBOO				IAmb		IAmb	01 38 21.8	
	comp=Z,6.4nm,0.7s							
DHH	**Diamond Head**	**43.76**	**29**	P		**P**	**01 38 24.2**	**-0.7**
WR8	**Warramunga Arr**	**44.36**	**259**	P		**P**	**01 38 28.3**	**-1.4**
WR8				IAmb		IAmb	01 38 44.0	
	comp=Z,4.5nm,1.1s							
WB0	**Warramunga Arr**	**44.48**	**260**	P		**P**	**01 38 29.9**	**-0.7**
WB0				IAmb		IAmb	01 38 36.8	
	comp=Z,5.3nm,1.1s							
WRA	**Warramunga Arr**	**44.51**	**259**	P		**P**	**01 38 29.7**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=91,slow=6.8,SNR=21							
	comp=Z,1.2nm,0.5s							
WRA	**Warramunga Arr**	**44.51**	**259**	P		**P**	**01 38 29.1**	**-1.8**
AS31	**Alice Springs**	**44.69**	**254**	P		**P**	**01 38 31.7**	**-0.6**
AS31				IAmb		IAmb	01 38 32.1	
	comp=Z,3.8nm,0.7s							
ASAR	**Alice Springs**	**44.69**	**254**	P		**P**	**01 38 31.6**	**-0.7**
	comp=Z,15nm,0.6s,baz=93,slow=7.9,SNR=154							
	comp=Z,15nm,0.6s							
ASAR	**Alice Springs**	**44.69**	**254**	P		**P**	**01 38 31.8**	**-0.5**
FORT	**Forrest**	**49.95**	**244**	P		**P**	**01 39 10.4**	**-1.2**
FORT				IAmb		IAmb	01 39 12.9	
	comp=Z,7.5nm,1.0s							
KNRA	**Kununurra**	**50.35**	**264**	P		**P**	**01 39 14.0**	**-0.7**
KNRA				IAmb		IAmb	01 39 19.1	
	comp=Z,8.1nm,1.1s							
PSA00	**Pilbara Seismi**	**57.80**	**255**	P		**P**	**01 40 05.8**	**-1.4**
GIRL	**Giralia**	**62.80**	**253**	P		**P**	**01 40 39.4**	**-0.7**
GIRL				IAmb		IAmb	01 40 50.8	
	comp=Z,26nm,1.1s							
CASY	**Casey**	**66.25**	**205**	P		**P**	**01 41 01.1**	**-0.1**
K05A	**Summer Lake**	**80.15**	**39**	P		**P**	**01 42 22.1**	**+0.9**
J05D	**Fort Rock, OR**	**80.26**	**39**	P		**P**	**01 42 22.6**	**+0.9**
ILAR	**Eielson Array**	**85.73**	**13**	P		**P**	**01 42 46.8**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=206,slow=5.2,SNR=1.8							
	comp=Z,0.2nm,0.6s							
TXAR	**Lajitas Array**	**86.02**	**58**	P		**P**	**01 42 52.6**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=268,slow=7.7,SNR=2.1							
	comp=Z,0.3nm,0.4s							
PDAR	**Pinedale Array**	**87.32**	**43**	P		**P**	**01 42 57.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=246,slow=4.4,SNR=4.5							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**87.32**	**43**	P		**P**	**01 42 56.0**	**-0.6**

JMA ***21*** *01:36:49.3±0.3, 45°.N±1°.14°.6E±°, h23km±4km, MV2.6/15, NEAR KUNASHIRI ISLAND*
SKHL ***21*** *01:36:51.5±0.3, 44°.90N×146°.00E, h43km±4km, mb4.2/3*
ISC 21 01:36:50.0±2.6**, 44°.90N**±0°.08×**146°.12E**±0°.06**, h25**km±22**km, n12,** σ0§**67**/18**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.88**	**192**	*i* P		**Pn**	**01 37 06.4**	**-0.3**
YUK					AMB	AMB	01 37 06.8	
	480nm,0.3s							
YUK				*i* S		**Sn**	**01 37 17.5**	**-1.2**
YUK				A		A	01 37 21.7	
	670nm,0.6s							
YUK				A		A	01 37 21.7	
	1μm,0.6s							
JRA	**Rausu**	**1.20**	**217**	*e*P		**Pn**	**01 37 10.5**	**-0.5**
JRA				*e*S		**Sn**	**01 37 26.2**	**-0.3**
GLVR	**Golovnino**	**1.23**	**201**	*e*P		**Pn**	**01 37 11.9**	**+0.3**
GLVR					AMB	AMB	01 37 13.3	
	80nm,0.3s							
GLVR				*e*S		**Sb**	**01 37 28.7**	**+0.7**
GLVR				A		A	01 37 32.3	
	340nm,0.3s							
GLVR				A		A	01 37 32.3	
	110nm,0.3s							
KUR	**Kuril'sk**	**1.28**	**74**	*e*P		**Pn**	**01 37 12.5**	**+0.2**
KUR					AMB	AMB	01 37 15.8	
	30nm,0.4s							
KUR				*e*S		**Sn**	**01 37 28.1**	**-0.5**
KUR				A		A	01 37 34.6	
	80nm,0.3s							
KUR				A		A	01 37 34.6	
	100nm,0.3s							
JNSB	**Nemuroshibetsu**	**1.38**	**216**	*e*P		**Pn**	**01 37 13.5**	**0.0**
NMR	**Nemuro--Hokkai**	**1.55**	**191**	*e*P		**Pn**	**01 37 16.3**	**+0.3**
NMR				*e*S		**Sn**	**01 37 35.1**	**-0.2**
NEM2	**Nemuro 2**	**1.55**	**190**	*e*P		**Pn**	**01 37 16.5**	**+0.5**
NEM2				*e*S		**Sn**	**01 37 36.3**	**+1.0**
JNK	**Nakash**	**1.65**	**218**	*e*S		**Sb**	**01 37 39.1**	**-1.0**
JKHN	**Kushirohamanak**	**1.94**	**201**	*e*P		**Pn**	**01 37 22.1**	**+0.7**
AKK	**Akkeshi**	**2.09**	**207**	*e*P		**Pn**	**01 37 23.8**	**+0.4**
JMP	**Maruseppu**	**2.17**	**247**	*e*S		**Sn**	**01 37 50.5**	**-0.1**
JKK2	**Kamakawa 2**	**2.63**	**248**	*e*P		**Pn**	**01 37 31.4**	**+0.7**

NEIC ***21*** *01:48:14.4±2.0, 17°.33N±0°.05×100°.44W±0°.03, h32km±4km, mb4.7/446, Md5.0/202(MEX), Error ellipse: s-maj=6.9km s-min=3.7km az=187.0*
IDC ***21*** *01:48:15.0±3.9, 17°.45N×100°.25W, h33km±29km, mb4.2/13, mbtmp4.3/17, ML3.7/5, MS4.0/39, Error ellipse: s-maj=21.7km s-min=13.3km az=46.0*
MEX ***21*** *01:48:15.6±1.3, 17°.23N×100°.46W, h43km±5km, MD5.0*
ISC 21 01:48:14.5±0.6**, 17°.24N**±0°.03×**100°.42W**±0°.03**, h41**km±5**km, n613,** σ1§**27**/687**, mb4.7**/164**, MS4.1**/35**, 12C-32D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ATYC	**Atoyac**	**0.03**	**212**			**Pn**	**01 48 20.4**	**-0.6**
ATYC						**Sn**	**01 48 25.2**	**-0.3**
ATYC	**Atoyac**	**0.03**	**212**	⇓	*e*P	**Pn**	**01 48 20.4**	**-0.6**
ATYC				*i*	S	**Sn**	**01 48 25.2**	**-0.3**
CAIG	**El Cayaco**	**0.23**	**142**			**Pn**	**01 48 21.9**	**-0.2**
CAIG						**Sn**	**01 48 27.6**	**+0.1**
CAIG	**El Cayaco**	**0.23**	**142**	⇓	*i*P	**Pn**	**01 48 21.9**	**-0.2**
	baz=313,slow=10							
CAIG				*e*	S	**Sn**	**01 48 27.6**	**+0.1**
ACP2	**Acapulco**	**0.62**	**125**			**Pn**	**01 48 26.9**	**0.0**
ACP2	**Acapulco**	**0.62**	**125**	⇓	*e*P	**Pn**	**01 48 26.9**	**0.0**
DAIG	**Los Arroyos**	**0.76**	**106**			**Pn**	**01 48 28.6**	**-0.3**
DAIG						**Sn**	**01 48 38.7**	**-0.5**
DAIG	**Los Arroyos**	**0.76**	**106**	⇑	*i*P	**Pn**	**01 48 28.6**	**-0.3**
DAIG				*e*	S	**Sn**	**01 48 38.7**	**-0.5**
PET2	**Petatlan**	**0.86**	**290**			**Pn**	**01 48 29.2**	**-0.9**
PET2						**Sn**	**01 48 38.2**	**-3.4**
PET2	**Petatlan**	**0.86**	**290**	⇑	*e*P	**Pn**	**01 48 29.2**	**-0.9**
PET2				*i*	S	**Sn**	**01 48 38.2**	**-3.4**
MEIG	**Mezcala**	**1.02**	**48**			**Pn**	**01 48 31.8**	**-0.7**
MEIG						**Sn**	**01 48 45.1**	**-0.7**
MEIG	**Mezcala**	**1.02**	**48**	⇑	*e*P	**Pn**	**01 48 31.8**	**-0.7**
MEIG				*e*	S	**Sn**	**01 48 45.1**	**-0.7**
ARIG	**Puente Sto Nin**	**1.04**	**4**			**Pn**	**01 48 31.6**	**-1.1**
ARIG						**Sn**	**01 48 44.7**	**-1.4**
ARIG	**Puente Sto Nin**	**1.04**	**4**	⇑	*e*P	**Pn**	**01 48 31.6**	**-1.1**
ARIG				*i*	S	**Sn**	**01 48 44.7**	**-1.4**
ZIIG	**Zihuatanejo**	**1.07**	**290**			**Pn**	**01 48 32.1**	**-0.9**
ZIIG						**Sn**	**01 48 46.0**	**-0.6**
ZIIG	**Zihuatanejo**	**1.07**	**290**	⇑	*i*P	**Pn**	**01 48 32.1**	**-0.9**
	baz=107,slow=14							
ZIIG				*i*	S	**Sn**	**01 48 46.0**	**-0.6**
CRIG	**Cruz Grande**	**1.33**	**112**			**Pn**	**01 48 36.5**	**-0.1**
CRIG						**Sn**	**01 48 52.1**	**-0.9**
CRIG	**Cruz Grande**	**1.33**	**112**	⇑	*e*P	**Pn**	**01 48 36.5**	**-0.1**
CRIG				*e*	S	**Sn**	**01 48 52.1**	**-0.9**
PLIG	**Platanillo**	**1.44**	**37**			**Pn**	**01 48 38.1**	**-0.1**
PLIG						**Sn**	**01 48 54.3**	**-1.8**
PLIG	**Platanillo**	**1.44**	**37**	⇓	*e*P	**Pn**	**01 48 38.1**	**-0.1**
PLIG				*e*	S	**Sn**	**01 48 54.3**	**-1.8**
UON	**La Union**	**1.52**	**299**	*e*	P	**Pn**	**01 48 38.6**	**-0.6**
UON				*e*	S	**Sn**	**01 48 56.1**	**-1.7**
MGIG	**Malinaltepec**	**1.71**	**90**			**Pn**	**01 48 42.5**	**+0.6**
MGIG						**Sn**	**01 49 02.4**	**-0.2**
MGIG	**Malinaltepec**	**1.71**	**90**	⇓	*e*P	**Pn**	**01 48 42.5**	**+0.6**
MGIG				*e*	S	**Sn**	**01 49 02.4**	**-0.2**
TLIG	**Tlapa**	**1.80**	**79**			**Pn**	**01 48 42.8**	**-0.4**
TLIG						**Sn**	**01 49 04.6**	**-0.2**
TLIG	**Tlapa**	**1.80**	**79**	⇓	*i*P	**Pn**	**01 48 43.7**	**+0.5**
TLIG				*e*	S	**Sn**	**01 49 04.4**	**-0.4**
HMTT	**Tlapaneco**	**1.86**	**72**			**Pn**	**01 48 44.7**	**+0.7**
HMTT	**Tlapaneco**	**1.86**	**72**	*e*	P	**Pn**	**01 48 44.7**	**+0.7**
MAVM	**Malinalco, Edo**	**1.93**	**27**			**Pn**	**01 48 44.1**	**-0.9**
MAVM						**Sn**	**01 49 08.6**	**+0.5**
MAVM	**Malinalco, Edo**	**1.93**	**27**	⇓	*i*P	**Pn**	**01 48 44.1**	**-0.9**
MAVM				*e*	S	**Sn**	**01 49 08.6**	**+0.5**
YAIG	**Yautepec**	**2.07**	**38**			**Pn**	**01 48 46.0**	**-0.8**
YAIG						**Sn**	**01 49 13.2**	**+1.7**
YAIG	**Yautepec**	**2.07**	**38**	⇓	*e*P	**Pn**	**01 48 46.0**	**-0.8**
YAIG				*e*	S	**Sn**	**01 49 13.2**	**+1.7**
TOVM	**TOLUCA**	**2.15**	**19**			**Pn**	**01 48 47.7**	**-0.5**
TOVM						**Sn**	**01 49 13.8**	**-0.1**
TOVM	**TOLUCA**	**2.15**	**19**	⇓	*e*P	**Pn**	**01 48 47.7**	**-0.5**
TOVM				*e*	S	**Sn**	**01 49 13.8**	**-0.1**
MZVM		**2.25**	**30**			**Pn**	**01 48 49.1**	**-0.1**
MZVM						**Sn**	**01 49 16.7**	**+1.0**
MZVM		**2.25**	**30**	⇓	*e*P	**Pn**	**01 48 49.1**	**-0.1**
MZVM				*e*	S	**Sn**	**01 49 16.7**	**+1.0**
INVM	**La Marquesa**	**2.27**	**26**			**Pn**	**01 48 49.3**	**-0.6**
INVM						**Sn**	**01 49 17.0**	**+0.2**
INVM	**La Marquesa**	**2.27**	**26**	⇓	*e*P	**Pn**	**01 48 49.3**	**-0.6**
INVM				*e*	S	**Sn**	**01 49 17.0**	**+0.2**
AOVM	**Tlapan**	**2.27**	**27**			**Pn**	**01 48 49.1**	**-0.9**
AOVM						**Sn**	**01 49 17.2**	**+0.1**
AOVM	**Tlapan**	**2.27**	**27**	⇓	*e*P	**Pn**	**01 48 49.1**	**-0.9**
AOVM				*e*	S	**Sn**	**01 49 17.2**	**+0.1**
FTIG	**Fresnillo de T**	**2.28**	**73**			**Pn**	**01 48 50.4**	**+0.6**
FTIG						**Sn**	**01 49 16.6**	**-0.1**
FTIG	**Fresnillo de T**	**2.28**	**73**	⇓	*e*P	**Pn**	**01 48 50.4**	**+0.6**
FTIG				*e*	S	**Sn**	**01 49 16.6**	**-0.1**
TLVM	**San Miguel Top**	**2.30**	**31**			**Pn**	**01 48 49.9**	**-0.3**
TLVM						**Sn**	**01 49 17.3**	**-0.3**
TLVM	**San Miguel Top**	**2.30**	**31**	⇓	*e*P	**Pn**	**01 48 49.9**	**-0.3**
TLVM				*e*	S	**Sn**	**01 49 17.3

HLIG **Huajuapan de L** 2.56 76 Pn 01 48 54.5 +0.7
HLIG Sn 01 49 24.1 +0.3
HLIG Huajuapan de L 2.56 76 ⇓*iP* Pn 01 48 54.5 +0.7
HLIG eS Sn 01 49 24.1 +0.3
ATVM ATLACOMULCO 2.57 12 Pn 01 48 53.9 -0.1
ATVM Sn 01 49 26.5 +2.3
ATVM ATLACOMULCO 2.57 12 *eP* Pn 01 48 53.9 -0.1
ATVM eS Sn 01 49 26.5 +2.3
AZVM Cuida Lopez Ma 2.57 25 Pn 01 48 53.6 -0.4
AZVM Sn 01 49 23.7 -0.5
AZVM Cuida Lopez Ma 2.57 25 *eP* Pn 01 48 53.6 -0.4
AZVM eS Sn 01 49 23.7 -0.5
PPSX Xalitzintla 2.58 44 *eP* Pn 01 48 54.4 +0.2
PPSX eS Sn 01 49 25.1 +0.6
TXVM Universitario 2.61 33 Pn 01 48 54.1 -0.4
TXVM Sn 01 49 25.7 +0.7
TXVM Universitario 2.61 33 *eP* Pn 01 48 54.1 -0.4
TXVM eS Sn 01 49 25.7 +0.7
PTVM Pico Tres Padr 2.65 28 Pn 01 48 54.2 -0.8
PTVM Sn 01 49 26.4 +0.3
PTVM Pico Tres Padr 2.65 28 ⇓*eP* Pn 01 48 54.2 -0.8
PTVM eS Sn 01 49 26.4 +0.3
URUA Uruapan 2.68 324 Pn 01 48 56.5 +1.1
URUA Sn 01 49 26.0 -0.8
URUA Uruapan 2.68 324 *eP* Pn 01 48 56.5 +1.1
URUA eS Sn 01 49 26.0 -0.8
YOIG Yosondua 2.77 97 Pn 01 48 58.0 +1.3
YOIG Sn 01 49 29.0 -0.1
YOIG Yosondua 2.77 97 ⇓*eP* Pn 01 48 58.0 +1.3
YOIG eS Sn 01 49 29.0 -0.1
ACIG Acambay 2.78 10 Pn 01 48 56.2 -0.5
ACIG Sn 01 49 31.2 +2.2
ACIG Acambay 2.78 10 ⇓*iP* Pn 01 48 56.2 -0.5
ACIG eS Sn 01 49 31.3 +2.2
PHPU Puebla 2.79 50 Pn 01 48 56.1 -0.9
PHPU Sn 01 49 29.1 -0.5
PHPU Puebla 2.79 50 *eP* Pn 01 48 56.1 -0.9
PHPU eS Sn 01 49 29.1 -0.5
ACAM Acambaro 2.81 354 Sn 01 49 30.0 +0.1
ACAM Acambaro 2.81 354 *eS* Sn 01 49 30.0 +0.1
ZUVM ZUMPANGO 2.87 26 Pn 01 48 58.9 +0.8
ZUVM Sn 01 49 31.6 0.0
ZUVM ZUMPANGO 2.87 26 *eP* Pn 01 48 58.9 +0.8
ZUVM eS Sn 01 49 31.6 0.0
VTVM Tizayuca 2.96 31 Pn 01 48 59.3 0.0
VTVM Sn 01 49 34.5 +0.7
VTVM Tizayuca 2.96 31 *eP* Pn 01 48 59.3 0.0
VTVM eS Sn 01 49 34.5 +0.7
MMIG Aquila 2.98 291 Pn 01 48 58.5 -0.8
MMIG Sn 01 49 32.1 -1.7
MMIG Aquila 2.98 291 ⇑*eP* Pn 01 48 58.5 -0.8
MMIG eS Sn 01 49 32.1 -1.7
TPIG Tehuac#an 3.14 68 Pn 01 49 01.4 -0.2
TPIG Sn 01 49 38.1 +0.1
TPIG Tehuac#an 3.14 68 *eP* Pn 01 49 01.4 -0.2
TPIG eS Sn 01 49 38.1 +0.1
TOIG Toxpalan 3.31 75 Pn 01 49 04.5 +0.6
TOIG Sn 01 49 42.3 +0.2
TOIG Toxpalan 3.31 75 ⇓*iP* Pn 01 49 04.5 +0.6
TOIG eS Sn 01 49 42.3 +0.2
DHIG Demacu 3.32 23 Pn 01 49 02.7 -1.4
DHIG Sn 01 49 44.0 +1.5
DEIG Demacu 3.32 23 ⇓*eP* Pn 01 49 02.7 -1.4
DEIG eS Sn 01 49 44.0 +1.5
PEIG Puerto Escondi 3.37 111 Pn 01 49 05.7 +1.1
PEIG Sn 01 49 43.1 -0.3
PEIG Puerto Escondi 3.37 111 ⇓*eP* Pn 01 49 05.7 +1.1
PEIG eS Sn 01 49 43.1 -0.3
OXIG Oaxaca 3.53 92 Pn 01 49 08.5 +1.5
OXIG Sn 01 49 47.0 -0.6
VHO Vista Hermosa 3.53 92 ⇓*eP* Pn 01 49 08.5 +1.5
VHO eS Sn 01 49 47.0 -0.6
OXBJ Oaxaca 3.54 92 Pn 01 49 07.3 +0.2
OXBJ Sn 01 49 47.5 -0.3
OXBJ Oaxaca 3.54 92 *eP* Pn 01 49 07.3 +0.2
OXBJ eS Sn 01 49 47.5 -0.3
OXLC Oaxaca 3.56 92 Pn 01 49 09.0 +1.6
OXLC Sn 01 49 48.4 +0.1
OXLC Oaxaca 3.56 92 *eP* Pn 01 49 09.0 +1.6
OXLC eS Sn 01 49 48.4 +0.1
IGIG Irapuato, Guan 3.60 346 Pn 01 49 07.2 -0.8
IGIG Sn 01 49 50.0 +0.5
IGIG Irapuato, Guan 3.60 346 *eP* Pn 01 49 07.2 -0.8
IGIG eS Sn 01 49 50.0 +0.5
INCO Volcan de Coli 3.79 307 *eP* Pn 01 49 12.9 +2.2
INCO eS Sn 01 49 53.4 -0.8
COMA Comala 3.80 304 Pn 01 49 11.1 +0.5
COMA Sn 01 49 53.8 -0.2
COMA Comala 3.80 304 *eP* Pn 01 49 11.1 +0.5
COMA eS Sn 01 49 53.8 -0.2
SOMAC Volcano de Col 3.81 307 *eP* Pn 01 49 13.4 +2.4
SOMAC eS Sn 01 49 53.7 -1.0
CDAR Ciudad de Arme 3.81 297 *eP* Pn 01 49 10.9 +0.1
CDAR eS Sn 01 49 53.6 -0.7
CEGR Campo Tres 3.91 304 *eP* Pn 01 49 12.3 +0.1
CEGR eS Sn 01 49 56.0 -1.0
CXUV Coxquihui 3.96 42 Pn 01 49 11.3 -1.6
CXUV Sn 01 50 00.9 +2.7
CXUV Coxquihui 3.96 42 *eP* Pn 01 49 11.3 -1.6
CXUV eS Sn 01 50 00.9 +2.7
JAUV Jalcomulco 4.04 58 Pn 01 49 13.5 -0.4
JAUV Sn 01 50 01.7 +1.8
JAUV Jalcomulco 4.04 58 *eP* Pn 01 49 13.5 -0.4
JAUV eS Sn 01 50 01.7 +1.8
HUIG Huatulco 4.38 109 Pn 01 49 20.2 +1.6
HUIG Sn 01 50 05.2 -3.2
HUIG Huatulco 4.38 109 *eP* Pn 01 49 20.2 +1.6
HUIG eS Sn 01 50 05.2 -3.2
NEUV Arroyo Zacate 4.43 83 Pn 01 49 19.4 +0.2
NEUV Sn 01 50 09.3 -0.3
NEUV Arroyo Zacate 4.43 83 ⇑*eP* Pn 01 49 19.4 +0.2
NEUV eS Sn 01 50 09.3 -0.3
LVIG Laguna Verde 4.53 56 Pn 01 49 22.7 +2.1
LVIG Sn 01 50 11.7 -0.4
LVIG Laguna Verde 4.53 56 *eP* Pn 01 49 22.7 +2.1
LVIG eS Sn 01 50 11.7 -0.4
CTUV Llano Grande 4.64 24 Pn 01 49 22.3 +0.2
CTUV Sn 01 50 18.7 +3.9
CTUV Llano Grande 4.64 24 *eP* Pn 01 49 22.3 +0.2
CTUV eS Sn 01 50 18.7 +3.9
CJM Chamela 4.94 298 *eP* Pn 01 49 26.7 +0.5
CJM eS Sn 01 50 19.1 -2.9
PMUV Sontecomapan 5.21 75 Pn 01 49 27.3 -2.7
PMUV Sn 01 50 25.2 -3.7
PMUV Sontecomapan 5.21 75 *eP* Pn 01 49 27.3 -2.7
PMUV eS Sn 01 50 25.2 -3.7
CMIG Matias Romero 5.29 91 Pn Pn 01 49 31.6 +0.5
9.8nm,0.3s,baz=275,slow=10,SNR=44
CMIG Sn Sn 01 50 27.3 -3.6
27nm,0.3s,baz=286,slow=14,SNR=7.5
CMIG Lg Lg 01 50 45.3
25nm,0.3s,baz=28,slow=20,SNR=9.2
CMIG LR LR 01 51 40.7
comp=Z,767nm,18.7s,baz=270,slow=40
20nm,0.3s
CMIG Matias Romero 5.29 91 Pn 01 49 32.0 +1.0
CMIG Sn 01 50 31.4 +0.5
CMIG Matias Romero 5.29 91 ⇑*eP* Pn 01 49 32.0 +1.0
CMIG eS Sn 01 50 31.4 +0.5
ANIG Ahuacatlan 5.43 315 Pn 01 49 37.0 +3.9
ANIG Sn 01 50 36.3 +2.0
ANIG Ahuacatlan 5.43 315 *eP* Pn 01 49 37.0 +3.9
ANIG eS Sn 01 50 36.3 +2.0
TUIG Tuzandepetl 5.77 81 Pn 01 49 35.5 -2.2
TUIG Sn 01 50 41.1 -1.5
TUIG Tuzandepetl 5.77 81 *eP* Pn 01 49 35.5 -2.2
TUIG eS Sn 01 50 41.1 -1.5
ZAIG Zacatecas 5.86 340 Pn 01 49 38.1 -1.1
ZAIG Zacatecas 5.86 340 *eP* Pn 01 49 39.8 +0.6
ZAIG eS Sn 01 50 51.5 +6.2
GTIG Gomez Farias 5.92 11 Pn 01 49 38.6 -1.1
GTIG Sn 01 51 10.3 +24
GTIG Gomez Farias 5.92 11 ⇓*eP* Pn 01 49 38.6 -1.1
GTIG eS Sn 01 51 10.3 +24
UXUV UXUV 5.99 88 Pn 01 49 41.4 +0.7
UXUV Sn 01 50 44.0 -4.1
UXUV UXUV 5.99 88 ⇑*eP* Pn 01 49 41.4 +0.7
UXUV eS Sn 01 50 44.0 -4.1
TGIG 7.00 93 Pn 01 49 56.2 +1.7
TGIG 7.00 93 *eP* Pn 01 49 56.2 +1.7

TGIG eS Sn 01 51 13.4 +0.5
PCIG 7.07 101 Pn 01 49 56.3 +0.8
PCIG 7.07 101 ⇑*eP* Pn 01 49 56.3 +0.8
PCIG eS Sn 01 51 10.2 -4.4
CCIG Comitan 7.99 96 Pn 01 50 09.5 +1.3
CCIG Comitan 7.99 96 *eP* Pn 01 50 09.9 +1.6
CCIG eS Sn 01 51 38.6 +1.1
PATR El Naranjo 8.14 104 Pn 01 50 12.2 +1.8
PATR El Naranjo 8.14 104 *eP* Pn 01 50 12.2 +1.8
PATR eS Sn 01 51 40.0 -1.3
PAVE Pavencul 8.17 103 Pn 01 50 12.9 +2.1
PAVE Pavencul 8.17 103 *eP* Pn 01 50 12.9 +2.1
PAVE eS Sn 01 51 41.5 -0.6
CHUJ Union Juarez 8.26 104 *eP* Pn 01 50 14.9 +2.8
CHUJ eS Sn 01 51 43.6 -0.7
PDIG Papasquiaro 9.05 330 Pn 01 50 25.7 +2.9
PDIG Papasquiaro 9.05 330 *eP* Pn 01 50 25.7 +2.9
APG El Apazote 9.82 102 Pn Pn 01 50 34.2 +0.8
0.2nm,0.3s,baz=149,slow=9.8,SNR=9.1
APG Sn Sn 01 52 20.5 -2.0
0.2nm,0.3s,baz=233,slow=23,SNR=4.6
APG Lg Lg 01 53 24.1
0.1nm,0.3s,baz=70,slow=20,SNR=4.1
PETF Flores 10.10 90 Pn 01 50 36.1 -0.9
PETF Flores 10.10 90 *eP* Pn 01 50 36.3 -0.7
PETF eS Sn 01 52 23.1 -5.9
MCIG Muzquiz 10.64 355 Pn 01 50 45.0 +0.6
MCIG Muzquiz 10.64 355 *eP* Pn 01 50 45.0 +0.6
MCIG eS Sn 01 52 42.6 +0.3
HPIG 10.81 334 Pn 01 50 46.8 -0.1
HPIG 10.81 334 *eP* Pn 01 50 46.0 -0.9
HPIG eS Sn 01 52 46.4 -0.3
SLBS Sierra La Lagu 10.99 307 Pn Pn 01 50 49.1 -0.3
MTO3 Montecristo 11.01 103 Pn Pn 01 50 53.0 +3.3
833A Chaparral WMA, 11.08 5 Pn 01 50 51.1 +0.7
LPIG La Paz 11.50 308 LR LR 01 54 50.3
comp=Z,208nm,18.8s,baz=82,slow=34
TEIG Tepich 11.88 74 Pn 01 51 02.4 +1.0
DRIO Del Rio 12.13 359 Pn 01 51 05.5 +0.6
HNDO Hondo 12.28 5 Pn 01 51 07.1 +0.2
TXAR Lajitas Array 12.41 347 Pn Pn 01 51 08.7 +0.1
0.1nm,0.3s,baz=151,slow=12,SNR=8.0
TXAR Lg Lg 01 54 43.5
0.1nm,0.3s,baz=302,slow=24,SNR=3.3
TXAR LR LR 01 56 22.8
comp=Z,885nm,19.2s,baz=144,slow=40
1.4nm,0.7s
TXAR Lajitas Array 12.41 347 Pn 01 51 11.8 +3.1
TX31 Lajitas Ar. Si 12.41 347 Pn 01 51 12.1 +3.4
SAND Sanderson 12.76 353 Pn 01 51 16.5 +3.1
JCT Junction City 13.20 2 Pn 01 51 19.5 +0.1
ALPN Alpine 13.41 348 Pn 01 51 24.4 +2.1
OZNA Ozona 13.64 357 Pn 01 51 28.2 +2.7
BRDY Brady 14.05 5 Pn 01 51 30.5 -0.5
CNGN Cerro Negro 14.07 108 Pn Pn 01 51 33.8 +2.4
VHRN Van Horn 14.12 344 Pn 01 51 33.0 +0.9
HNVL Huntsville, TX 14.20 18 Pn Pn 01 51 33.7 +0.7
MNHN Monahans 14.20 352 Pn 01 51 33.8 +0.6
PECS Pecos 14.42 348 Pn 01 51 37.8 +1.8
TPB06 Permian Basin 14.57 350 Pn 01 51 38.0 -0.1
SGCY Sterling City 14.63 358 Pn 01 51 38.1 -0.7
229A Bryant Ranch, 14.72 355 Pn 01 51 39.9 -0.2
WHTX Lake Whitney, 14.94 10 Pn 01 51 42.1 -0.7
ODSA Odessa 14.95 353 Pn 01 51 42.8 -0.3
441A DeRidder 14.98 25 Pn Pn 01 51 41.3 -2.1
TPB11 China Draw 15.00 348 Pn 01 51 42.2 -1.6
BOAB BOACO BROADBAN 15.03 106 P P 01 51 47.7 -1.2
BOAB IAmb IAmb 01 52 03.0
comp=Z,59nm,1.2s
HSIG 15.20 322 Pn 01 51 45.9 -0.5
HSIG IAmb IAmb 01 51 54.0
comp=Z,24nm,0.9s
237A Washetta, Mont 15.28 15 Pn 01 51 48.9 +1.4
FW13 Cleburne 15.29 10 Pn 01 51 46.4 -1.1
GDL2 Guadalupe Moun 15.32 347 Pn 01 51 48.6 +0.5
ABTX Abilene, Hawle 15.34 2 Pn 01 51 47.9 -0.3
ABTX IAmb IAmb 01 52 02.8
comp=Z,54nm,0.8s
NATX Nacogdoches 15.38 19 Pn 01 51 48.2 -0.4
SIUN Universidad Ur 15.48 101 Pn Pn 01 51 50.4 +0.3
SIUN IAmb IAmb 01 52 15.9
comp=Z,15nm,1.3s
EPT El Paso 15.49 340 Pn Pn 01 51 49.5 -0.7
EPT IAmb IAmb 01 51 56.1
comp=Z,30nm,1.0s
PLPT Palo Pinto 15.63 7 Pn 01 51 50.8 -1.1
PLPT IAmb IAmb 01 51 56.0
comp=Z,92nm,0.9s
POST Post 15.79 357 Pn 01 51 53.5 -0.6
POST IAmb IAmb 01 52 07.9
comp=Z,47nm,1.0s
SN07 Snyder 07 15.79 359 P Pn 01 51 53.0 -1.0
SN07 IAmb IAmb 01 51 58.0
comp=Z,30nm,0.8s
FW06 Azle 15.88 9 Pn 01 51 53.4 -1.8
FW06 IAmb IAmb 01 51 59.9
comp=Z,137nm,1.4s
APMT Aspermont 16.02 1 Pn 01 51 55.1 -1.9
APMT IAmb IAmb 01 52 15.0
comp=Z,71nm,0.9s
JUD3 Juan Diaz 3 16.07 114 P P 01 52 00.1 -0.5
319A Douglas 16.22 332 Pn 01 51 59.0 -0.6
Z35A Perchaven, San 16.28 9 Pn 01 51 58.6 -1.6
Z35A IAmb IAmb 01 52 17.5
comp=Z,101nm,1.2s
DKNS Dickens 16.37 359 Pn 01 51 59.5 -1.9
DKNS IAmb IAmb 01 52 16.8
comp=Z,39nm,0.9s
JTS Las Juntas de 16.52 113 Pn P 01 52 05.1 -0.5
comp=Z,0.6nm,0.3s,baz=292,slow=19,SNR=2.2
JTS LR LR 01 57 16.2
comp=Z,104nm,21.9s,baz=286,slow=33
comp=Z,2.4nm,0.6s
JTS Las Juntas de 16.52 113 Pn 01 52 03.9 +0.4
WTFS Witchita Falls 16.55 6 Pn 01 52 01.6 -2.1
WTFS IAmb IAmb 01 52 21.2
comp=Z,91nm,1.2s
121A Cookes Peak, D 16.62 338 Pn 01 52 04.2 -0.5
Z38A Mt. Pleasant 16.69 16 Pn 01 52 04.3 -1.0
MSTX Muleshoe 16.80 353 IAmb IAmb 01 52 21.6
comp=Z,98nm,0.9s
LOOK Love County 16.94 9 Pn Pn 01 52 06.3 -2.2
LOOK IAmb IAmb 01 52 24.8
comp=Z,102nm,1.1s
DUN6 Lazy B Ranch 17.15 334 Pn 01 52 09.5 -1.8
DUN6 IAmb IAmb 01 52 32.3
comp=Z,92nm,1.3s
SOR Soroa 17.26 68 Pn Pn 01 52 12.3 -0.4
Z41A Richland Creek 17.37 22 Pn 01 52 12.8 -1.0
VBMS Vicksburg 17.40 29 Pn Pn 01 52 12.2 -2.1
VBMS IAmb IAmb 01 52 29.1
comp=Z,66nm,1.1s
143A Socs Landing, 17.42 26 Pn 01 52 12.5 -2.0
143A IAmb IAmb 01 52 30.6
comp=Z,73nm,0.8s
X34A Smith Ranch, M 17.45 7 IAmb IAmb 01 52 30.9
comp=Z,113nm,1.0s
WMOK Wichita Mounta 17.49 4 Pn 01 52 12.8 -2.6
CRNM Carthage 17.59 342 P Pn 01 52 16.3 -0.5
AMTX Amarillo 17.61 357 Pn 01 52 15.6 -1.4
AMTX IAmb IAmb 01 52 31.2
comp=Z,88nm,1.2s
WLAR White Oak Lake 17.65 20 Pn 01 52 15.5 -1.8
TUC Tucson 17.70 330 P Pn 01 52 16.5 -1.5
SBM South Baldy 17.74 341 P P 01 52 19.7 +0.3
SMWD Samnorwood 17.80 0 P Pn 01 52 18.6 -0.6
SMWD IAmb IAmb 01 52 35.4
comp=Z,59nm,1.1s
LENM Lemitar 17.86 342 P Pn 01 52 19.1 -0.9
W35A Tecumseh 18.12 9 P 01 52 21.9 -1.3
PH02 Texas Public H 18.13 356 P P 01 52 21.7 -1.7
PH02 IAmb IAmb 01 52 55.0
comp=Z,23nm,1.0s
OKCSW OKLAHOMA CITY 18.29 8 P P 01 52 24.0 -1.0
OKCSW IAmb IAmb 01 52 39.7
comp=Z,84nm,0.8s
MIAR Mount Ida 18.29 18 P P 01 52 23.5 -1.5
MIAR IAmb IAmb 01 52 40.9
comp=Z,91nm,1.1s
CCAR Cane Creek 18.34 23 P P 01 52 24.6 -0.9
CCAR IAmb IAmb 01 52 41.9
comp=Z,104nm,1.1s
ANMO Albuquerque 18.45 344 P P 01 52 26.5 -0.4
comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=24
ANMO LR LR 02 00 18.4
comp=Z,867nm,18.8s,baz=158,slow=40
comp=Z,6.0nm,0.8s
ANMO Albuquerque 18.45 344 P 01 52 26.6 -0.2
ANMO Albuquerque 18.45 344 P P 01 52 26.6 -0.2
ANMO IAmb IAmb 01 52 43.8
comp=Z,18nm,0.9s
ANMO Albuquerque 18.45 344 P P 01 52 25.1 -1.8
ANMO IAmb IAmb 01 52 43.7
comp=Z,17nm,0.9s
146A Union 18.45 32 P P 01 52 24.9 -1.8
146A IAmb IAmb 01 52 45.4
comp=Z,38nm,0.9s
214A Organ Pipe Nat 18.46 325 P P 01 52 25.6 -1.3
X40A Basin Creek Fa 18.47 20 P 01 52 24.8 -2.1
PIX Pinacate 18.53 323 P P 01 52 25.9 -1.7
OK029 Liberty Lake 18.67 8 P P 01 52 27.2 -2.0
OK029 IAmb IAmb 01 52 45.1
comp=Z,36nm,0.8s
ELIS Ellis County 18.78 3 P P 01 52 28.4 -1.9
ELIS IAmb IAmb 01 52 51.7
comp=Z,62nm,1.5s
DEOK Depew 18.86 10 P P 01 52 29.1 -2.1
DEOK IAmb IAmb 01 52 45.5
comp=Z,104nm,1.1s
UALR University of 18.90 21 P 01 52 29.8 -1.9
UALR IAmb IAmb 01 52 48.5
comp=Z,56nm,1.0s
OK052 Battle Ridge R 18.96 9 P P 01 52 30.3 -2.0
SFX San Felipe 19.00 319 P P 01 52 31.9 -0.9
TUL3 Leonard 19.05 12 P 01 52 31.6 -1.7
QUOK Quay 19.15 9 P P 01 52 32.0 -2.3
QUOK IAmb IAmb 01 52 35.4
comp=Z,51nm,1.0s
X18A Snowflake 19.22 335 P P 01 52 34.5 -0.9
Y45A Yeager Farm, C 19.22 28 P P 01 52 33.3 -1.9
OK038 West end E0370 19.23 4 P P 01 52 33.6 -1.6
OK038 IAmb IAmb 01 52 45.1
comp=Z,62nm,0.7s
RTBA Rita Blanca 19.24 354 P 01 52 34.3 -1.2
RTBA IAmb IAmb 01 52 50.8
comp=Z,30nm,0.8s
OK048 Pawnee Station 19.35 8 IAmb IAmb 01 52 53.3
comp=Z,62nm,1.0s
WHAR Wooly Hollow 19.39 20 P 01 52 35.4 -1.6
WHAR IAmb IAmb 01 52 58.0
comp=Z,60nm,1.1s
Z47A Carrollton 19.40 33 P 01 52 36.2 -1.0
RLO Rose Lookout 19.45 13 IAmb IAmb 01 52 55.5
comp=Z,35nm,0.8s
250A Grady 19.49 39 P P 01 52 37.0 -1.0
250A IAmb IAmb 01 53 00.2
comp=Z,26nm,0.8s
113A Mohawk Valley, 19.60 325 P P 01 52 39.3 0.0
BLOK Blackwell 19.66 8 P P 01 52 38.7 -1.2
BLOK IAmb IAmb 01 52 54.6
comp=Z,88nm,1.1s
W18A Petrified Fore 19.66 337 P P 01 52 39.0 -1.1
W18A IAmb IAmb 01 52 45.3
comp=Z,36nm,1.2s
GC02 Grant County # 19.67 6 P P 01 52 37.7 -2.4
X16A Lo Mia Camp, P 19.75 332 P P 01 52 41.0 -0.2
HHAR Hobbs 19.82 16 P 01 52 40.2 -1.5
HHAR IAmb IAmb 01 52 58.9
comp=Z,47nm,1.1s
VTX Valle De La Tr 19.83 318 P P 01 52 40.3 -1.7
LRAL Lakeview Retre 19.84 35 IAmb IAmb 01 52 56.9
comp=Z,48nm,1.1s
U38A Gravette 19.86 14 IAmb IAmb 01 52 56.4
comp=Z,70nm,1.1s
T35A Sooner Cattle 19.91 9 P 01 52 40.4 -2.2
T35A IAmb IAmb 01 52 59.7
comp=Z,46nm,0.8s
KAN01 Argonia South 19.98 6 P P 01 52 42.1 -1.3
KAN08 Anthony NE Sta 20.03 6 P P 01 52 42.2 -1.8
KAN08 IAmb IAmb 01 52 58.7
comp=Z,85nm,1.1s
061Z Ochoppi 20.06 61 P P 01 52 43.9 -0.5
Y14A Wickenburg 20.11 328 P 01 52 45.0 +0.1
T25A Trinidad 20.14 351 P P 01 52 44.0 -1.4
T25A IAmb IAmb 01 52 59.4
comp=Z,28nm,0.9s
HBAR Harrisburg 20.21 24 P P 01 52 43.8 -2.1
ESJX Sierra Juarez 20.35 319 P P 01 52 46.3 -1.4
GLA Glamis 20.41 323 P P 01 52 48.1 -0.1
GLA IAmb IAmb 01 52 54.6
comp=Z,27nm,1.0s
LCAR Lake Charles 20.48 22 IAmb IAmb 01 53 07.1
comp=Z,35nm,0.9s
DWPF Disney Wildern 20.56 55 P P 01 52 50.7 +0.9
WUAZ Wupatki 20.66 334 P P 01 52 51.9 +0.9
WUAZ IAmb IAmb 01 53 05.6
comp=Z,46nm,1.0s
CCX Cicese 20.71 318 P P 01 52 51.4 0.0
CCX IAmb IAmb 01 53 13.7
comp=Z,20nm,0.7s
BLYC Blythe 20.76 325 P 01 52 52.0 +0.1
BLYC IAmb IAmb 01 52 54.9
comp=Z,29nm,1.1s
YUH Yuha Desert 20.77 321 P P 01 52 51.1 -0.9
Y49A Blount Mountai 20.79 35 P P 01 52 50.3 -1.9
Y49A IAmb IAmb 01 53 10.9
comp=Z,26nm,0.8s
152A Waverly Hall 20.90 40 P P 01 52 52.0 -1.5
152A IAmb IAmb 01 53 07.7
comp=Z,23nm,0.8s
X48A Hartselle 20.91 32 P P 01 52 50.8 -2.8
X48A IAmb IAmb 01 53 06.8
comp=Z,46nm,0.8s
SDCO Great Sand Dun 20.92 349 P P 01 52 53.1 -0.8
SDCO IAmb IAmb 01 53 09.7
comp=Z,22nm,1.0s
060A Indiantown 20.96 59 P P 01 52 54.1 0.0
CBX Cerro Bola 21.00 319 P P 01 52 53.3 -1.4
MGMO Mountain Grove 21.11 18 P 01 52 53.9 -1.8
MVCO Mesa Verde 21.14 342 P P 01 52 54.8 -1.4
MVCO IAmb IAmb 01 53 17.9
comp=Z,23nm,0.9s
R32A Long Quarter, 21.16 4 P P 01 52 54.5 -1.7
R32A IAmb IAmb 01 53 10.1
comp=Z,40nm,0.8s
S22A 4UR Ranch, Cre 21.20 346 P P 01 52 56.0 -1.0
S22A IAmb IAmb 01 53 24.1
comp=Z,23nm,1.0s
BC3 Big Chuckawall 21.21 323 P 01 52 55.7 -1.2
BAR Barrett 21.25 319 P 01 52 57.5 +0.2
S39A Bolivar 21.31 16 P P 01 52 56.4 -1.5
T42A Van Buren 21.37 21 P P 01 52 57.3 -1.2
PBMO Poplar Bluff 21.38 22 P P 01 52 57.0 -1.6
IRM Iron Mountain 21.41 325 P P 01 52 58.7 -0.2
IRM IAmb IAmb 01 53 21.1
comp=Z,29nm,1.2s
W13A Hualapai Mount 21.47 329 P 01 52 58.9 -0.9
BORC Borrego Spring 21.50 321 P P 01 52 59.6 -0.2
CBKS Cedar Bluff 21.51 1 IAmb IAmb 01 53 04.5
comp=Z,44nm,0.8s
CPE Camp Elliot 21.66 319 P P 01 53 00.8 -0.9
FPAL Fort Paine 21.73 35 P P 01 53 00.9 -1.5
FPAL IAmb IAmb 01 53 15.6
comp=Z,20nm,0.8s
PMD Palm Desert 21.74 322 P P 01 53 01.8 -0.6
PFO Pinyon Flats O 21.77 322 P P 01 53 03.5 +0.7
comp=Z,4.8nm,1.0s,baz=140,slow=6.5,SNR=9.7
PFO LR LR 02 01 02.5
comp=Z,203nm,19.9s,baz=144,slow=35
comp=Z,4.8nm,1.0s
PFO Pinyon Flats O 21.77 322 P P 01 53 03.0 +0.1
KSCO Kaye Shedlock' 21.78 355 P 01 53 01.7 -1.3
U15A North Rim 21.82 333 P 01 53 03.4 -0.2
DNR Dunn Ranch,Anz 21.84 321 P P 01 53 02.4 -1.2
DNR IAmb IAmb 01 53 06.8
comp=Z,25nm,1.1s
154A Montrose 21.88 42 P P 01 53 01.9 -2.1
WVT Waverly 21.88 28 P P 01 53 01.9 -2.0
WVT IAmb IAmb 01 53 18.0
comp=Z,27nm,0.8s
KSU1 Kansas State U 22.04 8 P 01 53 03.6 -2.0
Q24A Divide 22.04 350 P P 01 53 03.8 -2.2
V48A Smith Brothers 22.04 31 P P 01 53 04.6 -1.1
V48A IAmb IAmb 01 53 18.1
comp=Z,19nm,1.0s
SWET Sewanee 22.08 33 P P 01 53 05.2 -0.9
SWET IAmb IAmb 01 53 28.7

comp=Z,20nm,0.9s
PV13 Radium Mtn., P 22.11 342 P **P** **01 53 05.9 -0.7**
PV05 Paradox Valley 22.12 342 P **P** **01 53 05.5 -1.3**
CGM3 Cape Girardeau 22.12 23 IAmb IAmb 01 53 21.9
comp=Z,40nm,0.9s
Y52A Lilburn 22.13 38 IAmb IAmb 01 53 23.1
comp=Z,26nm,1.0s
PV02 Paradox Valley 22.13 342 P **P** **01 53 05.5 -1.4**
PV02 IAmb IAmb 01 53 32.3
comp=Z,29nm,1.1s
X51A Calhoun 22.17 36 P **P** **01 53 06.7 -0.4**
X51A IAmb IAmb 01 53 21.6
comp=Z,47nm,1.1s
GOGA Godfrey 22.18 40 IAmb IAmb 01 53 23.2
comp=Z,49nm,0.8s
PV15 Paradox Valley 22.18 343 IAmb IAmb 01 53 19.3
comp=Z,44nm,1.1s
PV03 Paradox Valley 22.21 342 P **P** **01 53 07.1 -0.6**
PV18 Skein Mesa, Pa 22.22 342 IAmb IAmb 01 53 31.3
comp=Z,30nm,1.1s
CCM Cathedral Cave 22.25 19 **P** **01 53 05.9 -2.0**
PV12 Saucer Basin, 22.25 342 P **P** **01 53 07.7 -0.5**
PV12 IAmb IAmb 01 53 52.5
comp=Z,43nm,1.1s
PV11 David Mesa, Pa 22.26 342 P **P** **01 53 07.1 -1.1**
PV11 IAmb IAmb 01 53 43.0
comp=Z,22nm,1.1s
PV17 East Wray Mesa 22.26 342 **P** **01 53 07.1 -1.1**
T45A Paducah 22.28 26 P **P** **01 53 06.1 -2.1**
PV19 Morning Glory 22.30 342 P **P** **01 53 07.8 -0.9**
PV19 IAmb IAmb 01 53 19.2
comp=Z,19nm,0.9s
PV07 Paradox Valley 22.32 343 P **P** **01 53 07.6 -1.2**
PV07 IAmb IAmb 01 53 20.5
comp=Z,41nm,1.2s
PV20 West Nyswonger 22.32 342 P **P** **01 53 08.0 -0.9**
PV20 IAmb IAmb 01 53 24.5
comp=Z,24nm,1.0s
PV04 Paradox Valley 22.35 342 P **P** **01 53 08.5 -0.7**
PV04 IAmb IAmb 01 53 24.4
comp=Z,19nm,1.1s
PV14 Lion Creek, Pa 22.37 342 P **P** **01 53 08.3 -1.2**
PV10 Paradox Valley 22.38 342 P **P** **01 53 08.1 -1.4**
PV10 IAmb IAmb 01 53 21.3
comp=Z,41nm,1.0s
W50A Signal Mountai 22.39 34 P **P** **01 53 08.6 -0.9**
W50A IAmb IAmb 01 53 30.0
comp=Z,36nm,1.0s
PV23 Carpenter Ridg 22.44 342 P **P** **01 53 08.9 -1.4**
PV23 IAmb IAmb 01 53 22.3
comp=Z,28nm,0.9s
V12A Nelson 22.45 328 **P** **01 53 08.8 -1.4**
PV22 Blue Mesa, Par 22.45 343 P **P** **01 53 09.7 -0.6**
PV22 IAmb IAmb 01 53 21.0
comp=Z,18nm,0.9s
PV21 Cone Mtn., Par 22.53 342 P **P** **01 53 10.0 -1.2**
PV21 IAmb IAmb 01 53 21.7
comp=Z,15nm,0.9s
HMU Henry Mountain 22.53 338 P **P** **01 53 10.1 -1.1**
KNB Kanab 22.54 333 **P** **01 53 11.1 -0.2**
KNB IAmb IAmb 01 53 47.3
comp=Z,21nm,1.1s
CLTN Cedars of Leba 22.56 31 P **P** **01 53 10.2 -1.0**
S44A Carbondale 22.62 24 P **P** **01 53 09.9 -2.0**
MTPC Mountain Pass 22.62 326 P **P** **01 53 11.3 -0.8**
SIUC Southern Illin 22.66 24 P **P** **01 53 09.6 -2.6**
PKCU Pink Cliffs 22.69 335 P **P** **01 53 12.9 -0.1**
PKCU IAmb IAmb 01 53 40.4
comp=Z,18nm,1.0s
LCMT Little Creek M 22.72 333 P **P** **01 53 12.9 -0.3**
CHIV Chivirico 22.91 79 P **P** **01 53 14.7 -0.4**
CHIV IAmb IAmb 01 53 37.9
comp=Z,48nm,1.0s
BFSC Mount Baldy Ra 22.92 321 P **P** **01 53 14.8 -0.3**
ISCO Idaho Springs 22.93 350 IAmb IAmb 01 53 27.9
comp=Z,20nm,0.8s
CPCT Cooper Cave 23.01 35 IAmb IAmb 01 53 31.9
comp=Z,32nm,0.9s
P38A Dawn 23.10 14 IAmb IAmb 01 53 33.4
comp=Z,20nm,0.8s
SLM Saint Louis 23.11 21 P **P** **01 53 14.6 -2.3**
SLM IAmb IAmb 01 53 27.3
comp=Z,38nm,0.8s
SZCU Shurtz Canyon 23.15 334 P **P** **01 53 16.8 -0.7**
MTPU Mount Pierson 23.16 336 **P** **01 53 17.1 -0.8**
MTPU IAmb IAmb 01 53 20.6
comp=Z,29nm,1.1s
U49A Red Boiling Sp 23.17 31 P **P** **01 53 17.2 -0.3**
U49A IAmb IAmb 01 53 30.3
comp=Z,16nm,0.8s
GSC Goldstone, Bar 23.17 324 P **P** **01 53 17.1 -0.5**
PASC Pasadena Art C 23.19 320 P **P** **01 53 17.1 -0.7**
SHPR Sheep Range 23.21 329 **P** **01 53 17.6 -0.5**
CCUT Cedar City 23.23 333 **P** **01 53 17.6 -0.7**
SHOC Shoshone, Teco 23.32 326 P **P** **01 53 19.4 +0.4**
SHOC IAmb IAmb 01 53 22.0
comp=Z,25nm,1.2s
P40A Paris 23.38 16 P **P** **01 53 17.7 -1.8**
HODGE Hodges 23.47 40 P **P** **01 53 19.9 -0.6**
SRU San Rafael Swe 23.51 340 P **P** **01 53 19.9 -1.1**
Q16A Castle Valley 23.56 339 **P** **01 53 20.9 -0.6**
TKL Tuckaleechee C 23.57 36 **P** **01 53 20.4 -1.0**
TKL IAmb IAmb 01 53 37.4
comp=Z,28nm,0.8s
CCCA Chr Cany lake 23.65 324 P **P** **01 53 20.3 -1.9**
OGNE Ogallala 23.67 357 **P** **01 53 20.7 -1.7**
OGNE IAmb IAmb 01 53 35.5
comp=Z,25nm,0.9s
QSM Queen of Sheba 23.69 325 **P** **01 53 22.7 +0.1**
TPO Tropico Hills 23.70 321 P **P** **01 53 22.4 -0.3**
TPO IAmb IAmb 01 53 25.5
comp=Z,37nm,1.4s
GWY Greenwater Val 23.75 326 **P** **01 53 22.4 -0.8**
TCRU Three Creeks R 23.75 336 **P** **01 53 22.4 -1.0**
LRMC Laurel Mtn Rad 23.80 323 P **P** **01 53 24.6 +0.9**
O20A White River Ci 23.81 345 IAmb IAmb 01 53 40.1
comp=Z,22nm,1.0s
PRN Pahroc Range 23.87 330 P **P** **01 53 24.6 +0.2**
P18A Preston Nutter 23.89 341 P **P** **01 53 24.6 -0.2**
P18A IAmb IAmb 01 53 36.1
comp=Z,16nm,0.9s
N35A Tabor 23.90 9 P **P** **01 53 22.9 -1.6**
P17A Butcher Ranch, 23.91 340 P **P** **01 53 24.8 0.0**
HAYD Hayden 23.95 347 P **P** **01 53 25.4 +0.2**
CLC China Lake 23.99 324 P **P** **01 53 24.9 -0.5**
FURC Furnace Creek, 24.06 326 P **P** **01 53 25.9 0.0**
FURC IAmb IAmb 01 53 28.9
comp=Z,19nm,1.2s
TPNV Topopah Spring 24.11 328 P **P** **01 53 26.5 -0.1**
TPNV IAmb IAmb 01 53 50.5
comp=Z,19nm,1.1s
V53A Saluda 24.13 37 IAmb IAmb 01 53 42.5
comp=Z,35nm,1.0s
JSC Jenkinsville 24.13 42 P **P** **01 53 24.8 -1.8**
JSC IAmb IAmb 01 53 42.0
comp=Z,48nm,1.1s
PAULI Pauline 24.14 40 P **P** **01 53 25.7 -1.1**
BGNE Belgrade 24.17 4 P **P** **01 53 25.8 -1.2**
WCT Wildcat Mounta 24.18 327 P **P** **01 53 27.3 +0.1**
PSUT Pine Spring 24.26 334 P **P** **01 53 28.1 +0.1**
WCI Wyandotte Cave 24.31 28 P **P** **01 53 25.8 -2.4**
WCI IAmb IAmb 01 53 43.7
comp=Z,32nm,0.9s
TZTN Tazewell 24.35 35 P **P** **01 53 28.1 -0.5**
TZTN IAmb IAmb 01 53 50.9
comp=Z,32nm,0.9s
ISA Isabella, Lake 24.38 322 P **P** **01 53 29.3 +0.3**
S11A Rachel 24.40 329 P **P** **01 53 27.5 -1.7**
RDMU Red Mountain 24.56 343 P **P** **01 53 30.7 -0.1**
RDMU IAmb IAmb 01 53 43.8
comp=Z,36nm,1.1s
KMSC Kings Mountain 24.65 40 P **P** **01 53 30.7 -0.6**
MPU Maple Canyon 24.70 339 P **P** **01 53 30.6 -1.4**
CWC Cottonwood Cre 24.71 324 **P** **01 53 32.1 0.0**
VES Vestal, Richgr 24.86 322 P **P** **01 53 33.7 +0.4**
BIRD Birdtown, Kers 24.87 42 P **P** **01 53 32.8 -0.6**
BSUT Blindstream Ca 24.88 341 P **P** **01 53 33.9 0.0**
BSUT IAmb IAmb 01 53 46.9
comp=Z,25nm,1.0s
Y58A Scranton 24.94 44 P **P** **01 53 33.2 -0.7**
BLO Bloomington 24.99 26 IAmb IAmb 01 53 48.8
comp=Z,23nm,0.8s
P46A Rosedale 25.09 25 P **P** **01 53 34.8 -0.5**
P46A IAmb IAmb 01 53 51.0
comp=Z,24nm,0.9s
TIN Tinemaha, Big 25.23 325 P **P** **01 53 37.6 +0.8**
TIN IAmb IAmb 01 53 42.0
comp=Z,42nm,1.0s
R50A Paris 25.27 31 P **P** **01 53 37.3 +0.3**
R50A IAmb IAmb 01 53 51.9
comp=Z,21nm,0.9s
DUG Dugway, Tooele 25.27 337 **P** **01 53 37.2 0.0**
DUG IAmb IAmb 01 53 51.6
comp=Z,21nm,1.2s
U54A Nelsons Funny 25.30 37 P **P** **01 53 36.4 -0.9**
CTU Camp Tracy 25.34 340 P **P** **01 53 37.4 -0.4**
SCIA State Center 25.35 13 P **P** **01 53 37.3 -0.4**
K30B Basset 25.36 1 P **P** **01 53 37.5 -0.4**
TCUT Toone Canyon 25.62 341 P **P** **01 53 39.9 -0.5**
TCUT IAmb IAmb 01 54 00.6
comp=Z,10.0nm,0.7s
K22A Casper 25.86 350 P **P** **01 53 43.3 +0.8**
BGU Big Grassy Mou 26.00 338 P **P** **01 53 43.8 +0.1**
U56A King 26.02 39 P **P** **01 53 44.0 +0.1**
U56A IAmb IAmb 01 53 59.4
comp=Z,24nm,0.8s
HWUT Hardware Ranch 26.11 341 IAmb IAmb 01 53 58.7
comp=Z,23nm,1.1s
MDPB Devils Postpil 26.12 325 P **P** **01 53 45.5 +0.5**
MDPB IAmb IAmb 01 53 48.0
comp=Z,16nm,1.1s
SPUT South Promonto 26.13 339 P **P** **01 53 44.7 -0.3**
PMPB Monarch Peak 26.15 320 P **P** **01 53 44.3 -0.7**
PMPB IAmb IAmb 01 53 50.1
comp=Z,38nm,1.5s
SSFO Shawnee State 26.15 32 P **P** **01 53 45.8 +0.8**
SSFO IAmb IAmb 01 54 12.0
comp=Z,28nm,1.1s
LHV Little Huntoon 26.26 326 **P** **01 53 45.1 -0.8**
LHV IAmb IAmb 01 53 57.6
comp=Z,14nm,1.0s
NVAR Mina Array Bea 26.29 327 P **P** **01 53 47.7 +1.2**
comp=Z,14nm,0.9s,baz=152,slow=9.8,SNR=88
NVAR PcP **PcP** **01 57 13.5 +1.4**
comp=Z,0.3nm,0.7s,baz=132,slow=2.7,SNR=1.7
NVAR LR LR 02 05 42.0
comp=Z,165nm,18.1s,baz=108,slow=40
comp=Z,14nm,0.9s
HULI Fort Hunter Li 26.29 319 P **P** **01 53 46.4 +0.1**
HULI IAmb IAmb 01 53 49.4
comp=Z,49nm,1.4s
M44A Midewin, Midew 26.32 21 P **P** **01 53 45.8 -0.6**
Q51A Peebles 26.33 31 **P** **01 53 45.2 -1.4**
Q51A IAmb IAmb 01 54 02.0
comp=Z,31nm,0.9s
V58A Windy Hill, Pi 26.45 42 P **P** **01 53 46.5 -1.2**
S54A Dingess, Beckl 26.48 36 P **P** **01 53 46.4 -1.7**
BBGB Big Mountain B 26.53 321 P **P** **01 53 49.5 +0.9**
BBGB IAmb IAmb 01 54 18.1
comp=Z,17nm,0.9s
ECSD EROS Data Cent 26.61 6 IAmb IAmb 01 54 01.2
comp=Z,31nm,1.0s
BW06 Boulder Array 26.61 345 P **P** **01 53 48.1 -1.3**
BW06 IAmb IAmb 01 54 10.0
comp=Z,13nm,1.0s
PD31 Pinedale Array 26.61 345 **P** **01 53 48.8 -0.6**
PD31 IAmb IAmb 01 54 09.9
comp=Z,13nm,1.0s
PDAR Pinedale Array 26.61 345 P **P** **01 53 49.0 -0.4**
comp=Z,3.4nm,0.8s,baz=144,slow=9.1,SNR=19
PDAR LR LR 02 05 23.8
comp=Z,239nm,18.4s,baz=159,slow=39
comp=Z,3.4nm,0.8s
PDAR Pinedale Array 26.61 345 P **P** **01 53 49.1 -0.3**
HVU Hansel Valley 26.66 339 **P** **01 53 49.4 -0.4**
ELK Elko 26.70 334 LR LR 02 06 07.1
comp=Z,594nm,18.9s,baz=157,slow=40
ELK Elko 26.70 334 **P** **01 53 50.2 +0.1**
SAO San Andreas Ge 26.90 320 P **P** **01 53 50.9 -0.8**
JFWS Jewell Farm 27.02 17 **P** **01 53 51.7 -1.0**
JFWS IAmb IAmb 01 54 07.7
comp=Z,26nm,0.8s
CMB Columbia Colle 27.13 324 **P** **01 53 53.2 -0.7**
MHC Mount Hamilton 27.40 321 P **P** **01 53 55.5 -0.8**
ACSO Alum Creek Sta 27.44 30 **P** **01 53 55.9 -0.7**
ACSO IAmb IAmb 01 54 11.6
comp=Z,26nm,1.0s
PNTR Pine Nut 27.46 326 P **P** **01 53 56.3 -0.7**
PNTR IAmb IAmb 01 54 00.3
comp=Z,20nm,1.0s
JRSC Jasper Ridge 27.80 321 P **P** **01 53 58.8 -0.9**
JRSC IAmb IAmb 01 54 02.6
comp=Z,16nm,1.1s
PAHR Pah Rah Range 27.80 327 P **P** **01 53 59.6 -0.3**
FXWY Fox Creek 27.81 343 P **P** **01 54 00.5 +0.3**
FXWY IAmb IAmb 01 54 15.6
comp=Z,14nm,1.0s
MOOW Moose Ponds 27.84 344 P **P** **01 53 59.9 -0.4**
AFDM Forest Hills D 28.10 324 **P** **01 54 02.3 -0.2**
CVS Carmenet Viney 28.54 322 P **P** **01 54 06.1 -0.3**
CVS IAmb IAmb 01 54 09.1
comp=Z,14nm,1.2s
ORV Oroville 28.82 325 **P** **01 54 09.6 +0.8**
MFID Camas Ranch 29.19 337 P **P** **01 54 12.7 +0.5**
WVOR Wild Horse Val 29.54 332 P **P** **01 54 15.7 +0.3**
K50A Casco 29.63 27 P **P** **01 54 15.3 -0.7**
DLMT Dillon 29.84 343 P **P** **01 54 18.4 +0.4**
DLMT IAmb IAmb 01 54 29.9
comp=Z,8.1nm,0.9s
SDV Santo Domingo 30.14 102 LR LR 02 06 25.1
comp=Z,135nm,21.2s,baz=328,slow=36
J08A Circle Bar Ran 30.21 333 IAmb IAmb 01 54 23.6
comp=Z,26nm,1.3s
M03C McCloud 30.37 327 P **P** **01 54 22.0 -0.7**
M03C IAmb IAmb 01 54 24.2
comp=Z,7.7nm,1.0s
KMRM Mail Ridge 30.51 323 P **P** **01 54 24.7 +0.7**
KMRM IAmb IAmb 01 54 27.2
comp=Z,16nm,1.1s
KHBM Hayfork Bally 30.53 325 P **P** **01 54 23.5 -0.8**
GLMI Grayling 30.54 22 P **P** **01 54 23.1 -1.0**
PLID Pearl Lake 30.69 338 **P** **01 54 24.8 -0.8**
K05A Summer Lake 30.82 330 P **P** **01 54 27.3 +0.5**
KMPM Mount Pierce 30.88 323 P **P** **01 54 27.5 +0.3**
KMPM IAmb IAmb 01 54 30.3
comp=Z,8.3nm,1.0s
KHMM Horse Mountain 30.96 324 P **P** **01 54 27.1 -1.0**
KHMM IAmb IAmb 01 54 30.8
comp=Z,14nm,1.1s
BMO Blue Mountains 30.97 336 **P** **01 54 26.5 -1.4**
YBH Yreka Blue Hor 31.00 327 LR LR 02 08 38.5
comp=Z,11nm,18.2s,baz=137,slow=40
YBH Yreka Blue Hor 31.00 327 P **P** **01 54 26.7 -1.6**
L04D Klamath Falls 31.14 328 **P** **01 54 28.8 -0.8**
L04D IAmb IAmb 01 54 31.5
comp=Z,20nm,1.4s
AGMN Agassiz Nation 31.20 6 P **P** **01 54 28.3 -1.6**
AGMN IAmb IAmb 01 54 40.5
comp=Z,18nm,0.9s
J04A Umpqua Nationa 31.80 329 P **P** **01 54 34.8 -0.6**
BBOR Butler Butte 31.82 328 P **P** **01 54 34.8 -0.7**
F10A Beach Ranch, E 31.89 338 IAmb IAmb 01 54 37.4
comp=Z,20nm,1.0s
G08A Pilot Rock 31.99 335 P **P** **01 54 36.1 -0.8**
G08A IAmb IAmb 01 54 38.4
comp=Z,13nm,1.0s
KBO Bosley Butte 32.15 326 P **P** **01 54 39.0 +0.7**
K02D Willamette Mer 32.19 327 P **P** **01 54 39.1 +0.4**
K02D IAmb IAmb 01 54 42.0
comp=Z,7.7nm,1.2s
WIFE Three Sisters- 32.27 330 **P** **01 54 40.1 +0.6**
WIFE IAmb IAmb 01 54 41.8
comp=Z,13nm,1.1s
ATAH Atahualpa 32.56 136 LR LR 02 05 02.7
comp=Z,172nm,21.6s,baz=312,slow=31
SJG San Juan 32.64 83 LR LR 02 09 13.6
comp=Z,100nm,18.9s,baz=228,slow=39
I03D Drain, OR 32.74 329 P **P** **01 54 44.0 +0.6**
I03D IAmb IAmb 01 54 45.5
comp=Z,11nm,1.0s
SADO Sadowa 32.75 29 LR LR 02 09 51.3
comp=Z,215nm,19.2s,baz=244,slow=40
EPLO Experimental L 32.81 8 IAmb IAmb 01 54 54.1
comp=Z,13nm,0.7s
F07A Phinny Hill Vi 32.88 335 **P** **01 54 42.5 -2.1**
F07A IAmb IAmb 01 54 46.0
comp=Z,6.4nm,0.9s
H04A Detroit Lake 32.91 331 **P** **01 54 45.6 +0.6**
H04A IAmb IAmb 01 54 46.7
comp=Z,19nm,1.2s
BUCK Buck Mountain 32.93 329 P **P** **01 54 43.9 -1.3**
BUCK IAmb IAmb 01 54 47.5
comp=Z,16nm,1.3s
ULM Lac du Bonnet 33.14 5 P **P** **01 54 44.7 -2.0**
comp=Z,6.7nm,0.8s,baz=188,slow=7.5,SNR=11
ULM LR LR 02 09 14.7
comp=Z,150nm,19.0s,baz=194,slow=38
comp=Z,6.7nm,0.8s
HOOD Mount Hood Mea 33.16 332 P **P** **01 54 46.9 -0.3**
HOOD IAmb IAmb 01 54 50.1
comp=Z,16nm,1.0s
C09A Chrisman Ranch 33.82 338 P **P** **01 54 52.4 -0.4**
C09A IAmb IAmb 01 54 54.6
comp=Z,4.5nm,0.7s
NEW Newport 33.83 340 LR LR 02 10 16.8
comp=Z,340nm,19.1s,baz=152,slow=39
LTY Liberty 34.28 335 P **P** **01 54 57.1 +0.3**
LTY IAmb IAmb 01 54 58.7
comp=Z,26nm,1.5s
LON Longmire 34.34 334 P **P** **01 54 57.8 +0.4**
LON IAmb IAmb 01 54 59.4
comp=Z,11nm,1.1s
B08A Colville Reser 34.68 338 **P** **01 55 00.2 0.0**
B08A IAmb IAmb 01 55 03.5
comp=Z,7.0nm,0.6s
GNW Green Mountain 35.41 334 P **P** **01 55 06.1 -0.4**
GNW IAmb IAmb 01 55 07.8
comp=Z,8.4nm,1.0s
CLRS Cowichan Lake 36.94 334 P **P** **01 55 18.9 -0.6**
CLRS IAmb IAmb 01 55 21.8
comp=Z,13nm,1.0s
NNA Nana 37.23 140 LR LR 02 07 34.2
comp=Z,154nm,19.6s,baz=313,slow=31
EDM Edmonton 37.31 347 IAmb IAmb 01 55 33.2
comp=Z,16nm,0.8s
FFC Flin Flon 37.44 359 P **P** **01 55 22.3 -1.4**
FFC IAmb IAmb 01 55 43.1
comp=Z,7.5nm,0.8s
LLLB Lillooet 37.47 337 IAmb IAmb 01 55 50.3
comp=Z,20nm,1.4s
LDAQ Lac Daran 38.84 31 IAmb IAmb 01 55 45.4
comp=Z,10nm,0.9s
LMQ La Malbaie 39.03 33 IAmb IAmb 01 55 47.8
comp=Z,25nm,1.3s
D62A Allapoint, All 39.41 34 IAmb IAmb 01 55 51.0
comp=Z,26nm,1.1s
BBB Bella Bella 41.15 334 LR LR 02 13 33.9
comp=Z,165nm,21.2s,baz=130,slow=37
RPN Rapa Nui 44.94 191 LR LR 02 10 53.3
comp=Z,231nm,21.1s,baz=356,slow=30
SCHQ Schefferville 45.51 27 P **P** **01 56 28.5 -1.3**
comp=Z,3.8nm,0.7s,baz=226,slow=8.8,SNR=6.6
SCHQ LR LR 02 17 36.3
comp=Z,156nm,18.4s,baz=230,slow=39
comp=Z,3.8nm,0.7s
SCHQ Schefferville 45.51 27 IAmb IAmb 01 56 40.8
comp=Z,13nm,0.9s
LPAZ La Paz 46.07 135 P **P** **01 56 36.2 +0.8**
comp=Z,2.1nm,0.7s,baz=316,slow=7.0,SNR=7.5
comp=Z,2.1nm,0.7s
LPAZ La Paz 46.07 135 P **P** **01 56 36.2 +0.8**
YKAW1 Yellowknife Wh 46.26 351 P **P** **01 56 34.7 -0.9**
YKAW1 IAmb IAmb 01 56 35.8
comp=Z,13nm,1.1s
YKA Yellowknife Ar 46.29 351 P **P** **01 56 35.0 -0.8**
comp=Z,3.7nm,1.0s,baz=167,slow=7.1,SNR=38
YKA LR LR 02 17 18.7
comp=Z,608nm,18.6s,baz=121,slow=38
comp=Z,3.7nm,1.0s
YKAW3 Yellowknife Wh 46.36 351 P **P** **01 56 35.2 -1.1**
YKAW3 IAmb IAmb 01 56 36.5
comp=Z,9.1nm,1.1s
DLBC Dease Lake 46.57 339 LR LR 02 17 56.2
comp=Z,364nm,19.8s,baz=114,slow=38
PB16 IPOC Station P 46.63 138 P **P** **01 56 40.1 +0.4**
PB16 IAmb IAmb 01 56 42.7
comp=Z,9.3nm,0.8s
BLKN Baker Lake 47.14 3 P **P** **01 56 41.5 -0.9**
BLKN IAmb IAmb 01 56 41.9
comp=Z,19nm,1.3s
KUQ Kuujjuuaa 47.17 23 P **P** **01 56 42.0 -0.8**
WTLY Watson Lake, Y 47.47 341 P **P** **01 56 47.1 +2.0**
MDP Montagnes des 48.26 99 LR LR 02 21 33.5
comp=Z,86nm,18.3s,baz=146,slow=42
PB02 IPOC Station P 48.61 141 P **P** **01 56 54.0 -0.6**
WRGLY Wrigley 48.64 346 P **P** **01 56 55.0 +0.9**
SKAG Skagway 49.20 337 P **P** **01 56 58.3 -0.1**
FRB Frobisher Bay 51.34 18 LR LR 02 20 13.2
comp=Z,221nm,20.0s,baz=254,slow=38
L29M L29M 52.70 340 P **P** **01 57 25.4 +0.6**
K29M Barlow Dome 53.00 340 **P** **01 57 27.7 +0.6**
K29M IAmb IAmb 01 57 45.4
comp=Z,14nm,1.0s
ILON Igloolik, Nuna 53.39 8 P **P** **01 57 29.7 0.0**
H31M Peel River 53.48 343 P **P** **01 57 30.0 -0.4**
I30M Mount Dempster 53.63 342 P **P** **01 57 31.5 -0.1**
I30M IAmb IAmb 01 57 33.8
comp=Z,14nm,1.1s
I29M Ogilvie Camp, 54.30 342 **P** **01 57 37.0 +0.5**
I29M IAmb IAmb 01 57 38.1
comp=Z,15nm,1.2s
H03N2 Juan Fernandez 54.41 158 T T 02 56 02.8
baz=336,slow=77
H03N1 Juan Fernandez 54.41 158 T T 02 56 06.4
baz=336,slow=77
H03N3 Juan Fernandez 54.42 158 T T 02 56 01.8
baz=336,slow=77
F31M Tsiigehtchic 54.56 345 **P** **01 57 38.5 +0.2**
INK Inuvik 55.18 346 **P** **01 57 42.3 -0.4**
F30M Barrier River 55.21 344 **P** **01 57 43.2 +0.2**
F30M IAmb IAmb 01 57 55.7
comp=Z,11nm,0.9s
RIDG Independent Ri 55.44 338 P **P** **01 57 45.3 +0.5**
KDAK Kodiak Island 55.76 329 LR LR 02 20 09.4
comp=Z,78nm,19.6s,baz=84,slow=34
G27K Doyon Strip 56.29 342 IAmb IAmb 01 58 07.6
comp=Z,7.7nm,0.9s
E29M Blow River 56.33 344 IAmb IAmb 01 58 04.0
comp=Z,8.6nm,1.1s
HDA Harding Lake 56.58 338 IAmb IAmb 01 58 09.8
comp=Z,10nm,1.0s
IL31 56.76 338 IAmb IAmb 01 58 11.4
comp=Z,16nm,1.1s
ILAR Eielson Array 56.76 338 P **P** **01 57 54.5 +0.4**
comp=Z,2.1nm,0.9s,baz=147,slow=5.7,SNR=21
ILAR LR LR 02 24 11.8
comp=Z,174nm,20.4s,baz=96,slow=38
comp=Z,2.1nm,0.9s
ILAR Eielson Array 56.76 338 P **P** **01 57 54.8 +0.7**
E28M Babbage River 56.91 344 IAmb IAmb 01 58 11.7
comp=Z,7.7nm,0.9s
E27K Coleen River 57.18 343 IAmb IAmb 01 58 14.3
comp=Z,10nm,1.1s
RES Resolute Bay 57.54 2 LR LR 02 23 53.1
comp=Z,173nm,20.1s,baz=31,slow=37
RES Resolute Bay 57.54 2 IAmb IAmb 01 57 59.1
comp=Z,7.0nm,1.0s
H24K Nodor Dome 57.70 339 IAmb IAmb 01 58 18.7
comp=Z,17nm,1.2s
D27M Malcolm River 57.72 344 IAmb IAmb 01 58 17.8
comp=Z,6.6nm,0.9s
I23K Minto, Yukon-K 57.85 338 IAmb IAmb 01 58 19.3
comp=Z,14nm,1.0s
F25K Christian Rive 57.99 341 IAmb IAmb 01 58 25.1
comp=Z,4.6nm,0.8s
C27K Jago River 58.71 344 IAmb IAmb 01 58 24.8
comp=Z,7.2nm,0.8s
G23K Bananza Creek 58.91 339 IAmb IAmb 01 58 31.1
comp=Z,13nm,1.3s
H22K Ishtalitna Cre 58.95 338 IAmb IAmb 01 58 10.6
comp=Z,6.6nm,0.8s
SFJD Kangerlussuaq 59.12 20 LR LR 02 24 28.1
comp=Z,149nm,18.7s,baz=182,slow=37
D25K Kavik River 59.25 343 IAmb IAmb 01 58 29.1
comp=Z,9.0nm,0.8s
H21K Melozitna Rive 59.35 338 IAmb IAmb 01 58 28.9
comp=Z,9.1nm,1.0s
GDH Godhavn 59.48 18 *i* P **P** **01 58 13.3 +0.3**
GDH IAmb IAmb 01 58 14.3
comp=Z,16nm,1.0s
PPT Papeete 59.48 237 P **P** **01 58 18.3 +4.5**
comp=Z,36nm,0.3s,baz=266,slow=15,SNR=7.6
PPT LR LR 02 17 55.0
comp=Z,62nm,21.9s,baz=4.0,slow=30
E23K Chandalar 59.50 341 IAmb IAmb 01 58 31.1
comp=Z,12nm,1.1s

E22K	**Anaktuvuk Pass**	**60.24**	**340**		IAmb	IAmb	01 58 42.0	
	comp=Z,5.7nm,1.0s							
SAATT	**Saattut**	**60.91**	**17**	*i* P	**P**		**01 58 22.8**	**0.0**
SAATT				IAmb	IAmb		01 58 24.5	
	comp=Z,26nm,0.8s							
NUUG	**Nuugaatsiaq**	**60.93**	**16**	*i* P	**P**		**01 58 23.0**	**+0.1**
NUUG				IAmb	IAmb		01 58 24.2	
	comp=Z,20nm,1.0s							
UPNV	**Upernavik**	**61.00**	**14**	*i* P	**P**		**01 58 23.4**	**+0.1**
UPNV				IAmb	IAmb		01 58 24.9	
	comp=Z,17nm,0.9s							
TULEG	**Thule**	**61.51**	**8**	*i* P	**P**		**01 58 26.7**	**0.0**
TULEG				IAmb	IAmb		01 58 27.6	
	comp=Z,6.5nm,1.0s							
F19K	**Shaleruckik Mo**	**61.68**	**338**	IAmb	IAmb		01 58 29.6	
	comp=Z,4.6nm,0.8s							
E19K	**Redstone River**	**61.74**	**339**	IAmb	IAmb		01 58 52.2	
	comp=Z,5.0nm,0.9s							
KULLO	**Kullorsuaq**	**61.96**	**12**	*i* P	**P**		**01 58 30.3**	**+0.5**
KULLO				IAmb	IAmb		01 58 31.3	
	comp=Z,24nm,1.0s							
D20K	**Etivluk River**	**62.08**	**340**	IAmb	IAmb		01 58 47.8	
	comp=Z,9.7nm,0.9s							
D19K	**Kuna River**	**62.48**	**339**	IAmb	IAmb		01 58 50.8	
	comp=Z,6.0nm,0.9s							
J14K	**Nanvaranak Lak**	**62.60**	**332**	P	**P**		**01 58 34.6**	**+0.3**
J14K				IAmb	IAmb		01 58 47.8	
	comp=Z,12nm,1.1s							
G16K	**Koyuk River**	**62.89**	**335**	P	**P**		**01 58 36.2**	**+0.1**
G16K				IAmb	IAmb		01 58 53.8	
	comp=Z,13nm,1.4s							
E18K	**Tukpahlearik C**	**62.93**	**338**	P	**P**		**01 58 36.7**	**+0.3**
E18K				IAmb	IAmb		01 58 37.8	
	comp=Z,8.4nm,0.9s							
C19K	**Lookout Ridge**	**63.22**	**340**		**P**		**01 58 39.1**	**+0.7**
C19K				IAmb	IAmb		01 58 55.9	
	comp=Z,6.6nm,0.9s							
C18K	**Utukok River**	**63.58**	**339**	IAmb	IAmb		01 58 57.4	
	comp=Z,9.3nm,1.1s							
F15K	**North Star Dit**	**63.90**	**335**	IAmb	IAmb		01 58 55.8	
	comp=Z,6.6nm,0.9s							
PLCA	**Paso Flores**	**64.00**	**155**	LR	LR		02 22 24.8	
	comp=Z,105nm,18.6s,baz=173,slow=32							
NEEM	**North Greenlan**	**64.94**	**11**	*eP*	**P**		**01 58 50.4**	**+0.5**
NEEM				IAmb	IAmb		01 58 50.7	
	comp=Z,8.0nm,0.8s							
SUMG	**Summit**	**65.41**	**17**	P	**P**		**01 58 53.7**	**+0.6**
SUMG	**Summit**	**65.41**	**17**	*eP*	**P**		**01 58 53.5**	**+0.4**
BORG	**Borgarnes**	**69.90**	**27**	LR	LR		02 33 09.0	
	comp=Z,106nm,18.3s,baz=330,slow=39							
DAG	**Danmarks Havn**	**71.45**	**14**	*i* P	**P**		**01 59 29.6**	**-0.7**
DAG				IAmb	IAmb		01 59 30.9	
	comp=Z,5.6nm,0.9s							
NOR	**Nord**	**72.14**	**9**	*i* P	**P**		**01 59 34.5**	**+0.1**
NOR				IAmb	IAmb		01 59 35.5	
	comp=Z,15nm,1.4s							
BILL	**Bilibino**	**75.40**	**337**	P	**P**		**01 59 54.3**	**+0.7**
BILL				IAmb	IAmb		01 59 55.6	
	comp=Z,5.4nm,0.8s							
SPITS	**Spitsbergen Ar**	**78.50**	**11**	P	**P**		**02 00 11.7**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=318,slow=1.1,SNR=2.0							
SPITS				LR	LR		02 38 52.4	
	comp=Z,114nm,18.5s,baz=210,slow=39							
	comp=Z,3.5nm,0.7s							
EKA	**Eskdalemuir Ar**	**80.06**	**35**	P	**P**		**02 00 19.4**	**-0.4**
	comp=Z,5.5nm,1.0s,baz=294,slow=16,SNR=3.2							
EKA				LR	LR		02 35 59.3	
	comp=Z,121nm,19.6s,baz=5.0,slow=36							
	comp=Z,5.5nm,1.0s							
SEY	**Seymchan**	**82.38**	**334**	LR	LR		02 39 35.3	
	comp=Z,92nm,18.1s,baz=134,slow=37							
ESDC	**Sonseca Array**	**84.01**	**50**	P	**P**		**02 00 41.2**	**+0.1**
	comp=Z,1.6nm,1.1s,baz=309,slow=3.9,SNR=4.8							
	comp=Z,1.6nm,1.1s							
NB2	**NORSAR Subarra**	**85.08**	**27**	P	**P**		**02 00 46.8**	**+0.9**
	comp=Z,2.3nm,0.9s,baz=299,slow=5.3							
NOA	**NORSAR Array B**	**85.08**	**27**	P	**P**		**02 00 47.1**	**+1.2**
	comp=Z,3.3nm,1.1s,baz=299,slow=5.4,SNR=3.5							
NOA				LR	LR		02 43 01.7	
	comp=Z,72nm,18.3s,baz=285,slow=39							
	comp=Z,3.3nm,1.1s							
TIXI	**Tiksi**	**85.30**	**346**	LR	LR		02 42 52.4	
	comp=Z,107nm,19.0s,baz=22,slow=38							
TIXI	**Tiksi**	**85.30**	**346**	P	**P**		**02 00 47.0**	**+0.2**
ARCES	**ARCESS Array B**	**85.50**	**17**	P	**P**		**02 00 48.6**	**+0.7**
	comp=Z,5.6nm,1.0s,baz=309,slow=3.1,SNR=1.9							
ARCES				LR	LR		02 39 01.0	
	comp=Z,149nm,19.9s,baz=242,slow=36							
	comp=Z,5.6nm,1.0s							
FINES	**FINESS Array B**	**90.85**	**23**	LR	LR		02 46 02.1	
	comp=Z,302nm,18.1s,baz=254,slow=38							
YAK	**Yakutsk**	**91.68**	**339**	LR	LR		02 48 32.8	
	comp=Z,77nm,18.2s,baz=100,slow=40							
DZM	**Mont Dzumac**	**99.12**	**250**	LR	LR		02 38 33.3	
	comp=Z,99nm,18.1s,baz=108,slow=30							
HHC	**Hu-ho-hao-te**	**115.03**	**334**	*eP*		**PKPdf**	**02 06 55.3**	**+3.7**
NJ2	**Nanjing**	**118.21**	**322**	*eP*		**PKPdf**	**02 06 57.1**	**-0.7**
NJ2				pmax	pmax			
	comp=Z,6.0nm,0.6s							
WRA	**Warramunga Arr**	**128.22**	**258**	PKP		**PKPdf**	**02 07 17.2**	**0.0**
	comp=Z,0.8nm,0.7s,baz=83,slow=2.3,SNR=10							
ASAR	**Alice Springs**	**128.95**	**253**	PKP		**PKPdf**	**02 07 18.4**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=90,slow=1.9,SNR=6.4							
PZH	**PanZhiHua**	**131.48**	**333**	PKP		**PKPdf**	**02 07 23.8**	**+0.2**
HYB	**Hyderabad**	**145.55**	**2**	*e*PKPdf		**PKPdf**	**02 07 48.4**	**-0.9**

*AZER **21** 01:48:58.7,41.21N×46.12E,h9km,ml2.2*
*MOS **21** 01:48:59.3,41.20N×46.25E,h19km,MPVA3.2*
*NORS **21** 01:49:00.0,41.28N×46.15E,h11km,MPVA3.0*
*DRS **21** 01:49:02.5,41.29N×46.32E,h60km*
ISC 21 01:48:60.0±1.0,41°23N±0.02×46°19E±0.02,h16km±9km,
n43,σ1§17/86,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.52**	**39**	P	**Pn**	**01 49 12.3**	**-0.6**
ZKTA				S	**Sn**	**01 49 21.8**	**+0.4**
GANJ	**Ganja**	**0.59**	**170**	P	**Pb**	**01 49 11.7**	**-0.3**
GANJ				S	**Sb**	**01 49 19.9**	**-0.3**
GDB	**GEDABAY**	**0.61**	**213**	P	**Pb**	**01 49 11.3**	**-1.0**
GDB				S	**Sb**	**01 49 19.2**	**-1.4**
QZX	**Qazax, Azerbai**	**0.64**	**255**	P	**Pb**	**01 49 12.2**	**-0.6**
QZX				S	**Sb**	**01 49 20.6**	**-0.9**
SEKA	**Sheki**	**0.76**	**91**	P	**Pn**	**01 49 15.6**	**-0.5**
SEKA				S	**Sn**	**01 49 27.9**	**+0.6**
MNGR	**Mingechevir, A**	**0.82**	**124**	P	**Pn**	**01 49 17.2**	**+0.4**
MNGR				S	**Sn**	**01 49 30.9**	**+2.2**
TLTR	**Tlyarata**	**0.88**	**8**	*e*Pg	**Pn**	**01 49 18.1**	**+0.2**
TLTR				*e*Sg	**Sn**	**01 49 31.0**	**+0.5**
KMKR	**Kumukh**	**1.13**	**37**	*i* Pg	**Pg**	**01 49 22.4**	**+0.6**
KMKR				*e*Sg	**Sg**	**01 49 38.8**	**+2.2**
AKT	**Akhty**	**1.19**	**77**	*e*Pg	**Pg**	**01 49 22.5**	**-0.4**
AKT				*e*Sg	**Sg**	**01 49 38.9**	**+0.5**
BRDA	**Brd**	**1.23**	**142**	P	**Pg**	**01 49 23.7**	**+0.2**
BRDA				S	**Sg**	**01 49 41.9**	**+2.3**
QBL	**Gabala**	**1.28**	**102**	Pn	**Pg**	**01 49 24.3**	**-0.3**
QBL				Sn	**Sg**	**01 49 42.7**	**+1.4**
GNBR	**Gunib**	**1.29**	**26**	*e*Pg	**Pg**	**01 49 25.3**	**+0.4**
GNBR				*e*Sg	**Sg**	**01 49 43.7**	**+1.9**
AGDM	**Agdam**	**1.32**	**148**	Pn	**Pg**	**01 49 24.3**	**-0.1**
AGDM				Sn	**Sg**	**01 49 43.1**	**+0.5**
XNZR	**Khunzakh**	**1.37**	**16**	*e*Pg	**Pg**	**01 49 27.1**	**+0.8**
XNZR				*e*Sg	**Sg**	**01 49 46.6**	**+2.5**
URKR	**Urkarakh**	**1.43**	**49**	*e*Pg	**Pg**	**01 49 27.1**	**-0.4**
URKR				*e*Sg	**Sg**	**01 49 47.2**	**+1.1**
BTLR	**Botlikh**	**1.43**	**1**	*e*Pg	**Pg**	**01 49 27.6**	**0.0**
BTLR				*e*Sg	**Sg**	**01 49 47.4**	**+1.2**
XNQ	**Khinaliq**	**1.47**	**92**	Pn	**Pg**	**01 49 27.3**	**-1.0**
XNQ				Sn	**Sg**	**01 49 48.1**	**+0.6**
ZRD	**Zardab**	**1.48**	**129**	Pn	**Pb**	**01 49 27.4**	**+0.3**
ZRD				Sn	**Sg**	**01 49 50.1**	**+2.4**
ARKR	**Arakani**	**1.50**	**23**	*e*Pg	**Pg**	**01 49 28.7**	**-0.1**
ARKR				*e*Sg	**Sg**	**01 49 49.9**	**+1.6**
KSMR	**Kasumkent**	**1.51**	**75**	*e*Pg	**Pg**	**01 49 27.3**	**-1.6**
KSMR				*e*Sg	**Sg**	**01 49 47.6**	**-0.9**
UNCR	**Uncukul**	**1.55**	**17**	*e*Pg	**Pg**	**01 49 29.6**	**-0.2**
UNCR				*e*Sg	**Sg**	**01 49 51.7**	**+1.7**
IML	**Ismayilli**	**1.57**	**106**	Pn	**Pb**	**01 49 28.6**	**0.0**
IML				Sn	**Sg**	**01 49 50.4**	**-0.2**
QSAR	**Qusar**	**1.59**	**79**	Pn	**Pg**	**01 49 30.1**	**-0.4**
QSAR				Sn	**Sg**	**01 49 52.0**	**+0.8**
SGKR	**Sergokala**	**1.65**	**41**	*e*Pg	**Pg**	**01 49 30.5**	**-1.1**
SGKR				*e*Sg	**Sg**	**01 49 53.5**	**+0.4**
KRNR	**Karanay**	**1.68**	**18**	*e*Pg	**Pg**	**01 49 31.0**	**-1.3**
KRNR				*e*Sg	**Sg**	**01 49 54.4**	**+0.2**
KDMR	**Kurdemir**	**1.74**	**119**	Pn	**Pb**	**01 49 31.8**	**+0.3**
KDMR				Sn	**Sg**	**01 49 54.5**	**-1.5**
QUBA	**Quba, Azerbaij**	**1.74**	**85**	Pn	**Pg**	**01 49 32.0**	**-1.5**
QUBA				Sn	**Sg**	**01 49 56.0**	**0.0**
GUDG	**Gudauri**	**1.78**	**315**	*e*Pg	**Pn**	**01 49 29.4**	**-0.8**
GUDG				*e*Sg	**Sb**	**01 49 54.2**	**-0.2**
DRN	**Derbent**	**1.79**	**63**	*e*Pg	**Pb**	**01 49 32.2**	**-0.2**
DRN				*e*Sg	**Sg**	**01 49 56.5**	**-1.2**
HYR	**Heyderabad**	**1.82**	**214**	Pn	**Pn**	**01 49 31.9**	**+1.1**
HYR				Sn	**Sn**	**01 49 55.2**	**+1.7**
BLQ	**Beylaqan**	**1.83**	**145**	Pn	**Pb**	**01 49 32.1**	**-1.1**
BLQ				Sn	**Sb**	**01 49 56.7**	**+0.8**
DLMR	**Dylym**	**1.87**	**10**	*e*Pg	**Pb**	**01 49 33.6**	**-0.2**
DLMR				*e*Sg	**Sg**	**01 49 58.9**	**-1.2**
PQL	**Pirkuli**	**1.87**	**103**	Pn	**Pb**	**01 49 33.4**	**-0.5**
PQL				Sn	**Sg**	**01 49 58.8**	**-1.5**
SBZ	**Shahbuz**	**1.90**	**195**	Pn	**Pb**	**01 49 33.9**	**-0.3**
SBZ				Sn	**Sb**	**01 49 58.4**	**+0.7**
QRD	**Qoradiz**	**1.97**	**154**	Pn	**Pb**	**01 49 34.8**	**-0.6**
QRD				Sn	**Sb**	**01 50 00.0**	**+0.3**
SIZA	**Siyzn**	**2.05**	**93**	Pn	**Pb**	**01 49 36.5**	**-0.4**
SIZA				Sn	**Sg**	**01 50 04.4**	**-1.6**
ATGJ	**Altiaghaj**	**2.11**	**99**	Pn	**Pb**	**01 49 37.2**	**-0.8**
ATGJ				Sn	**Sg**	**01 50 05.1**	**-2.9**
NAX	**Nakhchivan**	**2.12**	**195**	Pn	**Pb**	**01 49 38.3**	**+0.2**
NAX				Sn	**Sb**	**01 50 04.7**	**+0.5**
LACR	**Lac**	**2.13**	**319**	*e*Pg	**Pb**	**01 49 37.9**	**-0.4**
LACR				*e*Sg	**Sg**	**01 50 06.8**	**-1.6**
ORD	**Ordubad**	**2.31**	**184**	Pn	**Pn**	**01 49 39.3**	**+1.9**
ORD				Sn	**Sb**	**01 50 09.4**	**-0.1**
DIGR	**Digorskoe uzhe**	**2.56**	**312**	*e*Pn	**Pb**	**01 49 43.5**	**-2.1**
DIGR				*e*Sn	**Sb**	**01 50 16.8**	**-0.1**
GLBA	**Clilabad**	**2.61**	**139**	Pg	**Pb**	**01 49 45.1**	**-1.2**
GLBA				Sg	**Sg**	**01 50 21.0**	**-2.7**
YRD	**Yardimli**	**2.80**	**145**	Pg	**Pb**	**01 49 48.4**	**-1.3**
YRD				Sg	**Sg**	**01 50 28.0**	**-1.9**

*IDC **21** 01:48:46.6±5.4,17.20S×176.00W,h0km,mb4.1/3,*
mbtmp4.1/3,Error ellipse: s-maj=178.6km s-min=106.1km
az=156.0
*NEIC **21** 01:49:48.5±2.1,17.6S±0.1×177.6W±0.1,h533km±8km,*
mb4.2/23,Error ellipse: s-maj=17.6km s-min=16.4km
az=169.0
ISC 21 01:49:50.1±0.7,17°6S±0.1×177°7W±0.1,h550km,n34,
σ1§84/34,mb4.2/13,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.08**	**267**	P	**P**	**01 51 15.3**	**+2.7**
NIUE	**Niue**	**7.50**	**103**	P	P	01 51 37.5	-5.4
DZM	**Mont Dzumac**	**15.60**	**251**	P	**P**	**01 53 03.6**	**-2.2**
DZM				IAmb	IAmb	01 53 15.3	
	comp=Z,6.0nm,1.1s						
RAR	**Rarotonga**	**17.26**	**105**	P	**P**	**01 53 19.0**	**-2.2**
RAR				IAmb	IAmb	01 53 34.7	
	comp=Z,9.5nm,0.9s						
LTZ	**Lake Taylor**	**26.54**	**197**	P	**P**	**01 54 43.5**	**-0.7**
LTZ				IAmb	IAmb	01 54 47.6	
	comp=Z,16nm,1.2s						
RABL	**Rabaul**	**32.40**	**291**	P	**P**	**01 55 33.6**	**-1.8**
STKA	**Stephens Creek**	**39.41**	**241**	P	**P**	**01 56 32.5**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=72,slow=13,SNR=3.9						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**39.41**	**241**	P	**P**	**01 56 32.2**	**-0.8**
STKA				IAmb	IAmb	01 56 43.3	
	comp=Z,16nm,1.1s						
BBOO	**Buckleboo**	**44.18**	**241**	P	**P**	**01 57 10.9**	**+0.3**
BBOO				IAmb	IAmb	01 57 13.4	
	comp=Z,11nm,1.1s						
WR8	**Warramunga Arr**	**45.23**	**259**	P	**P**	**01 57 18.7**	**-0.1**
WR8				IAmb	IAmb	01 57 22.1	
	comp=Z,3.7nm,0.9s						
WB0	**Warramunga Arr**	**45.35**	**259**	P	**P**	**01 57 19.1**	**-0.6**
WRA	**Warramunga Arr**	**45.39**	**259**	P	**P**	**01 57 19.1**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=98,slow=8.2,SNR=7.9						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**45.39**	**259**	P	**P**	**01 57 19.0**	**-1.0**
AS31	**Alice Springs**	**45.56**	**254**	P	**P**	**01 57 21.5**	**+0.2**
AS31				IAmb	IAmb	01 57 22.0	
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**45.56**	**254**	P	**P**	**01 57 21.4**	**+0.1**
	comp=Z,7.0nm,0.6s,baz=93,slow=7.8,SNR=68						
ASAR				PcP	**PcP**	**01 58 52.8**	**+4.4**
	comp=Z,0.4nm,0.4s,baz=99,slow=3.4,SNR=2.9						
	comp=Z,7.0nm,0.6s						
ASAR	**Alice Springs**	**45.56**	**254**	P	**P**	**01 57 20.8**	**-0.5**
FORT	**Forrest**	**50.78**	**244**	P	**P**	**01 58 00.1**	**+0.1**
FORT				IAmb	IAmb	01 58 14.2	
	comp=Z,5.3nm,0.9s						
KNRA	**Kunumurra**	**51.22**	**264**	P	**P**	**01 58 01.6**	**-1.9**
VNDA	**Vanda**	**60.83**	**185**	P	**P**	**01 59 09.5**	**+0.7**
JMZ	**Minamidaito 2**	**65.81**	**310**	P	**P**	**01 59 40.2**	**-1.3**
NACB	**Ninganchiao**	**72.32**	**303**	P	**P**	**02 00 19.6**	**-1.1**
HULI	**Fort Hunter Li**	**75.42**	**44**	P	**P**	**02 00 36.1**	**-1.8**
HULI				IAmb	IAmb	02 00 54.0	
	comp=Z,12nm,1.1s						
OHAK	**Old Harbor**	**77.25**	**13**	P	**P**	**02 00 47.1**	**-0.4**
OHAK				IAmb	IAmb	02 00 49.6	
	comp=Z,12nm,1.2s						
AFDM	**Forest Hills D**	**77.26**	**42**	P	**P**	**02 00 47.2**	**-0.8**
M11K	**Mekoryuk**	**78.24**	**6**	P	**P**	**02 00 55.0**	**+2.3**
M11K				IAmb	IAmb	02 00 58.9	
	comp=Z,10nm,1.1s						
P18K	**Big Mountain,**	**78.86**	**11**	P	**P**	**02 00 55.5**	**-0.6**
P18K				IAmb	IAmb	02 01 08.3	
	comp=Z,3.6nm,0.9s						
P19K	**Oil Pt**	**79.49**	**12**	P	**P**	**02 01 00.5**	**+1.1**
RAGM	**Ragged Mountai**	**82.14**	**16**	P	**P**	**02 01 15.4**	**+2.2**
M27K	**Edge Creek, AK**	**84.53**	**16**	P	**P**	**02 01 24.4**	**-0.7**
M27K				IAmb	IAmb	02 01 33.6	
	comp=Z,7.2nm,1.2s						
BUR08	**Bucovina Ar. S**	**144.63**	**333**	PKPdf	**PKiKP**	**02 08 31.9**	**+3.5**
BURAR	**Bucovina Array**	**144.65**	**333**	PKPdf	**PKiKP**	**02 08 32.4**	**+3.9**
BRTR	**Keskin Array B**	**145.05**	**316**		**PKiKP**	**02 08 32.2**	**+2.7**
CIMO	**Cimolais**	**150.15**	**346**	PKPab	**PKPab**	**02 08 45.9**	**-1.6**
FUORN	**Ofenpass-Fuorn**	**150.30**	**349**	PKPab	**PKPab**	**02 08 47.6**	**-0.8**

*NEIC **21** 02:13:10.5±1.8,9.61S±0.09×120.60E±0.03,h86km±9km,*
mb4.2/11,Error ellipse: s-maj=12.4km s-min=4.9km
az=179.0
*IDC **21** 02:13:10.3±2.5,9.69S×120.71E,h87km±21km,mb3.6/5,*
mbtmp4.1/9,MS3.2/2,Error ellipse: s-maj=32.6km
s-min=11.0km az=51.0
*DJA **21** 02:13:11.0±0.2,10°S±3°×12°1E±°,h60km±4km,M4.7/27,*
mB5.5/6,mb4.7/13,MLv4.6/27,Mw(mB)4.9/6
ISC 21 02:13:09.9±0.7,9.76S±0.05×120.72E±0.04,h86km±7km,
n82,σ1§70/91,mb4.1/9,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.43**	**282**	P	**Pn**	**02 13 23.2**	**-0.5**
WSI				S	**Sn**	**02 13 32.1**	**-1.8**
BASI	**Baing, Sumba**	**0.48**	**197**	P	**Pn**	**02 13 24.7**	**+0.6**
BASI				S	**Sn**	**02 13 34.9**	**+0.3**
WBSI	**Waikabubak, Su**	**1.32**	**275**	P	**Pn**	**02 13 33.3**	**+0.1**
WBSI				S	**Sn**	**02 13 49.6**	**-1.2**
EDFI	**Ende, Flores**	**1.39**	**44**	P	**Pn**	**02 13 33.5**	**-0.7**
MMRI	**Maumere**	**1.87**	**53**		**Pn**	**02 13 40.6**	**+0.3**
MMRI				Sn	**Sn**	**02 14 01.7**	**-1.7**
MMRI	**Maumere**	**1.87**	**53**	P	**Pn**	**02 13 40.4**	**+0.1**
MMRI	**Maumere**	**1.87**	**53**	S	**Sn**	**02 14 02.0**	**-1.4**
MMRI	**Maumere**	**1.87**	**53**	P	**Pn**	**02 13 40.5**	**+0.3**
MMRI				S	**Sn**	**02 14 01.7**	**-1.7**
DBNI	**Kabupaten Domp**	**2.69**	**298**	P	**Pn**	**02 13 52.3**	**+1.1**
DBNI				S	**Sn**	**02 14 23.2**	**+0.3**
BATI	**Baumata**	**2.93**	**99**	P	**Pn**	**02 13 56.9**	**+2.4**
	572nm,0.4s,baz=299,slow=4.5,SNR=69						
BATI				S	**Sn**	**02 14 30.0**	**+1.2**
	387nm,0.6s,baz=15,slow=17,SNR=15						
BATI	**Baumata**	**2.93**	**99**	P	**Pn**	**02 13 56.9**	**+2.4**
BATI				S	**Sn**	**02 14 31.3**	**+2.5**
PLAI	**Plampang**	**3.05**	**287**	P	**Pn**	**02 13 56.6**	**+0.5**
PLAI	**Plampang**	**3.05**	**287**	S	**Sn**	**02 14 30.2**	**-1.5**
PLAI	**Plampang**	**3.05**	**287**	P	**Pn**	**02 13 56.8**	**+0.7**
SOEI	**Soe**	**3.50**	**90**		**Pn**	**02 14 04.6**	**+2.4**
SOEI	**Soe**	**3.50**	**90**	P	**Pn**	**02 14 04.0**	**+1.8**
SOEI	**Soe**	**3.50**	**90**	S	**Sn**	**02 14 42.6**	**0.0**
SOEI	**Soe**	**3.50**	**90**	P	**Pn**	**02 14 04.6**	**+2.4**
BSSI	**Bau Bau, Buton**	**3.60**	**356**	P	**Pn**	**02 14 03.4**	**-0.2**
TWSI	**Taliwang, Sumb**	**3.92**	**285**	P	**Pn**	**02 14 09.2**	**+1.3**
KLNI	**Mataram**	**4.76**	**286**	P	**Pn**	**02 14 19.4**	**+0.1**
KAPI	**Kappang**	**4.81**	**348**	P	**Pn**	**02 14 20.6**	**+0.6**
	21nm,0.3s,baz=198,slow=6.0,SNR=19						
KAPI				S	**Sn**	**02 15 13.3**	**-1.2**
	30nm,0.4s,baz=60,slow=24,SNR=6.3						
KAPI				LR	LR	02 16 09.2	
	comp=Z,72nm,21.7s,baz=129,slow=38						
KAPI	**Kappang**	**4.81**	**348**	P	**Pn**	**02 14 20.8**	**+0.8**
KAPI	**Kappang**	**4.81**	**348**	P	**Pn**	**02 14 20.6**	**+0.6**
KHKI	**Kahang-Kahang**	**5.24**	**285**	P	**Pn**	**02 14 26.6**	**+0.8**
	0.4nm67nm,0.7s						
DNP	**Denpasar**	**5.55**	**281**	P	**Pn**	**02 14 31.1**	**+1.1**
IGBI	**Denpasar**	**5.58**	**279**	P	**Pn**	**02 14 30.3**	**-0.2**
SPSI	**Sidrap Palu**	**5.84**	**351**	P	**Pn**	**02 14 36.5**	**+2.6**
	22nm,0.8s						
RTBI	**Rangdo, Negare**	**5.85**	**282**	P	**Pn**	**02 14 34.0**	**-0.2**
	0.5nm66nm,0.5s						
PMSI	**Majene**	**6.47**	**344**	P	**Pn**	**02 14 43.6**	**+0.9**
	0.4nm78nm,2.1s						
JAGI	**Jajag, Banyuwa**	**6.61**	**281**		**Pn**	**02 14 43.2**	**-1.3**
JAGI	**Jajag, Banyuwa**	**6.61**	**281**	P	**Pn**	**02 14 43.1**	**-1.5**
JAGI	**Jajag, Banyuwa**	**6.61**	**281**	P	**Pn**	**02 14 43.0**	**-1.5**
ABJI	**Asem Bagus**	**6.70**	**286**	P	**Pn**	**02 14 46.6**	**+0.8**
	0.3nm44nm,1.0s						
BLJI	**Banyuglugur**	**7.32**	**285**	P	**Pn**	**02 14 54.3**	**+0.1**
	0.4nm3µm73nm,0.5s						
GMJI	**Gumukmas**	**7.34**	**281**	P	**Pn**	**02 14 53.1**	**-1.3**
SNJI	**Sawahan-Nganju**	**9.07**	**282**	P	**Pn**	**02 15 19.4**	**+1.1**
	28nm,0.5s						
PCJI	**Pacitan**	**9.56**	**279**	P	**Pn**	**02 15 24.4**	**-0.3**
	40nm,1.0s						
FITZ	**Fitzroy Crossi**	**9.56**	**151**	P	**Pn**	**02 15 24.6**	**-0.2**
	4.6nm,0.3s,baz=344,slow=9.9,SNR=108						
FITZ				S	**Sn**	**02 17 05.3**	**-5.3**
	17nm,0.4s,baz=213,slow=23,SNR=8.7						
KNRA	**Kununurra**	**9.80**	**128**		**Pn**	**02 15 27.7**	**-0.4**
UGM	**Wanagama**	**10.24**	**280**	Pn	**Pn**	**02 15 33.1**	**-1.1**
UGM	**Wanagama**	**10.24**	**280**	P	**Pn**	**02 15 34.4**	**+0.3**
UGM	**Wanagama**	**10.24**	**280**	P	**Pn**	**02 15 34.3**	**+0.2**
DRS	**Darwin Rock St**	**10.34**	**106**	P	**Pn**	**02 15 35.3**	**0.0**
MTN	**Manton Dam**	**10.66**	**108**		**Pn**	**02 15 38.4**	**-1.4**
MBWA	**Marble Bar**	**11.37**	**185**	Pn	**Pn**	**02 15 49.9**	**+0.5**
MBWA	**Marble Bar**	**11.37**	**185**	P	**Pn**	**02 15 49.1**	**-0.3**
PSA00	**Pilbara Seismi**	**11.78**	**184**	Pn	**Pn**	**02 15 57.3**	**+2.5**
BBJI	**Bungbulang**	**13.12**	**279**	Pn	**Pn**	**02 16 09.3**	**-3.8**
BBJI	**Bungbulang**	**13.12**	**279**	P	**Pn**	**02 16 12.5**	**-0.6**
FAKI	**Fak Fak**	**13.32**	**60**	Pn	**Pn**	**02 16 15.4**	**-0.2**
FAKI	**Fak Fak**	**13.32**	**60**	P	**Pn**	**02 16 15.9**	**+0.3**
GIRL	**Giralia**	**14.24**	**205**	Pn	**Pn**	**02 16 26.5**	**-1.0**
WB0	**Warramunga Arr**	**16.53**	**129**		**Pn**	**02 16 56.4**	**-0.2**
WB0				IAmb	IAmb	02 16 59.7	
	comp=Z,8.7nm,0.7s						
WRA	**Warramunga Arr**	**16.59**	**129**	P	**Pn**	**02 16 57.6**	**+0.2**
	comp=Z,5.1nm,0.6s,baz=303,slow=14,SNR=74						
WRA				S	Sn	02 19 49.9	-11
	comp=Z,3.3nm,0.7s,baz=297,slow=23,SNR=7.0						
WRA	**Warramunga Arr**	**16.59**	**129**		**

*NEIC **21** 02:35:47.7±1.1,21˚.77N±0˚.10×144˚.0E±0˚.1,h141km±8km, mb4.3/45,Error ellipse: s-maj=17.8km s-min=8.9km az=137.0*

*IDC **21** 02:35:54.8±5.7,21˚.80N×143˚.97E,h218km±54km, mb3.4/12,mbtmp3.9/12,Error ellipse: s-maj=22.5km s-min=19.8km az=66.0*

ISC 21 02:35:47.5±1.4,21˚.8N±0˚.2×144˚.1E±0˚.1,h150km,n62, σ0s75/31,mb4.2/34,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.59**	**343**	Op Pn		**Pn**	**02 37 08.3**	**-0.4**
NACB	**Ninganchiao**	**20.82**	**281**	P		Pn	02 40 16.9	-4.8
NACB				IAmb		IAmb	02 40 19.5	
	comp=Z,15nm,0.8s							
KSRS	**Korea Array**	**20.97**	**322**	P		**P**	**02 40 20.6**	**+1.9**
	comp=Z,3.3nm,0.7s,baz=148,slow=9.1,SNR=15							
	comp=Z,3.3nm,0.7s							
TWG	**Pinlang**	**21.30**	**277**	P		**P**	**02 40 22.1**	**-0.4**
MYLDM	**Lahad Datu**	**29.74**	**240**	P		P	02 41 40.0	+0.1
LZDM	**Lanzhou Array**	**37.81**	**301**	P		**P**	**02 42 50.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=133,slow=8.5,SNR=2.5							
	comp=Z,0.5nm,0.3s							
SONM	**Songino Array**	**39.82**	**320**	P		**P**	**02 43 05.8**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=130,slow=8.7,SNR=4.2							
	comp=Z,0.4nm,0.5s							
AMKA	**Amchitka**	**40.27**	**34**	P		P	02 43 11.1	+1.4
WB0	**Warramunga Arr**	**42.33**	**194**	P		P	02 43 27.4	+0.5
WB0				IAmb		IAmb	02 43 49.0	
	comp=Z,12nm,1.5s							
WR8	**Warramunga Ar**	**42.49**	**193**	P		P	02 43 28.6	+0.5
WR8				IAmb		IAmb	02 44 07.9	
	comp=Z,15nm,1.4s							
WRA	**Warramunga Ar**	**42.52**	**194**	P		P	02 43 28.8	+0.5
	comp=Z,0.3nm,0.4s,baz=18,slow=9.2,SNR=5.6							
	comp=Z,0.3nm,0.4s							
WRA	**Warramunga Arr**	**42.52**	**194**	P		P	02 43 28.1	-0.2
GOMU	**GeErMu**	**44.97**	**300**	P		**P**	**02 43 48.5**	**+0.3**
GOMU				pmax		pmax		
	comp=Z,5.0nm,0.7s							
EVN	**Everest**	**51.92**	**289**	P		**P**	**02 44 42.2**	**+0.3**
EVN				IAmb		IAmb	02 44 43.1	
	comp=Z,4.8nm,1.3s							
ZALV	**Zalesovo Beam**	**54.67**	**321**	P		**P**	**02 44 59.6**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=112,slow=7.4,SNR=4.8							
	comp=Z,0.6nm,0.5s							
MKAR	**Makanchi Array**	**55.26**	**313**	P		**P**	**02 45 05.1**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=96,slow=8.2,SNR=12							
	comp=Z,0.6nm,0.4s							
MKAR	**Makanchi Array**	**55.26**	**313**	P		**P**	**02 45 05.8**	**+0.6**
M16K	**Timber Creek**	**55.35**	**30**	P		**P**	**02 45 06.2**	**+0.6**
K17K	**Iditarod**	**56.20**	**28**	P		P	02 45 13.1	+1.6
KURBB	**Kurchatov Arra**	**56.04**	**317**	P		**P**	**02 45 24.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=93,slow=7.6,SNR=22							
	comp=Z,1.3nm,0.4s							
C19K	**Lookout Ridge**	**58.08**	**21**	P		P	02 45 26.0	+1.3
C19K				IAmb		IAmb	02 46 00.4	
	comp=Z,2.7nm,1.3s							
D22K	**Ayikyak River**	**60.33**	**22**	P		P	02 45 41.6	+1.4
D22K				IAmb		IAmb	02 45 58.8	
	comp=Z,6.8nm,1.4s							
ILAR	**Eielson Array**	**61.62**	**27**	P		**P**	**02 45 48.0**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=263,slow=5.9,SNR=8.0							
	comp=Z,0.8nm,0.8s							
BVAR	**Borovoye Array**	**63.16**	**319**	P		**P**	**02 45 59.0**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=83,slow=7.5,SNR=21							
	comp=Z,1.3nm,0.5s							
F26K	**Sheenjek River**	**63.16**	**24**	P		P	02 46 00.7	+1.5
F26K				IAmb		IAmb	02 46 35.9	
	comp=Z,4.5nm,1.5s							
G26K	**Porcupine Rive**	**63.20**	**25**	P		P	02 46 00.3	+1.0
G26K				IAmb		IAmb	02 46 15.9	
	comp=Z,4.9nm,1.4s							
BORK	**Borovoye**	**63.20**	**320**	P		**P**	**02 45 59.5**	**-0.1**
C27K	**Jago River**	**63.61**	**22**	P		P	02 46 03.2	+1.2
C27K				IAmb		IAmb	02 46 12.5	
	comp=Z,4.0nm,1.4s							
L27K	**Beaver Creek,**	**63.65**	**29**	P		**P**	**02 46 02.6**	**+0.2**
L27K				IAmb		IAmb	02 46 07.5	
	comp=Z,5.8nm,1.4s							
KKAR	**Karatay Array**	**63.66**	**308**	P		**P**	**02 46 03.3**	**+0.4**
BCAR	**Beaver Creek A**	**63.66**	**29**	P		P	02 46 03.3	+0.7
I27K	**Kandik River**	**63.93**	**26**	P		P	02 46 04.9	+0.7
I27K				IAmb		IAmb	02 46 26.6	
	comp=Z,6.9nm,1.4s							
H27K	**Steamboat Moun**	**64.02**	**26**	P		P	02 46 05.8	+1.0
H27K				IAmb		IAmb	02 46 41.8	
	comp=Z,7.1nm,1.5s							
D27M	**Malcolm River**	**64.52**	**22**	P		P	02 46 09.6	+1.6
I28M	**Miner Creek**	**64.61**	**27**	P		**P**	**02 46 09.3**	**+0.5**
I28M				IAmb		IAmb	02 46 43.3	
	comp=Z,5.9nm,1.3s							
F28M	**Old Crow**	**64.78**	**24**	P		**P**	**02 46 10.0**	**+0.3**
M29M	**Somme Creek**	**65.17**	**30**	P		P	02 46 13.8	+1.4
L29M	**L29M**	**65.33**	**29**	P		P	02 46 14.3	+1.0
G29M	**Pine Creek**	**65.46**	**25**	P		P	02 46 15.1	+1.0
G29M				IAmb		IAmb	02 46 58.0	
	comp=Z,6.7nm,1.4s							
E29M	**Blow River**	**65.57**	**23**	P		**P**	**02 46 15.4**	**+0.7**
E29M				IAmb		IAmb	02 46 46.2	
	comp=Z,3.9nm,1.4s							
K29M	**Barlow Dome**	**65.61**	**28**	P		P	02 46 16.5	+1.3
K29M				IAmb		IAmb	02 46 28.1	
	comp=Z,4.0nm,1.3s							
M30M	**Minto, Yukon**	**65.94**	**30**	P		**P**	**02 46 17.9**	**+0.6**
KBL	**Kabul**	**66.03**	**299**	P		**P**	**02 46 18.4**	**-0.1**
KBL				IAmb		IAmb	02 46 19.2	
	comp=Z,3.5nm,0.7s							
J30M	**Hart River**	**66.12**	**28**	P		**P**	**02 46 16.6**	**-1.9**
G30M	**tAoh Zraii Nji**	**66.17**	**25**	P		**P**	**02 46 18.9**	**+0.2**
G30M				IAmb		IAmb	02 46 24.7	
	comp=Z,5.9nm,1.3s							
F30M	**Barrier River**	**66.34**	**24**	P		P	02 46 20.9	+1.2
H31M	**Peel River**	**66.94**	**26**	P		P	02 46 24.7	+1.1
H31M				IAmb		IAmb	02 47 08.0	
	comp=Z,6.7nm,1.4s							
INK	**Inuvik**	**67.19**	**24**	P		**P**	**02 46 25.4**	**+0.5**
INK				IAmb		IAmb	02 46 55.3	
	comp=Z,5.8nm,1.4s							
P32M	**Atlin**	**67.59**	**33**	P		P	02 46 28.8	+1.0
AB31	**Akbulak array**	**70.08**	**316**	P		**P**	**02 46 43.3**	**+0.1**
ABKAR	**Akbulak array**	**70.08**	**316**	P		**P**	**02 46 43.1**	**-0.2**
NLWA	**Neilton Lookou**	**75.67**	**44**	P		P	02 47 17.8	+1.5
NLWA				IAmb		IAmb	02 47 57.8	
	comp=Z,12nm,1.4s							
YKAW3	**Yellowknife Wh**	**76.00**	**28**	P		**P**	**02 47 18.0**	**+0.2**
YKA	**Yellowknife Ar**	**76.03**	**28**	P		**P**	**02 47 18.1**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=294,slow=6.3,SNR=9.9							
	comp=Z,0.6nm,0.8s							
L04D	**Klamath Falls**	**78.29**	**49**	P		P	02 47 32.4	+1.2
PINE	**Pine Mountain**	**78.73**	**47**	P		P	02 47 34.9	+1.2
PINE				IAmb		IAmb	02 47 39.9	
	comp=Z,5.7nm,1.5s							
K05A	**Summer Lake**	**79.11**	**48**	P		P	02 47 37.3	+1.5
MFID	**Camas Ranch**	**82.33**	**46**	P		P	02 47 53.4	+0.6
NVAR	**Mina Array Bea**	**82.47**	**52**	P		P	02 47 54.2	+0.5
	comp=Z,1.0nm,0.6s,baz=274,slow=6.1,SNR=10							
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**83.48**	**335**	P		**P**	**02 47 56.5**	**-1.6**
	comp=Z,10nm,1.1s,baz=95,slow=2.3,SNR=3.4							
	comp=Z,10nm,1.1s							
TPNV	**Topopah Spring**	**84.54**	**52**	P		P	02 48 04.7	+0.5
TPNV				IAmb		IAmb	02 48 06.2	
	comp=Z,4.6nm,1.2s							
YHL	**Hebgen Lake**	**84.81**	**44**	P		**P**	**02 48 06.1**	**+0.5**

*IDC **21** 02:44:37.6±2.0,8˚.10S×119˚.88E,h199km±16km,mb3.5/5, mbtmp4.0/9,MS2.4/1,Error ellipse: s-maj=51.5km s-min=9.5km az=53.0*

*NEIC **21** 02:44:38.5±1.9,7˚.95S±0˚.08×120˚.00E±0˚.08,h207km±9km, mb4.2/9,Error ellipse: s-maj=11.3km s-min=11.0km az=210.0*

ISC 21 02:44:37.6±0.6,8˚.14S±0˚.06×119˚.90E±0˚.06,h201km,n36, σ1s74/40,mb4.2/7,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.21**	**252**	P		**Pn**	**02 45 16.5**	**-1.9**
MMRI	**Maumere**	**2.37**	**102**	Pn		**Pn**	**02 45 20.1**	**0.0**
MMRI				Sn		**S**	**02 45 50.0**	**-2.5**
KAPI	**Kappang**	**3.11**	**357**	P		**Pn**	**02 45 29.0**	**+0.4**
	27nm,0.3s,baz=175,slow=8.1,SNR=19							
KAPI				LR		LR	02 46 28.8	
	comp=Z,53nm,18.2s,baz=265,slow=36							
KAPI	**Kappang**	**3.11**	**357**			**Pn**	**02 45 29.6**	**+1.1**
KAPI	**Kappang**	**3.11**	**357**	P		**Pn**	**02 45 29.7**	**+1.1**
BATI	**Baumata**	**4.25**	**119**	P		**Pn**	**02 45 43.9**	**+1.3**
	18nm,0.3s,baz=18,slow=9.6,SNR=1.8							
BATI				S		**S**	**02 46 33.3**	**+0.2**
	27nm,0.3s,baz=339,slow=19,SNR=6.6							
SOEI	**Soe**	**4.61**	**111**	Pn		**Pn**	**02 45 48.5**	**+1.3**
SOEI	**Soe**	**4.61**	**111**	P		**Pn**	**02 45 48.7**	**+1.5**
SOEI	**Soe**	**4.61**	**111**	S		**S**	**02 46 41.9**	**+0.5**
JAGI	**Jajag, Banyuwa**	**5.70**	**266**	Pn		**Pn**	**02 46 01.2**	**+0.2**
JAGI	**Jajag, Banyuwa**	**5.70**	**266**	P		**Pn**	**02 46 02.8**	**+1.8**
FITZ	**Fitzroy Crossi**	**11.37**	**151**	P		**Pn**	**02 47 15.8**	**+1.4**
	1.3nm,0.5s,baz=329,slow=9.8,SNR=18							
FITZ				S		**S**	**02 49 15.9**	**-5.4**
	2.3nm,0.4s,baz=193,slow=18,SNR=9.0							
KNRA	**Kununurra**	**11.46**	**132**	Pn		**Pn**	**02 47 15.0**	**-0.6**
MTN	**Manton Dam**	**12.00**	**114**	Pn		**Pn**	**02 47 22.6**	**+0.1**
MBWA	**Marble Bar**	**12.95**	**181**	Pn		**Pn**	**02 47 37.2**	**+2.8**
FAKI	**Fak Fak**	**13.34**	**68**	Pn		**Pn**	**02 47 37.0**	**-2.4**
PSA00	**Pilbara Seismi**	**13.36**	**180**	Pn		**P**	**02 47 42.1**	**-0.1**
GIRL	**Giralia**	**15.42**	**200**	Pn		**P**	**02 48 10.3**	**+5.2**
WB0	**Warramunga Arr**	**18.19**	**131**	P		**P**	**02 48 36.4**	**+0.8**
WB0				IAmb		IAmb	02 48 38.3	
	comp=Z,6.0nm,1.1s							
WRA	**Warramunga Arr**	**18.26**	**131**	P		**P**	**02 48 36.6**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=303,slow=12,SNR=27							
WRA				S		**S**	**02 51 56.8**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=296,slow=22,SNR=5.1							
WRA	**Warramunga Ar**	**18.26**	**131**	P		**P**	**02 48 36.6**	**+0.3**
ASAR	**Alice Springs**	**20.46**	**141**	P		**P**	**02 49 00.3**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=315,slow=8.6,SNR=31							
	comp=Z,1.7nm,0.6s							
ASAR	**Alice Springs**	**20.46**	**141**	P		**P**	**02 49 00.9**	**+0.9**
COEN	**Coen**	**23.56**	**106**	P		**P**	**02 49 29.6**	**-0.6**
COEN				IAmb		IAmb	02 49 35.6	
	comp=Z,6.2nm,1.1s							
FORT	**Forrest**	**23.78**	**162**	P		**P**	**02 49 30.9**	**-1.1**
FORT				IAmb		IAmb	02 49 49.5	
	comp=Z,5.5nm,0.9s							
BBOO	**Buckleboo**	**28.76**	**151**	P		**P**	**02 50 17.1**	**+0.5**
BBOO				IAmb		IAmb	02 50 26.4	
	comp=Z,8.3nm,1.1s							
STKA	**Stephens Creek**	**31.07**	**142**	P		**P**	**02 50 38.4**	**+1.4**
	comp=Z,1.5nm,0.5s,baz=323,slow=10.0,SNR=6.2							
	comp=Z,1.5nm,0.5s							
STKA	**Stephens Creek**	**31.07**	**142**	P		**P**	**02 50 38.4**	**+1.4**
STKA				IAmb		IAmb	02 50 39.6	
	comp=Z,6.2nm,0.8s							
MKAR	**Makanchi Array**	**64.11**	**332**	P		**P**	**02 54 50.4**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=138,slow=7.4,SNR=17							
	comp=Z,1.4nm,0.6s							
MKAR	**Makanchi Array**	**64.11**	**332**	P		**P**	**02 54 50.2**	**-0.2**
ZAA0	**Zalesovo Array**	**68.56**	**339**	P		**P**	**02 55 17.8**	**-0.6**
ZALV	**Zalesovo Beam**	**68.56**	**339**	P		**P**	**02 55 17.6**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=143,slow=4.8,SNR=7.0							
	comp=Z,1.4nm,0.3s							
KURBB	**Kurchatov Arra**	**68.60**	**333**	P		**P**	**02 55 18.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=140,slow=5.9,SNR=4.1							
	comp=Z,0.2nm,0.3s							
PEA0B	**Petropavlovsk-**	**68.94**	**23**	P		**P**	**02 55 20.8**	**+0.1**
PETK	**Petropavlovsk-**	**68.94**	**23**	P		**P**	**02 55 19.4**	**-1.3**
ABKAR	**Akbulak array**	**77.38**	**324**	P		**P**	**02 56 08.8**	**-1.5**

*NAO **21** 02:54:59.2,34˚.41N×6˚.15E,h10km,MB4.3*

*IDC **21** 02:55:15.6±0.7,36˚.65N×5˚.51E,h0km,mb4.1/18, mbtmp4.1/27,ML3.6/6,MS3.8/25,Error ellipse: s-maj=17.8km s-min=13.5km az=1.0*

*MOS **21** 02:55:15.9±1.0,36˚.74N×5˚.52E,h11km,mb4.7/27,Error ellipse: s-maj=9.3km s-min=5.1km az=65.2*

*CRAAG **21** 02:55:16.7,36˚.71N×5˚.69E,Ml4.3,Algrie 10km SE El-Aouana*

*MED_RC **21** 02:55:18.0±0.3,36˚.73N×5˚.62E,h10km,MW4.3/28, Moment Tensor Solution.Mantle waves: s28,c34; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.25±.24; $M_{\theta\theta}$-2.43±.19; $M_{\phi\phi}$3.68±.23; $M_{r\theta}$-0.29±.55; $M_{\theta\phi}$-2.36±.21; $M_{\phi r}$-0.38±.60; Best double couple: M_o3.90000×10^{15} NP1:ϕ_s117.00000˚,δ80.00000˚, λ-174.00000˚. NP2:ϕ_s26.00000˚,δ84.00000˚, λ-10.00000˚. Principal axes: T 4.5000, Plg3.0000˚, Azm71.0000˚; N -1.1900, Plg79.0000˚, Azm175.0000˚; P -3.3100, Plg11.0000˚, Azm341.0000˚; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **21** 02:55:18.2±1.4,36˚.73N±0˚.03×5˚.61E±0˚.06,h10km±1km, mb4.5/37 Error ellipse: s-maj=9.3km s-min=4.5km az=293.0*

*LDG **21** 02:55:20.4±0.2,36˚.75N×5˚.70E,h10km,Ml3.9/39,Error ellipse: s-maj=3.6km s-min=2.3km az=147.0*

*MDD **21** 02:55:20.6±0.5,36˚.74N×5˚.68E,h20km±5km,Mb4.8/60, M_mb4.3/60,Error ellipse: s-maj=4.4km s-min=2.2km az=156.0*

*CNRM **21** 02:55:39.9,36˚.36N×3˚.36E,h0km,ML4.0*

ISC 21 02:55:18.8±0.3,36˚.76N±0˚.04×5˚.63E±0˚.03,h18km,n440, σ2s10/487,mb4.5/59,MS3.9/24,36C-17D,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.29**	**137**	P		**Pg**	**02 55 22.7**	**-2.6**
CBHR	**Beni Haroun da**	**0.55**	**111**	P		**Pg**	**02 55 27.8**	**-2.1**
CBOS	**Bilal Ibnou Ra**	**0.55**	**87**	P		**Pg**	**02 55 27.6**	**-2.3**
SET	**Setif**	**0.59**	**198**	P		**Pg**	**02 55 30.0**	**-0.6**
CAZD	**Ain Tagrout**	**0.70**	**213**	P		**Pb**	**02 55 30.9**	**-1.5**
COAT	**Oued Athmania**	**0.75**	**135**	P		**Pb**	**02 55 30.7**	**-2.6**
CKHR	**Kef el Ahmar**	**0.75**	**187**	P		**Pb**	**02 55 31.2**	**-2.2**
CTCHA	**Tamokra**	**0.85**	**247**	P		**Pb**	**02 55 34.2**	**-0.9**
CASM	**Ain Smara**	**0.86**	**125**	P		**Pb**	**02 55 33.0**	**-2.2**
CJSR	**Ain Djasser**	**0.93**	**164**	P		**Pb**	**02 55 34.7**	**-1.8**
CTEI	**Djebel Teioual**	**0.94**	**138**	P		**Pb**	**02 55 34.5**	**-2.1**
CKFL	**Kef-Lekhel**	**0.95**	**112**	P		**Pb**	**02 55 34.7**	**-2.1**
CAEH	**'Ain El Ouahch**	**0.98**	**89**	P		**Pb**	**02 55 35.4**	**-1.9**
CSGS	**Sigus**	**1.08**	**125**	P		**Pb**	**02 55 38.1**	**-0.8**
ATKB	**Taksebt**	**1.21**	**266**	P		**Pn**	**02 55 40.1**	**-0.8**
CBST	**Bordj Sabath**	**1.24**	**106**	P		**Pn**	**02 55 40.2**	**-1.1**
CTGD	**Timgad**	**1.43**	**149**	P		**Pn**	**02 55 43.2**	**-0.7**
CMAH	**Djebel Manchou**	**1.45**	**95**	P		**Pn**	**02 55 43.0**	**-1.1**
AKET	**Djebel Ketaf**	**1.58**	**244**	P		**Pn**	**02 55 45.5**	**-0.5**
ABSD	**Ouled Sidi Bra**	**1.76**	**222**	P		**Pn**	**02 55 48.6**	**+0.2**
AKED	**El Kharrouba**	**1.78**	**267**	P		**Pn**	**02 55 47.5**	**-1.2**
CBBAR	**Babar**	**2.05**	**141**	P		**Pn**	**02 55 52.2**	**-0.3**
ABA	**Alger-Bouzarea**	**2.08**	**272**	P		**Pn**	**02 55 51.4**	**-1.4**
ADOR	**Douera**	**2.18**	**268**	P		**Pn**	**02 55 53.5**	**-0.9**
ACHR	**Chrea**	**2.24**	**262**	P		**Pn**	**02 55 54.3**	**-0.8**
CBOGS	**Bougous**	**2.24**	**91**	P		**Pn**	**02 55 53.7**	**-1.3**
AFRS	**Ain Fares**	**2.25**	**206**	P		**Pn**	**02 55 55.3**	**+0.2**
ABNIN	**Birine**	**2.32**	**241**	P		**Pn**	**02 55 54.3**	**+0.1**
ABKD	**Sidi Amar**	**2.68**	**266**	P		**Pn**	**02 55 59.3**	**-1.7**
AFDJ	**Sidi Ladjel**	**2.82**	**242**	P		**Pn**	**02 56 02.2**	**-0.8**
EDDR	**Deurdeur**	**2.86**	**256**	P		**Pn**	**02 56 02.5**	**-1.0**
EHRZ	**Djelida**	**2.89**	**260**	P		**Pn**	**02 56 03.4**	**-0.6**
EARB	**Arib**	**2.95**	**262**	P		**Pn**	**02 56 03.5**	**-1.3**
KEST	**Kesra**	**3.18**	**108**	Pn		**Pn**	**02 56 07.8**	**-0.1**
	303nm,0.5s,baz=245,slow=1.6,SNR=424							
KEST				Sn		**Sn**	**02 56 45.3**	**-0.1**
	28nm,0.3s,baz=259,slow=21,SNR=10							
EBGR	**Bougara**	**3.22**	**249**	P		**Pn**	**02 56 08.0**	**-0.5**
EBNH	**Beni Haoua**	**3.28**	**267**	P		**Pn**	**02 56 09.9**	**+0.6**
EZEK	**Zmalet El Emir**	**3.30**	**236**	P		**Pn**	**02 56 08.4**	**-1.2**
MAHO	**Mahon**	**3.31**	**342**	P		**Pn**	**02 56 09.7**	**0.0**
MAHO				S		**Sn**	**02 56 46.3**	**-2.2**
MAHO	**Mahon**	**3.31**	**342**			**Pn**	**02 56 08.8**	**-0.9**
EBNR	**Beni Rached**	**3.33**	**263**	P		**Pn**	**02 56 10.6**	**+0.5**
ECHA	**Ech Chlef**	**3.49**	**261**	P		Pn	02 56 02.0	-10
ETOS	**Mallorca**	**3.73**	**324**	P		**Pn**	**02 56 16.0**	**+0.5**
ETOS	**Mallorca**	**3.73**	**324**	Pn		**Pn**	**02 56 16.2**	**+0.7**
ETOS				Sn		**Sn**	**02 56 57.2**	**-1.8**
EANR	**'Ain N'Sour**	**3.74**	**259**	P		**Pn**	**02 56 16.3**	**+0.6**
EADEB	**Ain Deheb**	**3.81**	**241**	P		**Pn**	**02 56 15.5**	**-1.2**
VSL	**Villasalto**	**4.03**	**46**			**Pn**	**02 56 18.8**	**-0.7**
VSL	**Villasalto**	**4.03**	**46**	Pn		**Pn**	**02 56 18.6**	**-0.9**
VSL				Sn		**Sn**	**02 57 03.0**	**-3.2**
EKMS	**Oued Kramis**	**4.04**	**265**	P		**Pn**	**02 56 18.8**	**-0.9**
EIBI	**Ibiza**	**4.07**	**305**	P		**Pn**	**02 56 20.9**	**+0.7**
EIBI				S		**Sn**	**02 57 05.2**	**-2.2**
EIBI	**Ibiza**	**4.07**	**305**	Pn		**Pn**	**02 56 20.8**	**+0.6**
EIBI				Sn		**Sn**	**02 57 05.6**	**-1.9**
ESMB	**Sidi M'hamed B**	**4.25**	**255**	P		**Pn**	**02 56 22.4**	**-0.2**
ODJA	**Bouhanifia**	**4.89**	**255**	P		**Pn**	**02 56 31.2**	**-0.3**
EBEN2	**Beniarda presa**	**4.99**	**294**	Pn		**Pn**	**02 56 33.3**	**+0.4**
ETRV	**Los Montesinos**	**5.24**	**286**	Pn		**Pn**	**02 56 36.6**	**+0.4**
ETRV				⇑*i*Vmb_VC			02 56 46.2	
	1µm,SNR=3.1							
AFON	**Font Roja**	**5.25**	**293**	Pn		**Pn**	**02 56 38.4**	**+2.0**
AFON				⇑*i*Vmb_VC			02 56 47.5	
	552nm,SNR=6.7							
CART	**Cartagena**	**5.36**	**281**	P		**Pn**	**02 56 37.7**	**-0.1**
CART				S		**Sn**	**02 57 36.8**	**-2.2**
CART	**Cartagena**	**5.36**	**281**			**Pn**	**02 56 37.8**	**0.0**
CART	**Cartagena**	**5.36**	**281**	P		**Pn**	**02 56 37.8**	**0.0**
CART				S		Sn	02 57 22.1	-17
EMUR	**La Murta**	**5.58**	**283**	P		**Pn**	**02 56 40.9**	**0.0**
EMUR	**La Murta**	**5.58**	**283**	Pn		**Pn**	**02 56 41.3**	**+0.4**
EMUR				⇑*i*Vmb_VC			02 56 51.0	
	397nm,SNR=5.1							
EBR	**Ebro Roquetas**	**5.70**	**317**			**Pn**	**02 56 42.5**	**0.0**
EBR	**Ebro Roquetas**	**5.70**	**317**	P		**Pn**	**02 56 42.5**	**0.0**
EPOB	**Poblet**	**5.79**	**324**	Pn		**Pn**	**02 56 43.8**	**0.0**
EPOB				⇑*i*Vmb_VC			02 56 50.7	
	1µm,SNR=16							
EPOB				Sn		**Sn**	**02 57 44.7**	**-5.2**
ERTA	**Horta de San J**	**5.88**	**317**	Pn		**Pn**	**02 56 45.3**	**+0.2**
ERTA				⇑*i*Vmb_VC			02 56 54.3	
	379nm,SNR=3.9							
ERTA				Sn		**Sn**	**02 57 49.5**	**-2.6**
EVIV	**Cofrentes, Val**	**5.88**	**297**	Pn		**Pn**	**02 56 46.3**	**+1.2**
EVIV				⇑*i*Vmb_VC			02 56 51.0	
	1µm,SNR=9.1							
CORI	**Orista**	**5.90**	**333**			**Pn**	**02 56 45.6**	**+0.4**
TLOR	**Lorca, Murcia**	**5.91**	**281**	P		**Pn**	**02 56 45.7**	**+0.3**
TLOR	**Lorca, Murcia**	**5.91**	**281**	Pn		**Pn**	**02 56 45.7**	**+0.3**
ECHE	**Chera**	**5.91**	**301**	P		**Pn**	**02 56 46.4**	**+0.9**
ECHE	**Chera**	**5.91**	**301**	Pn		**Pn**	**02 56 46.7**	**+1.2**
ECHE				⇑*i*Vmb_VC			02 56 49.9	
	628nm,SNR=6.0							
EMOS	**Mosqueruela**	**5.98**	**309**	Pn		**Pn**	**02 56 47.6**	**+1.1**
EMOS				⇑*i*Vmb_VC			02 56 57.6	
	682nm,SNR=6.8							
ETOB	**Tobarra**	**5.99**	**290**	P		**Pn**	**02 56 47.9**	**+1.3**
ETOB				S		**Sn**	**02 57 54.1**	**-0.7**
ETOB	**Tobarra**	**5.99**	**290**	Pn		**Pn**	**02 56 48.8**	**+2.2**
ETOB				⇑*i*Vmb_VC			02 56 54.1	
	474nm,SNR=3.8							
ETOB				Sn		**Sn**	**02 57 53.8**	**-1.0**
EMIR	**Miracle**	**6.05**	**330**	Pn		**Pn**	**02 56 49.0**	**+1.6**
EMIR				⇑*i*Vmb_VC			02 56 54.9	
	1µm,SNR=7.3							
EMIR				Sn		**Sn**	**02 57 52.7**	**-3.5**
EJON	**La Jonquera**	**6.06**	**340**	P		**Pn**	**02 56 47.5**	**-0.1**
EJON				S		**Sn**	**02 57 54.0**	**-2.4**
EJON	**La Jonquera**	**6.06**	**340**	Pn		**Pn**	**02 56 47.3**	**-0.2**
EJON				⇑*i*Vmb_VC			02 56 52.4	
	498nm,SNR=3.5							
EJON				Sn		**Sn**	**02 57 51.1**	**-5.3**
CLTB	**Caltabellotta**	**6.11**	**80**	Pn		**Pn**	**02 56 47.9**	**-0.4**
CLTB				Sn		**Sn**	**02 57 54.3**	**-3.5**
OBBL	**Beni Bahdel**	**6.15**	**253**	P		**Pn**	**02 56 49.8**	**+1.0**
ENIJ	**Nijar**	**6.28**	**274**	P		**Pn**	**02 56 49.2**	**-1.4**
ENIJ				S		**Sn**	**02 57 59.1**	**-2.

VLC Villacollemand 8.23 25 P Pn 02 57 17.5 +0.3
EADA Adamuz 8.24 283 P Pn 02 57 16.8 -0.6
EADA Adamuz 8.24 283 Pn Pn 02 57 17.8 +0.4
SJPF Ste Jean 8.24 322 *e*Pn Pn 02 57 18.7 +1.3
SJPF *e*Sn Sn 02 58 44.5 -5.5
20nm,0.6s
INTR Introdacqua 8.28 48 Pn Pn 02 57 18.8 +0.8
CEL Celeste 8.29 77 Pn Pn 02 57 19.9 +1.6
BNI Bardonecchia 8.32 5 Pn 02 57 20.3 +1.7
BNI Bardonecchia 8.32 5 Pn Pn 02 57 20.2 +1.6
BNI Sn Sn 02 58 48.9 -3.2
BNI Bardonecchia 8.32 5 P Pn 02 57 20.3 +1.7
PAB San Pablo 8.34 292 Pn 02 57 19.3 +0.5
PAB San Pablo 8.34 292 Pn Pn 02 57 19.6 +0.8
PAB ⇑*i*Vmb_VC 02 57 25.5
172nm,SNR=2.4
PAB San Pablo 8.34 292 P Pn 02 57 19.3 +0.5
MURB Monte Urbino 8.37 37 Pn Pn 02 57 19.5 +0.2
EALK Alkurruntz 8.46 322 Pn Pn 02 57 22.1 +1.6
EALK Sn Sn 02 58 52.2 -3.3
FDMO Fiordimonte 8.49 40 Pn Pn 02 57 21.5 +0.6
SSB Saint Sauveur 8.55 355 Pn 02 57 21.7 +0.1
SSB Saint Sauveur 8.55 355 P Pn 02 57 21.7 +0.1
GUD Guadarrama 8.57 300 Pn Pn 02 57 24.5 +2.4
CAF Calviac 8.59 343 *e*Pn Pn 02 57 22.5 +0.3
CAF *e*Sn Sn 02 58 52.0 -6.6
12nm,0.5s
ZCCA Zocca 8.60 27 Pn 02 57 23.8 +1.4
CUC Castrocucco 8.63 65 Pn Pn 02 57 21.8 -0.9
CUC Castrocucco 8.63 65 Pn Pn 02 57 21.2 -1.6
LPG La Plagne 8.77 5 *e*Pn Pn 02 57 26.6 +1.7
LPG *e*Sn Sn 02 58 58.3 -5.1
58nm,0.9s
LPL La Plagne 8.79 5 *e*Pn Pn 02 57 26.3 +1.2
LPL *e*Sn Sn 02 58 58.8 -4.9
49nm,0.7s
ECAB El Cabril 8.89 282 Pn Pn 02 57 26.0 -0.3
EJIF Jimena Fronter 8.93 271 Pn Pn 02 57 32.1 +5.2
SMIR Smir Dam 8.96 266 P Pn 02 57 25.2 -2.1
SMIR S Sn 02 58 49.7 -18
LFF La Frestale 8.97 337 *e*Pn Pn 02 57 27.8 +0.5
LFF *e*Sn Sn 02 59 03.1 -4.7
38nm,0.7s
RJF Les Rejaudoux 9.08 341 *e*Pn Pn 02 57 28.8 -0.1
RJF *e*Sn Sn 02 59 06.1 -4.5
14nm,0.6s
TIP Timpagrande 9.12 71 Pn 02 57 29.2 -0.2
TIP Timpagrande 9.12 71 Pn Pn 02 57 31.6 +2.1
CIBOR Castaar de Ib 9.16 292 Pn Pn 02 57 32.1 +2.0
MDT Midelt 9.29 248 Pn Pn 02 57 30.3 -1.6
0.2nm,0.3s,baz=75,slow=16,SNR=6.7
0.8nm,0.6s
MDT Midelt 9.29 248 P Pn 02 57 29.7 -2.3
MDT S Sn 02 58 56.1 -20
MD01 Midelt array s 9.38 249 Pn 02 57 33.3 +0.1
MD31 MD31 9.38 249 Pn 02 57 33.5 +0.4
MD31 MD31 9.38 249 P Pn 02 57 30.4 -2.7
MD31 S Sn 02 58 59.2 -19
IFR Ifrane 9.38 253 P Pn 02 57 35.3 +2.1
ELAN Lanestosa 9.49 316 Pn Pn 02 57 35.8 +1.2
ELAN ⇑*i*Vmb_VC 02 57 40.4
344nm,SNR=1.9
SENIN Lac Senin/Sane 9.68 7 Pn 02 57 37.8 +0.6
SENIN Lac Senin/Sane 9.68 7 Pn Pn 02 57 37.9 +0.6
FIESA Fiescheralp 9.84 10 Pn Pn 02 57 42.1 +2.5
CABF La Chapelle 9.85 2 *e*Pn Pn 02 57 40.1 +0.6
CABF *e*Sn Sn 02 59 23.7 -5.9
3.0nm,0.5s
TCF Toulx Ste Croi 9.86 346 *e*Pn Pn 02 57 39.7 +0.1
TCF *e*Sn Sn 02 59 24.6 -5.1
3.5nm,0.5s
SMF Signal de Mont 9.96 353 *e*Pn Pn 02 57 41.3 +0.3
SMF *e*Sn Sn 02 59 26.5 -5.9
1.1nm,0.2s
BGF Bois d'Agland 10.01 349 *e*Sn Sn 02 59 27.8 -5.6
13nm,0.6s
TUE Stuetta 10.09 15 Pn 02 57 45.3 +2.4
TUE Stuetta 10.09 15 P Pn 02 57 43.5 +0.5
59nm,1.0s
AVF Avril sur Loir 10.16 351 *e*Pn Pn 02 57 43.3 -0.4
AVF *e*Sn Sn 02 59 31.2 -6.0
2.6nm,0.5s
BRANT Les Verrieres 10.19 3 Pn Pn 02 57 43.6 -0.6
CTI Castel Tesino 10.32 24 Pn 02 57 47.0 +1.0
CTI Castel Tesino 10.32 24 P Pn 02 57 47.0 +1.0
SSF Saint Saulge 10.41 352 *e*Pn Pn 02 57 47.6 +0.5
SSF *e*Sn Sn 02 59 37.2 -6.1
1.7nm,0.3s
FUORN Ofenpass-Fuorn 10.44 18 Pn Pn 02 57 50.4 +2.6
DAVOX Davos/Dischmat 10.50 16 Pn Pn 02 57 51.2 +2.7
0.4nm,0.3s,baz=200,slow=9.3,SNR=5.8
1.0nm,0.3s
LOR Lormes 10.58 353 *e*Pn Pn 02 57 49.5 0.0
LOR *e*Sn Sn 02 59 41.4 -6.1
5.5nm,0.6s
PMRV Marv??o 10.60 288 *e*P Pn 02 57 49.2 -0.6
PMRV *e*LR LR 03 01 37.2
PMRV *i* IAMs_20 IAMs_20 03 02 08.7
188nm,14.0s
PVAQ Vaqueiros 10.68 277 Pn Pn 02 57 48.7 -2.2
PVAQ Vaqueiros 10.68 277 *e*P Pn 02 57 49.4 -1.4
MFF Saint Martin d 10.73 338 *e*Pn Pn 02 57 51.4 -0.1
MFF Saint Martin d 10.73 338 *e*Pn Pn 02 57 51.7 +0.2
MFF *e*Sn Sn 02 59 45.6 -5.6
4.4nm,0.4s
MFF *e*Sn Sn 02 59 46.5 -4.7
4.3nm,0.5s
PCBR Castelo Branco 10.75 291 *e*P Pn 02 57 53.0 +1.3
MVO Moncorvo 10.79 298 *e*P Pn 02 57 53.9 +1.5
MVO *e*LR LR 03 01 59.6
MVO *i* IAMs_20 IAMs_20 03 02 28.0
373nm,16.0s
PBEJ Beja 10.81 281 *e*P Pn 02 57 52.9 +0.2
PBRG Braganca 10.83 301 *e*P Pn 02 57 54.9 +2.0
FETA Feichten 10.93 19 *i* Pn Pn 02 57 57.0 +2.7
4.5nm,0.8s
MTE Manteigas 10.93 293 Pn Pn 02 57 54.0 -0.3
MTE Manteigas 10.93 293 *e*LR LR 03 01 57.2
MTE *i* IAMs_20 IAMs_20 03 02 28.1
407nm,16.0s
EVO Evora 10.96 283 *e*P Pn 02 57 54.5 -0.2
DAVA Damuels 10.98 15 *e*Pn Pn 02 57 57.6 +2.6
2.6nm,0.5s
MESJ Messejana 11.08 280 Pn Pn 02 57 54.9 -1.5
MESJ Messejana 11.08 280 *e*P Pn 02 57 55.8 -0.6
MESJ Messejana 11.08 280 P Pn 02 57 54.9 -1.5
HINF Hinteralfeld 11.09 4 *e*Pn Pn 02 57 55.6 -0.8
HINF *e*Sn Sn 02 59 53.3 -6.5
0.7nm,0.2s
ABTA Abfaltersbach 11.22 25 *i* Pn Pn 02 58 01.6 +3.4
5.5nm,0.9s
SQTA Sankt Quirin 11.24 20 *i* Pn Pn 02 58 01.3 +2.7
1.6nm,0.4s
HAU Haudompre 11.25 2 *e*Pn Pn 02 57 58.2 -0.4
HAU *e*Sn Sn 02 59 57.7 -6.2
1.7nm,0.2s
PVRL Vila Real 11.31 298 *e*P Pn 02 58 01.3 +1.8
MOTA Moosalm 11.33 19 *e*Pn Pn 02 58 02.1 +2.3
0.8nm,0.3s
RETA Reutte 11.37 18 *i* Pn Pn 02 58 03.3 +2.9
1.3nm,0.5s
WTTA Wattenberg 11.40 21 *e*Pn Pn 02 58 05.4 +4.6
0.4nm,0.1s
POLO Lamas de Olo 11.40 298 *e*P Pn 02 58 04.5 +3.7
SFTF Sexfontaines 11.45 358 *e*Pn Pn 02 58 00.3 -1.0
SFTF *e*Sn Sn 03 00 02.9 -5.7
2.0nm,0.2s
WATA Walderalm 11.45 21 *i* Pn Pn 02 58 04.7 +3.3
2.5nm,0.6s
ECH Echery 11.50 5 Pn 02 58 02.1 0.0
ECH Echery 11.50 5 P Pn 02 58 02.1 0.0
PCAS Casmilo, Conde 11.56 291 *e*P Pn 02 58 06.7 +3.8
CDF Champ du Feu 11.71 5 *e*Pn Pn 02 58 04.1 -0.8
CDF *e*Sn Sn 03 00 07.5 -7.6
3.4nm,0.5s
PAGF Fort de Pagny 11.79 0 *e*Pn Pn 02 58 05.9 0.0
PAGF *e*Sn Sn 03 00 11.1 -5.9
1.3nm,0.4s
KBA Koelnbreinsper 11.79 27 *i* Pn Pn 02 58 11.6 +5.4
6.3nm,0.8s
OBKA Obir 11.80 32 *e*Pn Pn 02 58 08.9 +2.7
1.0nm,0.5s
SAVF Savonnieres en 11.85 358 *e*Pn Pn 02 58 07.3 +0.5
LESA Schwarzleotal 11.87 24 *i* Pn Pn 02 58 10.4 +3.3
5.0nm,0.5s
PGAV Gavieira, Arco 11.94 300 *e*LR LR 03 02 46.7
PGAV *i* IAMs_20 IAMs_20 03 03 21.5
409nm,16.0s
SOKA Soboth 12.14 32 *i* Pn Pn 02 58 14.3 +3.5
1.3nm,0.6s
TIO Tiouine 12.19 245 P Pn 02 58 10.9 -0.8
BIOA Bad Ischl, Aus 12.42 26 *i* Pn Pn 02 58 20.0 +5.3
0.8nm,0.3s
LDF La Druitiere 12.55 342 *e*Pn Pn 02 58 16.3 -0.1
GRR Gorron 12.56 340 *e*Pn Pn 02 58 17.1 +0.7
MOA Molln 12.78 27 *i* Pn Pn 02 58 24.6 +5.1
1.4nm,0.6s
ARSA Arzberg 12.79 32 *i* Pn Pn 02 58 23.1 +3.4
0.7nm,0.4s
FLN La Foliniere 12.80 341 *e*Pn Pn 02 58 20.9 +1.1
QUIF Quistinic 12.89 333 *e*Pn Pn 02 58 20.4 -0.6
QUIF *e*Sn Sn 03 00 37.8 -6.2
2.8nm,0.4s
SGMF Saint Gilles 12.96 335 *e*Pn Pn 02 58 20.9 -1.1
SGMF *e*Sn Sn 03 00 39.5 -6.2
18nm,0.7s
ROSF Rostrenen 13.29 333 *e*Pn Pn 02 58 27.4 +1.0
ROSF *e*Sn Sn 03 00 47.0 -6.6
18nm,0.9s
BAIF Baives 13.33 356 *e*Pn Pn 02 58 26.9 -0.1
BAIF *e*Sn Sn 03 00 46.2 -8.5
1.2nm,0.5s
GIVF Givet 13.35 358 *e*Pn Pn 02 58 27.7 +0.5
DOU Dourbes 13.35 357 *d*P Pn 02 58 28.3 +1.0
comp=Z,21nm,0.8s
RCHB Rochefort 13.39 359 *d*P Pn 02 58 29.6 +1.8
comp=Z,9.3nm,0.8s
GERES GERESS Array B 13.44 24 Pn Pn 02 58 29.6 +0.9
baz=206,slow=13,SNR=2.4
comp=Z,0.7nm,0.5s
CONA Conrad Observa 13.47 31 *i* Pn P 02 58 33.7 -4.5
comp=Z,1.2nm,0.4s
RONA Rosalia, Austr 13.47 32 *i* Pn P 02 58 33.8 -4.4
comp=Z,0.7nm,0.4s
BMRD Maredsous 13.55 358 *d*P Pn 02 58 31.1 +1.1
comp=Z,14nm,0.9s
CKRC Cesky Krumlov 13.62 25 *e*P Pn 02 58 32.2 +1.2
CKRC Cesky Krumlov 13.62 25 *e*P Pn 02 58 32.2 +1.2
BGES Gesves 13.62 359 *d*P Pn 02 58 32.6 +1.6
comp=Z,12nm,0.9s
MPLH Magyarpolny 13.65 37 P Pn 02 58 32.1 +0.8
comp=Z,14nm,2.0s
KHC Kasperske Hory 13.65 23 *e*P P 02 58 39.5 -0.7
KHC Kasperske Hory 13.65 23 *e*P P 02 58 39.5 -0.7
MEM Membach 13.85 1 *d*P Pn 02 58 34.5 +0.5
TAM Tamanrasset 13.92 180 Pn 02 58 34.2 -1.2
TAM Tamanrasset 13.92 180 P Pn 02 58 34.2 -1.2
MODS Modra-Piesok 14.41 33 *e*P P 02 58 52.1 +3.5
MODS Modra-Piesok 14.41 33 *e*P P 02 58 52.1 +3.5
KRUC Moravsky 14.59 29 *e*P P 02 58 50.5 0.0
VRAC Vranov 14.86 29 Pn P 02 58 52.8 -0.8
comp=Z,0.1nm,0.3s,baz=201,slow=9.4,SNR=5.2
VRAC LR LR 03 04 46.4
comp=Z,150nm,18.0s,baz=11,slow=38
VRAC Vranov 14.86 29 *e*P P 02 58 53.7 +0.1
MAUC Maruska 15.41 31 *e*P P 02 59 03.1 +3.4
GZR Gura Zlata 15.52 51 ⇓P P 02 59 00.9 -0.1
MORC Moravsky Berou 15.61 30 ⇑P P 02 59 01.9 -0.3
MORC Moravsky Berou 15.61 30 P P 02 59 01.9 -0.1
MORC Moravsky Berou 15.61 30 P P 02 59 01.9 -0.1
MORC pmax pmax
comp=Z,17nm,1.4s
MORC Moravsky Berou 15.61 30 *e*P P 02 59 00.3 -1.6
IDI Anoyia 15.66 90 Pn Pn 02 59 00.1 +1.6
comp=Z,24nm,1.2s,baz=286,slow=14,SNR=7.8
IDI Anoyia 15.66 90 P P 02 59 03.4 +0.8
LANS Liptovska Anna 15.97 35 *e*P P 02 59 07.5 +1.6
LANS Liptovska Anna 15.97 35 *e*P P 02 59 07.5 +1.6
KSP Ksiaz 16.02 25 P Pn 02 59 03.8 +0.8
comp=Z,14nm,2.6s
NIE Niedzica 16.54 36 P Pn 02 59 11.1 +1.4
comp=Z,4.7nm,1.3s
ARR Arges 16.68 53 ⇓P P 02 59 16.6 +2.6
BERU Beregovo 16.95 42 P P 02 59 16.3 -0.5
VOIR 16.98 53 ⇑P P 02 59 20.2 +3.0
VOIR 16.98 53 P P 02 59 16.6 -0.6
comp=Z,14nm,1.2s
HOLU Holmets 16.99 41 P Pn 02 59 15.8 +0.4
MUKU Mukachevo 17.11 42 P Pn 02 59 17.8 +1.0
BRIU Brid 17.22 42 P P 02 59 19.2 -0.5
DOPR Dopca 17.42 52 ⇓P P 02 59 24.7 +2.8
MLR Muntele Rosu 17.58 54 P P 02 59 25.1 +1.2
comp=Z,0.1nm,0.3s,baz=238,slow=17,SNR=7.6
comp=Z,12nm,1.0s
MLR Muntele Rosu 17.58 54 ⇑P P 02 59 25.7 +1.8
MLR Muntele Rosu 17.58 54 P P 02 59 24.4 +0.5
MLR lAmb lAmb 02 59 30.7
comp=Z,29nm,1.2s
MLR Muntele Rosu 17.58 54 P P 02 59 24.1 +0.2
comp=Z,27nm,1.3s
OZUR 17.72 52 ⇓P P 02 59 28.0 +2.6
ISR Istrita 17.84 56 ⇓P P 02 59 28.5 +1.9
ISR Istrita 17.84 56 P P 02 59 26.6 0.0
KWP Kalwaria Pacla 17.85 39 P P 02 59 26.6 -0.1
comp=Z,19nm,1.2s
TURR Turia 17.85 52 ⇑P P 02 59 29.4 +2.6
COVR Voineasa-Covas 17.89 53 ⇑P P 02 59 30.4 +3.2
SHIU Shidnytsya 17.93 40 P P 02 59 27.6 0.0
ARG Arkhangelos 18.10 85 P 02 59 29.7 +0.2
ARG Arkhangelos 18.10 85 P P 02 59 29.7 +0.2
ARG pmax pmax
comp=Z,111nm,1.4s
BISRR Bisoca 18.10 54 P P 02 59 29.8 +0.2
comp=Z,432nm,0.8s
MORS Morshin 18.15 41 P P 02 59 30.2 +0.2
PLOR Plostina 18.18 53 ⇓P P 02 59 33.4 +3.1
VRI Vrincioaia 18.23 54 ⇑P P 02 59 32.9 +2.0
STNU Starunia 18.24 43 P P 02 59 31.3 +0.3
KSV Kosov 18.34 45 P Pn 02 59 32.5 +0.4
TESR Tescani 18.44 52 P Pn 02 59 33.6 +0.3
comp=Z,9.5nm,1.3s
KMPD K-Podol'skiy 19.26 46 P P 02 59 42.7 +0.5
KMPD P P 02 59 42.7 +0.5
EKA Eskdalemuir Ar 19.52 345 P P 02 59 44.8 -0.2
baz=169,slow=13
EKA LR LR 03 07 54.1
comp=Z,302nm,18.2s,baz=180,slow=39
comp=Z,1.2nm,0.7s
HORU Horodok 19.58 44 P P 02 59 46.1 +0.4
SORM Soroca 20.18 49 ⇑P Pn 02 59 54.8 +0.7
SORM Soroca 20.18 49 P P 02 59 52.1 -0.1
comp=Z,21nm,0.9s
RNPP5 Staryi Chortor 20.43 39 P P 02 59 54.9 0.0
RNPP8 Varash 20.48 38 P P 02 59 55.4 -0.1
RNPP9 Sopachiv 20.55 38 P P 02 59 56.1 -0.1
LUBAR Lubar, Ukraine 20.69 44 P P 02 59 57.6 -0.1
SUW Suwalki 21.10 30 P P 03 00 02.7 +0.6
SUW Suwalki 21.10 30 P P 03 00 02.7 +0.6
MI28 Mi28,Pidlybu 21.18 41 P P 03 00 02.6 -0.4
AK13 Malin Array Si 21.76 43 P P 03 00 09.8 +0.6
AK19 Malin Array Si 21.79 43 P P 03 00 09.6 +0.1
AK14 Malin Array Si 21.80 43 P P 03 00 09.7 +0.1
AK20 Malin Array Si 21.80 43 P P 03 00 09.7 +0.1
KIEV Kiev 21.88 43 ⇓P P 03 00 12.1 +1.6
KIEV Kiev 21.88 43 P P 03 00 10.1 -0.5
KIEV lAmb lAmb 03 00 12.9
comp=Z,17nm,1.0s
KIEV Kiev 21.88 43 P P 03 00 10.1 -0.5
KIEV pmax pmax
comp=Z,17nm,1.0s
KIEV Kiev 21.88 43 P P 03 00 10.3 -0.2
comp=Z,81nm,1.2s
AK01 Malin Array Si 21.88 43 P P 03 00 10.6 0.0
AK09 Malin Array Si 21.89 43 P P 03 00 10.3 -0.3
AKASG Malin Array Be 21.89 43 P P 03 00 10.3 -0.4
comp=Z,7.1nm,0.8s,baz=242,slow=11,SNR=11
AKASG LR LR 03 09 50.3
comp=Z,210nm,18.6s,baz=261,slow=40
comp=Z,7.1nm,0.8s
AKASG Malin Array Be 21.89 43 P P 03 00 10.5 -0.2
AKASG Malin Array Be 21.89 43 *e*P P 03 00 12.1 +1.4
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKBB Malin Array Si 21.89 43 P P 03 00 10.2 -0.5
AKBB lAmb lAmb 03 00 12.9
comp=Z,18nm,1.0s
AKBB Malin Array Si 21.89 43 P P 03 00 10.2 -0.5
AKBB pmax pmax
comp=Z,18nm,1.0s
AKBB Malin Array Si 21.89 43 P P 03 00 10.3 -0.4
AK03 Malin Array Si 21.91 43 P P 03 00 10.4 -0.4
BR131 Keskin Array S 22.16 74 P 03 00 15.7 +1.8
BR131 Keskin Array S 22.16 74 P P 03 00 15.7 +1.8
BR131 pmax pmax
comp=Z,16nm,1.4s
BRTR Keskin Array B 22.16 74 P P 03 00 15.8 +2.0
comp=Z,1.7nm,0.7s,baz=256,slow=12,SNR=7.1
BRTR LR LR 03 08 45.0
comp=Z,71nm,19.5s,baz=296,slow=36
comp=Z,1.7nm,0.7s
BRTR Keskin Array B 22.16 74 P P 03 00 14.4 +0.5
KIRS Kirsehir-Merke 22.40 75 ⇑P P 03 00 17.3 +1.0
PABE Paberze 22.52 28 P P 03 00 18.3 +1.0
NACGM Naroch 23.22 32 *e*P P 03 00 24.8 +0.2
comp=Z,44nm,1.0s,baz=227
MNK Minsk 23.43 34 *i* P P 03 00 25.4 -1.3
comp=E,21nm,1.0s
MNK *i* P P 03 00 25.4 -1.3
comp=N,26nm,1.2s
MNK *i* P P 03 00 25.4 -1.3
comp=Z,33nm,0.9s,baz=230
MNK *i* PP PnPn 03 00 51.0 -2.1
MNK *i* PPP PPP 03 01 01.3
MNK *i* S S 03 04 38.9 -0.2
MNK *i* SS SnSn 03 05 17.5 +2.7
MNK *i* LR LR 03 09 16.4
MNK Minsk 23.43 34 *i* P P 03 00 25.4 -1.3
MNK *i* PPP PPP 03 01 01.3
MNK *i* S S 03 04 38.8 -0.2
MNK *i* SS SnSn 03 05 17.5 +2.7
MNK pmax pmax
comp=E,21nm,1.0s
MNK pmax pmax
comp=N,26nm,1.2s
MNK pmax pmax
comp=Z,33nm,0.9s
MNK MLR MLR
comp=E,256nm,16.0s
MNK MLR MLR
comp=N,274nm,15.0s
MNK MLR MLR
comp=Z,144nm,13.0s
TORD Torodi Ar. Bea 23.78 190 P P 03 00 28.7 -1.7
comp=Z,3.3nm,0.6s,baz=3.5,slow=8.7,SNR=19
comp=Z,3.3nm,0.6s
BNN Bunyan 23.92 76 P P 03 00 34.4 +2.6
BNN lAmb lAmb 03 00 40.7
comp=Z,10nm,1.0s
HFS Hagfors 23.96 10 P P 03 00 32.5 +0.7
comp=Z,5.9nm,1.0s,baz=187,slow=12,SNR=4.7
comp=Z,5.9nm,1.0s
TOKA Tokat 24.33 72 P P 03 00 35.9 +0.4
TOKA lAmb lAmb 03 00 40.2
comp=Z,6.3nm,0.8s
NB2 NORSAR Subarra 24.56 7 P P 03 00 39.1 +1.8
comp=Z,4.5nm,1.0s,baz=189,slow=9.3
NOA NORSAR Array B 24.56 7 P P 03 00 38.9 +1.5
comp=Z,2.5nm,0.9s,baz=191,slow=9.2,SNR=4.7
NOA LR LR 03 10 25.5
comp=Z,180nm,18.5s,baz=185,slow=37
comp=Z,2.5nm,0.9s
MMAI Mount Meron Ar 24.66 90 P P 03 00 40.8 +2.2
comp=Z,3.7nm,1.0s,baz=309,slow=9.1,SNR=3.6
comp=Z,3.7nm,0.8s
GAZ Gaziantep 25.18 79 P P 03 00 44.0 +0.8
GAZ lAmb lAmb 03 00 56.2
comp=Z,13nm,1.1s
EIL Elat 25.47 98 LR LR 03 12 41.5
comp=Z,71nm,18.4s,baz=237,slow=41
VSU Vasula 25.75 26⇑*e*P P 03 00 50.2 +2.2
VSU pmax pmax
comp=Z,33nm,1.2s
ARPR Arapgir-MALATY 25.83 75 P P 03 00 49.9 +0.6
SOC Sochi 26.79 65 *e*P P 03 00 59.1 +1.4
SOC *e*PPP PPP 03 01 49.1
SOC *e*S S 03 05 35.8 +3.0
SOC *e*SS SnSn 03 06 39.9 +2.8
SOC pmax pmax
comp=Z,20nm,1.2s
KOPT Kop Dagi 27.42 72 P P 03 01 04.8 +1.1
KOPT lAmb lAmb 03 01 21.1
comp=Z,5.5nm,0.9s
VSR Storozhevoye 27.84 48 *e*P P 03 01 08.9 +1.9
VSR pmax pmax
comp=Z,9.0nm,0.9s
FINES FINESS Array B 27.85 21 P P 03 01 09.0 +2.0
comp=Z,4.9nm,0.9s,baz=256,slow=11,SNR=1.6
comp=Z,4.9nm,0.9s
FINES FINESS Array B 27.85 21 P P 03 01 07.5 +0.5
FINES FINESS Array B 27.85 21 P P 03 01 09.0 +2.0
VORR Voronezh 28.01 47 *e*P P 03 01 07.5 -1.0
VORR pmax pmax
comp=Z,50nm,0.4s
LPSR Galich'ya Gora 28.16 45 *e*P P 03 01 09.5 -0.3
LPSR pmax pmax
comp=Z,10.0nm,0.8s
KIV Kislovodsk 28.95 64 *e*P P 03 01 17.5 +0.4
KIV pmax pmax
comp=Z,3.0nm,1.0s
VRH Novokhopyorsk 29.37 49 *e*P P 03 01 20.6 0.0
VRH pmax pmax
comp=Z,10.0nm,0.7s
KLMR Klimovskoe 32.23 31 *e*P P 03 01 45.5 -0.2
KLMR pmax pmax
comp=Z,26nm,1.5s
AKT Akhty 32.76 69 *e*P P 03 01 51.3 +0.5
AKT *e* 03 02 57.3
AKT pmax pmax
comp=Z,14nm,1.3s
BELG Belogornoye 33.21 48⇑*i*P P 03 01 55.4 +1.0
BELG pmax pmax
comp=Z,3.0nm,1.0s
KIRV Kirov 35.78 38⇓*e*P P 03 02 16.6 +0.1
RAYN Ar Rayn 36.66 100 P 03 02 25.7 +1.1
RAYN lAmb lAmb 03 02 26.4
comp=Z,4.4nm,0.8s
RAYN Ar Rayn 36.66 100 P P 03 02 25.7 +1.1
RAYN pmax pmax
comp=Z,4.0nm,0.8s
ARTI Arti 40.05 43 LR LR 03 19 50.8
comp=Z,102nm,18.5s,baz=304,slow=37
ARTI Arti 40.05 43 P P 03 02 52.7 +0.1
ARTI lAmb lAmb 03 02 53.5
comp=Z,8.5nm,0.7s
ARTI Arti 40.05 43*c*iP P 03 02 52.6 0.0
ARTI S S 03 08 59.4 +2.0
ARTI SS SS 03 11 51.8 -2.7
ARTI pmax pmax
comp=Z,18nm,1.5s
AB31 Akbulak array 40.79 55 P 03 02 58.1 -0.7
ABKAR Akbulak array 40.79 55 P P 03 02 58.4 -0.5
FURI Furi 40.83 124 LR LR 03 22 09.6
comp=Z,118nm,18.6s,baz=338,slow=40
ATD Arta Tunnel 41.83 117 LR LR 03 22 21.5
comp=Z,6.7nm,18.2s,baz=334,slow=39
SFJD Kangerlussuaq 43.67 332 LR LR 03 19 41.9
comp=Z,147nm,18.8s,baz=126,slow=34
MBAR Mbarara 43.87 142 LR LR 03 21 26.5
comp=Z,103nm,19.0s,baz=334,slow=36
UOSS Minazif 44.53 91 P P 03 03 29.7 +0.2
BORK Borovoye 46.98 48 P P 03 03 49.5 +1.0
BORK Borovoye 46.98 48⇓*e*P P 03 03 49.5 +1.0
BORK pmax pmax
comp=Z,13nm,1.3s
BVAR Borovoye Array 47.02 48 P P 03 03 48.5 -0.4
comp=Z,2.6nm,0.9s,baz=270,slow=4.4,SNR=11
comp=Z,2.6nm,0.9s
FRB Frobisher Bay 50.87 327 LR LR 03 25 13.8
comp=Z,134nm,18.1s,baz=90,slow=35
SCHQ Schefferville 51.24 315 P P 03 04 19.3 -1.8
comp=Z,3.6nm,0.8s,baz=88,slow=6.8,SNR=6.3
comp=Z,3.6nm,0.8s
SCHQ Schefferville 51.24 315 P P 03 04 20.8 -0.3
KUQ Kuujjuuaa 51.52 319 P P 03 04 23.1 0.0
AAK Ala-Archa 51.99 61⇓*e*P P 03 04 27.6 +0.5
AAK pmax pmax
comp=Z,4.0nm,1.2s
KURBB Kurchatov Arra 52.43 50 P P 03 04 30.1 +0.1
comp=Z,3.0nm,0.8s,baz=288,slow=7.8,SNR=16
comp=Z,3.0nm,0.8s
KURK Kurchatov 52.46 50 P 03 04 30.7 +0.5
KURK lAmb lAmb 03 04 36.1
comp=Z,6.5nm,1.0s
KURK Kurchatov 52.46 50 P P 03 04 30.7 +0.5

KURK pmax pmax
comp=Z,7.0nm,1.0s
KSH2 Kashi 53.92 65 P P 03 04 42.6 +1.2
KSH2 pP pP 03 04 47.1 -0.1
KSH2 pmax pmax
comp=Z,3.0nm,0.6s
TARG Taragay, Kyrgy 54.61 61 P 03 04 47.4 +0.7
TARG IAmb IAmb 03 04 53.9
comp=Z,5.1nm,1.0s
TARG Taragay, Kyrgy 54.61 61 P P 03 04 47.4 +0.7
TARG pmax pmax
comp=Z,5.0nm,1.0s
ILON Igloolik, Nuna 55.26 334 P P 03 04 51.1 +0.7
ZALV Zalesovo Beam 55.27 45 P P 03 04 49.8 -1.0
comp=Z,1.1nm,0.8s,baz=256,slow=6.0,SNR=4.7
comp=Z,1.1nm,0.8s
ZALV Zalesovo Beam 55.27 45 P P 03 04 52.3 +1.5
ZALV Zalesovo Beam 55.27 45 eP P 03 04 53.0 +2.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s
MK31 Makanchi Array 55.93 54 d iP P 03 04 55.9 +0.3
MKAR Makanchi Array 55.93 54 P P 03 04 56.0 +0.3
comp=Z,5.9nm,0.7s,baz=285,slow=6.1,SNR=47
comp=Z,5.9nm,0.7s
MKAR Makanchi Array 55.93 54 P P 03 04 56.0 +0.3
LSZ Lusaka 55.97 153 LR LR 03 32 05.2
comp=Z,176nm,18.4s,baz=340,slow=40
TSUM Tsumeb 56.80 166 LR LR 03 30 34.8
comp=Z,151nm,18.1s,baz=334,slow=37
DGZ Jazzator, Alta 58.16 49 eP P 03 05 12.3 +0.7
DGZ pmax pmax
comp=Z,4.0nm,1.7s
WMQ Urumqi 60.57 55 eP P 03 05 30.5 +2.3
WMQ PcS PcS 03 10 01.0 -14
WMQ S S 03 13 58.3 +15
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ LR LR
comp=Z,170nm,23.8s
SADO Sadowa 61.94 307 LR LR 03 30 46.7
comp=Z,93nm,18.2s,baz=90,slow=34
FCC Fort Churchill 64.03 325 P 03 05 51.3 +0.4
FCC IAmb IAmb 03 05 55.7
comp=Z,2.7nm,0.8s
FCC Fort Churchill 64.03 325 P P 03 05 51.3 +0.4
FCC pmax pmax
comp=Z,3.0nm,0.8s
TLY Talaya 66.64 42 ⇓ eP P 03 06 10.9 +2.8
TLY pmax pmax
comp=Z,6.0nm,1.4s
BOSA Boshof 67.60 161 LR LR 03 39 37.0
comp=Z,126nm,18.3s,baz=22,slow=39
ULM Lac du Bonnet 69.26 318 P P 03 06 24.5 -0.1
comp=Z,7.9nm,0.8s,baz=65,slow=5.6,SNR=15
comp=Z,7.9nm,0.8s
ULM Lac du Bonnet 69.26 318 P 03 06 25.1 +0.5
ULM Lac du Bonnet 69.26 318 P P 03 06 25.1 +0.5
ULM pmax pmax
comp=Z,9.0nm,0.8s
YKAW3 Yellowknife Wh 70.08 335 P 03 06 30.2 +0.9
YKAW3 IAmb IAmb 03 06 35.3
comp=Z,6.5nm,1.3s
YKAW1 Yellowknife Wh 70.09 335 P P 03 06 30.0 +0.6
YKAW1 IAmb IAmb 03 06 31.8
comp=Z,4.0nm,1.1s
YKA Yellowknife Ar 70.12 335 P P 03 06 30.2 +0.6
comp=Z,1.3nm,0.8s,baz=42,slow=5.9,SNR=21
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 70.12 335 P P 03 06 29.2 -0.4
SONM Songino Array 70.17 45 P P 03 06 30.5 +0.1
comp=Z,1.0nm,0.8s,baz=298,slow=6.2,SNR=5.3
comp=Z,1.0nm,0.8s
SONM Songino Array 70.17 45 P P 03 06 31.4 +1.0
SONM Songino Array 70.17 45 eP P 03 06 31.9 +1.5
SONM pmax pmax
comp=Z,2.0nm,1.2s
SUR Sutherland 70.23 166 LR LR 03 38 56.0
comp=Z,154nm,18.2s,baz=339,slow=37
ULN Ulaanbaatar 70.52 44 ⇑ eP P 03 06 32.8 +0.2
ULN pmax pmax
comp=Z,6.0nm,2.5s
GTA2 Gaotai 70.57 55 eP P 03 06 33.8 +0.8
GTA2 pmax pmax
comp=Z,4.0nm,0.9s
E29M Blow River 71.68 347 P P 03 06 40.2 +1.2
E29M IAmb IAmb 03 06 45.6
comp=Z,6.7nm,1.3s
YAK Yakutsk 71.73 24 ⇑ eP P 03 06 40.2 +0.8
YAK pmax pmax
comp=Z,11nm,0.6s
BDFB Brasilia 72.60 234 LR LR 03 37 18.5
comp=Z,110nm,18.1s,baz=108,slow=35
F28M Old Crow 72.72 347 P 03 06 45.6 +0.3
LZH Lanzhou 75.14 56 eP P 03 07 01.1 +0.9
LZH pP sP 03 07 08.0 -0.1
LZH pmax pmax
comp=Z,21nm,1.5s
ILAR Eielson Array 76.52 348 P P 03 07 07.8 +0.4
comp=Z,0.4nm,0.9s,baz=342,slow=2.5,SNR=4.3
comp=Z,0.4nm,0.9s
ILAR Eielson Array 76.52 348 P P 03 07 08.2 +0.9
ILAR Eielson Array 76.52 348 eP P 03 07 11.5 +4.1
H21K Melozitna Rive 76.54 351 P P 03 07 09.6 +2.2
H21K IAmb IAmb 03 07 32.7
comp=Z,8.6nm,1.4s
MIAR Mount Ida 76.68 303 P P 03 07 09.3 +0.5
MIAR IAmb IAmb 03 07 23.8
comp=Z,7.5nm,1.2s
MIAR Mount Ida 76.68 303 P P 03 07 09.3 +0.5
MIAR pmax pmax
comp=Z,7.0nm,1.3s
HHC Hu-ho-hao-te 77.23 48 eP P 03 07 12.4 +0.5
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,140nm,5.5s
PZH PanZhiHua 79.17 65 P P 03 07 24.3 +1.3
MA2 Magadan 79.77 17 LR LR 03 46 33.3
comp=Z,34nm,18.7s,baz=331,slow=38
NEW Newport 81.19 325 LR LR 03 42 14.6
comp=Z,70nm,18.3s,baz=26,slow=35
PD31 Pinedale Array 81.29 318 P P 03 07 34.7 +0.5
PDAR Pinedale Array 81.29 318 P P 03 07 34.8 +0.6
comp=Z,1.5nm,0.6s,baz=62,slow=5.3,SNR=15
comp=Z,1.5nm,0.6s
CMAR Chiang Mai Arr 81.75 73 P P 03 07 37.8 +1.1
comp=Z,1.9nm,0.3s,baz=325,slow=6.4,SNR=5.5
comp=Z,1.9nm,0.3s
BNX BinXian 82.58 37 ⇑ P P 03 07 39.8 -0.8
BNX pmax pmax
comp=Z,5.0nm,1.4s
BBB Bella Bella 82.66 333 LR LR 03 45 20.4
comp=Z,34nm,18.2s,baz=222,slow=36
RDMU Red Mountain 82.78 316 P P 03 07 42.2 +0.1
RDMU IAmb IAmb 03 07 47.3
comp=Z,4.8nm,1.0s
BMO Blue Mountains 83.78 323 P P 03 07 47.9 +0.9
BMO IAmb IAmb 03 07 48.4
comp=Z,2.1nm,0.8s
BMO Blue Mountains 83.78 323 P P 03 07 47.9 +0.9
BMO pmax pmax
comp=Z,2.0nm,0.8s
PV01 Paradox Valley 83.86 314 P P 03 07 48.9 +1.1
JTS Las Juntas de 84.39 279 LR LR 03 38 41.6
comp=Z,26nm,20.8s,baz=79,slow=31
CPUP Villa Florida 86.29 233 LR LR 03 45 31.5
comp=Z,67nm,18.4s,baz=76,slow=35
LPAZ La Paz 87.16 247 LR LR 03 44 38.5
comp=Z,50nm,20.0s,baz=53,slow=34
WRA Warramunga Arr 132.42 84 PKP PKPdf 03 14 29.8 -2.6
comp=Z,0.4nm,0.8s,baz=293,slow=1.8,SNR=1.8
ASAR Alice Springs 133.94 89 PKP PKPdf 03 14 33.2 -1.9
comp=Z,0.7nm,1.0s,baz=8.1,slow=2.8,SNR=5.0
ASAR Alice Springs 133.94 89 PKPdf PKPdf 03 14 34.4 -0.8
ASAR Alice Springs 133.94 89 PKIKP PKPdf 03 14 34.4 -0.8

*IDC **21** 03:11:23.9±0.6,55°.59N×164°.35E,h0km,mb4.0/23, mbtmp4.0/27,ML4.5/2,MS3.7/15,Error ellipse: s-maj=17.0km s-min=10.9km az=166.0*
*NEIC **21** 03:11:25.7±1.4,55°.54N±0°.10×164°.3E±0°.1,h10km±1km, mb4.3/114,Error ellipse: s-maj=18.1km s-min=11.5km az=152.0*
*KRSC **21** 03:11:25.1±1.0,55°.43N×164°.39E,h49km±19km,Mc4.5, Ml4.6*

*MOS **21** 03:11:27.0±0.7,55°.46N×164°.44E,h38km,mb4.3/14,Error ellipse: s-maj=6.0km s-min=4.7km az=71.1*
ISC 21 03:11:27.6±1.2,55°.49N±0°.04×164°.41E±0°.03,h29km±8km, n293,σ1$20/293,mb4.2/80,MS3.8/12,11C-5D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
BKI	**Bering**	**0.93**	**107**	PN	**Pn**	**03 11 42.7**	**-2.0**
BKI				S	**Sn**	03 11 54.8	-2.3
BKI	**Bering**	**0.93**	**107**	*e*P	**Pn**	**03 11 42.8**	**-2.0**
BKI				*e*S	**Sn**	03 11 54.8	-2.3
KBTR	**Krutoberegovo**	**1.16**	**310**	PN	**Pn**	**03 11 46.1**	**-1.7**
KBTR				S	**Sn**	03 12 00.9	-1.7
KBTR	**Krutoberegovo**	**1.16**	**310**	*e*P	**Pn**	**03 11 46.1**	**-1.7**
KBTR				*e*S	**Sn**	03 12 01.0	-1.7
KBG	**Krutoberegovo**	**1.23**	**309**	PN	**Pn**	**03 11 47.2**	**-1.7**
KBG				S	**Sn**	03 12 02.8	-1.7
KBG	**Krutoberegovo**	**1.23**	**309**	*e*P	**Pn**	**03 11 47.3**	**-1.7**
KBG				*e*S	**Sn**	03 12 02.8	-1.7
MKZ	**Mys Kozlova**	**1.80**	**240**	PN	**Pn**	**03 11 55.4**	**-1.3**
MKZ				S	**Sn**	03 12 15.1	-3.4
MKZ	**Mys Kozlova**	**1.80**	**240**	*e*P	**Pn**	**03 11 55.5**	**-1.3**
MKZ				*e*S	**Sn**	03 12 15.2	-3.4
SMKR	**Semkarok**	**1.98**	**305**	PN	**Pn**	**03 11 59.5**	**+0.2**
SMKR	**Semkarok**	**1.98**	**305**	*e*P	**Pn**	**03 11 59.6**	**+0.2**
ZLN	**Zelenaya**	**2.11**	**286**	PN	**Pn**	**03 12 01.5**	**+0.5**
ZLN	**Zelenaya**	**2.11**	**286**	*e*P	**Pn**	**03 12 01.6**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.15**	**284**	PN	**Pn**	**03 12 01.5**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**2.15**	**284**	*e*P	**Pn**	**03 12 01.5**	**-0.1**
CIRR	**Tsirk**	**2.16**	**288**	PN	**Pn**	**03 12 02.2**	**+0.4**
CIRR	**Tsirk**	**2.16**	**288**	*e*P	**Pn**	**03 12 02.3**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.27**	**284**	PN	**Pn**	**03 12 04.3**	**+1.0**
BZWR	**Bezymyannyi-We**	**2.27**	**284**	*e*P	**Pn**	**03 12 04.3**	**+1.0**
KLY	**Klyuchi**	**2.27**	**293**	PN	**Pn**	**03 12 02.3**	**-0.9**
KLY				S	**Sn**	03 12 26.0	-4.2
KLY	**Klyuchi**	**2.27**	**293**	*e*P	**Pn**	**03 12 02.3**	**-0.9**
KLY				*e*S	**Sn**	03 12 26.0	-4.2
TUMD	**Tumrok D**	**2.31**	**265**	PN	**Pn**	**03 12 04.3**	**+0.6**
TUMD	**Tumrok D**	**2.31**	**265**	*e*P	**Pn**	**03 12 04.3**	**+0.6**
KIRR	**Kirishev**	**2.35**	**283**	PN	**Pn**	**03 12 04.8**	**+0.4**
KIRR	**Kirishev**	**2.35**	**283**	*e*P	**Pn**	**03 12 04.9**	**+0.4**
KMNR	**Kamenistaya**	**2.38**	**278**	PN	**Pn**	**03 12 06.0**	**+1.2**
KMNR	**Kamenistaya**	**2.38**	**278**	*e*P	**Pn**	**03 12 06.1**	**+1.2**
KPT	**Kopyto**	**2.42**	**283**	PN	**Pn**	**03 12 06.0**	**+0.7**
KPT	**Kopyto**	**2.42**	**283**	*e*P	**Pn**	**03 12 06.0**	**+0.7**
KOZ	**Kozyrevsk**	**2.63**	**284**	PN	**Pn**	**03 12 09.2**	**+1.1**
KOZ	**Kozyrevsk**	**2.63**	**284**	*e*P	**Pn**	**03 12 09.3**	**+1.1**
SRDR	**Sredinnyy**	**2.77**	**289**	PN	**Pn**	**03 12 11.7**	**+1.6**
SRDR	**Sredinnyy**	**2.77**	**289**	*e*P	**Pn**	**03 12 11.7**	**+1.6**
KII	**Karymskiy**	**3.22**	**245**	PN	**Pn**	**03 12 16.7**	**+0.4**
KII	**Karymskiy**	**3.22**	**245**	*e*P	**Pn**	**03 12 16.8**	**+0.4**
ESO	**Esso**	**3.26**	**280**	PN	**Pn**	**03 12 17.8**	**+1.0**
ESO	**Esso**	**3.26**	**280**	*e*P	**Pn**	**03 12 17.8**	**+1.0**
SPN	**Mys Shipunski**	**3.51**	**229**	PN	**Pn**	**03 12 18.4**	**-1.8**
SPN	**Mys Shipunski**	**3.51**	**229**	*e*P	**Pn**	**03 12 18.5**	**-1.8**
SPN				*e*S	**Sn**	03 12 56.4	-4.3
NLC	**Nalytchevo**	**3.77**	**234**	PN	**Pn**	**03 12 23.6**	**0.0**
NLC	**Nalytchevo**	**3.77**	**234**	*e*P	**Pn**	**03 12 23.7**	**0.0**
OSSR	**Ossora**	**3.85**	**350**	PN	**Pn**	**03 12 25.2**	**+0.5**
OSSR	**Ossora**	**3.85**	**350**	*e*P	**Pn**	**03 12 25.3**	**+0.5**
TIGL	**Tigil**	**3.91**	**308**	PN	**Pn**	**03 12 27.1**	**+1.5**
TIGL	**Tigil**	**3.91**	**308**	*e*P	**Pn**	**03 12 27.1**	**+1.5**
SDLR	**Sedlovina**	**3.92**	**238**	PN	**Pn**	**03 12 26.4**	**+0.5**
SDLR	**Sedlovina**	**3.92**	**238**	*e*P	**Pn**	**03 12 26.4**	**+0.5**
SMAR	**Somma**	**3.96**	**238**	PN	**Pn**	**03 12 27.1**	**+0.5**
SMAR	**Somma**	**3.96**	**238**	*e*P	**Pn**	**03 12 27.1**	**+0.5**
KRER	**Koryakskii**	**3.97**	**239**	PN	**Pn**	**03 12 27.4**	**+0.8**
KRER	**Koryakskii**	**3.97**	**239**	*e*P	**Pn**	**03 12 27.4**	**+0.8**
KRX	**Arik**	**3.98**	**240**	PN	**Pn**	**03 12 27.5**	**+0.7**
KRX	**Arik**	**3.98**	**240**	*e*P	**Pn**	**03 12 27.5**	**+0.7**
UGLR	**Uglovaya**	**3.99**	**237**	PN	**Pn**	**03 12 27.4**	**+0.6**
UGLR	**Uglovaya**	**3.99**	**237**	*e*P	**Pn**	**03 12 27.4**	**+0.6**
AVH	**Avacha**	**4.00**	**239**	PN	**Pn**	**03 12 27.9**	**+1.0**
AVH	**Avacha**	**4.00**	**239**	*e*P	**Pn**	**03 12 27.9**	**+1.0**
DALK	**Dalny**	**4.13**	**236**	PN	**Pn**	**03 12 28.3**	**-0.4**
DALK	**Dalny**	**4.13**	**236**	*e*P	**Pn**	**03 12 28.3**	**-0.4**
GNL	**Ganaly**	**4.17**	**247**	PN	**Pn**	**03 12 30.2**	**+0.9**
GNL	**Ganaly**	**4.17**	**247**	*e*P	**Pn**	**03 12 30.3**	**+0.9**
INSR	**Institute**	**4.18**	**237**	*e*S	**Sn**	**03 13 15.4**	**-1.8**
PET	**Petropavlovsk**	**4.18**	**236**		**Pn**	**03 12 29.1**	**-0.3**
PET				Sn	**Sn**	03 13 14.9	-2.3
PET	**Petropavlovsk**	**4.18**	**236**	*e*PN	**Pn**	**03 12 29.7**	**+0.3**
PET				pmax	pmax		
	comp=Z,70nm,0.5s						
PET				MLR	MLR		
	comp=Z,300nm,12.0s						
PET				MLR	MLR		
	comp=Z,500nm,13.0s						
PET	**Petropavlovsk**	**4.18**	**236**	*e*P	**Pn**	**03 12 29.5**	**+0.1**
PALN	**Palana**	**4.34**	**328**	PN	**Pn**	**03 12 31.9**	**+0.3**
PALN	**Palana**	**4.34**	**328**	*e*P	**Pn**	**03 12 32.0**	**+0.3**
KRMR	**Karymshinskiy**	**4.55**	**237**	PN	**Pn**	**03 12 34.6**	**+0.1**
KRMR	**Karymshinskiy**	**4.55**	**237**	*e*P	**Pn**	**03 12 34.6**	**+0.1**
KRMR				*e*S	**Sn**	03 13 24.4	-2.0
PEA0B	**Petropavlovsk-**	**4.60**	**242**		**Pn**	**03 12 35.4**	**+0.3**
PEA0B				Sn	**Sn**	03 13 26.8	-0.7
PEA0B	**Petropavlovsk-**	**4.60**	**242**	⇑ *i*PN	**Pn**	**03 12 35.7**	**+0.6**
PETK	**Petropavlovsk-**	**4.60**	**242**	Pn	**Pn**	**03 12 35.8**	**+0.6**
	comp=Z,7.3nm,0.5s,baz=63,slow=17,SNR=30						
PETK				Sn	**Sn**	**03 13 29.0**	**+1.5**
	comp=Z,2.4nm,0.3s,baz=81,slow=20,SNR=3.7						
PETK				LR	LR	03 14 12.6	
	comp=Z,121nm,22.0s,baz=48,slow=36						
PETK	**Petropavlovsk-**	**4.60**	**242**		**Pn**	**03 12 34.7**	**-0.4**
PETK				Sn	**Sn**	03 13 27.7	+0.2
RUS	**Russkaya**	**4.63**	**231**	PN	**Pn**	**03 12 35.7**	**+0.1**
RUS	**Russkaya**	**4.63**	**231**	*e*P	**Pn**	**03 12 35.7**	**+0.1**
MTVR	**Mutnovka**	**4.75**	**233**	PN	**Pn**	**03 12 37.5**	**+0.2**
MTVR	**Mutnovka**	**4.75**	**233**	*e*P	**Pn**	**03 12 37.5**	**+0.2**
GRL	**Gorelyy**	**4.75**	**234**	PN	**Pn**	**03 12 38.4**	**+1.0**
GRL	**Gorelyy**	**4.75**	**234**	*e*P	**Pn**	**03 12 38.4**	**+1.0**
ASAK	**Asacha**	**4.95**	**234**	PN	**Pn**	**03 12 40.9**	**+0.9**
ASAK	**Asacha**	**4.95**	**234**	*e*P	**Pn**	**03 12 40.9**	**+0.9**
APC	**Apacha**	**4.97**	**242**	PN	**Pn**	**03 12 41.2**	**+1.0**
APC	**Apacha**	**4.97**	**242**	*e*P	**Pn**	**03 12 41.2**	**+1.0**
TILK	**Tilichiki**	**5.06**	**10**	PN	**Pn**	**03 12 42.7**	**+1.3**
TILK	**Tilichiki**	**5.06**	**10**	*e*P	**Pn**	**03 12 42.8**	**+1.3**
KDTR	**Khodutka, Kamc**	**5.27**	**228**	PN	**Pn**	**03 12 43.7**	**-0.6**
KDTR	**Khodutka, Kamc**	**5.27**	**228**	*e*P	**Pn**	**03 12 43.8**	**-0.6**
PAU	**Pauzhetka**	**6.07**	**232**	PN	**Pn**	**03 12 56.7**	**+1.4**
PAU	**Pauzhetka**	**6.07**	**232**	*e*P	**Pn**	**03 12 56.7**	**+1.4**
SHEM	**Shemya Is, Ala**	**6.33**	**112**	LR	LR	03 14 51.5	
	comp=Z,201nm,19.9s,baz=273,slow=32						
KMSK	**Kamenskaya**	**7.07**	**7**	PN	**Pn**	**03 13 10.8**	**+1.9**
KMSK	**Kamenskaya**	**7.07**	**7**	*e*P	**Pn**	**03 13 10.8**	**+1.9**
MA2	**Magadan**	**8.40**	**305**	Pn	**Pn**	**03 13 28.0**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=158,slow=13,SNR=3.7						
MA2				LR	LR	03 16 49.8	
	comp=Z,234nm,21.3s,baz=109,slow=39						
	comp=Z,3.6nm,0.2s						
MA2	**Magadan**	**8.40**	**305**	⇓ *i*PN	**Pn**	**03 13 30.6**	**+3.3**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SEY	**Seymchan**	**9.67**	**325**	*e*PN	**Pn**	**03 13 46.2**	**+1.6**
SEY				pmax	pmax		
	comp=Z,1.0nm,1.1s						
OKH	**Okha**	**12.62**	**270**	*de*PN	**P**	**03 14 35.0**	**-1.1**
OKH				*e*S	Sn	03 16 57.5	+13
OKH				MLR	MLR		
	comp=E,800nm,18.0s						
OKH				MLR	MLR		
	comp=Z,200nm,7.0s						
OKH				MLR	MLR		
	comp=N,600nm,18.0s						
BILL	**Bilibino**	**12.63**	**3**		**Pn**	**03 14 24.8**	**-0.2**
BILL	**Bilibino**	**12.63**	**3**	⇑ *i*PN	**Pn**	**03 14 28.5**	**+3.4**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ATKA	**Atka Island**	**13.04**	**96**	Pn	**Pn**	**03 14 28.4**	**-2.2**
GAMB	**Gambell**	**14.57**	**46**	Pn	**Pn**	**03 14 51.8**	**+0.2**
YSS	**Yuzhno-Sakhali**	**15.98**	**247**	*e*P	**P**	**03 15 14.6**	**+1.2**
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
M11K	**Mekoryuk**	**16.27**	**60**	P	**P**	**03 15 17.1**	**+0.6**
M11K				IAmb	IAmb	03 15 30.7	
	comp=Z,23nm,1.2s						
K13K	**Kusilvak Mount**	**17.19**	**55**	Pn	**Pn**	**03 15 25.2**	**-0.1**
J14K	**Nanvaranak Lak**	**17.82**	**53**		**P**	**03 15 34.1**	**+0.5**
JKA	**Kamikawa-asahi**	**18.01**	**240**	P	**P**	**03 15 36.1**	**+0.2**
JKA				IAmb	IAmb	03 15 54.1	
	comp=Z,60nm,1.5s						

ASAJ	**Asahikawa**	**18.02**	**240**	P	**P**	**03 15 36.3**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=64,slow=10,SNR=6.8						
	comp=Z,3.8nm,0.4s						
L14K	**Kuka Creek**	**18.06**	**58**	P	**P**	**03 15 38.8**	**+2.5**
L14K				IAmb	IAmb	03 15 43.7	
	comp=Z,19nm,1.1s						
F15K	**North Star Dit**	**18.10**	**43**		**Pn**	**03 15 36.6**	**0.0**
K15K	**Wolf Creek Mou**	**18.69**	**55**		**Pn**	**03 15 45.3**	**+1.6**
K15K				IAmb	IAmb	03 16 05.3	
	comp=Z,18nm,1.4s						
O14K	**Tigyukauivet M**	**18.75**	**64**	P	**Pn**	**03 15 44.7**	**+0.2**
O14K				IAmb	IAmb	03 16 28.5	
	comp=Z,24nm,1.2s						
C16K	**Lisburne Hills**	**18.89**	**35**	P	**P**	**03 15 44.7**	**-0.6**
YAK	**Yakutsk**	**18.98**	**304**	P	**P**	**03 15 45.6**	**-0.8**
	comp=Z,12nm,0.3s,baz=95,slow=22,SNR=6.8						
YAK				LR	LR	03 23 18.2	
	comp=Z,187nm,18.7s,baz=85,slow=38						
YAK	**Yakutsk**	**18.98**	**304**	*e*P	**P**	**03 15 46.3**	**-0.1**
YAK				*e*S	**Sn**	**03 19 13.6**	**-5.0**
YAK				pmax	pmax		
	comp=Z,28nm,1.4s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.8s						
YAK				pmax	pmax		
	comp=E,18nm,1.6s						
YAK				smax	smax		
	comp=N,130nm,5.8s						
YAK				smax	smax		
	comp=E,100nm,5.3s						
J16K	**Anvik River**	**19.23**	**52**	P	**P**	**03 15 48.1**	**-1.1**
I17K	**Unalakleet**	**19.28**	**50**	P	**P**	**03 15 50.1**	**+0.4**
N15K	**Kwethluk River**	**19.31**	**61**	P	**Pn**	**03 15 51.6**	**+0.4**
N15K				IAmb	IAmb	03 16 07.9	
	comp=Z,13nm,0.8s						
L16K	**Owhat River**	**19.62**	**57**	P	**P**	**03 15 53.4**	**0.0**
F17K	**Baldwin Pennin**	**19.65**	**42**	P	**P**	**03 15 54.3**	**+0.7**
H17K	**Granite Mounta**	**19.81**	**47**	P	**P**	**03 15 55.8**	**+0.3**
M16K	**Timber Creek**	**19.85**	**59**	P	**Pn**	**03 15 57.1**	**-0.6**
M16K				IAmb	IAmb	03 16 19.3	
	comp=Z,15nm,1.0s						
E18K	**Tukpahlearik C**	**20.20**	**40**	P	Pn	03 16 01.0	-0.7
K17K	**Iditarod**	**20.22**	**54**		Pn	03 16 02.7	+0.7
K17K				IAmb	IAmb	03 16 14.2	
	comp=Z,18nm,1.1s						
O16K	**Kokwok River B**	**20.35**	**63**	P	**P**	**03 16 00.4**	**-0.9**
O16K				IAmb	IAmb	03 16 37.1	
	comp=Z,24nm,1.5s						
C18K	**Utukok River**	**20.43**	**36**		**P**	**03 16 02.9**	**+0.7**
H18K	**Honhosa River**	**20.50**	**47**	P	Pn	03 16 04.4	-0.8
G18K	**Tagagawik**	**20.53**	**45**	P	Pn	03 16 04.7	-0.9
M17K	**Holitna River**	**20.59**	**58**	P	Pn	03 16 05.5	-0.8
M17K				IAmb	IAmb	03 16 10.5	
	comp=Z,16nm,0.9s						
N17K	**Nushagak Hills**	**20.74**	**60**	P	**P**	**03 16 06.5**	**+0.9**
N17K				IAmb	IAmb	03 16 32.9	
	comp=Z,14nm,1.2s						
KLR	**Kulʹdur**	**20.77**	**266**	LR	LR	03 25 35.8	
	comp=Z,58nm,18.5s,baz=68,slow=41						
KLR	**Kulʹdur**	**20.77**	**266**	⇑ *i*P	**P**	**03 16 06.4**	**+0.4**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
J18K	**Innoko River**	**20.99**	**52**		Pn	03 16 10.7	-0.3
J18K				IAmb	IAmb	03 16 21.2	
	comp=Z,14nm,1.1s						
F19K	**Shaleruckik Mo**	**21.09**	**42**	P	**P**	**03 16 11.4**	**+2.1**
C19K	**Lookout Ridge**	**21.14**	**36**		**P**	**03 16 10.8**	**+0.8**
C19K				IAmb	IAmb	03 16 43.5	
	comp=Z,10nm,1.2s						
G19K	**Purcell Mounta**	**21.20**	**44**	P	**P**	**03 16 13.1**	**+2.6**
N18K	**Kilae Creek**	**21.37**	**60**	P	**P**	**03 16 13.6**	**+1.2**
N18K				IAmb	IAmb	03 16 17.9	
	comp=Z,29nm,1.4s						
ZEA	**Zeya**	**21.43**	**281**	*e*P	**P**	**03 16 12.9**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
D19K	**Kuna River**	**21.43**	**38**	P	**P**	**03 16 12.9**	**-0.1**
E19K	**Redstone River**	**21.45**	**41**		**P**	**03 16 13.7**	**+0.5**
E19K				IAmb	IAmb	03 16 47.8	
	comp=Z,11nm,1.3s						
PLK4	**Peulik 4**	**21.52**	**68**	P	**P**	**03 16 14.6**	**+0.5**
O18K	**Koktuh Hills**	**21.78**	**62**	P	**P**	**03 16 17.7**	**+0.9**
L19K	**White Mountain**	**21.81**	**55**	P	**P**	**03 16 19.0**	**+1.9**
P18K	**Big Mountain,**	**21.82**	**63**	P	**P**	**03 16 18.0**	**+0.7**
F20K	**Avaraart Lake**	**21.93**	**42**	P	**P**	**03 16 19.0**	**+0.8**
ACHA	**Angle Creek He**	**21.95**	**66**	P	**P**	**03 16 16.2**	**-2.5**
ACHA				IAmb	IAmb	03 16 49.7	
	comp=Z,13nm,1.4s						
D20K	**Etivluk River**	**22.03**	**38**	P	**P**	**03 16 20.3**	**+0.9**
N19K	**Bonanza Creek**	**22.05**	**59**	P	**P**	**03 16 21.3**	**+1.6**
N19K				IAmb	IAmb	03 16 49.8	
	comp=Z,27nm,1.4s						
TIXI	**Tiksi**	**22.10**	**331**	P	**P**	**03 16 20.5**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=131,slow=8.4,SNR=16						
	comp=Z,3.0nm,0.5s						
TIXI	**Tiksi**	**22.10**	**331**		**P**	**03 16 19.3**	**-0.7**
TIXI				IAmb	IAmb	03 16 38.2	
	comp=Z,7.8nm,0.9s						
TIXI	**Tiksi**	**22.10**	**331**	⇓ *i*P	**P**	**03 16 21.4**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
K20K	**Telida**	**22.17**	**52**	P	**P**	**03 16 21.5**	**+0.6**
K20K				IAmb	IAmb	03 16 31.4	
	comp=Z,17nm,1.5s						
M20K	**Styx River**	**22.63**	**56**	P	**P**	**03 16 26.8**	**+0.9**
M20K				IAmb	IAmb	03 16 52.9	
	comp=Z,12nm,1.4s						
G21K	**Allakaket**	**22.69**	**44**	P	**P**	**03 16 27.5**	**+1.0**
G21K				IAmb	IAmb	03 16 34.1	
	comp=Z,13nm,1.5s						
HEH	**HeiHe**	**22.74**	**272**	*e*P	**P**	**03 16 23.8**	**-3.3**
HEH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HEH				LR	LR		
	comp=N,250nm,15.0s						
HEH				LR	LR		
	comp=E,290nm,15.5s						
HEH				LR	LR		
	comp=Z,310nm,12.0s						

D23K IAmb IAmb 03 17 01.1
comp=Z,10nm,1.4s
I23K Minto, Yukon-K 24.28 48 P P 03 16 41.5 -0.4
I23K IAmb IAmb 03 16 58.0
comp=Z,13nm,1.3s
NEA2 Nenana 24.39 49 P P 03 16 44.6 +1.5
NEA2 IAmb IAmb 03 17 02.4
comp=Z,6.1nm,0.9s
E23K Chandalar 24.41 41 P P 03 16 43.6 +0.3
E23K IAmb IAmb 03 16 55.8
comp=Z,9.1nm,1.1s
MCK McKinley 24.47 51 P P 03 16 43.9 +0.2
MCK McKinley 24.47 51 P P 03 16 43.9 +0.2
MCK pmax pmax
comp=Z,26nm,1.4s
RND Reindeer 24.52 52 P P 03 16 43.6 -0.7
RND IAmb IAmb 03 17 25.4
comp=Z,9.6nm,1.4s
RND Reindeer 24.52 52 P P 03 16 43.6 -0.7
RND pmax pmax
comp=Z,10.0nm,1.4s
SEW Seward 24.61 60 P P 03 16 45.9 +0.9
GHO Glory Hole Cre 24.63 56 P P 03 16 46.2 +1.0
WRH Wood River Hil 24.82 50 P P 03 16 47.5 +0.7
WRH IAmb IAmb 03 16 49.5
comp=Z,13nm,1.2s
E24K Your Creek 24.83 41 P P 03 16 48.6 +1.6
D24K Happy Valley 24.87 38 P P 03 16 47.7 +0.5
KNK Knik Glacier 24.89 57 P P 03 16 48.0 +0.4
H24K Noodor Dome 24.91 46 P P 03 16 48.7 +1.0
H24K IAmb IAmb 03 16 55.7
comp=Z,7.4nm,1.4s
C24K Franklin Bluff 25.01 37 P P 03 16 49.9 +1.4
C24K IAmb IAmb 03 17 04.4
comp=Z,12nm,1.1s
G24K Hadweenzic Riv 25.11 44 P P 03 16 49.8 +0.4
G24K IAmb IAmb 03 17 02.9
comp=Z,12nm,1.2s
BNX BinXian 25.15 263 ⇑P **P 03 16 48.8 -1.2**
BNX pmax pmax
comp=Z,5.0nm,1.9s
DHY Denali Highway 25.21 53 P **P 03 16 50.0 -0.7**
DHY IAmb IAmb 03 17 32.8
comp=Z,16nm,1.5s
IL31 25.33 49 P **P 03 16 50.8 -0.6**
IL31 IAmb IAmb 03 17 10.5
comp=Z,5.0nm,0.9s
ILAR Eielson Array 25.33 49 P **P 03 16 51.2 -0.2**
comp=Z,1.6nm,0.9s,baz=262,slow=8.2,SNR=15
comp=Z,1.6nm,0.9s
ILAR Eielson Array 25.33 49 P **P 03 16 51.9 +0.4**
ILAR Eielson Array 25.33 49 P **P 03 16 51.9 +0.4**
SCM Sheep Creek Mo 25.37 56 P **P 03 16 52.7 +0.7**
SCM Sheep Creek Mo 25.37 56 P **P 03 16 52.7 +0.7**
SCM pmax pmax
comp=Z,52nm,1.4s
K24K Donnelly Dome 25.87 51 P **P 03 16 56.4 0.0**
M24K Tolsona, Glenn 25.87 55 P **P 03 16 57.7 +1.2**
PRP Porcupine Dome 25.89 47 P **P 03 16 56.8 +0.1**
PRP IAmb IAmb 03 17 04.1
comp=Z,12nm,1.3s
E25K Arctic Village 25.93 41 P **P 03 16 57.2 +0.3**
J25K Salcha River, 25.99 49 P **P 03 16 56.2 -1.4**
MAJO Matsushiro 26.01 234⇓*iP* **P 03 16 59.9 +2.0**
MAJO pmax pmax
comp=Z,8.0nm,1.0s
MJAR Matsushiro Arr 26.01 234 P **P 03 16 59.8 +1.9**
comp=Z,3.7nm,0.8s,baz=15,slow=9.9,SNR=9.2
comp=Z,3.7nm,0.8s
KLU Klutina 26.08 56 P **P 03 17 00.0 +1.6**
KLU IAmb IAmb 03 17 23.1
comp=Z,11nm,1.0s
BMAR Burnt Mountain 26.27 43 P **P 03 17 01.2 +1.2**
F26K Sheenjek River 26.44 42 P **P 03 17 02.8 +1.2**
G26K Porcupine Rive 26.57 44 P **P 03 17 03.5 +0.8**
G26K IAmb IAmb 03 17 25.8
comp=Z,8.4nm,1.3s
DOT Dot Lake 26.64 51 P **P 03 17 02.6 -0.8**
DOT IAmb IAmb 03 17 14.4
comp=Z,8.9nm,1.4s
C27K Jago River 26.72 38 P **P 03 17 03.9 -0.1**
H27K Steamboat Moun 27.50 45 P **P 03 17 11.8 +0.7**
H27K IAmb IAmb 03 17 22.7
comp=Z,13nm,1.4s
L27K Beaver Creek, 27.72 52 P **P 03 17 12.9 -0.2**
L27K IAmb IAmb 03 17 46.9
comp=Z,8.4nm,1.3s
BCAR Beaver Creek A 27.74 52 P **P 03 17 13.6 +0.3**
F28M Old Crow 28.08 42 P **P 03 17 17.2 +1.0**
F28M IAmb IAmb 03 17 41.4
comp=Z,5.9nm,1.5s
BARN Barnard Glacie 28.19 56 P **P 03 17 18.9 +1.4**
I28M Miner Creek 28.22 47 P **P 03 17 17.2 -0.4**
I28M IAmb IAmb 03 17 59.9
comp=Z,13nm,1.5s
G29M Pine Creek 28.84 44 P **P 03 17 24.0 +1.0**
G29M IAmb IAmb 03 17 35.9
comp=Z,8.6nm,1.1s
M29M Somme Creek 29.36 53 P **P 03 17 29.0 +1.3**
M29M IAmb IAmb 03 18 00.5
comp=Z,4.8nm,1.4s
L29M L29M 29.37 51 P **P 03 17 28.6 +0.9**
G30M tAoh Zraii Nji 29.54 43 P **P 03 17 29.6 +0.3**
G30M IAmb IAmb 03 17 46.7
comp=Z,5.2nm,1.2s
INK Inuvik 30.41 40 P **P 03 17 37.2 +0.4**
comp=Z,1.0nm,0.6s,baz=299,slow=8.7,SNR=5.5
comp=Z,1.0nm,0.6s
INK Inuvik 30.41 40 P **P 03 17 37.6 +0.8**
INK IAmb IAmb 03 18 01.3
comp=Z,4.1nm,1.4s
INK Inuvik 30.41 40 P **P 03 17 37.6 +0.8**
INK pmax pmax
comp=Z,4.0nm,1.4s
F31M Tsiigehtchic 30.44 42 P **P 03 17 37.5 +0.4**
F31M IAmb IAmb 03 18 02.1
comp=Z,10nm,1.4s
M31M Drury Creek, Y 31.26 52 P **P 03 17 45.2 +0.8**
TLY Talaya 35.27 290 LR LR 03 32 39.5
comp=Z,148nm,21.0s,baz=41,slow=36
ULN Ulaanbaatar 35.45 282⇑*iP* **P 03 18 21.2 -0.1**
ULN pmax pmax
comp=Z,2.0nm,1.0s
H11N2 WAKE ISLAND Hy 35.74 176 T T 03 56 17.8
baz=358,slow=76,SNR=1147
H11N3 WAKE ISLAND Hy 35.76 176 T T 03 56 22.3
baz=358,slow=76,SNR=745
H11N1 WAKE ISLAND Hy 35.76 176 T T 03 56 22.6
baz=358,slow=76,SNR=661
SONM Songino Array 35.84 283 P **P 03 18 24.3 -0.2**
comp=Z,1.1nm,0.4s,baz=62,slow=8.1,SNR=15
SONM LR LR 03 35 13.6
comp=Z,126nm,18.5s,baz=176,slow=40
comp=Z,1.1nm,0.4s
SONM Songino Array 35.84 283 P **P 03 18 24.2 -0.3**
H11S1 WAKE ISLAND Hy 36.95 176 T T 03 57 50.2
baz=359,slow=76,SNR=20
H11S3 WAKE ISLAND Hy 36.97 176 T T 03 57 51.5
baz=359,slow=76,SNR=13
H11S2 WAKE ISLAND Hy 36.97 176 T T 03 57 51.7
baz=359,slow=76,SNR=17
KNGR Kungurtug, Tuv 39.11 292⇑*iP* **P 03 18 52.8 +0.7**
KNGR pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 39.68 46 P **P 03 18 56.4 -0.2**
comp=Z,0.3nm,0.5s,baz=303,slow=8.7,SNR=9.5
YKA LR LR 03 36 28.4
comp=Z,82nm,18.6s,baz=114,slow=38
comp=Z,0.3nm,0.5s
YKA Yellowknife Ar 39.68 46 P **P 03 18 56.6 0.0**
YKA Yellowknife Ar 39.68 46 P **P 03 18 56.6 0.0**
ZALV Zalesovo Beam 43.62 303 P **P 03 19 28.0 -0.9**
comp=Z,0.3nm,0.4s,baz=73,slow=16,SNR=1.7
ZALV LR LR 03 39 04.5
comp=Z,85nm,18.3s,baz=336,slow=38
comp=Z,0.3nm,0.4s
ZALV Zalesovo Beam 43.62 303 P **P 03 19 28.0 -0.9**
GUMO Guam 44.48 208 LR LR 03 34 15.2
comp=Z,63nm,20.9s,baz=54,slow=31
GTA2 Gaotai 44.82 277 *eP* **P 03 19 39.6 +0.7**
GTA2 pP pwP 03 19 52.3 +0.1
GTA2 pmax pmax
comp=Z,5.0nm,0.9s
DGZ Jazzator, Alta 44.88 296*c iP* **P 03 19 39.7 +0.4**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
SPITS Spitsbergen Ar 45.17 351 P **P 03 19 40.0 -1.1**
comp=Z,6.8nm,1.0s,baz=32,slow=8.5,SNR=6.3
comp=Z,6.8nm,1.0s
SPITS Spitsbergen Ar 45.17 351 P **P 03 19 40.0 -1.1**
JTMT Jette 48.33 63 P **P 03 20 07.2 +0.9**
KURK Kurchatov 48.61 302 P **P 03 20 07.6 -0.6**
KURK Kurchatov 48.61 302 P **P 03 20 08.4 +0.2**
BMO Blue Mountains 48.69 68 P **P 03 20 09.8 +0.8**
BMO IAmb IAmb 03 20 25.9
comp=Z,3.0nm,1.1s
BMO Blue Mountains 48.69 68 P **P 03 20 09.9 +0.8**
BMO pmax pmax
comp=Z,3.0nm,1.1s
KURBB Kurchatov Arra 48.71 302 P **P 03 20 08.4 -0.6**
comp=Z,1.9nm,0.5s,baz=55,slow=7.8,SNR=15
comp=Z,1.9nm,0.5s
MK31 Makanchi Array 49.38 296⇑*iP* **P 03 20 14.2 -0.1**
MKAR Makanchi Array 49.38 296 P **P 03 20 13.1 -1.2**
comp=Z,1.1nm,0.7s,baz=61,slow=7.5,SNR=13
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 49.38 296 P **P 03 20 13.8 -0.5**
MKAR Makanchi Array 49.38 296 *i* P **P 03 20 14.0 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
GOMU GeErMu 49.91 278 P **P 03 20 17.8 -1.0**
GOMU pmax pmax
comp=Z,6.0nm,1.1s
BVAR Borovoye Array 50.87 309 P **P 03 20 24.6 -0.8**
comp=Z,0.7nm,0.5s,baz=65,slow=7.2,SNR=6.6
BVAR LR LR 03 44 47.6
comp=Z,223nm,18.2s,baz=3.2,slow=40
comp=Z,0.7nm,0.5s
BORK Borovoye 50.88 309 P **P 03 20 26.4 +0.9**
BORK IAmb IAmb 03 20 43.4
comp=Z,1.9nm,0.7s
BORK Borovoye 50.88 309 P **P 03 20 26.4 +0.9**
BORK pmax pmax
comp=Z,2.0nm,0.7s
PNTR Pine Nut 51.42 75 **P 03 20 31.0 +1.0**
NVAR Mina Array Bea 52.60 75 P **P 03 20 40.4 +1.6**
comp=Z,1.2nm,0.7s,baz=304,slow=7.8,SNR=11
comp=Z,1.2nm,0.7s
LHV Little Huntoon 52.62 75 P **P 03 20 39.1 +0.5**
LHV IAmb IAmb 03 20 40.2
comp=Z,5.5nm,1.1s
RLMT Red Lodge 52.66 63 P **P 03 20 39.5 +0.3**
ARTI Arti 53.42 318 LR LR 03 46 53.8
comp=Z,164nm,20.0s,baz=9.5,slow=40
ARTI Arti 53.42 318 **P 03 20 44.0 -0.3**
ARTI Arti 53.42 318*c iP* **P 03 20 44.9 +0.6**
ARTI *PP **pwP 03 20 58.2 +0.1**
ARTI 03 21 50.7
ARTI S **S 03 28 13.6 -0.7**
ARTI SS **SS 03 31 53.6 -0.1**
PDAR Pinedale Array 54.18 65 P **P 03 20 50.9 +0.6**
comp=Z,1.2nm,1.0s,baz=75,slow=1.7,SNR=5.7
comp=Z,1.2nm,1.0s
PDAR Pinedale Array 54.18 65 P **P 03 20 50.8 +0.4**
AAK Ala-Archa 56.26 297⇑*iP* **P 03 21 06.5 +1.3**
AAK pmax pmax
comp=Z,2.0nm,1.1s
AB31 Akbulak array 58.13 312 **P 03 21 18.9 +0.8**
ABKAR Akbulak array 58.13 312 P **P 03 21 18.8 +0.6**
FINES FINESS Array B 58.89 338 P **P 03 21 24.0 +0.8**
comp=Z,3.9nm,1.0s,baz=10,slow=7.0,SNR=1.9
comp=Z,3.9nm,1.0s
FINES FINESS Array B 58.89 338 P **P 03 21 23.3 +0.1**
BELG Belogornoye 60.49 321⇓*iP* **P 03 21 35.1 +0.7**
BELG pmax pmax
comp=Z,2.0nm,1.3s
CMAR Chiang Mai Arr 61.12 260 P **P 03 21 41.1 +2.1**
comp=Z,2.7nm,0.3s,baz=20,slow=7.1,SNR=16
comp=Z,2.7nm,0.3s
CMAR Chiang Mai Arr 61.12 260 P **P 03 21 41.0 +1.9**
NOA NORSAR Array B 61.90 346 P **P 03 21 44.1 +0.2**
comp=Z,0.8nm,0.7s,baz=17,slow=6.8,SNR=1.6
comp=Z,0.8nm,0.7s
BRDH Bariadhala 61.91 270 LR LR 03 51 53.6
comp=Z,97nm,19.1s,baz=188,slow=39
HFS Hagfors 62.40 344 P **P 03 21 46.8 -0.4**
comp=Z,7.2nm,1.1s,baz=42,slow=2.3,SNR=1.6
comp=Z,7.2nm,1.1s
TXAR Lajitas Array 67.41 71 P **P 03 22 20.8 +0.4**
comp=Z,1.0nm,0.7s,baz=304,slow=4.7,SNR=7.3
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 67.81 331 P **P 03 22 21.9 -0.4**
comp=Z,0.3nm,0.4s,baz=20,slow=14,SNR=1.5
comp=Z,0.3nm,0.4s
KBZ Khabaz 69.47 319 P **P 03 22 33.2 +0.4**
comp=Z,0.9nm,0.8s,baz=76,slow=4.2,SNR=2.1
comp=Z,0.9nm,0.8s
KBZ Khabaz 69.47 319⇑*eP* **P 03 22 35.8 +2.9**
KBZ pmax pmax
comp=Z,1.0nm,0.9s
GNI Garni 71.82 315 LR LR 03 58 58.6
comp=Z,155nm,18.5s,baz=18,slow=40
WRA Warramunga Arr 79.36 209 P **P 03 23 30.6 +0.1**
comp=Z,0.9nm,0.9s,baz=18,slow=5.7,SNR=3.0
comp=Z,0.9nm,0.9s
ASAR Alice Springs 83.02 208 P **P 03 23 50.0 +0.1**
comp=Z,0.5nm,0.6s,baz=12,slow=6.0,SNR=7.0
comp=Z,0.5nm,0.6s
ASAR Alice Springs 83.02 208 P **P 03 23 50.4 +0.5**
ASAR Alice Springs 83.02 208 P **P 03 23 50.4 +0.5**
EIL Elat 84.83 318 LR LR 04 05 19.4
comp=Z,64nm,18.8s,baz=152,slow=38

IDC 21 03:29:00.0±3.6, 20°.71N×145°.64E, h0km, mb3.7/5, mbtmp3.7/5, MS3.3/1, Error ellipse: s-maj=148.3km s-min=33.9km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**23.69**	**238**	LR		LR	LR	03 42 34.6	
	comp=Z,65nm,19.0s,baz=344,slow=34								
WRA	**Warramunga Arr**	**41.89**	**196**	P		P	P	03 36 52.1	-0.2
	0.3nm,0.7s,baz=14,slow=8.2,SNR=1.7								
	0.3nm,0.7s								
MKAR	**Makanchi Array**	**57.04**	**313**	P		P	P	03 38 48.5	+0.6
	0.5nm,0.9s,baz=99,slow=6.8,SNR=3.7								
	0.5nm,0.9s								
KURBB	**Kurchatov Arra**	**59.80**	**317**	P		P	P	03 39 06.8	-0.2
	0.2nm,0.4s,baz=93,slow=7.7,SNR=6.2								
	0.2nm,0.4s								
BVAR	**Borovoye Array**	**64.90**	**320**	P		P	P	03 39 41.3	+0.1
	0.6nm,0.5s,baz=103,slow=7.9,SNR=4.0								
	0.6nm,0.5s								
FINES	**FINESS Array B**	**85.04**	**335**	P		P	P	03 41 36.8	-0.5
	4.1nm,1.0s,baz=29,slow=3.2,SNR=4.1								
	4.1nm,1.0s								

IDC 21 03:38:43.8±1.7, 28°.59N×103°.61E, h0km, mb3.5/3, mbtmp3.5/3, MS3.6/1, Error ellipse: s-maj=525.5km s-min=28.3km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HILR	**Hailar Array B**	**24.30**	**26**	LR		LR	LR	03 55 23.5	
	comp=Z,133nm,19.2s,baz=140,slow=41								
MKAR	**Makanchi Array**	**24.66**	**323**	P		P	P	03 44 06.2	0.0
	0.3nm,0.4s,baz=133,slow=8.5,SNR=7.0								
	0.3nm,0.4s								
WRA	**Warramunga Arr**	**56.65**	**145**	P		P	P	03 48 28.6	-0.4
	0.5nm,0.6s,baz=335,slow=7.9,SNR=4.7								
	0.5nm,0.6s								
ASAR	**Alice Springs**	**59.59**	**148**	P		P	P	03 48 49.9	+0.3
	0.4nm,0.7s,baz=334,slow=8.3,SNR=2.5								
	0.4nm,0.7s								

KRSC 21 03:49:42.8±1.8, 48°.40N×157°.95E, h30km±28km, MI4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.58**	**333**	*eS*			Sn	03 50 52.7	-0.1
PAU	**Pauzhetka**	**3.16**	**347**	*eP*			Pn	03 50 32.5	+2.1
PAU				*eS*			Sn	03 51 10.3	+3.3
KDTR	**Khodutka, Kamc**	**3.42**	**1**	*eP*			Pn	03 50 37.3	+3.4
KDTR				*eS*			Sb	03 51 18.7	-4.9
ASAK	**Asacha**	**3.99**	**360**	*eP*			Pn	03 50 45.7	+3.8
RUS	**Russkaya**	**4.06**	**5**	*eP*			Pn	03 50 46.7	+4.0
RUS				*eS*			Sn	03 51 34.9	+5.8
MTVR	**Mutnovka**	**4.09**	**2**	*eP*			Pn	03 50 47.1	+3.8
MTVR				*eS*			Sn	03 51 36.2	+5.9
GRL	**Gorelyy**	**4.16**	**1**	*eP*			Pn	03 50 48.4	+4.1
GRL				*eS*			Sn	03 51 38.0	+6.1
KRMR	**Karymshinskiy**	**4.44**	**1**	*eP*			Pn	03 50 52.3	+4.3
PET	**Petropavlovsk**	**4.65**	**5**	*eP*			Pn	03 50 56.4	+5.5
DALK	**Dalny**	**4.67**	**6**	*eP*			Pn	03 50 55.3	+4.2
DALK				*eS*			Sn	03 51 49.6	+5.4
UGLR	**Uglovaya**	**4.85**	**6**	*eP*			Pn	03 50 58.1	+4.4
SPN	**Mys Shipunski**	**4.89**	**15**	*eP*			Pn	03 50 58.5	+4.4
SPN				*eS*			Sn	03 51 55.1	+5.5
AVH	**Avacha**	**4.90**	**6**	*eP*			Pn	03 50 59.3	+4.9
SMAR	**Somma**	**4.90**	**6**	*eP*			Pn	03 51 00.4	+5.9
KOK	**Koryaka**	**4.92**	**5**	*eP*			Pn	03 51 00.0	+5.4
SDLR	**Sedlovina**	**4.92**	**7**	*eP*			Pn	03 50 58.9	+4.2
KRER	**Koryakskii**	**4.94**	**6**	*eP*			Pn	03 50 59.3	+4.3
KRX	**Arik**	**4.99**	**5**	*eP*			Pn	03 51 00.7	+5.1
GNL	**Ganaly**	**5.30**	**360**	*eP*			Pn	03 51 04.8	+4.9
KII	**Karymskiy**	**5.72**	**9**	*eS*			Sn	03 52 15.8	+5.5
MKZ	**Mys Kozlova**	**6.60**	**20**	*eP*			Pn	03 51 22.9	+5.2
KBTR	**Krutoberegovo**	**8.37**	**19**	*eP*			Pn	03 51 47.9	+6.0

*MDD **21** 04:02:50.2±1.4, 32°.48N×4°.32W, h24km±4km, Mb4.3/4, M_mb3.7/4, Error ellipse: s-maj=19.0km s-min=9.9km az=79.0*
*INMG **21** 04:02:50.0±1.1, 32°.69N×3°.99W, h13km, ML2.5, Error ellipse: s-maj=9.1km s-min=4.4km az=87.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*
*CNRM **21** 04:02:50.7, 32°.54N×4°.36W, h6km, ML3.1*
ISC 21 04:02:51.5±1.2, 32°.67N±0°.02×4°.32W±0°.03, h19km±3km, n56, σ1s60/102, 5C, Morocco

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MDT	**Midelt**	**0.28**	**302**	P			**Pg**	**04 02 56.7**	**-1.2**
MDT				S			**Sg**	**04 03 02.7**	**+0.4**
MD31	**MD31**	**0.42**	**299**	P			**Pg**	**04 02 59.9**	**-0.4**
MD31				S			**Sg**	**04 03 06.8**	**+0.6**
IFR	**Ifrane**	**1.08**	**322**	P			Pn	04 03 12.6	+0.8
IFR				S			Sn	04 03 28.5	+2.1
GOLM	**Goulmima**	**1.10**	**209**	P			**Pb**	**04 03 10.4**	**-1.6**
GOLM				S			**Sb**	**04 03 26.2**	**+0.3**
LCRM	**LCR**	**1.11**	**336**	P			Pn	04 03 13.2	+1.0
LCRM				S			**Sb**	**04 03 27.1**	**+0.7**
ARF	**Arif**	**1.23**	**176**	P			Pn	04 03 11.9	-1.9
ARF				S			**Sb**	**04 03 28.5**	**-1.3**
SICH	**Sidi Chahed**	**1.66**	**330**	P			**Pg**	**04 03 23.1**	**-0.4**
SICH				S			**Sb**	**04 03 43.9**	**+1.9**
AKLM	**AKL**	**1.88**	**12**	P			**Pb**	**04 03 26.2**	**+0.9**
AKLM				S			**Sg**	**04 03 54.4**	**+2.3**
TISM	**Timmit**	**2.03**	**243**	P			Pn	04 03 25.1	+0.4
TISM				S			Sn	04 03 50.8	+1.4
TZRR	**Tazzarine**	**2.15**	**210**	P			Pn	04 03 27.0	+0.5
TZRR				S			Sn	04 03 50.9	-1.8
JBK	**JBK**	**2.22**	**41**	P			Pn	04 03 27.0	-0.5
JBK				S			Sn	04 03 55.6	+1.1
RSA	**Sarsar**	**2.54**	**331**	P			Pn	04 03 34.4	+2.7
RSA				S			Sb	04 04 06.8	-0.6
PALE	**Palemas**	**2.56**	**7**	P			Pn	04 03 34.8	+2.7
PALE				S			Sb	04 04 10.2	+2.0
FIGM	**Figuig**	**2.64**	**101**	P			Pn	04 03 34.4	+1.2
FIGM				S			Sn	04 04 08.0	+3.1
AVE	**Averroes**	**2.67**	**284**	P			Pn	04 03 34.6	+1.1
AVE				S			Sb	04 04 09.3	-1.9
AVE	**Averroes**	**2.67**	**284**	P			Pn	04 03 35.4	+1.9
AVE				S			Sn	04 04 07.9	+2.5
OUZM	**OUZ**	**2.71**	**230**	P			Pn	04 03 35.6	+1.3
OUZM				S			Sn	04 04 10.4	+3.8
TIO	**Tiouine**	**3.04**	**236**	P			Pn	04 03 39.7	+1.0
TIO				S			Sn	04 04 18.3	+3.6
TIO	**Tiouine**	**3.04**	**236**	S			Sn	04 04 15.0	+0.3
ELGU	**Los Guajares,**	**4.23**	**8**	P			Pn	04 03 54.2	-0.8
ELGU				S			Sn	04 04 43.8	-0.2
ESPR	**Espera**	**4.38**	**344**	S			Sn	04 04 48.7	+1.3
EBER	**Berja**	**4.38**	**15**	P			Pn	04 03 58.5	+1.2
EGOR	**Sierra Gorda,**	**4.44**	**2**	P			Pn	04 03 59.9	+1.9
EMIN	**Mina Concepcio**	**5.44**	**340**	P			Pn	04 04 10.3	-1.3
EMIN				S			Sn	04 05 12.9	-0.8
EMIN	**Mina Concepcio**	**5.44**	**340**	Pn			Pn	04 04 10.5	-1.1
EMIN				⇑*i*IVmb_VC				04 04 17.4	
	168nm,SNR=1.6								
EMIN					Sn		Sn	04 05 10.9	-2.8
PBDV	**Barranco-do-Ve**	**5.44**	**328**	P			Pn	04 04 11.1	-0.5
PBDV				S			Sn	04 05 12.4	-1.3
PBDV	**Barranco-do-Ve**	**5.44**	**328**	*eP*			Pn	04 04 11.5	-0.2
PBDV				*eS*			Sn	04 05 13.5	-0.2
ECAB	**El Cabril**	**5.47**	**351**	P			Pn	04 04 12.5	+0.4
ECAB				S			Sn	04 05 12.1	-2.3
ECAB	**El Cabril**	**5.47**	**351**	Pn			Pn	04 04 12.4	+0.4
ECAB				⇑*i*IVmb_VC				04 04 19.6	
	108nm,SNR=1.1								
ECAB					Sn		Sn	04 05 11.6	-2.8
PVAQ	**Vaqueiros**	**5.49**	**330**	*eP*			Pn	04 04 11.9	-0.3
PVAQ				*eS*			Sn	04 05 13.9	-0.8
PVAQ				*i* IAML				04 05 14.5	
PVAQ				*i* IAML				04 05 14.7	
PVAQ				*i* IAML				04 05 15.6	
EADA	**Adamuz**	**5.49**	**358**	P			Pn	04 04 12.9	+0.6
EADA				S			Sn	04 04 14.0	-1.0
EGRO	**El Granado**	**5.50**	**333**	P			Pn	04 04 12.0	-0.5
EGRO				S			Sn	04 04 13.6	-1.6
EGRO	**El Granado**	**5.50**	**333**	Pn			Pn	04 04 12.1	-0.4
EGRO				⇑*i*IVmb_VC				04 04 16.7	
	374nm,SNR=2.2								
EGRO					Sn		Sn	04 05 11.8	-3.4
EMUR	**La Murta**	**5.75**	**25**	P			Pn	04 04 14.5	-1.3
PFVI	**Vila Bisbo**	**5.79**	**322**	S			Sn	04 05 22.6	+0.4
PFVI	**Vila Bisbo**	**5.79**	**322**	*eS*			Sn	04 05 23.2	+0.9
PCVE	**Castro Verde**	**5.81**	**329**	P			Pn	04 04 16.8	+0.1
PCVE				S			Sn	04 05 20.7	-2.2
PCVE	**Castro Verde**	**5.81**	**329**	*eP*			Pn	04 04 17.3	+0.5
PCVE				*eS*			Sn	04 05 21.9	-0.9
PCVE				*i* IAML				04 05 23.2	
PCVE				*i* IAML				04 05 24.5	
PCVE				*i* IAML				04 05 24.6	
MORF	**Marmelete**	**5.83**	**324**	*eS*			Sn	04 05 23.4	0.0
MORF				*i* IAML				04 05 26.3	
MORF				*i* IAML				04 05 29.6	
MORF				*i* IAML				04 05 35.9	
PBAR	**Barrancos**	**5.93**	**339**	P			Pn	04 04 17.7	-1.0
PBAR				S			Sn	04 05 23.6	-2.0
PBAR	**Barrancos**	**5.93**	**339**	*eP*			Pn	04 04 18.3	0.0
PBAR				*eS*			Sn	04 05 23.9	-1.8
PBAR				*i* IAML				04 05 26.1	
PBAR				*i* IAML				04 05 28.8	
PBAR				*i* IAML				04 05 32.2	
PTEO	**Sao Teotonio**	**6.06**	**325**	*eP*			Pn	04 04 19.8	-0.3
PTEO				*eS*			Sn	04 05 28.6	-0.3
MESJ	**Messejana**	**6.07**	**329**	*eP*			Pn	04 04 20.7	+0.6
MESJ				*eS*			Sn	04 05 27.9	-1.2
MESJ				*i* IAML				04 05 31.9	
MESJ				*i* IAML				04 05 32.0	
MESJ				*i* IAML				04 05 35.2	
ETOB	**Tobarra**	**6.38**	**20**	P			Pn	04 04 24.2	-0.4
EBAD	**Badajoz**	**6.46**	**341**	P			Pn	04 04 24.7	-0.8
EBAD				S			Sn	04 05 36.3	-2.4
EBAD	**Badajoz**	**6.46**	**341**	Pn			Pn	04 04 25.0	-0.6
EBAD				⇑*i*IVmb_VC				04 04 31.4	
	157nm,SNR=1.3								
EBAD					Sn		Sn	04 05 35.0	-3.7
EVO	**Evora**	**6.58**	**334**	P			Pn	04 04 26.6	-0.6
EVO				S			Sn	04 05 39.3	-2.4
EVO	**Evora**	**6.58**	**334**	*eP*			Pn	04 04 27.2	0.0
EVO				*eS*			Sn	04 05 39.9	-1.8
EVO				*i* IAML				04 05 40.7	
EVO				*i* IAML				04 05 41.1	
EVO				*i* IAML				04 05 42.3	
MOE	**Montemor**	**6.70**	**332**	*eP*			Pn	04 04 29.3	+0.4
MOE				*eS*			Sn	04 05 43.7	-1.0
PESTR	**Estremoz**	**6.73**	**338**	P			Pn	04 04 28.8	-0.5
PESTR				S			Sn	04 05 42.2	-3.3
PARRA	**Arraiolos**	**6.84**	**335**⇑	*eP*			Pn	04 04 30.6	-0.2
PARRA				*eS*			Sn	04 05 46.6	-1.5
PARRA				*i* IAML				04 05 48.3	
PARRA				*i* IAML				04 05 50.0	
PARRA				*i* IAML				04 05 52.0	
CIBOR	**Castaar de Ib**	**7.01**	**353**	Pn			Pn	04 04 33.3	+0.1
CIBOR				Sn			Sn	04 05 48.3	-4.1
PMTG	**Montargil**	**7.13**	**335**	*eP*			Pn	04 04 34.7	-0.1

PMTG				*e*S	Sn	04 05 53.2	-2.0
PMRV	**Marv??o**	**7.19**	**341**	*e*P	Pn	04 04 36.0	+0.4
PMRV				*e*S	Sn	04 05 55.0	-1.7
PSARD	**Sardoal**	**7.58**	**337**	*e*P	Pn	04 04 41.1	+0.1
PSARD				*e*S	Sn	04 06 04.1	-2.3
PSARD				*i* IAML		04 06 05.9	
PSARD				*i* IAML		04 06 10.1	
PSARD				*i* IAML		04 06 19.4	
PCBR	**Castelo Branco**	**7.60**	**341**	*e*P	**Pn**	**04 04 41.6**	**+0.4**

OMAN 21 04:22:42.1±1.0, 21°48N×61°71E, h10km, mb3.3/3, ml3.5/9, Error ellipse: s-maj=10.0km s-min=6.2km az=57.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JLN	**Jalan Bani Buh**	**2.24**	**288**	P	Pn	04 23 19.0	-0.3
JLN				S	Sn	04 23 46.5	-0.4
WBK	**Wadi Bani Khal** SNR=43	**2.78**	**294**	P	Pn	04 23 26.7	-0.1
WBK				S	Sn	04 24 02.3	+1.9
WSAR	**Wadi Sarin**	**3.34**	**302**	P	Pn	04 23 34.2	-0.3
WSAR				S	Sn	04 24 13.7	-0.6
JMDO	**Jabal Madar**	**3.46**	**285**	P	Pn	04 23 36.9	+0.7
JMDO				S	Sn	04 24 19.9	+2.7
MHTO	**MHTO** SNR=20	**3.52**	**263**	P	Pn	04 23 35.6	-1.4
MHTO				S	Sn	04 24 18.8	+0.1
SMDO	**Samad** SNR=28	**3.73**	**296**	P	Pn	04 23 40.3	+0.3
SMDO				S	Sn	04 24 25.0	+0.9
BIDO	**Bidbid** SNR=9.8	**3.88**	**302**	P	Pn	04 23 42.3	+0.4
BIDO				S	Sn	04 24 27.8	+0.2
BSY	**Bisya**	**4.37**	**288**	P	Pn	04 23 49.9	+1.3
HOQ	**Hoqain**	**4.57**	**298**	P	Pn	04 23 51.8	+0.4
HOQ				S	Sn	04 24 45.4	+0.8
SOHO	**SOHO**	**5.46**	**300**	P	Pn	04 24 02.7	-0.8
SOHO				S	Sn	04 25 08.5	+2.1
BANOM	**Banah**	**6.64**	**313**	P	Pn	04 24 19.7	-0.2
DMTO	**DMTO**	**7.39**	**241**	P	Pn	04 24 29.5	-0.6
DOK	**Doka**	**7.67**	**250**	P	Pn	04 24 33.4	-0.6
ABTO	**Aybut**	**8.93**	**244**	P	Pn	04 24 52.0	+0.6

*OSPL **21** 04:30:57.4±1.3, 18°.02N×67°.16W, h23km±67km, ML2.0, Presumed earthquake*
*RSPR **21** 04:30:58.9, 17°.90N×67°.07W, h6km, MD3.2/5*
*SDD **21** 04:31:00.0±0.5, 17°.96N×67°.05W, h10km±2km, MD3.0, ML2.5, MW2.4, Presumed earthquake*

ISC 21 04:30:58.4±1.2, 17°92N±0°.07×67°04W±0°.03, h13km±6km, n17, σ0s61/33, 16C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**0.11**	**320**	⇑*e*P	**Pg**	**04 31 01.8**	**+0.2**
CRPR				⇑*e*Sg	**Sg**	**04 31 03.5**	**-0.2**
CRPR	comp=N,4μm,0.1s			IAML		04 31 03.6	
CRPR	**Cabo Rojo, PR**	**0.11**	**320**	⇑*e*P	**Pg**	**04 31 01.7**	**+0.2**
CRPR				*e*S	**Sg**	**04 31 03.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.11**	**320**	*i* P	**Pg**	**04 31 01.7**	**+0.2**
CRPR				*e*S	**Sg**	**04 31 03.3**	**-0.5**
CRPR	comp=Z,2μm,0.2s			IAML		04 31 03.6	
GBPR	**Guanica, Bosqu**	**0.16**	**71**	⇑*e*P	**Pg**	**04 31 03.0**	**+0.7**
GBPR				*e*S	**Sb**	**04 31 06.8**	**+0.3**
LSP	**Las Mesas**	**0.25**	**349**	⇑*e*P	**Pg**	**04 31 04.4**	**+0.5**
LSP				*e*S	**Sb**	**04 31 09.2**	**-0.1**
PRSN	**Puerto Rico Se**	**0.31**	**341**	⇑*e*Pg	**Pg**	**04 31 05.3**	**+0.5**
PRSN				⇑*e*Sg	**Sg**	**04 31 08.7**	**-0.4**
PRSN	comp=N,547nm,0.2s			IAML		04 31 15.4	
PRSN	**Puerto Rico Se**	**0.31**	**341**	⇑*e*P	**Pg**	**04 31 05.5**	**+0.6**
PRSN				*e*S	**Sb**	**04 31 10.9**	**+0.1**
OBIP	**Obispado Ponce**	**0.43**	**74**	⇓*e*P	**Pb**	**04 31 07.9**	**0.0**
OBIP				*e*S	**Sb**	**04 31 14.8**	**+0.7**
OBIP	**Obispado Ponce**	**0.43**	**74**	*i* P	**Pb**	**04 31 07.8**	**0.0**
OBIP				*e*S	**Sb**	**04 31 14.4**	**+0.3**
OBIP	comp=Z,96nm,0.2s			IAML		04 31 14.9	
AGPR	**Aguadilla, PR**	**0.55**	**353**	⇑*e*Pg	**Pg**	**04 31 09.6**	**+0.4**
AGPR				⇑*e*Sg	**Sg**	**04 31 16.1**	**-0.4**
AGPR	comp=N,115nm,0.8s			IAML		04 31 19.0	
AGPR	**Aguadilla, PR**	**0.55**	**353**	⇑*e*P	**Pg**	**04 31 09.6**	**+0.4**
AGPR				*e*S	**Sb**	**04 31 17.7**	**+0.1**
IDE	**Isla Desecheo**	**0.62**	**318**	⇑*e*P	**Pg**	**04 31 10.7**	**+0.1**
IDE				*e*S	**Sb**	**04 31 20.0**	**+0.2**
ECPR	**Experimental S**	**0.75**	**58**	⇑*e*P	**Pg**	**04 31 13.1**	**+0.1**
ECPR				*e*S	**Sb**	**04 31 24.0**	**+0.5**
SJG	**San Juan**	**0.86**	**77**	*i* P	**Pb**	**04 31 13.4**	**-1.8**
SJG	comp=Z,22nm,0.1s			IAML		04 31 28.7	
GCPR	**Guaynabo City**	**0.98**	**67**	⇑*e*P	**Pb**	**04 31 17.1**	**-0.2**
GCPR				*e*S	**Sb**	**04 31 30.4**	**+0.2**
HUMP	**Col San Antoni**	**1.15**	**79**	⇑*e*P	**Pn**	**04 31 19.9**	**-0.3**
HUMP				*e*S	**Sg**	**04 31 36.5**	**+0.9**
HATOM	**Hato Mayor del**	**2.39**	**291**	⇑*e*Pg	**Pb**	**04 31 42.5**	**+1.1**
HATOM				⇓*e*Sg	**Sg**	**04 32 13.9**	**-1.3**
HATOM	comp=N,32nm,2.8s			IAML		04 32 22.5	

*IDC **21** 04:35:17.2±1.0, 4°.28S×131°.86E, h0km, mb3.8/8, mbtmp3.8/11, ML3.7/3, MS3.2/1, Error ellipse: s-maj=51.0km s-min=19.1km az=65.0*
*NEIC **21** 04:35:20.0±1.4, 4°.24S±0°.03×131°.52E±0°.09, h10km±1km, mb4.1/16, Error ellipse: s-maj=15.9km s-min=4.5km az=274.0*

ISC 21 04:35:22.2±0.6, 4°42S±0°.05×131°54E±0°.10, h35km, n40, σ2s27/44, mb4.0/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.65**	**26**		**Pn**	**04 35 47.0**	**-1.8**
FAKI				Sn	**Sn**	**04 36 06.3**	**-2.5**
SIJI	**Sorong** SNR=2.9nm,0.3s,baz=280,slow=23,SNR=1.9	**3.54**	**356**	Pn	**Pn**	**04 36 12.2**	**-2.5**
SIJI				Sn	**Sn**	**04 36 50.1**	**-5.3**
	9.6nm,0.3s,baz=221,slow=23,SNR=11 7.7nm,0.3s						
MTN	**Manton Dam**	**8.38**	**183**		**Pn**	**04 37 23.6**	**+2.4**
BATI	**Baumata** comp=Z,136nm,19.9s,baz=62,slow=38	**9.69**	**233**	LR	LR	04 41 36.3	
KNRA	**Kununurra**	**11.51**	**194**		**Pn**	**04 38 05.8**	**+1.6**
FITZ	**Fitzroy Crossi** 0.5nm,0.3s,baz=38,slow=12,SNR=14	**14.77**	**203**	Pn	**Pn**	**04 38 47.4**	**-1.2**
FITZ				Sn	**Sn**	**04 41 27.1**	**-4.0**
	0.4nm,0.3s,baz=300,slow=8.7,SNR=2.0						
COEN	**Coen**	**14.88**	**130**	Pn	**Pn**	**04 38 51.6**	**+1.4**
COEN	comp=Z,10nm,0.8s			IAmb	IAmb	04 38 59.6	
WB0	**Warramunga Arr**	**15.51**	**170**	Pn	**Pn**	**04 38 58.8**	**+0.4**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.3s,baz=341,slow=13,SNR=14	**15.67**	**170**	Pn	**Pn**	**04 38 58.5**	**-2.0**
WRA				Sn	**Sn**	**04 41 46.8**	**-6.3**
	comp=Z,0.5nm,0.3s,baz=353,slow=22,SNR=6.6 comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**15.67**	**170**		**Pn**	**04 38 58.9**	**-1.6**
WR8	**Warramunga Arr**	**15.71**	**170**	Pn	**Pn**	**04 39 01.1**	**+0.1**
AS31	**Alice Springs**	**19.27**	**173**	P	**Pn**	**04 39 47.0**	**+1.8**
ASAR	**Alice Springs** comp=Z,0.5nm,0.3s,baz=355,slow=10,SNR=44	**19.27**	**173**	P	**Pn**	**04 39 45.5**	**+0.3**
ASAR				S	**Sn**	**04 43 14.6**	**-5.7**
	comp=Z,0.6nm,0.7s,baz=354,slow=25,SNR=5.4 comp=Z,4.6nm,0.7s						
ASAR	**Alice Springs**	**19.27**	**173**	P	**Pn**	**04 39 45.8**	**+0.6**
MBWA	**Marble Bar**	**20.21**	**214**	P	**P**	**04 39 56.1**	**+1.9**
MBWA	comp=Z,10nm,1.1s			IAmb	IAmb	04 40 12.9	
PSA00	**Pilbara Seismi**	**20.48**	**213**	P	**P**	**04 39 58.9**	**+1.7**
PSA00	comp=Z,10nm,0.7s			IAmb	IAmb	04 40 00.1	
PSA00	**Pilbara Seismi**	**20.48**	**213**	P	**P**	**04 39 59.2**	**+2.0**
PSA00	comp=Z,3.8nm,0.8s			IAmb	IAmb	04 40 00.1	
CTA	**Charters Tower** comp=Z,0.7nm,0.3s,baz=312,slow=11,SNR=5.5 comp=Z,0.7nm,0.3s	**21.16**	**139**	P	**P**	**04 40 03.6**	**-1.0**
CTAO	**Charters Tower**	**21.16**	**139**	P	**P**	**04 40 08.4**	**+3.8**
CTAO				IAmb	IAmb	04 40 19.1	
	comp=Z,5.3nm,0.8s						
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.3s,baz=139,slow=8.2,SNR=6.7 comp=Z,1.0nm,0.3s	**39.35**	**306**	P	**P**	**04 42 50.1**	**+1.5**
EVN	**Everest**	**53.77**	**310**	P	**P**	**04 44 43.7**	**+1.4**
EVN	comp=Z,3.0nm,1.1s			IAmb	IAmb	04 44 57.0	
SONM	**Songino Array** comp=Z,0.3nm,0.5s,baz=157,slow=7.8,SNR=2.7 comp=Z,0.3nm,0.5s	**56.53**	**340**	P	**P**	**04 45 02.3**	**+1.1**
MKAR	**Makanchi Array** comp=Z,1.3nm,0.6s,baz=118,slow=7.6,SNR=18 comp=Z,1.3nm,0.6s	**66.95**	**326**	P	**P**	**04 46 13.0**	**+1.7**
MKAR	**Makanchi Array**	**66.95**	**326**	P	**P**	**04 46 12.6**	**+1.3**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.5s,baz=111,slow=7.9,SNR=2.0 comp=Z,0.4nm,0.5s	**69.98**	**333**	P	**P**	**04 46 30.0**	**-0.1**
KURBB	**Kurchatov Arra** comp=Z,1.1nm,0.6s,baz=127,slow=5.4,SNR=10 comp=Z,1.1nm,0.6s	**71.15**	**327**	P	**P**	**04 46 37.5**	**+0.2**
BVAR	**Borovoye Array** comp=Z,0.9nm,0.7s,baz=131,slow=6.7,SNR=4.4 comp=Z,0.9nm,0.7s	**76.73**	**327**	P	**P**	**04 47 09.9**	**0.0**
ABKAR	**Akbulak array**	**81.46**	**321**	P	**P**	**04 47 36.1**	**+0.2**
M16K	**Timber Creek**	**84.08**	**27**	P	**P**	**04 47 51.2**	**+2.0**
K17K	**Iditarod**	**84.95**	**26**	P	**P**	**04 47 55.9**	**+2.3**
K17K	comp=Z,1.7nm,1.1s			IAmb	IAmb	04 48 03.6	
J18K	**Innoko River**	**85.88**	**25**	P	**P**	**04 47 59.4**	**+1.2**
C19K	**Lookout Ridge**	**86.71**	**20**	P	**P**	**04 48 03.1**	**+0.9**
C19K	comp=Z,1.2nm,1.1s			IAmb	IAmb	04 48 19.3	
M20K	**Styx River**	**87.01**	**27**	P	**P**	**04 48 02.8**	**-1.0**
SKT	**Skwentna**	**87.77**	**27**	P	**P**	**04 48 08.2**	**+0.7**
ILAR	**Eielson Array** comp=Z,0.3nm,0.7s,baz=280,slow=5.6,SNR=4.1 comp=Z,0.3nm,0.7s	**90.38**	**25**	P	**P**	**04 48 18.5**	**-1.1**
D24K	**Happy Valley**	**90.42**	**21**	P	**P**	**04 48 21.7**	**+2.0**
BMAR	**Burnt Mountain**	**91.70**	**23**	P	**P**	**04 48 24.8**	**-1.0**
BCAR	**Beaver Creek A**	**92.40**	**27**	P	**P**	**04 48 29.5**	**+0.4**
I27K	**Kandik River**	**92.69**	**25**	P	**P**	**04 48 31.4**	**+1.0**
I28M	**Miner Creek**	**93.38**	**25**	P	**P**	**04 48 33.0**	**-0.6**

*IDC **21** 04:45:17.4±7.7, 12°.25S×166°.75E, h219km±79km, mb3.4/6, mbtmp3.9/7, Error ellipse: s-maj=74.3km s-min=26.0km az=159.0*

ISC 21 04:45:16.3±0.8, 12°42S±0°.10×166°.9E±0°.2, h220km, n11, σ1s64/13, mb3.5/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 2.1nm,0.6s,baz=307,slow=18,SNR=5.6	**9.61**	**183**	P	**P**	**04 47 35.1**	**-3.0**
DZM	2.0nm,0.7s,baz=352,slow=9.2,SNR=3.4			S	**S**	**04 49 21.7**	**+3.3**
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=83,slow=9.1,SNR=2.2 0.2nm,0.4s	**32.14**	**252**	P	**P**	**04 51 24.0**	**+0.4**
ASAR	**Alice Springs** 0.6nm,0.8s,baz=84,slow=7.8,SNR=4.9 0.6nm,0.8s	**33.25**	**246**	P	**P**	**04 51 31.6**	**-1.6**
ILAR	**Eielson Array** 3.1nm,0.6s,baz=233,slow=5.1,SNR=75 3.1nm,0.6s	**84.45**	**18**	P	**P**	**04 57 24.0**	**+0.1**
NVAR	**Mina Array Bea** 0.3nm,0.6s,baz=243,slow=6.5,SNR=3.6 0.3nm,0.6s	**86.02**	**49**	P	**P**	**04 57 32.9**	**+0.4**
MKAR	**Makanchi Array** 1.0nm,0.7s,baz=91,slow=5.5,SNR=8.9 1.0nm,0.7s	**95.32**	**317**	P	**P**	**04 58 16.6**	**+1.2**
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=264,slow=5.0,SNR=5.2 0.2nm,0.5s	**95.66**	**27**	P	**P**	**04 58 15.5**	**-1.0**
ARCES	**ARCESS Array B** 1.0nm,0.3s,baz=74,slow=1.5,SNR=11	**117.95**	**346**	PKP	**PKiKP**	**05 03 36.6**	**+0.4**
FINES	**FINESS Array B** 3.7nm,0.9s,baz=95,slow=1.5,SNR=5.1	**123.47**	**339**	PKP	**PKiKP**	**05 03 47.4**	**+0.2**
KEST	**Kesra** 2.4nm,0.7s,baz=32,slow=11,SNR=4.4	**149.21**	**323**	PKPbc	**PKiKP**	**05 04 40.6**	**+0.1**
ESDC	**Sonseca Array** 0.9nm,0.8s,baz=14,slow=3.2,SNR=6.9	**151.69**	**345**	PKPbc	**PKiKP**	**05 04 46.5**	**+1.1**
ESDC	1.0nm,0.7s,baz=10,slow=3.8,SNR=6.0			PKPab	**PKPab**	**05 04 55.0**	**+0.5**

RSPR 21 04:45:34.8, 18°.01N×66°.75W, h17km, 9C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.13**	**254**	⇑*e*P	Pg	04 45 38.7	0.0
GBPR				*e*S	Sb	04 45 41.7	+0.2
OBIP	**Obispado Ponce**	**0.14**	**77**	⇑*e*P	Pg	04 45 38.8	-0.1
OBIP				*e*S	Sb	04 45 41.7	0.0
CRPR	**Cabo Rojo, PR**	**0.34**	**269**	⇑*e*P	Pg	04 45 41.5	-0.6
CRPR				*e*S	Sg	04 45 46.5	-0.4
LSP	**Las Mesas**	**0.36**	**297**	⇑*e*P	Pg	04 45 41.8	-0.5
LSP				*e*S	Sg	04 45 47.6	+0.1
PRSN	**Puerto Rico Se**	**0.43**	**299**	⇑*e*P	Pg	04 45 42.9	-0.7
PRSN				*e*S	Sg	04 45 49.4	-0.1
ECPR	**Experimental S**	**0.48**	**50**	⇑*e*P	Pg	04 45 43.6	-0.8
ECPR				*e*S	Sg	04 45 50.7	-0.2
AGPR	**Aguadilla, PR**	**0.57**	**323**	⇑*e*P	Pg	04 45 45.1	-1.0
AGPR				*e*S	Sg	04 45 53.2	-0.6
SJG	**San Juan**	**0.58**	**80**	⇑*e*P	Pg	04 45 46.0	-0.2
SJG				*e*S	Sg	04 45 53.2	-0.8
GCPR	**Guaynabo City**	**0.70**	**65**	⇑*e*P	Pb	04 45 47.2	-1.3
GCPR				*e*S	Sg	04 45 56.5	-1.4

SDD 21 04:45:58.3±1.6, 18°.98N×67°.65W, h13km±47km, MD2.8, ML2.4, MW2.6, 5C, Presumed earthquake, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.72**	**135**	⇑*i*P	Pg	04 46 11.9	-0.5
AGPR	comp=N,325nm,0.2s			IAML		04 46 19.4	
AGPR				*i* S	Sg	04 46 19.9	-2.0
PRSN	**Puerto Rico Se**	**0.90**	**147**	⇑*i*P	Pg	04 46 15.0	-0.7
PRSN				⇑*i*S	Sg	04 46 24.0	-3.4
PRSN	comp=N,150nm,0.1s			IAML		04 46 28.9	
CRPR	**Cabo Rojo, PR**	**1.10**	**152**	*i* P	Pb	04 46 18.2	-0.9
CRPR				*i* S	Sb	04 46 31.9	-1.4
CRPR	comp=N,60nm,0.4s			IAML		04 46 36.4	
HATOM	**Hato Mayor del**	**1.65**	**264**	⇑*i*P	Pn	04 46 24.2	-2.7
HATOM				⇑*i*S	Sn	04 46 45.4	-2.6
HATOM	comp=N,22nm,1.4s			IAML		04 46 48.0	

MEX 21 05:01:33.4±0.9, 15°.89N×98°.96W, h16km±13km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.85**	**349**	*e*P	Pb	05 01 46.6	-3.3
CRIG				*e*S	Sb	05 01 56.7	-4.4
PNIG	**Pinotepa**	**0.94**	**58**	*e*P	Pb	05 01 47.8	-3.6
PNIG				*e*S	Sb	05 01 59.7	-4.0
DAIG	**Los Arroyos**	**1.30**	**330**	*e*P	Pn	05 01 53.7	-3.3
DAIG				*e*S	Sb	05 02 08.6	-5.5
MGIG	**Malinaltepec**	**1.37**	**13**	*e*P	Pn	05 01 54.9	-3.2
MGIG				*e*S	Sn	05 02 11.2	-4.8
YOIG	**Yosondua**	**1.66**	**55**	*e*P	Pn	05 01 58.5	-3.7
YOIG				*e*S	Sn	05 02 19.1	-4.2
CAIG	**El Cayaco**	**1.70**	**313**	*e*P	Pn	05 01 59.3	-3.2
CAIG				*e*S	Sn	05 02 18.5	-5.4
TLIG	**Tlapa**	**1.70**	**13**	*e*P	Pn	05 02 00.0	-2.6
TLIG				*e*S	Sn	05 02 19.6	-4.6
PEIG	**Puerto Escondi**	**1.75**	**86**	*e*P	Pn	05 01 59.9	-3.2
PEIG				*e*S	Sn	05 02 19.6	-5.6
TXIG	**Tlaxiaco**	**1.77**	**40**	*e*P	Pn	05 02 01.1	-2.5
TXIG				*e*S	Sn	05 02 13.8	-12
MEIG	**Mezcala**	**2.12**	**343**	*e*P	Pn	05 02 05.7	-2.5
MEIG				*e*S	Sn	05 02 29.5	-4.8
FTIG	**Fresnillo de T**	**2.15**	**21**	*e*P	Pn	05 02 06.2	-2.6
FTIG				*e*S	Sn	05 02 30.1	-5.2
HLIG	**Huajuapan de L**	**2.22**	**30**	*e*P	Pn	05 02 07.1	-2.7
HLIG				*e*S	Sn	05 02 31.7	-5.4
VHO	**Vista Hermosa**	**2.44**	**61**	*e*P	Pn	05 02 09.6	-3.2
VHO				*e*S	Sn	05 02 39.1	-3.3
PLIG	**Platanillo**	**2.54**	**348**	*e*P	Pn	05 02 12.4	-1.6
PLIG				*e*S	Sn	05 02 41.1	-3.6
ARIG	**Puente Sto Nin**	**2.72**	**331**	*e*P	Pn	05 02 15.3	-1.2
ARIG				*i* S	Sn	05 02 45.9	-3.2
ARIG				*e*S	Sn	05 02 45.9	-3.2
HUIG	**Huatulco**	**2.75**	**92**	*e*P	Pn	05 02 10.2	-6.6
HUIG				*e*S	Sn	05 02 42.1	-7.7
TOIG	**Toxpalan**	**2.84**	**39**	*e*P	Pn	05 02 15.9	-2.4
TOIG				*e*S	Sn	05 02 47.5	-4.8
NEUV	**Arroyo Zacate**	**3.53**	**59**	*e*S	Sn	05 03 04.2	-4.7
CMIG	**Matias Romero**	**4.09**	**72**	*e*P	Pn	05 02 33.1	-2.2
CMIG				*e*S	Sn	05 03 19.6	-3.3

*IDC **21** 05:08:49.6±2.0, 47°.73N×90°.26E, h0km, mb4.1/2, mbtmp3.7/7, ML3.0/5, Error ellipse: s-maj=23.5km s-min=17.2km az=166.0*
*NNC **21** 05:08:52.5±1.6, 47°.70N×89°.88E, h1km±6km, mb4.0, mpv3.6, Error ellipse: s-maj=11.4km s-min=8.8km az=81.0*
*ASRS **21** 05:08:56.7±0.5, 48°.N±2°×9°.0E±°, h8km, MLh3.8/10, Error ellipse: s-maj=5.2km s-min=4.3km az=172.1, confirmed*

ISC 21 05:08:51.1±1.0, 47°66N±0°.05×90°18E±0°.05, h10km, n26, σ2s09/54, 7C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**2.73**	**334**	Pn	**Pn**	**05 09 36.3**	**+1.2**
CUR				Sg	**Sg**	**05 10 17.6**	**-1.1**
DGZ	**Jazzator, Alta**	**2.74**	**319**	Pn	**Pn**	**05 09 37.4**	**+2.2**
DGZ				Pg	**Pg**	**05 09 42.1**	**-1.6**
DGZ				Sg	**Sg**	**05 10 19.9**	**+0.8**
AKAR	**Aktash**	**3.15**	**329**	Pn	**Pn**	**05 09 42.5**	**+1.5**
AKAR				Pg	**Pg**	**05 09 50.4**	**-1.1**
AKAR				Sg	**Sg**	**05 10 30.7**	**-1.8**
CHBI	**Chibit, Altay**	**3.19**	**327**	Pn	**Pn**	**05 09 43.1**	**+1.7**
CHBI				Pg	**Pb**	**05 09 49.7**	**+1.7**
CHBI				Sg	**Sg**	**05 10 31.2**	**-2.3**
ULGR	**Ulagan, Altay**	**3.31**	**335**	Pn	**Pn**	**05 09 44.5**	**+1.4**
ULGR				Pg	**Pb**	**05 09 51.5**	**+1.5**
ULGR				Sg	**Sg**	**05 10 35.3**	**-2.1**
TEL	**Teeli**	**3.37**	**0**	Pn	**Pn**	**05 09 43.3**	**-0.6**
TEL				Pg	**Pb**	**05 09 51.4**	**+0.5**
TEL				Sg	**Sb**	**05 10 32.2**	**+0.2**
TUNR	**Tungur**	**3.57**	**316**	Pg	**Pn**	**05 09 49.5**	**+2.9**
TUNR				Pg	**Pb**	**05 09 56.5**	**+2.2**
TUNR				Sg	**Sg**	**05 10 46.0**	**+0.3**
YALR	**Yailyu, Altay**	**4.44**	**339**	Sg	**Sg**	**05 11 12.3**	**-1.4**
ARTR	**Artybash**	**4.55**	**337**	Pn	**Pn**	**05 10 01.4**	**+1.3**
ARTR				Pg	**Pg**	**05 10 17.2**	**-1.1**
ARTR				Sg	**Sg**	**05 11 13.6**	**-3.7**
UKR	**Ust'-Kan**	**4.83**	**315**	Pn	**Pn**	**05 10 06.4**	**+2.5**
UKR				Pg	**Pg**	**05 10 20.5**	**-3.0**
UKR				Sg	**Sg**	**05 11 25.8**	**-0.2**
DJO	**Djoy, Khakassi**	**5.18**	**7**	Pn	**Pn**	**05 10 09.3**	**+0.7**
DJO				Pg	**Pb**	**05 10 25.5**	**+3.8**
DJO				Sg	**Sb**	**05 11 29.1**	**+5.2**
CERR	**Cheremushki**	**5.26**	**8**	Sg	**Sb**	**05 11 31.7**	**+5.3**
ARDR	**Aradan**	**5.36**	**22**	Pn	**Pn**	**05 10 11.1**	**-0.1**
ARDR				Sg	**Sb**	**05 11 31.3**	**+2.2**
MK31	**Makanchi Array** 0.8nm,0.3s,baz=90,slow=16,SNR=34	**5.44**	**264**	⇑Pn	**Pn**	**05 10 12.8**	**+0.5**
MK31	2.1nm,0.3s,baz=86,slow=18,SNR=8.1			⇑Pg	**Pb**	**05 10 27.7**	**+1.4**
MK31	11nm,0.4s,baz=96,slow=27,SNR=10			Lg	Lg	05 11 40.3	
MKAR	**Makanchi Array** 1.0nm,0.3s,baz=83,slow=17,SNR=30	**5.44**	**264**	Pn	**Pn**	**05 10 14.1**	**+1.8**
MKAR	1.8nm,0.3s,baz=80,slow=17,SNR=10.0			Pg	**Pb**	**05 10 26.3**	**0.0**
MKAR	2.1nm,0.3s,baz=80,slow=24,SNR=4.3			Sn	**Sn**	**05 11 17.8**	**+2.9**
MKAR	4.4nm,0.3s,baz=84,slow=29,SNR=6.2 1.6nm,0.5s			Lg	Lg	05 11 41.4	
VEH	**Verkhnyaya Baz**	**5.61**	**1**	Pn	**Pn**	**05 10 15.6**	**+1.0**
VEH				Sg	**Sg**	**05 11 45.2**	**-5.8**
MAKZ	**Makanchi** 4.2nm,0.6s	**5.65**	**264**	⇓Pg	**Pb**	**05 10 31.2**	**+1.4**
MAKZ	36nm,0.8s			⇓Lg	Lg	05 11 46.0	
ZALV	**Zalesovo Beam** 0.9nm,0.3s,baz=152,slow=13,SNR=9.4	**7.16**	**334**	Pn	**Pn**	**05 10 33.5**	**-2.2**
ZALV	0.9nm,0.3s,baz=156,slow=26,SNR=3.9 1.5nm,0.3s			Lg	Lg	05 12 34.8	
KURK	**Kurchatov** 1.4nm,0.3s	**8.17**	**296**	⇑Pn	**Pn**	**05 10 49.2**	**-0.4**
KURK	4.5nm,0.9s			⇑Sn	**Sn**	**05 12 20.8**	**-1.1**
KURK	14nm,0.6s			⇓Lg	Lg	05 13 07.6	
KURBB	**Kurchatov Arra** 0.8nm,0.3s,baz=102,slow=14,SNR=41	**8.20**	**296**	Pn	**Pn**	**05 10 50.1**	**+0.1**
KURBB	0.3nm,0.3s,baz=98,slow=28,SNR=5.5			Sn	**Sn**	**05 12 22.6**	**0.0**
KURBB	0.4nm,0.3s,baz=106,slow=35,SNR=7.9 5.5nm,0.5s			Lg	Lg	05 13 09.4	
KURBB	**Kurchatov Arra** 6.6nm,0.4s	**8.20**	**296**	⇓Pn	**Pn**	**05 10 49.4**	**-0.6**
KURBB	15nm,0.7s			⇓Sn	**Sn**	**05 12 21.6**	**-1.0**
KURBB	83nm,0.7s			⇑Lg	Lg	05 13 08.4	
PDGK	**Podgornoye** 1.3nm,0.5s	**8.66**	**244**	⇑Pn	**Pn**	**05 10 56.9**	**+0.3**
PDGK	3.8nm,0.5s			⇑Sn	**Sn**	**05 12 34.6**	**+0.2**
PDGK	11nm,0.7s			⇓Lg	Lg	05 13 21.7	
SONM	**Songino Array** baz=281,slow=15,SNR=2.0	**10.93**	**83**	Pn	**Pn**	**05 11 26.7**	**-0.8**
SONM	0.4nm,0.3s,baz=273,slow=30,SNR=18 0.3nm,0.6s			Lg	Lg	05 14 25.3	
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=98,slow=14,SNR=8.1 1.0nm,0.4s	**13.72**	**300

ITEG	**Tejag**	**1.74**	**232**	Pg		Pg	05 36 03.7	0.0
JRKH	**Jarkhoshk**	**1.91**	**359**	Pn		Pb	05 36 05.4	-0.1
IKOO	**Kooshah**	**1.94**	**217**	Pn		Pb	05 36 05.9	-0.2
IMYA	**Miami**	**2.35**	**355**	Pn		Pb	05 36 11.4	-1.7
TKDS	**Koohdasht(Taba**	**2.73**	**263**	Pn		Pn	05 36 16.9	+2.3
TAPT	**Tabas- Tapeh t**	**2.80**	**289**	Pn		Pn	05 36 17.9	+2.4
IKRD	**Kardeh**	**2.86**	**346**	Pn		Pn	05 36 19.0	+2.5
TPRV	**Parvadeh(Tabas**	**3.23**	**254**	Pn		Pn	05 36 23.7	+2.4
ISFR	**Sfrayin**	**3.62**	**328**	Pn		Pn	05 36 28.2	+1.3
ANAR	**Anarak**	**5.60**	**264**	Pn		Pn	05 36 56.6	+2.6
IGLO	**Ghaloghah**	**5.91**	**297**	Pn		Pn	05 37 01.1	+2.8

*JMA **21** 05:56:18.7±0.2,22°N±1°×121°4E±0°.9, h61km, MV3.6/14, TAIWAN REGION*
*TAP **21** 05:56:18.3, 22°.07N×121°.32E, h73km, ML3.7, C*
ISC 21 05:56:18.5±1.5,**22°.03N**±0°.05×**121°.34E**±0°.03,**h74**km±8km, **n116,σ0s97/206,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.19**	**88**	*i* P	**Pn**	**05 56 29.4**	**-0.2**
LAY				*i* S	**Sn**	**05 56 37.5**	**-0.2**
LYUB	**Lan-yu**	**0.23**	**97**	*i* P	**Pn**	**05 56 29.1**	**-0.6**
LYUB				*i* S	**Sn**	**05 56 37.3**	**-0.5**
TSEB	**Hengchuen, Pin**	**0.43**	**253**	P	**Pn**	**05 56 31.9**	**+0.8**
TSEB				S	**Sn**	**05 56 42.1**	**+1.8**
SMST	**Manzhou Townsh**	**0.47**	**269**	*i* P	**Pn**	**05 56 31.5**	**+0.1**
SMST				*i* S	**Sn**	**05 56 41.0**	**+0.1**
TWKBT	**Hengchun**	**0.50**	**260**	P	**Pn**	**05 56 32.1**	**+0.5**
TWKBT				eS	**Sn**	**05 56 42.1**	**+0.7**
TWK1	**Hengchun**	**0.51**	**260**	P	**Pn**	**05 56 32.1**	**+0.3**
TWK1				eS	**Sn**	**05 56 42.2**	**+0.7**
TAW	**Tawu**	**0.53**	**308**	P	**Pn**	**05 56 31.5**	**-0.4**
TAW				S	**Sn**	**05 56 40.9**	**-1.0**
SLIU	**Shizi**	**0.54**	**290**	*i* P	**Pn**	**05 56 32.1**	**0.0**
SLIU				eS	**Sn**	**05 56 42.2**	**+0.1**
HEN	**Hengchun**	**0.56**	**268**	eP	**Pn**	**05 56 32.9**	**+0.6**
HEN				eS	**Sn**	**05 56 42.9**	**+0.5**
EAST	**Anshuo**	**0.58**	**307**	*i* P	**Pn**	**05 56 32.1**	**-0.4**
EAST				eS	**Sn**	**05 56 41.5**	**-1.3**
LDUT	**Ludao**	**0.65**	**10**	eP	**Pn**	**05 56 32.9**	**-0.3**
LDUT				eS	**Sn**	**05 56 44.1**	**+0.2**
ECL	**Taimali**	**0.67**	**327**	eP	**Pn**	**05 56 32.5**	**-0.9**
ECL				eS	**Sn**	**05 56 42.8**	**-1.5**
TTN	**Taitung**	**0.74**	**346**	eP	**Pn**	**05 56 34.6**	**+0.4**
TTN				eS	**Sn**	**05 56 47.7**	**+1.9**
SCZT	**Fangliau**	**0.75**	**297**	*i* P	**Pn**	**05 56 34.1**	**-0.2**
SCZT				*i* S	**Sn**	**05 56 45.6**	**-0.4**
TWGBT	**Beinan**	**0.82**	**343**	P	**Pn**	**05 56 34.2**	**-0.9**
TWGBT	**Beinan**	**0.82**	**343**	*i* P	**Pn**	**05 56 34.4**	**-0.7**
TWGBT				*i* S	**Sn**	**05 56 45.9**	**-1.5**
TWG	**Pinlang**	**0.83**	**342**	*i* P	**Pn**	**05 56 34.1**	**-1.1**
TWG				S	**Sn**	**05 56 45.6**	**-1.9**
SSPT	**Xinbi**	**0.85**	**302**	eP	**Pn**	**05 56 35.8**	**+0.4**
SSPT				eS	**Sn**	**05 56 48.5**	**+0.6**
MASBT	**Mashibuluo**	**0.88**	**311**	*i* P	**Pn**	**05 56 35.7**	**-0.1**
MASBT				S	**Sn**	**05 56 47.7**	**-0.8**
LONT	**Longtian**	**0.89**	**347**	eP	**Pn**	**05 56 35.6**	**-0.4**
LONT				eS	**Sn**	**05 56 48.5**	**-0.4**
TSMG	**Majia**	**0.93**	**316**	eP	**Pn**	**05 56 36.3**	**-0.1**
TSMG				eS	**Sn**	**05 56 49.5**	**-0.2**
WLCH	**Liuqiu**	**0.95**	**290**	eS	**Sn**	**05 56 53.3**	**+3.0**
TWP	**Hsiaoliuchiu**	**0.96**	**289**	eS	**Sn**	**05 56 53.3**	**+3.0**
SSD	**Sandimen**	**0.97**	**317**	eP	**Pn**	**05 56 36.6**	**-0.2**
SSD				eS	**Sn**	**05 56 49.4**	**-1.1**
CHKT	**Chengkung**	**1.06**	**1**	eP	**Pn**	**05 56 38.0**	**0.0**
CHKT				eS	**Sn**	**05 56 52.1**	**-0.4**
SLGT	**Liugui**	**1.16**	**326**	P	**Pn**	**05 56 39.4**	**+0.2**
SLGT				S	**Sn**	**05 56 54.4**	**-0.2**
CHKH	**Chenggong**	**1.16**	**2**	*i* P	**Pn**	**05 56 39.6**	**+0.4**
CHKH				*i* S	**Sn**	**05 56 54.5**	**-0.1**
SCST	**Cishan**	**1.16**	**317**	eP	**Pn**	**05 56 40.1**	**+0.9**
TWM1	**Shoushan**	**1.16**	**313**	P	**Pn**	**05 56 40.4**	**+1.1**
TWM1				eS	**Sn**	**05 56 57.3**	**+2.5**
FULB	**Fuli**	**1.16**	**358**	eP	**Pn**	**05 56 39.9**	**+0.5**
FULB				eS	**Sn**	**05 56 55.2**	**+0.4**
WSSB	**Gushan**	**1.17**	**301**	eP	**Pn**	**05 56 39.7**	**+0.3**
ELDTW	**Lidau**	**1.19**	**345**	eP	**Pn**	**05 56 39.4**	**-0.4**
ELDTW				eS	**Sn**	**05 56 54.9**	**-0.7**
STYH	**Taoyuan**	**1.25**	**335**	eP	**Pn**	**05 56 40.8**	**+0.4**
STYH				S	**Sn**	**05 56 57.0**	**+0.2**
SGST	**Jiashian**	**1.26**	**326**	eP	**Pn**	**05 56 39.8**	**-0.7**
SGST				eS	**Sn**	**05 56 56.4**	**-0.6**
ECBN	**Changbin**	**1.28**	**4**	eP	**Pn**	**05 56 41.4**	**+0.6**
ECBN				eS	**Sn**	**05 56 57.6**	**0.0**
TWF1	**Yuli**	**1.32**	**358**	eP	**Pn**	**05 56 40.8**	**-0.5**
TWF1				S	**Sn**	**05 56 57.2**	**-1.1**
YULB	**Yu-li**	**1.36**	**358**	P	**Pn**	**05 56 41.8**	**0.0**
YULB	**Yu-li**	**1.36**	**358**	eP	**Pn**	**05 56 41.2**	**-0.5**
YULB				eS	**Sn**	**05 56 57.6**	**-1.7**
CHN1	**Nanshi**	**1.37**	**327**	eP	**Pn**	**05 56 42.2**	**+0.2**
CHN1				eS	**Sn**	**05 56 59.3**	**-0.4**
WTP	**Ta-pu**	**1.39**	**331**	eP	**Pn**	**05 56 42.1**	**-0.1**
WTP				eS	**Sn**	**05 56 59.9**	**-0.1**
TPUB	**Ta-pu**	**1.43**	**333**	P	**Pn**	**05 56 42.7**	**0.0**
TPUB	**Ta-pu**	**1.43**	**333**	eP	**Pn**	**05 56 43.1**	**+0.4**
TPUB				S	**Sn**	**05 57 00.5**	**-0.4**
EHYH	**Wanrong**	**1.46**	**0**	eP	**Pn**	**05 56 42.9**	**-0.1**
EHYH				eS	**Sn**	**05 57 00.7**	**-0.9**
HGSD	**Ruisui**	**1.46**	**3**	eP	**Pn**	**05 56 44.1**	**+1.1**
HGSD				eS	**Sn**	**05 57 03.2**	**+1.7**
TWK	**Hsinying**	**1.46**	**327**	eP	**Pn**	**05 56 43.4**	**+0.2**
TWK				eS	**Sn**	**05 57 01.4**	**-0.4**
EHY	**Hungye**	**1.47**	**359**	P	**Pn**	**05 56 42.7**	**-0.5**
EHY				eS	**Sn**	**05 57 00.8**	**-1.1**
SSHA	**Shanhua**	**1.47**	**319**	eS	**Sn**	**05 57 02.2**	**+0.4**
ALS	**Alishan**	**1.56**	**341**	P	**Pn**	**05 56 44.9**	**+0.2**
ALS				S	**Sn**	**05 57 04.8**	**+0.5**
SCLT	**Jiali**	**1.56**	**317**	eS	**Sn**	**05 57 03.8**	**-0.1**
WCKO	**Fanlu**	**1.56**	**334**	eS	**Sn**	**05 57 03.9**	**0.0**
TSCK	**Chigu Township**	**1.61**	**314**	eP	**Pn**	**05 56 45.8**	**+0.8**
TSCK				eS	**Sn**	**05 57 05.2**	**+0.1**
ICHU	**Yijhu**	**1.65**	**324**	eP	**Pn**	**05 56 45.5**	**-0.1**
ICHU				eS	**Sn**	**05 57 05.5**	**-0.5**
CHN5	**Tsauling**	**1.68**	**339**	eP	**Pn**	**05 56 45.9**	**+0.8**
CHN5				S	**Sn**	**05 57 06.7**	**-0.1**
CHN8	**Yiju**	**1.68**	**322**	eP	**Pn**	**05 56 45.3**	**-0.7**
CHN8				eS	**Sn**	**05 57 06.0**	**-0.7**
TEGC	**Jichi Village**	**1.68**	**6**	eP	**Pn**	**05 56 46.3**	**+0.3**
TEGC				eS	**Sn**	**05 57 07.7**	**+0.9**
WARBT	**Fenglin Townsh**	**1.68**	**1**	eP	**Pn**	**05 56 45.4**	**-0.7**
WARBT				eS	**Sn**	**05 57 05.6**	**-1.3**
CHY	**Chiayi**	**1.69**	**330**	eS	**Sn**	**05 57 06.5**	**-0.5**
CHN2	**Minshiung**	**1.70**	**332**	eP	**Pn**	**05 56 47.0**	**+0.8**
WHYT	**Xinyi Township**	**1.72**	**345**	eP	**Pn**	**05 56 48.9**	**+2.3**
WHYT				eS	**Sn**	**05 57 08.1**	**+0.3**
VWDT	**VWDT**	**1.73**	**354**	eP	**Pn**	**05 56 47.5**	**+0.9**
VWDT				eS	**Sn**	**05 57 08.8**	**+0.9**
SHUL	**Shoufeng**	**1.76**	**7**	eP	**Pn**	**05 56 47.7**	**+0.6**
SHUL				eS	**Sn**	**05 57 09.7**	**+1.0**
SSLB	**Suanglung**	**1.79**	**348**	P	**Pn**	**05 56 47.9**	**+0.5**
SSLB	**Suanglung**	**1.79**	**348**	P	**Pn**	**05 56 47.6**	**+0.2**
SSLB				S	**Sn**	**05 57 09.7**	**+0.3**
WGK	**Gukeng**	**1.80**	**337**	eS	**Sn**	**05 57 09.5**	**+0.1**
WSL	**Shuilin Townsh**	**1.81**	**325**	eP	**Pn**	**05 56 47.7**	**0.0**
WSL				eS	**Sn**	**05 57 09.0**	**-0.8**
WDLH	**Douliu**	**1.81**	**336**	eS	**Sn**	**05 57 09.7**	**-0.2**
TEYL	**Yanliau Villag**	**1.84**	**7**	eP	**Pn**	**05 56 49.2**	**+1.1**
TEYL				eS	**Sn**	**05 57 12.1**	**+1.4**
WTK	**Tuku**	**1.87**	**332**	eS	**Sn**	**05 57 10.9**	**-0.4**
SMLT	**Sun Moon Lake**	**1.89**	**348**	eP	**Pn**	**05 56 49.0**	**+0.1**
SMLT				S	**Sn**	**05 57 12.2**	**+0.3**
WSF	**Szhu**	**1.91**	**327**	eS	**Sn**	**05 57 11.0**	**-1.2**
TYC	**Yuchr**	**1.92**	**347**	eP	**Pn**	**05 56 49.1**	**-0.1**
TYC				eS	**Sn**	**05 57 12.8**	**+0.4**
OWD	**Renai**	**1.92**	**355**	eP	**Pn**	**05 56 50.4**	**+1.1**
OWD				eS	**Sn**	**05 57 13.2**	**+0.4**
ETM	**Tongmen**	**1.93**	**4**	eP	**Pn**	**05 56 49.9**	**+0.6**
WNT	**Mingjian**	**1.94**	**342**	eP	**Pn**	**05 56 50.0**	**+0.6**
WNT				eS	**Sn**	**05 57 12.9**	**0.0**
WUSB	**Renai**	**1.96**	**354**	eP	**Pn**	**05 56 50.5**	**+0.6**
WUSB				eS	**Sn**	**05 57 14.3**	**+0.5**
WDGT	**Dungji**	**1.98**	**309**	eP	**Pn**	**05 56 49.0**	**-1.0**
WDGT				eS	**Sn**	**05 57 11.0**	**-2.9**
LXIB	**Xiulin Townshi**	**1.98**	**2**	*i* P	**Pn**	**05 56 50.2**	**0.0**
LXIB				*i* S	**Sn**	**05 57 13.6**	**-0.7**
TWD	**Chiawan**	**2.05**	**6**	eP	**Pn**	**05 56 51.8**	**+0.8**
TWD				eS	**Sn**	**05 57 16.0**	**+0.3**
WCS	**Beigang Elemen**	**2.06**	**349**	eP	**Pn**	**05 56 51.6**	**+0.6**
WCS				eS	**Sn**	**05 57 15.8**	**0.0**
WRL	**Guolierlin Hig**	**2.06**	**335**	eS	**Sn**	**05 57 14.8**	**-1.1**
WHF	**Hehuan Shan**	**2.11**	**358**	eP	**Pn**	**05 56 53.5**	**+1.4**
WHF				eS	**Sn**	**05 57 17.7**	**+0.1**
VCHM	**Qimei**	**2.12**	**304**	eP	**Pn**	**05 56 50.6**	**-1.3**
VCHM				eS	**Sn**	**05 57 14.5**	**-2.9**
NACB	**Ninganchiao**	**2.15**	**6**	P	**Pn**	**05 56 52.6**	**+0.4**
NACB	**Ninganchiao**	**2.15**	**6**	P	**Pn**	**05 56 52.5**	**+0.3**
NACB				eS	**Sn**	**05 57 18.4**	**+0.5**
WCH1	**Changhua City**	**2.16**	**340**	eS	**Sn**	**05 57 18.2**	**-0.1**
ETLH	**Xiulin Townshi**	**2.17**	**3**	eP	**Pn**	**05 56 53.4**	**+0.7**
ETLH				eS	**Sn**	**05 57 17.9**	**-0.8**
TCU	**Taichung**	**2.19**	**344**	eS	**Sn**	**05 57 18.6**	**-0.5**
PHUB	**P'eng-hu**	**2.20**	**312**	eP	**Pn**	**05 56 53.0**	**+0.1**
PHUB				eS	**Sn**	**05 57 15.8**	**-3.5**
FUSS	**Fushou**	**2.21**	**358**	eP	**Pn**	**05 56 54.9**	**+1.6**
FUSS				eS	**Sn**	**05 57 20.9**	**+1.1**
TWT	**Tachien**	**2.22**	**356**	eP	**Pn**	**05 56 54.6**	**+1.3**
TWT				eS	**Sn**	**05 57 21.4**	**+1.4**
PNG	**Penghu**	**2.25**	**313**	eP	**Pn**	**05 56 53.2**	**-0.4**
PNG				eS	**Sn**	**05 57 17.9**	**-2.6**
EOS4	**EOS4**	**2.27**	**23**	eP	**Pn**	**05 56 53.9**	**+0.4**
EOS4				eS	**Sn**	**05 57 20.2**	**-0.1**
WHP	**Taichung City**	**2.27**	**351**	eP	**Pn**	**05 56 54.3**	**+0.4**
WHP				eS	**Sn**	**05 57 21.3**	**+0.3**
TWQ1	**Liyutan**	**2.37**	**347**	eP	**Pn**	**05 56 55.4**	**+0.1**
TWQ1				eS	**Sn**	**05 57 22.6**	**-0.7**
NNSB	**Datong**	**2.39**	**1**	eP	**Pn**	**05 56 57.1**	**+1.5**
NNSB				eS	**Sn**	**05 57 25.0**	**+1.1**
EOS3	**EOS3**	**2.42**	**22**	eP	**Pn**	**05 56 56.4**	**+0.6**
EOS3				eS	**Sn**	**05 57 24.5**	**+0.2**
LATG	**Datong**	**2.50**	**4**	eP	**Pn**	**05 56 57.5**	**+0.4**
LATG				eS	**Sn**	**05 57 27.7**	**+1.0**
NFF	**Wufeng Townshi**	**2.60**	**355**	eP	**Pn**	**05 56 59.2**	**+0.8**
TWC	**Suao**	**2.61**	**10**	eP	**Pn**	**05 56 59.7**	**+1.2**
TWC				eS	**Sn**	**05 57 29.9**	**+0.8**
NDS	**Dongshan**	**2.61**	**7**	eP	**Pn**	**05 56 59.2**	**+0.7**
NDS				eS	**Sn**	**05 57 29.6**	**+0.3**
YHNB	**Yeheng**	**2.63**	**1**	P	**Pn**	**05 57 00.1**	**+1.3**
YHNB	**Yeheng**	**2.63**	**1**	P	**Pn**	**05 57 00.7**	**+1.9**
YHNB				eS	**Sn**	**05 57 30.5**	**+0.8**
NSK	**Sanguang**	**2.63**	**0**	eP	**Pn**	**05 57 01.0**	**+2.1**
NSK				eS	**Sn**	**05 57 31.0**	**+1.1**
FUSB	**Fushanzhiwuyua**	**2.73**	**5**	eP	**Pn**	**05 57 01.8**	**+1.7**
FUSB				eS	**Sn**	**05 57 31.4**	**-0.7**
NWLT	**Wulai**	**2.74**	**3**	eP	**Pn**	**05 57 01.7**	**+1.5**
NWLT				eS	**Sn**	**05 57 33.1**	**+0.8**
JYNG	**Yonagunijimaku**	**2.82**	**31**	eS	**Sn**	**05 57 34.5**	**+0.2**
YOJ	**Yonaguni jima**	**2.87**	**32**	P	**Pn**	**05 57 02.4**	**+0.5**
YOJ	**Yonaguni jima**	**2.87**	**32**	eP	**Pn**	**05 57 02.4**	**+0.5**
YOJ				eS	**Sn**	**05 57 35.2**	**-0.1**
YOJ	**Yonaguni jima**	**2.87**	**32**	eP	**Pn**	**05 57 02.6**	**+0.7**
YOJ				eS	**Sn**	**05 57 35.8**	**+0.5**
TIPB	**Shuangxi**	**2.96**	**8**	P	**Pn**	**05 57 05.1**	**+1.8**
TIPB				eS	**Sn**	**05 57 39.1**	**+1.3**
HATJ	**Hateruma jima**	**3.03**	**48**	eP	**Pn**	**05 57 04.3**	**+0.1**
HATJ				eS	**Sn**	**05 57 38.4**	**-1.1**
IRIF	**Iriomote-Funau**	**3.17**	**43**	eP	**Pn**	**05 57 06.5**	**+0.3**
IRIF				eS	**Sn**	**05 57 43.0**	**+0.1**
JKRS	**Kuro-shima**	**3.29**	**48**	eP	**Pn**	**05 57 08.1**	**+0.3**
JKRS				*i* S	**Sn**	**05 57 45.1**	**-0.7**
JIJ	**Ishigaki jima**	**3.47**	**47**	eP	**Pn**	**05 57 10.1**	**-0.1**
JIJ				*i* S	**Sn**	**05 57 47.6**	**-2.4**
JISG	**Ishigakijimahi**	**3.73**	**46**	eP	**Pn**	**05 57 13.0**	**-0.7**
JISG				*i* S	**Sn**	**05 57 55.2**	**-1.2**
JTJ	**Tarama**	**4.03**	**49**	eP	**Pn**	**05 57 17.9**	**0.0**
JTJ				eS	**Sn**	**05 58 03.0**	**-0.9**

IDC 21 06:10:44.9±7.1,**27°.31N**×**141°.45E,h0**km,**mb3.4**/5, **mbtmp3.4/5,Error ellipse: s-maj=289.9km s-min=25.0km az=72.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.48**	**189**	P	P	06 19 21.7	0.0
	0.5nm,0.4s,baz=11,slow=7.9,SNR=8.2						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**49.83**	**309**	P	P	06 19 40.9	+1.2
	0.2nm,0.5s,baz=90,slow=5.8,SNR=2.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**51.20**	**189**	P	P	06 19 49.9	-0.3
	0.2nm,0.6s,baz=9.4,slow=7.1,SNR=1.5						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**52.42**	**314**	P	P	06 19 58.7	-0.3
	0.3nm,0.5s,baz=91,slow=8.1,SNR=6.3						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**57.44**	**317**	P	P	06 20 34.5	-0.9
	0.3nm,0.4s,baz=79,slow=7.5,SNR=2.5						
	0.3nm,0.4s						

*NEIC **21** 06:22:05.8±1.2, 17°.69N±0°.03×66°.88W±0°.01, h10km±2km, ML3.9/45, Md3.4/5(RSPR), Error ellipse: s-maj=5.2km s-min=3.0km az=15.0*
*OSPL **21** 06:22:07.7±0.7, 17°.74N×66°.89W, h3km±999km, ML3.3, Presumed earthquake*
*SDD **21** 06:22:07.5±1.3, 17°.72N×66°.92W, h17km±17km, MD3.9, ML3.7, MW4.0, Presumed earthquake*
*RSPR **21** 06:22:07.8, 17°.83N×66°.87W, h2km, MD3.4/5*
ISC 21 06:22:07.6±1.1,**17°.81N**±0°.06×**66°.88W**±0°.02,**h17**km±7km, **n59,σ0s73/76,14C-11D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.16**	**1**		**Pb**	**06 22 11.4**	**-0.8**
GBPR	**Guanica, Bosqu**	**0.16**	**1**	⇑*eP*	**Pb**	**06 22 11.4**	**-0.8**
MLPR	**Magueyes Islan**	**0.22**	**316**		**Pg**	**06 22 12.4**	**-0.3**
MLPR				IAML		06 22 16.8	
	12μm,0.6s						
MLPR				IAML		06 22 18.0	
	12μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.29**	**312**		**Pg**	**06 22 13.8**	**-0.1**
CRPR				IAML		06 22 19.6	
	16μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.29**	**312**	⇓*eP*	**Pg**	**06 22 14.1**	**+0.2**
CRPR				⇑*eSg*	**Sg**	**06 22 18.5**	**+0.3**
CRPR				IAML		06 22 18.8	
	comp=N,31μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**312**	⇑*eP*	**Pg**	**06 22 13.8**	**-0.1**
CRPR				*eS*	**Sg**	**06 22 18.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.29**	**312**	*i* P	**Pg**	**06 22 13.9**	**0.0**
CRPR				*eS*	**Sg**	**06 22 18.4**	**+0.1**
CRPR				IAML		06 22 18.7	
	comp=Z,13μm,0.3s						
OBIP	**Obispado Ponce**	**0.35**	**48**		**Pg**	**06 22 14.5**	**-0.4**
OBIP	**Obispado Ponce**	**0.35**	**48**		**Sg**	**06 22 20.2**	**+0.3**
OBIP	**Obispado Ponce**	**0.35**	**48**	⇓*iP*	**Pg**	**06 22 14.7**	**-0.2**
OBIP				*eS*	**Sg**	**06 22 20.2**	**+0.3**
OBIP	**Obispado Ponce**	**0.35**	**48**	*i* P	**Pg**	**06 22 14.7**	**-0.2**
OBIP				*eS*	**Sg**	**06 22 20.1**	**+0.3**
OBIP				IAML		06 22 20.5	
	comp=Z,1μm,0.6s						
CELP	**Cerrillos**	**0.39**	**47**		**Pg**	**06 22 15.3**	**-0.3**
LSP	**Las Mesas**	**0.41**	**332**		**Pg**	**06 22 16.0**	**-0.1**
LSP	**Las Mesas**	**0.41**	**332**	⇓*eP*	**Pg**	**06 22 16.0**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.47**	**19**		**Pg**	**06 22 16.5**	**-0.5**
PRSN	**Puerto Rico Se**	**0.48**	**328**		**Pg**	**06 22 16.8**	**-0.4**
PRSN				IAML		06 22 29.5	
	comp=Z,10μm,0.3s						
PRSN	**Puerto Rico Se**	**0.48**	**328**		**Sb**	**06 22 24.9**	**+0.6**
PRSN	**Puerto Rico Se**	**0.48**	**328**	⇓*ePg*	**Pg**	**06 22 17.4**	**+0.2**
PRSN				⇑*eSg*	**Sb**	**06 22 25.3**	**+1.0**
PRSN				IAML		06 22 27.3	
	comp=N,11μm,0.2s						
PRSN	**Puerto Rico Se**	**0.48**	**328**	⇑*eP*	**Pg**	**06 22 17.0**	**-0.2**
PRSN				*eS*	**Sb**	**06 22 24.9**	**+0.6**
AGPR	**Aguadilla, PR**	**0.69**	**342**		**Pb**	**06 22 20.6**	**-0.5**
AGPR				IAML		06 22 33.8	
	comp=N,3μm,0.8s						
AGPR				IAML		06 22 39.5	
	comp=N,3μm,1.1s						
AGPR	**Aguadilla, PR**	**0.69**	**342**	⇓*ePg*	**Pb**	**06 22 21.0**	**-0.2**
AGPR				⇓*eSg*	**Sg**	**06 22 30.5**	**+0.2**
AGPR				IAML		06 22 39.2	
	comp=N,3μm,0.9s						
AGPR	**Aguadilla, PR**	**0.69**	**342**	⇑*eP*	**Pb**	**06 22 20.7**	**-0.5**
AGPR				*eS*	**Sg**	**06 22 30.6**	**+0.3**
ECPR	**Experimental S**	**0.71**	**44**		**Pb**	**06 22 20.8**	**-0.7**
ECPR				IAML		06 22 32.8	
	comp=N,4μm,0.3s						
ECPR	**Experimental S**	**0.71**	**44**	⇓*eP*	**Pb**	**06 22 20.8**	**-0.7**
ECPR				*eS*	**Sb**	**06 22 30.9**	**0.0**
SJG	**San Juan**	**0.76**	**67**		**Pb**	**06 22 21.8**	**-0.5**
SJG	**San Juan**	**0.76**	**67**	*eP*	**Pb**	**06 22 22.0**	**-0.4**
SJG	**San Juan**	**0.76**	**67**	⇑*ePg*	**Pb**	**06 22 22.1**	**-0.2**
SJG				⇓*eSg*	**Sg**	**06 22 33.3**	**+0.9**
SJG	**San Juan**	**0.76**	**67**	⇑*eP*	**Pb**	**06 22 21.9**	**-0.4**
SJG				*eS*	**Sg**	**06 22 33.0**	**+0.6**
SJG	**San Juan**	**0.76**	**67**	*i* P	**Pb**	**06 22 21.8**	**-0.5**
SJG				*eS*	**Sg**	**06 22 33.0**	**+0.6**
SJG				IAML		06 22 36.7	
	comp=Z,1μm,0.2s						
IDE	**Isla Desecheo**	**0.80**	**316**		**Pb**	**06 22 22.7**	**-0.4**
IDE	**Isla Desecheo**	**0.80**	**316**	⇑*eP*	**Pb**	**06 22 22.7**	**-0.4**
PDPR	**Patillas Dam,**	**0.84**	**76**		**Pb**	**06 22 23.2**	**-0.6**
GCPR	**Guaynabo City**	**0.91**	**57**		**Pb**	**06 22 23.9**	**-1.0**
GCPR	**Guaynabo City**	**0.91**	**57**		**Sb**	**06 22 36.7**	**0.0**
GCPR	**Guaynabo City**	**0.91**	**57**	⇑*eP*	**Pb**	**06 22 24.2**	**-0.7**
GCPR				*eS*	**Sb**	**06 22 36.7**	**0.0**
HUMP	**Col San Antoni**	**1.04**	**71**		**Pb**	**06 22 26.4**	**-0.6**
HUMP	**Col San Antoni**	**1.04**	**71**		**Sn**	**06 22 40.9**	**-0.5**
HUMP	**Col San Antoni**	**1.04**	**71**	⇑*eP*	**Pb**	**06 22 26.6**	**-0.4**
HUMP				*eS*	**Sn**	**06 22 40.9**	**-0.5**
PCDR	**Punta Cana, DR**	**1.59**	**296**	⇑*ePg*	**Pn**	**06 22 34.9**	**0.0**
PCDR				IAML		06 23 09.7	
	comp=N,429nm,0.8s						
PCDR				IAML		06 23 19.6	
	comp=N,781nm,0.7s						
CUPR	**Culebra, Puert**	**1.60**	**72**		**Pn**	**06 22 35.7**	**+0.7**
DR12	**Loma Pena Alta**	**2.57**	**293**		**Pn**	**06 22 50.0**	**+1.6**
HATOM	**Hato Mayor del**	**2.57**	**293**	⇓*ePg*	**Pn**	**06 22 50.5**	**+2.1**
HATOM				⇓*eSg*	**Sb**	**06 23 23.8**	**-0.7**
HATOM				IAML		06 23 33.3	
	comp=N,154nm,0.5s						
SMDR	**Samana, DR**	**2.64**	**304**	⇑*ePg*	**Pb**	**06 22 53.7**	**-0.7**
SMDR				⇓*eSg*	**Sb**	**06 23 27.3**	**+0.8**
SMDR				IAML		06 23 39.1	
	comp=N,188nm,0.6s						
NADR	**Nagua**	**3.21**	**299**	*ePg*	**Pb**	**06 23 02.4**	**-1.8**
NADR				⇑*eSg*	**Sb**	**06 23 43.9**	**+0.9**
NADR				IAML		06 23 56.6	
	comp=N,874nm,0.6s						
BANI	**BANI**	**3.36**	**280**		**Pn**	**06 22 58.0**	**-1.4**
SABA	**Saba**	**3.47**	**93**	Pn	**Pn**	**06 23 00.5**	**-0.4**
SABA				IAML		06 23 51.2	
	comp=N,212nm,0.8s						
SABA				IAML		06 24 15.3	
	comp=E,337nm,0.9s						
SMRT	**St. Maarten**	**3.63**	**86**	Pn	**Pn**	**06 23 03.1**	**0.0**
SMRT				IAML		06 23 54.1	
	comp=E,209nm,0.1s						
SMRT				IAML		06 23 58.7	
	comp=N,136nm,0.4s						
SKI	**Saint Kitts**	**3.98**	**96**	*eP*	**Pn**	**06 23 09.5**	**+1.7**
SC01	**Santiago de lo**	**3.99**	**294**		**Pn**	**06 23 09.0**	**+1.1**
S

SBLS				*e*S		**Sb**	**06 27 50.4**	**+0.3**
SNJE	**San Jose**	**1.11**	**324**	*e*P		**Pn**	**06 27 35.5**	**-0.1**
RTR	**El Retiro**	**1.16**	**323**	*e*P		**Pb**	**06 27 36.8**	**-0.1**
UNIC	**Universidad Ca**	**1.18**	**330**	P		**Pn**	**06 27 36.5**	**+0.2**
UNIC	**Universidad Ca**	**1.18**	**330**	*e*P		**Pn**	**06 27 36.5**	**+0.2**
UNIC				*e*S		**Sn**	**06 27 51.5**	**-0.1**
LLGN	**La Laguna**	**1.19**	**360**	P		**Pn**	**06 27 36.6**	**0.0**
LLGN				S		**Sb**	**06 27 52.4**	**-0.2**
NUBE	**Las Nubes**	**1.25**	**319**	P		**Pn**	**06 27 37.2**	**-0.1**
NUBE				S		**Sn**	**06 27 53.0**	**-0.4**
NUBE	**Las Nubes**	**1.25**	**319**	*e*P		**Pn**	**06 27 37.3**	**-0.1**
NUBE				*e*S		**Sn**	**06 27 52.7**	**-0.6**
NUBE	**Las Nubes**	**1.25**	**319**	*i* P		**Pn**	**06 27 37.2**	**-0.1**
NUBE				*i* S		**Sn**	**06 27 52.6**	**-0.8**
CSGN	**Cosiguina Volc**	**1.34**	**89**	P		**Pn**	**06 27 38.5**	**0.0**
CSGN				S		**Sn**	**06 27 56.1**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.34**	**322**	P		**Pn**	**06 27 38.9**	**+0.4**
SLOZ				S		**Sn**	**06 27 55.6**	**0.0**
RBDL	**Robledal**	**1.36**	**328**	*e*P		**Pn**	**06 27 38.7**	**-0.2**
FAME	**Alcaldia de Sa**	**1.37**	**310**	P		**Pn**	**06 27 38.5**	**-0.4**
FAME				S		**Sn**	**06 27 56.0**	**-0.2**
MTO3	**Montecristo**	**1.49**	**344**	P		**Pn**	**06 27 40.4**	**-0.3**
MTO3				S		**Sn**	**06 27 58.8**	**-0.6**
MTO3	**Montecristo**	**1.49**	**344**	*e*P		**Pn**	**06 27 40.8**	**+0.1**
MTO3	**Montecristo**	**1.49**	**344**	*i* P		**Pn**	**06 27 40.8**	**+0.1**
ESQI	**Esquipulas**	**1.64**	**346**	P		**Pn**	**06 27 42.7**	**0.0**
ESQI				S		**Sn**	**06 28 03.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.95**	**56**	P		**Pn**	**06 27 45.0**	**-1.9**
TGUH				S		**Sn**	**06 28 09.9**	**-0.8**
CNGN	**Cerro Negro**	**2.23**	**102**	P		**Pn**	**06 27 50.1**	**-0.6**
CNGN				S		**Sn**	**06 28 18.2**	**+0.6**
MACN	**El Madrono**	**2.26**	**102**	P		**Pn**	**06 27 51.3**	**+0.1**
MACN				S		**Sn**	**06 28 18.1**	**-0.1**
COPN	**Copaltepe**	**2.42**	**108**	P		**Pn**	**06 27 53.8**	**+0.5**
LIMN	**Finca el Limon**	**2.50**	**87**	P		**Pn**	**06 27 54.0**	**-0.6**
LIMN				S		**Sn**	**06 28 24.2**	**-0.2**

*NEIC **21** 06:27:38.2±1.0, 17.°85N±0.°03×66.°88W±0.°01, h10km±1km, ML2.5/35, Md3.0/7(RSPR), Error ellipse: s-maj=4.3km s-min=2.8km az=3.0*
*OSPL **21** 06:27:38.6±0.3, 17.°83N×66.°90W, h10km±3km, ML1.8, Presumed earthquake*
*RSPR **21** 06:27:38.7, 17.°88N×66.°90W, h11km, MD3.0/7*

ISC 21 06:27:36.6±1.3, 17.°79N±0.°06×66.°90W±0.°03, h18km±4km, n38, σ0°51/55, 6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.18**	**6**		**Pg**	**06 27 41.6**	**+0.3**
GBPR					**Sg**	**06 27 43.6**	**-0.9**
GBPR	**Guanica, Bosqu**	**0.18**	**6**	⇓*i*P	**Pg**	**06 27 41.6**	**+0.3**
GBPR				*e*S	**Sg**	**06 27 43.6**	**-0.9**
MLPR	**Magueyes Islan**	**0.23**	**322**		**Pg**	**06 27 42.5**	**+0.6**
MLPR				IAML		06 27 45.9	
	1µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**317**		**Pg**	**06 27 43.7**	**+0.7**
CRPR					**Sg**	**06 27 47.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**317**	IAML		06 27 48.0	
	732nm,0.3s						
CRPR				IAML		06 27 48.9	
	592nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.29**	**317**	⇑*i*P	**Pg**	**06 27 43.7**	**+0.7**
CRPR				*e*S	**Sg**	**06 27 47.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**317**	*i* P	**Pg**	**06 27 43.7**	**+0.7**
CRPR				*e*S	**Sg**	**06 27 47.3**	**-0.1**
CRPR				IAML		06 27 47.9	
	comp=Z,634nm,0.1s						
OBIP	**Obispado Ponce**	**0.37**	**48**		**Sb**	**06 27 50.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.37**	**48**		**Pb**	**06 27 44.9**	**+0.2**
OBIP				IAML		06 27 51.2	
	comp=N,69nm,0.3s						
OBIP	**Obispado Ponce**	**0.37**	**48**	⇓*i*P	**Pb**	**06 27 45.1**	**+0.4**
OBIP				*e*S	**Sb**	**06 27 50.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.37**	**48**	*i* P	**Pb**	**06 27 45.1**	**+0.4**
OBIP				*e*S	**Sb**	**06 27 50.1**	**-0.2**
OBIP				IAML		06 27 51.7	
	comp=Z,74nm,0.2s						
CELP	**Cerrillos**	**0.41**	**47**		**Pb**	**06 27 45.6**	**+0.2**
CELP				IAML		06 27 52.0	
	comp=Z,477nm,0.2s						
LSP	**Las Mesas**	**0.42**	**335**		**Pg**	**06 27 45.6**	**+0.3**
LSP					**Sg**	**06 27 51.0**	**-0.1**
LSP	**Las Mesas**	**0.42**	**335**	⇓*i*P	**Pg**	**06 27 45.6**	**+0.3**
LSP				*e*S	**Sg**	**06 27 51.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.48**	**331**		**Pg**	**06 27 46.6**	**+0.3**
PRSN					**Sg**	**06 27 52.8**	**-0.1**
PRSN	**Puerto Rico Se**	**0.48**	**331**	IAML		06 27 53.2	
	comp=Z,695nm,0.2s						
PRSN				IAML		06 27 56.0	
	comp=Z,793nm,0.3s						
PRSN	**Puerto Rico Se**	**0.48**	**331**	⇑*i*P	**Pg**	**06 27 46.6**	**+0.3**
PRSN				*e*S	**Sg**	**06 27 52.8**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.49**	**20**		**Pg**	**06 27 46.4**	**-0.1**
AGPR	**Aguadilla, PR**	**0.70**	**343**		**Pg**	**06 27 50.1**	**-0.3**
AGPR				IAML		06 27 58.9	
	comp=Z,325nm,0.3s						
AGPR				IAML		06 27 58.9	
	comp=Z,303nm,0.3s						
AGPR	**Aguadilla, PR**	**0.70**	**343**	⇑*i*P	**Pg**	**06 27 50.2**	**-0.2**
AGPR				*e*S	**Sg**	**06 27 58.7**	**-1.1**
ECPR	**Experimental S**	**0.73**	**44**		**Pg**	**06 27 50.8**	**-0.2**
ECPR				IAML		06 28 01.2	
	comp=Z,280nm,0.2s						
ECPR				IAML		06 28 01.4	
	comp=Z,216nm,0.2s						
ECPR	**Experimental S**	**0.73**	**44**	⇓*i*P	**Pg**	**06 27 50.9**	**-0.1**
ECPR				*e*S	**Sg**	**06 28 00.1**	**-0.6**
SJG	**San Juan**	**0.78**	**66**		**Pg**	**06 27 52.2**	**+0.3**
SJG	**San Juan**	**0.78**	**66**	*e*P	**Pn**	**06 27 52.7**	**0.0**
SJG	**San Juan**	**0.78**	**66**	⇑*i*P	**Pg**	**06 27 52.4**	**+0.5**
SJG				*e*S	**Sg**	**06 28 02.6**	**+0.4**
SJG	**San Juan**	**0.78**	**66**	*i* P	**Pg**	**06 27 52.4**	**+0.5**
SJG				*e*S	**Sg**	**06 28 02.6**	**+0.4**
SJG				IAML		06 28 03.7	
	comp=Z,38nm,0.8s						
IDE	**Isla Desecheo**	**0.81**	**317**		**Pb**	**06 27 52.4**	**+0.3**
IDE					**Sb**	**06 28 02.8**	**+0.1**
IDE	**Isla Desecheo**	**0.81**	**317**	⇑*i*P	**Pb**	**06 27 52.4**	**+0.3**
IDE				*e*S	**Sb**	**06 28 02.8**	**+0.1**
PDPR	**Patillas Dam,**	**0.86**	**75**	Pg	**Pg**	**06 27 54.1**	**+0.6**
GCPR	**Guaynabo City**	**0.93**	**56**		**Pb**	**06 27 54.5**	**+0.4**
GCPR	**Guaynabo City**	**0.93**	**56**		**Sb**	**06 28 05.5**	**-0.7**
GCPR	**Guaynabo City**	**0.93**	**56**	⇓*i*P	**Pb**	**06 27 54.6**	**+0.4**
GCPR				*e*S	**Sb**	**06 28 05.5**	**-0.7**
HUMP	**Col San Antoni**	**1.06**	**71**		**Pn**	**06 27 57.0**	**+0.5**
HUMP					**Sb**	**06 28 10.2**	**+0.3**
HUMP	**Col San Antoni**	**1.06**	**71**	IAML		06 28 14.2	
	comp=Z,123nm,0.2s						
HUMP				IAML		06 28 14.3	
	comp=Z,109nm,0.9s						
HUMP	**Col San Antoni**	**1.06**	**71**	⇓*i*P	**Pn**	**06 27 57.0**	**+0.5**
HUMP				*e*S	**Sb**	**06 28 10.2**	**+0.3**
CUPR	**Culebra, Puert**	**1.62**	**71**		**Pb**	**06 28 06.6**	**+0.6**
DR12	**Loma Pena Alta**	**2.56**	**293**	Pn	**Pb**	**06 28 21.2**	**-0.8**
DSLB	**Salisbury**	**5.75**	**113**	*e*P	**Pb**	**06 29 14.7**	**-1.7**

IDC 21 06:41:30.5±7.8, 20.°59S×177.°50W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=340.8km s-min=41.1km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.95**	**257**	P	P	06 49 47.0	-0.8
	1.1nm,1.0s,baz=92,slow=8.1,SNR=6.0						
	1.1nm,1.0s						
WRA	**Warramunga Arr**	**45.05**	**262**	P	P	06 49 49.0	+0.5
	1.4nm,0.8s,baz=97,slow=8.6,SNR=7.7						
	1.4nm,0.8s						
ILAR	**Eielson Array**	**88.30**	**13**	P	P	06 54 23.4	-0.1
	0.6nm,0.8s,baz=223,slow=6.1,SNR=4.2						
	0.6nm,0.8s						

*VAO **21** 06:44:42.1±0.5, 9.°29S×79.°33W, h10km, mb4.9, Presumed earthquake*
*IDC **21** 06:44:47.6±2.0, 9.°32S×79.°37W, h56km±16km, mb4.3/19, mbtmp4.6/23, ML4.1/4, MS3.9/33, Error ellipse: s-maj=20.8km s-min=7.4km az=75.0*
*NEIC **21** 06:44:48.2±1.6, 9.°23S±0.°06×79.°3W±0.°1, h53km±8km, mb4.9/86, Error ellipse: s-maj=18.8km s-min=7.1km az=72.0*

ISC 21 06:44:47.0±0.6, 9.°25S±0.°04×79.°29W±0.°06, h49km±4km, n249, σ1°19/229, mb4.9/65, MS3.9/30, 1C-3D, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.28**	**23**	P	**Pn**	**06 45 24.3**	**+1.8**
	85nm,0.3s,baz=215,slow=5.3,SNR=419						
ATAH				S	**Sn**	**06 45 54.1**	**+4.5**
	3µm,0.6s,baz=309,slow=22,SNR=11						
ATAH				LR	LR	06 46 22.2	
	comp=Z,2µm,21.2s,baz=174,slow=40						
	791nm,0.7s						
NNA	**Nana**	**3.63**	**139**	P	**Pn**	**06 45 40.7**	**-0.1**
	147nm,0.3s,baz=324,slow=12,SNR=127						
NNA				S	**Sn**	**06 46 22.9**	**+0.5**
	1µm,0.4s,baz=152,slow=22,SNR=12						
	280nm,0.3s						
NNA	**Nana**	**3.63**	**139**		**Pn**	**06 45 40.5**	**-0.2**
NNA	**Nana**	**3.63**	**139**	P	**Pn**	**06 45 40.3**	**-0.4**
NNA				S	**Sn**	**06 46 16.7**	**-5.7**
MCRA	**Macar, Loja**	**4.89**	**352**	P	**Pn**	**06 45 57.9**	**-0.2**
MCRA				S	**Sn**	**06 46 50.4**	**-3.1**
COHC	**Cochancay**	**6.74**	**0**		**Pn**	**06 46 24.4**	**+1.0**
COHC	**Cochancay**	**6.74**	**0**	P	**Pn**	**06 46 25.1**	**+1.7**
	41nm2.5nm,0.7s						
PPLP	**Puerto Lpez**	**7.79**	**349**	P	**Pn**	**06 46 38.1**	**+0.2**
PPLP				S	**Sn**	**06 48 04.3**	**-0.6**
SLOR	**San Lorenzo -**	**8.50**	**5**		**Pn**	**06 46 49.1**	**+1.1**
OTAV	**Otavalo**	**9.46**	**5**		**Pb**	**06 47 02.3**	**+1.2**
OTAV	**Otavalo**	**9.46**	**5**	*e*P	**Pn**	**06 47 00.2**	**-0.9**
PAC1	**Pacto, Paraso**	**9.46**	**3**	P	**Pn**	**06 47 02.1**	**+1.2**
	2µm106nm,0.6s						
CASC	**Dorado de Casc**	**9.52**	**12**	P	**Pn**	**06 47 01.5**	**-0.2**
	1µm119nm,0.9s						
CASC				S	**Sn**	**06 48 46.7**	**-0.7**
	1µm119nm,0.9s						
CUSE	**Cuicocha Este**	**9.53**	**5**	P	Pn	06 47 06.9	+4.8
	2µm110nm,0.6s						
TULM	**Tulcn-Chalpat**	**10.01**	**9**	P	**Pn**	**06 47 10.8**	**+2.1**
	1µm175nm,1.0s						
CMBC	**Cumbal**	**10.23**	**8**	P	Pn	06 47 18.0	+6.4
GCUF	**Volcan Galeras**	**10.58**	**11**	P	**Pn**	**06 47 17.6**	**+1.1**
	69nm,0.8s						
CRUC	**La Cruz**	**10.99**	**12**	P	**Pn**	**06 47 25.3**	**+3.3**
FLOC	**Florencia**	**11.35**	**19**	P	**Pn**	**06 47 25.5**	**-1.1**
	1µm122nm,1.0s						
FLOC				P		06 47 25.6	
	1µm122nm,1.0s						
FLOC				P		06 47 26.4	
	1µm122nm,1.0s						
BBAC	**Balboa, Cauca**	**11.38**	**10**	P	**Pn**	**06 47 30.4**	**+3.2**
	40nm,0.8s						
BBAC				P		06 47 31.2	
	40nm,0.8s						
BBAC				P		06 47 32.6	
	40nm,0.8s						
GARC	**Garzon, Huila**	**11.97**	**19**	P	**Pn**	**06 47 34.4**	**-0.9**
	2µm90nm,0.4s						
GARC				S	**Sn**	**06 49 44.6**	**-3.0**
	2µm90nm,0.4s						
POPC	**Popayan, Colom**	**12.00**	**13**	P	**Pn**	**06 47 36.4**	**+0.8**
	46nm,0.9s						
MACC	**Macarena, Meta**	**12.55**	**26**	P	**Pn**	**06 47 42.2**	**-0.8**
	100nm,0.7s						
JAMC	**Jamundi, Valle**	**12.65**	**12**	P	**Pn**	**06 47 42.2**	**+2.7**
PB12	**IPOC Station P**	**12.73**	**138**	Pn	**Pn**	**06 47 46.6**	**+1.1**
LPAZ	**La Paz**	**12.93**	**124**	P	**Pn**	**06 47 50.4**	**+1.7**
	0.7nm,0.3s,baz=244,slow=7.0,SNR=3.9						
LPAZ				LR	LR	06 53 15.8	
	comp=Z,864nm,18.6s,baz=291,slow=39						
	2.4nm,0.8s						
LPAZ	**La Paz**	**12.93**	**124**		**Pn**	**06 47 48.0**	**-0.7**
LPAZ	**La Paz**	**12.93**	**124**	*e*P	**Pn**	**06 47 46.9**	**-1.8**
PB11	**IPOC Station P**	**14.00**	**139**		**Pn**	**06 48 03.0**	**+0.2**
GO01	**Chusmiza**	**14.23**	**138**	Pn	**Pn**	**06 48 03.7**	**-2.6**
PB08	**IPOC Station P**	**14.60**	**139**	Pn	**Pn**	**06 48 10.8**	**-0.2**
ROSC	**El Rosal**	**14.85**	**20**	P	**P**	**06 48 17.6**	**-1.6**
	1.9nm,0.3s,baz=232,slow=13,SNR=5.0						
ROSC				LR	LR	06 54 38.5	
	comp=Z,1µm,19.6s,baz=225,slow=40						
	3.1nm,0.3s						
ROSC	**El Rosal**	**14.85**	**20**	Pn	**Pn**	**06 48 15.2**	**+0.9**
TEFE	**Tefe**	**15.63**	**70**	*e*P	**Pn**	**06 48 22.4**	**-1.8**
PB03	**IPOC Station P**	**15.68**	**145**	Pn	**Pn**	**06 48 25.1**	**+0.2**
PIRO	**Carate, Puerto**	**18.00**	**347**	P	**P**	**06 48 53.0**	**-0.7**
GO02	**Mina Guanaco**	**18.32**	**151**	P	**Pn**	**06 48 58.3**	**+0.4**
VILB	**Vilhena**	**19.08**	**103**		**Pn**	**06 49 06.8**	**-0.1**
VILB				IAmb	IAmb	06 49 18.0	
	comp=Z,62nm,1.1s						
VILB	**Vilhena**	**19.08**	**103**	*e*P	**P**	**06 49 04.6**	**-1.1**
MACA	**Manacapuru-AM**	**19.45**	**73**		**P**	**06 49 08.9**	**-0.8**
MACA	**Manacapuru-AM**	**19.45**	**73**	*e*P	**P**	**06 49 09.8**	**+0.1**
HDC	**Heredia**	**19.72**	**346**	P	**P**	**06 49 12.8**	**+0.1**
AC02	**Maricunga**	**19.96**	**153**		**Pn**	**06 49 17.6**	**-0.1**
SDV	**Santo Domingo**	**19.97**	**26**	P	**P**	**06 49 16.5**	**+1.0**
	comp=Z,11nm,0.9s,baz=244,slow=13,SNR=9.0						
SDV				LR	LR	06 58 36.9	
	comp=Z,591nm,19.7s,baz=206,slow=41						
	comp=Z,11nm,0.9s						
SDV	**Santo Domingo**	**19.97**	**26**		**P**	**06 49 15.7**	**+0.2**
SDV	**Santo Domingo**	**19.97**	**26**	*e*P	**Pn**	**06 49 16.8**	**-0.8**
GO03	**Copiapo**	**20.15**	**156**	P	**P**	**06 49 17.7**	**+0.4**
JTS	**Las Juntas de**	**20.21**	**344**	LR	LR	06 56 03.3	
	comp=Z,419nm,20.8s,baz=169,slow=33						
JTS	**Las Juntas de**	**20.21**	**344**	P	**P**	**06 49 18.6**	**+0.6**
PTLB	**Pontes e Lacer**	**20.62**	**109**		**P**	**06 49 22.8**	**+0.4**
PTLB				IAmb	IAmb	06 49 40.8	
	comp=Z,48nm,1.1s						
PTLB	**Pontes e Lacer**	**20.62**	**109**	*e*P	**P**	**06 49 22.4**	**+0.1**
AC05	**El Transito**	**21.25**	**158**		**P**	**06 49 30.2**	**+1.0**
AC05				IAmb	IAmb	06 49 50.5	
	comp=Z,46nm,1.1s						
AHML	**Horco Molle**	**21.88**	**145**	*e*P	**P**	**06 49 42.7**	**+6.8**
BOAV	**Boa Vista**	**21.99**	**59**	P	**P**	**06 49 37.2**	**+0.1**
BOAV	**Boa Vista**	**21.99**	**59**	*e*P	**P**	**06 49 37.6**	**+0.5**
PDRB	**Porto dos Gac**	**22.31**	**98**	*e*P	**P**	**06 49 39.8**	**-0.8**
CO01	**Juntas del Tor**	**22.34**	**159**	P	**P**	**06 49 42.0**	**+0.9**
AANI	**Anillaco**	**22.66**	**151**	*e*P	**P**	**06 49 42.8**	**-1.5**
CO03	**El Pedregal**	**22.93**	**161**	P	**P**	**06 49 47.6**	**+0.6**
ACLC	**CERRO LA CRUZ**	**23.16**	**152**	*e*P	**P**	**06 49 52.5**	**+2.9**
CLDB	**Colider**	**23.18**	**96**	*e*P	**P**	**06 49 49.4**	**-0.3**
SIUN	**Universidad Ur**	**23.46**	**346**	P	**P**	**06 49 53.3**	**+1.1**
SIUN				IAmb	IAmb	06 49 54.5	
	comp=Z,32nm,1.8s						
ITTB	**Itaituba**	**23.88**	**80**	*e*P	**P**	**06 49 56.0**	**-0.2**
SALV	**Santo Antonio**	**23.94**	**108**	*e*P	**P**	**06 49 56.9**	**+0.1**
H03N2	**Juan Fernandez**	**24.08**	**179**	T	T	07 14 52.0	
	baz=359,slow=76,SNR=165						
H03N1	**Juan Fernandez**	**24.08**	**179**	T	T	07 14 39.6	
	baz=359,slow=76,SNR=166						
H03N3	**Juan Fernandez**	**24.09**	**179**	T	T	07 14 38.3	
	baz=359,slow=76,SNR=147						
MURT	**Porto Murtinho**	**24.22**	**123**	*e*P	**P**	**06 50 00.5**	**+1.2**
BDQN	**Bodoquena, MS**	**24.43**	**120**	*e*P	**P**	**06 50 01.2**	**0.0**
TGUH	**Tegucigalpa,Un**	**24.47**	**341**	P	**P**	**06 50 02.3**	**+0.6**
TGUH				IAmb	IAmb	06 50 04.7	
	comp=Z,28nm,0.8s						
VA03	**San Esteban**	**24.76**	**162**	P	**P**	**06 50 05.3**	**+1.1**
VA03				IAmb	IAmb	06 50 21.5	
	comp=Z,21nm,0.8s						
PP1B	**Ponte de Pedra**	**25.12**	**112**	*e*P	**P**	**06 50 08.1**	**+0.5**
AQDB	**Aquidauana**	**25.34**	**119**	*e*P	**P**	**06 50 10.3**	**+0.8**
MTO3	**Montecristo**	**25.53**	**337**	P	**P**	**06 50 11.2**	**-0.3**
MT08	**Bocatoma Ro**	**25.55**	**162**	P	**P**	**06 50 11.1**	**-0.4**
MT08				IAmb	IAmb	06 50 31.8	
	comp=Z,26nm,0.9s						
MT09	**Talagante**	**25.58**	**164**	P	**P**	**06 50 12.1**	**+0.4**
MT09				IAmb	IAmb	06 50 44.7	
	comp=Z,34nm,1.4s						
ESQI	**Esquipulas**	**25.67**	**337**	P	**P**	**06 50 11.0**	**-1.6**
ESQI				IAmb	IAmb	06 50 37.4	
	comp=Z,41nm,1.0s						
GO05	**Hualane**	**26.51**	**166**	P	**P**	**06 50 20.1**	**+0.2**
GO05				IAmb	IAmb	06 50 36.3	
	comp=Z,24nm,1.1s						
APG	**El Apazote**	**26.52**	**335**	LR	LR	06 59 27.0	
	comp=Z,33nm,20.6s,baz=273,slow=33						
BO02	**Sierra Bellavi**	**26.59**	**164**	P	**P**	**06 50 21.2**	**+0.5**
CPUP	**Villa Florida**	**26.86**	**132**	P	**P**	**06 50 23.9**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=354,slow=13,SNR=3.5						
CPUP				LR	LR	07 02 28.6	
	comp=Z,238nm,18.1s,baz=263,slow=40						
	comp=Z,0.7nm,0.7s						
CPUP	**Villa Florida**	**26.86**	**132**	P	**P**	**06 50 24.2**	**+1.0**
CPUP	**Villa Florida**	**26.86**	**132**	*e*P	**P**	**06 50 24.1**	**+1.0**
AMBA	**Amambai (Brazi**	**26.96**	**123**	*e*P	**P**	**06 50 25.3**	**+1.2**
ARAG	**Araguaiana, MT**	**27.56**	**106**	*e*P	**P**	**06 50 29.6**	**0.0**
SNDB	**Serra Nova Dou**	**27.64**	**98**	*e*P	**P**	**06 50 30.7**	**+0.4**
BI02	**San Fabin de**	**28.24**	**166**	P	**P**	**06 50 36.0**	**+0.5**
BI02				IAmb	IAmb	06 51 34.1	
	comp=Z,34nm,1.8s						
MLPR	**Magueyes Islan**	**29.62**	**24**	P	**P**	**06 50 45.5**	**-2.3**
MLPR				IAmb	IAmb	06 51 13.6	
	comp=Z,36nm,1.1s						
CRPR	**Cabo Rojo, PR**	**29.63**	**24**	P	**P**	**06 50 46.7**	**-1.2**
SJG	**San Juan**	**30.12**	**26**	LR	LR	07 05 47.6	
	comp=Z,126nm,18.6s,baz=189,slow=42						
MDP	**Montagnes des**	**30.14**	**63**	LR	LR	07 03 50.7	
	comp=Z,251nm,18.1s,baz=254,slow=38						
PTGB	**Pitanga**	**30.15**	**124**	*e*P	**P**	**06 50 53.9**	**+1.3**
CMIG	**Matias Romero**	**30.38**	**329**	LR	LR	07 00 55.5	
	comp=Z,208nm,21.5s,baz=174,slow=32						
LDASE	**Londrina, Braz**	**30.39**	**121**	*e*P	**P**	**06 50 53.7**	**-1.0**
TEIG	**Tepich**	**30.60**	**343**	P	**P**	**06 50 56.2**	**-0.2**
TEIG				IAmb	IAmb	06 51 39.6	
	comp=Z,24nm,1.4s						
TEIG	**Tepich**	**30.60**	**343**	P	**P**	**06 50 57.0**	**+0.6**
TEIG				pP	**pP**	**06 51 08.6**	**-0.6**
BDFB	**Brasilia**	**31.16**	**105**	P	**P**	**06 51 01.2**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=274,slow=7.2,SNR=6.7						
BDFB				LR	LR	07 04 17.6	
	comp=Z,458nm,20.6s,baz=305,slow=38						
	comp=Z,3.7nm,0.6s						
BDFB	**Brasilia**	**31.16**	**105**	P	**P**	**06 51 01.0**	**-0.7**
BDFB				IAmb	IAmb	06 51 50.5	
	comp=Z,28nm,1.3s						
SMTB	**Santa Maria do**	**31.30**	**92**	*e*P	**P**	**06 51 02.6**	**-0.1**
IPMB	**Ipameri, GO**	**31.38**	**109**	*e*P	**P**	**06 51 02.3**	**-1.2**
CAMR	**Camarioca**	**32.17**	**356**	P	**P**	**06 51 10.5**	**+0.2**
PLCA	**Paso Flores**	**32.30**	**168**	P	**P**	**06 51 10.8**	**-0.5**
	comp=Z,5.4nm,0.9s,baz=343,slow=7.7,SNR=5.5						
PLCA				LR	LR	07 01 28.8	
	comp=Z,155nm,19.4s,baz=4.5,slow=31						
	comp=Z,5.4nm,0.9s						
SPB	**Sao Paulo**	**33.61**	**119**	*e*P	**P**	**06 51 24.3**	**+1.4**
SDBA	**SAO DESIDERIO**	**33.90**	**98**	*e*P	**P**	**06 51 25.6**	**0.0**
JANB	**Januaria**	**34.64**	**103**	*e*P	**P**	**06 51 31.6**	**-0.4**
DIAM	**Diamantina, MG**	**35.68**	**108**	*e*P	**P**	**06 51 39.8**	**-1.2**
NBPS	**Pedro II - PI**	**37.86**	**85**	*e*P	**P**	**06 51 59.7**	**+0.1**
HBVL	**Hebbronville**	**40.70**	**333**	P	**P**	**06 52 23.9**	**+1.0**
152A	**Waverly Hall**	**42.00**	**353**	P	**P**	**06 52 32.9**	**-0.6**
152A				IAmb	IAmb	06 52 33.8	
	comp=Z,13nm,0.7s						
GOGA	**Godfrey**	**42.61**	**355**	P	**P**	**06 52 37.5**	**-0.9**
GOGA				IAmb	IAmb	06 53 04.0	
	comp=Z,54nm,1.8s						
LRAL	**Lakeview Retre**	**42.69**	**350**	P	**P**	**06 52 38.1**	**-0.9**
LRAL				IAmb	IAmb	06 53 46.5	
	comp=Z,44nm,1.8s						
HNDO	**Hondo**	**43.10**	**334**	P	**P**	**06 52 43.2**	**+0.7**
HNDO				IAmb	IAmb	06 52 44.5	
	comp=Z,27nm,0.8s						
RCBR	**Riachuelo**	**43.12**	**89**	LR	LR	07 11 45.4	
	comp=Z,72nm,19.7s,baz=230,slow=37						
NATX	**Nacogdoches**	**43.35**	**341**	P	**P**	**06 52 44.7**	**+0.3**
FPAL	**Fort Paine**	**43.96**	**352**	P	**P**	**06 52 48.6**	**-0.8**
FPAL				IAmb	IAmb	06 52 49.7	
	comp=Z,11nm,0.8s						
JCT	**Junction City**	**44.15**	**334**	P	**P**	**06 52 50.4**	**-0.6**
SLBS	**Sierra La Lagu**	**44.38**	**318**	P	**P**	**06 52 53.7**	**+0.7**
SLBS				IAmb	IAmb	06 53 07.6	
	comp=Z,28nm,1.4s						
SLBS	**Sierra La Lagu**	**44.38**	**318**	P	**P**	**06 52 53.9**	**+0.9**
SLBS				pP	**pP**	**06 53 06.2**	**+0.1**
BRDY	**Brady**	**44.51**	**336**	P	**P**	**06 52 53.9**	**+0.1**
SWET	**Sewanee**	**44.67**	**352**	P	**P**	**06 52 54.1**	**-0.9**
S

SUTB	**Sutter Butte**	**62.31**	**324**	P	**P**	**06 55 04.9**	**+0.6**
SUTB				IAmb	IAmb	06 55 05.8	
	comp=Z,20nm,1.4s						
ORV	**Oroville**	**62.36**	**324**		**P**	**06 55 05.2**	**+0.6**
KCPM	**Cahto Peak**	**63.66**	**323**	P	**P**	**06 55 14.4**	**+1.0**
KCPM				IAmb	IAmb	06 55 15.9	
	comp=Z,12nm,1.0s						
KHBM	**Hayfork Bally**	**64.08**	**324**	P	**P**	**06 55 16.7**	**+0.5**
KHBM				IAmb	IAmb	06 55 18.0	
	comp=Z,16nm,1.1s						
YBH	**Yreka Blue Hor**	**64.48**	**325**	LR	LR	07 20 30.3	
	comp=Z,6.4nm,18.2s,baz=110,slow=33						
F10A	**Beach Ranch, E**	**64.63**	**332**	P	**P**	**06 55 19.6**	**+0.1**
F10A				IAmb	IAmb	06 55 22.9	
	comp=Z,11nm,1.0s						
SCHQ	**Schefferville**	**64.69**	**8**	P	**P**	**06 55 19.1**	**-0.6**
	comp=Z,8.4nm,0.8s,baz=196,slow=5.6,SNR=8.3						
	comp=Z,8.4nm,0.8s						
NEW	**Newport**	**66.29**	**333**	LR	LR	07 24 15.8	
	comp=Z,65nm,18.5s,baz=105,slow=36						
COR	**Corvallis**	**66.70**	**327**	P	**P**	**06 55 34.3**	**+1.5**
COR				sP	**sP**	**06 55 53.4**	**+1.1**
PPT	**Papeete**	**68.56**	**255**	LR	LR	07 17 56.4	
	comp=Z,74nm,20.9s,baz=99,slow=29						
FCC	**Fort Churchill**	**68.83**	**352**		**P**	**06 55 45.7**	**-0.2**
FCC				IAmb	IAmb	06 55 46.4	
	comp=Z,20nm,1.3s						
VNA3	**Neumayer Olymp**	**74.79**	**162**	⇓P	**P**	**06 56 22.7**	**+1.0**
	comp=Z,1.6nm,0.6s						
VNA2	**Neumayer--Watz**	**75.42**	**161**	⇓P	**P**	**06 56 26.2**	**+0.9**
	comp=Z,3.1nm,0.5s,baz=296,slow=4.8						
DBIC	**Dimbokro**	**75.83**	**81**	P	**P**	**06 56 29.7**	**+1.0**
	comp=Z,8.4nm,0.5s,baz=281,slow=5.2,SNR=11						
DBIC				LR	LR	07 27 31.8	
	comp=Z,86nm,20.3s,baz=312,slow=34						
	comp=Z,8.4nm,0.5s						
YKA	**Yellowknife Ar**	**76.55**	**344**	P	**P**	**06 56 31.2**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=144,slow=5.0,SNR=42						
	comp=Z,3.0nm,0.8s						
SNAA	**Sanae**	**77.02**	**162**	P	**P**	**06 56 35.2**	**+0.8**
	comp=Z,7.4nm,0.3s,baz=294,slow=6.6,SNR=4.3						
	comp=Z,7.4nm,0.3s						
RAR	**Rarotonga**	**77.90**	**250**	LR	LR	07 21 22.1	
	comp=Z,91nm,22.0s,baz=101,slow=28						
SFJD	**Kangerlussuaq**	**78.84**	**11**	LR	LR	07 35 06.4	
	comp=Z,96nm,18.1s,baz=164,slow=38						
DLBC	**Dease Lake**	**78.89**	**335**	P	**P**	**06 56 44.9**	**0.0**
	comp=Z,6.4nm,0.9s,baz=48,slow=6.8,SNR=5.3						
	comp=Z,6.4nm,0.9s						
MORF	**Marmelete**	**80.52**	**50**	*e*P	**P**	**06 56 54.2**	**0.0**
MORF				*i* IAmb	IAmb	06 57 09.3	
	comp=Z,126nm,2.2s						
PTEO	**Sao Teotonio**	**80.55**	**49**	*e*P	**P**	**06 56 56.6**	**+2.3**
QSPA	**South Pole Qui**	**80.86**	**180**	P	**P**	**06 56 56.1**	**+0.5**
	comp=Z,13nm,0.8s,baz=149,slow=2.8,SNR=15						
	comp=Z,13nm,0.8s						
QSPA	**South Pole Qui**	**80.86**	**180**	P	**P**	**06 56 57.0**	**+1.4**
QSPA				pP	**pP**	**06 57 09.4**	**-0.5**
PCVE	**Castro Verde**	**81.09**	**50**	*e*P	**P**	**06 56 59.2**	**+2.0**
PCVE				*i* IAmb	IAmb	06 57 11.8	
	comp=Z,61nm,1.9s						
MOE	**Montemor**	**81.15**	**49**	*e*P	**P**	**06 56 59.7**	**+2.2**
MOE				*i* IAmb	IAmb	06 57 01.9	
	comp=Z,59nm,1.6s						
PBEJ	**Beja**	**81.35**	**49**	*e*P	**P**	**06 56 58.3**	**-0.2**
PBEJ				*i* IAmb	IAmb	06 56 59.3	
	comp=Z,36nm,1.8s						
PMTG	**Montargil**	**81.42**	**48**	*e*P	**P**	**06 57 00.1**	**+1.2**
PSARD	**Sardoal**	**81.64**	**48**	*e*P	**P**	**06 57 01.7**	**+1.6**
PMRV	**Marv??o**	**82.15**	**48**	*e*P	**P**	**06 57 03.9**	**+1.2**
PGAV	**Gavieira, Arco**	**82.35**	**45**	*e*P	P	06 57 09.1	+5.2
MVO	**Moncorvo**	**82.97**	**46**	*e*P	**P**	**06 57 08.8**	**+1.8**
PBRG	**Braganca**	**83.38**	**46**	*e*P	**P**	**06 57 10.2**	**+1.1**
PBRG				*i* IAmb	IAmb	06 57 11.4	
	comp=Z,37nm,1.4s						
TORD	**Torodi Ar. Bea**	**83.42**	**76**	P	**P**	**06 57 10.4**	**+0.6**
	comp=Z,14nm,0.8s,baz=255,slow=7.9,SNR=61						
	comp=Z,14nm,0.8s						
RES	**Resolute Bay**	**84.33**	**356**	P	**P**	**06 57 12.4**	**-0.8**
	comp=Z,2.2nm,1.1s,baz=228,slow=5.8,SNR=4.7						
RES				LR	LR	07 37 20.7	
	comp=Z,43nm,18.2s,baz=10.0,slow=37						
	comp=Z,2.2nm,1.1s						
ESDC	**Sonseca Array**	**84.75**	**49**	P	**P**	**06 57 17.5**	**+1.3**
	comp=Z,5.8nm,1.0s,baz=264,slow=5.9,SNR=18						
ESDC				LR	LR	07 34 09.5	
	comp=Z,90nm,18.2s,baz=310,slow=35						
	comp=Z,5.8nm,1.0s						
KULLO	**Kullorsuaq**	**84.78**	**6**	*i* P	**P**	**06 57 12.5**	**-3.0**
KULLO				IAmb	IAmb	06 57 17.0	
	comp=Z,21nm,1.1s						
SUMG	**Summit**	**85.83**	**11**	*i* P	**P**	**06 57 21.0**	**-0.3**
SUMG				IAmb	IAmb	06 57 22.6	
	comp=Z,11nm,0.9s						
TULEG	**Thule**	**85.86**	**2**		**P**	**06 57 21.4**	**+0.6**
TULEG	**Thule**	**85.86**	**2**	*i* P	**P**	**06 57 21.0**	**+0.2**
TULEG				IAmb	IAmb	06 57 22.1	
	comp=Z,36nm,1.4s						
INK	**Inuvik**	**86.20**	**342**	P	**P**	**06 57 22.5**	**-0.2**
	comp=Z,11nm,1.1s,baz=117,slow=3.9,SNR=18						
	comp=Z,11nm,1.1s						
BCAR	**Beaver Creek A**	**86.25**	**336**		**P**	**06 57 23.5**	**+0.4**
L27K	**Beaver Creek,**	**86.26**	**336**	P	**P**	**06 57 23.2**	**0.0**
L27K				IAmb	IAmb	06 57 24.6	
	comp=Z,11nm,0.9s						
E29M	**Blow River**	**87.58**	**342**	P	**P**	**06 57 29.2**	**-0.2**
RIDG	**Independent Ri**	**87.78**	**336**		**P**	**06 57 30.6**	**0.0**
NEEM	**North Greenlan**	**88.02**	**6**	*i* P	**P**	**06 57 32.3**	**+0.5**
NEEM				IAmb	IAmb	06 57 33.3	
	comp=Z,27nm,0.8s						
J25K	**Salcha River,**	**88.37**	**337**	P	**P**	**06 57 33.2**	**-0.1**
J25K				IAmb	IAmb	06 57 34.3	
	comp=Z,7.3nm,0.9s						
D27M	**Malcolm River**	**88.98**	**342**		**P**	**06 57 36.1**	**0.0**
ILAR	**Eielson Array**	**89.03**	**337**	P	**P**	**06 57 36.0**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=153,slow=3.2,SNR=27						
ILAR				PP	**PP**	**07 01 06.5**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=94,slow=6.2,SNR=4.1						
ILAR				LR	LR	07 39 02.8	
	comp=Z,50nm,20.3s,baz=72,slow=36						
	comp=Z,3.4nm,0.9s						
H24K	**Noodor Dome**	**89.84**	**337**		**P**	**06 57 40.2**	**+0.1**
C24K	**Franklin Bluff**	**91.64**	**341**	P	**P**	**06 57 48.7**	**+0.4**
DAG	**Danmarks Havn**	**92.52**	**12**	*i* P	**P**	**06 57 52.0**	**-0.3**
TSUM	**Tsumeb**	**93.40**	**110**	LR	LR	07 38 53.2	
	comp=Z,80nm,18.6s,baz=242,slow=35						
KEST	**Kesra**	**94.22**	**55**	LR	LR	07 42 01.4	
	comp=Z,68nm,18.0s,baz=315,slow=36						
NOR	**Nord**	**95.23**	**8**	*i* P	**P**	**06 58 04.7**	**0.0**
BOSA	**Boshof**	**98.16**	**121**	LR	LR	07 41 00.4	
	comp=Z,69nm,19.4s,baz=190,slow=34						
MAW	**Mawson**	**98.70**	**166**	LR	LR	07 42 45.0	
	comp=Z,80nm,18.2s,baz=111,slow=35						
H11N3	**WAKE ISLAND Hy**	**15.40**	**287**	T	T	09 08 49.3	
	baz=92,slow=74,SNR=36						
H11N2	**WAKE ISLAND Hy**	**15.41**	**287**	T	T	09 09 02.3	
	baz=92,slow=74,SNR=32						
H11N1	**WAKE ISLAND Hy**	**15.42**	**287**	T	T	09 08 56.0	
	baz=92,slow=74,SNR=23						
H11S2	**WAKE ISLAND Hy**	**15.56**	**286**	T	T	09 09 15.8	
	baz=94,slow=74,SNR=17						
H11S1	**WAKE ISLAND Hy**	**15.57**	**286**	T	T	09 09 13.5	
	baz=94,slow=74,SNR=10.0						
H11S3	**WAKE ISLAND Hy**	**15.58**	**286**	T	T	09 09 14.3	
	baz=94,slow=74,SNR=16						
KBZ	**Khabaz**	**119.42**	**45**	PKP	**PKPdf**	**07 03 30.9**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=317,slow=4.4,SNR=5.0						
ARTI	**Arti**	**122.59**	**26**	PKP	**PKPdf**	**07 03 37.1**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=276,slow=0.7,SNR=4.3						
STKA	**Stephens Creek**	**123.44**	**222**	PKP	**PKiKP**	**07 03 39.7**	**0.0**
	comp=Z,1.3nm,0.6s,baz=275,slow=6.0,SNR=3.4						
AKTO	**Aktyubinsk**	**125.92**	**32**	PKP	**PKPdf**	**07 03 43.2**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=325,slow=3.6,SNR=5.8						
BVAR	**Borovoye Array**	**129.94**	**23**	PKP	**PKPdf**	**07 03 51.0**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=299,slow=1.5,SNR=14						
ZALV	**Zalesovo Beam**	**133.63**	**13**	PKP	**PKPdf**	**07 03 57.0**	**-1.0**
	comp=Z,4.4nm,0.8s,baz=260,slow=2.4,SNR=16						
ASAR	**Alice Springs**	**133.93**	**224**	PKP	**PKPdf**	**07 03 59.6**	**0.0**
	comp=Z,2.2nm,0.7s,baz=121,slow=2.2,SNR=28						
KURBB	**Kurchatov Arra**	**134.86**	**20**	PKP	**PKPdf**	**07 04 00.7**	**+0.2**
WRA	**Warramunga Arr**	**135.99**	**229**	PKP	**PKPdf**	**07 04 03.5**	**0.0**
	comp=Z,5.1nm,0.7s,baz=124,slow=2.0,SNR=28						
MJAR	**Matsushiro Arr**	**136.50**	**315**	PKP	**PKPdf**	**07 04 03.3**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=110,slow=0.7,SNR=7.3						
HILR	**Hailar Array B**	**136.79**	**342**	PKP	**PKPdf**	**07 04 03.1**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=113,slow=3.4,SNR=3.5						

BNX	**BinXian**	**137.03**	**333**	⇓P	**PKPdf**	**07 04 04.6**	**-0.1**
BNX				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**139.42**	**20**	PKP	**PKPdf**	**07 04 07.4**	**-1.7**
	comp=Z,2.3nm,0.9s,baz=328,slow=2.3,SNR=10						
SONM	**Songino Array**	**141.25**	**354**	PKhKP	PKPpre	07 04 06.2	
	comp=Z,1.8nm,0.9s,baz=356,slow=3.2,SNR=9.9						
KSH2	**Kashi**	**142.68**	**33**	PKP	**PKPdf**	**07 04 15.3**	**-0.1**
KSRS	**Korea Array**	**142.69**	**323**	PKhKP	PKPpre	07 04 09.2	
	comp=Z,4.7nm,0.7s,baz=28,slow=1.3,SNR=13						
FITZ	**Fitzroy Crossi**	**143.34**	**222**	PKhKP	PKPpre	07 04 12.8	
	comp=Z,5.0nm,0.9s,baz=185,slow=3.1,SNR=3.2						
WMQ	**Urumqi**	**143.74**	**16**	*e*PKP	**PKPdf**	**07 04 17.6**	**+0.6**
WMQ				pPKP	pPKPdf	07 04 31.0	-0.9
BJI2	**Beijing**	**146.40**	**338**	P	**PKPdf**	**07 04 22.1**	**+0.5**
BJI2				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC	**Hu-ho-hao-te**	**147.09**	**345**	*e*P	**PKPbc**	**07 04 24.3**	**-0.7**
HNS	**HongShan**	**149.25**	**338**	⇑PKPbc	**PKPbc**	**07 04 30.0**	**-0.6**
TIA	**Tai'an**	**149.29**	**333**	PKPbc	**PKPdf**	**07 04 27.3**	**+0.8**
GTA2	**Gaotai**	**149.88**	**1**	pPKP	PKPbc	07 04 32.0	-0.3
GTA2	**Gaotai**	**149.88**	**1**	*e*PKPbc	**PKPdf**	**07 04 25.1**	**-2.4**
NJ2	**Nanjing**	**151.76**	**326**	*e*P	**PKPdf**	**07 04 31.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
GOMU	**GeErMu**	**152.64**	**10**	PKPbc	**PKPdf**	**07 04 31.8**	**-0.3**
LZH	**Lanzhou**	**153.13**	**354**	pP	PKPab	07 04 51.3	-0.2
LZH	**Lanzhou**	**153.13**	**354**	pmax	pmax		
	comp=Z,17nm,1.3s						
LZH	**Lanzhou**	**153.13**	**354**	*e*P	**PKPbc**	**07 04 39.3**	**-0.7**
PZH	**PanZhiHua**	**162.81**	**357**	PKP	**PKPdf**	**07 04 44.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**170.69**	**10**	PKP	**PKPdf**	**07 04 50.5**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=285,slow=2.1,SNR=9.7						

*IDC **21** 06:53:34.4±1.1,5.88S×127.94E,H401km±13km,mb3.2/2, mbtmp4.2/7,Error ellipse: s-maj=19.2km s-min=11.0km az=90.0*

ISC 21 06:53:34.6±0.9,5.88S±0.08×127.9E±0.1,H400km,n7, σ1§14/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.99**	**34**	P	**Pn**	**06 55 08.5**	**+1.3**
	22nm,0.3s,baz=316,slow=20,SNR=8.9						
SIJI				S	**S**	**06 56 20.5**	**-2.0**
	10.0nm,0.3s,baz=246,slow=23,SNR=6.0						
BATI	**Baumata**	**6.03**	**224**	P	**Pn**	**06 55 08.1**	**+0.5**
	38nm,0.4s,baz=54,slow=19,SNR=6.6						
BATI				S	**S**	**06 56 22.1**	**-1.2**
	43nm,0.6s,baz=278,slow=12,SNR=5.9						
FITZ	**Fitzroy Crossi**	**12.35**	**190**	P	**P**	**06 56 18.4**	**+0.2**
	1.9nm,0.5s,baz=17,slow=10,SNR=15						
WRA	**Warramunga Arr**	**15.30**	**157**	P	**P**	**06 56 51.1**	**+0.7**
	5.1nm,0.4s,baz=334,slow=11,SNR=51						
WRA				S	**S**	**06 59 31.4**	**-1.1**
	1.1nm,0.6s,baz=339,slow=20,SNR=9.8						
ASAR	**Alice Springs**	**18.59**	**163**	P	**P**	**06 57 26.2**	**+0.7**
	3.4nm,0.5s,baz=343,slow=12,SNR=69						
ASAR				S	**S**	**07 00 35.1**	**-0.6**
	0.8nm,0.8s,baz=335,slow=17,SNR=5.2						
MKAR	**Makanchi Array**	**66.18**	**328**	P	**P**	**07 03 40.6**	**-0.3**
	0.6nm,0.4s,baz=128,slow=7.7,SNR=16						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**70.50**	**329**	P	**P**	**07 04 06.9**	**-0.2**
	0.7nm,0.4s,baz=125,slow=5.0,SNR=5.2						
	0.7nm,0.4s						

KRSC 21 06:56:40.8±0.9,53.45N×160.96E,H48km±16km,Ml3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.66**	**238**	*e*P	Pn	06 56 55.3	+1.4
SPN				*e*S	Sn	06 57 03.8	+0.4
NLC	**Nalytchevo**	**1.01**	**255**	*e*P	Pn	06 56 59.9	+1.4
NLC				*e*S	Sn	06 57 12.3	+0.7
KII	**Karymskiy**	**1.07**	**304**	*e*P	Pn	06 57 00.8	+1.3
KII				*e*S	Sn	06 57 13.7	+0.3
MKZ	**Mys Kozlova**	**1.20**	**22**	*e*P	Pn	06 57 03.1	+1.9
MKZ				*e*S	Sn	06 57 17.4	+1.1
SDLR	**Sedlovina**	**1.25**	**263**	*e*P	Pn	06 57 03.9	+1.9
UGLR	**Uglovaya**	**1.30**	**260**	*e*P	Pn	06 57 04.7	+2.1
SMAR	**Somma**	**1.30**	**263**	*e*P	Pn	06 57 04.5	+1.7
KRER	**Koryakskii**	**1.33**	**265**	*e*P	Pn	06 57 05.2	+2.1
KRER				*e*S	Sn	06 57 21.6	+1.8
AVH	**Avacha**	**1.34**	**263**	*e*P	Pn	06 57 05.3	+2.2
KRX	**Arik**	**1.38**	**267**	*e*P	Pn	06 57 05.5	+1.7
DALK	**Dalny**	**1.39**	**253**	*e*P	Pn	06 57 05.4	+1.7
DALK				*e*S	Sn	06 57 21.9	+1.0
KOK	**Koryaka**	**1.40**	**264**	*e*P	Pn	06 57 06.0	+2.0
PET	**Petropavlovsk**	**1.45**	**254**	*e*P	Pn	06 57 06.2	+1.7
INSR	**Institute**	**1.46**	**256**	*e*P	Pn	06 57 06.6	+1.8
TUMD	**Tumrok D**	**1.79**	**350**	*e*P	Pn	06 57 11.7	+2.5
TUMD				*e*S	Sn	06 57 32.1	+1.3
RUS	**Russkaya**	**1.79**	**236**	*e*P	Pn	06 57 11.2	+1.9
KRMR	**Karymshinskiy**	**1.81**	**251**	*e*P	Pn	06 57 11.9	+2.4
KRMR				*e*S	Sn	06 57 32.6	+1.3
GNL	**Ganaly**	**1.81**	**279**	*e*P	Pn	06 57 12.0	+2.4
MTVR	**Mutnovka**	**1.94**	**241**	*e*P	Pn	06 57 13.6	+2.3
GRL	**Gorelyy**	**1.96**	**244**	*e*P	Pn	06 57 14.4	+2.8
ASAK	**Asacha**	**2.14**	**241**	*e*P	Pn	06 57 17.1	+3.1
APC	**Apacha**	**2.34**	**259**	*e*P	Pn	06 57 19.5	+2.7
KMNR	**Kamenistaya**	**2.35**	**350**	*e*P	Pn	06 57 20.9	+4.0
KDTR	**Khodutka, Kamc**	**2.40**	**228**	*e*P	Pn	06 57 20.4	+2.9
KDTR				*e*S	Sn	06 57 48.4	+2.6
KOZ	**Kozyrevsk**	**2.69**	**347**	*e*P	Pn	06 57 24.9	+3.4
ESO	**Esso**	**2.81**	**333**	*e*P	Pn	06 57 26.2	+3.0
SRDR	**Sredinnyy**	**2.96**	**347**	*e*P	Pn	06 57 28.3	+3.0
KBTR	**Krutoberegovo**	**2.97**	**21**	*e*P	Pn	06 57 29.4	+4.1
KBG	**Krutoberegovo**	**2.99**	**19**	*e*P	Pn	06 57 30.2	+4.6
BKI	**Bering**	**3.42**	**57**	*e*P	Pn	06 57 35.0	+3.4
BKI				*e*S	Sn	06 58 11.5	+0.7

ECX 21 06:59:51.9±0.5,31.59N×115.69W,h5km±4km,MD1.4, ML1.6,4C-1D,Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTX	**Valle De La Tr**	**0.21**	**203**	*e*P	Pg	06 59 58.9	+2.9
VTX				*e*S	Sg	07 00 01.9	+3.1
VTX				IAML		07 00 02.6	
	comp=N,48nm,0.1s						
VTX				IAML		07 00 03.0	
	comp=E,41nm,0.1s						
VTX				⇓*e*		07 00 03.0	
VTX	**Valle De La Tr**	**0.21**	**203**	*e*P	Pg	06 59 58.9	+2.9
VTX				*e*S	Sg	07 00 01.9	+3.1
VTX				IAML		07 00 02.3	
	comp=E,76nm,0.1s						
VTX				⇑*e*		07 00 02.3	
ALAMX	**Rancho Alamar**	**0.42**	**358**	*e*P	Pg	06 59 59.6	-0.4
ALAMX				*e*S	Sg	07 00 05.2	-0.4
SV2X	**San Vicente**	**0.53**	**243**	*e*P	Pb	07 00 04.5	+0.8
SV2X				*e*S	Sb	07 00 11.7	+0.1
SV2X				IAML		07 00 12.9	
	comp=N,8.6nm,0.1s						
SV2X				⇑*e*		07 00 12.9	
SV2X	**San Vicente**	**0.53**	**243**	*e*P	Pb	07 00 04.4	+0.8
SV2X				*e*S	Sb	07 00 11.8	+0.2
SV2X				IAML		07 00 11.9	
	comp=N,30nm,0.1s						
SV2X				*e*		07 00 11.9	
ECBX	**El Chinero**	**0.56**	**101**	*e*P	Pn	07 00 05.4	-1.0
ECBX				*e*S	Sb	07 00 12.8	+0.5
ECBX	**El Chinero**	**0.56**	**101**	*e*P	Pn	07 00 05.3	-1.1
ECBX				*e*S	Sb	07 00 12.8	+0.5
SPIG	**San Pedro Mart**	**0.57**	**160**	*e*P	Pg	06 59 59.8	-3.2
SPIG				*e*S	Sg	07 00 03.5	-6.9
SPIG	**San Pedro Mart**	**0.57**	**160**	*e*P	Pg	06 59 59.8	-3.1
SPIG				*e*S	Sg	07 00 03.2	-7.2
SPIG				IAML		07 00 03.7	
	comp=N,22nm,0.1s						
SPIG				⇑*e*		07 00 03.7	
RHX	**Rio Hardy**	**0.65**	**32**	⇑*e*P	Pg	07 00 03.4	-1.0
RHX				*e*S	Sg	07 00 07.5	-5.3
SQX	**San Quintin**	**1.02**	**189**	*e*P	Pg	07 00 07.4	-4.0

*IDC **21** 07:12:45.0±8.5,30.67S×179.09W,h0km,mb3.2/2, mbtmp3.2/2,Error ellipse: s-maj=366.3km s-min=56.8km az=157.0*

*WEL **21** 07:13:31.7±1.0,32.2S×12.6×17.9W±2.9,h349km±13km, M4.6/9,mB5.0/7,ML5.1/1,MLv4.9/9,Mw(mB)4.3/7,Error ellipse: s-maj=40.7km s-min=5.0km az=111.0*

ISC 21 07:13:25.0±1.9,31.3S±0.1×179.6W±0.3,h350km,n50, σ1§97/64,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.48**	**37**	P	Pn	07 14 29.1	+9.2
GLKZ				S	S	07 15 15.4	+11
MXZ	**Matakaoa Point**	**6.52**	**195**	P	**Pn**	**07 15 04.6**	**+3.0**
MXZ				S	**S**	**07 16 19.1**	**-1.0**
WMGZ	**Waiomatatini S**	**6.74**	**193**	P	**Pn**	**07 15 06.2**	**+2.0**
WMGZ				S	**S**	**07 16 25.5**	**+0.6**
HAZ	**Te Kaha**	**6.83**	**197**	P	**Pn**	**07 15 07.3**	**+2.1**
HAZ				S	**S**	**07 16 25.5**	**-1.2**
PKGZ	**Pakihiroa**	**6.86**	**195**	P	**Pn**	**07 15 08.6**	**+3.0**
PKGZ				S	**S**	**07 16 22.7**	**-4.7**
PUZ	**Puketiti**	**7.02**	**194**	P	**Pn**	**07 15 09.7**	**+2.3**
PUZ				S	**S**	**07 16 29.2**	**-1.6**
RUGZ	**Raukumara Rang**	**7.05**	**198**	P	**Pn**	**07 15 09.6**	**+1.7**
RUGZ				S	**S**	**07 16 27.9**	**-3.7**
TWGZ	**Tauwhareparae**	**7.18**	**195**	P	Pn	07 15 15.0	+5.7
TWGZ				S	**S**	**07 16 36.0**	**+1.7**
CNGZ	**Carnagh Statio**	**7.43**	**193**	P	**Pn**	**07 15 14.2**	**+2.0**
CNGZ				S	**S**	**07 16 37.2**	**-2.3**
MWZ	**Matawai**	**7.44**	**198**	P	**Pn**	**07 15 12.7**	**+0.3**
MWZ				S	**S**	**07 16 38.5**	**-1.4**
TKGZ	**Te Karaka**	**7.46**	**195**	P	**Pn**	**07 15 13.8**	**+1.2**
TKGZ				S	**S**	**07 16 38.5**	**-1.7**
URZ	**Urewera**	**7.48**	**200**	P	**Pn**	**07 15 12.9**	**0.0**
URZ				S	**S**	**07 16 38.1**	**-2.6**
TOZ	**Tahuroa Road**	**7.60**	**211**	P	Pn	07 15 21.0	+6.7
RAGZ	**Rawiri**	**7.62**	**198**	P	**Pn**	**07 15 16.5**	**+2.0**
RAGZ				S	**S**	**07 16 45.3**	**+1.5**
TARZ	**Mount Tarawera**	**7.65**	**203**	P	Pn	07 15 20.1	+5.1
TARZ				S	**S**	**07 16 42.8**	**-1.8**
RIGZ	**Rimuhau**	**7.73**	**195**	P	**Pn**	**07 15 16.0**	**+0.1**
RIGZ				S	**S**	**07 16 43.4**	**-2.8**
MUGZ	**Murupara**	**7.79**	**201**	P	**Pn**	**07 15 20.0**	**+3.6**
MUGZ				S	**S**	**07 16 48.4**	**+1.1**
RTZ	**Ruatahuna**	**7.85**	**200**	P	**Pn**	**07 15 21.4**	**+4.1**
RTZ				S	**S**	**07 16 46.5**	**-2.3**
SNGZ	**Shannon Statio**	**7.91**	**197**	P	**Pn**	**07 15 22.0**	**+4.1**
SNGZ				S	**S**	**07 16 47.3**	**-2.7**
PRRZ	**Plateau Road**	**7.93**	**203**	P	**Pn**	**07 15 22.5**	**+4.4**
ALRZ	**Allen Road**	**8.00**	**203**	P	**P**	**07 15 23.1**	**+1.0**
WPRZ	**Whakapapatarin**	**8.03**	**204**	P	**P**	**07 15 24.1**	**+1.7**
KNZ	**Kokohu**	**8.05**	**195**	P	**P**	**07 15 23.2**	**+0.6**
KNZ				S	**S**	**07 16 50.3**	**-2.9**
RAHZ	**Arahi**	**8.10**	**198**	P	**P**	**07 15 23.3**	**+0.1**
MTHZ	**Maungataniwha**	**8.11**	**200**	P	**P**	**07 15 23.2**	**-0.1**
MHGZ	**Mahia Peninsul**	**8.13**	**194**	P	**P**	**07 15 24.8**	**+1.3**
WHHZ	**Waihua**	**8.21**	**197**	P	**P**	**07 15 24.7**	**+0.3**
MRHZ	**Matea Rd**	**8.22**	**202**	P	**P**	**07 15 24.8**	**+0.2**
NMHZ	**Naumai**	**8.35**	**199**	P	**P**	**07 15 26.4**	**+0.4**
ARHZ	**Arapoaanui**	**8.45**	**198**	P	**P**	**07 15 27.1**	**+0.1**
BKZ	**Black Stump Fm**	**8.50**	**201**	P	**P**	**07 15 27.1**	**-0.6**
HIZ	**Hauiti**	**8.54**	**210**	P	**P**	**07 15 31.4**	**+3.4**
MCHZ	**McNeill Hill**	**8.70**	**199**	P	**P**	**07 15 30.2**	**+0.4**
TMVZ	**Te Maari**	**8.72**	**205**	P	**P**	**07 15 32.1**	**+1.0**
ETVZ	**East Tongariro**	**8.73**	**205**	P	**P**	**07 15

SGDS	**Sogindy**	**7.46**	**174**	Lg	Lg	07 46 29.0	
	14nm,0.9s						
KTBS	**Karatobe**	**7.46**	**163**	Pg	Pb	07 44 40.0	-1.7
	1.6nm,0.4s						
KTBS				Lg	Lg	07 46 12.1	
	13nm,0.8s						
KNOS	**Konyrlen**	**7.51**	**148**	Pg	Pb	07 44 39.9	-2.8
	1.6nm,0.3s						
KNOS				Lg	Lg	07 46 12.1	
	8.3nm,0.9s						
MTBS	**Maitube**	**7.98**	**165**	Pg	Pb	07 44 49.9	-0.6
	1.6nm,0.3s						
MTBS				Lg	Lg	07 46 29.9	
	9.3nm,0.7s						
MTBS				Lg	Lg	07 46 41.3	
	5.2nm,0.4s						
KST	**Kastek**	**7.99**	**168**	Pg	Pb	07 44 50.6	-0.2
	3.3nm,0.7s						
KST				Lg	Lg	07 46 30.7	
	14nm,1.0s						
KST				Lg	Lg	07 46 43.8	
	22nm,0.7s						
KOTS	**Kotyrbulak**	**8.00**	**161**	Pg	Pb	07 44 49.1	-1.9
	3.1nm,0.6s						
KOTS				Lg	Lg	07 46 27.9	
	4.9nm,0.2s						
KURS	**Kuram**	**8.01**	**156**	Pg	Pb	07 44 49.9	-1.2
	5.9nm,1.0s						
KURS				Lg	Lg	07 46 29.4	
	9.2nm,0.9s						
MDOK	**Medeo**	**8.06**	**162**	Pg	Pb	07 44 50.7	-1.2
	4.7nm,0.5s						
MDOK				Lg	Lg	07 46 31.1	
	12nm,0.8s						
KK31	**Karatay Array**	**8.06**	**197**	⇓Lg	Lg	07 46 49.8	
	4.3nm,0.7s,baz=9.5,slow=27,SNR=5.0						
ZSN	**Zaisan**	**8.11**	**111**	Pg	Pb	07 44 51.7	-1.2
	4.1nm,0.3s						
ZSN				Lg	Lg	07 46 32.2	
	16nm,0.8s						
MRKS	**Merke**	**8.14**	**182**	Pg	Pb	07 44 55.0	+1.7
	8.3nm,2.5s						
MRKS				Lg	Lg	07 46 38.4	
	8.7nm,1.1s						
TNSS	**Tian-Shan**	**8.16**	**163**	Pg	Pb	07 44 52.5	-1.3
	1.1nm,0.6s						
TNSS				Lg	Lg	07 46 34.0	
	3.1nm,0.7s						
KPKS	**Kokpek**	**8.17**	**153**	Pg	Pb	07 44 53.0	-0.8
	1.0nm,0.3s						
KPKS				Lg	Lg	07 46 34.5	
	4.8nm,0.8s						
AAK	**Ala-Archa**	**8.26**	**176**	⇑Lg	Lg	07 46 56.9	
	16nm,1.0s						
SATY	**Saty**	**8.47**	**156**	Pg	Pb	07 44 58.0	-1.0
	2.3nm,0.4s						
SATY				Lg	Lg	07 46 43.1	
	8.1nm,0.5s						
UZB	**Uzynbulak**	**8.56**	**153**	Pg	Pg	07 44 59.7	-16
	4.1nm,0.4s						
UZB				Lg	Lg	07 46 46.1	
	5.2nm,1.2s						
SHLS	**Shalkode**	**8.68**	**151**	Pg	Pg	07 45 04.4	-13
	5.7nm,0.3s						
SHLS				Lg	Lg	07 46 53.6	
	7.8nm,0.7s						

TRN 21 07:50:12.0, 15.10N×61.25W, h179km, MD3.6, South of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVN	**Savane Anatole**	**0.27**	**162**	*eP*	Pn	07 50 36.7	+0.7
SVN				*eS*	Sn	07 50 54.9	+0.4
DSLB	**Salisbury**	**0.38**	**334**	*eP*	Pn	07 50 37.1	+0.9
DSLB				*eS*	Sn	07 50 55.5	+0.4
BIM	**Bigot**	**0.60**	**163**	*eP*	Pn	07 50 37.7	+0.5
BIM				*eS*	Sn	07 50 57.3	+0.6
TBG	**Guadaloupe-3**	**0.84**	**333**	*eP*	Pn	07 50 39.0	+0.5
TBG				*eS*	Sn	07 50 59.9	+0.8
MMLZ	**Guadeloupe Bro**	**1.02**	**337**	*eP*	Pn	07 50 40.8	+1.0
MMLZ				*eS*	Sn	07 51 02.3	+0.9
SLBI	**Saint Lucia, B**	**1.10**	**166**	*eP*	Pn	07 50 40.4	0.0
SLBI				*eS*	Sn	07 51 02.3	-0.1
DSDZ	**La Diserade, G**	**1.22**	**8**	*eP*	Pn	07 50 42.1	+0.7
DSDZ				*eS*	Sn	07 51 03.4	-0.8
DHSZ	**Broadband at M**	**1.27**	**337**	*eP*	Pn	07 50 42.5	+0.8
DHSZ				*eS*	Sn	07 51 05.3	+0.4
SVB	**Belmont**	**1.81**	**180**	*eP*	Pn	07 50 47.1	0.0
SVB				*eS*	Sn	07 51 13.6	-0.8
MBFL	**Flemmings, Mon**	**1.88**	**331**	*eP*	Pn	07 50 48.6	+0.8
MBFL				*eS*	Sn	07 51 16.8	+1.1
BBGH	**Gun Hill**	**2.54**	**140**	*eP*	Pn	07 50 57.8	+2.6
BBGH				*eS*	Sn	07 51 29.4	+0.6
ANWB	**Willy Bob**	**2.61**	**349**	*eP*	Pn	07 50 55.9	0.0
ANWB				*eS*	Sn	07 51 29.0	-1.2
SKI	**Saint Kitts**	**2.64**	**327**	*eP*	Pn	07 50 57.1	+0.8
SKI				*eS*	Sn	07 51 31.2	+0.3
GRGR	**Grenville**	**2.97**	**188**	*eP*	Pn	07 51 00.5	+0.2
GRGR				*eS*	Sn	07 51 37.8	-0.2

*IDC **21** 07:51:57.0±1.8, 6.99S×126.65E, h417km±23km, mb3.2/7, mbtmp4.0/10, Error ellipse: s-maj=35.6km s-min=10.8km az=67.0*
*NEIC **21** 07:51:57.1±1.1, 6.90S±0.10×126.8E±0.2, h415km±11km, mb4.1/10, Error ellipse: s-maj=24.5km s-min=13.6km az=101.0*

ISC 21 07:51:56.3±0.6, 6.92S±0.07×126.82E±0.10, h407km, n31, σ0.95/34, mb3.8/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.78**	**222**	P	**P**	**07 53 07.5**	**+0.6**
BATI	**Baumata**	**4.52**	**224**	P	**P**	**07 53 14.7**	**+1.0**
	421nm,0.6s,baz=89,slow=1.1,SNR=55						
BATI				S	**S**	**07 54 15.1**	**-1.8**
	141nm,0.7s,baz=82,slow=1.5,SNR=8.0						
FAKI	**Fak Fak**	**6.71**	**54**		**P**	**07 53 37.3**	**-0.3**
MTN	**Manton Dam**	**7.25**	**145**	P	**P**	**07 53 44.3**	**+0.8**
KNRA	**Kununurra**	**8.90**	**168**	P	**P**	**07 54 02.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**11.17**	**186**	P	**P**	**07 54 27.1**	**+0.4**
	2.1nm,0.5s,baz=2.6,slow=10,SNR=22						
WB0	**Warramunga Arr**	**14.73**	**151**	P	**P**	**07 55 06.3**	**+0.5**
WRA	**Warramunga Arr**	**14.86**	**151**	P	**P**	**07 55 07.3**	**+0.2**
	1.8nm,0.7s,baz=324,slow=11,SNR=25						
WRA				S	**S**	**07 57 41.8**	**-3.2**
	0.5nm,0.7s,baz=327,slow=17,SNR=4.8						
WRA	**Warramunga Arr**	**14.86**	**151**	P	**P**	**07 55 06.4**	**-0.7**
COEN	**Coen**	**17.52**	**115**	P	**P**	**07 55 36.1**	**+0.4**
COEN				IAmb	IAmb	07 56 08.7	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**17.98**	**159**	P	**P**	**07 55 40.8**	**+0.3**
AS31				IAmb	IAmb	07 55 44.0	
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**17.98**	**159**	P	**P**	**07 55 41.0**	**+0.5**
	comp=Z,2.9nm,0.4s,baz=332,slow=8.2,SNR=78						
ASAR				S	**S**	**07 58 46.1**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=341,slow=22,SNR=9.0						
ASAR	**Alice Springs**	**17.98**	**159**	P	**P**	**07 55 40.4**	**-0.1**
FORT	**Forrest**	**23.76**	**177**	P	**P**	**07 56 34.0**	**-0.4**
FORT				IAmb	IAmb	07 57 03.9	
	comp=Z,5.4nm,0.8s						
STKA	**Stephens Creek**	**28.40**	**153**	P	**P**	**07 57 16.3**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=336,slow=9.3,SNR=3.3						
	comp=Z,1.2nm,0.5s						
MJAR	**Matsushiro Arr**	**44.54**	**13**	P	**P**	**07 59 28.9**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=198,slow=9.9,SNR=2.6						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**57.43**	**344**	P	**P**	**08 01 04.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=203,slow=4.6,SNR=3.9						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**57.43**	**344**	P	**P**	**08 01 04.3**	**-0.2**
CASY	**Casey**	**60.33**	**188**	P	**P**	**08 01 25.3**	**+1.6**
PEA0B	**Petropavlovsk-**	**65.28**	**20**	P	**P**	**08 01 57.1**	**+1.0**
PETK	**Petropavlovsk-**	**65.28**	**20**	P	**P**	**08 01 57.3**	**+1.2**
	comp=Z,2.0nm,0.6s,baz=207,slow=2.7,SNR=6.3						
	comp=Z,2.0nm,0.6s						
PETK	**Petropavlovsk-**	**65.28**	**20**	P	**P**	**08 01 56.7**	**+0.6**
MKAR	**Makanchi Array**	**66.47**	**328**	P	**P**	**08 02 03.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=122,slow=7.9,SNR=6.0						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**66.47**	**328**	P	**P**	**08 02 03.1**	**-0.6**
ZALV	**Zalesovo Beam**	**70.16**	**335**	P	**P**	**08 02 25.3**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=126,slow=4.5,SNR=4.2						
	comp=Z,1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**70.16**	**335**	P	**P**	**08 02 24.9**	**-1.2**
KURBB	**Kurchatov Arra**	**70.83**	**330**	P	**P**	**08 02 29.7**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=135,slow=5.0,SNR=4.1						
	comp=Z,0.6nm,0.4s						
C19K	**Lookout Ridge**	**90.64**	**20**	P	**P**	**08 04 13.7**	**+0.1**
C19K				IAmb	IAmb	08 04 39.2	
	comp=Z,3.8nm,1.4s						
D19K	**Kuna River**	**90.97**	**21**	P	**P**	**08 04 15.1**	**0.0**
D19K				IAmb	IAmb	08 04 50.7	
	comp=Z,6.8nm,1.4s						
D20K	**Etivluk River**	**91.56**	**21**	P	**P**	**08 04 17.4**	**-0.4**
B21K	**Ikpikpuk River**	**92.48**	**20**	P	**P**	**08 04 21.5**	**-0.4**
B21K				IAmb	IAmb	08 04 32.3	
	comp=Z,3.0nm,1.4s						

*IDC **21** 07:57:32.4±0.7, 9.32N×126.25E, h0km, mb3.9/14, mbtmp4.0/15, ML4.1/1, MS2.9/5, Error ellipse: s-maj=35.8km s-min=13.9km az=82.0*
*NEIC **21** 07:57:34.1±0.4, 9.30N±0.04×126.3E±0.2, h10km±1km, mb4.3/8, Error ellipse: s-maj=35.7km s-min=6.4km az=94.0*

ISC 21 07:57:40.6±0.6, 9.26N±0.07×126.2E±0.2, h67km, n33, σ1.51/25, mb4.1/18, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.25**	**195**	Pn	**Pn**	**07 58 12.7**	**-2.9**
	52nm,0.3s,baz=75,slow=7.2,SNR=1.7						
DAV				Sn	**Sn**	**07 58 46.5**	**+4.2**
	55nm,0.3s,baz=25,slow=22,SNR=4.4						
DAV				LR	LR	07 59 08.7	
	comp=Z,95nm,20.5s,baz=28,slow=41						
	175nm,0.4s						
DAV	**Davao City (W)**	**2.25**	**195**		**Pn**	**07 58 12.0**	**-3.6**
KAPI	**Kappang**	**15.56**	**205**	LR	LR	08 07 33.8	
	comp=Z,53nm,20.7s,baz=92,slow=38						
MTN	**Manton Dam**	**22.50**	**167**	P	**P**	**08 02 33.5**	**-1.2**
MTN				IAmb	IAmb	08 02 45.7	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**24.90**	**174**	P	**P**	**08 02 57.0**	**-0.4**
KNRA				IAmb	IAmb	08 03 12.1	
	comp=Z,6.7nm,0.9s						
KULM	**Kulim**	**25.63**	**263**	P	**P**	**08 03 03.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**27.18**	**181**	P	**P**	**08 03 19.0**	**+1.0**
	comp=Z,4.8nm,0.7s,baz=1.5,slow=9.3,SNR=4.2						
	comp=Z,4.8nm,0.7s						
KSRS	**Korea Array**	**28.12**	**3**	P	**P**	**08 03 26.6**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=185,slow=9.8,SNR=4.3						
KSRS				LR	LR	08 14 44.9	
	comp=Z,14nm,19.5s,baz=350,slow=37						
	comp=Z,0.9nm,0.5s						
WB0	**Warramunga Arr**	**29.95**	**164**	P	**P**	**08 03 42.2**	**-0.4**
WB0				IAmb	IAmb	08 04 02.9	
	comp=Z,5.1nm,1.1s						
WRA	**Warramunga Arr**	**30.11**	**165**	P	**P**	**08 03 42.8**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=345,slow=9.7,SNR=5.2						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**33.58**	**167**	P	**P**	**08 04 14.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=350,slow=7.0,SNR=7.2						
	comp=Z,0.4nm,0.6s						
ASAJ	**Asahikawa**	**37.55**	**20**	LR	LR	08 20 22.1	
	comp=Z,26nm,19.7s,baz=344,slow=37						
H11S3	**WAKE ISLAND Hy**	**40.30**	**72**	T	T	08 48 02.3	
	baz=262,slow=75,SNR=41						
H11S1	**WAKE ISLAND Hy**	**40.31**	**72**	T	T	08 48 02.7	
	baz=262,slow=75,SNR=68						
H11S2	**WAKE ISLAND Hy**	**40.31**	**72**	T	T	08 48 02.9	
	baz=262,slow=75,SNR=55						
HILR	**Hailar Array B**	**40.53**	**354**	P	**P**	**08 05 12.4**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=163,slow=12,SNR=1.9						
	comp=Z,0.5nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**40.66**	**71**	T	T	08 48 32.3	
	baz=264,slow=74,SNR=16						
H11N2	**WAKE ISLAND Hy**	**40.67**	**71**	T	T	08 48 36.5	
	baz=264,slow=74,SNR=17						
H11N3	**WAKE ISLAND Hy**	**40.68**	**71**	T	T	08 48 40.5	
	baz=264,slow=74,SNR=17						
NWAO	**Narrogin (SRO)**	**42.80**	**191**	LR	LR	08 28 14.6	
	comp=Z,42nm,18.4s,baz=88,slow=43						
STKA	**Stephens Creek**	**43.48**	**161**	P	**P**	**08 05 39.0**	**+1.8**
	comp=Z,0.8nm,0.4s,baz=338,slow=12,SNR=3.1						
	comp=Z,0.8nm,0.4s						
PEA0B	**Petropavlovsk-**	**50.59**	**24**	P	**P**	**08 06 31.9**	**-0.5**
PETK	**Petropavlovsk-**	**50.59**	**24**	P	**P**	**08 06 33.1**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=177,slow=1.1,SNR=9.2						
	comp=Z,2.1nm,0.8s						
PETK	**Petropavlovsk-**	**50.59**	**24**	P	**P**	**08 06 32.2**	**-0.3**
MKAR	**Makanchi Array**	**52.78**	**323**	P	**P**	**08 06 49.7**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=121,slow=8.0,SNR=13						
	comp=Z,1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**56.86**	**326**	P	**P**	**08 07 18.6**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=124,slow=6.8,SNR=9.8						
	comp=Z,1.3nm,0.5s						
BVAR	**Borovoye Array**	**62.45**	**326**	P	**P**	**08 07 57.1**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=132,slow=4.1,SNR=3.3						
	comp=Z,0.7nm,0.4s						
ILAR	**Eielson Array**	**80.39**	**26**	P	**P**	**08 09 44.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=258,slow=3.8,SNR=6.0						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**85.11**	**340**	P	**P**	**08 10 09.7**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=87,slow=6.6,SNR=7.7						
	comp=Z,1.3nm,0.5s						
INK	**Inuvik**	**85.25**	**22**	P	**P**	**08 10 08.9**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=280,slow=7.6,SNR=4.6						
	comp=Z,0.5nm,0.8s						
F31M	**Tsiigehtchic**	**85.37**	**22**	P	**P**	**08 10 10.2**	**0.0**
H31M	**Peel River**	**85.49**	**24**	P	**P**	**08 10 11.7**	**+0.8**
H31M				IAmb	IAmb	08 10 18.2	
	comp=Z,2.9nm,0.9s						
FINES	**FINESS Array B**	**86.74**	**332**	P	**P**	**08 10 17.0**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=56,slow=7.1,SNR=4.2						
	comp=Z,2.0nm,0.8s						

IDC 21 08:01:08.0±7.9, 33.61S×179.17W, h444km±103km, mb2.8/2, mbtmp3.7/3, Error ellipse: s-maj=144.3km s-min=51.2km az=1.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.54**	**212**	P	P	08 02 39.0	+1.8
	4.0nm,0.4s,baz=61,slow=12,SNR=1.8						
URZ				S	S	08 03 49.2	-0.9
	5.9nm,0.4s,baz=195,slow=23,SNR=6.5						
ASAR	**Alice Springs**	**42.06**	**271**	P	P	08 08 19.9	+0.6
	0.3nm,0.3s,baz=110,slow=7.4,SNR=13						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**43.34**	**276**	P	P	08 08 28.7	-0.8
	0.4nm,0.4s,baz=112,slow=8.1,SNR=9.8						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**147.77**	**337**	PKPbc	PKPbc	08 19 59.9	-1.0
	2.4nm,0.9s,baz=54,slow=3.6,SNR=1.6						

*ASRS **21** 08:50:09.0±1.1, 54.16N×87.19E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 21 08:50:09.0±3.3, 54.15N×87.46E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=27.5km s-min=18.9km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.57**	**264**	I	I	09 02 50.0	
	baz=83,slow=341,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.57**	**264**	Pg	Pn	08 50 36.9	-1.2
	1.5nm,0.3s,baz=80,slow=16,SNR=12						
ZALV				Lg	Lg	08 50 58.7	
	1.5nm,0.3s,baz=82,slow=25,SNR=11						
KURBB	**Kurchatov Arra**	**6.50**	**241**	Pn	Pn	08 51 46.7	+0.8
	0.1nm,0.3s,baz=55,slow=13,SNR=4.4						
KURBB				Lg	Lg	08 53 35.5	
	baz=55,slow=30,SNR=2.0						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.06**	**206**	Pn	Pn	08 52 08.6	+1.2
	baz=23,slow=14,SNR=1.2						
MKAR				Lg	Lg	08 54 25.1	
	baz=19,slow=28						
	0.1nm,0.4s						

*NNC **21** 08:54:28.7±3.5, 54.53N×86.09E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=78.7km s-min=24.3km az=149.0, Suspected Mining explosion.*
*ASRS **21** 08:54:29.0±0.9, 54.26N×86.16E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **21** 08:54:33.9±2.1, 54.12N×86.01E, h0km, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=16.0km s-min=9.9km az=59.0*

ISC 21 08:54:25.5±2.3, 53.38N±0.06×86.2E±0.1, h0km, n8, σ1.56/12, 8C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**305**	I	I	08 57 40.0	
	baz=77,slow=340,SNR=0.9						
ZAA0	**Zalesovo Array**	**1.01**	**305**	⇑P	**Pn**	**08 54 46.4**	**-0.5**
	0.8nm,0.3s						
ZAA0				⇑S	**Sb**	**08 55 00.3**	**+0.7**
	4.5nm,0.3s						
ZALV	**Zalesovo Beam**	**1.01**	**305**	Pg	**Pb**	**08 54 46.1**	**+0.3**
	1.8nm,0.3s,baz=75,slow=18,SNR=20						
ZALV				Lg	Lg	08 54 58.7	
	5.4nm,0.3s,baz=79,slow=29,SNR=20						
KURK	**Kurchatov**	**5.39**	**243**	⇑Pn	**Pb**	**08 55 59.9**	**-0.5**
	0.9nm,0.9s						
KURK				⇑Sn	**Sb**	**08 57 08.5**	**+2.9**
	0.3nm,0.6s						
KURK				⇑Lg	Lg	08 57 39.8	
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**5.49**	**243**	Pn	**Pb**	**08 56 01.6**	**-0.5**
	0.3nm,0.3s,baz=51,slow=13,SNR=19						
KURBB				Sn	**Sb**	**08 57 06.6**	**-1.8**
	baz=79,slow=14,SNR=0.9						
KURBB				Lg	Lg	08 57 36.9	
	baz=54,slow=33,SNR=1.5						
	1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**5.49**	**243**	⇑Pn	**Pb**	**08 55 59.9**	**-2.2**
	0.8nm,0.2s						
KURBB				⇑Sn	**Sb**	**08 57 09.9**	**+1.5**
	1.4nm,0.4s						
KURBB				⇑Lg	Lg	08 57 41.0	
	2.7nm,0.7s						
MK31	**Makanchi Array**	**7.05**	**203**	Pn	**Pb**	**08 56 28.7**	**-0.1**
	0.2nm,0.4s,baz=28,slow=14,SNR=19						
MKAR	**Makanchi Array**	**7.05**	**203**	Pn	**Pb**	**08 56 28.4**	**-0.4**
	0.4nm,0.3s,baz=21,slow=13,SNR=14						
MKAR				Sn	**Sb**	**08 57 54.9**	**+1.4**
	baz=27,slow=25,SNR=1.4						
MKAR				Lg	Lg	08 58 40.3	
	baz=24,slow=30,SNR=1.8						
	0.3nm,0.3s						

*SJA **21** 08:57:44.5±1.1, 28.80S×72.55W, h10km, ML3.6, MW3.3*
*IDC **21** 08:57:48.4±0.9, 29.00S×72.46W, h0km, mb4.0/8, mbtmp4.0/11, ML3.9/3, MS3.0/3, Error ellipse: s-maj=32.3km s-min=16.5km az=42.0*
*GUC **21** 08:57:50.9±0.8, 28.80S×72.30W, h24km±9km, ML3.8*

ISC 21 08:57:48.4±4.4, 28.79S±0.04×72.66W±0.05, h8km±27km, n63, σ3.30/92, mb4.1/7, 6C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**1.52**	**68**	⇑*iP*	**Pn**	**08 58 12.3**	**-3.5**
AC04				*eS*	**Sn**	**08 58 28.4**	**-7.3**
AC04	**Llanos de Chal**	**1.52**	**68**	*eP*	**Pn**	**08 58 12.3**	**-3.5**
AC04				*eS*	**Sn**	**08 58 29.2**	**-6.5**
AC04				IAML		08 58 32.7	
	comp=Z,487nm,0.5s						
CO05	**La Serena**	**1.67**	**132**	*eP*	**Pn**	**08 58 15.1**	**-2.9**
CO05				IAML		08 58 34.4	
	comp=E,2μm,0.4s						
LCO	**Las Campanas**	**1.73**	**98**	*eP*	**Pn**	**08 58 15.8**	**-3.2**
CO06	**Fray Jorge**	**2.08**	**155**	⇑*iP*	**Pn**	**08 58 20.8**	**-2.7**
CO06				IAML		08 58 42.5	
	comp=E,722nm,0.3s						
AC05	**El Transito**	**2.10**	**92**	⇑*iP*	**Pn**	**08 58 21.8**	**-2.1**
AC05				IAML		08 58 45.7	
	comp=N,1μm,0.4s						
AC05	**El Transito**	**2.10**	**92**	*eP*	**Pn**	**08 58 21.8**	**-2.1**
AC05				*eS*	**Sn**	**08 58 44.7**	**-5.6**
AC05				IAML		08 58 48.7	
	comp=Z,405nm,0.5s						
GO04	**Tololo Observa**	**2.13**	**131**	*eP*	**Pn**	**08 58 22.1**	**-2.4**
GO04	**Tololo Observa**	**2.13**	**131**	*eP*	**Pn**	**08 58 22.5**	**-2.0**
GO04				*eS*	**Sn**	**08 58 46.7**	**-4.5**
GO03	**Copiapo**	**2.45**	**61**	⇑*iP*	**Pn**	**08 58 26.9**	**-1.8**
GO03				IAML		08 59 00.1	
	comp=N,561nm,0.2s						
GO03	**Copiapo**	**2.45**	**61**	*eP*	**Pn**	**08 58 26.5**	**-2.2**
GO03				*eS*	**Sn**	**08 58 55.4**	**-3.6**
GO03				IAML		08 58 56.0	
	comp=Z,514nm,0.3s						
CO01	**Juntas del Tor**	**2.53**	**118**	*i* P	**Pn**	**08 58 28.6**	**-1.4**
CO01				IAML		08 58 58.1	
	comp=E,587nm,0.3s						
CO01	**Juntas del Tor**	**2.53**	**118**	*eP*	**Pn**	**08 58 28.1**	**-1.9**
CO01				*eS*	**Sn**	**08 58 57.2**	**-4.0**
CO01				IAML		08 58 58.9	
	comp=Z,414nm,0.3s						
CO03	**El Pedregal**	**2.66**	**140**	⇓*iP*	**Pn**	**08 58 29.7**	**-1.9**
CO03				IAML		08 58 59.9	
	comp=E,583nm,0.1s						
CO03	**El Pedregal**	**2.66**	**140**	*eP*	**Pn**	**08 58 29.8**	**-1.9**
CO03				*eS*	**Sn**	**08 58 59.3**	**-4.9**
CO03				IAML		08 59 00.5	
	comp=Z,300nm,0.6s						
CO02	**Combarbal**	**2.80**	**149**	⇓*iP*	**Pn**	**08 58 32.1**	**-1.5**
CO02				IAML		08 59 02.8	
	comp=E,2μm,0.1s						
CO02	**Combarbal**	**2.80**	**149**	*eP*	**Pn**	**08 58 31.4**	**-2.2**
CO02				*eS*	**Sn**	**08 59 01.8**	**-5.8**
CO02				IAML		08 59 08.6	
	comp=Z,358nm,0.5s						
AROD	**Rodeo**	**3.10**	**117**	*eP*	**Pn**	**08 58 37.9**	**0.0**
AROD				*eS*	**Sn**	**08 59 13.7**	**-1.6**
AC01	**Pan de Azucar**	**3.21**	**35**	⇑*iP*	**Pn**	**08 58 36.7**	**-2.4**
AC01				IAML		08 59 15.1	
	comp=E,155nm,0.3s						
AC01	**Pan de Azucar**	**3.21**	**35**	*eP*	**Pn**	**08 58 36.8**	**-2.4**
AC01				*eS*	**Sn**	**08 59 12.7**	**-4.8**
A

MT05					IAML			08 59 57.9	
	comp=Z,53nm,0.3s								
AVFE	**Valle Fertil**	**4.89**	**114**	*eP*		**Pn**		**08 59 02.4**	**0.0**
AVFE				*eS*		**Sn**		**08 59 56.5**	**-2.8**
AVFE				IAML				09 00 16.4	
	comp=Z,88nm,0.9s								
ACLC	**CERRO LA CRUZ**	**5.04**	**99**	*eP*		**Pn**		**08 59 04.6**	**+0.3**
ACLC				IAML				09 00 30.9	
	comp=Z,24nm,0.8s								
MT04	**Ro Olivares**	**5.08**	**155**	*eP*		**Pn**		**08 59 05.4**	**+0.3**
MT04				*eS*		**Sn**		**09 00 02.6**	**-1.4**
MT04				IAML				09 00 04.3	
	comp=Z,44nm,0.3s								
MT08	**Bocatoma Ro**	**5.16**	**155**	*eP*		**Pn**		**08 59 07.4**	**+1.2**
MT08				*eS*		**Sn**		**09 00 04.8**	**-1.2**
MT08				IAML				09 00 05.9	
	comp=Z,48nm,0.8s								
MT01	**Popeta**	**5.20**	**167**	*eP*		**Pn**		**08 59 04.6**	**-1.8**
MT01				*eS*		**Sn**		**08 59 58.8**	**-7.7**
MT01				IAML				09 00 03.2	
	comp=Z,30nm,0.7s								
H03N1	**Juan Fernandez**	**7.08**	**228**	Pn		**Pn**		**08 59 31.1**	**-0.9**
	baz=109,slow=17								
H03N1				Sn		**Sn**		**09 00 46.4**	**-6.2**
	baz=128								
H03N1				T		T		09 08 32.3	
	baz=59,slow=71,SNR=62								
H03N2	**Juan Fernandez**	**7.09**	**228**	Pn		**Pn**		**08 59 31.3**	**-0.9**
	baz=109,slow=17								
H03N2				Sn		**Sn**		**09 00 46.6**	**-6.3**
	baz=128								
H03N2				T		T		09 08 35.3	
	baz=59,slow=71,SNR=50								
H03N3	**Juan Fernandez**	**7.10**	**228**	Pn		**Pn**		**08 59 31.4**	**-0.9**
	baz=109,slow=17								
H03N3				Sn		**Sn**		**09 00 45.6**	**-7.4**
	baz=128								
H03N3				T		T		09 08 31.8	
	baz=59,slow=71,SNR=48								
H03S3	**Juan Fernandez**	**7.33**	**225**	Pn		**Pn**		**08 59 34.2**	**-1.2**
	baz=68,slow=74								
H03S3				Sn		**Sn**		**09 00 50.1**	**-8.5**
	baz=194								
H03S1	**Juan Fernandez**	**7.34**	**225**	Pn		**Pn**		**08 59 34.0**	**-1.6**
	baz=68								
H03S1				Sn		**Sn**		**09 00 52.1**	**-6.8**
	baz=194								
H03S2	**Juan Fernandez**	**7.35**	**225**	Pn		**Pn**		**08 59 34.1**	**-1.5**
	baz=68,slow=74								
H03S2				Sn		**Sn**		**09 00 53.1**	**-6.0**
	baz=194								
PLCA	**Paso Flores**	**12.04**	**172**	Pn		**Pn**		**09 00 38.0**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=341,slow=11,SNR=8.7								
PLCA				LR		LR		09 04 51.9	
	comp=Z,68nm,18.0s,baz=6.5,slow=36 comp=Z,1.1nm,0.8s								
LPAZ	**La Paz**	**13.13**	**20**	Pn		**Pn**		**09 00 54.7**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=166,slow=5.5,SNR=8.0								
LPAZ				LR		LR		09 07 18.9	
	comp=Z,46nm,18.0s,baz=243,slow=43								
CPUP	**Villa Florida**	**13.82**	**83**	LR		LR		09 06 31.4	
	comp=Z,76nm,19.1s,baz=248,slow=38								
SIV	**San Ignacio**	**16.63**	**42**	Pn		**P**		**09 01 44.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=217,slow=10,SNR=39 comp=Z,10nm,0.7s								
BDFB	**Brasilia**	**26.24**	**65**	P		**P**		**09 03 24.6**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=220,slow=12,SNR=4.8 comp=Z,3.2nm,0.7s								
TXAR	**Lajitas Array**	**64.95**	**330**	P		**P**		**09 08 31.9**	**+3.2**
	comp=Z,0.8nm,0.8s,baz=156,slow=8.4,SNR=5.4 comp=Z,0.8nm,0.8s								
DBIC	**Dimbokro**	**74.09**	**73**	P		**P**		**09 09 26.1**	**+0.6**
	comp=Z,4.2nm,0.8s,baz=242,slow=4.3,SNR=3.4 comp=Z,4.2nm,0.8s								
PDAR	**Pinedale Array**	**78.89**	**333**	P		**P**		**09 09 54.9**	**+2.6**
	comp=Z,0.2nm,0.6s,baz=143,slow=8.7,SNR=3.4 comp=Z,0.2nm,0.6s								
NVAR	**Mina Array Bea**	**79.32**	**325**	P		**P**		**09 09 57.9**	**+3.2**
	comp=Z,0.3nm,0.6s,baz=121,slow=4.2,SNR=3.8 comp=Z,0.3nm,0.6s								
ULM	**Lac du Bonnet**	**81.35**	**345**	P		**P**		**09 10 07.3**	**+2.2**
	comp=Z,1.8nm,0.8s,baz=48,slow=13,SNR=3.1 comp=Z,1.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**82.98**	**71**	P		**P**		**09 10 14.7**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=248,slow=6.4,SNR=5.7 comp=Z,1.2nm,0.6s								
BOSA	**Boshof**	**82.99**	**119**	P		**P**		**09 10 14.5**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=18,slow=2.2,SNR=4.2 comp=Z,2.2nm,0.8s								
WRA	**Warramunga Arr**	**124.98**	**211**	PKP		**PKiKP**		**09 16 50.5**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=162,slow=1.9,SNR=4.9								
BVAR	**Borovoye Array**	**143.67**	**38**	PKhKP		PKPpre		09 17 20.3	
	comp=Z,0.2nm,0.4s,baz=339,slow=3.7,SNR=1.2								
KURBB	**Kurchatov Arra**	**149.24**	**37**	PKPbc		**PKPbc**		**09 17 37.6**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=300,slow=3.2,SNR=3.2								
ZALV	**Zalesovo Beam**	**149.97**	**27**	PKP		**PKPdf**		**09 17 36.1**	**+2.1**
	comp=Z,8.4nm,0.7s,baz=319,slow=2.5,SNR=3.6								
ZALV				PKPbc		**PKiKP**		**09 17 40.7**	**+0.9**
	comp=Z,7.9nm,0.7s,baz=305,slow=3.7,SNR=22								

*IDC **21** 09:00:27.8±0.8, 62.°71N×136.°55W, h0km, mb3.6/4, mbtmp3.5/10, ML3.4/5, MS3.4/1, Error ellipse: s-maj=13.6km s-min=9.3km az=47.0*
*ANF **21** 09:00:27.6±0.1, 62.°60N×136.°69W, h2km±1km, ML4.0/50, Error ellipse: s-maj=1.1km s-min=0.8km az=90.0*
*PGC **21** 09:00:29.1±0.0, 62.°61N×136.°69W, h13km, ML3.7/38, 25km south of Pelly Crossing, Yt Southern Yukon Territory, Canada*
ISC 21 09:00:27.9±0.8, 62.°60N±0.°01×136.°66W±0.°02, h9km±5km, n148, σ1§23/212, mb3.2/4, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M30M	**Minto, Yukon**	**0.07**	**246**	P	**Pg**	**09 00 30.0**	**0.0**
	baz=57,SNR=1000						
M30M				S	**Sg**	**09 00 30.9**	**-0.5**
	baz=57						
L29M	**L29M**	**0.84**	**308**	P	**Pg**	**09 00 43.6**	**-0.5**
	baz=127						
L29M				S	**Sg**	**09 00 55.0**	**-0.1**
	baz=127						
L29M	**L29M**	**0.84**	**308**	P	**Pg**	**09 00 43.7**	**-0.5**
M29M	**Somme Creek**	**0.85**	**260**	P	**Pg**	**09 00 43.6**	**-0.7**
	baz=78						
M29M				S	**Sg**	**09 00 54.7**	**-0.7**
	baz=78						
MAYO	**Mayo, Yukon**	**1.06**	**19**	P	**Pb**	**09 00 48.3**	**-0.1**
	baz=201,SNR=338						
MAYO				S	**Sg**	**09 01 02.0**	**+0.1**
	baz=201						
MAYO	**Mayo, Yukon**	**1.06**	**19**	P	**Pb**	**09 00 48.2**	**-0.2**
MAYO				S	**Sg**	**09 01 01.4**	**-0.6**
M31M	**Drury Creek, Y**	**1.13**	**110**	P	**Pg**	**09 00 49.6**	**-0.1**
	baz=292,SNR=262						
M31M				S	**Sb**	**09 01 04.9**	**+0.3**
	baz=292						
M31M	**Drury Creek, Y**	**1.13**	**110**	P	**Pb**	**09 00 50.2**	**+0.5**
M31M				S	**Sg**	**09 01 04.6**	**+0.3**
N30M	**Aishikik Lake**	**1.17**	**190**	P	**Pg**	**09 00 49.9**	**-0.4**
	baz=8.9						
N30M				S	**Sg**	**09 01 05.2**	**-0.2**
	baz=8.9						
N30M	**Aishikik Lake**	**1.17**	**190**	P	**Pg**	**09 00 49.6**	**-0.6**
N30M				S	**Sb**	**09 01 05.8**	**+0.2**
N31M	**Braeburn, Yuko**	**1.20**	**159**	P	**Pg**	**09 00 50.5**	**-0.3**
	baz=339,SNR=771						
N31M				S	**Sb**	**09 01 07.5**	**+1.1**
	baz=339						
N31M	**Braeburn, Yuko**	**1.20**	**159**	P	**Pb**	**09 00 50.9**	**+0.1**
K29M	**Barlow Dome**	**1.30**	**343**	P	**Pb**	**09 00 52.6**	**-0.2**
	baz=163						
K29M				S	**Sb**	**09 01 09.8**	**+0.1**
	baz=163						
K29M	**Barlow Dome**	**1.30**	**343**	P	**Pb**	**09 00 52.6**	**-0.2**
K29M				S	**Sg**	**09 01 09.3**	**-0.6**
YUK4	**Talbot Arm**	**1.57**	**217**	P	**Pn**	**09 00 55.1**	**-1.2**
	baz=36,SNR=118						
YUK4				S	**Sn**	**09 01 15.2**	**-1.7**
	baz=36						
YUK4	**Talbot Arm**	**1.57**	**217**	P	**Pn**	**09 00 55.5**	**-0.8**
YUK4				S	**Sn**	**09 01 15.1**	**-1.7**
YUK5	**Granite Creek**	**1.58**	**202**	Pn	**Pb**	**09 00 57.5**	**0.0**
YUK5				Sn	**Sn**	**09 01 17.3**	**+0.3**
BRWY	**Burwash Landin**	**1.67**	**223**	Pn	**Pn**	**09 00 58.0**	**+0.6**
BRWY				Sn	**Sn**	**09 01 18.7**	**-0.3**
HYT	**Haines Junctio**	**1.83**	**193**	P	**Pn**	**09 01 00.0**	**+0.3**
	baz=12,SNR=243						
HYT				Sb	**Sg**	**09 01 26.3**	**-0.3**
	baz=12						
HYT	**Haines Junctio**	**1.83**	**193**	Pn	**Pb**	**09 01 01.0**	**-0.7**
HYT				Sn	**Sn**	**09 01 23.0**	**0.0**
YUK6	**Outpost Mounta**	**1.85**	**207**	P	**Pn**	**09 01 00.3**	**+0.2**
	baz=25,SNR=287						
YUK6				Sb	**Sg**	**09 01 27.0**	**-0.4**
	baz=25						
YUK6	**Outpost Mounta**	**1.85**	**207**	Pn	**Pn**	**09 01 00.7**	**+0.5**
YUK6				Sn	**Sn**	**09 01 23.4**	**-0.3**
O30N	**Mendenhall**	**1.86**	**171**	P	**Pn**	**09 01 00.3**	**+0.2**
	baz=351,SNR=642						
O30N				Sb	**Sg**	**09 01 26.7**	**-0.9**
	baz=351						
O30N	**Mendenhall**	**1.86**	**171**	Pn	**Pn**	**09 01 00.6**	**+0.6**
O30N				Sn	**Sn**	**09 01 24.0**	**+0.3**
DAWY	**Dawson**	**1.92**	**321**	P	**Pn**	**09 01 00.5**	**-0.4**
	baz=139,SNR=91						
DAWY				Sb	**Sg**	**09 01 28.9**	**-0.5**
	baz=139						
DAWY	**Dawson**	**1.92**	**321**	Pn	**Pn**	**09 01 00.8**	**0.0**
DAWY				Sn	**Sn**	**09 01 24.3**	**-0.8**
BVCY	**Beaver Creek**	**1.96**	**266**	P	**Pn**	**09 01 01.0**	**-0.4**
	baz=82,SNR=72						
BVCY				S	**Sn**	**09 01 26.6**	**+0.5**
	baz=82						
BVCY	**Beaver Creek**	**1.96**	**266**	Sn	**Sn**	**09 01 25.7**	**-0.4**
YUK3	**Moose Creek**	**1.96**	**247**	P	**Pn**	**09 01 01.7**	**0.0**
	baz=63,SNR=518						
YUK3				Sb	**Sg**	**09 01 29.8**	**-1.2**
	baz=63						
YUK3	**Moose Creek**	**1.96**	**247**	Sn	**Sn**	**09 01 26.0**	**-0.5**
YUK8	**Steele Glacier**	**1.98**	**229**	P	**Pn**	**09 01 01.9**	**0.0**
	baz=46						
YUK8				Pb	**Pg**	**09 01 04.8**	**-1.0**
	baz=46,SNR=583						
YUK8				Sb	**Sg**	**09 01 30.6**	**-0.8**
	baz=46						
YUK8	**Steele Glacier**	**1.98**	**229**	Pn	**Pn**	**09 01 02.7**	**+0.9**
YUK8				Sn	**Sn**	**09 01 26.4**	**-0.4**
J29N	**Klondike Camp**	**1.98**	**340**	P	**Pn**	**09 01 02.0**	**+0.2**
	baz=159,SNR=222						
J29N				Sb	**Sg**	**09 01 30.8**	**-0.8**
	baz=159						
J29N	**Klondike Camp**	**1.98**	**340**	Pn	**Pn**	**09 01 02.5**	**+0.7**
J29N				Sn	**Sn**	**09 01 26.7**	**-0.1**
J30M	**Hart River**	**1.99**	**4**	P	**Pn**	**09 01 02.2**	**+0.3**
	baz=185						
J30M				Sb	**Sg**	**09 01 31.2**	**-0.5**
	baz=185						
J30M	**Hart River**	**1.99**	**4**	Pn	**Pn**	**09 01 02.3**	**+0.4**
J30M				Sn	**Sn**	**09 01 26.2**	**-0.7**
YUK2	**White River**	**2.12**	**249**	Sg	**Sg**	**09 01 34.8**	**-1.3**
WHY	**Whitehorse**	**2.13**	**156**	P	**Pn**	**09 01 03.8**	**0.0**
	baz=337,SNR=32						
WHY				Sb	**Sg**	**09 01 35.6**	**-0.7**
	baz=337						
WHY	**Whitehorse**	**2.13**	**156**	Pn	**Pn**	**09 01 04.2**	**+0.4**
YUK7	**Dusty Glacier**	**2.20**	**199**	Pn	**Pn**	**09 01 05.8**	**+1.0**
YUK7				Sg	**Sg**	**09 01 37.8**	**-0.7**
N32M	**Quiet Lake**	**2.24**	**129**	P	**Pn**	**09 01 05.4**	**+0.2**
	baz=312						
N32M				Sg	**Sg**	**09 01 41.0**	**+1.3**
	baz=312						
N32M	**Quiet Lake**	**2.24**	**129**	Pn	**Pn**	**09 01 06.2**	**+1.0**
L27K	**Beaver Creek,**	**2.42**	**283**	P	**Pn**	**09 01 07.3**	**-0.3**
	baz=99						
L27K				Sb	**Sg**	**09 01 43.6**	**-1.8**
	baz=99						
L27K	**Beaver Creek,**	**2.42**	**283**	Pn	**Pn**	**09 01 07.8**	**+0.1**
M27K	**Edge Creek, AK**	**2.44**	**267**	Pb	**Pb**	**09 01 12.1**	**+0.1**
	baz=82						
M27K				Sb	**Sg**	**09 01 43.9**	**-2.2**
	baz=82						
O29M	**Mount Kennedy**	**2.48**	**203**	P	**Pn**	**09 01 09.7**	**+1.0**
	baz=20						
O29M				Sb	**Sg**	**09 01 45.8**	**-1.8**
	baz=20						
O29M	**Mount Kennedy**	**2.48**	**203**	Pn	**Pn**	**09 01 10.0**	**+1.3**
O28M	**Mount Upton**	**2.49**	**224**	P	**Pn**	**09 01 10.0**	**+1.0**
	baz=41						
O28M				Sb	**Sg**	**09 01 45.7**	**-2.2**
	baz=41						
O28M	**Mount Upton**	**2.49**	**224**	Sg	**Sg**	**09 01 46.0**	**-1.9**
P30M	**Million Dollar**	**2.49**	**183**	Pb	**Pb**	**09 01 13.7**	**+0.8**
	baz=2.8,SNR=67						
P30M				Sb	**Sg**	**09 01 46.2**	**-1.8**
	baz=2.8						
P30M	**Million Dollar**	**2.49**	**183**	Pn	**Pn**	**09 01 10.1**	**+1.3**
P30M				Sg	**Sg**	**09 01 46.8**	**-1.2**
I30M	**Mount Dempster**	**2.63**	**3**	P	**Pn**	**09 01 11.9**	**+1.2**
	baz=183						
I30M				Sb	**Sb**	**09 01 50.0**	**+2.1**
	baz=183						
I30M	**Mount Dempster**	**2.63**	**3**	Pn	**Pn**	**09 01 11.0**	**+0.3**
LOGN	**Logan Glacier**	**2.73**	**231**	Pn	**Pn**	**09 01 13.4**	**+1.3**
CTGM	**Chitina Glacie**	**2.76**	**236**	Pn	**Pn**	**09 01 13.8**	**+1.2**
CTG	**Chitna Glacier**	**2.76**	**236**	P	**Pn**	**09 01 12.8**	**+0.3**
	baz=51,SNR=9.6						
CTG				Sb	**Sg**	**09 01 54.1**	**-2.6**
	baz=51						
I29M	**Ogilvie Camp,**	**2.86**	**346**	P	**Pn**	**09 01 14.3**	**+0.5**
	baz=165,SNR=17						
I29M				S	**Sn**	**09 01 49.3**	**+0.9**
	baz=165						
I29M	**Ogilvie Camp,**	**2.86**	**346**	Pn	**Pn**	**09 01 14.6**	**+0.8**
M26K	**Nabesna, AK**	**2.95**	**269**	P	**Pn**	**09 01 15.5**	**+0.5**
	baz=83						
M26K				Sb	**Sg**	**09 01 59.5**	**-3.0**
	baz=83						
P33M	**Teslin, Yukon**	**3.03**	**141**	P	**Pn**	**09 01 15.9**	**-0.2**
	baz=324,SNR=8.3						
P33M				Sb	**Sb**	**09 02 02.4**	**+3.2**
	baz=324						
P33M	**Teslin, Yukon**	**3.03**	**141**	Pn	**Pn**	**09 01 16.1**	**-0.1**
P33M				Sg	**Sg**	**09 02 03.2**	**-1.9**
PINM	**Pinnacle**	**3.05**	**216**	Pb	**Pb**	**09 01 23.4**	**+1.0**
	baz=33						
GRNC	**Granite Creek**	**3.07**	**235**	Pn	**Pn**	**09 01 17.6**	**+0.7**
PTPK	**Patty Peak**	**3.09**	**245**	Pn	**Pn**	**09 01 17.7**	**+0.6**
PTPK				Sn	**Sn**	**09 01 53.1**	**-1.2**
L26K	**Log Cabin Wild**	**3.10**	**281**	P	**Pn**	**09 01 17.4**	**+0.3**
	baz=95,SNR=10						
L26K				S	**Sn**	**09 01 55.5**	**+1.2**
	baz=95						
BALM	**Baldy**	**3.12**	**242**	Pn	**Pn**	**09 01 18.2**	**+0.7**
BALM				Sn	**Sn**	**09 01 54.4**	**-0.5**
BALM				Sg	**Sg**	**09 02 05.0**	**-3.0**
KIAG	**Kiagna River**	**3.19**	**241**	Pn	**Pn**	**09 01 18.9**	**+0.5**
I28M	**Miner Creek**	**3.20**	**335**	P	**Pn**	**09 01 19.9**	**+1.4**
	baz=152						
I28M				Sb	**Sb**	**09 02 06.2**	**+2.1**
	baz=152						
I28M	**Miner Creek**	**3.20**	**335**	Pn	**Pn**	**09 01 18.9**	**+0.4**
SKAG	**Skagway**	**3.22**	**168**	Pg	**Pg**	**09 01 28.9**	**-0.7**
	baz=349						
SKAG				Sb	**Sb**	**09 02 07.7**	**+3.1**
	baz=349						
RKAV	**Rock Avalanche**	**3.22**	**226**	Pn	**Pn**	**09 01 19.6**	**+0.7**
MCARA	**McCarthy VSAT**	**3.24**	**251**	P	**Pn**	**09 01 20.1**	**+1.1**
	baz=65,SNR=33						
MCARA				Sb	**Sb**	**09 02 08.2**	**+3.0**
	baz=65						
MCARA	**McCarthy VSAT**	**3.24**	**251**	Pn	**Pn**	**09 01 19.7**	**+0.7**
MCARA				Sg	**Sb**	**09 02 08.2**	**+3.0**
P32M	**Atlin**	**3.34**	**153**	Pb	**Pb**	**09 01 27.7**	**+0.3**
	baz=336						
P32M	**Atlin**	**3.34**	**153**	Pn	**Pn**	**09 01 20.9**	**+0.5**
P32M				Sg	**Sg**	**09 02 12.6**	**-2.6**
H31M	**Peel River**	**3.37**	**16**	P	**Pn**	**09 01 21.2**	**+0.4**
	baz=199						
H31M	**Peel River**	**3.37**	**16**	Pn	**Pn**	**09 01 21.2**	**+0.4**
MESA	**MESA**	**3.52**	**229**	Pn	**Pn**	**09 01 24.1**	**+1.1**
CRQE	**Cirque**	**3.58**	**242**	P	**Pn**	**09 01 25.6**	**+1.8**
	baz=56						
SCRK	**Sand Creek**	**3.58**	**296**	P	**Pn**	**09 01 23.6**	**-0.2**
	baz=109,SNR=19						
I27K	**Kandik River**	**3.71**	**326**	P	**Pn**	**09 01 25.9**	**+0.4**
	baz=142,SNR=24						
EPYK	**Eagle Plains**	**3.78**	**360**	P	**Pn**	**09 01 27.0**	**+0.6**
	baz=180						
EPYK	**Eagle Plains**	**3.78**	**360**	Pn	**Pn**	**09 01 26.6**	**+0.2**
N25K	**Chitina, Valde**	**3.86**	**259**	Pg	**Pg**	**09 01 41.1**	**-0.8**
	baz=71						
N25K	**Chitina, Valde**	**3.86**	**259**	Pn	**Pn**	**09 01 28.1**	**+0.5**
N25K				Sn	**Sn**	**09 02 11.7**	**-1.4**
RIDG	**Independent Ri**	**3.88**	**291**	P	**Pn**	**09 01 28.3**	**+0.5**
	baz=104						
I26K	**Coal Creek Min**	**3.94**	**316**	P	**Pn**	**09 01 28.9**	**+0.2**
	baz=131						
PAX	**Paxson**	**4.06**	**279**	P	**Pn**	**09 01 30.4**	**0.0**
	baz=91						
BMRM	**Bremner River**	**4.11**	**250**	P	**Pn**	**09 01 32.3**	**+1.3**
	baz=63						
BESE	**Bessie Mountai**	**4.13**	**167**	Pn	**Pn**	**09 01 32.4**	**+1.1**
BESE				Sn	**Sn**	**09 02 19.5**	**-0.3**
BESE				Sg	**Sg**	**09 02 36.9**	**-3.6**
H27K	**Steamboat Moun**	**4.21**	**332**	P	**Pn**	**09 01 32.9**	**+0.6**
	baz=148						
H27K	**Steamboat Moun**	**4.21**	**332**	Pn	**Pn**	**09 01 32.2**	**-0.1**
Q32M	**Nakina River**	**4.24**	**148**	P	**Pn**	**09 01 34.1**	**+1.1**
	baz=331						
Q32M	**Nakina River**	**4.24**	**148**	Pn	**Pn**	**09 01 33.8**	**+0.9**
R33M	**Jennings River**	**4.25**	**137**	Sg	**Sg**	**09 02 40.8**	**-3.4**
K24K	**Donnelly Dome**	**4.30**	**290**	P	**Pn**	**09 01 33.9**	**+0.3**
	baz=102						
G29M	**Pine Creek**	**4.37**	**353**	P	**Pn**	**09 01 34.9**	**+0.5**
	baz=172						
G29M	**Pine Creek**	**4.37**	**353**	Pn	**Pn**	**09 01 34.9**	**+0.5**
J25K	**Salcha River,**	**4.38**	**301**	P	**Pn**	**09 01 34.9**	**+0.3**
	baz=114						
G30M	**tAoh Zraii Nji**	**4.40**	**2**	P	**Pn**	**09 01 35.2**	**+0.3**
	baz=183						
G30M	**tAoh Zraii Nji**	**4.40**	**2**	Pn	**Pn**	**09 01 35.0**	**+0.1**
G31M	**Satah River**	**4.46**	**12**	P	**Pn**	**09 01 36.3**	**+0.7**
	baz=195						
G31M	**Satah River**	**4.46**	**12**	Pn	**Pn**	**09 01 35.9**	**+0.3**
G27K	**Doyon Strip**	**4.73**	**335**	P	**Pn**	**09 01 39.8**	**+0.3**
	baz=151						
G27K	**Doyon Strip**	**4.73**	**335**	Pn	**Pn**	**09 01 39.7**	**+0.2**
PRP	**Porcupine Dome**	**4.87**	**311**	P	**Pn**	**09 01 41.5**	**+0.1**
	baz=123						
HDA	**Harding Lake**	**4.95**	**296**	P	**Pn**	**09 01 42.9**	**+0.4**
	baz=107						
F31M	**Tsiigehtchic**	**5.01**	**13**	P	**Pn**	**09 01 43.8**	**+0.6**
	baz=196,SNR=17						
F31M	**Tsiigehtchic**	**5.01**	**13**	Pn	**Pn**	**09 01 43.5**	**+0.3**
F30M	**Barrier River**	**5.04**	**4**	P	**Pn**	**09 01 43.5**	**-0.2**
	baz=185,SNR=30						
F30M	**Barrier River**	**5.04**	**4**	Pn	**Pn**	**09 01 43.4**	**-0.2**
ILAR	**Eielson Array**	**5.04**	**300**	Pn	**Pn**	**09 01 43.8**	**0.0**
	0.7nm,0.3s,baz=110,slow=11,SNR=53						
ILAR				Lg	Lg	09 03 02.2	
	5.9nm,0.3s,baz=103,slow=30,SNR=10 1.9nm,0.6s						
F28M	**Old Crow**	**5.21**	**346**	P	**Pn**	**09 01 46.4**	**+0.4**
	baz=164,SNR=9.4						
F28M	**Old Crow**	**5.21**	**346**	Pn	**Pn**	**09 01 46.1**	**+0.1**
DLBC	**Dease Lake**	**5.31**	**139**	Pn	**Pn**	**09 01 48.6**	**+1.1**
	1.9nm,0.3s,baz=315,slow=18,SNR=28						
DLBC				Pg	**Pb**	**09 02 01.2**	**+0.3**
	0.9nm,0.3s,baz=274,slow=15,SNR=4.3						
DLBC				Lg	Lg	09 03 13.4	
	3.9nm,0.3s,baz=209,slow=27,SNR=16 7.9nm,0.5s						
DLBC	**Dease Lake**	**5.31**	**139**	P	**Pn**	**09 01 48.1**	**+0.7**
	baz=325,SNR=28						
DLBC	**Dease Lake**	**5.31**	**139**	Pn	**Pn**	**09 01 47.6**	**+0.1**
DLBC				Sg	**Sg**	**09 03 14.3**	**-3.9**
G26K	**Porcupine Rive**	**5.32**	**328**	P	**Pn**	**09 01 48.3**	**+0.8**
	baz=142						
G26K	**Porcupine Rive**	**5.32**	**328**	Pn	**Pn**	**09 01 46.8**	**-0.6**
S34M	**Telegraph Cree**	**5.45**	**147**	Pn	**Pn**	**09 01 50.0**	**+0.7**
E29M	**Blow River**	**5.83**	**355**	P	**Pn**	**09 01 54.7**	**+0.2**
	baz=174						
E29M	**Blow River**	**5.83**	**355**	Pn	**Pn**	**09 01 54.4**	**-0.1**
H24K	**Noodor Dome**	**5.87**	**308**	P	**Pn**	**09 01 55.8**	**+0.7**
	baz=118						
INK	**Inuvik**	**5.88**	**11**	Pn	**Pn**	**09 01 54.8**	**-0.3**
	0.6nm,0.3s,baz=215,slow=9.5,SNR=18						
INK				Pg	**Pb**	**09 02 09.0**	**-1.4**
	1.3nm,0.3s,baz=101,slow=10,SNR=6.4						
INK				Sn	**Sn**	**09 02 59.2**	**-3.2**
	1.3nm,0.3s,baz=240,slow=25,SNR=4.8						
INK				Lg	Lg	09 03 29.2	
	1.8nm,0.3s,baz=106,slow=32,SNR=7.9 1.5nm,0.3s						
INK	**Inuvik**	**5.88**	**11**	P	**Pn**	**09 01 54.5**	**-0.6**
	baz=194,SNR=8.4						
INK	**Inuvik**	**5.88**	**11**	Pn	**Pn**	**09 01 54.7**	**-0.3**
E27K	**Coleen River**	**5.97**	**342**	P	**Pn**	**09 01 55.7**	**-0.8**
	baz=158						
E27K	**Coleen River**	**5.97**	**342**	Pn	**Pn**	**09 01 56.2**	**-0.3**
F26K	**Sheenjek River**	**6.00**	**332**	P	**Pn**	**09 01 56.5**	**-0.4**
	baz=145						
F26K	**Sheenjek River**	**6.00**	**332**	Pn	**Pn**	**09 01 57.1**	**+0.2**
E28M	**Babbage River**	**6.14**	**350**	P	**Pn**	**09 01 58.6**	**-0.2**
	baz=168						
E28M	**Babbage River**	**6.14**	**350**	Pn	**Pn**	**09 01 58.6**	**-0.2**
I23K	**Minto, Yukon-K**	**6.16**	**300**	P	**Pn**	**09 01 59.1**	**+0.1**
	baz=109						
F25K	**Christian Rive**	**6.28**	**327**	Pn	**Pn**	**09 02 00.4**	**-0.3**
D28M	**Stokes Point**	**6

NUBE	**Las Nubes**	**2.27 121**	P	**Pn**	**09 03 58.5**	**-0.2**
NUBE			S	**Sn**	**09 04 30.6**	**+1.8**
PETF	**Flores**	**2.60 45**	P	**Pn**	**09 04 01.9**	**-0.5**
PETF			S	**Sn**	**09 04 35.1**	**-0.5**
JAYA	**Jayaque - finc**	**2.67 122**	S	**Sn**	**09 04 37.7**	**+0.2**

*NOU **21** 09:05:20.6, 17°.48S×178°.64W, h556km, mb4.3/39, Fiji Islands Region*
*NEIC **21** 09:05:21.1±0.9, 17°.4S±0°.3×178°.49W±0°.06, h564km±16km, mb4.3/19, Error ellipse: s-maj=48.2km s-min=7.9km az=183.0*
*IDC **21** 09:05:22.2±2.6, 16°.78S×179°.05W, h563km±35km, mb3.2/5, mbtmp4.2/6, Error ellipse: s-maj=93.9km s-min=13.4km az=155.0*

ISC 21 09:05:20.2±0.7, **17°.5S**±0°.1×**178°.66W**±0°.08, **h547**km, **n66**, σ1§**06**/68, **mb4.3**/16, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.76 191**		P	**P**	**09 06 27.3**	**+1.7**
TAVE	**Taveuni**	**1.42 303**		P	**P**	**09 06 29.0**	**+1.6**
DGTI	**Dogotuki**	**1.93 307**		P	**P**	**09 06 30.3**	**+0.9**
MSVF	**Nonsavu**	**3.15 265**		P	**P**	**09 06 38.9**	**+2.8**
MSVF	**Nonsavu**	**3.15 265**		P	**P**	**09 06 38.7**	**+2.7**
NIUE	**Niue**	**8.45 102**		P	**P**	**09 07 21.6**	**-0.7**
NIUE	**Niue**	**8.45 102**		P	**P**	**09 07 22.8**	**+0.5**
DVP	**Devils Point**	**12.54 267**		P	**P**	**09 08 05.2**	**+0.8**
MARNC	**Mare, Loyalty**	**13.16 250**		P	**P**	**09 08 10.3**	**-0.5**
DZM	**Mont Dzumac**	**14.74 250**		P	**P**	**09 08 26.7**	**-0.5**
	14nm,0.6s,baz=82,slow=19,SNR=21						
DZM	**Mont Dzumac**	**14.74 250**		P	**P**	**09 08 27.0**	**-0.2**
KOUNC	**Koumac, New Ca**	**16.41 257**		P	**P**	**09 08 44.0**	**+0.2**
OUZ	**Omahuta**	**18.96 200**		P	**P**	**09 09 07.3**	**+0.4**
URZ	**Urewera**	**21.03 189**		P	**P**	**09 09 23.5**	**-2.1**
BKZ	**Black Stump Fm**	**22.01 190**		P	**P**	**09 09 35.4**	**+0.9**
TATA	**Tatamba Isabel**	**22.83 291**		P	**P**	**09 09 42.0**	**-0.1**
QRZ	**Quartz Range**	**24.47 196**		P	**P**	**09 09 56.7**	**+0.4**
KHZ	**Kahutara**	**25.73 193**		P	**P**	**09 10 05.6**	**-1.7**
JCZ	**Jackson Bay**	**28.55 199**		P	**P**	**09 10 32.5**	**+0.3**
EIDS	**Eidsvold**	**29.19 249**		P	**P**	**09 10 37.9**	**-0.1**
EIDS				IAmb	IAmb	09 10 38.5	
	comp=Z,7.0nm,0.9s						
ARMA	**Armidale**	**29.95 239**		P	**P**	**09 10 45.3**	**+0.7**
ARMA				IAmb	IAmb	09 10 46.3	
	comp=Z,7.3nm,0.8s						
ARMA	**Armidale**	**29.95 239**		P	**P**	**09 10 45.6**	**+1.0**
CTA	**Charters Tower**	**33.28 260**		P	**P**	**09 11 12.8**	**-0.2**
CTAO	**Charters Tower**	**33.28 260**		P	**P**	**09 11 13.2**	**+0.2**
CTAO				IAmb	IAmb	09 11 13.7	
	comp=Z,7.4nm,0.9s						
CTAO	**Charters Tower**	**33.28 260**		P	**P**	**09 11 12.8**	**-0.2**
CNB	**Canberra Magne**	**33.50 232**		P	**P**	**09 11 15.6**	**+0.9**
CAN	**Canberra**	**33.77 232**		P	**P**	**09 11 18.2**	**+1.2**
CAN				IAmb	IAmb	09 11 30.3	
	comp=Z,8.2nm,1.0s						
PMG	**Port Moresby**	**34.15 279**		P	**P**	**09 11 20.9**	**+0.5**
CMSA	**Cobar Meteorol**	**35.15 240**		P	**P**	**09 11 28.8**	**+0.3**
MTSU	**Mount Surprise**	**35.22 263**		P	**P**	**09 11 29.1**	**-0.2**
COEN	**Coen**	**36.86 270**		P	**P**	**09 11 43.7**	**+0.8**
COEN	**Coen**	**36.86 270**		P	**P**	**09 11 43.4**	**+0.5**
GLAD	**Gladstone**	**36.99 224**		P	**P**	**09 11 44.4**	**+0.9**
TOO	**Toolangi**	**37.25 230**		P	**P**	**09 11 46.6**	**+0.8**
TOO				IAmb	IAmb	09 11 47.7	
	comp=Z,5.6nm,1.0s						
STKA	**Stephens Creek**	**38.62 241**		P	**P**	**09 11 57.9**	**+0.9**
	comp=Z,5.9nm,0.4s,baz=89,slow=10,SNR=32						
	comp=Z,5.9nm,0.4s						
STKA	**Stephens Creek**	**38.62 241**			**P**	**09 11 58.0**	**+1.0**
STKA	**Stephens Creek**	**38.62 241**		P	**P**	**09 11 57.6**	**+0.6**
INKA	**Innaminka**	**38.69 247**			**P**	**09 11 58.1**	**+0.6**
QIS	**Mount Isa**	**39.50 259**		P	**P**	**09 12 04.2**	**-0.1**
MGBR	**Mount Gambier**	**40.97 232**		P	**P**	**09 12 15.0**	**-0.7**
MGBR				IAmb	IAmb	09 12 28.6	
	comp=Z,16nm,1.1s						
HTT	**Hallett**	**41.16 239**		P	**P**	**09 12 18.2**	**+0.9**
BBOO	**Buckleboo**	**43.40 241**		P	**P**	**09 12 35.3**	**+0.4**
BBOO	**Buckleboo**	**43.40 241**		P	**P**	**09 12 34.9**	**0.0**
WR8	**Warramunga Arr**	**44.32 259**		P	**P**	**09 12 41.6**	**-0.6**
WR8				IAmb	IAmb	09 12 42.8	
	comp=Z,8.0nm,0.5s						
WB0	**Warramunga Arr**	**44.44 259**			**P**	**09 12 42.4**	**-0.7**
WB0				IAmb	IAmb	09 12 43.2	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**44.47 259**		P	**P**	**09 12 42.1**	**-1.2**
WRA	**Warramunga Arr**	**44.47 259**		P	**P**	**09 12 42.5**	**-0.9**
	comp=Z,4.7nm,0.5s,baz=94,slow=6.9,SNR=106						
WRA				S	**S**	**09 18 35.5**	**-3.7**
	comp=Z,0.5nm,0.9s,baz=94,slow=14,SNR=2.0						
	comp=Z,4.7nm,0.5s						
WRA	**Warramunga Arr**	**44.47 259**			**P**	**09 12 41.9**	**-1.5**
AS31	**Alice Springs**	**44.67 254**			**P**	**09 12 45.0**	**+0.1**
ASAR	**Alice Springs**	**44.68 254**		P	**P**	**09 12 44.9**	**0.0**
	comp=Z,57nm,0.5s,baz=88,slow=8.1,SNR=731						
ASAR				PcP	**PcP**	**09 14 15.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=99,slow=3.4,SNR=1.8						
ASAR				S	**S**	**09 18 40.3**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=93,slow=14,SNR=5.5						
ASAR	**Alice Springs**	**44.68 254**			**P**	**09 12 45.1**	**+0.2**
SOEI	**Soe**	**55.83 270**		P	**P**	**09 14 06.8**	**+0.1**
SOEI				IAmb	IAmb	09 14 08.6	
	comp=Z,24nm,0.8s						
PSA00	**Pilbara Seismi**	**57.78 255**		P	**P**	**09 14 17.9**	**-1.9**
PSA00	**Pilbara Seismi**	**57.78 255**		P	**P**	**09 14 19.3**	**-0.5**
MBWA	**Marble Bar**	**57.95 256**		P	**P**	**09 14 19.4**	**-1.5**
MBWA				IAmb	IAmb	09 14 21.2	
	comp=Z,12nm,1.1s						
MBWA	**Marble Bar**	**57.95 256**		P	**P**	**09 14 20.4**	**-0.5**
MEEK	**Meekatharra**	**58.36 249**		P	**P**	**09 14 23.0**	**-0.7**
KLBR	**Kellerberrin**	**58.80 243**		P	**P**	**09 14 26.0**	**-0.5**
BLDU	**Ballidu**	**59.75 244**		P	**P**	**09 14 32.4**	**-0.5**
MORW	**Morawa**	**60.43 246**		P	**P**	**09 14 36.3**	**-1.1**
MORW	**Morawa**	**60.43 246**		P	**P**	**09 14 37.4**	**0.0**
PLAI	**Plampang**	**62.26 269**		P	**P**	**09 14 49.6**	**0.0**
NVAR	**Mina Array Bea**	**79.29 44**		P	**P**	**09 16 28.8**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=258,slow=4.6,SNR=4.6						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**85.97 58**		P	**P**	**09 17 03.6**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=201,slow=6.7,SNR=6.1						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	**87.21 44**		P	**P**	**09 17 08.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=204,slow=3.3,SNR=4.3						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**144.31 315**		PKP	PKPbc	09 23 53.1	-1.4
	comp=Z,0.5nm,0.4s,baz=73,slow=3.2,SNR=2.4						

IDC 21 09:09:21.7±8.1, **18°.13S**×**177°.79W**, **h417**km±83km, **mb3.1**/3, **mbtmp4.1**/4, **Error ellipse: s-maj=241.2km s-min=33.3km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.32 253**		P	P	09 12 36.8	-0.5
	15nm,0.7s,baz=80,slow=18,SNR=16						
WRA	**Warramunga Arr**	**45.17 260**		P	P	09 16 59.7	0.0
	0.8nm,0.3s,baz=92,slow=6.0,SNR=15						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**45.30 254**		P	P	09 17 00.5	-0.2
	1.5nm,0.6s,baz=98,slow=8.3,SNR=12						
	1.5nm,0.6s						
NVAR	**Mina Array Bea**	**79.18 44**		P	P	09 20 42.4	+0.1
	0.5nm,0.7s,baz=257,slow=5.6,SNR=4.1						
	0.5nm,0.7s						

*IDC **21** 09:25:06.5±1.9, 10°.48N×125°.92E, h0km, mb3.5/7, mbtmp3.5/7, MS3.2/2, Error ellipse: s-maj=188.4km s-min=19.7km az=68.0*

ISC 21 09:25:12.9±1.9, **10°.6N**±0°.5×**12°6E**±°, **h51**km, **n9**, σ0§**62**/7, **mb3.7**/7, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**26.80 3**		LR	LR	09 43 15.2	
	comp=Z,30nm,18.1s,baz=335,slow=40						
WRA	**Warramunga Arr**	**31.38 165**		P	**P**	**09 31 29.7**	**+0.7**
	0.3nm,0.7s,baz=343,slow=8.1,SNR=1.7						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**34.87 168**		P	**P**	**09 31 58.7**	**-0.8**
	0.5nm,0.8s,baz=340,slow=7.1,SNR=8.7						
	0.5nm,0.8s						
SONM	**Songino Array**	**40.70 340**		P	**P**	**09 32 48.3**	**-0.3**
	0.3nm,0.7s,baz=152,slow=9.8,SNR=1.8						
	0.3nm,0.7s						
NWAO	**Narrogin (SRO)**	**44.10 191**		LR	LR	09 53 59.5	
	comp=Z,46nm,19.0s,baz=26,slow=39						
MKAR	**Makanchi Array**	**51.74 323**		P	**P**	**09 34 15.7**	**+0.5**
	0.7nm,0.6s,baz=123,slow=8.1,SNR=10						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**54.32 331**		P	**P**	**09 34 34.1**	**+0.1**
	0.3nm,0.3s,baz=101,slow=7.5,SNR=2.1						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**55.78 325**		P	**P**	**09 34 44.5**	**0.0**
	0.4nm,0.5s,baz=122,slow=6.1,SNR=2.6						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**61.37 325**		P	**P**	**09 35 23.8**	**+0.3**
	0.5nm,0.6s,baz=116,slow=6.6,SNR=2.2						
	0.5nm,0.6s						

ANF 21 09:36:43.5±0.3, **68°.04N**×**135°.30W**, **h18**km±2km, **ML3.7**/40, **Error ellipse: s-maj=1.8km s-min=1.3km az=57.0, Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
F30M	**Barrier River**	**0.47 203**		P	Pg	09 36 52.5	-0.6
	baz=21						
F30M				S	Sg	09 36 59.1	-0.3
	baz=21						
INK	**Inuvik**	**0.71 67**		P	Pb	09 36 56.7	-0.7
	baz=248,SNR=1000						
INK				S	Sb	09 37 06.8	-0.1
	baz=248						
F31M	**Tsiigehtchic**	**0.85 135**		P	Pb	09 36 59.2	-0.5
	baz=313,SNR=1000						
F31M				S	Sg	09 37 11.4	+0.2
	baz=313						
E29M	**Blow River**	**1.03 291**		P	Pb	09 37 01.8	-1.1
	baz=111						
E29M				S	Sb	09 37 15.1	-1.0
	baz=111						
G30M	**tAoh Zraii Nji**	**1.12 199**		P	Pn	09 37 03.5	-0.9
	baz=17						
G30M				S	Sb	09 37 19.0	+0.3
	baz=17						
G31M	**Satah River**	**1.19 160**		P	Pn	09 37 05.2	-0.1
	baz=339						
G31M				S	Sg	09 37 21.8	-0.3
	baz=339						
G29M	**Pine Creek**	**1.54 224**		P	Pn	09 37 09.9	-0.3
	baz=41						
G29M				Sb	Sb	09 37 32.1	+1.2
	baz=41						
E28M	**Babbage River**	**1.67 292**		P	Pn	09 37 11.8	-0.2
	baz=109						
E28M				S	Sn	09 37 32.6	-0.4
	baz=109						
EPYK	**Eagle Plains**	**1.77 199**		P	Pn	09 37 13.1	-0.2
	baz=17,SNR=94						
EPYK				Sb	Sb	09 37 38.3	+1.1
	baz=17						
F28M	**Old Crow**	**1.79 258**		P	Pn	09 37 13.4	-0.1
	baz=75,SNR=1000						
F28M				S	Sn	09 37 36.1	+0.3
	baz=75						
D28M	**Stokes Point**	**1.80 317**		P	Pn	09 37 13.7	0.0
	baz=136						
D28M				Sb	Sb	09 37 39.1	+0.9
	baz=136						
H31M	**Peel River**	**2.28 170**		P	Pn	09 37 20.4	+0.1
	baz=350						
H31M				Sb	Sb	09 37 53.4	+1.5
	baz=350						
E27K	**Coleen River**	**2.36 276**		P	Pn	09 37 21.2	-0.3
	baz=91						
E27K				S	Sn	09 37 48.9	-1.1
	baz=91						
D27M	**Malcolm River**	**2.40 303**		P	Pn	09 37 22.4	+0.4
	baz=118,SNR=357						
D27M				S	Sn	09 37 50.7	-0.3
	baz=118						
G27K	**Doyon Strip**	**2.75 246**		P	Pn	09 37 26.8	0.0
	baz=61						
I30M	**Mount Dempster**	**2.86 189**		P	Pn	09 37 28.2	-0.2
	baz=7.6						
I29M	**Ogilvie Camp,**	**2.95 205**		Sb	Sb	09 38 13.0	+1.9
	baz=22						
H27K	**Steamboat Moun**	**3.04 236**		P	Pn	09 37 30.7	-0.1
	baz=50						
I28M	**Miner Creek**	**3.19 217**		P	Pn	09 37 32.2	-0.6
	baz=33						
F26K	**Sheenjek River**	**3.37 268**		P	Pn	09 37 35.2	0.0
	baz=80,SNR=47						
F26K				S	Sn	09 38 14.0	-0.8
	baz=80						
C27K	**Jago River**	**3.44 301**		P	Pn	09 37 35.9	-0.3
	baz=114						
G26K	**Porcupine Rive**	**3.44 255**		P	Pn	09 37 36.2	-0.1
	baz=68,SNR=89						
I27K	**Kandik River**	**3.50 229**		P	Pn	09 37 36.7	-0.4
	baz=43,SNR=66						
J30M	**Hart River**	**3.51 187**		P	Pn	09 37 37.3	0.0
	baz=5.9						
J30M				S	Sn	09 38 18.9	+0.5
	baz=5.9						
E25K	**Arctic Village**	**3.85 276**		P	Pn	09 37 41.7	-0.2
	baz=87,SNR=38						
E25K				S	Sn	09 38 26.0	-0.7
	baz=87						
C26K	**Camden Bay**	**3.94 303**		P	Pn	09 37 43.7	+0.6
	baz=115						
C26K				S	Sn	09 38 28.4	-0.4
	baz=115						
F25K	**Christian Rive**	**3.95 268**		P	Pn	09 37 43.1	-0.2
	baz=79,SNR=26						
F25K				S	Sn	09 38 27.9	-1.2
	baz=79						
I26K	**Coal Creek Min**	**4.16 232**		P	Pn	09 37 46.1	+0.1
	baz=45						
D25K	**Kavik River**	**4.24 293**		P	Pn	09 37 47.3	0.0
	baz=103						
D25K				S	Sn	09 38 36.1	-0.3
	baz=103						
C36M	**Paulatuk**	**4.30 67**		P	Pn	09 37 47.8	-0.2
	baz=257,SNR=225						
C36M				S	Sn	09 38 37.0	-0.6
	baz=257						
K29M	**Barlow Dome**	**4.31 193**		P	Pn	09 37 48.8	+0.5
	baz=11,SNR=162						
K29M				S	Sn	09 38 38.4	+0.2
	baz=11						
DAWY	**Dawson**	**4.33 205**		P	Pn	09 37 48.5	0.0
	baz=21,SNR=125						
DAWY				S	Sn	09 38 37.6	-0.8
	baz=21						
PRP	**Porcupine Dome**	**4.77 243**		P	Pn	09 37 54.6	-0.1
	baz=54						
PRP				S	Sn	09 38 49.3	-0.2
	baz=54						
G24K	**Hadweenzic Riv**	**4.89 260**		P	Pn	09 37 55.6	-0.5
	baz=69						
E24K	**Your Creek**	**4.95 276**		P	Pn	09 37 57.6	+0.7
	baz=85						
E24K				S	Sn	09 38 52.3	-1.4
	baz=85						
D24K	**Happy Valley**	**5.08 289**		S	Sn	09 38 55.6	-1.1
	baz=97						
L29M	**L29M**	**5.09 195**		P	Pn	09 37 59.3	+0.4
	baz=12						
C24K	**Franklin Bluff**	**5.13 295**		P	Pn	09 37 59.9	+0.5
	baz=103						
C24K				S	Sn	09 38 56.0	-2.0
	baz=103						
A36M	**Sachs Harbour**	**5.25 36**		P	Pn	09 38 00.8	-0.2
	baz=226,SNR=30						
A36M				S	Sn	09 38 58.6	-2.3
	baz=226						
J25K	**Salcha River,**	**5.32 234**		P	Pn	09 38 02.5	+0.5
	baz=45						
J25K				S	Sn	09 39 03.7	+0.9
	baz=45						
E23K	**Chandalar**	**5.37 277**		P	Pn	09 38 03.5	+0.7
	baz=84						
E23K				S	Sn	09 39 03.7	-0.4
	baz=84						
SCRK	**Sand Creek**	**5.40 225**		P	Pn	09 38 03.1	-0.2
	baz=37,SNR=49						
SCRK				S	Sn	09 39 04.0	-1.0
	baz=37						
H24K	**Noodor Dome**	**5.42 252**		P	Pn	09 38 02.7	-0.7
	baz=60						
H24K				S	Sn	09 39 03.9	-1.3
	baz=60						
M30M	**Minto, Yukon**	**5.52 187**		P	Pn	09 38 04.6	-0.3
	baz=5.5,SNR=75						
M30M				S	Sn	09 39 06.9	-1.0
	baz=5.5						
L27K	**Beaver Creek,**	**5.69 212**		P	Pn	09 38 06.8	-0.3
	baz=25,SNR=55						
D23K	**Nanushuk River**	**5.73 286**		P	Pn	09 38 07.8	+0.2
	baz=92						
D23K				S	Sn	09 39 11.8	-1.0
	baz=92						
COLD	**Coldfoot**	**5.75 269**		P	Pn	09 38 08.5	+0.6
	baz=75						
COLD				S	Sn	09 39 11.2	-2.1
	baz=75						
M29M	**Somme Creek**	**5.78 195**		P	Pn	09 38 08.5	+0.1
	baz=12						
M29M				S	Sn	09 39 12.9	-1.2
	baz=12						
C23K	**Itkillik River**	**5.80 295**		P	Pn	09 38 08.6	-0.1
	baz=101						
C23K				S	Sn	09 39 12.8	-1.8
	baz=101						
RIDG	**Independent Ri**	**5.82 227**		P	Pn	09 38 09.5	+0.5
	baz=38						
G23K	**Bananza Creek**	**5.84 264**		P	Pn	09 38 09.4	+0.2
	baz=70						
G23K				S	Sn	09 39 13.7	-1.9
	baz=70						
M31M	**Drury Creek, Y**	**5.88 176**		P	Pn	09 38 09.9	+0.2
	baz=356						
L26K	**Log Cabin Wild**	**6.04 217**		P	Pn	09 38 11.7	-0.2
	baz=30,SNR=10						
BVCY	**Beaver Creek**	**6.11 205**		P	Pn	09 38 13.0	+0.1
	baz=20,SNR=52						
BVCY				S	Sn	09 39 22.7	+0.3
	baz=20						
E22K	**Anaktuvuk Pass**	**6.18 279**		P	Pn	09 38 14.0	+0.2
	baz=84						
E22K				S	Sn	09 39 23.1	-0.9
	baz=84						
I23K	**Minto, Yukon-K**	**6.30 249**		P	Pn	09 38 15.4	-0.1
	baz=56						
M27K	**Edge Creek, AK**	**6.34 209**		P	Pn	09 38 15.9	-0.2
	baz=23,SNR=13						
D22K	**Ayikyak River**	**6.45 286**		P	Pn	09 38 17.7	+0.1
	baz=90						
D22K				S	Sn	09 39 30.2	-0.5
	baz=90						
M26K	**Nabesna, AK**	**6.52 213**		P	Pn	09 38 19.1	+0.6
	baz=26						
NEA2	**Nenana**	**6.53 245**		P	Pn	09 38 18.7	+0.1
	baz=52						
N31M	**Braeburn, Yuko**	**6.59 182**		P	Pn	09 38 19.5	+0.1
	baz=1.3,SNR=12						
PAX	**Paxson**	**6.61 224**		P	Pn	09 38 19.7	-0.1
	baz=35						
N30M	**Aishikik Lake**	**6.65 187**		P	Pn	09 38 20.7	+0.3
	baz=5.6						
N30M				S	Sn	09 39 34.4	-1.4
	baz=5.6						
H22K	**Ishtalitna Cre**	**6.66 259**		P	Pn	09 38 20.0	-0.4
	baz=64						
H22K				S	Sn	09 39 32.9	-2.9
	baz=64						
YUK3	**Moose Creek**	**6.66 202**		P	Pn	09 38 20.2	-0.4
	baz=17,SNR=22						
WRGLY	**Wrigley**	**6.87 129**		P	Pn	09 38 22.8	-0.5
	baz=320,SNR=28						
WRGLY				S	Sn	09 39 40.0	-1.0
	baz=320						
E21K	**Killik River**	**6.95 282**		P	Pn	09 38 24.0	-0.4
	baz=85						
E21K				S	Sn	09 39 42.1	-0.7
	baz=85						
F21K	**Alatna River**	**6.98 272**		P	Pn	09 38 24.5	-0.3
	baz=75						
F21K				S	Sn	09 39 40.5	-3.2
	baz=75						
B21K	**Ikpikpuk River**	**7.16 292**		P	Pn	09 38 26.9	-0.3
	baz=94						
B21K				S	Sn	09 39 44.8	-3.2
	baz=94						
C21K	**Knifeblade Rid**	**7.21 288**		P	Pn	09 38 27.7	-0.1
	baz=90						
C21K				S	Sn	09 39 46.1	-3.0
	baz=90						
G21K	**Allakaket**	**7.21 266**		P	Pn	09 38 27.5	-0.4
	baz=70						
G21K				S	Sn	09 39 45.5	-3.7
	baz=70						
I21K	**Tanana**	**7.22 254**		P	Pn	09 38 27.8	-0.3
	baz=59						
I21K				S	Sn	09 39 49.0	-0.6
	baz=59						
H21K	**Melozitna Rive**	**7.29 259**		P	Pn	09 38 28.7	-0.4
	baz=63						
H21K				S	Sn	09 39 49.9	-1.4
	baz=63						
BPAW	**Bear Paw Mtn.**	**7.49 246**		P	Pn	09 38 31.6	-0.2
	baz=51						
E20K	**Nigu River**	**7.79 281**		S	Sn	09 40 02.9	-0.5
	baz=82						
F20K	**Avaraart Lake**	**7.87 272**		P	Pn	09 38 37.2	+0.2
	baz=74						
F20K				S	Sn	09 40 03.1	-2.4
	baz=74						
D20K	**Etivluk River**	**7.89 285**		P	Pn	09 38 37.5	+0.3
	baz=85						
D20K				S	Sn	09 40 04.5	-1.4
	baz=85						
CHUM	**Lake Minchumin**	**8.09 247**		P	Pn	09 38 40.2	+0.3
	baz=52						
A21K	**Barrow**	**8.09 304**		P	Pn	09 38 39.2	-0.7
	baz=104						
H20K	**Anotleneega Mo**	**8.14 261**		P	Pn	09 38 40.3	-0.3
	baz=63						
D19K	**Kuna River**	**8.46 284**		P	Pn	09 38 44.9	-0.2
	baz=83						
C18K	**Utukok River**	**9.56 286**		P	Pn	09 38 58.9	-1.2
	baz=82						

IDC 21 09:39:33.3±296.0, **53°.82N**×**43°.31E**, **h0**km, **Error ellipse: s-maj=128.2km s-min=91.7km az=144.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.54 312**		I	I	10 08 40.0	
	baz=128,slow=322,SNR=1.9						
I31KZ	**AKTYUBINSK INF**	**9.68 105**		I	I	10 37 30.0	
	0.1nm,0.6s,baz=298,slow=317,SNR=5.2						
I46RU	**ZALESOVO INFRA**	**24.22 73**		I	I	12 07 10.0	
	baz=287,slow=321,SNR=1.8						

*ASRS **21** 09:51:23.6±0.5, 48°N±2°×9°0E±°, h10km, MLh3.6/15, Error ellipse: s-maj=4.9km s-min=3.4km az=164.2, confirmed*
*NNC **21** 09:51:25.4±2.6, 47°.82N×89°.94E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=21.4km s-min=17.9km az=56.0*

ISC 21 09:51:20.8±1.3, **47°.80N**±0°.06×**90°.54E**±0°.04, **h10**km, **n20**, σ1§**96**/40, **5C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**2.71 329**		Pg	**Pb**	**09 52 11.1**	**+1.6**
CUR				Sg	**Sg**	**09 52 49.2**	**+1.3**
DGZ	**Jazzator, Alta**	**2.80 314**		Pg	**Pg**	**09 52 13.7**	**-0.8**
DGZ				Sg	**Sg**	**09 52 50.8**	**+0.1**
AKAR	**Aktash**	**3.17 324**		Pg	**Pb**	**09 52 18.2**	**+1.0**
AKAR				Sg	**Sg**	**09 53 03.

UKR	**Ust'-Kan**	**4.90**	**312**	Pg		**Pg**	**09 52 53.0**	**-1.6**
UKR				Sg		**Sg**	**09 53 58.0**	**-0.1**
DJO	**Djoy, Khakassi**	**5.00**	**5**	Pg		**Pg**	**09 52 55.3**	**-1.3**
DJO				Sg		**Sg**	**09 54 04.2**	**+2.9**
CERR	**Cheremushki**	**5.09**	**6**	Sg		**Sg**	**09 54 05.6**	**+1.6**
ARDR	**Aradan**	**5.13**	**20**	Pg		**Pg**	**09 52 59.7**	**+0.8**
ARDR				Sg		**Sg**	**09 54 05.4**	**+0.1**
KNGR	**Kungurtug, Tuv**	**5.36**	**56**	Pg		**Pg**	**09 53 01.5**	**-2.0**
KNGR				Sg		**Sg**	**09 54 11.3**	**-1.5**
VEH	**Verkhnyaya Baz**	**5.46**	**359**	Pg		**Pg**	**09 53 05.3**	**0.0**
VEH				Sg		**Sg**	**09 54 17.7**	**+1.8**
MK31	**Makanchi Array**	**5.70**	**263**	⇓Pn		**Pn**	**09 52 46.9**	**+1.4**
	0.2nm,0.3s,baz=88,slow=15,SNR=9.1							
MK31				⇑Pg		**Pb**	**09 53 00.9**	**+0.5**
	1.2nm,0.5s,baz=85,slow=17,SNR=5.4							
MK31				⇑Lg		Lg	09 54 15.7	
	2.4nm,0.5s,baz=73,slow=36,SNR=5.8							
MAKZ	**Makanchi**	**5.91**	**263**	⇓Pg		**Pb**	**09 53 04.2**	**+0.4**
	1.2nm,0.5s							
MAKZ				⇓Lg		Lg	09 54 21.9	
	5.7nm,0.7s							
MAKZ	**Makanchi**	**5.91**	**263**	Pg		**Pb**	**09 53 06.8**	**+3.0**
MAKZ				Sg		**Sg**	**09 54 23.5**	**-6.9**
KURK	**Kurchatov**	**8.32**	**295**	⇓Pn		**Pn**	**09 53 22.3**	**+0.9**
	0.5nm,0.3s							
KURK				⇓Sn		**Sn**	**09 54 54.7**	**-0.7**
	1.0nm,0.8s							
KURK				⇑Lg		Lg	09 55 38.8	
	3.0nm,0.7s							
KURBB	**Kurchatov Arra**	**8.36**	**294**	⇓Pn		**Pn**	**09 53 22.5**	**+0.6**
	2.3nm,0.6s							
KURBB				⇑Sn		**Sn**	**09 54 53.7**	**-2.5**
	6.2nm,0.8s							
KURBB				⇑Lg		Lg	09 55 39.8	
	12nm,0.7s							

DJA 21 09:52:47.3±3.1,9°S±9°×10°9E±°, h25km±29km, M3.6/13, MLv3.6/13, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPJI	**Karang Pucung**	**1.33**	**3**	P	Pn	09 53 10.6	+0.3
CTJI	**Waduk Cacaban**	**1.69**	**11**	P	Pn	09 53 15.2	0.0
BBJI	**Bungbulang**	**1.69**	**315**	P	Pn	09 53 14.8	-0.5
UGM	**Wanagama**	**1.82**	**66**	P	Pn	09 53 16.9	-0.2
SMRI	**Semarang**	**2.25**	**44**	P	Pn	09 53 23.0	0.0
PCJI	**Pacitan**	**2.35**	**79**	P	Pn	09 53 24.3	0.0
JAGI	**Jajag, Banyuwa**	**5.25**	**88**	P	Pn	09 54 04.6	+0.4

HEL 21 09:59:45.9±0.2, 64°74N×30°69E, h0km, ML1.7, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.62**	**212**	PG	Pg	09 59 57.4	-0.4
	baz=34						
RMF				smax	smax	10 00 05.6	
	comp=Z,9.9nm,0.2s						
KU1	**Kurvinen**	**0.95**	**330**	PG	Pg	10 00 03.0	-1.2
KU6	**Riekki**	**1.33**	**346**	PG	Pg	10 00 09.5	-1.8
	baz=163						
KU6				smax	smax	10 00 26.1	
	comp=Z,3.5nm,0.2s						
KU6				SG	Sg	10 00 28.3	-0.3
MSF	**Maaselka**	**1.36**	**330**	PG	Pg	10 00 10.4	-1.5
MSF				SB	Sg	10 00 28.7	-0.9
KU2	**Taivalkoski**	**1.42**	**314**	PG	Pn	10 00 11.4	-1.5
JOF	**Joensuu**	**1.85**	**171**	PB	Pn	10 00 18.2	-0.7
	baz=347						
JOF				SG	Sb	10 00 44.0	-0.3
NIF	**Nilsia**	**1.86**	**224**	PG	Pn	10 00 19.3	+0.4
NIF				smax	smax	10 00 41.1	
	comp=Z,3.8nm,0.2s						
OUL	**Oulu**	**2.07**	**282**	PG	Pn	10 00 22.6	+0.8
OUL				SG	Sn	10 00 49.0	+0.6
RANF	**Ranua**	**2.07**	**310**	PG	Pn	10 00 22.7	+0.8
RANF				SG	Sn	10 00 48.9	+0.5
OUF	**Merijarvi**	**2.60**	**264**	PB	Pn	10 00 31.1	+1.9
	baz=78						
OUF				smax	smax	10 01 02.6	
	comp=Z,2.6nm,0.2s						
OUF				SG	Sb	10 01 05.4	-0.4
RNF	**Rovaniemi**	**2.69**	**316**	PB	Pn	10 00 31.9	+1.5
RNF				SN	Sn	10 00 59.4	-4.2
OBF0	**Syolatti, Pyha**	**2.79**	**268**	smax	smax	10 01 08.0	
	comp=Z,3.6nm,0.2s						
OBF0				SG	Sb	10 01 12.1	+0.9
SUF	**Sumiainen**	**2.87**	**227**	PB	Pn	10 00 35.3	+2.5
SUF				smax	smax	10 01 10.1	
	comp=Z,1.6nm,0.2s						
TOF	**Tornio**	**2.98**	**300**	PB	Pn	10 00 35.7	+1.4
TOF				smax	smax	10 01 13.5	
	comp=Z,2.8nm,0.2s						
VRF	**Varrio**	**3.05**	**352**	smax	smax	10 01 15.6	
	comp=Z,2.0nm,0.2s						
OBF8	**Ulkokalla**	**3.16**	**266**	PN	Pn	10 00 35.2	-1.6
RAJF	**Raja-Jooseppi**	**3.87**	**347**	PN	Pn	10 00 47.9	+1.4
FIA0	**FINESS Array S**	**3.92**	**214**	PB	Pn	10 00 50.3	+3.1
ERTU	**Ertsjaerv**	**3.96**	**301**	PN	Pn	10 00 48.7	+0.8

HEL 21 10:00:22.6±0.2, 67°73N×26°94E, h0km, ML1.5, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAJF	**Raja-Jooseppi**	**0.91**	**34**	PG	Pg	10 00 39.0	-1.0
VRF	**Varrio**	**1.02**	**88**	PG	Pg	10 00 41.0	-1.1
VRF				smax	smax	10 00 53.7	
	comp=Z,3.3nm,0.2s						
RNF	**Rovaniemi**	**1.18**	**198**	PG	Pg	10 00 44.4	-0.9
	baz=18						
KLF	**Kolari**	**1.25**	**248**	PG	Pg	10 00 44.8	-1.6
	baz=61						
KLF				smax	smax	10 01 00.5	
	comp=Z,3.8nm,0.2s						
KLF				SG	Sg	10 01 01.6	-1.0
HEF	**Hetta**	**1.41**	**300**	*e*P	Pn	10 00 48.5	-0.9
HEF	**Hetta**	**1.41**	**300**	PG	Pn	10 00 48.5	-1.0
	baz=120						
HEF				smax	smax	10 01 04.8	
	comp=Z,4.8nm,0.2s						
HEF				SN	Sn	10 01 10.0	+1.4
RANF	**Ranua**	**1.73**	**182**	SG	Sn	10 01 16.1	-0.4
KTK1	**Kautokeino**	**1.88**	**315**	PG	Pn	10 00 56.3	+0.4
KTK1				SG	Sb	10 01 21.7	-0.1
ARA0	**ARCESS Array S**	**1.89**	**345**	*e*P	Pn	10 00 56.6	+0.6
ARA0	**ARCESS Array S**	**1.89**	**345**	PG	Pn	10 00 56.4	+0.3
ARA0				SG	Sb	10 01 21.6	-0.3
LANU	**Lannavaara**	**1.90**	**282**	PG	Pn	10 00 56.2	0.0
LANU				SG	Sg	10 01 23.1	-0.3
TOF	**Tornio**	**1.95**	**213**	PG	Pn	10 00 56.8	-0.2
	baz=34						
TOF				smax	smax	10 01 20.6	
	comp=Z,2.8nm,0.2s						
TOF				SG	Sn	10 01 21.2	-0.9
KEV	**Kevo**	**2.03**	**1**	PG	Pn	10 00 58.8	+0.8
	baz=177						
KEV				SG	Sn	10 01 24.5	+0.4
ERTU	**Ertsjaerv**	**2.20**	**240**	PG	Pn	10 01 00.6	+0.3
	baz=59						
ERTU				SG	Sb	10 01 29.8	-1.2
KIF	**Kilpisjarvi**	**2.61**	**302**	PB	Pn	10 01 07.7	+1.8
KIF				smax	smax	10 01 40.1	
	comp=Z,1.6nm,0.2s						
KIF				SG	Sb	10 01 42.3	-0.4

OMAN 21 10:05:48.1±0.1, 18°19N×60°10E, h38km±15km, mb3.1/6, ml3.8/8, Error ellipse: s-maj=3.0km s-min=1.1km az=298.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQM	**DQM**	**2.98**	**306**	P	Pn	10 06 33.0	+0.3
DQM				S	Sn	10 07 09.3	+2.1
	SNR=9.2						
MHTO	**MHTO**	**3.43**	**324**	P	Pn	10 06 37.9	-1.1
MHTO				S	Sn	10 07 19.0	+0.6
JLN	**Jalan Bani Buh**	**3.99**	**351**	P	Pn	10 06 45.6	-1.1
	SNR=28						
JLN				S	Sn	10 07 30.8	-1.4
SHAO	**Shalim**	**4.26**	**268**	P	Pn	10 06 49.5	-1.0
	SNR=12						
SHAO				S	Sn	10 07 38.1	-0.9
WBK	**Wadi Bani Khal**	**4.52**	**347**	P	Pn	10 06 53.9	-0.1
	SNR=11						
WBK				S	Sn	10 07 46.7	+1.3
JMDO	**Jabal Madar**	**4.56**	**336**	P	Pn	10 06 54.5	0.0
	SNR=61						
JMDO				S	Sn	10 07 48.0	+1.7
DMTO	**DMTO**	**4.93**	**265**	P	Pn	10 06 58.6	-1.0
	SNR=22						
DMTO				S	Sn	10 07 54.1	-1.3
WSAR	**Wadi Sarin**	**5.21**	**345**	P	Pn	10 07 03.6	+0.2
WSAR				S	Sn	10 08 01.5	-0.7
SMDO	**Samad**	**5.21**	**339**	P	Pn	10 07 03.3	-0.2
	SNR=10						
BIDO	**Bidbid**	**5.61**	**341**	P	Pn	10 07 09.5	+0.5
	SNR=11						
RBK	**Rabkut**	**5.66**	**264**	P	Pn	10 07 09.7	0.0
DOK	**Doka**	**5.69**	**275**	P	Pn	10 07 09.9	-0.2
	SNR=11						
HOQ	**Hoqain**	**5.96**	**335**	P	Pn	10 07 14.3	+0.4
UMZA	**Um Al Zommool**	**6.46**	**315**	P	Pn	10 07 20.3	-0.3
ABTO	**Aybut**	**6.54**	**264**	P	Pn	10 07 21.8	0.0
SOHO	**SOHO**	**6.78**	**331**	P	Pn	10 07 25.7	+0.6
ALNE	**Al Ain**	**7.11**	**326**	P	Pn	10 07 30.4	+0.9
ASHO	**Ashiyiah**	**7.48**	**330**	P	Pn	10 07 34.7	+0.1
ASUD	**Al Ashush, Dub**	**7.79**	**326**	P	Pn	10 07 40.0	+1.1
	SNR=11						

IDC 21 10:13:04.9±3.8, 5°44S×130°41E, h430km±47km, mb2.4/1, mbtmp3.7/3, Error ellipse: s-maj=122.5km s-min=19.2km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.92**	**166**	P	P	10 16 15.9	+0.2
	1.1nm,0.5s,baz=345,slow=11,SNR=24						
ASAR	**Alice Springs**	**18.43**	**170**	P	P	10 16 52.6	-0.3
	1.8nm,0.4s,baz=346,slow=12,SNR=40						
ASAR				S	S	10 20 00.7	+0.8
	0.3nm,0.7s,baz=353,slow=23,SNR=1.8						
MKAR	**Makanchi Array**	**67.16**	**326**	P	P	10 23 14.6	0.0
	0.1nm,0.5s,baz=112,slow=7.1,SNR=2.0						
	0.1nm,0.5s						

BJI ***21*** *10:20:12.1,51.05N×179.34W, h8km, mB5.4/38, mb5.1/79, Ms5.1/78, Ms7 4.9/77*

NEIC ***21*** *10:20:14.5±1.6, 50.84N±0.03×179.27W±0.02, h10km±1km, mb5.4/903, ML5.6/14, Ms_20 4.8/145, Mww5.3/51, ML5.2(AEIC), Error ellipse: s-maj=5.8km s-min=2.6km az=183.0*

NEIC ***21*** *10:20:14.9, 50.67N×179.25W, h26km, Moment Tensor Solution. Duration: 29s6 Moment tensor: Scale 1017Nm; Mrr0.56; Mθθ-0.83; Mφφ 0.27; Mrθ 0.74; Mθφ -0.16; Mrφ 0.52; Fault plane solution: M0 1.17000×1017 NP1: φs290.85000°, δ26.47000°, λ139.27000°. NP2: φs58.48000°, δ73.09000°, λ69.33000°. Principal axes: T 1.1006, Plg57.0000°, Azm301.0000°; N 0.1359, Plg20.0000°, Azm65.0000°; P -1.2365, Plg25.0000°, Azm165.0000°;*

NEIC ***21*** *10:20:14.9, 50.87N×179.25W, h26km*

MOS ***21*** *10:20:15.9±1.0, 51.08N×179.23W, h26km, mb5.6/70, MS5.0/19, Error ellipse: s-maj=7.5km s-min=4.4km az=111.9*

ANF ***21*** *10:20:17.3±1.1, 50.78N×179.37W, h45km±4km, Mb5.3/83, Error ellipse: s-maj=10.7km s-min=3.8km az=42.0*

AEIC ***21*** *10:20:17.3±1.1, 50.97N±0.09×179.25W±0.05, h12km±7km, Error ellipse: s-maj=12.7km s-min=4.4km az=181.0*

IDC ***21*** *10:20:17.8±2.1, 51.19N×179.32W, h27km±13km, mb4.9/49, mbtmp5.0/51, ML5.0/2, MS4.7/84, Error ellipse: s-maj=13.7km s-min=8.7km az=170.0*

GCMT ***21*** *10:20:19.5±0.1, 51.02N±0.01×179.21W±0.02, h21km, MW5.3/142, Moment Tensor Solution. s116,c189; s142,c251; Duration: 1s1 Moment tensor: Scale 1017 Nm; Mrr 0.77±.02; Mθθ-0.79±.01; Mφφ 0.02±.01; Mrθ 0.69±.03; Mθφ-0.23±.01; Mrφ 0.42±.02; Best double couple: M0 1.14400×1017 NP1: φs268.00000°, δ24.00000°, λ113.00000°. NP2: φs63.00000°, δ68.00000°, λ80.00000°. Principal axes: T 1.1220, Plg66.0000°, Azm315.0000°; N 0.0430, Plg9.0000°, Azm67.0000°; P -1.1650, Plg22.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***21*** *10:20:24.8, 51.77N×178.68E, h33km, mb5.4, Ms4.7*

ISC 21 10:20:16.5±0.5, 50.97N±0.04×179.26W±0.02, h23km±2km, h22km: pP-P, n1408, c1918/1061, mb5.4/570, MS4.8/195, 61C-44D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.65**	**25**		**Pn**	**10 20 30.0**	**-0.4**
GAKI					**Sn**	**10 20 39.4**	**-0.6**
GAKI					**Sb**	**10 20 39.8**	**+1.9**
GASW	**Gareloi Southw**	**0.85**	**17**		**Pn**	**10 20 33.5**	**+0.4**
GASW					**Sn**	**10 20 45.7**	**+0.8**
GALAA	**Gareloi Lava P**	**0.85**	**21**		**Pn**	**10 20 33.8**	**+0.6**
GALAA					**Sn**	**10 20 45.9**	**+0.9**
GAEA	**Gareloi East**	**0.88**	**21**		**Pn**	**10 20 34.1**	**+0.6**
GANO	**Gareloi North**	**0.90**	**18**		**Pn**	**10 20 34.1**	**+0.2**
GANE	**Gareloi Northe**	**0.91**	**19**		**Pn**	**10 20 34.3**	**+0.4**
GANE					**Sn**	**10 20 47.0**	**+0.8**
AMKA	**Amchitka**	**1.00**	**295**		**Pb**	**10 20 34.7**	**-0.3**
AMKA					**Sn**	**10 20 48.8**	**+0.3**
AMKA					**Sb**	**10 20 49.3**	**+1.6**
TASE	**Tanaga Southea**	**1.16**	**41**		**Pb**	**10 20 38.6**	**+0.7**
TASE					**Sn**	**10 20 55.7**	**+3.2**
TAFL	**Tanaga Flats**	**1.16**	**47**		**Pb**	**10 20 37.9**	**0.0**
TAFL					**Sn**	**10 20 54.0**	**+1.4**
TAFL					**Sb**	**10 20 56.0**	**+3.5**
TANO	**Tanaga North**	**1.19**	**36**		**Pn**	**10 20 37.9**	**+0.2**
TANO					**Pb**	**10 20 38.6**	**+0.3**
CERB	**Semis' Cerberu**	**1.19**	**325**		**Pb**	**10 20 38.9**	**+0.5**
CESW	**Semis' Southwe**	**1.19**	**322**		**Pb**	**10 20 38.6**	**+0.2**
CEPE	**Semis' Perret**	**1.21**	**326**		**Pb**	**10 20 39.1**	**+0.3**
TAFP	**Tanaga Falls P**	**1.23**	**40**		**Pb**	**10 20 39.4**	**+0.4**
TAPA	**Tanaga Point A**	**1.24**	**46**		**Pb**	**10 20 39.3**	**0.0**
TAPA					**Sb**	**10 20 57.2**	**+2.3**
CEAP	**Semis' Anvil P**	**1.27**	**325**		**Pb**	**10 20 40.0**	**+0.3**
CETU	**Semis' Tuman**	**1.27**	**323**		**Pb**	**10 20 40.1**	**+0.4**
KIMD	**Kanaga Island**	**1.50**	**57**		**Pn**	**10 20 42.6**	**+0.6**
KIMD					**Sb**	**10 21 02.6**	**+0.4**
KIWB	**Kanaga Island**	**1.59**	**55**		**Pn**	**10 20 44.1**	**+0.9**
KIWB					**Sb**	**10 21 04.7**	**-0.1**
KIWB				IAML		10 21 10.4	
	comp=N,110μm,0.7s						
KIKV	**Kanaga Island**	**1.59**	**54**		**Pn**	**10 20 44.2**	**+0.8**
KIKV					**Sb**	**10 21 06.3**	**+1.3**
KICM	**Kanaga Island**	**1.61**	**53**		**Pb**	**10 20 44.6**	**-0.8**
KICM					**Pn**	**10 20 45.4**	**+2.0**
ADK	**Adak**	**1.85**	**59**		**Pb**	**10 20 48.6**	**-1.0**
ADK				IAML		10 21 19.5	
	comp=N,61μm,0.8s						
ADK				IAML		10 21 20.4	
	comp=N,73μm,0.8s						
ADK	**Adak**	**1.85**	**59**		**Sb**	**10 21 11.3**	**-1.1**
ETKA	**Kagalaska Isla**	**2.00**	**62**		**Sn**	**10 21 14.8**	**+1.6**
GSCK	**Great Sitkin C**	**2.20**	**60**		**Pb**	**10 20 53.9**	**-1.7**
GSSP	**Great Sitkin S**	**2.23**	**58**		**Pb**	**10 20 54.3**	**-1.8**
GSTR	**Great Sitkin T**	**2.29**	**59**		**Pn**	**10 20 54.8**	**+1.8**
GSIG	**Igitkin Island**	**2.32**	**63**		**Pn**	**10 20 55.2**	**+1.9**
ATKA	**Atka Island**	**3.39**	**67**		**Pn**	**10 21 09.5**	**+1.6**
ATKA				IAML		10 22 01.8	
	comp=N,20μm,0.8s						
ATKA				IAML		10 22 05.3	
	comp=E,12μm,0.7s						
KOWE	**Korovin West**	**3.42**	**64**		**Pn**	**10 21 10.6**	**+2.2**
KOKL	**Mount Kliuchef**	**3.43**	**65**		**Pn**	**10 21 11.0**	**+2.4**
KONW	**Korovin Northw**	**3.46**	**63**		**Pn**	**10 21 11.2**	**+2.4**
KONW					Pb	10 21 11.3	-5.6
KOSE	**Korovin Southe**	**3.52**	**65**		**Pn**	**10 21 12.8**	**+2.9**
SHEM	**Shemya Is, Ala**	**4.48**	**296**	Pn	**Pn**	**10 21 26.1**	**+3.2**
	comp=E,52nm,0.3s,baz=78,slow=2.1,SNR=39						
SHEM				Sn	**Sb**	**10 22 22.4**	**-5.5**
	baz=245,slow=20						
SHEM	**Shemya Is, Ala**	**4.48**	**296**		**Pn**	**10 21 23.7**	**+0.7**
SHEM				IAML		10 22 39.7	
	comp=E,2μm,1.8s						
SMY	**Shemya**	**4.48**	**296**		**Pn**	**10 21 26.2**	**+3.3**
SMY				IAML		10 22 30.6	
	comp=E,4μm,1.2s						
SMY				IAML		10 22 37.2	
	comp=N,4μm,1.8s						
SMY	**Shemya**	**4.48**	**296**	P	**Pn**	**10 21 26.2**	**+3.3**
CLES	**Cleveland East**	**6.09**	**69**		**Pn**	**10 21 45.5**	**+0.5**
CLCO	**Concord Point,**	**6.18**	**69**		**Pn**	**10 21 49.4**	**+3.1**
NIKH	**Nikolski High**	**6.74**	**69**		**Pn**	**10 21 54.4**	**+0.5**
NIKH	**Nikolski High**	**6.74**	**69**	P	**Pn**	**10 21 54.7**	**+0.8**
	baz=256,SNR=7.5						
OKFG	**Magazine Ridge**	**7.39**	**66**		**Pn**	**10 22 06.3**	**+3.4**
P08K	**Saint George I**	**8.05**	**42**	P	**Pn**	**10 22 13.6**	**+1.7**
	baz=229,SNR=5.7						
P08K				S	**Sn**	**10 23 43.4**	**+1.2**
	baz=229						
MAPS	**Pakushin South**	**8.05**	**65**		**Pn**	**10 22 14.8**	**+2.8**
MGOD	**Makushin Gods**	**8.09**	**65**		**Pn**	**10 22 15.2**	**+2.7**
SPIA	**Saint Paul Isl**	**8.17**	**37**		**Pn**	**10 22 14.4**	**+0.9**
SPIA	**Saint Paul Isl**	**8.17**	**37**	P	**Pn**	**10 22 15.0**	**+1.5**
	baz=224,SNR=12						
SPIA				S	**Sn**	**10 23 46.4**	**+1.4**
	baz=224						
MNAT	**Makushin Natee**	**8.22**	**64**		**Pn**	**10 22 17.1**	**+2.8**
UNV	**Unalaska Valle**	**8.31**	**65**		**Pn**	**10 22 17.7**	**+2.2**
UNV	**Unalaska Valle**	**8.31**	**65**	P	**Pn**	**10 22 16.9**	**+1.3**
	baz=254,SNR=13						
AKMO	**Akutan Morgan**	**8.66**	**64**		**Pn**	**10 22 23.5**	**+3.2**
LVA	**Lava Point**	**8.67**	**63**		**Pn**	**10 22 20.3**	**-0.1**
AKUT	**Akutan**	**8.81**	**64**	Pn	**Pn**	**10 22 25.4**	**+3.1**
FALS	**False Pass**	**10.33**	**62**		**Pn**	**10 22 45.1**	**+2.0**
FALS	**False Pass**	**10.33**	**62**	P	**Pn**	**10 22 44.0**	**+0.9**
	baz=254						
M11K	**Mekoryuk**	**11.95**	**33**		**Pn**	**10 23 08.7**	**+3.5**
M11K	**Mekoryuk**	**11.95**	**33**	P	**Pn**	**10 23 07.6**	**+2.4**
	baz=223,SNR=60						
SDPT	**Sand Point**	**12.09**	**61**		**Pn**	**10 23 07.7**	**+0.6**
SDPT	**Sand Point**	**12.09**	**61**	P	**Pn**	**10 23 08.1**	**+0.9**
	baz=256						
CNBA	**Chernabura Isl**	**12.48**	**64**		**Pn**	**10 23 11.9**	**-0.5**
M13K	**Dall Lake**	**13.01**	**37**	P	**Pn**	**10 23 21.6**	**+2.0**
	baz=230,SNR=16						
O14K	**Tigyukauivet M**	**13.19**	**44**	P	**Pn**	**10 23 23.7**	**+1.5**
	baz=238,SNR=13						
N14K	**Kuskokwak Cree**	**13.37**	**41**	P	**Pn**	**10 23 26.5**	**+1.9**
	baz=235,SNR=26						
GAMB	**Gambell**	**13.46**	**15**		**Pn**	**10 23 28.6**	**+2.8**
GAMB	**Gambell**	**13.46**	**15**	P	**Pn**	**10 23 27.9**	**+2.1**
	baz=201,SNR=78						
K13K	**Kusilvak Mount**	**13.60**	**30**	P	**Pn**	**10 23 28.7**	**+1.0**
	baz=222,SNR=24						
M14K	**Bethel**	**13.75**	**38**		**Pn**	**10 23 32.6**	**+2.8**
M14K	**Bethel**	**13.75**	**38**	P	**Pn**	**10 23 31.1**	**+1.3**
	baz=232,SNR=29						
PET	**Petropavlovsk**	**13.76**	**287**	*e*P	**Pn**	**10 23 31.5**	**+1.6**
PET				*e*S	**Sn**	**10 26 02.8**	**+1.0**
PET				pmax	pmax		
	comp=Z,500nm,12.1s						
PET				pmax	pmax		
	comp=Z,600nm,4.0s						
PET				pmax	pmax		
	comp=Z,71nm,1.3s						
PET				MLR	MLR		
	comp=Z,1μm,14.0s						
PET				MLR	MLR		
	comp=Z,2μm,14.0s						
O15K	**Ungalikthiuk R**	**13.80**	**46**	P	**Pn**	**10 23 32.4**	**+1.9**
	baz=242						
L14K	**Kuka Creek**	**13.86**	**35**	P	**Pn**	**10 23 33.9**	**+2.6**
	baz=228						
N15K	**Kwethluk River**	**14.18**	**42**	P	**Pn**	**10 23 38.0**	**+2.3**
	baz=238,SNR=108						
M15K	**Kasigluk River**	**14.22**	**40**	P	**Pn**	**10 23 38.3**	**+2.0**
	baz=235						
PEA0B	**Petropavlovsk-**	**14.33**	**288**		**Pn**	**10 23 36.7**	**-1.1**
PEA0B	**Petropavlovsk-**	**14.33**	**288**	*i* P	**Pn**	**10 23 39.8**	**+2.0**
PETK	**Petropavlovsk-**	**14.33**	**288**	Pn	**Pn**	**10 23 40.4**	**+2.6**
	comp=Z,1.0nm,0.3s,baz=94,slow=13,SNR=40						
PETK				Sn	**Sn**	**10 26 15.2**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=101,slow=36,SNR=1.4						
PETK				LR	LR	10 28 57.6	
	comp=Z,4μm,21.6s,baz=94,slow=36						
PETK	**Petropavlovsk-**	**14.33**	**288**		**Pn**	**10 23 38.3**	**+0.5**
PETK	**Petropavlovsk-**	**14.33**	**288**	P	**Pn**	**10 23 38.3**	**+0.5**
L15K	**Ungalak Mounta**	**14.51**	**36**	P	**Pn**	**10 23 41.6**	**+1.4**
	baz=230,SNR=161						
J14K	**Nanvaranak Lak**	**14.55**	**30**	P	**Pn**	**10 23 42.6**	**+2.0**
	baz=223						
P16K	**Nushagak River**	**14.58**	**48**		**Pn**	**10 23 40.8**	**-0.4**
P16K	**Nushagak River**	**14.58**	**48**	P	**Pn**	**10 23 42.4**	**+1.3**
	baz=245,SNR=36						
O16K	**Kokwok River B**	**14.78**	**46**	P	**Pn**	**10 23 46.5**	**+2.8**
O16K	**Kokwok River B**	**14.78**	**46**	P	**Pn**	**10 23 45.5**	**+1.7**
	baz=243,SNR=16						
CHIR	**Chirikof Islan**	**14.88**	**62**	Pn	**Pn**	**10 23 42.7**	**-2.5**
K15K	**Wolf Creek Mou**	**14.90**	**34**	P	**Pn**	**10 23 47.2**	**+1.8**
	baz=228,SNR=148						
N16K	**Nishlik Lake**	**14.90**	**42**	P	**Pn**	**10 23 47.2**	**+1.7**
	baz=239,SNR=94						
Q16K	**King Salmon**	**15.09**	**50**	P	**Pn**	**10 23 49.4**	**+1.5**
	baz=249,SNR=16						
M16K	**Timber Creek**	**15.11**	**40**	IAmb	IAmb	10 23 56.2	
	comp=Z,109nm,0.9s						
M16K	**Timber Creek**	**15.11**	**40**	P	**Pn**	**10 23 49.8**	**+1.6**
	baz=237,SNR=26						
L16K	**Owhat River**	**15.29**	**38**		**Pn**	**10 23 52.6**	**+2.0**
L16K				IAmb	IAmb	10 23 57.5	
	comp=Z,181nm,0.9s						
L16K	**Owhat River**	**15.29**	**38**	P	**Pn**	**10 23 51.7**	**+1.0**
	baz=234,SNR=43						
O17K	**Koliganek Bris**	**15.31**	**46**	P	**Pn**	**10 23 51.8**	**+0.9**
	baz=244,SNR=10						
Q17K	**Contact Creek**	**15.33**	**52**	P	**Pn**	**10 23 51.8**	**+0.5**
	baz=251,SNR=21						
P17K	**Kvichak River**	**15.38**	**49**	IAmb	IAmb	10 23 56.9

Q19K Cape Douglas, 16.65 51 IAmb IAmb 10 24 16.1
comp=Z,471nm,1.8s
Q19K Cape Douglas, 16.65 51 P **P** **10 24 09.3 -1.1**
baz=252
M18K Stony River 16.65 42 P **Pn** **10 24 08.6 +0.4**
baz=241,SNR=43
L18K Granite Mounta 16.67 39 P **Pn** **10 24 09.3 +1.0**
baz=238
O19K Port Alsworth 16.76 47 P **P** **10 24 10.6 -1.0**
baz=247,SNR=19
KDAK Kodiak Island 16.89 56 Pn **Pn** **10 24 08.8 -2.3**
comp=Z,3.0nm,0.3s,baz=198,slow=2.4,SNR=36
KDAK Sn **Sn** **10 27 13.5 -4.5**
comp=Z,1.5nm,0.3s,baz=312,slow=22,SNR=5.9
comp=Z,41nm,0.6s
KDAK Kodiak Island 16.89 56 **Pn** **10 24 08.6 -2.6**
KDAK Kodiak Island 16.89 56 *i* P **Pn** **10 24 09.4 -1.8**
KDAK Kodiak Island 16.89 56 P **Pn** **10 24 10.5 -0.7**
baz=257
G16K Koyuk River 16.90 25 P **Pn** **10 24 11.9 +0.7**
baz=219,SNR=96
N19K Bonanza Creek 16.93 45 P **Pn** **10 24 12.6 +0.9**
baz=245
P19K Oil Pt 17.08 49 P **P** **10 24 15.1 -0.1**
P19K Oil Pt 17.08 49 P **Pn** **10 24 14.2 +0.7**
baz=250
Q20K Shuyak Island 17.18 53 P **P** **10 24 16.0 -0.2**
baz=255
SYI Shuyak Island 17.19 53 P **Pn** **10 24 14.6 -0.3**
H17K Granite Mounta 17.25 28 P **P** **10 24 16.4 -0.6**
baz=225,SNR=77
J18K Innoko River 17.36 35 P **P** **10 24 18.3 0.0**
J18K Innoko River 17.36 35 P **P** **10 24 18.2 0.0**
baz=234,SNR=106
L19K White Mountain 17.39 40 IAmb IAmb 10 24 22.6
comp=Z,324nm,1.1s
L19K White Mountain 17.39 40 P **P** **10 24 18.2 -0.3**
baz=241
G17K Kiwalik Mounta 17.44 26 P **P** **10 24 19.0 -0.1**
baz=222
M19K Big River Lodg 17.45 42 P **P** **10 24 19.0 -0.2**
baz=242
HOM Homer 17.84 50 P **P** **10 24 23.7 +0.1**
HOM IAmb IAmb 10 24 32.8
comp=Z,220nm,0.9s
HOM Homer 17.84 50 P **P** **10 24 23.7 +0.1**
baz=253
H18K Honhosa River 17.87 29 P **P** **10 24 24.3 +0.5**
baz=227
M20K Styx River 17.97 43 P **P** **10 24 25.3 +0.2**
baz=244,SNR=52
F17K Baldwin Pennin 18.00 24 P **P** **10 24 25.7 +0.6**
baz=219,SNR=25
CNPM China Poot 18.01 51 P **P** **10 24 25.2 -0.2**
J19K Poorman 18.06 35 P **P** **10 24 27.0 +1.0**
baz=235,SNR=104
GCSA Galena City Sc 18.08 32 P **P** **10 24 26.9 +0.8**
baz=231,SNR=137
SPCR Spurr Chakacha 18.10 45 P **P** **10 24 26.9 +0.4**
baz=247,SNR=100
K20K Telida 18.29 38 P **P** **10 24 29.5 +1.0**
baz=239,SNR=53
G18K Tagagawik 18.30 27 P **P** **10 24 29.5 +1.0**
baz=225,SNR=55
BRSE Bradley Lake S 18.31 50 P **P** **10 24 29.5 +0.8**
baz=254
E17K Hotham Inlet 18.36 22 P **Pn** **10 24 30.4 +1.1**
baz=217
STLK Strandline Lak 18.38 44 IAmb IAmb 10 24 33.8
comp=Z,153nm,0.8s
CAPN Captain Cook N 18.43 47 P **Pn** **10 24 31.5 +1.5**
baz=250
F18K Selawik 18.54 25 P **Pn** **10 24 32.9 +1.6**
baz=222,SNR=125
BILL Bilibino 18.54 343 P **Pn** **10 24 31.5 0.0**
BILL IAmb IAmb 10 24 40.0
comp=Z,459nm,1.7s
BILL Bilibino 18.54 343 *ce* P **Pn** **10 24 32.8 +1.4**
BILL pmax pmax
comp=Z,165nm,1.3s
D17K Noatak River 18.59 19 P **Pn** **10 24 33.4 +1.4**
baz=213,SNR=158
C16K Lisburne Hills 18.65 16 P **Pn** **10 24 33.8 +1.1**
baz=208
SKT Skwentna 18.70 43 IAmb IAmb 10 24 40.7
comp=Z,308nm,1.0s
SKT Skwentna 18.70 43 P **Pn** **10 24 33.9 +0.4**
baz=246,SNR=105
PPLA Purkeypile 18.82 40 IAmb IAmb 10 24 43.5
comp=Z,139nm,0.8s
PPLA Purkeypile 18.82 40 P **Pn** **10 24 35.3 +0.3**
baz=243,SNR=62
SUA Susitna One 18.85 45 P **Pn** **10 24 36.0 +0.6**
baz=249,SNR=18
RDOG Red Dog Mine 18.92 19 P **Pn** **10 24 36.9 +0.8**
baz=213,SNR=32
E18K Tukpahlearik C 18.92 22 P **Pn** **10 24 36.4 +0.3**
baz=218,SNR=118
G19K Purcell Mounta 18.93 28 P **Pn** **10 24 36.1 -0.1**
baz=227
MA2 Magadan 18.98 309 P **P** **10 24 35.8 -0.2**
comp=Z,0.6nm,0.3s,baz=123,slow=11,SNR=4.6
MA2 LR LR 10 31 26.6
comp=Z,2µm,19.5s,baz=110,slow=36
comp=Z,5.1nm,0.7s
MA2 Magadan 18.98 309 *i* P **Pn** **10 24 37.7 +0.9**
MA2 pmax pmax
comp=Z,41nm,2.4s
SEW Seward 19.03 50 P **P** **10 24 36.5 -0.1**
baz=254,SNR=7.1
RC01 Rabbit Creek A 19.19 47 P **P** **10 24 38.5 +0.2**
baz=251,SNR=7.7
H20K Anotleneega Mo 19.21 32 P **Pn** **10 24 39.3 -0.3**
baz=232,SNR=108
F19K Shaleruckik Mo 19.22 26 P **Pn** **10 24 39.6 0.0**
baz=224,SNR=136
C17K DeLong Mountai 19.23 18 P **Pn** **10 24 40.4 +0.6**
baz=212,SNR=153
CHUM Lake Minchumin 19.23 37 P **Pn** **10 24 39.9 +0.1**
baz=240,SNR=81
M22K Willow 19.24 45 IAmb IAmb 10 24 45.9
comp=Z,291nm,1.0s
M22K Willow 19.24 45 P **Pn** **10 24 40.0 +0.1**
baz=249
L22K Petersville 19.25 42 IAmb IAmb 10 24 41.1
comp=Z,242nm,0.8s
SEY Seymchan 19.36 319 P **Pn** **10 24 42.9 +1.5**
comp=Z,13nm,1.0s,baz=111,slow=11,SNR=24
SEY LR LR 10 32 09.8
comp=Z,3µm,19.0s,baz=113,slow=37
SEY ScP **ScP** **10 32 35.8 +0.3**
comp=Z,0.5nm,0.3s,baz=140,slow=23,SNR=1.4
SEY Seymchan 19.36 319 *ce* P **Pn** **10 24 41.5 +0.1**
SEY pmax pmax
comp=Z,34nm,1.7s
CUT Chulitna 19.41 43 P **P** **10 24 40.9 +0.1**
baz=247,SNR=31
PMR Palmer 19.62 46 P **P** **10 24 43.6 +0.6**
baz=251
C18K Utukok River 19.77 20 IAmb IAmb 10 24 48.1
comp=Z,153nm,1.0s
C18K Utukok River 19.77 20 P **Pn** **10 24 46.1 -0.2**
baz=215,SNR=136
E19K Redstone River 19.81 25 IAmb IAmb 10 24 51.5
comp=Z,125nm,0.9s
E19K Redstone River 19.81 25 P **Pn** **10 24 46.2 -0.5**
baz=224
TRF Thorofare Moun 19.84 40 IAmb IAmb 10 24 51.4
comp=Z,396nm,1.4s
TRF Thorofare Moun 19.84 40 P **P** **10 24 45.6 0.0**
baz=244,SNR=67
BPAW Bear Paw Mtn. 19.85 38 P **Pn** **10 24 46.6 -0.6**
BPAW IAmb IAmb 10 24 47.9
comp=Z,254nm,1.1s
BPAW Bear Paw Mtn. 19.85 38 P **Pn** **10 24 46.6 -0.6**
baz=242,SNR=116
KNK Knik Glacier 19.87 46 IAmb IAmb 10 24 50.6
comp=Z,129nm,0.8s
KNK Knik Glacier 19.87 46 P **P** **10 24 45.6 -0.2**
baz=252,SNR=17
F20K Avaraart Lake 19.95 27 P **P** **10 24 46.8 +0.2**
baz=228
P23K Montague Islan 20.00 51 IAmb IAmb 10 24 53.2
comp=Z,220nm,1.1s
P23K Montague Islan 20.00 51 P **P** **10 24 48.1 +0.9**
baz=257
H21K Melozitna Rive 20.00 33 P Pn 10 24 48.3 -0.7
H21K IAmb IAmb 10 24 57.0
comp=Z,208nm,1.0s
H21K Melozitna Rive 20.00 33 P Pn 10 24 48.5 -0.6
baz=235,SNR=145
I21K Tanana 20.03 34 P Pn 10 24 48.4 -0.8
baz=238,SNR=223
SML Sawmill 20.05 45 IAmb_20 IAmb_20 10 33 47.2
comp=Z,4µm,22.0s
SML Sawmill 20.05 45 P **P** **10 24 48.3 +0.4**
baz=251,SNR=23
G21K Allakaket 20.28 30 IAmb IAmb 10 24 53.1
comp=Z,318nm,0.8s
G21K Allakaket 20.28 30 P Pn 10 24 51.4 -0.8
baz=232
WAT1 Susitna Watana 20.31 42 P **P** **10 24 49.5 -1.1**
baz=248
M23K Glacier View 20.32 46 P **P** **10 24 50.5 -0.2**
baz=252,SNR=27
D19K Kuna River 20.35 22 IAmb IAmb 10 24 53.9
comp=Z,182nm,0.9s
D19K Kuna River 20.35 22 P **P** **10 24 51.7 +0.7**
baz=221
RND Reindeer 20.41 41 IAmb IAmb 10 24 56.3
comp=Z,134nm,0.8s
RND IAMs_20 IAMs_20 10 33 45.5
comp=Z,4µm,19.0s
C19K Lookout Ridge 20.49 20 P **P** **10 24 53.1 +0.6**
baz=217,SNR=67
MCK McKinley 20.50 40 P **P** **10 24 51.9 -0.8**
MCK McKinley 20.50 40 P **P** **10 24 51.9 -0.8**
MCK pmax pmax
comp=Z,77nm,0.8s
MCK MLR MLR
comp=Z,5µm,18.0s
MCK McKinley 20.50 40 P **P** **10 24 51.7 -1.0**
baz=245,SNR=23
SCM Sheep Creek Mo 20.52 46 IAmb IAmb 10 24 57.5
comp=Z,208nm,0.8s
SCM IAMs_20 IAMs_20 10 33 23.3
comp=Z,3µm,21.0s
SCM Sheep Creek Mo 20.52 46 P **P** **10 24 51.4 -1.4**
baz=252,SNR=33
HIN Hinchinbrook I 20.53 50 IAMs_20 IAMs_20 10 34 08.6
comp=Z,4µm,19.0s
WAT6 Susitna Watana 20.57 44 P **P** **10 24 52.8 -0.8**
baz=250,SNR=82
H22K Ishtalitna Cre 20.63 33 IAmb IAmb 10 24 56.5
comp=Z,129nm,1.0s
H22K Ishtalitna Cre 20.63 33 P **P** **10 24 54.5 +0.5**
baz=237,SNR=97
E20K Nigu River 20.66 24 P **P** **10 24 54.6 +0.2**
baz=224,SNR=171
F21K Alatna River 20.73 29 IAmb IAmb 10 24 57.4
comp=Z,123nm,1.0s
F21K IAMs_20 IAMs_20 10 33 04.3
comp=Z,3µm,19.0s
F21K Alatna River 20.73 29 P **P** **10 24 55.8 +0.7**
baz=231,SNR=108
NEA2 Nenana 20.82 38 IAmb IAmb 10 25 02.6
comp=Z,301nm,1.0s
NEA2 Nenana 20.82 38 P **P** **10 24 56.0 -0.1**
baz=243,SNR=121
D20K Etivluk River 20.89 23 P **P** **10 24 57.5 +0.7**
baz=223
DHY Denali Highway 20.90 42 IAmb IAmb 10 25 01.0
comp=Z,268nm,0.9s
DHY IAMs_20 IAMs_20 10 34 25.6
comp=Z,3µm,22.0s
DHY Denali Highway 20.90 42 P **P** **10 24 56.6 -0.5**
baz=249,SNR=134
EYAK Cordova Ski Ar 20.93 50 IAMs_20 IAMs_20 10 34 20.1
comp=Z,5µm,21.0s
EYAK Cordova Ski Ar 20.93 50 P **P** **10 24 57.4 +0.2**
baz=258
I23K Minto, Yukon-K 20.97 36 IAmb IAmb 10 25 02.7
comp=Z,137nm,0.8s
I23K Minto, Yukon-K 20.97 36 P **P** **10 24 58.2 +0.6**
baz=242,SNR=99
DIV Divide 21.05 48 IAmb IAmb 10 25 04.3
comp=Z,109nm,0.9s
KLU Klutina 21.07 47 IAmb IAmb 10 25 07.2
comp=Z,170nm,0.9s
KLU Klutina 21.07 47 P **P** **10 24 59.4 +0.6**
baz=255,SNR=40
M24K Tolsona, Glenn 21.12 45 IAmb IAmb 10 25 06.8
comp=Z,221nm,0.8s
M24K Tolsona, Glenn 21.12 45 P **P** **10 24 58.8 -0.5**
baz=253,SNR=32
E21K Killik River 21.39 26 P **P** **10 25 01.7 -0.4**
baz=228
COLA College 21.42 38 P **P** **10 25 02.3 -0.1**
COLA IAmb IAmb 10 25 19.2
comp=Z,152nm,0.8s
COLA College 21.42 38 *i* P **P** **10 25 02.3 -0.1**
COLA pmax pmax
comp=Z,198nm,1.0s
COLA College 21.42 38 P **P** **10 25 02.3 -0.1**
baz=244
RAGM Ragged Mountai 21.42 51 IAmb IAmb 10 25 12.1
comp=Z,109nm,0.8s
G23K Bananza Creek 21.53 32 P **P** **10 25 03.9 +0.2**
G23K IAmb IAmb 10 25 06.5
comp=Z,193nm,1.1s
G23K Bananza Creek 21.53 32 P **P** **10 25 03.5 -0.2**
baz=237
BMRM Bremner River 21.56 49 P **P** **10 25 03.8 -0.4**
BMRM IAmb IAmb 10 25 16.5
comp=Z,193nm,1.3s
BMRM IAMs_20 IAMs_20 10 34 54.0
comp=Z,3µm,20.0s
BMRM Bremner River 21.56 49 P **P** **10 25 03.1 -1.1**
baz=258,SNR=13
HDA Harding Lake 21.58 39 IAMs_20 IAMs_20 10 34 23.6
comp=Z,5µm,19.0s
HDA Harding Lake 21.58 39 P **P** **10 25 03.3 -0.9**
baz=247,SNR=38
HARP HAARP 21.66 45 P **P** **10 25 04.9 -0.2**
baz=254,SNR=20
C21K Knifeblade Rid 21.67 24 P **P** **10 25 04.2 -0.8**
baz=225
PAX Paxson 21.69 43 IAmb IAmb 10 25 12.8
comp=Z,95nm,0.8s
PAX IAMs_20 IAMs_20 10 34 53.4
comp=Z,3µm,19.0s
PAX Paxson 21.69 43 P **P** **10 25 04.8 -0.6**
baz=252,SNR=49
N25K Chitina, Valde 21.71 47 P **P** **10 25 05.2 -0.5**
N25K IAmb IAmb 10 25 08.8
comp=Z,106nm,0.8s
N25K IAMs_20 IAMs_20 10 34 54.8
comp=Z,3µm,19.0s
N25K Chitina, Valde 21.71 47 P **P** **10 25 06.0 +0.3**
baz=256,SNR=23
IL31 21.75 38 IAmb IAmb 10 25 25.7
comp=Z,128nm,1.0s
ILAR Eielson Array 21.75 38 P **P** **10 25 04.0 -2.0**
comp=Z,38nm,1.0s,baz=241,slow=8.6,SNR=59
ILAR ScP **ScP** **10 32 41.6 +0.5**
comp=Z,0.7nm,0.8s,baz=288,slow=3.4,SNR=3.5
comp=Z,38nm,1.0s
COLD Coldfoot 21.76 31 IAmb IAmb 10 25 09.8
comp=Z,126nm,1.0s
COLD Coldfoot 21.76 31 P **P** **10 25 06.5 +0.4**
baz=236,SNR=111
E22K Anaktuvuk Pass 21.80 28 IAmb IAmb 10 25 09.6
comp=Z,107nm,0.9s
E22K Anaktuvuk Pass 21.80 28 P **P** **10 25 06.9 +0.3**
baz=232
K24K Donnelly Dome 21.83 41 IAmb IAmb 10 25 25.3
comp=Z,135nm,0.8s
K24K Donnelly Dome 21.83 41 P **P** **10 25 06.3 -0.7**
baz=250,SNR=41
H24K Noodor Dome 21.84 35 IAmb IAmb 10 25 10.9
comp=Z,96nm,0.9s
H24K Noodor Dome 21.84 35 P **P** **10 25 07.2 +0.2**
baz=242,SNR=111
BERG Berg Lake 21.89 51 IAmb IAmb 10 25 19.6
comp=Z,179nm,1.2s
D22K Ayikyak River 22.03 26 IAmb IAmb 10 25 12.2
comp=Z,126nm,0.9s
D22K Ayikyak River 22.03 26 P **P** **10 25 09.4 +0.4**
baz=229,SNR=84
B21K Ikpikpuk River 22.04 23 IAmb IAmb 10 25 10.3
comp=Z,134nm,0.9s
B21K IAMs_20 IAMs_20 10 33 59.1
comp=Z,3µm,20.0s
B21K Ikpikpuk River 22.04 23 P **P** **10 25 09.0 0.0**
baz=224
GLB Gilahina Butte 22.04 48 IAmb IAmb 10 25 16.2
comp=Z,113nm,0.8s
GLB IAMs_20 IAMs_20 10 33 51.5
comp=Z,3µm,22.0s
VRDI Verde Repeater 22.16 49 P **P** **10 25 10.8 0.0**
RIDG Independent Ri 22.20 42 IAmb IAmb 10 25 27.0
comp=Z,189nm,1.1s
RIDG IAMs_20 IAMs_20 10 35 16.9
comp=Z,4µm,21.0s
RIDG Independent Ri 22.20 42 P **P** **10 25 09.9 -1.0**
baz=251,SNR=33
CRQM Cirque 22.23 50 IAMs_20 IAMs_20 10 34 35.1
comp=Z,3µm,19.0s
CRQE Cirque 22.25 50 P **P** **10 25 10.8 -0.8**
baz=260,SNR=11
J25K Salcha River, 22.29 39 IAMs_20 IAMs_20 10 35 04.3
comp=Z,4µm,19.0s
J25K Salcha River, 22.29 39 P **P** **10 25 10.8 -1.1**
baz=248,SNR=51
TGL Tana Glacier 22.38 50 IAMs_20 IAMs_20 10 35 26.4
comp=Z,3µm,22.0s
G24K Hadweenzic Riv 22.39 33 P **P** **10 25 13.4 +0.4**
baz=241
MCARA McCarthy VSAT 22.40 48 IAmb IAmb 10 25 26.3
comp=Z,148nm,0.9s
MCARA IAMs_20 IAMs_20 10 34 46.0
comp=Z,3µm,22.0s
MCARA McCarthy VSAT 22.40 48 P **P** **10 25 13.0 -0.1**
baz=258,SNR=23
E23K Chandalar 22.41 29 IAMs_20 IAMs_20 10 34 07.9
comp=Z,3µm,19.0s
E23K Chandalar 22.41 29 P **P** **10 25 12.7 -0.6**
baz=235
MENT Mentasta 22.44 44 IAmb IAmb 10 25 31.6
comp=Z,122nm,0.9s
KUR Kuril'sk 22.57 268 P **P** **10 25 15.0 +0.1**
KUR *e* PPP PPP 10 25 45.2
KUR S **S** **10 29 23.3 +2.4**
KUR MLR MLR
comp=Z,800nm,14.0s
PRP Porcupine Dome 22.58 37 IAMs_20 IAMs_20 10 34 46.1
comp=Z,3µm,19.0s
PRP Porcupine Dome 22.58 37 P **P** **10 25 13.8 -1.2**
baz=246,SNR=69
M26K Nabesna, AK 22.63 46 IAmb IAmb 10 25 17.6
comp=Z,92nm,1.0s
M26K IAMs_20 IAMs_20 10 35 30.2
comp=Z,3µm,18.0s
M26K Nabesna, AK 22.63 46 P **P** **10 25 15.5 0.0**
baz=256
L26K Log Cabin Wild 22.63 44 IAmb IAmb 10 25 27.8
comp=Z,181nm,1.0s
L26K IAMs_20 IAMs_20 10 34 41.3
comp=Z,4µm,21.0s
L26K Log Cabin Wild 22.63 44 P **P** **10 25 14.6 -0.9**
baz=254,SNR=80
SCRK Sand Creek 22.64 41 IAmb IAmb 10 25 17.5
comp=Z,80nm,0.8s
SCRK IAMs_20 IAMs_20 10 35 31.4
comp=Z,4µm,19.0s
SCRK Sand Creek 22.64 41 P **P** **10 25 14.2 -1.5**
baz=251,SNR=83
D23K Nanushuk River 22.64 27 IAmb IAmb 10 25 17.2
comp=Z,87nm,0.9s
D23K IAMs_20 IAMs_20 10 34 27.0
comp=Z,3µm,18.0s
D23K Nanushuk River 22.64 27 P **P** **10 25 15.1 -0.5**
baz=232
E24K Your Creek 22.78 30 IAmb IAmb 10 25 19.6
comp=Z,73nm,0.8s
E24K IAMs_20 IAMs_20 10 34 38.4
comp=Z,2µm,19.0s
E24K Your Creek 22.78 30 P **P** **10 25 17.3 +0.3**
baz=236
A21K Barrow 22.87 19 P **P** **10 25 17.4 -0.4**
baz=219,SNR=9.7
GRNC Granite Creek 22.90 50 IAmb IAmb 10 25 21.8
comp=Z,92nm,1.0s
BARN Barnard Glacie 22.99 49 IAMs_20 IAMs_20 10 35 44.6
comp=Z,3µm,22.0s
FYU Fort Yukon 23.13 35 IAmb IAmb 10 25 21.5
comp=Z,192nm,1.0s
M27K Edge Creek, AK 23.13 46 IAmb IAmb 10 25 22.9
comp=Z,206nm,1.0s
M27K IAMs_20 IAMs_20 10 35 18.4
comp=Z,4µm,21.0s
M27K Edge Creek, AK 23.13 46 P **P** **10 25 21.1 +0.3**
baz=258
CTG Chitna Glacier 23.13 50 P **P** **10 25 20.7 -0.2**
baz=261,SNR=12
CTGM Chitina Glacie 23.13 50 IAMs_20 IAMs_20 10 35 24.4
comp=Z,3µm,22.0s
C23K Itkillik River 23.21 25 IAMs_20 IAMs_20 10 34 26.1
comp=Z,2µm,20.0s
C23K Itkillik River 23.21 25 P **P** **10 25 21.2 -0.2**
baz=230
LOGN Logan Glacier 23.27 50 IAmb IAmb 10 25 24.5
comp=Z,78nm,0.8s
D24K Happy Valley 23.29 27 IAMs_20 IAMs_20 10 34 39.1
comp=Z,3µm,20.0s
D24K Happy Valley 23.29 27 P **P** **10 25 22.1 -0.1**
baz=234
L27K Beaver Creek, 23.31 44 IAMs_20 IAMs_20 10 35 11.3
comp=Z,3µm,18.0s
L27K Beaver Creek, 23.31 44 P **P** **10 25 22.0 -0.5**
baz=256,SNR=34
BCAR Beaver Creek A 23.33 44 P **P** **10 25 21.2 -1.6**
I26K Coal Creek Min 23.42 39 IAMs_20 IAMs_20 10 35 39.2
comp=Z,3µm,20.0s
I26K Coal Creek Min 23.42 39 P **P** **10 25 21.4 -2.1**
baz=249
F25K Christian Rive 23.45 32 IAmb IAmb 10 25 25.2
comp=Z,129nm,0.9s
F25K Christian Rive 23.45 32 P **P** **10 25 23.6 -0.3**
baz=241
PCA Pinnacle 23.56 52 IAmb IAmb 10 25 27.3
comp=Z,83nm,0.8s
PINM Pinnacle 23.56 52 P **P** **10 25 24.5 -0.5**
baz=264
BVCY Beaver Creek 23.60 46 P **P** **10 25 25.0 -0.4**
baz=258,SNR=75
C24K Franklin Bluff 23.66 26 IAmb IAmb 10 25 27.8
comp=Z,160nm,0.8s
C24K IAMs_20 IAMs_20 10 36 10.9
comp=Z,3µm,18.0s
C24K Franklin Bluff 23.66 26 P **P** **10 25 25.1 -0.7**
baz=233
O28M Mount Upton 23.66 50 IAMs_20 IAMs_20 10 35 47.4
comp=Z,3µm,20.0s
O28M Mount Upton 23.66 50 P **P** **10 25 25.6 -0.7**
baz=263,SNR=12
YUK3 Moose Creek 23.68 48 P **P** **10 25 25.7 -0.6**
baz=260,SNR=29
E25K Arctic Village 23.73 31 IAmb IAmb 10 25 28.7
comp=Z,188nm,0.9s
E25K Arctic Village 23.73 31 P **P** **10 25 26.6 0.0**
baz=240,SNR=166
BMAR Burnt Mountain 23.74 33 P **P** **10 25 26.3 -0.4**
G26K Porcupine Rive 23.81 34 IAMs_20 IAMs_20 10 35 28.7
comp=Z,2µm,18.0s
G26K Porcupine Rive 23.81 34 P **P** **10 25 27.1 -0.2**
baz=245,SNR=184
TYV Tymovskoe 23.84 285 *e* P **P** **10 25 29.8 +2.1**
TYV *e* S **S** **10 29 47.5 +5.4**
TYV pmax pmax
comp=Z,69nm,1.5s
TYV pmax pmax
comp=Z,500nm,2.7s
TYV smax smax
comp=N,500nm,5.3s
TYV smax smax
comp=E,600nm,5.3s
TYV smax smax
comp=N,8.0nm,1.3s
TYV smax smax
comp=E,10.0nm,1.3s
TYV MLR MLR
comp=Z,1µm,21.0s
TYV MLR MLR
comp=N,1µm,21.0s
YUK8 Steele Glacier 23.93 49 P **P** **10 25 28.1 -0.7**
baz=262,SNR=28
F26K Sheenjek River 24.01 33 IAmb IAmb 10 25 31.5
comp=Z,79nm,1.0s
F26K IAMs_20 IAMs_20 10 36 19.0
comp=Z,2µm,18.0s
F26K Sheenjek River 24.01 33 P **P** **10 25 29.1 -0.1**
baz=243,SNR=74
D25K Kavik River 24.11 28 IAmb IAmb 10 25 32.0

comp=Z,118nm,0.8s
D25K Kavik River 24.11 28 P P 10 25 29.7 -0.4
baz=237
I27K Kandik River 24.12 38 IAMs_20 IAMs_20 10 36 10.9
comp=Z,3µm,20.0s
I27K Kandik River 24.12 38 P P 10 25 28.9 -1.4
baz=251
H27K Steamboat Moun 24.37 37 IAMs_20 IAMs_20 10 36 02.4
comp=Z,3µm,19.0s
H27K Steamboat Moun 24.37 37 P P 10 25 30.8 -1.8
baz=250
YUK Yuzh-Kuril'sk 24.39 267 *i* P P 10 25 34.2 +1.4
O29M Mount Kennedy 24.41 52 P P 10 25 31.6 -1.5
baz=266
YUK4 Talbot Arm 24.48 49 P P 10 25 33.3 -0.4
baz=263,SNR=13
NKL Nikolayevsk 24.51 291 *e*P P 10 25 34.4 +0.6
NKL *e*S S 10 29 56.3 +3.5
NKL pmax pmax
comp=N,450nm,1.2s
NKL pmax pmax
comp=E,182nm,1.1s
NKL pmax pmax
comp=Z,881nm,1.1s
NKL smax smax
comp=E,274nm,3.3s
NKL smax smax
comp=N,437nm,4.1s
NKL MLR MLR
comp=E,9µm,23.0s
NKL MLR MLR
comp=N,4µm,16.0s
NKL MLR MLR
comp=Z,10µm,22.0s
G27K Doyon Strip 24.53 36 IAMs_20 IAMs_20 10 35 58.7
comp=Z,3µm,19.0s
G27K Doyon Strip 24.53 36 P P 10 25 32.5 -1.5
baz=248
YUK6 Outpost Mounta 24.57 50 P P 10 25 34.4 -0.2
baz=264,SNR=10
DAWY Dawson 24.61 43 IAmb IAmb 10 25 47.6
comp=Z,75nm,0.9s
DAWY Dawson 24.61 43 P P 10 25 34.0 -0.7
baz=257,SNR=42
M29M Somme Creek 24.71 47 IAmb IAmb 10 25 38.7
comp=Z,64nm,0.8s
M29M IAMs_20 IAMs_20 10 37 01.2
comp=Z,3µm,20.0s
M29M Somme Creek 24.71 47 P P 10 25 35.2 -0.5
baz=261
UGL Uglegorsk 24.73 281 *e*P P 10 25 38.1 +2.2
UGL *e*S S 10 29 57.0 +0.5
UGL pmax pmax
comp=Z,100nm,0.6s
UGL smax smax
comp=E,900nm,12.0s
UGL smax smax
comp=N,800nm,8.5s
I28M Miner Creek 24.74 39 IAMs_20 IAMs_20 10 36 49.2
comp=Z,4µm,20.0s
I28M Miner Creek 24.74 39 P P 10 25 34.8 -1.1
baz=253
C26K Camden Bay 24.86 28 P P 10 25 37.4 +0.5
baz=238
L29M L29M 24.97 45 IAmb IAmb 10 25 40.3
comp=Z,122nm,0.8s
L29M IAMs_20 IAMs_20 10 36 14.0
comp=Z,4µm,22.0s
L29M L29M 24.97 45 P P 10 25 37.3 -0.6
baz=260
HYT Haines Junctio 24.98 51 P P 10 25 37.7 -0.5
baz=266
C27K Jago River 25.07 29 IAmb IAmb 10 25 41.2
comp=Z,63nm,0.8s
C27K IAMs_20 IAMs_20 10 36 06.0
comp=Z,2µm,19.0s
C27K Jago River 25.07 29 P P 10 25 38.1 -0.6
baz=240,SNR=78
YSS Yuzhno-Sakhali 25.07 276 P P 10 25 40.3 +1.3
YSS IAmb IAmb 10 25 43.2
comp=Z,50nm,0.9s
YSS Yuzhno-Sakhali 25.07 276 *o**e*P P 10 25 40.1 +1.1
YSS *e**SP **pP** 10 25 44.4 +0.1
YSS *e*S S 10 30 00.7 -1.2
YSS pmax pmax
comp=Z,700nm,5.5s
YSS pmax pmax
comp=E,300nm,4.2s
YSS pmax pmax
comp=Z,60nm,0.9s
YSS smax smax
comp=N,300nm,4.4s
YSS smax smax
comp=E,400nm,5.5s
YSS MLR MLR
comp=N,800nm,20.0s
YSS MLR MLR
comp=Z,2µm,20.0s
E27K Coleen River 25.09 33 IAmb IAmb 10 25 42.2
comp=Z,120nm,1.1s
E27K Coleen River 25.09 33 P P 10 25 39.0 0.0
baz=246
J29N Klondike Camp 25.19 42 P P 10 25 40.0 0.0
baz=257,SNR=14
P30M Million Dollar 25.21 52 P P 10 25 40.2 0.0
baz=268
N30M Aishikik Lake 25.23 49 IAMs_20 IAMs_20 10 36 50.9
comp=Z,3µm,19.0s
N30M Aishikik Lake 25.23 49 P P 10 25 39.9 -0.6
baz=264
K29M Barlow Dome 25.37 44 IAmb IAmb 10 25 45.7
comp=Z,95nm,0.8s
K29M Barlow Dome 25.37 44 P P 10 25 41.1 -0.6
baz=259
I29M Ogilvie Camp, 25.37 40 IAmb IAmb 10 25 42.0
comp=Z,84nm,1.1s
I29M Ogilvie Camp, 25.37 40 P P 10 25 40.8 -0.8
baz=255,SNR=17
F28M Old Crow 25.47 34 IAmb IAmb 10 25 45.7
comp=Z,135nm,0.9s
F28M IAMs_20 IAMs_20 10 36 28.6
comp=Z,3µm,19.0s
F28M Old Crow 25.47 34 P P 10 25 42.2 -0.2
baz=249,SNR=137
M30M Minto, Yukon 25.49 47 IAMs_20 IAMs_20 10 37 23.9
comp=Z,3µm,20.0s
M30M Minto, Yukon 25.49 47 P P 10 25 42.1 -0.7
baz=262,SNR=8.2
S31K Pelican 25.59 57 P P 10 25 43.2 -0.4
baz=273
O30N Mendenhall 25.67 51 IAMs_20 IAMs_20 10 36 41.4
comp=Z,3µm,20.0s
O30N Mendenhall 25.67 51 P P 10 25 44.0 -0.3
baz=267,SNR=11
D27M Malcolm River 25.75 31 IAMs_20 IAMs_20 10 36 27.0
comp=Z,2µm,20.0s
D27M Malcolm River 25.75 31 P P 10 25 45.0 -0.1
baz=244
N31M Braeburn, Yuko 25.86 49 IAMs_20 IAMs_20 10 37 26.6
comp=Z,3µm,18.0s
N31M Braeburn, Yuko 25.86 49 P P 10 25 45.5 -0.6
baz=266
G29M Pine Creek 25.92 36 P P 10 25 46.0 -0.5
baz=252
E28M Babbage River 25.96 32 IAmb IAmb 10 25 50.3
comp=Z,64nm,0.9s
E28M Babbage River 25.96 32 P P 10 25 46.6 -0.2
baz=247
J30M Hart River 26.02 42 IAMs_20 IAMs_20 10 36 42.9
comp=Z,3µm,19.0s
J30M Hart River 26.02 42 P P 10 25 46.6 -1.0
baz=259
MAYO Mayo, Yukon 26.04 44 IAmb IAmb 10 25 56.0
comp=Z,81nm,0.8s
MAYO Mayo, Yukon 26.04 44 P P 10 25 46.9 -0.7
baz=261,SNR=12
I30M Mount Dempster 26.13 41 IAmb IAmb 10 25 49.0
comp=Z,90nm,0.9s
I30M Mount Dempster 26.13 41 P P 10 25 47.4 -1.2
baz=256
SIT Sitka 26.15 59 P P 10 25 47.6 -1.0
baz=275
WHY Whitehorse 26.26 51 P P 10 25 50.3 +0.5
WHY Whitehorse 26.26 51 P P 10 25 49.4 -0.3
baz=268,SNR=6.1
EPYK Eagle Plains 26.26 38 IAmb IAmb 10 25 49.8
comp=Z,49nm,0.8s
EPYK Eagle Plains 26.26 38 P P 10 25 48.1 -1.6
baz=255,SNR=28
JKA Kamikawa-asahi 26.41 270 P P 10 25 52.2 +1.1
JKA IAmb IAmb 10 25 54.2
comp=Z,133nm,1.4s
ASAJ Asahikawa 26.42 270 P P 10 25 51.2 0.0
comp=Z,70nm,1.3s,baz=294,slow=15,SNR=9.3
ASAJ LR LR 10 36 22.2
comp=Z,1µm,21.2s,baz=75,slow=37
comp=Z,70nm,1.3s
ASAJ Asahikawa 26.42 270 P P 10 25 52.3 +1.1
ASAJ pmax pmax
comp=Z,133nm,1.4s
E29M Blow River 26.44 33 IAmb IAmb 10 25 55.4
comp=Z,72nm,0.9s
E29M Blow River 26.44 33 P P 10 25 50.9 -0.4
baz=250
D28M Stokes Point 26.51 31 P P 10 25 51.8 0.0
baz=247
S32K Killisnoo 26.52 58 P P 10 25 52.4 +0.4
baz=275
M31M Drury Creek, Y 26.57 48 IAMs_20 IAMs_20 10 37 48.3
comp=Z,3µm,20.0s
M31M Drury Creek, Y 26.57 48 P P 10 25 52.5 0.0
baz=266,SNR=7.8
G30M tAoh Zraii Nji 26.62 37 IAMs_20 IAMs_20 10 37 40.8
comp=Z,2µm,18.0s
G30M tAoh Zraii Nji 26.62 37 P P 10 25 51.5 -1.3
baz=254
P32M Atlin 26.84 54 IAMs_20 IAMs_20 10 37 13.4
comp=Z,3µm,20.0s
P32M Atlin 26.84 54 P P 10 25 53.8 -1.2
baz=271
F30M Barrier River 26.95 36 IAmb IAmb 10 26 19.8
comp=Z,56nm,1.0s
F30M Barrier River 26.95 36 P P 10 25 55.8 -0.1
baz=254
H31M Peel River 27.08 40 P P 10 25 55.8 -1.2
baz=259
N32M Quiet Lake 27.15 50 P P 10 25 57.0 -0.7
baz=269
P33M Teslin, Yukon 27.28 52 P P 10 25 58.9 -0.1
baz=271,SNR=15
G31M Satah River 27.34 37 P P 10 25 59.0 -0.4
baz=256
U33K Whale Pass 27.48 61 P P 10 26 00.7 +0.1
baz=279
Q32M Nakina River 27.61 55 IAmb IAmb 10 26 32.5
comp=Z,85nm,1.6s
Q32M Nakina River 27.61 55 P P 10 26 01.2 -0.9
baz=274
GRNR Gornyy 27.66 287⇑ *i*P P 10 26 03.0 +0.7
GRNR pmax pmax
comp=N,9.0nm,1.1s
GRNR pmax pmax
comp=E,20nm,1.1s
GRNR pmax pmax
comp=Z,40nm,1.2s
GRNR MLR MLR
comp=E,680nm,19.0s
GRNR MLR MLR
comp=N,420nm,17.0s
GRNR MLR MLR
comp=Z,750nm,18.0s
F31M Tsiigehtchic 27.67 36 P P 10 26 01.4 -0.8
baz=256,SNR=36
WRAK Wrangell Islan 27.86 60 P P 10 26 03.1 -0.9
baz=279
INK Inuvik 27.96 35 IAmb IAmb 10 26 10.3
comp=Z,44nm,0.9s
INK Inuvik 27.96 35 P P 10 26 04.2 -0.6
baz=255,SNR=44
R33M Jennings River 28.25 54 IAMs_20 IAMs_20 10 38 19.6
comp=Z,3µm,19.0s
R33M Jennings River 28.25 54 P P 10 26 08.0 +0.3
baz=274
S34M Telegraph Cree 28.31 57 P P 10 26 07.2 -0.8
baz=277
V35K Ketchikan 28.45 62 P P 10 26 08.0 -1.3
baz=281
DLBC Dease Lake 28.83 56 LR LR 10 39 44.1
comp=Z,1µm,18.2s,baz=262,slow=41
DLBC Dease Lake 28.83 56 P P 10 26 11.5 -1.3
baz=276
T35M Bob Quinn 28.91 59 P P 10 26 11.9 -1.6
baz=279
YAK Yakutsk 29.48 312 P P 10 26 17.0 -1.3
YAK comp=Z,13nm,0.4s,baz=116,slow=7.6,SNR=13 LR LR 10 37 47.4
comp=Z,2µm,21.0s,baz=94,slow=36
comp=Z,13nm,0.4s
YAK Yakutsk 29.48 312 P P 10 26 17.7 -0.6
YAK IAmb IAmb 10 26 18.7
comp=Z,157nm,1.9s
YAK Yakutsk 29.48 312 *c i*P P 10 26 17.0 -1.3
YAK *e**PP **pP** 10 26 20.1 -4.1
YAK *e*PPP PPP 10 27 17.7
YAK *e*S S 10 31 10.3 -0.8
YAK *e*SS SnSn 10 32 36.1 -2.7
YAK *e*SSS SSS 10 32 57.9
YAK *e* 10 37 00.3
YAK pmax pmax
comp=Z,11nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.1s
YAK pmax pmax
comp=Z,47nm,1.9s
YAK pmax pmax
comp=E,30nm,1.4s
YAK pmax pmax
comp=N,27nm,1.8s
YAK smax smax
comp=N,45nm,1.4s
YAK smax smax
comp=E,35nm,2.2s
YAK MLR MLR
comp=Z,2µm,22.0s
YAK MLR MLR
comp=E,1µm,17.0s
YAK MLR MLR
comp=N,578nm,17.0s
TEY Ternei 29.77 276⇑ *e*P P 10 26 20.6 -0.5
TEY *e* 10 27 26.5
TEY pmax pmax
comp=E,10.0nm,1.2s
TEY pmax pmax
comp=N,10.0nm,1.5s
TEY pmax pmax
comp=Z,20nm,1.4s
TIXI Tiksi 30.86 331 LR LR 10 39 18.6
comp=Z,1µm,18.5s,baz=140,slow=37
TIXI Tiksi 30.86 331 P P 10 26 30.5 0.0
TIXI Tiksi 30.86 331 IAMs_20 IAMs_20 10 39 49.7
comp=Z,2µm,18.0s
TIXI Tiksi 30.86 331 *c**e*P P 10 26 30.6 +0.2
TIXI pmax pmax
comp=Z,12nm,2.5s
KLR Kul'dur 31.02 286 P P 10 26 32.2 +0.1
comp=Z,47nm,0.8s,baz=68,slow=8.2,SNR=80
KLR LR LR 10 40 24.8
comp=Z,1µm,19.2s,baz=74,slow=39
comp=Z,47nm,0.8s
KLR Kul'dur 31.02 286 *c**e*P P 10 26 32.5 +0.4
KLR pmax pmax
comp=Z,49nm,1.7s
BBB Bella Bella 31.27 67 LR LR 10 38 05.9
comp=Z,872nm,21.0s,baz=291,slow=34
C36M Paulatuk 31.53 34 P P 10 26 35.7 -0.7
C36M IAmb IAmb 10 26 37.1
comp=Z,36nm,1.0s
C36M Paulatuk 31.53 34 P P 10 26 35.6 -0.8
baz=263,SNR=28
A36M Sachs Harbour 31.59 29 P P 10 26 37.2 +0.4
A36M IAmb IAmb 10 26 38.8
comp=Z,73nm,0.8s
A36M Sachs Harbour 31.59 29 P P 10 26 36.8 0.0
baz=258,SNR=54
WRGLY Wrigley 31.61 46 IAmb IAmb 10 26 38.9
comp=Z,69nm,0.9s
WRGLY Wrigley 31.61 46 P P 10 26 37.0 -0.1
baz=274,SNR=32
KOTAN Kotaneelee Air 31.65 52 P P 10 26 37.7 +0.1
baz=278,SNR=11
ZEA Zeya 32.15 296 *e*P P 10 26 41.6 -0.4
ZEA *e*S S 10 31 47.6 -5.5
ZEA pmax pmax
comp=E,200nm,4.2s
ZEA pmax pmax
comp=Z,300nm,4.3s
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=E,20nm,1.0s
ZEA pmax pmax
comp=Z,60nm,1.0s
ZEA smax smax
comp=E,100nm,11.3s
ZEA MLR MLR
comp=E,600nm,21.0s
ZEA MLR MLR
comp=N,500nm,14.0s
ZEA MLR MLR
comp=Z,900nm,17.0s
H11N2 WAKE ISLAND Hy 33.03 204 T T 11 02 39.4
baz=18,slow=76,SNR=303
H11N3 WAKE ISLAND Hy 33.04 204 T T 11 02 38.3
baz=18,slow=76,SNR=333
H11N1 WAKE ISLAND Hy 33.05 204 T T 11 02 53.5
baz=18,slow=76,SNR=307
USRK Ussuriysk Ar. 33.06 278 P P 10 26 50.1 0.0
comp=Z,9.0nm,0.9s,baz=72,slow=6.2,SNR=15
USRK PcP PcP 10 29 33.6 +0.4
comp=Z,3.3nm,0.9s,baz=84,slow=2.0,SNR=3.5
comp=Z,9.0nm,0.9s
HEH HeiHe 33.24 290 *e*P P 10 26 50.5 -1.1
HEH PcP PcP 10 29 33.6 +0.1
HEH ScP ScP 10 33 15.9 -0.3
HEH pmax pmax
comp=Z,55nm,1.4s
HEH LR LR
comp=Z,740nm,21.8s
HEH LR LR
comp=Z,1µm,20.2s
HEH LR LR
comp=Z,2µm,18.9s
MJAR Matsushiro Arr 33.44 261 P P 10 26 53.3 -0.2
comp=Z,2.5nm,0.6s,baz=46,slow=6.4,SNR=18
MJAR PcP PcP 10 29 34.5 +0.1
comp=Z,2.0nm,0.9s,baz=77,slow=1.3,SNR=4.8
MJAR ScP ScP 10 33 15.5 -1.7
comp=Z,4.7nm,1.0s,baz=37,slow=3.4,SNR=9.1
MJAR LR LR 10 39 48.3
comp=Z,1µm,19.5s,baz=58,slow=35
comp=Z,2.5nm,0.6s
MJAR Matsushiro Arr 33.44 261 P P 10 26 54.0 +0.5
MAJO Matsushiro 33.44 261 P P 10 26 54.5 +1.1
MAJO IAmb IAmb 10 26 56.4
comp=Z,56nm,1.4s
MAJO Matsushiro 33.44 261 *i* P P 10 26 54.8 +1.3
MAJO pmax pmax
comp=Z,48nm,1.5s
MJB9 Matsu-Tunnel 33.44 261 IAmb IAmb 10 26 57.3
comp=Z,58nm,1.4s
CBB Campbell River 33.66 70 IAmb IAmb 10 27 14.9
comp=Z,48nm,1.1s
VLA Vladivostok 33.67 276 *i* P P 10 26 57.6 +2.2
VLA pmax pmax
comp=Z,140nm,1.8s
H11S1 WAKE ISLAND Hy 34.25 204 T T 11 03 45.7
baz=16,slow=76,SNR=388
H11S2 WAKE ISLAND Hy 34.27 204 T T 11 03 52.5
baz=16,slow=76,SNR=156
H11S3 WAKE ISLAND Hy 34.27 204 T T 11 03 48.1
baz=16,slow=76,SNR=187
MDJ Mudanjiang 34.36 280 IAMs_20 IAMs_20 10 41 01.9
comp=Z,2µm,19.0s
MDJ Mudanjiang 34.36 280 P P 10 27 00.8 -0.6
MDJ pmax pmax
comp=Z,18nm,1.6s
MDJ pmax pmax
comp=Z,350nm,8.9s
MDJ LR LR
comp=Z,960nm,19.9s
MDJ LR LR
comp=Z,1µm,22.0s
MDJ LR LR
comp=Z,2µm,21.3s
JGF Kuroka 34.57 261 IAmb IAmb 10 27 06.3
comp=Z,92nm,1.7s
PSTR Posyet 34.59 276 *i* P P 10 27 04.7 +1.3
JHJ Hachijo jima 2 34.71 255 LR LR 10 39 14.2
comp=Z,366nm,20.8s,baz=80,slow=33
CLRS Cowichan Lake 34.88 71 IAmb IAmb 10 27 09.3
comp=Z,46nm,0.9s
C03A Quillayute Air 34.99 73 IAmb IAmb 10 27 11.5
comp=Z,106nm,1.0s
BNX BinXian 35.17 283⇑ P P 10 27 07.8 -0.6
BNX PcP PcP 10 29 39.8 +0.7
BNX S S 10 32 39.3 -0.8
BNX pmax pmax
comp=Z,51nm,1.2s
BNX pmax pmax
comp=Z,240nm,6.3s
BNX LR LR
comp=Z,1µm,18.1s
BNX LR LR
comp=Z,910nm,17.2s
BNX LR LR
comp=Z,1µm,19.6s
LLLB Lillooet 35.48 68 IAmb IAmb 10 27 14.3
comp=Z,62nm,1.0s
NLWA Neilton Lookou 35.66 74 IAmb IAmb 10 27 18.1
comp=Z,69nm,1.1s
YKAW3 Yellowknife Wh 35.71 46 P P 10 27 12.5 -0.3
YKAW3 IAmb IAmb 10 27 13.7
comp=Z,56nm,0.8s
YKA Yellowknife Ar 35.73 46 P P 10 27 12.4 -0.5
comp=Z,31nm,0.8s,baz=287,slow=9.1,SNR=258
YKA PcP PcP 10 29 40.4 -0.1
comp=Z,4.4nm,1.0s,baz=282,slow=3.3,SNR=5.2
YKA ScP ScP 10 33 23.5 -1.3
comp=Z,4.5nm,0.9s,baz=291,slow=3.9,SNR=12
YKA LR LR 10 43 45.5
comp=Z,3µm,19.6s,baz=272,slow=40
comp=Z,31nm,0.8s
YKA Yellowknife Ar 35.73 46 P P 10 27 12.9 0.0
A04D Lummi Island 35.78 71 IAmb IAmb 10 27 18.0
comp=Z,62nm,1.0s
YKAW1 Yellowknife Wh 35.78 46 IAmb IAmb 10 27 14.3
comp=Z,46nm,0.8s
WISH Wishkah 35.85 74 IAmb IAmb 10 27 22.3
comp=Z,69nm,1.0s
RADR Rader Ridge 36.15 75 IAmb IAmb 10 27 22.1
comp=Z,50nm,0.9s
GNW Green Mountain 36.22 73 IAmb IAmb 10 27 21.0
comp=Z,63nm,0.9s
F03A Seaside 36.53 76 IAmb IAmb 10 27 44.2
comp=Z,93nm,1.1s
D05A Enumclaw 36.90 73 IAmb IAmb 10 27 27.0
comp=Z,129nm,1.0s
G03D McMinnville, O 37.06 76 IAmb IAmb 10 27 44.9
comp=Z,116nm,1.5s
I02E Swisshome, OR 37.26 78 IAmb IAmb 10 27 32.7
comp=Z,40nm,0.8s
CN2 Changchun 37.34 281 P P 10 27 26.6 -0.4
CN2 PcP PcP 10 29 46.3 +0.6
CN2 pmax pmax
comp=Z,20nm,1.4s
CN2 LR LR
comp=Z,1µm,19.0s
CN2 LR LR
comp=Z,1µm,19.0s
CN2 LR LR
comp=Z,2µm,19.0s
COR Corvallis 37.35 77 IAmb IAmb 10 27 33.5
comp=Z,63nm,0.8s
G04A Mulino 37.55 76 P P 10 27 30.1 +1.4
G04A IAmb IAmb 10 28 05.3
comp=Z,109nm,0.8s
JCJ Chichijima 37.65 245 LR LR 10 40 09.0
comp=Z,524nm,21.0s,baz=96,slow=32
H04D Lebanon 37.73 77 IAmb IAmb 10 27 43.5
comp=Z,53nm,0.8s
BUCK Buck Mountain 37.74 78 IAmb IAmb 10 27 49.0
comp=Z,47nm,0.9s
B08A Colville Reser 37.95 70 IAmb IAmb 10 27 34.9
comp=Z,93nm,1.1s
H04A Detroit Lake 37.99 77 IAmb IAmb 10 27 51.8
comp=Z,110nm,1.0s
HOOD Mount Hood Mea 38.00 75 IAmb IAmb 10 27 59.9
comp=Z,72nm,0.8s
HILR Hailar Array B 38.04 292 P P 10 27 32.8 -0.1
comp=Z,9.0nm,0.7s,baz=74,slow=11,SNR=18
HILR PcP PcP 10 29 48.0 +0.2
comp=Z,18nm,1.1s,baz=100,slow=6.2,SNR=5.0
HILR LR LR 10 45 07.7
comp=Z,2µm,18.6s,baz=70,slow=39

	comp=Z,9.0nm,0.7s																		
HIA	**Hailar**	**38.17**	**292**		P	**P**	**10 27 33.9**	**-0.1**											
HIA	**Hailar**	**38.17**	**292**		IAMs_20	IAMs_20	10 44 51.2												
	comp=Z,2µm,18.0s																		
HIA	**Hailar**	**38.17**	**292**		P	**P**	**10 27 33.9**	**-0.1**											
HIA					pmax	pmax													
	comp=Z,52nm,1.1s																		
HIA					MLR	MLR													
	comp=Z,2µm,18.0s																		
G05A	**Wamic**	**38.24**	**75**		IAmb	IAmb	10 27 56.6												
	comp=Z,85nm,0.8s																		
EPH	**Ephrata**	**38.26**	**71**		IAmb	IAmb	10 27 37.1												
	comp=Z,47nm,0.9s																		
I04A	**Tendick Farm,**	**38.31**	**78**		IAmb	IAmb	10 27 53.0												
	comp=Z,71nm,0.8s																		
WIFE	**Three Sisters-**	**38.54**	**77**		IAmb	IAmb	10 27 45.9												
	comp=Z,71nm,1.0s																		
WAH2	**Wahluke Slope**	**38.56**	**72**		IAmb	IAmb	10 27 39.9												
	comp=Z,57nm,0.8s																		
BBOR	**Butler Butte**	**38.62**	**79**		IAmb	IAmb	10 27 56.5												
	comp=Z,82nm,1.2s																		
I05D	**Terrebonne, OR**	**38.69**	**77**		IAmb	IAmb	10 27 57.8												
	comp=Z,65nm,0.9s																		
HAWA	**Hanford**	**38.76**	**73**		IAmb	IAmb	10 27 41.8												
	comp=Z,72nm,0.9s																		
F07A	**Phinny Hill Vi**	**38.76**	**74**		IAmb	IAmb	10 28 02.0												
	comp=Z,71nm,1.0s																		
J04A	**Umpqua Nationa**	**38.79**	**79**		IAmb	IAmb	10 27 45.8												
	comp=Z,81nm,0.9s																		
C09A	**Chrisman Ranch**	**38.84**	**70**		IAmb	IAmb	10 27 42.0												
	comp=Z,72nm,1.1s																		
YBH	**Yreka Blue Hor**	**39.23**	**81**		LR	LR	10 42 14.3												
	comp=Z,82nm,19.9s,baz=290,slow=34																		
EDM	**Edmonton**	**39.27**	**60**		IAmb	IAmb	10 27 45.1												
	comp=Z,83nm,0.8s																		
YPT	**Yellepit**	**39.27**	**73**		IAmb	IAmb	10 27 46.8												
	comp=Z,57nm,1.0s																		
NEW	**Newport**	**39.30**	**69**		LR	LR	10 41 40.1												
	comp=Z,599nm,21.5s,baz=296,slow=33																		
NEW	**Newport**	**39.30**	**69**		IAmb	IAmb	10 27 45.7												
	comp=Z,84nm,1.0s																		
J05D	**Fort Rock, OR**	**39.30**	**78**		IAmb	IAmb	10 27 50.2												
	comp=Z,79nm,1.0s																		
K04D	**Chiloquin, OR**	**39.34**	**79**		IAmb	IAmb	10 28 02.0												
	comp=Z,75nm,0.9s																		
KSRS	**Korea Array**	**39.36**	**271**		P	**P**	**10 27 45.5**	**+1.6**											
	comp=Z,10nm,0.8s,baz=60,slow=8.0,SNR=29																		
KSRS					PcP	**PcP**	**10 29 52.6**	**+0.6**											
	comp=Z,1.3nm,0.8s,baz=48,slow=3.6,SNR=1.8																		
KSRS					LR	LR	10 42 57.8												
	comp=Z,418nm,21.1s,baz=60,slow=35																		
	comp=Z,10nm,0.8s																		
KS19	**Wonju Array Si**	**39.36**	**271**		P	**P**	**10 27 44.3**	**+0.3**											
KSAR	**Wonju Array Be**	**39.39**	**271**		P	**P**	**10 27 44.9**	**+0.7**											
KSAR	**Wonju Array Be**	**39.39**	**271**		P	**P**	**10 27 44.9**	**+0.7**											
K05A	**Sumner Lake**	**39.81**	**78**		IAmb	IAmb	10 27 54.1												
	comp=Z,68nm,1.0s																		
O02D	**Mt. Diablo Mer**	**40.05**	**83**		IAMs_20	IAMs_20	10 42 13.9												
	comp=Z,1µm,20.0s																		
INCN	**Inchon**	**40.15**	**272**		P	**P**	**10 27 50.7**	**+0.1**											
INCN					IAmb	IAmb	10 27 53.2												
	comp=Z,118nm,1.4s																		
INCN	**Inchon**	**40.15**	**272**		P	**P**	**10 27 50.7**	**+0.1**											
INCN					pmax	pmax													
	comp=Z,118nm,1.4s																		
JNU	**Nakatsue**	**40.24**	**263**		P	**P**	**10 27 51.2**	**-0.2**											
	comp=Z,42nm,1.2s,baz=43,slow=7.5,SNR=6.5																		
JNU					LR	LR	10 42 54.0												
	comp=Z,910nm,21.1s,baz=49,slow=34																		
	comp=Z,42nm,1.2s																		
JNU	**Nakatsue**	**40.24**	**263**		IAmb	IAmb	10 28 11.8												
	comp=Z,88nm,0.8s																		
RES	**Resolute Bay**	**40.24**	**24**		LR	LR	10 46 57.8												
	comp=Z,934nm,20.6s,baz=255,slow=40																		
RES	**Resolute Bay**	**40.24**	**24**		P	**P**	**10 27 50.5**	**-0.3**											
RES	**Resolute Bay**	**40.24**	**24**		P	**P**	**10 27 50.5**	**-0.3**											
RES					pmax	pmax													
	comp=Z,18nm,1.1s																		
F10A	**Beach Ranch, E**	**40.36**	**72**		P	**P**	**10 27 52.7**	**+0.4**											
CIT	**Chita**	**40.49**	**299**		*eP*	**P**	**10 27 53.6**	**+0.4**											
CIT					*e*		10 27 57.8												
CIT					*e*		10 29 54.6												
CIT					*e*		10 30 02.0												
CIT					pmax	pmax													
	comp=Z,253nm,2.1s																		
HATC	**Hat Creek Radi**	**40.52**	**81**		IAmb	IAmb	10 28 25.0												
	comp=Z,89nm,0.9s																		
BMO	**Blue Mountains**	**40.88**	**74**		IAMs_20	IAMs_20	10 42 03.2												
	comp=Z,1µm,21.0s																		
MNRC	**McLaughlin Min**	**41.02**	**84**		IAMs_20	IAMs_20	10 44 39.6												
	comp=Z,2µm,20.0s																		
ORV	**Oroville**	**41.22**	**83**		P	**P**	**10 28 00.8**	**+1.4**											
ORV	**Oroville**	**41.22**	**83**		P	**P**	**10 28 00.8**	**+1.4**											
ORV					pmax	pmax													
	comp=Z,11nm,1.0s																		
SUTB	**Sutter Butte**	**41.23**	**83**		P	**P**	**10 28 00.9**	**+1.5**											
CVS	**Carmenet Viney**	**41.33**	**85**		P	**P**	**10 28 02.0**	**+1.7**											
CVS					IAMs_20	IAMs_20	10 44 28.8												
	comp=Z,1µm,18.0s																		
WVOR	**Wild Horse Val**	**41.37**	**77**		IAMs_20	IAMs_20	10 42 04.0												
	comp=Z,1µm,18.0s																		
JSU	**Suzuyama**	**41.59**	**262**		P	**P**	**10 28 04.2**	**+1.7**											
JSU					IAmb	IAmb	10 28 05.4												
	comp=Z,141nm,1.5s																		
MSO	**Missoula**	**41.88**	**69**		IAmb	IAmb	10 28 07.0												
	comp=Z,97nm,1.1s																		
MHC	**Mount Hamilton**	**42.45**	**86**		IAMs_20	IAMs_20	10 45 25.4												
	comp=Z,1µm,18.0s																		
DL2	**Dalian**	**42.45**	**277**		P	**P**	**10 28 09.6**	**+0.2**											
DL2					S	**S**	**10 34 30.3**	**+0.5**											
DL2					pmax	pmax													
	comp=Z,47nm,1.4s																		
DL2					pmax	pmax													
	comp=Z,230nm,4.7s																		
DL2					LR	LR													
	comp=Z,620nm,16.1s																		
DL2					LR	LR													
	comp=Z,660nm,16.5s																		
DL2					LR	LR													
	comp=Z,720nm,16.3s																		
XLT	**XiLinHaoTe**	**43.04**	**287**		*eP*	**P**	**10 28 15.3**	**+1.0**											
XLT					pP	pP	10 28 19.3	-0.6											
XLT					PcP	**PcP**	**10 30 05.5**	**+1.4**											
XLT					S	**S**	**10 34 41.0**	**+2.5**											
XLT					ScS	**ScS**	**10 38 15.8**	**+2.6**											
XLT					pmax	pmax													
	comp=Z,60nm,1.4s																		
XLT					LR	LR													
	comp=Z,82nm,16.3s																		
XLT					LR	LR													
	comp=Z,810nm,18.6s																		
XLT					LR	LR													
	comp=Z,1µm,22.5s																		
BLKN	**Baker Lake**	**43.14**	**39**		P	**P**	**10 28 13.9**	**-0.8**											
BBGB	**Big Mountain B**	**43.30**	**86**		IAmb	IAmb	10 28 59.8												
	comp=Z,57nm,1.1s																		
HLID	**Hailey**	**43.33**	**74**		P	**P**	**10 28 17.4**	**+0.7**											
HLID					IAmb	IAmb	10 28 21.1												
	comp=Z,53nm,1.0s																		
DLMT	**Dillon**	**43.45**	**70**		IAmb	IAmb	10 28 36.9												
	comp=Z,139nm,2.0s																		
HULI	**Fort Hunter Li**	**43.53**	**87**		IAmb	IAmb	10 28 58.8												
	comp=Z,72nm,1.2s																		
BCYI	**Bear Canyon**	**43.53**	**72**		IAmb	IAmb	10 28 21.2												
	comp=Z,80nm,0.9s																		
EGMT	**Eagleton**	**43.71**	**65**		P	**P**	**10 28 20.1**	**+0.5**											
EGMT					IAmb	IAmb	10 28 22.5												
	comp=Z,98nm,0.8s																		
LHV	**Little Huntoon**	**43.87**	**82**		IAmb	IAmb	10 28 39.4												
	comp=Z,55nm,1.3s																		
NVAR	**Mina Array Bea**	**43.89**	**82**		P	**P**	**10 28 22.7**	**+1.3**											
	comp=Z,5.1nm,0.8s,baz=286,slow=7.5,SNR=49																		
NVAR					PcP	**PcP**	**10 30 07.4**	**+0.2**											
	comp=Z,4.2nm,0.8s,baz=306,slow=4.8,SNR=2.6																		
NVAR					ScP	**ScP**	**10 33 57.1**	**-0.2**											
	comp=Z,1.6nm,1.0s,baz=298,slow=3.9,SNR=2.5																		
NVAR					LR	LR	10 45 14.4												
	comp=Z,439nm,19.0s,baz=290,slow=34																		
	comp=Z,5.1nm,0.8s																		
BOZ	**Bozeman (W)**	**43.89**	**69**		IAmb	IAmb	10 28 23.2												
	comp=Z,62nm,0.8s																		
ELK	**Elko**	**44.43**	**77**		LR	LR	10 45 57.9												
	comp=Z,1µm,19.4s,baz=309,slow=35																		
ELK	**Elko**	**44.43**	**77**		IAMs_20	IAMs_20	10 45 45.8												
	comp=Z,1µm,19.0s																		
YHL	**Hebgen Lake**	**44.56**	**70**		IAmb	IAmb	10 28 29.0												
	comp=Z,70nm,0.9s																		
YHB	**Horse Butte**	**44.61**	**70**		IAmb	IAmb	10 28 30.4												
	comp=Z,78nm,0.8s																		
FFC	**Flin Flon**	**44.62**	**54**		P	**P**	**10 28 25.9**	**-0.8**											
FFC	**Flin Flon**	**44.62**	**54**		P	**P**	**10 28 25.9**	**-0.8**											
FFC					pmax	pmax													
	comp=Z,18nm,1.1s																		
TIN	**Tinemaha, Big**	**44.78**	**84**		IAmb	IAmb	10 28 55.5												
	comp=Z,42nm,0.9s																		
YMR	**Madison River**	**44.79**	**70**		IAmb	IAmb	10 28 31.9												
	comp=Z,57nm,0.8s																		
YNM	**Yellowstone No**	**44.92**	**70**		IAmb	IAmb	10 28 36.6												
	comp=Z,50nm,0.8s																		
YNR	**Norris Junctio**	**44.94**	**70**		IAmb	IAmb	10 28 32.5												
	comp=Z,67nm,0.9s																		
YFT	**Old Faithful**	**44.99**	**70**		IAmb	IAmb	10 28 34.2												
	comp=Z,62nm,0.8s																		
VES	**Vestal, Richgr**	**45.00**	**85**		IAmb	IAmb	10 28 38.0												
	comp=Z,51nm,1.0s																		
YPP	**Pitchstone Pla**	**45.11**	**71**		IAmb	IAmb	10 28 51.2												
	comp=Z,38nm,1.0s																		
YNE	**Yellowstone No**	**45.17**	**69**		IAmb	IAmb	10 28 36.2												
	comp=Z,30nm,0.8s																		
H17A	**Grant Village**	**45.18**	**70**		IAmb	IAmb	10 28 35.2												
	comp=Z,60nm,0.9s																		
BJI2	**Beijing**	**45.20**	**282**		P	**P**	**10 28 32.4**	**+0.9**											
BJI2					S	**S**	**10 35 14.0**	**+4.2**											
BJI2					pmax	pmax													
	comp=Z,9.0nm,1.3s																		
BJI2					LR	LR													
	comp=Z,510nm,21.6s																		
BJI2					LR	LR													
	comp=Z,410nm,22.6s																		
BJI2					LR	LR													
	comp=Z,570nm,19.6s																		
BJT	**Baijiatuau**	**45.20**	**282**		IAMs_20	IAMs_20	10 47 03.9												
	comp=Z,977nm,20.0s																		
YMP	**Mirror Lake Pl**	**45.23**	**70**		IAmb	IAmb	10 28 49.7												
	comp=Z,40nm,0.9s																		
FLWY	**Flagg Ranch**	**45.28**	**71**		IAmb	IAmb	10 28 36.4												
	comp=Z,62nm,0.8s																		
FXWY	**Fox Creek**	**45.33**	**71**		IAMs_20	IAMs_20	10 44 26.0												
	comp=Z,877nm,19.0s																		
HVU	**Hansel Valley**	**45.34**	**75**		IAmb	IAmb	10 28 51.9												
	comp=Z,43nm,0.9s																		
IRK	**Irkutsk**	**45.42**	**303**		*eP*	**P**	**10 28 32.6**	**-0.5**											
IRK					pmax	pmax													
	comp=Z,146nm,2.6s																		
TULEG	**Thule**	**45.46**	**18**		*i* P	**P**	**10 28 32.0**	**-1.1**											
TULEG					IAmb	IAmb	10 28 33.4												
	comp=Z,18nm,0.8s																		
ISA	**Isabella, Lake**	**45.49**	**85**		IAMs_20	IAMs_20	10 46 59.9												
	comp=Z,803nm,19.0s																		
BGU	**Big Grassy Mou**	**45.68**	**76**		IAmb	IAmb	10 28 47.3												
	comp=Z,32nm,0.8s																		
AHID	**Auburn Hatcher**	**45.78**	**72**		IAmb	IAmb	10 28 42.0												
	comp=Z,36nm,0.9s																		
AHID					IAMs_20	IAMs_20	10 44 39.9												
	comp=Z,1µm,22.0s																		
SPUT	**South Promonto**	**45.81**	**75**		IAmb	IAmb	10 28 57.5												
	comp=Z,29nm,0.9s																		
ILON	**Igloolik, Nuna**	**45.94**	**29**		P	**P**	**10 28 36.4**	**-0.6**											
ILON					IAmb	IAmb	10 28 37.7												
	comp=Z,58nm,1.1s																		
S11A	**Rachel**	**45.97**	**81**		IAmb	IAmb	10 29 01.5												
	comp=Z,42nm,0.9s																		
FURC	**Furnace Creek,**	**46.00**	**83**		IAmb	IAmb	10 28 45.2												
	comp=Z,37nm,1.1s																		
OSI	**Osito Audit: C**	**46.00**	**87**		IAmb	IAmb	10 28 46.8												
	comp=Z,30nm,0.9s																		
TLY	**Talaya**	**46.04**	**303**		P	**P**	**10 28 38.3**	**+0.2**											
	comp=Z,31nm,1.0s,baz=38,slow=8.6																		
TLY					LR	LR	10 48 20.9												
	comp=Z,2µm,21.7s,baz=47,slow=37																		
	comp=Z,31nm,1.0s																		
TLY	**Talaya**	**46.04**	**303**		P	**P**	**10 28 38.7**	**+0.7**											
TLY	**Talaya**	**46.04**	**303**	*ce*	P	**P**	**10 28 38.8**	**+0.7**											
TLY					pmax	pmax													
	comp=Z,113nm,1.7s																		
TLY	**Talaya**	**46.04**	**303**		P	**P**	**10 28 38.9**	**+0.8**											
TLY					P	**P**	**10 28 38.9**	**+0.8**											
TPNV	**Topopah Spring**	**46.09**	**82**		IAmb	IAmb	10 28 48.4												
	comp=Z,44nm,0.8s																		
TPO	**Tropico Hills**	**46.15**	**86**		IAmb	IAmb	10 28 46.8												
	comp=Z,56nm,1.7s																		
HWUT	**Hardware Ranch**	**46.17**	**74**		IAmb	IAmb	10 28 57.9												
	comp=Z,40nm,0.9s																		
ULN	**Ulaanbaatar**	**46.19**	**296**		P	**P**	**10 28 39.8**	**+0.4**											
ULN					IAmb	IAmb	10 28 41.7												
	comp=Z,27nm,0.9s																		
ULN	**Ulaanbaatar**	**46.19**	**296**	*ce*	P	**P**	**10 28 40.2**	**+0.7**											
ULN					pmax	pmax													
	comp=Z,66nm,1.7s																		
ULN	**Ulaanbaatar**	**46.19**	**296**		P	**P**	**10 28 40.1**	**+0.7**											
ULN					P	**P**	**10 28 40.1**	**+0.7**											
JOW	**Kunigami**	**46.21**	**259**		LR	LR	10 45 00.9												
	comp=Z,282nm,21.9s,baz=160,slow=32																		
DUG	**Dugway, Tooele**	**46.24**	**76**		IAmb	IAmb	10 28 45.3												
	comp=Z,88nm,1.1s																		
CCCA	**Chr Cany lake**	**46.28**	**85**		IAmb	IAmb	10 28 58.8												
	comp=Z,37nm,0.8s																		
PRN	**Pahroc Range**	**46.55**	**81**		IAmb	IAmb	10 28 49.0												
	comp=Z,72nm,1.0s																		
TCUT	**Toone Canyon**	**46.56**	**75**		IAmb	IAmb	10 29 04.7												
	comp=Z,46nm,0.9s																		
SONM	**Songino Array**	**46.58**	**297**		P	**P**	**10 28 43.0**	**+0.6**											
	comp=Z,12nm,0.8s,baz=57,slow=8.8,SNR=89																		
SONM					PcP	**PcP**	**10 30 16.9**	**+0.6**											
	comp=Z,5.5nm,0.8s,baz=70,slow=3.3,SNR=4.3																		
SONM					ScP	**ScP**	**10 34 07.2**	**-0.9**											
	comp=Z,3.0nm,1.0s,baz=66,slow=2.4,SNR=7.3																		
SONM					LR	LR	10 49 40.0												
	comp=Z,3µm,19.0s,baz=57,slow=38																		
	comp=Z,12nm,0.8s																		
SONM	**Songino Array**	**46.58**	**297**		P	**P**	**10 28 42.8**	**+0.4**											
SONM					IAmb	IAmb	10 28 45.0												
	comp=Z,57nm,1.2s																		
CTU	**Camp Tracy**	**46.60**	**75**		IAmb	IAmb	10 29 06.0												
	comp=Z,29nm,0.9s																		
PSUT	**Pine Spring**	**46.60**	**79**		IAmb	IAmb	10 28 60.0												
	comp=Z,36nm,0.9s																		
PASC	**Pasadena Art C**	**46.63**	**87**		IAmb	IAmb	10 29 00.1												
	comp=Z,64nm,1.9s																		
MWC	**Mount Wilson**	**46.67**	**86**		IAmb	IAmb	10 29 08.4												
	comp=Z,46nm,1.2s																		
PDAR	**Pindale Array**	**46.71**	**72**		P	**P**	**10 28 44.5**	**+0.8**											
	comp=Z,71nm,0.9s,baz=306,slow=3.9,SNR=338																		
PDAR					LR	LR	10 45 55.5												
	comp=Z,538nm,21.0s,baz=300,slow=33																		
	comp=Z,71nm,0.9s																		
PDAR	**Pinedale Array**	**46.71**	**72**		P	**P**	**10 28 44.1**	**+0.4**											
SHOC	**Shoshone, Teco**	**46.73**	**83**		IAmb	IAmb	10 29 08.1												
	comp=Z,32nm,0.8s																		
GSC	**Goldstone, Bar**	**46.77**	**84**		IAmb	IAmb	10 29 01.6												
	comp=Z,107nm,1.9s																		
BFSC	**Mount Baldy Ra**	**46.92**	**86**		IAmb	IAmb	10 29 10.1												
	comp=Z,25nm,1.0s																		
ZAK	**Zakamensk**	**46.92**	**301**		*eP*	**P**	**10 28 45.2**	**+0.1**											
ZAK					pmax	pmax													
	comp=Z,154nm,1.5s																		
ZAK					pmax	pmax													
	comp=Z,15nm,1.4s																		
TIA	**Tai'an**	**46.93**	**277**		P	**P**	**10 28 45.8**	**+0.6**											
TIA					ScP	**ScP**	**10 34 09.6**	**0.0**											
TIA					pmax	pmax													
	comp=Z,40nm,1.4s																		
TIA					pmax	pmax													
	comp=Z,570nm,7.7s																		
TIA					LR	LR													
	comp=Z,590nm,19.0s																		
TIA					LR	LR													
	comp=Z,560nm,21.8s																		
TIA					LR	LR													
	comp=Z,860nm,24.7s																		
MPU	**Maple Canyon**	**47.08**	**76**		IAmb	IAmb	10 29 06.8												
	comp=Z,20nm,0.7s																		
GUMO	**Guam**	**47.23**	**231**		LR	LR	10 47 01.8												
	comp=Z,325nm,19.7s,baz=62,slow=34																		
BSUT	**Blindstream Ca**	**47.30**	**75**		IAmb	IAmb	10 28 55.5												
	comp=Z,48nm,1.0s																		
NOR	**Nord**	**47.35**	**3**	*i*	P	**P**	**10 28 47.2**	**-0.7**											
NOR					IAmb	IAmb	10 28 48.4												
	comp=Z,16nm,1.1s																		
TCRU	**Three Creeks R**	**47.43**	**78**		IAmb	IAmb	10 28 57.9												
	comp=Z,40nm,1.0s																		
MTPC	**Mountain Pass**	**47.44**	**83**		IAmb	IAmb	10 28 56.4												
	comp=Z,37nm,1.4s																		
MOY	**Mondy**	**47.45**	**304**		*eP*	**P**	**10 28 49.8**	**+0.6**											
MOY					pmax	pmax													
	comp=Z,125nm,1.9s																		
HHC	**Hu-ho-hao-te**	**47.53**	**286**		*eP*	**P**	**10 28 50.4**	**+0.5**											
HHC					PP	**

LYN LR LR
comp=Z,1μm,20.6s
LYN LR LR
comp=Z,940nm,17.2s
S22A 4UR Ranch, Cre 51.42 75 IAmb IAmb 10 29 41.2
comp=Z,344nm,1.0s
X18A Snowflake 51.57 80 IAmb IAmb 10 29 27.4
comp=Z,44nm,1.2s
HOPEN Hopen 51.85 353 *e*P **P 10 29 21.7 -0.5**
DAG Danmarks Havn 51.94 6 *i* P **P 10 29 21.0 -1.8**
DAG IAmb IAmb 10 29 22.7
comp=Z,23nm,1.2s
HSPB Hornsund (broa 51.96 356 *e*P **P 10 29 22.5 -0.5**
HSPB Hornsund (broa 51.96 356 *e*P **P 10 29 22.9 -0.1**
NUUG Nuugaatsiaq 51.99 19 *i* P **P 10 29 22.6 -0.7**
NUUG IAmb IAmb 10 29 23.7
comp=Z,33nm,1.0s
WHN Wuhan 52.40 274 P **P 10 29 26.5 -0.3**
WHN pmax pmax
comp=Z,140nm,1.3s
NIAQ Niaqornat 52.47 20 *i* P **P 10 29 27.0 +0.1**
NIAQ IAmb IAmb 10 29 28.2
comp=Z,46nm,0.9s
TUC Tucson 52.51 83 P **P 10 29 28.0 +0.2**
TUC Tucson 52.51 83 P **P 10 29 28.0 +0.2**
TUC pmax pmax
comp=Z,26nm,1.0s
SAATT Saattut 52.88 19 *i* P **P 10 29 29.1 -0.8**
SAATT IAmb IAmb 10 29 29.9
comp=Z,59nm,1.3s
SSLB Suanglung 52.97 263 IAmb IAmb 10 29 33.8
comp=Z,60nm,1.2s
SSLB IAMs_20 IAMs_20 10 49 55.3
comp=Z,770nm,20.0s
YULB Yu-li 53.05 262 IAmb IAmb 10 30 03.1
comp=Z,68nm,1.4s
KSCO Kaye Shedlock' 53.16 71 IAmb IAmb 10 29 35.8
comp=Z,91nm,1.1s
KSCO IAMs_20 IAMs_20 10 49 12.1
comp=Z,1μm,22.0s
T25A Trinidad 53.29 74 IAmb IAmb 10 29 41.3
comp=Z,83nm,1.1s
DUN6 Lazy B Ranch 53.41 82 IAmb IAmb 10 29 43.8
comp=Z,43nm,1.0s
SAQQ Saqqaq 53.44 20 *i* P **P 10 29 33.9 -0.1**
SAQQ IAmb IAmb 10 29 35.4
comp=Z,31nm,1.0s
XAN Xi'an 53.45 281 P **P 10 29 34.5 -0.2**
XAN S **S 10 37 07.0 +1.1**
XAN pmax pmax
comp=Z,33nm,1.4s
XAN pmax pmax
comp=Z,380nm,3.6s
XAN LR LR
comp=Z,810nm,15.1s
XAN LR LR
comp=Z,910nm,17.2s
XAN LR LR
comp=Z,980nm,16.8s
ANMO Albuquerque 53.46 78 LR LR 10 51 32.0
comp=Z,793nm,19.3s,baz=315,slow=35
ANMO Albuquerque 53.46 78 P **P 10 29 35.3 +0.3**
ANMO Albuquerque 53.46 78 IAMs_20 IAMs_20 10 51 22.1
comp=Z,1μm,18.0s
ANMO Albuquerque 53.46 78 IAMs_20 IAMs_20 10 51 22.1
comp=Z,1μm,18.0s
ANMO Albuquerque 53.46 78 P **P 10 29 35.3 +0.3**
ANMO pmax pmax
comp=Z,33nm,1.5s
FRB Frobisher Bay 53.53 31 LR LR 10 56 31.7
comp=Z,1μm,18.7s,baz=303,slow=41
ECSD EROS Data Cent 53.67 63 IAmb IAmb 10 29 36.9
comp=Z,45nm,1.1s
GDH Godhavn 53.68 21 *i* P **P 10 29 35.0 -0.7**
GDH IAmb IAmb 10 29 36.4
comp=Z,49nm,1.1s
SUMG Summit 53.77 14 P **P 10 29 36.6 -0.3**
SUMG IAmb IAmb 10 29 37.8
comp=Z,68nm,1.0s
SUMG Summit 53.77 14 P **P 10 29 36.6 -0.3**
SUMG pmax pmax
comp=Z,68nm,1.0s
SUMG Summit 53.77 14 *i* P **P 10 29 36.8 -0.1**
SUMG IAmb IAmb 10 29 38.5
comp=Z,65nm,1.0s
Y22A Socorro 53.81 79 IAmb IAmb 10 29 43.8
comp=Z,59nm,1.2s
319A Douglas 54.09 83 IAmb IAmb 10 29 46.3
comp=Z,40nm,1.1s
ZAA0 Zalesovo Array 54.11 313 P **P 10 29 38.6 -0.5**
ZAA0 IAmb IAmb 10 30 45.8
comp=Z,36nm,1.2s
ZALV Zalesovo Beam 54.11 313 P **P 10 29 38.0 -1.1**
comp=Z,3.4nm,0.8s,baz=33,slow=6.2,SNR=10.0
ZALV PcP **PcP 10 30 44.5 +0.8**
comp=Z,12nm,0.9s,baz=35,slow=5.4,SNR=13
ZALV LR LR 10 54 14.5
comp=Z,773nm,18.8s,baz=54,slow=38
comp=Z,3.4nm,0.8s
ZALV Zalesovo Beam 54.11 313 P **P 10 29 39.1 0.0**
DBG Daneborg 54.22 7 *i* P **P 10 29 38.3 -1.3**
DBG IAmb IAmb 10 29 39.7
comp=Z,21nm,1.0s
ILULI Ilulissat 54.26 20 IAmb IAmb 10 29 40.2
comp=Z,39nm,0.9s
ILULI Ilulissat 54.26 20 *i* P **P 10 29 39.3 -0.7**
ILULI IAmb IAmb 10 29 40.2
comp=Z,43nm,1.0s
TBO Thunder Bay 54.48 55 IAmb IAmb 10 29 44.5
comp=Z,36nm,0.9s
E38A The Farm, Brul 54.65 58 IAmb IAmb 10 29 43.7
comp=Z,59nm,0.9s
RTBA Rita Blanca 54.76 74 IAmb IAmb 10 29 51.2
comp=Z,37nm,0.9s
SPMN Marine on St. 54.85 60 IAmb IAmb 10 29 45.7
comp=Z,40nm,1.2s
LZH Lanzhou 55.22 286 P **P 10 29 49.0 +1.3**
LZH sP sP 10 29 56.1 +0.3
LZH pmax pmax
comp=Z,61nm,1.8s
LZH pmax pmax
comp=Z,390nm,4.6s
LZH LR LR
comp=Z,930nm,16.2s
LZH LR LR
comp=Z,1μm,14.9s
LZH LR LR
comp=Z,1μm,19.4s
I37A Lemond, Waseca 55.29 61 IAmb IAmb 10 29 49.3
comp=Z,57nm,0.9s
LZDM Lanzhou Array 55.40 286 P **P 10 29 49.5 +0.4**
comp=Z,9.8nm,0.9s,baz=60,slow=5.8,SNR=18
LZDM LR LR 10 56 47.6
comp=Z,727nm,18.0s,baz=45,slow=40
comp=Z,9.8nm,0.9s
GTA2 Gaotai 55.44 292 P **P 10 29 49.9 +0.8**
GTA2 S **S 10 37 34.6 +2.0**
GTA2 ScS **ScS 10 39 34.9 -2.0**
GTA2 pmax pmax
comp=Z,76nm,1.4s
GTA2 LR LR
comp=Z,700nm,17.5s
GTA2 LR LR
comp=Z,1μm,16.4s
GTA2 LR LR
comp=Z,2μm,15.3s
EPT El Paso 55.55 81 P **P 10 29 50.3 +0.3**
EPT IAmb IAmb 10 29 58.9
comp=Z,55nm,0.9s
DGZ Jazzator, Alta 55.57 308*c i*P **P 10 29 50.4 +0.4**
DGZ pmax pmax
comp=Z,106nm,1.4s
ENH Enshi 55.64 277 IAmb IAmb 10 29 51.8
comp=Z,61nm,1.4s
R32A Long Quarter, 55.87 69 IAmb IAmb 10 29 53.6
comp=Z,48nm,0.9s
PH02 Texas Public H 55.93 74 P **P 10 29 52.8 +0.1**
PH02 IAmb IAmb 10 29 59.8
comp=Z,94nm,0.9s
SFJD Kangerlussuaq 56.14 22 LR LR 10 56 53.3
comp=Z,344nm,18.1s,baz=320,slow=39
SFJD Kangerlussuaq 56.14 22 *i* P **P 10 29 52.9 -0.7**
SFJD IAmb IAmb 10 29 54.0
comp=Z,29nm,0.9s
MNTX Cornudas Mount 56.30 80 IAmb IAmb 10 30 01.5
comp=Z,45nm,1.1s
MSTX Muleshoe 56.38 76 IAmb IAmb 10 30 00.7
comp=Z,109nm,1.4s
AMTX Amarillo 56.43 74 IAmb IAmb 10 30 00.3
comp=Z,32nm,0.8s
F42A Maple Grove Fa 57.01 57 IAmb IAmb 10 30 01.3
comp=Z,35nm,0.7s
ELIS Ellis County 57.01 72 IAmb IAmb 10 30 07.0
comp=Z,30nm,0.9s
KAN08 Anthony NE Sta 57.10 70 IAmb IAmb 10 30 09.0
comp=Z,22nm,0.8s
OK038 West end E0370 57.14 71 IAmb IAmb 10 30 04.6
comp=Z,39nm,1.0s
SMWD Samnorwood 57.16 73 IAmb IAmb 10 30 08.5
comp=Z,42nm,0.8s
VHRN Van Horn 57.18 80 IAmb IAmb 10 30 07.9
comp=Z,37nm,1.1s
KAN01 Argonia South 57.28 70 IAmb IAmb 10 30 04.4
comp=Z,68nm,1.1s
128A Castleberry Fa 57.47 77 IAmb IAmb 10 30 08.6
comp=Z,42nm,1.0s
CROK Carrier 57.58 71 IAmb IAmb 10 30 07.3
comp=Z,39nm,0.9s
TPB06 Permian Basin 57.68 78 IAmb IAmb 10 30 10.2
comp=Z,24nm,0.8s
DKNS Dickens 57.72 75 IAmb IAmb 10 30 10.0
comp=Z,64nm,0.9s
JFWS Jewell Farm 57.75 60 IAmb IAmb 10 30 06.0
comp=Z,107nm,1.6s
POST Post 57.77 76 IAmb IAmb 10 30 10.4
comp=Z,64nm,0.9s
ODSA Odessa 57.77 77 IAmb IAmb 10 30 10.6
comp=Z,35nm,1.0s
TPB01 Permian Basin 57.82 79 IAmb IAmb 10 30 11.3
comp=Z,28nm,1.0s
I42A Draeger Farm, 57.83 59 IAmb IAmb 10 30 08.2
comp=Z,49nm,1.0s
129A Stewart Farms, 57.84 77 IAmb IAmb 10 30 10.8
comp=Z,22nm,1.0s
BLOK Blackwell 57.86 70 IAmb IAmb 10 30 08.7
comp=Z,49nm,1.1s
TPB05 Hovey Rd 58.12 79 IAmb IAmb 10 30 13.6
comp=Z,29nm,0.9s
SN07 Snyder 07 58.13 76 IAmb IAmb 10 30 12.7
comp=Z,28nm,0.8s
JMIC Jan Mayen 58.17 4 LR LR 10 54 06.6
comp=Z,239nm,21.9s,baz=266,slow=35
T35A Sooner Cattle 58.18 69 IAmb IAmb 10 30 24.4
comp=Z,34nm,1.0s
MNHN Monahans 58.18 78 IAmb IAmb 10 30 13.6
comp=Z,54nm,0.9s
OK048 Pawnee Station 58.26 70 IAmb IAmb 10 30 10.9
comp=Z,48nm,1.1s
WMOK Wichita Mounta 58.29 73 IAmb IAmb 10 30 16.2
comp=Z,22nm,0.8s
ALPN Alpine 58.30 80 IAmb IAmb 10 30 17.6
comp=Z,23nm,0.9s
ZSN Zaisan 58.33 308*c i*P **P 10 30 09.9 +0.5**
ZSN pmax pmax
comp=Z,43nm,1.2s
ZSN Zaisan 58.33 308⇑ *i*P **P 10 30 09.9 +0.5**
comp=Z,43nm,1.2s
ARA0 ARCESS Array S 58.45 350 *e*P **P 10 30 09.1 -0.8**
ARCES ARCESS Array B 58.45 350 P **P 10 30 09.0 -0.9**
comp=Z,16nm,0.7s,baz=223,slow=26,SNR=8.3
comp=Z,16nm,0.7s
ARCES ARCESS Array B 58.45 350 P **P 10 30 09.4 -0.5**
ARCES IAmb IAmb 10 30 11.2
comp=Z,34nm,1.0s
ARCES ARCESS Array B 58.45 350 P **P 10 30 09.4 -0.5**
ARCES pmax pmax
comp=Z,34nm,1.0s
LPIG La Paz 58.52 90 LR LR 10 50 03.9
comp=Z,313nm,21.2s,baz=292,slow=30
QUOK Quay 58.56 70 IAmb IAmb 10 30 14.1
comp=Z,34nm,1.1s
LVZ Lovozero 58.77 346 P **P 10 30 11.4 -0.8**
LVZ Lovozero 58.77 346 P **P 10 30 11.4 -0.8**
LVZ pmax pmax
comp=Z,75nm,1.0s
CD2 Chengdu 58.78 282 P **P 10 30 13.3 +0.5**
CD2 S S 10 38 06.5 -10
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,1μm,17.6s
CD2 LR LR
comp=Z,1μm,20.6s
DEOK Depew 58.91 70 IAmb IAmb 10 30 16.1
comp=Z,72nm,1.2s
JETT Jettan, Norway 58.93 352 *e*P **P 10 30 11.5 -1.7**
TRO Tromso 58.98 353 *e*P **P 10 30 12.9 -0.7**
TX31 Lajitas Ar. Si 59.00 81 IAmb IAmb 10 30 20.3
comp=Z,46nm,1.2s
TXAR Lajitas Array 59.00 81 P **P 10 30 15.2 +0.8**
comp=Z,19nm,1.0s,baz=294,slow=4.3,SNR=52
comp=Z,19nm,1.0s
TXAR Lajitas Array 59.00 81 P **P 10 30 14.1 -0.3**
SLBS Sierra La Lagu 59.05 90 P **P 10 30 14.3 -0.5**
SLBS IAmb IAmb 10 30 23.5
comp=Z,27nm,1.1s
KURK Kurchatov 59.10 314 P **P 10 30 14.2 -0.5**
KURK IAmb IAmb 10 30 16.9
comp=Z,43nm,0.9s
KURK Kurchatov 59.10 314 P **P 10 30 14.9 +0.3**
KURK 10 31 02.8
KURK Kurchatov 59.10 314 P **P 10 30 14.4 -0.2**
KURK P **P 10 30 14.4 -0.2**
KURK S **S 10 38 18.9 -1.2**
KURK S **S 10 38 18.9 -1.2**
WTFS Witchita Falls 59.15 73 IAmb IAmb 10 30 23.8
comp=Z,44nm,0.9s
KTK1 Kautokeino 59.19 351 *e*P **P 10 30 14.3 -0.7**
KURBB Kurchatov Arra 59.20 314 P **P 10 30 14.9 -0.5**
comp=Z,28nm,0.7s,baz=42,slow=6.6,SNR=195
KURBB PcP **PcP 10 31 02.8 -0.8**
comp=Z,14nm,1.0s,baz=47,slow=4.0,SNR=11
KURBB LR LR 10 57 34.8
comp=Z,1μm,18.3s,baz=360,slow=38
comp=Z,28nm,0.7s
KURBB Kurchatov Arra 59.20 314 P **P 10 30 12.9 -2.5**
APA Apatity 59.27 346⇓ *e*P P 10 30 09.9 -5.6
APA *e* 10 31 07.1
APA pmax pmax
comp=Z,14nm,1.3s
TUL3 Leonard 59.28 70 IAmb IAmb 10 30 17.6
comp=Z,51nm,1.0s
WMQ Urumqi 59.32 303⇑ P **P 10 30 17.3 +0.9**
WMQ pmax pmax
comp=Z,98nm,1.7s
WMQ pmax pmax
comp=Z,430nm,3.8s
WMQ LR LR
comp=Z,2μm,24.7s
WMQ LR LR
comp=Z,1μm,24.7s
WMQ LR LR
comp=Z,2μm,21.3s
OZNA Ozona 59.48 78 IAmb IAmb 10 30 22.4
comp=Z,37nm,1.0s
RLO Rose Lookout 59.56 69 IAmb IAmb 10 30 23.4
comp=Z,21nm,0.9s
U38A Gravette 59.75 68 IAmb IAmb 10 30 20.3
comp=Z,22nm,1.0s
MK31 Makanchi Array 60.06 308*ce*P **P 10 30 21.2 -0.2**
MKAR Makanchi Array 60.06 308 P **P 10 30 21.1 -0.3**
comp=Z,9.1nm,0.6s,baz=48,slow=6.3,SNR=100
MKAR LR LR 10 57 36.0
comp=Z,913nm,19.6s,baz=36,slow=37
comp=Z,9.1nm,0.6s
MKAR Makanchi Array 60.06 308 P **P 10 30 21.3 -0.2**
MKAR Makanchi Array 60.06 308 P **P 10 30 21.3 -0.2**
ANGG Ammassalik, Gr 60.07 17 *i* P **P 10 30 19.2 -1.9**
ANGG IAmb IAmb 10 30 20.5
comp=Z,22nm,0.7s
GYA Guiyang 60.08 276⇑ P **P 10 30 21.9 0.0**
GYA pmax pmax
comp=Z,35nm,1.5s
HHAR Hobbs 60.12 68 P **P 10 30 21.8 -0.2**
HHAR IAmb IAmb 10 30 29.6
comp=Z,18nm,0.9s
MAKZ Makanchi 60.21 309 P **P 10 30 22.6 +0.2**
MAKZ Makanchi 60.21 309 P **P 10 30 22.6 +0.2**
MAKZ pmax pmax
comp=Z,104nm,1.5s
MAKZ MLR MLR
comp=Z,1μm,20.0s
CCM Cathedral Cave 60.47 65 P **P 10 30 24.3 0.0**
CCM Cathedral Cave 60.47 65 P **P 10 30 24.3 0.0**
CCM pmax pmax
comp=Z,121nm,1.8s
MGMO Mountain Grove 60.50 66 IAmb IAmb 10 30 40.5
comp=Z,32nm,1.0s
SCHQ Schefferville 60.51 38 P **P 10 30 23.7 -0.6**
comp=Z,53nm,0.9s,baz=324,slow=7.3,SNR=40
SCHQ LR LR 10 58 18.6
comp=Z,1μm,18.4s,baz=322,slow=38
comp=Z,53nm,0.9s
BRDY Brady 60.53 76 IAmb IAmb 10 30 29.5
comp=Z,50nm,1.3s
GOMU GeErMu 60.54 292 P **P 10 30 24.8 -0.5**
GOMU S **S 10 38 39.0 -0.9**
GOMU ScS SKKSac 10 40 13.3 -1.5
GOMU pmax pmax
comp=Z,23nm,1.2s
GOMU LR LR
comp=Z,640nm,16.5s
GOMU LR LR
comp=Z,600nm,15.0s
GOMU LR LR
comp=Z,1μm,15.3s
JCT Junction City 60.60 77 IAmb IAmb 10 30 32.5
comp=Z,32nm,0.9s
VLDQ Val d'Or 60.77 49 IAmb IAmb 10 30 25.0
comp=Z,34nm,1.1s
DRIO Del Rio 60.84 78 IAmb IAmb 10 30 31.2
comp=Z,19nm,0.9s
STEI Steigen 60.93 354 *e*P **P 10 30 26.1 -0.8**
WHTX Lake Whitney, 60.98 74 IAmb IAmb 10 30 36.7
comp=Z,49nm,0.9s
BVA0 Borovoye Array 61.02 320 P **P 10 30 25.3 -2.5**
BVAR Borovoye Array 61.02 320 P **P 10 30 27.3 -0.5**
comp=Z,19nm,1.0s,baz=45,slow=6.5,SNR=37
BVAR PcP **PcP 10 31 11.1 +0.3**
comp=Z,19nm,0.8s,baz=57,slow=5.5,SNR=11
BVAR LR LR 10 58 25.3
comp=Z,1μm,21.7s,baz=46,slow=38
comp=Z,19nm,1.0s
BORK Borovoye 61.03 320 P **P 10 30 27.8 -0.1**
BORK IAmb IAmb 10 30 30.7
comp=Z,34nm,1.1s
BORK Borovoye 61.03 320 P **P 10 30 27.8 -0.1**
BORK pmax pmax
comp=Z,34nm,1.1s
BORK MLR MLR
comp=Z,2μm,22.0s
T42A Van Buren 61.27 66 IAmb IAmb 10 30 37.8
comp=Z,25nm,1.2s
IVI Ivigtut 61.53 25 *i* P **P 10 30 30.5 -0.6**
AAM Ann Arbor 61.73 57 IAmb IAmb 10 30 37.0
comp=Z,58nm,1.1s
ADZR Andozero 61.74 342 *e*P **P 10 30 30.3 -2.2**
ADZR pmax pmax
comp=Z,97nm,1.0s
435B Jarrell 61.75 75 IAmb IAmb 10 30 38.0
comp=Z,39nm,0.9s
S44A Carbondale 61.86 64 IAmb IAmb 10 30 34.8
comp=Z,47nm,1.0s
LCAR Lake Charles 61.90 67 IAmb IAmb 10 30 34.5
comp=Z,19nm,1.0s
CGM3 Cape Girardeau 61.90 65 IAmb IAmb 10 30 34.7
comp=Z,68nm,1.8s
K50A Casco 61.94 56 IAmb IAmb 10 30 38.3
comp=Z,28nm,0.7s
X40A Basin Creek Fa 62.02 69 IAmb IAmb 10 30 51.3
comp=Z,20nm,1.0s
UALR University of 62.10 68 IAmb IAmb 10 30 38.5
comp=Z,72nm,1.6s
BRZS Berezniki 62.29 316 *e*P **P 10 30 36.9 +0.5**
BRZS Berezniki 62.29 316 *e*P **P 10 30 36.9 +0.5**
SADO Sadowa 62.31 52 LR LR 10 57 53.5
comp=Z,536nm,21.4s,baz=340,slow=36
833A Chaparral WMA, 62.37 78 IAmb IAmb 10 30 43.0
comp=Z,38nm,1.1s
M50A Fremont 62.68 57 IAmb IAmb 10 30 43.1
comp=Z,22nm,0.8s
MOR8 Moi Rana 62.73 354 *e*P **P 10 30 36.6 -2.5**
HNR Honiara 62.80 203 LR LR 10 54 53.8
comp=Z,28nm,18.8s,baz=97,slow=33
LEIR Leirfjorden 62.87 354 *e*P **P 10 30 39.4 -0.6**
ARTI Arti 62.90 328 P **P 10 30 39.4 -0.9**
comp=Z,8.2nm,0.6s,baz=44,slow=3.2,SNR=12
ARTI PcP **PcP 10 31 18.4 0.0**
comp=Z,16nm,0.9s,baz=78,slow=1.9,SNR=7.5
ARTI LR LR 11 00 07.6
comp=Z,808nm,21.0s,baz=34,slow=38
comp=Z,8.2nm,0.6s
ARTI Arti 62.90 328 P **P 10 30 39.7 -0.6**
ARTI IAmb IAmb 10 31 19.7
comp=Z,53nm,1.3s
ARTI Arti 62.90 328*c i*P **P 10 30 39.8 -0.6**
ARTI 10 31 15.8
ARTI 10 32 55.7
ARTI S **S 10 39 10.0 +1.6**
ARTI SS **SS 10 43 11.5 -1.2**
ARTI pmax pmax
comp=Z,28nm,1.5s
ARTI MLR MLR
comp=Z,906nm,18.0s
DAV Davao City (W) 63.05 246 LR LR 10 53 45.9
comp=Z,670nm,20.7s,baz=55,slow=32
PZH PanZhiHua 63.13 280 P **P 10 30 42.9 +0.4**
PZH S **S 10 39 13.8 +1.4**
PZH pmax pmax
comp=Z,40nm,1.4s
PZH LR LR
comp=Z,310nm,21.4s
PZH LR LR
comp=Z,280nm,16.9s
PZH LR LR
comp=Z,390nm,16.9s
WCI Wyandotte Cave 63.15 62 P **P 10 30 42.7 +0.4**
WCI Wyandotte Cave 63.15 62 P **P 10 30 42.7 +0.4**
WCI pmax pmax
comp=Z,103nm,0.9s
TDK Taldyqorghan 63.25 309 *e*P **P 10 30 43.3 +0.4**
TDK pmax pmax
comp=Z,27nm,1.1s
TDK Taldyqorghan 63.25 309 *e*P **P 10 30 43.4 +0.4**
comp=Z,27nm,1.1s
DELO Deloro Mine 63.25 52 IAmb IAmb 10 30 43.9
comp=Z,47nm,1.2s
JAY Jayapura 63.26 226 LR LR 10 55 47.8
comp=Z,520nm,19.4s,baz=20,slow=34
HKT Hockley 63.41 75 P **P 10 30 44.3 +0.3**
HKT IAmb IAmb 10 30 50.0
comp=Z,28nm,1.1s
HKT Hockley 63.41 75 *i* P **P 10 30 44.4 +0.4**
HKT pmax pmax
comp=Z,34nm,1.1s
QIZ Qiongzhong 63.46 268 P **P 10 30 46.8 +2.2**
QIZ S **S 10 39 17.3 +0.9**
QIZ LR LR
comp=Z,380nm,13.8s
QIZ LR LR
comp=Z,490nm,18.0s
QIZ LR LR
comp=Z,470nm,20.3s
KMI2 Kunming 63.48 278⇓ P **P 10 30 45.5 +0.6**
KMI2 S **S 10 39 24.6 +7.7**
KMI2 pmax pmax
comp=Z,20nm,1.5s
KMI2 LR LR
comp=Z,420nm,14.2s
KMI2 LR LR
comp=Z,570nm,19.9s
KMI2 LR LR
comp=Z,440nm,21.7s
M52A Chesterland 63.48 56 IAmb IAmb 10 30 46.6
comp=Z,34nm,0.7s
TRQ Mont Tremblant 63.51 49 IAmb IAmb 10 30 44.4
comp=Z,32nm,1.1s
LDAQ Lac Daran 63.76 45 IAmb IAmb 10 30 49.3
comp=Z,31nm,1.1s
WVT Waverly 63.77 64 P **P 10 30 46.6 +0.2**
WVT Waverly 63.77 64 P **P 10 30 46.6 +0.2**
WVT pmax pmax
comp=Z,48nm,0.9s
WVT MLR MLR
comp=Z,1μm,18.0s
KIRV Kirov 63.82 334 P **P 10 30 45.1 -1.2**
comp=Z,11nm,0.6s,baz=23,slow=5.3,SNR=8.9
KIRV LR LR 11 00 36.2
comp=Z,1μm,20.8s,baz=28,slow=38
comp=Z,11nm,0.6s
KIRV Kirov 63.82 334*ce*P **P 10 30 46.3 -0.1**

PDGK	**Podgornoye**	**63.92**	**307**	P	**P**		**10 30 46.7**	**-0.8**
PECO	**Prince Edward**	**63.99**	**52**	IAmb	IAmb		10 30 48.7	
	comp=Z,55nm,1.2s							
P51A	**Williamsport**	**64.04**	**59**	IAmb	IAmb		10 30 52.0	
	comp=Z,27nm,0.8s							
WBO	**Williamsburg**	**64.05**	**50**	IAmb	IAmb		10 30 48.2	
	comp=Z,30nm,1.1s							
SHLS	**Shalkode**	**64.06**	**307**	*c*	*i*P	**P**	**10 30 47.4**	**-1.0**
SHLS					pmax	pmax		
	comp=Z,17nm,0.9s							
SHLS	**Shalkode**	**64.06**	**307**	⇑	*i*P	**P**	**10 30 47.4**	**-1.0**
	comp=Z,17nm,0.9s							
ARXS	**Arharly**	**64.11**	**309**		*e*P	**P**	**10 30 45.8**	**-2.9**
KPKS	**Kokpek**	**64.22**	**308**		*e*P	**P**	**10 30 50.1**	**+0.6**
KPKS	**Kokpek**	**64.22**	**308**		*e*P	**P**	**10 30 50.1**	**+0.6**
KLMR	**Klimovskoe**	**64.27**	**340**		*e*P	**P**	**10 30 47.2**	**-2.1**
KLMR					pmax	pmax		
	comp=Z,118nm,1.2s							
N53A	**Lisbon**	**64.28**	**56**		IAmb	IAmb	10 30 53.7	
	comp=Z,34nm,0.9s							
UZB	**Uzynbulak**	**64.29**	**307**	*c*	*i*P	**P**	**10 30 50.3**	**+0.4**
UZB					pmax	pmax		
	comp=Z,24nm,1.3s							
UZB	**Uzynbulak**	**64.29**	**307**	⇑	*i*P	**P**	**10 30 50.4**	**+0.4**
	comp=Z,24nm,1.3s							
ICQ	**Pointe Anglais**	**64.32**	**42**		IAmb	IAmb	10 30 50.6	
	comp=Z,53nm,1.1s							
PAOC	**Oil Creek Stat**	**64.37**	**55**		IAmb	IAmb	10 30 53.9	
	comp=Z,21nm,0.9s							
ZAIG	**Zacatecas**	**64.38**	**85**		P	**P**	**10 30 51.5**	**+0.5**
ZAIG					IAmb	IAmb	10 30 58.0	
	comp=Z,20nm,1.0s							
MMNY	**Mt. Morris Dam**	**64.40**	**53**		IAmb	IAmb	10 30 51.6	
	comp=Z,47nm,0.9s							
MNTQ	**Montreal, Queb**	**64.48**	**49**		IAmb	IAmb	10 30 51.0	
	comp=Z,19nm,1.0s							
O53A	**New Philadelph**	**64.48**	**57**		IAmb	IAmb	10 30 55.0	
	comp=Z,37nm,0.8s							
PAMR	**Moraine State**	**64.57**	**56**		IAmb	IAmb	10 30 53.7	
	comp=Z,36nm,0.9s							
SATY	**Saty**	**64.66**	**308**	*c*	*i*P	**P**	**10 30 52.7**	**+0.4**
SATY					pmax	pmax		
	comp=Z,29nm,1.2s							
SATY	**Saty**	**64.66**	**308**	⇑	*i*P	**P**	**10 30 52.8**	**+0.4**
	comp=Z,29nm,1.2s							
Q52A	**Bidwell**	**64.84**	**59**		IAmb	IAmb	10 30 54.9	
	comp=Z,76nm,1.4s							
J57A	**Williamstown**	**64.86**	**52**		IAmb	IAmb	10 31 28.4	
	comp=Z,29nm,0.9s							
O54A	**Avella**	**64.97**	**57**		IAmb	IAmb	10 30 56.3	
	comp=Z,28nm,0.8s							
S51A	**Beattyville**	**65.07**	**61**		IAmb	IAmb	10 30 56.6	
	comp=Z,53nm,1.0s							
MDOK	**Medeo**	**65.26**	**308**		*e*P	**P**	**10 30 56.7**	**+0.4**
MDOK	**Medeo**	**65.26**	**308**		*e*P	**P**	**10 30 56.7**	**+0.4**
AAA	**Alma-Ata**	**65.29**	**309**		*e*P	**P**	**10 30 56.9**	**+0.5**
AAA	**Alma-Ata**	**65.29**	**309**		*e*P	**P**	**10 30 56.9**	**+0.5**
TNSS	**Tian-Shan**	**65.40**	**308**		*e*P	**P**	**10 30 57.7**	**+0.2**
TNSS	**Tian-Shan**	**65.40**	**308**		*e*P	**P**	**10 30 57.7**	**+0.2**
X48A	**Hartselle**	**65.41**	**65**		IAmb	IAmb	10 30 58.2	
	comp=Z,37nm,1.0s							
E62A	**Clayton Lake**	**65.54**	**45**		IAmb	IAmb	10 30 58.6	
	comp=Z,35nm,1.1s							
J59A	**Piesco**	**65.56**	**51**		IAmb	IAmb	10 30 58.2	
	comp=Z,40nm,1.2s							
BINY	**Binghamton**	**65.76**	**52**		IAmb	IAmb	10 31 00.7	
	comp=Z,53nm,1.1s							
VT1	**Waterbury**	**65.76**	**49**		IAmb	IAmb	10 30 59.6	
	comp=Z,55nm,1.5s							
TARG	**Taragay, Kyrgy**	**65.94**	**307**		IAmb	IAmb	10 31 04.8	
	comp=Z,46nm,1.3s							
SSPA	**Standing Stone**	**65.94**	**55**		P	**P**	**10 31 00.3**	**-0.2**
SSPA					IAmb	IAmb	10 31 04.6	
	comp=Z,38nm,0.9s							
FINES	**FINESS Array B**	**66.12**	**347**		P	**P**	**10 30 59.8**	**-1.5**
	comp=Z,47nm,0.9s,baz=28,slow=8.6,SNR=37							
FINES					LR	LR	11 05 04.3	
	comp=Z,670nm,18.3s,baz=34,slow=41							
	comp=Z,47nm,0.9s							
FINES	**FINESS Array B**	**66.12**	**347**		P	**P**	**10 31 00.2**	**-1.1**
FINES	**FINESS Array B**	**66.12**	**347**	*i*	P	**P**	**10 31 00.6**	**-0.7**
FINES					pmax	pmax		
	comp=Z,47nm,0.9s							
G62A	**West of Eustis**	**66.14**	**47**		IAmb	IAmb	10 31 02.3	
	comp=Z,41nm,1.1s							
TKM2	**Tokmak 2**	**66.15**	**309**		P	**P**	**10 31 03.4**	**+1.2**
	SNR=38							
TNCH	**TengChong**	**66.20**	**281**	⇑	P	**P**	**10 31 03.6**	**+1.0**
TNCH					pP	pP	10 31 07.3	-1.3
TNCH					S	**S**	**10 39 46.8**	**-3.6**
TNCH					pmax	pmax		
	comp=Z,69nm,1.4s							
TNCH					LR	LR		
	comp=Z,500nm,12.0s							
TNCH					LR	LR		
	comp=Z,470nm,16.8s							
TNCH					LR	LR		
	comp=Z,680nm,21.1s							
LBNH	**Lisbon**	**66.22**	**49**		IAmb	IAmb	10 31 02.7	
	comp=Z,40nm,1.2s							
SGDS	**Sogindy**	**66.23**	**310**		*e*P	**P**	**10 31 03.0**	**+0.6**
L59A	**Walton**	**66.24**	**52**		IAmb	IAmb	10 31 03.5	
	comp=Z,48nm,1.0s							
ULHL	**Ulahol**	**66.34**	**308**		P	**P**	**10 31 04.0**	**+0.7**
	SNR=22							
KSPA	**Keystone Colle**	**66.34**	**53**		IAmb	IAmb	10 31 07.7	
	comp=Z,36nm,1.0s							
TKL	**Tuckaleechee C**	**66.40**	**62**		LR	LR	11 02 13.4	
	comp=Z,600nm,18.4s,baz=326,slow=38							
USP	**Ospenovka**	**66.43**	**310**		P	**P**	**10 31 05.4**	**+1.7**
	SNR=53							
HNH	**Hanover**	**66.45**	**49**		IAmb	IAmb	10 31 05.0	
	comp=Z,19nm,1.0s							
LRAL	**Lakeview Retre**	**66.46**	**66**		IAmb	IAmb	10 31 05.8	
	comp=Z,36nm,0.8s							
R55A	**Marlinton**	**66.49**	**58**		IAmb	IAmb	10 31 08.8	
	comp=Z,33nm,1.0s							
BATG	**Bathurst New B**	**66.56**	**43**		IAmb	IAmb	10 31 04.9	
	comp=Z,43nm,1.1s							
J61A	**Chester**	**66.59**	**50**		IAmb	IAmb	10 31 05.9	
	comp=Z,25nm,1.0s							
F64A	**Sherman**	**66.64**	**45**		IAmb	IAmb	10 31 05.7	
	comp=Z,47nm,1.0s							
KBK	**Karagaybulak**	**66.67**	**309**		P	**P**	**10 31 06.7**	**+1.3**
	SNR=19							
PKME	**Peaks-Kenny Pk**	**66.67**	**46**		IAmb	IAmb	10 31 06.2	
	comp=Z,34nm,1.1s							
P57A	**Homestead Farm**	**66.72**	**56**		IAmb	IAmb	10 31 07.6	
	comp=Z,34nm,1.1s							
PMG	**Port Moresby**	**66.80**	**216**		LR	LR	10 57 52.8	
	comp=Z,467nm,19.3s,baz=30,slow=34							
AAK	**Ala-Archa**	**66.91**	**310**		P	**P**	**10 31 08.4**	**+1.5**
	SNR=33							
AAK	**Ala-Archa**	**66.91**	**310**		P	**P**	**10 31 06.8**	**-0.1**
AAK	**Ala-Archa**	**66.91**	**310**	*c*	*i*P	**P**	**10 31 07.1**	**+0.2**
AAK					pmax	pmax		
	comp=Z,93nm,1.5s							
AAK	**Ala-Archa**	**66.91**	**310**		P	**P**	**10 31 07.5**	**+0.6**
AAK					P	**P**	**10 31 07.5**	**+0.6**
BLA	**Blacksburg**	**67.11**	**59**		IAmb	IAmb	10 31 10.0	
	comp=Z,53nm,1.0s							
DOMB	**Dombas**	**67.15**	**356**		*e*P	**P**	**10 31 07.5**	**-0.4**
MVL	**Millersville**	**67.20**	**54**		IAmb	IAmb	10 31 12.6	
	comp=Z,18nm,0.8s							
UCH	**Uchtor**	**67.20**	**309**		P	**P**	**10 31 10.0**	**+0.8**
	SNR=28							
EKS2	**Erkin-Say**	**67.23**	**310**		P	**P**	**10 31 10.7**	**+1.8**
	SNR=36							
K62A	**Royalston**	**67.26**	**50**		IAmb	IAmb	10 31 09.7	
	comp=Z,49nm,1.2s							
LSA	**Lhasa**	**67.31**	**289**		IAmb	IAmb	10 31 13.2	
	comp=Z,54nm,1.3s							
LSA	**Lhasa**	**67.31**	**289**		P	**P**	**10 31 08.1**	**-1.9**
LSA					S	**S**	**10 40 05.4**	**+1.2**
LSA					pmax	pmax		
	comp=Z,31nm,1.3s							
LSA					LR	LR		
	comp=Z,400nm,22.4s							
LSA					LR	LR		
	comp=Z,500nm,17.5s							
LSA					LR	LR		
	comp=Z,890nm,20.0s							
LSA	**Lhasa**	**67.31**	**289**		P	**P**	**10 31 11.9**	**+1.9**
SDMD	**Soldier's Deli**	**67.39**	**55**		IAmb	IAmb	10 31 32.6	
	comp=Z,23nm,1.2s							
S57A	**Dark Hollow, R**	**67.50**	**58**		IAmb	IAmb	10 31 12.4	
	comp=Z,39nm,1.2s							
G65A	**Princeton**	**67.50**	**45**		IAmb	IAmb	10 31 11.0	
	comp=Z,48nm,1.1s							
PAL	**Palisades**	**67.69**	**52**		IAmb	IAmb	10 31 27.0	
	comp=Z,29nm,0.9s							
U56A	**King**	**67.77**	**60**		IAmb	IAmb	10 31 14.0	
	comp=Z,55nm,1.0s							
CPNY	**Central Park**	**67.82**	**52**		IAmb	IAmb	10 31 13.7	
	comp=Z,68nm,1.3s							
NC204	**NORSAR Array S**	**67.82**	**355**		IAmb	IAmb	10 31 13.0	
	comp=Z,57nm,1.1s							
AKTO	**Aktyubinsk**	**67.86**	**324**		P	**P**	**10 31 11.8**	**-0.7**
	comp=Z,9.2nm,0.6s,baz=42,slow=5.3,SNR=20							
AKTO					LR	LR	11 03 48.5	
	comp=Z,2μm,18.2s,baz=51,slow=39							
	comp=Z,9.2nm,0.6s							
R58B	**Mineral**	**67.92**	**57**		IAmb	IAmb	10 31 14.9	
	comp=Z,18nm,0.9s							
NB2	**NORSAR Subarra**	**68.03**	**355**		P	**P**	**10 31 12.6**	**-0.9**
	comp=Z,6.1nm,0.8s,baz=5.4,slow=6.5							
NOA	**NORSAR Array B**	**68.03**	**355**		P	**P**	**10 31 12.9**	**-0.6**
	comp=Z,31nm,1.1s,baz=5.0,slow=6.3,SNR=21							
NOA					LR	LR	11 01 56.0	
	comp=Z,294nm,19.8s,baz=355,slow=37							
	comp=Z,31nm,1.1s							
NOA	**NORSAR Array B**	**68.03**	**355**		P	**P**	**10 31 13.0**	**-0.6**
152A	**Waverly Hall**	**68.04**	**65**		IAmb	IAmb	10 31 14.8	
	comp=Z,38nm,1.1s							
AB31	**Akbulak array**	**68.09**	**323**		P	**P**	**10 31 13.9**	**-0.2**
AB31	**Akbulak array**	**68.09**	**323**	*i*	P	**P**	**10 31 12.9**	**-1.1**
ABKAR	**Akbulak array**	**68.09**	**323**		P	**P**	**10 31 13.7**	**-0.4**
DZA	**Taraz**	**68.23**	**312**	*e*	P	**P**	**10 31 15.6**	**+0.5**
DZA					pmax	pmax		
	comp=Z,19nm,0.9s							
DZA	**Taraz**	**68.23**	**312**	*e*	P	**P**	**10 31 15.6**	**+0.5**
	comp=Z,19nm,0.9s							
NC602	**NORSAR Array S**	**68.31**	**354**	*e*	P	**P**	**10 31 14.6**	**-0.7**
KK31	**Karatay Array**	**68.45**	**312**		IAmb	IAmb	10 31 18.5	
	comp=Z,56nm,1.1s							
KK31	**Karatay Array**	**68.45**	**312**	*i*	P	**P**	**10 31 16.0**	**-0.4**
KKAR	**Karatay Array**	**68.45**	**312**		P	**P**	**10 31 16.6**	**+0.1**
KKAR	**Karatay Array**	**68.45**	**312**		P	**P**	**10 31 16.6**	**+0.1**
DRLN	**Deer Lake**	**68.46**	**37**		P	**P**	**10 31 16.1**	**-0.2**
SKAR	**Skarslia**	**68.54**	**356**		*e*P	**P**	**10 31 17.1**	**+0.4**
HFS	**Hagfors**	**68.76**	**353**		P	**P**	**10 31 17.4**	**-0.6**
	comp=Z,47nm,1.0s,baz=52,slow=2.4,SNR=39							
	comp=Z,47nm,1.0s							
BRLS	**Borolday**	**68.82**	**313**		*e*P	**P**	**10 31 21.0**	**+2.3**
BRLS	**Borolday**	**68.82**	**313**		*e*P	**P**	**10 31 21.1**	**+2.3**
T59A	**Double "B" Far**	**68.83**	**57**		IAmb	IAmb	10 31 23.2	
	comp=Z,26nm,0.8s							
W57A	**Gilead**	**68.86**	**60**		IAmb	IAmb	10 31 23.0	
	comp=Z,42nm,1.2s							
V58A	**Windy Hill, Pi**	**68.86**	**59**		IAmb	IAmb	10 31 20.9	
	comp=Z,60nm,1.1s							
BIRD	**Birdtown, Kers**	**68.98**	**61**		IAmb	IAmb	10 31 21.5	
	comp=Z,42nm,0.9s							
KSH2	**Kashi**	**69.00**	**306**		P	**P**	**10 31 21.3**	**+1.2**
KSH2					pP	pP	10 31 26.6	+0.4
KSH2					pmax	pmax		
	comp=Z,150nm,1.2s							
KSH2					pmax	pmax		
	comp=Z,610nm,8.3s							
KSH2					LR	LR		
	comp=Z,1μm,19.2s							
KSH2					LR	LR		
	comp=Z,870nm,15.1s							
KSH2					LR	LR		
	comp=Z,1μm,15.5s							
OSL	**Oslo**	**69.16**	**355**		*e*P	**P**	**10 31 20.7**	**+0.2**
MOS	**Moscow**	**69.34**	**339**		*e*P	**P**	**10 31 20.7**	**-1.0**
MOS					*e*		10 31 43.6	
MOS					pmax	pmax		
	comp=Z,119nm,1.0s							
MOS					MLR	MLR		
	comp=Z,1μm,17.0s							
IUG	**Iuzhnay**	**69.42**	**312**	*c*	*i*P	**P**	**10 31 23.0**	**+0.5**
IUG					pmax	pmax		
	comp=Z,21nm,1.0s							
IUG	**Iuzhnay**	**69.42**	**312**	⇑	*i*P	**P**	**10 31 23.1**	**+0.5**
	comp=Z,21nm,1.0s							
CHM	**Chimkent**	**69.48**	**312**		*e*P	**P**	**10 31 23.4**	**+0.6**
CHM					pmax	pmax		
	comp=Z,28nm,1.0s							
CHM	**Chimkent**	**69.48**	**312**		*e*P	**P**	**10 31 23.5**	**+0.6**
	comp=Z,28nm,1.0s							
KONO	**Kongsberg**	**69.51**	**355**		P	**P**	**10 31 23.4**	**+0.7**
KONO	**Kongsberg**	**69.51**	**355**		*e*P	**P**	**10 31 22.5**	**-0.2**
KONO	**Kongsberg**	**69.51**	**355**		P	**P**	**10 31 23.4**	**+0.7**
BELG	**Belogornoye**	**69.68**	**332**		P	**P**	**10 31 23.2**	**-0.6**
	comp=Z,48nm,1.0s,baz=250,slow=4.1,SNR=13							
BELG					LR	LR	11 07 21.3	
	comp=Z,739nm,18.3s,baz=37,slow=41							
	comp=Z,48nm,1.0s							
HAL	**Halifax**	**69.70**	**43**		IAmb	IAmb	10 31 25.2	
	comp=Z,54nm,1.1s							
SHL	**Shillong**	**69.89**	**286**		P	**P**	**10 31 26.0**	**+0.2**
	SNR=27							
GBN	**Guysborough**	**69.97**	**42**		IAmb	IAmb	10 31 26.7	
	comp=Z,47nm,1.1s							
OBN	**Obninsk**	**70.15**	**339**		LR	LR	11 06 18.1	
	comp=Z,1μm,18.4s,baz=342,slow=40							
OBN	**Obninsk**	**70.15**	**339**		P	**P**	**10 31 26.0**	**-0.6**
OBN	**Obninsk**	**70.15**	**339**	*c*	*i*P	**P**	**10 31 26.1**	**-0.6**
OBN					*e*		10 31 47.9	
OBN					*e*		10 34 00.2	
OBN					*e*S	**S**	**10 40 31.8**	**-4.4**
OBN					*e*SS	**SS**	**10 45 08.6**	**+3.6**
OBN					pmax	pmax		
	comp=Z,109nm,1.0s							
OBN					MLR	MLR		
	comp=Z,1μm,17.0s							
OBN	**Obninsk**	**70.15**	**339**		P	**P**	**10 31 25.6**	**-1.1**
	comp=Z,115nm,1.3s							
CHTO	**Chiang Mai**	**70.50**	**276**		P	**P**	**10 31 27.4**	**-2.0**
CHTO	**Chiang Mai**	**70.50**	**276**		P	**P**	**10 31 27.4**	**-2.0**
CHTO					pmax	pmax		
	comp=Z,16nm,1.2s							
CHTO	**Chiang Mai**	**70.50**	**276**		P	**P**	**10 31 29.9**	**+0.5**
CHTO					P	**P**	**10 31 29.9**	**+0.5**
DRK	**Karamyk**	**70.63**	**309**		P	**P**	**10 31 30.9**	**+0.6**
DRK	**Karamyk**	**70.63**	**309**		P	**P**	**10 31 30.9**	**+0.6**
DRK					pmax	pmax		
	comp=Z,135nm,1.4s							
CM31	**Chiang Mai Arr**	**70.77**	**276**		P	**P**	**10 31 31.4**	**+0.3**
	SNR=5.0							
CMAR	**Chiang Mai Arr**	**70.77**	**276**		P	**P**	**10 31 31.3**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=27,slow=6.4,SNR=28							
CMAR					LR	LR	11 04 06.3	
	comp=Z,232nm,20.1s,baz=60,slow=37							
	comp=Z,1.8nm,0.4s							
CMAR	**Chiang Mai Arr**	**70.77**	**276**		P	**P**	**10 31 30.8**	**-0.3**
BORU	**Boraas**	**71.31**	**353**	*i*	P	**P**	**10 31 33.3**	**-0.4**
ONAU	**Onsala**	**71.61**	**354**	*i*	P	**P**	**10 31 35.4**	**-0.1**
LPSR	**Galich'ya Gora**	**71.90**	**337**	*e*	P	**P**	**10 31 36.7**	**-0.6**
LPSR					pmax	pmax		
	comp=Z,52nm,1.0s							
FABU	**Falkenberg**	**71.94**	**353**	*i*	P	**P**	**10 31 35.6**	**-1.9**
BRDH	**Bariadhala**	**72.17**	**284**		LR	LR	11 06 49.6	
	comp=Z,256nm,20.8s,baz=12,slow=39							
NACGM	**Naroch**	**72.28**	**345**	*e*	P	**P**	**10 31 39.3**	**-0.3**
	comp=Z,119nm,0.9s,baz=17							
BLEU	**Blekinge**	**72.37**	**351**	*i*	P	**P**	**10 31 38.8**	**-1.3**
DEL	**Delary**	**72.38**	**352**	*i*	P	**P**	**10 31 39.8**	**-0.4**
VRH	**Novokhopyorsk**	**72.43**	**334**	*e*	P	**P**	**10 31 38.9**	**-1.6**
VRH					pmax	pmax		
	comp=Z,40nm,0.5s							
MNK	**Minsk**	**72.48**	**344**	*i*	P	**P**	**10 31 41.2**	**+0.4**
	comp=E,107nm,1.0s							
MNK				*i*	P	**P**	**10 31 41.2**	**+0.4**
	comp=N,36nm,0.9s							
MNK				*i*	P	**P**	**10 31 41.2**	**+0.4**
	comp=Z,149nm,0.8s,baz=17							
MNK				*i*	PcP	**PcP**	**10 31 55.4**	**-3.0**
MNK				*i*	PP	**PP**	**10 34 20.9**	**-0.4**
MNK				*i*	PPP	PPP	10 36 04.7	
MNK				*i*	S	**S**	**10 41 04.8**	**+1.6**
MNK				*i*	SS	**SS**	**10 45 43.5**	**+2.8**
MNK				*i*	SSS	SSS	10 49 13.4	
MNK				*i*	LQ	LQ	10 57 58.5	
MNK				*i*	LR	LR	11 02 48.2	
MNK				*i*	LRM	MLR	11 05 31.6	
	comp=N,456nm,17.0s							
MNK				*i*	LRM	MLR	11 05 33.4	
	comp=E,351nm,12.2s							
MNK				*i*	LRM	MLR	11 05 34.1	
	comp=Z,475nm,18.8s							
MNK	**Minsk**	**72.48**	**344**	*i*	P	**P**	**10 31 41.2**	**+0.4**
MNK				*i*			10 31 55.4	
MNK				*i*			10 34 20.8	
MNK				*i*	PPP	PPP	10 36 04.7	
MNK				*i*	S	**S**	**10 41 04.8**	**+1.6**
MNK				*i*	SS	**SS**	**10 45 43.4**	**+2.8**
MNK					pmax	pmax		
	comp=N,36nm,0.9s							
MNK					pmax	pmax		
	comp=Z,149nm,0.8s							
MNK					pmax	pmax		
	comp=E,107nm,1.0s							
MNK					MLR	MLR		
	comp=N,456nm,17.0s							
MNK					MLR	MLR		
	comp=E,351nm,12.0s							
MNK					MLR	MLR		
	comp=Z,475nm,19.0s							
VORR	**Voronezh**	**72.67**	**336**	*e*	P	**P**	**10 31 41.3**	**-0.7**
VORR					pmax	pmax		
	comp=Z,87nm,0.4s							
MUD	**Monsted U'grnd**	**72.72**	**355**	*i*	P	**P**	**10 31 42.9**	**+0.8**
MUD					IAmb	IAmb	10 31 43.9	
	comp=Z,141nm,1.4s							
BJUU	**Bjuv**	**72.84**	**353**	*i*	P	**P**	**10 31 42.5**	**-0.4**
PPT	**Papeete**	**73.04**	**150**		LR	LR	10 58 02.3	
	comp=Z,514nm,21.1s,baz=316,slow=31							
VSR	**Storozhevoye**	**73.10**	**336**	*e*	P	**P**	**10 31 43.6**	**-0.9**
VSR					pmax	pmax		
	comp=Z,70nm,1.3s							
COP	**Copenhagen**	**73.27**	**353**	*i*	P	**P**	**10 31 45.0**	**-0.5**
COP					IAmb	IAmb	10 31 46.8	
	comp=Z,210nm,0.9s							
VORD	**Divnogorie**	**73.30**	**336**	*e*	P	**P**	**10 31 44.9**	**-0.8**
VORD					pmax	pmax		
	comp=Z,50nm,1.0s							
CMIG	**Matias Romero**	**73.41**	**83**		LR	LR	11 02 14.8	
	comp=Z,288nm,19.4s,baz=348,slow=34							
SUW	**Suwalki**	**73.72**	**346**	*e*	P	**P**	**10 31 46.8**	**-1.3**
RAR	**Rarotonga**	**73.89**	**161**		LR	LR	10 58 11.2	
	comp=Z,962nm,19.5s,baz=334,slow=31							
SHAA	**Shahritus**	**73.92**	**310**		IAmb	IAmb	10 31 52.4	
	comp=Z,202nm,1.1s							
EKA	**Eskdalemuir Ar**	**74.02**	**2**		P	**P**	**10 31 48.9**	**-1.0**
	comp=Z,17nm,0.9s,baz=356,slow=4.8,SNR=14							
	comp=Z,17nm,0.9s							
IDGL	**Inch Island, C**	**74.11**	**5**		P	**P**	**10 31 50.6**	**+0.3**
NIL	**Nilore**	**74.41**	**304**		P	**P**	**10 31 53.4**	**+0.8**
NIL	**Nilore**	**74.41**	**304**		P	**P**	**10 31 53.4**	**+0.8**
NIL					pmax	pmax		
	comp=Z,294nm,1.2s							
NIL					MLR	MLR		
	comp=Z,1μm,19.0s							
NIL	**Nilore**	**74.41**	**304**		P	**P**	**10 31 53.7**	**+1.2**
NIL					P	**P**	**10 31 53.7**	**+1.2**
BSEG	**Bad Segeberg**	**75.16**	**354**	*e*	P	**P**	**10 31 56.9**	**+0.4**
	comp=Z,55nm,1.0s,baz=7.9,slow=5.5							
ILTH	**Belurgan, Co L**	**75.21**	**4**		P	**P**	**10 31 57.7**	**+1.0**
IGLA	**Glengowla, Co**	**75.64**	**6**		P	**P**	**10 31 59.7**	**+0.5**
R9F13	**Warsaw-Wawer**	**75.75**	**347**	*e*	P	**P**	**10 32 00.4**	**+0.5**
RNPP9	**Sopachiv**	**75.79**	**344**		P	**P**	**10 31 58.9**	**-1.2**
AK23	**Malin Array Si**	**75.81**	**342**		P	**P**	**10 31 58.7**	**-1.6**
AK21	**Malin Array Si**	**75.82**	**342**		P	**P**	**10 31 58.9**	**-1.4**
AK22	**Malin Array Si**	**75.83**	**342**		P	**P**	**10 31 59.4**	**-0.9**
AK03	**Malin Array Si**	**75.83**	**342**		P	**P**	**10 31 59.2**	**-1.2**
AK04	**Malin Array Si**	**75.84**	**342**		P	**P**	**10 31 58.8**	**-1.6**
AKASG	**Malin Array Be**	**75.85**	**342**		P	**P**	**10 32 00.0**	**-0.5**
	comp=Z,66nm,0.6s,baz=22,slow=5.8,SNR=165							
AKASG					LR	LR	11 08 02.0	
	comp=Z,344nm,21.8s,baz=3.5,slow=38							
	comp=Z,66nm,0.6s							
AKBB	**Malin Array Si**	**75.85**	**342**	*i*	P	**P**	**10 31 59.6**	**-0.9**
AKBB					pmax	pmax		
	comp=Z,150nm,0.9s							
AKBB	**Malin Array Si**	**75.85**	**342**		P	**P**	**10 31 59.6**	**-0.9**
KIEV	**Kiev**	**75.86**	**342**		P	**P**	**10 31 59.9**	**-0.6**
KIEV	**Kiev**	**75.86**	**342**		P	**P**	**10 31 59.9**	**-0.6**
KIEV					pmax	pmax		
	comp=Z,107nm,0.8s							
KIEV	**Kiev**	**75.86**	**342**		P	**P**	**10 31 59.1**	**-1.5**
	comp=Z,718nm,1.0s							
KBL	**Kabul**	**75.86**	**308**		P	**P**	**10 32 00.8**	**-0.4**
KBL	**Kabul**	**75.86**	**308**		P	**P**	**10 32 00.8**	**-0.4**
KBL					pmax	pmax		
	comp=Z,89nm,1.0s							
KBL	**Kabul**	**75.86**	**308**		P	**P**	**10 32 01.0**	**-0.1**
	SNR=42							
KBL					P	**P**	**10 32 01.0**	**-0.1**
	SNR=42							
KBL					S	**S**	**10 41 40.7**	**-1.6**
KBL					S	**S**	**10 41 40.7**	**-1.6**
MTSU	**Mount Surprise**	**75.87**	**216**		P	**P**	**10 32 02.3**	**+1.4**
	comp=Z,8.4nm,1.1s							
RNPP8	**Varash**	**75.87**	**344**		P	**P**	**10 31 59.4**	**-1.2**
RNPP5	**Staryi Chortor**	**75.97**	**344**		P	**P**	**10 32 00.4**	**-0.8**
DSB	**Dublin**	**75.99**	**4**		P	**P**	**10 32 01.5**	**+0.2**
GORT1	**Trebel**	**76.04**	**353**	*e*	P	**P**	**10 32 01.9**	**+0.4**
	comp=Z,98nm,1.2s,baz=7.9,slow=5.5							
BEL	**Belsk**	**76.18**	**347**	*e*	P	**P**	**10 32 02.3**	**0.0**
KAPI	**Kappang**	**76.22**	**244**		LR	LR	11 00 41.0	
	comp=Z,100nm,20.6s,baz=44,slow=32							
RETH	**Rethem/Aller,**	**76.42**	**355**	*e*	P	**P**	**10 32 03.9**	**+0.3**
	comp=Z,62nm,1.1s,baz=7.9,slow=5.5			

comp=Z,48nm,1.2s,baz=7,slow=5.5
OSTC Ostas 78.00 350 *e*P **P 10 32 12.8 +0.1**
OSTC Ostas 78.00 350 *e*P **P 10 32 12.8 +0.1**
KWP Kalwaria Pacla 78.04 346 *e*P **P 10 32 13.2 +0.3**
KWP Kalwaria Pacla 78.04 346 P **P 10 32 12.9 0.0**
comp=Z,376nm,1.0s
UPC Upice 78.07 350 *e*P **P 10 32 13.6 +0.6**
UPC Upice 78.07 350 *e*P **P 10 32 13.6 +0.6**
DPC Dobruska-Polom 78.19 350 *e*P **P 10 32 14.0 +0.2**
DPC *e*pP **pP 10 32 18.7 -1.6**
DPC Dobruska-Polom 78.19 350 *e*P **P 10 32 14.0 +0.2**
DPC *e* 10 32 18.7
DPC Dobruska-Polom 78.19 350 P **P 10 32 12.9 -0.9**
comp=Z,42nm,1.1s
PVCC Panska Ves 78.20 351 *e*P **P 10 32 14.6 +0.9**
PVCC Panska Ves 78.20 351 *e*P **P 10 32 14.6 +0.9**
HSKC Hora Svate Kat 78.23 352 *e*P **P 10 32 13.5 -0.4**
RICC Richard 78.23 351 *e*P **P 10 32 15.0 +1.1**
UBBA Unterbreizbach 78.29 354 *e*P **P 10 32 14.0 -0.1**
comp=Z,85nm,1.6s,baz=7.9,slow=5.5
SHIU Shidnytsya 78.33 345 P **P 10 32 14.8 +0.3**
MOX Moxa 78.34 353 *e*P **P 10 32 14.3 -0.2**
comp=Z,35nm,1.0s,baz=7.9,slow=5.5
MOX *e*L L 11 12 00.0
comp=Z,351nm,21.4s
BATI Baumata 78.35 238 LR LR 11 02 16.4
comp=Z,127nm,20.6s,baz=30,slow=32
BAL3X Bal3x, Balta 78.41 341 P **P 10 32 14.1 -0.8**
KMPD K-Podol'skiy 78.43 343 P **P 10 32 14.0 -1.0**
KMPD P **P 10 32 14.2 -0.8**
STEB Steborice 78.43 349 *e*P **P 10 32 14.6 -0.4**
PLN Plauen 78.46 353 *e*P **P 10 32 15.0 -0.2**
comp=Z,8.7nm,0.9s,baz=7.9,slow=5.5
STHS Stebnicka Huta 78.47 347 *e*P **P 10 32 15.5 +0.2**
STHS pmax pmax
comp=Z,65nm,1.0s
STHS Stebnicka Huta 78.47 347 *e*P **P 10 32 15.5 +0.2**
SORM Soroca 78.47 342 ⇓P **P 10 32 15.3 0.0**
SORM Soroca 78.47 342 P **P 10 32 15.2 0.0**
SORM Soroca 78.47 342 P **P 10 32 13.9 -1.3**
comp=Z,258nm,1.0s
OKC Ostrava-Krasne 78.48 349 *e*P **P 10 32 15.4 +0.1**
OKC Ostrava-Krasne 78.48 349 *e*P **P 10 32 15.4 +0.1**
TANN Tannenbergstha 78.50 352 *e*P **P 10 32 15.4 -0.1**
comp=Z,28nm,1.1s,baz=7.9,slow=5.5
NIE Niedzica 78.61 347 P **P 10 32 15.8 -0.3**
comp=Z,20nm,1.1s
MORC Moravsky Berou 78.62 349 ⇓P **P 10 32 16.3 +0.2**
MORC Moravsky Berou 78.62 349 IAmb IAmb 10 32 17.2
comp=Z,31nm,1.1s
MORC Moravsky Berou 78.62 349 P **P 10 32 16.3 +0.2**
MORC Moravsky Berou 78.62 349 *e*P **P 10 32 15.6 -0.5**
STNU Starunia 78.64 344 P **P 10 32 16.0 -0.2**
LABN Labinsk 78.66 332 *e*P **P 10 32 16.6 +0.2**
LABN pmax pmax
comp=Z,48nm,0.8s
KVAR Kislovodsk Arr 78.69 331 P **P 10 32 16.5 -0.2**
comp=Z,8.8nm,0.9s,baz=92,slow=23,SNR=3.0
KVAR LR LR 11 10 37.7
comp=Z,521nm,22.0s,baz=252,slow=38
comp=Z,8.8nm,0.9s
NKC Novy Kostel 78.69 352 *e*P **P 10 32 16.5 0.0**
NKC Novy Kostel 78.69 352 *e*P **P 10 32 16.5 0.0**
KIV Kislovodsk 78.69 331 ⇑P **P 10 32 16.7 0.0**
KIV Kislovodsk 78.69 331 P **P 10 32 16.9 +0.2**
KIV IAmb IAmb 10 32 18.0
comp=Z,60nm,1.2s
KIV Kislovodsk 78.69 331 P **P 10 32 16.7 0.0**
KIV Kislovodsk 78.69 331 P **P 10 32 17.7 +1.0**
KIV Kislovodsk 78.69 331 P **P 10 32 16.2 -0.5**
comp=Z,31nm,1.1s
BTNL Ternell 78.72 357 *d*P **P 10 32 16.9 +0.3**
comp=Z,37nm,1.0s
PRU Pruhonice 78.74 351 *e*P **P 10 32 16.5 -0.2**
PRU Pruhonice 78.74 351 *e*P **P 10 32 16.5 -0.2**
BSTI Sart Tilman 78.75 357 *d*P **P 10 32 16.8 +0.1**
KBZ Khabaz 78.83 330 P **P 10 32 16.9 -0.4**
comp=Z,16nm,1.0s,baz=325,slow=2.0,SNR=25
KBZ LR LR 11 10 49.8
comp=Z,960nm,21.7s,baz=14,slow=39
comp=Z,16nm,1.0s
KBZ Khabaz 78.83 330 *i*P **P 10 32 17.4 +0.1**
KBZ pmax pmax
comp=Z,28nm,1.1s
SHA1 Shidzhatmaz 78.89 330 *e*P **P 10 32 18.7 +0.7**
BCLA Clavier 78.92 357 *d*P **P 10 32 17.8 +0.1**
comp=Z,30nm,0.9s
KSV Kosov 78.92 344 P **P 10 32 16.2 -1.6**
BGES Gesves 78.96 357 *d*P **P 10 32 17.8 -0.1**
comp=Z,28nm,1.0s
BHOU Houvegnez 78.96 357 *d*P **P 10 32 18.2 +0.2**
MANZ Manzenberg 78.96 353 *e*P **P 10 32 17.8 -0.2**
comp=Z,6.5nm,1.0s,baz=7.9,slow=5.5
TNS Taunus Mts 78.98 355 *e*P **P 10 32 18.0 -0.1**
comp=Z,41nm,0.9s,baz=7.9,slow=5.5
LANS Liptovska Anna 78.98 348 *e*P **P 10 32 19.2 +1.1**
LANS pmax pmax
comp=Z,53nm,1.0s
LANS Liptovska Anna 78.98 348 *e*P **P 10 32 19.2 +1.1**
MAUC Maruska 78.99 349 *e*P **P 10 32 18.6 +0.5**
MEZ Mezhgor'ye 78.99 345 P **P 10 32 18.1 -0.1**
BMRD Maredsous 79.05 357 *d*P **P 10 32 18.4 0.0**
comp=Z,52nm,1.0s
NSLU Nyzhne Selyshc 79.14 344 P **P 10 32 19.5 +0.6**
HOLU Holmets 79.16 346 P **P 10 32 18.9 -0.1**
ROTZ Rotzenmuhle 79.17 352 *e*P **P 10 32 19.0 -0.1**
comp=Z,8.1nm,1.1s,baz=7.9,slow=5.5
RCHB Rochefort 79.18 357 *d*P **P 10 32 18.8 -0.3**
comp=Z,29nm,1.0s
MUKU Mukachevo 79.19 345 P **P 10 32 18.8 -0.4**
VRAC Vranov 79.19 350 P **P 10 32 17.9 -1.3**
comp=Z,35nm,0.9s,baz=14,slow=5.9,SNR=20
VRAC LR LR 11 11 38.6
comp=Z,244nm,18.4s,baz=22,slow=39
comp=Z,35nm,0.9s
VRAC Vranov 79.19 350 ⇓P **P 10 32 19.6 +0.4**
VRAC Vranov 79.19 350 P **P 10 32 19.6 +0.4**
VRAC Vranov 79.19 350 *e*P **P 10 32 19.2 0.0**
AKT Akhty 79.22 326 *e*P **P 10 32 19.4 -0.3**
AKT *e* 10 32 28.0
AKT pmax pmax
comp=Z,39nm,1.1s
AKT MLR MLR
comp=Z,2µm,19.0s
BRIU Brid 79.25 345 P **P 10 32 19.6 +0.1**
DOU Dourbes 79.26 357 *d*P **P 10 32 19.5 -0.1**
comp=Z,29nm,1.1s
HRA Herat 79.28 312 IAmb IAmb 10 32 23.4
comp=Z,104nm,1.8s
ZVC Zvikov 79.32 351 *e*P **P 10 32 20.3 +0.4**
NE56 Odesa 79.32 339 P **P 10 32 18.1 -1.8**
GRF Grafenberg Arr 79.32 353 *e*P **P 10 32 20.2 +0.3**
comp=Z,88nm,1.1s,baz=7.9,slow=5.5
GRF *e*L L 11 07 27.5
comp=Z,391nm,21.4s
KORU Korolevo 79.40 345 P **P 10 32 20.0 -0.4**
BERU Beregovo 79.41 345 P **P 10 32 21.2 +0.8**
KRUC Moravsky 79.45 350 *e*P **P 10 32 20.5 -0.2**
TRSU Trosnyk 79.49 345 P **P 10 32 21.3 +0.5**
KECS Kecovo 79.49 347 *e*P **P 10 32 21.5 +0.6**
KECS pmax pmax
comp=Z,67nm,0.9s
KECS Kecovo 79.49 347 *e*P **P 10 32 21.5 +0.6**
JAVC Velka Javorina 79.50 349 *e*P **P 10 32 22.0 +1.0**
IASR Iasi 79.54 342 ⇑P **P 10 32 21.3 +0.2**
BURAR Bucovina Array 79.57 343 ⇑P **P 10 32 21.6 +0.1**
BURAR Bucovina Array 79.57 343 P **P 10 32 22.1 +0.7**
BURAR Bucovina Array 79.57 343 P **P 10 32 21.5 +0.1**
WLF Walferdange 79.64 356 IAmb IAmb 10 32 23.3
comp=Z,42nm,0.9s
WLF Walferdange 79.64 356 *d*P **P 10 32 22.0 +0.3**
comp=Z,31nm,1.0s
WLF Walferdange 79.64 356 *e*P **P 10 32 21.9 +0.3**
comp=Z,46nm,1.0s,baz=7.9,slow=5.5
KHC Kasperske Hory 79.68 351 *e*P **P 10 32 21.5 -0.4**
KHC Kasperske Hory 79.68 351 *e*P **P 10 32 21.5 -0.4**
WET Wettzell 79.73 352 *e*P **P 10 32 22.2 0.0**
comp=Z,21nm,1.1s,baz=7.9,slow=5.5
BMR Baia Mare 79.81 345 ⇓P **P 10 32 22.9 +0.2**
BMR Baia Mare 79.81 345 P **P 10 32 22.8 +0.2**
SMOL Smolenice 79.87 349 *e*P **P 10 32 24.1 +1.2**
SMOL pmax pmax
comp=Z,22nm,0.9s
RAO Raoul Island 79.87 179 LR LR 10 58 53.5
comp=Z,742nm,21.1s,baz=20,slow=29
CKRC Cesky Krumlov 79.92 351 *e*P **P 10 32 23.1 -0.1**
CKRC Cesky Krumlov 79.92 351 *e*P **P 10 32 23.1 -0.1**
SOC Sochi 79.92 332 *e*P **P 10 32 21.7 -1.6**
SOC *e* 10 35 31.4
SOC *e*PPP PPP 10 37 14.2
SOC *e*S **S 10 42 24.3 -1.0**
SOC *e*SS **SS 10 47 34.4 +0.8**
SOC *e*SSS SSS 10 50 49.5
SOC pmax pmax
comp=Z,25nm,1.1s
SOC MLR MLR
comp=Z,809nm,21.0s
GEC2 GERESS Array S 79.95 351 *e*P **P 10 32 23.2 -0.3**
comp=Z,22nm,0.9s,baz=7.9,slow=5.5
GERES GERESS Array B 79.95 351 P **P 10 32 23.3 -0.2**
comp=Z,10nm,0.8s,baz=20,slow=4.3,SNR=32
GERES LR LR 11 10 49.3
comp=Z,294nm,19.1s,baz=28,slow=38
comp=Z,10nm,0.8s
GIRR Girov 79.97 342 ⇓P **P 10 32 23.9 +0.5**
VASR Vaslui 80.01 341 ⇓P **P 10 32 25.3 +1.6**
MODS Modra-Piesok 80.03 349 *e*P **P 10 32 24.5 +0.7**
MODS pmax pmax
comp=Z,122nm,1.1s
MODS Modra-Piesok 80.03 349 *e*P **P 10 32 24.5 +0.7**
IPM Ipoh 80.06 265 IAMs_20 IAMs_20 11 12 41.1
comp=Z,330nm,21.0s
PSZ Piszkesteto 80.13 347 ⇑P **P 10 32 25.8 +1.3**
PSZ Piszkesteto 80.13 347 IAmb IAmb 10 32 27.0
comp=Z,77nm,1.1s
PSZ Piszkesteto 80.13 347 P **P 10 32 25.7 +1.3**
ZST Bratislava 80.22 349 *e*P **P 10 32 27.7 +2.9**
ZST Bratislava 80.22 349 *e*P **P 10 32 27.7 +2.9**
TESR Tescani 80.36 342 ⇓P **P 10 32 26.0 +0.4**
TESR Tescani 80.36 342 P **P 10 32 25.3 -0.3**
comp=Z,82nm,1.1s
KNRA Kununurra 80.38 230 P **P 10 32 26.2 +0.3**
comp=Z,19nm,2.1s
BIR Birlad 80.41 341 ⇓P **P 10 32 27.3 +1.5**
BIR Birlad 80.41 341 P **P 10 32 27.3 +1.5**
SRO Srobarova 80.45 348 *e*P **P 10 32 27.3 +1.3**
SRO pmax pmax
comp=Z,62nm,1.2s
SRO Srobarova 80.45 348 *e*P **P 10 32 27.3 +1.3**
ONER Baraj Valea Uz 80.58 342 ⇑P **P 10 32 28.5 +1.6**
CONA Conrad Observa 80.63 350 *i*P **P 10 32 27.7 +0.5**
comp=Z,40nm,1.1s,SNR=16
GHRR 80.65 342 ⇑P **P 10 32 28.3 +1.2**
GHRR 80.65 342 P **P 10 32 27.6 +0.5**
BSZH Besenyszg 80.68 347 ⇓P **P 10 32 28.8 +1.5**
CJR Cluj-Napoca 80.72 344 ⇑P **P 10 32 28.2 +0.6**
CJR Cluj-Napoca 80.72 344 P **P 10 32 28.2 +0.6**
DRGR 80.80 345 ⇓P **P 10 32 28.1 +0.1**
DRGR 80.80 345 P **P 10 32 28.1 +0.1**
RONA Rosalia, Austr 80.81 349 *i*P **P 10 32 28.9 +0.8**
comp=Z,47nm,1.4s,SNR=6.7
MARR Marisel-Cluj 80.84 345 ⇑P **P 10 32 28.8 +0.5**
COSR Cosmesti PH 80.86 342 ⇓P **P 10 32 29.7 +1.5**
BFO Black Forest 80.87 355 P **P 10 32 27.9 -0.4**
BFO Black Forest 80.87 355 P **P 10 32 27.9 -0.4**
BFO pmax pmax
comp=Z,16nm,0.8s
BFO Black Forest 80.87 355 *e*P **P 10 32 28.1 -0.2**
comp=Z,20nm,1.0s,baz=7.9,slow=5.5
PANC Panciu 80.88 342 ⇓P **P 10 32 29.8 +1.5**
MOA Molln 80.88 351 *i*P **P 10 32 28.7 +0.3**
comp=Z,14nm,1.2s
TURR Turia 80.92 342 ⇑P **P 10 32 30.7 +2.0**
OZUR 80.93 343 ⇓P **P 10 32 30.0 +1.3**
VRI Vrincioaia 80.97 342 ⇓P **P 10 32 29.5 +0.6**
VRI Vrincioaia 80.97 342 P **P 10 32 29.5 +0.6**
VRI Vrincioaia 80.97 342 P **P 10 32 29.2 +0.3**
comp=Z,34nm,1.0s
BOSR Bodos 80.97 343 ⇓P **P 10 32 30.6 +1.7**
PLOR Plostina 81.00 342 ⇓P **P 10 32 29.9 +0.8**
PLOR Plostina 81.00 342 P **P 10 32 29.8 +0.8**
ODBI Odobesti 81.00 342 ⇑P **P 10 32 30.2 +1.2**
ECH Echery 81.05 356 IAmb IAmb 10 32 30.4
comp=Z,34nm,1.1s
NEGRR Negrea 81.05 341 ⇓P **P 10 32 30.7 +1.4**
COVR Voineasa-Covas 81.09 342 ⇓P **P 10 32 30.5 +0.9**
BIOA Bad Ischl, Aus 81.10 351 *i*P **P 10 32 30.2 +0.6**
comp=Z,28nm,1.0s,SNR=9.9
DOPR Dopca 81.12 343 ⇓P **P 10 32 31.2 +1.5**
BATM Batumi 81.13 330 ⇑P **P 10 32 30.4 +0.6**
BATM Batumi 81.13 330 P **P 10 32 30.3 +0.6**
MDB Medias 81.14 344 ⇑P **P 10 32 30.9 +1.0**
MDB Medias 81.14 344 P **P 10 32 30.8 +1.0**
MPLH Magyarpolny 81.18 348 P **P 10 32 29.9 -0.1**
comp=Z,252nm,1.2s
TLCR 81.19 340 ⇓P **P 10 32 31.3 +1.3**
TLCR 81.19 340 P **P 10 32 31.3 +1.3**
WB0 Warramunga Arr 81.34 224 IAmb IAmb 10 32 45.6
comp=Z,62nm,1.9s
ARSA Arzberg 81.34 350 IAmb IAmb 10 32 32.6
comp=Z,39nm,1.0s
ARSA Arzberg 81.34 350 *i*P **P 10 32 31.5 +0.6**
comp=Z,34nm,1.1s,SNR=13
CFR Carcaliu 81.34 341 ⇓P **P 10 32 31.2 +0.4**
CFR Carcaliu 81.34 341 P **P 10 32 31.2 +0.4**
GRER 81.39 342 ⇓P **P 10 32 32.6 +1.5**
GNI Garni 81.44 327 P **P 10 32 31.7 0.0**
comp=Z,4.2nm,0.3s,baz=164,slow=6.5,SNR=7.4
GNI LR LR 11 13 54.8
comp=Z,1µm,18.8s,baz=29,slow=40
comp=Z,4.2nm,0.3s
GNI Garni 81.44 327 P **P 10 32 31.4 -0.3**
GNI Garni 81.44 327 *i*P **P 10 32 32.4 +0.7**
GNI pmax pmax
comp=Z,29nm,1.2s
GNI Garni 81.44 327 P **P 10 32 31.9 +0.2**
comp=Z,16nm,0.9s
LESA Schwarzleotal 81.45 352 *i*P **P 10 32 31.9 +0.4**
comp=Z,18nm,1.0s,SNR=9.2
NEHR Nehoiu 81.47 342 ⇑P **P 10 32 33.0 +1.4**
MLR Muntele Rosu 81.48 342 P **P 10 32 31.5 -0.3**
comp=Z,48nm,0.9s,baz=112,slow=2.4,SNR=33
MLR LR LR 11 14 00.4
comp=Z,398nm,18.4s,baz=26,slow=40
comp=Z,48nm,0.9s
MLR Muntele Rosu 81.48 342 ⇑P **P 10 32 33.6 +1.8**
MLR Muntele Rosu 81.48 342 IAmb IAmb 10 32 34.4
comp=Z,64nm,1.0s
MLR Muntele Rosu 81.48 342 P **P 10 32 33.6 +1.8**
MLR Muntele Rosu 81.48 342 P **P 10 32 32.4 +0.6**
comp=Z,79nm,0.9s
WRAB Tennant Creek 81.50 224 *i*P **P 10 32 30.7 -1.2**
WRAB pmax pmax
comp=Z,26nm,1.8s
WRA Warramunga Arr 81.52 224 P **P 10 32 31.8 -0.2**
comp=Z,2.1nm,0.7s,baz=33,slow=6.0,SNR=15
comp=Z,2.1nm,0.7s
RETA Reutte 81.55 353 *i*P **P 10 32 32.4 +0.4**
comp=Z,26nm,1.1s,SNR=5.5
JURR Jurilovca 81.58 340 ⇓P **P 10 32 32.7 +0.6**
TPGR Topolog 81.59 340 ⇓P **P 10 32 32.8 +0.6**
TNR Turnu Rosu 81.63 344 ⇑P **P 10 32 33.7 +1.3**
TNR Turnu Rosu 81.63 344 P **P 10 32 33.7 +1.3**
WATA Walderalm 81.64 353 *i*P **P 10 32 32.8 +0.2**
comp=Z,70nm,1.0s,SNR=14
MOTA Moosalm 81.67 353 *i*P **P 10 32 32.8 0.0**
comp=Z,69nm,1.3s,SNR=18
VOIR 81.70 343 ⇑P **P 10 32 34.4 +1.5**
VOIR 81.70 343 P **P 10 32 34.4 +1.5**
VOIR 81.70 343 P **P 10 32 33.4 +0.5**
comp=Z,100nm,1.1s
WTTA Wattenberg 81.70 353 *i*P **P 10 32 33.5 +0.5**
comp=Z,69nm,0.9s,SNR=19
KBA Koelnbreinsper 81.73 351 *i*P **P 10 32 33.9 +0.7**
comp=Z,139nm,0.8s,SNR=60
SQTA Sankt Quirin 81.78 353 *i*P **P 10 32 33.6 +0.3**
comp=Z,43nm,1.1s,SNR=13
DAVA Damuels 81.81 354 *i*P **P 10 32 33.9 +0.4**
comp=Z,22nm,1.0s,SNR=6.1
ARR Arges 81.84 343 ⇓P **P 10 32 34.6 +1.0**
MTUR Matau 81.90 343 ⇑P **P 10 32 34.0 0.0**
MTUR Matau 81.90 343 P **P 10 32 33.9 0.0**
LOT Lotru 81.92 344 ⇓P **P 10 32 34.0 -0.1**
SOKA Soboth 81.96 350 *i*P **P 10 32 34.6 +0.4**
comp=Z,98nm,1.0s,SNR=48
TIRR Tirgusor 81.97 340 ⇑P **P 10 32 35.1 +0.9**
TIRR Tirgusor 81.97 340 IAmb IAmb 10 32 35.6
comp=Z,42nm,1.1s
TIRR Tirgusor 81.97 340 P **P 10 32 35.1 +0.9**
comp=Z,37nm,1.0s
MORH Mrgy, Hungar 81.97 348 ⇓P **P 10 32 34.2 +0.1**
MORH Mrgy, Hungar 81.97 348 P **P 10 32 33.0 -1.1**
PERS Pernice 81.99 350 *i*P **P 10 32 34.6 +0.3**
FETA Feichten 82.02 353 *i*P **P 10 32 34.9 +0.3**
comp=Z,34nm,1.1s,SNR=18
KOGS Kog 82.05 349 *i*P **P 10 32 34.8 +0.2**
BZS Buzias 82.12 345 ⇑P **P 10 32 35.0 +0.1**
BZS Buzias 82.12 345 P **P 10 32 35.0 +0.1**
ABTA Abfaltersbach 82.14 352 *i*P **P 10 32 35.2 0.0**
comp=Z,61nm,1.0s,SNR=19
MYKA Terra Mystica 82.15 351 *i*P **P 10 32 35.5 +0.3**
comp=Z,33nm,1.3s,SNR=8.6
OBKA Obir 82.18 350 *i*P **P 10 32 35.6 +0.2**
comp=Z,42nm,1.1s,SNR=14
SIUN Universidad Ur 82.27 78 IAmb IAmb 10 32 39.1
comp=Z,23nm,1.2s
DAVOX Davos/Dischmat 82.32 354 P **P 10 32 36.2 0.0**
comp=Z,20nm,0.9s,baz=322,slow=4.8,SNR=30
DAVOX LR LR 11 09 51.9
comp=Z,161nm,20.8s,baz=62,slow=36
comp=Z,20nm,0.9s
PRED Cave del Predi 82.34 351 IAmb IAmb 10 32 37.4
comp=Z,34nm,0.9s
ICOR Ion Corvin 82.43 341 ⇑P **P 10 32 37.8 +1.2**
FUORN Ofenpass-Fuorn 82.45 353 IAmb IAmb 10 32 38.6
comp=Z,26nm,0.9s
CHIV Chivirico 82.48 68 IAmb IAmb 10 33 04.4
comp=Z,68nm,1.5s
CADS Cadrg 82.54 351 *i*P **P 10 32 36.3 -0.9**
HUMR Humele 82.59 343 ⇓P **P 10 32 37.5 0.0**
TUE Stuetta 82.66 354 IAmb IAmb 10 32 39.5
comp=Z,38nm,1.0s
TUE Stuetta 82.66 354 P **P 10 32 37.7 -0.3**
comp=Z,159nm,1.4s
HERR Herculane 82.70 345 ⇓P **P 10 32 38.5 +0.5**
RPSI Rantau Prapat 82.76 265 IAmb IAmb 10 32 39.9
comp=Z,46nm,1.2s
NMDO Nuevo Mundo 82.86 66 IAmb IAmb 10 32 43.0
comp=Z,47nm,1.3s
SENIN Lac Senin/Sane 82.89 355 IAmb IAmb 10 35 14.3
comp=Z,51nm,1.9s
CTI Castel Tesino 82.91 352 IAmb IAmb 10 32 47.3
comp=Z,27nm,1.1s
MDVR Moldovita 82.92 345 ⇓P **P 10 32 39.2 0.0**
KOPT Kop Dagi 82.94 330 IAmb IAmb 10 32 43.4
comp=Z,16nm,0.8s
PUNG Punghina 83.20 344 ⇑P **P 10 32 41.2 +0.6**
RAZG Razgrad 83.22 341 ⇑P **P 10 32 41.3 +0.6**
LOZB Loznitsa 83.39 341 ⇑P **P 10 32 41.6 0.0**
GEVA Gevas 83.66 328 IAmb IAmb 10 33 41.4
comp=Z,16nm,0.5s
PLVB Pleven 83.76 343 ⇓P **P 10 32 44.2 +0.7**
ILGA Ilgaz 83.94 336 IAmb IAmb 10 32 47.0
comp=Z,55nm,1.4s
ELND Elena 83.96 342 ⇓P **P 10 32 44.4 -0.1**
FITZ Fitzroy Crossi 83.98 232 LR LR 11 11 06.1
comp=Z,294nm,18.8s,baz=46,slow=36
BOVS Bovan 84.03 345 ⇑P **P 10 32 44.8 -0.1**
SSB Saint Sauveur 84.08 357 IAmb IAmb 10 32 46.6
comp=Z,32nm,1.1s
HYB Hyderabad 84.09 290 *e*P **P 10 32 46.0 +0.4**
JUD3 Juan Diaz 3 84.52 81 P **P 10 32 46.6 -1.2**
JTS Las Juntas de 84.79 80 P **P 10 32 51.8 +2.6**
comp=Z,10nm,0.8s,baz=141,slow=16,SNR=5.9
comp=Z,10nm,0.8s
LEM Lembang 84.79 253 LR LR 11 07 59.1
comp=Z,115nm,19.8s,baz=20,slow=34
ASAR Alice Springs 84.99 222 P **P 10 32 50.8 +1.0**
comp=Z,8.4nm,1.2s,baz=25,slow=5.2,SNR=19
ASAR LR LR 11 09 00.7
comp=Z,377nm,19.6s,baz=23,slow=34
comp=Z,8.4nm,1.2s
ASAR Alice Springs 84.99 222 P **P 10 32 49.4 -0.4**
ARMA Armidale 85.01 205 IAmb IAmb 10 33 07.5
comp=Z,39nm,1.3s
BR106 Keskin Array S 85.20 335 P **P 10 32 50.6 -0.4**
comp=Z,180nmcomp=Z,26nm,1.0s
BR131 Keskin Array S 85.20 335 IAmb IAmb 10 32 52.2
comp=Z,36nm,1.1s
BR131 Keskin Array S 85.20 335 P **P 10 32 51.1 +0.1**
SNR=7.8
BR131 P **P 10 32 51.1 +0.1**
SNR=7.8
BRTR Keskin Array B 85.20 335 P **P 10 32 50.6 -0.4**
comp=Z,20nm,0.9s,baz=44,slow=2.8,SNR=59
BRTR LR LR 11 16 30.9
comp=Z,250nm,18.4s,baz=3.5,slow=40
comp=Z,20nm,0.9s
BRTR Keskin Array B 85.20 335 P **P 10 32 50.3 -0.8**
BR105 Keskin Array S 85.21 335 P **P 10 32 50.7 -0.4**
comp=Z,227nmcomp=Z,33nm,1.0s
BR104 Keskin Array S 85.22 335 P **P 10 32 50.3 -0.8**
comp=Z,209nmcomp=Z,32nm,1.0s
BNN Bunyan 85.41 333 IAmb IAmb 10 32 53.6
comp=Z,44nm,1.0s
PDG Podgorica 85.59 346 ⇑P **P 10 32 53.5 +0.7**
KIRS Kirsehir-Merke 85.68 335 ⇑P **P 10 32 53.9 +0.5**
RDO Rodhopi 85.74 341 IAmb IAmb 10 32 55.7
comp=Z,43nm,1.0s
FDMO Fiordimonte 85.76 351 IAmb IAmb 10 32 55.5
comp=Z,53nm,1.0s
CESX Cesi 86.24 351 IAmb IAmb 10 32 56.8
comp=Z,55nm,1.2s
AQU L'Aquila 86.41 351 P **P 10 32 57.2 +0.3**
comp=Z,50nm,1.0s
GAZ Gaziantep 86.57 332 IAmb IAmb 10 32 59.6
comp=Z,49nm,1.2s
INTR Introdacqua 86.69 350 IAmb IAmb 10 33 00.3
comp=Z,38nm,1.0s
CEST Esterri de Car 86.82 360 IAmb IAmb 10 33 01.2
comp=Z,26nm,1.1s
PBRG Braganca 87.38 6 *e*P **P 10 33 01.1 -0.5**
POLO Lamas de Olo 87.74 6 *e*P **P 10 33 03.4 0.0**
MVO Moncorvo 88.00 6 *e*P **P 10 33 04.4 -0.2**
MTE Manteigas 88.72 6 IAmb IAmb 10 33 09.0
comp=Z,23nm,0.9s
MTE Manteigas 88.72 6 *e*P **P 10 33 08.1 +0.1**
URZ Urewera 88.91 183 LR LR 11 07 13.0
comp=Z,608nm,20.8s,baz=33,slow=32
PCAS Casmilo, Conde 89.00 7 *e*P **P 10 33 09.3 0.0**
TIP Timpagrande 89.14 348 IAmb IAmb 10 33 11.1
comp=Z,16nm,1.0s
TIP Timpagrande 89.14 348 P **P 10 33 09.1 -0.9**
comp=Z,14nm,1.2s
STKA Stephens Creek 89.42 212 P **P 10 33 12.3 +1.2**
comp=Z,9.1nm,1.0s,baz=28,slow=3.9,SNR=12
STKA LR LR 11 10 57.0
comp=Z,528nm,19.8s,baz=20,slow=34
comp=Z,9.1nm,1.0s
ECPR Experimental S 89.52 61 IAmb IAmb 10 33 13.7
comp=Z,44nm,1.0s
OBIP Obispado Ponce 89.61 61 IAmb IAmb 10 33 14.6
comp=Z,21nm,1.0s
ESBB Sonseca Array 89.64 4 IAmb IAmb 10 33 12.8
comp=Z,26nm,1.2s
ESDC Sonseca Array 89.64 4 P **P 10 33 11.0 -1.3**
comp=Z,13nm,1.1s,baz=354,slow=4.6,SNR=32
comp=Z,13nm,1.1s
ESDC Sonseca Array 89.64 4 P **P 10 33 11.9 -0.4**
ESDC IAmb IAmb 10 33 12.9
comp=Z,20nm,1.1s
PMRV Marv??o 89.70 6 *e*P **P 10 33 10.9 -1.7**
SJG San Juan 89.81 61 LR LR 11 17 15.1
comp=Z,299nm,18.8s,baz=310,slow=38
PSA00 Pilbara Seismi 89.82 234 P **P 10 33 12.3 -0.9**
PSA00 IAmb IAmb 10 33 14.5
comp=Z,40nm,1.8s
UOSS Minazif 90.03 312 P **P 10 33 14.0 -0.3**
UOSS P **P 10 33 14.0 -0.3**
HATD Hatta, Dubai 90.17 312 P **P 10 33 15.0 0.0**
HATD P **P 10 33 15.0 0.0**
NAZ Nazwa, Dubai 90.25 312 P **P 10 33 15.2 -0.1**
NAZ P **P 10 33 15.2 -0.1**
PARRA Arraiolos 90.26 7 *e*P **P 10 33 14.6 -0.6**
WSAR Wadi Sarin 90.30 309 P **P 10 33 16.6 +1.0**
ASHO Ashiyiah 90.32 312 P **P 10 33 15.8 +0.1**
ASHO P **P 10 33 15.8 +0.1**
SOHO SOHO 90.56 311 P **P 10 33 16.3 -0.5**
SOHO P **P 10 33 16.3 -0.5**
HOQ Hoqain 90.66 310 P **P 10 33 17.2 -0.1**
HOQ P **P 10 33 17.2 -0.1**
WBK Wadi Bani Khal 90.66 308 P **P 10 33 18.5 +1.2**
WBK P **P 10 33 18.5 +1.2**
PALK Pallekele 90.69 282 LR LR 11 17 00.4

comp=Z,246nm,20.4s,baz=28,slow=38
SMDO Samad 90.74 309 P **P** **10 33 18.0 +0.2**
SMDO P **P** **10 33 18.0 +0.2**
JLN Jalan Bani Buh 90.83 308 P **P** **10 33 18.6 +0.6**
JLN P **P** **10 33 18.6 +0.6**
MMAI Mount Meron Ar 90.97 331 LR LR 11 18 30.6
comp=Z,231nm,20.4s,baz=20,slow=38
PBAR Barrancos 90.97 6 *e*P **P** **10 33 18.3 -0.2**
ALNE Al Ain 91.00 311 P **P** **10 33 18.8 -0.1**
SNR=5.6
ALNE P **P** **10 33 18.8 -0.1**
SNR=5.6
VAE Valguarnera 91.11 349 LR LR 11 19 02.7
comp=Z,385nm,18.1s,baz=340,slow=39
ASF Jabal al Asfar 91.29 330 LR LR 11 20 19.0
comp=Z,509nm,18.5s,baz=22,slow=40
JMDO Jabal Madar 91.29 309 P **P** **10 33 20.3 0.0**
JMDO P **P** **10 33 20.3 0.0**
BSY Bisya 91.42 310 P **P** **10 33 20.8 0.0**
IDI Anoyia 91.52 340 LR LR 11 20 49.2
comp=Z,356nm,18.1s,baz=73,slow=40
MHTO MHTO 92.53 308 P **P** **10 33 26.0 0.0**
SNR=9.8
SMRA Abu-Samra 92.66 316 P **P** **10 33 26.3 -0.2**
MZR Muzera 92.97 313 P **P** **10 33 27.6 -0.4**
KEST Kesra 93.34 353 P **P** **10 33 28.8 -0.8**
comp=Z,6.1nm,1.0s,baz=48,slow=4.0,SNR=4.2
comp=Z,6.1nm,1.0s
KEST Kesra 93.34 353 IAmb IAmb 10 33 30.4
comp=Z,14nm,1.1s
KEST Kesra 93.34 353 P **P** **10 33 29.7 +0.1**
EIL Elat 94.22 331 LR LR 11 22 03.0
comp=Z,413nm,19.5s,baz=27,slow=39
SDV Santo Domingo 94.63 70 P **P** **10 33 36.5 +0.6**
comp=Z,3.6nm,0.8s,baz=9.2,slow=3.1,SNR=6.7
SDV LR LR 11 20 36.5
comp=Z,161nm,18.2s,baz=354,slow=38
comp=Z,3.6nm,0.8s
RPZ Rata Peaks 94.67 187 LR LR 11 13 10.2
comp=Z,618nm,18.9s,baz=348,slow=33
RAYN Ar Rayn 96.01 319 P **P** **10 33 41.4 -0.6**
RAYN IAmb IAmb 10 33 42.8
comp=Z,17nm,1.2s
RAYN Ar Rayn 96.01 319 P **P** **10 33 41.4 -0.6**
RAYN pmax pmax
comp=Z,17nm,1.3s
RAYN Ar Rayn 96.01 319 P **P** **10 33 42.1 +0.1**
MD01 Midelt array s 96.39 5 P **P** **10 33 43.1 -0.5**
MD31 MD31 96.39 5 IAmb IAmb 10 33 44.4
comp=Z,13nm,1.3s
ABTO Aybut 97.91 310 P **P** **10 33 50.6 -0.1**
RPN Rapa Nui 99.08 122 LR LR 11 09 36.7
comp=Z,179nm,20.4s,baz=325,slow=30
TORD Torodi Ar. Bea 116.16 359 PKP **PKPdf** **10 38 56.9 -1.0**
comp=Z,0.4nm,0.7s,baz=358,slow=2.1,SNR=3.0
TORD PKKPab **PKKPab** **10 49 36.8 +1.7**
comp=Z,1.2nm,0.8s,baz=227,slow=5.6,SNR=4.8
SIV San Ignacio 119.96 78 PKP **PKPdf** **10 39 05.0 -0.2**
comp=Z,1.6nm,0.8s,baz=252,slow=1.7,SNR=6.5
H03N2 Juan Fernandez 121.31 106 T T 12 52 17.4
baz=316,slow=77,SNR=42
H03N1 Juan Fernandez 121.32 106 T T 12 52 19.1
baz=316,slow=77,SNR=62
H03N3 Juan Fernandez 121.33 106 T T 12 52 16.5
baz=316,slow=77,SNR=52
DBIC Dimbokro 122.39 7 PKP **PKiKP** **10 39 10.6 +0.4**
comp=Z,3.1nm,0.8s,baz=34,slow=2.6,SNR=3.3
BDFB Brasilia 127.53 66 PKP **PKiKP** **10 39 20.2 -0.1**
comp=Z,12nm,0.4s,baz=209,slow=8.1,SNR=3.9
BI02 San Fabin de 128.14 104 **PKiKP** **10 39 21.7 +0.8**
CPUP Villa Florida 129.93 83 PKP **PKPdf** **10 39 24.2 +0.3**
comp=Z,2.4nm,0.7s,baz=323,slow=3.2,SNR=6.6
PLCA Paso Flores 131.12 107 PKP **PKiKP** **10 39 27.3 +0.5**
comp=Z,8.6nm,1.1s,baz=278,slow=2.3,SNR=6.2
QSPA South Pole Qui 140.72 180 PKP **PKPdf** **10 39 43.1 +0.3**
comp=Z,1.5nm,0.4s,baz=74,slow=3.4,SNR=2.1
QSPA South Pole Qui 140.72 180 **PKPdf** **10 39 43.4 +0.5**
BROLN Tihalogang 143.63 315 *i* P PKPbc 10 39 47.8 +0.9
KHWEE KHWEE 145.21 317 *i* P **PKPdf** **10 39 52.2 -0.1**
TSUM Tsumeb 145.61 331 **PKPab** **10 39 53.8 +0.2**
LPHEP Lephephe 146.27 315 *i* P **PKPdf** **10 39 54.1 +0.1**
GRTLG Ghanzi 146.38 324 *i* P **PKPbc** **10 39 55.2 -0.3**
KDWAN Kaudwane 146.81 317 *i* P **PKPdf** **10 39 55.5 +0.6**
KGCAE Kacgae 147.35 321 **PKPab** **10 39 59.5 -0.7**
KGCAE Kacgae 147.35 321 *i* P **PKPbc** **10 39 57.2 -1.1**
LKGWB Lokgwabe 148.87 322 *i* P **PKPdf** **10 39 59.9 +1.5**
BOSA Boshof 151.04 311 PKPbc **PKiKP** **10 40 07.8 -0.2**
comp=Z,15nm,0.9s,baz=102,slow=1.9,SNR=15
NVL N'lazarevskaya 159.48 190 *e*PKIKP **PKPdf** **10 40 07.2 -4.3**
NVL *e* 10 47 12.9
NVL *e*SS SS 11 04 35.0 -1.0
NVL *e*SSS SSS 11 10 43.0
NVL pmax pmax
comp=Z,8.0nm,0.6s

IDC 21 10:21:18.6±408.0, 57.66N×30.61E, h0km, Error ellipse: s-maj=159.4km s-min=84.9km az=106.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.72**	**102**	I	I	10 44 30.0	
	0.2nm,0.6s,baz=285,slow=323,SNR=1.3						
I26DE	**FREYUNG INFRAS**	**13.39**	**236**	I	I	11 43 30.0	
	baz=38,slow=340,SNR=1.6						
I31KZ	**AKTYUBINSK INF**	**17.58**	**103**	I	I	12 04 00.0	
	baz=307,slow=330,SNR=1.0						

*NEIC **21** 10:24:32.6±1.1, 50.88N±0.05×179.31W±0.07, h10km±1km, mb4.6/94, ML4.6/14, ML4.2(AEIC), Error ellipse: s-maj=8.5km s-min=6.4km az=141.0*
*MOS **21** 10:24:32.5±2.9, 50.80N×179.30W, h10km, mb4.9/13, Error ellipse: s-maj=12.0km s-min=8.2km az=107.2*
*AEIC **21** 10:24:34.4±2.2, 50.96N±0.05×179.24W±0.07, h7km±4km, Error ellipse: s-maj=7.2km s-min=5.4km az=144.0*
*IDC **21** 10:24:38.8±3.4, 51.19N×179.26W, h53km±30km, mb4.0/28, mbtmp4.3/30, ML4.4/1, Error ellipse: s-maj=23.1km s-min=13.0km az=170.0*

ISC 21 10:24:35.1±1.6, 50.94N±0.08×179.21W±0.03, h29km±10km, n221, σ1§10/204, mb4.6/82, 2C-9D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.67**	**22**		**Pb**	**10 24 47.5**	**-0.8**
GAKI					**Sb**	**10 24 57.1**	**-0.1**
GALAA	**Gareloi Lava P**	**0.87**	**18**		**Pb**	**10 24 51.3**	**-0.4**
GASW	**Gareloi Southw**	**0.87**	**15**		**Pb**	**10 24 51.0**	**-0.6**
GAEA	**Gareloi East**	**0.90**	**19**		**Pb**	**10 24 51.6**	**-0.5**
GANO	**Gareloi North**	**0.92**	**16**		**Pb**	**10 24 51.6**	**-0.9**
GANO					**Sb**	**10 25 04.1**	**-0.3**
GANE	**Gareloi Northe**	**0.93**	**17**		**Pb**	**10 24 51.8**	**-0.8**
GANE					**Sn**	**10 25 04.7**	**+0.1**
AMKA	**Amchitka**	**1.04**	**296**	Pg	**Pn**	**10 24 52.1**	**-1.6**
TASE	**Tanaga Southea**	**1.16**	**39**		**Pn**	**10 24 55.9**	**+0.4**
TAFL	**Tanaga Flats**	**1.16**	**44**		**Pb**	**10 24 56.2**	**-0.3**
TAFL					**Sb**	**10 25 13.0**	**+1.8**
TANO	**Tanaga North**	**1.20**	**34**		**Pn**	**10 24 56.5**	**+0.6**
TAFP	**Tanaga Falls P**	**1.23**	**38**		**Pn**	**10 24 56.8**	**+0.4**
CERB	**Semis' Cerberu**	**1.23**	**324**		**Pb**	**10 24 56.8**	**-1.0**
CESW	**Semis' Southwe**	**1.24**	**322**		**Pb**	**10 24 56.5**	**-1.2**
TAPA	**Tanaga Point A**	**1.24**	**44**		**Pn**	**10 24 57.1**	**+0.5**
TAPA					**Sb**	**10 25 14.6**	**+1.1**
CEPE	**Semis' Perret**	**1.26**	**326**		**Pb**	**10 24 56.9**	**-1.2**
CEAP	**Semis' Anvil P**	**1.31**	**325**		**Pb**	**10 24 57.9**	**-1.1**
CETU	**Semis' Tuman**	**1.31**	**322**		**Pb**	**10 24 58.0**	**-1.1**
KIMD	**Kanaga Island**	**1.49**	**55**		**Pn**	**10 25 00.9**	**+1.0**
KIMD					**Sb**	**10 25 20.5**	**-0.1**
KIWB	**Kanaga Island**	**1.58**	**54**	Pn	**Pn**	**10 25 02.1**	**+0.9**
KIKV	**Kanaga Island**	**1.59**	**53**		**Pn**	**10 25 02.4**	**+1.1**
KIKV					**Pb**	**10 25 02.8**	**-1.0**
KIKV					**Sb**	**10 25 23.2**	**-0.3**
KICM	**Kanaga Island**	**1.60**	**51**		**Pn**	**10 25 02.8**	**+1.4**
KIRH	**Kanaga Island**	**1.64**	**53**		**Pn**	**10 25 03.3**	**+1.3**
KINC	**Kanaga Island**	**1.64**	**52**		**Pn**	**10 25 03.4**	**+1.4**
LSSE	**Little Sitkin**	**1.71**	**307**		**Pb**	**10 25 03.9**	**-2.0**
LSPA	**Little Sitkin**	**1.72**	**307**		**Pb**	**10 25 04.1**	**-2.0**
LSNW	**Little Sitkin**	**1.76**	**307**		**Pn**	**10 25 04.4**	**+0.8**
ADK	**Adak**	**1.84**	**58**	Pn	**Pn**	**10 25 06.0**	**+1.2**
ADK				IAML		10 25 36.4	
	7μm,0.8s						
ADK				IAML		10 25 37.3	
	6μm,0.7s						
ADK	**Adak**	**1.84**	**58**	P	**Pn**	**10 25 06.0**	**+1.2**
ADK						10 25 28.5	
ADAG	**Mount Adagdak**	**1.94**	**56**		**Pn**	**10 25 07.5**	**+1.4**
ADAG					**Pb**	**10 25 08.1**	**-1.6**
ETKA	**Kagalaska Isla**	**1.99**	**61**		**Pn**	**10 25 07.7**	**+0.9**
ETKA					**Sn**	**10 25 31.8**	**+1.1**
GSTD	**Great Sitkin T**	**2.22**	**58**		**Pn**	**10 25 11.5**	**+1.4**
GSSP	**Great Sitkin S**	**2.22**	**57**		**Pn**	**10 25 11.6**	**+1.6**
GSSP					**Pb**	**10 25 12.1**	**-2.5**
GSSP					**Sb**	**10 25 40.7**	**-0.9**
GSMY	**Great Sitkin M**	**2.26**	**59**		**Pn**	**10 25 12.2**	**+1.7**
GSTR	**Great Sitkin T**	**2.29**	**58**	Pn	**Pn**	**10 25 12.3**	**+1.5**
GSTR				IAML		10 25 56.2	
	comp=E,5μm,0.6s						
GSIG	**Igitkin Island**	**2.31**	**62**		**Pn**	**10 25 12.6**	**+1.4**
ATKA	**Atka Island**	**3.38**	**66**	Pn	**Pn**	**10 25 26.2**	**+0.4**
ATKA				IAML		10 26 15.1	
	comp=E,770nm,0.6s						
ATKA				IAML		10 26 18.7	
	comp=N,2μm,0.7s						
KOWE	**Korovin West**	**3.41**	**63**		**Pn**	**10 25 27.7**	**+1.4**
KONW	**Korovin Northw**	**3.44**	**63**		**Pn**	**10 25 28.1**	**+1.4**
KOKV	**Korovin Volcan**	**3.45**	**64**		**Pn**	**10 25 28.4**	**+1.4**
SHEM	**Shemya Is, Ala**	**4.52**	**296**	P	**Pn**	**10 25 42.7**	**+1.1**
	comp=N,19nm,0.3s,baz=103,slow=3.1,SNR=6.2						
SHEM				S	**Sn**	**10 26 38.7**	**+5.6**
	comp=N,39nm,0.4s,baz=263,slow=22,SNR=1.2						
	comp=N,57nm,0.7s						
SHEM	**Shemya Is, Ala**	**4.52**	**296**	Pn	**Pn**	**10 25 40.1**	**-1.5**
SHEM				IAML		10 26 58.5	
	comp=E,243nm,1.4s						
SMY	**Shemya**	**4.52**	**296**	Pn	**Pn**	**10 25 40.4**	**-1.2**
SMY				IAML		10 26 58.0	
	comp=N,464nm,1.2s						
SMY				IAML		10 26 58.4	
	comp=E,584nm,1.5s						
SMY	**Shemya**	**4.52**	**296**	P	**Pn**	**10 25 40.4**	**-1.2**
NIKH	**Nikolski High**	**6.72**	**68**	Pn	**Pn**	**10 26 12.0**	**+0.3**
SPIA	**Saint Paul Isl**	**8.17**	**37**		**Pn**	**10 26 32.2**	**+0.5**
UNV	**Unalaska Valle**	**8.30**	**65**	Pn	**Pn**	**10 26 34.0**	**+0.6**
LVA	**Lava Point**	**8.65**	**63**	Pn	**Pn**	**10 26 39.0**	**+0.7**
AKUT	**Akutan**	**8.79**	**63**	Pn	**Pn**	**10 26 40.5**	**+0.4**
M11K	**Mekoryuk**	**11.96**	**33**	Pn	**Pn**	**10 27 27.0**	**+3.6**
SDPT	**Sand Point**	**12.07**	**61**	Pn	**Pn**	**10 27 25.7**	**+0.7**
GAMB	**Gambell**	**13.48**	**14**	Pn	**Pn**	**10 27 45.3**	**+1.1**
N15K	**Kwethluk River**	**14.18**	**42**		**Pn**	**10 27 54.8**	**+1.1**
PETK	**Petropavlovsk-**	**14.37**	**288**	P	**Pn**	**10 27 57.6**	**+1.2**
	comp=E,3.2nm,0.8s,baz=81,slow=18,SNR=1.5						
P16K	**Nushagak River**	**14.58**	**48**	Pn	**Pn**	**10 27 59.0**	**-0.1**
ANM	**Nome**	**15.47**	**23**	P	**Pn**	**10 28 12.2**	**+1.2**
ANM	**Nome**	**15.47**	**23**	P	**Pn**	**10 28 12.2**	**+1.2**
ANM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ACHA	**Angle Creek He**	**15.59**	**53**	Pn	**Pn**	**10 28 13.1**	**+0.5**
ACHA				IAmb	IAmb	10 28 23.8	
	comp=Z,49nm,1.4s						
J16K	**Anvik River**	**15.89**	**32**	Pn	**Pn**	**10 28 16.2**	**-0.3**
M17K	**Holitna River**	**15.94**	**41**	Pn	**Pn**	**10 28 16.9**	**-0.1**
M17K				IAmb	IAmb	10 28 28.3	
	comp=Z,28nm,0.8s						
K17K	**Iditarod**	**16.34**	**36**	Pn	**Pn**	**10 28 21.8**	**-0.3**
KDAK	**Kodiak Island**	**16.89**	**56**	P	**Pn**	**10 28 25.8**	**-3.3**
	comp=Z,17nm,0.8s,baz=153,slow=2.0,SNR=11						
KDAK				S	**Sn**	**10 31 30.2**	**-5.3**
	comp=Z,24nm,1.1s,baz=146,slow=17,SNR=2.3						
KDAK	**Kodiak Island**	**16.89**	**56**	P	**Pn**	**10 28 28.6**	**-0.5**
KDAK				IAmb	IAmb	10 28 31.7	
	comp=Z,35nm,1.0s						
KDAK	**Kodiak Island**	**16.89**	**56**	P	**Pn**	**10 28 28.6**	**-0.5**
KDAK				pmax	pmax		
	comp=Z,35nm,1.0s						
J18K	**Innoko River**	**17.36**	**35**	P	**Pn**	**10 28 34.2**	**-0.8**
L19K	**White Mountain**	**17.39**	**40**		**Pn**	**10 28 35.9**	**+0.4**
H18K	**Honhosa River**	**17.88**	**29**		**P**	**10 28 42.3**	**+0.4**
J19K	**Poorman**	**18.07**	**35**	P	**P**	**10 28 44.3**	**+0.4**
K20K	**Telida**	**18.30**	**38**	P	**Pn**	**10 28 47.1**	**+0.6**
G18K	**Tagagawik**	**18.31**	**27**	P	**Pn**	**10 28 47.4**	**+0.7**
STLK	**Strandline Lak**	**18.38**	**44**	P	**P**	**10 28 47.8**	**+0.3**
C16K	**Lisburne Hills**	**18.67**	**16**	P	**Pn**	**10 28 51.4**	**+0.5**
SLKM	**Skilak Lake**	**18.78**	**48**	P	**Pn**	**10 28 53.0**	**+0.7**
G19K	**Purcell Mounta**	**18.95**	**28**	P	**P**	**10 28 53.2**	**-0.4**
F19K	**Shaleruckik Mo**	**19.23**	**26**	P	**Pn**	**10 28 57.5**	**-0.2**
L22K	**Petersville**	**19.25**	**42**	P	**P**	**10 28 57.8**	**+0.8**
L22K				IAmb	IAmb	10 28 58.3	
	comp=Z,28nm,0.9s						
SEY	**Seymchan**	**19.41**	**319**	*i* P	**P**	**10 28 58.0**	**-0.6**
KTH	**Kantishna Hill**	**19.63**	**39**	P	**P**	**10 29 01.9**	**+0.8**
KTH				IAmb	IAmb	10 29 02.6	
	comp=Z,42nm,0.8s						
C18K	**Utukok River**	**19.79**	**20**	P	**Pn**	**10 29 04.3**	**-0.2**
C18K				IAmb	IAmb	10 29 05.3	
	comp=Z,22nm,1.0s						
BPAW	**Bear Paw Mtn.**	**19.86**	**38**		**P**	**10 29 04.4**	**+0.9**
BPAW				IAmb	IAmb	10 29 09.6	
	comp=Z,22nm,0.8s						
F20K	**Avaraart Lake**	**19.96**	**27**	P	**P**	**10 29 05.3**	**+0.7**
H21K	**Melozitna Rive**	**20.01**	**33**	P	Pn	10 29 06.7	-0.4
H21K				IAmb	IAmb	10 29 07.6	
	comp=Z,22nm,1.0s						
I21K	**Tanana**	**20.04**	**34**	P	**P**	**10 29 05.0**	**-0.4**
I21K				IAmb	IAmb	10 29 07.9	
	comp=Z,37nm,0.9s						
G21K	**Allakaket**	**20.29**	**30**	P	**P**	**10 29 08.8**	**+0.6**
G21K				IAmb	IAmb	10 29 10.3	
	comp=Z,37nm,0.8s						
H22K	**Ishtalitna Cre**	**20.64**	**33**	P	**P**	**10 29 12.8**	**+0.8**
F21K	**Alatna River**	**20.74**	**29**		**P**	**10 29 13.8**	**+0.7**
NEA2	**Nenana**	**20.83**	**38**	P	**P**	**10 29 14.4**	**+0.4**
NEA2				IAmb	IAmb	10 29 19.9	
	comp=Z,29nm,0.9s						
G23K	**Bananza Creek**	**21.54**	**32**	P	**P**	**10 29 21.3**	**-0.4**
G23K				IAmb	IAmb	10 29 23.7	
	comp=Z,16nm,1.0s						
ILAR	**Eielson Array**	**21.75**	**38**	P	**P**	**10 29 22.8**	**-1.1**
	comp=Z,2.9nm,0.8s,baz=249,slow=9.2,SNR=5.4						
	comp=Z,2.9nm,0.8s						
COLD	**Coldfoot**	**21.77**	**31**	P	**P**	**10 29 23.6**	**-0.5**
COLD				IAmb	IAmb	10 29 27.1	
	comp=Z,17nm,0.9s						
G24K	**Hadweenzic Riv**	**22.40**	**33**		**P**	**10 29 31.1**	**+0.1**
G24K				IAmb	IAmb	10 29 32.5	
	comp=Z,28nm,0.9s						
D24K	**Happy Valley**	**23.30**	**27**	IAmb	IAmb	10 29 41.7	
	comp=Z,26nm,0.8s						
L27K	**Beaver Creek,**	**23.31**	**44**	P	**P**	**10 29 40.0**	**-0.4**
F25K	**Christian Rive**	**23.46**	**32**	P	**P**	**10 29 41.9**	**0.0**
F25K				IAmb	IAmb	10 29 42.9	
	comp=Z,15nm,0.9s						
C24K	**Franklin Bluff**	**23.68**	**26**	IAmb	IAmb	10 29 45.0	
	comp=Z,19nm,0.8s						
G26K	**Porcupine Rive**	**23.82**	**34**	P	**P**	**10 29 45.5**	**+0.3**
G26K				IAmb	IAmb	10 29 46.6	
	comp=Z,55nm,1.4s						
TYV	**Tymovskoe**	**23.88**	**285**	*e*P	**P**	**10 29 44.6**	**-1.3**
TYV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.7s						
M29M	**Somme Creek**	**24.71**	**47**	P	**P**	**10 29 53.7**	**+0.1**
M29M				IAmb	IAmb	10 29 55.9	
	comp=Z,6.6nm,0.7s						
I28M	**Miner Creek**	**24.74**	**39**	P	**P**	**10 29 53.0**	**-0.9**
I28M				IAmb	IAmb	10 29 54.9	
	comp=Z,18nm,0.8s						
YSS	**Yuzhno-Sakhali**	**25.11**	**276**	*e*P	**P**	**10 29 58.7**	**+1.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=N,600nm,19.0s						
YSS				MLR	MLR		
	comp=Z,1μm,19.0s						
YSS				MLR	MLR		
	comp=E,900nm,17.0s						
K29M	**Barlow Dome**	**25.37**	**43**	IAmb	IAmb	10 29 59.8	
	comp=Z,10nm,0.8s						
F28M	**Old Crow**	**25.48**	**34**	IAmb	IAmb	10 30 02.9	
	comp=Z,12nm,0.8s						
KLR	**Kul'dur**	**31.06**	**286**	P	**P**	**10 30 50.4**	**+0.1**
	comp=Z,11nm,0.8s,baz=67,slow=8.5,SNR=11						
	comp=Z,11nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**33.02**	**205**	T	T	11 06 17.7	
	baz=15						
H11N3	**WAKE ISLAND Hy**	**33.03**	**204**	T	T	11 06 26.0	
	baz=15						
H11N1	**WAKE ISLAND Hy**	**33.04**	**205**	T	T	11 06 35.8	
	baz=18						
H11S1	**WAKE ISLAND Hy**	**34.24**	**204**	T	T	11 08 33.4	
	baz=18						
H11S2	**WAKE ISLAND Hy**	**34.26**	**204**	T	T	11 08 32.4	
	baz=18						
H11S3	**WAKE ISLAND Hy**	**34.26**	**204**	T	T	11 08 49.1	
	baz=18						
BNX	**BinXian**	**35.21**	**283**	||P	**P**	**10 31 25.3**	**-1.2**
BNX				pmax	pmax		
	comp=Z,12nm,0.7s						
YKA	**Yellowknife Ar**	**35.73**	**46**	P	**P**	**10 31 30.4**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=286,slow=8.9,SNR=11						
	comp=Z,3.3nm,0.7s						
YKA	**Yellowknife Ar**	**35.73**	**46**	P	**P**	**10 31 29.6**	**-1.1**
GNW	**Green Mountain**	**36.20**	**73**	P	**P**	**10 31 35.7**	**+0.8**
GNW				IAmb	IAmb	10 31 44.0	
	comp=Z,5.9nm,0.9s						
EDM	**Edmonton**	**39.26**	**60**	IAmb	IAmb	10 32 02.4	
	comp=Z,12nm,0.7s						
KSRS	**Korea Array**	**39.39**	**271**	P	**P**	**10 32 03.8**	**+1.8**
	comp=Z,2.7nm,0.9s,baz=64,slow=8.8,SNR=5.9						
	comp=Z,2.7nm,0.9s						
BCYI	**Bear Canyon**	**43.51**	**72**	IAmb	IAmb	10 32 38.5	
	comp=Z,8.7nm,1.1s						
EGMT	**Eagleton**	**43.70**	**65**	IAmb	IAmb	10 32 40.2	
	comp=Z,9.9nm,0.8s						
NVAR	**Mina Array Bea**	**43.87**	**82**	P	**P**	**10 32 41.0**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=306,slow=8.0,SNR=2.8						
	comp=Z,0.7nm,0.8s						
BOZ	**Bozeman (W)**	**43.88**	**69**	IAmb	IAmb	10 32 40.4	
	comp=Z,6.0nm,0.7s						
YHB	**Horse Butte**	**44.59**	**70**	IAmb	IAmb	10 32 47.6	
	comp=Z,8.2nm,0.8s						
YMR	**Madison River**	**44.78**	**70**	IAmb	IAmb	10 32 48.8	
	comp=Z,7.0nm,0.8s						
H17A	**Grant Village**	**45.16**	**70**	IAmb	IAmb	10 32 52.4	
	comp=Z,4.5nm,0.8s						
BJI2	**Beijing**	**45.23**	**282**	P	**P**	**10 32 49.8**	**+0.2**
BJI2				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RLMT	**Red Lodge**	**45.53**	**69**	P	**P**	**10 32 52.8**	**+0.6**
RLMT				IAmb	IAmb	10 32 55.6	
	comp=Z,6.9nm,0.9s						
TPNV	**Topopah Spring**	**46.06**	**82**	P	**P**	**10 32 56.9**	**+0.6**
TPNV				IAmb	IAmb	10 33 05.2	
	comp=Z,5.4nm,0.9s						
TPNV	**Topopah Spring**	**46.06**	**82**	P	**P**	**10 32 56.9**	**+0.6**
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TLY	**Talaya**	**46.09**	**303**	P	**P**	**10 32 56.5**	**+0.3**
	comp=Z,6.4nm,0.9s,baz=72,slow=9.5						
	comp=Z,6.4nm,0.9s						
TLY	**Talaya**	**46.09**	**303**	P	**P**	**10 32 56.1**	**-0.1**
TLY				IAmb	IAmb	10 32 57.7	
	comp=Z,6.6nm,0.8s						
DUG	**Dugway, Tooele**	**46.22**	**76**	IAmb	IAmb	10 33 14.3	
	comp=Z,4.9nm,0.8s						
ULN	**Ulaanbaatar**	**46.23**	**296**	*i* P	**P**	**10 32 57.1**	**-0.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**46.62**	**297**	P	**P**	**10 33 00.3**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=55,slow=8.6,SNR=5.7						
	comp=Z,3.1nm,0.8s						
SONM	**Songino Array**	**46.62**	**297**	P	**P**	**10 32 59.9**	**-0.6**
SONM				IAmb	IAmb	10 33 01.9	
	comp=Z,3.4nm,0.8s						
BW06	**Boulder Array**	**46.69**	**72**	IAmb	IAmb	10 33 03.1	
	comp=Z,6.5nm,0.9s						
PD31	**Pinedale Array**	**46.69**	**72**	IAmb	IAmb	10 33 03.1	
	comp=Z,6.5nm,0.9s						
PDAR	**Pinedale Array**	**46.69**	**72**	P	**P**	**10 33 02.2**	**+0.9**
	comp=Z,5.3nm,0.8s,baz=306,slow=3.7,SNR=6.7						
	comp=Z,5.3nm,0.8s						
PDAR	**Pinedale Array**	**46.69**	**72**	P	**P**	**10 33 01.6**	**+0.3**
HHC	**Hu-ho-hao-te**	**47.56**	**286**	*e*P	**P**	**10 33 08.1**	**+0.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,64nm,5.2s						
NJ2	**Nanjing**	**48.57**	**272**	*e*P	**P**	**10 33 14.5**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
O20A	**White River Ci**	**49.05**	**74**	IAmb	IAmb	10 33 25.4	
	comp=Z,7.3nm,0.7s						
PV20	**West Nyswonger**	**49.72**	**76**	IAmb	IAmb	10 33 28.3	
	comp=Z,9.5nm,0.8s						
PV04	**Paradox Valley**	**49.72**	**76**	IAmb	IAmb	10 33 28.8	
	comp=Z,8.8nm,0.8s						
PV19	**Morning Glory**	**49.73**	**76**	IAmb	IAmb	10 33 28.4	
	comp=Z,10nm,0.7s						
PV17	**East Wray Mesa**	**49.76**	**76**	IAmb	IAmb	10 33 28.8	
	comp=Z,8.7nm,0.6s						
PV03	**Paradox Valley**	**49.84**	**76**	IAmb	IAmb	10 33 29.3	
	comp=Z,7.4nm,0.7s						
KNGR	**Kungurtug, Tuv**	**49.91**	**304**	*i* P	**P**	**10 33 23.2**	**-2.7**
KNGR				pmax	pmax		
	comp=Z,23nm,1.4s						
SPITS	**Spitsbergen Ar**	**50.80**	**356**	P	**P**	**10 33 31.2**	**-1.0**
	comp=Z,6.1nm,0.6s,baz=41,slow=7.7,SNR=20						
	comp=Z,6.1nm,0.6s						
ZALV	**Zalesovo Beam**	**54.15**	**314**	P	**P**	**10 33 56.7**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=65,slow=8.3,SNR=3.1						
ZALV				PcP	**PcP**	**10 35 01.7**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=36,slow=5.9,SNR=4.7						
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**54.15**	**314**	P	**P**	**10 33 57.0**	**-0.2**
LZDM	**Lanzhou Array**	**55.44**	**286**	P	**P**	**10 34 08.0**	**+0.8

SFIN	**Lafayette**	**61.19**	**61**		**P**		**10 34 47.7**	**+0.8**
PZH	**PanZhiHua**	**63.16**	**280**	P	**P**		**10 35 01.1**	**+0.6**
FPAL	**Fort Paine**	**66.16**	**64**	P	**P**		**10 35 20.2**	**+0.5**
FINES	**FINESS Array B**	**66.16**	**347**	P	**P**		**10 35 18.3**	**-1.0**
	comp=Z,11nm,0.9s,baz=19,slow=6.5,SNR=8.2							
	comp=Z,11nm,0.9s							
FINES	**FINESS Array B**	**66.16**	**347**	P	**P**		**10 35 19.1**	**-0.2**
FINES	**FINESS Array B**	**66.16**	**347**	P	**P**		**10 35 19.1**	**-0.2**
AAK	**Ala-Archa**	**66.95**	**310**	*eP*	**P**		**10 35 24.6**	**-0.3**
AAK				pmax	pmax			
	comp=Z,7.0nm,0.9s							
AKTO	**Aktyubinsk**	**67.90**	**325**	P	**P**		**10 35 29.5**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=51,slow=13,SNR=2.9							
	comp=Z,1.9nm,0.6s							
NOA	**NORSAR Array B**	**68.06**	**355**	P	**P**		**10 35 30.8**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=6.8,slow=6.5,SNR=4.1							
	comp=Z,1.8nm,0.8s							
KKAR	**Karatay Array**	**68.49**	**312**		**P**		**10 35 34.3**	**-0.2**
KKAR	**Karatay Array**	**68.49**	**312**	P	**P**		**10 35 34.3**	**-0.2**
HFS	**Hagfors**	**68.80**	**353**	P	**P**		**10 35 34.6**	**-1.4**
	comp=Z,3.6nm,0.8s,baz=58,slow=3.7,SNR=5.6							
	comp=Z,3.6nm,0.8s							
KSH2	**Kashi**	**69.04**	**307**	P	**P**		**10 35 39.3**	**+1.2**
KSH2				pP	pP		10 35 41.8	-4.0
KSH2				pmax	pmax			
	comp=Z,18nm,1.0s							
CMAR	**Chiang Mai Arr**	**70.80**	**276**	P	**P**		**10 35 49.2**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=39,slow=7.3,SNR=1.9							
	comp=Z,0.5nm,0.4s							
EVN	**Everest**	**71.20**	**291**	P	**P**		**10 35 51.3**	**-0.7**
EVN				IAmb	IAmb		10 36 01.6	
	comp=Z,5.3nm,1.1s							
EKA	**Eskdalemuir Ar**	**74.05**	**2**	P	**P**		**10 36 07.4**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=359,slow=6.4,SNR=1.5							
	comp=Z,1.0nm,0.5s							
NIL	**Nilore**	**74.45**	**304**		**P**		**10 36 10.8**	**+0.3**
NIL	**Nilore**	**74.45**	**304**	P	**P**		**10 36 10.9**	**+0.3**
NIL				pmax	pmax			
	comp=Z,26nm,1.0s							
AKASG	**Malin Array Be**	**75.89**	**342**	P	**P**		**10 36 17.7**	**-0.8**
	comp=Z,6.2nm,0.4s,baz=24,slow=6.1,SNR=23							
	comp=Z,6.2nm,0.4s							
AKASG	**Malin Array Be**	**75.89**	**342**	P	**P**		**10 36 17.5**	**-0.9**
AKASG				IAmb	IAmb		10 36 18.9	
	comp=Z,4.2nm,0.8s							
AKBB	**Malin Array Si**	**75.89**	**342**	P	**P**		**10 36 17.8**	**-0.7**
AKBB	**Malin Array Si**	**75.89**	**342**	P	**P**		**10 36 17.8**	**-0.7**
AKBB				pmax	pmax			
	comp=Z,20nm,0.9s							
KIEV	**Kiev**	**75.90**	**342**		**P**		**10 36 17.8**	**-0.7**
KIEV	**Kiev**	**75.90**	**342**	P	**P**		**10 36 17.8**	**-0.7**
KIEV				pmax	pmax			
	comp=Z,18nm,0.9s							
KBL	**Kabul**	**75.91**	**308**	P	**P**		**10 36 18.9**	**-0.2**
KBL	**Kabul**	**75.91**	**308**	P	**P**		**10 36 18.9**	**-0.2**
KBL				pmax	pmax			
	comp=Z,14nm,1.0s							
MEM	**Membach**	**78.74**	**357**	*dP*	**P**		**10 36 34.7**	**+0.3**
	comp=Z,60nm,1.0s							
BTNL	**Ternell**	**78.75**	**357**	*dP*	**P**		**10 36 34.5**	**-0.1**
	comp=Z,7.4nm,0.8s							
LANS	**Liptovska Anna**	**79.02**	**348**	*eP*	**P**		**10 36 37.3**	**+1.2**
LANS	**Liptovska Anna**	**79.02**	**348**	*eP*	**P**		**10 36 37.3**	**+1.2**
BMRD	**Maredsous**	**79.08**	**357**	*dP*	**P**		**10 36 36.2**	**-0.1**
BUR08	**Bucovina Ar. S**	**79.58**	**343**		**P**		**10 36 39.6**	**+0.3**
BURAR	**Bucovina Array**	**79.61**	**343**	⇓P	**P**		**10 36 39.4**	**0.0**
BURAR	**Bucovina Array**	**79.61**	**343**		**P**		**10 36 39.7**	**+0.4**
GERES	**GERESS Array B**	**79.98**	**351**	P	**P**		**10 36 41.1**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=57,slow=4.9,SNR=3.8							
	comp=Z,1.4nm,0.7s							
DRGR		**80.83**	**345**	⇓P	**P**		**10 36 46.1**	**+0.2**
COVR	**Voineasa-Covas**	**81.13**	**342**	⇓P	**P**		**10 36 48.9**	**+1.4**
WRA	**Warramunga Arr**	**81.51**	**224**	P	**P**		**10 36 49.7**	**0.0**
	comp=Z,0.5nm,0.8s,baz=24,slow=5.4,SNR=2.4							
	comp=Z,0.5nm,0.8s							
WRA	**Warramunga Arr**	**81.51**	**224**	IAmb	IAmb		10 36 50.1	
	comp=Z,0.4nm,1.4s							
MLR	**Muntele Rosu**	**81.52**	**342**	⇑P	**P**		**10 36 51.1**	**+1.4**
VOIR		**81.74**	**343**	⇓P	**P**		**10 36 51.9**	**+1.1**
HERR	**Herculane**	**82.74**	**345**	⇑P	**P**		**10 36 55.9**	**-0.1**
MDVR	**Moldovita**	**82.95**	**345**	⇓P	**P**		**10 36 57.3**	**+0.2**
ARPR	**Arapgir-MALATY**	**84.50**	**332**	IAmb	IAmb		10 37 06.8	
	comp=Z,8.1nm,0.9s							
ZCCA	**Zocca**	**84.68**	**353**		**P**		**10 37 06.2**	**+0.3**
ASAR	**Alice Springs**	**84.98**	**222**	P	**P**		**10 37 09.2**	**+1.7**
	comp=Z,1.1nm,1.1s,baz=31,slow=5.6,SNR=2.6							
	comp=Z,1.1nm,1.1s							
ASAR	**Alice Springs**	**84.98**	**222**	P	**P**		**10 37 07.1**	**-0.4**
BRTR	**Keskin Array B**	**85.24**	**335**	P	**P**		**10 37 09.1**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=54,slow=3.2,SNR=7.7							
	comp=Z,3.2nm,0.8s							
BRTR	**Keskin Array B**	**85.24**	**335**	P	**P**		**10 37 08.7**	**-0.3**
ESDC	**Sonseca Array**	**89.67**	**4**	P	**P**		**10 37 28.9**	**-1.3**
	comp=Z,1.3nm,0.9s,baz=13,slow=3.6,SNR=2.8							
	comp=Z,1.3nm,0.9s							
H03N2	**Juan Fernandez**	**121.27**	**106**	T	T		12 56 35.1	
	baz=317,slow=78,SNR=6.4							
H03N1	**Juan Fernandez**	**121.29**	**106**	T	T		12 56 36.5	
	baz=317,slow=78,SNR=6.7							
H03N3	**Juan Fernandez**	**121.29**	**106**	T	T		12 56 35.7	
	baz=317,slow=78,SNR=6.6							

*IDC **21** 10:34:02.7±0.5,3˚.47N×79˚.46W, h0km, mb4.4/21, mbtmp4.5/27,ML4.2/5,MS3.9/14, Error ellipse: s-maj=17.5km s-min=11.7km az=58.0*

*VAO **21** 10:34:05.0±0.3,3˚.45N×79˚.07W, h10km, mb5.0, Presumed earthquake*

*NEIC **21** 10:34:05.5±1.8,3˚.48N±0˚.02×79˚.38W±0˚.08, h10km±1km, mb4.8/340, Error ellipse: s-maj=13.4km s-min=3.5km az=270.0*

*RSNC **21** 10:34:05.5±0.0,3˚N±3˚×7˚9W±˚, h28km±8km, M4.6, mB5.5, mb5.4, ML4.2, Mw(mB)4.9*

*CATAC **21** 10:34:08.4±0.8,4˚N±6˚×7˚9W±˚, h24km±9km, M4.7/15, mB5.0/7, mb5.0/15, MLv5.0/14, Mw(mB)4.3/7, MwMwp3.4/1, Mwp4.1/1, Error ellipse: s-maj=13.2km s-min=3.7km az=10.2, confirmed*

*GCMT **21** 10:34:09.5±0.2,3˚.56N±0˚.01×79˚.27W±0˚.02, h14km±1km, MW4.9/85, Moment Tensor Solution. s11,c12; s85,c123; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.74±.12; Mθθ=1.48±.07; Mφφ=2.23±.12; Mrθ=0.23±.18; Mθφ=1.37±.07; Mφr=0.76±.22; Best double couple: M=2.44900×10^16^ NP1:ϕ=63.00000°, δ=68.00000°, λ=-7.00000°. NP2: ϕ=155.00000°, δ=84.00000°, λ=158.00000°. Principal axes: T 2.8000, Plg10.0000°, Azm287.0000°; N -0.6980, Plg67.0000°, Azm171.0000°; P -2.0970, Plg20.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*UPA **21** 10:34:46.7±1.3,6˚.88N×78˚.63W, h4km±11km, MW3.9, Presumed earthquake*

ISC 21 10:34:04.2±1.7,3˚.44N±0˚.03×79˚.33W±0˚.04, h12km±10km, **n366,σ1§88/269, mb4.8**/170, **MS3.9**/11, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIZC	**Pizarro, Choco**	**2.48**	**52**	P	**Pn**	**10 34 41.7**	**-2.7**
PIZC				S	**Sn**	**10 35 08.6**	**-6.0**
BBAC	**Balboa, Cauca**	**2.51**	**124**	P	**Pn**	**10 34 43.6**	**-1.4**
BBAC				S	**Sn**	**10 35 12.1**	**-3.6**
JAMC	**Jamundi, Valle**	**2.66**	**95**	P	**Pn**	**10 34 45.6**	**-1.5**
JAMC				S	**Sn**	**10 35 16.0**	**-3.3**
POPC	**Popayan, Colom**	**2.79**	**109**	P	**Pn**	**10 34 47.3**	**-1.6**
POPC				S	**Sn**	**10 35 18.1**	**-4.6**
CMBC	**Cumbal**	**2.90**	**149**	P	**Pn**	**10 34 49.7**	**-0.9**
CMBC				S	Sn	10 35 16.6	-9.0
GCUF	**Volcan Galeras**	**2.96**	**138**	P	**Pn**	**10 34 51.6**	**+0.2**
GCUF				S	**Sn**	**10 35 26.3**	**-0.9**
CRUC	**La Cruz**	**3.01**	**128**	P	**Pn**	**10 34 52.4**	**+0.3**
CRUC				S	**Sn**	**10 35 28.1**	**-0.2**
YOTC	**Yotoco, Valle**	**3.02**	**80**	P	**Pn**	**10 34 50.0**	**-2.0**
YOTC				S	**Sn**	**10 35 25.1**	**-3.1**
TULM	**Tulcn-Chalpat**	**3.11**	**150**	P	**Pn**	**10 34 53.8**	**+0.3**
TULM				S	Sn	10 35 23.5	-7.4
PAC1	**Pacto, Paraso**	**3.20**	**170**	P	**Pn**	**10 34 52.5**	**-1.9**
PAC1				S	Sn	10 35 25.0	-7.6
CUSE	**Cuicocha Este**	**3.25**	**163**	P	**Pn**	**10 34 54.9**	**-0.5**
CUSE				S	**Sn**	**10 35 30.9**	**-3.3**
OTAV	**Otavalo**	**3.30**	**165**		**Pn**	**10 34 55.1**	**-1.0**
OTAV	**Otavalo**	**3.30**	**165**	*eP*	**Pn**	**10 34 55.1**	**-1.0**
OTAV	**Otavalo**	**3.30**	**165**	P	**Pn**	**10 34 54.8**	**-1.3**
OTAV				S	**Sn**	**10 35 31.1**	**-4.4**
SOLC	**Bahia Solano**	**3.36**	**35**	P	**Pn**	**10 34 53.7**	**-2.9**
SOLC				S	**Sn**	**10 35 29.5**	**-7.0**
PLMC	**San Jos del P**	**3.37**	**64**	P	**Pn**	**10 34 54.7**	**-2.0**
PLMC				S	**Sn**	**10 35 31.7**	**-5.0**
PTAC	**Punta Ardita,**	**3.98**	**22**	P	**Pn**	**10 35 03.5**	**-1.6**
PTAC	**Punta Ardita,**	**3.98**	**22**	*eP*	**Pn**	**10 35 03.9**	**-1.2**
GARC	**Garzon, Huila**	**4.02**	**108**	P	**Pn**	**10 35 06.8**	**+0.9**
GARC				S	**Sn**	**10 35 52.7**	**-0.5**
ACHO3	**Achotines, Los**	**4.04**	**348**	*eP*	**Pb**	**10 35 15.1**	**-0.2**
ANIL	**Santa Ana**	**4.05**	**75**	P	**Pn**	**10 35 05.9**	**-0.4**
ANIL				S	**Sn**	**10 35 51.8**	**-2.0**
CBOC	**Ciudad Bolivar**	**4.09**	**54**	P	**Pn**	**10 35 04.5**	**-2.2**
CBOC				S	**Sn**	**10 35 46.1**	**-8.5**
FLOC	**Florencia**	**4.11**	**117**	P	**Pn**	**10 35 07.6**	**+0.8**
FLOC				S	**Sn**	**10 35 54.0**	**-0.9**
PEDA3	**Pedasi**	**4.12**	**350**	*eP*	**Pb**	**10 35 14.7**	**-2.0**
NIZA	**Niza - Manizal**	**4.17**	**67**	P	**Pn**	**10 35 08.1**	**+0.2**
NIZA				S	**Sn**	**10 35 56.1**	**-0.6**
SLOR	**San Lorenzo -**	**4.22**	**169**		**Pn**	**10 35 10.6**	**+1.8**
RECRC	**Villamaria, Ca**	**4.24**	**69**	P	**Pn**	**10 35 09.6**	**+0.5**
RECRC				S	**Sn**	**10 35 57.5**	**-1.4**
GUY2C	**Guyana, Caldas**	**4.33**	**66**	P	**Pn**	**10 35 10.1**	**-0.2**
GUY2C				S	**Sn**	**10 35 59.1**	**-1.9**
PRAC	**Prado**	**4.44**	**86**	P	**Pn**	**10 35 12.4**	**+1.0**
PRAC				S	**Sn**	**10 36 02.0**	**-1.1**
MARI3	**Mariato, Verag**	**4.50**	**338**	*eP*	**Pg**	**10 35 27.7**	**-2.7**
DBBC	**Dabeiba**	**4.72**	**41**	P	**Pn**	**10 35 14.6**	**-0.7**
DBBC				S	**Sn**	**10 36 08.2**	**-1.9**
RSUS3	**Rio de Jesus,**	**4.87**	**338**	*eP*	**Pb**	**10 35 30.6**	**+1.1**
RSUS3				*eS*	Sn	10 36 04.3	-9.4
STIA3	**Santiago, Vera**	**4.91**	**341**	*eP*	**Pb**	**10 35 29.3**	**-0.9**
URMC	**La Uribe, Meta**	**4.94**	**92**	P	**Pn**	**10 35 19.3**	**+0.9**
URMC				S	**Sn**	**10 36 14.5**	**-1.1**
ROSC	**El Rosal**	**5.18**	**74**	Pn	**Pn**	**10 35 25.1**	**+3.2**
	93nm,0.3s,baz=315,slow=2.9,SNR=75						
ROSC				Sn	**Sn**	**10 36 25.9**	**+3.9**
	23nm,0.3s,baz=52,slow=24,SNR=6.1						
	277nm,0.4s						
ROSC	**El Rosal**	**5.18**	**74**		**Pn**	**10 35 24.2**	**+2.2**
ROSC	**El Rosal**	**5.18**	**74**	P	**Pn**	**10 35 24.1**	**+2.2**
ROSC				S	**Sn**	**10 36 24.9**	**+3.0**
APAC	**Apartado, Choc**	**5.21**	**32**	P	**Pn**	**10 35 22.4**	**+0.5**
	211nm,0.7s						
APAC				S	**Sn**	**10 36 20.1**	**-1.9**
	211nm,0.7s						
CVER	**Cruz Verde, Cu**	**5.35**	**78**	P	**Pn**	**10 35 25.8**	**+1.5**
	4µm375nm,0.7s						
CVER				S	**Sn**	**10 36 25.9**	**-0.2**
	4µm375nm,0.7s						
ARRA3	**Arraijan, Pana**	**5.50**	**357**	*eP*	**Pn**	**10 35 25.1**	**-0.9**
ZANG	**Zanguenga, Cho**	**5.51**	**354**	*eP*	**Pn**	**10 35 26.0**	**-0.1**
CAPC	**Capurgana**	**5.52**	**21**	P	**Pn**	**10 35 24.9**	**-1.4**
	126nm,0.7s						
CAPC				S	**Sn**	**10 36 25.1**	**-4.7**
	126nm,0.7s						
CAP2	**Capurgana**	**5.53**	**21**	P	**Pn**	**10 35 25.2**	**-1.2**
CAP2				S	**Sn**	**10 36 26.0**	**-4.1**
MACC	**Macarena, Meta**	**5.62**	**103**	P	**Pn**	**10 35 28.6**	**+0.9**
	6µm802nm,0.6s						
MACC				S	**Sn**	**10 36 30.8**	**-1.4**
	6µm802nm,0.6s						
GAMB1	**Gamboa**	**5.66**	**356**	*eP*	**Pn**	**10 35 27.7**	**-0.5**
VILC	**Villavicencio,**	**5.66**	**83**	P	**Pn**	**10 35 29.8**	**+1.5**
	14µm2µm,0.8s						
VILC				S	**Sn**	**10 36 33.7**	**+0.4**
	14µm2µm,0.8s						
SPBC	**San Pablo de B**	**5.68**	**67**	P	**Pn**	**10 35 29.5**	**+1.0**
	2µm116nm,0.6s						
CHIC	**Chingaza**	**5.70**	**78**	P	**Pn**	**10 35 30.6**	**+1.5**
	5µm514nm,0.8s						
UREC	**San Jos de Ur**	**5.71**	**41**	P	**Pn**	**10 35 30.4**	**+1.5**
	1µm59nm,0.5s						
UREC				S	**Sn**	**10 36 32.4**	**-2.0**
	1µm59nm,0.5s						
BCIP	**Isla Barro Col**	**5.71**	**355**		**Pn**	**10 35 29.3**	**+0.4**
BCIP	**Isla Barro Col**	**5.71**	**355**	P	**Pn**	**10 35 27.2**	**-1.7**
BCIP				S	**Sn**	**10 36 30.0**	**-4.5**
PTBC	**PUERTO BERRIO,**	**5.75**	**57**	P	**Pn**	**10 35 29.7**	**+0.3**
PTBC				S	**Sn**	**10 36 35.1**	**-0.2**
DVD	**David**	**5.86**	**328**	*eP*	**Pb**	**10 35 49.9**	**+3.6**
DVD				*eS*	**Sn**	**10 36 38.3**	**+0.3**
COHC	**Cochancay**	**5.87**	**179**	Pn	**Pn**	**10 35 28.8**	**-2.2**
CDITO	**Canoas**	**6.20**	**325**	S	**Sn**	**10 36 42.6**	**-3.9**
BRU2	**Volcan**	**6.29**	**328**		**Pn**	**10 35 35.6**	**-1.3**
BRU2	**Volcan**	**6.29**	**328**	P	**Pn**	**10 35 34.7**	**-2.2**
BRU2				S	**Sn**	**10 36 44.9**	**-3.9**
PIRO	**Carate, Puerto**	**6.34**	**321**		**Pn**	**10 35 36.1**	**-1.5**
PIRO	**Carate, Puerto**	**6.34**	**321**	P	**Pn**	**10 35 36.1**	**-1.5**
PIRO				S	**Sn**	**10 36 45.2**	**-4.8**
PTJ1	**Puerto Jimnez**	**6.42**	**322**	P	**Pn**	**10 35 36.9**	**-1.8**
PTJ1				S	**Sn**	**10 36 48.6**	**-3.4**
RUSC	**La Rusia**	**6.68**	**68**	P	**Pn**	**10 35 44.2**	**+1.6**
RUSC				S	**Sn**	**10 37 00.0**	**+1.0**
DRK0	**Durika**	**6.97**	**326**	P	**Pn**	**10 35 43.8**	**-2.7**
DRK0				S	**Sn**	**10 37 01.3**	**-4.5**
OCHAL	**Ojochal**	**7.07**	**323**	P	**Pn**	**10 35 48.5**	**+0.9**
OCHAL				S	**Sn**	**10 37 04.9**	**-3.2**
SJCC	**San Jacinto, C**	**7.62**	**32**	P	**Pn**	**10 35 54.8**	**-0.5**
SJCC				S	**Sn**	**10 37 17.5**	**-4.1**
LCR2	**La Lucha 2**	**7.80**	**324**	S	**Sn**	**10 37 24.0**	**-2.2**
RAFA	**San Farael, Vo**	**7.86**	**326**	Pn	**Pn**	**10 36 00.1**	**+1.4**
HDC	**Heredia**	**8.07**	**324**		**Pn**	**10 36 03.2**	**+1.8**
HDC	**Heredia**	**8.07**	**324**	*eP*	**Pn**	**10 36 04.5**	**+3.1**
TRT2	**Tortugero**	**8.32**	**328**	P	**Pn**	**10 36 05.7**	**+1.0**
TRT2				S	**Sn**	**10 37 37.1**	**-1.5**
JTS	**Las Juntas de**	**8.80**	**321**	Pn	**Pn**	**10 36 10.4**	**-1.0**
	3.0nm,0.3s,baz=102,slow=6.5,SNR=10						
JTS				Sn	**Sn**	**10 37 44.6**	**-6.1**
	2.3nm,0.3s,baz=323,slow=23,SNR=9.8						
	12nm,0.4s						
JTS	**Las Juntas de**	**8.80**	**321**		**Pn**	**10 36 10.7**	**-0.7**
JUD3	**Juan Diaz 3**	**9.09**	**318**		**Pn**	**10 36 15.4**	**-0.1**
SDV	**Santo Domingo**	**10.19**	**58**	Pn	**Pn**	**10 36 31.4**	**+0.8**
	11nm,0.3s,baz=200,slow=3.9,SNR=46						
SDV				Sn	**Sn**	**10 38 21.3**	**-3.8**
	21nm,0.3s,baz=239,slow=21,SNR=12						
SDV				LR	LR	10 41 01.6	
	comp=Z,607nm,20.9s,baz=231,slow=41						
	29nm,0.4s						
SDV	**Santo Domingo**	**10.19**	**58**		**Pn**	**10 36 31.3**	**+0.6**
SDV	**Santo Domingo**	**10.19**	**58**	*eP*	**Pn**	**10 36 29.3**	**-1.4**
ATAH	**Atahualpa**	**10.54**	**175**	Pn	**Pn**	**10 36 37.3**	**+1.7**
	2.4nm,0.3s,baz=11,slow=9.3,SNR=12						
ATAH				Sn	**Sn**	**10 38 31.2**	**-2.8**
	1.2nm,0.3s,baz=176,slow=14,SNR=4.9						
ATAH				LR	LR	10 40 39.9	
	comp=Z,558nm,21.4s,baz=358,slow=38						
	17nm,0.6s						
MTO3	**Montecristo**	**14.72**	**318**	P	**Pn**	**10 37 35.3**	**+2.8**
ESQI	**Esquipulas**	**14.82**	**319**	P	**P**	**10 37 38.8**	**-1.0**
NNA	**Nana**	**15.52**	**171**	Pn	**Pn**	**10 37 43.7**	**+0.6**
	5.4nm,0.3s,baz=347,slow=10,SNR=46						
NNA				LR	LR	10 44 31.5	
	comp=Z,612nm,19.9s,baz=352,slow=40						
	5.6nm,0.3s						
NNA	**Nana**	**15.52**	**171**		**Pn**	**10 37 44.3**	**+1.1**
APG	**El Apazote**	**15.89**	**317**	Pn	**Pn**	**10 37 46.2**	**-1.9**
	baz=169,slow=10,SNR=10						
TEFE	**Tefe**	**16.22**	**115**	*eP*	**Pn**	**10 37 50.8**	**-1.4**
CHIV	**Chivirico**	**16.68**	**10**		**P**	**10 37 59.9**	**-0.3**
GTBY	**Guantanamo Bay**	**16.90**	**14**	P	**P**	**10 38 03.5**	**+0.8**
SDDR	**Presa de Saban**	**17.33**	**26**		**P**	**10 38 08.4**	**+0.9**
SDDR				IAmb	IAmb	10 38 11.5	
	comp=Z,70nm,0.9s						
NMDO	**Nuevo Mundo**	**17.54**	**14**		**P**	**10 38 09.5**	**-0.2**
CCIG	**Comitan**	**17.93**	**316**	P	**P**	**10 38 16.2**	**+1.9**
DR12	**Loma Pena Alta**	**18.09**	**32**		**P**	**10 38 16.5**	**+0.5**
BOAV	**Boa Vista**	**18.81**	**93**		**P**	**10 38 21.9**	**-1.9**
BOAV				IAmb	IAmb	10 38 26.2	
	comp=Z,36nm,0.7s						
BOAV	**Boa Vista**	**18.81**	**93**	*eP*	**P**	**10 38 21.8**	**-2.0**
TEIG	**Tepich**	**18.83**	**333**	P	**Pn**	**10 38 24.9**	**+0.4**
SJG	**San Juan**	**19.47**	**41**	P	**Pn**	**10 38 31.5**	**-0.8**
	comp=Z,7.3nm,0.5s,baz=217,slow=8.8,SNR=3.9						
SJG				LR	LR	10 46 47.0	
	comp=Z,284nm,19.9s,baz=206,slow=39						
ECPR	**Experimental S**	**19.49**	**40**	P	**Pn**	**10 38 32.5**	**0.0**
ECPR				IAmb	IAmb	10 38 36.7	
	comp=Z,52nm,0.8s						
PDPR	**Patillas Dam,**	**19.49**	**41**		**Pn**	**10 38 33.3**	**+0.8**
PDPR				IAmb	IAmb	10 38 47.2	
	comp=Z,39nm,1.0s						
CAMR	**Camarioca**	**19.61**	**354**	P	**Pn**	**10 38 35.8**	**+1.9**
HUMP	**Col San Antoni**	**19.69**	**41**	IAmb	IAmb	10 38 43.6	
	comp=Z,34nm,0.8s						
MACA	**Manacapuru-AM**	**19.75**	**109**		**P**	**10 38 34.0**	**-0.2**
MACA	**Manacapuru-AM**	**19.75**	**109**	*eP*	**P**	**10 38 33.3**	**-0.9**
CMIG	**Matias Romero**	**20.43**	**313**	P	**P**	**10 38 40.9**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=123,slow=9.8,SNR=6.9						
CMIG				LR	LR	10 45 23.7	
	comp=Z,186nm,18.6s,baz=154,slow=34						
	comp=Z,3.7nm,0.7s						
LPAZ	**La Paz**	**22.51**	**151**	P	**P**	**10 39 04.8**	**+0.3**
	comp=Z,12nm,0.7s,baz=335,slow=8.8,SNR=27						
LPAZ				LR	LR	10 49 55.0	
	comp=Z,398nm,19.1s,baz=312,slow=42						
	comp=Z,12nm,0.7s						
LPAZ	**La Paz**	**22.51**	**151**	P	**P**	**10 39 04.7**	**+0.1**
LPAZ				IAmb	IAmb	10 39 15.0	
	comp=Z,18nm,0.8s						
LPAZ	**La Paz**	**22.51**	**151**	*eP*	**P**	**10 39 04.9**	**+0.3**
PB12	**IPOC Station P**	**23.64**	**158**	P	**P**	**10 39 17.0**	**+1.4**
PB16	**IPOC Station P**	**23.70**	**156**	P	**P**	**10 39 18.7**	**+2.0**
ITTB	**Itaituba**	**24.81**	**108**	*eP*	**P**	**10 39 26.2**	**-0.4**
PB11	**IPOC Station P**	**24.94**	**158**	P	**P**	**10 39 29.6**	**+1.9**
VILB	**Vilhena**	**25.02**	**131**	P	**P**	**10 39 29.5**	**+1.1**
VILB	**Vilhena**	**25.02**	**131**	*eP*	**P**	**10 39 28.6**	**+0.3**
GO01	**Chusmiza**	**25.03**	**157**	P	**P**	**10 39 31.4**	**+2.5**
SIV	**San Ignacio**	**26.43**	**137**	P	**P**	**10 39 41.6**	**+0.5**
	comp=Z,13nm,0.8s,baz=312,slow=12,SNR=24						
	comp=Z,13nm,0.8s						
MDP	**Montagnes des**	**26.66**	**86**	LR	LR	10 49 43.9	
	comp=Z,253nm,21.0s,baz=262,slow=35						
PB07	**IPOC Station P**	**26.66**	**160**	IAmb	IAmb	10 40 08.8	
	comp=Z,22nm,0.8s						
PB09	**IPOC Station P**	**26.95**	**159**	P	**P**	**10 39 47.1**	**+1.1**
PDRB	**Porto dos Gac**	**26.99**	**124**	*eP*	**P**	**10 39 45.4**	**-0.8**
PB03	**IPOC Station P**	**27.01**	**160**	P	**P**	**10 39 47.7**	**+1.3**
PB03				IAmb	IAmb	10 39 58.6	
	comp=Z,22nm,0.8s						
CLDB	**Colider**	**27.40**	**122**	*eP*	**P**	**10 39 48.6**	**-1.3**
PTLB	**Pontes e Lacer**	**27.41**	**134**		**P**	**10 39 50.2**	**+0.2**
PTLB	**Pontes e Lacer**	**27.41**	**134**	*eP*	**P**	**10 39 49.8**	**-0.2**
PB05	**IPOC Station P**	**27.61**	**162**	P	**P**	**10 39 53.1**	**+1.3**
PB05				IAmb	IAmb	10 40 16.3	
	comp=Z,22nm,1.1s						
GOGA	**Godfrey**	**30.07**	**353**	P	**P**	**10 40 13.8**	**+0.3**
GOGA				IAmb	IAmb	10 40 14.6	
	comp=Z,12nm,0.8s						
SALV	**Santo Antonio**	**30.26**	**130**	*eP*	**P**	**10 40 14.2**	**-1.1**
Y60A	**Bolivia**	**30.43**	**2**	P	**P**	**10 40 17.8**	**+1.2**
JSC	**Jenkinsville**	**30.74**	**357**	P	**P**	**10 40 20.5**	**+1.2**
HODGE	**Hodges**	**30.76**	**355**	P	**P**	**10 40 20.4**	**+0.9**
HODGE				IAmb	IAmb	10 40 29.1	
	comp=Z,23nm,1.1s						
W57A	**Gilead**	**31.56**	**359**	P	**P**	**10 40 27.1**	**+0.5**
BG3	**Lake Jocassee**	**31.57**	**354**	P	**P**	**10 40 27.8**	**+1.1**
AC02	**Maricunga**	**31.67**	**162**		**P**	**10 40 31.7**	**+3.5**
AC02				IAmb	IAmb	10 40 32.6	
	comp=Z,15nm,1.0s						
CPCT	**Cooper Cave**	**32.21**	**352**	IAmb	IAmb	10 40 34.0	
	comp=Z,16nm,0.9s						
BDQN	**Bodoquena, MS**	**32.47**	**138**	*eP*	**P

CBKS	**Cedar Bluff**	**39.82**	**335**	IAmb	IAmb	10 41 46.0		
	comp=Z,18nm,0.7s							
J59A	**Piesco**	**40.09**	**5**	P	**P**	**10 41 40.2**	**+0.6**	
ANMO	**Albuquerque**	**40.20**	**325**	P	**P**	**10 41 41.2**	**+0.3**	
ANMO				IAmb	IAmb	10 41 43.8		
	comp=Z,15nm,0.8s							
DUN6	**Lazy B Ranch**	**40.21**	**320**	IAmb	IAmb	10 41 43.7		
	comp=Z,27nm,0.8s							
RCLB	**Rio Claro- Sao**	**40.32**	**131**	*e*P	**P**	**10 41 41.5**	**-0.4**	
VAO	**Valinhos**	**41.08**	**131**	P	**P**	**10 41 47.7**	**-0.5**	
VAO				IAmb	IAmb	10 41 47.9		
	comp=Z,22nm,0.8s							
VAO	**Valinhos**	**41.08**	**131**	*e*P	**P**	**10 41 47.4**	**-0.8**	
I42A	**Draeger Farm,**	**41.17**	**349**	P	**P**	**10 41 47.4**	**-1.1**	
I42A				IAmb	IAmb	10 41 48.8		
	comp=Z,23nm,1.1s							
TUC	**Tucson**	**41.17**	**318**		**P**	**10 41 48.6**	**-0.3**	
DIAM	**Diamantina, MG**	**41.23**	**123**	*e*P	**P**	**10 41 48.9**	**-0.7**	
WBO	**Williamsburg**	**41.55**	**4**	IAmb	IAmb	10 42 00.6		
	comp=Z,20nm,0.9s							
BSCB	**Bom Sucesso**	**41.67**	**127**	*e*P	**P**	**10 41 52.6**	**-0.5**	
SDCO	**Great Sand Dun**	**41.71**	**328**	IAmb	IAmb	10 41 56.2		
	comp=Z,22nm,1.4s							
MNTQ	**Montreal, Queb**	**42.19**	**6**	IAmb	IAmb	10 42 06.1		
	comp=Z,23nm,1.0s							
PARB	**Paraibuna**	**42.28**	**131**	*e*P	**P**	**10 41 57.4**	**-0.7**	
OGNE	**Ogallala**	**42.57**	**334**	IAmb	IAmb	10 42 09.0		
	comp=Z,22nm,1.1s							
TRQ	**Mont Tremblant**	**42.82**	**5**	IAmb	IAmb	10 42 10.9		
	comp=Z,27nm,1.2s							
ECSD	**EROS Data Cent**	**42.95**	**342**	IAmb	IAmb	10 42 19.8		
	comp=Z,18nm,1.3s							
K30B	**Basset**	**43.05**	**338**	IAmb	IAmb	10 42 04.5		
	comp=Z,19nm,0.8s							
SPMN	**Marine on St.**	**43.27**	**346**	IAmb	IAmb	10 42 12.0		
	comp=Z,21nm,1.2s							
WUAZ	**Wupatki**	**43.56**	**321**	IAmb	IAmb	10 42 11.4		
	comp=Z,20nm,1.0s							
CMC01	**Camacan, BA**	**43.60**	**116**	*e*P	**P**	**10 42 08.8**	**0.0**	
PV01	**Paradox Valley**	**43.66**	**326**	IAmb	IAmb	10 42 12.0		
	comp=Z,16nm,1.4s							
PV15	**Paradox Valley**	**43.76**	**326**	IAmb	IAmb	10 42 20.2		
	comp=Z,20nm,1.1s							
PV02	**Paradox Valley**	**43.80**	**326**	IAmb	IAmb	10 42 19.8		
	comp=Z,18nm,0.9s							
PV13	**Radium Mtn., P**	**43.81**	**326**	IAmb	IAmb	10 42 20.2		
	comp=Z,14nm,0.9s							
E62A	**Clayton Lake**	**43.85**	**10**	P	**P**	**10 42 11.7**	**+1.4**	
PV05	**Paradox Valley**	**43.91**	**326**	IAmb	IAmb	10 42 12.8		
	comp=Z,8.3nm,0.8s							
PV12	**Saucer Basin,**	**43.92**	**326**	IAmb	IAmb	10 42 21.2		
	comp=Z,20nm,0.8s							
PV18	**Skein Mesa, Pa**	**43.93**	**326**	IAmb	IAmb	10 42 20.9		
	comp=Z,14nm,0.7s							
PV11	**David Mesa, Pa**	**43.94**	**326**	IAmb	IAmb	10 42 22.1		
	comp=Z,9.7nm,0.8s							
PV19	**Morning Glory**	**44.01**	**326**	IAmb	IAmb	10 42 13.8		
	comp=Z,21nm,1.3s							
PV20	**West Nyswonger**	**44.02**	**326**	IAmb	IAmb	10 42 21.1		
	comp=Z,12nm,1.0s							
PV10	**Paradox Valley**	**44.09**	**326**	IAmb	IAmb	10 42 21.2		
	comp=Z,13nm,0.9s							
RCBR	**Riachuelo**	**44.33**	**102**	LR	LR	11 00 59.0		
	comp=Z,106nm,19.1s,baz=258,slow=36							
RIB01	**Linhares ES**	**44.46**	**122**	*e*P	**P**	**10 42 14.9**	**-0.6**	
LMQ	**La Malbaie**	**44.62**	**9**	P	**P**	**10 42 17.5**	**+1.0**	
LMQ				IAmb	IAmb	10 42 25.7		
	comp=Z,13nm,0.8s							
PLCA	**Paso Flores**	**44.69**	**171**	P	**P**	**10 42 18.8**	**+1.6**	
	comp=Z,18nm,0.8s,baz=349,slow=8.8,SNR=37							
	comp=Z,18nm,0.8s							
PLCA	**Paso Flores**	**44.69**	**171**		**P**	**10 42 18.9**	**+1.7**	
PLCA	**Paso Flores**	**44.69**	**171**	*e*P	**P**	**10 42 19.2**	**+2.1**	
U15A	**North Rim**	**44.71**	**321**	P	**P**	**10 42 17.4**	**-0.3**	
F33A	**5 Mile Ranch,**	**44.76**	**343**	IAmb	IAmb	10 42 23.9		
	comp=Z,10nm,0.8s							
HMU	**Henry Mountain**	**44.76**	**324**	IAmb	IAmb	10 42 29.8		
	comp=Z,12nm,0.9s							
LDAQ	**Lac Daran**	**44.90**	**8**		**P**	**10 42 19.7**	**+0.9**	
IRM	**Iron Mountain**	**45.21**	**317**	IAmb	IAmb	10 42 24.3		
	comp=Z,12nm,1.4s							
SRU	**San Rafael Swe**	**45.43**	**326**	IAmb	IAmb	10 42 32.9		
	comp=Z,8.9nm,0.8s							
DANC	**Danby, Needles**	**45.64**	**317**	IAmb	IAmb	10 42 35.2		
	comp=Z,14nm,1.0s							
DPP	**Dos Picos Cty**	**45.83**	**314**	IAmb	IAmb	10 42 36.2		
	comp=Z,6.6nm,0.8s							
V12A	**Nelson**	**45.92**	**319**	IAmb	IAmb	10 42 29.3		
	comp=Z,6.3nm,0.8s							
RDMU	**Red Mountain**	**45.93**	**328**	IAmb	IAmb	10 42 28.6		
	comp=Z,6.8nm,0.9s							
RSSD	**Black Hills**	**46.02**	**335**		**P**	**10 42 28.4**	**+0.6**	
RSSD				IAmb	IAmb	10 42 29.8		
	comp=Z,12nm,0.8s							
TCRU	**Three Creeks R**	**46.21**	**324**	IAmb	IAmb	10 42 43.9		
	comp=Z,9.9nm,1.4s							
BSUT	**Blindstream Ca**	**46.55**	**327**	IAmb	IAmb	10 42 47.1		
	comp=Z,7.8nm,1.0s							
SHPR	**Sheep Range**	**46.58**	**320**		**P**	**10 42 34.5**	**+2.1**	
SHOC	**Shoshone, Teco**	**46.96**	**318**	IAmb	IAmb	10 42 38.0		
	comp=Z,14nm,1.4s							
GSC	**Goldstone, Bar**	**46.98**	**317**	IAmb	IAmb	10 42 45.7		
	comp=Z,7.1nm,0.9s							
DUG	**Dugway, Tooele**	**47.47**	**325**	IAmb	IAmb	10 42 41.8		
	comp=Z,9.4nm,1.4s							
CCCA	**Chr Cany lake**	**47.49**	**317**	IAmb	IAmb	10 42 49.5		
	comp=Z,7.0nm,0.8s							
BW06	**Boulder Array**	**47.51**	**330**	IAmb	IAmb	10 42 55.1		
	comp=Z,12nm,1.3s							
PD31	**Pinedale Array**	**47.51**	**330**	IAmb	IAmb	10 42 55.1		
	comp=Z,11nm,1.2s							
PDAR	**Pinedale Array**	**47.51**	**330**	P	**P**	**10 42 39.1**	**-0.6**	
	comp=Z,1.4nm,0.7s,baz=120,slow=9.7,SNR=12							
	comp=Z,1.4nm,0.7s							
PDAR	**Pinedale Array**	**47.51**	**330**	P	**P**	**10 42 38.5**	**-1.1**	
FURC	**Furnace Creek,**	**47.68**	**318**	IAmb	IAmb	10 42 51.0		
	comp=Z,5.8nm,0.9s							
LRMC	**Laurel Mtn Rad**	**47.68**	**317**	IAmb	IAmb	10 42 51.1		
	comp=Z,10nm,1.3s							
TPO	**Tropico Hills**	**47.73**	**316**	IAmb	IAmb	10 42 44.5		
	comp=Z,11nm,1.3s							
SPUT	**South Promonto**	**48.01**	**326**	IAmb	IAmb	10 42 46.0		
	comp=Z,8.1nm,1.2s							
ISA	**Isabella, Lake**	**48.32**	**316**	IAmb	IAmb	10 43 01.7		
	comp=Z,9.7nm,1.5s							
SNOW	**Snow King Moun**	**48.62**	**330**	IAmb	IAmb	10 42 52.1		
	comp=Z,11nm,1.1s							
ULM	**Lac du Bonnet**	**48.70**	**346**	P	**P**	**10 42 46.5**	**-1.9**	
	comp=Z,10nm,0.6s,baz=148,slow=8.0,SNR=18							
	comp=Z,10nm,0.6s							
VES	**Vestal, Richgr**	**48.84**	**316**	IAmb	IAmb	10 42 59.9		
	comp=Z,10nm,0.9s							
FLWY	**Flagg Ranch**	**49.04**	**330**	IAmb	IAmb	10 42 52.8		
	comp=Z,8.1nm,0.8s							
RLMT	**Red Lodge**	**49.12**	**332**	IAmb	IAmb	10 42 53.2		
	comp=Z,7.5nm,0.8s							
YMR	**Madison River**	**49.60**	**331**	IAmb	IAmb	10 42 59.0		
	comp=Z,8.2nm,0.8s							
NVAR	**Mina Array Bea**	**49.73**	**320**	P	**P**	**10 42 57.8**	**+1.0**	
NVAR	comp=Z,1.6nm,0.6s,baz=126,slow=7.0,SNR=20			PcP	**PcP**	**10 44 18.0**	**+0.1**	
	comp=Z,1.0nm,0.6s,baz=132,slow=4.7,SNR=4.2							
	comp=Z,1.6nm,0.6s							
YHL	**Hebgen Lake**	**49.84**	**331**	IAmb	IAmb	10 43 00.1		
	comp=Z,9.0nm,0.8s							
BOZ	**Bozeman (W)**	**50.59**	**331**	IAmb	IAmb	10 43 05.0		
	comp=Z,9.2nm,0.8s							
SCHQ	**Schefferville**	**52.23**	**9**	P	**P**	**10 43 14.7**	**-0.4**	
	comp=Z,5.6nm,0.9s,baz=204,slow=3.5,SNR=7.4							
	comp=Z,5.6nm,0.9s							
SCHQ	**Schefferville**	**52.23**	**9**	IAmb	IAmb	10 43 28.5		
	comp=Z,13nm,1.1s							
WVOR	**Wild Horse Val**	**52.28**	**324**	IAmb	IAmb	10 43 17.8		
	comp=Z,19nm,1.1s							
ORV	**Oroville**	**52.43**	**319**	IAmb	IAmb	10 43 19.6		
	comp=Z,14nm,1.2s							
LNOR	**Lincton Mounta**	**54.20**	**327**	IAmb	IAmb	10 43 43.7		
	comp=Z,10nm,1.4s							
J05D	**Fort Rock, OR**	**54.33**	**323**	IAmb	IAmb	10 43 40.4		
	comp=Z,9.0nm,1.1s							
FFC	**Flin Flon**	**54.34**	**344**		**P**	**10 43 29.8**	**-0.8**	
FFC				IAmb	IAmb	10 43 30.5		
	comp=Z,5.7nm,0.8s							
E09A	**Wood Farm, Sta**	**54.53**	**328**	IAmb	IAmb	10 43 33.1		
	comp=Z,5.1nm,0.7s							
KHMM	**Horse Mountain**	**54.58**	**319**	IAmb	IAmb	10 43 34.4		
	comp=Z,8.4nm,0.8s							
J04A	**Umpqua Nationa**	**54.83**	**323**	IAmb	IAmb	10 43 36.8		
	comp=Z,11nm,0.7s							
I05D	**Terrebonne, OR**	**54.99**	**324**	IAmb	IAmb	10 43 37.4		
	comp=Z,11nm,1.3s							
NEW	**Newport**	**55.15**	**330**	IAmb	IAmb	10 43 37.2		
	comp=Z,5.3nm,0.8s							
I04A	**Tendick Farm,**	**55.32**	**323**	IAmb	IAmb	10 43 39.1		
	comp=Z,8.5nm,1.2s							
H04A	**Detroit Lake**	**55.69**	**324**	IAmb	IAmb	10 43 47.0		
	comp=Z,18nm,1.5s							
MXC	**Moxie City**	**55.73**	**327**	IAmb	IAmb	10 43 43.1		
	comp=Z,8.6nm,1.1s							
FCC	**Fort Churchill**	**56.37**	**351**	IAmb	IAmb	10 43 51.9		
	comp=Z,9.3nm,0.9s							
D05A	**Enumclaw**	**57.03**	**327**	IAmb	IAmb	10 43 51.1		
	comp=Z,11nm,0.9s							
LLLB	**Lillooet**	**59.04**	**330**	IAmb	IAmb	10 44 18.1		
	comp=Z,14nm,1.3s							
YKA	**Yellowknife Ar**	**64.46**	**343**	P	**P**	**10 44 39.4**	**-0.9**	
	comp=Z,4.2nm,0.9s,baz=137,slow=5.9,SNR=44							
	comp=Z,4.2nm,0.9s							
YKA	**Yellowknife Ar**	**64.46**	**343**		**P**	**10 44 39.5**	**-0.8**	
ILON	**Igloolik, Nuna**	**65.85**	**359**	IAmb	IAmb	10 44 48.1		
	comp=Z,5.6nm,0.8s							
RES	**Resolute Bay**	**71.76**	**356**	LR	LR	11 21 51.5		
	comp=Z,70nm,18.5s,baz=330,slow=40							
K29M	**Barlow Dome**	**73.35**	**337**	IAmb	IAmb	10 45 45.4		
	comp=Z,14nm,1.1s							
SUMG	**Summit**	**73.49**	**12**		**P**	**10 45 36.4**	**-0.4**	
SUMG	**Summit**	**73.49**	**12**	*i* P	**P**	**10 45 36.0**	**-0.8**	
SUMG				IAmb	IAmb	10 45 38.1		
	comp=Z,51nm,1.6s							
I30M	**Mount Dempster**	**73.57**	**338**	IAmb	IAmb	10 45 41.2		
	comp=Z,5.2nm,0.8s							
G31M	**Satah River**	**73.69**	**340**	IAmb	IAmb	10 45 46.5		
	comp=Z,9.3nm,0.8s							
F31M	**Tsilgehtchi**	**73.79**	**341**	IAmb	IAmb	10 45 47.0		
	comp=Z,8.3nm,1.0s							
INK	**Inuvik**	**74.19**	**342**	IAmb	IAmb	10 45 49.2		
	comp=Z,10nm,0.9s							
DBIC	**Dimbokro**	**74.19**	**84**	P	**P**	**10 45 44.0**	**+2.4**	
	comp=Z,5.1nm,0.9s,baz=308,slow=4.7,SNR=5.1							
	comp=Z,5.1nm,0.9s							
EPYK	**Eagle Plains**	**74.25**	**339**	IAmb	IAmb	10 45 50.0		
	comp=Z,14nm,1.0s							
I29M	**Ogilvie Camp,**	**74.35**	**338**	IAmb	IAmb	10 45 55.3		
	comp=Z,13nm,1.2s							
F30M	**Barrier River**	**74.55**	**341**	IAmb	IAmb	10 45 53.9		
	comp=Z,12nm,0.8s							
BCAR	**Beaver Creek A**	**74.74**	**335**		**P**	**10 45 44.7**	**+0.8**	
L27K	**Beaver Creek,**	**74.75**	**335**	IAmb	IAmb	10 45 54.0		
	comp=Z,7.4nm,0.8s							
G29M	**Pine Creek**	**74.97**	**340**	IAmb	IAmb	10 45 54.4		
	comp=Z,10.0nm,0.8s							
I28M	**Miner Creek**	**75.00**	**338**	IAmb	IAmb	10 45 51.6		
	comp=Z,9.3nm,1.0s							
L26K	**Log Cabin Wild**	**75.38**	**335**	IAmb	IAmb	10 45 53.1		
	comp=Z,9.2nm,1.1s							
NEEM	**North Greenlan**	**75.49**	**6**	*i* P	**P**	**10 45 47.8**	**-0.5**	
NEEM				IAmb	IAmb	10 45 48.6		
	comp=Z,8.8nm,0.7s							
E29M	**Blow River**	**75.63**	**341**	IAmb	IAmb	10 45 57.7		
	comp=Z,9.4nm,0.9s							
H27K	**Steamboat Moun**	**75.93**	**338**	IAmb	IAmb	10 46 10.1		
	comp=Z,5.8nm,0.9s							
F28M	**Old Crow**	**75.93**	**340**	IAmb	IAmb	10 45 59.2		
	comp=Z,4.8nm,0.8s							
SCRK	**Sand Creek**	**76.00**	**336**		**P**	**10 45 51.7**	**+0.5**	
SCRK				IAmb	IAmb	10 45 56.9		
	comp=Z,8.4nm,1.1s							
G27K	**Doyon Strip**	**76.21**	**339**	IAmb	IAmb	10 46 00.6		
	comp=Z,5.5nm,0.8s							
E28M	**Babbage River**	**76.27**	**341**	IAmb	IAmb	10 46 00.6		
	comp=Z,8.0nm,0.9s							
ESDC	**Sonseca Array**	**76.55**	**50**	P	**P**	**10 45 57.2**	**+2.5**	
	comp=Z,0.9nm,0.8s,baz=269,slow=6.0,SNR=5.3							
	comp=Z,0.9nm,0.8s							
ESDC	**Sonseca Array**	**76.55**	**50**	P	**P**	**10 45 55.3**	**+0.6**	
E27K	**Coleen River**	**76.77**	**340**	P	**P**	**10 45 55.4**	**+0.1**	
E27K				IAmb	IAmb	10 46 04.1		
	comp=Z,7.4nm,0.8s							
J25K	**Salcha River,**	**76.79**	**336**	IAmb	IAmb	10 46 04.7		
	comp=Z,6.8nm,0.9s							
G26K	**Porupine Riv**	**77.04**	**339**	IAmb	IAmb	10 46 05.4		
	comp=Z,5.4nm,0.8s							
HDA	**Harding Lake**	**77.37**	**336**	IAmb	IAmb	10 46 07.3		
	comp=Z,10nm,0.8s							
F26K	**Sheenjek River**	**77.46**	**339**	IAmb	IAmb	10 46 08.3		
	comp=Z,6.5nm,0.8s							
IL31		**77.46**	**336**	IAmb	IAmb	10 46 10.2		
	comp=Z,9.6nm,1.2s							
ILAR	**Eielson Array**	**77.46**	**336**	P	**P**	**10 45 58.9**	**-0.4**	
	comp=Z,2.9nm,0.8s,baz=114,slow=4.2,SNR=20							
	comp=Z,2.9nm,0.8s							
ILAR	**Eielson Array**	**77.46**	**336**	P	**P**	**10 45 59.0**	**-0.2**	
BMAR	**Burnt Mountain**	**77.51**	**339**	P	**P**	**10 46 00.2**	**+0.7**	
CCB	**Clear Creek Bu**	**77.79**	**336**	P	**P**	**10 46 01.4**	**+0.3**	
CCB				IAmb	IAmb	10 46 08.7		
	comp=Z,7.0nm,1.2s							
RND	**Reindeer**	**77.86**	**334**	P	**P**	**10 46 02.0**	**+0.4**	
F25K	**Christian Rive**	**77.95**	**339**	IAmb	IAmb	10 46 12.1		
	comp=Z,14nm,1.4s							
E25K	**Arctic Village**	**78.11**	**339**	IAmb	IAmb	10 46 12.1		
	comp=Z,5.7nm,0.8s							
NEA2	**Nenana**	**78.30**	**336**	IAmb	IAmb	10 46 12.5		
	comp=Z,8.2nm,0.9s							
G24K	**Hadweenzic Riv**	**78.32**	**338**	IAmb	IAmb	10 46 13.4		
	comp=Z,6.6nm,0.8s							
I23K	**Minto, Yukon-K**	**78.58**	**336**	IAmb	IAmb	10 46 09.5		
	comp=Z,14nm,1.3s							
BPAW	**Bear Paw Mtn.**	**78.96**	**335**	IAmb	IAmb	10 46 16.6		
	comp=Z,14nm,1.0s							
G23K	**Banza Creek**	**79.29**	**338**	IAmb	IAmb	10 46 10.7		
	comp=Z,13nm,1.4s							
EKA	**Eskdalemuir Ar**	**79.32**	**34**	P	**P**	**10 46 11.1**	**+1.3**	
	comp=Z,3.5nm,0.9s,baz=252,slow=4.2,SNR=4.6							
	comp=Z,3.5nm,0.9s							
D23K	**Nanushuk River**	**80.17**	**340**	IAmb	IAmb	10 46 19.9		
	comp=Z,9.3nm,1.2s							
DAG	**Danmarks Havn**	**80.18**	**12**	*i* P	**P**	**10 46 12.7**	**-1.3**	
DAG				IAmb	IAmb	10 46 14.2		
	comp=Z,20nm,1.5s							
C23K	**Itkillik River**	**80.39**	**341**	IAmb	IAmb	10 46 24.3		
	comp=Z,9.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**80.49**	**77**	P	**P**	**10 46 16.4**	**-0.5**	
	comp=Z,0.8nm,0.5s,baz=272,slow=7.1,SNR=7.4							
	comp=Z,0.8nm,0.5s							
B21K	**Ikpikpuk River**	**81.69**	**340**	IAmb	IAmb	10 46 31.2		
	comp=Z,6.2nm,0.9s							
E19K	**Redstone River**	**82.21**	**338**	IAmb	IAmb	10 46 33.4		
	comp=Z,6.6nm,0.8s							
D19K	**Kuna River**	**82.71**	**339**	IAmb	IAmb	10 46 36.5		
	comp=Z,6.8nm,0.8s							
C19K	**Lookout Ridge**	**83.33**	**339**	IAmb	IAmb	10 46 40.2		
	comp=Z,5.9nm,0.9s							
E18K	**Tukpahlearik C**	**83.49**	**337**	IAmb	IAmb	10 46 40.1		
	comp=Z,3.6nm,0.8s							
J14K	**Nanvaranak Lak**	**84.31**	**333**	IAmb	IAmb	10 46 46.3		
	comp=Z,7.5nm,1.1s							
C16K	**Lisburne Hills**	**85.35**	**338**	IAmb	IAmb	10 46 49.9		
	comp=Z,5.2nm,0.8s							
KEST	**Kesra**	**86.93**	**55**	P	**P**	**10 46 51.6**	**+2.0**	
	comp=Z,1.0nm,0.4s,baz=330,slow=1.1,SNR=6.6							
	comp=Z,1.0nm,0.4s							
KEST	**Kesra**	**86.93**	**55**	IAmb	IAmb	10 47 00.4		
	comp=Z,6.2nm,0.8s							
NB2	**NORSAR Subarra**	**87.28**	**29**	P	P	10 46 58.6	+7.9	
	comp=Z,6.5nm,0.9s,baz=271,slow=4.8							
NOA	**NORSAR Array B**	**87.28**	**29**	P	**P**	**10 46 51.8**	**+1.1**	
	comp=Z,1.5nm,0.9s,baz=273,slow=4.6,SNR=6.3							
	comp=Z,1.5nm,0.9s							
GERES	**GERESS Array B**	**89.43**	**41**	P	**P**	**10 47 03.0**	**+1.7**	
	comp=Z,0.2nm,0.4s,baz=320,slow=2.6,SNR=3.8							
	comp=Z,0.2nm,0.4s							
ARCES	**ARCESS Array B**	**91.95**	**20**	P	**P**	**10 47 13.1**	**+0.7**	
	comp=Z,3.8nm,0.8s,baz=282,slow=4.2,SNR=3.8							
	comp=Z,3.8nm,0.8s							
ARCES	**ARCESS Array B**	**91.95**	**20**	P	**P**	**10 47 13.4**	**+1.0**	
ARCES				IAmb	IAmb	10 47 24.1		
	comp=Z,6.9nm,1.1s							
QSPA	**South Pole Qui**	**93.47**	**180**	P	**P**	**10 47 20.6**	**+1.0**	
	comp=Z,2.1nm,0.4s,baz=215,slow=1.2,SNR=3.7							
	comp=Z,2.1nm,0.4s							
FINES	**FINESS Array B**	**94.31**	**28**	P	**P**	**10 47 24.6**	**+1.2**	
	comp=Z,8.8nm,1.0s,baz=306,slow=9.6,SNR=3.6							
	comp=Z,8.8nm,1.0s							
VNDA	**Vanda**	**99.37**	**191**	LR	LR	11 25 22.7		
	comp=Z,118nm,19.8s,baz=322,slow=31							
H11N3	**WAKE ISLAND Hyl**	**11.04**	**293**	T	T	12 52 34.8		
	baz=69							
H11N2	**WAKE ISLAND Hyl**	**11.05**	**293**	T	T	12 52 47.1		
	baz=69							
H11N1	**WAKE ISLAND Hyl**	**11.06**	**293**	T	T	12 52 55.2		
	baz=69							
ZALV	**Zalesovo Beam**	**121.30**	**11**	PKP	**PKiKP**	**10 52 57.9**	**+0.4**	
	comp=Z,0.2nm,0.4s,baz=253,slow=1.5,SNR=1.5							
KURK	**Kurchatov**	**122.83**	**17**		**PKiKP**	**10 53 01.0**	**+0.4**	
KURBB	**Kurchatov Arra**	**122.89**	**17**	PKP	**PKiKP**	**10 53 01.0**	**+0.3**	
	comp=Z,0.1nm,0.3s,baz=322,slow=2.0,SNR=1.7							
MKAR	**Makanchi Array**	**127.41**	**16**	PKP	**PKPdf**	**10 53 09.5**	**+0.2**	
	comp=Z,0.3nm,0.6s,baz=2.1,slow=2.4,SNR=4.0							
SONM	**Songino Array**	**128.69**	**355**	PKP	**PKiKP**	**10 53 12.8**	**+0.3**	
	comp=Z,0.3nm,0.3s,baz=63,slow=0.3,SNR=3.5							
WMQ	**Urumqi**	**131.53**	**13**	*e*PKP	**PKiKP**	**10 53 18.4**	**+0.2**	
WMQ				LR	LR			
	comp=E,1μm,24.1s							
KSRS	**Korea Array**	**132.08**	**331**	PKP	**PKiKP**	**10 53 19.4**	**0.0**	
	comp=E,0.6nm,0.7s,baz=45,slow=0.9,SNR=1.9							
HHC	**Hu-ho-hao-te**	**134.81**	**348**	*e*P	**PKPdf**	**10 53 20.5**	**-3.1**	
NJ2	**Nanjing**	**140.70**	**335**	*e*P	**PKPdf**	**10 53 34.5**	**0.0**	
NJ2				pmax	pmax			
	comp=Z,4.0nm,0.9s							
ASAR	**Alice Springs**	**142.13**	**235**	PKhKP	PKPpre	10 53 31.7		
	comp=Z,0.4nm,0.6s,baz=118,slow=3.8,SNR=5.1							
WRA	**Warramunga Arr**	**143.30**	**241**	PKhKP	PKPpre	10 53 35.8		
	comp=Z,2.8nm,0.8s,baz=109,slow=3.1,SNR=16							
NWAO	**Narrogin (SRO)**	**146.82**	**206**	PKPbc	**PKPdf**	**10 53 46.3**	**+1.1**	
	comp=Z,7.1nm,1.0s,baz=125,slow=4.5,SNR=3.2							
PZH	**PanZhiHua**	**150.22**	**358**	PKPbc	**PKPdf**	**10 53 50.3**	**-0.8**	
FITZ	**Fitzroy Crossi**	**151.54**	**237**	PKPbc	**PKPbc**	**10 53 57.5**	**-1.8**	
	comp=Z,2.8nm,0.7s,baz=195,slow=5.6,SNR=5.2							
CMAR	**Chiang Mai Arr**	**158.18**	**4**	PKPab	**PKPab**	**10 54 33.7**	**-2.0**	
	comp=Z,1.2nm,0.7s,baz=339,slow=5.9,SNR=4.9							

*IDC **21** 10:39:41.4±1.3, 6°.13S×128°.25E, h366km±18km, mb3.0/3, mbtmp3.9/8, Error ellipse: s-maj=27.7km s-min=13.7km az=94.0*

ISC 21 10:39:40.5±0.8, 6°.23S±0°.07×128°.2E±0°.1, h350km, n8, σ1§86/13, mb3.5/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.01**	**229**	P	**Pn**	**10 41 13.0**	**+1.4**
	79nm,0.5s,baz=313,slow=2.3,SNR=12						
BATI				S	**S**	**10 42 24.0**	**-1.4**
	32nm,0.7s,baz=308,slow=20,SNR=1.8						
SIJI	**Sorong**	**6.12**	**30**	P	**Pn**	**10 41 14.1**	**+1.3**
	4.8nm,0.5s,baz=217,slow=20,SNR=1.0						
SIJI				S	**S**	**10 42 27.6**	**0.0**
	4.8nm,0.3s,baz=70,slow=23,SNR=8.7						
FITZ	**Fitzroy Crossi**	**12.07**	**192**	P	**Pn**	**10 42 24.2**	**+1.0**
	1.5nm,0.8s,baz=0.0,slow=13,SNR=0.8						
FITZ				S	**S**	**10 44 39.0**	**+1.7**
	1.0nm,0.4s,baz=119,slow=19,SNR=1.4						
WRA	**Warramunga Arr**	**14.86**	**157**	P	**P**	**10 42 54.8**	**+1.1**
	2.8nm,0.6s,baz=331,slow=12,SNR=22						
WRA				S	**S**	**10 45 30.8**	**-3.1**
	1.6nm,0.7s,baz=333,slow=21,SNR=5.5						
ASAR	**Alice Springs**	**18.17**	**163**	P	**P**	**10 43 30.8**	**+1.3**
	1.5nm,0.3s,baz=344,slow=12,SNR=34						
ASAR				S	**S**	**10 46 36.6**	**-2.6**
	1.4nm,1.2s,baz=343,slow=18,SNR=5.6						
CMAR	**Chiang Mai Arr**	**37.91**	**311**	P	**P**	**10 46 25.6**	**-0.1**
	0.7nm,0.5s,baz=130,slow=8.5,SNR=6.0						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**66.64**	**327**	P	**P**	**10 49 52.9**	**-1.5**
	0.4nm,0.4s,baz=112,slow=7.7,SNR=11						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**70.95**	**329**	P	**P**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**350**⇓	*eP*	Pg	10 54 07.2	-0.1
GBPR				*eS*	Sg	10 54 09.9	+0.5
CRPR	**Cabo Rojo, PR**	**0.26**	**297**⇑	*iP*	Pg	10 54 09.6	-0.1
CRPR				*eS*	Sg	10 54 13.7	0.0
OBIP	**Obispado Ponce**	**0.29**	**57**⇑	*eP*	Pg	10 54 09.9	-0.3
OBIP				*eS*	Sg	10 54 14.5	0.0
LSP	**Las Mesas**	**0.36**	**324**⇓	*iP*	Pg	10 54 11.1	-0.3
LSP				*eS*	Sg	10 54 16.8	+0.3
PRSN	**Puerto Rico Se**	**0.43**	**321**⇑	*eP*	Pg	10 54 11.9	-0.7
PRSN				*eS*	Sg	10 54 18.2	-0.2
AGPR	**Aguadilla, PR**	**0.63**	**338**⇑	*eP*	Pg	10 54 15.4	-0.9
AGPR				*eS*	Sg	10 54 23.1	-1.6
ECPR	**Experimental S**	**0.64**	**48**⇓	*eP*	Pg	10 54 15.5	-1.2
ECPR				*eS*	Sg	10 54 24.4	-0.8
IDE	**Isla Desecheo**	**0.77**	**311**⇑	*eP*	Pg	10 54 17.8	-1.2
IDE				*eS*	Sg	10 54 28.7	-0.4
GCPR	**Guaynabo City**	**0.85**	**60**⇑	*eP*	Pb	10 54 18.9	-1.6
GCPR				*eS*	Sb	10 54 29.5	-2.2

*RSPR **21** 10:54:34.5, 17°.88N×66°.86W, h16km, MD2.9/5*
NEIC 21 10:54:34.1±1.3, 17.85N±0.03°×66.86W±0.01, h10km±1km, ML2.6/31, Md2.9/5(RSPR), 5C-1D, Error ellipse: s-maj=5.7km s-min=2.8km az=359.0, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.13**	**354**		Pg	10 54 37.8	+0.6
GBPR					Sg	10 54 40.3	+1.0
GBPR	**Guanica, Bosqu**	**0.13**	**354**⇑	*eP*	Pg	10 54 37.8	+0.6
GBPR				*eS*	Sg	10 54 40.3	+1.0
MLPR	**Magueyes Islan**	**0.21**	**305**		Pg	10 54 39.0	+0.5
MLPR				IAML		10 54 42.7	
	1µm,0.3s						
MLPR				IAML		10 54 42.9	
	568nm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.28**	**304**	Pg	Pg	10 54 40.1	+0.2
CRPR				IAML		10 54 44.3	
	828nm,0.3s						
CRPR				IAML		10 54 44.5	
	882nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.28**	**304**⇑	*iP*	Pg	10 54 40.1	+0.2
CRPR				*eS*	Sg	10 54 44.1	+0.5
OBIP	**Obispado Ponce**	**0.31**	**52**	Pg	Pg	10 54 40.4	0.0
OBIP				Sg	Sg	10 54 44.9	+0.2
OBIP	**Obispado Ponce**	**0.31**	**52**⇑	*eP*	Pg	10 54 40.3	-0.1
OBIP				*eS*	Sg	10 54 45.0	+0.4
CELP	**Cerrillos**	**0.35**	**50**	Pg	Pg	10 54 41.1	-0.1
CELP				IAML		10 54 46.5	
	596nm,0.3s						
CELP				IAML		10 54 46.5	
	840nm,0.3s						
LSP	**Las Mesas**	**0.39**	**327**		Pg	10 54 41.6	-0.2
LSP					Sg	10 54 47.2	+0.2
LSP	**Las Mesas**	**0.39**	**327**⇓	*iP*	Pg	10 54 41.6	-0.2
LSP				*eS*	Sg	10 54 47.2	+0.2
UUPR	**Utuado, UPR, P**	**0.43**	**19**	Pg	Pg	10 54 41.8	-0.7
UUPR				Sg	Sg	10 54 47.0	-1.2
PRSN	**Puerto Rico Se**	**0.46**	**324**	Pg	Pg	10 54 42.7	-0.4
AGPR	**Aguadilla, PR**	**0.66**	**339**⇑	*iP*	Pg	10 54 46.0	-1.0
AGPR				*eS*	Sg	10 54 54.1	-1.6
ECPR	**Experimental S**	**0.67**	**45**	Pg	Pg	10 54 46.0	-1.1
ECPR				IAML		10 54 56.6	
	179nm,0.2s						
ECPR				IAML		10 54 57.6	
	184nm,0.2s						
ECPR	**Experimental S**	**0.67**	**45**⇑	*eP*	Pg	10 54 46.0	-1.1
ECPR				*eS*	Sg	10 54 53.3	-2.6
SJG	**San Juan**	**0.73**	**69**	Pg	Pg	10 54 47.7	-0.6
IDE	**Isla Desecheo**	**0.79**	**313**		Pg	10 54 48.3	-1.1
IDE					Sg	10 54 58.8	-0.9
IDE	**Isla Desecheo**	**0.79**	**313**⇑	*eP*	Pg	10 54 48.3	-1.1
IDE				*eS*	Sg	10 54 58.8	-0.9
GCPR	**Guaynabo City**	**0.87**	**58**		Pg	10 54 49.4	-1.6
GCPR					Sg	10 54 59.9	-2.5
GCPR	**Guaynabo City**	**0.87**	**58**⇑	*eP*	Pg	10 54 49.4	-1.6
GCPR				*eS*	Sg	10 54 59.9	-2.5
HUMP	**Col San Antoni**	**1.01**	**73**	Pg	Pg	10 54 53.6	0.0
HUMP				IAML		10 55 08.4	
	165nm,0.4s						
HUMP				IAML		10 55 08.5	
	164nm,0.3s						

*IDC **21** 10:54:57.3±1.1, 34°.57N×85°.73E, h0km, mb3.5/6, mbtmp3.6/10, ML2.9/3, Error ellipse: s-maj=38.9km s-min=19.0km az=66.0*
ISC 21 10:55:02.4±1.0, 34°.6N±0°.1×85°.7E±0°.2, h35km, n10, σ1s05/10, mb3.6/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.43**	**349**	Pn	**Pn**	**10 57 56.5**	**-0.3**
	baz=165,slow=15,SNR=6.6						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**16.83**	**344**	Pn	**Pn**	**10 58 54.5**	**-0.6**
	0.2nm,0.3s,baz=159,slow=11,SNR=8.5						
	0.9nm,0.2s						
ZALV	**Zalesovo Beam**	**19.33**	**358**	P	**P**	**10 59 24.7**	**+0.3**
	0.1nm,0.3s,baz=184,slow=13,SNR=7.0						
	1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**19.94**	**140**	P	**P**	**10 59 31.2**	**-0.2**
	0.6nm,0.3s,baz=329,slow=12,SNR=4.1						
SONM	**Songino Array**	**20.31**	**43**	P	**P**	**10 59 36.6**	**+1.3**
	0.4nm,0.4s,baz=228,slow=13,SNR=2.9						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**21.38**	**334**	P	**P**	**10 59 47.0**	**+0.3**
	1.2nm,0.7s,baz=140,slow=9.4,SNR=3.7						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**71.27**	**132**	P	**P**	**11 06 16.8**	**-1.5**
	0.9nm,0.9s,baz=321,slow=6.2,SNR=3.9						
	0.9nm,0.9s						
ILAR	**Eielson Array**	**72.75**	**21**	P	**P**	**11 06 25.6**	**-1.0**
	0.4nm,0.9s,baz=250,slow=2.9,SNR=4.1						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**73.83**	**135**	P	**P**	**11 06 35.0**	**+1.4**
	0.9nm,0.9s,baz=320,slow=5.9,SNR=6.3						
	0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**77.80**	**278**	P	**P**	**11 06 57.0**	**+0.5**
	0.4nm,0.8s,baz=49,slow=4.6,SNR=2.1						
	0.4nm,0.8s						

*IDC **21** 10:55:52.2±1.2, 7°.05S×155°.64E, h0km, mb3.7/6, mbtmp3.7/7, ML1.9/1, Error ellipse: s-maj=43.8km s-min=22.1km az=141.0*
ISC 21 10:55:58.6±1.2, 7°.2S±0°.3×155°.7E±0°.2, h50km, n11, σ0s63/9, mb3.6/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.71**	**255**	Pn	**Pn**	**10 58 01.5**	**-0.5**
	0.8nm,0.3s,baz=72,slow=18,SNR=2.5						
PMG				Sn	**Sn**	**10 59 39.3**	**+0.5**
	0.6nm,0.3s,baz=280,slow=18,SNR=1.9						
	5.2nm,0.5s						
WRA	**Warramunga Arr**	**24.26**	**236**	P	**P**	**11 01 11.6**	**+0.4**
	0.9nm,0.6s,baz=58,slow=9.3,SNR=11						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**26.54**	**230**	P	**P**	**11 01 31.9**	**-0.1**
	0.3nm,0.5s,baz=58,slow=10,SNR=13						
	0.3nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**27.76**	**23**	T	T	11 29 59.1	
	baz=203,slow=75,SNR=32						
H11S2	**WAKE ISLAND Hy**	**27.76**	**23**	T	T	11 30 00.4	
	baz=203,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**27.77**	**23**	T	T	11 29 56.0	
	baz=203,slow=75,SNR=12						
CMAR	**Chiang Mai Arr**	**61.49**	**295**	P	**P**	**11 06 11.2**	**+0.4**
	1.0nm,0.5s,baz=121,slow=4.9,SNR=8.2						
	1.0nm,0.5s						
ILAR	**Eielson Array**	**83.33**	**21**	P	**P**	**11 08 19.3**	**-0.6**
	0.3nm,0.5s,baz=246,slow=5.8,SNR=10						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**84.01**	**319**	P	**P**	**11 08 23.3**	**-0.6**
	0.4nm,0.7s,baz=102,slow=5.6,SNR=4.3						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**96.21**	**28**	P	**P**	**11 09 22.1**	**+1.0**
	0.1nm,0.5s,baz=271,slow=5.2,SNR=4.5						
	0.1nm,0.5s						
BDFB	**Brasilia**	**147.34**	**134**	PKPbc	**PKPab**	**11 15 39.7**	**-0.1**
	2.1nm,0.5s,baz=4.6,slow=3.0,SNR=3.8						

IDC 21 11:00:09.0±3.3, 6°.52S×147°.96E, h0km, mb2.9/1, mbtmp3.1/3, ML3.3/1, Error ellipse: s-maj=96.8km s-min=40.3km az=104.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.97**	**195**	Pn	Pn	11 00 58.8	+1.3
	12nm,0.4s,baz=11,slow=5.2,SNR=12						
PMG				Sn	Sn	11 01 31.5	-2.3
	4.9nm,0.3s,baz=355,slow=22,SNR=5.8						
WRA	**Warramunga Arr**	**18.79**	**223**	P	P	11 04 29.9	-0.2
	0.1nm,0.3s,baz=50,slow=11,SNR=5.8						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**21.75**	**217**	P	P	11 05 01.3	-1.0
	0.5nm,1.0s,baz=34,slow=13,SNR=6.4						
	0.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**146.14**	**284**	PKPbc	PKPdf	11 19 51.7	+0.3
	0.2nm,0.3s,baz=69,slow=5.7,SNR=4.6						

*UPA **21** 11:08:09.3±1.2, 9°.75N×84°.02W, h6km±2km, MW3.5, Presumed earthquake*
*UCR **21** 11:08:09.0±0.8, 9°.77N×83°.97W, h6km±4km, MW3.6, Fault plane solution: NP1:ϕ55.02000°, δ89.56000°, λ4.98000°., Presumed earthquake*
ISC 21 11:08:09.3±0.8, 9°.75N±0°.02×83°.99W±0°.02, h11km±4km, n89, σ0s71/101, 13C-14D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.02**	**247**	*eP*	**Pg**	**11 08 11.3**	**-0.2**
LCR2				*eS*	**Sg**	**11 08 12.7**	**-0.3**
PITB	**Pirrs, San**	**0.10**	**203**⇓	*eP*	**Pg**	**11 08 12.2**	**+0.1**
PITB				*eS*	**Sg**	**11 08 14.2**	**+0.1**
RAZU	**San Marcos de**	**0.10**	**202**⇓	*eP*	**Pg**	**11 08 12.2**	**+0.1**
RAZU				*eS*	**Sg**	**11 08 14.4**	**+0.3**
PIEC	**Cerro El Cedra**	**0.13**	**168**⇓	*eP*	**Pg**	**11 08 12.5**	**-0.1**
TAGO	**Cartago**	**0.13**	**28**⇓	*eP*	**Pg**	**11 08 12.4**	**-0.2**
TAGO				*eS*	**Sg**	**11 08 14.8**	**-0.1**
REPA	**Paraso**	**0.14**	**56**⇑	*eP*	**Pg**	**11 08 12.3**	**-0.4**
REPA				*eS*	**Sg**	**11 08 14.6**	**-0.4**
TRIO	**Tres Rios**	**0.15**	**357**⇓	*eP*	**Pg**	**11 08 12.6**	**-0.3**
TRIO				*eS*	**Sg**	**11 08 15.2**	**-0.2**
ACOS	**Acosta**	**0.18**	**285**⇑	*eP*	**Pg**	**11 08 13.6**	**+0.3**
LUJA	**Lujan**	**0.20**	**334**	*eP*	**Pg**	**11 08 13.7**	**+0.2**
LUJA				*eS*	**Sg**	**11 08 16.7**	**+0.2**
CENT	**San Jose**	**0.20**	**333**	*eP*	**Pg**	**11 08 14.9**	**+1.2**
LUPE	**Guadalupe**	**0.21**	**341**⇓	*eP*	**Pg**	**11 08 14.0**	**+0.2**
CORON	**Coronado**	**0.22**	**356**⇓	*eP*	**Pg**	**11 08 14.4**	**+0.3**
PCAYA	**Pacayas**	**0.24**	**46**	*eP*	**Pg**	**11 08 14.2**	**-0.2**
PICV	**PH. Pirrs**	**0.24**	**239**⇓	*eP*	**Pg**	**11 08 14.4**	**+0.2**
SANTA	**Santa Ana**	**0.27**	**313**⇑	*eP*	**Pg**	**11 08 14.8**	**0.0**
RAFA	**San Farael, Vo**	**0.27**	**40**⇓	*eP*	**Pg**	**11 08 14.8**	**-0.2**
VICA	**Volcano Irazu**	**0.27**	**31**⇓	*eP*	**Pg**	**11 08 14.8**	**-0.3**
VINA	**Juan Vinas**	**0.28**	**59**	*eP*	**Pg**	**11 08 14.7**	**-0.3**
HEME	**Heredia, Merce**	**0.29**	**329**⇑	*eP*	**Pb**	**11 08 16.6**	**0.0**
BELE	**Belen**	**0.30**	**318**⇑	*eP*	**Pg**	**11 08 15.5**	**0.0**
BUS1	**Rivas**	**0.30**	**130**⇑	*eP*	**Pg**	**11 08 15.2**	**-0.5**
CVTQ	**Turrialba Volc**	**0.33**	**40**⇓	*eP*	**Pg**	**11 08 16.0**	**-0.1**
TURIB	**Turrialba**	**0.33**	**62**⇑	*eP*	**Pg**	**11 08 15.5**	**-0.5**
CVTV	**Tajo**	**0.34**	**43**⇓	*eP*	**Pg**	**11 08 16.2**	**-0.1**
VTCV	**VTCV, Calle Va**	**0.34**	**48**⇓	*eP*	**Pg**	**11 08 16.1**	**-0.2**
VTR0	**Volcan Turrial**	**0.35**	**40**⇓	*eP*	**Pg**	**11 08 16.3**	**-0.1**
CVTR	**Volcan Turrial**	**0.35**	**40**⇓	*eP*	**Pg**	**11 08 16.2**	**-0.2**
SVQ2	**Quepos**	**0.36**	**209**	*eP*	**Pg**	**11 08 17.2**	**+0.7**
ABRB	**Las Abras (San**	**0.37**	**46**	*eP*	**Pg**	**11 08 16.7**	**0.0**
RESJ	**San Isidro (Tu**	**0.44**	**50**	*eP*	**Pg**	**11 08 17.8**	**-0.1**
SARCI	**Sarchi**	**0.49**	**314**	*eP*	**Pb**	**11 08 19.4**	**-0.6**
PILE	**Guapiles**	**0.50**	**23**	*eP*	**Pg**	**11 08 19.5**	**+0.4**
PALD	**Palmares**	**0.54**	**304**	*eP*	**Pg**	**11 08 19.5**	**-0.3**
LCOCO	**El Coco**	**0.54**	**52**	*eP*	**Pg**	**11 08 19.5**	**-0.2**
OROT	**Orotina**	**0.56**	**287**	*eP*	**Pg**	**11 08 20.0**	**-0.1**
ARTO	**Ro Cuarto**	**0.63**	**339**	*eP*	**Pg**	**11 08 21.6**	**0.0**
ARZA	**Esparza**	**0.71**	**290**	*eP*	**Pg**	**11 08 22.8**	**-0.3**
EDPE	**Pejibaye, P**	**0.71**	**145**	*eP*	**Pg**	**11 08 22.9**	**-0.2**
ITAL	**Pital**	**0.75**	**338**	*eP*	**Pb**	**11 08 24.0**	**-0.5**
TRT2	**Tortugero**	**0.84**	**17**	*eP*	**Pg**	**11 08 24.7**	**-0.8**
DRK0	**Durika**	**0.88**	**123**	*eP*	**Pg**	**11 08 22.9**	**-3.4**
LAES	**El Progreso Va**	**0.92**	**89**	*eP*	**Pg**	**11 08 26.3**	**-0.8**
FORC	**Fortuna**	**0.98**	**317**	*eP*	**Pg**	**11 08 27.9**	**-0.3**
VACR	**Volcan Arenal**	**0.99**	**317**	*eP*	**Pg**	**11 08 27.9**	**-0.5**
CASO	**Castillo**	**1.00**	**313**⇑	*eP*	**Pg**	**11 08 27.9**	**-0.7**
MTEVE	**Monteverde**	**1.00**	**304**⇑	*eP*	**Pg**	**11 08 27.8**	**-0.9**
ARE1	**Arenal 1**	**1.01**	**314**⇑	*eP*	**Pg**	**11 08 28.2**	**-0.6**
CEDE	**Laguna Cedeo**	**1.02**	**316**	*eP*	**Pg**	**11 08 28.5**	**-0.4**
CEUA	**Cerro Uatsi, L**	**1.04**	**97**	*eP*	**Pg**	**11 08 29.4**	**0.0**
TABAC	**Tabacon**	**1.07**	**314**	*eP*	**Pg**	**11 08 29.3**	**-0.7**
EDP2	**Potrero Grande**	**1.08**	**132**	*eP*	**Pg**	**11 08 29.1**	**-1.1**
JTS	**Las Juntas de**	**1.09**	**300**	*eP*	**Pg**	**11 08 29.4**	**-0.9**
JTS				*eS*	**Sb**	**11 08 44.3**	**-0.3**
JTS	**Las Juntas de**	**1.09**	**300**⇑	*eP*	**Pg**	**11 08 29.2**	**-1.1**
JUNT	**Juntas**	**1.09**	**299**	*eP*	**Pg**	**11 08 29.6**	**-0.8**
JCR1	**Jicaral**	**1.11**	**275**	*eP*	**Pg**	**11 08 29.9**	**-0.9**
QUEB	**Quebradon, Cot**	**1.25**	**314**	*eP*	**Pg**	**11 08 32.1**	**-1.1**
CNAS	**Canas**	**1.28**	**302**	*eP*	**Pn**	**11 08 32.9**	**-0.2**
INVE	**Universidad In**	**1.28**	**304**	*eP*	**Pn**	**11 08 33.1**	**-0.1**
TIMR	**Tierras Morena**	**1.31**	**309**	*eP*	**Pn**	**11 08 33.0**	**-0.6**
EDAD	**Golfito**	**1.36**	**143**	*eP*	**Pn**	**11 08 32.3**	**-2.0**
TENO	**El Achiote**	**1.36**	**314**	*eP*	**Pg**	**11 08 35.3**	**-0.1**
ALCO	**Alturas Coton,**	**1.39**	**125**	*eP*	**Pn**	**11 08 33.8**	**-0.9**
CMARA	**Lajas Hojancha**	**1.44**	**281**	*eP*	**Pn**	**11 08 35.0**	**-0.4**
CUI	**Cuipilapa**	**1.47**	**308**	*eP*	**Pn**	**11 08 35.8**	**0.0**
PLVR	**Palo Verde**	**1.47**	**294**	*eP*	**Pn**	**11 08 35.6**	**-0.3**
BAGA	**Bagaces**	**1.48**	**302**	*eP*	**Pn**	**11 08 36.1**	**+0.3**
ELVJ	**El Viejo (Barb**	**1.49**	**298**	*eP*	**Pg**	**11 08 37.5**	**-0.4**
MLIR3	**Monte Lirio, C**	**1.49**	**130**	*eP*	**Pb**	**11 08 37.7**	**+0.6**
MLIR3				*eS*	**Sg**	**11 09 00.1**	**+2.8**
COLC	**Colonia**	**1.50**	**307**	*eP*	**Pn**	**11 08 36.4**	**+0.1**
HORNC	**Hornillas**	**1.51**	**309**	*eP*	**Pn**	**11 08 36.5**	**0.0**
UPAL	**Upala**	**1.52**	**319**	*eP*	**Pn**	**11 08 36.9**	**+0.4**
VMAR	**Armenia, Volca**	**1.53**	**314**	*eP*	**Pn**	**11 08 36.8**	**+0.1**
MESS	**Mesas**	**1.54**	**310**	*eP*	**Pn**	**11 08 37.1**	**+0.3**
JUD3	**Juan Diaz 3**	**1.58**	**285**	*eP*	**Pn**	**11 08 37.6**	**+0.2**
BRU2	**Volcan**	**1.59**	**127**	*eP*	**Pn**	**11 08 37.9**	**+0.3**
GPS2	**Hotel Rincn d**	**1.67**	**307**	*eP*	**Pn**	**11 08 39.5**	**+0.8**
VRLE	**La Escondida,**	**1.71**	**307**	*eP*	**Pn**	**11 08 39.9**	**+0.8**
PEJA	**Penjamo Buenos**	**1.73**	**311**	*eP*	**Pn**	**11 08 40.0**	**+0.6**
BUAI	**Buenos Aires**	**1.73**	**310**	*eP*	**Pn**	**11 08 39.7**	**+0.3**
LAPC	**Finca la Perla**	**1.75**	**306**⇑	*eP*	**Pn**	**11 08 40.2**	**+0.6**
ALIBA	**Liberia Airpor**	**1.75**	**299**	*eP*	**Pb**	**11 08 40.6**	**-0.8**
LNBQ3	**Los Naranjos,**	**1.80**	**122**	*eP*	**Pn**	**11 08 40.2**	**-0.2**
LNBQ3				*eS*	**Sn**	**11 09 03.8**	**+0.5**
BQTLY	**Boquete Panama**	**1.80**	**123**	*eP*	**Pn**	**11 08 41.2**	**+0.8**
DAP26	**falda E V. Bar**	**1.81**	**122**	*eP*	**Pn**	**11 08 41.4**	**+0.7**
BQSF3	**Alto Boquete,**	**1.83**	**123**	*eP*	**Pn**	**11 08 40.9**	**0.0**
PSOM3	**Paja de Sombre**	**1.95**	**123**	*eP*	**Pn**	**11 08 43.4**	**+1.0**
PSOM3				*eS*	**Sn**	**11 09 07.5**	**+0.5**
PBNVO	**Pueblo Nuevo,**	**1.96**	**116**	*eP*	**Pn**	**11 08 43.2**	**+0.6**
CHGR2	**Aguacate**	**1.99**	**114**	*eP*	**Pn**	**11 08 43.4**	**+0.5**
CHGR2				*eS*	**Sn**	**11 09 09.1**	**+1.2**
RBALA	**Bur**	**2.00**	**115**	*eP*	**Pn**	**11 08 43.7**	**+0.6**

IDC 21 11:16:28.9±2.2, 7°.93S×119°.71E, h0km, mb3.0/2, mbtmp3.2/4, ML3.0/2, Error ellipse: s-maj=187.0km s-min=27.0km az=55.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.64**	**151**	Pn	Pn	11 19 15.5	-0.8
	0.1nm,0.3s,baz=335,slow=14,SNR=1.1						
FITZ				Sn	Sn	11 21 24.0	-3.1
	0.1nm,0.3s,baz=176,slow=19,SNR=1.3						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**18.53**	**132**	P	P	11 20 46.8	-0.3
	0.1nm,0.3s,baz=310,slow=12,SNR=5.5						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**20.74**	**141**	P	P	11 21 11.8	+0.5
	0.2nm,0.5s,baz=317,slow=10,SNR=10						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**63.84**	**332**	P	P	11 27 03.1	-0.1
	0.2nm,0.6s,baz=129,slow=3.9,SNR=2.6						
	0.2nm,0.6s						

KRSC 21 11:18:13.2±2.2, 49°.20N×156°.68E, h50km±44km, Ml4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.53**	**347**	*eP*	Pn	11 18 39.0	+0.9
SKR				*eS*	Sn	11 18 57.9	+1.1
PAU	**Pauzhetka**	**2.28**	**2**	*eP*	Pn	11 18 50.3	+2.0
PAU				*eS*	Sn	11 19 17.6	+2.5
KDTR	**Khodutka, Kamc**	**2.77**	**18**	*eP*	Pn	11 18 59.4	+4.4
KDTR				*eS*	Sn	11 19 31.4	+4.3
ASAK	**Asacha**	**3.28**	**13**	*eP*	Pn	11 19 06.1	+3.9
ASAK				*eS*	Sn	11 19 44.8	+4.8
MTVR	**Mutnovka**	**3.43**	**16**	*eP*	Pn	11 19 08.5	+4.3
MTVR				*eS*	Sn	11 19 48.4	+4.8
RUS	**Russkaya**	**3.44**	**19**	*eP*	Pn	11 19 08.3	+4.0
RUS				*eS*	Sn	11 19 47.7	+4.0
GRL	**Gorelyy**	**3.48**	**14**	*eP*	Pn	11 19 09.4	+4.5
GRL				*eS*	Sn	11 19 49.1	+4.3
APC	**Apacha**	**3.75**	**4**	*eP*	Pn	11 19 10.4	+2.0
KRMR	**Karymshinskiy**	**3.75**	**14**	*eP*	Pn	11 19 12.5	+4.0
DALK	**Dalny**	**4.06**	**18**	*eP*	Pn	11 19 16.6	+3.9
DALK				*eS*	Sn	11 20 02.0	+3.1
UGLR	**Uglovaya**	**4.24**	**18**	*eP*	Pn	11 19 20.0	+4.7
AVH	**Avacha**	**4.28**	**17**	*eP*	Pn	11 19 20.5	+4.7
KOK	**Koryaka**	**4.28**	**16**	*eP*	Pn	11 19 20.6	+4.8
SMAR	**Somma**	**4.29**	**17**	*eP*	Pn	11 19 20.7	+4.6
KRER	**Koryakskii**	**4.32**	**17**	*eP*	Pn	11 19 21.1	+4.7
SDLR	**Sedlovina**	**4.32**	**18**	*eP*	Pn	11 19 20.3	+3.9
KRX	**Arik**	**4.35**	**16**	*eP*	Pn	11 19 21.0	+4.2
SPN	**Mys Shipunski**	**4.44**	**27**	*eP*	Pn	11 19 22.9	+5.0
SPN				*eS*	Sn	11 20 13.1	+4.9
GNL	**Ganaly**	**4.58**	**9**	*eP*	Pn	11 19 22.0	+2.1
KII	**Karymskiy**	**5.14**	**19**	*eP*	Pn	11 19 31.6	+3.9
MKZ	**Mys Kozlova**	**6.21**	**28**	*eP*	Pn	11 19 45.3	+3.1
KBTR	**Krutoberegovo**	**7.95**	**26**	*eP*	Pn	11 20 09.6	+3.6
BKI	**Bering**	**8.29**	**40**	*eS*	Sn	11 21 43.1	+0.4

*IDC **21** 11:19:18.5±5.1, 18°.14S×177°.87W, h572km±59km, mb3.6/9, mbtmp4.5/9, Error ellipse: s-maj=34.9km s-min=22.8km az=8.0*
*NEIC **21** 11:19:20.7±0.4, 18°.0S±0°.1×177°.8W±0°.2, h601km±20km, mb4.3/21, Error ellipse: s-maj=33.7km s-min=5.2km az=126.0*
ISC 21 11:19:20.2±0.6, 18°.1S±0°.1×177°.98W±0°.09, h590km, n58, σ1s20/62, mb4.3/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.80**	**275**	P	**P**	**11 20 45.6**	**+1.9**
AFI	**Afiamalu**	**7.26**	**56**	P	**P**	**11 21 11.3**	**-1.1**
NIUE	**Niue**	**7.70**	**99**	P	**P**	**11 21 15.7**	**-0.7**
OUZ	**Omahuta**	**18.65**	**202**	P	**P**	**11 23 04.9**	**+2.9**
WCZ	**Waipu Caves**	**19.05**	**199**	P	**P**	**11 23 08.4**	**+2.8**
MKAZ	**Moumakai**	**19.89**	**196**	P	**P**	**11 23 15.0**	**+1.7**
HAZ	**Te Kaha**	**19.96**	**190**	P	**P**	**11 23 14.1**	**+0.3**
PUZ	**Puketiti**	**20.19**	**189**	P	**P**	**11 23 15.8**	**-0.2**
MWZ	**Matawai**	**20.56**	**190**	P	**P**	**11 23 19.5**	**+0.1**
URZ	**Urewera**	**20.56**	**191**	P	**P**	**11 23 17.5**	**-1.8**
	4.6nm,0.4s,baz=207,slow=0.2,SNR=9.1						
	4.6nm,0.4s						
URZ	**Urewera**	**20.56**	**191**	P	**P**	**11 23 18.0**	**-1.3**
MRZ	**Mangatainoka R**	**23.18**	**193**	P	**P**	**11 23 41.3**	**-1.4**
QRZ	**Quartz Range**	**24.10**	**198**	P	**P**	**11 23 51.4**	**+0.6**
THZ	**Tophouse**	**24.86**	**196**	P	**P**	**11 23 57.4**	**-0.2**
DSZ	**Denniston Nort**	**25.16**	**198**	P	**P**	**11 24 01.0**	**+0.8**
KHZ	**Kahutara**	**25.32**	**195**	P	**P**	**11

MD2.9/2
*CFUSG **21** 11:22:40.3, 45°.73N × 27°.58E, h10km, Mb2.6/3, MD3.4/3, MSH2.8/4*
ISC 21 11:22:37.7±0.8, 45°.74N±0°.01 × 27°.56E±0°.02, h30km±5km, n116, σ1°.44/173, 51C-43D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUDR		**0.17**	**152**	⇑P	**Pb**	**11 22 43.7**	**+0.2**
TUDR				⇑S	**Sb**	**11 22 47.9**	**+0.5**
COSR	**Cosmesti PH**	**0.21**	**304**	⇑P	**Pb**	**11 22 43.4**	**-0.5**
COSR				⇓S	**Sb**	**11 22 48.0**	**-0.2**
IZVR	**Izvoarele**	**0.25**	**143**	⇑P	**Pb**	**11 22 44.5**	**+0.2**
IZVR				⇑S	**Sb**	**11 22 49.1**	**+0.2**
VARL	**Varlezi**	**0.26**	**52**	⇑P	**Pb**	**11 22 45.0**	**+0.5**
VARL				⇑S	**Sn**	**11 22 50.1**	**-0.3**
NEGRR	**Negrea**	**0.30**	**132**	⇑P	**Pn**	**11 22 46.3**	**+0.2**
NEGRR				⇓S	**Sn**	**11 22 51.5**	**0.0**
SCHL	**Schela**	**0.31**	**141**	⇑P	**Pb**	**11 22 45.3**	**+0.1**
SCHL				⇑S	**Sn**	**11 22 51.2**	**-0.5**
SCTR	**Scanteiesti**	**0.31**	**102**	⇓P	**Pn**	**11 22 45.9**	**-0.3**
SCTR				⇑S	**Sn**	**11 22 51.9**	**+0.1**
PANC	**Panciu**	**0.32**	**295**	⇑P	**Pb**	**11 22 45.3**	**0.0**
PANC				⇓S	**Sn**	**11 22 51.3**	**-0.5**
SCHLR	**Schela**	**0.33**	**145**	⇓P	**Pb**	**11 22 45.8**	**+0.2**
SCHLR				⇓S	**Sb**	**11 22 51.7**	**+0.8**
GHRR		**0.34**	**342**	⇓P	**Pb**	**11 22 45.8**	**+0.2**
GHRR				⇑S	**Sb**	**11 22 51.7**	**+0.7**
GHRR		**0.34**	**342**	P	**Pb**	**11 22 45.6**	**0.0**
ODBI	**Odobesti**	**0.35**	**274**	⇓P	**Pb**	**11 22 46.1**	**+0.3**
ODBI				⇓S	**Sn**	**11 22 52.6**	**-0.2**
TATR	**Tatarca**	**0.37**	**112**	⇑P	**Pn**	**11 22 46.8**	**-0.3**
TATR				⇓S	**Sn**	**11 22 53.7**	**+0.4**
VLDR	**Vladesti**	**0.38**	**74**	⇑P	**Pn**	**11 22 46.9**	**-0.2**
VLDR				⇑S	**Sn**	**11 22 53.6**	**+0.1**
GISR	**Galati**	**0.46**	**131**	⇑P	**Pb**	**11 22 47.9**	**+0.4**
GISR				⇓S	**Sn**	**11 22 55.0**	**-0.4**
GIUM	**Giurgiulesti**	**0.52**	**119**	⇓P	**Pn**	**11 22 49.1**	**-0.1**
GIUM				⇑S	**Sn**	**11 22 57.6**	**+0.6**
GIUM	**Giurgiulesti**	**0.52**	**119**	P	**Pn**	**11 22 49.0**	**-0.1**
GIUM				S	**Sn**	**11 22 57.5**	**+0.6**
BIR	**Birlad**	**0.53**	**5**	⇑P	**Pb**	**11 22 48.6**	**0.0**
BIR				⇑S	**Sn**	**11 22 56.7**	**-0.4**
GRER		**0.55**	**229**	⇓P	**Pn**	**11 22 50.2**	**+0.8**
GRER				⇑S	**Sn**	**11 22 57.8**	**+0.3**
VRI	**Vrincioaia**	**0.59**	**282**	⇓P	**Pb**	**11 22 49.5**	**-0.2**
VRI				⇓S	**Sb**	**11 22 57.8**	**0.0**
VRI	**Vrincioaia**	**0.59**	**282**	P	**Pb**	**11 22 49.3**	**-0.3**
BISRR	**Bisoca**	**0.62**	**252**	⇓P	**Pn**	**11 22 51.2**	**+0.6**
BISRR	**Bisoca**	**0.62**	**252**	P	**Pn**	**11 22 50.6**	**0.0**
PLOR	**Plostina**	**0.64**	**280**	⇓P	**Pb**	**11 22 50.5**	**0.0**
PLOR				⇓S	**Sn**	**11 22 60.0**	**-0.1**
CFR	**Carcaliu**	**0.69**	**144**	⇑P	**Pb**	**11 22 51.3**	**+0.1**
LEOM	**Leova**	**0.88**	**33**	P	**Pb**	**11 22 55.8**	**+1.5**
VASR	**Vaslui**	**0.92**	**10**	⇓P	**Pb**	**11 22 55.7**	**+0.7**
VASR				⇑S	**Sb**	**11 23 07.5**	**+0.7**
NEHR	**Nehoiu**	**0.94**	**251**	⇓P	**Pb**	**11 22 56.7**	**+1.2**
NEHR				⇑S	**Sb**	**11 23 09.9**	**+2.4**
ISR	**Istrita**	**0.95**	**229**	⇑P	**Pb**	**11 22 56.7**	**+1.2**
ISR				⇑S	**Sb**	**11 23 10.2**	**+2.5**
COVR	**Voineasa-Covas**	**0.95**	**277**	⇓P	**Pb**	**11 22 55.9**	**+0.2**
COVR				⇓S	**Sb**	**11 23 09.0**	**+1.1**
TESR	**Tescani**	**1.00**	**321**	⇑P	**Pb**	**11 22 56.2**	**-0.2**
TESR				⇑S	**Sb**	**11 23 09.7**	**+0.5**
TESR	**Tescani**	**1.00**	**321**	P	**Pn**	**11 22 55.4**	**-0.2**
ONER	**Baraj Valea Uz**	**1.00**	**307**	⇓P	**Pb**	**11 22 56.7**	**+0.2**
ONER				⇓S	**Sb**	**11 23 11.1**	**+1.7**
TLCR		**1.04**	**122**	⇓P	**Pb**	**11 22 57.9**	**+0.7**
TLCR				⇑S	**Sb**	**11 23 12.1**	**+1.6**
TPGR	**Topolog**	**1.07**	**145**	⇑P	**Pb**	**11 22 58.0**	**+0.4**
TURR	**Turia**	**1.12**	**287**	⇑P	**Pb**	**11 22 59.0**	**+0.5**
MLR	**Muntele Rosu**	**1.16**	**258**	⇑P	**Pb**	**11 22 59.7**	**+0.5**
MLR				⇓S	**Sb**	**11 23 15.9**	**+2.0**
MLR	**Muntele Rosu**	**1.16**	**258**	P	**Pb**	**11 22 59.6**	**+0.4**
MLR	**Muntele Rosu**	**1.16**	**258**	*e*Pg	**Pb**	**11 22 59.6**	**+0.4**
MLR				*e*Sg	**Sb**	**11 23 15.9**	**+2.0**
OZUR		**1.29**	**287**	⇓P	**Pb**	**11 23 00.6**	**-0.6**
JURR	**Jurilovca**	**1.35**	**136**	⇓P	**Pb**	**11 23 02.9**	**+0.7**
BOSR	**Bodos**	**1.36**	**285**	⇓S	**Sb**	**11 23 19.4**	**+0.3**
LEHL	**Lehliu**	**1.37**	**203**	⇑P	**Pb**	**11 23 02.1**	**-0.5**
LEHL				⇑S	**Sb**	**11 23 21.3**	**+1.5**
SULR		**1.41**	**221**	⇑P	**Pb**	**11 23 03.9**	**+0.7**
GIRR	**Girov**	**1.42**	**329**	⇑P	**Pb**	**11 23 03.1**	**-0.3**
GIRR				⇑S	**Sb**	**11 23 21.8**	**+0.6**
TIRR	**Tirgusor**	**1.42**	**154**	⇓P	**Pb**	**11 23 02.7**	**-0.7**
TIRR				⇓S	**Sb**	**11 23 22.4**	**+1.2**
TIRR	**Tirgusor**	**1.42**	**154**	P	**Pn**	**11 23 02.5**	**+1.1**
IASR	**Iasi**	**1.44**	**0**	⇓P	**Pb**	**11 23 03.5**	**-0.3**
IASR				⇓S	**Sb**	**11 23 22.0**	**+0.3**
CVDA	**Cernavoda**	**1.45**	**166**	⇓S	**Sb**	**11 23 22.0**	**0.0**
KIS	**Kishinev**	**1.53**	**34**	⇑P	**Pb**	**11 23 05.3**	**0.0**
KIS				⇓S	**Sb**	**11 23 24.6**	**+0.3**
DOPR	**Dopca**	**1.53**	**279**	⇓P	**Pn**	**11 23 04.0**	**+0.9**
CICN	**Ciocanesti**	**1.59**	**194**	⇓P	**Pb**	**11 23 06.3**	**0.0**
CICN				⇓S	**Sb**	**11 23 26.6**	**+0.6**
TSSL	**Sulina**	**1.63**	**110**	⇑S	**Sb**	**11 23 27.3**	**+0.7**
ICOR	**Ion Corvin**	**1.63**	**174**	⇑P	**Pb**	**11 23 06.3**	**-0.8**
ICOR				⇑S	**Sb**	**11 23 27.9**	**+0.6**
MFTR	**Murfatlar**	**1.68**	**158**	⇓P	**Pb**	**11 23 07.3**	**-0.6**
MFTR				⇑S	**Sb**	**11 23 28.6**	**0.0**
TSCT	**Constanta Port**	**1.76**	**153**	⇑S	**Sb**	**11 23 31.2**	**+0.2**
VOIR		**1.79**	**261**	⇑P	**Pn**	**11 23 07.9**	**+1.4**
VOIR				⇑S	**Sb**	**11 23 30.4**	**-1.4**
VOIR		**1.79**	**261**	P	**Pn**	**11 23 07.6**	**+1.0**
PURM	**Purcari**	**1.79**	**63**	⇓S	**Sb**	**11 23 31.3**	**-0.5**
EFOR	**EFORIE**	**1.83**	**155**	⇑S	**Sb**	**11 23 32.2**	**-0.6**
PRAR	**RASCA**	**1.86**	**331**	⇓S	**Sb**	**11 23 32.6**	**-1.3**
SGRR	**Singureni**	**1.89**	**217**	⇑S	**Sb**	**11 23 34.1**	**-0.5**
MANR	**Mangalia**	**2.06**	**159**	⇓P	**Pn**	**11 23 12.1**	**+1.9**
MANR				⇓S	**Sn**	**11 23 37.1**	**+2.3**
PSN	**Preselentsi**	**2.14**	**169**	*i* P	**Pn**	**11 23 12.7**	**+1.3**
PSN				S	**Sb**	**11 23 41.3**	**-0.6**
SORM	**Soroca**	**2.46**	**13**	P	**Pn**	**11 23 16.6**	**+0.9**
SORM				Pg	**Pn**	**11 23 23.3**	**+2.2**
SORM	**Soroca**	**2.46**	**13**	P	**Pn**	**11 23 16.6**	**+0.9**
BURAR	**Bucovina Array**	**2.47**	**320**	⇓P	**Pn**	**11 23 18.7**	**+2.7**
NEF	**NEVSHA**	**2.48**	**185**	P	**Pn**	**11 23 18.8**	**+2.7**
NEF				S	**Sb**	**11 23 49.8**	**-2.0**
PRD	**Provadia**	**2.58**	**182**	P	**Pn**	**11 23 20.0**	**+2.6**
PRD				S	**Sn**	**11 23 49.4**	**+1.6**
ROIA	**ROIAK**	**2.65**	**183**	P	**Pn**	**11 23 20.4**	**+2.0**
ROIA				S	**Sn**	**11 23 51.5**	**+2.0**
SZH	**Strazhitsa**	**2.72**	**205**	P	**Pn**	**11 23 19.5**	**+0.1**
SZH				S	**Sn**	**11 23 51.0**	**-0.2**
KMPD	**K-Podol'skiy**	**2.92**	**346**	P	**Pn**	**11 23 21.4**	**-0.6**
KMPD				P	**Pn**	**11 23 22.0**	**0.0**
KMPD				Pg	**Pb**	**11 23 32.5**	**+3.5**
KMPD				Pg	**Pb**	**11 23 33.0**	**+4.0**
KMPD	**K-Podol'skiy**	**2.92**	**346**	*e*Pn	**Pn**	**11 23 24.6**	**+2.6**
KMPD				*e*Sn	**Sn**	**11 23 58.8**	**+2.7**
KSV	**Kosov**	**3.09**	**327**	P	**Pn**	**11 23 25.9**	**+1.5**
KSV	**Kosov**	**3.09**	**327**	*e*Pn	**Pn**	**11 23 26.5**	**+2.1**
KSV				pmax	pmax	11 23 36.7	
KSV				*e*Sn	**Sn**	**11 24 03.2**	**+2.9**
KSV				smax	smax	11 24 19.0	
PVL	**Pavlikeni**	**3.13**	**214**	P	**Pn**	**11 23 27.0**	**+2.1**
MARR	**Marisel-Cluj**	**3.22**	**288**	⇓P	**Pn**	**11 23 27.6**	**+1.3**
TARU	**Tarkhankut**	**3.51**	**94**	*ex*	**Pn**	**11 23 32.9**	**+2.7**
TARU				pmax	pmax	11 23 39.8	
	comp=Z,9.0nm,0.3s						
TARU				*e*S	**Sn**	**11 24 12.2**	**+1.5**
TARU				smax	smax	11 24 18.9	
	comp=N,2.0nm,0.2s						
TARU				smax	smax	11 24 18.9	
	comp=E,8.0nm,0.2s						
HORU	**Horodok**	**3.56**	**348**	P	**Pn**	**11 23 31.2**	**+0.4**
HORU	**Horodok**	**3.56**	**348**	*e*Pn	**Pn**	**11 23 32.9**	**+2.1**
HORU				*e*Sn	**Sn**	**11 24 15.3**	**+3.4**
MPEP	**Malo Peshtene**	**3.62**	**230**	P	**Pn**	**11 23 32.4**	**+0.7**
DNZ2	**Donuzlav2**	**3.99**	**93**	*ex*	**Pn**	**11 23 39.8**	**+3.1**
DNZ2				pmax	pmax	11 23 44.4	
	comp=Z,14nm,0.3s						
DNZ2				*e*S	**Sn**	**11 24 24.9**	**+2.4**
DNZ2				smax	smax	11 24 27.5	
	comp=N,10.0nm,0.2s						
DNZ2				smax	smax	11 24 27.5	
	comp=E,12nm,0.2s						
BLKB	**Belogradchik**	**4.08**	**240**	*e*Pn	**Pn**	**11 23 38.8**	**+0.8**
LUBAR	**Lubar, Ukraine**	**4.18**	**2**	P	**Pn**	**11 23 40.2**	**+0.8**
MORS	**Morshin**	**4.21**	**325**	*e*Pn	**Pn**	**11 23 42.7**	**+3.0**
MORS				*e*Sn	**Sn**	**11 24 31.7**	**+3.9**
MORS				*e*Sn	**Sb**	**11 24 36.6**	**-4.6**
MDVR	**Moldovita**	**4.24**	**259**	⇑P	**Pn**	**11 23 41.3**	**+1.1**
MDVR	**Moldovita**	**4.24**	**259**	*e*Pn	**Pn**	**11 23 40.7**	**+0.5**
ZAGS	**Zajecar**	**4.25**	**245**	*e*Pn	**Pn**	**11 23 40.9**	**+0.5**
ZAPS	**Zavoj**	**4.30**	**237**	*e*Pn	**Pn**	**11 23 41.4**	**+0.3**
KUBS	**Kucevo**	**4.37**	**254**	*e*Pn	**Pn**	**11 23 40.6**	**-1.5**
VTS	**Vitosha**	**4.41**	**226**	*e*Pn	**Pn**	**11 23 44.5**	**+1.9**
SEV	**Sevastopol'**	**4.49**	**103**	*i* P	**Pn**	**11 23 45.6**	**+2.1**
SEV				pmax	pmax	11 23 47.1	
	comp=Z,2.0nm,0.2s						
SEV				*i* S	**Sn**	**11 24 35.5**	**+0.8**
SEV				smax	smax	11 24 42.5	
	comp=N,4.0nm,0.3s						
SEV				smax	smax	11 24 42.5	
	comp=E,3.0nm,0.3s						
BOVS	**Bovan**	**4.67**	**245**	*e*Pn	**Pn**	**11 23 47.1**	**+0.9**
BOSS	**Bosilegrad**	**4.89**	**230**	*e*Pn	**Pn**	**11 23 49.4**	**+0.3**
AK07	**Malin Array Si**	**4.94**	**12**	P	**Pn**	**11 23 49.9**	**+0.2**
AK06	**Malin Array Si**	**4.97**	**12**	P	**Pn**	**11 23 50.6**	**+0.4**
AK13	**Malin Array Si**	**4.98**	**11**	P	**Pn**	**11 23 50.5**	**+0.2**
AK10	**Malin Array Si**	**4.99**	**13**	P	**Pn**	**11 23 50.7**	**+0.2**
AK14	**Malin Array Si**	**5.00**	**11**	P	**Pn**	**11 23 50.6**	**0.0**
AK09	**Malin Array Si**	**5.01**	**13**	P	**Pn**	**11 23 51.2**	**+0.4**
AK08	**Malin Array Si**	**5.03**	**12**	P	**Pn**	**11 23 51.2**	**+0.2**
AK16	**Malin Array Si**	**5.04**	**11**	P	**Pn**	**11 23 51.5**	**+0.3**
AK11	**Malin Array Si**	**5.06**	**12**	P	**Pn**	**11 23 51.5**	**+0.1**
AK18	**Malin Array Si**	**5.08**	**11**	P	**Pn**	**11 23 51.9**	**+0.1**
AKASG	**Malin Array Be**	**5.09**	**12**	Pn	**Pn**	**11 23 52.4**	**+0.6**
	comp=E,3.4nm,0.3s,baz=188,slow=12,SNR=10						
AKASG				Sn	**Sn**	**11 24 48.6**	**-0.9**
	comp=E,4.9nm,0.3s,baz=199,slow=21,SNR=6.7						
AKASG				Lg	Lg	11 25 12.1	
	comp=E,9.6nm,0.3s,baz=191,slow=30,SNR=7.3						
	comp=E,1.3nm,0.3s						
AKBB	**Malin Array Si**	**5.09**	**12**	P	**Pn**	**11 23 51.8**	**0.0**
AK20	**Malin Array Si**	**5.10**	**10**	P	**Pn**	**11 23 52.1**	**+0.1**
AK22	**Malin Array Si**	**5.12**	**11**	P	**Pn**	**11 23 52.1**	**-0.2**
MI28	**Mi28,Pidlybu**	**5.19**	**1**	P	**Pn**	**11 23 52.9**	**-0.4**
SUDU	**Sudak**	**5.32**	**97**	*ex*	x	11 24 04.2	
SUDU				*e*S	**Sn**	**11 24 57.4**	**+2.2**
SUDU				smax	smax	11 25 01.0	
	comp=N,9.0nm,0.3s						
SUDU				smax	smax	11 25 01.0	
	comp=E,2.0nm,0.3s						
RNPP5	**Staryi Chortor**	**5.60**	**349**	P	**Pn**	**11 23 59.3**	**+0.4**
RNPP8	**Varash**	**5.71**	**349**	P	**Pn**	**11 24 01.4**	**+1.0**
RNPP9	**Sopachiv**	**5.78**	**350**	P	**Pn**	**11 24 01.4**	**+0.1**
BRTR	**Keskin Array B**	**7.49**	**141**	Pn	**Pn**	**11 24 26.1**	**+1.1**
	comp=E,0.1nm,0.3s,baz=331,slow=15,SNR=2.1						
	comp=E,0.3nm,0.3s						
FINES	**FINESS Array B**	**15.76**	**357**	Pn	**Pn**	**11 26 10.4**	**-6.7**
	comp=E,0.3nm,0.3s,baz=181,slow=7.6,SNR=8.3						
FINES				Sn	Sn	11 28 59.5	-11
	comp=E,0.4nm,0.3s,baz=180,slow=19,SNR=5.8						
	comp=E,4.8nm,0.9s						
HFS	**Hagfors**	**16.61**	**335**	Pn	**Pn**	**11 26 23.8**	**-4.2**
	comp=E,0.2nm,0.3s,baz=144,slow=12,SNR=1.3						
	comp=E,1.7nm,0.7s						

*IDC **21** 11:25:25.6±3.7, 19°.99S × 175°.50W, h283km±35km, mb3.2/6, mbtmp4.0/8, Error ellipse: s-maj=22.6km s-min=13.2km az=118.0*
ISC 21 11:25:17.0±0.7, 20°.0S±0°.1 × 175°.29W±0°.09, h204km, n25, σ1°.79/33, mb3.4/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.15**	**80**	P	**Pn**	**11 26 34.0**	**+0.5**
NIUE				S	**S**	**11 27 32.8**	**-0.5**
DZM	**Mont Dzumac**	**17.17**	**260**	P	**Pn**	**11 29 06.1**	**+0.9**
	4.5nm,0.6s,baz=97,slow=18,SNR=8.6						
OUZ	**Omahuta**	**18.04**	**211**	P	**Pn**	**11 29 20.5**	**+5.2**
WMGZ	**Waiomatatini S**	**18.57**	**196**	P	**Pn**	**11 29 24.8**	**+3.4**
HAZ	**Te Kaha**	**18.68**	**197**	P	**Pn**	**11 29 24.3**	**+1.6**
PKGZ	**Pakihiroa**	**18.70**	**197**	P	**Pn**	**11 29 25.5**	**+2.5**
PUZ	**Puketiti**	**18.84**	**196**	P	**Pn**	**11 29 26.0**	**+1.3**
PUZ				S	**S**	**11 32 44.2**	**-0.8**
RUGZ	**Raukumara Rang**	**18.90**	**197**	P	**Pn**	**11 29 27.0**	**+1.5**
RUGZ				S	**S**	**11 32 43.8**	**-2.5**
MKAZ	**Moumakai**	**18.96**	**204**	P	**Pn**	**11 29 27.7**	**+1.7**
TWGZ	**Tauwhareparae**	**19.02**	**196**	P	**Pn**	**11 29 28.8**	**+2.0**
TWGZ				S	**S**	**11 32 47.4**	**-1.0**
CNGZ	**Carnagh Statio**	**19.25**	**196**	P	**Pn**	**11 29 31.0**	**+1.6**
MWZ	**Matawai**	**19.29**	**197**	P	**Pn**	**11 29 31.2**	**+1.2**
TKGZ	**Te Karaka**	**19.30**	**196**	P	**Pn**	**11 29 31.6**	**+1.6**
URZ	**Urewera**	**19.34**	**198**	P	**Pn**	**11 29 30.2**	**-0.3**
	16nm,0.5s,baz=306,slow=2.0,SNR=33						
URZ				S	**S**	**11 32 53.3**	**-1.4**
	3.6nm,0.5s,baz=63,slow=19,SNR=6.6						
URZ	**Urewera**	**19.34**	**198**	P	**Pn**	**11 29 30.2**	**-0.3**
URZ				S	**S**	**11 32 51.7**	**-2.9**
TOZ	**Tahuroa Road**	**19.39**	**202**	P	**Pn**	**11 29 32.6**	**+1.5**
RTZ	**Ruatahuna**	**19.70**	**198**	P	**Pn**	**11 29 35.3**	**+0.3**
TLZ	**Tolley Road**	**19.91**	**202**	P	**Pn**	**11 29 38.1**	**+0.6**
ASAR	**Alice Springs**	**47.10**	**256**	P	**P**	**11 33 28.8**	**-0.2**
	0.9nm,0.5s,baz=90,slow=8.2,SNR=18						
ASAR				PcP	**PcP**	**11 34 56.7**	**-0.7**
	0.6nm,0.7s,baz=110,slow=4.4,SNR=6.8						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**47.18**	**261**	P	**P**	**11 33 28.1**	**-1.4**
	0.3nm,0.3s,baz=96,slow=7.5,SNR=18						
WRA				PcP	**PcP**	**11 34 57.6**	**-0.1**
	0.2nm,0.5s,baz=100,slow=2.9,SNR=1.9						
	0.3nm,0.3s						
NVAR	**Mina Array Bea**	**78.95**	**42**	P	**P**	**11 36 59.1**	**+0.8**
	1.3nm,0.7s,baz=223,slow=8.9,SNR=14						
	1.3nm,0.7s						
TXAR	**Lajitas Array**	**84.67**	**56**	P	**P**	**11 37 29.4**	**+1.2**
	0.7nm,0.8s,baz=225,slow=8.7,SNR=5.8						
	0.7nm,0.8s						
PDAR	**Pinedale Array**	**86.88**	**42**	P	**P**	**11 37 37.9**	**-1.1**
	0.3nm,0.7s,baz=243,slow=5.3,SNR=2.9						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**87.30**	**12**	P	**P**	**11 37 38.9**	**-1.3**
	0.6nm,0.9s,baz=213,slow=4.8,SNR=8.7						
	0.6nm,0.9s						
BRTR	**Keskin Array B**	**148.35**	**315**	PKPbc	**PKPbc**	**11 44 39.1**	**-0.5**
	0.8nm,0.7s,baz=136,slow=2.7,SNR=3.1						

*SOME **21** 11:25:49.3, 43°.68N × 69°.70E*
*NNC **21** 11:25:50.7±1.5, 43°.61N × 69°.72E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=10.0km s-min=5.6km az=134.0, Suspected Mining explosion.*
ISC 21 11:25:49.6±2.5, 43°.8N±0°.1 × 69°.9E±0°.1, h0km, n14, σ0°.79/17, 2C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRLS	**Borolday**	**0.75**	**184**	P	**Pb**	**11 26 05.4**	**-0.2**
	3.9nm,0.5s						
BRLS				S	**Sb**	**11 26 16.9**	**+0.5**
	38nm,0.4s						
KK31	**Karatay Array**	**0.80**	**147**	⇑P	**Pg**	**11 26 05.2**	**+0.1**
	1.5nm,0.3s,baz=323,slow=17,SNR=171						
KK31				S	**Sg**	**11 26 16.2**	**+0.8**
	43nm,0.6s,baz=304,slow=28,SNR=70						
IUG	**Iuzhnay**	**1.63**	**177**	P	**Pn**	**11 26 19.6**	**-0.1**
	42nm,0.5s						
IUG				S	**Sn**	**11 26 41.3**	**-0.2**
	80nm,0.6s						
MRKS	**Merke**	**2.63**	**112**	Pg	**Pg**	**11 26 40.0**	**-0.1**
	8.4nm,0.6s						
MRKS				Lg	Lg	11 27 16.9	
	19nm,0.5s						
SGDS	**Sogindy**	**3.44**	**94**	Pg	**Pg**	**11 26 57.0**	**+1.5**
	1.7nm,0.1s						
SGDS				Lg	Lg	11 27 45.9	
	7.4nm,0.6s						
AAK	**Ala-Archa**	**3.54**	**107**	⇓Pg	**Pg**	**11 26 55.9**	**-1.5**
	3.1nm,0.5s						
AAK				⇑Lg	Lg	11 27 44.6	
	4.5nm,0.6s						
KRBS	**Karabastau**	**4.18**	**89**	Pg	**Pg**	**11 27 10.1**	**+0.5**
	5.4nm,0.7s						
KRBS				Lg	Lg	11 28 08.2	
	2.6nm,0.5s						
DGS	**Degeres**	**4.29**	**95**	Pg	**Pg**	**11 27 10.6**	**-1.3**
	3.6nm,0.6s						
DGS				Lg	Lg	11 28 09.4	
	9.8nm,0.5s						
KST	**Kastek**	**4.47**	**97**	Pg	**Pg**	**11 27 14.9**	**-0.4**
	4.7nm,0.6s						
KST				Lg	Lg	11 28 17.2	
	10nm,0.7s						
MTBS	**Maitube**	**4.79**	**96**	Pg	**Pg**	**11 27 20.4**	**-1.0**
	2.4nm,0.3s						
MTBS				Lg	Lg	11 28 25.4	
	6.1nm,0.5s						
KTBS	**Karatobe**	**4.90**	**88**	Pg	**Pg**	**11 27 23.8**	**+0.2**
	5.9nm,0.6s						
KTBS				Lg	Lg	11 28 31.5	
	0.3nm,0.3s						
TNSS	**Tian-Shan**	**5.18**	**96**	Pg	**Pg**	**11 27 28.5**	**-0.3**
	1.0nm,0.2s						
TNSS				Lg	Lg	11 28 39.8	
	2.5nm,0.4s						
MDOK	**Medeo**	**5.23**	**94**	Pg	**Pg**	**11 27 29.6**	**-0.2**
	2.5nm,0.3s						
MDOK				Lg	Lg	11 28 41.2	
	4.6nm,0.3s						
KOTS	**Kotyrbulak**	**5.26**	**93**	Pg	**Pg**	**11 27 30.8**	**+0.3**
	1.4nm,0.3s						
KOTS				Lg	Lg	11 28 43.3	
	9.8nm,0.4s						

*HEL **21** 11:53:34.2±0.2, 67°.83N × 20°.18E, h0km, ML1.3, Suspected explosion*
UPP 21 11:53:33.3±0.0, 67°.88N × 20°.12E, h0km, ML2.3, Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.11**	**46**	P	Pg	**11 53 35.6**	**+0.1**
KUA				S	Sg	**11 53 37.6**	**+0.7**
RATU	**Laukkuluspa**	**0.21**	**256**	P	Pg	**11 53 37.5**	**+0.3**
KOVU	**Salmi**	**0.35**	**2**	P	Pg	**11 53 40.3**	**+0.3**
NIKU	**Nikkaluokta**	**0.41**	**269**	P	Pg	**11 53 41.1**	**-0.1**
LANU	**Lannavaara**	**0.73**	**75**	P	Pg	**11 53 47.0**	**-0.2**
LANU	**Lannavaara**	**0.73**	**75**	PG	Pg	**11 53 47.0**	**-0.2**
LANU				SG	Sg	**11 53 56.8**	**+0.2**
SALU	**Saltoluokta**	**0.79**	**232**	*e*P	Pg	**11 53 48.3**	**-0.2**
SALU	**Saltoluokta**	**0.79**	**232**	P	Pg	**11 53 48.1**	**-0.3**
MASU	**Masugnsbyn**	**0.83**	**120**	P	Pg	**11 53 49.6**	**+0.4**
KIF	**Kilpisjarvi**	**1.16**	**12**	*e*P	Pn	**11 53 56.5**	**-0.3**
KIF	**Kilpisjarvi**	**1.16**	**12**	PG	Pn	**11 53 56.7**	**-0.1**
	baz=193						
KIF				smax	smax	11 54 11.8	
	comp=Z,3.1nm,0.2s						
KIF				SG	Sb	**11 54 12.5**	**+0.7**
HEF	**Hetta**	**1.43**	**66**	PG	Pn	**11 54 00.2**	**-0.2**
HEF				smax	smax	11 54 17.2	
	comp=Z,2.4nm,0.2s						
HEF				SG	Sg	**11 54 19.2**	**+0.1**
ERTU	**Ertsjaerv**	**1.55**	**148**	P	Pn	**11 54 01.6**	**-0.5**
ERTU	**Ertsjaerv**	**1.55**	**148**	PG	Pn	**11 54 01.6**	**-0.6**
ERTU				SN	Sb	**11 54 23.0**	**0.0**
KLF	**Kolari**	**1.61**	**112**	PG	Pn	**11 54 02.6**	**-0.3**
KLF				smax	smax	11 54 21.4	
	comp=Z,1.6nm,0.2s						
KLF				SN	Sg	**11 54 25.2**	**+0.2**
KTK1	**Kautokeino**	**1.62**	**44**	PG	Pb	**11 54 03.9**	**-0.2**
KTK1				SN	Sg	**11 54 27.1**	**+1.8**
TRO	**Tromso**	**1.82**	**347**	SN	Sg	**11 54 33.2**	**+1.6**
TOF	**Tornio**	**2.45**	**136**	PB	Pn	**11 54 15.8**	**+1.4**
	baz=322						
TOF				smax	smax	11 54 45.2	
	comp=Z,0.8nm,0.2s						
TOF				SG	Sb	**11 54 48.1**	**-0.6

HATOM IAML 12 26 53.7
comp=N,24nm,2.8s
DR08 Loma La Naviza 3.19 291 *e*Pg **Pb 12 26 02.1 +0.2**
DR08 *e*Sg **Sb 12 26 41.8 +1.2**
DR08 IAML 12 27 08.6
comp=N,176nm,0.1s

IDC 21 12:33:27.2±3.6, 19°80'N×121°37'E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=290.0km s-min=28.0km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**41.49**	**161**	P	P	12 41 15.2	-1.1
	1.2nm,0.8s,baz=343,slow=8.9,SNR=9.7						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**41.68**	**319**	P	P	12 41 17.4	-0.2
	0.3nm,0.7s,baz=112,slow=8.2,SNR=3.7						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**44.90**	**164**	P	P	12 41 44.6	+0.8
	0.6nm,0.3s,baz=341,slow=7.2,SNR=20						
	0.6nm,0.3s						

*CATAC **21** 12:35:42.0±0.4, 7°N±2.2°×7°3W±.°, h175km±4km, M4.6/14, mb4.4/7, mB4.6/4, MLv5.0/14, Mw(mB)3.7/4, MwMwp3.5/1, Mwp4.1/1, Error ellipse: s-maj=6.4km s-min=3.6km az=91.3, confirmed*
*IDC **21** 12:35:43.9±0.5, 6°78N×72°94W, h160km±5km, mb3.9/16, mbtmp4.4/19, MS3.8/2, Error ellipse: s-maj=11.0km s-min=7.3km az=131.0*
*RSNC **21** 12:35:44.4±0.0, 7°N±1°×7°3W±,° h156km±2km, M4.7, mB5.2, mb5.1, ML4.3, Mw(mB)4.5*
*VAO **21** 12:35:44.4±0.6, 6°69N×72°92W, h149km, mb4.4, Presumed earthquake*
*FUNV **21** 12:35:45.0, 6°85N×73°07W, h161km, MW4.7, Presumed earthquake*
*NEIC **21** 12:35:45.3±1.7, 6°78N±0°06×72°99W±0°05, h162km±8km, mb4.5/260, Error ellipse: s-maj=10.5km s-min=4.2km az=217.0*

ISC 21 12:35:43.9±0.5, 6°86N±0°03×73°03W±0°03, h157km±4km, n286, σ1°76/253, mb4.5/128, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.30**	**210**	P	**Pn**	**12 36 05.5**	**-0.2**
BARC				S	**Sn**	**12 36 20.9**	**-1.4**
PAMC	**Pamplona, Colo**	**0.58**	**34**	P	**Pn**	**12 36 08.2**	**+1.1**
PAMC				S	**Sn**	**12 36 25.4**	**+0.5**
BRJC	**Barrancabermej**	**0.72**	**279**	P	**Pn**	**12 36 07.2**	**-0.1**
BRJC				S	**Sn**	**12 36 24.6**	**-0.6**
RUSC	**La Rusia**	**0.96**	**183**	P	**Pn**	**12 36 09.4**	**-0.3**
RUSC				S	**Sn**	**12 36 29.2**	**-0.2**
RUSC	**La Rusia**	**0.96**	**183**	P	**Pn**	**12 36 09.3**	**-0.3**
RUSC				S	**Sn**	**12 36 28.0**	**-1.4**
RUSC	**La Rusia**	**0.96**	**183**	*i* P	**Pn**	**12 36 09.1**	**-0.6**
RUSC				*e*S	**Sn**	**12 36 28.1**	**-1.2**
CAPV	**Capacho**	**1.23**	**35**	*i* P	**Pn**	**12 36 13.4**	**+1.7**
CAPV				*e*S	**Sn**	**12 36 32.8**	**-0.2**
OCAC	**Ocana**	**1.40**	**348**	P	**Pn**	**12 36 13.6**	**+0.3**
OCAC				S	**Sn**	**12 36 36.3**	**+0.4**
PTBC	**PUERTO BERRIO,**	**1.45**	**258**	P	**Pn**	**12 36 11.9**	**-1.7**
PTBC				S	**Sn**	**12 36 33.5**	**-2.8**
SPBC	**San Pablo de B**	**1.58**	**221**	P	**Pn**	**12 36 13.3**	**-0.7**
SPBC				S	**Sn**	**12 36 36.9**	**-2.0**
CHIC	**Chingaza**	**2.32**	**198**	P	**Pn**	**12 36 23.0**	**-0.7**
CHIC				S	**Sn**	**12 36 52.6**	**-1.7**
ROSC	**El Rosal**	**2.38**	**213**	P	**Pn**	**12 36 25.0**	**+0.6**
	3μm,0.4s,baz=26,slow=4.5,SNR=483						
ROSC				S	**Sn**	**12 36 55.1**	**-0.4**
	4μm,0.5s,baz=87,slow=19,SNR=5.9						
ROSC	**El Rosal**	**2.38**	**213**	P	**Pn**	**12 36 24.8**	**+0.4**
ROSC				S	**Sn**	**12 36 54.7**	**-0.8**
BOG	**Bogota**	**2.44**	**205**	P	**Pn**	**12 36 24.3**	**-0.8**
BOG				S	**Sn**	**12 36 57.5**	**+0.6**
CVER	**Cruz Verde, Cu**	**2.54**	**204**	P	**Pn**	**12 36 26.6**	**+0.2**
CVER				S	**Sn**	**12 37 00.6**	**+1.4**
HELC	**Santa Helena**	**2.57**	**255**	P	**Pn**	**12 36 25.5**	**-1.1**
HELC				S	**Sn**	**12 36 57.9**	**-1.6**
HELC	**Santa Helena**	**2.57**	**255**	P	**Pn**	**12 36 25.4**	**-1.2**
HELC				S	**Sn**	**12 36 57.0**	**-2.5**
HELC	**Santa Helena**	**2.57**	**255**	*e*P	**Pn**	**12 36 26.8**	**+0.2**
HELC				*e*S	**Sn**	**12 36 57.7**	**-1.8**
SOCV	**Socops**	**2.58**	**57**	*i* P	**Pn**	**12 36 28.1**	**+1.7**
SOCV				*e*S	**Sn**	**12 36 59.1**	**-0.2**
UREC	**San Jos de Ur**	**2.64**	**290**	P	**Pn**	**12 36 25.0**	**-2.1**
UREC				S	**Sn**	**12 36 56.4**	**-4.1**
PTGC	**Puerto Gaitan,**	**2.79**	**161**	P	**Pn**	**12 36 28.3**	**-0.7**
PTGC				S	**Sn**	**12 37 01.7**	**-2.2**
VILC	**Villavicencio,**	**2.81**	**194**	P	**Pn**	**12 36 28.4**	**-0.9**
VILC				S	**Sn**	**12 37 03.4**	**-1.1**
GUY2C	**Guyana, Caldas**	**2.83**	**235**	P	**Pn**	**12 36 29.2**	**-0.8**
GUY2C				S	**Sn**	**12 37 04.7**	**-0.8**
RECRC	**Villamaria, Ca**	**2.98**	**231**	P	**Pn**	**12 36 32.5**	**+0.6**
RECRC				S	**Sn**	**12 37 09.0**	**+0.1**
NIZA	**Niza - Manizal**	**3.01**	**234**	P	**Pn**	**12 36 32.6**	**+0.6**
NIZA				S	**Sn**	**12 37 08.8**	**+0.5**
CMAN1	**Manizales, Cal**	**3.05**	**235**	P	**Pn**	**12 36 33.0**	**+0.5**
CMAN1				S	**Sn**	**12 37 08.2**	**-1.9**
SDV	**Santo Domingo**	**3.12**	**50**	P	**Pn**	**12 36 34.5**	**+1.3**
	843nm,0.3s,baz=216,slow=4.9,SNR=1694						
SDV				S	**Sn**	**12 37 11.6**	**+0.1**
	510nm,0.4s,baz=273,slow=22,SNR=18						
SDV	**Santo Domingo**	**3.12**	**50**	*e*P	**Pn**	**12 36 34.5**	**+1.3**
SDV				*e*S	**Sn**	**12 37 11.5**	**+0.1**
SDV	**Santo Domingo**	**3.12**	**50**	P	**Pn**	**12 36 34.5**	**+1.3**
SDV				S	**Sn**	**12 37 11.7**	**+0.2**
SDV	**Santo Domingo**	**3.12**	**50**	*i* P	**Pn**	**12 36 34.7**	**+1.4**
SDV				*e*S	**Sn**	**12 37 10.0**	**-1.4**
CBOC	**Ciudad Bolivar**	**3.12**	**252**	P	**Pn**	**12 36 25.2**	**-0.6**
CBOC				S	**Sn**	**12 37 09.4**	**-2.2**
DBBC	**Dabeiba**	**3.16**	**273**	P	**Pn**	**12 36 32.8**	**-0.9**
DBBC				S	**Sn**	**12 37 08.5**	**-3.8**
ARGC	**Ariguani, Magd**	**3.22**	**338**	P	**Pn**	**12 36 35.9**	**+1.6**
ARGC				S	**Sn**	**12 37 14.0**	**+0.5**
ANIL	**Santa Ana**	**3.33**	**225**	P	**Pn**	**12 36 35.7**	**-0.4**
ANIL				S	**Sn**	**12 37 14.8**	**-1.7**
PRAC	**Prado**	**3.63**	**211**	P	**Pn**	**12 36 39.5**	**-0.1**
PRAC				S	**Sn**	**12 37 22.5**	**-0.4**
PRAC	**Prado**	**3.63**	**211**	P	**Pn**	**12 36 38.0**	**-1.6**
PRAC				S	**Sn**	**12 37 20.8**	**-2.2**
ORTC	**Ortega, Tolima**	**3.67**	**217**	P	**Pn**	**12 36 38.9**	**-1.2**
ORTC				S	**Sn**	**12 37 22.3**	**-1.5**
APAC	**Apartado, Choc**	**3.67**	**287**	P	**Pn**	**12 36 39.4**	**-0.7**
APAC				S	**Sn**	**12 37 21.5**	**-2.3**
SJCC	**San Jacinto, C**	**3.69**	**325**	P	**Pn**	**12 36 39.4**	**-1.1**
SJCC				S	**Sn**	**12 37 21.6**	**-2.9**
SJCC	**San Jacinto, C**	**3.69**	**325**	P	**Pn**	**12 36 39.2**	**-1.3**
SJCC	**San Jacinto, C**	**3.69**	**325**	*i* P	**Pn**	**12 36 39.8**	**-0.7**
SJCC				*e*S	**Sn**	**12 37 20.7**	**-3.8**
PLMC	**San Jos del P**	**3.77**	**239**	P	**Pn**	**12 36 40.5**	**-1.0**
PLMC				S	**Sn**	**12 37 24.2**	**-2.1**
URMC	**La Uribe, Meta**	**3.83**	**201**	P	**Pn**	**12 36 41.4**	**-0.9**
CRJC	**Cerrejon, Guaj**	**4.14**	**2**	P	**Pn**	**12 36 45.5**	**-0.8**
GUVC	**San Jose del G**	**4.30**	**175**	P	**Pn**	**12 36 46.8**	**-1.6**
YOTC	**Yotoco, Valle**	**4.36**	**229**	P	**Pn**	**12 36 47.6**	**-1.6**
CAPC	**Capurgana**	**4.63**	**293**	P	**Pn**	**12 36 49.9**	**-2.8**
CAP2	**Capurgana**	**4.65**	**293**	P	Pn	12 36 49.2	-3.7
CAP2				S	**Sn**	**12 37 41.9**	**-4.7**
PTAC	**Punta Ardita,**	**4.75**	**274**	P	**Pn**	**12 36 52.6**	**-1.6**
TEPV	**Terepaima**	**4.89**	**51**	*i* P	**Pn**	**12 36 56.4**	**+0.3**
TEPV				*e*S	**Sn**	**12 37 48.9**	**-3.7**
URI	**Uribia**	**4.92**	**12**	P	**Pn**	**12 36 54.4**	**-2.1**
URI				S	**Sn**	**12 37 49.8**	**-3.3**
URIC	**Uribia, Colomb**	**4.92**	**12**	P	**Pn**	**12 36 55.0**	**-1.5**
URIC	**Uribia, Colomb**	**4.92**	**12**	*i* P	**Pn**	**12 36 55.6**	**-0.9**
URIC				*e*S	**Sn**	**12 37 48.5**	**-4.7**
JAMC	**Jamundi, Valle**	**5.12**	**225**	P	**Pn**	**12 36 57.4**	**-1.9**
	3μm195nm,0.7s						
GARC	**Garzon, Huila**	**5.25**	**208**	P	**Pn**	**12 36 58.6**	**-2.4**
	11μm372nm,0.6s						
MAPV	**Macapo**	**5.41**	**57**	*i* P	**Pn**	**12 37 02.9**	**0.0**
MAPV				*e*S	**Sn**	**12 37 59.9**	**-4.7**
POPC	**Popayan, Colom**	**5.62**	**220**	P	**Pn**	**12 37 04.7**	**-1.2**
	2μm175nm,0.7s						
FLOC	**Florencia**	**5.85**	**207**	P	**Pn**	**12 37 06.2**	**-2.6**
FLOC				S	**Sn**	**12 38 14.3**	**-1.0**
FLOC	**Florencia**	**5.85**	**207**	P	**Pn**	**12 37 06.7**	**-2.2**
	4μm317nm,1.1s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACV	**Jacura**	**5.91**	**44**	*e*P	**Pn**	**12 37 10.1**	**+0.6**
JACV				*e*S	**Sn**	**12 38 09.7**	**-6.9**
TURV	**Turiamo**	**6.25**	**55**	*e*P	**Pn**	**12 37 13.2**	**-0.9**
TURV				*e*S	**Sn**	**12 38 18.7**	**-6.0**
BBAC	**Balboa, Cauca**	**6.38**	**221**	P	**Pn**	**12 37 15.2**	**-0.8**
CACV	**CAICARA DEL OR**	**6.48**	**83**	*e*P	Pn	12 37 22.4	+5.3
TACV	**Tcata**	**6.78**	**61**	*e*P	**Pn**	**12 37 20.5**	**-0.6**
TACV				*e*S	**Sn**	**12 38 31.2**	**-6.1**
BCIP	**Isla Barro Col**	**7.12**	**289**	P	**Pn**	**12 37 22.3**	**-3.4**
BCIP				S	**Sn**	**12 38 40.8**	**-4.7**
FUNV	**FUNVISIS**	**7.12**	**59**	*e*P	**Pn**	**12 37 25.5**	**-0.2**
FUNV				*e*S	**Sn**	**12 38 38.5**	**-7.2**
OTAV	**Otavalo**	**8.51**	**220**	P	**Pn**	**12 37 43.7**	**-0.9**
OTAV	**Otavalo**	**8.51**	**220**	P	**Pn**	**12 37 42.1**	**-2.5**
OTAV				S	**Sn**	**12 39 16.9**	**-2.8**
OTAV	**Otavalo**	**8.51**	**220**	*e*P	**Pn**	**12 37 43.1**	**-1.5**
PCRV	**Puerto La Cruz**	**8.93**	**68**	*e*P	**Pn**	**12 37 48.9**	**-0.9**
BRU2	**Volcan**	**9.76**	**282**		**Pn**	**12 38 00.1**	**-0.8**
HDC	**Heredia**	**11.40**	**287**	Pn	**Pn**	**12 38 23.8**	**+1.4**
STH	**Stony Hill**	**11.75**	**342**	*e*P	**Pn**	**12 38 29.2**	**+2.4**
STH	**Stony Hill**	**11.75**	**342**	*i* P	**Pn**	**12 38 29.8**	**+3.0**
MTDJ	**Mount Denham**	**12.12**	**339**		**Pn**	**12 38 33.5**	**+1.7**
MTDJ	**Mount Denham**	**12.12**	**339**	*e*P	**Pn**	**12 38 34.8**	**+3.0**
MTDJ	**Mount Denham**	**12.12**	**339**	⇑*i*P	**Pn**	**12 38 34.7**	**+3.0**
SDDR	**Presa de Saban**	**12.17**	**8**		**Pn**	**12 38 34.7**	**+2.4**
JTS	**Las Juntas de**	**12.27**	**287**	P	**Pn**	**12 38 35.4**	**+1.8**
	8.3nm,0.6s,baz=266,slow=11,SNR=9.5						
JTS	**Las Juntas de**	**12.27**	**287**		**Pn**	**12 38 35.2**	**+1.5**
DR12	**Loma Pena Alta**	**12.38**	**16**	Pn	**Pn**	**12 38 33.6**	**-1.4**
SJG	**San Juan**	**13.04**	**30**	P	**Pn**	**12 38 42.9**	**-0.6**
	19nm,0.5s,baz=338,slow=18,SNR=7.4						
SJG				S	Sn	12 40 56.5	-12
	8.2nm,0.3s,baz=198,slow=20,SNR=3.4						
GTBY	**Guantanamo Bay**	**13.15**	**351**	P	**P**	**12 38 49.0**	**-0.1**
GTBY	**Guantanamo Bay**	**13.15**	**351**	*e*P	**P**	**12 38 48.5**	**-0.6**
HUMP	**Col San Antoni**	**13.22**	**31**	Pn	**Pn**	**12 38 44.8**	**-1.0**
BOAV	**Boa Vista**	**13.23**	**109**		**Pn**	**12 38 44.1**	**-1.8**
BOAV	**Boa Vista**	**13.23**	**109**	*e*P	**Pn**	**12 38 44.0**	**-1.9**
RCC	**Rio Carpintero**	**13.31**	**349**	*e*P	**P**	**12 38 51.1**	**+0.2**
SIUN	**Universidad Ur**	**13.41**	**301**	Pn	**Pn**	**12 38 49.1**	**+0.9**
CHIV	**Chivirico**	**13.45**	**346**		**Pn**	**12 38 50.0**	**+1.3**
NMDO	**Nuevo Mundo**	**13.75**	**352**		**Pn**	**12 38 53.4**	**+0.9**
MPOM	**Morne Pois Mar**	**14.13**	**57**	Pn	**Pn**	**12 38 56.7**	**-0.6**
CBCY	**The Bluff, Cay**	**14.38**	**304**	*e*P	**P**	**12 39 04.0**	**+1.3**
ATAH	**Atahualpa**	**14.89**	**201**	P	**Pn**	**12 39 07.9**	**+0.7**
	2.7nm,0.4s,baz=31,slow=12,SNR=6.5						
SOR	**Soroa**	**18.53**	**330**	P	**P**	**12 39 49.9**	**+1.4**
SOR				IAmb	IAmb	12 39 51.8	
	comp=Z,25nm,1.3s						
APG	**El Apazote**	**18.92**	**297**	P	**P**	**12 39 55.1**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=121,slow=13,SNR=6.4						
TEIG	**Tepich**	**19.88**	**313**		**P**	**12 40 04.5**	**+1.4**
061Z	**Ochoppi**	**20.34**	**339**	P	**P**	**12 40 09.2**	**+1.2**
MDP	**Montagnes des**	**20.35**	**94**	P	**P**	**12 40 07.6**	**-0.6**
	comp=Z,14nm,0.8s,baz=281,slow=8.5,SNR=4.1						
MDP				pP	**pP**	**12 40 35.0**	**-0.8**
	comp=Z,11nm,0.5s,baz=285,slow=14,SNR=2.8						
	comp=Z,14nm,0.8s						
ITTB	**Itaituba**	**20.55**	**122**	*e*P	**P**	**12 40 10.9**	**+0.5**
CCIG	**Comitan**	**20.91**	**298**	P	**P**	**12 40 15.2**	**+0.7**
CCIG				IAmb	IAmb	12 40 29.5	
	comp=Z,17nm,1.2s						
NPGB	**Novo Progresso**	**22.39**	**128**	*e*P	**P**	**12 40 29.0**	**-0.6**
VILB	**Vilhena**	**23.45**	**147**	P	**P**	**12 40 39.1**	**-0.2**
VILB	**Vilhena**	**23.45**	**147**	*e*P	**P**	**12 40 38.9**	**-0.4**
LPAZ	**La Paz**	**23.50**	**168**	P	**P**	**12 40 39.9**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=354,slow=12,SNR=4.6						
LPAZ				pP	**pP**	**12 41 10.9**	**0.0**
	comp=Z,12nm,0.7s,baz=342,slow=14,SNR=15						
	comp=Z,1.3nm,0.7s						
LPAZ	**La Paz**	**23.50**	**168**	P	**P**	**12 40 40.2**	**-0.2**
LPAZ				IAmb	IAmb	12 41 15.7	
	comp=Z,16nm,0.9s						
LPAZ	**La Paz**	**23.50**	**168**	*e*P	**P**	**12 40 40.5**	**+0.1**
656A	**Willston**	**24.12**	**339**	P	**P**	**12 40 46.7**	**+1.5**
PDRB	**Porto dos Gac**	**24.49**	**138**	*e*P	**P**	**12 40 48.4**	**-0.3**
CLDB	**Colider**	**24.59**	**136**	*e*P	**P**	**12 40 49.0**	**-0.6**
PB16	**IPOC Station P**	**25.27**	**172**	P	**P**	**12 40 54.6**	**-1.8**
TMAB	**Tom-Au,PA,Br**	**26.52**	**109**	*e*P	**P**	**12 41 07.6**	**+0.4**
GO01	**Chusmiza**	**26.63**	**172**	P	**P**	**12 41 07.5**	**-1.0**
GO01				IAmb	IAmb	12 41 44.5	
	comp=Z,8.6nm,0.8s						
PB11	**IPOC Station P**	**26.66**	**173**	P	**P**	**12 41 07.4**	**-1.0**
PB11				IAmb	IAmb	12 41 42.4	
	comp=Z,16nm,0.8s						
250A	**Grady**	**27.88**	**335**	P	**P**	**12 41 19.9**	**+0.9**
GOGA	**Godfrey**	**28.14**	**341**	P	**P**	**12 41 23.0**	**+1.7**
GOGA				IAmb	IAmb	12 41 23.6	
	comp=Z,17nm,1.1s						
JSC	**Jenkinsville**	**28.33**	**346**	P	**P**	**12 41 24.8**	**+1.8**
JSC				IAmb	IAmb	12 41 58.5	
	comp=Z,23nm,1.3s						
HODGE	**Hodges**	**28.55**	**344**	P	**P**	**12 41 27.0**	**+2.1**
HODGE				IAmb	IAmb	12 41 27.6	
	comp=Z,11nm,0.6s						
W52A	**Murphy**	**29.84**	**342**	P	**P**	**12 41 39.0**	**+2.6**
W52A				IAmb	IAmb	12 41 39.4	
	comp=Z,18nm,0.9s						
X48A	**Hartselle**	**30.36**	**337**		**P**	**12 41 43.1**	**+2.1**
U54A	**Nelsons Funny**	**30.60**	**346**	P	**P**	**12 41 45.6**	**+2.5**
ARAG	**Araguaiana, MT**	**30.73**	**137**	*e*P	**P**	**12 41 43.5**	**-0.9**
CLTN	**Cedars of Leba**	**31.55**	**339**	P	**P**	**12 41 53.5**	**+2.2**
CLTN				IAmb	IAmb	12 42 32.4	
	comp=Z,7.0nm,1.2s						
HBVL	**Hebbronville**	**31.58**	**313**	P	**P**	**12 41 52.9**	**+1.1**
U49A	**Red Boiling Sp**	**31.74**	**340**	P	**P**	**12 41 54.7**	**+1.6**
U49A				IAmb	IAmb	12 42 21.6	
	comp=Z,15nm,1.5s						
R55A	**Marlinton**	**31.94**	**349**	P	**P**	**12 41 57.2**	**+2.3**
WVT	**Waverly**	**32.13**	**337**		**P**	**12 41 57.8**	**+1.3**
T47A	**Sharon Grove**	**32.62**	**339**	P	**P**	**12 42 02.5**	**+1.7**
R50A	**Paris**	**32.92**	**344**	P	**P**	**12 42 05.4**	**+2.1**
R50A				IAmb	IAmb	12 42 06.4	
	comp=Z,17nm,0.8s						
X40A	**Basin Creek Fa**	**33.02**	**329**		**P**	**12 42 05.3**	**+1.1**
X40A				IAmb	IAmb	12 42 06.2	
	comp=Z,10nm,0.9s						
Q52A	**Bidwell**	**33.03**	**347**	P	**P**	**12 42 05.9**	**+1.6**
Q52A				IAmb	IAmb	12 42 07.1	
	comp=Z,15nm,0.7s						
P53A	**Whipple**	**33.35**	**348**	P	**P**	**12 42 09.2**	**+2.2**
P53A				IAmb	IAmb	12 42 09.5	
	comp=Z,15nm,1.0s						
Q51A	**Peebles**	**33.35**	**345**	P	**P**	**12 42 09.3**	**+2.3**
Q51A				IAmb	IAmb	12 42 10.0	
	comp=Z,13nm,0.7s						
BDFB	**Brasilia**	**33.37**	**132**	P	**P**	**12 42 06.8**	**-0.9**
	comp=Z,2.8nm,0.5s,baz=281,slow=11,SNR=4.3						
	comp=Z,2.8nm,0.5s						
BDFB	**Brasilia**	**33.37**	**132**	P	**P**	**12 42 05.1**	**-2.5**
WHAR	**Wooly Hollow**	**33.38**	**331**		**P**	**12 42 08.5**	**+1.1**
WHAR				IAmb	IAmb	12 42 08.8	
	comp=Z,16nm,0.9s						
MIAR	**Mount Ida**	**33.44**	**328**	P	**P**	**12 42 08.6**	**+0.7**
MIAR				IAmb	IAmb	12 42 50.1	
	comp=Z,12nm,1.4s						
HNDO	**Hondo**	**33.46**	**316**	P	**P**	**12 42 08.9**	**+0.7**
HNDO				IAmb	IAmb	12 42 08.9	
	comp=Z,11nm,1.5s						
WCI	**Wyandotte Cave**	**33.47**	**341**	P	**P**	**12 42 09.9**	**+1.9**
LCAR	**Lake Charles**	**33.48**	**333**	P	**P**	**12 42 09.8**	**+1.6**
LCAR				IAmb	IAmb	12 42 10.1	
	comp=Z,9.9nm,0.6s						
FCAR	**Ozark Folk Cen**	**33.78**	**331**	P	**P**	**12 42 11.6**	**+0.7**
SDBA	**SAO DESIDERIO**	**33.88**	**124**	*e*P	**P**	**12 42 11.1**	**-1.0**
T42A	**Van Buren**	**34.25**	**334**	IAmb	IAmb	12 42 16.5	
	comp=Z,15nm,0.7s						
DRIO	**Del Rio**	**34.34**	**314**	P	**P**	**12 42 15.9**	**+0.2**
BRDY	**Brady**	**34.36**	**318**	IAmb	IAmb	12 42 17.6	
	comp=Z,6.7nm,0.8s						
IPMB	**Ipameri, GO**	**34.78**	**136**	*e*P	**P**	**12 42 17.8**	**-1.8**
MGMO	**Mountain Grove**	**34.88**	**333**	IAmb	IAmb	12 42 21.8	
	comp=Z,10nm,0.9s						
PLPT	**Palo Pinto**	**34.91**	**321**	IAmb	IAmb	12 42 21.8	
	comp=Z,10nm,0.6s						
HHAR	**Hobbs**	**34.98**	**330**	IAmb	IAmb	12 42 22.1	
	comp=Z,8.6nm,0.8s						
CCM	**Cathedral Cave**	**35.18**	**335**		**P**	**12 42 23.9**	**+1.1**
BINY	**Binghamton**	**35.30**	**356**	P	**P**	**12 42 25.8**	**+2.1**
U38A	**Gravette**	**35.33**	**329**	IAmb	IAmb	12 42 24.4	
	comp=Z,7.3nm,0.8s						
RLO	**Rose Lookout**	**35.44**	**328**	IAmb	IAmb	12 42 25.9	
	comp=Z,13nm,0.7s						
ABTX	**Abilene, Hawle**	**35.63**	**320**	IAmb	IAmb	12 42 28.3	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,11nm,0.9s						
TUL3	**Leonard**	**35.66**	**327**	IAmb	IAmb	12 42 27.7	
	comp=Z,12nm,0.8s						
SAND	**Sanderson**	**35.72**	**314**		**P**	**12 42 27.8**	**+0.2**
S39A	**Bolivar**	**35.80**	**332**	IAmb	IAmb	12 42 30.0	
	comp=Z,7.6nm,0.6s						
PMNB	**Patos De Minas**	**36.40**	**134**	*e*P	**P**	**12 42 33.0**	**-0.5**
WMOK	**Wichita Mounta**	**36.51**	**323**	IAmb	IAmb	12 42 34.7	
	comp=Z,5.6nm,0.7s						
TXAR	**Lajitas Array**	**36.51**	**312**	P	**P**	**12 42 35.2**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=124,slow=9.2,SNR=41						
TXAR				PcP	**PcP**	**12 44 55.9**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=136,slow=4.9,SNR=4.1						
	comp=Z,2.2nm,0.6s						
TXAR	**Lajitas Array**	**36.51**	**312**	P	**P**	**12 42 35.3**	**+0.9**
OK048	**Pawnee Station**	**36.65**	**327**	IAmb	IAmb	12 42 36.5	
	comp=Z,17nm,0.9s						
229A	**Bryant Ranch,**	**36.66**	**317**	IAmb	IAmb	12 42 37.5	
	comp=Z,13nm,0.7s						
SN07	**Snyder 07**	**36.74**	**319**	IAmb	IAmb	12 42 37.3	
	comp=Z,8.3nm,0.6s						
T35A	**Sooner Cattle**	**36.79**	**328**	IAmb	IAmb	12 42 37.3	
	comp=Z,18nm,1.1s						
MNHN	**Monahans**	**36.95**	**315**	IAmb	IAmb	12 42 39.4	
	comp=Z,11nm,1.5s						
129A	**Stewart Farms,**	**37.10**	**318**	IAmb	IAmb	12 42 40.8	
	comp=Z,11nm,1.1s						
TPB05	**Hovey Rd**	**37.11**	**314**	IAmb	IAmb	12 42 40.8	
	comp=Z,9.0nm,0.6s						
POST	**Post**	**37.12**	**318**	IAmb	IAmb	12 42 40.9	
	comp=Z,14nm,0.8s						
DKNS	**Dickens**	**37.12**	**320**	IAmb	IAmb	12 42 40.9	
	comp=Z,6.1nm,0.8s						
TPB01	**Permian Basin**	**37.45**	**314**	IAmb	IAmb	12 42 44.0	
	comp=Z,4.5nm,0.5s						
128A	**Castleberry Fa**	**37.51**	**317**	IAmb	IAmb	12 42 44.3	
	comp=Z,14nm,0.6s						
AMTX	**Amarillo**	**38.38**	**321**	IAmb	IAmb	12 42 51.7	
	comp=Z,20nm,1.0s						
G65A	**Princeton**	**38.49**	**6**	P	**P**	**12 42 52.9**	**+2.2**
GGN	**Saint George**	**38.49**	**7**	P	**P**	**12 42 53.1**	**+2.4**
MSTX	**Muleshoe**	**38.51**	**319**	IAmb	IAmb	12 42 52.8	
	comp=Z,8.1nm,0.8s						
L40A	**Anamosa**	**38.59**	**338**	IAmb	IAmb	12 42 52.1	
	comp=Z,13nm,0.8s						
MNTX	**Cornudas Mount**	**39.01**	**314**	IAmb	IAmb	12 42 57.6	
	comp=Z,7.8nm,0.9s						
LMN	**Caledonia Moun**	**39.50**	**9**	P	**P**	**12 43 00.5**	**+1.4**
LMN				IAmb	IAmb	12 43 01.0	
	comp=Z,20nm,0.9s						
RTBA	**Rita Blanca**	**40.04**	**322**	IAmb	IAmb	12 43 05.4	
	comp=Z,15nm,1.2s						
D62A	**Allapoint, All**	**40.23**	**4**	P	**P**	**12 43 07.2**	**+2.1**
BATG	**Bathurst New B**	**40.72**	**7**		**P**	**12 43 10.8**	**+1.7**
LDAQ	**Lac Daran**	**40.99**	**2**	P	**P**	**12 43 12.7**	**+1.4**
LDAQ				IAmb	IAmb	12 43 13.7	
	comp=Z,8.2nm,0.9s						
ANMO	**Albuquerque**	**41.55**	**317**	P	**P**	**12 43 17.1**	**+0.7**
ECSD	**EROS Data Cent**	**42.16**	**334**	IAmb	IAmb	12 43 21.4	
	comp=Z,13nm,1.1s						
TUC	**Tucson**	**43.29**	**311**		**P**	**12 43 30.5**	**+0.1**
S22A	**4UR Ranch, Cre**	**43.42**	**320**	P	**P**	**12 43 33.2**	**+1.7**
S22A				IAmb	IAmb

	comp=Z,8.3nm,0.9s							
PINE	**Pine Mountain**	**55.68**	**319**	IAmb	IAmb	12 45 06.2		
	comp=Z,12nm,0.8s							
C09A	**Chrisman Ranch**	**56.02**	**325**	IAmb	IAmb	12 45 07.7		
	comp=Z,7.8nm,0.8s							
F07A	**Phinny Hill Vi**	**56.03**	**322**	IAmb	IAmb	12 45 09.3		
	comp=Z,4.9nm,0.7s							
WIFE	**Three Sisters-**	**56.37**	**319**	IAmb	IAmb	12 45 11.0		
	comp=Z,7.2nm,0.8s							
EPH	**Ephrata**	**56.56**	**324**	IAmb	IAmb	12 45 11.9		
	comp=Z,9.1nm,1.0s							
I04A	**Tendick Farm,**	**56.64**	**319**	IAmb	IAmb	12 45 11.1		
	comp=Z,4.9nm,1.0s							
HOOD	**Mount Hood Mea**	**56.83**	**321**	IAmb	IAmb	12 45 15.0		
	comp=Z,11nm,0.8s							
H04A	**Detroit Lake**	**56.88**	**320**	IAmb	IAmb	12 45 16.4		
	comp=Z,7.9nm,0.8s							
B08A	**Colville Reser**	**56.92**	**325**	IAmb	IAmb	12 45 19.8		
	comp=Z,5.6nm,0.6s							
LTY	**Liberty**	**57.14**	**323**	IAmb	IAmb	12 45 15.9		
	comp=Z,6.2nm,0.8s							
BUCK	**Buck Mountain**	**57.19**	**319**	IAmb	IAmb	12 45 15.6		
	comp=Z,11nm,0.9s							
KBO	**Bosley Butte**	**57.20**	**316**		**P**	**12 45 16.0**	**+1.2**	
USHA	**Ushuaia**	**61.58**	**177**	LR	LR	13 15 08.8		
	comp=Z,274nm,18.3s,baz=86,slow=38							
ILON	**Igloolik, Nuna**	**62.70**	**357**	P	**P**	**12 45 51.6**	**0.0**	
ILON				IAmb	IAmb	12 45 51.9		
	comp=Z,3.9nm,0.7s							
YKAW1	**Yellowknife Wh**	**63.21**	**340**		**P**	**12 45 55.3**	**+0.2**	
YKAW1				IAmb	IAmb	12 45 56.1		
	comp=Z,7.4nm,0.8s							
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**12 45 54.9**	**-0.6**	
	comp=Z,7.2nm,0.7s,baz=92,slow=12,SNR=169							
	comp=Z,7.2nm,0.7s							
YKA	**Yellowknife Ar**	**63.26**	**340**		**P**	**12 45 55.4**	**0.0**	
YKAW3	**Yellowknife Wh**	**63.31**	**340**		**P**	**12 45 56.0**	**+0.3**	
WRGLY	**Wrigley**	**66.91**	**338**	IAmb	IAmb	12 46 20.0		
	comp=Z,9.8nm,0.7s							
DLBC	**Dease Lake**	**67.34**	**331**	P	**P**	**12 46 22.9**	**+1.1**	
	comp=Z,2.3nm,0.5s,baz=86,slow=3.5,SNR=13							
	comp=Z,2.3nm,0.5s							
DBIC	**Dimbokro**	**67.64**	**86**	P	**P**	**12 46 22.7**	**-1.8**	
	comp=Z,1.8nm,0.5s,baz=292,slow=22,SNR=2.4							
	comp=Z,1.8nm,0.5s							
DBIC	**Dimbokro**	**67.64**	**86**	IAmb	IAmb	12 46 41.2		
	comp=Z,12nm,1.4s							
SUMG	**Summit**	**68.94**	**11**		**P**	**12 46 32.4**	**+0.5**	
M31M	**Drury Creek, Y**	**70.86**	**334**	IAmb	IAmb	12 46 45.6		
	comp=Z,12nm,1.2s							
H31M	**Peel River**	**72.27**	**338**	P	**P**	**12 46 52.9**	**+1.1**	
H31M				IAmb	IAmb	12 46 54.2		
	comp=Z,12nm,1.2s							
F31M	**Tsiigehtchic**	**72.73**	**339**	IAmb	IAmb	12 46 55.8		
	comp=Z,5.6nm,0.8s							
INK	**Inuvik**	**73.03**	**340**	P	**P**	**12 46 56.5**	**+0.3**	
	comp=Z,2.9nm,0.6s,baz=105,slow=4.8,SNR=33							
	comp=Z,2.9nm,0.6s							
F30M	**Barrier River**	**73.52**	**339**		**P**	**12 46 60.0**	**+0.9**	
F30M				IAmb	IAmb	12 47 00.7		
	comp=Z,21nm,1.2s							
TORD	**Torodi Ar. Bea**	**73.64**	**78**	P	**P**	**12 46 58.9**	**-1.9**	
	comp=Z,0.2nm,0.3s,baz=293,slow=5.3,SNR=4.3							
	comp=Z,0.2nm,0.3s							
E29M	**Blow River**	**74.55**	**340**	IAmb	IAmb	12 47 06.5		
	comp=Z,8.2nm,0.8s							
L26K	**Log Cabin Wild**	**75.05**	**334**	IAmb	IAmb	12 47 10.3		
	comp=Z,5.0nm,0.7s							
DOT	**Dot Lake**	**75.51**	**334**	IAmb	IAmb	12 47 12.6		
	comp=Z,7.7nm,0.7s							
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**12 47 18.9**	**+0.1**	
	comp=Z,1.3nm,0.8s,baz=109,slow=4.6,SNR=15							
	comp=Z,1.3nm,0.8s							
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**12 47 18.8**	**-0.1**	
RND	**Reindeer**	**77.56**	**333**	IAmb	IAmb	12 47 24.3		
	comp=Z,9.8nm,0.7s							
G23K	**Bananza Creek**	**78.60**	**337**	IAmb	IAmb	12 47 30.1		
	comp=Z,11nm,1.2s							
B21K	**Ikpikpuk River**	**80.68**	**339**	IAmb	IAmb	12 47 40.5		
	comp=Z,6.0nm,0.9s							
NOA	**NORSAR Array B**	**81.25**	**29**	P	**P**	**12 47 42.3**	**+0.1**	
	comp=Z,0.6nm,0.5s,baz=268,slow=5.3,SNR=1.9							
	comp=Z,0.6nm,0.5s							
D19K	**Kuna River**	**81.86**	**338**	IAmb	IAmb	12 47 46.9		
	comp=Z,5.0nm,0.7s							
C19K	**Lookout Ridge**	**82.41**	**339**	IAmb	IAmb	12 47 50.1		
	comp=Z,6.1nm,0.8s							
I17K	**Unalakleet**	**82.86**	**334**	IAmb	IAmb	12 47 52.8		
	comp=Z,6.8nm,0.8s							
SPITS	**Spitsbergen Ar**	**83.21**	**12**	P	**P**	**12 47 52.3**	**+0.2**	
	comp=Z,6.9nm,1.0s,baz=197,slow=2.6,SNR=8.2							
	comp=Z,6.9nm,1.0s							
GAMB	**Gambell**	**87.72**	**334**	IAmb	IAmb	12 48 16.6		
	comp=Z,3.7nm,0.8s							
KURBB	**Kurchatov Arra**	**117.69**	**20**	PKP	**PKPdf**	**12 54 10.6**	**-0.8**	
	comp=Z,0.3nm,0.6s,baz=311,slow=2.4,SNR=3.1							
MKAR	**Makanchi Array**	**122.26**	**20**	PKP	**PKPdf**	**12 54 19.8**	**-0.6**	
	comp=Z,0.4nm,0.4s,baz=310,slow=2.6,SNR=12							
SONM	**Songino Array**	**125.54**	**0**	PKP	**PKPdf**	**12 54 26.0**	**-0.8**	
	comp=Z,0.2nm,0.3s,baz=343,slow=2.0,SNR=4.8							
WMQ	**Urumqi**	**126.63**	**17**	*e*PKP	**PKiKP**	**12 54 30.8**	**+1.4**	
WMQ				LR	LR			
	comp=Z,280nm,24.1s							
HHC	**Hu-ho-hao-te**	**132.34**	**355**	*e*P	**PKPdf**	**12 54 40.1**	**+0.2**	
NJ2	**Nanjing**	**139.68**	**344**	*e*P	**PKiKP**	**12 54 55.3**	**-0.7**	
NJ2				pmax	pmax			
	comp=Z,540nm,0.7s							
ASAR	**Alice Springs**	**149.20**	**234**	PKPbc	**PKPbc**	**12 55 13.7**	**-1.1**	
	comp=Z,1.3nm,0.6s,baz=111,slow=3.7,SNR=19							
ASAR				pPKPbc	**pPKPdf**	**12 55 54.7**	**+2.1**	
	comp=Z,1.1nm,0.6s,baz=117,slow=3.6,SNR=2.8							
WRA	**Warramunga Arr**	**150.43**	**241**	PKPbc	**PKPbc**	**12 55 16.8**	**-1.0**	
	comp=Z,1.6nm,0.5s,baz=110,slow=2.4,SNR=24							
CMAR	**Chiang Mai Arr**	**153.63**	**17**	PKPbc	**PKiKP**	**12 55 25.4**	**+0.3**	
	comp=Z,1.2nm,0.4s,baz=326,slow=4.9,SNR=5.1							

*IDC **21** 12:47:04.3±3.1,50.°68N×178.°89W,h0km,mb3.3/5, mbtmp3.5/7,ML2.9/2,MS2.8/1,Error ellipse: s-maj=83.8km s-min=21.9km az=2.0*

*NEIC **21** 12:47:07.4±1.9,50.°83N±0.°04×179.°31W±0.°07,h10km±1km, mb3.3/17,ML3.3/12,ML2.9(AEIC),Error ellipse: s-maj=8.7km s-min=6.4km az=128.0*

*AEIC **21** 12:47:09.9±3.0,50.°97N±0.°04×179.°27W±0.°05,h5km±5km, Error ellipse: s-maj=6.4km s-min=4.2km az=166.0*

ISC 21 12:47:08.2±1.8,50.°83N±0.°09×179.°28W±0.°03, h25km±12km,n60,σ1°38/66,mb3.4/8,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.78**	**22**		**Pn**	**12 47 23.3**	**-0.3**
GAKI					**Sb**	**12 47 33.1**	**-0.3**
GALAA	**Gareloi Lava P**	**0.98**	**19**		**Pn**	**12 47 27.2**	**+0.7**
GALAA					**Sn**	**12 47 39.4**	**-0.3**
GASW	**Gareloi Southw**	**0.99**	**16**		**Pn**	**12 47 26.9**	**+0.4**
GAEA	**Gareloi East**	**1.01**	**19**		**Pn**	**12 47 27.3**	**+0.5**
GAEA					**Sn**	**12 47 40.0**	**-0.3**
GANO	**Gareloi North**	**1.03**	**17**		**Pn**	**12 47 27.5**	**+0.3**
GANE	**Gareloi Northe**	**1.04**	**18**		**Pn**	**12 47 27.6**	**+0.4**
AMKA	**Amchitka**	**1.05**	**302**		**Pn**	**12 47 28.4**	**+1.1**
TAFL	**Tanaga Flats**	**1.27**	**43**		**Pb**	**12 47 31.7**	**+0.3**
TAFL					**Sb**	**12 47 48.9**	**+1.5**
TASE	**Tanaga Southea**	**1.27**	**37**		**Pb**	**12 47 31.6**	**+0.1**
CESW	**Semis' Southwe**	**1.29**	**326**		**Pb**	**12 47 31.8**	**-0.1**
CERB	**Semis' Cerberu**	**1.30**	**329**		**Pb**	**12 47 32.6**	**+0.7**
CEPE	**Semis' Perret**	**1.32**	**330**		**Pb**	**12 47 32.5**	**+0.2**
TAFP	**Tanaga Falls P**	**1.34**	**37**		**Pb**	**12 47 32.9**	**+0.2**
TAFP					**Sb**	**12 47 50.0**	**+0.4**
TAPA	**Tanaga Point A**	**1.35**	**42**		**Pb**	**12 47 33.2**	**+0.4**
TAPA					**Sb**	**12 47 51.3**	**+1.6**
KIMD	**Kanaga Island**	**1.59**	**53**		**Pb**	**12 47 36.6**	**-0.3**
KIMD					**Sb**	**12 47 56.2**	**-0.3**
KIWB	**Kanaga Island**	**1.68**	**52**		**Pb**	**12 47 37.6**	**-0.9**
KIWB				IAML		12 48 06.1	
	comp=N,256nm,0.5s						
KIKV	**Kanaga Island**	**1.69**	**51**		**Pb**	**12 47 38.1**	**-0.5**
KIRH	**Kanaga Island**	**1.74**	**51**		**Pb**	**12 47 39.0**	**-0.5**
LSSE	**Little Sitkin**	**1.74**	**310**		**Pb**	**12 47 39.2**	**-0.3**
LSPA	**Little Sitkin**	**1.75**	**311**		**Pb**	**12 47 39.5**	**-0.2**
LSNW	**Little Sitkin**	**1.79**	**310**		**Pb**	**12 47 39.8**	**-0.6**
ADK	**Adak**	**1.94**	**56**		**Pb**	**12 47 41.4**	**-1.4**
ADK	**Adak**	**1.94**	**56**	IAML		12 48 11.4	
	comp=N,294nm,0.7s						
ADK				IAML		12 48 12.6	
	comp=N,214nm,0.4s						
GSMY	**Great Sitkin M**	**2.35**	**58**		**Pb**	**12 47 48.0**	**-1.9**
GSTR	**Great Sitkin T**	**2.38**	**57**	Pn	**Pn**	**12 47 46.7**	**+1.0**
GSIG	**Igitkin Island**	**2.40**	**60**		**Pb**	**12 47 48.5**	**-2.2**
ATKA	**Atka Island**	**3.46**	**65**		**Pn**	**12 48 02.9**	**+2.5**
ATKA				IAML		12 49 04.5	
	comp=E,44nm,0.9s						
KOKL	**Mount Kliuchef**	**3.50**	**63**		**Pn**	**12 48 03.8**	**+2.7**
KOFP	**Korovin Flat P**	**3.54**	**64**		**Pn**	**12 48 05.0**	**+3.3**
SHEM	**Shemya Is, Ala**	**4.53**	**297**	Pn	**Pn**	**12 48 19.6**	**+4.4**
	comp=E,2.0nm,0.3s,baz=274,slow=24,SNR=1.1						
SHEM				Sn	**Sb**	**12 49 16.3**	**-4.7**
	comp=E,2.0nm,0.3s,baz=274,slow=20,SNR=0.8						
	comp=E,22nm,0.5s						
SHEM	**Shemya Is, Ala**	**4.53**	**297**	IAML		12 49 29.9	
	comp=N,23nm,1.1s						
SHEM				IAML		12 50 24.0	
	comp=E,30nm,0.8s						
PETK	**Petropavlovsk-**	**14.36**	**288**	Pn	**P**	**12 50 34.0**	**-2.5**
	comp=E,0.1nm,0.3s,baz=96,slow=14,SNR=1.9						
PETK				LR	LR	12 57 11.5	
	comp=E,31nm,18.6s,baz=24,slow=42						
	comp=E,6.4nm,1.2s						
PETK	**Petropavlovsk-**	**14.36**	**288**		**Pn**	**12 50 31.2**	**+1.4**
M16K	**Timber Creek**	**15.22**	**40**	Pn	**Pn**	**12 50 41.6**	**+0.3**
TNA	**Tin City**	**15.89**	**17**	Pn	**Pn**	**12 50 50.6**	**+0.7**
TNA				IAmb	IAmb	12 51 03.8	
	comp=Z,1.9nm,0.8s						
P18K	**Big Mountain,**	**16.13**	**49**	Pn	**Pn**	**12 50 53.9**	**+0.8**
K20K	**Telida**	**18.41**	**37**	P	**Pn**	**12 51 22.0**	**+0.6**
STLK	**Strandline Lak**	**18.49**	**44**	P	**P**	**12 51 22.2**	**0.0**
STLK				IAmb	IAmb	12 51 51.2	
	comp=Z,3.2nm,1.2s						
BILL	**Bilibino**	**18.66**	**343**	P	**Pn**	**12 51 24.7**	**+0.3**
BILL				IAmb	IAmb	12 51 41.3	
	comp=Z,1.2nm,0.8s						
C16K	**Lisburne Hills**	**18.78**	**16**	P	**Pn**	**12 51 26.5**	**+0.6**
SKT	**Skwentna**	**18.81**	**43**	P	**P**	**12 51 26.0**	**+0.3**
SKT				IAmb	IAmb	12 51 51.6	
	comp=Z,4.7nm,1.1s						
KTH	**Kantishna Hill**	**19.74**	**39**	P	**P**	**12 51 35.3**	**-0.7**
GHO	**Glory Hole Cre**	**19.88**	**45**	P	**P**	**12 51 36.5**	**-1.0**
GHO				IAmb	IAmb	12 51 40.5	
	comp=Z,2.1nm,0.9s						
TRF	**Thorofare Moun**	**19.95**	**40**	P	**P**	**12 51 37.8**	**-0.5**
D19K	**Kuna River**	**20.48**	**22**	P	**P**	**12 51 43.6**	**-0.4**
RND	**Reindeer**	**20.52**	**41**	P	**P**	**12 51 43.9**	**-0.5**
RND				IAmb	IAmb	12 51 45.3	
	comp=Z,1.3nm,1.0s						
DHY	**Denali Highway**	**21.01**	**42**	P	**P**	**12 51 49.5**	**-0.2**
DHY				IAmb	IAmb	12 52 12.4	
	comp=Z,3.0nm,1.0s						
D20K	**Etivluk River**	**21.01**	**23**	P	**P**	**12 51 50.3**	**+0.6**
I23K	**Minto, Yukon-K**	**21.09**	**36**	P	**P**	**12 51 50.1**	**-0.3**
E21K	**Killik River**	**21.51**	**26**	P	**P**	**12 51 55.4**	**+0.4**
E21K				IAmb	IAmb	12 52 13.6	
	comp=Z,1.2nm,1.1s						
IL31		**21.86**	**38**	P	**P**	**12 51 59.0**	**+0.3**
IL31				IAmb	IAmb	12 52 09.4	
	comp=Z,1.1nm,0.9s						
ILAR	**Eielson Array**	**21.86**	**38**	P	**P**	**12 51 58.6**	**-0.1**
	comp=Z,1.0nm,1.1s,baz=238,slow=11,SNR=4.5						
	comp=Z,1.0nm,1.1s						
ILAR	**Eielson Array**	**21.86**	**38**	P	**P**	**12 51 58.1**	**-0.6**
YKA	**Yellowknife Ar**	**35.83**	**46**	P	**P**	**12 54 02.8**	**-2.5**
	comp=Z,0.1nm,0.6s,baz=284,slow=9.0,SNR=2.7						
	comp=Z,0.1nm,0.6s						
YKA	**Yellowknife Ar**	**35.83**	**46**	P	**P**	**12 54 03.5**	**-1.8**
PDAR	**Pinedale Array**	**46.77**	**71**	P	**P**	**12 55 35.1**	**-0.5**
	comp=Z,0.6nm,1.1s,baz=325,slow=2.3,SNR=3.6						
	comp=Z,0.6nm,1.1s						
KURK	**Kurchatov**	**59.18**	**314**	P	**P**	**12 57 07.8**	**+1.2**
KURBB	**Kurchatov Arra**	**59.28**	**314**	P	**P**	**12 57 09.1**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=44,slow=6.3,SNR=8.3						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**60.14**	**308**	P	**P**	**12 57 14.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=52,slow=6.2,SNR=3.8						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**60.14**	**308**	P	**P**	**12 57 14.5**	**+1.1**

*IDC **21** 12:49:42.8±1.2,45.°95N×142.°94E,h368km±75km,mb2.7/4, mbtmp3.4/5,Error ellipse: s-maj=162.2km s-min=24.1km az=172.0*

*JMA **21** 12:49:42.7±0.3,46°N±3°×14°3E±°,h349km,MV3.3/27, SOUTH SAKHALIN*

*SKHL **21** 12:49:43.5±0.4,46.°00N×143.°20E,h337km±1km,mb4.4/3, msha4.2/2*

ISC 21 12:49:41.6±0.8,46.°07N±0.°07×143.°13E±0.°09,h341km,n23, σ1°76/29,mb2.6/4,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzhno-Sakhali**	**0.93**	**344**	*e*P	**Pn**	**12 50 27.6**	**+1.7**
YSS				AMB	AMB	12 50 27.9	
	50nm,0.3s						
YSS				*e*S	**S**	**12 51 02.2**	**+0.7**
YSS				A	A	12 51 02.8	
	60nm,0.6s						
YSS				A	A	12 51 02.8	
	20nm,0.6s						
JWK2	**Keihoku**	**1.14**	**229**	P	**Pn**	**12 50 29.1**	**+2.1**
JWK2				S	**S**	**12 51 05.1**	**+1.8**
JSE	**Soyaes**	**1.17**	**199**	P	**Pn**	**12 50 29.0**	**+1.9**
KHLM	**Kholmsk**	**1.24**	**324**	*e*P	**Pn**	**12 50 28.9**	**+1.6**
KHLM				AMB	AMB	12 50 29.3	
	270nm,0.7s						
JRR	**Rishiri**	**1.57**	**235**	*e*P	**Pn**	**12 50 31.0**	**+1.8**
JRBN	**Rebuntou**	**1.58**	**247**	P	**Pn**	**12 50 30.5**	**+1.2**
JRBN				S	**S**	**12 51 07.2**	**-0.2**
JSS	**Shosan**	**1.89**	**209**	*e*P	**Pn**	**12 50 33.4**	**+2.1**
ASAJ	**Asahikawa**	**1.98**	**191**	P	**Pn**	**12 50 34.7**	**+2.7**
	18nm,0.6s,baz=15,slow=6.2,SNR=44						
ASAJ	**Asahikawa**	**1.98**	**191**	P	**Pn**	**12 50 34.2**	**+2.3**
JMP	**Maruseppu**	**2.06**	**175**	P	**Pn**	**12 50 34.6**	**+2.0**
JTKR	**Abashiri--Toko**	**2.17**	**165**	P	**Pn**	**12 50 35.6**	**+2.3**
JKK2	**Kamakawa 2**	**2.21**	**187**	P	**Pn**	**12 50 36.1**	**+2.4**
JAR	**Ashoro-kuto**	**2.81**	**170**	*i* P	**Pn**	**12 50 40.9**	**+2.3**
JAK	**Akkeshi**	**3.27**	**159**	*e*P	**Pn**	**12 50 43.7**	**+0.9**
JAK				*e*S	**S**	**12 51 31.9**	**-0.1**
NMR	**Nemuro--Hokkai**	**3.27**	**145**	*e*P	**Pn**	**12 50 44.1**	**+1.3**
NMR				*e*S	**S**	**12 51 31.0**	**-1.0**
AKK	**Akkeshi**	**3.29**	**157**	*e*P	**Pn**	**12 50 43.6**	**+0.7**
JEW	**Eniwo**	**3.44**	**201**	*e*P	**Pn**	**12 50 46.8**	**+2.4**
JCH	**Churui**	**3.45**	**177**	P	**Pn**	**12 50 45.1**	**+0.5**
JCH				S	**S**	**12 51 32.8**	**-2.4**
USRK	**Ussuriysk Ar.**	**8.09**	**261**	P	**Pn**	**12 51 37.1**	**+0.5**
	3.2nm,0.7s,baz=67,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**41.00**	**294**	P	**P**	**12 56 50.4**	**-1.8**
	0.2nm,0.6s,baz=69,slow=8.0,SNR=1.6						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**41.35**	**38**	P	**P**	**12 56 55.2**	**+0.4**
	0.2nm,0.7s,baz=280,slow=8.2,SNR=1.7						
	0.2nm,0.7s						
YKA	**Yellowknife Ar**	**55.46**	**33**	P	**P**	**12 58 41.2**	**-0.1**
	0.1nm,0.4s,baz=310,slow=7.2,SNR=5.9						
	0.1nm,0.4s						
FINES	**FINESS Array B**	**61.49**	**331**	P	**P**	**12 59 21.2**	**-1.4**
	3.5nm,0.9s,baz=36,slow=6.3,SNR=3.6						
	3.5nm,0.9s						

*IDC **21** 12:50:01.8±4.4,25.°14S×69.°66E,h0km,mb3.5/7, mbtmp3.5/7,MS3.4/9,Error ellipse: s-maj=131.2km s-min=34.6km az=52.0*

ISC 21 12:50:03.7±4.5,25.°15S±0.°6×69.°7E±0.°7,h10km,n21, σ0°40/7,mb3.5/7,MS3.4/9,Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**17.56**	**9**	T	T	13 12 29.9	
	baz=190						
H08S2	**Diego Garcia H**	**17.57**	**9**	T	T	13 12 28.5	
	baz=190						
H08S3	**Diego Garcia H**	**17.58**	**9**	T	T	13 12 26.9	
	baz=190						
H04N2	**CROZET ISLANDS**	**25.45**	**210**	T	T	13 22 05.3	
	baz=41,slow=75,SNR=318						
H04N1	**CROZET ISLANDS**	**25.46**	**210**	T	T	13 22 04.6	
	baz=41,slow=75,SNR=338						
H04N3	**CROZET ISLANDS**	**25.47**	**210**	T	T	13 22 01.4	
	baz=41,slow=75,SNR=240						
PALK	**Pallekele**	**33.91**	**20**	LR	LR	13 07 15.4	
	comp=Z,47nm,21.1s,baz=194,slow=30						
BOSA	**Boshof**	**39.66**	**255**	LR	LR	13 11 02.2	
	comp=Z,70nm,19.6s,baz=172,slow=32						
LSZ	**Lusaka**	**40.06**	**276**	LR	LR	13 11 35.7	
	comp=Z,100nm,18.1s,baz=154,slow=32						
LEM	**Lembang**	**40.51**	**70**	LR	LR	13 12 19.4	
	comp=Z,35nm,18.1s,baz=320,slow=33						
SUR	**Sutherland**	**43.20**	**249**	LR		13 13 29.3	
	comp=Z,63nm,19.4s,baz=174,slow=33						
TSUM	**Tsumeb**	**48.41**	**266**	LR		13 15 53.2	
	comp=Z,42nm,21.4s,baz=153,slow=32						
CMAR	**Chiang Mai Arr**	**51.81**	**36**	P	**P**	**12 59 12.1**	**0.0**
	0.6nm,0.3s,baz=213,slow=5.9,SNR=5.0						
CMAR				LR	LR	13 16 53.1	
	comp=Z,22nm,21.8s,baz=230,slow=31						
	0.6nm,0.3s						
KAPI	**Kappang**	**51.91**	**76**	LR		13 19 16.3	
	comp=Z,20nm,18.8s,baz=254,slow=34						
ASAR	**Alice Springs**	**57.96**	**103**	P	**P**	**12 59 56.5**	**-0.3**
	0.3nm,0.8s,baz=260,slow=6.2,SNR=4.6						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**59.42**	**99**	P	**P**	**13 00 07.3**	**+0.4**
	0.4nm,0.8s,baz=268,slow=14,SNR=1.6						
	0.4nm,0.8s						
CTA	**Charters Tower**	**69.96**	**103**	LR	LR	13 29 02.0	
	comp=Z,47nm,18.6s,baz=226,slow=33						
MKAR	**Makanchi Array**	**72.46**	**9**	P	**P**	**13 01 29.9**	**-0.3**
	0.3nm,0.7s,baz=210,slow=4.2,SNR=3.8						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**75.80**	**6**	P	**P**	**13 01 50.1**	**+0.5**
	0.2nm,0.7s,baz=176,slow=6.5,SNR=2.1						
	0.2nm,0.7s						
SONM	**Songino Array**	**79.74**	**24**	P	**P**	**13 02 11.8**	**0.0**
	0.2nm,0.4s,baz=219,slow=3.7,SNR=1.7						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**79.80**	**9**	P	**P**	**13 02 11.6**	**-0.2**
	0.2nm,0.2s,baz=191,slow=2.9,SNR=1.5						
	0.2nm,0.2s						

IDC 21 12:50:08.2±2.4,6.°58S×130.°03E,h0km,mb3.3/1, mbtmp3.3/4,ML3.2/3,Error ellipse: s-maj=91.4km s-min=30.4km az=77.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.22**	**200**	Pn	Pn	12 53 03.9	+0.3
	0.1nm,0.3s,baz=17,slow=10,SNR=17						
FITZ				Sn	Sn	12 55 06.6	-14
	0.2nm,0.3s,baz=275,slow=7.2,SNR=6.2						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**13.92**	**163**	Pn	Pn	12 53 26.6	-0.3
	0.1nm,0.3s,baz=346,slow=13,SNR=11						
WRA				Sn	Sn	12 55 46.8	-16
	0.2nm,0.3s,baz=110,slow=2.9,SNR=4.9						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**17.39**	**168**	P	Pn	12 54 12.5	0.0
	0.1nm,0.3s,baz=346,slow=9.4,SNR=4.6						
ASAR				S	Sn	12 57 10.6	-16
	0.3nm,0.7s,baz=351,slow=25,SNR=1.8						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**67.89**	**327**	P	P	13 01 08.7	0.0
	0.2nm,0.5s,baz=112,slow=5.2,SNR=2.1						
	0.2nm,0.5s						

*PAS **21** 13:42:53.4±1.5,34.°508N±0.°010×118.°64W±0.°01, h18km±2km,Error ellipse: s-maj=1.7km s-min=1.3km az=61.0*

NEIC 21 13:42:53.2±2.1,34.°540N±0.°009×118.°61W±0.°01, h10km±1km,ML3.6/108,Mwr3.5/6(PAS),Error ellipse: s-maj=2.7km s-min=1.5km az=270.0,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSI	**Osito Audit: C**	**0.12**	**309**		Pg	13 42 56.9	+0.7
OSI				Sg	Sg	13 42 59.8	+1.5
OSI				IAML		13 43 00.3	
	comp=E,32μm,0.5s						
OSI				IAML		13 43 00.4	
	comp=N,36μm,0.7s						
BTPC	**Burnt Peak**	**0.15**	**13**		Sg	13 43 01.1	+2.0
OAT	**Oat Mountain**	**0.20**	**180**		Pg	13 42 58.0	+0.6
OAT					Sg	13 43 01.9	+1.7
BLCC	**Black Canyon**	**0.30**	**190**		Pg	13 42 59.5	+0.2
BLCC					Sg	13 43 04.5	+1.2
THC	**Tehachapi Micr**	**0.37**	**354**		Sb	13 43 07.2	-0.8
FOXC	**Fox Airport**	**0.37**	**57**		Pg	13 43 01.3	+0.6
FOXC					Sg

	comp=E,813nm,0.6s							
LRMC	**Laurel Mtn Rad**	**1.21**	**39**		Pb	13 43 14.9	-1.4	
LRMC				IAML		13 43 33.9		
	comp=N,2µm,0.4s							
LRMC				IAML		13 43 35.3		
	comp=E,2µm,0.2s							
ELS	**Elsinore Mount**	**1.33**	**132**		Pn	13 43 15.6	-2.3	
ELS				IAML		13 43 34.8		
	comp=N,824nm,0.3s							
VES	**Vestal, Richgr**	**1.35**	**344**		Pn	13 43 17.1	-1.2	
VES				IAML		13 43 42.1		
	comp=N,1µm,0.6s							
CCCA	**Chr Cany lake**	**1.42**	**46**		Pn	13 43 18.0	-1.2	
CLC	**China Lake**	**1.52**	**33**		Pn	13 43 19.2	-1.3	
CLC				IAML		13 43 43.9		
	comp=E,440nm,0.8s							
CLC				IAML		13 43 44.4		
	comp=N,450nm,0.6s							
GSC	**Goldstone, Bar**	**1.67**	**62**		Pn	13 43 21.4	-1.2	
CWC	**Cottonwood Cre**	**1.94**	**13**		Pn	13 43 26.2	-0.3	
CWC				IAML		13 43 56.7		
	comp=E,511nm,0.3s							
CWC				IAML		13 43 59.9		
	comp=N,474nm,0.5s							
PFO	**Pinyon Flats O**	**2.01**	**117**		Pn	13 43 26.2	-1.2	
QSM	**Queen of Sheba**	**2.02**	**45**		Pn	13 43 26.0	-1.3	
PMD	**Palm Desert**	**2.06**	**115**		Pn	13 43 26.7	-1.2	
CPE	**Camp Elliot**	**2.07**	**142**		Pn	13 43 25.6	-2.5	
CPE				IAML		13 43 50.9		
	comp=E,374nm,0.2s							
CPE				IAML		13 43 51.2		
	comp=N,352nm,0.3s							
DPP	**Dos Picos Cty**	**2.07**	**137**		Pn	13 43 25.7	-2.5	
DPP				IAML		13 43 51.2		
	comp=E,409nm,0.2s							
DPP				IAML		13 43 51.4		
	comp=N,260nm,0.1s							
PKD	**Bear Valley Ra**	**2.11**	**312**		Pn	13 43 27.1	-1.6	
PKD				IAML		13 44 03.2		
	comp=E,277nm,0.8s							
PMPB	**Monarch Peak**	**2.45**	**314**		Pn	13 43 32.2	-1.2	
PMPB				IAML		13 44 11.0		
	comp=N,286nm,0.9s							
PMPB				IAML		13 44 25.9		
	comp=E,356nm,0.8s							
BAR	**Barrett**	**2.46**	**138**		Pn	13 43 31.3	-2.1	
BAR				IAML		13 44 01.2		
	comp=E,227nm,0.2s							
BAR				IAML		13 44 01.5		
	comp=N,400nm,0.2s							
HULI	**Fort Hunter Li**	**2.60**	**305**		Pn	13 43 33.5	-1.9	
HULI				IAML		13 44 24.3		
	comp=E,223nm,0.6s							
HULI				IAML		13 44 27.8		
	comp=N,211nm,1.4s							
DANC	**Danby, Needles**	**2.67**	**87**		Pn	13 43 34.6	-1.7	
CBX	**Cerro Bola**	**2.75**	**143**		Pn	13 43 35.7	-1.9	
CBX				IAML		13 44 28.5		
	comp=E,336nm,0.6s							
CBX				IAML		13 44 28.7		
	comp=N,304nm,0.7s							
BC3	**Big Chuckawall**	**2.77**	**108**		Pn	13 43 36.4	-1.3	
WCT	**Wildcat Mounta**	**2.77**	**35**		Pn	13 43 37.2	-0.6	
BBGB	**Big Mountain B**	**2.84**	**316**		Pn	13 43 38.0	-0.7	
BBGB				IAML		13 44 36.5		
	comp=N,324nm,1.0s							
DSP	**Deep Springs**	**2.87**	**10**		Pn	13 43 39.4	+0.4	
IRM	**Iron Mountain**	**2.90**	**97**		Pn	13 43 37.8	-1.7	
IRM				IAML		13 44 28.5		
	comp=E,129nm,0.5s							
YUH	**Yuha Desert**	**2.93**	**129**		Pn	13 43 40.7	+0.8	
MDPB	**Devils Postpil**	**3.11**	**353**	IAML		13 44 30.6		
	comp=E,264nm,0.7s							
MDPB				IAML		13 44 33.4		
	comp=N,215nm,0.4s							
SAO	**San Andreas Ge**	**3.20**	**315**		Pn	13 43 41.9	-1.8	
NEE2	**Needles Airpor**	**3.30**	**85**		Pn	13 43 44.0	-1.0	
ESJX	**Sierra Juarez**	**3.37**	**138**		Pn	13 43 45.3	-0.8	
SHPR	**Sheep Range**	**3.43**	**54**	Pn	Pn	13 43 47.2	+0.3	
BLYC	**Blythe**	**3.48**	**102**	IAML		13 44 51.5		
	comp=N,110nm,0.6s							
BLYC				IAML		13 44 57.9		
	comp=E,72nm,0.6s							
MHC	**Mount Hamilton**	**3.72**	**320**	IAML		13 44 59.0		
	comp=E,66nm,0.9s							
W13A	**Hualapai Mount**	**3.93**	**80**	IAML		13 45 00.0		
	comp=N,95nm,1.2s							
W13A				IAML		13 45 02.0		
	comp=E,58nm,1.1s							
Y14A	**Wickenburg**	**4.68**	**96**	IAML		13 45 30.0		
	comp=E,40nm,0.7s							
Y14A				IAML		13 45 30.7		
	comp=N,38nm,0.9s							
SFX	**San Felipe**	**4.72**	**137**	IAML		13 45 28.1		
	comp=E,35nm,1.2s							
SFX				IAML		13 45 29.9		
	comp=N,38nm,1.1s							
MNRC	**McLaughlin Min**	**5.31**	**326**	IAML		13 46 00.3		
	comp=N,34nm,3.8s							
MNRC				IAML		13 46 20.3		
	comp=E,25nm,3.8s							

*IDC **21** 14:27:09.5±1.6, 3.°80N×126.°08E, h0km, mb3.4/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=73.5km s-min=25.9km az=64.0*
*DJA **21** 14:27:18.2±0.3, 4.°N±2.°×12.°6E±.°, h10km, M4.0/11, mb4.2/3, MLv3.9/11, MwMwp4.6/1, Mwp5.0/1*
ISC 21 14:27:15.7±1.3, 3.°85N±0.°09×126.°45E±0.°08, h45km, n11, σ1s24/17, mb3.2/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.93**	**260**	P	**Pn**	**14 27 33.8**	**+1.4**
SGSI				S	**Sn**	**14 27 43.4**	**-1.2**
MNI	**Manado**	**2.88**	**214**	P	**Pn**	**14 28 00.0**	**+0.9**
MNI				S	**Sn**	**14 28 31.7**	**-0.8**
GTOI	**Gorontalo**	**4.69**	**227**	P	**Pn**	**14 28 24.0**	**0.0**
GTOI				S	**Sn**	**14 29 18.6**	**+1.5**
MRSI	**Marisa** 0.1nm35nm,0.5s	**5.61**	**233**	P	**Pn**	**14 28 37.9**	**+1.2**
SANI	**Sanana** 0.1nm15nm,1.6s	**5.88**	**184**	P	**Pn**	**14 28 40.5**	**+0.2**
SANI	0.1nm15nm,1.6s			S	**Sn**	**14 29 44.9**	**-1.6**
SIJI	**Sorong** 0.8nm,0.3s,baz=327,slow=18,SNR=4.1 3.1nm,0.4s	**6.72**	**134**	Pn	**Pn**	**14 28 54.9**	**+2.9**
NLAI	**Namlea**	**7.07**	**175**	P	**Pn**	**14 28 57.4**	**+0.7**
NLAI				S	**Sn**	**14 30 15.8**	**0.0**
FITZ	**Fitzroy Crossi** 3.5nm,0.9s,baz=5.6,slow=11,SNR=7.3 3.5nm,0.9s	**21.82**	**182**	P	**P**	**14 32 04.5**	**+0.2**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=341,slow=9.3,SNR=8.1 0.2nm,0.3s	**24.88**	**162**	P	**P**	**14 32 33.9**	**-0.6**
ASAR	**Alice Springs** 0.3nm,0.5s,baz=344,slow=7.3,SNR=8.7	**28.30**	**165**	P	**P**	**14 33 04.7**	**-0.6**
ASAR	0.1nm,0.7s,baz=0.1,slow=2.7,SNR=1.0 0.3nm,0.5s			PcP	**PcP**	**14 36 17.7**	**+0.1**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=129,slow=8.0,SNR=2.0 0.1nm,0.4s	**57.30**	**325**	P	**P**	**14 36 58.1**	**-0.9**

*NNC **21** 14:28:20.9±3.6, 47.°58N×90.°15E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=42.3km s-min=28.8km az=150.0*
*ASRS **21** 14:28:23.4±0.8, 48.°N±4.°×9.°0E±.°, h9km, MLh3.1/9, Error ellipse: s-maj=8.7km s-min=6.9km az=34.1, confirmed*
ISC 21 14:28:22.0±2.0, 47.°77N±0.°08×90.°22E±0.°09, h10km, n14, σ1s27/26, 6C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**2.64**	**333**	Pg	**Pb**	**14 29 08.4**	**-1.0**
CUR				Sg	**Sg**	**14 29 47.9**	**+1.2**
DGZ	**Jazzator, Alta**	**2.67**	**317**	Pg	**Pb**	**14 29 10.7**	**+0.7**
DGZ				Sg	**Sg**	**14 29 48.5**	**+0.6**
AKAR	**Aktash**	**3.07**	**327**	Pg	**Pg**	**14 29 21.4**	**+0.6**
AKAR				Sg	**Sg**	**14 29 59.9**	**-0.7**
CHBI	**Chibit, Altay**	**3.11**	**326**	Pg	**Pg**	**14 29 20.6**	**-1.0**
CHBI				Sg	**Sg**	**14 30 01.5**	**-0.3**
ULGR	**Ulagan, Altay**	**3.22**	**333**	Pg	**Pg**	**14 29 21.7**	**-1.9**
ULGR				Sg	**Sg**	**14 30 04.2**	**-1.1**
TEL	**Teeli**	**3.25**	**360**	Pn	**Pn**	**14 29 14.7**	**+1.6**
TEL				Pg	**Pb**	**14 29 20.7**	**+0.9**
TEL				Sg	**Sg**	**14 30 03.9**	**-2.6**
TUNR	**Tungur**	**3.51**	**315**	Pg	**Pg**	**14 29 28.2**	**-0.9**
TUNR				Sg	**Sg**	**14 30 14.2**	**-0.3**
YALR	**Yailyu, Altay**	**4.35**	**338**	Pg	**Pg**	**14 29 45.1**	**-0.1**
YALR				Sg	**Sg**	**14 30 43.7**	**+2.2**
ARTR	**Artybash**	**4.46**	**336**	Pg	**Pg**	**14 29 46.6**	**-0.8**
ARTR				Sg	**Sg**	**14 30 45.2**	**+0.1**
UKR	**Ust'-Kan**	**4.77**	**314**	Pg	**Pg**	**14 29 51.8**	**-1.5**
UKR				Sg	**Sg**	**14 30 56.6**	**+1.6**
MK31	**Makanchi Array** 0.1nm,0.3s,baz=88,slow=15,SNR=8.8	**5.48**	**263**	Pn	**Pn**	**14 29 44.6**	**+0.9**
MK31	1.0nm,0.6s,baz=82,slow=17,SNR=4.1			Pg	**Pb**	**14 29 58.9**	**+1.1**
MK31	2.0nm,0.6s,baz=87,slow=32,SNR=4.5			⇑Lg	Lg	14 31 12.5	
MAKZ	**Makanchi** 0.9nm,0.5s	**5.69**	**263**	⇑Pn	**Pn**	**14 29 44.6**	**-1.9**
MAKZ	3.2nm,0.6s			⇑Lg	Lg	14 31 20.2	
KURK	**Kurchatov** 0.7nm,0.7s	**8.14**	**296**	⇑Pn	**Pn**	**14 30 20.5**	**+0.4**
KURBB	**Kurchatov Arra** 1.6nm,0.6s	**8.17**	**295**	⇑Pn	**Pn**	**14 30 20.8**	**+0.3**
KURBB	6.6nm,1.2s			⇑Lg	Lg	14 32 43.2	

*IDC **21** 14:59:41.3±1.4, 7.°76S×110.°14E, h0km, mb3.3/4, mbtmp3.3/5, ML3.4/1, MS3.6/2, Error ellipse: s-maj=74.8km s-min=21.7km az=40.0*
*DJA **21** 14:59:54.2±0.5, 8.°S±2.°×10.°9E±.°, h18km±4km, M3.8/24, MLv3.8/24*
ISC 21 14:59:39.7±1.4, 9.°03S±0.°09×108.°70E±0.°06, h10km, n22, σ2s12/19, mb3.4/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPJI	**Karang Pucung**	**1.70**	**8**	P	**Pg**	**15 00 13.8**	**+1.4**
KPJI				S	**Sn**	**15 00 28.5**	**-2.8**
BBJI	**Bungbulang**	**1.87**	**326**	P	Pg	15 00 21.1	+5.5
CTJI	**Waduk Cacaban**	**2.07**	**14**	P	**Pb**	**15 00 18.2**	**+0.9**
CTJI				S	**Sn**	**15 00 35.6**	**-4.7**
UGM	**Wanagama**	**2.12**	**59**	P	**Pg**	**15 00 20.6**	**+0.2**
LEM	**Lembang** 7.5nm,0.3s,baz=142,slow=19,SNR=3.6	**2.44**	**334**	Pn	**Pb**	**15 00 25.0**	**+1.3**
LEM	13nm,0.3s,baz=103,slow=22,SNR=5.6 14nm,0.3s			Sn	**Sb**	**15 00 54.6**	**+0.8**
LEM	**Lembang**	**2.44**	**334**	P	**Pg**	**15 00 28.6**	**+2.2**
LEM				S	**Sb**	**15 00 54.7**	**+0.8**
PCJI	**Pacitan**	**2.59**	**72**	P	**Pg**	**15 00 29.2**	**-0.2**
PCJI				S	**Sn**	**15 00 56.3**	**+3.0**
SMRI	**Semarang**	**2.62**	**41**	P	**Pb**	**15 00 26.9**	**+0.1**
SNJI	**Sawahan-Nganju**	**3.28**	**68**	P	**Pb**	**15 00 40.1**	**+2.0**
SNJI				S	**Sn**	**15 01 13.5**	**+3.1**
SJI	**Sawahan**	**3.30**	**67**	P	**Pb**	**15 00 39.0**	**+0.6**
WRA	**Warramunga Arr** 0.3nm,0.8s,baz=298,slow=9.8,SNR=1.9 0.3nm,0.8s	**27.05**	**116**	P	**P**	**15 05 20.6**	**-1.9**
ASAR	**Alice Springs** 0.3nm,0.5s,baz=307,slow=9.2,SNR=13 0.3nm,0.5s	**28.16**	**124**	P	**P**	**15 05 31.1**	**-1.3**
H08S2	**Diego Garcia H** baz=93	**35.84**	**269**	T	T	15 45 09.5	
H08S3	**Diego Garcia H** baz=93,slow=74,SNR=9.2	**35.85**	**269**	T	T	15 45 13.2	
H08S1	**Diego Garcia H** baz=93,slow=74,SNR=2.8	**35.85**	**269**	T	T	15 45 10.7	
JNU	**Nakatsue** comp=Z,59nm,18.1s,baz=254,slow=38	**46.94**	**26**	LR	LR	15 27 58.0	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=138,slow=6.8,SNR=1.7 0.1nm,0.3s	**60.36**	**339**	P	**P**	**15 09 47.8**	**-1.2**
H04N2	**CROZET ISLANDS** baz=71,slow=75,SNR=76	**60.85**	**222**	T	T	16 17 14.9	
H04N1	**CROZET ISLANDS** baz=71,slow=75,SNR=77	**60.87**	**222**	T	T	16 17 14.8	
H04N3	**CROZET ISLANDS** baz=71,slow=75,SNR=82	**60.87**	**222**	T	T	16 17 13.8	
KLR	**Kul'dur** comp=Z,46nm,18.0s,baz=349,slow=38	**61.44**	**17**	LR	LR	15 37 23.9	
KURBB	**Kurchatov Arra** 0.2nm,0.6s,baz=150,slow=7.5,SNR=2.3 0.2nm,0.6s	**64.93**	**339**	P	**P**	**15 10 18.4**	**-0.9**

IDC 21 15:18:32.2±6.0, 4.°29S×148.°29E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=184.1km s-min=37.9km az=101.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.7nm,1.0s,baz=45,slow=10.0,SNR=8.0 0.7nm,1.0s	**20.66**	**220**	P	P	15 23 13.0	-0.8
ASAR	**Alice Springs** 0.6nm,1.1s,baz=37,slow=10,SNR=2.1 0.6nm,1.1s	**23.75**	**214**	P	P	15 23 47.4	+0.9
MKAR	**Makanchi Array** 0.3nm,0.9s,baz=95,slow=6.2,SNR=1.2 0.3nm,0.9s	**77.01**	**320**	P	P	15 30 27.0	-0.1

*IDC **21** 15:28:03.5±1.2, 14.°41N×147.°10E, h0km, mb3.9/10, mbtmp3.9/11, ML4.4/1, Error ellipse: s-maj=31.0km s-min=20.3km az=105.0*
ISC 21 15:28:08.1±1.2, 14.°4N±0.°2×147.°1E±0.°1, h33km, n12, σ0s79/13, mb3.8/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 92nm,0.3s,baz=98,slow=4.2,SNR=31	**2.33**	**250**	Pn	**Pn**	**15 28 43.8**	**-0.3**
GUMO	69nm,0.3s,baz=156,slow=20,SNR=6.5 190nm,0.3s			Sn	**Sn**	**15 29 12.4**	**+0.8**
WRA	**Warramunga Arr** 0.7nm,0.8s,baz=21,slow=8.4,SNR=2.3 0.7nm,0.8s	**36.36**	**201**	P	**P**	**15 35 08.7**	**-0.6**
ASAR	**Alice Springs** 0.2nm,0.7s,baz=13,slow=12,SNR=5.3 0.2nm,0.7s	**39.97**	**199**	P	**P**	**15 35 40.3**	**+0.5**
LZDM	**Lanzhou Array** 1.0nm,0.4s,baz=141,slow=7.6,SNR=6.0 1.0nm,0.4s	**44.32**	**307**	P	**P**	**15 36 15.7**	**+0.1**
CMAR	**Chiang Mai Arr** 0.4nm,0.5s,baz=80,slow=6.8,SNR=5.4 0.4nm,0.5s	**46.28**	**282**	P	**P**	**15 36 30.2**	**-0.7**
SONM	**Songino Array** 0.3nm,0.4s,baz=146,slow=8.7,SNR=4.5 0.3nm,0.4s	**47.37**	**323**	P	**P**	**15 36 39.4**	**+0.2**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=115,slow=6.8,SNR=2.8 0.4nm,0.3s	**62.26**	**324**	P	**P**	**15 38 25.0**	**-1.7**
MKAR	**Makanchi Array** 1.7nm,0.4s,baz=91,slow=8.2,SNR=53 1.7nm,0.4s	**62.44**	**315**	P	**P**	**15 38 29.0**	**+0.8**
KURBB	**Kurchatov Arra** 11nm,1.0s,baz=98,slow=6.8,SNR=51 11nm,1.0s	**65.43**	**319**	P	**P**	**15 38 48.0**	**+0.4**
ILAR	**Eielson Array** 0.6nm,0.9s,baz=259,slow=5.6,SNR=2.9 0.6nm,0.9s	**66.91**	**25**	P	**P**	**15 38 57.5**	**+0.6**
BVAR	**Borovoye Array** 3.8nm,0.9s,baz=96,slow=7.6,SNR=10.0 3.8nm,0.9s	**70.66**	**321**	P	**P**	**15 39 20.8**	**+0.3**
DBIC	**Dimbokro** 2.5nm,0.5s,baz=99,slow=2.1,SNR=5.9	**145.20**	**305**	PKPbc	**PKPdf**	**15 47 43.4**	**0.0**

*SOME **21** 15:39:03.8, 39.°45N×77.°30E, h20km, MS5.0*
*NNC **21** 15:39:12.3±1.7, 39.°88N×77.°24E, h0km, mb5.4, mpv5.1, Error ellipse: s-maj=13.1km s-min=9.9km az=155.0*
*MOS **21** 15:39:13.4±1.2, 39.°71N×77.°43E, h11km, mb5.1/37, MS4.4/9, Error ellipse: s-maj=5.0km s-min=3.3km az=104.0*
*IDC **21** 15:39:13.2±0.5, 39.°72N×77.°35E, h0km, mb4.6/33, mbtmp4.6/38, ML3.9/5, MS4.2/63, Error ellipse: s-maj=13.6km s-min=9.2km az=21.0*
*BJI **21** 15:39:14.8, 39.°86N×77.°44E, h10km, mB5.1/34, mb4.6/66, ML5.1/10, Ms4.8/69, Ms7 4.5/66*
*NEIC **21** 15:39:14.8±2.7, 39.°72N±0.°06×77.°43E±0.°07, h10km±1km, mb5.0/136, Mww4.8/10, Error ellipse: s-maj=10.2km s-min=8.9km az=152.0*
*NEIC **21** 15:39:14.9, 40.°24N×77.°19E, h14km, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.18; $M_{\theta\theta}$-1.58; $M_{\phi\phi}$0.40; $M_{r\theta}$-1.49; $M_{r\phi}$-0.69; $M_{\theta\phi}$-0.69; Fault plane solution: $M_0$2.28000×10^{16} NP1:ϕs85.90000°, δ22.08000°, λ109.58000°. NP2:ϕs244.91000°, δ69.26000°, λ82.26000°. Principal axes: T 1.9277, Plg65.0000°, Azm142.0000°; N 0.5920, Plg7.0000°, Azm248.0000°; P -2.5198, Plg24.0000°, Azm341.0000°;*
*NEIC **21** 15:39:14.9, 39.°74N×77.°45E, h14km*
*KRNET **21** 15:39:15.4±0.1, 39.°92N×77.°30E, h1km, mb5.4*
*GCMT **21** 15:39:17.9±0.2, 39.°84N±0.°01×77.°42E±0.°02, h14km±1km, MW4.8/93, Moment Tensor Solution. s17,c18; s93,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.16±.10; $M_{\theta\theta}$-1.87±.08; $M_{\phi\phi}$0.71±.06; $M_{r\theta}$0.49±.14; $M_{\theta\phi}$-0.88±.05; $M_{r\phi}$0.66±.17; Best double couple: $M_0$1.95400×10^{16} NP1:ϕs287.00000°, δ46.00000°, λ143.00000°. NP2: ϕs44.00000°, δ65.00000°, λ51.00000°. Principal axes: T 1.6370, Plg53.0000°, Azm266.0000°; N 0.6350, Plg35.0000°, Azm63.0000°; P -2.2720, Plg11.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 15:39:15.5±0.4, 39.°90N±0.°02×77.°32E±0.°02, h11km±2km, h11km:pP-P, n796, σ1s96/826, mb4.9/176, MS4.3/91, 67C-38D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH2	**Kashi**	**1.55**	**242**	Pn	**Pg**	**15 39 45.0**	**-0.3**
KSH2				Sn	**Sg**	**15 40 07.8**	**+2.4**
KSH2	comp=N,30µm,0.9s			smax	smax		
KSH2	comp=E,26µm,0.9s			smax	smax		
JNKS	**Jany-Kuch**	**1.73**	**312**	⇓*iP*	**Pn**	**15 39 46.5**	**+0.7**
JNKS				⇓*iS*	**Sb**	**15 40 09.6**	**+0.2**
NRN	**Naryn**	**1.84**	**327**		**Pb**	**15 39 49.0**	**-0.3**
NRN	**Naryn**	**1.84**	**327**	PN	**Pb**	**15 39 49.0**	**-0.3**
NRN	**Naryn**	**1.84**	**327**	⇓*iP*	**Pb**	**15 39 49.0**	**-0.3**
NRN				⇓*iS*	**Sb**	**15 40 12.9**	**+0.5**
TARG	**Taragay, Kyrgy**	**1.87**	**11**		**Pb**	**15 39 49.2**	**-0.7**
TARG				Sn	**Sg**	**15 40 14.8**	**-0.8**
TARG	**Taragay, Kyrgy**	**1.87**	**11**	PN	**Pb**	**15 39 49.2**	**-0.7**
TARG						15 40 14.8	
TARG	**Taragay, Kyrgy**	**1.87**	**11**	⇓*iP*	**Pb**	**15 39 49.6**	**-0.3**
TARG				⇓*iS*	**Sb**	**15 40 14.1**	**+0.7**
WUS	**Wushi**	**1.95**	**47**		**Pn**	**15 39 48.9**	**+0.3**
KDJ	**Kajisay**	**2.23**	**357**		**Pb**	**15 39 56.2**	**+0.2**
KDJ	**Kajisay**	**2.23**	**357**	PN	**Pb**	**15 39 56.2**	**+0.2**
KDJ	**Kajisay**	**2.23**	**357**	⇓*iP*	**Pb**	**15 39 55.1**	**-0.9**
KDJ				⇓*iS*	**Sb**	**15 40 23.4**	**-0.4**
ULHL	**Ulahol** SNR=1484	**2.49**	**341**	P	**Pb**	**15 40 00.1**	**-0.2**
ULHL	**Ulahol**	**2.49**	**341**	⇓*iP*	**Pb**	**15 39 58.5**	**-1.8**
ULHL				⇓*iS*	**Sb**	**15 40 29.7**	**-1.3**
PRZ	**Przheval'sk**	**2.71**	**17**		**Pb**	**15 40 03.0**	**-1.1**
PRZ	**Przheval'sk**	**2.71**	**17**	PN	**Pb**	**15 40 03.1**	**-1.1**
PRZ	**Przheval'sk**	**2.71**	**17**	⇓*iP*	**Pb**	**15 40 01.8**	**+2.6**
PRZ				⇓*iS*	**Sb**	**15 40 35.5**	**-2.0**
BOOM	**Boomskoye usch**	**2.79**	**339**		**Pb**	**15 40 04.6**	**-1.0**
BOOM	**Boomskoye usch**	**2.79**	**339**	PN	**Pb**	**15 40 04.6**	**-1.0**
BOOM	**Boomskoye usch**	**2.79**	**339**	⇑*iP*	**Pn**	**15 40 02.6**	**+2.3**
BOOM				⇑*iS*	**Sn**	**15 40 37.0**	**+2.9**
SALK	**Salom-Alik**	**2.85**	**291**	⇑*iP*	**Pn**	**15 40 03.6**	**+2.5**
SALK				⇑*iS*	**Sn**	**15 40 38.5**	**+3.0**
ANVS	**Anan'yevo**	**2.90**	**5**	⇑*eP*	**Pn**	**15 40 04.4**	**+2.6**
ANVS				⇑*eS*	**Sn**	**15 40 39.8**	**+3.1**
SFK	**Sufi-Kurgan**	**2.94**	**274**	⇑*iP*	**Pn**	**15 40 04.9**	**+2.6**
SFK				⇑*iS*	**Sn**	**15 40 40.8**	**+3.1**
ARLS	**Aral**	**3.00**	**312**	⇓*iP*	**Pn**	**15 40 05.4**	**+2.2**
ARLS				⇓*iS*	**Sn**	**15 40 41.8**	**+2.5**
TNSS	**Tian-Shan** 91nm,0.6s	**3.15**	**355**	Pg	**Pn**	**15 40 08.1**	**+2.7**
TNSS	3µm,0.8s			Lg	Lg	15 40 54.6	
TNSS	**Tian-Shan**	**3.15**	**355**	*e*PN	**Pb**	**15 40 08.8**	**-3.0**
TNSS				*e*S	**Sb**	**15 40 48.3**	**-2.0**
TNSS	**Tian-Shan**	**3.15**	**355**	*e*P	**Pb**	**15 40 08.8**	**-3.0**
TNSS				*e*S	**Sb**	**15 40 48.3**	**-2.0**
TNSS				*e*LQ	LQ	15 41 01.0	
TNSS	**Tian-Shan** 91nm,0.6s	**3.15**	**355**	*e*P	**Pn**	**15 40 08.1**	**+2.7**
TNSS	3µm,0.8s			*e*S	**Sg**	**15 40 54.6**	**-2.2**
UCH	**Uchtor** SNR=1319	**3.15**	**319**	P	**Pb**	**15 40 09.8**	**-2.0**
UCH	**Uchtor**	**3.15**	**319**	⇑*iP*	**Pn**	**15 40 07.9**	**+2.4**
UCH				⇑*iS*	**Sn**	**15 40 45.8**	**+2.5**
IZV	**Izvestkoviy** 200nm,0.6s	**3.18**	**351**	Pg	**Pn**	**15 40 08.5**	**+2.8**
IZV	2µm,0.6s			Lg	Lg	15 40 55.2	
IZV	**Izvestkoviy** 200nm,0.6s	**3.18**	**351**	*e*P	**Pn**	**15 40 08.5**	**+2.8**
IZV	2µm,0.6s			*e*S	**Sg**	**15 40 55.2**	**-2.6**
SATY	**Saty** 882nm,0.6s	**3.27**	**14**	Pg	**Pn**	**15 40 09.9**	**+3.3**
SATY	6µm,0.8s			Lg	Lg	15 40 57.6	
SATY	**Saty**	**3.27**	**14**	*e*PN	**Pb**	**15 40 10.0**	**+3.3**
SATY				*e*S	**Sb**	**15 40 50.5**	**-2.8**
SATY	**Saty**	**3.27**	**14**	*e*P	**Pn**	**15 40 10.0**	**+3.3**
SATY				*e*S	**Sb**	**15 40 50.6**	**-2.8**
SATY				*e*LQ	LQ	15 41 03.8	
MDOK	**Medeo** 2µm,0.5s	**3.27**	**356**	Pg	**Pb**	**15 40 10.5**	**-3.2**
MDOK	14µm,0.9s			Lg	Lg	15 40 58.6	
MDOK	**Medeo**	**3.27**	**356**	*e*PN	**Pb**	**15 40 10.5**	**-3.2**
MDOK	**Medeo**	**3.27**	**356**	*e*P	**Pb**	**15 40 10.5**	**-3.2**
KBK	**Karagaybulak** SNR=333	**3.29**	**328**	P	**Pb**	**15 40 11.7**	**-2.3**
KBK	**Karagaybulak**	**3.29**	**328**	⇑*iP*	**Pn**	**15 40 09.5**	**+2.4**
KBK				⇑*iS*	**Sn**	**15 40 48.8**	**+2.5**
TKM2	**Tokmak 2** SNR=512	**3.29**	**337**	P	**Pb**	**15 40 11.4**	**-2.6**
TKM2	**Tokmak 2**	**3.29**	**337**	⇑*iP*	**Pn**	**15 40 09.2**	**+2.0**
TKM2				⇑*iS*	**Sn**	**15 40 48.9**	**+2.5**
MTBS	**Maitube** 235nm,0.6s	**3.30**	**349**	Pg	**Pb**	**15 40 11.3**	**-2.9**
MTBS	3µm,0.4s			Lg	Lg	15 40 60.0	
MTBS	**Maitube** 235nm,0.6s	**3.30**	**349**	*e*P	**Pb**	**15 40 11.3**	**-2.9**
MTBS	3µm,0.4s			*e*S	**Sg**	**15 40 60.0**	**-1.6**
KST	**Kastek** 330nm,0.5s	**3.31**	**342**	Pg	**Pb**	**15 40 11.6**	**-2.7**
KST	2µm,0.5s			Lg	Lg	15 41 01.3	
KST	**Kastek** 330nm,0.5s	**3.31**	**342**	*e*P	**Pb**	**15 40 11.6**	**-2.7**
KST	2µm,0.5s			*e*S	**Sg**	**15 41 01.3**	**-0.4**
AAA	**Alma

AAK **Ala-Archa** 3.47 323 P Pb 15 40 14.3 -2.8
SNR=509
AAK **Ala-Archa** 3.47 323 Pb 15 40 14.0 -3.1
AAK **Ala-Archa** 3.47 323 ⇑Pn Pn 15 40 12.2 +2.6
575nm,0.7s
AAK ⇑Lg Lg 15 41 02.7
3µm,0.8s
AAK **Ala-Archa** 3.47 323 PN Pb 15 40 14.0 -3.1
AAK 15 41 04.5
AAK **Ala-Archa** 3.47 323 P Pb 15 40 14.5 -2.6
AAK S Sb 15 40 56.5 -2.8
AAK **Ala-Archa** 3.47 323 ⇓*i*P Pn 15 40 12.0 +2.4
AAK ⇓*i*S Sn 15 40 53.1 +2.3
UZB **Uzynbulak** 3.49 21 Pg Pb 15 40 14.9 -2.5
98nm,0.4s
UZB Lg Lg 15 41 06.3
4µm,0.7s
UZB **Uzynbulak** 3.49 21 *e*PN Pn 15 40 12.8 +2.9
UZB *e*S Sb 15 40 55.8 -4.1
UZB **Uzynbulak** 3.49 21 *e*P Pn 15 40 12.9 +3.0
UZB *e*S Sb 15 40 55.8 -4.1
UZB *e*LQ LQ 15 41 10.6
UZB **Uzynbulak** 3.49 21 *e*P Pb 15 40 14.9 -2.5
98nm,0.4s
UZB *e*S Sg 15 41 06.3 -1.4
4µm,0.7s
DGS **Degeres** 3.54 341 Pg Pb 15 40 14.8 -3.4
115nm,0.6s
DGS Lg Lg 15 41 06.5
3µm,0.7s
DGS **Degeres** 3.54 341 *e*P Pb 15 40 14.8 -3.4
115nm,0.6s
DGS *e*S Sg 15 41 06.5 -2.7
3µm,0.7s
FRU1 **Bishkek** 3.55 326 Pb 15 40 15.7 -2.6
FRU1 **Bishkek** 3.55 326 PN Pb 15 40 15.7 -2.6
FRU1 **Bishkek** 3.55 326 *i*P Pn 15 40 13.3 +2.7
FRU1 ⇑*i*S Sn 15 40 55.3 +2.8
ARSB **Arslanbob** 3.60 295 Pn 15 40 13.5 +2.1
ARSB **Arslanbob** 3.60 295 PN Pn 15 40 13.5 +2.1
ARSB **Arslanbob** 3.60 295 ⇑*i*P Pn 15 40 13.7 +2.4
ARSB ⇑*i*S Sn 15 40 56.6 +2.7
SHLS **Shalkode** 3.63 26 Pg Pb 15 40 20.0 +0.1
650nm,0.7s
SHLS Lg Lg 15 41 14.4
4µm,0.6s
SHLS **Shalkode** 3.63 26 *e*PN Pb 15 40 16.7 -3.1
SHLS **Shalkode** 3.63 26 *e*P Pb 15 40 16.8 -3.1
SHLS **Shalkode** 3.63 26 *e*P Pb 15 40 20.0 +0.1
650nm,0.7s
SHLS *e*S Sg 15 41 14.4 +2.2
4µm,0.6s
KURS **Kuram** 3.65 10 Pg Pb 15 40 17.0 -3.0
877nm,0.9s
KURS Lg Lg 15 41 09.8
2µm,0.6s
CHMS **Chumysh** 3.65 329 P Pb 15 40 16.5 -3.6
SNR=208
CHMS **Chumysh** 3.65 329 ⇑*i*P Pn 15 40 14.6 +2.6
CHMS ⇑*i*S Sn 15 40 57.3 +2.2
KPKS **Kokpek** 3.71 16 Pg Pb 15 40 18.3 -2.8
0.2nm,0.1s
KPKS Lg Lg 15 41 12.0
4µm,0.4s
KPKS **Kokpek** 3.71 16 *e*P Pb 15 40 18.3 -2.8
0.2nm,0.1s
KPKS *e*S Sg 15 41 11.9 -2.7
4µm,0.4s
PDGK **Podgornoye** 3.80 25 ⇑Pn Pn 15 40 16.6 +2.6
2µm,1.2s
PDGK ⇑Lg Lg 15 41 13.2
3µm,0.7s
PDGK **Podgornoye** 3.80 25 PN Pn 15 40 16.4 +2.3
PDGK 15 41 08.0
EKS2 **Erkin-Say** 3.84 317 P Pb 15 40 19.7 -3.7
SNR=1739
EKS2 **Erkin-Say** 3.84 317 ⇑*i*P Pn 15 40 17.3 +2.6
EKS2 ⇑*i*S Sn 15 41 02.0 +2.1
KTBS **Karatobe** 3.84 353 Pg Pb 15 40 20.7 -2.7
925nm,0.8s
KTBS Lg Lg 15 41 16.1
1.3nm,0.4s
KTBS **Karatobe** 3.84 353 *e*P Pb 15 40 20.7 -2.7
925nm,0.8s
KTBS *e*S Sg 15 41 16.1 -2.9
1.3nm,0.4s
USP **Ospenovka** 3.98 329 P Pn 15 40 20.6 +4.1
SNR=118
USP **Ospenovka** 3.98 329 ⇑*e*P Pn 15 40 18.8 +2.3
USP ⇑*i*S Sn 15 41 05.0 +1.9
KRBS **Karabastau** 3.99 343 Pg Pb 15 40 24.0 -1.9
176nm,0.6s
KRBS Lg Lg 15 41 21.7
2µm,0.6s
KRBS **Karabastau** 3.99 343 *e*P Pb 15 40 24.0 -1.9
176nm,0.6s
KRBS *e*S Sg 15 41 21.7 -2.0
2µm,0.6s
KUU **Kurty** 4.06 350 Pg Pb 15 40 24.3 -2.7
104nm,0.6s
KUU Lg Lg 15 41 22.3
2µm,1.3s
KUU **Kurty** 4.06 350 *e*PN Pn 15 40 21.0 +3.4
KUU **Kurty** 4.06 350 *e*P Pn 15 40 21.1 +3.4
KUU **Kurty** 4.06 350 *e*P Pb 15 40 24.3 -2.7
104nm,0.6s
KUU *e*S Sg 15 41 22.3 -3.7
2µm,1.3s
SGDS **Sogindy** 4.09 331 Pg Pb 15 40 24.9 -2.6
27nm,0.5s
SGDS Lg Lg 15 41 23.3
2µm,1.1s
SGDS **Sogindy** 4.09 331 *e*P Pn 15 40 21.3 +3.4
MRKS **Merke** 4.20 314 Pg Pn 15 40 24.1 +4.5
1µm,0.6s
MRKS Lg Lg 15 41 22.4
1µm,1.1s
MRKS **Merke** 4.20 314 *e*P Pn 15 40 24.1 +4.5
1µm,0.6s
MRKS *e*S Sb 15 41 22.4 +2.3
1µm,1.1s
KTMS **Ketmen** 4.21 32 Pg Pb 15 40 26.5 -3.2
92nm,0.6s
KTMS Lg Lg 15 41 25.6
818nm,0.7s
KTMS **Ketmen** 4.21 32 *e*P Pb 15 40 26.5 -3.2
92nm,0.6s
KTMS *e*S Sb 15 41 25.6 +5.0
818nm,0.7s
DRK **Karamyk** 4.28 266 Pn Pn 15 40 23.5 +2.6
DRK **Karamyk** 4.28 266 PN Pn 15 40 23.5 +2.6
DRK **Karamyk** 4.28 266 ⇑*i*P Pn 15 40 23.8 +3.0
DRK ⇑*i*S Sn 15 41 13.0 +2.1
ARXS **Arharly** 4.33 5 Pg Pb 15 40 29.5 -2.2
1µm,0.8s
ARXS Lg Lg 15 41 31.1
3µm,0.7s
ARXS **Arharly** 4.33 5 *e*PN Pn 15 40 23.5 +2.1
ARXS **Arharly** 4.33 5 *e*P Pb 15 40 29.5 -2.2
1µm,0.8s
ARXS *e*S Sg 15 41 31.1 -3.5
3µm,0.7s
MNAS **Manas** 4.46 307 ⇓*i*P Pn 15 40 26.0 +2.8
MNAS ⇓*i*S Sn 15 41 17.1 +1.9
ARK **Arkit** 4.49 297 ⇑*i*P Pn 15 40 26.5 +3.0
ARK ⇑*i*S Sn 15 41 17.7 +2.0
KNOS **Konyrlen** 4.67 17 Pg Pb 15 40 35.9 -1.6
649nm,0.8s
KNOS Lg Lg 15 41 42.1
1µm,1.2s
TRKS **Terek-Say** 4.97 291 ⇓*i*P Pn 15 40 32.3 +2.0
TRKS ⇓*i*S Sn 15 41 28.3 +0.5
BTK **Batken** 5.00 274 Pn 15 40 31.8 +1.3
BTK **Batken** 5.00 274 PN Pn 15 40 31.8 +1.3
BTK **Batken** 5.00 274 ⇓*i*P Pn 15 40 32.8 +2.3
BTK ⇓*i*S Sn 15 41 30.2 +1.9
TDK **Taldyqorghan** 5.17 9 *e*PN Pn 15 40 35.7 +3.0
TDK **Taldyqorghan** 5.17 9 *e*P Pn 15 40 35.8 +3.0
DZA **Taraz** 5.41 306 Pg Pb 15 40 49.4 -0.6
411nm,0.6s
DZA Lg Lg 15 42 04.8
1µm,0.8s
DZA **Taraz** 5.41 306 *e*PN Pn 15 40 39.4 +3.3
DZA **Taraz** 5.41 306 *e*P Pn 15 40 39.5 +3.3
DZA **Taraz** 5.41 306 *e*P Pb 15 40 49.4 -0.6
411nm,0.6s
DZA *e*S Sg 15 42 04.8 -4.3
1µm,0.8s
KAPS **Kapalarasan** 5.59 15 Pg Pb 15 40 54.7 +1.6
242nm,0.7s
KAPS Lg Lg 15 42 14.4
1µm,0.8s
ALCI **Alchi Leh** 5.67 181 *e*P Pn 15 40 42.7 +2.7
ALCI *e*S Sn 15 41 44.5 -0.8
ALCI IAML 15 42 24.7
comp=E,949nm,1.1s
ALCI IAML 15 42 25.0
comp=N,933nm,1.1s
IUG **Iuzhnay** 5.96 295 Pg Pb 15 40 58.0 -1.3
comp=N,174nm,0.7s
IUG Lg Lg 15 42 20.1
comp=N,2µm,0.9s
IUG **Iuzhnay** 5.96 295 *e*PN Pn 15 40 46.7 +3.1
IUG **Iuzhnay** 5.96 295 *e*P Pn 15 40 46.8 +3.1
IUG **Iuzhnay** 5.96 295 *e*P Pb 15 40 58.0 -1.3
IUG *e*S Sg 15 42 20.1 -6.6
KK31 **Karatay Array** 6.03 304 Pn 15 40 47.3 +2.6
KK31 **Karatay Array** 6.03 304 Pn Pn 15 40 44.0 -0.7
comp=N,12nm,0.6s,baz=122,slow=12,SNR=161
KK31 ⇑Pg Pb 15 41 02.9 +2.2
comp=N,209nm,0.8s,baz=118,slow=17,SNR=15
KK31 ⇑Lg Lg 15 42 27.1
comp=N,417nm,0.7s,baz=120,slow=27,SNR=3.2
KK31 **Karatay Array** 6.03 304 PN Pn 15 40 47.4 +2.7
KK31 15 41 03.6
KK31 15 42 25.2
KKAR **Karatay Array** 6.03 304 Pn 15 40 46.9 +2.2
KKAR **Karatay Array** 6.03 304 PN Pn 15 40 46.9 +2.2
SRNI **Srinagar** 6.17 200 *e*P Pn 15 40 48.3 +1.6
SRNI *e*S Sn 15 41 58.0 +0.6
SRNI IAML 15 43 32.8
comp=E,807nm,1.7s
SRNI IAML 15 43 37.5
comp=N,763nm,2.0s
CHM **Chimkent** 6.31 295 *e*P Pb 15 41 03.7 -1.7
comp=N,186nm,0.5s
CHM *e*S Sb 15 42 29.4 +8.6
comp=N,2µm,0.8s
BRLS **Borolday** 6.43 302 Pg Pb 15 41 08.1 +0.6
comp=N,43nm,0.5s
BRLS Lg Lg 15 42 37.0
comp=N,275nm,0.8s
BRLS **Borolday** 6.43 302 *e*PN Pn 15 40 53.6 +3.4
BRLS **Borolday** 6.43 302 *e*P Pn 15 40 53.6 +3.4
BRLS **Borolday** 6.43 302 *e*P Pb 15 41 08.1 +0.6
comp=N,43nm,0.5s
BRLS *e*S Sg 15 42 37.0 -5.0
comp=N,275nm,0.8s
CHGR **Chuyangaron** 6.45 262 Pn 15 40 51.0 +0.5
CHGR **Chuyangaron** 6.45 262 PN Pn 15 40 51.0 +0.5
CHGR **Chuyangaron** 6.45 262 ⇑*i*P Pn 15 40 51.2 +0.7
CHGR ⇑*i*S Sn 15 42 04.9 +0.7
NIL **Nilore** 7.04 209 P Pn 15 41 00.5 +2.0
NIL S Sn 15 42 19.0 +0.6
TSSA **Tissa** 7.11 188 *e*P Pn 15 41 01.3 +1.7
TSSA *e*S Sn 15 42 20.9 +0.5
TSSA IAML 15 43 14.8
comp=E,771nm,2.0s
TSSA IAML 15 43 19.9
comp=N,655nm,2.0s
JMU **Jammu** 7.38 197 *e*P Pn 15 41 06.8 +3.6
JMU *e*S Sn 15 42 24.0 -2.9
JMU IAML 15 43 23.4
comp=N,951nm,0.9s
JMU IAML 15 43 56.7
comp=E,816nm,2.2s
THN **Thein Dam** 7.54 190 *e*P Pn 15 41 07.8 +2.3
THN *e*S Sn 15 42 29.1 -1.9
THN IAML 15 43 49.6
comp=E,806nm,3.9s
SHAA **Shahritus** 7.56 255 Pn 15 41 05.2 -0.5
DHRM **DHARAMSHALA** 7.67 186 *e*P Pn 15 41 11.5 +4.1
DHRM *e*S Sn 15 42 31.0 -3.4
DHRM IAML 15 42 38.3
comp=N,604nm,1.2s
DHRM IAML 15 42 42.3
comp=E,826nm,0.8s
MAKZ **Makanchi** 7.70 25 Pn 15 41 08.2 +0.8
MAKZ **Makanchi** 7.70 25 ⇑Pn Pn 15 41 08.9 +1.4
comp=E,9.0nm,0.3s
MAKZ ⇓Pg Pb 15 41 36.0 +7.1
comp=E,40nm,0.7s
MAKZ ⇑Lg Lg 15 43 18.7
comp=E,226nm,1.1s
MAKZ **Makanchi** 7.70 25 P Pn 15 41 08.3 +0.8
MK31 **Makanchi Array** 7.79 26 ⇑Pn Pn 15 41 10.0 +1.3
comp=E,5.4nm,0.3s,baz=205,slow=13,SNR=426
MK31 ⇑Pg Pb 15 41 37.7 +7.2
comp=E,69nm,0.8s,baz=199,slow=12,SNR=15
MK31 ⇓Lg Lg 15 43 19.8
comp=E,152nm,0.7s,baz=104,slow=14,SNR=3.2
MK31 **Makanchi Array** 7.79 26 *e*P Pn 15 41 09.5 +0.8
MKAR **Makanchi Array** 7.79 26 Pn Pn 15 41 09.9 +1.2
comp=E,5.7nm,0.3s,baz=207,slow=16,SNR=191
MKAR Sn Sn 15 42 36.4 -0.5
comp=E,5.7nm,0.3s,baz=197,slow=19,SNR=5.3
MKAR Lg Lg 15 43 21.4
comp=E,11nm,0.3s,baz=209,slow=29,SNR=4.9
MKAR LR LR 15 44 16.1
comp=E,1µm,20.6s,baz=190,slow=38
comp=E,9.6nm,0.3s
MKAR **Makanchi Array** 7.79 26 Pn 15 41 09.7 +1.0
TLWR **Talawar** 8.00 188 *e*P Pn 15 41 15.2 +3.5
TLWR *e*S Sn 15 42 39.2 -2.9
TLWR IAML 15 42 52.8
comp=N,658nm,1.6s
TLWR IAML 15 43 53.2
comp=Z,226nm,0.7s
KBL **Kabul** 8.49 234 Pn 15 41 20.5 +1.9
KBL **Kabul** 8.49 234 P Pn 15 41 20.5 +1.9
KBL **Kabul** 8.49 234 P Pn 15 41 20.8 +2.1
SNR=51
KBL S Sn 15 42 54.0 -0.6
BHK **Bhakra** 8.52 185 *e*P Pn 15 41 21.6 +2.8
BHK *e*S Sn 15 42 50.5 -4.3
BHK IAML 15 44 05.0
comp=E,446nm,2.2s
BHK IAML 15 44 08.2
comp=N,670nm,1.6s
WMQ **Urumqi** 8.68 60 P Pn 15 41 21.8 +0.8
WMQ S Sn 15 43 01.9 +3.1
WMQ smax smax
comp=N,260nm,1.1s
WMQ smax smax
comp=N,210nm,0.9s
SMLA **Simla** 8.75 181 *e*P Pn 15 41 25.5 +3.6
SMLA *e*S Sn 15 42 56.5 -4.0
SMLA IAML 15 43 08.9
comp=N,462nm,0.2s
SMLA IAML 15 43 12.1
comp=E,352nm,0.6s
ZSN **Zaisan** 9.32 33 Pg Pn 15 42 05.0 +35
comp=E,22nm,0.6s
ZSN Lg Lg 15 44 14.4
comp=E,242nm,0.9s
ZSN **Zaisan** 9.32 33 *e*P Pn 15 41 32.4 +2.7
ZSN **Zaisan** 9.32 33 *e*P Pn 15 41 32.4 +2.7
JOSI **Joshimath** 9.50 168 *e*P Pn 15 41 35.7 +3.3
JOSI *e*S Sn 15 43 13.3 -5.9
JOSI IAML 15 43 28.6
comp=N,874nm,0.6s
JOSI IAML 15 43 45.7
comp=E,792nm,1.3s
DDI **Dehra Dun** 9.57 176 *e*P Pn 15 41 37.1 +3.8
DDI *e*S Sn 15 43 15.4 -5.4
DDI IAML 15 43 21.2
comp=E,666nm,0.5s
DDI IAML 15 43 21.4
comp=N,692nm,0.5s
PTH **Pithoragarh** 10.55 166 *e*P Pn 15 41 48.0 +1.1
PTH IAML 15 43 59.7
comp=Z,464nm,2.5s
PTH IAML 15 44 04.9
comp=N,758nm,2.9s
BRZS **Berezniki** 10.61 344 *e*P Pn 15 41 50.7 +3.4
BRZS **Berezniki** 10.61 344 *e*P Pn 15 41 50.8 +3.4
LGTI **Lohaghat** 10.71 167 *e*P Pn 15 41 50.3 +1.2
LGTI *e*S Sn 15 43 41.1 -8.0
LGTI IAML 15 43 52.5
comp=N,510nm,0.0s
LGTI IAML 15 44 12.6
comp=E,880nm,1.9s
KURBB **Kurchatov Arra** 10.76 4 Pn Pn 15 41 50.0 +0.6
comp=E,1.0nm,0.3s,baz=193,slow=12,SNR=82
KURBB Lg Lg 15 44 55.3
comp=E,1.4nm,0.3s,baz=174,slow=35,SNR=7.7
KURBB LR LR 15 46 17.0
comp=E,2µm,21.7s,baz=187,slow=39
comp=E,13nm,0.7s
KURBB **Kurchatov Arra** 10.76 4 ⇑Pn Pn 15 41 49.8 +0.3
comp=E,34nm,0.7s
KURBB ⇑Lg Lg 15 44 55.3
comp=E,769nm,0.9s
KURK **Kurchatov** 10.86 4 Pn 15 41 51.1 +0.3
KURK **Kurchatov** 10.86 4 ⇑Pn Pn 15 41 50.4 -0.4
comp=E,10nm,0.7s
KURK ⇑Lg Lg 15 44 58.1
comp=E,396nm,1.2s
KURK **Kurchatov** 10.86 4 *ce*P Pn 15 41 51.3 +0.5
KURK pmax pmax
comp=Z,37nm,0.8s
KURK **Kurchatov** 10.86 4 P Pn 15 41 52.6 +1.9
KURK S Sn 15 43 54.8 +2.7
KUDL **Kundal** 11.74 184 ⇓*e*P Pn 15 42 05.0 +2.1
KUDL *e*S Sn 15 44 05.8 -8.2
KUDL IAML 15 44 10.8
comp=E,471nm,1.7s
KUDL IAML 15 44 16.3
comp=N,532nm,1.7s
DGZ **Jazzator, Alta** 12.14 33 *i*P Pn 15 42 08.7 +0.3
BVA0 **Borovoye Array** 13.96 342 ⇓Pn Pn 15 42 33.3 +0.1
comp=N,91nm,1.3s
BVA0 ⇓Lg Lg 15 46 35.3
comp=N,577nm,1.4s
BVAR **Borovoye Array** 13.96 342 Pn Pn 15 42 33.7 +0.5
comp=N,0.2nm,0.3s,baz=153,slow=13,SNR=47
BVAR Lg Lg 15 46 32.3
comp=N,0.4nm,0.3s,baz=163,slow=21,SNR=5.5
BVAR LR LR 15 47 58.2
comp=N,2µm,18.4s,baz=150,slow=37
comp=N,8.5nm,0.6s
BORK **Borovoye** 14.00 342 Pn 15 42 34.1 +0.4
BORK **Borovoye** 14.00 342 *ce*P Pn 15 42 34.1 +0.4
BORK pmax pmax
comp=Z,60nm,1.7s
BRVK **Borovoye** 14.02 342 ⇑Pn Pn 15 42 32.5 -1.4
comp=Z,71nm,1.2s
BRVK ⇑Lg Lg 15 46 38.3
EVN **Everest** 14.27 144 Pn 15 42 33.4 -4.7
GOMU **GeErMu** 14.27 99 P Pn 15 42 34.1 -3.7
GOMU S Sn 15 45 16.3 +0.1
GOMU pmax pmax
comp=Z,70nm,0.8s
GOMU LR LR
comp=Z,940nm,6.9s
GOMU LR LR
comp=Z,660nm,8.3s
GOMU LR LR
comp=Z,1µm,9.1s
ZAA0 **Zalesovo Array** 14.95 17 Pn 15 42 45.2 -1.4
ZAA0 **Zalesovo Array** 14.95 17 ⇓Pn Pn 15 42 44.1 -2.5
comp=Z,19nm,0.6s
ZALV **Zalesovo Beam** 14.95 17 Pn Pn 15 42 45.9 -0.7
comp=Z,0.9nm,0.3s,baz=199,slow=12,SNR=21
ZALV Lg Lg 15 47 07.4
comp=Z,0.4nm,0.3s,baz=208,slow=22,SNR=5.6
ZALV LR LR 15 48 07.9
comp=Z,412nm,21.0s,baz=208,slow=35
comp=Z,6.1nm,0.5s
ZALV **Zalesovo Beam** 14.95 17 Pn 15 42 44.7 -1.9
LSA **Lhasa** 15.23 128 P Pn 15 42 46.8 -4.1
LSA S Sn 15 45 43.9 +4.1
LSA pmax pmax
comp=Z,6.0nm,1.4s
LSA LR LR
comp=Z,1µm,11.3s
LSA LR LR
comp=Z,880nm,10.7s
LSA LR LR
comp=Z,790nm,9.9s
AB31 **Akbulak array** 15.49 313 Pn 15 42 53.3 -0.5
AB31 **Akbulak array** 15.49 313 ⇑Pn Pn 15 42 53.6 -0.2
comp=Z,31nm,0.7s,baz=117,slow=12,SNR=218
ABKAR **Akbulak array** 15.49 313 Pn 15 42 52.8 -1.0
UDPR **Udaipur** 15.57 192 *e*P Pn 15 42 56.6 +1.6
UDPR *e*S Sn 15 45 49.9 +2.4
UDPR IAML 15 48 27.0
comp=N,331nm,3.1s
UDPR IAML 15 48 29.3
comp=E,364nm,3.1s
AKTO **Aktyubinsk** 17.16 314 P Pn 15 43 15.4 +0.3
comp=E,0.9nm,0.3s,baz=113,slow=12,SNR=44
AKTO Lg Lg 15 48 16.9
comp=E,0.1nm,0.3s,baz=133,slow=14,SNR=2.2
AKTO LR LR 15 50 23.8
comp=E,2µm,21.8s,baz=122,slow=39
comp=E,33nm,0.9s
AKTO **Aktyubinsk** 17.16 314 ⇑Pn Pn 15 43 15.1 -0.1
comp=E,81nm,1.1s
GTA2 **Gaotai** 17.27 84 *e*P Pn 15 43 13.8 -2.9
GTA2 pmax pmax
comp=E,18nm,1.1s
GTA2 LR LR
comp=E,1µm,13.8s
GTA2 LR LR
comp=E,910nm,13.8s
GTA2 LR LR
comp=E,1µm,14.9s
KNGR **Kungurtug, Tuv** 17.74 46 *i*P P 15 43 23.0 -0.3
SHL **Shillong** 18.78 135 P P 15 43 32.4 -2.6
SHL IAmb IAmb 15 43 39.0
comp=Z,89nm,1.0s
SHL **Shillong** 18.78 135 P P 15 43 32.4 -2.6
SHL pmax pmax
comp=Z,89nm,1.0s
SHL **Shillong** 18.78 135 P P 15 43 34.9 -0.1
SNR=11
SHL S Sn 15 47 03.0 -2.6
NGCH **Negor - Chabah** 19.85 228 P P 15 43 46.9 +0.5
SVE **Sverdlovsk** 20.15 333 *e*P P 15 43 50.1 +0.6
SVE *e*S Sn 15 47 43.2 +5.3
SVE pmax pmax
comp=N,47nm,0.8s
SVE MLR MLR
comp=E,1µm,9.0s
MOY **Mondy** 20.17 46 *e*P Pn 15 43 51.2 -0.6
MOY pmax pmax
comp=Z,55nm,2.9s
ARTI **Arti** 20.67 329 P Pn 15 43 56.7 -0.7
comp=Z,30nm,0.7s,baz=139,slow=6.5,SNR=26
ARTI Lg Lg 15 50 07.0
comp=Z,0.2nm,0.3s,baz=80,slow=18,SNR=3.5
ARTI LR LR 15 51 26.7
comp=Z,481nm,21.3s,baz=133,slow=35
comp=Z,30nm,0.7s
ARTI **Arti** 20.67 329 P P 15 43 56.3 +1.1
ARTI IAmb IAmb 15 44 08.6
comp=Z,49nm,0.6s
ARTI **Arti** 20.67 329 *c i*P P 15 43 56.2 +1.1
ARTI 15 44 15.2
ARTI S S 15 47 47.5 +1.8
ARTI SS SnSn 15 48 05.6 +0.6
ARTI pmax pmax
comp=Z,80nm,1.7s
ARTI MLR MLR
comp=Z,1µm,13.0s
ZAK **Zakamensk** 21.00 51 *e*P P 15 43 59.2 +0.3
ZAK pmax pmax
comp=Z,78nm,1.1s
BRDH **Bariadhala** 21.03 140 P P 15 43 58.2 -1.0
comp=Z,83nm,0.3s,baz=12,slow=7.0,SNR=6.6
BRDH LR LR 15 53 25.8
comp=Z,926nm,19.5s,baz=328,slow=41
comp=Z,83nm,0.3s
LZDM **Lanzhou Array** 21.14 92 P P 15 44 01.1 +0.3
comp=Z,19nm,0.8s,baz=278,slow=10.0,SNR=24
comp=Z,19nm,0.8s
LZH **Lanzhou** 21.22 92 P P 15 44 01.6 +0.2
LZH pP pP 15 44 05.3 +0.2
LZH S S 15 47 57.8 +0.6
LZH pmax pmax
comp=Z,33nm,1.5s
LZH pmax pmax
comp=Z,170nm,4.0s
LZH LR LR
comp=Z,2µm,14.3s
LZH LR LR

comp=Z,1μm,14.0s
LZH LR LR
comp=Z,1μm,14.0s
TLY Talaya 21.68 48 *ce*P **P 15 44 08.3 +2.2**
TLY pmax pmax
comp=Z,15nm,0.8s
TLY Talaya 21.68 48 P **P 15 44 07.5 +1.4**
TLY S **S 15 48 06.3 +0.4**
SONM Songino Array 22.32 60 P **P 15 44 13.7 +0.6**
comp=Z,18nm,0.9s,baz=258,slow=9.2,SNR=56
comp=Z,18nm,0.9s
SONM Songino Array 22.32 60 P **P 15 44 13.2 +0.1**
SONM IAmb IAmb 15 44 18.4
comp=Z,57nm,1.2s
BANOM Banah 22.41 238 P **P 15 44 14.1 -0.1**
HYB Hyderabad 22.42 177 *e*P **P 15 44 11.7 -2.6**
HYB IVmB_BB 15 44 17.4
comp=Z,829nm,1.7s
HYB *e*S **S 15 48 25.1 +4.6**
HYB IVMs_BB IVMs_BB 15 53 46.7
comp=Z,790nm,14.0s
SHME Shamm 22.43 238 P **P 15 44 14.5 +0.2**
AKT Akhty 22.45 284 *e*P **P 15 44 14.8 +0.3**
AKT *e*PPP PPP 15 44 46.9
AKT *e*S **S 15 48 23.0 +2.1**
AKT pmax pmax
comp=Z,78nm,1.0s
AKT MLR MLR
comp=Z,738nm,19.0s
MAK Makhachkala 22.51 288 *c i*P **P 15 44 09.3 -5.7**
MAK *e*S **S 15 48 13.7 -8.0**
MAK pmax pmax
comp=Z,146nm,1.1s
MAK MLR MLR
comp=Z,2μm,11.0s
ULN Ulaanbaatar 22.76 60 P **P 15 44 17.6 -0.2**
ULN Ulaanbaatar 22.76 60 *ce*P **P 15 44 18.4 +0.6**
ULN pmax pmax
comp=Z,29nm,1.3s
ULN Ulaanbaatar 22.76 60 P **P 15 44 18.6 +0.7**
ULN S **S 15 48 26.9 +0.4**
ULN Ulaanbaatar 22.76 60 P **P 15 44 18.0 +0.2**
comp=Z,113nm,1.7s
TNCH TengChong 23.15 123 P **P 15 44 20.8 -1.3**
TNCH pP pP 15 44 22.3 -3.5
TNCH PP **PnPn 15 44 51.8 +4.5**
TNCH S S 15 48 21.3 -12
TNCH pmax pmax
comp=Z,23nm,1.0s
TNCH pmax pmax
comp=Z,250nm,5.2s
TNCH LR LR
comp=Z,950nm,12.6s
TNCH LR LR
comp=Z,810nm,11.1s
TNCH LR LR
comp=Z,1μm,12.4s
CD2 Chengdu 23.27 104 P **P 15 44 24.3 +1.2**
CD2 S **S 15 48 38.6 +3.2**
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 LR LR
comp=Z,1μm,11.3s
CD2 LR LR
comp=Z,1μm,15.2s
CD2 LR LR
comp=Z,1μm,10.8s
BELG Belogornoye 23.88 311 P **P 15 44 31.4 +2.6**
comp=Z,48nm,0.8s,baz=19,slow=3.0,SNR=8.5
comp=Z,48nm,0.8s
PZH PanZhiHua 24.32 116 P **P 15 44 33.3 0.0**
PZH S **S 15 48 55.4 +3.1**
PZH pmax pmax
comp=Z,20nm,1.9s
PZH pmax pmax
comp=Z,330nm,3.8s
PZH LR LR
comp=Z,410nm,11.5s
PZH LR LR
comp=Z,600nm,14.5s
PZH LR LR
comp=Z,540nm,8.2s
BTO2 Baotou 24.77 77 *e*P **P 15 44 38.1 +0.8**
BTO2 pP **sP 15 44 42.6 -0.1**
BTO2 sP **pP 15 44 45.0 +3.9**
BTO2 PP 15 45 14.4
BTO2 S **S 15 48 56.3 -3.1**
BTO2 sS **pS 15 49 04.4 +0.7**
BTO2 SS **SnSn 15 49 52.3 +6.5**
BTO2 pmax pmax
comp=Z,41nm,0.7s
BTO2 pmax pmax
comp=Z,1μm,8.3s
BTO2 LR LR
comp=Z,3μm,17.2s
BTO2 LR LR
comp=Z,1μm,14.1s
BTO2 LR LR
comp=Z,2μm,14.9s
GNI Garni 24.88 281 LR LR 15 55 54.5
comp=Z,140nm,18.2s,baz=63,slow=40
GNI Garni 24.88 281 P **P 15 44 40.4 +2.1**
GNI Garni 24.88 281 P **P 15 44 40.4 +2.1**
GNI pmax pmax
comp=Z,68nm,1.1s
GNI Garni 24.88 281 P **P 15 44 40.3 +1.9**
GNI Garni 24.88 281 P **P 15 44 40.1 +1.8**
comp=Z,750nmcomp=Z,66nm,1.1s
MHTO MHTO 25.07 227 P **P 15 44 40.8 +0.8**
NCK Nalchik 25.34 289 *i*P **P 15 44 43.1 +0.8**
NCK pmax pmax
comp=Z,12nm,0.8s
UMZA Um Al Zommool 25.42 234 P **P 15 44 43.4 +0.3**
KIRV Kirov 25.80 326 P **P 15 44 47.9 +1.6**
comp=Z,33nm,0.7s,baz=135,slow=3.2,SNR=10
KIRV LR LR 15 55 46.3
comp=Z,774nm,21.9s,baz=126,slow=38
comp=Z,33nm,0.7s
KIRV Kirov 25.80 326 *ce*P **P 15 44 48.0 +1.7**
KBZ Khabaz 25.83 290 P **P 15 44 46.8 +0.1**
comp=Z,2.0nm,0.8s,baz=90,slow=7.2,SNR=6.1
KBZ LR LR 15 56 00.2
comp=Z,768nm,18.7s,baz=94,slow=39
comp=Z,2.0nm,0.8s
XAN Xi'an 25.83 93 P **P 15 44 47.6 +0.7**
XAN S **S 15 49 19.3 +3.0**
XAN pmax pmax
comp=Z,50nm,0.8s
XAN pmax pmax
comp=Z,540nm,4.5s
XAN LR LR
comp=Z,2μm,13.6s
XAN LR LR
comp=Z,2μm,12.0s
XAN LR LR
comp=Z,1μm,12.2s
KMI2 Kunming 25.88 117 P **P 15 44 48.1 +0.5**
KMI2 S **S 15 49 17.8 +0.3**
KMI2 pmax pmax
comp=Z,17nm,0.8s
KMI2 pmax pmax
comp=Z,230nm,4.7s
KMI2 LR LR
comp=Z,450nm,17.4s
KMI2 LR LR
comp=Z,600nm,18.8s
KMI2 LR LR
comp=Z,620nm,12.0s
KVAR Kislovodsk Arr 25.96 290 LR LR 15 55 59.5
comp=Z,878nm,18.8s,baz=210,slow=39
KIV Kislovodsk 25.97 290 P **P 15 44 49.0 +0.9**
KIV IAmb IAmb 15 45 16.9
comp=Z,30nm,0.7s
KIV Kislovodsk 25.97 290 *e*P **P 15 44 49.5 +1.3**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,317nm,15.0s
KIV Kislovodsk 25.97 290 P **P 15 44 49.9 +1.8**
KIV Kislovodsk 25.97 290 P **P 15 44 49.4 +1.3**
comp=Z,26nm,0.8s
SHA1 Shidzhatmaz 26.00 290 *i*P **P 15 44 48.2 -0.4**
NEUR Neytrino 26.00 289 *i*P **P 15 44 50.5 +2.0**
NEUR pmax pmax
comp=Z,10.0nm,1.2s
HHC Hu-ho-hao-te 26.01 77 *e*P **P 15 44 51.8 +3.2**
HHC pP sP 15 44 56.8 +2.8
HHC S **S 15 49 20.5 +1.3**
HHC sS pS 15 49 24.8 +1.2
HHC SS **SnSn 15 50 20.8 +4.6**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,170nm,4.9s
HHC LR LR
comp=Z,800nm,11.6s
HHC LR LR
comp=Z,520nm,11.8s
HHC LR LR
comp=Z,390nm,11.4s
MZR Muzera 26.28 237 P **P 15 44 51.4 +0.4**
KBD Kabd 26.53 255 P **P 15 44 52.7 -0.5**
VRH Novokhopyorsk 27.11 307 *e*P P 15 45 06.5 +8.3
VRH pmax pmax
comp=Z,10.0nm,0.4s
LABN Labinsk 27.34 292 *e*P **P 15 45 03.7 +3.4**
LABN pmax pmax
comp=Z,28nm,0.7s
TIY Taiyuan 27.35 83 P **P 15 45 05.6 +5.0**
TIY pmax pmax
comp=Z,41nm,0.7s
TIY pmax pmax
comp=Z,140nm,5.7s
TIY LR LR
comp=Z,500nm,7.9s
TIY LR LR
comp=Z,640nm,11.2s
TIY LR LR
comp=Z,740nm,13.4s
ERBR Yeremizino-Bor 27.47 294 *e*P P 15 45 09.9 +8.4
ERBR pmax pmax
comp=Z,13nm,0.9s
CIT Chita 27.66 52 *e*P **P 15 45 04.0 +0.8**
CIT *e* 15 45 47.4
CIT *e* 15 46 10.8
CIT pmax pmax
comp=Z,68nm,2.0s
GYA Guiyang 27.84 110 ⇓P **P 15 45 06.1 +1.0**
GYA pmax pmax
comp=Z,13nm,1.5s
ENH Enshi 27.89 100 P **P 15 45 06.5 +1.1**
CHTO Chiang Mai 28.09 132 P **P 15 45 04.7 -2.5**
CHTO Chiang Mai 28.09 132 P **P 15 45 08.3 +1.1**
CHTO Chiang Mai 28.09 132 P **P 15 45 04.7 -2.5**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 28.09 132 P **P 15 45 08.6 +1.4**
CHTO Chiang Mai 28.09 132 P **P 15 45 05.9 -1.3**
SOC Sochi 28.14 290 *e*P **P 15 45 04.2 -3.3**
SOC *e* 15 45 55.6
SOC *e*PPP PPP 15 46 06.6
SOC *e*S **S 15 49 48.2 -4.3**
SOC *e*SSS SSS 15 51 22.2
SOC MLR MLR
comp=Z,785nm,19.0s
CMAR Chiang Mai Arr 28.37 133 P **P 15 45 08.9 -0.8**
comp=Z,2.2nm,0.7s,baz=323,slow=10.0,SNR=17
CMAR LR LR 15 56 26.4
comp=Z,233nm,19.2s,baz=305,slow=37
comp=Z,2.2nm,0.7s
CMAR Chiang Mai Arr 28.37 133 P **P 15 45 09.0 -0.8**
LYN LuoYang 28.37 90 P **P 15 45 13.3 +3.7**
LYN pmax pmax
comp=Z,24nm,1.0s
LYN LR LR
comp=Z,1μm,14.3s
LYN LR LR
comp=Z,820nm,14.4s
LYN LR LR
comp=Z,930nm,15.5s
MARD Mardin 28.55 277 P **P 15 45 10.4 -0.9**
VSR Storozhevoye 28.70 306 *e*P **P 15 45 16.4 +4.0**
VSR pmax pmax
comp=Z,30nm,1.8s
VORR Voronezh 28.74 307 *e*P **P 15 45 13.6 +0.9**
VORR pmax pmax
comp=Z,70nm,0.5s
XLT XiLinHaoTe 28.94 69 *e*P **P 15 45 17.3 +2.5**
XLT pP sP 15 45 21.0 +0.7
XLT pmax pmax
comp=Z,150nm,6.9s
XLT LR LR
comp=Z,660nm,13.2s
XLT LR LR
comp=Z,790nm,15.7s
LPSR Galich'ya Gora 29.07 309 *e*P **P 15 45 15.0 -0.6**
LPSR pmax pmax
comp=Z,54nm,2.7s
HNS HongShan 29.17 83 ⇑P **P 15 45 19.8 +3.1**
HNS S **S 15 50 11.3 +2.6**
HNS pmax pmax
comp=Z,10.0nm,1.3s
HNS LR LR
comp=Z,750nm,15.9s
HNS LR LR
comp=Z,810nm,16.7s
BJT Baijiatuau 29.62 77 P **P 15 45 22.8 +2.1**
BJI2 Beijing 29.62 77 P **P 15 45 23.3 +2.6**
BJI2 pmax pmax
comp=Z,4.0nm,1.0s
BJI2 LR LR
comp=Z,490nm,15.3s
BJI2 LR LR
comp=Z,240nm,16.0s
BJI2 LR LR
comp=Z,390nm,13.5s
ANN Anapa 29.67 293 *e*P P 15 45 13.7 -7.4
ANN pmax pmax
comp=Z,51nm,1.0s
MOS Moscow 30.50 315 *e*P **P 15 45 27.7 -0.6**
MOS *e* 15 46 27.3
MOS *e*PPP PPP 15 46 38.5
MOS pmax pmax
comp=Z,30nm,0.6s
MOS MLR MLR
comp=Z,1μm,12.0s
OBN Obninsk 30.94 313 P **P 15 45 32.4 +0.3**
comp=Z,12nm,0.5s,baz=161,slow=23,SNR=3.4
OBN LR LR 15 58 40.6
comp=Z,845nm,18.8s,baz=44,slow=38
comp=Z,12nm,0.5s
OBN Obninsk 30.94 313 *e*P **P 15 45 32.1 0.0**
OBN *e* 15 46 34.6
OBN *e*S **S 15 50 32.7 -3.4**
OBN pmax pmax
comp=Z,41nm,1.4s
OBN MLR MLR
comp=Z,835nm,16.0s
KLMR Klimovskoe 31.28 325 *e*P **P 15 45 34.4 -0.7**
KLMR *e* 15 48 29.5
KLMR pmax pmax
comp=Z,45nm,1.3s
HILR Hailar Array B 31.28 58 P **P 15 45 36.2 +0.9**
comp=Z,2.3nm,0.8s,baz=264,slow=5.5,SNR=6.4
HILR LR LR 15 59 22.1
comp=Z,459nm,20.2s,baz=55,slow=38
comp=Z,2.3nm,0.8s
TIA Tai'an 31.38 84 P **P 15 45 37.4 +1.1**
TIA pP **pP 15 45 39.4 -0.8**
TIA PP **PnPn 15 46 38.9 +0.2**
TIA LR LR
comp=Z,890nm,16.0s
TIA LR LR
comp=Z,470nm,11.8s
TIA LR LR
comp=Z,800nm,11.2s
RAYN Ar Rayn 31.40 248 P **P 15 45 35.5 -1.0**
RAYN IAmb IAmb 15 45 40.3
comp=Z,18nm,1.1s
RAYN Ar Rayn 31.40 248 P **P 15 45 37.6 +1.0**
RAYN Ar Rayn 31.40 248 P **P 15 45 36.5 -0.1**
WHN Wuhan 31.47 96 P **P 15 45 38.3 +1.2**
WHN pmax pmax
comp=Z,110nm,1.2s
SIM Simferopol' 32.00 293 P **P 15 45 44.9 +3.2**
SIM pmax pmax
comp=Z,27nm,1.4s
SIM MLR MLR
comp=Z,654nm,22.9s
PALK Pallekele 32.62 174 LR LR 15 59 41.0
comp=Z,836nm,19.1s,baz=348,slow=38
KIRS Kirsehir-Merke 33.25 283 ⇓P **P 15 45 53.5 +0.8**
BR131 Keskin Array S 33.31 284 *e*P **P 15 45 54.2 +0.9**
BR131 Keskin Array S 33.31 284 P **P 15 45 54.0 +0.7**
BRTR Keskin Array B 33.31 284 P **P 15 45 54.2 +0.9**
comp=Z,7.5nm,0.8s,baz=91,slow=7.9,SNR=26
comp=Z,7.5nm,0.8s
BRTR Keskin Array B 33.31 284 P **P 15 45 53.7 +0.4**
BRTR Keskin Array B 33.31 284 *i*P **P 15 45 54.4 +1.1**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
BR104 Keskin Array S 33.31 284 P **P 15 45 54.1 +0.8**
comp=Z,70nmcomp=Z,11nm,0.8s
BR104 pP **sP 15 45 58.9 +0.1**
comp=Z,70nmcomp=Z,11nm,0.8s
BR106 Keskin Array S 33.32 284 P **P 15 45 54.1 +0.7**
comp=Z,81nmcomp=Z,11nm,0.8s
BR105 Keskin Array S 33.32 284 P **P 15 45 54.3 +0.8**
comp=Z,108nmcomp=Z,15nm,0.8s
DL2 Dalian 33.99 77 P P 15 45 53.0 -6.1
DL2 S **S 15 51 20.8 -3.2**
DL2 pmax pmax
comp=Z,44nm,1.3s
DL2 pmax pmax
comp=Z,250nm,4.3s
DL2 LR LR
comp=N,830nm,15.4s
DL2 LR LR
comp=E,640nm,13.7s
DL2 LR LR
comp=Z,760nm,18.4s
MMAI Mount Meron Ar 34.17 272 P **P 15 46 01.0 +0.2**
comp=Z,1.3nm,0.5s,baz=63,slow=8.9,SNR=1.1
MMAI LR LR 16 01 32.8
comp=Z,131nm,19.3s,baz=76,slow=39
comp=Z,1.3nm,0.5s
NJ2 Nanjing 34.27 90 *e*P **P 15 45 58.0 -3.5**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
NJ2 pmax pmax
comp=Z,160nm,4.3s
NJ2 LR LR
comp=Z,690nm,16.1s
NJ2 LR LR
comp=Z,470nm,16.1s
NJ2 LR LR
comp=Z,500nm,14.2s
GHAJ Ghor Haditha 34.76 269 P **P 15 46 03.5 -2.3**
GHAJ IAmb IAmb 15 46 11.8
comp=Z,58nm,1.7s
QIZ Qiongzhong 34.84 117 P **P 15 46 06.1 -0.5**
QIZ S **S 15 51 38.8 +1.3**
QIZ LR LR
comp=Z,590nm,15.3s
QIZ LR LR
comp=Z,760nm,14.9s
QIZ LR LR
comp=Z,500nm,9.4s
AK09 Malin Array Si 34.90 304 P **P 15 46 06.6 -0.2**
AK08 Malin Array Si 34.92 304 P **P 15 46 07.0 0.0**
AK08 pP **sP 15 46 12.5 0.0**
MDUB Mudurnu 34.93 286 P **P 15 46 06.5 -0.9**
MDUB IAmb IAmb 15 46 18.9
comp=Z,33nm,1.2s
AKASG Malin Array Be 34.94 304 P **P 15 46 07.2 0.0**
comp=Z,0.8nm,0.3s,baz=77,slow=8.4,SNR=5.6
AKASG PcP **PcP 15 48 38.1 -1.4**
comp=Z,0.9nm,0.4s,baz=79,slow=2.4,SNR=4.2
AKASG LR LR 16 01 23.5
comp=Z,535nm,19.3s,baz=85,slow=38
AKASG Malin Array Be 34.94 304 P **P 15 46 06.2 -0.9**
AKBB Malin Array Si 34.94 304 *ce*P **P 15 46 08.3 +1.2**
AKBB pmax pmax
comp=Z,6.0nm,1.1s
AKBB Malin Array Si 34.94 304 P **P 15 46 07.5 +0.4**
KIEV Kiev 34.95 304 ⇑P **P 15 46 07.9 +0.6**
KIEV Kiev 34.95 304 P **P 15 46 07.8 +0.6**
KIEV Kiev 34.95 304 P **P 15 46 07.6 +0.4**
AK02 Malin Array Si 34.95 304 P **P 15 46 07.3 +0.1**
CN2 Changchun 35.66 68 P **P 15 46 14.8 +1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,800nm,10.0s
CN2 LR LR
comp=Z,600nm,10.0s
CN2 LR LR
comp=Z,700nm,11.0s
MNK Minsk 35.83 311 *i*P **P 15 46 16.9 +2.1**
comp=E,16nm,0.7s
MNK *i*P **P 15 46 16.9 +2.1**
comp=N,22nm,1.0s
MNK *i*P **P 15 46 16.9 +2.1**
comp=Z,16nm,0.7s,baz=93
MNK *i*PP **PP 15 47 37.9 +1.9**
MNK *i*PPP PPP 15 47 51.2
MNK *i*S **S 15 51 56.4 +4.3**
MNK *i*SS **SnSn 15 54 13.4 -1.2**
MNK *i*SSS SSS 15 54 42.0
MNK *i*LQ LQ 15 58 19.2
MNK *i*LR LR 16 00 02.6
MNK *i*LRM MLR 16 01 53.7
comp=N,642nm,16.2s
MNK *i*LRM MLR 16 01 53.7
comp=Z,963nm,15.2s
MNK *i*LRM MLR 16 02 58.0
comp=E,613nm,15.9s
MNK Minsk 35.83 311 *i*P **P 15 46 16.8 +2.1**
MNK *i* 15 47 37.9
MNK *i*PPP PPP 15 47 51.2
MNK *i*S **S 15 51 56.3 +4.3**
MNK *i*SS **SnSn 15 54 13.4 -1.2**
MNK *i*SSS SSS 15 54 42.0
MNK pmax pmax
comp=N,22nm,1.0s
MNK pmax pmax
comp=Z,16nm,0.7s
MNK pmax pmax
comp=E,16nm,0.7s
MNK MLR MLR
comp=Z,963nm,15.0s
MNK MLR MLR
comp=N,642nm,16.0s
MNK MLR MLR
comp=E,613nm,16.0s
MI28 Mi28,Pidlybu 35.92 305 P **P 15 46 16.6 +1.0**
MI28 pP **pP 15 46 20.6 +1.0**
EIL Elat 35.97 267 LR LR 16 02 25.9
comp=E,182nm,20.4s,baz=68,slow=39
ZEA Zeya 36.09 51 *e*P **P 15 46 18.7 +1.7**
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,1.0s
HEH HeiHe 36.23 56 *e*P **P 15 46 18.9 +0.7**
HEH pmax pmax
comp=Z,27nm,0.8s
HEH LR LR
comp=Z,1μm,12.8s
HEH LR LR
comp=Z,270nm,14.8s
HEH LR LR
comp=Z,670nm,14.4s
KLYT Kilyos 36.32 288 P **P 15 46 20.5 +1.4**
comp=Z,107nm,1.3s
LVZ Lovozero 36.35 334 *i*P **P 15 46 19.3 +0.2**
LVZ pmax pmax
comp=Z,34nm,0.9s
SSE Sheshan 36.47 90 P **P 15 46 22.3 +1.8**
SSE S **S 15 52 04.5 +2.2**
SSE pmax pmax
comp=Z,20nm,1.2s
SSE pmax pmax
comp=Z,110nm,3.8s
SSE LR LR
comp=Z,280nm,15.3s
SSE LR LR
comp=Z,250nm,12.8s
NACGM Naroch 36.49 311 *e*P **P 15 46 25.0 +4.6**
comp=Z,17nm,0.8s,baz=93
APA Apatity 36.62 333 ⇓*e*P **P 15 46 22.4 +1.0**
APA *e* 15 47 45.3
APA pmax pmax
comp=Z,15nm,1.2s
APA MLR MLR
comp=Z,2μm,10.3s
BNX BinXian 36.70 64 ⇓P **P 15 46 23.0 +0.6**

BNX pmax pmax
comp=Z,9.0nm,1.0s
VSU Vasula 36.85 317 *ce*P **P 15 46 24.3 +0.9**
VSU pmax pmax
comp=Z,33nm,1.3s
RNPP9 Sopachiv 37.02 306 P **P 15 46 25.8 +0.8**
RNPP5 Staryi Chortor 37.03 305 P **P 15 46 25.5 +0.4**
VRI Vrinciioaia 37.03 296 ⇓P **P 15 46 27.1 +1.8**
VRI Vrinciioaia 37.03 296 P **P 15 46 27.0 +1.8**
VRI Vrinciioaia 37.03 296 P **P 15 46 25.7 +0.5**
comp=Z,9.5nm,1.0s
PLOR Plostina 37.09 296 ⇓P **P 15 46 27.2 +1.5**
PLOR Plostina 37.09 296 P **P 15 46 27.2 +1.5**
COVR Voineasa-Covas 37.40 296 ⇑P **P 15 46 27.8 -0.5**
MLR Muntele Rosu 37.64 296 ⇑P **P 15 46 31.6 +1.1**
MLR Muntele Rosu 37.64 296 P **P 15 46 29.1 -1.4**
MLR Muntele Rosu 37.64 296 P **P 15 46 31.5 +1.1**
MLR Muntele Rosu 37.64 296 P **P 15 46 32.0 +1.5**
comp=Z,13nm,0.8s
FINES FINESS Array B 37.66 322 P **P 15 46 30.9 +0.7**
comp=Z,6.9nm,0.6s,baz=109,slow=9.6,SNR=15
FINES LR LR 16 02 43.1
comp=Z,1µm,21.6s,baz=55,slow=37
comp=Z,6.9nm,0.6s
FINES FINESS Array B 37.66 322 P **P 15 46 30.4 +0.2**
FINES FINESS Array B 37.66 322 *i*P **P 15 46 33.0 +2.8**
FINES pmax pmax
comp=Z,7.0nm,0.6s
BURAR Bucovina Array 37.80 299 P **P 15 46 31.5 -0.3**
KSV Kosov 37.81 301 P **P 15 46 32.0 +0.3**
DOPR Dopca 37.94 297 ⇑P **P 15 46 34.5 +1.6**
STNU Starunia 38.13 301 P **P 15 46 34.0 -0.5**
YAK Yakutsk 38.29 37 LR LR 16 04 51.1
comp=Z,78nm,21.9s,baz=262,slow=40
YAK Yakutsk 38.29 37 P **P 15 46 34.8 -0.8**
YAK IAmb IAmb 15 46 40.1
comp=Z,23nm,0.8s
YAK Yakutsk 38.29 37 *e*P **P 15 46 36.4 +0.8**
YAK *e**PP **sP 15 46 44.1 +2.8**
YAK *e* 15 48 03.6
YAK *e* 15 48 50.9
YAK *e*S **S 15 52 30.6 +1.4**
YAK *e**SS **ScP 15 52 38.0 +1.0**
YAK *e*SS **SS 15 55 15.8 -1.5**
YAK *e* 15 56 48.0
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,13nm,0.9s
YAK pmax pmax
comp=Z,333nm,7.5s
YAK pmax pmax
comp=E,71nm,4.0s
YAK pmax pmax
comp=N,137nm,7.3s
YAK smax smax
comp=E,45nm,3.3s
YAK smax smax
comp=N,40nm,2.5s
YAK MLR MLR
comp=Z,231nm,19.0s
YAK MLR MLR
comp=N,162nm,13.0s
YAK MLR MLR
comp=E,213nm,17.0s
MDJ Mudanjiang 38.43 65 P **P 15 46 39.5 +2.5**
MDJ pmax pmax
comp=E,10.0nm,1.1s
MORS Morshin 38.48 302 P **P 15 46 39.8 +2.4**
KLR Kul'dur 39.12 58 LR LR 16 04 05.8
comp=E,312nm,19.7s,baz=280,slow=38
KLR Kul'dur 39.12 58 *ce*P **P 15 46 43.5 +0.8**
KLR pmax pmax
comp=Z,8.0nm,1.7s
KSAR Wonju Array Be 39.13 77 P **P 15 46 39.2 -3.7**
KSAR Wonju Array Be 39.13 77 P **P 15 46 39.2 -3.7**
KSRS Korea Array 39.15 77 P **P 15 46 43.0 -0.1**
comp=Z,6.6nm,1.0s,baz=277,slow=9.8,SNR=16
KSRS LR LR 16 05 29.9
comp=Z,282nm,18.3s,baz=275,slow=40
comp=Z,6.6nm,1.0s
HOLU Holmets 39.55 301 P **P 15 46 48.2 +1.9**
SSLB Suanglung 39.98 100 P **P 15 46 52.2 +2.0**
TPUB Ta-pu 40.01 101 P **P 15 46 51.2 +0.8**
ARCES ARCESS Array B 40.07 335 P **P 15 46 51.5 +1.2**
comp=Z,15nm,0.7s,baz=110,slow=10,SNR=8.8
ARCES LR LR 16 04 12.5
comp=Z,841nm,18.4s,baz=92,slow=37
comp=Z,15nm,0.7s
STHS Stebnicka Huta 40.16 303 *e*P **P 15 46 55.2 +3.7**
STHS Stebnicka Huta 40.16 303 *e*P **P 15 46 55.2 +3.7**
USRK Ussuriysk Ar. 40.20 65 P **P 15 46 51.8 0.0**
comp=Z,4.7nm,0.9s,baz=294,slow=14,SNR=5.8
comp=Z,4.7nm,0.9s
BZS Buzias 40.60 297 ⇑P **P 15 46 55.9 +0.8**
BZS Buzias 40.60 297 P **P 15 46 55.8 +0.8**
TWGBT Beinan 40.62 101 P **P 15 46 58.2 +2.7**
MDVR Moldovita 40.72 296 ⇓P **P 15 46 57.4 +1.2**
TIXI Tiksi 40.76 22 LR LR 16 04 42.9
comp=Z,616nm,20.0s,baz=266,slow=37
TIXI Tiksi 40.76 22 P **P 15 46 55.8 -0.2**
TIXI Tiksi 40.76 22 P **P 15 46 56.1 +0.1**
NIE Niedzica 40.77 303 P **P 15 46 56.6 +0.1**
comp=Z,6.9nm,0.7s
OJC Ojcow 40.98 304 P **P 15 46 57.5 -0.7**
OJC Ojcow 40.98 304 P **P 15 46 57.5 -0.7**
OJC Ojcow 40.98 304 P **P 15 46 58.3 +0.2**
comp=Z,16nm,0.9s
BOVS Bovan 41.00 294 ⇓P **P 15 46 60.0 +1.6**
ATD Arta Tunnel 41.54 237 LR LR 16 06 27.9
comp=Z,10.0nm,18.6s,baz=36,slow=39
GRNR Gornyy 41.89 55 ⇑*i*P **P 15 47 06.4 +0.7**
GRNR pmax pmax
comp=E,3.0nm,1.0s
GRNR pmax pmax
comp=Z,4.0nm,0.9s
STEB Steborice 42.31 304 *e*P **P 15 47 10.4 +1.3**
MORC Moravsky Berou 42.48 304 ⇓P **P 15 47 11.6 +1.0**
MORC Moravsky Berou 42.48 304 P **P 15 47 09.6 -1.0**
MORC Moravsky Berou 42.48 304 P **P 15 47 11.5 +1.0**
MORC Moravsky Berou 42.48 304 *e*P **P 15 47 12.2 +1.7**
MORH Mrgy, Hungar 42.49 299 ⇑P **P 15 47 11.2 +0.7**
MORH Mrgy, Hungar 42.49 299 P **P 15 47 11.0 +0.5**
comp=Z,5.6nm,0.8s
JAVC Velka Javorina 42.57 303 *e*P **P 15 47 13.2 +1.9**
GSI Gunungsitoli 42.61 149 P **P 15 47 08.9 -2.9**
GSI IAmb IAmb 15 47 14.3
comp=Z,25nm,0.8s
SMOL Smolenice 42.80 302 *e*P **P 15 47 13.6 +0.6**
KRLC Kraliky 42.92 305 AMS AMS 16 06 00.0
comp=Z,2µm,14.7s
JNU Nakatsue 43.03 82 LR LR 16 07 28.3
comp=Z,226nm,18.4s,baz=293,slow=39
DPC Dobruska-Polom 43.16 305 *e*P **P 15 47 17.6 +1.6**
DPC Dobruska-Polom 43.16 305 *e*P **P 15 47 17.6 +1.6**
DPC Dobruska-Polom 43.16 305 P **P 15 47 17.2 +1.2**
comp=Z,11nm,0.8s
VRAC Vranov 43.18 303 P **P 15 47 17.2 +1.1**
comp=Z,4.5nm,0.7s,baz=84,slow=10,SNR=5.5
VRAC LR LR 16 08 13.7
comp=Z,383nm,18.9s,baz=84,slow=40
comp=Z,4.5nm,0.7s
VRAC Vranov 43.18 303 *e*P **P 15 47 18.8 +2.7**
OSTC Ostas 43.19 305 AMS AMS 16 06 10.0
comp=Z,2µm,18.0s
CHVC Chvalec 43.28 305 *e*P **P 15 47 19.7 +2.7**
CHVC Chvalec 43.28 305 *e*P **P 15 47 19.7 +2.7**
UPC Upice 43.32 305 *e*P **P 15 47 18.9 +1.6**
UPC Upice 43.32 305 *e*P **P 15 47 18.9 +1.6**
KRUC Moravsky 43.36 303 *e*P **P 15 47 20.2 +2.6**
JSU Suzuyama 43.41 84 P **P 15 47 16.2 -2.0**
JSU IAmb IAmb 15 47 28.9
comp=Z,60nm,1.3s
HFS Hagfors 43.60 319 P **P 15 47 20.4 +1.0**
comp=Z,6.5nm,0.8s,baz=126,slow=7.5,SNR=7.3
HFS LR LR 16 05 59.3
comp=Z,882nm,19.6s,baz=102,slow=37
comp=Z,6.5nm,0.8s
CONA Conrad Observa 43.95 302 *e*P **P 15 47 22.8 +0.4**
comp=Z,3.9nm,1.0s
CONA *i* pP **pP 15 47 24.2 -2.3**
comp=Z,3.0nm,0.7s
PRU Pruhonice 44.35 305 *e*P **P 15 47 28.5 +3.0**
PRU Pruhonice 44.35 305 *e*P **P 15 47 28.5 +3.0**
BRG Berggiesshubel 44.55 306 *e*P **P 15 47 30.2 +3.1**
BRG Amp 15 47 31.7
comp=Z,6.2nm,0.8s
BRG PP PP 15 49 21.5 +11
BRG Amp 15 49 24.4
comp=Z,9.1nm,1.3s
ZVC Zvikov 44.69 304 *e*P **P 15 47 31.5 +3.3**
CKRC Cesky Krumlov 44.75 303 *e*P **P 15 47 30.6 +1.8**
CKRC Cesky Krumlov 44.75 303 *e*P **P 15 47 30.6 +1.8**
NB2 NORSAR Subarra 44.79 321 P **P 15 47 29.1 +0.2**
comp=Z,4.6nm,0.7s,baz=88,slow=7.9
NOA NORSAR Array B 44.79 321 P **P 15 47 29.4 +0.4**
comp=Z,4.7nm,0.8s,baz=88,slow=7.9,SNR=11
NOA LR LR 16 06 55.0
comp=Z,721nm,21.9s,baz=90,slow=37
comp=Z,4.7nm,0.8s
SOKA Soboth 44.80 300 *e*P **P 15 47 30.0 +0.8**
comp=Z,5.9nm,1.3s
CLL Collm 45.04 307 *i*P **P 15 47 33.8 +2.8**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL MLR MLR
comp=Z,800nm,17.6s
CLL Collm 45.04 307 *i*P **P 15 47 33.8 +2.8**
comp=Z,8.0nm,0.9s
CLL AMS AMS 16 04 00.0
comp=N,500nm,21.3s
CLL AMS AMS 16 04 00.0
comp=E,200nm,20.0s
GERES GERESS Array B 45.14 303 P **P 15 47 32.5 +0.6**
comp=E,4.9nm,0.7s,baz=66,slow=7.9,SNR=24
GERES LR LR 16 09 24.3
comp=E,434nm,19.1s,baz=82,slow=40
comp=E,4.9nm,0.7s
KHC Kasperske Hory 45.15 304 *e*P **P 15 47 29.0 -3.0**
KHC Kasperske Hory 45.15 304 *e*P **P 15 47 29.0 -3.0**
OBKA Obir 45.16 300 *e*P **P 15 47 32.4 +0.2**
comp=E,4.3nm,1.1s
SPITS Spitsbergen Ar 45.40 345 P **P 15 47 35.1 +1.6**
comp=E,6.2nm,0.8s,baz=134,slow=8.3,SNR=8.9
SPITS LR LR 16 09 22.9
comp=E,698nm,20.4s,baz=130,slow=40
comp=E,6.2nm,0.8s
BIOA Bad Ischl, Aus 45.46 302 *e*P **P 15 47 34.8 +0.4**
comp=E,3.2nm,1.1s
TYV Tymovskoe 45.76 53 *e*P **P 15 47 38.3 +1.6**
TYV *e*S **S 15 54 21.8 +1.9**
TYV pmax pmax
comp=Z,16nm,1.0s
TYV pmax pmax
comp=Z,100nm,2.9s
TYV smax smax
comp=N,300nm,4.2s
TYV smax smax
comp=E,200nm,4.2s
PDSI Padang 45.79 147 P **P 15 47 35.1 -2.2**
comp=E,63nm,0.9s
TRI Trieste 45.91 299 P **P 15 47 36.9 -1.0**
TRI IAmb IAmb 15 47 44.8
comp=Z,16nm,0.7s
TRI Trieste 45.91 299 P **P 15 47 36.9 -1.0**
TRI pmax pmax
comp=Z,16nm,0.7s
LESA Schwarzleotal 46.16 302 *e*P **P 15 47 40.4 +0.3**
comp=Z,3.1nm,0.5s
INU Inuyama 46.74 76 P **P 15 47 44.1 -0.5**
INU IAmb IAmb 15 47 49.4
comp=Z,22nm,1.0s
INU Inuyama 46.74 76 P **P 15 47 47.9 +3.3**
YSS Yuzhno-Sakhali 46.80 59 P **P 15 47 43.9 -1.1**
YSS Yuzhno-Sakhali 46.80 59 P **P 15 47 47.8 +2.9**
YSS Yuzhno-Sakhali 46.80 59 *e*P **P 15 47 45.6 +0.7**
YSS *e*S **S 15 54 33.3 -1.6**
YSS pmax pmax
comp=Z,200nm,4.5s
YSS pmax pmax
comp=Z,20nm,1.3s
YSS smax smax
comp=N,200nm,4.0s
YSS smax smax
comp=E,100nm,3.9s
JGF Kuroka 46.89 75 P **P 15 47 44.5 -1.4**
JGF IAmb IAmb 15 47 48.3
comp=Z,20nm,1.0s
JGF Kuroka 46.89 75 P **P 15 47 47.8 +1.9**
MAJO Matsushiro 47.14 74 P **P 15 47 49.6 +1.8**
MAJO Matsushiro 47.14 74 P **P 15 47 47.2 -0.6**
MJAR Matsushiro Arr 47.14 74 P **P 15 47 47.4 -0.4**
comp=Z,11nm,0.9s,baz=294,slow=8.6,SNR=22
MJAR LR LR 16 10 37.3
comp=Z,190nm,18.4s,baz=296,slow=40
comp=Z,11nm,0.9s
RETA Reutte 47.39 302 *e*P **P 15 47 49.7 +0.1**
comp=Z,0.5nm,0.4s
FETA Feichten 47.54 302 *ep*P **P 15 47 52.8 +1.9**
comp=Z,1.0nm,0.6s
ASAJ Asahikawa 47.55 62 LR LR 16 09 46.4
comp=Z,150nm,18.7s,baz=281,slow=38
DAVA Damuels 48.02 302 *e*P **P 15 47 54.1 -0.6**
comp=Z,9.7nm,1.0s
DAVOX Davos/Dischmat 48.17 302 LR LR 16 10 56.8
comp=Z,538nm,18.7s,baz=68,slow=39
VAE Valguarnera 48.26 288 LR LR 16 12 60.0
comp=Z,149nm,18.6s,baz=316,slow=42
MA2 Magadan 48.59 41 LR LR 16 10 16.0
comp=Z,189nm,18.0s,baz=276,slow=38
MA2 Magadan 48.59 41 P **P 15 48 01.9 +3.3**
MA2 Magadan 48.59 41 *i*P **P 15 47 59.0 +0.4**
MA2 pmax pmax
comp=Z,10.0nm,1.0s
MA2 Magadan 48.59 41 P **P 15 47 59.5 +0.9**
comp=Z,12nm,1.2s
MSEY Mahe Island 48.70 210 P **P 15 48 00.5 +0.5**
SEY Seymchan 48.79 36 *i*P **P 15 48 00.6 +0.5**
SEY pmax pmax
comp=Z,4.0nm,0.8s
NOR Nord 51.39 349 *i*P **P 15 48 20.8 +1.1**
KEST Kesra 52.69 289 LR LR 16 15 27.1
comp=Z,126nm,18.1s,baz=290,slow=41
DAG Danmarks Havn 52.90 343 *i*P **P 15 48 31.0 +0.1**
DAG IAmb IAmb 15 48 32.9
comp=Z,8.1nm,0.8s
BILL Bilibino 53.33 28 P **P 15 48 34.9 +0.7**
EKA Eskdalemuir Ar 53.34 315 P **P 15 48 34.5 0.0**
comp=Z,2.7nm,0.7s,baz=94,slow=6.9,SNR=4.7
EKA LR LR 16 12 04.2
comp=Z,663nm,18.6s,baz=80,slow=37
comp=Z,2.7nm,0.7s
DBG Daneborg 54.04 341 *i*P **P 15 48 42.2 +2.9**
PETK Petropavlovsk- 54.04 47 P **P 15 48 39.8 +0.2**
comp=Z,2.6nm,0.8s,baz=310,slow=9.1,SNR=2.3
PETK LR LR 16 11 13.5
comp=Z,146nm,18.5s,baz=290,slow=36
comp=Z,2.6nm,0.8s
PETK Petropavlovsk- 54.04 47 P **P 15 48 39.6 0.0**
LEM Lembang 54.26 142 LR LR 16 15 50.5
comp=Z,204nm,18.1s,baz=316,slow=41
JCJ Chichijima 54.50 82 LR LR 16 12 50.3
comp=Z,122nm,21.2s,baz=130,slow=37
BORG Borgarnes 58.17 330 LR LR 16 13 40.0
comp=Z,377nm,20.5s,baz=72,slow=35
MBAR Mbarara 58.53 238 LR LR 16 17 21.0
comp=Z,126nm,18.1s,baz=52,slow=39
MBAR Mbarara 58.53 238 *i*P **P 15 49 11.2 -1.1**
MBAR pmax pmax
comp=Z,10.0nm,1.0s
NEEM North Greenlan 58.74 348 *i*P **P 15 49 13.9 +0.7**
NEEM IAmb IAmb 15 49 16.4
comp=Z,15nm,0.8s
KAPI Kappang 59.32 129 LR LR 16 17 37.6
comp=Z,105nm,20.5s,baz=314,slow=39
SUMG Summit 59.44 342 *i*P **P 15 49 18.0 -0.2**
ESDC Sonseca Array 60.25 299 P **P 15 49 24.4 +0.5**
comp=Z,1.7nm,0.7s,baz=56,slow=7.5,SNR=9.9
ESDC LR LR 16 18 53.4
comp=Z,215nm,21.8s,baz=49,slow=39
comp=Z,1.7nm,0.7s
ESDC Sonseca Array 60.25 299 P **P 15 49 22.9 -0.9**
TULEG Thule 61.88 351 *i*P **P 15 49 34.0 -0.2**
TULEG IAmb IAmb 15 49 35.6
comp=Z,9.8nm,1.2s
KULLO Kullorsuaq 61.89 348 *i*P **P 15 49 34.9 +0.6**
KULLO IAmb IAmb 15 49 36.0
comp=Z,6.9nm,0.6s
TAM Tamanrasset 62.11 277 **P 15 49 34.5 -2.3**
TAM Tamanrasset 62.11 277 P **P 15 49 34.5 -2.3**
TAM pmax pmax
comp=Z,164nm,0.2s
C16K Lisburne Hills 62.52 22 P **P 15 49 39.0 +0.3**
baz=310
A21K Barrow 62.69 17 P **P 15 49 40.0 +0.3**
baz=316
C17K DeLong Mountai 63.00 21 P **P 15 49 42.0 +0.1**
baz=311,SNR=12
SHEM Shemya Is, Ala 63.13 43 LR LR 16 18 04.1
comp=Z,84nm,18.1s,baz=304,slow=37
GAMB Gambell 63.26 28 P **P 15 49 43.0 -0.6**
baz=306
RDOG Red Dog Mine 63.36 21 P **P 15 49 44.2 -0.1**
baz=312
C18K Utukok River 63.43 20 IAmb IAmb 15 49 48.6
comp=Z,9.9nm,0.8s
C18K Utukok River 63.43 20 P **P 15 49 44.4 -0.4**
baz=313
TNA Tin City 63.45 25 IAmb IAmb 15 49 50.1
comp=Z,24nm,1.4s
TNA Tin City 63.45 25 P **P 15 49 45.0 +0.1**
baz=308
C19K Lookout Ridge 63.54 20 P **P 15 49 45.2 -0.2**
baz=314,SNR=14
D17K Noatak River 63.55 22 P **P 15 49 45.3 -0.2**
baz=312,SNR=24
F14K Arctic Creek 64.02 25 P **P 15 49 47.8 -0.8**
baz=310,SNR=14
MDT Midelt 64.18 292 LR LR 16 25 30.0
comp=Z,68nm,18.0s,baz=46,slow=43
D19K Kuna River 64.35 20 P **P 15 49 49.9 -0.9**
baz=315
B21K Ikpikpuk River 64.39 18 IAmb IAmb 15 49 54.5
comp=Z,8.7nm,0.8s
B21K Ikpikpuk River 64.39 18 P **P 15 49 50.6 -0.3**
baz=318
F15K North Star Dit 64.40 24 P **P 15 49 50.9 -0.3**
baz=311
E18K Tukpahlearik C 64.44 21 P **P 15 49 51.4 0.0**
baz=314,SNR=8.2
D20K Etivluk River 64.57 19 IAmb IAmb 15 49 56.1
comp=Z,14nm,1.1s
D20K Etivluk River 64.57 19 P **P 15 49 52.1 -0.2**
baz=316
C21K Knifeblade Rid 64.70 18 P **P 15 49 53.3 +0.3**
baz=318
ANM Nome 64.93 25 IAmb IAmb 15 50 00.2
comp=Z,25nm,1.4s
ANM Nome 64.93 25 P **P 15 49 55.2 +0.6**
baz=311,SNR=6.4
F17K Baldwin Pennin 64.93 22 P **P 15 49 54.5 -0.1**
baz=313
E20K Nigu River 65.02 19 P **P 15 49 55.0 -0.1**
baz=317
G15K Niukluk 65.07 24 P **P 15 49 55.6 +0.1**
baz=312
F18K Selawik 65.28 22 P **P 15 49 57.3 +0.5**
baz=315,SNR=6.3
G16K Koyuk River 65.32 23 IAmb IAmb 15 50 01.7
comp=Z,16nm,1.2s
G16K Koyuk River 65.32 23 P **P 15 49 56.6 -0.5**
baz=313,SNR=7.1
E19K Redstone River 65.33 20 P **P 15 49 56.3 -0.9**
baz=316
D22K Ayikyak River 65.41 18 P **P 15 49 57.8 +0.2**
baz=320
E21K Killik River 65.43 18 IAmb IAmb 15 50 02.4
comp=Z,9.0nm,0.8s
E21K Killik River 65.43 18 P **P 15 49 56.7 -1.1**
baz=319
RES Resolute Bay 65.59 358 LR LR 16 23 14.6
comp=Z,151nm,18.0s,baz=11,slow=40
RES Resolute Bay 65.59 358 **P 15 49 59.0 +0.3**
RES IAmb IAmb 15 50 04.3
comp=Z,28nm,2.0s
RES Resolute Bay 65.59 358 P **P 15 49 59.0 +0.3**
RES pmax pmax
comp=Z,28nm,2.0s
F19K Shaleruckik Mo 65.64 21 P **P 15 49 58.9 -0.2**
baz=316
C24K Franklin Bluff 65.64 16 P **P 15 49 59.0 -0.1**
baz=322
G17K Kiwalik Mounta 65.76 23 P **P 15 49 59.7 -0.3**
baz=314
D23K Nanushuk River 65.80 17 P **P 15 50 01.1 +0.9**
D23K IAmb IAmb 15 51 50.5
comp=Z,30nm,1.9s
D23K Nanushuk River 65.80 17 P **P 15 49 59.7 -0.5**
baz=321
H16K Elim 65.88 24 P **P 15 49 59.4 -1.3**
baz=313,SNR=6.0
F20K Avaraart Lake 66.03 20 P **P 15 50 01.0 -0.6**
baz=318
D24K Happy Valley 66.06 16 IAmb IAmb 15 50 24.2
comp=Z,5.2nm,0.5s
D24K Happy Valley 66.06 16 P **P 15 50 01.6 -0.3**
baz=322
G18K Tagagawik 66.07 22 P **P 15 50 01.3 -0.6**
baz=316
E22K Anaktuvuk Pass 66.19 18 P **P 15 50 02.7 0.0**
baz=320
C26K Camden Bay 66.25 15 P **P 15 50 02.9 -0.1**
baz=326
G19K Purcell Mounta 66.33 21 P **P 15 50 02.9 -0.7**
baz=317
H17K Granite Mounta 66.38 23 IAmb IAmb 15 50 08.3
comp=Z,17nm,1.2s
H17K Granite Mounta 66.38 23 P **P 15 50 03.7 -0.3**
baz=315
POIN Pond Inlet 66.39 352 P **P 15 50 02.5 -1.3**
POIN IAmb IAmb 15 50 15.2
comp=Z,22nm,1.8s
D25K Kavik River 66.45 16 IAmb IAmb 15 50 08.4
comp=Z,11nm,0.9s
D25K Kavik River 66.45 16 P **P 15 50 04.0 -0.3**
baz=324
F21K Alatna River 66.48 19 IAmb IAmb 15 50 09.2
comp=Z,12nm,0.9s
F21K Alatna River 66.48 19 P **P 15 50 03.4 -1.2**
baz=319,SNR=5.3
H18K Honhosa River 66.69 22 IAmb IAmb 15 50 10.7
comp=Z,7.9nm,0.9s
H18K Honhosa River 66.69 22 P **P 15 50 05.7 -0.2**
baz=316
C27K Jago River 66.72 14 IAmb IAmb 15 50 11.9
comp=Z,9.1nm,0.8s
C27K Jago River 66.72 14 P **P 15 50 06.4 +0.3**
baz=326
J14K Nanvaranak Lak 66.75 26 P **P 15 50 06.2 -0.1**
baz=313
E23K Chandalar 66.76 17 P **P 15 50 06.4 -0.1**
baz=322
I17K Unalakleet 66.89 24 P **P 15 50 07.2 +0.1**
baz=315,SNR=7.1
K13K Kusilvak Mount 66.93 27 P **P 15 50 07.1 -0.3**
baz=312
E24K Your Creek 67.00 17 IAmb IAmb 15 50 11.6
comp=Z,6.3nm,0.8s
E24K Your Creek 67.00 17 P **P 15 50 07.4 -0.6**
baz=323
G21K Allakaket 67.01 20 P **P 15 50 07.3 -0.7**
baz=320,SNR=5.7
COLD Coldfoot 67.28 18 IAmb IAmb 15 50 13.3
comp=Z,14nm,0.9s
COLD Coldfoot 67.28 18 P **P 15 50 09.7 0.0**
baz=322,SNR=16
A36M Sachs Harbour 67.29 7 P **P 15 50 10.0 +0.4**
baz=341,SNR=18
J16K Anvik River 67.34 25 IAmb IAmb 15 50 16.2
comp=Z,11nm,0.9s
J16K Anvik River 67.34 25 P **P 15 50 10.4 +0.2**
baz=315
M11K Mekoryuk 67.41 29 P **P 15 50 10.2 -0.3**
baz=312
GCSA Galena City Sc 67.42 22 P **P 15 50 10.0 -0.5**
baz=317
H20K Anotleneega Mo 67.42 21 P **P 15 50 10.0 -0.6**
baz=319,SNR=16
D27M Malcolm River 67.57 14 IAmb IAmb 15 50 16.7
comp=Z,9.3nm,0.8s
D27M Malcolm River 67.57 14 P **P 15 50 11.2 -0.4**
baz=329
E25K Arctic Village 67.60 16 P **P 15 50 11.4 -0.3**
baz=325
G23K Bananza Creek 67.73 18 IAmb IAmb 15 50 16.3
comp=Z,9.9nm,1.2s
G23K Bananza Creek 67.73 18 P **P 15 50 12.6 0.0**
baz=322

K15K **Wolf Creek Mou** 67.74 26 P P 15 50 12.9 +0.2
baz=314
VOI **Vohitsoka** 67.76 211 P P 15 50 14.4 +1.1
H21K **Melozitna Rive** 67.86 20 IAmb IAmb 15 50 18.8
comp=Z,16nm,1.5s
H21K **Melozitna Rive** 67.86 20 P P 15 50 13.2 -0.2
baz=320
D28M **Stokes Point** 67.89 13 P P 15 50 13.6 +0.1
baz=331
SPIA **Saint Paul Isl** 67.92 33 P P 15 50 13.5 -0.3
baz=310
L14K **Kuka Creek** 68.02 27 P P 15 50 13.7 -0.7
baz=314
F25K **Christian Rive** 68.03 16 IAmb IAmb 15 50 18.6
comp=Z,9.8nm,0.9s
F25K **Christian Rive** 68.03 16 P P 15 50 14.4 -0.1
baz=326
H22K **Ishtalitna Cre** 68.04 19 IAmb IAmb 15 50 38.4
comp=Z,22nm,1.7s
H22K **Ishtalitna Cre** 68.04 19 P P 15 50 14.3 -0.2
baz=321
L15K **Ungalak Mounta** 68.19 26 P P 15 50 15.1 -0.3
baz=315
F26K **Sheenjek River** 68.26 16 P P 15 50 15.7 -0.1
baz=327
J19K **Poorman** 68.34 22 P P 15 50 16.1 -0.3
baz=319
G24K **Hadweenzic Riv** 68.35 18 IAmb IAmb 15 50 20.3
comp=Z,10nm,0.8s
G24K **Hadweenzic Riv** 68.35 18 P P 15 50 16.2 -0.3
baz=324
E28M **Babbage River** 68.38 14 IAmb IAmb 15 50 20.5
comp=Z,8.6nm,0.8s
E28M **Babbage River** 68.38 14 P P 15 50 16.4 -0.2
baz=330,SNR=7.4
BMAR **Burnt Mountain** 68.39 16 P P 15 50 14.9 -1.8
J18K **Innoko River** 68.42 23 P P 15 50 16.2 -0.7
baz=318
M13K **Dall Lake** 68.43 28 P P 15 50 16.4 -0.6
baz=314
I21K **Tanana** 68.44 20 IAmb IAmb 15 52 05.5
comp=Z,12nm,1.4s
I21K **Tanana** 68.44 20 P P 15 50 16.5 -0.5
baz=321
K17K **Iditarod** 68.48 24 IAmb IAmb 15 50 23.2
comp=Z,14nm,0.8s
K17K **Iditarod** 68.48 24 P P 15 50 16.4 -0.9
baz=317
P08K **Saint George I** 68.58 33 P P 15 50 17.1 -0.9
baz=310
M14K **Bethel** 68.69 27 P P 15 50 17.7 -0.8
baz=315
L16K **Owhat River** 68.84 25 P P 15 50 18.4 -1.1
baz=316
E29M **Blow River** 68.86 13 IAmb IAmb 15 50 25.2
comp=Z,12nm,0.9s
E29M **Blow River** 68.86 13 P P 15 50 18.2 -1.4
baz=332
L17K **Donlin** 68.91 25 P P 15 50 18.8 -1.1
baz=317
H24K **Noodor Dome** 68.96 18 IAmb IAmb 15 50 34.4
comp=Z,18nm,1.6s
H24K **Noodor Dome** 68.96 18 P P 15 50 19.1 -1.1
baz=324
G26K **Porcupine Rive** 68.96 16 IAmb IAmb 15 51 00.9
comp=Z,17nm,1.6s
G26K **Porcupine Rive** 68.96 16 P P 15 50 19.8 -0.4
baz=327
I23K **Minto, Yukon-K** 69.15 19 IAmb IAmb 15 50 32.4
comp=Z,13nm,1.4s
I23K **Minto, Yukon-K** 69.15 19 P P 15 50 21.1 -0.2
baz=323
M15K **Kasigluk River** 69.17 27 P P 15 50 21.1 -0.5
baz=316
F28M **Old Crow** 69.18 14 P P 15 50 21.5 -0.1
baz=330
K20K **Telida** 69.28 22 IAmb IAmb 15 50 26.0
comp=Z,8.2nm,0.7s
K20K **Telida** 69.28 22 P P 15 50 21.7 -0.6
baz=320
L18K **Granite Mounta** 69.36 24 P P 15 50 22.4 -0.3
baz=318
N14K **Kuskokwak Cree** 69.37 27 P P 15 50 22.3 -0.5
baz=315
CHUM **Lake Minchumin** 69.37 21 P P 15 50 22.4 -0.4
baz=321
M16K **Timber Creek** 69.51 26 P P 15 50 22.8 -1.0
baz=317
G27K **Doyon Strip** 69.53 15 IAmb IAmb 15 50 36.5
comp=Z,29nm,2.0s
G27K **Doyon Strip** 69.53 15 P P 15 50 23.5 -0.3
baz=329
BPAW **Bear Paw Mtn.** 69.56 20 IAmb IAmb 15 50 26.9
comp=Z,7.8nm,0.8s
BPAW **Bear Paw Mtn.** 69.56 20 P P 15 50 23.5 -0.5
baz=322
INK **Inuvik** 69.67 12 IAmb IAmb 15 50 28.2
comp=Z,13nm,0.9s
INK **Inuvik** 69.67 12 P P 15 50 24.1 -0.3
baz=335,SNR=12
NEA2 **Nenana** 69.67 19 IAmb IAmb 15 50 27.9
comp=Z,8.2nm,0.9s
NEA2 **Nenana** 69.67 19 P P 15 50 24.2 -0.4
baz=323
M17K **Holitna River** 69.73 25 P P 15 50 24.8 -0.3
baz=318
COLA **College** 69.75 19 P P 15 50 27.5 +2.4
COLA **College** 69.75 19 *i* P P 15 50 24.7 -0.4
COLA pmax pmax
comp=Z,11nm,0.9s
COLA **College** 69.75 19 P P 15 50 24.0 -1.0
baz=324
N15K **Kwethluk River** 69.75 27 P P 15 50 24.6 -0.6
baz=316
PRP **Porcupine Dome** 69.78 18 P P 15 50 24.7 -0.8
baz=326
F30M **Barrier River** 69.93 13 IAmb IAmb 15 50 31.0
comp=Z,11nm,0.8s
F30M **Barrier River** 69.93 13 P P 15 50 25.7 -0.4
baz=333
C36M **Paulatuk** 69.93 8 P P 15 50 25.6 -0.5
baz=342,SNR=8.6
L19K **White Mountain** 69.95 23 P P 15 50 25.9 -0.5
baz=320
N16K **Nishlik Lake** 69.98 26 P P 15 50 25.4 -1.2
baz=317
O14K **Tigyukauivet M** 70.00 28 P P 15 50 26.0 -0.7
baz=316
H27K **Steamboat Moun** 70.05 16 P P 15 50 26.1 -0.9
baz=329
ILAR **Eielson Array** 70.07 19 P P 15 50 26.4 -0.7
comp=Z,4.9nm,0.8s,baz=319,slow=5.4,SNR=29
ILAR LR LR 16 25 10.7
comp=Z,244nm,18.1s,baz=300,slow=39
comp=Z,4.9nm,0.8s
ILAR **Eielson Array** 70.07 19 P 15 50 25.8 -1.3
G29M **Pine Creek** 70.15 14 P P 15 50 27.1 -0.5
baz=332
M18K **Stony River** 70.18 24 P P 15 50 27.0 -0.8
baz=319
PPLA **Purkeypile** 70.18 22 P P 15 50 26.5 -1.4
baz=321
TRF **Thorofare Moun** 70.27 21 P P 15 50 27.5 -1.0
baz=323
M19K **Big River Lodg** 70.30 23 P P 15 50 27.9 -0.7
baz=320
HDA **Harding Lake** 70.36 19 P P 15 50 28.1 -0.8
baz=325
MCK **McKinley** 70.40 20 P P 15 50 28.6 -0.6
baz=324
G30M **tAoh Zraii Nji** 70.42 13 P P 15 50 29.2 0.0
baz=333
F31M **Tsiigehtchic** 70.42 12 IAmb IAmb 15 50 32.0
comp=Z,9.0nm,0.8s
F31M **Tsiigehtchic** 70.42 12 P P 15 50 28.9 -0.3
baz=335
N17K **Nushagak Hills** 70.47 25 P P 15 50 28.3 -1.3
baz=318
I26K **Coal Creek Min** 70.49 17 IAmb IAmb 15 50 33.4
comp=Z,8.6nm,0.9s
I26K **Coal Creek Min** 70.49 17 P P 15 50 28.3 -1.4
baz=328
O15K **Ungalikthiuk R** 70.57 27 P P 15 50 28.4 -1.8
baz=317
J25K **Salcha River,** 70.57 18 P P 15 50 28.0 -2.2
baz=326
I27K **Kandik River** 70.58 16 P P 15 50 28.9 -1.4
baz=329

M20K **Styx River** 70.70 23 P P 15 50 29.8 -1.3
baz=321
TORD **Torodi Ar. Bea** 70.70 271 P P 15 50 31.2 -0.6
comp=Z,25nm,0.8s,baz=38,slow=2.8,SNR=69
comp=Z,25nm,0.8s
N18K **Kilae Creek** 70.77 25 P P 15 50 30.4 -1.1
baz=319
G31M **Satah River** 70.81 13 IAmb IAmb 15 50 34.6
comp=Z,12nm,0.8s
G31M **Satah River** 70.81 13 P P 15 50 31.0 -0.5
baz=335
O16K **Kokwok River B** 70.86 26 P P 15 50 31.2 -0.7
baz=318
EPYK **Eagle Plains** 70.87 14 P P 15 50 31.3 -0.7
baz=333
L22K **Petersville** 70.87 21 IAmb IAmb 15 50 34.6
comp=Z,10nm,0.9s
I28M **Miner Creek** 71.06 16 IAmb IAmb 15 50 36.2
comp=Z,7.3nm,0.7s
I28M **Miner Creek** 71.06 16 P P 15 50 32.5 -0.7
baz=330
O17K **Koliganek Bris** 71.06 26 P P 15 50 32.5 -0.7
baz=318
SKT **Skwentna** 71.09 22 IAmb IAmb 15 50 36.4
comp=Z,14nm,0.8s
SKT **Skwentna** 71.09 22 P P 15 50 32.9 -0.5
baz=322
CUT **Chulitna** 71.11 21 P P 15 50 33.1 -0.3
baz=323
N19K **Bonanza Creek** 71.11 24 P P 15 50 33.0 -0.6
baz=320
K24K **Donnelly Dome** 71.15 19 P P 15 50 33.1 -0.6
baz=326
WAT1 **Susitna Watana** 71.24 20 P P 15 50 33.7 -0.6
baz=324
NIKH **Nikolski High** 71.29 36 P P 15 50 34.1 -0.6
baz=312
P16K **Nushagak River** 71.31 27 P P 15 50 34.0 -0.7
baz=318
DHY **Denali Highway** 71.35 20 P P 15 50 34.2 -0.9
DHY IAmb IAmb 15 50 38.5
comp=Z,9.5nm,0.8s
DHY **Denali Highway** 71.35 20 P P 15 50 34.2 -0.9
baz=325
LSZ **Lusaka** 71.42 230 P P 15 50 36.9 +0.8
RIDG **Independent Ri** 71.43 18 IAmb IAmb 15 50 38.1
comp=Z,13nm,0.8s
RIDG **Independent Ri** 71.43 18 P P 15 50 34.7 -0.7
baz=327
SCRK **Sand Creek** 71.43 18 P P 15 50 34.9 -0.7
baz=328
SPCR **Spurr Chakacha** 71.51 23 P P 15 50 34.6 -1.4
baz=322
O18K **Koktuli Hills** 71.62 25 P P 15 50 35.8 -0.8
baz=320
O19K **Port Alsworth** 71.64 24 P P 15 50 35.9 -0.8
baz=320
WAT6 **Susitna Watana** 71.66 20 P P 15 50 35.5 -1.5
baz=325
M22K **Willow** 71.68 22 P P 15 50 36.1 -0.8
baz=323
P17K **Kvichak River** 71.72 26 P P 15 50 36.4 -0.7
baz=319
UNV **Unalaska Valle** 71.73 34 P P 15 50 36.3 -1.0
baz=313
SUA **Susitna One** 71.73 22 P P 15 50 36.7 -0.6
baz=323
H31M **Peel River** 71.81 13 IAmb IAmb 15 50 40.7
comp=Z,8.4nm,0.8s
H31M **Peel River** 71.81 13 P P 15 50 36.8 -0.9
baz=335
PAX **Paxson** 71.92 19 P P 15 50 36.9 -1.6
baz=327
I30M **Mount Dempster** 71.96 14 IAmb IAmb 15 50 41.8
comp=Z,9.7nm,0.8s
I30M **Mount Dempster** 71.96 14 P P 15 50 38.3 -0.4
baz=333
P18K **Big Mountain,** 71.97 25 P P 15 50 37.3 -1.5
baz=320
Q16K **King Salmon** 72.04 26 P P 15 50 38.3 -0.7
baz=319
PMR **Palmer** 72.09 21 P P 15 50 41.6 +2.3
PMR **Palmer** 72.09 21 P P 15 50 38.9 -0.4
baz=324
SML **Sawmill** 72.13 21 P P 15 50 39.3 -0.4
baz=325
CAPN **Captain Cook N** 72.17 23 P P 15 50 39.4 -0.5
baz=323
J29N **Klondike Camp** 72.29 15 P P 15 50 40.1 -0.5
baz=332
M23K **Glacier View** 72.31 21 P P 15 50 40.0 -0.7
baz=325
FALS **False Pass** 72.31 32 P P 15 50 40.0 -0.8
baz=315
RC01 **Rabbit Creek A** 72.32 22 P P 15 50 39.7 -1.1
baz=324
SCM **Sheep Creek Mo** 72.38 20 P P 15 50 39.9 -1.4
baz=325
DAWY **Dawson** 72.39 16 P P 15 50 40.8 -0.4
baz=331
L26K **Log Cabin Wild** 72.39 18 P P 15 50 40.9 -0.4
baz=328
P19K **Oil Pt** 72.41 24 P P 15 50 40.4 -1.0
baz=321
KNK **Knik Glacier** 72.42 21 P P 15 50 40.6 -0.8
baz=325
M24K **Tolsona, Glenn** 72.46 20 P P 15 50 40.7 -1.0
baz=326
HARP **HAARP** 72.48 19 P P 15 50 41.2 -0.5
baz=327
J30M **Hart River** 72.55 15 IAmb IAmb 15 52 22.9
comp=Z,35nm,1.9s
J30M **Hart River** 72.55 15 P P 15 50 41.6 -0.7
baz=333
R16K **Pilot Point** 72.56 28 P P 15 50 41.5 -0.6
baz=319
Q17K **Contact Creek** 72.62 26 P P 15 50 41.9 -0.8
baz=320
L27K **Beaver Creek,** 72.72 18 P P 15 50 42.6 -0.6
baz=329
Q19K **Cape Douglas,** 72.85 25 P P 15 50 42.9 -1.1
baz=321
PSA00 **Pilbara Seismi** 72.89 139 P 15 50 42.9 -1.7
R17L **Mt. Peulik Vol** 72.94 27 P P 15 50 43.7 -0.8
baz=320
K29M **Barlow Dome** 72.97 15 P P 15 50 44.0 -0.7
K29M **Barlow Dome** 72.97 15 P P 15 50 44.1 -0.7
baz=332
M26K **Nabesna, AK** 73.01 18 P P 15 50 44.3 -0.7
baz=328
KLU **Klutina** 73.04 20 P P 15 50 44.1 -1.1
baz=326
BRSE **Bradley Lake S** 73.11 23 P P 15 50 44.6 -0.9
baz=323
KNRA **Kununurra** 73.12 128 P P 15 50 48.0 +2.0
comp=Z,32nm,0.9s
KNRA **Kununurra** 73.12 128 P P 15 50 42.4 -3.6
SDPT **Sand Point** 73.13 30 P P 15 50 44.7 -0.9
baz=317
FITZ **Fitzroy Crossi** 73.18 132 LR LR 16 27 55.3
comp=Z,74nm,18.1s,baz=323,slow=40
SEW **Seward** 73.20 22 P P 15 50 45.3 -0.7
baz=324
N25K **Chitina, Valde** 73.29 19 P P 15 50 46.2 -0.5
baz=327
M27K **Edge Creek, AK** 73.32 18 P P 15 50 46.1 -0.8
baz=329
L29M **L29M** 73.50 16 P P 15 50 47.3 -0.5
baz=332
Q20K **Shuyak Island** 73.50 25 P P 15 50 47.4 -0.4
baz=322
BVCY **Beaver Creek** 73.51 17 P P 15 50 47.2 -0.6
baz=330
MAYO **Mayo, Yukon** 73.52 15 P P 15 50 47.1 -0.8
baz=334
BMRM **Bremner River** 73.83 20 P P 15 50 48.8 -1.0
baz=328
CHNA **Chernabura Isl** 73.86 30 P P 15 50 49.2 -0.7
baz=318
EYAK **Cordova Ski Ar** 73.88 21 P P 15 50 48.6 -1.4
baz=327
MCARA **McCarthy VSAT** 73.88 19 P P 15 50 49.3 -0.7
baz=329
P23K **Montague Islan** 73.88 22 P P 15 50 49.4 -0.6
baz=326
M29M **Somme Creek** 74.02 16 P P 15 50 50.6 -0.4
baz=332
KDAK **Kodiak Island** 74.10 25 LR LR 16 26 23.2
comp=Z,226nm,18.6s,baz=320,slow=38
KDAK **Kodiak Island** 74.10 25 P P 15 50 50.7 -0.5
baz=322
YUK3 **Moose Creek** 74.16 18 P P 15 50 51.3 -0.6
baz=331
M30M **Minto, Yukon** 74.26 16 P P 15 50 51.5 -0.7
baz=333
OHAK **Old Harbor** 74.31 26 P P 15 50 51.7 -0.8
baz=322
CRQE **Cirque** 74.40 19 P P 15 50 51.4 -1.8
baz=329
SII **Sitkinak Islan** 74.52 27 P P 15 50 53.0 -0.9
baz=321
CHIR **Chirikof Islan** 74.59 28 P P 15 50 53.6 -0.6
baz=320
Q23K **Middleton Isla** 74.65 21 P P 15 50 53.8 -0.7
baz=326
CTG **Chitna Glacier** 74.66 18 P P 15 50 53.2 -1.5
baz=330
YUK8 **Steele Glacier** 74.75 18 P P 15 50 53.9 -1.5
baz=331
KAIM **Kayak Island** 74.76 20 P P 15 50 54.1 -1.1
baz=328
YUK4 **Talbot Arm** 74.95 17 P P 15 50 55.5 -1.0
baz=332
M31M **Drury Creek, Y** 75.08 15 P P 15 50 56.8 -0.2
baz=335
O28M **Mount Upton** 75.10 18 P P 15 50 56.9 -0.5
baz=331
MESA **MESA** 75.19 19 P P 15 50 57.4 -0.4
baz=330
N30M **Aishikik Lake** 75.20 16 P P 15 50 57.6 -0.1
baz=333
N31M **Braeburn, Yuko** 75.45 16 P P 15 50 58.8 -0.4
baz=334
HYT **Haines Junctio** 75.67 17 P P 15 50 59.5 -1.0
baz=333
PINM **Pinnacle** 75.68 18 P P 15 51 00.0 -0.5
baz=331
O29M **Mount Kennedy** 75.89 18 P P 15 51 01.4 -0.4
baz=332
BLKN **Baker Lake** 75.99 357 P 15 51 02.4 +0.3
O30N **Mendenhall** 76.03 16 P P 15 51 01.6 -0.9
baz=334
N32M **Quiet Lake** 76.30 15 P P 15 51 03.9 -0.1
baz=336
WHY **Whitehorse** 76.39 16 P P 15 51 04.3 -0.3
baz=335
P30M **Million Dollar** 76.42 17 P P 15 51 04.1 -0.7
baz=333
P33M **Teslin, Yukon** 77.22 15 P P 15 51 08.5 -0.7
baz=337
SKAG **Skagway** 77.38 16 P P 15 51 09.7 -0.4
baz=335
YKAW3 **Yellowknife Wh** 77.44 6 IAmb IAmb 15 51 13.1
comp=Z,10nm,0.8s
YKA **Yellowknife Ar** 77.51 6 P P 15 51 10.2 -0.5
comp=Z,4.3nm,0.7s,baz=345,slow=6.1,SNR=35
YKA LR LR 16 28 38.3
comp=Z,105nm,18.0s,baz=358,slow=38
comp=Z,4.3nm,0.7s
YKA **Yellowknife Ar** 77.51 6 P 15 51 09.7 -1.0
YKAW1 **Yellowknife Wh** 77.53 6 IAmb IAmb 15 51 14.1
comp=Z,11nm,0.8s
P32M **Atlin** 77.61 16 P P 15 51 10.7 -0.7
baz=336
WTLY **Watson Lake, Y** 78.05 13 P P 15 51 13.1 -0.8
baz=340
KUQ **Kuujjuuaa** 78.24 342 IAmb IAmb 15 51 15.5
comp=Z,14nm,1.1s
R33M **Jennings River** 78.33 14 P P 15 51 14.4 -1.1
baz=338
S31K **Pelican** 78.54 17 P P 15 51 15.2 -1.3
baz=334
R32K **Eaglecrest** 78.64 17 P P 15 51 15.6 -1.5
baz=336
KOTAN **Kotaneelee Air** 78.79 11 P P 15 51 16.9 -0.9
baz=343
S32K **Killisnoo** 79.36 17 P P 15 51 19.7 -1.3
baz=336
DLBC **Dease Lake** 79.40 14 LR LR 16 29 33.4
comp=Z,106nm,21.4s,baz=298,slow=38
DLBC **Dease Lake** 79.40 14 P P 15 51 20.3 -1.1
baz=339
SIT **Sitka** 79.56 17 P P 15 51 20.8 -1.3
baz=335
S34M **Telegraph Cree** 79.68 15 P P 15 51 21.9 -0.9
baz=338
WB0 **Warramunga Arr** 79.68 127 IAmb IAmb 15 51 25.3
comp=Z,17nm,1.2s
DBIC **Dimbolo** 79.76 270 P P 15 51 21.8 -2.1
comp=Z,18nm,0.8s,baz=66,slow=6.0,SNR=19
comp=Z,18nm,0.8s
WRA **Warramunga Arr** 79.78 127 P P 15 51 22.4 -1.4
comp=Z,6.2nm,0.9s,baz=323,slow=5.1,SNR=26
comp=Z,6.2nm,0.9s
WRA **Warramunga Arr** 79.78 127 P 15 51 22.9 -0.9
WRA **Warramunga Arr** 79.78 127 *i* P P 15 51 23.0 -0.8
WRA pmax pmax
comp=Z,7.0nm,0.9s
WRAB **Tennant Creek** 79.78 127 P P 15 51 24.7 +0.9
WR8 **Warramunga Arr** 79.89 127 P P 15 51 22.5 -1.9
T35M **Bob Quinn** 80.72 15 P P 15 51 27.6 -0.8
baz=339
SCHQ **Schefferville** 80.78 340 P P 15 51 28.8 0.0
comp=Z,2.5nm,0.8s,baz=64,slow=3.3,SNR=4.6
SCHQ LR LR 16 31 59.5
comp=Z,127nm,18.1s,baz=26,slow=39
comp=Z,2.5nm,0.8s
WRAK **Wrangell Islan** 80.81 16 P P 15 51 27.8 -1.1
baz=337
U33K **Whale Pass** 80.92 17 P P 15 51 28.2 -1.2
baz=337
NWAO **Narrogin (SRO)** 81.33 147 LR LR 16 29 26.7
comp=Z,82nm,20.0s,baz=334,slow=37
CRAG **Craig** 81.52 17 P P 15 51 30.9 -1.7
baz=337
V35K **Ketchikan** 81.98 16 P P 15 51 33.3 -1.8
baz=338
AS31 **Alice Springs** 82.33 129 P 15 51 35.2 -2.1
ASAR **Alice Springs** 82.33 129 P P 15 51 36.1 -1.2
comp=Z,5.7nm,0.8s,baz=319,slow=5.6,SNR=42
ASAR LR LR 16 31 59.9
comp=Z,51nm,20.4s,baz=294,slow=38
comp=Z,5.7nm,0.8s
QIS **Mount Isa** 83.55 123 P P 15 51 44.7 +1.0
MTSU **Mount Surprise** 84.94 119 P P 15 51 51.5 +0.7
BBB **Bella Bella** 85.66 15 LR LR 16 33 50.6
comp=Z,10nm,19.1s,baz=46,slow=38
CTA **Charters Tower** 87.60 119 LR LR 16 34 08.3
comp=Z,29nm,19.7s,baz=240,slow=38
ULM **Lac du Bonnet** 90.03 356 P P 15 52 15.8 +0.8
comp=Z,2.3nm,0.7s,baz=331,slow=1.8,SNR=4.4
ULM LR LR 16 36 42.9
comp=Z,270nm,18.2s,baz=13,slow=38
comp=Z,2.3nm,0.7s
NEW **Newport** 91.29 10 LR LR 16 37 50.6
comp=Z,85nm,18.6s,baz=360,slow=38
STKA **Stephens Creek** 92.96 130 LR LR 16 40 48.2
comp=Z,59nm,18.4s,baz=233,slow=40
SADO **Sadowa** 93.10 343 LR LR 16 38 03.7
comp=Z,115nm,19.8s,baz=330,slow=38
PDAR **Pinedale Array** 97.48 5 LR LR 16 41 48.9
comp=Z,118nm,18.3s,baz=6.0,slow=38
ELK **Elko** 98.93 10 LR LR 16 43 45.6
comp=Z,119nm,18.8s,baz=356,slow=39
DZM **Mont Dzumac** 103.16 108 *e*LR LR 16 26 57.2
comp=Z,80nm,25.6s
NBMO **Morrinhos-CE** 112.93 286 *e*P Pdif 15 54 00.8 +2.2
NVL **N'lazarevskaya** 119.80 200 *e*PKIKP PKPdf 15 58 00.5 -4.0
NVL *e* 15 59 23.9
NVL *e*PPP PPP 16 01 56.2
NVL *e* 16 05 08.7
NVL *e*SS SS 16 15 46.6 -6.6
NVL *e*SSS SSS 16 20 12.5
NVL pmax pmax
comp=Z,11nm,1.0s
NVL MLR MLR
comp=Z,750nm,20.0s
PPT2 **Papeete2** 133.89 75 *e*LR LR 16 41 07.1
comp=Z,65nm,23.8s
TBI **Tubuai** 137.39 82 *e*LR LR 16 42 46.2
comp=Z,243nm,28.2s
CPUP **Villa Florida** 140.09 276 PKP PKPdf 15 58 43.9 -0.3
comp=Z,1.9nm,0.7s,baz=72,slow=11,SNR=3.9
LPAZ **La Paz** 141.87 298 PKP PKPdf 15 58 47.8 -0.7
comp=Z,0.6nm,0.4s,baz=0.0,slow=0.0,SNR=1.7

WEL 21 16:11:37.6±1.5, 32°S±20″×18°0W±2′3, h371km±60km, M4.1/6, ML4.0/7, MLv4.1/6, Error ellipse: s-maj=33.5km s-min=21.0km az=54.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**6.02**	**199**	P	Pn	16 13 10.1	+1.0
HAZ				S	S	16 14 23.8	+0.1
PKGZ	**Pakihiroa**	**6.05**	**196**	P	Pn	16 13 11.2	+1.6
PKGZ				S	S	16 14 26.3	+1.9
PUZ	**Puketiti**	**6.21**	**194**	P	Pn	16 13 10.5	-0.8
PUZ				S	S	16 14 26.1	-1.5
WCZ	**Waipu Caves**	**6.21**	**230**	P	Pn	16 13 11.6	+0.3
RUGZ	**Raukumara Rang**	**6.24**	**199**	P	Pn	16 13 12.7	+0.8
OUZ	**Omahuta**	**6.34**	**238**	P	Pn	16 13 12.7	-0.2
CNGZ	**Carnagh Statio**	**6.61**	**194**	P	Pn	16 13 16.1	+0.3
MWZ	**Matawai**	**6.63**	**198**	P	Pn	16 13 15.3	-0.9
MWZ				S	S	16 14 36.4	-0.1
TKGZ	**Te Karaka**	**6.65**	**196**	P	Pn	16 13 15.5	-0.8
TKGZ				S	S	16 14 37.7	+1.0
URZ	**Urewera**	**6.68**	**201**	P	Pn	16 13 15.5	-1.1
URZ				S	S	16 14 37.2	-0.2
RIGZ	**Rimuhau**	**6.92**	**196**	P	P	16 13 20.1	-0.4
RIGZ				S	S	16 14 44.5	+2.0
KNZ	**Kokohu**	**7.25**	**196**	P	Pn	16 13 22.1	-1.0
BKZ	**Black Stump Fm**	**7.70**	**202**	P	Pn	16 13 27.1	-1.4
HIZ	**Hauiti**	**7.78**	**213**	P	P	16 13 30.2	-0.1
TSZ	**Takapari Road**	**8.69**	**202**	P	Pn	16 13 38.0	-1.9
THZ	**Tophouse**	**11.30**	**209**	P	P	16 14 07.8	-2.6
KHZ	**Kahutara**	**11.61**	**205**	P	P	16 14 12.4	-1.3

*IDC **21** 16:19:02.8±1.0, 12°.47S×14°.75W, h0km, mb4.0/9, mbtmp4.0/9, MS4.1/48, Error ellipse: s-maj=35.5km s-min=21.8km az=140.0*
*GCMT **21** 16:19:10.0±0.2, 12°.53S±0°.02×14°.83W±0°.01, h12km, MW4.9/108, Moment Tensor Solution. s38,c39; s108,c141; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.30±.06; Mθθ 0.11±.06; Mϕϕ 2.20±.05; Mrθ-0.20±.26; Mθϕ-0.18±.05; Mrϕ-1.12±.22; Best double couple: M≥2.52700×10¹⁶ NP1:ϕs169.00000°, δ32.00000°, λ-100.00000°. NP2:ϕs2.00000°, δ58.00000°, λ-83.00000°. Principal axes: T 2.4700, Plg13.0000°, Azm87.0000°; N 0.1230, Plg6.0000°, Azm178.0000°; P -2.5840, Plg76.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 21 16:19:05.6±0.8, 12°.5S±0°.2×14°.7W±0°.2, h18km, n56, σ0s31/11, mb4.2/8, MS4.1/49, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**3.50**	**2**	T	T	16 23 38.8	
	baz=55,slow=74,SNR=583						
H10S3	**ASCENSION HYDR**	**3.50**	**1**	T	T	16 23 37.1	
	baz=165,slow=74,SNR=831						
H10N1	**ASCENSION HYDR**	**4.61**	**3**	T	T	16 24 55.0	
	baz=181,slow=72,SNR=230						
H10N3	**ASCENSION HYDR**	**4.61**	**3**	T	T	16 25 01.9	
	baz=181,slow=72,SNR=472						
H10N2	**ASCENSION HYDR**	**4.63**	**3**	T	T	16 24 59.4	
	baz=181,slow=72,SNR=184						
DBIC	**Dimbokro**	**21.41**	**28**	P	**P**	**16 23 52.4**	**-0.3**
	14nm,1.3s,baz=249,slow=14,SNR=3.8						
DBIC				LR	LR	16 30 16.8	
	comp=Z,405nm,18.8s,baz=205,slow=32						
	14nm,1.3s						
RCBR	**Riachuelo**	**21.90**	**286**	LR	LR	16 30 12.2	
	comp=Z,213nm,20.9s,baz=100,slow=31						
TORD	**Torodi Ar. Bea**	**30.23**	**33**	P	**P**	**16 25 15.2**	**-0.3**
	0.5nm,0.4s,baz=210,slow=11,SNR=4.2						
TORD				LR	LR	16 35 33.7	
	comp=Z,449nm,20.3s,baz=221,slow=33						
	0.5nm,0.4s						
TSUM	**Tsumeb**	**31.77**	**106**	LR	LR	16 35 37.1	
	comp=Z,321nm,20.9s,baz=315,slow=31						
BDFB	**Brasilia**	**32.41**	**260**	P	**P**	**16 25 34.8**	**-0.1**
	1.3nm,0.3s,baz=122,slow=12,SNR=3.1						
BDFB				LR	LR	16 36 08.6	
	comp=Z,497nm,20.6s,baz=94,slow=32						
	1.3nm,0.3s						
SUR	**Sutherland**	**38.12**	**127**	LR	LR	16 38 34.6	
	comp=Z,347nm,19.6s,baz=311,slow=31						
BOSA	**Boshof**	**40.53**	**120**	P	**P**	**16 26 44.0**	**-0.1**
	4.2nm,1.0s,baz=264,slow=5.1,SNR=4.5						
BOSA				LR	LR	16 40 37.4	
	comp=Z,386nm,20.1s,baz=280,slow=32						
	4.2nm,1.0s						
MDP	**Montagnes des**	**41.52**	**293**	LR	LR	16 40 59.1	
	comp=Z,158nm,21.7s,baz=116,slow=32						
LSZ	**Lusaka**	**41.71**	**39**	LR	LR	16 41 34.8	
	comp=Z,389nm,21.4s,baz=307,slow=32						
CPUP	**Villa Florida**	**42.26**	**245**	P	**P**	**16 26 58.1**	**-0.1**
	1.7nm,0.3s,baz=75,slow=4.4,SNR=4.1						
CPUP				LR	LR	16 41 49.3	
	comp=Z,305nm,21.7s,baz=76,slow=32						
	1.7nm,0.3s						
MBAR	**Mbarara**	**46.61**	**79**	LR	LR	16 45 55.2	
	comp=Z,267nm,18.2s,baz=242,slow=35						
LPAZ	**La Paz**	**51.74**	**259**	LR	LR	16 50 50.3	
	comp=Z,162nm,18.4s,baz=76,slow=37						
KEST	**Kesra**	**53.09**	**25**	LR	LR	16 50 34.3	
	comp=Z,282nm,18.6s,baz=255,slow=36						
PLCA	**Paso Flores**	**56.17**	**229**	LR	LR	16 49 08.2	
	comp=Z,132nm,21.1s,baz=86,slow=32						
VAE	**Valguarnera**	**56.74**	**28**	LR	LR	16 53 32.0	
	comp=Z,348nm,18.2s,baz=122,slow=36						
FURI	**Furi**	**57.17**	**71**	LR	LR	16 51 22.9	
	comp=Z,360nm,19.1s,baz=234,slow=34						
SDV	**Santo Domingo**	**59.45**	**288**	LR	LR	16 55 23.4	
	comp=Z,108nm,18.4s,baz=70,slow=37						
SNAA	**Sanae**	**59.60**	**176**	LR	LR	16 48 24.8	
	comp=Z,151nm,21.0s,baz=4.0,slow=30						
NNA	**Nana**	**60.56**	**263**	LR	LR	16 54 15.3	
	comp=Z,327nm,19.2s,baz=120,slow=35						
ROSC	**El Rosal**	**61.65**	**282**	LR	LR	16 54 43.1	
	comp=Z,260nm,20.8s,baz=86,slow=35						
ATD	**Arta Tunnel**	**61.94**	**70**	LR	LR	16 53 54.6	
	comp=Z,11nm,20.9s,baz=201,slow=34						
PMSA	**Palmer Station**	**62.17**	**202**	LR	LR	16 51 06.9	
	comp=Z,52nm,21.4s,baz=342,slow=31						
ATAH	**Atahualpa**	**62.83**	**268**	LR	LR	16 57 35.2	
	comp=Z,234nm,18.1s,baz=93,slow=37						
DAVOX	**Davos/Dischmat**	**62.98**	**19**	LR	LR	16 56 18.1	
	comp=Z,267nm,18.7s,baz=250,slow=36						
EIL	**Elat**	**63.63**	**48**	LR	LR	16 56 05.2	
	comp=Z,150nm,20.1s,baz=180,slow=35						
MMAI	**Mount Meron Ar**	**65.83**	**45**	LR	LR	16 59 31.5	
	comp=Z,72nm,18.1s,baz=230,slow=37						
GERES	**GERESS Array B**	**66.04**	**20**	P	**P**	**16 29 51.1**	**-0.2**
	0.2nm,0.5s,baz=264,slow=40,SNR=1.4						
GERES				LR	LR	16 57 16.1	
	comp=Z,144nm,19.8s,baz=244,slow=35						
	0.2nm,0.5s						
ASF	**Jabal al Asfar**	**66.41**	**47**	LR	LR	16 56 47.1	
	comp=Z,114nm,21.1s,baz=209,slow=34						
VRAC	**Vranov**	**67.44**	**22**	LR	LR	17 00 01.5	
	comp=Z,176nm,18.6s,baz=242,slow=36						
MLR	**Muntele Rosu**	**68.39**	**30**	LR	LR	17 00 35.6	
	comp=Z,142nm,19.6s,baz=290,slow=36						
BRTR	**Keskin Array B**	**68.68**	**38**	P	**P**	**16 30 08.3**	**+0.1**
	0.6nm,0.9s,baz=343,slow=14,SNR=1.8						
BRTR				LR	LR	17 01 49.0	
	comp=Z,66nm,18.2s,baz=250,slow=37						
	0.6nm,0.9s						
AKASG	**Malin Array Be**	**73.66**	**27**	P	**P**	**16 30 38.5**	**+0.5**
	0.5nm,0.4s,baz=229,slow=7.1,SNR=6.2						
AKASG				LR	LR	17 04 00.2	
	comp=Z,102nm,18.6s,baz=316,slow=37						
	0.5nm,0.4s						
MAW	**Mawson**	**73.83**	**157**	LR	LR	16 56 14.0	
	comp=Z,165nm,18.7s,baz=271,slow=30						
GNI	**Garni**	**75.98**	**43**	LR	LR	17 04 09.5	
	comp=Z,92nm,21.4s,baz=284,slow=36						
KBZ	**Khabaz**	**76.64**	**39**	LR	LR	17 05 14.0	
	comp=Z,35nm,20.7s,baz=278,slow=36						
OBN	**Obninsk**	**79.92**	**27**	LR	LR	17 06 45.1	
	comp=Z,45nm,18.0s,baz=205,slow=36						
SCHQ	**Schefferville**	**80.09**	**332**	LR	LR	16 58 37.4	
	comp=Z,96nm,21.9s,baz=100,slow=30						
FINES	**FINESS Array B**	**80.39**	**19**	P	**P**	**16 31 16.0**	**+0.4**
	2.1nm,0.8s,baz=251,slow=5.8,SNR=3.3						
FINES				LR	LR	17 06 20.5	
	comp=Z,104nm,18.1s,baz=236,slow=35						
	2.1nm,0.8s						
TKL	**Tuckaleechee C**	**80.79**	**310**	LR	LR	17 00 06.5	
	comp=Z,59nm,20.9s,baz=110,slow=30						
SADO	**Sadowa**	**81.38**	**319**	LR	LR	16 58 24.2	
	comp=Z,83nm,22.0s,baz=150,slow=29						
KIRV	**Kirov**	**87.70**	**28**	LR	LR	17 11 12.5	
	comp=Z,87nm,18.3s,baz=283,slow=36						
AKTO	**Aktyubinsk**	**88.85**	**38**	LR	LR	17 14 41.6	
	comp=Z,50nm,18.2s,baz=251,slow=38						
VNDA	**Vanda**	**90.15**	**179**	LR	LR	17 08 26.4	
	comp=Z,80nm,21.5s,baz=260,slow=33						
ULM	**Lac du Bonnet**	**93.90**	**321**	LR	LR	17 08 30.5	
	comp=Z,71nm,18.7s,baz=26,slow=32						
PALK	**Pallekele**	**96.83**	**84**	LR	LR	17 14 35.7	
	comp=Z,100nm,18.2s,baz=252,slow=34						
BVAR	**Borovoye Array**	**96.95**	**37**	LR	LR	17 20 18.0	
	comp=Z,54nm,18.1s,baz=310,slow=38						
AAK	**Ala-Archa**	**97.78**	**48**	LR	LR	17 19 10.0	
	comp=Z,68nm,18.0s,baz=316,slow=37						
ANMO	**Albuquerque**	**98.42**	**304**	LR	LR	17 10 01.6	
	comp=Z,90nm,21.1s,baz=76,slow=31						
LPIG	**La Paz**	**100.00**	**293**	LR	LR	17 19 08.1	
	comp=Z,40nm,20.4s,baz=64,slow=36						
ASAR	**Alice Springs**	**132.77**	**139**	PKP	**PKPdf**	**16 38 20.7**	**+0.2**
	0.5nm,1.0s,baz=230,slow=1.4,SNR=2.3						
MJAR	**Matsushiro Arr**	**145.87**	**41**	PKPbc	**PKPbc**	**16 38 44.2**	**-0.2**
	0.6nm,0.6s,baz=270,slow=1.8,SNR=2.0						

*DNK **21** 16:46:56.6±2.0, 51°.22N×15°.64E, h15km±61km, ML3.1, Presumed earthquake*
*UPP **21** 16:46:59.7±3.1, 51°.47N×15°.63E, h0km, ML2.1, Presumed earthquake*
*VIE **21** 16:47:00.8±0.5, 51°.38N×15°.97E, h0km, mb2.6/4, ml2.8/5, Error ellipse: s-maj=3.6km s-min=2.8km az=39.0 79 km WNW of Wroclaw Suspected Mining induced.*
*PRU **21** 16:47:00.8, 51°.44N×16°.11E, h0km*
*IDC **21** 16:47:00.6±1.2, 51°.48N×15°.88E, h0km, mbtmp3.7/3, ML2.0/2, Error ellipse: s-maj=51.7km s-min=10.3km az=116.0*

ISC 21 16:46:58.1±0.7, 51°.56N±0°.03×16°.12E±0°.02, h0km, n46, σ1s21/87, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**171**	*i* Pg	**Pg**	**16 47 12.3**	**+0.2**
KSP				*e*Sg	**Sg**	16 47 20.8	-0.7
CHVC	**Chvalec**	**0.98**	**182**	*e*PG	**Pg**	16 47 17.0	+0.2
CHVC				*e*SG	**Sg**	16 47 28.7	-0.8
OSTC	**Ostas**	**1.01**	**177**	*e*PG	**Pg**	16 47 17.8	+0.4
OSTC				*e*SG	**Sg**	16 47 29.8	-0.7
	comp=Z,38nm,0.3s						
UPC	**Upice**	**1.06**	**184**	*e*PG	**Pg**	16 47 18.5	+0.1
UPC				*e*SG	**Sg**	16 47 31.5	-0.6
DPC	**Dobruska-Polom**	**1.22**	**174**	*e*PG	**Pg**	16 47 21.0	-0.5
DPC				*e*SG	**Sg**	16 47 35.7	-1.6
	comp=Z,17nm,0.4s						
PVCC	**Panska Ves**	**1.43**	**224**	*e*PG	**Pb**	16 47 25.7	+0.2
PVCC				*e*SG	**Sn**	16 47 44.3	-0.4
	comp=Z,114nm,0.3s						
BRG	**Berggiesshubel**	**1.53**	**244**	Pg	**Pg**	16 47 27.9	+0.4
BRG				Sg	**Sn**	16 47 48.1	+0.7
BRG				Amp		16 47 49.2	
	comp=Z,43nm,0.3s						
KRLC	**Kraliky**	**1.55**	**164**	*e*PG	**Pb**	16 47 27.3	-0.4
KRLC				*e*SG	**Sg**	16 47 45.4	-2.4
	comp=Z,43nm,0.6s						
PRU	**Pruhonice**	**1.87**	**213**	*e*PN	**Pn**	16 47 31.0	-0.3
STEB	**Steborice**	**1.94**	**147**	*e*PG	**Pb**	16 47 34.2	-0.1
STEB				*e*SG	**Sb**	16 47 58.6	-0.4
	comp=Z,45nm,0.4s						
HSKC	**Hora Svate Kat**	**1.95**	**242**	*e*PG	**Pb**	16 47 33.7	-0.8
HSKC				*e*SG	**Sb**	16 47 59.2	-0.1
CLL	**Collm**	**1.97**	**264**	*i* Pn	**Pn**	16 47 33.2	+0.5
CLL				*i* Pg	**Pg**	16 47 35.3	-0.5
CLL				*i* x	x	16 47 38.3	
CLL				*i* Sg	**Sg**	16 48 02.7	+1.4
	comp=Z,21nm,0.3s						
CLL				*i* x	x	16 48 09.2	
MORC	**Moravsky Berou**	**2.00**	**153**	*e*PN	**Pn**	16 47 33.0	-0.3
MORC				*e*SG	**Sn**	16 47 59.7	+0.7
OKC	**Ostrava-Krasne**	**2.16**	**142**	*e*SG	**Sb**	16 48 05.3	+0.1
	comp=Z,48nm,0.8s						
VRAC	**Vranov**	**2.28**	**172**	*e*PN	**Pn**	16 47 37.2	+0.2
VRAC				*e*SG	**Sb**	16 48 08.0	-0.8
TREC	**Trest**	**2.31**	**190**	*e*SG	**Sb**	16 48 09.9	+0.3
KRUC	**Moravsky**	**2.51**	**176**	*e*PN	**Pn**	16 47 41.0	+0.8
KRUC				*e*SG	**Sb**	16 48 16.6	+1.0
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN	**Pn**	16 47 43.6	+1.1
NKC				*e*SG	**Sg**	16 48 23.7	-0.4
	comp=Z,32nm,0.3s						
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	16 47 51.1	+1.5
OJC				*e*Sg	**Sg**	16 48 25.6	+1.1
CKRC	**Cesky Krumlov**	**2.98**	**204**	*e*PG	**Pb**	16 47 52.8	+0.7
CKRC				*e*SG	**Sb**	16 48 31.1	+2.0
GERES	**GERESS Array B**	**3.13**	**211**	Pn	**Pn**	16 47 50.0	+1.2
	comp=Z,0.1nm,0.3s,baz=29,slow=15,SNR=4.5						
GERES				Pg	**Pb**	16 47 54.8	+0.1
	comp=Z,0.4nm,0.3s,baz=28,slow=17,SNR=29						
GERES				Lg	Lg	16 48 32.9	
	comp=Z,0.4nm,0.3s,baz=28,slow=29,SNR=4.5						
	comp=Z,1.5nm,0.4s						
LANS	**Liptovska Anna**	**3.23**	**137**	*e*PG	**Pb**	16 47 58.1	+1.8
LANS				*e*SG	**Sb**	16 48 38.8	+2.6
MODS	**Modra-Piesok**	**3.28**	**166**	*e*PN	**Pn**	16 47 51.0	+0.3
MODS				*e*PG	**Pg**	16 47 59.7	-1.2
MODS				*e*SG	**Sb**	16 48 40.1	+2.5
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	**Pn**	16 47 56.8	+1.2
BSD				*e*S	**Sn**	16 48 36.2	-2.8
BSD				IAML		16 48 42.2	
	comp=Z,25nm,1.0s						
CONA	**Conrad Observa**	**3.64**	**183**	*i* Pn	**Pn**	16 47 56.5	+0.7
	comp=Z,0.2nm,0.2s						
CONA				*e*Sg	**Sg**	16 48 53.8	-1.3
	comp=Z,5.7nm,0.4s						
RONA	**Rosalia, Austr**	**3.87**	**178**	*i* Pn	**Pn**	16 47 59.1	+0.2
	comp=Z,1.2nm,0.3s						
RONA				*i* Sn	**Sn**	16 48 44.7	-0.3
	comp=Z,3.3nm,0.4s						
MOA	**Moln**	**3.91**	**199**	*i* Pn	**Pn**	16 47 59.7	+0.3
	comp=Z,0.7nm,0.2s						
MOA				*e*Sg	**Sg**	16 49 02.8	-0.8
	comp=Z,0.7nm,0.2s						
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*PN	**Pn**	16 47 59.6	+0.1
STHS				*e*PG	**Pg**	16 48 12.7	-0.4
STHS				*e*SG	**Sg**	16 49 01.0	-2.8
BIOA	**Bad Ischl, Aus**	**4.20**	**204**	*i* Pn	**Pn**	16 48 03.9	+0.5
	comp=Z,0.9nm,0.2s						
BIOA				*e*Sg	**Sg**	16 49 12.2	-0.7
	comp=Z,2.0nm,0.3s						
ARSA	**Arzberg**	**4.33**	**185**	*i* Pn	**Pn**	16 48 04.8	-0.5
	comp=Z,1.3nm,0.3s						
ARSA				*e*Sg	**Sg**	16 49 17.5	+0.2
	comp=Z,2.5nm,0.4s						
LUNU	**Lund**	**4.38**	**340**	P	**Pn**	16 48 06.7	+0.9
LUNU				S	**Sn**	16 48 58.0	+0.5
LUNU	**Lund**	**4.38**	**340**	*i* P	**Pn**	16 48 06.4	+0.7
LUNU				P	**Pn**	16 48 06.7	+0.9
LUNU				*e*S	**Sn**	16 48 54.0	-3.4
LUNU				S	**Sn**	16 48 58.0	+0.5
BLEU	**Blekinge**	**4.75**	**358**	P	**Pn**	16 48 12.9	+1.9
BLEU	**Blekinge**	**4.75**	**358**	*i* P	**Pn**	16 48 12.8	+1.9
BLEU				P	**Pn**	16 48 12.9	+1.9
BJUU	**Bjuv**	**4.88**	**339**	P	**Pn**	16 48 13.2	+0.6
BJUU	**Bjuv**	**4.88**	**339**	P	**Pn**	16 48 13.2	+0.6
BJUU				*i* P	**Pn**	16 48 13.4	+0.7
BJUU				*i* S	**Sn**	16 49 09.1	-0.7
DEL	**Delary**	**5.09**	**346**	P	**Pn**	16 48 16.5	+0.9
DEL	**Delary**	**5.09**	**346**	*i* P	**Pn**	16 48 16.3	+0.7
DEL				P	**Pn**	16 48 16.5	+0.9
DEL				*i* S	**Sn**	16 49 13.7	-1.3
VXJU	**Vaexsjoe**	**5.41**	**353**	P	**Pn**	16 48 21.6	+1.5
VXJU	**Vaexsjoe**	**5.41**	**353**	P	**Pn**	16 48 21.6	+1.5
OSKU	**Oskarshamn**	**5.64**	**360**	P	**Pn**	16 48 24.9	+1.8
OSKU	**Oskarshamn**	**5.64**	**360**	P	**Pn**	16 48 24.9	+1.8
BYXU	**Byxelkrok**	**5.76**	**5**	P	**Pn**	16 48 26.6	+1.8
BYXU				S	**Sn**	16 49 32.4	+0.9
BYXU	**Byxelkrok**	**5.76**	**5**	P	**Pn**	16 48 26.6	+1.8
BYXU				S	**Sn**	16 49 32.4	+0.9
FINES	**FINESS Array B**	**11.31**	**25**	Pn	**Pn**	16 49 40.6	-0.2
	comp=Z,0.1nm,0.3s,baz=213,slow=11,SNR=6.9						
	comp=Z,6.1nm,1.0s						
ARCES	**ARCESS Array B**	**18.57**	**10**	Pn	**P**	**16 51 14.0**	**-2.2**
	comp=Z,2.0nm,0.7s,baz=194,slow=15,SNR=4.3						

*RSNC **21** 17:11:01.2±0.4, 1°.N±2″×7°.9W±°, h47km±5km, M3.4, mB4.7, mb4.2, ML2.9, MLv3.6, Mw(mB)4.0*
*IGQ **21** 17:11:02.7±0.2, 1°.N±2″×7°.9W±°, h22km±2km, M3.8/24, Mjma3.7/23, ML4.1/19, MLv3.7/24*

ISC 21 17:11:02.4±1.2, 1°.15N±0°.03×78°.79W±0°.04, h45km±9km, n101, σ1s34/116, 6C-33D, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNLR	**San Lorenzo-Es**	**0.15**	**337**	⇓P	**Pn**	**17 11 10.5**	**+0.6**
SNLR				S	**Sn**	17 11 18.3	+3.1
ALIT	**Ecuador-Imbabu**	**0.55**	**130**	⇓P	**Pn**	17 11 12.7	-1.5
ALIT				S	**Sn**	17 11 21.0	-1.6
LITE1	**Lita**	**0.55**	**130**	⇓P	**Pn**	17 11 12.7	-1.5
LITE1				S	**Sn**	17 11 21.0	-1.6
CHMA	**Chilma**	**0.78**	**111**	⇑P	**Pn**	17 11 16.0	-1.3
CHMA				S	**Sn**	17 11 26.5	-1.6
ECEN	**Cerro Negro**	**0.88**	**112**	⇑P	**Pn**	17 11 18.1	-0.8
PAC1	**Pacto, Paraso**	**0.88**	**180**	⇓P	**Pn**	17 11 16.8	-1.8
PAC1	**Pacto, Paraso**	**0.88**	**180**	P	**Pn**	17 11 16.7	-1.8
PAC1				S	**Sn**	17 11 27.6	-2.7
LNGL	**El Angel-Carch**	**0.88**	**117**	⇓P	**Pn**	17 11 18.4	-0.6
LNGL				S	**Sn**	17 11 30.4	-0.5
URCU	**Urcuqui**	**0.88**	**143**	⇓P	**Pn**	17 11 18.2	-0.7
AVZ1	**Acelerografo,**	**0.90**	**237**	P	**Pn**	17 11 18.0	-0.8
CHL1	**Volc¡n Chiles**	**0.91**	**113**	⇑P	**Pn**	17 11 18.6	-0.8
CUSE	**Cuicocha Este**	**0.92**	**155**	P	**Pn**	17 11 18.3	-1.1
CUSE	**Cuicocha Este**	**0.92**	**155**	P	**Pn**	17 11 18.4	-1.0
CUSE				S	**Sn**	17 11 31.2	-0.6
COTA	**Cotacachi**	**0.93**	**151**	⇓P	**Pn**	17 11 18.9	-0.6
CHL2	**Volc¡n Chiles**	**0.94**	**112**	⇑P	**Pn**	17 11 18.9	-0.8
CUIC	**Cuicocha-Domo**	**0.94**	**153**	⇓P	**Pn**	17 11 18.8	-0.8
AMA1	**Acelerografo,**	**0.96**	**257**	P	**Pn**	17 11 20.1	+0.5
OTAV	**Otavalo**	**0.97**	**160**	⇓P	**Pn**	17 11 19.0	-1.0
OTAV	**Otavalo**	**0.97**	**160**	P	**Pn**	17 11 18.4	-1.6
OTAV				S	**Sn**	17 11 31.2	-1.7
CMBC	**Cumbal**	**0.98**	**102**	P	**Pn**	17 11 19.1	-1.2
CMBC	**Cumbal**	**0.98**	**102**	P	**Pn**	17 11 19.0	-1.2
IMBA	**Imbabura, San**	**1.05**	**146**	⇓P	**Pn**	17 11 21.4	+0.3
YAHU	**Yahuarcocha**	**1.05**	**137**	P	**Pn**	17 11 21.0	-0.1
BV15	**Puerto Quito-O**	**1.08**	**204**	P	**Pn**	17 11 19.1	-2.0
APR2	**Miler**	**1.08**	**190**	P	**Pn**	17 11 19.8	-1.5
AV18	**Acelerografo,**	**1.08**	**220**	P	**Pn**	17 11 21.2	0.0
TULM	**Tulcn-Chalpat**	**1.09**	**113**	⇓P	**Pn**	17 11 21.7	-0.1
TULM	**Tulcn-Chalpat**	**1.09**	**113**	⇑P	**Pn**	17 11 21.6	-0.1
TULM				S	**Sn**	17 11 36.2	+0.3
ATUL	**Tulcn**	**1.13**	**109**	P	**Pn**	17 11 22.3	+0.2
PULU	**Pululahua**	**1.16**	**166**	⇓P	**Pn**	17 11 22.2	-0.4
APR1	**Acelerografo,**	**1.20**	**172**	P	**Pn**	17 11 22.7	-0.4
YANA	**Yana**	**1.28**	**170**	⇓P	**Pn**	17 11 24.3	-0.1
PINO	**Pino**	**1.31**	**172**	⇓P	**Pn**	17 11 24.8	0.0
TERV	**Terraza Guagua**	**1.33**	**172**	⇓P	**Pn**	17 11 25.1	+0.1
GGPC	**Guagua Pichinc**	**1.33**	**172**	⇓P	**Pn**	17 11 25.2	0.0
PUEM	**Granja Avicola**	**1.35**	**162**	⇓P	**Pn**	17 11 26.1	+1.0
JUA2	**San Juan 2**	**1.37**	**172**	⇓P	**Pn**	17 11 25.5	0.0
CAYR	**Refugio Cayamb**	**1.37**	**145**	P	**Pn**	17 11 26.4	+0.7
GGPT	**Toaza - Volcan**	**1.38**	**173**	⇓P	**Pn**	17 11 25.5	-0.1
BONI	**La Bonita**	**1.44**	**119**	P	**Pn**	17 11 27.1	+0.8
BONI	**La Bonita**	**1.44**	**119**	P	**Pn**	17 11 26.9	+0.7
BONI				S	**Sn**	17 11 45.0	+0.9
GCUF	**Volcan Galeras**	**1.44**	**87**	P	**Pn**	17 11 26.3	-0.3
TING	**Casa Alexandra**	**1.46**	**167**	P	**Pn**	17 11 27.8	+1.1
APS4	**Papallacta**	**1.66**	**156**	P	**Pn**	17 11 30.5	+1.1
REVN	**San Rafael**	**1.68**	**136**	⇓P	**Pn**	17 11 31.1	+1.4
LAV4	**Lava4-Reventad**	**1.69**	**137**	⇓P	**Pn**	17 11 31.4	+1.6
ANTI	**Antisana**	**1.71**	**158**	⇓P	**Pn**	17 11 31.6	+1.3
REVS	**Reventador Sur**	**1.71**	**137**	⇓P	**Pn**	17 11 31.7	+1.7
ANTG	**Antisana-Guama**	**1.73**	**162**	⇓P	**Pn**	17 11 31.5	+1.0
PITA	**Cotopa

VISS	**Visnje**	**0.81**	**2**	*i* Pg	**Pg**	**17 34 28.6**	**-0.5**
VISS				*e*Sg	**Sb**	**17 34 40.1**	**-0.1**
VISS				IAML		17 34 43.5	
	comp=Z,2.1nm,0.2s						
DUGI	**Dugi Otok**	**1.02**	**169**	*e*Pg	**Pg**	**17 34 32.0**	**-1.0**
DUGI				Sg	**Sn**	**17 34 47.6**	**-0.1**
MORI	**Morici**	**1.31**	**149**	*e*Pg	**Pn**	**17 34 37.2**	**-0.1**
MORI				Sg	**Sg**	**17 34 57.3**	**+1.9**

WEL 21 17:44:29.1±1.4, 32°S±29'×18°0E±5'8, h380km±63km, M4.2/7, ML4.1/6, MLv4.2/7, Error ellipse: s-maj=80.4km s-min=25.9km az=111.5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**6.27**	**188**	P	Pn	17 46 04.6	+0.8
WMGZ				S	S	17 47 21.7	+0.5
HAZ	**Te Kaha**	**6.31**	**193**	P	Pn	17 46 04.1	-0.2
HAZ				S	S	17 47 22.2	+0.3
RUGZ	**Raukumara Rang**	**6.54**	**193**	P	Pn	17 46 06.6	-0.4
RUGZ				S	S	17 47 27.2	+0.5
PUZ	**Puketiti**	**6.54**	**189**	P	Pn	17 46 07.3	+0.3
PUZ				S	S	17 47 26.0	-0.7
MWZ	**Matawai**	**6.92**	**193**	P	P	17 46 11.9	-0.3
MWZ				S	S	17 47 35.3	+0.7
URZ	**Urewera**	**6.94**	**196**	P	Pn	17 46 10.6	-0.8
URZ				S	S	17 47 35.7	+0.8
CNGZ	**Carnagh Statio**	**6.96**	**189**	P	P	17 46 12.7	+0.2
TKGZ	**Te Karaka**	**6.96**	**191**	P	Pn	17 46 10.5	-1.1
TKGZ				S	S	17 47 36.5	+1.1
RIGZ	**Rimuhau**	**7.24**	**191**	P	Pn	17 46 15.1	+0.2
RIGZ				S	S	17 47 40.6	-0.6
RAHZ	**Arahi**	**7.57**	**195**	P	Pn	17 46 18.1	-0.6
RAHZ				S	S	17 47 49.0	+0.7
MHGZ	**Mahia Peninsul**	**7.65**	**190**	P	Pn	17 46 19.8	+0.2

*IDC **21** 17:45:03.1±1.1, 5°.24N×124°.12E, h0km, mb3.9/5, mbtmp3.9/7, ML4.0/2, Error ellipse: s-maj=41.6km s-min=19.1km az=69.0*
*NEIC **21** 17:45:18.1±2.5, 5°.93N±0°.05×126°.03E±0°.09, h144km±8km, mb4.2/27, Error ellipse: s-maj=12.9km s-min=7.8km az=95.0*
ISC 21 17:45:16.1±0.6, 5°.93N±0°.05×126°.0E±0°.1, h127km, n41, σ1§81/44, mb4.0/16, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.22**	**338**	Pn	**Pn**	**17 45 43.7**	**+2.7**
DAV				Sn	**Sn**	**17 46 04.8**	**+4.9**
	68nm,0.3s,baz=272,slow=2.0,SNR=4.3						
	173nm,0.3s,baz=271,slow=21,SNR=9.2						
	176nm,0.4s						
DAV	**Davao City (W)**	**1.22**	**338**		**Pn**	**17 45 43.3**	**+2.3**
DAV	**Davao City (W)**	**1.22**	**338**		**Sn**	**17 46 04.8**	**+4.9**
TNTI	**Ternate**	**5.29**	**165**	Pn	**Pn**	**17 46 33.7**	**+0.6**
TOLI2	**Tolitoli**	**7.10**	**228**	Pn	**Pn**	**17 46 58.2**	**+0.7**
SIJI	**Sorong**	**8.54**	**142**	Pn	**Pn**	**17 47 18.1**	**+1.2**
SIJI	0.7nm,0.3s,baz=287,slow=19,SNR=8.7			Sn	**Sn**	**17 48 52.5**	**+0.8**
	0.4nm,0.3s,baz=16,slow=22,SNR=1.1						
	2.5nm,0.4s						
SIJI	**Sorong**	**8.54**	**142**		**Pn**	**17 47 18.1**	**+1.2**
SIJI					**Sn**	**17 48 52.5**	**+0.8**
TPUB	**Ta-pu**	**18.04**	**344**	P	**P**	**17 49 15.8**	**-1.8**
SSLB	**Suanglung**	**18.42**	**345**	P	**P**	**17 49 19.9**	**-1.8**
SSLB				IAmb	IAmb	17 49 54.4	
	comp=Z,22nm,1.3s						
MTN	**Manton Dam**	**19.32**	**165**	P	**Pn**	**17 49 33.4**	**-0.6**
MTN				IAmb	IAmb	17 49 55.0	
	comp=Z,16nm,1.1s						
JOW	**Kunigami**	**20.90**	**6**	P	**P**	**17 49 49.4**	**+0.9**
KNRA	**Kununurra**	**21.64**	**173**	P	**P**	**17 49 58.1**	**+1.7**
WB0	**Warramunga Arr**	**26.83**	**162**	P	**P**	**17 50 45.1**	**+0.3**
WB0				IAmb	IAmb	17 50 46.3	
	comp=Z,10.0nm,1.3s						
WRA	**Warramunga Arr**	**26.98**	**163**	P	**P**	**17 50 46.4**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=340,slow=9.1,SNR=9.0						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**26.98**	**163**	P	**P**	**17 50 44.5**	**-1.6**
PSA00	**Pilbara Seismi**	**28.00**	**192**	P	**P**	**17 50 53.7**	**-1.5**
PSA00	**Pilbara Seismi**	**28.00**	**192**	P	**P**	**17 50 55.6**	**+0.4**
PSA00				IAmb	IAmb	17 50 57.1	
	comp=Z,2.5nm,0.9s						
AS31	**Alice Springs**	**30.40**	**166**	P	**P**	**17 51 15.2**	**-1.3**
ASAR	**Alice Springs**	**30.40**	**166**	P	**P**	**17 51 17.4**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=340,slow=7.2,SNR=57						
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**30.40**	**166**	P	**P**	**17 51 15.6**	**-0.9**
MAJO	**Matsushiro**	**32.45**	**18**	P	**P**	**17 51 30.4**	**-3.9**
MAJO				IAmb	IAmb	17 51 46.0	
	comp=Z,8.9nm,1.2s						
MJB9	**Matsu-Tunnel**	**32.45**	**18**	P	**P**	**17 51 31.1**	**-3.3**
MJB9				IAmb	IAmb	17 51 47.0	
	comp=Z,9.3nm,1.3s						
MORW	**Morawa**	**36.10**	**195**	P	**P**	**17 52 05.7**	**-0.2**
INKA	**Innaminka**	**36.36**	**158**	P	**P**	**17 52 08.1**	**0.0**
INKA				IAmb	IAmb	17 52 32.0	
	comp=Z,3.7nm,1.4s						
FORT	**Forrest**	**36.55**	**177**	P	**P**	**17 52 10.8**	**+1.1**
FORT				IAmb	IAmb	17 52 46.2	
	comp=Z,8.3nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.54**	**192**	P	**P**	**17 52 35.1**	**+0.4**
BBOO	**Buckleboo**	**39.69**	**167**	P	**P**	**17 52 36.7**	**+0.7**
STKA	**Stephens Creek**	**40.42**	**159**	P	**P**	**17 52 43.1**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=346,slow=11,SNR=3.5						
	comp=Z,1.7nm,0.6s						
STKA	**Stephens Creek**	**40.42**	**159**	P	**P**	**17 52 42.8**	**+0.8**
YSS	**Yuzhno-Sakhali**	**43.33**	**17**	P	**P**	**17 53 05.1**	**-0.4**
YSS				IAmb	IAmb	17 53 35.6	
	comp=Z,12nm,1.4s						
MKAR	**Makanchi Array**	**55.37**	**325**	P	**P**	**17 54 35.4**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=120,slow=6.8,SNR=4.6						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**55.37**	**325**	P	**P**	**17 54 34.6**	**-2.4**
KURBB	**Kurchatov Arra**	**59.53**	**327**	P	**P**	**17 55 04.4**	**-1.7**
	comp=Z,0.5nm,0.2s,baz=119,slow=7.6,SNR=1.9						
	comp=Z,0.5nm,0.2s						
KURK	**Kurchatov**	**59.53**	**327**	P	**P**	**17 55 03.6**	**-2.4**
KURK				IAmb	IAmb	17 55 32.5	
	comp=Z,5.1nm,1.4s						
M13K	**Dall Lake**	**75.35**	**29**	P	**P**	**17 56 44.6**	**-0.8**
C18K	**Utukok River**	**78.27**	**21**	P	**P**	**17 57 00.8**	**-0.9**
C19K	**Lookout Ridge**	**78.94**	**21**	P	**P**	**17 57 05.9**	**+0.6**
C19K				IAmb	IAmb	17 57 50.5	
	comp=Z,3.5nm,1.4s						
D19K	**Kuna River**	**79.34**	**21**	P	**P**	**17 57 07.8**	**+0.2**
D20K	**Etivluk River**	**79.92**	**21**	P	**P**	**17 57 10.7**	**0.0**
D20K				IAmb	IAmb	17 57 11.3	
	comp=Z,4.6nm,1.4s						
B21K	**Ikpikpuk River**	**80.76**	**20**	P	**P**	**17 57 15.5**	**+0.4**
D22K	**Ayikyak River**	**81.36**	**21**	P	**P**	**17 57 18.6**	**+0.3**
D22K				IAmb	IAmb	17 57 46.0	
	comp=Z,3.0nm,1.2s						

IDC 21 17:52:51.4±1.9, 16°.09S×177°.90W, h0km, mb3.9/4, mbtmp3.9/4, MS3.3/1, Error ellipse: s-maj=171.5km s-min=33.5km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.27**	**258**	LR	LR	18 11 25.2	
	comp=Z,44nm,19.6s,baz=68,slow=32						
STKA	**Stephens Creek**	**39.95**	**239**	P	P	18 00 27.3	-0.4
	0.9nm,0.7s,baz=102,slow=9.3,SNR=1.6						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**45.47**	**258**	P	P	18 01 12.8	+0.1
	0.6nm,0.5s,baz=91,slow=7.4,SNR=14						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**45.78**	**253**	P	P	18 01 14.9	-0.2
	3.8nm,0.5s,baz=87,slow=8.6,SNR=136						
	3.8nm,0.5s						
TXAR	**Lajitas Array**	**84.61**	**58**	P	P	18 05 27.3	0.0
	0.2nm,0.5s,baz=230,slow=4.6,SNR=2.4						
	0.2nm,0.5s						

*NNC **21** 17:56:02.6±1.7, 41°.48N×82°.90E, h34km±15km, mb3.6, mpv3.1, Error ellipse: s-maj=11.5km s-min=9.6km az=119.0*
*SOME **21** 17:56:02.1, 41°.48N×82°.95E, h10km*

ISC 21 17:55:57.3±3.1, 41°.4N±0°.1×83°.09E±0°.10, h10km, n18, σ1§21/25, 5C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.19**	**304**	Pg	**Pb**	**17 56 55.4**	**+1.2**
	12nm,0.5s						
SHLS				Lg	Lg	17 57 34.0	
	50nm,0.5s						
SHLS	**Shalkode**	**3.19**	**304**	*e*P	**Pb**	**17 56 55.4**	**+1.2**
	12nm,0.5s						
SHLS				*e*S	**Sb**	**17 57 34.0**	**+0.7**
	50nm,0.5s						
PDGK	**Podgornoye**	**3.27**	**307**	⇓Pn	**Pn**	**17 56 49.0**	**+0.2**
	1.3nm,0.6s						
PDGK				⇑Pg	**Pg**	**17 56 59.2**	**-0.7**
	4.4nm,0.5s						
PDGK				⇑Lg	Lg	17 57 42.2	
	18nm,0.7s						
UZB	**Uzynbulak**	**3.47**	**301**	Pg	**Pg**	**17 57 04.0**	**+0.2**
	3.8nm,0.3s						
UZB				Lg	Lg	17 57 48.8	
	16nm,0.7s						
UZB	**Uzynbulak**	**3.47**	**301**	*e*P	**Pg**	**17 57 04.0**	**+0.2**
	3.8nm,0.3s						
UZB				*e*S	**Sg**	**17 57 48.8**	**+0.1**
	16nm,0.7s						
SATY	**Saty**	**3.84**	**297**	Pg	**Pg**	**17 57 10.6**	**-0.3**
	6.2nm,0.5s						
SATY				Lg	Lg	17 57 59.8	
	11nm,0.5s						
KPKS	**Kokpek**	**3.84**	**303**	Pg	**Pg**	**17 57 10.5**	**-0.4**
	0.4nm,0.2s						
KPKS				Lg	Lg	17 57 59.9	
	16nm,0.5s						
KPKS	**Kokpek**	**3.84**	**303**	*e*P	**Pg**	**17 57 10.5**	**-0.4**
	0.4nm,0.2s						
KPKS				*e*S	**Sg**	**17 57 59.9**	**-0.7**
	16nm,0.5s						
KNOS	**Konyrlen**	**4.10**	**317**	Pg	**Pg**	**17 57 16.6**	**+0.7**
	1.6nm,0.4s						
KNOS				Lg	Lg	17 58 10.5	
	4.7nm,0.7s						
KAPS	**Kapalarasan**	**4.71**	**326**	Pg	**Pg**	**17 57 27.0**	**-0.6**
	0.8nm,0.1s						
KAPS				Lg	Lg	17 58 27.8	
	3.5nm,0.2s						
ARXS	**Arharly**	**4.76**	**307**	Pg	**Pg**	**17 57 27.8**	**-0.7**
	0.9nm,0.4s						
ARXS				Lg	Lg	17 58 29.2	
	4.3nm,0.6s						
ARXS	**Arharly**	**4.76**	**307**	*e*P	**Pg**	**17 57 27.8**	**-0.7**
	0.9nm,0.4s						
ARXS				*e*S	**Sg**	**17 58 29.2**	**-1.0**
	4.3nm,0.6s						
KOTS	**Kotyrbulak**	**4.78**	**294**	Pg	**Pg**	**17 57 27.6**	**-1.4**
	1.7nm,0.3s						
KOTS				Lg	Lg	17 58 28.7	
	10nm,0.7s						
KOTS	**Kotyrbulak**	**4.78**	**294**	*e*P	**Pg**	**17 57 27.6**	**-1.4**
	1.7nm,0.3s						
KOTS				*e*S	**Sg**	**17 58 28.7**	**-2.1**
	10nm,0.7s						
KTBS	**Karatobe**	**5.25**	**298**	Pg	**Pg**	**17 57 36.1**	**-1.7**
	1.6nm,0.3s						
KTBS				Lg	Lg	17 58 44.3	
	0.4nm,0.4s						
KTBS	**Karatobe**	**5.25**	**298**	*e*P	**Pg**	**17 57 36.1**	**-1.7**
	1.6nm,0.3s						
KTBS				*e*S	**Sg**	**17 58 44.3**	**-1.6**
	0.4nm,0.4s						
MK31	**Makanchi Array**	**5.39**	**354**	⇑Pg	**Pg**	**17 57 38.2**	**-2.3**
	0.3nm,0.5s,baz=162,slow=15,SNR=4.9						
MK31				⇑Sn	**Sn**	**17 58 21.5**	**+1.6**
	2.5nm,0.7s,baz=176,slow=21,SNR=3.6						
MK31				Lg	Lg	17 58 51.8	
	3.3nm,0.6s,baz=170,slow=28,SNR=4.9						
MAKZ	**Makanchi**	**5.43**	**352**	⇑Lg	Lg	17 58 51.3	
	7.0nm,1.4s						

*IDC **21** 17:59:57.3±2.0, 36°.23N×142°.08E, h0km, mb3.4/6, mbtmp3.3/7, ML2.6/1, MS2.6/1, Error ellipse: s-maj=53.8km s-min=24.4km az=56.0*
*JMA **21** 18:00:03.3±0.3, 36°.2N±0°.5×14°2E±°, h54km, MV3.1/32, FAR E OFF IBARAKI PREF*
ISC 21 18:00:02.9±1.4, 36°.20N±0°.07×141°.9E±0°.1, h35km, n23, σ1§14/21, mb3.4/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**1.07**	**278**	P	**Pn**	**18 00 20.1**	**-1.2**
JIHU	**Itakohorinouch**	**1.13**	**259**	P	**Pn**	**18 00 21.7**	**-0.5**
JIHU				*e*S	**Sn**	**18 00 34.7**	**-1.8**
JHO	**Hitachi**	**1.15**	**292**	*e*P	**Pn**	**18 00 20.7**	**-1.7**
ONAJ	**Iwakimizuishiy**	**1.26**	**316**	P	**Pn**	**18 00 23.0**	**-1.1**
ONAJ				*e*S	**Sn**	**18 00 38.7**	**-1.1**
JFK	**Kawauchi**	**1.43**	**325**	*e*P	**Pn**	**18 00 25.7**	**-0.6**
JOTO	**OTAMA OYAMA**	**1.85**	**318**	*e*P	**Pn**	**18 00 32.6**	**+0.5**
JMM	**Marumori**	**1.89**	**332**	*e*P	**Pn**	**18 00 32.3**	**-0.3**
JMM				*e*S	**Sn**	**18 00 55.0**	**0.0**
JAG	**Ashikaga**	**1.99**	**277**	*e*P	**Pn**	**18 00 33.2**	**-0.7**
JFY	**Yanaizu**	**2.13**	**305**	*e*P	**Pn**	**18 00 35.8**	**-0.2**
JKT	**Katashina**	**2.21**	**286**	*e*P	**Pn**	**18 00 37.1**	**0.0**
MJAR	**Matsushiro Arr**	**3.00**	**278**	Pn	**Pn**	**18 00 48.4**	**+0.5**
	0.7nm,0.3s,baz=106,slow=8.8,SNR=42						
MJAR				Sn	**Sn**	**18 01 25.8**	**+3.3**
	0.3nm,0.3s,baz=105,slow=22,SNR=4.1						
MJAR				LR	LR	18 02 11.6	
	comp=Z,87nm,20.1s,baz=154,slow=43						
	4.3nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**27.39**	**120**	T	T	18 34 33.5	
	baz=321						
H11N1	**WAKE ISLAND Hy**	**27.40**	**120**	T	T	18 34 36.7	
	baz=321						
H11N3	**WAKE ISLAND Hy**	**27.41**	**120**	T	T	18 34 32.0	
	baz=321						
H11S1	**WAKE ISLAND Hy**	**28.08**	**122**	T	T	18 35 19.8	
	baz=314						
H11S3	**WAKE ISLAND Hy**	**28.08**	**122**	T	T	18 35 16.4	
	baz=314,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.10**	**122**	T	T	18 35 19.1	
	baz=314,slow=74						
SONM	**Songino Array**	**28.58**	**305**	P	**P**	**18 05 55.4**	**-0.2**
	0.3nm,0.6s,baz=92,slow=7.9,SNR=2.4						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**42.77**	**313**	P	**P**	**18 07 57.2**	**+0.5**
	0.5nm,0.7s,baz=92,slow=7.8,SNR=1.8						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**44.89**	**303**	P	**P**	**18 08 14.0**	**+0.1**
	0.2nm,0.7s,baz=97,slow=6.0,SNR=2.4						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**46.82**	**309**	P	**P**	**18 08 29.7**	**+0.7**
	0.2nm,0.3s,baz=84,slow=8.0,SNR=3.2						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**56.29**	**189**	P	**P**	**18 09 39.8**	**-0.2**
	0.5nm,1.1s,baz=3.9,slow=7.1,SNR=1.1						
	0.5nm,1.1s						
ASAR	**Alice Springs**	**60.02**	**188**	P	**P**	**18 10 06.5**	**+0.4**
	0.3nm,1.0s,baz=353,slow=8.7,SNR=0.7						
	0.3nm,1.0s						

*ATH **21** 18:05:39.3, 38°.45N×25°.44E, h14km±2km, ML2.5/2, Manual Solution by A.Fokaefs First location: 2020/02/21 18:07:00, This location: 2020/02/21 18:29:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*ISK **21** 18:05:40.7, 38°.50N×25°.50E, h15km, ML2.1/6*
*THE **21** 18:05:40.0, 38°.N±4°×2°.5E±°, h9km±5km, M2.2/5, MLh2.2/5*
*AFAD **21** 18:05:40.0, 38°.48N×25°.51E, h7km±3km, ML2.0*
ISC 21 18:05:39.1±1.1, 38°.46N±0°.03×25°.45E±0°.02, h11km±10km, n34, σ0§58/50, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.48**	**99**	P	**Pb**	**18 05 49.3**	**-0.3**
CHOS				S	**Sb**	**18 05 56.0**	**-0.7**
KARB	**zmir-Karabur**	**0.78**	**75**	P	**Pg**	**18 05 54.3**	**+0.2**
KARB				S	**Sg**	**18 06 04.2**	**-0.1**
KARB				IAML		18 06 05.0	
	comp=E,66nm,0.3s						
SIGR	**SIGRI**	**0.81**	**23**	Pg	**Pn**	**18 05 55.8**	**-0.7**
SIGR				Sg	**Sb**	**18 06 07.1**	**+0.9**
SIGR	**SIGRI**	**0.81**	**23**	P	**Pb**	**18 05 55.4**	**+0.2**
SIGR				S	**Sn**	**18 06 07.8**	**-0.8**
SIGR	**SIGRI**	**0.81**	**23**	P	**Pb**	**18 05 55.3**	**+0.1**
SIGR				S	**Sb**	**18 06 06.5**	**+0.3**
ZEYE	**Izmir, Urla-Ze**	**0.86**	**105**	P	**Pb**	**18 05 56.1**	**+0.1**
ZEYE				S	**Sg**	**18 06 06.4**	**-0.3**
ZEYE				IAML		18 06 11.0	
	comp=N,56nm,0.6s						
KARY	**Karystos**	**0.91**	**242**	P	**Pb**	**18 05 57.1**	**+0.3**
KARY				S	**Sb**	**18 06 09.3**	**+0.4**
KARY	**Karystos**	**0.91**	**242**	P	**Pg**	**18 05 56.4**	**-0.2**
KARY				S	**Sg**	**18 06 08.4**	**0.0**
TNSA	**Tinos**	**0.95**	**194**	P	**Pb**	**18 05 57.5**	**-0.1**
TNSA				S	**Sb**	**18 06 09.8**	**-0.3**
PRK	**Paraskevi**	**1.01**	**39**	P	**Pn**	**18 05 58.9**	**-0.3**
PRK				S	**Sn**	**18 06 14.4**	**+1.0**
PRK	**Paraskevi**	**1.01**	**39**	P	**Pn**	**18 05 58.9**	**-0.3**
PRK				S	**Sg**	**18 06 12.5**	**+0.8**
FOCM	**Foa**	**1.03**	**76**	Pg	**Pn**	**18 06 00.1**	**+0.6**
FOCM				Sg	**Sn**	**18 06 14.3**	**+0.3**
KYMI	**Kymi, Euboea I**	**1.07**	**280**	P	**Pb**	**18 05 58.9**	**-0.8**
KOCA	**Canakkale, Ayv**	**1.17**	**27**	P	**Pb**	**18 06 01.1**	**-0.2**
KOCA				S	**Sn**	**18 06 18.2**	**+0.8**
KOCA				IAML		18 06 23.0	
	comp=E,63nm,0.4s						
DGB	**zmir**	**1.20**	**110**	P	**Pb**	**18 06 01.8**	**0.0**
DGB				S	**Sg**	**18 06 18.3**	**+0.6**
DGB				IAML		18 06 23.0	
	comp=E,34nm,1.7s						
DION	**Dionisos Attik**	**1.26**	**253**	P	**Pb**	**18 06 02.7**	**-0.1**
DION	**Dionisos Attik**	**1.26**	**253**	P	**Pn**	**18 06 02.5**	**-0.1**
DION				S	**Sn**	**18 06 19.4**	**-0.2**
AYVA	**Ayvalik**	**1.28**	**48**	P	**Pb**	**18 06 03.4**	**+0.1**
DKL	**Dikili**	**1.29**	**61**	Pn	**Pg**	**18 06 03.7**	**-0.1**
DKL				Sn	**Sn**	**18 06 20.2**	**-0.1**
SMG	**Samos**	**1.33**	**124**	P	**Pn**	**18 06 03.4**	**-0.2**
SMG	**Samos**	**1.33**	**124**	P	**Pn**	**18 06 03.4**	**-0.2**
VLY	**Voula,Athens**	**1.44**	**246**	P	**Pn**	**18 06 05.2**	**0.0**
LIA	**Limnos Island**	**1.45**	**352**	P	**Pb**	**18 06 06.1**	**0.0**
LIA	**Limnos Island**	**1.45**	**352**	P	**Pn**	**18 06 05.2**	**0.0**
BOZC	**Bozcaada**	**1.46**	**19**	Pn	**Pb**	**18 06 06.2**	**0.0**
BOZC	**Bozcaada**	**1.46**	**19**	P	**Pb**	**18 06 06.0**	**-0.1**
CAMT	**Merkez**	**1.48**	**78**	P	**Pn**	**18 06 03.8**	**-2.0**
EZN	**Ezine**	**1.52**	**26**	Pn	**Pb**	**18 06 07.1**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.54**	**33**	P	**Pn**	**18 06 05.0**	**-1.5**
DUVT	**Torbali**	**1.59**	**98**	P	**Pg**	**18 06 09.7**	**+0.1**
BUHA	**Balikesir, Bur**	**1.64**	**50**	P	**Pg**	**18 06 10.2**	**-0.3**
YAYO	**Edremit-Balk**	**1.71**	**47**	Pn	**Pb**	**18 06 09.8**	**-0.7**
VILL	**Villia**	**1.71**	**261**	P	**Pn**	**18 06 09.3**	**+0.4**
GORD	**Gordes-Manisa**	**2.18**	**77**	Pn	**Pn**	**18 06 16.5**	**+1.2**

*THE **21** 18:05:56.6, 37°N±1°×2°.3E±°, h12km±2km, M2.6/9, MLh2.6/9*
ATH 21 18:05:56.8, 36°.51N×22°.97E, h16km±1km, ML2.7/13, Manual Solution by N.Liadopoulou First location: 2020/02/21 18:07:04, This location: 2020/06/25 07:34:41 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS1	**Neapolis Lacon**	**0.08**	**87**	P	Pg	18 05 59.8	-0.1
NPS1				S	Sg	18 06 02.2	+0.4
MNA	**Monemvasia**	**0.19**	**17**	P	Pg	18 06 00.4	-0.9
VLI	**Veliai**	**0.21**	**353**	P	Pg	18 06 00.5	-1.2
VLI				S	Sg	18 06 03.3	-1.7
VLI	**Veliai**	**0.21**	**353**	P	Pg	18 06 00.4	-1.3
KTHA	**Kythira Island**	**0.26**	**163**	P	Pb	18 06 02.9	-0.3
KTHA	**Kythira Island**	**0.26**	**163**	P	Pg	18 06 02.7	+0.2
KTHA				S	Sb	18 06 08.0	+0.5
ANKY	**Antikythira Is**	**0.69**	**157**	P	Pb	18 06 10.5	-0.1
ANKY				S	Sb	18 06 20.2	+0.3
ANKY	**Antikythira Is**	**0.69**	**157**	P	Pg	18 06 10.2	-0.2
ANKY				S	Sb	18 06 19.8	-0.1
YDRA	**Hydra**	**0.93**	**25**	P	Pb	18 06 14.5	-0.1
VLX	**Vlachokerasia**	**0.98**	**331**	P	Pb	18 06 13.6	-1.9
VLX				S	Sb	18 06 26.0	-2.3
PYL	**PYLOS**	**1.06**	**292**	P	Pb	18 06 15.3	-1.5
PYL				S	Sg	18 06 31.1	0.0
PYL	**PYLOS**	**1.06**	**292**	P	Pb	18 06 15.4	-1.4
PYL				S	Sb	18 06 30.2	-0.2
MTHA	**Methoni**	**1.06**	**287**	P	Pb	18 06 16.1	-0.7
ITM	**Ithomi**	**1.07**	**309**	P	Pb	18 06 14.9	-2.1
ITM				S	Sg	18 06 31.2	-0.3
ITM	**Ithomi**	**1.07**	**309**	P	Pb	18 06 14.8	-2.3
PYL1	**Pylos**	**1.10**	**292**	P	Pb	18 06 16.4	-1.1
PYL1				S	Sb	18 06 31.4	-0.2
MET1	**Methana Town,**	**1.12**	**17**	P	Pb	18 06 17.5	-0.3
MET1				S	Sg	18 06 33.0	0.0
MET2	**Kameni Chora,**	**1.14**	**15**	P	Pn	18 06 17.8	-0.4
MET2				S	Sg	18 06 33.9	+0.2
MET5	**Makryloggos,Me**	**1.15**	**16**	P	Pn	18 06 17.9	-0.5
MET5				S	Sn	18 06 33.9	+0.1
MHLO	**Agia Marina, M**	**1.17**	**81**	P	Pn	18 06 18.0	-0.5
MHLO				S	Sn	18 06 33.9	-0.3
MHLO	**Agia Marina, M**	**1.17**	**81**	P	Pn	18 06 18.0	-0.5
MILOS	**Milos**	**1.20**	**78**	P	Pn	18 06 18.7	-0.2
CH01	**Chania**	**1.31**	**139**	P	Pn	18 06 20.9	-0.1
CH01				S	Sb	18 06 37.2	-0.4
CHAN	**Chania**	**1.32**	**138**	P	Pb	18 06 21.2	0.0
CHAN				S	Sn	18 06 37.7	-0.2
IMMV	**Iera Moni Meta**	**1.33**	**142**	P	Pn	18 06 20.7	-0.1
IMMV				S	Sn	18 06 38.1	-0.1
IMMV	**Iera Moni Meta**	**1.33**	**142**	P	Pn	18 06 20.7	0.0

az=183.0
*SVSA **21** 18:11:20.8±2.1,38°.43N×30°.50W,h5km,ML4.2(INMG), Error ellipse: s-maj=15.7km s-min=9.5km az=176.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

ISC 21 18:11:19.0±4.7,**38°.24N**±0°.08×**30°.34W**±0°.04,**h9**km±29km, **n143**,σ1§61/123,**mb4.4**/43,**MS3.9**/48,**4C-2D,Azores Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFCBR	**Castelo Branco**	**1.30**	**77**	*eP*	**Pn**	**18 11 42.0**	**-1.2**
PFCBR				*eS*	**Sb**	**18 11 58.0**	**-2.4**
PFCBR				IAML		18 11 58.8	
PFCBR				IAML		18 11 58.9	
PFCBR				IAML		18 11 59.5	
CALA	**Caldeira**	**1.33**	**74**	*eP*	**Pn**	**18 11 42.0**	**-1.8**
CALA				*eS*	**Sb**	**18 11 58.0**	**-3.2**
CALA				IAML		18 12 02.3	
CALA				IAML		18 12 03.0	
CALA				IAML		18 12 03.2	
PCED	**Cedros**	**1.34**	**73**	*eP*	**Pn**	**18 11 42.2**	**-1.6**
PCED				*eS*	**Sb**	**18 11 58.3**	**-3.2**
PCED				IAML		18 11 59.9	
PCED				IAML		18 12 00.1	
PCED				IAML		18 12 02.3	
HOR	**Horta**	**1.37**	**77**⇓	*iP*	**Pn**	**18 11 43.1**	**-1.1**
HOR				*eS*	**Sb**	**18 11 59.5**	**-2.8**
HOR				IAML		18 12 01.4	
HOR				IAML		18 12 01.6	
HOR				IAML		18 12 02.6	
PCAN	**Candelaria**	**1.47**	**81**	*eP*	**Pn**	**18 11 44.5**	**-1.2**
PCAN				*eS*	**Sn**	**18 12 02.6**	**-2.4**
PCAN				IAML		18 12 05.2	
PCAN				IAML		18 12 05.2	
PCAN				IAML		18 12 07.8	
PICO	**Pico**	**1.52**	**79**	*eP*	**Pn**	**18 11 45.5**	**-0.9**
PICO				*eS*	**Sn**	**18 12 04.2**	**-2.2**
PICO				IAML		18 12 09.6	
PICO				IAML		18 12 11.1	
PICO				IAML		18 12 12.5	
PPNO	**Prainha do Nor**	**1.65**	**81**	*eP*	**Pn**	**18 11 47.4**	**-0.7**
PPNO				*eS*	**Sn**	**18 12 07.4**	**-1.9**
PPNO				IAML		18 12 11.1	
PPNO				IAML		18 12 12.4	
ROSA	**Rosais**	**1.71**	**73**⇓	*iP*	**Pn**	**18 11 47.8**	**-1.2**
ROSA				*eS*	**Sn**	**18 12 08.1**	**-2.9**
ROSA				IAML		18 12 14.5	
ROSA				IAML		18 12 15.3	
ROSA				IAML		18 12 15.5	
PID	**Ribeirinha**	**1.75**	**83**	*eP*	**Pn**	**18 11 48.9**	**-0.6**
PID				*eS*	**Sn**	**18 12 10.3**	**-1.7**
PID				IAML		18 12 14.1	
PID				IAML		18 12 14.3	
PID				IAML		18 12 17.0	
PMAN	**Manadas**	**1.81**	**77**	*eP*	**Pn**	**18 11 49.2**	**-1.1**
PMAN				*eS*	**Sn**	**18 12 10.2**	**-3.1**
PMAN				IAML		18 12 17.3	
PMAN				IAML		18 12 19.6	
PMAN				IAML		18 12 19.7	
PGRA	**Graciosa**	**2.01**	**66**	*eP*	**Pn**	**18 11 51.3**	**-1.7**
PGRA				*eS*	**Sn**	**18 12 15.0**	**-3.2**
PGRA				IAML		18 12 16.4	
PGRA				IAML		18 12 17.5	
PGRA				IAML		18 12 17.6	
PSCRZ	**Santa Cruz da**	**2.01**	**64**	*eP*	**Pn**	**18 11 51.7**	**-1.3**
PSBA	**Serra de Santa**	**2.42**	**76**	*eP*	**Pn**	**18 11 57.0**	**-1.8**
PSBA				*eS*	**Sn**	**18 12 25.0**	**-3.4**
PSBA				IAML		18 12 29.4	
PSBA				IAML		18 12 30.8	
PSBA				IAML		18 12 31.1	
ADH	**Angra Heroismo**	**2.47**	**79**	*eP*	**Pn**	**18 11 58.9**	**-0.4**
ADH				*eS*	**Sn**	**18 12 27.2**	**-2.4**
ADH				IAML		18 12 28.5	
ADH				IAML		18 12 28.9	
ADH				IAML		18 12 29.7	
PAGU	**Agualva, Azore**	**2.53**	**77**	*eP*	**Pn**	**18 11 59.5**	**-0.6**
PAGU				*eS*	**Sn**	**18 12 29.3**	**-1.8**
PAGU				IAML		18 12 30.7	
PAGU				IAML		18 12 31.7	
PAGU				IAML		18 12 31.9	
PSCM	**Serra do Cume**	**2.57**	**79**⇑	*eP*	**Pn**	**18 11 59.8**	**-0.9**
PSCM				*eS*	**Sn**	**18 12 29.0**	**-3.1**
PSCM				IAML		18 12 32.6	
PSCM				IAML		18 12 33.2	
PSCM				IAML		18 12 33.8	
PSET	**Sete Cidades**	**3.67**	**95**⇑	*eP*	**Pn**	**18 12 15.3**	**-0.5**
PSET				*eS*	**Sn**	**18 12 56.8**	**-2.4**
PSET				IAML		18 13 02.2	
PSET				IAML		18 13 02.3	
PSET				IAML		18 13 02.4	
PDA	**Ponta Delgada**	**3.72**	**96**	*eP*	**Pn**	**18 12 16.3**	**-0.2**
PDA				*eS*	**Sn**	**18 12 59.8**	**-0.7**
PDA				IAML		18 13 00.3	
PDA				IAML		18 13 00.9	
PDA				IAML		18 13 01.1	
CMLA	**Cha da Macela**	**3.83**	**96**		**Pn**	**18 12 17.6**	**-0.5**
CMLA					**Sn**	**18 13 02.1**	**-1.1**
CMLA	**Cha da Macela**	**3.83**	**96**⇑	*eP*	**Pn**	**18 12 17.9**	**-0.2**
CMLA				*eS*	**Sn**	**18 13 01.5**	**-1.6**
CMLA				IAML		18 13 07.5	
CMLA				IAML		18 13 07.9	
CMLA				IAML		18 13 08.9	
PGRON	**Lagoa das Cont**	**3.95**	**95**⇑	*iP*	**Pn**	**18 12 20.0**	**+0.3**
PGRON				*eS*	**Sn**	**18 13 05.0**	**-1.1**
PGRON				IAML		18 13 09.2	
PGRON				IAML		18 13 09.8	
PGRON				IAML		18 13 10.4	
BART	**Pico Bartolome**	**4.11**	**95**	*eP*	**Pn**	**18 12 22.2**	**+0.3**
BART				IAML		18 13 15.8	
BART				IAML		18 13 16.9	
BART				IAML		18 13 17.2	
PSMN	**Pico do Norte,**	**4.36**	**105**	*eP*	**Pn**	**18 12 24.7**	**-0.7**
PSMN				*eS*	**Sn**	**18 13 13.0**	**-3.3**
PMOZ	**Porto Moniz, M**	**11.98**	**113**	Pn	**Pn**	**18 14 09.9**	**-0.2**
MACI	**Morro de la Ar**	**15.25**	**127**	Pn	**P**	**18 14 57.1**	**-2.4**
ESDC	**Sonseca Array**	**20.54**	**78**	P	Pn	18 16 01.0	+1.1
	2.0nm,1.0s,baz=277,slow=10,SNR=6.8						
ESDC				LR	LR	18 22 11.1	
	comp=Z,121nm,19.3s,baz=279,slow=31 2.0nm,1.0s						
MDT	**Midelt**	**21.60**	**97**	P	**P**	**18 16 13.4**	**+4.2**
	1.4nm,0.8s,baz=288,slow=3.2,SNR=2.0						
MDT				LR	LR	18 23 02.8	
	comp=Z,190nm,19.3s,baz=286,slow=32 1.4nm,0.8s						
DRLN	**Deer Lake**	**22.39**	**308**	P	**P**	**18 16 16.0**	**-1.4**
DRLN				IAmb	IAmb	18 16 17.0	
	comp=Z,24nm,1.2s						
GBN	**Guysborough**	**24.21**	**297**	P	**P**	**18 16 34.6**	**-1.1**
CEST	**Esterri de Car**	**24.36**	**70**	P	**P**	**18 16 38.0**	**+0.6**
CEST				IAmb	IAmb	18 16 50.9	
	comp=Z,18nm,1.4s						
EKA	**Eskdalemuir Ar**	**25.03**	**38**	P	**P**	**18 16 44.0**	**+0.9**
	comp=Z,4.6nm,0.9s,baz=229,slow=7.6,SNR=3.8						
EKA				LR	LR	18 24 42.4	
	comp=Z,180nm,18.3s,baz=346,slow=32 comp=Z,4.6nm,0.9s						
BATG	**Bathurst New B**	**27.54**	**301**	P	**P**	**18 17 05.8**	**-0.1**
F64A	**Sherman**	**29.02**	**297**	P	**P**	**18 17 18.7**	**-0.4**
F64A				IAmb	IAmb	18 17 30.7	
	comp=Z,20nm,1.5s						
D62A	**Allapoint, All**	**29.56**	**300**	P	**P**	**18 17 22.5**	**-1.3**
D62A				IAmb	IAmb	18 17 25.8	
	comp=Z,17nm,1.3s						
SCHQ	**Schefferville**	**29.66**	**316**	P	**P**	**18 17 23.1**	**-1.6**
	comp=Z,2.5nm,0.9s,baz=162,slow=9.6,SNR=2.0						
SCHQ				LR	LR	18 28 01.2	
	comp=Z,168nm,19.0s,baz=87,slow=34 comp=Z,2.5nm,0.9s						
DAVOX	**Davos/Dischmat**	**30.57**	**61**	LR	LR	18 27 08.7	
	comp=Z,111nm,20.6s,baz=274,slow=31						
SFJD	**Kangerlussuaq**	**31.01**	**345**	LR	LR	18 27 13.2	
	comp=Z,209nm,18.4s,baz=160,slow=31						
ILULI	**Ilulissat**	**33.01**	**347**	P	**P**	**18 17 55.5**	**+1.6**
FDMO	**Fiordimonte**	**33.02**	**68**	P	**P**	**18 17 56.2**	**+1.8**
FDMO				IAmb	IAmb	18 18 03.5	
	comp=Z,8.1nm,0.9s						
N62A	**Caumsett State**	**33.10**	**288**	P	**P**	**18 17 55.6**	**+0.5**
GERES	**GERESS Array B**	**33.21**	**57**	P	**P**	**18 17 57.9**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=253,slow=8.2,SNR=3.7 comp=Z,0.2nm,0.4s						
FRB	**Frobisher Bay**	**34.19**	**331**	LR	LR	18 29 04.1	
	comp=Z,228nm,19.8s,baz=106,slow=32						
NOA	**NORSAR Array B**	**34.39**	**35**	P	**P**	**18 18 07.8**	**+1.7**
NOA	comp=Z,2.7nm,0.9s,baz=248,slow=9.4,SNR=4.0			LR	LR	18 30 20.1	
	comp=Z,155nm,18.4s,baz=0.0,slow=33 comp=Z,2.7nm,0.9s						
NC405	**NORSAR Array S**	**34.64**	**35**	P	**P**	**18 18 10.0**	**+1.8**
NC405				IAmb	IAmb	18 18 47.3	
	comp=Z,11nm,1.1s						
VAE	**Valguarnera**	**35.08**	**77**	P	P	18 18 16.2	+3.9
	comp=Z,4.5nm,0.6s,baz=352,slow=14,SNR=1.6 comp=Z,4.5nm,0.6s						
VRAC	**Vranov**	**35.12**	**56**	P	**P**	**18 18 15.4**	**+2.9**
	comp=Z,1.1nm,0.6s,baz=294,slow=5.3,SNR=1.3						
VRAC				LR	LR	18 32 07.0	
	comp=Z,88nm,18.2s,baz=340,slow=35 comp=Z,1.1nm,0.6s						
HFS	**Hagfors**	**35.22**	**37**	P	**P**	**18 18 15.7**	**+2.5**
	comp=Z,4.2nm,0.9s,baz=243,slow=6.3,SNR=2.5 comp=Z,4.2nm,0.9s						
SADO	**Sadowa**	**36.68**	**296**	LR	LR	18 32 04.4	
	comp=Z,80nm,18.6s,baz=149,slow=34						
SJG	**San Juan**	**37.08**	**247**	LR	LR	18 30 19.6	
	comp=Z,45nm,21.7s,baz=68,slow=31						
TORD	**Torodi Ar. Bea**	**37.85**	**123**	P	**P**	**18 18 38.7**	**+2.6**
	comp=Z,2.1nm,1.0s,baz=294,slow=7.6,SNR=7.1 comp=Z,2.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**37.85**	**123**	P	**P**	**18 18 36.8**	**+0.7**
MDP	**Montagnes des**	**38.73**	**217**	LR	LR	18 31 11.0	
	comp=Z,73nm,19.4s,baz=109,slow=31						
DBIC	**Dimbokro**	**38.99**	**137**	LR	LR	18 33 16.2	
	comp=Z,186nm,20.7s,baz=10.0,slow=34						
BURAR	**Bucovina Array**	**40.95**	**58**	P	**P**	**18 19 03.3**	**+1.5**
FINES	**FINESS Array B**	**41.42**	**37**	P	**P**	**18 19 06.6**	**+1.3**
	comp=Z,3.8nm,0.7s,baz=260,slow=9.5,SNR=6.2						
FINES				LR	LR	18 34 41.6	
	comp=Z,203nm,18.1s,baz=234,slow=34 comp=Z,3.8nm,0.7s						
FINES	**FINESS Array B**	**41.42**	**37**	P	**P**	**18 19 06.4**	**+1.0**
FIA1	**FINESS Array S**	**41.42**	**37**	P	**P**	**18 19 06.3**	**+0.9**
HODGE	**Hodges**	**41.63**	**281**	P	**P**	**18 19 06.5**	**-0.9**
HODGE				IAmb	IAmb	18 19 39.7	
	comp=Z,21nm,1.4s						
TKL	**Tuckaleechee C**	**42.29**	**284**	LR	LR	18 34 20.2	
	comp=Z,79nm,19.0s,baz=54,slow=33						
AKASG	**Malin Array Be**	**43.17**	**53**	P	**P**	**18 19 20.4**	**+0.7**
AKASG				LR	LR	18 35 37.3	
	comp=Z,89nm,18.5s,baz=324,slow=34 comp=Z,1.7nm,0.6s						
RES	**Resolute Bay**	**46.84**	**341**	LR	LR	18 34 46.4	
	comp=Z,77nm,18.8s,baz=12,slow=30						
RES	**Resolute Bay**	**46.84**	**341**	P	**P**	**18 19 49.2**	**+0.5**
ULM	**Lac du Bonnet**	**47.01**	**307**	LR	LR	18 38 11.9	
	comp=Z,111nm,18.3s,baz=38,slow=35						
R40A	**Maddies Station**	**47.79**	**290**	P	**P**	**18 19 56.4**	**-0.1**
R40A				IAmb	IAmb	18 19 59.4	
	comp=Z,7.2nm,1.0s						
H10N2	**ASCENSION HYDR**	**48.15**	**159**	T	T	19 11 19.7	
	baz=342,slow=74,SNR=12						
H10N3	**ASCENSION HYDR**	**48.16**	**159**	T	T	19 11 15.6	
	baz=342,slow=74,SNR=9.7						
H10N1	**ASCENSION HYDR**	**48.17**	**159**	T	T	19 11 20.1	
	baz=342,slow=74,SNR=13						
S39A	**Bolivar**	**48.78**	**290**	P	**P**	**18 20 03.5**	**-0.8**
BRTR	**Keskin Array B**	**48.79**	**67**	P	**P**	**18 20 06.6**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=291,slow=6.5,SNR=2.2 comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**48.79**	**67**	P	**P**	**18 20 05.3**	**+0.9**
ECSD	**EROS Data Cent**	**49.14**	**299**		**P**	**18 20 06.8**	**-0.1**
ECSD				IAmb	IAmb	18 20 11.4	
	comp=Z,5.9nm,1.0s						
H10S3	**ASCENSION HYDR**	**49.17**	**159**	T	T	19 12 35.3	
	baz=342,slow=74,SNR=3.4						
H10S2	**ASCENSION HYDR**	**49.18**	**159**	T	T	19 12 43.7	
	baz=238,slow=74,SNR=5.2						
EIL	**Elat**	**53.84**	**78**	LR	LR	18 44 54.0	
	comp=Z,50nm,19.2s,baz=237,slow=37						
KBZ	**Khabaz**	**53.90**	**59**	P	**P**	**18 20 44.6**	**+2.1**
	comp=Z,1.1nm,0.8s,baz=290,slow=9.4,SNR=3.6 comp=Z,1.1nm,0.8s						
BELG	**Belogorsk**	**54.01**	**48**	P	**P**	**18 20 44.4**	**+1.3**
	comp=Z,4.8nm,0.6s,baz=247,slow=13,SNR=1.9 comp=Z,4.8nm,0.6s						
YKA	**Yellowknife Ar**	**54.38**	**325**	P	**P**	**18 20 43.1**	**-2.6**
YKA	comp=Z,0.1nm,0.3s,baz=71,slow=6.7,SNR=4.4			LR	LR	18 41 13.0	
	comp=Z,88nm,18.2s,baz=320,slow=33 comp=Z,0.1nm,0.3s						
YKA	**Yellowknife Ar**	**54.38**	**325**	P	**P**	**18 20 45.6**	**-0.1**
BRDY	**Brady**	**55.68**	**285**	P	**P**	**18 20 55.8**	**+0.1**
BRDY				IAmb	IAmb	18 20 59.9	
	comp=Z,3.7nm,0.8s						
PETF	**Flores**	**55.91**	**265**	P	**P**	**18 20 55.2**	**-2.1**
SDCO	**Great Sand Dun**	**57.62**	**295**	P	**P**	**18 21 08.9**	**-0.8**
PDAR	**Pinedale Array**	**58.30**	**302**	P	**P**	**18 21 14.1**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=70,slow=8.5,SNR=7.2 comp=Z,1.8nm,0.9s						
PDAR				LR	LR	18 45 10.1	
	comp=Z,121nm,19.8s,baz=44,slow=35 comp=Z,1.8nm,0.9s						
PDAR	**Pinedale Array**	**58.30**	**302**	P	**P**	**18 21 13.2**	**-1.1**
ARTI	**Arti**	**58.53**	**41**	LR	LR	18 43 38.9	
	comp=Z,82nm,18.8s,baz=315,slow=33						
GDL2	**Guadalupe Moun**	**59.30**	**289**	P	**P**	**18 21 20.3**	**-0.9**
AHID	**Auburn Hatcher**	**59.33**	**302**	P	**P**	**18 21 20.9**	**-0.6**
AHID				IAmb	IAmb	18 21 26.9	
	comp=Z,2.6nm,0.5s						
ANMO	**Albuquerque**	**59.56**	**292**	LR	LR	18 46 41.9	
	comp=Z,84nm,19.2s,baz=64,slow=36						
INK	**Inuvik**	**59.65**	**335**	LR	LR	18 43 54.5	
	comp=Z,142nm,18.4s,baz=308,slow=33						
INK	**Inuvik**	**59.65**	**335**	P	**P**	**18 21 22.2**	**-0.7**
INK				IAmb	IAmb	18 21 30.4	
	comp=Z,7.5nm,1.3s						
CMIG	**Matias Romero**	**59.76**	**268**	LR	LR	18 45 55.9	
	comp=Z,20nm,19.1s,baz=359,slow=35						
TX31	**Lajitas Ar. Si**	**60.16**	**285**		**P**	**18 21 26.0**	**-1.2**
TX31				IAmb	IAmb	18 21 27.8	
	comp=Z,4.3nm,1.4s						
TXAR	**Lajitas Array**	**60.16**	**285**	P	**P**	**18 21 25.3**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=78,slow=6.9,SNR=13 comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**60.16**	**285**	P	**P**	**18 21 25.8**	**-1.4**
G31M	**Satah River**	**60.55**	**334**	P	**P**	**18 21 29.4**	**+0.3**
F30M	**Barrier River**	**60.73**	**335**	P	**P**	**18 21 30.4**	**+0.1**
AKTO	**Aktyubinsk**	**60.77**	**47**	P	**P**	**18 21 32.1**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=295,slow=6.6,SNR=5.9						
AKTO				LR	LR	18 47 14.7	
	comp=Z,68nm,18.1s,baz=321,slow=35 comp=Z,1.3nm,0.4s						
NEW	**Newgoorpt**	**60.79**	**310**	LR	LR	18 46 54.5	
	comp=Z,161nm,18.7s,baz=51,slow=35						
H31M	**Peel River**	**61.12**	**333**	P	**P**	**18 21 33.0**	**0.0**
G30M	**tAoh Zrail Nji**	**61.19**	**334**	P	**P**	**18 21 33.1**	**-0.5**
MMPY	**Sheldon Lake,**	**61.48**	**329**	P	**P**	**18 21 34.8**	**-0.8**
D27M	**Malcolm River**	**61.52**	**338**	P	**P**	**18 21 35.9**	**+0.1**
G29M	**Pine Creek**	**61.84**	**335**	P	**P**	**18 21 36.3**	**-1.6**
G29M				IAmb	IAmb	18 21 48.1	
	comp=Z,6.0nm,1.1s						
C27K	**Jago River**	**62.10**	**339**	P	**P**	**18 21 39.5**	**-0.2**
C27K				IAmb	IAmb	18 21 46.8	
	comp=Z,6.9nm,1.3s						
DLBC	**Dease Lake**	**62.97**	**324**	LR	LR	18 47 36.6	
	comp=Z,79nm,18.1s,baz=46,slow=35						
ELK	**Elko**	**63.01**	**302**	LR	LR	18 48 02.2	
	comp=Z,123nm,21.4s,baz=44,slow=35						
G27K	**Doyon Strip**	**63.09**	**336**	P	**P**	**18 21 46.1**	**-0.2**
C24K	**Franklin Bluff**	**63.44**	**340**	P	**P**	**18 21 48.8**	**+0.4**
C24K				IAmb	IAmb	18 21 55.6	
	comp=Z,4.9nm,0.9s						
D24K	**Happy Valley**	**63.83**	**339**	P	**P**	**18 21 50.6**	**-0.5**
E24K	**Your Creek**	**64.43**	**338**	P	**P**	**18 21 55.2**	**+0.1**
E24K				IAmb	IAmb	18 22 02.4	
	comp=Z,4.3nm,0.9s						
LPAZ	**La Paz**	**64.80**	**221**	P	**P**	**18 22 00.6**	**+1.8**
	comp=Z,1.4nm,0.9s,baz=10,slow=6.5,SNR=4.8						
LPAZ				LR	LR	18 45 58.7	
	comp=Z,91nm,19.7s,baz=40,slow=32 comp=Z,1.4nm,0.9s						
LPAZ	**La Paz**	**64.80**	**221**	P	**P**	**18 21 56.7**	**-2.1**
LPAZ				IAmb	IAmb	18 22 10.0	
	comp=Z,6.3nm,1.2s						
BBB	**Bella Bella**	**65.16**	**318**	LR	LR	18 49 50.1	
	comp=Z,120nm,19.4s,baz=125,slow=36						
ILAR	**Eielson Array**	**66.05**	**335**	P	**P**	**18 22 04.2**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=48,slow=4.8,SNR=4.9						
ILAR				LR	LR	18 48 03.2	
	comp=Z,91nm,18.3s,baz=86,slow=34 comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**66.05**	**335**	P	**P**	**18 22 06.2**	**+0.6**
NVAR	**Mina Array Bea**	**66.21**	**301**	LR	LR	18 50 13.1	
	comp=Z,126nm,19.9s,baz=72,slow=36						
BVAR	**Borovoye Array**	**66.25**	**40**	P	**P**	**18 22 08.6**	**+1.5**
	comp=Z,1.2nm,0.6s,baz=295,slow=6.8,SNR=9.7 comp=Z,1.2nm,0.6s						
C19K	**Lookout Ridge**	**66.64**	**342**	P	**P**	**18 22 09.1**	**-0.3**
PNTR	**Pine Nut**	**66.74**	**302**	P	**P**	**18 22 08.9**	**-1.9**
PNTR				IAmb	IAmb	18 22 37.1	
	comp=Z,5.7nm,1.3s						
YBH	**Yreka Blue Hor**	**67.40**	**306**	LR	LR	18 51 20.2	
	comp=Z,4.6nm,18.2s,baz=50,slow=36						
PFO	**Pinyon Flats O**	**67.42**	**296**	LR	LR	18 50 30.0	
	comp=Z,81nm,20.8s,baz=26,slow=35						
LPIG	**La Paz**	**67.94**	**284**	LR	LR	18 51 28.4	
	comp=Z,28nm,20.2s,baz=204,slow=36						
MBAR	**Mbarara**	**68.01**	**109**	LR	LR	18 51 22.3	
	comp=Z,78nm,18.2s,baz=266,slow=35						
FURI	**Furi**	**68.08**	**96**	LR	LR	18 52 40.8	
	comp=Z,94nm,18.7s,baz=18,slow=36						
PB08	**IPOC Station P**	**68.56**	**219**	P	**P**	**18 22 18.8**	**-3.7**
TIXI	**Tiksi**	**69.43**	**7**	LR	LR	18 49 49.2	
	comp=Z,32nm,18.6s,baz=354,slow=33						
J18K	**Innoko River**	**70.07**	**337**	P	**P**	**18 22 30.6**	**-0.3**
F15K	**North Star Dit**	**70.52**	**342**	P	**P**	**18 22 33.9**	**+0.3**
F15K				IAmb	IAmb	18 22 40.2	
	comp=Z,8.2nm,1.5s						
KURK	**Kurchatov**	**71.75**	**39**		**P**	**18 22 42.6**	**+1.3**
KURBB	**Kurchatov Arra**	**71.76**	**39**	P	**P**	**18 22 42.5**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=312,slow=6.4,SNR=22 comp=Z,2.1nm,0.8s						
KKAR	**Karatay Array**	**71.87**	**49**	P	**P**	**18 22 43.0**	**+0.7**
ZALV	**Zalesovo Beam**	**72.59**	**34**	P	**P**	**18 22 46.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=290,slow=9.0,SNR=2.1 comp=Z,0.2nm,0.3s						
TSUM	**Tsumeb**	**72.71**	**133**	LR	LR	18 51 44.4	
	comp=Z,102nm,21.0s,baz=322,slow=33						
KDAK	**Kodiak Island**	**72.82**	**332**	LR	LR	18 52 38.9	
	comp=Z,104nm,18.0s,baz=62,slow=34						
AAK	**Ala-Archa**	**74.50**	**48**	LR	LR	18 54 39.5	
	comp=Z,36nm,19.1s,baz=324,slow=35						
MKAR	**Makanchi Array**	**76.13**	**41**	P	**P**	**18 23 07.9**	**+0.8**
	comp=Z,2.0nm,1.1s,baz=299,slow=5.0,SNR=9.5						
MKAR				LR	LR	18 57 03.2	
	comp=Z,87nm,18.6s,baz=250,slow=36 comp=Z,2.0nm,1.1s						
LSZ	**Lusaka**	**76.38**	**122**	LR	LR	18 56 24.1	
	comp=Z,164nm,19.3s,baz=304,slow=35						
LBTB	**Lobatse**	**81.89**	**131**	LR	LR	18 57 26.9	
	comp=Z,82nm,20.0s,baz=280,slow=34						
BOSA	**Boshof**	**84.40**	**133**	LR	LR	18 59 44.0	
	comp=Z,36nm,20.8s,baz=340,slow=34						
SUR	**Sutherland**	**84.86**	**139**	LR	LR	18 56 34.6	
	comp=Z,30nm,21.2s,baz=259,slow=32						
SONM	**Songino Array**	**86.04**	**28**	P	**P**	**18 24 01.1**	**+1.2**
	comp=Z,0.9nm,1.0s,baz=330,slow=3.7,SNR=5.1 comp=Z,0.9nm,1.0s						
SONM	**Songino Array**	**86.04**	**28**	P	**P**	**18 24 00.8**	**+0.8**
KLR	**Kul'dur**	**91.48**	**12**	LR	LR	19 04 18.9	
	comp=Z,37nm,18.2s,baz=344,slow=35						
ASAR	**Alice Springs**	**160.20**	**47**	PKPab	**PKPab**	**18 32 00.5**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=314,slow=3.3,SNR=4.3						

NOU 21 18:45:48.5,16°.47S×166°.50E,h95km,MLv4.4/8,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.04**	**128**	P	Pn	18 46 22.2	+0.8
MARNC	**Mare, Loyalty**	**5.19**	**164**	P	Pn	18 47 04.7	+0.9
DZM	**Mont Dzumac**	**5.57**	**181**	P	Pn	18 47 10.0	+0.9
NGOA	**Tingoa Renbel**	**7.93**	**307**	P	Pn	18 47 41.0	-0.1

*IDC **21** 18:46:54.5±0.9,17°.84N×66°.98W,h0km,mb3.7/9, mbtmp3.7/10,ML2.5/1,Error ellipse: s-maj=22.2km s-min=9.8km az=167.0*
*OSPL **21** 18:46:56.4±0.5,17°.90N×67°.01W,h8km±4km,ML3.6, Presumed earthquake*
*RSPR **21** 18:46:56.2,17°.91N×67°.01W,h7km,MD3.6/8*
*NEIC **21** 18:46:56.2±0.8,17°.93N±0°.02×67°.00W±0°.01,h9km±2km, mb4.3/3,ML4.0/37,ML3.8/8(RSPR),Mwr3.7/18(SLM),Error ellipse: s-maj=2.7km s-min=1.4km az=157.0*
*SDD **21** 18:46:56.4±1.7,17°.89N×67°.02W,h12km±12km,MD3.8, ML3.9,MW3.8,Presumed earthquake*
*NEIC **21** 18:46:56,17°.91N×67°.00W,h6km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.59; $M_{\theta\theta}$2.19; $M_{\phi\phi}$0.40; $M_{r\theta}$-0.19; $M_{\theta\phi}$2.37; $M_{\phi r}$2.17; Fault plane solution: $M_0$4.03000×10^{14} NP1:ϕ$_0$206.00000°, δ63.00000°,λ-127.00000°. NP2:ϕ$_0$85.00000°,δ45.00000°, λ-40.00000°. Principal axes: T 4.0240, Plg10.0000°, Azm322.0000°; N 0.0001, Plg33.0000°, Azm225.0000°; P -4.0241, Plg55.0000°, Azm67.0000°;*

ISC 21 18:46:56.0±0.7,**17°.93N**±0°.04×**66°.98W**±0°.02,**h11**km±4km, **n78**,σ0§73/105,**mb3.8**/8,**9C-6D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.07

	comp=N,6μm,0.4s								
AGPR	**Aguadilla, PR**	**0.55**	**347**	⇑*iP*		**Pg**	**18 47 06.8**	**+0.1**
AGPR				*eS*		**Sg**	**18 47 14.8**	**+0.8**
IDE	**Isla Desecheo**	**0.65**	**314**			**Pg**	**18 47 08.6**	**-0.1**
IDE						**Sg**	**18 47 17.5**	**+0.3**
IDE	**Isla Desecheo**	**0.65**	**314**	⇓*eP*		**Pg**	**18 47 08.6**	**-0.1**
IDE				*eS*		**Sg**	**18 47 17.5**	**+0.3**
EMPR	**Esperanza - Ma**	**0.69**	**38**			**Pg**	**18 47 09.8**	**+0.4**
EMPR						**Sb**	**18 47 19.6**	**-0.1**
EMPR	**Esperanza - Ma**	**0.69**	**38**	⇑*iP*		**Pg**	**18 47 09.8**	**+0.4**
EMPR				*eS*		**Sb**	**18 47 19.6**	**-0.1**
ECPR	**Experimental S**	**0.70**	**57**			**Pg**	**18 47 09.3**	**-0.3**
ECPR					Sg	**Sg**	**18 47 17.8**	**-1.1**
ECPR	**Experimental S**	**0.70**	**57**	⇑*eP*		**Pg**	**18 47 09.6**	**-0.1**
ECPR				*eS*		**Sb**	**18 47 20.1**	**+0.1**
SJG	**San Juan**	**0.81**	**77**	LR		LR	18 47 08.9	
	comp=N,29nm,19.6s,baz=319,slow=17								
SJG				Pg		**Pg**	**18 47 11.3**	**-0.4**
	comp=N,207nm,0.3s,baz=265,slow=14,SNR=128								
SJG				Lg		Lg	18 47 22.7		
	comp=N,438nm,0.3s,baz=340,slow=18,SNR=22								
SJG	**San Juan**	**0.81**	**77**			**Pg**	**18 47 11.2**	**-0.5**
SJG				IAML			18 47 24.6		
	comp=N,3μm,0.5s								
SJG	**San Juan**	**0.81**	**77**	*e*Pg		**Pg**	**18 47 11.4**	**-0.4**
SJG				*e*Sg		**Sb**	**18 47 23.0**	**-0.1**
SJG	**San Juan**	**0.81**	**77**	⇑*iP*		**Pg**	**18 47 11.4**	**-0.4**
SJG				*eS*		**Sb**	**18 47 23.1**	**-0.1**
SJG	**San Juan**	**0.81**	**77**	*i* P		**Pg**	**18 47 11.3**	**-0.4**
SJG				*eS*		**Sb**	**18 47 22.9**	**-0.3**
SJG				IAML			18 47 24.1		
	comp=Z,2μm,0.6s								
PDPR	**Patillas Dam,**	**0.92**	**84**	Pg		**Pg**	**18 47 13.2**	**-0.6**
GCPR	**Guaynabo City**	**0.94**	**66**			**Pg**	**18 47 13.2**	**-0.9**
GCPR	**Guaynabo City**	**0.94**	**66**			**Sg**	**18 47 25.8**	**-0.4**
GCPR	**Guaynabo City**	**0.94**	**66**	⇓*eP*		**Pg**	**18 47 13.5**	**-0.6**
GCPR				*eS*		**Sg**	**18 47 25.8**	**-0.4**
HUMP	**Col San Antoni**	**1.10**	**79**			**Pb**	**18 47 15.6**	**-1.5**
HUMP				IAML			18 47 36.4		
	comp=Z,2μm,0.3s								
HUMP	**Col San Antoni**	**1.10**	**79**			**Sb**	**18 47 31.0**	**-0.4**
HUMP	**Col San Antoni**	**1.10**	**79**	⇑*eP*		**Pb**	**18 47 16.3**	**-0.8**
HUMP				*eS*		**Sb**	**18 47 31.0**	**-0.4**
PCDR	**Punta Cana, DR**	**1.45**	**294**	*e*Pg		**Pn**	**18 47 22.1**	**-0.1**
PCDR				IAML			18 47 49.9		
	comp=E,1μm,0.7s								
PCDR				IAML			18 47 54.1		
	comp=N,1μm,0.9s								
PCDR				IAML			18 47 54.1		
	comp=N,1μm,0.9s								
CUPR	**Culebra, Puert**	**1.66**	**77**			**Pb**	**18 47 26.0**	**-0.7**
HIDR	**Higuey Centro**	**1.77**	**292**	*e*Pg		**Pb**	**18 47 27.8**	**-0.8**
HIDR				IAML			18 47 55.1		
	comp=E,385nm,0.3s								
HIDR				IAML			18 47 59.4		
	comp=N,726nm,0.3s								
DR12	**Loma Pena Alta**	**2.43**	**291**			**Pn**	**18 47 36.3**	**+0.6**
HATOM	**Hato Mayor del**	**2.43**	**291**	*e*Pg		**Pn**	**18 47 36.3**	**+0.5**
HATOM				IAML			18 48 19.7		
	comp=E,295nm,0.8s								
HATOM				IAML			18 48 20.6		
	comp=N,282nm,1.1s								
SMDR	**Samana, DR**	**2.49**	**303**	*e*Pg		**Pb**	**18 47 39.3**	**-1.5**
SMDR				IAML			18 48 23.4		
	comp=E,505nm,1.1s								
SMDR				IAML			18 48 25.5		
	comp=N,379nm,0.6s								
DR08	**Loma La Naviza**	**3.06**	**290**	*e*Pg		**Pb**	**18 47 48.0**	**-2.6**
DR08				IAML			18 48 34.1		
	comp=E,1μm,0.8s								
DR08				IAML			18 48 34.3		
	comp=N,2μm,0.5s								
BANI	**BANI**	**3.24**	**279**			**Pn**	**18 47 47.8**	**+0.8**
SABA	**Saba**	**3.58**	**94**			**Pn**	**18 47 52.0**	**+0.5**
SMRT	**St. Maarten**	**3.72**	**88**			**Pn**	**18 47 53.8**	**+0.3**
SC01	**Santiago de lo**	**3.85**	**293**	Pn		**Pn**	**18 47 55.1**	**-0.1**
SDDR	**Presa de Saban**	**4.22**	**285**			**Pn**	**18 47 59.7**	**-0.6**
GDHS	**Morne Mazeau,**	**5.26**	**108**	Pn		**Pn**	**18 48 13.6**	**-1.0**
ABD	**La Joyeuse, An**	**5.45**	**105**	Pn		**Pn**	**18 48 16.7**	**-0.5**
CBE	**Ff, Capester**	**5.47**	**109**	Pn		**Pn**	**18 48 17.9**	**+0.4**
TDBA	**Terre de Bas,**	**5.52**	**111**	Pn		**Pn**	**18 48 18.6**	**+0.3**
MAGL	**Barre de l'ile**	**5.80**	**109**	Pn		**Pn**	**18 48 21.9**	**-0.2**
GDSD	**La Dsirade Is**	**5.88**	**105**	Pn		**Pn**	**18 48 22.5**	**-0.7**
CXM	**Morne La Croix**	**6.39**	**118**	Pn		**Pn**	**18 48 29.7**	**-0.5**
BIM	**Bigot**	**6.62**	**120**	Pn		**Pn**	**18 48 32.8**	**-0.5**
ILAM	**Ilet Lapin Mar**	**6.65**	**117**	Pn		**Pn**	**18 48 33.4**	**-0.3**
MPOM	**Morne Pois Mar**	**6.83**	**120**	Pn		**Pn**	**18 48 36.9**	**+0.7**
SDV	**Santo Domingo**	**9.67**	**202**	Pn		**Pn**	**18 49 15.3**	**0.0**
	comp=N,0.4nm,0.3s,baz=14,slow=11,SNR=3.9								
SDV				Sn		**Sn**	**18 51 05.7**	**+1.6**
	comp=N,0.2nm,0.3s,baz=18,slow=20,SNR=1.3								
	comp=N,1.1nm,0.3s								
SDV	**Santo Domingo**	**9.67**	**202**	Pn		**Pn**	**18 49 17.6**	**+2.2**
TXAR	**Lajitas Array**	**35.33**	**296**	P		**P**	**18 53 53.3**	**+1.6**
	comp=N,1.0nm,0.8s,baz=112,slow=10,SNR=7.1								
	comp=N,1.0nm,0.8s								
TXAR	**Lajitas Array**	**35.33**	**296**	P		**P**	**18 53 51.8**	**+0.1**
PDAR	**Pinedale Array**	**43.67**	**314**	P		**P**	**18 55 03.5**	**+2.3**
	comp=N,0.2nm,0.6s,baz=106,slow=3.2,SNR=1.8								
	comp=N,0.2nm,0.6s								
PDAR	**Pinedale Array**	**43.67**	**314**	P		**P**	**18 55 01.9**	**+0.7**
CPUP	**Villa Florida**	**44.99**	**168**	P		**P**	**18 55 11.1**	**-0.4**
	comp=N,1.2nm,0.4s,baz=342,slow=3.2,SNR=2.8								
	comp=N,1.2nm,0.4s								
CPUP	**Villa Florida**	**44.99**	**168**	P		**P**	**18 55 10.4**	**-1.1**
CPUP				IAmb		IAmb	18 55 20.7		
	comp=Z,4.5nm,1.1s								
YKA	**Yellowknife Ar**	**55.32**	**335**	P		**P**	**18 56 29.7**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=112,slow=6.6,SNR=5.6								
	comp=Z,0.4nm,0.7s								
ESDC	**Sonseca Array**	**58.13**	**54**	P		**P**	**18 56 50.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=261,slow=6.8,SNR=7.0								
	comp=Z,1.0nm,0.7s								
ESDC	**Sonseca Array**	**58.13**	**54**	P		**P**	**18 56 49.9**	**-0.1**
ESDC				IAmb		IAmb	18 57 18.6		
	comp=Z,0.9nm,1.4s								
DBIC	**Dimbokro**	**61.48**	**92**	P		**P**	**18 57 12.2**	**-1.1**
	comp=Z,2.4nm,0.8s,baz=321,slow=6.5,SNR=3.5								
	comp=Z,2.4nm,0.8s								
DBIC	**Dimbokro**	**61.48**	**92**	IAmb		IAmb	18 57 26.7		
	comp=Z,7.8nm,1.2s								
TORD	**Torodi Ar. Bea**	**66.02**	**83**	P		**P**	**18 57 42.7**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=263,slow=6.2,SNR=3.4								
	comp=Z,0.7nm,0.8s								
ILAR	**Eielson Array**	**69.63**	**333**	P		**P**	**18 58 04.6**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=110,slow=3.8,SNR=5.6								
	comp=Z,0.4nm,0.7s								
BRTR	**Keskin Array B**	**86.59**	**49**	P		**P**	**18 59 39.9**	**0.0**
	comp=Z,0.9nm,0.8s,baz=289,slow=4.4,SNR=2.9								
	comp=Z,0.9nm,0.8s								

*IDC **21** 19:26:09.8±1.3,22°.57N×95°.04E, h0km, mb3.7/8, mbtmp3.7/9, ML3.3/1, Error ellipse: s-maj=70.8km s-min=13.9km az=56.0*

ISC 21 19:26:11.7±1.2, 22°.6N±0°.3×94°.9E±0°.4, h10km, n9, σ1s 23/10, mb3.7/8, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.58**	**137**	Pn		**Pn**	**19 27 34.3**	**-0.6**
	0.3nm,0.3s,baz=320,slow=13,SNR=1.5							
CMAR				Pg		**Pb**	**19 27 51.1**	**+1.7**
	0.8nm,0.3s,baz=304,slow=18,SNR=5.3							
CMAR				Lg		Lg	19 29 04.6	
	0.6nm,0.3s,baz=346,slow=34,SNR=2.0							
	1.0nm,0.3s							
MKAR	**Makanchi Array**	**26.20**	**340**	P		**P**	**19 31 47.9**	**+1.3**
	1.0nm,0.5s,baz=148,slow=10,SNR=27							
	1.0nm,0.5s							
SONM	**Songino Array**	**26.79**	**17**	P		**P**	**19 31 51.1**	**-0.9**
	0.2nm,0.7s,baz=190,slow=9.4,SNR=1.7							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**30.76**	**339**	P		**P**	**19 32 27.9**	**+0.8**
	0.8nm,0.6s,baz=148,slow=8.8,SNR=7.8							
	0.8nm,0.6s							
BVAR	**Borovoye Array**	**35.67**	**335**	P		**P**	**19 33 09.7**	**-0.3**
	0.2nm,0.4s,baz=151,slow=9.2,SNR=4.1							
	0.2nm,0.4s							
ARTI	**Arti**	**43.07**	**331**	P		**P**	**19 34 11.7**	**0.0**
	2.0nm,0.4s,baz=134,slow=7.9,SNR=6.4							
	2.0nm,0.4s							
WRA	**Warramunga Arr**	**57.17**	**135**	P		**P**	**19 35 57.5**	**-1.6**
	0.2nm,0.4s,baz=315,slow=7.0,SNR=5.0							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**59.59**	**138**	P		**P**	**19 36 14.9**	**-1.1**
	0.3nm,0.6s,baz=325,slow=7.4,SNR=5.4							
	0.3nm,0.6s							
FINES	**FINESS Array B**	**60.30**	**329**	P		**P**	**19 36 20.1**	**-0.3**
	5.3nm,1.1s,baz=91,slow=7.0,SNR=1.4							
	5.3nm,1.1s							

NOU 21 19:31:39.3, 15°.74S×166°.82E, h0km, MLv4.3/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.37**	**147**	P		Pn	19 32 20.3	+0.9
RTV	**Rentapao**	**2.56**	**143**	P		Pn	19 32 23.3	+1.3
KOUNC	**Koumac, New Ca**	**5.36**	**206**	P		Pn	19 33 02.5	+1.9
MARNC	**Mare, Loyalty**	**5.82**	**169**	P		Pn	19 33 05.9	-1.1
DZM	**Mont Dzumac**	**6.31**	**183**	P		Pn	19 33 12.9	-0.8
ONTNC	**Ouen Toro**	**6.54**	**183**	P		Pn	19 33 16.6	-0.2
SAVO	**Savo Central**	**9.47**	**313**	P		Pn	19 33 56.7	-0.4

IDC 21 19:35:13.7±3.1, 32°.10S×178°.07W, h0km, mb3.6/2, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=72.5km s-min=37.0km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.30**	**211**	Pn		Pn	19 37 01.3	-0.4
	0.4nm,0.3s,baz=37,slow=5.1,SNR=1.6							
URZ				Sn		Sn	19 38 25.1	-0.2
	1.4nm,0.3s,baz=30,slow=20,SNR=7.8							
	5.8nm,0.8s							
ASAR	**Alice Springs**	**42.99**	**269**	P		P	19 43 15.1	+0.1
	0.2nm,0.3s,baz=111,slow=7.5,SNR=5.1							
	0.2nm,0.3s							
WRA	**Warramunga Arr**	**44.13**	**274**	P		P	19 43 24.2	0.0
	0.5nm,0.4s,baz=113,slow=8.0,SNR=9.9							
	0.5nm,0.4s							
FINES	**FINESS Array B**	**146.71**	**339**	PKPbc		PKPdf	19 54 55.8	+0.7
	4.2nm,1.1s,baz=46,slow=4.0,SNR=6.2							

*THE **21** 20:25:45.5, 37°.N±1°.×2°.1E±°, h0km±1km, M3.4/27, MLh3.4/27*
*IDC **21** 20:25:46.0±13.0, 37°.80N×20°.86E, h0km, mb3.4/5, mbtmp3.4/6, ML2.6/1, Error ellipse: s-maj=268.6km s-min=33.4km az=36.0*
*ATH **21** 20:25:46.1, 37°.38N×20°.62E, h7km±1km, ML3.4/29, Manual Solution by N.Liadopoulou First location: 2020/02/21 20:26:44, This location: 2020/02/21 20:32:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 21 20:25:45.9±1.3, 37°.37N±0°.04×20°.61E±0°.04, h12km±8km, n104, σ1s 13/134, mb3.4/5, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.38**	**29**	P		**Pg**	**20 25 53.7**	**0.0**
LTHK				S		**Sg**	**20 25 59.0**	**+0.3**
LTHK	**Lithakia**	**0.38**	**29**	P		**Pg**	**20 25 53.3**	**-0.3**
LTHK				S		**Sg**	**20 25 58.3**	**-0.4**
ZAK2	**Zakynthos**	**0.48**	**29**	P		**Pg**	**20 25 55.9**	**+0.6**
ZAK2				S		**Sb**	**20 26 03.4**	**+0.1**
KYPS	**Kipseli, Zakin**	**0.48**	**21**	P		**Pg**	**20 25 55.5**	**+0.1**
KYPS				S		**Sg**	**20 26 01.5**	**-0.2**
ORTH	**Orthonies,Zaky**	**0.48**	**9**	P		**Pb**	**20 25 56.3**	**-0.1**
ORTH				S		**Sg**	**20 26 03.1**	**+1.1**
ORTH	**Orthonies,Zaky**	**0.48**	**9**	P		**Pg**	**20 25 56.0**	**+0.6**
ORTH				S		**Sg**	**20 26 02.2**	**+0.3**
CLEM	**Kyllini,Ilia,G**	**0.67**	**39**	P		**Pg**	**20 25 58.9**	**0.0**
CLEM				S		**Sg**	**20 26 07.1**	**-0.6**
RTZL	**Ratzakli, Kefa**	**0.71**	**11**	P		**Pg**	**20 25 59.3**	**-0.5**
RTZL				S		**Sg**	**20 26 10.1**	**+0.8**
RTZL	**Ratzakli, Kefa**	**0.71**	**11**	P		**Pg**	**20 25 59.1**	**-0.7**
RTZL				S		**Sg**	**20 26 09.2**	**+0.0**
LCHA	**Lechaina**	**0.77**	**43**	P		**Pg**	**20 26 00.6**	**-0.2**
LCHA				S		**Sg**	**20 26 10.7**	**-0.2**
KFL1	**Kefalonia,Entr**	**0.80**	**354**	P		**Pg**	**20 26 01.2**	**-0.2**
KFL1				S		**Sg**	**20 26 12.3**	**+0.5**
VLS	**Valsamata**	**0.80**	**359**	P		**Pg**	**20 26 00.7**	**-0.8**
VLS				S		**Sg**	**20 26 12.4**	**+0.3**
VLS	**Valsamata**	**0.80**	**359**	P		**Pg**	**20 26 00.9**	**-0.6**
VLS				S		**Sg**	**20 26 12.4**	**+0.3**
ARG2	**Argostoli**	**0.81**	**353**	P		**Pg**	**20 26 01.6**	**0.0**
ARG2				S		**Sg**	**20 26 13.0**	**+0.8**
ZARO	**Zacharo**	**0.84**	**82**	P		**Pb**	**20 26 02.7**	**+0.3**
ZARO				S		**Sg**	**20 26 13.1**	**0.0**
SMHA	**Samh**	**0.88**	**2**	P		**Pg**	**20 26 01.2**	**-1.7**
SMHA				S		**Sg**	**20 26 13.5**	**-0.9**
DMLN	**Damoulianata-K**	**0.88**	**348**	P		**Pg**	**20 26 02.7**	**-0.4**
DMLN				S		**Sb**	**20 26 15.9**	**+0.9**
DMLN	**Damoulianata-K**	**0.88**	**348**	P		**Pg**	**20 26 12.6**	**+0.5**
DMLN				S		**Sg**	**20 26 15.3**	**+0.7**
AMT	**Artemida-Makis**	**0.89**	**79**	P		**Pg**	**20 26 03.1**	**0.0**
AMT				S		**Sn**	**20 26 17.9**	**+0.7**
AMT	**Artemida-Makis**	**0.89**	**79**	P		**Pg**	**20 26 03.2**	**0.0**
AMT				S		**Sg**	**20 26 14.7**	**-0.2**
RLS	**Riolos of Patr**	**0.97**	**45**	P		**Pg**	**20 26 03.9**	**-0.7**
RLS				S		**Sb**	**20 26 18.5**	**+1.1**
RLS	**Riolos of Patr**	**0.97**	**45**	P		**Pg**	**20 26 03.7**	**-0.9**
RLS				S		**Sg**	**20 26 16.9**	**-0.4**
PYL1	**Pylos**	**0.98**	**117**	P		**Pg**	**20 26 04.9**	**0.0**
AXS	**Araxos**	**1.02**	**36**	P		**Pg**	**20 26 04.8**	**-0.9**
AXS				S		**Sb**	**20 26 20.3**	**+1.3**
AXS	**Araxos**	**1.02**	**36**	P		**Pg**	**20 26 04.6**	**-1.1**
AXS				S		**Sg**	**20 26 18.7**	**-0.4**
PYL	**PYLOS**	**1.03**	**117**	P		**Pg**	**20 26 05.4**	**-0.3**
PYL				S		**Sn**	**20 26 22.0**	**+1.6**
PYL	**PYLOS**	**1.03**	**117**	P		**Pg**	**20 26 05.2**	**-0.5**
VSK1	**VASILIKIADES**	**1.03**	**358**	P		**Pg**	**20 26 05.0**	**-0.9**
VSK1				S		**Sb**	**20 26 20.9**	**+1.6**
MTHA	**Methoni**	**1.04**	**122**	P		**Pb**	**20 26 06.7**	**+0.9**
DRO	**Drossia**	**1.05**	**56**	P		**Pg**	**20 26 05.7**	**-0.6**
DRO	**Drossia**	**1.05**	**56**	P		**Pg**	**20 26 05.5**	**-0.7**
ITM	**Ithomi**	**1.07**	**100**	P		**Pg**	**20 26 06.0**	**-0.6**
ITM				S		**Sn**	**20 26 24.2**	**+2.6**
ITM	**Ithomi**	**1.07**	**100**	P		**Pg**	**20 26 05.7**	**-0.9**
FSK	**Fiskardo**	**1.09**	**358**	P		**Pg**	**20 26 05.7**	**-1.1**
FSK				S		**Sb**	**20 26 22.3**	**+1.5**
FSK	**Fiskardo**	**1.09**	**358**	P		**Pg**	**20 26 05.8**	**-1.1**
MSL1	**Messolongi**	**1.19**	**33**	P		**Pg**	**20 26 08.0**	**-0.9**
EVGI	**Lefkada island**	**1.25**	**2**	P		**Pg**	**20 26 08.6**	**-1.3**
EVGI				S		**Sn**	**20 26 28.0**	**+2.1**
EVGI	**Lefkada island**	**1.25**	**2**	P		**Pg**	**20 26 08.8**	**-1.1**
PATC	**Patra C**	**1.28**	**45**	P		**Pg**	**20 26 09.8**	**-0.7**
UPR	**University Cam**	**1.30**	**45**	P		**Pg**	**20 26 10.5**	**-0.5**
DRAG	**Dragano-Lefkad**	**1.31**	**359**	P		**Pg**	**20 26 09.8**	**-1.4**
DRAG	**Dragano-Lefkad**	**1.31**	**359**	P		**Pg**	**20 26 09.7**	**-1.4**
NYDR	**Nydri-Lefkada**	**1.34**	**3**	P		**Pg**	**20 26 10.4**	**-1.3**
NYDR	**Nydri-Lefkada**	**1.34**	**3**	P		**Pg**	**20 26 10.6**	**-1.1**
AGRP	**Agrapidokambos**	**1.35**	**41**	P		**Pg**	**20 26 10.7**	**-1.2**
KLV1	**Kalavrita**	**1.36**	**61**	P		**Pg**	**20 26 11.2**	**-1.0**
KLV	**Kalavryta, Ach**	**1.40**	**61**	P		**Pg**	**20 26 11.6**	**-1.2**
KLV				S		**Sn**	**20 26 33.4**	**+3.7**
KLV	**Kalavryta, Ach**	**1.40**	**61**	P		**Pg**	**20 26 11.3**	**-1.5**
VLX	**Vlachokerasia**	**1.41**	**90**	P		**Pg**	**20 26 12.3**	**-0.9**
ZIRI	**Ziria, Aigiali**	**1.41**	**48**	P		**Pn**	**20 26 12.1**	**+0.6**
LKD2	**Lefkada island**	**1.42**	**2**	P		**Pn**	**20 26 11.5**	**0.0**
LKD2	**Lefkada island**	**1.42**	**2**	P		**Pn**	**20 26 11.5**	**0.0**
PVO	**Paravola**	**1.44**	**30**	P		**Pn**	**20 26 12.6**	**+0.8**
PVO	**Paravola**	**1.44**	**30**	P		**Pn**	**20 26 12.3**	**+0.5**
TSLK	**Tsoukalades, L**	**1.45**	**2**	P		**Pg**	**20 26 13.7**	**-0.1**
TSLK	**Tsoukalades, L**	**1.45**	**2**	P		**Pn**	**20 26 13.0**	**+1.1**
AGEO	**AgiosGiorgios,**	**1.46**	**52**	P		**Pn**	**20 26 12.7**	**+0.6**
EFP	**Efpalio**	**1.47**	**44**	P		**Pn**	**20 26 12.8**	**+0.5**
EFP	**Efpalio**	**1.47**	**44**	P		**Pn**	**20 26 12.8**	**+0.5**
TEME	**Temeni, Aigial**	**1.47**	**54**	P		**Pn**	**20 26 12.9**	**+0.7**
MG00	**Magoula, Dorid**	**1.49**	**45**	P		**Pn**	**20 26 12.5**	**+0.1**
GUR	**Goura**	**1.49**	**67**	P		**Pn**	**20 26 13.1**	**+0.5**
GUR	**Goura**	**1.49**	**67**	P		**Pn**	**20 26 12.8**	**+0.1**
TRIZ	**Trizonia**	**1.53**	**49**	P		**Pn**	**20 26 14.0**	**+0.9**
SERG	**Sergoula**	**1.55**	**47**	P		**Pn**	**20 26 13.8**	**+0.5**
SERG	**Sergoula**	**1.55**	**47**	P		**Pn**	**20 26 13.9**	**+0.5**
KALE	**Kalithea**	**1.58**	**50**	P		**Pn**	**20 26 14.9**	**+1.0**
KALE	**Kalithea**	**1.58**	**50**	P		**Pn**	**20 26 14.8**	**+1.0**
ANX	**Ano Chora**	**1.60**	**40**	P		**Pn**	**20 26 15.0**	**+0.8**
ANX	**Ano Chora**	**1.60**	**40**	P		**Pn**	**20 26 14.8**	**+0.6**
AMPL	**Ampelaki**	**1.62**	**17**	P		**Pn**	**20 26 15.3**	**+0.9**
AMPL	**Ampelaki**	**1.62**	**17**	P		**Pn**	**20 26 14.8**	**+0.5**
EVR	**Evrytania**	**1.81**	**31**	P		**Pn**	**20 26 18.5**	**+1.5**
VLI	**Veliai**	**1.98**	**109**	P		**Pb**	**20 26 22.1**	**+0.3**
VLI	**Veliai**	**1.98**	**109**	P		**Pn**	**20 26 20.2**	**+1.0**
LTK	**Loutraki**	**1.98**	**70**	P		**Pn**	**20 26 20.6**	**+1.3**
LTK	**Loutraki**	**1.98**	**70**	P		**Pn**	**20 26 20.2**	**+0.9**
MAKR	**Makrakomi, Fth**	**2.03**	**36**	P		**Pb**	**20 26 23.1**	**+0.3**
MAKR	**Makrakomi, Fth**	**2.03**	**36**	P		**Pn**	**20 26 21.7**	**+1.6**
TETR	**Tetrakomo, Epi**	**2.04**	**15**	P		**Pn**	**20 26 22.3**	**+2.1**
TETR	**Tetrakomo, Epi**	**2.04**	**15**	P		**Pn**	**20 26 21.6**	**+1.4**
AGG	**Agios Georgios**	**2.13**	**39**	P		**Pn**	**20 26 23.6**	**+2.2**
AGG	**Agios Georgios**	**2.13**	**39**	P		**Pn**	**20 26 22.9**	**+1.5**
AXAR	**Agios Charalam**	**2.14**	**49**	P		**Pn**	**20 26 23.6**	**+2.2**
AXAR	**Agios Charalam**	**2.14**	**49**	P		**Pn**	**20 26 22.8**	**+1.4**
MET2	**Kameni Chora,**	**2.18**	**83**	P		**Pn**	**20 26 23.2**	**+1.2**
PRMD	**Pramanda**	**2.19**	**10**	P		**Pn**	**20 26 23.5**	**+1.3**
MET5	**Makryloggos,Me**	**2.20**	**83**	P		**Pn**	**20 26 23.1**	**+0.8**
MET1	**Methana Town,**	**2.22**	**84**	P		**Pn**	**20 26 23.2**	**+0.6**
KTHA	**Kythira Island**	**2.26**	**119**	P		**Pn**	**20 26 25.0**	**+1.8**
VIL2	**Platees**	**2.27**	**68**	P		**Pn**	**20 26 24.7**	**+1.4**
LKR	**Lokris**	**2.28**	**55**	P		**Pn**	**20 26 25.0**	**+1.6**
LKR	**Lokris**	**2.28**	**55**	P		**Pn**	**20 26 24.8**	**+1.4**
ATAL	**Atalanti**	**2.32**	**55**	P		**Pn**	**20 26 25.7**	**+1.8**
ATAL	**Atalanti**	**2.32**	**55**	P		**Pn**	**20 26 25.2**	**+1.3**
THL	**Klokotos Trika**	**2.45**	**26**	P		**Pn**	**20 26 26.8**	**+1.1**
OHR	**Ohrid**	**3.74**	**2**	*i* Pn		**Pn**	**20 26 47.3**	**+3.8**
VAY	**Valandovo**	**4.23**	**21**	*i* Pn		**Pn**	**20 26 51.2**	**+1.1**
GERES	**GERESS Array B**	**12.52**	**339**	Pn		**Pn**	**20 28 42.2**	**-1.7**
	baz=152,slow=14,SNR=1.6							
	0.1nm,0.4s							
FINES	**FINESS Array B**	**24.34**	**6**	P		**P**	**20 31 01.6**	**-1.6**
	3.6nm,0.9s,baz=187,slow=11,SNR=4.5							
	3.6nm,0.9s							
KURBB	**Kurchatov Arra**	**42.66**	**53**	P		**P**	**20 33 40.2**	**-1.9**
	0.3nm,0.5s,baz=275,slow=8.2,SNR=2.3							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**45.67**	**58**	P		**P**	**20 34 04.8**	**-1.6**
	0.2nm,0.4s,baz=274,slow=7.5,SNR=6.9							
	0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**46.18**	**48**	P		**P**	**20 34 08.7**	**-1.6**
	0.3nm,0.4s,baz=270,slow=7.4,SNR=1.8							
	0.3nm,0.4s							
SONM	**Songino Array**	**60.92**	**50**	P		**P**	**20 35 58.2**	**-0.4**
	0.1nm,0.6s,baz=284,slow=5.8,SNR=1.6							
	0.1nm,0.6s							

*CATAC **21** 20:48:18.2±0.4, 12°.N±2°.×8°.8W±°, h22km±2km, M3.6/18, MLv3.6/18, Error ellipse: s-maj=4.2km s-min=2.0km az=27.7, confirmed*
*SNET **21** 20:48:18.9±1.4, 12°.19N×87°.76W, h7km, ML3.4, Presumed earthquake*

**ISC 21 20:48:17.4±1.4, 12°.16N±0°.05×87°.74W±0°.03, h19km±3km, n50, σ0s 80/81,

PR7R *i* P **Pn** **20 59 56.2 +2.9**
PR7R *i* S **Sn** **21 01 05.8 +2.3**
PR7R *i* S **Sn** **21 01 05.8 +2.3**
PR7R *i* S **Sn** **21 01 05.8 +2.3**
PR7R *i* AML AML 21 01 09.7
159nm,0.7s
SVE **Sverdlovsk** **6.47 230** *i* P **Pn** **20 59 57.7 -0.3**
SVE *i* S **Sn** **21 01 09.7 -2.1**
SVE *i* S **Sn** **21 01 09.7 -2.1**
SVE *i* AML AML 21 02 03.9
63nm,1.0s
BRK30 **Berezniki,** **6.65 259** *i* P **Pg** **21 00 29.7 -0.3**
BRK30 *i* P **Pg** **21 00 29.7 -0.3**
BRK30 *i* S **Sb** **21 01 44.3 +6.5**
PR1R **Pomanovo** **6.77 257** *i* P **Pn** **21 00 02.8 +0.8**
PR1R *i* S **Sn** **21 01 18.6 -0.4**
PR1R *i* S **Sn** **21 01 18.6 -0.4**
PR1R *i* S **Sn** **21 01 18.6 -0.4**
PR1R *i* AML AML 21 02 27.3
286nm,1.8s
PR0R **Verkhnechusovs** **7.04 249** *i* P **Pn** **21 00 10.2 +4.4**
PR0R *i* S **Sn** **21 01 26.7 +0.9**
PR0R *i* S **Sn** **21 01 26.7 +0.9**
PR0R *i* S **Sn** **21 01 26.7 +0.9**
PR0R *i* AML AML 21 02 24.6
324nm,0.8s
PR3R **Kungur** **7.53 244** *i* P **Pn** **21 00 11.2 -1.2**
PR3R *i* S **Sn** **21 01 34.9 -2.9**
PR3R *i* S **Sn** **21 01 34.9 -2.9**
PR3R *i* S **Sn** **21 01 34.9 -2.9**
PR3R *i* AML AML 21 02 41.5
89nm,0.8s
PR6R **Ekimyata** **7.54 251** *i* P **Pn** **21 00 12.3 -0.2**
PR6R *i* S **Sn** **21 01 33.9 -4.1**
PR6R *i* S **Sn** **21 01 33.9 -4.1**
PR6R *i* AML AML 21 02 05.0
27nm,0.4s
ARTI **Arti** **7.65 235** Pn **Pn** **21 00 10.9 -3.2**
0.7nm,0.3s,baz=34,slow=9.2,SNR=8.7
ARTI Pg **Pb** **21 00 38.1 +2.8**
1.1nm,0.3s,baz=32,slow=16,SNR=6.8
ARTI Sn **Sn** **21 01 38.4 -2.2**
2.1nm,0.3s,baz=108,slow=23,SNR=7.0
ARTI Lg Lg 21 02 22.2
1.7nm,0.3s,baz=35,slow=19,SNR=3.6
ARTI LR LR 21 03 36.5
comp=Z,262nm,21.0s,baz=21,slow=42
1.6nm,0.4s
ARTI **Arti** **7.65 235** *i* P **Pn** **21 00 13.3 -0.8**
3.8nm,0.7s
ARTI *i* S **Sn** **21 01 39.4 -1.3**
ARTI *i* S **Sn** **21 01 39.4 -1.3**
28nm,0.3s
ARTI *i* S **Sn** **21 01 39.4 -1.3**
ARTI *i* AML AML 21 02 48.7
118nm,1.0s
PR4R **Vlasy** **7.86 250** *i* P **Pn** **21 00 14.9 -2.1**
PR4R *i* S **Sn** **21 01 41.3 -4.6**
PR4R *i* S **Sn** **21 01 41.3 -4.6**
PR4R *i* S **Sn** **21 01 41.3 -4.6**
PR4R *i* AML AML 21 01 45.1
118nm,0.8s
BRVK **Borovoye** **8.30 177** ⇑Pn **Pn** **21 00 24.9 +1.8**
BRVK ⇓Sn **Sn** **21 01 55.0 -1.7**
16nm,0.9s
BVA0 **Borovoye Array** **8.33 177** ⇑Pn **Pn** **21 00 25.6 +2.0**
2.5nm,0.6s,baz=355,slow=15
BVA0 ⇑Sn **Sn** **21 01 56.3 -1.3**
20nm,0.8s
BVAR **Borovoye Array** **8.33 177** Pn **Pn** **21 00 22.9 -0.6**
0.3nm,0.3s,baz=1.5,slow=14,SNR=30
BVAR Sn **Sn** **21 01 59.3 +1.7**
0.7nm,0.3s,baz=33,slow=22,SNR=9.1
BVAR Lg Lg 21 02 50.9
baz=20,slow=30
BVAR LR LR 21 04 25.8
comp=Z,185nm,18.7s,baz=355,slow=43
2.8nm,0.4s
KIRV **Kirov** **10.49 264** Pn Pn 21 00 47.4 -5.7
0.6nm,0.3s,baz=60,slow=20,SNR=2.0
KIRV Sn Sn 21 02 40.3 -10
0.8nm,0.3s,baz=108,slow=20,SNR=1.2
KIRV Lg Lg 21 03 52.5
0.7nm,0.3s,baz=3.4,slow=19,SNR=2.0
4.4nm,0.5s
ZAA0 **Zalesovo Array** **10.97 126** ⇑Pn **Pn** **21 01 02.5 +2.9**
3.0nm,0.9s,baz=317,slow=14
ZAA0 ⇑Sn **Sn** **21 03 04.3 +2.0**
4.9nm,0.7s
ZALV **Zalesovo Beam** **10.97 126** Pn **Pn** **21 01 02.1 +2.5**
0.8nm,0.3s,baz=320,slow=15,SNR=10.0
ZALV Sn **Sn** **21 03 01.8 -0.4**
2.1nm,0.3s,baz=308,slow=22,SNR=8.8
ZALV Lg Lg 21 04 25.0
baz=318,slow=25
ZALV LR LR 21 05 14.7
comp=Z,74nm,20.6s,baz=324,slow=37
1.3nm,0.3s
KURK **Kurchatov** **11.75 151** ⇑Pn **Pn** **21 01 10.7 +0.5**
2.1nm,0.8s
KURK ⇓Sn **Sn** **21 03 22.5 +1.2**
14nm,0.8s
KURBB **Kurchatov Arra** **11.81 151** Pn **Pn** **21 01 11.1 0.0**
0.2nm,0.3s,baz=342,slow=12,SNR=14
KURBB Sn **Sn** **21 03 21.1 -1.7**
0.6nm,0.3s,baz=339,slow=23,SNR=9.7
KURBB LR LR 21 07 00.8
comp=Z,203nm,18.6s,baz=188,slow=43
1.5nm,0.5s
KURBB **Kurchatov Arra** **11.81 151** ⇑Pn **Pn** **21 01 12.3 +1.2**
5.4nm,0.7s
KURBB ⇓Sn **Sn** **21 03 22.7 -0.1**
37nm,0.6s
AKTO **Aktyubinsk** **12.69 216** Pn **Pn** **21 01 19.6 -3.5**
0.1nm,0.3s,baz=37,slow=17,SNR=8.3
AKTO Sn **Sn** **21 03 40.8 -3.5**
0.9nm,0.3s,baz=39,slow=17,SNR=5.7
AKTO Lg Lg 21 05 03.4
0.1nm,0.3s,baz=320,slow=20,SNR=1.3
3.0nm,0.8s
AKTO **Aktyubinsk** **12.69 216** ⇑Pn **Pn** **21 01 23.0 -0.1**
3.0nm,0.9s
AKTO ⇓Sn **Sn** **21 03 42.4 -1.9**
13nm,1.4s
AB31 **Akbulak array** **13.28 209** ⇑Pn **Pn** **21 01 31.5 +0.4**
0.8nm,0.5s
AB31 ⇑Sn **Sn** **21 03 53.6 -5.0**
5.8nm,0.6s
BELG **Belogornoye** **14.93 243** Pn **Pn** **21 01 50.7 -2.9**
0.2nm,0.3s,baz=120,slow=14,SNR=2.0
BELG Sn Sn 21 04 28.4 -10
0.2nm,0.3s,baz=10.0,slow=15,SNR=2.5
BELG Lg Lg 21 06 08.9
baz=172,slow=24
4.9nm,0.9s
MAKZ **Makanchi** **16.20 148** ⇓Pn **P** **21 02 12.9 -0.6**
12nm,1.1s
MAKZ ⇑Sn **Sn** **21 05 09.8 -0.1**
11nm,0.7s
MK31 **Makanchi Array** **16.30 148** Pn **P** **21 02 13.8 -0.8**
4.4nm,0.6s,baz=349,slow=12,SNR=73
MK31 ⇓Sn **Sn** **21 05 13.5 +1.3**
3.0nm,0.5s,baz=341,slow=24,SNR=3.6
MKAR **Makanchi Array** **16.30 148** Pn **Pn** **21 02 11.8 +0.2**
0.9nm,0.3s,baz=344,slow=12,SNR=43
MKAR Sn **Sn** **21 05 10.9 -1.3**
1.9nm,0.3s,baz=339,slow=20,SNR=13
MKAR LR LR 21 09 36.0
comp=Z,156nm,18.3s,baz=246,slow=41
5.6nm,0.8s
KK31 **Karatay Array** **18.26 178** ⇑Pn **P** **21 02 36.2 0.0**
0.7nm,0.4s,baz=351,slow=18,SNR=6.3
KK31 ⇑Sn **Sn** **21 05 58.9 -0.9**
3.9nm,0.8s,baz=25,slow=24,SNR=3.5
AAK **Ala-Archa** **18.94 169** ⇓Pn **Pn** **21 02 45.8 +1.2**
3.1nm,1.1s
ARCES **ARCESS Array B** **19.65 313** P **P** **21 02 47.6 -3.7**
0.1nm,0.3s,baz=78,slow=12,SNR=4.4
4.0nm,1.0s
FINES **FINESS Array B** **20.58 290** P **P** **21 02 58.2 -3.2**
5.4nm,1.1s,baz=64,slow=8.7,SNR=4.0
5.4nm,1.1s
SPITS **Spitsbergen Ar** **23.56 336** P **P** **21 03 32.5 -0.3**
7.0nm,1.0s,baz=166,slow=16,SNR=1.5
7.0nm,1.0s
KBZ **Khabaz** **23.70 234** P **P** **21 03 35.2 +0.8**
1.2nm,1.0s,baz=16,slow=2.2,SNR=3.7

1.2nm,1.0s
AKASG **Malin Array Be** **24.55 263** P **P** **21 03 41.8 -0.5**
0.3nm,0.4s,baz=39,slow=9.1,SNR=4.0
AKASG LR LR 21 13 40.2
comp=Z,172nm,18.6s,baz=360,slow=38
0.3nm,0.4s
SONM **Songino Array** **24.81 106** P **P** **21 03 46.3 +1.4**
0.7nm,1.0s,baz=305,slow=10,SNR=5.0
GNI **Garni** **26.11 227** LR LR 21 17 29.8
comp=Z,158nm,18.1s,baz=17,slow=44
HFS **Hagfors** **26.68 293** P **P** **21 03 58.5 -3.0**
5.4nm,1.0s,baz=83,slow=6.1,SNR=2.6
5.4nm,1.0s
YAK **Yakutsk** **27.61 62** LR LR 21 16 25.1
comp=Z,101nm,19.6s,baz=300,slow=39
KLR **Kul'dur** **35.96 81** LR LR 21 21 34.0
comp=Z,56nm,20.7s,baz=318,slow=39
MA2 **Magadan** **37.64 55** LR LR 21 23 26.0
comp=Z,100nm,18.9s,baz=322,slow=40
RES **Resolute Bay** **43.87 354** LR LR 21 28 00.8
comp=Z,55nm,19.8s,baz=22,slow=41
BBTS **Babate** **75.43 274** LR LR 21 44 30.6
comp=Z,216nm,20.1s,baz=260,slow=37

IDC ***21*** *20:59:56.7±1.3, 10°.95S×66°.55E, h0km, mb3.9/6, mbtmp3.9/6, MS3.8/33, Error ellipse: s-maj=47.9km s-min=27.0km az=45.0*
NEIC ***21*** *20:59:58.3±1.7, 10°.9S±0°.1×66°.6E±0°.1, h10km±1km, mb4.4/26, Error ellipse: s-maj=23.0km s-min=16.8km az=156.0*
GCMT ***21*** *20:59:59.3±0.4, 10°.73S±0°.05×66°.44E±0°.03, h21km±1km, MW4.8/75, Moment Tensor Solution. s12,c13; s75,c90; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.99±.20; Mθθ=0.53±.11; Mϕϕ=1.46±.12; Mrθ=0.59±.25; Mϕθ=-0.36±.08; Mϕr=0.92±.19; Best double couple: Mo=2.04900×10¹⁶ NP1:ϕs=330.00000°, δ35.00000°, λ-117.00000°. NP2: ϕs=182.00000°, δ59.00000°, λ-72.00000°. Principal axes: T 1.7280, Plg12.0000°, Azm259.0000°; N 0.6390, Plg15.0000°, Azm353.0000°; P -2.3710, Plg71.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 20:59:59.4±0.7, 10°.9S±0°.1×66°.56E±0°.10, h23km, n72, σ0ˢ96/37, mb4.4/18, MS3.8/33, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**6.76**	**60**	Pn	**Pn**		**Pn**	**21 01 35.8**	**-1.5**
PALK	**Pallekele**	**22.87**	**39**	LR	LR		LR	21 12 06.7	
	comp=Z,51nm,18.4s,baz=208,slow=32								
FURI	**Furi**	**33.99**	**304**	LR	LR		LR	21 20 04.2	
	comp=Z,79nm,18.6s,baz=76,slow=36								
MBAR	**Mbarara**	**37.02**	**284**	LR	LR		LR	21 21 06.6	
	comp=Z,110nm,18.1s,baz=120,slow=34								
H04N2	**CROZET ISLANDS**	**37.35**	**197**	T	T		T	21 47 03.1	
	baz=26,slow=75,SNR=7.5								
H04N1	**CROZET ISLANDS**	**37.36**	**197**	T	T		T	21 47 09.7	
	baz=26,slow=75,SNR=10								
H04N3	**CROZET ISLANDS**	**37.37**	**197**	T	T		T	21 47 06.1	
	baz=26,slow=75,SNR=9.2								
LSZ	**Lusaka**	**37.60**	**259**	LR	LR		LR	21 20 42.1	
	comp=Z,154nm,21.0s,baz=122,slow=33								
LSZ	**Lusaka**	**37.60**	**259**	P	**P**		**P**	**21 07 11.5**	**-1.4**
LSZ				IAmb	IAmb		IAmb	21 07 16.0	
	comp=Z,8.8nm,1.2s								
MREMI	**Moremi**	**39.11**	**248**	P	**P**		**P**	**21 07 25.4**	**-0.1**
LEM	**Lembang**	**40.74**	**88**	LR	LR		LR	21 23 30.1	
	comp=Z,108nm,18.6s,baz=208,slow=35								
BRDH	**Bradhala**	**41.42**	**36**	LR	LR		LR	21 26 37.8	
	comp=Z,72nm,18.7s,baz=208,slow=39								
BOSA	**Boshof**	**42.44**	**239**	LR	LR		LR	21 22 47.3	
	comp=Z,109nm,19.3s,baz=86,slow=32								
CMAR	**Chiang Mai Arr**	**43.24**	**48**	P	**P**		**P**	**21 08 00.9**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=232,slow=9.1,SNR=4.6								
CMAR				LR	LR		LR	21 26 00.1	
	comp=Z,43nm,18.4s,baz=225,slow=36								
	comp=Z,0.4nm,0.3s								
CMAR	**Chiang Mai Arr**	**43.24**	**48**	P	**P**		**P**	**21 07 59.0**	**-0.4**
EVN	**Everest**	**43.30**	**27**	P	**P**		**P**	**21 08 00.1**	**-0.3**
EVN				IAmb	IAmb		IAmb	21 08 21.0	
	comp=Z,5.1nm,1.1s								
SHL	**Shillong**	**43.82**	**34**	P	**P**		**P**	**21 08 04.8**	**+0.8**
SHL				IAmb	IAmb		IAmb	21 08 14.1	
	comp=Z,9.3nm,1.4s								
QNGWA	**Qangwa**	**44.52**	**253**	P	**P**		**P**	**21 08 08.2**	**-1.6**
QNGWA				IAmb	IAmb		IAmb	21 08 09.2	
	comp=Z,7.9nm,1.4s								
HRA	**Herat**	**45.19**	**355**	P	**P**		**P**	**21 08 14.0**	**-1.0**
KBL	**Kabul**	**45.22**	**3**	P	**P**		**P**	**21 08 16.0**	**+0.8**
LSA	**Lhasa**	**46.78**	**30**	P	**P**		**P**	**21 08 27.4**	**-0.5**
LSA				IAmb	IAmb		IAmb	21 08 46.3	
	comp=Z,6.1nm,1.5s								
SUR	**Sutherland**	**47.17**	**236**	LR	LR		LR	21 25 51.3	
	comp=Z,131nm,19.1s,baz=78,slow=33								
TSUM	**Tsumeb**	**47.89**	**254**	LR	LR		LR	21 26 45.4	
	comp=Z,114nm,19.9s,baz=86,slow=34								
H01W3	**Cape Leeuwin H**	**49.35**	**127**	T	T		T	22 01 41.0	
	baz=288,slow=75,SNR=10.0								
H01W2	**Cape Leeuwin H**	**49.35**	**127**	T	T		T	22 01 36.3	
	baz=288,slow=75,SNR=49								
H01W1	**Cape Leeuwin H**	**49.37**	**127**	T	T		T	22 01 45.3	
	baz=288,slow=75,SNR=13								
EIL	**Elat**	**50.52**	**324**	LR	LR		LR	21 28 23.8	
	comp=Z,76nm,18.5s,baz=252,slow=34								
BTK	**Batken**	**50.82**	**4**	P	**P**		**P**	**21 08 58.5**	**+0.3**
BTK				IAmb	IAmb		IAmb	21 09 15.9	
	comp=Z,4.4nm,1.1s								
KAPI	**Kappang**	**52.95**	**88**	LR	LR		LR	21 30 38.7	
	comp=Z,56nm,18.6s,baz=228,slow=35								
BATI	**Baumata**	**56.07**	**95**	LR	LR		LR	21 30 11.5	
	comp=Z,106nm,20.8s,baz=258,slow=32								
MAW	**Mawson**	**56.72**	**182**	LR	LR		LR	21 29 56.6	
	comp=Z,90nm,18.3s,baz=81,slow=32								
FITZ	**Fitzroy Crossi**	**57.46**	**105**	LR	LR		LR	21 30 05.7	
	comp=Z,88nm,21.3s,baz=224,slow=32								
EDA	**Edea**	**57.99**	**281**	P	**P**		**P**	**21 09 50.7**	**-0.1**
EDA				IAmb	IAmb		IAmb	21 09 53.5	
	comp=Z,7.4nm,1.3s								
ARG	**Arkhangelos**	**59.20**	**324**	P	**P**		**P**	**21 09 59.5**	**+0.7**
FORT	**Forrest**	**60.08**	**119**	P	**P**		**P**	**21 10 06.1**	**+1.0**
AB31	**Akbulak array**	**60.15**	**355**	P	**P**		**P**	**21 10 04.3**	**-0.8**
AB31				IAmb	IAmb		IAmb	21 10 20.1	
	comp=Z,5.4nm,1.4s								
ABKAR	**Akbulak array**	**60.15**	**355**	P	**P**		**P**	**21 10 04.0**	**-1.1**
KNMB	**Chin-men Tao**	**61.57**	**55**	P	**P**		**P**	**21 10 14.4**	**-0.9**
TWG	**Pinlang**	**63.01**	**57**	P	**P**		**P**	**21 10 24.2**	**-0.8**
BVAR	**Borovoye Array**	**63.72**	**3**	LR	LR		LR	21 37 16.0	
	comp=Z,80nm,18.0s,baz=295,slow=35								
BORK	**Borovoye**	**63.74**	**3**	P	**P**		**P**	**21 10 30.1**	**+0.9**
BORK				IAmb	IAmb		IAmb	21 10 38.8	
	comp=Z,5.1nm,1.3s								
SIJI	**Sorong**	**65.01**	**86**	LR	LR		LR	21 38 50.5	
	comp=Z,34nm,18.0s,baz=215,slow=36								
ASAR	**Alice Springs**	**65.06**	**111**	P	**P**		**P**	**21 10 39.1**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=275,slow=5.7,SNR=14								
ASAR				LR	LR		LR	21 35 38.6	
	comp=Z,59nm,19.0s,baz=266,slow=33								
	comp=Z,0.9nm,0.7s								
ASAR	**Alice Springs**	**65.06**	**111**	P	**P**		**P**	**21 10 37.0**	**-1.5**
WRA	**Warramunga Arr**	**65.61**	**107**	P	**P**		**P**	**21 10 43.2**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=274,slow=5.5,SNR=12								
	comp=Z,1.4nm,0.7s								
WRA	**Warramunga Arr**	**65.61**	**107**	P	**P**		**P**	**21 10 42.6**	**+0.5**
WB0	**Warramunga Arr**	**65.67**	**107**	P	**P**		**P**	**21 10 41.9**	**-0.6**
ZAA0	**Zalesovo Array**	**66.40**	**12**	P	**P**		**P**	**21 10 47.4**	**+0.9**
ZAA0				IAmb	IAmb		IAmb	21 11 15.7	
	comp=Z,4.5nm,1.4s								
ZALV	**Zalesovo Beam**	**66.40**	**12**	LR	LR		LR	21 35 35.7	
	comp=Z,53nm,19.1s,baz=272,slow=32								
ZALV	**Zalesovo Beam**	**66.40**	**12**	P	**P**		**P**	**21 10 47.1**	**+0.6**
MLR	**Muntele Rosu**	**66.96**	**330**	P	**P**		**P**	**21 10 51.0**	**+0.6**
MLR				IAmb	IAmb		IAmb	21 11 19.8	
	comp=Z,6.9nm,1.4s								
SONM	**Songino Array**	**68.30**	**28**	P	**P**		**P**	**21 10 59.7**	**+0.9**
	comp=Z,1.8nm,0.9s,baz=219,slow=6.6,SNR=13								
SONM				LR	LR		LR	21 39 57.2	
	comp=Z,165nm,20.6s,baz=204,slow=35								
	comp=Z,1.8nm,0.9s								
SONM	**Songino Array**	**68.30**	**28**	P	**P**		**P**	**21 10 59.0**	**+0.2**
SONM				IAmb	IAmb		IAmb	21 11 02.2	
	comp=Z,2.0nm,0.9s								
BJT	**Baijiatuau**	**68.36**	**39**	P	**P**		**P**	**21 10 59.5**	**+0.3**
BJT				IAmb	IAmb		IAmb	21 11 01.3	
	comp=Z,3.0nm,0.9s								
BURAR	**Bucovina Array**	**68.84**	**331**	P	**P**		**P**	**21 11 02.6**	**+0.5**
BUR08	**Bucovina Ar. S**	**68.87**	**331**	P	**P**		**P**	**21 11 01.8**	**-0.5**
TLY	**Talaya**	**70.05**	**24**	LR	LR		LR	21 41 45.8	
	comp=Z,78nm,18.1s,baz=213,slow=36								
JOW	**Kunigami**	**70.62**	**57**	LR	LR		LR	21 41 13.8	
	comp=Z,86nm,20.5s,baz=286,slow=35								
STKA	**Stephens Creek**	**71.68**	**120**	P	**P**		**P**	**21 11 20.4**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=266,slow=9.4,SNR=3.1								
STKA				LR	LR		LR	21 38 56.4	
	comp=Z,58nm,20.6s,baz=205,slow=33								
	comp=Z,1.5nm,0.9s								
DBIC	**Dimbokro**	**73.18**	**280**	LR	LR		LR	21 41 49.1	
	comp=Z,115nm,20.7s,baz=178,slow=34								
KSRS	**Korea Array**	**74.86**	**46**	LR	LR		LR	21 45 33.6	
	comp=Z,61nm,18.2s,baz=245,slow=36								
JNU	**Nakatsue**	**75.21**	**51**	LR	LR		LR	21 45 20.3	
	comp=Z,68nm,18.8s,baz=247,slow=36								
CTA	**Charters Tower**	**76.75**	**108**	LR	LR		LR	21 43 14.5	
	comp=Z,35nm,22.0s,baz=224,slow=34								
MJAR	**Matsushiro Arr**	**82.07**	**51**	LR	LR		LR	21 48 31.0	
	comp=Z,50nm,19.5s,baz=206,slow=36								
ESDC	**Sonseca Array**	**82.32**	**313**	P	**P**		**P**	**21 12 20.4**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=111,slow=4.4,SNR=5.7								
	comp=Z,0.6nm,0.8s								
KLR	**Kul'dur**	**82.61**	**37**	LR	LR		LR	21 55 38.5	
	comp=Z,20nm,18.4s,baz=299,slow=40								
ASAJ	**Asahikawa**	**87.67**	**44**	LR	LR		LR	21 52 36.4	
	comp=Z,57nm,18.2s,baz=337,slow=36								
TIXI	**Tiksi**	**91.90**	**16**	LR	LR		LR	21 54 47.7	
	comp=Z,57nm,18.7s,baz=290,slow=36								
MA2	**Magadan**	**96.36**	**31**	LR	LR		LR	21 57 10.7	
	comp=Z,37nm,18.6s,baz=305,slow=36								
PETK	**Petropavlovsk-**	**99.28**	**38**	LR	LR		LR	22 00 41.4	
	comp=Z,47nm,19.6s,baz=306,slow=37								
PDAR	**Pinedale Array**	**148.04**	**355**	PKPbc			**PKiKP**	**21 19 44.5**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=9.1,slow=2.4,SNR=3.2								
NVAR	**Mina Array Bea**	**152.21**	**8**	PKPbc			**PKiKP**	**21 19 56.3**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=342,slow=5.4,SNR=4.1								

IDC ***21*** *21:02:17.0±1.9, 31°.15N×129°.55E, h192km±17km, mb2.9/2, mbtmp3.6/5, Error ellipse: s-maj=87.3km s-min=20.0km az=109.0*
JMA ***21*** *21:02:18.7±0.2, 30°.9N±0°.5×13°.0E±°, h172km±1km, MV2.9/30, NEAR TANEGASHIMA ISLAND*
ISC 21 21:02:18.5±1.2, 30°.88N±0°.06×130°.0E±0°.1, h155km, n15, σ1ˢ93/18, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JSU	**Suzuyama**	**0.76**	**35**	P			**Pn**	**21 02 43.7**	**+1.8**
JYAK	**Yakushimahirau**	**0.80**	**143**	P			**Pn**	**21 02 43.9**	**+1.7**
JYAK				*e*S			**Sn**	**21 03 02.4**	**+2.1**
JSJ	**Shimokoshiki**	**0.82**	**346**	P			**Pn**	**21 02 44.2**	**+1.8**
JTSR	**Tashiro 2**	**0.88**	**71**	P			**Pn**	**21 02 43.7**	**+0.8**
JTSR				*e*S			**Sn**	**21 03 02.8**	**+1.4**
JTN	**Tanegashima 3**	**0.92**	**104**	*e*P			**Pn**	**21 02 44.2**	**+1.1**
JMTN	**Minamitane**	**0.95**	**120**	P			**Pn**	**21 02 45.0**	**+1.7**
JNN	**Nakanoshima**	**1.04**	**184**	P			**Pn**	**21 02 46.2**	**+2.1**
JTZ	**Takazaki**	**1.41**	**43**	P			**Pn**	**21 02 48.4**	**+0.9**
JTZ				*e*S			**Sn**	**21 03 11.5**	**+1.7**
JIU3	**Izumi3**	**1.82**	**24**	P			**Pn**	**21 02 53.1**	**+1.2**
JTAJ	**Takarajima**	**1.84**	**201**	*e*P			**Pn**	**21 02 54.3**	**+2.1**
JNU	**Nakatsue**	**2.37**	**19**	P			**Pn**	**21 02 59.2**	**+0.9**
	20nm,0.4s,baz=217,slow=11,SNR=35								
JNU				S			**Sn**	**21 03 29.8**	**+0.7**
	20nm,0.8s,baz=65,slow=10.0,SNR=6.1								
JOW	**Kunigami**	**4.29**	**200**	P			**Pn**	**21 03 23.6**	**+0.9**
	6.0nm,0.8s,baz=86,slow=21,SNR=8.0								
JOW				S			Sn	21 04 02.3	-10
	13nm,0.3s,baz=116,slow=27,SNR=9.6								
USRK	**Ussuriysk Ar.**	**13.39**	**6**	P			Pn	21 05 15.8	-6.5
	4.3nm,0.8s,baz=172,slow=12,SNR=5.8								
WRA	**Warramunga Arr**	**50.71**	**175**	P			**P**	**21 10 59.1**	**-3.2**
	0.5nm,0.8s,baz=354,slow=7.8,SNR=2.4								
	0.5nm,0.8s								
ASAR	**Alice Springs**	**54.37**	**176**	P			**P**	**21 11 26.4**	**-3.0**
	0.2nm,0.4s,baz=359,slow=6.6,SNR=6.0								
	0.2nm,0.4s								

DSN ***21*** *21:04:12.3±1.3, 27°.34N×54°.77E, h10km, ML3.0/14, Error ellipse: s-maj=17.8km s-min=4.8km az=15.0*
TEH ***21*** *21:04:13.5, 27°.14N×54°.83E, h13km±22km, ML3.2, Presumed earthquake*
ISC 21 21:04:15.6±0.9, 27°.15N±0°.04×54°.79E±0°.05, h17km, n26, σ1ˢ21/28, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.64**	**325**	Pg			**Pg**	**21 04 26.6**	**-1.6**
BNDS	**Bandar-Abbas**	**1.25**	**78**	Pg			**Pn**	**21 04 38.2**	**-0.2**
GENO	**Geno**	**1.25**	**78**	Pg			**Pn**	**21 04 38.3**	**-0.2**
KHL1	**Khalili_Fars**	**1.41**	**290**	Pg			**Pb**	**21 04 42.1**	**+0.7**
IBND	**Bandar-abas**	**1.59**	**79**	Pg			**Pb**	**21 04 43.9**	**-0.5**
SHME	**Shamm**	**1.63**	**132**	P			**Pn**	**21 04 43.0**	**-0.5**
SHME				S			**Sb**	**21 05 07.1**	**+1.5**
JHRM	**Jahrom**	**1.73**	**322**	Pg			**Pg**	**21 04 47.3**	**-1.5**
BANOM	**Banah**	**1.82**	**132**	*e*P			**Pn**	**21 04 46.3**	**+0.1**
	SNR=43								
BANOM				S			**Sn**	**21 05 10.1**	**+1.1**
MSFE	**Esma-Masafi**	**2.17**	**145**	P			**Pn**	**21 04 51.1**	**+0.2**
MDH	**Madha**	**2.29**	**143**	P			**Pn**	**21 04 52.8**	**+0.3**
NAZ	**Nazwa, Dubai**	**2.29**	**160**	P			**Pn**	**21 04 53.9**	**+1.3**
UOSS	**Minazif**	**2.54**	**150**	*e*P			**Pn**	**21 04 56.6**	**+0.6**
	SNR=6.9								
UOSS	**Minazif**	**2.54**	**150**	Pn			**Pn**	**21 04 56.9**	**+0.9**
HATD	**Hatta, Dubai**	**2.61**	**152**	P			**Pn**	**21 04 58.0**	**+1.0**
ASHO	**Ashiyiah**	**2.71**	**155**	*e*P			**Pn**	**21 04 59.3**	**+0.9**
	SNR=10								
NGRK	**Negar Kerman**	**3.02**	**34**	Pn			**Pn**	**21 05 03.4**	**+0.5**
DSBU	**Dashti - Bushe**	**3.35**	**292**	Pn			**Pn**	**21 05 09.5**	**+2.3**
SOHO	**SOHO**	**3.39**	**152**	*i* P			**Pn**	**21 05 07.5**	**-0.2**
	SNR=6.8								
KHGB	**Koh Gabri**	**3.54**	**24**	Pn			**Pn**	**21 05 11.0**	**+1.1**
KBAM	**BAM**	**3.79**	**58**	Pn			**Pn**	**21 05 14.5**	**+1.2**
MZR	**Muzera**	**4.30**	**196**	P			**Pn**	**21 05 20.4**	**+0.2**
IBAF	**Bafgh**	**4.48**	**9**	Pn			**Pn**	**21 05 24.3**	**+1.5**
TAFT	**Taft - Yazd**	**4.59**	**353**	Pn			**Pn**	**21 05 26.5**	**+2.1**
DOBD	**Dorbid, Yazd**	**4.83**	**357**	Pn			**Pn**	**21 05 29.3**	**+1.7**
WBK	**Wadi Bani Khal**	**5.90**	**139**	Pn			**Pn**	**21 05 42.4**	**+0.1**
RAYN	**Ar Rayn**	**9.14**

PMG	**Port Moresby**	**4.27**	**220**	P		**Pn**	**21**	**12**	**10.5** **+0.8**
	28nm,0.3s,baz=40,slow=7.6,SNR=30								
PMG				S		**Sn**	**21**	**12**	**57.2** **-1.0**
	111nm,0.3s,baz=49,slow=18,SNR=12								
WRA	**Warramunga Arr**	**20.46**	**226**	P		**P**	**21**	**15**	**40.5** **-0.1**
	4.2nm,0.6s,baz=50,slow=10,SNR=28								
	4.2nm,0.6s								
ASAR	**Alice Springs**	**23.29**	**220**	P		**P**	**21**	**16**	**10.8** **+0.3**
	0.7nm,0.4s,baz=55,slow=9.1,SNR=24								
	0.7nm,0.4s								
SONM	**Songino Array**	**65.98**	**329**	P		**P**	**21**	**21**	**47.6** **-0.7**
	0.3nm,0.4s,baz=146,slow=5.7,SNR=5.5								
	0.3nm,0.4s								
MKAR	**Makanchi Array**	**79.49**	**320**	P		**P**	**21**	**23**	**09.1** **+0.8**
	0.1nm,0.3s,baz=98,slow=8.1,SNR=7.1								
	0.1nm,0.3s								
ZALV	**Zalesovo Beam**	**80.71**	**327**	P		**P**	**21**	**23**	**15.1** **+0.5**
	0.4nm,0.5s,baz=107,slow=5.0,SNR=2.5								
	0.4nm,0.5s								
KURBB	**Kurchatov Arra**	**83.11**	**323**	P		**P**	**21**	**23**	**28.3** **+1.0**
	0.3nm,0.8s,baz=99,slow=7.5,SNR=2.0								
	0.3nm,0.8s								
ILAR	**Eielson Array**	**84.46**	**23**	P		**P**	**21**	**23**	**33.6** **-0.3**
	0.2nm,0.7s,baz=246,slow=5.1,SNR=2.3								
	0.2nm,0.7s								
TORD	**Torodi Ar. Bea**	**147.97**	**285**	PKPbc		**PKPbc**	**21**	**30**	**46.9** **-0.9**
	0.9nm,0.3s,baz=66,slow=3.4,SNR=25								

IDC 21 21:19:54.3±1.8, 7.92S×129.66E, h0km, mb3.5/2, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=113.0km s-min=30.5km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.78**	**160**	Pn	Pn	21 22 56.9	-0.6
	0.2nm,0.3s,baz=338,slow=13,SNR=8.4						
WRA				Sn	Sn	21 25 11.8	-8.8
	0.4nm,0.3s,baz=321,slow=25,SNR=7.9						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**16.18**	**166**	Pn	Pn	21 23 43.9	+0.7
	0.1nm,0.3s,baz=346,slow=11,SNR=13						
ASAR				Sn	Sn	21 26 33.8	-10
	0.1nm,0.3s,baz=316,slow=14,SNR=4.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**68.81**	**327**	P	P	21 31 00.7	+0.2
	0.2nm,0.6s,baz=119,slow=7.2,SNR=5.1						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**73.11**	**329**	P	P	21 31 26.3	-0.2
	0.3nm,0.6s,baz=123,slow=4.8,SNR=4.4						
	0.3nm,0.6s						

*UPP **21** 21:35:14.8±0.1, 67.86N×20.19E, h0km, ML2.5, Confirmed Induced event*
*HEL **21** 21:35:17.8±0.2, 67.83N×20.36E, h0km, ML1.0, Suspected explosion*

ISC 21 21:35:15.5±1.0, 67.86N±0.04×20.14E±0.04, h0km, n15, σ1s03/21, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**38**	P	**Pg**	**21 35 17.0**	**-0.8**
KUA				S	**Sg**	**21 35 18.6**	**-0.9**
RATU	**Laukkuluspa**	**0.21**	**261**	P	**Pg**	**21 35 19.3**	**-0.2**
KOVU	**Salmi**	**0.37**	**1**	P	**Pg**	**21 35 22.3**	**-0.2**
NIKU	**Nikkaluokta**	**0.42**	**272**	P	**Pg**	**21 35 23.1**	**-0.4**
LANU	**Lannavaara**	**0.73**	**74**	P	**Pg**	**21 35 28.4**	**-1.0**
LANU	**Lannavaara**	**0.73**	**74**	PG	**Pg**	**21 35 29.4**	**0.0**
LANU				SG	**Sg**	**21 35 37.8**	**-1.0**
KIF	**Kilpisjarvi**	**1.18**	**12**	PG	**Pn**	**21 35 39.8**	**+0.6**
KIF				smax	smax	21 35 55.1	
	comp=Z,1.7nm,0.2s						
KIF				SG	**Sn**	**21 35 55.2**	**-0.7**
HEF	**Hetta**	**1.43**	**66**	smax	smax	21 35 59.0	
	comp=Z,1.0nm,0.2s						
HEF				SG	**Sg**	**21 36 01.0**	**-0.4**
ERTU	**Ertsjaerv**	**1.53**	**148**	PG	**Pn**	**21 35 44.0**	**-0.1**
	baz=333						
ERTU				SN	**Sb**	**21 36 04.8**	**+0.1**
KLF	**Kolari**	**1.60**	**111**	smax	smax	21 36 03.2	
	comp=Z,0.8nm,0.2s						
KLF				SN	**Sg**	**21 36 06.9**	**+0.2**
KTK1	**Kautokeino**	**1.63**	**43**	PN	**Pg**	**21 35 47.2**	**+0.5**
KTK1				SN	**Sg**	**21 36 09.6**	**+1.8**
TOF	**Tornio**	**2.43**	**135**	smax	smax	21 36 27.5	
	comp=Z,0.6nm,0.2s						
TOF				SG	**Sb**	**21 36 30.2**	**-0.2**
ARA0	**ARCESS Array S**	**2.58**	**47**	SB	**Sb**	**21 36 33.6**	**-1.3**
RNF	**Rovaniemi**	**2.61**	**116**	PB	**Pn**	**21 36 00.6**	**+1.8**
	baz=306						
RNF				SG	**Sb**	**21 36 34.0**	**-1.5**
RAJF	**Raja-Jooseppi**	**3.12**	**75**	SG	**Sb**	**21 36 52.2**	**+2.0**

ATH 21 21:48:26.9, 39.41N×22.80E, h11km±1km, ML2.0/8, Manual Solution by M.Charalampakis First location: 2020/02/21 21:49:31, This location: 2020/02/22 05:45:39 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VOL2	**Volos**	**0.12**	**108**	P	Pg	21 48 30.0	+0.1
VOL2				S	Sg	21 48 32.3	+0.1
NEO	**Neokhori**	**0.34**	**106**	P	Pg	21 48 33.9	+0.1
NEO				S	Sg	21 48 38.5	+0.1
AGG	**Agios Georgios**	**0.53**	**224**	P	Pg	21 48 37.0	-0.2
AGG				S	Sb	21 48 46.1	+0.4
THL	**Klokotos Trika**	**0.63**	**285**	P	Pg	21 48 39.1	0.0
THL				S	Sb	21 48 48.0	-0.6
AXAR	**Agios Charalam**	**0.65**	**190**	P	Pg	21 48 38.9	-0.5
AXAR				S	Sg	21 48 48.5	+0.6
MAKR	**Makrakomi, Fth**	**0.65**	**233**	P	Pg	21 48 39.6	+0.2
MAKR				S	Sb	21 48 49.2	-0.1
ATAL	**Atalanti**	**0.73**	**166**	P	Pg	21 48 41.2	+0.1
ATAL				S	Sg	21 48 50.6	-0.1
LIT	**Litokhoron**	**0.73**	**341**	P	Pg	21 48 41.4	+0.3
LIT				S	Sb	21 48 51.8	0.0
LKR	**Lokris**	**0.77**	**168**	P	Pg	21 48 41.4	-0.4
AOS2	**Alonissos-2**	**0.85**	**107**	P	Pb	21 48 43.9	+0.2
AOS2				S	Sg	21 48 54.6	+0.1
EVR	**Evrytania**	**0.91**	**238**	P	Pg	21 48 44.4	0.0
EVR				S	Sb	21 48 57.8	+0.9
ANX	**Ano Chora**	**1.06**	**220**	P	Pb	21 48 47.1	-0.2
ANX				S	Sn	21 49 02.7	+0.1
PLG	**Polygyros**	**1.09**	**27**	P	Pb	21 48 47.8	0.0
KALE	**Kalithea**	**1.14**	**207**	P	Pb	21 48 47.7	-0.9
TETR	**Tetrakomo, Epi**	**1.18**	**268**	P	Pg	21 48 49.6	0.0
TRIZ	**Trizonia**	**1.18**	**209**	P	Pg	21 48 49.5	-0.1
MG00	**Magoula, Dorid**	**1.19**	**214**	P	Pb	21 48 48.9	-0.5
KZN	**Kozani**	**1.20**	**319**	P	Pg	21 48 50.7	+0.7
EFP	**Efpalio**	**1.20**	**216**	P	Pg	21 48 50.3	+0.3
HORT	**Hortiatis**	**1.21**	**11**	P	Pn	21 48 49.6	-0.3
VIL2	**Platees**	**1.25**	**163**	P	Pg	21 48 51.5	+0.7
KYMI	**Kymi, Euboea I**	**1.27**	**127**	P	Pb	21 48 51.0	+0.1
OUR	**Ouranopolis**	**1.30**	**44**	P	Pn	21 48 50.9	-0.1
AGRP	**Agrapidokambos**	**1.31**	**220**	P	Pg	21 48 52.1	0.0
KLV	**Kalavryta, Ach**	**1.45**	**201**	P	Pn	21 48 53.5	+0.4
GUR	**Goura**	**1.51**	**194**	P	Pn	21 48 54.2	+0.3

SKO 21 21:48:39.9, 41.29N×22.74E, h18km, ML1.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**284**	*i* Pg	Pg	21 48 43.9	0.0
VAY				*i* Sg	Sb	21 48 46.2	+0.2
VAY				*e*Lg	Lg	21 48 46.3	
	comp=E,53nm,0.2s						
VAY				*e*Lg	Lg	21 48 46.5	
	comp=N,53nm,0.2s						

*NEIC **21** 22:00:59.8±0.8, 17.88N±0.04×66.82W±0.01, h10km±1km, ML2.8/35, Md2.4/11(RSPR), Error ellipse: s-maj=7.2km s-min=2.9km az=14.0*
*RSPR **21** 22:01:00.1, 17.91N×66.84W, h9km, MD2.4/11*
*SDD **21** 22:01:00.2±0.7, 17.88N×66.86W, h20km±6km, MD3.5, ML2.7, MW3.2, Presumed earthquake*

ISC 21 22:00:59.9±1.1, 17.90N±0.05×66.82W±0.02, h13km±5km, n37, σ0s52/67, 11C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.09**	**324**		**Pg**	**22 01 02.7**	**-0.2**
GBPR					**Sg**	**22 01 04.3**	**-0.6**
GBPR	**Guanica, Bosqu**	**0.09**	**324**	⇑*e*P	**Pg**	**22 01 02.7**	**-0.2**
GBPR				*e*S	**Sg**	**22 01 04.3**	**-0.6**
MLPR	**Magueyes Islan**	**0.22**	**288**		**Pg**	**22 01 04.6**	**-0.2**
MLPR				Sg	**Sg**	**22 01 07.9**	**-0.2**
MLPR				IAML		22 01 09.2	
	2µm,0.3s						
OBIP	**Obispado Ponce**	**0.25**	**56**		**Pg**	**22 01 05.2**	**-0.1**
OBIP				Sg	**Sg**	**22 01 09.1**	**+0.2**
OBIP	**Obispado Ponce**	**0.25**	**56**	⇓*e*P	**Pg**	**22 01 05.5**	**+0.2**
OBIP				*e*S	**Sg**	**22 01 09.6**	**+0.7**
CELP	**Cerrillos**	**0.29**	**54**		**Pg**	**22 01 06.2**	**+0.2**
CELP				Sg	**Sg**	**22 01 10.2**	**+0.2**
CELP				IAML		22 01 12.3	
	592nm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.29**	**291**		**Pg**	**22 01 05.8**	**-0.2**
CRPR					**Sg**	**22 01 09.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.29**	**291**	IAML		22 01 10.3	
	1µm,0.5s						
CRPR				IAML		22 01 10.4	
	2µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**291**	⇑*e*Pg	**Pg**	**22 01 05.7**	**-0.2**
CRPR				*e*Sg	**Sg**	**22 01 09.3**	**-0.8**
CRPR				IAML		22 01 10.2	
	comp=N,2µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**291**	⇑*i*P	**Pg**	**22 01 05.8**	**-0.2**
CRPR				*e*S	**Sg**	**22 01 09.9**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.36**	**16**		**Pg**	**22 01 07.1**	**-0.2**
LSP	**Las Mesas**	**0.37**	**317**		**Pg**	**22 01 07.2**	**-0.2**
LSP					**Sg**	**22 01 13.1**	**+0.6**
LSP	**Las Mesas**	**0.37**	**317**	⇓*e*P	**Pg**	**22 01 07.2**	**-0.2**
LSP				*e*S	**Sg**	**22 01 13.1**	**+0.6**
PRSN	**Puerto Rico Se**	**0.44**	**316**		**Pg**	**22 01 08.3**	**-0.4**
PRSN					**Sg**	**22 01 14.4**	**-0.1**
PRSN	**Puerto Rico Se**	**0.44**	**316**	IAML		22 01 16.5	
	comp=N,1µm,0.3s						
PRSN				IAML		22 01 18.5	
	comp=N,2µm,0.3s						
PRSN	**Puerto Rico Se**	**0.44**	**316**	⇑*e*Pg	**Pg**	**22 01 08.3**	**-0.4**
PRSN				⇑*e*Sg	**Sg**	**22 01 14.8**	**+0.3**
PRSN				IAML		22 01 17.8	
	comp=N,833nm,0.2s						
PRSN	**Puerto Rico Se**	**0.44**	**316**	⇑*e*P	**Pg**	**22 01 08.3**	**-0.4**
PRSN				*e*S	**Sg**	**22 01 14.4**	**-0.1**
ECPR	**Experimental S**	**0.60**	**47**		**Pg**	**22 01 11.5**	**-0.3**
ECPR					**Sg**	**22 01 19.8**	**+0.1**
ECPR				IAML		22 01 20.2	
	comp=N,719nm,0.2s						
ECPR				IAML		22 01 21.5	
	comp=N,627nm,0.2s						
ECPR	**Experimental S**	**0.60**	**47**	⇓*e*P	**Pg**	**22 01 11.4**	**-0.3**
ECPR				*e*S	**Sg**	**22 01 19.9**	**+0.1**
AGPR	**Aguadilla, PR**	**0.62**	**334**		**Pg**	**22 01 11.4**	**-0.8**
AGPR				Sg	**Sg**	**22 01 19.8**	**-0.7**
AGPR				IAML		22 01 20.3	
	comp=N,244nm,0.4s						
AGPR				IAML		22 01 20.4	
	comp=N,258nm,0.3s						
AGPR	**Aguadilla, PR**	**0.62**	**334**	⇑*e*Pg	**Pg**	**22 01 11.4**	**-0.8**
AGPR				⇑*e*Sg	**Sg**	**22 01 20.0**	**-0.5**
AGPR				IAML		22 01 20.3	
	comp=N,308nm,0.2s						
AGPR	**Aguadilla, PR**	**0.62**	**334**	⇑*i*P	**Pg**	**22 01 11.5**	**-0.7**
AGPR				*e*S	**Sg**	**22 01 20.1**	**-0.4**
EMPR	**Esperanza - Ma**	**0.64**	**26**		**Pg**	**22 01 12.4**	**0.0**
EMPR					**Sb**	**22 01 21.5**	**-0.3**
EMPR	**Esperanza - Ma**	**0.64**	**26**	⇓*e*P	**Pg**	**22 01 12.4**	**0.0**
EMPR				*e*S	**Sb**	**22 01 21.5**	**-0.3**
SJG	**San Juan**	**0.67**	**72**	Pg	**Pg**	**22 01 12.8**	**-0.3**
SJG				Sg	**Sb**	**22 01 22.4**	**-0.3**
SJG	**San Juan**	**0.67**	**72**	⇓*e*Pg	**Pg**	**22 01 12.7**	**-0.4**
SJG				⇓*e*Sg	**Sb**	**22 01 22.5**	**-0.3**
SJG	**San Juan**	**0.67**	**72**	⇓*e*P	**Pg**	**22 01 12.7**	**-0.4**
SJG				*e*S	**Sb**	**22 01 22.7**	**-0.1**
PDPR	**Patillas Dam,**	**0.77**	**81**		**Pg**	**22 01 14.6**	**-0.3**
PDPR				Sg	**Sg**	**22 01 25.2**	**+0.1**
IDE	**Isla Desecheo**	**0.78**	**308**		**Pg**	**22 01 14.4**	**-0.8**
IDE					**Sg**	**22 01 24.9**	**-0.6**
IDE	**Isla Desecheo**	**0.78**	**308**	⇓*e*P	**Pg**	**22 01 14.4**	**-0.8**
IDE				*e*S	**Sg**	**22 01 24.9**	**-0.6**
GCPR	**Guaynabo City**	**0.81**	**60**		**Pg**	**22 01 15.0**	**-0.7**
GCPR					**Sg**	**22 01 26.2**	**-0.1**
GCPR	**Guaynabo City**	**0.81**	**60**	⇑*e*P	**Pg**	**22 01 15.0**	**-0.7**
GCPR				*e*S	**Sg**	**22 01 26.3**	**-0.1**
HUMP	**Col San Antoni**	**0.96**	**75**		**Pg**	**22 01 17.6**	**-0.9**
HUMP					**Sg**	**22 01 30.5**	**-0.5**
HUMP				IAML		22 01 35.1	
	comp=N,126nm,0.2s						
HUMP				IAML		22 01 35.2	
	comp=N,127nm,0.2s						
HUMP	**Col San Antoni**	**0.96**	**75**	⇑*e*P	**Pg**	**22 01 17.4**	**-1.1**
HUMP				*e*S	**Sg**	**22 01 30.8**	**-0.2**
CUPR	**Culebra, Puert**	**1.52**	**74**	Pn	**Pn**	**22 01 26.8**	**0.0**
CUPR					**Sb**	**22 01 47.1**	**-0.1**
DR12	**Loma Pena Alta**	**2.58**	**290**	Pn	**Pn**	**22 01 42.8**	**+1.3**
HATOM	**Hato Mayor del**	**2.58**	**290**	⇑*e*Pg	**Pn**	**22 01 43.2**	**+1.7**
HATOM				IAML		22 02 53.5	
	comp=N,26nm,4.5s						

*KRNET **21** 22:12:23.5±0.1, 41.80N×79.26E, h20km, mb2.1*
*SOME **21** 22:12:23.7, 41.83N×79.27E, h10km*
*NNC **21** 22:12:28.8±1.4, 42.03N×79.26E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=9.0km s-min=6.9km az=171.0*

ISC 21 22:12:24.6±2.1, 41.85N±0.07×79.20E±0.07, h11km±11km, n16, σ0s92/29, 2C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.87**	**317**	⇑*i*P	**Pg**	**22 12 41.3**	**-0.1**
PRZ				⇑*i*S	**Sb**	**22 12 54.1**	**+0.5**
TARG	**Taragay, Kyrgy**	**1.05**	**264**	⇓*i*P	**Pg**	**22 12 43.7**	**-1.1**
TARG				⇓*i*S	**Sg**	**22 12 58.8**	**+0.3**
UZB	**Uzynbulak**	**1.31**	**354**	P	**Pg**	**22 12 49.9**	**+0.2**
	2.6nm,0.1s						
UZB				S	**Sb**	**22 13 05.7**	**-0.4**
	1.8nm,0.2s						
UZB	**Uzynbulak**	**1.31**	**354**	*e*P	**Pn**	**22 12 48.1**	**-0.8**
	2.6nm,0.1s						
UZB				*e*S	**Sb**	**22 13 05.7**	**-0.4**
	1.8nm,0.2s						
SHLS	**Shalkode**	**1.33**	**8**	P	**Pg**	**22 12 51.7**	**+1.6**
	2.2nm,0.1s						
SHLS				S	**Sg**	**22 13 08.8**	**+1.4**
	17nm,0.2s						
SHLS	**Shalkode**	**1.33**	**8**	*e*P	**Pg**	**22 12 49.6**	**-0.5**
	3.1nm,0.2s						
SHLS				*e*S	**Sg**	**22 13 08.8**	**+1.4**
	17nm,0.2s						
SATY	**Saty**	**1.35**	**334**	P	**Pg**	**22 12 51.0**	**+0.6**
	1.4nm,0.1s						
SATY				S	**Sn**	**22 13 07.7**	**+0.3**
	4.9nm,0.1s						
KDJ	**Kajisay**	**1.53**	**281**	⇓*e*P	**Pn**	**22 12 52.3**	**+0.3**
KDJ				⇓*i*S	**Sb**	**22 13 13.2**	**+0.7**
KPKS	**Kokpek**	**1.66**	**347**	P	**Pg**	**22 12 56.7**	**+0.2**
	0.1nm,0.1s						
KPKS				S	**Sg**	**22 13 17.4**	**-0.7**
	4.7nm,0.3s						
KPKS	**Kokpek**	**1.66**	**347**	*e*P	**Pb**	**22 12 55.1**	**-0.2**
	0.1nm,0.1s						
KPKS				*e*S	**Sg**	**22 13 17.4**	**-0.7**
	4.7nm,0.3s						
KURS	**Kuram**	**1.81**	**336**	P	**Pg**	**22 12 59.8**	**+0.5**
	0.2nm,0.1s						
KURS				S	**Sg**	**22 13 22.6**	**-0.2**
	3.0nm,0.4s						
KOTS	**Kotyrbulak**	**2.08**	**313**	Pg	**Pg**	**22 13 04.9**	**+0.5**
	1.0nm,0.2s						
KOTS				Lg	Lg	22 13 31.3	
	4.4nm,0.3s						
KOTS	**Kotyrbulak**	**2.08**	**313**	*e*P	**Pb**	**22 13 03.2**	**+0.8**
	1.0nm,0.2s						
KOTS				*e*S	**Sg**	**22 13 31.3**	**0.0**
	4.4nm,0.3s						
KNOS	**Konyrlen**	**2.51**	**360**	Pg	**Pg**	**22 13 11.0**	**-1.7**
	0.4nm,0.1s						
KNOS				Lg	Lg	22 13 41.8	
	3.9nm,0.3s						

ARXS	**Arharly**	**2.57**	**337**	Pg		**Pg**	**22**	**13**	**12.9** **-0.9**
	0.5nm,0.2s								
ARXS				Lg		Lg	22	13	45.1
	2.5nm,0.2s								
ARXS	**Arharly**	**2.57**	**337**	*e*P		**Pb**	**22**	**13**	**11.1** **+0.3**
	0.5nm,0.2s								
ARXS				*e*S		**Sg**	**22**	**13**	**45.1** **-2.1**
	2.5nm,0.2s								

ISC 21 22:17:48.3±1.2, 45.18N±0.04×14.66E±0.04, h7km±18km, n8, σ0s37/15, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIY	**Rijeka**	**0.19**	**319**	*e*Pg	**Pg**	**22 17 51.8**	**-0.3**
RIY				Sg	**Sg**	**22 17 54.5**	**-0.1**
GBRS	**Gornja Briga**	**0.36**	**17**	*i* Pg	**Pg**	**22 17 55.3**	**-0.1**
GBRS				*i* Sg	**Sg**	**22 18 00.8**	**+0.6**
KNDS	**Knezji Dol**	**0.40**	**331**	*i* Sg	**Sg**	**22 18 02.0**	**+0.8**
KNDS				IAML		22 18 03.1	
	comp=Z,3.7nm,0.2s						
RABC	**Rab**	**0.44**	**168**	*i* Pg	**Pg**	**22 17 56.8**	**-0.1**
RABC				Sg	**Sb**	**22 18 04.9**	**-0.3**
BOJS	**Bojanci**	**0.53**	**53**	*i* Pg	**Pg**	**22 17 58.3**	**-0.2**
BOJS				*i* Sg	**Sg**	**22 18 05.7**	**+0.3**
BOJS				IAML		22 18 08.5	
	comp=Z,1.2nm,0.1s						
SKDS	**Skadanscina**	**0.58**	**309**	*i* Pg	**Pg**	**22 17 59.4**	**-0.1**
SKDS				*e*Sg	**Sg**	**22 18 07.4**	**+0.3**
SKDS				IAML		22 18 08.3	
	comp=Z,2.0nm,0.1s						
VISS	**Visnje**	**0.63**	**12**	*i* Pg	**Pg**	**22 18 00.1**	**-0.3**
VISS				*i* Sg	**Sg**	**22 18 08.6**	**-0.1**
VISS				IAML		22 18 11.9	
	comp=Z,1.2nm,0.1s						
NVLJ	**Novalja**	**0.64**	**166**	*e*Pg	**Pg**	**22 18 00.5**	**-0.1**
NVLJ				Sg	**Sb**	**22 18 10.8**	**0.0**

*JMA **21** 22:38:00.3±0.1, 40.4N±0.3×142.1E±0.7, h50km, MV3.7/40, NE OFF IWATE PREF*
JMA Felt II J1 at NE OFF IWATE PREF .
*IDC **21** 22:38:03.0±3.2, 40.48N×141.88E, h72km±21km, mb3.4/5, mbtmp3.6/8, Error ellipse: s-maj=52.7km s-min=18.2km az=113.0*

ISC 21 22:38:00.1±1.1, 40.38N±0.04×142.00E±0.08, h53km±8km, n25, σ1s11/30, mb3.8/5, 14D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKEN	**Kujiedanarisaw**	**0.28**	**233**	*i* P	**Pn**	**22 38 09.7**	**+0.3**
JKEN				*e*S	**Sn**	**22 38 16.1**	**+0.2**
JANG	**Nango**	**0.37**	**270**	⇓*i*P	**Pn**	**22 38 10.8**	**+0.6**
JANG				⇓S	**Sn**	**22 38 18.0**	**+0.6**
JTH	**Tanohata**	**0.45**	**194**	*i* P	**Pn**	**22 38 10.9**	**-0.1**
JTH				S	**Sn**	**22 38 18.5**	**-0.3**
JKZ	**Kuzumaki**	**0.65**	**233**	⇓*i*P	**Pn**	**22 38 14.1**	**+0.8**
JKZ				⇓S	**Sn**	**22 38 23.4**	**+0.5**
JARK	**Aomorirokkasho**	**0.79**	**323**	⇓*i*P	**Pn**	**22 38 15.6**	**+0.4**
JARK				⇓*e*S	**Sn**	**22 38 26.3**	**+0.1**
JTM	**Tenmabayashi**	**0.82**	**300**	⇓*i*P	**Pn**	**22 38 16.1**	**+0.6**
JTM				⇓S	**Sn**	**22 38 27.6**	**+0.8**
JOM	**Ohasama**	**1.05**	**211**	⇓P	**Pn**	**22 38 19.3**	**+0.7**
JOM				⇓S	**Sn**	**22 38 32.7**	**+0.4**
JAH	**Hinai**	**1.06**	**260**	⇓P	**Pn**	**22 38 19.8**	**+1.1**
JAH				⇓S	**Sn**	**22 38 33.9**	**+1.5**
JOT	**Ohata**	**1.24**	**325**	⇓P	**Pn**	**22 38 21.4**	**+0.3**
JOT				⇓*e*S	**Sn**	**22 38 36.6**	**-0.1**
JRG	**Rokugo**	**1.44**	**227**	P	**Pn**	**22 38 25.1**	**+1.3**
ASAJ	**Asahikawa**	**3.76**	**7**	P	**Pn**	**22 38 57.3**	**+1.7**
	8.5nm,0.4s,baz=225,slow=10,SNR=18						
ASAJ				S	**Sn**	**22 39 40.2**	**+1.6**
	11nm,0.6s,baz=15,slow=30,SNR=3.7						
MJAR	**Matsushiro Arr**	**4.85**	**219**	P	**Pn**	**22 39 13.8**	**+3.3**
	1.6nm,0.6s,baz=28,slow=12,SNR=7.9						
USRK	**Ussurisk Ar.**	**8.35**	**301**	P	**Pn**	**22 39 59.2**	**+0.8**
	2.5nm,0.6s,baz=114,slow=16,SNR=6.5						
HILR	**Hailar Array B**	**18.17**	**308**	P	**P**	**22 42 05.8**	**-2.4**
	1.1nm,0.4s,baz=111,slow=11,SNR=1.8						
SONM	**Songino Array**	**26.45**	**298**	P	**P**	**22 43 31.3**	**-0.7**
	0.2nm,0.3s,baz=98,slow=7.6,SNR=2.5						
	0.2nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**29.62**	**127**	T	T	23 14 51.1	
	baz=319,slow=75						
H11N1	**WAKE ISLAND Hy**	**29.63**	**127**	T	T	23 14 53.2	
	baz=319,slow=75						
H11N3	**WAKE ISLAND Hy**	**29.64**	**127**	T	T	23 14 53.9	
	baz=319,slow=75						
H11S1	**WAKE ISLAND Hy**	**30.43**	**128**	T	T	23 16 29.2	
	baz=321,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.44**	**129**	T	T	23 16 30.1	
	baz=321,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.45**	**128**	T	T	23 16 32.1	
	baz=321,slow=76						
ZALV	**Zalesovo Beam**	**40.07**	**309**	P	**P**	**22 45 29.9**	**-0.1**
	0.9nm,0.4s,baz=94,slow=8.9,SNR=5.7						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**42.81**	**299**	P	**P**	**22 45 52.9**	**+0.3**
	0.5nm,0.6s,baz=84,slow=11,SNR=11						
MKAR				PcP	**PcP**	**22 47 42.2**	**-0.8**
	0.2nm,0.6s,baz=60,slow=3.8,SNR=2.0						
	0.5nm,0.6s						

PPBI Pangkal Pinang 4.25 49 P **Pn** 22 55 30.4 +2.4
PDSI Padang 4.73 328 P **Pn** 22 55 37.1 +2.4
PDSI S **Sn** 22 56 30.9 +2.6
DSRI Dabo 4.76 20 P **Pn** 22 55 38.1 +3.1
DSRI S **Sn** 22 56 31.7 +2.8
LEM Lembang 5.01 112 P Pn 22 55 43.5 +4.9
66nm,0.7s,baz=197,slow=11,SNR=14
LEM S **Sn** 22 56 40.2 +4.8
42nm,0.5s,baz=150,slow=20,SNR=1.2
LEM LR LR 22 57 38.7
comp=Z,113nm,21.5s,baz=336,slow=38
LEM Lembang 5.01 112 P **Pn** 22 55 40.6 +2.0
71nm,0.7s
PPI Padang Panjang 5.15 330 P **Pn** 22 55 42.3 +1.9
0.6nm67nm,0.6s
TPI Tanjungpandan 5.20 65 P **Pn** 22 55 43.2 +2.1
59nm,0.8s
BBJI Bungbulang 5.30 118 **Pn** 22 55 43.3 +0.7
BBJI Sn **Sn** 22 56 41.1 -1.3
BBJI Bungbulang 5.30 118 P **Pn** 22 55 44.7 +2.1
BBJI Bungbulang 5.30 118 P **Pn** 22 55 44.5 +1.9
0.4nm1um38nm,0.6s
TPRI Tanjung Pinang 6.07 15 P **Pn** 22 55 56.7 +3.7
XMI Christmas Isla 6.09 154 P Pn 22 55 49.8 -3.5
BTDF Bukit Timah Da 6.35 8 P **Pn** 22 56 00.0 +3.1
0.2nm54nm,1.1s
KPJI Karang Pucung 6.41 112 P **Pn** 22 56 01.3 +3.6
0.2nm28nm,0.5s
MNSI Mandailing Nat 6.64 330 P **Pn** 22 56 02.1 +1.3
0.2nm4um36nm,0.8s
PBSI Pulau Batu 6.74 316 P **Pn** 22 56 03.9 +1.6
73nm,0.7s
MYKOM Kota Tinggi 6.78 8 **Pn** 22 56 04.7 +1.9
MYKOM Kota Tinggi 6.78 8 P **Pn** 22 56 06.1 +3.3
MYKOM Kota Tinggi 6.78 8 P **Pn** 22 56 04.8 +2.0
0.3nm54nm,0.7s
UGM Wanagama 8.09 112 Pn **Pn** 22 56 22.0 +1.3
UGM Wanagama 8.09 112 P **Pn** 22 56 23.2 +2.4
UGM Wanagama 8.09 112 P **Pn** 22 56 23.8 +3.0
45nm,0.9s
GSI Gunungsitoli 8.22 319 Pn **Pn** 22 56 20.9 -1.6
GSI Gunungsitoli 8.22 319 P **Pn** 22 56 22.7 +0.2
GSI Gunungsitoli 8.22 319 P **Pn** 22 56 23.3 +0.8
2um47nm,0.5s
PCJI Pacitan 8.79 112 P **Pn** 22 56 32.2 +1.8
SNJI Sawahan-Nganju 9.20 108 P **Pn** 22 56 40.6 +4.4
COCO West Island 9.37 220 P **Pn** 22 56 39.5 +1.3
COCO West Island 9.37 220 P **Pn** 22 56 39.5 +1.3
IPM Ipoh 9.58 348 Pn **Pn** 22 56 43.1 +1.9
IPM Ipoh 9.58 348 P **Pn** 22 56 44.6 +3.4
KULM Kulim 10.45 347 Pn **Pn** 22 56 54.4 +1.3
KULM Kulim 10.45 347 P **Pn** 22 56 57.2 +4.2
JAGI Jajag, Banyuwa 11.67 108 **Pn** 22 57 10.9 +1.1
JAGI Jajag, Banyuwa 11.67 108 P **Pn** 22 57 10.4 +0.6
LHMI Lhok Sumawe 11.77 329 Pn Pn 22 57 05.7 -5.4
PLAI Plampang 15.22 105 P **Pn** 22 57 58.0 +0.3
TOLI2 Tolitoli 18.83 72 **Pn** 22 58 43.5 +1.0
TOLI2 Tolitoli 18.83 72 P **Pn** 22 58 43.8 +1.3
PBA Port Blair 19.38 329 P **P** 22 58 45.1 -2.5
BATI Baumata 21.19 105 P **P** 22 59 06.8 -0.4
24nm,0.4s,baz=37,slow=3.0,SNR=10
BATI S **S** 23 02 51.8 -8.5
9.9nm,0.4s,baz=323,slow=20,SNR=2.0
24nm,0.4s
SOEI Soe 21.68 104 P **P** 22 59 12.5 -0.2
SOEI IAmb IAmb 22 59 25.2
comp=Z,22nm,0.7s
MBWA Marble Bar 22.91 136 P **P** 22 59 25.6 +0.1
PSA00 Pilbara Seismi 23.26 137 P **P** 22 59 29.4 +0.3
PSA00 Pilbara Seismi 23.26 137 P **P** 22 59 28.8 -0.3
PSA00 IAmb IAmb 22 59 56.5
comp=Z,7.1nm,0.8s
CM31 Chiang Mai Arr 23.61 351 P **P** 22 59 31.1 -1.3
CMAR Chiang Mai Arr 23.61 351 P **P** 22 59 31.2 -1.2
comp=Z,5.8nm,0.6s,baz=182,slow=8.9,SNR=54
comp=Z,5.8nm,0.6s
CMAR Chiang Mai Arr 23.61 351 **P** 22 59 30.4 -2.0
CHTO Chiang Mai 23.96 351 **P** 22 59 34.4 -1.2
PALK Pallekele 25.30 299 P **P** 22 59 45.2 -2.7
KNRA Kununurra 27.51 115 P **P** 23 00 07.6 -0.1
KNRA IAmb IAmb 23 00 08.6
comp=Z,15nm,0.8s
MTN Manton Dam 28.91 108 P **P** 23 00 19.7 -0.6
MTN IAmb IAmb 23 01 12.0
comp=Z,17nm,1.1s
FAKI Fak Fak 29.32 87 P **P** 23 00 23.4 -0.5
FAKI IAmb IAmb 23 00 25.7
comp=Z,33nm,1.1s
BRDH Bariadhala 29.61 339 LR LR 23 15 56.3
comp=Z,51nm,18.8s,baz=228,slow=44
KMI2 Kunming 29.94 360 P **P** 23 00 30.3 +0.8
KMI2 pmax pmax
comp=Z,6.0nm,0.7s
H08S2 Diego Garcia H 30.37 263 T T 23 32 50.3
baz=87,slow=76,SNR=10
H08S3 Diego Garcia H 30.38 263 T T 23 33 02.8
baz=87,slow=76,SNR=21
H08S1 Diego Garcia H 30.39 263 T T 23 32 55.5
baz=87,slow=76,SNR=10.0
PZH PanZhiHua 31.31 358 P **P** 23 00 46.0 +4.5
H01W3 Cape Leeuwin H 31.52 162 T T 23 34 11.0
baz=340,slow=76,SNR=18
H01W2 Cape Leeuwin H 31.53 162 T T 23 34 11.5
baz=340,slow=76,SNR=29
H01W1 Cape Leeuwin H 31.53 162 T T 23 34 12.5
baz=340,slow=76,SNR=27
SHL Shillong 32.20 341 P **P** 23 00 46.5 -2.8
WB0 Warramunga Arr 33.97 118 P **P** 23 01 05.4 +0.6
WRA Warramunga Arr 33.99 119 P **P** 23 01 05.5 +0.5
comp=Z,6.1nm,0.5s,baz=298,slow=9.0,SNR=106
WRA PcP **PcP** 23 03 42.6 +0.4
comp=Z,1.7nm,0.5s,baz=300,slow=2.0,SNR=6.1
WRA S **S** 23 06 22.4 -4.4
comp=Z,1.0nm,1.0s,baz=150,slow=17,SNR=3.2
comp=Z,6.1nm,0.5s
WRA Warramunga Arr 33.99 119 P **P** 23 01 05.4 +0.5
WRAB Tennant Creek 33.99 119 P **P** 23 01 05.7 +0.7
WRAB PcP **PcP** 23 03 43.0 +0.7
ASAR Alice Springs 35.15 125 P **P** 23 01 16.4 +1.4
comp=Z,5.0nm,0.3s,baz=303,slow=8.4,SNR=60
ASAR PcP **PcP** 23 03 46.1 +0.5
comp=Z,2.2nm,0.5s,baz=296,slow=2.7,SNR=10
ASAR S **S** 23 06 40.2 -4.6
comp=Z,0.4nm,0.7s,baz=297,slow=16,SNR=2.6
comp=Z,5.0nm,0.3s
ASAR Alice Springs 35.15 125 **P** 23 01 16.2 +1.2
AS31 Alice Springs 35.15 125 **P** 23 01 16.1 +1.1
AS31 IAmb IAmb 23 01 24.0
comp=Z,6.0nm,0.3s
CD2 Chengdu 35.69 1 P **P** 23 01 19.0 -0.4
CD2 pmax pmax
comp=Z,20nm,0.6s
LSA Lhasa 36.28 343 P **P** 23 01 21.4 -3.6
LSA pmax pmax
comp=Z,8.0nm,1.0s
LSA Lhasa 36.28 343 P **P** 23 01 25.8 +0.8
LSA pP **pP** 23 01 35.1 -3.0
XAN Xi'an 39.21 8 P **P** 23 01 48.6 -0.6
XAN pmax pmax
comp=Z,16nm,0.8s
XAN Xi'an 39.21 8 P **P** 23 01 48.4 -0.8
XAN x x 23 02 00.9
NJ2 Nanjing 39.82 21 *e*P P 23 01 59.8 +5.6
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
JOW Kunigami 40.01 37 LR LR 23 18 00.2
comp=Z,45nm,20.7s,baz=278,slow=36
LYN LuoYang 40.33 12 ⇓P **P** 23 01 58.9 +0.5
LYN pmax pmax
comp=Z,26nm,1.0s
LZDM Lanzhou Array 40.72 1 P **P** 23 02 01.7 -0.4
comp=Z,7.0nm,0.6s,baz=182,slow=10,SNR=26
LZDM PcP **PcP** 23 04 02.6 -0.3
comp=Z,0.7nm,0.3s,baz=207,slow=2.9,SNR=2.9
comp=Z,7.0nm,0.6s
LZH Lanzhou 40.85 1 *e*P **P** 23 02 02.9 0.0
LZH pmax pmax
comp=Z,25nm,1.6s
GOMU GeErMu 41.66 350 P **P** 23 02 09.6 -0.2
GOMU pmax pmax
comp=Z,3.0nm,1.0s
HNS HongShan 43.56 14 ⇑P **P** 23 02 24.4 -0.3
HNS pmax pmax
comp=Z,6.0nm,0.9s
GTA2 Gaotai 44.34 356 *e*P **P** 23 02 31.3 +0.2
GTA2 PcP **PP** 23 04 15.3 -0.1
GTA2 pmax pmax
comp=Z,7.0nm,0.7s
STKA Stephens Creek 45.00 131 P **P** 23 02 38.1 +1.6
comp=Z,7.9nm,0.5s,baz=300,slow=8.7,SNR=20
comp=Z,7.9nm,0.5s
STKA Stephens Creek 45.00 131 P **P** 23 02 37.7 +1.3
BTO2 Baotou 45.94 7 *e*P **P** 23 02 45.0 +1.2
BTO2 pmax pmax
comp=Z,13nm,0.9s
BTO2 pmax pmax
comp=Z,450nm,5.8s
HHC Hu-ho-hao-te 46.28 9 *e*P P 23 02 51.0 +4.5
HHC pmax pmax
comp=Z,5.0nm,0.5s
HHC pmax pmax
comp=Z,190nm,4.1s
BJT Baijiatuau 46.40 14 P **P** 23 02 47.5 +0.2
BJT pP **pP** 23 02 57.4 -3.4
BJI2 Beijing 46.40 14 P **P** 23 02 47.3 0.0
BJI2 pmax pmax
comp=Z,4.0nm,0.7s
KSRS Korea Array 48.20 27 P **P** 23 03 00.8 -0.5
comp=Z,2.9nm,0.6s,baz=228,slow=7.2,SNR=11
comp=Z,2.9nm,0.6s
XLT XiLinHaoTe 50.07 12 *e*P **P** 23 03 15.3 -0.4
XLT pmax pmax
comp=Z,9.0nm,1.0s
XLT pmax pmax
comp=Z,140nm,5.3s
WMQ Urumqi 50.48 346 *e*P **P** 23 03 19.4 +0.7
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ Urumqi 50.48 346 P **P** 23 03 19.4 +0.7
WMQ x x 23 03 28.0
WMQ x x 23 03 32.2
KBL Kabul 50.65 323 P **P** 23 03 18.7 -1.6
KSH2 Kashi 50.66 332 P **P** 23 03 20.1 -0.2
KSH2 sP pP 23 03 35.3 +1.6
KSH2 pmax pmax
comp=Z,11nm,0.6s
WUS Wushi 50.81 337 P **P** 23 03 21.8 +0.4
TARG Taragay, Kyrgy 51.83 336 P **P** 23 03 29.5 +0.2
TARG IAmb IAmb 23 03 30.8
comp=Z,7.8nm,0.4s
PRZ Przheval'sk 52.23 337 P **P** 23 03 33.0 +0.9
NRN Naryn 52.33 335 P **P** 23 03 32.9 0.0
NRN IAmb IAmb 23 03 33.7
comp=Z,14nm,1.2s
SHLS Shalkode 52.41 338 ⇑ *i*P **P** 23 03 32.9 -0.4
comp=Z,7.2nm,0.6s
UZB Uzynbulak 52.56 338 *e*P **P** 23 03 34.9 +0.5
comp=Z,7.5nm,0.4s
CN2 Changchun 52.63 20 P **P** 23 03 34.6 -0.1
CN2 pmax pmax
comp=Z,10.0nm,0.5s
SONM Songino Array 52.67 3 P **P** 23 03 35.3 +0.2
comp=Z,6.2nm,0.5s,baz=183,slow=9.2,SNR=69
SONM PcP **PcP** 23 04 44.4 0.0
comp=Z,1.7nm,0.3s,baz=195,slow=2.5,SNR=19
SONM LR LR 23 27 44.7
comp=Z,68nm,18.9s,baz=308,slow=38
comp=Z,6.2nm,0.5s
SONM Songino Array 52.67 3 P **P** 23 03 35.4 +0.3
SONM IAmb IAmb 23 03 36.4
comp=Z,8.4nm,0.6s
SATY Saty 52.72 338 ⇑ *i*P **P** 23 03 36.0 +0.5
comp=Z,4.2nm,0.4s
DRK Karamyk 52.74 330 P **P** 23 03 36.1 +0.1
DRK IAmb IAmb 23 03 38.1
comp=Z,9.8nm,0.5s
ULN Ulaanbaatar 52.74 3 P **P** 23 03 36.0 +0.4
MJAR Matsushiro Arr 52.84 36 P **P** 23 03 34.6 -1.9
comp=Z,4.2nm,0.8s,baz=216,slow=6.8,SNR=13
comp=Z,4.2nm,0.8s
BOOM Boomskoye usch 53.23 335 P **P** 23 03 39.6 +0.3
BOOM IAmb IAmb 23 03 40.2
comp=Z,7.4nm,0.6s
TNSS Tian-Shan 53.27 336 *e*P **P** 23 03 40.0 +0.1
SHAA Shahritus 53.29 326 P **P** 23 03 38.7 -1.1
SHAA IAmb IAmb 23 03 55.3
comp=Z,9.2nm,0.9s
MDOK Medeo 53.33 337 *e*P **P** 23 03 40.6 +0.4
AAA Alma-Ata 53.42 336 *e*P **P** 23 03 41.2 +0.5
comp=Z,7.7nm,0.5s
CHGR Chuyangaron 53.50 327 P **P** 23 03 40.6 -0.8
CHGR IAmb IAmb 23 04 50.1
comp=Z,12nm,0.9s
ARSB Arslanbob 53.59 332 P **P** 23 03 42.1 +0.1
ARSB IAmb IAmb 23 03 43.3
comp=Z,13nm,0.9s
UCH Uchtor 53.62 334 P **P** 23 03 43.0 +0.4
SNR=7.7
BTK Batken 53.67 330 P **P** 23 03 42.9 +0.3
BTK IAmb IAmb 23 03 44.0
comp=Z,5.3nm,0.5s
TKM2 Tokmak 2 53.72 335 P **P** 23 03 43.3 +0.2
SNR=50
KBK Karagaybulak 53.78 335 P **P** 23 03 43.8 +0.4
SNR=21
AAK Ala-Archa 53.96 334 P **P** 23 03 44.5 -0.3
AAK IAmb IAmb 23 04 51.8
comp=Z,4.1nm,0.7s
AAK Ala-Archa 53.96 334 P **P** 23 03 45.2 +0.5
AAK pP **pP** 23 03 54.7 -3.5
AAK PcP **PcP** 23 04 50.9 +1.4
EKS2 Erkin-Say 54.29 334 P **P** 23 03 47.8 +0.7
SNR=14
USP Ospenovka 54.47 335 P **P** 23 03 48.3 0.0
SNR=8.8
ZSN Zaisan 54.58 345 *e*P **P** 23 03 50.0 +1.1
MKAR Makanchi Array 54.69 343 P **P** 23 03 49.5 -0.3
comp=Z,7.5nm,0.6s,baz=145,slow=8.0,SNR=124
comp=Z,7.5nm,0.6s
MKAR Makanchi Array 54.69 343 P **P** 23 03 49.4 -0.4
MAKZ Makanchi 54.80 343 P **P** 23 03 50.2 -0.3
MAKZ Makanchi 54.80 343 P **P** 23 03 50.1 -0.4
MAKZ pP **pP** 23 04 01.1 -3.1
MAKZ sP sP 23 04 05.4 -4.5
MAKZ PcP **PcP** 23 04 52.8 +0.4
BNX BinXian 55.00 21 ⇓P **P** 23 03 51.8 -0.2
BNX pmax pmax
comp=Z,15nm,0.7s
USRK Ussuriysk Ar. 55.49 25 P **P** 23 03 55.2 -0.3
comp=Z,5.6nm,0.5s,baz=173,slow=3.2,SNR=14
comp=Z,5.6nm,0.5s
IUG Iuzhnay 55.63 331 *e*P **P** 23 03 57.2 +0.4
HILR Hailar Array B 56.24 13 P **P** 23 04 00.4 -0.5
comp=Z,1.2nm,0.3s,baz=192,slow=8.6,SNR=7.2
HILR PcP **PcP** 23 04 57.8 -0.1
comp=Z,1.1nm,0.4s,baz=180,slow=4.3,SNR=2.3
comp=Z,1.2nm,0.3s
BRLS Borolday 56.39 331 *e*P **P** 23 04 01.9 -0.2
HEH HeiHe 58.93 18 *e*P **P** 23 04 19.1 -0.6
HEH pmax pmax
comp=Z,9.0nm,0.8s
KURBB Kurchatov Arra 59.23 342 P **P** 23 04 21.6 -0.2
comp=Z,2.3nm,0.3s,baz=160,slow=6.6,SNR=23
KURBB PcP **PcP** 23 05 10.1 +0.5
comp=Z,2.0nm,0.4s,baz=158,slow=3.5,SNR=9.9
comp=Z,2.3nm,0.3s
KURK Kurchatov 59.29 342 P **P** 23 04 21.8 -0.3
KURK IAmb IAmb 23 04 22.6
comp=Z,8.3nm,0.8s
KURK Kurchatov 59.29 342 P **P** 23 04 22.0 -0.2
KURK x x 23 04 37.7
KURK x x 23 04 40.0
KURK PcP **PcP** 23 05 10.1 +0.2
KLR Kul'dur 59.52 22 LR LR 23 34 24.4
comp=Z,51nm,18.5s,baz=332,slow=40
ASAJ Asahikawa 60.48 32 LR LR 23 31 58.9
comp=Z,62nm,18.0s,baz=204,slow=37
JKA Kamikawa-asahi 60.48 32 P **P** 23 04 30.6 0.0
JKA IAmb IAmb 23 04 32.4
comp=Z,11nm,0.9s
ZAA0 Zalesovo Array 60.64 348 P **P** 23 04 30.9 -0.5
ZALV Zalesovo Beam 60.64 348 P **P** 23 04 31.0 -0.4
comp=Z,8.8nm,0.4s,baz=157,slow=5.9,SNR=67
ZALV LR LR 23 35 51.9
comp=Z,103nm,18.2s,baz=322,slow=41
comp=Z,8.8nm,0.4s
ZALV Zalesovo Beam 60.64 348 P **P** 23 04 30.8 -0.6
BRZS Berezniki 60.67 338 *e*P **P** 23 04 32.5 +0.8
RAYN Ar Rayn 62.73 300 P **P** 23 04 47.1 +1.0
RAYN Ar Rayn 62.73 300 P **P** 23 04 48.0 +1.8
RAYN x x 23 04 56.2

DZM Mont Dzumac 63.62 112 P **P** 23 04 51.7 -0.5
DZM IAmb IAmb 23 05 48.8
comp=Z,8.9nm,1.1s
BVAR Borovoye Array 63.98 339 P **P** 23 04 53.2 -0.6
comp=Z,12nm,0.6s,baz=138,slow=8.5,SNR=85
BVAR PcP **PcP** 23 05 29.1 +0.3
comp=Z,2.4nm,0.6s,baz=147,slow=6.3,SNR=4.1
comp=Z,12nm,0.6s
BORK Borovoye 64.02 339 P **P** 23 04 53.5 -0.5
BORK Borovoye 64.02 339 P **P** 23 04 53.5 -0.5
BORK x x 23 05 09.9
BORK PcP **PcP** 23 05 29.9 +0.9
AB31 Akbulak array 65.64 331 P **P** 23 05 04.5 -0.2
AB31 IAmb IAmb 23 05 05.8
comp=Z,10nm,0.9s
ABKAR Akbulak array 65.64 331 P **P** 23 05 04.4 -0.2
ARTI Arti 71.14 336 LR LR 23 44 59.0
comp=Z,52nm,18.5s,baz=318,slow=43
ARTI Arti 71.14 336 P **P** 23 05 38.7 -0.1
MARD Mardin 71.39 312 P **P** 23 05 42.6 +1.6
MARD IAmb IAmb 23 05 43.6
comp=Z,9.5nm,0.6s
KBZ Khabaz 72.46 319 P **P** 23 05 48.0 +1.0
comp=Z,4.6nm,0.8s,baz=138,slow=3.9,SNR=18
comp=Z,4.6nm,0.8s
KIV Kislovodsk 72.69 319 ⇓P **P** 23 05 49.7 +1.1
KIV Kislovodsk 72.69 319 P **P** 23 05 48.6 0.0
KIV IAmb IAmb 23 05 50.4
comp=Z,8.7nm,0.4s
TCW Tory Channel 72.72 132 P **P** 23 05 48.4 -0.3
LSZ Lusaka 74.01 256 LR LR 23 36 51.8
comp=Z,38nm,18.1s,baz=150,slow=34
MMAI Mount Meron Ar 74.14 306 P **P** 23 05 58.3 +1.0
comp=Z,2.3nm,0.6s,baz=74,slow=5.1,SNR=5.1
comp=Z,2.3nm,0.6s
BOSA Boshof 76.82 242 P **P** 23 06 14.3 +1.4
comp=Z,1.8nm,0.8s,baz=93,slow=7.3,SNR=3.6
comp=Z,1.8nm,0.8s
KIRS Kirsehir-Merke 77.09 312 ⇓P **P** 23 06 15.2 +1.1
BR131 Keskin Array S 77.48 312 P **P** 23 06 16.1 -0.2
BR131 IAmb IAmb 23 06 17.4
comp=Z,4.5nm,0.7s
BRTR Keskin Array B 77.48 312 P **P** 23 06 16.9 +0.5
comp=Z,3.1nm,0.6s,baz=142,slow=7.7,SNR=22
comp=Z,3.1nm,0.6s
SORM Soroca 83.48 319 ⇓P **P** 23 06 49.1 +1.0
AKASG Malin Array Be 83.61 322 P **P** 23 06 48.9 +0.2
comp=Z,1.4nm,0.5s,baz=90,slow=4.6,SNR=8.1
comp=Z,1.4nm,0.5s
KIEV Kiev 83.62 322 ⇑P **P** 23 06 48.8 0.0
ELND Elena 83.95 314 ⇑P **P** 23 06 51.8 +1.1
VRI Vrincioaia 84.01 317 ⇓P **P** 23 06 53.0 +2.1
TESR Tescani 84.21 318 ⇓P **P** 23 06 53.2 +1.3
MLR Muntele Rosu 84.46 316 ⇑P **P** 23 06 54.8 +1.4
AMKA Amchitka 85.41 38 P **P** 23 06 58.0 +0.3
BURAR Bucovina Array 85.41 318 ⇑P **P** 23 07 00.3 +2.3
BUR08 Bucovina Ar. S 85.43 318 P **P** 23 06 59.1 +1.0
BUR08 IAmb IAmb 23 07 01.0
comp=Z,4.1nm,0.8s
ITM Ithomi 85.84 308 P **P** 23 07 00.6 +0.3
LIT Litokhoron 85.89 311 P **P** 23 07 00.7 +0.1
MARR Marisel-Cluj 86.62 317 ⇑P **P** 23 07 06.5 +2.4
BZS Buzias 87.47 316 ⇑P **P** 23 07 09.1 +1.1
PABE Paberze 87.87 326 P **P** 23 07 09.8 +0.2
FIA1 FINESS Array S 88.09 332 P **P** 23 07 11.3 +0.6
FINES FINESS Array B 88.09 332 P **P** 23 07 11.3 +0.7
comp=Z,4.4nm,0.4s,baz=110,slow=5.5,SNR=46
comp=Z,4.4nm,0.4s
FINES FINESS Array B 88.09 332 P **P** 23 07 11.2 +0.5
LANS Liptovska Anna 89.46 319 *e*P **P** 23 07 18.8 +1.4
MORH Mrgy, Hungar 89.61 316 ⇓P **P** 23 07 19.9 +1.8
ARCES ARCESS Array B 90.25 340 P **P** 23 07 21.0 +0.4
comp=Z,1.3nm,0.3s,baz=96,slow=4.3,SNR=12
comp=Z,1.3nm,0.3s
ARCES ARCESS Array B 90.25 340 P **P** 23 07 21.1 +0.5
ARCES IAmb IAmb 23 09 43.0
comp=Z,7.3nm,1.1s
MORC Moravsky Berou 90.78 320 ⇑P **P** 23 07 25.8 +2.2
MODS Modra-Piesok 90.79 318 *e*P **P** 23 07 25.0 +1.3
GERES GERESS Array B 93.20 319 P **P** 23 07 35.4 +0.5
comp=Z,0.4nm,0.4s,baz=95,slow=6.9,SNR=2.9
comp=Z,0.4nm,0.4s
CLL Collm 93.80 321 *i* P **P** 23 07 39.3 +1.9
comp=Z,5.0nm,0.7s
HFS Hagfors 93.89 330 P **P** 23 07 37.8 +0.2
comp=Z,2.9nm,0.7s,baz=167,slow=7.0,SNR=8.3
comp=Z,2.9nm,0.7s
SPITS Spitsbergen Ar 94.13 348 P **P** 23 07 37.2 -1.3
comp=Z,4.2nm,0.7s,baz=114,slow=9.3,SNR=10.0
comp=Z,4.2nm,0.7s
NOA NORSAR Array B 95.15 331 P **P** 23 07 43.4 -0.1
comp=Z,1.4nm,0.8s,baz=89,slow=4.8,SNR=2.1
comp=Z,1.4nm,0.8s
NVAR Mina Array Bea 129.92 42 PKP **PKiKP** 23 13 31.9 +0.6
comp=Z,0.5nm,0.5s,baz=348,slow=4.3,SNR=5.2
PDAR Pinedale Array 132.62 33 PKP **PKPdf** 23 13 35.5 -0.1
comp=Z,0.3nm,0.6s,baz=70,slow=0.9,SNR=5.2
BDFB Brasilia 144.69 234 PKPbc **PKPdf** 23 13 58.8 +0.7
comp=Z,2.6nm,0.3s,baz=111,slow=4.9,SNR=6.1
U38A Gravette 144.87 25 **PKPab** 23 13 56.5 -0.4
OLIL Olney 144.93 15 PKPbc PKPbc 23 13 57.2 +0.3
FVM French Village 144.96 19 PKPbc **PKPab** 23 13 56.9 -0.2
TX31 Lajitas Ar. Si 145.07 43 **PKPdf** 23 13 58.4 -0.1
TXAR Lajitas Array 145.07 43 PKP **PKPdf** 23 13 58.6 +0.2
comp=Z,4.6nm,0.6s,baz=256,slow=0.7,SNR=84
TXAR Lajitas Array 145.07 43 PKPbc 23 13 58.1 +0.2
MGMO Mountain Grove 145.08 21 **PKPab** 23 13 57.2 -0.4
WTFS Witchita Falls 145.12 32 PKPbc **PKPab** 23 13 57.4 -0.4
HHAR Hobbs 145.19 24 **PKPbc** 23 13 57.2 -0.8
T42A Van Buren 145.60 20 PKPdf **PKPdf** 23 13 58.6 -0.4
Q51A Peebles 145.63 9 **PKPdf** 23 13 58.7 -0.3
SAND Sanderson 145.69 41 **PKPab** 23 14 00.6 +0.4
CGM3 Cape Girardeau 145.83 18 PKPdf **PKPdf** 23 13 59.3 -0.1
PBMO Poplar Bluff 146.06 19 **PKPdf** 23 14 00.3 +0.5
Z35A Perchaven, San 146.09 31 PKPdf **PKPdf** 23 14 00.1 +0.1
FCAR Ozark Folk Cen 146.25 22 PKPdf **PKPdf** 23 14 00.7 +0.6
BRDY Brady 146.69 36 **PKPbc** 23 14 02.5 -0.2
JCT Junction City 146.79 38 **PKPbc** 23 14 02.4 -0.6
WVT Waverly 147.45 16 **PKPbc** 23 14 04.5 -0.1
AC02 Marianna 147.46 193 **PKiKP** 23 14 07.5 -0.3
AC01 Pan de Azucar 148.44 191 **PKiKP** 23 14 10.4 +1.2
PB14 IPOC Station P 149.87 192 **PKPdf** 23 14 03.9 -2.9
PB14 PKPab **PKPab** 23 14 18.7 +1.6

HEL ***21*** *23:00:29.5◦0.5,67.61N×34.04E,h0km,ML1.5,Explosion*
KOLA 21 23:00:30.2,67.63N×33.87E,h0km,ML1.3,Error ellipse: s-maj=3.5km s-min=2.3km az=130.0,Khibiny, mines Rasvumchorr, Central,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
APA	**Apatity**	**0.19**	**251**	P	Pg	23 00 33.6	-0.2
APA				S	Sg	23 00 36.3	+0.1
APA0	**Apatity Array**	**0.34**	**266**	P	Pg	23 00 36.2	-0.5
APA0				S	Sg	23 00 40.8	-0.2
LVZ	**Lovozero**	**0.40**	**47**	P	Pg	23 00 37.6	-0.4
LVZ				S	Sg	23 00 43.2	0.0
KVDA	**Kovda**	**1.02**	**203**	P	Pg	23 00 48.6	-1.1
KVDA				S	Sg	23 01 01.5	-1.4
VRF	**Varrio**	**1.63**	**276**	PG	Pn	23 00 59.8	-0.3
VRF				SG	Sn	23 01 20.3	-1.5
VRF				smax	smax	23 01 20.3	
comp=Z,4.7nm,0.2s							
KU6	**Riekki**	**2.25**	**226**	PG	Pb	23 01 10.2	-1.5
baz=45							
KU6				smax	smax	23 01 37.1	
comp=Z,1.2nm,0.2s							
KU6				SG	Sb	23 01 39.5	-0.5
RAJF	**Raja-Jooseppi**	**2.25**	**295**	PB	Pn	23 01 09.6	+0.9
RAJF				SN	Sn	23 01 37.5	+0.3
MSF	**Maaselka**	**2.58**	**230**	PG	Pb	23 01 16.4	-0.9
MSF				SG	Sb	23 01 50.3	+0.9
VADS	**Vadso**	**2.99**	**329**	S	Sn	23 01 54.0	-1.2
RANF	**Ranua**	**3.23**	**243**	PG	Pb	23 01 26.6	-1.8
RANF				SG	Sb	23 02 09.9	+1.6
RNF	**Rovaniemi**	**3.23**	**255**	PN	Pn	23 01 23.0	+0.9
RNF				SN	Sn	23 02 02.5	+1.2
KEV	**Kevo**	**3.29**	**314**	PN	Pn	23 01 23.2	+0.3
KEV				SN	Sn	23 02 02.1	-0.6
ARA0	**ARCESS Array S**	**3.62**	**306**	PN	Pn	23 01 26.9	-0.5
ARA0				SN	Sn	23 02 10.1	-0.7
ARCES	**ARCESS Array B**	**3.62**	**306**	P	Pn	23 01 26.9	-0.5

ARCES S Sn 23 02 08.8 -1.9

*RSPR **21** 23:16:56.9, 17.°94N× 66.°98W, h6km, MD3.2/6*
*NEIC **21** 23:16:56.4±1.2, 17.°90N±0.°02× 66.°969W±0.°009, h10km±1km, ML3.0/31, ML3.5/6(RSPR), Error ellipse: s-maj=3.4km s-min=1.8km az=347.0*
*SDD **21** 23:16:56.4±0.6, 17.°87N× 67.°02W, h12km±5km, MD3.5, ML2.8, MW3.1, Presumed earthquake*

ISC 21 23:16:56.3±1.0, 17.°90N±0.°06× 66.°97W±0.°02, h11km±5km, n40, σ0s73/68, 14C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.10**	**315**		**Pg**	**23 16 58.8**	**-0.3**
MLPR				Sg	**Sg**	**23 17 00.4**	**-0.7**
MLPR				IAML		23 17 01.6	
	9μm,0.3s						
GBPR	**Guanica, Bosqu**	**0.12**	**49**		**Pg**	**23 16 59.5**	**+0.2**
GBPR					**Sg**	**23 17 01.6**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.12**	**49**	↑*eP*	**Pg**	**23 16 59.5**	**+0.2**
GBPR				*eS*	**Sg**	**23 17 01.6**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.17**	**309**		**Pg**	**23 17 00.0**	**-0.1**
CRPR				Sg	**Sg**	**23 17 02.5**	**-0.4**
CRPR				IAML		23 17 03.3	
	5μm,0.7s						
CRPR				IAML		23 17 04.0	
	5μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.17**	**309**	↑*eP*	**Pg**	**23 17 00.1**	**-0.1**
CRPR				↑*eSg*	**Sg**	**23 17 02.5**	**-0.4**
CRPR				IAML		23 17 02.7	
	comp=N,5μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.17**	**309**	↑*eP*	**Pg**	**23 17 00.1**	**0.0**
CRPR				*eS*	**Sg**	**23 17 02.5**	**-0.4**
LSP	**Las Mesas**	**0.30**	**338**		**Pg**	**23 17 02.3**	**-0.1**
LSP					**Sg**	**23 17 06.9**	**+0.4**
LSP	**Las Mesas**	**0.30**	**338**	↓*eP*	**Pg**	**23 17 02.3**	**-0.1**
LSP				*eS*	**Sg**	**23 17 06.9**	**+0.4**
PRSN	**Puerto Rico Se**	**0.36**	**332**		**Pg**	**23 17 03.4**	**-0.1**
PRSN	**Puerto Rico Se**	**0.36**	**332**		**Sg**	**23 17 08.9**	**+0.6**
PRSN	**Puerto Rico Se**	**0.36**	**332**	↑*eP*	**Pg**	**23 17 03.3**	**-0.1**
PRSN				*eSg*	**Sg**	**23 17 08.9**	**+0.6**
PRSN				IAML		23 17 12.1	
	comp=N,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.36**	**332**	↑*eP*	**Pg**	**23 17 03.4**	**-0.1**
PRSN				*eS*	**Sg**	**23 17 08.9**	**+0.6**
OBIP	**Obispado Ponce**	**0.38**	**67**		**Sb**	**23 17 10.2**	**-0.6**
OBIP	**Obispado Ponce**	**0.38**	**67**		**Pg**	**23 17 04.3**	**+0.4**
OBIP				IAML		23 17 11.8	
	comp=N,187nm,0.5s						
OBIP	**Obispado Ponce**	**0.38**	**67**	↓*eP*	**Pb**	**23 17 04.6**	**-0.4**
OBIP				*eS*	**Sb**	**23 17 10.2**	**-0.6**
CELP	**Cerrillos**	**0.41**	**65**		**Pg**	**23 17 05.0**	**+0.5**
CELP				Sg	**Sg**	**23 17 11.0**	**+1.0**
CELP				IAML		23 17 14.2	
	comp=N,690nm,0.2s						
UUPR	**Utuado, UPR, P**	**0.42**	**34**		**Pg**	**23 17 04.6**	**-0.2**
UUPR				Sg	**Sg**	**23 17 10.6**	**+0.2**
AGPR	**Aguadilla, PR**	**0.58**	**347**		**Pg**	**23 17 07.4**	**-0.3**
AGPR				IAML		23 17 15.4	
	comp=N,558nm,0.4s						
AGPR				IAML		23 17 15.7	
	comp=N,1μm,0.5s						
AGPR	**Aguadilla, PR**	**0.58**	**347**	↑*ePg*	**Pg**	**23 17 07.3**	**-0.4**
AGPR				↑*eSg*	**Sg**	**23 17 15.3**	**-0.1**
AGPR				IAML		23 17 18.5	
	comp=N,501nm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**347**	↓*eP*	**Pg**	**23 17 07.4**	**-0.3**
AGPR				*eS*	**Sg**	**23 17 15.2**	**-0.2**
IDE	**Isla Desecheo**	**0.68**	**315**		**Pg**	**23 17 09.2**	**-0.3**
IDE					**Sg**	**23 17 18.0**	**-0.6**
IDE	**Isla Desecheo**	**0.68**	**315**	↑*eP*	**Pg**	**23 17 09.2**	**-0.3**
IDE				*eS*	**Sg**	**23 17 18.0**	**-0.6**
EMPR	**Esperanza - Ma**	**0.71**	**36**		**Pg**	**23 17 10.3**	**+0.1**
EMPR					**Sb**	**23 17 20.3**	**-0.2**
EMPR	**Esperanza - Ma**	**0.71**	**36**	↑*eP*	**Pg**	**23 17 10.3**	**+0.1**
EMPR				*eS*	**Sb**	**23 17 20.3**	**-0.2**
ECPR	**Experimental S**	**0.71**	**54**		**Pg**	**23 17 09.9**	**-0.3**
ECPR					**Sg**	**23 17 19.9**	**+0.4**
ECPR	**Experimental S**	**0.71**	**54**	↑*eP*	**Pg**	**23 17 09.9**	**-0.3**
ECPR				*eS*	**Sg**	**23 17 20.1**	**+0.6**
SJG	**San Juan**	**0.81**	**75**		**Pg**	**23 17 11.9**	**-0.1**
SJG					**Sg**	**23 17 23.0**	**+0.5**
SJG	**San Juan**	**0.81**	**75**	Pg	**Pg**	**23 17 11.7**	**-0.3**
SJG				Sg	**Sg**	**23 17 22.9**	**+0.3**
SJG				IAML		23 17 25.0	
	comp=N,218nm,0.2s						
SJG				IAML		23 17 28.4	
	comp=N,201nm,0.3s						
SJG	**San Juan**	**0.81**	**75**	↓*ePg*	**Pg**	**23 17 11.8**	**-0.1**
SJG				↑↓*eSg*	**Sb**	**23 17 23.7**	**+0.4**
SJG	**San Juan**	**0.81**	**75**	↓*eP*	**Pg**	**23 17 11.8**	**-0.1**
SJG				*eS*	**Sg**	**23 17 23.1**	**+0.5**
PDPR	**Patillas Dam,**	**0.91**	**82**		**Pg**	**23 17 13.7**	**-0.3**
GCPR	**Guaynabo City**	**0.94**	**64**		**Pg**	**23 17 13.7**	**-0.8**
GCPR	**Guaynabo City**	**0.94**	**64**		**Sg**	**23 17 23.5**	**-3.1**
GCPR	**Guaynabo City**	**0.94**	**64**	↑*eP*	**Pg**	**23 17 14.0**	**-0.4**
GCPR				*eS*	**Sg**	**23 17 23.5**	**-3.1**
HUMP	**Col San Antoni**	**1.09**	**77**		**Pb**	**23 17 16.4**	**-0.8**
HUMP				IAML		23 17 36.4	
	comp=N,206nm,0.3s						
HUMP				IAML		23 17 37.2	
	comp=N,173nm,0.2s						
HUMP	**Col San Antoni**	**1.09**	**77**		**Sn**	**23 17 32.6**	**0.0**
HUMP	**Col San Antoni**	**1.09**	**77**	↓*eP*	**Pb**	**23 17 16.7**	**-0.5**
HUMP				*eS*	**Sn**	**23 17 32.6**	**0.0**
CUPR	**Culebra, Puert**	**1.66**	**76**		**Pn**	**23 17 26.0**	**+0.7**
CUPR					**Sg**	**23 17 50.2**	**+0.5**
DR12	**Loma Pena Alta**	**2.45**	**291**		**Pn**	**23 17 38.1**	**+1.8**
HATOM	**Hato Mayor del**	**2.45**	**291**	↑*eP*	**Pg**	**23 17 39.7**	**-0.8**
HATOM				IAML		23 18 23.8	
	comp=N,21nm,0.7s						

*IDC **21** 23:19:35.1±7.7, 16.°54S× 177.°13W, h349km±76km, mb3.8/13, mbtmp4.5/13, Error ellipse: s-maj=25.8km s-min=18.9km az=148.0*
*NEIC **21** 23:19:41.4±2.4, 16.°6S±0.°1× 176.°9W±0.°1, h406km±7km, mb4.2/25, Error ellipse: s-maj=22.7km s-min=12.7km az=158.0*
*NOU **21** 23:19:42.2, 17.°00S× 177.°07W, h409km, mb4.4/11, Fiji Islands Region*

ISC 21 23:19:39.8±0.5, 16.°7S±0.°1× 177.°00W±0.°07, h400km, n54, σ1s20/53, mb4.2/22, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**2.79**	**269**	P	**Pn**	**23 20 44.0**	**+2.7**
DGTI	**Dogotuki**	**3.15**	**276**	P	**Pn**	**23 20 46.5**	**+2.2**
MSVF	**Nonsavu**	**4.85**	**257**		**Pn**	**23 21 03.6**	**+3.2**
MSVF	**Nonsavu**	**4.85**	**257**	P	**Pn**	**23 21 03.2**	**+2.8**
AFI	**Afiamalu**	**5.73**	**62**		**Pn**	**23 21 09.6**	**-0.1**
NIUE	**Niue**	**7.15**	**111**		**P**	**23 21 26.6**	**+0.9**
MARNC	**Mare, Loyalty**	**14.94**	**249**	P	**P**	**23 22 50.6**	**-1.0**
MARNC	**Mare, Loyalty**	**14.94**	**249**	P	**P**	**23 22 51.7**	**0.0**
DZM	**Mont Dzumac**	**16.52**	**248**		**P**	**23 23 08.4**	**-0.4**
DZM				IAmb	IAmb	23 23 15.0	
	comp=Z,10nm,0.7s						
DZM	**Mont Dzumac**	**16.52**	**248**	P	**P**	**23 23 08.5**	**-0.3**
URZ	**Urewera**	**22.13**	**192**	P	**P**	**23 24 02.2**	**-1.3**
TATA	**Tatamba Isabel**	**24.07**	**287**	P	**P**	**23 24 23.8**	**+2.5**
JCZ	**Jackson Bay**	**29.86**	**201**	P	**P**	**23 25 11.0**	**-1.3**
TOO	**Toolangi**	**39.00**	**230**		**P**	**23 26 29.7**	**0.0**
STKA	**Stephens Creek**	**40.41**	**240**	P	**P**	**23 26 40.3**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=100,slow=11,SNR=5.3						
	comp=Z,2.8nm,0.7s						
STKA	**Stephens Creek**	**40.41**	**240**	P	**P**	**23 26 40.5**	**-0.8**
INKA	**Innaminka**	**40.47**	**247**	P	**P**	**23 26 41.4**	**-0.3**
BBOO	**Buckleboo**	**45.19**	**240**	P	**P**	**23 27 18.0**	**-1.1**
BBOO				IAmb	IAmb	23 27 18.7	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**46.19**	**258**	P	**P**	**23 27 25.1**	**-1.9**
	comp=Z,4.4nm,0.7s,baz=93,slow=7.6,SNR=19						
	comp=Z,4.4nm,0.7s						
ASAR	**Alice Springs**	**46.43**	**253**	PcP	**PcP**	**23 28 55.8**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=86,slow=4.0,SNR=2.4						
	comp=Z,25nm,0.6s						
SIJI	**Sorong**	**53.28**	**282**	P	**P**	**23 28 19.1**	**-0.7**
	comp=Z,36nm,0.7s,baz=107,slow=6.7,SNR=8.9						
	comp=Z,36nm,0.7s						
SOEI	**Soe**	**57.43**	**269**		**P**	**23 28 49.3**	**+0.2**
BATI	**Baumata**	**57.90**	**268**	P	**P**	**23 28 52.8**	**+0.5**
	comp=Z,25nm,0.6s,baz=123,slow=5.6,SNR=2.9						
	comp=Z,25nm,0.6s						
MJAR	**Matsushiro Arr**	**67.73**	**322**	P	**P**	**23 29 54.2**	**-1.6**
	comp=Z,1.7nm,0.7s,baz=156,slow=5.9,SNR=5.1						
	comp=Z,1.7nm,0.7s						
MJAR	**Matsushiro Art**	**67.73**	**322**	P	**P**	**23 29 53.9**	**-1.9**
MJAR				IAmb	IAmb	23 30 32.6	
	comp=Z,4.7nm,1.3s						
QSPA	**South Pole Qui**	**73.39**	**180**	P	**P**	**23 30 30.0**	**+0.8**
	comp=Z,4.7nm,0.7s,baz=64,slow=1.4,SNR=5.8						
	comp=Z,4.7nm,0.7s						
QSPA	**South Pole Qui**	**73.39**	**180**	P	**P**	**23 30 30.6**	**+1.3**
QSPA				IAmb	IAmb	23 30 31.2	
	comp=Z,5.1nm,0.8s						
BBJI	**Bungbulang**	**73.91**	**267**	P	**P**	**23 30 32.0**	**-1.1**
DSP	**Deep Springs**	**77.24**	**44**	P	**P**	**23 30 52.3**	**+1.1**
NVAR	**Mina Array Bea**	**77.59**	**43**	P	**P**	**23 30 54.1**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=226,slow=9.9,SNR=11						
	comp=Z,2.0nm,0.8s						
TPNV	**Topopah Spring**	**78.19**	**46**	P	**P**	**23 30 56.9**	**+0.3**
TPNV				IAmb	IAmb	23 30 58.2	
	comp=Z,3.9nm,0.8s						
J05D	**Fort Rock, OR**	**78.51**	**38**		**P**	**23 30 58.8**	**+0.6**
J05D				IAmb	IAmb	23 30 60.0	
	comp=Z,4.4nm,0.9s						
PINE	**Pine Mountain**	**78.98**	**38**	P	**P**	**23 31 01.1**	**+0.3**
PINE				IAmb	IAmb	23 31 03.1	
	comp=Z,7.5nm,1.1s						
PSUT	**Pine Spring**	**80.63**	**45**	P	**P**	**23 31 09.8**	**+0.2**
J16K	**Anvik River**	**80.71**	**7**	P	**P**	**23 31 09.6**	**+0.4**
TMUT	**Trail Mountain**	**82.80**	**46**	P	**P**	**23 31 20.8**	**-0.2**
TMUT				IAmb	IAmb	23 31 23.0	
	comp=Z,4.4nm,0.7s						
HVU	**Hansel Valley**	**82.95**	**43**	P	**P**	**23 31 21.6**	**+0.1**
HVU				IAmb	IAmb	23 31 22.9	
	comp=Z,3.3nm,0.7s						
VHRN	**Van Horn**	**83.71**	**55**		**P**	**23 31 26.5**	**+1.0**
VHRN				IAmb	IAmb	23 31 28.0	
	comp=Z,4.1nm,0.9s						
MNTX	**Cornudas Mount**	**83.76**	**54**	P	**P**	**23 31 26.1**	**+0.5**
O30N	**Mendenhall**	**83.84**	**19**	P	**P**	**23 31 25.4**	**+0.1**
TX31	**Lajitas Ar. Si**	**84.19**	**57**		**P**	**23 31 29.4**	**+1.4**
TX31				IAmb	IAmb	23 31 30.7	
	comp=Z,6.4nm,1.0s						
TXAR	**Lajitas Array**	**84.19**	**57**	P	**P**	**23 31 29.9**	**+1.9**
	comp=Z,3.1nm,0.8s,baz=223,slow=6.1,SNR=31						
	comp=Z,3.1nm,0.8s						
ILAR	**Eielson Array**	**84.38**	**12**	P	**P**	**23 31 26.9**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=223,slow=5.8,SNR=11						
	comp=Z,1.7nm,0.9s						
YHL	**Hebgen Lake**	**85.46**	**41**	P	**P**	**23 31 35.0**	**+1.0**
YHL				IAmb	IAmb	23 31 36.3	
	comp=Z,2.9nm,0.8s						
PDAR	**Pinedale Array**	**85.52**	**43**	P	**P**	**23 31 34.0**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=228,slow=3.8,SNR=3.8						
	comp=Z,0.6nm,0.9s						
PDAR	**Pinedale Array**	**85.52**	**43**	P	**P**	**23 31 34.0**	**-0.3**
DRIO	**Del Rio**	**86.69**	**58**		**P**	**23 31 40.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**89.74**	**289**	P	**P**	**23 31 54.8**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=89,slow=7.0,SNR=4.1						
	comp=Z,0.6nm,0.4s						
ELIB	**Princess Elisa**	**90.55**	**186**	*d*P	**P**	**23 31 57.4**	**+0.1**
	comp=Z,7.1nm,0.8s						
YKA	**Yellowknife Ar**	**92.64**	**24**	P	**P**	**23 32 06.5**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=256,slow=4.8,SNR=6.0						
	comp=Z,0.5nm,0.9s						
BUR08	**Bucovina Ar. S**	**144.10**	**334**	PKPbc	PKPbc	23 38 27.6	-0.1
BR131	**Keskin Array S**	**144.83**	**317**		**PKPdf**	**23 38 30.1**	**-0.3**
BRTR	**Keskin Array B**	**144.83**	**317**	PKP	**PKPdf**	**23 38 30.1**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=83,slow=2.0,SNR=14						
MMAI	**Mount Meron Ar**	**146.56**	**305**	PKPbc	**PKPbc**	**23 38 35.5**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=59,slow=6.9,SNR=14						

*NEIC **21** 23:23:00.7±1.1, 9.°31S±0.°06× 118.°73E±0.°06, h105km±8km, mb4.1/25, Error ellipse: s-maj=9.7km s-min=7.9km az=200.0*
*IDC **21** 23:23:01.4±2.9, 9.°14S× 118.°90E, h108km±24km, mb4.0/10, mbtmp4.3/14, MS2.6/1, Error ellipse: s-maj=32.6km s-min=10.9km az=62.0*
*DJA **21** 23:23:02.1±0.2, 9.°5S±2.°× 11.°9E±.°, h90km±4km, M4.8/37, mb4.7/16, mB5.4/9, MLv4.6/37, Mw(mB)4.9/9*

ISC 21 23:23:00.5±0.6, 9.°30S±0.°04× 118.°80E±0.°03, h109km±6km, n103, σ1s56/127, mb4.2/20, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.67**	**120**	P	**Pn**	**23 23 18.7**	**+0.1**
WBSI				S	**Sn**	**23 23 32.5**	**+0.4**
DBNI	**Kabupaten Domp**	**0.93**	**329**	P	**Pn**	**23 23 20.8**	**-0.1**
DBNI				S	**Sn**	**23 23 35.0**	**-1.3**
PLAI	**Plampang**	**1.12**	**295**	P	**Pn**	**23 23 23.3**	**+0.4**
PLAI	**Plampang**	**1.12**	**295**	S	**Sn**	**23 23 40.8**	**+1.0**
PLAI	**Plampang**	**1.12**	**295**	P	**Pn**	**23 23 23.3**	**+0.4**
PLAI				S	**Sn**	**23 23 39.4**	**-0.4**
WSI	**Waingapu**	**1.52**	**104**	P	**Pn**	**23 23 28.6**	**+1.1**
WSI				S	**Sn**	**23 23 48.7**	**+0.8**
BASI	**Baing, Sumba**	**1.97**	**118**	P	**Pn**	**23 23 35.0**	**+1.9**
BASI				S	**Sn**	**23 24 00.6**	**+2.6**
TWSI	**Taliwang, Sumb**	**1.98**	**286**	P	**Pn**	**23 23 34.4**	**+1.2**
TWSI				S	**Sn**	**23 23 59.4**	**+1.3**
EDFI	**Ende, Flores**	**2.91**	**79**	P	**Pn**	**23 23 46.0**	**+0.7**
EDFI				S	**Sn**	**23 24 20.3**	**+0.5**
KHKI	**Kahang-Kahang**	**3.29**	**286**	P	**Pn**	**23 23 52.0**	**+1.6**
KHKI				S	**Sn**	**23 24 29.7**	**+0.8**
MMRI	**Maumere**	**3.46**	**79**		**Pn**	**23 23 53.8**	**+1.2**
MMRI				Sn	**Sn**	**23 24 34.9**	**+2.0**
MMRI	**Maumere**	**3.46**	**79**	P	**Pn**	**23 23 54.1**	**+1.5**
MMRI	**Maumere**	**3.46**	**79**	S	**Sn**	**23 24 35.2**	**+2.4**
MMRI	**Maumere**	**3.46**	**79**	P	**Pn**	**23 23 54.3**	**+1.7**
MMRI				S	**Sn**	**23 24 34.5**	**+1.7**
BSSI	**Bau Bau, Buton**	**3.56**	**28**	P	**Pn**	**23 23 54.1**	**+0.2**
BSSI				S	**Sn**	**23 24 34.6**	**-0.7**
DNP	**Denpasar**	**3.60**	**280**	P	**Pn**	**23 23 56.7**	**+2.2**
DNP				S	**Sn**	**23 24 40.1**	**+3.8**
IGBI	**Denpasar**	**3.64**	**277**	P	**Pn**	**23 23 55.9**	**+0.8**
IGBI				S	**Sn**	**23 24 38.3**	**+1.0**
RTBI	**Rangdo, Negare**	**3.91**	**282**	P	**Pn**	**23 23 59.4**	**+0.8**
RTBI				S	**Sn**	**23 24 44.8**	**+1.1**
MKSS	**Makassar**	**4.11**	**9**	P	**Pn**	**23 24 01.9**	**+0.5**
BKSI	**Bulukumba**	**4.17**	**18**	P	**Pn**	**23 24 02.5**	**+0.4**
KAPI	**Kappang**	**4.36**	**13**	P	**Pn**	**23 24 04.9**	**+0.2**
	44nm,0.3s,baz=169,slow=5.5,SNR=17						
KAPI				S	**Sn**	**23 24 51.3**	**-3.3**
	60nm,0.3s,baz=271,slow=22,SNR=13						
KAPI	**Kappang**	**4.36**	**13**		**Pn**	**23 24 05.3**	**+0.5**
KAPI				Sn	**Sn**	**23 24 52.2**	**-2.5**
KAPI	**Kappang**	**4.36**	**13**	P	**Pn**	**23 24 05.6**	**+0.8**
KAPI	**Kappang**	**4.36**	**13**	P	**Pn**	**23 24 05.4**	**+0.6**
JAGI	**Jagiang, Banyuwa**	**4.67**	**280**		**Pn**	**23 24 08.2**	**-0.7**
JAGI				Sn	**Sn**	**23 25 00.8**	**-1.3**
JAGI	**Jajag, Banyuwa**	**4.67**	**280**	P	**Pn**	**23 24 08.2**	**-0.7**
JAGI	**Jajag, Banyuwa**	**4.67**	**280**	S	**Sn**	**23 25 00.9**	**-1.1**
JAGI	**Jajag, Banyuwa**	**4.67**	**280**	P	**Pn**	**23 24 08.4**	**-0.5**
ABJI	**Asem Bagus**	**4.76**	**288**	P	**Pn**	**23 24 12.8**	**+2.7**
ABJI				S	**Sn**	**23 25 06.7**	**+2.5**
BATI	**Baumata**	**4.87**	**101**	P	**Pn**	**23 24 13.3**	**+1.6**
	98nm,0.4s,baz=274,slow=2.3,SNR=24						
BATI				S	**Sn**	**23 25 05.9**	**-1.2**
	93nm,0.4s,baz=29,slow=17,SNR=12						
BATI				LR	LR	23 26 47.3	
	comp=Z,68nm,20.2s,baz=18,slow=47						
BATI	**Baumata**	**4.87**	**101**	P	**Pn**	**23 24 13.4**	**+1.7**
BATI				S	**Sn**	**23 25 09.0**	**+2.0**
KMMI	**Kalianget**	**5.29**	**295**	P	**Pn**	**23 24 19.8**	**+2.6**
BLJI	**Banyuglugur**	**5.38**	**286**	P	**Pn**	**23 24 19.9**	**+1.4**
BLJI				S	**Sn**	**23 25 20.7**	**+1.5**
SOEI	**Soe**	**5.41**	**95**		**Pn**	**23 24 19.6**	**+0.6**
SOEI	**Soe**	**5.41**	**95**	P	**Pn**	**23 24 20.5**	**+1.6**
SOEI	**Soe**	**5.41**	**95**	P	**Pn**	**23 24 20.6**	**+1.6**
	0.6nm2μm157nm,0.8s						
SOEI				S	**Sn**	**23 25 21.2**	**+1.1**
	0.6nm2μm157nm,0.8s						
PMSI	**Majene**	**5.76**	**1**	P	**Pn**	**23 24 24.9**	**+1.1**
	0.4nm109nm,0.6s						
TTSI	**Tana Toraja**	**6.30**	**9**	P	**Pn**	**23 24 33.9**	**+3.0**
	0.1nm42nm,0.8s						
MMSI	**Mamuju**	**6.57**	**1**	P	**Pn**	**23 24 36.2**	**+1.5**
	0.2nm33nm,0.6s						
SNJI	**Sawahan-Nganju**	**7.13**	**282**	P	**Pn**	**23 24 41.7**	**-0.7**
PCJI	**Pacitan**	**7.62**	**278**	P	**Pn**	**23 24 48.4**	**-0.4**
	0.3nm41nm,1.0s						
UGM	**Wanagama**	**8.30**	**279**	Pn	**Pn**	**23 24 56.2**	**-2.0**
UGM	**Wanagama**	**8.30**	**279**	P	**Pn**	**23 24 57.9**	**-0.3**
UGM	**Wanagama**	**8.30**	**279**	S	**Sn**	**23 26 29.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**10.98**	**144**	P	**Pn**	**23 25 34.7**	**+0.3**
	3.9nm,0.4s,baz=341,slow=7.8,SNR=26						
FITZ				S	**Sn**	**23 27 27.8**	**-7.5**
	27nm,0.6s,baz=186,slow=18,SNR=18						
BBJI	**Bungbulang**	**11.19**	**279**	Pn	**Pn**	**23 25 35.8**	**-1.5**
BBJI	**Bungbulang**	**11.19**	**279**	P	**Pn**	**23 25 36.4**	**-0.9**
BBJI	**Bungbulang**	**11.19**	**279**	S	**Sn**	**23 27 39.5**	**-1.0**
KNRA	**Kununurra**	**11.60**	**124**		**Pn**	**23 25 43.4**	**+0.6**
MBWA	**Marble Bar**	**11.82**	**176**	Pn	**Pn**	**23 25 45.9**	**+0.2**
PSA00	**Pilbara Seismi**	**12.24**	**175**		**Pn**	**23 25 51.4**	**+0.2**
PSA00	**Pilbara Seismi**	**12.24**	**175**		**Pn**	**23 25 50.8**	**-0.4**
PSA00	**Pilbara Seismi**	**12.24**	**175**	P	**Pn**	**23 25 52.1**	**+0.9**
DRS	**Darwin Rock St**	**12.28**	**106**	P	**Pn**	**23 25 51.4**	**-0.4**
SAUI	**Saumlaki**	**12.43**	**85**	Pn	**Pn**	**23 25 55.0**	**+1.3**
MTN	**Manton Dam**	**12.60**	**107**		**Pn**	**23 25 55.0**	**-1.0**
GIRL	**Giralia**	**13.97**	**198**		**Pn**	**23 26 12.9**	**-0.8**
FAKI	**Fak Fak**	**14.79**	**65**	Pn	**Pn**	**23 26 22.7**	**-1.7**
KKM	**Kota Kinabalu**	**15.46**	**350**	Pn	**Pn**	**23 26 31.6**	**-1.2**
MNAI	**Manna**	**16.48**	**286**	P	**Pn**	**23 26 43.9**	**-1.5**
WB0	**Warramunga Arr**	**18.31**	**126**	P	**Pn**	**23 27 07.0**	**-0.5**
WB0				IAmb	IAmb	23 27 25.8	
	comp=Z,9.7nm,0.8s						
WRA	**Warramunga Arr**	**18.36**	**127**	P	**Pn**	**23 27 08.8**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=302,slow=12,SNR=19						
WRA				S	**S**	**23 30 24.4**	**-6.9**
	comp=Z,1.8nm,0.6s,baz=297,slow=22,SNR=6.2						
WRA	**Warramunga Arr**	**18.36**	**127**	P	**P**	**23 27 07.5**	**+0.7**
WR8	**Warramunga Arr**	**18.50**	**127**	P	**Pn**	**23 27 09.2**	**-0.5**
WR8				IAmb	IAmb	23 27 13.5	
	comp=Z,4.7nm,0.7s						
AS31	**Alice Springs**	**20.31**	**137**		**P**	**23 27 27.1**	**-0.9**
AS31				IAmb	IAmb	23 27 28.1	
	comp=Z,8.0nm,0.6s						
AS31	**Alice Springs**	**20.31**	**137**		**P**	**23 27 27.1**	**-0.9**
ASAR	**Alice Springs**	**20.31**	**137**	S	**S**	**23 31 10.1**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=304,slow=22,SNR=8.0						
ASAR	**Alice Springs**	**20.31**	**137**		**P**	**23 27 27.2**	**-0.8**
ASAR	**Alice Springs**	**20.31**	**137**	P	**P**	**23 27 27.4**	**-0.6**
	comp=Z,25nm,0.6s,baz=91,slow=7.7,SNR=392						
RPSI	**Rantau Prapat**	**23.12**	**300**	P	**P**	**23 27 57.9**	**+0.5**
RPSI				IAmb	IAmb	23 27 59.1	
	comp=Z,6.9nm,0.5s						
STKA	**Stephens Creek**	**30.84**	**140**	P	**P**	**23 29 08.9**	**+2.5**
	comp=Z,3.3nm,0.6s,baz=309,slow=10,SNR=6.4						
	comp=Z,3.3nm,0.6s						
STKA	**Stephens Creek**	**30.84**	**140**	P	**P**	**23 29 08.9**	**+2.5**
CMAR	**Chiang Mai Arr**	**33.84**	**325**	P	**P**	**23 29 33.9**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=152,slow=7.0,SNR=4.3						
	comp=Z,1.2nm,0.3s						
LSA	**Lhasa**	**47.04**	**327**	P	**P**	**23 31 22.2**	**+0.4**
LSA				IAmb	IAmb	23 31 23.3	
	comp=Z,2.9nm,0.5s						
LZH	**Lanzhou**	**47.30**	**343**	*e*P	**P**	**23 31 25.0**	**+1.7**
LZH				sP	pP	23 31 42.5	-6.4
LZH				pmax	pmax		
	comp=Z,17nm,1.5s						
GTA2	**Gaotai**	**51.66**	**341**	*e*P	**P**	**23 31 57.8**	**+1.4**
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**54.58**	**12**	P	**P**	**23 32 18.0**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=191,slow=5.6,SNR=10						
	comp=Z,1.1nm,0.3s						
SONM	**Songino Array**	**57.94**	**350**	P	**P**	**23 32 42.0**	**+0.5**
	comp=

0.2nm,0.6s

*IDC **21** 23:59:02.5±5.3, 20°.99S×178°.98W, h0km, mb4.4/2, mbtmp4.4/2, Error ellipse: s-maj=278.7km s-min=51.4km az=152.0*
*NEIC **22** 00:00:05.5±1.4, 23°.3S±0°.2×179°.5E±0°.2, h532km±10km, mb4.4/19, Error ellipse: s-maj=27.0km s-min=22.7km az=89.0*
ISC 22 00:00:06.1±1.0, **23°.2S**±0°.2×**179°.4E**±0°.2, **h553**km, **n27**, σ**1s.42**/26, **mb4.3**/11, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.56**	**346**	P	**P**	**00 01 40.2**	**-1.0**
ARMA	**Armidale**	**25.79**	**248**	P	**P**	**00 04 54.1**	**+0.2**
EIDS	**Eidsvold**	**25.91**	**259**	P	**P**	**00 04 54.5**	**-0.3**
EIDS				IAmb	IAmb	00 04 56.7	
	comp=Z,12nm,1.2s						
CAN	**Canberra**	**29.05**	**238**	P	**P**	**00 05 21.8**	**-0.5**
CTAO	**Charters Tower**	**30.94**	**269**	P	**P**	**00 05 40.6**	**+1.9**
CTAO				IAmb	IAmb	00 05 42.3	
	comp=Z,15nm,1.1s						
TOO	**Toolangi**	**32.40**	**236**	P	**P**	**00 05 48.8**	**-2.1**
STKA	**Stephens Creek**	**34.50**	**247**	P	**P**	**00 06 08.8**	**+0.1**
BBOO	**Buckleboo**	**39.24**	**246**	P	**P**	**00 06 46.5**	**-1.0**
BBOO				IAmb	IAmb	00 06 47.5	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**41.63**	**260**	P	**P**	**00 07 07.3**	**+0.6**
ASAR	**Alice Springs**	**41.63**	**260**	P	**P**	**00 07 07.5**	**+0.8**
	comp=Z,1.9nm,0.4s,baz=96,slow=7.6,SNR=38						
	comp=Z,1.9nm,0.4s						
ASAR	**Alice Springs**	**41.63**	**260**	P	**P**	**00 07 06.9**	**+0.2**
WR0	**Warramunga Arr**	**41.74**	**266**	P	**P**	**00 07 07.0**	**-0.6**
WR8	**Warramunga Arr**	**41.77**	**266**	P	**P**	**00 07 08.4**	**+0.5**
WR8				IAmb	IAmb	00 07 48.6	
	comp=Z,17nm,1.4s						
WB2	**Warramunga Arr**	**41.91**	**266**	P	**P**	**00 07 08.9**	**0.0**
WB2				IAmb	IAmb	00 07 13.4	
	comp=Z,10nm,0.9s						
WB0	**Warramunga Arr**	**41.91**	**266**	P	**P**	**00 07 09.5**	**+0.5**
WB0				IAmb	IAmb	00 07 19.9	
	comp=Z,19nm,1.5s						
WRA	**Warramunga Arr**	**41.92**	**266**	P	**P**	**00 07 09.2**	**+0.2**
	comp=Z,2.2nm,0.3s,baz=96,slow=8.6,SNR=49						
	comp=Z,2.2nm,0.3s						
WRA	**Warramunga Arr**	**41.92**	**266**	P	**P**	**00 07 09.7**	**+0.7**
NWAO	**Narrogin (SRO)**	**55.05**	**245**	P	**P**	**00 08 45.8**	**-0.5**
NWAO				IAmb	IAmb	00 08 46.1	
	comp=Z,19nm,1.1s						
MORW	**Morawa**	**56.62**	**250**	P	**P**	**00 08 56.4**	**-0.8**
MORW				IAmb	IAmb	00 09 02.8	
	comp=Z,19nm,1.4s						
CASY	**Casey**	**60.53**	**206**	P	**P**	**00 09 23.1**	**+0.4**
BELA	**Belgrano 2**	**77.22**	**173**	P	**P**	**00 11 03.7**	**+0.7**
BELA				IAmb	IAmb	00 11 09.4	
	comp=Z,15nm,1.3s						
L19K	**White Mountain**	**87.52**	**12**	P	**P**	**00 11 56.7**	**+1.8**
HFS	**Hagfors**	**141.73**	**349**	PKP	**PKPdf**	**00 18 29.5**	**-5.0**
	comp=Z,0.9nm,0.3s,baz=40,slow=2.5,SNR=7.4						
HFS	**Hagfors**	**141.73**	**349**		PKPpre	00 18 29.5	
BRTR	**Keskin Array B**	**146.71**	**308**	PKPbc	**PKPdf**	**00 18 45.7**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=64,slow=6.6,SNR=3.5						
MMAI	**Mount Meron Ar**	**146.91**	**295**	PKPbc	**PKPbc**	**00 18 47.7**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=54,slow=7.3,SNR=5.8						
MMAI	**Mount Meron Ar**	**146.91**	**295**		**PKPbc**	**00 18 47.7**	**+0.4**

*NEIC **22** 00:31:49.0±1.2, 5°.1S±0°.1×144°.2E±0°.1, h60km±9km, mb4.4/28, Error ellipse: s-maj=25.0km s-min=14.7km az=51.0*
*IDC **22** 00:31:48.7±2.6, 5°.04S×144°.20E, h65km±21km, mb3.6/9, mbtmp4.0/12, Error ellipse: s-maj=27.2km s-min=15.4km az=60.0*
*DJA **22** 00:31:54.9±0.6, 5°S±6°×14°4E±°, h122km±7km, M4.9/12, mb5.0/12, mB5.5/1, MLv4.8/5, Mw(mB)5.0/1*
ISC 22 00:31:52.6±0.7, **5°.08S**±0°.08×**144°.12E**±0°.09, **h98**km, **n61**, σ**1s.37**/64, **mb4.2**/21, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.25**	**307**	P	**Pn**	**00 32 52.5**	**-2.7**
	21nm,0.3s,baz=152,slow=10,SNR=23						
JAY				S	**Sn**	**00 33 40.1**	**-3.7**
	38nm,0.5s,baz=263,slow=13,SNR=4.4						
GENI	**Genyem**	**4.65**	**302**	P	**Pn**	**00 33 01.5**	**+0.9**
GENI				S	**Sn**	**00 33 54.5**	**+1.1**
PMG	**Port Moresby**	**5.25**	**145**	P	**Pn**	**00 33 04.7**	**-4.1**
	6.4nm,0.3s,baz=306,slow=2.8,SNR=10						
PMG	**Port Moresby**	**5.25**	**145**	Pn	Pn	00 33 03.4	-5.4
PMG	**Port Moresby**	**5.25**	**145**	P	**Pn**	**00 33 11.3**	**+2.5**
SMPI	**Sarmi**	**6.21**	**299**	P	**Pn**	**00 33 21.7**	**0.0**
	0.4nm5μm71nm,0.8s						
SMPI				S	**Sn**	**00 34 31.7**	**+0.4**
	0.4nm5μm71nm,0.8s						
SRPI	**Serui, Papua**	**8.48**	**292**	P	**Pn**	**00 33 53.6**	**+0.9**
	206nm,0.5s						
COEN	**Coen**	**8.87**	**186**	Pn	**Pn**	**00 34 00.2**	**+2.2**
BAKI	**Biak**	**8.88**	**295**	P	**Pn**	**00 33 59.2**	**+1.1**
	133nm,0.6s						
SIJI	**Sorong**	**13.49**	**288**	P	**Pn**	**00 34 59.7**	**-0.5**
	30nm,0.6s,baz=74,slow=13,SNR=7.7						
WRA	**Warramunga Arr**	**17.58**	**212**	P	**P**	**00 35 49.8**	**-1.3**
	3.2nm,0.6s,baz=20,slow=12,SNR=14						
WRA	**Warramunga Arr**	**17.58**	**212**	P	**P**	**00 35 49.5**	**-1.7**
SANI	**Sanana**	**18.34**	**279**	P	**P**	**00 35 58.4**	**-1.1**
	46nm,0.9s						
KNRA	**Kununurra**	**18.40**	**234**	P	**P**	**00 35 57.9**	**-2.2**
KNRA				IAmb	IAmb	00 36 01.4	
	comp=Z,21nm,0.8s						
SOEI	**Soe**	**20.22**	**256**	P	**P**	**00 36 19.6**	**-0.5**
SOEI	**Soe**	**20.22**	**256**	P	**P**	**00 36 19.5**	**-0.6**
BATI	**Baumata**	**20.90**	**255**	P	**P**	**00 36 26.9**	**-0.4**
	comp=Z,44nm,0.5s,baz=103,slow=5.1,SNR=7.6						
AS31	**Alice Springs**	**20.94**	**207**	P	**P**	**00 36 28.2**	**+0.5**
ASAR	**Alice Springs**	**20.94**	**207**	P	**P**	**00 36 26.9**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=33,slow=7.5,SNR=15						
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**20.94**	**207**	P	**P**	**00 36 27.0**	**-0.7**
TOLI2	**Tolitoli**	**24.11**	**284**	P	**P**	**00 36 57.5**	**-2.0**
ARMA	**Armidale**	**26.18**	**165**	P	**P**	**00 37 17.0**	**-1.2**
ARMA				IAmb	IAmb	00 37 22.1	
	comp=Z,8.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.29**	**299**	P	**P**	**00 40 40.0**	**+0.4**
	comp=Z,3.3nm,0.6s,baz=126,slow=6.0,SNR=16						
	comp=Z,3.3nm,0.6s						
LZDM	**Lanzhou Array**	**55.67**	**320**	P	**P**	**00 41 19.3**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=126,slow=4.4,SNR=1.6						
	comp=Z,0.6nm,0.3s						
SONM	**Songino Array**	**62.23**	**332**	P	**P**	**00 42 04.7**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=149,slow=7.6,SNR=2.3						
	comp=Z,0.4nm,0.8s						
SONM	**Songino Array**	**62.23**	**332**	P	**P**	**00 42 04.2**	**+0.1**
MKAR	**Makanchi Array**	**74.97**	**321**	P	**P**	**00 43 23.4**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=95,slow=8.1,SNR=17						
	comp=Z,0.7nm,0.3s						
MKAR	**Makanchi Array**	**74.97**	**321**	P	**P**	**00 43 23.3**	**0.0**
MAKZ	**Makanchi**	**75.17**	**321**	P	**P**	**00 43 24.4**	**0.0**
ZALV	**Zalesovo Beam**	**76.72**	**329**	P	**P**	**00 43 32.3**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=110,slow=7.4,SNR=4.5						
ZALV				pP	**PcP**	**00 43 48.0**	**+4.1**
	comp=Z,1.0nm,0.5s,baz=112,slow=5.9,SNR=4.9						
	comp=Z,0.8nm,0.6s						
O14K	**Tigyukauivet M**	**77.24**	**25**	P	**P**	**00 43 35.9**	**+0.1**
O14K				IAmb	IAmb	00 43 53.4	
	comp=Z,5.2nm,0.9s						
KURK	**Kurchatov**	**78.77**	**324**	P	**P**	**00 43 43.7**	**-0.7**
KURBB	**Kurchatov Arra**	**78.78**	**324**	P	**P**	**00 43 43.9**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=120,slow=4.5,SNR=1.5						
	comp=Z,0.2nm,0.5s						
M16K	**Timber Creek**	**79.17**	**25**	P	**P**	**00 43 47.1**	**+0.7**
M16K				IAmb	IAmb	00 43 59.4	
	comp=Z,7.1nm,1.1s						
BVAR	**Borovoye Array**	**84.34**	**324**	P	**P**	**00 44 13.8**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=112,slow=7.5,SNR=7.4						
BVAR				pP	pP	00 44 30.1	-9.4
	comp=Z,1.8nm,0.5s,baz=105,slow=5.9,SNR=12						
	comp=Z,1.0nm,0.4s						
B21K	**Ikpikpuk River**	**85.10**	**18**	P	**P**	**00 44 18.5**	**+1.3**
B21K				IAmb	IAmb	00 44 19.8	
	comp=Z,4.5nm,1.1s						
WRH	**Wood River Hil**	**85.19**	**24**	P	**P**	**00 44 18.1**	**+0.4**
WRH				IAmb	IAmb	00 44 23.2	
	comp=Z,2.6nm,1.0s						
ILAR	**Eielson Array**	**85.78**	**24**	P	**P**	**00 44 20.0**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=248,slow=5.1,SNR=12						
	comp=Z,1.3nm,0.8s						
ILAR	**Eielson Array**	**85.78**	**24**	P	**P**	**00 44 19.8**	**-0.9**
H24K	**Noodor Dome**	**85.79**	**23**	P	**P**	**00 44 21.0**	**+0.2**
H24K				IAmb	IAmb	00 44 22.7	
	comp=Z,1.8nm,0.9s						
D23K	**Nanushuk River**	**86.05**	**19**	P	**P**	**00 44 22.8**	**+0.8**
D23K				IAmb	IAmb	00 44 25.2	
	comp=Z,4.0nm,0.9s						
G24K	**Hadweenzic Riv**	**86.26**	**22**		**P**	**00 44 23.8**	**+0.7**
G24K				IAmb	IAmb	00 44 25.8	
	comp=Z,2.6nm,1.1s						
J25K	**Salcha River,**	**86.33**	**24**	P	**P**	**00 44 23.9**	**+0.4**
J25K				IAmb	IAmb	00 44 30.1	
	comp=Z,2.4nm,1.2s						
C23K	**Itkillik River**	**86.44**	**18**	P	**P**	**00 44 25.2**	**+1.4**
BARN	**Barnard Glacie**	**86.85**	**28**	P	**P**	**00 44 25.9**	**-0.4**
C24K	**Franklin Bluff**	**87.00**	**19**	P	**P**	**00 44 28.0**	**+1.5**
C24K				IAmb	IAmb	00 44 34.5	
	comp=Z,2.9nm,1.1s						
LOGN	**Logan Glacier**	**87.09**	**28**	P	**P**	**00 44 28.3**	**+0.8**
M27K	**Edge Creek, AK**	**87.12**	**27**	P	**P**	**00 44 28.7**	**+1.2**
M27K				IAmb	IAmb	00 44 36.5	
	comp=Z,4.4nm,1.2s						
L27K	**Beaver Creek,**	**87.34**	**26**	P	**P**	**00 44 29.0**	**+0.5**
BCAR	**Beaver Creek A**	**87.36**	**26**	P	**P**	**00 44 29.1**	**+0.6**
E25K	**Arctic Village**	**87.46**	**21**	P	**P**	**00 44 30.1**	**+1.2**
BMAR	**Burnt Mountain**	**87.58**	**21**	P	**P**	**00 44 31.4**	**+1.9**
D25K	**Kavik River**	**87.61**	**19**	P	**P**	**00 44 30.7**	**+1.1**
G26K	**Porcupine Rive**	**87.72**	**22**	P	**P**	**00 44 31.5**	**+1.4**
F26K	**Sheenjek River**	**87.83**	**21**	P	**P**	**00 44 31.6**	**+0.9**
F26K				IAmb	IAmb	00 44 33.7	
	comp=Z,2.0nm,0.8s						
H27K	**Steamboat Moun**	**88.36**	**23**	P	**P**	**00 44 34.6**	**+1.4**
H27K				IAmb	IAmb	00 44 35.6	
	comp=Z,2.7nm,1.0s						
M29M	**Somme Creek**	**88.68**	**27**	P	**P**	**00 44 34.3**	**-0.6**
L29M	**L29M**	**88.98**	**26**	P	**P**	**00 44 36.8**	**+0.6**
K29M	**Barlow Dome**	**89.41**	**26**	P	**P**	**00 44 38.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**142.08**	**285**	PKP	**PKPdf**	**00 51 15.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=57,slow=3.1,SNR=1.7						
DBIC	**Dimbokro**	**149.10**	**274**	PKPbc	**PKPbc**	**00 51 30.5**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=55,slow=1.5,SNR=4.2						

*IDC **22** 00:32:27.4±1.8, 5°.35N×126°.30E, h0km, mb3.8/6, mbtmp3.8/6, MS3.6/1, Error ellipse: s-maj=180.3km s-min=27.8km az=67.0*
ISC 22 00:32:35.5±1.7, **5°.4N**±0°.5×**12°6E**±°, **h66**km, **n10**, σ**0s.47**/6, **mb3.9**/6, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.32**	**163**	P	**P**	**00 38 05.3**	**0.0**
	0.6nm,0.5s,baz=342,slow=9.1,SNR=2.5						
	0.6nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**41.83**	**66**	T	T	01 24 44.7	
	baz=256						
H11N2	**WAKE ISLAND Hy**	**41.84**	**66**	T	T	01 24 45.0	
	baz=256,SNR=5.8						
H11N3	**WAKE ISLAND Hy**	**41.85**	**66**	T	T	01 24 46.3	
	baz=256						
SONM	**Songino Array**	**45.67**	**341**	P	**P**	**00 40 49.5**	**-0.3**
	0.5nm,0.8s,baz=165,slow=7.4,SNR=3.6						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**56.06**	**325**	P	**P**	**00 42 08.0**	**+0.1**
	0.7nm,0.5s,baz=117,slow=7.7,SNR=15						
	0.7nm,0.5s						
AAK	**Ala-Archa**	**58.97**	**317**	LR	LR	01 09 01.9	
	comp=Z,50nm,18.3s,baz=6.5,slow=37						
ZALV	**Zalesovo Beam**	**59.01**	**333**	P	**P**	**00 42 29.0**	**+0.6**
	0.3nm,0.4s,baz=144,slow=5.4,SNR=1.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**60.22**	**327**	P	**P**	**00 42 36.5**	**-0.3**
	1.7nm,0.8s,baz=125,slow=6.7,SNR=12						
	1.7nm,0.8s						
BVAR	**Borovoye Array**	**65.80**	**327**	P	**P**	**00 43 14.0**	**+0.2**
	0.9nm,0.6s,baz=112,slow=4.7,SNR=4.7						
	0.9nm,0.6s						

*SJA **22** 00:33:48.8±0.7, 22°.14S×68°.71W, h126km±3km, ML3.8, MW3.8*
*GUC **22** 00:33:50.0±0.8, 22°.13S×68°.70W, h122km±4km, ML3.6*
ISC 22 00:33:50.4±1.4, **22°.15S**±0°.03×**68°.73W**±0°.05, **h118**km±9km, **n33**, σ**0s.68**/55, **5C-1D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.59**	**306**	*i* P	**Pn**	**00 34 08.8**	**-0.2**
PB09				*e*S	**Sn**	**00 34 22.6**	**-0.2**
PB09				IAML		00 34 23.6	
	comp=N,2μm,0.4s						
PB09	**IPOC Station P**	**0.59**	**306**	*e*P	**Pn**	**00 34 09.2**	**+0.2**
PB09				*e*S	**Sn**	**00 34 23.3**	**+0.4**
PB09				IAML		00 34 23.5	
	comp=Z,2μm,0.3s						
AF01	**San Pedro de A**	**0.95**	**148**	*e*P	**Pn**	**00 34 11.5**	**-0.6**
AF01				*e*S	**Sn**	**00 34 27.8**	**-0.7**
AF01				IAML		00 34 28.9	
	comp=E,2μm,0.3s						
AF01	**San Pedro de A**	**0.95**	**148**	*e*P	**Pn**	**00 34 11.6**	**-0.5**
AF01				IAML		00 34 46.4	
	comp=Z,819nm,0.6s						
PB03	**IPOC Station P**	**0.96**	**276**⇑	*i*P	**Pn**	**00 34 11.9**	**-0.1**
PB03				*e*S	**Sn**	**00 34 28.4**	**+0.1**
PB03				IAML		00 34 30.9	
	comp=E,2μm,0.1s						
PB03	**IPOC Station P**	**0.96**	**276**	*e*P	**Pn**	**00 34 11.7**	**-0.3**
PB03				*e*S	**Sn**	**00 34 28.7**	**+0.4**
PB03				IAML		00 34 29.9	
	comp=Z,2μm,0.2s						
PB06	**IPOC Station P**	**0.96**	**234**⇑	*i*P	**Pn**	**00 34 12.1**	**0.0**
PB06				*e*S	**Sn**	**00 34 28.9**	**+0.6**
PB06				IAML		00 34 29.5	
	comp=N,2μm,0.3s						
PB06	**IPOC Station P**	**0.96**	**234**	*e*P	**Pn**	**00 34 11.9**	**-0.1**
PB06				*e*S	**Sn**	**00 34 29.5**	**+1.1**
PB06				IAML		00 34 31.0	
	comp=Z,1μm,0.2s						
PB07	**IPOC Station P**	**1.15**	**291**⇑	*i*P	**Pn**	**00 34 14.1**	**0.0**
PB07				*e*S	**Sn**	**00 34 31.9**	**0.0**
PB07				IAML		00 34 33.8	
	comp=E,3μm,0.3s						
PB07	**IPOC Station P**	**1.15**	**291**	*e*P	**Pn**	**00 34 13.9**	**-0.1**
PB07				*e*S	**Sn**	**00 34 32.7**	**+0.8**
PB07				IAML		00 34 33.6	
	comp=Z,2μm,0.2s						
PB01	**IPOC Station P**	**1.31**	**327**⇓	*i*P	**Pn**	**00 34 14.9**	**-0.7**
PB01				*e*S	**Sn**	**00 34 34.3**	**-0.4**
PB01				IAML		00 34 35.7	
	comp=E,1μm,0.4s						
PB01	**IPOC Station P**	**1.31**	**327**	*e*P	**Pn**	**00 34 15.2**	**-0.4**
PB01				*e*S	**Sn**	**00 34 34.9**	**+0.2**
PB01				IAML		00 34 35.4	
	comp=Z,876nm,0.2s						
PB02	**IPOC Station P**	**1.36**	**307**	*i* P	**Pn**	**00 34 16.2**	**-0.1**
PB02				*e*S	**Sn**	**00 34 35.3**	**-0.5**
PB02				IAML		00 34 38.3	
	comp=E,2μm,0.3s						
PB02	**IPOC Station P**	**1.36**	**307**	*e*P	**Pn**	**00 34 16.2**	**-0.1**
PB02				*e*S	**Sn**	**00 34 36.0**	**+0.2**
PB02				IAML		00 34 40.2	
	comp=Z,2μm,0.4s						
PB05	**IPOC Station P**	**1.53**	**242**⇑	*i*P	**Pn**	**00 34 18.2**	**0.0**
PB05				*e*S	**Sn**	**00 34 39.5**	**+0.1**
PB05				IAML		00 34 47.5	
	comp=E,484nm,0.3s						
PB05	**IPOC Station P**	**1.53**	**242**	*e*P	**Pn**	**00 34 18.2**	**0.0**
PB05				*e*S	**Sn**	**00 34 40.1**	**+0.7**
PB08	**IPOC Station P**	**2.04**	**349**	*e*P	**Pn**	**00 34 24.7**	**+0.1**
PB08				IAML		00 34 53.3	
	comp=E,147nm,0.2s						
PB08	**IPOC Station P**	**2.04**	**349**	*e*P	**Pn**	**00 34 24.4**	**-0.3**
PB08				*e*S	**Sn**	**00 34 52.4**	**+1.7**
PB08				*e*S		00 34 53.0	
HMBC	**Humberstone**	**2.15**	**330**⇑	*i*P	**Pn**	**00 34 24.6**	**-1.3**
HMBC				*e*S	**Sn**	**00 34 51.7**	**-1.2**
HMBC				IAML		00 34 54.5	
	comp=E,659nm,0.4s						
PB10	**IPOC Station P**	**2.17**	**231**	*e*P	**Pn**	**00 34 25.8**	**-0.1**
PB10				IAML		00 35 09.0	
	comp=N,126nm,0.3s						
PB10	**IPOC Station P**	**2.17**	**231**	*e*P	**Pn**	**00 34 26.0**	**+0.1**
PB10				*e*S	**Sn**	**00 34 53.0**	**0.0**
GO01	**Chusmiza**	**2.50**	**350**	*e*P	**Pn**	**00 34 30.6**	**-0.1**
GO01				IAML		00 35 10.3	
	comp=N,221nm,0.2s						
GO01	**Chusmiza**	**2.50**	**350**	*e*P	**Pn**	**00 34 30.2**	**-0.5**
GO01				*e*S	**Sn**	**00 35 03.1**	**+1.6**
PB11	**IPOC Station P**	**2.53**	**340**	*e*P	**Pn**	**00 34 29.6**	**-1.1**
PB11				IAML		00 35 05.2	
	comp=N,269nm,0.3s						
PB11	**IPOC Station P**	**2.53**	**340**	*e*P	**Pn**	**00 34 29.6**	**-1.1**
PB11				*e*S	**Sn**	**00 35 00.2**	**-1.4**
PB14	**IPOC Station P**	**2.91**	**212**	*e*P	**Pn**	**00 34 35.3**	**-0.5**
PB14	**IPOC Station P**	**2.91**	**212**	*e*P	**Pn**	**00 34 35.6**	**-0.1**
PB14				*e*S	**Sn**	**00 35 10.1**	**-0.6**
GO02	**Mina Guanaco**	**3.10**	**195**	*e*P	**Pn**	**00 34 37.5**	**-0.9**
GO02	**Mina Guanaco**	**3.10**	**195**	*e*P	**Pn**	**00 34 38.3**	**-0.1**
GO02				*e*S	**Sn**	**00 35 16.1**	**+0.8**
GO02				*e*S		00 35 16.2	
GO02				IAML		00 35 19.2	
	comp=Z,168nm,0.2s						
HJA	**Humahuaca**	**3.24**	**110**	*e*P	**Pn**	**00 34 40.5**	**+0.3**
PB12	**IPOC Station P**	**3.82**	**337**	*e*P	**Pn**	**00 34 47.3**	**-0.4**
PB12				*e*S	Sn	00 35 20.3	-12
PB16	**IPOC Station P**	**3.86**	**349**	*e*P	**Pn**	**00 34 50.4**	**+1.7**
PB16				*e*S	Sn	00 35 19.0	-15
AC02	**Maricunga**	**4.68**	**184**	*e*P	**Pn**	**00 34 59.3**	**-0.2**
AC02				*e*S	Sn	00 35 41.4	-12
AC02				IAML		00 35 54.1	
	comp=Z,32nm,0.8s						

*IDC **22** 00:38:02.8±1.3, 4°.09S×129°.57E, h0km, mb3.6/3, mbtmp3.6/6, ML3.8/3, Error ellipse: s-maj=54.0km s-min=24.5km az=79.0*
*DJA **22** 00:38:04.3±0.4, 4°S±3°×13°0E±°, h43km±8km, M3.8/13, MLv3.8/13*
ISC 22 00:38:04.4±1.6, **4°.06S**±0°.06×**129°.75E**±0°.04, **h15**km±12km, **n14**, σ**0s.89**/20, **mb3.8**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.49**	**162**	P	**Pg**	**00 38 14.3**	**+0.2**
BNDI				S	**Sb**	**00 38 21.6**	**-0.1**
MSAI	**Masohi**	**1.08**	**311**	P	**Pb**	**00 38 24.2**	**-0.7**
MSAI				S	**Sb**	**00 38 39.1**	**+0.2**
KRAI	**Karang Ratu**	**1.54**	**298**	P	**Pn**	**00 38 30.7**	**-0.7**
KRAI				S	**Sb**	**00 38 51.8**	**-0.3**
AAI	**Ambon**	**1.60**	**283**	P	**Pn**	**00 38 31.6**	**-0.6**
AAI				S	**Sn**	**00 38 52.6**	**0.0**
FAKI	**Fak Fak**	**2.73**	**66**	P	**Pn**	**00 38 47.7**	**-0.1**
FAKI				S	**Sn**	**00 39 19.6**	**-1.1**
SIJI	**Sorong**	**3.51**	**26**	Pn	**Pn**	**00 38 59.1**	**+0.6**
	15nm,0.3s,baz=224,slow=17,SNR=57						
SIJI				Sn	**Sn**	**00 39 37.8**	**-2.0**
	5.8nm,0.3s,baz=219,slow=23,SNR=6.9						
	30nm,0.3s						
SIJI	**Sorong**	**3.51**	**26**	P	**Pn**	**00 38 59.0**	**+0.6**
SWI	**Sorong**	**3.51**	**25**	P	**Pn**	**00 38 59.1**	**+0.6**
SANI	**Sanana**	**4.25**	**298**	P	**Pn**	**00 39 09.1**	**+0.3**
WRA	**Warramunga Arr**	**16.41**	**165**	Pn	**P**	**00 41 56.0**	**-1.1**
	0.2nm,0.3s,baz=344,slow=13,SNR=2.9						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**19.90**	**169**	P	**P**	**00 42 35.9**	**+0.2**
	0.5nm,0.3s,baz=351,slow=10,SNR=12						
	1.1nm,0.4s						
SONM	**Songino Array**	**55.59**	**341**	P	**P**	**00 47 41.5**	**+1.9**
	0.4nm,0.9s,baz=158,slow=9.2,SNR=2.2						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**65.65**	**326**	P	**P**	**00 48 48.5**	**+0.3**
	0.4nm,0.5s,baz=121,slow=8.1,SNR=8.2						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**69.89**	**328**	P	**P**	**00 49 14.8**	**0.0**
	0.6nm,0.7s,baz=131,slow=5.6,SNR=11						
	0.6nm,0.7s						

*IDC **22** 01:10:58.1±0.8, 8°.07S×129°.30E, h0km, mb3.9/9, mbtmp3.9/12, ML4.1/3, MS3.2/6, Error ellipse: s-maj=42.0km s-min=17.6km az=68.0*
*NEIC **22** 01:11:03.7±1.2, 8°.11S±0°.08×129°.09E±0°.06, h31km±7km, mb5.2/36, Error ellipse: s-maj=12.4km s-min=8.1km az=158.0*
ISC 22 01:11:03.0±0.6, **8°.33S**±0°.06×**129°.19E**±0°.10, **h35**km, **n67**, σ**1s.66**/64, **mb5.2**/26, **MS3.3**/5, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.11**	**81**		**Pn**	**01 11 37.6**	**+1.8**
MTN	**Manton Dam**	**4.87**	**157**		**Pn**	**01 12 17.9**	**+4.1**
FAKI	**Fak Fak**	**6.18**	**30**	Pn	**Pn**	**01 12 30.7**	**-1.1**
KNRA	**Kununurra**	**7.31**	**183**	Pn	**Pn**	**01 12 50.8**	**+3.4**
FITZ	**Fitzroy Crossi**	**10.30**	**199**	Pn	**Pn**	**01 13 31.0**	**+2.5**
	1.7nm,0.3s,baz=29,slow=11,SNR=56						
FITZ				Sn	**Sn**	**01 15 17.5**	**-5.3**
	3.6nm,0.3s,baz=74,slow=14,SNR=8.9						
	3.0nm,0.3s						
WB0	**Warramunga Arr**	**12.43**	**157**		**Pn**	**01 13 58.0**	**+0.4**
WRA	**Warramunga Arr**	**12.57**	**157**	Pn	**Pn**	**01 13 59.8**	**+0.3**
	1.2nm,0.3s,baz=342,slow=13,SNR=22						
WRA				Sn	**Sn**	**01 16 14.7**	**-3.7**
	2.1nm,0.3s,baz=326,slow=24,SNR=18						
	3.3nm,0.6s						
WRA	**Warramunga Arr**	**12.57**	**157**		**Pn**	**01 13 59.4**	**-0.1**
WR8	**Warramunga Arr**	**12.65**	**157**	Pn	**Pn**	**01 14 00.7**	**+0.2**
ASAR	**Alice Springs**	**15.90**	**164**	Pn	**Pn**	**01 14 45.4**	**+1.0**
	0.4nm,0.3s,baz=6.4,slow=14,SNR=9.7						
ASAR				Sn	**Sn**	**01 17 34.6**	**-5.0**
	0.8nm,0.3s,baz=343,slow=25,SNR=8.4						
ASAR				LR	LR	01 21 33.6	
	comp=Z,72nm,20.0s,baz=280,slow=39						
	0.5nm,0.4s						
CTA	**Charters Tower**	**20.23**	**127**	P	**P**	**01 15 35.0**	**-0.3**
	3.0nm,0.9s,baz=297,slow=9.0,SNR=1.6						
	3.0nm,0.9s						
MORW	**Morawa**	**24.05**	**209**	P	**P**	**01 16 17.8**	**+2.7**
BBOO	**Buckleboo**	**25.18**	**166**	P	**P**	**01 16 28.9**	**+3.6**
STKA	**Stephens Creek**	**26.11**	**155**	P	**P**	**01 16 36.8**	**+3.1**
	0.6nm,0.3s,baz=348,slow=12,SNR=1.9						
	0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.99**	**312**	LR	LR	01 36 44.3	
	comp=Z,22nm,18.0s,baz=110,slow=39						
MJAR	**Matsushiro Arr**	**45.43**	**10**	LR	LR	01 36 08.3	
	comp=Z,32nm,19.4s,baz=196,slow=33						
KSRS	**Korea Array**	**45.56**	**359**	LR	LR	01 37 50.7	
	comp=Z,13nm,21.9s,baz=170,slow=36						
BRDH	**Bariadhala**	**47.98**	**311**	LR	LR	01 41 55.8	
	comp=Z,40nm,18.2s,baz=236,slow=39						
HYB	**Hyderabad**	**56.20**	**297**	*e*P	**P**	**01 20 39.3**	**-0.7**
SONM	**Songino Array**	**59.45**	**342**	P	**P**	**01 21 01.4**	**-1.0**
	0.2nm,0.5s,baz=162,slow=5.9,SNR=2.2						
	0.2nm,0.5s						
SONM	**Songino Array**	**59.45**	**342**	P	**P**	**01 21 01.6**	**-0.8**
TLY	**Talaya**	**63.69**	**343**	LR	LR	01 51 00.3	
	comp=Z,50nm,18.8s,baz=332,slow=38						
PETK	**Petropavlovsk-**	**65.83**	**18**	P	**P**	**01 21 44.1**	**-0.6**
	1.1nm,0.7s,baz=186,slow=7.3,SNR=1.0						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**68.90**	**327**	P	**P**	**01 22 03.8**	**-0.6**
	1.3nm,0.5s,baz=121,slow=7.9,SNR=29						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**68.90**	**327**	P	**P**	**01 22 04.2**	**-0.2**
MAKZ	**Makanchi**	**69.08**	**327**	P	**P**	**01 22 05.3**	**-0.1**
BOOM	**Boomskoye usch**	**70.06**	**321**	P	**P**	**01 22 11.0**	**-0.8**
ZALV	**Zalesovo Beam**	**72.42**	**334**	P	**P**	**01 22 24.4**	**-1.2**
	1.4nm,0.6s,baz=131,slow=5.7,SNR=7.6						
	1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**72.42**	**334**	P	**P**	**01 22 24.6**	**-0.9**
KURBB	**Kurchatov Arra**	**73.23**	**329**	P	**P**	**01 22 30.1**	**-0.3**
	0.9nm,0.5s,baz=126,slow=5.0,SNR=22						
	0.9nm,0.5s						
KURK	**Kurchatov**	**73.24**	**329**	P	**P**	**01 22 30.3**	**-0.2**
BVAR	**Borovoye Array**	**78.76**	**328**	P	**P**	**01 23 01.6**	**-0.4**
	0.4nm,0.5s,baz=126,slow=5.2,SNR=2.7						
	0.4nm,0.5s						
ABKAR	**Akbulak array**	**83.05**	**322**	P	**P**	**01 23 24.2**	**-0.7**
K13K	**Kusilvak Mount**	**86.42**	**26**	P	**P**	**01 23 42.5**	**+1.0**
L14K	**Kuka Creek**	**87.04**	**27**	P	**P**	**01 23 45.1**	**+0.5**
L14K				IAmb	IAmb	01 26 36.9	
	comp=Z,28nm,1.9s						
M14K	**Bethel**	**87.14**	**27**	P	**P**	**01 23 46.2**	**+1.1**
M14K				IAmb	IAmb	01 26 42.0	
	comp=Z,53nm,1.9s						
N15K	**Kwethluk River**	**87.78**	**28**	P	**P**	**01 23 49.1**	**+0.9**
K15K	**Wolf Creek Mou**	**87.91**	**26**	P	**P**	**01 23 50.1**	**+1.3**
K15K				IAmb	IAmb	01 25 48.0	

comp=Z,31nm,1.8s
P16K Nushagak River 88.40 30 P P 01 23 51.3 +0.1
M16K Timber Creek 88.60 28 P P 01 23 53.0 +0.9
J16K Anvik River 88.68 25 P P 01 23 53.2 +0.8
J16K IAmb IAmb 01 25 09.5
comp=Z,9.7nm,1.3s
G16K Koyuk River 88.77 23 P P 01 23 52.7 -0.1
J17K VABM Dome 89.36 25 P P 01 23 56.6 +1.0
J17K IAmb IAmb 01 24 16.2
comp=Z,30nm,2.0s
K17K Iditarod 89.47 26 P P 01 23 57.4 +1.3
K17K IAmb IAmb 01 27 03.3
comp=Z,34nm,1.8s
H17K Granite Mounta 89.56 24 P P 01 23 57.4 +0.8
H17K IAmb IAmb 01 25 34.6
comp=Z,19nm,1.9s
SII Sitkinak Islan 89.61 33 P 01 23 57.6 +0.6
RDOG Red Dog Mine 89.62 20 P P 01 23 54.5 -2.3
RDOG IAmb IAmb 01 23 59.9
comp=Z,7.4nm,0.6s
G18K Tagagawik 90.38 23 P P 01 24 01.2 +0.8
G18K IAmb IAmb 01 24 43.4
comp=Z,21nm,2.0s
E19K Redstone River 91.43 22 P P 01 24 04.8 -0.4
D19K Kuna River 91.45 21 P P 01 24 05.5 +0.2
D19K IAmb IAmb 01 26 37.3
comp=Z,18nm,1.8s
K20K Telida 91.50 26 P P 01 24 06.1 +0.5
K20K IAmb IAmb 01 25 26.6
comp=Z,26nm,1.7s
D20K Etivluk River 92.04 21 P P 01 24 08.2 +0.1
D20K IAmb IAmb 01 25 59.2
comp=Z,12nm,1.6s
B21K Ikpikpuk River 92.99 20 P P 01 24 12.7 +0.3
B21K IAmb IAmb 01 26 00.9
comp=Z,24nm,2.0s
RND Reindeer 93.80 27 P P 01 24 15.5 -0.8
RND IAmb IAmb 01 26 46.9
comp=Z,27nm,1.7s
MCK McKinley 93.82 26 P P 01 24 15.4 -1.0
WRH Wood River Hil 94.32 26 P P 01 24 18.1 -0.5
CCB Clear Creek Bu 94.47 25 P P 01 24 18.9 -0.4
CCB IAmb IAmb 01 24 57.0
comp=Z,22nm,2.0s
H24K Noodor Dome 94.65 24 P P 01 24 20.6 +0.4
H24K IAmb IAmb 01 24 49.8
comp=Z,28nm,2.0s
ILAR Eielson Array 94.88 25 P P 01 24 20.1 -1.1
comp=Z,0.7nm,0.8s,baz=256,slow=4.8,SNR=7.4
comp=Z,0.7nm,0.8s
FYU Fort Yukon 95.82 24 P P 01 24 25.1 -0.3
DOT Dot Lake 95.95 27 P P 01 24 26.7 +0.5
DOT IAmb IAmb 01 24 35.9
comp=Z,28nm,2.0s
BMAR Burnt Mountain 96.18 23 P P 01 24 28.4 +1.3
L27K Beaver Creek, 96.90 27 P P 01 24 31.4 +0.9
BCAR Beaver Creek A 96.92 27 P P 01 24 31.2 +0.7
I27K Kandik River 97.19 25 P Pdif 01 24 32.1 +0.3
I27K IAmb IAmb 01 26 17.4
comp=Z,22nm,1.8s
L29M L29M 98.58 27 P P 01 24 38.3 +0.3
TORD Torodi Ar. Bea 128.27 280 PKP PKiKP 01 30 08.4 +1.0
comp=Z,0.5nm,0.6s,baz=38,slow=3.8,SNR=4.1

IDC 22 01:15:41.9±1.8, 5°20S×142°52E, h0km, mb3.5/3, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=54.3km s-min=30.5km az=78.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.22**	**326**	Pn	Pn	01 16 35.6	+1.7
	6.7nm,0.3s,baz=165,slow=10,SNR=15						
JAY				Sn	Sn	01 17 12.8	-0.2
	13nm,0.3s,baz=130,slow=22,SNR=8.6						
	14nm,0.3s						
ASAR	**Alice Springs**	**20.15**	**203**	P	P	01 20 18.3	+0.3
	1.4nm,0.7s,baz=22,slow=10,SNR=2.9						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**74.08**	**322**	P	P	01 27 19.2	-0.8
	0.3nm,0.6s,baz=115,slow=5.5,SNR=3.8						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**86.53**	**24**	P	P	01 28 26.8	+0.2
	0.5nm,0.7s,baz=263,slow=4.7,SNR=5.8						
	0.5nm,0.7s						

IDC 22 01:18:14.5±1.6, 4.°53N×126.°90E, h0km, mb3.8/7, mbtmp3.8/8, ML4.7/1, MS3.2/1, Error ellipse: s-maj=167.7km s-min=18.6km az=68.0

ISC 22 01:18:19.7±1.7, 4.°5N±0.°5×12.°7E±.°, h35km, n8, σ1§48/9, mb3.9/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.79**	**335**	Pn	**Pn**	**01 19 00.3**	**-1.5**
	120nm,0.3s,baz=88,slow=4.8,SNR=4.1						
DAV				Sn	Sn	01 19 29.3	-4.9
	102nm,0.3s,baz=109,slow=22,SNR=4.5						
DAV				LR	LR	01 19 57.3	
	comp=Z,384nm,18.2s,baz=212,slow=36						
	288nm,0.4s						
WRA	**Warramunga Arr**	**25.43**	**163**	P	**P**	**01 23 44.1**	**-0.3**
	0.6nm,0.7s,baz=344,slow=9.2,SNR=2.2						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**28.88**	**166**	P	**P**	**01 24 14.1**	**-1.2**
	0.6nm,0.6s,baz=346,slow=10,SNR=8.3						
	0.6nm,0.6s						
SONM	**Songino Array**	**46.56**	**341**	P	**P**	**01 26 44.0**	**-0.1**
	0.5nm,0.9s,baz=146,slow=8.7,SNR=2.8						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**56.92**	**325**	P	**P**	**01 28 02.1**	**+0.7**
	0.7nm,0.6s,baz=124,slow=8.2,SNR=12						
MKAR				PcP	**PcP**	**01 28 59.4**	**+2.9**
	1.0nm,0.8s,baz=107,slow=4.1,SNR=6.9						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**59.90**	**333**	P	**P**	**01 28 22.5**	**+0.5**
	0.6nm,0.7s,baz=141,slow=5.2,SNR=2.3						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**61.09**	**327**	P	**P**	**01 28 30.4**	**+0.2**
	1.8nm,0.7s,baz=125,slow=6.4,SNR=17						
	1.8nm,0.7s						
BVAR	**Borovoye Array**	**66.67**	**327**	P	**P**	**01 29 07.5**	**+0.6**
	1.3nm,0.7s,baz=124,slow=7.5,SNR=6.0						
	1.3nm,0.7s						

NEIC 22 01:19:36.6±2.7, 24.°8S±0.°2×179.°9W±0.°1, h493km±11km, mb4.4/15, Error ellipse: s-maj=27.2km s-min=10.8km az=157.0

IDC 22 01:19:37.4±3.8, 24.°75S×179.°93E, h500km±33km, mb3.3/5, mbtmp4.3/6, Error ellipse: s-maj=89.3km s-min=30.4km az=162.0

ISC 22 01:19:36.4±0.8, 24.°8S±0.°1×179.°9W±0.°1, h500km, n26, σ1§10/27, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.80**	**159**	P	**P**	**01 21 00.1**	**-1.4**
MARNC	**Mare, Loyalty**	**11.58**	**284**	P	**P**	**01 22 10.5**	**-0.1**
DZM	**Mont Dzumac**	**12.82**	**279**	P	**P**	**01 22 24.8**	**+0.9**
	9.0nm,0.7s,baz=112,slow=17,SNR=12						
THZ	**Tophouse**	**17.97**	**198**	P	**P**	**01 23 18.1**	**+1.6**
LTZ	**Lake Taylor**	**19.09**	**198**	P	**P**	**01 23 28.5**	**+1.8**
LTZ				IAmb	IAmb	01 23 53.0	
	comp=Z,23nm,1.2s						
EIDS	**Eidsvold**	**26.27**	**262**	P	**P**	**01 24 31.2**	**-0.1**
EIDS				IAmb	IAmb	01 24 35.5	
	comp=Z,13nm,1.2s						
CTA	**Charters Tower**	**31.58**	**272**	P	**P**	**01 25 17.4**	**-0.2**
	comp=Z,9.4nm,0.5s,baz=79,slow=9.0,SNR=22						
	comp=Z,9.4nm,0.5s						
CTAO	**Charters Tower**	**31.58**	**272**	P	**P**	**01 25 17.5**	**-0.2**
CTAO				IAmb	IAmb	01 25 18.6	
	comp=Z,14nm,1.0s						
STKA	**Stephens Creek**	**34.49**	**249**	P	**P**	**01 25 42.9**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=98,slow=11,SNR=4.3						
	comp=Z,1.7nm,0.6s						
STKA	**Stephens Creek**	**34.49**	**249**	P	**P**	**01 25 42.9**	**+0.7**
INKA	**Innaminka**	**35.32**	**256**	P	**P**	**01 25 50.4**	**+1.3**
COEN	**Coen**	**36.35**	**280**	P	**P**	**01 25 57.8**	**0.0**
COEN				IAmb	IAmb	01 26 42.2	
	comp=Z,8.5nm,1.1s						
BBOO	**Buckleboo**	**39.20**	**248**	P	**P**	**01 26 20.8**	**-0.1**
BBOO				IAmb	IAmb	01 26 32.8	
	comp=Z,26nm,1.4s						
AS31	**Alice Springs**	**41.99**	**262**	P	**P**	**01 26 43.0**	**-0.4**
ASAR	**Alice Springs**	**41.99**	**262**	P	**P**	**01 26 42.9**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=91,slow=6.7,SNR=17						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**41.99**	**262**	P	**P**	**01 26 41.5**	**-1.9**
WR8	**Warramunga Arr**	**42.30**	**267**	P	**P**	**01 26 44.6**	**-1.3**
WR8				IAmb	IAmb	01 27 20.5	
	comp=Z,19nm,1.5s						
WRA	**Warramunga Arr**	**42.45**	**267**	P	**P**	**01 26 45.8**	**-1.3**
	comp=Z,2.7nm,0.5s,baz=108,slow=8.2,SNR=21						
WRA				ScP	**ScP**	**01 31 32.5**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=90,slow=4.8,SNR=4.9						
	comp=Z,2.7nm,0.5s						
WRA	**Warramunga Arr**	**42.45**	**267**	P	**P**	**01 26 45.6**	**-1.3**
FORT	**Forrest**	**46.10**	**250**	P	**P**	**01 27 13.8**	**-1.4**
FORT				IAmb	IAmb	01 27 15.1	
	comp=Z,6.7nm,0.8s						
KNRA	**Kununurra**	**48.78**	**271**	P	**P**	**01 27 34.0**	**-1.5**
KNRA				IAmb	IAmb	01 28 13.6	
	comp=Z,34nm,1.4s						
LUWI	**Luwuk**	**60.12**	**284**	P	**P**	**01 28 56.0**	**+0.6**
O02D	**Mt. Diablo Mer**	**83.66**	**40**	P	**P**	**01 31 11.6**	**-0.5**
O02D				IAmb	IAmb	01 31 40.5	
	comp=Z,11nm,1.4s						
TXAR	**Lajitas Array**	**90.81**	**58**	P	**P**	**01 31 47.8**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=210,slow=7.2,SNR=3.6						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**90.81**	**58**	P	**P**	**01 31 46.8**	**+0.5**
BURAR	**Bucovina Array**	**149.73**	**325**	PKPbc	**PKPbc**	**01 38 29.3**	**-0.1**

IDC 22 01:21:03.9±0.6, 54.°28S×118.°93W, h0km, mb4.2/9, mbtmp4.2/9, MS4.6/44, Error ellipse: s-maj=33.0km s-min=20.3km az=133.0

GCMT 22 01:21:09.0±0.1, 54.°76S±0.°01×118.°66W±0.°01, h14km±1km, MW5.2/129, Moment Tensor Solution. s75,c115; s129,c217; Duration: 1§0 Moment tensor: Scale 10^16 Nm; Mrr-0.80±.13; Mθθ4.22±.16; Mϕϕ-3.42±.14; Mrθ0.25±.25; Mθϕ6.53±.12; Mϕr0.30±.24; Best double couple: M=7.57400×10^16 NP1:ϕs105.00000°, δ87.00000°, λ1.00000°. NP2:ϕs15.00000°, δ89.00000°, λ177.00000°. Principal axes: T 7.9810, Plg2.0000°, Azm330.0000°; N -0.8120, Plg87.0000°, Azm178.0000°; P -7.1680, Plg1.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function

ISC 22 01:21:05.4±0.6, 54.°3S±0.°2×118.°9W±0.°2, h10km, n78, σ0§85/28, mb4.2/9, MS4.7/45, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**28.01**	**18**	LR	LR	01 35 40.6	
	comp=Z,919nm,19.1s,baz=196,slow=31						
USHA	**Ushuaia**	**28.77**	**112**	LR	LR	01 35 11.1	
	comp=Z,1μm,20.9s,baz=237,slow=29						
PMSA	**Palmer Station**	**28.78**	**133**	LR	LR	01 35 31.5	
	comp=Z,3μm,18.2s,baz=281,slow=30						
H03S2	**Juan Fernandez**	**34.60**	**70**	T	T	02 04 26.6	
	baz=219,slow=74						
H03S1	**Juan Fernandez**	**34.61**	**70**	T	T	02 04 27.4	
	baz=219,slow=74						
H03S3	**Juan Fernandez**	**34.62**	**70**	T	T	02 04 26.0	
	baz=219,slow=74						
PLCA	**Paso Flores**	**34.64**	**87**	LR	LR	01 38 41.8	
	comp=Z,732nm,19.8s,baz=226,slow=30						
H03N3	**Juan Fernandez**	**34.89**	**70**	T	T	02 04 42.0	
	baz=224,slow=72						
H03N2	**Juan Fernandez**	**34.90**	**70**	T	T	02 04 41.1	
	baz=224,slow=72						
H03N1	**Juan Fernandez**	**34.91**	**70**	T	T	02 04 41.3	
	baz=224,slow=72						
VNDA	**Vanda**	**35.49**	**202**	P	**P**	**01 28 02.6**	**+1.1**
	1.6nm,0.9s,baz=119,slow=7.4,SNR=3.9						
VNDA				LR	LR	01 38 30.5	
	comp=Z,309nm,18.9s,baz=93,slow=30						
	1.6nm,0.9s						
QSPA	**South Pole Qui**	**35.93**	**180**	P	**P**	**01 28 06.0**	**+0.4**
	3.5nm,0.8s,baz=111,slow=8.2,SNR=3.7						
QSPA				LR	LR	01 41 29.2	
	comp=Z,1μm,18.5s,baz=100,slow=34						
	3.5nm,0.8s						
CFA	**Coronel Fontan**	**42.30**	**79**	LR	LR	01 42 45.7	
	comp=Z,415nm,19.3s,baz=224,slow=31						
PPT	**Papeete**	**43.59**	**315**	LR	LR	01 42 27.6	
	comp=Z,1μm,21.9s,baz=177,slow=30						
RAR	**Rarotonga**	**45.17**	**301**	LR	LR	01 42 57.2	
	comp=Z,376nm,19.9s,baz=146,slow=29						
RPZ	**Rata Peaks**	**45.35**	**253**	LR	LR	01 43 29.3	
	comp=Z,2μm,21.8s,baz=154,slow=30						
URZ	**Urewera**	**45.42**	**263**	LR	LR	01 44 03.6	
	comp=Z,454nm,21.0s,baz=159,slow=30						
SNAA	**Sanae**	**46.63**	**157**	LR	LR	01 48 39.0	
	comp=Z,2μm,19.3s,baz=228,slow=36						
RAO	**Raoul Island**	**48.88**	**276**	LR	LR	01 47 47.2	
	comp=Z,191nm,18.1s,baz=144,slow=33						
CPUP	**Villa Florida**	**52.56**	**84**	LR	LR	01 49 56.3	
	comp=Z,1μm,18.1s,baz=236,slow=33						
NNA	**Nana**	**53.60**	**55**	LR	LR	01 47 31.3	
	comp=Z,461nm,19.6s,baz=186,slow=30						
LPAZ	**La Paz**	**54.40**	**66**	P	**P**	**01 30 32.1**	**-1.1**
	3.2nm,1.0s,baz=216,slow=6.1,SNR=7.4						
LPAZ				LR	LR	01 48 09.1	
	comp=Z,566nm,19.0s,baz=196,slow=30						
	3.2nm,1.0s						
ATAH	**Atahualpa**	**57.14**	**50**	LR	LR	01 49 35.8	
	comp=Z,932nm,20.2s,baz=234,slow=30						
MAW	**Mawson**	**58.45**	**181**	LR	LR	01 54 16.2	
	comp=Z,165nm,19.2s,baz=176,slow=34						
BDFB	**Brasilia**	**66.29**	**84**	LR	LR	01 58 01.4	
	comp=Z,701nm,18.7s,baz=215,slow=33						
ROSC	**El Rosal**	**69.60**	**48**	LR	LR	01 57 43.6	
	comp=Z,557nm,18.9s,baz=232,slow=32						
STKA	**Stephens Creek**	**69.93**	**243**	P	**P**	**01 32 16.5**	**-0.1**
	2.4nm,0.9s,baz=131,slow=12,SNR=3.0						
STKA				LR	LR	01 57 05.2	
	comp=Z,719nm,19.6s,baz=155,slow=31						
	2.4nm,0.9s						
JTS	**Las Juntas de**	**70.41**	**36**	LR	LR	01 55 43.8	
	comp=Z,439nm,20.2s,baz=255,slow=30						
CMIG	**Matias Romero**	**73.98**	**24**	LR	LR	01 58 03.5	
	comp=Z,550nm,21.4s,baz=177,slow=30						
SDV	**Santo Domingo**	**74.83**	**50**	LR	LR	02 01 58.9	
	comp=Z,389nm,18.4s,baz=196,slow=33						
CTA	**Charters Tower**	**76.71**	**254**	LR	LR	02 02 40.4	
	comp=Z,330nm,18.6s,baz=100,slow=33						
HNR	**Honiara**	**77.24**	**272**	LR	LR	02 00 32.9	
	comp=Z,5.3nm,19.6s,baz=236,slow=31						
LPIG	**La Paz**	**78.39**	**8**	LR	LR	02 00 19.7	
	comp=Z,338nm,19.1s,baz=182,slow=30						
H01W1	**Cape Leeuwin H**	**80.14**	**222**	T	T	03 02 11.0	
	baz=151,slow=76,SNR=80						
H01W2	**Cape Leeuwin H**	**80.14**	**222**	T	T	03 02 10.9	
	baz=151,slow=76,SNR=80						
H01W3	**Cape Leeuwin H**	**80.15**	**222**	T	T	03 02 06.9	
	baz=151,slow=76,SNR=84						
ASAR	**Alice Springs**	**80.55**	**243**	P	**P**	**01 33 17.2**	**-0.7**
	2.6nm,0.9s,baz=140,slow=4.7,SNR=14						
ASAR				LR	LR	02 04 18.8	
	comp=Z,617nm,19.1s,baz=123,slow=32						
	2.6nm,0.9s						
MDP	**Montagnes des**	**80.57**	**68**	LR	LR	02 04 32.5	
	comp=Z,279nm,20.7s,baz=188,slow=32						
WRA	**Warramunga Arr**	**83.38**	**245**	P	**P**	**01 33 32.3**	**-0.5**
	6.7nm,0.9s,baz=147,slow=4.7,SNR=26						
	6.7nm,0.9s						
TXAR	**Lajitas Array**	**84.29**	**13**	P	**P**	**01 33 38.2**	**+1.2**
	0.9nm,0.9s,baz=193,slow=10,SNR=6.3						
	0.9nm,0.8s						
PMG	**Port Moresby**	**84.74**	**261**	LR	LR	02 06 54.7	
	comp=Z,359nm,19.3s,baz=142,slow=32						
SJG	**San Juan**	**84.98**	**49**	LR	LR	02 08 22.0	
	comp=Z,192nm,19.4s,baz=220,slow=33						
SUR	**Sutherland**	**86.96**	**147**	LR	LR	02 09 01.7	
	comp=Z,286nm,18.8s,baz=205,slow=33						
PFO	**Pinyon Flats O**	**87.54**	**2**	LR	LR	02 04 51.5	
	comp=Z,415nm,18.0s,baz=194,slow=30						
FITZ	**Fitzroy Crossi**	**89.42**	**239**	LR	LR	02 08 20.4	
	comp=Z,378nm,20.4s,baz=149,slow=32						
ANMO	**Albuquerque**	**89.49**	**10**	LR	LR	02 07 50.9	
	comp=Z,175nm,18.4s,baz=186,slow=31						
BOSA	**Boshof**	**91.85**	**149**	LR	LR	02 09 24.0	
	comp=Z,534nm,19.8s,baz=196,slow=32						
NVAR	**Mina Array Bea**	**92.32**	**0**	P	**P**	**01 34 16.8**	**+1.3**
	0.8nm,0.7s,baz=185,slow=7.4,SNR=5.5						
NVAR				LR	LR	02 07 29.8	
	comp=Z,401nm,18.6s,baz=186,slow=30						
	0.8nm,0.7s						
JAY	**Jayapura**	**94.04**	**260**	LR	LR	02 16 07.0	
	comp=Z,208nm,18.0s,baz=108,slow=35						
TKL	**Tuckaleechee C**	**94.54**	**28**	LR	LR	02 10 08.8	
	comp=Z,104nm,20.2s,baz=174,slow=31						
ELK	**Elko**	**94.69**	**3**	LR	LR	02 09 20.5	
	comp=Z,326nm,18.4s,baz=185,slow=31						
LBTB	**Lobatse**	**95.32**	**148**	LR	LR	02 12 36.5	
	comp=Z,311nm,18.6s,baz=213,slow=32						
YBH	**Yreka Blue Hor**	**95.68**	**357**	LR	LR	02 09 06.4	
	comp=Z,26nm,18.8s,baz=170,slow=30						
H11N3	**WAKE ISLAND Hy**	**96.95**	**294**	T	T	03 22 49.2	
	baz=144,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**96.96**	**294**	T	T	03 22 49.7	
	baz=144,slow=75,SNR=40						
H11N2	**WAKE ISLAND Hy**	**96.97**	**294**	T	T	03 22 49.9	
	baz=144,slow=75,SNR=34						
PDAR	**Pinedale Array**	**96.98**	**7**	P	**P**	**01 34 37.3**	**+0.5**
	0.6nm,0.9s,baz=188,slow=4.3,SNR=4.0						
PDAR				LR	LR	02 10 25.7	
	comp=Z,208nm,20.7s,baz=189,slow=30						
	0.6nm,0.9s						
BATI	**Baumata**	**97.10**	**242**	LR	LR	02 13 03.5	
	comp=Z,494nm,21.5s,baz=189,slow=32						
TSUM	**Tsumeb**	**97.89**	**139**	LR	LR	02 11 13.3	
	comp=Z,256nm,21.6s,baz=202,slow=31						
ILAR	**Eielson Array**	**120.64**	**346**	PKP	**PKiKP**	**01 39 55.7**	**-0.2**
	0.6nm,0.8s,baz=188,slow=3.7,SNR=4.6						
HILR	**Hailar Array B**	**144.43**	**287**	PKP	**PKPdf**	**01 40 40.6**	**-0.2**
	1.5nm,0.5s,baz=131,slow=6.1,SNR=5.7						
LZDM	**Lanzhou Array**	**145.47**	**256**	PKPbc	**PKPab**	**01 40 44.6**	**+0.8**
	0.6nm,0.3s,baz=92,slow=4.7,SNR=7.7						
FETA	**Feichten**	**147.84**	**82**	*e*PKP	**PKPbc**	**01 40 49.9**	**0.0**
	6.9nm,1.3s						
RETA	**Reutte**	**148.11**	**81**	*e*PKP	**PKiKP**	**01 40 51.2**	**-1.0**
	9.8nm,2.0s						
MOTA	**Moosalm**	**148.23**	**82**	*e*PKP	**PKiKP**	**01 40 52.1**	**-0.4**
	2.1nm,0.8s						
WTTA	**Wattenberg**	**148.50**	**82**	*e*PKP	**PKPbc**	**01 40 51.0**	**-0.6**
	2.8nm,0.9s						
WATA	**Walderalm**	**148.50**	**82**	*e*PKP	**PKPab**	**01 40 56.0**	**+1.0**
	4.9nm,1.4s						
ABTA	**Abfaltersbach**	**148.74**	**84**	*e*PKP	**PKiKP**	**01 40 53.4**	**-0.1**
	6.6nm,1.0s						
KBA	**Koelnbreinsper**	**149.40**	**84**	*e*PKP	**PKPab**	**01 40 59.0**	**+0.3**
	9.0nm,1.2s						
OBKA	**Obir**	**149.80**	**85**	*e*PKP	**PKPbc**	**01 40 53.1**	**-1.6**
	0.9nm,0.7s						
BIOA	**Bad Ischl, Aus**	**149.88**	**83**	*e*PKP	**PKiKP**	**01 40 55.8**	**0.0**
	0.1nm,0.6s						
SOKA	**Soboth**	**150.17**	**86**	*e*PKP	**PKiKP**	**01 40 57.0**	**+0.5**
	9.3nm,1.6s						
GERES	**GERESS Array B**	**150.49**	**81**	PKPbc	**PKPbc**	**01 40 56.1**	**-0.2**
	1.3nm,0.7s,baz=188,slow=4.0,SNR=5.5						
ARSA	**Arzberg**	**150.76**	**85**	*e*PKP	**PKiKP**	**01 40 57.1**	**-0.4**
	0.9nm,0.7s						
SONM	**Songino Array**	**151.22**	**276**	PKPbc	**PKPbc**	**01 40 58.0**	**-0.2**
	0.8nm,0.7s,baz=114,slow=2.3,SNR=5.0						
BRTR	**Keskin Array B**	**156.49**	**117**	PKPab	**PKPab**	**01 41 28.7**	**0.0**
	1.3nm,0.8s,baz=165,slow=5.1,SNR=5.6						
MKAR	**Makanchi Array**	**164.63**	**250**	PKPab	**PKPab**	**01 42 01.7**	**-2.2**
	0.7nm,0.8s,baz=120,slow=4.8,SNR=6.5						
BVAR	**Borovoye Array**	**174.34**	**261**	PKPab	**PKPab**	**01 42 46.6**	**-0.1**
	0.9nm,0.9s,baz=86,slow=4.6,SNR=5.0						

IDC 22 01:24:20.2±0.6, 54.°47S×118.°92W, h0km, mb4.2/8, mbtmp4.2/8, Error ellipse: s-maj=32.8km s-min=21.2km az=134.0

NEIC 22 01:24:23.1±1.1, 54.°4S±0.°2×118.°7W±0.°3, h10km±1km, mb4.9/33, Error ellipse: s-maj=29.2km s-min=23.1km az=314.0

GCMT 22 01:24:25.1±0.3, 54.°75S±0.°02×118.°62W±0.°03, h26km±1km, MW5.0/95, Moment Tensor Solution. s26,c30; s95,c117; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.65±.21; Mθθ2.42±.24; Mϕϕ-1.77±.21; Mrθ1.30±.35; Mθϕ4.08±.14; Mϕr0.83±.32; Best double couple: M=4.78600×10^16 NP1:ϕs105.00000°, δ79.00000°, λ10.00000°. NP2: ϕs13.00000°, δ80.00000°, λ169.00000°. Principal axes: T 5.3100, Plg14.0000°, Azm329.0000°; N -1.0490, Plg75.0000°, Azm151.0000°; P -4.2620, Plg1.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 22 01:24:22.0±0.5, 54.°4S±0.°1×118.°8W±0.°1, h10km, n79, σ0§96/66, mb4.8/22, 1D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MG03	**Isla Dawson**	**27.90**	**109**	P	**P**	**01 30 12.7**	**+0.9**
VA02	**Isla de Pascua**	**28.12**	**18**	P	**P**	**01 30 15.0**	**+1.0**
H03S2	**Juan Fernandez**	**34.64**	**70**	T	T	02 07 41.5	
	baz=219,slow=74,SNR=72						
H03S1	**Juan Fernandez**	**34.64**	**70**	T	T	02 07 42.8	
	baz=219,slow=74,SNR=79						
H03S3	**Juan Fernandez**	**34.66**	**70**	T	T	02 07 42.0	
	baz=219,slow=74,SNR=84						
H03N3	**Juan Fernandez**	**34.93**	**70**	T	T	02 07 58.9	
	baz=221,slow=72,SNR=172						
H03N2	**Juan Fernandez**	**34.93**	**70**	T	T	02 07 59.3	
	baz=221,slow=72,SNR=259						
H03N1	**Juan Fernandez**	**34.94**	**70**	T	T	02 07 59.3	
	baz=221,slow=72,SNR=180						
VNDA	**Vanda**	**35.33**	**202**	P	**P**	**01 31 16.4**	**-0.4**
	3.5nm,1.0s,baz=75,slow=4.1,SNR=3.8						
	3.5nm,1.0s						
QSPA	**South Pole Qui**	**35.74**	**180**	P	**P**	**01 31 21.3**	**+0.6**
	5.2nm,1.0s,baz=147,slow=7.1,SNR=3.1						
	5.2nm,1.0s						
MT01	**Popeta**	**38.92**	**78**	P	**P**	**01 31 48.6**	**+0.9**
MT09	**Talagante**	**39.14**	**78**	P	**P**	**01 31 49.5**	**-0.2**
MT09				IAmb	IAmb	01 32 16.7	
	comp=Z,53nm,1.9s						
AC02	**Maricunga**	**45.42**	**73**	P	**P**	**01 32 41.6**	**+0.2**
ELIB	**Princess Elisa**	**51.14**	**166**	*d*P	P	01 33 18.8	-5.8
CASY	**Casey**	**53.95**	**202**	P	**P**	**01 33 47.6**	**+2.3**
LPAZ	**La Paz**	**54.45**	**66**	P	**P**	**01 33 50.4**	**+0.2**
	comp=Z,7.3nm,1.1s,baz=222,slow=5.6,SNR=7.7						
	comp=Z,7.3nm,1.1s						
LPAZ	**La Paz**	**54.45**	**66**		**P**	**01 33 50.2**	**0.0**
OTAV	**Otavalo**	**63.80**	**46**		**P**	**01 34 55.2**

ABTX					IAmb	IAmb	01 40 10.0	
	comp=Z,13nm,1.3s							
IRM	**Iron Mountain**	**88.30**	**3**	P		**P**	**01 37 15.6**	**+2.4**
IRM					IAmb	IAmb	01 37 16.7	
	comp=Z,12nm,1.3s							
MWC	**Mount Wilson**	**88.31**	**1**	P		**P**	**01 37 13.8**	**+0.3**
BFSC	**Mount Baldy Ra**	**88.33**	**1**	P		**P**	**01 37 13.0**	**-0.5**
BFSC					IAmb	IAmb	01 37 19.7	
	comp=Z,4.7nm,1.0s							
ANMO	**Albuquerque**	**89.67**	**10**			**P**	**01 37 20.5**	**+0.7**
ANMO	**Albuquerque**	**89.67**	**10**	P		**P**	**01 37 20.3**	**+0.4**
ANMO					IAmb	IAmb	01 37 22.4	
	comp=Z,5.8nm,1.2s							
ISA	**Isabella, Lake**	**89.74**	**0**	P		**P**	**01 37 21.1**	**+1.1**
ISA					IAmb	IAmb	01 37 30.8	
	comp=Z,17nm,1.9s							
WUAZ	**Wupatki**	**89.83**	**6**	P		**P**	**01 37 21.3**	**+0.8**
WUAZ					IAmb	IAmb	01 37 23.6	
	comp=Z,6.7nm,1.2s							
U15A	**North Rim**	**90.68**	**5**			**P**	**01 37 24.3**	**-0.3**
U15A					IAmb	IAmb	01 37 29.7	
	comp=Z,19nm,1.8s							
NVAR	**Mina Array Bea**	**92.51**	**0**	P		**P**	**01 37 33.8**	**+0.8**
	comp=Z,1.5nm,1.0s,baz=195,slow=7.0,SNR=4.8							
	comp=Z,1.5nm,1.0s							
H11N3	**WAKE ISLAND Hy**	**97.06**	**294**	T		T	03 26 06.6	
	baz=144,slow=75,SNR=18							
H11N1	**WAKE ISLAND Hy**	**97.06**	**294**	T		T	03 26 03.5	
	baz=144,slow=75,SNR=20							
H11N2	**WAKE ISLAND Hy**	**97.08**	**294**	T		T	03 26 04.5	
	baz=144,slow=75,SNR=13							
PDAR	**Pinedale Array**	**97.16**	**7**	P		**P**	**01 37 53.7**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=208,slow=5.9,SNR=3.9							
	comp=Z,0.6nm,0.9s							
ILAR	**Eielson Array**	**120.83**	**346**	PKP		**PKiKP**	**01 43 13.3**	**+0.4**
	comp=Z,1.0nm,1.0s,baz=184,slow=2.6,SNR=5.9							
ESDC	**Sonseca Array**	**134.89**	**81**	PKP		**PKiKP**	**01 43 42.5**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=241,slow=3.1,SNR=4.1							
HILR	**Hailar Array B**	**144.51**	**287**	PKP		**PKPdf**	**01 43 57.9**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=126,slow=9.3,SNR=8.2							
LZDM	**Lanzhou Array**	**145.46**	**255**	PKPbc		**PKPab**	**01 44 01.0**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=134,slow=6.4,SNR=8.8							
LZH	**Lanzhou**	**145.46**	**256**	*e*P		**PKPab**	**01 44 01.4**	**+1.2**
LZH					pmax	pmax		
	comp=Z,23nm,1.3s							
CESX	**Cesi**	**146.39**	**90**			**PKPdf**	**01 44 01.4**	**+0.3**
RAYN	**Ar Rayn**	**146.97**	**153**			**PKPbc**	**01 44 04.2**	**-0.4**
TIXI	**Tiksi**	**147.15**	**327**			**PKPbc**	**01 44 04.0**	**+0.4**
FETA	**Feichten**	**147.84**	**82**	*e*PKP		**PKPbc**	**01 44 06.5**	**0.0**
	comp=Z,7.0nm,1.3s							
SQTA	**Sankt Quirin**	**148.22**	**82**	*e*PKP		**PKPbc**	**01 44 07.4**	**-0.1**
	comp=Z,6.4nm,1.3s							
MOTA	**Moosalm**	**148.23**	**82**	*e*PKP		**PKPbc**	**01 44 07.3**	**-0.2**
	comp=Z,6.7nm,1.0s							
WTTA	**Wattenberg**	**148.49**	**82**	*e*PKP		**PKiKP**	**01 44 09.2**	**-0.6**
	comp=Z,4.0nm,0.9s							
ABTA	**Abfaltersbach**	**148.73**	**84**	*e*PKP		**PKPbc**	**01 44 09.0**	**+0.3**
	comp=Z,8.0nm,1.0s							
LESA	**Schwarzleotal**	**149.18**	**83**	*e*PKP		**PKPbc**	**01 44 09.8**	**0.0**
	comp=Z,7.6nm,1.2s							
GTA2	**Gaotai**	**150.15**	**256**	*e*P		**PKiKP**	**01 44 13.3**	**-0.1**
GTA2					pmax	pmax		
	comp=Z,8.0nm,1.2s							
MOA	**Molln**	**150.32**	**83**	*e*PKP		**PKPbc**	**01 44 12.4**	**-0.1**
	comp=Z,12nm,1.7s							
GERES	**GERESS Array B**	**150.49**	**81**	PKPbc		**PKPbc**	**01 44 11.7**	**-1.3**
	comp=Z,3.2nm,0.9s,baz=207,slow=1.5,SNR=9.5							
ARSA	**Arzberg**	**150.74**	**85**	*e*PKP		**PKPbc**	**01 44 12.0**	**-1.6**
	comp=Z,2.1nm,0.9s							
SONM	**Songino Array**	**151.27**	**276**	PKPbc		**PKPbc**	**01 44 13.7**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=134,slow=2.3,SNR=5.5							
CONA	**Conrad Observa**	**151.29**	**84**	*e*PKP		**PKPbc**	**01 44 14.5**	**-0.4**
	comp=Z,2.6nm,0.9s							
RONA	**Rosalia, Austr**	**151.42**	**85**	*e*PKP		**PKPbc**	**01 44 14.7**	**-0.4**
	comp=Z,4.4nm,1.1s							
BRTR	**Keskin Array B**	**156.37**	**117**	PKPab		**PKPab**	**01 44 43.3**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=182,slow=5.1,SNR=13							
BRTR	**Keskin Array B**	**156.37**	**117**	PKPab		**PKPab**	**01 44 43.7**	**-1.2**
BURAR	**Bucovina Array**	**156.59**	**92**	PKPab		**PKPab**	**01 44 45.9**	**+0.4**
MKAR	**Makanchi Array**	**164.60**	**249**	PKPab		**PKPab**	**01 45 19.1**	**-1.3**
	comp=Z,1.2nm,1.0s,baz=107,slow=6.5,SNR=6.0							
KURBB	**Kurchatov Arra**	**168.75**	**257**	PKPab		**PKPab**	**01 45 38.0**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=126,slow=4.7,SNR=4.1							
BVAR	**Borovoye Array**	**174.34**	**259**	PKPab		**PKPab**	**01 46 03.0**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=134,slow=4.3,SNR=4.9							

*ISK **22** 01:25:25.8, 39.°04N×27.°84E, h5km, ML3.5/22*
*THE **22** 01:25:26.0, 39.°N±5.°×2.°8E±.°, h0km±20km, M3.4/12, MLh3.4/12*
*AFAD **22** 01:25:26.0, 39.°03N×27.°85E, h8km±1km, MW3.3*

ISC 22 01:25:26.4±0.9, 39.°04N±0.°02×27.°85E±0.°02, h10km±7km, n61, σ0ˢ52/86, 1C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.16**	**191**	P	**Pg**	**01 25 29.9**	**-0.1**
AKHS				S	**Sg**	**01 25 32.9**	**+0.5**
AKHS				IAML		01 25 33.0	
	comp=E,5μm,0.3s						
AKS	**Akhisar**	**0.16**	**191**	Pg	**Pg**	**01 25 29.2**	**-0.7**
AKS				Sg	**Sg**	**01 25 32.5**	**+0.1**
SOMA	**Soma-Manisa**	**0.27**	**295**	Pg	**Pg**	**01 25 31.5**	**-0.4**
SOMA				Sg	**Sg**	**01 25 35.9**	**+0.3**
GORD	**Gordes-Manisa**	**0.28**	**117**	Pg	**Pg**	**01 25 32.3**	**+0.2**
GORD				Sg	**Sg**	**01 25 36.5**	**+0.5**
GOMA	**Golmarmara-Man**	**0.34**	**171**	Pg	**Pg**	**01 25 32.8**	**-0.3**
GOMA				Sg	**Sg**	**01 25 37.9**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.35**	**343**	P	**Pg**	**01 25 33.0**	**-0.4**
STEP				S	**Sg**	**01 25 38.4**	**+0.3**
STEP				IAML		01 25 39.0	
	comp=N,7μm,0.3s						
KTTT	**Salihli**	**0.40**	**152**	P	**Pg**	**01 25 34.1**	**-0.2**
KTTT				S	**Sg**	**01 25 39.8**	**+0.3**
KTTT				IAML		01 25 41.0	
	comp=N,1μm,1.0s						
CAMT	**Merkez**	**0.51**	**236**	P	**Pg**	**01 25 36.3**	**0.0**
CAMT				S	**Sb**	**01 25 44.7**	**-0.3**
CAMT				IAML		01 25 45.0	
	comp=N,2μm,0.3s						
CAMT				IAML		01 25 46.0	
	comp=E,3μm,0.4s						
BALB	**Balikesir**	**0.60**	**2**	Pg	**Pg**	**01 25 37.8**	**-0.2**
ZEDA	**zmir-Bergama**	**0.61**	**263**	P	**Pg**	**01 25 38.1**	**-0.1**
ZEDA				S	**Sg**	**01 25 46.2**	**0.0**
ZEDA				IAML		01 25 47.0	
	comp=N,2μm,0.6s						
ZEDA				IAML		01 25 48.0	
	comp=E,1μm,0.2s						
DEMI	**Demirci**	**0.67**	**89**	P	**Pg**	**01 25 39.4**	**0.0**
BKES	**Balkesir-Mer**	**0.69**	**5**	P	**Pg**	**01 25 39.5**	**-0.4**
IZMD	**zmir-Dikili-**	**0.72**	**266**	P	**Pg**	**01 25 40.4**	**+0.1**
IZMD				P	**Pg**	**01 25 40.4**	**+0.1**
IZMD				S	**Sg**	**01 25 50.0**	**+0.2**
IZMD				IAML		01 25 50.0	
	comp=N,672nm,0.5s						
DKL	**Dikili**	**0.74**	**273**	Pg	**Pg**	**01 25 40.7**	**+0.1**
DURS	**Dursunbey**	**0.74**	**41**	P	**Pg**	**01 25 39.8**	**-0.9**
DURS				S	**Sg**	**01 25 50.0**	**-0.3**
DURS				IAML		01 25 51.0	
	comp=N,528nm,0.2s						
DURS				IAML		01 25 51.0	
	comp=E,491nm,0.2s						
BUHA	**Balikesir, Bur**	**0.76**	**308**	P	**Pb**	**01 25 41.1**	**-0.6**
MANT	**Manisa**	**0.78**	**135**	P	**Pg**	**01 25 41.2**	**-0.2**
ODEM	**Odemis-Izmir**	**0.78**	**167**	Pg	**Pg**	**01 25 41.4**	**-0.1**
DST	**Dursunbey**	**0.82**	**46**	Pg	**Pg**	**01 25 42.1**	**-0.1**
KULA	**Kula-Manisa**	**0.82**	**129**	Pg	**Pg**	**01 25 42.0**	**-0.2**
YAYO	**Edremit-Balk**	**0.83**	**314**	Pg	**Pg**	**01 25 41.9**	**-0.5**
BLKS	**Balkesir-Sus**	**0.84**	**6**	P	**Pg**	**01 25 42.0**	**-0.6**
BLKS				P	**Pg**	**01 25 42.0**	**-0.6**
BLKS				S	**Sg**	**01 25 53.1**	**-0.4**
BLKS				IAML		01 25 57.0	
	comp=N,476nm,0.4s						
BAGT	**Foa**	**0.87**	**244**	P	**Pg**	**01 25 42.8**	**-0.4**
BAGT				S	**Sg**	**01 25 53.2**	**-1.3**
BAGT				IAML		01 25 58.0	
	comp=E,2μm,0.5s						
DUVT	**Torbali**	**0.88**	**201**	P	**Pg**	**01 25 42.9**	**-0.3**
SMAA	**Simav-Kutahya**	**0.88**	**86**	Pg	**Pb**	**01 25 43.6**	**-0.2**
SIMA	**Simav-Kutahya**	**0.88**	**87**	Pg	**Pb**	**01 25 43.4**	**-0.5**
IZMR	**zmir-demi**	**0.91**	**175**	P	**Pg**	**01 25 43.3**	**-0.5**
IZMR				P	**Pg**	**01 25 43.4**	**-0.5**
IZMR				S	**Sg**	**01 25 54.2**	**-1.3**
IZMR				IAML		01 26 03.0	
	comp=N,280nm,0.7s						
BLCB	**Balcova**	**0.91**	**224**	Pg	**Pg**	**01 25 43.6**	**-0.3**
BLCB	**Balcova**	**0.91**	**224**	P	**Pg**	**01 25 43.3**	**-0.6**
BLCB				S	**Sb**	**01 25 57.2**	**+0.7**
FOCM	**Foa**	**0.93**	**250**	Pg	**Pb**	**01 25 44.6**	**-0.1**
SUSR	**Susurluk-Balik**	**0.94**	**11**	Pg	**Pg**	**01 25 43.9**	**-0.6**
AYVA	**Ayvalik**	**0.94**	**287**	P	**Pg**	**01 25 44.1**	**-0.4**
AYVA				S	**Sg**	**01 25 56.9**	**+0.1**
AYVA				IAML		01 25 59.0	
	comp=N,923nm,0.4s						
AYVA				IAML		01 25 59.0	
	comp=E,1μm,0.7s						
KIRA	**zmir-Kiraz**	**0.94**	**153**	P	**Pg**	**01 25 44.1**	**-0.5**
KIRA				S	**Sg**	**01 25 56.2**	**-0.7**
KIRA				IAML		01 26 01.0	
	comp=N,394nm,0.5s						
USAK	**Uak-Merkez**	**0.97**	**109**	P	**Pg**	**01 25 44.5**	**-0.4**
YENI	**Yenice-Canakka**	**1.01**	**332**	Pg	**Pg**	**01 25 45.5**	**-0.4**
GONE	**Gonen-Balikesi**	**1.01**	**353**	Pg	**Pb**	**01 25 46.3**	**+0.2**
SHAP	**Saphane-Kutahy**	**1.07**	**90**	Pg	**Pg**	**01 25 46.5**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.09**	**178**	Pn	**Pg**	**01 25 46.9**	**-0.5**
NAZL	**Nazilli-Aydin**	**1.13**	**162**	Pn	**Pb**	**01 25 47.8**	**-0.2**
CANM	**Can-anakkale**	**1.15**	**328**	Pn	**Pn**	**01 25 48.6**	**0.0**
GMLD	**Gumuldur**	**1.21**	**218**	Pn	**Pn**	**01 25 49.9**	**+0.5**
GEDZ	**Gediz**	**1.21**	**89**	Pn	**Pn**	**01 25 49.7**	**+0.2**
SULTU	**Buldan**	**1.22**	**144**	P	**Pb**	**01 25 49.5**	**-0.1**
DGB	**zmir**	**1.25**	**218**	P	**Pg**	**01 25 49.2**	**-1.1**
DGB				S	**Sb**	**01 26 06.4**	**+0.3**
DGB				IAML		01 26 10.0	
	comp=N,522nm,0.4s						
PRK	**Paraskevi**	**1.25**	**280**	P	**Pg**	**01 25 49.6**	**-0.8**
PRK				S	**Sn**	**01 26 06.9**	**+0.2**
EZN	**Ezine**	**1.42**	**304**	P	**Pn**	**01 25 52.2**	**-0.1**
EZN				S	**Sg**	**01 26 12.4**	**+0.3**
GCAM	**G?zelcaml?**	**1.42**	**200**	Pn	**Pb**	**01 25 52.9**	**-0.1**
SMG	**Samos**	**1.55**	**211**	P	**Pb**	**01 25 55.3**	**0.0**
SMG				S	**Sg**	**01 26 17.5**	**+1.3**
SIGR	**SIGRI**	**1.56**	**277**	P	**Pn**	**01 25 53.8**	**-0.5**
SIGR				S	**Sg**	**01 26 16.5**	**-0.2**
GADA	**Gvkgeada**	**1.90**	**308**	P	**Pn**	**01 25 59.7**	**+0.3**
YER	**Yerkesik**	**1.93**	**170**	P	**Pn**	**01 25 58.7**	**-0.7**
BODT	**Bodrum**	**2.02**	**192**	P	**Pn**	**01 26 00.6**	**0.0**
ENEZ	**Enez**	**2.14**	**323**	P	**Pn**	**01 26 02.3**	**+0.1**
LIA	**Limnos Island**	**2.24**	**293**	P	**Pn**	**01 26 03.4**	**-0.2**
SMTH	**Samothraki Isl**	**2.29**	**309**	P	**Pn**	**01 26 04.1**	**-0.2**
RDO	**Rodhopi**	**2.75**	**321**	P	**Pn**	**01 26 10.7**	**+0.1**
PLVB	**Pleven**	**4.98**	**332**	⇓P	**Pn**	**01 26 42.8**	**+1.6**
SGRR	**Singureni**	**5.37**	**345**	⇓P	**Pn**	**01 26 47.5**	**+1.0**
BOVS	**Bovan**	**6.52**	**317**	⇓P	**Pn**	**01 27 03.1**	**+0.8**
DOPR	**Dopca**	**7.16**	**346**	⇓P	**Pn**	**01 27 11.1**	**0.0**
GZR	**Gura Zlata**	**7.38**	**331**	⇑P	**Pn**	**01 27 15.3**	**+1.1**

*SOF **22** 01:25:41.4, 39.°98N±0.°02×26.°95E±0.°02, h10km±72km, MD3.0/5*
*ISK **22** 01:25:56.5, 40.°78N×27.°44E, h12km±1km, ML3.7/8*
*AFAD **22** 01:25:56.3, 40.°77N×27.°43E, h7km±2km, ML3.2*

ISC 22 01:25:56.6±0.8, 40.°78N±0.°02×27.°43E±0.°02, h17km±5km, n72, σ1ˢ18/93, 11C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZK	**Gazikoy-TEKIRD**	**0.08**	**246**	Pg	**Pg**	**01 25 59.8**	**-0.1**
GAZK				Sg	**Sg**	**01 26 02.4**	**+0.3**
SART	**Tekirdag**	**0.21**	**244**	P	**Pg**	**01 26 01.3**	**-0.3**
SART				IAML		01 26 05.0	
	comp=N,3μm,0.7s						
SART				S	**Sg**	**01 26 05.2**	**+0.2**
RKY	**Sarkoy-Tekirda**	**0.21**	**244**	Pg	**Pg**	**01 26 01.5**	**-0.1**
RKY				Sg	**Sg**	**01 26 05.1**	**0.0**
MADA	**Marmara adas**	**0.22**	**153**	P	**Pg**	**01 26 01.3**	**-0.3**
MADA				S	**Sg**	**01 26 04.2**	**-0.8**
MADA				IAML		01 26 05.0	
	comp=N,3μm,0.5s						
MADA				IAML		01 26 05.0	
	comp=E,3μm,0.2s						
MRMT	**Marmara Adasi**	**0.22**	**144**	Pg	**Pg**	**01 26 01.4**	**-0.4**
MRMT				Sg	**Sg**	**01 26 04.4**	**-0.9**
TKR	**Tekirdag**	**0.22**	**22**	Pg	**Pg**	**01 26 01.5**	**-0.3**
TKR				Sg	**Sg**	**01 26 05.1**	**-0.2**
MURA	**Muratl, TEK**	**0.37**	**7**	P	**Pb**	**01 26 04.5**	**-0.2**
KRBG	**Karabiga-Canak**	**0.40**	**194**	Pg	**Pb**	**01 26 05.1**	**-0.1**
KRBG				Sg	**Sb**	**01 26 10.9**	**-0.1**
CRLT	**Corlu**	**0.42**	**34**	Pg	**Pg**	**01 26 05.2**	**+0.1**
BOTS	**Marmara Eregli**	**0.47**	**63**	Pg	**Pb**	**01 26 06.1**	**-0.3**
BOTS				Sg	**Sb**	**01 26 13.1**	**+0.1**
BIGA	**Biga-Canakkale**	**0.54**	**203**	Pg	**Pb**	**01 26 07.8**	**+0.2**
EDC	**Edincik**	**0.55**	**142**	Pg	**Pb**	**01 26 07.5**	**-0.2**
EDC				Sg	**Sb**	**01 26 15.1**	**-0.2**
KESN	**Edirne-Kesan**	**0.57**	**275**	P	**Pg**	**01 26 07.7**	**-0.3**
GOKT	**Kean, EDRN**	**0.62**	**259**	P	**Pb**	**01 26 08.9**	**0.0**
GOKT				S	**Sb**	**01 26 17.7**	**+0.3**
GOKT				IAML		01 26 20.0	
	comp=E,832nm,0.4s						
LPK	**Lapseki**	**0.65**	**231**	Pg	**Pb**	**01 26 09.5**	**0.0**
BAND	**Balkesir-Ban**	**0.67**	**130**	⇑P	**Pg**	**01 26 09.1**	**-0.5**
BAND	**Balkesir-Ban**	**0.67**	**130**	P	**Pg**	**01 26 09.4**	**-0.3**
BAND				S	**Sb**	**01 26 18.4**	**-0.3**
BAND				IAML		01 26 19.0	
	comp=N,3μm,0.2s						
BAND				IAML		01 26 19.0	
	comp=E,2μm,0.2s						
LAPS	**Lapseki, ANA**	**0.69**	**220**	P	**Pg**	**01 26 09.7**	**-0.5**
LAPS				S	**Sb**	**01 26 19.6**	**+0.1**
UKOP	**Uzunkopru-Edir**	**0.69**	**300**	Pg	**Pb**	**01 26 10.8**	**+0.6**
ERIK	**Erikli-Kesan**	**0.70**	**261**	Pg	**Pb**	**01 26 10.5**	**+0.1**
ERIK				Sg	**Sb**	**01 26 20.2**	**+0.4**
ATIT	**Gnen**	**0.71**	**171**	P	Pg	01 26 00.7	-10
SLVT	**Silivri**	**0.74**	**53**	Pg	**Pb**	**01 26 11.7**	**+0.7**
GONE	**Gonen-Balikesi**	**0.76**	**165**	Pg	**Pb**	**01 26 11.3**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.82**	**242**	Pg	**Pb**	**01 26 12.8**	**+0.4**
ELBA	**Catalca**	**0.84**	**64**	P	**Pb**	**01 26 13.1**	**+0.3**
ELBA				S	**Sb**	**01 26 24.1**	**+0.3**
ELBA				IAML		01 26 26.0	
	comp=N,1μm,0.2s						
VIZE	**Kirklareli, Vi**	**0.85**	**21**	P	**Pg**	**01 26 12.6**	**-0.6**
VIZE				S	**Sg**	**01 26 24.5**	**0.0**
VIZE				IAML		01 26 25.0	
	comp=E,544nm,0.5s						
YENI	**Yenice-Canakka**	**0.86**	**190**	Pg	**Pb**	**01 26 13.3**	**+0.3**
SINB	**Sinanoba-Istan**	**0.87**	**75**	Pg	**Pb**	**01 26 13.6**	**+0.4**
CMHT	**Manyas**	**0.87**	**152**	P	**Pn**	**01 26 15.3**	**+1.2**
CMHT				S	**Sb**	**01 26 25.6**	**+1.0**
CMHT				IAML		01 26 28.0	
	comp=N,1μm,0.6s						
KCTX	**Karacabey (Bur**	**0.88**	**126**	Pg	**Pb**	**01 26 13.5**	**+0.2**
CATL	**atalca, ST**	**0.90**	**51**	P	**Pg**	**01 26 13.5**	**-0.5**
CATL				S	**Sb**	**01 26 25.7**	**+0.3**
CATL				IAML		01 26 27.0	
	comp=N,1μm,0.5s						
CATL				IAML		01 26 28.0	
	comp=E,1μm,0.3s						
SUSR	**Susurluk-Balik**	**0.96**	**148**	Pg	**Pn**	**01 26 15.5**	**+0.2**
CAVK	**Edirne/Enez-Ca**	**0.96**	**265**	P	**Pg**	**01 26 14.7**	**-0.5**
CAVK				S	**Sb**	**01 26 28.1**	**+1.0**
CAVK				IAML		01 26 31.0	
	comp=N,494nm,0.2s						
KIRK	**Kirklareli**	**1.03**	**346**	P	**Pg**	**01 26 16.0**	**-0.5**
KIRK				S	**Sg**	**01 26 29.4**	**-0.6**
KIRK				IAML		01 26 30.0	
	comp=N,380nm,0.2s						
ARMN	**Kirklareli, Me**	**1.08**	**0**	P	**Pg**	**01 26 17.0**	**-0.5**
BKES	**Balkesir-Mer**	**1.12**	**160**	P	**Pn**	**01 26 18.0**	**+0.6**
BKES				S	**Sn**	**01 26 33.6**	**+1.2**
BKES				IAML		01 26 36.0	
	comp=N,647nm,0.6s						
BUHA	**Balikesir, Bur**	**1.31**	**192**	P	**Pb**	**01 26 20.8**	**+0.1**
BUHA				S	**Sg**	**01 26 38.0**	**-0.8**
BUHA				IAML		01 26 41.0	
	comp=N,810nm,0.4s						
GOAD	**anakkale-G¶**	**1.31**	**242**	P	**Pn**	**01 26 20.4**	**+0.2**
DURS	**Dursunbey**	**1.43**	**145**	P	**Pg**	**01 26 25.2**	**+1.1**
DURS				S	**Sn**	**01 26 40.2**	**0.0**
DURS				IAML		01 26 45.0	
	comp=N,535nm,0.2s						
SATE	**Sancaktepe,**	**1.43**	**80**	P	**Pn**	**01 26 22.1**	**+0.4**
SATE				S	**Sg**	**01 26 41.6**	**-1.1**
SATE				IAML		01 26 43.0	
	comp=N,536nm,0.3s						
IGD	**Bursa**	**1.45**	**110**	P	**Pn**	**01 26 17.8**	**-4.2**
IGD				S	**Sn**	**01 26 39.9**	**-0.7**
AYVA	**Ayvalik**	**1.58**	**201**	P	**Pg**	**01 26 26.5**	**-0.4**
AYVA				S	**Sg**	**01 26 46.8**	**-0.6**
AYVA				IAML		01 26 48.0	
	comp=E,541nm,0.5s						
SILT	**Sile**	**1.72**	**77**	⇑P	**Pn**	**01 26 26.8**	**+1.1**
JMB	**Yambol**	**1.83**	**339**	P	**Pn**	**01 26 23.8**	**-3.5**
DIM	**Dimitrovgrad**	**1.88**	**313**	P	**Pn**	**01 26 24.0**	**-3.9**
RZN	**Rozhen**	**2.22**	**295**	P	Pn	01 26 22.4	-10
PRD	**Provadia**	**2.38**	**360**	P	**Pn**	**01 26 33.6**	**-1.1**
PLD	**Plovdiv**	**2.43**	**305**	P	Pn	01 26 26.7	-8.8
ELND	**Elena**	**2.44**	**332**	⇑P	**Pn**	**01 26 37.3**	**+1.7**
LOZB	**Loznitsa**	**2.66**	**347**	⇓P	**Pn**	**01 26 38.6**	**-0.1**
MMB	**Musomishta**	**2.88**	**287**	P	Pn	01 26 28.4	-13
ICOR	**Ion Corvin**	**3.34**	**5**	⇓P	**Pn**	**01 26 47.8**	**-0.3**
KKB	**Krupnik**	**3.41**	**290**	P	Pn	01 26 36.3	-13
VAY	**Valandovo**	**3.71**	**280**	*i* Pn	**Pg**	**01 27 05.8**	**-1.9**
VAY				*i* Sn	**Sg**	**01 27 56.2**	**+0.4**
TIRR	**Tirgusor**	**3.75**	**11**	⇓P	**Pn**	**01 26 54.8**	**+1.2**
TPGR	**Topolog**	**4.14**	**10**	⇓P	**Pn**	**01 27 00.5**	**+1.5**
CFR	**Carcaliu**	**4.42**	**7**	⇓P	**Pn**	**01 27 03.9**	**+1.0**
MLR	**Muntele Rosu**	**4.83**	**348**	⇑P	**Pn**	**01 27 11.7**	**+3.1**
TATR	**Tatarca**	**4.83**	**5**	⇓P	**Pn**	**01 27 10.0**	**+1.5**
VOIR		**4.97**	**340**	⇑P	**Pn**	**01 27 12.3**	**+1.8**
ODBI	**Odobesti**	**4.99**	**357**	⇑P	**Pn**	**01 27 13.1**	**+2.5**
VLDR	**Vladesti**	**5.08**	**5**	⇓P	**Pn**	**01 27 12.5**	**+0.6**
PLOR	**Plostina**	**5.10**	**354**	⇓P	**Pn**	**01 27 12.5**	**+0.3**
VRI	**Vrincioaia**	**5.11**	**354**	⇓P	**Pn**	**01 27 14.6**	**+2.3**
VARL	**Varlezi**	**5.12**	**3**	⇓P	**Pn**	**01 27 14.2**	**+1.7**
COVR	**Voineasa-Covas**	**5.14**	**350**	⇑P	**Pn**	**01 27 13.4**	**+0.7**
TURR	**Turia**	**5.37**	**349**	⇓P	**Pn**	**01 27 18.7**	**+2.8**
OZUR		**5.44**	**348**	⇑P	**Pn**	**01 27 19.2**	**+2.3**
ONER	**Baraj Valea Uz**	**5.60**	**353**	⇓P	**Pn**	**01 27 19.2**	**+0.1**
TESR	**Tescani**	**5.75**	**355**	⇑P	**Pn**	**01 27 19.6**	**-1.5**
BURAR	**Bucovina Array**	**7.01**	**348**	⇑P	**Pn**	**01 27 40.2**	**+1.7**
SORM	**Soroca**	**7.38**	**5**	⇑P	**Pn**	**01 27 43.1**	**-0.3**

IDC 22 01:28:48.6±2.2, 49.°79S×110.°86E, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=58.3km s-min=51.0km az=110.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.07**	**10**	T	T	01 47 55.4	
	baz=188,slow=74,SNR=16						
H01W1	**Cape Leeuwin H**	**15.08**	**10**	T	T	01 47 58.7	
	baz=188,slow=74,SNR=16						
H01W3	**Cape Leeuwin H**	**15.09**	**10**	T	T	01 47 56.3	
	baz=188,slow=74,SNR=14						
ASAR	**Alice Springs**	**31.70**	**43**	P	P	01 35 13.9	0.0
	0.9nm,0.7s,baz=212,slow=7.7,SNR=9.9						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**35.17**	**41**	P	P	01 35 44.1	0.0
	1.3nm,0.8s,baz=206,slow=8.4,SNR=4.6						
	1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**68.76**	**348**	P	P	01 39 54.2	0.0
	2.5nm,0.3s,baz=172,slow=5.9,SNR=4.7						
	2.5nm,0.3s						
TXAR	**Lajitas Array**	**146.87**	**115**	PKPbc	PKPbc	01 48 31.9	-0.8
	0.7nm,0.7s,baz=204,slow=5.6,SNR=9.0						

*IDC **22** 01:42:29.0±10.0, 6.°43S×146.°12E, h170km±108km, mb3.0/5, mbtmp3.6/7, Error ellipse: s-maj=52.6

H04N3	**CROZET ISLANDS**	**19.39**	**203**	T	T	02 22 52.8		
	baz=30,slow=74,SNR=57							
CMAR	**Chiang Mai Arr**	**58.63**	**41**	LR	LR	02 31 12.1		
	comp=Z,53nm,20.7s,baz=160,slow=34							
ASAR	**Alice Springs**	**63.41**	**104**	P	P	02 08 36.2	0.0	
	0.5nm,0.7s,baz=249,slow=6.0,SNR=5.7							
	0.5nm,0.7s							
WRA	**Warramunga Arr**	**65.19**	**100**	P	P	02 08 47.9	0.0	
	0.7nm,0.8s,baz=245,slow=5.5,SNR=3.1							
	0.7nm,0.8s							
VAE	**Valguarnera**	**79.77**	**323**	LR	LR	02 42 42.0		
	comp=Z,186nm,21.8s,baz=214,slow=34							
YKA	**Yellowknife Ar**	**146.14**	**358**	PKPbc	PKPdf	02 17 45.0	+0.1	
	0.6nm,0.7s,baz=356,slow=3.5,SNR=13							

NEIC ***22*** *02:00:00.8±2.5, 31°.862N±0°.010×115°.54W±0°.01, h10km±2km, ML2.3/41, ML2.5/29(PAS), Error ellipse: s-maj=3.1km s-min=2.4km az=196.0*

ECX ***22*** *02:00:01.6±0.4, 31°.89N×115°.58W, h10km±5km, MD2.3, ML2.5*

PAS ***22*** *02:00:01.2±2.1, 31°.89N±0°.01×115°.58W±0°.02, h6km±1km, Error ellipse: s-maj=2.9km s-min=2.3km az=189.0*

MEX ***22*** *02:00:01.5±0.7, 31°.83N×115°.49W, h17km±6km, MD3.7*

ISC 22 01:59:59.8±0.9, 31°.88N±0°.02×115°.53W±0°.02, h15km±7km, n50, σ0°73/73, 5C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALAMX	**Rancho Alamar**	**0.20**	**310**	⇓*e*P	**Pg**	**02 00 04.6**	**0.0**
ALAMX				*e*S	**Sg**	**02 00 07.8**	**+0.1**
ALAMX				IAML		02 00 09.2	
	comp=N,1μm,0.2s						
ALAMX				⇓*e*		02 00 09.2	
ALAMX				IAML		02 00 09.9	
	comp=E,1μm,0.3s						
RHX	**Rio Hardy**	**0.33**	**38**	*e*P	**Pg**	**02 00 06.1**	**-0.6**
RHX				*e*S	**Sg**	**02 00 11.2**	**-0.2**
ESJX	**Sierra Juarez**	**0.38**	**290**		**Pg**	**02 00 07.9**	**+0.2**
ESJX				Sg	**Sg**	**02 00 13.4**	**+0.3**
ESJX				IAML		02 00 17.0	
	comp=N,466nm,0.1s						
ESJX				IAML		02 00 19.1	
	comp=E,482nm,0.1s						
SJX	**San Joaquin**	**0.39**	**253**	*e*P	**Pb**	**02 00 07.9**	**-0.4**
SJX				*e*S	**Sg**	**02 00 13.0**	**+0.1**
AGSX	**Ej. Aguas Cali**	**0.50**	**38**	⇑*i*P	**Pg**	**02 00 09.7**	**0.0**
AGSX				*e*S	**Sb**	**02 00 16.9**	**-0.4**
AGSX				⇑*e*		02 00 20.2	
AGSX				IAML		02 00 20.2	
	comp=E,523nm,0.2s						
VTX	**Valle De La Tr**	**0.53**	**205**		**Pb**	**02 00 10.8**	**0.0**
VTX					**Sb**	**02 00 19.1**	**+0.8**
VTX				IAML		02 00 21.0	
	comp=E,152nm,0.1s						
VTX				IAML		02 00 22.7	
	comp=N,158nm,0.1s						
VTX	**Valle De La Tr**	**0.53**	**205**	⇑*e*P	**Pb**	**02 00 11.0**	**+0.1**
VTX				*e*S	**Sb**	**02 00 18.6**	**+0.3**
RITX	**Riito Sonora**	**0.56**	**59**		**Pb**	**02 00 12.0**	**+0.6**
RITX					**Sn**	**02 00 20.7**	**-1.5**
RITX	**Riito Sonora**	**0.56**	**59**	*e*P	**Pb**	**02 00 11.9**	**+0.6**
RITX				*e*S	**Sb**	**02 00 20.4**	**+1.2**
ECBX	**El Chinero**	**0.57**	**135**	⇓*e*P	**Pb**	**02 00 11.2**	**-0.3**
ECBX				*e*S	**Sb**	**02 00 19.3**	**-0.1**
GUVIX	**Guadalupe Vict**	**0.57**	**42**		**Pn**	**02 00 12.4**	**-1.0**
GUVIX					**Sb**	**02 00 20.9**	**+1.4**
CPBX	**Cerro Prieto**	**0.57**	**19**		**Pn**	**02 00 13.1**	**-0.4**
CPBX					**Sb**	**02 00 20.8**	**+1.2**
CPBX	**Cerro Prieto**	**0.57**	**19**	*e*P	**Pb**	**02 00 11.7**	**+0.1**
CPBX				*e*S	**Sb**	**02 00 20.1**	**+0.5**
CPBX				⇑*e*		02 00 26.1	
CPBX				IAML		02 00 26.1	
	comp=E,905nm,0.2s						
CPBX				IAML		02 00 26.4	
	comp=N,773nm,0.2s						
CPBX				⇑*e*		02 00 26.4	
MBIG	**Mexicali**	**0.60**	**28**	*e*P	**Pn**	**02 00 12.9**	**-0.9**
MBIG				*e*S	**Sb**	**02 00 21.5**	**+1.2**
PESCX	**Ej. Pescaderos**	**0.73**	**40**		**Sb**	**02 00 25.2**	**+1.0**
SGL	**Mount Signal**	**0.79**	**348**		**Pg**	**02 00 15.0**	**-0.2**
SGL					**Sg**	**02 00 25.9**	**+0.3**
SPIG	**San Pedro Mart**	**0.83**	**176**	*e*P	**Pn**	**02 00 16.3**	**-1.0**
SPIG				*e*S	**Sb**	**02 00 27.0**	**-0.3**
YUH2	**Yuha Desert**	**0.84**	**337**	*e*P	**Pb**	**02 00 15.7**	**-0.5**
YUH	**Yuha Desert**	**0.84**	**336**		**Pb**	**02 00 15.7**	**-0.5**
YUH	**Yuha Desert**	**0.84**	**336**	IAML		02 00 28.9	
	comp=E,57nm,0.3s						
RMX	**La Rumorosa**	**0.86**	**327**	*e*P	**Pb**	**02 00 15.2**	**-1.5**
WESC	**Westside Schoo**	**0.90**	**349**		**Pg**	**02 00 17.4**	**+0.1**
WESC					**Sn**	**02 00 30.6**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**0.92**	**328**		**Pb**	**02 00 17.1**	**-0.4**
IKP					**Sb**	**02 00 28.9**	**-0.7**
IKP	**In-Ko-Pah, Jac**	**0.92**	**328**	*e*P	**Pb**	**02 00 16.9**	**-0.6**
IKP				*e*S	**Sb**	**02 00 29.4**	**-0.2**
CCX	**Cicese**	**0.97**	**270**		**Pn**	**02 00 19.7**	**+0.8**
CCX				IAML		02 00 35.9	
	comp=E,143nm,0.3s						
CCX	**Cicese**	**0.97**	**270**		**Sn**	**02 00 31.9**	**-0.5**
SNR	**Schaffner Ranc**	**0.99**	**4**		**Pn**	**02 00 20.0**	**+0.9**
SFX	**San Felipe**	**1.01**	**145**	Pg	**Pn**	**02 00 20.7**	**+1.2**
SFX				IAML		02 00 35.1	
	comp=N,109nm,0.5s						
SFX				IAML		02 00 35.5	
	comp=E,89nm,0.2s						
SFX	**San Felipe**	**1.01**	**145**	*e*P	**Pn**	**02 00 20.5**	**+1.0**
SFX				*e*S	**Sn**	**02 00 33.5**	**0.0**
COA	**Coachella**	**1.04**	**19**		**Pg**	**02 00 21.0**	**+1.0**
CBX	**Cerro Bola**	**1.06**	**295**		**Pg**	**02 00 21.0**	**+0.7**
CBX					**Sg**	**02 00 34.3**	**0.0**
CBX	**Cerro Bola**	**1.06**	**295**	*e*P	**Pb**	**02 00 20.0**	**+0.1**
CBX				*e*S	**Sg**	**02 00 34.3**	**0.0**
CRR	**Carrizo Plain**	**1.08**	**340**		**Pb**	**02 00 20.3**	**+0.1**
SWSC	**Sam W. Stewart**	**1.09**	**348**		**Pb**	**02 00 20.2**	**-0.2**
TJIG	**Tijuana**	**1.12**	**300**	*e*P	**Pb**	**02 00 20.5**	**-0.5**
TJIG				*e*S	**Sb**	**02 00 35.1**	**-0.3**
BAR	**Barrett**	**1.26**	**310**		**Pb**	**02 00 23.2**	**-0.1**
BAR					**Sb**	**02 00 39.0**	**-0.4**
GLA	**Glamis**	**1.31**	**27**		**Pn**	**02 00 23.6**	**-0.1**
GLA				IAML		02 00 42.5	
	comp=E,22nm,0.4s						
GLA				IAML		02 00 50.9	
	comp=N,32nm,0.5s						
SALN	**Salton City**	**1.45**	**345**	Pn	**Pn**	**02 00 26.1**	**+0.5**
SALN				IAML		02 01 01.5	
	comp=N,73nm,0.4s						
SALN				IAML		02 01 11.7	
	comp=E,72nm,0.6s						
BORC	**Borrego Spring**	**1.58**	**332**		**Pb**	**02 00 29.4**	**+0.6**
BORC				IAML		02 00 51.3	
	comp=N,17nm,0.4s						
BORC				IAML		02 00 52.0	
	comp=E,19nm,0.4s						
CPE	**Camp Elliot**	**1.68**	**308**		**Pn**	**02 00 28.9**	**+0.3**
113A	**Mohawk Valley,**	**1.73**	**59**		**Pn**	**02 00 29.8**	**+0.4**
BC3	**Big Chuckawall**	**1.78**	**2**		**Pb**	**02 00 32.0**	**-0.2**
PIX	**Pinacate**	**1.79**	**100**		**Pg**	**02 00 33.4**	**-0.8**
PIX				IAML		02 01 23.9	
	comp=N,13nm,2.6s						
PFO	**Pinyon Flats O**	**1.90**	**336**		**Pb**	**02 00 35.0**	**+0.7**
PMD	**Palm Desert**	**1.91**	**338**	Pn	**Pb**	**02 00 34.1**	**-0.2**
DNR	**Dunn Ranch,Anz**	**1.93**	**331**	Pn	**Pb**	**02 00 34.2**	**-0.6**
DNR				IAML		02 01 04.0	
	comp=E,39nm,0.6s						
DNR				IAML		02 01 04.3	
	comp=N,49nm,0.6s						
BLYC	**Blythe**	**2.05**	**24**		**Pb**	**02 00 36.0**	**-0.8**
BLYC				IAML		02 01 15.8	
	comp=E,8.1nm,1.1s						
IRM	**Iron Mountain**	**2.30**	**8**	Pn	**Pb**	**02 00 39.8**	**-1.3**
ELS	**Elsinore Mount**	**2.39**	**318**		**Pn**	**02 00 40.1**	**+1.6**
ELS				IAML		02 01 14.3	
	comp=N,12nm,2.0s						
ELS				IAML		02 01 15.9	
	comp=E,16nm,0.3s						
BREC	**Barre Substati**	**2.83**	**314**		**Pb**	**02 00 47.9**	**-2.1**

NOU ***22*** *02:08:18.7, 33°.68S×179°.02E, h357km, mb3.8/5, South of Kermadec Islands*

WEL 22 02:08:03.2±1.7, 32°.5S±22°.5×178°.0E±2°.8, h401km±43km, M3.9/9, mB4.3/5, ML4.0/6, MLv4.2/9, Mw(mB)3.4/5, Error ellipse: s-maj=37.3km s-min=27.5km az=70.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.21**	**193**	P	P	02 09 27.3	+0.3
MXZ	**Matakaoa Point**	**5.21**	**193**	P	P	02 09 27.0	0.0
HAZ	**Te Kaha**	**5.51**	**197**	P	P	02 09 29.9	-0.2
HAZ				S	S	02 10 41.7	+0.1
PKGZ	**Pakihiroa**	**5.55**	**194**	P	P	02 09 30.4	-0.3
PKGZ				S	S	02 10 44.6	+2.2
WCZ	**Waipu Caves**	**5.66**	**231**	P	P	02 09 31.4	-0.4
PUZ	**Puketiti**	**5.72**	**192**	P	P	02 09 33.0	+0.6
PUZ				S	S	02 10 44.8	-0.9
RUGZ	**Raukumara Rang**	**5.74**	**197**	P	P	02 09 32.2	-0.5
MWZ	**Matawai**	**6.12**	**197**	P	P	02 09 37.5	+0.7
MWZ				S	S	02 10 53.3	-0.3
CNGZ	**Carnagh Statio**	**6.13**	**191**	P	P	02 09 38.3	+1.6
URZ	**Urewera**	**6.16**	**200**	P	P	02 09 36.6	-0.5
URZ	**Urewera**	**6.16**	**200**	P	P	02 09 36.8	-0.3
TOZ	**Tahuroa Road**	**6.30**	**212**	P	P	02 09 41.2	+2.6
SNGZ	**Shannon Statio**	**6.59**	**197**	P	P	02 09 42.4	-0.4
RAHZ	**Arahi**	**6.78**	**198**	P	P	02 09 44.2	-0.7
MTHZ	**Maungataniwha**	**6.79**	**200**	P	P	02 09 44.4	-0.6
MRHZ	**Matea Rd**	**6.90**	**202**	P	P	02 09 45.0	-1.2
NMHZ	**Naumai**	**7.03**	**199**	P	P	02 09 47.4	-0.3
ARHZ	**Aropaoanui**	**7.13**	**198**	P	P	02 09 48.0	-0.8
BKZ	**Black Stump Fm**	**7.18**	**201**	P	P	02 09 48.1	-1.3
BKZ	**Black Stump Fm**	**7.18**	**201**	P	P	02 09 48.0	-1.4
BFZ	**Birch Farm**	**8.66**	**198**	P	P	02 10 05.0	-0.7
KHZ	**Kahutara**	**11.08**	**205**	P	P	02 10 33.2	+0.7

IDC ***22*** *02:32:41.8±0.5, 11°.97S×165°.56E, h0km, mb4.5/22, mbtmp4.5/24, ML3.6/3, MS3.8/18, Error ellipse: s-maj=18.2km s-min=14.6km az=108.0*

NOU ***22*** *02:32:43.1, 11°.93S×165°.52E, h0km, mb4.9/36, Santa Cruz Islands*

NEIC ***22*** *02:32:44.6±1.6, 11°.91S±0°.09×165°.52E±0°.09, h10km±1km, mb5.0/133, Error ellipse: s-maj=17.4km s-min=11.9km az=47.0*

BJI ***22*** *02:32:45.6, 11°.71S×165°.73E, h31km, mB5.2/7, mb4.8/50, Ms5.0/2, Ms7 4.7/2*

ISC 22 02:32:47.5±0.4, 12°.00S±0°.05×165°.49E±0°.06, h35km, n222, σ1°.07/186, mb4.9/103, MS3.8/17, 1C-2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**3.83**	**293**	P	**Pn**	**02 33 41.8**	**-2.2**
NGOA	**Tingoa Renbel**	**5.33**	**274**	P	**Pn**	**02 34 02.8**	**-1.8**
HNR	**Honiara**	**6.01**	**295**	Pn	**Pn**	**02 34 13.7**	**-0.2**
	2.1nm,0.3s,baz=250,slow=2.4,SNR=4.6						
HNR				Sn	**Sn**	**02 35 19.9**	**-1.7**
	1.8nm,0.3s,baz=245,slow=18,SNR=7.2						
HNR				LR	LR	02 36 15.8	
	comp=Z,43nm,19.8s,baz=226,slow=35						
HNR	**Honiara**	**6.01**	**295**		**Pn**	**02 34 13.3**	**-0.7**
HNR					**Sn**	**02 35 20.3**	**-1.3**
HNR	**Honiara**	**6.01**	**295**	P	**Pn**	**02 34 13.4**	**-0.6**
SAVO	**Savo Central**	**6.25**	**296**	P	**Pn**	**02 34 16.9**	**-0.5**
TATA	**Tatamba Isabel**	**6.64**	**302**	P	**Pn**	**02 34 21.7**	**-1.0**
KOUNC	**Koumac, New Ca**	**8.59**	**188**	P	**Pn**	**02 34 49.6**	**+0.3**
MARNC	**Mare, Loyalty**	**9.74**	**166**	Pn	**Pn**	**02 35 05.3**	**+0.1**
DZM	**Mont Dzumac**	**10.06**	**175**	Pn	**Pn**	**02 35 09.5**	**-0.1**
	4.9nm,0.3s,baz=334,slow=14,SNR=15						
DZM				Sn	**Sn**	**02 36 57.7**	**-3.7**
	0.2nm,0.3s,baz=333,slow=23,SNR=1.5						
	13nm,0.4s						
ONTNC	**Ouen Toro**	**10.30**	**175**	Pn	**Pn**	**02 35 13.5**	**+0.8**
PMG	**Port Moresby**	**18.19**	**276**	P	**Pn**	**02 36 57.5**	**0.0**
	1.3nm,0.3s,baz=238,slow=2.5,SNR=5.5						
PMG				LR	LR	02 43 00.8	
	comp=Z,410nm,20.6s,baz=133,slow=34						
	8.3nm,0.5s						
PMG	**Port Moresby**	**18.19**	**276**		**Pn**	**02 36 57.4**	**0.0**
PMG	**Port Moresby**	**18.19**	**276**	P	**P**	**02 36 58.2**	**+0.7**
PMG	**Port Moresby**	**18.19**	**276**	P	**P**	**02 36 58.5**	**+1.0**
PMG	**Port Moresby**	**18.19**	**276**	P	**P**	**02 36 57.9**	**+0.4**
	27nm,1.1s						
EIDS	**Eidsvold**	**19.03**	**224**		**P**	**02 37 07.3**	**+0.7**
EIDS				IAmb	IAmb	02 37 09.8	
	comp=Z,124nm,1.9s						
EIDS	**Eidsvold**	**19.03**	**224**	P	**Pn**	**02 37 08.2**	**+0.6**
TW1H	**Toowoomba 1 Ha**	**20.00**	**217**	P	**P**	**02 37 18.9**	**+1.7**
CTA	**Charters Tower**	**20.14**	**244**	P	**P**	**02 37 19.2**	**+0.4**
	comp=Z,15nm,0.8s,baz=68,slow=12,SNR=14						
CTA				LR	LR	02 43 42.8	
	comp=Z,241nm,20.8s,baz=42,slow=33						
	comp=Z,15nm,0.8s						
CTA	**Charters Tower**	**20.14**	**244**	P	**P**	**02 37 20.1**	**+1.3**
CTAO	**Charters Tower**	**20.14**	**244**		**P**	**02 37 19.7**	**+0.9**
CTAO	**Charters Tower**	**20.14**	**244**	P	**P**	**02 37 20.3**	**+1.5**
MANU	**Manus Island**	**20.50**	**297**		**P**	**02 37 22.9**	**+0.1**
MANU				IAmb	IAmb	02 37 24.0	
	comp=Z,47nm,0.8s						
MTSU	**Mount Surprise**	**21.32**	**251**	P	**P**	**02 37 32.9**	**+1.3**
COEN	**Coen**	**21.83**	**262**	P	**P**	**02 37 36.8**	**-0.2**
COEN	**Coen**	**21.83**	**262**	P	**P**	**02 37 37.9**	**+0.9**
ARMA	**Armidale**	**22.39**	**213**	P	**P**	**02 37 43.7**	**+0.7**
ARMA	**Armidale**	**22.39**	**213**	P	**P**	**02 37 44.3**	**+1.3**
RAO	**Raoul Island**	**23.10**	**140**	P	**P**	**02 37 51.0**	**+0.6**
	comp=Z,402nm,0.3s,baz=285,slow=20,SNR=2.7						
RAO	**Raoul Island**	**23.10**	**140**	IAmb	IAmb	02 37 55.2	
	comp=Z,506nm,0.5s						
RAO	**Raoul Island**	**23.10**	**140**	P	**P**	**02 37 51.5**	**+1.1**
AUPHS	**Peel High Scho**	**23.31**	**213**	P	**P**	**02 37 54.2**	**+1.7**
AULRC	**Lightning Ridg**	**23.80**	**221**	P	**P**	**02 37 58.7**	**+1.6**
QIS	**Mount Isa**	**26.23**	**248**	P	**P**	**02 38 19.1**	**-0.4**
CMSA	**Cobar Meteorol**	**26.68**	**220**	P	**P**	**02 38 25.5**	**+2.2**
INKA	**Innaminka**	**27.96**	**232**		**P**	**02 38 34.8**	**-0.1**
URZ	**Urewera**	**28.14**	**160**	LR	LR	02 48 15.8	
	comp=Z,230nm,18.3s,baz=336,slow=33						
RTZ	**Ruatahuna**	**28.42**	**161**		**P**	**02 38 40.1**	**+1.2**
RTZ				IAmb	IAmb	02 38 43.2	
	comp=Z,25nm,0.9s						
BKZ	**Black Stump Fm**	**28.77**	**162**		**P**	**02 38 43.1**	**+1.1**
STKA	**Stephens Creek**	**29.59**	**224**	P	**P**	**02 38 49.6**	**+0.2**
	comp=Z,9.1nm,0.7s,baz=31,slow=10.0,SNR=26						
STKA				LR	LR	02 49 24.0	
	comp=Z,217nm,21.2s,baz=29,slow=34						
	comp=Z,9.1nm,0.7s						
STKA	**Stephens Creek**	**29.59**	**224**	P	**P**	**02 38 49.9**	**+0.6**
STKA	**Stephens Creek**	**29.59**	**224**	P	**P**	**02 38 49.5**	**+0.2**
WB0	**Warramunga Arr**	**30.85**	**252**	P	**P**	**02 38 59.8**	**-0.9**
WB0				IAmb	IAmb	02 39 00.1	
	comp=Z,18nm,0.7s						
WRAB	**Tennant Creek**	**30.92**	**251**	P	**P**	**02 39 02.6**	**+1.4**
WB1	**Warramunga Ar.**	**30.93**	**251**	P	**P**	**02 39 00.7**	**-0.6**
WRA	**Warramunga Arr**	**30.93**	**251**	P	**P**	**02 39 00.2**	**-1.1**
	comp=Z,7.2nm,0.6s,baz=83,slow=9.5,SNR=94						
WRA				PcP	**PcP**	**02 41 57.2**	**-0.3**
	comp=Z,2.4nm,1.0s,baz=84,slow=3.1,SNR=5.0						
WRA				PKiKP	**PKiKP**	**02 49 29.6**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=104,slow=2.8,SNR=5.4						
	comp=Z,7.2nm,0.6s						
WRA	**Warramunga Arr**	**30.93**	**251**	P	**P**	**02 38 58.7**	**-2.6**
TOO	**Toolangi**	**31.14**	**212**	P	**P**	**02 39 03.6**	**+0.6**
LTZ	**Lake Taylor**	**31.23**	**170**	P	**P**	**02 39 04.8**	**+1.0**
AS31	**Alice Springs**	**32.15**	**244**		**P**	**02 39 10.7**	**-1.4**
ASAR	**Alice Springs**	**32.15**	**244**	P	**P**	**02 39 10.4**	**-1.6**
	comp=Z,9.6nm,0.7s,baz=71,slow=9.3,SNR=95						
ASAR				PcP	**PcP**	**02 42 00.6**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=54,slow=2.8,SNR=7.9						
ASAR				PKiKP	**PKiKP**	**02 49 25.4**	**-3.6**
	comp=Z,0.7nm,0.6s,baz=112,slow=3.3,SNR=9.8						
ASAR				LR	LR	02 51 00.8	
	comp=Z,178nm,19.7s,baz=100,slow=34						
	comp=Z,9.6nm,0.7s						
ASAR	**Alice Springs**	**32.15**	**244**	P	**P**	**02 39 10.8**	**-1.3**
AUALC	**St Philip's Co**	**32.17**	**244**	P	**P**	**02 39 11.6**	**-0.7**
HTT	**Hallett**	**32.32**	**224**	P	**P**	**02 39 13.8**	**+0.3**
AUMBR	**Murray Bridge**	**33.09**	**222**	P	**P**	**02 39 21.1**	**+1.0**
AUMAR	**Marden Senior**	**33.36**	**222**	P	**P**	**02 39 23.8**	**+1.3**
MTN	**Manton Dam**	**33.55**	**265**	P	**P**	**02 39 23.7**	**-0.7**
MGBR	**Mount Gambier**	**33.96**	**217**	P	**P**	**02 39 28.5**	**+0.9**
BBOO	**Buckleboo**	**34.00**	**228**	P	**P**	**02 39 27.6**	**-0.5**
BBOO				IAmb	IAmb	02 39 28.3	
	comp=Z,14nm,0.9s						
RAR	**Rarotonga**	**34.46**	**110**	LR	LR	02 51 00.5	
	comp=Z,72nm,20.4s,baz=272,slow=32						
RAR	**Rarotonga**	**34.46**	**110**	P	**P**	**02 39 31.8**	**-0.4**
SIJI	**Sorong**	**35.70**	**286**	LR	LR	02 55 43.9	
	comp=Z,88nm,18.1s,baz=344,slow=39						
KNRA	**Kununurra**	**35.82**	**260**		**P**	**02 39 43.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**38.90**	**256**	LR	LR	02 56 47.6	
	comp=Z,220nm,18.5s,baz=76,slow=37						
FORT	**Forrest**	**39.30**	**236**	P	**P**	**02 40 12.6**	**-0.7**
BATI	**Baumata**	**41.05**	**268**	LR	LR	02 57 07.6	
	comp=Z,101nm,19.7s,baz=85,slow=36						
WSI	**Waingapu**	**44.41**	**268**	P	**P**	**02 40 54.8**	**-0.4**
PSA00	**Pilbara Seismi**	**44.58**	**251**	P	**P**	**02 40 55.9**	**-0.7**
MBWA	**Marble Bar**	**44.66**	**252**	P	**P**	**02 40 56.9**	**-0.3**
MBWA				IAmb	IAmb	02 40 57.9	
	comp=Z,19nm,1.0s						
MBWA	**Marble Bar**	**44.66**	**252**	P	**P**	**02 40 57.5**	**+0.3**
KAPI	**Kappang**	**45.71**	**275**	LR	LR	03 01 11.3	
	comp=Z,20nm,18.9s,baz=93,slow=37						
TOLI2	**Tolitoli**	**46.27**	**283**	P	**P**	**02 41 09.2**	**-0.8**
TOLI2				IAmb	IAmb	02 41 09.8	
	comp=Z,13nm,0.8s						
MEEK	**Meekatharra**	**46.31**	**245**	P	**P**	**02 41 11.2**	**+1.0**
PCI	**Palu**	**46.60**	**280**	P	**P**	**02 41 13.1**	**+0.5**
MPSI	**Mapaga**	**46.88**	**282**	P	**P**	**02 41 14.3**	**-0.5**
	comp=Z,28nm,0.8s						
NWAO	**Narrogin (SRO)**	**48.73**	**237**	LR	LR	03 03 24.3	
	comp=Z,264nm,18.4s,baz=94,slow=38						
NWAO	**Narrogin (SRO)**	**48.73**	**237**	P	**P**	**02 41 29.0**	**+0.1**
NWAO				IAmb	IAmb	02 41 29.2	
	comp=Z,20nm,0.9s						
MORW	**Morawa**	**48.95**	**242**	P	**P**	**02 41 30.6**	**-0.1**
MORW				IAmb	IAmb	02 41 31.2	
	comp=Z,16nm,0.9s						
KKM	**Kota Kinabalu**	**52.17**	**287**	P	**P**	**02 41 55.5**	**+0.2**
SNJI	**Sawahan-Nganju**	**53.03**	**269**	P	**P**	**02 42 02.4**	**+0.7**
	comp=Z,57nm,1.6s						
MJAR	**Matsushiro Arr**	**54.70**	**333**	P	**P**	**02 42 12.2**	**-1.1**
	comp=Z,2.1nm,0.7s,baz=166,slow=8.9,SNR=5.3						
	comp=Z,2.1nm,0.7s						
YULB	**Yu-li**	**55.73**	**309**	P	**P**	**02 42 22.1**	**+1.1**
YULB	**Yu-li**	**55.73**	**309**	P	**P**	**02 42 22.3**	**+1.3**
KPJI	**Karang Pucung**	**55.87**	**269**	P	**P**	**02 42 22.7**	**+0.5**
	comp=Z,35nm,0.8s						
TPUB	**Ta-pu**	**56.19**	**309**	P	**P**	**02 42 24.0**	**-0.3**
LEM	**Lembang**	**57.24**	**270**	LR	LR	03 09 35.3	
	comp=Z,38nm,18.6s,baz=198,slow=39						
JKA	**Kamikawa-asahi**	**59.60**	**341**	P	**P**	**02 42 48.7**	**+0.9**
ASAJ	**Asahikawa**	**59.60**	**341**	P	**P**	**02 42 48.7**	**+0.9**
	comp=Z,8.9nm,0.8s,baz=175,slow=5.2,SNR=4.5						
	comp=Z,8.9nm,0.8s						
NJ2	**Nanjing**	**62.52**	**316**	⇓P	**P**	**02 43 11.1**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**63.68**	**334**	P	**P**	**02 43 15.7**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=155,slow=4.8,SNR=5.8						
	comp=Z,3.5nm,0.7s						
BNX	**BinXian**	**66.92**	**332**	⇑P	**P**	**02 43 36.3**	**0.0**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KLR	**Kul'dur**	**67.82**	**337**	P	**P**	**02 43 41.7**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=160,slow=8.7,SNR=5.1						
	comp=Z,2.1nm,0.9s						
ENH	**Enshi**	**68.30**	**309**	IAmb	IAmb	02 43 46.1	
	comp=Z,15nm,0.9s						
ENH	**Enshi**	**68.30**	**309**	P	**P**	**02 43 45.9**	**+0.5**
HNS	**HongShan**	**68.42**	**318**	⇓P	**P**	**02 43 46.3**	**+0.4**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BJI2	**Beijing**	**69.05**	**321**	P	**P**	**02 43 50.1**	**+0.3**
BJI2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
XAN	**Xi'an**	**70.57**	**313**	P	**P**	**02 43 59.1**	**-0.3**
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
KMI2	**Kunming**	**71.40**	**302**	P	**P**	**02 44 06.1**	**+1.3**
KMI2				pmax	pmax		
	comp=Z,16nm,1.3s						
XLT	**XiLinHaoTe**	**71.49**	**325**	*e*P	**P**	**02 44 05.8**	**+1.1**
XLT				pmax	pmax		
	comp=Z,12nm,1.2s						
CMAR	**Chiang Mai Arr**	**72.26**	**294**	P	**P**	**02 44 11.2**	**+1.4**
	comp=Z,8.4nm,0.9s,baz=123,slow=4.6,SNR=29						
	comp=Z,8.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**72.26**	**294**	P	**P**	**02 44 10.7**	**+0.9**
CHTO	**Chiang Mai**	**72.38**	**294**	P	**P

GOMU	**GeErMu**	**81.92**	**310**	P	**P**	**02 45 03.4**	**-0.8**
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.4s						
F17K	**Baldwin Pennin**	**81.97**	**13**	IAmb	IAmb	02 45 05.4	
	comp=Z,10nm,0.8s						
TRF	**Thorofare Moun**	**82.49**	**18**	P	**P**	**02 45 05.6**	**-0.7**
TRF				IAmb	IAmb	02 45 20.1	
	comp=Z,10.0nm,1.0s						
C16K	**Lisburne Hills**	**82.74**	**11**	IAmb	IAmb	02 46 28.1	
	comp=Z,13nm,1.8s						
E18K	**Tukpahlearik C**	**82.93**	**13**	IAmb	IAmb	02 45 10.4	
	comp=Z,9.3nm,0.8s						
F19K	**Shaleruckik Mo**	**83.08**	**14**	IAmb	IAmb	02 45 10.3	
	comp=Z,6.8nm,0.9s						
MCK	**McKinley**	**83.12**	**19**	IAmb	IAmb	02 45 10.2	
	comp=Z,19nm,1.3s						
I21K	**Tanana**	**83.27**	**17**	IAmb	IAmb	02 45 13.1	
	comp=Z,10nm,1.0s						
H21K	**Melozitna Rive**	**83.41**	**16**	IAmb	IAmb	02 45 17.7	
	comp=Z,11nm,1.5s						
WRH	**Wood River Hil**	**83.91**	**18**	IAmb	IAmb	02 45 13.9	
	comp=Z,6.3nm,0.8s						
CCB	**Clear Creek Bu**	**84.12**	**18**	IAmb	IAmb	02 45 14.8	
	comp=Z,6.4nm,0.8s						
M26K	**Nabesna, AK**	**84.21**	**21**	IAmb	IAmb	02 45 16.5	
	comp=Z,16nm,1.2s						
COLA	**College**	**84.26**	**18**	P	**P**	**02 45 15.5**	**+0.3**
COLA	**College**	**84.26**	**18**	P	**P**	**02 45 15.8**	**+0.7**
MENT	**Mentasta**	**84.30**	**21**	IAmb	IAmb	02 45 30.1	
	comp=Z,15nm,1.2s						
D19K	**Kuna River**	**84.35**	**13**	IAmb	IAmb	02 45 29.5	
	comp=Z,7.3nm,0.8s						
IL31		**84.49**	**19**	IAmb	IAmb	02 45 16.5	
	comp=Z,17nm,1.4s						
ILAR	**Eielson Array**	**84.49**	**19**	P	**P**	**02 45 15.7**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=257,slow=5.0,SNR=51						
	comp=Z,2.6nm,0.6s						
ILAR	**Eielson Array**	**84.49**	**19**	P	**P**	**02 45 16.3**	**0.0**
L26K	**Log Cabin Wild**	**84.49**	**21**	IAmb	IAmb	02 45 18.2	
	comp=Z,9.2nm,1.0s						
C19K	**Lookout Ridge**	**84.55**	**12**	IAmb	IAmb	02 45 29.4	
	comp=Z,6.2nm,0.8s						
D20K	**Etivluk River**	**84.85**	**13**	IAmb	IAmb	02 45 20.2	
	comp=Z,12nm,0.9s						
BBB	**Bella Bella**	**85.50**	**34**	LR	LR	03 17 06.5	
	comp=Z,69nm,19.0s,baz=303,slow=31						
E22K	**Anaktuvuk Pass**	**85.53**	**15**	IAmb	IAmb	02 45 46.1	
	comp=Z,10nm,1.4s						
G24K	**Hadweenzic Riv**	**85.65**	**17**	IAmb	IAmb	02 45 24.0	
	comp=Z,12nm,0.9s						
TPO	**Tropico Hills**	**85.80**	**53**		**P**	**02 45 23.7**	**-0.1**
TPO				IAmb	IAmb	02 45 26.1	
	comp=Z,7.8nm,0.8s						
D22K	**Ayikyak River**	**85.88**	**14**	IAmb	IAmb	02 45 26.6	
	comp=Z,11nm,1.2s						
B21K	**Ikpikpuk River**	**86.01**	**13**	IAmb	IAmb	02 45 26.7	
	comp=Z,7.7nm,0.8s						
I26K	**Coal Creek Min**	**86.03**	**19**	IAmb	IAmb	02 45 25.4	
	comp=Z,13nm,1.0s						
E23K	**Chandalar**	**86.04**	**15**	IAmb	IAmb	02 45 44.9	
	comp=Z,13nm,1.4s						
D23K	**Nanushuk River**	**86.43**	**15**	IAmb	IAmb	02 45 28.9	
	comp=Z,11nm,1.1s						
S34M	**Telegraph Cree**	**86.60**	**29**	P	**P**	**02 45 26.3**	**-0.7**
M30M	**Minto, Yukon**	**86.62**	**23**	P	**P**	**02 45 26.0**	**-1.0**
PINE	**Pine Mountain**	**86.68**	**44**	P	**P**	**02 45 27.8**	**-0.2**
PINE				IAmb	IAmb	02 45 45.0	
	comp=Z,11nm,1.4s						
I27K	**Kandik River**	**86.71**	**19**	P	**P**	**02 45 27.6**	**+0.1**
I27K				IAmb	IAmb	02 45 31.4	
	comp=Z,6.0nm,0.8s						
DSP	**Deep Springs**	**86.75**	**51**	P	**P**	**02 45 28.3**	**+0.1**
NVAR	**Mina Array Bea**	**86.83**	**50**	P	**P**	**02 45 28.4**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=231,slow=7.5,SNR=7.2						
NVAR				LR	LR	03 15 47.7	
	comp=Z,82nm,21.0s,baz=280,slow=30						
	comp=Z,0.9nm,0.8s						
G26K	**Porcupine Rive**	**86.90**	**18**	P	**P**	**02 45 29.5**	**+1.2**
BMAR	**Burnt Mountain**	**86.98**	**17**	P	**P**	**02 45 30.2**	**+1.5**
D24K	**Happy Valley**	**87.03**	**15**	P	**P**	**02 45 30.1**	**+1.3**
K29M	**Barlow Dome**	**87.07**	**22**	P	**P**	**02 45 29.8**	**+0.5**
K29M				IAmb	IAmb	02 46 48.2	
	comp=Z,30nm,1.9s						
C23K	**Itkillik River**	**87.09**	**14**	P	**P**	**02 45 30.2**	**+1.1**
H27K	**Steamboat Moun**	**87.14**	**19**	P	**P**	**02 45 30.1**	**+0.6**
E25K	**Arctic Village**	**87.17**	**16**	P	**P**	**02 45 30.4**	**+0.8**
I28M	**Miner Creek**	**87.17**	**20**		**P**	**02 45 29.6**	**-0.1**
I28M				IAmb	IAmb	02 45 34.8	
	comp=Z,29nm,2.0s						
J29N	**Klondike Camp**	**87.17**	**21**	P	**P**	**02 45 30.4**	**+0.7**
F26K	**Sheenjek River**	**87.28**	**17**	P	**P**	**02 45 31.4**	**+1.2**
F26K				IAmb	IAmb	02 46 00.6	
	comp=Z,18nm,1.9s						
G27K	**Doyon Strip**	**87.46**	**18**	P	**P**	**02 45 31.7**	**+0.7**
G27K				IAmb	IAmb	02 46 21.8	
	comp=Z,12nm,1.8s						
C24K	**Franklin Bluff**	**87.46**	**14**	P	**P**	**02 45 31.8**	**+0.9**
I29M	**Ogilvie Camp,**	**87.67**	**20**	IAmb	IAmb	02 45 36.0	
	comp=Z,8.1nm,0.7s						
I07A	**Izee**	**87.75**	**44**	P	**P**	**02 45 32.4**	**-0.6**
I07A				IAmb	IAmb	02 45 47.4	
	comp=Z,18nm,2.0s						
D25K	**Kavik River**	**87.77**	**15**		**P**	**02 45 32.7**	**+0.2**
C27K	**Jago River**	**88.67**	**16**	P	**P**	**02 45 37.8**	**+1.1**
C27K				IAmb	IAmb	02 45 39.0	
	comp=Z,4.7nm,0.7s						
D27M	**Malcolm River**	**89.18**	**17**		**P**	**02 45 40.5**	**+1.4**
D27M				IAmb	IAmb	02 45 41.8	
	comp=Z,5.8nm,0.8s						
E28M	**Babbage River**	**89.20**	**17**	P	**P**	**02 45 39.8**	**+0.6**
E28M				IAmb	IAmb	02 46 12.6	
	comp=Z,19nm,2.0s						
H31M	**Peel River**	**89.29**	**21**	P	**P**	**02 45 38.7**	**-1.1**
H31M				IAmb	IAmb	02 46 59.6	
	comp=Z,16nm,1.4s						
G30M	**tAoh Zraii Nji**	**89.29**	**20**	P	**P**	**02 45 39.2**	**-0.5**
G30M				IAmb	IAmb	02 45 40.5	
	comp=Z,12nm,1.3s						
BELA	**Belgrano 2**	**89.56**	**176**	P	**P**	**02 45 39.2**	**-1.8**
BELA				IAmb	IAmb	02 48 43.1	
	comp=Z,17nm,1.2s						
WMQ	**Urumqi**	**89.58**	**315**	*e*P	**P**	**02 45 43.1**	**+1.4**
LPIG	**La Paz**	**89.63**	**65**	LR	LR	03 18 50.4	
	comp=Z,24nm,18.4s,baz=164,slow=31						
ELK	**Elko**	**89.77**	**48**	LR	LR	03 23 47.5	
	comp=Z,63nm,18.4s,baz=57,slow=34						
F30M	**Barrier River**	**89.78**	**19**	P	**P**	**02 45 41.8**	**-0.2**
G31M	**Satah River**	**89.90**	**20**	P	**P**	**02 45 41.7**	**-0.8**
G31M				IAmb	IAmb	02 48 58.0	
	comp=Z,29nm,1.9s						
U15A	**North Rim**	**90.88**	**53**	P	**P**	**02 45 48.2**	**0.0**
MKAR	**Makanchi Array**	**94.04**	**317**	P	**P**	**02 46 02.1**	**-0.1**
	comp=Z,4.6nm,0.8s,baz=99,slow=6.3,SNR=44						
MKAR				PP	**PP**	**02 49 48.6**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=101,slow=3.8,SNR=3.7						
	comp=Z,4.6nm,0.8s						
MKAR	**Makanchi Array**	**94.04**	**317**	P	**P**	**02 46 02.4**	**+0.3**
ZALV	**Zalesovo Beam**	**94.17**	**324**	P	**P**	**02 46 01.7**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=104,slow=4.7,SNR=7.9						
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**94.17**	**324**	P	**P**	**02 46 01.4**	**-1.1**
MAKZ	**Makanchi**	**94.25**	**317**	P	**P**	**02 46 02.7**	**-0.4**
MAKZ				IAmb	IAmb	02 46 04.2	
	comp=Z,6.8nm,1.0s						
PDAR	**Pinedale Array**	**94.38**	**47**	P	**P**	**02 46 02.0**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=261,slow=5.1,SNR=2.2						
	comp=Z,0.2nm,0.6s						
A36M	**Sachs Harbour**	**95.08**	**17**		**P**	**02 46 06.7**	**+0.4**
A36M				IAmb	IAmb	02 46 07.5	
	comp=Z,7.8nm,0.9s						
ANMO	**Albuquerque**	**95.19**	**56**	LR	LR	03 22 22.3	
	comp=Z,59nm,18.6s,baz=322,slow=31						
YKA	**Yellowknife Ar**	**95.93**	**27**	P	**P**	**02 46 08.2**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=266,slow=4.8,SNR=11						
	comp=Z,0.4nm,0.6s						
CPRX	**Cap Rock**	**96.97**	**58**	P	**P**	**02 46 16.3**	**+0.3**
KURK	**Kurchatov**	**97.20**	**320**	P	**P**	**02 46 14.8**	**-1.7**
KURK	**Kurchatov**	**97.20**	**320**	IAmb	IAmb	02 47 36.4	
	comp=Z,4.2nm,1.2s						
KURBB	**Kurchatov Arra**	**97.24**	**320**	P	**P**	**02 46 14.8**	**-1.9**
	comp=Z,0.5nm,0.9s,baz=110,slow=5.0,SNR=3.0						
	comp=Z,0.5nm,0.9s						
MG05	**Puerto Natales**	**99.28**	**148**	P	**Pdif**	**02 46 26.5**	**+0.6**
ARCES	**ARCESS Array B**	**117.18**	**345**	PKP	**PKiKP**	**02 51 30.1**	**+1.6**
	comp=Z,3.5nm,0.9s,baz=64,slow=2.8,SNR=5.2						
FINES	**FINESS Array B**	**122.56**	**338**	PKP	**PKPdf**	**02 51 38.7**	**-0.2**
	comp=Z,3.5nm,0.9s,baz=352,slow=2.9,SNR=4.0						
BOSA	**Boshof**	**124.25**	**223**	PKP	**PKPdf**	**02 51 43.9**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=40,slow=1.6,SNR=8.1						
KEST	**Kesra**	**148.01**	**322**	PKPbc	**PKPbc**	**02 52 29.1**	**-0.8**
	comp=Z,8.3nm,0.9s,baz=8.4,slow=2.2,SNR=4.9						
ESDC	**Sonseca Array**	**150.89**	**343**	PKPbc	**PKPbc**	**02 52 37.0**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=18,slow=2.2,SNR=7.9						
ESDC	**Sonseca Array**	**150.89**	**343**		**PKiKP**	**02 52 40.4**	**+2.9**
TORD	**Torodi Ar. Bea**	**164.14**	**276**	PKP	**PKPdf**	**02 52 48.3**	**0.0**
	comp=Z,2.0nm,1.0s,baz=292,slow=2.0,SNR=6.7						
TORD				PKPab	**PKPab**	**02 53 42.0**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=131,slow=2.7,SNR=8.6						
TORD	**Torodi Ar. Bea**	**164.14**	**276**		**PKPdf**	**02 52 46.0**	**-2.2**
TORD					**PKPab**	**02 53 42.1**	**+0.2**

IDC ***22*** *02:34:51.7±0.8, 17°.47S×63°.96W, h0km, mb3.9/5, mbtmp3.8/10, ML3.6/4, MS3.4/3, Error ellipse: s-maj=20.8km s-min=15.1km az=170.0*
SCB ***22*** *02:34:51.0±1.2, 17°.40S×63°.90W, h17km±6km, ML3.8/3, Error ellipse: s-maj=5.9km s-min=3.7km az=0.0*
VAO ***22*** *02:34:53.9±0.5, 17°.40S×63°.89W, h10km, mb4.4, Presumed earthquake*
NEIC ***22*** *02:34:54.7±1.9, 17°.50S±0°.07×63°.92W±0°.05, h10km±1km, mb4.1/7, Error ellipse: s-maj=12.9km s-min=6.6km az=155.0*

ISC 22 02:34:53.6±0.5, 17°.46S±0°.06×63°.85W±0°.04, h10km, n72, σ1s29/73, mb4.0/5, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOEA	**Aiquile**	**1.50**	**241**	Pg	**Pn**	**02 35 19.7**	**-1.2**
AOEA	**Aiquile**	**1.50**	**241**	Pg	**Pn**	**02 35 19.8**	**-1.2**
AOEA				Sg	**Sn**	**02 35 40.1**	**-0.6**
AOEA				IAML		02 35 48.3	
	2μm,0.3s						
SOET	**ToroToro**	**1.98**	**250**	Pg	**Pn**	**02 35 27.7**	**+0.2**
SOET				Sg	**Sb**	**02 35 54.4**	**-0.5**
SOET				IAML		02 36 00.0	
	558nm,0.3s						
SIV	**San Ignacio**	**3.04**	**62**	Pn	**Pn**	**02 35 43.8**	**+2.0**
	36nm,0.3s,baz=274,slow=13						
SIV				Lg	Lg	02 36 31.1	
	baz=276,slow=19						
SIV	**San Ignacio**	**3.04**	**62**	Pn	**Pn**	**02 35 43.8**	**+2.0**
SOEO	**Opoqueri**	**4.00**	**253**	Pn	**Pn**	**02 35 57.1**	**+1.7**
BBOE	**La Paz, Chanca**	**4.00**	**279**	Pn	**Pn**	**02 35 56.6**	**+1.0**
MOCB	**Mochara**	**4.13**	**204**	Pn	**Pn**	**02 35 59.7**	**+2.4**
BBOJ	**La Paz, Jacaqu**	**4.18**	**276**	Pn	**Pn**	**02 35 59.3**	**+1.4**
SOEJ	**Jacaque**	**4.18**	**276**	Pn	**Pn**	**02 35 59.2**	**+1.3**
LPAZ	**La Paz**	**4.26**	**285**	Pn	**Pn**	**02 35 58.3**	**-0.9**
	2.8nm,0.3s,baz=118,slow=8.3,SNR=31						
LPAZ				Pg	**Pb**	**02 36 09.8**	**+0.7**
	5.2nm,0.3s,baz=104,slow=12,SNR=19						
LPAZ				Lg	Lg	02 36 57.6	
	12nm,0.3s,baz=11,slow=21,SNR=3.7						
LPAZ				LR	LR	02 37 31.3	
	comp=Z,88nm,20.5s,baz=124,slow=38						
	7.4nm,0.4s						
LPAZ	**La Paz**	**4.26**	**285**		**Pn**	**02 35 58.7**	**-0.5**
LPAZ					**Pb**	**02 36 09.7**	**+0.6**
LPAZ	**La Paz**	**4.26**	**285**	*e*P	**Pn**	**02 35 58.9**	**-0.2**
LPAZ	**La Paz**	**4.26**	**285**	Pn	**Pn**	**02 35 59.4**	**+0.2**
LPAZ				Sn	**Sn**	**02 36 52.1**	**+2.8**
LPAZ				IAML		02 37 21.4	
	146nm,0.8s						
BBOB	**La Paz, Bander**	**4.30**	**287**	Pn	**Pn**	**02 36 00.6**	**+0.9**
BBOD	**La Paz, Gloria**	**4.61**	**279**	Pn	**Pn**	**02 36 05.2**	**+1.2**
PTLB	**Pontes e Lacer**	**4.94**	**67**		**Pn**	**02 36 09.9**	**+1.9**
PTLB				Pb	**Pb**	**02 36 19.3**	**-1.1**
PTLB	**Pontes e Lacer**	**4.94**	**67**	*e*P	**Pn**	**02 36 09.7**	**+1.7**
PTLB	**Pontes e Lacer**	**4.94**	**67**	Pn	**Pn**	**02 36 09.9**	**+1.9**
YJA	**Yavi**	**4.95**	**198**	Pn	**Pn**	**02 36 11.0**	**+2.5**
PB18	**Visviri**	**5.37**	**268**		**Pn**	**02 36 16.3**	**+1.9**
PB16	**IPOC Station P**	**5.46**	**260**	Pn	**Pn**	**02 36 17.0**	**+1.4**
GO01	**Chusmiza**	**5.53**	**246**		**Pn**	**02 36 15.1**	**-1.3**
PB08	**IPOC Station P**	**5.69**	**241**	Pn	**Pn**	**02 36 18.2**	**-0.4**
VILB	**Vilhena**	**5.70**	**39**	Pn	**Pn**	**02 36 20.4**	**+2.0**
VILB	**Vilhena**	**5.70**	**39**	*e*P	**Pn**	**02 36 18.7**	**+0.3**
PB11	**IPOC Station P**	**5.96**	**246**	Pn	**Pn**	**02 36 22.1**	**0.0**
PB12	**IPOC Station P**	**6.27**	**258**	Pn	**Pn**	**02 36 26.3**	**0.0**
HMBC	**Humberstone**	**6.37**	**243**		**Pn**	**02 36 27.6**	**-0.1**
PB01	**IPOC Station P**	**6.41**	**235**	Pn	**Pn**	**02 36 26.9**	**-1.4**
PB09	**IPOC Station P**	**6.67**	**229**	Pn	**Pn**	**02 36 32.8**	**+0.9**
PB02	**IPOC Station P**	**6.88**	**235**	Pn	**Pn**	**02 36 34.1**	**-0.6**
MURT	**Porto Murtinho**	**7.22**	**126**	*e*P	**Pn**	**02 36 39.6**	**+0.4**
PB06	**IPOC Station P**	**7.49**	**225**	Pn	**Pn**	**02 36 42.9**	**-0.3**
SALV	**Santo Antonio**	**7.97**	**80**	*e*P	**Pn**	**02 36 50.2**	**+0.6**
AQDB	**Aquidauana**	**8.28**	**113**	Pn	**Pn**	**02 36 55.8**	**+2.0**
PP1B	**Ponte de Pedra**	**8.56**	**92**	*e*P	**Pn**	**02 36 59.1**	**+1.4**
PDRB	**Porto dos Gac**	**9.01**	**51**	*e*P	**Pn**	**02 37 04.5**	**+0.5**
GO02	**Mina Guanaco**	**9.35**	**214**	Pn	**Pn**	**02 37 08.7**	**-0.1**
CLDB	**Colider**	**10.19**	**51**	*e*P	**Pn**	**02 37 21.0**	**+0.9**
AC02	**Maricunga**	**10.54**	**207**		**Pn**	**02 37 24.0**	**-1.2**
CPUP	**Villa Florida**	**10.70**	**147**	Pn	**Pn**	**02 37 28.1**	**+1.1**
	0.2nm,0.3s,baz=334,slow=15,SNR=1.3						
CPUP				Lg	Lg	02 40 32.0	
	0.1nm,0.3s,baz=344,slow=7.1,SNR=2.8						
	0.6nm,0.4s						
ARAG	**Araguaiana, MT**	**11.67**	**83**	*e*P	**Pn**	**02 37 40.5**	**+0.2**
GO03	**Copiapo**	**11.68**	**209**	Pn	**Pn**	**02 37 39.3**	**-1.3**
NPGB	**Novo Progresso**	**13.26**	**40**	*e*P	**Pn**	**02 38 01.8**	**-0.3**
SNDB	**Serra Nova Dou**	**13.31**	**68**	*e*P	**Pn**	**02 38 03.3**	**+0.5**
TEFE	**Tefe**	**13.88**	**357**	*e*P	**Pn**	**02 38 07.5**	**-3.1**
MACA	**Manacapuru-AM**	**14.54**	**13**	Pn	**Pn**	**02 38 17.9**	**-1.7**
MACA	**Manacapuru-AM**	**14.54**	**13**	*e*P	**Pn**	**02 38 19.2**	**-0.5**
CFA	**Coronel Fontan**	**14.64**	**195**	Pn	**Pn**	**02 38 20.7**	**-0.2**
	0.1nm,0.3s,baz=24,slow=11,SNR=8.5						
	0.4nm,0.3s						
CO03	**El Pedregal**	**14.71**	**204**	Pn	**Pn**	**02 38 22.8**	**+1.0**
CO06	**Fray Jorge**	**14.95**	**207**	Pn	Pn	02 38 20.0	-5.1
BDFB	**Brasilia**	**15.29**	**86**	Pn	**Pn**	**02 38 31.8**	**+1.9**
	0.2nm,0.3s,baz=246,slow=20,SNR=3.6						
BDFB				Lg	Lg	02 43 00.8	
	0.4nm,0.3s,baz=328,slow=20,SNR=4.8						
	0.8nm,0.3s						
BDFB	**Brasilia**	**15.29**	**86**	IAmb	IAmb	02 38 54.0	
	comp=Z,8.2nm,1.1s						
MT01	**Popeta**	**17.64**	**201**	Pn	**Pn**	**02 38 58.8**	**-0.7**
MT01				IAmb	IAmb	02 39 16.3	
	comp=Z,12nm,1.1s						
BOAV	**Boa Vista**	**20.00**	**10**	P	**P**	**02 39 28.7**	**+2.1**
BOAV				IAmb	IAmb	02 39 30.6	
	comp=Z,12nm,1.1s						
BOAV	**Boa Vista**	**20.00**	**10**	*e*P	**P**	**02 39 26.5**	**0.0**
SLOR	**San Lorenzo -**	**22.00**	**318**	P	**P**	**02 39 48.5**	**-0.1**
OTAV	**Otavalo**	**22.71**	**319**	P	**P**	**02 39 57.3**	**+1.0**
OTAV				IAmb	IAmb	02 40 02.8	
	comp=Z,7.7nm,1.1s						
OTAV	**Otavalo**	**22.71**	**319**	*e*P	**P**	**02 39 55.9**	**-0.4**
PLCA	**Pago Flores**	**23.91**	**193**	P	**P**	**02 40 06.3**	**-1.4**
	comp=Z,1.8nm,0.9s,baz=18,slow=6.8,SNR=3.6						
	comp=Z,1.8nm,0.9s						
ROSC	**El Rosal**	**24.45**	**334**	Lg	Lg	02 47 43.4	
	comp=Z,0.9nm,0.3s,baz=9.1,slow=12,SNR=3.5						
MDP	**Montagnes des**	**25.00**	**27**	LR	LR	02 49 22.2	
	comp=Z,88nm,19.9s,baz=193,slow=35						
TORD	**Torodi Ar. Bea**	**71.49**	**69**	P	**P**	**02 46 15.0**	**-0.1**
	comp=Z,3.0nm,1.1s,baz=253,slow=4.1,SNR=12						
	comp=Z,3.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**71.49**	**69**	P	**P**	**02 46 17.1**	**+2.0**
PDAR	**Pinedale Array**	**73.19**	**327**	P	**P**	**02 46 23.5**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=104,slow=9.2,SNR=4.1						
	comp=Z,0.3nm,0.5s						
ESDC	**Sonseca Array**	**79.63**	**43**	P	**P**	**02 47 01.9**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=254,slow=6.3,SNR=5.7						
ESDC				LR	LR	03 19 09.6	
	comp=Z,95nm,19.7s,baz=5.0,slow=33						
	comp=Z,1.3nm,0.9s						
ESDC	**Sonseca Array**	**79.63**	**43**	IAmb	IAmb	02 47 05.3	
	comp=Z,3.3nm,1.4s						
YKA	**Yellowknife Ar**	**89.07**	**339**	P	**P**	**02 47 47.6**	**-1.0**
	comp=Z,1.5nm,1.0s,baz=123,slow=3.7,SNR=13						
	comp=Z,1.5nm,1.0s						
ASAR	**Alice Springs**	**135.60**	**204**	PKP	**PKPdf**	**02 54 14.2**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=143,slow=1.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**136.26**	**26**	PKP	**PKPdf**	**02 54 14.7**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=316,slow=4.0,SNR=2.4						
SONM	**Songino Array**	**148.66**	**13**	PKPbc	**PKPbc**	**02 54 41.2**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=246,slow=1.4,SNR=5.4						

IDC 22 02:42:53.8±2.4, 7°.99S×129°.55E, h0km, mb3.1/1,
mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=142.8km s-min=34.7km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.75**	**159**	Pn	Pn	02 45 56.6	0.0
	0.1nm,0.3s,baz=341,slow=13,SNR=1.8						
WRA				Sn	Sn	02 48 13.6	-5.8
	0.2nm,0.3s,baz=315,slow=29,SNR=5.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**16.13**	**165**	Pn	Pn	02 46 42.2	0.0
	baz=347,slow=11,SNR=1.6						
ASAR				Sn	Sn	02 49 37.0	-4.9
	0.1nm,0.3s,baz=73,slow=17,SNR=1.6						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**68.81**	**327**	P	P	02 54 00.0	0.0
	0.1nm,0.6s,baz=123,slow=7.6,SNR=1.9						
	0.1nm,0.6s						

MEX 22 02:44:43.1±0.3, 16°.09N×97°.64W, h5km±12km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.49**	**101**	*e*P	Pg	02 44 52.2	-0.3
PEIG				*e*S	Sg	02 44 59.2	+0.4
PEIG	**Puerto Escondi**	**0.49**	**101**	*e*P	Pn	02 44 56.0	-0.8
PEIG				*e*S	Sb	02 45 03.0	+1.3
PNIG	**Pinotepa**	**0.55**	**303**	*e*P	Pg	02 44 53.2	-0.5
PNIG				*e*S	Sg	02 45 01.6	+0.6
PNIG	**Pinotepa**	**0.55**	**303**	*e*P	Pn	02 44 57.2	-0.5
PNIG				*e*S	Sb	02 45 05.1	+1.5
YOIG	**Yosondua**	**0.77**	**7**	*e*P	Pg	02 44 56.8	-1.1
YOIG				*e*S	Sg	02 45 07.1	-0.8
YOIG	**Yosondua**	**0.77**	**7**	*e*P	Pn	02 45 00.8	-0.1
YOIG				*e*S	Sb	02 45 11.1	+1.1
TXIG	**Tlaxiaco**	**1.16**	**354**	*e*P	Pg	02 45 02.6	-2.9
TXIG				*e*S	Sg	02 45 17.6	-3.0
TXIG	**Tlaxiaco**	**1.16**	**354**	*e*P	Pn	02 45 07.2	+0.9
TXIG				*e*S	Sb	02 45 22.0	+0.6
VHO	**Vista Hermosa**	**1.31**	**42**	*e*P	Pn	02 45 05.6	-2.6
VHO				*e*S	Sg	02 45 22.2	-3.1
VHO	**Vista Hermosa**	**1.31**	**42**	*e*P	Pb	02 45 08.9	+0.6
VHO				*e*S	Sg	02 45 23.5	-1.8
MGIG	**Malinaltepec**	**1.48**	**320**	*e*S	Sn	02 45 28.0	-2.5
HUIG	**Huatulco**	**1.51**	**102**	*e*P	Pn	02 45 08.3	-2.5
HUIG				*e*S	Sn	02 45 27.3	-3.3
HUIG	**Huatulco**	**1.51**	**102**	*e*P	Pb	02 45 11.3	-0.4
HUIG				*e*S	Sn	02 45 29.5	-1.4
CRIG	**Cruz Grande**	**1.56**	**294**	*e*P	Pb	02 45 12.8	+0.3
CRIG				*e*S	Sn	02 45 30.0	-2.2
HLIG	**Huajuapan de L**	**1.74**	**355**	*e*P	Pb	02 45 15.5	-0.2
HLIG				*e*S	Sb	02 45 37.8	-0.1
FTIG	**Fresnillo de T**	**1.87**	**346**	*e*P	Pg	02 45 18.9	-0.1
FTIG				*e*S	Sb	02 45 41.0	-0.6
TOIG	**Toxpalan**	**2.07**	**15**	*e*P	Pn	02 45 16.6	-2.0
TOIG				*e*S	Sn	02 45 39.4	-5.5
TOIG	**Toxpalan**	**2.07**	**15**	*e*P	Pb	02 45 20.2	-1.1
TOIG				*e*S	Sn	02 45 45.3	+0.4
DAIG	**Los Arroyos**	**2.14**	**296**	*e*S	Sn	02 45 43.5	-2.9
DAIG	**Los Arroyos**	**2.14**	**296**	*e*P	Pn	02 45 20.7	+1.3
DAIG				*e*S	Sn	02 45 44.4	-1.9
MEIG	**Mezcala**	**2.63**	**314**	*e*P	Pb	02 45

s-maj=20.3km s-min=10.9km az=176.0
*AZER **22** 03:05:24.9, 40.24N×48.81E, h8km, ml3.8*
*MOS **22** 03:05:25.6±1.1, 40.30N×49.21E, h32km, mb4.4/4, Error ellipse: s-maj=10.5km s-min=5.1km az=119.5*
*TIF **22** 03:05:27.2, 40.19N×48.76E, h28km±1km*
ISC 22 03:05:27.5±0.8, **40.26N**±0.02×**48.85E**±0.02, **h33**km±3km, **n101**, σ2ᵩ41/132, **mb4.1**/12, **4C-3D**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBS	**Qobustan**	**0.28**	**15**	P	**Pb**	**03 05 32.9**	**-2.3**
GBS				S	**Sn**	**03 05 41.7**	**+1.8**
ALIB	**&Aumlli-Bayram**	**0.33**	**158**	P	**Pb**	**03 05 34.6**	**-1.1**
ALIB				S	**Sn**	**03 05 42.1**	**+0.9**
SAAT	**Saatly**	**0.52**	**219**	P	**Pb**	**03 05 39.0**	**+0.6**
SAAT				S	**Sb**	**03 05 46.5**	**+0.7**
KDMR	**Kurdemir**	**0.52**	**283**	P	**Pb**	**03 05 37.9**	**-0.6**
KDMR				S	**Sn**	**03 05 48.2**	**+1.9**
PQL	**Pirkuli**	**0.56**	**340**	P	**Pb**	**03 05 37.0**	**-2.2**
PQL				S	**Sn**	**03 05 48.6**	**+1.0**
ATGJ	**Altiaghaj**	**0.60**	**6**	P	**Pb**	**03 05 38.9**	**-1.0**
ATGJ				S	**Sn**	**03 05 50.9**	**+2.4**
GOBA	**Gobu**	**0.69**	**78**	P	**Pb**	**03 05 42.3**	**+1.1**
GOBA				S	**Sn**	**03 05 52.7**	**+2.2**
IML	**Ismayilli**	**0.73**	**316**	P	**Pn**	**03 05 40.5**	**-1.1**
IML				S	**Sb**	**03 05 52.0**	**+0.2**
SIZA	**Siyzn**	**0.81**	**3**	P	**Pn**	**03 05 42.6**	**-0.2**
SIZA				S	**Sb**	**03 05 57.5**	**+3.4**
ZRD	**Zardab**	**0.89**	**271**	P	**Pn**	**03 05 43.4**	**-0.3**
ZRD				S	**Sb**	**03 05 58.6**	**+2.5**
NDR	**Nardaran**	**0.93**	**70**	P	**Pb**	**03 05 46.0**	**+0.9**
NDR				S	**Sb**	**03 06 02.4**	**+5.2**
GALA	**Gala**	**1.01**	**81**	P	**Pb**	**03 05 48.1**	**+1.6**
GALA				S	**Sb**	**03 06 03.5**	**+4.0**
QBL	**Gabala**	**1.03**	**312**	P	**Pn**	**03 05 45.2**	**-0.5**
QBL				S	**Sb**	**03 06 01.5**	**+1.3**
XNQ	**Khinaliq**	**1.06**	**330**	P	**Pb**	**03 05 48.1**	**+0.6**
XNQ				S	**Sb**	**03 06 03.7**	**+2.5**
GLBA	**Clilabad**	**1.08**	**199**	P	**Pn**	**03 05 47.5**	**+1.2**
GLBA				S	**Sb**	**03 06 04.1**	**+2.6**
QUBA	**Quba, Azerbaij**	**1.12**	**346**	P	**Pb**	**03 05 48.6**	**+0.1**
QUBA				S	**Sb**	**03 06 05.6**	**+2.7**
BLQ	**Beylaqan**	**1.13**	**242**	P	**Pn**	**03 05 46.8**	**-0.2**
BLQ				S	**Sb**	**03 06 03.8**	**+0.8**
BRDA	**Brd**	**1.28**	**271**	P	**Pn**	**03 05 50.2**	**+1.2**
BRDA				S	**Sb**	**03 06 09.5**	**+2.4**
QSAR	**Qusar**	**1.33**	**341**	Pn	**Pn**	**03 05 51.2**	**+1.5**
QSAR				Sn	**Sb**	**03 06 12.3**	**+3.7**
AGDM	**Agdam**	**1.34**	**264**	Pn	**Pn**	**03 05 50.5**	**+0.5**
AGDM				Sn	**Sb**	**03 06 11.4**	**+2.4**
QRD	**Qoradiz**	**1.42**	**236**	Pn	**Pn**	**03 05 51.8**	**+0.7**
QRD				Sn	**Sb**	**03 06 12.2**	**+0.9**
YRD	**Yardimli**	**1.42**	**199**	Pg	**Pn**	**03 05 50.2**	**-1.1**
YRD				Sn	**Sb**	**03 06 12.7**	**+1.1**
MNGR	**Mingechevir, A**	**1.44**	**291**	Pn	**Pn**	**03 05 52.3**	**+1.0**
MNGR				Sn	**Sb**	**03 06 14.8**	**+3.1**
AKT	**Akhty**	**1.48**	**325**	*e*PN	**Pn**	**03 05 53.1**	**+1.1**
AKT				*e*		03 05 55.5	
AKT				*e*		03 06 22.1	
AKT				pmax	pmax		
	comp=Z,1μm,0.3s						
LKRN	**Lenkeran, Azer**	**1.55**	**182**	Pn	**Pn**	**03 05 53.3**	**+0.5**
LKRN				Sn	**Sb**	**03 06 16.7**	**+1.8**
SEKA	**Sheki**	**1.57**	**308**	Pn	**Pn**	**03 05 53.6**	**+0.5**
SEKA				Sn	**Sb**	**03 06 16.7**	**+1.1**
LRK	**Lerik**	**1.67**	**194**	Sn	**Sb**	**03 06 18.5**	**+0.2**
ASTR	**Astara**	**1.70**	**182**	Sn	**Sb**	**03 06 18.6**	**-0.5**
DRN	**Derbent**	**1.81**	**348**	*i* PN	**Pn**	**03 05 57.4**	**+1.1**
GANJ	**Ganja**	**1.97**	**282**	Sn	**Sb**	**03 06 26.6**	**-0.2**
VSHL	**Vashlovani**	**2.10**	**298**	P	**Pn**	**03 06 03.0**	**+2.6**
ZKTA	**Zakatala**	**2.17**	**310**	Sg	**Sb**	**03 06 35.7**	**+2.9**
GDB	**GEDABAY**	**2.40**	**282**	Pn	**Pn**	**03 06 06.8**	**+2.1**
GDB				Sn	**Sb**	**03 06 37.7**	**-1.9**
LGD	**Lagodekhi**	**2.52**	**309**	P	**Pn**	**03 06 09.1**	**+2.9**
LGD	**Lagodekhi**	**2.52**	**309**	PN	**Pn**	**03 06 09.0**	**+2.9**
ORD	**Ordubad**	**2.58**	**240**	Pg	**Pn**	**03 06 10.7**	**+3.7**
ORD				Sg	**Sb**	**03 06 44.4**	**0.0**
QZX	**Qazax, Azerbai**	**2.76**	**288**	Sn	**Sb**	**03 06 47.7**	**-1.9**
NAX	**Nakhchivan**	**2.81**	**248**	Pg	**Pn**	**03 06 13.8**	**+3.7**
NAX				Sn	**Sn**	**03 06 46.2**	**+3.3**
MAK	**Makhachkala**	**2.88**	**340**	*e*PN	**Pn**	**03 06 12.9**	**+1.9**
MAK				*e*S	**Sb**	**03 06 50.7**	**-2.2**
MAK				pmax	pmax		
	comp=Z,110nm,0.3s						
MAK				smax	smax		
	comp=E,471nm,0.6s						
MAK				smax	smax		
	comp=E,549nm,0.5s						
MAK				MLR	MLR		
	comp=Z,323nm,2.0s						
DGRG	**David-gareji**	**2.89**	**295**	P	**Pn**	**03 06 14.1**	**+2.8**
DGRG	**David-gareji**	**2.89**	**295**	PN	**Pn**	**03 06 14.1**	**+2.8**
BTLR	**Botlikh**	**3.11**	**321**	*i* PN	**Pn**	**03 06 18.0**	**+3.7**
GNI	**Garni**	**3.15**	**269**	Pn	**Pn**	**03 06 17.6**	**+2.7**
	comp=Z,9.8nm,0.3s,baz=12,slow=8.8,SNR=1.4						
GNI				Lg	Lg	03 07 01.6	
	comp=Z,15nm,0.3s,baz=20,slow=21,SNR=3.3						
	comp=Z,30nm,0.4s						
CHRG	**Chargali**	**3.60**	**306**	P	**Pn**	**03 06 22.9**	**+1.7**
SHTL	**Shatili**	**3.67**	**312**	P	**Pn**	**03 06 25.1**	**+3.0**
SHTL	**Shatili**	**3.67**	**312**	PN	**Pn**	**03 06 25.0**	**+3.0**
TRLG	**Trialeti**	**3.82**	**291**	P	**Pn**	**03 06 26.1**	**+1.9**
TRLG	**Trialeti**	**3.82**	**291**	PN	**Pn**	**03 06 26.0**	**+1.9**
GUDG	**Gudauri**	**3.96**	**305**	P	**Pn**	**03 06 28.2**	**+2.1**
GUDG				S	**Sn**	**03 07 16.6**	**+5.1**
GUDG	**Gudauri**	**3.96**	**305**	PN	**Pn**	**03 06 28.2**	**+2.1**
GUDG				S	**Sn**	**03 07 16.5**	**+5.1**
AKH	**Akhalkalaki**	**4.22**	**287**	P	**Pn**	**03 06 33.0**	**+3.3**
AKH	**Akhalkalaki**	**4.22**	**287**	PN	**Pn**	**03 06 33.0**	**+3.3**
ALIG	**Mtskhetisjvari**	**4.33**	**297**	P	**Pn**	**03 06 33.1**	**+2.0**
ALIG				S	**Sn**	**03 07 26.6**	**+6.1**
NCK	**Nalchik**	**5.08**	**311**	*i* PN	**Pn**	**03 06 45.6**	**+4.3**
KBZ	**Khabaz**	**5.63**	**310**	Pn	**Pn**	**03 06 51.0**	**+2.2**
	comp=Z,0.8nm,0.3s,baz=130,slow=12,SNR=8.1						
KBZ				Lg	Lg	03 08 20.9	
	comp=Z,0.3nm,0.3s,baz=280,slow=22,SNR=3.6						
	comp=Z,1.7nm,0.6s						
KBZ	**Khabaz**	**5.63**	**310**	P	**Pn**	**03 06 51.0**	**+2.2**
PYA1	**Pyatigorsk**	**5.72**	**313**	*i* P	**Pn**	**03 06 52.5**	**+2.4**
SHA1	**Shidzhatmaz**	**5.77**	**309**	*i* P	**Pn**	**03 06 54.8**	**+3.8**
KVAR	**Kislovodsk Arr**	**5.88**	**311**	Pn	**Pn**	**03 06 53.5**	**+1.1**
	baz=216,slow=19						
	comp=Z,1.3nm,0.5s						
KIV	**Kislovodsk**	**5.88**	**311**	*e*P	**Pn**	**03 06 52.7**	**+0.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRTR	**Keskin Array B**	**11.68**	**272**	LR	LR	03 13 58.1	
	comp=Z,149nm,19.8s,baz=66,slow=44						
VRH	**Novokhopyorsk**	**12.01**	**338**	*e*P	**Pn**	**03 08 18.0**	**+1.7**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKTO	**Aktyubinsk**	**12.03**	**29**	Pn	**Pn**	**03 08 16.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=208,slow=8.7,SNR=5.1						
	comp=Z,1.9nm,0.6s						
VSR	**Storozhevoye**	**12.86**	**332**	*e*P	**Pn**	**03 08 24.7**	**-3.1**
VSR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VORR	**Voronezh**	**13.22**	**333**	*e*P	Pn	03 08 25.0	-7.7
VORR				pmax	pmax		
	comp=Z,40nm,0.6s						
OBN	**Obninsk**	**16.96**	**335**	*e*P	**Pn**	**03 09 22.6**	**+0.6**
OBN				pmax	pmax		
	comp=Z,13nm,0.9s						
OBN				MLR	MLR		
	comp=Z,735nm,7.0s						
MOS	**Moscow**	**17.17**	**338**	*e*P	**Pn**	**03 09 25.2**	**+0.5**
MOS				pmax	pmax		
	comp=Z,65nm,0.8s						
AKASG	**Malin Array Be**	**17.22**	**314**	P	**Pn**	**03 09 24.0**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=122,slow=12,SNR=5.6						
	comp=Z,1.9nm,0.5s						
AKASG	**Malin Array Be**	**17.22**	**314**	*e*P	**Pn**	**03 09 24.8**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	**Malin Array Si**	**17.22**	**314**	*i* P	**P**	**03 09 27.5**	**+0.9**
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TESR	**Tescani**	**17.28**	**299**	ǁP	**P**	**03 09 28.4**	**+1.1**
ARTI	**Arti**	**17.31**	**18**	P	**Pn**	**03 09 24.1**	**-2.3**
	comp=Z,1.3nm,0.3s,baz=214,slow=7.8,SNR=8.1						
	comp=Z,4.4nm,0.5s						
ARTI	**Arti**	**17.31**	**18**	P	**Pn**	**03 09 22.6**	**-3.8**
ARTI				S	**Sn**	**03 12 34.0**	**-3.8**
MLR	**Muntele Rosu**	**17.56**	**295**	ǁP	**P**	**03 09 34.2**	**+3.7**
MLR	**Muntele Rosu**	**17.56**	**295**	ǁP	**P**	**03 09 34.2**	**+3.7**
SVE	**Sverdlovsk**	**18.27**	**21**	*e*P	**P**	**03 09 36.7**	**-1.5**
SVE				*e*S	**Sn**	**03 12 52.3**	**-8.8**
KIRV	**Kirov**	**18.34**	**1**	P	**P**	**03 09 36.9**	**-2.0**
	comp=Z,2.0nm,0.3s,baz=172,slow=19,SNR=6.0						
	comp=Z,8.1nm,0.6s						
KIRV	**Kirov**	**18.34**	**1**	*i* P	**P**	**03 09 37.5**	**-1.4**
BURAR	**Bucovina Array**	**18.49**	**301**	ǁP	**P**	**03 09 39.9**	**-0.9**
BURAR	**Bucovina Array**	**18.49**	**301**	ǁP	**P**	**03 09 39.9**	**-0.9**
BORK	**Borovoye**	**19.41**	**42**	*i* P	**P**	**03 09 46.0**	**-4.7**
BORK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BVAR	**Borovoye Array**	**19.44**	**42**	P	**P**	**03 09 50.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=229,slow=8.8,SNR=8.0						
	comp=Z,1.1nm,0.4s						
MARR	**Marisel-Cluj**	**19.69**	**298**	ǁP	**Pn**	**03 09 57.9**	**+2.3**
KLMR	**Klimovskoe**	**21.41**	**347**	*e*P	**P**	**03 10 11.5**	**-0.7**
KLMR				*e*		03 14 11.2	
KLMR				pmax	pmax		
	comp=Z,35nm,1.1s						
KURBB	**Kurchatov Arra**	**23.11**	**53**	P	**P**	**03 10 31.5**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=256,slow=10,SNR=7.3						
	comp=Z,0.7nm,0.6s						
KURK	**Kurchatov**	**23.19**	**53**	P	**P**	**03 10 31.5**	**+0.3**
MKAR	**Makanchi Array**	**24.98**	**64**	P	**P**	**03 10 49.6**	**+1.6**
	comp=Z,1.3nm,0.6s,baz=258,slow=8.4,SNR=13						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**25.36**	**334**	P	**P**	**03 10 51.4**	**+0.1**
	comp=Z,2.8nm,0.5s,baz=138,slow=9.9,SNR=9.6						
	comp=Z,2.8nm,0.5s						
FINES	**FINESS Array B**	**25.36**	**334**	*ce*P	**P**	**03 10 52.2**	**+1.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CLL	**Collm**	**27.07**	**306**	*i* P	**P**	**03 11 02.6**	**-4.1**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	**Collm**	**27.07**	**306**	*i* P	**P**	**03 11 02.6**	**-4.1**
	comp=Z,4.0nm,0.8s						
HFS	**Hagfors**	**29.49**	**324**	P	**P**	**03 11 27.5**	**-0.7**
	comp=Z,7.5nm,0.9s,baz=116,slow=9.8,SNR=6.3						
	comp=Z,7.5nm,0.9s						
NOA	**NORSAR Array B**	**30.98**	**325**	P	**P**	**03 11 40.3**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=119,slow=8.5,SNR=3.6						
	comp=Z,0.6nm,0.7s						
NOA	**NORSAR Array B**	**30.98**	**325**	*e*P	**P**	**03 11 40.8**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	**Sonseca Array**	**39.98**	**287**	P	**P**	**03 12 57.7**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=60,slow=8.0,SNR=13						
	comp=Z,1.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**40.27**	**350**	P	**P**	**03 12 59.5**	**-1.4**
	comp=Z,9.6nm,1.1s,baz=134,slow=10,SNR=2.3						
	comp=Z,9.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**48.04**	**102**	P	**P**	**03 14 03.4**	**-0.4**
	comp=Z,2.2nm,0.3s,baz=307,slow=7.6,SNR=3.5						
	comp=Z,2.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**49.28**	**250**	P	**P**	**03 14 13.4**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=57,slow=6.3,SNR=5.2						
	comp=Z,0.1nm,0.5s						
LSZ	**Lusaka**	**58.50**	**204**	LR	LR	03 40 58.1	
	comp=Z,87nm,19.0s,baz=11,slow=36						
FRB	**Frobisher Bay**	**65.17**	**334**	P	**P**	**03 16 05.6**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=64,slow=7.8,SNR=5.0						
	comp=Z,0.9nm,0.6s						
YKA	**Yellowknife Ar**	**76.73**	**352**	P	**P**	**03 17 14.9**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=10.0,slow=5.6,SNR=3.8						
	comp=Z,0.2nm,0.6s						

PRU 22 03:10:07.9, 51.51N×16.11E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.92**	**182**	*e*PG	Pg	03 10 24.1	-1.5
CHVC				*e*SG	Sg	03 10 38.0	+0.5
OSTC	**Ostas**	**0.96**	**176**	*e*PG	Pg	03 10 25.1	-1.1
OSTC				*e*SG	Sg	03 10 38.9	+0.3
UPC	**Upice**	**1.01**	**184**	*e*PG	Pg	03 10 26.2	-0.9
UPC				*e*SG	Sg	03 10 39.9	-0.3
DPC	**Dobruska-Polom**	**1.17**	**173**	*e*PG	Pg	03 10 28.7	-1.6
DPC				*e*SG	Sg	03 10 43.4	-2.0
PVCC	**Panska Ves**	**1.38**	**225**	*e*PG	Pg	03 10 32.6	-1.8
PVCC				*e*SG	Sg	03 10 51.8	-0.5
KRLC	**Kraliky**	**1.50**	**163**	*e*PG	Pn	03 10 34.8	-1.3
KRLC				*e*SG	Sg	03 10 54.6	-1.4
KRLC	**Kraliky**	**1.50**	**163**	*e*P	Pn	03 10 34.8	-1.3
BRG	**Berggiesshubel**	**1.50**	**246**	Sg	Sg	03 10 55.1	+1.1
BRG				Amp		03 10 56.4	
	comp=Z,2.3nm,0.3s						
STEB	**Steborice**	**1.90**	**146**	*e*SG	Sg	03 11 09.1	+0.2
MORC	**Moravsky Berou**	**1.96**	**152**	*e*PN	Pn	03 10 40.4	-2.0
MORC				*e*SG	Sb	03 11 08.7	-0.8
VRAC	**Vranov**	**2.23**	**172**	*e*SG	Sn	03 11 13.0	-1.2
CKRC	**Cesky Krumlov**	**2.93**	**204**	*e*SG	Sg	03 11 40.9	-1.1

*IDC **22** 03:18:06.3±1.0, 13.47N×146.52E, h0km, mb3.8/8, mbtmp3.8/8, MS3.4/1, Error ellipse: s-maj=25.3km s-min=21.6km az=112.0*
ISC 22 03:18:10.2±1.0, **13.5N**±0.2×**146.46E**±0.10, **h26**km, **n11**, σ0ᵩ63/11, **mb4.0**/9, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.55**	**275**	Pn	**Pn**	**03 18 36.0**	**-0.1**
	107nm,0.3s,baz=287,slow=4.1,SNR=5.1						
GUMO				Sn	**Sb**	**03 18 57.2**	**-0.2**
	100nm,0.3s,baz=227,slow=23,SNR=3.6						
WRA	**Warramunga Arr**	**35.28**	**200**	P	**P**	**03 25 03.2**	**0.0**
	1.2nm,1.0s,baz=26,slow=9.5,SNR=5.5						
	1.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**37.49**	**214**	LR	LR	03 42 06.2	
	comp=Z,50nm,18.2s,baz=202,slow=38						
ASAR	**Alice Springs**	**38.90**	**199**	P	**P**	**03 25 34.0**	**+0.1**
	0.3nm,0.7s,baz=24,slow=11,SNR=4.5						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**62.62**	**324**	P	**P**	**03 28 32.4**	**+0.1**
	0.4nm,0.3s,baz=103,slow=6.2,SNR=2.2						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**62.65**	**316**	P	**P**	**03 28 33.3**	**+0.6**
	0.7nm,0.3s,baz=91,slow=8.4,SNR=12						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**65.71**	**320**	P	**P**	**03 28 53.4**	**+0.8**
	2.9nm,0.6s,baz=103,slow=7.0,SNR=22						
	2.9nm,0.6s						
ILAR	**Eielson Array**	**68.02**	**25**	P	**P**	**03 29 07.4**	**+0.3**
	0.3nm,0.6s,baz=251,slow=5.7,SNR=5.8						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**70.98**	**322**	P	**P**	**03 29 26.5**	**+1.0**
	1.8nm,0.6s,baz=98,slow=7.0,SNR=7.0						
	1.8nm,0.6s						
YKA	**Yellowknife Ar**	**82.25**	**28**	P	**P**	**03 30 28.3**	**-0.8**
	0.1nm,0.5s,baz=287,slow=7.3,SNR=1.8						
	0.1nm,0.5s						
FINES	**FINESS Array B**	**91.91**	**335**	P	**P**	**03 31 15.7**	**-0.5**
	13nm,1.2s,baz=115,slow=6.6,SNR=4.5						

*AZER **22** 03:18:28.2, 38.55N×45.00E, h4km, ml3.8*
*NSSP **22** 03:18:30.1, 38.57N×45.05E, h10km, Ms3.4*
*TIF **22** 03:18:30.0, 38.48N×45.08E, h20km±2km*
*TEH **22** 03:18:30.0, 38.48N×45.08E, h7km±22km, ML3.5, Presumed earthquake*
*ISK **22** 03:18:32.7, 38.38N×44.93E, h10km, ML3.2/9*
*AFAD **22** 03:18:32.2, 38.38N×44.87E, h10km±1km, ML2.9*
ISC 22 03:18:30.1±1.1, **38.48N**±0.02×**45.07E**±0.01, **h5**km±10km, **n101**, σ1ᵩ44/146, **3C-1D**, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.47**	**114**	Pg	**Pg**	**03 18 38.9**	**-0.3**
NAX	**Nakhchivan**	**0.77**	**25**	Pg	**Pg**	**03 18 45.3**	**+0.4**
NAX	**Nakhchivan**	**0.77**	**25**	P	**Pg**	**03 18 45.4**	**+0.4**
NAX				S	**Sb**	**03 18 56.9**	**-0.1**
ORD	**Ordubad**	**0.85**	**58**	Pg	**Pg**	**03 18 46.7**	**+0.3**
ORD	**Ordubad**	**0.85**	**58**	P	**Pg**	**03 18 46.7**	**+0.3**
ORD				S	**Sb**	**03 18 59.2**	**-0.1**
OZAP	**Van, Ozalp-Mer**	**0.87**	**283**	P	**Pb**	**03 18 46.9**	**-0.9**
OZAP				S	**Sb**	**03 18 59.3**	**-0.5**
MAKU	**Maku**	**0.93**	**341**	Pg	**Pg**	**03 18 46.8**	**-1.1**
SBZ	**Shahbuz**	**0.99**	**22**	Pg	**Pg**	**03 18 48.9**	**-0.2**
SBZ	**Shahbuz**	**0.99**	**22**	P	**Pg**	**03 18 49.0**	**-0.2**
SBZ				S	**Sn**	**03 19 03.8**	**-1.6**
IAZR	**Azarshahr**	**1.07**	**138**	Pg	**Pg**	**03 18 50.4**	**-0.3**
YOVA	**Hakkari_Yksek**	**1.08**	**215**	P	**Pg**	**03 18 50.3**	**-0.6**
YOVA				S	**Sg**	**03 19 03.0**	**-1.9**
YOVA				IAML		03 19 13.0	
	comp=E,275nm,0.6s						
YOVA	**Hakkari_Yksek**	**1.08**	**215**	Pg	**Pg**	**03 18 50.3**	**-0.6**
ALVK	**Alvank**	**1.10**	**65**	*e*P	**Pb**	**03 18 50.5**	**-1.3**
ALVK				*e*S	**Sg**	**03 19 05.7**	**+0.2**
VAYK	**Vayk**	**1.25**	**13**	*i* P	**Pn**	**03 18 53.3**	**-1.1**
VAYK				*i* S	**Sb**	**03 19 09.1**	**-1.6**
HYR	**Heyderabad**	**1.25**	**352**	P	**Pn**	**03 18 52.9**	**-1.6**
HYR				S	**Sn**	**03 19 12.3**	**+0.5**
VMUR	**Van-Muradiye**	**1.28**	**294**	P	**Pg**	**03 18 54.7**	**0.0**
VMUR				S	**Sn**	**03 19 11.9**	**-0.7**
VMUR				IAML		03 19 16.0	
	comp=N,438nm,1.0s						
VMUR				IAML		03 19 17.0	
	comp=E,300nm,0.6s						
VMUR	**Van-Muradiye**	**1.28**	**294**	Pg	**Pg**	**03 18 54.7**	**0.0**
TVAN	**Van**	**1.31**	**273**	P	**Pb**	**03 18 54.5**	**-0.8**
TVAN	**Van**	**1.31**	**273**	Pg	**Pb**	**03 18 54.5**	**-0.8**
VANB	**Van**	**1.32**	**276**	Pn	**Pg**	**03 18 56.1**	**+0.6**
VANB				Sn	**Sg**	**03 19 13.3**	**+0.6**
EGVZ	**Egvard**	**1.37**	**56**	*e*P	**Pn**	**03 18 55.2**	**-0.9**
EGVZ				*e*S	**Sb**	**03 19 13.8**	**-0.5**
HAKT	**HAKKARI**	**1.42**	**230**	P	**Pn**	**03 18 55.6**	**-1.2**
HAKT	**HAKKARI**	**1.42**	**230**	Pg	**Pg**	**03 18 57.4**	**+0.2**
HAKT	**HAKKARI**	**1.42**	**230**	P	**Pg**	**03 18 57.5**	**+0.2**
HAKT				S	**Sg**	**03 19 20.4**	**+4.8**
GRS	**Goris**	**1.42**	**44**	ǁ*i*P	**Pg**	**03 19 01.0**	**+3.7**
GRS				ǁ*i*S	**Sg**	**03 19 20.0**	**+4.3**
ERCV	**ERCIS-VAN**	**1.46**	**292**	Pn	**Pg**	**03 18 59.1**	**+1.0**
ERCV				Sn	**Sg**	**03 19 18.0**	**+0.9**
DYDN	**Diyadin**	**1.52**	**315**	P	**Pb**	**03 18 58.0**	**-1.0**
DYDN	**Diyadin**	**1.52**	**315**	Pg	**Pb**	**03 18 57.9**	**-1.0**
IHRS	**Heris**	**1.56**	**95**	Pg	**Pn**	**03 18 58.6**	**-0.2**
IGDI	**IGDIR**	**1.59**	**331**	P	**Pn**	**03 18 58.6**	**-0.4**
IGDI	**IGDIR**	**1.59**	**331**	P	**Pb**	**03 18 59.3**	**-0.8**
IGDI				S	**Sg**	**03 19 22.9**	**+1.7**
GEVA	**Gevas**	**1.59**	**265**	P	**Pb**	**03 18 59.0**	**-1.2**
AKDM	**Akdamar-Van**	**1.65**	**265**	Pn	**Pb**	**03 19 00.2**	**-0.9**
AKDM				Sn	**Sb**	**03 19 21.9**	**-0.5**
AKDM	**Akdamar-Van**	**1.65**	**265**	Pg	**Pb**	**03 19 00.3**	**-0.9**
CUKT	**Cukurca**	**1.69**	**224**	Pn	**Pb**	**03 19 00.9**	**-0.9**
CUKT	**Cukurca**	**1.69**	**224**	P	**Pb**	**03 19 01.0**	**-0.6**
CUKT	**Cukurca**	**1.69**	**224**	Pg	**Pb**	**03 19 01.4**	**-0.4**
GNI	**Garni**	**1.69**	**351**	ǁ*i*P	**Pb**	**03 19 00.8**	**-1.0**
GNI				ǁ*i*S	**Sb**	**03 19 23.1**	**-0.4**
GNI	**Garni**	**1.69**	**351**	Pg	**Pb**	**03 19 00.8**	**-1.0**
AYRK	**Ayrk**	**1.73**	**19**	*e*P	**Pb**	**03 19 01.6**	**-1.0**
AYRK				*e*S	**Sb**	**03 19 24.8**	**+0.1**
MAHB	**Mahabad**	**1.78**	**163**	Pg	**Pb**	**03 19 02.2**	**-1.1**
METS	**Metsamor**	**1.84**	**336**	*e*P	**Pb**	**03 19 04.3**	**0.0**
METS				*e*S	**Sg**	**03 19 29.5**	**+0.2**
KAPZ	**Kaputan**	**1.86**	**351**	*e*P	**Pb**	**03 19 04.5**	**-0.3**
KAPZ				*e*S	**Sg**	**03 19 29.6**	**-0.5**
ADCV	**BITLIS_Adilcev**	**1.87**	**281**	P	**Pb**	**03 19 03.2**	**-1.7**
VNNZ	**Vanand**	**1.89**	**330**	*e*P	**Pb**	**03 19 04.7**	**-0.6**
VNNZ				*e*S	**Sg**	**03 19 30.1**	**-0.8**
AGRB	**Hanur-Agry**	**1.96**	**305**	Pn	**Pg**	**03 19 06.5**	**-1.1**
ARUZ	**Aruch**	**1.96**	**337**	*e*P	**Pb**	**03 19 05.3**	**-1.0**
ARUZ				*e*S	**Sb**	**03 19 31.0**	**-0.1**
KOTA	**Agri, Merkez-K**	**1.96**	**313**	P	**Pg**	**03 19 07.6**	**-0.2**
KO

PATS	Pohnpei	13.42	118	Pn	Pn	03 22 34.4	-4.7		
JAY	Jayapura	16.80	200	LR	LR	03 28 17.0			
	comp=Z,106nm,20.5s,slow=31								
SIJI	Sorong	20.65	228	P	Pn	03 24 10.4	-0.1		
	9.3nm,0.4s,baz=40,slow=9.8,SNR=5.6								
	9.3nm,0.4s								
JOW	Kunigami	21.59	311	P	P	03 24 18.9	+0.7		
	27nm,1.1s,baz=122,slow=13,SNR=3.0								
	27nm,1.1s								
JOW	Kunigami	21.59	311	P	P	03 24 18.8	+0.7		
JOW				IAmb	IAmb	03 24 19.8			
	comp=Z,60nm,1.3s								
JSU	Suzuyama	23.22	323	P	P	03 24 35.3	0.0		
JSU				IAmb	IAmb	03 24 43.1			
	comp=Z,44nm,1.1s								
MJAR	Matsushiro Art	24.18	344	P	P	03 24 41.8	-2.6		
	comp=Z,0.7nm,0.4s,baz=163,slow=9.5,SNR=1.8								
	comp=Z,0.7nm,0.4s								
MAJO	Matsushiro	24.18	344	P	P	03 24 44.5	0.0		
MJB9	Matsu-Tunnel	24.18	344	P	P	03 24 45.8	+1.4		
YULB	Yu-li	25.77	296	P	P	03 24 58.7	-0.3		
YULB				IAmb	IAmb	03 25 08.8			
	comp=Z,40nm,1.5s								
KSRS	Korea Array	29.07	329	P	P	03 25 27.5	-0.9		
	comp=Z,1.2nm,0.4s,baz=144,slow=9.5,SNR=5.6								
	comp=Z,1.2nm,0.4s								
KSAR	Wonju Array Be	29.08	329	P	P	03 25 28.4	-0.2		
CTA	Charters Tower	33.29	180	LR	LR	03 40 01.9			
	comp=Z,52nm,20.2s,baz=220,slow=37								
WB0	Warramunga Arr	35.03	200	P	P	03 26 20.8	-0.1		
WB0				IAmb	IAmb	03 26 37.1			
	comp=Z,32nm,1.9s								
WR8	Warramunga Arr	35.17	200	P	P	03 26 22.2	+0.1		
WR8				IAmb	IAmb	03 27 10.2			
	comp=Z,36nm,1.7s								
WRA	Warramunga Arr	35.21	200	P	P	03 26 21.9	-0.5		
	comp=Z,4.3nm,0.8s,baz=23,slow=9.4,SNR=18								
WRA				PcP	PcP	03 28 53.6	+0.3		
	comp=Z,0.3nm,0.5s,baz=20,slow=3.5,SNR=5.0								
	comp=Z,4.3nm,0.8s								
ASAR	Alice Springs	38.83	198	P	P	03 26 53.2	0.0		
	comp=Z,1.5nm,0.6s,baz=23,slow=9.4,SNR=16								
	comp=Z,1.5nm,0.6s								
ASAR	Alice Springs	38.83	198	P	P	03 26 51.3	-1.9		
MBWA	Marble Bar	43.21	218	P	P	03 27 29.8	+0.6		
MBWA				IAmb	IAmb	03 27 30.5			
	comp=Z,24nm,1.4s								
PSA00	Pilbara Seismi	43.46	217	P	P	03 27 32.1	+0.8		
STKA	Stephens Creek	45.27	186	P	P	03 27 45.4	-0.2		
	comp=Z,0.7nm,0.4s,baz=353,slow=12,SNR=2.9								
	comp=Z,0.7nm,0.4s								
CMAR	Chiang Mai Arr	45.81	283	P	P	03 27 51.3	+1.0		
	comp=Z,1.4nm,0.3s,baz=85,slow=6.3,SNR=9.9								
	comp=Z,1.4nm,0.3s								
MA2	Magadan	46.19	3	LR	LR	03 43 40.9			
	comp=Z,35nm,21.5s,baz=210,slow=32								
MA2	Magadan	46.19	3	P	P	03 27 52.7	+0.1		
BBOO	Buckleboo	47.02	192	P	P	03 27 59.5	+0.1		
BBOO				IAmb	IAmb	03 29 39.6			
	comp=Z,23nm,1.4s								
SONM	Songino Array	47.74	324	P	P	03 28 04.6	-0.5		
	comp=Z,1.2nm,0.7s,baz=136,slow=7.8,SNR=6.7								
SONM				PcP	PcP	03 29 33.7	-0.4		
	comp=Z,0.6nm,0.6s,baz=141,slow=3.7,SNR=2.0								
	comp=Z,1.2nm,0.7s								
SONM	Songino Array	47.74	324	P	P	03 28 04.9	-0.1		
ADK	Adak	48.46	30	P	P	03 28 11.3	+1.0		
SEY	Seymchan	49.63	4	LR	LR	03 50 10.4			
	comp=Z,39nm,20.1s,baz=172,slow=37								
ATKA	Atka Island	49.88	31	P	P	03 28 22.7	+1.5		
MORW	Morawa	51.42	214	P	P	03 28 33.3	+0.1		
MORW				IAmb	IAmb	03 29 38.3			
	comp=Z,21nm,1.4s								
BILL	Bilibino	56.09	9		P	03 29 06.5	-0.3		
BILL				IAmb	IAmb	03 29 07.8			
	comp=Z,15nm,1.3s								
K13K	Kusilvak Mount	59.64	24	P	P	03 29 33.1	+1.3		
ANM	Nome	60.80	22	P	P	03 29 40.3	+0.6		
K15K	Wolf Creek Mou	61.09	25	P	P	03 29 42.5	+0.7		
ZAA0	Zalesovo Array	62.64	324	P	P	03 29 51.3	-0.9		
ZALV	Zalesovo Beam	62.64	324	P	P	03 29 51.7	-0.6		
	comp=Z,1.5nm,0.4s,baz=106,slow=7.4,SNR=7.3								
ZALV				PcP	PcP	03 30 30.9	-0.1		
	comp=Z,1.4nm,0.6s,baz=83,slow=6.0,SNR=2.3								
	comp=Z,1.5nm,0.4s								
ZALV	Zalesovo Beam	62.64	324	P	P	03 29 51.8	-0.4		
MKAR	Makanchi Array	62.65	316	P	P	03 29 52.7	+0.1		
	comp=Z,2.4nm,0.3s,baz=90,slow=8.8,SNR=26								
MKAR				PcP	PcP	03 30 31.4	+0.1		
	comp=Z,1.3nm,0.7s,baz=103,slow=6.2,SNR=2.5								
	comp=Z,2.4nm,0.3s								
MKAR	Makanchi Array	62.65	316		P	03 29 53.0	+0.4		
MAKZ	Makanchi	62.87	316		P	03 29 54.3	+0.3		
C16K	Lisburne Hills	62.92	18	P	P	03 29 53.7	-0.2		
H17K	Granite Mounta	63.00	23	P	P	03 29 55.0	+0.5		
H17K				IAmb	IAmb	03 30 35.9			
	comp=Z,28nm,1.9s								
H18K	Honhosa River	63.68	23	P	P	03 29 59.2	+0.2		
H18K				IAmb	IAmb	03 30 55.6			
	comp=Z,23nm,1.8s								
L19K	White Mountain	63.87	27	P	P	03 30 01.5	+1.1		
G18K	Tagagawik	63.91	22	P	P	03 30 00.9	+0.3		
G18K				IAmb	IAmb	03 30 10.1			
	comp=Z,9.5nm,1.5s								
E18K	Tukpahlearik C	63.97	20		P	03 30 01.2	+0.4		
J19K	Poorman	64.25	25	P	P	03 30 03.4	+0.6		
C18K	Utukok River	64.41	19	P	P	03 30 03.9	+0.1		
C18K				IAmb	IAmb	03 30 20.8			
	comp=Z,20nm,2.0s								
G19K	Purcell Mounta	64.60	22	P	P	03 30 05.3	+0.3		
CNPM	China Poot	64.63	30	P	P	03 30 04.6	-0.8		
K20K	Telida	64.64	25	P	P	03 30 06.2	+0.8		
K20K				IAmb	IAmb	03 30 44.2			
	comp=Z,24nm,1.8s								
E19K	Redstone River	65.13	21	P	P	03 30 08.7	+0.2		
C19K	Lookout Ridge	65.15	19	P	P	03 30 09.3	+0.7		
C19K				IAmb	IAmb	03 30 23.2			
	comp=Z,17nm,1.6s								
HYB	Hyderabad	65.24	283	eP	P	03 30 10.2	+0.2		
HYB				eS	S	03 38 54.9	+2.5		
SKT	Skwentna	65.26	27	P	P	03 30 09.6	+0.2		
PPLA	Purkeypile	65.28	26	P	P	03 30 10.0	+0.3		
D19K	Kuna River	65.32	20	P	P	03 30 09.7	0.0		
D19K				IAmb	IAmb	03 30 40.0			
	comp=Z,27nm,1.9s								
SLKM	Skilak Lake	65.41	29	P	P	03 30 09.9	-0.5		
SUA	Susitna One	65.45	28	P	P	03 30 11.3	+0.5		
F20K	Avaraart Lake	65.48	21	P	P	03 30 11.1	+0.4		
KURK	Kurchatov	65.68	320		P	03 30 12.2	-0.1		
KURBB	Kurchatov Arra	65.72	320	P	P	03 30 12.3	-0.3		
	comp=Z,7.6nm,0.6s,baz=103,slow=7.2,SNR=33								
	comp=Z,7.6nm,0.6s								
IMAR	Indian Mountai	65.77	23	P	P	03 30 12.1	-0.5		
L22K	Petersville	65.78	27	P	P	03 30 12.6	-0.2		
RC01	Rabbit Creek A	65.81	29	P	P	03 30 12.7	-0.2		
D20K	Etivluk River	65.91	20	P	P	03 30 13.7	+0.2		
D20K				IAmb	IAmb	03 30 15.0			
	comp=Z,15nm,1.6s								
H21K	Melozitna Rive	66.01	23	P	P	03 30 14.4	+0.3		
H21K				IAmb	IAmb	03 31 40.7			
	comp=Z,12nm,1.5s								
KTH	Kantishna Hill	66.04	26	P	P	03 30 13.2	-1.3		
I21K	Tanana	66.16	24	P	P	03 30 15.1	0.0		
I21K				IAmb	IAmb	03 31 25.1			
	comp=Z,16nm,1.6s								
BPAW	Bear Paw Mtn.	66.19	25	P	P	03 30 16.0	+0.6		
BPAW				IAmb	IAmb	03 30 22.1			
	comp=Z,20nm,1.5s								
TRF	Thorofare Moun	66.27	26	P	P	03 30 15.4	-0.8		
F21K	Alatna River	66.35	22	P	P	03 30 16.1	-0.3		
GHO	Glory Hole Cre	66.38	28	P	P	03 30 16.1	-0.6		
KNK	Knik Glacier	66.49	28	P	P	03 30 17.5	+0.1		
SML	Sawmill	66.66	28	P	P	03 30 18.7	+0.3		
E21K	Killik River	66.67	20	P	P	03 30 18.7	+0.3		
BOOM	Boomskoye usch	66.68	311	P	P	03 30 20.0	+0.8		
RND	Reindeer	66.88	26	P	P	03 30 19.1	-0.8		
MCK	McKinley	66.94	26	P	P	03 30 20.3	+0.1		
MCK				IAmb	IAmb	03 30 47.9			
	comp=Z,21nm,1.6s								
B21K	Ikpikpuk River	66.95	19	P	P	03 30 20.6	+0.5		
SCM	Sheep Creek Mo	67.12	28	P	P	03 30 21.7	+0.2		
NEA2	Nenana	67.14	25	P	P	03 30 21.8	+0.4		
NEA2				IAmb	IAmb	03 32 45.9			
	comp=Z,28nm,2.0s								
I23K	Minto, Yukon-K	67.19	24	P	P	03 30 22.9	+1.2		
I23K				IAmb	IAmb	03 30 24.8			
	comp=Z,24nm,1.7s								
D22K	Ayikyak River	67.28	20	P	P	03 30 22.8	+0.6		
D22K				IAmb	IAmb	03 30 45.7			
	comp=Z,23nm,1.9s								
E22K	Anaktuvuk Pass	67.29	21	P	P	03 30 23.0	+0.7		
E22K				IAmb	IAmb	03 30 25.6			
	comp=Z,20nm,1.9s								
G23K	Bananza Creek	67.44	23	P	P	03 30 23.7	+0.4		
G23K				IAmb	IAmb	03 32 41.6			
	comp=Z,20nm,1.9s								
WRH	Wood River Hil	67.51	25	P	P	03 30 22.9	-0.8		
WRH				IAmb	IAmb	03 32 20.2			
	comp=Z,24nm,1.9s								
CCB	Clear Creek Bu	67.68	25	P	P	03 30 23.4	-1.4		
CCB				IAmb	IAmb	03 32 28.1			
	comp=Z,22nm,1.9s								
D23K	Nanushuk River	67.98	20	P	P	03 30 27.8	+1.1		
D23K				IAmb	IAmb	03 31 24.4			
	comp=Z,21nm,1.6s								
H24K	Noodor Dome	67.99	24	P	P	03 30 26.5	-0.3		
H24K				IAmb	IAmb	03 30 45.3			
	comp=Z,10nm,1.4s								
E23K	Chandalar	68.03	21	P	P	03 30 28.2	+1.1		
E23K				IAmb	IAmb	03 31 08.7			
	comp=Z,12nm,1.1s								
IL31		68.09	25	P	P	03 30 26.4	-0.9		
IL31				IAmb	IAmb	03 32 13.0			
	comp=Z,29nm,1.9s								
ILAR	Eielson Array	68.09	25	P	P	03 30 26.2	-1.2		
	comp=Z,1.1nm,0.6s,baz=255,slow=5.6,SNR=20								
	comp=Z,1.1nm,0.6s								
ILAR	Eielson Array	68.09	25	P	P	03 30 26.4	-1.0		
C23K	Itkillik River	68.32	19	P	P	03 30 29.5	+0.8		
C23K				IAmb	IAmb	03 30 30.6			
	comp=Z,15nm,1.5s								
N25K	Chitina, Valde	68.33	29	P	P	03 30 29.5	+0.4		
G24K	Hadweenzic Riv	68.40	23	P	P	03 30 29.9	+0.5		
G24K				IAmb	IAmb	03 31 28.0			
	comp=Z,25nm,1.8s								
E24K	Your Creek	68.44	21	P	P	03 30 30.4	+0.8		
E24K				IAmb	IAmb	03 31 19.8			
	comp=Z,13nm,1.8s								
D24K	Happy Valley	68.67	20	P	P	03 30 31.8	+0.9		
NIL	Nilore	68.75	301	P	P	03 30 32.1	-0.1		
NIL				IAmb	IAmb	03 30 35.2			
	comp=Z,11nm,1.0s								
PRP	Porcupine Dome	68.84	24	P	P	03 30 31.2	-1.0		
PRP				IAmb	IAmb	03 32 09.6			
	comp=Z,21nm,1.9s								
ARSB	Arslanbob	68.85	309	P	P	03 30 32.8	-0.1		
ARSB				IAmb	IAmb	03 30 35.7			
	comp=Z,11nm,1.3s								
C24K	Franklin Bluff	68.90	20	P	P	03 30 32.7	+0.4		
C24K				IAmb	IAmb	03 30 40.8			
	comp=Z,12nm,1.4s								
DOT	Dot Lake	69.02	27	P	P	03 30 33.6	+0.3		
SCRK	Sand Creek	69.12	26	P	P	03 30 34.0	-0.1		
SCRK				IAmb	IAmb	03 31 18.4			
	comp=Z,13nm,1.5s								
L26K	Log Cabin Wild	69.20	27	P	P	03 30 34.7	+0.3		
L26K				IAmb	IAmb	03 31 18.3			
	comp=Z,27nm,1.7s								
GRNC	Granite Creek	69.53	30	P	P	03 30 36.9	+0.2		
D25K	Kavik River	69.56	20	P	P	03 30 36.7	+0.2		
BMAR	Burnt Mountain	69.69	23	P	P	03 30 38.4	+1.1		
M27K	Edge Creek, AK	69.74	28		P	03 30 38.1	+0.2		
G26K	Porcupine Rive	69.87	23		P	03 30 39.7	+1.3		
G26K				IAmb	IAmb	03 31 01.4			
	comp=Z,13nm,1.4s								
LOGN	Logan Glacier	69.91	30	P	P	03 30 37.1	-1.9		
BCAR	Beaver Creek A	69.91	27	P	P	03 30 39.0	+0.2		
F26K	Sheenjek River	69.91	22	P	P	03 30 39.3	+0.5		
F26K				IAmb	IAmb	03 31 23.2			
	comp=Z,14nm,1.6s								
I27K	Kandik River	70.44	25	P	P	03 30 41.7	-0.3		
I27K				IAmb	IAmb	03 31 12.6			
	comp=Z,36nm,2.0s								
C27K	Jago River	70.54	20	P	P	03 30 43.4	+0.9		
C27K				IAmb	IAmb	03 33 15.0			
	comp=Z,25nm,1.9s								
H27K	Steamboat Moun	70.60	24	P	P	03 30 43.7	+0.8		
H27K				IAmb	IAmb	03 31 38.7			
	comp=Z,22nm,1.8s								
G27K	Doyon Strip	70.66	24	P	P	03 30 43.7	+0.4		
G27K				IAmb	IAmb	03 31 39.6			
	comp=Z,20nm,1.9s								
KK31	Karatay Array	70.69	311	P	P	03 30 43.7	-0.3		
KKAR	Karatay Array	70.69	311		P	03 30 44.5	+0.6		
BVAR	Borovoye Array	70.99	322	P	P	03 30 45.5	0.0		
	comp=Z,3.8nm,0.5s,baz=99,slow=8.3,SNR=15								
	comp=Z,3.8nm,0.5s								
BORK	Borovoye	71.03	322		P	03 30 45.9	+0.1		
DAWY	Dawson	71.12	27	P	P	03 30 47.1	+0.9		
DAWY				IAmb	IAmb	03 31 48.7			
	comp=Z,30nm,1.9s								
M29M	Somme Creek	71.33	28	P	P	03 30 48.7	+1.1		
M29M				IAmb	IAmb	03 30 50.0			
	comp=Z,17nm,1.4s								
D27M	Malcolm River	71.40	21	P	P	03 30 48.5	+0.7		
D27M				IAmb	IAmb	03 31 31.6			
	comp=Z,14nm,1.6s								
F28M	Old Crow	71.50	23	P	P	03 30 48.2	-0.1		
F28M				IAmb	IAmb	03 31 49.5			
	comp=Z,16nm,1.7s								
L29M	L29M	71.56	28	P	P	03 30 50.0	+1.1		
L29M				IAmb	IAmb	03 31 09.6			
	comp=Z,32nm,1.8s								
HYT	Haines Junctio	71.61	30	P	P	03 30 49.7	+0.4		
CHGR	Chuyangaron	71.84	307		P	03 30 51.1	0.0		
CHGR				IAmb	IAmb	03 30 52.9			
	comp=Z,22nm,1.2s								
E29M	Blow River	72.35	22	P	P	03 30 54.1	+0.7		
I30M	Mount Dempster	72.56	26	P	P	03 30 55.2	+0.3		
I30M				IAmb	IAmb	03 32 50.8			
	comp=Z,16nm,1.8s								
G30M	tAoh Zraii Nji	72.81	24	P	P	03 30 56.2	-0.1		
G30M				IAmb	IAmb	03 31 57.4			
	comp=Z,12nm,1.4s								
H31M	Peel River	73.45	25	P	P	03 31 00.6	+0.6		
H31M				IAmb	IAmb	03 31 50.6			
	comp=Z,23nm,1.6s								
G31M	Satah River	73.57	24	P	P	03 31 00.7	+0.1		
G31M				IAmb	IAmb	03 32 15.8			
	comp=Z,36nm,1.9s								
P33M	Teslin, Yukon	73.88	31	P	P	03 31 03.5	+0.7		
P33M				IAmb	IAmb	03 31 08.7			
	comp=Z,18nm,1.4s								
INK	Inuvik	73.96	22	P	P	03 31 03.0	+0.1		
R33M	Jennings River	74.81	32	P	P	03 31 08.7	+0.5		
R33M				IAmb	IAmb	03 32 05.6			
	comp=Z,35nm,1.6s								
AB31	Akbulak array	77.67	318		P	03 31 24.3	-0.2		
ABKAR	Akbulak array	77.67	318	P	P	03 31 24.2	-0.3		
NLWA	Neilton Lookou	80.08	44	P	P	03 31 39.0	+1.2		
F03A	Seaside	80.52	45	P	P	03 31 41.4	+1.2		
I03D	Drain, OR	81.05	47	P	P	03 31 44.0	+1.0		
G04A	Mulino	81.39	46	P	P	03 31 43.9	-1.0		
LON	Longmire	81.58	44	P	P	03 31 45.7	-0.2		
H04A	Detroit Lake	81.69	46	P	P	03 31 47.3	+0.8		
H04A				IAmb	IAmb	03 34 28.9			
	comp=Z,33nm,2.0s								
I04A	Tendick Farm,	81.70	47	P	P	03 31 47.4	+0.8		
I04A				IAmb	IAmb	03 31 51.8			
	comp=Z,28nm,1.7s								
WIFE	Three Sisters-	82.07	47	P	P	03 31 49.7	+1.0		
WIFE				IAmb	IAmb	03 31 50.8			
	comp=Z,20nm,1.4s								
YKA	Yellowknife Ar	82.33	28	P	P	03 31 49.3	0.0		
	comp=Z,0.7nm,0.5s,baz=290,slow=5.5,SNR=15								
	comp=Z,0.7nm,0.5s								
YKA	Yellowknife Ar	82.33	28	P	P	03 31 49.2	-0.2		
J05D	Fort Rock, OR	82.63	47		P	03 31 52.9	+1.3		
J05D				IAmb	IAmb	03 31 53.6			
	comp=Z,22nm,1.5s								
PINE	Pine Mountain	82.74	47		P	03 31 53.5	+1.2		
PINE				IAmb	IAmb	03 31 54.3			
	comp=Z,8.8nm,0.8s								
B08A	Colville Reser	82.91	42		P	03 31 53.4	+0.6		
B08A				IAmb	IAmb	03 33 02.2			
	comp=Z,4.4nm,0.6s								
K05A	Summer Lake	82.99	48		P	03 31 54.9	+1.3		
K05A				IAmb	IAmb	03 34 52.4			
	comp=Z,24nm,1.6s								
ORV	Oroville	83.18	51		P	03 31 54.1	-0.2		
AFDM	Forest Hills D	83.71	52	P	P	03 31 57.2	+0.1		
SPITS	Spitsbergen Ar	84.46	351	P	P	03 31 59.9	-0.2		
	comp=Z,10nm,1.0s,baz=29,slow=3.3,SNR=1.3								
	comp=Z,10nm,1.0s								
BMO	Blue Mountains	85.06	45		P	03 32 04.2	+0.3		
NVAR	Mina Array Bea	85.86	52	P	P	03 32 09.3	+1.1		
	comp=Z,0.8nm,0.6s,baz=276,slow=5.2,SNR=8.5								
	comp=Z,0.8nm,0.6s								
PLID	Pearl Lake	85.89	45	P	P	03 32 08.1	-0.2		
JTMT	Jette	86.34	42	P	P	03 32 10.8	+0.5		
MFID	Camas Ranch	86.44	46		P	03 32 09.6	-1.2		
HLID	Hailey	87.40	46	P	P	03 32 15.2	-0.4		
HLID				IAmb	IAmb	03 32 22.1			
	comp=Z,16nm,2.0s								
ELK	Elko	87.57	49		P	03 32 15.9	-0.6		
ELK				IAmb	IAmb	03 32 18.4			
	comp=Z,6.7nm,1.2s								
ARCES	ARCESS Array B	87.70	342	P	P	03 32 16.2	-0.1		
	comp=Z,5.3nm,0.9s,baz=63,slow=5.9,SNR=8.9								
	comp=Z,5.3nm,0.9s								
ARCES	ARCESS Array B	87.70	342	P	P	03 32 14.9	-1.4		
BCYI	Bear Canyon	87.89	45	P	P	03 32 18.6	+0.6		
LRM	Limekiln Ridge	88.09	43	P	P	03 32 19.1	+0.2		
MCMT	McKenzie Canyo	88.12	44	P	P	03 32 18.8	-0.3		
HVU	Hansel Valley	89.06	47		P	03 32 23.1	-0.4		
YHL	Hebgen Lake	89.24	44		P	03 32 22.9	-1.5		
YHL				IAmb	IAmb	03 32 27.6			
	comp=Z,10nm,1.1s								
DUG	Dugway, Tooele	89.50	49		P	03 32 25.1	-0.4		
KBZ	Khabaz	90.34	315	P	P	03 32 28.3	-0.9		
	comp=Z,2.6nm,1.0s,baz=58,slow=2.0,SNR=4.2								
	comp=Z,2.6nm,1.0s								
KNB	Kanab	90.42	52	P	P	03 32 30.1	+0.1		
KNB				IAmb	IAmb	03 32 32.5			
	comp=Z,8.7nm,1.3s								
RLMT	Red Lodge	90.44	43	P	P	03 32 30.1	+0.2		
RLMT				IAmb	IAmb	03 35 28.1			
	comp=Z,24nm,1.7s								
FIA1	FINESS Array S	91.94	335	P	P	03 32 34.6	-1.6		
FINES	FINESS Array B	91.94	335	P	P	03 32 34.5	-1.7		
	comp=Z,1.9nm,0.5s,baz=58,slow=3.8,SNR=16								
	comp=Z,1.9nm,0.5s								
FINES	FINESS Array B	91.94	335	P	P	03 32 34.8	-1.4		
PV20	West Nyswonger	92.92	50	P	P	03 32 42.3	+0.8		
PV04	Paradox Valley	92.94	50	P	P	03 32 41.6	0.0		
TORD	Torodi Ar. Bea	136.19	306	PKP	PKiKP	03 38 51.4	-0.6		
	comp=Z,0.5nm,0.8s,baz=94,slow=1.6,SNR=4.2								
DBIC	Dimbokro	145.18	303	PKPbc	PKPdf	03 39 06.4	-0.1		
	comp=Z,1.4nm,0.4s,baz=75,slow=4.2,SNR=5.2								
DBIC	Dimbokro	145.18	303		PKPab	03 39 06.2	0.0		
LPAZ	La Paz	146.52	99	PKPbc	PKPbc	03 39 10.6	-0.3		
	comp=Z,1.4nm,0.5s,baz=291,slow=5.5,SNR=5.6								

*SCB **22** 03:21:49.4±1.3,22°.38S×67°.63W,h157km±12km,MB5.7, ML3.4/3,Error ellipse: s-maj=5.4km s-min=3.6km az=0.0*
*GUC **22** 03:21:50.2±0.5,22°.38S×67°.80W,h182km±8km,ML3.5*

ISC 22 03:21:48.5±2.1,22°.39S±0°.07×67°.64W±0°.05, h173km±19km,n22,σ0s89/27,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.60	291	*i* P		Pn		03 22 22.3	+1.2
PB06	IPOC Station P	1.81	260	*i* P		Pn		03 22 23.9	+0.6
PB06	IPOC Station P	1.81	260	Pg		Pn		03 22 24.5	+1.2
YJA	Yavi	1.98	84	Pg		Pn		03 22 26.2	+0.9
PB03	IPOC Station P	1.99	279	*i* P		Pn		03 22 25.8	+0.6
PB03				*e*S		Sn		03 22 52.9	-0.6
PB03				IAML				03 22 54.1	
	comp=N,527nm,0.5s								
MOCB	Mochara	2.18	59	Pg		Pn		03 22 28.1	+0.5
MOCB				Sg		Sn		03 22 56.6	-1.2
MOCB				IAML				03 22 58.8	
	comp=N,173nm,0.4s								
PB01	IPOC Station P	2.18	308	*i* P		Pn		03 22 27.7	+0.4
PB01				*e*S		Sn		03 22 56.7	-0.5
PB01				IAML				03 22 59.4	
	comp=E,92nm,0.3s								
PB01	IPOC Station P	2.18	308	Pg		Pn		03 22 27.9	+0.7
PB01				Sg		Sn		03 22 56.8	-0.4
PB01				IAML				03 23 00.0	
	comp=E,108nm,0.2s								
PB02	IPOC Station P	2.35	297	*i* P		Pn		03 22 29.5	+0.3
PB02				*e*S		Sn		03 22 59.5	-1.2
PB02	IPOC Station P	2.35	297	Pg		Pn		03 22 29.7	+0.5
PB02			

131nm,0.2s,baz=51,slow=23,SNR=16
SIJI Sorong 5.25 6 P **Pn** 03 47 38.6 +0.3
SWI Sorong 5.25 6 P **Pn** 03 47 39.0 +0.7
1.5nm7µm206nm,0.4s
RKPI Ransiki, Papua 5.73 37 P **Pn** 03 47 46.8 +2.0
RKPI S **Sn** 03 48 49.1 -0.1
MWPI Manokwari, Pap 6.13 33 P **Pn** 03 47 52.0 +1.8
1.6nm255nm,0.7s
MWPI S **Sn** 03 48 57.6 -1.3
1.6nm255nm,0.7s
SANI Sanana 6.23 310 P **Pn** 03 47 54.1 +2.5
MTN Manton Dam 6.69 177 **Pn** 03 47 59.0 +1.3
BAKI Biak 7.26 48 P **Pn** 03 48 08.7 +3.1
0.8nm233nm,0.7s
SOEI Soe 7.35 240 **Pn** 03 48 09.8 +2.9
SOEI Sn **Sn** 03 49 31.0 +2.2
SOEI Soe 7.35 240 P **Pn** 03 48 10.1 +3.2
0.8nm49nm,1.0s
BATI Baumata 8.09 239 P **Pn** 03 48 18.8 +1.9
34nm,0.3s,baz=84,slow=9.2,SNR=7.8
BATI S **Sn** 03 49 44.2 -2.5
70nm,0.4s,baz=313,slow=21,SNR=8.2
BATI Baumata 8.09 239 P **Pn** 03 48 19.0 +2.1
48nm,0.5s
KNRA Kununurra 9.69 191 **Pn** 03 48 38.5 -0.1
TOLI2 Tolitoli 12.27 306 Pn **Pn** 03 49 16.2 +2.9
FITZ Fitzroy Crossi 12.89 202 P **Pn** 03 49 19.8 -1.9
18nm,0.3s,baz=30,slow=9.6,SNR=132
FITZ S Sn 03 51 32.4 -11
11nm,0.3s,baz=91,slow=9.3,SNR=4.1
FITZ LR LR 03 55 07.1
comp=Z,46nm,19.2s,baz=232,slow=40
WB0 Warramunga Arr 14.02 166 Pn 03 49 32.8 -3.6
WRAB Tennant Creek 14.17 166 P **Pn** 03 49 36.8 -1.4
WRA Warramunga Arr 14.17 166 P Pn 03 49 34.8 -3.6
8.9nm,0.5s,baz=340,slow=14,SNR=54
WRA S Sn 03 52 03.5 -11
11nm,0.7s,baz=5.5,slow=22,SNR=6.8
WR8 Warramunga Arr 14.22 165 Pn **Pn** 03 49 38.3 -0.8
COEN Coen 14.51 123 Pn **Pn** 03 49 44.0 +1.4
AS31 Alice Springs 17.70 170 P **P** 03 50 22.1 +0.2
AS31 IAmb IAmb 03 50 24.3
comp=Z,10nm,0.6s
ASAR Alice Springs 17.70 170 P **P** 03 50 21.7 -0.1
comp=Z,11nm,0.4s,baz=353,slow=11,SNR=145
ASAR S **Sn** 03 53 30.8 -9.0
comp=Z,3.1nm,0.5s,baz=353,slow=26,SNR=6.1
ASAR Alice Springs 17.70 170 P **P** 03 50 21.9 0.0
MBWA Marble Bar 18.36 214 P **P** 03 50 29.8 +0.8
MBWA IAmb IAmb 03 50 33.7
comp=Z,13nm,0.6s
PSA00 Pilbara Seismi 18.62 213 P **P** 03 50 32.2 +0.3
PSA00 IAmb IAmb 03 50 51.5
comp=Z,14nm,1.1s
PSA00 Pilbara Seismi 18.62 213 **P** 03 50 32.8 +0.9
PSA00 IAmb IAmb 03 51 01.5
comp=Z,6.9nm,1.1s
KKM Kota Kinabalu 18.87 310 P **P** 03 50 34.8 0.0
CTA Charters Tower 20.49 134 P **P** 03 50 54.0 +1.8
comp=Z,3.7nm,0.8s,baz=304,slow=11,SNR=1.9
comp=Z,3.7nm,0.8s
CTAO Charters Tower 20.49 134 P **P** 03 50 54.0 +1.8
CTAO IAmb IAmb 03 51 23.5
comp=Z,30nm,1.4s
BBJI Bungbulang 22.96 265 **P** 03 51 16.2 -2.1
BBJI IAmb IAmb 03 51 20.0
comp=Z,14nm,0.6s
FORT Forrest 24.65 186 P **P** 03 51 33.5 +0.1
FORT IAmb IAmb 03 51 53.7
comp=Z,10nm,0.8s
BBOO Buckleboo 27.01 170 P **P** 03 51 54.2 -0.6
BBOO IAmb IAmb 03 52 35.0
comp=Z,16nm,1.0s
STKA Stephens Creek 27.56 160 P **P** 03 51 59.9 +0.2
comp=Z,3.6nm,0.5s,baz=332,slow=7.8,SNR=8.0
comp=Z,3.6nm,0.5s
STKA Stephens Creek 27.56 160 P **P** 03 51 59.7 0.0
CAN Canberra 33.57 152 P **P** 03 52 51.9 -0.8
TOO Toolangi 34.06 159 P **P** 03 52 57.5 +0.5
CMAR Chiang Mai Arr 39.75 309 P **P** 03 53 45.3 0.0
comp=Z,1.4nm,0.6s,baz=128,slow=6.8,SNR=5.4
comp=Z,1.4nm,0.6s
PZH PanZhiHua 42.92 320 P **P** 03 54 13.8 +2.5
LZDM Lanzhou Array 48.96 331 P **P** 03 54 58.6 -0.2
comp=Z,0.7nm,0.3s,baz=171,slow=10,SNR=4.9
comp=Z,0.7nm,0.3s
HHC Hu-ho-hao-te 49.95 341 *eP* **P** 03 55 07.9 +1.9
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,88nm,4.1s
GTA2 Gaotai 53.66 330 *eP* **P** 03 55 34.1 +0.5
GTA2 pmax pmax
comp=Z,5.0nm,0.7s
ULN Ulaanbaatar 57.67 341 P **P** 03 56 03.3 +1.1
ULN IAmb IAmb 03 56 03.5
comp=Z,3.2nm,0.6s
SONM Songino Array 57.86 341 P **P** 03 56 03.8 +0.3
comp=Z,0.8nm,0.6s,baz=162,slow=5.1,SNR=6.3
comp=Z,0.8nm,0.6s
SONM Songino Array 57.86 341 P **P** 03 56 03.8 +0.3
MKAR Makanchi Array 67.90 326 P **P** 03 57 10.2 +0.1
comp=Z,9.2nm,0.7s,baz=114,slow=8.7,SNR=98
comp=Z,9.2nm,0.7s
MKAR Makanchi Array 67.90 326 **P** 03 57 10.3 +0.3
KSH2 Kashi 67.98 316 P **P** 03 57 11.3 +0.5
KSH2 pmax pmax
comp=Z,4.0nm,0.6s
MAKZ Makanchi 68.08 326 P **P** 03 57 11.4 +0.2
MAKZ IAmb IAmb 03 57 11.9
comp=Z,5.8nm,0.7s
KDJ Kajisay 68.37 320 P **P** 03 57 13.5 +0.3
KDJ IAmb IAmb 03 57 14.5
comp=Z,4.6nm,0.7s
BOOM Boomskoye usch 69.35 320 P **P** 03 57 19.1 -0.2
BOOM IAmb IAmb 03 57 20.5
comp=Z,5.0nm,1.0s
AAK Ala-Archa 70.35 319 P **P** 03 57 26.1 +0.6
AAK IAmb IAmb 03 57 26.8
comp=Z,3.1nm,0.8s
ARSB Arslanbob 70.74 318 P **P** 03 57 28.1 +0.3
ZALV Zalesovo Beam 71.13 333 P **P** 03 57 28.5 -1.1
comp=Z,0.7nm,0.5s,baz=104,slow=6.1,SNR=5.3
comp=Z,0.7nm,0.5s
BTK Batken 71.66 316 IAmb IAmb 03 57 35.0
comp=Z,4.7nm,0.8s
KURBB Kurchatov Arra 72.16 328 P **P** 03 57 35.0 -0.9
comp=Z,1.6nm,0.3s,baz=127,slow=4.9,SNR=12
comp=Z,1.6nm,0.3s
KURK Kurchatov 72.16 328 P **P** 03 57 35.8 -0.1
CHGR Chuyangaron 72.27 314 P **P** 03 57 35.8 -1.1
BVAR Borovoye Array 77.72 328 P **P** 03 58 07.0 -0.9
comp=Z,0.8nm,0.4s,baz=123,slow=5.5,SNR=6.5
comp=Z,0.8nm,0.4s
BORK Borovoye 77.77 328 P **P** 03 58 07.5 -0.6
VOI Vohitsoka 82.14 249 P **P** 03 58 32.1 -0.5
AB31 Akbulak array 82.28 321 P **P** 03 58 31.5 -1.0
ABKAR Akbulak array 82.28 321 P **P** 03 58 31.4 -1.1
ILAR Eielson Array 92.25 25 P **P** 03 59 18.4 -2.2
comp=Z,0.3nm,0.6s,baz=253,slow=4.5,SNR=4.7
comp=Z,0.3nm,0.6s

*SJA **22** 03:47:12.2±0.7,24°.24S×67°.09W,h207km±6km,ML3.5, MW3.4*
*GUC **22** 03:47:15.1±0.6,23°.99S×67°.06W,h164km±9km,ML3.6*
ISC 22 03:47:14.3±1.2,24°.23S±0°.04×67°.14W±0°.05,h181km,n33, σ0§95/48,1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.73**	**89**	*eP*	**Pn**	**03 47 41.0**	**0.0**
SALTA		**0.73**	**89**	*eP*	**Pn**	**03 47 41.6**	**+0.6**
SLA	**San Lorenzo**	**1.57**	**108**	*eP*	**Pn**	**03 47 47.3**	**+0.2**
SLA				*eS*	**Sn**	**03 48 12.7**	**+0.1**
AF01	**San Pedro de A**	**1.59**	**323**	*i P*	**Pn**	**03 47 51.0**	**+3.4**
AF01				IAML		03 48 20.7	
	comp=N,1µm,0.1s						
AF01	**San Pedro de A**	**1.59**	**323**	*eP*	**Pn**	**03 47 49.3**	**+1.8**
AF01				*eS*	Sn	03 48 24.4	+11
HJA	**Humahuaca**	**1.89**	**58**	*eP*	**Pn**	**03 47 51.3**	**+0.7**
FSA	**Cafayete**	**2.15**	**151**	*eP*	**Pn**	**03 47 53.1**	**-0.1**
GO02	**Mina Guanaco**	**2.41**	**247**	*eP*	**Pn**	**03 47 57.1**	**+0.8**
GO02				*eS*	**Sn**	**03 48 30.2**	**+1.2**
GO02				IAML		03 48 31.2	
	comp=Z,111nm,0.4s						

PB06 IPOC Station P 2.70 304 *eP* **Pn** **03 48 00.6 +1.0**
PB06 IAML 03 48 36.9
comp=E,313nm,0.1s
PB06 IPOC Station P 2.70 304 *eP* **Pn** **03 48 00.0 +0.4**
PB06 *eS* **Sn** **03 48 35.4 +0.6**
PB06 IAML 03 48 38.6
comp=Z,121nm,0.2s
PB14 IPOC Station P 3.00 262 IAML 03 48 42.7
comp=E,28nm,0.2s
PB14 IPOC Station P 3.00 262 *eP* **Pn** **03 48 03.8 +0.5**
PB14 *eS* **Sn** **03 48 41.4 -0.1**
PB09 IPOC Station P 3.10 321⇓ *eP* **Pn** **03 48 05.8 +1.3**
PB09 IAML 03 48 49.1
comp=N,91nm,0.3s
PB09 IPOC Station P 3.10 321 *eP* **Pn** **03 48 05.3 +0.8**
PB09 *eS* **Sn** **03 48 43.9 +0.4**
PB09 IAML 03 48 45.0
comp=E,61nm,0.6s
PB05 IPOC Station P 3.13 295 IAML 03 48 47.8
comp=E,79nm,0.2s
PB05 IPOC Station P 3.13 295 *eP* **Pn** **03 48 04.7 0.0**
PB05 *eS* **Sn** **03 48 44.1 +0.2**
PB05 IAML 03 48 47.5
comp=Z,40nm,0.4s
AC02 Maricunga 3.15 214 *eP* **Pn** **03 48 05.3 0.0**
AC02 *eS* **Sn** **03 48 45.1 -0.1**
PB10 IPOC Station P 3.21 282 *eP* **Pn** **03 48 06.4 +0.9**
PB10 IAML 03 48 50.0
comp=N,49nm,0.4s
PB10 IPOC Station P 3.21 282 *eP* **Pn** **03 48 06.2 +0.7**
PB10 *eS* **Sn** **03 48 45.5 +0.1**
PB10 IAML 03 48 49.4
comp=Z,47nm,0.8s
PB03 IPOC Station P 3.24 312 *i P* **Pn** **03 48 06.8 +0.7**
PB03 *eS* **Sn** **03 48 45.5 -1.1**
PB03 IAML 03 48 48.0
comp=E,158nm,0.3s
PB03 IPOC Station P 3.24 312 *eP* **Pn** **03 48 06.1 0.0**
PB03 *eS* **Sn** **03 48 45.6 -0.9**
PB03 IAML 03 48 46.7
comp=Z,128nm,0.2s
PB07 IPOC Station P 3.55 314 *i P* **Pn** **03 48 10.3 +0.3**
PB07 *eS* **Sn** **03 48 51.8 -1.7**
PB07 IPOC Station P 3.55 314 *eP* **Pn** **03 48 09.7 -0.3**
PB07 *eS* **Sn** **03 48 52.7 -0.8**
PB07 IAML 03 48 53.5
comp=Z,110nm,0.4s
AC01 Pan de Azucar 3.67 238 *eP* **Pn** **03 48 10.5 -0.8**
AC01 *eS* **Sn** **03 48 54.5 -1.3**
TINO Tinogasta 3.83 186 *eP* **Pn** **03 48 14.4 +0.9**
PB01 IPOC Station P 3.84 325 *i P* **Pn** **03 48 13.7 +0.1**
PB01 *eS* **Sn** **03 48 58.4 -1.6**
PB01 IPOC Station P 3.84 325 *eP* **Pn** **03 48 13.2 -0.4**
PB01 *eS* **Sn** **03 48 58.9 -1.1**
PB01 IAML 03 49 00.8
comp=Z,48nm,0.2s
PB02 IPOC Station P 3.86 318 *i P* **Pn** **03 48 14.1 +0.3**
PB02 IPOC Station P 3.86 318 *eP* **Pn** **03 48 13.6 -0.2**
PB02 *eS* **Sn** **03 48 59.0 -1.3**
PB02 IAML 03 49 04.4
comp=Z,121nm,0.3s
PB08 IPOC Station P 4.48 335 *eP* **Pn** **03 48 22.6 +0.7**
PB08 *eS* **Sn** **03 49 14.3 -0.7**
PB08 IAML 03 49 15.6
comp=Z,29nm,0.5s
VCA Vinchina 4.58 192 *eP* **Pn** **03 48 24.1 +1.1**
PB11 IPOC Station P 5.03 332 *eP* **Pn** **03 48 28.2 -0.6**
PB11 *eS* Sn 03 49 17.6 -10
PB11 IAML 03 49 26.5
comp=Z,33nm,0.3s
ACLC CERRO LA CRUZ 5.17 178 *eP* **Pn** **03 48 30.3 -0.4**

*IDC **22** 03:57:19.9±2.7, 19°.88S×178°.93E, h533km±28km, mb3.1/8, mbtmp4.0/9, Error ellipse: s-maj=30.3km s-min=19.6km az=152.0*
*NEIC **22** 03:57:20.5±1.6, 20°.2S±0°.1×179°.1E±0°.1, h536km±9km, mb4.2/13, Error ellipse: s-maj=20.2km s-min=11.7km az=55.0*
ISC 22 03:57:20.2±0.7, 20°.1S±0°.1×179°.0E±0°.1, h539km, n28, σ0§85/31, mb4.0/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.49**	**338**	P	**P**	**03 58 31.8**	**+0.3**
MARNC	**Mare, Loyalty**	**10.37**	**260**	P	**P**	**03 59 41.8**	**0.0**
DZM	**Mont Dzumac**	**11.90**	**258**	P	**P**	**03 59 58.6**	**+0.8**
1.3nm,0.4s,baz=99,slow=6.7,SNR=1.5							
DZM	**Mont Dzumac**	**11.90**	**258**	P	**P**	**03 59 59.0**	**+1.2**
TKNZ	**Takaka Hill**	**21.53**	**193**	P	**P**	**04 01 29.7**	**-0.7**
LTZ	**Lake Taylor**	**23.35**	**193**	P	**P**	**04 01 45.3**	**-1.5**
CTA	**Charters Tower**	**30.74**	**264**	P	**P**	**04 02 51.8**	**0.0**
1.5nm,0.4s,baz=94,slow=13,SNR=1.0							
1.5nm,0.4s							
CTAO	**Charters Tower**	**30.74**	**264**	P	**P**	**04 02 52.4**	**+0.5**
CTAO				IAmb	IAmb	04 03 33.5	
comp=Z,18nm,1.3s							
TOO	**Toolangi**	**33.92**	**232**	P	**P**	**04 03 19.6**	**+0.9**
TOO				IAmb	IAmb	04 03 21.6	
comp=Z,3.5nm,1.2s							
STKA	**Stephens Creek**	**35.47**	**243**	P	**P**	**04 03 32.2**	**+0.6**
comp=Z,2.3nm,0.7s,baz=85,slow=12,SNR=4.4							
comp=Z,2.3nm,0.7s							
STKA	**Stephens Creek**	**35.47**	**243**	P	**P**	**04 03 32.3**	**+0.7**
BBOO	**Buckleboo**	**40.24**	**243**	P	**P**	**04 04 10.6**	**+0.1**
BBOO				IAmb	IAmb	04 04 25.9	
comp=Z,22nm,1.5s							
WR8	**Warramunga Arr**	**41.73**	**262**	P	**P**	**04 04 21.1**	**-1.4**
WR8				IAmb	IAmb	04 05 03.2	
comp=Z,17nm,1.4s							
WRA	**Warramunga Arr**	**41.88**	**262**	P	**P**	**04 04 22.7**	**-1.0**
comp=Z,0.9nm,0.3s,baz=93,slow=7.1,SNR=25							
WRA				PcP	**PcP**	**04 06 06.4**	**-0.5**
comp=Z,0.3nm,0.3s,baz=97,slow=3.1,SNR=2.2							
comp=Z,0.9nm,0.3s							
WRA	**Warramunga Arr**	**41.88**	**262**	P	**P**	**04 04 22.0**	**-1.7**
AS31	**Alice Springs**	**41.89**	**257**	P	**P**	**04 04 23.4**	**-0.4**
ASAR	**Alice Springs**	**41.89**	**257**	P	**P**	**04 04 23.3**	**-0.5**
comp=Z,3.5nm,0.7s,baz=90,slow=8.3,SNR=46							
ASAR				PcP	**PcP**	**04 06 07.1**	**+0.2**
comp=Z,0.7nm,0.6s,baz=108,slow=3.7,SNR=10							
ASAR				ScP	**ScP**	**04 09 07.4**	**+1.3**
comp=Z,0.3nm,0.8s,baz=121,slow=4.5,SNR=4.1							
comp=Z,3.5nm,0.7s							
ASAR	**Alice Springs**	**41.89**	**257**	P	**P**	**04 04 23.1**	**-0.6**
MORW	**Morawa**	**57.40**	**248**	P	**P**	**04 06 16.8**	**-0.9**
MORW				IAmb	IAmb	04 06 40.6	
comp=Z,13nm,1.3s							
VNDA	**Vanda**	**58.11**	**184**	P	**P**	**04 06 22.7**	**+1.1**
comp=Z,1.5nm,0.8s,baz=7.6,slow=6.9,SNR=6.0							
comp=Z,1.5nm,0.8s							
VNDA	**Vanda**	**58.11**	**184**	P	**P**	**04 06 22.4**	**+0.8**
GIRL	**Giralia**	**59.96**	**255**	P	**P**	**04 06 34.9**	**-0.1**
BELA	**Belgrano 2**	**80.33**	**173**	P	**P**	**04 08 34.3**	**-0.5**
BELA				IAmb	IAmb	04 08 38.9	
comp=Z,8.0nm,1.4s							
NVAR	**Mina Array Bea**	**82.66**	**45**	P	**P**	**04 08 48.2**	**+0.6**
comp=Z,0.4nm,0.5s,baz=253,slow=5.4,SNR=4.0							
comp=Z,0.4nm,0.5s							
H04A	**Detroit Lake**	**83.78**	**38**	P	**P**	**04 08 53.4**	**+0.6**
H04A				IAmb	IAmb	04 08 57.9	
comp=Z,9.7nm,1.4s							
ILAR	**Eielson Array**	**88.54**	**14**	P	**P**	**04 09 13.8**	**-1.1**
comp=Z,0.5nm,0.8s,baz=220,slow=4.5,SNR=9.2							
comp=Z,0.5nm,0.8s							
TXAR	**Lajitas Array**	**89.20**	**58**	P	**P**	**04 09 19.3**	**+0.3**
comp=Z,0.2nm,0.6s,baz=240,slow=4.4,SNR=2.5							
comp=Z,0.2nm,0.6s							
BURAR	**Bucovina Array**	**145.26**	**328**	PKPab	**PKPab**	**04 15 58.8**	**0.0**

MEX 22 04:05:38.3±0.4, 16°.14N×97°.79W, h3km±4km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.41**	**308**	*eP*	Pg	04 05 45.9	-0.3
PNIG				*eS*	Sg	04 05 51.9	+0.3
PEIG	**Puerto Escondi**	**0.63**	**103**	*eP*	Pg	04 05 49.9	-0.6
PEIG				*eS*	Sg	04 05 59.2	+0.6
YOIG	**Yosondua**	**0.75**	**18**	*eP*	Pg	04 05 51.9	-0.8
YOIG				*eS*	Sg	04 06 02.3	-0.2
TXIG	**Tlaxiaco**	**1.11**	**1**	*eP*	Pg	04 05 57.3	-2.3
TXIG				*eS*	Sg	04 06 11.1	-2.8

MGIG Malinaltepec 1.36 323 *eP* Pn 04 06 00.7 -3.6
MGIG *eS* Sg 04 06 17.7 -4.2
VHO Vista Hermosa 1.37 47 *eP* Pn 04 06 00.8 -3.8
VHO *eS* Sg 04 06 18.3 -4.1
CRIG Cruz Grande 1.42 295 *eP* Pn 04 05 58.6 -6.4
CRIG *eS* Sb 04 06 17.6 -6.3
TLIG Tlapa 1.60 332 *eP* Pn 04 06 04.3 -3.3
TLIG *eS* Sn 04 06 24.1 -4.7
HUIG Huatulco 1.66 103 *eP* Pn 04 06 05.0 -3.3
HUIG *eS* Sn 04 06 25.8 -4.2
HLIG Huajuapan de L 1.68 359 *eP* Pn 04 06 05.8 -3.0
HLIG *eS* Sn 04 06 27.5 -3.4
FTIG Fresnillo de T 1.79 349 *eP* Pn 04 06 08.8 -1.4
FTIG *eS* Sn 04 06 29.8 -3.7
DAIG Los Arroyos 1.99 296 *eP* Pn 04 06 10.2 -2.7
DAIG *eS* Sn 04 06 31.5 -6.8
TOIG Toxpalan 2.06 19 *eP* Pn 04 06 11.2 -2.8
TOIG *eS* Sn 04 06 37.7 -2.6
TPIG Tehuac#an 2.30 10 *eP* Pn 04 06 13.4 -3.9
TPIG *eS* Sn 04 06 44.1 -2.1
NEUV Arroyo Zacate 2.46 50 *eP* Pn 04 06 17.0 -2.4
NEUV *eS* Sn 04 06 49.0 -0.9
MEIG Mezcala 2.49 316 *eP* Pn 04 06 19.9 0.0
MEIG *eS* Sn 04 06 50.0 -0.9
CAIG El Cayaco 2.54 291 *eP* Pn 04 06 13.2 -7.3
CAIG *eS* Sn 04 06 50.5 -1.4
PBCV Popocatepetl 2.92 346 *eP* Pn 04 06 25.2 -0.8
PBCV *eS* Sn 04 06 58.5 -3.3
CMIG Matias Romero 2.94 71 *eP* Pn 04 06 21.7 -4.2
CMIG *eS* Sn 04 06 58.3 -3.5
YAIG Yautepec 2.97 336 *eP* Pn 04 06 25.1 -1.4
YAIG *eS* Sn 04 07 01.0 -1.6
PBXN Popocatepetl 2.97 344 *eP* Pn 04 06 24.6 -2.2
PBXN *eP* Pb 04 06 24.9 -7.3
PBXN *eS* Sn 04 06 59.8 -3.4
PBXN *eS* Sb 04 07 00.2 -8.9
PBPN Popocatepetl 2.99 345 *eP* Pn 04 06 25.6 -1.5
PBPN *eS* Sn 04 07 00.3 -3.6
PPSX Xalitzintla 3.01 347 *eP* Pn 04 06 25.2 -2.0
PPSX *eS* Sn 04 06 59.5 -4.4
PPM Popocatepetl 3.02 345 *eP* Pn 04 06 27.4 -0.1
PPM *eS* Sn 04 07 01.6 -2.8
ARIG Puente Sto Nin 3.24 311 *eP* Pn 04 06 29.2 -0.9
ARIG *eS* Sn 04 07 06.1 -3.1
UXUV UXUV 3.68 71 *eP* Pn 04 06 32.6 -3.5
UXUV *eS* Sn 04 07 16.4 -3.6

IDC 22 04:08:38.4±1.6, 7°.40S×126°.90E, h0km, mb4.0/2, mbtmp3.9/6, ML3.8/4, MS2.7/2, Error ellipse: s-maj=38.1km s-min=24.9km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.24**	**229**	Pn	Pn	04 09 45.8	+1.4
13nm,0.3s,baz=32,slow=4.8,SNR=5.3							
BATI				Sn	Sn	04 10 34.5	-0.1
5.7nm,0.3s,baz=105,slow=16,SNR=1.8							
BATI				LR	LR	04 11 27.6	
comp=Z,97nm,19.9s,baz=355,slow=40							
49nm,0.5s							
SIJI	**Sorong**	**7.81**	**34**	LR	LR	04 13 28.8	
comp=Z,56nm,19.6s,baz=119,slow=37							
FITZ	**Fitzroy Crossi**	**10.70**	**186**	Pn	Pn	04 11 11.8	-1.3
0.4nm,0.3s,baz=12,slow=9.9,SNR=10							
FITZ				Sn	Sn	04 13 05.2	-8.5
0.9nm,0.3s,baz=30,slow=20,SNR=6.5							
1.6nm,0.5s							
WRA	**Warramunga Arr**	**14.40**	**151**	Pn	Pn	04 12 02.2	-1.5
0.3nm,0.3s,baz=325,slow=13,SNR=13							
1.8nm,0.8s							
ASAR	**Alice Springs**	**17.51**	**158**	Pn	Pn	04 12 44.5	+0.3
0.4nm,0.3s,baz=339,slow=13,SNR=33							
ASAR				Sn	Sn	04 15 47.2	-13
0.1nm,0.3s,baz=326,slow=20,SNR=6.6							
1.5nm,0.8s							
STKA	**Stephens Creek**	**27.94**	**153**	P	P	04 14 31.3	+0.7
1.8nm,0.8s,baz=328,slow=12,SNR=3.0							
1.8nm,0.8s							
MKAR	**Makanchi Array**	**66.92**	**328**	P	P	04 19 32.5	-0.2
1.0nm,0.8s,baz=138,slow=6.0,SNR=5.8							
1.0nm,0.8s							

*IDC **22** 04:08:54.0±0.8, 5°.13N×125°.85E, h0km, mb3.9/12, mbtmp3.9/12, Error ellipse: s-maj=67.3km s-min=16.1km az=69.0*
ISC 22 04:08:59.1±0.8, 5°.0N±0°.1×125°.7E±0°.3, h35km, n16, σ1§82/14, mb3.9/12, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.08**	**357**	Pn	**Pn**	**04 09 29.2**	**-2.3**
107nm,0.3s,baz=223,slow=19,SNR=4.3							
DAV				Sn	**Sn**	**04 10 00.1**	**+3.8**
95nm,0.3s,baz=233,slow=20,SNR=3.8							
WRA	**Warramunga Arr**	**26.19**	**161**	P	**P**	**04 14 32.1**	**+1.4**
0.9nm,0.7s,baz=343,slow=9.2,SNR=6.9							
0.9nm,0.7s							
ASAR	**Alice Springs**	**29.58**	**165**	P	**P**	**04 14 59.8**	**-1.2**
0.5nm,0.9s,baz=348,slow=8.7,SNR=2.5							
0.5nm,0.9s							
STKA	**Stephens Creek**	**39.66**	**159**	P	**P**	**04 16 29.8**	**+1.9**
1.7nm,0.9s,baz=328,slow=15,SNR=2.1							
1.7nm,0.9s							
H11N1	**WAKE ISLAND Hy**	**42.70**	**66**	T	T	05 01 13.6	
baz=254							
H11N2	**WAKE ISLAND Hy**	**42.71**	**66**	T	T	05 01 14.7	
baz=254							
H11N3	**WAKE ISLAND Hy**	**42.72**	**66**	T	T	05 01 15.9	
baz=254							
SONM	**Songino Array**	**45.79**	**342**	P	**P**	**04 17 18.2**	**+0.6**
0.4nm,0.8s,baz=144,slow=5.7,SNR=3.6							
0.4nm,0.8s							
MKAR	**Makanchi Array**	**55.94**	**325**	P	**P**	**04 18 34.5**	**+0.7**
0.8nm,0.5s,baz=122,slow=8.2,SNR=15							
0.8nm,0.5s							
ZALV	**Zalesovo Beam**	**59.01**	**333**	P	**P**	**04 18 53.1**	**-2.2**
0.3nm,0.4s,baz=138,slow=7.8,SNR=2.0							
0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**60.13**	**327**	P	**P**	**04 19 02.9**	**-0.2**
1.3nm,0.5s,baz=122,slow=6.9,SNR=9.7							
1.3nm,0.5s							
BVAR	**Borovoye Array**	**65.71**	**327**	P	**P**	**04 19 40.3**	**+0.1**
1.1nm,0.5s,baz=128,slow=9.3,SNR=7.4							
1.1nm,0.5s							
AKTO	**Aktyubinsk**	**72.03**	**322**	P	**P**	**04 20 20.4**	**+0.8**
0.7nm,0.3s,baz=78,slow=11,SNR=1.5							
0.7nm,0.3s							
ILAR	**Eielson Array**	**84.44**	**25**	P	**P**	**04 21 26.9**	**-1.0**
0.1nm,0.6s,baz=281,slow=5.2,SNR=1.5							
0.1nm,0.6s							
ARCES	**ARCESS Array B**	**88.92**	**340**	P	**P**	**04 21 48.3**	**-1.4**
3.6nm,0.9s,baz=82,slow=5.7,SNR=4.9							
3.6nm,0.9s							
FINES	**FINESS Array B**	**90.24**	**332**	P	**P**	**04 21 55.5**	**-0.5**
3.5nm,1.1s,baz=91,slow=6.1,SNR=6.0							
3.5nm,1.1s							

*IDC **22** 04:11:34.5±1.5, 49°.93S×110°.63E, h0km, mb4.1/3, mbtmp4.1/3, MS3.6/4, Error ellipse: s-maj=60.9km s-min=42.7km az=115.0*
ISC 22 04:11:35.6±1.7, 50°.1S±0°.3×110°.8E±0°.4, h10km, n14, σ0§68/7, mb4.0/3, MS3.5/3, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.38**	**10**	T	T	04 30 34.0	
baz=188,slow=74,SNR=23							
H01W1	**Cape Leeuwin H**	**15.39**	**11**	T	T	04 30 33.7	
baz=188,slow=74,SNR=20							
H01W3	**Cape Leeuwin H**	**15.40**	**10**	T	T	04 30 34.3	
baz=188,slow=74,SNR=28							
NWAO	**Narrogin (SRO)**	**17.81**	**18**	LR	LR	04 21 15.0	
comp=Z,114nm,21.5s,baz=265,slow=33							
MAW	**Mawson**	**29.31**	**216**	LR	LR	04 26 09.1	
comp=Z,132nm,21.0s,baz=89,slow=30							
ASAR	**Alice Springs**	**31.96**	**43**	P	**P**	**04 18 01.8**	**+0.2**
1.8nm,0.9s,baz=208,slow=8.5,SNR=8.2							
1.8nm,0.9s							
VNDA	**Vanda**	**33.42**	**162**	LR	LR	04 30 19.8	
comp=Z,83nm,20.0s,baz=320,slow=34							
WRA	**Warramunga Arr**	**35.43**	**40**	P	**P**	**04 18 31.6**	**-0.2**
2.2nm,0.9s,baz=206,slow=8.6,SNR=5.3							
2.2nm,0.9s							

SNAA	**Sanae**	**49.91**	**202**	LR	LR	04 38 42.5		
	comp=Z,144nm,18.1s,baz=222,slow=32							
CMAR	**Chiang Mai Arr**	**69.04**	**348**	P	**P**	**04 22 41.5**	**+0.2**	
	0.8nm,0.2s,baz=180,slow=6.2,SNR=1.6							
	0.8nm,0.2s							
TXAR	**Lajitas Array**	**146.79**	**116**	PKPbc	**PKPab**	**04 31 19.6**	**+0.6**	
	0.9nm,0.8s,baz=212,slow=3.6,SNR=9.2							
PDAR	**Pinedale Array**	**151.53**	**89**	PKPbc	**PKPbc**	**04 31 28.6**	**-0.8**	
	0.4nm,0.9s,baz=239,slow=1.7,SNR=4.0							
YKA	**Yellowknife Ar**	**152.57**	**46**	PKPbc	**PKPbc**	**04 31 31.4**	**+0.5**	
	0.1nm,0.5s,baz=280,slow=2.8,SNR=3.9							
RES	**Resolute Bay**	**153.09**	**15**	PKPbc	**PKPbc**	**04 31 31.1**	**-0.6**	
	1.7nm,0.4s,baz=0.0,slow=1.0,SNR=16							

AZER 22 04:22:23.8, 40.28N×48.67E, h2km, ml2.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBS	**Qobustan**	**0.33**	**39**	P	Pb	04 22 33.6	+1.2
GBS				S	Sb	04 22 42.0	+3.9
ALIB	**&Aumlli-Bayram**	**0.41**	**142**	P	Pn	04 22 35.4	-1.4
ATGJ	**Altiaghaj**	**0.61**	**19**	P	Pn	04 22 39.5	-0.2
ATGJ				S	Sn	04 22 52.6	+2.4
IML	**Ismayilli**	**0.63**	**324**	P	Pn	04 22 40.2	+0.3
SIZA	**Siyzn**	**0.81**	**12**	P	Pn	04 22 43.1	+0.7
GOBA	**Gobu**	**0.82**	**81**	P	Pn	04 22 43.8	+1.5
QBL	**Gabala**	**0.92**	**316**	P	Pn	04 22 44.1	+0.3
XNQ	**Khinaliq**	**0.98**	**336**	P	Pn	04 22 46.2	+1.4
GLBA	**Clilabad**	**1.06**	**192**	P	Pn	04 22 47.9	+2.2
GLBA				S	Sn	04 23 04.0	+3.0
QUBA	**Quba, Azerbaij**	**1.08**	**353**	P	Pn	04 22 48.4	+2.3
AGDM	**Agdam**	**1.21**	**262**	Pn	Pn	04 22 49.8	+2.0
QSAR	**Qusar**	**1.27**	**346**	Pn	Pn	04 22 52.2	+3.6
YRD	**Yardimli**	**1.40**	**194**	Pn	Pb	04 22 52.5	+1.7

*MOS **22** 04:22:34.9±0.9, 39.87N×49.40E, h25km, mb4.1/1, Error ellipse: s-maj=15.0km s-min=6.1km az=118.5*
*IDC **22** 04:22:36.7±1.3, 40.23N×48.81E, h0km, mb3.7/7, mbtmp3.7/15, ML3.5/8, MS3.8/3, Error ellipse: s-maj=22.0km s-min=11.0km az=1.0*
*AZER **22** 04:22:39.5, 40.24N×48.82E, h6km, ml3.3*
*DRS **22** 04:22:40.0, 39.90N×49.00E, h26km*
*TIF **22** 04:22:41.6, 40.24N×48.73E, h18km±1km*
ISC 22 04:22:40.3±1.0, 40.24N±0.02×48.81E±0.02, h17km±7km, n80, σ2°17/124, mb3.7/7, 1C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALIB	**&Aumlli-Bayram**	**0.32**	**152**	P	Pn	**04 22 49.7**	**-0.4**
ALIB				S	**Sb**	**04 22 55.3**	**+3.0**
GBS	**Qobustan**	**0.32**	**18**	P	**Pb**	**04 22 48.0**	**+0.5**
GBS				S	**Sb**	**04 22 56.3**	**+3.8**
SAAT	**Saatly**	**0.48**	**219**	P	**Pn**	**04 22 53.9**	**+1.6**
SAAT				S	**Sb**	**04 23 01.6**	**+4.6**
KDMR	**Kurdemir**	**0.50**	**287**	P	**Pn**	**04 22 52.6**	**0.0**
KDMR				S	**Sn**	**04 23 02.7**	**+1.8**
PQL	**Pirkuli**	**0.58**	**343**	P	**Pb**	**04 22 52.5**	**+0.5**
PQL				S	**Sn**	**04 23 03.7**	**+0.6**
ATGJ	**Altiaghaj**	**0.63**	**9**	P	**Pb**	**04 22 53.7**	**+0.7**
ATGJ				S	**Sn**	**04 23 06.0**	**+1.6**
GOBA	**Gobu**	**0.72**	**76**	P	**Pn**	**04 22 57.5**	**+1.7**
GOBA				S	**Sn**	**04 23 08.0**	**+1.5**
IML	**Ismayilli**	**0.73**	**319**	P	**Pn**	**04 22 55.8**	**-0.2**
IML				S	**Sn**	**04 23 08.5**	**+1.6**
SIZA	**Siyzn**	**0.84**	**5**	P	**Pn**	**04 22 57.8**	**+0.3**
SIZA				S	**Sn**	**04 23 12.6**	**+3.0**
NDR	**Nardaran**	**0.96**	**69**	P	**Pn**	**04 23 01.0**	**+1.9**
NDR				S	**Sn**	**04 23 17.3**	**+5.0**
QBL	**Gabala**	**1.03**	**314**	P	**Pb**	**04 22 59.8**	**+0.2**
QBL				S	**Sn**	**04 23 16.6**	**+2.5**
GALA	**Gala**	**1.04**	**80**	P	**Pn**	**04 23 02.1**	**+2.0**
GALA				S	**Sn**	**04 23 16.8**	**+2.5**
GLBA	**Clilabad**	**1.04**	**198**	P	**Pn**	**04 23 01.1**	**+1.0**
GLBA				S	**Sn**	**04 23 19.3**	**+5.0**
XNQ	**Khinaliq**	**1.07**	**332**	P	**Pn**	**04 23 02.2**	**+1.5**
XNQ				S	**Sn**	**04 23 18.8**	**+3.6**
BLQ	**Beylaqan**	**1.09**	**242**	P	**Pn**	**04 23 01.9**	**+1.1**
BLQ				S	**Sn**	**04 23 19.0**	**+3.5**
QUBA	**Quba, Azerbaij**	**1.14**	**348**	P	**Pn**	**04 23 03.4**	**+1.8**
QUBA				S	**Sn**	**04 23 21.0**	**+4.1**
BRDA	**Brd**	**1.25**	**272**	P	**Pg**	**04 23 05.4**	**+1.0**
BRDA				S	**Sn**	**04 23 23.8**	**+4.4**
AGDM	**Agdam**	**1.31**	**265**	Pn	**Pg**	**04 23 05.5**	**0.0**
AGDM				Sn	**Sn**	**04 23 27.0**	**+6.0**
QSAR	**Qusar**	**1.34**	**342**	Pn	**Pg**	**04 23 06.3**	**+0.1**
QSAR				Sn	**Sn**	**04 23 25.1**	**+3.2**
QRD	**Qoradiz**	**1.38**	**237**	Pn	**Pg**	**04 23 06.0**	**-0.9**
QRD				Sn	**Sg**	**04 23 27.8**	**+2.8**
YRD	**Yardimli**	**1.39**	**199**	Pn	**Pg**	**04 23 06.3**	**-0.8**
YRD				Sn	**Sn**	**04 23 27.6**	**+4.5**
MNGR	**Mingechevir, A**	**1.42**	**293**	Pn	**Pg**	**04 23 07.8**	**+0.1**
MNGR				Sn	**Sg**	**04 23 27.8**	**+1.6**
KSMR	**Kasumkent**	**1.46**	**339**	*e*Pg	**Pg**	**04 23 09.3**	**+0.9**
	283nm,0.3s						
KSMR				*e*Sg	**Sg**	**04 23 31.9**	**+4.4**
	1µm,0.5s						
KSMR	**Kasumkent**	**1.46**	**339**	*e*PN	**Pg**	**04 23 09.3**	**+0.9**
KSMR				pmax	pmax		
	comp=Z,283nm,0.3s						
AKT	**Akhty**	**1.49**	**327**	*e*Pg	**Pg**	**04 23 09.0**	**0.0**
	comp=Z,83nm,0.3s						
AKT				*e*Sg	**Sg**	**04 23 32.2**	**+3.8**
	comp=Z,402nm,0.5s						
AKT	**Akhty**	**1.49**	**327**	*i*PN	**Pg**	**04 23 09.3**	**+0.3**
AKT				pmax	pmax		
	comp=Z,201nm,0.6s						
LKRN	**Lenkeran, Azer**	**1.52**	**181**	Pn	**Pg**	**04 23 08.6**	**-1.0**
LKRN				Sn	**Sg**	**04 23 31.5**	**+2.1**
SEKA	**Sheki**	**1.56**	**309**	Pn	**Pb**	**04 23 08.9**	**0.0**
SEKA				Sn	**Sg**	**04 23 30.9**	**+0.1**
LRK	**Lerik**	**1.63**	**193**	Pn	**Pn**	**04 23 09.4**	**+1.0**
LRK				Sn	**Sg**	**04 23 32.8**	**-0.1**
ASTR	**Astara**	**1.67**	**181**	Pg	**Pn**	**04 23 09.5**	**+0.7**
ASTR				Sn	**Sg**	**04 23 33.5**	**-0.7**
DRN	**Derbent**	**1.83**	**349**	*e*Pg	**Pb**	**04 23 13.0**	**-0.4**
	comp=Z,132nm,0.3s						
DRN				*e*Sg	**Sg**	**04 23 40.4**	**+1.2**
	comp=Z,419nm,0.3s						
DRN	**Derbent**	**1.83**	**349**	*e*PN	**Pb**	**04 23 12.9**	**-0.4**
DRN				*e*S	**Sg**	**04 23 40.4**	**+1.2**
DRN				pmax	pmax		
	comp=Z,132nm,0.3s						
GANJ	**Ganja**	**1.94**	**283**	Pn	**Pb**	**04 23 14.8**	**-0.5**
GANJ				Sn	**Sb**	**04 23 40.6**	**+1.3**
VSHL	**Vashlovani**	**2.08**	**299**	P	**Pb**	**04 23 18.4**	**+0.7**
URKR	**Urkarakh**	**2.12**	**336**	*e*Pn	**Pb**	**04 23 17.9**	**-0.5**
	comp=Z,41nm,0.4s						
URKR				*e*Sn	**Sg**	**04 23 48.1**	**-0.5**
	comp=Z,115nm,0.4s						
URKR	**Urkarakh**	**2.12**	**336**	*e*PN	**Pb**	**04 23 17.9**	**-0.5**
URKR				*e*S	**Sg**	**04 23 48.1**	**-0.5**
URKR				pmax	pmax		
	comp=Z,41nm,0.4s						
ZKTA	**Zakatala**	**2.17**	**311**	Pn	**Pb**	**04 23 19.7**	**+0.5**
ZKTA				Sn	**Sg**	**04 23 48.3**	**-1.8**
KMKR	**Kumukh**	**2.29**	**326**	*e*Pn	**Pb**	**04 23 20.6**	**-0.8**
	comp=Z,51nm,0.4s						
KMKR				*e*Sn	**Sg**	**04 23 51.9**	**-2.1**
	comp=Z,129nm,0.6s						
KMKR	**Kumukh**	**2.29**	**326**	*e*PN	**Pb**	**04 23 20.5**	**-0.8**
KMKR				pmax	pmax		
	comp=Z,51nm,0.4s						
DDFL	**Dedoflistskaro**	**2.37**	**301**	P	**Pg**	**04 23 24.0**	**-1.8**
DDFL	**Dedoflistskaro**	**2.37**	**301**	PN	**Pg**	**04 23 24.0**	**-1.8**
GDB	**GEDABAY**	**2.38**	**283**	Pn	**Pb**	**04 23 21.6**	**-1.2**
GDB				Sn	**Sb**	**04 23 51.5**	**-0.5**
SGKR	**Sergokala**	**2.39**	**339**	*e*PN	**Pb**	**04 23 21.7**	**-1.1**
SGKR				*e*S	**Sg**	**04 23 54.6**	**-2.4**
SGKR				pmax	pmax		
	comp=Z,64nm,0.5s						
LGD	**Lagodekhi**	**2.52**	**310**	P	**Pb**	**04 23 24.0**	**-1.0**
LGD	**Lagodekhi**	**2.52**	**310**	PN	**Pb**	**04 23 24.0**	**-1.0**
ORD	**Ordubad**	**2.54**	**240**	Pn	**Pb**	**04 23 23.9**	**-1.6**
ORD				Sn	**Sb**	**04 23 57.9**	**+1.4**
GNBR	**Gunib**	**2.56**	**328**	*e*Pn	**Pn**	**04 23 23.6**	**+2.5**
	comp=Z,26nm,0.5s						
GNBR				*e*Sn	**Sb**	**04 23 59.2**	**+2.1**
	comp=Z,70nm,0.6s						
GNBR	**Gunib**	**2.56**	**328**	*e*PN	**Pn**	**04 23 23.6**	**+2.5**
GNBR				*e*S	**Sb**	**04 23 59.2**	**+2.1**
GNBR				pmax	pmax		
	comp=Z,26nm,0.5s						
TLTR	**Tlyarata**	**2.63**	**316**	*e*Pn	**Pb**	**04 23 25.0**	**-2.1**
	comp=Z,17nm,1.1s						
TLTR				*e*Sn	**Sb**	**04 24 00.5**	**+1.3**
	comp=Z,30nm,0.4s						
TLTR	**Tlyarata**	**2.63**	**316**	*e*PN	**Pb**	**04 23 25.0**	**-2.1**
TLTR				pmax	pmax		
	comp=Z,17nm,1.1s						
SBZ	**Shahbuz**	**2.65**	**253**	Pn	**Pb**	**04 23 25.4**	**-1.9**
QZX	**Qazax, Azerbai**	**2.74**	**289**	Pn	**Pb**	**04 23 27.0**	**-1.9**
QZX				Sn	**Sn**	**04 23 59.5**	**+3.1**
NAX	**Nakhchivan**	**2.77**	**249**	Pg	**Pb**	**04 23 28.6**	**-0.7**
NAX				Sn	**Sn**	**04 24 00.5**	**+3.5**
DGRG	**David-gareji**	**2.88**	**296**	P	**Pb**	**04 23 28.8**	**-2.4**
DGRG	**David-gareji**	**2.88**	**296**	PN	**Pb**	**04 23 28.8**	**-2.4**
MAK	**Makhachkala**	**2.89**	**341**	*e*PN	**Pn**	**04 23 24.6**	**-1.0**
MAK				pmax	pmax		
	comp=Z,63nm,0.2s						
MAK				MLR	MLR		
	comp=Z,302nm,7.0s						
GNI	**Garni**	**3.12**	**270**	Pn	**Pn**	**04 23 30.9**	**+2.0**
	comp=Z,3.8nm,0.3s,baz=64,slow=12,SNR=12						
	comp=Z,12nm,0.5s						
CHRG	**Chargali**	**3.60**	**307**	P	**Pn**	**04 23 38.1**	**+2.7**
SHTL	**Shatili**	**3.66**	**313**	P	**Pn**	**04 23 40.1**	**+3.7**
SHTL	**Shatili**	**3.66**	**313**	PN	**Pn**	**04 23 40.0**	**+3.7**
TRLG	**Trialeti**	**3.80**	**292**	P	**Pn**	**04 23 40.6**	**+2.4**
TRLG	**Trialeti**	**3.80**	**292**	PN	**Pn**	**04 23 40.6**	**+2.4**
ALIG	**Mtskhetisjvari**	**4.32**	**297**	P	**Pn**	**04 23 48.2**	**+2.9**
KBZ	**Khabaz**	**5.62**	**310**	Pn	**Pn**	**04 24 04.7**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=135,slow=2.9,SNR=7.5						
KBZ				Sn	**Sn**	**04 25 10.9**	**+3.8**
	comp=Z,0.2nm,0.3s,baz=128,slow=18,SNR=1.3						
	comp=Z,0.3nm,0.3s						
KVAR	**Kislovodsk Arr**	**5.87**	**311**	Pn	**Pn**	**04 24 07.8**	**+1.1**
	baz=133,slow=19						
KVAR				Sn	**Sn**	**04 25 16.1**	**+2.5**
	baz=175,slow=9.8						
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**12.07**	**29**	Pn	**Pn**	**04 25 29.2**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=196,slow=8.6,SNR=1.9						
AKTO				Sn	Sn	04 27 36.1	-9.4
	comp=Z,0.3nm,0.3s,baz=297,slow=6.8,SNR=7.2						
	comp=Z,1.0nm,0.3s						
BELG	**Belogornoye**	**12.19**	**357**	Pn	**Pn**	**04 25 29.7**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=2.0						
BELG				Sn	Sn	04 27 40.0	-8.4
	comp=Z,0.4nm,0.3s,baz=139,slow=19,SNR=1.2						
	comp=Z,5.2nm,0.8s						
AKASG	**Malin Array Be**	**17.22**	**314**	P	**Pn**	**04 26 38.6**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=120,slow=12,SNR=2.6						
	comp=Z,0.7nm,0.6s						
ARTI	**Arti**	**17.34**	**18**	P	**Pn**	**04 26 39.4**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=205,slow=14,SNR=4.9						
ARTI				LR	LR	04 36 08.8	
	comp=Z,106nm,20.3s,baz=309,slow=47						
	comp=Z,3.1nm,0.6s						
BVAR	**Borovoye Array**	**19.48**	**42**	P	**P**	**04 27 03.7**	**-2.5**
	baz=236,slow=10,SNR=4.8						
	comp=Z,0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**23.15**	**53**	P	**P**	**04 27 45.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=256,slow=9.1,SNR=4.5						
	comp=Z,0.4nm,0.6s						
KURK	**Kurchatov**	**23.23**	**53**	P	**P**	**04 27 45.6**	**-0.8**
MKAR	**Makanchi Array**	**25.02**	**64**	P	**P**	**04 28 03.0**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=263,slow=8.5,SNR=12						
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**25.02**	**64**	P	**P**	**04 28 03.0**	**-0.3**
FINES	**FINESS Array B**	**25.38**	**334**	P	**P**	**04 28 06.2**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=132,slow=9.0,SNR=8.5						
FINES				LR	LR	04 38 13.2	
	comp=Z,304nm,19.4s,baz=279,slow=37						
	comp=Z,1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**27.75**	**48**	P	**P**	**04 28 26.9**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=253,slow=8.7,SNR=2.9						
	comp=Z,0.5nm,0.3s						
HFS	**Hagfors**	**29.49**	**324**	P	**P**	**04 28 42.4**	**-0.8**
	comp=Z,6.1nm,1.0s,baz=123,slow=7.4,SNR=1.6						
	comp=Z,6.1nm,1.0s						
ESDC	**Sonseca Array**	**39.95**	**287**	P	**P**	**04 30 13.1**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=81,slow=7.0,SNR=2.3						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**76.75**	**352**	P	**P**	**04 34 27.6**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=10.0,slow=5.4,SNR=2.3						
	comp=Z,0.1nm,0.3s						
KDAK	**Kodiak Island**	**80.71**	**11**	LR	LR	05 17 00.5	
	comp=Z,101nm,18.7s,baz=97,slow=40						

*IDC **22** 04:31:19.5±2.4, 19.21N×121.24E, h29km±16km, mb4.2/31, mbtmp4.4/35, ML4.3/4, MS3.9/42, Error ellipse: s-maj=15.1km s-min=8.6km az=77.0*
*GCMT **22** 04:31:21.3±0.4, 19.36N±0.03×120.85E±0.04, h30km±1km, MW4.9/60, Moment Tensor Solution. s25,c26; s60,c81; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.22±.22; Mθθ -0.35±.12; Mϕϕ -1.87±.15; Mrθ -0.39±.16; Mϕθ -0.77±.06; Mϕr -1.61±.18; Best double couple: Mo 2.75700×10^16 NP1: ϕ28.00000°, δ27.00000°, λ99.00000°. NP2: ϕ197.00000°, δ63.00000°, λ85.00000°. Principal axes: T 2.7820, Plg71.0000°, Azm97.0000°; N -0.0480, Plg4.0000°, Azm199.0000°; P -2.7320, Plg18.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **22** 04:31:21.3±1.5, 19.26N±0.06×121.15E±0.09, h35km±1km, mb4.9/206 Error ellipse: s-maj=13.7km s-min=9.6km az=270.0*
*BJI **22** 04:31:21.3, 19.42N×120.90E, h30km, mB5.0/16, mb4.4/56, ML4.6/1, Ms4.3/43, Ms7 4.2/46*
*DJA **22** 04:31:22.1±0.5, 20.0N±3.3×12.1E±, h64km±10km, M5.0/31, mB5.9/5, mb4.8/31, MLv4.9/5, Mw(mB)5.5/5*
ISC 22 04:31:21.2±0.6, 19.25N±0.04×121.08E±0.05, h40km±5km, n567, σ1°93/523, mb4.8/145, MS4.0/50, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWGBT	**Beinan**	**3.55**	**360**	P	**Pn**	**04 32 13.8**	**+0.1**
TWG	**Pinlang**	**3.55**	**360**		**Pn**	**04 32 12.4**	**-1.4**
TPUB	**Ta-pu**	**4.05**	**354**		**Pn**	**04 32 18.5**	**-2.2**
TPUB	**Ta-pu**	**4.05**	**354**	P	**Pn**	**04 32 18.7**	**-2.0**
YULB	**Yu-li**	**4.12**	**3**		**Pn**	**04 32 19.9**	**-1.7**
YULB	**Yu-li**	**4.12**	**3**	P	**Pn**	**04 32 22.1**	**+0.4**
SSLB	**Suanglung**	**4.51**	**358**		**Pn**	**04 32 26.5**	**-0.6**
SSLB	**Suanglung**	**4.51**	**358**	P	**Pn**	**04 32 27.3**	**+0.3**
NACB	**Ninganchiao**	**4.92**	**5**		**Pn**	**04 32 30.4**	**-2.2**
NACB	**Ninganchiao**	**4.92**	**5**	P	**Pn**	**04 32 32.2**	**-0.4**
NACB	**Ninganchiao**	**4.92**	**5**	S	**Sn**	**04 33 29.7**	**+1.4**
TGY	**Tagaytay City**	**5.12**	**182**	Pn	**Pn**	**04 32 35.2**	**-0.3**
	51nm,0.3s,baz=18,slow=3.2,SNR=8.0						
TGY				Sn	**Sn**	**04 33 29.5**	**-4.0**
	59nm,0.3s,baz=41,slow=20,SNR=3.5						
TGY				Lg	Lg	04 33 59.0	
	52nm,0.3s,baz=30,slow=20,SNR=3.2						
	133nm,0.4s						
YHNB	**Yeheng**	**5.40**	**3**		**Pn**	**04 32 38.1**	**-1.2**
YHNB	**Yeheng**	**5.40**	**3**	P	**Pn**	**04 32 39.5**	**+0.3**
YOJ	**Yonaguni jima**	**5.48**	**19**		**Pn**	**04 32 40.1**	**-0.2**
YOJ	**Yonaguni jima**	**5.48**	**19**	P	**Pn**	**04 32 40.8**	**+0.5**
TATO	**Taipei**	**5.71**	**4**	Pn	**Pn**	**04 32 42.0**	**-1.4**
KNMB	**Chin-men Tao**	**5.76**	**335**		**Pn**	**04 32 40.7**	**-3.4**
HKPS	**Hong Kong Po S**	**7.16**	**296**		**Pn**	**04 33 00.4**	**-3.0**
HKPS	**Hong Kong Po S**	**7.16**	**296**	P	**Pn**	**04 33 01.3**	**-2.1**
JOW	**Kunigami**	**10.03**	**40**	Pn	**Pn**	**04 33 41.6**	**-1.2**
	4.8nm,0.3s,baz=222,slow=11,SNR=19						
JOW				Sn	**Sn**	**04 35 29.1**	**-4.9**
	0.1nm,0.3s,baz=210,slow=20,SNR=1.6						
	22nm,0.5s						
JOW	**Kunigami**	**10.03**	**40**	P	**Pn**	**04 33 43.4**	**+0.6**
QIZ	**Qiongzhong**	**10.63**	**271**		**Pn**	**04 33 48.3**	**-2.7**
QIZ	**Qiongzhong**	**10.63**	**271**	P	**Pn**	**04 33 49.3**	**-1.6**
QIZ				S	**Sn**	**04 35 44.8**	**-3.9**
QIZ				pmax	pmax		
	comp=Z,38nm,0.7s						
QIZ				LR	LR		
	comp=N,260nm,13.6s						
QIZ				LR	LR		
	comp=E,840nm,14.4s						
QIZ				LR	LR		
	comp=Z,1µm,14.8s						
DAV	**Davao City (W)**	**12.88**	**160**	LR	LR	04 40 05.5	
	comp=Z,938nm,18.6s,baz=14,slow=41						
NJ2	**Nanjing**	**12.90**	**351**	*e*P	**Pn**	**04 34 22.9**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=N,740nm,15.6s						
NJ2				LR	LR		
	comp=E,570nm,10.6s						
NJ2				LR	LR		
	comp=Z,590nm,15.2s						
GYA	**Guiyang**	**15.10**	**301**	⇓P	**Pn**	**04 34 51.1**	**-0.7**
GYA				pmax	pmax		
	comp=Z,13nm,1.2s						
ENH	**Enshi**	**15.19**	**318**		**Pn**	**04 34 52.9**	**-0.1**
ENH	**Enshi**	**15.19**	**318**	P	**Pn**	**04 34 53.4**	**+0.4**
JNU	**Nakatsue**	**16.36**	**30**	Pn	**Pn**	**04 35 07.0**	**-0.9**
	0.6nm,0.3s,baz=213,slow=17,SNR=6.2						
JNU				LR	LR	04 42 07.1	
	comp=Z,198nm,19.6s,baz=201,slow=40						
	16nm,0.8s						
LYN	**LuoYang**	**17.05**	**335**	P	**Pn**	**04 35 16.6**	**0.0**
LYN				pmax	pmax		
	comp=Z,26nm,1.2s						
TIA	**Tai'an**	**17.25**	**349**	P	**P**	**04 35 24.6**	**+4.4**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIA				LR	LR		
	comp=N,520nm,14.6s						
TIA				LR	LR		
	comp=E,350nm,14.7s						
TIA				LR	LR		
	comp=Z,930nm,18.0s						
TJN	**Taejon**	**17.93**	**17**		**Pn**	**04 35 27.2**	**-0.3**
KMI2	**Kunming**	**17.96**	**292**	P	**P**	**04 35 31.3**	**+3.0**
KMI2				pP	pP	04 35 38.8	+1.3
KMI2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI2				LR	LR		
	comp=Z,450nm,14.6s						
KMI2				LR	LR		
	comp=Z,690nm,14.0s						
KMI2				LR	LR		
	comp=Z,770nm,15.9s						
TOLI2	**Tolitoli**	**18.03**	**181**		**Pn**	**04 35 28.3**	**-0.5**
XAN	**Xi'an**	**18.28**	**326**	P	**Pn**	**04 35 31.8**	**0.0**
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				pmax	pmax		
	comp=Z,610nm,5.2s						
XAN				LR	LR		
	comp=Z,810nm,14.6s						
XAN				LR	LR		
	comp=Z,640nm,13.4s						
XAN				LR	LR		
	comp=Z,1µm,15.6s						
JMN	**Monobe**	**18.39**	**36**		**P**	**04 35 31.5**	**-1.2**
JMN				IAmb	IAmb	04 35 34.2	
	comp=Z,283nm,2.0s						
GAMI	**Galela, Maluku**	**18.51**	**158**	P	**Pn**	**04 35 40.0**	**+5.3**
MRSI	**Marisa**	**18.68**	**177**	P	**Pn**	**04 35 37.8**	**+1.1**
	comp=Z,23nm,0.7s						
SBUM	**Sibu**	**18.82**	**209**		**Pn**	**04 35 40.0**	**+1.7**
SBUM	**Sibu**	**18.82**	**209**	P	**Pn**	**04 35 38.8**	**+0.4**
SBUM	**Sibu**	**18.82**	**209**	P	**Pn**	**04 35 38.9**	**+0.5**
MPSI	**Mapaga**	**18.84**	**184**	P	**Pn**	**04 35 40.0**	**+1.5**
HNS	**HongShan**	**18.92**	**344**	⇓P	**Pn**	**04 35 40.1**	**+0.7**
HNS				pmax	pmax		
	comp=Z,24nm,1.1s						
HNS				LR	LR		
	comp=Z,640nm,16.7s						
HNS				LR	LR		
	comp=Z,790nm,16.7s						
KSAR	**Wonju Array Be**	**19.07**	**17**	P	**Pn**	**04 35 41.4**	**+0.1**
KSRS	**Korea Array**	**19.09**	**17**	P	**P**	**04 35 39.6**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=198,slow=11,SNR=17						
KSRS				LR	LR	04 44 02.3	
	comp=Z,319nm,19.3s,baz=210,slow=40						
	comp=Z,6.2nm,0.7s						
KS19	**Wonju Array Si**	**19.12**	**17**	P	**P**	**04 35 39.8**	**-1.0**
KS19				IAmb	IAmb	04 35 43.1	
	comp=Z,182nm,2.0s						
PZH	**PanZhiHua**	**19.21**	**296**	P	**Pn**	**04 35 43.4**	**+0.2**
PZH				sP	**sP**	**04 35 57.5**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				pmax	pmax		
	comp=Z,210nm,10.2s						
PZH				LR	LR		
	comp=Z,280nm,18.0s						
PZH				LR	LR		
	comp=Z,450nm,14.7s						
PZH				LR	LR		
	comp=Z,530nm,17.1s						
APSI	**Ampana**	**20.05**	**178**	P	Pn	04 35 53.0	0.0
	comp=Z,49nm,0.6s						
JCJ	**Chichijima**	**20.89**	**64**	P	**P**	**04 35 57.8**	**-2.3**
	comp=Z,62nm,0.6s,baz=245,slow=19,SNR=4.7						
	comp=Z,62nm,0.6s						
JCJ	**Chichijima**	**20.89**	**64**	P	**P**	**04 35 59.2**	**-0.8**
CHTO	**Chiang Mai**	**20.93**	**272**		**P**	**04 36 01.0**	**+0.4**
CHTO	**Chiang Mai**	**20.93**	**272**	P	**P**	**04

comp=Z,270nm,4.3s
LZH LR LR
comp=Z,510nm,13.7s
LZH LR LR
comp=Z,460nm,15.2s
LZH LR LR
comp=Z,720nm,16.2s
PMSI Majene 22.71 186 P P 04 36 20.6 +0.9
comp=Z,107nm,0.9s
MJAR Matsushiro Arr 22.86 38 P P 04 36 19.8 -1.3
comp=Z,5.1nm,0.8s,baz=225,slow=7.9,SNR=11
comp=Z,5.1nm,0.8s
MJAR Matsushiro Arr 22.86 38 P 04 36 20.8 -0.4
MJB9 Matsu-Tunnel 22.86 38 P P 04 36 20.5 -0.6
MJB9 IAmb IAmb 04 36 35.4
comp=Z,60nm,1.7s
HHC Hu-ho-hao-te 23.02 341 eP P 04 36 23.3 +0.5
HHC pP pP 04 36 32.1 -0.2
HHC S **S 04 40 27.8 -2.8**
HHC sS sS 04 40 37.1 -11
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.5s
HHC LR LR
comp=Z,540nm,15.1s
HHC LR LR
comp=Z,330nm,14.5s
HHC LR LR
comp=Z,630nm,14.5s
SPSI Sidrap Palu 23.11 183 P P 04 36 23.3 -0.4
comp=Z,40nm,1.0s
NLAI Namlea 23.12 165 P P 04 36 26.1 +2.2
comp=Z,66nm,0.8s
BBKI Banjar Baru 23.39 196 P P 04 36 26.7 +0.1
BTO2 Baotou 23.47 338 eP P 04 36 27.4 +0.1
BTO2 pP **pP 04 36 36.9 +0.1**
BTO2 sP **pwP 04 36 40.6 -0.7**
BTO2 pmax pmax
comp=Z,13nm,0.8s
BTO2 pmax pmax
comp=Z,450nm,5.4s
BTO2 LR LR
comp=Z,680nm,23.4s
BTO2 LR LR
comp=Z,770nm,14.9s
BTO2 LR LR
comp=Z,1μm,17.5s
GUMO Guam 23.49 100 LR LR 04 44 12.9
comp=Z,245nm,19.5s,baz=14,slow=33
KRAI Karang Ratu 23.55 161 P P 04 36 28.0 -0.1
comp=Z,24nm,0.6s
KAPI Kappang 24.15 183 P P 04 36 34.0 +0.4
comp=Z,8.1nm,0.4s,baz=11,slow=5.2,SNR=4.0
KAPI LR LR 04 47 04.7
comp=Z,180nm,19.6s,baz=358,slow=39
comp=Z,8.1nm,0.4s
KAPI Kappang 24.15 183 P P 04 36 34.2 +0.6
KAPI Kappang 24.15 183 P P 04 36 34.9 +1.3
FAKI Fak Fak 24.62 152 P P 04 36 38.8 +0.8
FAKI IAmb IAmb 04 36 41.4
comp=Z,38nm,1.0s
CN2 Changchun 24.75 8 P P 04 36 38.0 -0.8
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,500nm,9.0s
CN2 LR LR
comp=Z,300nm,9.0s
CN2 LR LR
comp=Z,400nm,12.0s
XLT XiLinHaoTe 24.93 351 eP P 04 36 40.3 -0.3
XLT pP pP 04 36 49.1 -1.6
XLT pmax pmax
comp=Z,6.0nm,1.3s
XLT LR LR
comp=Z,360nm,15.4s
XLT LR LR
comp=Z,360nm,15.3s
USRK Ussuriysk Ar. 26.50 18 P P 04 36 54.8 +0.2
comp=Z,6.8nm,0.7s,baz=206,slow=9.6,SNR=12
comp=Z,6.8nm,0.7s
BNX BinXian 26.93 10 ⇑P **P 04 36 58.1 -0.4**
BNX pmax pmax
comp=Z,3.0nm,0.7s
GTA2 Gaotai 27.30 322 eP P 04 37 06.3 +4.2
GTA2 pmax pmax
comp=Z,4.0nm,1.4s
GTA2 LR LR
comp=Z,240nm,17.1s
GTA2 LR LR
comp=Z,320nm,16.7s
GTA2 LR LR
comp=Z,430nm,16.7s
GOMU GeErMu 28.60 312 P P 04 37 14.9 +0.8
GOMU PcP **PcP 04 40 25.8 +1.2**
GOMU S **S 04 42 00.9 +0.8**
GOMU pmax pmax
comp=Z,5.0nm,1.0s
GOMU LR LR
comp=Z,440nm,17.9s
GOMU LR LR
comp=Z,470nm,16.8s
GOMU LR LR
comp=Z,690nm,18.9s
JAY Jayapura 28.98 136 LR LR 04 46 42.4
comp=Z,221nm,21.0s,baz=2.5,slow=32
LSA Lhasa 29.08 297 P P 04 37 18.4 -0.2
LEM Lembang 29.11 208 LR LR 04 49 28.4
comp=Z,95nm,18.5s,baz=176,slow=37
BATI Baumata 29.38 175 LR LR 04 50 48.0
comp=Z,107nm,20.4s,baz=22,slow=40
HILR Hailar Array B 30.25 358 P P 04 37 29.4 +1.3
comp=Z,3.1nm,0.7s,baz=180,slow=13,SNR=4.1
comp=Z,3.1nm,0.7s
ASAJ Asahikawa 30.63 31 LR LR 04 50 23.9
comp=Z,159nm,20.7s,baz=250,slow=37
SONM Songino Array 30.91 341 P P 04 37 34.6 +0.5
comp=Z,1.5nm,0.8s,baz=159,slow=9.2,SNR=9.5
comp=Z,1.5nm,0.8s
SONM Songino Array 30.91 341 P P 04 37 34.9 +0.8
KLR Kul'dur 31.11 14 LR LR 04 51 37.9
comp=Z,280nm,18.9s,baz=198,slow=39
MTN Manton Dam 33.40 162 P P 04 37 53.8 -2.3
MTN IAmb IAmb 04 38 16.0
comp=Z,33nm,1.2s
TLY Talaya 35.15 341 LR LR 04 53 54.6
comp=Z,307nm,18.3s,baz=122,slow=38
KNRA Kununurra 35.52 167 P P 04 38 12.2 -2.2
KNRA IAmb IAmb 04 38 42.3
comp=Z,19nm,1.2s
WMQ Urumqi 37.14 319 eP P 04 38 29.8 +1.7
WMQ LR LR
comp=Z,190nm,15.9s
FITZ Fitzroy Crossi 37.39 173 P P 04 38 28.5 -1.8
comp=Z,6.1nm,0.7s,baz=359,slow=12,SNR=14
FITZ PcP **PcP 04 40 48.0 -0.7**
comp=Z,5.7nm,0.7s,baz=332,slow=2.5,SNR=8.3
comp=Z,6.1nm,0.7s
COEN Coen 39.53 145 P P 04 38 46.8 -1.5
MBWA Marble Bar 40.19 182 P 04 38 52.4 -1.3
MBWA IAmb IAmb 04 38 53.5
comp=Z,16nm,0.8s
MBWA Marble Bar 40.19 182 P P 04 38 55.3 +1.6
MBWA Marble Bar 40.19 182 P P 04 38 52.6 -1.1
MBWA x x 04 39 09.8
MBWA PcP **PcP 04 40 58.4 +0.9**
PSA00 Pilbara Seismi 40.59 182 P P 04 38 56.2 -0.9
PSA00 IAmb IAmb 04 38 57.0
comp=Z,33nm,0.8s
PSA00 Pilbara Seismi 40.59 182 P 04 38 56.4 -0.7
PSA00 IAmb IAmb 04 38 56.9
comp=Z,24nm,0.8s
PSA00 Pilbara Seismi 40.59 182 P P 04 38 56.6 -0.5
WB0 Warramunga Arr 40.92 161 P P 04 38 57.3 -2.5
PALK Pallekele 40.96 259 LR LR 04 56 13.1
comp=Z,101nm,18.5s,baz=44,slow=36
WRA Warramunga Arr 41.06 161 P P 04 38 58.3 -2.7
comp=Z,3.5nm,0.5s,baz=342,slow=8.2,SNR=42
WRA PcP **PcP 04 41 00.7 +0.3**
comp=Z,4.5nm,0.7s,baz=343,slow=3.4,SNR=13
comp=Z,3.5nm,0.5s
WRA Warramunga Arr 41.06 161 P P 04 38 58.9 -2.1
WB1 Warramunga Ar. 41.08 161 P P 04 38 59.9 -1.3
WR8 Warramunga Arr 41.13 161 P P 04 38 59.7 -1.8
WR8 IAmb IAmb 04 39 11.0
comp=Z,57nm,1.9s

MKAR Makanchi Array 41.92 320 P P 04 39 09.0 +1.2
comp=Z,2.7nm,0.6s,baz=118,slow=9.2,SNR=39
MKAR PcP **PcP 04 41 03.1 +0.3**
comp=Z,0.8nm,0.7s,baz=119,slow=3.0,SNR=1.8
MKAR LR LR 04 58 45.7
comp=Z,245nm,18.0s,baz=110,slow=39
comp=Z,2.7nm,0.6s
MKAR Makanchi Array 41.92 320 P 04 39 09.4 +1.6
MAKZ Makanchi 42.12 320 P 04 39 11.0 +1.6
MAKZ Makanchi 42.12 320 P P 04 39 10.8 +1.4
GIRL Giralia 42.17 189 P P 04 39 10.6 +0.6
GIRL IAmb IAmb 04 39 11.8
comp=Z,28nm,0.9s
H11S3 WAKE ISLAND Hy 43.06 83 T T 05 25 06.8
baz=275,slow=76,SNR=39
H11S1 WAKE ISLAND Hy 43.07 83 T T 05 25 00.4
baz=275,slow=76,SNR=26
H11S2 WAKE ISLAND Hy 43.08 83 T T 05 24 59.2
baz=275,slow=76,SNR=21
H11N1 WAKE ISLAND Hy 43.08 81 T T 05 24 54.2
baz=278,slow=75,SNR=70
H11N2 WAKE ISLAND Hy 43.09 81 T T 05 24 53.6
baz=278,slow=75,SNR=54
H11N3 WAKE ISLAND Hy 43.10 81 T T 05 24 56.5
baz=278,slow=75,SNR=41
YAK Yakutsk 43.16 6 LR LR 04 58 24.7
comp=Z,127nm,21.3s,baz=136,slow=38
QIS Mount Isa 43.53 154 P P 04 39 20.5 -0.6
MTSU Mount Surprise 43.60 147 P P 04 39 23.3 +1.6
KSH2 Kashi 43.88 307 P P 04 39 26.0 +2.1
KSH2 pP pP 04 39 33.8 -0.6
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
PETK Petropavlovsk- 44.05 31 P P 04 39 24.5 -0.4
comp=Z,4.5nm,0.7s,baz=227,slow=7.1,SNR=4.2
PETK PcP **PcP 04 41 09.7 -0.1**
comp=Z,1.2nm,0.4s,baz=242,slow=3.1,SNR=4.1
PETK LR LR 04 59 36.5
comp=Z,65nm,18.6s,baz=212,slow=39
comp=Z,4.5nm,0.7s
PETK Petropavlovsk- 44.05 31 P P 04 39 24.9 0.0
NRN Naryn 44.14 310 P 04 39 26.5 +0.3
ZAA0 Zalesovo Array 44.38 330 P 04 39 28.2 +0.6
ZALV Zalesovo Beam 44.38 330 P P 04 39 28.4 +0.9
comp=Z,1.3nm,0.6s,baz=132,slow=8.0,SNR=6.6
ZALV LR LR 04 58 32.4
comp=Z,162nm,19.5s,baz=126,slow=37
comp=Z,1.3nm,0.6s
ZALV Zalesovo Beam 44.38 330 P 04 39 27.9 +0.3
AS31 Alice Springs 44.45 163 P 04 39 27.5 -1.0
ASAR Alice Springs 44.45 163 P P 04 39 27.1 -1.5
comp=Z,5.0nm,0.5s,baz=341,slow=8.0,SNR=96
ASAR PcP **PcP 04 41 12.0 +0.3**
comp=Z,2.3nm,0.8s,baz=342,slow=3.6,SNR=6.1
ASAR ScP **ScP 04 45 01.7 +1.0**
comp=Z,1.0nm,0.9s,baz=353,slow=5.1,SNR=4.7
ASAR LR LR 04 58 00.3
comp=Z,60nm,20.9s,baz=298,slow=36
comp=Z,5.0nm,0.5s
ASAR Alice Springs 44.45 163 P P 04 39 27.4 -1.1
ASAR **PcP 04 41 10.8 -0.8**
AUALC St Philip's Co 44.47 163 P P 04 39 29.7 +1.1
NIL Nilore 44.78 299 P P 04 39 31.3 +0.2
NIL IAmb IAmb 04 39 45.3
comp=Z,13nm,0.8s
AAK Ala-Archa 45.55 311 LR LR 04 59 52.3
comp=Z,221nm,19.9s,baz=104,slow=38
MA2 Magadan 45.58 21 LR LR 04 59 24.5
comp=Z,192nm,20.2s,baz=246,slow=37
MEEK Mekkatharra 45.68 183 P P 04 39 37.9 -0.3
KURK Kurchatov 45.89 323 P P 04 39 40.9 +1.3
KURK Kurchatov 45.89 323 ScP 04 45 06.5 +0.3
KURBB Kurchatov Arra 45.89 323 P P 04 39 40.8 +1.1
comp=Z,3.8nm,0.6s,baz=120,slow=7.8,SNR=37
KURBB ScP **ScP 04 45 06.5 +0.3**
comp=Z,0.4nm,0.8s,baz=108,slow=5.9,SNR=2.6
KURBB LR LR 04 59 48.5
comp=Z,124nm,19.1s,baz=169,slow=37
comp=Z,3.8nm,0.6s
CTA Charters Tower 46.23 146 P P 04 39 40.7 -2.0
comp=Z,10nm,1.1s,baz=329,slow=5.9,SNR=3.2
CTA LR LR 05 02 07.8
comp=Z,67nm,18.3s,baz=224,slow=40
comp=Z,10nm,1.1s
DRK Karamyk 46.80 306 P P 04 39 47.9 +0.5
DRK IAmb IAmb 04 40 04.9
comp=Z,6.8nm,0.6s
BTK Batken 47.65 307 P P 04 39 53.6 -0.1
HNR Honiara 47.74 123 LR LR 04 58 27.1
comp=Z,5.4nm,19.3s,baz=24,slow=34
MORW Morawa 48.28 186 P P 04 39 58.8 +0.4
KBL Kabul 48.34 299 P P 04 39 59.6 +0.4
KK31 Karatay Array 48.50 311 P P 04 40 00.4 +0.3
KKAR Karatay Array 48.50 311 P P 04 40 00.8 +0.7
CHGR Chuyangaron 48.70 305 P P 04 40 01.5 -0.2
CHGR IAmb IAmb 04 40 18.1
comp=Z,16nm,1.0s
FORT Forrest 50.20 172 P 04 40 12.2 -0.8
INKA Innaminka 50.45 157 P 04 40 14.1 -0.8
KLBR Kellerberrin 50.66 184 P P 04 40 16.4 -0.1
BVAR Borovoye Array 51.48 323 P P 04 40 23.9 +1.4
comp=Z,1.3nm,0.6s,baz=106,slow=7.7,SNR=8.7
BVAR PcP **PcP 04 41 36.0 -0.4**
comp=Z,1.8nm,0.6s,baz=109,slow=3.5,SNR=4.3
BVAR LR LR 05 04 54.5
comp=Z,123nm,19.9s,baz=353,slow=39
comp=Z,1.3nm,0.6s
BORK Borovoye 51.53 323 P P 04 40 23.9 +1.0
NWAO Narrogin (SRO) 52.02 184 P P 04 40 26.5 -0.1
NWAO Narrogin (SRO) 52.02 184 P P 04 40 27.4 +0.8
NWAO Narrogin (SRO) 52.02 184 P P 04 40 26.4 -0.2
NWAO x x 04 40 31.8
TIXI Tiksi 52.60 3 LR LR 05 07 30.5
comp=Z,140nm,18.6s,baz=202,slow=41
TIXI Tiksi 52.60 3 P 04 40 29.8 -0.7
TIXI IAmb IAmb 04 40 30.5
comp=Z,9.0nm,0.8s
TIXI Tiksi 52.60 3 P P 04 40 29.3 -1.2
TIXI PcP **PcP 04 41 40.5 +0.3**
BBOO Buckleboo 53.72 164 P 04 40 38.2 -1.0
BBOO Buckleboo 53.72 164 P P 04 40 39.3 +0.1
STKA Stephens Creek 54.51 159 P P 04 40 44.6 -0.5
comp=Z,5.6nm,0.6s,baz=333,slow=10.0,SNR=14
comp=Z,5.6nm,0.6s
STKA Stephens Creek 54.51 159 P 04 40 44.6 -0.5
STKA Stephens Creek 54.51 159 P P 04 40 45.5 +0.5
CMSA Cobar Meteorol 55.75 155 P P 04 40 54.8 +0.8
BILL Bilibino 56.35 19 P P 04 40 57.6 -0.2
BILL IAmb IAmb 04 40 59.4
comp=Z,6.3nm,0.7s
BILL Bilibino 56.35 19 P P 04 40 57.6 -0.2
BILL x x 04 41 09.9
AB31 Akbulak array 56.88 317 P 04 41 02.4 +0.5
ABKAR Akbulak array 56.88 317 P P 04 41 02.3 +0.4
ARMA Armidale 57.47 149 P P 04 41 07.1 +0.7
ARMA IAmb IAmb 04 41 09.0
comp=Z,12nm,1.0s
AKTO Aktyubinsk 58.29 318 LR LR 05 07 29.5
comp=Z,142nm,19.6s,baz=42,slow=37
ARTI Arti 59.11 325 LR LR 05 09 42.5
comp=Z,215nm,21.4s,baz=345,slow=39
ARTI Arti 59.11 325 P 04 41 17.3 -0.1
ARTI Arti 59.11 325 P P 04 41 17.7 +0.4
ARTI x x 04 41 29.0
CAN Canberra 60.40 154 P P 04 41 26.8 +0.3
DZM Mont Dzumac 60.44 131 P P 04 41 27.1 0.0
TOO Toolangi 61.02 158 P 04 41 31.3 +0.6
SPIA Saint Paul Isl 62.48 35 P P 04 41 40.1 -0.2
baz=263
P08K Saint George I 62.79 36 P P 04 41 41.1 -1.2
baz=264
GAMB Gambell 62.86 27 P P 04 41 42.5 -0.1
baz=258
KIRV Kirov 64.22 326 LR LR 05 12 37.0
comp=Z,289nm,18.3s,baz=66,slow=38
UNV Unalaska Valle 64.33 39 P P 04 41 51.9 -0.6
baz=268
TNA Tin City 64.78 26 P 04 41 55.7 +0.4
TNA Tin City 64.78 26 P P 04 41 55.6 +0.3
baz=261
M11K Mekoryuk 64.92 32 P P 04 41 56.5 +0.2
baz=265
F14K Arctic Creek 65.43 26 P P 04 42 00.1 +0.6
baz=262,SNR=7.7
ANM Nome 65.72 27 P 04 42 01.3 -0.1
ANM Nome 65.72 27 P P 04 42 01.9 +0.5
baz=264
K13K Kusilvak Mount 65.79 30 P P 04 42 02.4 +0.5
K13K IAmb IAmb 04 42 03.5
comp=Z,7.3nm,1.0s
K13K Kusilvak Mount 65.79 30 P P 04 42 02.4 +0.5
baz=266
F15K North Star Dit 66.15 26 P 04 42 04.2 0.0
F15K North Star Dit 66.15 26 P P 04 42 04.3 +0.1
baz=264
C16K Lisburne Hills 66.19 23 P 04 42 04.3 0.0
C16K IAmb IAmb 04 42 06.2
comp=Z,5.8nm,0.7s
C16K Lisburne Hills 66.19 23 P P 04 42 04.6 +0.2
baz=262
G15K Niukluk 66.33 27 P P 04 42 05.5 +0.1
baz=265
M13K Dall Lake 66.33 32 P P 04 42 06.4 +1.0
M13K Dall Lake 66.33 32 P P 04 42 05.9 +0.5
baz=267
J14K Nanvaranak Lak 66.37 29 P P 04 42 05.8 +0.2
baz=266
TAU Tasmania Unive 66.41 159 P P 04 42 06.9 +0.9
L14K Kuka Creek 66.70 31 P P 04 42 08.5 +0.8
L14K IAmb IAmb 04 42 09.4
comp=Z,15nm,0.8s
L14K Kuka Creek 66.70 31 P P 04 42 08.0 +0.3
baz=268
D17K Noatak River 66.97 24 P P 04 42 09.4 +0.1
baz=264
C17K DeLong Mountai 67.01 23 P P 04 42 09.7 0.0
baz=264
M14K Bethel 67.03 31 P P 04 42 10.2 +0.4
M14K IAmb IAmb 04 42 19.6
comp=Z,9.0nm,0.8s
M14K Bethel 67.03 31 P P 04 42 09.3 -0.5
baz=268
G16K Koyuk River 67.07 26 IAmb IAmb 04 42 11.8
comp=Z,18nm,1.8s
G16K Koyuk River 67.07 26 P P 04 42 10.0 -0.1
baz=266
RDOG Red Dog Mine 67.07 23 P P 04 42 09.2 -0.9
baz=264
H16K Elim 67.07 27 P P 04 42 10.0 -0.1
baz=266,SNR=5.4
N14K Kuskokwak Cree 67.15 32 P P 04 42 10.3 -0.3
N14K Kuskokwak Cree 67.15 32 P P 04 42 10.2 -0.3
baz=269
K15K Wolf Creek Mou 67.28 30 P P 04 42 11.7 +0.2
K15K IAmb IAmb 04 42 18.1
comp=Z,29nm,1.6s
K15K Wolf Creek Mou 67.28 30 P P 04 42 11.4 -0.1
baz=268
L15K Ungalak Mounta 67.28 30 P P 04 42 11.9 +0.4
baz=268
O14K Tigyukauivet M 67.36 33 P P 04 42 11.3 -0.6
baz=270
E17K Hotham Inlet 67.40 24 P P 04 42 11.9 -0.2
baz=266
GNI Garni 67.57 306 LR LR 05 14 43.4
comp=Z,77nm,19.4s,baz=22,slow=38
F17K Baldwin Pennin 67.59 25 P 04 42 14.0 +0.7
F17K IAmb IAmb 04 42 15.5
comp=Z,7.3nm,0.7s
F17K Baldwin Pennin 67.59 25 P P 04 42 13.2 0.0
baz=267
M15K Kasigluk River 67.65 31 P P 04 42 13.9 0.0
baz=270
I17K Unalakleet 67.71 28 P P 04 42 14.2 +0.1
baz=268
J16K Anvik River 67.73 29 P P 04 42 14.0 -0.3
J16K IAmb IAmb 04 43 31.2
comp=Z,32nm,1.9s
J16K Anvik River 67.73 29 P P 04 42 14.4 +0.1
baz=269
C18K Utukok River 67.75 23 P P 04 42 14.8 +0.4
C18K Utukok River 67.75 23 P P 04 42 14.4 0.0
baz=266
G17K Kiwalik Mounta 67.79 26 P P 04 42 14.7 +0.1
baz=268
E18K Tukpahlearik C 67.90 24 P P 04 42 16.1 +0.9
E18K IAmb IAmb 04 42 17.5
comp=Z,5.5nm,0.7s
E18K Tukpahlearik C 67.90 24 P P 04 42 15.7 +0.5
baz=267
N15K Kwethluk River 67.95 32 P P 04 42 15.8 +0.1
baz=270
H17K Granite Mounta 68.08 27 P P 04 42 17.5 +1.1
H17K Granite Mounta 68.08 27 P P 04 42 16.8 +0.3
baz=268
O15K Ungalikthiuk R 68.10 33 P P 04 42 16.7 0.0
O15K IAmb IAmb 04 42 29.1
comp=Z,18nm,1.2s
O15K Ungalikthiuk R 68.10 33 P P 04 42 16.3 -0.3
baz=271
F18K Selawik 68.24 25 P P 04 42 17.5 +0.2
baz=268,SNR=10
L16K Owhat River 68.24 30 P P 04 42 18.0 +0.5
L16K IAmb IAmb 04 43 01.1
comp=Z,32nm,1.9s
L16K Owhat River 68.24 30 P P 04 42 17.6 +0.1
baz=270
C19K Lookout Ridge 68.36 22 P P 04 42 18.8 +0.6
C19K IAmb IAmb 04 42 20.6
comp=Z,6.6nm,0.8s
C19K Lookout Ridge 68.36 22 P P 04 42 18.8 +0.6
baz=267
CHNA Chernabura Isl 68.37 38 P P 04 42 17.4 -1.0
baz=273
M16K Timber Creek 68.50 31 P P 04 42 19.3 +0.2
M16K IAmb IAmb 04 42 42.1
comp=Z,21nm,1.2s
M16K Timber Creek 68.50 31 P P 04 42 18.7 -0.4
baz=271
KBZ Khabaz 68.53 310 P P 04 42 20.4 +0.8
comp=Z,2.3nm,0.8s,baz=79,slow=5.2,SNR=7.5
KBZ LR LR 05 16 20.6
comp=Z,179nm,18.1s,baz=22,slow=39
comp=Z,2.3nm,0.8s
N16K Nishlik Lake 68.60 32 P P 04 42 20.0 +0.2
baz=271
G18K Tagagawik 68.62 26 P 04 42 19.9 0.0
G18K Tagagawik 68.62 26 P P 04 42 20.2 +0.3
baz=269
H18K Honhosa River 68.74 27 P P 04 42 20.4 -0.2
baz=270
K17K Iditarod 68.78 29 P P 04 42 21.8 +0.9
K17K IAmb IAmb 04 42 44.5
comp=Z,22nm,1.4s
K17K Iditarod 68.78 29 P P 04 42 20.8 -0.1
baz=271
L17K Donlin 68.80 30 P P 04 42 20.8 -0.2
baz=271
D19K Kuna River 68.88 23 P P 04 42 22.0 +0.6
D19K IAmb IAmb 04 42 23.4
comp=Z,13nm,0.6s
D19K Kuna River 68.88 23 P P 04 42 21.2 -0.2
baz=269
O16K Kokwok River B 68.97 33 P P 04 42 21.1 -1.0
O16K IAmb IAmb 04 42 28.8
comp=Z,16nm,1.2s
O16K Kokwok River B 68.97 33 P P 04 42 21.7 -0.3
baz=272
F19K Shaleruckik Mo 68.99 25 P P 04 42 22.5 +0.5
F19K IAmb IAmb 04 42 24.2
comp=Z,21nm,1.9s
F19K Shaleruckik Mo 68.99 25 P P 04 42 21.8 -0.2
baz=270
P16K Nushagak River 69.05 33 P P 04 42 22.0 -0.5
baz=272
E19K Redstone River 69.20 24 P P 04 42 23.4 0.0
baz=270,SNR=7.1
M17K Holitna River 69.22 31 P P 04 42 23.8 +0.1
baz=272
G19K Purcell Mounta 69.26 25 P P 04 42 24.1 +0.3
G19K Purcell Mounta 69.26 25 P P 04 42 24.1 +0.3
baz=271
R16K Pilot Point 69.34 35 P P 04 42 24.1 -0.3
baz=273
GCSA Galena City Sc 69.38 27 P P 04 42 24.8 +0.4
baz=271
N17K Nushagak Hills 69.38 32 P P 04 42 25.6 +1.0
N17K Nushagak Hills 69.38 32 P P 04 42 25.0 +0.3
baz=273
D20K Etivluk River 69.43 23 IAmb IAmb 04 42 27.2
comp=Z,11nm,0.7s
D20K Etivluk River 69.43 23 P P 04 42 25.4 +0.6
baz=270

A21K **Barrow** 69.45 20 P P 04 42 25.5 +0.7
baz=269
O17K **Koliganek Bris** 69.47 32 P P 04 42 25.2 0.0
baz=273
J18K **Innoko River** 69.48 28 P P 04 42 26.0 +0.7
J18K IAmb IAmb 04 42 26.8
comp=Z,25nm,1.9s
J18K **Innoko River** 69.48 28 P P 04 42 25.6 +0.4
baz=272
L18K **Granite Mounta** 69.55 30 P P 04 42 26.5 +0.9
L18K IAmb IAmb 04 42 33.0
comp=Z,34nm,1.6s
L18K **Granite Mounta** 69.55 30 P P 04 42 25.9 +0.3
baz=272
E20K **Nigu River** 69.59 23 P P 04 42 26.0 +0.2
baz=271
Q16K **King Salmon** 69.76 33 P P 04 42 26.7 -0.2
baz=274
F20K **Avaraart Lake** 69.79 25 P 04 42 27.6 +0.6
F20K IAmb IAmb 04 42 28.9
comp=Z,16nm,1.6s
F20K **Avaraart Lake** 69.79 25 P P 04 42 27.0 0.0
baz=272
P17K **Kvichak River** 69.84 33 P P 04 42 28.5 +1.1
P17K **Kvichak River** 69.84 33 P P 04 42 27.3 -0.1
baz=274
J19K **Poorman** 69.95 28 P P 04 42 29.4 +1.3
J19K **Poorman** 69.95 28 P P 04 42 27.9 -0.2
baz=273
R17L **Mt. Peulik Vol** 69.99 35 P P 04 42 28.3 -0.2
baz=274
PLK4 **Peulik 4** 69.99 35 P P 04 42 28.4 -0.1
M18K **Stony River** 69.99 30 P P 04 42 28.2 -0.2
baz=274
N18K **Kilae Creek** 70.01 31 P P 04 42 28.6 +0.1
baz=274
C21K **Knifeblade Rid** 70.08 22 P P 04 42 28.8 0.0
baz=272
B21K **Ikpikpuk River** 70.13 22 P P 04 42 29.8 +0.8
B21K IAmb IAmb 04 42 31.1
comp=Z,6.8nm,0.7s
B21K **Ikpikpuk River** 70.13 22 P P 04 42 29.4 +0.3
baz=272,SNR=8.0
H20K **Anotleneega Mo** 70.19 26 P P 04 42 29.9 +0.4
baz=273
E21K **Killik River** 70.41 23 P P 04 42 31.5 +0.7
E21K IAmb IAmb 04 42 33.1
comp=Z,7.0nm,0.6s
E21K **Killik River** 70.41 23 P P 04 42 31.1 +0.3
baz=273,SNR=14
L19K **White Mountain** 70.41 30 P P 04 42 31.6 +0.7
L19K IAmb IAmb 04 42 52.7
comp=Z,11nm,1.2s
L19K **White Mountain** 70.41 30 P P 04 42 31.0 +0.1
baz=274
O18K **Koktuh Hills** 70.41 32 P P 04 42 31.0 0.0
O18K **Koktuh Hills** 70.41 32 P P 04 42 31.0 0.0
baz=275
P18K **Big Mountain,** 70.44 33 P P 04 42 31.3 +0.1
P18K **Big Mountain,** 70.44 33 P P 04 42 31.1 -0.1
baz=275
ACHA **Angle Creek He** 70.49 34 P P 04 42 29.6 -1.9
ACHA IAmb IAmb 04 43 09.2
comp=Z,28nm,1.4s
CHIR **Chirikof Islan** 70.56 36 P P 04 42 31.8 -0.1
baz=276
IMAR **Indian Mountai** 70.63 26 P P 04 42 33.0 +0.8
F21K **Alatna River** 70.66 24 P P 04 42 34.0 +1.6
F21K **Alatna River** 70.66 24 P P 04 42 32.4 +0.1
baz=274
K20K **Telida** 70.68 28 P P 04 42 32.8 +0.2
K20K IAmb IAmb 04 43 49.5
comp=Z,18nm,1.6s
K20K **Telida** 70.68 28 P P 04 42 33.1 +0.6
baz=274
N19K **Bonanza Creek** 70.69 31 P P 04 42 32.9 +0.1
N19K IAmb IAmb 04 42 48.7
comp=Z,28nm,1.5s
N19K **Bonanza Creek** 70.69 31 P P 04 42 33.2 +0.4
baz=275
G21K **Allakaket** 70.69 25 P P 04 42 33.7 +1.1
G21K **Allakaket** 70.69 25 P P 04 42 33.2 +0.7
baz=274
O19K **Port Alsworth** 70.83 32 P P 04 42 34.0 +0.6
baz=275
D22K **Ayikyak River** 70.85 23 P 04 42 34.2 +0.7
D22K IAmb IAmb 04 42 35.5
comp=Z,5.9nm,0.7s
D22K **Ayikyak River** 70.85 23 P P 04 42 33.9 +0.3
baz=274
H21K **Melozitna Rive** 71.04 26 P P 04 42 35.1 +0.4
H21K IAmb IAmb 04 42 36.7
comp=Z,29nm,1.6s
H21K **Melozitna Rive** 71.04 26 P P 04 42 35.7 +1.0
baz=275,SNR=5.7
E22K **Anaktuvuk Pass** 71.23 23 P 04 42 36.0 +0.1
E22K IAmb IAmb 04 42 38.0
comp=Z,6.0nm,0.7s
E22K **Anaktuvuk Pass** 71.23 23 P P 04 42 36.4 +0.5
baz=275,SNR=9.9
M20K **Styx River** 71.24 30 P P 04 42 35.9 -0.2
baz=276
SII **Sitkinak Islan** 71.28 36 P P 04 42 36.4 +0.1
baz=277
Q19K **Cape Douglas,** 71.30 33 P P 04 42 35.5 -0.9
Q19K **Cape Douglas,** 71.30 33 P P 04 42 36.4 0.0
baz=276
CHUM **Lake Minchumin** 71.41 28 P P 04 42 37.5 +0.5
baz=276
I21K **Tanana** 71.43 26 P P 04 42 37.5 +0.4
I21K IAmb IAmb 04 42 51.3
comp=Z,11nm,1.1s
I21K **Tanana** 71.43 26 P P 04 42 37.4 +0.4
baz=276
P19K **Oil Pt** 71.43 32 P P 04 42 37.4 +0.3
baz=276
C23K **Itkillik River** 71.51 21 P P 04 42 37.7 +0.3
C23K IAmb IAmb 04 42 39.2
comp=Z,6.6nm,0.7s
C23K **Itkillik River** 71.51 21 P P 04 42 37.4 -0.1
baz=275
D23K **Nanushuk River** 71.57 22 P P 04 42 38.7 +0.9
D23K IAmb IAmb 04 42 40.4
comp=Z,10.0nm,0.8s
D23K **Nanushuk River** 71.57 22 P P 04 42 37.7 -0.1
baz=276
PPLA **Purkeypile** 71.57 29 P P 04 42 38.1 -0.1
PPLA **Purkeypile** 71.57 29 P P 04 42 38.1 -0.1
baz=276
H22K **Ishtalitna Cre** 71.61 26 P P 04 42 38.8 +0.7
H22K IAmb IAmb 04 42 40.4
comp=Z,22nm,1.5s
H22K **Ishtalitna Cre** 71.61 26 P P 04 42 38.1 -0.1
baz=276,SNR=7.6
OHAK **Old Harbor** 71.69 35 P P 04 42 37.8 -0.9
OHAK **Old Harbor** 71.69 35 P P 04 42 38.3 -0.4
baz=277
SPCR **Spurr Chakacha** 71.76 31 P P 04 42 38.8 -0.3
baz=277
SPU **Mount Spurr** 71.83 31 P 04 42 39.1 -0.5
SPU IAmb IAmb 04 43 36.6
comp=Z,26nm,1.8s
STLK **Strandline Lak** 71.90 30 P P 04 42 40.0 0.0
STLK IAmb IAmb 04 43 04.2
comp=Z,27nm,1.8s
COLD **Coldfoot** 71.93 24 P P 04 42 40.6 +0.6
COLD **Coldfoot** 71.93 24 P P 04 42 40.0 0.0
baz=276
BPAW **Bear Paw Mtn.** 71.97 27 P 04 42 40.7 +0.4
BPAW IAmb IAmb 04 42 41.9
comp=Z,19nm,1.4s
BPAW **Bear Paw Mtn.** 71.97 27 P P 04 42 40.1 -0.2
baz=277
SKT **Skwentna** 71.98 30 P 04 42 39.7 -0.7
SKT IAmb IAmb 04 45 14.4
comp=Z,51nm,2.0s
SKT **Skwentna** 71.98 30 P P 04 42 40.3 -0.1
baz=277
KDAK **Kodiak Island** 71.99 34 P P 04 42 39.9 -0.6
TOLK **Toolik Lake Re** 72.00 23 P P 04 42 40.1 -0.4
baz=277,SNR=6.6
E23K **Chandalar** 72.06 23 P 04 42 41.0 +0.1
E23K IAmb IAmb 04 42 42.8
comp=Z,6.4nm,0.7s
E23K **Chandalar** 72.06 23 P P 04 42 40.6 -0.2
baz=277
G23K **Bananza Creek** 72.06 25 P P 04 42 40.7 -0.2
baz=277
KTH **Kantishna Hill** 72.07 28 P P 04 42 40.9 -0.1
KTH IAmb IAmb 04 43 03.6
comp=Z,14nm,1.2s
C24K **Franklin Bluff** 72.18 21 IAmb IAmb 04 42 43.0
comp=Z,8.4nm,0.7s
C24K **Franklin Bluff** 72.18 21 P P 04 42 41.4 -0.1
baz=277
D24K **Happy Valley** 72.21 22 IAmb IAmb 04 42 43.4
comp=Z,9.0nm,0.7s
D24K **Happy Valley** 72.21 22 P P 04 42 41.2 -0.4
baz=277
L22K **Petersville** 72.27 29 IAmb IAmb 04 43 04.2
comp=Z,26nm,1.4s
CAPN **Captain Cook N** 72.32 31 P P 04 42 41.9 -0.5
baz=278
TRF **Thorofare Moun** 72.36 28 P P 04 42 43.2 +0.3
TRF **Thorofare Moun** 72.36 28 P P 04 42 42.5 -0.4
baz=278
SUA **Susitna One** 72.42 30 P P 04 42 43.1 -0.1
SUA **Susitna One** 72.42 30 P P 04 42 42.8 -0.4
baz=278
CNPM **China Poot** 72.45 32 P P 04 42 42.3 -1.0
E24K **Your Creek** 72.47 23 IAmb IAmb 04 42 45.5
comp=Z,8.5nm,0.7s
E24K **Your Creek** 72.47 23 P P 04 42 43.0 -0.3
baz=278,SNR=15
I23K **Minto, Yukon-K** 72.53 26 IAmb IAmb 04 43 02.8
comp=Z,26nm,1.6s
I23K **Minto, Yukon-K** 72.53 26 P P 04 42 43.4 -0.3
baz=278
BRLK **Bradley Lake** 72.59 32 P 04 42 43.7 -0.4
BRSE **Bradley Lake S** 72.67 32 P P 04 42 44.2 -0.4
baz=278
NEA2 **Nenana** 72.73 27 IAmb IAmb 04 42 45.4
comp=Z,11nm,1.2s
NEA2 P P 04 42 45.5 +0.7
NEA2 **Nenana** 72.73 27 P P 04 42 44.2 -0.7
baz=278
SLKM **Skilak Lake** 72.81 31 P P 04 42 44.5 -1.0
MCK **McKinley** 72.92 28 P P 04 42 45.3 -0.7
baz=279
RC01 **Rabbit Creek A** 72.96 31 P P 04 42 45.8 -0.5
baz=279
RND **Reindeer** 73.01 28 IAmb IAmb 04 43 01.4
comp=Z,8.4nm,0.7s
H24K **Noodor Dome** 73.04 25 P P 04 42 46.6 -0.1
baz=279
D25K **Kavik River** 73.05 22 IAmb IAmb 04 42 48.2
comp=Z,8.5nm,0.7s
D25K **Kavik River** 73.05 22 P P 04 42 46.9 +0.2
baz=279
O22K **Cooper Landing** 73.06 31 P P 04 42 46.5 -0.3
baz=279
G24K **Hadweenzic Riv** 73.06 25 P P 04 42 46.6 -0.2
baz=279,SNR=5.8
PMR **Palmer** 73.17 30 P P 04 42 46.9 -0.5
PMR **Palmer** 73.17 30 P P 04 42 47.1 -0.3
baz=279
WRH **Wood River Hil** 73.17 27 P 04 42 47.8 +0.3
COLA **College** 73.21 26 P P 04 42 47.3 -0.3
baz=279
WAT1 **Susitna Watana** 73.23 29 P P 04 42 47.6 -0.3
baz=279
SEW **Seward** 73.25 32 P P 04 42 47.9 -0.1
baz=279
CCB **Clear Creek Bu** 73.26 27 P P 04 42 49.2 +1.2
POKR **Poker Plat Res** 73.34 26 P P 04 42 48.4 -0.1
baz=280
C26K **Camden Bay** 73.45 21 P P 04 42 49.8 +0.8
baz=280,SNR=6.3
SML **Sawmill** 73.51 30 P P 04 42 49.0 -0.5
SML IAmb IAmb 04 43 07.0
comp=Z,16nm,1.0s
SML **Sawmill** 73.51 30 P P 04 42 49.6 0.0
baz=280
KNK **Knik Glacier** 73.52 30 P P 04 42 49.5 -0.1
baz=280
E25K **Arctic Village** 73.55 23 P P 04 42 50.5 +0.8
E25K IAmb IAmb 04 43 38.9
comp=Z,23nm,1.9s
E25K **Arctic Village** 73.55 23 P P 04 42 50.0 +0.4
baz=280
F25K **Christian Rive** 73.62 24 IAmb IAmb 04 42 52.3
comp=Z,6.1nm,0.7s
F25K **Christian Rive** 73.62 24 P P 04 42 50.9 +0.8
baz=280,SNR=10
IL31 **Sawmill** 73.63 27 IAmb IAmb 04 43 05.7
comp=Z,17nm,1.4s
ILAR **Eielson Array** 73.63 27 P P 04 42 48.9 -1.3
comp=Z,1.3nm,0.7s,baz=271,slow=5.7,SNR=31
comp=Z,1.3nm,0.7s
WAT6 **Susitna Watana** 73.65 29 P P 04 42 50.4 -0.1
baz=280
HDA **Harding Lake** 73.67 27 P P 04 42 49.1 -1.3
HDA IAmb IAmb 04 43 43.9
comp=Z,26nm,1.8s
HDA **Harding Lake** 73.67 27 P P 04 42 50.5 +0.1
baz=280
M23K **Glacier View** 73.79 30 P P 04 42 51.4 +0.2
baz=280
C27K **Jago River** 73.92 21 P P 04 42 52.3 +0.6
baz=282
SCM **Sheep Creek Mo** 73.97 30 P P 04 42 52.1 -0.2
baz=281
BMAR **Burnt Mountain** 74.05 24 P P 04 42 53.9 +1.3
PRP **Porcupine Dome** 74.06 26 P 04 42 51.6 -1.2
PRP IAmb IAmb 04 42 54.5
comp=Z,20nm,1.8s
PRP **Porcupine Dome** 74.06 26 P P 04 42 53.0 +0.2
baz=281
ARCES **ARCESS Array B** 74.06 339 P P 04 42 52.7 +0.1
comp=Z,4.2nm,0.8s,baz=77,slow=3.5,SNR=7.9
comp=Z,4.2nm,0.8s
F26K **Sheenjek River** 74.16 23 IAmb IAmb 04 42 56.3
comp=Z,28nm,1.9s
F26K **Sheenjek River** 74.16 23 P P 04 42 53.5 +0.2
baz=282
SPB2 **Spitsbergen Ar** 74.26 348 P P 04 42 53.3 -0.3
SPITS **Spitsbergen Ar** 74.26 348 P P 04 42 54.0 +0.3
comp=Z,2.5nm,0.5s,baz=66,slow=8.5,SNR=9.1
SPITS LR LR 05 18 52.8
comp=Z,66nm,18.9s,baz=108,slow=38
comp=Z,2.5nm,0.5s
P23K **Montague Islan** 74.28 31 P P 04 42 54.2 +0.2
baz=281
K24K **Donnelly Dome** 74.29 27 IAmb IAmb 04 42 55.8
comp=Z,13nm,0.6s
K24K **Donnelly Dome** 74.29 27 P P 04 42 54.1 +0.1
baz=282
J25K **Salcha River,** 74.30 27 P P 04 42 53.6 -0.5
baz=282
G26K **Porcupine Rive** 74.45 24 IAmb IAmb 04 42 57.0
comp=Z,6.4nm,0.7s
G26K **Porcupine Rive** 74.45 24 P P 04 42 55.2 +0.3
baz=282
M24K **Tolsona, Glenn** 74.45 29 P P 04 42 55.9 +0.8
M24K **Tolsona, Glenn** 74.45 29 P P 04 42 54.6 -0.4
baz=282
PAX **Paxson** 74.60 28 P P 04 42 55.6 -0.4
baz=282
HIN **Hinchinbrook I** 74.65 31 P P 04 42 55.7 -0.5
KLU **Klutina** 74.70 30 P P 04 42 56.6 +0.1
KLU IAmb IAmb 04 43 04.2
comp=Z,36nm,1.4s
KLU **Klutina** 74.70 30 P P 04 42 56.3 -0.3
baz=282
RIDG **Independent Ri** 74.71 27 P P 04 42 56.6 0.0
RIDG IAmb IAmb 04 43 08.3
comp=Z,7.8nm,0.8s
RIDG **Independent Ri** 74.71 27 P P 04 42 56.3 -0.2
baz=282
HARP **HAARP** 74.86 29 P P 04 42 57.4 +0.1
baz=282
Q23K **Middleton Isla** 74.92 32 P P 04 42 57.6 -0.1
baz=282
D27M **Malcolm River** 74.95 21 P P 04 42 57.7 -0.1
baz=284
EYAK **Cordova Ski Ar** 74.98 31 P P 04 42 58.1 +0.1
SCRK **Sand Creek** 75.03 27 P P 04 42 58.2 -0.3
SCRK IAmb IAmb 04 43 09.5
comp=Z,22nm,1.8s
SCRK **Sand Creek** 75.03 27 P P 04 42 58.4 -0.1
baz=283
I26K **Coal Creek Min** 75.07 26 P P 04 42 58.9 +0.4
baz=283
N25K **Chitina, Valde** 75.29 30 P P 04 43 00.5 +0.5
baz=283
G27K **Doyon Strip** 75.30 24 P P 04 43 01.0 +1.1
G27K **Doyon Strip** 75.30 24 P P 04 43 00.3 +0.5
baz=284
BMRM **Bremner River** 75.43 30 P P 04 43 00.6 -0.1
baz=283
H27K **Steamboat Moun** 75.50 25 IAmb IAmb 04 43 03.1
comp=Z,33nm,1.9s
H27K **Steamboat Moun** 75.50 25 P P 04 43 01.2 +0.2
baz=285
L26K **Log Cabin Wild** 75.53 28 IAmb IAmb 04 43 02.1
comp=Z,44nm,1.9s
L26K **Log Cabin Wild** 75.53 28 P P 04 43 00.6 -0.6
baz=284
RAGM **Ragged Mountai** 75.53 31 P P 04 42 59.6 -1.7
E28M **Babbage River** 75.62 22 IAmb IAmb 04 43 03.2
comp=Z,32nm,1.9s
E28M **Babbage River** 75.62 22 P P 04 43 01.4 -0.2
baz=286,SNR=9.8
I27K **Kandik River** 75.62 25 P P 04 43 01.5 -0.3
baz=285
FINES **FINESS Array B** 75.65 330 P P 04 43 01.8 -0.1
comp=Z,3.3nm,0.7s,baz=68,slow=5.9,SNR=6.1
comp=Z,3.3nm,0.7s
D28M **Stokes Point** 75.69 21 P P 04 43 02.0 0.0
baz=286
GLB **Gilahina Butte** 75.70 30 P P 04 43 02.7 +0.4
F28M **Old Crow** 75.77 23 IAmb IAmb 04 43 04.1
comp=Z,8.1nm,0.9s
F28M **Old Crow** 75.77 23 P P 04 43 02.7 +0.3
baz=286,SNR=5.9
KAIM **Kayak Island** 75.77 31 P P 04 43 03.0 +0.4
baz=284
M26K **Nabesna, AK** 75.84 29 IAmb IAmb 04 43 09.6
comp=Z,33nm,1.6s
M26K **Nabesna, AK** 75.84 29 P P 04 43 02.7 -0.3
baz=284
BRTR **Keskin Array B** 76.05 307 P P 04 43 04.8 0.0
comp=Z,0.6nm,0.7s,baz=75,slow=4.7,SNR=4.2
BRTR LR LR 05 20 55.5
comp=Z,69nm,18.1s,baz=338,slow=39
comp=Z,0.6nm,0.7s
MCARA **McCarthy VSAT** 76.08 30 P P 04 43 04.1 -0.3
baz=284
L27K **Beaver Creek,** 76.19 28 P P 04 43 06.1 +1.1
L27K IAmb IAmb 04 43 50.3
comp=Z,36nm,2.0s
L27K **Beaver Creek,** 76.19 28 P P 04 43 05.3 +0.3
baz=285
CRQE **Cirque** 76.20 30 P P 04 43 05.1 -0.1
baz=285
BCAR **Beaver Creek A** 76.21 28 P P 04 43 05.7 +0.6
E29M **Blow River** 76.26 22 P P 04 43 05.5 +0.3
baz=287
MMAI **Mount Meron Ar** 76.26 300 LR LR 05 21 50.3
comp=Z,69nm,18.5s,baz=46,slow=40
I28M **Miner Creek** 76.34 25 P P 04 43 06.0 +0.1
baz=286
M27K **Edge Creek, AK** 76.35 28 P 04 43 06.5 +0.4
M27K IAmb IAmb 04 43 19.0
comp=Z,42nm,1.7s
M27K **Edge Creek, AK** 76.35 28 P P 04 43 05.9 -0.2
baz=285
AKASG **Malin Array Be** 76.50 319 P P 04 43 05.9 -1.1
comp=Z,0.7nm,0.5s,baz=65,slow=5.5,SNR=4.4
comp=Z,0.7nm,0.5s
AKASG **Malin Array Be** 76.50 319 P P 04 43 06.2 -0.8
G29M **Pine Creek** 76.66 23 P P 04 43 07.5 -0.1
baz=288
BVCY **Beaver Creek** 76.79 28 P P 04 43 08.6 +0.1
baz=286
BARN **Barnard Glacie** 76.80 30 P P 04 43 08.1 -0.6
BARN IAmb IAmb 04 45 00.1
comp=Z,35nm,1.4s
TKNZ **Takaka Hill** 76.89 142 P P 04 43 09.0 -0.2
MESA **MESA** 76.90 31 P P 04 43 08.9 -0.4
baz=286
DAWY **Dawson** 76.96 26 P P 04 43 09.2 -0.2
baz=287
CTG **Chitna Glacier** 76.97 30 P P 04 43 09.4 -0.2
baz=286
CTGM **Chitina Glacie** 76.98 30 P P 04 43 09.7 0.0
MRNZ **Matariki Terra** 77.01 143 P P 04 43 11.1 +1.3
I29M **Ogilvie Camp,** 77.02 25 P P 04 43 09.7 +0.1
baz=288
YUK3 **Moose Creek** 77.15 29 P P 04 43 10.5 -0.2
baz=286
NNZ **Nelson** 77.25 142 P P 04 43 11.3 +0.1
F30M **Barrier River** 77.26 22 IAmb IAmb 04 43 12.0
comp=Z,13nm,1.0s
F30M **Barrier River** 77.26 22 P P 04 43 10.6 -0.3
baz=289
MHA **Mahukona** 77.27 73 P P 04 43 09.9 -1.9
G30M **tAoh Zrail Nji** 77.31 23 IAmb IAmb 04 43 11.7
comp=Z,9.0nm,0.9s
G30M **tAoh Zraii Nji** 77.31 23 P P 04 43 11.0 -0.3
baz=289
EPYK **Eagle Plains** 77.32 24 P P 04 43 11.2 -0.1
baz=289
J29N **Klondike Camp** 77.33 26 P P 04 43 13.9 +2.4
J29N IAmb IAmb 04 43 25.8
comp=Z,37nm,1.5s
J29N **Klondike Camp** 77.33 26 P P 04 43 11.3 -0.2
baz=288
EIL **Elat** 77.47 297 LR LR 05 22 08.7
comp=Z,73nm,18.4s,baz=2.0,slow=39
O28M **Mount Upton** 77.57 30 P P 04 43 13.2 +0.1
O28M **Mount Upton** 77.57 30 P P 04 43 13.0 -0.1
baz=287
LBZ **Lake Benmore** 77.58 146 P P 04 43 13.8 +0.8
RPZ **Rata Peaks** 77.59 145 P P 04 43 14.0 +0.9
YUK8 **Steele Glacier** 77.62 29 P P 04 43 12.9 -0.5
baz=287
L29M **L29M** 77.79 27 IAmb IAmb 04 43 16.1
comp=Z,20nm,1.2s
L29M **L29M** 77.79 27 P P 04 43 14.1 +0.1
baz=288
K29M **Barlow Dome** 77.81 26 P P 04 43 13.7 -0.5
baz=289
INK **Inuvik** 77.81 22 P P 04 43 14.0 0.0
baz=291,SNR=5.1
I30M **Mount Dempster** 77.83 25 IAmb IAmb 04 43 25.1
comp=Z,12nm,1.4s
I30M **Mount Dempster** 77.83 25 P P 04 43 14.3 -0.1
baz=289
M29M **Somme Creek** 77.85 28 IAmb IAmb 04 43 27.8
comp=Z,12nm,1.2s
M29M **Somme Creek** 77.85 28 P P 04 43 14.4 -0.1
baz=288
G31M **Satah River** 78.05 23 IAmb IAmb 04 43 25.6
comp=Z,12nm,1.3s
G31M **Satah River** 78.05 23 P P 04 43 15.0 -0.3
baz=291
F31M **Tsiigehtchic** 78.05 22 IAmb IAmb 04 43 15.8
comp=Z,8.3nm,0.7s
F31M **Tsiigehtchic** 78.05 22 P P 04 43 14.9 -0.4
baz=291,SNR=8.0
J30M **Hart River** 78.06 26 P P 04 43 15.6 -0.1
baz=290
YUK4 **Talbot Arm** 78.11 29 P P 04 43 15.7 -0.4
baz=288
YUK6 **Outpost Mounta** 78.37 29 P P 04 43 17.0 -0.5
baz=288
H31M **Peel River** 78.42 24 IAmb IAmb 04 43 18.2
comp=Z,12nm,1.1s
H31M **Peel River** 78.42 24 P P 04 43 17.3 -0.2
baz=291
O29M **Mount Kennedy** 78.47 30 P P 04 43 17.5 -0.5
baz=288
M30M **Minto, Yukon** 78.54 28 P P 04 43 18.2 0.0
baz=290
N30M **Aishikik Lake** 78.78 29 P P 04 43 19.1 -0.5
baz=290
HYT **Haines Junctio** 78.81 29 P P 04 43 20.0 +0.2
baz=289
A36M **Sachs Harbour** 78.84 17 IAmb IAmb 04 43 20.3
comp=Z,19nm,0.8s
A36M **Sachs Harbour** 78.84 17 P P 04 43 19.8 +0.2
baz=298,SNR=16
P30M **Million Dollar** 79.30 30 P P 04 43 22.3 -0.1
baz=290
N31M **Braeburn, Yuko** 79.36 28 P P 04 43 23.1 +0.3
baz=291
O30N **Mendenhall** 79.48 29 P P 04 43 23.0 -0.4
baz=290
M31M **Drury Creek, Y** 79.72 27 P P 04 43 24.9 +0.2
baz=292

FURI	**Furi**	**80.00**	**276**	LR	LR	05 19 05.5		
	comp=Z,31nm,18.7s,baz=44,slow=36							
WHY	**Whitehorse**	**80.07**	**29**	P	**P**	**04 43 26.6**	**0.0**	
	baz=292							
C36M	**Paulatuk**	**80.47**	**19**	IAmb	IAmb	04 43 28.8		
	comp=Z,14nm,0.8s							
C36M	**Paulatuk**	**80.47**	**19**	P	**P**	**04 43 28.2**	**-0.2**	
	baz=300,SNR=14							
N32M	**Quiet Lake**	**80.70**	**28**	P	**P**	**04 43 29.7**	**-0.3**	
	baz=293							
P32M	**Atlin**	**81.02**	**30**	P	**P**	**04 43 31.0**	**-0.7**	
	baz=293							
R32K	**Eaglecrest**	**81.13**	**31**	P	**P**	**04 43 32.2**	**0.0**	
	baz=292							
SIT	**Sitka**	**81.19**	**33**	P	**P**	**04 43 32.8**	**+0.4**	
	baz=292							
P33M	**Teslin, Yukon**	**81.19**	**29**	P	**P**	**04 43 32.4**	**-0.2**	
	baz=293							
HFS	**Hagfors**	**81.81**	**331**	P	**P**	**04 43 35.1**	**-0.7**	
	comp=Z,3.3nm,0.7s,baz=76,slow=6.1,SNR=6.2							
HFS				LR	LR	05 21 52.0		
	comp=Z,284nm,18.8s,baz=341,slow=37							
	comp=Z,3.3nm,0.7s							
R33M	**Jennings River**	**82.38**	**29**	P	**P**	**04 43 38.3**	**-0.7**	
	baz=295							
OJC	**Ojcow**	**82.39**	**321**	P	**P**	**04 43 39.7**	**+0.6**	
NOA	**NORSAR Array B**	**82.53**	**333**	P	**P**	**04 43 38.5**	**-1.0**	
	comp=Z,1.0nm,0.7s,baz=62,slow=5.3,SNR=2.0							
NOA				LR	LR	05 23 19.1		
	comp=Z,220nm,19.1s,baz=65,slow=38							
	comp=Z,1.0nm,0.7s							
U33K	**Whale Pass**	**82.67**	**33**	P	**P**	**04 43 40.7**	**+0.3**	
	baz=294							
CRAG	**Craig**	**82.93**	**34**	P	**P**	**04 43 41.4**	**-0.3**	
	baz=294							
WTLY	**Watson Lake, Y**	**83.05**	**28**	P	**P**	**04 43 42.4**	**0.0**	
	baz=297							
DLBC	**Dease Lake**	**83.23**	**30**	LR	LR	05 24 51.4		
	comp=Z,38nm,18.1s,baz=150,slow=39							
RES	**Resolute Bay**	**83.52**	**9**	P	**P**	**04 43 44.2**	**-0.2**	
	comp=Z,9.5nm,0.8s,baz=331,slow=6.1,SNR=38							
	comp=Z,9.5nm,0.8s							
RES	**Resolute Bay**	**83.52**	**9**	IAmb	IAmb	04 43 45.5		
	comp=Z,13nm,0.9s							
V35K	**Ketchikan**	**83.78**	**33**	P	**P**	**04 43 45.4**	**-0.6**	
	baz=295							
WRGLY	**Wrigley**	**83.78**	**24**	P	**P**	**04 43 46.1**	**+0.2**	
	baz=301							
GERES	**GERESS Array B**	**86.58**	**321**	P	**P**	**04 44 00.2**	**-0.2**	
	comp=Z,0.5nm,0.6s,baz=52,slow=6.4,SNR=2.4							
	comp=Z,0.5nm,0.6s							
RAR	**Rarotonga**	**87.24**	**113**	LR	LR	05 19 49.6		
	comp=Z,30nm,18.2s,baz=234,slow=33							
POIN	**Pond Inlet**	**87.39**	**6**	IAmb	IAmb	04 44 04.7		
	comp=Z,22nm,1.6s							
YKA	**Yellowknife Ar**	**87.53**	**23**	P	**P**	**04 44 04.6**	**0.0**	
	comp=Z,10nm,0.7s,baz=312,slow=5.5,SNR=186							
	comp=Z,10nm,0.7s							
YKA	**Yellowknife Ar**	**87.53**	**23**	P	**P**	**04 44 04.8**	**+0.3**	
DAVOX	**Davos/Dischmat**	**89.81**	**320**	LR	LR	05 28 03.8		
	comp=Z,188nm,20.6s,baz=339,slow=38							
ILON	**Igloolik, Nuna**	**90.11**	**8**	IAmb	IAmb	04 44 17.2		
	comp=Z,8.1nm,1.0s							
BLKN	**Baker Lake**	**91.91**	**15**	IAmb	IAmb	04 44 25.3		
	comp=Z,7.2nm,0.8s							
PINE	**Pine Mountain**	**95.44**	**40**	P	**P**	**04 44 42.7**	**+0.6**	
PINE				IAmb	IAmb	04 44 45.8		
	comp=Z,12nm,1.4s							
L04D	**Klamath Falls**	**95.45**	**42**	P	**P**	**04 44 42.3**	**+0.3**	
J05D	**Fort Rock, OR**	**95.54**	**41**	P	**P**	**04 44 43.2**	**+0.8**	
K05A	**Summer Lake**	**96.06**	**41**	P	**P**	**04 44 45.6**	**+0.8**	
FRB	**Frobisher Bay**	**96.93**	**4**	LR	LR	05 32 21.3		
	comp=Z,47nm,18.8s,baz=68,slow=38							
LSZ	**Lusaka**	**97.58**	**257**	LR	LR	05 29 20.4		
	comp=Z,82nm,18.3s,baz=136,slow=36							
FFC	**Flin Flon**	**97.67**	**24**	P	**P**	**04 44 51.5**	**-0.1**	
NVAR	**Mina Array Bea**	**100.08**	**43**	P	**Pdif**	**04 45 00.8**	**-2.2**	
	comp=Z,0.7nm,0.7s,baz=312,slow=5.1,SNR=6.9							
TORD	**Torodi Ar. Bea**	**112.18**	**294**	PKKPab	PKKPab	05 00 53.0	-0.9	
	comp=Z,2.1nm,0.9s,baz=252,slow=3.4,SNR=8.0							
TORD	**Torodi Ar. Bea**	**112.18**	**294**	PKKPab	PKKPab	05 00 53.2	-0.7	
TXAR	**Lajitas Array**	**115.22**	**43**	PKP	**PKPdf**	**04 49 59.4**	**+0.4**	
	comp=Z,1.5nm,0.6s,baz=320,slow=2.1,SNR=21							
ROSC	**El Rosal**	**151.66**	**34**	PKPbc	**PKPbc**	**04 51 12.1**	**-0.6**	
	comp=Z,16nm,0.6s,baz=311,slow=20,SNR=5.5							
ROSC	**El Rosal**	**151.66**	**34**		**PKiKP**	**04 51 13.9**	**+0.8**	

IDC 22 04:44:37.7±4.9, 20°.53S×176°.33W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=211.1km s-min=35.4km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.19**	**244**	P	P	04 52 07.4	-0.2
	1.2nm,0.4s,baz=90,slow=11,SNR=4.6						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**46.03**	**257**	P	P	04 53 03.4	-0.1
	3.0nm,0.6s,baz=94,slow=7.5,SNR=22						
	3.0nm,0.6s						
WRA	**Warramunga Arr**	**46.15**	**262**	P	P	04 53 04.2	-0.1
	0.7nm,0.4s,baz=98,slow=8.8,SNR=12						
	0.7nm,0.4s						
H03S2	**Juan Fernandez**	**84.68**	**124**	T	T	06 31 31.0	
	baz=243						
H03S1	**Juan Fernandez**	**84.70**	**124**	T	T	06 31 41.3	
	baz=243,slow=74						
H03S3	**Juan Fernandez**	**84.70**	**124**	T	T	06 31 33.1	
	baz=243,slow=74						
H03N2	**Juan Fernandez**	**84.82**	**124**	T	T	06 31 49.3	
	baz=241						
H03N3	**Juan Fernandez**	**84.82**	**124**	T	T	06 31 48.9	
	baz=241						
H03N1	**Juan Fernandez**	**84.84**	**124**	T	T	06 31 49.9	
	baz=241						
ILAR	**Eielson Array**	**88.00**	**12**	P	P	04 57 29.2	-0.1
	0.4nm,0.8s,baz=209,slow=4.6,SNR=6.3						
	0.4nm,0.8s						

*NEIC **22** 04:51:53.5±2.0, 43°.15N±0°.06×126°.31W±0°.05, h10km±2km, ML3.0/104, Error ellipse: s-maj=10.6km s-min=4.4km az=333.0*

*IDC **22** 04:51:54.5±1.8, 43°.24N×125°.93W, h0km, mb3.0/4, mbtmp3.3/9, ML3.5/5, MS3.3/6, Error ellipse: s-maj=28.1km s-min=11.1km az=56.0*

ISC 22 04:51:53.5±1.3, 43°.13N±0°.06×126°.4W±0°.1, h10km, n72, σ0s88/57, mb3.2/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
J01E	**Myrtle Point**	**1.77**	**88**		**Pn**	**04 52 22.6**	**-1.6**
J01E				IAML		04 52 47.1	
	comp=N,152nm,0.4s						
J01E				IAML		04 52 50.4	
	comp=E,159nm,0.4s						
KBO	**Bosley Butte**	**1.82**	**120**	Pn	Pn	04 52 23.1	-1.8
K02D	**Willamette Mer**	**2.02**	**101**		**Pn**	**04 52 26.4**	**-1.3**
I02E	**Swisshome, OR**	**2.06**	**61**		**Pn**	**04 52 27.1**	**-1.2**
I02E				IAML		04 52 52.6	
	comp=E,141nm,0.1s						
I03D	**Drain, OR**	**2.26**	**74**		**Pn**	**04 52 29.9**	**-1.0**
L02F	**Cave Junction**	**2.29**	**115**		**Pn**	**04 52 30.2**	**-1.1**
COR	**Corvallis**	**2.64**	**56**		**Pn**	**04 52 35.9**	**-0.3**
COR				IAML		04 53 16.3	
	comp=E,44nm,1.1s						
COR				IAML		04 53 17.1	
	comp=E,60nm,0.7s						
BUCK	**Buck Mountain**	**2.67**	**65**		**Pn**	**04 52 36.6**	**+0.1**
BBOR	**Butler Butte**	**2.71**	**94**		**Pn**	**04 52 37.1**	**-0.1**
JCC	**Jacoby Creek,**	**2.89**	**142**	Pn	Pn	04 52 39.0	-0.6
JCC				IAML		04 53 36.4	
	comp=E,38nm,2.0s						
I04A	**Tendick Farm,**	**2.95**	**76**		**Pn**	**04 52 40.6**	**+0.2**
I04A				IAML		04 53 20.3	
	comp=E,60nm,0.3s						
I04A				IAML		04 53 21.9	
	comp=N,50nm,0.6s						
H04D	**Lebanon**	**2.96**	**61**		**Pn**	**04 52 40.8**	**+0.1**
H04D				IAML		04 53 21.9	
	comp=E,56nm,0.5s						
H04D				IAML		04 53 26.1	
	comp=N,44nm,0.6s						
KHMM	**Horse Mountain**	**2.98**	**138**	Pn	**Pn**	**04 52 40.7**	**-0.3**
KHMM				IAML		04 53 06.7	
	comp=E,34nm,2.6s						
YBH	**Yreka Blue Hor**	**3.04**	**116**	Pn	**Pn**	**04 52 41.6**	**-0.1**
	comp=E,0.1nm,0.3s,baz=306,slow=9.0,SNR=22						
YBH				Lg	Lg	04 53 20.5	
	comp=E,0.1nm,0.3s,baz=270,slow=3.0,SNR=4.2						
YBH	**Yreka Blue Hor**	**3.04**	**116**		**Pn**	**04 52 41.8**	**+0.1**
G03D	**McMinnville, O**	**3.04**	**46**		**Pn**	**04 52 41.4**	**-0.3**
J04A	**Umpqua Nationa**	**3.11**	**87**		**Pn**	**04 52 43.8**	**+1.1**
L04D	**Klamath Falls**	**3.12**	**106**		**Pn**	**04 52 43.4**	**+0.5**
L04D				IAML		04 53 26.9	
	comp=E,37nm,2.8s						
M02C	**Callahan**	**3.12**	**123**		**Pn**	**04 52 42.5**	**-0.4**
H04A	**Detroit Lake**	**3.39**	**61**		**Pn**	**04 52 46.8**	**+0.4**
H04A				IAML		04 53 30.6	
	comp=N,41nm,0.5s						
H04A				IAML		04 53 34.0	
	comp=E,35nm,0.6s						
K04D	**Chiloquin, OR**	**3.42**	**97**		**Pn**	**04 52 46.9**	**-0.1**
K04D				IAML		04 53 44.1	
	comp=N,53nm,1.3s						
K04D				IAML		04 53 50.8	
	comp=E,48nm,1.6s						
WIFE	**Three Sisters-**	**3.42**	**73**		**Pn**	**04 52 47.7**	**+0.6**
WIFE				IAML		04 53 36.1	
	comp=N,35nm,0.6s						
WIFE				IAML		04 53 51.6	
	comp=E,39nm,3.2s						
F03A	**Seaside**	**3.44**	**35**		**Pn**	**04 52 46.6**	**-0.5**
N02D	**Trinity Center**	**3.47**	**127**	Pn	Pn	04 52 46.2	-1.4
G04A	**Mulino**	**3.48**	**52**		**Pn**	**04 52 48.4**	**+0.8**
KMRM	**Mail Ridge**	**3.52**	**145**	Pn	**Pn**	**04 52 48.5**	**+0.2**
KMRM				IAML		04 54 00.2	
	comp=E,37nm,3.7s						
M03C	**McCloud**	**3.65**	**119**	Pn	**Pn**	**04 52 49.4**	**-0.7**
M03C				IAML		04 54 35.2	
	comp=E,26nm,2.4s						
M03C				IAML		04 54 48.1	
	comp=N,21nm,2.2s						
J05D	**Fort Rock, OR**	**3.75**	**86**		**Pn**	**04 52 51.7**	**+0.2**
J05D				IAML		04 53 50.4	
	comp=E,18nm,4.2s						
J05D				IAML		04 54 17.2	
	comp=N,18nm,4.2s						
RADR	**Rader Ridge**	**3.76**	**28**		**Pn**	**04 52 51.2**	**-0.4**
RADR				IAML		04 54 02.9	
	comp=N,26nm,2.4s						
RADR				IAML		04 55 12.0	
	comp=E,37nm,4.4s						
F04D	**Rainier, OR**	**3.80**	**38**		**Pn**	**04 52 52.4**	**+0.3**
I05D	**Terrebonne, OR**	**3.83**	**70**		**Pn**	**04 52 52.9**	**+0.4**
I05D				IAML		04 54 14.3	
	comp=N,28nm,4.8s						
I05D				IAML		04 54 49.9	
	comp=E,25nm,4.8s						
PINE	**Pine Mountain**	**4.00**	**79**		**Pn**	**04 52 55.2**	**+0.2**
PINE				IAML		04 54 12.8	
	comp=E,15nm,3.5s						
PINE				IAML		04 55 06.1	
	comp=N,17nm,4.4s						
HOOD	**Mount Hood Mea**	**4.03**	**55**		**Pn**	**04 52 56.5**	**+1.2**
HOOD				IAML		04 53 51.4	
	comp=N,34nm,0.7s						
K05A	**Summer Lake**	**4.03**	**94**		**Pn**	**04 52 55.7**	**+0.2**
K05A				IAML		04 53 30.2	
	comp=E,28nm,4.9s						
K05A				IAML		04 54 17.4	
	comp=N,23nm,4.5s						
G05A	**Wamic**	**4.19**	**58**		**Pn**	**04 52 58.3**	**+0.7**
G05A				IAML		04 54 19.4	
	comp=N,28nm,4.5s						
WISH	**Wishkah**	**4.39**	**24**		**Pn**	**04 52 59.4**	**-0.7**
O03E	**Paynes Creek**	**4.43**	**128**	Pn	**Pn**	**04 53 01.8**	**+1.0**
O03E				IAML		04 54 49.3	
	comp=E,19nm,4.8s						
O03E				IAML		04 55 38.2	
	comp=N,12nm,3.9s						
NLWA	**Neilton Lookou**	**4.61**	**22**		**Pn**	**04 53 03.3**	**+0.1**
NLWA				IAML		04 54 11.9	
	comp=N,18nm,4.2s						
NLWA				IAML		04 54 25.5	
	comp=N,17nm,4.8s						
G06A	**Carlson Farm,**	**4.62**	**61**	IAML		04 53 48.8	
	comp=E,11nm,3.8s						
G06A				IAML		04 54 04.9	
	comp=N,14nm,4.8s						
LON	**Longmire**	**4.85**	**40**	IAML		04 54 06.2	
	comp=N,14nm,0.7s						
LON				IAML		04 54 12.4	
	comp=E,12nm,0.6s						
C03A	**Quillayute Air**	**4.98**	**14**	Pn	**Pn**	**04 53 07.2**	**-1.0**
I07A	**Izee**	**5.06**	**77**		**Pn**	**04 53 10.2**	**+0.6**
I07A				IAML		04 54 15.2	
	comp=E,8.1nm,4.9s						
I07A				IAML		04 56 15.3	
	comp=N,6.9nm,5.0s						
GNW	**Green Mountain**	**5.08**	**28**		**Pn**	**04 53 09.6**	**-0.2**
GNW				IAML		04 55 05.2	
	comp=N,11nm,4.5s						
GNW				IAML		04 55 57.5	
	comp=E,10nm,2.9s						
D05A	**Enumclaw**	**5.10**	**36**		**Pn**	**04 53 10.7**	**+0.8**
ORV	**Oroville**	**5.11**	**133**		**Pn**	**04 53 10.3**	**+0.3**
ORV				IAML		04 54 44.0	
	comp=N,6.9nm,4.3s						
ORV				IAML		04 55 18.3	
	comp=E,7.8nm,5.0s						
F07A	**Phinny Hill Vi**	**5.36**	**57**		**Pn**	**04 53 13.6**	**+0.1**
F07A				IAML		04 54 05.9	
	comp=E,11nm,4.6s						
F07A				IAML		04 54 49.5	
	comp=N,13nm,4.7s						
MXC	**Moxie City**	**5.52**	**49**		**Pn**	**04 53 16.0**	**+0.3**
WVOR	**Wild Horse Val**	**5.72**	**94**	Pn	**Pn**	**04 53 17.4**	**-1.2**
G08A	**Pilot Rock**	**5.74**	**65**		**Pn**	**04 53 19.2**	**+0.4**
E07A	**Sunnyside**	**5.75**	**51**		**Pn**	**04 53 19.4**	**+0.5**
J08A	**Circle Bar Ran**	**5.76**	**85**	Pn	**Pn**	**04 53 18.2**	**-0.9**
HAWA	**Hanford**	**5.85**	**54**		**Pn**	**04 53 20.4**	**+0.2**
PGC	**Sidney**	**5.88**	**19**	Pn	**Pn**	**04 53 19.3**	**-1.3**
CLRS	**Cowichan Lake**	**5.90**	**14**	Pn	Pn	04 53 19.2	-1.7
NVAR	**Mina Array Bea**	**7.70**	**125**	Pn	**Pn**	**04 53 48.2**	**+2.2**
	comp=N,0.1nm,0.3s,baz=299,slow=14,SNR=5.0						
	comp=N,0.4nm,0.6s						
NEW	**Newport**	**8.25**	**48**	Pn	**Pn**	**04 53 53.8**	**+0.5**
	comp=N,0.6nm,0.3s,baz=231,slow=13,SNR=8.1						
NEW				LR	LR	04 57 01.6	
	comp=N,222nm,19.6s,baz=274,slow=39						
	comp=N,0.7nm,0.4s						
BBB	**Bella Bella**	**9.14**	**353**	Pn	**Pn**	**04 54 06.1**	**+0.8**
	comp=N,0.4nm,0.3s,baz=153,slow=14,SNR=1.2						
	comp=N,47nm,1.2s						
PFO	**Pinyon Flats O**	**12.26**	**138**	LR	LR	04 59 32.4	
	comp=N,138nm,18.1s,baz=355,slow=38						
PDAR	**Pinedale Array**	**12.32**	**86**	Pn	**Pn**	**04 54 51.3**	**+2.2**
	comp=N,0.1nm,0.3s,baz=273,slow=16,SNR=4.8						
PDAR				LR	LR	04 58 43.8	
	comp=N,66nm,19.8s,baz=334,slow=34						
	comp=N,0.7nm,0.9s						
DLBC	**Dease Lake**	**15.50**	**353**	LR	LR	05 00 05.9	
	comp=N,142nm,19.1s,baz=304,slow=32						
ANMO	**Albuquerque**	**17.46**	**111**	Pn	**Pn**	**04 55 55.8**	**-1.4**
	comp=N,0.1nm,0.3s,baz=301,slow=13,SNR=4.8						
	comp=N,1.4nm,1.0s						
YKA	**Yellowknife Ar**	**20.59**	**16**	P	**P**	**04 56 33.3**	**+0.9**
	comp=N,0.3nm,0.7s,baz=211,slow=11,SNR=5.6						
	comp=N,0.3nm,0.7s						
ULM	**Lac du Bonnet**	**21.98**	**60**	P	**P**	**04 56 45.4**	**-2.0**
	comp=N,1.3nm,0.6s,baz=254,slow=7.2,SNR=4.4						
ULM				LR	LR	05 05 50.0	
	comp=N,109nm,20.4s,baz=14,slow=39						
	comp=N,1.3nm,0.6s						
TXAR	**Lajitas Array**	**22.81**	**120**	P	**P**	**04 56 57.7**	**+1.2**
	comp=N,0.3nm,0.8s,baz=319,slow=12,SNR=2.4						
	comp=N,0.3nm,0.8s						
LPIG	**La Paz**	**23.14**	**140**	LR	LR	05 05 43.8	
	comp=N,85nm,18.4s,baz=210,slow=36						
ILAR	**Eielson Array**	**24.59**	**339**	P	**P**	**04 57 14.3**	**+0.8**
	comp=N,0.4nm,0.7s,baz=133,slow=7.5,SNR=8.5						
	comp=N,0.4nm,0.7s						
H11N3	**WAKE ISLAND Hy**	**59.94**	**269**	T	T	06 06 38.9	
	baz=51,slow=75,SNR=46						
H11N2	**WAKE ISLAND Hy**	**59.94**	**269**	T	T	06 06 31.6	
	baz=51,slow=75,SNR=37						
H11N1	**WAKE ISLAND Hy**	**59.96**	**269**	T	T	06 06 32.7	
	baz=51,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy**	**60.86**	**269**	T	T	06 07 46.0	
	baz=50,slow=75,SNR=142						
H11S2	**WAKE ISLAND Hy**	**60.87**	**269**	T	T	06 07 55.4	
	baz=50,slow=75,SNR=144						
H11S3	**WAKE ISLAND Hy**	**60.88**	**269**	T	T	06 07 43.0	
	baz=50,slow=75,SNR=84						

*ASRS **22** 05:00:13.0±1.9, 52°.74N×87°.93E, h0km, M3.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

*IDC **22** 05:00:15.8±0.9, 52°.84N×87°.95E, h0km, mb3.7/6, mbtmp3.8/11, ML3.6/5, MS4.3/1, Error ellipse: s-maj=12.2km s-min=10.7km az=155.0*

*NNC **22** 05:00:20.1±2.0, 52°.66N×87°.60E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=16.7km s-min=8.8km az=89.0, Suspected Mining explosion.*

ISC 22 05:00:15.7±0.9, 52°.89N±0°.07×87°.88E±0°.07, h0km, n18, σ1s70/23, mb3.6/6, 6C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**2.12**	**301**	⇑Pn	**Pg**	**05 00 55.3**	**-1.0**
	25nm,0.3s						
ZAA0				⇑Sn	**Sg**	**05 01 25.3**	**+1.6**
	53nm,0.5s						
ZALV	**Zalesovo Beam**	**2.12**	**301**	Pn	**Pb**	**05 00 55.0**	**+0.1**
	43nm,0.3s,baz=119,slow=17,SNR=482						
ZALV				Lg	Lg	05 01 24.5	
	38nm,0.3s,baz=116,slow=25,SNR=40						
	85nm,0.3s						
KURK	**Kurchatov**	**6.14**	**253**	⇓Pn	**Pn**	**05 01 49.2**	**+1.7**
	2.4nm,0.7s						
KURK				⇑Sn	**Sn**	**05 02 58.0**	**-0.5**
	2.4nm,0.5s						
KURK				⇓Lg	Lg	05 03 28.9	
	13nm,0.6s						
KURBB	**Kurchatov Arra**	**6.23**	**252**	Pn	**Pn**	**05 01 50.7**	**+1.8**
	0.9nm,0.3s,baz=65,slow=15,SNR=40						
KURBB				Sn	**Sn**	**05 02 60.0**	**-0.8**
	0.6nm,0.3s,baz=65,slow=24,SNR=6.8						
KURBB				Lg	Lg	05 03 31.1	
	0.6nm,0.3s,baz=72,slow=33,SNR=7.2						
	5.9nm,0.5s						
KURBB	**Kurchatov Arra**	**6.23**	**252**	⇓Pn	**Pn**	**05 01 50.5**	**+1.7**
	8.7nm,0.5s						
KURBB				⇓Sn	**Sn**	**05 02 59.2**	**-1.6**
	30nm,0.7s						
KURBB				⇑Lg	Lg	05 03 30.6	
	65nm,0.7s						
MK31	**Makanchi Array**	**7.09**	**213**	⇑Pn	**Pn**	**05 02 02.3**	**+1.7**
	11nm,0.5s,baz=31,slow=12,SNR=365						
MK31				⇑Sn	**Sn**	**05 03 22.1**	**+0.2**
	4.1nm,0.5s,baz=33,slow=27,SNR=4.3						
MK31				⇓Lg	Lg	05 03 57.2	
	33nm,0.8s,baz=32,slow=31,SNR=5.5						
MKAR	**Makanchi Array**	**7.09**	**213**	Pn	**Pn**	**05 02 02.4**	**+1.8**
	7.4nm,0.3s,baz=29,slow=13,SNR=372						
MKAR				Sn	**Sn**	**05 03 21.3**	**-0.5**
	2.9nm,0.3s,baz=34,slow=21,SNR=7.5						
MKAR				Lg	Lg	05 03 54.8	
	2.0nm,0.3s,baz=31,slow=31,SNR=5.6						
	11nm,0.3s						
TLY	**Talaya**	**9.74**	**91**	Lg	Lg	05 05 14.2	
	baz=287,slow=17						
BVAR	**Borovoye Array**	**10.56**	**278**	Pn	**Pn**	**05 02 48.7**	**+0.6**
	baz=80,slow=16,SNR=4.4						
BVAR				Sn	**Sn**	**05 04 41.9**	**-5.0**
	baz=84,slow=26,SNR=2.7						
	0.5nm,0.4s						
SONM	**Songino Array**	**12.84**	**106**	Lg	Lg	05 06 56.4	
	0.1nm,0.3s,baz=300,slow=30,SNR=5.0						
ARTI	**Arti**	**17.36**	**293**	P	**P**	**05 04 19.9**	**-0.7**
	0.6nm,0.3s,baz=80,slow=11,SNR=2.6						
ARTI				Sn	**Sn**	**05 07 34.9**	**+2.2**
	0.3nm,0.3s,baz=196,slow=20,SNR=2.4						
	1.6nm,0.4s						
FINES	**FINESS Array B**	**33.36**	**310**	P	**P**	**05 06 55.5**	**+0.4**
	4.6nm,1.0s,baz=83,slow=11,SNR=3.9						
	4.6nm,1.0s						
HFS	**Hagfors**	**39.53**	**311**	P	**P**	**05 07 46.8**	**-0.9**
	6.7nm,1.1s,baz=68,slow=16,SNR=2.1						
	6.7nm,1.1s						
JHJ	**Hachijo jima 2**	**41.72**	**97**	LR	LR	05 25 16.3	
	comp=Z,416nm,19.7s,baz=82,slow=36						
ILAR	**Eielson Array**	**55.33**	**25**	P	**P**	**05 09 51.3**	**+0.8**
	0.2nm,0.4s,baz=330,slow=5.4,SNR=7.4						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**63.60**	**11**	P	**P**	**05 10 48.0**	**+0.3**
	0.1nm,0.4s,baz=346,slow=6.9,SNR=2.4						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**82.94**	**137**	P	**P**	**05 12 40.9**	**-1.3**
	0.5nm,0.9s,baz=339,slow=5.6,SNR=2.4						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**86.08**	**139**	P	**P**	**05 12 57.1**	**-1.0**
	0.3nm,0.7s,baz=336,slow=4.5,SNR=4.1						
	0.3nm,0.7s						

IDC 22 05:02:29.6±2.7, 6°.53S×129°.69E, h131km±36km, mb3.0/1, mbtmp3.6/5, Error ellipse: s-maj=52.8km s-min=15.4km az=86.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.84**	**16**	P	Pn	05 03 55.1	+1.1
	9.6nm,0.4s,baz=210,slow=20,SNR=3.1						
SIJI				S	Sn	05 04 59.2	-0.7
	7.2nm,0.3s,baz=180,slow=20,SNR=8.4						
FITZ	**Fitzroy Crossi**	**12.16**	**199**	P	Pn	05 05 20.5	+1.9
	1.8nm,0.8s,baz=19,slow=14,SNR=1.2						
FITZ				S	Sn	05 07 26.3	-6.4
	1.6nm,0.6s,baz=60,slow=20,SNR=6.8						
WRA	**Warramunga Arr**	**14.08**	**162**	P	Pn	05 05 42.8	-0.6
	0.4nm,0.5s,baz=336,slow=13,SNR=12						
WRA				S	Sn	05 08 10.0	-9.1
	0.4nm,0.5s,baz=333,slow=24,SNR=6.0						
ASAR	**Alice Springs**	**17.52**	**167**	P	Pn	05 06 26.8	+1.0
	1.3nm,0.5s,baz=346,slow=11,SNR=2.3						
ASAR				S

comp=E,8μm,0.5s
AKS **Akhisar** 0.23 179 Pg Pg 05 24 03.3 -0.6
AKS Sg Sg 05 24 07.0 -0.3
STEP **BALIKESIR_Sava** 0.28 345 P Pg 05 24 04.6 0.0
STEP IAML 05 24 09.0
comp=N,2μm,0.6s
STEP S Sb 05 24 09.4 -0.9
GORD **Gordes-Manisa** 0.35 125 Pg Pg 05 24 06.1 +0.1
GORD Sg Sg 05 24 11.7 +0.9
GOMA **Golmarmara-Man** 0.41 168 Pg Pg 05 24 06.9 -0.2
GOMA Sg Sg 05 24 13.2 +0.6
KTTT **Salihli** 0.48 152 P Pg 05 24 07.9 -0.4
KTTT S Sg 05 24 14.1 -0.6
CAMT **Merkez** 0.53 227 P Pg 05 24 09.4 +0.1
CAMT S Sg 05 24 17.4 +1.0
CAMT IAML 05 24 20.0
comp=E,1μm,0.4s
BALB **Balikesir** 0.53 6 Pg Pb 05 24 09.9 -0.2
BALB Sg Sb 05 24 18.1 +0.5
ZEDA **zmir-Bergama** 0.59 256 P Pg 05 24 10.5 +0.1
ZEDA S Sg 05 24 18.4 +0.2
ZEDA IAML 05 24 19.0
comp=N,2μm,0.7s
BKES **Balkesir-Mer** 0.63 9 P Pb 05 24 11.6 -0.1
BUHA **Balikesir, Bur** 0.69 305 P Pg 05 24 12.1 -0.2
IZMD **zmir-Dikili-** 0.70 260 P Pg 05 24 12.6 +0.2
DKL **Dikili** 0.70 267 Pg Pb 05 24 12.9 0.0
DEMI **Demirci** 0.71 95 P Pg 05 24 12.9 +0.2
DEMI S Sg 05 24 21.9 -0.2
DEMI IAML 05 24 24.0
comp=N,1μm,0.2s
DURS **Dursunbey** 0.71 46 P Pg 05 24 12.7 0.0
YAYO **Edremit-Balk** 0.76 312 Pg Pg 05 24 13.5 -0.1
BLKS **Balkesir-Sus** 0.77 9 P Pb 05 24 14.0 -0.2
BLKS P Pb 05 24 14.0 -0.2
BLKS S Sg 05 24 24.0 -0.1
BLKS S Sb 05 24 24.2 -0.4
DST **Dursunbey** 0.80 52 Pg Pb 05 24 14.8 +0.2
MANT **Manisa** 0.85 136 P Pg 05 24 15.0 -0.4
ODEM **Odemis-Izmir** 0.86 166 Pg Pg 05 24 15.6 +0.1
BAGT **Foa** 0.87 239 P Pb 05 24 15.5 -0.3
SUSR **Susurluk-Balik** 0.88 14 Pg Pb 05 24 16.3 +0.3
AYVA **Ayvalik** 0.89 283 P Pb 05 24 16.1 0.0
KULA **Kula-Manisa** 0.89 131 Pg Pg 05 24 15.5 -0.7
CMHT **Manyas** 0.91 8 P Pg 05 24 16.3 -0.1
SMAA **Simav-Kutahya** 0.91 90 Pg Pb 05 24 17.2 +0.6
SIMA **Simav-Kutahya** 0.91 91 Pg Pb 05 24 17.2 +0.6
FOCM **Foa** 0.93 245 Pg Pg 05 24 16.4 -0.4
DUVT **Torbali** 0.93 198 P Pg 05 24 16.9 0.0
YENI **Yenice-Canakka** 0.93 332 Pg Pb 05 24 17.0 +0.1
BLCB **Balcova** 0.94 220 Pg Pg 05 24 16.6 -0.4
BLCB **Balcova** 0.94 220 P Pg 05 24 16.6 -0.4
BLCB S Sb 05 24 30.7 +1.4
GONE **Gonen-Balikesi** 0.94 354 Pg Pn 05 24 18.0 +0.3
IZMR **zmir-demi** 0.98 173 P Pg 05 24 17.0 -0.8
IZMR P Pb 05 24 17.3 -0.3
ATIT **Gnen** 0.99 349 P Pb 05 24 18.2 +0.3
KIRA **zmir-Kiraz** 1.02 153 P Pg 05 24 18.1 -0.5
USAK **Usk-Merkez** 1.02 112 P Pg 05 24 18.4 -0.2
CANM **Can-anakkale** 1.07 327 Pg Pn 05 24 20.1 +0.5
SHAP **Saphane-Kutahy** 1.10 94 Pn Pg 05 24 20.5 +0.3
AYDB **Zeytinkoy-Aydi** 1.16 177 Pn Pb 05 24 20.7 -0.2
KARB **zmir-Karabur** 1.18 248 P Pb 05 24 20.9 -0.1
PRK **Paraskevi** 1.20 277 P Pb 05 24 21.7 +0.3
PRK S Sn 05 24 38.1 +0.7
PRK **Paraskevi** 1.20 277 P Pb 05 24 21.4 0.0
PRK S Sb 05 24 36.4 -0.5
EMET **Ktahya-Emet** 1.20 77 P Pg 05 24 22.5 +0.4
NAZL **Nazilli-Aydin** 1.21 161 Pn Pn 05 24 21.5 +0.1
GMLD **Gumuldur** 1.25 214 Pn Pn 05 24 22.8 +0.9
GEDZ **Gediz** 1.25 93 Pn Pb 05 24 23.0 +0.7
BAND **Balkesir-Ban** 1.26 10 P Pg 05 24 23.9 +0.7
BAND S Sb 05 24 38.3 -0.4
BAND IAML 05 24 41.0
comp=E,1μm,0.2s
BAND IAML 05 24 42.0
comp=N,971nm,0.5s
DGB **zmir** 1.28 215 P Pn 05 24 21.9 -0.5
SULTU **Buldan** 1.30 144 P Pn 05 24 22.1 -0.6
ZEYE **Izmir, Urla-Ze** 1.34 230 P Pn 05 24 22.2 -1.0
ZEYE S Sb 05 24 39.6 -1.2
EZN **Ezine** 1.35 302 P Pn 05 24 23.7 +0.3
EZN S Sg 05 24 42.2 -0.3
LAPS **Lapseki, ANA** 1.36 327 P Pn 05 24 22.8 -0.8
ESEN **Aydn-Nazilli** 1.38 162 P Pn 05 24 23.7 0.0
EAG2 **Marmaro, Chios** 1.44 247 P Pb 05 24 25.7 +0.1
AYDN **Tasoluk** 1.45 178 P Pn 05 24 25.2 +0.5
AYDN S Sn 05 24 41.3 -2.4
AYDN IAML 05 24 47.0
comp=N,343nm,0.6s
AYDN IAML 05 24 48.0
comp=E,500nm,0.3s
GCAM **G?zelcaml?** 1.48 198 Pn Pn 05 24 26.1 +1.0
SIGR **SIGRI** 1.52 274 P Pn 05 24 26.0 +0.3
SIGR S Sg 05 24 47.9 0.0
SIGR **SIGRI** 1.52 274 P Pn 05 24 26.1 +0.3
SIGR S Sn 05 24 45.0 -0.3
CHOS **Chios island** 1.55 243 P Pb 05 24 28.0 +0.6
CHOS S Sg 05 24 48.8 0.0
CHOS **Chios island** 1.55 243 P Pn 05 24 27.3 +1.2
KRL1 **Karlovasi Samo** 1.57 214 P Pb 05 24 28.8 +1.1
SMG **Samos** 1.59 209 P Pn 05 24 27.9 +1.1
SMG S Sg 05 24 50.7 +0.6
SMG **Samos** 1.59 209 P Pn 05 24 28.7 +1.4
SMG S Sb 05 24 49.7 +1.5
GADA **Gvkgeada** 1.83 307 P Pn 05 24 30.8 +0.8
GADA S Sb 05 24 54.7 -0.2
ENEZ **Enez** 2.06 322 P Pn 05 24 34.2 +1.0
ENEZ S Sb 05 25 00.6 -1.1
LIA **Limnos Island** 2.18 292 P Pn 05 24 35.7 +1.0
LIA **Limnos Island** 2.18 292 P Pn 05 24 35.4 +0.7
LIA S Sn 05 25 01.4 -0.2
SMTH **Samothraki Isl** 2.22 308 P Pn 05 24 36.2 +0.8
SMTH **Samothraki Isl** 2.22 308 P Pn 05 24 35.9 +0.5
SMTH S Sn 05 25 01.8 -0.8
ALN **Alexandroupoli** 2.24 323 P Pn 05 24 36.5 +0.9
ALN **Alexandroupoli** 2.24 323 P Pn 05 24 36.5 +0.9
ALN S Sn 05 25 02.9 -0.2
SFL1 **Soufli** 2.38 331 P Pn 05 24 37.7 +0.3
SFL1 S Sn 05 25 06.6 +0.2
SKY **Skiros Island** 2.55 266 P Pn 05 24 40.5 +0.6
RDO **Rodhopi** 2.68 320 P Pn 05 24 42.7 +1.1
RDO **Rodhopi** 2.68 320 P Pn 05 24 42.7 +1.1
RDO S Sn 05 25 13.7 -0.2
THAS **Thassos island** 2.81 303 P Pn 05 24 44.1 +0.7
KARY **Karystos** 2.85 249 P Pn 05 24 44.5 +0.5
KYMI **Kymi, Euboea I** 2.93 262 P Pn 05 24 45.9 +0.8
KAVA **Kavala** 3.15 308 P Pn 05 24 48.5 +0.3
KAVA S Sn 05 25 23.5 -2.1
OUR **Ouranopolis** 3.19 294 P Pn 05 24 49.0 +0.3
DION **Dionisos Attik** 3.21 252 P Pn 05 24 49.7 +0.8
VLY **Voula,Athens** 3.39 250 P Pn 05 24 52.8 +1.4
PLG **Polygyros** 3.59 292 P Pn 05 24 54.4 +0.2
MET5 **Makryloggos,Me** 3.80 248 P Pn 05 24 58.0 +0.9
SRS **Serrai** 3.80 303 P Pn 05 24 57.2 +0.1
MET2 **Kameni Chora,** 3.82 248 P Pn 05 24 57.5 +0.1
KNT **Kendrikon** 4.29 300 P Pn 05 25 04.4 +0.7
GUR **Goura** 4.44 256 P Pn 05 25 06.6 +0.6
KLV **Kalavryta, Ach** 4.56 258 P Pn 05 25 08.1 +0.5
ANX **Ano Chora** 4.62 265 P Pn 05 25 08.1 -0.4
NEST **Nestorio** 5.37 286 P Pn 05 25 18.5 -0.2

*IDC **22** 05:33:28.6±1.7, 12°.89S×77°.67W, h0km, mb3.5/4, mbtmp3.7/5, ML4.5/1, MS3.0/1, Error ellipse: s-maj=40.6km s-min=15.9km az=143.0*
ISC 22 05:33:33.6±1.4, **12°.8S**±0°.1×**77°.6W**±0°.2, **h31**km, **n17**, σ1§**19**/**8**, **mb3.6**/**3**, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.07**	**43**	Pg	**Pb**	**05 33 53.2**	**-0.4**
	334nm,0.3s,baz=228,slow=14,SNR=557						
NNA				Lg	Lg	05 34 06.7	
	580nm,0.3s,baz=142,slow=19,SNR=16						
ATAH	**Atahualpa**	**5.65**	**352**	Pn	**Pn**	**05 34 57.9**	**+2.0**
	14nm,0.3s,baz=169,slow=1.9,SNR=142						
ATAH				Sn	**Sn**	**05 35 58.9**	**-1.2**
	5.7nm,0.3s,baz=168,slow=2.4,SNR=5.8						
	31nm,0.3s						
LPAZ	**La Paz**	**9.81**	**112**	LR	LR	05 40 29.6	

comp=Z,82nm,19.3s,baz=91,slow=43
H03N2 **Juan Fernandez** **20.61** **183** T T 05 59 46.7
baz=3.5,slow=75,SNR=41
H03N1 **Juan Fernandez** **20.61** **183** T T 05 59 41.2
baz=3.5,slow=75,SNR=55
H03N3 **Juan Fernandez** **20.63** **183** T T 06 00 02.9
baz=3.5,slow=75,SNR=52
TXAR **Lajitas Array** **48.84** **329** P **P** **05 42 15.9** **-0.6**
0.5nm,0.8s,baz=148,slow=8.1,SNR=4.0
0.5nm,0.8s
YKA **Yellowknife Ar** **80.38** **344** P **P** **05 45 41.7** **+0.2**
0.4nm,0.8s,baz=147,slow=5.2,SNR=5.9
0.4nm,0.8s
TORD **Torodi Ar. Bea** **82.70** **75** P **P** **05 45 55.5** **+0.6**
0.1nm,0.6s,baz=249,slow=2.8,SNR=1.4
0.1nm,0.6s
ILAR **Eielson Array** **92.90** **336** P **P** **05 46 42.3** **-0.9**
0.3nm,0.7s,baz=120,slow=5.7,SNR=6.0
0.3nm,0.7s
H11N3 **WAKE ISLAND Hyl** **17.99** **286** T T 08 01 04.5
baz=94,slow=75,SNR=4.6
H11N2 **WAKE ISLAND Hyl** **18.00** **286** T T 08 01 01.8
baz=94,slow=75,SNR=6.5
H11N1 **WAKE ISLAND Hyl** **18.00** **286** T T 08 01 13.4
baz=94,slow=75,SNR=3.2
H11S2 **WAKE ISLAND Hyl** **18.08** **284** T T 08 01 11.2
baz=95,slow=75,SNR=21
H11S1 **WAKE ISLAND Hyl** **18.09** **284** T T 08 01 08.4
baz=95,slow=75,SNR=26
H11S3 **WAKE ISLAND Hyl** **18.10** **284** T T 08 01 08.9
baz=95,slow=75,SNR=23
SONM **Songino Array** **144.88** **355** PKPbc **PKPdf** **05 53 07.6** **-0.2**
1.1nm,0.8s,baz=359,slow=1.3,SNR=8.7

*IDC **22** 05:39:25.0±7.0, 1°.15N×97°.85E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=354.4km s-min=23.8km az=55.0*
*DJA **22** 05:39:28.8±0.8, 1°N±3°×97°7E±°, h15km±2km, M3.8/19, MLv3.8/19*
ISC 22 05:39:27.7±1.4, **0°.93N**±0°.09×**97°.4E**±0°.1, **h27**km, **n22**, σ0§**75**/**11**, **mb3.5**/**5**, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.43**	**32**	P	**Pn**	**05 39 37.9**	**-0.3**
GSI				S	**Sn**	**05 39 45.3**	**+0.1**
PBSI	**Pulau Batu**	**1.35**	**136**	P	**Pb**	**05 39 52.7**	**+0.4**
MNSI	**Mandailing Nat**	**2.23**	**93**	P	**Pn**	**05 40 03.5**	**+0.6**
PSI	**Prapat**	**2.43**	**40**	P	**Pn**	**05 40 05.8**	**0.0**
KCSI	**Kotacane, Aceh**	**2.61**	**9**	P	**Pn**	**05 40 08.2**	**+0.1**
H08S2	**Diego Garcia H**	**26.21**	**251**	T	T	06 12 01.8	
	baz=72,slow=76,SNR=33						
H08S3	**Diego Garcia H**	**26.22**	**251**	T	T	06 12 03.5	
	baz=72,slow=76,SNR=119						
H08S1	**Diego Garcia H**	**26.23**	**251**	T	T	06 12 06.3	
	baz=72,slow=76,SNR=32						
H01W3	**Cape Leeuwin H**	**38.94**	**158**	T	T	06 28 15.1	
	baz=333						
H01W2	**Cape Leeuwin H**	**38.95**	**158**	T	T	06 28 11.9	
	baz=333						
H01W1	**Cape Leeuwin H**	**38.96**	**158**	T	T	06 28 23.0	
	baz=333						
WRA	**Warramunga Arr**	**41.77**	**122**	P	**P**	**05 47 13.5**	**-1.6**
	0.6nm,0.9s,baz=300,slow=8.1,SNR=2.6						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**43.12**	**127**	P	**P**	**05 47 25.4**	**-0.7**
	0.3nm,0.7s,baz=301,slow=8.4,SNR=1.9						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**47.54**	**346**	P	**P**	**05 48 01.3**	**+0.6**
	0.6nm,0.5s,baz=163,slow=7.8,SNR=11						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**52.03**	**345**	P	**P**	**05 48 35.3**	**+0.6**
	0.4nm,0.6s,baz=165,slow=7.6,SNR=1.6						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**53.84**	**351**	P	**P**	**05 48 48.7**	**+0.6**
	0.8nm,0.4s,baz=167,slow=7.2,SNR=5.4						
	0.8nm,0.4s						
H04N2	**CROZET ISLANDS**	**61.64**	**214**	T	T	06 56 28.8	
	baz=54,slow=75,SNR=110						
H04N1	**CROZET ISLANDS**	**61.65**	**214**	T	T	06 56 26.8	
	baz=54,slow=75,SNR=135						
H04N3	**CROZET ISLANDS**	**61.66**	**214**	T	T	06 56 27.5	
	baz=54,slow=75,SNR=121						
H04S1	**CROZET ISLANDS**	**61.97**	**214**	T	T	06 56 48.0	
	baz=53,slow=76,SNR=7.4						
H04S3	**CROZET ISLANDS**	**61.98**	**214**	T	T	06 56 47.8	
	baz=53,slow=76,SNR=10						
H04S2	**CROZET ISLANDS**	**61.99**	**214**	T	T	06 56 49.1	
	baz=53,slow=76,SNR=9.1						

*IDC **22** 05:44:57.4±3.6, 30°.48S×176°.86W, h60km±28km, mb3.7/6, mbtmp3.9/6, MS3.3/3, Error ellipse: s-maj=29.7km s-min=22.8km az=104.0*
ISC 22 05:44:52.4±0.9, **30°.71S**±0°.08×**176°.9W**±0°.1, **h24**km, **n14**, σ1§**65**/**14**, **mb4.0**/**6**, **MS3.1**/**3**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.70**	**328**	P	**Pn**	**05 45 20.3**	**-0.3**
	507nm,0.3s,baz=49,slow=19,SNR=9.0						
RAO				S	**Sn**	**05 45 41.6**	**0.0**
	965nm,0.4s,baz=108,slow=20,SNR=12						
URZ	**Urewera**	**9.01**	**212**	P	**Pn**	**05 46 58.3**	**-2.6**
	6.6nm,0.9s,baz=120,slow=8.1,SNR=9.2						
URZ				S	**Sn**	**05 48 40.5**	**-1.1**
	4.6nm,0.3s,baz=127,slow=13,SNR=5.9						
PPT	**Papeete**	**28.07**	**69**	LR	LR	06 01 23.7	
	comp=Z,19nm,19.1s,baz=330,slow=35						
CTA	**Charters Tower**	**34.79**	**279**	LR	LR	06 05 15.8	
	comp=Z,38nm,19.2s,baz=168,slow=35						
STKA	**Stephens Creek**	**35.34**	**257**	P	**P**	**05 51 48.1**	**+2.2**
	1.7nm,0.6s,baz=99,slow=19,SNR=5.0						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**44.04**	**267**	P	**P**	**05 52 59.3**	**+0.7**
	0.4nm,0.4s,baz=107,slow=7.5,SNR=8.1						
ASAR				PcP	**PcP**	**05 54 44.0**	**+0.2**
	0.6nm,0.9s,baz=112,slow=3.6,SNR=3.1						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**45.06**	**272**	P	**P**	**05 53 07.3**	**+0.6**
	2.4nm,0.7s,baz=113,slow=8.2,SNR=17						
	2.4nm,0.7s						
VNDA	**Vanda**	**47.89**	**186**	P	**P**	**05 53 31.4**	**+3.3**
	0.9nm,0.4s,baz=17,slow=18,SNR=10						
	0.9nm,0.4s						
BATI	**Baumata**	**58.64**	**277**	LR	LR	06 21 05.5	
	comp=Z,65nm,18.1s,baz=52,slow=37						
NVAR	**Mina Array Bea**	**87.82**	**42**	P	**P**	**05 57 39.8**	**-0.1**
	0.5nm,0.9s,baz=244,slow=6.9,SNR=4.1						
	0.5nm,0.9s						
ILAR	**Eielson Array**	**98.02**	**13**	P	**P**	**05 58 24.6**	**-1.4**
	0.3nm,0.8s,baz=213,slow=6.2,SNR=4.2						
	0.3nm,0.8s						
ARCES	**ARCESS Array B**	**139.09**	**348**	PKP	**PKiKP**	**06 04 17.3**	**-1.1**
	3.9nm,0.9s,baz=34,slow=2.7,SNR=1.5						
FINES	**FINESS Array B**	**145.76**	**341**	PKPbc	**PKPdf**	**06 04 28.1**	**0.0**
	3.4nm,0.7s,baz=40,slow=2.4,SNR=13						
AKASG	**Malin Array Be**	**152.12**	**323**	PKPbc	**PKPbc**	**06 04 44.0**	**-1.3**
	0.9nm,0.6s,baz=52,slow=2.4,SNR=4.9						

*IDC **22** 05:58:47.9±2.9, 37°.04N×70°.73E, h0km, mb3.5/1, mbtmp3.4/6, ML3.0/5, Error ellipse: s-maj=51.2km s-min=21.3km az=138.0*
*NNC **22** 05:59:02.7±7.2, 38°.60N×69°.16E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=71.5km s-min=38.2km az=167.0*
ISC 22 05:59:06.7±2.0, **39°.1N**±0°.2×**69°.29E**±0°.09, **h10**km, **n16**, σ2§**95**/**21**, **4C-3D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.09**	**13**	Pn	**Pn**	**06 00 12.5**	**+3.2**
	0.5nm,0.2s,baz=192,slow=12,SNR=21						
KK31				⇓Pg	**Pg**	**06 00 25.1**	**+0.1**
	3.9nm,0.3s,baz=199,slow=21,SNR=14						
KK31				⇓Lg	Lg	06 01 27.4	
	26nm,0.6s,baz=195,slow=30,SNR=8.0						
EKS2	**Erkin-Say**	**4.91**	**42**	P	**Pn**	**06 00 23.7**	**+3.1**
	SNR=14						
UCH	**Uchtor**	**5.04**	**50**	P	**Pn**	**06 00 24.0**	**+1.2**
	SNR=7.2						
AAK	**Ala-Archa**	**5.29**	**47**	P	**Pn**	**06 00 29.2**	**+3.4**
	SNR=12						
AAK	**Ala-Archa**	**5.29**	**47**	Pn	**Pn**	**06 00 26.0**	**+0.1**
	2.3nm,0.3s,baz=212,slow=7.0,SNR=20						
AAK				Sn	**Sb**	**06 01 38.2**	**-4.6**
	0.9nm,0.3s,baz=156,slow=20,SNR=4.0						
	4.7nm,0.4s						
AAK	**Ala-Archa**	**5.29**	**47**	⇑Pn	**Pn**	**06 00 28.7**	**+2.9**
	2.1nm,0.5s						
AAK				⇑Pg	**Pb**	**06 00 43.7**	**+4.4**
	7.7nm,0.8s						
AAK				⇑Sn	**Sb**	**06 01 39.1**	**-3.7**
	2.0nm,0.5s						
KBK	**Karagaybulak**	**5.56**	**49**	P	**Pn**	**06 00 33.9**	**+4.3**
	SNR=5.3						
CHMS	**Chumysh**	**5.67**	**45**	P	**Pn**	**06 00 34.2**	**+3.3**
	SNR=5.8						
TKM2	**Tokmak 2**	**6.10**	**49**	P	**Pn**	**06 00 37.4**	**+0.4**
	SNR=11						
AB31	**Akbulak array**	**12.14**	**330**	⇑P	**Pn**	**06 02 01.2**	**+1.6**
	0.9nm,0.5s,baz=150,slow=12,SNR=6.8						
MKAR	**Makanchi Array**	**12.22**	**47**	Pn	Pn	06 01 55.3	-5.4
	0.1nm,0.3s,baz=220,slow=11,SNR=4.7						
MKAR				Sn	**Sn**	**06 04 17.2**	**+0.3**
	0.1nm,0.3s,baz=225,slow=14,SNR=1.6						
MKAR				Lg	Lg	06 05 40.5	
	baz=226,slow=21,SNR=2.8						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**13.23**	**27**	Pn	**Pn**	**06 02 13.4**	**-1.0**
	baz=212,slow=12,SNR=4.7						
KURBB				Lg	Lg	06 06 18.9	
	baz=216,slow=28,SNR=5.7						
	0.4nm,0.7s						
AKTO	**Aktyubinsk**	**13.84**	**329**	⇓P	**P**	**06 02 31.4**	**+0.2**
	1.8nm,0.8s						
BVAR	**Borovoye Array**	**13.93**	**3**	Pn	**P**	**06 02 28.8**	**-3.4**
	0.1nm,0.3s,baz=177,slow=7.2,SNR=5.8						
BVAR				Sn	**S**	**06 05 20.9**	**+0.2**
	baz=186,slow=22,SNR=2.0						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**18.22**	**30**	P	**Pn**	**06 03 16.9**	**-2.6**
	0.2nm,0.3s,baz=217,slow=12,SNR=6.2						
	1.0nm,0.5s						
ESDC	**Sonseca Array**	**55.07**	**296**	P	**P**	**06 08 35.7**	**-3.0**
	0.3nm,0.5s,baz=68,slow=6.9,SNR=6.3						
	0.3nm,0.5s						

*IDC **22** 06:15:55.0±1.1, 55°.72S×26°.72W, h0km, mb4.0/3, mbtmp4.0/3, MS3.4/1, Error ellipse: s-maj=50.6km s-min=35.1km az=81.0*
*NEIC **22** 06:16:04.0±1.0, 56°.1S±0°.2×27°.52W±0°.09, h59km±8km, mb4.5/13, Error ellipse: s-maj=22.4km s-min=3.8km az=196.0*
ISC 22 06:16:02.8±0.7, **56°.0S**±0°.1×**27°.4W**±0°.1, **h50**km, **n26**, σ1§**17**/**22**, **mb4.5**/**7**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.49**	**284**	Pn	**Pn**	**06 17 22.5**	**+0.7**
BELA	**Belgrano 2**	**22.16**	**184**	P	**P**	**06 20 52.2**	**-1.7**
GO09	**Cerro Castillo**	**26.70**	**261**	P	**P**	**06 21 35.8**	**-1.2**
GO09				IAmb	IAmb	06 22 09.2	
	comp=Z,12nm,1.3s						
MT02	**Curacav**	**37.66**	**288**	P	**P**	**06 23 12.2**	**-0.6**
MT02				IAmb	IAmb	06 23 49.4	
	comp=Z,14nm,1.4s						
CO01	**Juntas del Tor**	**39.68**	**293**	P	**P**	**06 23 29.1**	**-1.0**
AC05	**El Transito**	**40.69**	**294**	P	**P**	**06 23 38.4**	**+0.1**
AC05				IAmb	IAmb	06 24 08.4	
	comp=Z,16nm,1.5s						
SUR	**Sutherland**	**40.72**	**75**	LR	LR	06 35 45.9	
	comp=Z,51nm,21.3s,baz=231,slow=30						
AC02	**Maricunga**	**41.74**	**297**	P	**P**	**06 23 48.2**	**+0.9**
VNDA	**Vanda**	**46.66**	**183**	P	**P**	**06 24 27.0**	**+1.5**
	comp=Z,2.5nm,1.0s,baz=184,slow=8.8,SNR=5.0						
	comp=Z,2.5nm,1.0s						
VNDA	**Vanda**	**46.66**	**183**	P	**P**	**06 24 26.1**	**+0.6**
VNDA				IAmb	IAmb	06 24 57.9	
	comp=Z,8.2nm,1.4s						
PB08	**IPOC Station P**	**47.38**	**302**	P	**P**	**06 24 32.8**	**+0.5**
PB08				IAmb	IAmb	06 25 08.4	
	comp=Z,9.9nm,1.4s						
GO01	**Chusmiza**	**47.81**	**302**	P	**P**	**06 24 35.9**	**+0.2**
GO01				IAmb	IAmb	06 24 52.4	
	comp=Z,8.5nm,1.4s						
CRZF	**Crozet Islands**	**47.95**	**114**	P	**P**	**06 24 36.0**	**+0.1**
H10N1	**ASCENSION HYDR**	**49.07**	**17**	T	T	07 17 21.7	
	baz=188,slow=75,SNR=4.6						
H10N3	**ASCENSION HYDR**	**49.07**	**17**	T	T	07 17 22.4	
	baz=188,slow=75,SNR=10						
H10N2	**ASCENSION HYDR**	**49.08**	**17**	T	T	07 17 23.4	
	baz=188,slow=75,SNR=10						
LPAZ	**La Paz**	**50.24**	**305**	P	**P**	**06 24 54.9**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=149,slow=7.5,SNR=3.7						
	comp=Z,1.8nm,0.5s						
LPAZ	**La Paz**	**50.24**	**305**	P	**P**	**06 24 55.0**	**+0.5**
LPAZ				IAmb	IAmb	06 24 55.4	
	comp=Z,2.2nm,0.7s						
DBIC	**Dimbokro**	**65.13**	**25**	P	**P**	**06 26 39.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**73.03**	**30**	P	**P**	**06 27 25.2**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=201,slow=5.6,SNR=2.2						
	comp=Z,0.3nm,0.5s						
MSEY	**Mahe Island**	**82.15**	**87**	P	**P**	**06 28 18.1**	**-0.2**
F31M	**Tsiigehtchic**	**145.49**	**319**	PKPdf	**PKPdf**	**06 35 33.0**	**-0.4**
G31M	**Satah River**	**145.52**	**318**	PKPdf	**PKPdf**	**06 35 33.4**	**-0.2**
L29M	**L29M**	**145.80**	**311**	PKPdf	**PKPdf**	**06 35 34.2**	**-0.1**
ILAR	**Eielson Array**	**149.98**	**312**	PKPbc	**PKPbc**	**06 35 45.0**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=123,slow=2.9,SNR=8.8						
SONM	**Songino Array**	**150.83**	**86**	PKPbc	**PKPdf**	**06 35 46.2**	**+3.2**
	comp=Z,0.5nm,0.5s,baz=228,slow=2.9,SNR=4.3						

*JMA **22** 06:16:53.7±0.1, 23°.6N±0°.6×12°.2E±°, h43km±2km, MV3.1/15, TAIWAN REGION*
*TAP **22** 06:16:54.8, 23°.59N×121°.59E, h35km, ML3.5, B*
ISC 22 06:16:55.1±0.9, **23°.59N**±0°.02×**121°.62E**±0°.02, **h34**km±5km, **n145**, σ1§**10**/**258**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.14**	**329**	*i* P	**Pn**	**06 17 01.2**	**+2.4**
TEGC				*i* S	**Sb**	**06 17 06.4**	**+0.9**
EGFH	**Guangfu**	**0.20**	**295**	*i* P	**Pn**	**06 17 01.2**	**+0.7**
EGFH				S	**Sn**	**06 17 06.7**	**+4.5**
HGSD	**Ruisui**	**0.20**	**243**	*i* P	**Pn**	**06 17 01.7**	**+0.9**
HGSD				S	**Sb**	**06 17 07.7**	**+1.3**
SHUL	**Shoufeng**	**0.21**	**345**	*i* P	**Pb**	**06 17 01.9**	**0.0**
SHUL				*i* S	**Sn**	**06 17 07.3**	**+4.4**
WARBT	**Fenglin Townsh**	**0.25**	**302**	*i* P	**Pb**	**06 17 01.5**	**-0.9**
WARBT				S	**Sn**	**06 17 06.4**	**+0.7**
EHYH	**Wanrong**	**0.27**	**250**	*i* P	**Pb**	**06 17 01.9**	**-0.7**
EHYH				S	**Sb**	**06 17 07.1**	**-0.5**
TEYL	**Yanliau Villag**	**0.28**	**356**	*i* P	**Pb**	**06 17 03.1**	**+0.4**
TEYL				*eS*	**Sn**	**06 17 09.5**	**+2.6**
EHY	**Hungye**	**0.28**	**254**	P	**Pb**	**06 17 02.0**	**-0.8**
EHY				*eS*	**Sb**	**06 17 07.2**	**-0.7**
ESL	**Shilin**	**0.28**	**323**	*i* P	**Pb**	**06 17 02.0**	**-0.8**
ESL				S	**Sb**	**06 17 07.5**	**-0.4**
ECBN	**Changbin**	**0.31**	**210**	P	**Pb**	**06 17 02.9**	**-0.1**

NACB	**Ninganchiao**	**0.59**	**358**	P	**Pb**	06 17 05.7 -1.4
ECS	**Chishang**	**0.61**	**217**	*e*P	**Pb**	06 17 06.8 -0.7
WUSB	**Renai**	**0.61**	**311**	*i* P	**Pb**	06 17 06.8 -0.9
WUSB				S	**Sb**	06 17 14.8 -1.4
YUS	**Yu-Shan**	**0.62**	**261**	*e*P	**Pb**	06 17 07.2 -0.9
YUS				*e*S	**Sb**	06 17 15.7 -1.1
ETLH	**Xiulin Townshi**	**0.63**	**348**	*e*P	**Pn**	06 17 06.7 -1.0
SSLB	**Suanglung**	**0.64**	**288**	P	**Pn**	06 17 06.8 -1.0
SSLB	**Suanglung**	**0.64**	**288**	S	**Sb**	06 17 15.6 -1.4
SSLB	**Suanglung**	**0.64**	**288**	*i* P	**Pn**	06 17 06.9 -1.0
SSLB				S	**Sb**	06 17 15.6 -1.4
WHF	**Hehuan Shan**	**0.65**	**330**	*i* P	**Pn**	06 17 07.0 -1.3
WHF				S	**Sb**	06 17 16.0 -1.5
ELDTW	**Lidau**	**0.68**	**235**	*e*P	**Pn**	06 17 07.1 -1.4
ELDTW				*e*S	**Sb**	06 17 16.4 -1.7
WHYT	**Xinyi Township**	**0.71**	**279**	*i* P	**Pn**	06 17 08.5 -0.3
WHYT				S	**Sn**	06 17 18.2 -0.4
SMLT	**Sun Moon Lake**	**0.72**	**294**	*i* P	**Pn**	06 17 08.4 -0.7
SMLT				S	**Sn**	06 17 18.6 -0.4
FUSS	**Fushou**	**0.74**	**332**	*i* P	**Pn**	06 17 08.9 -0.6
FUSS				S	**Sn**	06 17 18.9 -0.8
EAHA	**Aohua**	**0.75**	**8**	*e*S	**Sn**	06 17 19.5 0.0
ALS	**Alishan**	**0.75**	**264**	P	**Pn**	06 17 09.4 -0.2
ALS				S	**Sn**	06 17 19.8 -0.2
TYC	**Yuchr**	**0.77**	**295**	*i* P	**Pn**	06 17 09.1 -0.5
TYC				*e*S	**Sn**	06 17 19.9 -0.1
DPDB	**Guoxing**	**0.78**	**305**	P	**Pn**	06 17 09.3 -0.5
DPDB				S	**Sn**	06 17 19.6 -0.7
TWT	**Tachien**	**0.78**	**329**	*i* P	**Pn**	06 17 09.6 -0.3
TWT				*i* S	**Sn**	06 17 19.5 -1.1
TDCB	**Techi**	**0.79**	**328**	*i* P	**Pn**	06 17 09.5 -0.5
TDCB				*i* S	**Sn**	06 17 19.3 -1.4
WCS	**Beigang Elemen**	**0.80**	**306**	*i* P	**Pn**	06 17 09.7 -0.4
WCS				S	**Sn**	06 17 19.9 -0.9
LONT	**Longtian**	**0.81**	**214**	*e*P	**Pn**	06 17 09.2 -1.0
EOS4	**EOS4**	**0.83**	**50**	*e*P	**Pn**	06 17 10.1 -0.1
EOS4				*e*S	**Sn**	06 17 21.2 +0.2
ENA	**Nanau**	**0.85**	**7**	*e*P	**Pn**	06 17 10.3 -0.3
ENA				*e*S	**Sn**	06 17 22.3 +0.4
WJS	**Zhushan**	**0.85**	**286**	P	**Pn**	06 17 11.2 +0.5
WJS				*e*S	**Sn**	06 17 23.6 +1.5
CHN5	**Tsauling**	**0.86**	**271**	*i* P	**Pn**	06 17 11.3 +0.3
CHN5				*i* S	**Sn**	06 17 23.2 +0.8
NNSB	**Datong**	**0.87**	**346**	*e*P	**Pn**	06 17 10.5 -0.6
NNSB				*e*S	**Sn**	06 17 21.5 -1.1
NNSH	**Datong**	**0.87**	**346**	*e*P	**Pn**	06 17 10.6 -0.5
NNSH				*e*S	**Sn**	06 17 21.6 -0.9
EWUT	**Wuta**	**0.87**	**10**	*e*P	**Pn**	06 17 11.0 0.0
EWUT				*e*S	**Sn**	06 17 22.6 +0.1
STYH	**Taoyuan**	**0.88**	**242**	P	**Pn**	06 17 11.0 -0.1
STYH				S	**Sn**	06 17 22.4 -0.3
NNS	**Nan Shan**	**0.88**	**345**	*i* P	**Pn**	06 17 10.8 -0.5
NNS				*e*S	**Sn**	06 17 22.1 -0.8
STYT	**Tauyuan**	**0.90**	**242**	*e*P	**Pn**	06 17 11.4 -0.1
STYT				*e*S	**Sn**	06 17 23.2 -0.1
WNT	**Mingjian**	**0.91**	**289**	*e*P	**Pn**	06 17 12.2 +0.7
WNT				*e*S	**Sn**	06 17 24.5 +1.1
TWGBT	**Beinan**	**0.91**	**213**	*e*P	**Pn**	06 17 10.4 -1.1
TWGBT				*e*S	**Sn**	06 17 23.8 +0.3
TWG	**Pinlang**	**0.91**	**214**	*e*P	**Pn**	06 17 10.7 -0.9
TWG				*e*S	**Sn**	06 17 22.9 -0.7
LDUT	**Ludao**	**0.92**	**189**	*e*P	**Pn**	06 17 10.9 -0.8
LDUT				*e*S	**Sn**	06 17 22.6 -1.0
WNT1	**Nantou City**	**0.92**	**291**	*e*P	**Pn**	06 17 12.2 +0.6
WNT1				*e*S	**Sn**	06 17 25.2 +1.5
WHP	**Taichung City**	**0.93**	**318**	*e*P	**Pn**	06 17 12.0 +0.1
WHP				*e*S	**Sn**	06 17 23.0 -0.2
WCKO	**Fanlu**	**0.94**	**261**	*e*P	**Pn**	06 17 12.9 +0.8
WCKO				*e*S	**Sn**	06 17 25.5 +1.2
EOS3	**EOS3**	**0.94**	**42**	*e*P	**Pn**	06 17 12.0 +0.1
EOS3				*e*S	**Sn**	06 17 24.6 +0.5
LATG	**Datong**	**0.95**	**355**	P	**Pn**	06 17 11.9 -0.3
LATG				*e*S	**Sn**	06 17 24.2 -0.4
TPUB	**Ta-pu**	**0.95**	**253**	P	**Pn**	06 17 12.5 +0.3
TPUB	**Ta-pu**	**0.95**	**253**	S	**Sn**	06 17 25.9 +1.3
TPUB	**Ta-pu**	**0.95**	**253**	*e*P	**Pn**	06 17 12.5 +0.3
TPUB				*e*S	**Sn**	06 17 25.5 +0.9
WWF	**Wufeng**	**0.96**	**298**	*e*P	**Pn**	06 17 13.0 +0.8
WGK	**Gukeng**	**0.97**	**276**	*e*P	**Pn**	06 17 12.9 +0.5
WGK				*e*S	**Sn**	06 17 25.9 +0.8
WTP	**Ta-pu**	**0.98**	**250**	*i* P	**Pn**	06 17 13.2 +0.5
WTP				*e*S	**Sn**	06 17 26.5 +1.1
WDLH	**Douliu**	**1.00**	**276**	*e*P	**Pn**	06 17 13.3 +0.5
WDLH				*e*S	**Sn**	06 17 27.6 +2.0
EOS2	**EOS2**	**1.00**	**34**	*e*P	**Pn**	06 17 13.2 +0.4
EOS2				*e*S	**Sn**	06 17 25.3 +0.3
NDT	**Datong Townshi**	**1.02**	**354**	*e*S	**Sn**	06 17 25.9 -0.2
TCU	**Taichung**	**1.03**	**303**	*e*P	**Pn**	06 17 13.9 +0.7
TCU				*e*S	**Sn**	06 17 28.3 +1.9
TWC	**Suao**	**1.04**	**12**	*e*P	**Pn**	06 17 14.1 +0.7
TWC				*e*S	**Sn**	06 17 27.6 +0.9
NDS	**Dongshan**	**1.05**	**5**	*e*P	**Pn**	06 17 13.9 +0.5
NDS				*e*S	**Sn**	06 17 26.3 -0.6
ENTT	**Nioudou**	**1.05**	**357**	*e*P	**Pn**	06 17 13.2 -0.3
ENTT				*e*S	**Sn**	06 17 26.7 -0.3
CHN2	**Minshiung**	**1.05**	**267**	*e*P	**Pn**	06 17 13.7 +0.2
CHN2				*e*S	**Sb**	06 17 29.4 +1.0
SLGT	**Liugui**	**1.07**	**237**	*e*P	**Pn**	06 17 14.2 +0.4
SLGT				*e*S	**Sn**	06 17 28.7 +1.1
SGST	**Jiashian**	**1.08**	**242**	*e*P	**Pn**	06 17 14.2 +0.3
SGST				*e*S	**Sn**	06 17 29.1 +1.4
CHN1	**Nanshi**	**1.08**	**249**	*e*P	**Pn**	06 17 15.1 +1.2
CHN1				*e*S	**Sn**	06 17 29.6 +1.8
TWQ1	**Liyutan**	**1.08**	**315**	P	**Pn**	06 17 15.0 +1.0
TWQ1				S	**Sn**	06 17 29.8 +1.9
TWK	**Hsinying**	**1.09**	**253**	*i* P	**Pn**	06 17 14.9 +0.8
TWK				*i* S	**Sn**	06 17 29.4 +1.4
WCHH	**Zhanghua**	**1.09**	**297**	P	**Pn**	06 17 14.8 +0.8
WCHH				S	**Sn**	06 17 29.5 +1.6
SNST	**Tainan City**	**1.09**	**251**	*e*S	**Sb**	06 17 32.7 +3.1
WCH1	**Changhua City**	**1.09**	**296**	*e*S	**Sn**	06 17 30.1 +2.0
CHY	**Chiayi**	**1.10**	**266**	P	**Pn**	06 17 15.2 +1.0
CHY				S	**Sn**	06 17 29.6 +1.4
YHNB	**Yeheng**	**1.10**	**348**	P	**Pn**	06 17 15.4 +1.1
YHNB	**Yeheng**	**1.10**	**348**	S	**Sn**	06 17 27.7 -0.7
YHNB	**Yeheng**	**1.10**	**348**	P	**Pn**	06 17 14.2 0.0
YHNB				S	**Sn**	06 17 27.9 -0.5
NSK	**Sanguang**	**1.11**	**348**	P	**Pn**	06 17 14.7 +0.3
NSK				S	**Sn**	06 17 28.2 -0.4
TWE	**Neicheng**	**1.13**	**2**	*e*P	**Pn**	06 17 14.7 +0.1
WTK	**Tuku**	**1.13**	**275**	*e*S	**Sn**	06 17 30.7 +1.7
NFF	**Wufeng Townshi**	**1.14**	**336**	*e*P	**Pn**	06 17 15.6 +0.9
NFF				*e*S	**Sn**	06 17 30.1 +0.8
NSY	**Sanyi**	**1.14**	**317**	*e*P	**Pn**	06 17 16.8 +2.0
NSY				*e*S	**Sb**	06 17 32.1 +1.2
FUSB	**Fushanzhiwuyua**	**1.17**	**359**	*e*P	**Pn**	06 17 15.4 +0.2
FUSB				*e*S	**Sn**	06 17 29.8 -0.2
WDJ	**Dajia District**	**1.17**	**310**	*e*P	**Pn**	06 17 16.7 +1.5
WDJ				*e*S	**Sn**	06 17 32.4 +2.4
WRL	**Guolierlin Hig**	**1.18**	**286**	*e*P	**Pn**	06 17 16.1 +0.9
WRL				*e*S	**Sn**	06 17 32.2 +2.0
NSTT	**Nanjuang**	**1.18**	**332**	P	**Pn**	06 17 16.4 +1.1
NSTT				S	**Sn**	06 17 30.9 +0.6
LIOB	**Emei**	**1.19**	**332**	*e*P	**Pn**	06 17 16.7 +1.2
LIOB				*e*S	**Sn**	06 17 31.7 +1.3
NWLT	**Wulai**	**1.19**	**355**	*e*P	**Pn**	06 17 16.7 +1.2
NWLT				*e*S	**Sn**	06 17 30.3 -0.2
NMLH	**Miaoli**	**1.21**	**322**	*e*P	**Pn**	06 17 16.2 +0.5
NMLH				S	**Sn**	06 17 32.6 +1.6
SSD	**Sandimen**	**1.23**	**228**	*e*P	**Pn**	06 17 16.8 +0.8
SSD				*e*S	**Sb**	06 17 34.1 +0.5
KSHI	**Guanxi Townshi**	**1.25**	**341**	*e*P	**Pn**	06 17 17.6 +1.3
KSHI				*e*S	**Sn**	06 17 33.6 +1.6
WTCT	**Ta-ch'eng**	**1.26**	**283**	*e*S	**Sn**	06 17 33.9 +1.9
WSL	**Shuilin Townsh**	**1.28**	**267**	*e*P	**Pn**	06 17 17.8 +1.1
WSL				*e*S	**Sn**	06 17 33.8 +1.2
WSF	**Szhu**	**1.28**	**273**	*e*P	**Pn**	06 17 16.9 +0.2
WSF				*e*S	**Sn**	06 17 34.1 +1.4
CHN8	**Yiju**	**1.32**	**260**	*e*S	**Sn**	06 17 35.4 +1.9
MASBT	**Mashibuluo**	**1.33**	**223**	*e*P	**Pn**	06 17 17.9 +0.5
MASBT				*e*S	**Sn**	06 17 35.7 +1.8
HSN	**Hsinchu**	**1.35**	**334**	*e*S	**Sn**	06 17 37.2 +2.9
TATO	**Taipei**	**1.39**	**355**	*e*S	**Sn**	06 17 36.6 +1.3
TIPB	**Shuangxi**	**1.39**	**8**	*e*P	**Pn**	06 17 19.6 +1.4
TIPB				*e*S	**Sn**	06 17 36.3 +0.8
NCUH	**Zhongli**	**1.43**	**344**	*e*S	**Sn**	06 17 38.8 +2.4
TWB1	**Santiao Chiao**	**1.46**	**13**	*e*P	**Pn**	06 17 21.0 +1.9
TWB1				*e*S	**Sn**	06 17 39.0 +2.0
TSCK	**Chigu Township**	**1.48**	**253**	*e*P	**Pn**	06 17 20.1 +0.8
TSCK				*e*S	**Sn**	06 17 39.4 +1.9
JYNG	**Yonagunijimaku**	**1.49**	**54**	*e*P	**Pn**	06 17 20.2 +0.7
JYNG				*e*S	**Sn**	06 17 38.8 +1.1
SCZT	**Fangliau**	**1.52**	**218**	*e*P	**Pn**	06 17 21.2 +1.3
SCZT				*e*S	**Sn**	06 17 40.7 +2.2
SXI1	**Grass Mountain**	**1.52**	**9**	*e*P	**Pn**	06 17 20.9 +0.9
LAY	**Lan-yu**	**1.54**	**182**	*e*P	**Pn**	06 17 19.3 -1.0
LAY				*e*S	**Sn**	06 17 37.6 -1.6
YOJ	**Yonaguni jima**	**1.54**	**55**	*e*P	**Pn**	06 17 21.1 +0.9
YOJ				*i* S	**Sn**	06 17 40.3 +1.2
YM01	**YM01**	**1.55**	**358**	*e*P	**Pn**	06 17 22.1 +1.6
YM01				*e*S	**Sn**	06 17 40.1 +0.7
ZUZH	**Zhuzihu**	**1.57**	**358**	*e*P	**Pn**	06 17 21.3 +0.6
ZUZH				*e*S	**Sn**	06 17 40.0 +0.1
LYUB	**Lan-yu**	**1.58**	**181**	*e*P	**Pn**	06 17 20.3 -0.4
LYUB				*e*S	**Sn**	06 17 38.3 -1.7
SMST	**Manzhou Townsh**	**1.72**	**205**	*e*P	**Pn**	06 17 23.6 +0.9
SMST				*e*S	**Sn**	06 17 43.5 +0.1
TWKBT	**Hengchun**	**1.80**	**205**	*e*S	**Sn**	06 17 45.9 +0.4
WDGT	**Dungji**	**1.83**	**260**	*e*P	**Pn**	06 17 24.2 +0.1
WDGT				*e*S	**Sn**	06 17 46.1 -0.1
PHUB	**P'eng-hu**	**1.88**	**268**	*e*P	**Pn**	06 17 25.0 +0.1
PHUB				*e*S	**Sn**	06 17 47.0 -0.5
PNG	**Penghu**	**1.90**	**270**	*e*P	**Pn**	06 17 25.0 -0.1
PNG				*e*S	**Sn**	06 17 47.8 0.0
VCHM	**Qimei**	**2.05**	**260**	*e*S	**Sn**	06 17 50.8 -0.8
HATJ	**Hateruma jima**	**2.06**	**76**	*e*S	**Sn**	06 17 51.4 -0.3
IRIF	**Iriomote-Funau**	**2.07**	**68**	*e*P	**Pn**	06 17 27.6 +0.1
IRIF				*e*S	**Sn**	06 17 53.3 +1.2
JKRS	**Kuro-shima**	**2.28**	**73**	*e*P	**Pn**	06 17 31.2 +0.9
JKRS				*e*S	**Sn**	06 17 58.5 +1.2
VWUC	**VWUC**	**2.42**	**306**	*e*P	**Pn**	06 17 32.3 -0.1
VWUC				*e*S	**Sn**	06 17 59.6 -1.3
JIJ	**Ishigaki jima**	**2.43**	**71**	*e*P	**Pn**	06 17 33.0 +0.5
JIJ				*e*S	**Sn**	06 18 00.6 -0.5
JISG	**Ishigakijimahi**	**2.65**	**67**	*e*P	**Pn**	06 17 35.8 +0.2
JISG				*e*S	**Sn**	06 18 05.8 -0.7
PTMZ	**Houxiangcun**	**2.70**	**303**	*e*P	**Pn**	06 17 36.5 +0.4
PTMZ				*e*S	**Sn**	06 18 06.0 -1.8
JTJ	**Tarama**	**3.01**	**69**	*e*P	**Pn**	06 17 41.3 +0.9
JTJ				*e*S	**Sn**	06 18 15.2 0.0
KNM	**Kinmen**	**3.03**	**286**	*e*P	**Pn**	06 17 43.0 +2.3
KNM				*e*S	**Sn**	06 18 17.8 +2.0
KNMB	**Chin-men Tao**	**3.08**	**287**	*e*P	**Pn**	06 17 41.7 +0.3
KNMB				*e*S	**Sn**	06 18 16.0 -1.1
LYJJ	**Jianjiangzhen**	**3.40**	**331**	*e*P	**Pn**	06 17 45.9 +0.1
LYJJ				*e*S	**Sn**	06 18 24.4 -0.6
MHZQ	**Yeshan**	**3.44**	**317**	*e*P	**Pn**	06 17 46.0 -0.3
MHZQ				*e*S	**Sn**	06 18 25.3 -0.5
AXDP	**Jialang**	**3.58**	**292**	*e*P	**Pn**	06 17 48.5 +0.2
AXDP				*e*S	**Sn**	06 18 28.8 -0.6

IDC ***22*** *06:18:00.6±1.3,0.°21N×124.°72E, h0km, mb3.8/5, mbtmp3.9/7, ML3.7/2, MS2.8/2, Error ellipse: s-maj=50.5km s-min=18.9km az=65.0*

DJA ***22*** *06:18:09.9±0.8,0.°5S×12.°4E±.°, h29km±9km, M4.5/30, mB5.2/6, mb4.7/12, MLv4.4/30, Mw(mB)4.5/6*

ISC 22 06:18:09.9±0.9,0.°12S±0.°06×124.°42E±0.°06, h73km, n24, σ1§17/24, mb3.6/5, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**1.60**	**298**	P	**Pn**	**06 18 37.2**	**+1.0**
MNI	**Manado**	**1.60**	**15**	P	**Pn**	**06 18 37.8**	**+1.4**
LUWI	**Luwuk**	**1.89**	**241**	P	**Pn**	**06 18 41.0**	**+0.9**
SANI	**Sanana**	**2.48**	**141**	P	**Pn**	**06 18 54.4**	**-2.3**
MRSI	**Marisa**	**2.55**	**283**	P	**Pn**	**06 18 45.9**	**-3.1**
APSI	**Ampana**	**2.88**	**254**	P	**Pn**	**06 18 54.4**	**+0.8**
NLAI	**Namlea**	**4.09**	**139**	P	**Pn**	**06 19 10.0**	**-0.1**
MPSI	**Mapaga**	**4.55**	**276**	P	**Pn**	**06 19 16.2**	**0.0**
PCI	**Palu**	**4.65**	**260**	P	**Pn**	**06 19 17.9**	**+0.2**
KRAI	**Karang Ratu**	**5.08**	**129**	P	**Pn**	**06 19 25.3**	**+1.7**
	0.4nm5µm64nm,0.6s						
TTSI	**Tana Toraja**	**5.45**	**238**	P	**Pn**	**06 19 28.6**	**+0.1**
	0.3nm85nm,0.6s						
SPSI	**Sidrap Palu**	**6.02**	**231**	P	**Pn**	**06 19 37.0**	**+0.6**
	0.2nm1µm61nm,0.5s						
MMSI	**Mamuju**	**6.08**	**245**	P	**Pn**	**06 19 38.1**	**+0.9**
	0.2nm45nm,0.8s						
KAPI	**Kappang**	**6.74**	**224**	Pn	**Pn**	**06 19 47.0**	**+0.8**
	4.0nm,0.3s,baz=45,slow=13,SNR=11						
KAPI				Sn	**Sn**	**06 21 01.4**	**-0.2**
	2.5nm,0.3s,baz=210,slow=21,SNR=6.1						
KAPI				LR	LR	06 22 57.6	
	comp=Z,65nm,20.1s,baz=80,slow=41						
	13nm,0.4s						
KAPI	**Kappang**	**6.74**	**224**	P	**Pn**	**06 19 46.6**	**+0.4**
BSSI	**Bau Bau, Buton**	**7.16**	**213**	P	**Pn**	**06 19 52.3**	**+0.3**
	80nm,1.3s						
MYLDM	**Lahad Datu**	**7.92**	**312**	P	**Pn**	**06 20 02.9**	**+0.6**
	59nm,1.1s						
JAY	**Jayapura**	**16.45**	**98**	LR	LR	06 29 35.7	
	comp=Z,40nm,20.5s,baz=350,slow=43						
FITZ	**Fitzroy Crossi**	**17.91**	**176**	P	**Pn**	**06 22 14.5**	**+0.4**
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=1.8						
	2.4nm,1.0s						
WRA	**Warramunga Arr**	**21.97**	**154**	P	**P**	**06 22 57.6**	**-0.2**
	0.9nm,0.5s,baz=330,slow=12,SNR=9.7						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**25.15**	**159**	P	**P**	**06 23 29.9**	**+1.4**
	1.4nm,0.9s,baz=343,slow=8.0,SNR=11						
	1.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**31.11**	**308**	P	**P**	**06 24 20.8**	**-0.8**
	0.8nm,0.3s,baz=129,slow=7.8,SNR=4.4						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**59.47**	**328**	P	**P**	**06 28 04.6**	**-0.7**
	0.2nm,0.4s,baz=120,slow=7.5,SNR=3.9						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.78**	**329**	P	**P**	**06 28 33.9**	**-0.3**
	0.9nm,0.2s,baz=134,slow=6.6,SNR=4.2						
	0.9nm,0.2s						

RSNC 22 06:29:11.5±0.0,10.°N±2.°×7.°7W±.°, h89km±10km, M2.7, mB3.6, mb3.4, ML2.4, MLv3.3, Mw(mB)2.5, North of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPC	**Capurgana**	**1.56**	**196**	P	Pn	06 29 37.5	-0.6
CAPC				S	Sn	06 29 58.7	+0.6
SJCC	**San Jacinto, C**	**1.73**	**98**	P	Pn	06 29 38.2	-2.1
SJCC				S	Sn	06 29 59.6	-2.5
APAC	**Apartado, Choc**	**2.26**	**171**	P	Pn	06 29 47.3	+0.1
APAC				S	Sn	06 30 16.5	+2.1
UREC	**San Jos de Ur**	**2.75**	**150**	P	Pn	06 29 53.0	-0.7
UREC				S	Sn	06 30 25.7	-0.4
BCIP	**Isla Barro Col**	**3.04**	**251**	P	Pn	06 29 56.7	-0.8
BCIP				S	Sn	06 30 31.5	-1.5
DBBC	**Dabeiba**	**3.19**	**167**	P	Pn	06 29 58.5	-1.2
DBBC				S	Sn	06 30 36.5	-0.4
OCAC	**Ocana**	**4.03**	**118**	P	Pn	06 30 09.9	-1.2
OCAC				S	Sn	06 30 55.1	-2.2
CRJC	**Cerrejon, Guaj**	**4.06**	**77**	P	Pn	06 30 08.0	-3.5
CRJC				S	Sn	06 30 52.7	-5.3
PTBC	**PUERTO BERRIO,**	**4.34**	**146**	P	Pn	06 30 15.0	-0.2
PTBC				S	Sn	06 31 02.3	-2.3
CBOC	**Ciudad Bolivar**	**4.35**	**168**	P	Pn	06 30 16.1	+0.6
CBOC				S	Sn	06 31 06.9	+1.7
PAMC	**Pamplona, Colo**	**5.02**	**123**	P	Pn	06 30 24.3	-0.6
	0.0nm70nm3.1nm,0.4s						
PAMC				S	Sn	06 31 22.3	+0.4
	0.0nm70nm3.1nm,0.4s						
URIC	**Uribia, Colomb**	**5.08**	**72**	P	Pn	06 30 24.5	-0.7
	0.1nm18nm,1.5s						
URIC				S	Sn	06 31 19.6	-3.0
	0.1nm18nm,1.5s						
GUY2C	**Guyana, Caldas**	**5.13**	**162**	P	Pn	06 30 28.7	+2.3
	0.0nm4.3nm,1.9s						
GUY2C				S	Sn	06 31 28.2	+3.6
	0.0nm4.3nm,1.9s						
RUSC	**La Rusia**	**5.69**	**138**	P	Pn	06 30 33.6	-0.3
RUSC				S	Sn	06 31 37.5	-0.6

NEIC ***22*** *06:55:37.3±1.4,2.°85S±0.°06×147.°6E±0.°2, h10km±2km, mb4.5/14, Error ellipse: s-maj=33.0km s-min=5.7km az=74.0*

IDC ***22*** *06:55:39.5±4.8,3.°01S×147.°82E, h43km±49km, mb3.8/11, mbtmp4.1/12, ML1.7/1, MS3.7/34, Error ellipse: s-maj=39.6km s-min=26.0km az=106.0*

ISC 22 06:55:38.7±0.9,2.°89S±0.°06×147.°7E±0.°2, h32km, n64, σ1§07/32, mb4.3/18, MS3.8/30, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**0.92**	**337**		**Pn**	**06 55 53.9**	**-1.5**
PMG	**Port Moresby**	**6.49**	**185**	P	**Pn**	**06 57 11.1**	**-1.1**
	1.0nm,0.3s,baz=87,slow=5.6,SNR=4.4						
PMG				S	**Sn**	**06 58 23.4**	**-1.8**
	20nm,0.8s,baz=23,slow=6.4,SNR=3.1						
PMG				LR	LR	06 59 44.5	
	comp=Z,617nm,19.6s,baz=24,slow=38						
	5.8nm,0.4s						
PMG	**Port Moresby**	**6.49**	**185**		**Pn**	**06 57 12.2**	**+0.1**
JAY	**Jayapura**	**7.03**	**273**	LR	LR	06 59 49.1	
	comp=Z,431nm,21.3s,baz=360,slow=35						
GUMO	**Guam**	**16.62**	**350**	LR	LR	07 06 00.4	
	comp=Z,234nm,18.9s,baz=120,slow=37						
CTA	**Charters Tower**	**17.15**	**185**	LR	LR	07 06 13.3	
	comp=Z,382nm,19.6s,baz=21,slow=37						
MTN	**Manton Dam**	**19.16**	**238**	P	**P**	**06 59 59.3**	**-0.5**
MTN				IAmb	IAmb	07 00 34.1	
	comp=Z,19nm,1.1s						
WB0	**Warramunga Arr**	**21.23**	**217**		**P**	**07 00 22.1**	**-0.1**
WB0				IAmb	IAmb	07 00 30.1	
	comp=Z,18nm,1.1s						
WRA	**Warramunga Arr**	**21.40**	**217**	P	**P**	**07 00 23.3**	**-0.7**
	comp=Z,5.6nm,0.8s,baz=41,slow=11,SNR=22						
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**21.40**	**217**		**P**	**07 00 24.9**	**+0.9**
KNRA	**Kununurra**	**22.59**	**235**	P	**P**	**07 00 36.2**	**-0.6**
KNRA				IAmb	IAmb	07 00 50.3	
	comp=Z,18nm,1.1s						
AS31	**Alice Springs**	**24.60**	**212**		**P**	**07 00 56.7**	**+0.4**
ASAR	**Alice Springs**	**24.60**	**212**	P	**P**	**07 00 55.8**	**-0.5**
	comp=Z,4.7nm,0.8s,baz=44,slow=8.0,SNR=28						
ASAR				LR	LR	07 10 10.9	
	comp=Z,190nm,20.4s,baz=44,slow=36						
	comp=Z,4.7nm,0.8s						
ASAR	**Alice Springs**	**24.60**	**212**		**P**	**07 00 56.7**	**+0.4**
BATI	**Baumata**	**24.97**	**252**	LR	LR	07 12 08.6	
	comp=Z,220nm,19.7s,baz=64,slow=40						
INKA	**Innaminka**	**25.59**	**194**	P	**P**	**07 01 07.9**	**+2.8**
INKA				IAmb	IAmb	07 01 15.6	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**26.40**	**234**	LR	LR	07 12 18.7	
	comp=Z,262nm,18.5s,baz=54,slow=38						
KAPI	**Kappang**	**27.99**	**265**	LR	LR	07 14 04.4	
	comp=Z,54nm,19.5s,baz=74,slow=39						
H11S3	**WAKE ISLAND Hy**	**28.29**	**41**	T	T	07 30 52.2	
	baz=222,slow=76,SNR=2544						
H11S2	**WAKE ISLAND Hy**	**28.30**	**41**	T	T	07 30 50.9	
	baz=222,slow=76,SNR=707						
H11S1	**WAKE ISLAND Hy**	**28.31**	**41**	T	T	07 30 48.1	
	baz=222,slow=76,SNR=199						
H11N1	**WAKE ISLAND Hy**	**29.31**	**39**	T	T	07 32 07.5	
	baz=221,slow=76,SNR=203						
H11N3	**WAKE ISLAND Hy**	**29.33**	**39**	T	T	07 32 08.3	
	baz=221,slow=76,SNR=324						
H11N2	**WAKE ISLAND Hy**	**29.33**	**39**	T	T	07 32 07.0	
	baz=221,slow=76,SNR=444						
STKA	**Stephens Creek**	**29.40**	**191**	LR	LR	07 14 23.9	
	comp=Z,266nm,18.2s,baz=12,slow=38						
MYLDM	**Lahad Datu**	**30.28**	**285**	P	**P**	**07 01 46.

PSMG				*e*S	Sn	07 08 43.5	0.0		
PSGH	**Port of Spain**	**0.68**	**93**	*e*P	Pn	07 08 34.7	+0.7		
PSGH				*e*S	Sn	07 08 43.9	-0.1		
TRN	**Trinidad (W)**	**0.79**	**93**	*e*P	Pn	07 08 35.7	+0.4		
TRN				*e*S	Sn	07 08 46.3	-0.1		
TPP	**Pointe-a-Pierr**	**0.83**	**117**	*e*P	Pn	07 08 36.9	+1.0		
GRFF	**Grenada Fort F**	**1.42**	**19**	*e*P	Pn	07 08 43.9	+0.1		
GRFF				*e*S	Sn	07 09 01.0	-0.5		
GRGR	**Grenville**	**1.53**	**21**	*e*P	Pn	07 08 45.0	-0.3		
GRGR				*e*S	Sn	07 09 04.4	+0.4		
GRW	**Mount Saint Ca**	**1.55**	**20**	*e*P	Pn	07 08 45.9	+0.2		
GRW				*e*S	Sn	07 09 04.8	0.0		
GRSS	**Sisters**	**1.69**	**20**	*e*P	Pn	07 08 48.1	+0.6		
GRSS				*e*S	Sn	07 09 08.9	+0.7		
GCMP	**Grenada, Carri**	**1.94**	**23**	*e*P	Pn	07 08 50.9	0.0		
GCMP				*e*S	Sn	07 09 14.1	+0.1		
PCRV	**Puerto La Cruz**	**2.45**	**258**	*e*P	Sn	07 08 58.5	+0.6		
PCRV				*e*S	Sn	07 09 25.9	-0.9		
SVB	**Belmont**	**2.73**	**20**	*e*P	Sn	07 09 02.0	+0.4		
SVB				*e*S	Sn	07 09 32.5	-0.9		
SLAC	**Saint Lucia, A**	**3.43**	**22**	*e*P	Pn	07 09 11.7	+0.4		
SLBI	**Saint Lucia, B**	**3.52**	**20**	*e*P	Pn	07 09 12.3	-0.2		
SLBI				*e*S	Sn	07 09 51.8	-1.1		
BIM	**Bigot**	**3.96**	**16**	*e*P	Pn	07 09 19.0	+0.5		
BIM				*e*S	Sn	07 10 02.0	-1.7		
SVN	**Savane Anatole**	**4.24**	**14**	*e*P	Pn	07 09 22.7	+0.1		
DLPL	**La Plaine**	**4.70**	**11**	*e*P	Pn	07 09 30.1	+1.4		
DSLB	**Salisbury**	**4.78**	**9**	*e*P	Pn	07 09 30.2	+0.4		
DSLB				*e*S	Sn	07 10 22.4	-1.5		
TBG	**Guadaloupe-3**	**5.16**	**6**	*e*P	Pn	07 09 35.3	+0.3		
MMLZ	**Guadeloupe Bro**	**5.34**	**6**	*e*P	Pn	07 09 38.0	+0.5		
DHSZ	**Broadband at M**	**5.56**	**4**	*e*P	Pn	07 09 42.1	+1.6		
DSDZ	**La Diserade, G**	**5.69**	**11**	*e*P	Pn	07 09 42.0	-0.3		
MLYT	**Lee's Yard**	**5.99**	**0**	*e*P	Pn	07 09 47.4	+0.9		
MLYT				*e*S	Sn	07 10 51.3	-2.5		
MBWH	**Windy Hill**	**6.01**	**0**	*e*P	Pn	07 09 47.4	+0.7		
MBWH				*e*S	Sn	07 10 51.5	-2.8		
MBFL	**Flemmings, Mon**	**6.02**	**360**	*e*P	Pn	07 09 47.1	+0.3		
MBFL				*e*S	Sn	07 10 51.4	-3.0		
SKI	**Saint Kitts**	**6.62**	**356**	*e*P	Pn	07 09 55.8	+0.7		
ANWB	**Willy Bob**	**6.95**	**3**	*e*P	Pn	07 10 00.4	+0.9		

*SOME **22** 07:12:58.8, 50˙.13N × 78˙.73E*
*NNC **22** 07:12:59.7±0.9, 50˙.03N × 78˙.72E, h0km, mb3.6, mpv3.0, Error ellipse: s-maj=7.8km s-min=3.7km az=52.0, Suspected Mining explosion.*
*IDC **22** 07:13:00.1±0.8, 50˙.06N × 78˙.80E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=11.5km s-min=5.7km az=58.0.*

ISC 22 07:12:59.6±0.8, **50˙.04N**±0˙.04 × **78˙.65E**±0˙.04, **h0**km, **n20, σ1ᵍ05**/35, **8C-14D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.55**	**352**	⇓P	**Pg**		**07 13 10.6**	**+0.4**
KUR07				⇑S	**Sb**		**07 13 19.3**	**-1.4**
KUR06	**Kurchatov Arra**	**0.57**	**352**	⇓P	**Pg**		**07 13 10.9**	**+0.3**
KUR06				⇓S	**Sb**		**07 13 20.1**	**-1.1**
KUR14	**Kurchatov Arra**	**0.58**	**357**	⇓P	**Pg**		**07 13 10.8**	**0.0**
KUR14				⇑S	**Sb**		**07 13 19.6**	**-1.8**
KUR15	**Kurchatov Arra**	**0.59**	**355**	⇑P	**Pg**		**07 13 10.9**	**+0.1**
KUR15				⇓S	**Sb**		**07 13 20.1**	**-1.5**
KURBB	**Kurchatov Arra**	**0.59**	**353**	Pg	**Pg**		**07 13 10.8**	**-0.2**
	1.1nm,0.3s,baz=165,slow=19,SNR=101							
KURBB				Lg	Lg		07 13 20.6	
	1.5nm,0.3s,baz=160,slow=33,SNR=16							
KURBB	**Kurchatov Arra**	**0.59**	**353**	⇓P	**Pg**		**07 13 10.9**	**0.0**
	20nm,0.6s							
KURBB				⇓S	**Sb**		**07 13 21.3**	**-0.4**
	58nm,0.7s							
KUR16	**Kurchatov Arra**	**0.60**	**351**	⇓P	**Pg**		**07 13 11.2**	**+0.1**
KUR16				⇓S	**Sb**		**07 13 21.2**	**-0.8**
KUR17	**Kurchatov Arra**	**0.61**	**349**	⇑P	**Pg**		**07 13 11.5**	**+0.3**
KUR17				⇓S	**Sb**		**07 13 21.6**	**-0.6**
KUR05	**Kurchatov Arra**	**0.61**	**353**	⇑P	**Pg**		**07 13 11.4**	**+0.1**
KUR05				⇓S	**Sb**		**07 13 20.9**	**-1.5**
KUR04	**Kurchatov Arra**	**0.63**	**354**	⇑P	**Pg**		**07 13 12.0**	**+0.3**
KUR04				⇓S	**Sb**		**07 13 21.6**	**-1.2**
KURK	**Kurchatov**	**0.68**	**359**	⇑P	**Pg**		**07 13 12.3**	**-0.3**
	3.9nm,0.6s							
KURK				⇑S	**Sb**		**07 13 23.7**	**-0.6**
	2.2nm,0.4s							
SEM	**Semipalatinsk**	**1.10**	**70**	P	**Pg**		**07 13 19.7**	**-0.8**
	4.3nm,0.1s							
SEM				P	**Pg**		**07 13 19.8**	**-0.8**
	4.3nm,0.1s							
SEM				S	**Sg**		**07 13 34.6**	**-0.2**
	15nm,0.1s							
BRZS	**Berezniki**	**3.85**	**271**	Pg	**Pg**		**07 14 13.0**	**-0.4**
	0.1nm,0.0s							
BRZS				Lg	Lg		07 15 05.8	
	3.8nm,0.1s							
MK31	**Makanchi Array**	**4.05**	**142**	Pn	**Pn**		**07 14 03.4**	**+0.6**
	baz=316,slow=10,SNR=16							
MK31				⇓Pg	**Pb**		**07 14 12.9**	**+1.1**
	0.9nm,0.5s,baz=318,slow=14,SNR=8.4							
MK31				⇓Lg	Lg		07 15 06.1	
	5.1nm,0.5s,baz=333,slow=30,SNR=26							
MKAR	**Makanchi Array**	**4.05**	**142**	Pn	**Pn**		**07 14 03.2**	**+0.3**
	0.2nm,0.3s,baz=326,slow=10,SNR=16							
MKAR				Pg	**Pb**		**07 14 10.3**	**-1.5**
	0.4nm,0.3s,baz=325,slow=14,SNR=16							
MKAR				Sn	**Sn**		**07 14 50.5**	**-0.5**
	0.3nm,0.3s,baz=329,slow=18,SNR=5.4							
MKAR				Lg	Lg		07 15 06.8	
	1.6nm,0.3s,baz=317,slow=25,SNR=22							
	0.2nm,0.3s							
ZSN	**Zaisan**	**4.86**	**120**	Pg	**Pb**		**07 14 28.5**	**+3.0**
	3.5nm,0.2s							
ZSN				Lg	Lg		07 15 32.3	
	9.3nm,0.4s							
I46RU	**ZALESOVO INFRA**	**5.47**	**42**	I	I		07 43 20.0	
	baz=223,slow=338,SNR=14							
ZALV	**Zalesovo Beam**	**5.47**	**42**	Pn	**Pn**		**07 14 23.4**	**+1.2**
	0.4nm,0.3s,baz=234,slow=14,SNR=5.5							
ZALV				Lg	Lg		07 15 53.0	
	0.2nm,0.3s,baz=221,slow=26,SNR=2.9							
	0.8nm,0.3s							
BVAR	**Borovoye Array**	**5.96**	**303**	Pg	**Pb**		**07 14 42.8**	**-1.4**
	baz=103,slow=15,SNR=2.3							
BVAR				Sn	**Sn**		**07 15 39.4**	**+1.5**
	baz=121,slow=24,SNR=1.8							
BVAR				Lg	Lg		07 16 10.7	
	0.1nm,0.3s,baz=124,slow=24,SNR=5.4							
AAK	**Ala-Archa**	**7.94**	**203**	Sn	**Sn**		**07 16 27.3**	**+0.5**
	0.2nm,0.3s,baz=0.0,slow=13,SNR=1.7							
AAK				Lg	Lg		07 17 09.7	
	0.1nm,0.3s,baz=78,slow=20,SNR=2.4							

*IDC **22** 07:20:44.8±1.1, 2˙.58N × 127˙.07E, h0km, mb3.8/7, mbtmp3.8/7, MS3.3/1, Error ellipse: s-maj=88.9km s-min=16.3km az=70.0*

ISC 22 07:20:52.3±1.1, **2˙.4N**±0˙.2 × **126˙.8E**±0˙.6, **h53**km, **n8**, σ0ᵍ79/8, **mb3.8/6, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.44**	**183**	P	**P**		**07 25 25.6**	**+0.1**
	1.3nm,0.4s,baz=23,slow=12,SNR=6.0							
	1.3nm,0.4s							
WRA	**Warramunga Arr**	**23.45**	**162**	P	**P**		**07 25 56.0**	**-1.2**
	1.1nm,0.5s,baz=344,slow=11,SNR=16							
	1.1nm,0.5s							
ASAR	**Alice Springs**	**26.86**	**165**	P	**P**		**07 26 27.5**	**-0.7**
	0.6nm,0.6s,baz=346,slow=7.3,SNR=16							
ASAR				PcP	**PcP**		**07 29 50.0**	**+0.2**
	0.2nm,0.6s,baz=1.9,slow=2.8,SNR=2.0							
	0.6nm,0.6s							
CTA	**Charters Tower**	**29.43**	**140**	LR	LR		07 39 51.1	
	comp=Z,54nm,20.5s,baz=235,slow=39							
STKA	**Stephens Creek**	**36.91**	**159**	P	**P**		**07 27 56.9**	**+0.7**
	1.5nm,0.6s,baz=339,slow=7.7,SNR=4.6							
	1.5nm,0.6s							
SONM	**Songino Array**	**48.53**	**342**	P	**P**		**07 29 30.6**	**+0.3**
	0.3nm,0.5s,baz=134,slow=4.2,SNR=2.1							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**58.64**	**326**	P	**P**		**07 30 43.6**	**-0.6**
	0.4nm,0.3s,baz=124,slow=7.3,SNR=12							
	0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**62.85**	**328**	P	**P**		**07 31 12.6**	**0.0**
	0.7nm,0.3s,baz=131,slow=6.3,SNR=7.9							
	0.7nm,0.3s							

*GUC **22** 07:58:41.1±0.7, 17˙.75S × 69˙.61W, h135km±3km, ML3.8*
*VAO **22** 07:58:41.8±1.7, 17˙.45S × 69˙.37W, h155km±7km, mb4.0, Presumed earthquake*
*IDC **22** 07:58:44.6±4.8, 17˙.21S × 69˙.22W, h164km±25km, mb3.4/6, mbtmp4.0/7, Error ellipse: s-maj=82.3km s-min=20.2km az=25.0*

ISC 22 07:58:39.1±0.7, **17˙.67S**±0˙.06 × **69˙.52W**±0˙.07, **h139**km±6km, **n34**, σ1ᵍ02/40, **mb3.5**/4, **4D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.09**	**24**	⇓*i*P	**Pn**		**07 59 00.0**	**+1.4**
PB18				*e*S	**Sn**		**07 59 15.2**	**+1.9**
PB16	**IPOC Station P**	**0.66**	**179**	⇓*i*P	**Pn**		**07 59 01.9**	**+0.9**
PB16				*e*S	**Sn**		**07 59 18.0**	**+0.5**
AP01	**Chacalluta**	**1.05**	**228**	*e*P	**Pn**		**07 59 03.0**	**-0.3**
AP01				*e*S	**Sn**		**07 59 20.6**	**-1.1**
AP01				IAML			07 59 21.1	
	comp=E,5μm,0.3s							
PB12	**IPOC Station P**	**1.22**	**219**	*e*P	**Pn**		**07 59 04.4**	**-0.6**
PB12				*e*S	**Sn**		**07 59 23.0**	**-1.8**
PB12				IAML			07 59 25.5	
	comp=N,2μm,0.2s							
LPAZ	**La Paz**	**1.91**	**44**	P	**Pn**		**07 59 14.6**	**+1.4**
	comp=N,49nm,0.3s,baz=226,slow=1.7,SNR=191							
LPAZ				S	**Sn**		**07 59 38.4**	**-0.8**
	comp=N,16nm,0.5s,baz=199,slow=2.7,SNR=4.7							
LPAZ	**La Paz**	**1.91**	**44**	*e*P	**Pn**		**07 59 14.2**	**+1.0**
GO01	**Chusmiza**	**2.01**	**171**	*e*P	**Pn**		**07 59 15.4**	**+1.1**
GO01				IAML			07 59 51.2	
	comp=N,336nm,0.3s							
PB11	**IPOC Station P**	**2.08**	**184**	⇓*i*P	**Pn**		**07 59 14.9**	**+0.1**
PB11				*e*S	**Sn**		**07 59 41.9**	**-0.3**
PB11				IAML			07 59 45.3	
	comp=E,422nm,0.2s							
PB08	**IPOC Station P**	**2.48**	**172**	⇓*i*P	**Pn**		**07 59 20.9**	**+1.0**
PB08				IAML			07 59 53.7	
	comp=E,257nm,0.5s							
TA02	**Huaiquique**	**2.65**	**193**	*e*P	**Pn**		**07 59 20.9**	**-0.8**
PB01	**IPOC Station P**	**3.36**	**180**	*e*P	**Pn**		**07 59 30.7**	**-0.1**
PB01				IAML			08 00 11.5	
	comp=N,211nm,0.3s							
PB02	**IPOC Station P**	**3.65**	**186**	*e*P	**Pn**		**07 59 34.3**	**-0.3**
SIV	**San Ignacio**	**8.26**	**80**	P	**Pn**		**08 00 34.8**	**-1.3**
	comp=N,11nm,0.4s							
VILB	**Vilhena**	**10.14**	**64**	*e*P	**Pn**		**08 00 59.7**	**-1.6**
PTLB	**Pontes e Lacer**	**10.20**	**79**	*e*P	**Pn**		**08 01 01.2**	**-0.8**
SALV	**Santo Antonio**	**13.36**	**84**	*e*P	**Pn**		**08 01 43.7**	**+0.3**
PDRB	**Porto dos Gac**	**13.76**	**66**	*e*P	**Pn**		**08 01 47.9**	**-0.7**
TEFE	**Tefe**	**14.87**	**19**	*e*P	**Pn**		**08 02 00.5**	**-2.0**
PTGB	**Pitanga**	**17.71**	**116**	*e*P	**P**		**08 02 37.2**	**+1.0**
LDASE	**Londrina, Braz**	**18.14**	**111**	*e*P	**P**		**08 02 41.8**	**+1.0**
SNDB	**Serra Nova Dou**	**18.50**	**75**	*e*P	**Pn**		**08 02 46.0**	**-0.6**
ITTB	**Itaituba**	**18.89**	**47**	*e*P	**P**		**08 02 47.5**	**-1.5**
IPMB	**Ipameri, GO**	**20.29**	**94**	*e*P	**P**		**08 03 04.3**	**+0.1**
BDFB	**Brasilia**	**20.70**	**88**	P	**P**		**08 03 08.9**	**+0.2**
	comp=N,3.6nm,0.4s,baz=275,slow=9.2,SNR=11							
	comp=N,3.6nm,0.4s							
SMTB	**Santa Maria do**	**23.05**	**71**	*e*P	**P**		**08 03 32.5**	**-0.1**
JANB	**Januaria**	**24.32**	**88**	*e*P	**P**		**08 03 44.4**	**+0.2**
SDBA	**SAO DESIDERIO**	**24.33**	**81**	*e*P	**P**		**08 03 43.1**	**-1.1**
TXAR	**Lajitas Array**	**57.19**	**324**	P	**P**		**08 08 12.7**	**+0.8**
	comp=N,0.2nm,0.6s,baz=151,slow=7.6,SNR=5.4							
	comp=N,0.2nm,0.6s							
PDAR	**Pinedale Array**	**70.52**	**330**	P	**P**		**08 09 39.9**	**+0.8**
	comp=N,0.2nm,0.7s,baz=69,slow=5.2,SNR=2.6							
	comp=N,0.2nm,0.7s							
ULM	**Lac du Bonnet**	**71.51**	**343**	P	**P**		**08 09 44.8**	**+0.2**
	comp=N,2.6nm,0.4s,baz=148,slow=7.1,SNR=9.9							
	comp=N,2.6nm,0.4s							
TORD	**Torodi Ar. Bea**	**76.65**	**71**	P	**P**		**08 10 15.8**	**+0.6**
	comp=N,0.5nm,0.4s,baz=262,slow=4.3,SNR=9.7							
	comp=N,0.5nm,0.4s							
YKA	**Yellowknife Ar**	**87.40**	**341**	P	**P**		**08 11 11.4**	**+1.2**
	comp=N,0.7nm,0.7s,baz=132,slow=4.1,SNR=19							
	comp=N,0.7nm,0.7s							
HILR	**Hailar Array B**	**147.32**	**349**	PKPbc	**PKPab**		**08 18 07.9**	**-0.6**
	comp=N,1.2nm,0.5s,baz=345,slow=2.2,SNR=5.0							
SONM	**Songino Array**	**149.73**	**5**	PKPbc	**PKiKP**		**08 18 14.2**	**+0.5**
	comp=N,0.8nm,0.5s,baz=333,slow=0.6,SNR=6.1							

*IDC **22** 08:06:49.8±0.8, 79˙.95N × 20˙.87E, h0km, mb3.7/8, mbtmp3.8/11, ML3.2/3, Error ellipse: s-maj=16.9km s-min=11.7km az=95.0*
*BER **22** 08:06:50.8±3.3, 79˙.99N × 20˙.86E, h15km, ML3.5, ML3.8(NAO), Confirmed Earthquake*
*FCIAR **22** 08:06:50.0, 79˙.89N × 19˙.05E, h10km, station ZFI2 has station magnitude of 4.20 station OMEGA has station magnitude of 4.20*
*KOLA **22** 08:06:5 0, 79˙.73N × 18˙.56E, h0km, ML3.2, Error ellipse: s-maj=14.8km s-min=11.4km az=30.0, Spitsbergen*
*NAO **22** 08:06:51.5±1.5, 79˙.87N × 19˙.51E, h12km±7km, ML2.8*

ISC 22 08:06:49.4±0.6, **79˙.78N**±0˙.04 × **20˙.93E**±0˙.05, **h10**km, **n55,** σ2ᵍ84/86, **mb3.7/7, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**1.84**	**211**	Pn	**Pn**		**08 07 21.5**	**+0.5**
	baz=21,slow=18							
SPA0				Sg	**Sg**		**08 07 49.1**	**+0.7**
	baz=27,slow=28							
SPA0	**Spitsbergen Ar**	**1.84**	**211**	Pn	**Pn**		**08 07 21.5**	**+0.5**
SPA0				Sg	**Sg**		**08 07 49.1**	**+0.7**
SPA0	**Spitsbergen Ar**	**1.84**	**211**	*e*P	**Pn**		**08 07 21.9**	**+0.9**
SPA0				*e*S	**Sn**		**08 07 45.8**	**+1.5**
SPITS	**Spitsbergen Ar**	**1.84**	**211**	Pn	**Pb**		**08 07 24.4**	**+1.3**
	baz=54,slow=10							
SPITS				Sn	**Sg**		**08 07 49.1**	**+0.7**
	baz=30,slow=27							
SPITS	**Spitsbergen Ar**	**1.84**	**211**	P	**Pn**		**08 07 21.3**	**+0.3**
SPITS				S	**Sn**		**08 07 44.0**	**-0.2**

KBS	**Kingsbay**	**1.88**	**247**	Pb	**Pn**		**08 07 20.0**	**-1.5**	
KBS				Sg	**Sn**		**08 07 44.7**	**-0.6**	
KBS	**Kingsbay**	**1.88**	**247**	*e*	**Pn**		**08 07 19.8**	**-1.7**	
KBS				*e*P	**Pb**		**08 07 21.4**	**-2.3**	
KBS				*e*S	**Sn**		**08 07 44.4**	**-0.8**	
KBS				IAML			08 07 45.7		
	comp=Z,1μm,0.3s								
KBS	**Kingsbay**	**1.88**	**247**	P	**Pn**		**08 07 19.5**	**-2.0**	
KBS				S	**Sn**		**08 07 38.6**	**-6.6**	
BRBB	**Barentsburg B**	**2.14**	**221**	Pn	**Pn**		**08 07 25.2**	**+0.1**	
BRBB	**Barentsburg B**	**2.14**	**221**	*e*P	**Pn**		**08 07 25.2**	**+0.1**	
BRBB	**Barentsburg B**	**2.14**	**221**	P	**Pn**		**08 07 24.8**	**-0.3**	
BRBB				S	**Sn**		**08 07 45.0**	**-6.6**	
BRBA	**Barentsburg A**	**2.17**	**220**	Pn	**Pn**		**08 07 25.5**	**0.0**	
BRBA				Sn	**Sn**		**08 07 51.2**	**-1.1**	
BRBA	**Barentsburg A**	**2.17**	**220**	*e*P	**Pn**		**08 07 25.6**	**+0.2**	
HSPB	**Hornsund (broa**	**3.00**	**204**	Pn	**Pn**		**08 07 39.1**	**+2.1**	
HSPB				Sg	**Sg**		**08 08 25.3**	**-0.4**	
HSPB	**Hornsund (broa**	**3.00**	**204**	*e*P	**Pn**		**08 07 39.3**	**+2.3**	
HSPB				*e*Pg	**Pb**		**08 07 45.0**	**+2.1**	
HSPB				*e*Sg	**Sg**		**08 08 25.5**	**-0.1**	
HSPB				IAML			08 08 28.2		
	comp=Z,332nm,0.6s								
HSPB	**Hornsund (broa**	**3.00**	**204**	*e*P	**Pn**		**08 07 37.9**	**+1.0**	
HSPB				*e*S	**Sn**		**08 08 14.9**	**+2.1**	
HSPB	**Hornsund (broa**	**3.00**	**204**	P	**Pn**		**08 07 38.5**	**+1.5**	
HSPB				S	**Sn**		**08 08 09.4**	**-3.5**	
HOPEN	**Hopen**	**3.40**	**164**	Pn	**Pn**		**08 07 45.1**	**+2.7**	
HOPEN				Sn	**Sn**		**08 08 26.1**	**+3.4**	
HOPEN	**Hopen**	**3.40**	**164**	*e*P	**Pn**		**08 07 44.6**	**+2.2**	
HOPEN				*e*S	**Sn**		**08 08 25.4**	**+2.8**	
HOPEN				IAML			08 08 48.8		
	comp=Z,222nm,0.4s								
ZFI2	**Zemlya Franca-**	**4.61**	**64**	*e*P	**Pn**		08 08 03.2	+4.3	
ZFI2				*e*S	**Sb**		**08 08 59.8**	**-5.8**	
	comp=Z,186nm,1.6s								
OMEGA	**Omega**	**4.62**	**65**	*e*P	**Pn**		08 08 03.2	+4.1	
OMEGA				*e*S	**Sb**		**08 08 59.8**	**-6.2**	
	comp=Z,169nm,1.0s								
BJO1	**Bjornoya**	**5.33**	**186**	*e*			08 09 41.0		
BEAR	**Bear Island, N**	**5.34**	**186**	Pn	**Pn**		**08 08 10.2**	**+1.3**	
	baz=2.9,slow=18								
BEAR				Sn	**Sn**		**08 09 09.3**	**-1.0**	
	baz=2.9,slow=18								
BEAR				Sg	**Sg**		**08 09 38.3**	**-2.1**	
	baz=3.0,slow=37								
NOR	**Nord**	**6.26**	**305**	*i* P	**Pn**		**08 08 21.6**	**0.0**	
DAG	**Danmarks Havn**	**8.44**	**270**	*e*P	**Pn**		**08 08 50.4**	**-1.1**	
DAG	**Danmarks Havn**	**8.44**	**270**	*i* P	**Pn**		**08 08 50.4**	**-1.1**	
DAG				*i* S	Sn		08 10 17.7	-8.9	
DAG				IAML			08 10 21.5		
	comp=Z,3.3nm,0.5s								
HAMF	**Hammerfest**	**9.22**	**174**	Pn	**Pn**		**08 09 03.3**	**+1.1**	
HAMF				Sn	**Sn**		**08 10 38.4**	**-7.4**	
VADS	**Vadso**	**9.94**	**163**	P	**Pn**		**08 09 14.7**	**+2.6**	
VADS				S	**Sn**		**08 11 00.2**	**-3.3**	
VADS	**Vadso**	**9.94**	**163**	P	**Pn**		**08 09 14.9**	**+2.8**	
VADS				S	**Sn**		**08 11 01.0**	**-2.5**	
KEV	**Kevo**	**10.20**	**168**	P	**Pn**		**08 09 17.4**	**+1.8**	
KEV				S	**Sn**		**08 11 06.6**	**-3.2**	
ARA0	**ARCESS Array S**	**10.37**	**171**	Pn	**Pn**		**08 09 20.1**	**+2.1**	
	baz=1.5,slow=11								
ARA0				Sn	Sn		08 11 05.5	-8.6	
	baz=0.4,slow=22								
ARA0	**ARCESS Array S**	**10.37**	**171**	Pn	**Pn**		**08 09 20.1**	**+2.1**	
ARA0				Sn	Sn		08 11 05.5	-8.6	
ARCES	**ARCESS Array B**	**10.37**	**171**	Pn	**Pn**		**08 09 18.6**	**+0.6**	
	comp=Z,1.1nm,0.3s,baz=3.5,slow=10.0,SNR=33								
ARCES				Sn	**Sn**		**08 11 07.7**	**-6.4**	
	comp=Z,1.2nm,0.3s,baz=3.9,slow=20,SNR=7.6								
	comp=Z,2.4nm,0.3s								
ARCES	**ARCESS Array B**	**10.37**	**171**	P	**Pn**		**08 09 19.8**	**+1.8**	
ARCES				S	**Sn**		**08 11 09.0**	**-5.1**	
DBG	**Daneborg**	**10.46**	**261**	P	**Pn**		**08 09 17.5**	**-1.6**	
DBG	**Daneborg**	**10.46**	**261**	*e*P	**Pn**		**08 09 18.1**	**-1.1**	
DBG	**Daneborg**	**10.46**	**261**	*i* P	**Pn**		**08 09 17.9**	**-1.2**	
DBG				*e*S	Sn		08 10 59.9	-16	
DBG				IAML			08 11 37.3		
	comp=Z,3.3nm,1.3s								
APA0	**Apatity Array**	**12.65**	**159**	Pn	**Pn**		**08 09 50.4**	**+1.4**	
	baz=346,slow=14								
APA0				Sn	**Sn**		**08 12 04.0**	**-5.7**	
	baz=344,slow=22								
APA0	**Apatity Array**	**12.65**	**159**	Pn	**Pn**		**08 09 50.4**	**+1.4**	
APA0				Sn	**Sn**		**08 12 04.0**	**-5.7**	
APA0	**Apatity Array**	**12.65**	**159**	P	**Pn**		**08 09 50.9**	**+1.8**	
APA0				S	**Sn**		**08 12 03.8**	**-5.9**	
KVDA	**Kovda**	**13.55**	**159**	P	**Pn**		**08 10 03.2**	**+1.9**	
KVDA				S	**Sn**		**08 12 28.6**	**-2.9**	
FIA0	**FINESS Array S**	**18.50**	**172**	P	**Pn**		**08 11 06.6**	**+1.2**	
	baz=358,slow=14								
FIA0	**FINESS Array S**	**18.50**	**172**	P	**Pn**		**08 11 06.6**	**+1.2**	
FINES	**FINESS Array B**	**18.50**	**172**	P	**Pn**		**08 11 06.8**	**+1.5**	
	comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=6.1								
FINES				S	**Sn**		**08 14 23.8**	**-7.9**	
	comp=Z,3.1nm,0.6s,baz=359,slow=23,SNR=3.9								
	comp=Z,3.4nm,0.9s								
NOA	**NORSAR Array B**	**19.06**	**195**	P	**Pn**		**08 11 14.8**	**+2.5**	
	baz=8.7,slow=9.9,SNR=2.1								
	comp=Z,1.9nm,0.9s								
HFS	**Hagfors**	**19.87**	**191**	P	**Pn**		**08 11 22.2**	**+0.4**	
	comp=Z,4.0nm,0.6s,baz=21,slow=8.7,SNR=13								
	comp=Z,4.0nm,0.6s								
HFS	**Hagfors**	**19.87**	**191**	Pn	**Pn**		**08 11 22.3**	**+0.4**	
	baz=14,slow=10								
HFS	**Hagfors**	**19.87**	**191**	Pn	**Pn**		**08 11 22.3**	**+0.4**	
SFJD	**Kangerlussuaq**	**22.03**	**276**	P	**P**		**08 11 45.7**	**+2.2**	
	comp=Z,4.6nm,0.6s,baz=7.1,slow=8.1,SNR=6.7								
	comp=Z,4.6nm,0.6s								
AKASG	**Malin Array Be**	**29.34**	**169**	P	**P**		**08 12 53.8**	**+2.0**	
	comp=Z,0.4nm,0.

ETSF				*e*Sg		**Sb**	**08 08 54.9**	**+1.3**
	48nm,0.2s							
ESAC	**San Caprasio**	**1.83**	**106**	Pn		**Pn**	**08 08 30.8**	**+1.2**
ESAC				Pg		**Pb**	**08 08 33.1**	**+1.2**
ESAC				Sg		**Sb**	**08 08 56.2**	**+1.6**
ESAC				*i* IVmb_Lg			08 09 07.8	
GUD	**Guadarrama**	**1.89**	**213**	Pn		**Pn**	**08 08 31.9**	**+1.4**
GUD				Sn		**Sb**	**08 08 56.8**	**+0.5**
GUD				Sg		**Sg**	**08 08 58.9**	**-0.8**
GUD				*i* IVmb_Lg			08 09 01.3	
UCM	**Universidad Co**	**1.96**	**190**	Pn		**Pn**	**08 08 32.6**	**+1.2**
UCM				Sn		**Sb**	**08 08 58.5**	**+0.2**
EARI	**Arriondas**	**2.05**	**302**	Pn		**Pb**	**08 09 45.0**	**-0.7**
EARI				Sn		**Sb**	**08 09 00.6**	**-0.5**
EARI				*i* IVmb_Lg			08 09 09.8	
ECHI	**Chisagues Biel**	**2.27**	**78**	Pn		**Pn**	**08 08 37.4**	**+1.6**
ECHI				*i* IVmb_Lg			08 09 11.7	
EPF	**Esparros**	**2.46**	**70**	*e*Pn		**Pn**	**08 08 40.4**	**+2.1**
EPF				*e*Sn		**Sn**	**08 09 08.5**	**+0.4**
EPF				*e*Sg		**Sb**	**08 09 14.9**	**+2.1**
	87nm,0.3s							
EJUZ	**Juzbado, Salam**	**2.57**	**244**	Pn		**Pn**	**08 08 41.6**	**+1.7**
EJUZ				Sg		**Sb**	**08 09 18.7**	**+2.7**
EMOS	**Mosqueruela**	**2.58**	**136**	Pn		**Pb**	**08 08 43.9**	**-0.9**
EMOS				Sn		**Sn**	**08 09 14.4**	**+3.3**
EMOS				*i* IVmb_Lg			08 09 24.9	
ERTA	**Horta de San J**	**2.69**	**117**	Pn		**Pn**	**08 08 42.7**	**+1.2**
ERTA				Sn		**Sb**	**08 09 17.9**	**-1.4**
ERTA				*i* IVmb_Lg			08 09 30.8	
ESDC	**Sonseca Array**	**2.71**	**199**	Pn		**Pn**	**08 08 42.6**	**+0.8**
ESDC				Sn		**Sn**	**08 09 16.3**	**+2.2**
ESDC				Sg		**Sg**	**08 09 25.6**	**-0.3**
ESDC				*i* IVmb_Lg			08 09 27.8	
PAB	**San Pablo**	**2.93**	**204**	Pn		**Pn**	**08 08 45.6**	**+0.8**
PAB				Sg		**Sg**	**08 09 31.0**	**-2.1**
PAB				*i* IVmb_Lg			08 09 35.3	
PBRG	**Braganca**	**2.95**	**263**	*e*Pn		**Pn**	**08 08 46.7**	**+1.6**
PBRG				*e*Sn		**Sn**	**08 09 22.3**	**+2.1**
PBRG				*e*Sg		**Sg**	**08 09 34.4**	**+0.7**
PBRG				*i* IAML			08 09 38.8	
PBRG				*i* IAML			08 09 41.7	
PBRG				*i* IAML			08 09 41.9	
ECHE	**Chera**	**3.00**	**151**	Pn		**Pn**	**08 08 49.8**	**+4.1**
ECHE				Pg		**Pb**	**08 08 54.5**	**+2.7**
ECHE				Sg		**Sg**	**08 09 34.9**	**-0.3**
ECHE	**Chera**	**3.00**	**151**	Pn		**Pn**	**08 09 49.4**	**+3.7**
ECHE				Sn		**Sn**	**08 09 24.7**	**+3.5**
ECHE				*i* IVmb_Lg			08 09 40.8	
EPOB	**Poblet**	**3.05**	**106**	Pn		**Pn**	**08 08 47.1**	**+0.7**
EPOB				Sn		**Sb**	**08 09 27.8**	**-1.9**
EPOB				*i* IVmb_Lg			08 09 40.8	
EVIV	**Cofrentes, Val**	**3.24**	**156**	Pn		**Pn**	**08 08 51.9**	**+2.8**
EVIV				Pg		**Pb**	**08 08 59.7**	**+3.7**
EVIV				Sn		**Sn**	**08 09 29.9**	**+2.6**
EVIV				Sg		**Sg**	**08 09 41.7**	**-1.3**
EVIV				*i* IVmb_Lg			08 09 51.0	
CIBOR	**Castaar de Ib**	**3.27**	**218**	Pn		**Pn**	**08 08 50.9**	**+1.5**
CIBOR				Sn		**Sn**	**08 09 29.0**	**+1.1**
CIBOR				Sg		**Sg**	**08 09 41.9**	**-2.0**
EPLA	**Plasencia**	**3.29**	**230**	Pn		**Pn**	**08 08 50.6**	**+1.0**
EPLA				Pg		**Pg**	**08 09 00.4**	**-1.4**
EPLA				Sn		**Sn**	**08 09 32.3**	**+3.9**
EPLA				Sg		**Sg**	**08 09 43.1**	**-1.3**
EPLA				*i* IVmb_Lg			08 09 48.0	
MVO	**Moncorvo**	**3.33**	**253**	*e*Pn		**Pn**	**08 08 51.8**	**+1.5**
MVO				*e*Sn		**Sn**	**08 09 31.8**	**+2.3**
MVO				*e*Sg		**Sg**	**08 09 45.7**	**-0.1**
MVO				*i* IAML			08 09 49.2	
MVO				*i* IAML			08 09 50.8	
MVO				*i* IAML			08 09 52.8	
EPON	**Pontenova**	**3.37**	**290**	Pn		**Pn**	**08 08 52.8**	**+2.0**
EPON				Sn		**Sn**	**08 09 32.5**	**+2.3**
EPON				Sg		**Sg**	**08 09 43.5**	**-3.5**
EPON				*i* IVmb_Lg			08 09 47.4	
PSIM	**Granatula de C**	**3.49**	**192**	Pn		**Pn**	**08 08 52.6**	**+0.1**
PSIM				Sn		**Sn**	**08 09 34.6**	**+1.1**
PSIM				Sg		**Sg**	**08 09 49.2**	**-1.9**
ETOB	**Tobarra**	**3.72**	**164**	Pn		**Pn**	**08 08 58.1**	**+2.4**
ETOB				Sg		**Sg**	**08 09 55.8**	**-2.6**
ETOB	**Tobarra**	**3.72**	**164**	Pn		**Pn**	**08 08 57.8**	**+2.1**
ETOB				*i* IVmb_Lg			08 10 01.4	
LFF	**La Frestale**	**3.74**	**43**	*e*Pn		**Pn**	**08 08 56.2**	**+0.4**
LFF				*e*Pg		**Pg**	**08 09 09.3**	**-1.1**
LFF				*e*Sn		**Sn**	**08 09 38.7**	**-0.7**
	45nm,0.7s							
PVRL	**Vila Real**	**3.79**	**257**	*e*Pn		**Pn**	**08 08 57.9**	**+1.3**
PVRL				*e*Sn		**Sn**	**08 09 41.9**	**+1.2**
PVRL				*e*Sg		**Sg**	**08 09 59.6**	**-0.9**
PVRL				*i* IAML			08 10 02.6	
PVRL				*i* IAML			08 10 05.0	
PVRL				*i* IAML			08 10 06.1	
POLO	**Lamas de Olo**	**3.82**	**259**	*e*Pn		**Pn**	**08 08 58.4**	**+1.4**
POLO				*e*Sg		**Sg**	**08 10 00.2**	**-1.3**
POLO				*i* IAML			08 10 05.7	
POLO				*i* IAML			08 10 09.6	
POLO				*i* IAML			08 10 09.6	
MTLF	**Montolieu**	**3.87**	**72**	*e*Pn		**Pn**	**08 08 59.0**	**+1.4**
MTLF				*e*Sn		**Sn**	**08 09 42.1**	**-0.5**
	11nm,0.4s							
PCAB	**Cabril**	**3.92**	**264**	*e*Pn		**Pn**	**08 08 59.7**	**+1.3**
PCAB				*e*Sn		**Sn**	**08 09 45.3**	**+1.4**
PCAB				*e*Sg		**Sg**	**08 10 03.3**	**-1.3**
PCAB				*i* IAML			08 10 07.9	
PCAB				*i* IAML			08 10 08.6	
PCAB				*i* IAML			08 10 13.5	
ELOB	**Lobios**	**3.92**	**266**	Pn		**Pn**	**08 08 59.6**	**+1.2**
ELOB				*i* IVmb_Lg			08 10 09.7	
EAGO	**Agolada(Pontev**	**3.93**	**280**	Pn		**Pn**	**08 08 59.9**	**+1.4**
EAGO				Sg		**Sb**	**08 10 00.6**	**+5.5**
EAGO				*i* IVmb_Lg			08 10 09.0	
AFON	**Font Roja**	**3.97**	**153**	Pn		**Pn**	**08 09 02.3**	**+3.2**
AFON				*i* IVmb_Lg			08 10 19.9	
MTE	**Manteigas**	**4.00**	**244**	*e*Sn		**Sn**	**08 09 45.9**	**-0.3**
MTE				*e*Sg		**Sg**	**08 10 05.8**	**-1.7**
MTE				*i* IAML			08 10 11.4	
MTE				*i* IAML			08 10 13.4	
MTE				*i* IAML			08 10 14.2	
PGAV	**Gavieira, Arco**	**4.06**	**268**	*e*Pn		**Pn**	**08 09 01.8**	**+1.4**
PGAV				*e*Sn		**Sn**	**08 09 49.8**	**+2.2**
PGAV				*e*Sg		**Sg**	**08 10 08.4**	**-0.9**
PGAV				*i* IAML			08 10 13.1	
PGAV				*i* IAML			08 10 15.4	
PGAV				*i* IAML			08 10 15.7	
EBEN2	**Beniarda presa**	**4.09**	**150**	Pn		**Pn**	**08 09 03.8**	**+3.2**
EBEN2				Sn		**Sn**	**08 09 50.4**	**+2.3**
EBEN2				*i* IVmb_Lg			08 10 15.4	
PVIS	**Viseu**	**4.11**	**250**	*e*Pn		**Pn**	**08 09 01.8**	**+0.9**
PVIS				*e*Sn		**Sn**	**08 09 49.8**	**+1.2**
PVIS				*e*Sg		**Sg**	**08 10 09.5**	**-1.1**
EJON	**La Jonquera**	**4.24**	**85**	Pn		**Pn**	**08 09 04.5**	**+1.8**
EJON				Sn		**Sn**	**08 09 50.7**	**-1.1**
EJON				Sg		**Sb**	**08 10 08.9**	**+5.0**
EJON	**La Jonquera**	**4.24**	**85**	Pn		**Pn**	**08 09 04.2**	**+1.5**
EJON				*i* IVmb_Lg			08 10 17.1	
PCBR	**Castelo Branco**	**4.26**	**237**	*e*Pn		**Pn**	**08 09 04.5**	**+1.5**
PCBR				*e*Sn		**Sn**	**08 09 53.9**	**+1.5**
PCBR				*e*Sg		**Sg**	**08 10 14.3**	**-1.3**
PCBR				*i* IAML			08 10 24.3	
PCBR				*i* IAML			08 10 24.6	
PCBR				*i* IAML			08 10 26.4	
EADA	**Adamuz**	**4.29**	**199**	Pn		**Pn**	**08 09 04.5**	**+1.1**
EADA				Sn		**Sn**	**08 09 51.4**	**-1.7**
EADA				Sg		**Sg**	**08 10 12.3**	**-4.2**
EADA	**Adamuz**	**4.29**	**199**	Pn		**Pn**	**08 09 04.7**	**+1.3**
EADA				Sn		**Sn**	**08 09 57.2**	**+4.2**
EADA				Sg		**Sg**	**08 10 14.1**	**-2.4**
EADA				*i* IVmb_Lg			08 10 20.9	
RJF	**Les Rejaudoux**	**4.38**	**44**	*e*Pn		**Pn**	**08 09 04.9**	**+0.2**
RJF				*e*Sn		**Sn**	**08 09 53.9**	**-1.5**
	18nm,0.4s							
CLAF	**Gruissan**	**4.45**	**76**	*e*Pn		**Pn**	**08 09 07.4**	**+1.9**
CAF	**Calviac**	**4.45**	**51**	*e*Pn		**Pn**	**08 09 06.2**	**+0.6**
CAF				*e*Sn		**Sn**	**08 09 55.8**	**-1.2**
	5.8nm,0.2s							
PMRV	**Marv??o**	**4.46**	**232**	*e*Pn		**Pn**	**08 09 06.9**	**+1.1**
PMRV				*e*Sn		**Sn**	**08 09 57.8**	**+0.5**
PMRV				*e*Sg		**Sg**	**08 10 21.3**	**-0.9**
PMRV				*i* IAML			08 10 27.4	
PMRV				*i* IAML			08 10 34.3	
PMRV				*i* IAML			08 10 38.2	
PTO	**Porto**	**4.47**	**258**	*e*Sg		**Sg**	**08 10 21.1**	**-1.2**
EIBI	**Ibiza**	**4.51**	**134**	Pn		**Pn**	**08 09 08.0**	**+1.5**
EIBI				Sn		**Sn**	**08 09 58.9**	**+0.3**
EIBI	**Ibiza**	**4.51**	**134**	Pn		**Pn**	**08 09 08.1**	**+1.7**
EIBI				*i* IVmb_Lg			08 11 34.3	
EMUR	**La Murta**	**4.56**	**164**	Pn		**Pn**	**08 09 10.3**	**+3.1**
EMUR	**La Murta**	**4.56**	**164**	Pn		**Pn**	**08 09 10.0**	**+2.9**
EMUR				Pg		**Pg**	**08 09 24.6**	**-1.6**
EMUR				*i* IVmb_Lg			08 10 32.0	
EMAZ	**Mazaricos**	**4.60**	**281**	Pn		**Pn**	**08 09 09.0**	**+1.3**
EMAZ				Sn		**Sn**	**08 09 59.2**	**-1.5**
EMAZ				*i* IVmb_Lg			08 10 05.9	
ECAB	**El Cabril**	**4.61**	**206**	Pn		**Pn**	**08 09 08.9**	**+1.0**
ECAB				Sn		**Sn**	**08 09 60.0**	**-1.1**
ECAB	**El Cabril**	**4.61**	**206**	Pn		**Pn**	**08 09 08.7**	**+0.9**
ECAB				Sn		**Sn**	**08 09 59.4**	**-1.7**
ECAB				*i* IVmb_Lg			08 10 30.8	
MFF	**Saint Martin d**	**4.76**	**23**	*e*Pn		**Pn**	**08 09 10.9**	**+1.1**
	baz=206							
MFF	**Saint Martin d**	**4.76**	**23**	*e*Pn		**Pn**	**08 09 11.0**	**+1.1**
MFF				*e*Sn		**Sn**	**08 10 02.7**	**-1.9**
	4.9nm,0.2s							
MFF				*e*Sn		Sb	08 10 03.3	-16
	2.7nm,0.2s							
PCAS	**Casmilo, Conde**	**4.81**	**245**	*e*Pn		**Pn**	**08 09 11.9**	**+1.3**
PCAS				*e*Sn		**Sn**	**08 10 06.5**	**+0.5**
PCAS				*e*Sg		**Sg**	**08 10 32.6**	**-0.7**
PCAS				*i* IAML			08 10 42.0	
PCAS				*i* IAML			08 10 43.5	
PCAS				*i* IAML			08 10 45.1	
PSARD	**Sardoal**	**4.83**	**239**	*e*Pn		**Pn**	**08 09 11.6**	**+0.8**
PSARD				*e*Sn		**Sn**	**08 10 07.2**	**+0.8**
PSARD				*e*Sg		**Sg**	**08 10 34.6**	**+0.7**
PSARD				*i* IAML			08 10 38.5	
PSARD				*i* IAML			08 10 41.4	
PSARD				*i* IAML			08 10 42.6	
ETOS	**Mallorca**	**4.93**	**118**	Pn		**Pn**	**08 09 12.7**	**+0.5**
PESTR	**Estremoz**	**4.96**	**229**	Sn		**Sn**	**08 10 07.8**	**-1.7**
PESTR	**Estremoz**	**4.96**	**229**	*e*Pn		**Pn**	**08 09 13.7**	**+1.1**
PESTR				*e*Sn		**Sn**	**08 10 09.1**	**-0.4**
PESTR				*e*Sg		**Sg**	**08 10 37.1**	**-0.8**
PESTR				*i* IAML			08 10 44.0	
PESTR				*i* IAML			08 10 45.1	
PESTR				*i* IAML			08 10 46.8	
PBAR	**Barrancos**	**5.19**	**220**	Pn		**Pn**	**08 09 16.8**	**+1.1**
PBAR				Sn		**Sn**	**08 10 14.3**	**-0.9**
PBAR	**Barrancos**	**5.19**	**220**	*e*Pn		**Pn**	**08 09 17.0**	**+1.2**
PBAR				*e*Sn		**Sn**	**08 10 15.1**	**-0.2**
PBAR				*e*Sg		**Sg**	**08 10 43.5**	**-1.9**
PBAR				*i* IAML			08 10 48.4	
PBAR				*i* IAML			08 10 50.0	
PBAR				*i* IAML			08 10 59.5	
PMTG	**Montargil**	**5.19**	**234**	*e*Pn		**Pn**	**08 09 17.2**	**+1.4**
PMTG				*e*Sn		**Sn**	**08 10 15.1**	**-0.1**
PMTG				*e*Sg		**Sg**	**08 10 43.4**	**-2.0**
PMTG				*i* IAML			08 10 54.2	
PMTG				*i* IAML			08 10 57.6	
PMTG				*i* IAML			08 10 57.9	
LASF	**Ste Croix**	**5.22**	**67**	*e*Pn		**Pn**	**08 09 17.7**	**+1.5**
LASF				*e*Sn		**Sn**	**08 10 14.4**	**-1.5**
	4.9nm,0.3s							
EGOR	**Sierra Gorda,**	**5.22**	**191**	Pn		**Pn**	**08 09 18.1**	**+1.7**
EGOR	**Sierra Gorda,**	**5.22**	**191**	Pn		**Pn**	**08 09 18.2**	**+1.8**
EGOR				Sn		**Sn**	**08 10 19.6**	**+3.4**
EGOR				*i* IVmb_Lg			08 10 57.8	
PARRA	**Arraiolos**	**5.25**	**231**	*e*Pn		**Pn**	**08 09 17.6**	**+1.0**
PARRA				*e*Sn		**Sn**	**08 10 17.4**	**+0.7**
PARRA				*e*Sg		**Sg**	**08 10 45.8**	**-1.5**
PARRA				*i* IAML			08 10 48.1	
PARRA				*i* IAML			08 10 55.8	
PARRA				*i* IAML			08 10 58.0	
PSBE	**So Bento**	**5.29**	**241**	*e*Pn		**Pn**	**08 09 20.3**	**+3.2**
PSBE				*i* IAML			08 10 55.5	
PSBE				*i* IAML			08 10 56.0	
PSBE				*i* IAML			08 11 01.3	
EMIN	**Mina Concepcio**	**5.36**	**215**	Pn		**Pn**	**08 09 18.8**	**+0.7**
EMIN				Sn		**Sn**	**08 10 18.6**	**-0.9**
EMIN	**Mina Concepcio**	**5.36**	**215**	Pn		**Pn**	**08 09 19.2**	**+1.1**
EMIN				Sn		**Sn**	**08 10 19.1**	**-0.3**
EMIN				*i* IVmb_Lg			08 10 55.7	
ELGU	**Los Guajares,**	**5.40**	**187**	Pn		**Pn**	**08 09 20.9**	**+2.1**
ELGU	**Los Guajares,**	**5.40**	**187**	Pn		**Pn**	**08 09 20.5**	**+1.7**
ELGU				*i* IVmb_Lg			08 11 01.6	
EVO	**Evora**	**5.43**	**229**	Pn		**Pn**	**08 09 19.8**	**+0.8**
EVO				Sn		**Sn**	**08 10 20.0**	**-1.0**
EVO	**Evora**	**5.43**	**229**	*e*Pn		**Pn**	**08 09 19.9**	**+0.8**
EVO				*e*Sn		**Sn**	**08 10 21.0**	**-0.1**
EVO				*e*Sg		**Sg**	**08 10 50.7**	**-2.3**
EVO				*i* IAML			08 10 58.0	
EVO				*i* IAML			08 10 59.4	
EVO				*i* IAML			08 11 00.0	
MOE	**Montemor**	**5.62**	**230**	*e*Pn		**Pn**	**08 09 22.7**	**+1.0**
MOE				*e*Sn		**Sn**	**08 10 26.0**	**+0.1**
MOE				*e*Sg		**Sg**	**08 10 55.2**	**-4.1**
MOE				*i* IAML			08 11 03.5	
MOE				*i* IAML			08 11 04.7	
MOE				*i* IAML			08 11 07.1	
QUIF	**Quistinic**	**5.68**	**358**	*e*Pn		**Pn**	**08 09 23.8**	**+1.4**
QUIF				*e*Sn		**Sn**	**08 10 23.6**	**-3.6**
	7.9nm,0.2s							
PBEJ	**Beja**	**5.72**	**224**	*e*Pn		**Pn**	**08 09 24.8**	**+1.8**
PBEJ				*e*Sn		**Sn**	**08 10 27.5**	**-0.7**
ESPR	**Espera**	**5.86**	**205**	Pn		**Pn**	**08 09 26.2**	**+1.3**
EGRO	**El Granado**	**5.91**	**219**	Pn		**Pn**	**08 09 26.4**	**+0.7**
EGRO				Sn		**Sn**	**08 10 30.8**	**-2.3**
EGRO	**El Granado**	**5.91**	**219**	Pn		**Pn**	**08 09 26.2**	**+0.6**
EGRO				Sn		**Sn**	**08 10 32.0**	**-1.1**
EGRO				*i* IVmb_Lg			08 11 13.2	
PMAFR	**Mafra**	**5.91**	**238**	Pn		**Pn**	**08 09 27.5**	**+1.8**
PMAFR				Sn		**Sn**	**08 10 30.4**	**-2.7**
PMAFR	**Mafra**	**5.91**	**238**	*e*Pn		**Pn**	**08 09 27.4**	**+1.9**
PMAFR				*e*Sn		**Sn**	**08 10 32.6**	**-0.5**
BGF	**Bois d'Agland**	**5.92**	**41**	*e*Pn		**Pn**	**08 09 25.9**	**+0.1**
BGF				*e*Sn		**Sn**	**08 10 30.5**	**-2.8**
SGMF	**Saint Gilles**	**6.01**	**2**	*e*Pn		**Pn**	**08 09 27.8**	**+0.7**
SGMF				*e*Sn		**Sn**	**08 10 32.6**	**-2.9**
	3.0nm,0.1s							
VIVF	**Saint-Julien-l**	**6.04**	**62**	*e*Pn		**Pn**	**08 09 28.3**	**+0.8**
VIVF				*e*Sn		**Sn**	**08 10 33.9**	**-2.3**
	2.9nm,0.3s							
MESJ	**Messejana**	**6.04**	**225**	*e*P		**Pn**	**08 09 28.0**	**+0.5**
MESJ	**Messejana**	**6.04**	**225**	*e*Pn		**Pn**	**08 09 28.7**	**+1.3**
MESJ				*e*Sn		**Sn**	**08 10 36.0**	**-0.2**
MESJ				*e*Sg		**Sg**	**08 11 13.3**	**+0.6**
MESJ				*i* IAML			08 11 19.9	
MESJ				*i* IAML			08 11 22.2	
MESJ				*i* IAML			08 11 22.4	
ROSF	**Rostrenen**	**6.10**	**357**	*e*Pn		**Pn**	**08 09 29.0**	**+0.7**
ROSF				*e*Sn		**Sn**	**08 10 34.1**	**-3.6**
	12nm,0.2s							
PCVE	**Castro Verde**	**6.11**	**223**	Pn		**Pn**	**08 09 29.1**	**+0.7**
PCVE				Sn		**Sn**	**08 10 34.7**	**-3.1**
PCVE	**Castro Verde**	**6.11**	**223**	*e*Pn		**Pn**	**08 09 29.4**	**+1.0**
PCVE				*e*Sn		**Sn**	**08 10 36.9**	**-0.9**
PCVE				*e*Sg		**Sg**	**08 11 13.4**	**-1.4**
PCVE				*i* IAML			08 11 21.6	
PCVE				*i* IAML			08 11 23.2	
PCVE				*i* IAML			08 11 29.0	
PVAQ	**Vaqueiros**	**6.13**	**220**	*e*Pn		**Pn**	**08 09 28.9**	**+0.3**
PVAQ				*e*Sn		**Sn**	**08 10 37.5**	**-0.9**
PVAQ				*i* IAML			08 11 23.9	
PVAQ				*i* IAML			08 11 24.9	
PVAQ				*i* IAML			08 11 28.5	
GRR	**Gorron**	**6.30**	**12**	*e*Pn		**Pn**	**08 09 30.8**	**-0.2**
GRR				*e*Sn		**Sn**	**08 10 38.6**	**-3.9**
	14nm,0.3s							
PBDV	**Barranco-do-Ve**	**6.36**	**220**	*e*Pn		**Pn**	**08 09 33.0**	**+1.1**
PBDV				*e*Sn		**Sn**	**08 10 42.8**	**-1.3**
PBDV				*e*Sg		**Sg**	**08 11 22.9**	**0.0**
PBDV				*i* IAML			08 11 29.9	
PBDV				*i* IAML			08 11 32.0	
PBDV				*i* IAML			08 11 32.6	
SMRF	**Simiane la Rot**	**6.38**	**71**	*e*Pn		**Pn**	**08 09 33.4**	**+1.2**
PTEO	**Sao Teotonio**	**6.53**	**226**	*e*Pn		**Pn**	**08 09 35.1**	**+1.0**
PTEO				*e*Sn		**Sn**	**08 10 47.6**	**-0.6**
PTEO				*e*Sg		**Sg**	**08 11 26.7**	**-1.5**
PTEO				*i* IAML			08 11 39.0	
PTEO				*i* IAML			08 11 39.5	
PTEO				*i* IAML			08 11 42.4	
LDF	**La Druitiere**	**6.63**	**16**	*e*Pn		**Pn**	**08 09 35.6**	**+0.1**
LDF				*e*Sn		**Sn**	**08 10 46.8**	**-3.8**
	4.6nm,0.2s							
MORF	**Marmelete**	**6.67**	**224**	*e*P		**Pn**	**08 09 36.5**	**+0.4**
MORF	**Marmelete**	**6.67**	**224**	*e*Pn		**Pn**	**08 09 36.5**	**+0.4**
MORF				*e*Sn		**Sn**	**08 10 50.1**	**-1.6**
FLN	**La Foliniere**	**6.72**	**13**	*e*Pn		**Pn**	**08 09 36.7**	**-0.1**
	baz=197							
FLN				*e*Sn		**Sn**	**08 10 48.8**	**-4.2**
	3.0nm,0.2s							
ORIF	**Oris-en-Rattie**	**6.86**	**64**	*e*Pn		**Pn**	**08 09 40.2**	**+1.4**
PFVI	**Vila Bisbo**	**6.89**	**224**	*e*Pn		**Pn**	**08 09 40.3**	**+1.1**
PFVI				*e*Sn		**Sn**	**08 10 56.6**	**-0.5**
LMR	**La Mourre**	**6.95**	**78**	*e*Pn		**Pn**	**08 09 41.5**	**+1.6**
LPL	**La Plagne**	**7.64**	**61**	*e*Pn		**Pn**	**08 09 49.9**	**+0.3**
PGF	**Pioggiola**	**8.75**	**84**	*e*Pn		**Pn**	**08 10 04.5**	**-0.3**
PGF				*e*Sn		**Sn**	**08 11 38.0**	**-5.1**
	3.0nm,0.4s							

IDC ***22*** *08:12:17.8±3.1, 27°.08N×56°.27E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=69.8km s-min=28.6km az=157.0*
TEH ***22*** *08:12:19.3, 27°.29N×56°.10E, h5km, ML3.3, Presumed earthquake*
DSN ***22*** *08:12:22.4±0.9, 27°.38N×56°.12E, h10km, ML2.6/5, Error ellipse: s-maj=43.5km s-min=7.3km az=84.0*

ISC 22 08:12:20.8±1.0, 27°.40N±0°.03×56°.17E±0°.05, h6km±7km, n22, σ1s50/25, mb3.6/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GENO	**Geno**	**0.00**	**340**	Pg		**Pg**	**08 12 21.8**	**-0.4**
IBND	**Bandar-abas**	**0.33**	**81**	Pg		**Pb**	**08 12 28.3**	**-0.8**
IBND				Sg		**Sb**	**08 12 34.3**	**-0.4**
SHME	**Shamm**	**1.34**	**181**	P		**Pn**	**08 12 46.2**	**+0.1**
SHME				S		**Sg**	**08 13 05.5**	**+1.6**
KHNJ	**Kahnooj**	**1.47**	**68**	Pg		**Pg**	**08 12 48.6**	**-0.4**
BANOM	**Banah**	**1.47**	**176**	P		**Pb**	**08 12 48.7**	**+0.1**
BANOM				S		**Sg**	**08 13 09.0**	**+0.9**
MSFE	**Esma-Masafi**	**2.03**	**180**	P		**Pn**	**08 12 56.7**	**+1.1**
MDH	**Madha**	**2.09**	**177**	P		**Pb**	**08 12 57.9**	**-1.3**
NGRK	**Negar Kerman**	**2.29**	**12**	Pn		**Pb**	**08 13 02.5**	**-0.4**
KBAM	**BAM**	**2.65**	**49**	Pn		**Pb**	**08 13 07.3**	**-1.5**
ASHO	**Ashiyiah**	**2.70**	**182**	P		**Pn**	**08 13 06.2**	**+1.3**
CHMN	**Cheshme madani**	**2.73**	**26**	Pn		**Pb**	**08 13 08.7**	**-1.6**
KHGB	**Koh Gabri**	**2.98**	**5**	Pn		**Pb**	**08 13 12.1**	**-2.4**
KRM1	**Kerman Provinc**	**3.24**	**17**	Pn		**Pn**	**08 13 15.4**	**+2.9**
IMEH	**Mehriz**	**4.21**	**341**	Pn		**Pn**	**08 13 28.0**	**+2.3**
IBAF	**Bafgh**	**4.21**	**353**	Pn		**Pn**	**08 13 28.0**	**+2.3**
KLNJ	**Kolanjah**	**5.38**	**313**	Pn		**Pn**	**08 13 42.6**	**+0.6**
BRTR	**Keskin Array B**	**22.38**	**309**	P		**P**	**08 17 22.0**	**+2.0**
	0.8nm,0.7s,baz=123,slow=12,SNR=2.6							
	0.8nm,0.7s							
BVAR	**Borovoye Array**	**27.70**	**19**	P		**P**	**08 18 09.4**	**-0.2**
	0.8nm,0.7s,baz=202,slow=7.7,SNR=3.8							
	0.8nm,0.7s							
MKAR	**Makanchi Array**	**28.23**	**40**	P		**P**	**08 18 14.6**	**+0.1**
	0.2nm,0.5s,baz=218,slow=7.3,SNR=4.3							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**33.86**	**31**	P		**P**	**08 19 04.0**	**+0.1**
	0.5nm,0.5s,baz=248,slow=7.6,SNR=2.9							
	0.5nm,0.5s							
FINES	**FINESS Array B**	**39.55**	**338**	P		**P**	**08 19 51.9**	**-0.5**
	4.8nm,0.9s,baz=145,slow=8.2,SNR=5.2							
	4.8nm,0.9s							
TORD	**Torodi Ar. Bea**

LCO IAML 08 48 13.0
comp=Z,77nm,0.5s
MT03 Universidad Ad 4.33 234 *e*P Pn 08 46 56.0 +2.6
MT03 IAML 08 48 00.4
comp=Z,50nm,0.6s
MT02 Curacav 4.66 240 *e*P Pn 08 46 54.9 -3.1
AC04 Llanos de Chal 5.00 303 IAML 08 48 41.1
comp=Z,16nm,1.9s
MT01 Popeta 5.05 234 IAML 08 48 36.1
comp=Z,19nm,1.1s

BJI ***22*** *08:46:04.3,37˚.30N×71˚.70E,h116km,mB4.9/8,mb4.5/29*
NEIC ***22*** *08:46:05.9±1.7,37˚.27N±0˚.05×71˚.55E±0˚.07,*
h117km±10km,mb4.6/12,Error ellipse: s-maj=10.9km
s-min=3.5km az=132.0
IDC ***22*** *08:46:05.8±2.9,37˚.27N×71˚.70E,h118km±25km,mb3.9/20,*
mbtmp4.4/25,MS3.4/3,Error ellipse: s-maj=19.3km
s-min=11.0km az=16.0
MOS ***22*** *08:46:05.1±1.0,37˚.29N×71˚.68E,h122km,mb4.5/18,Error*
ellipse: s-maj=6.5km s-min=3.8km az=88.6
NNC ***22*** *08:46:09.6±3.7,37˚.63N×71˚.57E,h168km±44km,mb3.9,*
mpv4.7,Error ellipse: s-maj=34.3km s-min=16.5km az=8.0
SOME ***22*** *08:46:14.7,38˚.23N×72˚.02E,h0km*
ISC 22 08:46:06.6±0.4,37˚.23N±0˚.04×71˚.77E±0˚.04,h142km,n255,
σ2ᵩ37/291**,mb4.3**/54**,28C-9D,Afghanistan-Tajikistan**
border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DRK	**Karamyk**	**2.24**	**1**			**Pn**	**08 46 43.7**	**-0.8**
DRK	**Karamyk**	**2.24**	**1**	PN		**Pn**	**08 46 43.7**	**-0.8**
CHGR	**Chuyangaron**	**2.50**	**305**			**Pn**	**08 46 43.7**	**-3.8**
CHGR	**Chuyangaron**	**2.50**	**305**	PN		**Pn**	**08 46 43.7**	**-3.8**
BTK	**Batken**	**2.92**	**346**			**Pn**	**08 46 51.8**	**-0.9**
BTK	**Batken**	**2.92**	**346**	PN		**Pn**	**08 46 51.8**	**-0.9**
SHAA	**Shahritus**	**2.92**	**278**			Pn	08 46 48.6	-4.1
KBL	**Kabul**	**3.48**	**220**			**Pn**	**08 46 58.7**	**-1.4**
KBL	**Kabul**	**3.48**	**220**	PN		**Pn**	**08 46 58.7**	**-1.4**
KSH2	**Kashi**	**3.55**	**56**	P		**Pn**	**08 47 02.3**	**+1.4**
KSH2				S		**Sn**	**08 47 43.4**	**+0.5**
KSH2				smax		smax		
	comp=N,2μm,0.5s							
KSH2				smax		smax		
	comp=E,990nm,0.6s							
NIL	**Nilore**	**3.77**	**161**			**Pn**	**08 47 03.6**	**-0.2**
NIL	**Nilore**	**3.77**	**161**	PN		**Pn**	**08 47 03.6**	**-0.2**
ARSB	**Arslanbob**	**4.19**	**13**			**Pn**	**08 47 07.5**	**-1.8**
ARSB	**Arslanbob**	**4.19**	**13**	PN		**Pn**	**08 47 07.5**	**-1.8**
IUG	**luzhnay**	**5.09**	**345**	*e*PN		**Pn**	**08 47 19.4**	**-1.7**
IUG	**luzhnay**	**5.09**	**345**	*e*P		**Pn**	**08 47 19.4**	**-1.7**
IUG				*e*S		**Sn**	**08 48 15.0**	**-4.1**
IUG	**luzhnay**	**5.09**	**345**	*e*P		**Pn**	**08 47 19.5**	**-1.7**
IUG				*e*S		**Sn**	**08 48 13.3**	**-5.9**
JMU	**Jammu**	**5.10**	**150**	*e*P		**Pn**	**08 47 17.9**	**-3.4**
JMU				*e*S		**Sn**	**08 48 13.1**	**-6.4**
JMU				IAML			08 48 20.4	
	comp=N,3μm,0.9s							
JMU				IAML			08 48 25.9	
	comp=E,2μm,0.5s							
NRN	**Naryn**	**5.33**	**37**			**Pn**	**08 47 22.8**	**-1.7**
NRN	**Naryn**	**5.33**	**37**	PN		**Pn**	**08 47 22.8**	**-1.7**
ALCI	**Alchi Leh**	**5.34**	**123**	*e*P		Pn	08 47 20.5	-4.2
ALCI				*e*S		**Sn**	**08 48 22.4**	**-3.2**
ALCI				IAML			08 48 24.2	
	comp=N,666nm,0.6s							
ALCI				IAML			08 48 24.5	
	comp=E,676nm,0.6s							
CHM	**Chimkent**	**5.35**	**343**	*e*PN		**Pn**	**08 47 22.4**	**-2.0**
CHM	**Chimkent**	**5.35**	**343**	*e*P		**Pn**	**08 47 22.5**	**-2.0**
CHM	**Chimkent**	**5.35**	**343**	*e*P		**Pn**	**08 47 23.5**	**-0.9**
	comp=E,184nm,0.2s							
CHM				*e*S		**Sn**	**08 48 18.5**	**-6.7**
	comp=E,302nm,0.4s							
UCH	**Uchtor**	**5.42**	**22**	P		**Pn**	**08 47 25.1**	**-0.7**
	SNR=109							
MRKS	**Merke**	**5.62**	**11**	*e*P		**Pn**	**08 47 27.4**	**-0.7**
	comp=E,229nm,0.3s							
MRKS				*e*S		**Sn**	**08 48 28.1**	**-3.8**
	comp=E,217nm,0.5s							
EKS2	**Erkin-Say**	**5.64**	**15**	P		**Pn**	**08 47 27.9**	**-0.5**
	SNR=166							
DZA	**Taraz**	**5.66**	**357**	*e*PN		**Pn**	**08 47 26.8**	**-1.9**
DZA	**Taraz**	**5.66**	**357**	*e*P		**Pn**	**08 47 26.9**	**-1.9**
DZA				*e*S		**Sn**	**08 48 28.7**	**-4.1**
DZA	**Taraz**	**5.66**	**357**	*e*P		**Pn**	**08 47 27.9**	**-0.7**
	comp=E,942nm,0.3s							
DZA				*e*S		**Sn**	**08 48 27.3**	**-5.5**
	comp=E,923nm,0.3s							
TSSA	**Tissa**	**5.67**	**139**	*e*P		**Pn**	**08 47 26.2**	**-2.8**
TSSA				*e*S		**Sn**	**08 48 27.1**	**-6.2**
TSSA				IAML			08 48 32.0	
	comp=N,14μm,0.6s							
TSSA				IAML			08 48 33.6	
	comp=E,16μm,0.7s							
AAK	**Ala-Archa**	**5.79**	**20**	P		**Pn**	**08 47 30.2**	**-0.4**
	SNR=301							
AAK	**Ala-Archa**	**5.79**	**20**	P		**Pn**	**08 47 29.7**	**-0.8**
	comp=E,149nm,0.4s,baz=192,slow=6.9,SNR=589							
AAK				S		**Sn**	**08 48 33.9**	**-2.2**
	comp=E,60nm,0.3s,baz=313,slow=22,SNR=15							
AAK	**Ala-Archa**	**5.79**	**20**			**Pn**	**08 47 30.1**	**-0.4**
AAK	**Ala-Archa**	**5.79**	**20**	⇓P		**Pn**	**08 47 30.2**	**-0.4**
	comp=E,52nm,0.5s							
AAK				⇓S		**Sn**	**08 48 33.9**	**-2.2**
	comp=E,81nm,0.6s							
AAK	**Ala-Archa**	**5.79**	**20**	PN		**Pn**	**08 47 30.1**	**-0.4**
THN	**Thein Dam**	**5.80**	**144**	*e*P		**Pn**	**08 47 28.4**	**-2.2**
THN				*e*S		**Sn**	**08 48 29.7**	**-6.4**
THN				IAML			08 48 36.0	
	comp=N,1μm,0.4s							
THN				IAML			08 48 36.5	
	comp=E,1μm,0.4s							
KBK	**Karagaybulak**	**5.94**	**23**	P		**Pn**	**08 47 32.3**	**-0.2**
	SNR=28							
KK31	**Karatay Array**	**5.94**	**351**			**Pn**	**08 47 30.8**	**-1.6**
KK31	**Karatay Array**	**5.94**	**351**	⇓P		**Pn**	**08 47 30.9**	**-1.6**
	comp=E,68nm,0.3s,baz=180,slow=13,SNR=420							
KK31				⇓S		**Sn**	**08 48 32.8**	**-6.7**
	comp=E,138nm,0.4s							
KK31	**Karatay Array**	**5.94**	**351**	*e*PN		**Pn**	**08 47 31.0**	**-1.4**
KKAR	**Karatay Array**	**5.94**	**351**			**Pn**	**08 47 30.9**	**-1.5**
KKAR	**Karatay Array**	**5.94**	**351**	PN		**Pn**	**08 47 30.9**	**-1.5**
BRLS	**Boroldaу**	**5.98**	**346**	*e*PN		Pn	08 47 28.1	-4.7
BRLS	**Boroldaу**	**5.98**	**346**	*e*P		Pn	08 47 28.1	-4.7
BRLS	**Boroldaу**	**5.98**	**346**	*e*P		Pn	08 47 28.2	-4.7
	comp=E,46nm,0.1s							
BRLS				*e*S		Sn	08 48 27.1	-13
	comp=E,283nm,0.6s							
FRU1	**Bishkek**	**5.99**	**21**			**Pn**	**08 47 33.7**	**+0.6**
FRU1	**Bishkek**	**5.99**	**21**	PN		**Pn**	**08 47 33.7**	**+0.6**
ULHL	**Ulahol**	**6.08**	**33**	P		**Pn**	**08 47 33.6**	**-0.9**
	SNR=32							
BOOM	**Boomskoye usch**	**6.15**	**30**			**Pn**	**08 47 35.1**	**-0.3**
BOOM	**Boomskoye usch**	**6.15**	**30**	PN		**Pn**	**08 47 35.1**	**-0.3**
CHMS	**Chumysh**	**6.20**	**21**	P		**Pn**	**08 47 35.3**	**-0.5**
	SNR=96							
DHRM	**DHARAMSHALA**	**6.21**	**142**	*e*P		**Pn**	**08 47 33.6**	**-2.7**
DHRM				*e*S		**Sn**	**08 48 39.9**	**-6.6**
DHRM				IAML			08 48 43.7	
	comp=E,2μm,0.6s							
DHRM				IAML			08 48 45.2	
	comp=N,1μm,0.4s							
TLWR	**Talawar**	**6.29**	**146**	*e*P		**Pn**	**08 47 34.1**	**-3.2**
TLWR				*e*S		**Sn**	**08 48 40.2**	**-7.9**
TLWR				IAML			08 48 45.5	
	comp=N,171nm,0.4s							
TLWR				IAML			08 48 48.0	
	comp=E,240nm,0.2s							
USP	**Ospenovka**	**6.38**	**18**	P		**Pn**	**08 47 37.2**	**-1.0**
	SNR=33							
TKM2	**Tokmak 2**	**6.39**	**26**	P		**Pn**	**08 47 38.1**	**-0.5**
	SNR=186							
KDJ	**Kajisay**	**6.43**	**39**			**Pn**	**08 47 38.9**	**-0.2**
KDJ	**Kajisay**	**6.43**	**39**	PN		**Pn**	**08 47 38.9**	**-0.2**
SGDS	**Sogindy**	**6.58**	**18**	*e*P		**Pn**	**08 47 39.8**	**-1.3**
KST	**Kastek**	**6.63**	**28**	*e*P		**Pn**	**08 47 41.5**	**-0.2**
	comp=E,24nm,0.6s							
KST				*e*S		**Sn**	**08 48 50.4**	**-5.8**
	comp=E,28nm,0.5s							
DGS	**Degeres**	**6.74**	**26**	*e*P		**Pn**	**08 47 42.5**	**-0.7**
	comp=E,62nm,0.8s							
DGS				*e*S		**Sn**	**08 48 52.4**	**-6.4**
	comp=E,21nm,0.5s							
IZV	**Izvestkoviy**	**6.88**	**31**	*e*P		**Pn**	**08 47 44.6**	**-0.5**
	comp=E,27nm,0.6s							
IZV				*e*S		**Sn**	**08 48 55.8**	**-6.5**
	comp=E,20nm,0.5s							
MTBS	**Maitube**	**6.89**	**30**	*e*P		**Pn**	**08 47 45.0**	**-0.2**
	comp=E,48nm,0.4s							
MTBS				*e*S		**Sn**	**08 48 55.5**	**-6.7**
	comp=E,23nm,0.5s							
BHK	**Bhakra**	**6.96**	**145**	*e*P		**Pn**	**08 47 45.7**	**-0.5**
BHK				*e*S		**Sn**	**08 48 59.5**	**-4.6**
BHK				IAML			08 48 59.5	
	comp=N,658nm,0.8s							
BHK				IAML			08 49 04.9	
	comp=E,532nm,0.3s							
TNSS	**Tian-Shan**	**7.02**	**33**	*e*PN		**Pn**	**08 47 46.4**	**-0.8**
TNSS	**Tian-Shan**	**7.02**	**33**	*e*P		**Pn**	**08 47 46.4**	**-0.8**
KRBS	**Karabastau**	**7.11**	**24**	*e*P		**Pn**	**08 47 46.8**	**-1.3**
	comp=E,29nm,0.6s							
KRBS				*e*S		Sn	08 48 58.3	-9.3
	comp=E,10.0nm,0.6s							
AAA	**Alma-Ata**	**7.15**	**32**	*e*PN		**Pn**	**08 47 48.2**	**-0.4**
AAA	**Alma-Ata**	**7.15**	**32**	*e*P		**Pn**	**08 47 48.2**	**-0.4**
MDOK	**Medeo**	**7.17**	**33**	*e*PN		**Pn**	**08 47 48.8**	**-0.1**
MDOK	**Medeo**	**7.17**	**33**	*e*P		**Pn**	**08 47 48.9**	**-0.1**
KOTS	**Kotyrbulak**	**7.25**	**33**	*e*P		**Pn**	**08 47 50.0**	**-0.2**
	comp=E,52nm,0.4s							
KOTS				*e*S		**Sn**	**08 49 04.9**	**-6.3**
	comp=E,29nm,0.6s							
PRZ	**Przheval'sk**	**7.31**	**42**			**Pn**	**08 47 51.5**	**+0.5**
PRZ	**Przheval'sk**	**7.31**	**42**	PN		**Pn**	**08 47 51.5**	**+0.5**
HNLY	**HANLEY**	**7.39**	**125**	*e*P		**Pn**	**08 47 50.0**	**-2.5**
HNLY				*e*S		**Sn**	**08 49 07.0**	**-8.2**
HNLY				IAML			08 49 11.9	
	comp=E,94nm,0.6s							
HNLY				IAML			08 49 14.3	
	comp=N,80nm,0.6s							
KTBS	**Karatobe**	**7.48**	**29**	*e*P		**Pn**	**08 47 51.4**	**-1.6**
	comp=N,8.1nm,0.4s							
KTBS				*e*S		Sn	08 49 07.1	-9.3
	comp=N,0.4nm,0.5s							
SMLA	**Simla**	**7.55**	**142**	*e*P		**Pn**	**08 47 50.7**	**-3.3**
SMLA				*e*S		Sn	08 49 09.0	-9.3
SMLA				IAML			08 49 14.3	
	comp=N,670nm,0.5s							
SMLA				IAML			08 49 17.3	
	comp=E,591nm,0.6s							
SATY	**Saty**	**7.72**	**39**	*e*PN		**Pn**	**08 47 56.5**	**+0.1**
SATY	**Saty**	**7.72**	**39**	*e*P		**Pn**	**08 47 56.6**	**+0.1**
KLP	**Kalpa**	**7.81**	**135**	*e*P		**Pn**	**08 47 53.9**	**-4.0**
KLP				*e*S		Sn	08 49 15.7	-9.3
KLP				IAML			08 49 23.1	
	comp=N,612nm,0.8s							
KLP				IAML			08 49 24.1	
	comp=E,1μm,0.6s							
UZB	**Uzynbulak**	**8.10**	**41**	*e*PN		**Pn**	**08 48 01.7**	**+0.2**
UZB	**Uzynbulak**	**8.10**	**41**	*e*P		**Pn**	**08 48 01.8**	**+0.2**
PDGK	**Podgornoye**	**8.48**	**42**	⇓P		**Pn**	**08 48 05.2**	**-1.3**
	comp=E,5.7nm,0.5s							
PDGK				⇓S		**Sn**	**08 49 40.2**	**-0.4**
	comp=E,23nm,0.9s							
PDGK	**Podgornoye**	**8.48**	**42**	PN		**Pn**	**08 48 05.4**	**-1.1**
DDI	**Dehra Dun**	**8.65**	**141**	*e*P		**Pn**	**08 48 05.4**	**-3.5**
DDI				*e*S		Sn	08 49 34.9	-10
DDI				IAML			08 49 40.4	
	comp=N,691nm,0.8s							
DDI				IAML			08 49 44.5	
	comp=E,576nm,0.6s							
JOSI	**Joshimath**	**9.29**	**134**	*e*P		**Pn**	**08 48 14.2**	**-3.3**
JOSI				*e*S		Sn	08 49 51.2	-9.3
JOSI				IAML			08 49 52.5	
	comp=E,372nm,1.1s							
JOSI				IAML			08 49 56.7	
	comp=N,312nm,0.5s							
LGTI	**Lohaghat**	**10.46**	**136**	*e*P		**Pn**	**08 48 29.5**	**-3.5**
LGTI				*e*S		Sn	08 50 15.7	-13
LGTI				IAML			08 50 23.0	
	comp=E,107nm,0.6s							
LGTI				IAML			08 50 25.9	
	comp=N,129nm,0.5s							
MAKZ	**Makanchi**	**12.20**	**35**			**Pn**	**08 48 54.7**	**-0.9**
MAKZ	**Makanchi**	**12.20**	**35**	P		**Pn**	**08 48 54.7**	**-0.9**
MK31	**Makanchi Array**	**12.34**	**36**	⇑P		**Pn**	**08 48 56.0**	**-1.4**
	comp=N,6.1nm,0.7s,baz=221,slow=13,SNR=69							
MK31	**Makanchi Array**	**12.34**	**36**	*i* P		**Pn**	**08 48 56.3**	**-1.1**
MKAR	**Makanchi Array**	**12.34**	**36**	P		**Pn**	**08 48 56.1**	**-1.3**
	comp=N,6.7nm,0.7s,baz=224,slow=14,SNR=71							
MKAR	**Makanchi Array**	**12.34**	**36**			**Pn**	**08 48 56.8**	**-0.6**
MKAR	**Makanchi Array**	**12.34**	**36**	*i* P		**Pn**	**08 48 57.2**	**-0.2**
MKAR				pmax		pmax		
	comp=Z,7.0nm,0.7s							
UDPR	**Udaipur**	**12.72**	**172**	*e*P		**Pn**	**08 48 58.7**	**-3.9**
UDPR				*e*S		Sn	08 51 06.6	-17
UDPR				IAML			08 51 15.6	
	comp=N,27nm,1.0s							
UDPR				IAML			08 51 16.7	
	comp=E,51nm,0.8s							
WMQ	**Urumqi**	**13.78**	**57**	*e*P		**P**	**08 49 18.9**	**-0.9**
ZSN	**Zaisan**	**14.05**	**39**	*e*P		**Pn**	**08 49 21.0**	**+1.6**
ZSN	**Zaisan**	**14.05**	**39**	*e*P		**Pn**	**08 49 21.0**	**+1.6**
KURBB	**Kurchatov Arra**	**14.23**	**18**	P		**Pn**	**08 49 17.8**	**-3.8**
	comp=E,3.0nm,0.7s,baz=212,slow=12,SNR=24							
KURBB	**Kurchatov Arra**	**14.23**	**18**	⇓P		**Pn**	**08 49 18.5**	**-3.1**
	comp=E,23nm,0.6s							
KURK	**Kurchatov**	**14.34**	**18**	*i* P		**Pn**	**08 49 24.0**	**+1.0**
KURK				pmax		pmax		
	comp=Z,19nm,0.9s							
AB31	**Akbulak array**	**14.76**	**328**			**Pn**	**08 49 25.4**	**-2.8**
AB31	**Akbulak array**	**14.76**	**328**	⇑P		**Pn**	**08 49 24.7**	**-3.5**
	comp=Z,5.7nm,0.5s							
AB31	**Akbulak array**	**14.76**	**328**	P		**Pn**	**08 49 24.9**	**-3.4**
ABKAR	**Akbulak array**	**14.76**	**328**			**Pn**	**08 49 25.4**	**-2.8**
BVA0	**Borovoye Array**	**15.82**	**357**	⇓P		**Pn**	**08 49 39.3**	**-2.0**
	comp=E,6.0nm,0.6s							
BVAR	**Borovoye Array**	**15.82**	**357**	P		**Pn**	**08 49 39.4**	**-2.0**
	comp=Z,7.7nm,0.4s,baz=155,slow=9.8,SNR=22							
BVAR				S		Sn	08 52 25.2	-12
	comp=Z,7.5nm,0.8s,baz=165,slow=24,SNR=7.0							
BVAR				LR		LR	08 56 33.7	
	comp=Z,93nm,20.0s,baz=324,slow=40							
BORK	**Borovoye**	**15.85**	**357**			**Pn**	**08 49 40.0**	**-1.6**
BORK				IAmb		IAmb	08 49 44.1	
	comp=Z,27nm,1.0s							
BORK	**Borovoye**	**15.85**	**357**	*ce*P		**Pn**	**08 49 40.0**	**-1.6**
BORK				pmax		pmax		
	comp=Z,51nm,1.7s							
AKTO	**Aktyubinsk**	**16.47**	**328**	P		**Pn**	**08 49 47.8**	**-1.5**
	comp=Z,44nm,0.6s,baz=146,slow=8.3,SNR=56							
AKTO				S		Sn	08 52 39.6	-13
	comp=Z,27nm,0.8s,baz=342,slow=21,SNR=6.8							
AKTO				LR		LR	08 56 37.8	
	comp=Z,143nm,21.9s,baz=232,slow=38							
AKTO	**Aktyubinsk**	**16.47**	**328**	⇓P		**Pn**	**08 49 47.8**	**-1.5**
	comp=Z,20nm,0.5s							
DGZ	**Jazzator, Alta**	**16.83**	**37**	*i* P		**P**	**08 49 52.6**	**-0.9**
DGZ				pmax		pmax		
	comp=Z,10.0nm,0.5s							
LSA	**Lhasa**	**17.81**	**109**	P		**P**	**08 50 03.4**	**-1.5**
LSA				pmax		pmax		
	comp=Z,17nm,1.2s							
GOMU	**GeErMu**	**18.50**	**86**	P		**Pn**	**08 50 15.3**	**+1.2**
GOMU				pmax		pmax		
	comp=Z,6.0nm,0.9s							
ZAA0	**Zalesovo Array**	**18.99**	**24**	P		**P**	**08 50 17.6**	**+0.6**
ZAA0				IAmb		IAmb	08 50 18.4	
	comp=Z,16nm,0.5s							
ZALV	**Zalesovo Beam**	**18.99**	**24**	P		**P**	**08 50 17.9**	**+0.8**
	comp=Z,13nm,0.3s,baz=214,slow=9.8,SNR=90							
ZALV				S		**S**	**08 53 41.7**	**-3.3**
	comp=Z,1.5nm,0.8s,baz=216,slow=17,SNR=1.5							
AKT	**Akhty**	**19.05**	**290**	*e*P		**P**	**08 50 18.6**	**+0.7**
AKT				*e*S		**S**	**08 53 46.8**	**+0.3**
AKT				pmax		pmax		
	comp=Z,8.0nm,0.4s							
AKT				smax		smax		
	comp=E,21nm,0.6s							
AKT				smax		smax		
	comp=N,30nm,0.6s							
MAK	**Makhachkala**	**19.39**	**295**	*e*P		**P**	**08 50 19.3**	**-2.1**
MAK				*e*S		**S**	**08 53 49.9**	**-3.1**
MAK				pmax		pmax		
	comp=Z,154nm,1.1s							
MAK				MLR		MLR		
	comp=Z,295nm,16.0s							
SHL	**Shillong**	**20.69**	**118**	P		**P**	**08 50 37.4**	**+1.6**
SHL				IAmb		IAmb	08 50 38.3	
	comp=Z,44nm,1.0s							
SHL	**Shillong**	**20.69**	**118**	P		**P**	**08 50 37.4**	**+1.6**
SHL				pmax		pmax		
	comp=Z,44nm,1.0s							
SVE	**Sverdlovsk**	**20.97**	**343**	*e*P		**P**	**08 50 38.7**	**+0.5**
SVE				*e*S		**S**	**08 54 22.4**	**-1.2**
SVE				pmax		pmax		
	comp=N,32nm,0.7s							
ARTI	**Arti**	**21.17**	**339**	P		**P**	**08 50 40.9**	**+0.5**
	comp=N,8.9nm,0.6s,baz=150,slow=7.4,SNR=11							
ARTI				S		**S**	**08 54 25.4**	**-2.0**
	comp=N,1.8nm,0.5s,baz=310,slow=17,SNR=1.8							
	comp=N,8.9nm,0.6s							
ARTI	**Arti**	**21.17**	**339**	P		**P**	**08 50 40.1**	**-0.2**
ARTI	**Arti**	**21.17**	**339**	*c* P		**P**	**08 50 41.2**	**+0.8**
ARTI							08 51 08.0	
ARTI				S		**S**	**08 54 26.1**	**-1.3**
ARTI				SS		**SnSn**	**08 55 10.7**	**+6.8**
ARTI				pmax		pmax		
	comp=Z,12nm,0.7s							
GNI	**Garni**	**21.27**	**286**	P		**P**	**08 50 44.1**	**+2.3**
	comp=Z,15nm,0.6s,baz=97,slow=0.5,SNR=7.5							
	comp=Z,15nm,0.6s							
GNI	**Garni**	**21.27**	**286**	P		**P**	**08 50 41.5**	**-0.3**
GNI				IAmb		IAmb	08 50 45.4	
	comp=Z,18nm,0.7s							
GTA2	**Gaotai**	**22.03**	**76**	*e*P		**P**	**08 50 52.9**	**+3.1**
GTA2				pP		pP	08 51 18.4	+1.5
GTA2				sP		sP	08 51 32.3	-2.8
GTA2				pmax		pmax		
	comp=Z,9.0nm,1.0s							
BELG	**Belogornoye**	**22.72**	**320**	*i* P		**P**	**08 50 56.2**	**0.0**
BELG				pmax		pmax		
	comp=Z,5.0nm,1.1s							
KNGR	**Kungurtug, Tuv**	**22.72**	**46**	*i* P		**P**	**08 50 59.1**	**+2.7**
KNGR				pmax		pmax		
	comp=Z,9.0nm,0.6s							
KBZ	**Khabaz**	**22.83**	**296**	P		**P**	**08 50 57.5**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=115,slow=8.5,SNR=8.8							
	comp=Z,2.9nm,0.8s							
KBZ	**Khabaz**	**22.83**	**296**	*ce*P		**P**	**08 50 57.7**	**+0.4**
KBZ				pmax		pmax		
	comp=Z,7.0nm,1.1s							
SHA1	**Shidzhatmaz**	**23.00**	**296**	*ce*P		**P**	**08 51 00.7**	**+1.5**
KIV	**Kislovodsk**	**23.00**	**296**	*e*P		**P**	**08 51 00.9**	**+1.8**
KIV				*e*S		**S**	**08 55 01.9**	**+3.2**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.0s							
VRH	**Novokhopyorsk**	**25.45**	**313**	*e*P		**P**	**08 51 21.2**	**+0.1**
VRH				pmax		pmax		
	comp=Z,10.0nm,0.6s							
LZDM	**Lanzhou Array**	**25.61**	**83**	P		**P**	**08 51 25.4**	**+2.3**
	comp=Z,0.9nm,0.4s,baz=282,slow=7.4,SNR=4.5							
	comp=Z,0.9nm,0.4s							
KIRV	**Kirov**	**25.86**	**333**	*ce*P		**P**	**08 51 26.9**	**+2.2**
VORD	**Divnogorie**	**26.81**	**311**	*e*P		**P**	**08 51 32.8**	**-0.5**
VORD				pmax		pmax		
	comp=Z,3.0nm,0.4s							
VSR	**Storozhevoye**	**26.96**	**312**	*e*P		**P**	**08 51 35.0**	**+0.3**
VSR				pmax		pmax		
	comp=Z,10.0nm,0.8s							
SONM	**Songino Array**	**27.41**	**56**	P		**P**	**08 51 41.8**	**+2.8**
	comp=Z,0.8nm,0.5s,baz=272,slow=8.7,SNR=10							
	comp=Z,0.8nm,0.5s							
SONM	**Songino Array**	**27.41**	**56**	P		**P**	**08 51 42.5**	**+3.6**
SONM	**Songino Array**	**27.41**	**56**	P		**P**	**08 51 42.6**	**+3.6**
SONM				pmax		pmax		
	comp=Z,1.0nm,0.9s							
PZH	**PanZhiHua**	**27.51**	**104**	P		**P**	**08 51 43.9**	**+3.9**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.6s							
LPSR	**Galich'ya Gora**	**27.57**	**314**	*e*P		**P**	**08 51 41.0**	**+0.9**
LPSR				pmax		pmax		
	comp=Z,10.0nm,0.7s							
ULN	**Ulaanbaatar**	**27.86**	**56**	*ce*P		**P**	**08 51 46.4**	**+3.5**
ULN				pmax		pmax		
	comp=Z,10.0nm,2.7s							
BTO2	**Baotou**	**29.67**	**71**	*e*P		**P**	**08 52 02.8**	**+3.8**
BTO2				pmax		pmax		
	comp=Z,12nm,0.9s							
BTO2				pmax		pmax		
	comp=Z,140nm,7.3s							
BTO2				LR		LR		
	comp=Z,780nm,10.7s							
BTO2				LR		LR		
	comp=Z,640nm,14.6s							
BTO2				LR		LR		
	comp=Z,690nm,16.1s							
KIRS	**Kirsehir-Merke**	**29.67**	**285**	⇑P		**P**	**08 52 01.3**	**+2.3**
OBN	**Obninsk**	**29.79**	**318**	*e*P		**P**	**08 52 01.8**	**+2.1**
OBN				*e**PP		**pP**	**08 52 26.5**	**-4.6**
OBN				*e*			08 53 00.6	
OBN				*e*			08 54 59.6	
OBN				pmax		pmax		
	comp=Z,13nm,0.9s							
OBN	**Obninsk**	**29.79**	**318**	P		**P**	**08 52 01.0**	**+1.3**
	comp=Z,24nm,0.5s							
BR104	**Keskin Array S**	**29.81**	**287**	P		**P**	**08 52 01.8**	**+1.6**
	com

MNK					pmax	pmax		
	comp=N,20nm,0.8s							
MNK					pmax	pmax		
	comp=E,22nm,0.9s							
MNK					pmax	pmax		
	comp=Z,22nm,1.1s							
MNK					MLR	MLR		
	comp=N,381nm,20.0s							
MNK					MLR	MLR		
	comp=E,365nm,20.0s							
MNK					MLR	MLR		
	comp=Z,95nm,9.0s							
TESR	**Tescani**	**34.44 300**		P	**P**		**08 52 42.0**	**+1.5**
PLOR	**Plostina**	**34.46 299**	⇑	P	**P**		**08 52 43.2**	**+2.5**
PLOR	**Plostina**	**34.46 299**	⇑	P	**P**		**08 52 43.2**	**+2.5**
KMPD	**K-Podol'skiy**	**34.59 304**		P	**P**		**08 52 42.2**	**+0.5**
COVR	**Voineasa-Covas**	**34.77 299**	⇑	P	**P**		**08 52 46.2**	**+2.9**
MLR	**Muntele Rosu**	**34.97 298**	⇑	P	**P**		**08 52 48.1**	**+3.0**
MLR	**Muntele Rosu**	**34.97 298**	⇑	P	**P**		**08 52 48.1**	**+3.0**
MLR	**Muntele Rosu**	**34.97 298**		P	**P**		**08 52 46.3**	**+1.2**
NACGM	**Naroch**	**35.13 315**		*eP*	**P**		**08 52 47.4**	**+1.2**
	comp=Z,40nm,0.9s,baz=101							
RNPP5	**Staryi Chortor**	**35.13 308**		P	**P**		**08 52 47.4**	**+1.1**
RNPP9	**Sopachiv**	**35.15 309**		P	**P**		**08 52 48.0**	**+1.6**
RNPP8	**Varash**	**35.16 309**		P	**P**		**08 52 47.9**	**+1.4**
DOPR	**Dopca**	**35.34 299**	⇑	P	**P**		**08 52 50.4**	**+2.3**
BURAR	**Bucovina Array**	**35.41 302**	⇑	P	**P**		**08 52 50.4**	**+1.5**
BURAR	**Bucovina Array**	**35.41 302**	⇑	P	**P**		**08 52 50.4**	**+1.5**
KSV	**Kosov**	**35.51 303**		P	**P**		**08 52 50.6**	**+1.0**
JOF	**Joensuu**	**35.55 329**		*eP*	**P**		**08 52 51.2**	**+1.5**
VOIR		**35.60 298**	⇑	P	**P**		**08 52 52.3**	**+1.8**
VOIR		**35.60 298**	⇑	P	**P**		**08 52 52.3**	**+1.8**
VOIR		**35.60 298**		P	**P**		**08 52 51.9**	**+1.4**
STNU	**Starunia**	**35.89 304**		P	**P**		**08 52 54.2**	**+1.3**
SHIU	**Shidnytsya**	**36.65 305**		P	**P**		**08 53 01.0**	**+1.7**
MARR	**Marisel-Cluj**	**36.87 301**	⇑	P	**P**		**08 53 03.8**	**+2.5**
BERU	**Beregovo**	**37.13 303**		P	**P**		**08 53 05.2**	**+1.9**
FINES	**FINESS Array B**	**37.23 325**		P	**P**		**08 53 05.0**	**+1.1**
	comp=Z,9.5nm,0.6s,baz=116,slow=9.4,SNR=61							
	comp=Z,9.5nm,0.6s							
FINES	**FINESS Array B**	**37.23 325**		*i* P	**P**		**08 53 05.5**	**+1.6**
FINES				pmax	pmax			
	comp=Z,10.0nm,0.6s							
HOLU	**Holmets**	**37.30 304**		P	**P**		**08 53 06.5**	**+1.8**
MTSE	**Matsula**	**37.54 321**		*eP*	**P**		**08 53 08.0**	**+1.3**
SUF	**Sumiainen**	**37.63 327**		*eP*	**P**		**08 53 08.4**	**+1.1**
KEF	**Keuruu**	**38.00 326**		*eP*	**P**		**08 53 11.7**	**+1.3**
MDVR	**Moldovita**	**38.01 298**	⇑	P	**P**		**08 53 12.8**	**+1.9**
NIE	**Niedzica**	**38.65 305**		P	**P**		**08 53 18.3**	**+2.2**
NJ2	**Nanjing**	**38.77 83**		*eP*	**P**		**08 53 19.3**	**+2.0**
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.6s							
RAF	**Rauma**	**39.10 324**		*eP*	**P**		**08 53 19.6**	**0.0**
VAF	**Ylistaro**	**39.24 327**		*eP*	**P**		**08 53 21.3**	**+0.5**
AAL	**Aland**	**39.77 322**		*eP*	**P**		**08 53 26.0**	**+0.9**
VADS	**Vadso**	**39.85 339**		*eP*	**P**		**08 53 27.6**	**+1.9**
MORH	**Mrgy, Hungar**	**39.99 300**	⇑	P	**P**		**08 53 25.1**	**-2.1**
MORH	**Mrgy, Hungar**	**39.99 300**		P	**P**		**08 53 28.8**	**+1.6**
	comp=Z,4.9nm,2.6s							
MORC	**Moravsky Berou**	**40.43 306**	⇑	P	**P**		**08 53 29.1**	**-1.7**
MORC	**Moravsky Berou**	**40.43 306**	⇑	P	**P**		**08 53 29.1**	**-1.7**
MODS	**Modra-Piesok**	**40.70 304**		*eP*	**P**		**08 53 35.4**	**+2.3**
MODS	**Modra-Piesok**	**40.70 304**		*eP*	**P**		**08 53 35.4**	**+2.3**
ARA0	**ARCESS Array S**	**40.71 337**		*eP*	**P**		**08 53 34.8**	**+2.0**
ARCES	**ARCESS Array B**	**40.71 337**		P	**P**		**08 53 34.1**	**+1.3**
	comp=Z,11nm,0.5s,baz=114,slow=8.4,SNR=64							
	comp=Z,11nm,0.5s							
ARCES	**ARCESS Array B**	**40.71 337**		P	**P**		**08 53 33.9**	**+1.1**
KTK1	**Kautokeino**	**41.20 336**		*eP*	**P**		**08 53 38.4**	**+1.6**
RONA	**Rosalia, Austr**	**41.42 303**		*eP*	**P**		**08 53 40.4**	**+1.4**
	comp=Z,2.8nm,1.0s							
CONA	**Conrad Observa**	**41.69 303**		*i* P	**P**		**08 53 43.2**	**+2.0**
	comp=Z,8.6nm,1.5s,SNR=5.6							
HAMF	**Hammerfest**	**41.77 338**		*eP*	**P**		**08 53 43.8**	**+2.3**
BNX	**BinXian**	**41.79 60**	⇑	P	**P**		**08 53 42.5**	**+0.5**
BNX				pmax	pmax			
	comp=Z,14nm,1.7s							
SOKA	**Soboth**	**42.41 301**		*i* P	**P**		**08 53 49.3**	**+2.2**
	comp=Z,3.3nm,0.7s,SNR=4.9							
BRG	**Berggiesshubel**	**42.66 308**		*i* P	**P**		**08 53 51.3**	**+2.4**
BRG				Amp			08 53 51.9	
	comp=Z,6.0nm,0.7s							
BRG				pP	**pP**		**08 54 19.5**	**-2.2**
BRG				Amp			08 54 20.8	
	comp=Z,5.2nm,0.9s							
HFS	**Hagfors**	**42.88 321**		P	**P**		**08 53 51.7**	**+1.2**
	comp=Z,30nm,0.4s,baz=97,slow=11,SNR=129							
GERES	**GERESS Array B**	**43.01 305**		P	**P**		**08 53 53.3**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=74,slow=7.3,SNR=3.8							
	comp=Z,0.4nm,0.3s							
CLL	**Collm**	**43.22 308**		*i* P	**P**		**08 53 54.7**	**+1.4**
CLL				pmax	pmax			
	comp=Z,9.0nm,0.9s							
CLL	**Collm**	**43.22 308**		P	**P**		**08 53 54.8**	**+1.4**
	comp=Z,13nm,2.6s							
CLL	**Collm**	**43.22 308**		*i* P	**P**		**08 53 54.7**	**+1.4**
	comp=Z,9.0nm,0.9s							
FAUS	**Fauske**	**43.44 332**		*eP*	**P**		**08 53 56.8**	**+1.9**
MOR8	**Moi Rana**	**43.48 330**		*eP*	**P**		**08 53 56.4**	**+1.1**
LESA	**Schwarzleotal**	**43.89 303**		*eP*	**P**		**08 54 00.6**	**+1.7**
	comp=Z,4.0nm,0.5s							
NC602	**NORSAR Array S**	**43.99 322**		*eP*	**P**		**08 54 00.7**	**+1.3**
ABTA	**Abfaltersbach**	**44.11 302**		*eP*	**P**		**08 54 02.1**	**+1.4**
	comp=Z,0.7nm,0.3s							
NB2	**NORSAR Subarra**	**44.17 323**		P	**P**		**08 54 01.9**	**+1.0**
	comp=Z,5.2nm,0.5s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**44.17 323**		P	**P**		**08 54 01.7**	**+0.8**
	comp=Z,8.6nm,0.6s,baz=94,slow=7.7,SNR=30							
	comp=Z,8.6nm,0.6s							
TIXI	**Tiksi**	**44.86 22**		P	**P**		**08 54 07.4**	**+1.2**
TIXI	**Tiksi**	**44.86 22**		P	**P**		**08 54 07.4**	**+1.2**
TIXI				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KONO	**Kongsberg**	**44.91 320**		*eP*	**P**		**08 54 08.2**	**+1.5**
DAVA	**Damuels**	**45.79 303**		*eP*	**P**		**08 54 15.3**	**+1.3**
	comp=Z,7.4nm,0.5s							
SPITS	**Spitsbergen Ar**	**46.92 347**		P	**P**		**08 54 24.3**	**+2.0**
	comp=Z,3.0nm,0.5s,baz=115,slow=11,SNR=9.6							
	comp=Z,3.0nm,0.5s							
SENIN	**Lac Senin/Sane**	**47.71 302**		P	**P**		**08 54 30.2**	**+1.1**
SENIN				IAmb	IAmb		08 54 32.9	
	comp=Z,10nm,1.0s							
KIBK	**Kibwezi**	**50.29 226**		P	**P**		**08 54 49.8**	**+0.9**
KIBK				IAmb	IAmb		08 54 51.5	
	comp=Z,4.9nm,0.7s							
EKA	**Eskdalemuir Ar**	**52.19 316**		P	**P**		**08 55 03.2**	**+0.7**
	comp=Z,3.4nm,0.5s,baz=86,slow=7.3,SNR=13							
	comp=Z,3.4nm,0.5s							
ESDC	**Sonseca Array**	**57.66 298**		P	**P**		**08 55 43.3**	**+1.2**
	comp=Z,3.6nm,0.6s,baz=57,slow=7.1,SNR=26							
	comp=Z,3.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**66.35 269**		P	**P**		**08 56 40.7**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=48,slow=7.7,SNR=8.2							
	comp=Z,0.9nm,0.5s							
RES	**Resolute Bay**	**68.01 356**		LR	LR		09 27 37.5	
	comp=Z,47nm,18.1s,baz=346,slow=37							
YKA	**Yellowknife Ar**	**80.48 3**		P	**P**		**08 58 03.7**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=348,slow=6.0,SNR=22							
	comp=Z,1.3nm,0.6s							
SCHQ	**Schefferville**	**81.66 337**		P	**P**		**08 58 10.0**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=52,slow=6.5,SNR=4.2							
	comp=Z,1.7nm,0.8s							
WRA	**Warramunga Arr**	**81.86 122**		P	**P**		**08 58 12.2**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=302,slow=11,SNR=1.8							
	comp=Z,0.7nm,0.8s							
ASAR	**Alice Springs**	**84.17 125**		P	**P**		**08 58 23.0**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=318,slow=6.0,SNR=2.3							
	comp=Z,0.8nm,0.8s							

IDC ***22*** *08:47:01.7±0.5, 26.98N×143.76E, h0km, mb4.8/31, mbtmp4.8/36, ML4.3/5, MS3.8/49, Error ellipse: s-maj=13.6km s-min=11.9km az=65.0*

MOS ***22*** *08:47:01.9±0.8, 26.94N×143.76E, h10km, mb5.2/60, Error ellipse: s-maj=9.2km s-min=4.5km az=114.0*

BJI ***22*** *08:47:03.6, 27.09N×143.42E, h8km, mB5.1/26, mb4.8/71, Ms4.5/54, MS7 4.4/57*

NEIC ***22*** *08:47:04.4±1.0, 27.03N±0.08×143.67E±0.07, h10km±1km, mb5.2/79, Mww4.9/16, Error ellipse: s-maj=13.3km s-min=10.6km az=165.0*

JMA ***22*** *08:47:04.8±0.1, 27.1N±0.6×143.7E±0.5, h87km, MD5.0/42, MV4.9/42, NEAR CHICHIJIMA ISLAND*

NEIC ***22*** *08:47:04.4, 27.03N×143.68E, h14km*

NEIC ***22*** *08:47:04.4, 27.03N×143.90E, h14km, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^16Nm; Mrr=2.07; Mθθ0.29; Mφφ1.79; Mrθ-0.67; Mθφ-0.80; Mφr0.99; Fault plane solution: M0 2.42000×10^16 NP1: φs342.01000°, δ30.62000°, λ-80.73000°. NP2: φs151.28000°, δ59.82000°, λ-95.44000°. Principal axes: T 2.4439, Plg15.0000°, Azm245.0000°; N -0.0439, Plg5.0000°, Azm154.0000°; P -2.4000, Plg75.0000°, Azm47.0000°;*

GCMT ***22*** *08:47:06.4±0.2, 26.99N±0.02×143.78E±0.02, h13km±1km, MW4.8/97, Moment Tensor Solution. s24,c26; s97,c138; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.37±.14; Mθθ0.50±.08; Mφφ1.87±.10; Mrθ-0.12±.20; Mθφ-0.96±.05; Mφr0.26±.19; Best double couple: M0 2.38400×10^16 NP1:φs333.00000°, δ41.00000°, λ-90.00000°. NP2: φs153.00000°, δ49.00000°, λ-90.00000°. Principal axes: T 2.3800, Plg4.0000°, Azm243.0000°; N 0.0090, Plg0.0000°, Azm333.0000°; P -2.3880, Plg86.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 08:47:05.1±0.6, 26.99N±0.04×143.67E±0.04, h18km±2km, h18km:pP-P, n610, σ1s27/630, mb5.1/174, MS4.0/70, 17C-4D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
CBIJ	**Chichi jima**	**1.33**	**275**	P		**Pn**	**08 47 28.6**	**-0.1**
CBIJ				A		A	08 47 28.6	
	comp=N,62nm,4.9s,comp=E,78nm,4.4s							
CBIJ				*eS*		**Sn**	**08 47 46.6**	**+0.6**
JCJ	**Chichijima**	**1.33**	**275**	Pn		**Pn**	**08 47 28.0**	**-0.8**
	comp=E,559nm,0.3s,baz=297,slow=20,SNR=145							
JCJ				Sn		**Sn**	**08 47 44.5**	**-1.6**
	comp=E,1μm,0.3s,baz=284,slow=22,SNR=9.9							
JCJ	**Chichijima**	**1.33**	**275**			**Pn**	**08 47 28.6**	**-0.2**
JCJ				Sn		**Sn**	**08 47 45.6**	**-0.4**
JHH2	**Haha-jima-NKT2**	**1.38**	**255**	P		**Pn**	**08 47 29.8**	**+0.2**
JHH2				A		A	08 47 29.8	
	comp=N,48nm,4.0s,comp=E,68nm,5.3s							
JHH2				*eS*		**Sb**	**08 47 48.7**	**+1.0**
JHJ2	**Mitsune**	**6.95**	**332**	Pn		**Pn**	**08 48 44.6**	**-1.5**
JHJ2	**Mitsune**	**6.95**	**332**	*eS*		**Sn**	**08 50 00.3**	**-4.4**
JHJ	**Hachijo jima 2**	**6.97**	**332**	Pn		**Pn**	**08 48 44.3**	**-2.0**
	comp=E,28nm,0.3s,baz=60,slow=23,SNR=5.0							
JHJ				Sn		**Sn**	**08 49 58.6**	**-6.6**
	comp=E,52nm,0.3s,baz=75,slow=23,SNR=4.7							
	comp=E,74nm,0.4s							
BSO1	**Boso 1**	**7.98**	**344**	*eP*		**Pn**	**08 48 57.0**	**-2.6**
BSO3	**Boso 3**	**8.24**	**342**	*eP*		**Pn**	**08 49 01.8**	**-1.8**
BSO4	**Boso 4**	**8.47**	**341**	*eP*		**Pn**	**08 49 04.9**	**-1.9**
JOD2	**Odawara 2**	**9.13**	**336**	*eP*		**Pn**	**08 49 14.8**	**-1.2**
JYN	**Shimob**	**9.54**	**334**	*eP*		**Pn**	**08 49 21.2**	**-0.5**
JYN				*eS*		**Sn**	**08 51 08.7**	**+0.1**
JYT	**Yasato**	**9.67**	**343**	*eP*		**Pn**	**08 49 22.5**	**-0.8**
JNY	**Yasuok**	**9.71**	**331**	*eP*		**Pn**	**08 49 24.8**	**+0.9**
JRY	**Ryogami san**	**9.87**	**337**	*eP*		**Pn**	**08 49 24.9**	**-1.2**
JHO	**Hitachi**	**9.95**	**345**	*eP*		**Pn**	**08 49 23.2**	**-3.9**
JAG	**Ashikaga**	**10.06**	**340**	*eP*		**Pn**	**08 49 26.5**	**-2.2**
INU	**Inuyama**	**10.09**	**327**			**Pn**	**08 49 28.5**	**-0.6**
JGF	**Kuroka**	**10.14**	**329**			**Pn**	**08 49 29.3**	**-0.4**
MJAR	**Matsushiro Arr**	**10.59**	**335**	Pn		**Pn**	**08 49 34.6**	**-1.4**
	comp=E,2.6nm,0.3s,baz=157,slow=9.3,SNR=138							
MJAR				Sn		**Sn**	**08 51 31.4**	**-2.8**
	comp=E,0.5nm,0.3s,baz=326,slow=39,SNR=3.1							
MJAR				LR		LR	08 53 13.6	
	comp=E,191nm,21.3s,baz=161,slow=35							
	comp=E,57nm,0.8s							
MJAR	**Matsushiro Arr**	**10.59**	**335**	Pn		**Pn**	**08 49 35.2**	**-0.8**
MJAR	**Matsushiro Arr**	**10.59**	**335**	P		**Pn**	**08 49 35.2**	**-0.8**
MAJO	**Matsushiro**	**10.59**	**335**			**Pn**	**08 49 34.9**	**-1.1**
MAJO	**Matsushiro**	**10.59**	**335**	P		**Pn**	**08 49 34.9**	**-1.1**
MJB9	**Matsu-Tunnel**	**10.60**	**335**			**Pn**	**08 49 35.7**	**-0.4**
JMN	**Monobe**	**10.79**	**311**	Pn		**Pn**	**08 49 38.6**	**-0.2**
JMK	**Ichinoseki**	**12.10**	**351**	*eP*		Pn	08 49 51.3	-5.3
JMK				*eS*		Sn	08 51 58.9	-12
JNU	**Nakatsue**	**12.65**	**302**	Pn		**Pn**	**08 50 06.4**	**+2.2**
	comp=E,0.3nm,0.3s,baz=44,slow=23,SNR=4.0							
JNU				LR		LR	08 54 58.6	
	comp=E,531nm,18.3s,baz=123,slow=38							
GUMO	**Guam**	**13.38**	**175**	LR		LR	08 55 06.7	
	comp=E,189nm,18.6s,baz=57,slow=36							
JOW	**Kunigami**	**13.74**	**273**	Pn		**Pn**	**08 50 17.7**	**-1.4**
KSRS	**Korea Array**	**16.90**	**312**	Pn		**Pn**	**08 51 02.0**	**+1.3**
	comp=E,1.4nm,0.3s,baz=120,slow=11,SNR=30							
KSRS				LR		LR	08 57 30.5	
	comp=E,273nm,19.0s,baz=125,slow=37							
	comp=E,25nm,1.0s							
KSRS	**Korea Array**	**16.90**	**312**	P		**Pn**	**08 51 02.0**	**+1.3**
KSAR	**Wonju Array Be**	**16.92**	**312**			**Pn**	**08 51 00.7**	**-0.2**
KSAR	**Wonju Array Be**	**16.92**	**312**	P		**Pn**	**08 51 00.7**	**-0.2**
KS19	**Wonju Array Si**	**16.96**	**312**			**Pn**	**08 51 02.0**	**+0.5**
JKA	**Kamikawa-asahi**	**17.11**	**357**	Pn		**Pn**	**08 51 01.0**	**-2.2**
ASAJ	**Asahikawa**	**17.11**	**357**	P		**Pn**	**08 51 01.6**	**-1.7**
	comp=E,1.1nm,0.3s,baz=216,slow=13,SNR=11							
ASAJ				LR		LR	08 56 50.4	
	comp=E,297nm,21.0s,baz=178,slow=34							
	comp=E,7.7nm,0.8s							
TEY	**Ternei**	**18.88**	**344**	*eP*		**Pn**	**08 51 25.9**	**+0.9**
USRK	**Ussuriysk Ar.**	**19.59**	**334**	P		**P**	**08 51 30.5**	**-1.6**
	comp=E,1.4nm,0.3s,baz=159,slow=9.2,SNR=9.7							
USRK				SKKS			09 25 52.9	
	comp=E,2.1nm,0.7s,baz=90,slow=6.1,SNR=4.2							
USRK				P3KP			09 26 35.5	
	comp=E,3.5nm,0.7s,baz=51,slow=12,SNR=4.3							
	comp=E,36nm,1.2s							
YSS	**Yuzhno-Sakhali**	**19.94**	**358**			**P**	**08 51 35.7**	**-0.2**
YSS				IAmb		IAmb	08 51 38.2	
	comp=Z,86nm,1.1s							
YSS	**Yuzhno-Sakhali**	**19.94**	**358**	*eP*		**Pn**	**08 51 37.3**	**-0.3**
YSS				*eS*		**S**	**08 55 16.3**	**-3.2**
YSS				pmax	pmax			
	comp=Z,60nm,1.0s							
YSS				pmax	pmax			
	comp=Z,500nm,6.0s							
YSS				smax	smax			
	comp=N,400nm,5.8s							
YSS				smax	smax			
	comp=E,300nm,4.8s							
YSS				MLR	MLR			
	comp=Z,400nm,17.0s							
YSS				MLR	MLR			
	comp=N,400nm,16.0s							
YSS				MLR	MLR			
	comp=E,400nm,14.0s							
NACB	**Ninganchiao**	**20.11**	**267**	P		**P**	**08 51 37.5**	**-0.5**
YHNB	**Yeheng**	**20.20**	**268**	P		**P**	**08 51 39.2**	**+0.1**
YHNB				IAmb		IAmb	08 51 50.0	
	comp=Z,68nm,0.9s							
YULB	**Yu-li**	**20.56**	**265**	P		**P**	**08 51 42.2**	**-0.7**
YULB				IAmb		IAmb	08 51 50.2	
	comp=Z,69nm,0.7s							
SSLB	**Suanglung**	**20.77**	**266**			**P**	**08 51 46.3**	**+1.1**
SSLB				IAmb		IAmb	08 51 51.7	
	comp=Z,133nm,1.0s							
MDJ	**Mudanjiang**	**20.91**	**331**	P		**P**	**08 51 46.6**	**0.0**
MDJ	**Mudanjiang**	**20.91**	**331**	P		**P**	**08 51 47.6**	**+1.0**
MDJ				ScP		**ScP**	**08 59 27.6**	**-2.5**
MDJ				pmax	pmax			
	comp=Z,34nm,1.7s							
MDJ				LR	LR			
	comp=Z,740nm,7.6s							
MDJ				LR	LR			
	comp=Z,540nm,8.8s							
MDJ				LR	LR			
	comp=Z,700nm,14.7s							
TPUB	**Ta-pu**	**21.17**	**265**			**P**	**08 51 49.6**	**0.0**
DL2	**Dalian**	**21.92**	**308**	P		**P**	**08 51 55.1**	**-2.4**
DL2				S		**S**	**08 55 58.0**	**-0.9**
DL2				pmax	pmax			
	comp=Z,42nm,0.9s							
DL2				pmax	pmax			
	comp=Z,320nm,6.2s							
DL2				LR	LR			
	comp=Z,740nm,17.7s							
DL2				LR	LR			
	comp=Z,760nm,17.2s							
DL2				LR	LR			
	comp=Z,980nm,18.0s							
UGL	**Uglegorsk**	**22.09**	**357**	*eP*		**P**	**08 52 00.6**	**+1.5**
UGL				*eS*		**S**	**08 55 52.9**	**-8.9**
UGL				pmax	pmax			
	comp=Z,100nm,1.1s							
UGL				smax	smax			
	comp=N,700nm,5.7s							
UGL				smax	smax			
	comp=E,700nm,5.7s							
UGL				MLR	MLR			
	comp=E,700nm,10.0s							
UGL				MLR	MLR			
	comp=N,1μm,18.0s							
UGL				MLR	MLR			
	comp=Z,1μm,20.0s							
NJ2	**Nanjing**	**22.16**	**289**	*eP*		**P**	**08 51 59.3**	**-0.7**
NJ2				S		**S**	**08 56 05.3**	**+1.8**
NJ2				pmax	pmax			
	comp=Z,11nm,1.3s							
NJ2				pmax	pmax			
	comp=Z,290nm,3.5s							
NJ2				LR	LR			
	comp=Z,440nm,13.3s							
NJ2				LR	LR			
	comp=Z,440nm,13.3s							
NJ2				LR	LR			
	comp=Z,420nm,11.8s							
CN2	**Changchun**	**22.32**	**323**	P		**P**	**08 52 01.8**	**+0.1**
CN2				S		**S**	**08 56 03.3**	**-3.1**
CN2				pmax	pmax			
	comp=Z,10.0nm,1.1s							
CN2				LR	LR			
	comp=Z,500nm,11.0s							
CN2				LR	LR			
	comp=Z,600nm,11.0s							
CN2				LR	LR			
	comp=Z,600nm,13.0s							
H11N2	**WAKE ISLAND Hy**	**22.49**	**104**	T		T	09 15 10.7	
	baz=295							
H11N1	**WAKE ISLAND Hy**	**22.49**	**104**	T		T	09 14 52.5	
	baz=295,slow=74							
H11N3	**WAKE ISLAND Hy**	**22.51**	**104**	T		T	09 15 29.3	
	baz=295,slow=74							
QZH2	**Quanzhou**	**22.62**	**270**	P		**P**	**08 52 05.4**	**+0.3**
QZH2				S		**S**	**08 56 12.5**	**+0.2**
QZH2				pmax	pmax			
	comp=Z,97nm,1.0s							
QZH2				LR	LR			
	comp=Z,540nm,14.0s							
BNX	**BinXian**	**22.76**	**330**	⇓ P		**P**	**08 52 06.4**	**+0.1**
BNX				S		**S**	**08 56 16.4**	**+2.1**
BNX				pmax	pmax			
	comp=Z,35nm,1.3s							
BNX				pmax	pmax			
	comp=Z,360nm,5.3s							
BNX				LR	LR			
	comp=Z,530nm,11.7s							
BNX				LR	LR			
	comp=Z,440nm,16.0s							
BNX				LR	LR			
	comp=Z,510nm,14.3s							
H11S3	**WAKE ISLAND Hy**	**22.82**	**107**	T		T	09 15 17.6	
	baz=294							
H11S1	**WAKE ISLAND Hy**	**22.83**	**107**	T		T	09 15 39.6	
	baz=294							
H11S2	**WAKE ISLAND Hy**	**22.84**	**107**	T		T	09 15 22.6	
	baz=294							
KNMB	**Chin-men Tao**	**22.91**	**269**	P		**P**	**08 52 07.8**	**-0.3**
KNMB				IAmb		IAmb	08 52 11.6	
	comp=Z,73nm,1.0s							
TYV	**Tymovskoe**	**23.85**	**358**	*eP*		**P**	**08 52 16.8**	**-0.4**
TYV				*eS*		**S**	**08 56 33.4**	**+1.2**
TYV				pmax	pmax			
	comp=Z,200nm,4.9s							
TYV				pmax	pmax			
	comp=Z,15nm,1.4s							
TYV				smax	smax			
	comp=N,300nm,5.1s							
TYV				smax	smax			
	comp=E,200nm,5.1s							
KLR	**Kul'dur**	**24.04**	**341**	P		**P**	**08 52 19.5**	**+0.5**
	comp=E,39nm,0.7s,baz=149,slow=7.8,SNR=104							
KLR				LR		LR	09 02 10.7	
	comp=E,54nm,20.6s,baz=154,slow=38							
	comp=E,39nm,0.7s							
KLR	**Kul'dur**	**24.04**	**341**	*ce*	P	**P**	**08 52 19.7**	**+0.7**
KLR				pmax	pmax			
	comp=Z,26nm,1.7s							
TIA	**Tai'an**	**24.34**	**299**	P		**P**	**08 52 20.8**	**-1.2**
TIA				S		**S**	**08 56 38.4**	**-2.1**
TIA				pmax	pmax			
	comp=Z,16nm,1.0s							
TIA				pmax	pmax			
	comp=Z,350nm,4.8s							
TIA				LR	LR			
	comp=Z,380nm,13.3s							
TIA				LR	LR			
	comp=Z,500nm,13.3s							
TIA				LR	LR			
	comp=Z,850nm,14.3s							
GRNR	**Gornyy**	**24.38**	**349**	⇓ *i* P		**P**	**08 52 22.9**	**+0.7**
GRNR				pmax	pmax			
	comp=E,9.0nm,0.9s							
GRNR				pmax	pmax			
	comp=N,20nm,1.1s							
GRNR				pmax	pmax			
	comp=Z,30nm,1.0s							
TGY	**Tagaytay City**	**24.80**	**243**	LR		LR	09 00 25.6	
	comp=Z,400nm,21.9s,baz=112,slow=32							
SKR	**Severo-Kuril's**	**25.50**	**19**	*eP*		**P**	**08 52 35.9**	**+3.7**
SKR				*e*			08 53 18.4	
SKR				*eS*		**S**	**08 57 05.9**	**+7.3**
SKR				*eSS*		**SnSn**	**08 57 57.8**	**+5.9**
S

comp=Z,520nm,14.1s
PEA0B Petropavlovsk- 28.10 18 P **P** **08 52 55.9 +0.2**
PEA0B IAmb IAmb 08 53 39.7
comp=Z,41nm,1.2s
PEA0B Petropavlovsk- 28.10 18 P **P** **08 52 55.9 +0.2**
PEA0B pmax pmax
comp=Z,41nm,1.3s
PETK Petropavlovsk- 28.10 18 P **P** **08 52 55.7 0.0**
comp=Z,3.8nm,0.7s,baz=199,slow=6.4,SNR=11
PETK LR LR 09 02 37.9
comp=Z,178nm,21.9s,baz=193,slow=33
comp=Z,3.8nm,0.7s
PETK Petropavlovsk- 28.10 18 P **P** **08 52 55.9 +0.2**
PETK Petropavlovsk- 28.10 18 P **P** **08 52 55.9 +0.2**
HIA Hailar 28.91 327 P **P** **08 53 02.9 -0.1**
HIA IAmb IAmb 08 53 09.2
comp=Z,26nm,1.1s
HIA Hailar 28.91 327 P **P** **08 53 02.9 -0.1**
HIA pmax pmax
comp=Z,26nm,1.1s
MANU Manus Island 29.09 172 P **P** **08 53 05.2 +0.4**
HILR Hailar Array B 29.10 327 P **P** **08 53 05.1 +0.4**
comp=Z,4.0nm,0.4s,baz=134,slow=13,SNR=9.9
comp=Z,4.0nm,0.4s
ZEA Zeya 29.35 340 *e*P **P** **08 53 07.6 +0.8**
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=N,20nm,0.6s
ZEA pmax pmax
comp=Z,30nm,0.8s
ZEA MLR MLR
comp=N,100nm,11.0s
ZEA MLR MLR
comp=Z,200nm,15.0s
JAY Jayapura 29.48 186 LR LR 09 02 57.9
comp=Z,118nm,20.1s,baz=23,slow=32
HHC Hu-ho-hao-te 29.83 306 *e*P **P** **08 53 11.8 +0.5**
HHC S **S** **08 58 06.0 -1.4**
HHC sS sS 08 58 14.3 +1.1
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,160nm,6.0s
HHC LR LR
comp=Z,240nm,14.5s
HHC LR LR
comp=Z,390nm,14.2s
HHC LR LR
comp=Z,530nm,14.3s
ENH Enshi 30.12 284 P **P** **08 53 12.7 -1.2**
ENH IAmb IAmb 08 53 23.5
comp=Z,47nm,1.1s
SIJI Sorong 30.17 205 LR LR 09 02 55.6
comp=Z,363nm,21.6s,baz=27,slow=32
SIJI Sorong 30.17 205 P **P** **08 53 12.9 -1.5**
XAN Xi'an 30.64 292 P **P** **08 53 17.6 -0.9**
XAN S **S** **08 58 21.5 +1.3**
XAN pmax pmax
comp=Z,34nm,0.6s
XAN pmax pmax
comp=Z,120nm,3.8s
XAN LR LR
comp=Z,500nm,11.5s
XAN LR LR
comp=Z,920nm,13.6s
XAN LR LR
comp=Z,1μm,15.6s
BTO2 Baotou 31.02 305 *e*P **P** **08 53 23.9 +2.0**
BTO2 pP **sP** **08 53 28.4 +1.3**
BTO2 sP **pwP** **08 53 31.0 -3.0**
BTO2 S **S** **08 58 27.8 +1.6**
BTO2 sS **sS** **08 58 35.0 +3.0**
BTO2 pmax pmax
comp=Z,21nm,1.0s
BTO2 pmax pmax
comp=Z,710nm,5.5s
BTO2 LR LR
comp=Z,710nm,14.1s
BTO2 LR LR
comp=Z,660nm,10.0s
BTO2 LR LR
comp=Z,1μm,13.6s
QIZ Qiongzhong 32.05 263 P **P** **08 53 31.4 +0.4**
QIZ S **S** **08 58 44.1 +1.7**
QIZ LR LR
comp=Z,290nm,20.9s
QIZ LR LR
comp=Z,260nm,20.9s
QIZ LR LR
comp=Z,320nm,20.9s
GTOI Gorontalo 32.88 221 P **P** **08 53 36.6 -1.6**
comp=Z,43nm,1.4s
MA2 Magadan 32.94 7 LR LR 09 09 20.1
comp=Z,90nm,18.2s,baz=192,slow=41
MA2 Magadan 32.94 7 P **P** **08 53 37.9 -0.4**
MA2 Magadan 32.94 7*ce*P **P** **08 53 38.6 +0.3**
MA2 pmax pmax
comp=Z,24nm,1.7s
MA2 Magadan 32.94 7 P **P** **08 53 38.0 -0.3**
comp=Z,15nm,1.5s
SANI Sanana 33.53 213 P **P** **08 53 40.9 -3.0**
comp=Z,67nm,0.9s
KRAI Karang Ratu 33.55 208 P **P** **08 53 44.6 +0.5**
comp=Z,5μmcomp=Z,97nm,1.1s
MRSI Marisa 33.63 222 P **P** **08 53 45.2 +0.4**
comp=Z,67nm,1.6s
TOLI2 Tolitoli 33.84 224 P **P** **08 53 46.7 +0.1**
TOLI2 IAmb IAmb 08 54 47.9
comp=Z,26nm,1.1s
SHEM Shemya Is, Ala 34.28 33 LR LR 09 05 21.3
comp=Z,270nm,20.2s,baz=292,slow=32
LZH Lanzhou 34.93 295 *e*P **P** **08 53 56.3 +0.1**
LZH sP sP 08 54 03.4 +2.5
LZH PP **PP** **08 55 17.9 +2.5**
LZH pmax pmax
comp=Z,23nm,1.5s
LZH LR LR
comp=Z,410nm,14.3s
LZH LR LR
comp=Z,510nm,15.2s
LZH LR LR
comp=Z,620nm,15.9s
LZDM Lanzhou Array 35.05 295 P **P** **08 53 56.9 -0.4**
comp=Z,10.0nm,0.7s,baz=131,slow=7.9,SNR=18
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 35.31 316 **P** **08 53 59.2 0.0**
ULN IAmb IAmb 08 54 11.8
comp=Z,44nm,1.4s
ULN Ulaanbaatar 35.31 316*ce*P **P** **08 54 01.4 +2.1**
ULN pmax pmax
comp=Z,23nm,1.3s
ULN Ulaanbaatar 35.31 316 P **P** **08 54 00.5 +1.2**
comp=Z,107nm,1.2s
SONM Songino Array 35.71 316 P **P** **08 54 02.3 -0.3**
comp=Z,11nm,1.0s,baz=121,slow=7.6,SNR=31
SONM PcP **PcP** **08 56 30.7 0.0**
comp=Z,4.8nm,1.0s,baz=118,slow=3.4,SNR=5.4
SONM LR LR 09 09 09.2
comp=Z,96nm,18.1s,baz=94,slow=37
comp=Z,11nm,1.0s
SONM Songino Array 35.71 316 **P** **08 54 03.6 +0.9**
YAK Yakutsk 36.26 349 P **P** **08 54 07.2 +0.2**
YAK IAmb IAmb 08 54 07.9
comp=Z,58nm,1.2s
YAK Yakutsk 36.26 349 *e*P **P** **08 54 06.7 -0.3**
YAK *e**PP **pP** **08 54 09.8 -0.6**
YAK *e* 08 55 25.1
YAK *e* 08 56 28.5
YAK *e*S **S** **08 59 47.7 +1.3**
YAK *e**SS **sS** **08 59 52.1 -0.3**
YAK *e*SS **SnSn** **09 02 09.4 -3.9**
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=N,17nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=Z,136nm,4.0s
YAK pmax pmax
comp=E,99nm,3.8s
YAK smax smax
comp=N,40nm,2.3s
YAK smax smax
comp=E,39nm,2.5s

PMG Port Moresby 36.34 174 P **P** **08 54 08.4 +0.3**
PMG Port Moresby 36.34 174*ce*P **P** **08 54 09.2 +1.1**
PMG pmax pmax
comp=Z,20nm,1.3s
PMG Port Moresby 36.34 174 P **P** **08 54 07.4 -0.7**
comp=Z,19nm,0.8s
SEY Seymchan 36.40 7*ce*P **P** **08 54 08.8 +0.7**
SEY pmax pmax
comp=Z,16nm,0.9s
KMI2 Kunming 36.70 277 P **P** **08 54 11.4 -0.1**
KMI2 sP sP 08 54 18.3 +2.1
KMI2 S **S** **08 59 51.6 -2.8**
KMI2 pmax pmax
comp=Z,23nm,1.1s
KMI2 LR LR
comp=Z,280nm,16.2s
KMI2 LR LR
comp=Z,350nm,15.7s
KMI2 LR LR
comp=Z,270nm,27.5s
PZH PanZhiHua 37.32 279 P **P** **08 54 16.3 -0.4**
PZH S **S** **09 00 00.5 -3.3**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH LR LR
comp=Z,220nm,9.4s
PZH LR LR
comp=Z,300nm,16.0s
PZH LR LR
comp=Z,310nm,14.5s
KKSI Kolaka, Sulawe 37.59 218 P **P** **08 54 19.3 +0.5**
GTA2 Gaotai 38.43 300 *e*P **P** **08 54 25.3 -0.6**
GTA2 S **S** **09 00 17.3 -3.0**
GTA2 pmax pmax
comp=Z,5.0nm,1.1s
GTA2 LR LR
comp=Z,260nm,14.2s
GTA2 LR LR
comp=Z,350nm,14.2s
GTA2 LR LR
comp=Z,610nm,14.5s
SPSI Sidrap Palu 38.48 221 P **P** **08 54 25.8 -0.5**
comp=Z,2μmcomp=Z,46nm,1.0s
ZAK Zakamensk 38.56 318 *e*P **P** **08 54 27.2 +0.4**
ZAK pmax pmax
comp=Z,38nm,1.5s
IRK Irkutsk 38.74 321 *e*P **P** **08 54 29.4 +1.2**
IRK pmax pmax
comp=Z,30nm,1.4s
TLY Talaya 38.86 320 LR LR 09 10 04.8
comp=Z,121nm,18.1s,baz=122,slow=36
TLY Talaya 38.86 320 **P** **08 54 29.5 +0.3**
TLY Talaya 38.86 320*ce*P **P** **08 54 31.2 +2.0**
TLY pmax pmax
comp=Z,20nm,1.3s
KAPI Kappang 39.34 220 LR LR 09 10 17.6
comp=Z,73nm,21.0s,baz=39,slow=35
ATKA Atka Island 40.26 40 P **P** **08 54 40.4 -0.4**
ATKA IAmb IAmb 08 55 50.0
comp=Z,109nm,1.4s
MOY Mondy 40.38 319 *e*P **P** **08 54 43.0 +1.0**
MOY pmax pmax
comp=Z,20nm,2.4s
TNCH TengChong 40.46 278 P **P** **08 54 43.3 +0.2**
TNCH pP pP 08 54 46.4 -0.2
TNCH sP sP 08 54 48.1 +0.2
TNCH S **S** **09 00 43.3 -8.0**
TNCH pmax pmax
comp=Z,36nm,0.9s
TNCH pmax pmax
comp=Z,160nm,3.9s
TNCH LR LR
comp=Z,1μm,21.1s
TNCH LR LR
comp=Z,510nm,19.4s
TNCH LR LR
comp=Z,570nm,16.4s
COEN Coen 40.71 181 P **P** **08 54 45.8 +1.0**
comp=Z,23nm,1.1s
COEN Coen 40.71 181 P **P** **08 54 44.7 -0.2**
COEN IAmb IAmb 08 55 30.5
comp=Z,72nm,1.6s
SOEI Soe 41.10 210 **P** **08 54 48.4 +0.2**
SOEI IAmb IAmb 08 55 10.7
comp=Z,60nm,0.8s
SOEI Soe 41.10 210 P **P** **08 54 47.9 -0.3**
comp=Z,81nm,0.9s
MTN Manton Dam 41.43 199 P **P** **08 54 51.2 +0.4**
comp=Z,32nm,1.5s
MTN Manton Dam 41.43 199 **P** **08 54 50.0 -0.8**
MTN IAmb IAmb 08 54 52.7
comp=Z,51nm,1.1s
EDFI Ende, Flores 41.44 214 P **P** **08 54 50.6 -0.4**
comp=Z,1μmcomp=Z,80nm,1.3s
BATI Baumata 41.77 210 LR LR 09 10 28.6
comp=Z,185nm,19.5s,baz=54,slow=34
BATI Baumata 41.77 210 P **P** **08 54 54.2 +0.6**
comp=Z,85nm,1.2s
CHTO Chiang Mai 41.82 268 **P** **08 54 53.8 -0.3**
CHTO Chiang Mai 41.82 268 P **P** **08 54 53.8 -0.3**
CHTO pmax pmax
comp=Z,13nm,0.8s
CHTO Chiang Mai 41.82 268 P **P** **08 54 53.9 -0.3**
comp=Z,17nm,0.7s
CM31 Chiang Mai Arr 41.94 268 P **P** **08 54 55.9 +0.8**
CMAR Chiang Mai Arr 41.94 268 P **P** **08 54 55.2 +0.1**
comp=Z,3.1nm,0.4s,baz=68,slow=5.7,SNR=17
CMAR PcP **PcP** **08 56 51.1 +0.6**
comp=Z,1.2nm,0.3s,baz=346,slow=1.0,SNR=4.9
CMAR LR LR 09 11 52.2
comp=Z,94nm,21.7s,baz=80,slow=36
comp=Z,3.1nm,0.4s
CMAR Chiang Mai Arr 41.94 268 **P** **08 54 54.8 -0.3**
KNGR Kungurtug, Tuv 42.12 317 *i*P **P** **08 54 57.2 +0.9**
KNGR pmax pmax
comp=Z,10.0nm,0.8s
GOMU GeErMu 42.24 295 P **P** **08 54 56.9 -0.9**
GOMU pmax pmax
comp=Z,38nm,1.0s
BILL Bilibino 43.27 12 **P** **08 55 04.9 -0.3**
BILL Bilibino 43.27 12*ce*P **P** **08 55 05.2 0.0**
BILL pmax pmax
comp=Z,44nm,1.7s
NIKH Nikolski High 43.59 40 P **P** **08 55 07.3 -0.7**
baz=252
KLNI Mataram 44.21 221 P **P** **08 55 12.8 -0.6**
comp=Z,72nm,0.9s
SPIA Saint Paul Isl 44.30 34 P **P** **08 55 13.1 -0.5**
baz=247
P08K Saint George I 44.43 35 P **P** **08 55 14.4 -0.3**
baz=248
KHKI Kahang-Kahang 44.45 222 P **P** **08 55 15.7 +0.4**
comp=Z,89nm,1.2s
KNRA Kununurra 44.82 201 P **P** **08 55 19.9 +1.8**
KNRA Kununurra 44.82 201 **P** **08 55 18.2 0.0**
KNRA IAmb IAmb 08 55 20.6
comp=Z,44nm,1.4s
MTSU Mount Surprise 44.86 179 P **P** **08 55 19.4 +0.9**
comp=Z,19nm,0.8s
UNV Unalaska Valle 45.19 40 P **P** **08 55 19.6 -1.2**
UNV Unalaska Valle 45.19 40 P **P** **08 55 19.6 -1.2**
baz=254
TIXI Tiksi 45.46 353 **P** **08 55 22.9 +0.3**
TIXI IAmb IAmb 08 55 23.5
comp=Z,20nm,0.7s
TIXI Tiksi 45.46 353 P **P** **08 55 22.9 +0.3**
TIXI pmax pmax
comp=Z,20nm,0.7s
AKUT Akutan 45.69 39 P **P** **08 55 24.1 -0.6**
SHL Shillong 46.19 280 P **P** **08 55 28.6 -0.7**
SHL IAmb IAmb 08 55 46.6
comp=Z,23nm,1.1s
SHL Shillong 46.19 280 P **P** **08 55 28.6 -0.7**
SHL pmax pmax
comp=Z,23nm,1.1s
SNJI Sawahan-Nganju 46.38 226 P **P** **08 55 29.9 -1.0**
GAMB Gambell 46.64 25 **P** **08 55 32.4 +0.3**
GAMB IAmb IAmb 08 55 33.5
comp=Z,24nm,0.9s
GAMB Gambell 46.64 25 P **P** **08 55 32.3 +0.3**
baz=240,SNR=22
CTA Charters Tower 46.87 177 LR LR 09 14 45.4
comp=Z,63nm,19.6s,baz=24,slow=36
CTAO Charters Tower 46.87 177 P **P** **08 55 33.5 -0.8**
CTAO IAmb IAmb 08 55 36.2
comp=Z,21nm,0.9s

CTAO Charters Tower 46.87 177 P **P** **08 55 33.5 -0.8**
CTAO pmax pmax
comp=Z,21nm,1.0s
BRDH Bariadhala 47.15 277 LR LR 09 15 45.4
comp=Z,170nm,20.6s,baz=340,slow=36
FALS False Pass 47.20 39 P **P** **08 55 36.3 -0.3**
baz=256
UGM Wanagama 47.29 227 P **P** **08 55 37.1 -0.7**
WB0 Warramunga Arr 47.34 192 **P** **08 55 37.8 -0.3**
QIS Mount Isa 47.43 185 P **P** **08 55 38.5 -0.3**
comp=Z,19nm,1.1s
M11K Mekoryuk 47.47 31 **P** **08 55 38.6 0.0**
M11K IAmb IAmb 08 55 40.1
comp=Z,16nm,0.9s
M11K Mekoryuk 47.47 31 P **P** **08 55 39.2 +0.6**
baz=248,SNR=5.5
WRAB Tennant Creek 47.52 192 P **P** **08 55 39.0 -0.4**
WRAB Tennant Creek 47.52 192*ce*P **P** **08 55 40.2 +0.8**
WRAB pmax pmax
comp=Z,134nm,1.7s
WRA Warramunga Arr 47.53 192 P **P** **08 55 38.8 -0.7**
comp=Z,35nm,0.8s,baz=11,slow=8.5,SNR=88
comp=Z,35nm,0.8s
WRA Warramunga Arr 47.53 192 **P** **08 55 39.4 -0.1**
WRA Warramunga Arr 47.53 192 P **P** **08 55 39.4 -0.1**
WRA pmax pmax
comp=Z,4.0nm,1.1s
WMQ Urumqi 47.71 306 *e*P **P** **08 55 41.9 +1.0**
WMQ sP pwP 08 55 51.1 -2.0
WMQ pmax pmax
comp=Z,14nm,1.3s
KPJI Karang Pucung 47.93 230 P **P** **08 55 41.6 -1.1**
comp=Z,101nm,1.1s
DGZ Jazzator, Alta 48.29 314 *i*P **P** **08 55 46.3 +0.9**
DGZ pmax pmax
comp=Z,44nm,1.0s
LEM Lembang 48.47 231 LR LR 09 16 48.6
comp=Z,40nm,20.9s,baz=316,slow=37
K13K Kusilvak Mount 48.74 30 P **P** **08 55 48.4 0.0**
K13K Kusilvak Mount 48.74 30 P **P** **08 55 48.9 +0.5**
baz=249,SNR=19
M13K Dall Lake 48.81 32 P **P** **08 55 49.4 +0.4**
M13K Dall Lake 48.81 32 P **P** **08 55 49.5 +0.5**
baz=251,SNR=7.8
BBJI Bungbulang 48.90 231 P **P** **08 55 48.0 -2.3**
comp=Z,21nm,0.7s
TNA Tin City 48.93 24 **P** **08 55 49.9 +0.1**
TNA Tin City 48.93 24 P **P** **08 55 50.3 +0.5**
baz=242,SNR=36
SDPT Sand Point 48.95 39 P **P** **08 55 48.9 -1.2**
baz=258
KLSI 49.08 236 P **P** **08 55 50.1 -1.5**
PSI Prapat 49.09 249 P **P** **08 55 51.5 -0.4**
PSI pmax pmax
comp=Z,13nm,0.5s
PSI Prapat 49.09 249 P **P** **08 55 50.9 -1.0**
comp=Z,18nm,0.9s
RPSI Rantau Prapat 49.15 248 **P** **08 55 51.5 -0.6**
RPSI IAmb IAmb 08 55 52.9
comp=Z,13nm,0.5s
MDSI Maura Dua 49.35 237 P **P** **08 55 51.9 -1.8**
comp=Z,45nm,1.3s
CHNA Chernabura Isl 49.36 40 P **P** **08 55 52.4 -0.8**
baz=260
L14K Kuka Creek 49.42 31 P **P** **08 55 53.6 +0.1**
baz=251
N14K Kuskokwak Cree 49.45 33 P **P** **08 55 54.1 +0.3**
N14K Kuskokwak Cree 49.45 33 P **P** **08 55 54.2 +0.3**
baz=253,SNR=7.4
ANM Nome 49.46 26 **P** **08 55 54.0 +0.1**
ANM Nome 49.46 26 P **P** **08 55 54.0 +0.1**
ANM pmax pmax
comp=Z,41nm,0.9s
ANM Nome 49.46 26 P **P** **08 55 54.4 +0.5**
baz=246,SNR=48
O14K Tigyukauivet M 49.47 34 P **P** **08 55 54.0 0.0**
O14K IAmb IAmb 08 55 54.8
comp=Z,24nm,0.8s
O14K Tigyukauivet M 49.47 34 P **P** **08 55 54.1 +0.1**
baz=254
F14K Arctic Creek 49.48 25 P **P** **08 55 55.0 +0.9**
baz=244,SNR=86
J14K Nanvaranak Lak 49.51 29 P **P** **08 55 54.5 +0.2**
J14K Nanvaranak Lak 49.51 29 P **P** **08 55 54.6 +0.4**
baz=249
M14K Bethel 49.57 32 P **P** **08 55 55.2 +0.5**
baz=252,SNR=18
ZSN Zaisan 49.82 311 *e*P **P** **08 55 58.4 +1.5**
ZSN pmax pmax
comp=Z,8.0nm,0.9s
ZSN Zaisan 49.82 311 *e*P **P** **08 55 58.4 +1.5**
comp=Z,7.8nm,0.9s
L15K Ungalak Mounta 50.07 31 P **P** **08 55 58.5 0.0**
baz=252,SNR=8.0
M15K Kasigluk River 50.15 32 P **P** **08 55 59.2 0.0**
baz=254,SNR=15
G15K Niukluk 50.16 26 P **P** **08 55 59.7 +0.5**
baz=247,SNR=46
O15K Ungalikthiuk R 50.17 34 P **P** **08 55 59.4 +0.1**
baz=256,SNR=9.3
F15K North Star Dk 50.22 25 P **P** **08 56 00.4 +0.7**
baz=246,SNR=44
K15K Wolf Creek Mou 50.24 30 P **P** **08 56 00.3 +0.4**
baz=252,SNR=12
N15K Kwethluk River 50.29 33 P **P** **08 56 00.7 +0.4**
baz=255
ZALV Zalesovo Beam 50.44 319 P **P** **08 56 01.2 -0.2**
comp=Z,6.2nm,0.7s,baz=106,slow=5.3,SNR=20
ZALV PcP **PcP** **08 57 18.9 -0.7**
comp=Z,6.0nm,0.5s,baz=115,slow=3.9,SNR=9.5
ZALV LR LR 09 16 35.1
comp=Z,45nm,19.9s,baz=48,slow=35
comp=Z,6.2nm,0.7s
ZALV Zalesovo Beam 50.44 319 **P** **08 56 01.1 -0.3**
H16K Elim 50.74 27 P **P** **08 56 03.7 +0.1**
baz=249,SNR=62
J16K Anvik River 50.96 29 P **P** **08 56 05.9 +0.6**
baz=252
G16K Koyuk River 50.97 26 P **P** **08 56 05.5 +0.2**
baz=248
R16K Pilot Point 50.97 36 P **P** **08 56 05.3 -0.1**
baz=259
L16K Owhat River 51.00 31 P **P** **08 56 05.6 +0.1**
L16K Owhat River 51.00 31 P **P** **08 56 05.5 -0.1**
baz=254,SNR=5.6
N16K Nishlik Lake 51.00 33 P **P** **08 56 06.1 +0.4**
baz=256,SNR=21
M16K Timber Creek 51.05 32 P **P** **08 56 06.2 +0.2**
baz=255,SNR=5.4
P16K Nushagak River 51.05 34 P **P** **08 56 06.5 +0.5**
baz=258,SNR=13
C16K Lisburne Hills 51.09 22 P **P** **08 56 06.3 +0.1**
baz=243,SNR=67
I17K Unalakleet 51.12 28 P **P** **08 56 07.0 +0.6**
baz=251
O16K Kokwok River B 51.12 34 P **P** **08 56 06.8 +0.2**
baz=257,SNR=6.1
AS31 Alice Springs 51.24 192 **P** **08 56 06.8 -1.0**
ASAR Alice Springs 51.24 192 P **P** **08 56 06.8 -1.1**
comp=Z,2.5nm,0.7s,baz=8.2,slow=6.4,SNR=29
ASAR PcP **PcP** **08 57 22.4 -0.6**
comp=Z,2.2nm,0.8s,baz=4.6,slow=3.9,SNR=4.2
ASAR LR LR 09 16 44.1
comp=Z,90nm,21.3s,baz=326,slow=35
comp=Z,2.5nm,0.7s
ASAR Alice Springs 51.24 192 **P** **08 56 07.2 -0.6**
MK31 Makanchi Array 51.56 310*ce*P **P** **08 56 11.3 +1.2**
MKAR Makanchi Array 51.56 310 P **P** **08 56 10.7 +0.6**
comp=Z,6.3nm,0.6s,baz=89,slow=8.9,SNR=25
MKAR PcP **PcP** **08 57 23.6 -0.4**
comp=Z,4.2nm,0.8s,baz=78,slow=6.3,SNR=4.2
MKAR ScP **ScP** **09 01 19.9 0.0**
comp=Z,0.7nm,0.8s,baz=83,slow=6.1,SNR=3.3
MKAR LR LR 09 19 20.0
comp=Z,131nm,18.2s,baz=76,slow=38
comp=Z,6.3nm,0.6s
MKAR Makanchi Array 51.56 310 **P** **08 56 10.2 +0.1**
D17K Noatak River 51.61 23 P **P** **08 56 10.6 +0.6**
baz=246,SNR=60
R17L Mt. Peulik Vol 51.63 36 P **P** **08 56 10.5 +0.1**
baz=260
L17K Donlin 51.65 31 P **P** **08 56 11.1 +0.7**
baz=255,SNR=10
J17K VABM Dome 51.65 29 P **P** **08 56 11.2 +0.7**
baz=253
O17K Koliganek Bris 51.66 34 P **P** **08 56 10.6 +0.1**
baz=258,SNR=10

Q16K	**King Salmon** baz=259	51.66	35	P		P	08 56 10.0	-0.5
G17K	**Kiwalik Mounta** baz=250,SNR=32	51.67	26	P		P	08 56 11.1	+0.5
CHIR	**Chirikof Islan** baz=262	51.75	39	P		P	08 56 11.1	-0.2
MAKZ	**Makanchi**	51.78	310			P	08 56 11.5	-0.2
MAKZ	comp=Z,19nm,1.1s			IAmb		IAmb	08 56 14.7	
MAKZ	**Makanchi**	51.78	310	P		P	08 56 11.5	-0.2
MAKZ	comp=Z,19nm,1.2s			pmax		pmax		
N17K	**Nushagak Hills** baz=257,SNR=9.2	51.78	33	P		P	08 56 11.9	+0.4
F17K	**Baldwin Pennin** baz=249	51.78	25	P		P	08 56 12.0	+0.7
H17K	**Granite Mounta** baz=251,SNR=27	51.78	27	P		P	08 56 11.9	+0.5
K17K	**Iditarod** baz=254,SNR=18	51.80	30	P		P	08 56 12.4	+0.9
E17K	**Hotham Inlet** baz=248	51.81	24	P		P	08 56 12.1	+0.5
RDOG	**Red Dog Mine** baz=246,SNR=10	51.81	23	P		P	08 56 12.0	+0.4
M17K	**Holitna River** baz=256,SNR=10	51.86	32	P		P	08 56 12.7	+0.6
P17K	**Kvichak River** baz=259,SNR=7.9	51.87	34	P		P	08 56 12.2	+0.1
C17K	**DeLong Mountai** baz=245	51.90	22	P		P	08 56 12.8	+0.5
ACHA	**Angle Creek He**	52.27	36	P		P	08 56 14.4	-0.8
E18K	**Tukpahlearik C** baz=249,SNR=91	52.38	24	P		P	08 56 16.5	+0.7
F18K	**Selawik** baz=250,SNR=39	52.44	25	P		P	08 56 16.5	+0.3
N18K	**Kilae Creek** baz=258,SNR=5.5	52.44	33	P		P	08 56 16.9	+0.5
H18K	**Honhosa River** baz=252	52.47	27	P		P	08 56 16.7	+0.1
P18K	**Big Mountain,** baz=260	52.52	34	P		P	08 56 17.6	+0.6
G18K	**Tagagawik** baz=252,SNR=31	52.59	26	P		P	08 56 17.5	+0.1
O18K	**Koktuh Hills** baz=260,SNR=7.7	52.61	34	P		P	08 56 18.0	+0.4
C18K	**Utukok River** baz=247,SNR=28	52.63	22	P		P	08 56 17.9	+0.1
M18K	**Stony River** baz=258	52.64	32	P		P	08 56 18.3	+0.5
J18K	**Innoko River** baz=255,SNR=5.2	52.69	29	P		P	08 56 18.1	-0.1
GCSA	**Galena City Sc** baz=254,SNR=5.5	52.96	28	P		P	08 56 19.8	-0.4
O19K	**Port Alsworth** baz=260,SNR=12	53.11	33	P		P	08 56 21.5	+0.2
N19K	**Bonanza Creek** baz=260,SNR=8.9	53.14	33	P		P	08 56 21.9	+0.2
MBWA	**Marble Bar** comp=Z,23nm,1.6s	53.19	208	P		P	08 56 22.3	0.0
OHAK	**Old Harbor** baz=263	53.21	37	P		P	08 56 21.5	-0.6
F19K	**Shaleruckik Mo** baz=252	53.22	25	P		P	08 56 21.7	-0.3
L19K	**White Mountain** baz=255,SNR=7.9	53.23	31	P		P	08 56 22.4	+0.1
QLP	**Quilpie** comp=Z,47nm,1.4s	53.27	179	P		P	08 56 23.6	+0.8
G19K	**Purcell Mounta** baz=253,SNR=13	53.27	26	P		P	08 56 22.3	-0.1
J19K	**Poorman** baz=256,SNR=22	53.30	29	P		P	08 56 22.8	+0.1
C19K	**Lookout Ridge** baz=248,SNR=64	53.35	22	P		P	08 56 23.7	+0.7
M19K	**Big River Lodg** baz=259	53.39	31	P		P	08 56 23.2	-0.2
PSAC2	**Pilbara Seismi** comp=Z,25nm,1.6s	53.47	208	P		P	08 56 26.0	+1.6
PSAC1	**Pilbara Seismi**	53.49	208	P		P	08 56 26.3	+1.8
PSA00	**Pilbara Seismi**	53.51	208	P		P	08 56 26.6	+2.0
PSA00	**Pilbara Seismi**	53.51	208	P		P	08 56 25.4	+0.7
PSA00	comp=Z,14nm,0.9s			IAmb		IAmb	08 56 26.9	
PSAB3	**Pilbara Seismi**	53.52	208	P		P	08 56 26.5	+1.7
P19K	**Oil Pt** baz=262	53.56	34	P		P	08 56 24.3	-0.4
E19K	**Redstone River** baz=252,SNR=34	53.61	24	P		P	08 56 25.3	+0.3
D19K	**Kuna River** baz=250	53.63	23	P		P	08 56 25.1	0.0
KDAK	**Kodiak Island** comp=Z,54nm,18.4s,baz=236,slow=39	53.65	37	LR		LR	09 21 41.1	
KDAK	**Kodiak Island** baz=264	53.65	37	P		P	08 56 24.8	-0.6
SHLS	**Shalkode**	53.72	305	*e*P		P	08 56 25.0	-1.2
SHLS	**Shalkode**	53.72	305	*e*P		P	08 56 25.0	-1.2
WRKA	**Warakurna** comp=Z,9.7nm,1.5s	53.81	197	P		P	08 56 27.1	+0.2
K20K	**Telida** baz=258,SNR=35	53.83	30	P		P	08 56 27.4	+0.8
Q20K	**Shuyak Island** baz=263	53.85	36	P		P	08 56 25.7	-1.1
H20K	**Anotleneega Mo** baz=256	53.97	27	P		P	08 56 28.0	+0.4
M20K	**Styx River** baz=260	53.97	32	P		P	08 56 28.0	+0.3
KURK	**Kurchatov**	54.00	315			P	08 56 28.1	+0.1
KURK	**Kurchatov**	54.00	315	P		P	08 56 28.9	+0.9
UZB	**Uzynbulak**	54.04	305	*e*P		P	08 56 29.6	+1.0
UZB	comp=Z,8.0nm,1.0s			pmax		pmax		
UZB	**Uzynbulak** comp=Z,7.7nm,1.0s	54.04	305	*e*P		P	08 56 29.6	+1.0
F20K	**Avaraart Lake** baz=254	54.05	25	P		P	08 56 28.4	+0.3
KURBB	**Kurchatov Arra** comp=Z,16nm,0.8s,baz=91,slow=7.5,SNR=42	54.06	314	P		P	08 56 28.9	+0.4
KURBB	comp=Z,1.0nm,0.4s,baz=72,slow=9.1,SNR=4.7			P4KP			09 35 46.2	
D20K	comp=Z,16nm,0.8s **Etivluk River** baz=252	54.23	23	P		P	08 56 29.7	+0.2
E20K	**Nigu River** baz=252,SNR=43	54.23	23	P		P	08 56 29.7	+0.1
SPCR	**Spurr Chakacha** baz=261,SNR=8.2	54.30	32	P		P	08 56 30.3	+0.2
TDK	**Taldyqorghan**	54.34	308	*e*P		P	08 56 31.7	+1.1
TDK	comp=Z,6.0nm,0.5s			pmax		pmax		
TDK	**Taldyqorghan** comp=Z,6.2nm,0.5s	54.34	308	*e*P		P	08 56 31.8	+1.1
INKA	**Innaminka**	54.49	183			P	08 56 31.9	+0.1
INKA	comp=Z,29nm,1.7s			IAmb		IAmb	08 56 33.3	
SATY	**Saty**	54.49	305	*e*P		P	08 56 33.0	+1.1
SATY	**Saty**	54.49	305	*e*P		P	08 56 33.1	+1.1
IMAR	**Indian Mountai**	54.54	26	P		P	08 56 31.9	+0.2
PPLA	**Purkeypile** baz=260	54.58	30	P		P	08 56 32.6	+0.4
CHUM	**Lake Minchumin** baz=259	54.70	29	P		P	08 56 33.4	+0.5
SKT	**Skwentna** baz=261,SNR=7.8	54.73	32	P		P	08 56 32.6	-0.6
G21K	**Allakaket** baz=256,SNR=36	54.76	26	P		P	08 56 33.7	+0.4
BRSE	**Bradley Lake S** baz=264	54.83	34	P		P	08 56 33.1	-0.9
H21K	**Melozitna Rive** baz=258,SNR=28	54.85	27	P		P	08 56 34.7	+0.7
F21K	**Alatna River** baz=256	54.94	25	P		P	08 56 34.6	0.0
C21K	**Knifeblade Rid** baz=253	54.99	23	P		P	08 56 35.5	+0.6
SUA	**Susitna One** baz=262,SNR=6.9	55.03	32	P		P	08 56 34.7	-0.8
E21K	**Killik River** baz=255	55.08	24	P		P	08 56 35.7	+0.1
A21K	**Barrow** baz=250,SNR=6.4	55.08	20	P		P	08 56 36.0	+0.4
I21K	**Tanana** baz=259,SNR=25	55.09	28	P		P	08 56 36.2	+0.5
BPAW	**Bear Paw Mtn.** baz=260,SNR=10.0	55.31	29	P		P	08 56 37.4	0.0
M22K	**Willow** baz=263	55.37	32	P		P	08 56 36.6	-1.0
CUT	**Chulitna** baz=262	55.38	31	P		P	08 56 36.9	-0.9
RC01	**Rabbit Creek A** baz=264	55.47	33	P		P	08 56 37.7	-0.8
H22K	**Ishtalitna Cre** baz=259,SNR=16	55.47	27	P		P	08 56 39.0	+0.5
MDOK	**Medeo**	55.47	305	*e*P		P	08 56 40.1	+1.1
MDOK	**Medeo**	55.47	305	*e*P		P	08 56 40.2	+1.1
SEW	**Seward** baz=265	55.51	34	P		P	08 56 38.0	-0.7
TRF	**Thorofare Moun** baz=262,SNR=14	55.52	30	P		P	08 56 38.5	-0.6
TNSS	**Tian-Shan**	55.56	305	*e*P		P	08 56 40.8	+0.8
TNSS	**Tian-Shan**	55.56	305	*e*P		P	08 56 40.8	+0.8
D22K	**Ayikyak River** baz=256	55.65	23	P		P	08 56 40.6	+0.9
E22K	**Anaktuvuk Pass** baz=257,SNR=46	55.78	24	P		P	08 56 41.2	+0.5
PMR	**Palmer** baz=264,SNR=12	55.82	32	P		P	08 56 40.0	-0.9
KNK	**Knik Glacier** baz=265,SNR=8.8	56.12	32	P		P	08 56 42.5	-0.7
MCK	**McKinley** baz=263,SNR=15	56.16	30	P		P	08 56 42.6	-0.8
G23K	**Bananza Creek** baz=260,SNR=66	56.16	26	P		P	08 56 44.1	+0.6
I23K	**Minto, Yukon-K** baz=261,SNR=15	56.17	28	P		P	08 56 43.6	+0.2
COLD	**Coldfoot** baz=259,SNR=47	56.19	25	P		P	08 56 44.4	+0.8
NEA2	**Nenana** baz=262,SNR=25	56.21	29	P		P	08 56 43.6	-0.2
SML	**Sawmill** baz=264,SNR=7.6	56.22	32	P		P	08 56 43.2	-0.7
WAT1	**Susitna Watana** baz=264	56.22	31	P		P	08 56 43.2	-0.7
D23K	**Nanushuk River** baz=258,SNR=55	56.37	23	P		P	08 56 45.9	+1.1
M23K	**Glacier View** baz=265,SNR=6.3	56.50	32	P		P	08 56 45.2	-0.7
P23K	**Montague Islan** baz=266	56.53	34	P		P	08 56 46.2	+0.1
WAT6	**Susitna Watana** baz=264,SNR=17	56.57	31	P		P	08 56 45.9	-0.6
E23K	**Chandalar** baz=259,SNR=49	56.57	24	P		P	08 56 47.3	+0.9
SCM	**Sheep Creek Mo** baz=265,SNR=19	56.69	32	P		P	08 56 47.1	-0.2
TOLK	**Toolik Lake Re** baz=259,SNR=20	56.70	24	P		P	08 56 47.8	+0.6
COLA	**College**	56.77	28	*i* P		P	08 56 47.7	0.0
COLA	comp=Z,8.0nm,0.8s			pmax		pmax		
COLA	**College** baz=263	56.77	28	P		P	08 56 47.5	-0.2
DHY	**Denali Highway** baz=264	56.78	31	P		P	08 56 47.6	-0.4
H24K	**Noodor Dome** baz=262,SNR=13	56.88	27	P		P	08 56 48.9	+0.3
POKR	**Poker Flat Res** baz=263,SNR=8.8	56.98	28	P		P	08 56 48.8	-0.5
E24K	**Your Creek** baz=260	56.99	25	P		P	08 56 50.1	+0.8
D24K	**Happy Valley** baz=259	57.06	23	P		P	08 56 50.6	+0.9
HDA	**Harding Lake** baz=264,SNR=10	57.10	29	P		P	08 56 48.7	-1.4
KSH2	**Kashi**	57.14	301	P		P	08 56 52.6	+1.6
KSH2				sP		pwP	08 57 01.0	-2.4
KSH2	comp=Z,6.0nm,0.7s			pmax		pmax		
G24K	**Hadweenzic Riv** baz=262	57.16	26	P		P	08 56 51.4	+0.8
ILAR	**Eielson Array** comp=Z,19nm,0.9s,baz=261,slow=5.9,SNR=171	57.17	29	P		P	08 56 49.2	-1.3
ILAR	comp=Z,4.0nm,0.7s,baz=275,slow=3.4,SNR=6.7			PcP		PcP	08 57 44.0	-1.0
ILAR	comp=Z,84nm,19.2s,baz=257,slow=36			LR		LR	09 21 47.7	
C24K	comp=Z,19nm,0.9s **Franklin Bluff** baz=259	57.21	23	P		P	08 56 51.4	+0.7
M24K	**Tolsona, Glenn** baz=266	57.26	32	P		P	08 56 51.3	0.0
KLU	**Klutina** baz=267,SNR=16	57.34	32	P		P	08 56 51.9	0.0
EYAK	**Cordova Ski Ar** baz=268	57.38	34	P		P	08 56 52.0	-0.1
AAK	**Ala-Archa** comp=Z,90nm,18.1s,baz=48,slow=39	57.40	305	LR		LR	09 24 15.1	
AAK	**Ala-Archa**	57.40	305	*ce*P		P	08 56 54.4	+1.6
AAK	comp=Z,9.0nm,1.3s			pmax		pmax		
K24K	**Donnelly Dome** baz=266	57.56	30	P		P	08 56 53.1	-0.3
ARMA	**Armidale**	57.59	172	P		P	08 56 56.0	+2.0
ARMA	**Armidale**	57.59	172			P	08 56 53.9	-0.1
ARMA	comp=Z,30nm,1.2s			IAmb		IAmb	08 56 56.7	
PAX	**Paxson** baz=266,SNR=16	57.64	31	P		P	08 56 53.8	-0.2
HARP	**HAARP** baz=267	57.75	31	P		P	08 56 54.8	+0.1
J25K	**Salcha River,** baz=265,SNR=8.5	57.80	29	P		P	08 56 53.8	-1.4
PRP	**Porcupine Dome** baz=265,SNR=7.9	57.82	28	P		P	08 56 54.2	-1.1
D25K	**Kavik River** baz=262,SNR=36	57.95	23	P		P	08 56 56.7	+0.6
BMRM	**Bremner River** baz=268,SNR=8.1	57.95	33	P		P	08 56 56.3	0.0
RIDG	**Independent Ri** baz=266,SNR=10	57.97	30	P		P	08 56 55.7	-0.6
N25K	**Chitina, Valde** baz=268	57.98	32	P		P	08 56 56.4	0.0
F25K	**Christian Rive** baz=263,SNR=58	57.99	25	P		P	08 56 57.7	+1.3
KAIM	**Kayak Island** baz=269	58.02	34	P		P	08 56 57.2	+0.5
E25K	**Arctic Village** baz=263,SNR=46	58.08	25	P		P	08 56 58.2	+1.2
CMSA	**Cobar Meteorol** comp=Z,20nm,1.3s	58.23	178	P		P	08 56 58.5	+0.2
SCRK	**Sand Creek** baz=267,SNR=40	58.36	30	P		P	08 56 58.7	-0.5
C26K	**Camden Bay** baz=262	58.54	23	P		P	08 57 01.6	+1.5
F26K	**Sheenjek River** baz=265	58.57	25	P		P	08 57 01.6	+1.2
STKA	**Stephens Creek** comp=Z,69nm,0.8s	58.58	182	P		P	08 57 00.2	-0.5
STKA	**Stephens Creek** comp=Z,8.6nm,0.7s,baz=334,slow=7.9,SNR=20	58.58	182	P		P	08 56 59.5	-1.2
STKA	comp=Z,54nm,21.2s,baz=24,slow=35			LR		LR	09 21 16.6	
L26K	comp=Z,8.6nm,0.7s **Log Cabin Wild** baz=268,SNR=13	58.61	31	P		P	08 57 01.0	+0.3
G26K	**Porcupine Rive** baz=265	58.64	26	P		P	08 57 01.7	+0.8
CRQE	**Cirque** baz=270	58.69	33	P		P	08 57 01.4	-0.1
MCARA	**McCarthy VSAT** baz=270,SNR=6.8	58.73	33	P		P	08 57 01.3	-0.3
M26K	**Nabesna, AK** baz=269,SNR=6.1	58.76	31	P		P	08 57 01.7	-0.1
I26K	**Coal Creek Min** baz=267	58.79	28	P		P	08 57 01.8	-0.1
C27K	**Jago River** baz=264,SNR=34	58.92	23	P		P	08 57 03.7	+0.9
BVAR	**Borovoye Array** comp=Z,9.0nm,0.5s,baz=81,slow=5.8,SNR=24	59.01	318	P		P	08 57 03.8	+0.1
BVAR	comp=Z,59nm,19.5s,baz=32,slow=36			LR		LR	09 22 27.7	
BORK	comp=Z,9.0nm,0.5s **Borovoye**	59.05	318	*ce*P		P	08 57 04.9	+0.9
BORK	comp=Z,27nm,1.3s			pmax		pmax		
MESA	**MESA** baz=271	59.26	34	P		P	08 57 05.9	+0.3
M27K	**Edge Creek, AK** baz=270,SNR=5.3	59.28	32	P		P	08 57 05.6	+0.1
L27K	**Beaver Creek,** baz=270	59.30	31	P		P	08 57 05.5	-0.1
BARN	**Barnard Glacie**	59.39	33	P		P	08 57 06.1	-0.3
BARN	comp=Z,14nm,0.7s			IAmb		IAmb	08 57 06.8	
I27K	**Kandik River** baz=268,SNR=9.5	59.44	28	P		P	08 57 06.2	-0.3
G27K	**Doyon Strip** baz=268	59.47	26	P		P	08 57 07.3	+0.7
H27K	**Steamboat Moun**	59.50	27	P		P	08 57 07.5	+0.6
CTG	**Chitna Glacier** baz=271	59.55	33	P		P	08 57 07.0	-0.4
DZA	**Taraz**	59.66	306	*e*P		P	08 57 09.6	+1.2
DZA	comp=Z,5.0nm,0.4s			pmax		pmax		
DZA	**Taraz** comp=Z,4.9nm,0.4s	59.66	306	*e*P		P	08 57 09.6	+1.2
BVCY	**Beaver Creek** baz=271,SNR=5.2	59.75	31	P		P	08 57 08.4	-0.2
D27M	**Malcolm River** baz=267	59.86	24	P		P	08 57 10.2	+0.9
BBOO	**Buckleboo** comp=Z,21nm,0.8s	59.91	187	P		P	08 57 09.4	-0.6
YUK3	**Moose Creek** baz=272,SNR=6.5	59.95	32	P		P	08 57 10.0	-0.3
PINM	**Pinnacle** baz=273	60.11	34	P		P	08 57 11.1	-0.1
O28M	**Mount Upton** baz=272	60.12	33	P		P	08 57 11.5	0.0
I28M	**Miner Creek** baz=270,SNR=29	60.14	28	P		P	08 57 11.5	+0.1
F28M	**Old Crow** baz=269,SNR=16	60.19	25	P		P	08 57 12.1	+0.5
KKAR	**Karatay Array**	60.22	306			P	08 57 12.4	+0.2
KKAR	**Karatay Array**	60.22	306	P		P	08 57 12.4	+0.2
HTT	**Hallett** comp=Z,7.4nm,1.5s	60.26	185	P		P	08 57 11.9	-0.5
YUK8	**Steele Glacier** baz=272	60.30	33	P		P	08 57 12.7	-0.1
E28M	**Babbage River** baz=268	60.35	24	P		P	08 57 13.6	+0.9
DAWY	**Dawson** baz=271,SNR=24	60.39	30	P		P	08 57 13.2	+0.2
HYB	**Hyderabad**	60.48	276	*e*P		P	08 57 14.4	+0.1
D28M	**Stokes Point** baz=269	60.65	23	P		P	08 57 15.4	+0.8
BRLS	**Boroldaу**	60.72	306	*c i*P		P	08 57 17.8	+2.2
BRLS	comp=Z,8.0nm,1.3s			pmax		pmax		
BRLS	**Boroldaу** comp=Z,8.0nm,1.3s	60.72	306 ⇑	*i*P		P	08 57 17.8	+2.2
IUG	**Iuzhnay**	60.74	305	*c i*P		P	08 57 17.1	+1.2
IUG	comp=Z,14nm,0.6s			pmax		pmax		
IUG	**Iuzhnay** comp=Z,14nm,0.6s	60.74	305 ⇑	*i*P		P	08 57 17.1	+1.2
I29M	**Ogilvie Camp,**	60.82	28	P		P	08 57 15.7	-0.3
I29M	**Ogilvie Camp,** baz=271,SNR=15	60.82	28	P		P	08 57 16.0	+0.1
YUK4	**Talbot Arm** baz=273,SNR=16	60.84	33	P		P	08 57 17.1	+0.7
M29M	**Somme Creek** baz=273,SNR=28	60.86	31	P		P	08 57 17.2	+0.8
J29N	**Klondike Camp** baz=272,SNR=20	60.89	29	P		P	08 57 17.0	+0.6
G29M	**Pine Creek** baz=271	60.91	26	P		P	08 57 17.2	+0.7
O29M	**Mount Kennedy** baz=274,SNR=5.9	60.94	34	P		P	08 57 17.9	+0.9
E29M	**Blow River** baz=270,SNR=18	60.95	25	P		P	08 57 17.3	+0.6
L29M	**L29M** baz=273	60.98	31	P		P	08 57 18.0	+0.9
YUK6	**Outpost Mounta** baz=274	61.00	33	P		P	08 57 18.1	+0.6
CHM	**Chimkent**	61.02	305	*e*P		P	08 57 18.9	+1.2
CHM	comp=Z,16nm,1.1s			pmax		pmax		
CHM	**Chimkent** comp=Z,16nm,1.1s	61.02	305	*e*P		P	08 57 19.0	+1.2
YNG	**Young** comp=Z,17nm,1.3s	61.12	176	P		P	08 57 18.4	+0.2
K29M	**Barlow Dome** baz=273	61.22	30	P		P	08 57 19.2	+0.5
HYT	**Haines Junctio** baz=275,SNR=7.2	61.43	33	P		P	08 57 20.9	+0.6
EPYK	**Eagle Plains** baz=272,SNR=32	61.44	27	P		P	08 57 20.7	+0.5
N30M	**Aishikik Lake** baz=275	61.58	32	P		P	08 57 21.6	+0.4
G30M	**tAoh Zraii Nji** baz=272	61.62	26	P		P	08 57 21.5	+0.2
M30M	**Minto, Yukon** baz=274,SNR=15	61.63	31	P		P	08 57 21.9	+0.4
I30M	**Mount Dempster** baz=273	61.64	28	P		P	08 57 21.8	+0.1
J30M	**Hart River** baz=274	61.70	29	P		P	08 57 22.4	+0.4
MORW	**Morawa**	61.72	207	P		P	08 57 17.0	-5.4
P30M	**Million Dollar** baz=276	61.76	34	P		P	08 57 23.1	+0.7
F30M	**Barrier River** baz=272,SNR=19	61.76	25	P		P	08 57 22.9	+0.7
MAYO	**Mayo, Yukon** baz=274,SNR=9.8	61.96	30	P		P	08 57 24.2	+0.6
O30N	**Mendenhall** baz=276	62.12	33	P		P	08 57 25.2	+0.4
N31M	**Braeburn, Yuko** baz=276,SNR=8.4	62.20	32	P		P	08 57 25.8	+0.5
S31K	**Pelican** baz=277	62.37	36	P		P	08 57 26.6	+0.2
G31M	**Satah River** baz=274	62.39	26	P		P	08 57 26.5	+0.1
H31M	**Peel River** baz=275,SNR=20	62.45	27	P		P	08 57 27.0	+0.1
F31M	**Tsiigehtchic** baz=274,SNR=10	62.55	26	P		P	08 57 27.2	-0.3
INK	**Inuvik** baz=274,SNR=15	62.57	25	P		P	08 57 27.5	-0.1
SKAG	**Skagway** baz=277	62.65	35	P		P	08 57 28.9	+0.6
PALK	**Illelekele** comp=Z,62nm,18.4s,baz=63,slow=37	62.67	264	LR		LR	09 25 50.1	
WHY	**Whitehorse** baz=277,SNR=9.2	62.73	33	P		P	08 57 29.5	+0.5
M31M	**Drury Creek, Y** baz=277,SNR=14	62.78	31	P		P	08 57 29.4	+0.2
BLDU	**Ballidu** comp=Z,23nm,1.5s	62.81	206	P		P	08 57 29.9	+0.2
R32K	**Eaglecrest** baz=278	63.23	36	P		P	08 57 32.6	+0.4
KLBR	**Kellerberrin** comp=Z,24nm,1.2s	63.29	205	P		P	08 57 34.4	+1.6
S32K	**Killisnoo** baz=279	63.32	37	P		P	08 57 33.0	+0.3
ARPS	**Mount Arapiles** comp=Z,23nm,0.9s	63.45	182	P		P	08 57 33.0	-0.7
P32M	**Atlin**	63.45	34	P		P	08 57 33.9	+0.2
P32M	comp=Z,30nm,1.1s			IAmb		IAmb	08 57 35.1	
P32M	**Atlin** baz=278	63.45	34	P		P	08 57 33.9	+0.2
N32M	**Quiet Lake** baz=278	63.53	33	P		P	08 57 34.3	+0.1
P33M	**Teslin, Yukon** baz=279,SNR=11	63.80	34	P		P	08 57 36.5	+0.4
TOO	**Toolangi** comp=Z,8.1nm,1.1s	64.25	178	P		P	08 57 39.7	+0.7
TOO	**Toolangi**	64.25	178			P	08 57 39.1	+0.1
TOO	**Toolangi**	64.25	178	P		P	08 57 39.1	+0.1
TOO	comp=Z,6.0nm,0.9s			pmax		pmax		
T33K	**Petersburg** baz=280	64.30	37	P		P	08 57 39.6	+0.4
U33K	**Whale Pass** baz=281	64.34	38	P		P	08 57 40.0	+0.6
CRAG	**Craig** baz=281	64.45	39	P		P	08 57 40.9	+0.7
NWAO	**Narrogin (SRO)**	64.68	204	P		P	08 57 42.8	+0.9
NWAO	comp=Z,17nm,1.0s			IAmb		IAmb	08 57 44.1	
NWAO	**Narrogin (SRO)** comp=Z,17nm,1.0s	64.68	204	P		P	08 57 42.8	+0.9
NWAO				pmax		pmax		
WRAK	**Wrangell Islan** baz=281	64.70	38	P		P	08 57 42.4	+0.5
R33M	**Jennings River** baz=281	64.86	34	P		P	08 57 43.6	+0.5
A36M	**Sachs Harbour** baz=280,SNR=11	64.92	20	P		P	08 57 43.2	+0.1
S34M	**Telegraph Cree** baz=281,SNR=7.2	65.06	36	P		P	08 57 44.9	+0.7
V35K	**Ketchikan** baz=282	65.33	39	P		P	08 57 46.8	+0.9
ARTI	**Arti** comp=Z,39nm,0.9s,baz=99,slow=2.6,SNR=17	65.42	322	P		P	08 57 46.4	-0.1
	comp=Z,39nm,0.9s							

ARTI	**Arti**	**65.42**	**322**			**P**	**P**	**08 57 46.5**	**-0.1**
ARTI	**Arti**	**65.42**	**322**	*c*	*i* P	**P**	**P**	**08 57 47.0**	**+0.4**
ARTI								08 58 15.5	
ARTI								09 00 08.2	
ARTI					S	**S**	**S**	**09 06 32.4**	**+2.4**
ARTI					SS	**SS**	**SS**	**09 10 39.9**	**-3.0**
ARTI					pmax	pmax			
	comp=Z,45nm,1.0s								
DLBC	**Dease Lake**	**65.53**	**35**		LR	LR		09 23 07.6	
	comp=Z,172nm,21.9s,baz=287,slow=33								
DLBC	**Dease Lake**	**65.53**	**35**		P	**P**		**08 57 47.9**	**+0.6**
	baz=282								
T35M	**Bob Quinn**	**65.72**	**37**		P	**P**		**08 57 49.4**	**+0.8**
	baz=282,SNR=6.0								
WTLY	**Watson Lake, Y**	**65.80**	**33**		P	**P**		**08 57 49.4**	**+0.4**
	baz=282,SNR=8.7								
C36M	**Paulatuk**	**65.82**	**23**		P	**P**		**08 57 48.6**	**-0.3**
	baz=282,SNR=22								
ABKAR	**Akbulak array**	**66.11**	**315**			**P**		**08 57 51.5**	**+0.4**
AKTO	**Aktyubinsk**	**67.03**	**316**		P	**P**		**08 57 56.5**	**-0.5**
	comp=Z,6.4nm,0.7s,baz=73,slow=11,SNR=7.0								
AKTO					LR	LR		09 26 58.9	
	comp=Z,52nm,18.2s,baz=35,slow=36								
	comp=Z,6.4nm,0.7s								
WRGLY	**Wrigley**	**67.53**	**29**		P	**P**		**08 57 59.9**	**0.0**
	baz=285,SNR=9.9								
BBB	**Bella Bella**	**68.11**	**42**		LR	LR		09 19 55.7	
	comp=Z,150nm,21.8s,baz=252,slow=29								
KIRV	**Kirov**	**69.52**	**326**	*c*	eP	**P**		**08 58 13.3**	**+0.9**
SPITS	**Spitsbergen Ar**	**70.72**	**350**		P	**P**		**08 58 19.4**	**-0.1**
	comp=Z,8.1nm,0.7s,baz=70,slow=5.4,SNR=16								
	comp=Z,8.1nm,0.7s								
KBS	**Kingsbay**	**70.85**	**351**	*i*	P	**P**		**08 58 21.1**	**+0.9**
NOR	**Nord**	**71.16**	**357**	*i*	P	**P**		**08 58 22.1**	**0.0**
NOR					IAmb	IAmb		08 58 23.2	
	comp=Z,5.2nm,0.9s								
YKA	**Yellowknife Ar**	**71.60**	**29**		P	**P**		**08 58 24.0**	**-1.0**
	comp=Z,7.0nm,0.8s,baz=296,slow=6.5,SNR=63								
	comp=Z,7.0nm,0.8s								
YKA	**Yellowknife A**	**71.60**	**29**		P	**P**		**08 58 24.2**	**-0.8**
YKA	**Yellowknife Ar**	**71.60**	**29**	*i*	P	**P**		**08 58 24.5**	**-0.5**
YKA					pmax	pmax			
	comp=Z,7.0nm,0.8s								
RES	**Resolute Bay**	**71.85**	**14**		LR	LR		09 36 43.6	
	comp=Z,37nm,18.0s,baz=354,slow=42								
BELG	**Belogornoye**	**72.59**	**320**	*i*	P	**P**		**08 58 32.1**	**+0.9**
BELG					pmax	pmax			
	comp=Z,13nm,1.0s								
APA	**Apatity**	**72.65**	**338**	⇓	*e*P	**P**		**08 58 30.6**	**-0.6**
APA					*e*			08 58 46.7	
APA					pmax	pmax			
	comp=Z,12nm,0.9s								
APA					MLR	MLR			
	comp=Z,2μm,8.0s								
RAR	**Rarotonga**	**72.76**	**125**		LR	LR		09 25 32.5	
	comp=Z,36nm,20.9s,baz=268,slow=32								
KLMR	**Klimovskoe**	**73.33**	**330**		*e*P	**P**		**08 58 34.3**	**-1.1**
KLMR					pmax	pmax			
	comp=Z,28nm,1.2s								
ARCES	**ARCESS Array B**	**74.07**	**341**		P	**P**		**08 58 39.4**	**-0.3**
	comp=Z,8.8nm,0.8s,baz=57,slow=8.8,SNR=8.1								
	comp=Z,8.8nm,0.8s								
TULEG	**Thule**	**74.78**	**7**	*i*	P	**P**		**08 58 42.8**	**-0.8**
TULEG					IAmb	IAmb		08 58 43.9	
	comp=Z,21nm,0.8s								
YBH	**Yreka Blue Hor**	**75.09**	**51**		LR	LR		09 23 44.3	
	comp=Z,14nm,21.5s,baz=290,slow=29								
YBH	**Yreka Blue Hor**	**75.09**	**51**			**P**		**08 58 46.1**	**0.0**
YBH					IAmb	IAmb		08 58 47.8	
	comp=Z,22nm,0.9s								
YBH	**Yreka Blue Hor**	**75.09**	**51**		P	**P**		**08 58 46.2**	**0.0**
YBH					pmax	pmax			
	comp=Z,22nm,0.9s								
M02C	**Callahan**	**75.13**	**51**			**P**		**08 58 45.9**	**-0.5**
M02C					IAmb	IAmb		08 58 47.7	
	comp=Z,15nm,0.8s								
WAH2	**Wahluke Slope**	**75.19**	**45**		P	**P**		**08 58 46.1**	**-0.4**
WAH2					IAmb	IAmb		08 58 47.2	
	comp=Z,15nm,0.8s								
NEEM	**North Greenlan**	**75.42**	**3**	*i*	P	**P**		**08 58 47.0**	**-0.7**
NEEM					IAmb	IAmb		08 58 48.9	
	comp=Z,63nm,1.1s								
D08A	**Wollman Farm,**	**75.48**	**44**			**P**		**08 58 48.0**	**-0.2**
D08A					IAmb	IAmb		08 58 49.3	
	comp=Z,24nm,0.9s								
DAG	**Danmarks Havn**	**75.91**	**356**	*i*	P	**P**		**08 58 49.5**	**-0.6**
DAG					IAmb	IAmb		08 58 50.8	
	comp=Z,12nm,0.6s								
NEW	**Newport**	**76.08**	**43**		LR	LR		09 28 48.7	
	comp=Z,102nm,21.4s,baz=310,slow=33								
MAK	**Makhachkala**	**76.34**	**311**		*e*P	**P**		**08 58 51.7**	**-1.4**
MAK					*e*PPP	PPP		09 03 32.6	
MAK					*e*S	**S**		**09 08 36.6**	**-0.7**
MAK					*e*SS	**SS**		**09 13 33.8**	**+2.9**
MAK					pmax	pmax			
	comp=Z,216nm,1.2s								
LNOR	**Lincton Mounta**	**76.36**	**45**		P	**P**		**08 58 53.4**	**0.0**
VRH	**Novokhopyorsk**	**76.43**	**321**		*e*P	**P**		**08 58 53.2**	**-0.3**
VRH					pmax	pmax			
	comp=Z,40nm,0.9s								
MOS	**Moscow**	**76.54**	**326**		*e*P	**P**		**08 58 53.7**	**-0.3**
MOS					pmax	pmax			
	comp=Z,55nm,1.1s								
AKT	**Akhty**	**76.79**	**310**		*e*P	**P**		**08 58 56.3**	**+0.4**
AKT					*e*			08 59 07.6	
AKT					*e*PPP	PPP		09 03 33.8	
AKT					pmax	pmax			
	comp=Z,13nm,0.6s								
LPSR	**Galich'ya Gora**	**77.33**	**323**		*e*P	**P**		**08 58 57.6**	**-1.0**
LPSR					pmax	pmax			
	comp=Z,30nm,0.8s								
OBN	**Obninsk**	**77.36**	**326**		*e*P	**P**		**08 58 59.2**	**+0.5**
OBN					*e*			08 59 09.0	
OBN					*e*PPP	PPP		09 03 41.0	
OBN					pmax	pmax			
	comp=Z,44nm,1.3s								
OBN					MLR	MLR			
	comp=Z,186nm,13.0s								
VORR	**Voronezh**	**77.62**	**322**		*e*P	**P**		**08 58 59.7**	**-0.5**
VORR					pmax	pmax			
	comp=Z,30nm,0.3s								
VSR	**Storozhevoye**	**77.85**	**321**		*e*P	**P**		**08 59 01.4**	**-0.1**
VSR					pmax	pmax			
	comp=Z,50nm,1.1s								
VORD	**Divnogorie**	**77.90**	**321**		*e*P	**P**		**08 59 01.0**	**-0.7**
VORD					pmax	pmax			
	comp=Z,10.0nm,0.7s								
DBG	**Daneborg**	**78.40**	**356**	*i*	P	**P**		**08 59 03.6**	**-0.5**
DBG					IAmb	IAmb		08 59 04.9	
	comp=Z,14nm,0.9s								
PPT	**Papeete**	**78.43**	**117**		LR	LR		09 29 02.1	
	comp=Z,72nm,18.2s,baz=321,slow=32								
ILON	**Igloolik, Nuna**	**78.43**	**15**			**P**		**08 59 03.5**	**-0.8**
ILON					IAmb	IAmb		08 59 04.8	
	comp=Z,30nm,1.1s								
FINES	**FINESS Array B**	**78.62**	**334**		P	**P**		**08 59 05.1**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=77,slow=6.3,SNR=20								
	comp=Z,3.6nm,0.7s								
FINES	**FINESS Array B**	**78.62**	**334**	*i*	P	**P**		**08 59 06.4**	**+0.9**
FINES					pmax	pmax			
	comp=Z,4.0nm,0.7s								
NCK	**Nalchik**	**78.69**	**313**	*i*	P	**P**		**08 59 07.4**	**+1.0**
NCK					pmax	pmax			
	comp=Z,12nm,0.7s								
MFID	**Camas Ranch**	**79.01**	**47**			**P**		**08 59 08.0**	**-0.2**
MFID					IAmb	IAmb		08 59 09.5	
	comp=Z,41nm,1.1s								
KBZ	**Khabaz**	**79.04**	**314**		P	**P**		**08 59 09.2**	**+1.1**
	comp=Z,22nm,0.9s,baz=86,slow=2.7,SNR=31								
	comp=Z,22nm,0.9s								
KBZ	**Khabaz**	**79.04**	**314**	*i*	P	**P**		**08 59 09.3**	**+1.1**
KBZ					pmax	pmax			
	comp=Z,30nm,0.9s								
KVAR	**Kislovodsk Arr**	**79.07**	**314**		LR	LR		09 36 00.5	
	comp=Z,240nm,21.7s,baz=100,slow=37								
KIV	**Kislovodsk**	**79.08**	**314**		*e*P	**P**		**08 59 09.3**	**+0.7**
KIV					pmax	pmax			
	comp=Z,21nm,1.0s								
SHA1	**Shidzhatmaz**	**79.19**	**314**	*i*	P	**P**		**08 59 10.1**	**+0.7**
NEUR	**Neytrino**	**79.38**	**313**	*i*	P	**P**		**08 59 11.2**	**+0.8**
NEUR					pmax	pmax			
	comp=Z,7.0nm,1.2s								
GNI	**Garni**	**79.41**	**310**		P	**P**		**08 59 11.9**	**+1.4**
	comp=Z,3.2nm,0.4s,baz=51,slow=5.8,SNR=3.9								
	comp=Z,3.2nm,0.4s								
NVAR	**Mina Array Bea**	**79.54**	**52**		P	**P**		**08 59 10.8**	**-0.6**
	comp=Z,19nm,0.9s,baz=288,slow=5.6,SNR=102								
NVAR					LR	LR		09 26 11.7	
	comp=Z,168nm,21.8s,baz=279,slow=30								
	comp=Z,19nm,0.9s								
ELK	**Elko**	**80.61**	**49**			**P**		**08 59 16.9**	**-0.2**
ELK					IAmb	IAmb		08 59 18.3	
	comp=Z,18nm,1.0s								
ELK	**Elko**	**80.61**	**49**		P	**P**		**08 59 17.0**	**-0.2**
ELK					pmax	pmax			
	comp=Z,18nm,1.0s								
SUMG	**Summit**	**80.69**	**1**	*i*	P	**P**		**08 59 16.9**	**-0.2**
SUMG					IAmb	IAmb		08 59 19.1	
	comp=Z,36nm,0.6s								
NIAQ	**Niaqornat**	**81.72**	**6**	*i*	P	**P**		**08 59 21.9**	**-0.2**
NIAQ					IAmb	IAmb		08 59 22.1	
	comp=Z,320nm,1.3s								
SAATT	**Saattut**	**81.87**	**5**	*i*	P	**P**		**08 59 22.6**	**-0.2**
SAATT					IAmb	IAmb		08 59 24.3	
	comp=Z,26nm,0.7s								
MNK	**Minsk**	**81.94**	**328**	*i*	P	**P**		**08 59 24.7**	**+1.2**
	comp=E,20nm,0.9s								
MNK					*i*				
	comp=N,16nm,0.6s								
MNK					*i*	P	**P**	**08 59 24.7**	**+1.2**
	comp=Z,35nm,1.0s,baz=54								
MNK					*i*	PP	**PP**	**09 02 32.0**	**+1.5**
MNK					*i*	PPP	PPP	09 04 20.6	
MNK					*i*	S	**S**	**09 09 40.1**	**+3.7**
MNK					*i*	SS	**SS**	**09 15 00.0**	**+5.9**
MNK					*i*	SSS	SSS	09 18 26.8	
MNK					*i*	LQ	LQ	09 30 44.0	
MNK					*i*	LR	LR	09 36 46.8	
MNK					*i*	LRM	MLR	09 38 53.4	
	comp=Z,146nm,8.7s								
MNK					*i*	LRM	MLR	09 38 58.7	
	comp=N,159nm,9.2s								
MNK	**Minsk**	**81.94**	**328**	*i*	P	**P**		**08 59 24.7**	**+1.2**
MNK					*i*			09 02 32.0	
MNK					*i*	PPP	PPP	09 04 20.6	
MNK					*i*	S	**S**	**09 09 40.1**	**+3.7**
MNK					*i*	SS	**SS**	**09 15 00.0**	**+5.9**
MNK					*i*	SSS	SSS	09 18 26.7	
MNK					pmax	pmax			
	comp=N,16nm,0.6s								
MNK					pmax	pmax			
	comp=E,20nm,0.9s								
MNK					pmax	pmax			
	comp=Z,35nm,1.0s								
MNK					MLR	MLR			
	comp=Z,146nm,9.0s								
MNK					MLR	MLR			
	comp=N,159nm,9.0s								
MNK					MLR	MLR			
	comp=E,262nm,16.0s								
SAQQ	**Saqqaq**	**82.62**	**5**	*i*	P	**P**		**08 59 26.9**	**+0.1**
SAQQ					IAmb	IAmb		08 59 28.5	
	comp=Z,44nm,0.7s								
DPP	**Dos Picos Cty**	**82.97**	**57**		P	**P**		**08 59 28.6**	**-0.8**
PFO	**Pinyon Flats O**	**83.04**	**56**		LR	LR		09 33 00.1	
	comp=Z,131nm,18.5s,baz=266,slow=33								
PFO	**Pinyon Flats O**	**83.04**	**56**	*i*	P	**P**		**08 59 29.3**	**-0.6**
PFO					pmax	pmax			
	comp=Z,16nm,0.9s								
GDH	**Godhavn**	**83.22**	**6**	*i*	P	**P**		**08 59 29.4**	**-0.6**
GDH					IAmb	IAmb		08 59 31.2	
	comp=Z,20nm,0.6s								
PDAR	**Pinedale Array**	**83.35**	**45**		P	**P**		**08 59 30.4**	**-1.1**
	comp=Z,4.0nm,0.7s,baz=290,slow=2.0,SNR=42								
	comp=Z,4.0nm,0.7s								
AK03	**Malin Array Si**	**83.46**	**324**		P	**P**		**08 59 31.0**	**-0.6**
ILULI	**Ilulissat**	**83.47**	**5**	*i*	P	**P**		**08 59 31.1**	**-0.2**
ILULI					IAmb	IAmb		08 59 32.2	
	comp=Z,19nm,0.6s								
AKASG	**Malin Array Be**	**83.48**	**324**		P	**P**		**08 59 30.6**	**-1.1**
	comp=Z,12nm,0.7s,baz=52,slow=5.2,SNR=34								
	comp=Z,12nm,0.7s								
AKASG	**Malin Array Be**	**83.48**	**324**		P	**P**		**08 59 31.1**	**-0.5**
AKASG					IAmb	IAmb		08 59 32.3	
	comp=Z,12nm,1.1s								
AKASG	**Malin Array Be**	**83.48**	**324**	*i*	P	**P**		**08 59 31.1**	**-0.5**
AKASG					pmax	pmax			
	comp=Z,13nm,0.7s								
AKBB	**Malin Array Si**	**83.48**	**324**		P	**P**		**08 59 30.9**	**-0.8**
AKBB					IAmb	IAmb		08 59 31.9	
	comp=Z,22nm,0.9s								
AKBB	**Malin Array Si**	**83.48**	**324**	*i*	P	**P**		**08 59 31.1**	**-0.5**
AKBB					pmax	pmax			
	comp=Z,20nm,0.9s								
AKBB	**Malin Array Si**	**83.48**	**324**		P	**P**		**08 59 30.9**	**-0.8**
AK01	**Malin Array Si**	**83.49**	**324**		P	**P**		**08 59 30.9**	**-0.8**
KIEV	**Kiev**	**83.49**	**324**		P	**P**		**08 59 31.2**	**-0.5**
KIEV					IAmb	IAmb		08 59 31.9	
	comp=Z,20nm,0.9s								
KIEV	**Kiev**	**83.49**	**324**		P	**P**		**08 59 31.2**	**-0.5**
KIEV					pmax	pmax			
	comp=Z,20nm,0.9s								
KIEV	**Kiev**	**83.49**	**324**		P	**P**		**08 59 30.9**	**-0.8**
	comp=Z,108nm,1.0s								
HFS	**Hagfors**	**84.03**	**337**		P	**P**		**08 59 33.8**	**-0.5**
	comp=Z,5.0nm,0.8s,baz=69,slow=4.9,SNR=9.7								
	comp=Z,5.0nm,0.8s								
MI28	**Mi28,Pidlybu**	**84.14**	**325**		P	**P**		**08 59 33.4**	**-1.6**
NB2	**NORSAR Subarra**	**84.19**	**339**		P	**P**		**08 59 33.9**	**-1.3**
	comp=Z,32nm,1.2s,baz=41,slow=5.3								
NB2	**NORSAR Subarra**	**84.19**	**339**		P	**P**		**08 59 33.9**	**-1.3**
NB2					AMP			08 59 33.9	
	comp=Z,32nm,1.2s								
NOA	**NORSAR Array B**	**84.19**	**339**		P	**P**		**08 59 34.3**	**-0.9**
	comp=Z,11nm,1.1s,baz=39,slow=5.1,SNR=7.4								
	comp=Z,11nm,1.1s								
ARPR	**Arapgir-MALATY**	**84.27**	**311**		P	**P**		**08 59 37.0**	**+0.8**
LUBAR	**Lubar, Ukraine**	**84.70**	**324**		P	**P**		**08 59 37.1**	**-0.8**
RNPP9	**Sopachiv**	**84.75**	**326**		P	**P**		**08 59 38.2**	**+0.1**
SFJD	**Kangerlussuaq**	**85.68**	**6**		P	**P**		**08 59 42.3**	**-0.2**
SFJD	**Kangerlussuaq**	**85.68**	**6**		P	**P**		**08 59 42.3**	**-0.2**
SFJD					pmax	pmax			
	comp=Z,56nm,0.8s								
SFJD	**Kangerlussuaq**	**85.68**	**6**	*i*	P	**P**		**08 59 42.7**	**+0.2**
SFJD					IAmb	IAmb		08 59 43.5	
	comp=Z,50nm,0.7s								
KMPD	**K-Podol'skiy**	**86.19**	**324**		P	**P**		**08 59 43.7**	**-1.6**
ULM	**Lac du Bonnet**	**86.80**	**34**		P	**P**		**08 59 47.2**	**-1.1**
	comp=Z,4.9nm,0.9s,baz=283,slow=5.7,SNR=5.7								
ULM					LR	LR		09 39 17.2	
	comp=Z,56nm,19.4s,baz=12,slow=36								
	comp=Z,4.9nm,0.9s								
BR131	**Keskin Array S**	**87.04**	**313**	*i*	P	**P**		**08 59 49.1**	**-0.8**
BRTR	**Keskin Array B**	**87.04**	**313**		P	**P**		**08 59 49.3**	**-0.6**
	comp=Z,5.8nm,0.8s,baz=84,slow=3.4,SNR=25								
BRTR					LR	LR		09 41 18.8	
	comp=Z,109nm,19.1s,baz=18,slow=37								
	comp=Z,5.8nm,0.8s								
BRTR	**Keskin Array B**	**87.04**	**313**		P	**P**		**08 59 49.5**	**-0.4**
BRTR	**Keskin Array B**	**87.04**	**313**		P	**P**		**08 59 49.5**	**-0.4**
ANMO	**Albuquerque**	**89.53**	**51**		LR	LR		09 32 13.4	
	comp=Z,141nm,20.2s,baz=299,slow=30								
ANMO	**Albuquerque**	**89.53**	**51**	*i*	P	**P**		**09 00 01.2**	**-0.7**
ANMO					pmax	pmax			
	comp=Z,5.0nm,1.1s								
VRAC	**Vranov**	**90.62**	**329**		LR	LR		09 44 19.0	
	comp=Z,101nm,18.9s,baz=331,slow=38								
CLL	**Collm**	**90.78**	**332**		*e*P	**P**		**09 00 09.0**	**+1.9**
CLL					pmax	pmax			
	comp=Z,10.0nm,1.1s								
CLL	**Collm**	**90.78**	**332**		*e*P	**P**		**09 00 09.0**	**+1.9**
	comp=Z,10.0nm,1.1s								
SMOL	**Smolenice**	**90.78**	**328**		*e*P	**P**		**09 00 07.7**	**+0.5**
SMOL					pmax	pmax			
	comp=Z,8.0nm,1.2s								
MODS	**Modra-Piesok**	**90.95**	**328**		*e*P	**P**		**09 00 08.3**	**+0.3**
MODS	**Modra-Piesok**	**90.95**	**328**		*e*P	**P**		**09 00 08.3**	**+0.3**
ZVC	**Zvikov**	**91.62**	**330**		*e*P	**P**		**09 00 11.0**	**-0.1**
LPIG	**La Paz**	**92.39**	**62**		LR	LR		09 37 10.0	
	comp=Z,110nm,18.8s,baz=319,slow=33								
SCHQ	**Schefferville**	**94.39**	**17**		P	**P**		**09 00 23.5**	**-0.2**
	comp=Z,4.8nm,1.0s,baz=313,slow=5.1,SNR=4.7								
SCHQ					LR	LR		09 44 54.8	
	comp=Z,58nm,21.1s,baz=0.0,slow=37								
	comp=Z,4.8nm,1.0s								
TXAR	**Lajitas Array**	**94.60**	**54**		P	**P**		**09 00 25.2**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=308,slow=3.0,SNR=27								
TXAR					LR	LR		09 37 47.9	
	comp=Z,80nm,19.2s,baz=322,slow=32								
	comp=Z,3.0nm,0.8s								
DAVOX	**Davos/Dischmat**	**95.53**	**330**		LR	LR		09 47 31.2	
	comp=Z,122nm,18.4s,baz=256,slow=38								
TORD	**Torodi Ar. Bea**	**125.64**	**312**		PKP	**PKPdf**		**09 06 05.3**	**-0.9**
	comp=Z,2.6nm,0.9s,baz=32,slow=1.9,SNR=9.0								
SDV	**Santo Domingo**	**131.23**	**48**		PKP	**PKPdf**		**09 06 16.1**	**-1.1**
	comp=Z,10nm,0.9s,baz=315,slow=6.0,SNR=3.7								
LPAZ	**La Paz**	**148.66**	**77**		PKPbc	**PKPbc**		**09 06 52.9**	**+0.2**
	comp=Z,23nm,0.7s,baz=307,slow=2.5,SNR=18								
PLCA	**Paso Flores**	**148.66**	**125**		PKPbc	**PKPbc**		**09 06 50.7**	**-0.6**
	comp=Z,6.1nm,0.8s,baz=247,slow=3.1,SNR=9.0								
PLCA					PKKPab			09 14 14.5	
	comp=Z,2.0nm,1.0s,baz=44,slow=1.3,SNR=3.0								

*IDC **22** 08:56:16.4±0.8,3°.13S×77°.29W,h0km,mb3.9/8, mbtmp4.0/10,ML4.2/2,MS3.5/6,Error ellipse: s-maj=35.8km s-min=16.2km az=75.0*
*NEIC **22** 08:56:19.3±1.8,3°.40S±0°.07×77°.65W±0°.09,h10km±1km, mb4.4/27,Error ellipse: s-maj=15.8km s-min=10.8km az=64.0*

ISC 22 08:56:18.0±0.5,**3°.38S**±0°.03×**77°.60W**±0°.05,**h10**km,**n76,** σ1§**40**/79,**mb4.4**/16,**MS3.3**/5,**Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**1.89**	**299**		**Pn**	**08 56 50.7**	**+0.3**
COHC	**Cochancay**	**1.89**	**299**	P	**Pn**	**08 56 50.6**	**+0.2**
COHC				S	**Sn**	**08 57 13.8**	**-0.5**
MCRA	**Macar, Loja**	**2.55**	**247**	P	**Pn**	**08 57 00.9**	**+1.4**
MCRA				S	**Sn**	**08 57 32.4**	**+1.7**
SLOR	**San Lorenzo -**	**2.78**	**341**		**Pn**	**08 57 05.2**	**+2.1**
CASC	**Dorado de Casc**	**3.50**	**4**	P	**Pb**	**08 57 21.8**	**+1.6**
CASC				S	**Sg**	**08 58 08.6**	**-2.0**
PPLP	**Puerto Lpez**	**3.66**	**300**	P	**Pn**	**08 57 14.7**	**-0.1**
OTAV	**Otavalo**	**3.69**	**347**		**Pn**	**08 57 16.5**	**+0.9**
OTAV	**Otavalo**	**3.69**	**347**	P	**Pb**	**08 57 25.3**	**+1.6**
CUSE	**Cuicocha Este**	**3.75**	**348**	P	**Pb**	**08 57 26.8**	**+2.2**
BONI	**La Bonita**	**3.81**	**1**	P	**Pb**	**08 57 26.4**	**+0.9**
BONI				S	**Sg**	**08 58 17.8**	**-2.7**
ATAH	**Atahualpa**	**3.81**	**192**	Pn	**Pn**	**08 57 21.0**	**+3.7**
	18nm,0.3s,baz=8.9,slow=6.7,SNR=79						
ATAH				Sn	**Sb**	**08 58 11.0**	**-1.2**
	16nm,0.3s,baz=236,slow=23,SNR=6.8						
	71nm,0.4s						
PAC1	**Pacto, Paraso**	**3.81**	**342**	P	**Pb**	**08 57 23.1**	**-2.5**
TULM	**Tulcn-Chalpat**	**4.07**	**357**	P	**Pb**	**08 57 32.0**	**+1.8**
	0.7nm94nm,0.7s						
TULM				S	**Sg**	**08 58 27.3**	**-1.7**
	0.7nm94nm,0.7s						
CMBC	**Cumbal**	**4.30**	**357**	P	**Pb**	**08 57 32.8**	**-1.2**
PTLC	**Puerto Leguiza**	**4.50**	**38**	P	**Pn**	**08 57 24.9**	**-1.4**
	1.0nm3μm324nm,1.1s						
PTLC				S	**Sb**	**08 58 32.3**	**+0.7**
	1.0nm3μm324nm,1.1s						
GCUF	**Volcan Galeras**	**4.58**	**3**	P	**Pn**	**08 57 29.7**	**+1.8**
	44nm,0.7s						
CRUC	**La Cruz**	**4.96**	**7**	P	**Pn**	**08 57 33.7**	**+0.8**
CRUC				S	**Sg**	**08 58 56.0**	**-1.4**
FLOC	**Florencia**	**5.30**	**22**	P	**Pn**	**08 57 37.7**	**+0.4**
	2μm66nm,0.5s						
BBAC	**Balboa, Cauca**	**5.38**	**4**	P	**Pn**	**08 57 40.2**	**+1.6**
	34nm,0.7s						
BBAC				S	**Sg**	**08 59 12.0**	**+1.2**
	34nm,0.7s						
GARC	**Garzon, Huila**	**5.92**	**21**	P	**Pn**	**08 57 46.7**	**+0.7**
	2μm91nm,0.4s						
POPC	**Popayan, Colom**	**5.95**	**9**	P	**Pn**	**08 57 49.6**	**+3.1**
	14nm,0.8s						
MACC	**Macarena, Meta**	**6.64**	**34**	P	**Pn**	**08 57 57.4**	**+1.6**
	50nm,0.5s						
URMC	**La Uribe, Meta**	**7.33**	**26**	P	**Pn**	**08 58 07.2**	**+2.0**
	746nm67nm,0.9s						
ORTC	**Ortega, Tolima**	**7.61**	**18**	P	**Pn**	**08 58 12.5**	**+3.4**
	25nm,0.6s						
VILC	**Villavicencio,**	**8.40**	**28**	P	**Pn**	**08 58 21.7**	**+1.6**
NNA	**Nana**	**8.58**	**175**	Pn	**Pn**	**08 58 24.9**	**+2.4**
	4.2nm,0.3s,baz=358,slow=10,SNR=5.2						
NNA				Sn	**Sn**	**08 59 57.2**	**-2.3**
	7.0nm,0.3s,baz=293,slow=21,SNR=6.7						
	6.1nm,0.4s						
NNA	**Nana**	**8.58**	**175**	Pn	**Pn**	**08 58 23.3**	**+0.8**
BRU2	**Volcan**	**13.12**	**337**	Pn	**Pn**	**08 59 23.6**	**-1.1**
SDV	**Santo Domingo**	**14.02**	**30**	Pn	**Pn**	**08 59 37.4**	**+0.3**
	0.4nm,0.3s,baz=223,slow=22,SNR=3.7						
SDV				Lg	Lg	09 03 28.0	
	0.1nm,0.3s,baz=50,slow=17,SNR=1.8						
SDV	

ULM	**Lac du Bonnet**	**55.69**	**346**	P	**P**	09 05 53.0	**-1.5**
	comp=Z,3.6nm,0.7s,baz=139,slow=6.4,SNR=4.9						
	comp=Z,3.6nm,0.7s						
ELK	**Elko**	**55.77**	**326**	LR	LR	09 32 34.2	
	comp=Z,188nm,18.2s,baz=292,slow=39						
MFID	**Camas Ranch**	**57.91**	**328**		**P**	**09 06 11.0**	**+0.5**
MFID				IAmb	IAmb	09 06 12.2	
	comp=Z,6.0nm,0.9s						
YKA	**Yellowknife Ar**	**71.44**	**343**	P	**P**	**09 07 37.5**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=140,slow=4.9,SNR=10						
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.36**	**76**	P	**P**	**09 08 27.5**	**-2.9**
	comp=Z,5.0nm,1.3s,baz=269,slow=4.9,SNR=4.0						
	comp=Z,5.0nm,1.3s						
ILAR	**Eielson Array**	**84.35**	**336**	P	**P**	**09 08 49.2**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=126,slow=4.3,SNR=10						
	comp=Z,1.1nm,0.9s						
VNDA	**Vanda**	**93.05**	**191**	LR	LR	09 47 33.6	
	comp=Z,82nm,19.8s,baz=296,slow=33						
ZALV	**Zalesovo Beam**	**127.57**	**13**	PKP	**PKPdf**	**09 15 23.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=336,slow=3.2,SNR=2.5						
KURBB	**Kurchatov Arra**	**128.80**	**19**	PKP	**PKPdf**	**09 15 25.8**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=336,slow=2.0,SNR=2.9						
ASAR	**Alice Springs**	**139.21**	**227**	PKP	**PKPdf**	**09 15 45.4**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=132,slow=2.2,SNR=4.6						
WRA	**Warramunga Arr**	**141.00**	**232**	PKP	**PKPdf**	**09 15 48.3**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=116,slow=2.0,SNR=3.0						
HHC	**Hu-ho-hao-te**	**141.79**	**349**	*eP*	**PKPdf**	**09 15 50.5**	**-0.1**
PZH	**PanZhiHua**	**157.00**	**2**	PKP	**PKPdf**	**09 16 14.4**	**-0.6**

AFAD ***22*** *09:14:16.3, 39.˚10N×27.˚71E, h7km±4km, ML1.9*
ISK 22 09:14:15.5, 39.˚13N×27.˚74E, h4km, ML2.0/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOMA	**Soma-Manisa**	**0.16**	**281**	Pg	Pg	09 14 19.7	+1.1
SOMA				Sg	Sg	09 14 22.4	+1.7
STEP	**BALIKESIR_Sava**	**0.25**	**357**	P	Pg	09 14 21.7	+1.4
STEP				S	Sg	09 14 26.4	+2.8
STEP				IAML		09 14 27.0	
	comp=N,225nm,0.5s						
AKHS	**Akhisar**	**0.26**	**166**	P	Pg	09 14 21.4	+1.0
AKHS				S	Sg	09 14 25.4	+1.6
AKS	**Akhisar**	**0.26**	**166**	Pg	Pg	09 14 21.3	+0.9
GORD	**Gordes-Manisa**	**0.41**	**122**	Pg	Pg	09 14 24.3	+1.0
CAMT	**Merkez**	**0.50**	**221**	P	Pb	09 14 26.5	-0.4
CAMT				S	Sb	09 14 33.5	-1.1
CAMT				IAML		09 14 37.0	
	comp=E,68nm,0.4s						
CAMT				IAML		09 14 39.0	
	comp=N,84nm,0.4s						
KTTT	**Salihli**	**0.52**	**147**	P	Pg	09 14 26.3	+0.9
KTTT				S	Sg	09 14 33.4	+1.2
KTTT				IAML		09 14 49.0	
	comp=N,79nm,0.2s						
BALB	**Balikesir**	**0.52**	**12**	Pg	Pb	09 14 26.6	-0.7
ZEDA	**zmir-Bergama**	**0.54**	**253**	P	Pb	09 14 27.0	-0.5
ZEDA				S	Sg	09 14 33.9	+1.1
IZMD	**zmir-Dikili-**	**0.65**	**257**	P	Pb	09 14 29.4	0.0
IZMD				S	Sg	09 14 37.0	+0.7
DKL	**Dikili**	**0.65**	**265**	Pg	Pb	09 14 29.0	-0.4
YAYO	**Edremit-Balk**	**0.71**	**313**	Pg	Pb	09 14 29.9	-0.5
YAYO				Sg	Sb	09 14 40.2	-0.3
DEMI	**Demirci**	**0.77**	**96**	P	Pb	09 14 31.1	-0.5
DEMI				S	Sb	09 14 42.1	-0.2
DEMI				IAML		09 14 45.0	
	comp=N,56nm,0.2s						
ODEM	**Odemis-Izmir**	**0.89**	**163**	Pg	Pb	09 14 33.4	-0.2
MANT	**Manisa**	**0.90**	**134**	P	Pn	09 14 35.0	-0.3
MANT				S	Sg	09 14 44.5	-0.1
BLCB	**Balcova**	**0.92**	**216**	Pg	Pb	09 14 33.9	-0.1
DUVT	**Torbali**	**0.93**	**194**	P	Pn	09 14 35.3	-0.2
DUVT				S	Sg	09 14 45.2	-0.2
DUVT				IAML		09 14 49.0	
	comp=E,50nm,0.9s						
KULA	**Kula-Manisa**	**0.95**	**130**	Pg	Pb	09 14 34.4	-0.2
KULA				Sg	Sb	09 14 47.9	+0.4
IZMR	**zmir-demi**	**1.00**	**170**	P	Pn	09 14 36.0	-0.4

IDC ***22*** *09:16:06.3±9.7, 30.˚54S×179.˚61W, h354km±98km, mb2.8/2, mbtmp3.7/3, Error ellipse: s-maj=100.8km s-min=50.9km az=15.0*
WEL ***22*** *09:16:14.6±1.1, 31.˚5S±19.˚1×18.˚0W±5.˚2, h270km±24km, M4.5/6, mB4.3/3, ML4.4/6, MLv4.6/6, Mw(mB)3.5/3, Error ellipse: s-maj=72.0km s-min=6.3km az=109.9*
ISC 22 09:16:06.9±1.0, 30.˚50S±0.˚10×179.˚7W±0.˚2, h350km, n17, σ1s91/29, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.96**	**51**	P	**Pn**	**09 16 59.0**	**+1.1**
GLKZ				S	**S**	**09 17 37.1**	**-1.9**
WMGZ	**Waiomatatini S**	**7.47**	**192**	P	Pn	09 18 00.7	+6.1
WMGZ				S	**S**	**09 19 22.4**	**+0.1**
HAZ	**Te Kaha**	**7.54**	**196**	P	**Pn**	**09 17 58.2**	**+2.8**
HAZ				S	**S**	**09 19 24.0**	**+0.2**
PUZ	**Puketiti**	**7.74**	**192**	P	**Pn**	**09 18 00.5**	**+2.7**
PUZ				S	**S**	**09 19 26.2**	**-2.1**
RUGZ	**Raukumara Rang**	**7.76**	**196**	P	**Pn**	**09 18 02.1**	**+3.9**
RUGZ				S	**S**	**09 19 28.4**	**-0.5**
MWZ	**Matawai**	**8.15**	**196**	P	**P**	**09 18 05.9**	**+0.2**
MWZ				S	**S**	**09 19 37.1**	**-0.1**
CNGZ	**Carnagh Statio**	**8.15**	**192**	P	**Pn**	**09 18 01.9**	**-0.8**
TKGZ	**Te Karaka**	**8.18**	**194**	P	**P**	**09 18 06.5**	**+0.6**
TKGZ				S	**S**	**09 19 35.2**	**-2.5**
URZ	**Urewera**	**8.18**	**198**	P	**Pn**	**09 18 02.8**	**-0.2**
	11nm,1.1s,baz=0.0,slow=20,SNR=31						
URZ				S	**S**	**09 19 36.8**	**-0.9**
	20nm,0.5s,baz=24,slow=20,SNR=14						
URZ	**Urewera**	**8.18**	**198**	P	**Pn**	**09 18 04.7**	**+1.6**
URZ				S	**S**	**09 19 36.5**	**-1.3**
RIGZ	**Rimuhau**	**8.45**	**194**	P	**P**	**09 18 08.6**	**-0.4**
RIGZ				S	**S**	**09 19 39.9**	**-3.9**
SNGZ	**Shannon Statio**	**8.62**	**196**	P	**P**	**09 18 11.7**	**+0.8**
SNGZ				S	**S**	**09 19 47.2**	**-0.2**
MTHZ	**Maungataniwha**	**8.81**	**198**	P	**P**	**09 18 13.8**	**+0.8**
MTHZ				S	**S**	**09 19 48.1**	**-3.5**
MHGZ	**Mahia Peninsul**	**8.86**	**192**	P	**P**	**09 18 15.2**	**+1.8**
MHGZ				S	**S**	**09 19 50.2**	**-2.4**
ASAR	**Alice Springs**	**41.66**	**268**	P	**P**	**09 23 23.0**	**+0.4**
	0.2nm,0.3s,baz=115,slow=8.0,SNR=2.4						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**42.65**	**273**	P	**P**	**09 23 29.5**	**-1.0**
	0.4nm,0.3s,baz=111,slow=8.5,SNR=6.4						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**144.73**	**339**	PKP	**PKPdf**	**09 34 59.8**	**-1.8**
	5.0nm,1.0s,baz=53,slow=3.0,SNR=11						

IDC ***22*** *09:31:19.1±4.0, 17.˚82S×178.˚61W, h600km±45km, mb3.1/9, mbtmp4.0/10, Error ellipse: s-maj=43.3km s-min=18.3km az=147.0*
ISC 22 09:31:17.1±1.1, 17.˚8S±0.˚3×178.˚5W±0.˚2, h579km, n16, σ0s79/18, mb3.6/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.75**	**251**	P	**P**	**09 34 24.7**	**+1.0**
	2.3nm,0.6s,baz=72,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**44.54**	**259**	P	**P**	**09 38 38.3**	**-0.3**
	0.3nm,0.3s,baz=96,slow=7.6,SNR=12						
WRA				PcP	**PcP**	**09 40 08.2**	**-0.9**
	0.3nm,0.3s,baz=90,slow=3.7,SNR=6.5						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**44.71**	**254**	P	**P**	**09 38 39.9**	**0.0**
	1.5nm,0.5s,baz=87,slow=8.5,SNR=32						
ASAR				PcP	**PcP**	**09 40 08.8**	**-0.9**
	0.8nm,0.5s,baz=101,slow=3.7,SNR=9.2						
	1.5nm,0.5s						
MJAR	**Matsushiro Arr**	**67.75**	**323**	P	**P**	**09 41 18.1**	**+0.2**
	1.3nm,0.7s,baz=160,slow=10,SNR=2.0						
	1.3nm,0.7s						
PETK	**Petropavlovsk-**	**73.54**	**345**	P	**P**	**09 41 52.2**	**+0.6**
	1.9nm,0.7s,baz=100,slow=9.6,SNR=5.8						
	1.9nm,0.7s						
NVAR	**Mina Array Bea**	**79.42**	**44**	P	**P**	**09 42 25.3**	**+1.0**
	0.9nm,0.7s,baz=224,slow=9.4,SNR=9.7						
	0.9nm,0.7s						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**09 42 54.7**	**-0.8**
	0.6nm,0.4s,baz=222,slow=5.0,SNR=26						
	0.6nm,0.4s						
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**09 42 58.6**	**+1.1**
	1.3nm,0.8s,baz=219,slow=6.2,SNR=18						
PDAR	**Pinedale Array**	**87.35**	**43**	P	**P**	**09 43 03.6**	**0.0**
	1.3nm,0.8s						
	0.7nm,0.6s,baz=224,slow=4.0,SNR=8.8						
	0.7nm,0.6s						
YKA	**Yellowknife Ar**	**94.28**	**25**	P	**P**	**09 43 34.3**	**-0.5**
	0.1nm,0.5s,baz=254,slow=8.8,SNR=2.2						
	0.1nm,0.5s						
BVAR	**Borovoye Array**	**116.68**	**321**	PKP	**PKPdf**	**09 48 54.7**	**-1.3**
	0.6nm,0.5s,baz=103,slow=3.3,SNR=3.9						
ARCES	**ARCESS Array B**	**126.18**	**350**	PKP	**PKPdf**	**09 49 12.6**	**-1.2**
	2.9nm,0.9s,baz=40,slow=1.4,SNR=4.0						
FINES	**FINESS Array B**	**133.05**	**344**	PKP	**PKPdf**	**09 49 27.1**	**+0.1**
	5.1nm,1.0s,baz=39,slow=5.3,SNR=4.5						
BRTR	**Keskin Array B**	**144.62**	**315**	PKP	**PKPdf**	**09 49 49.0**	**+0.2**
	0.8nm,0.5s,baz=101,slow=2.4,SNR=6.5						
MMAI	**Mount Meron Ar**	**145.98**	**303**	PKPbc	**PKPbc**	**09 49 53.4**	**+0.2**
	2.1nm,0.5s,baz=64,slow=5.7,SNR=6.0						
GERES	**GERESS Array B**	**147.47**	**345**	PKPbc	**PKPbc**	**09 49 56.7**	**-0.1**
	2.1nm,0.6s,baz=20,slow=4.7,SNR=6.7						

VIE ***22*** *09:43:07.4±0.3, 50.˚20N×19.˚12E, h0km, mb2.5/1, ml2.3/2, Error ellipse: s-maj=4.9km s-min=1.4km az=160.0 8 km S of Sosnowice Suspected Mining induced.*
IPEC ***22*** *09:43:07.3±0.1, 50.˚14N×19.˚15E, h1km, ML2.4/6, Error ellipse: s-maj=1.9km s-min=0.8km az=177.0*
PRU ***22*** *09:43:08.1, 50.˚11N×19.˚14E, h0km*
ISC 22 09:43:07.2±0.8, 50.˚07N±0.˚04×19.˚13E±0.˚02, h0km, n24, σ0s86/41, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.46**	**71**	*e*Pg	**Pg**	**09 43 15.7**	**-0.3**
OJC				*e*Sg	**Sg**	**09 43 21.6**	**-0.3**
OKC	**Ostrava-Krasne**	**0.68**	**250**	*e*PG	**Pb**	**09 43 21.6**	**-0.3**
OKC				*e*SG	**Sb**	**09 43 31.4**	**-0.3**
	comp=Z,21nm,0.3s						
STEB	**Steborice**	**0.89**	**262**	*e*PG	**Pb**	**09 43 24.9**	**-0.5**
STEB				*e*SG	**Sb**	**09 43 38.0**	**+0.2**
	comp=Z,54nm,0.5s						
NIE	**Niedzica**	**1.00**	**130**	*e*Pg	**Pn**	**09 43 28.5**	**-0.1**
NIE				*e*Sg	**Sn**	**09 43 43.3**	**-0.1**
MORC	**Moravsky Berou**	**1.07**	**255**	*e*Pg	**Pb**	**09 43 28.6**	**0.0**
	baz=70						
MORC				*e*Sg	**Sg**	**09 43 41.9**	**+0.5**
	59nm,0.5s,baz=70						
ANAC	**Anensky vrch**	**1.13**	**271**	*e*Pg	**Pb**	**09 43 29.1**	**-0.5**
	baz=86						
ANAC				*e*Sg	**Sg**	**09 43 43.0**	**-0.4**
	73nm,0.5s,baz=86						
LOSC	**Losov**	**1.22**	**249**	*e*Pg	**Pn**	**09 43 31.3**	**-0.3**
	baz=65						
LOSC				*e*Sg	**Sb**	**09 43 46.9**	**-0.6**
	50nm,0.7s,baz=65						
KRLC	**Kraliky**	**1.51**	**271**	*e*SG	**Sn**	**09 43 56.0**	**0.0**
	comp=Z,30nm,0.4s						
STHS	**Stebnicka Huta**	**1.52**	**115**	*e*PG	**Pb**	**09 43 36.1**	**-0.2**
STHS				*e*SG	**Sn**	**09 43 58.7**	**+2.5**
STHS				*e*LG	Lg	09 44 08.8	
JAVC	**Velka Javorina**	**1.54**	**219**	*e*Pn	**Pb**	**09 43 36.4**	**-0.3**
	baz=36						
VRAC	**Vranov**	**1.81**	**246**	*e*Pn	**Pn**	**09 43 40.0**	**+0.3**
	baz=62						
VRAC				*e*Sg	**Sg**	**09 44 05.4**	**-0.1**
	18nm,0.4s,baz=62						
KECS	**Kecovo**	**1.82**	**150**	*e*PN	**Pn**	**09 43 39.7**	**-0.1**
KECS				*e*SN	**Sn**	**09 44 02.9**	**-0.7**
KECS				*e*LG	Lg	09 44 09.7	
DPC	**Dobruska-Polom**	**1.82**	**280**	*e*PG	**Pn**	**09 43 39.6**	**-0.3**
DPC				*e*SG	**Sg**	**09 44 06.2**	**+0.4**
	comp=Z,15nm,0.4s						
OSTC	**Ostas**	**1.93**	**286**	*e*PG	**Pb**	**09 43 42.2**	**-1.1**
OSTC				*e*SG	**Sg**	**09 44 09.7**	**+0.6**
UPC	**Upice**	**2.04**	**284**	*e*SG	**Sg**	**09 44 13.5**	**+0.6**
KRUC	**Moravsky**	**2.05**	**241**	*e*Pn	**Pn**	**09 43 43.4**	**+0.5**
	baz=58						
KRUC				*e*Sg	**Sg**	**09 44 12.7**	**-0.2**
	18nm,0.8s,baz=58						
MODS	**Modra-Piesok**	**2.09**	**216**	*e*PN	**Pb**	**09 43 45.7**	**-0.3**
MODS				*e*SN	**Sg**	**09 44 13.5**	**-0.7**
PRU	**Pruhonice**	**2.96**	**270**	*e*SG	**Sg**	**09 44 40.5**	**-1.7**
RONA	**Rosalia, Austr**	**3.02**	**219**	*i* Pn	**Pn**	**09 43 56.9**	**+0.6**
	0.1nm,0.1s						
CONA	**Conrad Observa**	**3.04**	**226**	*i* Pn	**Pn**	**09 43 57.9**	**+1.4**
	0.1nm,0.1s						
CONA				*i* Sn	**Sn**	**09 44 34.6**	**+1.0**
	1.4nm,0.3s						
CKRC	**Cesky Krumlov**	**3.38**	**250**	*e*SG	**Sg**	**09 44 55.5**	**-0.4**
BRG	**Berggiesshubel**	**3.41**	**286**	Pg	**Pg**	**09 44 13.5**	**+1.0**
BRG				Sg	**Sg**	**09 44 56.1**	**-0.5**
BRG				Amp		09 44 59.9	
	comp=Z,4.8nm,0.5s						
KHC	**Kasperske Hory**	**3.73**	**258**	*e*PN	**Pn**	**09 44 06.0**	**-0.1**
KHC				*e*SG	**Sg**	**09 45 04.0**	**-3.0**
CLL	**Collm**	**4.09**	**290**	*e*Sg	**Sg**	**09 45 19.0**	**+0.6**

IDC ***22*** *09:50:21.4±2.0, 27.˚87S×135.˚72E, h0km, mbtmp4.0/6, ML3.9/5, Error ellipse: s-maj=29.2km s-min=16.1km az=54.0*
NOU ***22*** *09:50:21.7, 27.˚81S×135.˚67E, h0km, mb3.8/10, South Australia*
AUST ***22*** *09:50:24.0±0.3, 28.˚5S±2.˚×13.˚6E±.˚, h10km, ML3.3/11, Error ellipse: s-maj=7.7km s-min=4.5km az=85.7*
ISC 22 09:50:21.9±0.7, 27.˚84S±0.˚05×135.˚57E±0.˚05, h10km, n34, σ2s72/46, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OOD	**Oodnadatta**	**0.11**	**69**	P	**Pg**	**09 50 29.1**	**+4.4**
OOD				S	**Sg**	**09 50 31.6**	**+5.0**
MULG	**Mulgathing**	**2.77**	**208**	P	**Pn**	**09 51 08.6**	**+2.2**
MULG				S	**Sn**	**09 51 42.8**	**+2.9**
LCRK	**Leigh Creek**	**3.48**	**139**	P	**Pn**	**09 51 17.6**	**+1.5**
LCRK				S	**Sn**	**09 51 56.8**	**-0.6**
ASAR	**Alice Springs**	**4.41**	**340**	Pn	**Pn**	**09 51 32.5**	**+3.5**
	2.4nm,0.3s,baz=154,slow=13,SNR=92						
ASAR				Sn	**Sn**	**09 52 23.3**	**+2.8**
	4.0nm,0.3s,baz=162,slow=23,SNR=5.0						
ASAR				Lg	Lg	09 52 44.2	
	8.0nm,0.3s,baz=158,slow=25,SNR=6.7						
	2.2nm,0.4s						
INKA	**Innaminka**	**4.59**	**90**	P	**Pn**	**09 51 31.6**	**+0.3**
YAPP	**Yappala Statio**	**4.67**	**150**	P	**Pn**	**09 51 33.3**	**+0.9**
YAPP				S	**Sn**	**09 52 25.9**	**-0.9**
BBOO	**Buckleboo**	**4.98**	**175**	P	**Pn**	**09 51 37.0**	**+0.3**
BBOO				S	**Sn**	**09 52 31.3**	**-3.0**
BBOO	**Buckleboo**	**4.98**	**175**	P	**Pn**	**09 51 38.1**	**+1.4**
NAPP	**Napperby**	**5.78**	**158**	P	**Pn**	**09 51 49.4**	**+1.7**
HTT	**Hallett**	**6.28**	**153**	P	**Pn**	**09 51 56.1**	**+1.5**
	comp=Z,2.9nm,1.1s,comp=Z,0.0nm						
HTT				S	**Sn**	**09 53 05.3**	**-1.2**
HTT	**Hallett**	**6.28**	**153**	P	**Pn**	**09 51 56.3**	**+1.7**
STKA	**Stephens Creek**	**6.60**	**129**	P	**Pn**	**09 51 59.0**	**0.0**
	comp=Z,28nm,0.7s,comp=Z,0.3nm						
STKA	**Stephens Creek**	**6.60**	**129**	Pn	**Pn**	**09 51 58.6**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=310,slow=14,SNR=18						
STKA				Sn	**Sn**	**09 53 09.5**	**-4.9**
	comp=Z,6.5nm,0.3s,baz=311,slow=20,SNR=8.9						
STKA				Lg	Lg	09 53 46.2	
	comp=Z,3.0nm,0.3s,baz=21,slow=22,SNR=3.1						
	comp=Z,2.8nm,0.3s						
STKA	**Stephens Creek**	**6.60**	**129**	P	**Pn**	**09 51 59.0**	**0.0**
WRKA	**Warakurna**	**7.09**	**291**	P	**Pn**	**09 52 09.8**	**+4.1**
	comp=Z,2.3nm,0.9s,comp=Z,0.0nm						
FORT	**Forrest**	**7.18**	**244**	P	**Pn**	**09 52 08.4**	**+1.5**
	comp=Z,9.0nm,0.8s,comp=Z,0.1nm						
SDAN	**Sedan**	**7.39**	**155**	P	**Pn**	**09 52 10.1**	**+0.3**
	comp=Z,1.7nm,0.4s,comp=Z,0.0nm						
WR0	**Warramunga Arr**	**7.90**	**353**	P	**Pn**	**09 52 19.1**	**+2.3**
WRA	**Warramunga Arr**	**7.94**	**352**	Pn	**Pn**	**09 52 19.4**	**+2.1**
	comp=Z,3.4nm,0.3s,baz=171,slow=12,SNR=81						
WRA				Sn	**Sn**	**09 53 45.0**	**-2.3**
	comp=Z,2.0nm,0.3s,baz=166,slow=24,SNR=6.2						
WRA				Lg	Lg	09 54 33.6	
	comp=Z,1.5nm,0.3s,baz=171,slow=30,SNR=4.9						
	comp=Z,3.4nm,0.3s						
WRAB	**Tennant Creek**	**7.94**	**352**	P	**Pn**	**09 52 19.7**	**+2.2**
QIS	**Mount Isa**	**8.13**	**28**	P	**Pn**	**09 52 21.0**	**+1.1**
	comp=Z,4.4nm,0.9s,comp=Z,0.0nm						
QIS	**Mount Isa**	**8.13**	**28**	P	**Pn**	**09 52 21.3**	**+1.3**
CMSA	**Cobar Meteorol**	**9.55**	**115**	P	**Pn**	**09 52 39.2**	**-0.2**
	comp=Z,6.7nm,2.8s,comp=Z,0.0nm						
CMSA	**Cobar Meteorol**	**9.55**	**115**	P	**Pn**	**09 52 38.7**	**-0.7**
ARPS	**Mount Arapiles**	**10.37**	**151**	P	**Pn**	**09 52 50.7**	**+0.1**
KMBL	**Kambalda**	**12.42**	**250**	P	**Pn**	**09 53 18.3**	**-0.4**
CTA	**Charters Tower**	**12.44**	**54**	Pn	**Pn**	**09 53 18.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=291,slow=3.9,SNR=1.8						
CTA				Sn	**Sn**	**09 55 30.1**	**-7.7**
	comp=Z,0.2nm,0.3s,baz=310,slow=17,SNR=2.0						
	comp=Z,6.1nm,1.0s						
CTAO	**Charters Tower**	**12.44**	**54**	P	**Pn**	**09 53 18.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**13.31**	**315**	Pn	**Pn**	**09 53 32.2**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=140,slow=13,SNR=16						
FITZ				Sn	**Sn**	**09 55 52.8**	**-6.4**
	comp=Z,0.8nm,0.3s,baz=223,slow=19,SNR=5.3						
FITZ				Lg	Lg	09 57 22.6	
	comp=Z,0.2nm,0.3s,baz=154,slow=23,SNR=1.6						
	comp=Z,4.1nm,0.4s						
KNRA	**Kununurra**	**13.64**	**331**	P	**Pn**	**09 53 35.6**	**+0.1**
CAN	**Canberra**	**13.66**	**126**	P	**Pn**	**09 53 35.3**	**-0.4**
MEEK	**Meekatharra**	**15.13**	**271**	P	**Pn**	**09 53 56.8**	**+1.0**
COEN	**Coen**	**15.52**	**29**	P	**Pn**	**09 53 58.6**	**-2.1**
NWAO	**Narrogin (SRO)**	**16.61**	**248**	Pn	**Pn**	**09 54 16.6**	**+1.7**
	comp=Z,3.1nm,0.8s,baz=80,slow=6.1,SNR=1.2						
NWAO				Sn	**Sn**	**09 57 13.1**	**-6.2**
	comp=Z,0.2nm,0.3s,baz=96,slow=6.6,SNR=1.6						
NWAO				Lg	Lg	09 58 57.5	
	comp=Z,0.7nm,0.3s,baz=153,slow=18,SNR=3.6						

IDC ***22*** *10:14:28.0±0.8, 6.˚22N×72.˚34W, h0km, mb3.8/9, mbtmp4.0/12, ML3.9/3, Error ellipse: s-maj=22.2km s-min=15.9km az=112.0*
NEIC ***22*** *10:14:30.9±1.2, 6.˚30N±0.˚07×72.˚09W±0.˚09, h10km±1km, mb4.5/53, Error ellipse: s-maj=16.4km s-min=9.9km az=125.0*
RSNC ***22*** *10:14:32.4±0.0, 6.˚N±1.˚×7.˚2W±.˚, h0km±2km, M4.2, mB5.0, mb4.8, ML3.8, MLv4.7, Mw(mB)4.3*
FUNV ***22*** *10:14:32.1, 6.˚20N×72.˚32W, h5km, MW4.5, Presumed earthquake*
ISC 22 10:14:28.7±1.2, 6.˚27N±0.˚03×72.˚15W±0.˚03, h1km±8km, n121, σ1s86/141, mb4.5/30, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUSC	**La Rusia**	**1.01**	**248**	P	**Pg**	**10 14 47.6**	**-0.5**
RUSC				S	**Sg**	**10 14 58.9**	**-2.3**
RUSC	**La Rusia**	**1.01**	**248**	*e*P	**Pg**	**10 14 47.8**	**-0.3**
RUSC				*e*S	**Sg**	**10 14 58.6**	**-2.5**
BARC	**Barichara**	**1.08**	**287**	P	**Pg**	**10 14 49.1**	**-0.4**
BARC				S	**Sg**	**10 15 01.6**	**-1.9**
PAMC	**Pamplona, Colo**	**1.20**	**333**	P	**Pb**	**10 14 52.4**	**-0.1**
PAMC				S	**Sg**	**10 15 07.8**	**+0.6**
CAPV	**Capacho**	**1.59**	**354**	*e*P	**Pg**	**10 15 01.2**	**+1.9**
CAPV				*e*S	**Sg**	**10 15 23.7**	**+3.8**
BRJC	**Barrancabermej**	**1.73**	**294**	P	**Pn**	**10 15 01.3**	**+1.2**
BRJC				S	**Sn**	**10 15 22.2**	**-0.7**
SPBC	**San Pablo de B**	**2.01**	**252**	P	**Pn**	**10 15 04.5**	**+0.5**
SPBC				S	**Sn**	**10 15 28.2**	**-1.7**
CHIC	**Chingaza**	**2.27**	**224**	P	**Pn**	**10 15 08.7**	**+0.9**
OCAC	**Ocana**	**2.27**	**329**	P	**Pn**	**10 15 10.8**	**+2.5**
OCAC				S	**Sb**	**10 15 40.1**	**+0.6**
PTBC	**PUERTO BERRIO,**	**2.31**	**277**	P	**Pn**	**10 15 09.1**	**+1.1**
PTBC				S	**Sn**	**10 15 36.1**	**-1.1**
SOCV	**Socops**	**2.37**	**33**	*e*P	**Pb**	**10 15 12.2**	**-0.2**
SOCV				*e*S	**Sg**	**10 15 43.7**	**-1.4**
CVER	**Cruz Verde, Cu**	**2.59**	**228**	P	**Pn**	**10 15 14.3**	**+2.0**
CVER				S	**Sn**	**10 15 47.0**	**+2.3**
ROSC	**El Rosal**	**2.59**	**237**	Pn	**Pn**	**10 15 15.1**	**+2.9**
	46nm,0.3s,baz=117,slow=22,SNR=47						
ROSC				Lg	Lg	10 15 49.9	
	151nm,0.3s,baz=17,slow=19,SNR=8.8						
ROSC	**El Rosal**	**2.59**	**237**		**Pn**	**10 15 15.2**	**+3.0**
ROSC	**El Rosal**	**2.59**	**237**	P	**Pn**	**10 15 15.2**	**+3.0**
ROSC				S	**Sb**	**10 15 49.9**	**+1.1**
VILC	**Villavicencio,**	**2.64**	**216**	P	**Pn**	**10 15 15.8**	**+3.1**
VILC				S	**Sb**	**10 15 53.6**	**+3.5**
SDV	**Santo Domingo**	**3.00**	**30**	Pn	**Pn**	**10 15 20.8**	**+3.2**
	30nm,0.3s,baz=215,slow=11,SNR=105						
SDV			

LPAZ	**La Paz**	**22.77 170**	P	**P**	**10 19 34.0**	**+0.5**
AP01	**Chacalluta**	**24.55 176**	P	**P**	**10 19 50.7**	**+0.5**
PB16	**IPOC Station P**	**24.59 174**	P	**P**	**10 19 50.9**	**-0.4**
PB02	**IPOC Station P**	**27.51 175**	P	**P**	**10 20 17.3**	**+0.2**
PB02			IAmb	IAmb	10 20 25.8	
	comp=Z,20nm,1.4s					
346A	**Big Creek Wild**	**29.79 329**	P	**P**	**10 20 36.6**	**-0.6**
Y49A	**Blount Mountai**	**30.47 336**	P	**P**	**10 20 42.5**	**-0.8**
V48A	**Smith Brothers**	**32.28 337**	P	**P**	**10 21 00.6**	**+1.4**
J59A	**Piesco**	**37.10 357**	P	**P**	**10 21 40.8**	**0.0**
OK052	**Battle Ridge R**	**37.23 326**	P	**P**	**10 21 41.6**	**-0.4**
TXAR	**Lajitas Array**	**37.55 311**	P	**P**	**10 21 44.4**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=126,slow=9.4,SNR=17					
	comp=Z,1.1nm,0.7s					
TX31	**Lajitas Ar. Si**	**37.55 311**		**P**	**10 21 45.0**	**+0.1**
POST	**Post**	**38.14 318**	P	**P**	**10 21 49.3**	**-0.5**
POST			IAmb	IAmb	10 21 50.1	
	comp=Z,7.9nm,0.8s					
P38A	**Dawn**	**38.39 333**	P	**P**	**10 21 51.3**	**-0.4**
J47A	**Sunmer**	**38.48 345**	P	**P**	**10 21 52.6**	**+0.3**
SMWD	**Samnorwood**	**38.63 322**	P	**P**	**10 21 53.6**	**-0.3**
SMWD			IAmb	IAmb	10 21 53.9	
	comp=Z,10nm,0.6s					
JFWS	**Jewell Farm**	**39.84 339**	P	**P**	**10 22 03.5**	**-0.4**
JFWS			IAmb	IAmb	10 22 24.9	
	comp=Z,15nm,1.1s					
MNTX	**Cornudas Mount**	**40.05 313**		**P**	**10 22 05.8**	**+0.1**
K30B	**Basset**	**43.63 330**		**P**	**10 22 34.4**	**-0.6**
PV02	**Paradox Valley**	**45.92 319**	P	**P**	**10 22 54.1**	**+0.5**
PV13	**Radium Mtn., P**	**45.95 319**	IAmb	IAmb	10 22 54.9	
	comp=Z,5.5nm,0.7s					
PV18	**Skein Mesa, Pa**	**46.06 319**		**P**	**10 22 55.4**	**+0.8**
PV18			IAmb	IAmb	10 22 56.2	
	comp=Z,5.2nm,0.7s					
PV05	**Paradox Valley**	**46.09 319**	IAmb	IAmb	10 22 55.7	
	comp=Z,5.0nm,0.7s					
WUAZ	**Wupatki**	**46.29 314**		**P**	**10 22 56.5**	**0.0**
WUAZ			IAmb	IAmb	10 22 58.2	
	comp=Z,4.3nm,0.8s					
Y14A	**Wickenburg**	**46.73 312**	IAmb	IAmb	10 23 00.2	
	comp=Z,3.2nm,0.8s					
HMU	**Henry Mountain**	**47.10 318**		**P**	**10 23 03.2**	**+0.4**
HMU			IAmb	IAmb	10 23 18.7	
	comp=Z,5.1nm,1.1s					
U15A	**North Rim**	**47.39 315**	IAmb	IAmb	10 23 06.6	
	comp=Z,2.8nm,0.9s					
KNB	**Kanab**	**48.05 315**	IAmb	IAmb	10 23 19.8	
	comp=Z,4.6nm,1.0s					
ULM	**Lac du Bonnet**	**48.13 340**	P	**P**	**10 23 09.2**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=163,slow=8.5,SNR=4.2					
	comp=Z,2.2nm,0.7s					
ULM	**Lac du Bonnet**	**48.13 340**	IAmb	IAmb	10 23 10.2	
	comp=Z,6.5nm,1.1s					
LCMT	**Little Creek M**	**48.34 315**	IAmb	IAmb	10 23 13.6	
	comp=Z,2.8nm,0.8s					
BSUT	**Blindstream Ca**	**48.53 321**	P	**P**	**10 23 13.4**	**-0.6**
BSUT			IAmb	IAmb	10 23 15.0	
	comp=Z,2.6nm,0.8s					
TCRU	**Three Creeks R**	**48.59 317**	IAmb	IAmb	10 23 17.7	
	comp=Z,5.0nm,1.0s					
SCHQ	**Schefferville**	**48.61 4**	P	**P**	**10 23 13.2**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=188,slow=8.9,SNR=3.8					
	comp=Z,2.3nm,0.7s					
SCHQ	**Schefferville**	**48.61 4**	P	**P**	**10 23 13.8**	**-0.2**
V12A	**Nelson**	**48.89 313**		**P**	**10 23 15.7**	**-0.9**
V12A			IAmb	IAmb	10 23 25.5	
	comp=Z,2.7nm,0.8s					
PDAR	**Pinedale Array**	**49.09 324**	P	**P**	**10 23 17.3**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=127,slow=8.5,SNR=7.3					
	comp=Z,1.0nm,0.8s					
PDAR	**Pinedale Array**	**49.09 324**	P	**P**	**10 23 17.4**	**-0.8**
TCUT	**Toone Canyon**	**49.26 321**	IAmb	IAmb	10 23 20.3	
	comp=Z,4.6nm,0.6s					
BGU	**Big Grassy Mou**	**50.19 320**	IAmb	IAmb	10 23 26.9	
	comp=Z,3.4nm,0.7s					
NVAR	**Mina Array Bea**	**52.56 314**	P	**P**	**10 23 43.7**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=126,slow=7.3,SNR=7.5					
	comp=Z,0.6nm,0.6s					
MFID	**Camas Ranch**	**53.26 321**		**P**	**10 23 48.7**	**-0.7**
PNTR	**Pine Nut**	**53.75 315**	P	**P**	**10 23 52.8**	**-0.3**
PNTR			IAmb	IAmb	10 23 58.2	
	comp=Z,2.7nm,0.7s					
PINE	**Pine Mountain**	**56.70 319**	IAmb	IAmb	10 24 15.3	
	comp=Z,3.8nm,0.8s					
YKA	**Yellowknife Ar**	**64.11 340**	P	**P**	**10 25 03.7**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=134,slow=6.0,SNR=16					
	comp=Z,0.5nm,0.5s					
YKA	**Yellowknife Ar**	**64.11 340**	P	**P**	**10 25 04.0**	**-0.4**
A36M	**Sachs Harbour**	**73.21 345**	P	**P**	**10 26 00.7**	**-0.4**
A36M			IAmb	IAmb	10 26 01.6	
	comp=Z,3.0nm,0.7s					
ILAR	**Eielson Array**	**77.87 335**	P	**P**	**10 26 26.1**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=92,slow=5.8,SNR=4.6					
	comp=Z,0.1nm,0.4s					
NOA	**NORSAR Array B**	**81.33 29**	P	**P**	**10 26 47.3**	**+0.4**
	comp=Z,2.2nm,1.1s,baz=267,slow=5.3,SNR=2.2					
	comp=Z,2.2nm,1.1s					
HHC	**Hu-ho-hao-te**	**132.99 356**	*e*P	**PKPdf**	**10 33 42.3**	**-4.3**
NJ2	**Nanjing**	**140.47 345**	*e*P	**PKPdf**	**10 33 59.8**	**-0.8**
NJ2			pmax	pmax		
	comp=Z,5.0nm,0.5s					
PZH	**PanZhiHua**	**146.88 10**	PKPbc	**PKPdf**	**10 34 11.3**	**-0.8**
ASAR	**Alice Springs**	**149.56 233**	PKPbc	**PKPdf**	**10 34 18.4**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=116,slow=3.1,SNR=15					
ASAR	**Alice Springs**	**149.56 233**		**PKPdf**	**10 34 19.1**	**+2.6**
WRA	**Warramunga Arr**	**150.91 240**	PKPbc	**PKPdf**	**10 34 22.1**	**+3.4**
	comp=Z,1.3nm,0.6s,baz=112,slow=2.3,SNR=16					
WRA	**Warramunga Arr**	**150.91 240**		**PKPbc**	**10 34 23.6**	**-0.7**

IDC 22 10:31:29.7±2.8, 6°87S×119°48E, h0km, mb2.9/2, mbtmp3.0/3, ML3.5/1, Error ellipse: s-maj=291.6km s-min=29.1km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.41**	**133**	P	P	10 35 57.8	+0.2
	0.1nm,0.3s,baz=308,slow=9.6,SNR=9.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.70**	**142**	P	P	10 36 22.3	-0.2
	0.3nm,0.8s,baz=321,slow=8.9,SNR=4.4						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**62.80**	**332**	P	P	10 41 57.1	0.0
	0.1nm,0.4s,baz=134,slow=6.2,SNR=1.7						
	0.1nm,0.4s						

*NOU **22** 10:34:00.6, 14°82S×176°79W, h365km, mb4.6/18, Fiji Islands Region*
*NEIC **22** 10:34:06.2±1.5, 15°0S±0°1×177°5W±0°1, h366km±9km, mb4.1/19, Error ellipse: s-maj=17.6km s-min=13.2km az=153.0*
*IDC **22** 10:34:09.3±2.6, 14°99S×177°64W, h399km±26km, mb3.5/11, mbtmp4.3/12, Error ellipse: s-maj=20.5km s-min=11.2km az=143.0*

ISC 22 10:34:06.4±0.5, 15°05S±0°08×177°47W±0°06, h372km, n101, σ1§64/103, mb4.0/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**2.86**	**235**	P	**Pn**	**10 35 06.9**	**+0.6**
DGTI	**Dogotuki**	**2.96**	**245**	P	**Pn**	**10 35 06.9**	**-0.2**
MSVF	**Nonsavu**	**5.06**	**238**		**Pn**	**10 35 28.5**	**+0.7**
MSVF	**Nonsavu**	**5.06**	**238**	P	**Pn**	**10 35 28.8**	**+1.0**
AFI	**Afiamalu**	**5.63**	**79**		**Pn**	**10 35 32.0**	**-2.1**
AFI	**Afiamalu**	**5.63**	**79**	P	**Pn**	**10 35 32.3**	**-1.7**
FUNA	**Funafuti**	**7.26**	**333**	Pn	**Pn**	**10 35 50.7**	**-1.7**
NIUE	**Niue**	**8.25**	**120**	Pn	**Pn**	**10 36 03.9**	**+0.1**
NIUE	**Niue**	**8.25**	**120**	P	**Pn**	**10 36 01.8**	**-2.1**
NIUE				S	**S**	**10 37 40.7**	**+0.8**
DVP	**Devils Point**	**14.02**	**257**	P	**Pn**	**10 37 12.2**	**+0.8**
MARNC	**Mare, Loyalty**	**15.18**	**243**	P	**P**	**10 37 22.6**	**+0.6**
DZM	**Mont Dzumac**	**16.76**	**243**	P	**P**	**10 37 40.0**	**+0.7**
	13nm,0.5s,baz=47,slow=20,SNR=30						
DZM	**Mont Dzumac**	**16.76**	**243**		**Pn**	**10 37 43.1**	**-0.1**
DZM				IAmb	IAmb	10 37 56.3	
	comp=Z,12nm,0.8s						
DZM	**Mont Dzumac**	**16.76**	**243**	P	**Pn**	**10 37 41.9**	**-1.3**
OUZ	**Omahuta**	**21.63**	**200**	P	**P**	**10 38 27.7**	**+0.2**
OUZ	**Omahuta**	**21.63**	**200**	P	**P**	**10 38 29.1**	**+1.6**
WCZ	**Waipu Caves**	**22.05**	**198**	P	**P**	**10 38 32.9**	**+1.5**
WIAZ	**Waiheke Island**	**22.63**	**196**	P	**P**	**10 38 37.1**	**+0.4**
ETAZ	**East Tamaki Re**	**22.84**	**196**	P	**P**	**10 38 39.2**	**+0.7**
MKAZ	**Moumakai**	**22.92**	**195**	P	**P**	**10 38 39.6**	**+0.3**
SAVO	**Savo Central**	**22.96**	**282**	P	**P**	**10 38 40.6**	**+0.6**
WMGZ	**Waiomatatini S**	**22.97**	**188**	P	**P**	**10 38 38.5**	**-1.2**
HAZ	**Te Kaha**	**23.00**	**190**	P	**P**	**10 38 37.8**	**-2.1**
TATA	**Tatamba Isabel**	**23.20**	**284**	P	**P**	**10 38 41.5**	**-0.6**
PUZ	**Puketiti**	**23.24**	**189**	P	**P**	**10 38 40.1**	**-2.0**
TGRZ	**Tauranga**	**23.26**	**193**	P	**P**	**10 38 42.9**	**+0.6**
TWGZ	**Tauwhareparae**	**23.38**	**189**	P	**P**	**10 38 42.3**	**-1.2**
URZ	**Urewera**	**23.61**	**191**	P	**P**	**10 38 42.0**	**-3.4**
URZ	**Urewera**	**23.61**	**191**	P	**P**	**10 38 41.6**	**-3.9**
MWZ	**Matawai**	**23.61**	**190**	P	**P**	**10 38 42.1**	**-3.4**
CNGZ	**Carnagh Statio**	**23.65**	**188**	P	**P**	**10 38 43.9**	**-1.9**
TKGZ	**Te Karaka**	**23.66**	**189**	P	**P**	**10 38 44.3**	**-1.6**
RIGZ	**Rimuhau**	**23.93**	**189**	P	**P**	**10 38 46.7**	**-1.8**
RAHZ	**Arahi**	**24.25**	**190**	P	**P**	**10 38 49.6**	**-1.7**
MRHZ	**Matea Rd**	**24.29**	**192**	P	**P**	**10 38 50.5**	**-1.2**
BKZ	**Black Stump Fm**	**24.60**	**191**	P	**P**	**10 38 51.3**	**-3.2**
BKZ	**Black Stump Fm**	**24.60**	**191**	P	**P**	**10 38 51.2**	**-3.3**
PXZ	**Pawanui**	**25.37**	**190**	P	**P**	**10 38 58.6**	**-2.7**
BFZ	**Birch Farm**	**26.11**	**191**	P	**P**	**10 39 06.1**	**-1.8**
BFZ	**Birch Farm**	**26.11**	**191**	P	**P**	**10 39 05.0**	**-2.9**
MRZ	**Mangatainoka R**	**26.22**	**192**	P	**P**	**10 39 03.3**	**-5.5**
TCW	**Tory Channel**	**27.03**	**194**	P	**P**	**10 39 16.0**	**0.0**
QRZ	**Quartz Range**	**27.11**	**197**	P	**P**	**10 39 15.6**	**-1.1**
QRZ	**Quartz Range**	**27.11**	**197**	P	**P**	**10 39 15.8**	**-0.9**
NNZ	**Nelson**	**27.25**	**195**	P	**P**	**10 39 15.9**	**-2.0**
THZ	**Tophouse**	**27.89**	**196**	P	**P**	**10 39 21.5**	**-2.1**
KHZ	**Kahutara**	**28.35**	**194**	P	**P**	**10 39 24.9**	**-2.7**
GVZ	**Greta Valley S**	**28.99**	**194**	P	**P**	**10 39 30.5**	**-2.7**
LTZ	**Lake Taylor**	**29.01**	**196**	P	**P**	**10 39 30.6**	**-2.9**
INZ	**Inchbonnie**	**29.18**	**197**	P	**P**	**10 39 33.4**	**-1.5**
OXZ	**Oxford**	**29.58**	**196**	P	**P**	**10 39 35.9**	**-2.5**
RPZ	**Rata Peaks**	**30.20**	**197**	P	**P**	**10 39 42.5**	**-1.4**
RPZ	**Rata Peaks**	**30.20**	**197**	P	**P**	**10 39 46.2**	**+2.4**
FOZ	**Fox Glacier**	**30.39**	**198**	P	**P**	**10 39 42.4**	**-3.1**
JCZ	**Jackson Bay**	**31.20**	**199**	P	**P**	**10 39 51.3**	**-1.4**
JCZ	**Jackson Bay**	**31.20**	**199**	P	**P**	**10 39 51.2**	**-1.4**
ARMA	**Armidale**	**32.21**	**236**	P	**P**	**10 40 02.5**	**+0.9**
ARMA				IAmb	IAmb	10 40 18.2	
	comp=Z,10nm,1.1s						
MLZ	**Mavora Lakes**	**32.58**	**199**	P	**P**	**10 40 03.6**	**-0.8**
WHZ	**Wether Hill Ro**	**33.10**	**199**	P	**P**	**10 40 08.4**	**-0.5**
CTAO	**Charters Tower**	**34.90**	**256**	P	**P**	**10 40 24.8**	**+0.2**
CTAO				IAmb	IAmb	10 40 40.6	
	comp=Z,12nm,1.1s						
CTAO	**Charters Tower**	**34.90**	**256**	P	**P**	**10 40 25.2**	**+0.6**
PMG	**Port Moresby**	**34.99**	**275**	P	**P**	**10 40 26.0**	**+0.6**
PMG				IAmb	IAmb	10 40 29.6	
	comp=Z,10.0nm,0.8s						
CMSA	**Cobar Meteorol**	**37.39**	**237**	P	**P**	**10 40 45.8**	**+0.5**
COEN	**Coen**	**38.08**	**266**	P	**P**	**10 40 51.9**	**+0.6**
COEN				IAmb	IAmb	10 40 54.1	
	comp=Z,7.8nm,0.9s						
TOO	**Toolangi**	**39.69**	**229**	P	**P**	**10 41 03.8**	**-0.4**
BBOO	**Buckleboo**	**45.61**	**239**		**P**	**10 41 51.2**	**-0.1**
WB0	**Warramunga Arr**	**46.05**	**257**	P	**P**	**10 41 54.1**	**-0.8**
WB0				IAmb	IAmb	10 41 54.6	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**46.10**	**257**	P	**P**	**10 41 54.3**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=98,slow=13,SNR=25						
WRA				PcP	**PcP**	**10 43 24.1**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=102,slow=3.2,SNR=2.3						
WRA				S	**S**	**10 48 09.8**	**-2.7**
	comp=Z,0.5nm,0.8s,baz=96,slow=14,SNR=4.5						
	comp=Z,1.5nm,0.7s						
WRA	**Warramunga Arr**	**46.10**	**257**	P	**P**	**10 41 54.8**	**-0.5**
AS31	**Alice Springs**	**46.48**	**252**		**P**	**10 41 58.0**	**-0.3**
AS31				IAmb	IAmb	10 41 59.5	
	comp=Z,7.0nm,0.7s						
ASAR	**Alice Springs**	**46.49**	**252**	P	**P**	**10 41 57.5**	**-0.7**
	comp=Z,24nm,0.7s,baz=85,slow=8.2,SNR=6.0						
ASAR				PcP	**PcP**	**10 43 25.7**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=89,slow=3.3,SNR=2.2						
ASAR				S	**S**	**10 48 15.1**	**-2.9**
	comp=Z,1.4nm,0.7s,baz=82,slow=16,SNR=12						
	comp=Z,24nm,0.7s						
ASAR	**Alice Springs**	**46.49**	**252**		**P**	**10 41 58.2**	**-0.1**
MTN	**Manton Dam**	**49.84**	**266**	P	**P**	**10 42 23.5**	**-0.1**
MTN				IAmb	IAmb	10 42 47.3	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**51.73**	**262**	P	**P**	**10 42 36.8**	**-0.7**
KNRA				IAmb	IAmb	10 42 37.7	
	comp=Z,7.5nm,0.8s						
FORT	**Forrest**	**52.08**	**243**	P	**P**	**10 42 39.9**	**0.0**
SOEI	**Soe**	**57.02**	**268**	P	**P**	**10 43 14.9**	**-0.5**
SBA	**Scott Base**	**63.31**	**184**	P	**P**	**10 43 59.2**	**+2.8**
SBA				IAmb	IAmb	10 44 00.3	
	comp=Z,8.6nm,0.9s						
VNDA	**Vanda**	**63.35**	**185**	P	**P**	**10 43 57.8**	**+1.1**
	comp=Z,3.1nm,0.9s,baz=11,slow=5.2,SNR=14						
	comp=Z,3.1nm,0.9s						
VNDA	**Vanda**	**63.35**	**185**	P	**P**	**10 43 58.4**	**+1.7**
VNDA				IAmb	IAmb	10 44 05.0	
	comp=Z,6.1nm,1.1s						
PETK	**Petropavlovsk-**	**71.17**	**344**	P	**P**	**10 44 46.7**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=196,slow=7.7,SNR=1.8						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**74.99**	**180**	P	**P**	**10 45 08.4**	**+0.8**
	comp=Z,5.5nm,0.6s,baz=11,slow=4.0,SNR=7.3						
	comp=Z,6.5nm,0.6s						
QSPA	**South Pole Qui**	**74.99**	**180**		**P**	**10 45 08.5**	**+0.8**
NVAR	**Mina Array Bea**	**76.75**	**44**	P	**P**	**10 45 18.6**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=232,slow=9.5,SNR=8.9						
	comp=Z,1.6nm,0.9s						
J05D	**Fort Rock, OR**	**77.54**	**38**		**P**	**10 45 23.1**	**+0.8**
ILAR	**Eielson Array**	**82.92**	**13**	P	**P**	**10 45 49.2**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=216,slow=6.1,SNR=21						
	comp=Z,2.2nm,0.9s						
TXAR	**Lajitas Array**	**83.71**	**58**	P	**P**	**10 45 56.4**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=222,slow=6.4,SNR=24						
	comp=Z,2.0nm,0.8s						
PDAR	**Pinedale Array**	**84.67**	**43**	P	**P**	**10 45 59.7**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=204,slow=3.3,SNR=6.3						
	comp=Z,0.7nm,0.7s						
BELA	**Belgrano 2**	**84.87**	**173**	P	**P**	**10 46 00.2**	**+0.5**
HHC	**Hu-ho-hao-te**	**85.94**	**314**	*e*P	**P**	**10 46 05.4**	**-0.3**
HHC	**Hu-ho-hao-te**	**85.94**	**314**	pmax	pmax		
	comp=Z,89nm,5.9s						
HHC	**Hu-ho-hao-te**	**85.94**	**314**	pmax	pmax		
	comp=Z,11nm,0.6s						
YKA	**Yellowknife Ar**	**91.38**	**24**	P	**P**	**10 46 30.4**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=244,slow=4.9,SNR=3.7						
	comp=Z,0.2nm,0.8s						
YKA	**Yellowknife Ar**	**91.38**	**24**	P	**P**	**10 46 30.2**	**-0.3**
SONM	**Songino Array**	**91.99**	**319**	P	**P**	**10 46 35.3**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=128,slow=4.0,SNR=2.2						
	comp=Z,0.2nm,0.3s						
BVAR	**Borovoye Array**	**115.19**	**322**	PKP	**PKPdf**	**10 52 02.9**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=80,slow=3.4,SNR=1.9						
ARCES	**ARCESS Array B**	**123.67**	**351**	PKP	**PKPdf**	**10 52 18.9**	**-0.9**
	comp=Z,6.1nm,1.1s,baz=90,slow=2.4,SNR=5.6						
FINES	**FINESS Array B**	**130.69**	**345**	PKP	**PKPdf**	**10 52 33.1**	**-0.2**
	comp=Z,8.9nm,1.1s,baz=358,slow=13,SNR=3.9						
BRTR	**Keskin Array B**	**143.34**	**318**	PKP	PKPbc	10 52 55.2	-0.3
	comp=Z,1.4nm,0.9s,baz=90,slow=2.9,SNR=6.0						
MODS	**Modra-Piesok**	**144.62**	**343**	*e*PKP	**PKPdf**	**10 52 59.9**	**+0.6**
GERES	**GERESS Array B**	**145.07**	**347**	PKP	**PKPdf**	**10 52 59.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=8.5,slow=2.0,SNR=3.9						
MMAI	**Mount Meron Ar**	**145.26**	**307**	PKPbc	**PKPab**	**10 53 02.1**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=51,slow=9.4,SNR=2.1						

*NNC **22** 10:40:54.6±0.8, 43°07N×79°51E, h0km, mb3.7, mpv2.6, Error ellipse: s-maj=7.3km s-min=3.2km az=170.0*
*SOME **22** 10:40:54.8, 43°08N×79°52E, h15km*

ISC 22 10:40:53.9±1.4, 43°04N±0°08×79°56E±0°04, h28km±7km, n12, σ1§19/24, 4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.13**	**328**	P	**Pn**	**10 41 01.0**	**+0.7**
	4.7nm,0.2s						
SHLS				S	**Sb**	**10 41 05.5**	**+2.3**
	29nm,0.1s						
SHLS	**Shalkode**	**0.13**	**328**	*e*P	**Pn**	**10 41 01.0**	**+0.7**
	4.7nm,0.2s						
SHLS				*e*S	**Sb**	**10 41 05.6**	**+2.3**
	19nm,0.2s						
PDGK	**Podgornoye**	**0.29**	**350**	⇓P	**Pb**	**10 41 00.3**	**-0.9**
	3.0nm,0.4s						
PDGK				⇓S	**Sb**	**10 41 04.7**	**-1.6**
	4.8nm,0.3s						
UZB	**Uzynbulak**	**0.41**	**285**	P	**Pb**	**10 41 02.2**	**-0.7**
	5.5nm,0.1s						
UZB				S	**Sb**	**10 41 07.4**	**-1.6**
	24nm,0.1s						
UZB	**Uzynbulak**	**0.41**	**285**	*e*P	**Pb**	**10 41 02.2**	**-0.7**
	5.5nm,0.1s						
UZB				*e*S	**Sb**	**10 41 07.7**	**-1.3**
	25nm,0.1s						
KTMS	**Ketmen**	**0.71**	**55**	P	**Pn**	**10 41 07.8**	**-0.4**
	0.9nm,0.1s						
KTMS				S	**Sb**	**10 41 17.3**	**0.0**
	4.8nm,0.2s						
KTMS	**Ketmen**	**0.71**	**55**	*e*P	**Pn**	**10 41 07.8**	**-0.4**
	0.9nm,0.1s						
KTMS				*e*S	**Sb**	**10 41 17.3**	**0.0**
	4.8nm,0.2s						
KPKS	**Kokpek**	**0.77**	**304**	P	**Pn**	**10 41 08.4**	**-0.6**
	0.2nm,0.1s						
KPKS				S	**Sb**	**10 41 18.3**	**-0.6**
	11nm,0.2s						
KPKS	**Kokpek**	**0.77**	**304**	*e*P	**Pn**	**10 41 08.4**	**-0.6**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**10 41 18.3**	**-0.6**
	11nm,0.2s						
SATY	**Saty**	**0.84**	**271**	P	**Pb**	**10 41 10.2**	**0.0**
	1.5nm,0.1s						
SATY				S	**Sn**	**10 41 21.3**	**-0.3**
	16nm,0.1s						
KNOS	**Konyrlen**	**1.34**	**348**	P	**Pb**	**10 41 19.0**	**+0.5**
	0.7nm,0.1s						
KNOS				S	**Sb**	**10 41 36.7**	**+1.3**
	3.4nm,0.2s						
KNDC	**Almaty**	**1.91**	**276**	⇓P	**Pb**	**10 41 29.2**	**+1.2**
	8.4nm,0.2s						
KNDC				⇓S	**Sb**	**10 41 53.4**	**+1.9**
	26nm,0.3s						

*IDC **22** 10:42:13.3±1.2, 26°98N×143°68E, h0km, mb3.5/6, mbtmp3.5/7, ML3.1/1, Error ellipse: s-maj=24.6km s-min=22.4km az=52.0*

ISC 22 10:42:18.4±1.2, 27°0N±0°1×143°7E±0°1, h35km, n8, σ0§83/9, mb3.6/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.32**	**273**	Pn	**Pn**	**10 42 39.6**	**-0.7**
	18nm,0.3s,baz=185,slow=18,SNR=20						
JCJ				Sn	**Sn**	**10 42 57.2**	**+0.4**
	59nm,0.3s,baz=127,slow=20,SNR=17						
MJAR	**Matsushiro Arr**	**10.55**	**335**	Pn	**Pn**	**10 44 46.2**	**-0.9**
	0.2nm,0.3s,baz=158,slow=10,SNR=9.9						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**47.56**	**192**	P	**P**	**10 50 50.1**	**-0.6**
	0.7nm,0.6s,baz=12,slow=8.6,SNR=6.1						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**51.28**	**191**	P	**P**	**10 51 18.9**	**0.0**
	0.3nm,0.8s,baz=15,slow=9.0,SNR=1.6						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**51.53**	**310**	P	**P**	**10 51 21.7**	**+1.0**
	0.2nm,0.5s,baz=108,slow=7.7,SNR=3.0						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**54.03**	**314**	P	**P**	**10 51 39.4**	**+0.4**
	0.4nm,0.5s,baz=92,slow=8.1,SNR=3.0						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**57.13**	**29**	P	**P**	**10 52 01.0**	**-0.1**
	0.4nm,0.8s,baz=272,slow=8.3,SNR=4.8						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**58.98**	**318**	P	**P**	**10 52 15.4**	**+1.1**
	0.5nm,0.4s,baz=86,slow=7.4,SNR=1.7						
	0.5nm,0.4s						

*TAP **22** 10:44:06.0, 25°35N×122°28E, h203km, ML3.5, C*
*JMA **22** 10:44:06.7±0.3, 25°2N±3°×122°2E±0°8, h198km±2km, MV2.8/12, TAIWAN REGION*

ISC 22 10:44:05.8±2.3, 25°29N±0°09×122°27E±0°04, h201km±13km, n77, σ0§62/135, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.38**	**222**	*i* P	**Pn**	**10 44 33.2**	**+0.6**
PCYT	**Pengchaiyu**	**0.38**	**332**	*e*P	**Pn**	**10 44 32.7**	**+0.2**
PCYT				S	**S**	**10 44 52.5**	**-1.1**
SXI1	**Grass Mountain**	**0.41**	**241**	P	**Pn**	**10 44 33.4**	**+0.7**
SXI1

OWD				*e*S	**S**	**10 45 08.1**	**-0.1**
WUSB	**Renai**	**1.66**	**219**	*e*P	**Pn**	**10 44 41.9**	**+0.6**
WUSB				*e*S	**S**	**10 45 08.7**	**+0.4**
WCS	**Beigang Elemen**	**1.74**	**225**	*i* P	**Pn**	**10 44 42.1**	**+0.3**
WCS				*i* S	**S**	**10 45 09.1**	**-0.1**
WARBT	**Fenglin Townsh**	**1.76**	**207**	*e*P	**Pn**	**10 44 41.1**	**-0.9**
WARBT				*e*S	**S**	**10 45 07.8**	**-1.9**
VWDT	**VWDT**	**1.84**	**214**	*e*P	**Pn**	**10 44 43.9**	**+1.1**
VWDT				*e*S	**S**	**10 45 12.1**	**+1.1**
SMLT	**Sun Moon Lake**	**1.88**	**222**	*e*P	**Pn**	**10 44 44.0**	**+0.7**
SMLT				*e*S	**S**	**10 45 12.4**	**+0.7**
TYC	**Yuchr**	**1.89**	**223**	*e*P	**Pn**	**10 44 43.8**	**+0.6**
TYC				*e*S	**S**	**10 45 12.2**	**+0.5**
JKRS	**Kuro-shima**	**1.90**	**123**	*e*P	**Pn**	**10 44 43.7**	**+0.3**
JKRS				*e*S	**S**	**10 45 11.8**	**-0.1**
SSLB	**Suanglung**	**1.92**	**219**	P	**Pn**	**10 44 43.7**	**+0.1**
SSLB	**Suanglung**	**1.92**	**219**	S	**S**	**10 45 11.9**	**-0.5**
SSLB	**Suanglung**	**1.92**	**219**	*i* P	**Pn**	**10 44 43.9**	**+0.4**
SSLB				*i* S	**S**	**10 45 12.1**	**-0.3**
JIJ	**Ishigaki jima**	**1.94**	**118**	*e*P	**Pn**	**10 44 43.9**	**+0.2**
JIJ				*e*S	**S**	**10 45 11.3**	**-1.3**
HGSD	**Ruisui**	**1.95**	**203**	P	**Pn**	**10 44 44.2**	**+0.3**
HGSD				*e*S	**S**	**10 45 13.6**	**+0.7**
EHYH	**Wanrong**	**1.98**	**205**	*e*P	**Pn**	**10 44 43.9**	**-0.3**
JISG	**Ishigakijimahi**	**1.98**	**110**	*e*S	**S**	**10 45 12.8**	**-0.6**
WNT	**Mingjian**	**2.01**	**226**	*e*S	**S**	**10 45 14.6**	**+0.6**
WJS	**Zhushan**	**2.03**	**224**	*e*P	**Pn**	**10 44 45.8**	**+1.1**
WJS				*e*S	**S**	**10 45 14.9**	**+0.6**
WHYT	**Xinyi Township**	**2.04**	**219**	P	**Pn**	**10 44 45.4**	**+0.5**
WHYT				S	**S**	**10 45 14.7**	**0.0**
YULB	**Yu-li**	**2.09**	**205**	P	**Pn**	**10 44 45.2**	**-0.1**
YULB	**Yu-li**	**2.09**	**205**	*e*P	**Pn**	**10 44 44.5**	**-0.8**
YUS	**Yu-Shan**	**2.16**	**214**	*e*P	**Pn**	**10 44 47.1**	**+0.6**
YUS				*e*S	**S**	**10 45 19.2**	**+1.6**
WRL	**Guolierlin Hig**	**2.21**	**232**	*e*S	**S**	**10 45 16.8**	**-0.8**
ALS	**Alishan**	**2.22**	**217**	*e*P	**Pn**	**10 44 47.3**	**+0.3**
ALS				*e*S	**S**	**10 45 19.1**	**+0.7**
CHN5	**Tsauling**	**2.22**	**221**	*e*P	**Pn**	**10 44 47.1**	**+0.3**
CHN5				*e*S	**S**	**10 45 18.3**	**+0.2**
JTJ	**Tarama**	**2.30**	**106**	*e*P	**Pn**	**10 44 48.2**	**+0.7**
JTJ				*e*S	**S**	**10 45 19.4**	**0.0**
TPUB	**Ta-pu**	**2.48**	**217**	P	**Pn**	**10 44 49.6**	**0.0**
TPUB	**Ta-pu**	**2.48**	**217**	S	**S**	**10 45 22.2**	**-0.8**
TPUB	**Ta-pu**	**2.48**	**217**	*e*P	**Pn**	**10 44 49.7**	**0.0**
TPUB				*i* S	**S**	**10 45 22.7**	**-0.4**
WTP	**Ta-pu**	**2.53**	**217**	*e*P	**Pn**	**10 44 50.1**	**-0.1**
WTP				*e*S	**S**	**10 45 24.6**	**+0.4**
JMJ2	**Miyako jima3**	**2.83**	**101**	*e*S	**S**	**10 45 30.3**	**+0.4**

FCIAR ***22*** *11:21:41.0, 76˚.45N×7˚.51E, h10km*
NAO ***22*** *11:21:42.4±0.7, 76˚.61N×7˚.21E, h10km, ML2.6*
BER ***22*** *11:21:44.0±2.4, 76˚.54N×7˚.46E, h10km, Mw3.8, ML3.2(NAO), Confirmed Earthquake*
DNK ***22*** *11:21:44.4±0.8, 76˚.66N×7˚.00E, h15km±12km, ML2.1, Presumed earthquake*
KOLA ***22*** *11:21:48.0, 76˚.86N×9˚.28E, h0km, ML2.4, Error ellipse: s-maj=7.3km s-min=5.0km az=40.0, Greenland sea*

ISC 22 11:21:39.4±1.6, 76˚.60N±0˚.05×7˚.24E±0˚.04, h12km±11km, n31, σ2^{2}28/53, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**1.95**	**74**	Pn	**Pb**	**11 22 15.0**	**+0.3**
HSPB				Sn	**Sn**	**11 22 36.0**	**-0.5**
HSPB	**Hornsund (broa**	**1.95**	**74**	*e*P	**Pb**	**11 22 15.0**	**+0.3**
HSPB				*e*S	**Sn**	**11 22 36.8**	**+0.4**
HSPB				IAML		11 22 37.2	
	comp=Z,26nm,0.1s						
HSPB	**Hornsund (broa**	**1.95**	**74**	*e*P	**Pb**	**11 22 15.2**	**+0.5**
HSPB				*e*S	**Sg**	**11 22 40.1**	**-1.8**
HSPB	**Hornsund (broa**	**1.95**	**74**	P	**Pb**	**11 22 14.8**	**+0.1**
HSPB				S	**Sn**	**11 22 31.9**	**-4.5**
BRBA	**Barentsburg A**	**2.13**	**43**	Pn	**Pb**	**11 22 17.9**	**+0.2**
BRBA	**Barentsburg A**	**2.13**	**43**	*e*P	**Pg**	**11 22 19.8**	**-0.3**
BRBA				IAML		11 22 41.1	
	comp=Z,10nm,0.3s						
BRBA				*e*S	**Sb**	**11 22 41.2**	**-2.9**
BRBB	**Barentsburg B**	**2.15**	**42**	Pn	**Pb**	**11 22 18.6**	**+0.5**
BRBB	**Barentsburg B**	**2.15**	**42**	*e*P	**Pg**	**11 22 18.8**	**-1.8**
BRBB				*e*S	**Sb**	**11 22 42.1**	**-2.6**
BRBB	**Barentsburg B**	**2.15**	**42**	P	**Pg**	**11 22 20.1**	**-0.4**
BRBB				S	**Sn**	**11 22 40.4**	**-1.0**
KBS	**Kingsbay**	**2.55**	**21**	Pn	**Pb**	**11 22 23.8**	**-1.2**
KBS				Sn	**Sn**	**11 22 51.4**	**+0.2**
KBS	**Kingsbay**	**2.55**	**21**	*e*P	**Pb**	**11 22 23.7**	**-1.2**
KBS				IAML		11 22 56.5	
	comp=Z,12nm,0.1s						
KBS	**Kingsbay**	**2.55**	**21**	P	**Pb**	**11 22 23.5**	**-1.4**
KBS				S	**Sn**	**11 22 51.6**	**+0.4**
KBS	**Kingsbay**	**2.55**	**21**	*i* P	**Pb**	**11 22 24.1**	**-0.8**
SPA0	**Spitsbergen Ar**	**2.56**	**47**	Pn	**Pb**	**11 22 25.0**	**-0.1**
	baz=227,slow=16						
SPA0				Sn	**Sb**	**11 22 54.1**	**-2.3**
	baz=230,slow=22						
SPA0	**Spitsbergen Ar**	**2.56**	**47**	Pn	**Pb**	**11 22 25.0**	**-0.1**
SPA0				Sn	**Sb**	**11 22 54.1**	**-2.3**
SPA0	**Spitsbergen Ar**	**2.56**	**47**	*e*P	**Pb**	**11 22 23.0**	**-2.1**
SPA0				*e*S	**Sb**	**11 22 55.4**	**-1.0**
SPITS	**Spitsbergen Ar**	**2.56**	**47**	P	**Pb**	**11 22 24.8**	**-0.3**
SPITS				S	**Sn**	**11 22 51.1**	**-0.4**
HOPEN	**Hopen**	**4.14**	**83**	Pn	**Pn**	**11 22 46.2**	**+3.9**
HOPEN				Sn	**Sn**	**11 23 31.3**	**+0.8**
HOPEN	**Hopen**	**4.14**	**83**	*e*P	**Pn**	**11 22 46.2**	**+3.9**
HOPEN				*e*S	**Sn**	**11 23 30.5**	**0.0**
HOPEN				IAML		11 23 43.6	
	comp=Z,22nm,0.3s						
DAG	**Danmarks Havn**	**5.96**	**284**	*e*P	**Pn**	**11 23 10.3**	**+3.2**
DAG	**Danmarks Havn**	**5.96**	**284**	*i* P	**Pn**	**11 23 10.1**	**+3.0**
DAG				*i* S	**Sn**	**11 24 13.2**	**-2.0**
DAG				IAML		11 24 16.1	
	comp=Z,7.0nm,0.7s						
NOR	**Nord**	**6.69**	**329**	Pn	**Pn**	**11 23 19.6**	**+2.5**
NOR	**Nord**	**6.69**	**329**	*e*P	**Pn**	**11 23 19.5**	**+2.3**
NOR	**Nord**	**6.69**	**329**	*i* P	**Pn**	**11 23 19.6**	**+2.5**
NOR				*i* S	**Sn**	**11 24 30.7**	**-2.4**
NOR				IAML		11 24 34.9	
	comp=Z,5.7nm,0.9s						
DBG	**Daneborg**	**7.24**	**265**	Pn	**Pn**	**11 23 25.9**	**+1.2**
DBG	**Daneborg**	**7.24**	**265**	*i* P	**Pn**	**11 23 27.2**	**+2.5**
DBG				*i* S	**Sn**	**11 24 43.7**	**-2.8**
DBG				IAML		11 24 48.5	
	comp=Z,4.3nm,0.7s						
ZFI2	**Zemlya Franca-**	**8.77**	**43**	*e*P	**Pn**	**11 23 48.0**	**+2.4**
ZFI2				*e*S	**Sn**	**11 25 27.6**	**+3.5**
OMEGA	**Omega**	**8.78**	**43**	*e*P	**Pn**	**11 23 48.0**	**+2.2**
OMEGA				*e*S	**Sn**	**11 25 27.6**	**+3.2**
ARA0	**ARCESS Array S**	**8.81**	**134**	Pn	**Pn**	**11 23 48.7**	**+2.4**
	baz=334,slow=12						
ARA0				Sn	**Sn**	**11 25 20.3**	**-5.0**
	baz=335,slow=22						
ARA0	**ARCESS Array S**	**8.81**	**134**	Pn	**Pn**	**11 23 48.7**	**+2.4**
ARA0				Sn	**Sn**	**11 25 20.3**	**-5.0**
NEEM	**North Greenlan**	**12.67**	**302**	*i* P	**Pn**	**11 24 38.6**	**-0.6**
NEEM				*i* S	Sn	11 26 46.4	-14
NEEM				IAML		11 27 27.1	
	comp=Z,4.9nm,0.9s						

RSNC ***22*** *11:24:53.3±0.0, 6˚N±3˚×7˚2W±˚, h~1km±5km, M2.8, ML2.5, MLv3.3*
FUNV ***22*** *11:24:53.9, 6˚.19N×72˚.45W, h32km, MW3.8, Presumed earthquake*

ISC 22 11:24:52.0±1.3, 6˚32N±0˚.03×72˚35W±0˚.04, h13km±10km, n22, σ1^{9}72/40, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUSC	**La Rusia**	**0.84**	**240**	P	**Pg**	**11 25 07.9**	**-0.6**
RUSC				S	**Sg**	**11 25 19.2**	**-0.5**
RUSC	**La Rusia**	**0.84**	**240**	*e*P	**Pg**	**11 25 07.6**	**-0.9**
RUSC				*e*S	**Sg**	**11 25 17.7**	**-1.9**
BARC	**Barichara**	**0.87**	**288**	P	**Pb**	**11 25 09.4**	**+0.2**
BARC				S	**Sn**	**11 25 22.4**	**-0.5**
PAMC	**Pamplona, Colo**	**1.07**	**341**	P	**Pb**	**11 25 12.8**	**+0.1**
PAMC				S	**Sb**	**11 25 27.6**	**+0.8**
BRJC	**Barrancabermej**	**1.53**	**295**	P	**Pg**	**11 25 21.9**	**+0.5**
BRJC				S	**Sg**	**11 25 43.2**	**+1.9**
CAPV	**Capacho**	**1.53**	**1**	*e*P	**Pg**	**11 25 21.2**	**-0.3**
CAPV				*e*S	**Sn**	**11 25 40.0**	**+0.7**
SPBC	**San Pablo de B**	**1.84**	**249**	P	**Pb**	**11 25 25.5**	**-0.1**
SPBC				S	**Sb**	**11 25 49.2**	**+0.6**
PTBC	**PUERTO BERRIO,**	**2.10**	**276**	P	**Pb**	**11 25 29.7**	**-0.4**
PTBC				S	**Sg**	**11 25 58.1**	**-1.7**
OCAC	**Ocana**	**2.13**	**333**	P	**Pb**	**11 25 30.9**	**+0.2**
OCAC				S	**Sg**	**11 26 01.1**	**+0.4**
CHIC	**Chingaza**	**2.17**	**219**	P	**Pn**	**11 25 28.9**	**+0.5**
CHIC				S	**Sg**	**11 26 01.1**	**-0.9**
SOCV	**Socops**	**2.45**	**37**	*e*P	**Pn**	**11 25 32.4**	**+0.6**
SOCV				*e*S	**Sn**	**11 26 03.0**	**+1.3**
ROSC	**El Rosal**	**2.45**	**233**	P	**Pg**	**11 25 40.9**	**+1.8**
CVER	**Cruz Verde, Cu**	**2.48**	**224**	P	**Pg**	**11 25 38.6**	**-1.1**
CVER				S	**Sg**	**11 26 13.9**	**+2.0**
VILC	**Villavicencio,**	**2.57**	**211**	P	**Pb**	**11 25 37.8**	**-0.4**
VILC				S	**Sg**	**11 26 15.3**	**+0.5**
SDV	**Santo Domingo**	**3.06**	**34**	*e*P	**Pn**	**11 25 41.5**	**+1.0**
SDV				*e*S	**Sn**	**11 26 16.5**	**-0.6**
GUY2C	**Guyana, Caldas**	**3.19**	**250**	P	**Pb**	**11 25 46.1**	**-2.9**
GUY2C				S	**Sb**	**11 26 28.3**	**+0.3**
UREC	**San Jos de Ur**	**3.46**	**294**	P	**Pn**	**11 25 48.9**	**+3.1**
UREC				S	**Sb**	**11 26 37.3**	**+1.9**
PRAC	**Prado**	**3.62**	**224**	P	**Pn**	**11 25 49.8**	**+1.9**
URMC	**La Uribe, Meta**	**3.66**	**214**	P	**Pn**	**11 25 51.5**	**+2.9**
MCQV	**Machiques**	**3.71**	**357**	*e*S	**Sn**	**11 26 30.9**	**-1.8**
SJCC	**San Jacinto, C**	**4.52**	**322**	*e*P	**Pn**	**11 25 58.4**	**-2.0**
SJCC				*e*S	**Sn**	**11 26 48.2**	**-4.8**
MAPV	**Macapo**	**5.20**	**48**	*e*P	**Pn**	**11 26 10.5**	**+0.9**
MAPV				*e*S	**Sn**	**11 27 05.7**	**-3.8**

HEL 22 11:25:46.0±0.3, 61˚.91N×30˚.52E, h0km, ML1.5, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUF	**Ruokolahti**	**0.89**	**238**	PG	Pg	11 26 01.9	-1.2
RUF				smax	smax	11 26 13.5	
	comp=Z,2.7nm,0.2s						
RUF				SG	Sg	11 26 13.5	-1.0
JOF	**Joensuu**	**1.08**	**20**	PG	Pg	11 26 05.2	-1.5
	baz=198						
JOF				SG	Sg	11 26 18.8	-1.9
NIF	**Nilsia**	**1.95**	**321**	PG	Pn	11 26 20.6	+0.3
NIF				smax	smax	11 26 43.8	
	comp=Z,2.3nm,0.2s						
NIF				SG	Sb	11 26 46.5	-0.5
VJF	**Virojoki**	**1.98**	**228**	smax	smax	11 26 45.1	
	comp=Z,2.3nm,0.2s						
VJF				SG	Sn	11 26 46.7	+0.4
FIA0	**FINESS Array S**	**2.17**	**260**	PG	Pn	11 26 24.0	+0.7
	baz=77						
FIA0				smax	smax	11 26 50.3	
	comp=Z,2.3nm,0.2s						
FIA0				SG	Sn	11 26 51.9	+1.1
SUF	**Sumiainen**	**2.20**	**294**	PG	Pb	11 26 25.2	-1.3
SUF				smax	smax	11 26 51.0	
	comp=Z,1.9nm,0.2s						
SUF				SG	Sg	11 26 55.5	-1.0
RMF	**Romuvaara**	**2.34**	**354**	smax	smax	11 26 55.2	
	comp=Z,1.4nm,0.2s						
RMF				SB	Sb	11 26 56.7	-1.6
PVF	**Pernaja**	**2.63**	**241**	PN	Pn	11 26 29.9	+0.2
PVF				smax	smax	11 27 03.7	
	comp=Z,1.3nm,0.2s						
KEF	**Keuruu**	**2.67**	**278**	PB	Pn	11 26 32.4	+2.1
KEF				smax	smax	11 27 04.8	
	comp=Z,1.3nm,0.2s						
KEF				SB	Sb	11 27 06.7	-1.3

IDC ***22*** *11:31:28.8±1.4, 24˚.05N×94˚.80E, h295km±19km, mb3.2/7, mbtmp3.8/8, Error ellipse: s-maj=39.4km s-min=10.6km az=59.0*

ISC 22 11:31:15.1±1.1, 24˚.7N±0˚.1×94˚.3E±0˚.1, h82km, n20, σ1^{9}07/27, mb3.9/7, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**3.15**	**232**	P	Pn	11 32 26.6	+24
	231nm,0.3s,baz=0.0,slow=20,SNR=9.3						
ODAN	**Odare**	**6.62**	**291**	Sn	**Sn**	**11 34 05.7**	**+1.5**
	79nm,0.3s,baz=280,slow=0.0						
RAMN	**Ramite**	**7.32**	**290**	Pn	**Pn**	**11 33 00.8**	**+1.2**
	baz=280,slow=0.0						
RAMN				Sn	**Sn**	**11 34 24.1**	**+2.7**
	51nm,0.6s,baz=280,slow=0.0						
CMAR	**Chiang Mai Arr**	**7.52**	**144**	P	Pn	11 33 08.3	+6.2
	0.9nm,0.7s,baz=313,slow=14,SNR=6.3						
CMAR				S	**Sn**	**11 34 25.4**	**-0.3**
	1.0nm,0.8s,baz=322,slow=26,SNR=2.3						
GUN	**Gumba**	**8.24**	**295**	Pn	**Pn**	**11 33 11.4**	**-0.8**
	baz=286,slow=0.0						
GUN				Sn	**Sn**	**11 34 43.2**	**-0.7**
	78nm,0.6s,baz=286,slow=0.0						
PKI	**Pulchoki**	**8.52**	**292**	Pn	**Pn**	**11 33 16.1**	**+0.1**
	baz=284,slow=0.0						
PKI				Sn	**Sn**	**11 34 50.5**	**-0.2**
	20nm,0.5s,baz=284,slow=0.0						
PKIN	**Phulchoki**	**8.53**	**292**	Pn	**Pn**	**11 33 16.3**	**+0.1**
	baz=284,slow=0.0						
PKIN				Sn	**Sn**	**11 34 50.7**	**-0.2**
	21nm,0.4s,baz=284,slow=0.0						
KKN	**Kakani**	**8.70**	**293**	Pn	**Pn**	**11 33 18.1**	**-0.3**
	baz=285,slow=0.0						
KKN				Sn	**Sn**	**11 34 54.8**	**-0.1**
	34nm,0.5s,baz=285,slow=0.0						
DMN	**Daman**	**8.79**	**292**	Pn	**Pn**	**11 33 19.5**	**-0.1**
	baz=284,slow=0.0						
DMN				Sn	**Sn**	**11 34 57.7**	**+0.5**
	22nm,0.5s,baz=284,slow=0.0						
GKN	**Gorkha**	**9.30**	**293**	Pn	**Pn**	**11 33 27.1**	**+0.5**
	baz=286,slow=0.0						
GKN				Sn	**Sn**	**11 35 08.2**	**-1.4**
	37nm,0.3s,baz=286,slow=0.0						
KOLN	**Koldanda**	**10.11**	**290**	Pn	**Pn**	**11 33 37.5**	**-0.2**
	baz=283,slow=0.0						
KOLN				Sn	**Sn**	**11 35 28.1**	**-1.4**
	29nm,0.4s,baz=283,slow=0.0						
DANN	**Dangsing**	**10.15**	**294**	Pn	**Pn**	**11 33 37.6**	**-0.6**
	baz=287,slow=0.0						
DANN				Sn	**Sn**	**11 35 28.4**	**-2.0**
	30nm,0.6s,baz=287,slow=0.0						
PYUN	**Piuthan**	**10.72**	**291**	Pn	**Pn**	**11 33 45.5**	**-0.5**
	baz=285,slow=0.0						
PYUN				Sn	**Sn**	**11 35 42.9**	**-1.4**
	0.2nm,0.5s,baz=285,slow=0.0						
MKAR	**Makanchi Array**	**24.10**	**339**	P	**P**	**11 36 24.5**	**+1.5**
	4.6nm,0.5s,baz=152,slow=9.8,SNR=83						
	4.6nm,0.5s						
SONM	**Songino Array**	**25.04**	**19**	P	**P**	**11 36 31.0**	**-0.7**
	0.3nm,0.5s,baz=215,slow=10,SNR=3.1						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**28.66**	**339**	P	**P**	**11 37 04.6**	**+0.6**
	0.6nm,0.6s,baz=160,slow=7.5,SNR=7.5						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**30.11**	**349**	P	**P**	**11 37 17.5**	**+0.8**
	0.4nm,0.5s,baz=169,slow=8.2,SNR=2.5						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**33.60**	**334**	P	**P**	**11 37 47.3**	**-0.1**
	0.8nm,0.5s,baz=129,slow=12,SNR=3.8						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**59.01**	**135**	P	P	11 40 53.3	-13
	1.8nm,0.9s,baz=320,slow=7.4,SNR=34						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**61.48**	**138**	P	P	11 41 10.2	-13
	1.3nm,0.5s,baz=322,slow=6.9,SNR=26						
	1.3nm,0.5s						

SDD ***22*** *11:36:00.3±2.5, 18˚.72N×69˚.40W, h99km±10km, MD3.4, ML3.9, MW3.8, Presumed earthquake*
RSPR ***22*** *11:36:02.3, 19˚.59N×68˚.93W, h113km±14km, MD3.5/9*

ISC 22 11:35:57.1±1.2, 18˚.78N±0˚.06×69˚.51W±0˚.03, h115km±6km, n41, σ1^{9}93/67, 17C-23D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATOM	**Hato Mayor del**	**0.12**	**87**	*e*Pg	**Pn**	**11 36 12.4**	**-0.6**
HATOM				*e*Sg	**Sn**	**11 36 22.1**	**-2.8**
HATOM				IAML		11 36 22.6	
	comp=N,2μm,0.2s						
SPM1	**San Pedro UASD**	**0.38**	**151**	*e*Pg	**Pn**	**11 36 13.6**	**-0.3**
SPM1				*e*Sg	**Sn**	**11 36 24.5**	**-1.9**
SPM1				IAML		11 36 31.1	
	comp=N,1μm,3.3s						
SDD	**Santo Domingo**	**0.50**	**230**	*e*Pg	**Pn**	**11 36 14.6**	**+0.1**
SDD				*e*Sg	**Sn**	**11 36 25.6**	**-1.9**
SDD				IAML		11 36 25.9	
	comp=N,735nm,0.2s						
DR08	**Loma La Naviza**	**0.52**	**290**	*e*Pg	**Pn**	**11 36 15.3**	**+0.6**
DR08				*e*Sg	**Sn**	**11 36 26.7**	**-1.2**
DR08				IAML		11 36 28.1	
	comp=N,65μm,0.1s						
SMDR	**Samana, DR**	**0.59**	**31**	*e*Pg	**Pn**	**11 36 15.1**	**+0.1**
SMDR				*e*Sg	**Sn**	**11 36 27.7**	**-0.9**
SMDR				IAML		11 36 31.4	
	comp=N,2μm,0.3s						
NADR	**Nagua**	**0.66**	**330**	*e*Pg	**Pn**	**11 36 16.4**	**+0.8**
NADR				*e*Sg	**Sn**	**11 36 30.4**	**+0.9**
NADR				IAML		11 36 32.0	
	comp=N,8μm,0.3s						
HIDR	**Higuey Centro**	**0.77**	**104**	*e*Pg	**Pn**	**11 36 17.0**	**+0.5**
HIDR				*e*Sg	**Sn**	**11 36 30.2**	**-1.0**
HIDR				IAML		11 36 31.1	
	comp=N,4μm,0.2s						
SFDR	**San Fco. de Ma**	**0.86**	**306**	*e*Pg	**Pn**	**11 36 19.2**	**+1.9**
SFDR				*e*Sg	**Sn**	**11 36 34.8**	**+2.2**
SFDR				IAML		11 36 39.7	
	comp=N,6μm,0.3s						
BANI	**BANI**	**0.90**	**245**	*e*Pg	**Pn**	**11 36 19.4**	**+1.6**
BANI				*e*Sg	**Sn**	**11 36 34.3**	**+0.8**
BANI				IAML		11 36 38.6	
	comp=N,2μm,0.2s						
CADR	**Cabrera**	**0.97**	**335**	*e*Pg	**Pn**	**11 36 19.0**	**+0.6**
CADR				*e*Sg	**Sn**	**11 36 35.2**	**+0.7**
CADR				IAML		11 36 49.0	
	comp=N,862nm,0.7s						
PCDR	**Punta Cana, DR**	**1.10**	**104**	*e*Pg	**Pn**	**11 36 20.6**	**+0.9**
PCDR				IAML		11 36 38.3	
	comp=N,1μm,0.7s						
SC01	**Santiago de lo**	**1.32**	**299**	*e*Pg	**Pn**	**11 36 24.8**	**+2.7**
SC01				*e*Sg	**Sn**	**11 36 44.6**	**+3.4**
SC01				IAML		11 36 46.7	
	comp=N,796nm,0.2s						
MADR	**Mao Valverde**	**1.70**	**298**	*e*Pg	**Pn**	**11 36 28.8**	**+2.2**
MADR				*e*Sg	**Sn**	**11 36 50.8**	**+1.8**
MADR				IAML		11 36 55.9	
	comp=N,2μm,0.3s						
SDDR	**Presa de Saban**	**1.70**	**277**	*i* P	**Pn**	**11 36 30.0**	**+3.3**
SDDR				*i* S	**Sn**	**11 36 54.0**	**+4.8**
SDDR	**Presa de Saban**	**1.70**	**277**	*e*Pg	**Pn**	**11 36 30.0**	**+3.3**
SDDR				IAML		11 36 56.2	
	comp=N,496nm,0.5s						
LUDR	**Luperon**	**1.76**	**309**	*e*Pg	**Pn**	**11 36 29.3**	**+2.0**
LUDR				*e*Sg	**Sn**	**11 36 52.1**	**+1.7**
REDR	**Restauracion**	**1.83**	**282**	*e*Pg	Pn	11 36 34.3	+6.2
REDR				*e*Sg	Sn	11 37 01.2	+9.4
REDR				IAML		11 37 04.3	
	comp=N,767nm,0.1s						
IDE	**Isla Desecheo**	**1.97**	**101**	*i* P	Pn	11 36 31.9	+2.0
IDE				*e*S	**Sn**	**11 36 56.5**	**+1.5**
AGPR	**Aguadilla, PR**	**2.29**	**97**	*i* P	Pn	11 36 36.1	+2.0
AGPR				*e*S	**Sn**	**11 37 02.9**	**+0.5**
PRSN	**Puerto Rico Se**	**2.31**	**104**	*i* P	Pn	11 36 37.5	+3.2
PRSN				*e*S	**Sn**	**11 37 05.2**	**+2.5**
MCDR	**Montecristi**	**2.31**	**299**	*e*Pg	**Pn**	**11 36 35.8**	**+1.5**
MCDR				*e*Sg	**Sn**	**11 37 04.5**	**+1.7**
MCDR				IAML		11 37 07.0	
	comp=N,273nm,0.1s						
LSP	**Las Mesas**	**2.37**	**104**	*i* P	Pn	11 36 38.0	+2.9
LSP				*e*S	**Sn**	**11 37 05.7**	**+1.4**
CRPR	**Cabo Rojo, PR**	**2.40**	**108**	*i* P	Pn	11 36 39.4	+4.0
CRPR				*e*S	**Sn**	**11 37 07.7**	**+2.8**
GBPR	**Guanica, Bosqu**	**2.62**	**107**	*e*P	Pn	11 36 42.5	+4.3
GBPR				*e*S	**Sn**	**11 37 12.9**	**+3.0**
EMPR	**Esperanza - Ma**	**2.84**	**96**	*i* P	**Pn**	**11 36 42.1**	**+1.0**
EMPR				*e*S	**Sn**	**11 37 13.5**	**-1.5**
OBIP	**Obispado Ponce**	**2.85**	**105**	*e*P	Pn	11 36 44.4	+3.2
OBIP				*e*S	**Sn**	**11 37 17.8**	**+2.5**
ECPR	**Experimental S**	**3.02**	**98**	*i* P	**Pn**	**11 36 44.1**	**+0.6**
ECPR				*e*S	**Sn**	**11 37 17.7**	**-1.5**
GRTK	**Grand Turk**	**3.12**	**331**	*i* P	**Pn**	**11 36 45.5**	**+0.7**
GRTK				*i* S	**Sn**	**11 37 20.1**	**-1.5**
SJG	**San Juan**	**3.25**	**101**	*i* P	Pn	11 36 49.2	+2.6
SJG				*e*S	**Sn**	**11 37 23.9**	**-1.0**
GCPR	**Guaynabo City**	**3.28**	**98**	*e*P	**Pn**	**11 36 47.5**	**+0.5**
GCPR				*e*S	**Sn**	**11 37 22.9**	**-2.5**
HUMP	**Col San Antoni**	**3.53**	**100**	*e*P	Pn	11 36 51.6	+1.4
HUMP				*e*S	**Sn**	**11 37 29.6**	**-1.7**
MASC	**Masc**	**4.67**	**288**	*i* P	**Pn**	**11 37 04.9**	**-0.6**
MASC				*i

SPITS				Sn	Sg	11 44 37.0	+1.2	
	baz=38,slow=24							
SPITS	**Spitsbergen Ar**	**1.77**	**207**	P	**Pn**	**11 44 10.0**	**+0.2**	
SPITS				S	**Sn**	**11 44 32.6**	**+0.4**	
BRBB	**Barentsburg B**	**2.05**	**218**	Pn	**Pn**	**11 44 13.7**	**+0.1**	
BRBB				Sn	**Sn**	**11 44 38.8**	**-0.3**	
BRBB	**Barentsburg B**	**2.05**	**218**	*e*P	**Pn**	**11 44 13.8**	**+0.2**	
BRBB	**Barentsburg B**	**2.05**	**218**	P	**Pn**	**11 44 13.3**	**-0.3**	
BRBB				S	**Sn**	**11 44 38.0**	**-1.2**	
BRBA	**Barentsburg A**	**2.08**	**217**	Pn	**Pn**	**11 44 14.2**	**+0.2**	
BRBA				Sn	**Sn**	**11 44 39.7**	**-0.1**	
BRBA	**Barentsburg A**	**2.08**	**217**	*e*P	**Pn**	**11 44 14.0**	**0.0**	
BRBA				*e*Sg	**Sg**	**11 44 47.2**	**+1.4**	
BRBA				IAML		11 44 57.4		
	comp=Z,116nm,0.5s							
HSPB	**Hornsund (broa**	**2.94**	**201**	*e*P	**Pn**	**11 44 27.5**	**+1.7**	
HSPB				*e*Pg	**Pb**	**11 44 33.1**	**+1.5**	
HSPB				*e*Sg	**Sg**	**11 45 13.9**	**+0.5**	
HSPB				IAML		11 45 18.2		
	comp=Z,74nm,0.3s							
HSPB	**Hornsund (broa**	**2.94**	**201**	*e*P	**Pn**	**11 44 26.3**	**+0.5**	
HSPB				*e*S	**Sn**	**11 45 04.0**	**+2.9**	
HSPB	**Hornsund (broa**	**2.94**	**201**	P	**Pn**	**11 44 27.4**	**+1.6**	
HSPB				S	**Sn**	**11 45 00.7**	**-0.4**	
HOPEN	**Hopen**	**3.42**	**161**	Pn	**Pn**	**11 44 33.4**	**+1.0**	
HOPEN				Sn	**Sn**	**11 45 12.7**	**-0.2**	
HOPEN				Sg	**Sg**	**11 45 30.4**	**+1.7**	
HOPEN	**Hopen**	**3.42**	**161**	*e*P	**Pn**	**11 44 32.9**	**+0.5**	
HOPEN				*e*S	**Sn**	**11 45 13.5**	**+0.7**	
HOPEN				IAML		11 45 39.6		
	comp=Z,75nm,0.4s							
ZFI2	**Zemlya Franca-**	**4.72**	**64**	*e*P	**Pn**	**11 44 49.1**	**-1.2**	
ZFI2				*e*S	**Sn**	**11 45 45.3**	**+0.4**	
	comp=Z,66nm,1.8s							
OMEGA	**Omega**	**4.73**	**64**	*e*P	**Pn**	**11 44 49.1**	**-1.4**	
OMEGA				*e*S	**Sn**	**11 45 45.3**	**0.0**	
	comp=Z,57nm,1.7s							
VADS	**Vadso**	**9.96**	**162**	P	**Pn**	**11 46 02.8**	**+0.7**	
VADS	**Vadso**	**9.96**	**162**	S	**Sn**	**11 47 49.5**	**-4.2**	
VADS	**Vadso**	**9.96**	**162**	P	**Pn**	**11 46 03.2**	**+1.1**	
KEV	**Kevo**	**10.21**	**167**	P	**Pn**	**11 46 05.9**	**+0.4**	
KEV				S	**Sn**	**11 47 54.2**	**-5.5**	
ARA0	**ARCESS Array S**	**10.38**	**170**	Pn	**Pn**	**11 46 08.9**	**+1.1**	
	baz=357,slow=11							
ARA0				Sn	Sn	11 47 54.0	-10	
	baz=2.1,slow=22							
ARA0	**ARCESS Array S**	**10.38**	**170**	Pn	**Pn**	**11 46 08.9**	**+1.1**	
ARA0				Sn	Sn	11 47 54.0	-10	
ARCES	**ARCESS Array B**	**10.38**	**170**	Pn	**Pn**	**11 46 08.3**	**+0.5**	
	comp=Z,0.3nm,0.3s,baz=359,slow=11,SNR=10							
ARCES				Sn	Sn	11 47 56.1	-7.8	
	comp=Z,0.6nm,0.3s,baz=3.1,slow=19,SNR=9.0							
	comp=Z,4.8nm,0.9s							
ARCES	**ARCESS Array B**	**10.38**	**170**	S	Sn	11 47 53.0	-11	
ARCES	**ARCESS Array B**	**10.38**	**170**	P	**Pn**	**11 46 08.3**	**+0.5**	
APA0	**Apatity Array**	**12.68**	**157**	S	**Sn**	**11 48 52.8**	**-7.3**	
FINES	**FINESS Array B**	**18.50**	**171**	Pn	**P**	**11 47 54.1**	**-0.9**	
	comp=Z,0.1nm,0.3s,baz=356,slow=18,SNR=1.6							
	comp=Z,2.6nm,0.9s							
KIRV	**Kirov**	**23.09**	**139**	LR	LR	12 00 17.2		
	comp=Z,167nm,19.4s,baz=301,slow=44							
KURBB	**Kurchatov Arra**	**35.08**	**109**	P	**P**	**11 50 33.5**	**+1.6**	
	comp=Z,0.5nm,0.7s,baz=342,slow=7.7,SNR=5.1							
	comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**39.42**	**107**	P	**P**	**11 51 10.0**	**+1.3**	
	comp=Z,0.5nm,0.5s,baz=349,slow=7.5,SNR=8.7							
	comp=Z,0.5nm,0.5s							

IDC 22 11:47:10.5±1.1, 17°.00N×147°.02E, h0km, mb3.7/7, mbtmp3.6/7, Error ellipse: s-maj=43.5km s-min=24.2km az=95.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.77**	**199**	P	P	11 54 36.2	-0.7
	0.5nm,0.8s,baz=27,slow=8.6,SNR=4.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**42.41**	**198**	P	P	11 55 07.1	+0.1
	0.5nm,0.9s,baz=8.9,slow=7.6,SNR=2.3						
	0.5nm,0.9s						
ZALV	**Zalesovo Beam**	**60.12**	**323**	P	P	11 57 18.4	-1.2
	0.6nm,0.6s,baz=111,slow=7.9,SNR=2.6						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**63.42**	**318**	P	P	11 57 42.5	+0.6
	0.4nm,0.5s,baz=96,slow=7.3,SNR=6.6						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**64.61**	**26**	P	P	11 57 48.6	-0.9
	0.2nm,0.5s,baz=264,slow=6.5,SNR=4.5						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**68.58**	**321**	P	P	11 58 15.6	+0.5
	0.3nm,0.4s,baz=73,slow=5.0,SNR=1.6						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**97.73**	**56**	P	Pdif	12 00 49.4	+1.3
	0.5nm,0.8s,baz=301,slow=3.6,SNR=4.7						
	0.5nm,0.8s						

*IDC **22** 11:47:20.2±0.9, 34°.13N×138°.08E, h0km, mb3.8/10, mbtmp3.8/13, ML3.4/3, MS3.0/1, Error ellipse: s-maj=24.2km s-min=16.7km az=27.0*
*NIED **22** 11:47:23.8, 34°.21N×138°.04E, h40km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.84; $M_{\theta\theta}$-7.69; $M_{\phi\phi}$3.85; $M_{r\theta}$2.08; $M_{\theta\phi}$0.92; $M_{\phi r}$3.75; Fault plane solution: $M_0$7.97000×10^{14} NP1: ϕ_s310.00000°, δ52.00000°, λ151.00000°. NP2: ϕ_s59.00000°, δ67.00000°, λ42.00000°.*
*JMA **22** 11:47:23.8±0.1, 34°.2N±0°.4×138°.0E±0°.6, h40km±1km, MV3.7/40, ENSYUNADA*
JMA Felt I J1 at ENSYUNADA .
*NEIC **22** 11:47:24.9±1.3, 34°.25N±0°.05×137°.93E±0°.06, h20km±5km, mb4.1/11, Error ellipse: s-maj=8.3km s-min=5.9km az=52.0*

ISC 22 11:47:23.7±1.0, 34°.19N±0°.03×138°.04E±0°.03, h19km±3km, n59, σ1$ for 80, mb3.9/17, 4D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO5	**TONANKAI O.B.S**	**0.28**	**282**	*i* P	**Pn**	**11 47 31.5**	**-1.1**
TTO5				X		11 47 37.4	
TTO4	**TONANKAI O.B.S**	**0.46**	**246**	*i* P	**Pb**	**11 47 33.9**	**+0.8**
TTO4				X		11 47 41.5	
JSG	**Sagara**	**0.49**	**14**		**Pb**	**11 47 34.4**	**+0.6**
JSG				Sg	**Sb**	**11 47 41.3**	**+0.7**
JSG	**Sagara**	**0.49**	**14**	⇓*i*P	**Pb**	**11 47 34.4**	**+0.6**
JSG				⇓S	**Sb**	**11 47 42.0**	**+1.4**
JKKG	**Kakegawa**	**0.59**	**354**	*i* P	**Pg**	**11 47 35.6**	**+0.2**
JKKG				S	**Sg**	**11 47 43.8**	**+0.4**
TTO3	**TONANKAI O.B.S**	**0.63**	**239**	P	**Pg**	**11 47 36.6**	**+0.5**
TTO3				X		11 47 46.5	
JHMK	**Hamakita**	**0.66**	**339**	*i* P	**Pb**	**11 47 36.4**	**-0.1**
JHMK				S	**Sb**	**11 47 44.8**	**-0.5**
HMMJ	**Hamamatsu 2**	**0.71**	**338**	P	**Pb**	**11 47 37.2**	**-0.2**
HMMJ				S	**Sb**	**11 47 46.2**	**-0.6**
JAA	**Atsumi**	**0.86**	**301**	P	**Pb**	**11 47 39.5**	**-0.5**
JAA				*e*S	**Sb**	**11 47 50.1**	**-1.0**
JIZS	**Izushimoda**	**0.86**	**53**	P	**Pb**	**11 47 38.3**	**-1.7**
JIZS				S	**Sb**	**11 47 48.4**	**-2.9**
SHZ3	**Shizuoka 3**	**0.88**	**9**	*i* P	**Pb**	**11 47 39.6**	**-0.8**
TTO2	**TONANKAI O.B.S**	**0.96**	**242**	P	**Pb**	**11 47 41.0**	**-0.5**
TTO2				S	**Sn**	**11 47 54.6**	**-0.3**
JIE	**Ise**	**1.12**	**280**	*i* P	**Pn**	**11 47 43.1**	**-1.3**
TTO1	**TONANKAI O.B.S**	**1.19**	**242**	*e*P	**Pn**	**11 47 44.7**	**-0.4**
TTO1				S	**Sb**	**11 47 59.8**	**-0.7**
JMYK	**Miyake Tsubota**	**1.25**	**96**	*e*S	**Sb**	**11 48 01.9**	**-0.6**
JIM2	**Oshima 3**	**1.26**	**65**	*e*S	**Sb**	**11 48 02.1**	**-0.6**
JMKN	**Mikurajimanish**	**1.32**	**103**	P	**Pn**	**11 47 46.8**	**-0.3**
JMKN				*e*S	**Sn**	**11 48 03.8**	**-0.4**
JYN	**Shimob**	**1.36**	**17**	⇓*i*P	**Pn**	**11 47 46.5**	**-1.2**
JYN				⇓S	**Sn**	**11 48 04.1**	**-1.3**
JOD2	**Odawara 2**	**1.37**	**39**	*e*P	**Pn**	**11 47 46.5**	**-1.3**
INU	**Inuyama**	**1.43**	**324**		**Pn**	**11 47 47.8**	**-0.8**
INU					**Sn**	**11 48 05.3**	**-1.5**
TSUJ	**Tsu 2**	**1.44**	**291**	*i* P	**Pn**	**11 47 47.8**	**-0.9**
TSUJ				*e*S	**Sn**	**11 48 04.5**	**-2.5**
JKN2	**Miekihoku**	**1.47**	**272**	P	**Pn**	**11 47 47.9**	**-1.2**
JKN2				S	**Sn**	**11 48 05.1**	**-2.7**
JGF	**Kuroka**	**1.51**	**338**		**Pn**	**11 47 49.2**	**-0.5**
JGF				Sn	**Sn**	**11 48 07.3**	**-1.7**
JHJ	**Hachijo jima 2**	**1.80**	**126**	Pn	**Pn**	**11 47 52.1**	**-1.6**
	36nm,0.3s,baz=115,slow=22,SNR=6.1						
JHJ				Sn	**Sn**	**11 48 15.2**	**-0.9**
	86nm,0.3s,baz=282,slow=20,SNR=12						
JHJ2	**Mitsune**	**1.83**	**126**	Pn	**Pn**	**11 47 54.2**	**+0.1**
MJAR	**Matsushiro Arr**	**2.35**	**3**	Pn	**Pn**	**11 48 01.4**	**+0.2**
	2.1nm,0.3s,baz=181,slow=14,SNR=113						
MJAR				Sn	**Sn**	**11 48 31.1**	**+1.5**
	6.6nm,0.3s,baz=67,slow=22,SNR=7.4						
	17nm,0.4s						
MJAR	**Matsushiro Arr**	**2.35**	**3**		**Pn**	**11 48 01.7**	**+0.5**
MAJO	**Matsushiro**	**2.35**	**3**		**Pn**	**11 48 01.9**	**+0.7**
MJB9	**Matsu-Tunnel**	**2.35**	**3**		**Pn**	**11 48 02.7**	**+1.4**
JMN	**Monobe**	**3.49**	**264**	Pn	**Pn**	**11 48 16.8**	**-0.2**
JNU	**Nakatsue**	**6.07**	**262**	Pn	**Pn**	**11 48 53.1**	**+0.7**
	2.3nm,0.3s,baz=90,slow=5.1,SNR=20						
JNU				Sn	**Sn**	**11 50 03.0**	**+1.6**
	baz=283,slow=12						
	4.3nm,0.3s						
KSRS	**Korea Array**	**8.84**	**294**	Pn	**Pn**	**11 49 31.4**	**+1.0**
	0.3nm,0.3s,baz=111,slow=15,SNR=5.4						
KSRS				LR	LR	11 53 05.1	
	comp=Z,100nm,19.2s,baz=105,slow=39						
	1.6nm,0.7s						
KSAR	**Wonju Array Be**	**8.86**	**294**	Pn	**Pn**	**11 49 31.1**	**+0.4**
KS19	**Wonju Array Si**	**8.90**	**295**	Pn	**Pn**	**11 49 31.6**	**+0.4**
SONM	**Songino Array**	**27.28**	**310**	P	**P**	**11 53 06.5**	**-0.5**
	0.6nm,0.5s,baz=101,slow=7.5,SNR=4.3						
	0.6nm,0.5s						
SONM	**Songino Array**	**27.28**	**310**	P	**P**	**11 53 06.6**	**-0.4**
LZDM	**Lanzhou Array**	**28.08**	**283**	P	**P**	**11 53 13.9**	**-0.6**
	1.2nm,0.5s,baz=72,slow=14,SNR=1.2						
	1.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**38.13**	**256**	P	**P**	**11 54 40.9**	**-0.9**
	0.3nm,0.2s,baz=56,slow=9.0,SNR=1.5						
	0.3nm,0.2s						
ZAA0	**Zalesovo Array**	**41.88**	**315**	P	**P**	**11 55 11.7**	**-0.7**
ZALV	**Zalesovo Beam**	**41.88**	**315**	P	**P**	**11 55 12.1**	**-0.4**
	0.3nm,0.5s,baz=76,slow=12,SNR=3.6						
ZALV				PcP	**PcP**	**11 57 07.4**	**-0.5**
	0.4nm,0.5s,baz=74,slow=2.7,SNR=2.1						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**41.88**	**315**	P	**P**	**11 55 12.3**	**-0.2**
MK31	**Makanchi Array**	**43.37**	**304**	P	**P**	**11 55 24.7**	**0.0**
MK31				IAmb	IAmb	11 55 26.6	
	comp=Z,2.9nm,1.2s						
MKAR	**Makanchi Array**	**43.37**	**304**	P	**P**	**11 55 24.4**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=88,slow=10,SNR=16						
MKAR				PcP	**PcP**	**11 57 12.0**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=113,slow=3.7,SNR=3.7						
	comp=Z,1.8nm,0.8s						
MAKZ	**Makanchi**	**43.58**	**304**	P	**P**	**11 55 27.1**	**+0.6**
MAKZ				IAmb	IAmb	11 55 36.6	
	comp=Z,4.5nm,1.4s						
KURK	**Kurchatov**	**45.58**	**310**	P	**P**	**11 55 40.7**	**-1.6**
KURK				IAmb	IAmb	11 55 43.0	
	comp=Z,2.6nm,0.9s						
KURBB	**Kurchatov Arra**	**45.64**	**310**	P	**P**	**11 55 42.4**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=89,slow=8.7,SNR=7.8						
	comp=Z,1.3nm,0.9s						
D20K	**Etivluk River**	**49.68**	**26**	P	**P**	**11 56 15.4**	**+1.5**
BVAR	**Borovoye Array**	**50.49**	**314**	P	**P**	**11 56 20.3**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=88,slow=8.6,SNR=3.6						
BVAR				PcP	**PcP**	**11 57 38.0**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=101,slow=2.3,SNR=5.6						
	comp=Z,0.7nm,0.6s						
B21K	**Ikpikpuk River**	**50.52**	**25**	P	**P**	**11 56 21.9**	**+1.7**
B21K				IAmb	IAmb	11 56 32.9	
	comp=Z,2.6nm,0.9s						
E21K	**Killik River**	**50.61**	**26**	P	**P**	**11 56 22.0**	**+1.1**
KK31	**Karatay Array**	**52.20**	**301**	P	**P**	**11 56 32.6**	**-0.7**
KK31				IAmb	IAmb	11 56 35.2	
	comp=Z,7.4nm,1.5s						
KKAR	**Karatay Array**	**52.20**	**301**	P	**P**	**11 56 32.7**	**-0.5**
ABKAR	**Akbulak array**	**57.68**	**311**	P	**P**	**11 57 12.9**	**+0.2**
RES	**Resolute Bay**	**66.01**	**13**	P	**P**	**11 58 08.9**	**+0.5**
RES				IAmb	IAmb	11 58 21.8	
	comp=Z,2.2nm,1.4s						
AKASG	**Malin Array Be**	**74.83**	**321**	P	**P**	**11 59 02.5**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=52,slow=5.5,SNR=6.6						
	comp=Z,1.2nm,0.6s						
BRTR	**Keskin Array B**	**78.63**	**310**	P	**P**	**11 59 25.7**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=73,slow=5.0,SNR=4.0						
	comp=Z,0.8nm,0.9s						
TX31	**Lajitas Ar. Si**	**94.03**	**50**	P	**P**	**12 00 40.1**	**-0.9**
TX31				IAmb	IAmb	12 01 14.3	
	comp=Z,0.7nm,1.1s						
TXAR	**Lajitas Array**	**94.03**	**50**	P	**P**	**12 00 41.2**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=313,slow=1.9,SNR=3.7						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**94.03**	**50**	P	**P**	**12 00 40.4**	**-0.6**

*IDC **22** 12:05:01.7±1.6, 2°.45S×121°.48E, h0km, mb3.2/3, mbtmp3.5/5, ML3.9/2, MS2.8/1, Error ellipse: s-maj=30.6km s-min=27.0km az=92.0*
*DJA **22** 12:05:04.4±0.2, 2°.5S±2°×12°1E±°, h10km, M4.2/31, mb4.3/6, MLv4.1/31*

ISC 22 12:05:05.3±1.0, 2°.49S±0°.05×121°.48E±0°.06, h22km, n23, σ1$ for 00/23, mb3.1/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.58**	**6**	P	**Pn**	**12 05 32.3**	**+0.3**
KKSI	**Kolaka, Sulawe**	**1.68**	**174**	P	**Pn**	**12 05 33.8**	**+0.4**
TTSI	**Tana Toraja**	**1.74**	**252**	P	**Pn**	**12 05 32.7**	**-1.6**
LUWI	**Luwuk**	**1.94**	**42**	P	**Pn**	**12 05 37.5**	**+0.6**
SPSI	**Sidrap Palu**	**2.25**	**229**	P	**Pn**	**12 05 42.1**	**+0.9**
PCI	**Palu**	**2.27**	**314**	P	**Pn**	**12 05 42.0**	**+0.4**
MMSI	**Mamuju**	**2.57**	**266**	P	**Pn**	**12 05 46.0**	**+0.3**
PMSI	**Majene**	**2.75**	**249**	P	**Pn**	**12 05 49.8**	**+1.7**
MRSI	**Marisa**	**2.98**	**9**	P	**Pn**	**12 05 51.3**	**-0.1**
KAPI	**Kappang**	**3.04**	**214**	Pn	**Pn**	**12 05 53.1**	**+1.0**
	8.4nm,0.3s,baz=21,slow=9.5,SNR=18						
KAPI				Sn	**Sn**	**12 06 28.2**	**+0.4**
	8.4nm,0.3s,baz=218,slow=23,SNR=7.6						
	31nm,0.4s						
KAPI	**Kappang**	**3.04**	**214**	P	**Pn**	**12 05 53.3**	**+1.2**
MPSI	**Mapaga**	**3.22**	**331**	P	**Pn**	**12 05 54.4**	**-0.2**
MKS	**Makassar**	**3.37**	**216**	P	**Pn**	**12 05 56.4**	**-0.2**
GTOI	**Gorontalo**	**3.46**	**26**	P	**Pn**	**12 05 58.9**	**+0.9**
BSSI	**Bau Bau, Buton**	**3.76**	**195**	P	**Pn**	**12 06 02.7**	**+0.7**
SANI	**Sanana**	**4.53**	**85**	P	**Pn**	**12 06 11.5**	**-1.1**
EDFI	**Ende, Flores**	**6.22**	**178**	P	**Pn**	**12 06 36.2**	**+0.2**
	0.1nm9.9nm,1.2s						
TNTI	**Ternate**	**6.72**	**61**	P	**Pn**	**12 06 45.1**	**+2.3**
	32nm,1.1s						
BATI	**Baunata**		**7.97**	**164**	LR	LR	12 10 52.4
	comp=Z,57nm,18.6s,baz=251,slow=44						
SIJI	**Sorong**	**9.92**	**81**	Pn	**Pn**	**12 07 27.0**	**+0.3**
	1.6nm,0.3s,baz=159,slow=20,SNR=4.6						
	6.6nm,0.6s						
WRA	**Warramunga Arr**	**21.42**	**145**	P	**P**	**12 09 50.8**	**-1.2**
	0.6nm,0.8s,baz=321,slow=12,SNR=5.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**24.25**	**151**	P	**P**	**12 10 21.1**	**+0.2**
	0.6nm,0.9s,baz=326,slow=8.3,SNR=9.2						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**59.95**	**330**	P	**P**	**12 15 09.3**	**-0.7**
	0.4nm,1.0s,baz=122,slow=7.0,SNR=2.5						
	0.4nm,1.0s						

IDC 22 12:09:34.0±4.3, 49°.34S×124°.73E, h0km, mb3.4/3, mbtmp3.5/3, MS3.6/6, Error ellipse: s-maj=126.3km s-min=75.4km az=111.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.40**	**328**	T	T	12 30 32.1	
	baz=153,slow=74,SNR=6.2						
H01W2	**Cape Leeuwin H**	**16.40**	**328**	T	T	12 30 39.5	
	baz=153,slow=74,SNR=3.6						
H01W3	**Cape Leeuwin H**	**16.41**	**328**	T	T	12 30 33.6	
	baz=153,slow=74,SNR=6.9						
STKA	**Stephens Creek**	**21.55**	**42**	P	P	12 14 25.0	+0.2
	3.3nm,1.1s,baz=209,slow=13,SNR=4.2						
STKA				LR	LR	12 21 15.7	
	comp=Z,103nm,19.7s,baz=206,slow=33						
	3.3nm,1.1s						
ASAR	**Alice Springs**	**26.62**	**19**	P	P	12 15 14.2	+0.1
	0.3nm,0.7s,baz=196,slow=8.8,SNR=6.0						
ASAR				LR	LR	12 25 55.7	
	comp=Z,94nm,18.1s,baz=190,slow=37						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**30.32**	**18**	P	P	12 15 46.9	-0.2
	0.3nm,0.7s,baz=181,slow=7.5,SNR=1.8						
	0.3nm,0.7s						

RPZ	**Rata Peaks**	**31.96**	**98**	LR	LR	12 26 05.5		
	comp=Z,67nm,20.3s,baz=80,slow=31							
CTA	**Charters Tower**	**33.88**	**38**	LR	LR	12 29 36.0		
	comp=Z,104nm,18.8s,baz=233,slow=36							
MAW	**Mawson**	**35.23**	**216**	LR	LR	12 28 18.4		
	comp=Z,130nm,19.4s,baz=93,slow=32							
DZM	**Mont Dzumac**	**42.65**	**66**	LR	LR	12 33 32.4		
	comp=Z,76nm,18.1s,baz=226,slow=34							
YKA	**Yellowknife Ar**	**145.57**	**45**	PKPbc	PKPdf	12 29 12.1	-0.7	
	0.2nm,0.9s,baz=275,slow=3.7,SNR=2.9							

*IDC **22** 12:21:02.1±2.9, 20°.92S×69°.48W, h0km, mb3.5/2, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=64.9km s-min=52.9km az=172.0*
*GUC **22** 12:21:21.9±0.8, 19°.52S×69°.49W, h93km±4km, ML3.2*

ISC 22 12:21:20.9±1.0, 19°.56S±0°.05×69°.50W±0°.08, h106km±7km, n18, σ1$ for 09/19, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**0.25**	**217**	⇓*i*P	**Pn**	**12 21 36.5**	**+0.3**
PB11				*e*S	**Sn**	**12 21 47.2**	**-0.5**
GO01	**Chusmiza**	**0.30**	**111**	*e*P	**Pn**	**12 21 36.8**	**-0.1**
GO01				*e*S	**Sn**	**12 21 48.6**	**-0.2**
GO01				IAML		12 21 51.1	
	comp=E,4μm,0.1s						
PB08	**IPOC Station P**	**0.66**	**151**	*e*P	**Pn**	**12 21 39.6**	**+0.5**
PB08				*e*S	**Sn**	**12 21 52.8**	**+0.1**
PB08				IAML		12 21 54.3	
	comp=E,1μm,0.2s						
HMBC	**Humberstone**	**0.81**	**207**	⇑*i*P	**Pn**	**12 21 40.6**	**+0.6**
HMBC				*e*S	**Sn**	**12 21 54.5**	**+0.1**
HMBC				IAML		12 21 58.6	
	comp=N,981nm,0.4s						
TA02	**Huaiquique**	**0.93**	**220**	*e*P	**Pn**	**12 21 41.7**	**+0.7**
TA02				*e*S	**Sn**	**12 21 57.0**	**+0.8**
PB16	**IPOC Station P**	**1.22**	**359**	*e*P	**Pn**	**12 21 45.6**	**+0.8**
PB16				*e*S	**Sn**	**12 22 03.3**	**+0.6**
PB16				IAML		12 22 04.9	
	comp=N,261nm,0.5s						
PB12	**IPOC Station P**	**1.23**	**320**	*e*P	**Pn**	**12 21 44.6**	**+0.3**
PB12				*e*S	**Sn**	**12 22 01.5**	**-0.6**
PB12				IAML		12 22 03.2	
	comp=E,400nm,0.2s						
PB01	**IPOC Station P**	**1.48**	**180**	*e*P	**Pn**	**12 21 48.4**	**+1.1**
PB01				*e*S	**Sn**	**12 22 08.6**	**+1.2**
PB01				IAML		12 22 10.8	
	comp=N,445nm,0.3s						
LPAZ	**La Paz**	**3.50**	**22**	Pn	**Pn**	**12 22 16.1**	**+2.0**
	comp=N,0.4nm,0.3s,baz=191,slow=9.2,SNR=4.2						
	comp=N,0.7nm,0.3s						
SIV	**San Ignacio**	**8.77**	**67**	Pn	Pn	12 23 18.3	-6.6
	comp=N,2.9nm,0.5s,baz=274,slow=16						
H03N1	**Juan Fernandez**	**16.18**	**209**	T	T	12 41 21.8	
	baz=32,slow=73,SNR=8.1						
H03N2	**Juan Fernandez**	**16.19**	**209**	T	T	12 41 22.9	
	baz=32,slow=73,SNR=8.2						
H03N3	**Juan Fernandez**	**16.20**	**209**	T	T	12 41 22.5	
	baz=32,slow=73,SNR=8.7						
TORD	**Torodi Ar. Bea**	**77.23**	**71**	P	**P**	**12 33 01.3**	**-2.6**
	comp=N,0.2nm,0.4s,baz=247,slow=4.6,SNR=2.5						
	comp=N,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**89.18**	**341**	P	**P**	**12 34 05.0**	**+0.9**
	comp=N,0.3nm,1.0s,baz=130,slow=4.4,SNR=3.6						
	comp=N,0.3nm,1.0s						
H11S2	**WAKE ISLAND Hyd**	**27.07**	**279**	T	T	14 59 44.5	
	baz=101,slow=75,SNR=5.4						
H11S1	**WAKE ISLAND Hyd**	**27.07**	**279**	T	T	14 59 44.7	
	baz=101,slow=75,SNR=4.7						
H11S3	**WAKE ISLAND Hyd**	**27.08**	**279**	T	T	14 59 45.9	
	baz=101,slow=75,SNR=4.9						

IDC 22 12:32:27.8±2.0, 6°.83S×128°.59E, h0km, mb3.3/2, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=111.2km s-min=27.1km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.56**	**194**	Pn	Pn	12 35 14.8	+0.5
	0.2nm,0.3s,baz=17,slow=13,SNR=1.8						
FITZ				Sn	Sn	12 37 04.8	-20

YM08	**YM08**	**1.34 287**	*eP*	**Pn**	**13 23 05.1**	**-0.9**
YM01	**YM01**	**1.34 285**	*eP*	**Pn**	**13 23 07.1**	**+1.0**
YM01			S	**Sn**	**13 23 26.2**	**-0.5**
TWY	**Chenhua**	**1.36 290**	P	**Pn**	**13 23 05.8**	**-0.3**
NWLT	**Wulai**	**1.37 269**	*eP*	**Pn**	**13 23 06.6**	**+0.3**
NWLT			S	**Sn**	**13 23 27.2**	**+0.1**
ZUZH	**Zhuzihu**	**1.37 285**	*eP*	**Pn**	**13 23 07.5**	**+1.1**
ZUZH			*eS*	**Sn**	**13 23 26.7**	**-0.5**
LATG	**Datong**	**1.37 259**	P	**Pn**	**13 23 07.0**	**+0.5**
LATG			*eS*	**Sn**	**13 23 27.0**	**-0.4**
NDT	**Datong Townshi**	**1.37 262**	*eP*	**Pn**	**13 23 07.2**	**+0.8**
TAP	**Taipei**	**1.38 280**	*eP*	**Pn**	**13 23 07.1**	**+0.7**
ANP	**Anpu**	**1.40 286**	*eP*	**Pn**	**13 23 07.7**	**+0.9**
ETL	**Fush Village**	**1.42 243**	*eP*	**Pn**	**13 23 06.4**	**-0.5**
ETL			*eS*	**Sn**	**13 23 26.4**	**-1.7**
NACB	**Ninganchiao**	**1.43 244**	P	**Pn**	**13 23 06.2**	**-0.8**
NACB	**Ninganchiao**	**1.43 244**	S	**Sn**	**13 23 27.5**	**-0.8**
NACB	**Ninganchiao**	**1.43 244**	P	**Pn**	**13 23 06.4**	**-0.7**
NACB			S	**Sn**	**13 23 26.9**	**-1.4**
NTST	**Danshui**	**1.46 284**	*eP*	**Pn**	**13 23 07.4**	**+0.2**
NTST			*eS*	**Sn**	**13 23 28.8**	**+0.1**
TWS1	**Kuangyinshan**	**1.47 282**	*eP*	**Pn**	**13 23 08.1**	**+0.7**
TWS1			*i* S	**Sn**	**13 23 29.8**	**+0.8**
TWD	**Chiawan**	**1.48 241**	⇓P	**Pn**	**13 23 07.1**	**-0.3**
TWD			*i* S	**Sn**	**13 23 27.0**	**-2.1**
YHNB	**Yeheng**	**1.49 265**	P	**Pn**	**13 23 08.2**	**+0.5**
YHNB	**Yeheng**	**1.49 265**	S	**Sn**	**13 23 28.5**	**-1.0**
YHNB	**Yeheng**	**1.49 265**	P	**Pn**	**13 23 08.3**	**+0.5**
YHNB			*i* S	**Sn**	**13 23 28.6**	**-0.9**
NSK	**Sanguang**	**1.50 265**	⇓*i*P	**Pn**	**13 23 08.3**	**+0.5**
NSK			*i* S	**Sn**	**13 23 28.6**	**-1.1**
ETLH	**Xiulin Townshi**	**1.51 247**	P	**Pn**	**13 23 07.8**	**-0.2**
ETLH			*eS*	**Sn**	**13 23 27.7**	**-2.3**
HWA	**Hwalien**	**1.52 237**	P	**Pn**	**13 23 08.0**	**+0.1**
HWA			S	**Sn**	**13 23 28.6**	**-1.4**
NNSB	**Datong**	**1.52 256**	P	**Pn**	**13 23 08.3**	**+0.2**
NNSB			S	**Sn**	**13 23 29.3**	**-1.0**
NNS	**Nan Shan**	**1.53 256**	P	**Pn**	**13 23 08.5**	**+0.3**
NNS			*eS*	**Sn**	**13 23 29.0**	**-1.4**
JTJ	**Tarama**	**1.55 96**	P	**Pn**	**13 23 09.2**	**+1.0**
JTJ			S	**Sn**	**13 23 30.4**	**-0.2**
TEYL	**Yanliau Villag**	**1.59 234**	*i* P	**Pn**	**13 23 08.5**	**-0.2**
TEYL			*i* S	**Sn**	**13 23 30.3**	**-1.1**
ETM	**Tongmen**	**1.61 239**	*i* P	**Pn**	**13 23 08.7**	**-0.3**
ETM			*eS*	**Sn**	**13 23 30.4**	**-1.5**
LXIB	**Xiulin Townshi**	**1.65 242**	P	**Pn**	**13 23 09.2**	**-0.4**
LXIB			*i* S	**Sn**	**13 23 30.8**	**-2.1**
NCU	**National Centr**	**1.66 276**	*eS*	**Sn**	**13 23 30.9**	**-1.8**
NCUH	**Zhongli**	**1.66 276**	*eS*	**Sn**	**13 23 33.0**	**+0.2**
KSHI	**Guanxi Townshi**	**1.66 269**	*eP*	**Pn**	**13 23 10.5**	**+1.0**
KSHI			S	**Sn**	**13 23 33.1**	**+0.3**
SHUL	**Shoufeng**	**1.66 233**	*eP*	**Pn**	**13 23 09.7**	**+0.1**
SHUL			*i* S	**Sn**	**13 23 31.9**	**-0.9**
FUSS	**Fushou**	**1.70 251**	P	**Pn**	**13 23 10.8**	**+0.5**
FUSS			S	**Sn**	**13 23 33.1**	**-0.9**
WHF	**Hehuan Shan**	**1.72 248**	*i* P	**Pn**	**13 23 10.9**	**+0.2**
WHF			S	**Sn**	**13 23 33.1**	**-1.6**
NFF	**Wufeng Townshi**	**1.73 265**	P	**Pn**	**13 23 10.7**	**+0.4**
NFF			*i* S	**Sn**	**13 23 32.0**	**-2.2**
TEGC	**Jichi Village**	**1.73 231**	*eP*	**Pn**	**13 23 10.4**	**+0.1**
TEGC			*eS*	**Sn**	**13 23 33.6**	**-0.6**
ESL	**Shilin**	**1.74 236**	*i* P	**Pn**	**13 23 10.1**	**-0.4**
ESL			*eS*	**Sn**	**13 23 31.8**	**-2.7**
TWT	**Tachien**	**1.76 252**	P	**Pn**	**13 23 11.8**	**+1.0**
TWT			S	**Sn**	**13 23 34.2**	**-0.8**
TDCB	**Techi**	**1.77 252**	P	**Pn**	**13 23 11.8**	**+0.8**
TDCB			*eS*	**Sn**	**13 23 34.3**	**-1.0**
LIOB	**Emei**	**1.82 265**	*i* P	**Pn**	**13 23 11.7**	**+0.4**
LIOB			*i* S	**Sn**	**13 23 34.4**	**-1.6**
NSTT	**Nanjuang**	**1.83 265**	*eP*	**Pn**	**13 23 11.8**	**+0.3**
NSTT			*i* S	**Sn**	**13 23 34.4**	**-1.9**
WARBT	**Fenglin Townsh**	**1.83 234**	*i* P	**Pn**	**13 23 11.1**	**-0.4**
WARBT			*i* S	**Sn**	**13 23 34.3**	**-2.1**
SBCB	**Hsinchu**	**1.84 270**	*eP*	**Pn**	**13 23 12.2**	**+0.6**
SBCB			*i* S	**Sn**	**13 23 35.1**	**-1.3**
HSN	**Hsinchu**	**1.85 270**	*eS*	**Sn**	**13 23 34.8**	**-1.9**
OWD	**Renai**	**1.87 243**	*i* P	**Pn**	**13 23 12.3**	**+0.2**
OWD			*i* S	**Sn**	**13 23 35.6**	**-1.8**
WUSB	**Renai**	**1.90 245**	*i* P	**Pn**	**13 23 13.0**	**+0.5**
WUSB			*i* S	**Sn**	**13 23 37.2**	**-0.8**
WHP	**Taichung City**	**1.95 255**	*i* P	**Pn**	**13 23 14.2**	**+1.2**
WHP			S	**Sn**	**13 23 38.9**	**0.0**
HGSD	**Ruisui**	**1.95 228**	*i* P	**Pn**	**13 23 12.9**	**0.0**
HGSD			S	**Sn**	**13 23 37.8**	**-1.1**
VWDT	**VWDT**	**2.00 239**	*i* P	**Pn**	**13 23 14.1**	**+0.6**
VWDT			*i* S	**Sn**	**13 23 39.0**	**-0.8**
EHYH	**Wanrong**	**2.00 230**	*i* P	**Pn**	**13 23 13.3**	**-0.2**
EHYH			S	**Sn**	**13 23 38.2**	**-1.7**
EHY	**Hungye**	**2.01 230**	*eP*	**Pn**	**13 23 13.2**	**-0.5**
NMLH	**Miaoli**	**2.03 263**	*eP*	**Pn**	**13 23 14.4**	**+0.5**
NMLH			*i* S	**Sn**	**13 23 38.9**	**-1.6**
JIKM	**Ikemajima**	**2.04 86**	*eS*	**Sn**	**13 23 40.9**	**+0.2**
WCS	**Beigang Elemen**	**2.05 249**	P	**Pn**	**13 23 15.3**	**+1.2**
WCS			*i* S	**Sn**	**13 23 41.5**	**+0.6**
ECBN	**Changbin**	**2.06 224**	*eP*	**Pn**	**13 23 14.3**	**+0.2**
ECBN			S	**Sn**	**13 23 39.9**	**-1.1**
NSY	**Sanyi**	**2.08 260**	*eP*	**Pn**	**13 23 15.9**	**+1.4**
NSY			*i* S	**Sn**	**13 23 42.0**	**+0.3**
TWQ1	**Liyutan**	**2.08 258**	*eP*	**Pn**	**13 23 15.2**	**+0.7**
TWQ1			*eS*	**Sn**	**13 23 41.4**	**-0.3**
YULB	**Yu-li**	**2.10 228**	P	**Pn**	**13 23 14.1**	**-0.7**
YULB	**Yu-li**	**2.10 228**	S	**Sn**	**13 23 40.5**	**-1.7**
YULB	**Yu-li**	**2.10 228**	P	**Pn**	**13 23 14.5**	**-0.3**
YULB			S	**Sn**	**13 23 40.4**	**-1.7**
JMJ2	**Miyako jima3**	**2.11 91**	*eP*	**Pn**	**13 23 16.4**	**+1.6**
JMJ2			*eS*	**Sn**	**13 23 42.6**	**+0.3**
SSLB	**Suanglung**	**2.13 242**	P	**Pn**	**13 23 15.9**	**+0.8**
SSLB	**Suanglung**	**2.13 242**	S	**Sn**	**13 23 41.5**	**-1.2**
SSLB	**Suanglung**	**2.13 242**	*eP*	**Pn**	**13 23 15.8**	**+0.7**
SSLB			S	**Sn**	**13 23 41.9**	**-0.9**
SMLT	**Sun Moon Lake**	**2.13 245**	*eP*	**Pn**	**13 23 16.4**	**+1.2**
TWF1	**Yuli**	**2.13 227**	*i* P	**Pn**	**13 23 14.9**	**-0.2**
TWF1			*eS*	**Sn**	**13 23 40.9**	**-1.8**
TYC	**Yuchr**	**2.16 246**	*i* P	**Pn**	**13 23 16.9**	**+1.5**
TYC			S	**Sn**	**13 23 43.9**	**+0.7**
CHKH	**Chenggong**	**2.18 223**	*eP*	**Pn**	**13 23 15.6**	**-0.1**
CHKH			*eS*	**Sn**	**13 23 42.0**	**-1.8**
WDJ	**Dajia District**	**2.20 258**	*eP*	**Pn**	**13 23 16.8**	**+0.9**
WDJ			*eS*	**Sn**	**13 23 43.9**	**-0.3**
FULB	**Fuli**	**2.24 225**	P	**Pn**	**13 23 16.7**	**+0.2**
FULB			S	**Sn**	**13 23 43.7**	**-1.4**
WHYT	**Xinyi Township**	**2.26 241**	*i* P	**Pn**	**13 23 18.1**	**+1.4**
WHYT			*i* S	**Sn**	**13 23 46.2**	**+0.7**
CHKT	**Chengkung**	**2.27 222**	*eP*	**Pn**	**13 23 16.5**	**-0.3**
CHKT			*i* S	**Sn**	**13 23 43.5**	**-2.2**
YUS	**Yu-Shan**	**2.29 235**	P	**Pn**	**13 23 18.2**	**+0.7**
YUS			*i* S	**Sn**	**13 23 45.8**	**-1.1**
WNT	**Mingjian**	**2.31 247**	*eP*	**Pn**	**13 23 18.8**	**+1.5**
WCHH	**Zhanghua**	**2.35 252**	*eP*	**Pn**	**13 23 18.4**	**+0.7**
WCHH			S	**Sn**	**13 23 46.5**	**-0.8**
WCH1	**Changhua City**	**2.36 252**	*eP*	**Pn**	**13 23 16.7**	**-1.2**
ECS	**Chishang**	**2.36 224**	*eP*	**Pn**	**13 23 18.9**	**+0.9**
ALS	**Alishan**	**2.39 238**	P	**Pn**	**13 23 20.0**	**+1.4**
ELDTW	**Lidau**	**2.43 229**	P	**Pn**	**13 23 19.0**	**+0.1**
ELDTW			*i* S	**Sn**	**13 23 48.7**	**-0.8**
CHN5	**Tsauling**	**2.44 241**	*eP*	**Pn**	**13 23 20.8**	**+1.7**
WDL	**Douliou City**	**2.50 245**	*eP*	**Pn**	**13 23 19.7**	**+0.1**
WDLH	**Douliu**	**2.51 244**	*eP*	**Pn**	**13 23 21.3**	**+1.6**
WDLH			S	**Sn**	**13 23 51.9**	**+0.8**
WRL	**Guolierlin Hig**	**2.56 250**	*i* P	**Pn**	**13 23 20.9**	**+0.4**
WRL			*i* S	**Sn**	**13 23 52.1**	**-0.1**
WCKO	**Fanlu**	**2.58 239**	*eP*	**Pn**	**13 23 22.3**	**+1.6**
STYH	**Taoyuan**	**2.61 232**	P	**Pn**	**13 23 22.4**	**+1.3**
WTK	**Tuku**	**2.64 245**	*eP*	**Pn**	**13 23 22.5**	**+1.2**
TPUB	**Ta-pu**	**2.64 236**	P	**Pn**	**13 23 23.5**	**+2.1**
TPUB	**Ta-pu**	**2.64 236**	S	**Sn**	**13 23 55.4**	**+1.4**
TPUB	**Ta-pu**	**2.64 236**	*eP*	**Pn**	**13 23 23.5**	**+2.1**
TWGBT	**Beinan**	**2.65 222**	*eP*	**Pn**	**13 23 21.7**	**+0.1**
TWGBT			*i* S	**Sn**	**13 23 53.6**	**-0.7**
TWG	**Pinlang**	**2.66 222**	*eP*	**Pn**	**13 23 21.5**	**-0.1**
TWG			*eS*	**Sn**	**13 23 52.8**	**-1.6**
TTN	**Taitung**	**2.66 220**	*eP*	**Pn**	**13 23 22.4**	**+0.8**
TTN			*eS*	**Sn**	**13 23 53.5**	**-0.9**
WTP	**Ta-pu**	**2.68 235**	*eP*	**Pn**	**13 23 23.0**	**+0.9**
CHY	**Chiayi**	**2.69 242**	*eP*	**Pn**	**13 23 23.4**	**+1.3**
TWK	**Hsinying**	**2.77 237**	*eP*	**Pn**	**13 23 23.9**	**+0.8**
CHN1	**Nanshi**	**2.78 235**	*eP*	**Pn**	**13 23 24.4**	**+1.2**
WSF	**Szhu**	**2.80 246**	*eP*	**Pn**	**13 23 22.8**	**-0.6**
WSF			S	**Sn**	**13 23 57.7**	**+0.3**
SGST	**Jiashian**	**2.81 233**	*eP*	**Pn**	**13 23 25.0**	**+1.5**
WSL	**Shuilin Townsh**	**2.84 244**	*eP*	**Pn**	**13 23 24.8**	**+0.8**
LAY	**Lan-yu**	**3.06 206**	*i* P	**Pn**	**13 23 26.6**	**-0.2**
LAY			*i* S	**Sn**	**13 24 00.9**	**-2.8**
LYUB	**Lan-yu**	**3.08 205**	*i* P	**Pn**	**13 23 26.8**	**-0.3**
LYUB			*i* S	**Sn**	**13 24 01.8**	**-2.4**
JOW	**Kunigami**	**5.16 66**	P	**Pn**	**13 23 52.9**	**-1.5**
	21nm,0.8s,baz=101,slow=25,SNR=11					
JOW			S	**Sn**	**13 24 48.1**	**-5.0**
	6.1nm,0.3s,baz=116,slow=25,SNR=6.7					
KSRS	**Korea Array**	**13.29 17**	P	Pn	13 25 38.6	-3.6
	0.4nm,0.4s,baz=198,slow=12,SNR=7.5					
DAV	**Davao City (W)**	**17.81 172**	LR	LR	13 33 42.4	
	comp=Z,101nm,20.2s,baz=316,slow=37					
TLY	**Talaya**	**30.64 336**	LR	LR	13 42 05.2	
	comp=Z,69nm,18.6s,baz=340,slow=38					
MKAR	**Makanchi Array**	**39.06 315**	P	**P**	**13 29 51.1**	**-1.4**
	0.3nm,0.4s,baz=102,slow=9.4,SNR=8.6					
	0.3nm,0.4s					
ZALV	**Zalesovo Beam**	**40.64 326**	P	**P**	**13 30 03.2**	**-2.1**
	0.3nm,0.3s,baz=108,slow=9.5,SNR=2.3					
	0.3nm,0.3s					
KURBB	**Kurchatov Arra**	**42.72 319**	P	**P**	**13 30 21.9**	**-0.4**
	0.2nm,0.3s,baz=110,slow=11,SNR=3.0					
	0.2nm,0.3s					
WRA	**Warramunga Arr**	**45.83 165**	P	**P**	**13 30 49.2**	**+1.8**
	1.0nm,0.5s,baz=347,slow=8.7,SNR=11					
	1.0nm,0.5s					
BVAR	**Borovoye Array**	**48.25 320**	P	**P**	**13 31 05.0**	**-0.9**
	0.4nm,0.5s,baz=116,slow=7.2,SNR=3.1					
	0.4nm,0.5s					
ASAR	**Alice Springs**	**49.33 167**	P	**P**	**13 31 16.4**	**+1.9**
	0.3nm,0.4s,baz=353,slow=7.1,SNR=16					
	0.3nm,0.4s					
STKA	**Stephens Creek**	**59.10 162**	P	**P**	**13 32 26.2**	**+1.2**
	0.7nm,0.5s,baz=326,slow=15,SNR=1.5					
	0.7nm,0.5s					
FINES	**FINESS Array B**	**71.74 330**	P	**P**	**13 33 45.6**	**-0.3**
	3.1nm,0.9s,baz=62,slow=4.8,SNR=1.3					
	3.1nm,0.9s					

ROM ***22*** *13:31:27.9±0.0, 44°.746N±0°.002×10°.810E±0°.003, h28km, ML3.3/281, Error ellipse: s-maj=0.2km s-min=0.2km az=83.0*

BGR ***22*** *13:31:28.8±0.7, 44°.53N×10°.66E, h10km, ML3.1/6, Error ellipse: s-maj=13.3km s-min=8.9km az=36.0*

IDC ***22*** *13:31:28.6±1.7, 44°.63N×11°.12E, h0km, mb3.5/1, mbtmp3.3/3, ML3.0/2, MS3.6/3, Error ellipse: s-maj=48.6km s-min=14.3km az=116.0*

GEN ***22*** *13:31:29.7, 44°.76N×10°.84E, h16km, Ml3.3*

LDG ***22*** *13:31:32.5±0.2, 44°.78N×10°.85E, h6km, Ml3.6/36, Error ellipse: s-maj=3.3km s-min=2.6km az=75.0*

PRU ***22*** *13:31:33.5, 44°.80N×11°.09E, h10km*

VIE ***22*** *13:31:39.3±6.2, 45°.07N×11°.75E, h0km, mb2.3/1, ml2.8/2, Error ellipse: s-maj=67.5km s-min=12.8km az=56.0 63 km SW of Venice*

ISC 22 13:31:30.9±0.9, 44°.80N±0°.01×10°.74E±0°.02, h14km±6km, n172, σ1§24/270, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAVE	**Cavezzo**	**0.20**	**72**	P	**Pg**	**13 31 35.3**	**-0.1**
CAVE				S	**Sb**	**13 31 39.8**	**-0.1**
CAVE	**Cavezzo**	**0.20**	**72**	P	**Pg**	**13 31 35.2**	**-0.1**
CAVE				S	**Sb**	**13 31 39.8**	**-0.1**
CAVE				AML	AML		
	comp=N,51050μm,0.2s						
CAVE				AML	AML		
	comp=E,73700μm,0.2s						
CAVE				AML	AML		
	comp=N,51057μm,0.2s						
CAVE				AML	AML		
	comp=E,73692μm,0.2s						
MODE	**Modena**	**0.23**	**139**	P	**Pg**	**13 31 35.0**	**-0.8**
MODE				S	**Sg**	**13 31 39.4**	**+0.2**
MODE				AML	AML		
	comp=N,46450μm,0.5s						
MODE				AML	AML		
	comp=E,76450μm,0.6s						
MODE				AML	AML		
	comp=E,74312μm,0.5s						
MODE				AML	AML		
	comp=N,46431μm,0.5s						
RAVA	**Ravarino**	**0.27**	**100**	P	**Pg**	**13 31 36.3**	**-0.3**
RAVA				S	**Sb**	**13 31 41.8**	**-0.3**
RAVA	**Ravarino**	**0.27**	**100**	⇑P	**Pg**	**13 31 36.3**	**-0.3**
RAVA				S	**Sb**	**13 31 41.8**	**-0.3**
RAVA				AML	AML		
	comp=E,47850μm,0.3s						
RAVA				AML	AML		
	comp=N,80950μm,0.2s						
RAVA				AML	AML		
	comp=E,47847μm,0.3s						
RAVA				AML	AML		
	comp=N,80928μm,0.2s						
SBPO	**S.Benedetto Po**	**0.28**	**27**	P	**Pb**	**13 31 38.4**	**+0.7**
SBPO				S	**Sn**	**13 31 46.4**	**-0.2**
PRMA	**PARMA**	**0.31**	**263**	P	**Pb**	**13 31 39.2**	**+1.0**
PRMA				S	**Sn**	**13 31 46.2**	**-1.0**
PRMA	**PARMA**	**0.31**	**263**	P	**Pb**	**13 31 39.1**	**+1.0**
PRMA				S	**Sn**	**13 31 47.2**	**-0.1**
PRMA				AML	AML		
	comp=E,5370μm,0.7s						
PRMA				AML	AML		
	comp=N,4495μm,0.6s						
PRMA				AML	AML		
	comp=E,4690μm,0.3s						
PRMA				AML	AML		
	comp=N,3448μm,0.3s						
BOZZ	**Bozzolo**	**0.35**	**329**	P	**Pn**	**13 31 41.3**	**-0.4**
BOZZ				S	**Sn**	**13 31 51.8**	**+3.3**
SERM	**Sermide**	**0.45**	**62**	P	**Pb**	**13 31 40.6**	**+0.1**
SERM				S	**Sb**	**13 31 48.3**	**+1.3**
SERM	**Sermide**	**0.45**	**62**	P	**Pb**	**13 31 40.6**	**+0.1**
SERM				S	**Sn**	**13 31 51.1**	**+0.4**
SERM				AML	AML		
	comp=E,11400μm,1.0s						
SERM				AML	AML		
	comp=N,7325μm,0.2s						
SERM				AML	AML		
	comp=E,4425μm,1.0s						
SERM				AML	AML		
	comp=N,2480μm,0.8s						
SERM				AML	AML		
	comp=N,7330μm,0.2s						
SERM				AML	AML		
	comp=E,2847μm,0.4s						
SERM				AML	AML		
	comp=E,8070μm,0.4s						
SERM				AML	AML		
	comp=N,7326μm,0.2s						
SERM				AML	AML		
	comp=N,2294μm,0.3s						
GSCL	**Gusciola**	**0.47**	**194**	P	**Pb**	**13 31 40.7**	**-0.2**
GSCL				S	**Sb**	**13 31 48.3**	**+0.6**
GSCL	**Gusciola**	**0.47**	**194**	P	**Pb**	**13 31 40.5**	**-0.4**
ZCCA	**Zocca**	**0.48**	**160**	P	**Pg**	**13 31 40.3**	**-0.2**
ZCCA				S	**Sn**	**13 31 50.0**	**-1.7**
ZCCA	**Zocca**	**0.48**	**160**	P	**Pb**	**13 31 40.8**	**-0.4**
ZCCA				S	**Sn**	**13 31 50.3**	**-1.4**
ZCCA				AML	AML		
	comp=E,6205μm,1.2s						
ZCCA				AML	AML		
	comp=N,4585μm,0.4s						
ZCCA				AML	AML		
	comp=E,6205μm,1.2s						
ZCCA				AML	AML		
	comp=E,6210μm,1.2s						
ZCCA				AML	AML		
	comp=N,4585μm,0.5s						
ZCCA				AML	AML		
	comp=E,6310μm,1.2s						
ZCCA				AML	AML		
	comp=N,4770μm,0.5s						
ZCCA				AML	AML		
	comp=E,6310μm,0.8s						
ZCCA				AML	AML		
	comp=N,4585μm,1.5s						
ZCCA				AML	AML		
	comp=E,4485μm,0.8s						
ZCCA				AML	AML		
	comp=N,4771μm,0.5s						
ZCCA				AML	AML		
	comp=E,4356μm,0.8s						
ZCCA				AML	AML		
	comp=E,6210μm,0.8s						
ZCCA				AML	AML		
	comp=N,4771μm,1.5s						
ZCCA				AML	AML		
	comp=N,4770μm,1.5s						
FIU	**Minerbio Fiu**	**0.56**	**107**	P	**Pb**	**13 31 42.5**	**+0.1**
FIU				AML	AML		
	comp=E,9216μm,0.4s						
GRAM	**Graiana**	**0.57**	**237**	P	**Pb**	**13 31 42.9**	**+0.1**
GRAM	**Graiana**	**0.57**	**237**	P	**Pb**	**13 31 42.8**	**+0.1**
GRAM				AML	AML		
	comp=N,2600μm,1.2s						
GRAM				AML	AML		
	comp=N,2600μm,0.8s						
GRAM				AML	AML		
	comp=E,2935μm,0.5s						
FERS	**Ferrara-Casagl**	**0.58**	**80**	P	**Pg**	**13 31 42.5**	**+0.2**
FERS				AML	AML		
	comp=N,5555μm,0.8s						
FERS				AML	AML		
	comp=E,5200μm,0.6s						
FERS				AML	AML		
	comp=E,4044μm,0.3s						
FERS				AML	AML		
	comp=N,5503μm,0.8s						
FERS				AML	AML		
	comp=N,5555μm,1.2s						
FERS				AML	AML		
	comp=N,5503μm,1.2s						
OPPE	**Oppeano**	**0.59**	**31**	P	**Pb**	**13 31 43.4**	**+0.4**
OPPE				AML	AML		
	comp=E,5800μm,0.3s						
OPPE				AML	AML		
	comp=N,4465μm,1.3s						
OPPE				AML	AML		
	comp=E,5799μm,0.3s						
OPPE				AML	AML		
	comp=N,4032μm,0.4s						
SARO	**Sassorosso**	**0.67**	**202**	P	**Pg**	**13 31 43.8**	**-0.1**
SARO				S	**Sb**	**13 31 54.4**	**+0.9**
SARO	**Sassorosso**	**0.67**	**202**	P	**Pg**	**13 31 43.9**	**-0.1**
MTRZ	**Monterenzio**	**0.67**	**129**	P	**Pn**	**13 31 45.4**	**-0.7**
MTRZ				S	**Sn**	**13 31 58.9**	**+2.5**
MTRZ	**Monterenzio**	**0.67**	**129**	P	**Pb**	**13 31 45.1**	**+0.7**
MTRZ				AML	AML		
	comp=E,4040μm,0.6s						
MTRZ				AML	AML		
	comp=N,3170μm,1.4s						
MTRZ				AML	AML		
	comp=N,3190μm,1.5s						
MTRZ				AML	AML		
	comp=E,4045μm,0.6s						
MTRZ				AML	AML		
	comp=E,4170μm,0.6s						
FNVD	**Fontana Vidola**	**0.69**	**157**	P	**Pg**	**13 31 43.1**	**-1.3**
FNVD				AML	AML		
	comp=N,2735μm,0.4s						
FNVD				AML	AML		
	comp=E,3040μm,0.5s						
FNVD				AML	AML		
	comp=N,2734μm,0.4s						
FNVD				AML	AML		
	comp=E,3037μm,0.5s						
VLC	**Villacollemand**	**0.69**	**202**	P	**Pg**	**13 31 44.3**	**-0.1**
VLC				S	**Sb**	**13 31 55.3**	**+1.2**
VLC	**Villacollemand**	**0.69**	**202**	P	**Pg**	**13 31 44.3**	**-0.1**
VLC				AML	AML		
	comp=N,2445μm,0.4s						
VLC				AML	AML		
	comp=E,2165μm,0.5s						
VLC				AML	AML		
	comp=N,2420μm,0.4s						
VLC				AML	AML		
	comp=E,2235μm,0.5s						
VLC				AML	AML		
	comp=E,2232μm,0.5s						
VLC				AML	AML		
	comp=N,2444μm,0.4s						
VLC				AML	AML		
	comp=E,2168μm,0.5s						
VLC				AML	AML		
	comp=N,2421μm,0.4s						
VLC				AML	AML		
	comp=E,2232μm,1.5s						
VLC				AML	AML		
	comp=E,2168μm,1.5s						
FIVI	**Fivizzano**	**0.71**	**218**	P	**Pb**	**13 31 45.3**	**+0.2**
BDI	**Bagni Di Lucca**	**0.75**	**188**	P	**Pg**	**13 31 45.0**	**-0.4**
BDI				S	**Sb**	**13 31 56.4**	**+0.6**
BDI	**Bagni Di Lucca**	**0.75**	**188**	P	**Pg**	**13 31 45.2**	**-0.2**
BDI				AML	AML		
	comp=E,4160μm,1.4s						
BDI				AML	AML		
	comp=N,4995μm,0.2s						
BDI				AML	AML		
	comp=E,4515μm,0.2s						
BDI				AML	AML		
	comp=N,5465μm,0.2s						
BDI				AML	AML		
	comp=E,4513μm,0.2s						
BDI				AML	AML		
	comp=N,5465μm,0.2s						
BDI				AML	AML		
	comp=E,4143μm,0.8s						
BDI				AML	AML		
	comp=N,4996μm,0.2s						
BDI				AML	AML		
	comp=E,4513μm,1.8s						
PCN	**Piacenza**	**0.76**	**288**	P	**Pn**	**13 31 48.1**	**+1.0**
PCN				AML	AML		
	comp=N,11450μm,0.4s						
PCN				AML	AML		
	comp=E,12150μm,0.4s						
PCN				AML	AML		
	comp=E,12450μm,0.4s						
PCN				AML	AML		
	comp=N,11450μm,0.4s						
PCN				AML	AML		
	comp=N,12200μm,0.4s						
PCN				AML	AML		
	comp=N,12198μm,0.4s						
PCN				AML	AML		
	comp=N,11481μm,0.4s						
PCN				AML	AML		
	comp=E,12438μm,0.4s						
PCN				AML	AML		
	comp=E,12152μm,0.4s						
POPM	**Popiglio**	**0.76**	**179**	P	**Pg**	**13 31 45.2**	**-0.4**
POPM	**Popiglio**	**0.76**	**179**	P	**Pg**	**13 31 45.1**	**-0.5**
POPM				AML	AML		
	comp=E,2670μm,0.5s						
POPM				AML	AML		
	comp=N,6475μm,0.8s						
POPM				AML	AML		
	comp=E,2668μm,0.5s						
POPM				AML	AML		
	comp=N,6127μm,0.3s						
POPM				AML	AML		
	comp=E,2668μm,1.5s						
EQUI	**Equi**	**0.76**	**214**	P	**Pg**	**13 31 45.5**	**-0.3**
EQUI				S	**S

CARD	**Cardoso**	**0.80**	**194**	P	**Pg**	**13 31 46.1**	**-0.2**
CARD				AML	AML		
	comp=E,2915µm,0.4s						
CARD				AML	AML		
	comp=N,3575µm,0.3s						
CARD				AML	AML		
	comp=E,2743µm,0.2s						
CARD				AML	AML		
	comp=N,2487µm,0.2s						
SALO	**Salr**	**0.83**	**349**	P	**Pn**	**13 31 48.5**	**+0.3**
SALO				AML	AML		
	comp=N,6105µm,0.8s						
SALO				AML	AML		
	comp=E,5130µm,0.3s						
SALO				AML	AML		
	comp=E,5235µm,0.3s						
SALO				AML	AML		
	comp=N,6295µm,0.8s						
SALO				AML	AML		
	comp=N,5249µm,0.3s						
SALO				AML	AML		
	comp=E,5130µm,0.3s						
SALO				AML	AML		
	comp=N,5525µm,0.3s						
SALO				AML	AML		
	comp=E,5233µm,0.3s						
ORZI	**Orzinuovi**	**0.83**	**317**	P	**Pn**	**13 31 49.1**	**+0.9**
ORZI				AML	AML		
	comp=E,2950µm,0.6s						
ORZI				AML	AML		
	comp=N,3170µm,0.5s						
ORZI				AML	AML		
	comp=E,2646µm,0.3s						
ORZI				AML	AML		
	comp=N,3170µm,0.5s						
ORZI				AML	AML		
	comp=N,3170µm,1.5s						
ORZI				AML	AML		
	comp=N,3170µm,1.5s						
ZOVE	**Zovencedo**	**0.84**	**39**	P	**Pb**	**13 31 47.3**	**0.0**
ZOVE				AML	AML		
	comp=E,5280µm,0.5s						
ZOVE				AML	AML		
	comp=E,5610µm,0.5s						
ZOVE				AML	AML		
	comp=N,4535µm,1.1s						
ZOVE				AML	AML		
	comp=N,4410µm,1.1s						
ZOVE				AML	AML		
	comp=E,5574µm,0.4s						
ZOVE				AML	AML		
	comp=N,3663µm,0.5s						
ZOVE				AML	AML		
	comp=E,5274µm,0.4s						
ZOVE				AML	AML		
	comp=N,3586µm,0.2s						
IMOL	**Imola, Italy**	**0.84**	**121**	P	**Pn**	**13 31 48.5**	**+0.2**
IMOL				S	**Sn**	**13 32 01.9**	**+1.5**
IMOL	**Imola, Italy**	**0.84**	**121**	P	**Pn**	**13 31 48.0**	**-0.3**
IMOL				AML	AML		
	comp=E,2195µm,1.0s						
IMOL				AML	AML		
	comp=N,2305µm,0.8s						
IMOL				AML	AML		
	comp=E,2185µm,1.0s						
IMOL				AML	AML		
	comp=E,1864µm,0.3s						
IMOL				AML	AML		
	comp=N,1401µm,0.3s						
BRIS	**BRISIGHELLA**	**0.85**	**140**	P	**Pn**	**13 31 48.8**	**+0.3**
BRIS				AML	AML		
	comp=E,1135µm,1.3s						
BRIS				AML	AML		
	comp=N,1185µm,1.2s						
BRIS				AML	AML		
	comp=N,233µm,0.9s						
BRIS				AML	AML		
	comp=E,1053µm,0.5s						
BRIS				AML	AML		
	comp=N,1172µm,0.4s						
VOBA	**Vobarno**	**0.86**	**349**	P	**Pn**	**13 31 48.8**	**+0.3**
VOBA				AML	AML		
	comp=E,5230µm,1.4s						
VOBA				AML	AML		
	comp=N,6855µm,0.2s						
VOBA				AML	AML		
	comp=E,4439µm,0.2s						
VOBA				AML	AML		
	comp=N,6852µm,0.2s						
TEOL	**Teolo**	**0.86**	**49**	P	**Pg**	**13 31 47.6**	**+0.1**
SEI	**Scarperia**	**0.87**	**149**	P	**Pg**	**13 31 47.1**	**-0.6**
SEI				S	**Sn**	**13 32 02.3**	**+1.1**
SEI	**Scarperia**	**0.87**	**149**	P	**Pg**	**13 31 46.9**	**-0.8**
SEI				AML	AML		
	comp=E,1955µm,0.4s						
SEI				AML	AML		
	comp=N,3460µm,0.3s						
SEI				AML	AML		
	comp=N,3460µm,0.3s						
SEI				AML	AML		
	comp=E,1956µm,0.4s						
BALD	**Monte Baldo**	**0.88**	**4**	P	**Pn**	**13 31 48.7**	**-0.4**
BALD				S	**Sn**	**13 32 04.3**	**+2.5**
BALD	**Monte Baldo**	**0.88**	**4**	P	**Pn**	**13 31 48.8**	**-0.4**
MPPT	**Montemurlo**	**0.88**	**163**	P	**Pg**	**13 31 47.2**	**-0.8**
MPPT				AML	AML		
	comp=E,3510µm,0.5s						
MPPT				AML	AML		
	comp=N,2075µm,0.3s						
MPPT				AML	AML		
	comp=E,3513µm,0.5s						
MPPT				AML	AML		
	comp=N,2074µm,0.3s						
CNCS	**Concesio**	**0.88**	**335**	P	**Pn**	**13 31 50.0**	**+1.1**
MARN	**Marana (Italy)**	**0.90**	**22**	P	**Pn**	**13 31 49.2**	**+0.1**
MBAL	**Monte Baldo -**	**0.90**	**5**	P	**Pn**	**13 31 49.6**	**+0.4**
MBAL				AML	AML		
	comp=E,10195µm,0.7s						
MBAL				AML	AML		
	comp=N,10375µm,0.5s						
MBAL				AML	AML		
	comp=E,9675µm,0.4s						
MBAL				AML	AML		
	comp=N,9985µm,0.7s						
MBAL				AML	AML		
	comp=E,7355µm,0.1s						
MBAL				AML	AML		
	comp=N,8224µm,0.1s						
MBAL				AML	AML		
	comp=E,7583µm,0.2s						
MBAL				AML	AML		
	comp=E,7355µm,1.9s						
MBAL				AML	AML		
	comp=N,7632µm,0.1s						
MAIM	**Mastiano**	**0.91**	**191**	P	**Pb**	**13 31 48.2**	**-0.2**
MAIM	**Mastiano**	**0.91**	**191**	P	**Pb**	**13 31 48.4**	**0.0**
MASSA	**Massa (MS), It**	**0.91**	**210**	P	**Pn**	**13 31 49.1**	**-0.1**
MASSA				S	**Sn**	**13 32 04.5**	**+2.5**
BOB	**Bobbio (Coli)**	**0.92**	**268**	P	**Pn**	**13 31 50.7**	**+1.3**
BOB	**Bobbio (Coli)**	**0.92**	**268**	P	**Pn**	**13 31 50.8**	**+1.3**
BOB				AML	AML		
	comp=E,2700µm,1.0s						
BOB				AML	AML		
	comp=N,4550µm,0.6s						
BOB				AML	AML		
	comp=E,2840µm,1.2s						
BOB				AML	AML		
	comp=N,4730µm,0.6s						
BOB				AML	AML		
	comp=E,1806µm,0.4s						
BOB				AML	AML		
	comp=E,2267µm,0.4s						
BOB				AML	AML		
	comp=N,4731µm,0.6s						
BOB				AML	AML		
	comp=N,4551µm,0.6s						
BOB				AML	AML		
	comp=E,2267µm,1.6s						
MAGA	**Magasa**	**0.97**	**355**	P	**Pn**	**13 31 50.5**	**+0.2**
MAGA				AML	AML		
	comp=E,27400µm,0.3s						
MAGA				AML	AML		
	comp=N,14400µm,1.1s						
MAGA				AML	AML		
	comp=N,13380µm,0.3s						
MAGA				AML	AML		
	comp=N,13380µm,1.7s						
MAGA				AML	AML		
	comp=N,14400µm,0.9s						
MAGA				AML	AML		
	comp=E,27372µm,0.3s						
PLMA	**Palmaria, Port**	**0.99**	**221**	P	**Pg**	**13 31 50.0**	**+0.1**
PLMA				S	**Sn**	**13 32 06.1**	**+2.1**
PLMA	**Palmaria, Port**	**0.99**	**221**	P	**Pn**	**13 31 50.4**	**+0.1**
PLMA				AML	AML		
	comp=E,1034µm,0.7s						
PLMA				AML	AML		
	comp=N,1050µm,1.4s						
PLMA				AML	AML		
	comp=E,603µm,0.5s						
PLMA				AML	AML		
	comp=N,899µm,0.2s						
MSSA	**Maissana**	**1.00**	**241**	P	**Pn**	**13 31 51.4**	**+0.8**
MSSA	**Maissana**	**1.00**	**241**	P	**Pn**	**13 31 50.9**	**+0.3**
LMD	**Lutirano**	**1.00**	**136**	P	**Pb**	**13 31 49.7**	**-0.4**
LMD				S	**Sn**	**13 32 06.1**	**+1.6**
LMD	**Lutirano**	**1.00**	**136**	P	**Pb**	**13 31 49.7**	**-0.4**
LMD				AML	AML		
	comp=E,749µm,0.8s						
LMD				AML	AML		
	comp=N,972µm,0.7s						
LMD				AML	AML		
	comp=E,704µm,0.3s						
LMD				AML	AML		
	comp=N,691µm,0.4s						
CRMI	**Carmignano**	**1.03**	**171**	P	**Pb**	**13 31 50.0**	**-0.5**
CRMI				AML	AML		
	comp=E,553µm,0.6s						
CRMI				AML	AML		
	comp=N,596µm,0.5s						
CRMI				AML	AML		
	comp=E,236µm,0.6s						
CRMI				AML	AML		
	comp=N,267µm,0.5s						
CRMI				AML	AML		
	comp=E,201µm,0.3s						
CRMI				AML	AML		
	comp=N,267µm,0.5s						
CRMI				AML	AML		
	comp=E,553µm,0.6s						
CRMI				AML	AML		
	comp=E,201µm,1.7s						
CRMI				AML	AML		
	comp=N,596µm,0.5s						
VARA	**Varagna**	**1.03**	**6**	P	**Pn**	**13 31 51.4**	**+0.3**
VARA				AML	AML		
	comp=E,9055µm,0.6s						
VARA				AML	AML		
	comp=N,9415µm,0.6s						
VARA				AML	AML		
	comp=E,9770µm,0.6s						
VARA				AML	AML		
	comp=N,9145µm,0.6s						
VARA				AML	AML		
	comp=E,9754µm,0.2s						
VARA				AML	AML		
	comp=N,7699µm,0.3s						
VARA				AML	AML		
	comp=E,8204µm,0.1s						
VARA				AML	AML		
	comp=N,9133µm,0.2s						
BAG8	**Bagolino**	**1.04**	**349**	P	**Pn**	**13 31 51.8**	**+0.7**
SANR	**Sandrigo**	**1.04**	**36**	P	**Pg**	**13 31 50.9**	**0.0**
GORR	**Gorreto**	**1.05**	**260**	P	**Pn**	**13 31 52.7**	**+1.5**
GORR	**Gorreto**	**1.05**	**260**	P	**Pn**	**13 31 52.8**	**+1.5**
GORR				AML	AML		
	comp=E,7150µm,0.4s						
GORR				AML	AML		
	comp=N,3615µm,0.3s						
GORR				AML	AML		
	comp=E,7151µm,0.4s						
GORR				AML	AML		
	comp=N,3611µm,0.3s						
BRSN	**Barisano**	**1.09**	**118**	P	**Pg**	**13 31 52.5**	**+0.7**
PII	**Pisa**	**1.09**	**188**	P	**Pg**	**13 31 51.9**	**-0.1**
PII				S	**Sn**	**13 32 07.3**	**+0.7**
PII	**Pisa**	**1.09**	**188**	P	**Pb**	**13 31 51.4**	**-0.2**
PII				AML	AML		
	comp=E,4690µm,0.3s						
PII				AML	AML		
	comp=N,6580µm,0.6s						
PII				AML	AML		
	comp=E,4687µm,0.3s						
PII				AML	AML		
	comp=N,5140µm,0.2s						
PII				AML	AML		
	comp=N,5140µm,1.8s						
RUFI	**Rufina**	**1.11**	**150**	P	**Pn**	**13 31 52.0**	**-0.1**
RUFI				S	**Sn**	**13 32 07.2**	**+0.1**
RUFI	**Rufina**	**1.11**	**150**	P	**Pn**	**13 31 51.9**	**-0.1**
RUFI				AML	AML		
	comp=E,610µm,0.6s						
RUFI				AML	AML		
	comp=N,676µm,0.7s						
RUFI				AML	AML		
	comp=N,676µm,0.7s						
RUFI				AML	AML		
	comp=E,609µm,0.6s						
DOSS	**Dosso del Somm**	**1.12**	**16**	P	**Pg**	**13 31 52.8**	**+0.2**
DOSS				S	**Sn**	**13 32 08.3**	**+0.6**
MDI	**Monti di Nese**	**1.22**	**324**	P	**Pg**	**13 31 54.8**	**+0.5**
ASQU	**Asqua**	**1.26**	**143**	P	**Pb**	**13 31 54.4**	**0.0**
ASQU				S	**Sg**	**13 32 12.3**	**+0.8**
GAGG	**Gaggia**	**1.29**	**7**	P	**Pb**	**13 31 55.2**	**+0.1**
GAGG				S	**Sg**	**13 32 14.4**	**+1.9**
RNCA	**Ronca, Sant'Ol**	**1.32**	**256**	P	**Pg**	**13 31 57.2**	**+0.9**
OSSC	**Osservatorio P**	**1.33**	**164**	P	**Pb**	**13 31 55.3**	**-0.3**
OSSC				S	**Sb**	**13 32 12.2**	**-0.3**
CSNT	**Castellina Chi**	**1.39**	**163**	P	**Pn**	**13 31 55.9**	**0.0**
CSNT				S	**Sn**	**13 32 13.6**	**-0.4**
CTI	**Castel Tesino**	**1.40**	**27**	P	**Pn**	**13 31 56.1**	**0.0**
FETA	**Feichten**	**2.22**	**360**	*e*Pn	**Pb**	**13 32 10.3**	**-0.6**
	comp=E,5.4nm,0.2s,SNR=14						
FETA				*e*Sn	**Sb**	**13 32 38.8**	**+0.5**
	comp=E,24nm,0.3s						
ABTA	**Abfaltersbach**	**2.31**	**32**	*e*Pn	**Pn**	**13 32 09.8**	**+1.3**
	comp=E,1.8nm,0.2s,SNR=12						
ABTA				*e*Sn	**Sb**	**13 32 40.7**	**0.0**
	comp=E,16nm,0.3s						
SKDS	**Skadanscina**	**2.43**	**71**	*i* Pn	**Pn**	**13 32 08.8**	**-1.5**
SKDS				*e*Sn	**Sn**	**13 32 36.5**	**-3.2**
PLONS	**Plons/SG**	**2.44**	**338**	*e*Pn	**Pb**	**13 32 13.5**	**-1.0**
PLONS				*e*Sn	**Sb**	**13 32 43.1**	**-1.4**
SQTA	**Sankt Quirin**	**2.44**	**8**	*e*Pn	**Pb**	**13 32 12.9**	**-1.7**
	comp=E,25nm,0.2s,SNR=21						
SQTA				*i* Sn	**Sb**	**13 32 44.3**	**-0.3**
	comp=E,52nm,0.3s						
VOJS	**Vojsko**	**2.53**	**60**	*i* Pn	**Pn**	**13 32 10.7**	**-1.0**
WTTA	**Wattenberg**	**2.54**	**14**	*e*Pn	**Pb**	**13 32 14.2**	**-2.1**
	comp=E,14nm,0.3s,SNR=9.3						
WTTA				*e*Sn	**Sb**	**13 32 48.1**	**+0.7**
	comp=E,41nm,0.3s						
SBF	**Sospel**	**2.55**	**250**	*e*Pn	**Pn**	**13 32 13.1**	**+1.2**
SBF				*e*Sn	**Sn**	**13 32 44.7**	**+1.9**
	comp=E,84nm,0.3s						
MOTA	**Moosalm**	**2.55**	**6**	*e*Pn	**Pb**	**13 32 15.0**	**-1.6**
	comp=E,3.4nm,0.1s						
MOTA				*e*Sn	**Sb**	**13 32 47.9**	**0.0**
	comp=E,21nm,0.3s						
DAVA	**Damuels**	**2.56**	**347**	*e*Pn	**Pb**	**13 32 15.2**	**-1.4**
	comp=E,8.3nm,0.2s,SNR=10.0						
DAVA				*i* Sn	**Sb**	**13 32 47.9**	**0.0**
	comp=E,17nm,0.2s						
JAVS	**Javornik**	**2.58**	**64**	*i* Pn	**Pn**	**13 32 11.3**	**-1.1**
PGF	**Pioggiola**	**2.58**	**210**	*e*Pn	**Pn**	**13 32 13.0**	**+0.6**
PGF				*e*Sn	**Sn**	**13 32 43.8**	**+0.1**
	comp=E,58nm,0.3s						
WATA	**Walderalm**	**2.60**	**13**	*e*Pn	**Pb**	**13 32 15.5**	**-1.8**
	comp=E,4.4nm,0.1s,SNR=13						
WATA				*e*Sn	**Sb**	**13 32 49.1**	**-0.1**
	comp=E,39nm,0.2s						
ZUGS	**Zugspitze, Sch**	**2.62**	**4**	*e*Pn	**Pb**	**13 32 16.1**	**-1.7**
ZUGS				*e*Sn	**Sb**	**13 32 50.4**	**+0.5**
RETA	**Reutte**	**2.68**	**0**	*e*Pn	**Pb**	**13 32 16.4**	**-2.4**
	comp=E,3.1nm,0.2s						
RETA				*e*Sn	**Sb**	**13 32 50.6**	**-1.0**
	comp=E,9.2nm,0.2s						
PART	**Garmisch-Parte**	**2.71**	**5**	*e*Pn	**Pb**	**13 32 16.8**	**-2.3**
PART				*e*Sn	**Sb**	**13 32 51.4**	**-0.7**
MYKA	**Terra Mystica**	**2.73**	**47**	*e*Pn	**Pn**	**13 32 15.9**	**+1.5**
	comp=E,0.8nm,0.1s,SNR=11						
MYKA				*i* Pg	**Pg**	**13 32 22.1**	**-1.1**
	comp=E,13nm,0.2s						
MYKA				Sg	**Sg**	**13 32 58.3**	**-0.4**
	comp=E,24nm,0.3s						
MBDF	**Montbardon**	**2.83**	**270**	*e*Pn	**Pn**	**13 32 16.4**	**+0.6**
MBDF				*e*Sn	**Sn**	**13 32 51.5**	**+1.8**
	comp=E,32nm,0.3s						
LPG	**La Plagne**	**2.91**	**285**	*e*Pn	**Pn**	**13 32 18.0**	**+1.0**
LPG				*e*P	**Pb**	**13 32 21.7**	**-1.0**
LPG				*e*Sn	**Sn**	**13 32 51.2**	**-0.7**
	comp=E,41nm,0.3s						
KBA	**Koelnbreinsper**	**2.91**	**38**	*e*Pn	**Pn**	**13 32 18.2**	**+1.2**
	comp=E,0.6nm,0.1s,SNR=11						
KBA				*e*Pg	**Pg**	**13 32 26.4**	**-0.3**
	comp=E,17nm,0.3s						
KBA				*e*Sg	**Sg**	**13 33 04.9**	**+0.5**
	comp=E,36nm,0.3s						
UBR	**Ueberruh**	**2.91**	**352**	*e*Pn	**Pn**	**13 32 19.4**	**+2.6**
UBR				*e*Sn	**Sb**	**13 32 55.7**	**-2.4**
LPL	**La Plagne**	**2.92**	**286**	*e*Pn	**Pn**	**13 32 18.4**	**+1.2**
LPL				*e*Sn	**Sn**	**13 32 52.2**	**0.0**
	comp=E,34nm,0.2s						
LESA	**Schwarzleotal**	**2.95**	**27**	*i* Pn	**Pn**	**13 32 19.8**	**+2.4**
	comp=E,3.4nm,0.2s						
LESA				*e*Sn	**Sb**	**13 32 56.5**	**-2.6**
	comp=E,47nm,0.5s						
BE1	**Monatshausen**	**3.13**	**6**	*e*Pn	**Pn**	**13 32 22.2**	**+2.5**
OBKA	**Obir**	**3.17**	**56**	*i* Pn	**Pn**	**13 32 20.7**	**+0.3**
	comp=E,2.4nm,0.2s,SNR=6.2						
OBKA				Pg	**Pg**	**13 32 32.6**	**+1.0**
	comp=E,12nm,0.2s,SNR=5.3						
OBKA				*i* Sn	**Sn**	**13 32 59.9**	**+1.8**
	comp=E,10nm,0.2s						
OBKA				*e*Sg	**Sg**	**13 33 12.1**	**-0.5**
	comp=E,20nm,0.3s						
OBKA	**Obir**	**3.17**	**56**	*e*Pn	**Pn**	**13 32 20.7**	**+0.3**
BALST	**Balsthal**	**3.30**	**321**	*e*Pn	**Pn**	**13 32 23.8**	**+1.6**
BALST				*e*Sn	**Sn**	**13 33 01.9**	**+0.5**
LMR	**La Mourre**	**3.38**	**246**	*e*Pn	**Pn**	**13 32 22.8**	**-0.5**
LMR				*e*Sn	**Sn**	**13 33 03.4**	**+0.2**
	comp=E,58nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.46**	**274**	*e*Pn	**Pn**	**13 32 26.6**	**+2.2**
ORIF				*e*Sn	**Sn**	**13 33 06.0**	**+0.8**
	comp=E,60nm,0.3s						
SOKA	**Soboth**	**3.54**	**57**	*i* Pn	**Pn**	**13 32 25.3**	**-0.2**
	comp=E,2.3nm,0.3s,SNR=8.9						
SOKA				*e*Pg	**Pb**	**13 32 35.5**	**+2.2**
	comp=E,102nm,0.0s						
SOKA				*e*Sn	**Sn**	**13 33 08.8**	**+1.6**
	comp=E,6.7nm,0.3s						
CABF	**La Chapelle**	**3.73**	**301**	*e*Pn	**Pn**	**13 32 30.1**	**+2.0**
CABF				*e*Sn	**Sn**	**13 33 13.3**	**+1.5**
	comp=E,20nm,0.3s						
SMRF	**Simiane la Rot**	**3.79**	**259**	*e*Pn	**Pn**	**13 32 31.1**	**+2.1**
SMRF				*e*S	**Sb**	**13 33 19.9**	**-3.6**
	comp=E,12nm,0.3s						
BFO	**Black Forest**	**3.90**	**336**	*e*Pn	**Pn**	**13 32 31.7**	**+1.3**
MOA	**Molln**	**3.90**	**37**	*i* Pn	**Pn**	**13 32 31.5**	**+1.1**
	comp=E,2.8nm,0.2s,SNR=9.6						
MOA				*i* Sn	**Sn**	**13 33 17.4**	**+1.3**
	comp=E,13nm,0.4s						
MOA	**Molln**	**3.90**	**37**	*e*Pn	**Pn**	**13 32 31.9**	**+1.4**
HINF	**Hinteralfeld**	**4.04**	**320**	*e*Pn	**Pn**	**13 32 33.3**	**+0.9**
HINF				*e*Sn	**Sn**	**13 33 18.5**	**-1.0**
	comp=E,12nm,0.1s						
ARSA	**Arzberg**	**4.13**	**52**	*i* Pn	**Pn**	**13 32 33.8**	**+0.2**
	comp=E,1.5nm,0.2s						
ARSA				*i* Sn	**Sn**	**13 33 26.9**	**+5.2**
	comp=E,2.8nm,0.3s						
ARSA	**Arzberg**	**4.13**	**52**	*e*Pn	**Pn**	**13 32 34.4**	**+0.8**
VIVF	**Saint-Julien-l**	**4.32**	**273**	*e*Pn	**Pn**	**13 32 37.8**	**+1.7**
VIVF				*e*Sn	**Sn**	**13 33 25.7**	**-0.6**
	comp=E,18nm,0.3s						
CDF	**Champ du Feu**	**4.33**	**328**	*e*Pn	**Pn**	**13 32 37.2**	**+0.9**
CDF				*e*Sn	**Sn**	**13 33 26.4**	**-0.2**
	comp=E,11nm,0.3s						
HAU	**Haudompre**	**4.41**	**318**	*e*Pn	**Pn**	**13 32 38.8**	**+1.3**
HAU				*e*Sn	**Sn**	**13 33 27.6**	**-1.1**
	comp=E,45nm,0.3s						
GEC2	**GERESS Array S**	**4.52**	**26**	*e*Pn	**Pn**	**13 32 39.7**	**+0.6**
GERES	**GERESS Array B**	**4.52**	**26**	Pn	**Pn**	**13 32 39.8**	**+0.8**
	comp=E,0.1nm,0.3s,baz=201,slow=13,SNR=15						
GERES				Pg	**Pb**	**13 32 51.7**	**+1.6**
	comp=E,0.2nm,0.3s,baz=201,slow=17,SNR=7.5						
GERES				Sn	**Sn**	**13 33 30.7**	**-0.8**
	comp=E,0.3nm,0.3s,baz=202,slow=23,SNR=7.2						
GERES				Lg	Lg	13 33 52.4	
	comp=E,0.4nm,0.3s,baz=206,slow=30,SNR=5.8						
	comp=E,1.4nm,0.3s						
WET	**Wettzell**	**4.58**	**18**	*e*Pn	**Pn**	**13 32 40.7**	**+1.0**
CKRC	**Cesky Krumlov**	**4.71**	**30**	*e*PN	**Pn**	**13 32 41.6**	**+0.1**
CKRC				*e*SN	**Sn**	**13 33 34.7**	**-1.1**
CONA	**Conrad Observa**	**4.72**	**47**	*i* Pn	**Pn**	**13 32 42.0**	**+0.2**
	comp=E,2.1nm,0.3s,SNR=6.3						
CONA				*i* Sn	**Sn**	**13 33 36.8**	**+0.4**
	comp=E,2.7nm,0.3s						
KHC	**Kasperske Hory**	**4.74**	**23**	*e*PN	**Pn**	**13 32 42.0**	**0.0**
KHC				*e*SN	**Sn**	**13 33 35.0**	**-1.8**
KHC				*e*SG	**Sg**	**13 34 02.0**	**-1.1**
RONA	**Rosalia, Austr**	**4.82**	**51**	*i* Pn	**Pn**	**13 32 42.7**	**-0.4**
	comp=E,1.2nm,0.2s						
LASF	**Ste Croix**	**4.98**	**264**	*e*Pn	**Pn**	**13 32 46.3**	**+1.0**
LASF				*e*Sn	**Sn**	**13 33 42.3**	**-0.4**
	comp=E,3.4nm,0.3s						
ROTZ	**Rotzenmuhle**	**5.07**	**11**	*e*Pn	**Pn**	**13 32 46.0**	**-0.3**
PAGF	**Fort de Pagny**	**5.10**	**319**	*e*Pn	**Pn**	**13 32 48.6**	**+1.8**
PAGF				*e*Sn	**Sn**	**13 33 45.0**	**-0.5**
	comp=E,9.2nm,0.2s						
SMF	**Signal de Mont**	**5.17**	**293**	*e*Pn	**Pn**	**13 32 49.4**	**+1.6**
SMF				*e*Sn	**Sn**	**13 33 46.5**	**-0.8**
	comp=E,41nm,0.3s						
ZVC	**Zvikov**	**5.20**	**26**	*e*PN	**Pn**	**13 32 50.2**	**+2.0**
ZVC				*e*SN	**Sn**	**13 33 46.0**	**-2.0**
SFTF	**Sexfontaines**	**5.20**	**313**	*e*Pn	**Pn**	**13 32 49.7**	**+1.4**
	baz=126						
SFTF				*e*Sn	**Sn**	**13 33 48.3**	**+0.3**
	comp=E,13nm,0.3s						
MEZF	**Maizieres J'vi**	**5.39**	**315**	*e*Pn	**Pn**	**13 32 52.6**	**+1.8**
	baz=130						
MEZF				*e*Sn	**Sn**	**13 33 51.7**	**-0.8**
	comp=E,8.7nm,0.2s						
LOR	**Lormes**	**5.39**	**300**	*e*Pn	**Pn**	**13 32 52.3**	**+1.5**
	baz=119						
LOR				*e*P	**Pn**	**13 32 52.5**	**+1.7**
LOR				*e*S	**Sn**	**13 33 51.8**	**-0.8**
LOR				*e*Sn	**Sn**	**13 33 52.5**	**-0.1**
	comp=E,29nm,0.2s						
SAVF	**Savonnieres en**	**5.43**	**317**	*e*Pn	**Pn**	**13 32 52.8**	**+1.5**
SAVF	**Savonnieres en**	**5.43**	**317**	*e*Pn	**Pn**	**13 32 53.2**	**+1.9**
SAVF				*e*Sn	**Sn**	**13 33 52.6**	**-0.9**
	comp=E,6.0nm,0.2s						
SAVF				*e*Sn	**Sn**	**13 33 54.2**	**+0.7**
	comp=E,7.1nm,0.3s						
SSF	**Saint Saulge**	**5.53**	**297**	*e*Pn	**Pn**	**13 32 54.1**	**+1.4**
SSF				*e*Sn	**Sn**	**13 33 54.2**	**-1.9**
	comp=E,32nm,0.3s						
AVF	**Avril sur Loir**	**5.54**	**294**	*e*Pn	**Pn**	**13 32 54.3**	**+1.5**
AVF				*e*Sn	**Sn**	**13 33 54.2**	**-2.0**
	comp=E,6.2nm,0.3s						
TNS	**Taunus Mts**	**5.64**	**345**	*e*Pn	**Pn**	**13 32 55.6**	**+1.3**
MODS	**Modra-Piesok**	**5.75**	**49**	*e*PN	**Pn**	**13 32 56.1**	**+0.3**
MODS				*e*SN	**Sn**	**13 33 59.7**	**-1.8**
BGF	**Bois d'Agland**	**5.80**	**290**	*e*Pn	**Pn**	**13 32 57.9**	**+1.4**
BGF				*e*Sn	**Sn**	**13 34 02.3**	**-0.5**
	comp=E,44nm,0.3s						
HYF	**Humbligny**	**6.16**	**296**	*e*Pn	**Pn**	**13 33 03.6**	**+2.3**
HYF				*e*Sn	**Sn**	**13 34 11.1**	**-0.4**
CAF	**Calviac**	**6.17**	**274**	*e*Pn	**Pn**	**13 33 02.8**	**+1.2**
CAF				*e*Sn	**Sn**	**13 34 11.1**	**-0.8**
	comp=E,3.1nm,0.3s						
TCF	**Toulx Ste Croi**	**6.17**	**287**	*e*Pn	**Pn**	**13 33 02.8**	**+1.2**
TCF				*e*Sn	**Sn**	**13 34 10.2**	**-1.8**
	comp=E,22nm,0.3s						
MTLF	**Montolieu**	**6.31**	**260**	*e*Pn	**Pn**	**13 33 06.0**	**+2.5**
MTLF				*e*Sn	**Sn**	**13 34 15.0**	**-0.4**
	comp=E,2.2nm,0.3s						
BRG	**Berggiesshubel**	**6.44**	**18**	Pn	**Pn**	**13 33 07.1**	**+1.8**
BRG				Sn	**Sn**

EPF	**Esparros**	**7.72**	**260**	*e*Pn	**Pn**	**13 33 25.3**	**+2.5**
MFF	**Saint Martin d**	**7.83**	**287**	*e*Pn	**Pn**	**13 33 25.3**	**+1.0**
MFF				*e*Sn	**Sn**	**13 34 50.0**	**-2.7**
	comp=Z,7.8nm,0.4s						
MFF				*e*Sn	**Sn**	**13 34 50.3**	**-2.4**
	comp=Z,4.8nm,0.3s						
LDF	**La Druitiere**	**8.37**	**301**	*e*Pn	**Pn**	**13 33 33.9**	**+2.1**
ETSF	**Etsaut**	**8.39**	**261**	*e*P	Pn	13 33 38.7	+6.7
FLN	**La Foliniere**	**8.66**	**301**	*e*Pn	**Pn**	**13 33 37.6**	**+1.9**
GRR	**Gorron**	**8.75**	**298**	*e*Pn	**Pn**	**13 33 38.1**	**+1.1**
SGMF	**Saint Gilles**	**9.79**	**295**	*e*Pn	**Pn**	**13 33 52.9**	**+1.7**
QUIF	**Quistinic**	**10.17**	**293**	*e*Pn	**Pn**	**13 33 57.0**	**+1.5**
MLR	**Muntele Rosu**	**10.77**	**81**	LR	LR	13 38 58.5	
	comp=Z,322nm,18.5s,baz=306,slow=43						
ESDC	**Sonseca Array**	**12.04**	**250**	Pn	**Pn**	**13 34 23.5**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=58,slow=14,SNR=5.8						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**32.48**	**197**	P	**P**	**13 37 59.3**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=3.6,slow=8.5,SNR=2.6						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**69.37**	**350**	LR	LR	14 15 39.6	
	comp=Z,18nm,19.1s,baz=38,slow=38						
MA2	**Magadan**	**70.92**	**20**	LR	LR	14 21 15.4	
	comp=Z,57nm,18.2s,baz=352,slow=42						

IDC 22 13:39:15.9±2.1, 10.08S×118.41E, h0km, mb3.2/2, mbtmp3.5/4, ML3.7/2, Error ellipse: s-maj=64.0km s-min=26.9km az=36.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.18**	**92**	Pn	Pn	13 40 35.1	+0.3
	3.3nm,0.3s,baz=268,slow=6.8,SNR=6.6						
BATI				Sn	Sn	13 41 36.9	+1.6
	3.6nm,0.3s,baz=8.5,slow=21,SNR=2.0						
	9.1nm,0.3s						
WRA	**Warramunga Arr**	**18.23**	**124**	P	Pn	13 43 29.2	-1.4
	0.2nm,0.3s,baz=302,slow=13,SNR=5.9						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**20.03**	**134**	P	P	13 43 51.5	+0.8
	0.7nm,0.5s,baz=309,slow=9.0,SNR=47						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**65.15**	**333**	P	P	13 49 58.7	-0.1
	0.2nm,0.7s,baz=148,slow=8.1,SNR=2.3						
	0.2nm,0.7s						

OMAN 22 13:53:47.0±0.1, 17.09N×59.78E, h30km±4km, mb3.2/3, ml3.5/6, Error ellipse: s-maj=6.5km s-min=1.0km az=311.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQM	**DQM**	**3.54**	**323**	P	Pn	13 54 39.9	0.0
DQM				S	Sn	13 55 22.0	+1.2
SHAO	**Shalim**	**4.07**	**284**	P	Pn	13 54 47.1	-0.2
	SNR=20						
SHAO				S	Sn	13 55 33.4	-0.6
MHTO	**MHTO**	**4.24**	**336**	P	Pn	13 54 49.5	-0.1
	SNR=11						
MHTO				S	Sn	13 55 38.8	+0.7
DMTO	**DMTO**	**4.66**	**278**	P	Pn	13 54 54.6	-0.7
	SNR=18						
DMTO				S	Sn	13 55 48.1	-0.3
	SNR=7.4						
JLN	**Jalan Bani Buh**	**5.05**	**356**	P	Pn	13 55 01.1	+0.3
JLN				S	Sn	13 55 57.5	-0.6
	SNR=17						
RBK	**Rabkut**	**5.34**	**275**	P	Pn	13 55 05.4	+0.6
RBK				S	Sn	13 56 04.9	-0.5
JMDO	**Jabal Madar**	**5.49**	**344**	P	Pn	13 55 07.7	+0.9
JMDO				S	Sn	13 56 10.2	+1.2
	SNR=6.7						
WBK	**Wadi Bani Khal**	**5.55**	**352**	P	Pn	13 55 08.9	+1.3
WBK				S	Sn	13 56 11.0	+0.6
DOK	**Doka**	**5.59**	**287**	P	Pn	13 55 08.8	+0.6
DOK				S	Sn	13 56 12.5	+1.0
BSY	**Bisya**	**6.13**	**337**	S	Sn	13 56 25.6	+0.9
SMDO	**Samad**	**6.16**	**345**	P	Pn	13 55 17.1	+1.0
SMDO				S	Sn	13 56 27.0	+1.4
	SNR=7.4						
ABTO	**Aybut**	**6.20**	**273**	P	Pn	13 55 16.3	-0.3
ABTO				S	Sn	13 56 26.4	-0.3

*WEL **22** 13:55:28.2±0.7, 45.5S×3.16°E, h5km, M3.1/6, ML3.1/11, MLv3.1/6, Error ellipse: s-maj=6.0km s-min=2.8km az=120.7*
*NOU **22** 13:55:29.4, 44.63S×167.56E, h14km, MLv3.7/11, South Island, New Zealand*
ISC 22 13:55:27.3±1.5, 44.65S±0.04×167.46E±0.05, h5km±10km, n43, σ0.87/53, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.33**	**94**	P	**Pg**	**13 55 33.9**	**+0.2**
MSZ				S	**Sg**	**13 55 38.2**	**+0.1**
GLNY	**Glenorchy**	**0.71**	**108**	P	**Pg**	**13 55 40.6**	**-0.2**
GLNY				S	**Sg**	**13 55 49.3**	**-0.7**
TAFS	**Te Anau Fire S**	**0.79**	**167**	P	**Pg**	**13 55 42.7**	**+0.3**
TAFS				S	**Sg**	**13 55 53.3**	**+0.6**
DCZ	**Deep Cove**	**0.84**	**195**	P	**Pg**	**13 55 42.2**	**-1.2**
DCZ				S	**Sg**	**13 55 53.8**	**-0.6**
MLZ	**Mavora Lakes**	**0.85**	**147**	P	**Pg**	**13 55 43.1**	**-0.5**
MLZ				S	**Sg**	**13 55 53.9**	**-0.9**
NSBS	**Neils Beach**	**1.08**	**53**	P	**Pg**	**13 55 48.4**	**+0.4**
NSBS				S	**Sb**	**13 56 03.2**	**+0.4**
JCZ	**Jackson Bay**	**1.11**	**59**	P	**Pg**	**13 55 48.8**	**+0.2**
JCZ	**Jackson Bay**	**1.11**	**59**	S	**Sb**	**13 56 04.1**	**+0.3**
JCZ	**Jackson Bay**	**1.11**	**59**	P	**Pg**	**13 55 48.4**	**-0.2**
JCZ				S	**Sn**	**13 56 04.3**	**-0.9**
WKZ	**Wanaka**	**1.12**	**100**	P	**Pg**	**13 55 48.1**	**-0.7**
WKZ				S	**Sg**	**13 56 02.4**	**-1.0**
MOSS	**Mossburn Schoo**	**1.16**	**152**	P	**Pg**	**13 55 48.8**	**-0.7**
MOSS				S	**Sg**	**13 56 04.4**	**-0.1**
WHZ	**Wether Hill Ro**	**1.29**	**165**	P	**Pn**	**13 55 50.5**	**-1.5**
WHZ				S	**Sb**	**13 56 07.5**	**-1.3**
MECS	**Makarora Emerg**	**1.33**	**72**	P	**Pn**	**13 55 52.7**	**+0.1**
HDWS	**Haast DOC Work**	**1.37**	**57**	P	**Pn**	**13 55 53.5**	**+0.5**
EAZ	**Earnscleugh**	**1.43**	**115**	P	**Pn**	**13 55 53.2**	**-0.7**
RRKS	**Rarakau**	**1.50**	**180**	S	**Sn**	**13 56 13.8**	**-0.9**
PYZ	**Puysegur Point**	**1.61**	**200**	P	**Pn**	**13 55 57.6**	**+1.2**
PYZ	**Puysegur Point**	**1.61**	**200**	S	**Sb**	**13 56 19.9**	**+1.7**
PYZ	**Puysegur Point**	**1.61**	**200**	P	**Pn**	**13 55 57.1**	**+0.7**
LBZ	**Lake Benmore**	**1.96**	**83**	P	**Pn**	**13 56 01.9**	**+0.7**
TUZ	**Tuapeka**	**2.01**	**131**	P	**Pn**	**13 56 02.3**	**+0.5**
FOZ	**Fox Glacier**	**2.03**	**57**	P	**Pn**	**13 56 00.2**	**-1.9**
APZ	**The Paps**	**2.21**	**171**	P	**Pn**	**13 56 05.0**	**+0.3**
SYZ	**Scrubby Hill**	**2.22**	**149**	P	**Pn**	**13 56 05.3**	**+0.5**
SYZ	**Scrubby Hill**	**2.22**	**149**	S	**Sn**	**13 56 33.3**	**+0.7**
SYZ	**Scrubby Hill**	**2.22**	**149**	P	**Pn**	**13 56 05.0**	**+0.2**
ODZ	**Otahua Downs**	**2.30**	**101**	P	**Pn**	**13 56 05.8**	**0.0**
ODZ	**Otahua Downs**	**2.30**	**101**	S	**Sn**	**13 56 33.7**	**-0.7**
ODZ	**Otahua Downs**	**2.30**	**101**	P	**Pn**	**13 56 06.0**	**+0.2**
GCSZ	**Gaunt Creek Bo**	**2.46**	**58**	P	**Pb**	**13 56 13.4**	**+1.5**
HHSZ	**Highcliff Hill**	**2.53**	**120**	P	**Pn**	**13 56 10.1**	**+1.1**
TMZ	**Timaru**	**2.55**	**85**	P	**Pn**	**13 56 09.2**	**-0.1**
RPZ	**Rata Peaks**	**2.75**	**71**	P	**Pn**	**13 56 12.0**	**0.0**
RPZ	**Rata Peaks**	**2.75**	**71**	P	**Pn**	**13 56 12.5**	**+0.5**
ARCZ	**Arundel**	**2.76**	**77**	P	**Pn**	**13 56 11.7**	**-0.4**
WVZ	**Waitaha Valley**	**2.84**	**58**	P	**Pn**	**13 56 11.6**	**-1.7**
MHCZ	**Mount Hutt**	**3.16**	**71**	P	**Pn**	**13 56 17.5**	**-0.2**
INZ	**Inchbonnie**	**3.47**	**58**	P	**Pn**	**13 56 20.8**	**-1.1**
DSZ	**Denniston Nort**	**4.30**	**49**	P	**Pn**	**13 56 31.4**	**-2.0**
THZ	**Tophouse**	**4.91**	**56**	P	**Pn**	**13 56 41.2**	**-0.6**
MRNZ	**Matariki Terra**	**5.06**	**52**	P	**Pn**	**13 56 43.2**	**-0.6**
QRZ	**Quartz Range**	**5.34**	**46**	P	**Pn**	**13 56 46.7**	**-0.9**
BKZ	**Black Stump Fm**	**8.68**	**54**	P	**Pn**	**13 57 34.4**	**+0.9**

IDC 22 13:55:39.5±1.4, 12.42N×143.55E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=44.2km s-min=20.8km az=119.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.74**	**48**	Pn	Pb	13 56 11.6	-0.7
	10nm,0.3s,baz=96,slow=12,SNR=1.9						
GUMO				Sn	Sn	13 56 34.0	+0.2
	8.2nm,0.3s,baz=44,slow=22,SNR=1.1						
WRA	**Warramunga Arr**	**33.41**	**196**	P	P	14 02 19.7	-0.3
	0.3nm,0.8s,baz=21,slow=9.6,SNR=6.2						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**37.08**	**195**	P	P	14 02 51.9	+0.2
	0.3nm,0.8s,baz=18,slow=13,SNR=5.8						
	0.3nm,0.8s						
SONM	**Songino Array**	**46.96**	**326**	P	P	14 04 11.9	-0.4
	0.1nm,0.4s,baz=126,slow=7.3,SNR=1.6						
	0.1nm,0.4s						

WEL 22 14:01:49.9±1.2, 32.S±21.×17.9E±5.2, h168km±46km, M4.1/3, mB4.1/2, ML4.1/3, MLv4.1/3, Mw(mB)3.2/2, Error ellipse: s-maj=72.9km s-min=4.9km az=112.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.84**	**37**	P	Pn	14 02 49.4	+0.7
GLKZ				S	Sn	14 03 34.5	0.0
WMGZ	**Waiomatatini S**	**5.49**	**189**	P	Pn	14 03 10.2	+0.3
WMGZ				S	Sn	14 04 14.1	+1.2
RUGZ	**Raukumara Rang**	**5.76**	**194**	P	Pn	14 03 14.6	+1.0
RUGZ				S	Sn	14 04 19.3	-0.1
MWZ	**Matawai**	**6.14**	**194**	P	Pn	14 03 18.3	-0.3
MWZ				S	Sn	14 04 29.1	+0.7
URZ	**Urewera**	**6.17**	**197**	P	Pn	14 03 19.0	+0.1
URZ				S	Sn	14 04 29.2	+0.3
CNGZ	**Carnagh Statio**	**6.17**	**189**	P	Pn	14 03 18.5	-0.5
TKGZ	**Te Karaka**	**6.19**	**192**	P	Pn	14 03 18.1	-1.0
TKGZ				S	Sn	14 04 29.4	+0.1
RTZ	**Ruatahuna**	**6.54**	**197**	P	Pn	14 03 23.8	0.0
RTZ				S	Sn	14 04 38.0	+0.1

IDC 22 14:30:06.9±1.4, 6.91S×128.79E, h0km, mb3.5/3, mbtmp3.4/5, ML3.6/2, MS3.7/1, Error ellipse: s-maj=115.8km s-min=24.2km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.03**	**158**	Pn	Pn	14 33 27.1	0.0
	0.3nm,0.3s,baz=337,slow=12,SNR=12						
WRA				Sn	Sn	14 35 53.4	-10
	0.4nm,0.3s,baz=333,slow=24,SNR=8.4						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**17.37**	**164**	Pn	P	14 34 11.8	-0.6
	0.1nm,0.3s,baz=336,slow=9.4,SNR=12						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**27.57**	**156**	P	P	14 35 55.4	-0.3
	0.5nm,0.5s,baz=328,slow=15,SNR=1.5						
	0.5nm,0.5s						
HILR	**Hailar Array B**	**56.78**	**353**	LR	LR	15 07 23.4	
	comp=Z,61nm,19.6s,baz=85,slow=39						
MKAR	**Makanchi Array**	**67.50**	**327**	P	P	14 41 04.8	-0.1
	0.1nm,0.3s,baz=129,slow=7.3,SNR=6.3						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**71.81**	**329**	P	P	14 41 31.6	+0.3
	0.2nm,0.5s,baz=127,slow=6.1,SNR=2.0						
	0.2nm,0.5s						

*NEIC **22** 14:44:32.0±2.1, 39.3S±0.1×92.7W±0.3, h10km±2km, mb4.5/34, Error ellipse: s-maj=38.4km s-min=10.5km az=244.0*
*IDC **22** 14:44:34.8±1.9, 38.96S×92.47W, h0km, mb4.0/6, mbtmp3.9/7, ML3.5/1, MS4.2/31, Error ellipse: s-maj=61.9km s-min=25.8km az=11.0*
*GCMT **22** 14:44:39.0±0.2, 39.04S±0.01×92.48W±0.02, h13km±1km, MW5.0/104, Moment Tensor Solution. s29,c36; s104,c145; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-1.70±.14; Mθθ0.77±.11; Mφφ0.93±.10; Mrθ-1.01±.26; Mθφ-3.36±.09; Mφr-0.82±.23; Best double couple: M~o~3.83800×10^16^ NP1:φ~s~355.00000°, δ64.00000°, λ-27.00000°. NP2:φ~s~97.00000°, δ66.00000°, λ-152.00000°. Principal axes: T 4.2160, Plg1.0000°, Azm225.0000°; N -0.7520, Plg54.0000°, Azm134.0000°; P -3.4600, Plg36.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 14:44:34.8±1.0, 39.1S±0.2×92.3W±0.1, h10km, n84, σ2.24/44, mb4.4/11, MS4.2/30, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.00**	**68**	T	T	14 59 54.9	
	baz=240,slow=74,SNR=628						
H03S1	**Juan Fernandez**	**12.01**	**68**	T	T	14 59 58.7	
	baz=240,slow=74,SNR=709						
H03S3	**Juan Fernandez**	**12.02**	**68**	T	T	14 59 57.5	
	baz=240,slow=74,SNR=1073						
H03N3	**Juan Fernandez**	**12.19**	**67**	T	T	15 00 09.6	
	baz=242,SNR=325						
H03N2	**Juan Fernandez**	**12.19**	**67**	T	T	15 00 04.2	
	baz=242,SNR=325						
H03N1	**Juan Fernandez**	**12.21**	**67**	T	T	15 00 02.6	
	baz=242,SNR=490						
LL07	**Hotel Espejo d**	**14.74**	**111**	P	**P**	**14 48 11.8**	**+2.4**
LL01	**San Ignacio de**	**15.47**	**109**	P	**P**	**14 48 21.8**	**+4.4**
LL01				IAmb	IAmb	14 48 38.5	
	comp=Z,53nm,1.2s						
AY01	**Puyuhuapi**	**15.63**	**116**	P	**P**	**14 48 22.6**	**+3.3**
LL02	**Futaleuf**	**15.97**	**111**	P	**P**	**14 48 27.1**	**+3.9**
GO06	**Curarrehue**	**16.16**	**98**		**P**	**14 48 31.4**	**+6.1**
COYC	**Coyhaique**	**16.31**	**120**		**P**	**14 48 31.6**	**+4.8**
COYC				IAmb	IAmb	14 48 44.4	
	comp=Z,46nm,1.4s						
PLCA	**Paso Flores**	**16.80**	**103**	Pn	**P**	**14 48 32.8**	**+0.3**
	baz=256,slow=16,SNR=3.3						
	comp=Z,1.5nm,1.0s						
PLCA	**Paso Flores**	**16.80**	**103**		**P**	**14 48 34.0**	**+1.6**
BI02	**San Fabin de**	**16.81**	**88**		**Pn**	**14 48 29.2**	**-1.2**
GO08	**Villa O'Higgin**	**17.06**	**130**	P	**Pn**	**14 48 32.1**	**-1.2**
MT01	**Popeta**	**17.73**	**79**	Pn	**Pn**	**14 48 37.0**	**-4.8**
MT09	**Talagante**	**17.97**	**80**	P	**P**	**14 48 46.5**	**+1.1**
MT09				IAmb	IAmb	14 48 51.7	
	comp=Z,36nm,1.2s						
BO04	**La Punta**	**18.18**	**81**	P	**Pn**	**14 48 44.8**	**-2.5**
BO04				IAmb	IAmb	14 49 04.7	
	comp=Z,33nm,1.4s						
PEL	**Peldehue**	**18.46**	**78**	P	**P**	**14 48 47.9**	**-2.7**
PEL				IAmb	IAmb	14 49 04.8	
	comp=Z,43nm,1.4s						
RPN	**Rapa Nui**	**18.52**	**305**	LR	LR	14 54 01.1	
	comp=Z,819nm,18.9s,baz=142,slow=31						
GO09	**Cerro Castillo**	**18.57**	**138**	P	P	14 48 44.5	-7.3
GO09				IAmb	IAmb	14 49 13.7	
	comp=Z,44nm,1.4s						
CO06	**Fray Jorge**	**18.92**	**70**	P	**P**	**14 48 53.7**	**-2.0**
CO06				IAmb	IAmb	14 49 00.7	
	comp=Z,44nm,1.4s						
CO02	**Combarbal**	**19.11**	**72**	P	**P**	**14 48 57.2**	**-0.7**
CO02				IAmb	IAmb	14 49 05.0	
	comp=Z,46nm,1.4s						
CO03	**El Pedregal**	**19.53**	**72**	P	**Pn**	**14 49 03.7**	**0.0**
LCO	**Las Campanas**	**20.51**	**67**		**P**	**14 49 13.1**	**-0.2**
LCO				IAmb	IAmb	14 49 21.0	
	comp=Z,25nm,1.4s						
AC05	**El Transito**	**20.91**	**67**		**P**	**14 49 17.8**	**+0.1**
AC05				IAmb	IAmb	14 49 34.7	
	comp=Z,28nm,1.2s						
MG03	**Isla Dawson**	**20.98**	**142**		**P**	**14 49 15.1**	**-2.9**
CFA	**Coronel Fontan**	**20.99**	**77**	P	Pn	14 49 20.4	-0.5
	comp=Z,3.0nm,0.5s,baz=249,slow=10,SNR=10.0						
CFA				LR	LR	14 56 12.2	
	comp=Z,328nm,18.4s,baz=218,slow=33						
	comp=Z,3.0nm,0.5s						
GO03	**Copiapo**	**21.67**	**65**	P	**P**	**14 49 25.5**	**-0.2**
GO03				IAmb	IAmb	14 49 41.6	
	comp=Z,16nm,1.1s						
AC01	**Pan de Azucar**	**22.33**	**61**	P	**P**	**14 49 32.3**	**-0.4**
AC01				IAmb	IAmb	14 49 38.2	
	comp=Z,32nm,1.2s						
AC02	**Maricunga**	**22.91**	**65**	P	**P**	**14 49 40.7**	**+1.2**
AC02				IAmb	IAmb	14 49 45.1	
	comp=Z,15nm,0.9s						
GO02	**Mina Guanaco**	**23.66**	**61**		**P**	**14 49 44.9**	**-1.9**
PB06	**IPOC Station P**	**25.35**	**57**	P	**P**	**14 50 02.5**	**+0.3**
PB03	**IPOC Station P**	**25.70**	**55**	P	**P**	**14 50 04.7**	**-0.7**
HMBC	**Humberstone**	**26.92**	**52**	P	**P**	**14 50 16.4**	**0.0**
NNA	**Nana**	**30.29**	**31**	LR	LR	14 59 40.1	
	comp=Z,896nm,20.9s,baz=189,slow=30						
PMSA	**Palmer Station**	**30.59**	**156**	LR	LR	15 00 35.4	
	comp=Z,281nm,20.2s,baz=304,slow=31						
LPAZ	**La Paz**	**31.04**	**50**	P	**P**	**14 50 55.4**	**+1.8**
	comp=Z,3.9nm,1.1s,baz=197,slow=8.0,SNR=7.3						
LPAZ				LR	LR	15 01 26.7	
	comp=Z,482nm,18.2s,baz=226,slow=33						
	comp=Z,3.9nm,1.1s						
LPAZ	**La Paz**	**31.04**	**50**		P	14 50 46.7	-6.9
LPAZ				IAmb	IAmb	14 50 58.6	
	comp=Z,11nm,1.4s						
CPUP	**Villa Florida**	**31.89**	**77**	LR	LR	15 01 52.2	
	comp=Z,307nm,21.5s,baz=248,slow=32						
ATAH	**Atahualpa**	**34.19**	**25**	LR	LR	15 01 52.2	
	comp=Z,685nm,21.2s,baz=217,slow=30						
BDFB	**Brasilia**	**45.20**	**72**	P	**P**	**14 52 53.9**	**+1.6**
	comp=Z,1.3nm,0.4s,baz=186,slow=27,SNR=3.7						
BDFB				LR	LR	15 11 03.6	
	comp=Z,477nm,18.5s,baz=220,slow=35						
	comp=Z,1.3nm,0.4s						
BDFB	**Brasilia**	**45.20**	**72**	P	P	14 52 42.6	-10
ROSC	**El Rosal**	**46.76**	**25**	LR	LR	15 10 50.5	
	comp=Z,665nm,18.2s,baz=128,slow=34						
JTS	**Las Juntas de**	**49.59**	**10**	LR	LR	15 09 02.8	
	comp=Z,401nm,21.5s,baz=204,slow=30						
QSPA	**South Pole Qui**	**51.16**	**180**	LR	LR	15 13 31.4	
	comp=Z,223nm,18.3s,baz=130,slow=34						
SDV	**Santo Domingo**	**51.81**	**28**	LR	LR	15 14 30.5	
	comp=Z,947nm,18.0s,baz=202,slow=35						
SNAA	**Sanae**	**53.30**	**157**	LR	LR	15 13 36.4	
	comp=Z,159nm,19.3s,baz=340,slow=33						
PPT	**Papeete**	**53.83**	**276**	LR	LR	15 11 33.1	
	comp=Z,91nm,20.2s,baz=146,slow=30						
VNDA	**Vanda**	**55.49**	**195**	LR	LR	15 14 08.8	
	comp=Z,170nm,19.1s,baz=110,slow=32						
CMIG	**Matias Romero**	**55.92**	**357**	LR	LR	15 13 20.0	
	comp=Z,120nm,18.3s,baz=176,slow=31						
MDP	**Montagnes des**	**57.24**	**49**	LR	LR	15 16 20.9	
	comp=Z,258nm,21.3s,baz=157,slow=33						
RAR	**Rarotonga**	**59.70**	**266**	LR	LR	15 13 05.4	
	comp=Z,145nm,21.9s,baz=124,slow=29						
RCBR	**Riachuelo**	**60.57**	**72**	LR	LR	15 20 06.5	
	comp=Z,136nm,18.3s,baz=240,slow=35						
LPIG	**La Paz**	**65.05**	**342**	LR	LR	15 16 33.5	
	comp=Z,130nm,18.8s,baz=50,slow=30						
URZ	**Urewera**	**67.59**	**238**	LR	LR	15 17 50.1	
	comp=Z,356nm,19.5s,baz=140,slow=30						
RPZ	**Rata Peaks**	**68.44**	**231**	LR	LR	15 17 39.7	
	comp=Z,257nm,20.3s,baz=178,slow=29						
HNDO	**Hondo**	**68.55**	**354**	P	**P**	**14 55 35.4**	**-2.1**
TX31	**Lajitas Ar. Si**	**68.87**	**349**	P	**P**	**14 55 39.7**	**+0.1**
TXAR	**Lajitas Array**	**68.87**	**349**	P	**P**	**14 55 39.6**	**+0.1**
	comp=Z,0.9nm,1.0s,baz=171,slow=8.5,SNR=6.9						
	comp=Z,0.9nm,1.0s						
TXAR	**Lajitas Array**	**68.87**	**349**	P	**P**	**14 55 39.4**	**-0.2**
RAO	**Raoul Island**	**69.04**	**249**	LR	LR	15 16 58.0	
	comp=Z,302nm,20.5s,baz=124,slow=28						
TKL	**Tuckaleechee C**	**74.78**	**7**	LR	LR	15 22 32.3	
	comp=Z,175nm,21.8s,baz=112,slow=30						
X16A	**Lo Mia Camp, P**	**75.23**	**344**		**P**	**14 56 15.4**	**-2.3**
X16A				IAmb	IAmb	14 56 28.8	
	comp=Z,6.0nm,1.2s						
PFO	**Pinyon Flats O**	**75.70**	**339**	LR	LR	15 21 30.4	
	comp=Z,92nm,21.1s,baz=82,slow=29						
NVAR	**Mina Array Bea**	**80.73**	**340**	P	**P**	**14 56 49.3**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=168,slow=5.6,SNR=5.1						
	comp=Z,0.9nm,0.7s						
BSUT	**Blindstream Ca**	**81.00**	**346**	P	**P**	**14 56 47.7**	**-2.1**
BSUT				IAmb	IAmb	14 57 00.6	
	comp=Z,9.4nm,1.3s						
PDAR	**Pinedale Array**	**82.94**	**347**	P	**P**	**14 57 01.4**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=142,slow=5.3,SNR=6.5						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	**82.94**	**347**	P	**P**	**14 57 00.8**	**+1.0**
SADO	**Sadowa**	**84.31**	**9**	LR	LR	15 30 14.1	
	comp=Z,296nm,18.5s,baz=148,slow=32						
HLID	**Hailey**	**84.64**	**344**		**P**	**14 57 06.4**	**-2.0**
HLID				IAmb	IAmb	14 57 19.4	
	comp=Z,5.1nm,1.1s						
SUR	**Sutherland**	**85.67**	**129**	LR	LR	15 29 19.1	
	comp=Z,90nm,20.0s,baz=212,slow=31						
ULM	**Lac du Bonnet**	**89.00**	**358**	LR	LR	15 37 37.2	
	comp=Z,168nm,18.2s,baz=20,slow=36						
DBIC	**Dimbokro**	**92.21**	**83**	LR	LR	15 35 20.9	
	comp=Z,146nm,18.7s,baz=269,slow=33						
TSUM	**Tsumeb**	**92.61**	**117**	LR	LR	15 34 59.9	
	comp=Z,93nm,19.4s,baz=310,slow=33						
LBTB	**Lobatse**	**93.84**	**127**	LR	LR	15 37 18.4	
	comp=Z,32nm,18.1s,baz=231,slow=34						
H11S2	**WAKE ISLAND Hyl**	**09.77**	**278**	T	T	17 01 53.8	
	baz=126,slow=76,SNR=6.4						
H11S1	**WAKE ISLAND Hyl**	**09.78**	**278**	T	T	17 01 56.0	
	baz=126,slow=76,SNR=5.4						
H11S3	**WAKE ISLAND Hyl**	**09.78**	**278**	T	T	17 01 53.6	
	baz=126,slow=76,SNR=5.7						
SONM	**Songino Array**	**163.85**	**309**	PKPab	**PKPab**	**15 05 31.0**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=105,slow=9.5,SNR=1.9						
ZALV	**Zalesovo Beam**	**164.99**	**6**	PKPab	**PKPab**	**15 05 35.7**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=319,slow=4.2,SNR=1.5						
KURBB	**Kurchatov Arra**	**166.77**	**26**	PKP	**PKPdf**	**15 04 40.8**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=322

Plg66.0000°, Azm292.0000°; N 0.1723, Plg7.0000°, Azm187.0000°; P -5.9087, Plg23.0000°, Azm94.0000°;
NEIC ***22*** *15:29:52.1,5.46N×126.73E,h14km*
GCMT ***22*** *15:29:52.4±0.2,5.42N±0.02×126.73E±0.01,h22km, MW5.2/104, Moment Tensor Solution. s90,c128; s104,c160; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.72±.02; Mθθ0.06±.01; Mφφ-0.78±.02; Mrθ0.21±.03; Mθφ-0.00±.01; Mφr0.46±.03; Best double couple: M0 0.90400×10^17 NP1:φs167.00000°, δ31.00000°, λ66.00000°. NP2:φs14.00000°, δ62.00000°, λ103.00000°. Principal axes: T 0.8980, Plg70.0000°, Azm312.0000°; N 0.0130, Plg12.0000°, Azm187.0000°; P -0.9110, Plg16.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***22*** *15:29:53.2±1.8,5.42N×126.62E,h59km±17km,mb4.2/33, mbtmp4.4/36,MS4.6/20 Error ellipse: s-maj=16.2km s-min=9.5km az=79.0*
BJI ***22*** *15:29:54.2,5.40N×126.60E,h60km,mB5.3/29,mb4.6/73, Ms5.0/61,Ms7 4.9/60*
ISC 22 15:29:51.8±0.4,5.43N±0.04×126.85E±0.05,h47km±3km, h46km:pP-P,n260,σ1s81/277,mb4.8/108,MS4.6/43, 13C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.06**	**322**	P	**Pn**	**15 30 24.2**	**+0.1**
	785nm,0.4s,baz=134,slow=2.0,SNR=60						
DAV				S	**Sn**	**15 30 52.8**	**+4.3**
	3µm,0.6s,baz=244,slow=23,SNR=9.5						
DAV	**Davao City (W)**	**2.06**	**322**		**Pn**	**15 30 23.5**	**-0.5**
DAV	**Davao City (W)**	**2.06**	**322**	P	**Pn**	**15 30 24.1**	**+0.1**
SGSI	**Sangihe**	**2.18**	**217**	P	**Pn**	**15 30 24.9**	**-0.7**
MNI	**Manado**	**4.44**	**207**	P	**Pn**	**15 30 56.8**	**+0.1**
TNTI	**Ternate**	**4.66**	**174**		**Pn**	**15 31 01.1**	**+1.4**
TNTI				Sn	**Sn**	**15 31 55.3**	**+2.8**
TNTI	**Ternate**	**4.66**	**174**	P	**Pn**	**15 31 01.7**	**+2.0**
GTOI	**Gorontalo**	**6.12**	**219**	P	**Pn**	**15 31 19.2**	**-0.5**
	1.2nm7µm3µm248nm,0.6s						
MRSI	**Marisa**	**6.95**	**225**	P	**Pn**	**15 31 30.3**	**-0.8**
TOLI2	**Tolitoli**	**7.43**	**235**		**Pn**	**15 31 34.9**	**-2.8**
SANI	**Sanana**	**7.48**	**187**	P	**Pn**	**15 31 37.2**	**-1.2**
	0.5nm3µm2µm93nm,0.6s						
LUWI	**Luwuk**	**7.62**	**212**		**Pn**	**15 31 42.4**	**+2.1**
LUWI	**Luwuk**	**7.62**	**212**	P	**Pn**	**15 31 43.2**	**+3.0**
SWI	**Sorong**	**7.65**	**145**	P	**Pn**	**15 31 43.5**	**+2.8**
	0.4nm6µm88nm,1.0s						
SIJI	**Sorong**	**7.66**	**145**	P	**Pn**	**15 31 42.6**	**+1.8**
	12nm,0.4s,baz=342,slow=22,SNR=13						
SIJI	**Sorong**	**7.66**	**145**	P	**Pn**	**15 31 43.9**	**+3.1**
	6µm60nm,0.9s						
APSI	**Ampana**	**8.17**	**220**	P	**Pn**	**15 31 49.7**	**+1.9**
MYLDM	**Lahad Datu**	**8.32**	**269**		**Pn**	**15 31 50.6**	**+0.6**
MYLDM	**Lahad Datu**	**8.32**	**269**	P	**Pn**	**15 31 49.1**	**-0.8**
	4µm133nm,1.4s						
MPSI	**Mapaga**	**8.59**	**234**	P	**Pn**	**15 31 53.1**	**-0.6**
	6µm45nm,0.8s						
NLAI	**Namlea**	**8.62**	**178**	P	**Pn**	**15 31 55.9**	**+1.9**
	3µm151nm,0.5s						
KRAI	**Karang Ratu**	**8.83**	**170**	P	Pn	15 32 00.2	+3.3
	4µm2µm54nm,0.7s						
MSAI	**Masohi**	**8.96**	**167**	P	**Pn**	**15 32 01.8**	**+3.1**
	3µm4µm157nm,2.1s						
KKM	**Kota Kinabalu**	**10.60**	**274**	Pn	**Pn**	**15 32 20.0**	**-1.3**
TTSI	**Tana Toraja**	**10.97**	**220**	P	**Pn**	**15 32 27.6**	**+1.4**
	2µm2µm80nm,0.7s						
BAKI	**Biak**	**11.35**	**125**	P	Pn	15 32 36.0	+4.6
	157nm,1.0s						
SPSI	**Sidrap Palu**	**11.71**	**217**	P	**Pn**	**15 32 37.2**	**+0.8**
	2µm1µm49nm,1.0s						
SRPI	**Serui, Papua**	**11.85**	**127**	P	Pn	15 32 42.2	+3.9
	3µm56nm,1.0s						
KAPI	**Kappang**	**12.57**	**214**	P	**Pn**	**15 32 48.1**	**0.0**
	5.3nm,0.4s,baz=349,slow=17,SNR=3.8						
KAPI	**Kappang**	**12.57**	**214**	P	**Pn**	**15 32 50.7**	**+2.6**
SBUM	**Sibu**	**14.90**	**259**		**Pn**	**15 33 17.0**	**-2.6**
SBUM	**Sibu**	**14.90**	**259**	P	**P**	**15 33 23.5**	**-0.8**
SOEI	**Soe**	**15.31**	**190**	P	**P**	**15 33 29.0**	**0.0**
	1µm74nm,0.9s						
BATI	**Baumata**	**15.86**	**192**	P	**Pn**	**15 33 31.0**	**-1.0**
	27nm,0.9s,baz=25,slow=2.9,SNR=9.2						
DBNI	**Kabupaten Domp**	**16.25**	**212**	P	**P**	**15 33 41.7**	**+2.3**
TWSI	**Taliwang, Sumb**	**17.23**	**215**	P	**P**	**15 33 54.1**	**+3.8**
	2µm1µm91nm,1.1s						
MTN	**Manton Dam**	**18.65**	**167**		**P**	**15 34 05.5**	**-0.3**
JAGI	**Jajag, Banyuwa**	**18.74**	**223**	P	**Pn**	**15 34 10.0**	**+2.3**
	1µm61nm,1.4s						
TPUB	**Ta-pu**	**18.75**	**342**	Pn	**Pn**	**15 34 08.0**	**+0.2**
TPUB				IAmb	IAmb	15 34 09.7	
	comp=Z,200nm,1.9s						
SJI	**Sawahan**	**19.94**	**229**	P	Pn	15 34 28.9	+6.8
	comp=Z,42nm,1.1s						
KNRA	**Kununurra**	**21.06**	**175**	P	**P**	**15 34 32.6**	**+0.6**
KNRA				IAmb	IAmb	15 34 49.1	
	comp=Z,61nm,0.8s						
JOW	**Kunigami**	**21.32**	**3**	LR	LR	15 44 46.7	
	comp=Z,879nm,18.1s,baz=148,slow=42						
QIZ	**Qiongzhong**	**21.39**	**311**	P	**P**	**15 34 35.8**	**+0.1**
QIZ				pP	**pwP**	**15 34 46.8**	**-2.0**
QIZ				sP	**sP**	**15 34 54.5**	**+2.5**
QIZ				S	**S**	**15 38 29.4**	**-1.4**
QIZ				sS	**sS**	**15 38 49.3**	**+2.3**
QIZ				pmax	pmax		
	comp=Z,29nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,520nm,10.3s						
QIZ				LR	LR		
	comp=Z,1µm,17.0s						
QIZ				LR	LR		
	comp=Z,2µm,16.0s						
QIZ				LR	LR		
	comp=Z,2µm,21.3s						
KPJI	**Karang Pucung**	**21.92**	**235**	P	**P**	**15 34 45.2**	**+3.8**
	comp=Z,38nm,1.1s						
LEM	**Lembang**	**22.73**	**238**	P	**P**	**15 34 48.4**	**-1.9**
	comp=Z,12nm,0.5s,baz=17,slow=14,SNR=4.6						
	comp=Z,12nm,0.5s						
BBJI	**Bungbulang**	**23.05**	**236**	P	**P**	**15 34 51.5**	**-1.9**
BBJI	**Bungbulang**	**23.05**	**236**	P	**P**	**15 34 56.8**	**+3.4**
MYKOM	**Kota Tinggi**	**23.24**	**262**	P	**P**	**15 34 55.4**	**+0.1**
MYKOM				IAmb	IAmb	15 34 56.8	
	comp=Z,94nm,1.1s						
DBJI	**Dramaga**	**23.33**	**240**	P	**P**	**15 35 01.1**	**+5.0**
	comp=Z,42nm,0.8s						
KLSI		**24.27**	**246**	P	**P**	**15 35 08.1**	**+3.2**
MDSI	**Maura Dua**	**24.70**	**247**	P	**P**	**15 35 12.0**	**+3.3**
	comp=Z,35nm,1.1s						
COEN	**Coen**	**25.17**	**140**	P	**P**	**15 35 11.9**	**-1.1**
COEN				IAmb	IAmb	15 35 45.6	
	comp=Z,57nm,1.5s						
IPM	**Ipoh**	**25.75**	**269**	P	**P**	**15 35 15.3**	**-3.0**
IPM				IAmb	IAmb	15 35 46.2	
	comp=Z,61nm,1.3s						
MASI	**Maura Aman, Be**	**26.02**	**251**	P	**P**	**15 35 25.8**	**+5.0**
	comp=Z,182nm,1.4s						
JCJ	**Chichijima**	**26.03**	**32**	P	**P**	**15 35 21.6**	**+0.8**
	comp=Z,38nm,0.4s,baz=125,slow=12,SNR=7.0						
WB0	**Warramunga Arr**	**26.12**	**164**	P	**P**	**15 35 22.1**	**+0.5**
WB0				IAmb	IAmb	15 35 40.5	
	comp=Z,60nm,0.8s						
WRAB	**Tennant Creek**	**26.26**	**164**	*ce*P	**P**	**15 35 25.4**	**+2.5**
WRAB				pmax	pmax		
	comp=Z,37nm,1.3s						
WRA	**Warramunga Arr**	**26.27**	**164**	P	**P**	**15 35 23.4**	**+0.4**
	comp=Z,8.6nm,0.7s,baz=343,slow=10,SNR=38						
	comp=Z,8.6nm,0.7s						
WRA	**Warramunga Arr**	**26.27**	**164**	P	**P**	**15 35 24.3**	**+1.4**
WRA	**Warramunga Arr**	**26.27**	**164**	*i* P	**P**	**15 35 25.7**	**+2.8**
WRA				pmax	pmax		
	comp=Z,12nm,0.6s						
PPI	**Padang Panjang**	**27.06**	**258**	P	**P**	**15 35 31.2**	**+1.0**
	comp=Z,36nm,1.0s						
MBWA	**Marble Bar**	**27.34**	**195**	P	**P**	**15 35 30.6**	**-1.9**
MBWA				IAmb	IAmb	15 35 53.1	
	comp=Z,65nm,1.2s						
NJ2	**Nanjing**	**27.52**	**345**	*e*P	**P**	**15 35 35.8**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,300nm,4.4s						
NJ2				LR	LR		
	comp=Z,980nm,17.5s						
NJ2				LR	LR		
	comp=Z,1µm,16.9s						
NJ2				LR	LR		
	comp=Z,1µm,19.2s						
WHN	**Wuhan**	**27.61**	**336**	P	**P**	**15 35 35.6**	**+0.7**
WHN				pmax	pmax		
	comp=Z,140nm,1.5s						
PSA00	**Pilbara Seismi**	**27.70**	**194**	P	**P**	**15 35 35.5**	**-0.3**
PSA00				IAmb	IAmb	15 35 49.9	
	comp=Z,43nm,1.1s						
ASAR	**Alice Springs**	**29.73**	**167**	P	**P**	**15 35 55.4**	**+1.6**
	comp=Z,2.0nm,0.5s,baz=352,slow=7.5,SNR=38						
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**29.73**	**167**	P	**P**	**15 35 55.9**	**+2.1**
CMAR	**Chiang Mai Arr**	**30.16**	**298**	P	**P**	**15 35 55.8**	**-1.9**
	comp=Z,1.6nm,0.6s,baz=107,slow=7.1,SNR=16						
CMAR				PcP	**PcP**	**15 38 57.6**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=97,slow=2.6,SNR=1.6						
CMAR				LR	LR	15 47 53.0	
	comp=Z,876nm,21.5s,baz=115,slow=36						
	comp=Z,1.6nm,0.6s						
KMI2	**Kunming**	**30.31**	**313**	P	**P**	**15 35 59.3**	**+0.1**
KMI2				pmax	pmax		
	comp=Z,20nm,1.3s						
KMI2				LR	LR		
	comp=Z,1µm,19.1s						
KMI2				LR	LR		
	comp=Z,630nm,20.6s						
KMI2				LR	LR		
	comp=Z,2µm,22.8s						
PZH	**PanZhiHua**	**31.84**	**314**	P	**P**	**15 36 10.8**	**-1.8**
PZH				S	**S**	**15 41 23.0**	**+2.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				LR	LR		
	comp=Z,700nm,20.6s						
PZH				LR	LR		
	comp=Z,1µm,18.8s						
PZH				LR	LR		
	comp=Z,2µm,21.0s						
KSRS	**Korea Array**	**31.89**	**2**	P	**P**	**15 36 12.7**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=182,slow=9.7,SNR=5.5						
KSRS				LR	LR	15 49 48.9	
	comp=Z,664nm,20.8s,baz=185,slow=38						
	comp=Z,0.9nm,0.8s						
LYN	**LuoYang**	**31.89**	**337**	P	**P**	**15 36 14.3**	**+1.6**
LYN				pP	pwP	15 36 27.3	-1.7
LYN				pmax	pmax		
	comp=Z,38nm,1.7s						
LYN				LR	LR		
	comp=Z,2µm,16.5s						
LYN				LR	LR		
	comp=Z,1µm,16.8s						
LYN				LR	LR		
	comp=Z,3µm,21.0s						
TIA	**Tai'an**	**31.91**	**345**	P	**P**	**15 36 13.3**	**+0.4**
TIA				S	**S**	**15 41 27.4**	**+6.6**
TIA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TIA				LR	LR		
	comp=Z,700nm,19.4s						
TIA				LR	LR		
	comp=Z,1µm,16.3s						
TIA				LR	LR		
	comp=Z,1µm,18.9s						
MJAR	**Matsushiro Arr**	**32.67**	**17**	P	**P**	**15 36 20.1**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=189,slow=7.8,SNR=2.0						
MJAR				LR	LR	15 48 19.2	
	comp=Z,1µm,20.7s,baz=214,slow=34						
	comp=Z,1.4nm,0.9s						
XAN	**Xi'an**	**32.97**	**332**	P	**P**	**15 36 21.8**	**-0.5**
XAN				pP	sP	15 36 34.4	-4.6
XAN				S	**S**	**15 41 35.3**	**-2.1**
XAN				pmax	pmax		
	comp=Z,43nm,1.5s						
XAN				pmax	pmax		
	comp=Z,370nm,9.6s						
XAN				LR	LR		
	comp=Z,2µm,22.0s						
XAN				LR	LR		
	comp=Z,2µm,20.4s						
XAN				LR	LR		
	comp=Z,4µm,23.0s						
TNCH	**TengChong**	**33.43**	**309**	P	**P**	**15 36 25.3**	**-1.3**
TNCH				pP	sP	15 36 41.9	-2.2
TNCH				sP	pP	15 36 47.8	+9.2
TNCH				S	**S**	**15 41 44.5**	**-0.6**
TNCH				sS	sS	15 42 04.0	-0.1
TNCH				pmax	pmax		
	comp=Z,230nm,4.1s						
TNCH				LR	LR		
	comp=Z,500nm,20.3s						
TNCH				LR	LR		
	comp=Z,800nm,19.5s						
TNCH				LR	LR		
	comp=Z,2µm,20.8s						
DL2	**Dalian**	**33.66**	**353**	P	**P**	**15 36 31.1**	**+3.0**
DL2				S	**S**	**15 41 51.3**	**+3.5**
DL2				pmax	pmax		
	comp=Z,27nm,1.6s						
DL2				pmax	pmax		
	comp=Z,330nm,5.6s						
DL2				LR	LR		
	comp=Z,1µm,18.4s						
DL2				LR	LR		
	comp=Z,1µm,17.3s						
DL2				LR	LR		
	comp=Z,2µm,18.8s						
HNS	**HongShan**	**33.70**	**342**	⇑P	**P**	**15 36 29.3**	**+0.8**
HNS				S	**S**	**15 41 50.8**	**+2.4**
HNS				pmax	pmax		
	comp=Z,24nm,1.5s						
HNS				LR	LR		
	comp=Z,590nm,22.3s						
HNS				LR	LR		
	comp=Z,920nm,22.3s						
HNS				LR	LR		
	comp=Z,740nm,21.5s						
INKA	**Innaminka**	**35.60**	**159**	P	**P**	**15 36 45.0**	**-0.1**
BJI2	**Beijing**	**35.75**	**346**	P	**P**	**15 36 46.8**	**+0.6**
BJI2				pP	**pwP**	**15 37 00.9**	**-1.6**
BJI2				sP	**sP**	**15 37 06.3**	**+3.6**
BJI2				S	**S**	**15 42 22.3**	**+2.2**
BJI2				pmax	pmax		
	comp=Z,12nm,1.4s						
BJI2				LR	LR		
	comp=Z,340nm,16.8s						
BJI2				LR	LR		
	comp=Z,250nm,16.0s						
BJI2				LR	LR		
	comp=Z,500nm,19.3s						
MORW	**Morawa**	**35.84**	**196**	P	**P**	**15 36 47.5**	**+0.3**
FORT	**Forrest**	**36.02**	**178**	P	**P**	**15 36 50.2**	**+1.6**
HNR	**Honiara**	**36.13**	**114**	LR	LR	15 50 17.2	
	comp=Z,34nm,22.0s,baz=18,slow=34						
LZDM	**Lanzhou Array**	**37.09**	**328**	P	**P**	**15 36 57.4**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=143,slow=8.7,SNR=13						
LZDM				PcP	**PcP**	**15 39 17.3**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=151,slow=3.3,SNR=1.5						
LZDM				LR	LR	15 54 40.8	
	comp=Z,2µm,18.6s,baz=110,slow=40						
	comp=Z,1.9nm,0.5s						
LZH	**Lanzhou**	**37.12**	**328**	*e*P	**P**	**15 36 58.3**	**+0.2**
LZH				pP	pwP	15 37 14.4	+0.5
LZH				sP	sP	15 37 24.3	+9.4
LZH				pmax	pmax		
	comp=Z,46nm,1.8s						
LZH				pmax	pmax		
	comp=Z,410nm,4.1s						
LZH				LR	LR		
	comp=Z,2µm,17.1s						
LZH				LR	LR		
	comp=Z,3µm,16.8s						
LZH				LR	LR		
	comp=Z,3µm,19.4s						
HHC	**Hu-ho-hao-te**	**37.84**	**341**	*e*P	**P**	**15 37 05.5**	**+1.4**
HHC				pP	pwP	15 37 20.4	-0.1
HHC				sP	sP	15 37 29.0	+8.5
HHC				S	**S**	**15 42 52.8**	**+0.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,3.9s						
HHC				LR	LR		
	comp=Z,640nm,16.6s						
HHC				LR	LR		
	comp=Z,670nm,16.7s						
HHC				LR	LR		
	comp=Z,710nm,16.9s						
BTO2	**Baotou**	**38.31**	**339**	*e*P	P	15 37 12.8	+4.7
BTO2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BTO2				pmax	pmax		
	comp=Z,460nm,6.6s						
BTO2				LR	LR		
	comp=Z,3µm,19.0s						
BTO2				LR	LR		
	comp=Z,2µm,21.0s						
BTO2				LR	LR		
	comp=Z,2µm,19.0s						
USRK	**Ussuriysk Ar.**	**38.87**	**6**	P	**P**	**15 37 13.8**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=176,slow=7.6,SNR=5.3						
	comp=Z,1.8nm,0.5s						
BBOO	**Buckleboo**	**39.02**	**168**	P	**P**	**15 37 15.5**	**+1.5**
BBOO				IAmb	IAmb	15 37 30.7	
	comp=Z,50nm,1.4s						
MDJ	**Mudanjiang**	**39.10**	**3**	P	**P**	**15 37 17.0**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,19nm,2.4s						
NWAO	**Narrogin (SRO)**	**39.23**	**193**	P	**P**	**15 37 15.6**	**-0.1**
NWAO				IAmb	IAmb	15 37 30.4	
	comp=Z,111nm,1.8s						
NWAO	**Narrogin (SRO)**	**39.23**	**193**	P	**P**	**15 37 15.6**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,111nm,1.8s						
XLT	**XiLinHaoTe**	**39.47**	**348**	*e*P	**P**	**15 37 18.6**	**+0.9**
XLT				pP	pwP	15 37 31.3	-2.8
XLT				pmax	pmax		
	comp=Z,11nm,1.3s						
XLT				LR	LR		
	comp=Z,520nm,18.6s						
XLT				LR	LR		
	comp=Z,640nm,17.8s						
STKA	**Stephens Creek**	**39.67**	**160**	P	**P**	**15 37 20.5**	**+1.1**
	comp=Z,9.7nm,0.8s,baz=335,slow=7.1,SNR=7.7						
	comp=Z,9.7nm,0.8s						
STKA	**Stephens Creek**	**39.67**	**160**	P	**P**	**15 37 20.2**	**+0.8**
STKA	**Stephens Creek**	**39.67**	**160**	*i* P	**P**	**15 37 20.8**	**+1.4**
BNX	**BinXian**	**40.15**	**1**	‖P	**P**	**15 37 26.5**	**+3.3**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ASAJ	**Asahikawa**	**40.94**	**17**	P	**P**	**15 37 30.4**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=220,slow=9.4,SNR=8.2						
ASAJ				LR	LR	15 53 10.0	
	comp=Z,780nm,21.9s,baz=210,slow=34						
	comp=Z,1.3nm,0.3s						
LSA	**Lhasa**	**41.43**	**310**	P	**P**	**15 37 31.3**	**-3.3**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
LSA				LR	LR		
	comp=Z,690nm,22.0s						
LSA				LR	LR		
	comp=Z,380nm,19.9s						
LSA				LR	LR		
	comp=Z,940nm,21.6s						
H11N1	**WAKE ISLAND Hy**	**41.44**	**66**	T	T	16 22 01.6	
	baz=255,slow=75,SNR=54						
H11N2	**WAKE ISLAND Hy**	**41.45**	**66**	T	T	16 22 05.2	
	baz=255,slow=75,SNR=37						
H11N3	**WAKE ISLAND Hy**	**41.46**	**66**	T	T	16 22 03.8	
	baz=255,slow=75,SNR=48						
GTA2	**Gaotai**	**41.80**	**328**	*e*P	**P**	**15 37 37.0**	**-0.1**
GTA2				PcP	**PcP**	**15 39 36.4**	**+3.8**
GTA2				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA2				LR	LR		
	comp=Z,1µm,20.4s						
GTA2				LR	LR		
	comp=Z,1µm,18.9s						
GTA2				LR	LR		
	comp=Z,2µm,20.0s						
GOMU	**GeErMu**	**42.45**	**321**	P	**P**	**15 37 42.9**	**+0.2**
GOMU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
YSS	**Yuzhno-Sakhali**	**43.58**	**16**	*e*P	**P**	**15 37 52.3**	**+1.1**
YSS				*e*S	**S**	**15 44 17.6**	**+0.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
YSS				MLR	MLR		
	comp=N,500nm,17.0s						
KLR	**Kul'dur**	**43.84**	**5**	P	**P**	**15 37 54.4**	**+1.1**
	comp=N,2.5nm,0.5s,baz=209,slow=5.2,SNR=7.6						
	comp=N,2.5nm,0.5s						
HILR	**Hailar Array B**	**44.38**	**353**	P	**P**	**15 37 57.3**	**-0.4**
	comp=N,1.5nm,0.4s,baz=167,slow=10,SNR=5.6						
HILR				PcP	**PP**	**15 39 41.1**	**-0.7**
	comp=N,1.2nm,0.4s,baz=148,slow=4.0,SNR=4.7						
HILR				LR	LR	16 00 15.9	
	comp=N,714nm,18.1s,baz=105,slow=41						
	comp=N,1.5nm,0.4s						
HEH	**HeiHe**	**44.67**	**1**	*e*P	**P**	**15 38 00.3**	**+0.4**
HEH				LR	LR		
	comp=N,810nm,20.4s						
HEH				LR	LR		
	comp=N,510nm,21.4s						
HEH				LR	LR		
	comp=N,990nm,21.0s						
ULN	**Ulaanbaatar**	**45.55**	**341**	P	**P**	**15 38 06.8**	**-0.3**
ULN				IAmb	IAmb	15 38 38.8	
	comp=Z,20nm,1.0s						
ULN	**Ulaanbaatar**	**45.55**	**341**	P	**P**	**15 38 06.8**	**-0.3**
ULN				pmax	pmax		
	comp=Z,20nm,1.0s						
SONM	**Songino Array**	**45.74**	**341**	P	**P**	**15 38 08.6**	**0.0**
	comp=Z,2.7nm,0.7s,baz=162,slow=8.7,SNR=19						
	comp=Z,2.7nm,0.7s						
SONM	**Songino Array**	**45.74**	**341**	P	**P**	**15 38 09.2**	**+0.6**
DZM	**Mont Dzumac**	**47.43**	**127**	*e*P	P	15 38 15.7	-6.4
	comp=Z,60nm,25.7s						
DZM				*e*S	**S**	**15 45 11.5**	**-2.0**
	comp=Z,372nm,30.1s						
DZM				*e*SS	**SS**	**15 48 44.9**	**+3.0**
	comp=Z,348nm,26.1s						
DZM				*e*LQ	LQ	15 49 49.1	
	comp=Z,2µm,33.0s						
DZM				*e*LR	LR	15 51 56.7	
	comp=Z,806nm,33.4s						
CIT	**Chita**	**47.73**	**349**	*e*P	**P**	**15 38 26.0**	**+2.0**
CIT				*e*		15 38 37.6	
CIT				*e*		15 38 45.4	
CIT				pmax	pmax		
	comp=Z,67nm,2.1s						
ZEA	**Zeya**	**48.16**	**0**	*e*P	**P**	**15 38 27.8**	**+0.6**
ZEA				*e*		15 38 40.9	
ZEA				MLR	MLR		
	comp=N,300nm,21.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,21.0s						
HYB	**Hyderabad**	**48.68**	**288**	*e*P	**P**	**15 38 31.7**	**-0.2**
HYB				*e*S	**S**	**15 45 34.0**	**+2.7**
ZAK	**Zakamensk**	**48.97**	**340**	*e*P	**P**	**15 38 34.2**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,11nm,1.7s						
TLY	**Talaya**	**49.96**	**341**	P	**P**	**15 38 40.7**	**-0.4**
	comp=Z,3.8nm,0.7s						
	comp=Z,3.8nm,0.7s						
TLY	**Talaya**	**49.96**	**341**	*ce*P	**P**	**15 38 42.7**	**+1.6**
TLY				pmax	pmax		
	comp=Z,26nm,1.4s						
IRK	**Irkutsk**	**50.25**	**342**	*e*P	**P**	**15 38 44.0**	**+0.7**
IRK				pmax	pmax		
	comp=Z,61nm,2.0s						
MOY	**Mondy**	**50.84**	**339**	*e*P	**P**	**15 38 49.5**	**+1.7**
MOY				pmax	pmax		
	comp=Z,51nm,1.5s						
KNGR	**Kungurtug, Tuv**	**51.28**	**336**	*i* P	**P**	**15 38 52.8**	**+1.6**
KNGR				pmax	pmax		
	comp=Z,41nm,1.3s						
WMQ	**Urumqi**	**51.42**	**324**	*e*P	**P**	**15 38 52.8**	**+0.6**
WMQ				LR	LR		
	comp=Z,1µm,17.9s						
WMQ				LR	LR		
	comp=Z,2µm,18.7s						
WMQ				LR	LR		
	comp=Z,1µm,17.7s						
PETK	**Petropavlovsk-**	**53.82**	**23**	P	**P**	**15 39 10.1**	**+0.4**
	comp=Z,4.5nm,0.9s,baz=245,slow=2.2,SNR=12						
	comp=Z,4.5nm,0.9s						
ZSN	**Zaisan**	**55.16**	**326**	*e*P	**P**	**15 39 19.2**	**

SHLS	**Shalkode**	**56.13**	**320**	*e*P		**P**	**15 39 24.1**	**-2.7**
	comp=Z,5.3nm,0.6s								
MK31	**Makanchi Array**	**56.24**	**325**	*i* P		**P**	**15 39 26.1**	**-1.3**
MKAR	**Makanchi Array**	**56.24**	**325**	P		**P**	**15 39 26.9**	**-0.6**
	comp=Z,6.4nm,0.5s,baz=116,slow=7.5,SNR=235								
	comp=Z,6.4nm,0.5s								
MKAR	**Makanchi Array**	**56.24**	**325**	P		**P**	**15 39 26.4**	**-1.0**
UZB	**Uzynbulak**	**56.41**	**319**	*e*P		**P**	**15 39 28.0**	**-0.8**
UZB	**Uzynbulak**	**56.41**	**319**	*e*P		**P**	**15 39 28.0**	**-0.8**
MAKZ	**Makanchi**	**56.43**	**324**			**P**	**15 39 27.7**	**-1.1**
MAKZ				IAmb		IAmb	15 39 44.1		
	comp=Z,30nm,1.1s								
MAKZ	**Makanchi**	**56.43**	**324**	P		**P**	**15 39 27.7**	**-1.1**
MAKZ				pmax		pmax			
	comp=Z,30nm,1.1s								
YAK	**Yakutsk**	**56.51**	**2**	P		**P**	**15 39 29.6**	**+0.6**
	comp=Z,9.0nm,0.4s,baz=200,slow=20,SNR=7.8								
	comp=Z,9.0nm,0.4s								
YAK	**Yakutsk**	**56.51**	**2**			**P**	**15 39 29.4**	**+0.4**
YAK				IAmb		IAmb	15 39 44.2		
	comp=Z,31nm,0.8s								
YAK	**Yakutsk**	**56.51**	**2**	*e*P		**P**	**15 39 30.3**	**+1.3**
YAK				*e**PP		**pwP**	**15 39 43.1**	**-2.9**
YAK				*e*			15 40 25.5		
YAK				*e*S		**S**	**15 47 16.8**	**0.0**
YAK				*e**SS		sS	15 47 42.2	+5.2
YAK				*e*			15 49 17.6		
YAK				*e*SS		**SS**	**15 50 57.7**	**-7.0**
YAK				pmax		pmax			
	comp=Z,11nm,0.9s								
YAK				pmax		pmax			
	comp=N,9.0nm,1.3s								
YAK				pmax		pmax			
	comp=E,3.0nm,1.4s								
YAK				pmax		pmax			
	comp=Z,228nm,4.3s								
YAK				pmax		pmax			
	comp=E,180nm,4.1s								
YAK				pmax		pmax			
	comp=N,193nm,4.6s								
YAK				smax		smax			
	comp=E,42nm,3.3s								
YAK				smax		smax			
	comp=N,86nm,3.7s								
SATY	**Saty**	**56.77**	**319**	*e*P		**P**	**15 39 30.6**	**-0.7**
SATY				pmax		pmax			
	comp=Z,8.0nm,0.8s								
SATY	**Saty**	**56.77**	**319**	*e*P		**P**	**15 39 30.7**	**-0.7**
	comp=Z,8.4nm,0.8s								
KPKS	**Kokpek**	**56.78**	**320**	*e*P		**P**	**15 39 30.6**	**-0.8**
KPKS	**Kokpek**	**56.78**	**320**	*e*P		**P**	**15 39 30.6**	**-0.8**
NIL	**Nilore**	**57.00**	**307**			**P**	**15 39 31.8**	**-1.3**
NIL	**Nilore**	**57.00**	**307**	P		**P**	**15 39 31.8**	**-1.3**
NIL				pmax		pmax			
	comp=Z,49nm,0.9s								
MA2	**Magadan**	**57.03**	**14**	P		**P**	**15 39 33.1**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=196,slow=8.5,SNR=6.5								
	comp=Z,1.2nm,0.4s								
MA2	**Magadan**	**57.03**	**14**	*i* P		**P**	**15 39 34.9**	**+2.2**
MA2				pmax		pmax			
	comp=Z,3.0nm,0.6s								
KSH2	**Kashi**	**57.09**	**314**	P		**P**	**15 39 33.5**	**-0.2**
KSH2				pmax		pmax			
	comp=Z,12nm,1.6s								
KSH2				LR		LR			
	comp=Z,510nm,9.6s								
KSH2				LR		LR			
	comp=Z,1μm,18.2s								
KSH2				LR		LR			
	comp=Z,1μm,18.2s								
ARXS	**Arharly**	**57.67**	**320**	*e*P		**P**	**15 39 39.9**	**+2.2**
TDK	**Taldyqorghan**	**57.67**	**321**	*e*P		**P**	**15 39 36.9**	**-0.7**
TDK				pmax		pmax			
	comp=Z,7.0nm,0.7s								
TDK	**Taldyqorghan**	**57.67**	**321**	*e*P		**P**	**15 39 36.1**	**-1.5**
	comp=Z,6.7nm,0.7s								
MDOK	**Medeo**	**57.71**	**319**	*e*P		**P**	**15 39 37.2**	**-0.8**
MDOK	**Medeo**	**57.71**	**319**	*e*P		**P**	**15 39 37.3**	**-0.8**
TNSS	**Tian-Shan**	**57.72**	**318**	*e*P		**P**	**15 39 37.3**	**-1.1**
TNSS	**Tian-Shan**	**57.72**	**318**	*e*P		**P**	**15 39 37.4**	**-1.1**
AAA	**Alma-Ata**	**57.81**	**319**	*e*P		**P**	**15 39 37.9**	**-0.7**
AAA				pmax		pmax			
	comp=Z,10.0nm,0.6s								
AAA	**Alma-Ata**	**57.81**	**319**	*e*P		**P**	**15 39 38.0**	**-0.7**
	comp=Z,10nm,0.6s								
ULHL	**Ulahol**	**57.85**	**317**	P		**P**	**15 39 38.9**	**-0.2**
	SNR=7.3								
BOOM	**Boomskoye usch**	**58.16**	**317**			**P**	**15 39 40.7**	**-0.5**
BOOM				IAmb		IAmb	15 39 53.8		
	comp=Z,20nm,1.4s								
BOOM	**Boomskoye usch**	**58.16**	**317**	P		**P**	**15 39 40.7**	**-0.5**
BOOM				pmax		pmax			
	comp=Z,20nm,1.4s								
KUU	**Kurty**	**58.49**	**319**	*e*P		**P**	**15 39 42.7**	**-0.6**
KUU				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KUU	**Kurty**	**58.49**	**319**	*e*P		**P**	**15 39 42.8**	**-0.6**
	comp=Z,5.3nm,0.9s								
TKM2	**Tokmak 2**	**58.57**	**318**	P		**P**	**15 39 43.7**	**-0.4**
	SNR=7.7								
UCH	**Uchtor**	**59.02**	**317**	P		**P**	**15 39 47.1**	**-0.5**
	SNR=9.8								
ZALV	**Zalesovo Beam**	**59.14**	**333**	P		**P**	**15 39 46.7**	**-0.9**
	comp=Z,2.6nm,0.3s,baz=139,slow=5.5,SNR=24								
ZALV				LR		LR	16 06 49.0		
	comp=Z,666nm,20.9s,baz=138,slow=38								
	comp=Z,2.6nm,0.3s								
ZALV	**Zalesovo Beam**	**59.14**	**333**	*i* P		**P**	**15 39 47.5**	**-0.1**
ZALV				pmax		pmax			
	comp=Z,3.0nm,0.3s								
AAK	**Ala-Archa**	**59.20**	**317**			**P**	**15 39 48.0**	**-0.4**
AAK				IAmb		IAmb	15 40 05.3		
	comp=Z,31nm,1.6s								
AAK	**Ala-Archa**	**59.20**	**317**	*ce*P		**P**	**15 39 48.4**	**0.0**
AAK				pmax		pmax			
	comp=Z,21nm,1.5s								
USP	**Ospenovka**	**59.44**	**318**	P		**P**	**15 39 49.4**	**-0.6**
	SNR=9.7								
EKS2	**Erkin-Say**	**59.69**	**317**	P		**P**	**15 39 51.7**	**-0.1**
	SNR=9.3								
SEY	**Seymchan**	**60.36**	**13**	*e*P		**P**	**15 39 55.6**	**-0.2**
SEY				pmax		pmax			
	comp=Z,6.0nm,1.3s								
KURBB	**Kurchatov Arra**	**60.38**	**327**	P		**P**	**15 39 55.2**	**-1.0**
	comp=Z,17nm,0.8s,baz=126,slow=6.4,SNR=50								
KURBB				LR		LR	16 07 27.9		
	comp=Z,561nm,20.9s,baz=156,slow=37								
	comp=Z,17nm,0.8s								
KURK	**Kurchatov**	**60.38**	**327**			**P**	**15 39 55.6**	**-0.6**
KURK	**Kurchatov**	**60.38**	**327**	P		**P**	**15 39 55.2**	**-1.0**
KBL	**Kabul**	**60.60**	**307**			**P**	**15 39 56.4**	**-1.9**
KBL				IAmb		IAmb	15 40 06.8		
	comp=Z,14nm,0.9s								
KBL	**Kabul**	**60.60**	**307**	P		**P**	**15 39 56.4**	**-1.9**
KBL				pmax		pmax			
	comp=Z,14nm,0.9s								
SHEM	**Shemya Is, Ala**	**60.94**	**31**	LR		LR	16 02 08.8		
	comp=Z,210nm,22.0s,baz=278,slow=32								
DZA	**Taraz**	**61.45**	**316**	*e*P		**P**	**15 40 03.1**	**-0.5**
DZA	**Taraz**	**61.45**	**316**	*e*P		**P**	**15 40 03.1**	**-0.5**
KK31	**Karatay Array**	**62.09**	**316**	*i* P		**P**	**15 40 06.4**	**-1.5**
KKAR	**Karatay Array**	**62.09**	**316**			**P**	**15 40 06.4**	**-1.5**
KKAR	**Karatay Array**	**62.09**	**316**	P		**P**	**15 40 06.4**	**-1.5**
IUG	**luzhnay**	**62.09**	**315**	*e*P		**P**	**15 40 07.4**	**-0.7**
IUG				pmax		pmax			
	comp=Z,6.0nm,0.7s								
IUG	**luzhnay**	**62.09**	**315**	*e*P		**P**	**15 40 07.4**	**-0.7**
	comp=Z,5.6nm,0.7s								
CHM	**Chimkent**	**62.45**	**315**	*e*P		**P**	**15 40 09.7**	**-0.7**
CHM				pmax		pmax			
	comp=Z,7.0nm,1.0s								
CHM	**Chimkent**	**62.45**	**315**	*e*P		**P**	**15 40 09.7**	**-0.7**
	comp=Z,6.7nm,1.0s								
BRLS	**Borolday**	**62.52**	**316**	*e*P		**P**	**15 40 10.3**	**-0.5**
BRLS	**Borolday**	**62.52**	**316**	*e*P		**P**	**15 40 10.4**	**-0.5**
BVAR	**Borovoye Array**	**65.97**	**327**	P		**P**	**15 40 32.2**	**-1.0**
	comp=Z,11nm,0.7s,baz=143,slow=7.8,SNR=22								
BVAR				LR		LR	16 09 57.9		
	comp=Z,457nm,19.9s,baz=99,slow=36								
	comp=Z,11nm,0.7s								
BORK	**Borovoye**	**66.02**	**327**			**P**	**15 40 33.3**	**-0.2**
BORK	**Borovoye**	**66.02**	**327**	P		**P**	**15 40 33.3**	**-0.2**
BORK				pmax		pmax			
	comp=Z,29nm,0.8s								
TIXI	**Tiksi**	**66.15**	**1**	*ce*P		**P**	**15 40 34.1**	**+0.1**
TIXI				pmax		pmax			
	comp=Z,19nm,1.2s								
BILL	**Bilibino**	**67.89**	**15**	*i* P		**P**	**15 40 48.4**	**+3.3**
BILL				pmax		pmax			
	comp=Z,4.0nm,1.1s								
AB31	**Akbulak array**	**70.92**	**320**	*i* P		**P**	**15 41 03.1**	**-1.1**
ABKAR	**Akbulak array**	**70.92**	**320**			**P**	**15 41 02.7**	**-1.5**
AKTO	**Aktyubinsk**	**72.41**	**321**	LR		LR	16 14 27.8		
	comp=Z,1μm,22.0s,baz=90,slow=37								
ARTI	**Arti**	**73.66**	**327**	LR		LR	16 15 49.5		
	comp=Z,612nm,21.7s,baz=112,slow=38								
ARTI	**Arti**	**73.66**	**327**			**P**	**15 41 20.1**	**-0.3**
ARTI				IAmb		IAmb	15 41 34.8		
	comp=Z,36nm,1.3s								
ARTI	**Arti**	**73.66**	**327**	*d* iP		**P**	**15 41 21.9**	**+1.5**
ARTI				*PP		**sP**	**15 41 34.4**	**-3.3**
ARTI				S		**S**	**15 50 48.2**	**+0.8**
ARTI				SS		**SS**	**15 55 27.5**	**-3.8**
ARTI				pmax		pmax			
	comp=Z,14nm,1.1s								
AKT	**Akhty**	**78.28**	**311**	*e*P		**P**	**15 41 46.2**	**-1.0**
AKT				*e*			15 41 55.7		
AKT				*e**PP		**sP**	**15 41 59.7**	**-5.2**
AKT				*e**SP		**pwP**	**15 42 07.3**	**+3.7**
AKT				*e*PPP		PPP	15 46 30.7		
AKT				pmax		pmax			
	comp=Z,8.0nm,0.6s								
KIRV	**Kirov**	**78.84**	**329**	LR		LR	16 19 35.4		
	comp=Z,773nm,20.3s,baz=97,slow=38								
KIRV	**Kirov**	**78.84**	**329**	*ce*P		**P**	**15 41 52.2**	**+2.5**
BELG	**Belogornoye**	**79.14**	**322**	*i* P		**P**	**15 41 49.9**	**-1.6**
BELG				pmax		pmax			
	comp=Z,7.0nm,1.1s								
KDAK	**Kodiak Island**	**80.39**	**32**	LR		LR	16 15 13.7		
	comp=Z,286nm,19.8s,baz=246,slow=34								
GNI	**Garni**	**80.50**	**310**	*i* P		**P**	**15 42 01.1**	**+1.7**
GNI				pmax		pmax			
	comp=Z,27nm,1.2s								
NCK	**Nalchik**	**81.40**	**313**	*i* P		**P**	**15 42 04.6**	**+0.7**
NCK				pmax		pmax			
	comp=Z,14nm,1.2s								
GOF	**Gofitskoye**	**81.81**	**315**	*ce*P		**P**	**15 42 09.0**	**+3.0**
KBZ	**Khabaz**	**81.91**	**313**	P		**P**	**15 42 05.9**	**-0.6**
	comp=Z,5.5nm,1.1s,baz=90,slow=1.5,SNR=7.1								
	comp=Z,5.5nm,1.1s								
KBZ	**Khabaz**	**81.91**	**313**	*ce*P		**P**	**15 42 08.2**	**+1.7**
KBZ				pmax		pmax			
	comp=Z,13nm,1.3s								
NEUR	**Neytrino**	**82.05**	**313**	*i* P		**P**	**15 42 09.0**	**+1.4**
NEUR				pmax		pmax			
	comp=Z,11nm,1.2s								
KIV	**Kislovodsk**	**82.06**	**313**	*e*P		**P**	**15 42 07.6**	**+0.1**
KIV				pmax		pmax			
	comp=Z,10.0nm,1.0s								
SHA1	**Shidzhatmaz**	**82.08**	**313**	*i* P		**P**	**15 42 09.2**	**+1.4**
VRH	**Novokhopyorsk**	**82.75**	**321**	*e*P		**P**	**15 42 11.1**	**+0.3**
VRH				pmax		pmax			
	comp=Z,13nm,0.5s								
ILAR	**Eielson Array**	**83.52**	**25**	P		**P**	**15 42 14.8**	**+0.2**
	comp=Z,1.6nm,1.1s,baz=265,slow=5.5,SNR=9.8								
	comp=Z,1.6nm,1.1s								
KLMR	**Klimovskoe**	**83.99**	**331**	*e*P		**P**	**15 42 17.5**	**+0.5**
KLMR				pmax		pmax			
	comp=Z,77nm,1.3s								
VORD	**Divnogorie**	**84.28**	**321**	*e*P		**P**	**15 42 17.9**	**-0.7**
VORD				pmax		pmax			
	comp=Z,10.0nm,0.6s								
VORR	**Voronezh**	**84.31**	**321**	*e*P		**P**	**15 42 19.1**	**+0.3**
VORR				pmax		pmax			
	comp=Z,40nm,0.4s								
VSR	**Storozhevoye**	**84.35**	**321**	*e*P		**P**	**15 42 19.9**	**+0.9**
VSR				pmax		pmax			
	comp=Z,10.0nm,0.5s								
LPSR	**Galich'ya Gora**	**84.46**	**322**	*e*P		**P**	**15 42 20.5**	**+1.0**
LPSR				pmax		pmax			
	comp=Z,27nm,1.2s								
BMAR	**Burnt Mountain**	**84.47**	**23**			**P**	**15 42 20.8**	**+1.4**
VNDA	**Vanda**	**85.09**	**173**	P		**P**	**15 42 22.8**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=323,slow=8.1,SNR=6.5								
	comp=Z,1.0nm,0.4s								
VNDA	**Vanda**	**85.09**	**173**	P		**P**	**15 42 22.1**	**-0.1**
VNDA				IAmb		IAmb	15 43 02.7		
	comp=Z,16nm,1.4s								
VNDA	**Vanda**	**85.09**	**173**	P		**P**	**15 42 22.1**	**-0.1**
VNDA				pmax		pmax			
	comp=Z,16nm,1.4s								
MOS	**Moscow**	**85.12**	**325**	*e*P		**P**	**15 42 24.6**	**+1.9**
MOS				*e*			15 42 45.5		
MOS				pmax		pmax			
	comp=Z,44nm,0.7s								
PPT	**Papeete**	**85.52**	**108**	LR		LR	16 13 08.0		
	comp=Z,164nm,21.6s,baz=278,slow=30								
PPT2	**Papeete2**	**85.52**	**108**	*e*S		**S**	**15 52 53.4**	**-1.0**
	comp=Z,238nm,25.8s								
PPT2				*e*SS		SS	15 58 21.7	-9.3	
	comp=Z,127nm,25.2s								
PPT2				*e*LR		LR	16 09 35.5		
	comp=Z,388nm,25.2s								
PPT2				*e*LR		LR	16 09 36.7		
	comp=Z,474nm,23.8s								
OBN	**Obninsk**	**85.75**	**325**	*e*P		**P**	**15 42 27.3**	**+1.4**
OBN				*e*			15 45 44.6		
OBN				pmax		pmax			
	comp=Z,81nm,1.7s								
ANN	**Anapa**	**85.80**	**314**	*e*P		**P**	**15 42 26.7**	**+0.3**
ANN				*e**PP		**pwP**	**15 42 42.1**	**-1.6**
ANN				*e*			15 45 46.6		
ANN				*e*S		**SKSac**	**15 52 46.8**	**-1.6**
ANN				pmax		pmax			
	comp=Z,31nm,0.7s								
TBI	**Tubuai**	**86.36**	**114**	*e*P		**P**	**15 42 27.0**	**-2.5**
	comp=Z,200nm,35.5s								
TBI				*e*S		**S**	**15 53 01.6**	**-0.6**
	comp=Z,776nm,26.0s								
TBI				*e*SS		**SS**	**15 58 34.6**	**-8.3**
	comp=Z,742nm,33.2s								
MMAI	**Mount Meron Ar**	**88.29**	**303**	P		**P**	**15 42 38.4**	**-0.5**
	comp=Z,6.9nm,0.4s,baz=58,slow=7.9,SNR=6.4								
	comp=Z,0.6nm,0.4s								
SPITS	**Spitsbergen Ar**	**88.84**	**349**	P		**P**	**15 42 41.6**	**+1.1**
	comp=Z,2.1nm,0.5s,baz=87,slow=7.0,SNR=17								
	comp=Z,2.1nm,0.5s								
ARCES	**ARCESS Array B**	**88.90**	**340**	P		**P**	**15 42 40.5**	**-0.4**
	comp=Z,1.9nm,0.4s,baz=86,slow=5.5,SNR=17								
	comp=Z,1.9nm,0.4s								
ARCES	**ARCESS Array B**	**88.90**	**340**	P		**P**	**15 42 40.4**	**-0.4**
ARCES	**ARCESS Array B**	**88.90**	**340**	P		**P**	**15 42 40.4**	**-0.4**
ARCES				pmax		pmax			
	comp=Z,83nm,1.6s								
EIL	**Elat**	**88.99**	**300**	LR		LR	16 27 08.8		
	comp=Z,156nm,21.6s,baz=53,slow=39								
BR131	**Keskin Array S**	**89.04**	**310**	*i* P		**P**	**15 42 42.8**	**+0.5**
BRTR	**Keskin Array B**	**89.04**	**310**	P		**P**	**15 42 40.5**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=131,slow=4.2,SNR=13								
	comp=Z,0.9nm,0.6s								
FINES	**FINESS Array B**	**90.40**	**332**	P		**P**	**15 42 48.0**	**0.0**
	comp=Z,2.6nm,0.5s,baz=65,slow=4.6,SNR=34								
	comp=Z,2.6nm,0.5s								
FINES	**FINESS Array B**	**90.40**	**332**	P		**P**	**15 42 47.3**	**-0.7**
FINES	**FINESS Array B**	**90.40**	**332**	*i* P		**P**	**15 42 49.0**	**+1.0**
FINES				pmax		pmax			
	comp=Z,3.0nm,0.4s								
AKASG	**Malin Array Be**	**90.66**	**321**	P		**P**	**15 42 48.0**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=73,slow=3.0,SNR=4.5								
	comp=Z,0.5nm,0.5s								
AKBB	**Malin Array Si**	**90.66**	**321**	*ce*P		**P**	**15 42 49.8**	**+0.4**
AKBB				pmax		pmax			
	comp=Z,8.0nm,1.3s								
MI28	**Mi28,Pidlybu**	**91.59**	**321**	P		**PKiKP**	**15 47 44.7**	**-0.4**
MLR	**Muntele Rosu**	**93.77**	**316**	LR		LR	16 30 22.2		
	comp=Z,541nm,20.6s,baz=68,slow=39								
TAOE	**Nuku Hiva Isla**	**93.78**	**98**	*e*S		**S**	**15 54 09.4**	**-2.0**
	comp=Z,182nm,28.8s								
TAOE				*e*SS		**SS**	**16 00 33.9**	**+2.9**
	comp=Z,225nm,31.9s								
TAOE				*e*LR		LR	16 13 26.8		
	comp=Z,517nm,23.4s								
BBB	**Bella Bella**	**94.87**	**37**	LR		LR	16 27 16.3		
	comp=Z,92nm,18.7s,baz=255,slow=36								
HFS	**Hagfors**	**96.58**	**332**	P		**P**	**15 43 15.8**	**-0.7**
	comp=Z,3.7nm,0.8s,baz=108,slow=4.8,SNR=12								
	comp=Z,3.7nm,0.8s								
NOA	**NORSAR Array B**	**97.33**	**334**	P		**P**	**15 43 19.6**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=66,slow=4.6,SNR=4.9								
	comp=Z,1.3nm,0.7s								
YKA	**Yellowknife Ar**	**97.91**	**24**	P		Pdif	15 43 23.4	+1.0	
	comp=Z,0.1nm,0.6s,baz=306,slow=5.6,SNR=4.9								
YKA				PKKPbc		**PKKPbc**	**15 59 56.2**	**-2.7**	
	comp=Z,0.1nm,0.4s,baz=113,slow=2.0,SNR=4.0								
YKA				LR		LR	16 29 21.8		
	comp=Z,96nm,21.2s,baz=302,slow=36								
	comp=Z,0.1nm,0.6s								
SNAA	**Sanae**	**106.88**	**195**	⇑Pdiff		**Pdif**	**15 44 00.7**	**-1.5**	
	comp=Z,270nm,0.4s								
VNA2	**Neumayer--Watz**	**108.49**	**194**	⇑Pdiff		**Pdif**	**15 44 09.6**	**+0.2**	
	comp=Z,2.7nm,0.4s,baz=299,slow=4.1								
VNA3	**Neumayer Olymp**	**108.83**	**194**	⇑Pdiff		**Pdif**	**15 44 10.7**	**-0.1**	
	comp=Z,6.3nm,1.0s								
VNA1	**Neumayer--Stat**	**108.89**	**194**	⇑Pdiff		**Pdif**	**15 44 11.6**	**+0.5**	
	comp=Z,14nm,1.0s								
PDAR	**Pinedale Array**	**110.00**	**41**	PKKPbc		PKKPbc	15 59 22.4	0.0	
	comp=Z,0.5nm,0.8s,baz=110,slow=6.2,SNR=3.8								
TXAR	**Lajitas Array**	**120.45**	**51**	PKP		**PKPdf**	**15 48 37.3**	**-1.7**	
	comp=Z,0.2nm,0.7s,baz=292,slow=2.1,SNR=2.1								
TORD	**Torodi Ar. Bea**	**122.49**	**289**	PKP		**PKPdf**	**15 48 41.4**	**-1.7**	
	comp=Z,1.0nm,0.6s,baz=53,slow=2.9,SNR=7.0								
DBIC	**Dimbokro**	**130.33**	**283**	PKP		**PKPdf**	**15 48 56.5**	**-1.7**	
	comp=Z,3.0nm,0.8s,baz=115,slow=3.3,SNR=2.0								
PLCA	**Paso Flores**	**141.54**	**159**	PKP		**PKPdf**	**15 49 17.5**	**-0.8**	
	comp=Z,3.0nm,0.9s,baz=242,slow=2.9,SNR=7.1								
JTS	**Las Juntas de**	**144.68**	**64**	PKPdf		**PKPab**	**15 49 22.4**	**-0.9**	
JTS	**Las Juntas de**	**144.68**	**64**	PKIKP		**PKPab**	**15 49 22.4**	**-0.9**	
LPAZ	**La Paz**	**161.77**	**127**	PKP		**PKPdf**	**15 49 49.5**	**0.0**	
	comp=Z,0.7nm,0.8s,baz=155,slow=2.0,SNR=1.5								
LPAZ				PKPab		**PKPab**	**15 50 36.1**	**+1.1**	
	comp=Z,1.1nm,0.7s,baz=236,slow=3.6,SNR=2.0								

SJA ***22*** *15:33:34.9±0.7, 20.˚38S×66.˚34W, h292km±6km, ML3.7, MW3.7*

SCB ***22*** *15:33:36.7±1.4, 20.˚34S×66.˚39W, h266km±12km, ML3.7/4, Error ellipse: s-maj=5.6km s-min=4.0km az=0.0*

ISC 22 15:33:33.9±2.2, 20.˚42S±0.˚05×66.˚35W±0.˚06, h294km±17km, n34, σ2s02/53, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MOCB	**Mocbara**	**1.07**	**141**	Pg		**Pn**	**15 34 15.5**	**+1.0**
MOCB				Sg		**S**	**15 34 44.0**	**-2.6**
MOCB				IAML			15 34 47.1	
	250nm,0.6s							
YJA	**Yavi**	**1.92**	**156**	*e*P		**Pn**	**15 34 21.9**	**+1.9**
YJA				*e*S		**S**	**15 34 56.2**	**-0.3**
YJA	**Yavi**	**1.92**	**156**	Pg		**Pn**	**15 34 21.6**	**+1.6**
SOEO	**Opoqueri**	**2.34**	**322**	Pg		**Pn**	**15 34 24.7**	**+1.0**
AOEA	**Aiquile**	**2.46**	**26**	Pg		**Pn**	**15 34 24.5**	**0.0**
PB08	**IPOC Station P**	**2.65**	**275**	*e*P		**Pn**	**15 34 27.5**	**+1.2**
PB08				*e*S		**S**	**15 35 09.6**	**+1.7**
PB08	**IPOC Station P**	**2.65**	**275**	Pg		**Pn**	**15 34 27.6**	**+1.4**
GO01	**Chusmiza**	**2.77**	**285**	*e*P		**Pn**	**15 34 28.6**	**+1.1**
GO01				*e*S		**S**	**15 35 16.6**	**+6.2**
GO01				*e*S		S	15 35 16.6	+6.3
GO01	**Chusmiza**	**2.77**	**285**	Pg		**Pn**	**15 34 28.3**	**+0.7**
HJA	**Humahuaca**	**2.91**	**163**	*e*P		**Pn**	**15 34 31.3**	**+2.5**
HJA				*e*S		**S**	**15 35 08.9**	**-3.6**
PB01	**IPOC Station P**	**3.00**	**257**	*e*P		**Pn**	**15 34 30.3**	**+0.9**
PB01				*e*S		**S**	**15 35 11.9**	**-1.6**
PB01				IAML			15 35 12.7	
	comp=Z,235nm,0.2s							
PB01	**IPOC Station P**	**3.00**	**257**	Pg		**Pn**	**15 34 30.7**	**+1.3**
PB01				Sg		**S**	**15 35 11.6**	**-2.0**
PB01				IAML			15 35 13.2	
	comp=Z,107nm,0.4s							
PB09	**IPOC Station P**	**3.03**	**243**	*e*P		**Pn**	**15 34 31.7**	**+2.0**
PB09				*e*S		**S**	**15 35 12.2**	**-2.1**
PB09				IAML			15 35 15.6	
	comp=Z,45nm,0.2s							
PB09	**IPOC Station P**	**3.03**	**243**	Pg		**Pn**	**15 34 32.3**	**+2.6**
PB11	**IPOC Station P**	**3.17**	**281**	*e*P		**Pn**	**15 34 32.0**	**+0.8**
PB11				*e*S		**S**	**15 35 16.6**	**-0.2**
PB11				IAML			15 35 19.6	
	comp=Z,47nm,0.1s							
PB11	**IPOC Station P**	**3.17**	**281**	Pg		**Pn**	**15 34 31.8**	**+0.6**
PB11				Sg		**S**	**15 35 14.4**	**-2.5**
PB11				IAML			15 35 15.7	
	comp=Z,50nm,0.4s							
PB02	**IPOC Station P**	**3.44**	**254**	*e*P		**Pn**	**15 34 35.2**	**+1.4**
PB02				*e*S		**S**	**15 35 19.4**	**-2.3**
PB02	**IPOC Station P**	**3.44**	**254**	Pg		**Pn**	**15 34 35.6**	**+1

Mindanao

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.83**	**325**	P	**Pn**	**15 35 13.5**	**0.0**
	2μm,0.5s,baz=319,slow=0.4,SNR=8.4						
DAV	**Davao City (W)**	**1.83**	**325**		**Pn**	**15 35 12.9**	**-0.6**
DAV	**Davao City (W)**	**1.83**	**325**	P	**Pn**	**15 35 16.4**	**+2.9**
SGSI	**Sangihe**	**2.15**	**211**	P	**Pn**	**15 35 15.4**	**-2.6**
MNI	**Manado**	**4.45**	**204**	P	**Pn**	**15 35 50.8**	**+1.2**
TNTI	**Ternate**	**4.81**	**171**		**Pn**	**15 35 52.9**	**-1.6**
TNTI	**Ternate**	**4.81**	**171**	P	**Pn**	**15 35 53.4**	**-1.1**
GTOI	**Gorontalo**	**6.07**	**217**	P	**Pn**	**15 36 14.9**	**+3.1**
	1.5nm5μm362nm,0.9s						
MRSI	**Marisa**	**6.88**	**223**	P	**Pn**	**15 36 21.4**	**-1.5**
TOLI2	**Tolitoli**	**7.31**	**233**		**Pn**	**15 36 26.8**	**-2.1**
SANI	**Sanana**	**7.58**	**185**	P	**Pn**	**15 36 33.5**	**+1.0**
	0.7nm2μm135nm,1.0s						
LUWI	**Luwuk**	**7.60**	**211**		**Pn**	**15 36 30.6**	**-2.2**
LUWI	**Luwuk**	**7.60**	**211**	P	**Pn**	**15 36 34.5**	**+1.7**
SWI	**Sorong**	**7.88**	**144**	P	**Pn**	**15 36 35.7**	**-0.9**
	0.4nm152nm,0.9s						
SIJI	**Sorong**	**7.89**	**144**	P	**Pn**	**15 36 36.5**	**-0.2**
	2.4nm,0.3s,baz=52,slow=23,SNR=8.1						
	24nm,0.7s						
SIJI	**Sorong**	**7.89**	**144**	P	**Pn**	**15 36 34.8**	**-2.0**
	68nm,0.8s						
MYLDM	**Lahad Datu**	**8.10**	**268**		**Pn**	**15 36 40.0**	**+0.3**
MYLDM	**Lahad Datu**	**8.10**	**268**	P	**Pn**	**15 36 41.9**	**+2.3**
	207nm,1.1s						
APSI	**Ampana**	**8.12**	**218**	P	**Pn**	**15 36 42.8**	**+2.9**
MPSI	**Mapaga**	**8.48**	**233**	P	**Pn**	**15 36 44.9**	**0.0**
	92nm,1.0s						
NLAI	**Namlea**	**8.75**	**177**	P	**Pn**	**15 36 48.3**	**-0.2**
	192nm,0.7s						
KRAI	**Karang Ratu**	**8.99**	**169**	P	**Pn**	**15 36 51.8**	**-0.1**
	129nm,1.0s						
MSAI	**Masohi**	**9.14**	**165**	P	**Pn**	**15 36 56.7**	**+2.8**
	246nm,1.4s						
AAI	**Ambon**	**9.31**	**170**	P	**Pn**	**15 36 59.0**	**+2.7**
	144nm,0.9s						
PCI	**Palu**	**9.33**	**227**	P	**Pn**	**15 36 58.5**	**+1.9**
	123nm,1.1s						
MWPI	**Manokwari, Pap**	**9.82**	**131**	P	**Pn**	**15 37 03.3**	**+0.1**
	183nm,0.9s						
FAKI	**Fak Fak**	**10.12**	**146**		**Pn**	**15 37 06.4**	**-0.9**
TGY	**Tagaytay City**	**10.17**	**327**	P	**Pn**	**15 37 05.6**	**-2.5**
	68nm,0.3s,baz=200,slow=6.4,SNR=2.4						
KKM	**Kota Kinabalu**	**10.37**	**273**		**Pn**	**15 37 10.2**	**-0.6**
KKM	**Kota Kinabalu**	**10.37**	**273**	P	**Pn**	**15 37 13.3**	**+2.5**
	154nm,1.3s						
KKSI	**Kolaka, Sulawe**	**10.86**	**207**	P	**Pn**	**15 37 21.1**	**+3.6**
	69nm,0.8s						
TTSI	**Tana Toraja**	**10.92**	**219**	P	**Pn**	**15 37 19.5**	**+1.3**
	3μm137nm,1.1s						
MMSI	**Mamuju**	**11.24**	**223**	P	**Pn**	**15 37 25.3**	**+2.6**
	130nm,1.4s						
BAKI	**Biak**	**11.60**	**125**	P	**Pn**	**15 37 30.3**	**+2.7**
	4μm226nm,1.1s						
SPSI	**Sidrap Palu**	**11.67**	**216**	P	**Pn**	**15 37 30.4**	**+1.8**
	2μm55nm,0.8s						
PMSI	**Majene**	**11.84**	**221**	P	**Pn**	**15 37 33.4**	**+2.5**
	225nm,1.6s						
SRPI	**Serui, Papua**	**12.11**	**127**	P	**Pn**	**15 37 35.6**	**+1.0**
KAPI	**Kappang**	**12.54**	**213**	P	**Pn**	**15 37 38.5**	**-1.9**
	9.9nm,0.8s,baz=1.7,slow=13,SNR=4.0						
KAPI	**Kappang**	**12.54**	**213**	P	**Pn**	**15 37 40.6**	**+0.1**
MKS	**Makassar**	**12.87**	**214**	P	**Pn**	**15 37 46.4**	**+1.5**
	3μm115nm,1.3s						
SBUM	**Sibu**	**14.69**	**258**		**Pn**	**15 38 09.7**	**0.0**
SBUM	**Sibu**	**14.69**	**258**	P	**Pn**	**15 38 11.8**	**+2.1**
BBKI	**Banjar Baru**	**14.79**	**233**	P	**P**	**15 38 13.5**	**-2.5**
	216nm,1.2s						
EDFI	**Ende, Flores**	**15.04**	**199**	P	**Pn**	**15 38 16.1**	**+1.8**
SOEI	**Soe**	**15.39**	**189**	P	**Pn**	**15 38 20.2**	**+1.3**
	206nm,1.1s						
GENI	**Genyem**	**15.76**	**121**	P	**Pn**	**15 38 24.5**	**+0.9**
	3μm163nm,1.4s						
BATI	**Baumata**	**15.93**	**191**	P	**Pn**	**15 38 25.5**	**-0.3**
	9.0nm,0.3s,baz=94,slow=1.8,SNR=6.0						
	21nm,0.6s						
BATI	**Baumata**	**15.93**	**191**	P	**P**	**15 38 28.4**	**-0.3**
DBNI	**Kabupaten Domp**	**16.24**	**211**	P	**P**	**15 38 32.2**	**+0.1**
PLAI	**Plampang**	**16.79**	**212**	P	**P**	**15 38 40.0**	**+1.8**
	8μm217nm,0.9s						
TWSI	**Taliwang, Sumb**	**17.20**	**214**	P	**P**	**15 38 45.1**	**+2.3**
	2μm177nm,1.1s						
KHKI	**Kahang-Kahang**	**17.66**	**219**	P	**P**	**15 38 50.9**	**+3.1**
	86nm,1.0s						
YULB	**Yu-li**	**18.46**	**344**	P	**P**	**15 38 52.8**	**-3.9**
TPUB	**Ta-pu**	**18.57**	**342**		**P**	**15 38 56.5**	**-1.3**
JAGI	**Jajag, Banyuwa**	**18.68**	**222**	P	**Pn**	**15 39 01.5**	**+1.7**
	105nm,0.9s						
MTN	**Manton Dam**	**18.82**	**166**	P	**Pn**	**15 39 02.3**	**+0.9**
	comp=Z,58nm,1.0s,comp=Z,0.0nm						
MTN	**Manton Dam**	**18.82**	**166**		**P**	**15 38 56.0**	**-4.6**
SSLB	**Suanglung**	**18.93**	**344**		**Pn**	**15 39 03.6**	**+0.8**
KDU	**Kakadu**	**19.03**	**162**	P	**Pn**	**15 39 05.3**	**+1.3**
	comp=Z,37nm,1.6s						
QZH2	**Quanzhou**	**20.76**	**339**	P	Pn	15 39 28.1	+3.6
QZH2				pmax	pmax		
	comp=Z,120nm,1.2s						
QZH2				LR	LR		
	comp=Z,2μm,14.6s						
QIZ	**Qiongzhong**	**21.14**	**311**	P	**P**	**15 39 27.4**	**+1.6**
QIZ				pP	**pwP**	**15 39 38.0**	**-0.5**
QIZ				S	**S**	**15 43 21.5**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,31nm,1.1s						
QIZ				LR	LR		
	comp=Z,640nm,15.1s						
QIZ				LR	LR		
	comp=Z,780nm,15.9s						
QIZ				LR	LR		
	comp=Z,1μm,16.6s						
KNRA	**Kununurra**	**21.20**	**174**	P	**P**	**15 39 28.1**	**+1.7**
	comp=Z,139nm,0.9s						
KNRA	**Kununurra**	**21.20**	**174**		**P**	**15 39 26.3**	**-0.1**
LEM	**Lembang**	**22.61**	**237**	P	**P**	**15 39 40.6**	**-1.2**
	comp=Z,20nm,0.6s,baz=352,slow=13,SNR=6.6						
	comp=Z,20nm,0.6s						
BBJI	**Bungbulang**	**22.93**	**236**		**P**	**15 39 42.0**	**-3.0**
FITZ	**Fitzroy Crossi**	**23.52**	**182**	P	**P**	**15 39 49.8**	**-0.9**
	comp=Z,26nm,0.8s,baz=15,slow=7.7,SNR=8.3						
	comp=Z,26nm,0.8s						
PMG	**Port Moresby**	**25.29**	**126**	LR	LR	15 50 44.9	
	comp=Z,715nm,18.6s,baz=306,slow=38						
COEN	**Coen**	**25.41**	**140**	P	P	15 40 16.5	+8.4
	comp=Z,24nm,1.5s						
COEN	**Coen**	**25.41**	**140**	P	**P**	**15 40 06.9**	**-1.1**
COEN				IAmb	IAmb	15 40 36.4	
	comp=Z,50nm,1.4s						
IPM	**Ipoh**	**25.52**	**269**		**P**	**15 40 08.9**	**-0.3**
IPM				IAmb	IAmb	15 40 27.5	
	comp=Z,69nm,1.0s						
KULM	**Kulim**	**25.86**	**271**	P	**P**	**15 40 11.4**	**-0.8**
JCJ	**Chichijima**	**26.05**	**33**	P	**P**	**15 40 13.5**	**-0.3**
	comp=Z,120nm,0.4s,baz=302,slow=13,SNR=16						
JCJ	**Chichijima**	**26.05**	**33**		**P**	**15 40 13.7**	**0.0**
WB0	**Warramunga Arr**	**26.30**	**163**		**P**	**15 40 14.8**	**-1.3**
WRAB	**Tennant Creek**	**26.44**	**163**	*i* P	**P**	**15 40 18.6**	**+1.2**
WRAB				pmax	pmax		
	comp=Z,47nm,0.6s						
WRA	**Warramunga Arr**	**26.45**	**164**	P	**P**	**15 40 16.2**	**-1.2**
	comp=Z,11nm,0.5s,baz=344,slow=10.0,SNR=13						
WRA				ScP	**ScP**	**15 47 16.7**	**-1.7**
	comp=Z,4.1nm,1.0s,baz=338,slow=3.2,SNR=3.9						
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**26.45**	**164**	P	**P**	**15 40 15.3**	**-2.1**
NJ2	**Nanjing**	**27.35**	**346**	*e*P	**P**	**15 40 27.5**	**+2.2**
NJ2				pP	**pP**	**15 40 34.0**	**-2.8**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MBWA	**Marble Bar**	**27.39**	**194**	P	**P**	**15 40 30.1**	**+4.2**
	comp=Z,70nm,1.5s						
MBWA	**Marble Bar**	**27.39**	**194**		**P**	**15 40 25.8**	**-0.1**
MBWA				IAmb	IAmb	15 40 47.5	
	comp=Z,43nm,0.8s						
WHN	**Wuhan**	**27.41**	**337**	P	**P**	**15 40 29.9**	**+3.9**
WHN				pmax	pmax		
	comp=Z,110nm,1.1s						
JNU	**Nakatsue**	**27.71**	**8**	P	**P**	**15 40 26.8**	**-1.9**
	comp=Z,6.5nm,0.7s,baz=172,slow=11,SNR=1.6						
	comp=Z,6.5nm,0.7s						
PSAC1	**Pilbara Seismi**	**27.74**	**194**	P	**P**	**15 40 27.4**	**-1.5**
	comp=Z,72nm,1.1s						
PSAC2	**Pilbara Seismi**	**27.74**	**194**	P	**P**	**15 40 31.2**	**+2.1**
	comp=Z,83nm,1.0s						
PSA00	**Pilbara Seismi**	**27.77**	**194**	P	**P**	**15 40 31.1**	**+1.9**
	comp=Z,70nm,1.1s						
PSA00	**Pilbara Seismi**	**27.77**	**194**	P	**P**	**15 40 27.0**	**-2.2**
PSA00				IAmb	IAmb	15 40 48.7	
	comp=Z,55nm,0.9s						
PSA00	**Pilbara Seismi**	**27.77**	**194**		**P**	**15 40 27.5**	**-1.7**
PSA00				IAmb	IAmb	15 40 50.9	
	comp=Z,54nm,1.1s						
PSAB3	**Pilbara Seismi**	**27.78**	**194**	P	**P**	**15 40 27.8**	**-1.5**
	comp=Z,60nm,0.9s						
QIS	**Mount Isa**	**28.91**	**154**	P	**P**	**15 40 40.6**	**+1.1**
	comp=Z,56nm,1.1s,comp=Z,0.0nm						
MTSU	**Mount Surprise**	**29.31**	**144**	P	P	15 40 48.4	+5.4
	comp=Z,10nm,0.9s						
ENH	**Enshi**	**29.41**	**329**		**P**	**15 40 43.4**	**-0.5**
ENH				IAmb	IAmb	15 41 33.3	
	comp=Z,32nm,0.9s						
CM31	**Chiang Mai Arr**	**29.90**	**298**	P	**P**	**15 40 47.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**29.90**	**298**	P	**P**	**15 40 47.7**	**-0.6**
	comp=Z,5.5nm,0.6s,baz=109,slow=7.2,SNR=31						
CMAR				PcP	**PcP**	**15 43 49.1**	**-1.4**
	comp=Z,3.1nm,0.8s,baz=147,slow=1.3,SNR=6.2						
CMAR				ScP	**ScP**	**15 47 28.9**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=68,slow=1.1,SNR=4.9						
	comp=Z,5.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**29.90**	**298**	P	**P**	**15 40 48.2**	**0.0**
ASAR	**Alice Springs**	**29.90**	**167**	P	**P**	**15 40 48.4**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=17,slow=9.0,SNR=8.3						
ASAR				PcP	**PcP**	**15 43 50.5**	**0.0**
	comp=Z,3.0nm,0.6s,baz=354,slow=2.0,SNR=5.0						
ASAR				ScP	**ScP**	**15 47 28.4**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=359,slow=3.7,SNR=5.4						
	comp=Z,3.9nm,0.9s						
ASAR	**Alice Springs**	**29.90**	**167**		**P**	**15 40 47.2**	**-1.0**
CHTO	**Chiang Mai**	**30.03**	**298**		**P**	**15 40 49.2**	**-0.3**
CHTO	**Chiang Mai**	**30.03**	**298**	P	**P**	**15 40 49.2**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,17nm,1.0s						
KMI2	**Kunming**	**30.06**	**313**	P	**P**	**15 40 52.8**	**+3.0**
KMI2				pmax	pmax		
	comp=Z,17nm,1.3s						
KMI2				LR	LR		
	comp=Z,1μm,17.0s						
KMI2				LR	LR		
	comp=Z,810nm,17.7s						
KMI2				LR	LR		
	comp=Z,2μm,18.7s						
WRKA	**Warakurna**	**30.45**	**177**	P	**P**	**15 40 57.2**	**+4.1**
	comp=Z,19nm,1.0s						
GIRL	**Giralia**	**30.53**	**203**	P	**P**	**15 40 52.8**	**-1.0**
GIRL				IAmb	IAmb	15 41 23.0	
	comp=Z,54nm,1.1s						
PATS	**Pohnpei**	**31.53**	**86**	P	**P**	**15 41 05.3**	**+2.6**
	comp=Z,112nm,1.5s						
PZH	**PanZhiHua**	**31.59**	**314**	P	**P**	**15 41 02.8**	**-0.4**
PZH				pP	**sP**	**15 41 20.0**	**+0.1**
PZH				S	**S**	**15 46 09.3**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,200nm,7.5s						
PZH				LR	LR		
	comp=Z,510nm,17.5s						
PZH				LR	LR		
	comp=Z,850nm,17.5s						
PZH				LR	LR		
	comp=Z,1μm,17.7s						
LYN	**LuoYang**	**31.69**	**337**	P	**P**	**15 41 05.8**	**+1.9**
LYN				pP	pP	15 41 16.4	+1.0
LYN				pmax	pmax		
	comp=Z,21nm,2.8s						
LYN				LR	LR		
	comp=Z,1μm,23.7s						
LYN				LR	LR		
	comp=Z,1μm,20.3s						
LYN				LR	LR		
	comp=Z,2μm,18.9s						
TIA	**Tai'an**	**31.73**	**345**	P	**P**	**15 41 04.6**	**+0.4**
TIA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KSRS	**Korea Array**	**31.77**	**2**	P	**P**	**15 41 03.5**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=186,slow=9.7,SNR=8.1						
	comp=Z,0.7nm,0.6s						
MJAR	**Matsushiro Arr**	**32.62**	**17**	P	**P**	**15 41 09.9**	**-2.1**
	comp=Z,1.2nm,0.6s,baz=187,slow=8.8,SNR=6.5						
	comp=Z,1.2nm,0.6s						
XAN	**Xi'an**	**32.76**	**332**	P	**P**	**15 41 13.1**	**-0.2**
XAN				pP	pP	15 41 23.4	-1.4
XAN				S	**S**	**15 46 26.8**	**-0.3**
XAN				pmax	pmax		
	comp=Z,40nm,1.1s						
XAN				pmax	pmax		
	comp=Z,440nm,5.2s						
XAN				LR	LR		
	comp=Z,2μm,17.9s						
XAN				LR	LR		
	comp=Z,1μm,15.8s						
XAN				LR	LR		
	comp=Z,3μm,19.7s						
MEEK	**Meekatharra**	**32.93**	**193**	P	**P**	**15 41 13.1**	**-1.7**
	comp=Z,48nm,0.9s						
TNCH	**TengChong**	**33.18**	**309**	⇑P	**P**	**15 41 16.8**	**-0.5**
TNCH				pP	pwP	15 41 31.8	+0.5
TNCH				sP	sP	15 41 37.4	+3.4
TNCH				S	**S**	**15 46 36.3**	**+2.1**
TNCH				SS	**SnSn**	**15 48 34.5**	**-2.2**
TNCH				pmax	pmax		
	comp=Z,14nm,2.8s						
TNCH				pmax	pmax		
	comp=Z,170nm,4.1s						
TNCH				LR	LR		
	comp=Z,500nm,18.3s						
TNCH				LR	LR		
	comp=Z,800nm,19.0s						
TNCH				LR	LR		
	comp=Z,2μm,21.0s						
DL2	**Dalian**	**33.51**	**353**	P	**P**	**15 41 22.1**	**+2.4**
DL2				S	**S**	**15 46 42.3**	**+3.8**
DL2				pmax	pmax		
	comp=Z,41nm,1.7s						
DL2				pmax	pmax		
	comp=Z,350nm,4.9s						
DL2				LR	LR		
	comp=Z,1μm,17.7s						
DL2				LR	LR		
	comp=Z,1μm,17.1s						
DL2				LR	LR		
	comp=Z,2μm,17.3s						
HNS	**HongShan**	**33.51**	**343**	⇓P	**P**	**15 41 21.1**	**+1.3**
HNS				S	**S**	**15 46 42.4**	**+3.8**
HNS				pmax	pmax		
	comp=Z,47nm,0.9s						
HNS				LR	LR		
	comp=Z,790nm,15.9s						
HNS				LR	LR		
	comp=Z,1μm,19.9s						
HNS				LR	LR		
	comp=Z,1μm,16.7s						
BJI2	**Beijing**	**35.58**	**346**	P	**P**	**15 41 38.3**	**+0.7**
BJI2				pP	**sP**	**15 41 54.5**	**0.0**
BJI2				S	**S**	**15 47 13.9**	**+3.5**
BJI2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI2				LR	LR		
	comp=Z,340nm,17.7s						
BJI2				LR	LR		
	comp=Z,250nm,12.6s						
BJI2				LR	LR		
	comp=Z,500nm,18.5s						
BJT	**Baijiatuau**	**35.58**	**346**		**P**	**15 41 37.9**	**+0.3**
BJT	**Baijiatuau**	**35.58**	**346**	P	**P**	**15 41 37.9**	**+0.3**
BJT				pmax	pmax		
	comp=Z,50nm,0.9s						
INKA	**Innaminka**	**35.80**	**158**	P	**P**	**15 41 39.1**	**-0.5**
MORW	**Morawa**	**35.90**	**196**	P	**P**	**15 41 42.3**	**+1.9**
	comp=Z,27nm,1.2s						
MORW	**Morawa**	**35.90**	**196**	IAmb	IAmb	15 41 49.9	
	comp=Z,20nm,0.9s						
FORT	**Forrest**	**36.15**	**178**	P	**P**	**15 41 45.5**	**+2.8**
	comp=Z,18nm,0.8s						
FORT	**Forrest**	**36.15**	**178**	P	**P**	**15 41 43.4**	**+0.8**
QLP	**Quilpie**	**36.22**	**153**	P	**P**	**15 41 47.6**	**+4.3**
	comp=Z,41nm,1.4s						
LKP	**Lekhapani**	**36.42**	**310**	*e*P	**P**	**15 41 46.8**	**+1.8**
LKP				IAmb	IAmb	15 41 47.1	
	comp=Z,16nm,0.3s						
LKP				*e*S	**S**	**15 47 29.0**	**+5.3**
SAIH	**SAIHA**	**36.58**	**301**	*e*P	**P**	**15 41 47.7**	**+1.1**
SAIH				IAmb	IAmb	15 41 48.0	
	comp=Z,13nm,0.5s						
SAIH				*e*S	**S**	**15 47 29.0**	**+2.5**
IMP	**Imphal**	**36.73**	**305**	*e*P	**P**	**15 41 49.8**	**+1.9**
IMP				IAmb	IAmb	15 41 53.2	
	comp=Z,10nm,0.8s						
IMP				*e*S	**S**	**15 47 33.1**	**+4.5**
LZDM	**Lanzhou Array**	**36.87**	**328**	P	**P**	**15 41 48.5**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=153,slow=10.0,SNR=6.0						
LZDM				PcP	**PcP**	**15 44 09.0**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=188,slow=4.4,SNR=1.6						
	comp=Z,1.9nm,0.4s						
LZH	**Lanzhou**	**36.89**	**329**	*e*P	**P**	**15 41 50.1**	**+1.0**
LZH				pP	pP	15 42 03.0	+2.1
LZH				SS	SS	15 49 56.6	-17
LZH				pmax	pmax		
	comp=Z,56nm,1.7s						
LZH				LR	LR		
	comp=Z,2μm,17.6s						
LZH				LR	LR		
	comp=Z,2μm,16.8s						
LZH				LR	LR		
	comp=Z,3μm,18.1s						
KMBL	**Kambalda**	**36.99**	**187**	P	**P**	**15 41 52.8**	**+3.0**
	comp=Z,19nm,0.9s						
KOHI	**KOHIMA**	**37.00**	**306**	*e*P	**P**	**15 41 52.9**	**+2.8**
KOHI				IAmb	IAmb	15 42 02.1	
	comp=Z,46nm,1.2s						
KOHI				*e*S	**S**	**15 47 39.3**	**+6.4**
BLDU	**Ballidu**	**37.20**	**194**	P	**P**	**15 41 50.8**	**-0.7**
	comp=Z,35nm,1.1s						
HHC	**Hu-ho-hao-te**	**37.65**	**341**	*e*P	**P**	**15 41 57.9**	**+2.5**
HHC				pP	sP	15 42 13.8	+1.5
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,290nm,4.9s						
KLBR	**Kellerberrin**	**37.90**	**192**	P	**P**	**15 41 58.3**	**+0.9**
	comp=Z,69nm,0.9s						
ZIRO	**ZIRO**	**38.05**	**309**	*e*P	**P**	**15 41 59.2**	**+0.1**
ZIRO				IAmb	IAmb	15 42 13.3	
	comp=Z,74nm,1.3s						
ZIRO				*e*S	**S**	**15 47 53.5**	**+4.7**
CN2	**Changchun**	**38.11**	**359**	P	P	15 42 04.8	+5.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,600nm,12.0s						
CN2				LR	LR		
	comp=Z,400nm,12.0s						
CN2				LR	LR		
	comp=Z,800nm,18.0s						
BTO2	**Baotou**	**38.12**	**339**	*e*P	**P**	**15 42 01.5**	**+2.1**
BTO2				pP	**pwP**	**15 42 13.6**	**+0.1**
BTO2				sP	**sP**	**15 42 19.1**	**+2.8**
BTO2				S	**S**	**15 47 54.4**	**+5.0**
BTO2				sS	**sS**	**15 48 11.9**	**+2.8**
BTO2				pmax	pmax		
	comp=Z,16nm,1.6s						
BTO2				pmax	pmax		
	comp=Z,680nm,7.4s						
BTO2				LR	LR		
	comp=Z,2μm,16.4s						
BTO2				LR	LR		
	comp=Z,2μm,18.2s						
BTO2				LR	LR		
	comp=Z,3μm,18.2s						
MUN	**Mundaring**	**38.62**	**194**	P	**P**	**15 42 04.8**	**+1.3**
	comp=Z,23nm,0.6s						
SHL	**Shillong**	**38.74**	**305**	IAmb	IAmb	15 42 18.2	
	comp=Z,50nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.78**	**6**	P	**P**	**15 42 03.9**	**-0.8**
	comp=Z,4.8nm,0.6s,baz=187,slow=6.9,SNR=7.5						
	comp=Z,4.8nm,0.6s						
EIDS	**Eidsvold**	**38.86**	**143**	P	**P**	**15 42 06.9**	**+1.3**
	comp=Z,27nm,1.7s						
MDJ	**Mudanjiang**	**38.99**	**3**		**P**	**15 42 05.8**	**-0.7**
MDJ				IAmb	IAmb	15 42 21.6	
	comp=Z,40nm,1.1s						
MDJ	**Mudanjiang**	**38.99**	**3**	P	**P**	**15 42 07.8**	**+1.3**
MDJ				pP	pwP	15 42 20.8	-0.5
MDJ				S	**S**	**15 48 02.8**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,15nm,1.2s						
MDJ				LR	LR		
	comp=Z,690nm,10.5s						
MDJ				LR	LR		
	comp=Z,570nm,10.3s						
MDJ				LR	LR		
	comp=Z,900nm,19.0s						
BBOO	**Buckleboo**	**39.19**	**167**	P	**P**	**15 42 09.7**	**+1.4**
	comp=Z,33nm,1.2s						
BBOO	**Buckleboo**	**39.19**	**167**		**P**	**15 42 07.8**	**-0.5**
BBOO				IAmb	IAmb	15 42 22.6	
	comp=Z,44nm,1.2s						
NWAO	**Narrogin (SRO)**	**39.30**	**193**	P	**P**	**15 42 11.6**	**+2.4**
	comp=Z,42nm,1.0s						
NWAO	**Narrogin (SRO)**	**39.30**	**193**	P	**P**	**15 42 09.2**	**+0.1**
NWAO				IAmb	IAmb	15 42 35.4	
	comp=Z,46nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.30**	**193**	P	**P**	**15 42 09.3**	**+0.1**
NWAO				pmax	pmax		
	comp=Z,46nm,1.1s						
XLT	**XiLinHaoTe**	**39.30**	**348**	*e*P	**P**	**15 42 09.8**	**+0.6**
XLT				pP	pwP	15 42 22.3	-0.8
XLT				pmax	pmax		
	comp=Z,15nm,1.0s						
XLT				LR	LR		
	comp=Z,59nm,16.1s						
XLT				LR	LR		
	comp=Z,530nm,17.5s						
XLT				LR	LR		
	comp=Z,1μm,17.9s						
STKA	**Stephens Creek**	**39.87**	**160**	P	**P**	**15 42 13.8**	**-0.2**
	comp=Z,177nm,1.3s						
STKA	**Stephens Creek**	**39.87**	**160**	P	**P**	**15 42 13.0**	**-0.9**
	comp=Z,35nm,0.9s,baz=337,slow=9.6,SNR=16						
STKA				PcP	**PcP**	**15 44 17.2**	**-2.0**
	comp=Z,10.0nm,0.8s,baz=350,slow=11,SNR=2.0						
	comp=Z,35nm,0.9s						
STKA	**Stephens Creek**	**39.87**	**160**		**P**	**15 42 11.6**	**-2.3**
BNX	**BinXian**	**40.03**	**1**	⇓P	P	15 42 21.4	+6.3
BNX				pmax	pmax		
	comp=Z,13nm,1.2s						
ASAJ	**Asahikawa**	**40.89**	**18**	P	**P**	**15 42 22.1**	**-0.1**
	comp=Z,8.0nm,1.1s,baz=207,slow=14,SNR=9.7						
	comp=Z,8.0nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**41.13**	**68**	T	T	16 26 16.3	
	baz=257,slow=75,SNR=17						
CMSA	**Cobar Meteorol**	**41.13**	**155**	P	**P**	**15 42 26.8**	**+2.5**
	comp=Z,20nm,0.9s						
H11S1	**WAKE ISLAND Hy

GOMU LR LR
comp=Z,1µm,19.4s
GOMU LR LR
comp=Z,3µm,19.5s
ARMA Armidale 43.05 148 P 15 42 39.6 -0.6
ARMA IAmb IAmb 15 42 55.0
comp=Z,36nm,1.0s
YSS Yuzhno-Sakhali 43.53 16 *eP* **P 15 42 43.1 -0.5**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,800nm,18.0s
KLR Kul'dur 43.74 5 P **P 15 42 44.2 -1.1**
comp=Z,4.1nm,0.7s,baz=220,slow=4.5,SNR=11
comp=Z,4.1nm,0.7s
HILR Hailar Array B 44.23 354 P **P 15 42 48.4 -1.0**
comp=Z,1.4nm,0.5s,baz=169,slow=11,SNR=7.4
HILR PcP **PP 15 44 31.7 -1.5**
comp=Z,7.1nm,0.8s,baz=145,slow=4.7,SNR=3.6
comp=Z,1.4nm,0.5s
ARPS Mount Arapiles 44.45 162 P **P 15 42 53.1 +1.9**
comp=Z,34nm,1.2s
HEH HeiHe 44.55 1 *eP* **P 15 42 53.6 +1.8**
HEH LR LR
comp=Z,970nm,18.6s
HEH LR LR
comp=Z,480nm,18.6s
HEH LR LR
comp=Z,1µm,17.4s
ULN Ulaanbaatar 45.36 342 P 15 42 58.9 +0.3
ULN IAmb IAmb 15 43 11.8
comp=Z,31nm,0.9s
ULN Ulaanbaatar 45.36 342 *i* P **P 15 42 59.1 +0.6**
ULN pmax pmax
comp=Z,41nm,1.0s
SONM Songino Array 45.55 341 P **P 15 43 00.9 +0.9**
comp=Z,4.0nm,0.9s,baz=157,slow=5.3,SNR=10
comp=Z,4.0nm,0.9s
SONM Songino Array 45.55 341 P 15 43 00.8 +0.9
CAN Canberra 45.79 154 P **P 15 43 05.7 +3.7**
comp=Z,27nm,2.3s
GRNR Gornyy 45.80 9 *eP* **P 15 43 01.5 -0.3**
GRNR MLR MLR
comp=E,240nm,13.0s
GRNR MLR MLR
comp=N,350nm,14.0s
GRNR MLR MLR
comp=Z,390nm,13.0s
CIT Chita 47.57 349 *eP* P 15 43 09.4 -6.2
CIT *e* 15 43 27.0
CIT *e* 15 44 39.6
CIT *e* 15 50 12.0
CIT pmax pmax
comp=Z,77nm,3.1s
DZM Mont Dzumac 47.68 127 *e*LR LR 15 56 56.4
comp=Z,1µm,28.3s
ZEA Zeya 48.04 0 *eP* **P 15 43 19.0 -0.2**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
HYB Hyderabad 48.42 288 *eP* **P 15 43 23.2 +0.4**
HYB *e*pP **pP 15 43 30.7 -4.1**
HYB *e*S **S 15 50 22.9 +2.2**
ZAK Zakamensk 48.78 340 *eP* **P 15 43 29.3 +4.2**
ZAK pmax pmax
comp=Z,15nm,1.6s
TLY Talaya 49.78 341 *i* P **P 15 43 33.6 +1.0**
TLY pmax pmax
comp=Z,40nm,1.0s
IRK Irkutsk 50.07 342 *eP* **P 15 43 35.3 +0.6**
IRK pmax pmax
comp=Z,82nm,1.8s
MOY Mondy 50.64 340 *eP* **P 15 43 41.2 +2.0**
MOY pmax pmax
comp=Z,68nm,1.8s
KNGR Kungurtug, Tuv 51.08 337 *i* P **P 15 43 43.2 +0.7**
KNGR pmax pmax
comp=Z,38nm,1.3s
WMQ Urumqi 51.18 324 *eP* **P 15 43 46.4 +3.0**
WMQ pmax pmax
comp=Z,26nm,1.1s
WMQ LR LR
comp=Z,1µm,18.1s
WMQ LR LR
comp=Z,2µm,20.9s
WMQ LR LR
comp=Z,2µm,20.9s
PETK Petropavlovsk- 53.80 23 P **P 15 44 02.5 0.0**
comp=Z,3.2nm,0.8s,baz=185,slow=3.8,SNR=16
comp=Z,3.2nm,0.8s
PETK Petropavlovsk- 53.80 23 P P 15 44 00.0 -2.4
PET Petropavlovsk 54.10 23 *eP* **P 15 44 06.3 +1.6**
PET *e*S **S 15 51 36.1 -1.8**
PET pmax pmax
comp=Z,43nm,1.3s
PET MLR MLR
comp=Z,700nm,15.0s
PET MLR MLR
comp=Z,500nm,15.0s
ZSN Zaisan 54.93 326 *eP* **P 15 44 10.6 -0.3**
ZSN Zaisan 54.93 326 *eP* **P 15 44 10.6 -0.3**
DGZ Jazzator, Alta 54.97 330 *i* P **P 15 44 11.0 -0.3**
DGZ pmax pmax
comp=Z,42nm,1.8s
WUS Wushi 55.15 317 IAmb IAmb 15 44 26.4
comp=Z,56nm,1.5s
SHLS Shalkode 55.89 320 *eP* **P 15 44 15.4 -2.6**
SHLS pmax pmax
comp=Z,12nm,0.8s
SHLS Shalkode 55.89 320 *eP* **P 15 44 15.5 -2.6**
comp=Z,12nm,0.8s
MK31 Makanchi Array 56.01 325 P **P 15 44 17.9 -0.8**
MKAR Makanchi Array 56.01 325 P **P 15 44 17.8 -0.8**
comp=Z,13nm,0.7s,baz=120,slow=7.3,SNR=33
MKAR PcP **PcP 15 45 15.8 -0.8**
comp=Z,8.8nm,0.7s,baz=117,slow=4.6,SNR=3.5
MKAR PKP2bc **P'P'bc 16 14 34.6 +2.3**
comp=Z,1.0nm,1.0s,baz=347,slow=2.6,SNR=4.7
comp=Z,13nm,0.7s
MKAR Makanchi Array 56.01 325 P **P 15 44 17.9 -0.8**
MKAR PcP **PcP 15 45 16.9 +0.4**
UZB Uzynbulak 56.17 319 *eP* **P 15 44 19.5 -0.5**
UZB pmax pmax
comp=Z,11nm,0.7s
UZB Uzynbulak 56.17 319 *eP* **P 15 44 19.6 -0.5**
comp=Z,12nm,0.7s
MAKZ Makanchi 56.20 324 P 15 44 19.7 -0.3
MAKZ IAmb IAmb 15 44 39.6
comp=Z,25nm,0.9s
MAKZ Makanchi 56.20 324 P **P 15 44 19.7 -0.3**
MAKZ pmax pmax
comp=Z,25nm,0.9s
PRZ Przheval'sk 56.27 318 P 15 44 21.2 +0.4
PRZ Przheval'sk 56.27 318 P **P 15 44 21.2 +0.4**
PRZ pmax pmax
comp=Z,37nm,0.9s
YAK Yakutsk 56.40 2 P **P 15 44 19.9 -1.1**
comp=Z,21nm,0.8s,baz=164,slow=13,SNR=6.7
comp=Z,21nm,0.8s
YAK Yakutsk 56.40 2 P P 15 44 20.7 -0.4
YAK Yakutsk 56.40 2 *eP* **P 15 44 20.0 -1.1**
YAK *e**PP **pP 15 44 29.8 -3.5**
YAK *e* 15 45 11.8
YAK *e* 15 46 24.7
YAK *e*S S 15 52 18.5 +10
YAK *e**SS **sS 15 52 32.9 +5.0**
YAK pmax pmax
comp=Z,25nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=Z,103nm,3.5s
YAK pmax pmax
comp=E,35nm,2.0s
YAK pmax pmax
comp=N,18nm,1.4s
YAK smax smax
comp=N,152nm,5.2s
YAK smax smax
comp=E,138nm,4.8s
YAK MLR MLR
comp=E,218nm,18.0s
SATY Saty 56.53 319 *eP* **P 15 44 21.9 -0.6**
SATY pmax pmax
comp=Z,10.0nm,0.7s
SATY Saty 56.53 319 *eP* **P 15 44 22.0 -0.6**
comp=Z,10.0nm,0.7s
KPKS Kokpek 56.54 320 *eP* **P 15 44 22.1 -0.4**
KPKS Kokpek 56.54 320 *eP* **P 15 44 22.1 -0.4**
NIL Nilore 56.74 307 P 15 44 23.1 -1.0
NIL Nilore 56.74 307 P **P 15 44 23.1 -1.0**
NIL pmax pmax
comp=Z,82nm,1.0s
KSH2 Kashi 56.84 314 P **P 15 44 24.3 -0.6**
KSH2 pP pP 15 44 35.6 -1.5
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
KSH2 pmax pmax
comp=Z,270nm,4.9s
KSH2 LR LR
comp=Z,820nm,19.2s
KSH2 LR LR
comp=Z,1µm,18.9s
KSH2 LR LR
comp=Z,1µm,13.1s
MA2 Magadan 56.97 14 P **P 15 44 24.2 -1.0**
comp=Z,1.6nm,0.5s,baz=162,slow=4.3,SNR=4.3
comp=Z,1.6nm,0.5s
MA2 Magadan 56.97 14 P P 15 44 24.2 -1.0
MA2 Magadan 56.97 14 *i* P **P 15 44 24.9 -0.3**
MA2 pmax pmax
comp=Z,5.0nm,0.9s
MA2 Magadan 56.97 14 P **P 15 44 24.8 -0.4**
comp=Z,10nm,0.7s
ARXS Arharly 57.43 320 *eP* **P 15 44 27.4 -1.5**
TDK Taldyqorghan 57.43 321 *eP* **P 15 44 28.5 -0.2**
TDK pmax pmax
comp=Z,16nm,0.6s
TDK Taldyqorghan 57.43 321 *eP* **P 15 44 28.6 -0.2**
comp=Z,16nm,0.6s
NRN Naryn 57.44 316 P 15 44 28.9 -0.4
NRN IAmb IAmb 15 44 40.2
comp=Z,12nm,0.6s
NRN Naryn 57.44 316 P **P 15 44 28.9 -0.4**
NRN pmax pmax
comp=Z,12nm,0.6s
MDOK Medeo 57.47 319 *eP* **P 15 44 28.7 -0.5**
MDOK Medeo 57.47 319 *eP* **P 15 44 28.7 -0.5**
TNSS Tian-Shan 57.48 318 *eP* **P 15 44 28.9 -0.7**
TNSS Tian-Shan 57.48 318 *eP* **P 15 44 28.9 -0.7**
AAA Alma-Ata 57.57 319 *eP* **P 15 44 29.5 -0.3**
AAA pmax pmax
comp=Z,9.0nm,0.6s
AAA Alma-Ata 57.57 319 *eP* **P 15 44 29.6 -0.3**
comp=Z,9.2nm,0.6s
ULHL Ulahol 57.61 317 P **P 15 44 31.1 +0.8**
SNR=6.5
BOOM Boomskoye usch 57.91 318 IAmb IAmb 15 45 27.0
comp=Z,30nm,1.5s
TKM2 Tokmak 2 58.32 318 P **P 15 44 34.6 -0.7**
SNR=12
UCH Uchtor 58.77 317 P **P 15 44 40.0 +1.2**
SNR=9.3
ZAA0 Zalesovo Array 58.93 333 IAmb IAmb 15 45 00.8
comp=Z,32nm,1.1s
ZALV Zalesovo Beam 58.93 333 P **P 15 44 37.7 -1.3**
comp=Z,8.4nm,0.7s,baz=128,slow=6.7,SNR=17
ZALV PKP2bc **P'P'bc 16 14 30.4 +5.2**
comp=Z,1.5nm,0.8s,baz=266,slow=4.5,SNR=4.0
comp=Z,8.4nm,0.7s
ZALV Zalesovo Beam 58.93 333 P 15 44 38.2 -0.8
ZALV Zalesovo Beam 58.93 333 *i* P **P 15 44 39.0 0.0**
ZALV pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 58.95 317 LR LR 16 13 05.5
comp=Z,1µm,18.9s,baz=96,slow=39
AAK Ala-Archa 58.95 317 P **P 15 44 37.6 -2.0**
AAK IAmb IAmb 15 44 56.6
comp=Z,45nm,1.6s
AAK Ala-Archa 58.95 317 *i* P **P 15 44 39.0 -0.6**
AAK pmax pmax
comp=Z,33nm,1.5s
USP Ospenovka 59.20 318 P **P 15 44 40.4 -0.8**
SNR=13
EKS2 Erkin-Say 59.45 317 P **P 15 44 43.1 +0.1**
SNR=12
KURBB Kurchatov Arra 60.16 327 P **P 15 44 46.8 -0.7**
comp=Z,19nm,0.6s,baz=125,slow=6.7,SNR=18
KURBB PKP2bc **P'P'bc 16 14 22.2 -0.3**
comp=Z,0.3nm,0.7s,baz=300,slow=4.1,SNR=2.0
comp=Z,19nm,0.6s
KURK Kurchatov 60.16 327 P **P 15 44 46.7 -0.8**
KURK Kurchatov 60.16 327 P **P 15 44 46.8 -0.8**
SEY Seymchan 60.29 13 *i* P **P 15 44 49.1 +0.9**
SEY pmax pmax
comp=Z,9.0nm,0.9s
KBL Kabul 60.34 307 P 15 44 48.1 -1.3
KBL Kabul 60.34 307 P **P 15 44 48.1 -1.3**
KBL pmax pmax
comp=Z,24nm,0.8s
DZA Taraz 61.20 316 *eP* **P 15 44 54.5 -0.4**
DZA Taraz 61.20 316 *eP* **P 15 44 54.5 -0.4**
KK31 Karatay Array 61.84 316 *i* P **P 15 44 58.2 -1.0**
KKAR Karatay Array 61.84 316 P 15 44 58.0 -1.2
KKAR Karatay Array 61.84 316 P **P 15 44 58.0 -1.2**
IUG luzhnay 61.85 315 *eP* **P 15 44 58.9 -0.4**
IUG pmax pmax
comp=Z,8.0nm,0.6s
IUG luzhnay 61.85 315 *eP* **P 15 44 59.0 -0.4**
comp=Z,7.5nm,0.6s
CHM Chimkent 62.20 315 *eP* **P 15 45 01.3 -0.3**
CHM Chimkent 62.20 315 *eP* **P 15 45 01.4 -0.3**
BRLS Boroldoy 62.28 316 *eP* **P 15 45 01.7 -0.4**
BRLS Boroldoy 62.28 316 *eP* **P 15 45 01.7 -0.4**
BVAR Borovoye Array 65.75 327 P **P 15 45 24.4 -0.3**
comp=Z,20nm,0.7s,baz=140,slow=7.7,SNR=26
comp=Z,20nm,0.7s
BORK Borovoye 65.79 327 P 15 45 24.8 -0.1
BORK Borovoye 65.79 327 P **P 15 45 24.8 -0.1**
BORK pmax pmax
comp=Z,60nm,0.9s
TIXI Tiksi 66.03 1 P 15 45 25.4 -0.7
TIXI Tiksi 66.03 1 P **P 15 45 25.4 -0.7**
TIXI pmax pmax
comp=Z,41nm,1.1s
BILL Bilibino 67.83 15 P 15 45 38.6 +1.0
BILL IAmb IAmb 15 46 07.5
comp=Z,25nm,1.4s
BILL Bilibino 67.83 15 *i* P **P 15 45 37.7 +0.1**
BILL pmax pmax
comp=Z,8.0nm,0.9s
AB31 Akbulak array 70.68 320 IAmb IAmb 15 46 06.4
comp=Z,24nm,0.8s
AB31 Akbulak array 70.68 320 P **P 15 45 54.1 -1.5**
ABKAR Akbulak array 70.68 320 P 15 45 54.4 -1.3
ARTI Arti 73.43 327 P 15 46 11.1 -0.9
ARTI Arti 73.43 327 *c* *i* P **P 15 46 12.2 +0.2**
ARTI *PP **pP 15 46 24.8 +0.1**
ARTI S **S 15 55 37.6 -0.3**
ARTI SS **SS 16 00 17.6 -3.3**
ARTI pmax pmax
comp=Z,12nm,0.7s
H17K Granite Mounta 78.01 25 IAmb IAmb 15 46 58.0
comp=Z,30nm,1.8s
AKT Akhty 78.02 311 *eP* **P 15 46 38.1 -0.6**
AKT *e* 15 46 47.2
AKT *e**PP **pP 15 46 52.1 +0.3**
AKT *e* 15 49 35.3
AKT pmax pmax
comp=Z,12nm,0.6s
AKT MLR MLR
comp=Z,672nm,17.0s
KIRV Kirov 78.62 329 *i* P **P 15 46 40.8 -0.6**
BELG Belogornoye 78.91 322 *i* P **P 15 46 42.5 -0.6**
BELG pmax pmax
comp=Z,19nm,1.2s
C19K Lookout Ridge 79.08 21 IAmb IAmb 15 46 55.9
comp=Z,18nm,1.0s
D19K Kuna River 79.47 21 IAmb IAmb 15 47 19.4
comp=Z,14nm,1.0s
E19K Redstone River 79.59 22 IAmb IAmb 15 46 58.9
comp=Z,20nm,0.9s
RAYN Ar Rayn 79.68 293 P 15 46 47.9 -0.2
RAYN Ar Rayn 79.68 293 P **P 15 46 47.9 -0.2**
RAYN pmax pmax
comp=Z,7.0nm,0.6s
D20K Etivluk River 80.05 21 IAmb IAmb 15 47 00.7
comp=Z,18nm,1.0s
GNI Garni 80.24 310 LR LR 16 28 07.4
comp=Z,302nm,18.3s,baz=72,slow=40
GNI Garni 80.24 310 *i* P **P 15 46 51.9 +1.0**
GNI pmax pmax
comp=Z,70nm,1.6s
GNI Garni 80.24 310 P **P 15 46 50.1 -0.8**
comp=Z,39nm,1.6s
B21K Ikpikpuk River 80.91 20 IAmb IAmb 15 46 59.9
comp=Z,15nm,0.8s
E21K Killik River 80.97 22 IAmb IAmb 15 47 05.5
comp=Z,12nm,0.8s
NCK Nalchik 81.15 313 *i* P **P 15 46 54.7 -0.8**
NCK pmax pmax
comp=Z,12nm,0.8s
I21K Tanana 81.37 25 IAmb IAmb 15 47 03.4
comp=Z,14nm,0.9s
D22K Ayikyak River 81.49 21 IAmb IAmb 15 47 51.4
comp=Z,20nm,1.3s
GEVA Gevas 81.54 308 IAmb IAmb 15 47 16.8
comp=Z,19nm,0.9s
KBZ Khabaz 81.66 313 P **P 15 46 57.5 -0.6**
comp=Z,2.3nm,0.7s,baz=114,slow=11,SNR=5.4
KBZ LR LR 16 28 15.6
comp=Z,399nm,18.2s,baz=69,slow=39
comp=Z,2.3nm,0.7s
L22K Petersville 81.69 28 IAmb IAmb 15 47 20.0
comp=Z,21nm,1.0s
E22K Anaktuvuk Pass 81.73 22 P 15 46 55.1 -3.0
E22K IAmb IAmb 15 47 12.4
comp=Z,13nm,0.8s
NEUR Neytrino 81.80 313 *i* P **P 15 47 01.3 +2.1**
NEUR pmax pmax
comp=Z,20nm,1.2s
KIV Kislovodsk 81.81 313 P 15 46 58.3 -0.8
KIV Kislovodsk 81.81 313 *eP* **P 15 46 58.3 -0.8**
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,411nm,19.0s
KIV Kislovodsk 81.81 313 P **P 15 46 58.4 -0.8**
comp=Z,21nm,1.1s
SHA1 Shidzhatmaz 81.83 313 *i* P **P 15 47 00.1 +0.7**
COLD Coldfoot 82.26 23 P 15 47 01.4 +0.6
I23K Minto, Yukon-K 82.47 25 IAmb IAmb 15 47 48.3
comp=Z,44nm,1.5s
VRH Novokhopyorsk 82.51 321 *eP* **P 15 47 03.7 +1.3**
VRH pmax pmax
comp=Z,20nm,0.8s
E23K Chandalar 82.54 22 IAmb IAmb 15 47 14.7
comp=Z,22nm,1.1s
NEA2 Nenana 82.57 26 IAmb IAmb 15 47 22.6
comp=Z,21nm,1.2s
MCK McKinley 82.59 27 IAmb IAmb 15 47 21.4
comp=Z,33nm,1.1s
VOI Vohitsoka 82.67 247 P **P 15 47 03.3 -0.8**
D24K Happy Valley 82.90 21 IAmb IAmb 15 47 27.3
comp=Z,18nm,0.8s
E24K Your Creek 82.97 22 IAmb IAmb 15 47 16.5
comp=Z,13nm,1.1s
COLA College 83.10 25 *i* P **P 15 47 04.5 -0.7**
COLA pmax pmax
comp=Z,5.0nm,0.9s
CCB Clear Creek Bu 83.11 26 IAmb IAmb 15 47 30.0
comp=Z,21nm,1.3s
H24K Noodor Dome 83.12 24 IAmb IAmb 15 47 30.6
comp=Z,14nm,0.8s
LABN Labinsk 83.22 314 *eP* **P 15 47 08.1 +1.8**
LABN *e**PP **sP 15 47 22.9 -1.5**
LABN *e*S **S 15 57 25.3 +2.0**
LABN pmax pmax
comp=Z,18nm,0.6s
G24K Hadweenzic Riv 83.31 24 IAmb IAmb 15 47 18.4
comp=Z,32nm,1.2s
ERBR Yeremizino-Bor 83.36 315 *eP* **P 15 47 10.2 +3.2**
ERBR *e**PP **sP 15 47 24.5 -0.7**
ERBR *e*S **S 15 57 28.0 +3.2**
ERBR pmax pmax
comp=Z,25nm,0.7s
HDA Harding Lake 83.48 26 IAmb IAmb 15 47 29.9
comp=Z,8.7nm,0.8s
ILAR Eielson Array 83.51 26 P 15 47 07.2 -0.1
comp=Z,2.0nm,0.8s,baz=249,slow=4.8,SNR=14
ILAR PKKPbc **PKKPbc 16 05 26.3 -2.0**
comp=Z,0.5nm,0.9s,baz=81,slow=2.1,SNR=4.3
ILAR LR LR 16 24 54.7
comp=Z,86nm,20.2s,baz=260,slow=36
comp=Z,2.0nm,0.8s
ILAR Eielson Array 83.51 26 P 15 47 06.4 -0.9
KLMR Klimovskoe 83.77 331 *eP* **P 15 47 08.2 -0.6**
KLMR pmax pmax
comp=Z,126nm,1.3s
D25K Kavik River 83.78 21 IAmb IAmb 15 47 20.9
comp=Z,12nm,0.9s
SOC Sochi 83.97 313 *eP* **P 15 47 09.4 -0.7**
SOC *e* 15 50 23.1
SOC *e*PPP PPP 15 52 17.3
SOC *e*S **SKSac 15 57 27.0 -2.8**
SOC *e*SS **SS 16 02 57.2 -2.4**
SOC *e*SSS SSS 16 06 31.1
SOC MLR MLR
comp=Z,294nm,12.0s
F25K Christian Rive 84.04 23 IAmb IAmb 15 47 23.3
comp=Z,12nm,1.1s
VORD Divnogorie 84.04 321 *eP* **P 15 47 10.4 +0.1**
VORD pmax pmax
comp=Z,20nm,0.6s
E25K Arctic Village 84.06 22 IAmb IAmb 15 47 22.4
comp=Z,28nm,1.2s
VORR Voronezh 84.08 321 *eP* **P 15 47 11.1 +0.6**
VORR pmax pmax
comp=Z,57nm,0.4s
VSR Storozhevoye 84.11 321 *eP* **P 15 47 11.3 +0.6**
VSR pmax pmax
comp=Z,10.0nm,0.5s
LPSR Galich'ya Gora 84.23 322 *eP* **P 15 47 11.5 +0.3**
LPSR pmax pmax
comp=Z,22nm,0.7s
BMAR Burnt Mountain 84.45 23 P 15 47 12.4 +0.2
C27K Jago River 84.72 21 IAmb IAmb 15 47 39.4
comp=Z,16nm,1.0s
MOS Moscow 84.89 325 *eP* P 15 47 19.7 +5.2
MOS pmax pmax
comp=Z,65nm,0.8s
VNDA Vanda 85.24 173 P **P 15 47 14.7 -1.1**
comp=Z,2.4nm,0.8s,baz=332,slow=5.9,SNR=5.8
comp=Z,2.4nm,0.8s
VNDA Vanda 85.24 173 P P 15 47 15.1 -0.7
VNDA IAmb IAmb 15 47 40.0
comp=Z,16nm,1.3s
VNDA Vanda 85.24 173 P **P 15 47 15.1 -0.7**
VNDA pmax pmax
comp=Z,16nm,1.3s
OBN Obninsk 85.52 325 *eP* **P 15 47 17.4 -0.2**
OBN *e* 15 50 34.8
OBN *e*PPP PPP 15 52 29.2
OBN pmax pmax
comp=Z,125nm,1.3s
OBN MLR MLR
comp=Z,1µm,7.0s
OBN Obninsk 85.52 325 P P 15 47 17.2 -0.4
comp=Z,67nm,1.3s
E27K Coleen River 85.55 22 IAmb IAmb 15 47 55.1
comp=Z,18nm,1.3s
ANN Anapa 85.55 314 *eP* **P 15 47 16.6 -1.5**
ANN *e**PP **pP 15 47 32.4 +1.2**
ANN *e* 15 50 39.0
ANN *e*S **SKSac 15 57 36.1 -3.8**
ANN *e*SS **SS 16 03 25.6 +2.7**
ANN pmax pmax
comp=Z,34nm,0.7s
PPT2 Papeete2 85.78 108 *e*LR LR 16 14 27.4
comp=Z,366nm,26.5s
PPT2 *e*LR LR 16 14 31.3
comp=Z,272nm,26.8s
APA Apatity 86.14 337 ‖ *eP* P 15 47 26.0 +5.5
APA pmax pmax
comp=Z,14nm,1.0s
APA MLR MLR
comp=Z,2µm,20.3s
F28M Old Crow 86.24 23 IAmb IAmb 15 47 43.7
comp=Z,11nm,0.9s
I28M Miner Creek 86.42 25 IAmb IAmb 15 47 47.8
comp=Z,10nm,0.9s
ASF Jabal al Asfar 86.85 302 LR LR 16 31 05.0
comp=Z,130nm,18.9s,baz=62,slow=39
MMAI Mount Meron Ar 88.03 303 P **P 15 47 29.7 -0.9**
comp=Z,4.9nm,1.0s,baz=77,slow=7.6,SNR=1.8
comp=Z,4.9nm,1.0s

G31M	**Satah River**	**88.50**	**23**	IAmb	IAmb	15 47 58.3		
	comp=Z,13nm,1.3s							
INK	**Inuvik**	**88.51**	**21**	PKKPbc	PKKPbc	16 05 12.4	-4.0	
	comp=Z,1.2nm,0.8s,baz=86,slow=4.2,SNR=3.5							
SPITS	**Spitsbergen Ar**	**88.68**	**349**	P	**P**	**15 47 32.0**	**-0.6**	
	comp=Z,2.9nm,0.6s,baz=73,slow=12,SNR=9.7							
	comp=Z,2.9nm,0.6s							
ARCES	**ARCESS Array B**	**88.71**	**340**	P	**P**	**15 47 31.1**	**-1.8**	
	comp=Z,5.1nm,0.6s,baz=73,slow=4.2,SNR=16							
	comp=Z,5.1nm,0.6s							
BR104	**Keskin Array S**	**88.78**	**310**	P	**P**	**15 47 33.1**	**-0.9**	
	comp=Z,85nmcomp=Z,13nm,1.0s							
BR131	**Keskin Array S**	**88.78**	**310**	*i* P	**P**	**15 47 31.6**	**-2.4**	
BRTR	**Keskin Array B**	**88.78**	**310**	P	**P**	**15 47 31.9**	**-2.1**	
	comp=Z,1.4nm,0.7s,baz=124,slow=4.5,SNR=9.7							
BRTR				LR	LR	16 33 09.8		
	comp=Z,222nm,19.7s,baz=62,slow=40							
	comp=Z,1.4nm,0.7s							
BRTR	**Keskin Array B**	**88.78**	**310**	P	**P**	**15 47 32.0**	**-2.1**	
BR106	**Keskin Array S**	**88.80**	**310**	P	**P**	**15 47 33.0**	**-1.1**	
	comp=Z,7.2nm,1.0s							
BR105	**Keskin Array S**	**88.80**	**310**	P	**P**	**15 47 33.5**	**-0.6**	
	comp=Z,85nmcomp=Z,12nm,1.0s							
FINES	**FINESS Array B**	**90.18**	**332**	P	**P**	**15 47 39.8**	**-0.1**	
	comp=Z,7.2nm,0.7s,baz=59,slow=5.6,SNR=22							
	comp=Z,7.2nm,0.7s							
FINES	**FINESS Array B**	**90.18**	**332**	*i* P	**P**	**15 47 40.0**	**+0.1**	
FINES				pmax	pmax			
	comp=Z,5.0nm,0.6s							
AK09	**Malin Array Si**	**90.39**	**321**	P	**P**	**15 47 40.5**	**-0.6**	
AK08	**Malin Array Si**	**90.41**	**321**	P	**P**	**15 47 40.6**	**-0.6**	
AK10	**Malin Array Si**	**90.42**	**321**	P	**P**	**15 47 40.6**	**-0.6**	
AKASG	**Malin Array Be**	**90.42**	**321**	P	**P**	**15 47 40.1**	**-1.1**	
	comp=Z,2.9nm,0.7s,baz=69,slow=4.6,SNR=6.5							
AKASG				LR	LR	16 31 46.0		
	comp=Z,240nm,18.6s,baz=64,slow=38							
	comp=Z,2.9nm,0.7s							
AKASG	**Malin Array Be**	**90.42**	**321**	*i* P	**P**	**15 47 42.0**	**+0.8**	
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.7s							
AKBB	**Malin Array Si**	**90.42**	**321**		**P**	**15 47 41.4**	**+0.2**	
AKBB	**Malin Array Si**	**90.42**	**321**	P	**P**	**15 47 41.4**	**+0.2**	
AKBB				pmax	pmax			
	comp=Z,30nm,1.2s							
AKBB	**Malin Array Si**	**90.42**	**321**	P	**P**	**15 47 40.6**	**-0.6**	
AK01	**Malin Array Si**	**90.43**	**321**	P	**P**	**15 47 40.7**	**-0.6**	
KIEV	**Kiev**	**90.43**	**321**		**P**	**15 47 40.7**	**-0.6**	
KIEV	**Kiev**	**90.43**	**321**	P	**P**	**15 47 40.7**	**-0.6**	
KIEV				pmax	pmax			
	comp=Z,27nm,1.2s							
KIEV	**Kiev**	**90.43**	**321**	P	**P**	**15 47 40.6**	**-0.7**	
	comp=Z,76nm,2.6s							
MNK	**Minsk**	**90.58**	**325**	*i* P	**P**	**15 47 41.7**	**-0.2**	
	comp=E,23nm,0.8s							
MNK				*i* P	**P**	**15 47 41.7**	**-0.2**	
	comp=N,36nm,1.0s							
MNK				*i* P	**P**	**15 47 41.7**	**-0.2**	
	comp=Z,18nm,1.0s,baz=80							
MNK				*i* PP	**PP**	**15 51 17.4**	**+0.4**	
MNK				*i* PPP	PPP	15 53 14.9		
MNK				*i* S	**SKSac**	**15 58 08.3**	**-1.5**	
MNK				*i* SS	**SS**	**16 04 36.6**	**+1.0**	
MNK				*i* SSS	SSS	16 08 14.0		
MNK				*i* LQ	LQ	16 23 07.4		
MNK				*i* LR	LR	16 28 59.2		
MNK				*i* LRM	MLR	16 29 56.2		
	comp=N,1μm,19.9s							
MNK				*i* LRM	MLR	16 29 57.0		
	comp=E,1μm,23.1s							
MNK				*i* LRM	MLR	16 30 05.3		
	comp=Z,347nm,15.4s							
MNK	**Minsk**	**90.58**	**325**	*i* P	**P**	**15 47 41.6**	**-0.2**	
MNK				*i*		15 51 17.4		
MNK				*i* PPP	PPP	15 53 14.8		
MNK				*i* S	**SKSac**	**15 58 08.2**	**-1.5**	
MNK				*i* SS	**SS**	**16 04 36.5**	**+1.0**	
MNK				*i* SSS	SSS	16 08 14.0		
MNK				pmax	pmax			
	comp=N,36nm,1.0s							
MNK				pmax	pmax			
	comp=E,23nm,0.8s							
MNK				pmax	pmax			
	comp=Z,18nm,1.0s							
MNK				MLR	MLR			
	comp=N,1μm,20.0s							
MNK				MLR	MLR			
	comp=E,1μm,23.0s							
MNK				MLR	MLR			
	comp=Z,347nm,15.0s							
NOR	**Nord**	**91.28**	**355**	*eP*	**P**	**15 47 46.3**	**+1.6**	
NOR				IAmb	IAmb	15 47 54.0		
	comp=Z,16nm,1.3s							
LUBAR	**Lubar, Ukraine**	**91.48**	**320**	P	**P**	**15 47 45.7**	**-0.5**	
RNPP8	**Varash**	**92.39**	**322**	P	**P**	**15 47 49.5**	**-0.9**	
KMPD	**K-Podol'skiy**	**92.57**	**319**	P	**P**	**15 47 50.6**	**-0.6**	
TESR	**Tescani**	**92.84**	**317**	P	**P**	**15 47 51.9**	**-0.7**	
	comp=Z,30nm,2.0s							
VRI	**Vrincioaia**	**92.91**	**316**	P	**P**	**15 47 52.3**	**-0.6**	
	comp=Z,24nm,1.6s							
MLR	**Muntele Rosu**	**93.52**	**316**	P	**P**	**15 47 55.2**	**-0.7**	
	comp=Z,19nm,1.7s							
TAOE	**Nuku Hiva Isla**	**94.02**	**98**	*e*LR	LR	16 18 20.6		
	comp=Z,387nm,23.6s							
VOIR		**94.15**	**316**	P	**P**	**15 47 57.8**	**-0.9**	
DAG	**Danmarks Havn**	**95.44**	**352**	*i* P	**P**	**15 48 01.2**	**-2.6**	
QSPA	**South Pole Qui**	**95.45**	**180**	P	**P**	**15 48 04.9**	**+0.7**	
	comp=Z,2.8nm,0.8s,baz=344,slow=3.9,SNR=3.9							
QSPA				LR	LR	16 30 42.5		
	comp=Z,190nm,20.9s,baz=3.5,slow=35							
	comp=Z,2.8nm,0.8s							
IDI	**Anoyia**	**96.33**	**306**	LR	LR	16 38 48.4		
	comp=Z,177nm,19.4s,baz=86,slow=40							
HFS	**Hagfors**	**96.36**	**332**	P	**P**	**15 48 07.3**	**-1.1**	
	comp=Z,4.4nm,0.8s,baz=92,slow=3.6,SNR=8.1							
	comp=Z,4.4nm,0.8s							
NEEM	**North Greenlan**	**97.11**	**359**	*eP*	Pdif	15 48 12.3	+0.4	
NB2	**NORSAR Subarra**	**97.11**	**334**	P	**P**	**15 48 10.7**	**-1.1**	
	comp=Z,18nm,1.0s,baz=66,slow=4.6							
NB2	**NORSAR Subarra**	**97.11**	**334**	P	**P**	**15 48 10.7**	**-1.1**	
NB2				AMP		15 48 10.7		
	comp=Z,18nm,1.0s							
NOA	**NORSAR Array B**	**97.11**	**334**	P	**P**	**15 48 09.9**	**-1.9**	
	comp=Z,3.0nm,0.9s,baz=66,slow=4.6,SNR=5.3							
	comp=Z,3.0nm,0.9s							
DBG	**Daneborg**	**97.72**	**351**	*i* P	**P**	**15 48 11.6**	**-2.7**	
YKA	**Yellowknife Ar**	**97.89**	**24**	P	Pdif	15 48 15.3	0.0	
	comp=Z,0.4nm,0.8s,baz=304,slow=6.0,SNR=6.4							
YKA				PKKPbc	**PKKPbc**	**16 04 48.5**	**-3.4**	
	comp=Z,0.2nm,0.6s,baz=110,slow=2.1,SNR=5.1							
	comp=Z,0.4nm,0.8s							
LSZ	**Lusaka**	**99.56**	**255**	LR	LR	16 30 01.8		
	comp=Z,226nm,20.2s,baz=91,slow=33							
SOKA	**Soboth**	**100.51**	**319**	*ep*Pdiff	pPdif	15 48 36.8	-3.8	
	comp=Z,4.7nm,1.0s							
GERES	**GERESS Array B**	**100.60**	**322**	P	**Pdif**	**15 48 26.5**	**-1.3**	
	comp=Z,1.1nm,0.8s,baz=48,slow=6.0,SNR=4.7							
MOA	**Molln**	**100.60**	**321**	*ep*Pdiff	pPdif	15 48 35.9	-5.0	
	comp=Z,11nm,1.3s							
MYKA	**Terra Mystica**	**101.43**	**320**	*ep*Pdiff	pPdif	15 48 38.6	-6.1	
	comp=Z,3.5nm,0.8s							
LESA	**Schwarzleotal**	**101.76**	**321**	*i* pPdiff	**Pdif**	**15 48 39.3**	**+6.3**	
	comp=Z,5.0nm,1.3s							
DAVA	**Damuels**	**103.56**	**321**	*e*Pdiff	**Pdif**	**15 48 46.0**	**+5.0**	
	comp=Z,9.0nm,1.4s							
PDAR	**Pinedale Array**	**110.05**	**41**	Pdiff	**Pdif**	**15 49 09.1**	**-1.0**	
	comp=Z,0.6nm,0.9s,baz=348,slow=2.4,SNR=1.9							
PDAR				PKKPbc	**PKKPbc**	**16 04 15.6**	**+0.4**	
	comp=Z,0.5nm,0.7s,baz=112,slow=7.0,SNR=4.4							
SCHQ	**Schefferville**	**118.79**	**9**	PKP	**PKPdf**	**15 53 26.8**	**-1.1**	
	comp=Z,2.7nm,0.7s,baz=64,slow=4.4,SNR=4.2							
TXAR	**Lajitas Array**	**120.56**	**51**	PKP	**PKiKP**	**15 53 32.4**	**+0.2**	
	comp=Z,0.3nm,0.6s,baz=193,slow=1.5,SNR=3.4							
TXAR				PKKPbc	**PKKPbc**	**16 03 36.0**	**-2.2**	
	comp=Z,0.4nm,0.7s,baz=142,slow=3.5,SNR=4.2							
TORD	**Torodi Ar. Bea**	**122.24**	**289**	PKP	**PKPdf**	**15 53 34.8**	**-0.8**	
	comp=Z,3.0nm,0.8s,baz=48,slow=0.7,SNR=6.9							
PLCA	**Paso Flores**	**141.74**	**159**	PKP	**PKPdf**	**15 54 11.3**	**-0.3**	
	comp=Z,1.9nm,0.7s,baz=288,slow=3.5,SNR=7.4							
PLCA	**Paso Flores**	**141.74**	**159**	*eP*	**PKiKP**	**15 54 15.6**	**+1.1**	
CO04	**Los Peladeros**	**148.93**	**150**		**PKPbc**	**15 54 27.9**	**-0.5**	
CO02	**Combarbal**	**149.59**	**149**		**PKiKP**	**15 54 32.6**	**+1.7**	
CFA	**Coronel Fontan**	**150.58**	**154**	PKPbc	**PKPbc**	**15 54 32.5**	**+0.3**	
	comp=Z,7.1nm,0.8s,baz=224,slow=1.6,SNR=13							
LCO	**Las Campanas**	**151.48**	**147**		**PKPbc**	**15 54 34.7**	**0.0**	
LCO	**Las Campanas**	**151.48**	**147**	PKIKP	**PKPbc**	**15 54 34.7**	**0.0**	
ROSC	**El Rosal**	**156.68**	**64**	PKPab	**PKPab**	**15 55 03.7**	**-2.0**	
	comp=Z,7.6nm,0.4s,baz=350,slow=22,SNR=1.6							
SDV	**Santo Domingo**	**157.60**	**50**	*eP*	**PKPdf**	**15 54 41.3**	**+4.0**	
CPUP	**Villa Florida**	**159.00**	**170**	PKPab	**PKPab**	**15 55 14.7**	**0.0**	
	comp=Z,2.1nm,0.7s,baz=234,slow=1.4,SNR=4.3							
LPAZ	**La Paz**	**162.03**	**128**	PKP	**PKPdf**	**15 54 42.9**	**+0.1**	
	comp=Z,1.3nm,0.7s,baz=228,slow=3.0,SNR=3.7							
LPAZ				PKPab	**PKPab**	**15 55 28.8**	**-0.3**	
	comp=Z,1.7nm,0.8s,baz=187,slow=7.5,SNR=1.8							
LPAZ	**La Paz**	**162.03**	**128**	*eP*	**PKPdf**	**15 54 46.7**	**+3.9**	
RCBR	**Riachuelo**	**162.61**	**268**	PKP	**PKPdf**	**15 54 42.1**	**-0.6**	
	comp=Z,4.6nm,1.1s,baz=17,slow=19,SNR=3.1							
SIV	**San Ignacio**	**167.17**	**145**	PKP	**PKPdf**	**15 54 45.8**	**-0.7**	
	baz=273,slow=5.0							
PTLB	**Pontes e Lacer**	**168.66**	**151**	*eP*	**PKPdf**	**15 54 50.1**	**+2.6**	
BDFB	**Brasilia**	**168.68**	**207**	PKPab	**PKPab**	**15 55 56.3**	**-1.3**	
	comp=Z,1.4nm,0.4s,baz=59,slow=7.6,SNR=2.7							
BOAV	**Boa Vista**	**169.35**	**42**	*eP*	**PKPdf**	**15 54 49.6**	**+1.5**	
SALV	**Santo Antonio**	**169.47**	**168**	*eP*	**PKPdf**	**15 54 49.5**	**+1.5**	
SMTB	**Santa Maria do**	**173.38**	**240**	*eP*	**PKPdf**	**15 54 52.0**	**+1.9**	
ITTB	**Itaituba**	**177.37**	**63**	*eP*	**PKPdf**	**15 54 56.2**	**+5.1**	
NPGB	**Novo Progresso**	**177.54**	**127**	*eP*	**PKPdf**	**15 54 53.5**	**+2.3**	

NEIC ***22*** *15:39:06.5±2.5, 5.25N±0.09×126.8E±0.1, h35km±2km, mb4.9/26, Error ellipse: s-maj=21.7km s-min=7.8km az=231.0*

DJA ***22*** *15:39:06.3±0.5, 6.N±5.×12.7E±., h10km, M5.1/18, mb5.1/13, MLv5.0/18*

GCMT ***22*** *15:39:09.5±0.4, 5.38N±0.03×126.95E±0.03, h36km, MW5.1/61, Moment Tensor Solution. s40,c45; s61,c91; Duration: 0 Moment tensor: Scale 1016Nm; Mrr5.58±.33; Mθθ-0.63±.19; Mϕϕ-4.95±.21; Mrθ0.25±.18; Mθϕ0.67±.13; Mϕr1.78±.18; Best double couple: Mo5.60900×1016 NP1:ϕs167.00000°, δ36.00000°, λ83.00000°. NP2: ϕs356.00000°, δ54.00000°, λ95.00000°. Principal axes: T 5.8920, Plg80.0000°, Azm288.0000°; N -0.5700, Plg4.0000°, Azm173.0000°; P -5.3260, Plg9.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***22*** *15:39:10.0±1.9, 5.45N×126.54E, h58km±17km, mb4.1/27, mbtmp4.4/30 Error ellipse: s-maj=21.2km s-min=10.7km az=76.0*

ISC 22 15:39:10.4±0.4, **5.36N**±0.05×**126.57E**±0.08, **h66**km, **n101**, σ1s**80**/101, **mb4.6**/54, **1D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.96**	**212**	P		**Pn**	**15 39 42.7**	**+1.3**
DAV	**Davao City (W)**	**1.97**	**330**	P		**Pn**	**15 39 40.2**	**-1.4**
	98nm,0.3s,baz=125,slow=19,SNR=0.8							
DAV				S		**Sn**	**15 40 05.5**	**+0.2**
	950nm,0.5s,baz=232,slow=20,SNR=3.9							
DAV	**Davao City (W)**	**1.97**	**330**	P		**Pn**	**15 39 37.8**	**-3.8**
TNTI	**Ternate**	**4.62**	**170**			Pn	15 40 10.2	-7.6
TNTI	**Ternate**	**4.62**	**170**	P		**Pn**	**15 40 20.0**	**+2.2**
GTOI	**Gorontalo**	**5.88**	**217**	P		**Pn**	**15 40 37.3**	**+2.2**
	0.6nm147nm,0.7s							
MRSI	**Marisa**	**6.70**	**224**	P		**Pn**	**15 40 48.3**	**+2.1**
	0.7nm150nm,0.5s							
SANI	**Sanana**	**7.38**	**185**	P		**Pn**	**15 40 54.4**	**-1.1**
LUWI	**Luwuk**	**7.40**	**211**	P		Pn	15 41 00.0	+4.2
	382nm,1.3s							
SWI	**Sorong**	**7.75**	**143**	P		**Pn**	**15 41 00.4**	**-0.3**
	0.2nm54nm,0.8s							
SIJI	**Sorong**	**7.76**	**143**	P		**Pn**	**15 41 00.4**	**-0.4**
	12nm,0.5s,baz=330,slow=18,SNR=5.5							
SIJI	**Sorong**	**7.76**	**143**	P		**Pn**	**15 41 00.8**	**0.0**
	0.2nm44nm,0.8s							
MYLDM	**Lahad Datu**	**8.04**	**269**	Pn		**Pn**	**15 41 01.8**	**-2.7**
MYLDM	**Lahad Datu**	**8.04**	**269**	P		**Pn**	**15 41 05.6**	**+1.0**
	70nm,0.8s							
NLAI	**Namlea**	**8.55**	**176**	P		**Pn**	**15 41 13.0**	**+1.4**
KAPI	**Kappang**	**12.35**	**214**	P		**Pn**	**15 42 03.9**	**+0.5**
	4.1nm,0.3s,baz=128,slow=20,SNR=0.9							
SBUM	**Sibu**	**14.60**	**259**	Pn		**Pn**	**15 42 32.4**	**-1.2**
BATI	**Baumata**	**15.73**	**191**	P		**P**	**15 42 49.3**	**-1.6**
	29nm,0.8s,baz=76,slow=3.2,SNR=5.0							
MTN	**Manton Dam**	**18.64**	**166**	P		**P**	**15 43 18.2**	**-4.8**
KNRA	**Kununurra**	**21.01**	**174**	P		**P**	**15 43 49.6**	**+0.9**
KNRA					IAmb	IAmb	15 44 13.1	
	comp=Z,35nm,0.8s							
LEM	**Lembang**	**22.45**	**238**	P		**P**	**15 44 03.8**	**-0.7**
	comp=Z,6.0nm,0.4s,baz=95,slow=2.4,SNR=4.2							
	comp=Z,6.0nm,0.4s							
BBJI	**Bungbulang**	**22.77**	**236**	P		**P**	**15 44 03.6**	**-4.1**
MYKOM	**Kota Tinggi**	**22.95**	**262**	P		**P**	**15 44 08.4**	**-1.0**
MYKOM					IAmb	IAmb	15 44 26.3	
	comp=Z,104nm,1.4s							
FITZ	**Fitzroy Crossi**	**23.32**	**182**	P		**P**	**15 44 12.6**	**-0.4**
	comp=Z,8.4nm,0.7s,baz=359,slow=7.3,SNR=8.0							
	comp=Z,8.4nm,0.7s							
WB0	**Warramunga Arr**	**26.12**	**163**	P		**P**	**15 44 38.8**	**+0.3**
WB0					IAmb	IAmb	15 44 55.9	
	comp=Z,53nm,1.1s							
WRA	**Warramunga Arr**	**26.27**	**163**	P		**P**	**15 44 42.0**	**+2.2**
	comp=Z,9.1nm,0.7s,baz=343,slow=10.0,SNR=7.3							
	comp=Z,9.1nm,0.7s							
WRA	**Warramunga Arr**	**26.27**	**163**	P		**P**	**15 44 34.1**	**-5.7**
WR8	**Warramunga Arr**	**26.33**	**163**	P		**P**	**15 44 35.2**	**-5.2**
WR8					IAmb	IAmb	15 45 00.2	
	comp=Z,42nm,1.2s							
MBWA	**Marble Bar**	**27.19**	**194**	P		**P**	**15 44 47.1**	**-0.9**
MBWA					IAmb	IAmb	15 45 06.7	
	comp=Z,19nm,0.9s							
NJ2	**Nanjing**	**27.52**	**346**	*eP*		**P**	**15 44 51.6**	**+0.7**
NJ2				pmax		pmax		
	comp=Z,3.0nm,0.5s							
PSA00	**Pilbara Seismi**	**27.56**	**194**	P		**P**	**15 44 51.7**	**+0.4**
PSA00					IAmb	IAmb	15 45 10.3	
	comp=Z,18nm,0.9s							
PSA00	**Pilbara Seismi**	**27.56**	**194**			**P**	**15 44 51.9**	**+0.6**
PSA00					IAmb	IAmb	15 45 09.7	
	comp=Z,12nm,0.9s							
RPSI	**Rantau Prapat**	**27.70**	**266**	P		**P**	**15 44 54.1**	**+1.4**
RPSI					IAmb	IAmb	15 45 05.4	
	comp=Z,21nm,1.0s							
ASAR	**Alice Springs**	**29.72**	**166**	P		**P**	**15 45 13.5**	**+2.9**
	comp=Z,1.2nm,0.6s,baz=347,slow=7.2,SNR=4.8							
	comp=Z,1.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**29.94**	**298**	P		**P**	**15 45 12.8**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=110,slow=7.4,SNR=7.3							
CMAR				ScP		**ScP**	**15 51 52.7**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=95,slow=3.3,SNR=1.4							
	comp=Z,1.2nm,0.6s							
PZH	**PanZhiHua**	**31.69**	**314**	P		**P**	**15 45 31.1**	**+3.0**
LYN	**LuoYang**	**31.85**	**338**	P		**P**	**15 45 32.4**	**+3.2**
LYN				pmax		pmax		
	comp=Z,15nm,1.6s							
XAN	**Xi'an**	**32.91**	**332**	P		**P**	**15 45 39.6**	**+1.1**
XAN				pmax		pmax		
	comp=Z,18nm,1.4s							
HNS	**HongShan**	**33.69**	**343**	||P		**P**	**15 45 47.8**	**+2.6**
HNS				pmax		pmax		
	comp=Z,16nm,1.0s							
BJI2	**Beijing**	**35.76**	**346**	P		**P**	**15 46 05.3**	**+2.2**
BJI2				sP		**pP**	**15 46 17.6**	**-1.0**
BJI2				pmax		pmax		
	comp=Z,6.0nm,1.2s							
BJI2				LR		LR		
	comp=Z,240nm,16.8s							
BJI2				LR		LR		
	comp=Z,210nm,18.5s							
BJT	**Baijiatuau**	**35.76**	**346**	P		**P**	**15 46 04.1**	**+1.0**
BJT	**Baijiatuau**	**35.76**	**346**	P		**P**	**15 46 05.4**	**+2.3**
BJT				x		x	15 46 17.3	
BJT				x		x	15 46 27.8	
LZDM	**Lanzhou Array**	**37.01**	**328**	P		**P**	**15 46 15.2**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=133,slow=8.7,SNR=3.5							
	comp=Z,0.9nm,0.3s							
LZH	**Lanzhou**	**37.04**	**329**	*eP*		**P**	**15 46 16.1**	**+1.9**
LZH				pP		pP	15 46 26.0	-3.8
LZH				sP		pwP	15 46 29.5	-3.2
LZH				pmax		pmax		
	comp=Z,13nm,1.8s							
HHC	**Hu-ho-hao-te**	**37.82**	**341**	*eP*		**P**	**15 46 23.4**	**+2.7**
HHC				pP		pP	15 46 31.8	-4.6
HHC				pmax		pmax		
	comp=Z,11nm,0.7s							
HHC				pmax		pmax		
	comp=Z,110nm,4.5s							
BTO2	**Baotou**	**38.29**	**339**	*eP*		**P**	**15 46 28.3**	**+3.6**
BTO2				pP		**pP**	**15 46 38.0**	**-2.4**
BTO2				sP		**pwP**	**15 46 42.0**	**-0.9**
BTO2				pmax		pmax		
	comp=Z,14nm,0.9s							
BTO2				pmax		pmax		
	comp=Z,770nm,8.3s							
MDJ	**Mudanjiang**	**39.20**	**3**	P		**P**	**15 46 33.8**	**+1.8**
MDJ				pmax		pmax		
	comp=Z,7.0nm,1.2s							
XLT	**XiLinHaoTe**	**39.48**	**348**	*eP*		**P**	**15 46 36.4**	**+1.8**
XLT				pmax		pmax		
	comp=Z,7.0nm,1.1s							
XLT				LR		LR		
	comp=Z,430nm,13.2s							
XLT				LR		LR		
	comp=Z,450nm,17.9s							
STKA	**Stephens Creek**	**39.70**	**160**	P		**P**	**15 46 38.2**	**+1.8**
	comp=Z,12nm,0.9s,baz=333,slow=9.8,SNR=5.6							
	comp=Z,12nm,0.9s							
STKA	**Stephens Creek**	**39.70**	**160**			**P**	**15 46 38.5**	**+2.1**
ASAJ	**Asahikawa**	**41.10**	**18**	P		**P**	**15 46 47.1**	**-0.7**
	comp=Z,7.8nm,0.9s,baz=175,slow=8.6,SNR=1.5							
	comp=Z,7.8nm,0.9s							
GTA2	**Gaotai**	**41.72**	**328**	*eP*		**P**	**15 46 54.1**	**+0.9**
GTA2				pmax		pmax		
	comp=Z,4.0nm,1.4s							
H11N1	**WAKE ISLAND Hy**	**41.73**	**66**	T		T	16 31 22.0	
	baz=255,slow=75,SNR=16							
H11N2	**WAKE ISLAND Hy**	**41.74**	**66**	T		T	16 31 20.4	
	baz=255,slow=75,SNR=23							
H11N3	**WAKE ISLAND Hy**	**41.75**	**66**	T		T	16 31 23.8	
	baz=255,slow=75,SNR=22							
GOMU	**GeErMu**	**42.33**	**321**	P		**P**	**15 46 58.9**	**+0.5**
GOMU				pmax		pmax		
	comp=Z,6.0nm,1.2s							
KLR	**Kul'dur**	**43.94**	**5**	P		**P**	**15 47 09.7**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=226,slow=20,SNR=2.0							
	comp=Z,0.6nm,0.4s							
HILR	**Hailar Array B**	**44.42**	**354**	P		**P**	**15 47 14.4**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=154,slow=8.0,SNR=1.9							
	comp=Z,0.8nm,0.5s							
ULN	**Ulaanbaatar**	**45.54**	**342**			**P**	**15 47 25.6**	**+1.9**
ULN				IAmb		IAmb	15 47 41.8	
	comp=Z,13nm,0.9s							
ULN	**Ulaanbaatar**	**45.54**	**342**	P		**P**	**15 47 27.6**	**+3.8**
ULN				x		x	15 47 38.8	
SONM	**Songino Array**	**45.72**	**341**	P		**P**	**15 47 25.8**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=151,slow=8.2,SNR=5.6							
	comp=Z,2.5nm,0.9s							
SONM	**Songino Array**	**45.72**	**341**	P		**P**	**15 47 25.8**	**+0.7**
TLY	**Talaya**	**49.95**	**342**	P		**P**	**15 47 56.8**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=170,slow=8.8							
	comp=Z,1.7nm,0.5s							
TLY	**Talaya**	**49.95**	**342**	P		**P**	**15 47 57.6**	**-0.1**
WMQ	**Urumqi**	**51.31**	**324**	*eP*		**P**	**15 48 11.5**	**+3.4**
WMQ				LR		LR		
	comp=Z,810nm,18.1s							
WMQ				LR		LR		
	comp=Z,570nm,15.7s							
WMQ				LR		LR		
	comp=Z,520nm,19.3s							
PETK	**Petropavlovsk-**	**54.00**	**23**	P		**P**	**15 48 27.6**	**-0.1**
	comp=Z,4.7nm,0.9s,baz=184,slow=2.3,SNR=4.9							
	comp=Z,4.7nm,0.9s							
WUS	**Wushi**	**55.26**	**318**	P		**P**	**15 48 37.4**	**+0.2**
WUS				IAmb		IAmb	15 49 05.3	
	comp=Z,12nm,0.8s							
MKAR	**Makanchi Array**	**56.14**	**325**	P		**P**	**15 48 44.4**	**+1.1**
	comp=Z,4.7nm,0.5s,baz=116,slow=7.0,SNR=24							
	comp=Z,4.7nm,0.5s							
MKAR	**Makanchi Array**	**56.14**	**325**	P		**P**	**15 48 43.2**	**-0.1**
MAKZ	**Makanchi**	**56.33**	**325**			**P**	**15 48 44.2**	**-0.5**
MAKZ				IAmb		IAmb	15 49 00.0	
	comp=Z,10nm,0.8s							
MAKZ	**Makanchi**	**56.33**	**325**	P		**P**	**15 48 46.0**	**+1.4**
MAKZ				x		x	15 48 54.9	
YAK	**Yakutsk**	**56.60**	**2**	P		**P**	**15 48 45.7**	**-0.5**
	comp=Z,5.0nm,0.5s,baz=285,slow=1.5,S

ISC 22 15:44:36.8±0.9, 7.58S±0.09×128.2E±0.1, h150km, n8, σ1$89/9, mb3.3/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.21**	**240**	P	**Pn**	**15 45 54.1**	**+1.1**
	16nm,0.4s,baz=135,slow=1.4,SNR=14						
BATI				S	**Sn**	**15 46 51.6**	**-0.8**
	26nm,0.4s,baz=130,slow=7.1,SNR=10						
SIJI	**Sorong**	**7.32**	**25**	P	**Pn**	**15 46 22.0**	**+0.8**
	11nm,0.9s,baz=170,slow=19,SNR=8.7						
SIJI				S	**Sn**	**15 47 42.0**	**-1.2**
	8.4nm,1.0s,baz=256,slow=23,SNR=1.2						
FITZ	**Fitzroy Crossi**	**10.75**	**193**	P	**Pn**	**15 47 04.1**	**-2.7**
	1.8nm,0.4s,baz=22,slow=15,SNR=14						
FITZ				S	Sn	15 48 54.8	-11
	2.3nm,0.4s,baz=118,slow=22,SNR=7.6						
WRA	**Warramunga Arr**	**13.65**	**155**	P	Pn	15 47 42.5	-1.8
	1.3nm,0.6s,baz=333,slow=12,SNR=5.8						
WRA				S	Sn	15 50 05.8	-10
	1.2nm,0.3s,baz=334,slow=22,SNR=8.1						
ASAR	**Alice Springs**	**16.90**	**162**	P	**P**	**15 48 25.7**	**+1.6**
	3.4nm,0.7s,baz=341,slow=11,SNR=9.7						
ASAR				S	S	15 51 24.2	-8.4
	0.9nm,0.6s,baz=316,slow=18,SNR=6.7						
STKA	**Stephens Creek**	**27.20**	**154**	P	**P**	**15 50 08.9**	**+2.3**
	0.6nm,0.3s,baz=318,slow=11,SNR=4.7						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**67.75**	**328**	P	**P**	**15 55 17.2**	**-1.0**
	0.1nm,0.5s,baz=126,slow=6.3,SNR=1.7						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**72.09**	**329**	P	**P**	**15 55 43.6**	**-1.0**
	0.3nm,0.5s,baz=126,slow=4.7,SNR=2.4						
	0.3nm,0.5s						

TEH 22 15:53:16.6, 34.01N×60.28E, h6km±74km, ML3.6, Presumed earthquake, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFRZ	**Afriz**	**1.20**	**241**	Pg	Pn	15 53 40.8	+0.7
TBJM	**Torbat-e-JAM**	**1.26**	**2**	Pg	Pn	15 53 41.4	+0.4
BAGH	**Bagheran - Bir**	**1.51**	**217**	Pg	Pg	15 53 46.3	+0.6
TBHD	**Torbat heydari**	**1.64**	**329**	Pg	Pg	15 53 48.3	+0.2
ITEG	**Tejag**	**1.69**	**229**	Pg	Pg	15 53 49.9	+0.9
JRKH	**Jarkhoshk**	**1.90**	**2**	Pn	Pg	15 53 53.0	0.0
IKOO	**Kooshah**	**1.90**	**214**	Pn	Pb	15 53 52.4	+0.5
IMOG	**Moghan**	**2.23**	**340**	Pn	Pb	15 53 57.2	-0.3
BSRN	**Basiran**	**2.25**	**206**	Pn	Pb	15 53 57.1	-0.7
IPAY	**Payeh**	**2.65**	**337**	Pn	Pb	15 54 03.0	-1.6
TKDS	**Koohdasht(Taba**	**2.65**	**262**	Pn	Pb	15 54 02.8	-1.8
TAPT	**Tabas- Tapeh t**	**2.72**	**290**	Pn	Pn	15 54 03.2	+2.2
IAKL	**Akhelmad**	**2.87**	**335**	Pn	Pb	15 54 06.3	-2.1
TNSJ	**Nastanj**	**3.05**	**270**	Pn	Pn	15 54 08.3	+2.9
TPRV	**Parvadeh(Tabas**	**3.15**	**253**	Pn	Pn	15 54 09.9	+3.1
ISFR	**Sfrayin**	**3.56**	**329**	Pn	Pn	15 54 15.8	+3.2
MRVT	**Maraveh tapeh**	**4.98**	**318**	Pn	Pn	15 54 34.7	+2.7
KBAM	**BAM**	**5.10**	**198**	Pn	Pn	15 54 36.3	+2.7

*IDC **22** 15:55:10.3±0.9, 41.27N×139.84E, h0km, mb3.6/7, mbtmp3.5/11, ML2.9/4, Error ellipse: s-maj=23.8km s-min=16.8km az=101.0*
*JMA **22** 15:55:12.9±0.0, 41.3N±0.2×139.8E±0.2, h14km±1km, MV3.7/39, W OFF AOMORI PREF*
JMA Felt I J1 at W OFF AOMORI PREF .

ISC 22 15:55:12.1±1.2, 41.30N±0.03×139.83E±0.04, h13km±8km, n21, σ0$62/33, mb3.7/7, 10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOMM	**Oshimamatsumae**	**0.26**	**30**	P	**Pb**	**15 55 18.2**	**-0.5**
JOMM				S	**Sg**	**15 55 21.7**	**+0.5**
JSI2	**Shiura 2**	**0.50**	**118**	⇓*i*P	**Pb**	**15 55 22.4**	**-0.3**
JSI2				⇓S	**Sb**	**15 55 29.2**	**-0.7**
JSR	**Shiriuchi**	**0.50**	**62**	⇓*i*P	**Pb**	**15 55 22.5**	**-0.2**
JSR				⇓S	**Sb**	**15 55 29.3**	**-0.6**
JIW	**Iwasaki**	**0.72**	**169**	*i*P	**Pb**	**15 55 26.3**	**-0.1**
JIW				S	**Sb**	**15 55 36.1**	**-0.1**
JOSM	**Okushiri--Mats**	**0.83**	**341**	P	**Pg**	**15 55 28.1**	**0.0**
JOSM				S	**Sg**	**15 55 39.1**	**+0.1**
JYM2	**Yakumo 2**	**0.91**	**26**	*i*P	**Pb**	**15 55 30.1**	**+0.2**
JYM2				S	**Sb**	**15 55 42.1**	**+0.2**
JOT	**Ohata**	**0.92**	**84**	⇓*e*P	**Pg**	**15 55 29.4**	**-0.5**
JOT				⇓S	**Sb**	**15 55 41.7**	**-0.3**
JTM	**Tenmabayashi**	**1.06**	**118**	⇓*i*P	**Pb**	**15 55 32.1**	**-0.3**
JTM				⇓S	**Sb**	**15 55 46.3**	**+0.1**
JKB	**Kayabe**	**1.08**	**56**	⇓*i*P	**Pb**	**15 55 32.8**	**+0.2**
JKB				⇓S	**Sb**	**15 55 47.0**	**+0.5**
JHST	**Hiyamasetana**	**1.12**	**2**	P	**Pg**	**15 55 32.9**	**-0.8**
JHST				S	**Sg**	**15 55 48.1**	**-0.3**
ASAJ	**Asahikawa**	**3.48**	**35**	Pn	**Pn**	**15 56 07.3**	**+1.4**
	0.5nm,0.3s,baz=187,slow=23,SNR=9.1						
	6.2nm,1.0s						
MJAR	**Matsushiro Arr**	**4.91**	**195**	Pn	**Pn**	**15 56 27.0**	**+1.3**
	0.2nm,0.3s,baz=7.6,slow=15,SNR=16						
MJAR				Sn	**Sn**	**15 57 22.0**	**-0.4**
	0.1nm,0.3s,baz=14,slow=21,SNR=2.0						
	1.8nm,0.4s						
USRK	**Ussuriysk Ar.**	**6.46**	**299**	Pn	**Pn**	**15 56 46.3**	**-0.5**
	0.6nm,0.3s,baz=101,slow=14,SNR=6.9						
USRK				Sn	**Sn**	**15 57 59.0**	**-1.5**
	0.6nm,0.3s,baz=123,slow=25,SNR=4.7						
	2.3nm,0.5s						
KSRS	**Korea Array**	**9.98**	**251**	Pn	**Pn**	**15 57 36.0**	**+0.8**
	0.3nm,0.3s,baz=63,slow=14,SNR=4.7						
	1.2nm,1.0s						
MKAR	**Makanchi Array**	**40.93**	**298**	P	**P**	**16 02 53.9**	**-0.2**
	0.2nm,0.7s,baz=71,slow=8.2,SNR=2.1						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**42.50**	**304**	P	**P**	**16 03 07.3**	**+0.4**
	0.7nm,0.6s,baz=80,slow=8.7,SNR=4.1						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**46.61**	**34**	P	**P**	**16 03 39.0**	**-0.5**
	0.6nm,0.9s,baz=275,slow=7.6,SNR=7.2						
	0.6nm,0.9s						
BVAR	**Borovoye Array**	**46.86**	**309**	P	**P**	**16 03 42.2**	**+0.6**
	0.8nm,0.6s,baz=74,slow=7.6,SNR=5.3						
	0.8nm,0.6s						
INK	**Inuvik**	**51.19**	**28**	P	**P**	**16 04 15.2**	**+0.6**
	0.6nm,0.4s,baz=294,slow=5.8,SNR=3.5						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**61.14**	**186**	P	**P**	**16 05 26.0**	**-0.2**
	1.0nm,0.5s,baz=2.6,slow=7.2,SNR=15						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**64.86**	**186**	P	**P**	**16 05 50.9**	**0.0**
	0.2nm,0.4s,baz=1.1,slow=6.9,SNR=8.7						
	0.2nm,0.4s						

IDC 22 15:56:29.6±2.0, 5.47N×126.46E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=209.3km s-min=22.0km az=67.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.42**	**163**	P	P	16 02 07.4	-0.8
	0.5nm,0.6s,baz=342,slow=9.2,SNR=2.3						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**29.86**	**166**	P	P	16 02 39.5	+0.6
	0.5nm,1.1s,baz=353,slow=7.1,SNR=4.1						
	0.5nm,1.1s						
MKAR	**Makanchi Array**	**55.98**	**325**	P	P	16 06 09.8	-0.1
	0.3nm,0.5s,baz=117,slow=7.1,SNR=8.0						
MKAR				PcP	PcP	16 07 07.6	-0.8
	0.3nm,0.7s,baz=111,slow=5.4,SNR=2.6						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**60.14**	**327**	P	P	16 06 38.1	-0.8
	0.7nm,0.7s,baz=125,slow=6.1,SNR=5.8						
	0.7nm,0.7s						
BVAR	**Borovoye Array**	**65.72**	**327**	P	P	16 07 17.4	+1.3
	0.6nm,0.7s,baz=116,slow=6.8,SNR=4.1						
	0.6nm,0.7s						

*IDC **22** 16:11:10.0±0.7, 26.88N×143.78E, h0km, mb3.8/14, mbtmp3.8/17, ML3.4/3, Error ellipse: s-maj=18.4km s-min=16.4km az=48.0*
*NIED **22** 16:11:13.6, 27.09N×143.83E, h54km, MW4.0, Moment Tensor Solution. s1 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.70; $M_{\theta\theta}$0.27; $M_{\phi\phi}$0.43; $M_{r\theta}$-0.88; $M_{\theta\phi}$-0.17; $M_{\phi r}$0.52; Fault plane solution: $M_0$1.18000×10^{15} NP1: ϕ_s331.00000°, δ17.00000°, λ-65.00000°. NP2: ϕ_s125.00000°, δ75.00000°, λ-97.00000°.*

ISC 22 16:11:15.2±0.8, 26.9N±0.1×143.71E±0.09, h35km, n20, σ1$09/23, mb3.8/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.37**	**277**	Pn	**Pn**	**16 11 37.6**	**-0.2**
	24nm,0.3s,baz=108,slow=20,SNR=23						
JCJ				Sn	**Sn**	**16 11 55.1**	**+0.4**
	88nm,0.3s,baz=277,slow=23,SNR=9.2						
MJAR	**Matsushiro Arr**	**10.66**	**335**	Pn	**Pn**	**16 13 44.0**	**-1.5**
	0.3nm,0.3s,baz=163,slow=11,SNR=36						
	4.9nm,0.5s						
KSRS	**Korea Array**	**16.96**	**312**	P	**Pn**	**16 15 08.0**	**-1.8**
	0.1nm,0.3s,baz=122,slow=11,SNR=5.0						
	1.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**19.66**	**334**	P	**P**	**16 15 39.7**	**-1.3**
	0.2nm,0.3s,baz=134,slow=14,SNR=1.9						
	3.4nm,1.0s						
HILR	**Hailar Array B**	**29.17**	**327**	P	**P**	**16 17 14.3**	**+1.2**
	0.3nm,0.3s,baz=139,slow=9.5,SNR=1.9						
	0.3nm,0.3s						
SONM	**Songino Array**	**35.78**	**316**	P	**P**	**16 18 10.6**	**-0.5**
	1.0nm,1.2s,baz=101,slow=8.3,SNR=3.0						
	1.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**41.97**	**268**	P	**P**	**16 19 02.4**	**-0.7**
	0.3nm,0.7s,baz=62,slow=8.1,SNR=2.1						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**47.47**	**192**	P	**P**	**16 19 46.8**	**0.0**
	5.1nm,0.9s,baz=11,slow=8.1,SNR=18						
	5.1nm,0.9s						
ZALV	**Zalesovo Beam**	**50.50**	**319**	P	**P**	**16 20 10.6**	**+0.9**
	0.6nm,0.6s,baz=99,slow=7.5,SNR=3.6						
ZALV				PcP	**PcP**	**16 21 27.9**	**+0.6**
	0.5nm,0.5s,baz=97,slow=2.3,SNR=2.4						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**51.18**	**192**	P	**P**	**16 20 14.5**	**-0.6**
	0.3nm,0.6s,baz=0.4,slow=5.2,SNR=14						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**51.62**	**310**	P	**P**	**16 20 18.6**	**+0.3**
	0.6nm,0.6s,baz=104,slow=6.6,SNR=8.6						
MKAR				PcP	**PcP**	**16 21 32.7**	**+1.0**
	0.3nm,0.8s,baz=81,slow=3.7,SNR=1.4						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**54.12**	**314**	P	**P**	**16 20 37.7**	**+1.1**
	1.5nm,0.6s,baz=90,slow=7.7,SNR=15						
	1.5nm,0.6s						
ILAR	**Eielson Array**	**57.21**	**29**	P	**P**	**16 20 58.7**	**+0.1**
	1.5nm,0.9s,baz=259,slow=5.6,SNR=11						
	1.5nm,0.9s						
BVAR	**Borovoye Array**	**59.08**	**318**	P	**P**	**16 21 12.6**	**+0.7**
	0.8nm,0.5s,baz=84,slow=6.5,SNR=6.0						
	0.8nm,0.5s						
YKA	**Yellowknife Ar**	**71.64**	**29**	P	**P**	**16 22 33.0**	**+0.1**
	0.5nm,0.7s,baz=293,slow=6.5,SNR=6.2						
	0.5nm,0.7s						
KBZ	**Khabaz**	**79.11**	**314**	P	**P**	**16 23 17.9**	**+1.8**
	1.7nm,0.9s,baz=127,slow=6.0,SNR=4.7						
	1.7nm,0.9s						
NVAR	**Mina Array Bea**	**79.55**	**52**	P	**P**	**16 23 19.1**	**+0.1**
	0.6nm,0.6s,baz=272,slow=5.2,SNR=4.2						
	0.6nm,0.6s						
PDAR	**Pinedale Array**	**83.37**	**45**	P	**P**	**16 23 39.9**	**+0.7**
	0.4nm,0.7s,baz=289,slow=4.5,SNR=4.6						
	0.4nm,0.7s						
LPAZ	**La Paz**	**148.65**	**77**	PKPbc	**PKPbc**	**16 31 00.4**	**+0.3**
	1.4nm,0.6s,baz=359,slow=2.7,SNR=5.2						
CPUP	**Villa Florida**	**161.18**	**93**	PKPab	**PKPab**	**16 31 53.6**	**-2.5**
	2.4nm,0.3s,baz=288,slow=3.4,SNR=3.4						

NOU 22 16:18:59.6, 15.69S×167.07E, h0km, MLv4.5/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.29**	**152**	P	Pn	16 19 37.8	-0.8
DVP	**Devils Point**	**2.29**	**152**	S	Sn	16 20 09.0	+1.4
DZM	**Mont Dzumac**	**6.38**	**185**	P	Pn	16 20 35.7	+0.8
ONTNC	**Ouen Toro**	**6.61**	**185**	P	Pn	16 20 38.6	+0.5
OUENC	**Ouen Island, N**	**6.70**	**182**	P	Pn	16 20 40.4	+1.1
NGOA	**Tingoa Renbel**	**7.96**	**300**	P	Pn	16 20 56.0	-0.6

*BJI **22** 16:29:34.0, 4.95N×126.60E, h54km, mB5.1/11, mb4.5/52, Ms4.6/5, Ms7 4.2/6*
*DJA **22** 16:29:34.2±0.5, 5.N±4.×12.7E±.°, h10km, M4.7/19, mb5.0/19, mB5.2/13, MLv4.9/19, Mw(mB)4.6/13*
*NEIC **22** 16:29:36.4±2.0, 5.42N±0.06×126.70E±0.08, h51km±5km, mb4.6/73, Error ellipse: s-maj=11.4km s-min=8.4km az=69.0*
*IDC **22** 16:29:36.3±1.5, 5.37N×126.64E, h49km±13km, mb4.2/26, mbtmp4.4/28, ML4.5/2, MS3.9/29, Error ellipse: s-maj=22.7km s-min=10.0km az=71.0*

ISC 22 16:29:36.4±0.9, 5.37N±0.05×126.71E±0.07, h54km±8km, n182, σ1$34/157, mb4.6/72, MS3.8/29, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.03**	**327**	P	**Pn**	**16 30 07.3**	**-0.9**
	1μm,0.7s,baz=119,slow=2.0,SNR=46						
DAV				S	**Sn**	**16 30 36.5**	**+4.0**
	1μm,0.7s,baz=240,slow=22,SNR=4.6						
DAV				LR	LR	16 31 09.4	
	comp=Z,3μm,19.3s,baz=172,slow=47						
DAV	**Davao City (W)**	**2.03**	**327**		**Pn**	**16 30 07.0**	**-1.2**
DAV	**Davao City (W)**	**2.03**	**327**	P	**Pn**	**16 30 08.0**	**-0.3**
SGSI	**Sangihe**	**2.04**	**215**	P	**Pn**	**16 30 08.4**	**0.0**
MNI	**Manado**	**4.32**	**206**	P	**Pn**	**16 30 41.4**	**+1.8**
TNTI	**Ternate**	**4.61**	**172**		**Pn**	**16 30 44.0**	**+0.4**
TNTI	**Ternate**	**4.61**	**172**	P	**Pn**	**16 30 46.4**	**+2.8**
GTOI	**Gorontalo**	**5.97**	**218**	P	**Pn**	**16 31 02.3**	**0.0**
	0.4nm1μm121nm,0.6s						
MRSI	**Marisa**	**6.80**	**225**	P	**Pn**	**16 31 15.0**	**+1.4**
	0.7nm2μm214nm,0.7s						
TOLI2	**Tolitoli**	**7.27**	**235**		**Pn**	**16 31 19.2**	**-0.9**
SANI	**Sanana**	**7.40**	**186**	P	**Pn**	**16 31 20.4**	**-1.5**
	0.2nm893nm46nm,0.6s						
LUWI	**Luwuk**	**7.48**	**212**		**Pn**	**16 31 26.8**	**+3.8**
LUWI	**Luwuk**	**7.48**	**212**	P	**Pn**	**16 31 26.4**	**+3.4**
SWI	**Sorong**	**7.68**	**144**	P	**Pn**	**16 31 25.8**	**+0.1**
	0.2nm37nm,0.8s						
SIJI	**Sorong**	**7.69**	**144**	P	**Pn**	**16 31 25.7**	**-0.2**
	3.1nm,0.3s,baz=326,slow=19,SNR=13						
	10nm,0.4s						
SIJI	**Sorong**	**7.69**	**144**	P	**Pn**	**16 31 25.6**	**-0.2**
APSI	**Ampana**	**8.03**	**219**	P	**Pn**	**16 31 33.1**	**+2.7**
	2μm163nm,1.0s						
MYLDM	**Lahad Datu**	**8.18**	**269**		**Pn**	**16 31 34.4**	**+1.9**
MYLDM	**Lahad Datu**	**8.18**	**269**	P	**Pn**	**16 31 34.8**	**+2.3**
	87nm,1.2s						
MPSI	**Mapaga**	**8.44**	**234**	P	**Pn**	**16 31 36.4**	**+0.3**
	23nm,0.7s						
NLAI	**Namlea**	**8.56**	**177**	P	**Pn**	**16 31 38.8**	**+1.1**
	1μm65nm,0.7s						
KRAI	**Karang Ratu**	**8.79**	**169**	P	**Pn**	**16 31 44.0**	**+3.1**
FAKI	**Fak Fak**	**9.92**	**146**	Pn	**Pn**	**16 31 57.3**	**+0.9**
FAKI	**Fak Fak**	**9.92**	**146**	P	**Pn**	**16 31 57.8**	**+1.4**
TGY	**Tagaytay City**	**10.38**	**327**	LR	LR	16 36 53.2	
	comp=Z,611nm,21.5s,baz=122,slow=42						
KKM	**Kota Kinabalu**	**10.46**	**274**	Pn	**Pn**	**16 32 01.9**	**-2.0**
KKM	**Kota Kinabalu**	**10.46**	**274**	P	**Pn**	**16 32 04.3**	**+0.4**
KAPI	**Kappang**	**12.43**	**214**	LR	LR	16 37 51.1	
	comp=Z,535nm,19.8s,baz=49,slow=40						
SBUM	**Sibu**	**14.74**	**259**	Pn	**Pn**	**16 33 01.8**	**-0.1**
SOEI	**Soe**	**15.22**	**189**	Pn	**Pn**	**16 33 08.1**	**0.0**
SOEI				IAmb	IAmb	16 33 29.7	
	comp=Z,40nm,0.8s						
BATI	**Baumata**	**15.76**	**191**	P	**Pn**	**16 33 14.4**	**-0.7**
	comp=Z,4.3nm,0.3s,baz=348,slow=3.7,SNR=5.2						
	comp=Z,15nm,0.7s						
JAY	**Jayapura**	**16.02**	**119**	LR	LR	16 39 38.1	
	comp=Z,382nm,18.9s,baz=306,slow=37						
MTN	**Manton Dam**	**18.62**	**166**	P	**P**	**16 33 49.5**	**-0.1**
YULB	**Yu-li**	**18.67**	**344**	P	**P**	**16 33 47.8**	**-2.3**
TPUB	**Ta-pu**	**18.77**	**342**	P	**P**	**16 33 50.6**	**-0.6**
TPUB				IAmb	IAmb	16 34 29.4	
	comp=Z,109nm,1.5s						
SSLB	**Suanglung**	**19.14**	**344**	P	**P**	**16 33 53.1**	**-2.2**
SSLB				IAmb	IAmb	16 34 36.2	
	comp=Z,61nm,1.5s						
GUMO	**Guam**	**19.68**	**64**	LR	LR	16 40 19.4	
	comp=Z,298nm,20.8s,baz=182,slow=33						
UGM	**Wanagama**	**20.85**	**231**	P	**P**	**16 34 12.1**	**-1.8**
KNRA	**Kununurra**	**21.01**	**174**		**P**	**16 34 15.2**	**-0.4**
KNRA				IAmb	IAmb	16 34 48.2	
	comp=Z,24nm,0.7s						
QIZ	**Qiongzhong**	**21.33**	**311**	P	**P**	**16 34 17.3**	**-1.7**
QIZ				IAmb	IAmb	16 34 22.0	
	comp=Z,53nm,1.3s						
QIZ	**Qiongzhong**	**21.33**	**311**	P	**P**	**16 34 19.8**	**+0.8**
QIZ				S	**S**	**16 38 16.6**	**+3.5**
QIZ				LR	LR		
	comp=Z,250nm,9.0s						
QIZ				LR	LR		
	comp=Z,230nm,12.6s						
JOW	**Kunigami**	**21.40**	**4**	LR	LR	16 43 33.3	
	comp=Z,79nm,18.3s,baz=114,slow=39						
LEM	**Lembang**	**22.58**	**238**	LR	LR	16 44 42.0	
	comp=Z,268nm,19.9s,baz=38,slow=40						
BBJI	**Bungbulang**	**22.89**	**236**		**P**	**16 34 35.4**	**-0.5**
MYKOM	**Kota Tinggi**	**23.08**	**262**	P	**P**	**16 34 38.4**	**+0.6**
MYKOM				IAmb	IAmb	16 35 10.9	
	comp=Z,40nm,1.2s						
COEN	**Coen**	**25.21**	**140**	P	**P**	**16 34 57.2**	**-0.1**
COEN				IAmb	IAmb	16 35 34.4	
	comp=Z,30nm,1.3s						
IPM	**Ipoh**	**25.60**	**269**		**P**	**16 35 01.4**	**+0.4**
IPM				IAmb	IAmb	16 35 04.6	
	comp=Z,20nm,0.9s						
KULM	**Kulim**	**25.95**	**271**	P	**P**	**16 35 04.0**	**0.0**
KULM				IAmb	IAmb	16 35 28.7	
	comp=Z,28nm,1.2s						
WB0	**Warramunga Arr**	**26.09**	**163**	P	**P**	**16 35 05.8**	**+0.6**
JCJ	**Chichijima**	**26.16**	**33**	P	**P**	**16 35 04.2**	**-1.7**
WRA	**Warramunga Arr**	**26.25**	**164**	P	**P**	**16 35 08.0**	**+1.3**
	comp=Z,9.2nm,0.8s,baz=334,slow=11,SNR=22						
WRA				ScP	**ScP**	**16 42 08.2**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=342,slow=3.8,SNR=7.5						
	comp=Z,9.2nm,0.8s						
WRA	**Warramunga Arr**	**26.25**	**164**	P	**P**	**16 35 05.4**	**-1.2**
WR8	**Warramunga Arr**	**26.30**	**163**	P	**P**	**16 35 08.1**	**+0.9**
WR8				IAmb	IAmb	16 35 37.0	
	comp=Z,16nm,0.9s						
MBWA	**Marble Bar**	**27.23**	**194**	P	**P**	**16 35 14.2**	**-1.3**
MBWA				IAmb	IAmb	16 35 30.8	
	comp=Z,16nm,1.0s						
NJ2	**Nanjing**	**27.55**	**345**	*e*P	**P**	**16 35 19.6**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PSA00	**Pilbara Seismi**	**27.60**	**194**	P	**P**	**16 35 17.1**	**-1.7**
PSA00				IAmb	IAmb	16 35 44.5	
	comp=Z,15nm,0.8s						
PSA00	**Pilbara Seismi**	**27.60**	**194**	P	**P**	**16 35 17.4**	**-1.5**
PSA00				IAmb	IAmb	16 35 33.0	
	comp=Z,15nm,1.2s						
RPSI	**Rantau Prapat**	**27.84**	**266**		**P**	**16 35 18.9**	**-2.1**
RPSI				IAmb	IAmb	16 35 22.8	
	comp=Z,17nm,0.8s						
JNU	**Nakatsue**	**27.89**	**7**	LR	LR	16 47 23.0	
	comp=Z,60nm,19.5s,baz=208,slow=38						
ENH	**Enshi**	**29.62**	**329**	P	**P**	**16 35 35.3**	**-1.4**
ENH				IAmb	IAmb	16 35 51.2	
	comp=Z,9.8nm,0.9s						
AS31	**Alice Springs**	**29.70**	**167**		**P**	**16 35 37.2**	**-0.2**
ASAR	**Alice Springs**	**29.70**	**167**	P	**P**	**16 35 38.2**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=353,slow=7.9,SNR=34						
ASAR				PcP	**PcP**	**16 38 40.1**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=358,slow=2.0,SNR=6.5						
ASAR				ScP	**ScP**	**16 42 19.4**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=358,slow=2.5,SNR=6.0						
ASAR				LR	LR	16 48 58.8	
	comp=Z,107nm,18.3s,baz=46,slow=39						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**29.70**	**167**	P	**P**	**16 35 37.7**	**+0.2**
CM31	**Chiang Mai Arr**	**30.06**	**298**	P	**P**	**16 35 39.0**	**-1.7**
CMAR	**Chiang Mai Arr**	**30.06**	**298**	P	**P**	**16 35 41.5**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=103,slow=7.3,SNR=24						
CMAR				PcP	**PcP**	**16 38 41.9**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=32,slow=0.2,SNR=4.7						
CMAR				ScP	**ScP**	**16 42 20.8**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=137,slow=1.6,SNR=6.9						
CMAR				LR	LR	16 48 05.9	
	comp=Z,139nm,18.5s,baz=110,slow=37						
	comp=Z,1.8nm,0.6s						
INU	**Inuyama**	**31.32**	**16**	P	**P**	**16 35 50.6**	**-1.0**
CTA	**Charters Tower**	**31.77**	**143**	LR	LR	16 49 30.5	
	comp=Z,121nm,18.8s,baz=333,slow=38						
CTAO	**Charters Tower**	**31.77**	**143**	P	**P**	**16 35 56.1**	**+0.4**
PZH	**PanZhiHua**	**31.78**	**314**	P	**P**	**16 35 58.3**	**+2.3**
LYN	**LuoYang**	**31.89**	**337**	P	**P**	**16 35 59.8**	**+3.1**
LYN				pmax	pmax		
	comp=Z,13nm,1.3s						
TIA	**Tai'an**	**31.94**	**345**	P	**P**	**16 35 58.5**	**+1.4**
TIA				pmax	pmax		

JKA IAmb IAmb 16 37 51.3
comp=Z,18nm,1.1s
H11S3 WAKE ISLAND Hy 41.12 68 T T 17 21 13.7
baz=257,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 41.14 68 T T 17 21 13.3
baz=257,slow=75,SNR=7.2
H11S2 WAKE ISLAND Hy 41.14 68 T T 17 21 12.3
baz=257,slow=75,SNR=19
LSA Lhasa 41.36 310 P **P** **16 37 15.5 -2.4**
LSA pmax pmax
comp=Z,4.0nm,0.8s
H11N1 WAKE ISLAND Hy 41.60 66 T T 17 21 49.7
baz=255,slow=75,SNR=26
H11N2 WAKE ISLAND Hy 41.61 66 T T 17 21 50.8
baz=255,slow=75,SNR=20
H11N3 WAKE ISLAND Hy 41.62 66 T T 17 21 51.7
baz=255,slow=75,SNR=24
GTA2 Gaotai 41.78 328 *e*P **P** **16 37 21.3 +0.5**
GTA2 PcP **PcP** **16 39 19.0 +2.7**
GTA2 pmax pmax
comp=Z,3.0nm,0.9s
GOMU GeErMu 42.40 321 P **P** **16 37 27.3 +1.1**
GOMU PcP **PcP** **16 39 20.8 +2.1**
GOMU pmax pmax
comp=Z,4.0nm,1.1s
ARMA Armidale 42.84 148 P **P** **16 37 28.7 -0.8**
ARMA IAmb IAmb 16 37 42.5
comp=Z,9.2nm,0.8s
KLR Kul'dur 43.92 5 LR LR 16 56 02.0
comp=Z,79nm,18.9s,baz=239,slow=36
HILR Hailar Array B 44.43 354 P **P** **16 37 43.2 +1.3**
comp=Z,3.3nm,0.6s,baz=178,slow=10,SNR=5.2
HILR PcP **PcP** **16 39 23.8 -1.0**
comp=Z,1.2nm,0.4s,baz=152,slow=4.2,SNR=3.0
comp=Z,3.3nm,0.6s
HEH HeiHe 44.74 1 *e*P P 16 37 51.3 +7.0
ULN Ulaanbaatar 45.57 342 P **P** **16 37 49.2 -1.9**
ULN IAmb IAmb 16 37 54.5
comp=Z,9.1nm,0.9s
CAN Canberra 45.58 154 P **P** **16 37 50.0 -1.2**
PALK Pallekele 45.75 275 LR LR 16 59 11.9
comp=Z,71nm,18.2s,baz=34,slow=39
SONM Songino Array 45.75 341 P **P** **16 37 53.4 +0.8**
comp=Z,2.0nm,0.6s,baz=158,slow=8.9,SNR=20
SONM PcP **PcP** **16 39 30.7 +1.1**
comp=Z,0.7nm,0.6s,baz=142,slow=3.4,SNR=2.2
comp=Z,2.0nm,0.6s
SONM Songino Array 45.75 341 P **P** **16 37 51.1 -1.5**
DZM Mont Dzumac 47.51 126 *e*LR LR 16 51 38.5
comp=Z,125nm,25.6s
TLY Talaya 49.98 341 LR LR 16 59 40.5
comp=Z,81nm,18.2s,baz=207,slow=36
WMQ Urumqi 51.38 324 *e*P **P** **16 38 38.8 +2.9**
WMQ LR LR
comp=Z,170nm,14.1s
PEA0B Petropavlovsk- 53.94 23 P **P** **16 38 54.5 +0.1**
PETK Petropavlovsk- 53.94 23 P **P** **16 38 55.9 +1.4**
comp=Z,4.6nm,0.7s,baz=216,slow=1.8,SNR=12
comp=Z,4.6nm,0.7s
PETK Petropavlovsk- 53.94 23 P **P** **16 38 54.5 +0.1**
WUS Wushi 55.34 317 P **P** **16 39 05.5 +0.4**
WUS PcP **PcP** **16 40 05.8 +0.7**
MKAR Makanchi Array 56.21 325 P **P** **16 39 11.3 +0.3**
comp=Z,5.6nm,0.5s,baz=118,slow=7.7,SNR=116
MKAR PcP **PcP** **16 40 09.4 +1.2**
comp=Z,6.4nm,0.7s,baz=118,slow=4.1,SNR=9.9
MKAR LR LR 17 04 21.2
comp=Z,260nm,19.8s,baz=66,slow=37
comp=Z,5.6nm,0.5s
MKAR Makanchi Array 56.21 325 P **P** **16 39 11.3 +0.3**
MKAR PcP **PcP** **16 40 08.8 +0.6**
MAKZ Makanchi 56.40 325 P **P** **16 39 12.1 -0.3**
MAKZ PcP **PcP** **16 40 09.0 +0.1**
YAK Yakutsk 56.59 2 LR LR 17 04 16.8
comp=Z,87nm,20.8s,baz=251,slow=37
YAK Yakutsk 56.59 2 P **P** **16 39 12.7 -0.7**
KSH2 Kashi 57.03 314 P **P** **16 39 18.3 +1.1**
KSH2 sP sP 16 39 38.8 +1.2
KSH2 pmax pmax
comp=Z,5.0nm,1.1s
MA2 Magadan 57.13 14 LR LR 17 03 24.0
comp=Z,34nm,20.9s,baz=260,slow=36
ZAA0 Zalesovo Array 59.13 333 P **P** **16 39 30.9 -0.4**
ZAA0 IAmb IAmb 16 39 34.4
comp=Z,4.7nm,0.8s
ZALV Zalesovo Beam 59.13 333 P **P** **16 39 31.1 -0.3**
comp=Z,2.4nm,0.4s,baz=121,slow=7.0,SNR=15
ZALV LR LR 17 06 11.0
comp=Z,226nm,18.2s,baz=299,slow=37
comp=Z,2.4nm,0.4s
ZALV Zalesovo Beam 59.13 333 P **P** **16 39 31.6 +0.3**
AAK Ala-Archa 59.14 317 LR LR 17 07 01.4
comp=Z,155nm,20.5s,baz=32,slow=38
AAK Ala-Archa 59.14 317 P **P** **16 39 31.7 -0.2**
KURK Kurchatov 60.36 327 P **P** **16 39 40.1 +0.3**
KURBB Kurchatov Arra 60.36 327 P **P** **16 39 40.0 +0.1**
comp=Z,14nm,0.6s,baz=126,slow=6.7,SNR=77
KURBB LR LR 17 07 42.3
comp=Z,124nm,18.2s,baz=176,slow=38
comp=Z,14nm,0.6s
KKAR Karatay Array 62.03 316 P **P** **16 39 50.7 -0.7**
BVAR Borovoye Array 65.95 327 P **P** **16 40 17.0 +0.1**
comp=Z,4.2nm,0.6s
comp=Z,4.2nm,0.6s
BORK Borovoye 66.00 327 P **P** **16 40 16.4 -0.7**
TIXI Tiksi 66.22 1 LR LR 17 09 30.1
comp=Z,61nm,21.8s,baz=192,slow=36
TIXI Tiksi 66.22 1 P **P** **16 40 19.0 +0.8**
TIXI IAmb IAmb 16 40 19.7
comp=Z,5.0nm,0.7s
AB31 Akbulak array 70.88 320 IAmb IAmb 16 40 50.7
comp=Z,6.7nm,0.8s
ABKAR Akbulak array 70.88 320 P **P** **16 40 47.5 -0.2**
AKTO Aktyubinsk 72.37 321 LR LR 17 14 25.8
comp=Z,326nm,18.8s,baz=346,slow=37
ARTI Arti 73.64 327 P **P** **16 41 02.7 -1.3**
E18K Tukpahlearik C 78.46 22 **P** **16 41 32.9 +1.6**
G19K Purcell Mounta 79.55 24 IAmb IAmb 16 42 00.5
comp=Z,8.9nm,1.5s
E19K Redstone River 79.74 22 IAmb IAmb 16 41 51.3
comp=Z,6.9nm,0.9s
D20K Etivluk River 80.20 21 IAmb IAmb 16 41 53.2
comp=Z,7.8nm,1.1s
B21K Ikpikpuk River 81.06 20 IAmb IAmb 16 41 54.0
comp=Z,4.7nm,0.8s
I21K Tanana 81.51 25 IAmb IAmb 16 41 56.1
comp=Z,4.8nm,0.9s
KBZ Khabaz 81.85 313 P **P** **16 41 48.9 -1.1**
comp=Z,1.3nm,0.9s,baz=108,slow=5.8,SNR=1.5
comp=Z,1.3nm,0.9s
E22K Anaktuvuk Pass 81.87 22 P **P** **16 41 50.0 +0.3**
E22K IAmb IAmb 16 42 03.4
comp=Z,6.7nm,1.0s
COLD Coldfoot 82.40 23 P **P** **16 41 53.1 +0.6**
COLD IAmb IAmb 16 42 00.9
comp=Z,3.7nm,0.8s
I23K Minto, Yukon-K 82.61 25 P **P** **16 41 55.2 +1.7**
I23K IAmb IAmb 16 42 09.7
comp=Z,6.2nm,1.3s
VOI Vohitsoka 82.68 247 P **P** **16 41 53.4 -1.5**
H24K Noodor Dome 83.26 24 IAmb IAmb 16 42 09.1
comp=Z,6.9nm,1.1s
G24K Hadweenzic Riv 83.45 24 IAmb IAmb 16 42 26.7
comp=Z,4.7nm,0.9s
ILAR Eielson Array 83.65 25 P **P** **16 41 58.2 -0.7**
comp=Z,1.0nm,0.8s,baz=246,slow=4.4,SNR=11
comp=Z,1.0nm,0.8s
ILAR Eielson Array 83.65 25 P **P** **16 41 58.9 0.0**
E25K Arctic Village 84.21 22 IAmb IAmb 16 42 22.1
comp=Z,5.5nm,1.2s
BMAR Burnt Mountain 84.59 23 P **P** **16 42 04.0 +0.3**
VNDA Vanda 85.04 173 P **P** **16 42 06.2 +0.5**
comp=Z,1.3nm,0.6s,baz=320,slow=3.2,SNR=6.0
comp=Z,1.3nm,0.6s
VNDA Vanda 85.04 173 P **P** **16 42 06.2 +0.5**
PPT2 Papeete2 85.64 108 *e*LR LR 17 08 56.6
comp=Z,163nm,25.8s
F28M Old Crow 86.39 23 IAmb IAmb 16 42 51.8
comp=Z,4.1nm,0.9s
TBI Tubuai 86.46 114 *e*LR LR 17 09 45.7
comp=Z,574nm,29.5s
FURI Furi 87.24 279 LR LR 17 21 14.8
comp=Z,36nm,19.2s,baz=34,slow=36
MMAI Mount Meron Ar 88.20 303 P **P** **16 42 22.1 -0.1**
comp=Z,3.1nm,0.7s,baz=66,slow=8.3,SNR=4.2
comp=Z,3.1nm,0.7s
SPITS Spitsbergen Ar 88.88 349 P **P** **16 42 24.1 -0.3**
comp=Z,13nm,0.4s,baz=96,slow=8.5,SNR=12
comp=Z,1.3nm,0.4s
ARCES ARCESS Array B 88.92 340 P **P** **16 42 24.2 -0.4**
comp=Z,2.8nm,0.5s,baz=80,slow=7.5,SNR=14
comp=Z,2.8nm,0.5s
ARCES ARCESS Array B 88.92 340 P **P** **16 42 23.4 -1.3**
BRTR Keskin Array B 88.97 310 P **P** **16 42 24.3 -1.5**
comp=Z,0.6nm,0.6s,baz=94,slow=3.8,SNR=5.2
comp=Z,0.6nm,0.6s
BRTR Keskin Array B 88.97 310 P **P** **16 42 24.1 -1.7**
FINES FINESS Array B 90.39 332 P **P** **16 42 31.8 +0.1**
comp=Z,5.7nm,0.9s,baz=68,slow=3.9,SNR=20
comp=Z,5.7nm,0.9s
AKASG Malin Array Be 90.62 321 P **P** **16 42 32.4 -0.6**
comp=Z,0.7nm,0.5s,baz=73,slow=4.2,SNR=4.4
comp=Z,0.7nm,0.5s
MLR Muntele Rosu 93.71 316 LR LR 17 31 43.5
comp=Z,327nm,18.4s,baz=326,slow=40
HFS Hagfors 96.57 332 P **P** **16 42 59.9 -0.3**
comp=Z,2.3nm,0.6s,baz=153,slow=0.3,SNR=7.2
comp=Z,2.3nm,0.6s
NOA NORSAR Array B 97.32 334 P **P** **16 43 02.9 -0.7**
comp=Z,1.0nm,0.7s,baz=108,slow=4.1,SNR=2.0
NOA LR LR 17 30 03.2
comp=Z,216nm,18.3s,baz=260,slow=37
comp=Z,1.0nm,0.7s
MODS Modra-Piesok 98.72 320 *e*PDIFF Pdif 16 43 13.0 +2.8
TXAR Lajitas Array 120.61 51 PKP **PKiKP** **16 48 23.4 +0.3**
comp=Z,0.2nm,0.6s,baz=205,slow=2.1,SNR=2.2
TORD Torodi Ar. Bea 122.38 289 PKP **PKPdf** **16 48 26.8 +0.2**
comp=Z,1.4nm,0.6s,baz=72,slow=2.7,SNR=9.0
PLCA Paso Flores 141.53 159 PKP **PKPdf** **16 49 01.9 -0.1**
comp=Z,1.3nm,0.7s,baz=207,slow=2.3,SNR=5.2
CFA Coronel Fontan 150.37 154 PKPbc **PKiKP** **16 49 23.8 +0.5**
comp=Z,1.0nm,0.5s,baz=280,slow=8.0,SNR=5.3

*IDC **22** 16:43:13.6±7.6, 17.°46N×106.°21W, h0km, mb3.2/4, mbtmp3.4/6, ML3.5/2, MS3.4/5, Error ellipse: s-maj=146.5km s-min=76.2km az=130.0*
*MEX **22** 16:43:21.2±0.8, 18.°11N×106.°08W, h10km±82km, MD4.4*
*NEIC **22** 16:43:23.5±2.6, 18.°2N±0.°1×105.°6W±0.°1, h10km±2km, mb4.2/42, Md4.4/29(MEX), Error ellipse: s-maj=22.8km s-min=17.7km az=226.0*
ISC 22 16:43:21.4±3.0, 18.°16N±0.°08×105.°64W±0.°07, h4km±18km, n81, σ1s53/76, mb4.2/12, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**1.45**	**23**	*e*P	**Pn**	**16 43 47.3**	**-1.1**
CJM				*e*S	**Sn**	**16 44 07.8**	**-0.1**
CDAR	**Ciudad de Arme**	**1.73**	**63**	*e*P	**Pn**	**16 43 53.3**	**+1.1**
CDAR				*e*S	**Sb**	**16 44 14.7**	**-1.3**
CEGR	**Campo Tres**	**2.09**	**54**	*e*P	**Pn**	**16 43 58.1**	**+0.7**
CEGR				*e*S	**Sg**	**16 44 28.0**	**-0.6**
MMIG	**Aquila**	**2.19**	**86**	*e*P	**Pb**	**16 44 00.5**	**-1.0**
MMIG				*e*S	**Sb**	**16 44 28.2**	**-0.7**
SOMAC	**Volcano de Col**	**2.34**	**54**	*e*P	**Pn**	**16 44 02.7**	**+1.7**
INCO	**Volcan de Coli**	**2.36**	**54**	*e*P	**Pn**	**16 44 03.1**	**+1.8**
INCO				*e*S	**Sn**	**16 44 32.0**	**+1.0**
ANIG	**Ahuacatlan**	**3.07**	**20**	*e*P	**Pn**	**16 44 11.4**	**+0.6**
ANIG				*e*S	**Sn**	**16 44 49.4**	**+1.3**
ZIIG	**Zihuatanejo**	**4.01**	**97**	*e*S	**Sn**	**16 45 12.2**	**+1.0**
MOIG	**Morelia**	**4.48**	**70**	Pn	**Pn**	**16 44 28.4**	**-1.9**
H06S1	**SOCORRO T**	**5.08**	**277**	T	T	16 49 20.7	
	SNR=50						
H06S		**5.08**	**277**	*e*S	Sn	16 45 24.6	-13
H06N1	**SOCORRO T-PHAS**	**5.12**	**279**	T	T	16 49 24.3	
	SNR=7.3						
H06N	**Isla Socorro**	**5.12**	**279**	*e*S	Sn	16 45 20.0	-19
ZAIG	**Zacatecas**	**5.42**	**32**		**Pn**	**16 44 43.8**	**+0.5**
TLIG	**Tlapa**	**6.76**	**94**		**Pn**	**16 45 03.2**	**+1.6**
LPIG	**La Paz**	**7.35**	**324**	LR	LR	16 47 27.9	
	comp=Z,347nm,18.2s,baz=155,slow=33						
TX31	**Lajitas Ar. Si**	**11.27**	**9**		**Pn**	**16 46 05.1**	**+1.7**
TXAR	**Lajitas Array**	**11.27**	**9**	Pn	**Pn**	**16 46 07.9**	**+4.5**
	0.1nm,0.3s,baz=189,slow=14,SNR=38						
TXAR				LR	LR	16 50 42.2	
	comp=Z,228nm,19.9s,baz=199,slow=37						
	3.3nm,0.8s						
TXAR	**Lajitas Array**	**11.27**	**9**		**Pn**	**16 46 05.5**	**+2.0**
833A	**Chaparral WMA,**	**11.63**	**28**	Pn	**Pn**	**16 46 09.1**	**+0.8**
DRIO	**Del Rio**	**12.12**	**21**		**Pn**	**16 46 16.3**	**+1.3**
ALPN	**Alpine**	**12.30**	**8**	Pn	**Pn**	**16 46 17.8**	**+0.3**
VHRN	**Van Horn**	**12.59**	**3**	Pn	**Pn**	**16 46 22.5**	**+1.1**
TPB01	**Permian Basin**	**12.84**	**7**	Pn	**Pn**	**16 46 27.9**	**+3.0**
OZNA	**Ozona**	**13.35**	**17**	Pn	**Pn**	**16 46 34.6**	**+2.8**
JCT	**Junction City**	**13.37**	**22**	Pn	**Pn**	**16 46 34.4**	**+2.4**
MNHN	**Monahans**	**13.38**	**11**	Pn	**Pn**	**16 46 33.3**	**+1.1**
TPB06	**Permian Basin**	**13.61**	**9**	Pn	**Pn**	**16 46 36.7**	**+1.3**
TPB11	**China Draw**	**13.80**	**6**	Pn	**Pn**	**16 46 38.5**	**+0.5**
GDL2	**Guadalupe Moun**	**14.03**	**4**	Pn	**Pn**	**16 46 43.1**	**+1.9**
BRLY	**Brady**	**14.39**	**23**		**Pn**	**16 46 47.6**	**+1.6**
128A	**Castleberry Fa**	**14.68**	**11**	Pn	**Pn**	**16 46 52.3**	**+2.3**
POST	**Post**	**15.31**	**13**	Pn	**Pn**	**16 46 58.7**	**+0.3**
POST				IAmb	IAmb	16 47 14.9	
	comp=Z,14nm,1.0s						
SN07	**Snyder 07**	**15.47**	**15**	Pn	**Pn**	**16 47 01.0**	**+0.4**
Y22A	**Socorro**	**15.76**	**356**		**Pn**	**16 47 06.0**	**+1.5**
MSTX	**Muleshoe**	**15.96**	**9**	P	**P**	**16 47 10.3**	**-0.3**
LENM	**Lemitar**	**15.99**	**356**	P	**P**	**16 47 12.2**	**+1.1**
PLPT	**Palo Pinto**	**16.01**	**23**	P	**P**	**16 47 10.3**	**-0.8**
PLPT				IAmb	IAmb	16 47 17.6	
	comp=Z,29nm,1.1s						
TEIG	**Tepich**	**16.53**	**80**	P	**Pn**	**16 47 14.8**	**+0.5**
ANMO	**Albuquerque**	**16.74**	**358**	P	**Pn**	**16 47 19.5**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=170,slow=14,SNR=5.0						
	comp=Z,0.9nm,0.6s						
ANMO	**Albuquerque**	**16.74**	**358**	P	**Pn**	**16 47 18.9**	**+1.9**
Z35A	**Perchaven, San**	**16.88**	**25**	P	**P**	**16 47 20.8**	**+0.1**
Z35A				IAmb	IAmb	16 47 27.1	
	comp=Z,25nm,1.0s						
X16A	**Lo Mia Camp, P**	**17.00**	**343**	P	**Pn**	**16 47 22.8**	**+2.5**
AMTX	**Amarillo**	**17.03**	**11**	P	**Pn**	**16 47 22.2**	**+1.6**
AMTX				IAmb	IAmb	16 47 24.9	
	comp=Z,23nm,1.2s						
PH02	**Texas Public H**	**17.48**	**10**	P	**Pn**	**16 47 26.9**	**+0.7**
PH02				IAmb	IAmb	16 47 31.6	
	comp=Z,13nm,0.8s						
SMWD	**Samnorwood**	**17.55**	**15**	P	**Pn**	**16 47 27.6**	**+0.6**
SMWD				IAmb	IAmb	16 47 35.6	
	comp=Z,18nm,0.9s						
X34A	**Smith Ranch, M**	**17.80**	**22**	P	**P**	**16 47 32.5**	**+1.6**
PFO	**Pinyon Flats O**	**18.19**	**330**	LR	LR	16 52 59.2	
	comp=Z,138nm,18.7s,baz=22,slow=32						
RTBA	**Rita Blanca**	**18.39**	**7**	P	**Pn**	**16 47 37.5**	**0.0**
RTBA				IAmb	IAmb	16 47 43.6	
	comp=Z,11nm,1.0s						
MVCO	**Mesa Verde**	**19.15**	**353**	P	**P**	**16 47 47.8**	**+1.8**
MVCO				IAmb	IAmb	16 48 09.3	
	comp=Z,13nm,1.4s						
SDCO	**Great Sand Dun**	**19.52**	**0**	P	**P**	**16 47 50.5**	**+0.4**
TUL3	**Leonard**	**19.72**	**24**	P	**P**	**16 47 52.5**	**+0.5**
GSC	**Goldstone, Bar**	**19.75**	**332**	P	**P**	**16 47 54.6**	**+2.2**
PV13	**Radium Mtn., P**	**20.12**	**353**	P	**P**	**16 47 57.3**	**+0.7**
CCCA	**Chr Cany lake**	**20.19**	**331**	P	**P**	**16 47 57.4**	**+0.3**
CCCA				IAmb	IAmb	16 48 02.3	
	comp=Z,12nm,1.4s						
T35A	**Sooner Cattle**	**20.34**	**21**	P	**P**	**16 47 58.5**	**-0.3**
PV22	**Blue Mesa, Par**	**20.49**	**353**	P	**P**	**16 48 00.8**	**+0.3**
PV22				IAmb	IAmb	16 48 11.7	
	comp=Z,9.4nm,1.0s						
VES	**Vestal, Richgr**	**21.26**	**329**	P	**P**	**16 48 10.8**	**+2.1**
VES				IAmb	IAmb	16 48 14.7	
	comp=Z,31nm,1.4s						
FCAR	**Ozark Folk Cen**	**21.34**	**31**	P	**P**	**16 48 09.3**	**-0.2**
FCAR				IAmb	IAmb	16 48 13.2	
	comp=Z,8.5nm,1.0s						
PSUT	**Pine Spring**	**21.53**	**342**	P	**P**	**16 48 15.1**	**+3.2**
MGMO	**Mountain Grove**	**22.28**	**29**	P	**P**	**16 48 18.5**	**-1.2**
MGMO				IAmb	IAmb	16 48 26.7	
	comp=Z,14nm,1.1s						
NVAR	**Mina Array Bea**	**23.03**	**334**	P	**P**	**16 48 24.5**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=164,slow=9.7,SNR=1.6						
NVAR				LR	LR	16 56 10.6	
	comp=Z,177nm,18.6s,baz=77,slow=33						
	comp=Z,0.1nm,0.3s						
CCM	**Cathedral Cave**	**23.49**	**30**	P	**P**	**16 48 32.4**	**+0.2**
FPAL	**Fort Paine**	**24.18**	**44**	P	**P**	**16 48 38.9**	**-0.1**
S44A	**Carbondale**	**24.19**	**33**	P	**P**	**16 48 39.2**	**+0.2**
P40A	**Paris**	**24.34**	**26**	P	**P**	**16 48 40.6**	**+0.3**
PDAR	**Pinedale Array**	**24.76**	**353**	P	**P**	**16 48 42.7**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=153,slow=7.6,SNR=5.8						
	comp=Z,0.6nm,0.9s						
PDAR	**Pinedale Array**	**24.76**	**353**	P	**P**	**16 48 44.2**	**-0.2**
GOGA	**Godfrey**	**25.01**	**48**	P	**P**	**16 48 47.3**	**+0.8**
LOHW	**Long Hollow**	**25.72**	**352**	P	**P**	**16 48 54.0**	**+0.9**
LOHW				IAmb	IAmb	16 49 04.7	
	comp=Z,8.7nm,1.2s						
YBH	**Yreka Blue Hor**	**27.66**	**332**	LR	LR	16 59 45.3	
	comp=Z,12nm,18.3s,baz=106,slow=35						
YKA	**Yellowknife Ar**	**44.73**	**354**	P	**P**	**16 51 33.4**	**-2.1**
	comp=Z,0.2nm,0.8s,baz=174,slow=7.6,SNR=4.1						
	comp=Z,0.2nm,0.8s						
G27K	**Doyon Strip**	**53.91**	**343**	P	**P**	**16 52 44.1**	**-1.6**
G27K				IAmb	IAmb	16 53 23.5	
	comp=Z,2.4nm,1.2s						
F28M	**Old Crow**	**54.04**	**345**	P	**P**	**16 52 46.1**	**-0.6**
F28M				IAmb	IAmb	16 52 59.9	
	comp=Z,5.2nm,1.1s						
ILAR	**Eielson Array**	**54.11**	**340**	P	P	16 52 43.3	-3.9
	comp=Z,0.4nm,0.7s,baz=136,slow=7.3,SNR=5.0						
	comp=Z,0.4nm,0.7s						
PRP	**Porcupine Dome**	**54.16**	**341**	P	**P**	**16 52 47.4**	**-0.2**
PRP				IAmb	IAmb	16 53 13.6	
	comp=Z,5.1nm,1.4s						
BMAR	**Burnt Mountain**	**55.17**	**343**	P	**P**	**16 52 53.3**	**-1.5**
F26K	**Sheenjek River**	**55.23**	**343**	P	**P**	**16 52 54.9**	**-0.4**
F26K				IAmb	IAmb	16 52 57.8	
	comp=Z,3.6nm,1.4s						
H03N2	**Juan Fernandez**	**57.29**	**153**	T	T	17 54 58.3	
	baz=331,slow=78,SNR=6.2						
H03N1	**Juan Fernandez**	**57.30**	**153**	T	T	17 55 06.3	
	baz=331,slow=78,SNR=8.2						
H03N3	**Juan Fernandez**	**57.31**	**153**	T	T	17 55 03.3	
	baz=331,slow=78,SNR=9.0						

*CRAAG **22** 16:52:32.1, 35.°28N×0.°68W, Ml3.0, Algrie 01km SW Ain-Trid*
*MDD **22** 16:52:33.0±1.0, 35.°34N×0.°70W, h5km±20km, Mb3.8/12, M_mb3.1/12, Error ellipse: s-maj=26.6km s-min=6.4km az=155.0*
ISC 22 16:52:33.4±1.4, 35.°40N±0.°07×0.°74W±0.°04, h16km±13km, n30, σ1s50/48, 9C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSBL	**Sidi Abdelli**	**0.46**	**226**	P	**Pg**	**16 52 42.7**	**0.0**
ODJA	**Bouhanifia**	**0.49**	**98**	P	**Pg**	**16 52 41.9**	**-1.3**
OLHC	**Oulhaca**	**0.58**	**255**	P	**Pb**	**16 52 47.0**	**+1.8**
OBBL	**Beni Bahdel**	**0.94**	**222**	P	**Pg**	**16 52 50.1**	**-1.5**
ESMB	**Sidi M'hamed B**	**1.09**	**81**	P	**Pb**	**16 52 53.1**	**-0.9**
OKGL	**Djebel Kef Gue**	**1.29**	**60**	P	**Pg**	**16 52 59.7**	**+1.4**
EANR	**'Ain N'Sour**	**1.59**	**69**	P	Pg	16 53 11.3	+7.2
EADEB	**Ain Deheb**	**1.96**	**105**	P	**Pn**	**16 53 08.4**	**+2.2**
ENIJ	**Nijar**	**1.96**	**323**	Pn	**Pn**	**16 53 06.7**	**+0.5**
ENIJ				Sn	**Sn**	**16 53 30.8**	**+0.3**
ENIJ	**Nijar**	**1.96**	**323**	Pn	**Pn**	**16 53 06.4**	**+0.3**
ENIJ				⇑*i*Vmb_VC		16 53 08.5	
	592nm,SNR=6.7						
ENIJ				Sn	**Sn**	**16 53 30.6**	**0.0**
CART	**Cartagena**	**2.19**	**355**	Pn	**Pn**	**16 53 08.4**	**-0.8**
CART				Sn	**Sn**	**16 53 33.3**	**-2.7**
EBER	**Berja**	**2.29**	**311**	Pn	**Pn**	**16 53 10.7**	**-0.1**
EBER	**Berja**	**2.29**	**311**	Pn	**Pn**	**16 53 10.8**	**-0.1**
EBER				⇑*i*Vmb_VC		16 53 15.8	
	351nm,SNR=4.5						
EBER				Sn	**Sn**	**16 53 39.8**	**+1.0**
EMUR	**La Murta**	**2.47**	**351**	Pn	**Pn**	**16 53 13.4**	**+0.3**
EMUR				Sn	**Sn**	**16 53 41.5**	**-1.4**
EMUR	**La Murta**	**2.47**	**351**	Pn	**Pn**	**16 53 13.6**	**+0.6**
EMUR				Sn	**Sn**	**16 53 42.2**	**-0.8**
ELGU	**Los Guajares,**	**2.76**	**303**	Pn	**Pn**	**16 53 15.9**	**-1.1**
ELGU				Sn	**Sn**	**16 53 48.2**	**-2.0**
ELGU	**Los Guajares,**	**2.76**	**303**	Pn	**Pn**	**16 53 15.8**	**-1.3**
ELGU				⇑*i*Vmb_VC		16 53 23.1	
	187nm,SNR=2.3						
ELGU				Sn	**Sn**	**16 53 50.0**	**-0.1**
EQUE	**Quentar**	**2.83**	**310**	Pn	**Pn**	**16 53 19.8**	**+1.7**
EQUE				⇑*i*Vmb_VC		16 53 22.3	
	166nm,SNR=3.0						
EQUE				Sn	**Sn**	**16 53 53.8**	**+1.9**
EQTA	**Presa de Quent**	**2.83**	**310**	Pn	**Pn**	**16 53 19.5**	**+1.4**
EQES	**Quesada**	**3.04**	**323**	Pn	**Pn**	**16 53 23.8**	**+2.7**
EQES				Sn	**Sn**	**16 54 00.1**	**+2.9**
ETOB	**Tobarra**	**3.30**	**349**	Pn	**Pn**	**16 53 26.1**	**+1.6**
ETOB				Sn	**Sn**	**16 54 03.4**	**-0.1**
ETOB	**Tobarra**	**3.30**	**349**	Pn	**Pn**	**16 53 26.4**	**+1.9**
ETOB				⇑*i*Vmb_VC		16 53 29.3	
	217nm,SNR=2.4						
ETOB				Sn	**Sn**	**16 54 02.7**	**-0.8**
EVIV	**Cofrentes, Val**	**3.87**	**356**	Pn	**Pn**	**16 53 32.4**	**+0.1**
EVIV				⇑*i*Vmb_VC		16 53 41.3	
	87nm,SNR=1.0						
EVIV				Sn	**Sn**	**16 54 15.7**	**-1.9**
EIBI	**Ibiza**	**3.98**	**24**	Pn	**Pn**	**16 53 34.3**	**+0.5**
EIBI				Sn	**Sn**	**16 54 18.4**	**-1.8**
EADA	**Adamuz**	**4.13**	**313**	Pn	**Pn**	**16 53 37.0**	**+1.0**
PSIM	**Granatula de C**	**4.18**	**326**	Pn	**Pn**	**16 53 36.2**	**-0.3**
PSIM				Sn	**Sn**	**16 54 23.7**	**-1.5**
ECAB	**El Cabril**	**4.61**	**307**	Pn	**Pn**	**16 53 42.5**	**0.0**
ECAB				Sn	**Sn**	**16 54 32.0**	**-3.7**
ECAB	**El Cabril**	**4.61**	**307**	Pn	**Pn**	**16 53 42.9**	**+0.4**
ECAB				⇑*i*Vmb_VC		16 53 52.8	
	94nm,SNR=1.4						
ECAB				Sn	**Sn**	**16 54 33.0**	**-2.7**
EMOS	**Mosqueruela**	**4.96**	**2**	Pn	**Pn**	**16 53 48.7**	**+1.3**
EMOS				⇑*i*Vmb_VC		16 53 57.4	
	115nm,SNR=1.5						
EMOS				Sn	**Sn**	**16 54 45.0**	**+0.5**
PAB	**San Pablo**	**5.03**	**326**	Pn	**Pn**	**16 53 48.7**	**+0.3**
PAB				⇑*i*Vmb_VC		16 53 54.7	
	73nm,SNR=1.1						
PAB				Sn	**Sn**	**16 54 45.2**	**-1.1**

IDC 22 17:02:41.6±1.2, 13.°66N×120.°71E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=28.6km s-min=9.0km az=111.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.49**	**26**	Pg	Pb	17 02 52.5	-0.7
	334nm,0.3s,baz=138,slow=3.2,SNR=18						
TGY				Lg	Lg	17 02 56.6	
	382nm,0.3s,baz=194,slow=7.3,SNR=15						
CMAR	**Chiang Mai Arr**	**21.45**	**286**	P	P	17 07 32.5	+0.7
	0.1nm,0.3s,baz=98,slow=10,SNR=1.4						
	0.1nm,0.3s						

	40nm,0.2s						
GRNR				*e*Sg	**Sg**	17 10 46.3	-2.1
GRNR				A	A	17 10 47.6	
	220nm,0.3s						
GRNR				A	A	17 10 47.6	
	170nm,0.3s						
EKMR	**Ekimchan**	**3.31**	**7**	*e*P	**Pn**	**17 10 10.7**	**+1.7**
EKMR				*e*Pg	**Pb**	**17 10 18.3**	**+2.4**
EKMR				AMB	AMB	17 10 21.7	
	50nm,0.4s						
EKMR				*e*Sg	**Sg**	**17 11 01.5**	**-1.8**
EKMR				A	A	17 11 03.7	
	90nm,0.4s						
EKMR				A	A	17 11 03.7	
	200nm,0.4s						
OCTB	**Oktyabr'skiy**	**3.94**	**326**	*e*P	**Pn**	**17 10 18.9**	**+1.3**
OCTB				*e*Pg	**Pb**	**17 10 29.4**	**+2.8**
OCTB				AMB	AMB	17 10 32.8	
	30nm,0.3s						
OCTB				*e*Sg	**Sg**	**17 11 20.8**	**-2.8**
OCTB				A	A	17 11 24.4	
	90nm,0.5s						
OCTB				A	A	17 11 24.4	
	120nm,0.5s						
ZEA	**Zeya**	**5.03**	**324**	*e*P	**Pn**	**17 10 33.9**	**+1.4**
ZEA				*e*Pg	**Pb**	**17 10 49.0**	**+3.9**
ZEA				AMB	AMB	17 10 54.2	
	20nm,0.4s						
ZEA				AMB	AMB	17 10 54.2	
	20nm,0.4s						
ZEA				AMB	AMB	17 10 54.2	
	50nm,0.4s						
ZEA				*e*Sg	**Sg**	**17 11 54.5**	**-3.8**
ZEA				A	A	17 11 55.1	
	80nm,0.8s						
BMKR	**Bomnak**	**5.35**	**338**	*e*Sg	**Sg**	**17 12 04.9**	**-3.9**
BMKR				A	A	17 12 09.3	
	80nm,0.4s						
BMKR				A	A	17 12 09.3	
	70nm,0.4s						
TEY	**Ternei**	**5.60**	**147**	*e*Pn	**Pn**	**17 10 42.4**	**+2.0**
TEY				*e*Sg	**Sg**	**17 12 12.7**	**-4.1**
USRK	**Ussuriysk Ar.**	**5.60**	**182**	Pn	**Pn**	**17 10 41.0**	**+0.6**
	0.6nm,0.3s,baz=358,slow=13,SNR=9.3						
USRK				Lg	Lg	17 12 10.9	
	3.5nm,0.3s,baz=353,slow=34,SNR=8.2						
	3.4nm,0.5s						
GRTR	**Gornotajezhnoj**	**6.09**	**181**	*e*Sg	**Sg**	**17 12 30.0**	**-2.6**
GRTR				A	A	17 12 34.9	
	20nm,0.6s						
GRTR				A	A	17 12 34.9	
	30nm,0.6s						
NKL	**Nikolayevsk**	**6.24**	**54**	*e*Pg	Pb	17 11 12.0	+6.2
NKL				AMB	AMB	17 11 17.2	
	20nm,0.4s						
NKL				*e*Sg	**Sg**	**17 12 33.8**	**-3.5**
NKL				A	A	17 12 37.0	
	50nm,0.6s						
NKL				A	A	17 12 37.0	
	30nm,0.6s						
PSTR	**Posyet**	**7.22**	**189**	*e*Sg	**Sg**	**17 13 03.6**	**-5.0**
PSTR				A	A	17 13 06.6	
	20nm,0.7s						
PSTR				A	A	17 13 06.6	
	20nm,0.7s						
HILR	**Hailar Array B**	**8.12**	**273**	Pn	**Pn**	**17 11 14.6**	**-0.4**
	baz=79,slow=14						
HILR				Lg	Lg	17 13 33.5	
	baz=75,slow=31						
	0.7nm,0.3s						
YAK	**Yakutsk**	**12.35**	**354**	Lg	Lg	17 15 36.0	
	1.4nm,0.3s,baz=254,slow=21,SNR=8.3						
MA2	**Magadan**	**14.46**	**40**	Pn	**Pn**	**17 12 42.6**	**+1.0**
	0.2nm,0.3s,baz=205,slow=8.7,SNR=3.6						
	0.5nm,0.3s						
SONM	**Songino Array**	**17.12**	**273**	Lg	Lg	17 18 14.3	
	0.1nm,0.3s,baz=74,slow=26,SNR=12						
SEY	**Seymchan**	**17.14**	**32**	P	**P**	**17 13 20.0**	**+1.9**
	0.9nm,0.7s,baz=221,slow=20,SNR=4.4						
TIXI	**Tiksi**	**21.98**	**357**	P	**P**	**17 14 10.6**	**-0.2**
	8.1nm,0.3s,baz=194,slow=6.6,SNR=6.7						
	8.1nm,0.3s						
BVAR	**Borovoye Array**	**37.67**	**299**	P	**P**	**17 16 31.8**	**-0.4**
	0.5nm,0.6s						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**42.92**	**38**	P	**P**	**17 17 13.2**	**-2.4**
	0.4nm,0.6s,baz=294,slow=9.0,SNR=8.3						
	0.4nm,0.6s						

*IDC **22** 17:09:35.4±0.9,51°.57N×15°.97E,h0km,mbtmp3.7/4, ML2.2/3,Error ellipse: s-maj=20.5km s-min=9.2km az=119.0*
*IPEC **22** 17:09:35.3±0.2,51°.56N×16°.22E,h1km,ML2.6/7,Error ellipse: s-maj=2.6km s-min=1.3km az=72.0*
*VIE **22** 17:09:36.5±0.7,51°.48N×15°.99E,h0km,mb2.8/8,ml2.7/12, Error ellipse: s-maj=9.5km s-min=3.4km az=50.0 83 km WNW of Wroclaw Suspected Mining induced.*
*PRU **22** 17:09:38.0,51°.47N×16°.16E,h10km*
ISC 22 17:09:33.7±0.8,51°.62N±0°.03×16°.13E±0°.02,h0km,n48,
σ1ᵍ19°/90,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.78**	**172**	*e*Pg	**Pb**	**17 09 49.5**	**-0.7**
KSP				*e*Sg	**Sg**	**17 09 59.1**	**+0.3**
CHVC	**Chvalec**	**1.03**	**183**	*e*PG	**Pb**	**17 09 54.2**	**-0.2**
CHVC				*e*SG	**Sg**	**17 10 07.4**	**+0.6**
	comp=Z,57nm,0.6s						
OSTC	**Ostas**	**1.06**	**177**	*e*PG	**Pb**	**17 09 54.7**	**-0.3**
OSTC				*e*SG	**Sg**	**17 10 08.2**	**+0.4**
UPC	**Upice**	**1.11**	**184**	*e*PG	**Pb**	**17 09 55.7**	**-0.1**
UPC				*e*SG	**Sg**	**17 10 09.5**	**+0.1**
DPC	**Dobruska-Polom**	**1.27**	**174**	*e*PG	**Pg**	**17 09 58.3**	**+0.2**
DPC				*e*SG	**Sg**	**17 10 14.0**	**-0.6**
	comp=Z,38nm,0.5s						
PIVO	**Bartosovice**	**1.46**	**169**	*e*Pg	**Pn**	**17 10 01.4**	**+0.1**
	baz=352						
PIVO				*e*Sg	**Sg**	**17 10 18.6**	**-1.8**
	71nm,0.4s,baz=352						
PVCC	**Panska Ves**	**1.47**	**223**	*e*PG	**Pb**	**17 10 02.7**	**+0.8**
PVCC				*e*SG	**Sn**	**17 10 21.8**	**+0.4**
	comp=Z,141nm,0.4s						
BRG	**Berggiesshubel**	**1.56**	**242**	Pg	**Pg**	**17 10 04.3**	**+0.6**
BRG				Sg	**Sg**	**17 10 25.0**	**+1.1**
BRG				Amp		17 10 26.9	
	comp=Z,58nm,0.5s						
KRLC	**Kraliky**	**1.60**	**165**	*e*PG	**Pn**	**17 10 03.7**	**+0.4**
KRLC				*e*SG	**Sn**	**17 10 23.8**	**-0.8**
	comp=Z,39nm,0.5s						
RYBC	**Ceska Rybna**	**1.81**	**181**	*e*Pn	**Pn**	**17 10 06.4**	**+0.2**
	baz=3.0						
RYBC				*e*Sg	**Sb**	**17 10 30.5**	**-0.4**
	comp=Z,46nm,0.4s,baz=3.0						
PRU	**Pruhonice**	**1.92**	**212**	*e*PG	**Pb**	**17 10 09.7**	**+0.2**
CLL	**Collm**	**1.98**	**262**	*i* Pn	**Pn**	**17 10 08.7**	**+0.2**
	comp=Z,10.0nm,0.4s						
CLL				*i* Pg	**Pg**	**17 10 12.2**	**+0.5**
CLL				*i* x	x	17 10 15.7	
CLL				*i* Sg	**Sg**	**17 10 39.0**	**+1.7**
	comp=Z,39nm,0.4s						
STEB	**Steborice**	**1.98**	**148**	*e*PN	**Pn**	**17 10 08.6**	**+0.1**
STEB				*e*PG	**Pb**	**17 10 11.0**	**+0.4**
STEB				*e*SG	**Sb**	**17 10 36.5**	**+0.7**
	comp=Z,56nm,0.6s						
MORC	**Moravsky Berou**	**2.05**	**153**	*e*Pn	**Pn**	**17 10 09.5**	**+0.1**
	baz=335						
MORC				*e*Sg	**Sb**	**17 10 37.3**	**-0.5**
	comp=Z,30nm,0.6s,baz=335						
MORC	**Moravsky Berou**	**2.05**	**153**	*e*PN	**Pn**	**17 10 09.6**	**+0.1**
MORC				*e*SG	**Sb**	**17 10 37.4**	**-0.4**
OKC	**Ostrava-Krasne**	**2.19**	**143**	*e*PG	**Pg**	**17 10 15.7**	**-0.1**
OKC				*e*SG	**Sb**	**17 10 42.4**	**+0.4**
	comp=Z,27nm,0.4s						
VRAC	**Vranov**	**2.33**	**173**	*e*Pn	**Pn**	**17 10 14.0**	**+0.7**
	baz=354						
VRAC				*e*Sg	**Sb**	**17 10 46.3**	**+0.4**
	comp=Z,25nm,0.5s,baz=354						
MAUC	**Maruska**	**2.50**	**154**	*e*SG	**Sg**	**17 10 55.4**	**+1.4**
	comp=Z,59nm,0.6s						
ZVC	**Zvikov**	**2.51**	**210**	*e*PN	**Pn**	**17 10 16.2**	**+0.5**
ZVC				*e*PG	**Pb**	**17 10 20.3**	**+0.7**
KRUC	**Moravsky**	**2.56**	**176**	*e*Pn	**Pn**	**17 10 17.4**	**+0.9**
	baz=357						
KRUC				*e*Sg	**Sb**	**17 10 53.4**	**+0.8**
	comp=Z,26nm,1.0s,baz=357						
NKC	**Novy Kostel**	**2.71**	**241**	*e*PN	**Pn**	**17 10 19.6**	**+1.0**
NKC				*e*PG	**Pg**	**17 10 26.9**	**+1.3**
NKC				*e*SG	**Sg**	**17 11 02.1**	**+1.3**
OJC	**Ojcow**	**2.71**	**120**	*e*Pg	**Pg**	**17 10 27.1**	**+1.4**
OJC				*e*Sg	**Sg**	**17 11 02.0**	**+1.2**
JAVC	**Velka Javorina**	**2.93**	**160**	*e*Pn	**Pn**	**17 10 22.1**	**+0.5**
	baz=342						
JAVC				*e*Sg	**Sb**	**17 11 04.9**	**+1.6**
	comp=Z,22nm,1.0s,baz=342						
KHC	**Kasperske Hory**	**2.98**	**214**	*e*PN	**Pn**	**17 10 22.0**	**-0.2**
KHC				*e*PG	**Pg**	**17 10 30.5**	**-0.2**
KHC				*e*SN	**Sn**	**17 10 57.0**	**-1.6**
KHC				*e*SG	**Sg**	**17 11 07.5**	**-1.8**
CKRC	**Cesky Krumlov**	**3.03**	**203**	*e*PN	**Pn**	**17 10 24.2**	**+1.2**
CKRC				*e*PG	**Pb**	**17 10 29.9**	**+1.3**
CKRC				*e*SG	**Sg**	**17 11 09.7**	**-1.4**
	comp=Z,13nm,0.4s						
GERES	**GERESS Array B**	**3.18**	**210**	Pn	**Pn**	**17 10 25.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=30,slow=13,SNR=25						
GERES				Pg	**Pb**	**17 10 31.4**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=30,slow=16,SNR=32						
GERES				Lg	Lg	17 11 12.9	
	comp=Z,0.2nm,0.3s,baz=30,slow=26,SNR=4.0						
	comp=Z,2.4nm,0.3s						
LANS	**Liptovska Anna**	**3.26**	**138**	*e*PG	**Pg**	**17 10 35.2**	**-1.1**
LANS				*e*SG	**Sg**	**17 11 19.8**	**+1.3**
MODS	**Modra-Piesok**	**3.33**	**167**	*e*PN	**Pn**	**17 10 29.8**	**+2.7**
MODS				*e*PG	**Pg**	**17 10 37.8**	**+0.3**
MODS				*e*SG	**Sg**	**17 11 23.5**	**+2.9**
ZST	**Bratislava**	**3.48**	**169**	*e*SG	**Sg**	**17 11 25.3**	**-0.2**
BSD	**Bornholm Skovb**	**3.58**	**349**	*e*	**Pn**	**17 10 30.6**	**+0.1**
	baz=191,slow=14						
BSD				*i* P	Pb	17 10 31.1	-6.8
BSD				IAML		17 11 39.9	
	comp=Z,2.7nm,0.4s						
CONA	**Conrad Observa**	**3.70**	**183**	*i* Pn	**Pn**	**17 10 33.1**	**+1.0**
	comp=Z,0.7nm,0.2s						
CONA				*e*Sg	**Sg**	**17 11 30.7**	**-1.7**
	comp=Z,8.0nm,0.3s						
RONA	**Rosalia, Austr**	**3.92**	**178**	*e*Pn	**Pn**	**17 10 35.7**	**+0.5**
	comp=Z,0.5nm,0.2s						
RONA				*e*Sg	**Sg**	**17 11 37.3**	**-2.4**
	comp=Z,4.6nm,0.4s						
STHS	**Stebnicka Huta**	**3.94**	**122**	*e*PG	**Pg**	**17 10 50.8**	**+1.7**
STHS				*e*SG	**Sg**	**17 11 42.2**	**+2.1**
MOA	**Molln**	**3.96**	**199**	*i* Pn	**Pn**	**17 10 36.0**	**+0.2**
	comp=Z,5.6nm,0.3s,SNR=15						
MOA				*e*Sg	**Sg**	**17 11 39.4**	**-1.4**
	comp=Z,18nm,0.7s						
BIOA	**Bad Ischl, Aus**	**4.25**	**203**	Pn	**Pn**	**17 10 40.4**	**+0.7**
	comp=Z,3.1nm,0.3s,SNR=4.9						
BIOA				Sg	**Sg**	**17 11 50.4**	**+0.2**
	comp=Z,11nm,0.4s						
ARSA	**Arzberg**	**4.39**	**185**	*i* Pn	**Pn**	**17 10 43.5**	**+1.8**
	comp=Z,0.9nm,0.2s						
ARSA				*e*Sg	**Sg**	**17 11 51.6**	**-3.0**
	comp=Z,9.5nm,0.7s						
BLEU	**Blekinge**	**4.70**	**358**	*i* P	**Pn**	**17 10 46.8**	**+0.9**
BLEU				*i* S	**Sn**	**17 11 39.3**	**-1.7**
BJUU	**Bjuv**	**4.83**	**339**	*i* P	**Pn**	**17 10 46.6**	**-1.0**
SOKA	**Soboth**	**5.00**	**189**	*i* Pn	**Pn**	**17 10 51.1**	**+1.1**
	comp=Z,0.5nm,0.3s						
SOKA				*e*Sg	**Sg**	**17 12 11.5**	**-2.6**
	comp=Z,3.0nm,0.8s						
DEL	**Delary**	**5.04**	**346**	*i* P	**Pn**	**17 10 50.5**	**0.0**
DEL				*i* S	**Sn**	**17 11 45.8**	**-3.6**
DEL				IAML		17 11 50.4	
	comp=Z,0.7nm,0.3s						
WATA	**Walderalm**	**5.21**	**216**	*e*Sg	**Sg**	**17 12 21.0**	**-0.1**
	comp=Z,8.0nm,0.6s						
OBKA	**Obir**	**5.22**	**192**	*e*Sg	**Sg**	**17 12 22.2**	**+1.0**
	comp=Z,4.9nm,0.6s						
WTTA	**Wattenberg**	**5.25**	**216**	Sg	**Sg**	**17 12 22.3**	**0.0**
	comp=Z,4.8nm,0.7s						
RETA	**Reutte**	**5.41**	**222**	*e*Sg	**Sg**	**17 12 28.3**	**+0.9**
	comp=Z,5.6nm,0.5s						
FETA	**Feichten**	**5.80**	**220**	Sg	**Sg**	**17 12 40.1**	**+0.3**
	comp=Z,1.4nm,0.7s						
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**17 11 34.2**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=286,slow=11,SNR=3.0						
HFS	**Hagfors**	**8.65**	**352**	Pn	**Pn**	**17 11 39.2**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=177,slow=14,SNR=1.4						
	comp=Z,15nm,1.2s						
FINES	**FINESS Array B**	**11.26**	**25**	Pn	**Pn**	**17 12 14.0**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=5.1						
	comp=Z,14nm,1.1s						

*IDC **22** 17:36:17.1±1.2,2°.37N×126°.54E,h0km,mb3.6/6, mbtmp3.6/7,ML2.9/1,Error ellipse: s-maj=64.5km s-min=18.6km az=64.0*
ISC 22 17:36:23.8±1.3,2°.4N±0°.2×126°.8E±0°.2,h53km,n7,σ0ᵍ48/7, mb3.6/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.54**	**126**	Pn	**Pn**	**17 37 43.8**	**0.0**
	0.4nm,0.3s,baz=338,slow=21,SNR=1.5						
	8.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.42**	**183**	P	**P**	**17 40 56.6**	**-0.1**
	2.4nm,1.1s,baz=7.2,slow=11,SNR=5.8						
	2.4nm,1.1s						
WRA	**Warramunga Arr**	**23.43**	**162**	P	**P**	**17 41 27.8**	**-0.7**
	0.5nm,0.3s,baz=338,slow=10,SNR=12						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**26.84**	**165**	P	**P**	**17 41 59.2**	**-0.2**
	0.2nm,0.5s,baz=346,slow=7.6,SNR=8.4						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**36.89**	**159**	P	**P**	**17 43 27.9**	**+0.5**
	1.7nm,0.6s,baz=343,slow=11,SNR=3.5						
	1.7nm,0.6s						
MKAR	**Makanchi Array**	**58.66**	**326**	P	**P**	**17 46 15.5**	**-0.3**
	0.2nm,0.4s,baz=109,slow=7.5,SNR=8.0						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**62.87**	**328**	P	**P**	**17 46 44.6**	**+0.3**
	0.4nm,0.3s,baz=132,slow=6.2,SNR=2.1						
	0.4nm,0.3s						

*IDC **22** 17:47:46.0±1.1,2°.01N×125°.99E,h0km,mb3.5/4, mbtmp3.6/6,ML3.4/2,MS2.8/1,Error ellipse: s-maj=65.6km s-min=19.1km az=63.0*
*DJA **22** 17:47:57.3±0.9,2°.N±2°.×12°.6E±°,h37km±19km,M4.0/18, mB5.2/2,mb4.1/5,MLv3.9/18,Mw(mB)4.6/2*
ISC 22 17:47:53.6±1.0,2°.18N±0°.06×126°.57E±0°.06,h35km,n14,
σ3ᵍ57/17,mb3.5/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.61**	**150**	P	**Pn**	**17 48 24.2**	**+4.6**
TNTI				S	**Sn**	**17 48 43.3**	**+4.2**
SGSI	**Sangihe**	**1.82**	**325**	P	**Pn**	**17 48 26.6**	**+4.1**
SGSI				S	**Sn**	**17 48 48.0**	**+3.6**
MNI	**Manado**	**1.88**	**247**	P	**Pn**	**17 48 25.3**	**+2.1**
MNI				S	**Sn**	**17 48 48.6**	**+2.9**
GTOI	**Gorontalo**	**3.87**	**247**	P	**Pn**	**17 48 54.3**	**+3.6**
SANI	**Sanana**	**4.24**	**188**	P	**Pn**	**17 48 56.6**	**+0.8**
LUWI	**Luwuk**	**4.96**	**230**	P	**Pn**	**17 49 08.4**	**+2.7**
NLAI	**Namlea**	**5.41**	**174**	P	**Pn**	**17 49 14.1**	**+2.3**
SIJI	**Sorong**	**5.59**	**123**	Pn	**Pn**	**17 49 16.2**	**+1.8**
	0.3nm,0.3s,baz=273,slow=7.4,SNR=2.0						
SIJI				LR	LR	17 51 19.1	
	comp=Z,77nm,18.3s,baz=123,slow=36						
	13nm,1.0s						
KRAI	**Karang Ratu**	**5.76**	**162**	P	**Pn**	**17 49 20.8**	**+4.2**
FITZ	**Fitzroy Crossi**	**20.17**	**183**	Pn	**P**	**17 52 21.8**	**-3.4**
	0.2nm,0.3s,baz=1.4,slow=11,SNR=7.4						
	2.6nm,1.0s						
WRA	**Warramunga Arr**	**23.27**	**161**	P	**P**	**17 52 55.6**	**-2.7**
	0.7nm,0.7s,baz=338,slow=11,SNR=7.6						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**26.66**	**165**	P	**P**	**17 53 27.0**	**-2.5**
	0.4nm,0.8s,baz=348,slow=13,SNR=6.9						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**58.73**	**326**	P	**P**	**17 57 44.6**	**-3.5**
	0.3nm,0.4s,baz=120,slow=8.2,SNR=16						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.95**	**328**	P	**P**	**17 58 13.0**	**-3.6**
	0.6nm,0.5s,baz=129,slow=6.6,SNR=5.4						
	0.6nm,0.5s						

IDC 22 17:54:24.0±1.2,5°.31N×126°.12E,h0km,mb3.5/5, mbtmp3.5/5,Error ellipse: s-maj=64.1km s-min=22.6km az=72.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.36**	**162**	P	P	18 00 02.7	+0.7
	0.7nm,0.6s,baz=342,slow=10,SNR=7.0						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**29.78**	**166**	P	P	18 00 31.7	-0.9
	0.1nm,0.6s,baz=351,slow=9.6,SNR=1.2						
	0.1nm,0.6s						
PETK	**Petropavlovsk-**	**54.22**	**23**	P	P	18 03 51.3	-0.1
	2.9nm,0.9s,baz=216,slow=7.6,SNR=2.7						
	2.9nm,0.9s						
MKAR	**Makanchi Array**	**55.92**	**325**	P	P	18 04 03.0	-0.9
	0.2nm,0.6s,baz=120,slow=8.8,SNR=4.1						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**60.09**	**327**	P	P	18 04 33.7	+0.7
	0.3nm,0.4s,baz=123,slow=6.6,SNR=4.2						
	0.3nm,0.4s						

*TEH **22** 18:24:21.9,26°.33N×58°.80E,h5km,ML3.1,Presumed earthquake*
*OMAN **22** 18:24:26.0±0.1,26°.27N×58°.75E,h10km,ml2.7/15,Error ellipse: s-maj=1.5km s-min=0.9km az=37.0*
ISC 22 18:24:25.2±1.3,26°.34N±0°.04×58°.81E±0°.04,h10km,n29,
σ0ᵍ73/42,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHBR	**Chabahar**	**1.68**	**116**	Pg	**Pn**	**18 24 53.4**	**-1.2**
KHNJ	**Kahnooj**	**1.88**	**329**	Pn	**Pn**	**18 24 56.8**	**-0.6**
BANM	**Banah**	**2.29**	**260**	P	**Pn**	**18 25 02.8**	**-0.3**
NGCH	**Negor - Chabah**	**2.31**	**114**	P	**Pn**	**18 25 04.1**	**+0.7**
	SNR=11						
NGCH	**Negor - Chabah**	**2.31**	**114**	Pn	**Pn**	**18 25 02.6**	**-0.7**
SHME	**Shamm**	**2.41**	**264**	P	**Pn**	**18 25 04.9**	**+0.3**
SHME				S	**Sn**	**18 25 35.9**	**+1.6**
MDH	**Madha**	**2.49**	**246**	P	**Pn**	**18 25 05.3**	**-0.4**
	SNR=5.7						
MDH				S	**Sn**	**18 25 35.5**	**-0.7**
GENO	**Geno**	**2.58**	**295**	Pn	**Pn**	**18 25 07.2**	**+0.1**
UOSS	**Minazif**	**2.73**	**240**	P	**Pn**	**18 25 08.4**	**-0.7**
UOSS				S	**Sn**	**18 25 42.0**	**-0.1**
KBAM	**BAM**	**2.80**	**354**	Pn	**Pn**	**18 25 09.5**	**-0.7**
HATD	**Hatta, Dubai**	**2.85**	**239**	P	**Pn**	**18 25 10.2**	**-0.4**
HATD				S	**Sn**	**18 25 43.7**	**-1.3**
BIDO	**Bidbid**	**2.87**	**193**	P	**Pn**	**18 25 10.6**	**-0.5**
BIDO				S	**Sn**	**18 25 44.4**	**-1.3**
ASHO	**Ashiyiah**	**2.98**	**237**	P	**Pn**	**18 25 12.6**	**0.0**
	SNR=18						
SOHO	**SOHO**	**3.01**	**224**	P	**Pn**	**18 25 12.2**	**-0.7**
SOHO				S	**Sn**	**18 25 49.3**	**+0.3**
HOQ	**Hoqain**	**3.06**	**207**	P	**Pn**	**18 25 13.2**	**-0.4**
	SNR=20						
HOQ				S	**Sn**	**18 25 49.9**	**-0.5**
HOQ	**Hoqain**	**3.06**	**207**	Pn	**Pn**	**18 25 13.1**	**-0.6**
WSAR	**Wadi Sarin**	**3.09**	**183**	P	**Pn**	**18 25 14.6**	**+0.6**
WSAR				S	**Sn**	**18 25 51.2**	**+0.1**
SMDO	**Samad**	**3.34**	**192**	P	**Pn**	**18 25 17.4**	**-0.2**
SMDO				S	**Sn**	**18 25 57.7**	**+0.3**
SRVN	**Saravan**	**3.38**	**71**	Pn	**Pn**	**18 25 18.6**	**+0.5**
ZHDN	**Zahedan**	**3.53**	**30**	Pn	**Pn**	**18 25 20.0**	**-0.2**
ASUD	**Al Ashush, Dub**	**3.58**	**242**	P	**Pn**	**18 25 21.2**	**+0.4**
ASUD				S	**Sn**	**18 26 03.2**	**+0.1**
ALNE	**Al Ain**	**3.58**	**231**	P	**Pn**	**18 25 21.2**	**+0.4**
ALNE				S	**Sn**	**18 26 03.1**	**-0.1**
CHMN	**Cheshme madani**	**3.68**	**343**	Pn	**Pn**	**18 25 22.6**	**+0.1**
WBK	**Wadi Bani Khal**	**3.72**	**178**	P	**Pn**	**18 25 22.5**	**-0.1**
	SNR=51						
WBK				S	**Sn**	**18 26 06.6**	**+0.1**
WBK	**Wadi Bani Khal**	**3.72**	**178**	Pn	**Pn**	**18 25 22.6**	**-0.1**
JMDO	**Jabal Madar**	**4.00**	**189**	P	**Pn**	**18 25 26.8**	**+0.1**
JMDO				S	**Sn**	**18 26 15.9**	**+2.3**
JLN	**Jalan Bani Buh**	**4.21**	**172**	P	**Pn**	**18 25 28.7**	**-0.7**
KRM1	**Kerman Provinc**	**4.36**	**342**	Pn	**Pn**	**18 25 31.9**	**+0.2**
MHTO	**MHTO**	**5.38**	**188**	P	**Pn**	**18 25 47.1**	**+1.5**

*CNRM **22** 18:34:52.8,34°.28N×5°.81W,h10km,ML2.7*
*MDD **22** 18:34:53.3±1.1,34°.32N×5°.80W,h11km±6km,mb_Lg3.1/6, Error ellipse: s-maj=5.0km s-min=3.6km az=87.0*
*IGIL **22** 18:34:53.3,34°.30N×5°.70W,h12km,ML2.0*
*SFS **22** 18:34:54.2,34°.30N×5°.72W,h21km,ML3.7/11,ML3.1/13, MLv2.7/13*
*INMG **22** 18:34:54.0±1.4,34°.30N×5°.71W,h22km±5km,ML2.3,Error ellipse: s-maj=6.2km s-min=2.6km az=71.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Fez (Marr)*
ISC 22 18:34:53.8±1.0,34°.32N±0°.03×5°.74W±0°.04,h29km±10km,
n57,σ1ᵍ36/99,Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SICH	**Sidi Chahed**	**0.41**	**122**	P	**Pb**	**18 35 01.2**	**-1.5**
SICH				S	**Sb**	**18 35 08.5**	**-0.3**
RSA	**Sarsar**	**0.56**	**353**	P	**Pb**	**18 35 04.8**	**-0.5**
RSA				S	**Sb**	**18 35 13.1**	**0.0**
CHEFC	**Chefchaouen**	**0.85**	**22**	P	**Pb**	**18 35 10.9**	**+0.9**
CHEFC				S	**Sb**	**18 35 22.0**	**+0.9**
IFR	**Ifrane**	**0.95**	**148**	Pg	**Pn**	**18 35 10.3**	**-1.0**
IFR				Sg	**Sn**	**18 35 22.6**	**-1.3**
LCRM	**LCR**	**0.97**	**131**	P	**Pn**	**18 35 10.6**	**-0.6**
LCRM				S	**Sb**	**18 35 27.5**	**+3.0**
AKLM	**AKL**	**1.56**	**83**	P	**Pn**	**18 35 21.3**	**+1.8**
MD31	**MD31**	**1.67**	**150**	P	**Pn**	**18 35 21.0**	**0.0**
PALE	**Palemas**	**1.73**	**58**	P	**Pn**	**18 35 24.

MORF	**Marmelete**	**3.80**	**322**	*e*P		**Pn**	**18 35 50.8**	**+0.4**
MORF				*e*S		**Sn**	**18 36 33.6**	**-0.6**
MORF				*i* IAML			18 36 36.6	
MORF				*i* IAML			18 36 38.6	
EADA	**Adamuz**	**3.95**	**13**	Pn		**Pn**	**18 35 53.8**	**+1.4**
EADA				Sn		**Sn**	**18 36 37.0**	**-0.8**
EADA	**Adamuz**	**3.95**	**13**	Pn		**Pn**	**18 35 54.0**	**+1.6**
EADA				Sn		**Sn**	**18 36 36.8**	**-0.9**
EADA				*i* IVmb_Lg			18 36 39.6	
PBAR	**Barrancos**	**3.99**	**345**	Pn		**Pn**	**18 35 53.3**	**+0.5**
PBAR				Sn		**Sn**	**18 36 37.1**	**-1.5**
PBAR	**Barrancos**	**3.99**	**345**	*e*P		**Pn**	**18 35 53.4**	**+0.5**
PBAR				*e*S		**Sn**	**18 36 37.4**	**-1.2**
PBAR				*i* IAML			18 36 38.2	
PBAR				*i* IAML			18 36 38.5	
PBAR				*i* IAML			18 36 38.8	
PTEO	**Sao Teotonio**	**4.03**	**324**	*e*P		**Pn**	**18 35 54.4**	**+0.9**
PTEO				*e*S		**Sn**	**18 36 39.3**	**-0.3**
PTEO				*i* IAML			18 36 41.3	
MESJ	**Messejana**	**4.05**	**331**	*e*P		**Pn**	**18 35 53.8**	**+0.1**
MESJ				*e*S		**Sn**	**18 36 37.9**	**-2.2**
MESJ				IAML			18 36 42.0	
	comp=N,3.1nm,0.3s							
MESJ	**Messejana**	**4.05**	**331**	*e*P		**Pn**	**18 35 53.9**	**+0.2**
MESJ				*e*S		**Sn**	**18 36 40.2**	**+0.1**
MESJ				*i* IAML			18 36 43.1	
MESJ				*i* IAML			18 36 43.1	
MESJ				*i* IAML			18 36 43.9	
PBEJ	**Beja**	**4.08**	**336**	*e*S		**Sn**	**18 36 40.6**	**-0.3**
PBEJ				*i* IAML			18 36 43.3	
EVO	**Evora**	**4.58**	**337**	Pn		**Pn**	**18 36 01.4**	**+0.3**
EVO				Sn		**Sn**	**18 36 52.6**	**-0.8**
EVO	**Evora**	**4.58**	**337**	*e*P		**Pn**	**18 36 02.4**	**+1.3**
EVO				*e*S		**Sn**	**18 36 52.8**	**-0.6**
EVO				*i* IAML			18 36 53.8	
EVO				*i* IAML			18 36 53.9	
EVO				*i* IAML			18 36 53.9	
MOE	**Montemor**	**4.69**	**334**	*e*P		**Pn**	**18 36 03.3**	**+0.7**
MOE				*e*S		**Sn**	**18 36 55.0**	**-1.0**
MOE				*i* IAML			18 36 57.9	
MOE				*i* IAML			18 36 58.2	
MOE				*i* IAML			18 36 58.5	
PSIM	**Granatula de C**	**4.76**	**19**	Pn		**Pn**	**18 36 04.9**	**+1.3**
PSIM				Sn		**Sn**	**18 36 56.6**	**-1.3**
PESTR	**Estremoz**	**4.78**	**342**	Pn		**Pn**	**18 36 04.9**	**+1.2**
PESTR				Sn		**Sn**	**18 36 56.5**	**-1.6**
PESTR	**Estremoz**	**4.78**	**342**	*e*P		**Pn**	**18 36 05.4**	**+1.6**
PESTR				*e*S		**Sn**	**18 36 56.7**	**-1.4**
PESTR				*i* IAML			18 36 58.1	
PESTR				*i* IAML			18 36 59.3	
PESTR				*i* IAML			18 37 02.4	
PESTR	**Estremoz**	**4.78**	**342**	P		**Pn**	**18 36 05.8**	**+2.1**
PARRA	**Arraiolos**	**4.85**	**338**	*e*P		**Pn**	**18 36 05.3**	**+0.5**
PARRA				*e*S		**Sn**	**18 36 59.3**	**-0.6**
PARRA				*i* IAML			18 37 00.5	
PARRA				*i* IAML			18 37 01.0	
PARRA				*i* IAML			18 37 02.6	
PMTG	**Montargil**	**5.14**	**338**	*e*P		**Pn**	**18 36 09.3**	**+0.5**
PMTG				*e*S		**Sn**	**18 37 06.0**	**-1.1**
PMTG				*i* IAML			18 37 09.2	
PMTG				*i* IAML			18 37 10.5	
PMTG				*i* IAML			18 37 10.9	
PMRV	**Marv??o**	**5.27**	**346**	*e*P		**Pn**	**18 36 11.2**	**+0.7**
PMRV				*e*S		**Sn**	**18 37 09.0**	**-1.2**
PMRV				*i* IAML			18 37 09.6	
PMRV				*i* IAML			18 37 09.9	
PMRV				*i* IAML			18 37 10.2	
PSARD	**Sardoal**	**5.61**	**340**	*e*P		**Pn**	**18 36 15.9**	**+0.7**
PSARD				*e*S		**Sn**	**18 37 16.8**	**-2.0**
PSARD				*i* IAML			18 37 18.3	
PSARD				*i* IAML			18 37 18.6	
PSARD				*i* IAML			18 37 19.7	
PCBR	**Castelo Branco**	**5.68**	**346**	*e*P		**Pn**	**18 36 17.3**	**+1.1**
PCBR				*e*S		**Sn**	**18 37 17.5**	**-2.8**
PCBR				*i* IAML			18 37 19.1	
PCBR				*i* IAML			18 37 19.1	
PCBR				*i* IAML			18 37 19.8	
EPLA	**Plasencia**	**5.74**	**357**	Pn		**Pn**	**18 36 17.6**	**+0.6**
EPLA				*i* IVmb_Lg			18 36 51.3	
EPLA				Sn		**Sn**	**18 37 19.0**	**-2.8**
MVO	**Moncorvo**	**6.91**	**352**	*e*P		**Pn**	**18 36 34.8**	**+1.8**
MVO				*e*S		**Sn**	**18 37 48.5**	**-2.2**
MVO				*i* IAML			18 37 49.3	
PVRL	**Vila Real**	**7.12**	**348**	*e*S		**Sn**	**18 37 53.2**	**-2.6**
PVRL				*i* IAML			18 37 54.1	
PVRL				*i* IAML			18 37 54.1	
POLO	**Lamas de Olo**	**7.22**	**348**	*e*P		**Pn**	**18 36 38.3**	**+0.8**
POLO				*e*S		**Sn**	**18 37 55.9**	**-2.6**
POLO				*i* IAML			18 37 56.1	
POLO				*i* IAML			18 37 57.3	
POLO				*i* IAML			18 37 57.5	
PGAV	**Gavieira, Arco**	**7.89**	**346**	*e*S		**Sn**	**18 38 12.3**	**-2.5**

NEIC ***22*** *18:35:20.7±1.7,19°.1S±0°.1×177°.7W±0°.1,h471km±6km, mb4.3/74,Error ellipse: s-maj=18.0km s-min=14.5km az=160.0*

NOU ***22*** *18:35:20.3,19°.15S×177°.63W,h474km,mb4.1/24,Fiji Islands Region*

IDC ***22*** *18:35:21.4±2.0,19°.07S×177°.83W,h475km±22km, mb3.6/18,mbtmp4.3/20,Error ellipse: s-maj=15.3km s-min=10.5km az=145.0*

ISC 22 18:35:22.3±0.4,19.07S±0.08×177.70W±0.06,h500km, n236,σ1ē51/242,mb4.2/50,43C-8D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
LKBA	**Tubou, Lakemba**	**1.34**	**308**	P	**P**	**18 36 20.5**		**-4.2**
LKBA	**Tubou, Lakemba**	**1.34**	**308**	S	**S**	**18 37 09.6**		**-5.6**
TAVE	**Taveuni**	**3.15**	**318**	P	**P**	**18 36 31.4**		**-3.0**
TAVE	**Taveuni**	**3.15**	**318**	S	**S**	**18 37 28.9**		**-4.0**
DGTI	**Dogotuki**	**3.68**	**318**	P	**P**	**18 36 35.3**		**-3.0**
DGTI	**Dogotuki**	**3.68**	**318**	S	**S**	**18 37 36.5**		**-3.6**
MSVF	**Nonsavu**	**4.25**	**288**	P	**P**	**18 36 40.7**		**-2.2**
MSVF	**Nonsavu**	**4.25**	**288**	P	**P**	**18 36 40.6**		**-2.3**
NIUE	**Niue**	**7.35**	**91**	P	**P**	**18 37 08.8**		**-3.2**
NIUE					**S**	**18 38 37.8**		**-4.2**
NIUE	**Niue**	**7.35**	**91**	P	**P**	**18 37 09.2**		**-2.9**
NIUE	**Niue**	**7.35**	**91**	S	**S**	**18 38 37.9**		**-4.1**
MARNC	**Mare, Loyalty**	**13.60**	**257**	P	**P**	**18 38 15.6**		**-2.3**
MARNC	**Mare, Loyalty**	**13.60**	**257**	P	**P**	**18 38 16.8**		**-1.1**
DZM	**Mont Dzumac**	**15.15**	**256**	P	**P**	**18 38 31.4**		**-2.7**
	8.7nm,0.6s,baz=82,slow=17,SNR=12							
DZM	**Mont Dzumac**	**15.15**	**256**	P	**P**	**18 38 32.6**		**-1.6**
DZM	**Mont Dzumac**	**15.15**	**256**	P	**P**	**18 38 33.2**		**-1.0**
URZ	**Urewera**	**19.65**	**192**	P	**P**	**18 39 15.9**		**-1.7**
	7.9nm,0.9s,baz=223,slow=6.4,SNR=2.0							
QRZ	**Quartz Range**	**23.25**	**199**	P	**P**	**18 39 49.1**		**-0.9**
TUWZ	**Tuamarina**	**23.40**	**196**	P	**P**	**18 39 53.3**		**+1.9**
THZ	**Tophouse**	**24.00**	**197**	P	**P**	**18 39 55.7**		**-1.1**
TATA	**Tatamba Isabel**	**24.26**	**293**	P	**P**	**18 40 00.0**		**+0.5**
EIDS	**Eidsvold**	**29.53**	**252**	P	**P**	**18 40 45.2**		**-0.5**
EIDS				IAmb	IAmb	18 40 54.8		
	comp=Z,16nm,1.2s							
ARMA	**Armidale**	**29.97**	**242**	P	**P**	**18 40 49.5**		**0.0**
ARMA				IAmb	IAmb	18 41 14.4		
	comp=Z,17nm,1.4s							
CTA	**Charters Tower**	**33.94**	**262**	P	**P**	**18 41 23.3**		**-0.2**
CTAO	**Charters Tower**	**33.94**	**262**	P	**P**	**18 41 22.9**		**-0.6**
CTAO				IAmb	IAmb	18 41 33.7		
	comp=Z,14nm,1.2s							
CTAO	**Charters Tower**	**33.94**	**262**	P	**P**	**18 41 23.6**		**+0.1**
QLP	**Quilpie**	**35.77**	**251**	P	**P**	**18 41 38.4**		**-0.4**
MTSU	**Mount Surprise**	**35.97**	**265**	P	**P**	**18 41 39.9**		**-0.6**
TOO	**Toolangi**	**36.98**	**232**	P	**P**	**18 41 49.1**		**+0.5**
COEN	**Coen**	**37.80**	**272**	P	**P**	**18 41 55.5**		**-0.1**
COEN				IAmb	IAmb	18 42 25.2		
	comp=Z,12nm,1.1s							
COEN	**Coen**	**37.80**	**272**	P	**P**	**18 41 55.8**		**+0.2**
STKA	**Stephens Creek**	**38.68**	**243**	P	**P**	**18 42 03.1**		**+0.5**
	comp=Z,1.6nm,0.4s,baz=82,slow=9.0,SNR=6.6							
	comp=Z,1.6nm,0.4s							
STKA	**Stephens Creek**	**38.68**	**243**	IAmb	IAmb	18 42 04.7		
	comp=Z,20nm,1.1s							
STKA	**Stephens Creek**	**38.68**	**243**	P	**P**	**18 42 02.4**		**-0.2**
INKA	**Innaminka**	**38.95**	**249**	P	**P**	**18 42 05.8**		**+1.0**
HTT	**Hallett**	**41.15**	**241**	P	**P**	**18 42 22.3**		**-0.2**
BBOO	**Buckleboo**	**43.45**	**242**	P	**P**	**18 42 40.5**		**-0.1**
BBOO				IAmb	IAmb	18 42 46.1		
	comp=Z,22nm,1.5s							
BBOO	**Buckleboo**	**43.45**	**242**	P	**P**	**18 42 40.8**		**+0.2**
WR8	**Warramunga Arr**	**44.94**	**261**		**P**	**18 42 52.1**		**-0.3**
WR8				IAmb	IAmb	18 43 06.1		
	comp=Z,15nm,1.4s							
WB0	**Warramunga Arr**	**45.07**	**261**		**P**	**18 42 52.9**		**-0.4**
WB0				IAmb	IAmb	18 43 03.7		
	comp=Z,10nm,1.2s							
WRAB	**Tennant Creek**	**45.09**	**261**	P	**P**	**18 42 52.9**		**-0.6**
WRA	**Warramunga Arr**	**45.09**	**261**	P	**P**	**18 42 53.0**		**-0.5**
	comp=Z,1.5nm,0.3s,baz=99,slow=6.8,SNR=22							
WRA				PcP	**pP**	**18 44 24.8**		**-0.9**
	comp=Z,1.1nm,0.6s,baz=94,slow=3.2,SNR=3.8							
WRA				S	**S**	**18 48 55.9**		**-0.1**
	comp=Z,1.8nm,0.9s,baz=98,slow=13,SNR=4.5							
	comp=Z,1.5nm,0.3s							
WRA	**Warramunga Arr**	**45.09**	**261**	P	**P**	**18 42 52.8**		**-0.7**
AS31	**Alice Springs**	**45.14**	**255**	P	**P**	**18 42 53.8**		**-0.1**
ASAR	**Alice Springs**	**45.14**	**255**	P	**P**	**18 42 53.5**		**-0.3**
	comp=Z,8.0nm,0.6s,baz=89,slow=8.5,SNR=37							
ASAR				PcP	**pP**	**18 44 24.9**		**-1.2**
	comp=Z,1.4nm,0.5s,baz=106,slow=4.1,SNR=5.1							
ASAR				S	**S**	**18 48 56.8**		**+0.2**
	comp=Z,2.4nm,0.7s,baz=91,slow=15,SNR=12							
	comp=Z,8.0nm,0.6s							
ASAR	**Alice Springs**	**45.14**	**255**	P	**P**	**18 42 53.0**		**-0.8**
ASAR					**pP**	**18 44 24.1**		**-1.9**
MTN	**Manton Dam**	**49.45**	**269**	P	**P**	**18 43 26.2**		**-0.2**
MTN				IAmb	IAmb	18 43 58.4		
	comp=Z,29nm,1.4s							
KNRA	**Kununurra**	**51.05**	**265**	P	**P**	**18 43 38.2**		**0.0**
KNRA				IAmb	IAmb	18 44 18.3		
	comp=Z,30nm,1.4s							
FITZ	**Fitzroy Crossi**	**53.51**	**261**	P	**P**	**18 43 56.2**		**+0.4**
	comp=Z,2.5nm,0.5s,baz=101,slow=5.2,SNR=1.8							
	comp=Z,2.5nm,0.5s							
SOEI	**Soe**	**56.75**	**271**	P	**P**	**18 44 20.1**		**+1.4**
SOEI	**Soe**	**56.75**	**271**	P	**P**	**18 44 19.8**		**+1.1**
PSA00	**Pilbara Seismi**	**58.28**	**256**	P	**P**	**18 44 28.5**		**-0.4**
PSA00				IAmb	IAmb	18 45 10.2		
	comp=Z,9.2nm,1.1s							
MBWA	**Marble Bar**	**58.45**	**256**	P	**P**	**18 44 29.6**		**-0.5**
VNDA	**Vanda**	**59.35**	**185**	P	**P**	**18 44 36.9**		**+1.7**
	comp=Z,1.0nm,0.6s,baz=18,slow=6.5,SNR=2.3							
	comp=Z,1.0nm,0.6s							
VNDA	**Vanda**	**59.35**	**185**	P	**P**	**18 44 36.6**		**+1.4**
PLAI	**Plampang**	**63.16**	**270**	P	**P**	**18 45 01.9**		**+0.6**
GIRL	**Giralia**	**63.21**	**254**	P	**P**	**18 45 00.8**		**-0.7**
TOLI2	**Tolitoli**	**63.60**	**281**	P	**P**	**18 45 04.9**		**+0.8**
TOLI2				IAmb	IAmb	18 45 19.6		
	comp=Z,13nm,1.1s							
MJAR	**Matsushiro Arr**	**69.23**	**323**	P	**P**	**18 45 39.2**		**+0.5**
	comp=Z,1.8nm,0.5s,baz=162,slow=5.8,SNR=14							
	comp=Z,1.8nm,0.5s							
MJAR	**Matsushiro Arr**	**69.23**	**323**	P	**P**	**18 45 38.8**		**+0.2**
MJAR				IAmb	IAmb	18 46 00.6		
	comp=Z,9.0nm,1.4s							
MAJO	**Matsushiro**	**69.24**	**323**	P	**P**	**18 45 39.4**		**+0.7**
MJB9	**Matsu-Tunnel**	**69.24**	**323**	P	**P**	**18 45 40.0**		**+1.3**
MJB9				IAmb	IAmb	18 46 01.0		
	comp=Z,17nm,1.5s							
KKM	**Kota Kinabalu**	**69.68**	**284**	P	**P**	**18 45 42.5**		**+0.6**
UGM	**Wanagama**	**70.28**	**268**	P	**P**	**18 45 45.4**		**-0.1**
ADK	**Adak**	**70.65**	**1**	P	**P**	**18 45 46.8**		**+0.2**
QSPA	**South Pole Qui**	**70.99**	**180**	P	**P**	**18 45 50.6**		**+1.8**
	comp=Z,12nm,0.7s,baz=28,slow=1.2,SNR=15							
	comp=Z,12nm,0.7s							
QSPA	**South Pole Qui**	**70.99**	**180**	P	**P**	**18 45 50.3**		**+1.5**
QSPA				IAmb	IAmb	18 45 51.4		
	comp=Z,12nm,0.8s							
JKA	**Kamikawa-asahi**	**72.61**	**331**	P	**P**	**18 45 59.9**		**+1.6**
YULB	**Yu-li**	**72.96**	**303**	P	**P**	**18 46 00.6**		**-0.3**
NACB	**Ninganchiao**	**73.12**	**304**	P	**P**	**18 46 01.6**		**-0.1**
BBJI	**Bungbulang**	**73.13**	**268**	P	**P**	**18 46 01.8**		**-0.4**
BBJI				IAmb	IAmb	18 46 02.6		
	comp=Z,5.1nm,0.7s							
UNV	**Unalaska Valle**	**73.25**	**7**	P	**P**	**18 46 02.5**		**+0.7**
LEM	**Lembang**	**73.36**	**268**	P	**P**	**18 46 04.6**		**+1.1**
	comp=Z,18nm,0.7s,baz=63,slow=11,SNR=6.4							
	comp=Z,18nm,0.7s							
SSLB	**Suanglung**	**73.43**	**303**	P	**P**	**18 46 03.0**		**-0.6**
TPUB	**Ta-pu**	**73.45**	**302**	P	**P**	**18 46 02.9**		**-0.7**
PET	**Petropavlovsk**	**74.66**	**345**	P	**P**	**18 46 10.4**		**+0.6**
PEA0B	**Petropavlovsk-**	**74.97**	**345**	P	**P**	**18 46 12.8**		**+1.2**
PETK	**Petropavlovsk-**	**74.97**	**345**	P	**P**	**18 46 12.7**		**+1.1**
	comp=Z,10nm,0.6s,baz=107,slow=7.6,SNR=60							
	comp=Z,10nm,0.6s							
PETK	**Petropavlovsk-**	**74.97**	**345**	P	**P**	**18 46 12.6**		**+1.0**
KSRS	**Korea Array**	**76.01**	**318**	P	**P**	**18 46 19.0**		**+1.3**
	comp=Z,1.3nm,0.9s,baz=120,slow=6.1,SNR=4.6							
	comp=Z,1.3nm,0.9s							
MNAI	**Manna**	**78.53**	**269**	P	**P**	**18 46 32.5**		**+0.5**
OHAK	**Old Harbor**	**78.70**	**13**	P	**P**	**18 46 32.8**		**+0.9**
L04D	**Klamath Falls**	**79.54**	**38**	P	**P**	**18 46 38.5**		**+1.6**
L04D				IAmb	IAmb	18 47 08.2		
	comp=Z,15nm,1.4s							
N14K	**Kuskokwak Cree**	**79.78**	**8**	P	**P**	**18 46 38.7**		**+1.1**
N14K				IAmb	IAmb	18 46 40.2		
	comp=Z,9.7nm,0.8s							
NVAR	**Mina Array Bea**	**79.80**	**43**	P	**P**	**18 46 40.1**		**+1.6**
	comp=Z,9.0nm,0.7s,baz=220,slow=9.8,SNR=4.6							
	comp=Z,0.9nm,0.7s							
O16K	**Kokwok River B**	**80.00**	**10**	P	**P**	**18 46 39.2**		**+0.5**
O16K				IAmb	IAmb	18 47 15.2		
	comp=Z,14nm,1.2s							
N15K	**Kwethluk River**	**80.24**	**9**	P	**P**	**18 46 41.1**		**+1.0**
N15K				IAmb	IAmb	18 47 09.1		
	comp=Z,12nm,1.4s							
P18K	**Big Mountain,**	**80.32**	**11**	P	**P**	**18 46 40.2**		**-0.3**
P18K				IAmb	IAmb	18 47 01.7		
	comp=Z,21nm,1.4s							
K05A	**Summer Lake**	**80.68**	**39**	P	**P**	**18 46 44.5**		**+1.6**
K05A				IAmb	IAmb	18 46 48.0		
	comp=Z,17nm,1.4s							
J05D	**Fort Rock, OR**	**80.81**	**38**	P	**P**	**18 46 45.6**		**+2.1**
BELA	**Belgrano 2**	**80.93**	**173**	P	**P**	**18 46 44.4**		**+0.8**
BELA				IAmb	IAmb	18 46 45.3		
	comp=Z,5.7nm,0.8s							
M16K	**Timber Creek**	**81.23**	**9**	P	**P**	**18 46 46.3**		**+1.2**
M16K				IAmb	IAmb	18 46 48.7		
	comp=Z,18nm,1.3s							
PINE	**Pine Mountain**	**81.29**	**38**	P	**P**	**18 46 48.0**		**+1.9**
BRLK	**Bradley Lake**	**81.54**	**13**	P	**P**	**18 46 47.9**		**+1.1**
L16K	**Owhat River**	**81.81**	**9**	P	**P**	**18 46 49.6**		**+1.6**
L16K				IAmb	IAmb	18 46 52.2		
	comp=Z,9.3nm,1.2s							
K15K	**Wolf Creek Mou**	**82.10**	**8**	P	**P**	**18 46 50.5**		**+1.0**
K15K				IAmb	IAmb	18 46 52.9		
	comp=Z,10nm,0.8s							
I07A	**Izee**	**82.29**	**38**	P	**P**	**18 46 52.7**		**+1.6**
MA2	**Magadan**	**82.49**	**344**	P	**P**	**18 46 51.1**		**-0.5**
MA2				IAmb	IAmb	18 46 52.8		
	comp=Z,5.1nm,0.8s							
GAMB	**Gambell**	**82.71**	**3**	P	**P**	**18 46 54.3**		**+1.8**
GAMB				IAmb	IAmb	18 46 55.5		
	comp=Z,6.2nm,1.1s							
U15A	**North Rim**	**82.79**	**48**	P	**P**	**18 46 55.8**		**+1.8**
SUA	**Susitna One**	**83.11**	**13**	P	**P**	**18 46 55.1**		**+0.3**
SUA				IAmb	IAmb	18 47 01.5		
	comp=Z,10nm,1.4s							
IPM	**Ipoh**	**83.23**	**277**	P	**P**	**18 46 57.7**		**+1.2**
KULM	**Kulim**	**83.86**	**278**	P	**P**	**18 47 00.6**		**+1.1**
J18K	**Innoko River**	**83.89**	**9**		**P**	**18 46 59.3**		**+0.7**
J18K				IAmb	IAmb	18 47 01.2		
	comp=Z,3.7nm,0.8s							
GLB	**Gilahina Butte**	**84.69**	**16**	P	**P**	**18 47 03.1**		**+0.5**
GLB				IAmb	IAmb	18 47 29.0		
	comp=Z,9.6nm,1.3s							
O28M	**Mount Upton**	**85.11**	**17**	P	**P**	**18 47 05.8**		**+0.9**
ENH	**Enshi**	**85.48**	**304**		**P**	**18 47 08.4**		**+1.3**
ENH				IAmb	IAmb	18 47 09.8		
	comp=Z,8.8nm,0.8s							
VHRN	**Van Horn**	**85.61**	**56**		**P**	**18 47 10.1**		**+2.2**
TX31	**Lajitas Ar. Si**	**86.05**	**57**		**P**	**18 47 11.8**		**+1.8**
TXAR	**Lajitas Array**	**86.05**	**57**	P	**P**	**18 47 11.9**		**+2.0**
	comp=Z,1.8nm,0.8s,baz=217,slow=6.5,SNR=21							
	comp=Z,1.8nm,0.8s							
TXAR	**Lajitas Array**	**86.05**	**57**	P	**P**	**18 47 11.8**		**+1.8**
ILAR	**Eielson Array**	**86.86**	**13**	P	**P**	**18 47 12.7**		**-0.2**
	comp=Z,0.6nm,0.3s,baz=224,slow=4.7,SNR=12							
	comp=Z,0.6nm,0.3s							
E18K	**Tukpahlearik C**	**87.16**	**7**	P	**P**	**18 47 15.2**		**+1.1**
E19K	**Redstone River**	**87.59**	**8**	IAmb	IAmb	18 47 18.4		
	comp=Z,2.5nm,0.7s							
BILL	**Bilibino**	**87.65**	**354**		**P**	**18 47 17.4**		**+1.0**
PDAR	**Pinedale Array**	**87.73**	**43**	P	**P**	**18 47 18.9**		**+1.1**
	comp=Z,0.4nm,0.6s,baz=174,slow=2.2,SNR=4.2							
	comp=Z,0.4nm,0.6s							
HILR	**Hailar Array B**	**87.85**	**325**	P	**P**	**18 47 19.5**		**+1.6**
	comp=Z,3.2nm,0.7s,baz=122,slow=7.2,SNR=3.9							
	comp=Z,3.2nm,0.7s							
E22K	**Anaktuvuk Pass**	**88.99**	**9**	IAmb	IAmb	18 47 25.6		
	comp=Z,6.7nm,1.2s							
CMAR	**Chiang Mai Arr**	**89.91**	**289**	P	**P**	**18 47 29.9**		**+1.8**
	comp=Z,2.6nm,0.9s,baz=120,slow=2.9,SNR=18							
	comp=Z,2.6nm,0.9s							
CHTO	**Chiang Mai**	**90.03**	**290**		**P**	**18 47 30.4**		**+1.7**
CHTO				IAmb	IAmb	18 47 31.5		
	comp=Z,4.4nm,0.8s							
SONM	**Songino Array**	**94.86**	**319**	P	**P**	**18 47 52.7**		**+2.3**
	comp=Z,0.4nm,0.6s,baz=190,slow=2.7,SNR=3.8							
	comp=Z,0.4nm,0.6s							
YKA	**Yellowknife Ar**	**95.10**	**25**	P	**P**	**18 47 51.0**		**+0.1**
	comp=Z,0.1nm,0.6s,baz=254,slow=4.7,SNR=2.9							
	comp=Z,0.1nm,0.6s							
BVAR	**Borovoye Array**	**118.17**	**321**	PKP	**PKiKP**	**18 53 12.5**		**+0.5**
	comp=Z,3.9nm,0.4s,baz=116,slow=1.9,SNR=40							
ARCES	**ARCESS Array B**	**127.57**	**350**	PKP	**PKiKP**	**18 53 31.0**		**+0.9**
	comp=Z,1.1nm,0.4s,baz=28,slow=1.4,SNR=12							
BOSA	**Boshof**	**127.66**	**206**	PKP	**PKiKP**	**18 53 32.9**		**+1.1**
	comp=Z,3.7nm,1.0s,baz=173,slow=4.5,SNR=5.0							
FINES	**FINESS Array B**	**134.48**	**344**	PKhKP	PKPpre	18 53 40.6		
	comp=Z,8.8nm,1.0s,baz=137,slow=2.0,SNR=8.0							
HFS	**Hagfors**	**138.18**	**351**	PKhKP	PKPpre	18 53 39.2		
	comp=Z,2.8nm,0.6s,baz=37,slow=0.7,SNR=7.5							
AKASG	**Malin Array Be**	**141.90**	**332**	PKhKP	PKPpre	18 53 52.8		
	comp=Z,3.5nm,0.4s,baz=44,slow=4.1,SNR=20							
KIEV	**Kiev**	**141.91**	**332**	⇑P	**PKPdf**	**18 53 52.0**		**-4.6**
KIEV	**Kiev**	**141.91**	**332**		PKPpre	18 53 52.6		
EKA	**Eskdalemuir Ar**	**143.56**	**5**	PKP	**PKPdf**	**18 53 58.9**		**-0.6**
	comp=Z,2.1nm,0.4s,baz=328,slow=2.7,SNR=10							
SORM	**Soroca**	**144.13**	**330**	⇓P	**PKPdf**	**18 54 00.5**		**-0.1**
PURM	**Purcari**	**144.47**	**327**	⇑P	**PKiKP**	**18 54 02.5**		**-2.6**
VASR	**Vaslui**	**145.45**	**328**	⇑P	**PKiKP**	**18 54 05.7**		**-1.5**
PRAR	**RASCA**	**145.68**	**331**	⇑P	**PKiKP**	**18 54 04.3**		**-1.9**
GIRR	**Girov**	**145.85**	**330**	⇑P	**PKiKP**	**18 54 06.8**		**-1.2**
VLDR	**Vladesti**	**145.85**	**327**	⇑P	**PKiKP**	**18 54 07.0**		**-1.1**
TLCR		**145.91**	**326**	⇓P	**PKiKP**	**18 54 06.3**		**-1.8**
VARL	**Varlezi**	**145.93**	**327**	⇓P	**PKiKP**	**18 54 07.0**		**-1.2**
BURAR	**Bucovina Array**	**145.95**	**332**	⇑P	**PKiKP**	**18 54 07.4**		**-1.0**
SCTR	**Scanteiesti**	**146.01**	**327**	⇑P	**PKiKP**	**18 54 07.5**		**-0.8**
TATR	**Tatarca**	**146.03**	**327**	⇑P	**PKPab**	**18 54 06.0**		**-1.6**
GHRR		**146.04**	**328**	⇓P	**PKiKP**	**18 54 08.8**		**-1.7**
BR131	**Keskin Array S**	**146.07**	**314**		**PKPab**	**18 54 06.4**		**-1.8**
BRTR	**Keskin Array B**	**146.07**	**314**	PKPbc	**PKiKP**	**18 54 07.1**		**-1.8**
	comp=Z,5.9nm,0.7s,baz=134,slow=4.6,SNR=31							
BRTR	**Keskin Array B**	**146.07**	**314**		**PKPab**	**18 54 06.3**		**-2.0**
TESR	**Tescani**	**146.09**	**329**	⇑P	**PKiKP**	**18 54 06.9**		**-1.7**
JURR	**Jurilovca**	**146.15**	**325**	⇑P	**PKiKP**	**18 54 07.7**		**-0.9**
KIRS	**Kirsehir-Merke**	**146.16**	**313**	⇑P	**PKiKP**	**18 54 06.2**		**-2.3**

WTTA	**Wattenberg**	**150.86**	**347**	*i* PKP	**PKiKP**	**18**	**54**	**19.5 +1.0**
	comp=Z,15nm,0.5s,SNR=17							
WTTA	**Wattenberg**	**150.86**	**347**	*eP*	**PKiKP**	**18**	**54**	**19.5 +1.0**
	comp=Z,15nm,0.5s,SNR=17							
MOTA	**Moosalm**	**150.89**	**348**	*i* PKP	**PKiKP**	**18**	**54**	**19.4 +0.8**
	comp=Z,7.9nm,0.8s,SNR=7.5							
MYKA	**Terra Mystica**	**150.97**	**344**	*i* PKP	**PKiKP**	**18**	**54**	**18.9 +0.2**
	comp=Z,7.4nm,0.5s,SNR=6.3							
MYKA				*i* PKP	**PKPab**	**18**	**54**	**28.8 +0.8**
	comp=Z,3.3nm,0.4s							
SQTA	**Sankt Quirin**	**150.99**	**347**	*i* PKP	**PKiKP**	**18**	**54**	**19.7 +1.0**
	comp=Z,10.0nm,0.6s,SNR=9.2							
LEGS	**Legarje**	**151.11**	**341**	*i* PKPab	**PKPab**	**18**	**54**	**29.5 +1.0**
ABTA	**Abfaltersbach**	**151.15**	**345**	*i* PKP	**PKiKP**	**18**	**54**	**19.6 +0.5**
	comp=Z,15nm,0.6s,SNR=4.3							
DAVA	**Damuels**	**151.18**	**349**	*i* PKP	**PKiKP**	**18**	**54**	**20.0 +0.8**
	comp=Z,3.9nm,0.6s							
FETA	**Feichten**	**151.28**	**348**	*i* PKP	**PKiKP**	**18**	**54**	**20.6 +1.2**
	comp=Z,10nm,1.0s,SNR=7.3							
CRNS	**Crni Vrh**	**151.31**	**343**	*i* PKPbc	**PKiKP**	**18**	**54**	**19.7 +0.4**
VISS	**Visnje**	**151.39**	**342**	*i* PKPbc	**PKiKP**	**18**	**54**	**20.1 +0.7**
BOJS	**Bojanci**	**151.53**	**341**	*i* PKPbc	**PKiKP**	**18**	**54**	**20.7 +1.0**
BLY	**Banja Luka**	**151.54**	**337**	⇓P	**PKiKP**	**18**	**54**	**20.4 +0.6**
FUORN	**Ofenpass-Fuorn**	**151.75**	**348**		**PKiKP**	**18**	**54**	**22.0 +1.5**
TUE	**Stuetta**	**152.06**	**350**		**PKiKP**	**18**	**54**	**22.5 +1.4**
TORD	**Torodi Ar. Bea**	**174.08**	**174**	PKP	**PKPdf**	**18**	**54**	**34.9 0.0**
	comp=Z,1.4nm,1.1s,baz=257,slow=2.4,SNR=4.1							

AUST 22 18:36:41.9±1.0, 21°S±9°×**11°5E**±°, **h10**km, **ML3.5/8, Error ellipse: s-maj=23.9km s-min=7.6km az=137.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GIRL	**Giralia**	**1.37**	**213**	P		Pn	18 37 06.0	-1.1
GIRL				S		Sg	18 37 26.7	+0.6
CVQOZ	**Cooralya Stati**	**3.08**	**197**	P		Pn	18 37 31.8	+1.2
MBWA	**Marble Bar**	**4.39**	**87**	P		Pn	18 37 48.5	-0.2
MBWA				S		Sn	18 38 35.8	-4.1
PSAC1	**Pilbara Seismi**	**4.44**	**91**	P		Pn	18 37 49.3	-0.1
PSAC1				S		Sn	18 38 37.9	-3.4
PSA00	**Pilbara Seismi**	**4.48**	**92**	P		Pn	18 37 49.7	-0.2
PSA00				S		Sn	18 38 38.2	-3.9
MEEK	**Meekatharra**	**6.08**	**148**	P		Pn	18 38 12.7	+0.8
	comp=Z,9.0nm,1.6s,comp=Z,0.3nm							
MEEK				S		Sn	18 39 18.5	-3.2
CAAN	**Eighty Mile Be**	**6.46**	**71**	P		Pn	18 38 17.4	+0.2
	comp=Z,82nm,1.2s,comp=Z,0.1nm							
CAAN				S		Sn	18 39 25.4	-5.6
MORW	**Morawa**	**7.61**	**173**	P		Pn	18 38 31.9	-0.9
	comp=Z,7.1nm,1.6s,comp=Z,0.1nm							
BLDU	**Ballidu**	**9.21**	**171**	P		Pn	18 38 55.0	0.0
	comp=Z,9.3nm,2.1s,comp=Z,0.1nm							
KLBR	**Kellerberrin**	**10.36**	**167**	P		Pn	18 39 10.1	-0.4
	comp=Z,11nm,1.1s,comp=Z,0.1nm							
MUN	**Mundaring**	**10.50**	**175**	P		Pn	18 39 15.5	+2.9
NWAO	**Narrogin (SRO)**	**11.56**	**171**	P		Pn	18 39 29.7	+2.6
KMBL	**Kambalda**	**11.59**	**150**	P		Pn	18 39 26.0	-1.5
WRKA	**Warakurna**	**12.69**	**109**	P		Pn	18 39 39.7	-2.9
RKGY	**Rocky Gully**	**13.19**	**173**	P		Pn	18 39 50.7	+1.4
DNDOZ	**Balladonia**	**13.46**	**146**	P		Pn	18 39 52.9	-0.2
	comp=Z,64nm,2.4s							
UGM	**Wanagama**	**14.18**	**341**	P		Pn	18 40 04.0	+1.0
KNRA	**Kununurra**	**14.23**	**68**	P		Pn	18 39 59.8	-3.8
FORT	**Forrest**	**14.90**	**131**	P		Pn	18 40 08.1	-4.7

IDC ***22*** *18:42:56.5±1.9, 55°.72N×2°.60E, h0km, mb3.7/5, mbtmp3.7/12, ML3.6/7, Error ellipse: s-maj=37.8km s-min=17.4km az=103.0*

DNK ***22*** *18:43:00.8±2.4, 55°.74N×3°.08E, h32km±8km, ML3.5, Confirmed Earthquake*

BER ***22*** *18:43:00.7±2.2, 55°.74N×3°.09E, h10km, MD0.4, ML2.9, ML4.0(BGS), Confirmed Earthquake*

NAO ***22*** *18:43:00.8±0.6, 55°.84N×2°.96E, h14km±6km, ML3.2*

LDG ***22*** *18:43:01.5±0.3, 55°.53N×2°.62E, h5km, Ml4.0/36, Error ellipse: s-maj=7.0km s-min=3.8km az=40.0*

BGS ***22*** *18:43:02.2±0.9, 55°.68N×3°.00E, h11km±36km, ML4.0*

BGR ***22*** *18:43:02.7±0.6, 55°.66N×3°.26E, h10km, ML4.1/15, Error ellipse: s-maj=5.6km s-min=4.4km az=117.0*

UCC ***22*** *18:43:03.8, 55°.29N×2°.87E, h10km, ML4.6*

UPP ***22*** *18:43:05.6±3.0, 55°.96N×3°.88E, h0km, ML3.0, Presumed earthquake*

PRU ***22*** *18:43:06.9, 55°.46N×3°.78E, h10km*

ISC 22 18:42:55.9±0.6, **55°.70N**±0°.03×**3°.16E**±0°.03, **h10**km, **n281, s38**12/475, **mb3.7/4, 17D, North Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GDLE	**Glaisdale, N Y**	**2.62**	**242**	*eP*		**Pb**	**18 43 40.9**	**-2.0**
GDLE				IAML			18 44 36.1	
	comp=N,2μm,0.4s							
GDLE				IAML			18 44 39.6	
	comp=E,1μm,0.4s							
GDLE	**Glaisdale, N Y**	**2.62**	**242**	*eP*		**Pb**	**18 43 40.8**	**-2.0**
GDLE				*e*			18 44 10.3	
GDLE				END			18 44 10.5	
GDLE				*eS*		**Sn**	**18 44 11.2**	**+1.2**
GDLE				*i*			18 44 24.8	
GDLE	**Glaisdale, N Y**	**2.62**	**242**	*eP*		**Pb**	**18 43 40.8**	**-2.0**
GDLE				*e*			18 44 10.3	
GDLE				*eS*		**Sn**	**18 44 11.2**	**+1.2**
GDLE				*i*			18 44 24.8	
LMK	**Market Rasen**	**3.03**	**223**	*eP*		**Pb**	**18 43 47.4**	**-2.4**
LMK				IAML			18 44 46.7	
	comp=N,816nm,0.4s							
LMK				IAML			18 44 50.4	
	comp=E,753nm,0.5s							
LMK	**Market Rasen**	**3.03**	**223**	*eP*		**Pb**	**18 43 47.4**	**-2.4**
LMK	**Market Rasen**	**3.03**	**223**	*eP*		**Pb**	**18 43 47.4**	**-2.4**
EDMD	**Edmundbyers**	**3.06**	**256**	*eP*		**Pn**	**18 43 46.7**	**+2.5**
EDMD				IAML			18 44 39.5	
	comp=N,302nm,0.6s							
EDMD				IAML			18 44 50.0	
	comp=E,582nm,0.5s							
EDMD	**Edmundbyers**	**3.06**	**256**	*eP*		**Pn**	**18 43 46.7**	**+2.5**
EDMD				*eS*		**Sn**	**18 44 20.2**	**-0.6**
EDMD	**Edmundbyers**	**3.06**	**256**	*eP*		**Pn**	**18 43 46.7**	**+2.5**
EDMD				*eS*		**Sn**	**18 44 20.2**	**-0.6**
HLG	**Helgoland**	**3.12**	**117**	*i* P		**Pb**	**18 43 48.4**	**-3.0**
HLG				*i* S		**Sn**	**18 44 24.1**	**+1.7**
HLG	**Helgoland**	**3.12**	**117**	*i* P		**Pb**	**18 43 48.4**	**-3.0**
HLG				*i* P		**Pb**	**18 43 48.4**	**-3.0**
HLG				*i* S		**Sn**	**18 44 24.1**	**+1.7**
HLG				*i* S		**Sn**	**18 44 24.1**	**+1.7**
HLG	**Helgoland**	**3.12**	**117**	*e*Pn		**Pb**	**18 43 49.6**	**-1.8**
HLG				*e*Sn		**Sn**	**18 44 24.5**	**+2.2**
WACR	**West Acre**	**3.33**	**208**	*eP*		**Pn**	**18 43 50.8**	**+2.9**
WACR				IAML			18 44 37.0	
	comp=E,127nm,0.2s							
WACR				IAML			18 44 45.9	
	comp=N,105nm,0.2s							
WACR	**West Acre**	**3.33**	**208**	*eP*		**Pn**	**18 43 50.8**	**+2.9**
WACR	**West Acre**	**3.33**	**208**	*eP*		**Pn**	**18 43 50.8**	**+2.9**
DRUM	**Mains of Drumt**	**3.37**	**293**	*eP*		**Pn**	**18 43 51.4**	**+2.9**
DRUM				IAML			18 44 52.6	
	comp=E,203nm,0.3s							
DRUM				IAML			18 44 55.4	
	comp=N,238nm,0.4s							
DRUM	**Mains of Drumt**	**3.37**	**293**	*eP*		**Pn**	**18 43 51.4**	**+2.9**
DRUM				*eS*		**Sn**	**18 44 29.6**	**+1.0**
DRUM	**Mains of Drumt**	**3.37**	**293**	*eP*		**Pn**	**18 43 51.4**	**+2.9**
DRUM				*eS*		**Sn**	**18 44 29.6**	**+1.0**
SNART	**Snartemo**	**3.45**	**38**	*eP*		**Pn**	**18 43 52.6**	**+3.0**
SNART				*eS*		**Sn**	**18 44 31.3**	**+0.8**
SNART				IAML			18 44 34.6	
	comp=Z,245nm,0.2s							
SNART	**Snartemo**	**3.45**	**38**	*eP*		**Pn**	**18 43 52.6**	**+3.0**
SNART				*i* P		**Pn**	**18 43 52.6**	**+3.0**
SNART				*eS*		**Sn**	**18 44 31.3**	**+0.8**
SNART				IAML			18 44 34.6	
	comp=Z,245nm,0.2s							
MUD	**Monsted U'grnd**	**3.46**	**75**	*i* P		**Pb**	**18 43 53.9**	**-3.2**
MUD				IAML			18 44 58.5	
	comp=Z,110nm,0.3s							
MUD	**Monsted U'grnd**	**3.46**	**75**	*i* P		**Pb**	**18 43 53.9**	**-3.2**
MUD				*i* P		**Pb**	**18 43 53.9**	**-3.2**
MUD				IAML			18 44 58.5	
	comp=Z,110nm,0.3s							
MUD				IAML			18 44 58.5	
	comp=Z,110nm,0.3s							
MUD	**Monsted U'grnd**	**3.46**	**75**	*e*Pn		**Pb**	**18 43 54.2**	**-2.9**
MUD				*e*Sn		**Sn**	**18 44 31.5**	**+0.9**
STAV	**Stavanger**	**3.52**	**22**	Pn		**Pn**	**18 43 52.7**	**+2.1**
STAV				Sn		**Sn**	**18 44 30.9**	**-1.4**
STAV	**Stavanger**	**3.52**	**22**	*eP*		**Pn**	**18 43 52.7**	**+2.1**
STAV				*i* P		**Pb**	**18 43 53.9**	**-4.3**
STAV				*i* S		**Sn**	**18 44 30.8**	**-1.5**
STAV				*eS*		**Sn**	**18 44 31.1**	**-1.2**
STAV				IAML			18 44 33.5	
	comp=Z,100nm,0.2s							
EDI	**Edinburgh**	**3.59**	**276**	Pn		**Pn**	**18 43 54.6**	**+3.1**
EDI	**Edinburgh**	**3.59**	**276**	*eP*		**Pn**	**18 43 54.4**	**+2.9**
EDI				IAML			18 45 01.9	
	comp=N,183nm,0.4s							
EDI				IAML			18 45 03.4	
	comp=E,224nm,0.6s							
EDI	**Edinburgh**	**3.59**	**276**	*eP*		**Pn**	**18 43 54.4**	**+2.9**
EDI				*eS*		**Sn**	**18 44 33.9**	**+0.1**
EDI	**Edinburgh**	**3.59**	**276**	*eP*		**Pn**	**18 43 54.4**	**+2.9**
EDI				*eS*		**Sn**	**18 44 33.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**3.61**	**267**	Pn		**Pn**	**18 43 53.9**	**+2.0**
	baz=89,slow=13							
EKA				Sn		**Sn**	**18 44 31.9**	**-2.6**
	baz=86,slow=24							
EKA	**Eskdalemuir Ar**	**3.61**	**267**	Pn		**Pn**	**18 43 54.5**	**+2.7**
	baz=76,slow=37							
EKA	**Eskdalemuir Ar**	**3.61**	**267**	Pn		**Pn**	**18 43 54.5**	**+2.7**
EKA	**Eskdalemuir Ar**	**3.61**	**267**	Pn		**Pn**	**18 43 54.5**	**+2.7**
GOET	**G??ttrup**	**3.63**	**66**	*i* P		**Pb**	**18 43 57.4**	**-2.7**
GOET				*i* S		**Sn**	**18 44 36.6**	**+1.7**
GOET	**G??ttrup**	**3.63**	**66**	*i* P		**Pb**	**18 43 57.4**	**-2.7**
GOET				*i* P		**Pb**	**18 43 57.4**	**-2.7**
GOET				*i* S		**Sn**	**18 44 36.6**	**+1.7**
GOET				*i* S		**Sn**	**18 44 36.6**	**+1.7**
ESK	**Eskdalemuir**	**3.64**	**267**	*eP*		**Pn**	**18 43 54.5**	**+2.3**
ESK				IAML			18 45 01.2	
	comp=E,175nm,0.6s							
ESK				IAML			18 45 02.8	
	comp=N,157nm,0.3s							
ESK	**Eskdalemuir**	**3.64**	**267**	*eP*		**Pn**	**18 43 54.5**	**+2.3**
ESK				*eS*		**Sn**	**18 44 34.3**	**-0.8**
ESK	**Eskdalemuir**	**3.64**	**267**	*eP*		**Pn**	**18 43 54.5**	**+2.3**
ESK				*eS*		**Sn**	**18 44 34.3**	**-0.8**
LBWR	**Ladybower, Pea**	**3.66**	**233**	*eP*		**Pn**	**18 43 54.6**	**+2.1**
LBWR				IAML			18 45 04.7	
	comp=N,387nm,0.4s							
LBWR				IAML			18 45 11.0	
	comp=E,344nm,0.4s							
LBWR	**Ladybower, Pea**	**3.66**	**233**	*eP*		**Pn**	**18 43 54.6**	**+2.1**
LBWR	**Ladybower, Pea**	**3.66**	**233**	*eP*		**Pn**	**18 43 54.6**	**+2.1**
SSRD	**Sdr. Stenderup**	**3.68**	**91**	*i* P		**Pn**	**18 43 56.0**	**+3.2**
SSRD				*i* S		**Sn**	**18 44 36.4**	**+0.3**
SSRD	**Sdr. Stenderup**	**3.68**	**91**	*i* P		**Pn**	**18 43 56.0**	**+3.2**
SSRD				*i* P		**Pn**	**18 43 56.0**	**+3.2**
SSRD				*i* S		**Sn**	**18 44 36.4**	**+0.3**
SSRD				*i* S		**Sn**	**18 44 36.4**	**+0.3**
KMY	**Karmoy**	**3.70**	**17**	Pn		**Pn**	**18 43 55.0**	**+2.0**
KMY				Sn		**Sn**	**18 44 35.8**	**-0.8**
KMY	**Karmoy**	**3.70**	**17**	*eP*		**Pn**	**18 43 55.6**	**+2.6**
KMY				*eS*		**Sn**	**18 44 35.8**	**-0.8**
KMY				IAML			18 44 38.4	
	comp=Z,95nm,0.4s							
KMY	**Karmoy**	**3.70**	**17**	*eP*		**Pn**	**18 43 55.6**	**+2.6**
KMY				*eS*		**Sn**	**18 44 35.8**	**-0.8**
KMY				IAML			18 44 38.4	
	comp=Z,95nm,0.4s							
SKMB	**Sankelmark Bun**	**3.73**	**103**	*i* P		**Pb**	**18 43 57.9**	**-3.9**
SKMB				*e*S		**Sn**	**18 44 40.1**	**+2.7**
SKMB	**Sankelmark Bun**	**3.73**	**103**	*i* P		**Pb**	**18 43 57.9**	**-3.9**
SKMB				*i* P		**Pb**	**18 43 57.9**	**-3.9**
SKMB				*e*S		**Sn**	**18 44 40.1**	**+2.7**
SKMB				*e*S		**Sn**	**18 44 40.1**	**+2.7**
ELMS	**Elmsett, Ipswi**	**3.83**	**200**	*eP*		**Pn**	**18 43 57.7**	**+2.8**
ELMS				IAML			18 45 04.9	
	comp=N,204nm,0.3s							
ELMS				IAML			18 45 11.2	
	comp=E,329nm,0.4s							
HOMB	**Homborsund**	**3.90**	**46**	Pn		**Pn**	**18 43 59.5**	**+3.8**
HOMB				Sn		**Sn**	**18 44 41.6**	**+0.1**
HOMB	**Homborsund**	**3.90**	**46**	*eP*		**Pn**	**18 43 59.2**	**+3.5**
HOMB				*eS*		**Sn**	**18 44 41.5**	**+0.1**
HOMB				IAML			18 44 45.5	
	comp=Z,91nm,0.2s							
HOMB	**Homborsund**	**3.90**	**46**	*eP*		**Pn**	**18 43 59.2**	**+3.5**
HOMB				*i* P		Pb	18 43 59.2	-5.4
HOMB				*eS*		**Sn**	**18 44 41.5**	**+0.1**
HOMB				IAML			18 44 45.5	
	comp=Z,91nm,0.2s							
CWF	**Charnwood Fore**	**3.96**	**223**	*eP*		**Pn**	**18 43 58.9**	**+2.3**
CWF	**Charnwood Fore**	**3.96**	**223**	*eP*		**Pn**	**18 43 58.9**	**+2.3**
CWF	**Charnwood Fore**	**3.96**	**223**	*eP*		**Pn**	**18 43 58.9**	**+2.3**
MCD	**Coleburn Disti**	**4.01**	**301**	*eP*		**Pn**	**18 44 00.1**	**+2.8**
MCD				IAML			18 45 13.1	
	comp=E,182nm,0.4s							
MCD				IAML			18 45 13.5	
	comp=N,104nm,0.4s							
MCD	**Coleburn Disti**	**4.01**	**301**	*eP*		**Pn**	**18 44 00.1**	**+2.8**
MCD	**Coleburn Disti**	**4.01**	**301**	*eP*		**Pn**	**18 44 00.1**	**+2.8**
BLS5	**Blasjo**	**4.13**	**24**	Pn		**Pn**	**18 44 02.4**	**+3.3**
BLS5				Sn		**Sn**	**18 44 47.6**	**+0.3**
BLS5	**Blasjo**	**4.13**	**24**	*eP*		**Pn**	**18 44 01.9**	**+2.9**
BLS5				*eS*		**Sn**	**18 44 47.5**	**+0.1**
BLS5				IAML			18 44 52.1	
	comp=Z,46nm,0.3s							
BLS5	**Blasjo**	**4.13**	**24**	*eP*		**Pn**	**18 44 01.9**	**+2.9**
BLS5				*i* P		**Pn**	**18 44 02.4**	**+3.3**
BLS5				*i* S		**Sn**	**18 44 47.2**	**-0.2**
BLS5				*eS*		**Sn**	**18 44 47.5**	**+0.1**
BLS5				IAML			18 44 52.1	
	comp=Z,46nm,0.3s							
WTSB	**Winterswijk**	**4.32**	**149**	*e*Pn		**Pn**	**18 44 05.6**	**+4.0**
WTSB				*e*Sn		**Sn**	**18 44 50.8**	**-1.1**
BOST	**Ostende**	**4.47**	**182**	*dP*		**Pn**	**18 44 06.6**	**+3.0**
BOST				*dS*		**Sn**	**18 44 55.8**	**+0.1**
BSEG	**Bad Segeberg**	**4.50**	**110**	*i* P		**Pn**	**18 44 07.8**	**+3.7**
BSEG				*i* S		**Sn**	**18 44 57.0**	**+0.6**
BSEG	**Bad Segeberg**	**4.50**	**110**	*i* P		**Pn**	**18 44 07.8**	**+3.7**
BSEG				*i* P		**Pn**	**18 44 07.8**	**+3.7**
BSEG				*i* S		**Sn**	**18 44 57.0**	**+0.6**
BSEG				*i* S		**Sn**	**18 44 57.0**	**+0.6**
BSEG	**Bad Segeberg**	**4.50**	**110**	*e*Pn		**Pn**	**18 44 08.2**	**+4.1**
BSEG				*e*Sn		**Sn**	**18 44 55.1**	**-1.3**
GOLB	**Goldborn**	**4.61**	**125**	*e*Pn		Pn	18 44 10.6	+5.1
ODD1	**Odda**	**4.61**	**22**	*eP*		**Pn**	**18 44 08.5**	**+2.9**
ODD1				*eS*		**Sn**	**18 44 58.9**	**-0.3**
ODD1				IAML			18 45 11.9	
	comp=Z,52nm,0.2s							
ODD1	**Odda**	**4.61**	**22**	*eP*		**Pn**	**18 44 08.5**	**+2.9**
ODD1				*eS*		**Sn**	**18 44 58.9**	**-0.3**
ODD1				IAML			18 45 11.9	
	comp=Z,52nm,0.2s							
BDSL	**Dessel**	**4.63**	**165**	*dP*		**Pn**	**18 44 09.4**	**+3.5**
BDSL				*dS*		**Sn**	**18 44 58.8**	**-0.9**
RETH	**Rethem/Aller,**	**4.70**	**127**	*e*Pn		**Pn**	**18 44 11.0**	**+4.3**
BIGH	**Upper Bighouse**	**4.76**	**309**	*eP*		**Pn**	**18 44 10.0**	**+2.4**
BIGH				*eS*		**Sn**	**18 45 00.7**	**-2.1**
BIGH				IAML			18 45 02.9	
	comp=E,54nm,0.3s							
BIGH				IAML			18 45 14.8	
	comp=N,48nm,0.3s							
BIGH	**Upper Bighouse**	**4.76**	**309**	*eP*		**Pn**	**18 44 10.0**	**+2.4**
BIGH				*eS*		**Sn**	**18 45 00.7**	**-2.1**
BIGH	**Upper Bighouse**	**4.76**	**309**	*eP*		**Pn**	**18 44 10.0**	**+2.4**
BIGH				*eS*		**Sn**	**18 45 00.7**	**-2.1**
BOPT	**Opiter**	**4.83**	**161**	*dP*		**Pn**	**18 44 13.1**	**+4.5**
BOPT				*dS*		**Sn**	**18 45 05.8**	**+1.3**
BER	**Bergen**	**4.84**	**13**	*eP*		**Pn**	**18 44 10.8**	**+2.2**
BER				*eS*		**Sn**	**18 45 01.3**	**-3.3**
BER	**Bergen**	**4.84**	**13**	*eP*		**Pn**	**18 44 10.8**	**+2.2**
BER				*eS*		**Sn**	**18 45 01.3**	**-3.3**
ASK	**Askoy**	**4.92**	**12**	Pn		**Pn**	**18 44 11.7**	**+2.0**
ASK				Sn		**Sn**	**18 45 02.6**	**-4.0**
ASK	**Askoy**	**4.92**	**12**	*eP*		**Pn**	**18 44 11.7**	**+2.0**
ASK				*eS*		**Sn**	**18 45 02.6**	**-4.0**
ASK				IAML			18 45 17.7	
	comp=Z,41nm,0.4s							
ASK	**Askoy**	**4.92**	**12**	*eP*		**Pn**	**18 44 11.7**	**+2.0**
ASK				*eS*		**Sn**	**18 45 02.6**	**-4.0**
ASK				IAML			18 45 17.7	
	comp=Z,41nm,0.4s							
BUG	**Bochum--Univer**	**4.92**	**148**	*e*Pn		**Pn**	**18 44 14.5**	**+4.6**
BUG				*e*Sn		**Sn**	**18 45 05.7**	**-1.1**
BAS0D	**BAS04**	**4.95**	**12**	*eP*		**Pn**	**18 44 12.4**	**+2.2**
BAS0D				*eS*		**Sn**	**18 45 05.5**	**-1.9**
BAS0D				IAML			18 45 36.0	
	comp=Z,72nm,0.6s							
BAS03	**BAS03**	**4.96**	**11**	*eP*		**Pn**	**18 44 12.4**	**+2.1**
BAS03				*eS*		**Sn**	**18 45 04.6**	**-3.1**
BAS03				IAML			18 45 08.2	
	comp=Z,105nm,0.2s							
UCC	**Uccle**	**4.96**	**171**	*dP*		**Pn**	**18 44 14.5**	**+4.1**
UCC				*dS*		**Sn**	**18 45 07.3**	**-0.5**
UCC	**Uccle**	**4.96**	**171**	*e*Pn		**Pn**	**18 44 14.3**	**+3.9**
BAS02	**BAS02**	**5.01**	**10**	*eS*		**Sn**	**18 45 05.5**	**-3.3**
BAS02				IAML			18 45 13.7	
	comp=Z,28nm,0.3s							
LRW	**Lerwick**	**5.01**	**334**	*eP*		**Pn**	**18 44 13.8**	**+2.7**
LRW				*eS*		**Sn**	**18 45 07.7**	**-1.2**
LRW				IAML			18 45 10.8	
	comp=Z,35nm,0.3s							
LRW	**Lerwick**	**5.01**	**334**	*eP*		**Pn**	**18 44 13.8**	**+2.7**
LRW				*eS*		**Sn**	**18 45 07.7**	**-1.2**
LRW				IAML			18 45 10.8	
	comp=Z,35nm,0.3s							
BSKQ	**Steenkerk**	**5.09**	**173**	*dP*		**Pn**	**18 44 15.5**	**+3.3**
BSKQ				*dS*		**Sn**	**18 45 09.8**	**-1.1**
ONAU	**Onsala**	**5.14**	**67**	P		**Pn**	**18 44 16.0**	**+3.3**
ONAU				S		**Sn**	**18 45 09.9**	**-2.1**
ONAU	**Onsala**	**5.14**	**67**	P		**Pn**	**18 44 16.0**	**+3.3**
ONAU				S		**Sn**	**18 45 09.9**	**-2.1**
ONAU	**Onsala**	**5.14**	**67**	P		**Pn**	**18 44 16.0**	**+3.3**
ONAU				*eP*		**Pn**	**18 44 16.1**	**+3.3**
ONAU				*i* P		**Pn**	**18 44 16.4**	**+3.6**
ONAU				S		**Sn**	**18 45 09.9**	**-2.1**
ONAU				S		**Sn**	**18 45 09.9**	**-2.1**
BEBN	**Eben Emael**	**5.14**	**162**	*dP*		**Pn**	**18 44 16.9**	**+4.1**
BEBN				*dS*		**Sn**	**18 45 11.3**	**-0.8**
BRQR	**Ronquire**	**5.14**	**172**	*dP*		**Pn**	**18 44 16.1**	**+3.2**
KPL	**Plockton**	**5.15**	**292**	*eP*		**Pn**	**18 44 15.6**	**+2.7**
KPL				*eS*		**Sn**	**18 45 10.8**	**-1.4**
KPL	**Plockton**	**5.15**	**292**	*eP*		**Pn**	**18 44 15.6**	**+2.7**
KPL				*eS*		**Sn**	**18 45 10.8**	**-1.4**
MCH1	**Michaelchurch**	**5.20**	**227**	*eP*		**Pn**	**18 44 15.7**	**+2.1**
MCH1				IAML			18 45 13.2	
	comp=E,59nm,0.4s							
MCH1				IAML			18 45 14.1	
	comp=N,55nm,0.2s							
MCH1	**Michaelchurch**	**5.20**	**227**	*eP*		**Pn**	**18 44 15.7**	**+2.1**
MCH1	**Michaelchurch**	**5.20**	**227**	*eP*		**Pn**	**18 44 15.7**	**+2.1**
TJOU	**Tjoern**	**5.20**	**60**	P		**Pn**	**18 44 17.1**	**+3.5**
TJOU				S		**Sn**	**18 45 12.3**	**-1.3**
TJOU	**Tjoern**	**5.20**	**60**	P		**Pn**	**18 44 17.1**	**+3.5**
TJOU				S		**Sn**	**18 45 12.3**	**-1.3**
TJOU	**Tjoern**	**5.20**	**60**	*i* P		**Pn**	**18 44 17.0**	**+3.4**
TJOU				P		**Pn**	**18 44 17.1**	**+3.5**
TJOU				P		**Pn**	**18 44 17.1**	**+3.5**
TJOU				S		**Sn**	**18 45 12.3**	**-1.3**
TJOU				S		**Sn**	**18 45 12.3**	**-1.3**
HGN	**Heimansgroeve**	**5.22**	**160**	*e*Pn		**Pn**	**18 44 17.0**	**+3.1**
HGN				*e*Sn		**Sn**	**18 45 13.1**	**-1.0**
MONM	**Monmouth**	**5.24**	**225**	*eP*		**Pn**	**18 44 17.0**	**+2.8**
MONM				IAML			18 45 15.1	
	comp=N,100nm,0.4s							
MONM				IAML			18 45 17.6	
	comp=E,89nm,0.4s							
MONM	**Monmouth**	**5.24**	**225**	*eP*		**Pn**	**18 44 17.0**	**+2.8**
MONM	**Monmouth**	**5.24**	**225**	*eP*		**Pn**	**18 44 17.0**	**+2.8**
COP	**Copenhagen**	**5.25**	**86**	*i* P		**Pn**	**18 44 18.4**	**+4.1**
COP				IAML			18 45 17.7	
	comp=Z,57nm,0.3s							
COP	**Copenhagen**	**5.25**	**86**

OSL IAML 18 45 46.0
comp=Z,29nm,0.7s
OSL Oslo 5.86 40 *e*S **Sn 18 45 27.9 -1.9**
OSL IAML 18 45 46.0
comp=Z,29nm,0.7s
FOO Floro 6.00 9 Pn **Pn 18 44 26.1 +1.6**
FOO Sn **Sn 18 45 28.7 -4.4**
FOO Floro 6.00 9 *j i*P **Pn 18 44 26.0 +1.4**
FOO *e*S **Sn 18 45 28.6 -4.5**
FOO IAML 18 45 36.0
comp=Z,46nm,0.3s
FOO Floro 6.00 9 *j i*P **Pn 18 44 26.0 +1.4**
FOO *e*S **Sn 18 45 28.6 -4.5**
FOO IAML 18 45 36.0
comp=Z,46nm,0.3s
DEL Delary 6.05 78 P **Pn 18 44 29.3 +4.0**
DEL Delary 6.05 78 P **Pn 18 44 29.3 +4.0**
DEL Delary 6.05 78 *i* P **Pn 18 44 29.1 +3.8**
DEL P **Pn 18 44 29.3 +4.0**
DEL P **Pn 18 44 29.3 +4.0**
DEL IAML 18 45 38.4
comp=Z,19nm,0.3s
GNOU Gnosjoe 6.08 70 P **Pn 18 44 29.1 +3.3**
GNOU Gnosjoe 6.08 70 P **Pn 18 44 29.1 +3.3**
GNOU Gnosjoe 6.08 70 P **Pn 18 44 29.1 +3.3**
GNOU P **Pn 18 44 29.1 +3.3**
FINU Finntorp 6.24 50 P **Pn 18 44 31.1 +3.3**
FINU Finntorp 6.24 50 P **Pn 18 44 31.1 +3.3**
FINU Finntorp 6.24 50 P **Pn 18 44 31.1 +3.3**
FINU P **Pn 18 44 31.1 +3.3**
NASU Vaermlandsnaes 6.32 55 P **Pn 18 44 32.6 +3.6**
NASU Vaermlandsnaes 6.32 55 P **Pn 18 44 32.6 +3.6**
NASU Vaermlandsnaes 6.32 55 P **Pn 18 44 32.6 +3.6**
NASU P **Pn 18 44 32.6 +3.6**
TNS Taunus Mts 6.35 148 *e*Pn **Pn 18 44 33.8 +4.3**
TNS *e*Sn **Sn 18 45 38.6 -3.4**
NAO01 NORSAR Array S 6.57 35 *e*P **Pn 18 44 35.0 +2.5**
NAO01 *e*S **Sn 18 45 46.5 -0.9**
NAO01 NORSAR Array S 6.57 35 *e*P **Pn 18 44 35.0 +2.5**
NAO01 *e*S **Sn 18 45 46.5 -0.9**
NC602 NORSAR Array S 6.71 38 *e*P **Pn 18 44 36.7 +2.3**
NC602 *e*S **Sn 18 45 47.8 -3.0**
NC602 NORSAR Array S 6.71 38 *e*P **Pn 18 44 36.7 +2.3**
NC602 *e*S **Sn 18 45 47.8 -3.0**
NRA0 NORESS Array S 6.71 38 Pn **Pn 18 44 36.8 +2.4**
baz=220,slow=12
NRA0 Sn **Sn 18 45 47.1 -3.7**
baz=214,slow=22
NRA0 NORESS Array S 6.71 38 Pn **Pn 18 44 36.8 +2.4**
NRA0 Sn **Sn 18 45 47.1 -3.7**
NRA0 NORESS Array S 6.71 38 Pn **Pn 18 44 36.8 +2.4**
NRA0 Sn **Sn 18 45 47.1 -3.7**
BSD Bornholm Skovb 6.72 90 *i* P **Pn 18 44 37.9 +3.4**
BSD IAML 18 46 07.2
comp=Z,13nm,0.4s
BSD Bornholm Skovb 6.72 90 *i* P **Pn 18 44 37.9 +3.4**
BSD *i* P **Pn 18 44 37.9 +3.4**
BSD IAML 18 46 07.2
comp=Z,13nm,0.4s
BSD IAML 18 46 07.2
comp=Z,13nm,0.4s
BSD Bornholm Skovb 6.72 90 *e*Pn **Pn 18 44 38.7 +4.1**
BSD *e*Sn **Sn 18 45 47.7 -3.4**
AKN Aaknes 6.79 15 Pn **Pn 18 44 37.3 +1.8**
AKN Sn **Sn 18 45 48.8 -4.1**
AKN Aaknes 6.79 15 Pn **Pn 18 44 37.3 +1.8**
AKN Sn **Sn 18 45 48.8 -4.1**
AKN Aaknes 6.79 15 Pn **Pn 18 44 37.3 +1.8**
AKN Sn **Sn 18 45 48.8 -4.1**
AKN IAML 18 45 55.5
comp=Z,28nm,0.1s
NB2 NORSAR Subarra 6.82 35 Pn **Pn 18 44 39.3 +3.3**
baz=220,slow=14
NB2 NORSAR Subarra 6.82 35 Pn **Pn 18 44 39.3 +3.3**
NB2 NORSAR Subarra 6.82 35 Pn **Pn 18 44 39.3 +3.3**
NOA NORSAR Array B 6.82 35 Pn **Pn 18 44 38.0 +2.1**
comp=Z,0.2nm,0.3s,baz=228,slow=13,SNR=11
NOA Sn **Sn 18 45 49.0 -4.6**
comp=Z,0.3nm,0.3s,baz=225,slow=10,SNR=4.5
comp=Z,0.7nm,0.4s
NB201 NORSAR Array S 6.86 35 *e*P **Pn 18 44 38.9 +2.5**
NC204 NORSAR Array S 6.86 32 *e*P **Pn 18 44 40.4 +3.9**
NC303 NORSAR Array S 7.01 34 *e*P **Pn 18 44 41.1 +2.6**
DOMB Dombas 7.06 23 Pn **Pn 18 44 42.3 +3.2**
DOMB Dombas 7.06 23 *e*P **Pn 18 44 42.2 +3.1**
DOMB *e*S **Sn 18 45 56.0 -3.3**
DOMB IAML 18 46 25.2
comp=Z,17nm,0.3s
DOMB Dombas 7.06 23 *e*P **Pn 18 44 42.2 +3.1**
DOMB *e*S **Sn 18 45 56.0 -3.3**
DOMB IAML 18 46 25.2
comp=Z,17nm,0.3s
BLEU Blekinge 7.13 80 *i* P **Pn 18 44 43.6 +3.6**
BLEU Blekinge 7.13 80 *i* P **Pn 18 44 43.6 +3.6**
BLEU *i* P **Pn 18 44 43.6 +3.6**
HFS Hagfors 7.16 47 Pn **Pn 18 44 43.1 +2.6**
comp=Z,0.6nm,0.3s,baz=238,slow=14,SNR=32
HFS Sn **Sn 18 45 57.6 -4.1**
comp=Z,4.5nm,0.3s,baz=238,slow=24,SNR=11
comp=Z,2.3nm,0.4s
HFS Hagfors 7.16 47 Pn **Pn 18 44 43.2 +2.7**
baz=234,slow=16
HFS Sn **Sn 18 45 58.3 -3.4**
baz=237,slow=22
HFS Hagfors 7.16 47 Pn **Pn 18 44 43.2 +2.7**
HFS Sn **Sn 18 45 58.3 -3.4**
HFS Hagfors 7.16 47 Pn **Pn 18 44 43.2 +2.7**
HFS Sn **Sn 18 45 58.3 -3.4**
MOX Moxa 7.17 131 *e*Pn **Pn 18 44 46.4 +3.8**
MOX *e*Sn **Sn 18 45 59.7 -2.5**
SAVF Savonnieres en 7.20 170 *e*Pn **Pn 18 44 43.2 +2.1**
SAVF *e*Sn **Sn 18 45 58.4 -4.5**
comp=Z,20nm,0.4s
MOL Molde 7.25 16 Pn **Pn 18 44 44.0 +2.2**
MOL Sn **Sn 18 46 00.3 -3.7**
MOL Molde 7.25 16 *e*P **Pn 18 44 44.2 +2.4**
MOL *e*S **Sn 18 46 01.3 -2.7**
MOL IAML 18 46 04.9
comp=Z,14nm,0.4s
MOL Molde 7.25 16 *e*P **Pn 18 44 44.2 +2.4**
MOL *e*S **Sn 18 46 01.3 -2.7**
MOL IAML 18 46 04.9
comp=Z,14nm,0.4s
FLN La Foliniere 7.30 199 *e*Pn **Pn 18 44 43.3 +0.8**
FLN *e*Sn **Sn 18 46 00.5 -4.8**
comp=Z,20nm,0.3s
MEZF Maizieres J'vi 7.30 170 *e*Pn **Pn 18 44 45.2 +2.7**
MEZF *e*Sn **Sn 18 46 03.7 -1.7**
comp=Z,17nm,0.3s
PAGF Fort de Pagny 7.33 166 *e*Pn **Pn 18 44 45.0 +2.1**
CLL Collm 7.33 123 *i* Pn **Pn 18 44 47.2 +4.2**
comp=Z,8.0nm,0.8s
CLL *i* Sn **Sn 18 46 05.6 -0.6**
LDF La Druitiere 7.40 197 *e*Pn **Pn 18 44 44.4 +0.6**
LDF *e*Sn **Sn 18 46 03.2 -4.5**
comp=Z,24nm,0.4s
SFTF Sexfontaines 7.60 170 *e*Pn **Pn 18 44 49.5 +2.9**
SFTF *e*Sn **Sn 18 46 08.3 -4.4**
comp=Z,9.0nm,0.2s
TANN Tannenbergstha 7.71 130 *e*Pn **Pn 18 44 51.4 +3.3**
CDF Champ du Feu 7.73 159 *e*Pn **Pn 18 44 51.4 +3.0**
CDF *e*Sn **Sn 18 46 11.6 -4.4**
comp=Z,4.8nm,0.3s
GRR Gorron 7.73 200 *e*Pn **Pn 18 44 49.2 +0.8**
GRR *e*Sn **Sn 18 46 09.4 -6.5**
comp=Z,24nm,0.2s
NKC Novy Kostel 7.84 130 *e*PN **Pn 18 44 53.2 +3.3**
HAU Haudompre 7.96 164 *e*Pn **Pn 18 44 55.2 +3.7**
HAU *e*Sn **Sn 18 46 19.3 -2.2**
comp=Z,13nm,0.4s
HSKC Hora Svate Kat 8.01 125 *e*PN **Pn 18 44 56.1 +3.9**
HSKC *e*SN **Sn 18 46 19.3 -3.5**
BRG Berggiesshubel 8.07 122 *e*Pn **Pn 18 44 55.5 +2.5**
BRG *e*Sn **Sn 18 46 18.0 -6.2**
BRG Berggiesshubel 8.07 122 Pg **Pn 18 44 55.9 +2.8**
BRG Sg **Sn 18 46 19.4 -4.8**
BRG Amp 18 46 25.7
comp=Z,9.4nm,0.4s
HINF Hinteralfeld 8.22 162 *e*Pn **Pn 18 44 59.2 +4.0**
HINF *e*Sn **Sn 18 46 24.5 -3.6**
comp=Z,7.1nm,0.4s
SGMF Saint Gilles 8.25 208 *e*Pn **Pn 18 44 56.2 +0.7**
SGMF *e*Sn **Sn 18 46 22.7 -5.9**
comp=Z,15nm,0.3s
ROSF Rostrenen 8.37 211 *e*Pn **Pn 18 44 57.6 +0.4**
ROSF *e*Sn **Sn 18 46 22.8 -8.8**
comp=Z,23nm,0.4s
HYF Humbligny 8.45 182 *e*Pn **Pn 18 45 00.1 +1.8**
HYF *e*Sn **Sn 18 46 30.0 -3.7**
LOR Lormes 8.46 177 *e*Pn **Pn 18 45 00.2 +1.8**
baz=359
LOR *e*Sn **Sn 18 46 27.8 -6.0**
comp=Z,32nm,0.3s
PVCC Panska Ves 8.60 122 *e*PN **Pn 18 45 03.8 +3.6**
SSF Saint Saulge 8.65 178 *e*Pn **Pn 18 45 02.5 +1.4**
SSF *e*Sn **Sn 18 46 31.8 -6.9**
comp=Z,12nm,0.3s
QUIF Quistinic 8.72 209 *e*Pn **Pn 18 45 02.0 +0.1**
QUIF *e*Sn **Sn 18 46 34.0 -6.2**
comp=Z,15nm,0.3s
AVF Avril sur Loir 8.92 179 *e*Pn **Pn 18 45 06.6 +1.9**
AVF *e*Sn **Sn 18 46 39.3 -5.9**
comp=Z,7.4nm,0.3s
PRU Pruhonice 8.95 125 *e*PN **Pn 18 45 08.8 +3.7**
PRU *e*SN **Sn 18 46 41.3 -4.6**
SMF Signal de Mont 9.08 177 *e*Pn **Pn 18 45 08.2 +1.3**
SMF *e*Sn **Sn 18 46 41.5 -7.6**
comp=Z,14nm,0.4s
KHC Kasperske Hory 9.15 132 *e*PN Pn 18 45 13.0 +5.1
KHC *e*SN **Sn 18 46 51.0 +0.1**
KHC *ex* x 18 47 14.0
BGF Bois d'Agland 9.16 181 *e*Pn **Pn 18 45 10.0 +2.0**
BGF *e*Sn **Sn 18 46 46.0 -5.0**
comp=Z,48nm,0.4s
ZVC Zvikov 9.19 128 *e*PN **Pn 18 45 12.9 +4.6**
CABF La Chapelle 9.29 167 *e*Pn **Pn 18 45 12.5 +2.7**
CABF *e*Sn **Sn 18 46 48.1 -6.2**
comp=Z,5.8nm,0.3s
UPC Upice 9.31 119 *e*PN **Pn 18 45 13.6 +3.5**
MFF Saint Martin d 9.34 194 *e*Pn **Pn 18 45 10.3 -0.2**
MFF *e*Sn **Sn 18 46 47.9 -7.6**
comp=Z,23nm,0.5s
DAVA Damuels 9.41 151 *i* Pn Pn 18 45 16.7 +5.2
comp=Z,1.0nm,0.2s
DAVA *i* Sn **Sn 18 46 57.1 -0.2**
comp=Z,2.3nm,0.3s
GERES GERESS Array B 9.42 132 Pn **Pn 18 45 15.4 +3.7**
comp=Z,0.1nm,0.3s,baz=313,slow=13,SNR=21
GERES Sn **Sn 18 46 57.5 -0.1**
comp=Z,0.1nm,0.3s,baz=324,slow=23,SNR=3.1
comp=Z,1.3nm,0.3s
TCF Toulx Ste Croi 9.45 184 *e*Pn **Pn 18 45 13.0 +1.1**
TCF *e*Sn **Sn 18 46 50.6 -7.5**
comp=Z,9.0nm,0.4s
RETA Reutte 9.48 147 *i* Pn Pn 18 45 18.8 +6.3
comp=Z,0.7nm,0.1s
RETA *i* Sn **Sn 18 46 58.5 -0.6**
comp=Z,1.3nm,0.3s
CKRC Cesky Krumlov 9.70 131 *e*PN **Pn 18 45 19.8 +4.4**
MOTA Moosalm 9.72 146 *i* Pn Pn 18 45 21.3 +5.6
comp=Z,1.4nm,0.1s,SNR=4.4
MOTA *i* Sn **Sn 18 47 02.9 -2.0**
comp=Z,3.1nm,0.3s
SQTA Sankt Quirin 9.86 146 *i* Pn **Pn 18 45 22.1 +4.5**
comp=Z,1.4nm,0.2s
SQTA *i* Sn **Sn 18 47 06.2 -2.2**
comp=Z,1.5nm,0.2s
DAVOX Davos/Dischmat 9.87 152 Pn **Pn 18 45 22.1 +4.2**
comp=Z,0.5nm,0.3s,baz=154,slow=22,SNR=5.3
DAVOX Sn **Sn 18 47 08.0 -0.8**
comp=Z,0.5nm,0.3s,baz=151,slow=20,SNR=3.6
comp=Z,0.9nm,0.4s
NSS Namsos 9.88 23 *e*P **Pn 18 45 20.5 +2.9**
TREC Trest 9.88 125 *e*PN **Pn 18 45 22.2 +4.4**
WATA Walderalm 9.88 145 *i* Pn Pn 18 45 23.3 +5.3
comp=Z,2.6nm,0.2s,SNR=6.8
WATA *i* Sn **Sn 18 47 09.0 +0.1**
comp=Z,7.1nm,0.4s
FETA Feichten 9.89 148 *i* Pn Pn 18 45 23.2 +5.1
comp=Z,0.6nm,0.2s
FETA *i* Sn **Sn 18 47 09.0 -0.2**
comp=Z,0.3nm,0.2s
WTTA Wattenberg 9.96 144 *i* Pn Pn 18 45 24.6 +5.4
comp=Z,2.6nm,0.2s,SNR=6.7
WTTA *i* Sn **Sn 18 47 10.9 0.0**
comp=Z,3.3nm,0.2s
LESA Schwarzleotal 10.18 141 *i* Pn Pn 18 45 27.9 +5.9
comp=Z,3.0nm,0.3s,SNR=7.2
LESA *i* Sn **Sn 18 47 14.5 -1.7**
comp=Z,1.4nm,0.2s
BIOA Bad Ischl, Aus 10.32 137 *e*Pn Pn 18 45 29.2 +5.3
comp=Z,3.4nm,0.3s,SNR=5.6
BIOA *i* Sn **Sn 18 47 21.6 +2.1**
comp=Z,2.2nm,0.3s
VRAC Vranov 10.38 122 Pn **Pn 18 45 29.0 +4.3**
comp=Z,0.8nm,0.3s,baz=296,slow=19,SNR=6.1
VRAC Sn **Sn 18 47 18.0 -3.1**
comp=Z,0.3nm,0.3s,baz=92,slow=22,SNR=1.7
comp=Z,1.9nm,0.4s
VRAC Vranov 10.38 122 *e*PN **Pn 18 45 28.9 +4.1**
VRAC *e*SN **Sn 18 47 16.6 -4.5**
MOA Molln 10.44 134 *i* Pn Pn 18 45 30.3 +4.8
comp=Z,0.5nm,0.2s
MOA *i* Sn **Sn 18 47 24.7 +2.3**
comp=Z,1.6nm,0.3s
LPL La Plagne 10.45 166 *e*Pn **Pn 18 45 27.6 +1.8**
LPL *e*Sn **Sn 18 47 18.2 -4.7**
comp=Z,3.6nm,0.5s
RJF Les Rejaudoux 10.46 186 *e*Pn **Pn 18 45 26.3 +0.5**
RJF *e*Sn **Sn 18 47 16.5 -6.5**
comp=Z,26nm,0.5s
KRUC Moravsky 10.46 124 *e*PN **Pn 18 45 29.5 +3.7**
KRUC *e*SN **Sn 18 47 19.5 -3.5**
LPG La Plagne 10.47 166 *e*Pn **Pn 18 45 30.6 +4.4**
LPG *e*Sn **Sn 18 47 17.9 -5.6**
comp=Z,4.3nm,0.5s
MORC Moravsky Berou 10.54 118 *e*PN **Pn 18 45 30.5 +3.6**
ABTA Abfaltersbach 10.70 143 *e*Pn Pn 18 45 35.4 +6.2
comp=Z,1.5nm,0.2s,SNR=6.5
ABTA *i* Sn **Sn 18 47 28.8 -0.3**
comp=Z,6.2nm,0.5s
KBA Koelnbreinsper 10.71 139 *e*Pn Pn 18 45 35.0 +5.6
comp=Z,4.0nm,0.3s,SNR=7.1
KBA *i* Sn **Sn 18 47 28.4 -1.0**
comp=Z,1.0nm,0.2s
CAF Calviac 10.81 184 *e*Pn **Pn 18 45 31.1 +0.5**
CAF *e*Sn **Sn 18 47 23.9 -7.7**
comp=Z,5.9nm,0.2s
LFF La Frestale 10.88 189 *e*Pn **Pn 18 45 32.3 +0.7**
LFF *e*Sn **Sn 18 47 26.4 -6.9**
comp=Z,12nm,0.4s
VIVF Saint-Julien-l 10.90 174 *e*Pn **Pn 18 45 34.2 +2.3**
VIVF *e*Sn Sn 18 47 24.7 -9.1
comp=Z,3.0nm,0.2s
ORIF Oris-en-Rattie 10.93 170 *e*Pn **Pn 18 45 35.6 +3.2**
ORIF *e*Sn **Sn 18 47 28.9 -5.8**
comp=Z,7.9nm,0.5s
CONA Conrad Observa 11.05 129 *i* Pn Pn 18 45 40.0 +6.1
comp=Z,0.2nm,0.1s
ARSA Arzberg 11.43 133 *i* Pn Pn 18 45 44.4 +5.3
comp=Z,0.7nm,0.2s
OBKA Obir 11.64 137 *i* Pn Pn 18 45 47.9 +5.8
comp=Z,0.5nm,0.2s
OBKA *i* Sn **Sn 18 47 51.9 -0.2**
comp=Z,2.3nm,0.5s
LASF Ste Croix 11.65 177 *e*Pn **Pn 18 45 44.5 +2.5**
LASF *e*Sn **Sn 18 47 43.5 -8.6**
comp=Z,3.4nm,0.5s
SOKA Soboth 11.69 136 *i* Pn Pn 18 45 47.8 +5.0
comp=Z,0.4nm,0.2s
LANS Liptovska Anna 11.91 117 *e*PN **Pn 18 45 49.3 +3.7**
MTLF Montolieu 12.39 183 *e*Pn **Pn 18 45 52.4 +0.2**
STHS Stebnicka Huta 12.66 112 *e*PN **Pn 18 45 58.8 +3.0**
EPF Esparros 12.81 189 *e*Pn **Pn 18 45 57.6 -0.4**
EPF *e*Sn Sn 18 48 09.6 -11
comp=Z,1.4nm,0.2s
SJPF Ste Jean 12.91 194 *e*Pn **Pn 18 45 58.7 -0.7**
SJPF *e*Sn Sn 18 48 12.6 -10
comp=Z,1.7nm,0.2s
ETSF Etsaut 13.04 192 *e*Pn **Pn 18 46 00.6 -0.5**
ETSF *e*Sn Sn 18 48 15.1 -11
comp=Z,3.9nm,0.4s
FIA0 FINESS Array S 13.23 55 Pn **Pn 18 46 06.4 +2.9**
baz=247,slow=12
FIA0 Sn Sn 18 48 21.3 -9.1
baz=251,slow=22
FIA0 FINESS Array S 13.23 55 Pn **Pn 18 46 06.4 +2.9**
FIA0 Sn Sn 18 48 21.3 -9.1
FIA0 FINESS Array S 13.23 55 Pn **Pn 18 46 06.4 +2.9**
FIA0 Sn Sn 18 48 21.3 -9.1
FINES FINESS Array B 13.23 55 Pn **Pn 18 46 06.3 +2.9**
comp=Z,1.0nm,0.3s,baz=250,slow=12,SNR=32
FINES Sn **Sn 18 48 21.8 -8.6**
comp=Z,0.7nm,0.3s,baz=248,slow=18,SNR=5.1
AKASG Malin Array Be 16.35 97 Pn **P 18 46 48.5 +0.3**
comp=Z,0.8nm,0.3s,baz=297,slow=12,SNR=1.8
ESDC Sonseca Array 16.72 199 Pn **Pn 18 46 50.1 0.0**
comp=Z,0.1nm,0.3s,baz=14,slow=11,SNR=10
comp=Z,0.4nm,0.4s
ARA0 ARCESS Array S 17.10 27 P **P 18 46 57.3 +1.0**
baz=227,slow=14
ARA0 ARCESS Array S 17.10 27 P **P 18 46 57.3 +1.0**
ARA0 ARCESS Array S 17.10 27 P **P 18 46 57.3 +1.0**
ARCES ARCESS Array B 17.10 27 P **P 18 46 56.9 +0.6**
comp=Z,0.2nm,0.3s,baz=225,slow=14,SNR=6.2
comp=Z,2.1nm,0.8s
BVAR Borovoye Array 37.88 65 P **P 18 50 17.3 +4.7**
comp=Z,0.3nm,0.5s,baz=309,slow=9.1,SNR=2.2
comp=Z,0.3nm,0.5s
TORD Torodi Ar. Bea 42.47 182 P **P 18 50 53.9 +2.9**
comp=Z,0.7nm,0.5s,baz=344,slow=7.8,SNR=6.0
comp=Z,0.7nm,0.5s
KURBB Kurchatov Arra 43.40 64 P **P 18 51 01.8 +3.6**
comp=Z,0.6nm,0.3s,baz=316,slow=8.0,SNR=0.9
comp=Z,0.6nm,0.3s
ZALV Zalesovo Beam 44.48 57 P **P 18 51 10.6 +3.7**
comp=Z,0.7nm,0.4s,baz=313,slow=8.2,SNR=4.7
comp=Z,0.7nm,0.4s
MKAR Makanchi Array 47.76 66 P **P 18 51 37.0 +4.2**
comp=Z,0.3nm,0.7s,baz=312,slow=5.8,SNR=2.1
comp=Z,0.3nm,0.7s

UPP ***22*** *18:46:16.1±0.1, 67.7°N×20.1°E, h0km, ML2.5, Confirmed Induced event*
HEL ***22*** *18:46:17.0±0.3, 67.82°N×20.16°E, h0km, ML1.4, Suspected explosion*
ISC 22 18:46:15.9±0.8**, 67.79N**±0.02×**20.23E**±0.03**, h0**km**, n25,** σ**0**s**70/37, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.17**	**14**	P	**Pg**	**18 46 19.7**	**+0.5**
KUA				S	**Sg**	**18 46 21.7**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**279**	P	**Pg**	**18 46 20.6**	**0.0**
KOVU	**Salmi**	**0.44**	**357**	P	**Pg**	**18 46 24.2**	**-0.1**
KOVU				S	**Sg**	**18 46 29.7**	**-0.3**
NIKU	**Nikkaluokta**	**0.46**	**281**	P	**Pg**	**18 46 24.7**	**+0.1**
DUNU	**Dundret**	**0.68**	**169**	P	**Pg**	**18 46 29.0**	**+0.2**
LANU	**Lannavaara**	**0.72**	**68**	P	**Pg**	**18 46 29.7**	**+0.2**
LANU	**Lannavaara**	**0.72**	**68**	PG	**Pg**	**18 46 29.8**	**+0.2**
	baz=257						
LANU				SG	**Sg**	**18 46 39.2**	**+0.3**
SALU	**Saltoluokta**	**0.78**	**239**	*e*P	**Pg**	**18 46 30.8**	**+0.1**
SALU	**Saltoluokta**	**0.78**	**239**	P	**Pg**	**18 46 30.8**	**+0.1**
KIF	**Kilpisjarvi**	**1.24**	**10**	*e*P	**Pn**	**18 46 40.4**	**0.0**
KIF	**Kilpisjarvi**	**1.24**	**10**	PN	**Pn**	**18 46 40.9**	**+0.5**
	baz=191						
KIF				smax	smax	18 46 54.9	
	comp=Z,4.5nm,0.2s						
KIF				SG	**Sg**	**18 46 56.0**	**+0.3**
HEF	**Hetta**	**1.43**	**63**	PG	**Pn**	**18 46 42.7**	**-0.4**
	baz=243						
HEF				smax	smax	18 47 00.3	
	comp=Z,2.0nm,0.2s						
HEF				SN	**Sg**	**18 47 02.0**	**+0.2**
ERTU	**Ertsjaerv**	**1.46**	**147**	PG	**Pb**	**18 46 44.0**	**+0.3**
ERTU				SN	**Sn**	**18 47 04.2**	**+1.1**
KLF	**Kolari**	**1.54**	**109**	PG	**Pn**	**18 46 45.0**	**+0.5**
KLF				smax	smax	18 47 04.2	
	comp=Z,2.2nm,0.2s						
KLF				SG	**Sg**	**18 47 06.0**	**+0.8**
KTK1	**Kautokeino**	**1.66**	**41**	PN	**Pb**	**18 46 47.4**	**+0.1**
KTK1				SN	**Sb**	**18 47 08.8**	**+0.1**
TRO	**Tromso**	**1.92**	**346**	SG	**Sb**	**18 47 15.3**	**-0.7**
KALU	**Kalix**	**2.30**	**146**	SG	**Sg**	**18 47 30.2**	**+0.6**
TOF	**Tornio**	**2.35**	**135**	PB	**Pb**	**18 46 58.5**	**-0.6**
TOF				smax	smax	18 47 28.0	
	comp=Z,1.1nm,0.2s						
TOF				SG	**Sg**	**18 47 30.5**	**-0.8**
RNF	**Rovaniemi**	**2.54**	**115**	PG	**Pb**	**18 47 01.8**	**-0.5**
RNF				SB	**Sb**	**18 47 34.5**	**+0.3**
ARA0	**ARCESS Array S**	**2.61**	**45**	PB	**Pb**	**18 47 01.5**	**-1.9**
ARA0				SG	**Sb**	**18 47 34.8**	**-1.2**
RAJF	**Raja-Jooseppi**	**3.10**	**73**	SB	**Sb**	**18 47 50.0**	**-0.2**
RANF	**Ranua**	**3.14**	**121**	SG	**Sg**	**18 47 54.9**	**-1.7**
KEV	**Kevo**	**3.16**	**48**	PG	**Pb**	**18 47 13.2**	**+0.4**
KEV				SN	**Sn**	**18 47 46.4**	**+1.3**
MSF	**Maaselka**	**3.96**	**114**	SN	**Sn**	**18 48 04.8**	**0.0**
KU6	**Riekki**	**4.20**	**110**	SG	**Sg**	**18 48 29.2**	**-1.3**

NEIC ***22*** *18:50:17.5, 21.58S×174.44W, h30km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^17^Nm; Mrr1.01; Mθθ-0.14; Mφφ-0.87; Mrθ0.27; Mθφ-0.37; Mφr0.29; Fault plane solution: M0 1.09000×10^17^ NP1: φs195.50000°, δ35.42000°, λ78.13000°. NP2: φs29.96000°, δ55.45000°, λ98.32000°. Principal axes: T 1.0878, Plg78.0000°, Azm329.0000°; N 0.0003, Plg7.0000°, Azm205.0000°; P -1.0881, Plg10.0000°, Azm114.0000°;*
IDC ***22*** *18:50:17.4±0.5, 21.86S×175.05W, h0km, mb4.5/21, mbtmp4.5/22, ML5.3/2, MS4.7/51 Error ellipse: s-maj=19.3km s-min=15.0km az=106.0*
NEIC ***22*** *18:50:17.5, 21.68S×174.87W, h30km*
MOS ***22*** *18:50:18.4±1.4, 21.97S×174.91W, h22km, mb5.2/34, Error ellipse: s-maj=10.8km s-min=8.7km az=58.1*
NEIC ***22*** *18:50:18.3±1.4, 21.78S±0.08×174.89W±0.09, h18km±3km, mb5.2/129, Mww5.3/11, Error ellipse: s-maj=12.7km s-min=9.8km az=129.0*
NOU ***22*** *18:50:19.7, 21.92S×174.34W, h11km, mb5.2/19, Tonga Islands*
GCMT ***22*** *18:50:24.5±0.1, 22.02S±0.01×174.47W±0.01, h22km, MW5.4/143, Moment Tensor Solution. s107, c174; s143, c240; Duration: 1s2 Moment tensor: Scale 10^17^ Nm; Mrr1.21±.02; Mθθ-0.33±.01; Mφφ-0.87±.01; Mrθ0.43±.03; Mθφ-0.68±.01; Mφr0.60±.02; Best double couple: M0 1.47100×10^17^ NP1: φs213.00000°, δ30.00000°, λ89.00000°. NP2: φs35.00000°, δ60.00000°, λ91.00000°. Principal axes: T 1.4090, Plg75.0000°, Azm307.0000°; N 0.1260, Plg1.0000°, Azm214.0000°; P -1.5330, Plg15.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 18:50:19.2±0.3**, 21.91S**±0.04×**174.62W**±0.05**, h27**km**, n495,** σ**1s97/423, mb5.1/136, MS4.8/62, 82C-20D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.22**	**58**	P	**Pn**	**18 51 33.1**	**-2.5**
NIUE				S	**Sn**	**18 52 27.3**	**-7.7**
NIUE	**Niue**	**5.22**	**58**		**Pn**	**18 51 33.0**	**-2.6**
NIUE				Sn	Sn	18 52 25.6	-9.4
NIUE	**Niue**	**5.22**	**58**	P	**Pn**	**18 51 33.5**	**-2.1**
NIUE	**Niue**	**5.22**	**58**	P	**Pn**	**18 51 33.5**	**-2.1**
NIUE				S	**Sn**	**18 52 26.2**	**-8.8**
LKBA	**Tubou, Lakemba**	**5.38**	**312**	P	Pn	18 51 42.8	+5.0
TAVE	**Taveuni**	**7.19**	**315**	P	Pn	18 52 08.5	+5.8
DGTI	**Dogotuki**	**7.72**	**315**	P	Pn	18 52 15.0	+5.0
RAO	**Raoul Island**	**7.89**	**202**	Pn	**Pn**	**18 52 13.3**	**+1.1**
	140nm,0.3s,baz=281,slow=22,SNR=5.7						
RAO				Sn	**Sn**	**18 53 36.5**	**-4.1**
	164nm,0.3s,baz=73,slow=23,SNR=9.9						
RAO	**Raoul Island**	**7.89**	**202**	Pn	**Pn**	**18 52 11.7**	**-0.5**
RAO				Sn	**Sn**	**18 53 35.9**	**-4.7**
RAO	**Raoul Island**	**7.89**	**202**	P	Pn	18 52 16.5	+4.3
RAO	**Raoul Island**	**7.89**	**202**	P	**Pn**	**18 52 11.7**	**-0.5**
RAO						18 53 35.9	
GLKZ	**Green Lake**	**7.90**	**201**	P	**Pn**	**18 52 12.7**	**+0.4**
GLKZ				S	**Sn**	**18 53 36.9**	**-3.9**
MSVF	**Nonsavu**	**8.06**	**300**	P	Pn	18 52 20.2	+5.6
MSVF	**Nonsavu**	**8.06**	**300**	P	Pn	18 52 20.0	+5.4
MSVF	**Nonsavu**	**8.06**	**300**	P	Pn	18 52 20.2	+5.6
AFI	**Afiamalu**	**8.41**	**19**		**Pn**	**18 52 18.2**	**-1.2**
AFI				Sn	Sn	18 53 44.0	-10
AFI	**Afiamalu**	**8.41**	**19**	P	**Pn**	**18 52 18.2**	**-1.2**
AFI	**Afiamalu**	**8.41**	**19**	P	**Pn**	**18 52 19.1**	**-0.4**
AFI				S	**Sn**	**18 53 49.5**	**-4.1**

RAR **Rarotonga** 13.83 90 Pn **Pn** 18 53 32.0 -1.5
6.1nm,0.3s,baz=258,slow=6.0,SNR=11
RAR Sn Sn 18 55 50.3 -16
2.5nm,0.3s,baz=47,slow=16,SNR=1.4
RAR LR LR 18 59 51.6
comp=Z,2μm,18.1s,baz=260,slow=40
RAR Rarotonga 13.83 90 P **Pn** 18 53 30.3 -3.3
RAR Rarotonga 13.83 90 P **Pn** 18 53 32.4 -1.2
RAR Rarotonga 13.83 90 P **Pn** 18 53 30.3 -3.3
RAR Rarotonga 13.83 90 P **Pn** 18 53 31.7 -1.9
RAR S Sn 18 55 51.2 -15
FUNA Funafuti 14.58 335 Pn **Pn** 18 53 40.1 -3.8
MARNC **Mare, Loyalty** 16.14 268 **Pn** 18 54 02.8 -1.4
DVP **Devils Point** 16.71 281 P **P** 18 54 16.7 +3.1
MXZ **Matakaoa Point** 16.75 200 **P** 18 54 12.7 -1.3
HAZ **Te Kaha** 17.10 201 P **Pn** 18 54 10.7 -5.6
OUENC **Ouen Island, N** 17.18 265 P **Pn** 18 54 14.6 -2.9
PUZ **Puketiti** 17.23 199 P **Pn** 18 54 15.5 -2.6
ONTNC **Ouen Toro** 17.55 265 Pn **Pn** 18 54 18.4 -3.6
ONTNC **Ouen Toro** 17.55 265 P **P** 18 54 28.0 +5.1
DZM Mont Dzumac 17.57 266 P **P** 18 54 24.3 +1.0
22nm,0.7s,baz=105,slow=23,SNR=12
DZM LR LR 18 58 41.7
comp=Z,997nm,19.0s,baz=101,slow=29
DZM Mont Dzumac 17.57 266 **Pn** 18 54 19.6 -2.7
DZM Mont Dzumac 17.57 266 P **P** 18 54 27.5 +4.2
URZ Urewera 17.78 202 P **P** 18 54 25.2 -0.2
3.3nm,0.3s,baz=340,slow=2.3,SNR=13
URZ S Sn 18 57 26.1 -16
37nm,0.8s,baz=161,slow=20,SNR=7.2
9.3nm,0.5s
URZ Urewera 17.78 202 P **P** 18 54 25.8 +0.5
RAGZ Rawiri 17.89 201 P **P** 18 54 29.3 +2.6
TOZ Tahuroa Road 17.92 206 P **P** 18 54 27.0 +0.1
SNGZ Shannon Statio 18.17 201 P **P** 18 54 30.6 +0.8
MTHZ Maungataniwha 18.40 202 P **Pn** 18 54 33.3 +0.8
BKZ Black Stump Fm 18.80 202 P **Pn** 18 54 37.8 +0.5
MCHZ McNeill Hill 18.98 201 P **Pn** 18 54 42.8 +3.3
OTVZ Oturere 19.10 204 P **Pn** 18 54 41.2 +0.2
SNVZ South Ngauruho 19.13 204 P **Pn** 18 54 40.5 -0.9
KRHZ Kereru 19.27 201 P **Pn** 18 54 43.9 +0.9
PNHZ Pukenui 19.57 201 P **P** 18 54 45.3 +0.2
KOUNC **Koumac, New Ca** 19.71 270 P **Pn** 18 54 52.0 +3.7
BFZ Birch Farm 20.25 200 P **P** 18 54 50.4 -2.0
BFZ IAmb IAmb 18 55 09.7
comp=Z,116nm,1.2s
BFZ Birch Farm 20.25 200 P Pn 18 54 56.9 +2.4
MRZ Mangatainoka R 20.45 202 P **P** 18 54 53.4 -1.2
MRZ IAmb IAmb 18 55 02.2
comp=Z,148nm,1.7s
QRZ Quartz Range 21.77 207 P **P** 18 55 13.0 +4.2
KHZ Kahutara 22.72 203 P **P** 18 55 18.1 -0.8
KHZ IAmb IAmb 18 55 37.9
comp=Z,136nm,1.7s
KHZ Kahutara 22.72 203 P **P** 18 55 21.5 +2.5
PPT Papeete 23.95 84 P **P** 18 55 34.6 +3.2
comp=Z,61nm,1.0s,baz=234,slow=14,SNR=4.8
PPT LR LR 19 02 37.6
comp=Z,1μm,21.2s,baz=262,slow=30
PPTF Pamatai, Papee 23.96 84 P **P** 18 55 32.8 +1.2
PPTF Pamatai, Papee 23.96 84 P **P** 18 55 33.1 +1.5
OXZ Oxford 24.07 204 P **P** 18 55 31.8 -0.5
OXZ IAmb IAmb 18 55 57.0
comp=Z,218nm,2.0s
FOZ Fox Glacier 25.14 207 P **P** 18 55 41.3 -0.7
HNR Honiara 27.40 293 LR LR 19 05 10.7
comp=Z,58nm,20.9s,baz=220,slow=33
WHZ Wether Hill Ro 27.83 207 P **P** 18 56 05.6 -0.7
TATA Tatamba Isabel 28.05 295 P P 18 56 13.8 +5.3
ARMA Armidale 31.36 247 P **P** 18 56 35.4 -2.6
ARMA IAmb IAmb 18 57 00.5
comp=Z,52nm,1.7s
EIDS Eidsvold 31.56 257 P **P** 18 56 36.8 -2.7
EIDS IAmb IAmb 18 57 09.2
comp=Z,92nm,1.9s
CAN Canberra 34.42 239 P **P** 18 57 03.2 -1.4
CAN Canberra 34.42 239 P **P** 18 57 03.2 -1.4
CAN pmax pmax
comp=Z,98nm,1.9s
CTA Charters Tower 36.51 266 LR LR 19 11 27.0
comp=Z,1μm,18.0s,baz=94,slow=35
CTAO Charters Tower 36.51 266 **P** 18 57 20.6 -2.0
CTAO IAmb IAmb 18 57 24.0
comp=Z,20nm,0.7s
CTAO Charters Tower 36.51 266 P **P** 18 57 20.6 -2.0
CTAO pmax pmax
comp=Z,20nm,0.7s
TOO Toolangi 37.68 236 P **P** 18 57 31.1 -1.3
TOO Toolangi 37.68 236 P **P** 18 57 31.1 -1.3
TOO pmax pmax
comp=Z,20nm,1.9s
QLP Quilpie 37.69 255 P **P** 18 57 31.4 -1.1
comp=Z,56nm,1.4s
TAU Tasmania Unive 37.92 227 P **P** 18 57 33.5 -0.8
TAU IAmb IAmb 18 57 52.7
comp=Z,91nm,1.6s
TAU Tasmania Unive 37.92 227 P **P** 18 57 33.5 -0.8
TAU pmax pmax
comp=Z,91nm,1.6s
MTSU Mount Surprise 38.69 268 P **P** 18 57 40.9 -0.2
comp=Z,12nm,0.8s
PMG Port Moresby 38.73 283 LR LR 19 12 25.4
comp=Z,2μm,18.2s,baz=132,slow=35
PMG Port Moresby 38.73 283 **P** 18 57 38.9 -2.5
PMG Port Moresby 38.73 283 *ce*P **P** 18 57 39.7 -1.7
PMG pmax pmax
comp=Z,14nm,0.7s
PMG Port Moresby 38.73 283 P **P** 18 57 41.6 +0.2
comp=Z,28nm,1.1s
STKA Stephens Creek 40.06 246 P **P** 18 57 51.1 -1.3
comp=Z,47nm,0.9s
STKA Stephens Creek 40.06 246 P **P** 18 57 51.0 -1.4
comp=Z,3.9nm,0.5s,baz=92,slow=10,SNR=12
STKA LR LR 19 13 50.1
comp=Z,2μm,18.2s,baz=80,slow=36
comp=Z,3.9nm,0.5s
STKA Stephens Creek 40.06 246 **P** 18 57 50.7 -1.7
STKA IAmb IAmb 18 57 57.0
comp=Z,97nm,1.6s
STKA Stephens Creek 40.06 246 *i* P **P** 18 57 51.8 -0.6
INKA Innaminka 40.76 253 **P** 18 57 56.6 -1.6
COEN Coen 40.82 274 P **P** 18 57 56.7 -2.2
COEN IAmb IAmb 18 58 09.9
comp=Z,120nm,1.9s
HTT Hallett 42.41 244 P **P** 18 58 11.5 -0.2
comp=Z,6.1nm,1.4s
BBOO Buckleboo 44.78 245 P **P** 18 58 28.9 -1.9
AS31 Alice Springs 47.28 258 **P** 18 58 48.4 -2.3
ASAR Alice Springs 47.28 258 P **P** 18 58 49.2 -1.5
comp=Z,17nm,0.8s,baz=93,slow=7.2,SNR=121
ASAR PcP **PcP** 19 00 23.2 +1.6
comp=Z,1.7nm,0.6s,baz=109,slow=3.6,SNR=4.3
ASAR LR LR 19 18 23.4
comp=Z,2μm,18.0s,baz=98,slow=36
comp=Z,17nm,0.8s
ASAR Alice Springs 47.28 258 **P** 18 58 48.4 -2.3
ASAR **PcP** 19 00 22.2 +0.6
WB0 Warramunga Arr 47.53 263 **P** 18 58 49.7 -2.9
WB0 IAmb IAmb 18 58 56.3
comp=Z,24nm,0.8s
WRAB Tennant Creek 47.53 263 P **P** 18 58 49.6 -3.0
WRAB IAmb IAmb 18 58 55.5
comp=Z,23nm,1.1s
WRAB Tennant Creek 47.53 263 *ce*P **P** 18 58 51.4 -1.2
WRAB pmax pmax
comp=Z,17nm,0.9s
WRA Warramunga Arr 47.54 263 P **P** 18 58 50.7 -2.0
comp=Z,16nm,0.9s,baz=98,slow=5.2,SNR=35
comp=Z,16nm,0.9s
WRA Warramunga Arr 47.54 263 **P** 18 58 49.6 -3.1
FORT Forrest 51.65 247 P **P** 18 59 22.7 -1.2
comp=Z,34nm,0.7s
FORT Forrest 51.65 247 P **P** 18 59 21.8 -2.1
FORT IAmb IAmb 18 59 25.3
comp=Z,24nm,0.7s
WRKA Warakurna 52.13 255 P **P** 18 59 26.2 -1.3
comp=Z,14nm,0.8s
MTN Manton Dam 52.33 270 P **P** 18 59 26.1 -3.0
GUMO Guam 53.14 308 LR LR 19 19 30.4
comp=Z,590nm,21.0s,baz=130,slow=33
KNRA Kununurra 53.72 266 P **P** 18 59 38.5 -0.9
comp=Z,40nm,0.7s
KNRA Kununurra 53.72 266 **P** 18 59 37.0 -2.3
KNRA IAmb IAmb 18 59 39.6
comp=Z,24nm,0.8s

FITZ Fitzroy Crossi 55.97 262 LR LR 19 23 11.9
comp=Z,1μm,19.1s,baz=99,slow=36
SIJI Sorong 56.65 284 LR LR 19 23 56.9
comp=Z,1μm,19.9s,baz=88,slow=36
SIJI Sorong 56.65 284 P **P** 19 00 00.8 +0.3
comp=Z,58nm,0.9s
SWI Sorong 56.65 284 P **P** 19 00 01.3 +0.8
comp=Z,84nm,0.9s
SBA Scott Base 56.70 185 P **P** 19 00 01.9 +2.0
SBA IAmb IAmb 19 00 14.2
comp=Z,46nm,1.3s
SBA Scott Base 56.70 185 P **P** 19 00 01.9 +2.0
SBA pmax pmax
comp=Z,46nm,1.3s
VNDA Vanda 56.81 186 P **P** 19 00 04.2 +3.5
comp=Z,2.8nm,1.0s,baz=9.9,slow=4.0,SNR=3.9
VNDA LR LR 19 22 40.6
comp=Z,262nm,19.5s,baz=3.0,slow=34
comp=Z,2.8nm,1.0s
VNDA Vanda 56.81 186 P **P** 19 00 03.1 +2.4
VNDA IAmb IAmb 19 00 14.0
comp=Z,24nm,1.4s
KRAI Karang Ratu 58.24 280 P **P** 19 00 11.9 +0.2
comp=Z,19nm,0.7s
VA02 Isla de Pascua 58.95 109 P **P** 19 00 18.4 +1.9
RPN Rapa Nui 59.05 109 LR LR 19 22 00.5
comp=Z,751nm,18.2s,baz=322,slow=32
SOEI Soe 59.69 271 **P** 19 00 19.0 -3.0
SOEI Soe 59.69 271 P **P** 19 00 22.7 +0.7
comp=Z,71nm,0.8s
BATI Baumata 60.10 271 LR LR 19 25 30.9
comp=Z,2μm,21.3s,baz=138,slow=35
PSAC2 Pilbara Seismi 60.38 257 P **P** 19 00 25.3 -1.2
comp=Z,17nm,1.1s
PSAB3 Pilbara Seismi 60.41 257 P **P** 19 00 25.8 -0.9
comp=Z,20nm,0.9s
PSA00 Pilbara Seismi 60.42 257 P **P** 19 00 25.7 -1.0
comp=Z,24nm,1.0s
PSA00 Pilbara Seismi 60.42 257 P **P** 19 00 25.0 -1.8
PSA00 IAmb IAmb 19 00 28.9
comp=Z,17nm,0.8s
PSA00 Pilbara Seismi 60.42 257 **P** 19 00 24.7 -2.0
PSA00 IAmb IAmb 19 00 28.9
comp=Z,10nm,0.9s
PSAC1 Pilbara Seismi 60.47 257 P **P** 19 00 26.1 -1.0
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 60.57 244 LR LR 19 23 43.6
comp=Z,497nm,21.5s,baz=80,slow=33
NWAO Narrogin (SRO) 60.57 244 P **P** 19 00 25.6 -1.9
NWAO Narrogin (SRO) 60.57 244 P **P** 19 00 25.7 -1.9
NWAO pmax pmax
comp=Z,75nm,1.9s
MBWA Marble Bar 60.63 257 P **P** 19 00 27.2 -0.9
comp=Z,21nm,0.7s
MBWA Marble Bar 60.63 257 **P** 19 00 25.5 -2.6
MBWA IAmb IAmb 19 00 29.7
comp=Z,15nm,0.7s
MORW Morawa 62.22 248 **P** 19 00 37.5 -1.3
MORW IAmb IAmb 19 00 40.6
comp=Z,28nm,1.1s
JCJ Chichijima 64.19 317 LR LR 19 25 44.6
comp=Z,486nm,19.7s,baz=138,slow=33
DAV Davao City (W) 65.28 289 LR LR 19 28 17.7
comp=Z,492nm,18.7s,baz=114,slow=35
KAPI Kappang 65.55 275 LR LR 19 30 47.8
comp=Z,311nm,19.6s,baz=126,slow=37
TOLI2 Tolitoli 66.98 281 **P** 19 01 09.0 -1.1
TOLI2 IAmb IAmb 19 03 33.3
comp=Z,13nm,1.0s
QSPA South Pole Qui 68.16 180 P **P** 19 01 20.2 +3.3
comp=Z,24nm,0.9s,baz=42,slow=3.4,SNR=17
QSPA LR LR 19 27 23.5
comp=Z,553nm,20.0s,baz=40,slow=33
comp=Z,24nm,0.9s
QSPA South Pole Qui 68.16 180 P **P** 19 01 19.3 +2.4
QSPA IAmb IAmb 19 01 25.8
comp=Z,24nm,0.8s
SNJI Sawahan-Nganju 71.98 269 P **P** 19 01 42.6 +1.4
comp=Z,20nm,0.9s
TGY Tagaytay City 72.61 293 LR LR 19 30 48.9
comp=Z,273nm,21.8s,baz=106,slow=34
MJAR Matsushiro Arr 73.24 322 P **P** 19 01 49.3 +1.3
comp=Z,4.5nm,0.8s,baz=158,slow=5.6,SNR=13
comp=Z,4.5nm,0.8s
MJAR Matsushiro Arr 73.24 322 P **P** 19 01 47.8 -0.2
MJAR IAmb IAmb 19 04 06.6
comp=Z,48nm,2.0s
JOW Kunigami 73.50 309 LR LR 19 31 28.5
comp=Z,268nm,19.7s,baz=109,slow=34
KPJI Karang Pucung 74.76 268 P **P** 19 01 53.7 -3.7
comp=Z,29nm,0.9s
SHEM Shemya Is, Ala 74.97 353 LR LR 19 30 10.4
comp=Z,863nm,20.2s,baz=138,slow=32
JNU Nakatsue 75.48 315 LR LR 19 30 41.3
comp=Z,296nm,20.5s,baz=112,slow=32
BBJI Bungbulang 75.91 268 P **P** 19 02 02.1 -2.0
LEM Lembang 76.16 268 LR LR 19 35 42.9
comp=Z,538nm,19.6s,baz=144,slow=36
ASAJ Asahikawa 76.50 330 LR LR 19 34 26.1
comp=Z,548nm,18.2s,baz=156,slow=35
LPIG La Paz 77.45 58 LR LR 19 30 26.6
comp=Z,638nm,18.4s,baz=222,slow=31
PET Petropavlovsk 78.15 344 *e*P P 19 02 20.7 +5.0
PET *e*PPP PPP 19 07 04.2
PET *e*S **S** **19 12 13.3 +5.1**
PET pmax pmax
comp=Z,100nm,4.2s
PET MLR MLR
comp=Z,300nm,16.0s
PET MLR MLR
comp=Z,500nm,16.0s
PFO Pinyon Flats O 78.21 46 LR LR 19 29 17.9
comp=Z,278nm,20.5s,baz=254,slow=30
PFO Pinyon Flats O 78.21 46 *i* P **P** 19 02 18.0 +1.4
PFO pmax pmax
comp=Z,12nm,1.3s
PEA0B Petropavlovsk- 78.48 343 *ce*P **P** 19 02 17.9 +0.4
PETK Petropavlovsk- 78.48 343 P **P** 19 02 18.9 +1.4
comp=Z,16nm,0.9s,baz=130,slow=6.4,SNR=19
comp=Z,16nm,0.9s
PETK Petropavlovsk- 78.48 343 **P** 19 02 17.5 0.0
YSS Yuzhno-Sakhali 78.60 332 P **P** 19 02 17.3 -1.0
YSS Yuzhno-Sakhali 78.60 332 *e*P **P** 19 02 19.9 +1.6
YSS *e**SP **PcP** 19 02 27.3 +0.1
YSS *e* 19 05 19.6
YSS *e*S **S** **19 12 16.7 +3.5**
YSS *e* 19 13 19.1
YSS *e*SS **SS** **19 17 19.7 +1.8**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,400nm,21.0s
AFDM Forest Hills D 78.64 40 **P** 19 02 19.5 +0.7
ORV Oroville 78.72 39 **P** 19 02 20.3 +1.1
ORV Oroville 78.72 39 P **P** 19 02 20.3 +1.1
ORV pmax pmax
comp=Z,17nm,1.5s
PMSA Palmer Station 78.73 156 LR LR 19 29 13.9
comp=Z,339nm,21.4s,baz=280,slow=30
CLC China Lake 78.78 44 P **P** 19 02 19.3 -0.4
CLC China Lake 78.78 44 P **P** 19 02 19.3 -0.4
CLC pmax pmax
comp=Z,10.0nm,1.2s
N02D Trinity Center 78.97 37 **P** 19 02 20.1 -0.5
N02D IAmb IAmb 19 02 47.6
comp=Z,33nm,1.4s
MPMC Manual Prospec 78.99 44 P **P** 19 02 19.8 -1.3
M02C Callahan 79.16 37 **P** 19 02 21.0 -0.6
M02C IAmb IAmb 19 02 45.7
comp=Z,35nm,1.4s
YBH Yreka Blue Hor 79.47 37 LR LR 19 31 48.4
comp=Z,21nm,19.1s,baz=252,slow=31
DSP Deep Springs 79.48 43 **P** 19 02 23.1 -0.2
DSP IAmb IAmb 19 02 39.9
comp=Z,30nm,1.7s
KASI Kota Agung 79.52 268 P **P** 19 02 22.2 -2.0
comp=Z,15nm,0.9s
NVAR Mina Array Bea 79.93 42 P **P** 19 02 29.8 +3.6
comp=Z,1.4nm,0.7s,baz=223,slow=8.7,SNR=9.4
NVAR LR LR 19 31 50.8
comp=Z,425nm,19.6s,baz=250,slow=31
comp=Z,1.4nm,0.7s
KSRS Korea Array 80.05 317 P **P** 19 02 27.4 +1.0
comp=Z,1.6nm,0.8s,baz=119,slow=6.0,SNR=4.7
KSRS LR LR 19 32 02.9
comp=Z,314nm,21.8s,baz=140,slow=31
comp=Z,1.6nm,0.8s

LWLI Liwa 80.11 269 P **P** 19 02 26.3 -1.2
comp=Z,1μmcomp=Z,61nm,0.8s
MDSI Maura Dua 80.19 269 P **P** 19 02 26.1 -1.7
comp=Z,20nm,0.8s
K05A Summer Lake 81.14 37 **P** 19 02 32.5 +0.1
K05A IAmb IAmb 19 02 58.7
comp=Z,40nm,1.5s
USHA Ushuaia 81.20 146 LR LR 19 33 59.1
comp=Z,298nm,18.5s,baz=216,slow=32
MAW Mawson 81.29 199 LR LR 19 38 35.4
comp=Z,472nm,19.0s,baz=116,slow=36
J05D Fort Rock, OR 81.32 36 P **P** 19 02 33.6 +0.3
TUC Tucson 81.41 50 **P** 19 02 34.7 +0.7
TUC Tucson 81.41 50 P **P** 19 02 34.7 +0.7
TUC pmax pmax
comp=Z,8.0nm,1.2s
KDAK Kodiak Island 81.50 12 LR LR 19 34 41.2
comp=Z,438nm,19.0s,baz=198,slow=33
TYV Tymovskoe 81.65 334 *e*P **P** 19 02 36.5 +1.8
TYV *e*S **SKSac** 19 12 51.6 -0.8
TYV pmax pmax
comp=Z,9.0nm,0.8s
TYV pmax pmax
comp=Z,100nm,2.5s
TYV smax smax
comp=N,100nm,4.5s
TYV smax smax
comp=E,100nm,4.5s
P16K Nushagak River 81.81 9 P **P** 19 02 35.0 -0.3
PINE Pine Mountain 81.81 36 P **P** 19 02 35.4 -0.6
PINE IAmb IAmb 19 02 59.6
comp=Z,23nm,1.2s
USRK Ussuriysk Ar. 81.92 324 P **P** 19 02 38.5 +2.3
comp=Z,5.2nm,0.9s,baz=222,slow=2.6,SNR=5.6
comp=Z,5.2nm,0.9s
X16A Lo Mia Camp, P 82.09 48 pP 19 02 43.0 -2.0
WVOR Wild Horse Val 82.23 38 P **P** 19 02 39.3 +1.2
WVOR IAmb IAmb 19 03 04.1
comp=Z,24nm,1.5s
WVOR Wild Horse Val 82.23 38 P **P** 19 02 39.3 +1.2
WVOR pmax pmax
comp=Z,24nm,1.5s
M11K Mekoryuk 82.29 4 pP 19 02 41.5 -3.8
CCUT Cedar City 82.55 45 **P** 19 02 40.8 +0.8
H03S2 Juan Fernandez 82.59 123 T T 20 34 34.8
baz=247,slow=74,SNR=63
KNB Kanab 82.60 45 **P** 19 02 41.0 +0.7
KNB IAmb IAmb 19 03 16.2
comp=Z,32nm,1.4s
KNB Kanab 82.60 45 P **P** 19 02 41.0 +0.7
KNB pmax pmax
comp=Z,32nm,1.4s
H03S1 Juan Fernandez 82.60 123 T T 20 34 38.7
baz=247,slow=74,SNR=85
H03S3 Juan Fernandez 82.61 123 T T 20 34 34.5
baz=247,slow=74,SNR=95
H03N2 Juan Fernandez 82.73 123 T T 20 34 42.9
baz=246,slow=73
H03N3 Juan Fernandez 82.73 123 T T 20 34 47.8
baz=246,slow=73
WUAZ Wupatki 82.74 47 **P** 19 02 40.9 -0.1
H03N1 Juan Fernandez 82.74 123 T T 20 34 35.2
baz=246,slow=73
I07A Izee 82.79 37 **P** 19 02 41.3 +0.3
I07A IAmb IAmb 19 03 07.2
comp=Z,29nm,1.8s
M14K Bethel 83.01 6 IAmb IAmb 19 03 05.9
comp=Z,15nm,1.1s
ELK Elko 83.22 41 LR LR 19 34 12.5
comp=Z,484nm,19.2s,baz=228,slow=32
ELK Elko 83.22 41 **P** 19 02 43.2 -0.2
ELK Elko 83.22 41 P **P** 19 02 43.2 -0.2
ELK pmax pmax
comp=Z,7.0nm,1.2s
NJ2 Nanjing 83.22 308 *e*P **P** 19 02 42.1 -1.2
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
O19K Port Alsworth 83.47 10 P **P** 19 02 43.3 -0.6
MDJ Mudanjiang 83.50 324 P **P** 19 02 47.0 +2.5
MDJ pmax pmax
comp=Z,28nm,1.3s
MTPU Mount Pierson 83.59 45 pP 19 02 50.4 -2.6
G08A Pilot Rock 83.86 36 IAmb IAmb 19 03 01.7
comp=Z,12nm,0.9s
LL02 Futaleuf 84.09 134 **P** 19 02 48.0 +0.2
BBB Bella Bella 84.19 27 LR LR 19 33 51.1
comp=Z,318nm,19.4s,baz=233,slow=31
L16K Owhat River 84.22 7 P **P** 19 02 47.4 -0.3
GRNR Gornyy 84.23 331 ||*i* P **P** 19 02 50.7 +2.6
GRNR pmax pmax
comp=Z,4.0nm,0.8s
HAWA Hanford 84.26 35 **P** 19 02 47.3 -1.0
HAWA IAmb IAmb 19 03 03.6
comp=Z,9.0nm,0.9s
QIZ Qiongzhong 84.31 293 P **P** 19 02 49.0 -0.2
QIZ Qiongzhong 84.31 293 S **S** **19 13 13.4 -0.2**
QIZ LR LR
comp=N,300nm,8.8s
QIZ LR LR
comp=E,250nm,15.2s
QIZ LR LR
comp=Z,290nm,16.2s
MFID Camas Ranch 84.46 39 IAmb IAmb 19 03 16.0
comp=Z,18nm,1.4s
HMU Henry Mountain 84.48 45 **P** 19 02 49.3 -0.8
BMO Blue Mountains 84.50 37 **P** 19 02 50.1 +0.4
BMO Blue Mountains 84.50 37 P **P** 19 02 50.1 +0.4
BMO pmax pmax
comp=Z,8.0nm,1.2s
Q16A Castle Valley 84.74 44 **P** 19 02 50.8 -0.4
Q16A IAmb IAmb 19 03 27.1
comp=Z,12nm,1.1s
SPU Mount Spurr 84.78 11 IAmb IAmb 19 02 54.9
comp=Z,30nm,1.8s
VHRN Van Horn 84.89 54 pP 19 02 57.7 -1.8
D08A Wolman Farm, 85.01 35 **P** 19 02 51.6 -0.5
MNTX Cornudas Mount 85.03 53 **P** 19 02 52.8 +0.2
MNTX IAmb IAmb 19 03 08.2
comp=Z,15nm,1.4s
L18K Granite Mounta 85.06 8 IAmb IAmb 19 03 35.4
comp=Z,25nm,1.5s
TXAR Lajitas Array 85.19 56 P P 19 02 58.4 +4.8
comp=Z,1.4nm,1.1s,baz=217,slow=5.7,SNR=7.3
TXAR LR LR 19 34 52.0
comp=Z,354nm,18.6s,baz=245,slow=31
comp=Z,1.4nm,1.1s
F10A Beach Ranch, E 85.23 36 IAmb IAmb 19 03 07.8
comp=Z,14nm,1.0s
SUA Susitna One 85.28 11 IAmb IAmb 19 03 17.2
comp=Z,27nm,1.4s
HVU Hansel Valley 85.33 41 **P** 19 02 55.1 +1.0
HVU IAmb IAmb 19 03 09.9
comp=Z,25nm,1.8s
HVU Hansel Valley 85.33 41 P **P** 19 02 55.1 +1.0
HVU pmax pmax
comp=Z,25nm,1.8s
CN2 Changchun 85.36 321 P **P** 19 02 56.1 +2.2
CN2 pmax pmax
comp=Z,10.0nm,1.1s
KLR Kul'dur 85.37 328 P **P** 19 02 56.1 +2.3
comp=Z,4.0nm,0.9s,baz=110,slow=7.3,SNR=8.1
KLR LR LR 19 35 29.3
comp=Z,496nm,21.7s,baz=136,slow=32
comp=Z,4.0nm,0.9s
PLID Pearl Lake 85.37 37 IAmb IAmb 19 03 11.2
comp=Z,27nm,1.8s
HLID Hailey 85.38 39 IAmb IAmb 19 03 12.0
comp=Z,24nm,1.8s
BNX BinXian 85.41 323 ||P **P** 19 02 56.1 +2.0
BNX pmax pmax
comp=Z,21nm,1.1s
GAMB Gambell 85.43 1 IAmb IAmb 19 03 08.5
comp=Z,14nm,1.1s
ELIB Princess Elisa 85.58 186 *d*P **P** 19 02 57.3 +2.4
comp=Z,10nm,0.7s
ELIB *d*PP **PP** 19 06 11.6 -1.4
WHN Wuhan 85.83 305 P P 19 02 51.3 -5.3
WHN pmax pmax
comp=Z,270nm,2.2s
GO06 Currarehue 85.85 131 **P** 19 02 57.9 +1.0
GO06 IAmb IAmb 19 03 09.4
comp=Z,19nm,1.2s
ANMO Albuquerque 85.86 50 LR LR 19 35 52.8
comp=Z,428nm,18.4s,baz=274,slow=32
ANMO Albuquerque 85.86 50 P **P** 19 02 57.4 +0.5
ANMO Albuquerque 85.86 50 *ce*P **P** 19 03 00.3 +3.4

ANMO pmax pmax
comp=Z,6.0nm,0.9s
PV18 Skein Mesa, Pa 85.87 46 P 19 02 57.7 +0.8
PV18 IAmb IAmb 19 03 12.9
comp=Z,50nm,1.9s
GHO Glory Hole Cre 85.90 12 P
GHO IAmb IAmb 19 03 10.3
comp=Z,25nm,1.1s
PLCA Paso Flores 86.00 132 P P 19 03 01.5 +4.0
comp=Z,1.4nm,0.9s,baz=146,slow=6.5,SNR=3.5
PLCA LR LR 19 35 31.4
comp=Z,324nm,18.4s,baz=252,slow=31
comp=Z,1.4nm,0.9s
MA2 Magadan 86.01 343 LR LR 19 35 18.1
comp=Z,165nm,21.1s,baz=158,slow=32
MA2 Magadan 86.01 343 P 19 02 56.3 -0.5
MA2 IAmb IAmb 19 02 59.5
comp=Z,31nm,1.7s
MA2 Magadan 86.01 343*ce***P P 19 02 58.0 +1.2**
MA2 pmax pmax
comp=Z,19nm,1.7s
MA2 Magadan 86.01 343 P P **19 02 58.0 +1.2**
comp=Z,5.5nm,1.2s
L22K Petersville 86.26 11 IAmb IAmb 19 03 15.6
comp=Z,26nm,1.3s
SNAA Sanae 86.49 177 ⇓P **P 19 02 59.0 -0.4**
comp=Z,87nm,0.6s
SNAA Sanae 86.49 177 P **P 19 03 01.6 +2.3**
comp=Z,3.8nm,0.7s,baz=175,slow=4.1,SNR=4.9
SNAA LR LR 19 37 03.6
comp=Z,546nm,20.7s,baz=189,slow=32
comp=Z,3.8nm,0.7s
SNAA Sanae 86.49 177 P **P 19 03 00.7 +1.4**
SNAA IAmb IAmb 19 04 49.3
comp=Z,44nm,2.0s
SNAA Sanae 86.49 177*ce***P P 19 03 01.8 +2.5**
SNAA pmax pmax
comp=Z,10.0nm,1.1s
VNA3 Neumayer Olymp 86.50 175 ⇓P **P 19 02 57.9 -1.4**
comp=Z,6.3nm,0.7s
TIA Tai'an 86.56 311 P **P 19 02 59.3 -0.8**
TIA pmax pmax
comp=Z,16nm,1.3s
SAND Sanderson 86.67 56 P 19 03 01.4 +0.5
NEW Newport 86.71 34 LR LR 19 35 45.3
comp=Z,187nm,20.4s,baz=214,slow=31
M24K Tolsona, Glenn 86.76 13 pwP 19 03 15.7 +2.8
VNA2 Neumayer--Watz 86.98 176 ⇓P P 19 02 55.5 -6.1
comp=Z,5.7nm,0.6s,baz=229,slow=9.7
CMIG Matias Romero 87.14 70 LR LR 19 32 21.4
comp=Z,292nm,21.5s,baz=196,slow=29
VNA1 Neumayer--Stat 87.19 175 ⇓P P 19 02 57.0 -5.6
comp=Z,14nm,0.8s
BI02 San Fabin de 87.23 128 P 19 03 05.7 +2.1
BI02 IAmb IAmb 19 03 15.7
comp=Z,14nm,1.2s
RND Reindeer 87.42 11 P 19 03 03.2 -0.5
RND Reindeer 87.42 11 P **P 19 03 03.2 -0.5**
RND pmax pmax
comp=Z,39nm,1.1s
NVL N'lazarevskaya 87.46 182*e***P** P 19 03 09.8 +5.9
NVL pmax pmax
comp=Z,13nm,1.4s
DRIO Del Rio 87.59 57 P 19 03 06.1 +0.8
DRIO IAmb IAmb 19 03 29.8
comp=Z,9.4nm,1.1s
MCK McKinley 87.70 11 P **P 19 03 05.9 +0.9**
MCK McKinley 87.70 11 P **P 19 03 05.9 +0.9**
MCK pmax pmax
comp=Z,29nm,1.2s
PDAR Pinedale Array 87.86 42 P **P 19 03 08.8 +2.3**
comp=Z,0.3nm,0.5s,baz=207,slow=6.2,SNR=4.7
comp=Z,0.3nm,0.5s
PDAR Pinedale Array 87.86 42 P **P 19 03 07.2 +0.6**
DLBC Dease Lake 88.15 22 LR LR 19 36 39.0
comp=Z,180nm,18.2s,baz=202,slow=32
HEH HeiHe 88.19 327*e***P P 19 03 09.4 +1.9**
HEH pmax pmax
comp=Z,15nm,1.6s
HEH LR LR
comp=N,450nm,21.2s
HEH LR LR
comp=E,290nm,21.2s
HEH LR LR
comp=Z,630nm,20.1s
BO02 Sierra Bellavi 88.39 127 pwP 19 03 17.6 -4.8
MT01 Popeta 88.44 126 P **P 19 03 10.3 +1.0**
SEY Seymchan 88.49 346*ce***P P 19 03 10.6 +1.9**
SEY pmax pmax
comp=Z,15nm,1.1s
WRH Wood River Hil 88.53 11 P 19 03 09.5 +0.6
I21K Tanana 88.55 9 IAmb IAmb 19 03 43.5
comp=Z,31nm,1.7s
HDA Harding Lake 88.69 12 P **P 19 03 10.1 +0.5**
HNS HongShan 88.84 311 ⇑P **P 19 03 10.8 -0.1**
SCRK Sand Creek 88.89 13 P 19 03 11.0 +0.3
SCRK IAmb IAmb 19 03 26.0
comp=Z,13nm,1.4s
COLA College 88.94 11 P **P 19 03 13.8 +3.0**
COLA College 88.94 11 P **P 19 03 13.8 +3.0**
IL31 89.03 12 IAmb IAmb 19 03 25.8
comp=Z,26nm,1.4s
ILAR Eielson Array 89.03 12 P **P 19 03 13.3 +2.2**
comp=Z,1.0nm,0.6s,baz=211,slow=1.0,SNR=15
ILAR LR LR 19 36 18.8
comp=Z,168nm,20.7s,baz=226,slow=31
comp=Z,1.0nm,0.6s
ILAR Eielson Array 89.03 12 P **P 19 03 11.4 +0.3**
IMAR Indian Mountai 89.05 8 P **P 19 03 11.0 -0.3**
LYN LuoYang 89.10 308 P **P 19 03 14.9 +2.6**
LYN pmax pmax
comp=Z,28nm,1.4s
BJI2 Beijing 89.12 314 P **P 19 03 14.6 +2.4**
BJI2 pmax pmax
comp=Z,6.0nm,1.4s
PEL Peldehue 89.18 125 P 19 03 13.2 +0.3
PEL Peldehue 89.18 125 P **P 19 03 13.2 +0.3**
PEL pmax pmax
comp=Z,26nm,1.1s
M30M Minto, Yukon 89.39 16 P 19 03 12.6 -0.3
M30M IAmb IAmb 19 03 27.6
comp=Z,28nm,1.6s
PRP Porcupine Dome 89.95 12 P **P 19 03 15.7 0.0**
PRP IAmb IAmb 19 03 34.1
comp=Z,22nm,1.4s
DAWY Dawson 89.98 15 IAmb IAmb 19 03 30.6
comp=Z,34nm,1.7s
CO03 El Pedregal 90.17 123 P **P 19 03 19.4 +1.7**
CO03 IAmb IAmb 19 03 29.9
comp=Z,21nm,1.4s
ZEA Zeya 90.42 330*e***P P 19 03 20.3 +2.4**
ZEA *e* 19 13 59.7
ZEA pmax pmax
comp=Z,10.0nm,1.1s
J29N Klondike Camp 90.59 15 IAmb IAmb 19 03 36.3
comp=Z,13nm,0.9s
BILL Bilibino 90.79 353*i* P **P 19 03 21.0 +1.7**
BILL pmax pmax
comp=Z,10.0nm,2.0s
XLT XiLinHaoTe 91.10 317*e***P P 19 03 22.6 +1.1**
XLT pmax pmax
comp=Z,9.0nm,1.0s
E22K Anaktuvuk Pass 91.34 8 IAmb IAmb 19 03 36.9
comp=Z,13nm,1.1s
AC05 El Transito 91.36 122 P 19 03 23.3 0.0
XAN Xi'an 91.50 306 P **P 19 03 26.1 +2.5**
XAN pmax pmax
comp=Z,36nm,1.0s
BMAR Burnt Mountain 91.83 11 P **P 19 03 24.4 +0.1**
HILR Hailar Array B 91.84 324 P **P 19 03 25.7 +1.0**
comp=Z,5.4nm,0.9s,baz=110,slow=11,SNR=5.4
comp=Z,5.4nm,0.9s
HHC Hu-ho-hao-te 92.61 313*e***P P 19 03 29.6 +1.0**
HHC pP pP 19 03 35.3 -0.8
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,65nm,4.3s
HHC LR LR
comp=N,250nm,17.5s
HHC LR LR
comp=E,360nm,17.5s
HHC LR LR
comp=Z,340nm,17.5s
NNA Nana 92.66 104 LR LR 19 35 08.5
comp=Z,380nm,21.5s,baz=186,slow=29

KMI2 Kunming 92.81 296 P **P 19 03 33.0 +3.0**
KMI2 pP pwP 19 03 42.5 +0.3
KMI2 Kunming 92.81 296 SS SS 19 20 45.8 -2.4
KMI2 pmax pmax
comp=Z,15nm,1.5s
KMI2 LR LR
comp=N,220nm,22.3s
KMI2 LR LR
comp=E,440nm,19.4s
KMI2 LR LR
comp=Z,570nm,22.7s
ATAH Atahualpa 93.10 99 LR LR 19 38 52.9
comp=Z,482nm,18.2s,baz=325,slow=31
CMAR Chiang Mai Arr 93.56 288 P **P 19 03 35.1 +1.8**
comp=Z,7.0nm,0.9s,baz=121,slow=3.0,SNR=53
CMAR LR LR 19 43 59.7
comp=Z,146nm,19.7s,baz=115,slow=35
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 93.56 288 P **P 19 03 31.8 -1.6**
CHTO Chiang Mai 93.69 289 P **P 19 03 32.7 -1.2**
CHTO IAmb IAmb 19 03 37.3
comp=Z,14nm,1.0s
CHTO Chiang Mai 93.69 289 P **P 19 03 32.7 -1.2**
CHTO pmax pmax
comp=Z,14nm,1.0s
CHTO Chiang Mai 93.69 289 P **P 19 03 35.0 +1.1**
BTO2 Baotou 93.71 313*e***P P 19 03 36.3 +2.6**
BTO2 pP pwP 19 04 02.3 +16
BTO2 sP sP 19 04 13.0 +29
BTO2 Baotou 93.71 313 S **S 19 14 36.8 -4.5**
BTO2 Baotou 93.71 313 SS SS 19 20 59.4 -0.9
BTO2 pmax pmax
comp=Z,19nm,1.7s
BTO2 pmax pmax
comp=Z,800nm,7.6s
BTO2 LR LR
comp=N,670nm,15.9s
BTO2 LR LR
comp=E,750nm,18.6s
BTO2 LR LR
comp=Z,940nm,20.4s
PZH PanZhiHua 94.16 297 P **P 19 03 36.8 +0.7**
PZH PanZhiHua 94.16 297 S **S 19 14 43.9 -1.9**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH LR LR
comp=N,170nm,21.2s
PZH LR LR
comp=E,310nm,23.7s
PZH LR LR
comp=Z,430nm,19.6s
YAK Yakutsk 94.62 337 LR LR 19 46 22.0
comp=Z,234nm,18.3s,baz=108,slow=36
YAK Yakutsk 94.62 337*ce***P P 19 03 38.2 +1.1**
YAK pmax pmax
comp=Z,7.0nm,1.0s
LZH Lanzhou 96.14 306*e***P P 19 03 47.8 +2.8**
LZH pP pP 19 03 52.3 -0.3
LZH pmax pmax
comp=Z,12nm,1.7s
LZH LR LR
comp=N,300nm,17.8s
LZH LR LR
comp=E,410nm,16.2s
LZH LR LR
comp=Z,420nm,15.9s
LZDM Lanzhou Array 96.20 306 P **P 19 03 47.8 +2.3**
comp=Z,0.4nm,0.3s,baz=106,slow=3.2,SNR=5.0
comp=Z,0.4nm,0.3s
TNCH TengChong 96.32 294 ⇑P **P 19 03 46.5 +0.4**
TNCH pP PcP 19 03 49.1 +2.9
TNCH sP pP 19 03 52.3 -1.4
TNCH TengChong 96.32 294 S **S 19 15 00.8 -4.0**
TNCH TengChong 96.32 294 sS sS 19 15 10.8 -6.7
TNCH TengChong 96.32 294 SS SS 19 21 34.9 -3.3
TNCH pmax pmax
comp=Z,8.0nm,2.4s
TNCH pmax pmax
comp=Z,190nm,7.9s
TNCH LR LR
comp=N,180nm,8.6s
TNCH LR LR
comp=E,300nm,8.3s
TNCH LR LR
comp=Z,390nm,18.7s
YKA Yellowknife Ar 96.50 24 P **P 19 03 48.2 +2.5**
comp=Z,0.6nm,0.8s,baz=248,slow=4.4,SNR=8.6
YKA LR LR 19 41 32.8
comp=Z,219nm,19.3s,baz=274,slow=32
comp=Z,0.6nm,0.8s
YKA Yellowknife Ar 96.50 24 P **P 19 03 47.2 +1.5**
PB16 IPOC Station P 96.54 113 P 19 03 48.0 +0.2
ECSD EROS Data Cent 96.64 46 P 19 03 47.3 +0.4
ECSD IAmb IAmb 19 04 11.8
comp=Z,14nm,1.4s
ULN Ulaanbaatar 98.50 318*ce***P** Pdif 19 03 56.7 +1.3
ULN pmax pmax
comp=Z,6.0nm,1.4s
LPAZ La Paz 98.61 111 LR LR 19 42 30.6
comp=Z,345nm,18.2s,baz=277,slow=32
SONM Songino Array 98.90 318 P Pdif 19 03 57.9 +0.8
comp=Z,0.6nm,0.6s,baz=131,slow=4.5,SNR=4.9
SONM LR LR 19 44 28.6
comp=Z,217nm,18.3s,baz=88,slow=33
comp=Z,0.6nm,0.6s
SONM Songino Array 98.90 318 P **P 19 03 55.7 -1.4**
SONM IAmb IAmb 19 03 58.8
comp=Z,8.8nm,1.9s
A36M Sachs Harbour 99.47 14 P **Pdif 19 03 58.7 -0.1**
A36M IAmb IAmb 19 04 17.0
comp=Z,5.3nm,0.9s
ULM Lac du Bonnet 99.68 40*i* P **Pdif 19 04 02.1 +1.8**
TIXI Tiksi 100.93 344*i* P **Pdif 19 04 06.2 +0.8**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 113.57 321 PKiKP **PKiKP 19 08 55.7 +1.0**
comp=Z,0.8nm,0.5s,baz=131,slow=2.0,SNR=6.7
MKAR Makanchi Array 114.47 313 PKP **PKiKP 19 08 57.9 +1.2**
comp=Z,0.7nm,0.4s,baz=155,slow=0.7,SNR=33
MKAR Makanchi Array 114.47 313 PKiKP 19 08 56.7 0.0
MAKZ Makanchi 114.68 313 ⇑PKiKP **PKiKP 19 08 57.8 +0.7**
KURK Kurchatov 117.17 317 PKiKP 19 09 02.2 +0.5
KURK Kurchatov 117.17 317 PKiKP **PKiKP 19 09 02.2 +0.5**
KURBB Kurchatov Arra 117.23 317 PKP **PKiKP 19 09 02.2 +0.4**
comp=Z,1.5nm,0.9s,baz=97,slow=1.7,SNR=12
KSH2 Kashi 118.56 304 PKP **PKiKP 19 09 07.0 +2.0**
BOOM Boomskoye usch 118.58 307 PKPdf 19 09 04.1 -0.8
BOOM Boomskoye usch 118.58 307 PKiKP **PKPdf 19 09 04.1 -0.8**
BVAR Borovoye Array 122.19 320 PKP **PKiKP 19 09 12.4 +0.9**
comp=Z,2.1nm,0.4s,baz=114,slow=0.3,SNR=19
KKAR Karatay Array 122.59 308 PKiKP 19 09 12.4 -0.2
KKAR Karatay Array 122.59 308 PKiKP **PKiKP 19 09 12.4 -0.2**
KBL Kabul 123.34 298 PKPdf 19 09 13.1 -1.2
KBL Kabul 123.34 298 PKiKP **PKPdf 19 09 13.1 -1.2**
SPITS Spitsbergen Ar 123.44 357 PKP **PKiKP 19 09 15.9 +2.7**
comp=Z,3.8nm,0.8s,baz=33,slow=9.0,SNR=1.9
SPITS Spitsbergen Ar 123.44 357 PKiKP **PKiKP 19 09 16.0 +2.7**
ARTI Arti 128.25 326*i* PKiKP **PKiKP 19 09 25.4 +2.0**
ARTI 19 11 29.7
ARTI 19 16 36.2
ARCES ARCESS Array B 130.84 351 PKP **PKPdf 19 09 27.5 +0.1**
comp=Z,3.2nm,0.7s,baz=26,slow=3.1,SNR=5.1
FINES FINESS Array B 137.97 345 PKhKP PKPpre 19 09 34.8
comp=Z,8.4nm,1.1s,baz=91,slow=5.6,SNR=4.8
OBN Obninsk 139.47 333*e***PKiKP PKiKP 19 09 44.7 -1.4**
OBN pmax pmax
comp=Z,6.0nm,0.9s
AKT Akhty 139.51 309*e***PKiKP PKiKP 19 09 45.5 -1.4**
AKT pmax pmax
comp=Z,7.0nm,1.3s
NOA NORSAR Array B 140.69 356 PKhKP PKPpre 19 09 43.7
comp=Z,1.6nm,0.8s,baz=37,slow=1.6,SNR=3.3
HFS Hagfors 141.36 353 PKhKP PKPpre 19 09 44.7
comp=Z,4.0nm,0.8s,baz=111,slow=3.8,SNR=5.1
KIV Kislovodsk 142.20 314*i* PKiKP **PKiKP 19 09 54.2 +2.0**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,398nm,24.0s
RAYN Ar Rayn 143.04 280 ⇑PKiKP PKPbc 19 09 49.2 +1.0
KOPT Kop Dagi 145.19 309 PKPbc 19 09 52.9 -1.6
LODK Lodwar 145.58 242 PKPab 19 09 57.9 +1.3
AKASG Malin Array Be 145.74 333 PKPbc **PKPab 19 09 57.1 +1.2**
comp=Z,20nm,0.8s,baz=41,slow=4.3,SNR=64
AKASG Malin Array Be 145.74 333 PKPab 19 09 56.5 +0.6
KIEV Kiev 145.75 333 ⇑P **PKPab 19 09 56.4 +0.4**

KIEV Kiev 145.75 333 PKPab 19 09 56.6 +0.8
KIEV Kiev 145.75 333 PKP2 **PKPab 19 09 56.7 +0.8**
EKA Eskdalemuir Ar 146.02 9 PKPbc **PKiKP 19 09 58.6 -0.9**
comp=Z,2.9nm,0.7s,baz=338,slow=1.8,SNR=6.3
SORM Soroca 148.02 330 ⇑P **PKPab 19 10 04.0 -0.8**
SORM Soroca 148.02 330 ⇑PKP2 **PKPab 19 10 04.0 -0.8**
PURM Purcari 148.42 327 ⇑P **PKPab 19 10 05.5 -0.9**
PRAR RASCA 149.55 331 ⇑P **PKPab 19 10 08.8 -2.3**
GIRR Girov 149.74 331 ⇑P **PKiKP 19 10 09.3 +1.7**
BUR08 Bucovina Ar. S 149.78 333 PKiKP 19 10 08.9 +1.1
VLDR Vladesti 149.79 328 ⇑P **PKiKP 19 10 09.2 +1.6**
BURAR Bucovina Array 149.80 333 ⇑P **PKiKP 19 10 09.2 +1.4**
BURAR Bucovina Array 149.80 333 PKPdf **PKPdf 19 09 59.9 -2.1**
BURAR **pPKPdf 19 10 08.9 -0.9**
BURAR Bucovina Array 149.80 333 ⇑PKP2 **PKiKP 19 10 09.2 +1.4**
STHS Stebnicka Huta 149.81 339*e*PKP2 **PKiKP 19 10 09.0 +1.4**
STHS Stebnicka Huta 149.81 339*e*PKP **PKiKP 19 10 09.0 +1.4**
VARL Varlezi 149.87 328 ⇑P **PKPab 19 10 09.7 -2.6**
TLCR 149.87 326 ⇑P **PKiKP 19 10 09.3 +1.5**
TLCR 149.87 326 ⇑PKP2 **PKiKP 19 10 09.3 +1.5**
SCTR Scanteiesti 149.95 327 ⇑P **PKiKP 19 10 09.3 +1.3**
GHRR 149.97 329 ⇑P **PKPab 19 10 10.1 -2.7**
TESR Tescani 150.00 330 ⇑P **PKiKP 19 10 09.1 +1.0**
CLL Collm 150.06 350*i* PKiKP **PKiKP 19 10 10.0 +1.9**
CLL pmax pmax
comp=Z,22nm,1.0s
CLL Collm 150.06 350*i* PKPbc **PKiKP 19 10 10.0 +1.9**
comp=Z,22nm,1.0s
CLL *i* x x 19 10 21.9
NEGRR Negrea 150.11 327 ⇓P **PKPbc 19 10 07.1 -0.4**
BR131 Keskin Array S 150.12 313 PKPdf **PKPdf 19 10 00.1 -2.8**
BR131 **PKiKP 19 10 09.3 +0.5**
BR131 Keskin Array S 150.12 313 PKP2 **PKiKP 19 10 09.3 +0.5**
BRTR Keskin Array B 150.12 313 PKPbc **PKiKP 19 10 09.6 +0.8**
comp=Z,9.4nm,0.8s,baz=130,slow=3.4,SNR=52
BRTR Keskin Array B 150.12 313 PKiKP 19 10 09.3 +0.5
SCHL Schela 150.16 327 ⇑P **PKiKP 19 10 08.2 -0.2**
OSTC Ostas 150.17 346*e*PKP **PKiKP 19 10 10.0 +1.6**
OSTC Ostas 150.17 346*e*PKiKP **PKiKP 19 10 10.0 +1.6**
SCHLR Schela 150.18 327 ⇑P **PKiKP 19 10 08.7 +0.2**
KIRS Kirsehir-Merke 150.20 312 ⇑P **PKiKP 19 10 09.5 +0.6**
CFR Carcaliu 150.23 327 ⇑P **PKiKP 19 10 09.8 +1.2**
CFR Carcaliu 150.23 327 ⇑PKiKP **PKiKP 19 10 09.8 +1.2**
ONER Baraj Valea Uz 150.25 330 ⇑P **PKiKP 19 10 09.6 +0.9**
TPGR Topolog 150.30 326 ⇓P **PKiKP 19 10 10.6 +1.8**
BRG Berggiesshubel 150.33 349*i* PKP **PKiKP 19 10 10.8 +2.1**
BRG Amp 19 10 11.7
comp=Z,10nm,0.9s
BRG pPKP **sPKPab 19 10 23.0 -1.4**
BRG Amp 19 10 27.0
comp=Z,25nm,1.2s
DPC Dobruska-Polom 150.34 346⇑*e*PKP **PKiKP 19 10 10.8 +2.1**
DPC Dobruska-Polom 150.34 346 *e*PKiKP **PKiKP 19 10 10.8 +2.1**
ODBI Odobesti 150.35 328 ⇑P **PKiKP 19 10 10.0 +1.2**
STEB Steborice 150.37 344⇑*e*PKP **PKiKP 19 10 10.1 +1.3**
VRI Vrincioaia 150.44 329 ⇑P **PKiKP 19 10 10.1 +1.1**
VRI Vrincioaia 150.44 329 ⇑PKiKP **PKiKP 19 10 10.1 +1.1**
PLOR Plostina 150.48 329 ⇑P **PKiKP 19 10 09.8 +0.6**
PLOR Plostina 150.48 329 ⇑PKiKP **PKiKP 19 10 09.8 +0.6**
KRLC Kraliky 150.49 345⇑*e*PKP **PKiKP 19 10 10.7 +1.6**
KRLC Kraliky 150.49 345 *e*PKiKP **PKiKP 19 10 10.7 +1.6**
PVCC Panska Ves 150.54 348⇑*e*PKP **PKPab 19 10 11.9 -3.1**
PVCC Panska Ves 150.54 348 *e*PKiKP **PKPab 19 10 11.9 -3.1**
TIRR Tirgusor 150.57 325 ⇑P **PKiKP 19 10 09.8 +0.5**
TIRR Tirgusor 150.57 325 ⇑PKiKP **PKiKP 19 10 09.8 +0.5**
MORC Moravsky Berou 150.58 344 ⇑P **PKiKP 19 10 11.2 +1.9**
MORC Moravsky Berou 150.58 344 ⇑PKiKP **PKiKP 19 10 11.2 +1.9**
MORC Moravsky Berou 150.58 344 *e*PKP **PKiKP 19 10 10.7 +1.4**
LANS Liptovska Anna 150.60 341 *e*PKiKP **PKPab 19 10 12.5 -2.9**
LANS Liptovska Anna 150.60 341 *e*PKP **PKPab 19 10 12.5 -2.9**
TURR Turia 150.63 330 ⇑P **PKiKP 19 10 11.1 +1.7**
COVR Voineasa-Covas 150.70 329 ⇓P **PKiKP 19 10 10.7 +1.1**
OZUR 150.71 330 ⇑P **PKiKP 19 10 11.6 +1.9**
MFTR Murfatlar 150.75 325 ⇑P **PKiKP 19 10 11.3 +1.6**
BOSR Bodos 150.78 330 ⇑P **PKiKP 19 10 11.9 +2.1**
MAUC Maruska 150.88 343⇑*e*PKP **PKiKP 19 10 12.4 +2.5**
MANR Mangalia 150.91 324 ⇓P **PKiKP 19 10 12.6 +2.6**
NEHR Nehoiu 150.96 329 ⇑P **PKiKP 19 10 09.6 -0.6**
DOPR Dopca 150.99 331 ⇑P **PKiKP 19 10 11.9 +1.8**
PRU Pruhonice 151.06 348⇑*e*PKP **PKiKP 19 10 11.8 +1.6**
PRU Pruhonice 151.06 348 *e*PKiKP **PKiKP 19 10 11.8 +1.6**
ISR Istrita 151.07 328 ⇑P **PKiKP 19 10 10.0 -0.4**
ISR Istrita 151.07 328 ⇑PKiKP **PKiKP 19 10 10.0 -0.4**
MLR Muntele Rosu 151.08 329 ⇑P **PKiKP 19 10 11.2 +0.7**
MLR Muntele Rosu 151.08 329 ⇑PKiKP **PKiKP 19 10 11.2 +0.7**
CJR Cluj-Napoca 151.19 333 ⇑P **PKiKP 19 10 12.6 +2.0**
CJR Cluj-Napoca 151.19 333 ⇑PKiKP **PKiKP 19 10 12.6 +2.0**
VRAC Vranov 151.25 345 ⇓P **PKiKP 19 10 13.0 +2.4**
VRAC Vranov 151.25 345 ⇓PKiKP **PKiKP 19 10 13.0 +2.4**
VRAC Vranov 151.25 345 *e*PKP **PKiKP 19 10 12.4 +1.8**
MMAI Mount Meron Ar 151.25 299 PKPbc **PKiKP 19 10 13.4 +2.2**
comp=Z,9.6nm,0.8s,baz=26,slow=9.7,SNR=8.1
MDB Medias 151.30 332 ⇑P **PKiKP 19 10 13.6 +2.8**
MDB Medias 151.30 332 ⇑PKiKP **PKiKP 19 10 13.6 +2.8**
MEM Membach 151.36 359 *d*PKiKP **PKiKP 19 10 12.3 +1.6**
BTNL Ternell 151.38 359 *d*PKiKP **PKiKP 19 10 12.9 +2.1**
JAVC Velka Javorina 151.38 343 *e*PKP **PKiKP 19 10 13.4 +2.4**
GHAJ Ghor Haditha 151.51 296 PKPdf 19 10 02.8 -2.2
SULR 151.53 328 ⇑P **PKiKP 19 10 13.6 +2.4**
KRUC Moravsky 151.53 345 *e*PKP **PKiKP 19 10 12.6 +1.4**
VOIR 151.54 330 ⇑P **PKiKP 19 10 13.7 +2.3**
VOIR 151.54 330 ⇑PKiKP **PKiKP 19 10 13.7 +2.3**
PSZ Piszkesteto 151.56 339 ⇑P **PKPab 19 10 20.1 +0.7**
BMRD Maredsous 151.66 1 *d*PKiKP **PKiKP 19 10 13.4 +2.0**
TNR Turnu Rosu 151.73 331 ⇑P **PKiKP 19 10 13.7 +2.0**
TNR Turnu Rosu 151.73 331 ⇑PKiKP **PKiKP 19 10 13.7 +2.0**
ARR Arges 151.79 331 ⇑P **PKiKP 19 10 14.3 +2.4**
RCHB Rochefort 151.81 0 *d*PKiKP **PKiKP 19 10 13.7 +2.0**
MODS Modra-Piesok 151.93 343 *e*PKiKP **PKiKP 19 10 14.4 +2.3**
MODS Modra-Piesok 151.93 343 *e*PKP **PKiKP 19 10 14.4 +2.3**
KHC Kasperske Hory 152.07 348⇑*e*PKP **PKPdf 19 10 05.0 -0.4**
KHC *e*PKPAB **pPKPdf 19 10 14.0 +0.8**
KHC Kasperske Hory 152.07 348 *e*PKiKP **PKPdf 19 10 05.0 -0.4**
KHC *e* 19 10 14.0
DEV Deva 152.14 333 ⇑P **PKiKP 19 10 15.2 +2.7**
DEV Deva 152.14 333 ⇑PKiKP **PKiKP 19 10 15.2 +2.7**
RAZG Razgrad 152.19 326 ⇓P **PKiKP 19 10 14.4 +1.6**
CKRC Cesky Krumlov 152.22 347⇑*e*PKP **PKiKP 19 10 14.8 +2.2**
CKRC *e*PKPAB **sPKPbc 19 10 25.5 +2.7**
CKRC Cesky Krumlov 152.22 347 *e*PKiKP **PKiKP 19 10 14.8 +2.2**
CKRC *e* 19 10 25.5
GERES GERESS Array B 152.32 348 PKPbc **PKiKP 19 10 14.9 +2.0**
comp=Z,1.6nm,0.8s,baz=48,slow=2.0,SNR=6.4
GERES GERESS Array B 152.32 348 PKiKP **PKiKP 19 10 15.0 +2.0**
CONA Conrad Observa 152.71 345 *ep*PKP pPKPdf 19 10 15.7 +1.5
comp=Z,12nm,1.3s
RONA Rosalia, Austr 152.81 344 *e*PKiKP **PKiKP 19 10 15.6 +1.6**
comp=Z,8.4nm,0.9s
BZS Buzias 152.88 335 ⇑P **PKiKP 19 10 15.5 +1.4**
BZS Buzias 152.88 335 ⇑PKiKP **PKiKP 19 10 15.5 +1.4**
ELND Elena 152.96 326 ⇑P **PKiKP 19 10 16.5 +2.2**
HERR Herculane 153.15 333 ⇓P **PKiKP 19 10 15.7 +1.0**
MOA Molln 153.16 347 *e*PKiKP **PKiKP 19 10 15.9 +1.3**
comp=Z,9.2nm,1.4s
BANR Banloc 153.27 335 ⇑P PKPdf 19 09 57.3 -10
PLVB Pleven 153.27 328 ⇑P **PKiKP 19 10 15.5 +0.6**
BIOA Bad Ischl, Aus 153.44 347 *ep*PKP pPKPdf 19 10 17.7 +2.4
comp=Z,17nm,1.3s
MORH Mrgy, Hungar 153.46 339 ⇑P **PKPbc 19 10 13.3 -1.8**
MDVR Moldovita 153.53 333 ⇑P **PKiKP 19 10 17.3 +1.8**
LESA Schwarzleotal 153.88 349 *ep*PKiKP **PKiKP 19 10 20.8 +4.6**
comp=Z,9.1nm,1.3s
SOKA Soboth 154.08 345 *ep*PKiKP **PKiKP 19 10 20.4 +3.8**
comp=Z,8.3nm,1.0s
RETA Reutte 154.12 352 *ep*PKP **PKiKP 19 10 19.6 +2.9**
comp=Z,7.7nm,1.3s
WATA Walderalm 154.15 350 *ep*PKP **PKiKP 19 10 19.2 +2.3**
comp=Z,8.1nm,1.2s
WTTA Wattenberg 154.21 350 *ep*PKP **PKiKP 19 10 19.7 +2.7**
comp=Z,6.3nm,0.8s
MOTA Moosalm 154.21 351 *i* pPKiKP **PKiKP 19 10 21.2 +4.2**
comp=Z,9.3nm,1.1s
SQTA Sankt Quirin 154.32 351 *i* pPKP **PKiKP 19 10 19.1 +1.9**
comp=Z,10nm,1.2s
OBKA Obir 154.36 345 *i* pPKiKP **PKiKP 19 10 22.1 +4.8**
comp=Z,3.7nm,0.7s
DAVA Damuels 154.43 353 *ep*PKP **PKiKP 19 10 20.6 +3.2**
comp=Z,17nm,1.9s
FETA Feichten 154.58 351 *ep*PKP **PKiKP 19 10 20.8 +3.1**
comp=Z,9.6nm,1.6s
ESDC Sonseca Array 160.58 22 PKP **PKPdf 19 10 19.6 +2.8**
comp=Z,1.4nm,1.1s,baz=330,slow=2.9,SNR=5.6

TORD	**Torodi Ar. Bea**	**170.60**	**157**	PKP		**PKPdf**	**19 10 27.1**	**+1.4**
	comp=Z,2.3nm,1.1s,baz=259,slow=3.3,SNR=6.3								
TORD				PKPab		**PKPab**	**19 11 46.0**	**+3.2**
	comp=Z,1.1nm,0.8s,baz=199,slow=2.8,SNR=3.9								

NEIC ***22*** *18:55:24.9±1.0, 17°.90N±0°.03×66°.995W±0°.009, h10km±3km, ML2.9/37, Md3.3/7(RSPR), Error ellipse: s-maj=4.6km s-min=1.0km az=190.0*
RSPR ***22*** *18:55:25.7, 17°.94N×66°.99W, h6km, MD3.3/7*
SDD ***22*** *18:55:26.0±2.6, 17°.92N×66°.98W, h15km±19km, MD3.6, ML2.9, MW3.5, Presumed earthquake*
ISC 22 18:55:24.4±1.0, 17°.88N±0°.05×67°.00W±0°.02, h13km±5km, n40, σ0§47/72, 11C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.10**	**333**				**Pg**	**18 55 27.4**	**0.0**
MLPR						Sg	**Sg**	**18 55 28.6**	**-0.9**
GBPR	**Guanica, Bosqu**	**0.15**	**49**				**Pg**	**18 55 28.5**	**+0.5**
GBPR							**Sg**	**18 55 30.6**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.15**	**49**	⇓	*iP*		**Pg**	**18 55 28.5**	**+0.5**
GBPR					*eS*		**Sg**	**18 55 30.6**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.17**	**320**	Pg			**Pg**	**18 55 28.5**	**+0.2**
CRPR				IAML				18 55 30.5	
	2μm,0.2s								
CRPR				Sg			**Sg**	**18 55 30.7**	**-0.3**
CRPR				IAML				18 55 31.2	
	4μm,0.3s								
CRPR	**Cabo Rojo, PR**	**0.17**	**320**	⇑	*ePg*		**Pg**	**18 55 28.6**	**+0.3**
CRPR				⇑	*eSg*		**Sg**	**18 55 30.4**	**-0.6**
CRPR				IAML				18 55 31.3	
	comp=N,3μm,0.1s								
CRPR	**Cabo Rojo, PR**	**0.17**	**320**	⇓	*iP*		**Pg**	**18 55 28.8**	**+0.5**
CRPR					*eS*		**Sg**	**18 55 30.4**	**-0.6**
LSP	**Las Mesas**	**0.31**	**344**				**Pg**	**18 55 31.1**	**+0.3**
LSP							**Sg**	**18 55 35.4**	**+0.3**
LSP	**Las Mesas**	**0.31**	**344**	⇑	*iP*		**Pg**	**18 55 31.1**	**+0.3**
LSP					*eS*		**Sg**	**18 55 35.4**	**+0.3**
PRSN	**Puerto Rico Se**	**0.37**	**337**	Pg			**Pg**	**18 55 31.8**	**0.0**
PRSN				Sg			**Sg**	**18 55 36.6**	**-0.1**
PRSN	**Puerto Rico Se**	**0.37**	**337**	⇑	*ePg*		**Pg**	**18 55 31.5**	**-0.3**
PRSN				⇑	*eSg*		**Sg**	**18 55 36.9**	**+0.2**
PRSN				IAML				18 55 39.0	
	comp=N,3μm,0.3s								
PRSN	**Puerto Rico Se**	**0.37**	**337**	⇓	*iP*		**Pg**	**18 55 32.1**	**+0.3**
PRSN					*eS*		**Sg**	**18 55 37.2**	**+0.4**
OBIP	**Obispado Ponce**	**0.41**	**66**				**Pg**	**18 55 33.0**	**+0.5**
OBIP							**Sg**	**18 55 38.3**	**+0.4**
OBIP	**Obispado Ponce**	**0.41**	**66**	⇑	*iP*		**Pb**	**18 55 33.3**	**-0.2**
OBIP					*eS*		**Sb**	**18 55 39.2**	**-0.4**
CELP	**Cerrillos**	**0.44**	**64**				**Pg**	**18 55 33.6**	**+0.5**
CELP				Sg			**Sg**	**18 55 39.6**	**+0.5**
CELP				IAML				18 55 41.5	
	comp=N,749nm,0.4s								
UUPR	**Utuado, UPR, P**	**0.46**	**35**				**Pg**	**18 55 33.3**	**-0.1**
UUPR				Sg			**Sg**	**18 55 38.4**	**-1.1**
AGPR	**Aguadilla, PR**	**0.60**	**349**				**Pg**	**18 55 36.0**	**-0.1**
AGPR				IAML				18 55 44.0	
	comp=N,963nm,0.7s								
AGPR				IAML				18 55 44.3	
	comp=N,813nm,0.5s								
AGPR	**Aguadilla, PR**	**0.60**	**349**	⇑	*ePg*		**Pg**	**18 55 36.0**	**-0.1**
AGPR					*eSg*		**Sg**	**18 55 43.9**	**-0.1**
AGPR				IAML				18 55 44.2	
	comp=N,648nm,0.3s								
AGPR	**Aguadilla, PR**	**0.60**	**349**	⇓	*iP*		**Pg**	**18 55 36.2**	**+0.1**
AGPR					*eS*		**Sg**	**18 55 43.8**	**-0.2**
IDE	**Isla Desecheo**	**0.68**	**318**				**Pg**	**18 55 37.9**	**+0.2**
IDE							**Sg**	**18 55 46.7**	**0.0**
IDE	**Isla Desecheo**	**0.68**	**318**	⇓	*iP*		**Pg**	**18 55 37.9**	**+0.2**
IDE					*eS*		**Sg**	**18 55 46.7**	**0.0**
EMPR	**Esperanza - Ma**	**0.74**	**37**				**Pg**	**18 55 39.1**	**+0.2**
EMPR							**Sb**	**18 55 49.2**	**-0.1**
EMPR	**Esperanza - Ma**	**0.74**	**37**	⇓	*iP*		**Pg**	**18 55 39.1**	**+0.2**
EMPR					*eS*		**Sb**	**18 55 49.2**	**-0.1**
ECPR	**Experimental S**	**0.74**	**54**				**Pg**	**18 55 38.7**	**-0.2**
ECPR				Sg			**Sg**	**18 55 48.4**	**-0.3**
ECPR				IAML				18 55 49.9	
	comp=N,546nm,0.2s								
ECPR				IAML				18 55 50.3	
	comp=N,744nm,0.2s								
ECPR	**Experimental S**	**0.74**	**54**	⇑	*iP*		**Pg**	**18 55 38.9**	**0.0**
ECPR					*eS*		**Sg**	**18 55 48.6**	**0.0**
SJG	**San Juan**	**0.84**	**74**				**Pg**	**18 55 40.3**	**-0.3**
SJG				Sg			**Sg**	**18 55 51.8**	**+0.2**
SJG	**San Juan**	**0.84**	**74**	⇑	*ePg*		**Pg**	**18 55 39.6**	**-1.0**
SJG				⇑	*eSg*		**Sb**	**18 55 52.3**	**+0.2**
SJG	**San Juan**	**0.84**	**74**	⇓	*iP*		**Pg**	**18 55 40.5**	**-0.1**
SJG					*eS*		**Sb**	**18 55 52.1**	**0.0**
PDPR	**Patillas Dam,**	**0.94**	**81**				**Pg**	**18 55 42.2**	**-0.3**
GCPR	**Guaynabo City**	**0.97**	**64**				**Pg**	**18 55 42.4**	**-0.7**
HUMP	**Col San Antoni**	**1.12**	**76**				**Pb**	**18 55 45.8**	**+0.1**
HUMP							**Sb**	**18 56 00.3**	**+0.1**
HUMP	**Col San Antoni**	**1.12**	**76**	Pg			**Pb**	**18 55 45.5**	**-0.3**
HUMP							**Sb**	**18 56 00.5**	**+0.2**
HUMP				IAML				18 56 04.5	
	comp=N,140nm,0.3s								
HUMP				IAML				18 56 05.5	
	comp=N,175nm,0.3s								
HUMP	**Col San Antoni**	**1.12**	**76**	⇑	*iP*		**Pb**	**18 55 45.8**	**+0.1**
HUMP					*eS*		**Sb**	**18 56 00.3**	**+0.1**
PCDR	**Punta Cana, DR**	**1.46**	**296**	⇑	*ePg*		**Pg**	**18 55 52.8**	**+0.3**
PCDR				IAML				18 56 18.7	
	comp=N,110nm,0.8s								
CUPR	**Culebra, Puert**	**1.69**	**75**				**Pb**	**18 55 55.0**	**-0.3**
CUPR						Sn	**Sn**	**18 56 16.0**	**+0.9**
DR12	**Loma Pena Alta**	**2.44**	**292**			Pn	**Pn**	**18 56 04.3**	**+0.2**
DR12						Sn	**Sn**	**18 56 34.0**	**+0.1**
HATOM	**Hato Mayor del**	**2.44**	**292**	⇑	*ePg*		**Pb**	**18 56 06.9**	**-1.3**
HATOM				⇑	*eSg*		**Sb**	**18 56 40.0**	**+1.8**
HATOM				IAML				18 56 46.1	
	comp=N,24nm,0.8s								
DR08	**Loma La Naviza**	**3.07**	**291**	⇑	*ePg*		**Pb**	**18 56 18.2**	**-0.8**
DR08				IAML				18 57 03.2	
	comp=N,164nm,0.4s								
BANI	**BANI**	**3.24**	**280**			Pn	**Pn**	**18 56 14.8**	**-0.3**
SDDR	**Presa de Saban**	**4.22**	**286**			Pn	**Pn**	**18 56 28.9**	**+0.3**
GDHS	**Morne Mazeau,**	**5.25**	**107**			Pn	**Pn**	**18 56 42.4**	**-0.3**

NEIC ***22*** *19:06:23.4±1.6, 26°.92S±0°.01×26°.8E±0°.1, h5km±2km, mb_Lg3.5/8, Error ellipse: s-maj=20.3km s-min=3.1km az=92.0*
BGSI ***22*** *19:06:24.8±1.4, 26°.94S×26°.72E, h0km±28km, ML3.6*
ISC 22 19:06:22.5±1.3, 26°.87S±0°.05×26°.66E±0°.08, h5km, n31, σ1§97/39, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**2.08**	**332**				**Pn**	**19 07 00.6**	**+2.6**
LBTB				IAmb_Lg				19 07 36.2	
	comp=Z,167nm,1.1s								
LBTB	**Lobatse**	**2.08**	**332**	P			**Pn**	**19 07 00.7**	**+2.6**
BOSA	**Boshof**	**2.14**	**215**				**Pn**	**19 07 00.0**	**+1.0**
BOSA						Sn	**Sn**	**19 07 26.3**	**+0.3**
BOSA	**Boshof**	**2.14**	**215**	P			**Pn**	**19 07 00.4**	**+1.4**
LPHEP	**Lephephe**	**3.56**	**348**	*iP*			**Pn**	**19 07 20.6**	**+2.0**
LPHEP				*iS*			**Sn**	**19 08 01.2**	**+0.1**
LPHEP				IAML				19 08 17.8	
	comp=E,152nm,0.3s								
KDWAN	**Kaudwane**	**3.92**	**332**	*iP*			**Pn**	**19 07 25.9**	**+2.5**
KDWAN				*iS*			**Sn**	**19 08 10.1**	**+0.3**
KDWAN				IAML				19 08 31.2	
	comp=N,398nm,0.4s								
KDWAN	**Kaudwane**	**3.92**	**332**	P			**Pn**	**19 07 26.0**	**+2.6**
MREMI	**Moremi**	**4.34**	**10**	P			**Pn**	**19 07 30.6**	**+1.4**
KHWEE	**KHWEE**	**5.02**	**347**				**Pn**	**19 07 40.8**	**+2.1**
KHWEE	**KHWEE**	**5.02**	**347**	*iP*			**Pn**	**19 07 40.7**	**+2.1**
KHWEE				*iS*			**Sn**	**19 08 37.0**	**-0.1**
KHWEE				IAML				19 09 04.9	
	comp=E,604nm,0.3s								
KHWEE	**KHWEE**	**5.02**	**347**	P			**Pn**	**19 07 40.9**	**+2.3**
KGCAE	**Kacgae**	**5.68**	**314**				**Pn**	**19 07 50.5**	**+2.8**
KGCAE	**Kacgae**	**5.68**	**314**	*iP*			**Pn**	**19 07 49.0**	**+1.2**
KGCAE				*iS*			**Sn**	**19 08 52.8**	**-0.6**
KGCAE				IAML				19 09 28.7	
	comp=N,127nm,0.4s								
BROLN	**Tlhalogang**	**5.77**	**6**	*iP*			**Pn**	**19 07 49.5**	**+0.6**
BROLN				*iS*			**Sn**	**19 08 53.9**	**-1.8**
BROLN				IAML				19 09 27.2	
	comp=E,58nm,0.4s								
BROLN	**Tlhalogang**	**5.77**	**6**	*iP*			**Pn**	**19 07 49.9**	**+0.9**
SOOWA	**Sowa**	**6.29**	**356**	*iP*			**Pn**	**19 07 58.1**	**+2.1**
SOOWA				*iS*			**Sn**	**19 09 06.2**	**-2.1**
SOOWA				IAML				19 09 43.9	
	comp=E,248nm,0.8s								
GRHM	**Grahamstown, E**	**6.39**	**182**	Pn			**Pn**	**19 07 56.5**	**-0.9**
GRHM				IAmb_Lg				19 09 55.7	
	comp=Z,80nm,1.2s								
KOOLE	**Kule**	**7.02**	**302**	Pn			**Pn**	**19 08 07.4**	**+1.3**
KOOLE				IAmb_Lg				19 10 19.8	
	comp=Z,56nm,1.0s								
KOOLE	**Kule**	**7.02**	**302**	*iP*			**Pn**	**19 08 06.8**	**+0.7**
KOOLE				*iS*			**Sn**	**19 09 23.1**	**-3.3**
KOOLE				IAML				19 10 17.1	
	comp=N,58nm,0.6s								
GRTLG	**Ghanzi**	**7.40**	**317**	*iP*			**Pn**	**19 08 13.0**	**+1.8**
GRTLG				*iS*			**Sn**	**19 09 31.2**	**-4.5**
GRTLG				IAML				19 10 21.9	
	comp=E,51nm,0.3s								
SUR	**Sutherland**	**7.49**	**221**	Pn			**Pn**	**19 08 13.0**	**+0.4**
SUR	**Sutherland**	**7.49**	**221**	IAmb_Lg				19 10 27.9	
	comp=Z,51nm,0.8s								
QNGWA	**Qangwa**	**8.87**	**324**				**Pn**	**19 08 33.9**	**+2.4**
QNGWA	**Qangwa**	**8.87**	**324**	P			**Pn**	**19 08 34.5**	**+2.9**
KSANE	**Kasane**	**9.13**	**351**				**Pn**	**19 08 36.8**	**+1.8**
KSANE	**Kasane**	**9.13**	**351**	*iP*			**Pn**	**19 08 34.4**	**-0.7**
KSANE				*iS*		Sn	Sn	19 10 11.0	-7.3
KSANE				IAML				19 10 45.2	
	comp=N,34nm,0.3s								
KSANE	**Kasane**	**9.13**	**351**	P			**Pn**	**19 08 36.8**	**+1.8**
WIN	**Windhoek**	**9.69**	**294**	Pn			**Pn**	**19 08 44.7**	**+2.0**
WIN	**Windhoek**	**9.69**	**294**	P			**Pn**	**19 08 44.8**	**+2.0**
TSUM	**Tsumeb**	**11.31**	**311**	Pn			**Pn**	**19 09 05.1**	**+0.1**
LSZ	**Lusaka**	**11.62**	**7**				**Pn**	**19 09 08.7**	**-0.5**

NEIC ***22*** *19:14:24.1, 40°.28N×124°.91W, h7km*
NEIC ***22*** *19:14:24.4±2.1, 40°.28N±0°.05×124°.90W±0°.05, h9km±4km, mb4.1/14, ML3.9/95, Mwr4.3/54, Mwr4.3/4(NCEDC), Error ellipse: s-maj=7.2km s-min=5.6km az=181.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.48; Mθθ=0.42; Mϕϕ=0.90; Mrθ=0.86; Mθϕ=-3.81; Mϕr=1.11; Fault plane solution: M0=4.13000×10¹⁵ NP1: ϕs=96.77000°, δ=72.73000°, λ=-167.84000°. NP2:ϕs=3.11000°, δ=78.39000°, λ=-17.64000°. Principal axes: T 4.1262, Plg4.0000°, Azm51.0000°; N 0.0123, Plg69.0000°, Azm151.0000°; P -4.1385, Plg21.0000°, Azm319.0000°;*
NEIC ***22*** *19:14:27.4, 40°.31N×124°.69W, h11km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.44; Mθθ=1.16; Mϕϕ=0.72; Mrθ=1.21; Mθϕ=-3.38; Mϕr=1.21; Fault plane solution: M0=3.92000×10¹⁵ NP1:ϕs=169.33000°, δ=69.95000°, λ=-15.77000°. NP2:ϕs=264.86000°, δ=75.21000°, λ=-159.23000°. Principal axes: T 3.7401, Plg4.0000°, Azm36.0000°; N 0.3348, Plg65.0000°, Azm299.0000°; P -4.0749, Plg25.0000°, Azm128.0000°;*
IDC ***22*** *19:14:27.9±0.9, 40°.51N×124°.33W, h0km, mb3.9/11, mbtmp3.8/17, ML3.9/5, MS3.7/10 Error ellipse: s-maj=13.1km s-min=9.6km az=42.0*
NEIC ***22*** *19:14:27.4, 40°.31N×124°.69W, h6km*
NCEDC ***22*** *19:14:27.6±2.7, 40°.29N±0°.05×124°.67W±0°.06, h7km±6km, Error ellipse: s-maj=7.3km s-min=6.7km az=46.0*
ISC 22 19:14:26.4±1.8, 40°.28N±0°.03×124°.67W±0°.06, h5km±11km, n165, σ1§17/163, mb4.0/14, MS4.3/4, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PETL	**Petrolia**	**0.25**	**88**				**Pb**	**19 14 33.8**	**+0.3**
PETL							**Sb**	**19 14 38.5**	**+0.4**
KCTM	**Capetown**	**0.32**	**53**				**Pb**	**19 14 35.3**	**+0.6**
KCTM							**Sb**	**19 14 41.2**	**+1.0**
FER	**Ferndale**	**0.43**	**46**				**Pb**	**19 14 37.5**	**+1.0**
KMPM	**Mount Pierce**	**0.44**	**72**				**Pb**	**19 14 37.1**	**+0.3**
KMPM							**Sb**	**19 14 44.2**	**+0.4**
BRIC	**Briceland Vine**	**0.62**	**106**				**Pb**	**19 14 40.9**	**+1.2**
KCRM	**Chalk Rock**	**0.67**	**77**				**Pb**	**19 14 41.6**	**+1.0**
JCC	**Jacoby Creek,**	**0.73**	**42**				**Pb**	**19 14 41.3**	**-0.3**
JCC				IAML				19 14 52.3	
	comp=N,8μm,0.9s								
KMRM	**Mail Ridge**	**0.74**	**94**				**Pb**	**19 14 42.8**	**+0.9**
KMRM						Sg	**Sn**	**19 14 54.4**	**-0.9**
DMOR	**Dinsmores, CA**	**0.85**	**60**				**Pb**	**19 14 44.1**	**+0.3**
KHMM	**Horse Mountain**	**0.93**	**50**				**Pg**	**19 14 44.9**	**+0.6**
KHMM				IAML				19 15 12.4	
	comp=E,5μm,0.9s								
KPPM	**Pickett Peak**	**1.00**	**86**				**Pn**	**19 14 49.0**	**+1.6**
KRPM	**Rodgers**	**1.01**	**29**				**Pg**	**19 14 45.2**	**-0.5**
KRPM				IAML				19 15 19.9	
	comp=E,5μm,0.8s								
KCPM	**Cahto Peak**	**1.03**	**125**				**Pb**	**19 14 47.0**	**+0.2**
KIPM	**Iron Peak**	**1.03**	**117**				**Pn**	**19 14 47.5**	**-0.2**
RVIT	**Round Valley I**	**1.06**	**110**				**Pb**	**19 14 47.5**	**+0.2**
KFPM	**Farley Peak**	**1.15**	**123**				**Pb**	**19 14 48.7**	**-0.2**
KHBM	**Hayfork Bally**	**1.17**	**71**				**Pg**	**19 14 48.5**	**-0.4**
KHBM				IAML				19 15 14.7	
	comp=N,3μm,1.7s								
KHBM				IAML				19 15 17.8	
	comp=E,2μm,1.2s								
KBNM	**Bluenose Ridge**	**1.20**	**108**				**Pb**	**19 14 49.6**	**-0.1**
MNDO	**Woodland Fire**	**1.20**	**143**				**Pg**	**19 14 49.0**	**-0.5**
GTC	**Three Chop Rid**	**1.23**	**135**				**Pg**	**19 14 49.7**	**-0.3**
DCMP	**DeCamp, Califo**	**1.31**	**128**				**Pg**	**19 14 50.7**	**-0.8**
DCMP				IAML				19 15 14.0	
	comp=N,1μm,0.5s								
GNAM	**Navarro Ridge**	**1.35**	**143**				**Pg**	**19 14 51.0**	**-1.2**
KOMM	**Orleans Mounta**	**1.36**	**42**				**Pn**	**19 14 50.9**	**-1.3**
O02D	**Mt. Diablo Mer**	**1.45**	**94**				**Pn**	**19 14 53.0**	**-0.3**
O02D				IAML				19 15 27.9	
	comp=E,2μm,1.6s								
GWRM	**Wonder Ranch**	**1.51**	**135**				**Pn**	**19 14 53.5**	**-0.6**
GHOM	**Hamilton Openi**	**1.51**	**144**				**Pn**	**19 14 53.4**	**-0.9**
GROM	**Round Mountain**	**1.58**	**103**				**Pn**	**19 14 55.6**	**+0.4**
GVV	**Valley View**	**1.61**	**108**				**Pn**	**19 14 55.2**	**-0.5**
BONV	**Boonville, CA**	**1.65**	**141**				**Pn**	**19 14 55.2**	**-0.8**
N02D	**Trinity Center**	**1.65**	**65**				**Pn**	**19 14 55.2**	**-0.9**
N02D				IAML				19 15 22.4	
	comp=N,2μm,0.5s								
SIGP	**Signal Peak, C**	**1.66**	**16**				**Pn**	**19 14 54.2**	**-2.0**
LBKM	**Bonanza King**	**1.72**	**62**				**Pn**	**19 14 56.4**	**-0.8**
GSNM	**Snow Mountain**	**1.76**	**139**				**Pn**	**19 14 57.1**	**-0.6**
M02C	**Callahan**	**1.77**	**51**				**Pn**	**19 14 56.7**	**-1.1**
M02C				IAML				19 15 10.2	
	comp=E,759nm,0.9s								
M02C				IAML				19 15 41.3	
	comp=N,805nm,1.1s								
HOPS	**Hopland Field**	**1.78**	**136**				**Pn**	**19 14 57.4**	**-0.5**
HOPS				IAML				19 15 38.4	
	comp=E,870nm,1.1s								
HOPS				IAML				19 15 50.4	
	comp=N,1μm,1.2s								
GHGM	**Hogback Ridge**	**1.83**	**128**				**Pn**	**19 14 58.4**	**-0.3**
KBO	**Bosley Butte**	**1.96**	**10**				**Pn**	**19 14 58.2**	**-2.3**
KBO				IAML				19 15 24.5	
	comp=E,665nm,1.1s								
KBO				IAML				19 16 05.5	
	comp=N,663nm,1.4s								
L02F	**Cave Junction**	**2.02**	**24**				**Pn**	**19 14 59.8**	**-1.4**
L02F				IAML				19 15 27.3	
	comp=N,594nm,0.5s								
L02F				IAML				19 15 35.2	
	comp=E,715nm,0.8s								
GDXM	**Geysers**	**2.07**	**135**				**Pn**	**19 15 01.0**	**-0.9**
LCSM	**College of the**	**2.07**	**56**				**Pn**	**19 15 01.6**	**-0.3**
LSHM	**Sage Hen Hill**	**2.07**	**75**				**Pn**	**19 15 01.7**	**-0.2**
YBH	**Yreka Blue Hor**	**2.08**	**45**	Pn			**Pn**	**19 15 01.1**	**-0.9**
	comp=E,2.7nm,0.3s,baz=256,slow=6.3,SNR=441								
YBH						Sn	**Sn**	**19 15 22.3**	**-6.0**
	comp=E,3.0nm,0.3s,baz=300,slow=13,SNR=6.5								
YBH				LR		LR	LR	19 15 31.0	
	comp=E,12nm,20.9s,baz=236,slow=36								
YBH	**Yreka Blue Hor**	**2.08**	**45**				**Pn**	**19 15 01.1**	**-0.9**
YBH				IAML				19 15 29.5	
	comp=N,712nm,0.6s								
GBGM	**Boggs Mountain**	**2.13**	**133**				**Pn**	**19 15 03.4**	**+0.7**
LGBM	**Gray Butte**	**2.16**	**60**				**Pn**	**19 15 03.9**	**+0.5**
M03C	**McCloud**	**2.18**	**62**				**Pn**	**19 15 03.5**	**0.0**
M03C				IAML				19 15 18.4	
	comp=N,1μm,0.5s								
O03E	**Paynes Creek**	**2.19**	**89**				**Pn**	**19 15 03.0**	**-0.6**
O03E				IAML				19 15 35.1	
	comp=N,535nm,0.8s								
O03E				IAML				19 16 04.3	
	comp=E,1μm,1.2s								
LDBM	**Digger Butte**	**2.21**	**85**				**Pn**	**19 15 03.2**	**-0.7**
MNRC	**McLaughlin Min**	**2.22**	**128**				**Pn**	**19 15 04.2**	**+0.3**
LMPM	**Military Pass**	**2.25**	**57**				**Pn**	**19 15 05.1**	**+0.6**
OCHM	**Cohasset Ridge**	**2.27**	**99**				**Pn**	**19 15 04.3**	**-0.3**
LHEM	**Herd Peak**	**2.29**	**53**				**Pn**	**19 15 05.3**	**+0.1**
B040	**Montague**	**2.30**	**47**				**Pn**	**19 15 04.8**	**-0.3**
LBFM	**Black Fox Moun**	**2.37**	**62**				**Pn**	**19 15 06.2**	**+0.1**
LMEM	**Manzanita Entr**	**2.38**	**83**				**Pn**	**19 15 06.4**	**+0.1**
LCMM	**Colby Mountain**	**2.42**	**92**				**Pn**	**19 15 06.5**	**-0.3**
OGOM	**Van Goodin Ran**	**2.43**	**104**				**Pn**	**19 15 06.6**	**-0.2**
LRDM	**Redding Peak**	**2.46**	**85**				**Pn**	**19 15 07.3**	**+0.1**
SUTB	**Sutter Butte**	**2.46**	**114**				**Pn**	**19 15 06.8**	**-0.5**
SUTB				IAML				19 15 41.5	
	comp=N,390nm,0.6s								
SUTB				IAML				19 16 02.1	
	comp=E,500nm,0.7s								
SIFF	**Sifford Mounta**	**2.48**	**86**				**Pn**	**19 15 07.6**	**-0.2**
HATC	**Hat Creek Radi**	**2.50**	**77**				**Pn**	**19 15 08.2**	**+0.3**
LGMM	**Garner Mountai**	**2.52**	**58**				**Pn**	**19 15 08.3**	**+0.1**
K02D	**Willamette Mer**	**2.53**	**17**				**Pn**	**19 15 07.3**	**-0.9**
K02D				IAML				19 15 37.1	
	comp=E,466nm,0.6s								
OSTM	**Stimpson Lane**	**2.54**	**110**				**Pn**	**19 15 07.7**	**-0.5**
ORV	**Oroville**	**2.54**	**106**				**Pn**	**19 15 07.8**	**-0.6**
MCCM	**Marconi Confer**	**2.55**	**146**				**Pn**	**19 15 07.7**	**-0.7**
MCCM				IAML				19 16 19.8	
	comp=E,378nm,1.5s								
LTIM	**Timbered Crate**	**2.58**	**69**				**Pn**	**19 15 08.9**	**-0.1**
CVS	**Carmenet Viney**	**2.58**	**138**				**Pn**	**19 15 07.8**	**-1.1**
M04C	**Macdoel**	**2.62**	**54**				**Pn**	**19 15 09.4**	**0.0**
L04D	**Klamath Falls**	**2.63**	**42**	Pn			**Pn**	**19 15 10.6**	**+0.8**
FARB	**Farallon Islan**	**2.89**	**153**				**Pn**	**19 15 13.0**	**-0.1**
FARB				IAML				19 15 45.2	
	comp=E,299nm,0.4s								
FARB				IAML				19 15 47.1	
	comp=N,259nm,0.2s								
J01E	**Myrtle Point**	**2.93**	**11**				**Pn**	**19 15 14.0**	**+0.3**
BBOR	**Butler Butte**	**3.00**	**29**				**Pn**	**19 15 15.3**	**+0.5**
BBOR				IAML				19 15 59.1	
	comp=E,256nm,1.0s								
AFDM	**Forest Hills D**	**3.15**	**114**				**Pn**	**19 15 16.9**	**+0.2**
K04D	**Chiloquin, OR**	**3.21**	**42**				**Pn**	**19 15 17.8**	**+0.2**
BEKR	**Beckworth**	**3.33**	**96**	Pn			**Pn**	**19 15 19.7**	**+0.3**
JRSC	**Jasper Ridge**	**3.44**	**146**				**Pn**	**19 15 20.1**	**-0.6**
JRSC				IAML				19 16 49.2	
	comp=E,159nm,1.5s								
J04A	**Umpqua Nationa**	**3.52**	**32**				**Pn**	**19 15 22.4**	**+0.3**
MPK	**Martis Peak**	**3.71**	**104**				**Pn**	**19 15 26.2**	**+1.6**
MPK				IAML				19 16 33.7	
	comp=E,350nm,0.9s								
MPK				IAML				19 17 10.3	
	comp=N,347nm,1.2s								
MHC	**Mount Hamilton**	**3.77**	**140**				**Pn**	**19 15 25.4**	**+0.1**
J05D	**Fort Rock, OR**	**3.95**	**39**				**Pn**	**19 15 28.1**	**+0.2**
J05D				IAML				19 17 01.3	
	comp=E,171nm,1.8s								
J05D				IAML				19 17 21.3	
	comp=N,149nm,1.9s								
CMB	**Columbia Colle**	**4.01**	**123**				**Pn**	**19 15 30.1**	**+1.5**
PNTR	**Pine Nut**	**4.09**	**105**				**Pn**	**19 15 30.5**	**+0.7**
PNTR				IAML				19 16 57.7	
	comp=E,277nm,1.1s								
PNTR				IAML				19 17 12.6	
	comp=N,278nm,1.6s								
PAHR	**Pah Rah Range**	**4.10**	**96**	

comp=Z,9.3nm,0.9s
SDCO Great Sand Dun 15.12 93 Pn Pn 19 18 02.0 +1.1
ANMO Albuquerque 15.38 104 Pn Pn 19 18 05.2 +0.9
comp=Z,0.1nm,0.3s,baz=276,slow=9.9,SNR=4.1
comp=Z,0.6nm,0.6s
ANMO Albuquerque 15.38 104 Pn 19 18 04.3 0.0
T25A Trinidad 16.12 95 Pn 19 18 14.2 +0.2
OGNE Ogallala 17.20 80 Pn 19 18 25.0 -2.5
OGNE IAmb IAmb 19 18 33.7
comp=Z,29nm,1.2s
CBKS Cedar Bluff 19.27 86 P 19 18 51.6 -0.3
R32A Long Quarter, 20.14 87 P 19 19 01.4 0.0
TX31 Lajitas Ar. Si 20.36 116 P 19 19 04.2 +0.3
TXAR Lajitas Array 20.36 116 P P 19 19 05.1 +1.1
comp=Z,2.9nm,0.8s,baz=300,slow=9.0,SNR=25
comp=Z,2.9nm,0.8s
TXAR Lajitas Array 20.36 116 P P 19 19 04.8 +0.8
FFC Flin Flon 20.93 39 P 19 19 08.3 -1.5
FFC IAmb IAmb 19 19 15.1
comp=Z,4.5nm,0.7s
ECSD EROS Data Cent 21.09 71 P 19 19 08.7 -3.0
ECSD IAmb IAmb 19 19 19.0
comp=Z,5.0nm,0.8s
AGMN Agassiz Nation 22.03 59 P 19 19 21.0 -0.6
AGMN IAmb IAmb 19 19 24.0
comp=Z,12nm,1.0s
ULM Lac du Bonnet 22.46 54 P P 19 19 24.1 -2.1
comp=Z,4.0nm,0.7s,baz=255,slow=9.0,SNR=6.7
ULM LR LR 19 28 59.3
comp=Z,407nm,18.6s,baz=246,slow=39
comp=Z,4.0nm,0.7s
ULM Lac du Bonnet 22.46 54 P P 19 19 25.2 -1.0
ULM IAmb IAmb 19 19 28.3
comp=Z,6.4nm,1.0s
BRDY Brady 22.62 105 P 19 19 27.2 -0.9
BRDY IAmb IAmb 19 19 31.8
comp=Z,10.0nm,0.8s
YKA Yellowknife Ar 23.06 12 P P 19 19 31.9 -0.5
comp=Z,1.8nm,1.1s,baz=205,slow=10.0,SNR=10
comp=Z,1.8nm,1.1s
ILAR Eielson Array 27.70 340 P P 19 20 16.4 +1.2
comp=Z,0.4nm,0.3s,baz=138,slow=6.8,SNR=9.4
comp=Z,0.4nm,0.3s
SCHQ Schefferville 40.46 49 P P 19 22 05.4 -0.3
comp=Z,3.3nm,1.1s,baz=273,slow=12,SNR=4.0
comp=Z,3.3nm,1.1s
SJG San Juan 54.62 96 LR LR 19 50 29.6
comp=Z,137nm,18.2s,baz=216,slow=40
H11N3 WAKE ISLAND Hy 61.24 272 T T 20 31 22.1
baz=53,slow=75,SNR=129
H11N2 WAKE ISLAND Hy 61.25 272 T T 20 31 22.1
baz=53,slow=75,SNR=150
H11N1 WAKE ISLAND Hy 61.26 272 T T 20 31 22.8
baz=53,slow=75,SNR=109
SONM Songino Array 81.26 328 P P 19 26 46.4 +2.8
comp=Z,0.4nm,0.9s,baz=38,slow=2.6,SNR=4.0
comp=Z,0.4nm,0.9s
KIRV Kirov 81.37 3 LR LR 20 09 59.4
comp=Z,270nm,18.3s,baz=54,slow=41
ZALV Zalesovo Beam 82.77 343 P P 19 26 53.7 +2.5
comp=Z,1.3nm,0.8s,baz=350,slow=5.1,SNR=5.3
comp=Z,1.3nm,0.8s
ESDC Sonseca Array 83.80 42 P P 19 26 57.9 +1.0
comp=Z,1.4nm,0.9s,baz=308,slow=5.8,SNR=4.4
comp=Z,1.4nm,0.9s
ESDC Sonseca Array 83.80 42 P P 19 26 56.5 -0.4
ESDC IAmb IAmb 19 26 59.7
comp=Z,1.8nm,1.4s
HHC Hu-ho-hao-te 84.43 321 eP P 19 26 59.5 -0.6
HHC pmax pmax
comp=Z,3.0nm,0.8s
HHC pmax pmax
comp=Z,210nm,5.2s
BVAR Borovoye Array 86.16 351 P P 19 27 08.9 +0.5
comp=Z,0.5nm,0.7s,baz=26,slow=3.8,SNR=5.1
comp=Z,0.5nm,0.7s
KURBB Kurchatov Arra 87.22 345 P P 19 27 14.6 +1.0
comp=Z,3.0nm,0.9s,baz=21,slow=4.7,SNR=7.3
comp=Z,3.0nm,0.9s
BELG Belogornoye 87.46 5 LR LR 20 11 03.1
comp=Z,258nm,18.1s,baz=68,slow=39
MKAR Makanchi Array 90.03 342 P P 19 27 28.2 +1.2
comp=Z,0.5nm,0.9s,baz=38,slow=7.3,SNR=2.3
comp=Z,0.5nm,0.9s
PZH PanZhiHua 100.77 319 P Pdif 19 28 15.8 -0.7

*NEIC **22** 19:28:38.6±2.1,22.0°S×0.2×174.5°W×0.05,h10km±1km, mb4.5/7, Error ellipse: s-maj=29.4km s-min=7.8km az=174.0*
*IDC **22** 19:28:39.2×1.1,22.00°S×174.97°W,h0km,mb4.0/10, mbtmp4.0/11,ML3.9/1, Error ellipse: s-maj=51.2km s-min=20.4km az=148.0*
ISC 22 19:28:39.1±0.6,22.0°S±0.1×174.61°W±0.09,h10km,n34, σ1s46/31,mb4.2/15,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.28	57			P	Pn	19 29 55.6	-2.5
RAR	Rarotonga	13.83	89	Pn		Pn	Pn	19 31 53.3	-2.0
URZ	Urewera	17.68	202	P		P	Pn	19 32 46.1	+0.7
	0.4nm,0.3s,baz=137,slow=14,SNR=1.5								
URZ				S		Sn	Sn	19 35 49.7	-13
	9.5nm,1.0s,baz=85,slow=18,SNR=1.5								
	3.9nm,0.9s								
LTZ	Lake Taylor	23.42	205	P		P	P	19 33 49.4	+1.0
LTZ				IAmb		IAmb	IAmb	19 34 01.4	
	comp=Z,39nm,1.5s								
CTA	Charters Tower	36.51	266	P		P	P	19 35 43.8	-1.1
	comp=Z,5.7nm,0.6s,baz=86,slow=10.0,SNR=9.9								
	comp=Z,5.7nm,0.6s								
CTAO	Charters Tower	36.51	266	P		P	P	19 35 43.5	-1.4
PMG	Port Moresby	38.76	283	P		P	P	19 36 02.6	-1.4
PMG				IAmb		IAmb	IAmb	19 36 03.6	
	comp=Z,6.0nm,0.8s								
STKA	Stephens Creek	40.02	246	P		P	P	19 36 14.3	-0.2
	comp=Z,2.7nm,1.1s,baz=76,slow=12,SNR=2.2								
	comp=Z,2.7nm,1.1s								
AS31	Alice Springs	47.26	258	P		P	P	19 37 11.9	-1.0
AS31				IAmb		IAmb	IAmb	19 37 25.5	
	comp=Z,1.0nm,0.9s								
ASAR	Alice Springs	47.26	258	P		P	P	19 37 11.8	-1.2
	comp=Z,1.6nm,0.8s,baz=88,slow=7.4,SNR=19								
	comp=Z,1.6nm,0.8s								
ASAR	Alice Springs	47.26	258	P		P	P	19 37 11.6	-1.3
WB0	Warramunga Arr	47.52	263	P		P	P	19 37 12.7	-2.2
WB0				IAmb		IAmb	IAmb	19 37 19.7	
	comp=Z,9.0nm,1.2s								
WRA	Warramunga Arr	47.53	263	P		P	P	19 37 12.9	-2.1
	comp=Z,1.1nm,0.8s,baz=96,slow=8.4,SNR=13								
	comp=Z,1.1nm,0.8s								
WRA	Warramunga Arr	47.53	263	P		P	P	19 37 13.1	-2.0
FORT	Forrest	51.61	248	P		P	P	19 37 45.5	-0.6
FORT				IAmb		IAmb	IAmb	19 38 10.6	
	comp=Z,8.1nm,0.8s								
FITZ	Fitzroy Crossi	55.96	263	P		P	P	19 38 16.8	-1.2
	comp=Z,1.0nm,0.5s,baz=65,slow=14,SNR=6.9								
	comp=Z,1.0nm,0.5s								
PETK	Petropavlovsk-	78.59	343	P		P	P	19 40 41.8	+1.1
	comp=Z,2.9nm,0.9s,baz=102,slow=6.9,SNR=4.2								
	comp=Z,2.9nm,0.9s								
PETK	Petropavlovsk-	78.59	343	P		P	P	19 40 40.7	0.0
H03S2	Juan Fernandez	82.52	123	T		T	T	21 12 53.0	
	baz=247,slow=74,SNR=11								
H03S1	Juan Fernandez	82.54	123	T		T	T	21 13 01.5	
	baz=247,slow=74,SNR=11								
H03S3	Juan Fernandez	82.54	123	T		T	T	21 13 04.6	
	baz=247,slow=74,SNR=11								
TXAR	Lajitas Array	85.25	56	P		P	P	19 41 19.6	+3.1
	comp=Z,0.3nm,0.8s,baz=246,slow=3.6,SNR=2.2								
	comp=Z,0.3nm,0.8s								
PDAR	Pinedale Array	87.94	42	P		P	P	19 41 30.9	+1.4
	comp=Z,0.3nm,0.8s,baz=260,slow=6.9,SNR=2.1								
	comp=Z,0.3nm,0.8s								
ILAR	Eielson Array	89.13	12	P		P	P	19 41 35.9	+1.6
	comp=Z,0.3nm,0.7s,baz=204,slow=4.0,SNR=2.7								
	comp=Z,0.3nm,0.7s								
CMAR	Chiang Mai Arr	93.59	288	P		P	P	19 41 58.1	+2.0
	comp=Z,1.0nm,0.8s,baz=134,slow=3.2,SNR=7.7								
	comp=Z,1.0nm,0.8s								
CMAR	Chiang Mai Arr	93.59	288	P		P	P	19 41 55.9	-0.2
MKAR	Makanchi Array	114.54	313	PKP			PKiKP	19 47 20.3	+0.8
	comp=Z,0.2nm,0.5s,baz=203,slow=1.3,SNR=10								
KURBB	Kurchatov Arra	117.31	317	PKP			PKiKP	19 47 25.5	+0.9
	comp=Z,0.2nm,0.7s,baz=97,slow=1.6,SNR=4.2								
BVAR	Borovoye Array	122.28	320	PKP			PKiKP	19 47 35.5	+1.1
	comp=Z,0.8nm,0.4s,baz=101,slow=3.0,SNR=6.6								
AKASG	Malin Array Be	145.84	333	PKPbc			PKPab	19 48 19.4	+0.5
	comp=Z,1.8nm,0.5s,baz=41,slow=4.2,SNR=13								
AKBB	Malin Array Si	145.84	333				PKPab	19 48 18.6	-0.3
KIEV	Kiev	145.85	333				PKPab	19 48 18.6	-0.3
BRTR	Keskin Array B	150.19	313	PKPbc			PKiKP	19 48 32.4	+0.8
	comp=Z,1.7nm,0.7s,baz=131,slow=4.4,SNR=11								
BRTR	Keskin Array B	150.19	313				PKPbc	19 48 30.2	-0.6

*MDD **22** 19:36:08.5±1.0,35.51N×0.10W,h1km,Mb3.7/14, M_mb3.0/14,Error ellipse: s-maj=7.9km s-min=5.5km az=155.0*
*CRAAG **22** 19:36:09.2,35.51N×0.06W,Ml3.5,Algrie 07km NW Hacine*
ISC 22 19:36:11.4±1.4,35.63N±0.05×0.14W±0.03,h23km±14km, n36,σ1s33/54,10C,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
USTO	Oran	0.35	288	P		P	Pb	19 36 19.3	+0.2
ESMB	Sidi M'hamed B	0.59	95	P		P	Pb	19 36 20.6	-2.5
EKMS	Oued Kramis	0.93	42	P		P	Pb	19 36 28.6	-0.4
OSBL	Sidi Abdelli	0.98	237	P		P	Pn	19 36 30.8	+0.9
EANR	'Ain N'Sour	1.06	72	P		P	Pb	19 36 31.1	0.0
OBBL	Beni Bahdel	1.45	231	P		P	Pb	19 36 38.9	+1.2
EADEB	Ain Deheb	1.59	118	P		P	Pb	19 36 37.9	-2.3
EBGR	Bougara	1.69	91	P		P	Pn	19 36 39.0	-0.7
EDDR	Deurdeur	1.95	78	P		P	Pb	19 36 49.4	+3.1
CART	Cartagena	2.08	341	Pn		Pn	Pn	19 36 43.4	-1.4
CART				Sn		Sn	Sn	19 37 07.0	-3.0
EZEK	Zmalet El Emir	2.14	110	P		P	Pb	19 36 49.7	+0.1
ENIJ	Nijar	2.14	309	Sn		Sn	Sn	19 37 09.4	-2.3
ENIJ	Nijar	2.14	309	S		Sn	Sn	19 37 09.7	-2.1
AFDJ	Sidi Ladjel	2.23	95	P		P	Pb	19 36 52.1	+1.1
WMELI	Melilla	2.32	263	Pn		Pn	Pn	19 36 48.9	+0.8
EMUR	La Murta	2.38	339	Pn		Pn	Pn	19 36 50.0	+0.9
EMUR	La Murta	2.38	339	P		Pn	Pn	19 36 49.7	+0.6
EMUR				S		Sn	Sn	19 37 17.4	-0.2
ELOR	Lorca, Murcia	2.39	328	P		Pn	Pn	19 36 48.4	-0.7
ELOR				⇑iVmb_VC				19 36 55.5	
	393nm,SNR=2.2								
ELOR				S			Sn	19 37 16.3	-1.5
EBER	Berja	2.56	301	Pn		Pn	Pn	19 36 51.1	-0.6
EBER				Sn		Sn	Sn	19 37 21.3	-0.9
EBER	Berja	2.56	301	P		Pn	Pn	19 36 51.3	-0.4
EBER				⇑iVmb_VC				19 36 54.3	
	152nm,SNR=1.8								
EBER				S			Sn	19 37 21.5	-0.8
ABRIN	Birine	2.66	89	P		P	Pb	19 36 59.1	+0.7
ADCK	Dar Chioukh	3.02	103	P		P	Pb	19 37 03.3	+2.7
EBEN2	Beniarda presa	3.04	359	P		Pn	Pn	19 36 57.8	-0.4
EBEN2				⇑iVmb_VC				19 37 03.8	
	140nm,SNR=1.7								
EBEN2				S			Sn	19 37 34.2	+0.3
ELGU	Los Guajares,	3.08	295	Pn		Pn	Pn	19 36 57.7	-1.1
ELGU				Sn		Sn	Sn	19 37 33.4	-1.5
ELGU	Los Guajares,	3.08	295	P		Pn	Pn	19 36 57.7	-1.1
ELGU				⇑iVmb_VC				19 36 60.0	
	181nm,SNR=2.3								
ELGU				S			Sn	19 37 34.7	-0.2
EQES	Quesada	3.21	314	P		P	Pn	19 37 02.7	+2.2
EQES				S			Sn	19 37 38.2	+0.2
ETOB	Tobarra	3.22	340	Pn		Pn	Pn	19 37 01.6	+1.0
ETOB				Sn		Sn	Sn	19 37 38.2	-0.1
ETOB	Tobarra	3.22	340	P		Pn	Pn	19 37 01.6	+1.0
ETOB				⇑iVmb_VC				19 37 05.0	
	106nm,SNR=1.2								
ETOB				S			Sn	19 37 37.5	-0.7
EGOR	Sierra Gorda,	3.53	296	Pn		Pn	Pn	19 37 06.0	+1.0
EGOR	Sierra Gorda,	3.53	296	P		Pn	Pn	19 37 05.7	+0.7
EGOR				⇑iVmb_VC				19 37 09.7	
	96nm,SNR=1.7								
EGOR				S			Sn	19 37 47.2	+1.1
EIBI	Ibiza	3.59	19	Pn		Pn	Pn	19 37 06.7	+1.0
EIBI				Sn		Sn	Sn	19 37 47.6	+0.1
EIBI	Ibiza	3.59	19	P		Pn	Pn	19 37 06.6	+0.8
EIBI				⇑iVmb_VC				19 37 09.0	
	145nm,SNR=1.8								
EIBI				S			Sn	19 37 48.0	+0.5
EVIV	Cofrentes, Val	3.72	348	P		Pn	Pn	19 37 06.0	-1.5
EVIV				⇑iVmb_VC				19 37 12.2	
	100nm,SNR=1.3								
EVIV				S			Sn	19 37 51.6	+1.0
EADA	Adamuz	4.37	307	P		Pn	Pn	19 37 15.3	-1.1
EADA				⇑iVmb_VC				19 37 25.3	
	121nm,SNR=2.1								
EADA				S			Sn	19 38 06.7	+0.1
EMOS	Mosqueruela	4.74	357	P		Pn	Pn	19 37 21.9	+0.3
EMOS				⇑iVmb_VC				19 37 26.5	
	78nm,SNR=1.0								
EMOS				S			Sn	19 38 16.3	+0.4
ECAB	El Cabril	4.89	302	P		Pn	Pn	19 37 23.2	-0.3
ECAB				S			Sn	19 38 16.9	-2.5

*MDD **22** 19:44:39.6±0.7,36.76N×12.46W,h5km,Mb4.3/18, M_mb3.7/18,Error ellipse: s-maj=5.8km s-min=4.9km az=32.0*
*IGIL **22** 19:44:42.4,36.76N×12.46W,h27km,ML2.5*
*INMG **22** 19:44:43.4±1.2,36.60N×12.61W,h28km±27km,ML2.6, Error ellipse: s-maj=4.8km s-min=3.5km az=90.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*CNRM **22** 19:44:45.0,36.39N×11.98W,h124km*
ISC 22 19:44:38.4±2.3,36.67N±0.06×12.2W±0.1,h10km,n78, σ2s70/146,12C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.75	79	Pn		Pb	Pb	19 45 26.0	-1.6
PFVI				Sn		Sn	Sn	19 45 57.9	+2.2
PFVI	Vila Bisbo	2.75	79	eP		Pb	Pb	19 45 26.0	-1.6
PFVI				eS		Sn	Sn	19 45 58.2	+2.5
PFVI				i IAML				19 45 59.6	
PFVI				i IAML				19 46 00.6	
PFVI				i IAML				19 46 00.7	
PFVI	Vila Bisbo	2.75	79	P		Pn	Pn	19 45 25.8	+3.3
PFVI				S		Sb	Sb	19 45 59.5	-1.8
MORF	Marmelete	2.92	76	eP		Pn	Pn	19 45 28.2	+3.3
MORF				eS		Sn	Sn	19 46 01.5	+1.6
MORF				IAML				19 46 06.3	
	comp=N,27nm,0.2s								
MORF	Marmelete	2.92	76	eP		Pn	Pn	19 45 28.3	+3.5
MORF				eS		Sn	Sn	19 46 01.8	+1.8
MORF				i IAML				19 46 03.9	
MORF				i IAML				19 46 06.5	
MORF				i IAML				19 46 07.1	
PTEO	Sao Teotonio	2.92	72	eP		Pb	Pb	19 45 28.5	-2.0
PTEO				eS		Sn	Sn	19 46 02.3	+2.4
PTEO				i IAML				19 46 04.2	
PTEO				i IAML				19 46 04.8	
PTEO				i IAML				19 46 06.1	
PMAFR	Mafra	3.25	45	Pn		Pn	Pn	19 45 32.4	+3.0
PMAFR				Sn		Sn	Sn	19 46 10.5	+2.4
PMAFR	Mafra	3.25	45	eP		Pn	Pn	19 45 32.4	+3.0
PMAFR				eS		Sn	Sn	19 46 10.4	+2.2
PMAFR				i IAML				19 46 11.3	
PMAFR				i IAML				19 46 12.0	
PMAFR				i IAML				19 46 12.6	
MESJ	Messejana	3.39	69	eP		Pn	Pn	19 45 34.6	+3.3
MESJ				eS		Sn	Sn	19 46 12.5	+0.9
MESJ				IAML				19 46 15.4	
	comp=N,8.4nm,0.1s								
MESJ	Messejana	3.39	69	eP		Pn	Pn	19 45 34.8	+3.5
MESJ				eS		Sn	Sn	19 46 13.8	+2.2
MESJ				i IAML				19 46 17.7	
MESJ				i IAML				19 46 18.2	
MESJ				i IAML				19 46 18.6	
PCVE	Castro Verde	3.47	73	Pn		Pn	Pn	19 45 35.9	+3.5
PCVE				Sn		Sn	Sn	19 46 15.0	+1.6
PCVE	Castro Verde	3.47	73	eP		Pn	Pn	19 45 36.0	+3.6
PCVE				eS		Sn	Sn	19 46 15.3	+1.8
PCVE				i IAML				19 46 19.1	
PCVE				i IAML				19 46 19.6	
PCVE				i IAML				19 46 22.9	
PBDV	Barranco-do-Ve	3.47	79	Pn		Pn	Pn	19 45 36.3	+3.8
PBDV				Sn		Sn	Sn	19 46 16.7	+3.0
PBDV	Barranco-do-Ve	3.47	79	eP		Pb	Pb	19 45 37.0	-2.9
PBDV				eS		Sn	Sn	19 46 17.0	+3.3
PBDV				i IAML				19 46 18.8	
PBDV				i IAML				19 46 22.4	
PBDV				i IAML				19 46 22.9	
MOE	Montemor	3.58	58	eP		Pn	Pn	19 45 37.0	+3.1
MOE				eS		Sn	Sn	19 46 17.9	+1.7
MOE				i IAML				19 46 19.4	
MOE				i IAML				19 46 21.4	
MOE				i IAML				19 46 21.6	
PVAQ	Vaqueiros	3.67	77	eP		Pn	Pn	19 45 39.0	+3.9
PVAQ				eS		Sn	Sn	19 46 20.5	+2.1
PVAQ				i IAML				19 46 24.8	
PVAQ				i IAML				19 46 24.8	
PVAQ				i IAML				19 46 25.6	
PVAQ	Vaqueiros	3.67	77	P		Pn	Pn	19 45 39.0	+3.9
PVAQ				S		Sn	Sn	19 46 22.0	+3.6
PBEJ	Beja	3.71	67	eP		Pn	Pn	19 45 39.6	+3.8
PBEJ				eS		Sn	Sn	19 46 21.2	+1.6
PBEJ				i IAML				19 46 22.7	
PBEJ				i IAML				19 46 23.0	
PBEJ				i IAML				19 46 25.0	
EVO	Evora	3.81	60	Pn		Pn	Pn	19 45 40.1	+3.0
EVO				Sn		Sn	Sn	19 46 23.3	+1.2
EVO	Evora	3.81	60	eP		Pn	Pn	19 45 40.1	+3.0
EVO				eS		Sn	Sn	19 46 23.4	+1.4
EVO				i IAML				19 46 25.0	
EVO				i IAML				19 46 27.7	
EVO				i IAML				19 46 28.0	
EGRO	El Granado	3.87	76	Pn		Pn	Pn	19 45 41.7	+3.8
EGRO				Sn		Sn	Sn	19 46 25.7	+2.1
EGRO	El Granado	3.87	76	P		Pn	Pn	19 45 41.8	+3.8
EGRO				⇑iVmb_VC				19 45 50.9	
	comp=N,258nm,SNR=1.4								
EGRO				S			Sn	19 46 25.2	+1.7
PSBE	So Bento	3.91	42	eP		Pn	Pn	19 45 41.8	+3.2
PSBE				eS		Sn	Sn	19 46 26.4	+1.9
PARRA	Arraiolos	3.94	56	eP		Pn	Pn	19 45 41.5	+2.7
PARRA				eS		Sn	Sn	19 46 26.1	+1.0
PARRA				i IAML				19 46 27.3	
PARRA				i IAML				19 46 29.9	
PARRA				i IAML				19 46 29.9	
PMTG	Montargil	3.96	52	eP		Pn	Pn	19 45 42.2	+3.1
PMTG				eS		Sn	Sn	19 46 26.9	+1.3
PMTG				i IAML				19 46 30.7	
PMTG				i IAML				19 46 31.6	
PMTG				i IAML				19 46 32.3	
PESTR	Estremoz	4.26	58	Pn		Pn	Pn	19 45 47.0	+3.6
PESTR	Estremoz	4.26	58	eP		Pn	Pn	19 45 47.1	+3.7
PESTR				eS		Sn	Sn	19 46 33.8	+0.6
PESTR				i IAML				19 46 37.4	
PESTR				i IAML				19 46 37.5	
PESTR	Estremoz	4.26	58	P		Pn		19 45 48.3	+4.9
PESTR				S		Sn		19 46 36.4	+3.2
PSARD	Sardoal	4.33	46	eP		Pn	Pn	19 45 47.2	+2.9
PSARD				eS		Sn	Sn	19 46 36.9	+2.1
PSARD				i IAML				19 46 39.4	
PSARD				i IAML				19 46 40.6	
PSARD				i IAML				19 46 42.4	
PBAR	Barrancos	4.38	68	Pn		Pn	Pn	19 45 48.4	+3.5
PBAR				Sn		Sn	Sn	19 46 36.7	+0.6
PBAR	Barrancos	4.38	68	eP		Pn	Pn	19 45 48.6	+3.7
PBAR				eS		Sn	Sn	19 46 37.2	+1.2
PBAR				i IAML				19 46 39.4	
PBAR				i IAML				19 46 40.1	
PBAR				i IAML				19 46 40.9	
PCAS	Casmilo, Conde	4.46	40	eP		Pn	Pn	19 45 48.9	+2.9
PCAS				eS		Sn	Sn	19 46 37.7	-0.3
PCAS				i IAML				19 46 39.3	
PCAS				i IAML				19 46 39.4	
PCAS				i IAML				19 46 40.0	
EMIN	Mina Concepcio	4.55	74	Pn		Pn	Pn	19 45 50.6	+3.3
EMIN				Sn		Sn	Sn	19 46 40.3	+0.1
EMIN	Mina Concepcio	4.55	74	P		Pn	Pn	19 45 50.8	+3.5
EMIN				S		Sn	Sn	19 46 40.9	+0.6
PMRV	Marv??o	4.69	53	eP		Pn	Pn	19 45 51.9	+2.7
PMRV				eS		Sn	Sn	19 46 44.0	+0.2
PMRV				i IAML				19 46 45.7	
PMRV				i IAML				19 46 46.1	
PMRV				i IAML				19 46 46.6	
PCBR	Castelo Branco	4.88	48	eP		Pn	Pn	19 45 55.1	+3.3
ESPR	Espera	5.10	86	Pn		Pn	Pn	19 45 58.5	+3.6
ESPR				Sn		Sn	Sn	19 46 54.4	+0.5
ESPR	Espera	5.10	86	P		Pn	Pn	19 45 56.3	+1.4
ESPR				⇑iVmb_VC				19 46 02.7	
	comp=N,159nm,SNR=1.3								
ESPR				S			Sn	19 46 55.8	+1.9
AVE	Averroes	5.18	129	Pn		Pn	Pn	19 45 56.6	+0.7
AVE				Sn		Sn	Sn	19 46 53.7	-2.1
MTE	Manteigas	5.22	43	eP		Pn	Pn	19 45 59.5	+3.0
MTE				eS		Sn	Sn	19 46 56.5	-0.2
PVIS	Viseu	5.26	39	eP		Pn	Pn	19 45 59.6	+2.5
PVIS				eS		Sn	Sn	19 46 56.6	-1.3
SRHM	Skhour des Reh	5.50	138	P		Pn	Pn	19 46 00.7	+0.4
ECAB	El Cabril	5.59	73	Pn		Pn	Pn	19 46 04.7	+3.2
ECAB				Sn		Sn	Sn	19 47 05.2	-0.6
ECAB	El Cabril	5.59	73	P		Pn	Pn	19 46 05.0	+3.4
ECAB				⇑iVmb_VC				19 46 10.4	
	comp=N,137nm,SNR=1.6								
ECAB				S			Sn	19 47 07.2	+1.4
E1302	La Puebla de C	5.60	83	P		Pn	Pn	19 46 05.1	+3.4
E1302				⇑iVmb_VC				19 46 14.6	
	comp=N,145nm,SNR=1.1								
E1302				S			Sn	19 47 05.0	-1.1
PVRL	Vila Real	5.78	36	eS			Sn	19 47 08.8	-1.7
POLO	Lamas de Olo	5.82	35	eP		Pn	Pn	19 46 07.1	+2.3
POLO				eS		Sn	Sn	19 47 09.0	-2.6
POLO				i IAML				19 47 10.7	
POLO				i IAML				19 47 11.5	
POLO				i IAML				19 47 16.5	
EPLA	Plasencia	5.89	53	P		Pn	Pn	19 46 08.8	+3.1
EPLA				⇑iVmb_VC				19 46 17.3	
	comp=N,118nm,SNR=1.3								
EPLA				S			Sn	19 47 12.5	-0.7
PCAB	Cabril	5.99	32	eP		Pn	Pn	19 46 09.7	+2.6
PCAB				eS		Sn	Sn	19 47 13.5	-2.2
PCAB				i IAML				19 47 14.9	
PCAB				i IAML				19 47 18.0	
MVO	Moncorvo	6.04	40	eP		Pn	Pn	19 46 10.0	+2.2
MVO				eS		Sn	Sn	19 47 15.0	-

TIO	Tiouine	7.05	143	P	Pn	19 46 22.2	+0.3
TIO				S	Sn	19 47 37.0	-5.2
ESDC	Sonseca Array	7.15	63	P	Pn	19 46 24.2	+1.1
ESDC				S	Sn	19 47 43.7	-0.7
ESBB	Sonseca Array	7.15	63	S	Sn	19 47 43.7	-0.7
MD31	MD31	7.21	120	P	Pn	19 46 24.9	+1.0
MD31				S	Sn	19 47 40.3	-5.6
MDT	Midelt	7.34	119	P	Pn	19 46 26.3	+0.5
MDT				S	Sn	19 47 45.0	-4.3
EQES	Quesada	7.38	78	S	Sn	19 47 51.1	+1.1
GUD	Guadarrama	7.44	55	P	Pn	19 46 29.4	+2.2
GUD				⇑*i*IVmb_VC		19 46 37.8	
	comp=N,113nm,SNR=2.1						
GUD				S	Sn	19 47 48.4	-3.3
EPON	Pontenova	7.70	29	P	Pn	19 46 31.9	+1.4
EPON				S	Sn	19 47 52.0	-5.7
UCM	Universidad Co	7.91	60	Pn	Pn	19 46 36.4	+2.9
UCM				Sn	Sn	19 48 03.5	+0.5
ETOB	Tobarra	8.68	74	P	Pn	19 46 45.7	+1.6
ETOB				⇑*i*IVmb_VC		19 46 54.8	
	comp=N,130nm,SNR=1.5						
ETOB				S	Sn	19 48 22.1	+0.1
ETOR	Torete	8.95	59	P	Pn	19 46 49.8	+2.1
ETOR				⇑*i*IVmb_VC		19 46 51.4	
	comp=N,126nm,SNR=1.6						
ETOR				S	Sn	19 48 26.1	-2.4
EVIV	Cofrentes, Val	9.13	70	S	Sn	19 48 32.6	-0.5

GFZ ***22*** *19:46:10.6,22˚.44S×174˚.55W,h27km,MW5.6,Moment Tensor Solution. s74 Moment tensor: Mrr1.94; Mθθ-0.18; Mφφ-1.76; Mrθ1.18; Mθφ-0.70; Mφr2.11; Fault plane solution: NP1:φs194.00000°,δ20.00000°, λ77.00000°. NP2:φs27.00000°,δ70.00000°,λ95.00000°. Principal axes: T 3.1000, Plg64.0000°, Azm305.0000°; N 0.0600, Plg4.0000°, Azm206.0000°; P -3.1600, Plg25.0000°, Azm114.0000°;*

IDC ***22*** *19:46:10.9±0.5,21˚.86S×175˚.14W,h0km,mb4.8/22, mbtmp4.7/23,ML5.4/2,MS4.9/57 Error ellipse: s-maj=17.1km s-min=12.8km az=146.0*

MOS ***22*** *19:46:11.5±1.4,21˚.815×175˚.21W,h8km,mb5.3/39, MS5.1/21,Error ellipse: s-maj=10.0km s-min=9.4km az=113.0*

NEIC ***22*** *19:46:11.3,21˚.83S×174˚.65W,h24km*

NEIC ***22*** *19:46:11.3±1.7,21˚.83S±0˚.08×174˚.66W±0˚.09,h10km±1km, mb5.3/101,Ms_20 5.3/336,Mwb5.5/71,Mww5.6/21,Error ellipse: s-maj=15.4km s-min=11.7km az=136.0,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.68; Mθθ-1.32; Mφφ-0.36; Mrθ0.42; Mθφ-0.97; Mφr0.39; Fault plane solution: M0 1.90000×10^17 NP1:φs54.30000°, δ53.78000°,λ85.27000°. NP2:φs242.27000°,δ36.49000°, λ96.43000°. Principal axes: T 1.7708, Plg81.0000°, Azm304.0000°; N 0.2385, Plg4.0000°, Azm57.0000°; P -2.0093, Plg9.0000°, Azm148.0000°;*

NEIC ***22*** *19:46:11.1,21˚.83S×174˚.65W,h10km*

BJI ***22*** *19:46:11.9,21˚.82S×174˚.45W,h24km,mB5.8/17, mb5.3/52,Ms5.4/33,Ms7 5.1/34*

NEIC ***22*** *19:46:11.3,21˚.73S×174˚.44W,h24km,Moment Tensor Solution. Duration: 3≋0 Moment tensor: Scale 10^17Nm; Mrr2.07; Mθθ-0.61; Mφφ-1.46; Mrθ0.64; Mθφ-1.01; Mφr1.50; Fault plane solution: M0 2.66000×10^17 NP1: φs220.16000°,δ26.58000°,λ101.74000°. NP2: φs27.08000°,δ64.02000°,λ84.19000°. Principal axes: T 2.6413, Plg70.0000°, Azm285.0000°; N 0.0337, Plg5.0000°, Azm30.0000°; P -2.6749, Plg19.0000°, Azm121.0000°;*

NOU ***22*** *19:46:16.2,21˚.91S×174˚.43W,h48km,mb5.1/53,Tonga Islands*

GCMT ***22*** *19:46:19.3±0.1,21˚.99S±0˚.01×174˚.49W±0˚.01,h24km, MW5.6/154,Moment Tensor Solution. s125,c213; s154,c285; Duration: 1≋5 Moment tensor: Scale 10^17 Nm; Mrr2.39±.04; Mθθ-0.28±.02; Mφφ-2.10±.03; Mrθ0.67±.04; Mθφ-1.05±.02; Mφr1.22±.04; Best double couple: M0 2.84800×10^17 NP1:φs202.00000°,δ30.00000°, λ86.00000°. NP2:φs27.00000°,δ60.00000°,λ92.00000°. Principal axes: T 2.7540, Plg75.0000°, Azm303.0000°; N 0.1930, Plg2.0000°, Azm206.0000°; P -2.9410, Plg15.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 19:46:13.9±0.3,22˚.06S±0˚.05×174˚.64W±0˚.05,h27km, n678,σ1§68/502,mb5.2/116,MS5.2/240,87C-26D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.32**	**57**	P	Pn	19 47 27.2	-4.4
NIUE				S	Sn	19 48 21.9	-10
NIUE	**Niue**	**5.32**	**57**		**Pn**	**19 47 27.4**	**-4.1**
NIUE	**Niue**	**5.32**	**57**	P	**Pn**	**19 47 27.5**	**-4.1**
LKBA	**Tubou, Lakemba**	**5.47**	**313**	P	**Pn**	**19 47 35.7**	**+2.0**
TAVE	**Taveuni**	**7.29**	**316**	P	**Pn**	**19 48 01.4**	**+2.8**
RAO	**Raoul Island**	**7.75**	**202**	Pn	**Pn**	**19 48 06.4**	**+1.5**
	99nm,0.3s,baz=76,slow=19,SNR=3.0						
RAO				Sn	**Sn**	**19 49 29.8**	**-2.0**
	178nm,0.3s,baz=89,slow=21,SNR=7.5						
RAO	**Raoul Island**	**7.75**	**202**	Pn	**Pn**	**19 48 05.9**	**+1.0**
DGTI	**Dogotuki**	**7.82**	**316**	P	**Pn**	**19 48 07.6**	**+1.7**
MSVF	**Nonsavu**	**8.12**	**301**		**Pn**	**19 48 10.9**	**+0.8**
MSVF	**Nonsavu**	**8.12**	**301**	P	**Pn**	**19 48 13.6**	**+3.5**
	635nm,1.2s						
MSVF	**Nonsavu**	**8.12**	**301**	P	**Pn**	**19 48 10.9**	**+0.8**
AFI	**Afiamalu**	**8.55**	**19**	Pn	Pn	19 48 11.1	-5.0
AFI	**Afiamalu**	**8.55**	**19**	P	Pn	19 48 11.1	-5.0
RAR	**Rarotonga**	**13.85**	**89**	Pn	**Pn**	**19 49 25.9**	**-2.6**
	11nm,0.3s,baz=259,slow=7.3,SNR=21						
RAR				Sn	Sn	19 51 46.0	-15
	5.0nm,0.3s,baz=85,slow=20,SNR=2.1						
RAR				LR	LR	19 55 47.1	
	comp=Z,3μm,18.0s,baz=236,slow=40						
RAR	**Rarotonga**	**13.85**	**89**	Pn	**Pn**	**19 49 25.6**	**-2.9**
RAR	**Rarotonga**	**13.85**	**89**	P	**Pn**	**19 49 25.6**	**-2.9**
MARNC	**Mare, Loyalty**	**16.11**	**269**	Pn	**Pn**	**19 49 56.2**	**-2.4**
MARNC				IAmb	IAmb	19 50 02.0	
	comp=Z,492nm,1.5s						
MARNC	**Mare, Loyalty**	**16.11**	**269**	P	**P**	**19 50 04.5**	**+2.8**
DVP	**Devils Point**	**16.72**	**282**	P	**P**	**19 50 11.9**	**+3.5**
OUENC	**Ouen Island, N**	**17.16**	**265**	P	**P**	**19 50 13.8**	**+0.5**
ONTNC	**Ouen Toro**	**17.52**	**266**	Pn	**Pn**	**19 50 14.7**	**-1.6**
DZM	**Mont Dzumac**	**17.54**	**266**	P	**Pn**	**19 50 15.7**	**-1.0**
	comp=Z,13nm,0.6s,baz=91,slow=16,SNR=14						
DZM	**Mont Dzumac**	**17.54**	**266**		**Pn**	**19 50 15.2**	**-1.5**
DZM	**Mont Dzumac**	**17.54**	**266**	P	**P**	**19 50 19.5**	**+1.9**
URZ	**Urewera**	**17.64**	**202**	P	**P**	**19 50 19.2**	**+0.7**
	comp=Z,5.6nm,0.3s,baz=305,slow=3.1,SNR=21						
URZ				S	**Sn**	**19 53 23.6**	**-10**
	comp=Z,26nm,0.8s,baz=256,slow=19,SNR=7.2						
	comp=Z,8.1nm,0.4s						
URZ	**Urewera**	**17.64**	**202**	P	**P**	**19 50 20.5**	**+2.1**
BKZ	**Black Stump Fm**	**18.66**	**202**	P	**Pn**	**19 50 33.1**	**+2.8**
HIZ	**Hauiti**	**18.72**	**206**	P	**Pn**	**19 50 36.5**	**+5.6**
BFZ	**Birch Farm**	**20.11**	**201**	P	Pn	19 50 47.2	-0.3
MRZ	**Mangatainoka R**	**20.31**	**202**	P	**P**	**19 50 45.5**	**-2.2**
QRZ	**Quartz Range**	**21.63**	**207**	P	**P**	**19 51 08.9**	**+6.9**
KHZ	**Kahutara**	**22.58**	**203**	P	**P**	**19 51 15.3**	**+3.1**
PPT	**Papeete**	**23.98**	**84**	P	**P**	**19 51 28.2**	**+1.8**
	comp=Z,44nm,0.9s,baz=75,slow=10,SNR=4.2						
PPT				LR	LR	19 58 33.6	
	comp=Z,3μm,20.8s,baz=264,slow=30						
PPTF	**Pamatai, Papee**	**23.99**	**84**	P	**P**	**19 51 25.1**	**-1.4**
PPTF				IAmb	IAmb	19 51 32.5	
	comp=Z,148nm,1.4s						
RPZ	**Rata Peaks**	**24.64**	**205**	LR	LR	20 01 02.9	
	comp=Z,6μm,20.3s,baz=68,slow=36						
RPZ	**Rata Peaks**	**24.64**	**205**	P	**P**	**19 51 36.4**	**+4.2**
LBZ	**Lake Benmore**	**25.55**	**206**	IAMs_20	IAMs_20	20 02 10.8	
	comp=Z,8μm,19.0s						
JCZ	**Jackson Bay**	**25.88**	**208**	P	**P**	**19 51 46.5**	**+3.0**
ODZ	**Otahua Downs**	**25.91**	**204**	P	**P**	**19 51 45.7**	**+2.0**
TARA	**Tarawa**	**26.25**	**331**	IAMs_20	IAMs_20	19 59 38.1	
	comp=Z,7μm,20.0s						
HNR	**Honiara**	**27.44**	**293**	P	**P**	**19 51 55.4**	**-2.4**
HNR	**Honiara**	**27.44**	**293**	P	**P**	**19 51 55.4**	**-2.4**
HNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HNR				MLR	MLR		
	comp=Z,3μm,21.0s						
TATA	**Tatamba Isabel**	**28.10**	**295**	P	**P**	**19 52 00.7**	**-2.9**
PYZ	**Puysegur Point**	**28.45**	**208**	IAMs_20	IAMs_20	20 03 12.3	
	comp=Z,5μm,18.0s						
ARMA	**Armidale**	**31.29**	**247**	P	**P**	**19 52 32.1**	**+0.2**
	comp=Z,29nm,0.9s						
ARMA	**Armidale**	**31.29**	**247**		**P**	**19 52 31.6**	**-0.4**
ARMA	**Armidale**	**31.29**	**247**	P	**P**	**19 52 32.4**	**+0.4**
	comp=Z,29nm,0.9s						
GD1S	**Gladstone Soft**	**31.50**	**260**	P	**P**	**19 52 36.6**	**+2.9**
EIDS	**Eidsvold**	**31.51**	**257**	P	**P**	**19 52 32.4**	**-1.4**
EIDS				IAmb	IAmb	19 52 40.4	
	comp=Z,67nm,1.9s						
CAN	**Canberra**	**34.33**	**239**	P	**P**	**19 52 57.8**	**-0.6**
CAN	**Canberra**	**34.33**	**239**	P	**P**	**19 53 00.7**	**+2.3**
	comp=Z,24nm,1.4s						
CAN	**Canberra**	**34.33**	**239**	P	**P**		
CAN				pmax	pmax		
	comp=Z,41nm,1.5s						
CAN				MLR	MLR		
	comp=Z,4μm,19.0s						
CMSA	**Cobar Meteorol**	**36.48**	**246**	P	**P**	**19 53 16.6**	**-0.3**
CTA	**Charters Tower**	**36.48**	**266**	P	**P**	**19 53 14.4**	**-2.7**
	comp=Z,20nm,0.5s,baz=89,slow=10,SNR=53						
CTA				LR	LR	20 07 20.8	
	comp=Z,2μm,18.6s,baz=93,slow=35						
	comp=Z,20nm,0.5s						
CTA	**Charters Tower**	**36.48**	**266**	P	**P**	**19 53 15.8**	**-1.3**
CTAO	**Charters Tower**	**36.48**	**266**		**P**	**19 53 14.9**	**-2.1**
CTAO	**Charters Tower**	**36.48**	**266**	P	**P**	**19 53 15.8**	**-1.3**
CTAO	**Charters Tower**	**36.48**	**266**	P	**P**	**19 53 14.9**	**-2.1**
CTAO				pmax	pmax		
	comp=Z,20nm,0.6s						
GLAD	**Gladstone**	**36.66**	**230**	P	P	19 53 24.2	+5.9
TOO	**Toolangi**	**37.59**	**237**	P	**P**	**19 53 25.5**	**-0.8**
TOO	**Toolangi**	**37.59**	**237**	P	**P**	**19 53 25.5**	**-0.8**
TOO				pmax	pmax		
	comp=Z,11nm,1.5s						
QLP	**Quilpie**	**37.64**	**255**	P	**P**	**19 53 25.8**	**-1.0**
	comp=Z,67nm,1.2s						
QLP	**Quilpie**	**37.64**	**255**	P	**P**	**19 53 25.4**	**-1.4**
MOO	**Moorlands**	**37.73**	**228**	P	**P**	**19 53 29.3**	**+1.9**
TAU	**Tasmania Unive**	**37.81**	**228**	P	**P**	**19 53 27.8**	**-0.2**
TAU				IAmb	IAmb	19 54 12.1	
	comp=Z,139nm,1.7s						
TAU	**Tasmania Unive**	**37.81**	**228**	P	**P**	**19 53 29.1**	**+1.1**
TAU	**Tasmania Unive**	**37.81**	**228**	P	**P**	**19 53 27.8**	**-0.2**
TAU				pmax	pmax		
	comp=Z,139nm,1.7s						
TAU				MLR	MLR		
	comp=Z,2μm,20.0s						
MTSU	**Mount Surprise**	**38.67**	**268**	P	**P**	**19 53 34.4**	**-1.2**
	comp=Z,11nm,0.9s						
PMG	**Port Moresby**	**38.75**	**283**	P	**P**	**19 53 33.1**	**-3.2**
	comp=Z,10nm,0.7s,baz=80,slow=10.0,SNR=6.1						
PMG				LR	LR	20 08 18.3	
	comp=Z,4μm,18.0s,baz=135,slow=35						
	comp=Z,10nm,0.7s						
PMG	**Port Moresby**	**38.75**	**283**		**P**	**19 53 32.9**	**-3.4**
PMG				IAmb	IAmb	19 53 41.0	
	comp=Z,68nm,1.4s						
PMG	**Port Moresby**	**38.75**	**283**	IAMs_20	IAMs_20	20 08 07.5	
	comp=Z,4μm,18.0s						
PMG	**Port Moresby**	**38.75**	**283**	*ce*P	**P**	**19 53 33.2**	**-3.0**
PMG				pmax	pmax		
	comp=Z,51nm,1.4s						
PMG	**Port Moresby**	**38.75**	**283**	P	**P**	**19 53 33.0**	**-3.2**
	comp=Z,34nm,1.3s						
PATS	**Pohnpei**	**39.09**	**314**	IAMs_20	IAMs_20	20 05 37.5	
	comp=Z,5μm,21.0s						
STKA	**Stephens Creek**	**39.99**	**246**	P	**P**	**19 53 44.6**	**-1.9**
	comp=Z,4.6nm,0.5s,baz=83,slow=10.0,SNR=16						
STKA				LR	LR	20 09 26.5	
	comp=Z,4μm,18.4s,baz=79,slow=35						
	comp=Z,4.6nm,0.5s						
STKA	**Stephens Creek**	**39.99**	**246**		**P**	**19 53 44.4**	**-2.1**
STKA	**Stephens Creek**	**39.99**	**246**	P	**P**	**19 53 44.7**	**-1.7**
STKA	**Stephens Creek**	**39.99**	**246**	*e*P	**P**	**19 53 45.3**	**-1.1**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
INKA	**Innaminka**	**40.70**	**253**		**P**	**19 53 50.8**	**-1.6**
COEN	**Coen**	**40.82**	**274**	P	**P**	**19 53 51.8**	**-1.7**
COEN				IAmb	IAmb	19 54 41.1	
	comp=Z,93nm,1.6s						
COEN	**Coen**	**40.82**	**274**	P	**P**	**19 53 57.1**	**+3.6**
MANU	**Manus Island**	**41.95**	**293**	P	**P**	**19 54 00.2**	**-2.6**
HTT	**Hallett**	**42.33**	**244**	P	**P**	**19 54 03.9**	**-1.8**
QIS	**Mount Isa**	**42.54**	**263**	P	**P**	**19 54 08.1**	**+0.6**
BBOO	**Buckleboo**	**44.70**	**245**	P	**P**	**19 54 22.5**	**-2.4**
BBOO	**Buckleboo**	**44.70**	**245**	P	**P**	**19 54 24.3**	**-0.5**
AS31	**Alice Springs**	**47.23**	**258**		**P**	**19 54 42.9**	**-2.1**
ASAR	**Alice Springs**	**47.23**	**258**	P	**P**	**19 54 42.5**	**-2.5**
	comp=Z,16nm,0.8s,baz=97,slow=7.2,SNR=107						
ASAR				PcP	**PcP**	**19 56 16.9**	**+0.8**
	comp=Z,5.4nm,0.9s,baz=104,slow=4.2,SNR=5.1						
ASAR				S	**S**	**20 01 33.7**	**-3.0**
	comp=Z,0.9nm,0.7s,baz=99,slow=14,SNR=5.7						
ASAR				LR	LR	20 14 16.9	
	comp=Z,4μm,18.2s,baz=96,slow=36						
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**47.23**	**258**	P	**P**	**19 54 42.8**	**-2.2**
WB0	**Warramunga Arr**	**47.49**	**263**	P	**P**	**19 54 44.0**	**-3.0**
WB0				IAmb	IAmb	19 54 49.5	
	comp=Z,28nm,0.7s						
WRAB	**Tennant Creek**	**47.50**	**263**	IAMs_20	IAMs_20	20 13 04.9	
	comp=Z,3μm,20.0s						
WRAB	**Tennant Creek**	**47.50**	**263**	*i* P	P	19 54 42.4	-4.6
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s						
WRA	**Warramunga Arr**	**47.51**	**263**	P	**P**	**19 54 44.0**	**-3.1**
	comp=Z,17nm,0.6s,baz=99,slow=8.7,SNR=91						
	comp=Z,17nm,0.6s						
WRA	**Warramunga Arr**	**47.51**	**263**	P	**P**	**19 54 43.5**	**-3.6**
WRA	**Warramunga Arr**	**47.51**	**263**	P	**P**	**19 54 44.0**	**-3.1**
FORT	**Forrest**	**51.58**	**248**		**P**	**19 55 15.3**	**-2.7**
FORT				IAmb	IAmb	19 55 18.4	
	comp=Z,34nm,0.7s						
GUMO	**Guam**	**53.22**	**308**	LR	LR	20 15 22.6	
	comp=Z,925nm,20.9s,baz=130,slow=33						
KNRA	**Kununurra**	**53.69**	**266**	P	**P**	**19 55 31.0**	**-2.8**
KNRA				IAmb	IAmb	19 56 36.5	
	comp=Z,73nm,1.5s						
FAKI	**Fak Fak**	**54.90**	**282**	IAMs_20	IAMs_20	20 18 46.7	
	comp=Z,2μm,20.0s						
FITZ	**Fitzroy Crossi**	**55.94**	**263**	P	**P**	**19 55 47.9**	**-2.2**
	comp=Z,7.9nm,0.6s,baz=86,slow=7.2,SNR=27						
FITZ				LR	LR	20 19 05.2	
	comp=Z,3μm,18.9s,baz=100,slow=36						
	comp=Z,7.9nm,0.6s						
VNDA	**Vanda**	**56.66**	**186**	LR	LR	20 18 44.6	
	comp=Z,545nm,19.5s,baz=5.5,slow=34						
SIJI	**Sorong**	**56.66**	**284**	LR	LR	20 19 40.0	
	comp=Z,2μm,19.6s,baz=83,slow=36						
SIJI	**Sorong**	**56.66**	**284**	P	**P**	**19 55 53.1**	**-2.2**
	comp=Z,44nm,1.0s						
SWI	**Sorong**	**56.67**	**284**	P	**P**	**19 55 53.4**	**-1.9**
	comp=Z,67nm,0.8s						
KRAI	**Karang Ratu**	**58.25**	**280**	P	**P**	**19 56 03.9**	**-2.6**
	comp=Z,18nm,0.9s						
RPN	**Rapa Nui**	**59.01**	**109**	LR	LR	20 17 55.8	
	comp=Z,1μm,18.1s,baz=278,slow=32						
SOEI	**Soe**	**59.68**	**271**		**P**	**19 56 15.1**	**-1.5**
SOEI				IAMs_20	IAMs_20	20 21 38.3	
	comp=Z,2μm,20.0s						
SOEI	**Soe**	**59.68**	**271**	P	**P**	**19 56 16.3**	**-0.3**
SOEI	**Soe**	**59.68**	**271**	P	**P**	**19 56 15.1**	**-1.5**
	comp=Z,63nm,1.1s						
BATI	**Baumata**	**60.09**	**271**	LR	LR	20 22 34.1	
	comp=Z,3μm,18.5s,baz=144,slow=37						
KLBR	**Kellerberrin**	**60.25**	**245**	P	**P**	**19 56 19.4**	**-0.7**
PSA00	**Pilbara Seismi**	**60.38**	**257**	P	**P**	**19 56 18.9**	**-2.2**
PSA00				IAmb	IAmb	19 56 22.0	
	comp=Z,18nm,0.8s						
PSA00	**Pilbara Seismi**	**60.38**	**257**	P	**P**	**19 56 18.6**	**-2.5**
PSA00				IAmb	IAmb	19 56 28.6	
	comp=Z,30nm,1.4s						
MEEK	**Meekatharra**	**60.38**	**251**	P	**P**	**19 56 21.9**	**+0.8**
NWAO	**Narrogin (SRO)**	**60.49**	**244**	P	**P**	**19 56 20.6**	**-1.2**
	comp=Z,9.5nm,0.9s,baz=38,slow=4.7,SNR=3.2						
NWAO				LR	LR	20 19 36.9	
	comp=Z,969nm,21.7s,baz=100,slow=33						
	comp=Z,9.5nm,0.9s						
NWAO	**Narrogin (SRO)**	**60.49**	**244**	P	**P**	**19 56 19.7**	**-2.0**
NWAO				IAmb	IAmb	19 56 21.8	
	comp=Z,50nm,1.5s						
NWAO	**Narrogin (SRO)**	**60.49**	**244**	IAMs_20	IAMs_20	20 22 06.9	
	comp=Z,2μm,18.0s						
NWAO	**Narrogin (SRO)**	**60.49**	**244**	P	**P**	**19 56 24.6**	**+2.9**
	comp=Z,13nm,1.7s						
MBWA	**Marble Bar**	**60.58**	**257**		**P**	**19 56 20.2**	**-2.3**
MBWA				IAmb	IAmb	19 56 23.3	
	comp=Z,15nm,0.6s						
MBWA	**Marble Bar**	**60.58**	**257**	IAMs_20	IAMs_20	20 22 35.1	
	comp=Z,2μm,18.0s						
MBWA	**Marble Bar**	**60.58**	**257**	P	**P**	**19 56 21.4**	**-1.1**
BLDU	**Ballidu**	**61.29**	**246**	P	**P**	**19 56 26.6**	**-0.6**
MUN	**Mundaring**	**61.49**	**245**	P	**P**	**19 56 28.9**	**+0.4**
MORW	**Morawa**	**62.15**	**248**	P	**P**	**19 56 31.5**	**-1.5**
MORW				IAmb	IAmb	19 56 35.6	
	comp=Z,19nm,0.9s						
MORW	**Morawa**	**62.15**	**248**	P	**P**	**19 56 32.1**	**-0.9**
EDFI	**Ende, Flores**	**62.41**	**272**	P	**P**	**19 56 32.3**	**-2.8**
	comp=Z,20nm,1.1s						
WSI	**Waingapu**	**63.39**	**270**	P	**P**	**19 56 39.2**	**-2.3**
JCJ	**Chichijima**	**64.29**	**317**	LR	LR	20 21 36.7	
	comp=Z,666nm,19.6s,baz=134,slow=33						
DAV	**Davao City (W)**	**65.31**	**289**	LR	LR	20 24 00.9	
	comp=Z,830nm,18.7s,baz=104,slow=35						
KAPI	**Kappang**	**65.54**	**275**	LR	LR	20 26 31.6	
	comp=Z,703nm,19.6s,baz=132,slow=37						
PLAI	**Plampang**	**66.02**	**270**	P	**P**	**19 57 02.0**	**+3.4**
TOLI2	**Tolitoli**	**66.99**	**281**	P	**P**	**19 57 01.8**	**-3.0**
TOLI2	**Tolitoli**	**66.99**	**281**	P	**P**	**19 57 05.3**	**+0.5**
QSPA	**South Pole Qui**	**68.02**	**180**	P	**P**	**19 57 13.0**	**+2.4**
	comp=Z,22nm,1.0s,baz=47,slow=4.2,SNR=16						
QSPA				LR	LR	20 23 18.2	
	comp=Z,1μm,20.0s,baz=38,slow=33						
	comp=Z,22nm,1.0s						
QSPA	**South Pole Qui**	**68.02**	**180**	P	**P**	**19 57 12.3**	**+1.7**
QSPA				IAmb	IAmb	19 57 29.4	
	comp=Z,29nm,0.9s						
QSPA	**South Pole Qui**	**68.02**	**180**	IAMs_20	IAMs_20	20 27 56.0	
	comp=Z,1μm,19.0s						
JAGI	**Jajag, Banyuwa**	**69.50**	**269**	P	**P**	**19 57 19.6**	**-1.0**
PCJI	**Pacitan**	**72.36**	**268**	P	**P**	**19 57 39.8**	**+1.9**
UGM	**Wanagama**	**73.06**	**268**	P	**P**	**19 57 40.9**	**-1.3**
JGF	**Kuroka**	**73.18**	**321**	P	**P**	**19 57 40.4**	**-2.0**
KKM	**Kota Kinabalu**	**73.18**	**284**	P	**P**	**19 57 41.5**	**-1.5**
KKM				IAmb	IAmb	19 59 48.4	
	comp=Z,42nm,1.2s						
MJA0	**Matsu Arr-Jizo**	**73.32**	**322**	*e*P	**P**	**19 57 41.9**	**-1.3**
MJA0				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MJAR	**Matsushiro Arr**	**73.34**	**322**	P	**P**	**19 57 41.6**	**-1.7**
	comp=Z,5.6nm,0.8s,baz=159,slow=6.1,SNR=14						
MJAR				LR	LR	20 29 49.8	
	comp=Z,116nm,18.4s,baz=130,slow=36						
	comp=Z,5.6nm,0.8s						
MJAR	**Matsushiro Arr**	**73.34**	**322**		**P**	**19 57 41.3**	**-2.0**
MAJO	**Matsushiro**	**73.35**	**322**	P	**P**	**19 57 46.0**	**+2.7**
JOW	**Kunigami**	**73.58**	**309**	LR	LR	20 27 21.6	
	comp=Z,490nm,19.7s,baz=112,slow=34						
ADK	**Adak**	**73.65**	**359**	P	**P**	**19 57 42.0**	**-2.7**
ADK	**Adak**	**73.65**	**359**	IAMs_20	IAMs_20	20 25 26.4	
	comp=Z,2μm,21.0s						
ADK	**Adak**	**73.65**	**359**	P	**P**	**19 57 42.0**	**-2.7**
ADK				pmax	pmax		
	comp=Z,99nm,1.3s						
ADK				MLR	MLR		
	comp=Z,2μm,21.0s						
ATKA	**Atka Island**	**73.95**	**0**	IAMs_20	IAMs_20	20 26 03.2	
	comp=Z,1μm,21.0s						
KPJI	**Karang Pucung**	**74.74**	**268**	P	**P**	**19 57 53.4**	**+1.4**
	comp=Z,17nm,0.9s						
NIKH	**Nikolski High**	**74.89**	**4**	P	**P**	**19 57 50.6**	**-1.2**
NIKH	**Nikolski High**	**74.89**	**4**	P	**P**	**19 57 52.7**	**+0.8**
SHEM	**Shemya Is, Ala**	**75.12**	**353**	LR	LR	20 25 33.2	
	comp=Z,2μm,21.0s,baz=152,slow=32						
JNU	**Nakatsue**	**75.58**	**315**	LR	LR	20 26 23.3	
	comp=Z,512nm,21.2s,baz=117,slow=32						
BBJI	**Bungbulang**	**75.88**	**268**		**P**	**19 57 56.9**	**-1.7**
LEM	**Lembang**	**76.14**	**268**	LR	LR	20 30 12.5	
	comp=Z,1μm,21.6s,baz=128,slow=35						
JKA	**Kamikawa-asahi**	**76.62**	**330**	P	**P**	**19 58 01.6**	**-0.4**
ASAJ	**Asahikawa**	**76.62**	**330**	LR	LR	20 29 14.7	
	comp=Z,1μm,18.8s,baz=159,slow=34						
ASAJ	**Asahikawa**	**76.62**	**330**	P	**P**	**19 58 01.6**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,281nm,2.0s						
HULI	**Fort Hunter Li**	**76.72**	**42**	IAMs_20	IAMs_20	20 26 41.5	
	comp=Z,2μm,19.0s						
FORD	**Fort Ord Natur**	**76.81**	**41**	IAMs_20	IAMs_20	20 35 17.9	
	comp=Z,2μm,18.0s						
SKR	**Severo-Kuril's**	**76.89**	**341**	*e*P	**P**	**19 57 59.0**	**-4.3**
SKR				pmax	pmax		
	comp=Z,300nm,5.6s						
SKR				MLR	MLR		
	comp=Z,800nm,18.0s						
SAO	**San Andreas Ge**	**77.07**	**41**	IAMs_20

YSS MLR MLR
comp=Z,600nm,15.0s
AFDM Forest Hills D 78.77 40 P 19 58 13.8 -0.4
CWC Cottonwood Cre 78.96 43 IAMs_20 IAMs_20 20 26 26.0
comp=Z,987nm,20.0s
MPMC Manual Prospec 79.11 44 IAMs_20 IAMs_20 20 26 21.9
comp=Z,1µm,20.0s
TIN Tinemaha, Big 79.25 43 IAMs_20 IAMs_20 20 26 04.5
comp=Z,1µm,21.0s
YBH Yreka Blue Hor 79.60 37 LR LR 20 28 01.2
comp=Z,28nm,19.0s,baz=248,slow=32
HSIG 79.64 53 P **P 19 58 18.2 -0.9**
HATC Hat Creek Radi 79.70 38 IAMs_20 IAMs_20 20 29 03.1
comp=Z,1µm,18.0s
FURC Furnace Creek, 79.76 44 IAMs_20 IAMs_20 20 26 14.1
comp=Z,1µm,20.0s
NVAR Mina Array Bea 80.05 42 P **P 19 58 23.2 +1.8**
comp=Z,7.1nm,1.0s,baz=222,slow=9.2,SNR=15
NVAR LR LR 20 29 01.1
comp=Z,977nm,18.4s,baz=242,slow=32
comp=Z,7.1nm,1.0s
KSRS Korea Array 80.15 317 P **P 19 58 19.1 -2.5**
comp=Z,2.3nm,0.9s,baz=128,slow=7.5,SNR=5.1
KSRS LR LR 20 27 55.3
comp=Z,560nm,21.8s,baz=145,slow=31
comp=Z,2.3nm,0.9s
L04D Klamath Falls 80.15 37 P 19 58 20.6 -1.2
L04D IAmb IAmb 19 58 38.4
comp=Z,31nm,1.0s
KSAR Wonju Array Be 80.16 317 P **P 19 58 20.6 -1.1**
KSAR Wonju Array Be 80.16 317 P **P 19 58 20.6 -1.1**
PMBI Palembang 80.19 271 IAMs_20 IAMs_20 20 32 56.0
comp=Z,1µm,22.0s
TPNV Topopah Spring 80.44 44 P **P 19 58 22.3 -1.2**
TPNV IAMs_20 IAMs_20 20 26 46.2
comp=Z,1µm,20.0s
TPNV Topopah Spring 80.44 44 P **P 19 58 22.3 -1.2**
TPNV pmax pmax
comp=Z,13nm,1.0s
TPNV MLR MLR
comp=Z,1µm,20.0s
W13A Hualapai Mount 80.91 46 P 19 58 24.9 -1.3
OHAK Old Harbor 80.99 12 P **P 19 58 26.1 +0.4**
USHA Ushuaia 81.09 146 LR LR 20 31 17.3
comp=Z,417nm,18.1s,baz=260,slow=33
MAW Mawson 81.14 199 LR LR 20 33 39.2
comp=Z,892nm,20.0s,baz=120,slow=35
COR Corvallis 81.20 34 IAMs_20 IAMs_20 20 37 01.4
comp=Z,1µm,18.0s
K05A Summer Lake 81.27 37 P 19 58 28.5 +0.7
TUC Tucson 81.52 50 P 19 58 27.3 -1.9
TUC Tucson 81.52 50 IAMs_20 IAMs_20 20 31 15.2
comp=Z,1µm,20.0s
TUC Tucson 81.52 50 P **P 19 58 27.3 -1.9**
TUC pmax pmax
comp=Z,17nm,1.2s
TUC MLR MLR
comp=Z,1µm,20.0s
KDAK Kodiak Island 81.65 12 LR LR 20 30 43.9
comp=Z,1µm,19.4s,baz=201,slow=33
O14K Tigyukauivet M 81.76 7 IAMs_20 IAMs_20 20 30 35.4
comp=Z,993nm,21.0s
TYV Tymovskoe 81.77 334 *e*P **P 19 58 29.9 -0.1**
TYV *e*S **S 20 08 41.6 +0.5**
TYV pmax pmax
comp=Z,25nm,1.2s
TYV pmax pmax
comp=Z,100nm,2.1s
TYV smax smax
comp=N,300nm,5.7s
TYV smax smax
comp=E,200nm,5.7s
O15K Ungalikthiuk R 81.86 8 IAMs_20 IAMs_20 20 29 55.9
comp=Z,1µm,20.0s
P16K Nushagak River 81.95 9 IAMs_20 IAMs_20 20 30 38.4
comp=Z,1µm,21.0s
USRK Ussuriysk Ar. 82.03 324 P **P 19 58 31.1 -0.5**
comp=Z,9.0nm,1.0s,baz=116,slow=4.4,SNR=8.2
comp=Z,9.0nm,1.0s
WVOR Wild Horse Val 82.36 38 P **P 19 58 32.6 -0.9**
WVOR IAmb IAmb 19 58 51.4
comp=Z,32nm,1.4s
WVOR IAMs_20 IAMs_20 20 36 32.6
comp=Z,1µm,18.0s
WVOR Wild Horse Val 82.36 38 P **P 19 58 32.6 -0.9**
WVOR pmax pmax
comp=Z,33nm,1.4s
WVOR MLR MLR
comp=Z,1µm,18.0s
H03S2 Juan Fernandez 82.52 123 T T 21 30 20.4
baz=247,slow=75,SNR=403
H03S1 Juan Fernandez 82.53 123 T T 21 30 21.5
baz=247,slow=75,SNR=456
H03S3 Juan Fernandez 82.54 123 T T 21 30 29.2
baz=247,slow=75,SNR=388
HPIG 82.59 57 P **P 19 58 33.3 -1.8**
H03N2 Juan Fernandez 82.66 123 T T 21 30 31.0
baz=257,slow=70,SNR=243
H03N3 Juan Fernandez 82.66 123 T T 21 30 33.0
baz=257,slow=70,SNR=121
H03N1 Juan Fernandez 82.67 123 T T 21 30 30.6
baz=257,slow=70,SNR=178
N15K Kwethluk River 82.79 7 IAMs_20 IAMs_20 20 31 16.6
comp=Z,1µm,20.0s
WUAZ Wupatki 82.85 47 P 19 58 35.2 -1.0
WUAZ IAmb IAmb 19 58 54.2
comp=Z,40nm,1.6s
J08A Circle Bar Ran 83.03 38 P 19 58 36.2 -0.7
J08A IAmb IAmb 19 58 54.2
comp=Z,40nm,1.7s
NJ2 Nanjing 83.30 308 *e*P **P 19 58 37.6 -0.8**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
ELK Elko 83.34 41 LR LR 20 30 45.5
comp=Z,1µm,18.8s,baz=228,slow=32
ELK Elko 83.34 41 P 19 58 37.3 -1.4
ELK IAmb IAmb 19 58 55.7
comp=Z,19nm,1.3s
ELK IAMs_20 IAMs_20 20 29 54.6
comp=Z,1µm,20.0s
ELK Elko 83.34 41 P **P 19 58 37.3 -1.4**
ELK pmax pmax
comp=Z,19nm,1.3s
ELK MLR MLR
comp=Z,1µm,20.0s
MDJ Mudanjiang 83.61 324 P **P 19 58 38.9 -0.9**
MDJ Mudanjiang 83.61 324 P **P 19 58 40.0 +0.3**
MDJ sS sS 20 09 13.0 +0.3
MDJ pmax pmax
comp=Z,44nm,1.7s
MDJ LR LR
comp=Z,550nm,4.4s
MDJ LR LR
comp=Z,860nm,4.7s
MDJ LR LR
comp=Z,590nm,4.4s
LL05 Los Muermos 83.63 132 IAMs_20 IAMs_20 20 28 46.5
comp=Z,1µm,19.0s
M16K Timber Creek 83.76 8 IAMs_20 IAMs_20 20 31 37.2
comp=Z,1µm,20.0s
121A Cookes Peak, D 83.79 51 P **P 19 58 40.5 -0.7**
121A IAmb IAmb 19 58 59.4
comp=Z,50nm,1.6s
K13K Kusilvak Mount 84.08 5 P **P 19 58 41.8 +0.1**
K13K IAmb IAmb 19 58 44.6
comp=Z,32nm,1.4s
N19K Bonanza Creek 84.18 10 IAMs_20 IAMs_20 20 31 37.4
comp=Z,979nm,20.0s
LR04 Corral 84.28 131 IAMs_20 IAMs_20 20 27 03.6
comp=Z,1µm,21.0s
BBB Bella Bella 84.33 27 LR LR 20 29 33.9
comp=Z,708nm,20.0s,baz=237,slow=31
EPT El Paso 84.34 53 IAMs_20 IAMs_20 20 31 37.2
comp=Z,964nm,18.0s
GRNR Gornyy 84.35 331 ⇑ *i*P **P 19 58 43.9 +0.5**
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=E,540nm,15.0s
QIZ Qiongzhong 84.36 293 P **P 19 58 42.5 -1.6**
QIZ S **S 20 09 12.3 +3.6**
QIZ LR LR
comp=E,350nm,16.2s
QIZ LR LR
comp=E,460nm,17.2s
QIZ LR LR
comp=E,430nm,23.0s

HAWA Hanford 84.39 35 P 19 58 44.0 +0.3
HAWA IAmb IAmb 19 59 00.9
comp=Z,36nm,1.2s
HAWA IAMs_20 IAMs_20 20 39 11.6
comp=Z,1µm,18.0s
UNM Universidad Na 84.43 67 IAMs_20 IAMs_20 20 32 00.1
comp=Z,1µm,19.0s
DUG Dugway, Tooele 84.52 43 P 19 58 42.9 -1.8
DUG IAmb IAmb 19 59 01.7
comp=Z,31nm,1.9s
DUG IAMs_20 IAMs_20 20 29 15.1
comp=Z,899nm,18.0s
DUG Dugway, Tooele 84.52 43 P **P 19 58 42.9 -1.8**
DUG pmax pmax
comp=Z,31nm,2.0s
DUG MLR MLR
comp=Z,900nm,18.0s
HMU Henry Mountain 84.60 45 P 19 58 44.1 -1.2
BMO Blue Mountains 84.62 37 P 19 58 44.4 -0.6
BMO IAmb IAmb 19 59 01.1
comp=Z,14nm,1.1s
BMO Blue Mountains 84.62 37 P **P 19 58 44.4 -0.6**
BMO pmax pmax
comp=Z,14nm,1.1s
BMO MLR MLR
comp=Z,600nm,19.0s
SLKM Skilak Lake 84.64 12 P 19 58 44.3 -0.4
O22K Cooper Landing 84.71 12 IAMs_20 IAMs_20 20 40 50.6
comp=Z,1µm,19.0s
VHRN Van Horn 84.98 54 P 19 58 45.9 -1.3
LR05 Currie 85.13 131 P 19 58 48.8 +1.1
RC01 Rabbit Creek A 85.27 12 P 19 58 46.4 -1.4
RC01 IAmb IAmb 19 59 01.8
comp=Z,31nm,1.2s
RC01 IAMs_20 IAMs_20 20 32 48.3
comp=Z,1µm,20.0s
TXAR Lajitas Array 85.29 56 P **P 19 58 51.1 +2.3**
comp=Z,2.0nm,1.0s,baz=209,slow=6.9,SNR=9.8
TXAR LR LR 20 30 56.3
comp=Z,623nm,18.6s,baz=238,slow=31
comp=Z,2.0nm,1.0s
TXAR Lajitas Array 85.29 56 P 19 58 47.7 -1.1
M20K Styx River 85.41 10 IAMs_20 IAMs_20 20 32 07.9
comp=Z,1µm,19.0s
ELIB Princess Elisa 85.43 186 *d*P **P 19 58 50.4 +1.6**
comp=Z,16nm,0.7s
CN2 Changchun 85.46 321 P **P 19 58 49.3 +0.2**
CN2 pmax pmax
comp=Z,40nm,1.5s
K17K Iditarod 85.48 7 IAMs_20 IAMs_20 20 32 49.8
comp=Z,1µm,20.0s
KLR Kul'dur 85.48 328 LR LR 20 34 17.9
comp=Z,872nm,19.1s,baz=138,slow=34
KLR Kul'dur 85.48 328 *ce*P **P 19 58 48.9 -0.2**
KLR pmax pmax
comp=Z,30nm,2.0s
HLID Hailey 85.50 39 P 19 58 48.5 -1.0
PLID Pearl Lake 85.50 37 P 19 58 48.7 -0.9
BNX BinXian 85.52 323 ⇓ P **P 19 58 49.8 +0.4**
BNX pmax pmax
comp=Z,29nm,1.1s
GAMB Gambell 85.58 1 P 19 58 48.8 -0.3
GAMB IAMs_20 IAMs_20 20 33 17.8
comp=Z,1µm,20.0s
BI05 Punta Hualpn 85.72 128 IAMs_20 IAMs_20 20 35 16.9
comp=Z,1µm,18.0s
GO06 Curarrehue 85.77 131 IAMs_20 IAMs_20 20 27 51.2
comp=Z,1µm,20.0s
SKT Skwentna 85.77 11 P 19 58 49.4 -0.9
SKT IAmb IAmb 19 59 03.2
comp=Z,33nm,1.4s
SKT IAMs_20 IAMs_20 20 32 49.7
comp=Z,1µm,19.0s
M22K Willow 85.81 11 IAMs_20 IAMs_20 20 32 59.8
comp=Z,2µm,19.0s
WHN Wuhan 85.90 305 P **P 19 58 53.4 +1.8**
WHN pmax pmax
comp=Z,40nm,1.2s
PLCA Paso Flores 85.92 132 P **P 19 58 54.7 +2.9**
comp=Z,2.3nm,1.0s,baz=256,slow=7.1,SNR=4.6
PLCA LR LR 20 31 18.0
comp=Z,540nm,19.0s,baz=245,slow=31
comp=Z,2.3nm,1.0s
PLCA Paso Flores 85.92 132 *e*P P 19 58 57.3 +5.5
PLCA pmax pmax
comp=Z,1.0nm,0.8s
ANMO Albuquerque 85.97 50 LR LR 20 32 42.5
comp=Z,766nm,18.1s,baz=244,slow=32
ANMO Albuquerque 85.97 50 IAMs_20 IAMs_20 20 31 27.1
comp=Z,1µm,20.0s
ANMO Albuquerque 85.97 50 IAMs_20 IAMs_20 20 31 26.7
comp=Z,1µm,20.0s
ANMO Albuquerque 85.97 50 IAMs_20 IAMs_20 20 31 27.1
comp=Z,1µm,20.0s
ANMO Albuquerque 85.97 50 *i* P **P 19 58 54.0 +1.9**
ANMO pmax pmax
comp=Z,6.0nm,1.0s
PV18 Skein Mesa, Pa 85.98 46 P 19 58 50.5 -1.6
PV18 IAmb IAmb 20 01 36.4
comp=Z,19nm,0.6s
LLLB Lillooet 85.99 31 P 19 58 51.5 -0.2
LLLB IAmb IAmb 19 59 08.5
comp=Z,32nm,1.3s
GHO Glory Hole Cre 86.05 12 IAMs_20 IAMs_20 20 29 29.0
comp=Z,941nm,22.0s
HWUT Hardware Ranch 86.10 42 IAMs_20 IAMs_20 20 30 02.8
comp=Z,1µm,22.0s
MA2 Magadan 86.15 343 LR LR 20 35 35.4
comp=Z,464nm,18.9s,baz=156,slow=34
MA2 Magadan 86.15 343 P 19 58 50.6 -1.6
MA2 IAmb IAmb 19 58 53.1
comp=Z,60nm,1.9s
MA2 Magadan 86.15 343 *ce*P **P 19 58 51.7 -0.4**
MA2 pmax pmax
comp=Z,27nm,1.7s
MA2 Magadan 86.15 343 P P 19 58 51.3 -0.8
SNAA Sanae 86.34 177 ⇓ P **P 19 58 55.9 +2.6**
comp=Z,101nm,0.9s
SNAA Sanae 86.34 177 P P 19 58 55.4 +2.2
comp=Z,5.1nm,0.9s,baz=207,slow=2.9,SNR=5.2
SNAA LR LR 20 33 30.3
comp=Z,1µm,20.2s,baz=196,slow=33
comp=Z,5.1nm,0.9s
SNAA Sanae 86.34 177 IAmb IAmb 19 59 33.5
comp=Z,22nm,1.3s
SNAA IAMs_20 IAMs_20 20 32 58.4
comp=Z,1µm,20.0s
VNA3 Neumayer Olymp 86.36 175 ⇓ P **P 19 58 55.7 +2.4**
comp=Z,7.5nm,0.8s
J18K Innoko River 86.40 8 IAMs_20 IAMs_20 20 33 18.1
comp=Z,1µm,20.0s
IPM Ipoh 86.43 276 P P 19 58 54.0 -0.7
IPM IAmb IAmb 19 58 57.1
comp=Z,53nm,1.6s
ANM Nome 86.64 4 P P 19 58 53.6 -0.9
ANM IAmb IAmb 19 59 09.1
comp=Z,33nm,2.0s
ANM Nome 86.64 4 P P 19 58 53.6 -0.9
ANM pmax pmax
comp=Z,33nm,2.0s
ANM MLR MLR
comp=Z,800nm,20.0s
TIA Tai'an 86.65 311 P P 19 58 55.8 +0.6
TIA S **S 20 09 29.9 -0.8**
TIA pmax pmax
comp=Z,25nm,1.2s
TIA LR LR
comp=Z,370nm,19.6s
TIA LR LR
comp=Z,360nm,21.2s
TIA LR LR
comp=Z,650nm,18.0s
VRDI Verde Repeater 86.72 15 IAMs_20 IAMs_20 20 33 35.7
comp=Z,1µm,20.0s
GLB Gilahina Butte 86.83 14 IAMs_20 IAMs_20 20 35 29.5
comp=Z,1µm,18.0s
VNA2 Neumayer--Watz 86.83 176 ⇓ P **P 19 58 57.8 +2.2**
comp=Z,9.8nm,0.7s,baz=180,slow=1.4
NEW Newport 86.84 34 LR LR 20 30 01.2
comp=Z,948nm,21.8s,baz=222,slow=30
NEW Newport 86.84 34 IAMs_20 IAMs_20 20 29 49.6
comp=Z,1µm,20.0s
CTGM Chitina Glacie 87.01 16 IAMs_20 IAMs_20 20 28 45.1
comp=Z,2µm,21.0s
AHID Auburn Hatcher 87.03 41 IAMs_20 IAMs_20 20 33 29.4
comp=Z,1µm,18.0s
J19K Poorman 87.05 8 IAMs_20 IAMs_20 20 33 38.2

comp=Z,1µm,21.0s
O28M Mount Upton 87.13 16 IAMs_20 IAMs_20 20 32 08.1
comp=Z,2µm,20.0s
BI02 San Fabin de 87.15 128 P 19 58 59.1 +1.1
BI02 IAmb IAmb 19 59 17.7
comp=Z,22nm,1.6s
BI02 IAMs_20 IAMs_20 20 36 28.8
comp=Z,975nm,18.0s
CMIG Matias Romero 87.20 70 LR LR 20 28 17.1
comp=Z,752nm,21.7s,baz=217,slow=29
NVL N'lazarevskaya 87.31 182 *e*P P 19 58 53.3 -4.6
NVL pmax pmax
comp=Z,2.0nm,0.6s
NVL MLR MLR
comp=Z,830nm,17.0s
KTH Kantishna Hill 87.34 10 P 19 58 56.6 -1.4
KTH IAmb IAmb 19 59 11.2
comp=Z,27nm,1.1s
KTH IAMs_20 IAMs_20 20 30 16.0
comp=Z,1µm,22.0s
GO05 Hualane 87.37 127 IAMs_20 IAMs_20 20 36 23.6
comp=Z,1µm,18.0s
ML02 Panimavida 87.43 128 IAMs_20 IAMs_20 20 38 58.2
comp=Z,941nm,20.0s
FXWY Fox Creek 87.56 41 IAMs_20 IAMs_20 20 32 50.3
comp=Z,990nm,19.0s
DLMT Dillon 87.61 39 IAMs_20 IAMs_20 20 39 02.4
comp=Z,886nm,20.0s
RPSI Rantau Prapat 87.70 274 P 19 58 59.0 -1.8
RPSI IAMs_20 IAMs_20 20 40 13.8
comp=Z,1µm,20.0s
PSI Prapat 87.74 274 P **P 19 58 59.1 -2.1**
PSI pmax pmax
comp=Z,49nm,1.5s
PSI MLR MLR
comp=Z,1µm,20.0s
PSI Prapat 87.74 274 P **P 19 59 00.8 -0.4**
comp=Z,20nm,1.6s
H18K Honhosa River 87.83 7 IAMs_20 IAMs_20 20 33 53.0
comp=Z,1µm,20.0s
BPAW Bear Paw Mtn. 87.84 10 P 19 58 58.0 -2.3
BPAW IAmb IAmb 19 59 13.3
comp=Z,29nm,1.5s
BPAW IAMs_20 IAMs_20 20 31 03.1
comp=Z,903nm,21.0s
BW06 Boulder Array 87.98 42 IAMs_20 IAMs_20 20 31 56.8
comp=Z,934nm,20.0s
PDAR Pinedale Array 87.98 42 LR LR 20 33 26.9
comp=Z,518nm,19.2s,baz=252,slow=32
FLWY Flagg Ranch 88.00 40 IAMs_20 IAMs_20 20 33 06.0
comp=Z,806nm,18.0s
MSTX Muleshoe 88.15 52 IAMs_20 IAMs_20 20 32 06.1
comp=Z,1µm,20.0s
BO01 Tunca 88.27 126 IAMs_20 IAMs_20 20 29 28.3
comp=Z,845nm,20.0s
DLBC Dease Lake 88.30 22 LR LR 20 32 22.0
comp=Z,365nm,20.3s,baz=216,slow=31
HEH HeiHe 88.30 327 *e*P **P 19 59 02.8 0.0**
HEH pmax pmax
comp=Z,27nm,1.5s
HEH LR LR
comp=Z,510nm,22.0s
HEH LR LR
comp=Z,560nm,20.0s
HEH LR LR
comp=Z,1µm,19.9s
BO02 Sierra Bellavi 88.32 127 IAMs_20 IAMs_20 20 32 12.7
comp=Z,1µm,19.0s
L26K Log Cabin Wild 88.33 14 IAMs_20 IAMs_20 20 34 34.2
comp=Z,1µm,20.0s
MT01 Popeta 88.37 126 P **P 19 59 04.9 +1.2**
MT01 IAmb IAmb 19 59 25.1
comp=Z,22nm,1.1s
MT01 IAMs_20 IAMs_20 20 29 29.0
comp=Z,948nm,19.0s
GSI Gunungsitoli 88.43 272 IAMs_20 IAMs_20 20 38 11.3
comp=Z,1µm,20.0s
SEY Seymchan 88.63 346 *ce*P **P 19 59 02.8 -1.2**
SEY pmax pmax
comp=Z,9.0nm,0.9s
WRH Wood River Hil 88.68 11 IAMs_20 IAMs_20 20 34 30.6
comp=Z,1µm,21.0s
MT02 Curacav 88.71 125 IAMs_20 IAMs_20 20 28 56.1
comp=Z,985nm,20.0s
BCAR Beaver Creek A 88.72 14 P 19 59 03.9 -0.7
JCT Junction City 88.79 56 IAMs_20 IAMs_20 20 35 46.1
comp=Z,1µm,18.0s
BO04 La Punta 88.80 126 IAMs_20 IAMs_20 20 29 12.3
comp=Z,901nm,19.0s
Q24A Divide 88.88 47 IAMs_20 IAMs_20 20 31 11.9
comp=Z,945nm,19.0s
HNS HongShan 88.92 311 ⇑ P **P 19 59 06.3 +0.3**
HNS pmax pmax
comp=Z,18nm,2.0s
MT05 Renca 88.96 126 IAMs_20 IAMs_20 20 30 22.6
comp=Z,1µm,22.0s
H21K Melozitna Rive 89.02 9 IAMs_20 IAMs_20 20 34 52.2
comp=Z,824nm,18.0s
MT03 Universidad Ad 89.09 126 IAMs_20 IAMs_20 20 30 12.0
comp=Z,988nm,21.0s
COLA College 89.09 11 P **P 19 59 05.4 -0.7**
COLA College 89.09 11 P **P 19 59 05.4 -0.7**
COLA MLR MLR
comp=Z,2µm,19.0s
ILAR Eielson Array 89.17 12 P **P 19 59 06.8 +0.2**
comp=Z,4.9nm,1.1s,baz=223,slow=5.0,SNR=16
ILAR LR LR 20 32 24.8
comp=Z,277nm,21.6s,baz=200,slow=31
comp=Z,4.9nm,1.1s
ILAR Eielson Array 89.17 12 P 19 59 05.9 -0.6
LYN LuoYang 89.18 308 P **P 19 59 08.1 +0.8**
LYN pmax pmax
comp=Z,34nm,1.6s
LYN LR LR
comp=Z,600nm,18.9s
LYN LR LR
comp=Z,780nm,15.8s
LYN LR LR
comp=Z,1µm,17.9s
IMAR Indian Mountai 89.20 8 P **P 19 59 06.2 -0.4**
BJI2 Beijing 89.21 314 P **P 19 59 07.4 +0.1**
BJI2 pmax pmax
comp=Z,8.0nm,1.9s
BJT Baijiatuau 89.21 314 P **P 19 59 06.7 -0.6**
BJT IAmb IAmb 19 59 10.2
comp=Z,18nm,1.2s
BJT Baijiatuau 89.21 314 P **P 19 59 06.7 -0.6**
BJT pmax pmax
comp=Z,18nm,1.2s
RLMT Red Lodge 89.43 40 IAMs_20 IAMs_20 20 33 12.7
comp=Z,868nm,20.0s
MT08 Bocatoma Ro 89.48 126 IAMs_20 IAMs_20 20 30 48.5
comp=Z,1µm,22.0s
735A Kenedy 89.65 59 IAMs_20 IAMs_20 20 37 10.0
comp=Z,878nm,18.0s
APMT Aspermont 89.82 54 P 19 59 10.3 -0.1
ABTX Abilene, Hawle 89.87 55 IAMs_20 IAMs_20 20 36 05.8
comp=Z,1µm,18.0s
DAWY Dawson 90.13 15 P 19 59 11.5 +0.4
DAWY IAmb IAmb 19 59 26.0
comp=Z,16nm,0.9s
C16K Lisburne Hills 90.33 3 IAMs_20 IAMs_20 20 35 53.7
comp=Z,970nm,20.0s
F21K Alatna River 90.41 8 IAMs_20 IAMs_20 20 32 56.0
comp=Z,834nm,20.0s
ZEA Zeya 90.53 330 *e*P **P 19 59 14.4 +1.3**
ZEA pmax pmax
comp=N,10.0nm,1.4s
ZEA pmax pmax
comp=Z,10.0nm,1.5s
TIY Taiyuan 90.66 311 P **P 19 59 15.5 +1.2**
TIY pmax pmax
comp=Z,17nm,1.3s
LCO Las Campanas 90.89 122 P **P 19 59 16.6 +0.7**
LCO IAmb IAmb 19 59 35.9
comp=Z,34nm,1.4s
LCO Las Campanas 90.89 122 P **P 19 59 16.6 +0.7**
LCO pmax pmax
comp=Z,34nm,1.5s
BILL Bilibino 90.93 353 P 19 59 14.1 -0.6
BILL Bilibino 90.93 353 *ce*P **P 19 59 15.8 +1.1**
BILL pmax pmax
comp=Z,17nm,1.7s
CO01 Juntas del Tor 90.94 123 P **P 19 59 16.0 -0.2**
CO01 IAmb IAmb 19 59 46.1
comp=Z,22nm,1.4s
C18K Utukok River 90.98 5 IAMs_20 IAMs_20 20 35 38.9

	comp=Z,852nm,21.0s								
D19K	**Kuna River**	**91.10**	**6**	IAMs_20	IAMs_20	20 36 24.2			
	comp=Z,1µm,20.0s								
I28M	**Miner Creek**	**91.18**	**14**	IAMs_20	IAMs_20	20 38 13.0			
	comp=Z,1µm,20.0s								
XLT	**XiLinHaoTe**	**91.19**	**317**	*e*P	**P**	**19 59 16.5**	**-0.1**		
XLT				pmax	pmax				
	comp=Z,12nm,1.0s								
WHTX	**Lake Whitney,**	**91.26**	**56**	IAMs_20	IAMs_20	20 38 23.3			
	comp=Z,1µm,18.0s								
AC05	**El Transito**	**91.30**	**122**	IAMs_20	IAMs_20	20 28 57.5			
	comp=Z,706nm,18.0s								
E22K	**Anaktuvuk Pass**	**91.49**	**8**	IAMs_20	IAMs_20	20 33 05.5			
	comp=Z,900nm,22.0s								
E21K	**Killik River**	**91.50**	**7**	IAMs_20	IAMs_20	20 36 28.9			
	comp=Z,1µm,19.0s								
H27K	**Steamboat Moun**	**91.52**	**13**	IAMs_20	IAMs_20	20 36 05.7			
	comp=Z,850nm,20.0s								
XAN	**Xi'an**	**91.58**	**306**	⇑P	**P**	**19 59 19.0**	**+0.4**		
XAN				pmax	pmax				
	comp=Z,44nm,1.4s								
XAN				pmax	pmax				
	comp=Z,420nm,3.8s								
XAN				LR	LR				
	comp=Z,360nm,20.1s								
XAN				LR	LR				
	comp=Z,600nm,18.9s								
XAN				LR	LR				
	comp=Z,1µm,19.9s								
CFA	**Coronel Fontan**	**91.64**	**125**	LR	LR	20 33 00.9			
	comp=Z,305nm,20.0s,baz=232,slow=30								
HIA	**Hailar**	**91.80**	**323**	P	**P**	**19 59 18.5**	**-0.7**		
HIA				IAmb	IAmb	19 59 20.0			
	comp=Z,15nm,1.2s								
HIA	**Hailar**	**91.80**	**323**	P	**P**	**19 59 18.5**	**-0.7**		
HIA				pmax	pmax				
	comp=Z,15nm,1.2s								
HIA				MLR	MLR				
	comp=Z,800nm,20.0s								
E24K	**Your Creek**	**91.91**	**10**	IAMs_20	IAMs_20	20 44 07.9			
	comp=Z,888nm,19.0s								
HILR	**Hailar Array B**	**91.95**	**324**	P	**P**	**19 59 19.5**	**-0.4**		
HILR	comp=Z,6.7nm,0.8s,baz=126,slow=7.3,SNR=7.2			LR	LR	20 38 20.2			
	comp=Z,538nm,19.4s,baz=85,slow=34								
	comp=Z,6.7nm,0.8s								
BMAR	**Burnt Mountain**	**91.98**	**11**		**P**	**19 59 20.1**	**+0.5**		
Z35A	**Perchaven, San**	**91.98**	**55**	IAMs_20	IAMs_20	20 37 03.9			
	comp=Z,1µm,18.0s								
X34A	**Smith Ranch, M**	**92.09**	**53**		**P**	**19 59 20.9**	**+0.1**		
CBKS	**Cedar Bluff**	**92.54**	**49**	IAMs_20	IAMs_20	20 32 57.0			
	comp=Z,1µm,22.0s								
B21K	**Ikpikpuk River**	**92.55**	**7**	IAMs_20	IAMs_20	20 37 46.6			
	comp=Z,932nm,21.0s								
NNA	**Nana**	**92.64**	**104**	LR	LR	20 31 15.8			
	comp=Z,865nm,21.3s,baz=244,slow=29								
NNA	**Nana**	**92.64**	**104**	IAMs_20	IAMs_20	20 31 04.6			
	comp=Z,865nm,21.0s								
HHC	**Hu-ho-hao-te**	**92.69**	**313**	*e*P	**P**	**19 59 23.6**	**-0.1**		
HHC				sP	sP	19 59 33.5	-0.1		
HHC				pmax	pmax				
	comp=Z,16nm,1.0s								
HHC				pmax	pmax				
	comp=Z,150nm,4.4s								
HHC				LR	LR				
	comp=Z,260nm,16.2s								
HHC				LR	LR				
	comp=Z,520nm,16.3s								
HHC				LR	LR				
	comp=Z,460nm,16.5s								
KMI2	**Kunming**	**92.86**	**296**	P	**P**	**19 59 25.8**	**+0.9**		
KMI2				pmax	pmax				
	comp=Z,19nm,1.8s								
KMI2				LR	LR				
	comp=Z,430nm,24.3s								
KMI2				LR	LR				
	comp=Z,600nm,21.0s								
KMI2				LR	LR				
	comp=Z,1µm,22.6s								
OK029	**Liberty Lake**	**92.87**	**53**	IAMs_20	IAMs_20	20 36 02.2			
	comp=Z,1000nm,19.0s								
TRQA	**Tornquist**	**93.03**	**133**	IAMs_20	IAMs_20	20 40 25.3			
	comp=Z,729nm,19.0s								
R32A	**Long Quarter,**	**93.09**	**50**		**P**	**19 59 25.4**	**-0.1**		
R32A				IAMs_20	IAMs_20	20 38 43.6			
	comp=Z,997nm,18.0s								
ATAH	**Atahualpa**	**93.09**	**99**	LR	LR	20 33 15.7			
	comp=Z,817nm,19.1s,baz=253,slow=30								
D25K	**Kavik River**	**93.38**	**10**	IAMs_20	IAMs_20	20 38 02.6			
	comp=Z,1µm,19.0s								
OK052	**Battle Ridge R**	**93.44**	**53**	IAMs_20	IAMs_20	20 36 18.1			
	comp=Z,869nm,20.0s								
JTS	**Las Juntas de**	**93.51**	**80**	LR	LR	20 31 42.0			
	comp=Z,457nm,21.9s,baz=158,slow=29								
CM31	**Chiang Mai Arr**	**93.59**	**288**		**P**	**19 59 28.2**	**+0.1**		
CM31				IAmb	IAmb	19 59 30.8			
	comp=Z,19nm,1.1s								
CMAR	**Chiang Mai Arr**	**93.59**	**288**	P	**P**	**19 59 28.8**	**+0.7**		
	comp=Z,6.8nm,1.0s,baz=120,slow=3.0,SNR=48								
	comp=Z,6.8nm,1.0s								
CMAR	**Chiang Mai Arr**	**93.59**	**288**		**P**	**19 59 27.8**	**-0.4**		
G31M	**Satah River**	**93.70**	**15**	IAMs_20	IAMs_20	20 37 07.7			
	comp=Z,1µm,20.0s								
CHTO	**Chiang Mai**	**93.72**	**289**	P	**P**	**19 59 30.0**	**+1.3**		
BTO2	**Baotou**	**93.79**	**313**	*e*P	**P**	**19 59 29.9**	**+1.1**		
BTO2				pP	**pwP**	**19 59 40.5**	**-0.6**		
BTO2				sP	**sP**	**19 59 44.3**	**+5.6**		
BTO2				S	**S**	**20 10 36.6**	**-0.1**		
BTO2				sS	**sS**	**20 10 53.5**	**+4.2**		
BTO2				pmax	pmax				
	comp=Z,32nm,1.7s								
BTO2				pmax	pmax				
	comp=Z,720nm,10.6s								
BTO2				LR	LR				
	comp=Z,1µm,17.4s								
BTO2				LR	LR				
	comp=Z,990nm,18.6s								
BTO2				LR	LR				
	comp=Z,2µm,24.5s								
E29M	**Blow River**	**94.10**	**13**	IAMs_20	IAMs_20	20 38 37.0			
	comp=Z,1µm,20.0s								
TUL3	**Leonard**	**94.15**	**53**	IAMs_20	IAMs_20	20 37 14.0			
	comp=Z,1µm,18.0s								
PZH	**PanZhiHua**	**94.21**	**297**	P	**P**	**19 59 31.3**	**+0.3**		
PZH				SS	SS	20 17 07.9	+5.2		
PZH				pmax	pmax				
	comp=Z,10.0nm,1.4s								
PZH				LR	LR				
	comp=Z,260nm,20.2s								
PZH				LR	LR				
	comp=Z,430nm,24.1s								
PZH				LR	LR				
	comp=Z,670nm,21.6s								
YAK	**Yakutsk**	**94.75**	**337**	LR	LR	20 41 47.8			
	comp=Z,369nm,18.4s,baz=122,slow=35								
YAK	**Yakutsk**	**94.75**	**337**	*e*P	**P**	**19 59 32.0**	**-0.4**		
YAK				pmax	pmax				
	comp=Z,25nm,2.5s								
BGNE	**Belgrade**	**94.76**	**47**	IAMs_20	IAMs_20	20 36 42.6			
	comp=Z,951nm,19.0s								
KSU1	**Kansas State U**	**94.87**	**50**	IAMs_20	IAMs_20	20 37 53.6			
	comp=Z,1µm,20.0s								
INK	**Inuvik**	**94.98**	**14**	LR	LR	20 39 54.8			
	comp=Z,547nm,18.4s,baz=208,slow=34								
U38A	**Gravette**	**95.40**	**53**	IAMs_20	IAMs_20	20 33 17.9			
	comp=Z,902nm,21.0s								
SUSD	**Miller**	**95.52**	**44**	IAMs_20	IAMs_20	20 36 22.4			
	comp=Z,857nm,19.0s								
AP01	**Chacalluta**	**95.77**	**112**	IAMs_20	IAMs_20	20 38 43.8			
	comp=Z,770nm,19.0s								
PB08	**IPOC Station P**	**96.02**	**114**	IAMs_20	IAMs_20	20 36 17.4			
	comp=Z,1µm,19.0s								
LZH	**Lanzhou**	**96.21**	**306**	*e*P	**P**	**19 59 40.8**	**+0.8**		
LZH				sP	sP	19 59 50.4	+0.1		
LZH				pmax	pmax				
	comp=Z,14nm,1.7s								
LZH				LR	LR				
	comp=Z,410nm,18.1s								
LZH				LR	LR				
	comp=Z,430nm,16.8s								
LZH				LR	LR				
	comp=Z,480nm,16.2s								
LZDM	**Lanzhou Array**	**96.27**	**306**	P	**P**	**19 59 40.7**	**+0.2**		
	comp=Z,0.7nm,0.4s,baz=106,slow=4.8,SNR=5.9								
LZDM				LR	LR	20 42 53.0			
	comp=Z,249nm,18.6s,baz=85,slow=36								
	comp=Z,0.7nm,0.4s								

TNCH	**TengChong**	**96.36**	**294**	⇑P	**P**	**19 59 38.9**	**-2.0**		
TNCH				S	**S**	**20 11 04.4**	**+4.6**		
TNCH				sS	sS	20 11 14.8	+2.4		
TNCH				pmax	pmax				
	comp=Z,15nm,1.4s								
TNCH				LR	LR				
	comp=Z,290nm,8.3s								
TNCH				LR	LR				
	comp=Z,300nm,15.1s								
TNCH				LR	LR				
	comp=Z,710nm,20.6s								
YKA	**Yellowknife Ar**	**96.64**	**24**	P	**P**	**19 59 41.8**	**+0.7**		
	comp=Z,1.4nm,1.0s,baz=247,slow=4.5,SNR=13								
YKA				LR	LR	20 35 32.2			
	comp=Z,580nm,22.0s,baz=254,slow=31								
	comp=Z,1.4nm,1.0s								
S39A	**Bolivar**	**96.67**	**52**	IAMs_20	IAMs_20	20 33 39.8			
	comp=Z,782nm,20.0s								
VBMS	**Vicksburg**	**96.75**	**58**	IAMs_20	IAMs_20	20 40 32.0			
	comp=Z,1µm,19.0s								
ECSD	**EROS Data Cent**	**96.76**	**46**		**P**	**19 59 42.0**	**-0.1**		
P38A	**Dawn**	**97.26**	**50**	IAMs_20	IAMs_20	20 41 24.1			
	comp=Z,1µm,18.0s								
R40A	**Maddies Statio**	**97.67**	**52**	IAMs_20	IAMs_20	20 40 33.1			
	comp=Z,852nm,19.0s								
T42A	**Van Buren**	**98.07**	**53**	IAMs_20	IAMs_20	20 38 22.0			
	comp=Z,988nm,21.0s								
CCM	**Cathedral Cave**	**98.33**	**52**	IAMs_20	IAMs_20	20 39 15.8			
	comp=Z,1µm,20.0s								
LPAZ	**La Paz**	**98.57**	**111**	LR	LR	20 38 34.9			
	comp=Z,613nm,18.0s,baz=263,slow=32								
ULN	**Ulaanbaatar**	**98.60**	**318**		**P**	**19 59 49.3**	**-1.1**		
ULN				IAmb	IAmb	19 59 52.6			
	comp=Z,11nm,1.4s								
ULN	**Ulaanbaatar**	**98.60**	**318**	*c*eP	Pdif	19 59 51.2	+0.7		
ULN				pmax	pmax				
	comp=Z,12nm,1.7s								
SONM	**Songino Array**	**99.00**	**318**	P	**P**	**19 59 51.4**	**-0.8**		
	comp=Z,0.7nm,0.8s,baz=140,slow=2.1,SNR=5.7								
	comp=Z,0.7nm,0.8s								
SONM	**Songino Array**	**99.00**	**318**	P	**P**	**19 59 50.9**	**-1.3**		
SONM				IAmb	IAmb	19 59 54.9			
	comp=Z,16nm,1.9s								
N41A	**Harden Midland**	**99.57**	**50**	IAMs_20	IAMs_20	20 37 53.1			
	comp=Z,1µm,22.0s								
MORE	**Moreh**	**99.68**	**292**	IAMs_20	IAMs_20	20 46 07.3			
	comp=Z,335nm,19.0s								
ULM	**Lac du Bonnet**	**99.80**	**40**	LR	LR	20 40 58.3			
	comp=Z,720nm,18.8s,baz=244,slow=33								
T45A	**Paducah**	**99.90**	**54**	IAMs_20	IAMs_20	20 41 54.4			
	comp=Z,1µm,19.0s								
X48A	**Hartselle**	**100.26**	**57**	IAMs_20	IAMs_20	20 42 22.7			
	comp=Z,922nm,19.0s								
Q44A	**Meyer Farm, Va**	**100.27**	**52**	IAMs_20	IAMs_20	20 43 52.0			
	comp=Z,1µm,19.0s								
GTA2	**Gaotai**	**100.46**	**308**	*e*P	**Pdif**	**19 59 59.6**	**+0.7**		
GTA2				pmax	pmax				
	comp=Z,3.0nm,1.5s								
GTA2				LR	LR				
	comp=Z,370nm,17.4s								
GTA2				LR	LR				
	comp=Z,640nm,17.1s								
GTA2				LR	LR				
	comp=Z,630nm,19.6s								
L42A	**Oliver, Polo**	**100.86**	**49**	IAMs_20	IAMs_20	20 41 02.1			
	comp=Z,775nm,20.0s								
V48A	**Smith Brothers**	**100.86**	**56**	IAMs_20	IAMs_20	20 41 20.4			
	comp=Z,1µm,18.0s								
T47A	**Sharon Grove**	**101.05**	**55**	IAMs_20	IAMs_20	20 39 51.0			
	comp=Z,996nm,20.0s								
W50A	**Signal Mountai**	**101.85**	**57**	IAMs_20	IAMs_20	20 44 46.8			
	comp=Z,995nm,19.0s								
WCI	**Wyandotte Cave**	**102.06**	**54**	IAMs_20	IAMs_20	20 39 33.6			
	comp=Z,962nm,20.0s								
Y52A	**Lilburn**	**102.41**	**58**	IAMs_20	IAMs_20	20 44 32.8			
	comp=Z,935nm,18.0s								
R49A	**Shelbyville**	**102.92**	**54**	IAMs_20	IAMs_20	20 38 03.4			
	comp=Z,1µm,21.0s								
R50A	**Paris**	**103.55**	**54**	IAMs_20	IAMs_20	20 41 33.1			
	comp=Z,1000nm,19.0s								
V53A	**Saluda**	**103.94**	**57**	IAMs_20	IAMs_20	20 46 19.0			
	comp=Z,896nm,18.0s								
Q51A	**Peebles**	**104.50**	**54**	IAMs_20	IAMs_20	20 40 59.2			
	comp=Z,979nm,21.0s								
V55A	**Taylorsville**	**105.23**	**57**	IAMs_20	IAMs_20	20 47 10.4			
	comp=Z,986nm,20.0s								
Q52A	**Bidwell**	**105.29**	**54**	IAMs_20	IAMs_20	20 43 15.1			
	comp=Z,1µm,20.0s								
M50A	**Fremont**	**105.39**	**51**	IAMs_20	IAMs_20	20 50 37.4			
	comp=Z,992nm,19.0s								
O52A	**Adamsville**	**105.93**	**53**	IAMs_20	IAMs_20	20 43 43.8			
	comp=Z,930nm,20.0s								
W57A	**Gilead**	**106.00**	**58**	IAMs_20	IAMs_20	20 47 46.3			
	comp=Z,1µm,19.0s								
P53A	**Whipple**	**106.09**	**54**	IAMs_20	IAMs_20	20 44 54.2			
	comp=Z,1µm,20.0s								
PALK	**Pallekele**	**106.25**	**271**	IAMs_20	IAMs_20	20 47 57.7			
	comp=Z,843nm,21.0s								
V58A	**Windy Hill, Pi**	**106.86**	**58**	IAMs_20	IAMs_20	20 52 33.5			
	comp=Z,992nm,18.0s								
S57A	**Dark Hollow, R**	**107.49**	**56**	IAMs_20	IAMs_20	20 48 19.9			
	comp=Z,942nm,18.0s								
R58B	**Mineral**	**108.36**	**56**	IAMs_20	IAMs_20	20 49 05.1			
	comp=Z,837nm,18.0s								
V61A	**Roper**	**108.85**	**58**	IAMs_20	IAMs_20	20 48 34.4			
	comp=Z,977nm,18.0s								
J55A	**Hilton**	**109.60**	**50**	IAMs_20	IAMs_20	20 49 12.7			
	comp=Z,995nm,19.0s								
M57A	**Sunshine Farm,**	**109.69**	**52**	IAMs_20	IAMs_20	20 46 11.4			
	comp=Z,825nm,19.0s								
WMQ	**Urumqi**	**110.32**	**310**	*e*PKP	**PKiKP**	**20 04 40.3**	**-3.3**		
WMQ				LR	LR				
	comp=Z,810nm,19.7s								
ZALV	**Zalesovo Beam**	**113.68**	**321**	PKiKP	**PKiKP**	**20 04 49.4**	**-0.1**		
	comp=Z,1.5nm,0.8s,baz=277,slow=1.2,SNR=7.2								
MK31	**Makanchi Array**	**114.55**	**313**	*c* iPKiKP	PKPdf	20 04 51.8	+0.3		
MKAR	**Makanchi Array**	**114.55**	**313**	PKP	PKPdf	20 04 51.0	-0.5		
	comp=Z,0.8nm,0.6s,baz=135,slow=0.6,SNR=11								
MKAR	**Makanchi Array**	**114.55**	**313**	PKiKP	PKPdf	20 04 51.0	-0.5		
MAKZ	**Makanchi**	**114.77**	**313**	⇑PKiKP	PKPdf	20 04 50.8	-1.1		
PKME	**Peaks-Kenny Pk**	**115.96**	**49**	IAMs_20	IAMs_20	21 01 12.3			
	comp=Z,800nm,19.0s								
KURK	**Kurchatov**	**117.27**	**317**		**PKPdf**	**20 04 55.4**	**-1.1**		
KURK	**Kurchatov**	**117.27**	**317**	*c* iPKiKP	**PKiKP**	**20 04 57.0**	**+0.5**		
KURK				pmax	pmax				
	comp=Z,10.0nm,1.7s								
KURBB	**Kurchatov Arra**	**117.32**	**317**	PKP	**PKPdf**	**20 04 56.6**	**-0.1**		
	comp=Z,1.7nm,0.8s,baz=96,slow=1.9,SNR=13								
NRN	**Naryn**	**118.52**	**306**		**PKPdf**	**20 04 58.8**	**-0.9**		
NRN	**Naryn**	**118.52**	**306**	PKiKP	**PKPdf**	**20 04 58.8**	**-0.9**		
KSH2	**Kashi**	**118.63**	**304**	PKP	**PKiKP**	**20 05 00.4**	**+0.6**		
BOOM	**Boomskoye usch**	**118.65**	**307**		**PKPdf**	**20 04 58.9**	**-0.8**		
BOOM	**Boomskoye usch**	**118.65**	**307**	PKiKP	**PKPdf**	**20 04 58.9**	**-0.8**		
AAK	**Ala-Archa**	**119.73**	**307**	*c* iPKiKP	**PKiKP**	**20 05 02.3**	**+0.4**		
AAK				pmax	pmax				
	comp=Z,7.0nm,1.7s								
BVAR	**Borovoye Array**	**122.29**	**320**	PKP	**PKPdf**	**20 05 06.3**	**+0.1**		
	comp=Z,3.0nm,0.7s,baz=89,slow=1.8,SNR=16								
BORK	**Borovoye**	**122.33**	**320**		**PKPdf**	**20 05 05.5**	**-0.8**		
BORK	**Borovoye**	**122.33**	**320**	*c* iPKiKP	**PKiKP**	**20 05 06.7**	**+0.3**		
BORK				pmax	pmax				
	comp=Z,15nm,1.7s								
KK31	**Karatay Array**	**122.67**	**308**		**PKPdf**	**20 05 06.5**	**-0.7**		
KK31	**Karatay Array**	**122.67**	**308**	PKiKP	**PKPdf**	**20 05 06.5**	**-0.7**		
KBL	**Kabul**	**123.39**	**298**		**PKPdf**	**20 05 08.8**	**-0.3**		
KBL	**Kabul**	**123.39**	**298**	PKiKP	**PKPdf**	**20 05 08.8**	**-0.3**		
SPITS	**Spitsbergen Ar**	**123.59**	**357**	PKP	**PKiKP**	**20 05 08.7**	**+0.4**		
	comp=Z,10nm,1.1s,baz=331,slow=6.7,SNR=7.0								
BOSA	**Boshof**	**126.09**	**202**	PKP	**PKiKP**	**20 05 16.9**	**+2.0**		
	comp=Z,2.4nm,0.8s,baz=135,slow=4.3,SNR=4.1								
ARTI	**Arti**	**128.37**	**325**		**PKPdf**	**20 05 16.8**	**-0.9**		
ARTI	**Arti**	**128.37**	**325**	*i* PKiKP	**PKiKP**	**20 05 19.2**	**+0.9**		
ARTI						20 07 19.6			
ARTI						20 12 30.2			
ARTI				SS	SS	20 24 29.8	-6.5		
ARTI				MLR	MLR				
	comp=Z,1µm,20.0s								
ARCES	**ARCESS Array B**	**130.99**	**351**	PKP	**PKiKP**	**20 05 23.6**	**+0.4**		
	comp=Z,3.0nm,0.7s,baz=58,slow=2.1,SNR=7.1								
KIRV	**Kirov**	**131.86**	**331**	*c* iPKiKP	**PKiKP**	**20 05 26.6**	**+1.4**		
FINES	**FINESS Array B**	**138.11**	**345**	PKP	**PKiKP**	**20 05 37.9**	**0.0**		
	comp=Z,0.8nm,0.4s,baz=95,slow=2.2,SNR=6.9								
VRH	**Novokhopyorsk**	**139.49**	**325**	*e*PKiKP	**PKPdf**	**20 05 40.0**	**+1.4**		
VRH				pmax	pmax				
	comp=Z,10.0nm,0.9s								
AKT	**Akhty**	**139.59**	**309**	*e*PKiKP	**PKPdf**	**20 05 39.1**	**-0.2**		
AKT				pmax	pmax				

	comp=Z,14nm,1.2s								
OBN	**Obninsk**	**139.60**	**333**	*i* PKiKP	**PKiKP**	**20 05 40.5**	**-0.5**		
OBN				*e*		20 08 32.6			
OBN				*e*PPP	PPP	20 11 36.0			
OBN				pmax	pmax				
	comp=Z,64nm,1.7s								
KIBK	**Kibwezi**	**139.91**	**237**	IAMs_20	IAMs_20	21 05 37.1			
	comp=Z,491nm,20.0s								
LPSR	**Galich'ya Gora**	**140.12**	**328**	*e*PKiKP	**PKiKP**	**20 05 41.6**	**-0.6**		
LPSR				pmax	pmax				
	comp=Z,10.0nm,0.9s								
VSR	**Storozhevoye**	**140.82**	**326**	*e*PKiKP	**PKPdf**	**20 05 42.2**	**+1.1**		
VSR				pmax	pmax				
	comp=Z,10.0nm,1.3s								
VORD	**Divnogorie**	**140.90**	**326**	*e*PKiKP	**PKPdf**	**20 05 42.5**	**+1.3**		
VORD				pmax	pmax				
	comp=Z,6.0nm,1.0s								
HFS	**Hagfors**	**141.51**	**353**	PKhKP	PKPpre	20 05 36.1			
	comp=Z,5.1nm,0.9s,baz=98,slow=2.9,SNR=5.4								
KBZ	**Khabaz**	**142.24**	**314**	*c* iPKiKP	**PKiKP**	**20 05 46.7**	**-0.1**		
KIV	**Kislovodsk**	**142.29**	**314**	*i* PKiKP	**PKiKP**	**20 05 47.3**	**+0.2**		
KIV				pmax	pmax				
	comp=Z,4.0nm,1.0s								
KIV				MLR	MLR				
	comp=Z,661nm,24.0s								
SHA1	**Shidzhatmaz**	**142.39**	**314**	*c* iPKiKP	**PKPdf**	**20 05 46.2**	**+1.7**		
RAYN	**Ar Rayn**	**143.05**	**280**	IAMs_20	IAMs_20	21 03 53.7			
	comp=Z,568nm,22.0s								
RAYN	**Ar Rayn**	**143.05**	**280**	⇑PKHKP	PKPpre	20 05 38.8			
MNK	**Minsk**	**143.43**	**338**	*i* PKP	**PKPdf**	**20 05 44.9**	**-0.7**		
MNK				*i* PKP	**PKPdf**	**20 05 44.9**	**-0.7**		
MNK				*i* PKP	**PKPdf**	**20 05 44.9**	**-0.7**		
	comp=Z,18nm,1.0s,baz=37								
MNK				*i* PKiKP	**PKiKP**	**20 05 49.4**	**+0.4**		
MNK				*i* PP	**PP**	**20 08 55.9**	**-0.9**		
MNK				*i* PPP	PPP	20 12 03.9			
MNK				*i* SKS	**SKSdf**	**20 12 55.3**	**+2.0**		
MNK				*i* SKKS	**SKKSdf**	**20 22 09.9**	**-0.3**		
MNK				*i* SS	**SS**	**20 27 36.0**	**+0.4**		
MNK				*i* SSS	SSS	20 32 58.2			
MNK				*i* LQ	LQ	21 02 57.1			
MNK	**Minsk**	**143.43**	**338**	*i* PKiKP	**PKPdf**	**20 05 44.9**	**-0.7**		
MNK				*i*		20 05 49.4			
MNK				*i*		20 08 55.8			
MNK				*i* PPP	PPP	20 12 03.9			
MNK				*i*		20 12 55.2			
MNK				*i* SS	SS	20 27 36.0	+0.4		
MNK				*i* SSS	SSS	20 32 58.1			
MNK				pmax	pmax				
	comp=Z,18nm,1.0s								
GEVA	**Gevas**	**143.90**	**305**		PKPab	20 05 44.5	0.0		
GURO	**Guroymak-BITLI**	**144.61**	**306**		PKPbc	20 05 47.4	+0.3		
SUW	**Suwalki**	**145.36**	**341**	*e*PKP	**PKPab**	**20 05 49.2**	**+0.2**		
FURI	**Furi**	**145.43**	**253**	IAMs_20	IAMs_20	21 04 11.7			
	comp=Z,628nm,20.0s								
LODK	**Lodwar**	**145.50**	**242**	IAMs_20	IAMs_20	21 06 09.7			
	comp=Z,521nm,20.0s								
AK03	**Malin Array Si**	**145.85**	**333**	PKP	**PKPdf**	**20 05 50.0**	**+0.1**		
AK23	**Malin Array Si**	**145.86**	**333**	PKP	**PKPdf**	**20 05 50.2**	**+0.3**		
AKASG	**Malin Array Be**	**145.86**	**333**	PKPbc	**PKPdf**	**20 05 50.3**	**+0.3**		
	comp=Z,21nm,0.7s,baz=41,slow=4.2,SNR=86								
AKASG	**Malin Array Be**	**145.86**	**333**		**PKPdf**	**20 05 49.8**	**-0.1**		
AKBB	**Malin Array Si**	**145.86**	**333**	PKP	**PKPdf**	**20 05 50.1**	**+0.1**		
AK04	**Malin Array Si**	**145.87**	**333**	PKP	**PKPdf**	**20 05 50.3**	**+0.3**		
AK01	**Malin Array Si**	**145.88**	**333**	PKP	**PKPdf**	**20 05 50.2**	**+0.2**		
KIEV	**Kiev**	**145.88**	**333**	⇑P	**PKPdf**	**20 05 50.5**	**+0.5**		
KIEV	**Kiev**	**145.88**	**333**		**PKPdf**	**20 05 50.0**	**0.0**		
KIEV	**Kiev**	**145.88**	**333**	⇑PKiKP	**PKPdf**	**20 05 50.5**	**+0.5**		
KIEV	**Kiev**	**145.88**	**333**	PKP	**PKPdf**	**20 05 50.1**	**+0.1**		
AK22	**Malin Array Si**	**145.88**	**333**	PKP	**PKPdf**	**20 05 50.2**	**+0.2**		
AK21	**Malin Array Si**	**145.88**	**333**	PKP	**PKPdf**	**20 05 50.2**	**+0.2**		
AK08	**Malin Array Si**	**145.90

MLR	**Muntele Rosu**	**151.20 329**	⇑PKIKP	**PKPbc**	**20 06 04.7**	**-0.2**
PRU	**Pruhonice**	**151.21 348**	⇑*e*PKP	**PKiKP**	**20 06 05.3**	**+0.2**
PRU	**Pruhonice**	**151.21 348**	*e*PKIKP	**PKiKP**	**20 06 05.3**	**+0.2**
ICOR	**Ion Corvin**	**151.24 325**	⇑P	**PKPbc**	**20 06 05.0**	**+0.1**
UCC	**Uccle**	**151.31 1**	*d*PKP	**PKiKP**	**20 06 05.7**	**+0.4**
CJR	**Cluj-Napoca**	**151.31 333**	⇑P	**PKiKP**	**20 06 06.0**	**+0.5**
CJR	**Cluj-Napoca**	**151.31 333**	⇑PKIKP	**PKiKP**	**20 06 06.0**	**+0.5**
MMAI	**Mount Meron Ar**	**151.31 299**	PKPbc	**PKiKP**	**20 06 06.5**	**+0.5**
	comp=Z,13nm,0.8s,baz=77,slow=6.2,SNR=10.0					
VRAC	**Vranov**	**151.39 345**	⇑P	**PKPbc**	**20 06 04.8**	**-0.3**
VRAC	**Vranov**	**151.39 345**	⇑PKIKP	**PKPbc**	**20 06 04.8**	**-0.3**
VRAC	**Vranov**	**151.39 345**	*e*PKP	**PKiKP**	**20 06 06.0**	**+0.4**
MDB	**Medias**	**151.43 332**	⇑P	**PKiKP**	**20 06 06.4**	**+0.7**
MDB	**Medias**	**151.43 332**	⇑PKIKP	**PKiKP**	**20 06 06.4**	**+0.7**
MEM	**Membach**	**151.50 359**	*d*PKP	**PKPbc**	**20 06 05.7**	**+0.4**
JAVC	**Velka Javorina**	**151.52 343**	*e*PKP	**PKiKP**	**20 06 07.5**	**+1.6**
BTNL	**Ternell**	**151.53 359**	*d*PKP	**PKiKP**	**20 06 06.4**	**+0.6**
BSTI	**Sart Tilman**	**151.53 360**	*d*PKP	**PKiKP**	**20 06 06.9**	**+1.1**
MARR	**Marisel-Cluj**	**151.54 334**	⇑P	**PKPbc**	**20 06 05.7**	**0.0**
DRGR		**151.61 334**	⇑P	**PKiKP**	**20 06 06.5**	**+0.3**
DRGR		**151.61 334**	⇑PKIKP	**PKiKP**	**20 06 06.5**	**+0.3**
TREC	**Trest**	**151.66 346**	⇑*e*PKP	**PKiKP**	**20 06 06.6**	**+0.5**
TREC	**Trest**	**151.66 346**	*e*PKIKP	**PKiKP**	**20 06 06.6**	**+0.5**
VOIR		**151.66 330**	⇑P	**PKiKP**	**20 06 06.5**	**+0.2**
VOIR		**151.66 330**	⇑PKIKP	**PKiKP**	**20 06 06.5**	**+0.2**
KRUC	**Moravsky**	**151.66 345**	*e*PKP	**PKiKP**	**20 06 06.5**	**+0.4**
BCLA	**Clavier**	**151.70 0**	*d*PKP	**PKPbc**	**20 06 05.2**	**-0.5**
BHOU	**Houvegnez**	**151.76 359**	*d*PKP	**PKiKP**	**20 06 07.3**	**+1.0**
ZVC	**Zvikov**	**151.80 348**	⇑*e*PKP	**PKiKP**	**20 06 06.8**	**+0.4**
BMRD	**Maredsous**	**151.81 1**	*d*PKP	**PKiKP**	**20 06 07.0**	**+0.7**
TNR	**Turnu Rosu**	**151.85 331**	⇑P	**PKiKP**	**20 06 08.0**	**+1.4**
TNR	**Turnu Rosu**	**151.85 331**	⇑PKIKP	**PKiKP**	**20 06 08.0**	**+1.4**
ARR	**Arges**	**151.91 330**	⇑P	**PKiKP**	**20 06 08.0**	**+1.2**
DOU	**Dourbes**	**152.01 1**	*d*PKP	**PKiKP**	**20 06 07.7**	**+0.9**
MODS	**Modra-Piesok**	**152.07 343**	*e*PKIKP	**PKiKP**	**20 06 08.3**	**+1.3**
MODS	**Modra-Piesok**	**152.07 343**	*e*PKP	**PKiKP**	**20 06 08.3**	**+1.3**
MODS			*e*		20 06 18.2	
KHC	**Kasperske Hory**	**152.21 348**	⇑*e*PKP	**PKiKP**	**20 06 08.0**	**+0.7**
KHC	**Kasperske Hory**	**152.21 348**	*e*PKIKP	**PKiKP**	**20 06 08.0**	**+0.7**
LOT	**Lotru**	**152.23 332**	⇑P	**PKiKP**	**20 06 08.1**	**+0.5**
DEV	**Deva**	**152.26 333**	⇑P	**PKiKP**	**20 06 08.1**	**+0.6**
DEV	**Deva**	**152.26 333**	⇑PKIKP	**PKiKP**	**20 06 08.1**	**+0.6**
SRO	**Srobarova**	**152.28 341**	*e*PKP	**PKPab**	**20 06 19.1**	**+2.1**
RAZG	**Razgrad**	**152.30 326**	⇑P	**PKiKP**	**20 06 07.9**	**+0.3**
CKRC	**Cesky Krumlov**	**152.36 347**	⇑*e*PKP	**PKiKP**	**20 06 08.3**	**+0.7**
CKRC	**Cesky Krumlov**	**152.36 347**	*e*PKIKP	**PKiKP**	**20 06 08.3**	**+0.7**
HUMR	**Humele**	**152.37 329**	⇑P	**PKPbc**	**20 06 07.8**	**+0.3**
WLF	**Walferdange**	**152.45 359**	*d*PKP	**PKiKP**	**20 06 09.2**	**+1.5**
GERES	**GERESS Array B**	**152.46 348**	PKPbc	**PKiKP**	**20 06 08.9**	**+1.0**
	comp=Z,3.0nm,0.9s,baz=47,slow=5.8,SNR=8.1					
GZR	**Gura Zlata**	**152.71 333**	⇑P	**PKPbc**	**20 06 08.3**	**+0.1**
GZR	**Gura Zlata**	**152.71 333**	⇑PKIKP	**PKPbc**	**20 06 08.3**	**+0.1**
CONA	**Conrad Observa**	**152.85 344**	*e*PKP	**PKPdf**	**20 06 04.8**	**+3.4**
	comp=Z,19nm,1.1s					
RONA	**Rosalia, Austr**	**152.95 344**	*e*PKP	**PKPdf**	**20 06 04.8**	**+3.3**
	comp=Z,20nm,1.3s					
BZS	**Buzias**	**153.01 334**	⇓P	**PKPbc**	**20 06 09.2**	**+0.4**
BZS	**Buzias**	**153.01 334**	⇓PKIKP	**PKPbc**	**20 06 09.2**	**+0.4**
ELND	**Elena**	**153.07 325**	⇑P	**PKPbc**	**20 06 09.1**	**0.0**
HERR	**Herculane**	**153.27 332**	⇑P	**PKPbc**	**20 06 09.8**	**+0.4**
MOA	**Molln**	**153.29 347**	*e*pPKP	**PKPdf**	**20 06 02.9**	**+1.0**
	comp=Z,13nm,2.0s					
PLVB	**Pleven**	**153.39 328**	⇑P	**PKiKP**	**20 06 10.7**	**+0.9**
ARSA	**Arzberg**	**153.56 344**	*e*pPKP	**PKPab**	**20 06 24.0**	**+1.6**
	comp=Z,11nm,1.2s					
BIOA	**Bad Ischl, Aus**	**153.58 347**	*i* PKP	**PKPdf**	**20 06 05.2**	**+2.9**
	comp=Z,3.6nm,1.0s					
BIOA			*e*pPKP	**PKPab**	**20 06 24.0**	**+1.5**
	comp=Z,19nm,0.9s					
MORH	**Mrgy, Hungar**	**153.59 339**	⇑P	**PKPdf**	**20 06 03.5**	**+1.1**
MDVR	**Moldovita**	**153.65 333**	⇑P	**PKPbc**	**20 06 10.1**	**-0.3**
LESA	**Schwarzleotal**	**154.02 349**	*e*pPKP	**PKPdf**	**20 06 04.3**	**+1.3**
	comp=Z,13nm,1.4s					
LESA			*e*pPKP	**PKPab**	**20 06 24.4**	**-0.1**
	comp=Z,11nm,1.2s					
KBA	**Koelnbreinsper**	**154.22 347**	*e*pPKP	**PKPdf**	**20 06 03.2**	**-0.2**
	comp=Z,7.9nm,1.3s					
SOKA	**Soboth**	**154.22 345**	*e*pPKP	**PKPdf**	**20 06 04.6**	**+1.3**
	comp=Z,7.8nm,1.1s					
SOKA			*e*pPKP	**PKPab**	**20 06 25.3**	**0.0**
	comp=Z,24nm,1.5s					
RETA	**Reutte**	**154.26 352**	*i* PKP	**PKPdf**	**20 06 06.4**	**+3.1**
	comp=Z,5.6nm,1.4s					
RETA			*e*pPKP	**PKPab**	**20 06 25.6**	**+0.1**
	comp=Z,10.0nm,1.2s					
WATA	**Walderalm**	**154.29 350**	*i* PKP	**PKPdf**	**20 06 06.6**	**+3.1**
	comp=Z,5.8nm,1.4s					
WATA			*e*pPKP	**PKPab**	**20 06 25.2**	**-0.5**
	comp=Z,16nm,1.3s					
WTTA	**Wattenberg**	**154.35 350**	*e*pPKP	**PKPdf**	**20 06 05.1**	**+1.5**
	comp=Z,8.5nm,1.2s					
WTTA			*i* pPKP	**PKPab**	**20 06 26.2**	**+0.2**
	comp=Z,31nm,1.6s					
MOTA	**Moosalm**	**154.35 351**	*e*pPKP	**PKPab**	**20 06 25.4**	**-0.6**
	comp=Z,15nm,1.2s					
SQTA	**Sankt Quirin**	**154.46 351**	*i* PKP	**PKPdf**	**20 06 07.2**	**+3.5**
	comp=Z,5.0nm,1.4s					
SQTA			*e*pPKP	**PKPab**	**20 06 26.2**	**-0.2**
	comp=Z,12nm,1.2s					
OBKA	**Obir**	**154.50 345**	*e*pPKP	**PKPdf**	**20 06 05.5**	**+1.8**
	comp=Z,5.6nm,1.7s					
OBKA			*e*pPKP	**PKPab**	**20 06 25.7**	**-0.8**
	comp=Z,8.1nm,0.9s					
DAVA	**Damuels**	**154.57 353**	*i* PKP	**PKPdf**	**20 06 07.4**	**+3.5**
	comp=Z,6.5nm,1.4s					
ABTA	**Abfaltersbach**	**154.70 348**	*e*pPKP	**PKPdf**	**20 06 04.4**	**+0.3**
	comp=Z,11nm,1.4s					
FETA	**Feichten**	**154.72 351**	*i* pPKP	**PKPdf**	**20 06 04.6**	**+0.5**
	comp=Z,7.5nm,1.3s					
FETA			*e*pPKP	**PKPab**	**20 06 28.3**	**+0.8**
	comp=Z,9.3nm,1.1s					
ESDC	**Sonseca Array**	**160.73 22**	PKP	**PKPdf**	**20 06 12.4**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=337,slow=3.1,SNR=7.0					
ESDC			PKPab	**PKPab**	**20 06 54.4**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=298,slow=3.2,SNR=4.1					
DBIC	**Dimbokro**	**161.79 146**	PKP	**PKPdf**	**20 06 14.0**	**+0.5**
	comp=Z,4.8nm,0.9s,baz=231,slow=4.8,SNR=3.8					
DBIC	**Dimbokro**	**161.79 146**	⇑PKIKP	**PKPdf**	**20 06 14.5**	**+1.0**
KEST	**Kesra**	**165.94 347**	PKPab	**PKPab**	**20 07 16.5**	**0.0**
	comp=Z,3.5nm,0.9s,baz=346,slow=0.4,SNR=4.7					
TORD	**Torodi Ar. Bea**	**170.47 158**	PKP	**PKPdf**	**20 06 20.4**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=267,slow=4.0,SNR=9.5					
TORD			PKPab	**PKPab**	**20 07 39.6**	**+2.8**
	comp=Z,2.4nm,1.1s,baz=216,slow=6.8,SNR=4.5					

IDC ***22*** *20:14:18.4±0.7, 0.°35N×126.°21E, h0km, mb4.1/13, mbtmp4.1/14, ML3.7/1, Error ellipse: s-maj=37.6km s-min=14.0km az=76.0*
DJA ***22*** *20:14:22.3±0.2, 0.°1N±2.°×12.°6E±.°, h10km, M4.2/33, mB5.0/7, mb4.3/13, MLv4.1/33, Mw(mB)4.3/7*
NEIC ***22*** *20:14:23.9±1.2, 0.°46N±0.°07×126.°38E±0.°05, h31km±5km, mb4.5/26, Error ellipse: s-maj=11.2km s-min=7.0km az=159.0*

ISC 22 20:14:24.9±0.5, **0.°39N**±0.°05×**126.°35E**±0.°06, **h47**km, **n67,**
σ1§**08**/68, **mb4.3**/25, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.09**	**70**		**Pn**	**20 14 41.9**	**-1.9**
TNTI				Sn	**Sn**	**20 14 54.9**	**-2.9**
TNTI	**Ternate**	**1.09**	**70**	P	**Pn**	**20 14 42.8**	**-1.0**
MNI	**Manado**	**1.83**	**305**	P	**Pn**	**20 14 52.6**	**-1.4**
SANI	**Sanana**	**2.45**	**188**	P	**Pn**	**20 15 00.1**	**-2.3**
NLAI	**Namlea**	**3.68**	**168**	P	**Pn**	**20 15 19.5**	**+0.1**
LUWI	**Luwuk**	**3.85**	**248**	Pn	**Pn**	**20 15 21.9**	**+0.2**
LUWI	**Luwuk**	**3.85**	**248**	P	**Pn**	**20 15 23.4**	**+1.8**
KRAI	**Karang Ratu**	**4.21**	**151**	P	**Pn**	**20 15 27.7**	**+1.0**
MRSI	**Marisa**	**4.41**	**271**	P	**Pn**	**20 15 29.3**	**0.0**
AAI	**Ambon**	**4.45**	**155**	P	**Pn**	**20 15 30.1**	**+0.2**
MSAI	**Masohi**	**4.52**	**145**	P	**Pn**	**20 15 31.5**	**+0.6**
APSI	**Ampana**	**4.87**	**255**	P	**Pn**	**20 15 34.5**	**-1.2**
SWI	**Sorong**	**5.07**	**104**	P	**Pn**	**20 15 39.0**	**+0.6**
	0.1nm28nm,1.0s						
SIJI	**Sorong**	**5.08**	**104**	P	**Pn**	**20 15 38.8**	**+0.3**
	0.1nm15nm,1.1s						
TOLI2	**Tolitoli**	**5.61**	**277**	Pn	**Pn**	**20 15 45.0**	**-0.9**
KDI	**Kendari**	**5.70**	**221**	P	**Pn**	**20 15 47.2**	**+0.1**
FAKI	**Fak Fak**	**6.75**	**119**	Pn	**Pn**	**20 16 00.9**	**-0.7**
TTSI	**Tana Toraja**	**7.36**	**242**	P	**Pn**	**20 16 08.7**	**-1.2**
	18nm,0.6s						
SPSI	**Sidrap Palu**	**7.87**	**237**	P	**Pn**	**20 16 16.5**	**-0.3**
KAPI	**Kappang**	**8.50**	**231**	Pn	**Pn**	**20 16 25.2**	**-0.2**

KNRA	**Kununurra**	**16.14 172**		Pn	**Pn**	**20 18 09.1**	**+0.4**
KNRA				IAmb	IAmb	20 18 26.9	
	comp=Z,31nm,1.3s						
FITZ	**Fitzroy Crossi**	**18.38 182**		P	**P**	**20 18 34.0**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=5.2						
	comp=Z,2.1nm,0.6s						
WB0	**Warramunga Arr**	**21.53 159**		P	**P**	**20 19 08.6**	**-1.6**
WB0				IAmb	IAmb	20 19 20.7	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**21.67 159**		P	**P**	**20 19 10.4**	**-1.4**
	comp=Z,3.4nm,0.4s,baz=336,slow=11,SNR=50						
	comp=Z,3.4nm,0.4s						
WRA	**Warramunga Arr**	**21.67 159**		P	**P**	**20 19 09.1**	**-2.7**
COEN	**Coen**	**21.93 131**		P	**P**	**20 19 14.6**	**0.0**
COEN				IAmb	IAmb	20 19 37.5	
	comp=Z,28nm,1.4s						
AS31	**Alice Springs**	**25.01 163**		P	**P**	**20 19 44.1**	**-0.6**
ASAR	**Alice Springs**	**25.01 163**		P	**P**	**20 19 45.0**	**+0.3**
	comp=Z,3.7nm,0.4s,baz=344,slow=11,SNR=48						
	comp=Z,3.7nm,0.4s						
ASAR	**Alice Springs**	**25.01 163**		P	**P**	**20 19 43.2**	**-1.5**
FORT	**Forrest**	**31.04 177**		P	**P**	**20 20 38.4**	**0.0**
FORT				IAmb	IAmb	20 21 04.9	
	comp=Z,13nm,1.3s						
BBOO	**Buckleboo**	**34.27 165**		P	**P**	**20 21 06.6**	**0.0**
STKA	**Stephens Creek**	**35.19 157**		P	**P**	**20 21 14.1**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=334,slow=9.1,SNR=6.2						
	comp=Z,1.6nm,0.4s						
INU	**Inuyama**	**36.18 15**		P	**P**	**20 21 23.2**	**+0.1**
JGF	**Kuroka**	**36.50 15**		P	**P**	**20 21 26.5**	**+0.6**
JGF				IAmb	IAmb	20 21 47.7	
	comp=Z,11nm,1.2s						
KSRS	**Korea Array**	**36.91 2**		P	**P**	**20 21 28.7**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=179,slow=9.6,SNR=2.1						
	comp=Z,1.0nm,0.8s						
MJAR	**Matsushiro Arr**	**37.62 16**		P	**P**	**20 21 34.1**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=188,slow=8.9,SNR=5.6						
	comp=Z,0.7nm,0.6s						
MJAR	**Matsushiro Arr**	**37.62 16**		P	**P**	**20 21 34.6**	**-0.6**
MJAR				IAmb	IAmb	20 21 53.1	
	comp=Z,11nm,1.5s						
ARMA	**Armidale**	**38.95 144**		P	**P**	**20 21 46.9**	**+0.1**
ARMA				IAmb	IAmb	20 22 12.1	
	comp=Z,18nm,1.4s						
USRK	**Ussuriysk Ar.**	**43.91 6**		P	**P**	**20 22 27.4**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=209,slow=8.1,SNR=3.1						
	comp=Z,3.1nm,0.6s						
ULN	**Ulanbaatar**	**50.17 343**		P	**P**	**20 23 16.4**	**+0.4**
SONM	**Songino Array**	**50.34 343**		P	**P**	**20 23 17.8**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=155,slow=8.6,SNR=8.5						
	comp=Z,0.9nm,0.7s						
SONM	**Songino Array**	**50.34 343**		P	**P**	**20 23 17.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**58.65 22**		P	**P**	**20 24 19.2**	**+1.9**
PETK	**Petropavlovsk-**	**58.65 22**		P	**P**	**20 24 19.4**	**+2.1**
	comp=Z,4.7nm,0.6s,baz=176,slow=4.7,SNR=19						
	comp=Z,4.7nm,0.6s						
PETK	**Petropavlovsk-**	**58.65 22**		P	**P**	**20 24 19.1**	**+1.8**
MKAR	**Makanchi Array**	**60.09 327**		P	**P**	**20 24 27.3**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=122,slow=7.7,SNR=44						
	comp=Z,1.2nm,0.3s						
MAKZ	**Makanchi**	**60.27 326**		P	**P**	**20 24 28.4**	**-0.2**
MAKZ				IAmb	IAmb	20 24 33.1	
	comp=Z,2.5nm,1.1s						
KDJ	**Kajisay**	**60.60 320**		P	**P**	**20 24 30.9**	**-0.3**
KDJ				IAmb	IAmb	20 24 36.5	
	comp=Z,4.4nm,1.3s						
YAK	**Yakutsk**	**61.54 2**		P	**P**	**20 24 37.2**	**+0.3**
MA2	**Magadan**	**62.02 14**		P	**P**	**20 24 40.6**	**+0.4**
MA2				IAmb	IAmb	20 24 43.2	
	comp=Z,3.8nm,0.8s						
ZALV	**Zalesovo Beam**	**63.39 334**		P	**P**	**20 24 48.6**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=123,slow=5.5,SNR=4.2						
	comp=Z,0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**63.39 334**		P	**P**	**20 24 50.6**	**+1.2**
KURBB	**Kurchatov Arra**	**64.35 328**		P	**P**	**20 24 55.4**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=129,slow=6.2,SNR=26						
	comp=Z,1.9nm,0.7s						
KURK	**Kurchatov**	**64.35 329**		P	**P**	**20 24 55.3**	**-0.6**
KURK				IAmb	IAmb	20 24 57.6	
	comp=Z,3.9nm,0.9s						
KKAR	**Karatay Array**	**65.42 318**		P	**P**	**20 25 02.7**	**-0.3**
BVAR	**Borovoye Array**	**69.91 328**		P	**P**	**20 25 31.1**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=109,slow=8.0,SNR=3.7						
	comp=Z,1.1nm,0.8s						
TIXI	**Tiksi**	**71.17 1**		P	**P**	**20 25 38.3**	**0.0**
TIXI				IAmb	IAmb	20 25 46.8	
	comp=Z,5.0nm,1.4s						
AB31	**Akbulak array**	**74.49 321**		P	**P**	**20 25 58.3**	**-0.2**
ABKAR	**Akbulak array**	**74.49 321**		P	**P**	**20 25 58.5**	**0.0**
SDPT	**Sand Point**	**80.16 34**		P	**P**	**20 26 31.1**	**+1.0**
K15K	**Wolf Creek Mou**	**81.41 27**		P	**P**	**20 26 38.3**	**+1.7**
K15K				IAmb	IAmb	20 26 40.2	
	comp=Z,4.8nm,0.8s						
RAYN	**Ar Rayn**	**81.45 294**		P	**P**	**20 26 37.5**	**-0.3**
J16K	**Anvik River**	**82.08 26**		P	**P**	**20 26 41.9**	**+1.7**
GEVA	**Gevas**	**84.48 308**		P	**P**	**20 26 54.1**	**+0.7**
GEVA				IAmb	IAmb	20 27 00.6	
	comp=Z,6.5nm,1.2s						
IMAR	**Indian Mountai**	**85.53 24**		P	**P**	**20 26 58.9**	**+1.1**
ILAR	**Eielson Array**	**88.27 25**		P	**P**	**20 27 10.3**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=259,slow=5.3,SNR=2.8						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**123.53 286**		PKP	**PKiKP**	**20 33 18.9**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=181,slow=3.2,SNR=2.5						

IDC ***22*** *20:17:45.7±1.3, 5.°87N×127.°26E, h0km, mb3.7/8, mbtmp3.7/9, ML3.9/1, MS4.6/1, Error ellipse: s-maj=62.0km s-min=17.2km az=65.0*
NEIC ***22*** *20:17:50.6±1.8, 5.°49N±0.°06×127.°0E±0.°1, h40km±9km, mb4.1/8, Error ellipse: s-maj=15.1km s-min=9.4km az=96.0*

ISC 22 20:17:51.2±0.9, **5.°40N**±0.°08×**127.°0E**±0.°1, **h50**km, **n25,**
σ1§**92**/25, **mb3.8**/12, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.16**	**320**	Pn	**Pn**	**20 18 23.6**	**-1.2**
	46nm,0.3s,baz=243,slow=16,SNR=4.0						
DAV				Sn	**Sn**	**20 18 54.9**	**+4.5**
	40nm,0.3s,baz=99,slow=9.6,SNR=3.9						
	92nm,0.4s						
DAV	**Davao City (W)**	**2.16**	**320**		**Pn**	**20 18 22.3**	**-2.5**
DAV				Sn	**Sn**	**20 18 49.0**	**-1.4**
TOLI2	**Tolitoli**	**7.51**	**236**	Pn	**Pn**	**20 19 35.3**	**-2.8**
MYLDM	**Lahad Datu**	**8.44**	**269**	Pn	**Pn**	**20 19 51.2**	**+0.3**
KNRA	**Kununurra**	**21.02**	**175**		**P**	**20 22 32.1**	**+1.4**
FITZ	**Fitzroy Crossi**	**23.39**	**183**	P	**P**	**20 22 59.5**	**+3.8**
	2.9nm,0.9s,baz=347,slow=12,SNR=1.8						
	2.9nm,0.9s						
WB0	**Warramunga Arr**	**26.05**	**164**	P	**P**	**20 23 21.5**	**+1.5**
WRA	**Warramunga Arr**	**26.20**	**164**	P	**P**	**20 23 25.9**	**+4.5**
	0.8nm,0.7s,baz=345,slow=10,SNR=7.4						
	0.8nm,0.7s						
AS31	**Alice Springs**	**29.67**	**167**	P	**P**	**20 23 51.8**	**-0.5**
ASAR	**Alice Springs**	**29.67**	**167**	P	P	20 23 58.5	+6.1
	0.3nm,0.6s,baz=346,slow=9.1,SNR=1.5						
	0.3nm,0.6s						
ENH	**Enshi**	**29.73**	**328**	P	**P**	**20 23 52.6**	**-0.2**
ENH				IAmb	IAmb	20 24 03.8	
	comp=Z,10nm,1.5s						
CMAR	**Chiang Mai Arr**	**30.28**	**298**	P	**P**	**20 23 58.6**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=111,slow=8.5,SNR=4.3						
	comp=Z,0.3nm,0.4s						
PALK	**Pallekele**	**46.01**	**275**	LR	LR	20 48 19.8	
	comp=Z,622nm,20.1s,baz=116,slow=40						
MKAR	**Makanchi Array**	**56.34**	**325**	P	**P**	**20 27 27.4**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=119,slow=7.6,SNR=7.8						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**56.34**	**325**	P	**P**	**20 27 26.8**	**-0.3**
MAKZ	**Makanchi**	**56.53**	**324**	P	**P**	**20 27 27.9**	**-0.6**
MAKZ				IAmb	IAmb	20 27 51.4	
	comp=Z,1.9nm,1.4s						
ZALV	**Zalesovo Beam**	**59.22**	**333**	P	**P**	**20 27 47.3**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=122,slow=6.5,SNR=2.6						
	comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**59.22**	**333**	P	**P**	**20 27 46.9**	**-0.2**
KURK	**Kurchatov**	**60.48**	**327**	P	**P**	**20 27 55.4**	**-0.5**
KURK				IAmb	IAmb	20 27 58.8	
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**60.48**	**327**	P	**P**	**20 27 55.5**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=126,slow=6.5,SNR=9.5						
	comp=Z,1.4nm,0.7s						
KKAR	**Karatay Array**	**62.19**	**316**	P	**P**	**20 28 07.2**	**-0.5**
BVAR	**Borovoye Array**	**66.07**	**327**	P	**P**	**20 28 31.6**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=130,slow=8.1,SNR=4.2						
	comp=Z,0.8nm,0.6s						
AB31	**Akbulak array**	**71.02**	**320**	P	**P**	**20 29 03.2**	**-0.6**
ABKAR	**Akbulak array**	**71.02**	**320**	P	**P**	**20 29 03.7**	**-0.1**
F20K	**Avaraart Lake**	**80.11**	**23**	P	**P**	**20 29 55.3**	**-0.2**
F20K				IAmb	IAmb	20 30 17.8	
	comp=Z,1.2nm,1.2s						

IDC ***22*** *20:42:13.3±0.7, 39.°29N×143.°48E, h0km, mb4.0/20, mbtmp4.0/25, ML3.2/4, MS3.7/3, Error ellipse: s-maj=15.6km s-min=15.1km az=136.0*
MOS ***22*** *20:42:13.2±0.8, 39.°38N×143.°60E, h10km, mb4.3/17, Error ellipse: s-maj=9.6km s-min=5.9km az=94.3*
NEIC ***22*** *20:42:15.3±2.3, 39.°38N±0.°08×143.°7E±0.°1, h10km±1km, mb4.4/29, Error ellipse: s-maj=18.0km s-min=12.2km az=117.0*
NIED ***22*** *20:42:16.6, 39.°43N×143.°50E, h41km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.19; Mθθ0.07; Mφφ-0.25; Mrθ0.19; Mθφ-0.31; Mφr1.30; Fault plane solution: M₀1.36000×10¹⁵ NP1: ϕs251.00000°, δ12.00000°, λ153.00000°. NP2:ϕs7.00000°, δ85.00000°, λ79.00000°.*
JMA ***22*** *20:42:16.6±0.2, 39.°4N±0.°7×14.°4E±.°, h41km, MV4.2/34, FAR E OFF SANRIKU*

ISC 22 20:42:15.0±0.5, **39.°40N**±0.°05×**143.°54E**±0.°05, **h11**km, **n139,**
σ1§**44**/142, **mb4.3**/45, **10C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.34**	**278**	P	**Pn**	**20 42 39.1**	**-0.6**
MIYJ				S	**Sn**	**20 42 54.9**	**-2.3**
JTH	**Tanohata**	**1.40**	**293**	*i* P	**Pn**	**20 42 39.8**	**-0.7**
OFUJ	**Ofunato**	**1.48**	**258**	P	**Pn**	**20 42 41.2**	**-0.4**
OFUJ				S	**Sn**	**20 42 59.5**	**-1.5**
JOM	**Ohasama**	**1.74**	**273**	*i* P	**Pn**	**20 42 45.3**	**+0.1**
JMK	**Ichinoseki**	**1.85**	**257**	P	**Pn**	**20 42 46.8**	**+0.1**
JMK				*e*S	**Sn**	**20 43 08.4**	**-1.7**
JIO	**Ouri**	**1.95**	**242**	*i* P	**Pn**	**20 42 47.6**	**-0.4**
JIO				*e*S	**Sn**	**20 43 09.2**	**-3.2**
JRG	**Rokugo**	**2.25**	**271**	P	**Pn**	**20 42 52.6**	**+0.5**
JTM	**Tenmabayashi**	**2.34**	**307**	*e*S	**Sn**	**20 43 20.9**	**-1.4**
JYK	**Kaneyama**	**2.52**	**260**	P	**Pn**	**20 42 56.5**	**+0.7**
JNBK	**Urakawa-nobuka**	**2.94**	**349**	P	**Pn**	**20 43 02.5**	**+0.9**
JOTO	**OTAMA OYAMA**	**3.11**	**235**	P	**Pn**	**20 43 04.6**	**+0.6**
JCH	**Churui**	**3.21**	**358**	P	**Pn**	**20 43 05.1**	**-0.3**
JCH				S	**Sn**	**20 43 40.1**

H11S2	**WAKE ISLAND Hy**	**28.92**	**129**		T		T	21 18 45.3	
	baz=321,slow=76,SNR=6.3								
ENH	**Enshi**	**29.25**	**262**				**P**	**20 48 16.8**	**-0.2**
ENH					IAmb		IAmb	20 48 29.4	
	comp=Z,7.6nm,0.7s								
LZH	**Lanzhou**	**31.39**	**277**	*e*	P		**P**	**20 48 36.6**	**+0.5**
LZH					pmax		pmax		
	comp=Z,13nm,1.3s								
LZDM	**Lanzhou Array**	**31.54**	**276**		P		**P**	**20 48 37.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=72,slow=9.5,SNR=4.9								
	comp=Z,0.4nm,0.3s								
GTA2	**Gaotai**	**33.56**	**284**	*e*	P		**P**	**20 48 55.9**	**+0.9**
GTA2					pmax		pmax		
	comp=Z,8.0nm,0.9s								
KNGR	**Kungurtug, Tuv**	**33.89**	**305**	*i*	P		**P**	**20 48 57.9**	**+0.1**
KNGR					pmax		pmax		
	comp=Z,2.0nm,0.8s								
PZH	**PanZhiHua**	**37.04**	**263**		P		**P**	**20 49 26.5**	**+1.4**
GOMU	**GeErMu**	**38.26**	**281**		P		**P**	**20 49 36.1**	**+0.5**
GOMU					pmax		pmax		
	comp=Z,8.0nm,0.9s								
F15K	**North Star Dit**	**39.31**	**31**		P		**P**	**20 49 44.3**	**+0.6**
DGZ	**Jazzator, Alta**	**40.41**	**304**	*i*	P		**P**	**20 49 53.6**	**+0.4**
DGZ					pmax		pmax		
	comp=Z,6.0nm,0.8s								
ZAA0	**Zalesovo Array**	**41.60**	**310**		P		**P**	**20 50 02.7**	**0.0**
ZALV	**Zalesovo Beam**	**41.60**	**310**		P		**P**	**20 50 02.5**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=90,slow=8.1,SNR=10								
	comp=Z,1.9nm,0.7s								
ZALV	**Zalesovo Beam**	**41.60**	**310**				**P**	**20 50 02.7**	**0.0**
ZALV	**Zalesovo Beam**	**41.60**	**310**	*i*	P		**P**	**20 50 03.2**	**+0.5**
ZALV					pmax		pmax		
	comp=Z,2.0nm,0.7s								
J19K	**Poorman**	**42.79**	**35**		P		**P**	**20 50 13.0**	**+0.7**
J19K					IAmb		IAmb	20 50 15.3	
	comp=Z,8.0nm,1.4s								
LSA	**Lhasa**	**43.69**	**274**		P		**P**	**20 50 18.4**	**-2.2**
CMAR	**Chiang Mai Arr**	**43.73**	**255**		P		**P**	**20 50 20.1**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=47,slow=6.7,SNR=4.2								
	comp=Z,0.3nm,0.4s								
CMAR	**Chiang Mai Arr**	**43.73**	**255**	*ce*	P		**P**	**20 50 21.2**	**+0.8**
CMAR					pmax		pmax		
	comp=Z,1.0nm,0.8s								
IMAR	**Indian Mountai**	**43.77**	**32**		P		**P**	**20 50 21.7**	**+1.5**
MK31	**Makanchi Array**	**44.32**	**300**	*ce*	P		**P**	**20 50 25.7**	**+0.8**
MKAR	**Makanchi Array**	**44.32**	**300**		P		**P**	**20 50 24.9**	**0.0**
	comp=Z,1.7nm,0.7s,baz=82,slow=9.1,SNR=20								
	comp=Z,1.7nm,0.7s								
MKAR	**Makanchi Array**	**44.32**	**300**		P		**P**	**20 50 25.3**	**+0.4**
MKAR	**Makanchi Array**	**44.32**	**300**	*ce*	P		**P**	**20 50 25.3**	**+0.4**
MKAR					pmax		pmax		
	comp=Z,2.0nm,0.8s								
MAKZ	**Makanchi**	**44.53**	**301**				**P**	**20 50 26.8**	**+0.2**
MAKZ					IAmb		IAmb	20 50 42.0	
	comp=Z,5.0nm,1.2s								
MAKZ	**Makanchi**	**44.53**	**301**		P		**P**	**20 50 26.8**	**+0.2**
MAKZ					pmax		pmax		
	comp=Z,5.0nm,1.3s								
E22K	**Anaktuvuk Pass**	**44.73**	**29**		P		**P**	**20 50 28.7**	**+0.8**
E22K					IAmb		IAmb	20 50 42.0	
	comp=Z,7.0nm,1.3s								
KURK	**Kurchatov**	**45.83**	**307**				**P**	**20 50 36.7**	**0.0**
KURK	**Kurchatov**	**45.83**	**307**		P		**P**	**20 50 37.5**	**+0.8**
KURBB	**Kurchatov Arra**	**45.90**	**306**		P		**P**	**20 50 37.5**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=81,slow=8.3,SNR=32								
	comp=Z,3.7nm,0.7s								
H24K	**Noodor Dome**	**46.16**	**32**		P		**P**	**20 50 40.9**	**+1.6**
H24K					IAmb		IAmb	20 51 21.3	
	comp=Z,11nm,1.5s								
IL31		**46.60**	**34**		P		**P**	**20 50 43.4**	**+0.8**
IL31					IAmb		IAmb	20 51 23.2	
	comp=Z,5.4nm,1.2s								
ILAR	**Eielson Array**	**46.60**	**34**		P		**P**	**20 50 44.0**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=260,slow=6.5,SNR=25								
	comp=Z,1.4nm,0.6s								
ILAR	**Eielson Array**	**46.60**	**34**		P		**P**	**20 50 43.4**	**+0.7**
ILAR	**Eielson Array**	**46.60**	**34**		P		**P**	**20 50 44.0**	**+1.3**
BMAR	**Burnt Mountain**	**47.45**	**30**		P		**P**	**20 50 50.6**	**+1.2**
RIDG	**Independent Ri**	**47.55**	**35**		P		**P**	**20 50 50.2**	**0.0**
SCRK	**Sand Creek**	**47.91**	**35**		P		**P**	**20 50 54.0**	**+1.0**
SCRK					IAmb		IAmb	20 51 28.8	
	comp=Z,6.4nm,1.4s								
BCAR	**Beaver Creek A**	**49.00**	**36**				**P**	**20 51 02.9**	**+1.5**
BVAR	**Borovoye Array**	**50.24**	**311**		P		**P**	**20 51 11.4**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=93,slow=10,SNR=7.1								
	comp=Z,1.7nm,0.6s								
HYT	**Haines Junctio**	**51.41**	**38**		P		**P**	**20 51 20.2**	**+0.5**
HYT					IAmb		IAmb	20 51 38.5	
	comp=Z,6.0nm,1.0s								
INK	**Inuvik**	**51.52**	**28**		P		**P**	**20 51 21.4**	**+1.2**
INK					IAmb		IAmb	20 51 22.5	
	comp=Z,2.9nm,1.1s								
INK	**Inuvik**	**51.52**	**28**		P		**P**	**20 51 21.4**	**+1.2**
INK					pmax		pmax		
	comp=Z,3.0nm,1.2s								
H31M	**Peel River**	**51.70**	**31**		P		**P**	**20 51 23.2**	**+1.4**
H31M					IAmb		IAmb	20 51 24.6	
	comp=Z,5.7nm,0.8s								
ARSB	**Arslanbob**	**52.40**	**296**		P		**P**	**20 51 28.2**	**+0.8**
ARSB					IAmb		IAmb	20 51 38.7	
	comp=Z,4.8nm,1.0s								
ARSB	**Arslanbob**	**52.40**	**296**		P		**P**	**20 51 28.3**	**+0.8**
ARSB					pmax		pmax		
	comp=Z,5.0nm,1.0s								
KKAR	**Karatay Array**	**53.41**	**299**		P		**P**	**20 51 35.0**	**+0.3**
KKAR	**Karatay Array**	**53.41**	**299**		P		**P**	**20 51 35.0**	**+0.3**
ARTI	**Arti**	**55.82**	**318**				**P**	**20 51 51.8**	**-0.2**
ARTI	**Arti**	**55.82**	**318**	*d*	P		**P**	**20 51 52.8**	**+0.9**
ARTI								20 53 54.8	
ARTI					S		**S**	**20 59 38.8**	**+0.1**
ARTI					SS		**SS**	**21 03 22.1**	**-1.6**
AB31	**Akbulak array**	**57.71**	**310**		P		**P**	**20 52 05.4**	**0.0**
AB31					IAmb		IAmb	20 52 15.8	
	comp=Z,2.6nm,0.6s								
ABKAR	**Akbulak array**	**57.71**	**310**		P		**P**	**20 52 05.1**	**-0.4**
WB0	**Warramunga Arr**	**59.48**	**190**		P		**P**	**20 52 17.0**	**-1.0**
WRA	**Warramunga Arr**	**59.66**	**190**		P		**P**	**20 52 18.0**	**-1.2**
	comp=Z,1.7nm,0.6s,baz=8.0,slow=7.0,SNR=18								
	comp=Z,1.7nm,0.6s								
WRA	**Warramunga Arr**	**59.66**	**190**		P		**P**	**20 52 17.9**	**-1.4**
RES	**Resolute Bay**	**59.89**	**15**		P		**P**	**20 52 20.4**	**+0.2**
RES					IAmb		IAmb	20 52 32.6	
	comp=Z,1.3nm,0.8s								
RES	**Resolute Bay**	**59.89**	**15**		P		**P**	**20 52 20.4**	**+0.2**
RES					pmax		pmax		
	comp=Z,1.0nm,0.8s								
YKA	**Yellowknife Ar**	**60.92**	**31**		P		**P**	**20 52 28.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=306,slow=7.1,SNR=8.4								
	comp=Z,0.4nm,0.6s								
YKA	**Yellowknife Ar**	**60.92**	**31**	*ce*	P		**P**	**20 52 28.7**	**+1.2**
YKA					pmax		pmax		
	comp=Z,1.0nm,0.6s								
AS31	**Alice Springs**	**63.38**	**190**		P		**P**	**20 52 43.2**	**-1.2**
ASAR	**Alice Springs**	**63.38**	**190**		P		**P**	**20 52 44.0**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=5.8,slow=5.0,SNR=9.4								
	comp=Z,0.7nm,0.7s								
ASAR	**Alice Springs**	**63.38**	**190**		P		**P**	**20 52 43.3**	**-1.1**
ILON	**Igloolik, Nuna**	**66.53**	**16**		P		**P**	**20 53 03.7**	**-0.6**
ILON					IAmb		IAmb	20 53 05.1	
	comp=Z,2.3nm,0.9s								
OBN	**Obninsk**	**67.20**	**323**	*e*	P		**P**	**20 53 09.9**	**+1.1**
OBN				*e*				20 53 38.9	
OBN				*e*				20 55 37.6	
OBN					pmax		pmax		
	comp=Z,5.0nm,1.2s								
FINES	**FINESS Array B**	**67.50**	**333**		P		**P**	**20 53 11.1**	**+0.5**
	comp=Z,3.8nm,1.0s,baz=36,slow=7.1,SNR=6.5								
	comp=Z,3.8nm,1.0s								
FINES	**FINESS Array B**	**67.50**	**333**		P		**P**	**20 53 10.5**	**-0.1**
KIV	**Kislovodsk**	**70.61**	**311**	*e*	P		**P**	**20 53 31.7**	**+1.3**
KIV					pmax		pmax		
	comp=Z,6.0nm,1.0s								
KBZ	**Khabaz**	**70.62**	**311**		P		**P**	**20 53 31.2**	**+0.9**
	comp=Z,2.2nm,0.9s,baz=53,slow=3.7,SNR=4.4								
	comp=Z,2.2nm,0.9s								
NVAR	**Mina Array Bea**	**72.25**	**55**		P		**P**	**20 53 41.5**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=283,slow=5.7,SNR=6.4								
	comp=Z,0.9nm,0.8s								
HFS	**Hagfors**	**72.61**	**336**		P		**P**	**20 53 43.0**	**+1.0**
	comp=Z,6.1nm,1.0s,baz=62,slow=7.4,SNR=9.8								
	comp=Z,6.1nm,1.0s								
HFS	**Hagfors**	**72.61**	**336**		P		**P**	**20 53 43.0**	**+1.0**
NOA	**NORSAR Array B**	**72.64**	**338**		P		**P**	**20 53 43.3**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=38,slow=6.1,SNR=4.5								
	comp=Z,0.6nm,0.6s								
ELK	**Elko**	**72.76**	**51**		LR		LR	21 18 49.2	
	comp=Z,124nm,21.6s,baz=84,slow=30								
AKASG	**Malin Array Be**	**73.44**	**323**		P		**P**	**20 53 47.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=44,slow=7.2,SNR=4.2								
	comp=Z,0.5nm,0.5s								
PDAR	**Pinedale Array**	**74.82**	**47**		P		**P**	**20 53 56.9**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=275,slow=1.6,SNR=12								
	comp=Z,0.8nm,0.6s								
PDAR	**Pinedale Array**	**74.82**	**47**		P		**P**	**20 53 56.3**	**+0.7**
ANMO	**Albuquerque**	**81.80**	**51**	*ce*	P		**P**	**20 54 37.0**	**+2.7**
ANMO					pmax		pmax		
	comp=Z,5.0nm,2.5s								
TXAR	**Lajitas Array**	**87.36**	**54**		P		**P**	**20 55 01.6**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=316,slow=4.7,SNR=3.0								
	comp=Z,0.2nm,0.5s								
TXAR	**Lajitas Array**	**87.36**	**54**		P		**P**	**20 55 02.1**	**-0.4**
TXAR	**Lajitas Array**	**87.36**	**54**		P		**P**	**20 55 02.1**	**-0.4**
NVL	**N'lazarevskaya**	**140.11**	**203**	*e*	PKIKP		**PKPdf**	**21 01 36.9**	**-5.5**
NVL					pmax		pmax		
	comp=Z,9.0nm,0.8s								

*IDC **22** 21:05:09.6±0.7,21°.94S×175°.32W,h0km,mb4.1/12, mbtmp4.0/13,ML3.3/1,MS3.8/11,Error ellipse: s-maj=31.7km s-min=19.1km az=139.0*
*NEIC **22** 21:05:13.8±1.6,21°.8S±0°.1×175°.0W±0°.1,h35km±2km, mb4.7/22,Error ellipse: s-maj=25.2km s-min=14.0km az=136.0*

ISC 22 21:05:14.1±0.6,21°.8S±0°.1×175°.2W±0°.1,h33km,n68, σ1°12/51,mb4.6/24,MS3.9/11,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NIUE	**Niue**	**5.69**	**62**		Pn	Pn	21 06 24.6	-12
RAR	**Rarotonga**	**14.40**	**90**		Pn	Pn	21 08 24.3	-11
	3.7nm,0.3s,baz=287,slow=11,SNR=7.7							
RAR					Sn	Sn	21 10 41.2	-33
	1.0nm,0.3s,baz=22,slow=18,SNR=1.4							
RAR					LR	LR	21 13 31.5	
	comp=Z,155nm,19.5s,baz=273,slow=35							
RAR	**Rarotonga**	**14.40**	**90**			Pn	21 08 22.3	-13
DZM	**Mont Dzumac**	**17.00**	**266**			**P**	**21 09 12.4**	**+1.3**
URZ	**Urewera**	**17.64**	**200**		P	**Pn**	**21 09 15.1**	**-2.1**
	0.1nm,0.3s,baz=351,slow=7.0,SNR=3.4							
URZ					S	Sn	21 12 17.4	-15
	9.2nm,1.0s,baz=356,slow=16,SNR=1.8							
	4.7nm,0.9s							
BKZ	**Black Stump Fm**	**18.67**	**200**		P	**Pn**	**21 09 29.0**	**-0.8**
CTZ	**Chatham Island**	**21.87**	**183**		P	**P**	**21 10 05.2**	**+1.3**
PPT	**Papeete**	**24.52**	**85**		LR	LR	21 17 29.5	
	comp=Z,167nm,20.4s,baz=258,slow=30							
RPZ	**Rata Peaks**	**24.61**	**204**		LR	LR	21 20 52.0	
	comp=Z,305nm,18.0s,baz=6.0,slow=38							
HNR	**Honiara**	**26.84**	**293**		LR	LR	21 20 40.0	
	comp=Z,5.0nm,19.2s,baz=222,slow=35							
ARMA	**Armidale**	**30.86**	**247**		P	**P**	**21 11 28.8**	**+1.2**
ARMA					IAmb	IAmb	21 11 56.1	
	comp=Z,21nm,1.5s							
CTAO	**Charters Tower**	**35.94**	**266**		P	**P**	**21 12 12.6**	**+0.8**
CTAO					IAmb	IAmb	21 12 15.7	
	comp=Z,16nm,1.1s							
STKA	**Stephens Creek**	**39.57**	**246**		P	**P**	**21 12 42.4**	**0.0**
	comp=Z,0.9nm,0.3s,baz=110,slow=15,SNR=4.9							
STKA					LR	LR	21 28 23.7	
	comp=Z,172nm,18.2s,baz=151,slow=35							
	comp=Z,0.9nm,0.3s							
BBOO	**Buckleboo**	**44.29**	**245**		P	**P**	**21 13 20.1**	**-0.8**
AS31	**Alice Springs**	**46.74**	**258**		P	**P**	**21 13 40.2**	**-0.3**
ASAR	**Alice Springs**	**46.74**	**258**		P	**P**	**21 13 40.4**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=80,slow=6.2,SNR=55							
ASAR					PcP	**PcP**	**21 15 14.4**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=94,slow=5.1,SNR=4.9							
ASAR					LR	LR	21 32 45.9	
	comp=Z,204nm,18.3s,baz=122,slow=36							
	comp=Z,3.8nm,0.9s							
ASAR	**Alice Springs**	**46.74**	**258**		P	**P**	**21 13 39.3**	**-1.1**
WB0	**Warramunga Arr**	**46.97**	**263**		P	**P**	**21 13 41.7**	**-0.5**
WB0					IAmb	IAmb	21 13 47.3	
	comp=Z,6.5nm,0.8s							
WRA	**Warramunga Arr**	**46.98**	**263**		P	**P**	**21 13 42.1**	**-0.3**
	comp=Z,4.3nm,0.7s,baz=98,slow=8.6,SNR=37							
	comp=Z,4.3nm,0.7s							
FORT	**Forrest**	**51.15**	**247**		P	**P**	**21 14 13.3**	**-0.8**
FORT					IAmb	IAmb	21 14 14.4	
	comp=Z,6.9nm,0.7s							
GUMO	**Guam**	**52.65**	**308**		LR	LR	21 34 20.7	
	comp=Z,52nm,21.0s,baz=88,slow=33							
KNRA	**Kununurra**	**53.15**	**266**		P	**P**	**21 14 28.9**	**-0.2**
SOEI	**Soe**	**59.12**	**272**		P	**P**	**21 15 13.1**	**+1.1**
BATI	**Baumata**	**59.53**	**271**		LR	LR	21 39 35.6	
	comp=Z,185nm,21.2s,baz=126,slow=35							
PSA00	**Pilbara Seismi**	**59.88**	**257**		P	**P**	**21 15 16.5**	**-0.6**
PSA00					IAmb	IAmb	21 15 25.3	
	comp=Z,4.8nm,1.2s							
MORW	**Morawa**	**61.71**	**248**		P	**P**	**21 15 29.0**	**-0.4**
MORW					IAmb	IAmb	21 15 44.3	
	comp=Z,6.7nm,1.2s							
GIRL	**Giralia**	**64.68**	**254**		P	**P**	**21 15 48.7**	**-0.4**
KAPI	**Kappang**	**64.97**	**275**		LR	LR	21 45 25.9	
	comp=Z,44nm,19.1s,baz=164,slow=37							
QSPA	**South Pole Qui**	**68.24**	**180**		P	**P**	**21 16 11.5**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=357,slow=3.1,SNR=5.2							
	comp=Z,4.7nm,0.8s							
MJAR	**Matsushiro Arr**	**72.83**	**322**		P	**P**	**21 16 39.5**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=160,slow=5.1,SNR=1.6							
	comp=Z,1.0nm,0.8s							
MJAR	**Matsushiro Arr**	**72.83**	**322**		P	**P**	**21 16 39.0**	**-0.6**
MAJO	**Matsushiro**	**72.83**	**322**		P	**P**	**21 16 39.5**	**-0.1**
MAJO					IAmb	IAmb	21 16 56.6	
	comp=Z,11nm,1.4s							
LPIG	**La Paz**	**77.90**	**58**		LR	LR	21 47 15.1	
	comp=Z,72nm,18.3s,baz=31,slow=32							
PETK	**Petropavlovsk-**	**78.25**	**344**		P	**P**	**21 17 10.1**	**-0.1**
	comp=Z,4.2nm,0.8s,baz=120,slow=8.8,SNR=4.3							
	comp=Z,4.2nm,0.8s							
PETK	**Petropavlovsk-**	**78.25**	**344**		P	**P**	**21 17 09.5**	**-0.7**
NVAR	**Mina Array Bea**	**80.26**	**42**		P	**P**	**21 17 25.1**	**+3.2**
	comp=Z,1.1nm,0.8s,baz=244,slow=7.0,SNR=7.1							
	comp=Z,1.1nm,0.8s							
KDAK	**Kodiak Island**	**81.55**	**12**		LR	LR	21 46 28.6	
	comp=Z,92nm,21.4s,baz=43,slow=30							
N15K	**Kwethluk River**	**82.64**	**8**		P	**P**	**21 17 32.3**	**-1.3**
N15K					IAmb	IAmb	21 17 44.1	
	comp=Z,19nm,1.5s							
H03S2	**Juan Fernandez**	**83.11**	**124**		T	T	22 49 18.5	
	baz=247,slow=75,SNR=41							
H03S1	**Juan Fernandez**	**83.12**	**124**		T	T	22 49 19.6	
	baz=247,slow=75,SNR=42							
H03S3	**Juan Fernandez**	**83.12**	**124**		T	T	22 49 18.4	
	baz=247,slow=75,SNR=36							
H03N2	**Juan Fernandez**	**83.25**	**123**		T	T	22 49 28.8	
	baz=258,slow=72,SNR=14							
H03N3	**Juan Fernandez**	**83.25**	**123**		T	T	22 49 35.0	
	baz=258,slow=72,SNR=14							
H03N1	**Juan Fernandez**	**83.26**	**123**		T	T	22 49 27.8	
	baz=258,slow=72,SNR=18							
G08A	**Pilot Rock**	**84.14**	**36**		P	**P**	**21 17 40.7**	**-1.2**
G08A					IAmb	IAmb	21 17 55.4	
	comp=Z,5.7nm,1.0s							
K15K	**Wolf Creek Mou**	**84.55**	**6**		P	**P**	**21 17 43.6**	**+0.2**
KLR	**Kul'dur**	**85.00**	**328**		LR	LR	21 54 13.9	
	comp=Z,49nm,18.1s,baz=359,slow=35							
SUA	**Susitna One**	**85.32**	**12**		P	**P**	**21 17 46.5**	**-0.9**
SUA					IAmb	IAmb	21 18 04.1	
	comp=Z,9.0nm,1.1s							
K17K	**Iditarod**	**85.33**	**8**		P	**P**	**21 17 46.7**	**-0.6**
K17K					IAmb	IAmb	21 17 57.9	
	comp=Z,5.5nm,1.1s							
J16K	**Anvik River**	**85.62**	**7**		P	**P**	**21 17 47.9**	**-0.8**
J16K					IAmb	IAmb	21 18 07.9	
	comp=Z,12nm,1.4s							
TXAR	**Lajitas Array**	**85.63**	**56**		P	**P**	**21 17 52.4**	**+2.7**
	comp=Z,0.4nm,0.9s,baz=210,slow=4.5,SNR=2.7							
	comp=Z,0.4nm,0.9s							
TXAR	**Lajitas Array**	**85.63**	**56**		P	**P**	**21 17 48.1**	**-1.6**
PDAR	**Pinedale Array**	**88.19**	**42**		P	**P**	**21 18 04.0**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=234,slow=5.3,SNR=5.1							
	comp=Z,0.3nm,0.8s							
IMAR	**Indian Mountai**	**89.06**	**9**		P	**P**	**21 18 04.4**	**-0.9**
ILAR	**Eielson Array**	**89.07**	**12**		P	**P**	**21 18 04.9**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=239,slow=5.1,SNR=5.2							
	comp=Z,0.6nm,1.0s							
CMAR	**Chiang Mai Arr**	**92.99**	**289**		P	**P**	**21 18 26.4**	**+1.8**
	comp=Z,0.9nm,0.7s,baz=115,slow=3.1,SNR=10							
	comp=Z,0.9nm,0.7s							
CMAR	**Chiang Mai Arr**	**92.99**	**289**			**P**	**21 18 25.6**	**+1.0**
YKA	**Yellowknife Ar**	**96.66**	**24**		P	**P**	**21 18 40.1**	**-0.3**
	comp=Z,0.1nm,0.7s,baz=248,slow=4.5,SNR=1.6							
	comp=Z,0.1nm,0.7s							
MKAR	**Makanchi Array**	**113.99**	**313**		PKP	**PKiKP**	**21 23 48.9**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=99,slow=1.4,SNR=4.3							
MKAR	**Makanchi Array**	**113.99**	**313**			**PKiKP**	**21 23 48.2**	**-1.4**
BVAR	**Borovoye Array**	**121.76**	**320**		PKP	**PKPdf**	**21 24 04.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=144,slow=1.4,SNR=5.6							
MARD	**Mardin**	**145.33**	**305**			**PKPbc**	**21 24 48.2**	**-0.5**
AKASG	**Malin Array Be**	**145.41**	**332**		PKPbc	**PKPbc**	**21 24 47.9**	**-0.5**
	comp=Z,3.1nm,0.5s,baz=41,slow=4.2,SNR=19							
AKBB	**Malin Array Si**	**145.41**	**332**			**PKPbc**	**21 24 46.4**	**-2.0**
ARPR	**Arapgir-MALATY**	**146.58**	**309**		PKPdf	**PKPdf**	**21 24 50.9**	**-0.1**
BRTR	**Keskin Array B**	**149.64**	**313**		PKPbc	**PKiKP**	**21 25 01.1**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=100,slow=3.0,SNR=14							
BRTR	**Keskin Array B**	**149.64**	**313**			**PKPbc**	**21 24 59.4**	**-1.3**
MMAI	**Mount Meron Ar**	**150.72**	**299**		PKPbc	**PKiKP**	**21 25 04.3**	**+0.3**
	comp=Z,7.8nm,0.9s,baz=40,slow=11,SNR=4.9							

*IDC **22** 21:26:43.8±1.3,30°.77S×176°.62W,h0km,mb4.3/5, mbtmp4.2/7,ML3.7/2,MS3.5/1,Error ellipse: s-maj=34.9km s-min=28.7km az=144.0*
*NEIC **22** 21:26:47.5±2.4,30°.6S±0°.1×176°.9W±0°.2,h10km±2km, mb4.3/9,Error ellipse: s-maj=36.3km s-min=7.4km az=58.0*

ISC 22 21:26:49.4±1.1,30°.77S±0°.07×176°.8W±0°.1,h35km,n24, σ1°30/29,mb4.5/9,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.78**	**328**		Pn	**Pn**	**21 27 16.3**	**-1.3**
	122nm,0.3s,baz=284,slow=21,SNR=3.6							
RAO					Sn	**Sn**	**21 27 37.4**	**-1.6**
	350nm,0.3s,baz=95,slow=22,SNR=9.6							
RAO					LR	LR	21 27 43.0	
	comp=Z,124nm,19.1s,baz=128,slow=32							
RAO	**Raoul Island**	**1.78**	**328**			**Pn**	**21 27 16.2**	**-1.3**
RAO					Sn	**Sn**	**21 27 37.0**	**-2.0**
URZ	**Urewera**	**8.98**	**212**		Pn	**Pn**	**21 28 54.3**	**-2.2**
	0.8nm,0.3s,baz=269,slow=5.0,SNR=6.8							
URZ					Sn	**Sn**	**21 30 34.8**	**-1.6**
	1.1nm,0.3s,baz=27,slow=23,SNR=7.5							
	3.0nm,0.5s							
THZ	**Tophouse**	**13.72**	**214**		Pn	**Pn**	**21 29 59.7**	**-1.8**
DZM	**Mont Dzumac**	**17.28**	**296**		P	**P**	**21 30 50.0**	**+0.7**
	0.3nm,0.3s,baz=106,slow=15,SNR=3.4							
	3.7nm,0.8s							
DZM	**Mont Dzumac**	**17.28**	**296**		P	**P**	**21 30 50.3**	**+1.1**
DZM					IAmb	IAmb	21 30 58.8	
	comp=Z,15nm,1.2s							
CTA	**Charters Tower**	**34.84**	**279**		P	**P**	**21 33 39.1**	**+1.9**
	comp=Z,8.2nm,1.0s,baz=90,slow=12,SNR=2.6							
CTA					LR	LR	21 46 47.3	
	comp=Z,65nm,18.1s,baz=102,slow=34							
	comp=Z,8.2nm,1.0s							
CTAO	**Charters Tower**	**34.84**	**279**		P	**P**	**21 33 39.1**	**+1.9**
STKA	**Stephens Creek**	**35.37**	**257**		P	**P**	**21 33 44.0**	**+2.3**
	comp=Z,3.9nm,0.7s,baz=92,slow=9.4,SNR=7.3							
	comp=Z,3.9nm,0.7s							
STKA	**Stephens Creek**	**35.37**	**257**			**P**	**21 33 43.8**	**+2.1**
BBOO	**Buckleboo**	**39.83**	**254**		P	**P**	**21 34 18.5**	**-0.9**
BBOO					IAmb	IAmb	21 34 21.3	
	comp=Z,13nm,1.1s							

ISC 22 22:02:05.8±0.5,**2°34N**±0.06×**127°17E**±0.08,**h53**km,**n47**, σ1§**00**/49,**mb4.2**/19,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.57**	**173**	**Pn**	**Pn**	**22 02 30.6**	**-0.8**
TNTI				Sn	**Sn**	**22 02 50.5**	**-0.1**
TNTI	**Ternate**	**1.57**	**173**	P	**Pn**	**22 02 31.0**	**-0.4**
MNI	**Manado**	**2.49**	**249**	P	**Pn**	**22 02 45.1**	**+1.1**
GTOI	**Gorontalo**	**4.49**	**248**	P	**Pn**	**22 03 13.3**	**+2.0**
SANI	**Sanana**	**4.52**	**195**	P	**Pn**	**22 03 11.8**	**+0.1**
SIJI	**Sorong**	**5.19**	**128**	P	**Pn**	**22 03 23.3**	**+2.3**
	3.2nm,0.3s,baz=166,slow=22,SNR=8.7						
SIJI				LR	LR	22 05 50.9	
	comp=Z,79nm,18.7s,baz=238,slow=43 7.9nm,0.3s						
LUWI	**Luwuk**	**5.53**	**233**	Pn	**Pn**	**22 03 25.2**	**-0.4**
MRSI	**Marisa**	**5.54**	**251**	P	**Pn**	**22 03 27.2**	**+1.4**
	0.2nm46nm,0.7s						
TOLI2	**Tolitoli**	**6.50**	**259**	Pn	**Pn**	**22 03 37.5**	**-1.5**
FAKI	**Fak Fak**	**7.29**	**136**	Pn	**Pn**	**22 03 51.3**	**+1.6**
SBUM	**Sibu**	**14.94**	**271**	Pn	**Pn**	**22 05 34.5**	**+0.7**
MTN	**Manton Dam**	**15.59**	**165**		**P**	**22 05 44.7**	**-0.9**
MTN				IAmb	IAmb	22 05 54.2	
	comp=Z,21nm,1.1s						
KNRA	**Kununurra**	**17.97**	**175**	P	**Pn**	**22 06 12.6**	**+0.6**
KNRA				IAmb	IAmb	22 06 23.0	
	comp=Z,36nm,1.5s						
FITZ	**Fitzroy Crossi**	**20.37**	**184**	P	**P**	**22 06 38.6**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=20,slow=11,SNR=2.0 comp=Z,2.5nm,0.6s						
TPUB	**Ta-pu**	**21.78**	**344**	P	**P**	**22 06 51.8**	**-1.6**
WB0	**Warramunga Arr**	**23.09**	**162**	P	**P**	**22 07 05.9**	**-1.3**
WB0				IAmb	IAmb	22 07 09.4	
	comp=Z,5.2nm,0.6s						
WRA	**Warramunga Arr**	**23.24**	**163**	P	**P**	**22 07 07.8**	**-0.8**
	comp=Z,3.0nm,0.5s,baz=342,slow=10,SNR=25 comp=Z,3.0nm,0.5s						
WRA	**Warramunga Arr**	**23.24**	**163**	P	**P**	**22 07 06.3**	**-2.4**
AS31	**Alice Springs**	**26.67**	**166**	P	**P**	**22 07 39.5**	**-0.5**
ASAR	**Alice Springs**	**26.67**	**166**	P	**P**	**22 07 38.8**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=348,slow=7.9,SNR=11						
ASAR				PcP	**PcP**	**22 11 03.6**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=348,slow=2.0,SNR=8.1 comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**26.67**	**166**	P	**P**	**22 07 40.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**31.96**	**302**	P	**P**	**22 08 25.9**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=122,slow=5.6,SNR=4.1 comp=Z,1.2nm,0.3s						
ENH	**Enshi**	**32.45**	**331**	P	**P**	**22 08 31.0**	**-0.2**
KSRS	**Korea Array**	**34.95**	**1**	P	**P**	**22 08 52.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=177,slow=11,SNR=5.8 comp=Z,1.3nm,0.8s						
BBOO	**Buckleboo**	**35.96**	**167**	P	**P**	**22 09 01.4**	**-0.1**
EIDS	**Eidsvold**	**36.00**	**141**	P	**P**	**22 09 02.4**	**+0.4**
STKA	**Stephens Creek**	**36.68**	**159**	P	**P**	**22 09 07.9**	**+0.2**
	comp=Z,5.8nm,0.8s,baz=341,slow=7.7,SNR=12 comp=Z,5.8nm,0.8s						
SONM	**Songino Array**	**48.75**	**341**	P	**P**	**22 10 46.5**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=169,slow=8.9,SNR=6.9 comp=Z,0.9nm,0.8s						
SONM	**Songino Array**	**48.75**	**341**	P	**P**	**22 10 45.5**	**+0.1**
MKAR	**Makanchi Array**	**58.94**	**326**	P	**P**	**22 11 59.9**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=120,slow=7.2,SNR=24 comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**58.94**	**326**	P	**P**	**22 11 59.4**	**-0.4**
MAKZ	**Makanchi**	**59.13**	**325**	P	**P**	**22 12 00.5**	**-0.6**
MAKZ				IAmb	IAmb	22 12 07.9	
	comp=Z,4.0nm,1.4s						
KDJ	**Kajisay**	**59.67**	**319**	P	**P**	**22 12 04.6**	**-0.5**
ZALV	**Zalesovo Beam**	**62.02**	**333**	P	**P**	**22 12 20.6**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=95,slow=11,SNR=4.2 comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**62.02**	**333**	P	**P**	**22 12 19.9**	**-0.6**
KURBB	**Kurchatov Arra**	**63.14**	**328**	P	**P**	**22 12 28.2**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=129,slow=6.2,SNR=26 comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**63.14**	**328**	P	**P**	**22 12 28.1**	**0.0**
KURK				IAmb	IAmb	22 12 29.8	
	comp=Z,1.9nm,0.7s						
BVAR	**Borovoye Array**	**68.72**	**327**	P	**P**	**22 13 02.5**	**-1.4**
	comp=Z,2.9nm,0.8s,baz=104,slow=11,SNR=8.5 comp=Z,2.9nm,0.8s						
BORK	**Borovoye**	**68.76**	**327**	P	**P**	**22 13 04.4**	**+0.2**
BORK				IAmb	IAmb	22 13 05.9	
	comp=Z,3.0nm,0.7s						
TIXI	**Tiksi**	**69.22**	**1**	P	**P**	**22 13 06.3**	**-0.3**
TIXI				IAmb	IAmb	22 13 35.3	
	comp=Z,5.5nm,1.5s						
AB31	**Akbulak array**	**73.50**	**321**	P	**P**	**22 13 32.9**	**0.0**
AB31				IAmb	IAmb	22 13 34.1	
	comp=Z,2.4nm,0.8s						
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**22 13 33.0**	**+0.1**
M14K	**Bethel**	**78.69**	**28**	P	**P**	**22 14 03.9**	**+1.7**
M14K				IAmb	IAmb	22 14 12.5	
	comp=Z,6.2nm,1.1s						
K15K	**Wolf Creek Mou**	**79.30**	**27**	P	**P**	**22 14 07.2**	**+1.6**
L16K	**Owhat River**	**80.10**	**28**	P	**P**	**22 14 10.7**	**+0.8**
L16K				IAmb	IAmb	22 14 37.4	
	comp=Z,3.2nm,1.1s						
RAYN	**Ar Rayn**	**81.43**	**293**	P	**P**	**22 14 17.2**	**-0.7**
ILAR	**Eielson Array**	**86.16**	**25**	P	**P**	**22 14 40.6**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=237,slow=4.8,SNR=4.5 comp=Z,0.1nm,0.5s						

UPP ***22*** *22:09:34.7±0.0,67°.87N×20°.14E,h0km,ML2.6,Confirmed Induced event*

HEL ***22*** *22:09:35.6±0.4,67°.84N×20°.20E,h0km,ML1.1,Suspected explosion*

ISC 22 22:09:34.7±0.9,**67°.83N**±0°.03×**20°.16E**±0°.03,**h0**km,**n17**, σ0§**61**/22,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**29**	P	**Pg**	**22 09 36.8**	**-0.6**
RATU	**Laukkuluspa**	**0.22**	**268**	P	**Pg**	**22 09 38.7**	**-0.1**
RATU				S	**Sg**	**22 09 41.6**	**0.0**
KOVU	**Salmi**	**0.39**	**0**	P	**Pg**	**22 09 42.1**	**-0.2**
NIKU	**Nikkaluokta**	**0.43**	**275**	P	**Pg**	**22 09 42.8**	**-0.1**
LANU	**Lannavaara**	**0.73**	**72**	P	**Pg**	**22 09 48.3**	**-0.3**
LANU	**Lannavaara**	**0.73**	**72**	PG	**Pg**	**22 09 48.9**	**+0.3**
LANU				SG	**Sg**	**22 09 57.2**	**-0.8**
DUNU	**Dundret**	**0.73**	**167**	P	**Pb**	**22 09 49.8**	**-0.5**
SALU	**Saltoluokta**	**0.78**	**235**	P	**Pg**	**22 09 49.5**	**-0.2**
KIF	**Kilpisjarvi**	**1.20**	**11**	PG	**Pg**	**22 09 57.7**	**0.0**
	baz=191						
KIF				smax	smax	22 10 12.7	
	comp=Z,2.1nm,0.2s						
KIF				SG	**Sg**	**22 10 13.0**	**-0.3**
HEF	**Hetta**	**1.43**	**65**	smax	smax	22 10 18.1	
	comp=Z,1.2nm,0.2s						
HEF				SN	**Sn**	**22 10 23.5**	**+2.0**
ERTU	**Ertsjaerv**	**1.51**	**147**	PG	**Pn**	**22 10 02.6**	**-0.4**
ERTU				SN	**Sg**	**22 10 23.3**	**+0.2**
KLF	**Kolari**	**1.58**	**111**	PG	**Pn**	**22 10 03.7**	**-0.3**
KLF				smax	smax	22 10 22.5	
	comp=Z,0.8nm,0.2s						
KLF				SN	**Sg**	**22 10 25.5**	**+0.1**
HARU	**Harads**	**1.71**	**169**	P	**Pn**	**22 10 05.9**	**+0.2**
TRO	**Tromso**	**1.86**	**347**	SG	**Sg**	**22 10 34.4**	**-0.2**
TOF	**Tornio**	**2.41**	**135**	smax	smax	22 10 46.6	
	comp=Z,0.8nm,0.2s						
TOF				SG	**Sb**	**22 10 49.2**	**+0.3**
RNF	**Rovaniemi**	**2.59**	**116**	SG	**Sb**	**22 10 53.5**	**-0.7**
ARA0	**ARCESS Array S**	**2.60**	**46**	SG	**Sb**	**22 10 55.1**	**+0.7**

MEX 22 22:25:45.5±0.6,**18°.86N×104°.48W,h5**km,**MD3.6**,**Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAR	**Ciudad de Arme**	**0.45**	**80**	*eP*	Pg	22 25 53.6	-0.6
CDAR				*eS*	Sg	22 26 00.2	+0.1
CEGR	**Campo Tres**	**0.79**	**48**	*eP*	Pg	22 25 59.3	-1.4
CEGR				*eS*	Sg	22 26 09.8	-1.2
CJM	**Chamela**	**0.83**	**320**	*eP*	Pg	22 26 00.0	-1.4
CJM				*eS*	Sg	22 26 10.6	-1.6
SOMAC	**Volcano de Col**	**1.04**	**50**	*eP*	Pg	22 26 04.1	-1.5
SOMAC				*eS*	Sb	22 26 20.1	-0.3
INCO	**Volcan de Coli**	**1.06**	**51**	*eP*	Pg	22 26 04.2	-1.8
INCO				*eS*	Sg	22 26 20.3	+0.6
MMIG	**Aquila**	**1.22**	**118**	*eP*	Pg	22 26 05.0	-3.8
MMIG				*eS*	Sg	22 26 19.4	-5.3

MOS ***22*** *22:26:39.3±0.9,37°.38N×31°.50E,h11km,mb4.8/37,Error ellipse: s-maj=4.9km s-min=3.1km az=90.0*

IDC ***22*** *22:26:39.2±0.5,37°.34N×31°.53E,h0km,mb4.5/27, mbtmp4.5/42,ML3.9/11,MS3.6/16,Error ellipse: s-maj=10.0km s-min=8.7km az=153.0*

ISK ***22*** *22:26:39.3,37°.40N×31°.48E,h5km,ML4.6/45*

MED_RC ***22*** *22:26:40.0±0.4,37°.23N×31°.43E,h14km±1km,MW4.5/27, Moment Tensor Solution.Mantle waves: s27,c35; Duration: 1§1 Moment tensor: Scale 10¹⁵Nm; Mrr-6.61±.88; Mθθ0.73±.56; Mϕϕ5.88±.53; Mrθ0.32±.74; Mθϕ-1.65±.29; Mϕr3.52±.55; Best double couple: M₀7.38000×10¹⁵ NP1:φs335.00000°,δ32.00000°, λ-106.00000°. NP2:φs173.00000°,δ59.00000°, λ-80.00000°. Principal axes: T 7.1600, Plg14.0000°, Azm256.0000°; N 0.4400, Plg8.0000°, Azm348.0000°; P -7.6000, Plg74.0000°, Azm109.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

AFAD ***22*** *22:26:40.1,37°.38N×31°.48E,h15km±1km,MW4.5*

NEIC ***22*** *22:26:41.7±1.4,37°.41N±0°.04×31°.47E±0°.05,h13km±4km, mb4.7/103,Error ellipse: s-maj=6.7km s-min=4.9km az=206.0*

GII ***22*** *22:26:41.2±0.0,37°.391N±0°.002×31°.446E±0°.001,h0km, Mws4.6,confirmed*

NIC ***22*** *22:26:42.5,37°.26N×31°.44E,h5km±1km,Ml4.5/16*

CFUSG ***22*** *22:26:43.8,37°.91N×30°.97E,h6km,Mb4.0/2,MD3.8/8, MSH3.5/8*

ISC 22 22:26:41.5±0.6,**37°.38N**±0°.02×**31°.48E**±0°.02,**h13**km±3km, **n620,σ1§48/700,mb4.7/117,MS3.6/10,58C-16D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEDI	**Konya, Seydise**	**0.23**	**71**	P	**Pg**	**22 26 45.2**	**-1.3**
SEDI				S	**Sg**	**22 26 49.5**	**-0.4**
SEYD	**Seydisehir-KON**	**0.28**	**84**	Pg	**Pg**	**22 26 46.5**	**-1.0**
MNVG	**Manavgat-Antal**	**0.58**	**185**	Pg	**Pg**	**22 26 52.5**	**-0.4**
MNVG				Sg	**Sb**	**22 27 01.7**	**-0.1**
BCK	**Bucak**	**0.72**	**277**	Pg	**Pg**	**22 26 54.2**	**-1.2**
BCK				Sg	**Sb**	**22 27 05.2**	**-0.5**
BUCA	**Burdur, Bucak-**	**0.74**	**266**	P	**Pg**	**22 26 54.6**	**-1.2**
BUCA				S	**Sg**	**22 27 04.7**	**-0.8**
DOGA	**KONYA_Doganhis**	**0.74**	**11**	P	**Pg**	**22 26 54.2**	**-1.7**
DOGA				S	**Sg**	**22 27 02.8**	**-2.9**
ANTB	**Antalya**	**0.82**	**235**	Pg	**Pg**	**22 26 56.4**	**-0.9**
BAGO	**Egridir - ISPA**	**0.82**	**318**	P	**Pg**	**22 26 56.4**	**-1.1**
BAGO				S	**Sg**	**22 27 07.8**	**-0.5**
ISP	**Isparta**	**0.88**	**301**		**Pg**	**22 26 57.3**	**-1.4**
ISP				Sg	**Sg**	**22 27 10.1**	**-0.1**
ISP	**Isparta**	**0.88**	**301**	Pg	**Pg**	**22 26 57.0**	**-1.6**
ISP				Sg	**Sb**	**22 27 10.7**	**+0.1**
ISP	**Isparta**	**0.88**	**301**	*ePg*	**Pg**	**22 26 57.3**	**-1.4**
ISP	**Isparta**	**0.88**	**301**	P	**Pg**	**22 26 57.2**	**-1.4**
ISP				S	**Sn**	**22 27 11.6**	**-1.0**
KONT	**Konya--Tatoy**	**0.90**	**51**	Pg	**Pg**	**22 26 57.7**	**-1.2**
KONT	**Konya--Tatoy**	**0.90**	**51**	P	**Pg**	**22 26 57.5**	**-1.4**
KONT				S	**Sg**	**22 27 08.7**	**-2.0**
HDMB	**Hadim**	**0.90**	**117**	Pg	**Pg**	**22 26 57.4**	**-1.6**
YVAC	**Isparta, Yalva**	**0.91**	**348**	P	**Pg**	**22 26 57.4**	**-1.8**
ALAN	**Alanya-ANTALYA**	**0.93**	**152**	Pg	**Pg**	**22 26 58.2**	**-1.3**
KORT	**Korkueli**	**0.98**	**248**	Pg	**Pg**	**22 26 59.3**	**-1.1**
KORT	**Korkueli**	**0.98**	**248**	P	**Pg**	**22 26 59.1**	**-1.3**
KORT				P	**Pg**	**22 26 59.4**	**-1.1**
KEMT	**Kemer-ANTALYA**	**1.07**	**224**	Pn	**Pb**	**22 27 00.9**	**-1.0**
LADK	**Ladik-KONYA**	**1.08**	**40**	Pg	**Pb**	**22 27 00.6**	**-1.5**
LADK				Sg	**Sn**	**22 27 17.2**	**-0.2**
SDAG	**Sultandagi-AFY**	**1.15**	**337**	Pn	**Pb**	**22 27 02.1**	**-1.3**
KKBE	**Karaman, Kazim**	**1.17**	**97**	P	**Pb**	**22 27 03.4**	**-0.3**
KKBE				S	**Sb**	**22 27 18.6**	**-0.3**
AFYN	**Afyon-Dinar-K**	**1.18**	**319**	P	**Pb**	**22 27 02.9**	**-1.0**
AFYN				S	**Sn**	**22 27 20.6**	**+0.7**
KDHN	**Kadinhani**	**1.25**	**23**	P	**Pn**	**22 27 03.7**	**-1.1**
KDHN				S	**Sb**	**22 27 19.7**	**-1.4**
UCKU	**Afyonkarahisar**	**1.26**	**358**	P	**Pn**	**22 27 03.3**	**-1.6**
BASM	**Basmaki-Afyon**	**1.26**	**296**	Pn	**Pn**	**22 27 04.2**	**-0.7**
GAZI	**Gazipasa**	**1.32**	**149**	Pn	**Pn**	**22 27 05.9**	**+0.2**
GAZI	**Gazipasa**	**1.32**	**149**	P	**Pn**	**22 27 05.2**	**-0.5**
GAZI				S	**Sb**	**22 27 22.9**	**-0.2**
GAZI	**Gazipasa**	**1.32**	**149**	P	**Pn**	**22 27 05.0**	**-0.7**
GAZI				S	**Sb**	**22 27 23.1**	**+0.1**
KZIL	**AFYON_Kizioren**	**1.38**	**310**	P	**Pn**	**22 27 06.3**	**-0.3**
KZIL				S	**Sn**	**22 27 25.0**	**+0.2**
SHUT	**Suhut-Afyon**	**1.39**	**328**	Pn	**Pn**	**22 27 06.4**	**-0.3**
AKUM	**Antalya-Kumluc**	**1.39**	**221**	P	**Pn**	**22 27 05.9**	**-0.8**
AKUM				S	**Sg**	**22 27 27.1**	**+0.7**
ELL	**Elmali**	**1.41**	**244**		**Pn**	**22 27 06.2**	**-0.8**
ELL	**Elmali**	**1.41**	**244**	Pn	**Pb**	**22 27 07.4**	**-0.3**
ELL	**Elmali**	**1.41**	**244**	P	**Pn**	**22 27 06.2**	**-0.8**
ELL	**Elmali**	**1.41**	**244**	P	**Pn**	**22 27 07.0**	**0.0**
ELL				S	**Sg**	**22 27 26.2**	**-0.7**
ELL				AML	AML	22 27 36.5	
	52nm,0.7s						
ELL				AML	AML	22 27 37.4	
	49nm,0.8s						
KURO	**Afyon-Bolvadin**	**1.42**	**342**	P	**Pn**	**22 27 06.2**	**-1.0**
KURO				S	**Sn**	**22 27 25.4**	**-0.5**
KRMN	**Karaman**	**1.44**	**98**	Pn	**Pn**	**22 27 07.3**	**-0.1**
ALIN	**Konya, Altinte**	**1.44**	**50**	P	**Pn**	**22 27 07.4**	**0.0**
ALIN				S	**Sn**	**22 27 24.5**	**-1.8**
KIZT	**Kizilcal**	**1.53**	**12**	Pn	**Pn**	**22 27 08.6**	**-0.1**
GOLH	**Golhisar**	**1.54**	**265**	P	**Pn**	**22 27 09.6**	**-0.4**
GOLH				S	**Sb**	**22 27 29.9**	**+0.5**
INCE	**Denizli-Bozkur**	**1.55**	**283**	P	**Pn**	**22 27 08.7**	**-0.3**
BYAT	**Afyon-Bayat**	**1.62**	**346**	P	**Pn**	**22 27 09.6**	**-0.3**
KNIK	**Mula-Seydike**	**1.62**	**251**	P	**Pb**	**22 27 10.9**	**-0.4**
CHBY	**Cihanbeyli**	**1.64**	**42**	Pn	**Pn**	**22 27 10.3**	**+0.1**
CTIK	**Konya-Celtik**	**1.66**	**4**	P	**Pn**	**22 27 10.8**	**+0.5**
AFYO	**Afyonkarahisar**	**1.69**	**327**	P	**Pn**	**22 27 11.2**	**+0.3**
DEMR	**Demre-Antalya**	**1.70**	**229**	Pn	**Pn**	**22 27 11.4**	**+0.5**
APMY	**Acipayam-Deniz**	**1.74**	**274**	Pn	**Pn**	**22 27 11.9**	**+0.4**
CAEL	**Denizli, Camel**	**1.74**	**262**	P	**Pb**	**22 27 12.8**	**-0.7**
BOZY	**Bozyazi-Mersin**	**1.75**	**136**	Pn	**Pn**	**22 27 12.1**	**+0.6**
CAME	**Cameli-Denizli**	**1.79**	**257**	Pn	**Pn**	**22 27 12.9**	**+0.6**
TEKE	**Tekeli-Mersin**	**1.80**	**133**	Pn	**Pn**	**22 27 12.8**	**+0.6**
BNAZ	**Uak-Banaz**	**1.81**	**316**	P	**Pn**	**22 27 13.0**	**+0.4**
TEVE	**Tevekalti-Mers**	**1.83**	**120**	Pn	**Pn**	**22 27 13.5**	**+0.7**
YESY	**Yesilyurt**	**1.84**	**77**	Pn	**Pn**	**22 27 13.2**	**+0.2**
PASA	**Karahalli, USA**	**1.85**	**302**	P	**Pn**	**22 27 12.6**	**-0.5**
AKAS	**Kas**	**1.89**	**233**		**Pn**	**22 27 14.0**	**+0.9**
AKAS	**Kas**	**1.89**	**233**	Pn	**Pb**	**22 27 14.8**	**-1.2**
AKAS	**Kas**	**1.89**	**233**	P	**Pb**	**22 27 15.9**	**-0.1**
AKAS				S	**Sg**	**22 27 42.1**	**-0.2**
KSL	**Kastellorizon**	**1.96**	**232**	P	**Pb**	**22 27 16.3**	**-0.7**
KSL	**Kastellorizon**	**1.96**	**232**	P	**Pn**	**22 27 15.6**	**+1.2**
KSL				AML	AML	22 27 50.4	
	31nm,0.7s						
KSL				AML	AML	22 27 53.1	
	11nm,0.7s						
DNIZ	**Denizli-Tavas-**	**1.96**	**278**	P	**Pn**	**22 27 14.4**	**-0.2**
DNZT	**Denizli-Tavas-**	**1.96**	**268**	P	**Pn**	**22 27 15.0**	**+0.4**
YORU	**Yoruktepe-Mers**	**1.97**	**128**	Pn	**Pn**	**22 27 15.4**	**+0.8**
OREN	**Orenkoy-Mersin**	**1.97**	**126**	Pn	**Pn**	**22 27 15.4**	**+0.8**
CIFT	**Cifteler, Eski**	**2.01**	**351**	Pn	**Pn**	**22 27 14.1**	**-1.1**
KEBE	**Keben-Mersin**	**2.01**	**117**	Pn	**Pn**	**22 27 15.6**	**+0.3**
TEPK	**Tepekoy-MERSIN**	**2.02**	**124**	Pn	**Pn**	**22 27 16.4**	**+1.1**
GULN	**MERSIN_Gulnar**	**2.04**	**125**	P	**Pn**	**22 27 14.0**	**-1.6**
GULN				S	**Sn**	**22 27 41.0**	**+0.1**
KULU	**Kulu**	**2.05**	**35**	Pn	**Pn**	**22 27 15.6**	**-0.2**
FETY	**Fethiye**	**2.06**	**250**	P	Pn	22 27 07.0	-8.9
AKK1	**Akkuyu-Mersin**	**2.06**	**126**	Pn	**Pn**	**22 27 16.8**	**+1.0**
AUSIV	**SIVRIHISAR**	**2.06**	**1**	P	**Pn**	**22 27 15.9**	**-0.1**
BECE	**Buyukeceli-Mer**	**2.06**	**126**	Pn	**Pn**	**22 27 16.9**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.07**	**1**	Pn	**Pn**	**22 27 15.9**	**-0.2**
AKK2	**Akkuyu-Mersin**	**2.07**	**126**	Pn	**Pn**	**22 27 16.7**	**+0.7**
YESI	**Yesilovacik-Me**	**2.10**	**124**	Pn	**Pn**	**22 27 17.5**	**+1.2**
IKL	**Isikli**	**2.10**	**122**	Pn	**Pn**	**22 27 17.2**	**+0.8**
KERG	**Konya-Eregli**	**2.10**	**88**	P	**Pn**	**22 27 17.4**	**+0.8**
KERG				S	**Sb**	**22 27 46.3**	**+0.6**
KKUL	**Konya-Kulu**	**2.12**	**32**	P	**Pn**	**22 27 17.4**	**+0.7**
KARG	**Kargicak-Mersi**	**2.14**	**123**	Pn	**Pn**	**22 27 17.7**	**+0.8**
TISA	**Tisan-Mersin**	**2.14**	**124**	Pn	**Pn**	**22 27 18.3**	**+1.4**
SILI	**Silifke-Mersin**	**2.20**	**117**	Pn	**Pn**	**22 27 18.3**	**+0.5**
AKSY	**AKSARAY - Alti**	**2.20**	**54**	P	**Pn**	**22 27 18.8**	**+0.9**
SLFK	**Silifke-Mersin**	**2.21**	**116**	Pn	**Pn**	**22 27 18.3**	**+0.5**
SERE	**Sereflikochisa**	**2.27**	**46**	Pn	**Pn**	**22 27 19.4**	**+0.6**
SRFK	**ereflkohsa**	**2.29**	**49**	P	**Pn**	**22 27 19.4**	**+0.3**
KIZK	**Mersin**	**2.31**	**112**	Pn	**Pn**	**22 27 19.8**	**+0.5**
KIZK	**Mersin**	**2.31**	**112**	P	**Pb**	**22 27 21.8**	**-1.2**
GULA	**Gulagac**	**2.38**	**65**	Pn	**Pn**	**22 27 21.2**	**+0.8**
ALFC	**Alefka**	**2.39**	**158**	P	**Pn**	**22 27 19.5**	**-0.9**
ALFC				S	**Sn**	**22 27 50.7**	**+1.1**
ALFC				AML	AML	22 27 52.9	
	10nm,1.0s						
ALFC				AML	AML	22 27 53.2	
	16nm,0.9s						
BSIR	**Belisirma, Guz**	**2.40**	**67**	P	**Pn**	**22 27 21.6**	**+1.0**
AKMS	**Akamas**	**2.45**	**163**	P	**Pn**	**22 27 20.1**	**-1.2**
AKMS				S	**Sn**	**22 27 51.9**	**+0.8**
AKMS				AML	AML	22 28 04.8	
	16nm,0.9s						
AKMS				AML	AML	22 28 08.6	
	20nm,0.7s						
YER	**Yerkesik**	**2.56**	**266**	P	**Pn**	**22 27 24.0**	**+1.2**
MANT	**Manisa**	**2.57**	**297**		**Pn**	**22 27 22.7**	**-0.3**
KIRS	**Kirsehir-Merke**	**2.60**	**47**	⇑P	**Pn**	**22 27 24.8**	**+1.5**
BORA	**Eskisehir**	**2.63**	**342**		**Pn**	**22 27 24.1**	**+0.3**
TROD	**Troodos**	**2.67**	**155**	P	**Pn**	**22 27 23.9**	**-0.5**
TROD				AML	AML	22 28 19.0	
	12nm,1.5s						
TROD				AML	AML	22 28 19.2	
	6.9nm,0.7s						
XYLS	**Xyliatos**	**2.68**	**151**	P	**Pn**	**22 27 23.9**	**-0.5**
XYLS				S	**Sn**	**22 27 58.5**	**+1.7**
XYLS				AML	AML	22 28 07.9	
	4.4nm,0.5s						
XYLS				AML	AML	22 28 09.6	
	5.6nm,1.0s						
ATHAL	**Athalassa**	**2.71**	**145**	P	**Pn**	**22 27 25.3**	**+0.5**
ATHAL				S	**Sn**	**22 27 59.9**	**+2.3**
ATHAL				AML	AML	22 28 30.8	
	28nm,1.1s						
NATA	**Nata**	**2.74**	**161**	P	**Pn**	**22 27 25.6**	**+0.4**
NATA				AML	AML	22 28 21.0	
	32nm,1.4s						
NATA				AML	AML	22 28 24.3	
	54nm,1.0s						
CSS	**Mathiatis**	**2.84**	**148**		**Pn**	**22 27 26.3**	**-0.2**
CSS	**Mathiatis**	**2.84**	**148**	P	**Pn**	**22 27 26.2**	**-0.4**
CSS				S	**Sn**	**22 28 02.1**	**+1.5**
CSS				AML	AML	22 28 18.6	
	4.6nm,1.0s						
CSS				AML	AML	22 28 19.7	
	4.1nm,1.0s						
CSS	**Mathiatis**	**2.84**	**148**	P	**Pn**	**22 27 27.1**	**+0.5**
BR131	**Keskin Array S**	**2.89**	**35**		**Pn**	**22 27 27.6**	**+0.2**
BR131	**Keskin Array S**	**2.89**	**35**	P	**Pn**	**22 27 27.6**	**+0.2**
BRTR	**Keskin Array B**	**2.89**	**35**	Pn	**Pn**	**22 27 27.2**	**-0.2**
	12nm,0.3s,baz=205,slow=15,SNR=209						
BRTR				Pg	**Pb**	**22 27 34.0**	**+0.9**
	41nm,0.3s,baz=213,slow=16,SNR=42						
BRTR				Sn	**Sn**	**22 28 03.7**	**+1.6**
	26nm,0.3s,baz=138,slow=23,SNR=5.2 48nm,0.5s						
MVOU	**Mavrovouni**	**2.93**	**143**	P	**Pn**	**22 27 27.8**	**0.0**
MVOU				S	**Sn**	**22 28 03.7**	**+0.9**
MVOU				AML	AML	22 28 12.9	
	5.4nm,0.9s						
MVOU				AML	AML	22 28 27.8	
	4.3nm,0.9s						
ARG	**Arkhangelos**	**2.93**	**248**		**Pn**	**22 27 28.8**	**+1.0**
ARG	**Arkhangelos**	**2.93**	**248**	P	**Pn**	**22 27 29.3**	**+1.5**
ARG	**Arkhangelos**	**2.93**	**248**	P	**Pn**	**22 27 28.8**	**+1.0**
ARG	**Arkhangelos**	**2.93**	**248**	P	**Pn**	**22 27 29.2**	**+1.3**
ARG				S	**Sn**	**22 28 05.8**	**+2.8**
ARG				AML	AML	22 28 26.4	
	4.1nm,0.7s						
ARG				AML	AML	22 28 35.2	
	4.3nm,1.4s						

MMLI S Sn 22 29 18.4 +2.4
SLTI Sal'it 5.90 149 P Pn 22 28 10.2 +1.6
SLTI S Sn 22 29 18.4 +2.3
RDO Rodhopi 5.95 311 Pn 22 28 10.2 +0.9
HMDT Nahal Hemdat 6.10 146 P Pn 22 28 12.9 +1.5
HMDT S Sn 22 29 23.3 +2.3
UJAP Al Uja 6.33 148 P Pn 22 28 15.9 +1.4
UJAP S Sn 22 29 28.9 +2.3
JMB Yambol 6.37 325 *i* P Pn 22 28 15.9 +0.8
KDZ Kurdzhali 6.37 314 *i* P Pn 22 28 14.3 -0.8
AMAZ Amatzia 6.48 153 P Pn 22 28 18.4 +1.7
AMAZ S Sn 22 29 32.8 +2.3
DIM Dimitrovgrad 6.51 318 *i* P Pn 22 28 19.3 +2.2
DSI Dead Sea 6.63 150 P Pn 22 28 20.1 +1.5
DSI S Sn 22 29 35.8 +1.8
YTIR Yattir 6.71 152 P Pn 22 28 22.1 +2.3
YTIR S Sn 22 29 38.9 +2.8
RZN Rozhen 6.76 312 *i* P Pn 22 28 21.0 +0.3
ASF Jabal al Asfar 6.84 138 Pn Pn 22 28 21.8 +0.2
2.5nm,0.3s,baz=326,slow=17,SNR=27
ASF Sn Sn 22 29 43.5 +4.0
1.6nm,0.3s,baz=359,slow=20,SNR=4.0
ASF LR LR 22 31 23.3
comp=Z,338nm,20.1s,baz=28,slow=42
4.8nm,0.4s
MSBI Mazada 6.84 151 P Pn 22 28 22.9 +1.3
MSBI S Sn 22 29 41.6 +2.2
KZIT Kziot 6.89 159 P Pn 22 28 23.0 +0.7
KZIT S Sn 22 29 43.1 +2.5
GHAJ Ghor Haditha 6.94 150 Pn Pn 22 28 24.9 +2.1
GHAJ Ghor Haditha 6.94 150 P Pn 22 28 24.4 +1.5
GHAJ S Sn 22 29 44.1 +2.5
ELND Elena 7.01 324 ⇑P Pn 22 28 24.9 +1.0
PLD Plovdiv 7.04 315 *i* P Pn 22 28 26.2 +1.9
MFTR Murfatlar 7.18 342 ⇑P Pn 22 28 27.0 +0.9
IDAN Idan 7.24 153 P Pn 22 28 28.1 +1.0
IDAN S Sn 22 29 51.7 +2.4
ICOR Ion Corvin 7.29 339 ⇑P Pn 22 28 29.6 +2.0
RMNI Mount Ramon 7.29 157 P Pn 22 28 28.4 +0.5
RMNI S Sn 22 29 53.2 +2.7
SEV Sevastopol' 7.35 12 ⇑*i* P Pn 22 28 28.6 +0.1
SEV pmax pmax 22 28 32.9
comp=Z,16nm,0.6s
SEV *i* S Sn 22 29 51.2 -0.5
SEV smax smax 22 29 56.3
comp=N,8.0nm,0.5s
SEV smax smax 22 29 56.3
comp=E,3.0nm,0.5s
YAL Yalta 7.39 15 *e*P Pn 22 28 29.3 +0.3
YAL *e*S Sn 22 29 52.0 -0.6
YAL pmax pmax
comp=Z,81nm,0.5s
YAL smax smax
comp=N,23nm,0.5s
YAL smax smax
comp=E,23nm,0.4s
YAL Yalta 7.39 15 *e*P Pn 22 28 29.3 +0.3
YAL pmax pmax 22 28 33.4
comp=Z,81nm,0.5s
YAL x x 22 29 52.0
YAL smax smax 22 30 00.4
comp=N,23nm,0.5s
YAL smax smax 22 30 00.4
comp=E,23nm,0.4s
MARD Mardin 7.41 88 Pn 22 28 30.8 +1.3
CVDA Cernavoda 7.42 341 ⇑P Pn 22 28 31.2 +1.7
TIRR Tirgusor 7.45 343 ⇓P Pn 22 28 30.4 +0.6
TIRR Tirgusor 7.45 343 Pn 22 28 29.9 +0.1
TIRR Tirgusor 7.45 343 P Pn 22 28 30.4 +0.6
ZFRI Zfri 7.46 155 P Pn 22 28 31.0 +0.9
ZFRI S Sn 22 29 56.9 +2.3
KOPT Kop Dagi 7.53 67 Pn 22 28 32.0 +0.7
LIT Litokhoron 7.54 294 Pn 22 28 32.2 +1.1
LIT Litokhoron 7.54 294 P Pn 22 28 32.2 +1.1
PRNI Paran 7.59 156 P Pn 22 28 32.5 +0.6
PRNI S Sn 22 30 00.2 +2.3
CICN Ciocanesti 7.60 335 ⇓P Pn 22 28 33.2 +1.2
ITM Ithomi 7.62 271 Pn Pn 22 28 32.8 +0.5
ALU Alushta 7.62 16 ⇑*i* P Pn 22 28 34.7 +2.4
ALU *e*S Sn 22 30 01.9 +3.4
ALU pmax pmax
comp=Z,43nm,0.5s
ALU smax smax
comp=N,41nm,0.5s
ALU smax smax
comp=E,13nm,0.4s
ALU Alushta 7.62 16 ⇑*i* P Pn 22 28 34.7 +2.4
ALU pmax pmax 22 28 38.7
comp=Z,43nm,0.5s
ALU *ex* x 22 30 01.9
ALU smax smax 22 30 08.5
comp=N,41nm,0.5s
ALU smax smax 22 30 08.5
comp=E,13nm,0.4s
JURR Jurilovca 7.64 346 ⇑P Pn 22 28 33.3 +0.8
KRMI Paran Flat 7.73 159 P Pn 22 28 33.9 +0.1
KRMI S Sn 22 30 03.8 +2.6
SIM Simferopol' 7.82 14 *e*P Pn 22 28 35.5 +0.5
SIM *e*S Sn 22 30 02.0 -1.4
SIM pmax pmax
comp=Z,92nm,0.7s
SIM smax smax
comp=E,65nm,1.2s
SIM smax smax
comp=N,23nm,0.8s
SIM Simferopol' 7.82 14 *e*P Pn 22 28 37.1 +2.1
SIM pmax pmax 22 28 39.4
comp=Z,65nm,0.6s
SIM *ex* x 22 30 07.3
SIM smax smax 22 30 15.0
comp=N,16nm,0.8s
SIM smax smax 22 30 15.0
comp=E,34nm,0.8s
TPGR Topolog 7.82 344 ⇑P Pn 22 28 35.7 +0.7
HRFI Mount Harif 7.90 157 P Pn 22 28 36.4 +0.3
HRFI S Sn 22 30 07.9 +2.6
VAY Valandovo 7.95 302 *i* Pn Pn 22 28 43.2 +6.5
SUDU Sudak 7.96 18 ⇑*i* P Pn 22 28 36.3 -0.6
SUDU *e*S Sn 22 30 06.5 -0.3
SUDU pmax pmax
comp=Z,56nm,0.4s
SUDU Sudak 7.96 18 ⇑*i* P Pn 22 28 36.3 -0.6
SUDU pmax pmax 22 28 41.6
comp=Z,56nm,0.4s
SUDU smax smax 22 30 19.9
comp=N,45nm,0.6s
SUDU smax smax 22 30 19.9
comp=E,12nm,0.5s
SUDU *e*S Sg 22 31 05.0 +8.2
PLVB Pleven 7.96 321 ⇑P Pn 22 28 38.3 +1.3
TARU Tarkhankut 8.03 5 *e*P Pn 22 28 37.4 -0.4
TARU pmax pmax 22 28 45.5
comp=Z,40nm,0.5s
TARU *e*S Sn 22 30 06.9 -1.6
TARU smax smax 22 30 16.8
comp=N,29nm,0.6s
TARU smax smax 22 30 16.8
comp=E,12nm,0.6s
TLCR 8.06 346 ⇑P Pn 22 28 39.3 +1.0
TLCR 8.06 346 P Pn 22 28 39.2 +1.0
DNZ2 Donuzlav2 8.10 9 ⇑*e*P Pn 22 28 39.6 +0.9
DNZ2 pmax pmax 22 28 48.8
comp=Z,61nm,0.4s
DNZ2 *ex* x 22 30 07.4
DNZ2 *e*S Sn 22 30 10.6 +0.5
DNZ2 smax smax 22 30 24.7
comp=N,24nm,0.6s
DNZ2 smax smax 22 30 24.7
comp=E,45nm,0.6s
FEO Feodosiya 8.18 20 *e*P Pn 22 28 41.2 +1.3
FEO *e*S Sn 22 30 13.6 +1.4
FEO pmax pmax
comp=Z,37nm,0.6s
FEO Feodosiya 8.18 20 *e*P Pn 22 28 41.2 +1.3
FEO pmax pmax 22 28 44.1
comp=Z,37nm,0.6s
FEO *e*S Sn 22 30 13.6 +1.4
FEO smax smax 22 30 18.0
comp=N,20nm,0.5s
FEO smax smax 22 30 18.0
comp=E,7.0nm,0.6s
CFR Carcaliu 8.19 343 ⇑P Pn 22 28 40.5 +0.5
CFR Carcaliu 8.19 343 P Pn 22 28 40.5 +0.5

EIL Elat 8.21 158 Pn Pn 22 28 40.6 +0.2
comp=E,108nm,0.7s,baz=333,slow=4.8,SNR=56
EIL Sn Sn 22 30 13.9 +0.8
comp=E,12nm,0.3s,baz=17,slow=15,SNR=6.3
EIL LR LR 22 33 15.3
comp=E,222nm,18.3s,baz=44,slow=49
EIL Elat 8.21 158 P Pn 22 28 40.9 +0.5
EIL S Sn 22 30 15.4 +2.3
COPA Copaceanca 8.25 327 ⇑P Pn 22 28 42.3 +1.4
MPEP Malo Peshtene 8.40 318 *i* P Pn 22 28 44.4 +1.5
SCHLR Schela 8.54 342 ⇑P Pn 22 28 45.6 +0.8
ISR Istrita 8.58 336 ⇑P Pn 22 28 46.5 +1.0
ISR Istrita 8.58 336 P Pn 22 28 46.4 +1.0
TATR Tatarca 8.61 344 ⇑P Pn 22 28 47.8 +2.1
IZVR Izvoarele 8.62 342 ⇓P Pn 22 28 47.9 +1.9
ANN Anapa 8.67 29 *e*P Pn 22 28 45.9 -0.7
ANN *e*S Sn 22 30 24.2 +0.1
ANN pmax pmax
comp=Z,13nm,0.7s
HUMR Humele 8.67 328 ⇑P Pn 22 28 48.0 +1.3
GRER 8.68 338 ⇓P Pn 22 28 48.0 +1.2
SCTR Scanteiesti 8.69 344 ⇑P Pn 22 28 48.4 +1.5
TUDR 8.69 342 ⇓P Pn 22 28 48.9 +2.0
VLDR Vladesti 8.84 344 ⇑P Pn 22 28 48.8 +1.0
VARL Varlezi 8.94 343 ⇑P Pn 22 28 52.1 +1.8
ODBI Odobesti 9.01 340 ⇑P Pn 22 28 53.2 +1.9
PANC Panciu 9.09 340 ⇑P Pn 22 28 54.1 +1.8
OHR Ohrid 9.09 298 *i* Pn Pn 22 28 57.1 +4.7
MLR Muntele Rosu 9.11 335 Pn Pn 22 28 55.4 +2.6
comp=Z,1.6nm,0.3s,baz=204,slow=5.6,SNR=12
comp=Z,17nm,0.7s
MLR Muntele Rosu 9.11 335 ⇓P Pn 22 28 53.8 +1.0
MLR Muntele Rosu 9.11 335 Pn 22 28 53.1 +0.3
GHRR 9.19 342 ⇓P Pn 22 28 55.9 +2.1
VRI Vrincioaia 9.20 339 ⇑P Pn 22 28 54.9 +1.0
VRI Vrincioaia 9.20 339 P Pn 22 28 54.8 +1.0
GEVA Gevas 9.21 81 Pn Pn 22 28 53.5 -0.7
PLOR Plostina 9.21 338 ⇑P Pn 22 28 55.1 +1.0
PLOR Plostina 9.21 338 P Pn 22 28 55.0 +1.0
PURM Puncari 9.22 353 ⇓P Pn 22 28 56.4 +2.2
BIR Birlad 9.34 343 ⇑P Pn 22 28 57.2 +1.4
BIR Birlad 9.34 343 P Pn 22 28 57.1 +1.4
COVR Voineasa-Covas 9.34 337 ⇑P Pn 22 28 57.6 +1.8
VOIR 9.39 331 ⇑P Pn 22 28 57.7 +1.2
VOIR 9.39 331 P Pn 22 28 57.7 +1.2
PUNG Punghina 9.46 319 ⇑P Pn 22 28 59.0 +1.6
TURR Turia 9.58 337 ⇓P Pn 22 29 01.0 +1.9
KARS Kars 9.59 67 Pn 22 29 00.1 +0.8
KARS Kars 9.59 67 P Pn 22 29 00.2 +0.8
DOPR Dopca 9.71 334 ⇑P Pn 22 29 02.2 +1.2
BOVS Bovan 9.72 313 ⇓P Pn 22 29 02.7 +1.7
TESR Tescani 9.81 340 ⇓P Pn 22 29 03.3 +1.1
TNR Turnu Rosu 9.87 329 ⇑P Pn 22 29 04.3 +1.1
TNR Turnu Rosu 9.87 329 P Pn 22 29 04.2 +1.1
HERR Herculane 10.14 320 ⇓P Pn 22 29 07.1 +0.3
MDB Medias 10.23 331 ⇑P Pn 22 29 09.7 +1.6
MDB Medias 10.23 331 P Pn 22 29 09.7 +1.6
GZR Gura Zlata 10.34 324 ⇑P Pn 22 29 10.7 +1.1
GZR Gura Zlata 10.34 324 P Pn 22 29 10.6 +1.1
NEUR Neytrino 10.38 52 *i* P Pn 22 29 11.3 +1.0
MDVR Moldovita 10.44 318 ⇑P Pn 22 29 11.3 +0.4
SHA1 Shidzhatmaz 10.61 50 *i* P Pn 22 29 15.9 +2.5
PDG Podgorica 10.66 302 Pn 22 29 15.3 +1.4
PRAR RASCA 10.71 340 ⇓P Pn 22 29 14.8 +0.3
GNI Garni 10.72 71 Pn Pn 22 29 17.8 +2.9
comp=Z,0.3nm,0.3s,baz=330,slow=1.8,SNR=12
comp=Z,8.6nm,0.8s
GNI Garni 10.72 71 Pn 22 29 15.6 +0.8
GNI Garni 10.72 71 P Pn 22 29 20.8 +6.0
KIV Kislovodsk 10.75 49 Pn 22 29 15.7 +0.5
KIV Kislovodsk 10.75 49 P Pn 22 29 19.2 +4.1
KIV Kislovodsk 10.75 49 *e*P Pn 22 29 13.5 -1.7
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,94nm,13.0s
KBZ Khabaz 10.75 50 Pn Pn 22 29 19.1 +4.0
comp=Z,0.1nm,0.3s,baz=220,slow=9.9,SNR=11
comp=Z,3.8nm,0.8s
SORM Soroca 10.99 349 ⇑P Pn 22 29 18.7 +0.2
SORM Soroca 10.99 349 P Pn 22 29 18.6 +0.2
BZS Buzias 11.06 321 ⇓P Pn 22 29 19.7 +0.4
BZS Buzias 11.06 321 P Pn 22 29 19.7 +0.4
NCK Nalchik 11.07 53 *i* P Pn 22 29 20.9 +1.4
MARR Marisel-Cluj 11.17 329 ⇑P Pn 22 29 22.1 +1.1
BURAR Bucovina Array 11.22 338 ⇑P Pn 22 29 23.7 +2.0
BURAR Bucovina Array 11.22 338 Pn 22 29 22.2 +0.6
BURAR Bucovina Array 11.22 338 P Pn 22 29 23.7 +2.0
BUR08 Bucovina Ar. S 11.25 338 Pn 22 29 23.6 +1.5
DRGR 11.44 328 ⇑P Pn 22 29 24.6 0.0
DRGR 11.44 328 P Pn 22 29 24.6 0.0
TIP Timpagrande 11.71 283 ⇑P Pn 22 29 28.8 +0.4
TIP Timpagrande 11.71 283 Pn 22 29 28.3 -0.1
CEL Celeste 12.36 279 Pn 22 29 35.9 -1.3
CUC Castrocucco 12.52 287 Pn 22 29 39.7 +0.3
ACER Acerenza 12.55 291 Pn 22 29 39.4 -0.4
MORH Mrgy, Hungar 13.01 317 ⇑P Pn 22 29 47.1 +1.0
AKT Akhty 13.21 67 *e*P Pn 22 29 45.9 -3.0
AKT *e*S Sn 22 32 12.7 -3.0
AKT pmax pmax
comp=Z,1.0nm,0.3s
AKT smax smax
comp=E,2.0nm,0.7s
AKT smax smax
comp=N,3.0nm,0.6s
KIEV Kiev 13.41 354 ⇑P Pn 22 29 53.3 +1.8
KIEV Kiev 13.41 354 Pn 22 29 50.1 -1.3
KIEV Kiev 13.41 354 P Pn 22 29 52.3 +0.8
KIEV Kiev 13.41 354 P Pn 22 29 53.3 +1.8
AKASG Malin Array Be 13.42 354 Pn Pn 22 29 50.5 -1.1
comp=N,1.4nm,0.3s,baz=168,slow=12,SNR=7.9
AKASG Sn Sn 22 32 17.2 -3.3
comp=N,1.3nm,0.3s,baz=184,slow=26,SNR=7.9
comp=N,1.3nm,0.5s
AKASG Malin Array Be 13.42 354 Pn 22 29 49.3 -2.2
AKBB Malin Array Si 13.42 354 *i* P Pn 22 29 51.4 -0.1
MAK Makhachkala 13.46 61 *e*P Pn 22 29 50.2 -1.9
MAK *e*S Sn 22 32 19.8 -1.7
MAK pmax pmax
comp=Z,66nm,1.0s
MAK MLR MLR
comp=Z,801nm,9.0s
PSZ Piszkesteto 13.54 325 Pn 22 29 51.2 -2.1
PSZ Piszkesteto 13.54 325 P Pn 22 29 51.2 -2.1
VAE Valguarnera 13.57 276 Pn Pn 22 29 53.8 0.0
comp=Z,17nm,0.9s,baz=310,slow=10,SNR=5.0
PAOL Paolisi 13.62 291 Pn 22 29 50.4 -3.9
RAFF Raffo Rosso 13.63 275 Pn Pn 22 29 51.9 -2.7
STHS Stebnicka Huta 14.13 332 *e*P P 22 30 08.3 -0.7
STHS Stebnicka Huta 14.13 332 *e*P P 22 30 08.3 -0.7
INTR Introdacqua 14.30 294 Pn 22 30 02.0 -1.7
LANS Liptovska Anna 14.64 327 *e*P P 22 30 19.6 +4.9
LANS Liptovska Anna 14.64 327 *e* P 22 30 19.6 +4.9
VORD Divnogorie 14.68 20 *e*P Pn 22 30 08.3 -0.5
VORD pmax pmax
comp=Z,20nm,0.8s
CAMP Campotosto 14.78 296 Pn 22 30 08.1 -2.2
VSR Storozhevoye 14.88 19 *e*P Pn 22 30 09.8 -1.6
VSR pmax pmax
comp=Z,10.0nm,0.9s
NRCA Norcia 15.07 297 Pn 22 30 12.5 -1.7
ZST Bratislava 15.08 320 *e*P P 22 30 25.5 +6.0
ZST Bratislava 15.08 320 *e* P 22 30 25.5 +6.0
MODS Modra-Piesok 15.11 321 *e*P P 22 30 21.6 +1.7
MODS Modra-Piesok 15.11 321 *e*P P 22 30 21.6 +1.7
RONA Rosalia, Austr 15.20 318 *e*P P 22 30 18.7 -2.0
comp=Z,11nm,1.0s
JAVC Velka Javorina 15.25 323 *e*P P 22 30 21.6 +0.2
VORR Voronezh 15.30 18 *e*P Pn 22 30 16.2 -0.9
VORR pmax pmax
comp=Z,20nm,0.4s
SOKA Soboth 15.33 312 *i* P P 22 30 21.4 -0.9
comp=Z,8.7nm,1.1s
ARSA Arzberg 15.36 315 *i* P P 22 30 20.4 -2.2
comp=Z,13nm,1.0s
CESX Cesi 15.39 296 Pn 22 30 18.2 -0.1
MAUC Maruska 15.53 325 *e*P P 22 30 28.4 +3.9
OBKA Obir 15.53 311 *e*P P 22 30 23.5 -1.1
comp=Z,13nm,1.2s
CONA Conrad Observa 15.57 318 *e*P P 22 30 23.4 -1.6
comp=Z,9.0nm,1.2s
VRH Novokhopyorsk 15.62 25 *e*P P 22 30 24.8 -0.6

VRH pmax pmax
comp=Z,80nm,1.0s
MORC Moravsky Berou 15.96 325 Pn 22 30 25.2 -0.4
MORC Moravsky Berou 15.96 325 P Pn 22 30 25.3 -0.4
MORC pmax pmax
comp=Z,28nm,1.0s
MORC Moravsky Berou 15.96 325 *e*P P 22 30 31.1 +1.9
STEB Steborice 15.97 326 *e*P P 22 30 34.5 +5.2
KRUC Moravsky 16.01 322 *e*P P 22 30 29.9 +0.2
VRAC Vranov 16.07 323 Pn Pn 22 30 28.7 +1.6
comp=Z,0.2nm,0.3s,baz=126,slow=11,SNR=10
comp=Z,3.3nm,0.9s
VRAC Vranov 16.07 323 *e*P P 22 30 32.5 +2.0
LPSR Galich'ya Gora 16.09 17 *e*P Pn 22 30 26.6 -0.7
LPSR pmax pmax
comp=Z,64nm,1.2s
MYKA Terra Mystica 16.14 311 *i* P P 22 30 31.5 +0.2
comp=Z,4.5nm,0.7s
MOA Molln 16.40 315 *e*pP P 22 30 36.0 +1.8
comp=Z,22nm,1.2s
KBA Koelnbreinsper 16.53 312 *e*pP P 22 30 38.0 +2.2
comp=Z,6.9nm,0.8s,SNR=6.0
BIOA Bad Ischl, Aus 16.67 314 *e*P P 22 30 38.4 +1.2
comp=Z,9.1nm,1.1s
TEOL Teolo 16.85 304 Pn 22 30 35.2 -1.8
TEOL IAmb IAmb 22 30 47.5
comp=Z,31nm,0.9s
ABTA Abfaltersbach 16.88 310 *e*P P 22 30 41.3 +1.8
comp=Z,6.0nm,1.1s
DPC Dobruska-Polom 16.92 325 *e*P P 22 30 47.4 +7.5
DPC Dobruska-Polom 16.92 325 *e*P P 22 30 47.4 +7.5
CKRC Cesky Krumlov 16.93 318 *e*P P 22 30 43.2 +3.2
CKRC Cesky Krumlov 16.93 318 *e*P P 22 30 43.2 +3.2
ZCCA Zocca 16.98 301 Pn 22 30 38.2 -0.6
ZCCA IAmb IAmb 22 30 48.4
comp=Z,81nm,1.4s
LESA Schwarzleotal 17.10 312 P P 22 30 44.1 +2.2
comp=Z,6.5nm,1.3s
GEC2 GERESS Array S 17.27 317 Pn 22 30 41.7 -0.7
GERES GERESS Array B 17.27 317 P P 22 30 44.2 +0.3
baz=133,slow=13,SNR=17
GERES LR LR 22 38 51.8
comp=Z,408nm,21.6s,baz=300,slow=42
comp=Z,4.0nm,0.8s
MNK Minsk 17.31 353 *i* P Pn 22 30 41.2 -1.5
comp=E,25nm,0.9s
MNK *i* P Pn 22 30 41.2 -1.5
comp=N,15nm,1.0s
MNK *i* P Pn 22 30 41.2 -1.5
comp=Z,31nm,1.0s,baz=170
MNK *i* PP PnPn 22 30 51.7 -1.0
MNK *i* PPP PPP 22 30 59.2
MNK *i* S Sn 22 33 53.5 -1.5
MNK *i* SS SnSn 22 34 08.0 -0.3
MNK *i* SSS SSS 22 34 21.5
MNK *i* LQ LQ 22 36 00.9
MNK *i* LR LR 22 37 32.1
MNK *i* LRM MLR 22 38 43.2
comp=E,443nm,13.2s
MNK *i* LRM MLR 22 39 15.9
comp=Z,119nm,8.1s
MNK *i* LRM MLR 22 39 21.6
comp=N,409nm,22.8s
MNK Minsk 17.31 353 *i* P Pn 22 30 41.2 -1.5
MNK *i* S Sn 22 33 53.4 -1.5
MNK pmax pmax
comp=N,15nm,1.0s
MNK pmax pmax
comp=E,25nm,0.9s
MNK pmax pmax
comp=Z,31nm,1.0s
MNK MLR MLR
comp=E,443nm,13.0s
MNK MLR MLR
comp=Z,119nm,8.0s
MNK MLR MLR
comp=N,409nm,23.0s
ZVC Zvikov 17.36 319 *e*P P 22 30 48.7 +3.9
VSL Villasalto 17.44 284 Pn 22 30 43.6 -1.0
KHC Kasperske Hory 17.50 318 *e*P Pn 22 30 45.5 +0.3
KHC Kasperske Hory 17.50 318 *e*P Pn 22 30 45.5 +0.3
PRU Pruhonice 17.53 321 *e*P P 22 30 53.3 +6.7
PRU Pruhonice 17.53 321 *e*P P 22 30 53.3 +6.7
WTTA Wattenberg 17.65 310 *e*P P 22 30 51.7 +3.6
comp=N,16nm,1.3s
WATA Walderalm 17.72 310 *e*P P 22 30 50.3 +1.4
comp=N,8.3nm,1.1s
NACGM Naroch 17.82 351 *e*P P 22 30 52.3 +2.6
comp=Z,35nm,0.9s,baz=168
KEST Kesra 17.86 271 P Pn 22 30 49.5 -0.2
comp=Z,0.7nm,0.3s,baz=98,slow=6.4,SNR=15
comp=Z,14nm,0.9s
KEST Kesra 17.86 271 Pn 22 30 48.4 -1.4
SQTA Sankt Quirin 17.89 310 *e*P P 22 30 52.5 +1.8
comp=Z,25nm,1.5s
MOTA Moosalm 18.01 310 *e*Pn P 22 30 53.6 +1.5
comp=Z,21nm,1.2s
OBN Obninsk 18.08 9 *e*P Pn 22 30 51.0 -1.2
OBN pmax pmax
comp=Z,18nm,1.1s
OBN MLR MLR
comp=Z,228nm,12.0s
FETA Feichten 18.10 309 *e*P P 22 30 54.1 +1.0
comp=Z,49nm,1.1s,SNR=9.3
FUORN Ofenpass-Fuorn 18.23 307 Pn P 22 30 56.0 +1.4
RETA Reutte 18.28 310 *e*P P 22 30 56.4 +1.4
comp=Z,9.8nm,0.7s,SNR=8.6
RAYN Ar Rayn 18.32 135 P Pn 22 30 55.2 -0.2
RAYN Ar Rayn 18.32 135 *i* P P 22 30 56.9 +1.4
SNR=10
RAYN Ar Rayn 18.32 135 P Pn 22 30 55.3 -0.2
RAYN pmax pmax
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 18.39 323 *e*P Pn 22 31 03.4 +7.3
BRG Amp 22 31 04.2
comp=Z,15nm,0.9s
DAVOX Davos/Dischmat 18.54 307 P Pn 22 30 58.2 +0.1
comp=Z,0.3nm,0.3s,baz=125,slow=12,SNR=22
DAVOX LR LR 22 39 26.1
comp=Z,467nm,21.1s,baz=44,slow=41
comp=Z,3.0nm,0.7s
DAVA Damuels 18.74 309 *e*P Pn 22 31 03.3 +2.8
comp=Z,37nm,0.7s,SNR=5.1
TUE Stuetta 18.76 306 P P 22 31 00.0 -0.4
BELG Belogornoye 18.81 32 P P 22 30 59.8 -0.8
comp=Z,1.9nm,0.3s,baz=353,slow=1.3,SNR=8.8
comp=Z,25nm,0.8s
BELG Belogornoye 18.81 32 *i* P Pn 22 31 02.5 +1.4
BELG pmax pmax
comp=Z,10.0nm,0.9s
MOS Moscow 18.83 11 *e*P P 22 30 59.6 -1.3
MOS *e*S S 22 34 33.9 -0.7
MOS pmax pmax
comp=Z,75nm,1.3s
CLL Collm 19.12 323 P P 22 31 03.8 -0.3
CLL Collm 19.12 323 *i* P Pn 22 31 10.7 +5.7
CLL pmax pmax
comp=Z,27nm,1.5s
CLL Collm 19.12 323 *i* P Pn 22 31 10.7 +5.7
comp=Z,27nm,1.5s
STU Stuttgart 19.79 312 P P 22 31 11.2 -0.3
STU IAmb IAmb 22 31 29.4
comp=Z,29nm,0.8s
STU Stuttgart 19.79 312 P P 22 31 11.2 -0.3
STU pmax pmax
comp=Z,29nm,0.8s
SENIN Lac Senin/Sane 20.06 304 P 22 31 15.4 +0.7
BFO Black Forest 20.12 310 P P 22 31 13.9 -1.2
BFO IAmb IAmb 22 31 26.1
comp=Z,61nm,1.4s
BFO Black Forest 20.12 310 P P 22 31 13.9 -1.2
BFO pmax pmax
comp=Z,61nm,1.4s
BNI Bardonecchia 20.12 300 P P 22 31 15.4 +0.1
BNI IAmb IAmb 22 31 24.4
comp=Z,46nm,0.9s
BNI Bardonecchia 20.12 300 P P 22 31 15.4 +0.1
BNI pmax pmax
comp=Z,46nm,0.9s
ECH Echery 20.79 309 P P 22 31 21.7 -0.7
ECH IAmb IAmb 22 31 29.6
comp=Z,27nm,0.9s
ECH Echery 20.79 309 P P 22 31 21.7 -0.7
ECH pmax pmax
comp=Z,27nm,0.9s
SSB Saint Sauveur 21.65 300 P P 22 31 30.5 -1.1

SSB Saint Sauveur 21.65 300 P **P** **22 31 30.5 -1.1**
SSB pmax pmax
comp=Z,16nm,1.0s
WLF Walferdange 21.98 312 P **P** **22 31 34.1 -0.9**
WLF lAmb lAmb 22 31 43.7
comp=Z,21nm,0.9s
WLF Walferdange 21.98 312 P **P** **22 31 34.2 -0.9**
WLF pmax pmax
comp=Z,21nm,0.9s
CORI Orista 23.06 291 P **P** **22 31 46.2 -0.4**
CORI lAmb lAmb 22 31 54.6
comp=Z,21nm,1.0s
CEST Esterri de Car 23.67 292 P **P** **22 31 52.4 -0.5**
CEST lAmb lAmb 22 32 01.4
comp=Z,18nm,1.1s
AB31 Akbulak array 23.72 51 P **P** **22 31 52.5 -0.6**
AB31 lAmb lAmb 22 31 58.7
comp=Z,12nm,0.6s
ABKAR Akbulak array 23.72 51 P **P** **22 31 52.4 -0.7**
MZR Muzera 23.73 121 *i* P **P** **22 31 54.0 +0.6**
SNR=7.4
SHME Shamm 23.75 111 P **P** **22 31 54.4 +0.7**
CLF Chambon-Foret 23.83 306 P **P** **22 31 53.8 -0.4**
BANOM Banah 23.94 111 P **P** **22 31 56.4 +0.9**
NAZ Nazwa, Dubai 24.02 114 P **P** **22 31 57.3 +1.2**
KLMR Klimovskoe 24.04 10 *e*P **P** **22 31 55.4 -0.6**
KLMR pmax pmax
comp=Z,53nm,1.4s
MSFE Esma-Masafi 24.16 113 P **P** **22 31 58.3 +0.8**
KIRV Kirov 24.23 23 *i* P **P** **22 31 56.7 -1.1**
FINES FINESS Array B 24.33 354 P **P** **22 31 58.1 -0.6**
comp=Z,6.4nm,0.6s,baz=155,slow=11,SNR=34
comp=Z,6.4nm,0.6s
FINES FINESS Array B 24.33 354 *i* P **P** **22 31 59.5 +0.8**
FINES pmax pmax
comp=Z,7.0nm,0.6s
FIA1 FINESS Array S 24.33 354 P **P** **22 31 58.6 -0.1**
HATD Hatta, Dubai 24.45 114 P **P** **22 32 01.1 +0.9**
ALNE Al Ain 24.64 116 *i* P **P** **22 32 03.0 +1.1**
SNR=9.7
HRA Herat 25.05 88 P **P** **22 32 05.3 -0.5**
HFS Hagfors 25.45 339 P **P** **22 32 09.9 +1.1**
comp=Z,11nm,0.9s,baz=169,slow=11,SNR=6.4
comp=Z,11nm,0.9s
ARTI Arti 26.17 35 LR LR 22 45 18.9
comp=Z,148nm,19.1s,baz=298,slow=43
ARTI Arti 26.17 35 P **P** **22 32 14.8 -0.7**
ARTI lAmb lAmb 22 32 20.7
comp=Z,14nm,0.6s
ARTI Arti 26.17 35*c* *i* P **P** **22 32 17.2 +1.7**
ARTI 22 32 50.4
ARTI S **S** **22 36 52.4 +5.6**
ARTI SS **SnSn** **22 37 53.4 +7.9**
ARTI pmax pmax
comp=Z,11nm,0.7s
TAM Tamanrasset 26.64 244 P **P** **22 32 20.0 -0.2**
TAM lAmb lAmb 22 32 23.9
comp=Z,9.8nm,0.8s
TAM Tamanrasset 26.64 244 P **P** **22 32 20.0 -0.2**
TAM pmax pmax
comp=Z,10.0nm,0.8s
NOA NORSAR Array B 26.91 338 P **P** **22 32 23.1 +1.0**
comp=Z,4.4nm,1.1s,baz=145,slow=9.2,SNR=6.2
NOA LR LR 22 43 59.9
comp=Z,69nm,20.3s,baz=350,slow=39
comp=Z,4.4nm,1.1s
ESBB Sonseca Array 27.72 286 P **P** **22 32 28.3 -1.3**
ESBB lAmb lAmb 22 32 31.8
comp=Z,16nm,1.1s
ESDC Sonseca Array 27.72 286 P **P** **22 32 30.4 +0.8**
comp=Z,8.3nm,1.1s,baz=74,slow=8.5,SNR=30
comp=Z,8.3nm,1.1s
ESDC Sonseca Array 27.72 286 **P** **22 32 29.1 -0.5**
PAB San Pablo 28.03 286 P **P** **22 32 31.7 -0.7**
PAB lAmb lAmb 22 32 34.6
comp=Z,22nm,1.3s
PAB San Pablo 28.03 286 P **P** **22 32 31.7 -0.7**
PAB pmax pmax
comp=Z,22nm,1.3s
SHAA Shahritus 28.97 78 P **P** **22 32 40.3 -0.5**
SHAA lAmb lAmb 22 33 06.2
comp=Z,22nm,1.3s
EKA Eskdalemuir Ar 29.48 319 P **P** **22 32 45.6 +0.6**
comp=Z,6.8nm,1.0s,baz=111,slow=12,SNR=4.1
comp=Z,6.8nm,1.0s
CHGR Chuyangaron 29.58 76 P **P** **22 32 45.7 -0.5**
CHGR Chuyangaron 29.58 76 *i* P **P** **22 32 47.5 +1.3**
CHGR pmax pmax
comp=Z,21nm,0.7s
MD01 Midelt array s 29.86 272 P **P** **22 32 49.3 +0.4**
MVO Moncorvo 29.89 289 *e*P **P** **22 32 49.8 +0.8**
KK31 Karatay Array 30.14 67 P **P** **22 32 50.4 -0.7**
KK31 Karatay Array 30.14 67 P **P** **22 32 50.4 -0.7**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 30.14 67 P **P** **22 32 50.6 -0.5**
KKAR Karatay Array 30.14 67 P **P** **22 32 50.6 -0.5**
PBAR Barrancos 30.32 283 *e*P **P** **22 32 53.3 +0.7**
PBAR *i* lAmb lAmb 22 32 56.8
comp=Z,41nm,1.9s
PMRV Marv??o 30.38 286 *e*P **P** **22 32 54.1 +0.9**
PCBR Castelo Branco 30.38 287 *e*P **P** **22 32 54.0 +0.8**
PCBR *i* lAmb lAmb 22 32 58.4
comp=Z,20nm,1.6s
KBL Kabul 30.41 84 P **P** **22 32 53.7 -0.1**
KBL lAmb lAmb 22 32 59.4
comp=Z,13nm,1.2s
KBL Kabul 30.41 84 P **P** **22 32 53.7 -0.1**
KBL pmax pmax
comp=Z,13nm,1.2s
POLO Lamas de Olo 30.44 290 *e*P **P** **22 32 54.8 +0.9**
PESTR Estremoz 30.62 285 P **P** **22 32 54.8 -0.5**
PESTR lAmb lAmb 22 32 57.6
comp=Z,11nm,0.9s
PESTR Estremoz 30.62 285 *e*P **P** **22 32 55.9 +0.6**
PGAV Gavieira, Arco 30.75 291 *e*P **P** **22 32 57.6 +1.1**
PARRA Arraiolos 30.97 285 *e*P **P** **22 32 59.9 +1.4**
PBEJ Beja 30.98 283 *e*P **P** **22 32 59.6 +1.0**
PBEJ *i* lAmb lAmb 22 33 03.9
comp=Z,36nm,1.3s
PVAQ Vaqueiros 30.99 282 P **P** **22 32 57.6 -1.0**
PVAQ Vaqueiros 30.99 282 *e*P **P** **22 32 59.4 +0.8**
EVO Evora 31.00 284 *e*P **P** **22 33 00.1 +1.3**
BORK Borovoye 31.07 47 **P** **22 32 58.2 -0.9**
BORK Borovoye 31.07 47 *i* P **P** **22 32 59.7 +0.5**
BORK pmax pmax
comp=Z,7.0nm,0.9s
BVAR Borovoye Array 31.11 47 P **P** **22 32 59.7 +0.2**
comp=Z,4.2nm,1.0s,baz=254,slow=5.5,SNR=14
BVAR LR LR 22 49 07.1
comp=Z,169nm,19.3s,baz=292,slow=43
comp=Z,4.2nm,1.0s
PBDV Barranco-do-Ve 31.19 282 *e*P **P** **22 33 01.5 +1.1**
PBDV *i* lAmb lAmb 22 33 03.4
comp=Z,79nm,1.7s
PCVE Castro Verde 31.20 283 *e*P **P** **22 33 01.4 +1.0**
MESJ Messejana 31.29 283 *e*P **P** **22 33 01.9 +0.6**
MESJ lAmb lAmb 22 33 04.2
comp=Z,26nm,1.2s
MESJ Messejana 31.29 283 *e*P **P** **22 33 02.4 +1.1**
PSBE So Bento 31.44 286 *e*P **P** **22 33 04.8 +2.2**
PTEO Sao Teotonio 31.75 283 *e*P **P** **22 33 06.5 +1.2**
PFVI Vila Bisbo 31.92 282 *e*P **P** **22 33 07.0 +0.2**
PFVI *i* lAmb lAmb 22 33 11.8
comp=Z,167nm,1.7s
ARSB Arslanbob 32.11 70 P **P** **22 33 08.8 +0.2**
ARSB lAmb lAmb 22 33 21.8
comp=Z,8.7nm,0.9s
ARSB Arslanbob 32.11 70 P **P** **22 33 08.8 +0.2**
ARSB pmax pmax
comp=Z,9.0nm,0.9s
ARCES ARCESS Array B 32.38 356 P **P** **22 33 10.6 +0.1**
comp=Z,12nm,0.7s,baz=164,slow=6.2,SNR=20
comp=Z,12nm,0.7s
ARCES ARCESS Array B 32.38 356 **P** **22 33 10.3 -0.2**
AAK Ala-Archa 33.09 67 LR LR 22 49 05.4
comp=Z,105nm,18.1s,baz=308,slow=41
AAK Ala-Archa 33.09 67 **P** **22 33 17.1 -0.1**
AAK lAmb lAmb 22 33 23.4
comp=Z,4.6nm,0.7s
AAK Ala-Archa 33.09 67 *i* P **P** **22 33 18.4 +1.1**
SNR=11
AAK Ala-Archa 33.09 67*ce* P **P** **22 33 18.0 +0.8**
AAK pmax pmax
comp=Z,7.0nm,0.9s

LODK Lodwar 33.98 173 **P** **22 33 24.1 -0.9**
NIL Nilore 34.00 84 **P** **22 33 25.0 -0.1**
NIL Nilore 34.00 84 P **P** **22 33 25.0 -0.1**
NIL pmax pmax
comp=Z,33nm,1.1s
BOOM Boomskoye usch 34.17 67 P **P** **22 33 25.8 -0.8**
BOOM lAmb lAmb 22 33 32.7
comp=Z,9.2nm,1.2s
BOOM Boomskoye usch 34.17 67 P **P** **22 33 25.8 -0.8**
BOOM pmax pmax
comp=Z,9.0nm,1.2s
NRN Naryn 34.35 69 P **P** **22 33 27.5 -0.9**
NRN lAmb lAmb 22 33 36.7
comp=Z,5.7nm,0.9s
NRN Naryn 34.35 69 P **P** **22 33 27.5 -0.9**
NRN pmax pmax
comp=Z,6.0nm,0.9s
KSH2 Kashi 34.41 73 P **P** **22 33 31.0 +2.3**
KSH2 pP sP 22 33 34.3 -0.6
KSH2 sP pP 22 33 40.0 +6.9
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
KDJ Kajisay 35.13 68 **P** **22 33 35.2 +0.3**
KDJ Kajisay 35.13 68 P **P** **22 33 35.2 +0.3**
KDJ pmax pmax
comp=Z,4.0nm,0.9s
KURBB Kurchatov Arra 35.73 53 P **P** **22 33 40.1 +0.3**
comp=Z,19nm,0.8s,baz=275,slow=8.8,SNR=88
comp=Z,19nm,0.8s
KURK Kurchatov 35.80 53 P **P** **22 33 40.0 -0.3**
KURK Kurchatov 35.80 53 *i* P **P** **22 33 40.3 0.0**
KURK pmax pmax
comp=Z,28nm,1.1s
TORD Torodi Ar. Bea 35.90 236 P **P** **22 33 41.0 -0.5**
comp=Z,15nm,0.8s,baz=40,slow=4.8,SNR=49
comp=Z,15nm,0.8s
TORD Torodi Ar. Bea 35.90 236 P **P** **22 33 41.7 +0.2**
TORD lAmb lAmb 22 33 44.6
comp=Z,14nm,0.9s
PRZ Przheval'sk 35.98 67 **P** **22 33 42.0 -0.2**
PRZ lAmb lAmb 22 33 47.3
comp=Z,19nm,1.3s
PRZ Przheval'sk 35.98 67 P **P** **22 33 42.0 -0.2**
PRZ pmax pmax
comp=Z,19nm,1.3s
WUS Wushi 36.78 69 P **P** **22 33 48.6 -0.4**
WUS lAmb lAmb 22 33 54.6
comp=Z,8.9nm,0.8s
MBAR Mbarara 37.80 181 P **P** **22 33 57.4 -0.4**
MBAR Mbarara 37.80 181 P **P** **22 33 57.4 -0.4**
MBAR pmax pmax
comp=Z,5.0nm,1.0s
MAKZ Makanchi 38.06 59 **P** **22 33 58.5 -1.1**
MAKZ Makanchi 38.06 59 P **P** **22 33 58.5 -1.1**
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 38.27 59 *i* P **P** **22 34 01.1 -0.4**
MK31 pmax pmax
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 38.27 59 P **P** **22 34 01.6 +0.2**
comp=Z,6.6nm,0.7s,baz=278,slow=8.3,SNR=94
MKAR LR LR 22 52 28.3
comp=Z,79nm,21.7s,baz=304,slow=40
comp=Z,6.6nm,0.7s
MKAR Makanchi Array 38.27 59 **P** **22 34 01.2 -0.3**
EDA Edea 38.74 215 P **P** **22 34 05.2 -0.4**
EDA lAmb lAmb 22 34 10.1
comp=Z,14nm,0.9s
PMPS Porto Santo 38.98 278 *e*P **P** **22 34 09.0 +1.5**
ZAA0 Zalesovo Array 39.76 48 P **P** **22 34 12.5 -1.2**
ZAA0 lAmb lAmb 22 34 17.6
comp=Z,8.6nm,0.6s
ZALV Zalesovo Beam 39.76 48 P **P** **22 34 13.2 -0.6**
comp=Z,9.9nm,0.5s,baz=267,slow=8.9,SNR=40
comp=Z,9.9nm,0.5s
ZALV Zalesovo Beam 39.76 48 P **P** **22 34 12.8 -0.9**
SPITS Spitsbergen Ar 41.40 355 P **P** **22 34 27.6 +0.5**
comp=Z,11nm,0.8s,baz=141,slow=11,SNR=9.7
comp=Z,11nm,0.8s
DGZ Jazzator, Alta 41.47 54 *i* P **P** **22 34 28.0 -0.1**
DGZ pmax pmax
comp=Z,14nm,1.0s
WMQ Urumqi 42.46 63 *e*P **P** **22 34 37.3 +1.1**
WMQ sP sP 22 34 53.3 +11
WMQ pmax pmax
comp=Z,20nm,0.9s
SCO Scoresbysund 43.21 337 *i* P **P** **22 34 46.4 +4.6**
SCO lAmb lAmb 22 34 48.3
comp=Z,8.3nm,0.8s
DBG Daneborg 44.27 342 *i* P **P** **22 34 53.4 +3.1**
DBG lAmb lAmb 22 34 57.1
comp=Z,14nm,1.3s
DBIC Dimbokro 45.00 236 P **P** **22 34 56.3 -0.5**
comp=Z,11nm,0.7s,baz=65,slow=8.1,SNR=18
DBIC LR LR 22 55 30.1
comp=Z,80nm,18.7s,baz=26,slow=38
comp=Z,11nm,0.7s
DBIC Dimbokro 45.00 236 P **P** **22 34 56.2 -0.5**
DAG Danmarks Havn 45.10 346 *i* P **P** **22 34 56.3 -0.6**
DAG lAmb lAmb 22 34 58.2
comp=Z,2.9nm,0.9s
NOR Nord 47.47 351 *i* P **P** **22 35 14.9 -0.5**
NOR lAmb lAmb 22 35 18.5
comp=Z,10nm,0.8s
KNGR Kungurtug, Tuv 47.77 52 *i* P **P** **22 35 20.4 +2.0**
KNGR pmax pmax
comp=Z,25nm,1.5s
SUMG Summit 48.80 338 *i* P **P** **22 35 28.2 +1.9**
SUMG lAmb lAmb 22 35 30.6
comp=Z,8.8nm,0.9s
LSA Lhasa 49.61 80 P **P** **22 35 32.7 -0.5**
LSA lAmb lAmb 22 35 36.0
comp=Z,9.2nm,1.0s
LSA Lhasa 49.61 80 P **P** **22 35 29.4 -3.8**
LSA pmax pmax
comp=Z,6.0nm,1.1s
LSA Lhasa 49.61 80 P **P** **22 35 33.1 -0.1**
LSA Lhasa 49.61 80 P **P** **22 35 32.7 -0.5**
LSA pmax pmax
comp=Z,9.0nm,1.0s
MOY Mondy 49.71 50 *e*P **P** **22 35 33.9 +0.6**
MOY pmax pmax
comp=Z,108nm,2.2s
GOMU GeErMu 49.86 71 P **P** **22 35 34.5 -0.5**
GOMU pmax pmax
comp=Z,3.0nm,1.1s
ZAK Zakamensk 51.41 51 *e*P **P** **22 35 46.2 0.0**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
SHL Shillong 52.06 85 P **P** **22 35 50.0 -1.4**
SHL Shillong 52.06 85 P **P** **22 35 50.0 -1.4**
SHL pmax pmax
comp=Z,27nm,1.5s
NEEM North Greenlan 52.23 344 *i* P **P** **22 35 51.1 -1.0**
NEEM lAmb lAmb 22 35 53.7
comp=Z,3.5nm,0.7s
GTA2 Gaotai 52.34 65 *e*P **P** **22 35 53.4 +0.2**
GTA2 pmax pmax
comp=Z,7.0nm,0.8s
SONM Songino Array 54.10 53 P **P** **22 36 06.5 +0.4**
comp=Z,4.7nm,0.5s,baz=289,slow=7.7,SNR=35
SONM LR LR 23 02 59.9
comp=Z,70nm,19.9s,baz=11,slow=40
comp=Z,4.7nm,0.5s
SONM Songino Array 54.10 53 **P** **22 36 06.1 0.0**
SONM lAmb lAmb 22 36 09.6
comp=Z,5.2nm,0.6s
ULN Ulaanbaatar 54.51 53 P **P** **22 36 08.8 -0.3**
ULN lAmb lAmb 22 36 12.5
comp=Z,5.2nm,0.7s
ULN Ulaanbaatar 54.51 53 P **P** **22 36 08.8 -0.3**
ULN pmax pmax
comp=Z,5.0nm,0.7s
TULEG Thule 56.34 344 **P** **22 36 21.9 +0.3**
TULEG Thule 56.34 344 *i* P **P** **22 36 21.9 +0.3**
TULEG lAmb lAmb 22 36 23.6
comp=Z,13nm,1.1s
LZDM Lanzhou Array 56.58 68 P **P** **22 36 23.5 -0.9**
comp=Z,0.7nm,0.3s,baz=287,slow=6.0,SNR=7.3
comp=Z,0.7nm,0.3s
LZH Lanzhou 56.63 68 *e*P **P** **22 36 24.8 +0.2**
LZH sP sP 22 36 31.6 +0.7
LZH pmax pmax
comp=Z,17nm,1.1s
TIXI Tiksi 57.25 22 P **P** **22 36 27.8 -0.3**
TIXI lAmb lAmb 22 36 39.4
comp=Z,5.8nm,1.1s
TIXI Tiksi 57.25 22*ce* P **P** **22 36 28.2 0.0**
TIXI pmax pmax
comp=Z,6.0nm,1.0s
QNGWA Qangwa 57.43 192 P **P** **22 36 29.9 -0.2**
QNGWA lAmb lAmb 22 37 02.9
comp=Z,7.1nm,1.2s
CD2 Chengdu 58.84 73 P **P** **22 36 39.6 -0.4**
CD2 pmax pmax
comp=Z,20nm,0.7s
BTO2 Baotou 59.02 60 *e*P **P** **22 36 41.8 +0.6**
BTO2 pP **pP** **22 36 46.3 +0.5**
BTO2 sP **sP** **22 36 48.8 +1.3**
BTO2 pmax pmax
comp=Z,17nm,1.0s
BTO2 pmax pmax
comp=Z,510nm,8.9s
PZH PanZhiHua 59.38 79 P **P** **22 36 42.3 -1.6**
PZH pmax pmax
comp=Z,10.0nm,1.1s
HHC Hu-ho-hao-te 60.14 60 *e*P **P** **22 36 49.3 +0.4**
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,110nm,3.9s
POIN Pond Inlet 60.17 341 P **P** **22 36 48.4 0.0**
POIN lAmb lAmb 22 36 55.8
comp=Z,7.0nm,0.8s
VOI Vohitsoka 60.70 164 P **P** **22 36 51.9 -0.9**
CHTO Chiang Mai 61.12 88 P **P** **22 36 54.7 -1.0**
CHTO lAmb lAmb 22 36 58.3
comp=Z,7.7nm,1.0s
CHTO Chiang Mai 61.12 88 P **P** **22 36 54.7 -1.0**
CHTO pmax pmax
comp=Z,8.0nm,1.0s
XAN Xi'an 61.27 68 P **P** **22 36 56.1 -0.5**
XAN pmax pmax
comp=Z,8.0nm,0.9s
CM31 Chiang Mai Arr 61.31 88 P **P** **22 36 55.8 -1.3**
CMAR Chiang Mai Arr 61.31 88 P **P** **22 36 56.5 -0.5**
comp=Z,8.2nm,0.8s,baz=297,slow=8.3,SNR=52
CMAR LR LR 23 08 39.3
comp=Z,32nm,19.0s,baz=325,slow=41
comp=Z,8.2nm,0.8s
CMAR Chiang Mai Arr 61.31 88 **P** **22 36 56.2 -0.8**
HILR Hailar Array B 61.68 48 P **P** **22 36 59.3 +0.1**
comp=Z,1.5nm,0.5s,baz=3.8,slow=4.5,SNR=4.2
comp=Z,1.5nm,0.5s
XLT XiLinHaoTe 61.84 55 *e*P **P** **22 37 00.3 -0.1**
XLT pmax pmax
comp=Z,4.0nm,1.1s
ILON Igloolik, Nuna 63.03 339 **P** **22 37 06.9 -0.9**
ENH Enshi 63.48 71 P **P** **22 37 10.2 -1.3**
BJT Baijiatuau 63.65 59 P **P** **22 37 11.7 -0.7**
BJT lAmb lAmb 22 37 13.1
comp=Z,7.8nm,1.0s
BJT Baijiatuau 63.65 59 P **P** **22 37 11.7 -0.7**
BJT pmax pmax
comp=Z,8.0nm,1.0s
BJI2 Beijing 63.65 59 P **P** **22 37 12.3 -0.1**
BJI2 pmax pmax
comp=Z,4.0nm,1.2s
HNS HongShan 63.87 62 ⇑P **P** **22 37 14.0 +0.2**
HNS pmax pmax
comp=Z,7.0nm,1.0s
KUQ Kuujjuuaa 63.92 324 P **P** **22 37 13.3 -0.5**
SCHQ Schefferville 64.76 321 P **P** **22 37 20.4 +0.9**
comp=Z,5.3nm,0.9s,baz=54,slow=9.5,SNR=5.2
comp=Z,5.3nm,0.9s
SCHQ Schefferville 64.76 321 P **P** **22 37 19.5 0.0**
SCHQ lAmb lAmb 22 37 24.8
comp=Z,6.6nm,0.9s
HEH HeiHe 65.75 44 *e*P **P** **22 37 25.5 -0.4**
BOSA Boshof 65.90 186 P **P** **22 37 25.6 -1.5**
comp=Z,5.2nm,0.7s,baz=6.3,slow=6.2,SNR=11
comp=Z,5.2nm,0.7s
BOSA Boshof 65.90 186 P **P** **22 37 26.8 -0.4**
BOSA Boshof 65.90 186 P **P** **22 37 26.8 -0.4**
BOSA pmax pmax
comp=Z,28nm,1.5s
TIA Tai'an 66.14 62 P **P** **22 37 28.3 -0.4**
TIA pmax pmax
comp=Z,9.0nm,1.0s
BNX BinXian 68.04 49 ⇓P **P** **22 37 41.3 +0.7**
BNX pmax pmax
comp=Z,8.0nm,1.0s
KLR Kul'dur 68.69 44*ce* P **P** **22 37 43.7 -0.9**
KLR pmax pmax
comp=Z,26nm,2.8s
SEY Seymchan 69.49 25*ce* P **P** **22 37 49.5 +0.2**
SEY pmax pmax
comp=Z,7.0nm,1.1s
NJ2 Nanjing 69.50 65 *e*P **P** **22 37 48.9 -1.0**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
BILL Bilibino 69.58 17 P **P** **22 37 49.6 -0.1**
BILL lAmb lAmb 22 37 58.9
comp=Z,12nm,1.4s
BILL Bilibino 69.58 17 *i* P **P** **22 37 50.3 +0.5**
BILL pmax pmax
comp=Z,2.0nm,0.4s
A36M Sachs Harbour 69.71 352 **P** **22 37 50.5 0.0**
KULM Kulim 70.28 99 P **P** **22 37 53.8 -1.1**
BLKN Baker Lake 70.56 338 **P** **22 37 54.9 -0.9**
BLKN lAmb lAmb 22 38 02.1
comp=Z,6.7nm,0.9s
MA2 Magadan 71.22 28 LR LR 23 14 48.3
comp=Z,47nm,20.3s,baz=310,slow=41
MA2 Magadan 71.22 28 **P** **22 37 59.8 -0.2**
MA2 lAmb lAmb 22 38 03.5
comp=Z,5.7nm,0.9s
MA2 Magadan 71.22 28*ce* P **P** **22 38 00.7 +0.8**
MA2 pmax pmax
comp=Z,9.0nm,1.3s
USRK Ussuriysk Ar. 71.61 48 P **P** **22 38 01.6 -1.0**
comp=Z,4.4nm,0.9s,baz=262,slow=5.8,SNR=5.4
comp=Z,4.4nm,0.9s
C36M Paulatuk 72.07 351 **P** **22 38 04.0 -0.9**
C36M lAmb lAmb 22 38 11.8
comp=Z,4.4nm,0.8s
B20K Meade River 72.74 3 P **P** **22 38 09.3 +0.5**
B20K lAmb lAmb 22 38 20.0
comp=Z,4.7nm,0.8s
KSAR Wonju Array Be 72.83 56 P **P** **22 38 09.5 -0.5**
KSAR Wonju Array Be 72.83 56 P **P** **22 38 09.5 -0.5**
KSRS Korea Array 72.85 56 P **P** **22 38 08.4 -1.7**
comp=Z,5.0nm,0.8s,baz=298,slow=5.5,SNR=11
KSRS LR LR 23 13 45.9
comp=Z,52nm,18.5s,baz=320,slow=39
comp=Z,5.0nm,0.8s
C23K Itkillik River 73.09 1 P **P** **22 38 11.6 +0.6**
C24K Franklin Bluff 73.21 0 P **P** **22 38 11.9 +0.2**
C24K lAmb lAmb 22 38 19.7
comp=Z,8.1nm,1.1s
B21K Ikpikpuk River 73.22 2 P **P** **22 38 11.8 +0.1**
B21K lAmb lAmb 22 38 16.7
comp=Z,5.0nm,0.8s
C19K Lookout Ridge 73.52 4 P **P** **22 38 14.1 +0.5**
D25K Kavik River 73.60 359 P **P** **22 38 14.2 +0.1**
D25K lAmb lAmb 22 38 22.3
comp=Z,3.9nm,0.9s
C16K Lisburne Hills 73.91 6 P **P** **22 38 16.0 +0.2**
D23K Nanushuk River 73.96 1 P **P** **22 38 15.9 -0.2**
D23K lAmb lAmb 22 38 21.0
comp=Z,4.0nm,0.8s
FCC Fort Churchill 74.07 334 **P** **22 38 16.3 -0.6**
FCC lAmb lAmb 22 38 23.2
comp=Z,6.3nm,1.2s
FCC Fort Churchill 74.07 334 P **P** **22 38 16.3 -0.6**
FCC pmax pmax
comp=Z,6.0nm,1.2s
E28M Babbage River 74.12 357 P **P** **22 38 16.7 -0.4**
D19K Kuna River 74.20 4 P **P** **22 38 17.3 -0.3**
D19K lAmb lAmb 22 38 21.9
comp=Z,5.1nm,0.8s
E29M Blow River 74.25 356 P **P** **22 38 17.5 -0.3**
E29M lAmb lAmb 22 38 25.2
comp=Z,8.1nm,1.0s
E22K Anaktuvuk Pass 74.78 1 **P** **22 38 20.9 0.0**
E22K lAmb lAmb 22 38 29.7
comp=Z,4.9nm,1.1s
F30M Barrier River 74.89 355 P **P** **22 38 21.1 -0.5**
F30M lAmb lAmb 22 38 29.4
comp=Z,12nm,1.4s
E18K Tukpahlearik C 75.12 5 P **P** **22 38 22.6 -0.2**

F25K	**Christian Rive**	**75.33**	**359**	P		**P**	**22 38 24.6**	**+0.4**
BMAR	**Burnt Mountain**	**75.47**	**358**	P		**P**	**22 38 25.4**	**+0.5**
G29M	**Pine Creek**	**75.73**	**356**	P		**P**	**22 38 25.9**	**-0.5**
G29M				IAmb		IAmb	22 38 53.9	
	comp=Z,7.1nm,1.1s							
H27K	**Steamboat Moun**	**76.58**	**357**	P		**P**	**22 38 31.6**	**+0.3**
H27K				IAmb		IAmb	22 38 39.1	
	comp=Z,4.3nm,0.8s							
YKAW3	**Yellowknife Wh**	**76.74**	**345**			**P**	**22 38 32.3**	**+0.2**
YKAW3				IAmb		IAmb	22 38 39.5	
	comp=Z,4.8nm,1.1s							
YKA	**Yellowknife Ar**	**76.80**	**345**	P		**P**	**22 38 31.8**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=22,slow=5.7,SNR=13							
	comp=Z,1.1nm,0.8s							
YKA	**Yellowknife Ar**	**76.80**	**345**	P		**P**	**22 38 31.4**	**-1.1**
YKA	**Yellowknife Ar**	**76.80**	**345**	*ce*P		**P**	**22 38 34.0**	**+1.5**
YKA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
IMAR	**Indian Mountai**	**76.89**	**2**	P		**P**	**22 38 32.5**	**-0.5**
ILAR	**Eielson Array**	**78.18**	**359**	P		**P**	**22 38 39.7**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=350,slow=4.8,SNR=7.4							
	comp=Z,0.5nm,0.7s							
DAWY	**Dawson**	**78.64**	**356**			**P**	**22 38 42.3**	**-0.5**
MJAR	**Matsushiro Arr**	**80.00**	**52**	P		**P**	**22 38 49.9**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=294,slow=4.5,SNR=4.3							
	comp=Z,2.6nm,0.8s							
MJAR	**Matsushiro Arr**	**80.00**	**52**	P		**P**	**22 38 50.1**	**-0.6**
MJAR	**Matsushiro Arr**	**80.00**	**52**	P		**P**	**22 38 50.1**	**-0.6**
MJAR				pmax		pmax		
	comp=Z,6.0nm,1.3s							
ULM	**Lac du Bonnet**	**81.19**	**329**	P		**P**	**22 38 56.7**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=54,slow=8.7,SNR=2.2							
	comp=Z,1.6nm,0.7s							
SUA	**Susitna One**	**81.49**	**1**	P		**P**	**22 38 57.5**	**-0.8**
BDFB	**Brasilia**	**91.26**	**251**	P		**P**	**22 39 46.9**	**-0.2**
	comp=Z,7.6nm,0.8s,baz=55,slow=5.1,SNR=10							
	comp=Z,7.6nm,0.8s							
PDAR	**Pinedale Array**	**92.70**	**332**	P		**P**	**22 39 52.6**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=357,slow=10,SNR=2.2							
	comp=Z,0.2nm,0.7s							

IDC 22 22:50:22.0±2.0, 6°66S×129°51E, h0km, mb3.6/1, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=122.4km s-min=30.6km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.01**	**161**	Pn	Pn	22 53 41.4	-0.6
	0.3nm,0.3s,baz=340,slow=11,SNR=8.2						
WRA				Sn	Sn	22 56 03.4	-15
	0.6nm,0.3s,baz=334,slow=21,SNR=9.5						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**17.43**	**166**	P	Pn	22 54 27.3	+0.5
	0.1nm,0.3s,baz=347,slow=10,SNR=10.0						
ASAR				S	Sn	22 57 27.1	-15
	0.3nm,0.6s,baz=356,slow=27,SNR=1.8						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**67.67**	**327**	P	P	23 01 21.1	0.0
	0.4nm,0.5s,baz=116,slow=8.2,SNR=14						
	0.4nm,0.5s						

*NEIC **22** 22:58:42.3±1.2, 17°.84N±0°.03×66°.87W±0°.01, h10km±2km, ML3.3/37, Md3.1/7(RSPR), Error ellipse: s-maj=5.1km s-min=2.9km az=14.0*
*RSPR **22** 22:58:42.9, 17°.90N×66°.90W, h11km, MD3.1/7*
*SDD **22** 22:58:43.0±0.9, 17°.90N×66°.91W, h18km±7km, MD3.6, ML3.0, MW3.3, Presumed earthquake*

ISC 22 22:58:42.4±1.0, 17°.90N±0°.05×66°.88W±0°.02, h16km±5km, n41, σ0°59'65, 11C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.08**	**359**		**Pg**	**22 58 45.6**	**0.0**
GBPR					**Sg**	**22 58 47.6**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.08**	**359**	↓*i*P	**Pg**	**22 58 45.6**	**0.0**
GBPR				*e*S	**Sg**	**22 58 47.6**	**-0.2**
MLPR	**Magueyes Islan**	**0.17**	**295**		**Pg**	**22 58 46.7**	**-0.1**
MLPR				Sg	**Sg**	**22 58 49.4**	**-0.3**
MLPR				IAML		22 58 50.0	
	9µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.25**	**296**		**Pg**	**22 58 47.8**	**-0.1**
CRPR				Sg	**Sg**	**22 58 51.1**	**-0.5**
CRPR				IAML		22 58 52.6	
	5µm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.25**	**296**	↑*e*Pg	**Pg**	**22 58 47.9**	**-0.1**
CRPR				↑*e*Sg	**Sg**	**22 58 51.1**	**-0.5**
CRPR				IAML		22 58 51.7	
	comp=N,5µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.25**	**296**	↑*i*P	**Pg**	**22 58 47.9**	**-0.1**
CRPR				*e*S	**Sg**	**22 58 51.3**	**-0.3**
OBIP	**Obispado Ponce**	**0.30**	**61**		**Pg**	**22 58 49.1**	**+0.4**
OBIP				Sg	**Sb**	**22 58 54.1**	**+0.1**
OBIP	**Obispado Ponce**	**0.30**	**61**	↓*i*P	**Pg**	**22 58 49.1**	**+0.4**
OBIP				*e*S	**Sb**	**22 58 53.9**	**-0.1**
CELP	**Cerrillos**	**0.34**	**58**		**Pg**	**22 58 49.8**	**+0.4**
LSP	**Las Mesas**	**0.34**	**324**		**Pg**	**22 58 49.5**	**0.0**
LSP					**Sg**	**22 58 54.8**	**+0.4**
LSP	**Las Mesas**	**0.34**	**324**	↓*i*P	**Pg**	**22 58 49.5**	**0.0**
LSP				*e*S	**Sg**	**22 58 54.8**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.38**	**23**		**Pg**	**22 58 50.3**	**0.0**
PRSN	**Puerto Rico Se**	**0.41**	**321**		**Pg**	**22 58 50.5**	**-0.2**
PRSN				IAML		22 58 58.6	
	comp=N,4µm,0.2s						
PRSN	**Puerto Rico Se**	**0.41**	**321**		**Sg**	**22 58 56.7**	**+0.3**
PRSN	**Puerto Rico Se**	**0.41**	**321**	↑*e*Pg	**Pg**	**22 58 50.5**	**-0.2**
PRSN				↑*e*Sg	**Sg**	**22 58 56.6**	**+0.3**
PRSN				IAML		22 58 57.2	
	comp=N,3µm,0.3s						
PRSN	**Puerto Rico Se**	**0.41**	**321**	↑*i*P	**Pg**	**22 58 50.5**	**-0.2**
PRSN				*e*S	**Sg**	**22 58 56.7**	**+0.3**
AGPR	**Aguadilla, PR**	**0.61**	**339**		**Pg**	**22 58 54.0**	**-0.4**
AGPR				IAML		22 59 02.4	
	comp=N,2µm,0.3s						
AGPR				IAML		22 59 02.5	
	comp=N,2µm,0.3s						
AGPR	**Aguadilla, PR**	**0.61**	**339**	↑*e*Pg	**Pg**	**22 58 54.0**	**-0.4**
AGPR				↑*e*Sg	**Sg**	**22 59 02.2**	**-0.4**
AGPR				IAML		22 59 04.0	
	comp=N,1µm,0.2s						
AGPR	**Aguadilla, PR**	**0.61**	**339**	↑*i*P	**Pg**	**22 58 54.1**	**-0.4**
AGPR				*e*S	**Sg**	**22 59 02.3**	**-0.3**
ECPR	**Experimental S**	**0.65**	**49**		**Pg**	**22 58 54.8**	**-0.3**
ECPR				IAML		22 59 05.3	
	comp=N,2µm,0.2s						
ECPR				IAML		22 59 06.5	
	comp=N,1µm,0.2s						
ECPR	**Experimental S**	**0.65**	**49**	↓*i*P	**Pg**	**22 58 54.8**	**-0.3**
ECPR				*e*S	**Sb**	**22 59 04.2**	**+0.1**
EMPR	**Esperanza - Ma**	**0.67**	**30**		**Pg**	**22 58 55.5**	**+0.1**
EMPR					**Sb**	**22 59 04.9**	**+0.3**
EMPR	**Esperanza - Ma**	**0.67**	**30**	↓*i*P	**Pg**	**22 58 55.5**	**+0.1**
EMPR				*e*S	**Sb**	**22 59 04.9**	**+0.3**
SJG	**San Juan**	**0.72**	**73**	Pg	**Pg**	**22 58 56.2**	**-0.3**
SJG				IAML		22 59 07.2	
	comp=N,731nm,0.5s						
SJG	**San Juan**	**0.72**	**73**	↓*e*Pg	**Pg**	**22 58 56.3**	**-0.3**
SJG				↑*e*Sg	**Sb**	**22 59 06.9**	**+0.6**
SJG	**San Juan**	**0.72**	**73**	↓*i*P	**Pg**	**22 58 56.4**	**-0.2**
SJG				*e*S	**Sb**	**22 59 06.6**	**+0.3**
IDE	**Isla Desecheo**	**0.75**	**311**		**Pb**	**22 58 56.1**	**-1.0**
IDE					**Sg**	**22 59 06.1**	**-0.9**
IDE	**Isla Desecheo**	**0.75**	**311**	↓*e*P	**Pb**	**22 58 56.1**	**-1.0**
IDE				*e*S	**Sg**	**22 59 06.1**	**-0.9**
PDPR	**Patillas Dam,**	**0.82**	**81**		**Pb**	**22 58 58.2**	**-0.1**
GCPR	**Guaynabo City**	**0.86**	**61**		**Pb**	**22 58 58.5**	**-0.4**
GCPR					**Sb**	**22 59 09.8**	**-0.4**
GCPR	**Guaynabo City**	**0.86**	**61**	↑*e*P	**Pb**	**22 58 58.3**	**-0.6**
GCPR				*e*S	**Sb**	**22 59 10.1**	**-0.2**
HUMP	**Col San Antoni**	**1.01**	**76**		**Pb**	**22 59 01.2**	**-0.3**
HUMP				IAML		22 59 18.1	
	comp=N,627nm,0.3s						
HUMP				IAML		22 59 18.9	
	comp=N,452nm,0.2s						
HUMP	**Col San Antoni**	**1.01**	**76**		**Sb**	**22 59 13.8**	**-0.7**
HUMP	**Col San Antoni**	**1.01**	**76**	↑*e*P	**Pb**	**22 59 01.0**	**-0.5**
HUMP				*e*S	**Sb**	**22 59 13.8**	**-0.7**
PCDR	**Punta Cana, DR**	**1.56**	**293**	↑*e*Pg	**Pn**	**22 59 09.4**	**0.0**
PCDR				IAML		22 59 44.8	
	comp=N,145nm,0.6s						
CUPR	**Culebra, Puert**	**1.57**	**75**		**Pb**	**22 59 10.6**	**-0.5**
DR12	**Loma Pena Alta**	**2.54**	**291**	Pn	**Pn**	**22 59 24.6**	**+1.6**
HATOM	**Hato Mayor del**	**2.54**	**291**	↑*e*Pg	**Pn**	**22 59 25.2**	**+2.3**
HATOM				IAML		23 00 05.6	
	comp=N,33nm,1.1s						
SMRT	**St. Maarten**	**3.62**	**87**	Pn	**Pn**	**22 59 38.1**	**+0.2**
SDDR	**Presa de Saban**	**4.32**	**285**		**Pn**	**22 59 49.5**	**+2.0**
GDHS	**Morne Mazeau,**	**5.15**	**108**	Pn	**Pn**	**22 59 58.5**	**-0.4**

HEL 22 23:03:34.2±0.3, 67°.15N×20°.50E, h0km, ML1.2, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERTU	**Ertsjaerv**	**0.90**	**131**	PG	Pg	23 03 50.5	-0.9
	baz=313						
LANU	**Lannavaara**	**1.06**	**32**	PG	Pg	23 03 53.3	-1.2
LANU				SB	Sg	23 04 08.3	0.0
KLF	**Kolari**	**1.35**	**85**	PG	Pg	23 03 58.5	-1.6
KLF				smax	smax	23 04 14.9	
	comp=Z,1.7nm,0.2s						
KLF				SB	Sg	23 04 17.0	-0.6
HEF	**Hetta**	**1.74**	**42**	PG	Pn	23 04 05.5	-0.2
HEF				smax	smax	23 04 26.0	
	comp=Z,1.0nm,0.2s						
HEF				SG	Sn	23 04 26.9	-1.6
KIF	**Kilpisjarvi**	**1.86**	**3**	PG	Pb	23 04 08.6	-0.4
KIF				smax	smax	23 04 30.7	
	comp=Z,2.3nm,0.2s						
KIF				SG	Sg	23 04 34.0	0.0
TOF	**Tornio**	**1.87**	**123**	PG	Pn	23 04 08.0	+0.6
TOF				smax	smax	23 04 29.9	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sb	23 04 32.6	-0.4
KTK1	**Kautokeino**	**2.13**	**28**	PG	Pn	23 04 12.2	+1.2
KTK1				SG	Sn	23 04 38.9	+0.8
RNF	**Rovaniemi**	**2.24**	**102**	PG	Pn	23 04 14.0	+1.5
RNF				SB	Sb	23 04 42.5	-1.3
RANF	**Ranua**	**2.76**	**112**	SG	Sb	23 04 58.0	-0.7
ARA0	**ARCESS Array S**	**3.03**	**36**	SB	Sn	23 05 02.0	+1.8
OBF8	**Ulkokalla**	**3.08**	**155**	smax	smax	23 05 04.9	
	comp=Z,0.6nm,0.2s						
OBF8				SG	Sb	23 05 08.2	+0.2

UPP 22 23:04:27.2±0.0, 67°.17N×20°.64E, h0km, ML2.2, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.06**	**207**	P	Pg	23 04 28.7	+0.4
DUNU				S	Sg	23 04 29.6	+0.6
MASU	**Masugnsbyn**	**0.60**	**61**	P	Pg	23 04 38.7	0.0
RATU	**Laukkuluspa**	**0.77**	**329**	P	Pg	23 04 41.4	-0.4
KUA	**Kurravaara**	**0.79**	**352**	P	Pg	23 04 42.2	-0.1
SALU	**Saltoluokta**	**0.85**	**285**	P	Pg	23 04 43.3	-0.2
ERTU	**Ertsjaerv**	**0.87**	**135**	P	Pg	23 04 43.2	-0.7
NIKU	**Nikkaluokta**	**0.93**	**319**	P	Pg	23 04 44.5	-0.5
LANU	**Lannavaara**	**1.02**	**30**	P	Pg	23 04 46.1	-0.6
HARU	**Harads**	**1.02**	**172**	P	Pg	23 04 46.0	-0.7
KOVU	**Salmi**	**1.07**	**350**	P	Pg	23 04 47.7	0.0
	baz=186						
KALU	**Kalix**	**1.71**	**139**	P	Pn	23 04 58.4	+0.2
SJUU	**Sjulsmark**	**1.72**	**166**	P	Pn	23 04 58.2	-0.1

*IDC **22** 23:10:10.8±2.7, 37°.90S×93°.75W, h0km, mb3.8/5, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=82.2km s-min=27.7km az=17.0*

ISC 22 23:10:12.2±2.3, 37°.9S±0°.4×93°.7W±0°.2, h10km, n16, σ1s24/7, mb3.9/5, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.68**	**76**	T	T	23 26 15.3	
	baz=250						
H03S1	**Juan Fernandez**	**12.69**	**76**	T	T	23 26 23.6	
	baz=250						
H03S3	**Juan Fernandez**	**12.70**	**76**	T	T	23 26 15.2	
	baz=250						
H03N2	**Juan Fernandez**	**12.83**	**74**	T	T	23 26 25.2	
	baz=254						
H03N3	**Juan Fernandez**	**12.83**	**74**	T	T	23 26 37.8	
	baz=254						
H03N1	**Juan Fernandez**	**12.85**	**74**	T	T	23 26 25.0	
	baz=254						
PLCA	**Paso Flores**	**18.16**	**106**	P	**Pn**	**23 14 24.6**	**+0.1**
	baz=262,slow=11,SNR=4.1						
	3.6nm,1.1s						
CFA	**Coronel Fontan**	**21.84**	**81**	P	**P**	**23 15 05.3**	**+0.4**
	3.1nm,0.9s,baz=249,slow=6.4,SNR=6.5						
	3.1nm,0.9s						
LPAZ	**La Paz**	**31.17**	**53**	P	**P**	**23 16 31.5**	**-0.6**
	0.6nm,0.3s,baz=197,slow=9.2,SNR=2.2						
	0.6nm,0.3s						
TXAR	**Lajitas Array**	**67.52**	**351**	P	**P**	**23 21 08.0**	**-0.6**
	0.5nm,1.0s,baz=177,slow=9.6,SNR=4.7						
	0.5nm,1.0s						
NVAR	**Mina Array Bea**	**79.25**	**341**	P	**P**	**23 22 19.2**	**+1.5**
	1.5nm,1.0s,baz=184,slow=8.6,SNR=5.1						
	1.5nm,1.0s						
PDAR	**Pinedale Array**	**81.56**	**348**	P	**P**	**23 22 31.0**	**+1.0**
	1.3nm,1.1s,baz=180,slow=5.5,SNR=4.7						
	1.3nm,1.1s						
H11S2	**WAKE ISLAND Hyl**	**08.51**	**279**	T	T	01 26 03.8	
	baz=130,SNR=7.5						
H11S1	**WAKE ISLAND Hyl**	**08.52**	**279**	T	T	01 26 06.6	
	baz=130						
H11S3	**WAKE ISLAND Hyl**	**08.52**	**279**	T	T	01 26 07.5	
	baz=130						
SONM	**Songino Array**	**162.25**	**310**	PKPab	**PKPab**	**23 30 59.5**	**-1.4**
	1.0nm,1.0s,baz=117,slow=2.7,SNR=4.4						

*IDC **22** 23:12:34.7±0.4, 38°.21S×93°.74W, h0km, mb4.9/15, mbtmp4.9/17, ML4.6/2, MS4.9/35, Error ellipse: s-maj=15.3km s-min=14.7km az=139.0*
*BJI **22** 23:12:34.1, 38°.97S×92°.89W, h10km, mB5.5/15, Ms5.7/33, Ms7 5.5/38*
*MOS **22** 23:12:36.9±2.0, 38°.10S×93°.70W, h10km, mb5.5/45, MS5.0/9, Error ellipse: s-maj=11.3km s-min=8.1km az=94.0*
*NEIC **22** 23:12:36.9±1.3, 38°.15S±0°.09×93°.8W±0°.1, h10km±1km, mb5.4/176, Ms_20 5.2/174, Mww5.5/56, Error ellipse: s-maj=15.9km s-min=13.4km az=210.0*
*GCMT **22** 23:12:37.9±0.1, 38°.24S±0°.01×93°.81W±0°.01, h12km, MW5.5/158, Moment Tensor Solution. s112,c181; s158,c301; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr=2.00±.02; Mθθ=0.01±.02; Mφφ=1.99±.02; Mrθ=0.36±.05; Mrφ=0.11±.01; Mθφ=0.53±.04; Best double couple: M=2.09700×10^17 NP1:φs193.00000°, δ39.00000°, λ-74.00000°. NP2:φs353.00000°, δ53.00000°, λ-103.00000°. Principal axes: T 2.0600, Plg7.0000°, Azm92.0000°; N 0.0740, Plg10.0000°, Azm0.0000°; P -2.1330, Plg78.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*GFZ **22** 23:12:37.8, 38°.08S×93°.83W, h10km, MW5.5, Moment Tensor Solution. s68 Moment tensor: Mrr=1.89; Mθθ=0.16; Mφφ=1.73; Mrθ=-0.36; Mrφ=0.12; Mθφ=-1.04; Fault plane solution: NP1:φs178.00000°, δ30.00000°, λ-100.00000°. NP2:φs11.00000°, δ61.00000°, λ-82.00000°. Principal axes: T 2.0300, Plg15.0000°, Azm97.0000°; N 0.1800, Plg6.0000°, Azm188.0000°; P -2.2100, Plg74.0000°, Azm298.0000°;*
*NEIC **22** 23:12:37.2, 38°.14S×93°.75W, h12km*
*NEIC **22** 23:12:37.2, 37°.94S×93°.87W, h12km, Moment Tensor Solution. Duration: 2s9 Moment tensor: Scale 10^17Nm; Mrr=1.87; Mθθ=0.07; Mφφ=1.93; Mrθ=0.68; Mθφ=0.17; Mrφ=1.30; Fault plane solution: M=2.41000×10^17 NP1: φs351.67000°, δ28.64000°, λ-113.76000°. NP2: φs198.31000°, δ63.98000°, λ-77.59000°. Principal axes: T 2.3912, Plg18.0000°, Azm279.0000°; N 0.0294, Plg11.0000°, Azm13.0000°; P -2.4206, Plg69.0000°, Azm133.0000°;*
*PTWC **22** 23:12:38, 38°.20S×93°.70W, h10km, Mwp6.0/13*

ISC 22 23:12:36.5±0.8, 38°.15S±0°.05×93°.78W±0°.05, h10km±4km, h10km:pP-P, n601, σ1s35/525, mb5.3/110, MS5.1/126, 20C-7D, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.78**	**75**	T	T	23 28 38.2	
	baz=244,slow=74,SNR=494						
H03S1	**Juan Fernandez**	**12.79**	**75**	T	T	23 28 42.3	
	baz=244,slow=74,SNR=457						
H03S3	**Juan Fernandez**	**12.79**	**75**	T	T	23 28 43.8	
	baz=244,slow=74						
H03N3	**Juan Fernandez**	**12.94**	**73**	T	T	23 29 03.9	
	baz=250,slow=72,SNR=356						
H03N2	**Juan Fernandez**	**12.94**	**73**	T	T	23 29 01.2	
	baz=250,slow=72,SNR=351						
H03N1	**Juan Fernandez**	**12.95**	**73**	T	T	23 29 07.8	
	baz=250,slow=72,SNR=400						
BI04	**Isla Mocha**	**15.63**	**97**	↑*e*P	**Pn**	**23 16 17.9**	**+1.2**
BI04				IVMs_BB	IVMs_BB	23 20 21.6	
	comp=Z,8µm,15.9s						
LR04	**Corral**	**15.92**	**103**		**Pn**	**23 16 20.3**	**-0.2**
LR04	**Corral**	**15.92**	**103**	P	**Pn**	**23 16 21.1**	**+0.7**
LL05	**Los Muermos**	**15.95**	**108**		**Pn**	**23 16 22.1**	**+1.3**
LL05	**Los Muermos**	**15.95**	**108**	P	**Pn**	**23 16 22.8**	**+2.0**
GO07	**Milladeo Hill,**	**16.05**	**114**		**Pn**	**23 16 22.3**	**+0.2**
GO07				IAmb	IAmb	23 16 29.6	
	comp=Z,571nm,1.4s						
LL07	**Hotel Espejo d**	**16.13**	**113**		**Pn**	**23 16 23.7**	**+0.5**
LL07	**Hotel Espejo d**	**16.13**	**113**	↑*e*P	**Pn**	**23 16 25.2**	**+2.1**
LL07				IVMs_BB	IVMs_BB	23 20 42.5	
	comp=Z,7µm,23.4s						
BI05	**Punta Hualpn**	**16.42**	**91**		**Pn**	**23 16 27.0**	**+0.2**
BI05				IAmb	IAmb	23 16 32.9	
	comp=Z,392nm,1.4s						
BI05	**Punta Hualpn**	**16.42**	**91**	↑*e*P	**Pn**	**23 16 27.0**	**+0.2**
BI05				*e*S	**S**	**23 19 36.4**	**-4.9**
BI05				IVMs_BB	IVMs_BB	23 20 44.4	
	comp=Z,7µm,22.0s						
BI05	**Punta Hualpn**	**16.42**	**91**	P	**Pn**	**23 16 26.0**	**-0.8**
LL01	**San Ignacio de**	**16.84**	**111**	P	**Pn**	**23 16 33.0**	**+0.8**
LR05	**Currie**	**17.01**	**104**		**Pn**	**23 16 34.3**	**0.0**
AY01	**Puyuhuapi**	**17.05**	**118**		**Pn**	**23 16 34.7**	**-0.1**
RPN	**Rapa Nui**	**17.07**	**306**	P	**P**	**23 16 36.2**	**-0.8**
	comp=Z,8.1nm,0.3s,baz=167,slow=9.7,SNR=3.8						
	comp=Z,28nm,0.5s						
RPN	**Rapa Nui**	**17.07**	**306**	Pn	**Pn**	**23 16 35.5**	**+0.2**
VA02	**Isla de Pascua**	**17.11**	**305**	Pn	**Pn**	**23 16 34.0**	**-1.8**
VA02				IAmb	IAmb	23 16 42.8	
	comp=Z,579nm,1.6s						
VA02	**Isla de Pascua**	**17.11**	**305**	P	**P**	**23 16 38.5**	**+1.1**
LC01	**Cunco**	**17.16**	**99**	↑*e*P	**Pn**	**23 16 37.5**	**+1.2**
LL02	**Futaleuf**	**17.37**	**114**		**Pn**	**23 16 38.4**	**-0.4**
GO06	**Curarrehue**	**17.43**	**102**		**Pn**	**23 16 39.2**	**-0.5**
GO06	**Curarrehue**	**17.43**	**102**	↑*e*P	**P**	**23 16 41.2**	**+0.2**
GO06				IVMs_BB	IVMs_BB	23 21 21.7	
	comp=Z,4µm,15.7s						
GO06	**Curarrehue**	**17.43**	**102**	P	**P**	**23 16 41.3**	**+0.2**
COYC	**Coyhaique**	**17.75**	**122**		**Pn**	**23 16 43.9**	**+0.4**
GO05	**Hualane**	**17.83**	**87**	P	**Pn**	**23 16 44.2**	**-0.4**
GO05				IAmb	IAmb	23 16 47.4	
	comp=Z,442nm,1.4s						
GO05	**Hualane**	**17.83**	**87**	*e*P	**Pn**	**23 16 43.8**	**-0.8**
GO05	**Hualane**	**17.83**	**87**	P	**P**	**23 16 45.7**	**+0.4**
BI02	**San Fabin de**	**17.94**	**92**		**Pn**	**23 16 45.3**	**-0.8**
BI02	**San Fabin de**	**17.94**	**92**	↓*e*P	**Pn**	**23 16 46.4**	**+0.3**
BI02				*e*S	**S**	**23 20 14.6**	**+2.0**
BI02				IVMs_BB	IVMs_BB	23 21 32.5	
	comp=Z,6µm,19.1s						
BI02	**San Fabin de**	**17.94**	**92**	P	**P**	**23 16 47.2**	**+0.6**
AY03	**Cochrane**	**17.99**	**127**	P	**Pn**	**23 16 46.0**	**-0.5**
ML02	**Panimavida**	**18.03**	**89**	P	**Pn**	**23 16 46.3**	**-0.8**
PLCA	**Paso Flores**	**18.12**	**105**	P	**Pn**	**23 16 48.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=273,slow=11,SNR=33						
	comp=Z,42nm,1.2s						
PLCA	**Paso Flores**	**18.12**	**105**	P	**Pn**	**23 16 47.9**	**-0.4**
PLCA	**Paso Flores**	**18.12**	**105**	P	**P**	**23 16 50.5**	**+1.9**
PLCA	**Paso Flores**	**18.12**	**105**	*e*P	**P**	**23 16 49.6**	**+1.0**
VA05	**Santo Domingo**	**18.50**	**83**	P	**P**	**23 16 51.7**	**-1.0**
GO08	**Villa O'Higgin**	**18.51**	**131**		**P**	**23 16 52.4**	**-0.3**
GO08				IAmb	IAmb	23 17 01.2	
	comp=Z,405nm,1.9s						
GO08	**Villa O'Higgin**	**18.51**	**131**	P	**Pn**	**23 16 54.0**	**+1.1**
BO01	**Tunca**	**18.67**	**85**		**P**	**23 16 54.3**	**-0.3**
BO01				IAmb	IAmb	23 16 58.2	
	comp=Z,659nm,2.0s						
BO01	**Tunca**	**18.67**	**85**	*e*P	**P**	**23 16 53.1**	**-1.5**
BO01				*e*S	**S**	**23 20 30.4**	**+3.1**
BO01				IVMs_BB	IVMs_BB	23 21 49.4	
	comp=Z,4µm,27.9s						
MT01	**Popeta**	**18.71**	**84**	P	**P**	**23 16 53.8**	**-1.3**
MT01	**Popeta**	**18.71**	**84**	↑*e*P	**P**	**23 16 55.6**	**+0.5**
BO02	**Sierra Bellavi**	**18.79**	**87**		**P**	**23 16 55.6**	**-0.4**
MT09	**Talagante**	**18.95**	**84**	P	**P**	**23 16 57.1**	**-0.7**
MT09				IAmb	IAmb	23 17 02.4	
	comp=Z,512nm,1.6s						
PEL	**Peldehue**	**19.41**	**82**	P	**P**	**23 17 03.8**	**+1.0**
MT13	**San Alfonso**	**19.51**	**84**	P	**P**	**23 17 03.5**	**-0.4**
MT13				IAmb	IAmb	23 17 15.4	
	comp=Z,312nm,1.9s						
CO04	**Los Peladeros**	**19.61**	**79**	P	**P**	**23 17 05.2**	**-0.1**
CO04				IAmb	IAmb	23 17 16.5	
	comp=Z,289nm,1.6s						
VA03	**San Esteban**	**19.66**	**81**	P	**P**	**23 17 05.3**	**-0.2**
CO06	**Fray Jorge**	**19.71**	**74**	P	**P**	**23 17 05.8**	**-0.2**
MT08	**Bocatoma Ro**	**19.82**	**84**	P	**P**	**23 17 07.4**	**-0.1**
CO02	**Combarbal**	**19.95**	**77**	P	**P**	**23 17

comp=Z,7µm,21.0s
AC01 Pan de Azucar 22.92 65 P P 23 17 39.0 -1.7
AC01 IAmb IAmb 23 17 48.2
comp=Z,120nm,1.2s
AC01 IAMs_20 IAMs_20 23 23 45.8
comp=Z,8µm,21.0s
AC01 Pan de Azucar 22.92 65 P P 23 17 41.0 +0.4
AC02 Maricunga 23.59 69 P P 23 17 47.2 -0.7
AC02 IAmb IAmb 23 17 57.5
comp=Z,183nm,1.1s
AC02 IAMs_20 IAMs_20 23 24 22.4
comp=Z,8µm,19.0s
AC02 Maricunga 23.59 69 P P 23 17 48.6 +0.7
USHA Ushuaia 23.94 142 LR LR 23 25 14.6
comp=Z,6µm,18.2s,baz=288,slow=32
PB14 IPOC Station P 24.00 63 P P 23 17 50.8 -0.9
PB14 IAmb IAmb 23 17 55.0
comp=Z,119nm,1.2s
PB14 IAMs_20 IAMs_20 23 24 18.4
comp=Z,7µm,21.0s
GO02 Mina Guanaco 24.24 65 P P 23 17 52.1 -1.8
GO02 IAMs_20 IAMs_20 23 24 36.7
comp=Z,6µm,19.0s
GO02 Mina Guanaco 24.24 65 P P 23 17 54.2 +0.3
MG01 Puerto William 24.38 142 P P 23 17 54.7 +0.1
MG01 IAMs_20 IAMs_20 23 25 36.5
comp=Z,6µm,18.0s
MG01 Puerto William 24.38 142 P P 23 17 53.9 -0.7
PB10 IPOC Station P 24.62 60 IAMs_20 IAMs_20 23 24 35.8
comp=Z,7µm,22.0s
TRQA Tornquist 24.97 100 P P 23 18 00.1 0.0
TRQA IAmb IAmb 23 18 12.7
comp=Z,226nm,1.8s
TRQA Tornquist 24.97 100 P P 23 18 00.1 0.0
TRQA pmax pmax
comp=Z,226nm,1.8s
TRQA MLR MLR
comp=Z,11µm,19.0s
PB05 IPOC Station P 25.30 60 IAMs_20 IAMs_20 23 25 06.8
comp=Z,6µm,20.0s
PB06 IPOC Station P 25.83 60 IAMs_20 IAMs_20 23 25 23.8
comp=Z,5µm,19.0s
PB03 IPOC Station P 26.15 59 P P 23 18 10.1 -1.0
PB03 IAmb IAmb 23 18 19.1
comp=Z,126nm,1.4s
PB03 IAMs_20 IAMs_20 23 25 32.3
comp=Z,5µm,20.0s
PB07 IPOC Station P 26.28 58 IAMs_20 IAMs_20 23 25 34.7
comp=Z,5µm,20.0s
PB02 IPOC Station P 26.56 58 IAMs_20 IAMs_20 23 25 43.0
comp=Z,4µm,19.0s
AF01 San Pedro de A 26.64 63 IAMs_20 IAMs_20 23 25 53.1
comp=Z,6µm,22.0s
PB09 IPOC Station P 26.67 59 IAMs_20 IAMs_20 23 25 49.0
comp=Z,5µm,20.0s
PB01 IPOC Station P 27.02 58 P P 23 18 18.3 -0.6
PB01 IAMs_20 IAMs_20 23 25 58.4
comp=Z,5µm,20.0s
HMBC Humberstone 27.30 56 IAMs_20 IAMs_20 23 25 52.6
comp=Z,6µm,22.0s
PB11 IPOC Station P 27.82 56 P P 23 18 24.1 -2.0
PB11 IAmb IAmb 23 18 33.9
comp=Z,75nm,1.4s
PB11 IAMs_20 IAMs_20 23 26 08.5
comp=Z,6µm,22.0s
PB08 IPOC Station P 27.88 57 IAMs_20 IAMs_20 23 26 23.0
comp=Z,5µm,20.0s
GO01 Chusmiza 28.19 56 IAMs_20 IAMs_20 23 26 32.2
comp=Z,4µm,19.0s
PB12 IPOC Station P 28.23 53 P P 23 18 28.2 -1.5
PB12 IAmb IAmb 23 18 37.2
comp=Z,80nm,1.3s
EFI East Falkland 28.37 130 P P 23 18 30.4 -0.1
EFI IAmb IAmb 23 18 32.1
comp=Z,106nm,1.4s
EFI East Falkland 28.37 130 P P 23 18 30.4 -0.1
EFI pmax pmax
comp=Z,106nm,1.4s
EFI MLR MLR
comp=Z,7µm,18.0s
NNA Nana 30.13 35 P P 23 18 45.9 -0.6
NNA Nana 30.13 35 *i* P P **23 18 47.4 +0.9**
NNA pmax pmax
comp=Z,37nm,1.0s
PSAL Palomas, Salto 30.45 88 *eP* **P 23 18 48.6 -0.6**
LPAZ La Paz 31.35 53 P P 23 18 56.7 -1.3
comp=Z,33nm,1.0s,baz=214,slow=6.9,SNR=30
LPAZ LR LR 23 28 40.8
comp=Z,3µm,20.9s,baz=216,slow=31
comp=Z,33nm,1.0s
LPAZ La Paz 31.35 53 P P 23 18 57.9 -0.1
LPAZ IAmb IAmb 23 19 06.6
comp=Z,48nm,1.0s
LPAZ La Paz 31.35 53 P P 23 18 57.9 -0.1
LPAZ pmax pmax
comp=Z,49nm,1.0s
LPAZ La Paz 31.35 53 P P 23 18 59.2 +1.2
LPAZ La Paz 31.35 53 *eP* **P 23 18 57.4 -0.6**
PMSA Palmer Station 31.88 156 LR LR 23 28 19.6
comp=Z,3µm,20.8s,baz=306,slow=30
CPUP Villa Florida 32.81 80 P P 23 19 09.5 -0.5
comp=Z,6.0nm,0.7s,baz=248,slow=9.6,SNR=7.9
CPUP LR LR 23 31 07.9
comp=Z,3µm,18.8s,baz=248,slow=34
comp=Z,6.0nm,0.7s
CPUP Villa Florida 32.81 80 P P 23 19 08.9 -1.1
PTCN Pitcairn Islan 33.34 282 P P 23 19 14.7 0.0
PLTB Pedras Altas 33.35 91 P P 23 19 13.6 -1.1
PLTB IAmb IAmb 23 19 21.5
comp=Z,61nm,1.1s
ESPZ Base Esperanza 33.53 151 P P 23 19 16.6 +0.7
ESPZ IAmb IAmb 23 19 26.3
comp=Z,106nm,1.3s
ATAH Atahualpa 33.88 28 LR LR 23 30 04.9
comp=Z,3µm,18.4s,baz=219,slow=31
MCRA Macar, Loja 35.91 24 P P 23 19 37.9 +0.9
comp=Z,648nmcomp=Z,34nm,0.9s
AMBA Amambai (Brazi 36.41 77 *eP* **P 23 19 41.8 +0.6**
ITAB Concordia 36.44 85 P P 23 19 40.3 -1.0
ITAB IAmb IAmb 23 19 48.3
comp=Z,74nm,1.1s
ITAB Concordia 36.44 85 *eP* **P 23 19 41.1 -0.3**
PTGB Pitanga 37.72 82 *eP* **P 23 19 52.2 -0.3**
COHC Cochancay 37.93 24 P P 23 19 55.3 +1.2
PTLB Pontes e Lacer 37.97 63 P P 23 19 53.9 -0.6
PTLB IAmb IAmb 23 20 02.0
comp=Z,108nm,1.5s
PTLB Pontes e Lacer 37.97 63 *eP* **P 23 19 54.7 +0.2**
TRCB Terra Rica 38.30 78 P P 23 19 56.4 -0.8
TRCB IAmb IAmb 23 20 03.5
comp=Z,62nm,1.1s
TRCB Terra Rica 38.30 78 *eP* **P 23 19 57.5 +0.2**
VILB Vilhena 38.99 59 P P 23 20 03.0 -0.1
VILB IAmb IAmb 23 20 10.4
comp=Z,114nm,1.7s
VILB Vilhena 38.99 59 *eP* **P 23 20 03.3 +0.2**
PP1B Ponte de Pedra 39.64 70 *eP* **P 23 20 08.3 -0.3**
SLOR San Lorenzo - 39.81 24 P P 23 20 10.7 +0.3
SALV Santo Antonio 40.13 67 *eP* **P 23 20 12.5 -0.1**
OTAV Otavalo 40.73 24 P P 23 20 17.4 -0.6
OTAV Otavalo 40.73 24 P P 23 20 17.4 -0.6
OTAV pmax pmax
comp=Z,73nm,1.4s
OTAV MLR MLR
comp=Z,2µm,20.0s
OTAV Otavalo 40.73 24 P P 23 20 18.8 +0.8
OTAV Otavalo 40.73 24 *eP* **P 23 20 18.6 +0.6**
OTAV Otavalo 40.73 24 P P 23 20 20.1 +2.1
comp=Z,904nmcomp=Z,29nm,1.3s
HOPE Hope Point 41.57 132 P P 23 20 24.5 +0.5
HOPE Hope Point 41.57 132 IAMs_20 IAMs_20 23 36 08.0
comp=Z,3µm,20.0s
HOPE Hope Point 41.57 132 P P 23 20 24.5 +0.5
HOPE pmax pmax
comp=Z,176nm,1.3s
HOPE MLR MLR
comp=Z,3µm,20.0s
ITRB Iturama 41.78 76 *eP* **P 23 20 26.2 -0.1**
PTLC Puerto Leguiza 41.96 29 P P 23 20 28.4 +0.8
comp=Z,4µmcomp=Z,62nm,1.3s
PDRB Porto dos Gac 42.31 61 *eP* **P 23 20 30.5 -0.1**
BB19B Bebedouro 42.42 80 *eP* **P 23 20 31.6 +0.2**
BBAC Balboa, Cauca 42.80 25 P P 23 20 37.7 +3.0
comp=Z,755nmcomp=Z,26nm,1.6s
ARAG Araguaiana, MT 43.11 70 *eP* **P 23 20 36.7 -0.3**
POPC Popayan, Colom 43.47 25 P P 23 20 42.7 +2.5

comp=Z,402nmcomp=Z,9.4nm,1.1s
CLDB Colider 43.48 61 *eP* **P 23 20 40.2 +0.2**
TEFE Tefe 43.56 45 *eP* **P 23 20 41.3 +0.7**
JAMC Jamundi, Valle 44.11 25 P P 23 20 48.3 +3.1
comp=Z,36nm,1.2s
MACC Macarena, Meta 44.13 29 P P 23 20 47.6 +2.4
comp=Z,629nmcomp=Z,19nm,1.7s
IPMB Ipameri, GO 44.44 76 *eP* **P 23 20 47.0 -0.8**
SGC2 Sao Gabriel da 45.15 40 P P 23 20 53.6 +0.3
comp=Z,832nmcomp=Z,49nm,1.3s
PRAC Prado 45.19 27 P P 23 20 57.3 +3.6
comp=Z,1µmcomp=Z,54nm,2.3s
ORTC Ortega, Tolima 45.24 27 P P 23 20 57.6 +3.5
comp=Z,841nmcomp=Z,47nm,1.7s
BDFB Brasilia 46.00 74 P P 23 20 59.1 -1.2
comp=Z,11nm,0.8s,baz=263,slow=6.0,SNR=9.3
BDFB LR LR 23 39 28.1
comp=Z,3µm,18.2s,baz=232,slow=35
comp=Z,11nm,0.8s
BDFB Brasilia 46.00 74 P P 23 20 58.9 -1.3
BDFB IAmb IAmb 23 21 08.6
comp=Z,77nm,1.8s
MACA Manacapuru-AM 46.12 49 P P 23 20 59.8 -1.2
MACA IAmb IAmb 23 21 08.2
comp=Z,65nm,1.0s
ROSC El Rosal 46.44 27 P P 23 21 05.4 +1.5
comp=Z,6.9nm,0.4s,baz=207,slow=5.7,SNR=23
ROSC LR LR 23 38 35.4
comp=Z,1µm,18.2s,baz=212,slow=34
comp=Z,6.9nm,0.4s
ROSC El Rosal 46.44 27 P P 23 21 04.5 +0.6
ROSC El Rosal 46.44 27 P P 23 21 04.5 +0.6
ROSC pmax pmax
comp=Z,226nm,1.7s
ROSC El Rosal 46.44 27 P P 23 21 09.3 +5.4
NPGB Novo Progresso 46.53 58 *eP* **P 23 21 04.0 -0.3**
PIRO Carate, Puerto 47.33 14 P P 23 21 11.6 +1.2
PIRO IAmb IAmb 23 21 15.7
comp=Z,66nm,1.2s
BRU2 Volcan 47.84 15 P P 23 21 15.0 +0.4
BRU2 IAmb IAmb 23 21 29.4
comp=Z,46nm,1.1s
ITTB Itaituba 48.27 55 *eP* **P 23 21 17.1 -0.7**
UREC San Jos de Ur 48.74 24 P P 23 21 24.2 +2.9
comp=Z,27nm,1.8s
JTS Las Juntas de 48.89 12 LR LR 23 36 49.1
comp=Z,2µm,20.9s,baz=201,slow=30
JTS Las Juntas de 48.89 12 P P 23 21 23.5 +1.0
JTS IAmb IAmb 23 21 42.1
comp=Z,52nm,1.2s
JTS Las Juntas de 48.89 12 *i* P P **23 21 24.3 +1.8**
JTS pmax pmax
comp=Z,86nm,1.6s
JANB Januaria 49.17 76 *eP* **P 23 21 24.7 -0.1**
PAMC Pamplona, Colo 49.34 28 P P 23 21 27.0 +0.5
comp=Z,162nmcomp=Z,19nm,1.1s
SDBA SAO DESIDERIO 50.37 73 *eP* **P 23 21 33.9 -0.1**
SMTB Santa Maria do 50.70 67 *eP* **P 23 21 36.9 +0.5**
BOAV Boa Vista 50.72 45 P P 23 21 35.7 -0.8
BOAV Boa Vista 50.72 45 *eP* **P 23 21 36.0 -0.5**
SJCC San Jacinto, C 50.86 24 P P 23 21 41.6 +4.0
comp=Z,1µmcomp=Z,61nm,1.9s
BOAB BOACO BROADBAND 50.91 10 P P 23 21 37.7 -0.1
BOAB IAMs_20 IAMs_20 23 37 41.8
comp=Z,2µm,21.0s
SDV Santo Domingo 51.55 30 LR LR 23 41 58.4
comp=Z,3µm,19.3s,baz=200,slow=34
SDV Santo Domingo 51.55 30 P P 23 21 42.2 -0.7
SDV IAmb IAmb 23 21 45.6
comp=Z,128nm,1.9s
SDV Santo Domingo 51.55 30 *eP* **P 23 21 43.1 +0.2**
SDV Santo Domingo 51.55 30 P P 23 21 43.5 +0.6
comp=Z,18nm,1.1s
GUA01 Guaratinga, BA 51.75 81 *eP* **P 23 21 44.3 0.0**
QSPA South Pole Qui 52.07 180 P P 23 21 46.0 -0.3
comp=Z,24nm,1.1s,baz=133,slow=4.8,SNR=11
QSPA LR LR 23 40 18.1
comp=Z,729nm,20.6s,baz=128,slow=32
comp=Z,24nm,1.1s
QSPA South Pole Qui 52.07 180 P P 23 21 46.3 +0.1
QSPA IAmb IAmb 23 21 49.3
comp=Z,76nm,1.4s
TGUH Tegucigalpa,Un 52.29 8 P P 23 21 48.3 0.0
TGUH IAmb IAmb 23 21 56.8
comp=Z,72nm,1.0s
VNA3 Neumayer Olymp 52.54 156 ⇑P **P 23 21 50.4 +1.0**
VNA3 ⇑pP **pwP 23 21 55.9 -0.4**
PPTF Pamatai, Papee 52.58 277 P P 23 21 50.8 +0.3
PPT Papeete 52.60 277 P P 23 21 50.3 -0.3
comp=Z,49nm,0.9s,baz=283,slow=19,SNR=6.1
PPT LR LR 23 38 07.2
comp=Z,2µm,19.7s,baz=120,slow=29
comp=Z,49nm,0.9s
CRJC Cerrejon, Guaj 52.68 26 P P 23 21 51.8 +0.6
comp=Z,1µmcomp=Z,76nm,1.7s
CMC01 Camacan, BA 52.69 80 *eP* **P 23 21 50.8 -0.4**
NBIT Itapeh - BA 53.01 80 *eP* **P 23 21 54.8 +1.2**
VNA1 Neumayer--Stat 53.09 155 ⇑P **P 23 21 55.5 +2.0**
comp=Z,82nm,0.9s
VNA1 ⇓pP **pwP 23 21 59.6 -0.7**
VNA2 Neumayer--Watz 53.32 156 ⇑P **P 23 21 56.8 +1.5**
comp=Z,34nm,0.9s,baz=290,slow=7.9
VNA2 ⇓pP **pwP 23 22 01.1 -1.0**
baz=291,slow=7.5
URIC Uribia, Colomb 53.63 27 P P 23 21 59.6 +1.6
SNAA Sanae 54.59 157 ⇑P **P 23 22 05.8 +1.3**
comp=Z,644nm,0.9s
SNAA ⇓pP **pwP 23 22 11.0 -0.3**
SNAA Sanae 54.59 157 P P 23 22 04.1 -0.4
comp=Z,13nm,0.8s,baz=270,slow=3.7,SNR=16
SNAA LR LR 23 42 18.9
comp=Z,790nm,18.5s,baz=263,slow=33
comp=Z,13nm,0.8s
SNAA Sanae 54.59 157 P P 23 22 04.9 +0.4
SNAA Sanae 54.59 157 P P 23 22 04.9 +0.4
SNAA pmax pmax
comp=Z,130nm,1.6s
SNAA MLR MLR
comp=Z,1µm,20.0s
PETF Flores 54.90 5 P P 23 22 06.8 -0.4
PETF IAmb IAmb 23 22 11.6
comp=Z,49nm,0.9s
CMIG Matias Romero 54.96 359 LR LR 23 39 48.1
comp=Z,1µm,21.9s,baz=170,slow=30
SBA Scott Base 54.99 195 P P 23 22 08.6 +1.4
SBA IAmb IAmb 23 22 16.7
comp=Z,77nm,1.2s
SBA Scott Base 54.99 195 P P 23 22 08.6 +1.4
SBA pmax pmax
comp=Z,77nm,1.3s
TLIG Tlapa 55.60 354 P P 23 22 13.1 +0.6
TLIG IAmb IAmb 23 22 17.2
comp=Z,98nm,1.8s
VNDA Vanda 56.09 195 P P 23 22 16.1 +0.9
comp=Z,11nm,1.1s,baz=122,slow=8.6,SNR=9.0
VNDA LR LR 23 41 42.7
comp=Z,527nm,20.1s,baz=110,slow=31
comp=Z,11nm,1.1s
VNDA Vanda 56.09 195 P P 23 22 16.3 +1.1
VNDA IAmb IAmb 23 22 29.2
comp=Z,59nm,1.5s
VNDA Vanda 56.09 195 P P 23 22 16.3 +1.1
VNDA pmax pmax
comp=Z,59nm,1.5s
MDP Montagnes des 57.52 51 LR LR 23 44 50.6
comp=Z,1µm,20.6s,baz=206,slow=34
MOIG Morelia 57.94 352 P P 23 22 29.7 +0.6
RAR Rarotonga 58.63 267 LR LR 23 40 38.4
comp=Z,2µm,21.4s,baz=150,slow=29
NVL N'lazarevskaya 59.33 158 *eP* **P 23 22 35.3 -2.7**
NVL *e* 23 23 23.1
NVL *eS* **S 23 30 44.5 -1.5**
NVL *eSS* **SS 23 34 40.6 +0.6**
NVL *eSSS* SSS 23 37 18.9
NVL pmax pmax
comp=Z,88nm,1.5s
NBPA Parau_RN 60.51 73 *eP* **P 23 22 47.3 +0.3**
ZAIG Zacatecas 61.16 351 P P 23 22 52.3 +0.9
RCBR Riachuelo 61.38 74 LR LR 23 48 56.0
comp=Z,1µm,18.1s,baz=222,slow=36
OBIP Obispado Ponce 61.45 30 P 23 22 53.1 0.0
CELP Cerrillos 61.49 30 P P 23 22 53.5 +0.1
CELP IAmb IAmb 23 22 55.9
comp=Z,44nm,1.2s
SJG San Juan 61.69 30 LR LR 23 48 24.9
comp=Z,251nm,18.3s,baz=216,slow=35

SJG San Juan 61.69 30 P P 23 22 54.1 -0.6
SJG IAmb IAmb 23 22 56.8
comp=Z,40nm,1.1s
SJG San Juan 61.69 30 P P 23 22 54.1 -0.6
SJG pmax pmax
comp=Z,40nm,1.1s
SJG MLR MLR
comp=Z,600nm,18.0s
ECPR Experimental S 61.80 30 P P 23 22 55.6 +0.1
ECPR IAmb IAmb 23 23 01.9
comp=Z,64nm,1.5s
ELIB Princess Elisa 61.81 162 *dP* **P 23 22 54.7 -0.5**
comp=Z,32nm,1.3s
GDHS Morne Mazeau, 61.92 35 P P 23 22 56.5 +0.1
GDHS IAMs_20 IAMs_20 23 47 15.7
comp=Z,1µm,20.0s
GDSD La Dsirade Is 62.28 36 IAMs_20 IAMs_20 23 47 16.8
comp=Z,1µm,20.0s
SABA Saba 62.45 33 IAMs_20 IAMs_20 23 47 37.5
comp=Z,2µm,21.0s
SEUS St. Eustatius 62.45 33 IAMs_20 IAMs_20 23 47 37.5
comp=Z,1µm,20.0s
SMRT St. Maarten 62.91 33 IAMs_20 IAMs_20 23 48 11.5
comp=Z,1µm,19.0s
SLBS Sierra La Lagu 63.36 343 P 23 23 06.1 +0.2
LPIG La Paz 63.84 343 LR LR 23 44 23.2
comp=Z,336nm,20.1s,baz=155,slow=30
HPIG 65.70 348 P 23 23 21.6 +0.3
833A Chaparral WMA, 66.34 355 P P 23 23 24.9 -0.2
833A IAmb IAmb 23 23 28.1
comp=Z,28nm,1.1s
MXZ Matakaoa Point 66.65 240 IAMs_20 IAMs_20 23 44 28.8
comp=Z,2µm,22.0s
735A Kenedy 66.77 356 P P 23 23 28.0 +0.2
BHW Baring Head 66.96 235 IAMs_20 IAMs_20 23 45 11.6
comp=Z,1µm,20.0s
RTZ Ruatahuna 67.01 238 P P 23 23 29.4 -0.2
URZ Urewera 67.10 239 LR LR 23 46 25.1
comp=Z,2µm,19.3s,baz=148,slow=30
HNDO Hondo 67.53 355 P P 23 23 33.3 +0.6
SYO Syowa Base 67.74 164 ⇑P **P 23 23 33.8 +0.2**
TXAR Lajitas Array 67.77 351 P P 23 23 35.3 +1.0
comp=Z,12nm,1.0s,baz=170,slow=7.6,SNR=42
TXAR LR LR 23 48 11.9
comp=Z,1µm,19.1s,baz=166,slow=32
comp=Z,12nm,1.0s
TXAR Lajitas Array 67.77 351 P 23 23 34.5 +0.2
TXAR Lajitas Array 67.77 351 P P 23 23 34.5 +0.2
TX31 Lajitas Ar. Si 67.77 351 P 23 23 34.8 +0.4
HKT Hockley 67.78 358 P P 23 23 34.3 +0.2
HKT IAmb IAmb 23 23 39.3
comp=Z,84nm,1.9s
HKT Hockley 67.78 358 *i* P P **23 23 34.7 +0.6**
HKT pmax pmax
comp=Z,14nm,1.6s
RPZ Rata Peaks 68.15 231 LR LR 23 47 10.5
comp=Z,800nm,18.9s,baz=194,slow=30
JCT Junction City 68.51 354 P P 23 23 39.3 +0.5
JCT IAmb IAmb 23 23 42.4
comp=Z,55nm,1.4s
JCT Junction City 68.51 354 P P 23 23 39.3 +0.5
JCT pmax pmax
comp=Z,55nm,1.4s
JCT MLR MLR
comp=Z,400nm,18.0s
QRZ Quartz Range 68.77 234 P P 23 23 41.0 +0.4
NATX Nacogdoches 69.56 359 P P 23 23 45.7 +0.4
WHTX Lake Whitney, 69.87 357 P 23 23 47.2 0.0
MNTX Cornudas Mount 70.33 350 P 23 23 49.0 -1.1
319A Douglas 70.67 346 P P 23 23 52.4 +0.1
319A IAmb IAmb 23 24 00.6
comp=Z,64nm,1.7s
Z41A Richland Creek 71.05 1 P P 23 23 54.4 0.0
LRAL Lakeview Retre 71.11 6 P 23 23 53.8 -0.9
WLAR White Oak Lake 71.48 1 P 23 23 56.6 -0.3
121A Cookes Peak, D 71.52 348 P 23 23 57.3 -0.2
WTFS Witchita Falls 71.69 356 P P 23 23 58.3 0.0
WTFS IAmb IAmb 23 24 01.2
comp=Z,48nm,1.4s
TUC Tucson 71.87 345 P 23 23 59.3 -0.2
TUC IAmb IAmb 23 24 07.8
comp=Z,41nm,1.6s
TUC Tucson 71.87 345 P P 23 23 59.3 -0.2
TUC pmax pmax
comp=Z,41nm,1.6s
X40A Basin Creek Fa 72.28 1 P P 23 24 02.2 +0.5
MIAR Mount Ida 72.33 0 P P 23 24 02.5 +0.4
MIAR IAmb IAmb 23 24 05.4
comp=Z,47nm,1.4s
MIAR Mount Ida 72.33 0 P P 23 24 02.5 +0.4
MIAR pmax pmax
comp=Z,47nm,1.5s
HODGE Hodges 72.81 10 P P 23 24 05.1 +0.2
AMTX Amarillo 73.04 353 P 23 24 06.9 +0.5
AMTX IAmb IAmb 23 24 09.9
comp=Z,57nm,1.2s
SWET Sewanee 73.36 7 P P 23 24 08.1 -0.2
SWET IAmb IAmb 23 24 15.9
comp=Z,85nm,1.7s
ANMO Albuquerque 73.67 349 LR LR 23 52 03.3
comp=Z,954nm,18.0s,baz=173,slow=32
ANMO Albuquerque 73.67 349 P P 23 24 10.3 0.0
ANMO IAmb IAmb 23 24 14.3
comp=Z,44nm,1.6s
ANMO Albuquerque 73.67 349 IAMs_20 IAMs_20 23 52 01.4
comp=Z,1µm,18.0s
ANMO Albuquerque 73.67 349 IAMs_20 IAMs_20 23 52 00.7
comp=Z,1µm,19.0s
ANMO Albuquerque 73.67 349 IAMs_20 IAMs_20 23 52 00.4
comp=Z,1µm,19.0s
ANMO Albuquerque 73.67 349 *ceP* **P 23 24 11.1 +0.8**
ANMO pmax pmax
comp=Z,29nm,1.5s
FCAR Ozark Folk Cen 73.69 1 P P 23 24 09.8 -0.2
FCAR IAmb IAmb 23 24 12.9
comp=Z,63nm,1.7s
LCAR Lake Charles 73.89 2 P P 23 24 10.7 -0.6
LCAR IAmb IAmb 23 24 13.8
comp=Z,61nm,1.8s
TKL Tuckaleechee C 74.03 8 LR LR 23 53 48.6
comp=Z,280nm,18.4s,baz=168,slow=33
HHAR Hobbs 74.06 360 P 23 24 12.1 -0.2
HHAR IAmb IAmb 23 24 15.3
comp=Z,54nm,1.5s
WVT Waverly 74.12 5 P 23 24 12.5 -0.1
WVT IAmb IAmb 23 24 15.6
comp=Z,55nm,1.8s
WVT Waverly 74.12 5 P P 23 24 12.5 -0.1
WVT pmax pmax
comp=Z,55nm,1.8s
W59A Clinton 74.33 13 IAMs_20 IAMs_20 23 52 04.2
comp=Z,894nm,20.0s
PFO Pinyon Flats O 74.45 340 LR LR 23 49 51.7
comp=Z,620nm,18.9s,baz=174,slow=30
PFO Pinyon Flats O 74.45 340 P P 23 24 15.1 +0.3
PFO Pinyon Flats O 74.45 340 P P 23 24 15.1 +0.3
PFO pmax pmax
comp=Z,42nm,1.7s
PBMO Poplar Bluff 74.62 3 P P 23 24 15.1 -0.4
PBMO IAmb IAmb 23 24 18.1
comp=Z,48nm,1.6s
RTBA Rita Blanca 74.68 353 P P 23 24 16.4 +0.3
RTBA IAmb IAmb 23 24 19.7
comp=Z,73nm,1.8s
TZTN Tazewell 74.93 9 P P 23 24 17.9 +0.6
WUAZ Wupatki 75.09 345 P 23 24 19.0 +0.5
T25A Trinidad 75.56 351 IAMs_20 IAMs_20 23 52 41.3
comp=Z,1µm,18.0s
CCM Cathedral Cave 75.87 2 P 23 24 21.9 -0.8
CCM Cathedral Cave 75.87 2 P P 23 24 21.9 -0.8
CCM pmax pmax
comp=Z,163nm,1.9s
SDCO Great Sand Dun 76.29 350 P P 23 24 26.0 +0.5
CCCA Chr Cany lake 76.50 340 P P 23 24 27.4 +1.1
CCCA IAmb IAmb 23 24 31.1
comp=Z,88nm,1.6s
KNB Kanab 76.84 344 P 23 24 29.5 +1.1
KNB IAmb IAmb 23 24 33.1
comp=Z,78nm,1.6s
KNB Kanab 76.84 344 P P 23 24 29.5 +1.1
KNB pmax pmax
comp=Z,78nm,1.6s
SHPR Sheep Range 76.87 342 P 23 24 28.9 +0.3
SHPR IAmb IAmb 23 24 33.5
comp=Z,52nm,1.7s

R58B Mineral 77.15 13 IAMs_20 IAMs_20 23 54 24.9
comp=Z,787nm,20.0s
Q51A Peebles 77.40 8 P P **23 24 31.0 -0.3**
Q51A IAmb IAmb 23 24 43.7
comp=Z,25nm,0.9s
TPNV Topopah Spring 77.56 342 P P **23 24 33.2 +0.7**
TPNV IAmb IAmb 23 24 37.4
comp=Z,83nm,1.6s
TPNV Topopah Spring 77.56 342 P P **23 24 33.2 +0.7**
TPNV pmax pmax
comp=Z,83nm,1.6s
PKD Bear Valley Ra 77.78 338 P P **23 24 34.2 +0.6**
PKD IAmb IAmb 23 24 38.1
comp=Z,64nm,1.2s
MSVF Nonsavu 77.86 257 P **23 24 34.8 +0.2**
MSVF IAmb IAmb 23 24 38.1
comp=Z,109nm,1.9s
MSVF Nonsavu 77.86 257 P P **23 24 34.8 +0.2**
MSVF pmax pmax
comp=Z,109nm,1.9s
ISCO Idaho Springs 78.33 351 P **23 24 37.0 +0.1**
ISCO Idaho Springs 78.33 351 P P **23 24 37.0 +0.1**
ISCO pmax pmax
comp=Z,36nm,1.6s
P57A Homestead Farm 78.61 12 IAMs_20 IAMs_20 23 55 00.5
comp=Z,891nm,19.0s
ACSO Alum Creek Sta 78.63 8 P P **23 24 37.8 -0.4**
SAO San Andreas Ge 78.81 338 IAMs_20 IAMs_20 23 51 40.6
comp=Z,1μm,20.0s
MDPB Devils Postpil 78.94 340 P P **23 24 40.5 +0.3**
OGNE Ogallala 79.08 354 IAMs_20 IAMs_20 23 55 50.4
comp=Z,812nm,19.0s
HAYD Hayden 79.26 350 P P **23 24 43.6 +1.7**
HAYD IAmb IAmb 23 24 46.8
comp=Z,81nm,1.9s
HAYD IAMs_20 IAMs_20 23 54 14.0
comp=Z,761nm,20.0s
MVL Millersville 79.40 14 P **23 24 42.2 -0.1**
NVAR Mina Array Bea 79.48 341 P P **23 24 44.7 +1.6**
comp=Z,35nm,1.1s,baz=171,slow=5.6,SNR=45
comp=Z,35nm,1.1s
JRSC Jasper Ridge 79.64 337 IAMs_20 IAMs_20 23 51 57.6
comp=Z,1μm,21.0s
CMB Columbia Colle 79.68 339 IAMs_20 IAMs_20 23 52 27.7
comp=Z,846nm,18.0s
SSPA Standing Stone 79.75 12 P **23 24 44.6 +0.4**
SSPA IAmb IAmb 23 24 46.3
comp=Z,88nm,1.7s
DUG Dugway, Tooele 79.90 345 P **23 24 45.7 +0.5**
DUG IAmb IAmb 23 24 49.8
comp=Z,62nm,1.4s
DUG Dugway, Tooele 79.90 345 P P **23 24 45.7 +0.5**
DUG pmax pmax
comp=Z,62nm,1.4s
WELL Weller Preserv 80.15 339 IAMs_20 IAMs_20 23 52 33.2
comp=Z,1μm,19.0s
AFDM Forest Hills D 80.69 339 P **23 24 50.2 +0.8**
AFDM IAmb IAmb 23 24 58.5
comp=Z,45nm,1.4s
JFWS Jewell Farm 80.75 3 P P **23 24 49.5 -0.1**
JFWS IAmb IAmb 23 24 52.2
comp=Z,60nm,1.7s
JFWS Jewell Farm 80.75 3 P P **23 24 49.5 -0.1**
JFWS pmax pmax
comp=Z,60nm,1.7s
ELK Elko 80.94 344 P **23 24 51.3 +0.3**
ELK IAmb IAmb 23 24 55.1
comp=Z,48nm,1.4s
ELK Elko 80.94 344 P P **23 24 51.3 +0.3**
ELK pmax pmax
comp=Z,48nm,1.5s
SUTB Sutter Butte 81.19 338 IAMs_20 IAMs_20 23 52 30.7
comp=Z,968nm,21.0s
K22A Casper 81.26 351 IAMs_20 IAMs_20 23 55 46.0
comp=Z,1μm,21.0s
ORV Oroville 81.41 339 IAMs_20 IAMs_20 23 53 09.5
comp=Z,1μm,20.0s
ECSD EROS Data Cent 81.55 358 P **23 24 53.6 -0.2**
BW06 Boulder Array 81.81 348 P P **23 24 55.7 +0.2**
BW06 IAmb IAmb 23 24 59.2
comp=Z,81nm,1.5s
PDAR Pinedale Array 81.81 348 P P **23 24 56.1 +0.6**
comp=Z,12nm,0.8s,baz=160,slow=4.7,SNR=45
PDAR LR LR 23 57 20.4
comp=Z,202nm,18.3s,baz=138,slow=33
comp=Z,12nm,0.8s
PDAR Pinedale Array 81.81 348 P **23 24 55.7 +0.2**
AHID Auburn Hatcher 82.06 347 P P **23 24 57.2 +0.4**
O02D Mt. Diablo Mer 82.36 338 IAMs_20 IAMs_20 23 52 43.7
comp=Z,1μm,22.0s
SNOW Snow King Moun 82.68 348 P P **23 25 00.9 +0.8**
SNOW IAmb IAmb 23 25 04.3
comp=Z,49nm,1.4s
BCX Boston College 82.71 17 IAMs_20 IAMs_20 23 55 46.1
comp=Z,1μm,19.0s
KHBM Hayfork Bally 82.93 338 IAMs_20 IAMs_20 23 53 01.8
comp=Z,1μm,21.0s
N02D Trinity Center 83.07 338 IAMs_20 IAMs_20 23 53 08.5
comp=Z,1μm,22.0s
WVOR Wild Horse Val 83.34 342 P P **23 25 04.1 +0.7**
WVOR IAmb IAmb 23 25 11.9
comp=Z,38nm,1.4s
WVOR Wild Horse Val 83.34 342 P P **23 25 04.1 +0.7**
WVOR pmax pmax
comp=Z,38nm,1.4s
HLID Hailey 83.46 345 P **23 25 04.6 +0.6**
M02C Callahan 83.50 338 IAMs_20 IAMs_20 23 54 15.8
comp=Z,1μm,20.0s
DZM Mont Dzumac 83.93 247 LR LR 23 53 44.7
comp=Z,971nm,21.9s,baz=116,slow=29
YHH Holmes Hill 83.99 348 P P **23 25 07.0 +0.1**
RLMT Red Lodge 84.06 349 P P **23 25 07.4 +0.3**
QLMT Earthquake Lak 84.13 347 P P **23 25 08.5 +1.1**
K05A Summer Lake 84.19 340 P **23 25 08.6 +0.8**
MCMT McKenzie Canyo 84.38 346 P P **23 25 09.6 +0.9**
BBOR Butler Butte 84.83 339 P P **23 25 11.2 +0.2**
BBOR IAmb IAmb 23 25 14.5
comp=Z,56nm,1.9s
BOZ Bozeman (W) 84.90 348 P P **23 25 11.8 +0.5**
BOZ IAmb IAmb 23 25 17.0
comp=Z,72nm,1.9s
BOZ Bozeman (W) 84.90 348 P P **23 25 11.8 +0.5**
BOZ pmax pmax
comp=Z,73nm,2.0s
J04A Umpqua Nationa 85.00 340 P P **23 25 12.2 +0.4**
LAO LASA Array 85.19 351 P P **23 25 13.2 +0.6**
LAO IAmb IAmb 23 25 28.8
comp=Z,51nm,1.6s
PLID Pearl Lake 85.25 344 P **23 25 13.4 +0.2**
BMO Blue Mountains 85.31 343 P **23 25 13.9 +0.6**
BMO Blue Mountains 85.31 343 P P **23 25 13.9 +0.6**
BMO pmax pmax
comp=Z,21nm,1.6s
WIFE Three Sisters- 85.68 340 P **23 25 15.7 +0.4**
WIFE IAmb IAmb 23 25 23.8
comp=Z,38nm,1.4s
AGMN Agassiz Nation 86.09 359 P **23 25 16.7 -0.2**
MSO Missoula 86.51 346 P **23 25 20.5 +1.3**
MSO IAmb IAmb 23 25 23.8
comp=Z,62nm,1.8s
CAN Canberra 86.61 227 IAMs_20 IAMs_20 23 55 04.8
comp=Z,935nm,20.0s
TOO Toolangi 86.93 223 P **23 25 21.2 -0.5**
TOO Toolangi 86.93 223 P P **23 25 21.2 -0.5**
TOO pmax pmax
comp=Z,11nm,1.3s
EGMT Eagleton 86.97 349 P **23 25 22.2 +0.8**
SUR Sutherland 87.12 130 LR LR 23 58 20.4
comp=Z,671nm,21.7s,baz=220,slow=32
HAWA Hanford 87.28 342 P **23 25 23.7 +0.9**
ULM Lac du Bonnet 88.05 359 P P **23 25 24.9 -1.5**
comp=Z,6.7nm,0.8s,baz=181,slow=5.2,SNR=9.6
comp=Z,6.7nm,0.8s
ULM Lac du Bonnet 88.05 359 *i* P P **23 25 25.7 -0.7**
EPH Ephrata 88.20 343 P **23 25 28.2 +1.0**
EPH IAmb IAmb 23 25 32.7
comp=Z,90nm,1.9s
BATG Bathurst New B 88.59 18 P **23 25 29.9 +0.9**
BBTS Babate 89.22 71 LR LR 00 04 12.0
comp=Z,1μm,18.6s,baz=260,slow=35
WIN Windhoek 91.44 120 IAMs_20 IAMs_20 23 58 34.7
comp=Z,1μm,22.0s
BOSA Boshof 92.49 130 P P **23 25 46.6 -1.4**
comp=Z,3.6nm,0.9s,baz=305,slow=12,SNR=3.2
BOSA LR LR 00 01 17.1
comp=Z,631nm,21.4s,baz=226,slow=32
comp=Z,3.6nm,0.9s
FFC Flin Flon 92.78 355 P **23 25 47.6 -0.7**
FFC IAmb IAmb 23 25 51.5
comp=Z,30nm,1.8s
FFC Flin Flon 92.78 355 P P **23 25 47.6 -0.7**
FFC pmax pmax
comp=Z,30nm,1.8s
DBIC Dimbokro 93.23 84 LR LR 00 03 19.6
comp=Z,684nm,21.8s,baz=252,slow=33
STKA Stephens Creek 93.31 225 P P **23 25 50.4 -1.3**
comp=Z,3.2nm,1.0s,baz=119,slow=4.8,SNR=4.7
STKA LR LR 00 01 02.4
comp=Z,624nm,18.8s,baz=149,slow=31
comp=Z,3.2nm,1.0s
STKA Stephens Creek 93.31 225 P **23 25 50.7 -1.0**
STKA Stephens Creek 93.31 225 P P **23 25 50.7 -1.0**
TSUM Tsumeb 94.03 118 LR LR 00 03 06.5
comp=Z,568nm,19.2s,baz=228,slow=32
TSUM Tsumeb 94.03 118 IAMs_20 IAMs_20 00 03 22.9
comp=Z,883nm,18.0s
LBTB Lobatse 95.29 127 P P **23 25 59.4 -1.6**
LBTB Lobatse 95.29 127 P P **23 25 59.4 -1.6**
LBTB pmax pmax
comp=Z,66nm,1.9s
SCHQ Schefferville 95.46 15 LR LR 00 09 13.6
comp=Z,248nm,18.8s,baz=189,slow=36
CTA Charters Tower 99.21 236 LR LR 00 03 15.9
comp=Z,672nm,21.9s,baz=130,slow=31
CTAO Charters Tower 99.21 236 IAMs_20 IAMs_20 00 02 31.7
comp=Z,784nm,21.0s
YKA Yellowknife Ar 101.70 350 P **Pdif** **23 26 26.8 -1.6**
comp=Z,0.2nm,0.6s,baz=179,slow=3.3,SNR=5.3
TORD Torodi Ar. Bea 102.26 83 PP **PP** **23 30 45.9 +1.3**
comp=Z,4.3nm,1.3s,baz=240,slow=8.7,SNR=5.4
ASAR Alice Springs 103.95 224 Pdiff **Pdif** **23 26 40.4 +0.6**
comp=Z,0.4nm,0.9s,baz=132,slow=4.3,SNR=4.4
LSZ Lusaka 103.99 122 IAMs_20 IAMs_20 00 06 52.5
comp=Z,954nm,22.0s
PMG Port Moresby 106.14 244 IAMs_20 IAMs_20 00 09 47.9
comp=Z,648nm,19.0s
H11S2 WAKE ISLAND Hyl 108.52 279 T T 01 28 29.6
baz=126,slow=76,SNR=53
H11S1 WAKE ISLAND Hyl 108.53 279 T T 01 28 30.9
baz=126,slow=76,SNR=43
H11S3 WAKE ISLAND Hyl 108.53 279 T T 01 28 33.1
baz=126,slow=76,SNR=11
P16K Nushagak River 110.44 330 IAMs_20 IAMs_20 00 05 20.7
comp=Z,756nm,22.0s
E29M Blow River 111.21 344 IAMs_20 IAMs_20 00 10 36.7
comp=Z,596nm,20.0s
L19K White Mountain 111.37 334 IAMs_20 IAMs_20 00 06 57.2
comp=Z,611nm,20.0s
NIKH Nikolski High 111.54 321 IAMs_20 IAMs_20 00 11 40.4
comp=Z,572nm,19.0s
N14K Kuskokwak Cree 112.46 330 IAMs_20 IAMs_20 00 08 18.6
comp=Z,719nm,21.0s
K13K Kuulvak Mount 114.83 331 IAMs_20 IAMs_20 00 10 25.0
comp=Z,735nm,20.0s
J14K Nanvaranak Lak 114.88 332 IAMs_20 IAMs_20 00 09 01.2
comp=Z,628nm,21.0s
E19K Redstone River 115.58 338 IAMs_20 IAMs_20 00 13 33.5
comp=Z,375nm,19.0s
G16K Koyuk River 115.98 334 IAMs_20 IAMs_20 00 11 29.3
comp=Z,553nm,20.0s
MBAR Mbarara 116.13 113 IAMs_20 IAMs_20 00 14 22.6
comp=Z,795nm,22.0s
C16K Lisburne Hills 118.56 336 **PKPdf** **23 31 22.8 -0.5**
LODK Lodwar 122.23 114 IAMs_20 IAMs_20 00 21 12.3
comp=Z,488nm,20.0s
MMRI Maumere 122.60 224 IAMs_20 IAMs_20 00 17 00.9
comp=Z,515nm,22.0s
ZCCA Zocca 124.94 58 **PKPdf** **23 31 36.2 -0.2**
DAVA Damuels 125.27 54 *i* PKP **PKPdf** **23 31 37.2 +0.2**
comp=Z,12nm,1.4s
FETA Fethiye 125.72 55 *i* PKP **PKPdf** **23 31 38.1 +0.2**
comp=Z,11nm,1.5s
RETA Reutte 125.90 54 *e*PKP **PKPdf** **23 31 38.4 +0.2**
comp=Z,13nm,1.8s
MOTA Moosalm 126.07 54 *e*PKP **PKPdf** **23 31 38.7 +0.1**
comp=Z,21nm,1.4s
SQTA Sankt Quirin 126.10 55 *i* PKP **PKPdf** **23 31 38.8 +0.2**
comp=Z,17nm,1.5s
WATA Walderalm 126.37 55 *e*PKP **PKPdf** **23 31 38.9 -0.2**
comp=Z,16nm,1.5s
WTTA Wattenberg 126.39 55 *i* PKP **PKPdf** **23 31 39.7 +0.5**
comp=Z,29nm,1.6s
ABTA Abfaltersbach 126.78 55 *i* PKP **PKiKP** **23 31 40.8 +0.4**
comp=Z,16nm,1.8s
KAPI Kappang 126.96 224 IAMs_20 IAMs_20 00 24 39.5
comp=Z,506nm,20.0s
LESA Schwarzleotal 127.11 55 *i* PKP **PKPdf** **23 31 40.1 -0.4**
comp=Z,14nm,1.4s
SABO M.te Sabotino 127.24 57 **PKPdf** **23 31 40.9 +0.2**
KBA Koelnbreinsper 127.43 55 *e*PKP **PKPdf** **23 31 40.3 -0.9**
comp=Z,9nm,1.1s
MYKA Terra Mystica 127.48 56 *e*PKP **PKPdf** **23 31 40.9 -0.3**
comp=Z,12nm,1.6s
BIOA Bad Ischl, Aus 127.81 55 *e*PKP **PKPdf** **23 31 41.4 -0.4**
comp=Z,13nm,1.2s
OBKA Obir 128.04 56 *e*PKP **PKPdf** **23 31 41.9 -0.4**
comp=Z,14nm,1.9s
GEC2 GERESS Array S 128.19 53 **PKPdf** **23 31 41.8 -0.7**
GERES GERESS Array B 128.19 53 PKP **PKPdf** **23 31 40.8 -1.8**
comp=Z,1.4nm,0.9s,baz=224,slow=3.7,SNR=4.9
MOA Molln 128.26 55 *e*PKP **PKPdf** **23 31 42.2 -0.4**
comp=Z,12nm,1.9s
BILL Bilibino 128.41 332 *c i*PKIKP **PKiKP** **23 31 42.9 +0.1**
BILL pmax pmax
comp=Z,19nm,2.5s
SOKA Soboth 128.41 56 *e*PKP **PKPdf** **23 31 42.7 -0.3**
comp=Z,4.4nm,1.0s
ARSA Arzberg 128.90 56 *e*PKP **PKPdf** **23 31 42.7 -1.1**
comp=Z,9.1nm,1.7s
BRG Berggiesshubel 128.91 51⇓ *e*PKPf 23 31 44.8
BRG Amp 23 31 48.1
comp=Z,26nm,1.7s
CONA Conrad Observa 129.31 55 *e*PKP **PKPdf** **23 31 44.1 -0.6**
comp=Z,12nm,1.7s
RONA Rosalia, Austr 129.53 55 *e*PKP **PKPdf** **23 31 43.8 -1.2**
comp=Z,3.0nm,0.9s
PEA0B Petropavlovsk- 129.92 312 *c i*PKIKP **PKiKP** **23 31 47.4 +1.1**
PETK Petropavlovsk- 129.92 312 PKP **PKPdf** **23 31 43.8 -1.7**
comp=Z,3.9nm,1.1s,baz=102,slow=6.2,SNR=7.3
PETK Petropavlovsk- 129.92 312 **PKPdf** **23 31 45.7 +0.2**
PETK Petropavlovsk- 129.92 312 PKIKP **PKPdf** **23 31 45.7 +0.2**
MODS Modra-Piesok 130.34 55 *i* P **Pdif** **23 28 40.4 +4.1**
MODS Modra-Piesok 130.34 55 *e*PDIFF **Pdif** **23 28 40.3 +4.0**
SPITS Spitsbergen Ar 131.15 15 PKP **PKPdf** **23 31 47.9 +0.6**
comp=Z,4.7nm,0.8s,baz=204,slow=1.8,SNR=4.7
ATD Arta Tunnel 133.15 113 IAMs_20 IAMs_20 00 28 43.7
comp=Z,407nm,19.0s
SEY Seymchan 133.85 325 *c i*PKIKP **PKiKP** **23 31 53.7 -0.2**
SEY pmax pmax
comp=Z,19nm,1.7s
MA2 Magadan 134.59 320 IAMs_20 IAMs_20 00 20 53.0
comp=Z,455nm,21.0s
MA2 Magadan 134.59 320 *c i*PKIKP **PKiKP** **23 31 57.2 +1.7**
MA2 pmax pmax
comp=Z,15nm,1.7s
PMBI Palembang 135.66 207 IAMs_20 IAMs_20 00 30 35.4
comp=Z,473nm,20.0s
FINES FINESS Array B 136.73 37 PKP **PKiKP** **23 31 59.8 0.0**
comp=Z,7.3nm,1.0s,baz=270,slow=0.6,SNR=4.1
KKM Kota Kinabalu 138.02 228 IAMs_20 IAMs_20 00 26 34.6
comp=Z,547nm,21.0s
AKASG Malin Array Be 138.41 53 PKP **PKPdf** **23 32 02.0 +0.5**
comp=Z,1.5nm,0.7s,baz=269,slow=2.3,SNR=7.1
AKASG Malin Array Be 138.41 53 **PKPdf** **23 32 01.1 -0.4**
AKASG Malin Array Be 138.41 53 PKIKP **PKPdf** **23 32 02.0 +0.5**
MJAR Matsushiro Arr 139.08 284 PKP **PKPdf** **23 32 02.8 -0.4**
comp=Z,2.2nm,0.9s,baz=223,slow=1.9,SNR=4.5
BRTR Keskin Array B 139.56 71 PKP **PKPdf** **23 32 04.4 +0.2**
comp=Z,0.5nm,0.9s,baz=327,slow=2.1,SNR=4.4
TIXI Tiksi 140.10 340 *i* PKIKP **PKPdf** **23 32 01.7 -2.3**
RAYN Ar Rayn 142.43 101 PKPdf **PKPdf** **23 32 06.9 -2.9**
OBN Obninsk 142.83 46 *e*PKIKP **PKPdf** **23 32 08.7 -0.6**
OBN *e* 23 35 19.3
OBN *e*PPP PPP 23 38 30.8
OBN pmax pmax
comp=Z,22nm,1.5s
RPSI Rantau Prapat 142.84 201 IAMs_20 IAMs_20 00 36 18.0
comp=Z,391nm,20.0s
ARPR Arapgir-MALATY 142.92 73 **PKPdf** **23 32 09.8 -0.5**
KLMR Klimovskoe 143.24 37 *e*PKIKP **PKPdf** **23 32 10.3 +0.4**
KLMR pmax pmax
comp=Z,49nm,1.6s
MOS Moscow 143.35 45 *i* PKHKP PKPpre 23 32 07.1

IPM Ipoh 143.86 206 IAMs_20 IAMs_20 00 32 18.4
comp=Z,430nm,21.0s
YAK Yakutsk 144.32 326 **PKPab** **23 32 09.2 -0.6**
YAK Yakutsk 144.32 326 *d i*PKHKP PKPpre 23 32 09.0
YAK *e* 23 35 24.8
YAK pmax pmax
comp=Z,111nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=E,25nm,1.2s
YAK pmax pmax
comp=Z,131nm,4.8s
YAK pmax pmax
comp=N,118nm,4.5s
YAK pmax pmax
comp=E,147nm,4.8s
MARD Mardin 144.33 77 **PKPab** **23 32 11.4 +0.5**
LPSR Galich'ya Gora 144.46 50 *e*PKIKP **PKPdf** **23 32 12.3 0.0**
LPSR pmax pmax
comp=Z,70nm,1.0s
VORR Voronezh 144.70 52 *e*PKIKP PKPbc 23 32 12.2 +0.6
VORR pmax pmax
comp=Z,110nm,1.2s
VSR Storozhevoye 144.70 53 *e*PKIKP PKPbc 23 32 12.1 +0.4
VSR pmax pmax
comp=Z,140nm,2.0s
KULM Kulim 144.75 205 **PKPab** **23 32 12.2 -0.6**
KOPT Kop Dagi 144.76 72 **PKPab** **23 32 12.8 +0.3**
SOC Sochi 144.78 66 *e*PKIKP PKPbc 23 32 12.8 +0.6
SOC *e* 23 35 31.2
SOC *e*PPP PPP 23 38 44.5
SOC *e*SS SS 23 54 23.9 +4.0
SOC pmax pmax
comp=Z,83nm,0.9s
VORD Divnogorie 144.79 53 *e*PKHKP PKPpre 23 32 10.5
VORD pmax pmax
comp=Z,40nm,1.0s
RBK Rabkut 145.27 117 P **PKPdf** **23 32 16.9 +2.1**
SNR=13
USRK Ussuriysk Ar. 145.38 295 PKPbc **PKPbc** **23 32 13.7 -0.4**
comp=Z,43nm,0.9s,baz=104,slow=3.1,SNR=25
GURO Guroymak-BITLI 145.60 75 **PKPdf** **23 32 14.6 -0.4**
KLR Kul'dur 145.75 304 PKPbc **PKPdf** **23 32 13.8 -0.9**
comp=Z,12nm,1.1s,baz=63,slow=5.3,SNR=3.7
KLR Kul'dur 145.75 304 *i* PKIKP **PKPdf** **23 32 14.0 -0.6**
DMTO DMTO 145.93 118 P **PKPab** **23 32 17.9 +0.9**
DOK Doka 145.96 116 P **PKPab** **23 32 17.8 +0.7**
SNR=12
VRH Novokhopyorsk 146.30 53 *e*PKIKP **PKPdf** **23 32 15.7 +0.2**
VRH pmax pmax
comp=Z,84nm,2.0s
GEVA Gevas 146.33 76 **PKPdf** **23 32 15.3 -0.9**
KARS Kars 146.81 72 **PKPdf** **23 32 16.7 -0.2**
KARS Kars 146.81 72 PKIKP **PKPdf** **23 32 16.7 -0.2**
SHA1 Shidzhatmaz 146.92 66 *i* PKIKP **PKPdf** **23 32 17.0 -0.1**
KIV Kislovodsk 146.96 66 **PKPdf** **23 32 17.4 +0.4**
KIV Kislovodsk 146.96 66 *i* PKPbc **PKPbc** **23 32 19.4 +0.4**
SNR=6.8
KIV Kislovodsk 146.96 66 *i* PKIKP **PKPdf** **23 32 16.0 -1.0**
KIV pmax pmax
comp=Z,24nm,1.0s
KIV MLR MLR
comp=Z,366nm,25.0s
KIV Kislovodsk 146.96 66 P **PKPbc** **23 32 19.7 +0.7**
KBZ Khabaz 147.09 66 PKPbc **PKPbc** **23 32 19.1 -0.1**
comp=Z,8.3nm,1.0s,baz=316,slow=2.7,SNR=13
MDJ Mudanjiang 147.13 295 **PKPdf** **23 32 17.9 +0.8**
MDJ Mudanjiang 147.13 295 PKPbc **PKPbc** **23 32 18.6 -0.7**
MDJ AMB AMB
comp=Z,30nm,7.8s
MDJ LR LR
comp=Z,1μm,10.1s
MDJ LR LR
comp=Z,550nm,10.4s
MDJ LR LR
comp=Z,850nm,21.1s
SMRA Abu-Samra 147.19 104 P **PKPbc** **23 32 20.7 +0.7**
SNR=14
KSRS Korea Array 147.24 282 PKPbc **PKPdf** **23 32 18.9 +1.5**
comp=Z,12nm,0.9s,baz=114,slow=3.9,SNR=20
KSRS Korea Array 147.24 282 PKIKP **PKPdf** **23 32 19.0 +1.5**
KSAR Wonju Array Be 147.26 282 **PKPdf** **23 32 16.8 -0.8**
KSAR Wonju Array Be 147.26 282 PKHKP PKPpre 23 32 16.8
GOF Gofitskoye 147.30 64 *ce*PKP2 **PKPbc** **23 32 20.4 +0.6**
TRNA Turayna 147.48 104 P **PKPbc** **23 32 21.9 +1.0**
SNR=10
SHMA Al-Shehemyia 147.88 102 P **PKPbc** **23 32 22.9 +1.0**
SNR=9.1
GNI Garni 147.98 73 **PKPdf** **23 32 19.1 +0.2**
GNI Garni 147.98 73 PKPdf **PKPdf** **23 32 19.6 +0.7**
GNI Garni 147.98 73 *i* PKIKP **PKPdf** **23 32 19.4 +0.5**
GNI Garni 147.98 73 P **PKiKP** **23 32 23.4 -0.4**
ZEA Zeya 148.01 313 *i* PKIKP **PKPbc** **23 32 20.9 -0.5**
ZEA pmax pmax
comp=Z,300nm,3.3s
ZEA pmax pmax
comp=Z,50nm,1.7s
MZR Muzera 148.22 109 *i* PKPdf **PKPdf** **23 32 19.8 +0.1**
SNR=10
MZR Muzera 148.22 109 P **PKPbc** **23 32 22.5 -0.4**
SNR=18
HEH HeiHe 148.49 306 PKPbc **PKPbc** **23 32 21.5 -1.3**
HEH LR LR
comp=Z,330nm,19.8s
HEH LR LR
comp=Z,740nm,20.2s
HEH LR LR
comp=Z,980nm,22.0s
BNX BinXian 148.72 297 PKPbc **PKPbc** **23 32 22.5 -1.0**
KIRV Kirov 148.73 37 *i* PKIKP **PKPdf** **23 32 21.5 +2.3**
PALK Pallekele 148.86 169 PKPbc **PKPdf** **23 32 22.9 +1.9**
PALK Pallekele 148.86 169 PKIKP **PKPdf** **23 32 22.9 +1.9**
DQM DQM 149.23 118 P **PKPbc** **23 32 26.0 +0.4**
SNR=7.8
KNMB Chin-men Tao 149.48 253 IAMs_20 IAMs_20 00 23 44.3
comp=Z,468nm,21.0s
CN2 Changchun 150.05 293 PKPbc **PKPbc** **23 32 25.3 -1.6**
MHTO MHTO 150.23 117 P **PKPbc** **23 32 27.0 -0.9**
SNR=12
AJN Ajban 150.25 108 *i* PKPbc **PKPbc** **23 32 26.5 -1.4**
SNR=9.2
AJN Ajban 150.25 108 P **PKPbc** **23 32 27.5 -0.5**
SNR=7.6
AKT Akhty 150.42 71 *e*PKIKP **PKPdf** **23 32 21.4 -1.3**
AKT *e* 23 39 27.0
AKT *e*PPP PPP 23 39 27.2
AKT pmax pmax
comp=Z,81nm,1.9s
ALNE Al Ain 150.53 110 *i* PKPbc **PKPbc** **23 32 27.5 -1.1**
SNR=7.6
ALNE Al Ain 150.53 110 P **PKPbc** **23 32 27.6 -1.0**
SNR=10
ASUD Al Ashush, Dub 150.54 108 *i* PKPbc **PKPbc** **23 32 27.4 -1.2**
SNR=7.4
ASUD Al Ashush, Dub 150.54 108 P **PKPbc** **23 32 27.7 -0.9**
SNR=7.0
BSY Bisya 150.80 113 P **PKPbc** **23 32 28.6 -0.8**
SNR=11
FAQ Al Faqa, Dubai 150.80 108 *i* PKPbc **PKPbc** **23 32 28.9 -0.4**
SNR=6.1
FAQ Al Faqa, Dubai 150.80 108 P **PKPbc** **23 32 28.2 -1.0**
SNR=6.5
NAZ Nazwa, Dubai 150.99 108 *i* PKPbc **PKPbc** **23 32 29.1 -0.6**
SNR=14
NAZ Nazwa, Dubai 150.99 108 P **PKPbc** **23 32 28.4 -1.3**
SNR=9.0
ASHO Ashiyiah 151.12 109 P **PKPbc** **23 32 28.4 -1.6**
SOHO SOHO 151.15 110 PKPbc **PKPbc** **23 32 29.1 -1.0**
SOHO SOHO 151.15 110 P **PKPbc** **23 32 28.5 -1.6**
JMDO Jabal Madar 151.22 115 P **PKPbc** **23 32 28.3 -2.1**
SNR=5.4
HATD Hatta, Dubai 151.25 109 PKPbc **PKPbc** **23 32 28.9 -1.5**
HATD Hatta, Dubai 151.25 109 P **PKPbc** **23 32 28.8 -1.5**
SNY Shenyang 151.29 289 ⇑ PKPbc **PKPab** **23 32 36.6 -1.4**
SNY PP **PP** **23 36 06.0 -3.2**
HOQ Hoqain 151.39 112 P **PKPbc** **23 32 29.1 -1.6**
MASF Masafi 151.58 108 P **PKPbc** **23 32 29.4 -1.7**
SMDO Samad 151.61 114 P **PKPdf** **23 32 28.3 +3.2**
SNR=9.2
SHME Shamm 151.94 107 PKPbc **PKPbc** **23 32 29.2 -2.6**
SHME Shamm 151.94 107 P **PKPbc** **23 32 29.3 -2.6**
BIDO Bidbid 151.95 113 P **PKPbc** **23 32 30.2 -1.7**
QIZ Qiongzhong 151.97 234 PKPbc **PKPdf** **23 32 25.3 -0.3**
QIZ PP **PP** **23 36 13.3 +0.6**

QIZ				SS	SS	23 55 43.0	+3.0	
QIZ				LR	LR			
	comp=Z,250nm,8.2s							
QIZ				LR	LR			
	comp=Z,400nm,14.2s							
QIZ				LR	LR			
	comp=Z,320nm,9.2s							
BANOM	**Banah**	**151.99**	**107**	P	**PKPbc**	**23 32 29.4**	**-2.6**	
WBK	**Wadi Bani Khal**	**151.99**	**116**	P	**PKPbc**	**23 32 29.5**	**-2.6**	
JLN	**Jalan Bani Buh**	**152.00**	**117**	P	**PKPdf**	**23 32 28.8**	**+3.2**	
WSAR	**Wadi Sarin**	**152.14**	**114**	P	**PKPbc**	**23 32 30.1**	**-2.4**	
DL2	**Dalian**	**152.39**	**283**	PKPbc	**PKPdf**	**23 32 26.5**	**+0.9**	
DL2				PP	**PP**	**23 36 21.1**	**+5.5**	
DL2				SS	SS	23 55 55.6	+10	
DL2				AMB	AMB			
	comp=Z,350nm,10.0s							
DL2				LR	LR			
	comp=Z,420nm,19.5s							
DL2				LR	LR			
	comp=Z,830nm,19.3s							
DL2				LR	LR			
	comp=Z,800nm,19.7s							
NJ2	**Nanjing**	**152.70**	**267**	*e*PKPbc	**PKPdf**	**23 32 26.8**	**+0.5**	
HILR	**Hailar Array B**	**153.48**	**306**	PKPbc	**PKPbc**	**23 32 33.0**	**-1.7**	
	comp=Z,5.8nm,0.9s,baz=120,slow=5.3,SNR=8.2							
HILR				PKPab	**PKPab**	**23 32 47.5**	**+0.4**	
	comp=Z,29nm,1.0s,baz=111,slow=6.3,SNR=11							
HIA	**Hailar**	**153.55**	**306**		**PKPbc**	**23 32 32.9**	**-1.9**	
HIA	**Hailar**	**153.55**	**306**	PKIKP	**PKPbc**	**23 32 32.9**	**-1.9**	
ARTI	**Arti**	**154.03**	**36**		**PKPdf**	**23 32 26.5**	**-0.9**	
ARTI	**Arti**	**154.03**	**36**	*i* PKIKP	**PKPdf**	**23 32 26.9**	**-0.5**	
WHN	**Wuhan**	**155.63**	**260**	PKPbc	**PKPdf**	**23 32 37.9**	**+7.4**	
BJI2	**Beijing**	**156.72**	**284**	P	**PKPab**	**23 32 59.9**	**-1.2**	
BJI2				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BJT	**Baijiatuau**	**156.72**	**284**		**PKPab**	**23 32 59.7**	**-1.4**	
BJT	**Baijiatuau**	**156.72**	**284**	IAMs_20	IAMs_20	00 30 23.5		
	comp=Z,461nm,22.0s							
BJT	**Baijiatuau**	**156.72**	**284**	PKP2	**PKPab**	**23 32 59.7**	**-1.4**	
XLT	**XiLinHaoTe**	**156.82**	**294**	*e*PKP	**PKPab**	**23 33 00.3**	**-1.3**	
CMAR	**Chiang Mai Arr**	**157.45**	**213**	PKP	**PKPdf**	**23 32 32.2**	**-0.9**	
	comp=Z,0.8nm,0.3s,baz=228,slow=1.1,SNR=11							
CMAR				PKPab	**PKPab**	**23 33 04.9**	**+0.3**	
	comp=Z,0.7nm,0.3s,baz=162,slow=4.1,SNR=4.5							
CMAR				PP	**PP**	**23 36 48.3**	**+5.4**	
	comp=Z,0.4nm,0.3s,baz=175,slow=4.8,SNR=4.0							
CMAR	**Chiang Mai Arr**	**157.45**	**213**		**PKPdf**	**23 32 31.6**	**-1.6**	
HNS	**HongShan**	**157.50**	**277**	⇑PKP	**PKPdf**	**23 32 30.1**	**-2.6**	
HNS				PKPab	**PKPab**	**23 33 04.3**	**-0.2**	
HNS				PP	**PP**	**23 36 51.6**	**+7.4**	
HNS				LR	LR			
	comp=Z,410nm,18.4s							
HNS				LR	LR			
	comp=Z,570nm,18.2s							
HNS				LR	LR			
	comp=Z,580nm,19.6s							
CHTO	**Chiang Mai**	**157.76**	**213**	PKPdf	**PKPdf**	**23 32 32.0**	**-1.6**	
CHTO	**Chiang Mai**	**157.76**	**213**	PKIKP	**PKPdf**	**23 32 32.0**	**-1.6**	
AB31	**Akbulak array**	**158.12**	**51**		**PKPdf**	**23 32 32.4**	**-0.7**	
ABKAR	**Akbulak array**	**158.12**	**51**		**PKPdf**	**23 32 32.3**	**-0.8**	
HYB	**Hyderabad**	**158.28**	**160**	*e*PKPab	**PKPab**	**23 33 08.2**	**0.0**	
LYN	**LuoYang**	**158.58**	**268**	PKP	**PKPab**	**23 33 08.8**	**-0.5**	
HHC	**Hu-ho-hao-te**	**160.27**	**286**	*e*PKP	**PKPdf**	**23 32 32.0**	**-4.0**	
HHC				LR	LR			
	comp=Z,250nm,16.1s							
HHC				LR	LR			
	comp=Z,360nm,16.5s							
HHC				LR	LR			
	comp=Z,420nm,16.1s							
HRA	**Herat**	**160.32**	**94**		**PKPdf**	**23 32 35.5**	**-1.0**	
KMI2	**Kunming**	**160.90**	**232**	PKP	**PKPdf**	**23 32 37.0**	**-0.3**	
IRK	**Irkutsk**	**161.09**	**324**	*e*PKP2	**PKPab**	**23 33 19.3**	**-0.4**	
IRK				pmax	pmax			
	comp=Z,75nm,2.5s							
XAN	**Xi'an**	**161.21**	**264**	PKP	**PKPdf**	**23 32 35.3**	**-1.9**	
XAN				PKPab	**PKPab**	**23 33 20.3**	**-0.6**	
XAN				PP	**PP**	**23 37 08.8**	**+4.3**	
XAN				SS	SS	23 57 24.1	+3.7	
XAN				AMB	AMB			
	comp=Z,350nm,9.8s							
XAN				LR	LR			
	comp=Z,580nm,18.0s							
XAN				LR	LR			
	comp=Z,480nm,19.1s							
XAN				LR	LR			
	comp=Z,540nm,17.7s							
BORK	**Borovoye**	**161.48**	**31**		**PKPdf**	**23 32 36.3**	**-0.4**	
BORK	**Borovoye**	**161.48**	**31**	PKIKP	**PKPdf**	**23 32 36.3**	**-0.4**	
BVAR	**Borovoye Array**	**161.52**	**31**	PKP	**PKPdf**	**23 32 35.3**	**-1.5**	
	comp=Z,2.8nm,1.0s,baz=236,slow=1.1,SNR=10							
BVAR				PKPab	**PKPab**	**23 33 21.4**	**0.0**	
	comp=Z,2.2nm,0.9s,baz=294,slow=2.5,SNR=6.4							
BTO2	**Baotou**	**161.55**	**285**	*e*PKP	**PKPab**	**23 33 22.3**	**0.0**	
BTO2				PP	PP	23 37 54.3	+48	
SONM	**Songino Array**	**162.40**	**310**	PKP	**PKPdf**	**23 32 35.8**	**-2.2**	
	comp=Z,1.6nm,1.1s,baz=132,slow=2.2,SNR=6.2							
SONM				PKPab	**PKPab**	**23 33 25.5**	**-0.2**	
	comp=Z,12nm,1.0s,baz=93,slow=2.0,SNR=20							
SONM				PP	**PP**	**23 37 08.0**	**-2.3**	
	comp=Z,1.6nm,1.1s,baz=78,slow=2.0,SNR=5.2							
SONM	**Songino Array**	**162.40**	**310**		**PKPdf**	**23 32 35.5**	**-2.6**	
PZH	**PanZhiHua**	**162.50**	**233**	PKP	**PKPdf**	**23 32 37.6**	**-1.2**	
PZH				PKPab	**PKPab**	**23 33 26.9**	**+0.2**	
ZAK	**Zakamensk**	**162.76**	**321**	*e*PKP2	**PKPab**	**23 33 27.3**	**+0.1**	
ZAK				*e*		23 37 09.5		
ZAK				pmax	pmax			
	comp=Z,39nm,2.1s							
ZAK				pmax	pmax			
	comp=Z,22nm,2.1s							
ZAK				pmax	pmax			
	comp=Z,12nm,2.0s							
MOY	**Mondy**	**162.96**	**327**	*e*PKIKP	**PKPdf**	**23 32 37.0**	**-1.5**	
MOY				pmax	pmax			
	comp=Z,28nm,3.1s							
CD2	**Chengdu**	**163.85**	**249**	PKP	**PKPdf**	**23 32 32.9**	**-7.0**	
CD2				SKS	**SKSdf**	**23 39 43.8**	**-0.7**	
CD2				LR	LR			
	comp=N,400nm,15.2s							
CD2				LR	LR			
	comp=E,660nm,20.6s							
CD2				LR	LR			
	comp=Z,620nm,21.1s							
ZAA0	**Zalesovo Array**	**164.17**	**3**		**PKPdf**	**23 32 36.9**	**-2.5**	
ZALV	**Zalesovo Beam**	**164.17**	**3**	PKP	**PKPdf**	**23 32 36.7**	**-2.6**	
	comp=Z,2.1nm,0.9s,baz=112,slow=1.6,SNR=6.2							
ZALV				PKPab	**PKPab**	**23 33 33.0**	**+0.1**	
	comp=Z,1.0nm,0.7s,baz=329,slow=5.5,SNR=3.5							
ZALV	**Zalesovo Beam**	**164.17**	**3**		**PKPdf**	**23 32 36.9**	**-2.4**	
LZH	**Lanzhou**	**165.78**	**267**	*e*PKP	**PKPab**	**23 33 41.0**	**-0.1**	
LZH				sPKP	sPKPab	23 33 54.3	+10	
LZH				PP	PP	23 37 48.6	+20	
LZDM	**Lanzhou Array**	**165.87**	**266**	PKPab	**PKPab**	**23 33 42.0**	**+0.4**	
	comp=Z,0.8nm,0.3s,baz=70,slow=4.9,SNR=8.9							
KURK	**Kurchatov**	**166.33**	**21**		**PKPdf**	**23 32 39.5**	**-1.7**	
KURK	**Kurchatov**	**166.33**	**21**	PKIKP	**PKPdf**	**23 32 39.6**	**-1.7**	
KURK						23 33 43.1		
KURBB	**Kurchatov Arra**	**166.39**	**21**	PKP	**PKPdf**	**23 32 39.5**	**-1.7**	
	comp=Z,3.7nm,1.1s,baz=322,slow=0.9,SNR=14							
KURBB				PKPab	**PKPab**	**23 33 43.0**	**+0.2**	
	comp=Z,0.3nm,0.3s,baz=331,slow=3.2,SNR=5.1							
KURBB				PP	**PP**	**23 37 32.8**	**+2.5**	
	comp=Z,0.4nm,0.2s,baz=354,slow=4.8,SNR=5.2							
SHL	**Shillong**	**166.56**	**203**	PKPdf	**PKPdf**	**23 32 40.8**	**-1.7**	
SHL	**Shillong**	**166.56**	**203**	PKIKP	**PKPdf**	**23 32 40.8**	**-1.7**	
SHL	**Shillong**	**166.56**	**203**	P	**PKPdf**	**23 32 45.1**	**+2.6**	
SNR=5.7								
KKAR	**Karatay Array**	**167.09**	**63**		**PKPdf**	**23 32 39.6**	**-2.6**	
KKAR	**Karatay Array**	**167.09**	**63**	PKIKP	**PKPdf**	**23 32 39.6**	**-2.6**	
GTA2	**Gaotai**	**169.35**	**281**	*e*PKP	**PKPdf**	**23 32 43.0**	**-0.9**	
GTA2				PKPab	**PKPab**	**23 33 56.3**	**-0.4**	
GTA2				LR	LR			
	comp=Z,400nm,18.2s							
GTA2				LR	LR			
	comp=Z,370nm,18.2s							
GTA2				LR	LR			
	comp=Z,610nm,21.8s							
LSA	**Lhasa**	**170.63**	**207**	PKP	**PKPdf**	**23 32 41.6**	**-3.8**	
MAKZ	**Makanchi**	**170.80**	**19**		**PKPdf**	**23 32 42.2**	**-2.2**	
MAKZ	**Makanchi**	**170.80**	**19**	PKIKP	**PKPdf**	**23 32 42.2**	**-2.2**	
MKAR	**Makanchi Array**	**170.89**	**17**	PKP	**PKPdf**	**23 32 43.1**	**-1.3**	
	comp=Z,2.5nm,1.1s,baz=5.7,slow=1.2,SNR=11							
MKAR				PKPab	**PKPab**	**23 34 03.3**	**+0.4**	
	comp=Z,1.1nm,0.9s,baz=6.9,slow=4.0,SNR=3.9							
MKAR				PP	**PP**	**23 37 56.7**	**+3.6**	
	comp=Z,0.9nm,1.0s,baz=90,slow=1.2,SNR=3.6							
MKAR	**Makanchi Array**	**170.89**	**17**		**PKPdf**	**23 32 42.4**	**-2.0**	
GOMU	**GeErMu**	**172.86**	**257**	PKP	**PKPdf**	**23 32 45.4**	**-0.8**	
GOMU				SS	SS	23 59 18.6	-0.2	
GOMU				LR	LR			
	comp=Z,440nm,17.0s							
GOMU				LR	LR			
	comp=Z,270nm,17.8s							
GOMU				LR	LR			
	comp=Z,660nm,17.9s							
WUS	**Wushi**	**173.80**	**58**		**PKPdf**	**23 32 44.9**	**-1.2**	
WMQ	**Urumqi**	**174.23**	**349**	*e*PKP	**PKPdf**	**23 32 47.5**	**+1.5**	
WMQ				PKPab	**pPKPab**	**23 34 20.4**	**+0.1**	
WMQ				LR	LR			
	comp=Z,500nm,19.7s							

*IDC **22** 23:19:00.0±0.5, 38.˚36S×93.˚74W, h0km, mb4.6/12, mbtmp4.6/13, ML4.1/1, Error ellipse: s-maj=18.1km s-min=17.2km az=85.0*

*MOS **22** 23:19:01.4±1.1, 38.˚19S×93.˚68W, h10km, mb5.2/31, Error ellipse: s-maj=13.8km s-min=10.3km az=76.2*

*GCMT **22** 23:19:02.8±0.2, 38.˚21S±0.˚03×93.˚92W±0.˚02, h18km, MW5.1/105, Moment Tensor Solution. s44,c56; s105,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=6.36±.33; $M_{\theta\theta}$=0.71±.17; $M_{\phi\phi}$=5.65±.23; $M_{r\theta}$=1.47±.49; $M_{\theta\phi}$=-0.30±.12; $M_{\phi r}$=0.66±.40; Best double couple: M_o=6.19900×10^{16} NP1:ϕ_s187.00000°, δ42.00000°, λ-74.00000°. NP2:ϕ_s345.00000°, δ50.00000°, λ-104.00000°. Principal axes: T 5.7160, Plg4.0000°, Azm85.0000°; N 0.9680, Plg11.0000°, Azm355.0000°; P -6.6810, Plg79.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 23:19:02.8±0.8, 38.˚24S±0.˚05×93.˚8W±0.˚1, h10km±1km, mb5.0/103 Error ellipse: s-maj=19.3km s-min=6.8km az=289.0*

ISC 22 23:19:01.7±0.4,**38.˚27S**±0.˚07×**93.˚86W**±0.˚07,**h10**km,**n242,** σ0°**90**/238,**mb5.0**/57,**4C-2D**,**West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	h m s	Res ISC
				Op				
H03S2	**Juan Fernandez**	**12.87**	**74**	T	T	23 35 10.1		
	baz=244,slow=74,SNR=249							
H03S1	**Juan Fernandez**	**12.88**	**74**	T	T	23 35 10.2		
	baz=244,slow=74,SNR=300							
H03S3	**Juan Fernandez**	**12.89**	**74**	T	T	23 35 23.2		
	baz=244,slow=74,SNR=296							
H03N3	**Juan Fernandez**	**13.03**	**73**	T	T	23 35 14.1		
	baz=250,slow=72,SNR=247							
H03N2	**Juan Fernandez**	**13.03**	**73**	T	T	23 35 13.6		
	baz=250,slow=72,SNR=253							
H03N1	**Juan Fernandez**	**13.05**	**73**	T	T	23 35 13.5		
	baz=250,slow=72,SNR=373							
LL05	**Los Muermos**	**15.97**	**108**	Pn	**Pn**	**23 22 43.7**	**-2.6**	
GO07	**Milladeo Hill,**	**16.05**	**114**		**Pn**	**23 22 47.2**	**-0.3**	
GO07				IAmb	IAmb	23 22 55.6		
	comp=Z,153nm,1.2s							
BI05	**Punta Hualpn**	**16.48**	**91**		**Pn**	**23 22 51.5**	**-1.3**	
BI05				IAmb	IAmb	23 22 59.1		
	comp=Z,145nm,1.4s							
LR05	**Currie**	**17.04**	**103**		**Pn**	**23 23 00.3**	**+0.2**	
AY01	**Puyuhuapi**	**17.05**	**118**		**Pn**	**23 23 00.9**	**+0.8**	
LL02	**Futaleuf**	**17.38**	**113**		**P**	**23 23 05.9**	**+0.3**	
GO06	**Curarrehue**	**17.47**	**101**		**P**	**23 23 06.8**	**+0.1**	
COYC	**Coyhaique**	**17.74**	**121**		**P**	**23 23 09.9**	**+0.4**	
GO05	**Hualane**	**17.89**	**86**	P	**Pn**	**23 23 10.2**	**-0.6**	
GO05				IAmb	IAmb	23 23 13.5		
	comp=Z,147nm,1.3s							
AY03	**Cochrane**	**17.97**	**127**		**P**	**23 23 12.5**	**+0.4**	
BI02	**San Fabin de**	**18.00**	**92**		**P**	**23 23 12.9**	**+0.3**	
ML02	**Panimavida**	**18.09**	**89**	P	**P**	**23 23 13.8**	**+0.2**	
ML02				IAmb	IAmb	23 23 19.4		
	comp=Z,103nm,1.4s							
PLCA	**Paso Flores**	**18.15**	**105**	P	**Pn**	**23 23 13.3**	**-0.6**	
	comp=Z,0.2nm,0.3s,baz=270,slow=12,SNR=21							
	comp=Z,17nm,1.0s							
PLCA	**Paso Flores**	**18.15**	**105**		**P**	**23 23 14.6**	**+0.4**	
PLCA	**Paso Flores**	**18.15**	**105**	P	**P**	**23 23 14.6**	**+0.4**	
PLCA				pmax	pmax			
	comp=Z,28nm,1.1s							
PLCA	**Paso Flores**	**18.15**	**105**	*e*P	**P**	**23 23 14.5**	**+0.4**	
GO08	**Villa O'Higgin**	**18.48**	**130**		**Pn**	**23 23 18.4**	**+0.6**	
VA05	**Santo Domingo**	**18.58**	**82**	P	**P**	**23 23 18.7**	**-0.2**	
BO01	**Tunca**	**18.75**	**85**		**P**	**23 23 20.4**	**-0.3**	
BO01				IAmb	IAmb	23 23 24.3		
	comp=Z,98nm,1.6s							
MT01	**Popeta**	**18.79**	**83**	P	**P**	**23 23 21.1**	**-0.2**	
BO02	**Sierra Bellavi**	**18.86**	**86**		**P**	**23 23 21.8**	**-0.3**	
MT09	**Talagante**	**19.02**	**83**	P	**P**	**23 23 23.9**	**0.0**	
MT09				IAmb	IAmb	23 23 28.4		
	comp=Z,185nm,1.6s							
MT02	**Curacav**	**19.09**	**82**	P	**P**	**23 23 24.6**	**+0.1**	
VA06	**Catapilco**	**19.24**	**80**		**P**	**23 23 26.3**	**+0.2**	
BO04	**La Punta**	**19.25**	**84**	P	**P**	**23 23 26.2**	**-0.1**	
BO04				IAmb	IAmb	23 23 32.5		
	comp=Z,65nm,1.2s							
PEL	**Peldehue**	**19.49**	**82**		**P**	**23 23 28.9**	**0.0**	
PEL	**Peldehue**	**19.49**	**82**	P	**P**	**23 23 28.9**	**0.0**	
PEL				pmax	pmax			
	comp=Z,266nm,1.9s							
MT13	**San Alfonso**	**19.59**	**84**	P	**P**	**23 23 30.5**	**+0.5**	
CO04	**Los Peladeros**	**19.70**	**79**	P	**P**	**23 23 31.2**	**-0.3**	
CO04				IAmb	IAmb	23 23 42.8		
	comp=Z,81nm,1.4s							
GO09	**Cerro Castillo**	**19.96**	**138**	P	**P**	**23 23 34.6**	**+0.7**	
CO02	**Combarbal**	**20.04**	**76**	P	**P**	**23 23 34.7**	**-0.4**	
MG05	**Puerto Natales**	**20.10**	**139**	P	**P**	**23 23 35.6**	**+0.3**	
MG05				IAmb	IAmb	23 23 44.8		
	comp=Z,120nm,1.4s							
CO03	**El Pedregal**	**20.44**	**76**		**P**	**23 23 39.0**	**-0.4**	
CO01	**Juntas del Tor**	**21.30**	**74**	P	**P**	**23 23 48.8**	**-0.1**	
CO01				IAmb	IAmb	23 24 04.1		
	comp=Z,111nm,1.6s							
AC04	**Llanos de Chal**	**21.49**	**69**	P	**P**	**23 23 49.5**	**-1.1**	
AC04				IAmb	IAmb	23 24 08.9		
	comp=Z,65nm,1.4s							
ZON	**Zonda**	**21.68**	**80**		**P**	**23 23 52.5**	**-0.2**	
ZON				IAmb	IAmb	23 23 55.2		
	comp=Z,103nm,1.5s							
ZON	**Zonda**	**21.68**	**80**	P	**P**	**23 23 52.5**	**-0.2**	
ZON				pmax	pmax			
	comp=Z,103nm,1.5s							
AC05	**El Transito**	**21.75**	**71**		**P**	**23 23 52.8**	**-0.7**	
AC05				IAmb	IAmb	23 24 01.8		
	comp=Z,100nm,1.3s							
CFA	**Coronel Fontan**	**22.00**	**80**	P	**P**	**23 23 55.6**	**-0.4**	
	comp=Z,18nm,0.8s,baz=248,slow=11,SNR=43							
	comp=Z,18nm,0.8s							
MG03	**Isla Dawson**	**22.34**	**142**	P	**P**	**23 24 00.6**	**+1.0**	
MG03				IAmb	IAmb	23 24 10.5		
	comp=Z,73nm,1.1s							
GO03	**Copiapo**	**22.45**	**69**		**P**	**23 24 00.3**	**-0.7**	
GO03				IAmb	IAmb	23 24 10.0		
	comp=Z,80nm,1.2s							
GO02	**Mina Guanaco**	**24.35**	**65**		**P**	**23 24 20.1**	**-0.2**	
GO02				IAmb	IAmb	23 24 28.8		
	comp=Z,43nm,1.2s							
TRQA	**Tornquist**	**25.01**	**99**		**P**	**23 24 25.1**	**-0.6**	
TRQA				IAmb	IAmb	23 24 36.9		
	comp=Z,68nm,1.6s							
TRQA	**Tornquist**	**25.01**	**99**	P	**P**	**23 24 25.1**	**-0.6**	
TRQA				pmax	pmax			
	comp=Z,68nm,1.6s							
PB05	**IPOC Station P**	**25.42**	**60**	P	**P**	**23 24 29.4**	**-0.3**	
PB09	**IPOC Station P**	**26.79**	**59**	P	**P**	**23 24 42.0**	**-0.2**	
PB09				IAmb	IAmb	23 24 51.2		
	comp=Z,56nm,1.2s							
PB01	**IPOC Station P**	**27.14**	**58**	P	**P**	**23 24 45.1**	**-0.2**	
PB01				IAmb	IAmb	23 24 53.8		
	comp=Z,58nm,1.5s							
PB11	**IPOC Station P**	**27.94**	**56**	P	**P**	**23 24 51.9**	**-0.6**	
PB11				IAmb	IAmb	23 24 59.6		
	comp=Z,44nm,1.5s							
PB08	**IPOC Station P**	**28.00**	**57**	P	**P**	**23 24 53.6**	**+0.4**	
PB08				IAmb	IAmb	23 25 01.8		
	comp=Z,43nm,1.4s							
GO01	**Chusmiza**	**28.31**	**56**	P	**P**	**23 24 56.1**	**-0.1**	
GO01				IAmb	IAmb	23 25 04.2		
	comp=Z,17nm,1.1s							
PB18	**Visviri**	**29.65**	**53**	P	**P**	**23 25 07.9**	**-0.2**	
NNA	**Nana**	**30.27**	**35**	P	**P**	**23 25 12.8**	**-0.2**	
NNA				IAmb	IAmb	23 25 20.8		
	comp=Z,39nm,1.2s							
NNA	**Nana**	**30.27**	**35**	*i* P	**P**	**23 25 15.4**	**+2.4**	
NNA				pmax	pmax			
	comp=Z,26nm,1.1s							
LPAZ	**La Paz**	**31.48**	**53**	P	**P**	**23 25 24.2**	**-0.2**	
	comp=Z,14nm,1.0s,baz=210,slow=6.7,SNR=13							
	comp=Z,14nm,1.0s							
LPAZ	**La Paz**	**31.48**	**53**	P	**P**	**23 25 24.6**	**+0.2**	
LPAZ	**La Paz**	**31.48**	**53**	P	**P**	**23 25 24.6**	**+0.2**	
LPAZ				pmax	pmax			
	comp=Z,42nm,1.2s							
LPAZ	**La Paz**	**31.48**	**53**	*e*P	**P**	**23 25 23.4**	**-1.0**	
CPUP	**Villa Florida**	**32.89**	**80**	P	**P**	**23 25 34.5**	**-1.5**	
	comp=Z,2.4nm,0.6s,baz=259,slow=12,SNR=4.5							
	comp=Z,2.4nm,0.6s							
CPUP	**Villa Florida**	**32.89**	**80**	P	**P**	**23 25 35.2**	**-0.9**	
CPUP				IAmb	IAmb	23 25 43.0		
	comp=Z,18nm,1.2s							
CPUP	**Villa Florida**	**32.89**	**80**	P	**P**	**23 25 35.2**	**-0.9**	
CPUP				pmax	pmax			
	comp=Z,18nm,1.2s							
PLTB	**Pedras Altas**	**33.41**	**91**	P	**P**	**23 25 40.3**	**-0.2**	
PLTB	**Pedras Altas**	**33.41**	**91**	*e*P	**P**	**23 25 40.7**	**+0.2**	
AQDB	**Aquidauana**	**37.37**	**73**	P	**P**	**23 26 13.7**	**-1.0**	
AQDB				IAmb	IAmb	23 26 21.7		
	comp=Z,36nm,1.0s							
PTGB	**Pitanga**	**37.80**	**81**	*e*P	**P**	**23 26 17.9**	**-0.5**	
PTLB	**Pontes e Lacer**	**38.08**	**63**		**P**	**23 26 20.2**	**-0.5**	
PTLB				IAmb	IAmb	23 26 28.3		
	comp=Z,41nm,1.3s							
PTLB	**Pontes e Lacer**	**38.08**	**63**	*e*P	**P**	**23 26 21.0**	**+0.3**	
TRCB	**Terra Rica**	**38.38**	**78**		**P**	**23 26 22.6**	**-0.6**	
TRCB				IAmb	IAmb	23 26 30.5		
	comp=Z,44nm,1.0s							
VILB	**Vilhena**	**39.10**	**59**	P	**P**	**23 26 29.0**	**-0.3**	
VILB				IAmb	IAmb	23 26 36.7		
	comp=Z,57nm,1.4s							
VILB	**Vilhena**	**39.10**	**59**	*e*P	**P**	**23 26 29.1**	**-0.3**	
PP1B	**Ponte de Pedra**	**39.74**	**70**	*e*P	**P**	**23 26 35.0**	**+0.3**	
SLOR	**San Lorenzo -**	**39.94**	**24**	P	**P**	**23 26 37.0**	**+0.2**	
SLOR				IAmb	IAmb	23 26 46.1		
	comp=Z,63nm,1.6s							
SALV	**Santo Antonio**	**40.24**	**67**	*e*P	**P**	**23 26 38.8**	**0.0**	
OTAV	**Otavalo**	**40.87**	**24**		**P**	**23 26 44.3**	**-0.2**	
OTAV				IAmb	IAmb	23 26 54.1		
	comp=Z,32nm,1.3s							
OTAV	**Otavalo**	**40.87**	**24**	P	**P**	**23 26 44.3**	**-0.2**	
OTAV				pmax	pmax			
	comp=Z,32nm,1.3s							
OTAV	**Otavalo**	**40.87**	**24**	*e*P	**P**	**23 26 43.9**	**-0.5**	
ITRB	**Iturama**	**41.87**	**76**	*e*P	**P**	**23 26 52.5**	**+0.2**	
PDRB	**Porto dos Gac**	**42.42**	**61**	*e*P	**P**	**23 26 55.9**	**-0.9**	
ARAG	**Araguaiana, MT**	**43.21**	**70**	*e*P	**P**	**23 27 03.2**	**+0.1**	
CLDB	**Colider**	**43.59**	**61**	*e*P	**P**	**23 27 02.0**	**-4.2**	
TEFE	**Tefe**	**43.69**	**45**	*e*P	**P**	**23 27 05.8**	**-1.2**	
BDFB	**Brasilia**	**46.09**	**74**	P	**P**	**23 27 25.5**	**-0.8**	
	comp=Z,3.7nm,0.7s,baz=256,slow=4.8,SNR=4.9							
	comp=Z,3.7nm,0.7s							
BDFB	**Brasilia**	**46.09**	**74**	P	**P**	**23 27 26.0**	**-0.3**	
BDFB				IAmb	IAmb	23 27 33.4		
	comp=Z,22nm,1.2s							
BDFB	**Brasilia**	**46.09**	**74**	P	**P**	**23 27 26.0**	**-0.3**	
BDFB				pmax	pmax			
	comp=Z,22nm,1.2s							
ROSC	**El Rosal**	**46.57**	**27**	P	**P**	**23 27 29.3**	**-1.0**	
	comp=Z,4.6nm,0.5s,baz=102,slow=19,SNR=4.5							
	comp=Z,4.6nm,0.5s							
ROSC	**El Rosal**	**46.57**	**27**	P	**P**	**23 27 30.5**	**+0.2**	
ROSC	**El Rosal**	**46.57**	**27**	P	**P**	**23 27 30.5**	**+0.2**	
ROSC				pmax	pmax			
	comp=Z,64nm,1.5s							
NPGB	**Novo Progresso**	**46.65**	**58**	*e*P	**P**	**23 27 29.7**	**-0.8**	
ITTB	**Itaituba**	**48.39**	**55**	*e*P	**P**	**23 27 43.8**	**-0.3**	
JANB	**Januaria**	**49.26**	**76**	*e*P	**P**	**23 27 51.1**	**+0.3**	
SMTB	**Santa Maria do**	**50.80**	**67**	*e*P	**P**	**23 28 02.9**	**+0.4**	
BOAV	**Boa Vista**	**50.85**	**45**	P	**P**	**23 28 02.9**	**+0.1**	
BOAV				IAmb	IAmb	23 28 10.5		
	comp=Z,28nm,1.4s							
BOAV	**Boa Vista**	**50.85**	**45**	*e*P	**P**	**23 28 02.3**	**-0.4**	
SDV	**Santo Domingo**	**51.68**	**30**	P	**P**	**23 28 08.7**	**-0.5**	
SDV				IAmb	IAmb	23 28 15.7		
	comp=Z,17nm,1.2s							
SDV	**Santo Domingo**	**51.68**	**30**	*e*P	**P**	**23 28 09.0**	**-0.1**	
QSPA	**South Pole Qui**	**51.95**	**180**	P	**P**	**23 28 10.1**	**-0.6**	
	comp=Z,7.8nm,0.9s,baz=119,slow=2.9,SNR=7.1							
	comp=Z,7.8nm,0.9s							
QSPA	**South Pole Qui**	**51.95**	**

T25A	**Trinidad**	**75.67**	**351**	P	**P**	**23 30 47.7**	**+0.5**
T25A				IAmb	IAmb	23 30 57.4	
	comp=Z,29nm,1.6s						
CCM	**Cathedral Cave**	**75.99**	**2**		**P**	**23 30 48.4**	**-0.3**
CCM	**Cathedral Cave**	**75.99**	**2**	P	**P**	**23 30 48.4**	**-0.3**
CCM				pmax	pmax		
	comp=Z,41nm,1.6s						
MVCO	**Mesa Verde**	**76.32**	**348**		**P**	**23 30 51.3**	**+0.4**
MVCO				IAmb	IAmb	23 30 53.7	
	comp=Z,23nm,1.6s						
SDCO	**Great Sand Dun**	**76.40**	**351**		**P**	**23 30 52.4**	**+1.0**
KSU1	**Kansas State U**	**77.04**	**358**	P	**P**	**23 30 55.0**	**+0.4**
KSU1				IAmb	IAmb	23 30 56.7	
	comp=Z,19nm,1.1s						
Q24A	**Divide**	**77.56**	**351**	P	**P**	**23 30 58.9**	**+0.9**
Q24A				IAmb	IAmb	23 31 07.4	
	comp=Z,18nm,1.3s						
ISCO	**Idaho Springs**	**78.44**	**351**		**P**	**23 31 03.1**	**+0.3**
ISCO	**Idaho Springs**	**78.44**	**351**	P	**P**	**23 31 03.1**	**+0.3**
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NVAR	**Mina Array Bea**	**79.58**	**341**	P	**P**	**23 31 11.4**	**+2.4**
	comp=Z,8.7nm,0.9s,baz=173,slow=7.3,SNR=33						
	comp=Z,8.7nm,0.9s						
DUG	**Dugway, Tooele**	**80.00**	**345**		**P**	**23 31 12.6**	**+1.5**
DUG				IAmb	IAmb	23 31 14.3	
	comp=Z,16nm,1.1s						
DUG	**Dugway, Tooele**	**80.00**	**345**	P	**P**	**23 31 12.6**	**+1.5**
DUG				pmax	pmax		
	comp=Z,16nm,1.1s						
ELK	**Elko**	**81.04**	**344**		**P**	**23 31 17.8**	**+1.0**
ELK				IAmb	IAmb	23 31 19.6	
	comp=Z,9.4nm,1.1s						
ELK	**Elko**	**81.04**	**344**	P	**P**	**23 31 17.8**	**+1.0**
ELK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HWUT	**Hardware Ranch**	**81.13**	**347**		**P**	**23 31 17.5**	**+0.3**
ECSD	**EROS Data Cent**	**81.67**	**358**		**P**	**23 31 20.4**	**+0.6**
ECSD				IAmb	IAmb	23 31 21.7	
	comp=Z,18nm,1.4s						
PD31	**Pinedale Array**	**81.91**	**348**	P	**P**	**23 31 22.2**	**+0.8**
PD31				IAmb	IAmb	23 31 23.7	
	comp=Z,14nm,1.1s						
PDAR	**Pinedale Array**	**81.91**	**348**	P	**P**	**23 31 22.5**	**+1.1**
	comp=Z,6.7nm,0.8s,baz=164,slow=5.9,SNR=53						
	comp=Z,6.7nm,0.8s						
PDAR	**Pinedale Array**	**81.91**	**348**		**P**	**23 31 22.1**	**+0.8**
LOHW	**Long Hollow**	**82.91**	**348**		**P**	**23 31 27.4**	**+0.9**
WVOR	**Wild Horse Val**	**83.43**	**342**	P	**P**	**23 31 30.5**	**+1.4**
WVOR				IAmb	IAmb	23 31 33.7	
	comp=Z,15nm,1.3s						
WVOR	**Wild Horse Val**	**83.43**	**342**	P	**P**	**23 31 30.5**	**+1.4**
WVOR				pmax	pmax		
	comp=Z,15nm,1.3s						
HLID	**Hailey**	**83.56**	**345**	P	**P**	**23 31 30.7**	**+0.9**
HLID				IAmb	IAmb	23 31 33.1	
	comp=Z,11nm,1.1s						
K05A	**Summer Lake**	**84.28**	**340**		**P**	**23 31 34.8**	**+1.2**
I07A	**Izee**	**85.20**	**342**		**P**	**23 31 39.2**	**+1.1**
EGMT	**Eagleton**	**87.08**	**349**	P	**P**	**23 31 48.2**	**+1.0**
HAWA	**Hanford**	**87.38**	**343**	P	**P**	**23 31 49.5**	**+1.0**
HAWA				IAmb	IAmb	23 31 51.9	
	comp=Z,16nm,1.4s						
D08A	**Wollman Farm,**	**87.86**	**343**		**P**	**23 31 52.1**	**+1.2**
D08A				IAmb	IAmb	23 31 55.1	
	comp=Z,15nm,1.5s						
ULM	**Lac du Bonnet**	**88.17**	**359**	P	**P**	**23 31 51.9**	**-0.4**
	comp=Z,4.5nm,0.9s,baz=179,slow=6.0,SNR=6.0						
	comp=Z,4.5nm,0.9s						
ULM	**Lac du Bonnet**	**88.17**	**359**	*i* P	**P**	**23 31 52.4**	**+0.2**
NEW	**Newport**	**88.61**	**345**		**P**	**23 31 55.3**	**+0.8**
NEW	**Newport**	**88.61**	**345**	P	**P**	**23 31 55.3**	**+0.8**
NEW				pmax	pmax		
	comp=Z,24nm,1.6s						
STKA	**Stephens Creek**	**93.18**	**225**	*i* P	**P**	**23 32 16.6**	**+0.2**
H11S2	**WAKE ISLAND Hyl**	**08.47**	**279**	T	T	01 34 57.7	
	baz=126,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hyl**	**08.49**	**279**	T	T	01 34 58.9	
	baz=126,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hyl**	**08.49**	**279**	T	T	01 34 59.2	
	baz=126,slow=76,SNR=20						
ZCCA	**Zocca**	**125.05**	**58**		**PKPdf**	**23 38 01.8**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**125.40**	**55**		**PKPdf**	**23 38 02.9**	**+0.2**
GERES	**GERESS Array B**	**128.32**	**53**	PKP	**PKPdf**	**23 38 07.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=325,slow=2.1,SNR=5.0						
BILL	**Bilibino**	**128.48**	**332**	*c i* PKIKP	**PKiKP**	**23 38 09.1**	**+0.8**
BILL				pmax	pmax		
	comp=Z,13nm,2.5s						
PEA0B	**Petropavlovsk-**	**129.96**	**312**	*c i* PKIKP	**PKPdf**	**23 38 11.4**	**+0.5**
PETK	**Petropavlovsk-**	**129.96**	**312**	PKP	**PKPdf**	**23 38 09.9**	**-1.0**
	comp=Z,4.4nm,0.9s,baz=86,slow=4.6,SNR=4.3						
PETK	**Petropavlovsk-**	**129.96**	**312**		**PKPdf**	**23 38 10.4**	**-0.5**
PETK	**Petropavlovsk-**	**129.96**	**312**	PKIKP	**PKPdf**	**23 38 10.4**	**-0.5**
SEY	**Seymchan**	**133.91**	**324**	*c i* PKIKP	**PKiKP**	**23 38 19.9**	**+0.5**
SEY				pmax	pmax		
	comp=Z,17nm,2.5s						
MA2	**Magadan**	**134.64**	**320**	*c i* PKIKP	**PKiKP**	**23 38 21.6**	**+0.6**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.7s						
AKASG	**Malin Array Be**	**138.53**	**54**	PKP	**PKPdf**	**23 38 27.3**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=274,slow=2.5,SNR=4.1						
BRTR	**Keskin Array B**	**139.66**	**71**	PKP	**PKPdf**	**23 38 30.1**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=160,slow=3.9,SNR=4.5						
BRTR	**Keskin Array B**	**139.66**	**71**		**PKPdf**	**23 38 29.4**	**-0.3**
TIXI	**Tiksi**	**140.19**	**340**	PKhKP	PKPpre	23 38 22.2	
	comp=Z,4.9nm,0.8s,baz=51,slow=1.8,SNR=9.5			PKP	**PKPdf**	**23 38 29.2**	**-0.3**
TIXI	comp=Z,2.0nm,0.7s,baz=67,slow=2.2,SNR=4.3						
OBN	**Obninsk**	**142.95**	**47**	*e* PKIKP	**PKPdf**	**23 38 34.1**	**-0.7**
OBN				*e*		23 41 51.5	
OBN				*e* PPP	PPP	23 44 55.7	
OBN				pmax	pmax		
	comp=Z,13nm,1.1s						
YAK	**Yakutsk**	**144.39**	**326**	PKP	**PKPab**	**23 38 35.7**	**+0.3**
	comp=Z,38nm,0.8s,baz=83,slow=0.8,SNR=19						
YAK	**Yakutsk**	**144.39**	**326**		**PKPab**	**23 38 35.4**	**+0.1**
YAK	**Yakutsk**	**144.39**	**326**	*e* PKHKP	PKPpre	23 38 34.1	
YAK				*e* SS	SS	00 00 35.5	-3.7
YAK				pmax	pmax		
	comp=Z,55nm,1.0s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,151nm,4.1s						
YAK				pmax	pmax		
	comp=E,82nm,3.3s						
YAK				pmax	pmax		
	comp=N,80nm,3.7s						
LPSR	**Galich'ya Gora**	**144.58**	**51**	*e* PKIKP	**PKPab**	**23 38 36.9**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,53nm,1.0s						
VORR	**Voronezh**	**144.82**	**52**	*e* PKIKP	**PKPab**	**23 38 37.4**	**+0.1**
VORR				pmax	pmax		
	comp=Z,23nm,0.4s						
VSR	**Storozhevoye**	**144.82**	**53**	*e* PKIKP	**PKPab**	**23 38 36.8**	**-0.5**
VSR				pmax	pmax		
	comp=Z,40nm,1.3s						
KOPT	**Kop Dagi**	**144.85**	**73**		**PKPab**	**23 38 37.8**	**-0.4**
SOC	**Sochi**	**144.89**	**66**	*e* PKIKP	**PKPab**	**23 38 37.9**	**+0.1**
SOC				*e*		23 41 54.7	
SOC				*e* SS	SS	00 00 47.7	+1.3
SOC				pmax	pmax		
	comp=Z,41nm,0.8s						
VORD	**Divnogorie**	**144.91**	**53**	*e* PKIKP	**PKPab**	**23 38 37.0**	**-0.6**
VORD				pmax	pmax		
	comp=Z,20nm,1.1s						
USRK	**Ussuriysk Ar.**	**145.37**	**295**	PKPbc	**PKPdf**	**23 38 37.5**	**-2.0**
	comp=Z,14nm,0.8s,baz=127,slow=3.3,SNR=11						
GURO	**Guroymak-BITLI**	**145.69**	**75**		**PKPbc**	**23 38 41.6**	**+0.8**
KLR	**Kul'dur**	**145.77**	**304**	PKPbc	**PKPdf**	**23 38 38.7**	**-1.3**
	comp=Z,2.5nm,0.9s,baz=55,slow=5.3,SNR=6.4						
KLR	**Kul'dur**	**145.77**	**304**	*i* PKIKP	**PKPdf**	**23 38 39.8**	**-0.2**
GEVA	**Gevas**	**146.42**	**76**	PKPdf	**PKPdf**	**23 38 40.4**	**-1.3**
VRH	**Novokhopyorsk**	**146.43**	**53**	*e* PKP2	**PKPdf**	**23 38 42.3**	**+1.3**
VRH				pmax	pmax		
	comp=Z,28nm,0.8s						
SHA1	**Shidzhatmaz**	**147.03**	**66**	*i* PKP2	**PKPdf**	**23 38 43.2**	**+0.6**
KIV	**Kislovodsk**	**147.07**	**66**		**PKPbc**	**23 38 44.7**	**+0.1**
KIV	**Kislovodsk**	**147.07**	**66**	*e* PKP2	**PKPdf**	**23 38 43.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
MDJ	**Mudanjiang**	**147.12**	**295**	PKPbc	**PKPbc**	**23 38 44.8**	**+0.2**
MDJ				PP	**PP**	**23 42 05.6**	**-4.7**
MDJ				AMB	AMB		
	comp=Z,22nm,7.6s						
MDJ				LR	LR		
	comp=N,740nm,10.0s						
MDJ				LR	LR		
	comp=E,990nm,10.3s						
MDJ				LR	LR		
	comp=Z,1μm,17.7s						
KBZ	**Khabaz**	**147.20**	**66**	PKPbc	**PKPdf**	**23 38 43.8**	**+1.2**
	comp=Z,3.3nm,0.8s,baz=276,slow=3.8,SNR=6.6						
KSRS	**Korea Array**	**147.20**	**282**	PKPbc	**PKPdf**	**23 38 44.9**	**+2.1**
	comp=Z,6.6nm,1.0s,baz=114,slow=4.3,SNR=10						
KSAR	**Wonju Array Be**	**147.23**	**282**		**PKPdf**	**23 38 44.6**	**+1.8**
KSAR	**Wonju Array Be**	**147.23**	**282**	PKP2	**PKPdf**	**23 38 44.6**	**+1.8**
ZEA	**Zeya**	**148.05**	**312**	*e* PKP2	**PKPbc**	**23 38 46.8**	**0.0**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GNI	**Garni**	**148.07**	**73**	*i* PKIKP	**PKPdf**	**23 38 44.9**	**+0.5**
HEH	**HeiHe**	**148.51**	**306**	PKPbc	**PKPbc**	**23 38 47.6**	**-0.5**
HEH				LR	LR		
	comp=N,500nm,19.6s						
HEH				LR	LR		
	comp=E,600nm,21.0s						
HEH				LR	LR		
	comp=Z,980nm,18.4s						
BNX	**BinXian**	**148.72**	**297**	⇓P	**PKPbc**	**23 38 48.3**	**-0.5**
BNX				pmax	pmax		
	comp=Z,18nm,0.9s						
KIRV	**Kirov**	**148.86**	**37**	*i* PKIKP	**PKPdf**	**23 38 46.4**	**+1.6**
CN2	**Changchun**	**150.04**	**293**	PKPbc	**PKPbc**	**23 38 51.3**	**-0.9**
AKT	**Akhty**	**150.51**	**72**	*e* PKIKP	**PKPdf**	**23 38 49.5**	**+1.3**
AKT				*e*		23 42 30.3	
AKT				pmax	pmax		
	comp=Z,25nm,1.2s						
NJ2	**Nanjing**	**152.64**	**267**	*e* P	**PKPdf**	**23 38 51.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HILR	**Hailar Array B**	**153.51**	**306**	PKPbc	**PKPbc**	**23 39 00.1**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=99,slow=6.3,SNR=2.4						
HILR				PKPab	**PKPab**	**23 39 12.9**	**+0.4**
	comp=Z,6.8nm,0.9s,baz=110,slow=8.1,SNR=6.3						
ARTI	**Arti**	**154.16**	**36**	*i* PKIKP	**PKPdf**	**23 38 52.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**157.31**	**213**	PKP	**PKPdf**	**23 38 58.7**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=66,slow=2.9,SNR=1.9						
HYB	**Hyderabad**	**158.18**	**160**	*e* PKPdf	**PKPdf**	**23 38 59.4**	**0.0**
AB31	**Akbulak array**	**158.24**	**51**	PKPdf	**PKPdf**	**23 38 58.5**	**0.0**
ABKAR	**Akbulak array**	**158.24**	**51**		**PKPdf**	**23 38 58.4**	**-0.1**
HHC	**Hu-ho-hao-te**	**160.25**	**285**	*e* P	**PKPdf**	**23 38 57.3**	**-4.0**
HRA	**Herat**	**160.38**	**94**	PKPdf	**PKPdf**	**23 39 01.4**	**-0.4**
BVAR	**Borovoye Array**	**161.66**	**31**	PKP	**PKPdf**	**23 39 01.6**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=335,slow=2.1,SNR=5.0						
BVAR				PKPab	**PKPab**	**23 39 47.4**	**0.0**
	comp=Z,1.3nm,0.8s,baz=340,slow=3.9,SNR=6.1						
PZH	**PanZhiHua**	**162.38**	**233**	PKP	**PKPdf**	**23 39 03.8**	**-0.2**
SONM	**Songino Array**	**162.43**	**309**	PKPab	**PKPab**	**23 39 52.2**	**+1.0**
	comp=Z,3.4nm,1.0s,baz=32,slow=2.4,SNR=12						
SONM	**Songino Array**	**162.43**	**309**	PKPab	**PKPab**	**23 39 51.2**	**+0.1**
ZALV	**Zalesovo Beam**	**164.30**	**3**	PKP	**PKPdf**	**23 39 04.0**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=243,slow=0.3,SNR=4.6						
ZALV				PKPab	**PKPab**	**23 39 58.5**	**-0.3**
	comp=Z,1.5nm,1.0s,baz=348,slow=6.3,SNR=2.4						
MORE	**Moreh**	**164.37**	**209**	PKPdf	**PKPdf**	**23 39 04.4**	**-1.4**
KURK	**Kurchatov**	**166.46**	**21**	PKIKP	**PKPdf**	**23 39 05.0**	**-1.7**
KURK						23 40 08.8	
KURBB	**Kurchatov Arra**	**166.52**	**21**	PKP	**PKPdf**	**23 39 05.0**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=14,slow=1.8,SNR=5.7						
KURBB				PKPab	**PKPab**	**23 40 08.8**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=320,slow=2.8,SNR=1.8						
MKAR	**Makanchi Array**	**171.03**	**17**	PKP	**PKPdf**	**23 39 08.4**	**-1.4**
	comp=Z,1.1nm,1.0s,baz=336,slow=2.7,SNR=4.0						
MKAR				PKPab	**PKPab**	**23 40 29.1**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=26,slow=3.7,SNR=2.1						
KSH2	**Kashi**	**171.69**	**81**	PKP	**PKPdf**	**23 39 11.3**	**+0.7**
WMQ	**Urumqi**	**174.33**	**349**	*e* PKP	**PKPdf**	**23 39 12.8**	**+1.4**
WMQ				LR	LR		
	comp=Z,570nm,20.9s						

IDC 22 23:23:20.2±6.9, 38°.64S×94°.00W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=188.6km s-min=34.4km az=11.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**13.08**	**73**	T	T	23 39 44.8	
	baz=241						
H03S1	**Juan Fernandez**	**13.09**	**73**	T	T	23 39 46.3	
	baz=241						
H03S3	**Juan Fernandez**	**13.09**	**73**	T	T	23 39 45.1	
	baz=241						
H03N3	**Juan Fernandez**	**13.25**	**72**	T	T	23 39 58.4	
	baz=251						
H03N2	**Juan Fernandez**	**13.25**	**72**	T	T	23 39 56.9	
	baz=251						
H03N1	**Juan Fernandez**	**13.26**	**72**	T	T	23 39 52.1	
	baz=251						
CFA	**Coronel Fontan**	**22.17**	**79**	P	P	23 28 18.6	+0.7
	2.2nm,0.6s,baz=246,slow=11,SNR=6.2						
	2.2nm,0.6s						
LPAZ	**La Paz**	**31.78**	**53**	P	P	23 29 46.3	-0.8
	1.7nm,0.8s,baz=210,slow=7.2,SNR=4.7						
	1.7nm,0.8s						
TXAR	**Lajitas Array**	**68.22**	**351**	P	P	23 34 24.1	+1.5
	0.5nm,0.9s,baz=182,slow=7.1,SNR=3.4						
	0.5nm,0.9s						
NVAR	**Mina Array Bea**	**79.88**	**341**	P	P	23 35 31.7	+1.0
	0.6nm,0.7s,baz=172,slow=5.3,SNR=3.9						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	**82.25**	**349**	P	P	23 35 41.5	-1.8
	0.9nm,0.8s,baz=160,slow=6.0,SNR=6.5						
	0.9nm,0.8s						

*NOU **22** 23:27:03.2, 30°.43S×173°.88W, h87km, mb4.9/6, Kermadec Islands Region*
*IDC **22** 23:28:03.3±1.5, 33°.41S×178°.75W, h0km, mb4.0/2, mbtmp4.1/3, ML4.3/1, Error ellipse: s-maj=52.9km s-min=31.0km az=134.0*
*WEL **22** 23:28:04.1±0.6, 34°.5S±5°×17°.8W±1°.0, h33km, M4.5/13, mB5.0/8, ML4.6/18, MLv4.7/13, Mw(mB)4.3/8, Error ellipse: s-maj=13.8km s-min=3.6km az=115.9*

ISC 22 23:28:07.6±1.1, 33°.52S±0°.07×178°.4W±0°.1, h41km, n42, σ1°02/52, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.26**	**5**	P	**Pn**	**23 29 08.7**	**-1.3**
GLKZ				S	**Sn**	**23 29 59.2**	**+0.7**
MXZ	**Matakaoa Point**	**4.86**	**213**	P	**Pn**	**23 29 19.1**	**+1.0**
MXZ	**Matakaoa Point**	**4.86**	**213**	P	**Pn**	**23 29 19.3**	**+1.2**
MXZ				S	**Sn**	**23 30 13.8**	**+0.7**
MXZ				T	T	23 34 12.0	
WMGZ	**Waiomatatini S**	**5.02**	**210**	P	**Pn**	**23 29 20.9**	**+0.5**
WMGZ				S	**Sn**	**23 30 18.2**	**+1.0**
PKGZ	**Pakihiroa**	**5.21**	**213**	P	**Pn**	**23 29 23.3**	**+0.3**
PKGZ				S	**Sn**	**23 30 22.2**	**+0.5**
HAZ	**Te Kaha**	**5.26**	**215**	P	**Pn**	**23 29 23.4**	**-0.2**
HAZ				S	**Sn**	**23 30 24.4**	**+1.5**
PUZ	**Puketiti**	**5.30**	**210**	P	**Pn**	**23 29 23.6**	**-0.7**
PUZ				S	**Sn**	**23 30 24.6**	**+0.5**
RUGZ	**Raukumara Rang**	**5.47**	**215**	P	**Pn**	**23 29 26.5**	**-0.2**
RUGZ				S	**Sn**	**23 30 29.2**	**+0.7**
TWGZ	**Tauwhareparae**	**5.51**	**211**	P	**Pn**	**23 29 26.9**	**-0.2**
TWGZ				S	**Sn**	**23 30 29.9**	**+0.7**
CNGZ	**Carnagh Statio**	**5.67**	**208**	P	**Pn**	**23 29 28.9**	**-0.5**
CNGZ				S	**Sn**	**23 30 34.6**	**+1.4**
TKGZ	**Te Karaka**	**5.78**	**211**	P	**Pn**	**23 29 31.8**	**+1.0**
TKGZ				S	**Sn**	**23 30 36.3**	**+0.4**
MWZ	**Matawai**	**5.84**	**213**	P	**Pn**	**23 29 31.1**	**-0.6**
MWZ				S	**Sn**	**23 30 36.8**	**-0.6**
URZ	**Urewera**	**5.98**	**216**	Pn	**Pn**	**23 29 32.6**	**-0.9**
	7.1nm,0.3s,baz=259,slow=5.1,SNR=37						
URZ				Sn	**Sn**	**23 30 39.5**	**-1.2**
	9.9nm,0.3s,baz=119,slow=24,SNR=11						
	15nm,0.3s						
URZ	**Urewera**	**5.98**	**216**	P	**Pn**	**23 29 34.2**	**+0.6**
URZ	**Urewera**	**5.98**	**216**	P	**Pn**	**23 29 32.9**	**-0.6**
URZ				S	**Sn**	**23 30 39.4**	**-1.4**
RAGZ	**Rawiri**	**6.02**	**213**	P	**Pn**	**23 29 35.2**	**+0.9**
RIGZ	**Rimuhau**	**6.04**	**210**	P	**Pn**	**23 29 35.3**	**+0.8**
PRGZ	**Paritu Road**	**6.18**	**208**	P	**Pn**	**23 29 36.6**	**+0.2**
SNGZ	**Shannon Statio**	**6.29**	**212**	P	**Pn**	**23 29 38.8**	**+1.0**
RTZ	**Ruatahuna**	**6.32**	**215**	P	**Pn**	**23 29 38.3**	**0.0**
KNZ	**Kokohu**	**6.35**	**209**	P	**Pn**	**23 29 37.3**	**-1.3**
WCZ	**Waipu Caves**	**6.45**	**246**	P	**Pn**	**23 29 40.9**	**+0.8**
RAHZ	**Arahi**	**6.51**	**213**	P	**Pn**	**23 29 41.8**	**+0.8**
TOZ	**Tahuroa Road**	**6.51**	**228**	P	**Pn**	**23 29 42.8**	**+1.9**
ARHZ	**Aropaoanui**	**6.84**	**212**	P	**Pn**	**23 29 45.5**	**+0.2**
OUZ	**Omahuta**	**6.84**	**253**	P	**Pn**	**23 29 45.1**	**-0.3**
OUZ	**Omahuta**	**6.84**	**253**	P	**Pn**	**23 29 44.9**	**-0.6**
BKZ	**Black Stump Fm**	**6.99**	**215**	P	**Pn**	**23 29 47.6**	**+0.1**
BKZ	**Black Stump Fm**	**6.99**	**215**	P	**Pn**	**23 29 47.3**	**-0.1**
BKZ				S	**Sn**	**23 31 02.7**	**-3.0**
HIZ	**Hauiti**	**7.41**	**226**	P	**Pn**	**23 29 55.1**	**+2.0**
BFZ	**Birch Farm**	**8.34**	**209**	P	**Pn**	**23 30 04.4**	**-1.5**
AFI	**Afiamalu**	**20.42**	**19**	P	Pn	23 32 45.1	+1.3
ASAR	**Alice Springs**	**42.71**	**270**	P	**P**	**23 36 00.3**	**-0.5**
	1.5nm,0.6s,baz=110,slow=7.2,SNR=28						
	1.5nm,0.6s						
WRA	**Warramunga Arr**	**43.98**	**276**	P	**P**	**23 36 09.4**	**-1.7**
	1.0nm,0.5s,baz=117,slow=7.8,SNR=18						
	1.0nm,0.5s						
H03N3	**Juan Fernandez**	**79.24**	**123**	T	T	01 08 47.2	
	baz=239,slow=72,SNR=4.1						
H03N2	**Juan Fernandez**	**79.24**	**123**	T	T	01 08 48.9	
	baz=239,slow=72,SNR=4.0						
H03N1	**Juan Fernandez**	**79.25**	**123**	T	T	01 08 42.2	
	baz=239,slow=72,SNR=5.9						
KURBB	**Kurchatov Arra**	**122.97**	**312**	PKP	**PKiKP**	**23 46 59.4**	**+0.2**
	0.5nm,0.5s,baz=113,slow=1.9,SNR=5.8						
BVAR	**Borovoye Array**	**128.37**	**314**	PKP	**PKiKP**	**23 47 10.9**	**+1.1**
	0.6nm,0.4s,baz=82,slow=0.1,SNR=5.7						
FINES	**FINESS Array B**	**147.93**	**338**	PKPbc	**PKiKP**	**23 47 49.1**	**-0.3**
	2.3nm,0.5s,baz=42,slow=5.0,SNR=17						
MMAI	**Mount Meron Ar**	**151.81**	**278**	PKPbc	**PKiKP**	**23 47 59.8**	**+1.3**
	1.9nm,0.5s,baz=68,slow=5.0,SNR=14						
BRTR	**Keskin Array B**	**153.65**	**293**	PKPbc	**PKiKP**	**23 48 02.4**	**+0.2**
	0.5nm,0.5s,baz=126,slow=4.3,SNR=7.9						

*SOME **22** 23:50:05.4, 45°.00N×89°.45E, h0km*
*IDC **22** 23:50:12.4±2.0, 47°.64N×90°.07E, h0km, mb3.8/1, mbtmp3.4/7, ML3.0/5, MS3.8/4, Error ellipse: s-maj=20.9km s-min=19.3km az=162.0*
*NNC **22** 23:50:12.9±2.5, 47°.70N×89°.98E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=20.3km s-min=13.9km az=81.0*
*ASRS **22** 23:50:15.2±0.5, 48°.N±.3°×9°.1E±°, h9km, MLh4.0/14, Error ellipse: s-maj=5.5km s-min=3.6km az=169.4, confirmed*

ISC 22 23:50:13.1±1.0, 47.70N±0°.04×90.13E±0°.04, h10km, n33, σ2°39/59, MS4.1/3, 7C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**2.68**	**335**	Pn	**Pn**	**23 50 53.0**	**-3.5**
CUR				Pg	**Pg**	**23 50 59.9**	**-1.3**
CUR				Sg	**Sg**	**23 51 37.1**	**-2.0**
DGZ	**Jazzator, Alta**	**2.69**	**319**	Pg	**Pb**	**23 51 01.4**	**0.0**
DGZ				Sg	**Sg**	**23 51 38.2**	**-1.2**
AKAR	**Aktash**	**3.10**	**329**	Pn	**Pn**	**23 51 01.4**	**-0.9**
AKAR				Pg	**Pg**	**23 51 14.6**	**+2.1**
AKAR				Sg	**Sg**	**23 51 50.2**	**-2.6**
CHBI	**Chibit, Altay**	**3.14**	**328**	Pn	**Pn**	**23 51 03.2**	**+0.5**
CHBI				Pg	**Pg**	**23 51 11.6**	**-1.6**
CHBI				Sg	**Sg**	**23 51 51.8**	**-2.1**
ULGR	**Ulagan, Altay**	**3.26**	**335**	Pg	**Pg**	**23 51 13.7**	**-1.8**
ULGR				Sg	**Sg**	**23 51 54.7**	**-3.1**
TEL	**Teeli**	**3.33**	**1**	Pn	**Pn**	**23 51 04.4**	**-0.9**
TEL				Pg	**Pb**	**23 51 10.8**	**-1.5**
TEL				Sg	**Sb**	**23 51 52.8**	**0.0**
TUNR	**Tungur**	**3.52**	**316**	Pg	**Pg**	**23 51 18.2**	**-2.3**
TUNR				Sg	**Sg**	**23 52 05.6**	**-0.4**
ZSN	**Zaisan**	**3.57**	**268**	*e* P	**Pg**	**23 51 19.3**	**-2.2**
	25nm,1.0s						
ZSN				*e* S	**Sg**	**23 52 11.6**	**+3.9**
	45nm,0.7s						
YALR	**Yailyu, Altay**	**4.39**	**339**	Pn	**Pn**	**23 51 23.2**	**+3.3**
YALR				Pg	**Pg**	**23 51 35.4**	**-1.8**
YALR				Sg	**Sg**	**23 52 32.2**	**-1.9**
ARTR	**Artybash**	**4.50**	**337**	Pg	**Pb**	**23 51 35.4**	**+

mbtmp3.4/4, Error ellipse: s-maj=390.5km s-min=33.5km az=65.0

ISC 23 00:08:06.6±3.2, **6°4S**±0.4×**70°9E**±0.5, **h10**km, **n10**, σ**0s28**/10, **mb3.7/4, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**1.96**	**127**	Pn	**Pn**		**00 08 39.8**	**+0.1**
H08S3				Sn	**Sb**		**00 09 06.7**	**+0.1**
H08S1	**Diego Garcia H**	**1.96**	**128**	Pn	**Pn**		**00 08 39.7**	**0.0**
H08S1				Sn	**Sb**		**00 09 06.7**	**0.0**
H08S2	**Diego Garcia H**	**1.98**	**128**	Pn	**Pn**		**00 08 40.3**	**+0.4**
H08S2				Sn	**Sb**		**00 09 07.0**	**-0.2**
H04N2	**CROZET ISLANDS**	**42.89**	**200**	T	T		01 01 46.5	
	baz=29,slow=75,SNR=20							
H04N1	**CROZET ISLANDS**	**42.90**	**200**	T	T		01 01 47.6	
	baz=29,slow=75,SNR=11							
H04N3	**CROZET ISLANDS**	**42.91**	**200**	T	T		01 01 45.1	
	baz=29,slow=75,SNR=13							
MKAR	**Makanchi Array**	**53.95**	**10**	P	**P**		**00 17 30.6**	**0.0**
	0.2nm,0.8s,baz=194,slow=8.9,SNR=4.8							
	0.2nm,0.8s							
SONM	**Songino Array**	**62.42**	**26**	P	**P**		**00 18 30.1**	**+0.1**
	0.4nm,1.0s,baz=218,slow=7.1,SNR=2.3							
	0.4nm,1.0s							
ASAR	**Alice Springs**	**62.73**	**113**	P	**P**		**00 18 32.5**	**+0.1**
	0.4nm,0.5s,baz=275,slow=6.6,SNR=10							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**62.87**	**109**	P	**P**		**00 18 32.9**	**-0.6**
	0.7nm,0.7s,baz=284,slow=6.3,SNR=4.6							
	0.7nm,0.7s							

*ISK **23** 00:31:01.9, 35°.74N×27°.65E, h54km±1km, ML2.8/15*
*ATH **23** 00:31:02.5, 35°.59N×27°.81E, h29km±6km, ML3.0/2, Manual Solution by M.Charalampakis First location: 2020/02/23 00:32:49, This location: 2020/02/23 06:37:13 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 7 km; Longitude uncertainty: 5 km*
*AFAD **23** 00:31:03.8, 35°.94N×27°.65E, h50km±2km, ML2.6*

ISC 23 00:31:03.8±1.4, **35°80N**±0°.05×**27°61E**±0°.04, **h43**km±16km, **n41**, σ**1s18**/64, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.45**	**235**	Pg	**Pn**		**00 31 13.4**	**-0.5**
KARP				Sg	**Sn**		**00 31 21.5**	**+0.3**
KARP	**Karpathos**	**0.45**	**235**	P	**Pn**		**00 31 13.5**	**-0.5**
KARP				S	**Sn**		**00 31 21.1**	**-0.1**
ARG	**Arkhangelos**	**0.58**	**45**	Pg	**Pn**		**00 31 15.5**	**-0.2**
ARG				Sg	**Sn**		**00 31 24.9**	**+0.6**
ARG	**Arkhangelos**	**0.58**	**45**	P	**Pn**		**00 31 15.8**	**+0.1**
ARG				S	**Sn**		**00 31 24.8**	**+0.6**
RDI1	**Rhodes Town Ha**	**0.81**	**37**	P	**Pn**		**00 31 19.4**	**+0.6**
RDI1				S	**Sn**		**00 31 31.8**	**+2.1**
YAZI	**Mula-Dat§a-**	**0.89**	**352**	P	**Pn**		**00 31 19.3**	**-0.5**
YAZI				S	**Sn**		**00 31 30.6**	**-0.8**
DAT	**Datca**	**0.92**	**358**	Pg	**Pn**		**00 31 20.2**	**-0.2**
DAT				Sg	**Sn**		**00 31 33.5**	**+0.9**
DAT	**Datca**	**0.92**	**358**	P	**Pn**		**00 31 20.0**	**-0.4**
DAT				S	**Sn**		**00 31 32.2**	**-0.4**
DAT				IAML			00 31 35.0	
	comp=E,139nm,0.4s							
TURN	**Turunc**	**1.09**	**28**	Pn	**Pn**		**00 31 22.3**	**-0.3**
TURN				Sn	**Sn**		**00 31 37.4**	**+0.8**
TURN	**Turunc**	**1.09**	**28**	P	**Pn**		**00 31 22.4**	**-0.3**
TURN				S	**Sn**		**00 31 37.7**	**+1.1**
TURN				IAML			00 31 42.0	
	comp=N,206nm,0.2s							
BDRM	**Kayabasi**	**1.27**	**354**	P	**Pn**		**00 31 24.8**	**-0.3**
BDRM				S	**Sn**		**00 31 39.9**	**-1.0**
BDRM				IAML			00 31 42.0	
	comp=E,132nm,0.3s							
BODT	**Bodrum**	**1.28**	**349**	Pn	**Pn**		**00 31 25.8**	**+0.6**
DALY	**Dalyan (Mula)**	**1.31**	**39**	Pn	**Pn**		**00 31 25.3**	**-0.3**
ZKR	**Zakros**	**1.33**	**239**	P	**Pn**		**00 31 26.3**	**+0.4**
ZKR				S	**Sn**		**00 31 44.1**	**+1.7**
YER	**Yerkesik**	**1.43**	**22**	Pn	**Pn**		**00 31 27.2**	**-0.1**
IZZE	**Mula-Seydike**	**1.45**	**64**	P	**Pn**		**00 31 26.3**	**-1.2**
IZZE				S	**Sn**		**00 31 42.2**	**-3.1**
MLSB	**Milas**	**1.49**	**5**	Pn	**Pn**		**00 31 28.4**	**+0.2**
SABU	**Mula-Dalaman**	**1.49**	**47**	P	**Pn**		**00 31 27.8**	**-0.4**
SABU				S	**Sn**		**00 31 46.2**	**-0.3**
SABU				IAML			00 31 53.0	
	comp=N,69nm,0.4s							
MULA	**Mugla, Merkez-**	**1.56**	**21**	P	**Pn**		**00 31 29.0**	**-0.1**
MULA				S	**Sn**		**00 31 47.7**	**-0.4**
AKAS	**Kas**	**1.67**	**75**	Pn	**Pn**		**00 31 29.4**	**-1.3**
DDIM	**Aydin, Didim**	**1.68**	**350**	P	**Pn**		**00 31 30.3**	**-0.3**
DDIM				S	**Sn**		**00 31 49.3**	**-1.6**
NPS	**Neapolis**	**1.72**	**252**	P	**Pn**		**00 31 31.1**	**-0.2**
CAME	**Cameli-Denizli**	**1.77**	**50**	Pn	**Pn**		**00 31 31.6**	**-0.5**
DNZT	**Denizli-Tavas-**	**1.86**	**37**	P	**Pn**		**00 31 33.1**	**-0.1**
DNZT				S	**Sn**		**00 31 58.9**	**+3.3**
AYDN	**Tasoluk**	**1.86**	**6**	P	**Pn**		**00 31 34.7**	**+1.4**
AYDN				S	**Sn**		**00 31 54.5**	**-1.1**
AYDN				IAML			00 31 59.0	
	comp=N,46nm,0.2s							
CAEL	**Denizli, Camel**	**1.90**	**46**	P	**Pn**		**00 31 33.2**	**-0.6**
CAEL				IAML			00 32 10.0	
	comp=E,125nm,0.6s							
CAEL				IAML			00 32 22.0	
	comp=N,50nm,0.9s							
GCAM	**G?zelcaml?**	**1.92**	**351**	Pn	**Pn**		**00 31 34.1**	**+0.2**
GCAM	**G?zelcaml?**	**1.92**	**351**	P	**Pn**		**00 31 32.7**	**-1.2**
GCAM				IAML			00 32 14.0	
	comp=E,57nm,2.6s							
GCAM				IAML			00 32 24.0	
	comp=N,97nm,1.9s							
TAVA	**DENIZLI_Tavas**	**1.96**	**32**	P	**Pn**		**00 31 34.1**	**-0.5**
TAVA				S	**Sn**		**00 32 01.2**	**+3.1**
TAVA				IAML			00 32 05.0	
	comp=E,85nm,0.3s							
TAVA				IAML			00 32 06.0	
	comp=N,48nm,0.5s							
ESEN	**Aydn-Nazilli**	**2.08**	**16**	P	**Pn**		**00 31 36.2**	**+0.2**
ESEN				S	**Sn**		**00 31 59.9**	**-0.8**
APMY	**Acipayam-Deniz**	**2.15**	**39**	Pn	**Pn**		**00 31 36.7**	**-0.5**
DNIZ	**Denizli-Tavas-**	**2.15**	**32**	P	**Pn**		**00 31 37.1**	**-0.1**
DNIZ				S	**Sn**		**00 32 06.1**	**+3.5**
DNIZ				IAML			00 32 11.0	
	comp=N,91nm,0.2s							
AYDB	**Zeytinkoy-Aydi**	**2.15**	**6**	Pn	**Pn**		**00 31 37.5**	**+0.3**
NAZL	**Nazilli-Aydin**	**2.22**	**14**	Pn	**Pn**		**00 31 38.7**	**+0.5**
IDI	**Anoyia**	**2.28**	**258**	P	**Pn**		**00 31 39.0**	**0.0**
DGB	**zmir**	**2.32**	**346**	P	**Pn**		**00 31 39.4**	**0.0**
DGB				IAML			00 32 07.0	
	comp=E,55nm,1.8s							
DGB				IAML			00 32 21.0	
	comp=N,46nm,2.2s							
IZMR	**zmir-demi**	**2.34**	**7**	P	**Pn**		**00 31 39.5**	**-0.2**
IZMR				S	**Sn**		**00 32 04.4**	**-3.0**
SULTU	**Buldan**	**2.43**	**22**	P	**Pn**		**00 31 42.1**	**+1.1**
SULTU				S	**Sn**		**00 32 09.8**	**+0.3**
KIRA	**zmir-Kiraz**	**2.47**	**15**	P	**Pn**		**00 31 39.8**	**-1.9**
ODEM	**Odemis-Izmir**	**2.50**	**8**	Pn	**Pn**		**00 31 41.9**	**0.0**
MANT	**Manisa**	**2.79**	**15**	P	**Pn**		**00 31 46.0**	**-0.1**

*IDC **23** 00:40:37.9±2.9, 36°.62N×71°.81E, h0km, mb3.8/4, mbtmp3.8/9, ML3.3/5, Error ellipse: s-maj=55.8km s-min=23.7km az=139.0*
*NNC **23** 00:41:01.1±4.4, 37°.89N×71°.71E, h197km±69km, mb2.8, mpv3.9, Error ellipse: s-maj=50.0km s-min=26.6km az=24.0*

ISC 23 00:40:55.1±1.5, **37°5N**±0°.1×**71°6E**±0°.1, **h109**km, **n20**, σ**2s08**/24, **mb4.2/3, 5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.23**	**25**	P	**Pn**		**00 42 13.4**	**+2.1**
	SNR=30							
EKS2	**Erkin-Say**	**5.42**	**18**	P	**Pn**		**00 42 16.2**	**+2.6**
	SNR=32							
AAK	**Ala-Archa**	**5.59**	**23**	P	**Pn**		**00 42 18.4**	**+2.4**
	SNR=56							
AAK	**Ala-Archa**	**5.59**	**23**	⇑P	**Pn**		**00 42 17.7**	**+1.7**
	7.8nm,0.5s							
AAK				⇑S	**Sn**		**00 43 19.3**	**+0.3**
	31nm,1.1s							
KK31	**Karatay Array**	**5.64**	**352**	⇑P	**Pn**		**00 42 19.2**	**+2.7**
	4.5nm,0.2s,baz=172,slow=12,SNR=206							
KK31				⇓S	**Sn**		**00 43 21.4**	**+1.4**
	36nm,0.8s,baz=180,slow=24,SNR=14							
KBK	**Karagaybulak**	**5.76**	**26**	P	**Pn**		**00 42 20.6**	**+2.4**
	SNR=10							
ULHL	**Ulahol**	**5.94**	**36**	P	**Pn**		**00 42 21.8**	**+1.0**
	SNR=8.5							
CHMS	**Chumysh**	**6.00**	**23**	P	**Pn**		**00 42 23.6**	**+2.2**
	SNR=25							
USP	**Ospenovka**	**6.17**	**20**	P	**Pn**		**00 42 25.3**	**+1.6**
	SNR=20							
TKM2	**Tokmak 2**	**6.22**	**29**	P	**Pn**		**00 42 26.3**	**+1.7**
	SNR=43							
MKAR	**Makanchi Array**	**12.21**	**37**	Pn	**Pn**		**00 43 42.4**	**-2.8**
	0.2nm,0.3s,baz=222,slow=14,SNR=26							
	3.0nm,0.9s							
KURBB	**Kurchatov Arra**	**14.02**	**19**	Pn	**Pn**		**00 44 07.0**	**-1.7**
	baz=208,slow=12,SNR=5.2							
	0.7nm,0.9s							
AB31	**Akbulak array**	**14.44**	**328**	⇑P	**Pn**		**00 44 14.6**	**+0.6**
	1.4nm,0.9s,baz=263,slow=35,SNR=16							
AB31				⇑S	**Sn**		**00 46 49.9**	**-3.2**
	1.7nm,0.6s,baz=144,slow=22,SNR=7.0							
BVAR	**Borovoye Array**	**15.54**	**357**	Pn	**Pn**		**00 44 27.6**	**-0.3**
	baz=161,slow=9.2,SNR=5.8							
BVAR				Sn	**Sn**		**00 47 15.6**	**-4.0**
	baz=168,slow=29,SNR=4.6							
	0.5nm,0.5s							
AKTO	**Aktyubinsk**	**16.15**	**327**	Pn	**Pn**		**00 44 34.8**	**-0.7**
	0.4nm,0.3s,baz=121,slow=8.4,SNR=5.5							
	0.6nm,0.3s							
ZALV	**Zalesovo Beam**	**18.81**	**25**	P	**Pn**		**00 45 06.1**	**-1.5**
	0.9nm,0.3s,baz=227,slow=10.0,SNR=11							
	2.0nm,0.3s							
FINES	**FINESS Array B**	**36.90**	**325**	P	**P**		**00 47 53.4**	**+0.6**
	4.6nm,1.0s,baz=104,slow=8.8,SNR=1.3							
	4.6nm,1.0s							
HFS	**Hagfors**	**42.55**	**321**	P	**P**		**00 48 40.7**	**+1.1**
	2.2nm,0.5s,baz=104,slow=12,SNR=4.3							
	2.2nm,0.5s							
ESDC	**Sonseca Array**	**57.38**	**297**	P	**P**		**00 50 32.4**	**+0.3**
	0.4nm,0.8s,baz=60,slow=7.4,SNR=5.4							
	0.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**66.19**	**269**	P	**P**		**00 51 30.0**	**-1.4**
	0.2nm,0.5s,baz=51,slow=6.6,SNR=1.9							
	0.2nm,0.5s							

*MOS **23** 00:43:43.5, 40°.28N×49°.16E, h4km, MPVA4.1*
*IDC **23** 00:43:44.4±1.6, 40°.37N×48°.76E, h0km, mb3.7/6, mbtmp3.6/11, ML3.3/5, Error ellipse: s-maj=30.5km s-min=13.9km az=172.0*
*TEH **23** 00:43:45.5, 40°.14N×49°.00E, h10km±28km, ML3.2, Presumed earthquake*
*AZER **23** 00:43:45.4, 40°.24N×48°.75E, h3km, ml3.5*
*DRS **23** 00:43:45.9, 40°.14N×49°.20E, h0km*
*TIF **23** 00:43:47.7, 40°.27N×48°.75E, h16km±1km*

ISC 23 00:43:45.7±1.1, **40°27N**±0°.01×**49°02E**±0°.03, **h13**km±8km, **n144**, σ**2s50**/225, **mb3.4/6, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GBS	**Qobustan**	**0.28**	**348**	Pg	**Pn**		**00 43 54.2**	**-1.4**
GBS	**Qobustan**	**0.28**	**348**	P	**Pn**		**00 43 54.3**	**-1.3**
GBS				S	**Sb**		**00 44 01.5**	**+4.3**
ALIB	**&Aumlli-Bayram**	**0.31**	**182**	P	**Pn**		**00 43 55.8**	**-0.1**
ALIB				S	**Sb**		**00 44 02.7**	**+4.7**
GOBA	**Gobu**	**0.56**	**76**	P	Pn		00 44 04.4	+5.0
GOBA				S	Sb		00 44 17.9	+13
ATGJ	**Altiaghaj**	**0.60**	**354**	P	**Pn**		**00 44 00.3**	**+0.3**
ATGJ				S	**Sn**		**00 44 12.3**	**+2.7**
SAAT	**Saatly**	**0.61**	**229**	P	**Pn**		**00 44 00.1**	**+0.1**
SAAT				S	**Sb**		**00 44 08.2**	**+1.6**
PQL	**Pirkuli**	**0.62**	**328**	Pg	**Pb**		**00 43 58.8**	**+0.4**
PQL	**Pirkuli**	**0.62**	**328**	P	**Pb**		**00 43 58.9**	**+0.4**
PQL				S	**Sn**		**00 44 09.3**	**-0.9**
KDMR	**Kurdemir**	**0.65**	**280**	Pg	**Pg**		**00 43 58.0**	**-0.3**
KDMR	**Kurdemir**	**0.65**	**280**	P	**Pg**		**00 43 58.1**	**-0.2**
KDMR				S	**Sg**		**00 44 06.9**	**+0.1**
NDR	**Nardaran**	**0.80**	**67**	P	Pn		00 44 07.3	+4.6
NDR				S	Sn		00 44 24.4	+10
SIZA	**Siyzn**	**0.82**	**354**	Pg	**Pn**		**00 44 04.1**	**+1.1**
SIZA	**Siyzn**	**0.82**	**354**	P	**Pn**		**00 44 04.1**	**+1.1**
SIZA				S	**Sn**		**00 44 18.6**	**+3.6**
IML	**Ismayilli**	**0.83**	**310**	Pg	**Pb**		**00 44 01.4**	**-0.5**
IML	**Ismayilli**	**0.83**	**310**	P	**Pb**		**00 44 01.5**	**-0.5**
IML				S	**Sb**		**00 44 15.3**	**+2.3**
GALA	**Gala**	**0.88**	**80**	P	Pn		00 44 09.2	+5.5
GALA				S	Sn		00 44 27.0	+11
ZRD	**Zardab**	**1.02**	**271**	Pg	**Pg**		**00 44 04.2**	**-1.2**
ZRD	**Zardab**	**1.02**	**271**	P	**Pg**		**00 44 04.6**	**-0.8**
ZRD				S	**Sg**		**00 44 19.4**	**+0.7**
XNQ	**Khinaliq**	**1.13**	**324**	P	**Pn**		**00 44 07.1**	**-0.3**
XNQ				S	**Sn**		**00 44 25.0**	**+2.1**
QBL	**Gabala**	**1.13**	**307**	P	**Pg**		**00 44 06.5**	**-1.0**
QBL				S	**Sn**		**00 44 25.0**	**+2.3**
GLBA	**Clilabad**	**1.13**	**205**	P	**Pn**		**00 44 07.3**	**+0.1**
GLBA				S	**Sn**		**00 44 26.1**	**+3.5**
QUBA	**Quba, Azerbaij**	**1.16**	**340**	P	**Pn**		**00 44 09.8**	**+2.1**
QUBA				S	**Sn**		**00 44 28.5**	**+5.1**
BLQ	**Beylaqan**	**1.25**	**245**	P	**Pn**		**00 44 07.7**	**-1.1**
BLQ				S	**Sg**		**00 44 25.6**	**-0.3**
QSAR	**Qusar**	**1.37**	**336**	Pn	**Pg**		**00 44 13.0**	**+0.9**
QSAR				Sn	**Sn**		**00 44 33.9**	**+5.2**
BRDA	**Brd**	**1.41**	**271**	P	**Pn**		**00 44 11.3**	**+0.3**
BRDA				S	**Sb**		**00 44 31.6**	**+1.9**
AGDM	**Agdam**	**1.47**	**265**	P	**Pn**		**00 44 11.4**	**-0.5**
AGDM				S	**Sn**		**00 44 32.9**	**+1.8**
YRD	**Yardimli**	**1.48**	**204**	Pn	**Pb**		**00 44 12.2**	**-0.9**
YRD				Sn	**Sg**		**00 44 34.9**	**+1.7**
KSMR	**Kasumkent**	**1.50**	**333**	ePg	**Pg**		**00 44 14.5**	**+0.1**
KSMR				eSg	**Sg**		**00 44 37.9**	**+3.9**
KSMR	**Kasumkent**	**1.50**	**333**	ePN	**Pg**		**00 44 14.6**	**+0.1**
KSMR				eS	**Sg**		**00 44 37.1**	**+3.1**
KSMR				pmax	pmax			
	comp=Z,275nm,0.5s							
QRD	**Qoradiz**	**1.53**	**239**	Pn	**Pn**		**00 44 11.9**	**-0.9**
QRD				Sn	**Sn**		**00 44 33.4**	**+0.9**
AKT	**Akhty**	**1.56**	**322**	ePN	**Pg**		**00 44 15.2**	**-0.5**
AKT				eS	**Sg**		**00 44 40.0**	**+4.1**
MNGR	**Mingechevir, A**	**1.56**	**290**	Pn	**Pn**		**00 44 13.7**	**+0.6**
MNGR				Sn	**Sn**		**00 44 33.9**	**+0.7**
LKRN	**Lenkeran, Azer**	**1.56**	**187**	Pn	**Pg**		**00 44 14.9**	**-0.8**
LKRN				Sn	**Sg**		**00 44 38.5**	**+2.4**
SEKA	**Sheki**	**1.68**	**305**	Pn	**Pn**		**00 44 14.8**	**0.0**
SEKA				Sn	**Sn**		**00 44 37.0**	**+0.9**
GRMI	**Germi**	**1.69**	**211**	Pg	**Pb**		**00 44 15.9**	**-0.9**
LRK	**Lerik**	**1.70**	**198**	Pn	**Pb**		**00 44 16.1**	**-0.9**
LRK				Sn	**Sg**		**00 44 40.6**	**+0.1**
ASTR	**Astara**	**1.71**	**186**	Pn	**Pb**		**00 44 15.5**	**-1.5**
ASTR				Sn	**Sg**		**00 44 42.2**	**+1.5**
DRN	**Derbent**	**1.84**	**344**	ePg	**Pg**		**00 44 19.3**	**-1.7**
DRN				eSg	**Sg**		**00 44 45.0**	**+0.2**
DRN	**Derbent**	**1.84**	**344**	ePN	**Pg**		**00 44 19.3**	**-1.7**
GAS1	**Astara - Iran**	**1.88**	**184**	Pg	**Pb**		**00 44 17.9**	**-2.0**
GANJ	**Ganja**	**2.09**	**281**	Pn	**Pn**		**00 44 20.2**	**-0.3**
GANJ				Sn	**Sn**		**00 44 48.2**	**+1.7**
URKR	**Urkarakh**	**2.17**	**332**	ePg	**Pb**		**00 44 24.0**	**-0.9**
URKR				eSg	**Sg**		**00 44 56.5**	**+1.1**
URKR	**Urkarakh**	**2.17**	**332**	ePN	**Pb**		**00 44 24.6**	**-0.3**
URKR				eS	**Sg**		**00 44 55.3**	**-0.1**
URKR				pmax	pmax			
	comp=Z,18nm,0.2s							
VSHL	**Vashlovani**	**2.21**	**297**	P	**Pb**		**00 44 23.9**	**-1.6**
ZKTA	**Zakatala**	**2.27**	**308**	Pn	**Pb**		**00 44 25.4**	**-1.2**
ZKTA				Sn	**Sb**		**00 44 56.5**	**+1.9**
KMKR	**Kumukh**	**2.36**	**323**	ePn	**Pb**		**00 44 27.1**	**-1.1**
KMKR				eSn	**Sb**		**00 44 59.0**	**+1.6**
KMKR	**Kumukh**	**2.36**	**323**	ePN	**Pb**		**00 44 27.7**	**-0.5**
KMKR				eS	**Sg**		**00 45 00.3**	**-1.3**
KMKR				pmax	pmax			
	comp=Z,31nm,0.7s							
SGKR	**Sergokala**	**2.42**	**335**	ePN	**Pb**		**00 44 28.5**	**-0.6**
SGKR				eS	**Sg**		**00 45 02.1**	**-1.4**
SGKR				pmax	pmax			
	comp=Z,20nm,0.4s							
IHRS	**Heris**	**2.48**	**219**	Pn	**Pn**		**00 44 27.2**	**+1.3**
DDFL	**Dedoflistskaro**	**2.50**	**299**	P	**Pb**		**00 44 29.9**	**-0.6**
DDFL	**Dedoflistskaro**	**2.50**	**299**	PN	**Pb**		**00 44 29.8**	**-0.6**
GDB	**GEDABAY**	**2.53**	**281**	Pn	**Pn**		**00 44 25.9**	**-0.7**
GDB				Sn	**Sn**		**00 44 59.2**	**+1.8**
LGD	**Lagodekhi**	**2.62**	**308**	P	**Pb**		**00 44 31.1**	**-1.5**
LGD	**Lagodekhi**	**2.62**	**308**	PN	**Pb**		**00 44 31.0**	**-1.5**
GNBR	**Gunib**	**2.63**	**325**	*i* Pn	**Pb**		**00 44 31.7**	**-1.0**
GNBR				eSn	**Sb**		**00 45 06.6**	**+1.8**
GNBR	**Gunib**	**2.63**	**325**	*i* PN	**Pb**		**00 44 31.7**	**-1.0**
GNBR				eS	**Sb**		**00 45 06.6**	**+1.8**
ORD	**Ordubad**	**2.69**	**241**	Pn	**Pn**		**00 44 29.8**	**+1.0**
ORD				Sn	**Sn**		**00 45 04.1**	**+2.9**
TLTR	**Tlyarata**	**2.73**	**313**	ePn	**Pb**		**00 44 32.4**	**-2.1**
TLTR				eSn	**Sb**		**00 45 09.6**	**+1.8**
TLTR	**Tlyarata**	**2.73**	**313**	ePN	**Pb**		**00 44 32.3**	**-2.1**
TLTR				eS	**Sb**		**00 45 09.6**	**+1.8**
ARKR	**Arakani**	**2.79**	**328**	ePn	**Pb**		**00 44 33.0**	**-2.3**
ARKR				eSn	**Sb**		**00 45 11.0**	**+1.5**
ARKR	**Arakani**	**2.79**	**328**	ePN	**Pb**		**00 44 33.1**	**-2.3**
ARKR				eS	**Sb**		**00 45 10.3**	**+0.8**
ARKR				pmax	pmax			
	comp=Z,16nm,0.4s							
SBZ	**Shahbuz**	**2.81**	**253**	Pn	**Pn**		**00 44 31.2**	**+0.9**
SBZ				Sn	**Sn**		**00 45 06.9**	**+2.8**
XNZR	**Khunzakh**	**2.86**	**323**	ePn	**Pb**		**00 44 35.3**	**-1.5**
XNZR				eSn	**Sb**		**00 45 11.5**	**-0.3**
HNZR	**Khunzah**	**2.87**	**324**	ePN	**Pb**		**00 44 35.3**	**-1.6**
HNZR				eS	**Sb**		**00 45 11.5**	**-0.5**
QZX	**Qazax, Azerbai**	**2.88**	**287**	Pn	**Pn**		**00 44 32.8**	**+1.4**
QZX				Sn	**Sn**		**00 45 06.8**	**+0.9**
MAK	**Makhachkala**	**2.92**	**338**	ePn	**Pb**		**00 44 35.7**	**-1.9**
MAK				eSn	**Sb**		**00 45 13.3**	**0.0**
MAK	**Makhachkala**	**2.92**	**338**	ePN	**Pb**		**00 44 35.7**	**-1.9**
MAK				eS	**Sb**		**00 45 13.3**	**0.0**
NAX	**Nakhchivan**	**2.93**	**249**	Pg	**Pn**		**00 44 34.8**	**+2.8**
NAX				Sn	**Sn**		**00 45 10.1**	**+3.0**
BUJR	**Buynaksk**	**2.93**	**331**	ePN	**Pb**		**00 44 36.5**	**-1.3**
BUJR				eS	**Sb**		**00 45 11.6**	**-2.0**
UNCR	**Uncukul**	**2.96**	**326**	ePn	**Pb**		**00 44 36.2**	**-2.1**
UNCR				eSn	**Sb**		**00 45 15.8**	**+1.3**
UNCR	**Uncukul**	**2.96**	**326**	ePN	**Pb**		**00 44 36.2**	**-2.1**
UNCR				eS	**Sb**		**00 45 15.8**	**+1.3**
DGRG	**David-gareji**	**3.01**	**294**	P	**Pn**		**00 44 35.5**	**+2.4**
DGRG	**David-gareji**	**3.01**	**294**	PN	**Pn**		**00 44 35.5**	**+2.4**
KRNR	**Karanay**	**3.01**	**329**	ePn	**Pb**		**00 44 36.6**	**-2.5**
KRNR				eSn	**Sb**		**00 45 14.4**	**-1.5**
KRNR	**Karanay**	**3.01**	**329**	ePN	**Pb**		**00 44 36.7**	**-2.5**
KRNR				eS	**Sb**		**00 45 14.4**	**-1.5**
ITBZ	**Tabriz**	**3.01**	**229**	Pn	**Pn**		**00 44 33.8**	**+0.5**
BTLR	**Botlikh**	**3.19**	**320**	ePn	**Pb**		**00 44 40.1**	**-2.0**
BTLR				eSn	**Sb**		**00 45 18.5**	**-2.5**
BTLR	**Botlikh**	**3.19**	**320**	ePN	**Pb**		**00 44 40.2**	**-2.0**
BTLR				eS	**Sb**		**00 45 18.5**	**-2.5**
LHJ2	**Lahijan - Gila**	**3.20**	**165**	Pn	**Pn**		**00 44 36.1**	**+0.4**
DBC	**Dubki**	**3.21**	**330**	ePN	**Pb**		**00 44 39.2**	**-3.3**
DBC				eS	**Sn**		**00 45 17.2**	**+3.3**
HYR	**Heyderabad**	**3.25**	**262**	Pn	**Pn**		**00 44 37.4**	**+1.0**
IHSH	**Hashtrud**	**3.26**	**205**	Pn	**Pn**		**00 44 37.4**	**+0.6**
GNI	**Garni**	**3.28**	**269**	Pn	**Pn**		**00 44 38.1**	**+1.2**
	comp=Z,4.8nm,0.3s,baz=271,slow=0.8,SNR=23							
	comp=Z,12nm,0.4s							
GNI	**Garni**	**3.28**	**269**	ePn	**Pn**		**00 44 38.9**	**+2.0**
GNI				eSn	**Sb**		**00 45 22.1**	**-1.6**
GNI	**Garni**	**3.28**	**269**	ePN	**Pn**		**00 44 38.9**	**+2.0**
GNI				eS	**Sb**		**00 45 22.1**	**-1.6**
ISHB	**Shabestar**	**3.30**	**234**	Pn	**Pn**		**00 44 38.5**	**+1.2**
DLMR	**Dylym**	**3.33**	**328**	ePn	**Pb**		**00 44 41.0**	**-3.6**
DLMR				eSn	**Sb**		**00 45 24.1**	**-0.8**
GIDE	**GILAN DEYLAMAN**	**3.41**	**168**	Pn	**Pn**		**00 44 38.7**	**0.0**
DVE	**Vedeno**	**3.46**	**322**	ePn	**Pn**		**00 44 40.7**	**+1.4**
DVE				eSn	**Sb**		**00 45 25.2**	**-3.5**
DVE	**Vedeno**	**3.46**	**322**	ePN	**Pn**		**00 44 40.7**	**+1.4**
DVE				eS	**Sb**		**00 45 25.2**	**-3.5**
MAKU	**Maku

comp=Z,0.2nm,0.3s
HFS Hagfors 29.56 324 P **P** **00 49 49.3 -0.6**
comp=Z,8.2nm,1.0s,baz=142,slow=12,SNR=2.7
comp=Z,8.2nm,1.0s
ESDC Sonseca Array 40.10 287 P **P** **00 51 19.4 -1.5**
comp=Z,0.2nm,0.5s,baz=72,slow=8.0,SNR=5.6
comp=Z,0.2nm,0.5s

IDC ***23*** *00:52:29.5±1.2, 49.88S×118.62E, h0km, mb4.3/5, mbtmp4.3/6, ML2.4/1, MS3.6/5, Error ellipse: s-maj=87.7km s-min=21.5km az=106.0*
ISC 23 00:52:30.9±1.0, 49.9S±0.2×118.7E±0.5, h10km, n14, σ0.53/8, mb4.2/5, MS3.6/4, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.33**	**346**	T		T	01 11 38.2	
	baz=167,slow=73,SNR=127							
H01W1	**Cape Leeuwin H**	**15.33**	**346**	T		T	01 11 38.7	
	baz=167,slow=73,SNR=102							
H01W3	**Cape Leeuwin H**	**15.34**	**346**	T		T	01 11 39.6	
	baz=167,slow=73,SNR=102							
NWAO	**Narrogin (SRO)**	**16.97**	**356**	Pn		**P**	**00 56 29.7 -0.5**	
	0.6nm,0.3s,baz=196,slow=8.3,SNR=5.3							
NWAO				LR		LR	01 01 27.1	
	comp=Z,152nm,18.9s,baz=148,slow=32							
	6.1nm,0.6s							
ASAR	**Alice Springs**	**28.76**	**30**	P		**P**	**00 58 28.9 +0.2**	
	2.5nm,0.9s,baz=212,slow=7.8,SNR=14							
ASAR				LR		LR	01 08 18.2	
	comp=Z,86nm,21.2s,baz=267,slow=33							
	2.5nm,0.9s							
VNDA	**Vanda**	**32.13**	**164**	LR		LR	01 11 08.7	
	comp=Z,173nm,19.3s,baz=311,slow=35							
FITZ	**Fitzroy Crossi**	**32.20**	**13**	P		**P**	**00 58 59.4 +0.4**	
	3.2nm,0.9s,baz=171,slow=9.7,SNR=4.0							
	3.2nm,0.9s							
WRA	**Warramunga Arr**	**32.38**	**28**	P		**P**	**00 59 00.0 -0.7**	
	1.8nm,0.7s,baz=199,slow=9.2,SNR=6.6							
	1.8nm,0.7s							
SNAA	**Sanae**	**51.95**	**200**	P		**P**	**01 01 39.4 -0.1**	
	2.9nm,0.6s,baz=139,slow=10,SNR=4.9							
	2.9nm,0.6s							
PALK	**Pallekele**	**65.78**	**318**	LR		LR	01 25 49.1	
	comp=Z,61nm,18.9s,baz=9.0,slow=30							
CMAR	**Chiang Mai Arr**	**70.23**	**340**	LR		LR	01 30 44.4	
	comp=Z,25nm,20.6s,baz=290,slow=33							
PLCA	**Paso Flores**	**89.41**	**173**	P		**P**	**01 05 28.1 +0.3**	
	2.5nm,0.9s,baz=163,slow=4.1,SNR=5.4							
	2.5nm,0.9s							
PDAR	**Pinedale Array**	**146.45**	**83**	PKPbc		**PKPbc**	**01 12 11.9 0.0**	
	0.4nm,0.9s,baz=233,slow=5.5,SNR=2.8							
YKA	**Yellowknife Ar**	**148.76**	**46**	PKPbc		**PKPbc**	**01 12 16.6 -0.6**	
	0.4nm,0.7s,baz=276,slow=3.0,SNR=7.2							

IDC ***23*** *01:00:38.8±1.0, 5.80N×127.27E, h0km, mb3.7/8, mbtmp3.7/9, ML3.9/1, MS3.7/1, Error ellipse: s-maj=52.8km s-min=17.1km az=65.0*
ISC 23 01:00:43.8±1.1, 5.8N±0.2×127.3E±0.2, h35km, n10, σ18/10, mb3.7/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**2.12**	**307**	Pn		**Pn**	**01 01 16.6 -0.3**	
	40nm,0.3s,baz=249,slow=19,SNR=1.2							
DAV				Sn		**Sn**	**01 01 42.6 +0.7**	
	24nm,0.3s,baz=263,slow=17,SNR=1.3							
	214nm,0.4s							
WRA	**Warramunga Arr**	**26.50**	**165**	P		**P**	**01 06 18.1 -0.1**	
	1.7nm,0.6s,baz=342,slow=10,SNR=12							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**29.98**	**168**	P		**P**	**01 06 49.5 +0.3**	
	0.4nm,0.6s,baz=349,slow=8.8,SNR=4.2							
	0.4nm,0.6s							
KSRS	**Korea Array**	**31.52**	**1**	P		**P**	**01 07 03.5 +0.9**	
	0.5nm,0.4s,baz=161,slow=5.3,SNR=2.3							
	0.5nm,0.4s							
SONM	**Songino Array**	**45.54**	**340**	P		**P**	**01 08 58.3 -2.0**	
	0.1nm,0.3s,baz=150,slow=5.6,SNR=1.2							
	0.1nm,0.3s							
YAK	**Yakutsk**	**56.14**	**1**	LR		LR	01 39 23.4	
	comp=Z,66nm,18.0s,baz=296,slow=41							
MKAR	**Makanchi Array**	**56.20**	**324**	P		**P**	**01 10 19.9 -0.5**	
	0.4nm,0.6s,baz=122,slow=8.4,SNR=8.6							
	0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**59.02**	**332**	P		**P**	**01 10 41.5 +1.4**	
	0.3nm,0.4s,baz=128,slow=5.6,SNR=2.4							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**60.32**	**327**	P		**P**	**01 10 48.7 -0.4**	
	1.0nm,0.6s,baz=126,slow=6.4,SNR=18							
	1.0nm,0.6s							
BVAR	**Borovoye Array**	**65.91**	**326**	P		**P**	**01 11 27.6 +1.4**	
	0.9nm,0.7s,baz=116,slow=9.8,SNR=3.5							
	0.9nm,0.7s							

IDC ***23*** *01:12:21.1±1.2, 27.84N×57.12E, h0km, mb3.7/14, mbtmp3.8/20, ML3.6/6, Error ellipse: s-maj=29.5km s-min=14.9km az=172.0*
DSN ***23*** *01:12:24.3±1.1, 28.04N×56.89E, h10km, ML3.6/16, Error ellipse: s-maj=13.6km s-min=8.5km az=77.0*
OMAN ***23*** *01:12:25.0±0.5, 28.04N×57.04E, h21km, mb4.0/14, ml4.0/20, Error ellipse: s-maj=5.0km s-min=3.6km az=13.0*
TEH ***23*** *01:12:24.1, 28.05N×57.07E, h9km±28km, ML4.1, Presumed earthquake*
THR ***23*** *01:12:24.9±0.0, 27.98N×57.09E, h10km±27km, ML4.0, Presumed earthquake*
ISC 23 01:12:24.6±1.5, 28.00N±0.04×57.06E±0.04, h13km±10km, n106, σ1$44/118, mb3.7/13, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.57**	**95**	Pg		**Pg**	**01 12 35.2 -0.7**	
IBND	**Bandar-abas**	**0.72**	**220**	Pg		**Pb**	**01 12 39.2 +0.3**	
GENO	**Geno**	**0.99**	**233**	Pg		**Pb**	**01 12 43.8 +0.2**	
BNDS	**Bandar-Abbas**	**0.99**	**233**	*e*Pg		**Pn**	**01 12 44.3 0.0**	
BNDS				IAML			01 13 25.6	
	comp=Z,2μm,1.0s							
NGRK	**Negar Kerman**	**1.66**	**350**	Pg		**Pn**	**01 12 54.7 +1.0**	
KBAM	**BAM**	**1.67**	**47**	Pg		**Pn**	**01 12 53.8 +0.3**	
CHMN	**Cheshme madani**	**1.90**	**13**	Pn		**Pn**	**01 12 57.8 +0.8**	
SHME	**Shamm**	**2.11**	**203**	*e*P		**Pn**	**01 12 59.6 +0.1**	
	SNR=53							
SHME				S		**Sn**	**01 13 27.0 +1.4**	
SHME	**Shamm**	**2.11**	**203**	P		**Pn**	**01 13 00.0 +0.5**	
	SNR=12							
SHME				S		**Sn**	**01 13 26.6 +1.0**	
BANOM	**Banah**	**2.18**	**198**	*e*P		**Pn**	**01 13 00.6 +0.1**	
	SNR=93							
BANOM				S		**Sn**	**01 13 27.8 +0.5**	
BANOM	**Banah**	**2.18**	**198**	P		**Pn**	**01 13 01.1 +0.6**	
BANOM				S		**Sn**	**01 13 28.3 +1.0**	
LAR1	**LAR**	**2.40**	**263**	Pn		**Pb**	**01 13 05.8 -1.8**	
KHGB	**Koh Gabri**	**2.42**	**348**	Pn		**Pn**	**01 13 06.0 +2.0**	
MASF	**Masafi**	**2.74**	**197**	P		**Pn**	**01 13 09.4 +1.2**	
	SNR=7.6							
MASF				S		**Sn**	**01 13 43.1 +1.8**	
MSFE	**Esma-Masafi**	**2.75**	**197**	*e*P		**Pn**	**01 13 08.7 +0.3**	
	SNR=10							
UMQ	**Umm Al-Quwin**	**2.76**	**207**	P		**Pn**	**01 13 09.0 +0.4**	
MDH	**Madha**	**2.78**	**194**	P		**Pn**	**01 13 08.7 -0.1**	
MDH	**Madha**	**2.78**	**194**	P		**Pn**	**01 13 09.1 +0.4**	
JHRM	**Jahrom**	**3.11**	**280**	Pn		**Pn**	**01 13 15.6 +2.1**	
UOSS	**Minazif**	**3.14**	**194**	P		**Pn**	**01 13 14.2 +0.5**	
NAZ	**Nazwa, Dubai**	**3.25**	**203**	*i* P		**Pn**	**01 13 15.9 +0.7**	
	SNR=15							
NAZ	**Nazwa, Dubai**	**3.25**	**203**	P		**Pn**	**01 13 16.4 +1.1**	
NAZ				S		**Sn**	**01 13 55.9 +2.1**	
HATD	**Hatta, Dubai**	**3.27**	**195**	P		**Pn**	**01 13 15.6 +0.1**	
HATD	**Hatta, Dubai**	**3.27**	**195**	P		**Pn**	**01 13 16.6 +1.0**	
ASHO	**Ashiyiah**	**3.42**	**195**	*i* P		**Pn**	**01 13 18.6 +0.9**	
	SNR=19							
ASHO	**Ashiyiah**	**3.42**	**195**	P		**Pn**	**01 13 18.4 +0.8**	
FAQ	**Al Faqa, Dubai**	**3.50**	**202**	*i* P		**Pn**	**01 13 19.4 +0.7**	
	SNR=14							
FAQ	**Al Faqa, Dubai**	**3.50**	**202**	P		**Pn**	**01 13 19.2 +0.6**	
FAQ				S		**Sn**	**01 14 02.2 +2.3**	
ZHDN	**Zahedan**	**3.58**	**66**	Pn		**Pn**	**01 13 22.2 +2.3**	
ASUD	**Al Ashush, Dub**	**3.70**	**205**	*i* P		**Pn**	**01 13 23.0 +1.6**	
	SNR=196							
ASUD	**Al Ashush, Dub**	**3.70**	**205**	P		**Pn**	**01 13 22.9 +1.5**	
	SNR=7.8							
ASUD				S		**Sn**	**01 14 06.6 +1.7**	
IBAF	**Bafgh**	**3.81**	**340**	Pn		**Pn**	**01 13 24.6 +1.5**	
SOHO	**SOHO**	**3.88**	**187**	*i* P		**Pn**	**01 13 23.2 -0.7**	
	SNR=9.2							
SOHO	**SOHO**	**3.88**	**187**	P		**Pn**	**01 13 23.5 -0.4**	
CHBR	**Chabahar**	**3.89**	**127**	*e*Pn		**Pn**	**01 13 24.7 +0.7**	
CHBR				IAML			01 14 10.2	
	comp=Z,210nm,1.0s							
AJN	**Ajban**	**3.90**	**209**	*i* P		**Pn**	**01 13 25.1 +1.0**	
	SNR=43							
AJN	**Ajban**	**3.90**	**209**	P		**Pn**	**01 13 25.1 +1.0**	
	SNR=7.1							
AJN				S		**Sn**	**01 14 10.9 +1.2**	
IMEH	**Mehriz**	**3.99**	**328**	Pn		**Pn**	**01 13 27.3 +1.6**	
ALNE	**Al Ain**	**4.10**	**197**	P		**Pn**	**01 13 27.4 +0.5**	
BSRN	**Basiran**	**4.34**	**24**	*e*Pn		**Pn**	**01 13 33.8 +3.5**	
BSRN				IAML			01 14 55.1	
	comp=Z,140nm,1.0s							
HOQ	**Hoqain**	**4.41**	**177**	P		**Pn**	**01 13 30.8 -0.4**	
	SNR=7.6							
HOQ				S		**Sn**	**01 14 22.4 +0.1**	
TAFT	**Taft - Yazd**	**4.48**	**327**	Pn		**Pn**	**01 13 34.1 +1.8**	
NGCH	**Negor - Chabah**	**4.50**	**125**	P		**Pn**	**01 13 33.2 +0.9**	
NGCH				S		**Sn**	**01 14 25.8 +1.3**	
NGCH	**Negor - Chabah**	**4.50**	**125**	Pn		**Pn**	**01 13 34.3 +1.9**	
DOBD	**Dorbid, Yazd**	**4.55**	**332**	Pn		**Pn**	**01 13 34.5 +1.3**	
BIDO	**Bidbid**	**4.56**	**168**	P		**Pn**	**01 13 32.9 -0.4**	
SRVN	**Saravan**	**4.77**	**96**	Pn		**Pn**	**01 13 38.8 +2.5**	
SRVN	**Saravan**	**4.77**	**96**	*e*Pn		**Pn**	**01 13 40.0 +3.7**	
SRVN				IAML			01 15 01.6	
	comp=Z,29nm,1.0s							
ICHK	**Chekchek**	**4.81**	**332**	Pn		**Pn**	**01 13 38.6 +1.7**	
JRN	**Qarnain Island**	**4.85**	**232**	P		**Pn**	**01 13 37.4 +0.2**	
YZKH	**Yazd**	**4.87**	**335**	*e*Pn		**Pn**	**01 13 39.4 +1.8**	
YZKH				IAML			01 15 16.7	
	comp=Z,48nm,1.0s							
WSAR	**Wadi Sarin**	**4.95**	**163**	P		**Pn**	**01 13 39.0 +0.3**	
SMDO	**Samad**	**5.00**	**169**	P		**Pn**	**01 13 40.1 +0.7**	
SMDO				S		**Sn**	**01 14 37.0 -0.1**	
MZWR	**Madinat Zayed**	**5.10**	**215**	P		**Pn**	**01 13 40.7 +0.1**	
BSY	**Bisya**	**5.24**	**179**	P		**Pn**	**01 13 44.5 +1.9**	
	SNR=10							
BSY				S		**Sn**	**01 14 44.6 +1.8**	
GHWR	**Ruwais**	**5.51**	**224**	P		**Pn**	**01 13 46.0 -0.3**	
GHWR				S		**Sn**	**01 14 48.3 -1.2**	
UMZA	**Um Al Zommool**	**5.54**	**198**	P		**Pn**	**01 13 48.4 +1.7**	
KLNJ	**Kolanjah**	**5.63**	**303**	Pn		**Pn**	**01 13 49.7 +1.4**	
KLNJ	**Kolanjah**	**5.63**	**303**	IAML			01 15 02.7	
	comp=Z,82nm,1.0s							
TABS	**Tabas**	**5.63**	**1**	*e*Pn		**Pn**	**01 13 51.9 +3.8**	
TABS				IAML			01 14 51.4	
	comp=Z,2.5nm,1.0s							
WBK	**Wadi Bani Khal**	**5.64**	**162**	P		**Pn**	**01 13 48.2 0.0**	
JMDO	**Jabal Madar**	**5.69**	**170**	P		**Pn**	**01 13 49.7 +0.9**	
JMDO				S		**Sn**	**01 14 54.2 +0.2**	
SHMA	**Al-Shehemyia**	**5.84**	**250**	P		**Pn**	**01 13 49.9 -1.0**	
SHMA				S		**Sn**	**01 14 56.5 -1.2**	
MZR	**Muzera**	**5.94**	**214**	*i* P		**Pn**	**01 13 51.4 -0.7**	
	SNR=23							
MZR	**Muzera**	**5.94**	**214**	P		**Pn**	**01 13 51.5 -0.7**	
NASN	**Na'in**	**6.03**	**324**	IAML			01 16 08.6	
	comp=Z,20nm,1.0s							
SAKB	**Bahrain**	**6.16**	**252**	P		**Pn**	**01 13 54.6 -0.6**	
TRNA	**Turayna**	**6.17**	**240**	P		**Pn**	**01 13 54.6 -0.7**	
JLN	**Jalan Bani Buh**	**6.20**	**159**	P		**Pn**	**01 13 55.7 -0.2**	
SLWR	**Sila**	**6.21**	**232**	P		**Pn**	**01 13 55.2 -0.8**	
SHRT	**Shahrakht**	**6.28**	**25**	*e*Pn		**Pn**	**01 14 01.4 +4.5**	
SHRT				IAML			01 16 12.0	
	comp=Z,30nm,1.0s							
IBRJ	**Brojen**	**6.36**	**309**	Pn		**Pn**	**01 13 59.6 +1.4**	
SMRA	**Abu-Samra**	**6.46**	**241**	P		**Pn**	**01 13 58.9 -0.5**	
MHTO	**MHTO**	**7.03**	**173**	P		**Pn**	**01 14 08.2 +0.9**	
DQM	**DQM**	**8.05**	**177**	P		**Pn**	**01 14 21.0 -0.2**	
GTMR	**Gotvand**	**8.19**	**305**	IAML			01 14 44.6	
	comp=Z,12nm,0.6s							
ASAO	**Ashtian**	**8.88**	**319**	*e*Pn		**Pn**	**01 14 37.2 +4.5**	
ASAO				IAML			01 14 59.0	
	comp=Z,7.0nm,0.8s							
MRVT	**Maraveh tapeh**	**9.67**	**355**	IAML			01 14 52.8	
	comp=Z,3.9nm,0.8s							
DOK	**Doka**	**9.72**	**197**	P		**Pn**	**01 14 43.9 -0.2**	
SHAO	**Shalim**	**10.02**	**188**	*i* P		**Pn**	**01 14 48.3 0.0**	
	SNR=8.1							
SHAO	**Shalim**	**10.02**	**188**	P		**Pn**	**01 14 47.2 -1.0**	
DMTO	**DMTO**	**10.42**	**191**	P		**Pn**	**01 14 54.1 +0.4**	
ABTO	**Aybut**	**11.15**	**199**	P		**Pn**	**01 15 03.0 -0.7**	
RAYN	**Ar Rayn**	**11.33**	**249**	*i* P		**Pn**	**01 15 02.3 -3.9**	
	SNR=16							
GNI	**Garni**	**15.82**	**323**	Pn		**Pn**	**01 16 07.5 +0.4**	
	comp=Z,0.3nm,0.3s,baz=243,slow=7.1,SNR=5.2							
	comp=Z,3.8nm,0.7s							
ASF	**Jabal al Asfar**	**17.93**	**288**	Pn		**Pn**	**01 16 33.9 +0.1**	
	comp=Z,0.4nm,0.3s,baz=84,slow=10,SNR=6.7							
	comp=Z,3.3nm,0.9s							
KSH2	**Kashi**	**18.97**	**49**	P		**Pn**	**01 16 47.8 +1.3**	
KSH2				pP		sP	01 16 53.8 +2.2	
KSH2				pmax		pmax		
	comp=Z,3.0nm,0.6s							
MMAI	**Mount Meron Ar**	**19.31**	**290**	P		**Pn**	**01 16 50.5 0.0**	
	comp=Z,0.5nm,0.3s,baz=79,slow=15,SNR=1.7							
	comp=Z,3.7nm,0.9s							
KBZ	**Khabaz**	**19.40**	**328**	P		**Pn**	**01 16 51.5 +0.2**	
	comp=Z,0.1nm,0.3s,baz=149,slow=5.9,SNR=1.7							
	comp=Z,0.7nm,0.8s							
EIL	**Elat**	**19.44**	**280**	P		**P**	**01 16 51.4 +0.6**	
	comp=Z,0.1nm,0.3s,baz=72,slow=9.6,SNR=2.1							
	comp=Z,3.0nm,0.7s							
KVAR	**Kislovodsk Arr**	**19.66**	**328**	P		**Pn**	**01 16 55.3 +0.6**	
	baz=130,slow=17							
	comp=Z,1.1nm,0.6s							
AAK	**Ala-Archa**	**20.33**	**40**	P		**P**	**01 17 01.1 +0.5**	
	comp=Z,1.3nm,0.6s,baz=212,slow=9.8,SNR=6.0							
	comp=Z,1.3nm,0.6s							
BRTR	**Keskin Array B**	**22.62**	**307**	P		**P**	**01 17 24.9 -0.3**	
	comp=Z,0.7nm,0.8s,baz=138,slow=13,SNR=13							
	comp=Z,0.7nm,0.8s							
BVAR	**Borovoye Array**	**26.88**	**18**	P		**P**	**01 18 04.8 -0.2**	
	comp=Z,1.0nm,0.5s,baz=196,slow=5.8,SNR=3.8							
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**27.26**	**40**	P		**P**	**01 18 07.8 -0.6**	
	comp=Z,0.2nm,0.4s,baz=220,slow=9.1,SNR=9.6							
	comp=Z,0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**27.85**	**30**	P		**P**	**01 18 13.6 0.0**	
	comp=Z,0.4nm,0.6s,baz=228,slow=8.2,SNR=6.6							
	comp=Z,0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**32.94**	**30**	P		**P**	**01 18 58.2 -0.3**	
	comp=Z,1.6nm,0.3s,baz=230,slow=8.7,SNR=13							
	comp=Z,1.6nm,0.3s							
FINES	**FINESS Array B**	**39.30**	**337**	P		**P**	**01 19 51.4 -1.5**	
	comp=Z,4.8nm,0.9s,baz=127,slow=8.2,SNR=6.7							
	comp=Z,4.8nm,0.9s							
CLL	**Collm**	**40.32**	**318**	*i* P		**P**	**01 20 05.0 +3.5**	
	comp=Z,5.0nm,0.8s							
SONM	**Songino Array**	**42.84**	**49**	P		**P**	**01 20 21.1 -1.2**	
	comp=Z,0.6nm,0.9s,baz=289,slow=9.1,SNR=3.5							
	comp=Z,0.6nm,0.9s							
EKA	**Eskdalemuir Ar**	**50.64**	**320**	P		**P**	**01 21 21.6 -1.6**	
	comp=Z,3.7nm,1.0s,baz=81,slow=7.1,SNR=2.4							
	comp=Z,3.7nm,1.0s							
ESDC	**Sonseca Array**	**51.13**	**300**	P		**P**	**01 21 28.3 +1.1**	
	comp=Z,0.2nm,0.5s,baz=81,slow=8.3,SNR=2.0							
	comp=Z,0.2nm,0.5s							
HILR	**Hailar Array B**	**51.79**	**47**	P		**P**	**01 21 31.5 -0.4**	
	comp=Z,0.6nm,0.4s,baz=259,slow=1.5,SNR=1.9							
	comp=Z,0.6nm,0.4s							
TORD	**Torodi Ar. Bea**	**53.48**	**266**	P		**P**	**01 21 42.9 -2.0**	
	comp=Z,0.6nm,0.8s,baz=72,slow=4.1,SNR=11							
	comp=Z,0.6nm,0.8s							
KSRS	**Korea Array**	**59.10**	**61**	P		**P**	**01 22 22.8 -2.0**	
	comp=Z,0.9nm,0.5s,baz=279,slow=6.7,SNR=4.1							
	comp=Z,0.9nm,0.5s							
ASAR	**Alice Springs**	**90.11**	**117**	P		**P**	**01 25 23.5 -1.2**	
	comp=Z,0.3nm,0.8s,baz=308,slow=4.5,SNR=1.8							
	comp=Z,0.3nm,0.8s							

SJA ***23*** *01:12:29.7±0.5, 30.39S×71.99W, h8km, ML4.9, MW4.4*
VAO ***23*** *01:12:32.8±0.5, 30.42S×71.57W, h10km, mb4.6, Presumed earthquake*
GUC ***23*** *01:12:35.4±0.7, 30.44S×71.63W, h36km±1km, ML5.0*
IDC ***23*** *01:12:35.8±5.2, 30.45S×71.57W, h33km±37km, mb4.1/11, mbtmp4.3/15, ML4.5/3, MS3.6/9, Error ellipse: s-maj=24.5km s-min=17.5km az=90.0*
NEIC ***23*** *01:12:36.3, 30.42S×71.73W, h35km*
NEIC ***23*** *01:12:36.1±2.7, 30.43S±0.04×71.77W±0.07, h35km±1km, mb4.9/33, Mwr4.3/71, ML5.0(GUC), Error ellipse: s-maj=10.0km s-min=6.7km az=286.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr3.02; Mθθ0.86; Mϕϕ-3.89; Mrθ0.76; Mrϕ0.09; Mθϕ-1.25; Fault plane solution: M₀3.83000×10¹⁵ NP1:φ₁164.40000°, δ56.95000°, λ71.73000°. NP2:φ₂15.60000°, δ37.26000°, λ115.73000°. Principal axes: T 3.4531, Plg72.0000°, Azm30.0000°; N 0.6618, Plg15.0000°, Azm175.0000°; P -4.1149, Plg10.0000°, Azm267.0000°:*
ISC 23 01:12:33.1±0.8, 30.42S±0.02×71.70W±0.04, h17km±4km, n226, σ1$36/260, mb4.8/21, MS3.7/7, 15C-9D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CO06	**Fray Jorge**	**0.26**	**167**			**Pn**	**01 12 42.5 +0.2**	
CO06				Sg		**Sn**	**01 12 46.9 -1.1**	
CO06	**Fray Jorge**	**0.26**	**167**	⇑ *i* P		**Pn**	**01 12 42.5 +0.2**	
CO06				*i* S		**Sb**	**01 12 46.7 +3.0**	
CO06				IAML			01 12 47.3	
	comp=E,199μm,0.3s							
CO05	**La Serena**	**0.64**	**39**			**Pn**	**01 12 48.6 +1.2**	
CO05						**Sn**	**01 12 57.7 +0.5**	
CO05	**La Serena**	**0.64**	**39**	⇓ *i* P		**Pn**	**01 12 48.6 +1.2**	
CO05				*i* S		**Sb**	**01 12 55.8 +1.4**	
GO04	**Tololo Observa**	**0.82**	**73**			**Pn**	**01 12 50.9 +0.8**	
GO04	**Tololo Observa**	**0.82**	**73**	⇓ *i* P		**Pn**	**01 12 50.9 +0.8**	
GO04				*i* S		**Sn**	**01 13 00.8 -1.2**	
GO04				IAML			01 13 06.6	
	comp=N,88μm,0.5s							
GO04	**Tololo Observa**	**0.82**	**73**	*e*P		**Pn**	**01 12 50.0 -0.1**	
GO04				IAML			01 13 09.5	
	comp=Z,39μm,0.5s							
CO03	**El Pedregal**	**0.97**	**116**			**Pn**	**01 12 52.6 +0.5**	
CO03	**El Pedregal**	**0.97**	**116**	⇓ *i* P		**Pn**	**01 12 52.6 +0.5**	
CO03				*i* S		**Sb**	**01 13 03.9 -0.2**	
CO03				IAML			01 13 05.5	
	comp=E,38μm,0.1s							
CO03	**El Pedregal**	**0.97**	**116**	*e*P		**Pn**	**01 12 52.4 +0.3**	
CO03				*e*S		**Sn**	**01 13 04.8 -0.7**	
CO02	**Combarbal**	**0.99**	**143**			**Pn**	**01 12 52.8 +0.4**	
CO02	**Combarbal**	**0.99**	**143**	⇓ *i* P		**Pn**	**01 12 53.1 +0.7**	
CO02				*i* S		**Sb**	**01 13 05.3 +0.5**	
CO02				IAML			01 13 09.4	
	comp=E,100μm,0.3s							
CO02	**Combarbal**	**0.99**	**143**	*e*P		**Pb**	**01 12 52.3 +0.4**	
CO02				*e*S		**Sn**	**01 13 06.0 -0.1**	
CO02				IAML			01 13 07.4	
	comp=Z,19μm,0.8s							
CO01	**Juntas del Tor**	**1.46**	**73**			**Pg**	**01 13 00.9 -0.3**	
CO01	**Juntas del Tor**	**1.46**	**73**	⇓ *i* P		**Pg**	**01 13 01.0 -0.3**	
CO01	**Juntas del Tor**	**1.46**	**73**	*e*P		**Pg**	**01 13 00.9 -0.3**	
CO01				*e*S		**Sg**	**01 13 20.3 0.0**	
LCO	**Las Campanas**	**1.65**	**32**			**Pb**	**01 13 04.0 +0.7**	
LCO	**Las Campanas**	**1.65**	**32**	*i* P		**Pb**	**01 13 03.5 +0.3**	
LCO				*i* S		**Sb**	**01 13 24.3 +0.5**	
LCO	**Las Campanas**	**1.65**	**32**	*e*P		**Pb**	**01 13 03.1 -0.2**	
LCO				*e*S		**Sg**	**01 13 28.6 +2.2**	
LCO				IAML			01 13 33.6	
	comp=Z,16μm,0.7s							
CO04	**Los Peladeros**	**1.74**	**159**			**Pb**	**01 13 04.7 -0.1**	
CO04	**Los Peladeros**	**1.74**	**159**	⇑ *i* P		**Pb**	**01 13 04.6 -0.2**	
CO04				*i* S		**Sn**	**01 13 25.9 +1.1**	
CO04				IAML			01 13 30.6	
	comp=N,24μm,0.2s							
AROD	**Rodeo**	**1.94**	**83**	*e*P		**Pg**	**01 13 09.2 -1.3**	
AC05	**El Transito**	**2.01**	**39**			**Pb**	**01 13 09.7 +0.4**	
AC05	**El Transito**	**2.01**	**39**	⇓ *i* P		**Pb**	**01 13 09.6 +0.3**	
AC05				*i* S		**Sb**	**01 13 34.3 +0.2**	
AC05				IAML			01 13 39.1	
	comp=N,11μm,0.6s							
AC05	**El Transito**	**2.01**	**39**	*e*P		**Pb**	**01 13 09.0 -0.3**	
AC05				*e*S		**Sg**	**01 13 36.7 -1.0**	
VA06	**Catapilco**	**2.17**	**171**			**Pn**	**01 13 09.6 +1.1**	
VA06	**Catapilco**	**2.17**	**171**	⇑ *i* P		**Pn**	**01 13 09.6 +1.1**	
VA06				*i* S		**Sn**	**01 13 36.1 +1.2**	
VA06				IAML			01

comp=Z,205nm,0.3s,baz=73,slow=16,SNR=8.2
CFA LR LR 01 15 00.8
comp=Z,372nm,21.5s,baz=239,slow=47
CFA Coronel Fontan 3.20 113 *eP* **Pb 01 13 26.5 -3.1**
MT03 Universidad Ad 3.23 162 *i* P **Pn 01 13 24.6 +1.4**
MT03 *i* S **Sn 01 14 02.8 +1.4**
MT03 IAML 01 14 20.8
comp=E,6μm,0.3s
MT03 Universidad Ad 3.23 162 *eP* **Pn 01 13 25.5 +2.3**
MT03 *eS* **Sb 01 14 11.1 +1.8**
MT03 IAML 01 14 20.6
comp=Z,3μm,0.5s
VA05 Santo Domingo 3.23 179 Pn 01 13 23.6 +0.5
VA05 Santo Domingo 3.23 179⇓ *eP* **Pn 01 13 23.4 +0.3**
MT04 Ro Olivares 3.26 156 *eP* **Pn 01 13 26.7 +2.9**
MT04 *eS* **Sb 01 14 07.6 -2.7**
MT04 Ro Olivares 3.26 156 *eP* **Pn 01 13 26.9 +3.1**
MT04 *eS* **Sb 01 14 09.2 -1.1**
MT04 IAML 01 14 14.5
comp=Z,2μm,1.1s
MT15 Las Vizcachas 3.33 163 *i* P **Pn 01 13 26.6 +2.0**
MT15 *i* S **Sn 01 14 04.5 +0.7**
MT15 IAML 01 14 19.5
comp=E,5μm,0.2s
MT08 Bocatoma Ro 3.34 155 Pb 01 13 29.2 -2.9
MT08 Bocatoma Ro 3.34 155⇑ *iP* **Pn 01 13 28.8 +4.0**
MT08 *i* S **Sn 01 14 06.3 +2.1**
MT08 IAML 01 14 20.6
comp=E,3μm,0.6s
MT09 Talagante 3.40 170⇑ *iP* **Pn 01 13 27.1 +1.5**
MT09 IAML 01 14 23.4
comp=E,3μm,0.6s
MT12 Pirque 3.45 164⇑ *iP* **Pn 01 13 27.9 +1.8**
MT12 *i* S **Sn 01 14 08.3 +1.6**
MT12 IAML 01 14 32.0
comp=N,5μm,0.6s
MT01 Popeta 3.46 174 Pn 01 13 26.8 +0.6
MT01 Popeta 3.46 174 *i* P **Pn 01 13 27.0 +0.7**
MT01 IAML 01 14 23.2
comp=E,2μm,0.7s
VCA Vinchina 3.48 62⇓ *eP* **Pb 01 13 32.3 -2.0**
MT13 San Alfonso 3.53 160 Pn 01 13 30.1 +2.8
MT13 San Alfonso 3.53 160 *i* P **Pn 01 13 29.3 +2.0**
MT13 *i* S **Sn 01 14 10.2 +1.5**
MT13 IAML 01 14 23.1
comp=E,3μm,0.5s
LMEL Las Melosas 3.65 160⇑ *iP* **Pn 01 13 31.7 +2.7**
LMEL *i* S **Sn 01 14 13.0 +1.2**
BO04 La Punta 3.68 166 Pn 01 13 30.9 +1.5
BO04 La Punta 3.68 166⇑ *iP* **Pn 01 13 30.9 +1.5**
BO04 *i* S **Sn 01 14 11.8 -0.6**
BO01 Tunca 4.00 173 Pn 01 13 34.0 +0.3
BO01 Tunca 4.00 173 *i* P **Pn 01 13 34.3 +0.6**
AC02 Maricunga 4.22 33 Pn 01 13 39.5 +2.3
AC02 Maricunga 4.22 33⇑ *eP* **Pn 01 13 40.0 +2.8**
ACLC CERRO LA CRUZ 4.24 78 *eS* **Sb 01 14 41.6 +3.2**
ACLC IAML 01 14 44.4
comp=Z,750nm,0.7s
AC01 Pan de Azucar 4.36 13 Pn 01 13 39.1 +0.4
BO02 Sierra Bellavi 4.43 170 Pn 01 13 39.8 +0.1
GO05 Hualane 4.58 182 Pn 01 13 41.2 -0.5
ML02 Panimavida 5.34 178 Pn 01 13 52.3 +0.2
GO02 Mina Guanaco 5.56 20 Pn 01 13 55.4 0.0
PB14 IPOC Station P 5.88 12 Pn **Pn 01 13 58.6 -1.2**
TCA Tanti 6.18 100⇓ *eP* **Pn 01 14 05.1 +1.4**
BI02 San Fabin de 6.24 177 Pn 01 14 04.5 0.0
BI05 Punta Hualpn 6.43 191 Pn 01 14 06.1 -1.0
H03N1 Juan Fernandez 6.83 242 Pn **Pn 01 14 12.0 -0.3**
baz=116,slow=18
H03N1 T T 01 21 16.1
baz=70,slow=72,SNR=6326
H03N2 Juan Fernandez 6.84 242 Pn **Pn 01 14 12.2 -0.3**
baz=116,slow=18
H03N2 T T 01 21 11.9
baz=70,slow=72,SNR=5542
H03N3 Juan Fernandez 6.84 242 Pn **Pn 01 14 12.1 -0.5**
baz=116,slow=18
H03N3 T T 01 21 14.0
baz=70,slow=72,SNR=3969
VA04 Juan Fernndez 6.85 240 Pn 01 14 12.1 -0.8
VA04 Juan Fernndez 6.85 240 *eP* **Pn 01 14 11.5 -1.4**
PB10 IPOC Station P 6.95 9 Pn **Pn 01 14 13.0 -1.3**
H03S3 Juan Fernandez 7.00 239 Pn **Pn 01 14 14.0 -0.5**
H03S1 Juan Fernandez 7.00 239 Pn **Pn 01 14 13.2 -1.4**
H03S2 Juan Fernandez 7.01 239 Pn **Pn 01 14 13.6 -1.2**
PB05 IPOC Station P 7.65 10 Pn 01 14 23.2 -0.8
GO06 Curarrehue 9.15 179 Pn 01 14 44.1 -0.3
PB02 IPOC Station P 9.20 11 Pn **Pn 01 14 44.5 -0.8**
PB01 IPOC Station P 9.54 13 Pn **Pn 01 14 47.7 -2.2**
LR04 Corral 9.55 188 Pn 01 14 48.6 -1.2
LR05 Currie 9.79 181 Pn 01 14 53.3 +0.1
HMBC Humberstone 10.23 10 Pn **Pn 01 15 00.3 +1.0**
PLCA Paso Flores 10.34 175 Pn Pn 01 15 00.9 +0.2
comp=Z,0.7nm,0.3s,baz=338,slow=15,SNR=8.3
PLCA LR LR 01 18 54.8
comp=Z,313nm,18.3s,baz=350,slow=37
comp=Z,1.8nm,0.4s
PLCA Paso Flores 10.34 175 Pn 01 15 01.5 +0.8
PLCA Paso Flores 10.34 175 *eP* **Pn 01 15 01.3 +0.6**
TRQA Tornquist 11.08 136 Pn 01 15 11.4 +0.6
PB12 IPOC Station P 11.82 6 Pn **Pn 01 15 21.3 +0.2**
PSAL Palomas, Salto 12.14 97 *eP* **Pn 01 15 24.8 -0.5**
CPUP Villa Florida 13.29 76 Pn **Pn 01 15 40.6 -0.5**
comp=Z,0.6nm,0.3s,baz=251,slow=13,SNR=5.5
CPUP LR LR 01 21 10.1
comp=Z,250nm,20.4s,baz=248,slow=39
comp=Z,1.8nm,0.5s
CPUP Villa Florida 13.29 76 Pn 01 15 42.7 +1.6
CPUP Villa Florida 13.29 76 *eP* **Pn 01 15 40.8 -0.3**
LPAZ La Paz 14.44 1 Pn **Pn 01 15 58.1 +0.7**
comp=Z,0.9nm,0.3s,baz=185,slow=7.6,SNR=11
comp=Z,4.5nm,0.5s
LPAZ La Paz 14.44 14 P **Pn 01 16 01.0 +3.6**
LPAZ La Paz 14.44 14 *eP* **Pn 01 15 58.2 +0.7**
MURT Porto Murtinho 15.37 59 *eP* **Pn 01 16 07.7 -1.5**
PLTB Pedras Altas 15.57 100 Pn **Pn 01 16 11.0 -0.9**
PLTB Pedras Altas 15.57 100 *eP* **Pn 01 16 09.4 -2.5**
CPSB Cacapava Do Su 15.76 95 *eP* **Pn 01 16 12.7 -1.6**
SIV San Ignacio 17.35 37 P **Pn 01 16 35.3 +0.6**
comp=Z,10.0nm,0.7s,baz=274,slow=8.4
ITAB Concordia 17.44 84 P **P 01 16 36.7 -0.1**
ITAB IAML IAmb 01 16 42.0
comp=Z,34nm,0.8s
ITAB Concordia 17.44 84 *eP* **Pn 01 16 35.7 0.0**
AQDB Aquidauana 17.50 59 Pn 01 16 37.1 +0.7
PTLB Pontes e Lacer 18.84 41 P **P 01 16 52.8 +0.6**
PTLB Pontes e Lacer 18.84 41 *eP* **P 01 16 52.9 +0.6**
VILB Vilhena 20.38 34 P **P 01 17 07.6 -1.6**
VILB Vilhena 20.38 34 *eP* **P 01 17 07.3 -1.8**
SALV Santo Antonio 20.59 49 *eP* **P 01 17 11.7 +0.3**
ITRB Iturama 22.04 66 *eP* **P 01 17 26.6 -0.5**
VAO Valinhos 23.27 77 P **P 01 17 39.7 -0.3**
VAO IAML IAmb 01 17 57.8
comp=Z,28nm,1.0s
PDRB Porto dos Gac 23.30 40 *eP* **P 01 17 40.6 +0.2**
EFI East Falkland 23.52 158 P **P 01 17 42.5 +0.3**
EFI IAML IAmb 01 18 00.4
comp=Z,31nm,1.1s
ATAH Atahualpa 24.00 343 LR LR 01 25 11.1
comp=Z,121nm,20.4s,baz=157,slow=31
BDFB Brasilia 26.22 61 P **P 01 18 06.8 -0.6**
comp=Z,13nm,0.8s,baz=236,slow=8.3,SNR=18
BDFB LR LR 01 29 25.0
comp=Z,205nm,20.8s,baz=250,slow=39
comp=Z,13nm,0.8s
BDFB Brasilia 26.22 61 P **P 01 18 07.3 -0.1**
TEFE Tefe 27.59 15 *eP* **P 01 18 21.0 +1.4**
MACA Manacapuru-AM 29.04 23 P **P 01 18 33.2 +0.7**
MACA IAML IAmb 01 18 39.9
comp=Z,17nm,0.9s
ITTB Itaituba 29.98 33 *eP* **P 01 18 39.2 -1.7**
SMTB Santa Maria do 31.10 51 *eP* **P 01 18 50.8 0.0**
BOAV Boa Vista 34.33 20 P **P 01 19 19.3 +0.3**
BOAV IAML IAmb 01 19 33.8
comp=Z,11nm,0.7s
BOAV Boa Vista 34.33 20 *eP* **P 01 19 19.1 +0.1**
NBPS Pedro II - PI 38.52 54 *eP* **P 01 19 54.9 -0.1**
SDV Santo Domingo 39.09 2 LR LR 01 37 18.3
comp=Z,85nm,18.1s,baz=72,slow=38
SDV Santo Domingo 39.09 2 P **P 01 19 59.5 -0.3**
MDP Montagnes des 39.75 31 LR LR 01 37 08.8
comp=Z,113nm,21.5s,baz=232,slow=37

MLPR Magueyes Islan 48.31 6 P **P 01 21 14.3 +0.6**
CRPR Cabo Rojo, PR 48.34 6 P **P 01 21 14.7 +0.7**
OBIP Obispado Ponce 48.43 6 P **P 01 21 15.0 +0.4**
OBIP IAmb IAmb 01 21 16.5
comp=Z,9.7nm,0.7s
CELP Cerrillos 48.46 7 P **P 01 21 15.7 +0.8**
PDPR Patillas Dam, 48.46 7 P **P 01 21 14.9 +0.1**
PDPR IAmb IAmb 01 21 16.1
comp=Z,20nm,1.1s
SJG San Juan 48.54 7 P **P 01 21 15.8 +0.3**
SJG IAmb IAmb 01 21 16.7
comp=Z,15nm,0.8s
BANI BANI 48.54 2 P **P 01 21 16.4 +0.8**
UUPR Utuado, UPR, P 48.62 6 P **P 01 21 16.9 +0.7**
ECPR Experimental S 48.73 7 P **P 01 21 16.8 -0.1**
SNAA Sanae 54.80 159 P **P 01 22 01.6 -0.1**
comp=Z,5.1nm,0.7s,baz=285,slow=9.4,SNR=7.2
SNAA LR LR 01 44 48.3
comp=Z,61nm,18.5s,baz=40,slow=35
comp=Z,5.1nm,0.7s
SNAA Sanae 54.80 159 P **P 01 22 01.4 -0.3**
SNAA IAmb IAmb 01 22 03.1
comp=Z,12nm,1.1s
QSPA South Pole Qui 59.81 180 P **P 01 22 37.7 +0.4**
comp=Z,8.6nm,0.9s,baz=160,slow=2.1,SNR=7.4
comp=Z,8.6nm,0.9s
QSPA South Pole Qui 59.81 180 P **P 01 22 38.9 +1.6**
QSPA IAmb IAmb 01 22 39.3
comp=Z,14nm,1.1s
TXAR Lajitas Array 66.77 330 P **P 01 23 25.3 +1.5**
comp=Z,0.9nm,0.5s,baz=151,slow=6.3,SNR=4.8
comp=Z,0.2nm,0.5s
TXAR Lajitas Array 66.77 330 P **P 01 23 24.3 +0.5**
CCM Cathedral Cave 70.52 344 P **P 01 23 48.5 +1.6**
CCM IAmb IAmb 01 23 59.2
comp=Z,8.1nm,0.8s
P40A Paris 72.12 344 P **P 01 23 57.9 +1.4**
P40A IAmb IAmb 01 24 08.2
comp=Z,15nm,1.1s
DBIC Dimbokro 73.78 72 P **P 01 24 06.8 -0.2**
comp=Z,5.7nm,0.4s,baz=253,slow=5.5,SNR=18
comp=Z,5.7nm,0.4s
DBIC Dimbokro 73.78 72 P **P 01 24 06.7 -0.2**
DBIC IAmb IAmb 01 24 08.0
comp=Z,20nm,1.1s
MAW Mawson 76.53 164 LR LR 02 02 01.0
comp=Z,73nm,18.2s,baz=207,slow=39
ECSD EROS Data Cent 77.24 342 P **P 01 24 27.4 +1.3**
ECSD IAmb IAmb 01 24 37.3
comp=Z,7.2nm,0.9s
PDAR Pinedale Array 80.71 333 P **P 01 24 45.5 0.0**
comp=Z,0.5nm,1.0s,baz=170,slow=7.6,SNR=2.1
comp=Z,0.5nm,1.0s
PDAR Pinedale Array 80.71 333 P **P 01 24 45.4 -0.1**
NVAR Mina Array Bea 81.12 325 P **P 01 24 49.1 +1.3**
comp=Z,0.4nm,0.7s,baz=117,slow=6.0,SNR=2.7
comp=Z,0.4nm,0.7s
AGMN Agassiz Nation 81.30 344 P **P 01 24 47.8 -0.4**
BOSA Boshof 81.49 118 P **P 01 24 49.7 -0.4**
comp=Z,5.4nm,1.0s,baz=257,slow=4.3,SNR=3.7
comp=Z,5.4nm,1.0s
BOSA Boshof 81.49 118 P **P 01 24 49.0 -1.0**
BOSA IAmb IAmb 01 24 51.6
comp=Z,7.7nm,1.1s
TORD Torodi Ar. Bea 82.73 70 P **P 01 24 56.2 -0.3**
comp=Z,3.4nm,0.7s,baz=242,slow=7.8,SNR=30
comp=Z,3.4nm,0.7s
TORD Torodi Ar. Bea 82.73 70 P **P 01 24 55.9 -0.5**
TORD IAmb IAmb 01 24 59.0
comp=Z,10nm,0.6s
ULM Lac du Bonnet 83.12 345 P **P 01 24 57.5 -0.2**
comp=Z,1.2nm,0.3s,baz=157,slow=2.2,SNR=4.3
comp=Z,1.2nm,0.3s
ULM Lac du Bonnet 83.12 345 P **P 01 24 56.9 -0.7**
YKA Yellowknife Ar 98.77 341 P **P 01 26 10.6 -0.6**
comp=Z,0.1nm,0.4s,baz=153,slow=4.2,SNR=1.9
comp=Z,0.1nm,0.4s
BRTR Keskin Array B 119.80 59 PKP **PKPdf 01 31 22.0 -0.6**
comp=Z,0.9nm,0.9s,baz=41,slow=2.7,SNR=3.9
FINES FINESS Array B 119.87 33 PKP **PKPdf 01 31 20.8 -1.0**
comp=Z,5.0nm,1.1s,baz=252,slow=7.2,SNR=3.4
ARCES ARCESS Array B 120.64 24 PKP **PKPdf 01 31 21.0 -2.1**
comp=Z,3.0nm,0.9s,baz=4.1,slow=7.3,SNR=1.6
ASAR Alice Springs 120.88 207 PKP **PKPdf 01 31 24.4 -0.8**
comp=Z,0.3nm,0.5s,baz=129,slow=1.6,SNR=6.3
WRA Warramunga Arr 124.01 210 PKP **PKPdf 01 31 30.6 -0.6**
comp=Z,0.9nm,0.6s,baz=157,slow=1.6,SNR=11
H11S2 WAKE ISLAND Hyd 26.03 272 T T 03 50 17.6
baz=115,slow=74,SNR=78
H11S1 WAKE ISLAND Hyd 26.05 272 T T 03 50 15.5
baz=115,slow=74,SNR=79
H11S3 WAKE ISLAND Hyd 26.05 272 T T 03 50 16.4
baz=115,slow=74,SNR=69
H11N3 WAKE ISLAND Hyd 26.36 273 T T 03 50 46.3
baz=116,slow=75,SNR=14
H11N1 WAKE ISLAND Hyd 26.37 273 T T 03 50 50.6
baz=116,slow=75,SNR=7.0
H11N2 WAKE ISLAND Hyd 26.37 273 T T 03 50 43.8
baz=116,slow=75,SNR=19
BVAR Borovoye Array 144.41 40 PKP **PKPab 01 32 07.3 +1.1**
comp=Z,2.5nm,0.6s,baz=311,slow=3.1,SNR=8.9
SHAA Shahritus 146.13 67 PKPdf 01 32 12.3 +0.7
KK31 Karatay Array 147.46 57 PKPbc 01 32 16.2 +0.1
KKAR Karatay Array 147.46 57 PKPdf 01 32 15.9 +2.3
ARSB Arslanbob 149.57 59 PKPbc 01 32 23.0 +1.1
EKS2 Erkin-Say 149.90 56 P **PKPbc 01 32 23.7 +1.1**
SNR=9.1
HYB Hyderabad 149.99 109 *e*PKPbc **PKPbc 01 32 22.6 -0.8**
KURBB Kurchatov Arra 149.99 39 PKPbc **PKPbc 01 32 22.9 +0.6**
comp=Z,7.1nm,0.6s,baz=304,slow=3.2,SNR=8.6
KURK Kurchatov 150.00 39 PKPbc 01 32 23.2 +0.9
USP Ospenovka 150.27 55 P **PKPbc 01 32 24.0 +0.7**
SNR=9.8
AAK Ala-Archa 150.42 56 P **PKPbc 01 32 25.2 +1.3**
SNR=17
AAK Ala-Archa 150.42 56 PKPbc 01 32 25.0 +1.2
CHMS Chumysh 150.52 55 P **PKPbc 01 32 24.6 +0.7**
SNR=6.2
UCH Uchtor 150.52 57 P **PKPbc 01 32 25.8 +1.3**
SNR=15
KBK Karagaybulak 150.74 56 P **PKPbc 01 32 26.1 +1.4**
SNR=6.0
ZAA0 Zalesovo Array 151.01 29 PKPbc 01 32 25.3 +0.7
ZALV Zalesovo Beam 151.01 29 PKP **PKPdf 01 32 18.8 0.0**
comp=Z,1.5nm,0.7s,baz=292,slow=4.2,SNR=6.9
ZALV PKPbc **pPKPdf 01 32 24.9 +0.5**
comp=Z,23nm,0.5s,baz=303,slow=3.2,SNR=108
ZALV Zalesovo Beam 151.01 29 PKPbc 01 32 25.3 +0.7
TKM2 Tokmak 2 151.14 55 P **PKPbc 01 32 26.3 +0.7**
SNR=11
KSH2 Kashi 151.86 63 PKPbc **PKPdf 01 32 22.3 +1.4**
KSH2 pPKP sPKPdf 01 32 28.3 0.0
KSH2 sPKP sPKPdf 01 32 36.4 +8.1
MKAR Makanchi Array 154.09 44 PKP **PKPdf 01 32 21.4 -2.3**
comp=Z,0.6nm,0.9s,baz=323,slow=1.8,SNR=4.7
MKAR PKPbc **sPKPdf 01 32 31.9 +0.7**
comp=Z,2.2nm,0.8s,baz=309,slow=2.3,SNR=22
WMQ Urumqi 158.89 45 *e*PKP **PKPdf 01 32 26.3 -3.8**
WMQ PKPab **PKPab 01 33 07.6 +1.4**
WMQ LR LR
comp=N,1μm,15.7s
WMQ LR LR
comp=E,1μm,13.7s
WMQ LR LR
comp=Z,840nm,24.0s
CN2 Changchun 160.93 319 *eP* **PKPdf 01 32 31.5 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 162.54 4 PKPab **PKPab 01 33 23.1 +1.1**
comp=Z,1.4nm,0.9s,baz=324,slow=3.0,SNR=6.1
SONM Songino Array 162.54 4 PKPdf **PKPdf 01 32 34.5 +0.5**
HHC Hu-ho-hao-te 169.26 347 *eP* **PKPdf 01 32 39.3 -0.3**
NJ2 Nanjing 170.82 283 *eP* **PKPdf 01 32 41.3 +0.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
PZH PanZhiHua 173.04 122 PKP **PKPdf 01 32 41.3 -0.7**
LZH Lanzhou 173.23 32 *e*PKP **PKPdf 01 32 38.8 -3.0**
LZH sPKP sPKPdf 01 32 53.3 +3.9

*OSPL **23** 01:18:39.6±0.4, 18°.77N×71°.58W, h11km±6km, ML1.6, Presumed earthquake*
*SDD **23** 01:18:39.7±2.0, 18°.63N×71°.63W, h48km±21km, MD2.6, ML1.5, MW2.6, Presumed earthquake*
ISC 23 01:18:39.4±1.2, 18°.69N±0°.05×71°.61W±0°.06, h17km±7km, n7, σ0°82/13, 4C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LONE3	**El Aguacate, B**	**0.17**	**119**	*i* P	**Pg**	**01 18 43.8**	**-0.1**
LONE3				*eS*	**Sg**	**01 18 46.7**	**-0.3**
LONE3				IAML		01 18 47.2	
	comp=Z,42nm,0.1s						
JIDR	**Jimani**	**0.30**	**229⇑**	*ePg*	**Pg**	**01 18 46.0**	**+0.1**
JIDR				*⇓eSg*	**Sn**	**01 18 54.1**	**-0.9**
JIDR				IAML		01 18 54.5	
	comp=N,51nm,0.1s						
LODU1	**El Espartillar**	**0.36**	**159**	*i* P	**Pg**	**01 18 47.3**	**+0.4**
LODU1				*eS*	**Sb**	**01 18 53.4**	**+0.7**
LODU1				IAML		01 18 53.6	
	comp=Z,186nm,0.1s						
SDDR	**Presa de Saban**	**0.42**	**46**	*eSg*	**Sn**	**01 18 56.7**	**-1.6**
SDDR				IAML		01 19 28.1	
	comp=N,12nm,2.1s						
REDR	**Restauracion**	**0.52**	**23⇓**	*ePg*	**Pn**	**01 18 52.6**	**+0.6**
REDR				*⇑eSg*	**Sn**	**01 19 01.2**	**+0.7**
REDR				IAML		01 19 04.2	
	comp=N,18nm,0.1s						
PODR	**Polo**	**0.61**	**149⇑**	*ePg*	**Pb**	**01 18 51.0**	**-0.7**
PODR				*⇑eSg*	**Sg**	**01 19 00.1**	**+0.4**
PODR				IAML		01 19 06.9	
	comp=N,42nm,2.8s						
PODR	**Polo**	**0.61**	**149**	*i* P	**Pb**	**01 18 51.2**	**-0.4**
PODR				*eS*	**Sg**	**01 19 00.1**	**+0.4**

*VIE **23** 01:21:36.0±0.3, 50°.15N×18°.39E, h0km, mb2.4/5, ml2.5/6, Error ellipse: s-maj=2.9km s-min=2.3km az=51.0 37°km NNE of Ostrava Suspected Mining induced.*
*IPEC **23** 01:21:37.2±0.1, 50°.07N×18°.45E, h1km, ML2.3/6, Error ellipse: s-maj=1.6km s-min=0.7km az=165.0*
*PRU **23** 01:21:38.4, 50°.06N×18°.40E, h0km*
ISC 23 01:21:37.1±0.8, 50°.07N±0°.03×18°.42E±0°.02, h0km, n32, σ0°97/59, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.15**	**275**	*ePG*	**Pg**	**01 21 41.4**	**+1.5**
RAC				*eSG*	**Sg**	**01 21 44.5**	**+2.7**
OKC	**Ostrava-Krasne**	**0.29**	**217**	*ePG*	**Pg**	**01 21 43.4**	**+0.7**
OKC				*eSG*	**Sg**	**01 21 47.6**	**+1.1**
	comp=Z,128nm,0.5s						
STEB	**Steborice**	**0.44**	**252**	*ePG*	**Pg**	**01 21 46.4**	**+0.9**
STEB				*eSG*	**Sb**	**01 21 53.3**	**-1.6**
	comp=Z,126nm,0.5s						
MORC	**Moravsky Berou**	**0.64**	**243**	*ePg*	**Pg**	**01 21 49.6**	**+0.3**
	baz=63						
MORC				*eSg*	**Sg**	**01 21 57.6**	**0.0**
	66nm,0.6s,baz=63						
ANAC	**Anensky vrch**	**0.67**	**271**	*ePg*	**Pg**	**01 21 50.4**	**+0.5**
	baz=90						
ANAC				*eSg*	**Sg**	**01 21 59.0**	**+0.4**
	57nm,0.4s,baz=90						
LOSC	**Losov**	**0.82**	**237**	*ePg*	**Pg**	**01 21 53.1**	**+0.4**
	baz=57						
LOSC				*eSg*	**Sg**	**01 22 03.4**	**+0.2**
	44nm,0.4s,baz=57						
OJC	**Ojcow**	**0.90**	**80**	*ePg*	**Pg**	**01 21 53.7**	**-0.6**
OJC				*eSg*	**Sg**	**01 22 06.7**	**+0.8**
LANS	**Liptovska Anna**	**1.15**	**143**	*ePG*	**Pb**	**01 21 59.4**	**-0.4**
LANS				*eSG*	**Sb**	**01 22 15.4**	**+0.2**
LANS				*eLG*	Lg	01 22 19.9	
JAVC	**Velka Javorina**	**1.31**	**202**	*ePg*	**Pg**	**01 22 02.1**	**0.0**
	baz=22						
JAVC	**Velka Javorina**	**1.31**	**202**	*ePG*	**Pg**	**01 22 02.2**	**+0.1**
DPC	**Dobruska-Polom**	**1.38**	**282**	*ePG*	**Pg**	**01 22 03.2**	**-0.3**
DPC				*eSG*	**Sn**	**01 22 22.3**	**-0.3**
	comp=Z,56nm,0.5s						
NIE	**Niedzica**	**1.38**	**118**	*ePg*	**Pg**	**01 22 03.3**	**-0.3**
NIE				Sn	**Sb**	**01 22 22.3**	**+0.3**
NIE				*eSg*	**Sn**	**01 22 24.2**	**+1.5**
VRAC	**Vranov**	**1.41**	**238**	*ePg*	**Pn**	**01 22 03.5**	**-0.5**
	baz=57						
VRAC				*eSg*	**Sg**	**01 22 21.8**	**-0.6**
	39nm,0.8s,baz=57						
OSTC	**Ostas**	**1.50**	**290**	*ePG*	**Pn**	**01 22 04.6**	**-0.6**
OSTC				*eSG*	**Sn**	**01 22 26.2**	**+0.8**
	comp=Z,41nm,1.1s						
KSP	**Ksiaz**	**1.56**	**300**	*ePg*	**Pn**	**01 22 05.4**	**-0.8**
KSP				*eSg*	**Sg**	**01 22 27.4**	**+0.1**
CHVC	**Chvalec**	**1.60**	**290**	*ePG*	**Pn**	**01 22 06.5**	**-0.2**
CHVC				*eSG*	**Sg**	**01 22 29.1**	**+0.6**
UPC	**Upice**	**1.61**	**287**	*ePG*	**Pb**	**01 22 07.2**	**-0.4**
KRUC	**Moravsky**	**1.66**	**233**	*ePn*	**Pn**	**01 22 07.6**	**+0.1**
	baz=52						
KRUC				*eSg*	**Sn**	**01 22 29.6**	**+0.1**
	25nm,0.6s,baz=52						
MODS	**Modra-Piesok**	**1.86**	**204**	*ePG*	**Pn**	**01 22 09.8**	**-0.4**
MODS				*eSG*	**Sn**	**01 22 34.9**	**+0.5**
STHS	**Stebnicka Huta**	**1.94**	**109**	*ePG*	**Pb**	**01 22 13.3**	**-0.1**
STHS				*eSG*	**Sg**	**01 22 42.2**	**+2.7**
STHS				*eLG*	Lg	01 22 42.7	
TREC	**Trest**	**2.06**	**249**	*ePG*	**Pb**	**01 22 14.2**	**-1.1**
TREC				*eSG*	**Sg**	**01 22 42.5**	**-0.7**
KECS	**Kecovo**	**2.09**	**139**	*ePN*	**Pn**	**01 22 12.5**	**-0.8**
KECS				*ePG*	**Pb**	**01 22 16.0**	**+0.2**
KECS				*eSN*	**Sn**	**01 22 38.0**	**-2.0**
KECS				*eLG*	Lg	01 22 51.6	
PRU	**Pruhonice**	**2.50**	**270**	*ePG*	**Pb**	**01 22 21.8**	**-1.1**
PRU				*eSG*	**Sb**	**01 22 55.2**	**+1.0**
PVCC	**Panska Ves**	**2.51**	**282**	*ePG*	**Pg**	**01 22 24.1**	**-1.1**
PVCC				*eSG*	**Sg**	**01 22 58.1**	**+0.3**
	comp=Z,33nm,0.7s						
CONA	**Conrad Observa**	**2.73**	**219**	*ePn*	**Pn**	**01 22 21.4**	**-0.8**
	0.1nm,0.1s						
ZVC	**Zvikov**	**2.81**	**259**	*ePG*	**Pb**	**01 22 29.4**	**+1.2**
CKRC	**Cesky Krumlov**	**2.96**	**247**	*ePG*	**Pb**	**01 22 31.8**	**+1.1**
CKRC				*eSG*	**Sg**	**01 23 12.5**	**+0.3**
BRG	**Berggiesshubel**	**2.97**	**287**	Pg	**Pb**	**01 22 32.2**	**+1.4**
BRG				Sg	**Sg**	**01 23 11.3**	**-1.2**
BRG				Amp		01 23 16.3	
	comp=Z,6.7nm,0.4s						
KHC	**Kasperske Hory**	**3.29**	**255**	*ePN*	**Pn**	**01 22 28.5**	**-1.4**
KHC				*ePG*	**Pb**	**01 22 37.5**	**+1.2**
KHC				*eSG*	**Sg**	**01 23 22.5**	**-0.2**
ARSA	**Arzberg**	**3.42**	**215**	*ePn*	**Pn**	**01 22 31.0**	**-0.6**
	comp=Z,0.5nm,0.3s						
MOA	**Molln**	**3.53**	**233**	*ePn*	**Pn**	**01 22 31.9**	**-1.2**
	comp=Z,0.2nm,0.2s						
BIOA	**Bad Ischl, Aus**	**3.96**	**235**	*ePn*	**Pn**	**01 22 37.9**	**-1.1**
	comp=Z,0.3nm,0.2s						

UPP 23 01:25:05.4±0.1, 67°.85N×20°.23E, h1km, ML2.6, Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**20**	P	Pg	01 25 07.8	+0.2
KUA				S	Sg	01 25 09.3	+0.2
RATU	**Laukkuluspa**	**0.24**	**265**	P	Pg	01 25 10.2	+0.1
RATU				S	Sg	01 25 13.4	+0.2
KOVU	**Salmi**	**0.38**	**356**	P	Pg	01 25 12.7	0.0
KOVU				S	Sg	01 25 17.7	+0.1
NIKU	**Nikkaluokta**	**0.45**	**273**	P	Pg	01 25 14.0	-0.1
LANU	**Lannavaara**	**0.70**	**72**	S	Sg	01 25 28.1	+0.4
MASU	**Masugnsbyn**	**0.78**	**119**	P	Pg	01 25 19.9	-0.4

*SJA **23** 01:30:21.4±0.6, 33°.27S×70°.98W, h75km±1km, ML3.4, MW3.5*
*GUC **23** 01:30:22.6±0.5, 33°.26S×70°.97W, h77km±1km, ML3.5*
ISC 23 01:30:23.1±1.2, 33°.26S±0°.02×70°.97W±0°.03, h70km±5km, n59, σ1°29/90, 5C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MT02	**Curacav**	**0.14**	**272**	*i* P	**Pn**	**01 30 33.4**	**-0.1**
MT02				*eS*	**Sn**	**01 30 41.3**	**+0.2**
MT02				IAML		01 30 42.0	
	comp=E,4μm,0.1s						
MT02	**Curacav**	**0.14**	**272**	*eP*	**Pn**	**01 30 33.1**	**-0.4**
MT02				*eS*	**Sn**	**01 30 41.7**	**+0.7**
MT02				IAML		01 30 43.2	
	comp=Z,1μm,0.2s						
MT05	**Renca**	**0.23**	**123**	*eP*	**Pn**	**01 30 33.8**	**-0.2**
MT05				*eS*	**Sn**	**01 30 42.3**	**+0.4**
MT05				IAML		01 30 42.9	
	comp=E,5μm,0.2s						

MT05	**Renca**	**0.23**	**123**	*eP*	**Pn**	**01 30 33.6**	**-0.4**
MT05				*eS*	**Sn**	**01 30 42.3**	**+0.4**
MT05				IAML		01 30 43.7	
	comp=Z,2μm,0.1s						
PEL	**Peldehue**	**0.27**	**64**	*eP*	**Pn**	**01 30 34.0**	**-0.2**
PEL				*eS*	**Sn**	**01 30 42.6**	**+0.3**
PEL				IAML		01 30 43.0	
	comp=N,2μm,0.2s						
ROCH	**El Roble**	**0.29**	**354**	*eP*		01 30 34.5	
ROCH				*eP*	**Pn**	**01 30 34.4**	**-0.2**
ROCH				*eS*	**Sn**	**01 30 43.1**	**+0.2**
ROCH				*eS*		01 30 43.2	
ROCH				IAML		01 30 44.0	
	comp=N,5μm,0.3s						
ROCH				IAML		01 30 44.0	
	comp=N,2μm,0.2s						
MT10	**Hacienda Santa**	**0.37**	**91**	*eP*	**Pn**	**01 30 34.5**	**-0.5**
MT10				*eS*	**Sn**	**01 30 44.0**	**+0.3**
MT10				IAML		01 30 45.7	
	comp=N,2μm,0.1s						
MT14	**Cerro Cal¡n**	**0.39**	**110** ⇑	*iP*	**Pn**	**01 30 34.7**	**-0.3**
MT16	**CCHEN**	**0.41**	**114** ⇑	*eP*	**Pn**	**01 30 34.9**	**-0.4**
MT03	**Universidad Ad**	**0.45**	**121**	*iP*	**Pn**	**01 30 35.3**	**-0.3**
MT03				*eS*	**Sn**	**01 30 44.8**	**0.0**
MT03	**Universidad Ad**	**0.45**	**121**	*eP*	**Pn**	**01 30 35.2**	**-0.3**
MT03				*eS*	**Sn**	**01 30 45.3**	**+0.6**
MT03				IAML		01 30 46.4	
	comp=Z,5μm,0.1s						
MT09	**Talagante**	**0.51**	**181**	*iP*	**Pn**	**01 30 35.8**	**-0.4**
MT09				IAML		01 30 46.5	
	comp=N,4μm,0.2s						
MT15	**Las Vizcachas**	**0.52**	**131**	*eP*	**Pn**	**01 30 35.5**	**-0.7**
MT12	**Pirque**	**0.59**	**143**	*eP*	**Pn**	**01 30 36.4**	**-0.5**
MT12				*eS*	**Sn**	**01 30 46.9**	**-0.1**
MT12				IAML		01 30 47.8	
	comp=E,4μm,0.1s						
VA03	**San Esteban**	**0.61**	**36**	*eP*	**Pn**	**01 30 36.9**	**-0.3**
VA03				IAML		01 30 50.6	
	comp=E,4μm,0.1s						
VA03	**San Esteban**	**0.61**	**36**	*eP*	**Pn**	**01 30 36.7**	**-0.5**
VA03				*eS*	**Sn**	**01 30 48.0**	**+0.5**
VA03				IAML		01 30 49.5	
	comp=Z,2μm,0.2s						
VA01	**Torpederas**	**0.61**	**293**	*eP*	**Pn**	**01 30 37.3**	**+0.3**
VA01				IAML		01 30 49.9	
	comp=N,1μm,0.1s						
VA01	**Torpederas**	**0.61**	**293**	*eP*	**Pn**	**01 30 36.6**	**-0.4**
VA01				IAML		01 30 50.1	
	comp=Z,684nm,0.2s						
MT01	**Popeta**	**0.64**	**201**	⇓ *iP*	**Pn**	**01 30 37.1**	**-0.3**
MT01				*eS*	**Sn**	**01 30 48.0**	**0.0**
MT01				IAML		01 30 49.1	
	comp=N,4μm,0.3s						
MT01	**Popeta**	**0.64**	**201**	*eP*	**Pn**	**01 30 36.7**	**-0.7**
MT01				*eP*		01 30 36.8	
MT01				*eS*	**Sn**	**01 30 48.3**	**+0.3**
MT01				IAML		01 30 49.1	
	comp=Z,2μm,0.2s						
VA05	**Santo Domingo**	**0.66**	**234**	*eP*	**Pn**	**01 30 37.5**	**-0.1**
MT04	**Ro Olivares**	**0.71**	**102** ⇑	*iP*	**Pn**	**01 30 38.2**	**-0.2**
MT04				*eS*	**Sn**	**01 30 49.7**	**0.0**
MT04				IAML		01 30 50.6	
	comp=N,2μm,0.1s						
MT04	**Ro Olivares**	**0.71**	**102**	*eP*	**Pn**	**01 30 38.3**	**-0.2**
MT04				*eS*	**Sn**	**01 30 50.2**	**+0.5**
MT04				IAML		01 30 50.5	
	comp=Z,1μm,0.7s						
MT13	**San Alfonso**	**0.75**	**130**	*eP*	**Pn**	**01 30 38.3**	**-0.4**
MT13				*eS*	**Sn**	**01 30 50.4**	**+0.2**
MT13				IAML		01 30 51.3	
	comp=N,2μm,0.2s						
MT13	**San Alfonso**	**0.75**	**130**	*eP*	**Pn**	**01 30 38.3**	**-0.4**
MT13				*eS*	**Sn**	**01 30 50.8**	**+0.6**
MT13				IAML		01 30 53.1	
	comp=Z,681nm,0.1s						
VA06	**Catapilco**	**0.75**	**339**	*eP*	**Pn**	**01 30 38.3**	**-0.3**
VA06				*eS*	**Sn**	**01 30 49.9**	**-0.2**
VA06				IAML		01 30 50.6	
	comp=N,4μm,0.3s						
BO04	**La Punta**	**0.78**	**157** ⇓	*eP*	**Pn**	**01 30 38.6**	**-0.5**
BO04				*eS*	**Sn**	**01 30 50.7**	**-0.1**
BO04				IAML		01 30 51.6	
	comp=E,2μm,0.2s						
MT08	**Bocatoma Ro**	**0.82**	**103** ⇑	*iP*	**Pn**	**01 30 39.6**	**0.0**
MT08	**Bocatoma Ro**	**0.82**	**103**	*eP*	**Pn**	**01 30 39.0**	**-0.7**
MT08				*eS*	**Sn**	**01 30 53.2**	**+1.3**
MT08				IAML		01 30 53.4	
	comp=Z,493nm,0.7s						
LMEL	**Las Melosas**	**0.87**	**132** ⇑	*iP*	**Pn**	**01 30 40.0**	**-0.2**
LMEL				*eS*	**Sn**	**01 30 52.7**	**-0.1**
LMEL				IAML		01 30 54.0	
	comp=N,3μm,0.1s						
BO01	**Tunca**	**1.13**	**185**	*eP*	**Pn**	**01 30 42.9**	**-0.4**
BO01				*eS*	**Sn**	**01 30 58.2**	**-0.1**
BO01	**Tunca**	**1.13**	**185**	*eP*	**Pn**	**01 30 42.8**	**-0.4**
BO01				*eS*	**Sn**	**01 30 58.3**	**+0.1**
BO01				IAML		01 30 58.9	
	comp=Z,318nm,0.3s						
CO04	**Los Peladeros**	**1.22**	**360**	*eP*	**Pn**	**01 30 44.1**	**-0.6**
CO04				*eS*	**Sn**	**01 31 00.9**	**+0.2**
BO02	**Sierra Bellavi**	**1.53**	**174**	*eP*	**Pn**	**01 30 48.3**	**-0.3**
BO02				IAML		01 31 10.5	
	comp=N,1μm,0.2s						
BO02	**Sierra Bellavi**	**1.53**	**174**	*eP*	**Pn**	**01 30 48.3**	**-0.3**
BO02				*eS*	**Sn**	**01 31 09.6**	**+1.8**
BO02				IAML		01 31 12.1	
	comp=Z,699nm,0.1s						
ASAL	**Salagasta**	**1.92**	**70**	*eP*	**Pn**	**01 30 55.5**	**+1.7**
ASAL				*eS*	**Sn**	**01 31 15.3**	**-1.7**
RTLS	**Leoncito**	**2.04**	**45**	*eP*	**Pn**	**01 30 56.1**	**+0.6**
RTLS				*eS*	**Sn**	**01 31 20.3**	**+0.2**
RTLS				IAML		01 31 27.4	
	comp=Z,222nm,0.4s						
CO02	**Combarbal**	**2.06**	**359**	*eP*	**Pn**	**01 30 55.5**	**-0.1**
CO02	**Combarbal**	**2.06**	**359**	*eP*	**Pn**	**01 30 55.5**	**-0.1**
CO02				*eS*	Sn	01 31 04.3	-16
CO02				IAML		01 31 29.5	
	comp=Z,368nm,0.3s						
CO03	**El Pedregal**	**2.43**	**6**	*eP*	**Pn**	**01 31 01.0**	**+0.4**
CO03	**El Pedregal**	**2.43**	**6**	*eP*	**Pn**	**01 31 01.1**	**+0.4**
CO03				*eS*	**Sn**	**01 31 32.1**	**+2.7**
CO03				*eS*		01 31 33.8	
CO03				IAML		01 31 33.9	
	comp=Z,113nm,0.1s						
ML02	**Panimavida**	**2.52**	**188**	*eP*	**Pn**	**01 31 01.9**	**+0.2**
ML02				*eS*	Sn	01 31 40.3	+8.9
ML02				IAML		01 31 50.1	
	comp=Z,80nm,0.6s						
RFA	**San Rafael**	**2.57**	**126**	*eP*	**Pn**	**01 31 03.0**	**+0.5**
CO06	**Fray Jorge**	**2.64**	**348**	*eP*	**Pn**	**01 31 02.8**	**-0.7**
CFA	**Coronel Fontan**	**2.84**	**55**	*eP*	**Pn**	**01 31 06.6**	**+0.3**
CFA				*eS*	Sn	01 31 26.9	-13
CFA				IAML		01 31 27.1	
	comp=Z,261nm,1.9s						
RTLL	**Cerro Villicun**	**2.86**	**48**	*eP*	**Pn**	**01 31 07.5**	**+0.9**
RTLL				*eS*	**Sn**	**01 31 36.8**	**-3.1**
RTLL				IAML		01 31 44.5	
	comp=Z,88nm,0.4s						
GO04	**Tololo Observa**	**3.09**	**3**	*eP*	**Pn**	**01 31 09.4**	**-0.4**
GO04	**Tololo Observa**	**3.09**	**3**	*eP*	**Pn**	**01 31 10.1**	**+0.3**
GO04				*eS*	**Sn**	**01 31 42.3**	**-3.3**
GO04				IAML		01 32 07.1	
	comp=Z,224nm,0.5s						
ACCO	**Cerro Coronel**	**3.12**	**32**	*eP*	**Pn**	**01 31 11.5**	**+1.2**
ACCO				*eS*	**Sn**	**01 31 54.0**	**+7.4**
ACAN	**Cantantal**	**3.34**	**74**	*eP*	**Pn**	**01 31 12.9**	**-0.1**
ACAN				IAML		01 31 57.9	
	comp=Z,197nm,0.5s						
AROD	**Rodeo**	**3.34**	**23**	*eP*	**Pn**	**01 31 15.1**	**+1.8**
AROD				*eS*	Sn	01 32 03.2	+11
CO05	**La Serena**	**3.34**	**356**	*eP*	**Pn**	**01 31 12.6**	**-0.5**
CO01	**Juntas del Tor**	**3.36**	**13**	*eP*	**Pn**	**01 31 13.9**	**+0.4**
CO01				IAML		01 32 15.5	
	comp=Z,46nm,0.5s						
BI02	**San Fabin de**	**3.40**	**184**	*eP*	**Pn**	**01 31 14.0**	**+0.2**
BI02	**San Fabin de**	**3.40**	**184**	*eP*	**Pn**	**01 31 13.8**	**-0.1**
AVFE	**Valle Fertil**	**3.96**	**50**	*eP*	**Pn**	**01 31 21.8**	**+0.2**
AVFE				*eS*	**Sn**	**01 32 01.3**	**-5.4**
AC05	**El Transito**	**4.46**	**8**	IAML		01 32 54.1	
	comp=Z,27nm,1.0s						
MRA	**San Martin**	**4.50**	**81**	*eP*	**Pn**	**01 31 29.1**	**+0.2**
ACLC	**CERRO LA CRUZ**	**5.15**	**43**	*eS*	**Sn**	**01 32 33.8**	**-2.1**
ACLC				IAML		01 32 42.4	

comp=Z,11nm,0.8s

IDC 23 01:35:46.8±3.9, 39.06S×94.62W, h0km, mb3.6/4, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=111.5km s-min=36.6km az=21.0, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**13.66**	**72**	T	T	01 52 16.0	
	baz=244,slow=74,SNR=113						
H03S1	**Juan Fernandez**	**13.68**	**72**	T	T	01 52 05.4	
	baz=244,slow=74,SNR=156						
H03S3	**Juan Fernandez**	**13.68**	**72**	T	T	01 52 16.6	
	baz=244,slow=74,SNR=143						
H03N3	**Juan Fernandez**	**13.84**	**71**	T	T	01 52 28.9	
	baz=249,slow=72,SNR=79						
H03N2	**Juan Fernandez**	**13.84**	**71**	T	T	01 52 12.4	
	baz=249,slow=72,SNR=85						
H03N1	**Juan Fernandez**	**13.86**	**71**	T	T	01 52 13.6	
	baz=249,slow=72,SNR=96						
PLCA	**Paso Flores**	**18.54**	**103**	P	P	01 40 04.5	-0.3
	0.1nm,0.3s,baz=291,slow=12,SNR=3.1						
	1.1nm,0.8s						
LPAZ	**La Paz**	**32.42**	**53**	P	P	01 42 19.4	+0.2
	1.5nm,0.6s,baz=200,slow=9.1,SNR=4.1						
	1.5nm,0.6s						
TXAR	**Lajitas Array**	**68.56**	**352**	P	P	01 46 51.4	+0.2
	0.3nm,1.0s,baz=170,slow=4.1,SNR=3.8						
	0.3nm,1.0s						
NVAR	**Mina Array Bea**	**80.12**	**341**	P	P	01 47 59.1	+0.5
	0.1nm,0.4s,baz=166,slow=4.0,SNR=5.8						
	0.4s						
PDAR	**Pinedale Array**	**82.57**	**349**	P	P	01 48 10.8	-0.7
	0.4nm,0.8s,baz=187,slow=4.5,SNR=6.5						
	0.4nm,0.8s						

IDC 23 01:40:17.9±1.0, 38.26S×93.80W, h0km, mb4.1/6, mbtmp4.1/7, ML3.7/1, MS4.1/19, Error ellipse: s-maj=33.3km s-min=24.0km az=29.0
NEIC 23 01:40:20.8±2.0, 38.3S±0.1×93.8W±0.3, h10km±2km, mb4.4/30, Error ellipse: s-maj=38.1km s-min=10.3km az=242.0
GCMT 23 01:40:21.8±0.3, 38.42S±0.03×93.77W±0.03, h15km±1km, MW5.0/95, Moment Tensor Solution. s29,c35; s95,c121; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.45±.21; Mθθ 0.80±.12; Mϕϕ 2.65±.14; Mrθ-1.14±.35; Mθϕ-1.00±.08; Mϕr-1.03±.27; Best double couple: M0 3.55100×10^16 NP1: ϕs 140.00000°, δ43.00000°, λ-117.00000°. NP2: ϕs 355.00000°, δ52.00000°, λ-67.00000°. Principal axes: T 3.1280, Plg5.0000°, Azm69.0000°; N 0.8440, Plg18.0000°, Azm161.0000°; P -3.9730, Plg71.0000°, Azm325.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 23 01:40:19.6±0.8, 38.3S±0.1×93.8W±0.1, h10km, n68, σ1 9 47/43, mb4.3/12, MS4.2/18, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.84**	**74**	T	T	01 56 39.9	
	baz=244,slow=74,SNR=166						
H03S1	**Juan Fernandez**	**12.85**	**74**	T	T	01 56 40.9	
	baz=244,slow=74,SNR=132						
H03S3	**Juan Fernandez**	**12.85**	**74**	T	T	01 56 37.7	
	baz=244,slow=74,SNR=154						
H03N2	**Juan Fernandez**	**13.00**	**73**	T	T	01 56 46.5	
	baz=275,slow=78,SNR=167						
H03N3	**Juan Fernandez**	**13.00**	**73**	T	T	01 56 48.1	
	baz=275,slow=78,SNR=162						
H03N1	**Juan Fernandez**	**13.02**	**73**	T	T	01 56 46.0	
	baz=275,slow=78,SNR=154						
LR05	**Currie**	**17.00**	**103**		**P**	**01 44 18.4**	**-0.9**
LR05				IAmb	IAmb	01 44 36.2	
	comp=Z,36nm,1.4s						
AY01	**Puyuhuapi**	**17.01**	**118**	P	**P**	**01 44 18.7**	**-0.7**
AY01				IAmb	IAmb	01 44 44.4	
	comp=Z,34nm,1.4s						
LL02	**Futaleuf**	**17.34**	**113**		**P**	**01 44 23.8**	**+0.7**
GO06	**Curarrehue**	**17.43**	**101**	P	**P**	**01 44 23.5**	**-0.7**
COYC	**Coyhaique**	**17.70**	**121**		**P**	**01 44 26.6**	**-0.4**
COYC				IAmb	IAmb	01 44 40.3	
	comp=Z,46nm,1.5s						
GO05	**Hualane**	**17.86**	**86**		**Pn**	**01 44 23.8**	**-4.4**
BI02	**San Fabin de**	**17.96**	**92**		**Pn**	**01 44 29.2**	**-0.3**
ML02	**Panimavida**	**18.05**	**89**		**P**	**01 44 30.9**	**-0.1**
ML02				IAmb	IAmb	01 44 56.6	
	comp=Z,37nm,1.2s						
PLCA	**Paso Flores**	**18.11**	**105**	P	**Pn**	**01 44 30.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=311,slow=11,SNR=4.8						
PLCA				LR	LR	01 49 46.5	
	comp=Z,643nm,20.8s,baz=268,slow=31						
	comp=Z,5.6nm,1.2s						
PLCA	**Paso Flores**	**18.11**	**105**		**P**	**01 44 31.8**	**+0.1**
GO08	**Villa O'Higgin**	**18.44**	**130**	P	**Pn**	**01 44 35.6**	**+0.4**
GO08				IAmb	IAmb	01 44 40.2	
	comp=Z,38nm,1.4s						
BO01	**Tunca**	**18.71**	**85**		**Pn**	**01 44 38.6**	**0.0**
MT09	**Talagante**	**18.99**	**83**	P	**P**	**01 44 41.4**	**0.0**
MT09				IAmb	IAmb	01 44 50.9	
	comp=Z,30nm,1.4s						
BO04	**La Punta**	**19.21**	**84**	P	**P**	**01 44 41.1**	**-2.7**
BO04				IAmb	IAmb	01 44 55.8	
	comp=Z,38nm,1.5s						
CO01	**Juntas del Tor**	**21.27**	**74**	P	**P**	**01 45 08.9**	**+2.5**
CO01				IAmb	IAmb	01 45 14.4	
	comp=Z,17nm,1.4s						
ZON	**Zonda**	**21.64**	**79**		**P**	**01 45 09.8**	**-0.5**
ZON				IAmb	IAmb	01 45 27.0	
	comp=Z,20nm,1.2s						
CFA	**Coronel Fontan**	**21.96**	**80**	P	**P**	**01 45 12.6**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=245,slow=13,SNR=6.4						
CFA				LR	LR	01 52 20.5	
	comp=Z,196nm,18.6s,baz=266,slow=33						
	comp=Z,1.6nm,0.6s						
AC02	**Maricunga**	**23.66**	**68**		**P**	**01 45 32.7**	**+0.8**
AC02				IAmb	IAmb	01 46 02.6	
	comp=Z,15nm,1.2s						
PB14	**IPOC Station P**	**24.09**	**62**	P	**P**	**01 45 35.6**	**-0.1**
TRQA	**Tornquist**	**24.97**	**99**	P	**P**	**01 45 47.1**	**+3.8**
NNA	**Nana**	**30.26**	**35**	LR	LR	01 55 24.5	
	comp=Z,632nm,21.0s,baz=202,slow=30						
LPAZ	**La Paz**	**31.45**	**53**	P	**P**	**01 46 41.5**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=186,slow=3.5,SNR=5.0						
LPAZ				LR	LR	01 56 25.1	
	comp=Z,468nm,21.4s,baz=224,slow=31						
	comp=Z,2.4nm,0.7s						
LPAZ	**La Paz**	**31.45**	**53**		**P**	**01 46 42.5**	**+0.4**
LPAZ				IAmb	IAmb	01 46 53.1	
	comp=Z,5.7nm,1.0s						
PMSA	**Palmer Station**	**31.76**	**156**	LR	LR	01 55 33.7	
	comp=Z,199nm,21.2s,baz=274,slow=29						
CPUP	**Villa Florida**	**32.86**	**80**	LR	LR	01 58 51.0	
	comp=Z,388nm,18.9s,baz=252,slow=34						
ATAH	**Atahualpa**	**34.01**	**28**	LR	LR	01 58 07.6	
	comp=Z,415nm,18.0s,baz=232,slow=32						
BDFB	**Brasilia**	**46.06**	**74**	LR	LR	02 06 42.5	
	comp=Z,299nm,21.5s,baz=229,slow=34						
JTS	**Las Juntas de**	**49.03**	**12**	LR	LR	02 04 32.9	
	comp=Z,238nm,20.3s,baz=53,slow=30						
SDV	**Santo Domingo**	**51.67**	**30**	LR	LR	02 09 33.0	
	comp=Z,512nm,20.0s,baz=204,slow=34						
QSPA	**South Pole Qui**	**51.94**	**180**	LR	LR	02 08 07.7	
	comp=Z,113nm,19.0s,baz=138,slow=32						
PPT	**Papeete**	**52.59**	**277**	LR	LR	02 05 51.4	
	comp=Z,193nm,18.3s,baz=124,slow=29						
SNAA	**Sanae**	**54.47**	**157**	P	**P**	**01 49 46.7**	**-0.2**
	comp=Z,3.4nm,1.0s,baz=232,slow=12,SNR=3.4						
	comp=Z,3.4nm,1.0s						
CMIG	**Matias Romero**	**55.09**	**359**	LR	LR	02 07 21.2	
	comp=Z,124nm,21.8s,baz=159,slow=30						
VNDA	**Vanda**	**55.95**	**195**	LR	LR	02 09 13.2	
	comp=Z,110nm,19.2s,baz=126,slow=31						
MDP	**Montagnes des**	**57.62**	**51**	LR	LR	02 12 55.7	
	comp=Z,197nm,20.2s,baz=182,slow=34						
RAR	**Rarotonga**	**58.59**	**267**	LR	LR	02 08 20.3	
	comp=Z,170nm,21.6s,baz=110,slow=29						
SJG	**San Juan**	**61.82**	**30**	LR	LR	02 16 01.1	
	comp=Z,69nm,19.4s,baz=236,slow=35						
TX31	**Lajitas Ar. Si**	**67.90**	**351**	P	**P**	**01 51 18.2**	**-0.2**
TXAR	**Lajitas Array**	**67.90**	**351**	P	**P**	**01 51 17.7**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=155,slow=9.1,SNR=9.9						
	comp=Z,1.3nm,0.9s						
TXAR	**Lajitas Array**	**67.90**	**351**		**P**	**01 51 17.3**	**-1.1**
WHTX	**Lake Whitney,**	**70.00**	**357**	P	**P**	**01 51 30.5**	**-0.8**
MSTX	**Muleshoe**	**72.38**	**352**	P	**P**	**01 51 44.6**	**-1.1**
LENM	**Lemitar**	**73.12**	**349**	P	**P**	**01 51 51.6**	**+1.3**
X18A	**Snowflake**	**73.98**	**346**	P	**P**	**01 51 56.0**	**+0.6**
X18A				IAmb	IAmb	01 52 07.8	
	comp=Z,8.9nm,1.5s						
BLYC	**Blythe**	**74.22**	**342**	P	**P**	**01 51 58.4**	**+1.9**
BLYC				IAmb	IAmb	01 51 59.7	
	comp=Z,4.1nm,0.9s						
T35A	**Sooner Cattle**	**74.88**	**358**	P	**P**	**01 52 02.5**	**+2.3**
LHV	**Little Huntoon**	**79.49**	**340**	P	**P**	**01 52 26.9**	**+0.8**
NVAR	**Mina Array Bea**	**79.60**	**341**	P	**P**	**01 52 27.4**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=167,slow=3.8,SNR=19						
	comp=Z,2.4nm,0.7s						
K22A	**Casper**	**81.39**	**351**	P	**P**	**01 52 38.1**	**+1.6**
K22A				IAmb	IAmb	01 52 46.8	
	comp=Z,6.6nm,1.0s						
PD31	**Pinedale Array**	**81.94**	**348**	P	**P**	**01 52 37.8**	**-1.6**
PD31				IAmb	IAmb	01 52 42.4	
	comp=Z,3.9nm,0.9s						
PDAR	**Pinedale Array**	**81.94**	**348**	P	**P**	**01 52 38.6**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=153,slow=6.3,SNR=20						
	comp=Z,1.9nm,0.7s						
PDAR	**Pinedale Array**	**81.94**	**348**	P	**P**	**01 52 37.7**	**-1.8**
YHH	**Holmes Hill**	**84.12**	**348**	P	**P**	**01 52 50.3**	**-0.5**
DBIC	**Dimbokro**	**93.27**	**84**	LR	LR	02 30 49.7	
	comp=Z,85nm,18.1s,baz=256,slow=32						
CTA	**Charters Tower**	**99.11**	**236**	LR	LR	02 28 29.5	
	comp=Z,692nm,20.8s,baz=322,slow=29						
H11S2	**WAKE ISLAND Hyd**	**108.52**	**279**	T	T	03 56 13.3	
	baz=126,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hyd**	**108.53**	**279**	T	T	03 56 15.3	
	baz=126,slow=76,SNR=5.5						
H11S3	**WAKE ISLAND Hyd**	**108.53**	**279**	T	T	03 56 12.6	
	baz=126,slow=76,SNR=5.8						
USRK	**Ussuriysk Ar.**	**145.41**	**295**	PKPbc	**PKPbc**	**01 59 55.5**	**-1.9**
	comp=Z,3.2nm,0.9s,baz=115,slow=2.4,SNR=4.7						
KSRS	**Korea Array**	**147.24**	**282**	PKPbc	**PKPab**	**02 00 03.2**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=90,slow=3.8,SNR=2.7						
BVAR	**Borovoye Array**	**161.65**	**31**	PKPab	**PKPab**	**02 01 06.1**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=308,slow=3.5,SNR=4.0						
SONM	**Songino Array**	**162.47**	**309**	PKPab	**PKPab**	**02 01 08.3**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=90,slow=1.4,SNR=4.4						

DNK 23 02:04:02.3±3.9, 80.18N×1.17W, h10km, ML1.3, Presumed earthquake
BER 23 02:04:07.3±1.7, 79.92N×0.82W, h10km, Mw2.5, ML1.3(DNK), Confirmed Earthquake

ISC 23 02:03:58.7±1.0, 80.11N±0.07×0.18W±0.05, h10km, n9, σ3 3 16/16, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.52**	**112**	*eP*	**Pg**	**02 04 46.9**	**+0.1**
KBS				*eS*	**Sb**	**02 05 15.0**	**+0.3**
KBS				IAML		02 05 21.5	
	comp=Z,2.6nm,0.5s						
KBS	**Kingsbay**	**2.52**	**112**	*i* P	**Pg**	**02 04 46.5**	**-0.3**
KBS				*i* S	**Sb**	**02 05 15.3**	**+0.6**
NOR	**Nord**	**3.02**	**308**	*eP*	**Pn**	**02 04 49.3**	**+2.9**
NOR				*i* S	**Sn**	**02 05 18.1**	**-4.5**
NOR				IAML		02 05 32.2	
	comp=Z,0.9nm,0.3s						
SPA0	**Spitsbergen Ar**	**3.67**	**114**	*eP*	**Pb**	**02 05 03.6**	**+0.1**
SPA0				*eS*	**Sb**	**02 05 44.6**	**-3.4**
SPA0				IAML		02 05 47.9	
	comp=Z,1.3nm,0.5s						
DAG	**Danmarks Havn**	**4.98**	**237**	*eP*	**Pn**	**02 05 16.9**	**+3.6**
DAG				*eS*	**Sn**	**02 06 08.2**	**-2.5**
DAG	**Danmarks Havn**	**4.98**	**237**	*i* P	**Pn**	**02 05 16.6**	**+3.3**
DAG				*i* S	**Sn**	**02 06 07.9**	**-2.9**
DAG				IAML		02 06 12.4	
	comp=Z,1.5nm,0.3s						
DBG	**Daneborg**	**7.27**	**227**	*eP*	**Pn**	**02 05 48.4**	**+3.7**
DBG				*eS*	**Sn**	**02 07 02.4**	**-4.8**
DBG	**Daneborg**	**7.27**	**227**	*eP*	**Pn**	**02 05 47.6**	**+2.8**
DBG				*eS*	Sn	02 07 00.7	-6.4
DBG				IAML		02 07 07.4	
	comp=Z,1.4nm,0.3s						
NEEM	**North Greenlan**	**9.95**	**281**	*i*	**Pn**	**02 06 24.3**	**+2.6**
NEEM				IAML		02 08 24.3	
	comp=Z,0.9nm,0.5s						

SVSA 23 02:04:29.8±1.5, 41.30N×29.64W, h5km, ML3.7(INMG), 3D, Error ellipse: s-maj=38.4km s-min=10.1km az=65.0, #DIST_RANGE: LOCAL #IPMA_REGION: Crista Mdia Atlntico N, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGRA	**Graciosa**	**2.60**	**150**	*eP*	Pn	02 05 08.2	-4.2
PGRA				*eS*	Sn	02 05 36.4	-8.0
PGRA				IAML		02 05 40.9	
PGRA				IAML		02 05 41.7	
PGRA				IAML		02 05 45.6	
PSBA	**Serra de Santa**	**3.09**	**144** ⇓	*eP*	Pn	02 05 13.8	-5.5
PSBA				*eS*	Sn	02 05 47.4	-9.1
PSBA				IAML		02 05 49.5	
PSBA				IAML		02 05 51.3	
PSBA				IAML		02 05 51.5	
PAGU	**Agualva, Azore**	**3.15**	**142** ⇓	*eP*	Pn	02 05 15.3	-4.8
PAGU				*eS*	Sn	02 05 50.3	-7.8
PAGU				IAML		02 05 53.3	
PAGU				IAML		02 05 54.1	
PAGU				IA

plane solution: NP1:φ₀38.00000°,δ58.00000°, λ80.00000°. NP2:φ₀236.00000°,δ33.00000°,λ105.00000°. Principal axes: T 9.1200, Plg75.0000°, Azm282.0000°; N -0.1600, Plg8.0000°, Azm43.0000°; P -8.9600, Plg13.0000°, Azm135.0000°;

ISC 23 02:08:06.1±0.3,0.255±0.03×125°24E±0°.03,h46km±2km, h46km:pP-P,n1126,σ1945/1156,mb5.4/289,MS4.6/78, 65C-27D,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.73**	**347**	P	**Pn**	**02 08 34.4**	**+0.7**
SANI	**Sanana**	**1.94**	**157**	P	**Pn**	**02 08 37.3**	**+0.7**
SANI	**Sanana**	**1.94**	**157**	P	**Pn**	**02 08 34.0**	**-2.6**
TNTI	**Ternate**	**2.35**	**65**		**Pn**	**02 08 42.2**	**-0.1**
TNTI				Sn	**Sn**	**02 09 10.6**	**+0.6**
TNTI	**Ternate**	**2.35**	**65**	P	**Pn**	**02 08 44.7**	**+2.4**
TNTI	**Ternate**	**2.35**	**65**	S	**Sn**	**02 09 12.6**	**+2.7**
TNTI	**Ternate**	**2.35**	**65**	P	**Pn**	**02 08 43.3**	**+1.0**
GTOI	**Gorontalo**	**2.40**	**291**	P	**Pn**	**02 08 45.7**	**+2.8**
LUWI	**Luwuk**	**2.59**	**252**		**Pn**	**02 08 45.3**	**-0.3**
LUWI	**Luwuk**	**2.59**	**252**	P	**Pn**	**02 08 47.8**	**+2.2**
LUWI	**Luwuk**	**2.59**	**252**	S	**Sn**	**02 09 20.6**	**+4.7**
LUWI	**Luwuk**	**2.59**	**252**	P	**Pn**	**02 08 46.4**	**+0.8**
GAMI	**Galela, Maluku**	**3.28**	**51**	P	**Pn**	**02 08 56.2**	**+1.2**
MRSI	**Marisa**	**3.38**	**282**	P	**Pn**	**02 08 54.6**	**-1.8**
NLAI	**Namlea**	**3.51**	**148**	P	**Pn**	**02 08 56.8**	**-1.3**
APSI	**Ampana**	**3.65**	**260**	P	**Pn**	**02 09 00.9**	**+0.7**
SGSI	**Sangihe**	**3.92**	**4**	P	**Pn**	**02 09 04.3**	**+0.5**
KRAI	**Karang Ratu**	**4.39**	**134**	P	**Pn**	**02 09 10.4**	**+0.2**
AAI	**Ambon**	**4.52**	**139**	P	**Pn**	**02 09 12.2**	**+0.2**
TOLI2	**Tolitoli**	**4.66**	**287**		**Pn**	**02 09 13.0**	**-1.0**
TOLI2	**Tolitoli**	**4.66**	**287**	P	**Pn**	**02 09 15.4**	**+1.4**
TOLI2	**Tolitoli**	**4.66**	**287**	S	**Sn**	**02 10 10.9**	**+4.1**
MSAI	**Masohi**	**4.80**	**130**	P	**Pn**	**02 09 16.8**	**+0.9**
MPSI	**Mapaga**	**5.38**	**276**	P	**Pn**	**02 09 24.9**	**+1.1**
	5.7nm15μm10μm861nm,0.7s						
PCI	**Palu**	**5.45**	**263**	P	**Pn**	**02 09 26.3**	**+1.5**
SWI	**Sorong**	**6.05**	**96**	P	**Pn**	**02 09 33.6**	**+0.5**
	12μm3μm181nm,1.0s						
SIJI	**Sorong**	**6.05**	**96**	Pn	**Pn**	**02 09 34.5**	**+1.4**
	9.8nm,0.3s,baz=308,slow=11,SNR=20						
SIJI				Sn	**Sn**	**02 10 42.4**	**+1.1**
	baz=269,slow=20						
	120nm,0.6s						
SIJI	**Sorong**	**6.05**	**96**	P	**Pn**	**02 09 34.1**	**+0.9**
	10μm3μm204nm,1.1s						
TTSI	**Tana Toraja**	**6.09**	**243**	P	**Pn**	**02 09 34.4**	**+0.7**
BNDI	**Bandanaira**	**6.30**	**132**	P	**Pn**	**02 09 36.1**	**-0.5**
BNDI	**Bandanaira**	**6.30**	**132**	S	**Sn**	**02 10 48.3**	**+1.0**
BNDI	**Bandanaira**	**6.30**	**132**	P	**Pn**	**02 09 36.3**	**-0.3**
	4.6nm17μm1μm,1.3s						
SPSI	**Sidrap Palu**	**6.60**	**236**	P	**Pn**	**02 09 41.9**	**+1.3**
	2.8nm11μm7μm575nm,0.8s						
MMSI	**Mamuju**	**6.78**	**249**	P	**Pn**	**02 09 44.2**	**+1.1**
	4.5nm7μm458nm,0.5s						
PMSI	**Majene**	**7.10**	**243**	P	**Pn**	**02 09 49.3**	**+1.7**
	5.0nm7μm12μm503nm,1.0s						
KAPI	**Kappang**	**7.25**	**229**	Pn	**Pn**	**02 09 50.9**	**+1.4**
	21nm,0.3s,baz=33,slow=4.0,SNR=31						
KAPI				Sn	**Sn**	**02 11 08.8**	**-1.7**
	16nm,0.3s,baz=252,slow=20,SNR=1.8						
KAPI				LR	LR	02 13 26.6	
	comp=Z,10μm,20.7s,baz=45,slow=45						
KAPI	**Kappang**	**7.25**	**229**		**Pn**	**02 09 51.3**	**+1.8**
KAPI	**Kappang**	**7.25**	**229**	P	**Pn**	**02 09 51.3**	**+1.8**
KAPI	**Kappang**	**7.25**	**229**	S	**Sn**	**02 11 13.0**	**+2.5**
KAPI	**Kappang**	**7.25**	**229**	P	**Pn**	**02 09 51.3**	**+1.8**
KAPI	**Kappang**	**7.25**	**229**	P	**Pn**	**02 09 50.5**	**+1.0**
KAPI				S	**Sn**	**02 11 05.8**	**-4.7**
KAPI	**Kappang**	**7.25**	**229**	P	**Pn**	**02 09 51.2**	**+1.8**
DAV	**Davao City (W)**	**7.27**	**3**	Pn	**Pn**	**02 09 51.2**	**+1.3**
	55nm,0.3s,baz=200,slow=5.3,SNR=8.6						
DAV				LR	LR	02 13 04.0	
	comp=Z,13μm,19.1s,baz=196,slow=42						
DAV	**Davao City (W)**	**7.27**	**3**		**Pn**	**02 09 50.7**	**+0.8**
DAV	**Davao City (W)**	**7.27**	**3**	P	**Pn**	**02 09 50.9**	**+1.0**
DAV	**Davao City (W)**	**7.27**	**3**	S	**Sn**	**02 11 13.2**	**+2.0**
DAV	**Davao City (W)**	**7.27**	**3**	P	**Pn**	**02 09 51.5**	**+1.6**
	4.0nm11μm842nm,1.1s						
FAKI	**Fak Fak**	**7.49**	**111**		**Pn**	**02 09 51.3**	**-1.6**
FAKI	**Fak Fak**	**7.49**	**111**	P	**Pn**	**02 09 51.3**	**-1.6**
FAKI	**Fak Fak**	**7.49**	**111**	P	**Pn**	**02 09 51.3**	**-1.6**
	0.7nm8μm130nm,0.6s						
BSSI	**Bau Bau, Buton**	**7.54**	**219**	P	**Pn**	**02 09 54.0**	**+0.5**
	1.3nm4μm230nm,0.6s						
MKS	**Makassar**	**7.59**	**229**	P	**Pn**	**02 09 56.0**	**+1.8**
	1.8nm4μm532nm,0.7s						
BKB	**Balikpapan**	**8.41**	**263**		Pn	02 10 10.6	+5.2
BKB	**Balikpapan**	**8.41**	**263**	P	Pn	02 10 09.2	+3.8
BKB	**Balikpapan**	**8.41**	**263**	P	**Pn**	**02 10 06.8**	**+1.4**
MYLDM	**Lahad Datu**	**8.62**	**309**		**Pn**	**02 10 10.4**	**+2.0**
MYLDM	**Lahad Datu**	**8.62**	**309**	P	Pn	02 10 11.5	+3.1
MYLDM	**Lahad Datu**	**8.62**	**309**	P	**Pn**	**02 10 10.9**	**+2.5**
MWPI	**Manokwari, Pap**	**8.82**	**94**	P	**Pn**	**02 10 13.5**	**+2.4**
	6μm615nm,1.2s						
RKPI	**Ransiki, Papua**	**9.02**	**98**	P	**Pn**	**02 10 15.5**	**+1.6**
	9μm281nm,1.2s						
KMPI	**Kaimana, Papua**	**9.11**	**112**	P	**Pn**	**02 10 13.9**	**-1.2**
	4μm292nm,0.8s						
EDFI	**Ende, Flores**	**9.16**	**203**	P	**Pn**	**02 10 15.9**	**0.0**
SOEI	**Soe**	**9.50**	**186**		Pn	02 10 24.3	+3.8
SOEI	**Soe**	**9.50**	**186**	P	Pn	02 10 25.3	+4.8
SOEI	**Soe**	**9.50**	**186**	P	**Pn**	**02 10 23.2**	**+2.7**
	8μm4μm232nm,1.0s						
BATI	**Baumata**	**10.02**	**189**	Pn	**Pn**	**02 10 28.3**	**+0.8**
	8.6nm,0.3s,baz=110,slow=4.5,SNR=6.9						
BATI				LR	LR	02 15 47.9	
	comp=Z,5μm,20.5s,baz=359,slow=46						
	25nm,0.7s						
BATI	**Baumata**	**10.02**	**189**	P	**Pn**	**02 10 28.2**	**+0.6**
	5μm2μm150nm,1.1s						
MTKI	**Muara Teweh, K**	**10.37**	**266**	P	**Pn**	**02 10 33.5**	**+1.2**
	5μm108nm,0.6s						
BBKI	**Banjar Baru**	**10.88**	**253**	P	**Pn**	**02 10 40.6**	**+1.3**
	137nm,0.9s						
BAKI	**Biak**	**10.90**	**95**	P	**Pn**	**02 10 39.6**	**-0.1**
	6μm3μm205nm,1.2s						
KKM	**Kota Kinabalu**	**10.97**	**305**		**Pn**	**02 10 40.0**	**-0.6**
KKM	**Kota Kinabalu**	**10.97**	**305**	P	Pn	02 10 45.5	+4.9
KKM	**Kota Kinabalu**	**10.97**	**305**	P	**Pn**	**02 10 43.3**	**+2.7**
	9μm2μm109nm,0.8s						
PLAI	**Plampang**	**11.31**	**221**	P	**Pn**	**02 10 48.6**	**+3.4**
TWSI	**Taliwang, Sumb**	**11.86**	**224**	P	Pn	02 11 11.2	+19
KHKI	**Kahang-Kahang**	**12.54**	**230**	P	P	02 11 17.6	+5.1
SRBI	**Singaraja**	**12.67**	**232**	P	**Pn**	**02 11 06.0**	**+2.2**
	66nm,0.8s						
RTBI	**Rangdo, Negare**	**13.11**	**231**	P	**Pn**	**02 11 13.1**	**+3.2**
	2μm256nm,0.9s						
SBUM	**Sibu**	**13.29**	**282**		**Pn**	**02 11 12.0**	**-0.3**
SBUM	**Sibu**	**13.29**	**282**	P	**Pn**	**02 11 15.3**	**+3.0**
SBUM	**Sibu**	**13.29**	**282**	P	**P**	**02 11 21.7**	**+0.8**
ABJI	**Asem Bagus**	**13.29**	**235**	P	P	02 11 26.4	+5.5
DRS	**Darwin Rock St**	**13.35**	**155**	P	**Pn**	**02 11 13.6**	**+0.6**
SMPI	**Sarmi**	**13.57**	**97**	P	**P**	**02 11 20.6**	**-3.5**
JAGI	**Jajag, Banyuwa**	**13.74**	**233**		**Pn**	**02 11 18.7**	**+0.2**
JAGI	**Jajag, Banyuwa**	**13.74**	**233**	P	**Pn**	**02 11 18.9**	**+0.4**
JAGI	**Jajag, Banyuwa**	**13.74**	**233**	P	**P**	**02 11 22.1**	**-3.8**
	2μm99nm,0.8s						
BLJI	**Banyuglugur**	**13.80**	**237**	P	**P**	**02 11 30.0**	**+3.5**
MTN	**Manton Dam**	**13.81**	**155**	P	**Pn**	**02 11 19.2**	**-0.2**
	comp=Z,65nm,1.2s						
MTN	**Manton Dam**	**13.81**	**155**		**Pn**	**02 11 18.1**	**-1.3**
KDU	**Kakadu**	**14.29**	**150**	P	**Pn**	**02 11 24.4**	**-1.4**
	comp=Z,44nm,1.1s						
TBJI	**Tambak Boyo**	**14.87**	**244**	P	**P**	**02 11 40.5**	**+2.0**
TGY	**Tagaytay City**	**14.88**	**344**	Pn	**Pn**	**02 11 32.6**	**-1.1**
	comp=Z,114nm,0.3s,baz=180,slow=7.1,SNR=4.5						
TGY				LR	LR	02 18 16.5	
	comp=Z,2μm,20.7s,baz=134,slow=42						
GENI	**Genyem**	**15.10**	**99**	P	**Pn**	**02 11 36.5**	**-0.1**
GENI	**Genyem**	**15.10**	**99**	P	**P**	**02 11 42.5**	**+1.5**
SJI	**Sawahan**	**15.36**	**241**	P	**P**	**02 11 43.7**	**-0.3**
	comp=Z,5μmcomp=Z,312nm,1.8s						
SNJI	**Sawahan-Nganju**	**15.38**	**241**	P	**P**	**02 11 46.0**	**+1.6**
NGJI	**Ngawi**	**15.46**	**242**	P	**P**	**02 11 48.2**	**+3.2**
JAY	**Jayapura**	**15.62**	**98**	Pn	**Pn**	**02 11 44.5**	**+1.2**
	comp=Z,1.5nm,0.3s,baz=267,slow=7.5,SNR=5.4						
	comp=Z,19nm,0.8s						
KNRA	**Kununurra**	**15.72**	**167**	P	**Pn**	**02 11 44.0**	**-0.6**
	comp=Z,168nm,1.0s						
KNRA	**Kununurra**	**15.72**	**167**		**Pn**	**02 11 43.7**	**-0.9**
PCJI	**Pacitan**	**16.09**	**240**	P	**Pn**	**02 11 50.1**	**+0.8**
	comp=Z,3μmcomp=Z,195nm,1.8s						
SMRI	**Semarang**	**16.24**	**245**		**P**	**02 11 54.9**	**+1.2**
SMRI				IAmb	IAmb	02 11 58.6	
	comp=Z,456nm,1.0s						
SMRI	**Semarang**	**16.24**	**245**	P	**P**	**02 11 54.3**	**+0.6**
SMRI	**Semarang**	**16.24**	**245**	P	**P**	**02 11 54.7**	**+1.0**
UGM	**Wanagama**	**16.53**	**242**	P	**P**	**02 11 57.2**	**+0.2**
UGM	**Wanagama**	**16.53**	**242**	P	**P**	**02 11 58.9**	**+1.9**
UGM	**Wanagama**	**16.53**	**242**	P	**P**	**02 11 57.1**	**+0.1**
	comp=Z,82nm,0.9s						
CTJI	**Waduk Cacaban**	**17.37**	**247**	P	**P**	**02 12 08.7**	**+2.5**
	comp=Z,6μmcomp=Z,221nm,0.9s						
KPJI	**Karang Pucung**	**17.72**	**246**	P	**P**	**02 12 11.0**	**+0.9**
FITZ	**Fitzroy Crossi**	**17.75**	**179**	Pn	**Pn**	**02 12 09.9**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=6.9,slow=9.6,SNR=23						
FITZ				S	**Sn**	**02 15 25.0**	**-1.9**
	comp=Z,6.1nm,0.8s,baz=94,slow=19,SNR=4.5						
FITZ				LR	LR	02 21 00.3	
	comp=Z,1μm,20.5s,baz=5.0,slow=44						
	comp=Z,17nm,0.9s						
SZP	**Santa**	**18.30**	**345**	P	**Pn**	**02 12 20.2**	**+3.5**
LEM	**Lembang**	**18.76**	**249**	Pn	**Pn**	**02 12 22.5**	**0.0**
	comp=Z,10.0nm,0.3s,baz=63,slow=11,SNR=26						
LEM				LR	LR	02 20 18.7	
	comp=Z,7μm,21.7s,baz=51,slow=39						
	comp=Z,380nm,0.9s						
LEM	**Lembang**	**18.76**	**249**	P	**Pn**	**02 12 22.7**	**+0.2**
	comp=Z,3μmcomp=Z,3μmcomp=Z,362nm,0.9s						
BBJI	**Bungbulang**	**18.95**	**247**	P	**P**	**02 12 23.5**	**-0.2**
BBJI				IAmb	IAmb	02 12 29.3	
	comp=Z,170nm,0.9s						
BBJI	**Bungbulang**	**18.95**	**247**	P	**Pn**	**02 12 24.1**	**-0.6**
BBJI	**Bungbulang**	**18.95**	**247**	P	**P**	**02 12 23.6**	**-0.1**
	comp=Z,3μmcomp=Z,236nm,1.1s						
PPBI	**Pangkal Pinang**	**19.20**	**264**	P	**Pn**	**02 12 29.3**	**+1.7**
DBJI	**Dramaga**	**19.49**	**251**	P	**Pn**	**02 12 30.7**	**-0.4**
	comp=Z,5μmcomp=Z,247nm,0.8s						
DSRI	**Dabo**	**20.67**	**269**	P	**P**	**02 12 41.7**	**-0.6**
	comp=Z,3μmcomp=Z,2μmcomp=Z,142nm,0.8s						
TPRI	**Tanjung Pinang**	**20.75**	**273**	P	Pn	02 12 44.3	-1.7
	comp=Z,3μmcomp=Z,125nm,0.8s						
KLSI		**20.96**	**258**	P	**P**	**02 12 46.4**	**+0.9**
KASI	**Kota Agung**	**21.37**	**255**	P	**P**	**02 12 52.1**	**+2.2**
	comp=Z,2μmcomp=Z,2μmcomp=Z,137nm,1.3s						
WB0	**Warramunga Arr**	**21.37**	**156**		**P**	**02 12 48.2**	**-1.7**
MDSI	**Maura Dua**	**21.46**	**258**	P	**P**	**02 12 51.1**	**+0.2**
MBWA	**Marble Bar**	**21.47**	**194**	P	**P**	**02 12 51.8**	**+0.9**
	comp=Z,69nm,1.5s						
MBWA	**Marble Bar**	**21.47**	**194**	P	**P**	**02 12 51.2**	**+0.3**
MBWA	**Marble Bar**	**21.47**	**194**	P	**P**	**02 12 52.8**	**+1.9**
MBWA	**Marble Bar**	**21.47**	**194**	P	**P**	**02 12 53.2**	**+2.3**
MBWA				S	**S**	**02 16 41.4**	**-5.4**
MYKOM	**Kota Tinggi**	**21.48**	**275**	P	**P**	**02 12 51.0**	**-0.1**
MYKOM	**Kota Tinggi**	**21.48**	**275**	P	**P**	**02 12 53.1**	**+2.0**
MYKOM	**Kota Tinggi**	**21.48**	**275**	P	**P**	**02 12 50.5**	**-0.6**
	comp=Z,77nm,0.9s						
WRAB	**Tennant Creek**	**21.50**	**156**	P	**P**	**02 12 49.7**	**-1.6**
WRAB	**Tennant Creek**	**21.50**	**156**	P	**P**	**02 12 50.2**	**-1.1**
WRAB	**Tennant Creek**	**21.50**	**156**	*ce*P	**P**	**02 12 51.2**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,89nm,1.3s						
WRA	**Warramunga Arr**	**21.51**	**156**	P	**P**	**02 12 49.7**	**-1.6**
	comp=Z,40nm,1.1s,baz=335,slow=10,SNR=35						
WRA				PcP	**PcP**	**02 16 53.9**	**+0.9**
	comp=Z,8.2nm,1.2s,baz=316,slow=2.7,SNR=6.2						
WRA				ScP	**ScP**	**02 20 27.0**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=323,slow=3.9,SNR=4.8						
WRA	**Warramunga Arr**	**21.51**	**156**	P	**P**	**02 12 48.4**	**-2.9**
WRA	**Warramunga Arr**	**21.51**	**156**	P	**P**	**02 12 48.4**	**-2.9**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WR8	**Warramunga Arr**	**21.59**	**156**	P	**P**	**02 12 50.1**	**-2.1**
LWLI	**Liwa**	**21.68**	**257**	P	P	02 13 00.2	+6.8
PSAC1	**Pilbara Seismi**	**21.81**	**194**	P	**P**	**02 12 56.3**	**+1.7**
	comp=Z,52nm,1.7s						
PSAC2	**Pilbara Seismi**	**21.82**	**193**	P	**P**	**02 12 54.7**	**0.0**
	comp=Z,58nm,1.4s						
PSA00	**Pilbara Seismi**	**21.84**	**194**	P	**P**	**02 12 56.8**	**+1.9**
	comp=Z,44nm,0.6s						
PSA00	**Pilbara Seismi**	**21.84**	**194**	P	**P**	**02 12 54.2**	**-0.7**
PSA00	**Pilbara Seismi**	**21.84**	**194**		**P**	**02 12 54.5**	**-0.4**
PSA00				IAmb	IAmb	02 13 03.4	
	comp=Z,152nm,1.9s						
PSA00	**Pilbara Seismi**	**21.84**	**194**	P	**P**	**02 12 57.7**	**+2.8**
PSAB3	**Pilbara Seismi**	**21.86**	**194**	P	**P**	**02 12 55.8**	**+0.7**
	comp=Z,66nm,1.4s						
XMI	**Christmas Isla**	**21.93**	**242**	P	**P**	**02 12 56.6**	**+0.7**
MANU	**Manus Island**	**22.19**	**95**	P	**P**	**02 12 58.0**	**-0.7**
COEN	**Coen**	**22.38**	**128**	P	**P**	**02 13 01.2**	**+0.5**
	comp=Z,168nm,1.2s						
COEN	**Coen**	**22.38**	**128**	P	**P**	**02 13 00.8**	**+0.1**
COEN				IAmb	IAmb	02 13 08.6	
	comp=Z,256nm,1.2s						
COEN	**Coen**	**22.38**	**128**	P	**P**	**02 13 02.5**	**+1.8**
MNAI	**Manna**	**22.64**	**259**	P	**P**	**02 13 02.2**	**-1.4**
MNAI				IAmb	IAmb	02 13 07.0	
	comp=Z,276nm,1.4s						
MASI	**Maura Aman, Be**	**23.17**	**263**	P	**P**	**02 13 08.4**	**-0.6**
	comp=Z,4μmcomp=Z,204nm,2.2s						
TWGBT	**Beinan**	**23.28**	**350**	P	**P**	**02 13 12.1**	**+2.2**
TWG	**Pinlang**	**23.28**	**350**	P	**P**	**02 13 08.9**	**-1.1**
TWG				IAmb	IAmb	02 13 12.3	
	comp=Z,58nm,0.6s						
PMG	**Port Moresby**	**23.64**	**113**	LR	LR	02 26 25.4	
	comp=Z,1μm,19.9s,baz=310,slow=46						
PMG	**Port Moresby**	**23.64**	**113**	P	**P**	**02 13 12.8**	**-0.7**
PMG				IAmb	IAmb	02 13 37.0	
	comp=Z,193nm,1.4s						
PMG	**Port Moresby**	**23.64**	**113**	P	**P**	**02 13 15.3**	**+1.8**
PMG	**Port Moresby**	**23.64**	**113**	P	**P**	**02 13 14.8**	**+1.3**
PMG	**Port Moresby**	**23.64**	**113**	P	**P**	**02 13 12.8**	**-0.7**
PMG				pmax	pmax		
	comp=Z,193nm,1.4s						
PMG	**Port Moresby**	**23.64**	**113**	P	**P**	**02 13 14.9**	**+1.4**
	comp=Z,4μmcomp=Z,2μmcomp=Z,98nm,1.1s						
YULB	**Yu-li**	**23.81**	**351**	P	**P**	**02 13 12.6**	**-2.3**
YULB				IAmb	IAmb	02 13 20.1	
	comp=Z,120nm,1.3s						
YULB	**Yu-li**	**23.81**	**351**	P	**P**	**02 13 16.4**	**+1.5**
TPUB	**Ta-pu**	**23.83**	**349**	P	**P**	**02 13 12.2**	**-3.0**
TPUB				IAmb	IAmb	02 13 26.4	
	comp=Z,221nm,1.0s						
TPUB	**Ta-pu**	**23.83**	**349**	P	**P**	**02 13 15.0**	**-0.2**
KRJI	**Kerinci**	**23.84**	**265**	P	**P**	**02 13 19.8**	**+4.3**
	comp=Z,417nm,1.0s						
SSLB	**Suanglung**	**24.25**	**350**		**P**	**02 13 17.5**	**-1.5**
SSLB	**Suanglung**	**24.25**	**350**	P	**P**	**02 13 20.7**	**+1.7**
QIZ	**Qiongzhong**	**24.40**	**323**	P	**P**	**02 13 20.5**	**+0.1**
QIZ				S	**S**	**02 17 38.9**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,39nm,2.2s						
QIZ				pmax	pmax		
	comp=Z,670nm,9.2s						
QIZ				LR	LR		
	comp=Z,900nm,17.7s						
QIZ				LR	LR		
	comp=Z,1μm,17.8s						
QIZ				LR	LR		
	comp=Z,2μm,17.2s						
QIS	**Mount Isa**	**24.59**	**146**	P	**P**	**02 13 22.8**	**+0.6**
	comp=Z,139nm,1.1s						
QIS	**Mount Isa**	**24.59**	**146**	P	**P**	**02 13 23.5**	**+1.3**
IPM	**Ipoh**	**24.64**	**281**		**P**	**02 13 21.4**	**-1.4**
IPM				IAmb	IAmb	02 13 25.0	
	comp=Z,91nm,1.1s						
IPM	**Ipoh**	**24.64**	**281**	P	**P**	**02 13 24.9**	**+2.1**
IPM	**Ipoh**	**24.64**	**281**	P	**P**	**02 13 22.5**	**-0.3**
	comp=Z,82nm,0.9s						
AS31	**Alice Springs**	**24.75**	**161**		**P**	**02 13 23.4**	**-0.3**
ASAR	**Alice Springs**	**24.75**	**161**	P	**P**	**02 13 22.8**	**-0.9**
	comp=Z,22nm,0.9s,baz=341,slow=8.7,SNR=61						
ASAR				PcP	**PcP**	**02 17 00.2**	**+0.5**
	comp=Z,4.5nm,0.5s,baz=348,slow=2.0,SNR=13						
ASAR				S	**S**	**02 17 43.9**	**+0.9**
	comp=Z,6.7nm,1.1s,baz=347,slow=23,SNR=5.8						
ASAR				ScP	**ScP**	**02 20 36.2**	**+1.1**
	comp=Z,5.3nm,1.1s,baz=11,slow=0.9,SNR=9.5						
ASAR				LR	LR	02 24 29.8	
	comp=Z,604nm,21.4s,baz=295,slow=40						
	comp=Z,22nm,0.9s						
ASAR	**Alice Springs**	**24.75**	**161**		**P**	**02 13 23.7**	**0.0**
ASAR					**PcP**	**02 16 59.5**	**-0.2**
ASAR					**S**	**02 17 46.5**	**+3.6**
ASAR					**ScP**	**02 20 36.8**	**+1.7**
ASAR	**Alice Springs**	**24.75**	**161**	P	**P**	**02 13 23.7**	**0.0**
ASAR						02 16 59.5	
ASAR				S	**S**	**02 17 46.5**	**+3.6**
AUALC	**St Philip's Co**	**24.77**	**161**	P	**P**	**02 13 25.5**	**+1.7**
PDSI	**Padang**	**24.79**	**268**	P	**P**	**02 13 24.4**	**+0.3**
	comp=Z,73nm,1.2s						
WRKA	**Warakurna**	**24.82**	**173**	P	**P**	**02 13 24.8**	**+0.6**
	comp=Z,37nm,1.1s						
PPI	**Padang Panjang**	**24.85**	**269**	P	**P**	**02 13 24.1**	**-0.5**
	comp=Z,3μmcomp=Z,49nm,1.0s						
YHNB	**Yeheng**	**25.05**	**352**		**P**	**02 13 25.1**	**-1.2**
YHNB	**Yeheng**	**25.05**	**352**	P	**P**	**02 13 30.7**	**+4.4**
KULM	**Kulim**	**25.17**	**283**		**P**	**02 13 27.2**	**-0.3**
KULM	**Kulim**	**25.17**	**283**	P	**P**	**02 13 29.8**	**+2.3**
KULM	**Kulim**	**25.17**	**283**	P	**P**	**02 13 28.4**	**+0.9**
PPSI	**Pulau Pagai**	**25.35**	**264**	P	P	02 13 35.6	+6.5
KAVG	**Kavieng**	**25.66**	**95**	P	**P**	**02 13 33.7**	**+1.8**
MNSI	**Mandailing Nat**	**25.68**	**272**	P	**P**	**02 13 34.5**	**+2.3**
	comp=Z,5μmcomp=Z,55nm,0.5s						
MTSU	**Mount Surprise**	**25.84**	**135**	P	**P**	**02 13 34.5**	**+1.0**
	comp=Z,29nm,1.2s						
MTSU	**Mount Surprise**	**25.84**	**135**	P	**P**	**02 13 35.2**	**+1.7**
QZH2	**Quanzhou**	**25.86**	**346**	P	**P**	**02 13 35.3**	**+1.7**
QZH2				S	**S**	**02 18 02.0**	**+1.7**
QZH2				LR	LR		
	comp=Z,1μm,18.2s						
QZH2				LR	LR		
	comp=Z,2μm,23.6s						
QZH2				LR	LR		
	comp=Z,2μm,22.3s						
GZH2	**Guangzhou**	**26.29**	**335**	P	**P**	**02 13 36.8**	**-0.7**
GZH2				S	**S**	**02 18 11.4**	**+4.3**
GZH2				LR	LR		
	comp=Z,2μm,16.5s						
GZH2				LR	LR		
	comp=Z,1μm,18.0s						
GZH2				LR	LR		
	comp=Z,4μm,19.2s						
RPSI	**Rantau Prapat**	**26.47**	**277**		**P**	**02 13 38.2**	**-1.1**
PSI	**Prapat**	**26.48**	**277**	P	**P**	**02 13 41.2**	**+1.7**
PSI	**Prapat**	**26.48**	**277**	P	**P**	**02 13 38.2**	**-1.3**
PSI				pmax	pmax		
	comp=Z,22nm,1.0s						
PSI	**Prapat**	**26.48**	**277**	P	**P**	**02 13 38.7**	**-0.8**
MEEK	**Meekatharra**	**27.01**	**193**	P	**P**	**02 13 43.3**	**-0.7**
	comp=Z,28nm,0.9s						
MEEK	**Meekatharra**	**27.01**	**193**	P	**P**	**02 13 44.4**	**+0.4**
JOW	**Kunigami**	**27.08**	**6**	LR	LR	02 24 14.6	
	comp=Z,1μm,21.1s,baz=128,slow=36						
JOW	**Kunigami**	**27.08**	**6**	P	**P**	**02 13 45.1**	**+0.5**
JOW	**Kunigami**	**27.08**	**6**	P	**P**	**02 13 47.6**	**+3.0**
CTA	**Charters Tower**	**28.50**	**135**	P	P	02 14 02.2	+4.8
CTAO	**Charters Tower**	**28.50**	**135**	P	**P**	**02 13 58.0**	**+0.6**
CTAO	**Charters Tower**	**28.50**	**135**	P	P	02 14 02.5	+5.1
CTAO	**Charters Tower**	**28.50**	**135**	P	**P**	**02 13 58.0**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,63nm,1.5s						
GULI	**GuiLin**	**29.18**	**332**	P	**P**	**02 14 04.8**	**+1.4**
GULI				S	**S**	**02 18 52.3**	**-0.4**
GULI				pmax	pmax		
	comp=Z,18nm,1.1s						
GULI				LR	LR		
	comp=Z,1μm,19.0s						
GULI				LR	LR		
	comp=Z,930nm,18.4s						

PZH pmax pmax
comp=Z,210nm,3.8s
PZH LR LR
comp=Z,910nm,21.1s
PZH LR LR
comp=Z,540nm,18.6s
PZH LR LR
comp=Z,1μm,21.6s
STKA Stephens Creek 35.06 155 P P 02 14 55.9 +1.0
comp=Z,243nm,1.0s
STKA Stephens Creek 35.06 155 P P 02 14 54.7 -0.1
comp=Z,45nm,1.1s,baz=328,slow=9.4,SNR=30
STKA S **S 02 20 23.8 -0.4**
comp=Z,9.0nm,1.2s,baz=63,slow=23,SNR=5.1
comp=Z,45nm,1.1s
STKA Stephens Creek 35.06 155 P 02 14 55.3 +0.5
STKA Stephens Creek 35.06 155 P P 02 14 55.7 +0.9
STKA Stephens Creek 35.06 155 P P 02 14 55.3 +0.5
STKA pmax pmax
comp=Z,232nm,1.1s
HTT Hallett 35.43 160 P P 02 14 60.0 +1.9
comp=Z,12nm,1.3s
HTT Hallett 35.43 160 P P 02 15 00.5 +2.5
comp=Z,29nm,1.3s
HTT Hallett 35.43 160 P P 02 14 59.9 +1.9
SAVO Savo Central 35.54 105 P P 02 15 01.0 +1.8
TNCH TengChong 36.05 316 P P 02 15 02.6 -1.1
TNCH pP sP 02 15 18.4 -1.7
TNCH PP **PP 02 16 29.4 +3.1**
TNCH S **S 02 20 40.1 +0.1**
TNCH SS **SnSn 02 23 08.1 +0.2**
TNCH pmax pmax
comp=Z,44nm,1.8s
TNCH pmax pmax
comp=Z,240nm,2.6s
TNCH LR LR
comp=Z,540nm,22.2s
TNCH LR LR
comp=Z,490nm,24.0s
TNCH LR LR
comp=Z,2μm,26.1s
AULRC Lightning Ridg 36.23 145 P P 02 15 06.9 +2.0
TJN Taejon 36.49 3 P 02 15 07.3 +0.3
TJN Taejon 36.49 3 P P 02 15 09.7 +2.7
TJN Taejon 36.49 3 P P 02 15 07.3 +0.3
TJN pmax pmax
comp=Z,549nm,1.6s
LYN LuoYang 36.62 342 P P 02 15 07.3 -0.9
LYN pmax pmax
comp=Z,65nm,0.8s
LYN pmax pmax
comp=Z,460nm,5.3s
LYN LR LR
comp=Z,1μm,18.1s
LYN LR LR
comp=Z,1μm,24.1s
LYN LR LR
comp=Z,2μm,24.1s
CMSA Cobar Meteorol 36.65 150 P P 02 15 10.0 +1.6
comp=Z,48nm,1.1s
CMSA Cobar Meteorol 36.65 150 P P 02 15 09.9 +1.4
JSG Sagara 36.79 18 P P 02 15 08.9 -0.7
TIA Tai'an 37.05 349 P P 02 15 11.6 -0.2
TIA PcP **PcP 02 17 32.9 +1.0**
TIA S **S 02 20 55.6 +1.1**
TIA pmax pmax
comp=Z,20nm,0.7s
TIA pmax pmax
comp=Z,280nm,6.2s
TIA LR LR
comp=Z,840nm,20.6s
TIA LR LR
comp=Z,540nm,21.3s
TIA LR LR
comp=Z,2μm,26.1s
INU Inuyama 37.08 16 P 02 15 12.1 +0.1
INU IAmb IAmb 02 15 36.7
comp=Z,139nm,1.4s
INU Inuyama 37.08 16 P P 02 15 13.0 +1.0
CD2 Chengdu 37.10 329 P P 02 15 13.0 +0.7
CD2 S **S 02 20 56.4 +0.8**
CD2 pmax pmax
comp=Z,70nm,1.3s
CD2 pmax pmax
comp=Z,290nm,5.9s
CD2 LR LR
comp=Z,2μm,21.3s
CD2 LR LR
comp=Z,2μm,19.9s
CD2 LR LR
comp=Z,2μm,19.3s
AUMBR Murray Bridge 37.10 161 P P 02 15 13.6 +1.4
XAN Xi'an 37.39 337 P P 02 15 13.1 -1.6
XAN S **S 02 20 56.3 -3.5**
XAN pmax pmax
comp=Z,55nm,0.9s
XAN pmax pmax
comp=Z,260nm,5.0s
XAN LR LR
comp=Z,2μm,18.9s
XAN LR LR
comp=Z,1μm,18.5s
XAN LR LR
comp=Z,3μm,17.7s
JGF Kuroka 37.41 16 P 02 15 14.3 -0.6
JGF IAmb IAmb 02 15 16.7
comp=Z,97nm,1.6s
INCN Inchon 37.56 2 P P 02 15 16.9 +0.8
INCN IAmb IAmb 02 15 19.0
comp=Z,126nm,1.5s
INCN Inchon 37.56 2 P P 02 15 19.0 +2.9
INCN Inchon 37.56 2 P P 02 15 16.9 +0.8
INCN pmax pmax
comp=Z,126nm,1.5s
KSAR Wonju Array Be 37.58 3 P P 02 15 16.8 +0.6
KSAR Wonju Array Be 37.58 3 P P 02 15 16.8 +0.6
KSRS Korea Array 37.59 3 P P 02 15 17.0 +0.7
comp=Z,12nm,0.7s,baz=184,slow=10,SNR=39
KSRS PcP **PcP 02 17 33.7 +0.2**
comp=Z,3.7nm,0.7s,baz=182,slow=2.7,SNR=6.2
KSRS ScP **ScP 02 21 18.0 +0.7**
comp=Z,1.6nm,0.8s,baz=185,slow=4.2,SNR=4.2
KSRS LR LR 02 30 36.9
comp=Z,801nm,21.7s,baz=185,slow=36
comp=Z,12nm,0.7s
KS19 Wonju Array Si 37.64 3 P P 02 15 16.9 +0.2
KS19 IAmb IAmb 02 15 18.8
comp=Z,77nm,1.4s
MAJO Matsushiro 38.53 17 P P 02 15 24.0 -0.3
MAJO IAmb IAmb 02 15 24.9
comp=Z,216nm,1.7s
MAJO Matsushiro 38.53 17 P P 02 15 24.6 +0.3
MAJO Matsushiro 38.53 17 P P 02 15 24.0 -0.3
MAJO pmax pmax
comp=Z,216nm,1.7s
MJAR Matsushiro Arr 38.53 17 P P 02 15 23.5 -0.8
comp=Z,25nm,0.9s,baz=191,slow=9.0,SNR=60
comp=Z,25nm,0.9s
MJAR Matsushiro Arr 38.53 17 P P 02 15 23.5 -0.8
MJB9 Matsu-Tunnel 38.53 17 P P 02 15 24.3 -0.1
MJB9 IAmb IAmb 02 15 25.9
comp=Z,211nm,1.7s
HNS HongShan 38.70 347 ⇓P P 02 15 24.8 -0.9
HNS PcP **PcP 02 17 38.3 +1.4**
HNS S **S 02 21 18.3 -1.2**
HNS pmax pmax
comp=Z,34nm,1.5s
HNS LR LR
comp=Z,530nm,22.3s
HNS LR LR
comp=Z,680nm,23.9s
HNS LR LR
comp=Z,1μm,23.5s
AUDCS Dubbo College 38.73 147 P P 02 15 27.4 +1.4
DL2 Dalian 39.10 356 P P 02 15 26.3 -2.7
DL2 S **S 02 21 18.6 -6.9**
DL2 pmax pmax
comp=Z,57nm,0.9s
DL2 pmax pmax
comp=Z,470nm,8.2s
DL2 LR LR
comp=Z,1μm,21.4s
DL2 LR LR
comp=Z,990nm,23.7s
DL2 LR LR
comp=Z,2μm,21.8s

ARMA Armidale 39.11 143 P P 02 15 31.1 +1.8
comp=Z,44nm,0.7s
ARMA Armidale 39.11 143 P 02 15 30.7 +1.4
ARMA Armidale 39.11 143 P P 02 15 32.0 +2.6
ARPS Mount Arapiles 39.46 159 P P 02 15 33.5 +1.5
comp=Z,35nm,0.8s
TIY Taiyuan 39.58 344 P P 02 15 34.0 +0.9
TIY pmax pmax
comp=Z,61nm,0.6s
BRDH Bariadhala 39.86 307 LR LR 02 33 16.7
comp=Z,909nm,21.4s,baz=128,slow=38
YNG Young 40.22 150 P P 02 15 40.6 +2.2
comp=Z,47nm,1.1s
BJI2 Beijing 40.92 349 P P 02 15 43.9 -0.2
BJI2 S **S 02 21 53.3 +0.6**
BJI2 pmax pmax
comp=Z,13nm,1.3s
BJI2 pmax pmax
comp=Z,150nm,3.9s
BJI2 LR LR
comp=Z,380nm,23.2s
BJI2 LR LR
comp=Z,270nm,23.5s
BJI2 LR LR
comp=Z,580nm,24.4s
BJT Baijiatuau 40.92 349 P P 02 15 43.3 -0.8
BJT IAmb IAmb 02 15 46.9
comp=Z,98nm,1.8s
BJT Baijiatuau 40.92 349 P P 02 15 44.3 +0.2
BJT Baijiatuau 40.92 349 P P 02 15 43.3 -0.8
BJT pmax pmax
comp=Z,99nm,1.8s
BRAT Ballarat 40.94 157 P P 02 15 46.5 +2.3
SHL Shillong 41.19 311 P P 02 15 45.1 -1.6
SHL Shillong 41.19 311 P P 02 15 45.1 -1.6
SHL pmax pmax
comp=Z,25nm,0.7s
SHL Shillong 41.19 311 P P 02 15 46.5 -0.2
SNR=11
LZDM Lanzhou Array 41.22 333 P P 02 15 44.7 -2.3
comp=Z,5.3nm,0.8s,baz=173,slow=16,SNR=14
LZDM PcP **PcP 02 17 45.1 -0.4**
comp=Z,3.0nm,0.5s,baz=174,slow=2.9,SNR=3.9
LZDM LR LR 02 33 14.0
comp=Z,1μm,20.5s,baz=125,slow=37
comp=Z,5.3nm,0.8s
LZH Lanzhou 41.27 333 *e*P P 02 15 46.6 -0.6
LZH pmax pmax
comp=Z,61nm,1.3s
LZH pmax pmax
comp=Z,290nm,7.3s
LZH LR LR
comp=Z,1μm,19.2s
LZH LR LR
comp=Z,1μm,20.3s
LZH LR LR
comp=Z,2μm,21.0s
AUMTS Mt Stromlo 41.33 150 P P 02 15 50.0 +2.4
CAN Canberra 41.33 150 P P 02 15 49.9 +2.3
comp=Z,52nm,1.5s
CAN Canberra 41.33 150 P P 02 15 49.5 +1.8
CAN IAmb IAmb 02 16 11.6
comp=Z,141nm,1.6s
CAN Canberra 41.33 150 P P 02 15 50.1 +2.5
CAN Canberra 41.33 150 P P 02 15 49.5 +1.8
CAN pmax pmax
comp=Z,141nm,1.6s
AUDAR Daramalan Coll 41.35 150 P P 02 15 50.2 +2.5
AUMHS Melrose High S 41.41 150 P P 02 15 50.6 +2.3
TOO Toolangi 41.58 156 P P 02 15 52.2 +2.6
comp=Z,13nm,1.1s
TOO Toolangi 41.58 156 P P 02 15 50.6 +1.0
TOO Toolangi 41.58 156 P P 02 15 50.6 +1.0
TOO pmax pmax
comp=Z,34nm,1.5s
WOLH Wollongong Har 41.60 147 P P 02 15 52.7 +3.0
SNY Shenyang 41.91 358 ⇓P P 02 15 52.8 +0.7
SNY S **S 02 22 05.9 -1.3**
SNY pmax pmax
comp=Z,48nm,1.1s
SNY pmax pmax
comp=Z,190nm,5.6s
SNY LR LR
comp=Z,630nm,14.3s
SNY LR LR
comp=Z,930nm,17.1s
SNY LR LR
comp=Z,920nm,18.2s
HHC Hu-ho-hao-te 42.75 345 ⇓*i*P P 02 16 00.5 +1.3
HHC pP sP 02 16 15.0 -1.1
HHC S S 02 22 10.1 -10
HHC sS sS 02 22 51.8 +12
HHC pmax pmax
comp=Z,14nm,1.4s
HHC pmax pmax
comp=Z,160nm,4.5s
HHC LR LR
comp=Z,720nm,21.8s
HHC LR LR
comp=Z,570nm,20.8s
HHC LR LR
comp=Z,740nm,22.7s
PSTR Posyet 42.99 6 *i*P P 02 16 01.3 +0.3
BTO2 Baotou 43.12 343 *e*P P 02 16 03.0 +0.8
BTO2 pP **sP 02 16 18.4 -0.7**
BTO2 sP pwP 02 16 25.8 +9.0
BTO2 S **S 02 22 25.8 +0.3**
BTO2 sS sS 02 22 53.5 +8.4
BTO2 SS **SS 02 25 32.4 -7.1**
BTO2 pmax pmax
comp=Z,22nm,1.3s
BTO2 pmax pmax
comp=Z,700nm,5.7s
BTO2 LR LR
comp=Z,2μm,20.0s
BTO2 LR LR
comp=Z,1μm,19.2s
BTO2 LR LR
comp=Z,3μm,22.1s
CN2 Changchun 43.85 0 ⇓P P 02 16 07.8 -0.1
CN2 *e*pP sP 02 16 31.0 +6.3
CN2 *e*S **S 02 22 36.0 +0.2**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=Z,300nm,12.0s
CN2 LR LR
comp=Z,400nm,12.0s
CN2 LR LR
comp=Z,400nm,13.0s
LSA Lhasa 44.08 315 P P 02 16 09.9 -0.6
LSA Lhasa 44.08 315 P P 02 16 06.8 -3.7
LSA LR LR
comp=Z,370nm,20.6s
LSA LR LR
comp=Z,460nm,18.5s
LSA Lhasa 44.08 315 P P 02 16 09.9 -0.6
LSA pmax pmax
comp=Z,27nm,0.7s
USRK Ussuriysk Ar. 44.66 7 P P 02 16 13.6 -0.7
comp=Z,19nm,0.7s,baz=182,slow=6.6,SNR=21
comp=Z,19nm,0.7s
XLT XiLinHaoTe 44.71 351 *e*P P 02 16 14.9 +0.1
XLT pP pwP 02 16 28.8 -0.7
XLT S **S 02 22 44.8 -3.6**
XLT pmax pmax
comp=Z,48nm,1.6s
XLT pmax pmax
comp=Z,250nm,5.4s
XLT LR LR
comp=Z,51nm,24.2s
XLT LR LR
comp=Z,400nm,18.7s
XLT LR LR
comp=Z,960nm,26.8s
MDJ Mudanjiang 44.83 4 P P 02 16 15.8 +0.1
MDJ IAmb IAmb 02 16 19.4
comp=Z,37nm,0.9s
MDJ Mudanjiang 44.83 4 P P 02 16 16.7 +1.0
MDJ Mudanjiang 44.83 4 P P 02 16 16.6 +0.9
MDJ pmax pmax
comp=Z,41nm,0.8s
MDJ LR LR
comp=Z,1μm,21.3s

PALK Pallekele 45.05 280 LR LR 02 37 05.4
comp=Z,1μm,20.0s,baz=110,slow=39
DZM Mont Dzumac 45.61 121 *e*P P 02 16 20.6 -1.8
comp=Z,68nm,1.4s
DZM *e*LR LR 02 29 22.2
comp=Z,2μm,24.4s
DZM Mont Dzumac 45.61 121 P P 02 16 22.7 +0.3
DZM IAmb IAmb 02 16 39.5
comp=Z,56nm,1.5s
DZM Mont Dzumac 45.61 121 P P 02 16 25.0 +2.6
BNX BinXian 45.83 2 ⇑P P 02 16 23.6 0.0
BNX pmax pmax
comp=Z,24nm,1.2s
GTA2 Gaotai 45.90 332 *e*P P 02 16 23.6 -0.9
GTA2 pP pwP 02 16 38.3 -1.1
GTA2 S **S 02 23 04.3 -1.6**
GTA2 pmax pmax
comp=Z,7.0nm,0.9s
GTA2 LR LR
comp=Z,1μm,18.2s
GTA2 LR LR
comp=Z,1μm,20.0s
GTA2 LR LR
comp=Z,2μm,20.0s
GOMU GeErMu 45.98 325 P P 02 16 26.0 +0.6
GOMU S **S 02 23 09.3 +1.8**
GOMU pmax pmax
comp=Z,23nm,1.4s
GOMU LR LR
comp=Z,470nm,17.1s
GOMU LR LR
comp=Z,530nm,20.1s
GOMU LR LR
comp=Z,980nm,21.5s
OUENC Ouen Island, N 46.09 121 P P 02 16 26.9 +0.9
OUENC IAmb IAmb 02 16 46.5
comp=Z,58nm,1.4s
ASAJ Asahikawa 46.80 17 P P 02 16 32.5 +1.3
ASAJ pmax pmax
comp=Z,278nm,1.7s
JKA Kamikawa-asahi 46.80 17 P P 02 16 32.5 +1.3
HYB Hyderabad 49.19 293 *e*P P 02 16 49.8 -0.3
HYB *e*PcP **PcP 02 18 13.4 +0.4**
HYB *e*PP **PP 02 18 45.0 +0.6**
HYB *e*S **S 02 23 55.3 +2.3**
YSS Yuzhno-Sakhali 49.44 16 P P 02 16 51.7 +0.1
YSS IAmb IAmb 02 16 52.9
comp=Z,59nm,1.4s
YSS Yuzhno-Sakhali 49.44 16 P P 02 16 54.5 +2.9
YSS Yuzhno-Sakhali 49.44 16 *e*P P 02 16 53.3 +1.7
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=Z,3μm,13.0s
HIA Hailar 49.55 355 P P 02 16 52.6 +0.2
HIA IAmb IAmb 02 16 54.1
comp=Z,70nm,1.3s
HIA Hailar 49.55 355 P P 02 16 53.7 +1.3
HIA Hailar 49.55 355 P P 02 16 52.6 +0.2
HIA pmax pmax
comp=Z,70nm,1.3s
KLR Kul'dur 49.60 6*ce*P P 02 16 53.1 +0.3
KLR pmax pmax
comp=Z,12nm,1.7s
HILR Hailar Array B 49.83 355 P P 02 16 54.8 +0.2
comp=Z,42nm,0.7s,baz=176,slow=10,SNR=28
HILR PcP **PcP 02 18 16.0 +1.3**
comp=Z,4.5nm,0.5s,baz=151,slow=6.0,SNR=2.2
comp=Z,42nm,0.7s
HEH HeiHe 50.34 2 *e*P P 02 16 58.4 +0.1
HEH pP **pwP 02 17 12.8 -0.5**
HEH S **S 02 24 09.8 +1.8**
HEH pmax pmax
comp=Z,73nm,1.0s
HEH LR LR
comp=Z,700nm,15.6s
HEH LR LR
comp=Z,480nm,16.6s
HEH LR LR
comp=Z,980nm,16.8s
ULN Ulaanbaatar 50.46 344 P P 02 16 58.9 -0.7
ULN IAmb IAmb 02 17 02.0
comp=Z,20nm,0.7s
ULN Ulaanbaatar 50.46 344*ce*P P 02 16 59.2 -0.3
ULN pmax pmax
comp=Z,40nm,1.3s
ULN Ulaanbaatar 50.46 344 P P 02 16 59.7 +0.2
comp=Z,134nm,1.1s
SONM Songino Array 50.62 344 P P 02 16 59.1 -1.6
comp=Z,18nm,0.7s,baz=157,slow=8.6,SNR=57
SONM PcP **PcP 02 18 17.8 0.0**
comp=Z,2.4nm,0.7s,baz=169,slow=3.3,SNR=1.0
SONM LR LR 02 39 09.8
comp=Z,857nm,20.6s,baz=157,slow=37
comp=Z,18nm,0.7s
SONM Songino Array 50.62 344 P P 02 16 59.7 -1.0
GRNR Gornyy 51.71 9⇑*i*P P 02 17 09.7 +1.1
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR MLR MLR
comp=E,350nm,20.0s
GRNR MLR MLR
comp=N,430nm,14.0s
GRNR MLR MLR
comp=Z,540nm,16.0s
CIT Chita 53.00 351 *e*P P 02 17 17.4 -0.9
CIT *e* 02 17 30.4
CIT *e* 02 18 26.0
CIT pmax pmax
comp=Z,101nm,1.7s
TYV Tymovskoe 53.03 14 *e*P P 02 17 19.5 +1.1
TYV *e*S **S 02 24 44.3 -0.7**
TYV pmax pmax
comp=Z,15nm,0.9s
TYV pmax pmax
comp=Z,100nm,4.9s
TYV smax smax
comp=N,500nm,5.1s
TYV smax smax
comp=E,600nm,5.1s
ZAK Zakamensk 53.81 343 *e*P P 02 17 23.5 -0.8
ZAK pmax pmax
comp=Z,24nm,1.4s
ZEA Zeya 53.82 1 *e*P P 02 17 24.2 0.0
ZEA pmax pmax
comp=Z,20nm,1.4s
WMQ Urumqi 55.18 328 *e*P P 02 17 35.8 +1.4
WMQ pP sP 02 17 51.0 -0.4
WMQ pmax pmax
comp=Z,26nm,1.3s
WMQ LR LR
comp=Z,1μm,21.5s
WMQ LR LR
comp=Z,840nm,24.0s
IRK Irkutsk 55.19 344 *e*P P 02 17 34.4 +0.2
IRK pmax pmax
comp=Z,57nm,2.0s
MOY Mondy 55.63 342 *e*P P 02 17 38.1 +0.6
MOY pmax pmax
comp=Z,80nm,1.8s
DGTI Dogotuki 56.02 109 P P 02 17 42.9 +2.2
WUS Wushi 58.59 320 P P 02 17 58.0 -0.7
WUS IAmb IAmb 02 18 06.7
comp=Z,22nm,0.8s
ZSN Zaisan 59.08 329 *e*P P 02 18 02.9 +1.2
ZSN Zaisan 59.08 329 *e*P P 02 18 02.9 +1.2
NIL Nilore 59.25 310 P 02 18 02.3 -0.9
NIL IAmb IAmb 02 18 05.7
comp=Z,40nm,1.1s
NIL Nilore 59.25 310 P P 02 18 02.3 -0.9
NIL pmax pmax
comp=Z,40nm,1.2s
NIL Nilore 59.25 310 P P 02 18 03.2 0.0
DGZ Jazzator, Alta 59.35 332 *i* P P 02 18 02.7 -1.1
DGZ pmax pmax
comp=Z,28nm,1.0s
RPZ Rata Peaks 59.45 143 LR LR 02 45 16.4
comp=Z,314nm,19.5s,baz=46,slow=37
SHLS Shalkode 59.51 323*d i*P P 02 18 04.3 -0.6
SHLS pmax pmax
comp=Z,23nm,1.0s
SHLS Shalkode 59.51 323⇓*i*P P 02 18 04.3 -0.6
comp=Z,23nm,1.0s
PDGK Podgornoye 59.59 323 P P 02 18 04.6 -0.9
PEA0B Petropavlovsk- 59.65 22 P 02 18 06.6 +1.1
PEA0B Petropavlovsk- 59.65 22*ce*P P 02 18 07.8 +2.3

PETK Petropavlovsky- 59.65 22 P **P** **02 18 06.8 +1.3**
comp=Z,38nm,0.7s,baz=190,slow=4.2,SNR=55
PETK LR LR 02 46 47.1
comp=Z,133nm,19.1s,baz=214,slow=39
comp=Z,38nm,0.7s
PETK Petropavlovsky- 59.65 22 P **P** **02 18 07.3 +1.7**
PETK Petropavlovsky- 59.65 22 P **P** **02 18 07.3 +1.7**
UZB Uzynbulak 59.77 322 *d* iP **P** **02 18 08.0 +1.2**
UZB pmax pmax
comp=Z,17nm,1.1s
UZB Uzynbulak 59.77 322 ⇓ *i* P **P** **02 18 07.1 +0.3**
comp=Z,17nm,1.1s
PRZ Przheval'sk 59.79 321 **P** **02 18 07.6 +0.6**
PRZ IAmb IAmb 02 18 09.9
comp=Z,41nm,0.7s
PRZ Przheval'sk 59.79 321 P **P** **02 18 07.6 +0.6**
PRZ pmax pmax
comp=Z,41nm,0.7s
PET Petropavlovsk 59.94 23 P **P** **02 18 08.4 +0.8**
PET Petropavlovsk 59.94 23 P **P** **02 18 09.5 +2.0**
PET Petropavlovsk 59.94 23 *eP* **P** **02 18 04.2 -3.3**
PET *e* 02 20 17.7
PET *eS* **S** **02 26 15.4 -1.0**
PET *eSS* **SS** **02 30 15.9 +2.3**
PET pmax pmax
comp=Z,200nm,13.0s
PET pmax pmax
comp=Z,400nm,14.0s
PET pmax pmax
comp=Z,55nm,1.4s
PET pmax pmax
comp=Z,100nm,15.7s
PET MLR MLR
comp=Z,200nm,17.0s
PET MLR MLR
comp=Z,200nm,17.0s
PET Petropavlovsk 59.94 23 P **P** **02 18 07.6 +0.1**
comp=Z,50nm,1.5s
KSH2 Kashi 59.97 317 P **P** **02 18 09.4 +1.2**
KSH2 PcP **PcP** **02 18 55.3 +1.2**
KSH2 pmax pmax
comp=Z,33nm,0.8s
KSH2 LR LR
comp=Z,550nm,17.2s
KSH2 LR LR
comp=Z,480nm,15.5s
KSH2 LR LR
comp=Z,600nm,9.6s
MK31 Makanchi Array 60.01 327 *i* P **P** **02 18 06.8 -1.4**
MKAR Makanchi Array 60.01 327 P **P** **02 18 06.7 -1.6**
comp=Z,21nm,0.6s,baz=123,slow=8.0,SNR=165
MKAR ScP **ScP** **02 22 51.1 -0.4**
comp=Z,1.5nm,0.9s,baz=118,slow=5.1,SNR=3.2
MKAR LR LR 02 45 31.7
comp=Z,1000nm,19.0s,baz=116,slow=38
comp=Z,21nm,0.6s
MKAR Makanchi Array 60.01 327 P **P** **02 18 06.9 -1.4**
TUWZ Tuamarina 60.06 139 P **P** **02 18 09.0 +0.4**
SATY Saty 60.10 322 *d* iP **P** **02 18 10.2 +1.2**
SATY pmax pmax
comp=Z,20nm,0.7s
SATY Saty 60.10 322 ⇓ *i* P **P** **02 18 10.3 +1.2**
comp=Z,20nm,0.7s
KPKS Kokpek 60.15 322 *eP* **P** **02 18 10.1 +0.8**
KPKS Kokpek 60.15 322 *eP* **P** **02 18 10.2 +0.9**
MAKZ Makanchi 60.19 327 P **P** **02 18 08.2 -1.3**
MAKZ IAmb IAmb 02 18 11.1
comp=Z,24nm,0.7s
MAKZ Makanchi 60.19 327 P **P** **02 18 08.3 -1.2**
KDJ Kajisay 60.38 320 **P** **02 18 10.2 -0.8**
KDJ IAmb IAmb 02 18 13.2
comp=Z,32nm,0.6s
KDJ Kajisay 60.38 320 P **P** **02 18 10.2 -0.8**
KDJ pmax pmax
comp=Z,32nm,0.6s
URZ Urewera 60.74 135 LR LR 02 48 57.6
comp=Z,382nm,18.1s,baz=306,slow=40
NRN Naryn 60.78 319 **P** **02 18 12.4 -1.6**
NRN IAmb IAmb 02 18 15.6
comp=Z,20nm,0.6s
NRN Naryn 60.78 319 P **P** **02 18 12.4 -1.6**
NRN pmax pmax
comp=Z,20nm,0.6s
TNSS Tian-Shan 60.99 321 *eP* **P** **02 18 16.3 +0.8**
TNSS Tian-Shan 60.99 321 *eP* **P** **02 18 16.3 +0.8**
MDOK Medeo 61.00 321 *eP* **P** **02 18 16.1 +1.0**
MDOK Medeo 61.00 321 *eP* **P** **02 18 16.2 +1.0**
ULHL Ulahol 61.03 320 P **P** **02 18 17.5 +2.0**
SNR=5.8
AAA Alma-Ata 61.10 321 *eP* **P** **02 18 17.0 +1.2**
AAA pmax pmax
comp=Z,27nm,0.9s
AAA Alma-Ata 61.10 321 *eP* **P** **02 18 17.1 +1.2**
comp=Z,27nm,0.9s
TDK Taldyqorghan 61.16 324 *d* iP **P** **02 18 17.3 +1.2**
TDK pmax pmax
comp=Z,25nm,0.7s
TDK Taldyqorghan 61.16 324 ⇓ *i* P **P** **02 18 17.4 +1.2**
comp=Z,25nm,0.7s
RAO Raoul Island 61.31 123 LR LR 02 44 34.4
comp=Z,152nm,21.0s,baz=317,slow=36
BOOM Boomskoye usch 61.35 320 **P** **02 18 16.9 -0.7**
BOOM IAmb IAmb 02 18 20.4
comp=Z,86nm,1.7s
BOOM Boomskoye usch 61.35 320 P **P** **02 18 16.9 -0.7**
BOOM pmax pmax
comp=Z,87nm,1.7s
TKM2 Tokmak 2 61.79 321 P **P** **02 18 22.2 +1.6**
SNR=75
KBK Karagaybulak 62.07 320 P **P** **02 18 24.2 +1.8**
SNR=28
UCH Uchtor 62.14 319 P **P** **02 18 22.8 -0.5**
SNR=58
YAK Yakutsk 62.21 2 LR LR 02 46 56.8
comp=Z,374nm,20.6s,baz=188,slow=38
YAK Yakutsk 62.21 2 P **P** **02 18 22.1 -0.6**
YAK Yakutsk 62.21 2 *c i* P **P** **02 18 22.9 +0.2**
YAK *e**PP **sP** **02 18 39.4 -0.6**
YAK *e* 02 19 02.2
YAK *e* 02 20 40.1
YAK *ePPP PPP 02 22 07.2
YAK *eS* **S** **02 26 43.2 -1.7**
YAK *e**SS sS 02 27 13.0 +7.7
YAK *e* 02 28 08.3
YAK *eSS* **SS** **02 30 48.2 -0.5**
YAK *eSSS SSS 02 33 38.9
YAK pmax pmax
comp=Z,97nm,1.0s
YAK pmax pmax
comp=N,47nm,1.3s
YAK pmax pmax
comp=E,18nm,1.4s
YAK pmax pmax
comp=Z,292nm,6.3s
YAK pmax pmax
comp=N,123nm,6.0s
YAK pmax pmax
comp=E,274nm,6.4s
YAK smax smax
comp=E,264nm,3.2s
YAK smax smax
comp=N,259nm,3.7s
FRU1 Bishkek 62.35 320 P **P** **02 18 23.9 -0.3**
FRU1 IAmb IAmb 02 18 38.1
comp=Z,16nm,0.8s
FRU1 Bishkek 62.35 320 P **P** **02 18 23.9 -0.3**
FRU1 pmax pmax
comp=Z,16nm,0.8s
AAK Ala-Archa 62.35 320 P **P** **02 18 23.8 -0.5**
SNR=33
AAK Ala-Archa 62.35 320 LR LR 02 47 18.0
comp=Z,660nm,21.9s,baz=103,slow=38
AAK Ala-Archa 62.35 320 P **P** **02 18 23.4 -0.9**
AAK IAmb IAmb 02 18 28.2
comp=Z,22nm,0.8s
AAK Ala-Archa 62.35 320 P **P** **02 18 23.8 -0.5**
AAK Ala-Archa 62.35 320 P **P** **02 18 25.8 +1.4**
CHMS Chumysh 62.36 320 P **P** **02 18 25.4 +1.2**
SNR=9.5
USP Ospenovka 62.66 320 P **P** **02 18 25.1 -1.1**
SNR=56
SGDS Sogindy 62.66 321 *eP* **P** **02 18 27.3 +1.0**
DRK Karamyk 62.72 316 P **P** **02 18 26.6 -0.4**
DRK Karamyk 62.72 316 P **P** **02 18 26.6 -0.4**
DRK pmax pmax
comp=Z,461nm,0.5s

ARSB Arslanbob 62.73 318 P **P** **02 18 24.7 -2.2**
ARSB Arslanbob 62.73 318 P **P** **02 18 24.7 -2.2**
ARSB pmax pmax
comp=Z,205nm,1.7s
KBL Kabul 62.82 310 P **P** **02 18 26.1 -1.6**
KBL Kabul 62.82 310 P **P** **02 18 26.1 -1.6**
KBL pmax pmax
comp=Z,47nm,0.7s
KBL Kabul 62.82 310 P **P** **02 18 27.6 -0.1**
SNR=22
EKS2 Erkin-Say 62.83 320 P **P** **02 18 29.3 +1.9**
SNR=38
MA2 Magadan 62.90 14 P **P** **02 18 26.4 -1.0**
MA2 Magadan 62.90 14 P **P** **02 18 29.0 +1.6**
MA2 Magadan 62.90 14 *ce**P **P** **02 18 29.0 +1.6**
MA2 pmax pmax
comp=Z,72nm,1.3s
MA2 Magadan 62.90 14 P **P** **02 18 27.2 -0.2**
comp=Z,1↓μcomp=Z,68nm,1.3s
ZAA0 Zalesovo Array 63.48 335 P **P** **02 18 29.6 -1.7**
ZAA0 IAmb IAmb 02 18 32.6
comp=Z,40nm,1.2s
ZALV Zalesovo Beam 63.48 335 P **P** **02 18 28.9 -2.4**
comp=Z,8.1nm,0.5s,baz=116,slow=6.8,SNR=35
ZALV LR LR 02 46 48.1
comp=Z,686nm,20.0s,baz=130,slow=37
comp=Z,8.1nm,0.5s
ZALV Zalesovo Beam 63.48 335 **P** **02 18 29.1 -2.2**
ZALV Zalesovo Beam 63.48 335 *i* P **P** **02 18 29.3 -2.0**
ZALV pmax pmax
comp=Z,8.0nm,0.5s
BTK Batken 63.65 316 **P** **02 18 31.3 -1.6**
BTK Batken 63.65 316 P **P** **02 18 31.3 -1.6**
BTK pmax pmax
comp=Z,203nm,2.0s
CHGR Chuyangaron 64.27 314 **P** **02 18 35.2 -1.8**
CHGR Chuyangaron 64.27 314 P **P** **02 18 35.2 -1.8**
CHGR pmax pmax
comp=Z,70nm,0.9s
KURBB Kurchatov Arra 64.31 329 P **P** **02 18 34.9 -2.0**
comp=Z,25nm,0.8s,baz=130,slow=5.9,SNR=72
comp=Z,25nm,0.8s
KURK Kurchatov 64.32 329 P **P** **02 18 35.5 -1.4**
KURK IAmb IAmb 02 18 38.6
comp=Z,41nm,0.7s
KURK Kurchatov 64.32 329 P **P** **02 18 35.8 -1.1**
KURK Kurchatov 64.32 329 P **P** **02 18 37.0 +0.1**
DZA Taraz 64.53 319 *eP* **P** **02 18 39.6 +1.0**
DZA pmax pmax
comp=Z,15nm,0.8s
DZA Taraz 64.53 319 *eP* **P** **02 18 39.6 +1.0**
comp=Z,15nm,0.8s
SHAA Shahritus 64.61 312 P **P** **02 18 37.1 -2.1**
SHAA IAmb IAmb 02 19 32.1
comp=Z,41nm,1.1s
IUG Iuzhnay 65.07 318 *d* iP **P** **02 18 43.3 +1.1**
IUG pmax pmax
comp=Z,34nm,0.9s
IUG Iuzhnay 65.07 318 ⇓ *i* P **P** **02 18 43.4 +1.1**
comp=Z,34nm,0.9s
KK31 Karatay Array 65.17 319 **P** **02 18 41.6 -1.1**
KK31 IAmb IAmb 02 18 44.9
comp=Z,34nm,1.0s
KK31 Karatay Array 65.17 319 *i* P **P** **02 18 41.6 -1.1**
KKAR Karatay Array 65.17 319 P **P** **02 18 41.5 -1.2**
KKAR Karatay Array 65.17 319 P **P** **02 18 41.5 -1.2**
CHM Chimkent 65.43 318 *eP* **P** **02 18 45.6 +1.2**
CHM pmax pmax
comp=Z,20nm,0.9s
CHM Chimkent 65.43 318 *eP* **P** **02 18 45.6 +1.2**
comp=Z,20nm,0.9s
BRLS Boroldoy 65.58 318 *d* iP **P** **02 18 46.4 +1.0**
BRLS pmax pmax
comp=Z,11nm,0.6s
BRLS Boroldoy 65.58 318 ⇓ *i* P **P** **02 18 46.4 +1.0**
comp=Z,12nm,0.6s
SEY Seymchan 66.21 13 *ce**P **P** **02 18 50.9 +1.9**
SEY pmax pmax
comp=Z,58nm,1.7s
BRZS Berezniki 67.10 326 *eP* **P** **02 18 56.3 +1.4**
BRZS Berezniki 67.10 326 *eP* **P** **02 18 56.3 +1.4**
JLN Jalan Bani Buh 67.79 294 P **P** **02 18 59.8 -0.1**
HRA Herat 68.09 307 **P** **02 19 01.2 -0.6**
WBK Wadi Bani Khal 68.27 294 P **P** **02 19 01.6 -1.3**
WSAR Wadi Sarin 68.69 295 P **P** **02 19 04.4 -1.1**
MHTO MHTO 68.93 293 P **P** **02 19 05.8 -1.1**
JMDO Jabal Madar 69.02 294 P **P** **02 19 06.4 -1.2**
DQM DQM 69.17 291 P **P** **02 19 07.5 -1.0**
BIDO Bibiid 69.19 295 P **P** **02 19 06.5 -2.1**
BVAR Borovoye Array 69.86 328 P **P** **02 19 10.8 -1.3**
comp=Z,17nm,0.7s,baz=133,slow=8.3,SNR=54
BVAR LR LR 02 50 03.4
comp=Z,371nm,21.6s,baz=117,slow=36
comp=Z,17nm,0.7s
BORK Borovoye 69.91 328 P **P** **02 19 11.3 -1.1**
BORK IAmb IAmb 02 19 14.8
comp=Z,36nm,0.9s
BORK Borovoye 69.91 328 *ce**P **P** **02 19 11.6 -0.8**
BORK pmax pmax
comp=Z,66nm,1.3s
BSY Bisya 69.91 294 P **P** **02 19 12.1 -0.9**
SOHO SOHO 70.73 296 P **P** **02 19 17.4 -0.6**
UOSS Minazif 71.16 296 P **P** **02 19 19.9 -0.7**
HATD Hatta, Dubai 71.20 296 P **P** **02 19 20.4 -0.4**
BANOM Banah 71.23 297 P **P** **02 19 20.6 -0.5**
ASHO Ashiyiah 71.25 296 P **P** **02 19 20.3 -0.9**
MASF Masafi 71.27 297 P **P** **02 19 20.5 -0.8**
ALNE Al Ain 71.42 295 P **P** **02 19 21.6 -0.6**
SNR=6.2
TIXI Tiksi 71.81 1 LR LR 02 51 39.2
comp=Z,647nm,21.5s,baz=199,slow=36
TIXI Tiksi 71.81 1 P **P** **02 19 22.9 -0.6**
TIXI IAmb IAmb 02 19 40.4
comp=Z,48nm,1.1s
TIXI Tiksi 71.81 1 *ce**P **P** **02 19 23.0 -0.6**
TIXI pmax pmax
comp=Z,48nm,1.3s
ASUD Al Ashush, Dub 71.89 296 P **P** **02 19 24.5 -0.5**
AJN Ajban 72.19 296 P **P** **02 19 26.2 -0.6**
SNR=6.9
DOK Doka 72.20 290 P **P** **02 19 25.7 -1.2**
MZWR Madinat Zayed 73.08 295 P **P** **02 19 31.4 -0.7**
MZR Muzera 73.34 294 P **P** **02 19 32.9 -0.8**
BILL Bilibino 73.75 15 P **P** **02 19 34.9 -0.3**
BILL Bilibino 73.75 15 *ce**P **P** **02 19 36.5 +1.4**
BILL pmax pmax
comp=Z,33nm,2.5s
GHWR Ruwais 74.01 295 P **P** **02 19 36.6 -0.9**
JRN Qarnain Island 74.17 296 P **P** **02 19 37.1 -1.3**
AB31 Akbulak array 74.30 322 P **P** **02 19 37.8 -1.0**
ABKAR Akbulak array 74.30 322 P **P** **02 19 37.3 -1.4**
SLWR Sila 75.10 295 P **P** **02 19 42.8 -1.1**
TRNA Turayna 75.62 296 P **P** **02 19 45.6 -1.2**
AKTO Aktyubinsk 75.86 323 LR LR 02 55 26.1
comp=Z,704nm,19.5s,baz=101,slow=38
RAR Rarotonga 75.92 112 LR LR 02 53 26.5
comp=Z,72nm,21.7s,baz=273,slow=36
SMRA Abu-Samra 75.97 295 P **P** **02 19 47.5 -1.3**
SHMA Al-Shehemyia 75.98 297 P **P** **02 19 47.5 -1.3**
SVE Sverdlovsk 76.57 329 *eP* **P** **02 19 51.6 0.0**
SVE *eS* **S** **02 29 32.2 -2.1**
SVE pmax pmax
comp=E,17nm,0.7s
UNV Unalaska Valle 77.52 34 P **P** **02 19 56.6 -0.4**
baz=252
ARTI Arti 77.58 328 **P** **02 19 56.1 -1.1**
ARTI IAmb IAmb 02 20 01.8
comp=Z,31nm,0.8s
ARTI Arti 77.58 328 *c i* P **P** **02 19 56.4 -0.9**
ARTI S **S** **02 29 41.6 -3.7**
ARTI pmax pmax
comp=Z,73nm,1.8s
AKUT Akutan 78.02 34 P **P** **02 19 59.7 0.0**
ABPO Ambohimpanom 78.59 251 P **P** **02 20 04.3 +0.4**
ABPO Ambohimpanom 78.59 251 P **P** **02 20 04.3 +0.4**
ABPO pmax pmax
comp=Z,31nm,1.5s
GAMB Gambell 78.61 24 **P** **02 20 04.4 +1.6**
GAMB IAmb IAmb 02 20 05.9
comp=Z,65nm,1.3s
GAMB Gambell 78.61 24 P **P** **02 20 04.2 +1.4**
baz=245,SNR=26
VOI Vohitsoka 79.19 248 P **P** **02 20 07.2 +0.1**
VOI IAmb IAmb 02 20 25.0
comp=Z,22nm,0.7s
VOI Vohitsoka 79.19 248 P **P** **02 20 05.7 -1.3**
MAW Mawson 79.54 200 P **P** **02 20 08.9 +1.2**
comp=Z,47nm,1.1s,baz=15,slow=12,SNR=3.4
MAW LR LR 02 52 04.9
comp=Z,289nm,19.0s,baz=56,slow=33
comp=Z,47nm,1.1s
MAW Mawson 79.54 200 P **P** **02 20 09.0 +1.2**
FALS False Pass 79.54 34 P **P** **02 20 09.0 +1.0**
baz=254
VNDA Vanda 79.70 172 P **P** **02 20 09.7 +1.1**
comp=Z,2.2nm,0.7s,baz=303,slow=4.0,SNR=6.6
VNDA LR LR 02 55 41.4
comp=Z,357nm,21.6s,baz=336,slow=36
comp=Z,2.2nm,0.7s
VNDA Vanda 79.70 172 P **P** **02 20 09.4 +0.8**
M11K Mekoryuk 79.75 28 P **P** **02 20 10.7 +1.6**
M11K Mekoryuk 79.75 28 P **P** **02 20 11.3 +2.2**
baz=251
RAYN Ar Rayn 80.69 294 P **P** **02 20 13.8 -1.3**
RAYN Ar Rayn 80.69 294 P **P** **02 20 13.8 -1.3**
RAYN pmax pmax
comp=Z,16nm,0.9s
RAYN Ar Rayn 80.69 294 P **P** **02 20 14.0 -1.1**
TNA Tin City 80.80 23 P **P** **02 20 15.8 +1.2**
TNA Tin City 80.80 23 P **P** **02 20 16.4 +1.7**
baz=249,SNR=11
AKT Akhty 80.81 312 *eP* **P** **02 20 15.2 -0.2**
AKT *e* 02 20 21.8
AKT *e**PP **pwP** **02 20 29.8 -1.4**
AKT pmax pmax
comp=Z,43nm,0.6s
K13K Kusilvak Mount 80.95 27 P **P** **02 20 16.3 +0.8**
K13K IAmb IAmb 02 20 19.2
comp=Z,70nm,1.4s
K13K Kusilvak Mount 80.95 27 P **P** **02 20 17.7 +2.2**
baz=252
M13K Dall Lake 81.11 28 P **P** **02 20 17.1 +0.7**
M13K IAmb IAmb 02 20 20.1
comp=Z,65nm,1.5s
M13K Dall Lake 81.11 28 P **P** **02 20 18.7 +2.3**
baz=254,SNR=6.1
SDPT Sand Point 81.30 34 **P** **02 20 18.3 +0.8**
SDPT Sand Point 81.30 34 P **P** **02 20 19.1 +1.6**
SDPT Sand Point 81.30 34 P **P** **02 20 18.6 +1.1**
baz=257,SNR=11
F14K Arctic Creek 81.40 23 P **P** **02 20 20.1 +2.3**
baz=250
ANM Nome 81.48 24 **P** **02 20 18.9 +0.6**
ANM Nome 81.48 24 P **P** **02 20 18.9 +0.6**
ANM pmax pmax
comp=Z,13nm,1.0s
ANM Nome 81.48 24 P **P** **02 20 20.3 +2.0**
baz=251,SNR=8.2
CNBA Chernabura Isl 81.68 34 P **P** **02 20 19.2 -0.4**
CNBA IAmb IAmb 02 20 21.7
comp=Z,32nm,1.1s
CHNA Chernabura Isl 81.68 34 P **P** **02 20 21.5 +1.9**
baz=258
L14K Kuka Creek 81.68 28 P **P** **02 20 20.7 +1.3**
L14K IAmb IAmb 02 20 23.0
comp=Z,66nm,1.4s
L14K Kuka Creek 81.68 28 P **P** **02 20 21.7 +2.3**
baz=254
J14K Nanvaranak Lak 81.69 26 P **P** **02 20 20.8 +1.4**
J14K IAmb IAmb 02 20 23.1
comp=Z,50nm,1.4s
J14K Nanvaranak Lak 81.69 26 P **P** **02 20 21.7 +2.3**
baz=253
N14K Kuskokwak Cree 81.78 29 P **P** **02 20 21.1 +1.1**
N14K IAmb IAmb 02 21 07.7
comp=Z,22nm,0.8s
N14K Kuskokwak Cree 81.78 29 P **P** **02 20 21.8 +1.9**
baz=255
O14K Tigyukauivet M 81.82 30 **P** **02 20 20.5 +0.4**
O14K IAmb IAmb 02 20 23.1
comp=Z,32nm,1.2s
O14K Tigyukauivet M 81.82 30 P **P** **02 20 21.9 +1.7**
baz=256
M14K Bethel 81.86 28 **P** **02 20 21.5 +1.2**
M14K IAmb IAmb 02 20 23.1
comp=Z,32nm,0.9s
M14K Bethel 81.86 28 P **P** **02 20 22.4 +2.0**
baz=255,SNR=13
F15K North Star Dit 82.13 23 **P** **02 20 22.9 +1.2**
F15K North Star Dit 82.13 23 P **P** **02 20 24.1 +2.3**
baz=252,SNR=42
G15K Niukluk 82.15 24 P **P** **02 20 23.8 +1.9**
baz=252,SNR=32
L15K Ungalak Mounta 82.33 27 P **P** **02 20 24.7 +1.9**
baz=255,SNR=18
M15K Kasigluk River 82.45 29 P **P** **02 20 25.2 +1.7**
baz=256
K15K Wolf Creek Mou 82.47 27 **P** **02 20 24.7 +1.2**
K15K Wolf Creek Mou 82.47 27 P **P** **02 20 25.8 +2.3**
baz=255,SNR=31
O15K Ungalikthiuk R 82.52 30 P **P** **02 20 24.7 +0.8**
O15K Ungalikthiuk R 82.52 30 P **P** **02 20 25.7 +1.8**
baz=257
ATD Arta Tunnel 82.60 282 P **P** **02 20 24.7 -0.6**
ATD IAmb IAmb 02 20 27.3
comp=Z,23nm,1.0s
ATD Arta Tunnel 82.60 282 P **P** **02 20 23.8 -1.4**
N15K Kwethluk River 82.61 29 **P** **02 20 25.7 +1.3**
N15K IAmb IAmb 02 20 44.8
comp=Z,24nm,0.8s
N15K Kwethluk River 82.61 29 P **P** **02 20 26.4 +2.0**
baz=257,SNR=8.8
BELG Belogornoye 82.64 323 LR LR 02 59 08.8
comp=Z,180nm,21.6s,baz=124,slow=37
BELG Belogornoye 82.64 323 *i* P **P** **02 20 24.6 0.0**
BELG pmax pmax
comp=Z,32nm,1.5s
C16K Lisburne Hills 82.70 21 **P** **02 20 26.1 +1.5**
C16K Lisburne Hills 82.70 21 P **P** **02 20 26.7 +2.0**
baz=251,SNR=76
H16K Elim 82.79 24 P **P** **02 20 27.1 +2.0**
baz=254,SNR=58
KIRV Kirov 82.84 329 *ce**P **P** **02 20 25.5 0.0**
GNI Garni 82.89 310 LR LR 03 03 57.6
comp=Z,118nm,18.1s,baz=86,slow=40
GNI Garni 82.89 310 P **P** **02 20 27.1 +0.6**
GNI IAmb IAmb 02 20 38.0
comp=Z,28nm,0.7s
GNI Garni 82.89 310 P **P** **02 20 27.1 +0.6**
GNI pmax pmax
comp=Z,28nm,0.7s
GNI Garni 82.89 310 P **P** **02 20 25.8 -0.7**
comp=Z,45nm,0.8s
G16K Koyuk River 82.95 24 **P** **02 20 27.0 +1.1**
G16K Koyuk River 82.95 24 P **P** **02 20 28.0 +2.0**
baz=254,SNR=115
J16K Anvik River 83.13 26 **P** **02 20 28.0 +1.0**
J16K Anvik River 83.13 26 P **P** **02 20 29.5 +2.5**
baz=256,SNR=55
I17K Unalakleet 83.24 25 **P** **02 20 29.9 +2.4**
I17K Unalakleet 83.24 25 P **P** **02 20 30.1 +2.6**
baz=256,SNR=28
L16K Owhat River 83.26 28 **P** **02 20 29.1 +1.5**
L16K Owhat River 83.26 28 P **P** **02 20 29.6 +1.9**
baz=257,SNR=30
N16K Nishlik Lake 83.33 29 P **P** **02 20 30.6 +2.5**
baz=258,SNR=16
D17K Noatak River 83.33 21 P **P** **02 20 30.4 +2.5**
baz=253,SNR=130
M16K Timber Creek 83.35 28 P **P** **02 20 28.4 +0.2**
M16K Timber Creek 83.35 28 P **P** **02 20 30.3 +2.1**
baz=258,SNR=12
P16K Nushagak River 83.41 30 P **P** **02 20 29.6 +1.2**
P16K Nushagak River 83.41 30 P **P** **02 20 30.2 +1.8**
baz=258,SNR=7.4
O16K Kokwok River B 83.47 30 P **P** **02 20 29.9 +1.2**
O16K IAmb IAmb 02 20 48.2
comp=Z,47nm,1.2s
O16K Kokwok River B 83.47 30 P **P** **02 20 30.6 +1.8**
baz=258,SNR=8.4
RDOG Red Dog Mine 83.50 21 P **P** **02 20 30.4 +1.6**
RDOG Red Dog Mine 83.50 21 P **P** **02 20 31.0 +2.1**
baz=253,SNR=8.8
C17K DeLong Mountai 83.53 21 P **P** **02 20 31.2 +2.2**
baz=253
E17K Hotham Inlet 83.62 22 P **P** **02 20 31.8 +2.4**
baz=254,SNR=99
G17K Kiwalik Mounta 83.67 24 P **P** **02 20 31.8 +2.2**
baz=255,SNR=60
F17K Baldwin Pennin 83.67 23 **P** **02 20 31.5 +1.9**

F17K **Baldwin Pennin** 83.67 23 P P 02 20 32.0 +2.3
baz=255,SNR=21
H17K **Granite Mounta** 83.83 24 P P 02 20 32.4 +1.8
H17K **Granite Mounta** 83.83 24 P P 02 20 32.9 +2.3
baz=256,SNR=39
L17K **Donlin** 83.90 27 P P 02 20 33.4 +2.5
baz=258,SNR=17
R17L **Mt. Peulik Vol** 84.00 32 P P 02 20 33.9 +2.4
baz=260
O17K **Koliganek Bris** 84.00 30 P P 02 20 33.4 +1.9
baz=259,SNR=9.8
GEVA **Gevas** 84.01 308 P 02 20 31.8 -0.4
K17K **Iditarod** 84.02 27 P 02 20 32.9 +1.3
K17K **Iditarod** 84.02 27 P P 02 20 33.8 +2.2
baz=258,SNR=23
Q16K **King Salmon** 84.03 31 P P 02 20 34.1 +2.5
baz=260
CHIR **Chirikof Islan** 84.09 34 P P 02 20 33.6 +1.6
baz=261
NCK **Nalchik** 84.10 314 *i* P P 02 20 31.9 -0.5
NCK pmax pmax
comp=Z,20nm,0.8s
N17K **Nushagak Hills** 84.10 29 P 02 20 33.0 +1.0
N17K IAmb IAmb 02 20 35.7
comp=Z,57nm,1.3s
N17K **Nushagak Hills** 84.10 29 P P 02 20 34.0 +2.0
baz=259,SNR=8.7
M17K **Holitna River** 84.15 28 P P 02 20 33.3 +1.0
M17K IAmb IAmb 02 20 36.0
comp=Z,57nm,1.4s
M17K **Holitna River** 84.15 28 P P 02 20 34.6 +2.3
baz=259
E18K **Tukpahlearik C** 84.17 22 P P 02 20 33.3 +1.1
E18K **Tukpahlearik C** 84.17 22 P P 02 20 34.4 +2.2
baz=255
KARS **Kars** 84.20 311 P 02 20 33.3 +0.1
KARS **Kars** 84.20 311 P P 02 20 33.3 +0.1
KARS pmax pmax
comp=Z,66nm,1.1s
P17K **Kvichak River** 84.23 30 P P 02 20 33.5 +0.9
P17K **Kvichak River** 84.23 30 P P 02 20 33.8 +1.2
baz=260
C18K **Utukok River** 84.28 21 P 02 20 33.5 +0.6
C18K **Utukok River** 84.28 21 P P 02 20 34.6 +1.7
baz=255,SNR=31
F18K **Selawik** 84.33 23 P P 02 20 34.8 +1.8
baz=256,SNR=14
Q17K **Contact Creek** 84.35 31 P P 02 20 33.8 +0.4
baz=260
H18K **Honhosa River** 84.52 24 P P 02 20 35.2 +1.2
H18K IAmb IAmb 02 20 37.1
comp=Z,56nm,1.6s
H18K **Honhosa River** 84.52 24 P P 02 20 35.6 +1.6
baz=258
G18K **Tagagawik** 84.56 24 P 02 20 35.4 +1.2
G18K IAmb IAmb 02 20 37.1
comp=Z,38nm,1.4s
G18K **Tagagawik** 84.56 24 P P 02 20 35.6 +1.3
baz=257,SNR=12
KBZ **Khabaz** 84.63 314 P P 02 20 34.5 -0.4
comp=Z,9.7nm,0.8s,baz=107,slow=5.3,SNR=29
KBZ LR LR 03 04 43.8
comp=Z,165nm,18.1s,baz=66,slow=40
comp=Z,9.7nm,0.8s
KBZ **Khabaz** 84.63 314 *ce* P P 02 20 34.6 -0.4
KBZ pmax pmax
comp=Z,41nm,1.4s
ACHA **Angle Creek He** 84.64 32 P P 02 20 35.2 +0.3
ACHA IAmb IAmb 02 20 47.3
comp=Z,67nm,1.8s
GOF **Gofitskoye** 84.65 315 *ce* P P 02 20 35.2 +0.1
L18K **Granite Mounta** 84.66 27 P P 02 20 36.2 +1.4
L18K IAmb IAmb 02 20 38.2
comp=Z,60nm,1.5s
L18K **Granite Mounta** 84.66 27 P P 02 20 36.7 +1.9
baz=259
NEUR **Neytrino** 84.72 313 *i* P P 02 20 35.1 -0.7
NEUR pmax pmax
comp=Z,49nm,1.8s
N18K **Kilae Creek** 84.76 29 P P 02 20 36.1 +0.7
N18K **Kilae Creek** 84.76 29 P P 02 20 37.5 +2.1
baz=260
KVAR **Kislovodsk Arr** 84.79 314 LR LR 03 04 15.8
comp=Z,185nm,18.2s,baz=224,slow=40
KIV **Kislovodsk** 84.80 314 ⇑P P 02 20 36.3 +0.3
KIV **Kislovodsk** 84.80 314 P P 02 20 35.5 -0.6
KIV IAmb IAmb 02 20 41.1
comp=Z,31nm,0.8s
KIV **Kislovodsk** 84.80 314 ⇑P P 02 20 36.3 +0.3
KIV **Kislovodsk** 84.80 314 P P 02 20 36.0 0.0
comp=Z,30nm,0.9s
SHA1 **Shidzhatmaz** 84.80 314 *ce* P P 02 20 37.0 +0.8
GURO **Guroymak-BITLI** 84.83 309 P 02 20 36.4 0.0
P18K **Big Mountain,** 84.87 30 P P 02 20 36.8 +0.9
baz=261
J18K **Innoko River** 84.88 26 P 02 20 36.6 +0.7
J18K **Innoko River** 84.88 26 P P 02 20 37.3 +1.4
baz=259,SNR=10
M18K **Stony River** 84.93 28 P P 02 20 37.7 +1.6
baz=260,SNR=7.6
O18K **Koktuh Hills** 84.96 30 P P 02 20 37.4 +1.0
O18K **Koktuh Hills** 84.96 30 P P 02 20 37.5 +1.1
baz=261
C19K **Lookout Ridge** 84.96 20 P P 02 20 37.8 +1.6
C19K IAmb IAmb 02 20 40.9
comp=Z,54nm,1.1s
C19K **Lookout Ridge** 84.96 20 P P 02 20 38.5 +2.3
baz=256
SII **Sitkinak Islan** 85.00 33 P P 02 20 38.0 +1.4
baz=262
GCSA **Galena City Sc** 85.05 25 P P 02 20 38.2 +1.5
baz=259
F19K **Shaleruckik Mo** 85.11 23 P P 02 20 38.2 +1.2
baz=258,SNR=6.2
G19K **Purcell Mounta** 85.24 23 P P 02 20 38.7 +1.1
G19K IAmb IAmb 02 20 40.7
comp=Z,76nm,1.6s
G19K **Purcell Mounta** 85.24 23 P P 02 20 39.3 +1.7
baz=259,SNR=25
PPT **Papeete** 85.33 107 LR LR 02 57 35.5
comp=Z,83nm,20.8s,baz=274,slow=35
PPT2 **Papeete2** 85.33 108 *eP* P 02 20 33.2 -6.0
PPT2 *e*PP PP 02 23 51.4 -6.3
comp=Z,70nm,23.8s
comp=Z,61nm,24.0s
PPT2 *e*S SKSac 02 30 56.6 -4.6
comp=Z,277nm,26.2s
PPT2 *e*SS SS 02 36 41.0 -1.7
comp=Z,296nm,34.0s
PPT2 *e*LQ LQ 02 43 52.1
comp=Z,184nm,27.5s
PPT2 *e*LR LR 02 47 42.5
comp=Z,637nm,27.8s
PPT2 *e*LR LR 02 47 42.6
comp=Z,493nm,33.8s
D19K **Kuna River** 85.34 21 P P 02 20 39.5 +1.3
D19K IAmb IAmb 02 20 42.2
comp=Z,31nm,0.9s
D19K **Kuna River** 85.34 21 P P 02 20 39.8 +1.7
baz=258
E19K **Redstone River** 85.45 22 P P 02 20 39.7 +1.1
E19K IAmb IAmb 02 20 58.8
comp=Z,37nm,0.8s
E19K **Redstone River** 85.45 22 P P 02 20 40.4 +1.7
baz=258
O19K **Port Alsworth** 85.45 30 P P 02 20 40.0 +1.3
baz=262
J19K **Poorman** 85.45 26 P P 02 20 39.6 +0.9
J19K **Poorman** 85.45 26 P P 02 20 40.2 +1.5
baz=260,SNR=7.5
N19K **Bonanza Creek** 85.46 29 P 02 20 40.1 +1.1
N19K **Bonanza Creek** 85.46 29 P P 02 20 40.3 +1.3
baz=261
L19K **White Mountain** 85.50 28 P 02 20 39.9 +0.8
L19K **White Mountain** 85.50 28 P P 02 20 40.5 +1.5
baz=261,SNR=9.5
OHAK **Old Harbor** 85.58 33 P P 02 20 40.8 +1.4
baz=263
TBI **Tubuai** 85.58 113 *eP* P 02 20 36.5 -3.7
comp=Z,238nm,26.2s
TBI *e*PP PP 02 23 58.2 -1.3
comp=Z,295nm,21.5s
TBI *e*S SKSac 02 31 03.1 +0.7
comp=Z,1μm,26.2s
TBI *e*LR LR 02 47 52.2
comp=Z,2μm,28.5s
MARD **Mardin** 85.74 307 P 02 20 40.9 0.0

P19K **Oil Pt** 85.92 30 P P 02 20 42.9 +1.7
baz=263
D20K **Etivluk River** 85.92 21 P P 02 20 41.8 +0.8
D20K IAmb IAmb 02 21 01.8
comp=Z,20nm,0.8s
D20K **Etivluk River** 85.92 21 P P 02 20 42.5 +1.5
baz=259
F20K **Avaraart Lake** 85.94 23 P 02 20 42.2 +1.1
F20K IAmb IAmb 02 20 44.0
comp=Z,32nm,1.4s
F20K **Avaraart Lake** 85.94 23 P P 02 20 42.6 +1.5
baz=260
E20K **Nigu River** 85.99 21 P P 02 20 42.9 +1.5
baz=259
B20K **Meade River** 85.99 20 P P 02 20 42.3 +1.0
B20K IAmb IAmb 02 21 02.1
comp=Z,61nm,1.6s
B20K **Meade River** 85.99 20 P P 02 20 42.8 +1.5
baz=258
H20K **Anotleneega Mo** 86.02 24 P P 02 20 43.0 +1.5
baz=261
KDAK **Kodiak Island** 86.02 32 P P 02 20 43.1 +1.4
baz=263
K20K **Telida** 86.03 26 P P 02 20 42.5 +0.9
K20K **Telida** 86.03 26 P P 02 20 43.1 +1.4
baz=262
VRH **Novokhopyorsk** 86.12 321 *eP* P 02 20 41.7 -0.6
VRH pmax pmax
comp=Z,130nm,0.8s
KOPT **Kop Dagi** 86.12 310 P 02 20 43.5 +0.5
KOPT IAmb IAmb 02 20 48.5
comp=Z,46nm,0.9s
Q20K **Shuyak Island** 86.22 31 P P 02 20 43.7 +1.1
baz=263
M20K **Styx River** 86.26 28 P P 02 20 43.8 +0.9
M20K IAmb IAmb 02 20 45.3
comp=Z,29nm,1.3s
M20K **Styx River** 86.26 28 P P 02 20 44.2 +1.4
baz=263
LABN **Labinsk** 86.26 315 *eP* P 02 20 40.8 -2.4
LABN *e**PP pwP 02 20 57.6 -1.5
LABN *eS* SKSac 02 31 00.5 -5.4
LABN pmax pmax
comp=Z,52nm,0.9s
A21K **Barrow** 86.43 18 P P 02 20 44.9 +1.5
baz=259,SNR=26
ERBR **Yeremizino-Bor** 86.50 316 *c i* P P 02 20 42.6 -1.7
ERBR *e**PP pwP 02 20 59.0 -1.3
ERBR *eS* SKSac 02 31 03.4 -3.9
ERBR pmax pmax
comp=Z,103nm,1.0s
IMAR **Indian Mountai** 86.56 24 P P 02 20 45.1 +1.0
FURI **Furi** 86.64 279 LR LR 02 58 35.7
comp=Z,317nm,21.0s,baz=90,slow=35
FURI **Furi** 86.64 279 P P 02 20 47.3 +1.2
C21K **Knifeblade Rid** 86.66 21 P P 02 20 46.2 +1.7
baz=261,SNR=6.4
SPU **Mount Spurr** 86.69 29 P P 02 20 44.7 -0.2
HOM **Homer** 86.72 30 P P 02 20 45.1 +0.1
HOM **Homer** 86.72 30 P P 02 20 45.9 +0.8
baz=264
G21K **Allakaket** 86.73 23 P P 02 20 46.0 +1.0
G21K **Allakaket** 86.73 23 P P 02 20 46.0 +1.0
baz=262
B21K **Ikpikpuk River** 86.79 20 P P 02 20 46.0 +0.8
B21K IAmb IAmb 02 21 06.9
comp=Z,26nm,0.8s
B21K **Ikpikpuk River** 86.79 20 P P 02 20 46.6 +1.4
baz=261
PPLA **Purkeypile** 86.82 27 P P 02 20 45.8 +0.1
baz=263
STLK **Strandline Lak** 86.83 28 P P 02 20 45.5 -0.1
E21K **Killik River** 86.83 21 P P 02 20 46.3 +0.8
E21K IAmb IAmb 02 20 48.0
comp=Z,47nm,1.7s
E21K **Killik River** 86.83 21 P P 02 20 46.4 +0.9
baz=261,SNR=11
F21K **Alatna River** 86.84 23 P P 02 20 45.7 +0.1
F21K **Alatna River** 86.84 23 P P 02 20 46.5 +1.0
baz=262,SNR=5.4
CHUM **Lake Minchumin** 86.88 26 P P 02 20 47.0 +1.3
baz=263
H21K **Melozitna Rive** 86.89 24 P P 02 20 46.4 +0.5
H21K **Melozitna Rive** 86.89 24 P P 02 20 46.8 +1.0
baz=263,SNR=7.2
SOC **Sochi** 86.92 313 *eP* P 02 20 44.4 -2.0
SOC *eS* SKSac 02 31 05.7 -4.3
SOC *e*SS SS 02 37 01.9 -2.8
SOC *e*SSS SSS 02 40 34.8
SOC pmax pmax
comp=Z,35nm,0.8s
SOC MLR MLR
comp=Z,209nm,9.0s
SKT **Skwentna** 87.02 28 P P 02 20 47.2 +0.7
baz=264
CAPN **Captain Cook N** 87.08 29 P P 02 20 48.2 +1.5
baz=264
I21K **Tanana** 87.18 25 P P 02 20 48.0 +0.8
I21K **Tanana** 87.18 25 P P 02 20 47.8 +0.6
baz=263,SNR=7.3
BRSE **Bradley Lake S** 87.18 30 P P 02 20 48.8 +1.5
baz=265
KIBK **Kibwezi** 87.19 268 P 02 20 48.6 +0.1
KIBK IAmb IAmb 02 20 51.0
comp=Z,53nm,1.5s
KIBK **Kibwezi** 87.19 268 P P 02 20 47.2 -1.3
SNR=8.4
SUA **Susitna One** 87.34 29 P P 02 20 48.3 +0.1
SUA IAmb IAmb 02 21 08.7
comp=Z,22nm,0.8s
SUA **Susitna One** 87.34 29 P P 02 20 48.6 +0.4
baz=265
D22K **Ayikyak River** 87.36 21 P 02 20 49.4 +1.3
D22K IAmb IAmb 02 20 53.5
comp=Z,29nm,1.6s
D22K **Ayikyak River** 87.36 21 P P 02 20 49.3 +1.3
baz=263,SNR=7.6
L22K **Petersville** 87.43 27 P P 02 20 48.2 -0.4
BPAW **Bear Paw Mtn.** 87.49 26 P 02 20 47.6 -1.1
BPAW IAmb IAmb 02 20 49.7
comp=Z,39nm,1.8s
H22K **Ishtalitna Cre** 87.51 24 P P 02 20 49.7 +0.9
H22K **Ishtalitna Cre** 87.51 24 P P 02 20 50.3 +1.5
baz=264,SNR=9.7
E22K **Anaktuvuk Pass** 87.59 22 P 02 20 50.4 +1.2
E22K IAmb IAmb 02 20 51.8
comp=Z,43nm,1.3s
E22K **Anaktuvuk Pass** 87.59 22 P P 02 20 50.4 +1.2
baz=263,SNR=23
VORD **Divnogorie** 87.63 321 *eP* P 02 20 47.9 -1.7
VORD pmax pmax
comp=Z,80nm,1.0s
M22K **Willow** 87.67 28 P P 02 20 49.6 0.0
M22K IAmb IAmb 02 21 06.8
comp=Z,43nm,1.1s
M22K **Willow** 87.67 28 P P 02 20 49.7 +0.1
baz=265
VORR **Voronezh** 87.72 322 *eP* P 02 20 49.4 -0.7
VORR pmax pmax
comp=Z,49nm,0.5s
VSR **Storozhevoye** 87.72 321 *eP* P 02 20 49.1 -1.0
VSR pmax pmax
comp=Z,80nm,1.2s
TRF **Thorofare Moun** 87.73 27 P P 02 20 50.0 -0.2
baz=265
ARPR **Arapgir-MALATY** 87.75 309 P 02 20 51.1 +0.4
RC01 **Rabbit Creek A** 87.80 29 P 02 20 50.9 +0.6
RC01 IAmb IAmb 02 21 08.0
comp=Z,12nm,0.8s
RC01 **Rabbit Creek A** 87.80 29 P P 02 20 50.3 +0.1
baz=266
SEW **Seward** 87.86 30 P P 02 20 51.7 +1.1
baz=266
LPSR **Galich'ya Gora** 87.95 322 *eP* P 02 20 50.5 -0.6
LPSR pmax pmax
comp=Z,90nm,1.2s
KMBO **Kilima Mbogo** 87.99 269 P P 02 20 51.5 -1.0
baz=125,slow=6.7
KMBO LR LR 02 55 06.3
comp=Z,275nm,21.8s,baz=112,slow=32
D23K **Nanushuk River** 88.09 21 IAmb IAmb 02 20 54.5
comp=Z,30nm,1.1s
D23K **Nanushuk River** 88.09 21 P P 02 20 52.8 +1.3
baz=264
COLD **Coldfoot** 88.11 23 P 02 20 52.4 +0.8
COLD IAmb IAmb 02 20 54.1
comp=Z,28nm,1.2s
COLD **Coldfoot** 88.11 23 P P 02 20 52.9 +1.3
baz=265,SNR=22
KLMR **Klimovskoe** 88.12 331 *eP* P 02 20 50.5 -1.3
KLMR *e**PP pwP 02 21 06.6 -0.9
KLMR pmax pmax
comp=Z,103nm,1.5s
PMR **Palmer** 88.12 28 P P 02 20 51.7 0.0
baz=266
G23K **Bananza Creek** 88.13 23 P P 02 20 52.6 +0.8
G23K IAmb IAmb 02 20 54.5
comp=Z,32nm,1.1s
G23K **Bananza Creek** 88.13 23 P P 02 20 53.2 +1.4
baz=265
C23K **Itkillik River** 88.20 20 P P 02 20 52.5 +0.5
C23K IAmb IAmb 02 20 55.0
comp=Z,27nm,1.1s
C23K **Itkillik River** 88.20 20 P P 02 20 53.0 +1.1
baz=264,SNR=16
I23K **Minto, Yukon-K** 88.28 25 P P 02 20 53.1 +0.8
I23K IAmb IAmb 02 20 54.5
comp=Z,56nm,1.4s
I23K **Minto, Yukon-K** 88.28 25 P P 02 20 53.2 +0.8
baz=266,SNR=16
MCK **McKinley** 88.36 26 P 02 20 53.0 +0.1
MCK IAmb IAmb 02 20 54.0
comp=Z,32nm,1.4s
MCK **McKinley** 88.36 26 P P 02 20 53.0 +0.1
MCK pmax pmax
comp=Z,31nm,1.4s
MCK **McKinley** 88.36 26 P P 02 20 52.8 -0.2
baz=266,SNR=5.1
NEA2 **Nenana** 88.36 25 P P 02 20 52.6 -0.2
NEA2 **Nenana** 88.36 25 P P 02 20 53.4 +0.6
baz=266,SNR=5.0
RND **Reindeer** 88.38 27 P 02 20 52.6 -0.4
RND IAmb IAmb 02 20 53.8
comp=Z,27nm,1.3s
RND **Reindeer** 88.38 27 P P 02 20 52.6 -0.4
RND pmax pmax
comp=Z,27nm,1.3s
E23K **Chandalar** 88.40 22 P P 02 20 53.7 +0.6
E23K IAmb IAmb 02 20 55.7
comp=Z,24nm,1.0s
E23K **Chandalar** 88.40 22 P P 02 20 54.6 +1.5
baz=266,SNR=19
KNK **Knik Glacier** 88.43 29 P P 02 20 54.2 +0.9
KNK **Knik Glacier** 88.43 29 P P 02 20 53.9 +0.6
baz=267,SNR=5.7
TOLK **Toolik Lake Re** 88.46 21 P P 02 20 54.6 +1.3
baz=266,SNR=14
WAT1 **Susitna Watana** 88.48 27 P P 02 20 53.6 +0.2
baz=267
SML **Sawmill** 88.52 28 P 02 20 54.4 +0.7
SML IAmb IAmb 02 20 55.4
comp=Z,29nm,1.2s
SML **Sawmill** 88.52 28 P P 02 20 54.1 +0.4
baz=267
GAZ **Gaziantep** 88.57 307 P 02 20 54.8 +0.3
ANN **Anapa** 88.61 315 *c i* P P 02 20 53.4 -1.0
ANN *e**PP pwP 02 21 09.0 -1.4
ANN *e* 02 24 23.6
ANN *e* 02 31 28.2
ANN pmax pmax
comp=Z,92nm,0.7s
ASF **Jabal al Asfar** 88.73 302 LR LR 03 06 09.0
comp=Z,207nm,20.8s,baz=26,slow=39
D24K **Happy Valley** 88.77 21 P P 02 20 55.9 +1.2
D24K IAmb IAmb 02 20 57.4
comp=Z,32nm,1.2s
D24K **Happy Valley** 88.77 21 P P 02 20 56.0 +1.3
baz=266
WRH **Wood River Hil** 88.78 26 P 02 20 54.7 -0.1
WRH IAmb IAmb 02 20 56.4
comp=Z,15nm,1.0s
M23K **Glacier View** 88.80 28 P P 02 20 56.0 +1.0
baz=267
E24K **Your Creek** 88.83 22 P P 02 20 56.0 +1.0
E24K **Your Creek** 88.83 22 P P 02 20 55.9 +0.8
baz=266
WAT6 **Susitna Watana** 88.83 28 P P 02 20 55.8 +0.5
baz=267,SNR=6.3
MOS **Moscow** 88.85 326 *eP* P 02 20 53.4 -1.9
MOS pmax pmax
comp=Z,75nm,1.2s
C24K **Franklin Bluff** 88.85 20 IAmb IAmb 02 20 57.4
comp=Z,60nm,1.6s
C24K **Franklin Bluff** 88.85 20 P P 02 20 56.1 +1.1
baz=266
P23K **Montague Islan** 88.88 30 P P 02 20 56.1 +0.7
baz=268
CCB **Clear Creek Bu** 88.91 25 P 02 20 54.4 -1.0
CCB IAmb IAmb 02 20 56.1
comp=Z,23nm,1.2s
H24K **Noodor Dome** 88.94 24 P P 02 20 56.1 +0.5
H24K IAmb IAmb 02 20 58.0
comp=Z,27nm,1.3s
H24K **Noodor Dome** 88.94 24 P P 02 20 56.5 +0.9
baz=267,SNR=12
SCM **Sheep Creek Mo** 89.00 28 P P 02 20 56.7 +0.7
baz=268
DHY **Denali Highway** 89.03 27 P P 02 20 57.5 +1.3
DHY **Denali Highway** 89.03 27 P P 02 20 56.7 +0.5
baz=268
POKR **Poker Plat Res** 89.09 25 P P 02 20 57.7 +1.4
baz=268
G24K **Hadweenzic Riv** 89.14 23 P 02 20 57.6 +1.1
G24K IAmb IAmb 02 21 17.0
comp=Z,13nm,0.8s
G24K **Hadweenzic Riv** 89.14 23 P P 02 20 57.8 +1.3
baz=268,SNR=7.9
TOKA **Tokat** 89.21 310 P P 02 20 57.6 +0.1
HDA **Harding Lake** 89.27 26 P P 02 20 58.4 +1.2
baz=268,SNR=7.2
ILAR **Eielson Array** 89.31 25 P P 02 20 55.8 -1.6
comp=Z,2.4nm,0.6s,baz=243,slow=5.1,SNR=48
comp=Z,2.4nm,0.6s
ILAR **Eielson Array** 89.31 25 P P 02 20 56.0 -1.3
ILAR **Eielson Array** 89.31 25 P P 02 20 56.0 -1.3
Q23K **Middleton Isla** 89.39 31 P P 02 20 58.7 +1.0
baz=269
OBN **Obninsk** 89.44 325 LR LR 03 04 44.1
comp=Z,356nm,18.9s,baz=41,slow=38
OBN **Obninsk** 89.44 325 ⇑P P 02 20 57.3 -0.7
OBN **Obninsk** 89.44 325 P P 02 20 57.6 -0.4
OBN **Obninsk** 89.44 325 ⇑*eP* P 02 20 57.2 -0.9
OBN *e* 02 24 25.3
OBN *e*PPP PPP 02 26 28.1
OBN *eS* SKSac 02 31 18.6 -5.9
OBN pmax pmax
comp=Z,66nm,1.1s
OBN MLR MLR
comp=Z,610nm,18.0s
OBN **Obninsk** 89.44 325 P P 02 20 57.5 -0.6
comp=Z,80nm,1.1s
M24K **Tolsona, Glenn** 89.55 28 P P 02 20 59.4 +0.8
baz=269
D25K **Kavik River** 89.65 21 IAmb IAmb 02 21 01.0
comp=Z,38nm,1.8s
D25K **Kavik River** 89.65 21 P P 02 20 59.6 +0.7
baz=268,SNR=9.5
KLU **Klutina** 89.65 29 P P 02 20 59.8 +0.7
baz=269
BNN **Bunyan** 89.68 309 IAmb IAmb 02 21 00.9
comp=Z,22nm,1.0s
QSPA **South Pole Qui** 89.69 180 P P 02 20 58.8 -0.4
comp=Z,5.0nm,0.6s,baz=333,slow=2.2,SNR=6.6
QSPA LR LR 03 02 22.5
comp=Z,191nm,19.3s,baz=348,slow=36
comp=Z,5.0nm,0.6s
QSPA **South Pole Qui** 89.69 180 P P 02 21 00.2 +1.0
EYAK **Cordova Ski Ar** 89.72 30 P P 02 21 00.1 +0.8
baz=269
K24K **Donnelly Dome** 89.77 26 IAmb IAmb 02 21 17.4
comp=Z,13nm,0.8s
K24K **Donnelly Dome** 89.77 26 P P 02 20 59.9 +0.4
baz=269,SNR=6.3
GHAJ **Ghor Haditha** 89.85 301 IAmb IAmb 02 21 02.1
comp=Z,45nm,1.0s
F25K **Christian Rive** 89.89 23 P P 02 21 01.1 +1.0
F25K **Christian Rive** 89.89 23 P P 02 21 01.4 +1.4
baz=269
PAX **Paxson** 89.89 27 P P 02 21 00.8 +0.6
baz=269,SNR=6.4
LODK **Lodwar** 89.90 273 IAmb IAmb 02 21 03.9
comp=Z,41nm,1.7s

LODK	Lodwar	89.90	273	P		P	02 21 00.6	-0.7	
	SNR=10								
PRP	Porcupine Dome	89.90	25	P		P	02 21 01.3	+1.0	
	baz=269								
E25K	Arctic Village	89.92	22	IAmb		IAmb	02 21 02.9		
	comp=Z,34nm,1.4s								
E25K	Arctic Village	89.92	22	P		P	02 21 01.5	+1.3	
	baz=269,SNR=16								
J25K	Salcha River,	89.95	26	P		P	02 21 00.0	-0.4	
	baz=269								
MMAI	Mount Meron Ar	90.00	303	P		P	02 21 01.4	+0.1	
	comp=Z,14nm,0.9s,baz=53,slow=8.5,SNR=12								
MMAI				LR		LR	03 09 54.4		
	comp=Z,176nm,18.2s,baz=82,slow=41								
	comp=Z,14nm,0.9s								
HARP	HAARP	90.03	28	P		P	02 21 00.8	0.0	
	baz=270								
FYU	Fort Yukon	90.03	24	P		P	02 21 01.7	+1.0	
FYU				IAmb		IAmb	02 21 03.5		
	comp=Z,30nm,1.3s								
C26K	Camden Bay	90.17	20	P		P	02 21 02.1	+0.9	
	baz=270								
RIDG	Independent Ri	90.18	26	P		P	02 21 01.3	-0.2	
RIDG				IAmb		IAmb	02 21 19.6		
	comp=Z,15nm,0.8s								
RIDG	Independent Ri	90.18	26	P		P	02 21 01.6	+0.1	
	baz=270,SNR=6.9								
BMRM	Bremner River	90.29	29	P		P	02 21 02.7	+0.7	
	baz=270								
N25K	Chitina, Valde	90.29	29	P		P	02 21 02.9	+0.9	
	baz=270								
BMAR	Burnt Mountain	90.29	23	P		P	02 21 03.4	+1.5	
EIL	Elat	90.37	300	LR		LR	03 09 39.5		
	comp=Z,254nm,18.3s,baz=98,slow=41								
F26K	Sheenjek River	90.46	22	IAmb		IAmb	02 21 05.6		
	comp=Z,30nm,1.7s								
F26K	Sheenjek River	90.46	22	P		P	02 21 04.1	+1.4	
	baz=270,SNR=7.9								
SCRK	Sand Creek	90.56	26	P		P	02 21 03.8	+0.5	
	baz=271								
C27K	Jago River	90.59	20	IAmb		IAmb	02 21 06.0		
	comp=Z,36nm,1.4s								
C27K	Jago River	90.59	20	P		P	02 21 04.8	+1.5	
	baz=271								
G26K	Porcupine Rive	90.61	23	IAmb		IAmb	02 21 07.1		
	comp=Z,55nm,1.8s								
G26K	Porcupine Rive	90.61	23	P		P	02 21 04.8	+1.5	
	baz=271,SNR=11								
GLB	Gilahina Butte	90.67	29	P		P	02 21 04.7	+0.9	
MENT	Mentasta	90.69	27	IAmb		IAmb	02 21 22.5		
	comp=Z,12nm,0.7s								
MENT	Mentasta	90.69	27	P		P	02 21 06.1	+2.2	
L26K	Log Cabin Wild	90.86	27	P		P	02 21 05.3	+0.7	
	baz=271								
I26K	Coal Creek Min	90.89	25	P		P	02 21 05.2	+0.5	
	baz=271								
APA	Apatity	90.93	337⇓	*e*P		P	02 20 59.8	-5.0	
APA				*e*			02 24 41.0		
APA				pmax		pmax			
	comp=Z,8.0nm,1.2s								
APA				MLR		MLR			
	comp=Z,3μm,6.7s								
SIM	Simferopol'	90.97	315	*e*P		P	02 21 04.8	-0.7	
SIM				pmax		pmax			
	comp=Z,43nm,1.0s								
M26K	Nabesna, AK	91.03	28	P		P	02 21 06.2	+0.7	
	baz=272								
MCARA	McCarthy VSAT	91.05	29	P		P	02 21 06.8	+1.3	
	baz=272								
KIRS	Kirsehir-Merke	91.18	309	⇑P		P	02 21 06.0	-0.8	
BR104	Keskin Array S	91.39	310	P		P	02 21 06.3	-1.5	
	comp=Z,55nmcomp=Z,6.7nm,1.0s								
BR131	Keskin Array S	91.39	310	P		P	02 21 06.9	-0.9	
BRTR	Keskin Array B	91.39	310	P		P	02 21 06.2	-1.6	
	comp=Z,4.0nm,0.8s,baz=128,slow=5.1,SNR=24								
BRTR				LR		LR	03 09 46.4		
	comp=Z,168nm,18.6s,baz=80,slow=41								
	comp=Z,4.0nm,0.8s								
BRTR	Keskin Array B	91.39	310	P		P	02 21 06.5	-1.3	
BRTR	Keskin Array B	91.39	310	*i* P		P	02 21 06.5	-1.3	
BRTR				pmax		pmax			
	comp=Z,4.0nm,0.8s								
E27K	Coleen River	91.41	22			P	02 21 07.8	+0.7	
E27K				IAmb		IAmb	02 21 09.6		
	comp=Z,32nm,1.2s								
E27K	Coleen River	91.41	22	P		P	02 21 08.3	+1.2	
	baz=273,SNR=22								
BR105	Keskin Array S	91.41	310	P		P	02 21 06.8	-1.1	
	comp=Z,63nmcomp=Z,7.5nm,0.9s								
BR106	Keskin Array S	91.41	310	P		P	02 21 06.4	-1.4	
	comp=Z,51nmcomp=Z,5.4nm,1.1s								
G27K	Doyon Strip	91.45	23	IAmb		IAmb	02 21 10.1		
	comp=Z,22nm,1.4s								
G27K	Doyon Strip	91.45	23	P		P	02 21 08.5	+1.2	
	baz=273								
I27K	Kandik River	91.53	25	P		P	02 21 08.8	+1.1	
I27K				IAmb		IAmb	02 21 10.4		
	comp=Z,36nm,1.4s								
I27K	Kandik River	91.53	25	P		P	02 21 09.3	+1.6	
	baz=273,SNR=8.5								
H27K	Steamboat Moun	91.53	24			P	02 21 08.7	+1.0	
H27K				IAmb		IAmb	02 21 11.5		
	comp=Z,34nm,1.4s								
H27K	Steamboat Moun	91.53	24	P		P	02 21 09.3	+1.6	
	baz=273,SNR=19								
L27K	Beaver Creek,	91.55	27	IAmb		IAmb	02 21 27.7		
	comp=Z,10.0nm,0.8s								
L27K	Beaver Creek,	91.55	27	P		P	02 21 09.2	+1.4	
	baz=273								
M27K	Edge Creek, AK	91.56	28	P		P	02 21 09.0	+0.9	
	baz=272								
BCAR	Beaver Creek A	91.57	27			P	02 21 08.9	+0.9	
D27M	Malcolm River	91.58	21			P	02 21 08.3	+0.4	
D27M				IAmb		IAmb	02 21 10.4		
	comp=Z,21nm,1.3s								
D27M	Malcolm River	91.58	21	P		P	02 21 09.0	+1.1	
	baz=274								
CSS	Mathiatis	91.71	305			P	02 21 08.5	-0.7	
CSS	Mathiatis	91.71	305	P		P	02 21 08.7	-0.5	
	comp=Z,47nm,0.9s								
BARN	Barnard Glacie	91.72	29	P		P	02 21 10.4	+1.5	
CTG	Chitna Glacier	91.88	29	P		P	02 21 10.9	+1.4	
	baz=273								
CTGM	Chitina Glacie	91.88	29	P		P	02 21 10.7	+1.1	
BVCY	Beaver Creek	92.03	28	P		P	02 21 11.3	+1.2	
	baz=273								
LOGN	Logan Glacier	92.05	29	P		P	02 21 10.3	-0.1	
F28M	Old Crow	92.09	22	IAmb		IAmb	02 21 12.5		
	comp=Z,33nm,1.2s								
F28M	Old Crow	92.09	22	P		P	02 21 11.4	+1.2	
	baz=274,SNR=21								
E28M	Babbage River	92.14	21	IAmb		IAmb	02 21 12.8		
	comp=Z,31nm,1.2s								
E28M	Babbage River	92.14	21	P		P	02 21 11.8	+1.3	
	baz=275								
I28M	Miner Creek	92.23	25	IAmb		IAmb	02 21 13.7		
	comp=Z,23nm,1.1s								
I28M	Miner Creek	92.23	25	P		P	02 21 12.2	+1.2	
	baz=274,SNR=17								
YUK3	Moose Creek	92.26	28	P		P	02 21 12.4	+1.0	
	baz=274								
D28M	Stokes Point	92.36	21	P		P	02 21 12.8	+1.4	
	baz=276								
O28M	Mount Upton	92.45	29	IAmb		IAmb	02 21 37.4		
	comp=Z,25nm,1.2s								
O28M	Mount Upton	92.45	29	P		P	02 21 12.9	+0.6	
	baz=274								
PINM	Pinnacle	92.47	30	P		P	02 21 13.1	+1.0	
	baz=274								
DAWY	Dawson	92.58	26			P	02 21 13.4	+0.8	
DAWY				IAmb		IAmb	02 21 15.5		
	comp=Z,26nm,1.5s								
DAWY	Dawson	92.58	26	P		P	02 21 13.7	+1.1	
	baz=275,SNR=10								
YUK8	Steele Glacier	92.62	29	P		P	02 21 13.1	0.0	
	baz=274								
E29M	Blow River	92.76	22	P		P	02 21 13.9	+0.6	
E29M				IAmb		IAmb	02 21 15.3		
	comp=Z,25nm,1.4s								
E29M	Blow River	92.76	22	P		P	02 21 14.0	+0.8	
	baz=276								
G29M	Pine Creek	92.88	23	P		P	02 21 14.9	+1.1	
	baz=276								
I29M	Ogilvie Camp,	92.92	25	IAmb		IAmb	02 21 16.2		
	comp=Z,29nm,1.2s								
I29M	Ogilvie Camp,	92.92	25	P		P	02 21 15.1	+0.9	
	baz=276,SNR=20								

J29N	Klondike Camp	93.05	26	IAmb		IAmb	02 21 17.7		
	comp=Z,24nm,1.2s								
J29N	Klondike Camp	93.05	26	P		P	02 21 16.1	+1.3	
	baz=276,SNR=7.0								
M29M	Somme Creek	93.14	28	P		P	02 21 16.7	+1.4	
M29M				IAmb		IAmb	02 21 34.4		
	comp=Z,12nm,0.9s								
M29M	Somme Creek	93.14	28	P		P	02 21 16.8	+1.5	
	baz=276,SNR=6.0								
YUK4	Talbot Arm	93.16	29	P		P	02 21 16.8	+1.3	
	baz=275								
L29M	L29M	93.22	27	P		P	02 21 16.3	+0.7	
L29M	L29M	93.22	27	P		P	02 21 17.6	+2.0	
	baz=276								
O29M	Mount Kennedy	93.28	30	P		P	02 21 17.4	+1.4	
	baz=275								
YUK6	Outpost Mounta	93.33	29	P		P	02 21 17.7	+1.3	
	baz=276								
K29M	Barlow Dome	93.42	26	IAmb		IAmb	02 21 19.2		
	comp=Z,24nm,1.3s								
K29M	Barlow Dome	93.42	26	P		P	02 21 17.7	+1.1	
	baz=276,SNR=8.9								
ELIB	Princess Elisa	93.45	198	*d*P		P	02 21 17.8	+1.2	
	comp=Z,5.7nm,1.1s								
EPYK	Eagle Plains	93.45	24	P		P	02 21 16.9	+0.3	
	baz=277,SNR=16								
G30M	tAoh Zraii Nji	93.57	23	IAmb		IAmb	02 21 18.5		
	comp=Z,38nm,1.2s								
G30M	tAoh Zraii Nji	93.57	23	P		P	02 21 17.2	+0.1	
	baz=278,SNR=18								
ARCES	ARCESS Array B	93.64	340	P		P	02 21 15.5	-1.7	
	comp=Z,2.5nm,0.5s,baz=77,slow=4.0,SNR=10								
	comp=Z,2.5nm,0.5s								
ARCES	ARCESS Array B	93.64	340	P		P	02 21 15.6	-1.7	
ARCES				pmax		pmax			
	comp=Z,110nm,1.9s								
F30M	Barrier River	93.65	22	P		P	02 21 18.0	+0.6	
	baz=278								
I30M	Mount Dempster	93.74	25	IAmb		IAmb	02 21 20.0		
	comp=Z,15nm,1.2s								
I30M	Mount Dempster	93.74	25	P		P	02 21 18.4	+0.4	
	baz=278,SNR=8.0								
HYT	Haines Junctio	93.76	29	P		P	02 21 18.8	+0.6	
HYT				IAmb		IAmb	02 21 20.8		
	comp=Z,25nm,1.4s								
HYT	Haines Junctio	93.76	29	P		P	02 21 19.4	+1.2	
	baz=276								
J30M	Hart River	93.85	25	P		P	02 21 19.5	+0.9	
J30M				IAmb		IAmb	02 21 21.0		
	comp=Z,30nm,1.4s								
J30M	Hart River	93.85	25	P		P	02 21 19.6	+1.0	
	baz=278,SNR=9.5								
PURM	Purcari	93.88	316	P		P	02 21 17.8	-1.1	
	comp=Z,41nm,1.1s								
N30M	Aishikik Lake	93.89	28	P		P	02 21 20.2	+1.5	
N30M				IAmb		IAmb	02 21 21.6		
	comp=Z,28nm,1.4s								
N30M	Aishikik Lake	93.89	28	P		P	02 21 19.6	+0.9	
	baz=277								
M30M	Minto, Yukon	93.89	27			P	02 21 19.8	+1.1	
M30M				IAmb		IAmb	02 21 21.6		
	comp=Z,28nm,1.4s								
M30M	Minto, Yukon	93.89	27	P		P	02 21 19.7	+1.1	
	baz=277,SNR=8.4								
BAL3X	Bal3x, Balta	93.97	318	P		P	02 21 18.5	-0.8	
AK09	Malin Array Si	93.98	321	P		P	02 21 17.9	-1.3	
AK10	Malin Array Si	94.00	321	P		P	02 21 17.8	-1.5	
AKASG	Malin Array Be	94.01	321	P		P	02 21 17.5	-1.9	
	comp=Z,4.2nm,0.7s,baz=71,slow=4.8,SNR=16								
AKASG				LR		LR	03 09 55.7		
	comp=Z,308nm,18.1s,baz=64,slow=40								
	comp=Z,4.2nm,0.7s								
AKASG	Malin Array Be	94.01	321	P		P	02 21 18.3	-1.1	
AKASG				IAmb		IAmb	02 21 19.6		
	comp=Z,31nm,1.6s								
AKASG	Malin Array Be	94.01	321	P		P	02 21 18.3	-1.1	
AKASG				pmax		pmax			
	comp=Z,31nm,1.6s								
AKBB	Malin Array Si	94.01	321	*i* P		P	02 21 17.0	-2.4	
AKBB				pmax		pmax			
	comp=Z,7.0nm,0.9s								
AKBB	Malin Array Si	94.01	321	P		P	02 21 18.0	-1.4	
AK01	Malin Array Si	94.02	321	P		P	02 21 17.9	-1.5	
KIEV	Kiev	94.02	321	⇑P		P	02 21 17.9	-1.5	
KIEV	Kiev	94.02	321	P		P	02 21 18.1	-1.3	
KIEV	Kiev	94.02	321	P		P	02 21 18.1	-1.3	
KIEV				pmax		pmax			
	comp=Z,64nm,2.0s								
KIEV	Kiev	94.02	321	P		P	02 21 18.0	-1.5	
	comp=Z,77nm,1.5s								
AK02	Malin Array Si	94.03	321	P		P	02 21 17.9	-1.6	
SPITS	Spitsbergen Ar	94.06	349	P		P	02 21 18.6	-0.6	
	comp=Z,11nm,0.7s,baz=82,slow=10,SNR=23								
SPITS				LR		LR	03 10 04.6		
	comp=Z,354nm,18.8s,baz=70,slow=40								
	comp=Z,11nm,0.7s								
SPITS	Spitsbergen Ar	94.06	349	P		P	02 21 19.1	0.0	
SPITS				pmax		pmax			
	comp=Z,128nm,1.6s								
P30M	Million Dollar	94.11	30	P		P	02 21 20.5	+0.8	
	baz=277								
MAYO	Mayo, Yukon	94.17	26	P		P	02 21 20.7	+0.8	
G31M	Satah River	94.34	23	P		P	02 21 20.9	+0.4	
	baz=280								
INK	Inuvik	94.38	21			P	02 21 20.7	0.0	
INK				IAmb		IAmb	02 21 22.2		
	comp=Z,35nm,1.4s								
INK	Inuvik	94.38	21	P		P	02 21 20.7	0.0	
INK				pmax		pmax			
	comp=Z,35nm,1.4s								
INK	Inuvik	94.38	21	P		P	02 21 21.0	+0.3	
	baz=280								
ELL	Elmali	94.43	307	P		P	02 21 20.0	-1.8	
ELL	Elmali	94.43	307	P		P	02 21 20.0	-1.8	
ELL				pmax		pmax			
	comp=Z,61nm,1.6s								
F31M	Tsiigehtchic	94.45	22	P		P	02 21 21.4	+0.4	
	baz=280								
O30N	Mendenhall	94.45	29	P		P	02 21 21.9	+0.6	
	baz=278								
MNK	Minsk	94.48	325	*i* P		P	02 21 21.5	+0.1	
	comp=E,25nm,1.0s								
MNK				*i* P		P	02 21 21.5	+0.1	
	comp=N,41nm,1.1s								
MNK				*i* P		P	02 21 21.5	+0.1	
	comp=Z,51nm,1.0s,baz=84								
MNK				*i* pP		pwP	02 21 36.2	-1.0	
MNK				*i* PP		PP	02 25 09.4	+0.1	
MNK				*i* PPP		PPP	02 27 10.8		
MNK				*i* S		SKSac	02 31 52.0	-1.0	
MNK				*i* sS		SKKSac	02 32 18.2	+3.6	
MNK				*i* PS		PS	02 33 52.6	+1.0	
MNK				*i* SS		SS	02 38 54.5	+1.3	
MNK				*i* SSS		SSS	02 42 36.6		
MNK				*i* LQ		LQ	02 59 25.4		
MNK				*i* LRM		MLR	03 03 48.2		
	comp=E,2μm,19.9s								
MNK				*i* LRM		MLR	03 03 49.5		
	comp=N,2μm,20.9s								
MNK				*i* LRM		MLR	03 04 37.6		
	comp=Z,626nm,20.7s								
MNK	Minsk	94.48	325	*i* P		P	02 21 21.5	+0.1	
MNK				*i* *PP		pwP	02 21 36.2	-1.0	
MNK				*i*			02 25 09.4		
MNK				*i* PPP		PPP	02 27 10.8		
MNK				*i* S		SKSac	02 31 52.0	-1.0	
MNK				*i* *SS		SKKSac	02 32 18.2	+3.6	
MNK				*i* PS		PS	02 33 52.6	+1.0	
MNK				*i* SS		SS	02 38 54.5	+1.3	
MNK				*i* SSS		SSS	02 42 36.6		
MNK				pmax		pmax			
	comp=E,25nm,1.0s								
MNK				pmax		pmax			
	comp=Z,51nm,1.0s								
MNK				pmax		pmax			
	comp=N,41nm,1.1s								
MNK				MLR		MLR			
	comp=E,2μm,20.0s								
MNK				MLR		MLR			
	comp=N,2μm,21.0s								
MNK				MLR		MLR			
	comp=Z,626nm,21.0s								
H31M	Peel River	94.50	24	IAmb		IAmb	02 21 23.2		
	comp=Z,18nm,1.1s								
H31M	Peel River	94.50	24	P		P	02 21 21.9	+0.6	
	baz=280,SNR=6.7								

MBAR	Mbarara	94.50	269	LR		LR	03 04 38.9		
	comp=Z,206nm,18.7s,baz=74,slow=36								
MBAR	Mbarara	94.50	269	P		P	02 21 19.1	-3.6	
MBAR	Mbarara	94.50	269	*ce*P		P	02 21 19.4	-3.3	
MBAR				pmax		pmax			
	comp=Z,8.0nm,0.7s								
MBAR	Mbarara	94.50	269	P		P	02 21 20.6	-2.1	
N31M	Braeburn, Yuko	94.51	28			P	02 21 22.1	+0.6	
N31M				IAmb		IAmb	02 21 40.5		
	comp=Z,23nm,1.0s								
N31M	Braeburn, Yuko	94.51	28	P		P	02 21 21.9	+0.4	
	baz=278,SNR=6.0								
TAOE	Nuku Hiva Isla	94.52	99	*e*S		S	02 32 20.2	-12	
	comp=Z,151nm,31.6s								
TAOE				*e*LR		LR	02 51 51.3		
	comp=Z,352nm,27.9s								
FIA1	FINESS Array S	94.60	332	P		P	02 21 22.2	+0.4	
FINES	FINESS Array B	94.60	332	P		P	02 21 20.2	-1.7	
	comp=Z,4.1nm,0.8s,baz=53,slow=5.8,SNR=7.8								
	comp=Z,4.1nm,0.8s								
FINES	FINESS Array B	94.60	332	P		P	02 21 20.8	-1.0	
FINES	FINESS Array B	94.60	332	P		P	02 21 20.8	-1.0	
JURR	Jurilovca	94.70	315	⇑P		P	02 21 21.7	-1.0	
TLCR		94.71	315	⇑P		P	02 21 21.8	-0.9	
TLCR		94.71	315	⇑P		P	02 21 21.8	-0.9	
S31K	Pelican	94.74	32	P		P	02 21 23.1	+0.6	
	baz=277								
SORM	Soroca	94.79	318	⇑P		P	02 21 21.8	-1.2	
SORM	Soroca	94.79	318	⇑P		P	02 21 21.8	-1.2	
SORM	Soroca	94.79	318	P		P	02 21 21.7	-1.3	
	comp=Z,15nm,1.0s								
SKAG	Skagway	95.01	30	P		P	02 21 24.4	+0.6	
	baz=276								
LUBAR	Lubar, Ukraine	95.02	320	P		P	02 21 22.4	-1.6	
TPGR	Topolog	95.02	315	⇑P		P	02 21 23.3	-0.9	
M31M	Drury Creek, Y	95.06	28	P		P	02 21 24.9	+1.0	
	baz=279,SNR=6.6								
WHY	Whitehorse	95.06	29			P	02 21 25.1	+1.0	
WHY	Whitehorse	95.06	29	P		P	02 21 25.2	+1.0	
	baz=279,SNR=6.2								
VLDR	Vladesti	95.17	316	⇑P		P	02 21 24.6	-0.2	
CFR	Carcaliu	95.19	315	⇑P		P	02 21 22.7	-2.2	
CFR	Carcaliu	95.19	315	⇑P		P	02 21 22.7	-2.2	
SIT	Sitka	95.34	33	P		P	02 21 26.0	+0.7	
	baz=278								
MANT	Manisa	95.39	308	P		P	02 21 25.0	-1.3	
R32K	Eaglecrest	95.60	31	P		P	02 21 27.0	+0.5	
	baz=279								
S32K	Killisnoo	95.69	32	P		P	02 21 27.7	+0.9	
	baz=279								
N32M	Quiet Lake	95.85	29	P		P	02 21 28.6	+1.0	
N32M	Quiet Lake	95.85	29	P		P	02 21 28.9	+1.2	
	baz=280,SNR=10								
KMPD	K-Podol'skiy	96.00	319	P		P	02 21 26.7	-1.8	
KMPD				P		PcP	02 21 27.6	-1.1	
RNPP5	Staryi Chortor	96.06	321	P		P	02 21 28.0	-0.7	
RNPP8	Varash	96.06	322	P		P	02 21 28.1	-0.7	
TESR	Tescani	96.10	317	⇑P		P	02 21 28.1	-1.0	
TESR	Tescani	96.10	317	P		P	02 21 28.3	-0.8	
	comp=Z,47nm,1.5s								
VRI	Vrincioaia	96.11	316	⇑P		P	02 21 29.0	-0.1	
VRI	Vrincioaia	96.11	316	⇑P		P	02 21 29.0	-0.1	
VRI	Vrincioaia	96.11	316	P		P	02 21 28.8	-0.4	
	comp=Z,32nm,1.5s								
P33M	Teslin, Yukon	96.14	29	P		P	02 21 29.9	+0.8	
	baz=280								
PLOR	Plostina	96.17	316	⇑P		P	02 21 27.8	-1.6	
PLOR	Plostina	96.17	316	⇑P		P	02 21 27.8	-1.6	
A36M	Sachs Harbour	96.20	17	P		P	02 21 28.6	-0.3	
A36M	Sachs Harbour	96.20	17	P		P	02 21 29.3	+0.3	
	baz=289								
COVR	Voineasa-Covas	96.48	316	⇑P		P	02 21 29.5	-1.4	
TURR	Turia	96.59	316	⇑P		P	02 21 30.4	-1.0	
MLR	Muntele Rosu	96.70	316	LR		LR	03 11 08.2		
	comp=Z,487nm,18.9s,baz=61,slow=39								
MLR	Muntele Rosu	96.70	316	⇓P		P	02 21 31.1	-0.9	
MLR	Muntele Rosu	96.70	316			P	02 21 30.8	-1.2	
MLR				IAmb		IAmb	02 21 32.6		
	comp=Z,27nm,1.1s								
MLR	Muntele Rosu	96.70	316	⇓P		P	02 21 31.1	-0.9	
MLR	Muntele Rosu	96.70	316	P		P	02 21 31.3	-0.7	
	comp=Z,34nm,1.5s								
LSZ	Lusaka	96.74	255	LR		LR	03 01 10.8		
	comp=Z,985nm,21.9s,baz=110,slow=33								
LSZ	Lusaka	96.74	255	P		P	02 21 32.8	0.0	
LSZ				IAmb		IAmb	02 21 33.6		
	comp=Z,9.9nm,0.9s								
LSZ	Lusaka	96.74	255	P		P	02 21 32.8	0.0	
LSZ				pmax		pmax			
	comp=Z,10.0nm,0.9s								
LSZ	Lusaka	96.74	255	P		P	02 21 32.2	-0.6	
CRAG	Craig	96.80	34	P		P	02 21 32.7	+0.8	
	baz=280								
NOR	Nord	96.89	355	*i* P		P	02 21 31.2	-0.7	
NOR				IAmb		IAmb	02 21 32.4		
	comp=Z,11nm,1.1s								
BURAR	Bucovina Array	96.94	318	⇑P		P	02 21 32.9	-0.1	
BURAR	Bucovina Array	96.94	318	P		P	02 21 32.9	-0.1	
BURAR				IAmb		IAmb	02 21 34.4		
	comp=Z,16nm,0.8s								
BURAR	Bucovina Array	96.94	318	⇑P		P	02 21 32.9	-0.1	
BUR08	Bucovina Ar. S	96.95	318	IAmb		IAmb	02 21 34.1		
	comp=Z,21nm,0.9s								
KSV	Kosov	96.95	319	P		P	02 21 31.3	-1.6	
DOPR	Dopca	97.03	316	⇑P		P	02 21 32.5	-0.9	
ELND	Elena	97.03	313	⇓P		P	02 21 32.4	-0.9	
R33M	Jennings River	97.22	30	P		Pdif	02 21 34.8	+0.7	
	baz=282								
STNU	Starunia	97.28	319	P		P	02 21 33.3	-1.0	
VOIR		97.33	316	⇑P		P	02 21 33.4	-1.4	
VOIR		97.33	316	⇑P		P	02 21 33.4	-1.4	
C36M	Paulatuk	97.43	20	P		Pdif	02 21 34.9

	comp=Z,6.0nm,0.9s,baz=81,slow=4.7,SNR=7.7							
DAG	**Danmarks Havn**	**100.96**	**352**	*i* P	**Pdif**	02 21 49.0	**-1.2**
DAG				IAmb	IAmb	02 21 50.3		
	comp=Z,5.8nm,1.1s							
MORC	**Moravsky Berou**	**101.56**	**321**	*e*PDIFF	**Pdif**	02 21 53.3	**-0.2**
MORH	**Mrgy, Hungar**	**101.62**	**317**	⇑P	**Pdif**	02 21 52.8	**-1.0**
MODS	**Modra-Piesok**	**102.05**	**320**	*i* P	**Pdif**	02 21 55.4	**-0.3**
MODS	**Modra-Piesok**	**102.05**	**320**	*e*PDIFF	**Pdif**	02 21 55.4	**-0.3**
VRAC	**Vranov**	**102.27**	**321**	*e*PDIFF	**Pdif**	02 21 56.9	**+0.3**
KRUC	**Moravsky**	**102.45**	**320**	*e*PDIFF	**Pdif**	02 21 57.6	**+0.1**
NEEM	**North Greenlan**	**102.85**	**359**	*i* P	**Pdif**	02 21 59.8	**+0.7**
NEEM				IAmb	IAmb	02 22 00.6		
	comp=Z,6.9nm,0.8s							
DBG	**Daneborg**	**103.20**	**351**	*i* P	**Pdif**	02 21 59.3	**-0.9**
DBG				IAmb	IAmb	02 22 00.4		
	comp=Z,4.3nm,0.9s							
BRG	**Berggiesshubel**	**103.50**	**323**	⇓*e*Pif		02 22 03.0		
BRG				Amp		02 22 04.5		
	comp=Z,16nm,1.3s							
YKA	**Yellowknife Ar**	**103.71**	**24**	Pdiff	**Pdif**	02 22 03.0	**+0.3**
	comp=Z,0.8nm,1.0s,baz=299,slow=5.2,SNR=8.5							
YKA				PKiKP	**PKiKP**	02 26 20.7	**+0.1**	
	comp=Z,0.2nm,0.5s,baz=317,slow=2.0,SNR=6.4							
YKA	**Yellowknife Ar**	**103.71**	**24**	Pdif	**Pdif**	02 22 02.8	**+0.1**
YKA	**Yellowknife Ar**	**103.71**	**24**	P	**Pdif**	02 22 02.8	**+0.1**
GERES	**GERESS Array B**	**104.22**	**321**	Pdiff	**Pdif**	02 22 05.4	**0.0**
	comp=Z,0.5nm,0.4s,baz=59,slow=6.2,SNR=2.9							
NVAR	**Mina Array Bea**	**110.64**	**49**	PKiKP	**PKiKP**	02 26 36.0	**+1.4**
	comp=Z,0.2nm,0.4s,baz=253,slow=1.5,SNR=3.6							
PDAR	**Pinedale Array**	**115.30**	**42**	PKP	**PKiKP**	02 26 42.0	**-1.4**
	comp=Z,0.2nm,0.5s,baz=216,slow=3.8,SNR=4.8							
PDAR				PKKPbc	**PKKPbc**	02 37 17.1	**-2.1**	
	comp=Z,0.3nm,0.5s,baz=115,slow=4.4,SNR=7.8							
PV18	**Skein Mesa, Pa**	**117.63**	**46**		**PKiKP**	02 26 49.7	**+1.8**	
RSSD	**Black Hills**	**118.22**	**38**		**PKiKP**	02 26 49.3	**+0.3**	
RSSD	**Black Hills**	**118.22**	**38**	PKiKP	**PKiKP**	02 26 49.3	**+0.3**	
ULM	**Lac du Bonnet**	**119.14**	**29**	PKP	**PKPdf**	02 26 48.8	**-1.4**	
	comp=Z,1.1nm,0.5s,baz=278,slow=4.3,SNR=3.0							
ESDC	**Sonseca Array**	**119.38**	**317**	PKP	**PKPdf**	02 26 51.1	**+0.1**	
	comp=Z,1.2nm,0.9s,baz=32,slow=2.0,SNR=6.1							
ESDC				PP	**PP**	02 28 10.6	**-1.8**	
	comp=Z,0.6nm,0.8s,baz=73,slow=7.2,SNR=4.1							
EPLO	**Experimental L**	**120.55**	**28**		**PKiKP**	02 26 53.5	**+0.5**	
ANMO	**Albuquerque**	**120.77**	**49**		**PKiKP**	02 26 56.1	**+1.9**	
ANMO	**Albuquerque**	**120.77**	**49**	PKiKP	**PKiKP**	02 26 56.1	**+1.9**	
TORD	**Torodi Ar. Bea**	**122.64**	**285**	PKP	**PKPdf**	02 26 57.5	**-0.4**	
	comp=Z,5.3nm,0.7s,baz=25,slow=2.8,SNR=50							
TORD				PKKPbc	**PKKPab**	02 36 53.0	**+1.1**	
	comp=Z,1.7nm,0.8s,baz=222,slow=1.9,SNR=7.1							
ECSD	**EROS Data Cent**	**122.88**	**35**		**PKiKP**	02 26 58.2	**+0.4**	
SCHQ	**Schefferville**	**124.69**	**8**	PKP	**PKPdf**	02 27 01.0	**+0.3**	
	comp=Z,5.5nm,0.7s,baz=7.9,slow=1.2,SNR=17							
TX31	**Lajitas Ar. Si**	**125.17**	**54**		**PKiKP**	02 27 03.2	**+0.3**	
TXAR	**Lajitas Array**	**125.17**	**54**	PKP	**PKiKP**	02 27 03.3	**+0.4**	
	comp=Z,1.5nm,0.9s,baz=265,slow=0.9,SNR=11							
TXAR	**Lajitas Array**	**125.17**	**54**		**PKiKP**	02 27 04.0	**+1.1**	
TXAR	**Lajitas Array**	**125.17**	**54**	PKiKP	**PKiKP**	02 27 04.0	**+1.1**	
U38A	**Gravette**	**128.58**	**41**		**PKiKP**	02 27 10.1	**+0.7**	
CCM	**Cathedral Cave**	**129.59**	**38**		**PKiKP**	02 27 11.4	**+0.1**	
CCM	**Cathedral Cave**	**129.59**	**38**	PKiKP	**PKiKP**	02 27 11.4	**+0.1**	
DBIC	**Dimbokro**	**129.81**	**278**	PKP	**PKiKP**	02 27 12.3	**-0.1**	
	comp=Z,8.1nm,0.9s,baz=96,slow=1.8,SNR=11							
WVT	**Waverly**	**132.91**	**37**		**PKiKP**	02 27 18.5	**+0.4**	
WVT	**Waverly**	**132.91**	**37**	PKiKP	**PKiKP**	02 27 18.5	**+0.4**	
PLCA	**Paso Flores**	**136.76**	**162**	PKP	**PKPdf**	02 27 24.3	**+0.2**	
	comp=Z,2.0nm,0.6s,baz=245,slow=4.6,SNR=5.9							
BO02	**Sierra Bellavi**	**142.06**	**158**		**PKPdf**	02 27 33.5	**-0.4**	
BO01	**Tunca**	**142.30**	**158**		**PKPdf**	02 27 31.0	**-3.3**	
VA03	**San Esteban**	**143.95**	**157**	*e*P	PKPbc	02 27 36.3	+1.1	
ASAL	**Salagasta**	**144.74**	**159**	*e*P	**PKPdf**	02 27 39.2	**+0.4**	
AUSP	**Uspallata**	**144.87**	**158**	*e*P	**PKPdf**	02 27 40.0	**+0.7**	
RTLS	**Leoncito**	**145.28**	**158**	*e*P	**PKPdf**	02 27 41.0	**+1.0**	
ACAN	**Cantantal**	**145.59**	**161**	*e*P	**PKPab**	02 27 41.6	**+1.0**	
ACAN				*e*P	**PKPbc**	02 27 42.0	**+1.7**	
ACAN				*e*P	**PKiKP**	02 27 43.0	**-1.2**	
ZON	**Zonda**	**145.74**	**159**	*e*P	**PKPab**	02 27 41.8	**+0.6**	
ZON				*e*P	**PKPbc**	02 27 42.2	**+1.3**	
ZON				*e*P	**PKiKP**	02 27 42.8	**-1.7**	
LCO	**Las Campanas**	**147.16**	**154**		**PKPbc**	02 27 45.2	**-0.2**	
LCO	**Las Campanas**	**147.16**	**154**	PKP2	**PKPbc**	02 27 45.2	**-0.2**	
JTS	**Las Juntas de**	**148.36**	**71**		**PKiKP**	02 27 50.9	**+0.6**	
JTS	**Las Juntas de**	**148.36**	**71**	PKP2	**PKiKP**	02 27 50.9	**+0.6**	
CPSB	**Cacapava Do Su**	**149.49**	**182**	*e*P	**PKPdf**	02 27 45.0	**-1.6**	
AC02	**Maricunga**	**149.73**	**154**		**PKPbc**	02 27 50.6	**-1.9**	
CPUP	**Villa Florida**	**153.46**	**175**	PKPbc	**PKiKP**	02 28 01.1	**+0.6**	
	comp=Z,3.6nm,0.5s,baz=200,slow=2.1,SNR=13							
CPUP	**Villa Florida**	**153.46**	**175**		**PKiKP**	02 28 02.0	**+1.5**	
CPUP	**Villa Florida**	**153.46**	**175**	PKiKP	**PKiKP**	02 28 02.0	**+1.5**	
LPAZ	**La Paz**	**158.93**	**142**	PKP	**PKPdf**	02 28 01.4	**+0.5**	
	comp=Z,0.9nm,0.4s,baz=180,slow=2.0,SNR=5.5							
LPAZ				PKPab	**PKPab**	02 28 38.5	**+1.5**	
	comp=Z,3.3nm,0.7s,baz=60,slow=4.3,SNR=5.6							
ROSC	**El Rosal**	**159.94**	**77**	PKP	**PKPdf**	02 28 02.1	**+0.2**	
	comp=Z,3.1nm,0.3s,baz=142,slow=5.1,SNR=4.3							
ROSC	**El Rosal**	**159.94**	**77**	PKPdf	**PKPdf**	02 28 01.6	**-0.3**	

*ANF **23** 02:32:50.2±0.2, 61.77N×135.37W, h3km±2km, ML3.9/43, Error ellipse: s-maj=1.3km s-min=1.2km az=50.0*
*PGC **23** 02:32:51.4±0.0, 61.78N×135.36W, h8km, ML3.6/36, ML3.4(AEIC), 60km southeast of Carmacks, Yt Southern Yukon Territory, Canada*

ISC 23 02:32:50.7±1.0, 61.78N±0.02×135.33W±0.02, h9km±8km, n161, σ1932/231, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
N31M	**Braeburn, Yuko**	**0.37**	**216**	P	**Pg**	**02 32 58.0**	**+0.1**
	baz=38,SNR=1000						
N31M				S	**Sg**	02 33 03.2	**+0.4**
	baz=38						
N31M	**Braeburn, Yuko**	**0.37**	**216**	P	**Pg**	02 32 58.0	**+0.1**
N31M				S	**Sg**	02 33 03.2	**+0.4**
M31M	**Drury Creek, Y**	**0.61**	**46**	P	**Pg**	02 33 02.7	**+0.3**
	baz=225,SNR=1000						
M31M				S	**Sg**	02 33 10.9	**+0.4**
	baz=225						
M31M	**Drury Creek, Y**	**0.61**	**46**	P	**Pg**	02 33 02.8	**+0.3**
N30M	**Aishikik Lake**	**0.90**	**250**	P	**Pg**	02 33 07.0	**-1.0**
	baz=69						
N30M				S	**Sg**	02 33 18.6	**-1.2**
	baz=69						
N30M	**Aishikik Lake**	**0.90**	**250**	P	**Pg**	02 33 07.0	**-1.0**
M30M	**Minto, Yukon**	**1.05**	**320**	P	**Pg**	02 33 09.7	**-1.2**
	baz=138,SNR=1000						
M30M				S	**Sg**	02 33 23.5	**-1.1**
	baz=138						
M30M	**Minto, Yukon**	**1.05**	**320**	P	**Pg**	02 33 09.7	**-1.2**
M30M				S	**Sg**	02 33 23.5	**-1.1**
O30N	**Mendenhall**	**1.08**	**200**	P	**Pg**	02 33 10.4	**-1.0**
	baz=20,SNR=1000						
O30N				S	**Sg**	02 33 25.2	**-0.2**
	baz=20						
O30N	**Mendenhall**	**1.08**	**200**	P	**Pg**	02 33 10.5	**-1.0**
O30N				S	**Sg**	02 33 24.9	**-0.5**
O30N				Sg	**Sn**	02 33 27.9	**+0.8**
WHY	**Whitehorse**	**1.15**	**169**	P	**Pg**	02 33 11.3	**-1.4**
	baz=350,SNR=767						
WHY				S	**Sb**	02 33 28.0	**+0.2**
	baz=350						
WHY	**Whitehorse**	**1.15**	**169**	P	**Pg**	02 33 11.3	**-1.4**
WHY				S	**Sg**	02 33 27.6	**+0.1**
N32M	**Quiet Lake**	**1.25**	**119**	P	**Pg**	02 33 14.1	**-0.5**
	baz=301,SNR=954						
N32M				S	**Sg**	02 33 31.4	**+0.5**
	baz=301						
N32M	**Quiet Lake**	**1.25**	**119**	P	**Pg**	02 33 14.2	**-0.5**
N32M				S	**Sb**	02 33 31.5	**+0.9**
YUK5	**Granite Creek**	**1.38**	**243**	P	**Pn**	02 33 15.5	**-0.7**
YUK5				Sg	**Sn**	02 33 35.9	**+1.2**
HYT	**Haines Junctio**	**1.42**	**229**	P	**Pn**	02 33 16.4	**-0.4**
	baz=47,SNR=823						
HYT				S	**Sb**	02 33 34.9	**-0.8**
	baz=47						
HYT	**Haines Junctio**	**1.42**	**229**	Pn	**Pn**	02 33 16.4	**-0.4**
HYT				Sn	**Sb**	02 33 34.9	**-0.8**
HYT				Sg	**Sn**	02 33 37.3	**+1.6**
M29M	**Somme Creek**	**1.62**	**296**	P	**Pn**	02 33 18.8	**-0.6**
	baz=113						
M29M				S	**Sn**	02 33 40.1	**-0.3**
	baz=113						
M29M	**Somme Creek**	**1.62**	**296**	Pn	**Pn**	02 33 18.8	**-0.6**
YUK4	**Talbot Arm**	**1.65**	**256**	P	**Pn**	02 33 19.0	**-0.9**
	baz=76,SNR=1000						
YUK4				Sb	**Sn**	02 33 41.0	**-0.3**
	baz=76						
YUK4	**Talbot Arm**	**1.65**	**256**	Pn	**Pn**	02 33 19.1	**-0.9**
YUK4				Sg	**Sn**	02 33 41.2	**-0.2**
YUK6	**Outpost Mounta**	**1.69**	**241**	P	**Pn**	02 33 20.7	**+0.2**
	baz=59,SNR=885						
YUK6				Sg	**Sg**	02 33 45.3	**+0.4**
	baz=59						
YUK6	**Outpost Mounta**	**1.69**	**241**	Pn	**Pn**	02 33 20.8	**+0.2**
YUK6				Sn	**Sn**	02 33 42.1	**-0.3**
YUK6				Sg	**Sg**	02 33 45.1	**+0.2**
BRWY	**Burwash Landin**	**1.82**	**259**	Pn	**Pn**	02 33 22.3	**+0.1**
BRWY				Sg	**Sb**	02 33 47.0	**-0.1**
MAYO	**Mayo, Yukon**	**1.84**	**352**	Pg	**Pb**	02 33 25.5	**+1.0**
	baz=171,SNR=47						
MAYO				S	**Sn**	02 33 46.3	**+0.5**
	baz=171						
MAYO	**Mayo, Yukon**	**1.84**	**352**	Pn	**Pn**	02 33 22.9	**+0.5**
MAYO				Pg	**Pb**	02 33 25.5	**+1.0**
P30M	**Million Dollar**	**1.85**	**206**	P	**Pn**	02 33 22.9	**+0.3**
	baz=25						
P30M				Sb	**Sb**	02 33 48.7	**+0.9**
	baz=25						
P30M	**Million Dollar**	**1.85**	**206**	Pn	**Pn**	02 33 23.1	**+0.6**
P30M				Sg	**Sb**	02 33 48.6	**+0.8**
YUK7	**Dusty Glacier**	**1.85**	**229**	Pn	**Pn**	02 33 23.5	**+0.7**
YUK7				Pg	**Pb**	02 33 25.0	**+0.2**
YUK7				Sg	**Sb**	02 33 48.5	**+0.3**
L29M	**L29M**	**1.86**	**317**	P	**Pn**	02 33 22.2	**-0.6**
	baz=134,SNR=782						
L29M				Sb	**Sb**	02 33 49.0	**+0.7**
	baz=134						
L29M	**L29M**	**1.86**	**317**	Pn	**Pn**	02 33 22.4	**-0.3**
P33M	**Teslin, Yukon**	**1.99**	**141**	P	**Pn**	02 33 24.4	**-0.2**
	baz=323,SNR=379						
P33M				Sb	**Sb**	02 33 53.8	**+1.7**
	baz=323						
P33M	**Teslin, Yukon**	**1.99**	**141**	Pn	**Pn**	02 33 24.6	**0.0**
P33M				Pg	**Pb**	02 33 27.5	**+0.4**
P33M				Sg	**Sb**	02 33 53.7	**+1.6**
O29M	**Mount Kennedy**	**2.17**	**228**	P	**Pn**	02 33 27.6	**+0.5**
	baz=46						
O29M				Sb	**Sb**	02 33 58.2	**+1.0**
	baz=46						
O29M	**Mount Kennedy**	**2.17**	**228**	Pn	**Pn**	02 33 27.8	**+0.7**
YUK8	**Steele Glacier**	**2.18**	**259**	P	**Pn**	02 33 27.0	**-0.4**
	baz=75,SNR=73						
YUK8				Sb	**Sb**	02 33 58.8	**+1.1**
	baz=75						
YUK8	**Steele Glacier**	**2.18**	**259**	Pn	**Pn**	02 33 27.4	**0.0**
YUK8				Pg	**Pb**	02 33 31.1	**+0.6**
YUK8				Sg	**Sg**	02 33 59.1	**-1.7**
K29M	**Barlow Dome**	**2.30**	**335**	P	**Pn**	02 33 28.7	**-0.1**
	baz=153						
K29M				Sb	**Sb**	02 34 02.9	**+2.0**
	baz=153						
K29M	**Barlow Dome**	**2.30**	**335**	Pn	**Pn**	02 33 29.0	**+0.1**
K29M				Pg	**Pb**	02 33 33.1	**+0.8**
K29M				Sg	**Sb**	02 34 03.0	**+2.0**
SKAG	**Skagway**	**2.33**	**180**	P	**Pn**	02 33 29.2	**+0.1**
	baz=0.3,SNR=27						
SKAG				S	**Sn**	02 33 58.5	**+0.7**
	baz=0.3						
P32M	**Atlin**	**2.34**	**159**	P	**Pn**	02 33 29.2	**-0.1**
	baz=341,SNR=37						
P32M				Sb	**Sb**	02 34 03.8	**+1.8**
	baz=341						
P32M	**Atlin**	**2.34**	**159**	Pn	**Pn**	02 33 29.3	**0.0**
P32M				Pg	**Pb**	02 33 32.7	**-0.3**
P32M				Sg	**Sb**	02 34 03.7	**+1.8**
YUK3	**Moose Creek**	**2.44**	**272**	P	**Pn**	02 33 30.3	**-0.5**
	baz=88,SNR=88						
YUK3				Sb	**Sb**	02 34 06.2	**+1.2**
	baz=88						
YUK3	**Moose Creek**	**2.44**	**272**	Pn	**Pn**	02 33 30.5	**-0.4**
O28M	**Mount Upton**	**2.56**	**249**	P	**Pn**	02 33 33.1	**+0.6**
	baz=65						
O28M				Sb	**Sb**	02 34 10.2	**+1.7**
	baz=65						
O28M	**Mount Upton**	**2.56**	**249**	Pn	**Pn**	02 33 33.5	**+1.0**
O28M				Sg	**Sb**	02 34 10.2	**+1.7**
YUK2	**White River**	**2.62**	**273**	Pn	**Pn**	02 33 32.8	**-0.4**
BVCY	**Beaver Creek**	**2.68**	**286**	P	**Pn**	02 33 33.5	**-0.4**
	baz=101,SNR=15						
BVCY	**Beaver Creek**	**2.68**	**286**	Pn	**Pn**	02 33 33.5	**-0.4**
J30M	**Hart River**	**2.84**	**351**	P	**Pn**	02 33 36.5	**+0.3**
	baz=170						
J30M				Sb	**Sb**	02 34 18.4	**+1.9**
	baz=170						
J30M	**Hart River**	**2.84**	**351**	Pn	**Pn**	02 33 36.6	**+0.4**
LOGN	**Logan Glacier**	**2.90**	**253**	Pn	**Pn**	02 33 37.8	**+0.7**
PCA	**Pinnacle**	**2.94**	**237**	Pn	**Pn**	02 33 38.9	**+1.3**
PCA				Sg	**Sg**	02 34 24.1	**-1.0**
DAWY	**Dawson**	**2.95**	**323**	P	**Pn**	02 33 37.4	**-0.3**
	baz=139,SNR=32						
DAWY				S	**Sn**	02 34 13.3	**+0.1**
	baz=139						
DAWY	**Dawson**	**2.95**	**323**	Pn	**Pn**	02 33 37.3	**-0.3**
DAWY				Pg	**Pb**	02 33 45.0	**+1.6**
DAWY				Sg	**Sb**	02 34 22.4	**+2.9**
J29N	**Klondike Camp**	**2.98**	**335**	Sb	**Sb**	02 34 23.4	**+2.9**
	baz=152						
J29N	**Klondike Camp**	**2.98**	**335**	Pg	**Pb**	02 33 45.7	**+1.7**
CTGM	**Chitina Glacie**	**3.01**	**257**	Pn	**Pn**	02 33 39.5	**+0.9**
CTGM				Sg	**Sg**	02 34 25.3	**-1.9**
CTG	**Chitna Glacier**	**3.01**	**257**	P	**Pn**	02 33 38.8	**+0.2**
	baz=72,SNR=64						
CTG				Sb	**Sb**	02 34 24.0	**+2.7**
	baz=72						
M27K	**Edge Creek, AK**	**3.14**	**283**	P	**Pn**	02 33 40.1	**-0.2**
	baz=98,SNR=46						
M27K				Sb	**Sb**	02 34 27.4	**+2.4**
	baz=98						
R33M	**Jennings River**	**3.22**	**136**	P	**Pn**	02 33 41.5	**0.0**
	baz=320						
R33M				Sb	**Sb**	02 34 30.2	**+2.9**
	baz=320						
R33M	**Jennings River**	**3.22**	**136**	Pn	**Pn**	02 33 42.1	**+0.7**
R33M				Sg	**Sb**	02 34 30.5	**+3.2**
BESE	**Bessie Mountai**	**3.22**	**176**	Pn	**Pn**	02 33 42.2	**+0.8**
BESE				Sg	**Sb**	02 34 30.4	**+3.0**
GRNC	**Granite Creek**	**3.28**	**254**	Pn	**Pn**	02 33 43.7	**+1.3**
RKAV	**Rock Avalanche**	**3.28**	**246**	Pn	**Pn**	02 33 44.1	**+1.7**
L27K	**Beaver Creek,**	**3.29**	**296**	P	**Pn**	02 33 41.5	**-0.8**
	baz=110						
L27K	**Beaver Creek,**	**3.29**	**296**	Pn	**Pn**	02 33 41.4	**-0.9**
L27K				Sg	**Sg**	02 34 34.4	**-1.7**
TGTN	**Hyland Airport**	**3.37**	**91**	P	**Pn**	02 33 44.0	**+0.5**
	baz=277,SNR=20						
TGTN	**Hyland Airport**	**3.37**	**91**	Pn	**Pn**	02 33 44.2	**+0.7**
BALM	**Baldy**	**3.46**	**261**	Pn	**Pn**	02 33 47.1	**+2.3**
PTPK	**Patty Peak**	**3.48**	**263**	Pn	**Pn**	02 33 47.4	**+2.3**
I30M	**Mount Dempster**	**3.49**	**353**	P	**Pn**	02 33 46.2	**+1.1**
	baz=172						
I30M	**Mount Dempster**	**3.49**	**353**	Pn	**Pn**	02 33 46.4	**+1.2**
KIAG	**Kiagna River**	**3.50**	**259**	Pn	**Pn**	02 33 47.1	**+1.8**
WTLY	**Watson Lake, Y**	**3.60**	**115**	P	**Pn**	02 33 47.1	**+0.5**
	baz=300						
WTLY	**Watson Lake, Y**	**3.60**	**115**	Pn	**Pn**	02 33 47.4	**+0.9**
MESA	**MESA**	**3.61**	**246**	Pn	**Pn**	02 33 49.0	**+2.2**
M26K	**Nabesna, AK**	**3.66**	**283**	P	**Pn**	02 33 47.5	**+0.1**
	baz=96						
MCARA	**McCarthy VSAT**	**3.70**	**267**	P	**Pn**	02 33 48.8	**+0.8**
	baz=81,SNR=25						
MCARA	**McCarthy VSAT**	**3.70**	**267**	Pn	**Pn**	02 33 49.3	**+1.4**
S31K	**Pelican**	**3.86**	**187**	P	**Pn**	02 33 50.7	**+0.6**
	baz=6.5,SNR=11						
CRQE	**Cirque**	**3.89**	**258**	P	**Pn**	02 33 52.0	**+1.4**
	baz=71						
L26K	**Log Cabin Wild**	**3.94**	**292**	P	**Pn**	02 33 50.4	**-0.8**
	baz=105,SNR=9.8						
H31M	**Peel River**	**4.06**	**6**	P	**Pn**	02 33 53.5	**+0.5**
	baz=186						
H31M	**Peel River**	**4.06**	**6**	Pn	**Pn**	02 33 53.4	**+0.4**
H31M				Pg	**Pg**	02 34 06.7	**-1.7**
I28M	**Miner Creek**	**4.22**	**333**	P	**Pn**	02 33 56.0	**+0.8**
	baz=149						
I28M	**Miner Creek**	**4.22**	**333**	Pn	**Pn**	02 33 56.2	**+1.1**
DLBC	**Dease Lake**	**4.28**	**139**	P	**Pn**	02 33 57.2	**+1.3**
	baz=324,SNR=146						
DLBC	**Dease Lake**	**4.28**	**139**	Pn	**Pn**	02 33 57.0	**+1.1**
DLBC				Sg	**Sg**	02 35 04.9	**-2.9**
N25K	**Chitina, Valde**	**4.42**	**272**	P	**Pn**	02 33 59.6	**+1.7**
	baz=84						
N25K	**Chitina, Valde**	**4.42**	**272**	Pn	**Pn**	02 33 59.4	**+1.5**
S34M	**Telegraph Cree**	**4.42**	**150**	P	**Pn**	02 33 58.8	**+1.0**
	baz=333,SNR=7.7						
S34M	**Telegraph Cree**	**4.42**	**150**	Pn	**Pn**	02 33 59.5	**+1.7**
S34M				Sg	**Sg**	02 35 08.0	**-4.4**
DOT	**Dot Lake**	**4.44**	**299**	Pn	**Pn**	02 33 57.4	**-0.7**
DOT				Sg	**Sg**	02 35 10.1	**-2.9**
SCRK	**Sand Creek**	**4.53**	**303**	P	**Pn**	02 33 59.0	**-0.5**
	baz=115,SNR=25						
BMRM	**Bremner River**	**4.54**	**264**	P	**Pn**	02 33 59.7	**+0.2**
	baz=76						
EPYK	**Eagle Plains**	**4.65**	**353**	P	**Pn**	02 34 01.6	**+0.7**
	baz=172,SNR=7.5						
EPYK	**Eagle Plains**	**4.65**	**353**	Pn	**Pn**	02 34 01.6	**+0.7**
I27K	**Kandik River**	**4.75**	**327**	P	**Pn**	02 34 03.5	**+1.1**
	baz=141,SNR=25						
RIDG	**Independent Ri**	**4.79**	**298**	P	**Pn**	02 34 02.4	**-0.7**
	baz=110						
PAX	**Paxson**	**4.87**	**289**	P	**Pn**	02 34 03.8	**-0.3**
	baz=100						
PAX	**Paxson**	**4.87**	**289**	Pn	**Pn**	02 34 03.3	**-0.8**
I26K	**Coal Creek Min**	**4.97**	**319**	P	**Pn**	02 34 06.2	**+0.8**
	baz=132						
KLU	**Klutina**	**5.06**	**271**	P	**Pn**	02 34 08.2	**+1.5**
	baz=82						
G31M	**Satah River**	**5.18**	**5**	P	**Pn**	02 34 08.8	**+0.6**
	baz=185						
G31M	**Satah River**	**5.18**	**5**	Pn	**Pn**	02 34 08.9	**+0.7**
G31M				Sn	**Sn**	02 35 08.1	**+0.1**
K24K	**Donnelly Dome**	**5.21**	**297**	P	**Pn**	02 34 08.2	**-0.4**
	baz=108						
H27K	**Steamboat Moun**	**5.23**	**331**	P	**Pn**	02 34 10.1	**+1.1**
	baz=146						
H27K	**Steamboat Moun**	**5.23**	**331**	Pn	**Pn**	02 34 10.1	**+1.1**
G30M	**tAoh Zraii Nji**	**5.24**	**356**	P	**Pn**	02 34 09.4	**+0.3**
	baz=175						
G30M	**tAoh Zraii Nji**	**5.24**	**356**	Pn	**Pn**	02 34 09.4	**+0.3**
G30M				Sn	**Sn**	02 35 07.1	**-2.4**
G29M	**Pine Creek**	**5.28**	**348**	P	**Pn**	02 34 09.8	**+0.2**
	baz=166						
G29M	**Pine Creek**	**5.28**	**348**	Pn	**Pn**	02 34 09.5	**-0.1**
J25K	**Salcha River,**	**5.36**	**306**	P	**Pn**	02 34 10.6	**-0.1**
	baz=118						
T35M	**Bob Quinn**	**5.47**	**149**	Pn	**Pn**	02 34 15.9	**+3.6**
WRAK	**Wrangell Islan**	**5.59**	**163**	Sg	**Sg**	02 35 44.3	**-5.8**
F31M	**Tsiigehtchic**	**5.72**	**6**	P	**Pn**	02 34 15.5	**-0.1**
	baz=188,SNR=16						
F31M	**Tsiigehtchic**	**5.72**	**6**	Pn	**Pn**	02 34 15.6	**-0.1**
F31M				Sn	**Sn**	02 35 20.2	**-1.1**
DHY	**Denali Highway**	**5.75**	**288**	P	**Pn**	02 34 16.4	**+0.2**
	baz=98						
G27K	**Doyon Strip**	**5.75**	**334**	P	**Pn**	02 34 17.0	**+0.9**
	baz=148						
G27K	**Doyon Strip**	**5.75**	**334**	Pn	**Pn**	02 34 16.4	**+0.4**
F30M	**Barrier River**	**5.86**	**358**	P	**Pn**	02 34 17.7	**+0.2**
	baz=178,SNR=24						
F30M	**Barrier River**	**5.86**	**358**	Pn	**Pn**	02 34 17.1	**-0.4**
F30M				Sn	**Sn**	02 35 23.5	**-1.2**
PRP	**Porcupine Dome**	**5.89**	**314**	P	**Pn**	02 34 17.8	**-0.2**
	baz=125						
NBC1	**NorthernBC 1**	**6.03**	**106**	Pn	**Pn**	02 34 20.8	**+0.8**
F28M	**

BOOM	**Boomskoye usch**	**7.17**	**33**	Pn		**Pn**	**03 16 00.6**	**-1.8**
MAKZ	**Makanchi**	**13.25**	**36**			**Pn**	**03 17 19.6**	**-0.5**
MKAR	**Makanchi Array**	**13.39**	**37**	P		**Pn**	**03 17 21.2**	**-0.7**
	comp=E,0.8nm,0.7s,baz=213,slow=8.9,SNR=12							
MKAR	**Makanchi Array**	**13.39**	**37**			**Pn**	**03 17 22.9**	**+1.0**
WMQ	**Urumqi**	**14.88**	**56**	*e*P		**Pn**	**03 17 40.6**	**+0.3**
AB31	**Akbulak array**	**14.89**	**332**			**Pn**	**03 17 40.2**	**-0.1**
AB31				IAmb		IAmb	03 17 43.8	
	comp=Z,3.1nm,0.7s							
AB31	**Akbulak array**	**14.89**	**332**	⇓P		**Pn**	**03 17 39.7**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=147,slow=11,SNR=93							
AB31				⇓S		**S**	**03 20 19.1**	**-6.2**
	comp=Z,1.2nm,0.6s,baz=155,slow=21,SNR=5.2							
ABKAR	**Akbulak array**	**14.89**	**332**	P		**Pn**	**03 17 40.3**	**0.0**
KURBB	**Kurchatov Arra**	**15.14**	**19**	P		**Pn**	**03 17 43.0**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=209,slow=9.5,SNR=1.6							
KURK	**Kurchatov**	**15.25**	**20**	P		**Pn**	**03 17 43.0**	**-1.6**
BVAR	**Borovoye Array**	**16.45**	**359**	P		**Pn**	**03 17 59.7**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=159,slow=9.7,SNR=9.4							
AKTO	**Aktyubinsk**	**16.58**	**331**	P		**Pn**	**03 18 01.6**	**+0.9**
	comp=Z,5.9nm,0.6s,baz=146,slow=9.4,SNR=13							
AKTO	**Aktyubinsk**	**16.58**	**331**	⇑P		**P**	**03 18 00.4**	**+0.8**
	comp=Z,9.6nm,1.2s							
AKTO				⇓S		**S**	**03 21 01.6**	**-0.9**
	comp=Z,1.1nm,1.0s							
ZALV	**Zalesovo Beam**	**19.96**	**25**	P		**P**	**03 18 36.9**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=224,slow=11,SNR=11							
	comp=Z,1.1nm,0.3s							
ZALV	**Zalesovo Beam**	**19.96**	**25**	P		**P**	**03 18 36.7**	**+0.5**
GNI	**Garni**	**20.61**	**288**	P		**P**	**03 18 45.7**	**+2.1**
	comp=Z,1.4nm,0.5s,baz=45,slow=13,SNR=3.6							
	comp=Z,1.4nm,0.5s							
GNI	**Garni**	**20.61**	**288**	IAmb		IAmb	03 18 53.3	
	comp=Z,13nm,1.4s							
ARTI	**Arti**	**21.48**	**341**	P		**P**	**03 18 54.0**	**+1.8**
	comp=Z,1.0nm,0.4s,baz=140,slow=7.9,SNR=2.9							
	comp=Z,1.0nm,0.4s							
ARTI	**Arti**	**21.48**	**341**	IAmb		IAmb	03 19 28.4	
	comp=Z,5.3nm,1.0s							
KBZ	**Khabaz**	**22.33**	**297**	P		**P**	**03 19 02.8**	**+2.2**
	comp=Z,0.6nm,0.8s,baz=117,slow=6.8,SNR=4.0							
	comp=Z,0.6nm,0.8s							
LZH	**Lanzhou**	**26.66**	**81**	*e*P		**P**	**03 19 42.3**	**+2.3**
LZH				pmax		pmax		
	comp=Z,18nm,1.4s							
TLY	**Talaya**	**27.78**	**47**	P		**P**	**03 19 48.7**	**-0.9**
PZH	**PanZhiHua**	**28.22**	**102**	P		**P**	**03 19 54.5**	**+0.6**
SONM	**Songino Array**	**28.51**	**56**	P		**P**	**03 19 56.2**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=245,slow=7.8,SNR=1.8							
	comp=Z,0.3nm,0.6s							
HHC	**Hu-ho-hao-te**	**31.99**	**70**	*e*P		**P**	**03 20 26.4**	**-0.5**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,170nm,4.5s							
AKASG	**Malin Array Be**	**32.69**	**309**	P		**P**	**03 20 34.9**	**+2.2**
	comp=Z,0.8nm,0.5s,baz=80,slow=7.0,SNR=5.0							
	comp=Z,0.8nm,0.5s							
AKASG	**Malin Array Be**	**32.69**	**309**	IAmb		IAmb	03 20 36.0	
	comp=Z,1.8nm,0.8s							
KIEV	**Kiev**	**32.70**	**309**	P		**P**	**03 20 34.5**	**+1.8**
KIEV				IAmb		IAmb	03 20 48.4	
	comp=Z,3.7nm,1.4s							
FINES	**FINESS Array B**	**37.27**	**326**	P		**P**	**03 21 13.5**	**+1.8**
	comp=Z,5.7nm,1.1s,baz=121,slow=9.6,SNR=7.7							
	comp=Z,5.7nm,1.1s							
ARCES	**ARCESS Array B**	**40.97**	**338**	P		**P**	**03 21 44.1**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=103,slow=7.9,SNR=6.9							
	comp=Z,1.3nm,0.6s							
ARCES	**ARCESS Array B**	**40.97**	**338**	P		**P**	**03 21 43.3**	**+1.1**
HFS	**Hagfors**	**42.84**	**322**	P		**P**	**03 21 59.5**	**+2.1**
	comp=Z,3.6nm,0.5s,baz=98,slow=11,SNR=11							
	comp=Z,3.6nm,0.5s							
CLL	**Collm**	**42.93**	**309**	*i* P		**P**	**03 21 57.5**	**-0.8**
	comp=Z,4.0nm,0.8s							
NC303	**NORSAR Array S**	**44.10**	**323**	P		**P**	**03 22 09.9**	**+2.4**
NB2	**NORSAR Subarra**	**44.16**	**323**	P		**P**	**03 22 09.5**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.16**	**323**	P		**P**	**03 22 09.6**	**+1.6**
	comp=Z,1.2nm,0.5s,baz=96,slow=7.8,SNR=5.0							
	comp=Z,1.2nm,0.5s							
SENIN	**Lac Senin/Sane**	**47.32**	**303**	P		**P**	**03 22 34.0**	**+0.9**
SENIN				IAmb		IAmb	03 23 04.2	
	comp=Z,9.4nm,1.5s							
SPITS	**Spitsbergen Ar**	**47.36**	**347**	P		**P**	**03 22 35.6**	**+2.8**
	comp=Z,7.2nm,0.9s,baz=112,slow=12,SNR=5.8							
	comp=Z,7.2nm,0.9s							
TULEG	**Thule**	**64.32**	**350**	P		**P**	**03 24 34.5**	**+1.6**
TORD	**Torodi Ar. Bea**	**65.45**	**268**	P		**P**	**03 24 40.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=141,slow=3.6,SNR=7.3							
	comp=Z,0.5nm,0.7s							
WRA	**Warramunga Arr**	**82.26**	**122**	P		**P**	**03 26 17.1**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=324,slow=4.9,SNR=4.6							
	comp=Z,0.6nm,0.7s							
WRA	**Warramunga Arr**	**82.26**	**122**	IAmb		IAmb	03 26 23.4	
	comp=Z,0.5nm,1.4s							
ASAR	**Alice Springs**	**84.52**	**125**	P		**P**	**03 26 28.4**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=309,slow=4.5,SNR=5.4							
	comp=Z,0.4nm,0.7s							

DJA 23 03:16:02.5±0.2, 9°S±4°×12°0E±°, h39km±5km, M3.8/17, mB6.4/1, mb3.7/1, MLv3.9/17, Mw(mB)6.2/1, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.24**	**211**	P	Pn	03 16 11.1	+0.5
WBSI				S	Sn	03 16 18.6	+1.5
WSI	**Waingapu**	**0.80**	**107**	P	Pn	03 16 17.3	0.0
WSI				S	Sn	03 16 30.3	+2.2
BASI	**Baing, Sumba**	**1.30**	**127**	P	Pn	03 16 25.3	+1.1
BASI				S	Sn	03 16 40.6	+0.2
DBNI	**Kabupaten Domp**	**1.51**	**308**	P	Pn	03 16 28.4	+1.4
DBNI				S	Sn	03 16 48.2	+2.7
PLAI	**Plampang**	**1.82**	**289**	P	Pn	03 16 31.6	+0.2
PLAI				S	Sn	03 16 53.7	+0.5
EDFI	**Ende, Flores**	**2.25**	**73**	P	Pn	03 16 37.2	-0.1
TWSI	**Taliwang, Sumb**	**2.69**	**285**	P	Pn	03 16 43.9	+0.6
MMRI	**Maumere**	**2.80**	**74**	P	Pn	03 16 44.9	+0.1
BSSI	**Bau Bau, Buton**	**3.41**	**16**	P	Pn	03 16 52.9	-0.2
KLNI	**Mataram**	**3.53**	**286**	P	Pn	03 16 52.5	-2.3
KHKI	**Kahang-Kahang**	**4.01**	**285**	P	Pn	03 17 01.0	-0.4
BATI	**Baumata**	**4.16**	**101**	P	Pn	03 17 03.1	-0.4
IGBI	**Denpasar**	**4.36**	**278**	P	Pn	03 17 06.7	+0.4
KAPI	**Kappang**	**4.39**	**3**	P	Pn	03 17 07.4	+0.7
SOEI	**Soe**	**4.69**	**94**	P	Pn	03 17 11.6	+0.7

IDC 23 03:27:37.4±2.5, 3°86N×125°92E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=257.8km s-min=26.0km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.05**	**161**	P	P	03 33 02.0	-1.6
	0.4nm,0.7s,baz=339,slow=9.9,SNR=4.8						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**28.44**	**164**	P	P	03 33 36.0	+1.9
	0.2nm,0.9s,baz=345,slow=9.9,SNR=0.9						
	0.2nm,0.9s						
MKAR	**Makanchi Array**	**56.99**	**326**	P	P	03 37 24.9	0.0
	0.2nm,0.3s,baz=121,slow=7.7,SNR=11						
	0.2nm,0.3s						

*LDG **23** 03:37:38.9±0.1, 43°12N×0°54W, h2km, Md2.4/3, Ml2.6/15, Error ellipse: s-maj=1.6km s-min=1.4km az=122.0*
*STR **23** 03:37:38.6±0.0, 43°05N±0°08×0°58W±0°05, h3km, MLv2.1/19, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*MDD **23** 03:37:39.4±0.2, 43°08N×0°55W, h0km, mb_Lg2.4/52, Error ellipse: s-maj=1.6km s-min=1.0km az=7.0*

ISC 23 03:37:37.1±0.8, 43°14N±0°02×0°55W±0°02, h13km±5km, n64, σ1§10/124, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.13**	**243**	Pg	**Pg**	**03 37 40.6**	**+0.2**
ATE				Sg	**Sg**	**03 37 42.4**	**-0.4**
REYF	**Montagne du Re**	**0.14**	**124**	Pg	**Pb**	**03 37 41.3**	**-0.4**
REYF				Sg	**Sg**	**03 37 43.5**	**+0.4**
ETSF	**Etsaut**	**0.25**	**182**	*e*Pg	**Pg**	**03 37 42.3**	**-0.1**
ETSF				*e*Sg	**Sg**	**03 37 44.6**	**-1.3**
	218nm,0.2s						
ORDF	**Ordiarp**	**0.29**	**284**	Pg	**Pb**	**03 37 44.1**	**-0.2**
ORDF				Sg	**Sb**	**03 37 49.4**	**+0.3**
PYLO	**Lourdes**	**0.37**	**97**	Pg	**Pb**	**03 37 45.8**	**+0.3**
PYLO				Sg	**Sb**	**03 37 51.4**	**+0.2**
IRAF	**Chalets d'Irat**	**0.38**	**253**	Pg	**Pb**	**03 37 45.3**	**-0.5**
IRAF				Sg	**Sb**	**03 37 51.3**	**-0.3**
CANF	**Canfranc**	**0.38**	**177**	Pg	**Pg**	**03 37 44.8**	**0.0**
CANF				Sg	**Sg**	**03 37 49.4**	**-0.6**
LABF	**Labassere**	**0.46**	**102**	Pg	**Pb**	**03 37 47.0**	**-0.3**
LABF				Sg	**Sb**	**03 37 54.4**	**+0.4**
VIEF	**Viey**	**0.49**	**122**	Pg	**Pb**	**03 37 47.5**	**-0.2**
VIEF				Sg	**Sb**	**03 37 54.4**	**-0.5**
SJPF	**Ste Jean**	**0.50**	**267**	*e*Pg	**Pb**	**03 37 47.7**	**-0.1**
SJPF				*e*Sg	**Sg**	**03 37 53.8**	**+0.2**
	36nm,0.3s						
OSSF	**Osses**	**0.54**	**282**	Pg	**Pb**	**03 37 47.9**	**-0.5**
EORO	**Oroz-Betelu**	**0.61**	**246**	Pg	**Pb**	**03 37 50.1**	**+0.3**
EORO				Sg	**Sg**	**03 37 57.8**	**+0.5**
EORO				*i* lVmb_Lg		03 38 01.3	
EPF	**Esparros**	**0.66**	**100**	*e*Pg	**Pb**	**03 37 50.7**	**+0.1**
EPF				*e*Sg	**Sb**	**03 37 59.2**	**-0.5**
	19nm,0.2s						
TERF	**Tercis-les-Bai**	**0.68**	**322**	Pg	**Pn**	**03 37 53.0**	**+0.5**
EALK	**Alkurruntz**	**0.71**	**276**	Pg	**Pb**	**03 37 51.4**	**0.0**
EALK				Sg	**Sn**	**03 38 02.3**	**-1.5**
EALK				*i* lVmb_Lg		03 38 04.3	
EALK	**Alkurruntz**	**0.71**	**276**	Pg	**Pb**	**03 37 51.0**	**-0.4**
ECHI	**Chisagues Biel**	**0.72**	**131**	Pg	**Pb**	**03 37 51.7**	**-0.1**
ECHI				Sg	**Sg**	**03 38 01.0**	**+0.2**
ECHI				*i* lVmb_Lg		03 38 02.0	
ECHI	**Chisagues Biel**	**0.72**	**131**	Pg	**Pb**	**03 37 51.5**	**-0.2**
ECHI				Sg	**Sg**	**03 38 00.7**	**0.0**
MLZA	**Monlezun-d-Arm**	**0.75**	**24**	Pg	**Pn**	**03 37 54.3**	**+0.8**
MLZA				Sg	**Sn**	**03 38 06.2**	**+1.5**
MELF	**Melles**	**0.99**	**105**	Pg	**Pn**	**03 37 56.8**	**-0.1**
MELF				Sg	**Sn**	**03 38 10.6**	**-0.3**
VIER	**Vielha - Casau**	**1.07**	**114**	Pg	**Pn**	**03 37 58.2**	**+0.2**
VIER				Sg	**Sn**	**03 38 12.8**	**0.0**
MLS	**Moulis**	**1.22**	**98**	Pg	**Pg**	**03 38 01.1**	**+0.5**
SALF	**Salau**	**1.33**	**106**	Pg	**Pg**	**03 38 03.0**	**+0.3**
SALF				Sg	**Sg**	**03 38 22.2**	**+2.2**
ESAC	**San Caprasio**	**1.42**	**178**	Pg	**Pb**	**03 38 03.6**	**0.0**
ESAC				Sg	**Sb**	**03 38 22.4**	**+0.7**
ESAC				*i* lVmb_Lg		03 38 25.7	
CTRM	**Tremp**	**1.45**	**132**	Sn	**Sg**	**03 38 24.0**	**+0.3**
GENF	**Genat**	**1.59**	**101**	Pg	**Pg**	**03 38 08.0**	**+0.4**
PAND	**Andorre**	**1.66**	**111**	Pg	**Pg**	**03 38 09.0**	**+0.6**
DUNF	**Dun**	**1.73**	**93**	Pn	**Pb**	**03 38 08.5**	**-0.3**
DUNF				Sg	**Sg**	**03 38 35.5**	**+2.7**
MONQ	**Montcuq**	**1.76**	**45**	Pn	**Pb**	**03 38 07.9**	**-1.4**
MONQ				Pg	**Pg**	**03 38 12.2**	**+1.4**
FNEB	**Nbias**	**1.96**	**96**	Pg	**Pg**	**03 38 15.4**	**+0.6**
FNEB				Sg	**Sg**	**03 38 42.3**	**+2.1**
EMIR	**Miracle**	**1.96**	**128**	Pn	**Pb**	**03 38 11.7**	**-1.2**
EMIR				Pg	**Pg**	**03 38 14.7**	**-0.1**
EMIR				Sn	**Sb**	**03 38 36.1**	**-1.2**
EMIR				Sg	**Sg**	**03 38 41.0**	**+0.7**
EMIR				*i* lVmb_Lg		03 38 42.3	
LLIS	**Llivia - Polie**	**1.98**	**109**	Pg	**Pg**	**03 38 14.5**	**-0.5**
CARF	**Carcanieres**	**1.99**	**101**	Pg	**Pg**	**03 38 15.2**	**-0.1**
LFF	**La Frestale**	**2.02**	**27**	*e*Pg	**Pg**	**03 38 17.2**	**+1.3**
LFF				*e*Sg	**Sg**	**03 38 44.0**	**+1.9**
	14nm,0.3s						
MTLF	**Montolieu**	**2.03**	**83**	*e*Pg	**Pg**	**03 38 16.1**	**+0.1**
MTLF				*e*Sg	**Sg**	**03 38 42.9**	**+0.5**
	8.0nm,0.3s						
ELAN	**Lanestosa**	**2.11**	**273**	Pn	**Pb**	**03 38 15.0**	**-0.3**
ELAN				Sn	**Sb**	**03 38 41.0**	**-0.6**
ELAN				*i* lVmb_Lg		03 38 53.9	
EPOB	**Poblet**	**2.16**	**145**	Pn	**Pb**	**03 38 14.4**	**-1.7**
EPOB				Pg	**Pg**	**03 38 17.7**	**-0.9**
EPOB				Sn	**Sn**	**03 38 40.7**	**+1.1**
EPOB				Sg	**Sg**	**03 38 45.5**	**-1.0**
EPOB				*i* lVmb_Lg		03 38 48.0	
AVIN	**Avinyo**	**2.27**	**124**	Sg	**Sg**	**03 38 50.3**	**+0.4**
ERTA	**Horta de San J**	**2.28**	**163**	Pn	**Pb**	**03 38 16.8**	**-1.5**
ERTA				Pg	**Pg**	**03 38 19.7**	**-1.2**
ERTA				Sn	**Sn**	**03 38 43.4**	**+0.8**
ERTA				Sg	**Sg**	**03 38 49.9**	**-0.6**
ERTA				*i* lVmb_Lg		03 38 55.0	
CMON	**Montserrat**	**2.35**	**130**	Sg	**Sg**	**03 38 52.5**	**-0.1**
ETOR	**Torete**	**2.58**	**206**	Pn	**Pn**	**03 38 20.3**	**+1.5**
ETOR				Sn	**Sn**	**03 38 51.1**	**+1.0**
ETOR				*i* lVmb_Lg		03 38 58.9	
CAF	**Calviac**	**2.59**	**46**	*e*Pn	**Pn**	**03 38 20.0**	**+1.2**
CAF				*e*Pg	**Pg**	**03 38 26.9**	**+0.1**
CAF				*e*Sn	**Sn**	**03 38 49.9**	**-0.3**
CAF				*e*Sg	**Sg**	**03 39 01.3**	**+0.9**
	5.3nm,0.2s						
RJF	**Les Rejaudoux**	**2.62**	**34**	*e*Pg	**Pg**	**03 38 28.7**	**+1.4**
RJF				*e*Sg	**Sg**	**03 39 01.9**	**+0.6**
	6.3nm,0.2s						
EJON	**La Jonquera**	**2.62**	**104**	Sg	**Sg**	**03 39 03.3**	**+1.9**
EJON				*i* lVmb_Lg		03 39 07.2	
CLAF	**Gruissan**	**2.66**	**89**	Pg	**Pb**	**03 38 25.0**	**+0.3**
E0901	**Celadas (Terue**	**2.70**	**189**	Pn	**Pn**	**03 38 21.7**	**+1.4**
E0901				Sn	**Sn**	**03 38 53.7**	**+0.8**
E0901				*i* lVmb_Lg		03 39 13.2	
EMOS	**Mosqueruela**	**2.78**	**179**	Pn	**Pn**	**03 38 23.4**	**+1.8**
EMOS				Pg	**Pb**	**03 38 27.8**	**+1.0**
EMOS				Sn	**Sn**	**03 38 55.2**	**+0.2**
EMOS				Sg	**Sg**	**03 39 05.3**	**-1.1**
EMOS				*i* lVmb_Lg		03 39 10.8	
LASF	**Ste Croix**	**3.33**	**72**	*e*Pn	**Pn**	**03 38 29.9**	**+0.9**
LASF				*e*Pg	**Pg**	**03 38 39.2**	**-1.7**
LASF				*e*Sn	**Sn**	**03 39 07.8**	**-0.6**
LASF				*e*Sg	**Sg**	**03 39 23.8**	**-0.3**
	3.7nm,0.3s						
ECOL	**Islas Columbre**	**3.37**	**164**	Sg	**Sg**	**03 39 25.1**	**-0.4**
LBL	**Lubilhac**	**3.44**	**51**	Pn	**Pn**	**03 38 31.7**	**+1.2**
MFF	**Saint Martin d**	**3.47**	**5**	*e*Pg	**Pg**	**03 38 43.5**	**-0.1**
MFF				*e*Sg	**Sg**	**03 39 28.7**	**+0.2**
	1.1nm,0.2s						
MFF				*e*Sg	Sb	03 39 28.9	+8.4
	2.0nm,0.3s						
GUD	**Guadarrama**	**3.67**	**228**	Pn	**Pn**	**03 38 35.9**	**+2.0**
GUD				Sn	**Sn**	**03 39 17.0**	**-0.1**
GUD				*i* lVmb_Lg		03 39 24.1	
TCF	**Toulx Ste Croi**	**3.71**	**31**	*e*Pg	**Pg**	**03 38 47.9**	**-0.2**
TCF				*e*Sn	**Sn**	**03 39 16.3**	**-1.4**
TCF				*e*Sg	**Sg**	**03 39 36.2**	**+0.1**
	4.9nm,0.3s						
VIVF	**Saint-Julien-l**	**4.14**	**64**	*e*Pg	**Pg**	**03 38 55.3**	**-1.0**
VIVF				*e*Sg	**Sg**	**03 39 49.1**	**-0.8**
	1.8nm,0.3s						
BGF	**Bois d'Agland**	**4.18**	**34**	*e*Sn	**Sn**	**03 39 27.7**	**-1.6**
BGF				*e*Sg	**Sg**	**03 39 50.9**	**-0.4**
	14nm,0.4s						
EIBI	**Ibiza**	**4.35**	**160**	Pn	**Pn**	**03 38 44.5**	**+1.4**
EIBI				Sn	**Sn**	**03 39 30.9**	**-2.8**
EIBI				*i* lVmb_Lg		03 39 36.8	
AVF	**Avril sur Loir**	**4.58**	**36**	*e*Pn	**Pn**	**03 38 47.3**	**+1.2**
AVF				*e*Sn	**Sn**	**03 39 37.6**	**-1.5**
AVF				*e*Sg	**Sg**	**03 40 03.4**	**-0.6**
	1.4nm,0.3s						
PAB	**San Pablo**	**4.59**	**220**	Pn	**Pn**	**03 38 48.7**	**+2.2**
PAB				Sn	**Sn**	**03 39 38.5**	**-1.2**
PAB				*i* lVmb_Lg		03 39 43.3	
SMF	**Signal de Mont**	**4.69**	**40**	*e*Sg	**Sg**	**03 40 06.9**	**-0.6**
	1.0nm,0.2s						
SSF	**Saint Saulge**	**4.85**	**35**	*e*Pg	**Pg**	**03 39 07.7**	**-2.4**
SSF				*e*Sn	**Sn**	**03 39 43.4**	**-2.6**
SSF				*e*Sg	**Sg**	**03 40 11.5**	**-1.4**
	1.7nm,0.3s						
PSIM	**Granatula de C**	**4.96**	**210**	Pn	**Pn**	**03 38 53.3**	**+1.9**
CIBOR	**Castaar de Ib**	**5.08**	**228**	Pn	**Pn**	**03 38 55.2**	**+2.2**
CIBOR				Sn	**Sn**	**03 39 50.7**	**-0.8**
EPLA	**Plasencia**	**5.17**	**235**	*i* lVmb_Lg		03 39 49.9	
EPLA				Sn	**Sn**	**03 39 52.3**	**-1.4**
LOR	**Lormes**	**5.17**	**36**	*e*Sg	**Sg**	**03 40 20.0**	**-2.9**
	0.8nm,0.2s						

*BJI **23** 03:39:50.4, 0°96S×125°32E, h60km, mB5.3/17, mb4.9/68, Ms4.7/15, Ms7 4.3/20*
*NEIC **23** 03:39:52.8±1.9, 0°23S±0°06×125°21E±0°05, h18km±3km, mb5.2/185, Mww4.9/10, Error ellipse: s-maj=8.9km s-min=7.1km az=162.0*
*NEIC **23** 03:39:53.6, 0°29S×125°08E, h22km, Moment Tensor Solution. Duration: 1§4 Moment tensor: Scale 10^{16}Nm; M_{rr}1.86; $M_{\theta\theta}$-1.39; $M_{\phi\phi}$-0.48; $M_{r\theta}$-0.16; $M_{\theta\phi}$-1.43; $M_{\phi r}$1.46; Fault plane solution: M_o2.65000×10^{16} NP1: ϕ_s260.43000°, δ42.78000°, λ135.66000°. NP2: ϕ_s26.08000°, δ61.66000°, λ56.50000°. Principal axes: T 2.7206, Plg59.0000°, Azm247.0000°; N -0.1544, Plg29.0000°, Azm44.0000°; P -2.5662, Plg11.0000°, Azm139.0000°;*
*NEIC **23** 03:39:53.6, 0°19S×125°18E, h22km*
*GCMT **23** 03:39:55.6±0.2, 0°42S±0°01×125°37E±0°02, h36km, MW5.0/96, Moment Tensor Solution. s53,c70; s96,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.21±.21; $M_{\theta\theta}$-2.55±.14; $M_{\phi\phi}$-0.66±.17; $M_{r\theta}$1.31±.13; $M_{\theta\phi}$-2.96±.10; $M_{\phi r}$2.07±.17; Best double couple: M_o4.71900×10^{16} NP1:ϕ_s255.00000°, δ33.00000°, λ123.00000°. NP2: ϕ_s38.00000°, δ62.00000°, λ70.00000°. Principal axes: T 4.1080, Plg67.0000°, Azm271.0000°; N 1.2180, Plg17.0000°, Azm47.0000°; P -5.3310, Plg15.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **23** 03:39:55.3±1.6, 0°29S×125°13E, h43km±14km, mb4.5/28, mbtmp4.8/32, ML4.5/5, MS4.1/33 Error ellipse: s-maj=16.4km s-min=8.7km az=82.0*
*DJA **23** 03:39:56.1±0.1, 0°S±2°×12°5E±°, h47km±2km, M5.3/91, mB5.8/53, mb5.3/91, MLv5.3/49, Mw5.0/31, Mw(mB)5.3/53, MwMwp4.7/7, Mwp5.0/7*

ISC 23 03:39:55.9±0.7, 0°29S±0°04×125°19E±0°04, h48km±6km, n685, σ1§19/666, mb5.1/156, MS4.1/38, 32C-2D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.76**	**348**	P	**Pn**	**03 40 24.4**	**+0.4**
SANI	**Sanana**	**1.92**	**156**	P	**Pn**	**03 40 24.7**	**-1.5**
SANI	**Sanana**	**1.92**	**156**	P	**Pn**	**03 40 23.4**	**-2.8**
GTOI	**Gorontalo**	**2.37**	**293**	P	**Pn**	**03 40 35.4**	**+3.1**
TNTI	**Ternate**	**2.41**	**64**		**Pn**	**03 40 32.8**	**-0.2**
TNTI	**Ternate**	**2.41**	**64**	P	**Pn**	**03 40 33.9**	**+0.9**
TNTI	**Ternate**	**2.41**	**64**	S	**Sn**	**03 41 03.6**	**+2.3**
TNTI	**Ternate**	**2.41**	**64**	P	**Pn**	**03 40 33.5**	**+0.5**
LUWI	**Luwuk**	**2.54**	**253**		**Pn**	**03 40 35.6**	**+1.0**
LUWI	**Luwuk**	**2.54**	**253**	P	**Pn**	**03 40 35.9**	**+1.3**
LUWI	**Luwuk**	**2.54**	**253**	S	**Sn**	**03 41 05.9**	**+1.6**
LUWI	**Luwuk**	**2.54**	**253**	P	**Pn**	**03 40 36.0**	**+1.3**
MRSI	**Marisa**	**3.34**	**283**	P	**Pn**	**03 40 44.5**	**-1.2**
GAMI	**Galela, Maluku**	**3.34**	**51**	P	**Pn**	**03 40 46.1**	**+0.3**
NLAI	**Namlea**	**3.50**	**147**	P	**Pn**	**03 40 46.0**	**-1.8**
APSI	**Ampana**	**3.60**	**260**	P	**Pn**	**03 40 50.1**	**+0.9**
KRAI	**Karang Ratu**	**4.39**	**133**	P	**Pn**	**03 41 00.2**	**0.0**
AAI	**Ambon**	**4.51**	**138**	P	**Pn**	**03 40 59.6**	**-2.2**
TOLI2	**Tolitoli**	**4.63**	**287**		**Pn**	**03 41 04.1**	**+1.0**
TOLI2	**Tolitoli**	**4.63**	**287**	P	**Pn**	**03 41 04.1**	**+0.7**
TOLI2	**Tolitoli**	**4.63**	**287**	S	**Sn**	**03 41 58.7**	**+2.9**
MSAI	**Masohi**	**4.81**	**129**	P	**Pn**	**03 41 06.9**	**+1.0**
KKSI	**Kolaka, Sulawe**	**5.24**	**222**	P	**Pn**	**03 41 11.9**	**+0.2**
	0.7nm3μm110nm,0.5s						
MPSI	**Mapaga**	**5.33**	**277**	P	**Pn**	**03 41 13.9**	**+0.8**
	2.8nm5μm346nm,0.8s						
PCI	**Palu**	**5.39**	**263**	P	Pn	03 41 18.3	+4.4
TTSI	**Tana Toraja**	**6.03**	**243**	P	**Pn**	**03 41 24.2**	**+1.6**
	4.5nm3μm6μm280nm,0.8s						
SWI	**Sorong**	**6.09**	**95**	P	**Pn**	**03 41 22.3**	**-1.2**
	47nm,0.5s						
SIJI	**Sorong**	**6.10**	**95**	P	**Pn**	**03 41 22.6**	**-0.9**
	4.2nm,0.3s,baz=222,slow=20,SNR=8.2						
SIJI				S	**Sn**	**03 42 35.7**	**+3.6**
	26nm,0.7s,baz=251,slow=23,SNR=1.1						
	39nm,0.6s						
SIJI	**Sorong**	**6.10**	**95**	P	**

comp=Z,12µmcomp=Z,253nm,1.1s
SKJI Sukabumi 19.75 250 P **Pn** **03 44 24.4 +0.5**
comp=Z,4µmcomp=Z,319nm,1.2s
PMBI Palembang 20.58 262 P **P** **03 44 32.0 +0.9**
DSRI Dabo 20.62 269 P **P** **03 44 32.4 +0.9**
comp=Z,113nm,0.9s
TPRI Tanjung Pinang 20.70 273 P Pn 03 44 33.7 -1.5
comp=Z,153nm,0.7s
KLSI 20.90 258 P Pn 03 44 37.0 -0.5
KASI Kota Agung 21.31 256 P **P** **03 44 41.0 +2.1**
comp=Z,2µmcomp=Z,137nm,1.3s
WB0 Warramunga Arr 21.35 156 P **P** **03 44 37.7 -1.7**
MDSI Maura Dua 21.40 258 P **P** **03 44 39.7 -0.2**
MBWA Marble Bar 21.42 194 **P** **03 44 40.6 +0.6**
MYKOM Kota Tinggi 21.44 276 P **P** **03 44 40.8 +0.5**
MYKOM IAmb IAmb 03 44 43.1
comp=Z,236nm,1.9s
WRAB Tennant Creek 21.48 156 P **P** **03 44 37.9 -2.8**
WRA Warramunga Arr 21.49 156 P **P** **03 44 39.1 -1.7**
comp=Z,12nm,0.9s,baz=332,slow=11,SNR=26
comp=Z,12nm,0.9s
WRA Warramunga Arr 21.49 156 P **P** **03 44 38.0 -2.8**
WR8 Warramunga Arr 21.57 156 P **P** **03 44 39.6 -2.0**
PSA00 Pilbara Seismi 21.79 194 P **P** **03 44 43.6 -0.4**
PSA00 Pilbara Seismi 21.79 194 P **P** **03 44 43.4 -0.5**
PSA00 IAmb IAmb 03 44 54.4
comp=Z,12nm,1.1s
XMI Christmas Isla 21.86 242 P **P** **03 44 45.0 +0.1**
MANU Manus Island 22.23 95 P **P** **03 44 47.9 -1.0**
COEN Coen 22.39 128 P **P** **03 44 49.9 -0.6**
COEN IAmb IAmb 03 44 55.9
comp=Z,70nm,1.1s
COEN Coen 22.39 128 P **P** **03 44 52.3 +1.8**
MASI Maura Aman, Be 23.12 263 P **P** **03 44 58.3 +0.2**
comp=Z,2µmcomp=Z,130nm,0.9s
YULB Yu-li 23.84 351 P **P** **03 45 03.1 -1.7**
YULB Yu-li 23.84 351 P **P** **03 45 06.8 +1.9**
TPUB Ta-pu 23.86 350 P **P** **03 45 02.6 -2.4**
TPUB IAmb IAmb 03 45 06.1
comp=Z,107nm,1.3s
SSLB Suanglung 24.28 351 P **P** **03 45 07.2 -1.8**
SSLB IAmb IAmb 03 45 30.8
comp=Z,106nm,1.6s
SSLB Suanglung 24.28 351 P **P** **03 45 11.0 +2.1**
QIZ Qiongzhong 24.41 323 P **P** **03 45 11.1 +1.0**
QIZ S **S** **03 49 30.8 +4.0**
QIZ LR LR
comp=Z,340nm,14.9s
QIZ LR LR
comp=Z,320nm,16.1s
QIZ LR LR
comp=Z,530nm,16.7s
QIS Mount Isa 24.59 146 P **P** **03 45 12.2 +0.5**
IPM Ipoh 24.61 281 P **P** **03 45 11.4 -0.6**
IPM IAmb IAmb 03 45 14.9
comp=Z,62nm,1.2s
IPM Ipoh 24.61 281 P **P** **03 45 12.8 +0.8**
comp=Z,44nm,1.1s
AS31 Alice Springs 24.73 161 **P** **03 45 12.1 -0.9**
ASAR Alice Springs 24.73 161 P **P** **03 45 12.8 -0.2**
comp=Z,6.7nm,0.5s,baz=342,slow=10,SNR=57
ASAR PcP **PcP** **03 48 49.5 +0.3**
comp=Z,1.1nm,0.5s,baz=358,slow=1.7,SNR=4.4
ASAR ScP **ScP** **03 52 25.4 +1.1**
comp=Z,1.3nm,0.9s,baz=343,slow=2.6,SNR=6.3
ASAR LR LR 03 56 52.9
comp=Z,195nm,20.9s,baz=307,slow=41
comp=Z,6.7nm,0.5s
ASAR Alice Springs 24.73 161 P **P** **03 45 13.2 +0.2**
PDSI Padang 24.74 268 P **P** **03 45 13.8 +0.6**
comp=Z,70nm,1.3s
PPI Padang Panjang 24.80 270 P **P** **03 45 15.0 +1.3**
comp=Z,2µmcomp=Z,65nm,1.2s
PPSI Pulau Pagai 25.29 264 P **P** **03 45 19.6 +1.4**
comp=Z,2µmcomp=Z,122nm,1.1s
RPSI Rantau Prapat 26.43 277 P **P** **03 45 27.4 -1.1**
PSI Prapat 26.44 277 P **P** **03 45 28.7 -0.1**
JOW Kunigami 27.13 6 P **P** **03 45 35.8 +1.2**
comp=Z,37nm,0.5s,baz=187,slow=9.4,SNR=6.5
JOW LR LR 03 56 15.3
comp=Z,259nm,21.5s,baz=154,slow=36
comp=Z,37nm,0.5s
JOW Kunigami 27.13 6 P **P** **03 45 35.6 +1.0**
FORT Forrest 30.45 175 **P** **03 46 03.9 -0.2**
INKA Innaminka 31.11 153 **P** **03 46 10.6 +0.6**
BLDU Balidu 31.22 194 P **P** **03 46 12.2 +1.3**
CM31 Chiang Mai Arr 31.82 307 P **P** **03 46 16.7 +0.3**
CM31 IAmb IAmb 03 46 17.5
comp=Z,21nm,1.1s
CMAR Chiang Mai Arr 31.82 307 P **P** **03 46 16.4 +0.1**
comp=Z,6.5nm,0.9s,baz=138,slow=7.4,SNR=37
CMAR PcP **PcP** **03 49 07.5 +0.7**
comp=Z,1.6nm,0.4s,baz=136,slow=2.7,SNR=9.1
CMAR LR LR 03 59 16.7
comp=Z,145nm,21.2s,baz=115,slow=37
comp=Z,6.5nm,0.9s
CMAR Chiang Mai Arr 31.82 307 P **P** **03 46 15.7 -0.7**
CMAR **PcP** **03 49 08.1 +1.3**
CHTO Chiang Mai 32.01 308 P **P** **03 46 17.8 -0.3**
CHTO IAmb IAmb 03 46 19.5
comp=Z,37nm,1.1s
CHTO Chiang Mai 32.01 308 P **P** **03 46 17.8 -0.3**
comp=Z,33nm,1.1s
WHN Wuhan 32.35 342 P **P** **03 46 23.3 +2.5**
WHN pmax pmax
comp=Z,28nm,0.9s
NJ2 Nanjing 32.72 350 *eP* **P** **03 46 24.9 +0.8**
NJ2 pmax pmax
comp=Z,14nm,0.6s
NWAO Narrogin (SRO) 33.32 192 LR LR 04 02 41.1
comp=Z,121nm,18.1s,baz=13,slow=41
KMI2 Kunming 33.33 321 P **P** **03 46 30.8 +1.0**
KMI2 pP pwP 03 46 43.0 -2.1
KMI2 pmax pmax
comp=Z,9.0nm,1.3s
KMI2 LR LR
comp=Z,290nm,17.5s
KMI2 LR LR
comp=Z,210nm,19.2s
KMI2 LR LR
comp=Z,280nm,18.1s
JNU Nakatsue 33.66 9 P **P** **03 46 31.9 -0.5**
comp=Z,13nm,0.8s,baz=123,slow=3.0,SNR=10
comp=Z,13nm,0.8s
ENH Enshi 33.87 335 **P** **03 46 33.5 -0.7**
ENH IAmb IAmb 03 46 37.6
comp=Z,19nm,1.0s
BBOO Buckleboo 33.93 163 P **P** **03 46 36.5 +1.9**
JMN Monobe 34.81 13 P **P** **03 46 44.4 +2.1**
PZH PanZhiHua 34.93 321 P **P** **03 46 45.6 +2.1**
STKA Stephens Creek 35.04 155 P **P** **03 46 44.4 +0.1**
comp=Z,13nm,0.8s,baz=334,slow=7.8,SNR=24
comp=Z,13nm,0.8s
STKA Stephens Creek 35.04 155 **P** **03 46 44.4 +0.1**
STKA Stephens Creek 35.04 155 P **P** **03 46 45.4 +1.2**
HTT Hallett 35.40 160 P **P** **03 46 48.3 +0.9**
CMSA Cobar Meteorol 36.64 150 P **P** **03 46 58.9 +0.9**
LYN LuoYang 36.65 342 P **P** **03 46 58.3 +0.3**
LYN pP sP 03 47 12.1 -3.3
LYN pmax pmax
comp=Z,25nm,0.8s
TIA Tai'an 37.08 349 P **P** **03 47 00.6 -1.1**
TIA pmax pmax
comp=Z,5.0nm,0.6s
CD2 Chengdu 37.11 329 P **P** **03 47 02.6 +0.6**
CD2 S **S** **03 52 46.8 +1.7**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 LR LR
comp=Z,680nm,15.1s
CD2 LR LR
comp=Z,870nm,13.7s
CD2 LR LR
comp=Z,530nm,17.1s
XAN Xi'an 37.41 337 P **P** **03 47 03.1 -1.4**
XAN S **S** **03 52 43.6 -6.0**
XAN pmax pmax
comp=Z,20nm,1.0s
XAN pmax pmax
comp=Z,250nm,6.0s
XAN LR LR
comp=Z,530nm,14.6s
XAN LR LR
comp=Z,310nm,13.1s
XAN LR LR
comp=Z,690nm,17.5s

JGF Kuroka 37.46 16 P **P** **03 47 06.1 +1.2**
KSAR Wonju Array Be 37.62 4 P **P** **03 47 05.0 -1.2**
KSRS Korea Array 37.64 4 P **P** **03 47 06.9 +0.6**
comp=Z,5.1nm,0.9s,baz=182,slow=12,SNR=17
KSRS PcP **PcP** **03 49 24.1 +1.0**
comp=Z,1.5nm,0.6s,baz=170,slow=2.5,SNR=4.9
KSRS LR LR 04 02 26.7
comp=Z,187nm,21.9s,baz=180,slow=36
comp=Z,5.1nm,0.9s
KS19 Wonju Array Si 37.68 3 P **P** **03 47 04.8 -1.9**
KS19 IAmb IAmb 03 47 23.4
comp=Z,28nm,1.1s
MJAR Matsushiro Arr 38.59 17 P **P** **03 47 13.1 -1.3**
comp=Z,6.1nm,0.6s,baz=189,slow=8.5,SNR=18
MJAR PcP **PcP** **03 49 27.6 +1.4**
comp=Z,0.8nm,0.6s,baz=210,slow=5.0,SNR=1.2
comp=Z,6.1nm,0.6s
MJAR Matsushiro Arr 38.59 17 P **P** **03 47 13.6 -0.8**
MJAR **PcP** **03 49 26.6 +0.4**
HNS HongShan 38.73 347 ⇑P **P** **03 47 15.4 -0.1**
HNS pmax pmax
comp=Z,11nm,1.5s
DL2 Dalian 39.14 356 P P 03 47 23.6 +4.7
DL2 S S 03 53 24.9 +9.4
DL2 pmax pmax
comp=Z,28nm,1.5s
DL2 pmax pmax
comp=Z,430nm,9.0s
DL2 LR LR
comp=Z,730nm,22.9s
DL2 LR LR
comp=Z,700nm,22.2s
DL2 LR LR
comp=Z,530nm,24.7s
BRDH Bariadhala 39.84 307 LR LR 04 05 17.5
comp=Z,200nm,21.9s,baz=142,slow=38
BJI2 Beijing 40.95 349 P **P** **03 47 35.4 +1.4**
BJI2 pmax pmax
comp=Z,3.0nm,0.8s
BJI2 LR LR
comp=Z,240nm,23.6s
BJT Baijiatuan 40.95 349 P **P** **03 47 34.8 +0.8**
SHL Shillong 41.18 311 P **P** **03 47 34.4 -1.9**
LZDM Lanzhou Array 41.24 333 P **P** **03 47 37.2 +0.4**
comp=Z,1.2nm,0.4s,baz=132,slow=8.9,SNR=6.2
LZDM LR LR 04 05 03.0
comp=Z,265nm,20.0s,baz=180,slow=37
comp=Z,1.2nm,0.4s
LZH Lanzhou 41.28 333 *eP* **P** **03 47 38.3 +1.4**
LZH sP sP 03 47 53.4 -0.8
LZH pmax pmax
comp=Z,21nm,1.4s
LZH LR LR
comp=Z,380nm,18.2s
LZH LR LR
comp=Z,400nm,18.2s
LZH LR LR
comp=Z,530nm,19.6s
CAN Canberra 41.32 150 P **P** **03 47 36.7 -0.4**
CAN IAmb IAmb 03 48 01.4
comp=Z,48nm,1.4s
CAN Canberra 41.32 150 P **P** **03 47 38.6 +1.5**
TOO Toolangi 41.56 155 P **P** **03 47 40.4 +1.4**
HHC Hu-ho-hao-te 42.78 345 *eP* **P** **03 47 50.3 +1.3**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,310nm,5.1s
CN2 Changchun 43.90 0 *eP* **P** **03 48 00.6 +2.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
LSA Lhasa 44.07 316 **P** **03 47 59.6 -0.5**
LSA Lhasa 44.07 316 P **P** **03 47 57.9 -2.1**
USRK Ussuriysk Ar. 44.71 7 P **P** **03 48 05.0 +0.7**
comp=Z,12nm,0.5s,baz=187,slow=7.0,SNR=27
comp=Z,12nm,0.5s
XLT XiLinHaoTe 44.74 351 *eP* **P** **03 48 06.8 +2.1**
XLT pP sP 03 48 20.8 -1.4
XLT sP pwP 03 48 28.4 +8.2
XLT pmax pmax
comp=Z,14nm,0.9s
MDJ Mudanjiang 44.88 4 **P** **03 48 06.2 +0.6**
MDJ IAmb IAmb 03 48 24.5
comp=Z,20nm,0.9s
MDJ Mudanjiang 44.88 4 P **P** **03 48 07.3 +1.6**
MDJ pmax pmax
comp=Z,25nm,1.0s
PALK Pallekele 45.01 281 LR LR 04 08 55.2
comp=Z,293nm,19.9s,baz=108,slow=39
DZM Mont Dzumac 45.63 121 *e*LR LR 04 01 12.9
comp=Z,368nm,24.4s
BNX BinXian 45.88 2 ⇑P **P** **03 48 13.6 +0.1**
BNX pmax pmax
comp=Z,9.0nm,1.0s
GTA2 Gaotai 45.92 332 *eP* **P** **03 48 13.9 -0.3**
GTA2 pP pwP 03 48 25.9 -3.6
GTA2 pmax pmax
comp=Z,6.0nm,1.0s
GTA2 LR LR
comp=Z,290nm,17.1s
GTA2 LR LR
comp=Z,310nm,17.4s
GTA2 LR LR
comp=Z,520nm,17.4s
GOMU GeErMu 45.98 325 P **P** **03 48 15.8 +0.8**
GOMU pP pwP 03 48 27.0 -4.0
GOMU pmax pmax
comp=Z,10.0nm,1.4s
TAU Tasmania Unive 46.84 158 P **P** **03 48 20.5 -0.6**
ASAJ Asahikawa 46.86 17 P **P** **03 48 21.2 0.0**
comp=Z,4.4nm,0.4s,baz=256,slow=12,SNR=6.9
comp=Z,4.4nm,0.4s
JKA Kamikawa-asahi 46.86 17 P **P** **03 48 21.5 +0.2**
HIA Hailar 49.59 355 P **P** **03 48 42.4 +0.1**
HIA IAmb IAmb 03 48 43.5
comp=Z,25nm,1.3s
KLR Kul'dur 49.65 6 P **P** **03 48 42.3 -0.4**
comp=Z,8.1nm,0.5s,baz=198,slow=8.1,SNR=28
comp=Z,8.1nm,0.5s
HILR Hailar Array B 49.87 355 P **P** **03 48 45.2 +0.7**
comp=Z,8.4nm,0.5s,baz=169,slow=9.9,SNR=12
comp=Z,8.4nm,0.5s
HEH HeiHe 50.39 2 *eP* **P** **03 48 47.8 -0.5**
HEH pmax pmax
comp=Z,24nm,0.8s
ULN Ulaanbaatar 50.49 344 P **P** **03 48 48.8 -0.5**
ULN Ulaanbaatar 50.49 344 P **P** **03 48 51.4 +2.1**
comp=Z,62nm,1.1s
SONM Songino Array 50.65 344 P **P** **03 48 50.5 0.0**
comp=Z,6.1nm,0.7s,baz=158,slow=9.2,SNR=24
SONM PcP **PcP** **03 50 07.3 -0.1**
comp=Z,2.8nm,0.7s,baz=159,slow=4.6,SNR=3.6
SONM LR LR 04 11 18.9
comp=Z,168nm,20.0s,baz=162,slow=37
comp=Z,6.1nm,0.7s
SONM Songino Array 50.65 344 P **P** **03 48 49.0 -1.5**
TLY Talaya 54.89 344 P **P** **03 49 21.0 -0.6**
WMQ Urumqi 55.19 328 *eP* **P** **03 49 25.4 +1.4**
WMQ pP sP 03 49 37.6 -4.0
WMQ PcP **PcP** **03 50 25.8 +1.2**
WMQ pmax pmax
comp=Z,20nm,1.3s
WMQ LR LR
comp=Z,310nm,23.9s
WUS Wushi 58.59 321 **P** **03 49 48.5 +0.2**
WUS IAmb IAmb 03 49 50.8
comp=Z,27nm,1.4s
ZSN Zaisan 59.09 329 *eP* **P** **03 49 52.3 +0.9**
NIL Nilore 59.24 310 **P** **03 49 52.3 -0.5**
NIL IAmb IAmb 03 49 54.5
comp=Z,13nm,0.6s
RPZ Rata Peaks 59.44 143 LR LR 04 16 32.1
comp=Z,186nm,19.4s,baz=54,slow=37
SHLS Shalkode 59.51 323 *eP* **P** **03 49 53.3 -1.2**
comp=Z,12nn,0.9s
PETK Petropavlovsk- 59.70 22 P **P** **03 49 56.2 +0.7**
comp=Z,13nn,0.7s,baz=185,slow=3.7,SNR=28
comp=Z,13nn,0.7s
PETK Petropavlovsk- 59.70 22 P **P** **03 49 56.8 +1.3**
UZB Uzynbulak 59.77 322 *eP* **P** **03 49 56.9 +0.5**
comp=Z,10nn,1.1s
PRZ Przheval'sk 59.80 321 **P** **03 49 58.1 +1.5**
KSH2 Kashi 59.96 317 P **P** **03 49 58.8 +1.0**
KSH2 S **S** **03 58 01.4 -5.5**
KSH2 pmax pmax
comp=Z,18nn,1.1s

PET Petropavlovsk 60.00 23 P **P** **03 49 56.8 -0.7**
comp=Z,12nn,0.7s
MKAR Makanchi Array 60.02 327 P **P** **03 49 56.4 -1.5**
comp=Z,10nn,0.4s,baz=123,slow=7.8,SNR=106
MKAR LR LR 04 16 26.9
comp=Z,316nn,19.4s,baz=120,slow=36
comp=Z,10nn,0.4s
MKAR Makanchi Array 60.02 327 P **P** **03 49 56.6 -1.2**
KPKS Kokpek 60.16 322 *eP* **P** **03 49 59.3 +0.3**
MAKZ Makanchi 60.20 327 P **P** **03 49 57.3 -1.8**
MAKZ IAmb IAmb 03 50 01.1
comp=Z,14nn,0.6s
KDJ Kajisay 60.38 321 **P** **03 50 00.1 -0.5**
KDJ IAmb IAmb 03 50 03.2
comp=Z,17nn,0.6s
URZ Urewera 60.75 135 LR LR 04 20 44.4
comp=Z,77nn,18.0s,baz=315,slow=40
NRN Naryn 60.78 319 **P** **03 50 03.0 -0.6**
NRN IAmb IAmb 03 50 06.0
comp=Z,8.7nn,0.7s
TNSS Tian-Shan 61.00 321 *eP* **P** **03 50 05.3 +0.2**
MDOK Medeo 61.00 321 *eP* **P** **03 50 05.1 +0.3**
AAA Alma-Ata 61.11 321 *eP* **P** **03 50 05.9 +0.5**
comp=Z,11nn,0.4s
TDK Taldyqorghan 61.17 324 *eP* **P** **03 50 06.5 +0.8**
comp=Z,8.9nn,0.6s
BOOM Boomskoye usch 61.35 320 **P** **03 50 07.3 +0.1**
YAK Yakutsk 62.25 2 LR LR 04 19 06.7
comp=Z,120nn,19.5s,baz=282,slow=38
YAK Yakutsk 62.25 2 P **P** **03 50 12.0 -0.5**
AAK Ala-Archa 62.35 320 LR LR 04 20 34.2
comp=Z,114nn,20.8s,baz=86,slow=39
AAK Ala-Archa 62.35 320 P **P** **03 50 13.2 -0.7**
AAK IAmb IAmb 03 50 16.1
comp=Z,16nn,1.1s
SGDS Sogindy 62.67 321 *eP* **P** **03 50 16.4 +0.5**
DRK Karamyk 62.72 316 P **P** **03 50 17.0 +0.4**
DRK IAmb IAmb 03 50 18.9
comp=Z,19nn,0.7s
ARSB Arslanbob 62.73 318 P **P** **03 50 15.5 -0.9**
ARSB IAmb IAmb 03 50 18.8
comp=Z,22nn,0.8s
KBL Kabul 62.81 310 P **P** **03 50 15.5 -1.6**
KBL IAmb IAmb 03 50 18.6
comp=Z,24nn,1.1s
MA2 Magadan 62.95 14 P **P** **03 50 17.6 +0.3**
MA2 IAmb IAmb 03 50 35.2
comp=Z,19nn,0.9s
MA2 Magadan 62.95 14 P **P** **03 50 16.7 -0.6**
comp=Z,26nn,2.2s
ZAA0 Zalesovo Array 63.49 335 P **P** **03 50 20.2 -0.8**
ZAA0 IAmb IAmb 03 50 22.0
comp=Z,14nn,1.1s
ZALV Zalesovo Beam 63.49 335 P **P** **03 50 19.0 -2.0**
comp=Z,3.7nn,0.6s,baz=120,slow=5.8,SNR=22
comp=Z,3.7nn,0.6s
BTK Batken 63.65 316 **P** **03 50 21.9 -0.6**
BTK IAmb IAmb 03 50 24.8
comp=Z,23nn,1.2s
CHGR Chuyangaron 64.26 314 P **P** **03 50 25.1 -1.4**
KURBB Kurchatov Arra 64.32 329 P **P** **03 50 25.2 -1.3**
comp=Z,11nn,0.6s,baz=129,slow=6.3,SNR=42
comp=Z,11nn,0.6s
KURK Kurchatov 64.33 329 P **P** **03 50 25.2 -1.4**
DZA Taraz 64.53 319 *eP* **P** **03 50 28.8 +0.6**
IUG Iuzhnay 65.07 318 *eP* **P** **03 50 32.5 +0.7**
comp=Z,16nn,0.6s
KK31 Karatay Array 65.17 319 **P** **03 50 30.9 -1.3**
KK31 IAmb IAmb 03 50 34.3
comp=Z,35nn,1.3s
KKAR Karatay Array 65.17 319 P **P** **03 50 30.9 -1.4**
CHM Chimkent 65.43 318 *eP* **P** **03 50 34.5 +0.5**
comp=Z,11nn,0.9s
BRLS Borolday 65.58 319 ‖*iP* **P** **03 50 35.6 +0.6**
BRZS Berezniki 67.11 326 *eP* **P** **03 50 45.4 +0.9**
BVAR Borovoye Array 69.87 328 P **P** **03 51 00.6 -1.1**
comp=Z,12nn,0.8s,baz=132,slow=8.2,SNR=38
comp=Z,12nn,0.8s
BORK Borovoye 69.92 328 P **P** **03 51 01.6 -0.4**
BORK IAmb IAmb 03 51 04.2
comp=Z,33nn,1.2s
RER Riviere de l'E 70.76 248 P **P** **03 51 07.3 -0.6**
TIXI Tiksi 71.86 1 LR LR 04 23 07.0
comp=Z,140nn,21.9s,baz=190,slow=36
TIXI Tiksi 71.86 1 P **P** **03 51 12.7 -0.7**
TIXI IAmb IAmb 03 51 30.3
comp=Z,18nn,1.0s
AB31 Akbulak array 74.31 322 **P** **03 51 26.8 -1.5**
ABKAR Akbulak array 74.31 322 P **P** **03 51 27.1 -1.3**
AKTO Aktyubinsk 75.87 323 LR LR 04 27 17.9
comp=Z,228nn,19.2s,baz=256,slow=38
RAR Rarotonga 75.95 112 LR LR 04 27 03.3
comp=Z,36nn,18.0s,baz=254,slow=37
NIKH Nikolski High 75.97 35 P **P** **03 51 38.7 +1.0**
baz=250
SPIA Saint Paul Isl 76.72 30 P **P** **03 51 43.2 +1.2**
baz=248
UNV Unalaska Valle 77.58 34 P **P** **03 51 47.7 +0.8**
baz=252
ARTI Arti 77.59 328 P **P** **03 51 45.6 -1.3**
ARTI IAmb IAmb 03 51 49.7
comp=Z,12nn,0.7s
GAMB Gambell 78.67 24 **P** **03 51 53.8 +1.1**
GAMB IAmb IAmb 03 52 11.2
comp=Z,19nn,1.2s
GAMB Gambell 78.67 24 P **P** **03 51 54.2 +1.6**
baz=245
VOI Vohitsoka 79.13 248 P **P** **03 51 56.3 0.0**
MAW Mawson 79.48 200 LR LR 04 24 16.9
comp=Z,91nn,21.4s,baz=72,slow=34
VNDA Vanda 79.67 172 LR LR 04 27 19.2
comp=Z,131nn,20.1s,baz=324,slow=36
M11K Mekoryuk 79.81 28 P **P** **03 52 00.7 +1.7**
baz=251
RAYN Ar Rayn 80.66 294 P **P** **03 52 03.4 -1.1**
RAYN IAmb IAmb 03 52 08.2
comp=Z,17nn,1.1s
TNA Tin City 80.86 23 **P** **03 52 05.8 +1.3**
TNA Tin City 80.86 23 P **P** **03 52 05.9 +1.3**
baz=249
K13K Kusilvak Mount 81.01 27 P **P** **03 52 06.8 +1.4**
K13K Kusilvak Mount 81.01 27 P **P** **03 52 07.0 +1.5**
baz=252,SNR=7.5
M13K Dall Lake 81.17 28 P **P** **03 52 07.4 +1.2**
baz=254
SDPT Sand Point 81.36 34 **P** **03 52 07.4 0.0**
SDPT Sand Point 81.36 34 P **P** **03 52 08.2 +0.8**
baz=257
F14K Arctic Creek 81.45 23 P **P** **03 52 09.4 +1.7**
baz=250
ANM Nome 81.53 24 P **P** **03 52 09.2 +1.1**
baz=251
L14K Kuka Creek 81.74 28 P **P** **03 52 10.4 +1.2**
L14K IAmb IAmb 03 52 28.4
comp=Z,29nn,1.1s
L14K Kuka Creek 81.74 28 P **P** **03 52 10.3 +1.0**
baz=254
CHNA Chernabura Isl 81.75 34 P **P** **03 52 10.3 +0.8**
baz=258
J14K Nanvaranak Lak 81.75 26 P **P** **03 52 09.3 +0.1**
J14K Nanvaranak Lak 81.75 26 P **P** **03 52 10.9 +1.6**
baz=253
N14K Kuskokwak Cree 81.84 29 P **P** **03 52 10.1 +0.3**
N14K IAmb IAmb 03 52 28.5
comp=Z,25nn,1.1s
N14K Kuskokwak Cree 81.84 29 P **P** **03 52 11.2 +1.4**
baz=255
O14K Tigyukauivet M 81.88 30 P **P** **03 52 11.4 +1.3**
O14K IAmb IAmb 03 52 29.8
comp=Z,18nn,1.1s
O14K Tigyukauivet M 81.88 30 P **P** **03 52 11.3 +1.3**
baz=256
M14K Bethel 81.92 28 P **P** **03 52 11.2 +1.0**
M14K IAmb IAmb 03 52 29.2
comp=Z,24nn,1.0s
M14K Bethel 81.92 28 P **P** **03 52 11.6 +1.4**
baz=255
F15K North Star Dit 82.19 23 **P** **03 52 13.0 +1.4**
F15K IAmb IAmb 03 52 14.8
comp=Z,36nn,1.4s
F15K North Star Dit 82.19 23 P **P** **03 52 13.2 +1.6**
baz=252,SNR=14
G15K Niukluk 82.21 24 P **P** **03 52 13.1 +1.4**
baz=252,SNR=13
L15K Ungalak Mounta 82.39 27 P **P** **03 52 13.9 +1.3**
baz=255

M15K **Kasigluk River** 82.51 29 P P 03 52 14.6 +1.2
baz=256
K15K **Wolf Creek Mou** 82.53 27 P 03 52 14.1 +0.7
K15K **Wolf Creek Mou** 82.53 27 P P 03 52 14.7 +1.3
baz=255,SNR=12
O15K **Ungalikthiuk R** 82.58 30 P P 03 52 15.0 +1.3
baz=257
N15K **Kwethluk River** 82.68 29 P P 03 52 15.8 +1.5
baz=256
C16K **Lisburne Hills** 82.76 21 P 03 52 15.1 +0.6
C16K IAmb IAmb 03 52 18.0
comp=Z,37nm,1.2s
C16K **Lisburne Hills** 82.76 21 P P 03 52 16.3 +1.8
baz=251
H16K **Elim** 82.85 24 P P 03 52 16.7 +1.7
baz=254,SNR=22
GNI **Garni** 82.88 310 P P 03 52 15.0 -1.0
GNI IAmb IAmb 03 52 34.8
comp=Z,13nm,0.8s
G16K **Koyuk River** 83.01 24 P 03 52 15.8 0.0
G16K **Koyuk River** 83.01 24 P P 03 52 17.6 +1.8
baz=254,SNR=24
J16K **Anvik River** 83.19 26 P 03 52 17.0 +0.2
J16K **Anvik River** 83.19 26 P P 03 52 18.5 +1.7
baz=256,SNR=19
I17K **Unalakleet** 83.30 25 P 03 52 18.6 +1.3
I17K **Unalakleet** 83.30 25 P P 03 52 19.5 +2.2
baz=256,SNR=5.8
L16K **Owhat River** 83.33 28 P 03 52 17.8 +0.3
L16K **Owhat River** 83.33 28 P P 03 52 19.3 +1.8
baz=257,SNR=13
N16K **Nishlik Lake** 83.39 29 P P 03 52 19.7 +1.8
baz=258
D17K **Noatak River** 83.39 21 P P 03 52 19.8 +2.0
baz=253,SNR=54
M16K **Timber Creek** 83.41 28 P P 03 52 19.0 +1.0
M16K **Timber Creek** 83.41 28 P P 03 52 19.4 +1.4
baz=257
P16K **Nushagak River** 83.47 30 P P 03 52 19.5 +1.1
P16K **Nushagak River** 83.47 30 P P 03 52 19.7 +1.4
baz=258
O16K **Kokwok River B** 83.53 30 P P 03 52 20.2 +1.5
O16K **Kokwok River B** 83.53 30 P P 03 52 20.0 +1.4
baz=258
RDOG **Red Dog Mine** 83.56 21 P P 03 52 19.4 +0.7
RDOG IAmb IAmb 03 52 21.7
comp=Z,19nm,0.9s
RDOG **Red Dog Mine** 83.56 21 P P 03 52 20.4 +1.8
baz=253,SNR=7.8
C17K **DeLong Mountai** 83.59 21 P P 03 52 20.2 +1.4
baz=253
E17K **Hotham Inlet** 83.68 22 P P 03 52 20.9 +1.7
baz=254,SNR=21
G17K **Kiwalik Mounta** 83.72 24 P P 03 52 20.7 +1.2
baz=255,SNR=21
F17K **Baldwin Pennin** 83.73 23 P 03 52 20.5 +1.0
F17K IAmb IAmb 03 52 38.6
comp=Z,34nm,1.3s
F17K **Baldwin Pennin** 83.73 23 P P 03 52 21.6 +2.1
baz=255,SNR=9.0
H17K **Granite Mounta** 83.89 24 P P 03 52 21.1 +0.7
H17K **Granite Mounta** 83.89 24 P P 03 52 22.3 +1.9
baz=256,SNR=15
L17K **Donlin** 83.96 27 P P 03 52 22.5 +1.7
baz=258,SNR=5.8
GEVA **Gevas** 84.00 308 P 03 52 22.1 +0.3
R17L **Mt. Peulik Vol** 84.06 32 P P 03 52 22.9 +1.5
baz=260
O17K **Koliganek Bris** 84.07 30 P P 03 52 23.1 +1.7
baz=259
K17K **Iditarod** 84.08 27 P 03 52 23.0 +1.6
K17K **Iditarod** 84.08 27 P P 03 52 23.0 +1.6
baz=258,SNR=7.0
Q16K **King Salmon** 84.09 31 P P 03 52 23.2 +1.7
baz=260
CHIR **Chirikof Islan** 84.16 34 P P 03 52 23.1 +1.2
baz=261
N17K **Nushagak Hills** 84.16 29 P P 03 52 22.9 +1.0
N17K IAmb IAmb 03 52 41.2
comp=Z,30nm,1.2s
N17K **Nushagak Hills** 84.16 29 P P 03 52 23.6 +1.7
baz=259
KARS **Kars** 84.19 311 P 03 52 23.0 +0.3
M17K **Holitna River** 84.21 28 P P 03 52 24.1 +2.0
baz=259
E18K **Tukpahlearik C** 84.23 22 P 03 52 23.1 +1.0
E18K **Tukpahlearik C** 84.23 22 P P 03 52 23.8 +1.7
baz=255,SNR=30
P17K **Kvichak River** 84.29 30 P P 03 52 23.8 +1.3
baz=260
C18K **Utukok River** 84.34 21 P 03 52 22.8 +0.1
C18K IAmb IAmb 03 52 41.3
comp=Z,23nm,1.2s
C18K **Utukok River** 84.34 21 P P 03 52 24.1 +1.4
baz=255,SNR=14
F18K **Selawik** 84.39 23 P P 03 52 24.1 +1.2
baz=256
Q17K **Contact Creek** 84.41 31 P P 03 52 24.3 +0.9
baz=260
H18K **Honhosa River** 84.58 24 P P 03 52 25.0 +1.2
baz=258
G18K **Tagagawik** 84.62 24 P P 03 52 25.4 +1.3
G18K IAmb IAmb 03 52 43.2
comp=Z,16nm,1.4s
G18K **Tagagawik** 84.62 24 P P 03 52 25.7 +1.6
baz=257
KBZ **Khabaz** 84.62 314 P P 03 52 24.3 -0.2
comp=Z,9.3nm,0.8s,baz=107,slow=3.0,SNR=15
comp=Z,9.3nm,0.8s
ACHA **Angle Creek He** 84.70 32 P P 03 52 24.6 -0.1
ACHA IAmb IAmb 03 52 42.3
comp=Z,30nm,1.5s
L18K **Granite Mounta** 84.72 27 P P 03 52 25.3 +0.7
L18K IAmb IAmb 03 52 44.3
comp=Z,21nm,1.3s
L18K **Granite Mounta** 84.72 27 P P 03 52 26.0 +1.4
baz=259
KIV **Kislovodsk** 84.80 314 ⇑P P 03 52 26.2 +0.7
KIV **Kislovodsk** 84.80 314 P P 03 52 25.3 -0.3
KIV IAmb IAmb 03 52 30.7
comp=Z,13nm,0.8s
KIV **Kislovodsk** 84.80 314 P P 03 52 25.3 -0.3
comp=Z,12nm,0.9s
GURO **Guroymak-BITLI** 84.82 309 P 03 52 26.3 +0.4
P18K **Big Mountain,** 84.94 30 P P 03 52 27.1 +1.3
baz=261
J18K **Innoko River** 84.94 26 P 03 52 26.4 +0.7
J18K **Innoko River** 84.94 26 P P 03 52 27.0 +1.3
baz=259
M18K **Stony River** 84.99 28 P P 03 52 27.6 +1.6
baz=260
C19K **Lookout Ridge** 85.02 20 P P 03 52 27.7 +1.7
C19K IAmb IAmb 03 52 47.7
comp=Z,22nm,0.9s
C19K **Lookout Ridge** 85.02 20 P P 03 52 27.8 +1.7
baz=256
O18K **Koktuh Hills** 85.02 30 P P 03 52 27.5 +1.3
baz=261
SII **Sitkinak Islan** 85.06 33 P P 03 52 27.6 +1.1
baz=262
GCSA **Galena City Sc** 85.11 25 P P 03 52 28.1 +1.6
baz=259
F19K **Shaleruckik Mo** 85.17 23 P P 03 52 28.5 +1.8
baz=258
G19K **Purcell Mounta** 85.30 24 P P 03 52 28.5 +1.0
G19K IAmb IAmb 03 52 45.4
comp=Z,12nm,1.1s
G19K **Purcell Mounta** 85.30 24 P P 03 52 28.6 +1.2
baz=259
PPT **Papeete** 85.36 107 LR LR 04 29 53.2
comp=Z,28nm,19.0s,baz=304,slow=35
PPT2 **Papeete2** 85.36 108 *e*P P 03 52 33.3 +4.4
comp=Z,41nm,23.8s
PPT2 *e*S **SKSac** 04 02 53.8 +3.1
comp=Z,69nm,26.0s
PPT2 *e*SS **SS** 04 08 36.1 +3.5
comp=Z,59nm,24.8s
PPT2 *e*LR LR 04 19 22.6
comp=Z,229nm,31.2s
PPT2 *e*LR LR 04 19 25.0
comp=Z,168nm,32.5s
D19K **Kuna River** 85.40 21 P P 03 52 28.5 +0.5
D19K IAmb IAmb 03 52 47.5
comp=Z,16nm,1.1s
D19K **Kuna River** 85.40 21 P P 03 52 28.8 +0.9
baz=258
E19K **Redstone River** 85.51 22 P P 03 52 29.3 +0.8
E19K IAmb IAmb 03 52 49.2
comp=Z,18nm,0.9s
E19K **Redstone River** 85.51 22 P P 03 52 29.6 +1.2
baz=258
J19K **Poorman** 85.51 26 P P 03 52 30.2 +1.6
baz=260
N19K **Bonanza Creek** 85.52 29 P P 03 52 29.7 +0.9
baz=261
L19K **White Mountain** 85.56 28 P P 03 52 30.7 +1.8
L19K IAmb IAmb 03 52 48.7
comp=Z,11nm,1.0s
L19K **White Mountain** 85.56 28 P P 03 52 30.2 +1.3
baz=261
TBI **Tubuai** 85.61 113 *e*P P 03 52 31.9 +2.0
comp=Z,305nm,32.0s
TBI *e*S **SKSac** 04 02 50.9 -1.0
TBI comp=Z,292nm,24.8s *e*LR LR 04 19 31.0
TBI comp=Z,518nm,28.8s *e*LR LR 04 19 34.4
comp=Z,981nm,34.8s
OHAK **Old Harbor** 85.64 33 P P 03 52 30.1 +0.8
baz=263
Q19K **Cape Douglas,** 85.67 31 P P 03 52 30.3 +0.8
baz=262
MARD **Mardin** 85.72 307 P 03 52 30.4 0.0
P19K **Oil Pt** 85.98 30 P P 03 52 31.4 +0.3
baz=263
D20K **Etivluk River** 85.98 21 P P 03 52 31.4 +0.5
D20K **Etivluk River** 85.98 21 P P 03 52 31.5 +0.7
baz=259
F20K **Avaraart Lake** 86.00 23 P 03 52 31.8 +0.8
F20K **Avaraart Lake** 86.00 23 P P 03 52 32.1 +1.2
baz=260
B20K **Meade River** 86.05 20 P P 03 52 32.2 +1.1
B20K IAmb IAmb 03 52 50.7
comp=Z,13nm,1.1s
B20K **Meade River** 86.05 20 P P 03 52 32.4 +1.3
baz=259
E20K **Nigu River** 86.05 21 P P 03 52 32.3 +1.0
baz=259
H20K **Anotleneega Mo** 86.08 24 P P 03 52 32.7 +1.3
baz=261
KDAK **Kodiak Island** 86.08 32 P P 03 52 32.8 +1.3
baz=263
K20K **Telida** 86.09 26 P P 03 52 32.7 +1.1
baz=262
KOPT **Kop Dagi** 86.11 310 P 03 52 32.9 +0.4
M20K **Styx River** 86.32 28 P P 03 52 33.5 +0.7
M20K IAmb IAmb 03 52 51.3
comp=Z,20nm,1.3s
M20K **Styx River** 86.32 28 P P 03 52 34.0 +1.2
baz=262
A21K **Barrow** 86.49 18 P P 03 52 35.2 +2.0
baz=259
FURI **Furi** 86.60 279 LR LR 04 30 13.9
comp=Z,86nm,21.4s,baz=72,slow=35
IMAR **Indian Mountai** 86.61 24 P P 03 52 34.7 +0.7
SPCR **Spurr Chakacha** 86.67 29 P P 03 52 36.1 +1.7
baz=263
C21K **Knifeblade Rid** 86.71 21 P P 03 52 36.2 +1.8
baz=261
HOM **Homer** 86.78 30 P P 03 52 36.5 +1.6
baz=264
G21K **Allakaket** 86.79 23 P P 03 52 36.1 +1.2
G21K **Allakaket** 86.79 23 P P 03 52 36.3 +1.4
baz=262
B21K **Ikpikpuk River** 86.85 20 P P 03 52 35.9 +0.9
B21K **Ikpikpuk River** 86.85 20 P P 03 52 36.9 +1.9
baz=261
PPLA **Purkeypile** 86.88 27 P P 03 52 36.5 +1.0
baz=263
E21K **Killik River** 86.89 21 P P 03 52 36.0 +0.7
E21K **Killik River** 86.89 21 P P 03 52 36.7 +1.3
baz=261
F21K **Alatna River** 86.90 23 P P 03 52 36.3 +0.9
baz=262
CHUM **Lake Minchumin** 86.94 26 P P 03 52 36.7 +1.1
baz=263
H21K **Melozitna Rive** 86.95 24 P P 03 52 36.8 +1.2
baz=263
SKT **Skwentna** 87.08 28 P P 03 52 37.1 +0.7
baz=264
CAPN **Captain Cook N** 87.14 29 P P 03 52 37.6 +1.0
baz=264
KIBK **Kibwezi** 87.14 268 P P 03 52 38.5 +0.8
KIBK IAmb IAmb 03 52 40.3
comp=Z,21nm,1.1s
I21K **Tanana** 87.24 25 P P 03 52 38.0 +1.0
baz=263
SUA **Susitna One** 87.40 29 P P 03 52 38.8 +0.7
baz=265
D22K **Ayikyak River** 87.42 21 P P 03 52 39.2 +1.3
baz=263
BPAW **Bear Paw Mtn.** 87.55 26 P P 03 52 39.0 +0.4
baz=264
H22K **Ishtalitna Cre** 87.57 24 P P 03 52 39.3 +0.7
H22K IAmb IAmb 03 52 58.7
comp=Z,16nm,1.4s
H22K **Ishtalitna Cre** 87.57 24 P P 03 52 39.2 +0.6
baz=264
E22K **Anaktuvuk Pass** 87.65 22 P 03 52 38.6 -0.4
E22K IAmb IAmb 03 52 57.7
comp=Z,14nm,1.2s
E22K **Anaktuvuk Pass** 87.65 22 P P 03 52 39.7 +0.7
baz=263
CUT **Chulitna** 87.71 28 P P 03 52 40.2 +0.9
baz=265
M22K **Willow** 87.73 28 P P 03 52 39.4 0.0
baz=265
ARPR **Arapgir-MALATY** 87.74 309 P 03 52 40.4 +0.2
TRF **Thorofare Moun** 87.80 27 P P 03 52 40.0 0.0
baz=265
RC01 **Rabbit Creek A** 87.86 29 P P 03 52 40.1 +0.1
baz=266
SEW **Seward** 87.92 30 P P 03 52 41.9 +1.5
baz=266
D23K **Nanushuk River** 88.15 21 P P 03 52 42.0 +0.7
D23K IAmb IAmb 03 53 00.5
comp=Z,11nm,1.1s
D23K **Nanushuk River** 88.15 21 P P 03 52 42.8 +1.4
baz=264
COLD **Coldfoot** 88.17 23 P P 03 52 41.9 +0.4
COLD IAmb IAmb 03 52 59.5
comp=Z,8.5nm,0.9s
COLD **Coldfoot** 88.17 23 P P 03 52 42.4 +1.0
baz=265
PMR **Palmer** 88.19 28 P P 03 52 42.8 +1.2
baz=266
G23K **Bananza Creek** 88.19 23 P 03 52 42.5 +0.9
G23K IAmb IAmb 03 53 00.5
comp=Z,14nm,1.1s
G23K **Bananza Creek** 88.19 23 P P 03 52 42.6 +0.9
baz=265
C23K **Itkillik River** 88.26 20 P P 03 52 42.2 +0.4
C23K IAmb IAmb 03 52 45.5
comp=Z,13nm,1.1s
C23K **Itkillik River** 88.26 20 P P 03 52 43.3 +1.5
baz=264
I23K **Minto, Yukon-K** 88.34 25 P P 03 52 42.7 +0.4
I23K IAmb IAmb 03 53 00.5
comp=Z,16nm,1.2s
I23K **Minto, Yukon-K** 88.34 25 P P 03 52 43.4 +1.2
baz=266,SNR=6.5
MCK **McKinley** 88.42 26 P P 03 52 42.3 -0.5
MCK IAmb IAmb 03 53 00.1
comp=Z,18nm,1.3s
MCK **McKinley** 88.42 26 P P 03 52 44.3 +1.6
baz=266
NEA2 **Nenana** 88.42 25 P P 03 52 44.2 +1.6
baz=266
RND **Reindeer** 88.44 27 P P 03 52 42.7 -0.1
RND IAmb IAmb 03 54 18.9
comp=Z,26nm,1.6s
E23K **Chandalar** 88.46 22 P 03 52 43.4 +0.5
E23K IAmb IAmb 03 52 45.7
comp=Z,8.5nm,0.8s
E23K **Chandalar** 88.46 22 P P 03 52 44.6 +1.6
baz=265
KNK **Knik Glacier** 88.50 29 P P 03 52 44.6 +1.5
baz=267
TOLK **Toolik Lake Re** 88.52 21 P P 03 52 44.2 +1.1
baz=266
WAT1 **Susitna Watana** 88.54 27 P P 03 52 43.9 +0.6
baz=266
GAZ **Gaziantep** 88.56 307 P 03 52 44.4 +0.3
SML **Sawmill** 88.58 28 P P 03 52 44.4 +0.9
baz=267
ASF **Jabal al Asfar** 88.71 302 LR LR 04 40 20.9
comp=Z,73nm,18.3s,baz=25,slow=41
D24K **Happy Valley** 88.83 21 P P 03 52 45.1 +0.6
D24K IAmb IAmb 03 53 03.9
comp=Z,9.3nm,1.1s
D24K **Happy Valley** 88.83 21 P P 03 52 45.7 +1.2
baz=266
WRH **Wood River Hil** 88.84 26 P 03 52 44.8 +0.1
WRH IAmb IAmb 03 53 01.8
comp=Z,9.6nm,1.2s
M23K **Glacier View** 88.86 28 P P 03 52 45.5 +0.6
baz=267
E24K **Your Creek** 88.88 22 P P 03 52 45.8 +0.9
baz=266
WAT6 **Susitna Watana** 88.90 28 P P 03 52 46.0 +0.8
baz=267
C24K **Franklin Bluff** 88.91 20 P P 03 52 45.9 +1.1
baz=266
P23K **Montague Islan** 88.94 30 P P 03 52 46.0 +0.8
baz=268
CCB **Clear Creek Bu** 88.97 25 P 03 52 44.9 -0.4
H24K **Noodor Dome** 89.00 24 P P 03 52 45.5 +0.1
H24K **Noodor Dome** 89.00 24 P P 03 52 46.5 +1.0
baz=267
SCM **Sheep Creek Mo** 89.06 28 P P 03 52 46.8 +0.9
baz=268
DHY **Denali Highway** 89.08 27 P P 03 52 46.4 +0.4
DHY IAmb IAmb 03 53 31.1
comp=Z,17nm,1.4s
DHY **Denali Highway** 89.08 27 P P 03 52 46.8 +0.7
baz=268
POKR **Poker Plat Res** 89.15 25 P P 03 52 47.3 +1.2
baz=268
G24K **Hadweenzic Riv** 89.20 23 P P 03 52 46.4 0.0
G24K IAmb IAmb 03 53 04.4
comp=Z,9.1nm,1.1s
G24K **Hadweenzic Riv** 89.20 23 P P 03 52 47.4 +1.0
baz=267
TOKA **Tokat** 89.20 310 P P 03 52 46.9 -0.1
TOKA IAmb IAmb 03 52 50.9
comp=Z,10nm,1.0s
HDA **Harding Lake** 89.33 26 P P 03 52 46.7 -0.3
HDA **Harding Lake** 89.33 26 P P 03 52 47.9 +1.0
baz=268
ILAR **Eielson Array** 89.37 25 P P 03 52 45.7 -1.4
comp=Z,0.7nm,0.5s,baz=256,slow=4.2,SNR=13
comp=Z,0.7nm,0.5s
OBN **Obninsk** 89.44 325 ⇑P P 03 52 47.3 -0.4
OBN **Obninsk** 89.44 325 P P 03 52 47.2 -0.4
OBN **Obninsk** 89.44 325 P P 03 52 47.1 -0.5
comp=Z,54nm,1.1s
Q23K **Middleton Isla** 89.46 31 P P 03 52 48.3 +0.7
baz=268
M24K **Tolsona, Glenn** 89.61 28 P P 03 52 49.1 +0.7
baz=269
QSPA **South Pole Qui** 89.64 180 P P 03 52 48.2 -0.4
comp=Z,3.4nm,0.6s,baz=318,slow=3.5,SNR=4.5
comp=Z,3.4nm,0.6s
QSPA **South Pole Qui** 89.64 180 P P 03 52 48.5 -0.1
QSPA IAmb IAmb 03 52 52.0
comp=Z,16nm,1.4s
BNN **Bunyan** 89.67 309 P 03 52 48.9 -0.4
BNN IAmb IAmb 03 52 50.3
comp=Z,15nm,1.1s
D25K **Kavik River** 89.71 21 P 03 52 48.6 -0.1
D25K **Kavik River** 89.71 21 P P 03 52 49.4 +0.7
baz=268
KLU **Klutina** 89.72 29 P P 03 52 49.5 +0.5
baz=269
EYAK **Cordova Ski Ar** 89.78 30 P P 03 52 50.1 +1.0
baz=269
K24K **Donnelly Dome** 89.83 26 P P 03 52 50.1 +0.8
baz=269
GHAJ **Ghor Haditha** 89.83 301 P 03 52 49.6 -0.4
LODK **Lodwar** 89.85 273 P P 03 52 50.5 -0.1
F25K **Christian Rive** 89.94 23 P P 03 52 50.2 +0.3
F25K **Christian Rive** 89.94 23 P P 03 52 51.0 +1.2
baz=269
PAX **Paxson** 89.95 27 P P 03 52 50.8 +0.8
baz=269
PRP **Porcupine Dome** 89.96 25 P P 03 52 50.9 +0.8
baz=269
E25K **Arctic Village** 89.98 22 P 03 52 50.5 +0.5
E25K **Arctic Village** 89.98 22 P P 03 52 51.2 +1.2
baz=269
MMAI **Mount Meron Ar** 89.98 303 P P 03 52 51.0 +0.2
comp=Z,8.4nm,0.9s,baz=65,slow=5.1,SNR=5.8
comp=Z,8.4nm,0.9s
J25K **Salcha River,** 90.02 26 P P 03 52 49.8 -0.5
J25K **Salcha River,** 90.02 26 P P 03 52 51.7 +1.4
baz=269
HARP **HAARP** 90.09 28 P P 03 52 52.0 +1.4
baz=270
C26K **Camden Bay** 90.23 20 P P 03 52 52.3 +1.2
baz=270
RIDG **Independent Ri** 90.24 26 P P 03 52 51.6 +0.3
RIDG IAmb IAmb 03 53 09.0
comp=Z,19nm,1.3s
RIDG **Independent Ri** 90.24 26 P P 03 52 52.3 +1.0
baz=270
BMRM **Bremner River** 90.35 29 P P 03 52 53.1 +1.2
baz=270
N25K **Chitina, Valde** 90.35 29 P P 03 52 52.9 +1.0
baz=270
EIL **Elat** 90.35 300 LR LR 04 40 42.0
comp=Z,95nm,18.4s,baz=42,slow=40
KAIM **Kayak Island** 90.44 30 P P 03 52 53.8 +1.5
baz=270
F26K **Sheenjek River** 90.52 22 P P 03 52 54.0 +1.5
baz=270
SCRK **Sand Creek** 90.62 26 P P 03 52 54.1 +1.0
baz=271
C27K **Jago River** 90.65 20 P P 03 52 53.6 +0.6
C27K **Jago River** 90.65 20 P P 03 52 54.5 +1.5
baz=271
G26K **Porcupine Rive** 90.67 23 P P 03 52 54.7 +1.6
baz=271
L26K **Log Cabin Wild** 90.92 27 P P 03 52 55.9 +1.5
baz=271
I26K **Coal Creek Min** 90.95 25 P P 03 52 55.7 +1.2
baz=271
BGLC **Bering Glacier** 91.01 30 P P 03 52 56.4 +1.6
baz=271
CRQE **Cirque** 91.09 29 P P 03 52 56.2 +0.8
baz=271
M26K **Nabesna, AK** 91.10 28 P P 03 52 56.3 +1.0
baz=272
MCARA **McCarthy VSAT** 91.11 29 P P 03 52 56.4 +1.1
baz=271
KIRS **Kirsehir-Merke** 91.17 309 ⇑P P 03 52 54.4 -1.9
BR104 **Keskin Array S** 91.38 310 P P 03 52 56.5 -0.8
comp=Z,5.4nm,1.0s
BR131 **Keskin Array S** 91.38 310 P 03 52 56.1 -1.1
BR131 IAmb IAmb 03 52 58.1
comp=Z,9.0nm,1.1s
BRTR **Keskin Array B** 91.38 310 P P 03 52 55.8 -1.5
comp=Z,4.7nm,1.0s,baz=133,slow=4.5,SNR=20
comp=Z,4.7nm,1.0s
BRTR **Keskin Array B** 91.38 310 P P 03 52 56.1 -1.1
BR105 **Keskin Array S** 91.40 310 P P 03 52 56.3 -1.1
comp=Z,59nmcomp=Z,6.2nm,1.0s
BR106 **Keskin Array S** 91.40 310 P 03 52 56.3 -1.0
comp=Z,39nmcomp=Z,5.2nm,1.0s
E27K **Coleen River** 91.47 22 P P 03 52 56.9 0.0
E27K IAmb IAmb 03 53 14.9
comp=Z,12nm,1.1s
E27K **Coleen River** 91.47 22 P P 03 52 58.0 +1.2
baz=273
G27K **Doyon Strip** 91.51 23 P P 03 52 57.5 +0.4
G27K IAmb IAmb 03 53 15.5
comp=Z,17nm,1.5s
G27K **Doyon Strip** 91.51 23 P P 03 52 58.2 +1.0
baz=273
I27K **Kandik River** 91.58 25 P P 03 52 58.5 +0.9
I27K IAmb IAmb 03 53 15.8
comp=Z,16nm,1.3s
I27K **Kandik River** 91.58 25 P P 03 52 58.6 +1.1
baz=273
H27K **Steamboat Moun** 91.59 24 P 03 52 58.8 +1.3
H27K IAmb IAmb 03 53 16.9
comp=Z,17nm,1.4s
H27K **Steamboat Moun** 91.59 24 P P 03 52 58.8 +1.3
baz=273
L27K **Beaver Creek,** 91.61 27 P 03 52 58.6 +0.9
L27K **Beaver Creek,** 91.61 27 P P 03 52 58.5 +0.9
baz=272

BCAR	Beaver Creek A	91.63	27	P		P	03 52 57.7	-0.1
D27M	Malcolm River	91.64	21			P	03 52 57.9	+0.2
D27M					IAmb	IAmb	03 52 59.9	
	comp=Z,111nm,1.4s							
D27M	Malcolm River	91.64	21	P		P	03 52 58.8	+1.1
	baz=274							
CSS	Mathiatis	91.69	305			P	03 52 57.7	-1.0
CSS	Mathiatis	91.69	305	P		P	03 52 58.1	-0.6
	comp=Z,36nm,1.0s							
CTG	Chitna Glacier	91.94	29	P		P	03 53 00.2	+0.8
	baz=273							
BVCY	Beaver Creek	92.09	28	P		P	03 53 00.7	+0.8
	baz=273							
F28M	Old Crow	92.15	22			P	03 53 00.2	+0.1
F28M					IAmb	IAmb	03 53 18.5	
	comp=Z,15nm,1.2s							
F28M	Old Crow	92.15	22	P		P	03 53 00.9	+0.8
	baz=274,SNR=10.0							
E28M	Babbage River	92.20	21			P	03 53 00.7	+0.4
E28M					IAmb	IAmb	03 53 18.8	
	comp=Z,13nm,1.2s							
E28M	Babbage River	92.20	21	P		P	03 53 01.4	+1.2
	baz=275							
I28M	Miner Creek	92.29	25			P	03 53 01.1	+0.3
I28M	Miner Creek	92.29	25	P		P	03 53 01.9	+1.0
	baz=274,SNR=5.8							
YUK3	Moose Creek	92.32	28	P		P	03 53 01.7	+0.6
	baz=274							
D28M	Stokes Point	92.42	21	P		P	03 53 02.5	+1.4
	baz=276							
O28M	Mount Upton	92.51	29	P		P	03 53 02.0	-0.2
O28M	Mount Upton	92.51	29	P		P	03 53 02.7	+0.5
	baz=274							
PINM	Pinnacle	92.53	30	P		P	03 53 03.0	+1.0
	baz=274							
DAWY	Dawson	92.64	26	P		P	03 53 03.5	+1.1
DAWY					IAmb	IAmb	03 53 20.4	
	comp=Z,16nm,1.4s							
DAWY	Dawson	92.64	26	P		P	03 53 03.6	+1.2
	baz=275							
YUK8	Steele Glacier	92.68	29	P		P	03 53 03.6	+0.7
	baz=274							
E29M	Blow River	92.82	22		IAmb	IAmb	03 53 23.6	
	comp=Z,9.4nm,1.4s							
E29M	Blow River	92.82	22	P		P	03 53 04.4	+1.3
	baz=276							
G29M	Pine Creek	92.93	23	P		P	03 53 04.1	+0.4
G29M	Pine Creek	92.93	23	P		P	03 53 04.9	+1.2
	baz=276							
I29M	Ogilvie Camp,	92.98	25	P		P	03 53 04.7	+0.8
I29M	Ogilvie Camp,	92.98	25	P		P	03 53 05.3	+1.4
	baz=276							
J29N	Klondike Camp	93.11	26	P		P	03 53 05.9	+1.3
	baz=276							
NE56	Odesa	93.16	317	P		P	03 53 03.4	-1.7
M29M	Somme Creek	93.20	28	P		P	03 53 05.8	+0.7
	baz=276							
YUK4	Talbot Arm	93.22	29	P		P	03 53 06.5	+1.2
	baz=275							
L29M	L29M	93.29	27	P		P	03 53 06.5	+1.1
L29M	L29M	93.29	27	P		P	03 53 06.4	+1.0
	baz=276							
O29M	Mount Kennedy	93.35	30	P		P	03 53 07.1	+1.2
	baz=275							
YUK6	Outpost Mounta	93.39	29	P		P	03 53 06.8	+0.7
	baz=276							
K29M	Barlow Dome	93.48	26	P		P	03 53 07.4	+1.0
	baz=276							
EPYK	Eagle Plains	93.51	24	P		P	03 53 06.3	0.0
EPYK	Eagle Plains	93.51	24	P		P	03 53 07.3	+0.9
	baz=277,SNR=6.3							
G30M	tAoh Zraii Nji	93.63	23			P	03 53 06.2	-0.7
G30M					IAmb	IAmb	03 53 23.9	
	comp=Z,16nm,1.3s							
G30M	tAoh Zraii Nji	93.63	23	P		P	03 53 07.8	+0.9
	baz=278,SNR=6.6							
ARCES	ARCESS Array B	93.66	340	P		P	03 53 05.4	-1.6
	comp=Z,3.6nm,0.9s,baz=58,slow=1.3,SNR=6.5							
	comp=Z,3.6nm,0.9s							
ARCES	ARCESS Array B	93.66	340	P		P	03 53 06.7	-0.3
F30M	Barrier River	93.71	22			P	03 53 07.1	-0.1
F30M					IAmb	IAmb	03 53 24.6	
	comp=Z,19nm,1.2s							
F30M	Barrier River	93.71	22	P		P	03 53 08.5	+1.3
	baz=278							
I30M	Mount Dempster	93.80	25	P		P	03 53 07.3	-0.6
I30M					IAmb	IAmb	03 53 12.5	
	comp=Z,16nm,1.7s							
I30M	Mount Dempster	93.80	25	P		P	03 53 08.6	+0.8
	baz=278							
HYT	Haines Junctio	93.82	29	P		P	03 53 08.9	+0.9
	baz=276							
PURM	Purcari	93.88	316	⇑P		P	03 53 07.9	-0.5
PURM	Purcari	93.88	316	P		P	03 53 07.7	-0.7
	comp=Z,37nm,1.0s							
J30M	Hart River	93.91	25	P		P	03 53 08.9	+0.6
	baz=278							
N30M	Aishikik Lake	93.95	28	P		P	03 53 09.7	+1.2
	baz=277							
M30M	Minto, Yukon	93.95	27	P		P	03 53 08.8	+0.3
M30M					IAmb	IAmb	03 53 27.6	
	comp=Z,8.9nm,1.1s							
M30M	Minto, Yukon	93.95	27	P		P	03 53 09.4	+0.9
	baz=277							
AK08	Malin Array Si	94.00	321	P		P	03 53 08.1	-0.8
AK10	Malin Array Si	94.00	321	P		P	03 53 08.5	-0.4
AKASG	Malin Array Be	94.01	321	P		P	03 53 07.5	-1.5
	comp=Z,4.4nm,0.8s,baz=74,slow=4.0,SNR=11							
AKASG				LR		LR	04 40 15.4	
	comp=Z,122nm,18.2s,baz=288,slow=38							
	comp=Z,4.4nm,0.8s							
AKASG	Malin Array Be	94.01	321	P		P	03 53 07.2	-1.8
AKASG					IAmb	IAmb	03 53 08.9	
	comp=Z,9.6nm,1.2s							
AKBB	Malin Array Si	94.01	321	P		P	03 53 07.9	-1.0
AKBB	Malin Array Si	94.01	321	P		P	03 53 08.0	-1.0
KIEV	Kiev	94.02	321	P		P	03 53 08.3	-0.7
KIEV					IAmb	IAmb	03 53 08.5	
	comp=Z,26nm,1.6s							
KIEV	Kiev	94.02	321	P		P	03 53 08.3	-0.7
AK02	Malin Array Si	94.03	321	P		P	03 53 07.8	-1.2
SPITS	Spitsbergen Ar	94.10	349	P		P	03 53 07.5	-1.4
	comp=Z,1.2nm,0.3s,baz=92,slow=8.7,SNR=22							
	comp=Z,1.2nm,0.3s							
P30M	Million Dollar	94.17	30	P		P	03 53 09.8	+0.2
	baz=277							
G31M	Satah River	94.40	23	P		P	03 53 10.2	-0.2
G31M					IAmb	IAmb	03 53 27.4	
	comp=Z,15nm,1.1s							
G31M	Satah River	94.40	23	P		P	03 53 11.3	+1.0
	baz=280							
INK	Inuvik	94.44	21		IAmb	IAmb	03 53 12.2	
	comp=Z,11nm,1.2s							
INK	Inuvik	94.44	21	P		P	03 53 11.8	+1.3
	baz=280,SNR=7.7							
MBAR	Mbarara	94.45	269	LR		LR	04 32 00.7	
	comp=Z,109nm,21.1s,baz=58,slow=33							
F31M	Tsiigehtchic	94.51	22	P		P	03 53 11.4	+0.5
	baz=280,SNR=8.5							
O30N	Mendenhall	94.52	29	P		P	03 53 11.8	+0.7
	baz=278							
H31M	Peel River	94.55	24	P		P	03 53 12.3	+1.1
	baz=279							
TAOE	Nuku Hiva Isla	94.56	99	*e*LR		LR	04 23 40.5	
	comp=Z,76nm,25.1s							
N31M	Braeburn, Yuko	94.57	28	P		P	03 53 12.2	+0.9
	baz=278							
FINES	FINESS Array B	94.62	332	P		P	03 53 09.9	-1.5
	comp=Z,4.0nm,0.8s,baz=79,slow=4.1,SNR=5.5							
	comp=Z,4.0nm,0.8s							
FINES	FINESS Array B	94.62	332	P		P	03 53 10.3	-1.2
SORM	Soroca	94.79	318	⇑P		P	03 53 10.6	-2.0
SORM	Soroca	94.79	318	P		P	03 53 11.3	-1.3
S31K	Pelican	94.80	32	P		P	03 53 13.0	+0.7
	baz=277							
LUBAR	Lubar, Ukraine	95.02	320	P		P	03 53 12.6	-1.0
SKAG	Skagway	95.07	30	P		P	03 53 14.2	+0.6
	baz=278							
M31M	Drury Creek, Y	95.12	28	P		P	03 53 14.5	+0.7
	baz=279							
WHY	Whitehorse	95.12	29	P		P	03 53 14.6	+0.6
	baz=278							
CFR	Carcaliu	95.19	315	⇑P		P	03 53 14.3	-0.2
SIT	Sitka	95.41	33	P		P	03 53 16.0	+0.9
	baz=278							
BAND	Balkesir-Ban	95.60	310	⇑P		P	03 53 25.4	+8.9
R32K	Eaglecrest	95.66	31	P		P	03 53 16.9	+0.5
	baz=279							
S32K	Killisnoo	95.75	32	P		P	03 53 17.2	+0.5
	baz=278							
N32M	Quiet Lake	95.91	29	P		P	03 53 17.8	+0.4
N32M	Quiet Lake	95.91	29	P		P	03 53 18.1	+0.6
	baz=280							
HORU	Horodok	95.95	319	P		P	03 53 17.1	-0.8
KMPD	K-Podol'skiy	96.00	319	P		P	03 53 16.7	-1.4
RNPP8	Varash	96.07	322	P		P	03 53 17.9	-0.4
TESR	Tescani	96.10	317	⇑P		P	03 53 17.8	-0.8
TESR	Tescani	96.10	317	P		P	03 53 18.0	-0.6
	comp=Z,24nm,1.5s							
VRI	Vrincioaia	96.11	316	⇑P		P	03 53 18.6	-0.1
VRI	Vrincioaia	96.11	316	P		P	03 53 18.4	-0.3
PLOR	Plostina	96.17	316	⇑P		P	03 53 18.7	-0.3
P33M	Teslin, Yukon	96.20	29	P		P	03 53 19.5	+0.6
	baz=280							
A36M	Sachs Harbour	96.25	17	P		P	03 53 19.5	+0.8
	baz=289							
PRAR	RASCA	96.29	318	⇑P		P	03 53 13.9	-5.6
RAZG	Razgrad	96.50	314	⇑P		P	03 53 10.9	-10
TURR	Turia	96.58	316	⇑P		P	03 53 20.0	-0.8
LSZ	Lusaka	96.69	255	LR		LR	04 32 59.8	
	comp=Z,249nm,21.8s,baz=112,slow=33							
MLR	Muntele Rosu	96.70	316	LR		LR	04 45 01.8	
	comp=Z,180nm,18.0s,baz=5.0,slow=40							
MLR	Muntele Rosu	96.70	316	⇑P		P	03 53 20.9	-0.7
MLR	Muntele Rosu	96.70	316			P	03 53 20.8	-0.7
MLR					IAmb	IAmb	03 53 24.9	
	comp=Z,11nm,1.0s							
MLR	Muntele Rosu	96.70	316	P		P	03 53 21.2	-0.3
T33K	Petersburg	96.73	33	P		P	03 53 21.6	+0.5
	baz=280							
BURAR	Bucovina Array	96.94	318	⇑P		P	03 53 22.4	-0.1
BURAR	Bucovina Array	96.94	318	P		P	03 53 22.6	0.0
BURAR					IAmb	IAmb	03 53 24.3	
	comp=Z,9.6nm,0.9s							
BUR08	Bucovina Ar. S	96.95	318			P	03 53 22.0	-0.6
ELND	Elena	97.03	313	⇑P		P	03 53 22.2	-0.7
WRAK	Wrangell Islan	97.13	33	P		Pdif	03 53 23.3	+0.3
	baz=280							
STNU	Starunia	97.28	319	P		P	03 53 23.4	-0.5
R33M	Jennings River	97.28	30	P		P	03 53 24.1	+0.3
	baz=282							
VOIR		97.33	316	⇑P		P	03 53 23.1	-1.2
C36M	Paulatuk	97.49	20			P	03 53 23.9	-0.4
C36M	Paulatuk	97.49	20	P		P	03 53 24.4	+0.1
	baz=289,SNR=7.2							
MORS	Morshin	97.61	319	P		P	03 53 24.9	-0.5
ARR	Arges	97.63	316	⇑P		P	03 53 25.3	-0.4
MDB	Medias	97.70	316	⇑P		P	03 53 25.1	-0.8
V35K	Ketchikan	97.73	34	P		P	03 53 25.7	0.0
	baz=281							
TNR	Turnu Rosu	97.84	316	⇑P		P	03 53 26.8	+0.3
PLVB	Pleven	97.89	314	⇑P		P	03 53 25.8	-0.9
SHIU	Shidnytsya	97.94	320	P		P	03 53 26.6	-0.3
MEZ	Mezhgor'ye	97.95	319	P		P	03 53 26.5	-0.5
BMR	Baia Mare	98.09	318	⇑P		P	03 53 27.7	+0.1
CJR	Cluj-Napoca	98.16	317	⇑P		Pdif	03 53 28.8	+0.8
WTLY	Watson Lake, Y	98.19	29	P		P	03 53 28.0	+0.2
	baz=284							
BRIU	Brid	98.30	319	P		P	03 53 28.4	-0.1
MARR	Marisel-Cluj	98.49	317	⇑P		P	03 53 29.4	-0.2
U35K	Hyder	98.50	33	P		P	03 53 29.1	0.0
	baz=282							
LBTB	Lobatse	98.58	245	LR		LR	04 35 35.2	
	comp=Z,60nm,18.0s,baz=96,slow=34							
BOSA	Boshof	98.59	241	LR		LR	04 32 33.5	
	comp=Z,96nm,21.9s,baz=74,slow=32							
DRGR		98.75	317	⇑P		P	03 53 30.0	-0.7
DEV	Deva	98.76	316	⇑P		P	03 53 30.6	0.0
GZR	Gura Zlata	98.92	316	⇑P		P	03 53 29.7	-1.8
HERR	Herculane	99.25	315	⇓P		Pdif	03 53 32.5	-0.4
BZS	Buzias	99.69	316	⇑P		Pdif	03 53 33.9	-0.9
MDVR	Moldovita	99.76	315	⇑P		Pdif	03 53 34.5	-0.7
BOVS	Bovan	99.95	314	⇑P		Pdif	03 53 35.5	-0.5
LANS	Liptovska Anna	100.47	320	*e*PDIFF		Pdif	03 53 39.3	+1.1
HFS	Hagfors	100.82	332	P		Pdif	03 53 37.8	-1.7
	comp=Z,1.3nm,0.5s,baz=90,slow=1.4,SNR=1.2							
MODS	Modra-Piesok	102.05	320	*e*PDIFF		Pdif	03 53 47.8	+2.5
YKA	Yellowknife Ar	103.77	24	Pdiff		Pdif	03 53 52.2	-0.2
	comp=Z,0.1nm,0.7s,baz=293,slow=5.8,SNR=3.8							
PDAR	Pinedale Array	115.36	42	PKP		PKiKP	03 58 32.7	-0.4
	comp=Z,0.2nm,0.7s,baz=348,slow=2.4,SNR=1.7							
PDAR	Pinedale Array	115.36	42			PKiKP	03 58 31.6	-1.5
ESDC	Sonseca Array	119.38	317	PKP		PKPdf	03 58 40.5	-0.1
	comp=Z,0.2nm,0.7s,baz=23,slow=2.2,SNR=1.6							
TORD	Torodi Ar. Bea	122.60	285	PKP		PKPdf	03 58 47.3	-0.1
	comp=Z,3.1nm,0.7s,baz=50,slow=2.1,SNR=17							
TORD	Torodi Ar. Bea	122.60	285			PKPdf	03 58 47.7	+0.3
SCHQ	Schefferville	124.75	8	PKP		PKiKP	03 58 51.1	+0.4
	comp=Z,3.0nm,0.7s,baz=333,slow=1.2,SNR=7.4							
TXAR	Lajitas Array	125.23	54	PKP		PKPdf	03 58 52.1	-0.1
	comp=Z,0.3nm,0.5s,baz=256,slow=0.6,SNR=6.2							
S39A	Bolivar	128.59	39			PKiKP	03 58 59.2	+0.3
DBIC	Dimbokro	129.77	278	PKP		PKiKP	03 59 02.0	+0.1
	comp=Z,3.4nm,0.8s,baz=106,slow=5.6,SNR=4.3							
MTO3	Montecristo	143.06	66			PKPbc	03 59 24.4	+1.5
CFA	Coronel Fontan	145.82	159	PKPbc		PKPbc	03 59 30.9	+0.2
	comp=Z,0.7nm,0.4s,baz=208,slow=1.4,SNR=3.8							
BOAB	BOACO BROADBAND	147.09	67			PKPbc	03 59 35.2	+0.5
PLTB	Pedras Altas	148.10	182			PKPab	03 59 39.8	0.0
JTS	Las Juntas de	148.42	71			PKiKP	03 59 41.2	+1.2
CPUP	Villa Florida	153.42	175	PKPbc		PKPbc	03 59 49.4	-0.4
	comp=Z,2.7nm,0.8s,baz=205,slow=2.3,SNR=4.3							
LPAZ	La Paz	158.93	142	PKPab		PKPab	04 00 27.3	+0.7
	comp=Z,1.1nm,0.8s,baz=241,slow=4.1,SNR=4.0							
LPAZ	La Paz	158.93	142	PKPdf		PKPdf	03 59 49.9	-0.6
SIV	San Ignacio	162.68	159	PKP		PKPdf	03 59 53.1	-0.7
	baz=270,slow=5.1							

*SNET **23** 04:06:19.4±1.4, 12°.59N×88°.68W, h17km, ML3.7, Presumed earthquake*
*CATAC **23** 04:06:20.1±0.6, 13°.N±3°×8°.9W±°, h29km±5km, M3.9/18, MLv3.9/18, Error ellipse: s-maj=6.8km s-min=3.0km az=26.5, confirmed*
*GCG **23** 04:06:22.1±1.3, 12°.64N×88°.93W, h20km±9km, MD3.9, Presumed earthquake*

ISC 23 04:06:17.0±1.4, 12°.53N±0°.05×88°.71W±0°.03, h19km±3km, n59, σ0°.57/98, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LCY	Lacayo	0.98	25	*e*P		Pg	04 06 36.9	+0.8
RANC	El Ranchito	0.99	25	P		Pg	04 06 37.1	+0.8
RANC				S		Sg	04 06 49.7	+0.2
RANC	El Ranchito	0.99	25	P		Pg	04 06 37.0	+0.7
RANC				S		Sg	04 06 49.4	0.0
TECO	Alcaldia de Te	1.01	356	P		Pg	04 06 37.2	+0.6
TECO				S		Sb	04 06 49.1	+0.3
TECO	Alcaldia de Te	1.01	356	P		Pg	04 06 37.0	+0.5
TECO				S		Sg	04 06 49.9	0.0
PACA	Pacayal	1.01	22	P		Pg	04 06 37.5	+0.8
PACA				S		Sg	04 06 50.2	+0.2
PACA	Pacayal	1.01	22	P		Pg	04 06 37.3	+0.6
PACA				S		Sg	04 06 50.0	+0.2
CNRM	Centro Naciona	1.08	29	P		Pg	04 06 38.0	+0.1
CNRM				S		Sn	04 06 52.0	+0.4
CNRM	Centro Naciona	1.08	29	P		Pg	04 06 38.0	+0.1
CNRM	Centro Naciona	1.08	29	*e*P		Pg	04 06 38.0	+0.1
CNRM				*e*S		Sb	04 06 51.3	+0.5
COEG	Centro de Oper	1.10	351	P		Pg	04 06 38.5	+0.1
COEG				S		Sn	04 06 52.1	0.0
COEG	Centro de Oper	1.10	351	P		Pg	04 06 38.4	+0.1
COEG				S		Sn	04 06 52.2	0.0
PQSS	Presa 15 de Se	1.10	8	P		Pg	04 06 38.6	+0.3
PQSS				S		Sb	04 06 51.3	-0.1
LCND	La Caada	1.12	46	P		Pn	04 06 37.9	+0.2
LCND	La Caada	1.12	46	P		Pn	04 06 37.9	+0.2
LCND	La Caada	1.12	46	*e*P		Pn	04 06 37.9	+0.2
LCND				*e*S		Sb	04 06 51.9	0.0
LALI	Alcalda de L	1.12	328	P		Pg	04 06 39.4	+0.6
LALI	Alcalda de L	1.12	328	P		Pg	04 06 39.2	+0.4
LALI				S		Sg	04 06 53.1	-0.4
LALI	Alcalda de L	1.12	328	*e*P		Pg	04 06 39.4	+0.6
LALI				*e*S		Sn	04 06 52.8	+0.1
LALI	Alcalda de L	1.12	328	*i* P		Pg	04 06 39.4	+0.6
LALI				*i* S		Sb	04 06 51.7	-0.4
PANCS	Alcalda de	1.17	337	S		Sn	04 06 53.7	-0.2
PAVA	Las Pavas	1.20	350	P		Pg	04 06 40.5	+0.3
PAVA				S		Sn	04 06 55.3	+0.6
PAVA	Las Pavas	1.20	350	P		Pg	04 06 40.2	0.0
PAVA				S		Sn	04 06 55.1	+0.4
UDBS	Universidad Do	1.26	340	S		Sn	04 06 56.7	+0.6
IGN	Direccin Gen	1.26	339	P		Pg	04 06 41.6	+0.2
IGN				S		Sg	04 06 57.0	-1.0
SEMO	Seminario San	1.27	337	P		Pg	04 06 42.2	+0.6
SEMO				S		Sg	04 06 57.5	-0.8
UEES	Universidad Ev	1.29	337	P		Pg	04 06 42.1	+0.2
UEES				S		Sg	04 06 58.3	-0.5
PMON	Piamonte	1.32	334	P		Pg	04 06 42.2	-0.3
PMON				S		Sg	04 06 58.5	-1.2
BOQS	Boqueron	1.32	335	*e*P		Pg	04 06 42.4	-0.2
JAYA	Jayaque - finc	1.33	327	P		Pg	04 06 42.6	-0.2
JAYA	Jayaque - finc	1.33	327	*e*P		Pg	04 06 42.4	-0.4
JAYA				*e*S		Sb	04 06 58.7	+0.5
JAYA	Jayaque - finc	1.33	327	*i* P		Pg	04 06 42.4	-0.4
JAYA				*i* S		Sn	04 06 56.7	-1.3
CEDA	San Andres	1.43	332	P		Pg	04 06 43.8	-0.8
CEDA				S		Sb	04 07 01.4	+0.4
CEDA	San Andres	1.43	332	P		Pg	04 06 44.0	-0.7
CEDA				S		Sb	04 07 01.6	+0.5
CEDA	San Andres	1.43	332	*e*P		Pb	04 06 43.6	+0.5
P5NO	Presa 5 de nov	1.45	358	P		Pg	04 06 44.3	-0.7
P5NO				S		Sb	04 07 02.5	+1.0
CEVE	Cerro Verde	1.57	326	S		Sb	04 07 05.8	+0.7
CEVE	Cerro Verde	1.57	326	*e*P		Pg	04 06 47.4	+0.1
LLGN	La Laguna	1.64	352	P		Pb	04 06 46.9	+0.1
LLGN				S		Sb	04 07 06.9	-0.2
UNIC	Universidad Ca	1.66	331	P		Pb	04 06 47.4	+0.3
UNIC				S		Sb	04 07 07.7	+0.1
NUBE	Las Nubes	1.72	323	P		Pb	04 06 48.2	+0.1
NUBE				S		Sb	04 07 09.1	-0.2
NUBE	Las Nubes	1.72	323	*i* P		Pb	04 06 48.2	+0.1
NUBE				*i* S		Sb	04 07 08.7	-0.6
LOAL	Lomas de Alarc	1.79	325	S		Sb	04 07 11.6	+0.1
FAME	Alcaldia de Sa	1.82	316	P		Pb	04 06 49.5	-0.2
FAME				S		Sb	04 07 12.2	0.0
POLN	Al Sur del Vol	1.86	86	P		Pb	04 06 49.5	-0.9
POLN				S		Sn	04 07 10.2	-0.7
MTO3	Montecristo	1.96	341	*i* P		Pb	04 06 52.1	-0.2
MACN	El Madrono	1.99	92	P		Pn	04 06 50.8	+1.1
MACN				S		Sn	04 07 13.8	-0.4
TGUH	Tegucigalpa,Un	2.07	43	P		Pb	04 06 53.0	-1.0
COPN	Copaltepe	2.10	99	P		Pn	04 06 52.7	+1.5
ESQI	Esquipulas	2.11	343	P		Pb	04 06 54.2	-0.5
ESQI				S		Sb	04 07 19.6	-1.0
ESQI	Esquipulas	2.11	343	P		Pb	04 06 54.1	-0.7
SARH	Santa Rosa de	2.24	359	P		Pb	04 06 55.8	-1.0
SARH	Santa Rosa de	2.24	359	*i* P		Pb	04 06 55.7	-1.2
SARH				*i* S		Sb	04 07 24.7	+0.5
LIMN	Finca el Limon	2.35	77	P		Pn	04 06 55.3	+0.6
LIMN				S		Sn	04 07 22.7	-0.4
LIMN	Finca el Limon	2.35	77	P		Pn	04 06 55.2	+0.4
LIMN				S		Sn	04 07 22.7	-0.4
APQ2	Apoyeque	2.36	98	S		Sn	04 07 22.8	-0.3
MATN	Matagalpa	2.75	81	P		Pn	04 07 00.0	-0.2
MATN				S		Sn	04 07 33.8	+0.8
MATN	Matagalpa	2.75	81	P		Pn	04 06 59.9	-0.3
MATN				S		Sn	04 07 32.4	-0.6
STG5	El Palmar, Qui	3.17	306	*i* P		Pb	04 07 12.9	+0.1

*IDC **23** 04:12:46.6±0.8, 17°.63N×94°.24W, h170km±33km, mb2.9/4, mbtmp3.4/5, Error ellipse: s-maj=95.6km s-min=13.3km az=30.0*
*MEX **23** 04:12:47.7±0.7, 17°.51N×94°.35W, h189km±5km, MD4.1*

ISC 23 04:12:46.5±0.8, 17°.47N±0°.05×94°.39W±0°.04, h186km±6km, n42, σ2s12/77, mb3.1/4, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UXUV	UXUV	0.28	122	*e*P		Pn	04 13 11.5	+0.2
UXUV				*e*S		Sn	04 13 29.4	-0.9
CMIG	Matias Romero	0.60	232	P		Pn	04 13 12.9	+0.5
	116nm,0.3s,baz=69,slow=4.6,SNR=801							
CMIG				S		Sn	04 13 31.8	-0.7
	baz=288,slow=19							
CMIG	Matias Romero	0.60	232	*e*P		Pn	04 13 12.9	+0.5
CMIG				*e*S		Sn	04 13 32.2	-0.2
PMUV	Sontecomapan	1.28	327	*e*P		Pn	04 13 13.4	+0.7
PMUV				*e*S		Sn	04 13 40.5	-0.4
CARR	Arriaga	1.30	159	*i* P		Pn	04 13 17.7	+0.5
CARR				*e*S		Sn	04 13 40.9	-0.1
NEUV	Arroyo Zacate	1.37	280	*e*P		Pn	04 13 18.0	+0.3
NEUV				*e*S		Sn	04 13 41.5	-0.4
TGIG		1.39	119	*e*P		Pn	04 13 18.0	-0.1
PCIG		2.08	147	*e*P		Pn	04 13 25.3	+0.4
PCIG				*e*S		Sn	04 13 53.8	-1.0
OXLC	Oaxaca	2.24	260	*e

IDC ***23*** *04:38:33.9±0.8, 34°.83N×25°.45E, h0km, mb4.0/15, mbtmp3.9/27, ML3.4/11, Error ellipse: s-maj=15.0km s-min=7.9km az=28.0*
ISK ***23*** *04:38:34.3, 34°.72N×25°.29E, h11km, ML3.6/13*
NEIC ***23*** *04:38:34.7±2.0, 34°.70N±0°.04×25°.26E±0°.04, h10km±1km, mb4.2/36, Error ellipse: s-maj=7.3km s-min=5.1km az=158.0*
THE ***23*** *04:38:36.4, 35°.N±6°×2°.5E±°, h7km±4km, M3.7/6, MLh3.7/6*
ATH ***23*** *04:38:36.2, 34°.82N×25°.34E, h6km, ML3.8/12, Manual Solution by M.Charalampakis First location: 2020/02/23 04:39:44, This location: 2020/02/23 04:54:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
HLW ***23*** *04:38:36.0, 34°.70N×25°.32E, h3km±1km, Md3.8, Ml3.5*
AFAD ***23*** *04:38:41.8, 35°.19N×25°.83E, h8km±5km, ML3.0*

ISC 23 04:38:35.7±1.1, 34°.77N±0°.04×25°.34E±0°.02, h15km±7km, n189, σ1§63/220, mb4.1/29, 2D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.54**	**25**	P	**Pg**	**04 38 45.7**	**-0.7**
NPS				S	**Sg**	**04 38 53.2**	**-0.5**
NPS	**Neapolis**	**0.54**	**25**	P	**Pg**	**04 38 45.6**	**-0.7**
NPS				S	**Sg**	**04 38 52.7**	**-0.9**
IACM	**Heraklion**	**0.58**	**338**	P	**Pg**	**04 38 47.0**	**-0.1**
IACM				S	**Sg**	**04 38 53.5**	**-1.3**
IDI	**Anoyia**	**0.63**	**325**	Pg	**Pg**	**04 38 47.3**	**-0.9**
	194nm,0.3s,baz=156,slow=18,SNR=722						
IDI				Lg	Lg	04 38 55.7	
	733nm,0.3s,baz=218,slow=20,SNR=33						
IDI	**Anoyia**	**0.63**	**325**		**Pg**	**04 38 47.5**	**-0.7**
IDI	**Anoyia**	**0.63**	**325**	Pg	**Pg**	**04 38 47.5**	**-0.7**
IDI				S	**Sb**	**04 38 56.9**	**-0.3**
IDI	**Anoyia**	**0.63**	**325**	P	**Pg**	**04 38 47.4**	**-0.7**
IDI	**Anoyia**	**0.63**	**325**	P	**Pg**	**04 38 47.5**	**-0.7**
IDI				S	**Sg**	**04 38 55.8**	**-0.8**
SIT2	**Siteia**	**0.77**	**55**	P	**Pg**	**04 38 50.5**	**-0.2**
SIT2				S	**Sg**	**04 39 00.3**	**-0.5**
ZKR	**Zakros**	**0.80**	**64**	Pg	**Pg**	**04 38 51.2**	**-0.1**
ZKR				Sg	**Sb**	**04 39 03.6**	**+1.6**
ZKR	**Zakros**	**0.80**	**64**	P	**Pg**	**04 38 50.9**	**-0.4**
ZKR				S	**Sb**	**04 39 03.4**	**+1.4**
ZKR	**Zakros**	**0.80**	**64**	P	**Pg**	**04 38 50.8**	**-0.4**
ZKR				S	**Sb**	**04 39 02.6**	**+0.6**
GVD	**Gavdhos**	**1.03**	**274**	P	**Pb**	**04 38 56.2**	**+0.9**
GVD	**Gavdhos**	**1.03**	**274**	P	**Pg**	**04 38 55.8**	**+0.2**
VAM	**Vamos**	**1.13**	**305**	P	**Pg**	**04 38 56.7**	**-0.8**
VAM				S	**Sn**	**04 39 13.9**	**+1.7**
VAM	**Vamos**	**1.13**	**305**	P	**Pg**	**04 38 56.7**	**-0.8**
CHNB	**Souda**	**1.26**	**305**	P	**Pb**	**04 38 59.2**	**-0.1**
CHAN	**Chania**	**1.30**	**306**	P	**Pn**	**04 39 00.1**	**+0.8**
IMMV	**Iera Moni Meta**	**1.31**	**302**	P	**Pn**	**04 38 59.7**	**+0.3**
IMMV	**Iera Moni Meta**	**1.31**	**302**	P	**Pn**	**04 38 59.8**	**+0.3**
KNDR	**Palaiochora Ch**	**1.48**	**289**	P	**Pb**	**04 39 03.3**	**+0.4**
THR9	**Santorini-Faro**	**1.58**	**1**	P	**Pb**	**04 39 05.0**	**+0.3**
THERA	**Ancient Thera,**	**1.60**	**4**	P	**Pn**	**04 39 04.0**	**+0.6**
THERA				S	**Sn**	**04 39 24.1**	**+0.3**
THERA	**Ancient Thera,**	**1.60**	**4**	P	**Pn**	**04 39 04.6**	**+1.1**
THR3	**Thira Island,**	**1.64**	**2**	P	**Pb**	**04 39 05.7**	**+0.1**
THR8	**Santorini-Mono**	**1.64**	**4**	P	**Pn**	**04 39 04.7**	**+0.7**
THRA	**Thira**	**1.64**	**3**	P	**Pb**	**04 39 05.4**	**-0.3**
SAP3	**Santorini-Thir**	**1.66**	**0**	P	**Pn**	**04 39 05.1**	**+0.8**
KARP	**Karpathos**	**1.68**	**62**		**Pn**	**04 39 06.3**	**+1.7**
KARP					**Sg**	**04 39 31.1**	**+1.2**
KARP	**Karpathos**	**1.68**	**62**	Pn	**Pn**	**04 39 05.8**	**+1.2**
KARP	**Karpathos**	**1.68**	**62**	P	**Pb**	**04 39 07.1**	**+0.7**
MHLO	**Agia Marina, M**	**2.06**	**339**	P	**Pn**	**04 39 11.3**	**+1.5**
KTHA	**Kythira Island**	**2.38**	**309**	P	**Pn**	**04 39 15.7**	**+1.6**
YAZI	**Mula-Dat§a-**	**2.57**	**41**	P	**Pn**	**04 39 17.3**	**+0.5**
YAZI				S	**Sn**	**04 39 45.4**	**-2.3**
DAT	**Datca**	**2.67**	**42**	Pn	**Pn**	**04 39 19.1**	**+0.8**
DAT	**Datca**	**2.67**	**42**	P	**Pn**	**04 39 19.9**	**+1.6**
DAT				S	**Sn**	**04 39 46.7**	**-3.7**
ARG	**Arkhangelos**	**2.69**	**57**		**Pn**	**04 39 17.9**	**-0.6**
ARG	**Arkhangelos**	**2.69**	**57**	Pn	**Pn**	**04 39 19.5**	**+1.0**
ARG	**Arkhangelos**	**2.69**	**57**	P	**Pn**	**04 39 19.8**	**+1.3**
VLI	**Veliai**	**2.75**	**316**	P	**Pn**	**04 39 20.8**	**+1.4**
BODT	**Bodrum**	**2.79**	**34**	Pn	**Pn**	**04 39 21.6**	**+1.7**
BDRM	**Kayabasi**	**2.86**	**36**	P	**Pn**	**04 39 22.5**	**+1.7**
BDRM				S	**Sn**	**04 39 55.5**	**+0.6**
TURN	**Turunc**	**3.10**	**49**	Pn	**Pn**	**04 39 25.2**	**+1.1**
TURN	**Turunc**	**3.10**	**49**	P	**Pn**	**04 39 25.1**	**+1.1**
TURN				S	**Sn**	**04 39 57.9**	**-2.8**
SMG	**Samos**	**3.17**	**22**	P	**Pn**	**04 39 26.4**	**+1.3**
MLSB	**Milas**	**3.20**	**37**	Pn	**Pn**	**04 39 27.2**	**+1.7**
MET1	**Methana Town,**	**3.22**	**331**	P	**Pn**	**04 39 27.2**	**+1.5**
MET5	**Makryloggos,Me**	**3.27**	**331**	P	**Pn**	**04 39 28.7**	**+2.3**
MET2	**Kameni Chora,**	**3.27**	**331**	P	**Pn**	**04 39 28.4**	**+2.0**
SLUM	**Salum**	**3.27**	**182**	P	**Pn**	**04 39 26.6**	**+0.2**
GCAM	**G?zelcaml?**	**3.30**	**27**	Pn	**Pn**	**04 39 28.5**	**+1.7**
GCAM	**G?zelcaml?**	**3.30**	**27**	P	**Pn**	**04 39 28.7**	**+1.8**
GCAM				S	**Sn**	**04 40 07.8**	**+2.0**
GCAM				IAML		04 40 12.0	
	comp=N,56nm,0.7s						
GCAM				IAML		04 40 29.0	
	comp=E,70nm,0.7s						
VLY	**Voula,Athens**	**3.32**	**338**	P	**Pn**	**04 39 29.6**	**+2.5**
KARY	**Karystos**	**3.33**	**348**	P	**Pn**	**04 39 29.3**	**+1.9**
YER	**Yerkesik**	**3.36**	**45**	Pn	**Pn**	**04 39 29.2**	**+1.5**
DALY	**Dalyan (Mula)**	**3.38**	**52**	Pn	**Pn**	**04 39 29.3**	**+1.4**
ATHU	**Athens Univers**	**3.43**	**339**	P	**Pn**	**04 39 31.2**	**+2.6**
MULA	**Mugla, Merkez-**	**3.46**	**43**	P	**Pn**	**04 39 28.7**	**-0.5**
MULA				S	**Sn**	**04 40 09.3**	**-0.7**
PTL	**Penteli**	**3.48**	**340**	P	**Pn**	**04 39 32.0**	**+2.7**
DION	**Dionisos Attik**	**3.49**	**341**	P	**Pn**	**04 39 31.6**	**+2.1**
DGB	**zmir**	**3.50**	**20**	P	**Pn**	**04 39 31.1**	**+1.5**
DGB				S	**Sn**	**04 40 09.8**	**-0.9**
DGB				IAML		04 40 28.0	
	comp=N,52nm,2.0s						
DGB				IAML		04 40 58.0	
	comp=E,52nm,2.2s						
AYDN	**Tasoluk**	**3.54**	**35**	P	**Pn**	**04 39 32.6**	**+2.4**
IZZE	**Mula-Seydike**	**3.58**	**61**	P	**Pn**	**04 39 32.4**	**+1.7**
IZZE				IAML		04 40 18.0	
	comp=N,88nm,0.5s						
IZZE				IAML		04 40 20.0	
	comp=E,47nm,0.5s						
SABU	**Mula-Dalaman**	**3.59**	**54**	P	**Pn**	**04 39 33.0**	**+2.1**
SABU				S	**Sn**	**04 40 14.7**	**+1.6**
SABU				IAML		04 40 42.0	
	comp=N,43nm,1.5s						
SABU				IAML		04 40 45.0	
	comp=E,40nm,0.8s						
PYL	**PYLOS**	**3.61**	**307**	P	**Pn**	**04 39 32.5**	**+1.4**
MAGU	**Magoula**	**3.61**	**337**	P	**Pn**	**04 39 33.9**	**+2.7**
ITM	**Ithomi**	**3.67**	**312**		**Pn**	**04 39 34.5**	**+2.6**
ITM	**Ithomi**	**3.67**	**312**	P	**Pn**	**04 39 34.5**	**+2.6**
LTK	**Loutraki**	**3.77**	**330**	P	**Pn**	**04 39 35.9**	**+2.6**
AKAS	**Kas**	**3.77**	**66**		**Pn**	**04 39 34.1**	**+0.6**
AKAS	**Kas**	**3.77**	**66**	Pn	**Pn**	**04 39 34.1**	**+0.6**
VIL2	**Platees**	**3.82**	**335**	P	**Pn**	**04 39 35.7**	**+1.7**
ESEN	**Aydn-Nazilli**	**3.88**	**38**	P	**Pn**	**04 39 38.0**	**+3.2**
ESEN				S	**Sn**	**04 40 20.7**	**+0.6**
CAME	**Cameli-Denizli**	**3.88**	**55**	Pn	**Pn**	**04 39 36.1**	**+1.1**
DNZT	**Denizli-Tavas-**	**3.90**	**49**	P	**Pn**	**04 39 38.0**	**+2.8**
DNZT				S	**Sn**	**04 40 22.9**	**+2.2**
DNZT				IAML		04 40 38.0	
	comp=N,37nm,1.3s						
TAVA	**DENIZLI_Tavas**	**3.95**	**46**	P	**Pn**	**04 39 38.7**	**+2.8**
TAVA				S	**Sn**	**04 40 24.6**	**+2.6**
IZMR	**zmir-demi**	**3.97**	**31**	P	**Pn**	**04 39 38.2**	**+2.2**
IZMR				S	**Sn**	**04 40 16.8**	**-5.5**
GUR	**Goura**	**3.98**	**323**	P	**Pn**	**04 39 38.3**	**+2.0**
CAEL	**Denizli, Camel**	**3.99**	**53**	P	**Pn**	**04 39 38.5**	**+2.0**
CAEL				IAML		04 41 07.0	
	comp=N,107nm,1.4s						
KNIK	**Mula-Seydike**	**4.02**	**58**	P	**Pn**	**04 39 37.4**	**+0.6**
KNIK				S	**Sn**	**04 40 21.6**	**-2.1**
KNIK				IAML		04 41 19.0	
	comp=E,30nm,2.0s						
AMT	**Artemida-Makis**	**4.03**	**314**	P	**Pn**	**04 39 38.2**	**+1.4**
KLV	**Kalavryta, Ach**	**4.16**	**323**	P	**Pn**	**04 39 41.0**	**+2.3**
ELL	**Elmali**	**4.21**	**61**		**Pn**	**04 39 42.2**	**+2.7**
KIRA	**zmir-Kiraz**	**4.22**	**35**	P	**Pn**	**04 39 43.2**	**+3.7**
KIRA				S	**Sn**	**04 40 24.8**	**-3.8**
KIRA				IAML		04 41 15.0	
	comp=N,33nm,2.8s						
SULTU	**Buldan**	**4.29**	**39**	P	**Pn**	**04 39 42.6**	**+2.1**
SULTU				S	**Sn**	**04 40 27.7**	**-2.6**
SULTU				IAML		04 40 36.0	
	comp=N,41nm,2.2s						
SULTU				IAML		04 41 28.0	
	comp=E,40nm,3.8s						
LKR	**Lokris**	**4.30**	**335**	P	**Pn**	**04 39 43.1**	**+2.5**
ATAL	**Atalanti**	**4.33**	**335**	P	**Pn**	**04 39 44.1**	**+3.1**
AGEO	**AgiosGiorgios,**	**4.37**	**324**	P	**Pn**	**04 39 44.2**	**+2.7**
TRIZ	**Trizonia**	**4.45**	**325**	P	**Pn**	**04 39 45.2**	**+2.6**
SIGR	**SIGRI**	**4.45**	**5**	P	**Pn**	**04 39 44.3**	**+1.7**
ZIRI	**Ziria, Aigiali**	**4.46**	**323**	P	**Pn**	**04 39 45.6**	**+2.8**
SERG	**Sergoula**	**4.49**	**325**	P	**Pn**	**04 39 46.0**	**+2.7**
MANT	**Manisa**	**4.53**	**34**		**Pn**	**04 39 45.0**	**+1.1**
PRK	**Paraskevi**	**4.53**	**9**	P	**Pn**	**04 39 44.8**	**+1.0**
AXAR	**Agios Charalam**	**4.53**	**332**	P	**Pn**	**04 39 46.3**	**+2.5**
MG00	**Magoula, Dorid**	**4.55**	**324**	P	**Pn**	**04 39 47.0**	**+3.1**
EFP	**Efpalio**	**4.58**	**324**	P	**Pn**	**04 39 47.2**	**+2.8**
ANX	**Ano Chora**	**4.70**	**325**	P	**Pn**	**04 39 48.8**	**+2.6**
AGG	**Agios Georgios**	**4.88**	**331**	P	**Pn**	**04 39 50.9**	**+2.4**
SWA2		**5.51**	**179**	P	**Pn**	**04 39 57.8**	**+0.5**
SWA2				S	**Sn**	**04 40 57.3**	**-3.1**
LIT	**Litokhoron**	**5.78**	**338**	Pn	**Pn**	**04 40 03.3**	**+2.4**
ALN	**Alexandroupoli**	**6.14**	**5**		**Pn**	**04 40 07.0**	**+1.1**
RDO	**Rodhopi**	**6.37**	**1**	Pn	**Pn**	**04 40 10.2**	**+1.3**
CSS	**Mathiatis**	**6.57**	**86**	Pn	**Pn**	**04 40 11.0**	**-0.8**
KEK	**Kerkira**	**6.62**	**320**	Pn	**Pn**	**04 40 13.8**	**+1.4**
RYAN	**Fayoum**	**7.05**	**142**	P	**Pn**	**04 40 19.7**	**+1.2**
RYAN				S	**Sn**	**04 41 35.2**	**-3.2**
NBNS	**Bani Suef**	**7.96**	**139**	P	**Pn**	**04 40 32.2**	**+1.4**
HFRF	**Wahat Farafira**	**8.02**	**161**	P	**Pn**	**04 40 32.4**	**+0.7**
TIP	**Timpagrande**	**8.15**	**305**		**Pn**	**04 40 33.7**	**+0.2**
BRTR	**Keskin Array B**	**8.26**	**51**	Pn	**Pn**	**04 40 34.7**	**-0.4**
	0.1nm,0.3s,baz=223,slow=12,SNR=6.2 1.0nm,0.7s						
CEL	**Celeste**	**8.36**	**297**	Pn	**Pn**	**04 40 37.5**	**+1.1**
MMAI	**Mount Meron Ar**	**8.55**	**99**	Pn	**Pn**	**04 40 37.6**	**-1.4**
	3.5nm,0.3s,baz=295,slow=12,SNR=10						
MMAI				Sn	**Sn**	**04 42 15.2**	**-0.1**
	1.6nm,0.3s,baz=260,slow=17,SNR=2.5 2.0nm,0.3s						
PDG	**Podgorica**	**9.01**	**330**	Pn	**Pn**	**04 40 45.7**	**+0.5**
CUC	**Castrocucco**	**9.20**	**307**		**Pn**	**04 40 49.2**	**+1.4**
RAFF	**Raffo Rosso**	**9.22**	**289**	Pn	**Pn**	**04 40 47.2**	**-1.0**
VAE	**Valguarnera**	**9.24**	**290**	Pn	**Pn**	**04 40 49.7**	**+1.2**
	1.9nm,0.3s,baz=135,slow=10.0,SNR=6.9 7.8nm,0.9s						
EIL	**Elat**	**9.60**	**119**	Pn	**Pn**	**04 40 52.3**	**-1.0**
	0.8nm,0.3s,baz=340,slow=17,SNR=8.2						
EIL				Sn	**Sn**	**04 42 36.0**	**-4.9**
	0.8nm,0.3s,baz=307,slow=14,SNR=2.3 3.6nm,0.5s						
ASF	**Jabal al Asfar**	**10.00**	**102**	Pn	**Pn**	**04 40 57.5**	**-1.4**
	0.4nm,0.3s,baz=270,slow=16,SNR=2.3 2.4nm,0.6s						
SGRT	**San Giovanni R**	**10.27**	**316**	Pn	**Pn**	**04 41 01.1**	**-1.4**
INTR	**Introdacqua**	**11.51**	**312**	Pn	**Pn**	**04 41 19.9**	**+0.3**
NRCA	**Norcia**	**12.47**	**314**		**Pn**	**04 41 34.1**	**+1.5**
FDMO	**Fiordimonte**	**12.61**	**315**	Pn	**Pn**	**04 41 35.2**	**+0.8**
KEST	**Kesra**	**13.11**	**279**	Pn	**Pn**	**04 41 43.9**	**+2.5**
	baz=143,slow=22,SNR=1.4 2.2nm,0.9s						
CTI	**Castel Tesino**	**15.32**	**321**	Pn	**Pn**	**04 42 09.7**	**-1.8**
VRAC	**Vranov**	**15.89**	**339**	Pn	**Pn**	**04 42 19.2**	**+0.4**
	0.2nm,0.3s,baz=350,slow=15,SNR=1.5 0.7nm,0.6s						
KIEV	**Kiev**	**16.16**	**9**	P	**P**	**04 42 25.1**	**-0.2**
KIEV				IAmb	IAmb	04 42 27.4	
	comp=Z,7.0nm,0.7s						
AKASG	**Malin Array Be**	**16.17**	**9**	Pn	**Pn**	**04 42 22.1**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=203,slow=11,SNR=9.6						
AKASG	**Malin Array Be**	**16.17**	**9**		**Pn**	**04 42 22.3**	**0.0**
AKBB	**Malin Array Si**	**16.17**	**9**	P	**P**	**04 42 25.1**	**-0.3**
AKBB				IAmb	IAmb	04 42 27.4	
	comp=Z,7.8nm,0.7s						
KBZ	**Khabaz**	**16.25**	**51**	Pn	**Pn**	**04 42 25.1**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=236,slow=11,SNR=11 comp=Z,6.7nm,1.0s						
GNI	**Garni**	**16.31**	**65**	Pn	**Pn**	**04 42 25.3**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=270,slow=3.0,SNR=3.0 comp=Z,3.2nm,0.5s						
FUORN	**Ofenpass-Fuorn**	**16.42**	**321**		**P**	**04 42 29.1**	**+0.6**
GERES	**GERESS Array B**	**16.49**	**332**	Pn	**Pn**	**04 42 28.4**	**+1.9**
	baz=139,slow=12,SNR=2.9 comp=Z,0.4nm,0.5s						
DAVOX	**Davos/Dischmat**	**16.73**	**320**	Pn	**Pn**	**04 42 30.7**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=155,slow=19,SNR=1.5 comp=Z,0.5nm,0.5s						
SENIN	**Lac Senin/Sane**	**17.89**	**316**		**Pn**	**04 42 43.7**	**-0.5**
DOU	**Dourbes**	**21.55**	**322**	*d*P	**P**	**04 43 25.3**	**+0.9**
BMRD	**Maredsous**	**21.59**	**322**	*d*P	**P**	**04 43 24.7**	**0.0**
ESDC	**Sonseca Array**	**23.78**	**291**	P	**P**	**04 43 48.0**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=84,slow=8.7,SNR=10 comp=Z,1.3nm,0.8s						
ESDC	**Sonseca Array**	**23.78**	**291**	P	**P**	**04 43 47.9**	**+0.1**
MD01	**Midelt array s**	**25.04**	**274**	P	**P**	**04 43 58.3**	**-1.2**
PESTR	**Estremoz**	**26.59**	**289**	P	**P**	**04 44 10.2**	**-3.2**
FINES	**FINESS Array B**	**26.70**	**1**	P	**P**	**04 44 12.3**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=180,slow=7.8,SNR=7.2 comp=Z,2.3nm,0.6s						
FINES	**FINESS Array B**	**26.70**	**1**	P	**P**	**04 44 11.9**	**-2.1**
FIA1	**FINESS Array S**	**26.70**	**1**	P	**P**	**04 44 11.6**	**-2.4**
UOSS	**Minazif**	**28.41**	**102**	P	**P**	**04 44 28.8**	**-1.0**
EKA	**Eskdalemuir Ar**	**28.44**	**325**	P	**P**	**04 44 31.3**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=121,slow=9.9,SNR=5.8 comp=Z,0.5nm,0.4s						
AB31	**Akbulak array**	**29.21**	**50**	P	**P**	**04 44 37.0**	**+0.4**
ABKAR	**Akbulak array**	**29.21**	**50**	P	**P**	**04 44 37.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**30.35**	**231**	P	**P**	**04 44 48.2**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=34,slow=9.1,SNR=14 comp=Z,0.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**30.35**	**231**	P	**P**	**04 44 47.7**	**+0.6**
ARCES	**ARCESS Array B**	**34.82**	**0**	P	**P**	**04 45 23.7**	**-1.9**
	comp=Z,2.2nm,0.9s,baz=182,slow=7.8,SNR=5.7 comp=Z,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**34.82**	**0**	P	**P**	**04 45 23.3**	**-2.3**
KKAR	**Karatay Array**	**35.75**	**63**	P	**P**	**04 45 33.9**	**-0.1**
BVAR	**Borovoye Array**	**36.51**	**46**	P	**P**	**04 45 41.1**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=259,slow=5.1,SNR=4.2 comp=Z,0.8nm,0.6s						
ARSB	**Arslanbob**	**37.70**	**66**	P	**P**	**04 45 50.4**	**-0.3**
ARSB				IAmb	IAmb	04 45 58.3	
	comp=Z,2.2nm,0.8s						
DBIC	**Dimbokro**	**39.44**	**232**	P	**P**	**04 46 07.8**	**+2.4**
	comp=Z,5.1nm,1.1s,baz=162,slow=3.2,SNR=3.7 comp=Z,5.1nm,1.1s						
KURBB	**Kurchatov Array**	**41.25**	**51**	P	**P**	**04 46 20.4**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=275,slow=8.7,SNR=25 comp=Z,2.2nm,0.5s						
KURK	**Kurchatov**	**41.31**	**51**	P	**P**	**04 46 20.9**	**+0.4**
KURK				IAmb	IAmb	04 46 21.6	
	comp=Z,2.4nm,0.8s						
MAKZ	**Makanchi**	**43.65**	**56**	P	**P**	**04 46 39.2**	**-0.5**
MAKZ				IAmb	IAmb	04 46 45.2	
	comp=Z,1.2nm,0.5s						
SPITS	**Spitsbergen Ar**	**43.68**	**357**	P	**P**	**04 46 38.0**	**-1.5**
	comp=Z,6.2nm,1.0s,baz=128,slow=9.3,SNR=1.3 comp=Z,6.2nm,1.0s						
MKAR	**Makanchi Array**	**43.87**	**56**	P	**P**	**04 46 41.7**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=272,slow=7.3,SNR=31 comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**43.87**	**56**	P	**P**	**04 46 42.3**	**+0.9**
ZAA0	**Zalesovo Array**	**45.17**	**46**	P	**P**	**04 46 51.6**	**0.0**
ZAA0				IAmb	IAmb	04 46 52.7	
	comp=Z,2.1nm,0.5s						
ZALV	**Zalesovo Beam**	**45.17**	**46**	P	**P**	**04 46 51.1**	**-0.6**
	comp=Z,1.8nm,0.4s,baz=270,slow=8.3,SNR=12 comp=Z,1.8nm,0.4s						
ZALV	**Zalesovo Beam**	**45.17**	**46**	P	**P**	**04 46 51.4**	**-0.2**
SONM	**Songino Array**	**59.62**	**50**	P	**P**	**04 48 39.5**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=286,slow=7.9,SNR=10 comp=Z,1.2nm,0.5s						
SONM	**Songino Array**	**59.62**	**50**	P	**P**	**04 48 39.7**	**+0.6**
SONM				IAmb	IAmb	04 48 40.5	
	comp=Z,1.0nm,0.6s						
ULN	**Ulaanbaatar**	**60.03**	**50**	P	**P**	**04 48 42.4**	**+0.5**
KUQ	**Kuujjuaa**	**63.09**	**324**	P	**P**	**04 49 02.2**	**0.0**
SCHQ	**Schefferville**	**63.58**	**320**	P	**P**	**04 49 05.6**	**0.0**
	comp=Z,2.1nm,0.7s,baz=58,slow=5.8,SNR=7.6 comp=Z,2.1nm,0.7s						
SCHQ	**Schefferville**	**63.58**	**320**	P	**P**	**04 49 05.5**	**0.0**
ILON	**Igloolik, Nuna**	**63.59**	**338**	P	**P**	**04 49 05.3**	**0.0**
ILON				IAmb	IAmb	04 49 05.3	
	comp=Z,3.2nm,1.3s						
BATG	**Bathurst New B**	**66.29**	**312**	P	**P**	**04 49 24.4**	**+1.1**
C36M	**Paulatuk**	**73.78**	**349**	P	**P**	**04 50 08.2**	**-0.6**
C36M				IAmb	IAmb	04 50 24.0	
	comp=Z,5.5nm,1.5s						
B21K	**Ikpikpuk River**	**75.91**	**360**	P	**P**	**04 50 23.0**	**+1.8**
B21K				IAmb	IAmb	04 50 57.4	
	comp=Z,4.3nm,1.3s						
E29M	**Blow River**	**76.39**	**354**	P	**P**	**04 50 24.4**	**+0.4**
E29M				IAmb	IAmb	04 50 42.6	
	comp=Z,4.9nm,1.5s						
YKAW3	**Yellowknife Wh**	**77.81**	**342**	P	**P**	**04 50 31.9**	**-0.1**
G29M	**Pine Creek**	**77.84**	**353**	P	**P**	**04 50 30.7**	**-1.5**
G29M				IAmb	IAmb	04 50 56.1	
	comp=Z,1.9nm,1.1s						
YKA	**Yellowknife Ar**	**77.86**	**342**	P	**P**	**04 50 32.2**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=30,slow=5.3,SNR=6.7 comp=Z,0.2nm,0.4s						
E19K	**Redstone River**	**78.07**	**1**	P	**P**	**04 50 33.1**	**-0.4**
E19K				IAmb	IAmb	04 50 57.0	
	comp=Z,1.3nm,0.8s						
KSRS	**Korea Array**	**78.40**	**52**	P	**P**	**04 50 36.2**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=316,slow=5.1,SNR=2.2 comp=Z,0.7nm,0.6s						
F20K	**Avaraart Lake**	**78.50**	**0**	P	**P**	**04 50 35.1**	**-0.6**
F20K				IAmb	IAmb	04 51 06.7	
	comp=Z,2.9nm,1.5s						
H31M	**Peel River**	**78.52**	**352**	P	**P**	**04 50 35.6**	**-0.4**
M52A	**Chesterland**	**78.61**	**313**	P	**P**	**04 50 37.0**	**+0.1**
H27K	**Steamboat Moun**	**78.81**	**355**	P	**P**	**04 50 37.9**	**+0.3**
H27K				IAmb	IAmb	04 50 38.2	
	comp=Z,6.7nm,1.5s						
I30M	**Mount Dempster**	**79.31**	**352**	P	**P**	**04 50 40.1**	**-0.3**
I30M				IAmb	IAmb	04 50 45.4	
	comp=Z,4.4nm,1.4s						
G19K	**Purcell Mounta**	**79.39**	**1**	P	**P**	**04 50 40.3**	**-0.4**
G19K				IAmb	IAmb	04 51 01.3	
	comp=Z,5.1nm,1.5s						
I28M	**Miner Creek**	**79.45**	**354**	P	**P**	**04 50 40.4**	**-0.8**
I28M				IAmb	IAmb	04 50 48.7	
	comp=Z,2.0nm,1.2s						
IMAR	**Indian Mountai**	**79.57**	**360**	P	**P**	**04 50 41.5**	**-0.2**

NEIC ***23*** *04:40:15.5±0.8, 19°.11N±0°.08×145°.3E±0°.2, h185km±5km, mb3.5/5, Error ellipse: s-maj=31.0km s-min=11.5km az=92.0*
IDC ***23*** *04:40:23.8±22.0, 19°.01N×145°.14E, h272km±224km, mb2.9/8, mbtmp3.5/8, Error ellipse: s-maj=43.7km s-min=29.4km az=60.0*

ISC 23 04:40:17.6±0.7, 18°.92N±0°.08×145°.3E±0°.2, h214km, n18, σ1§18/19, mb3.2/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.69**	**172**	Pn	**Pn**	**04 41 15.7**	**-0.5**
DPSS				Sn	**S**	**04 41 59.8**	**-2.2**
WB0	**Warramunga Arr**	**39.89**	**196**	P	**P**	**04 47 32.6**	**+1.7**
WB0				IAmb	IAmb	04 47 33.0	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**40.08**	**196**	P	**P**	**04 47 33.8**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=20,slow=9.0,SNR=7.3 comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**40.08**	**196**	P	**P**	**04 47 33.6**	**+1.2**
ASAR	**Alice Springs**	**43.75**	**195**	P	**P**	**04 48 03.1**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=13,slow=6.1,SNR=6.4 comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**43.75**	**195**	P	**P**	**04 48 03

WR8	**Warramunga Arr**	**39.98**	**196**	P	**P**	05 10 10.7	+0.3
WR8				IAmb	IAmb	05 10 12.1	
	comp=Z,4.2nm,0.8s						
WRA	**Warramunga Arr**	**40.01**	**196**	P	**P**	05 10 11.2	+0.6
	comp=Z,3.0nm,0.4s,baz=356,slow=8.9,SNR=45						
	comp=Z,3.0nm,0.4s						
WRA	**Warramunga Arr**	**40.01**	**196**	P	**P**	05 10 09.6	-1.0
MA2	**Magadan**	**40.92**	**4**	LR	LR	05 27 34.5	
	comp=Z,29nm,18.7s,baz=312,slow=36						
SONM	**Songino Array**	**42.96**	**321**	P	**P**	05 10 35.0	+0.6
	comp=Z,0.5nm,0.5s,baz=129,slow=8.1,SNR=5.3						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**42.96**	**321**	P	**P**	05 10 35.4	+1.0
AS31	**Alice Springs**	**43.68**	**195**	P	**P**	05 10 41.1	+0.8
ASAR	**Alice Springs**	**43.68**	**195**	P	**P**	05 10 40.7	+0.4
	comp=Z,0.8nm,0.6s,baz=14,slow=6.8,SNR=14						
	comp=Z,0.8nm,0.6s						
DZM	**Mont Dzumac**	**45.48**	**152**	P	**P**	05 10 54.2	-0.4
FORT	**Forrest**	**52.05**	**199**	P	**P**	05 11 44.2	-0.1
FORT				IAmb	IAmb	05 11 55.4	
	comp=Z,4.3nm,0.9s						
BBOO	**Buckleboo**	**52.09**	**190**	P	**P**	05 11 44.8	+0.2
BBOO				IAmb	IAmb	05 12 11.9	
	comp=Z,6.1nm,1.1s						
SDPT	**Sand Point**	**54.51**	**35**	P	**P**	05 12 02.2	+0.3
K13K	**Kusilvak Mount**	**55.19**	**26**	P	**P**	05 12 08.4	+1.8
K13K				IAmb	IAmb	05 12 09.1	
	comp=Z,3.5nm,0.7s						
MORW	**Morawa**	**55.42**	**212**	P	**P**	05 12 09.8	+1.0
MORW				IAmb	IAmb	05 12 14.2	
	comp=Z,5.3nm,0.9s						
O14K	**Tigyukauivet M**	**55.54**	**30**	P	**P**	05 12 09.7	+0.5
O14K				IAmb	IAmb	05 12 34.2	
	comp=Z,8.7nm,1.1s						
N14K	**Kuskokwak Cree**	**55.61**	**29**	P	**P**	05 12 10.9	+1.2
N14K				IAmb	IAmb	05 12 35.0	
	comp=Z,11nm,1.0s						
L14K	**Kuka Creek**	**55.76**	**27**	P	**P**	05 12 11.9	+1.2
L14K				IAmb	IAmb	05 12 31.2	
	comp=Z,2.8nm,0.8s						
M14K	**Bethel**	**55.83**	**28**	P	**P**	05 12 12.4	+1.2
M14K				IAmb	IAmb	05 12 13.5	
	comp=Z,5.5nm,0.8s						
O15K	**Ungalikthiuk R**	**56.19**	**30**	P	**P**	05 12 15.2	+1.3
ZALV	**Zalesovo Beam**	**57.83**	**322**	P	**P**	05 12 25.5	+0.1
	comp=Z,0.4nm,0.4s,baz=103,slow=7.5,SNR=3.6						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**58.27**	**314**	P	**P**	05 12 29.4	+0.8
	comp=Z,0.6nm,0.6s,baz=91,slow=7.7,SNR=10						
	comp=Z,0.6nm,0.6s						
H17K	**Granite Mounta**	**58.44**	**24**	P	**P**	05 12 30.6	+1.2
MAKZ	**Makanchi**	**58.48**	**314**	P	**P**	05 12 31.1	+1.0
KURK	**Kurchatov**	**61.08**	**318**	P	**P**	05 12 47.9	+0.2
KURBB	**Kurchatov Arra**	**61.13**	**318**	P	**P**	05 12 48.2	+0.3
	comp=Z,0.8nm,0.5s,baz=92,slow=7.6,SNR=13						
	comp=Z,0.8nm,0.5s						
D20K	**Etivluk River**	**61.20**	**21**	P	**P**	05 12 49.2	+1.0
D20K				IAmb	IAmb	05 12 49.6	
	comp=Z,3.5nm,0.5s						
B20K	**Meade River**	**61.55**	**19**	P	**P**	05 12 51.7	+1.2
B20K				IAmb	IAmb	05 12 52.8	
	comp=Z,2.7nm,0.8s						
ILAR	**Eielson Array**	**63.66**	**26**	P	**P**	05 13 03.5	-1.0
	comp=Z,1.2nm,0.8s,baz=251,slow=5.3,SNR=20						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**63.66**	**26**	P	**P**	05 13 03.8	-0.7
BVAR	**Borovoye Array**	**66.29**	**320**	P	**P**	05 13 22.1	+0.5
	comp=Z,2.2nm,0.5s,baz=95,slow=7.2,SNR=16						
	comp=Z,2.2nm,0.5s						
BORK	**Borovoye**	**66.33**	**320**	P	**P**	05 13 22.6	+0.7
BORK				IAmb	IAmb	05 13 24.5	
	comp=Z,2.0nm,0.6s						
KKAR	**Karatay Array**	**66.57**	**310**	P	**P**	05 13 24.6	+1.0
HYT	**Haines Junctio**	**67.46**	**31**	P	**P**	05 13 30.5	+1.5
HYT				IAmb	IAmb	05 13 31.6	
	comp=Z,5.0nm,1.2s						
INK	**Inuvik**	**69.37**	**23**		**P**	05 13 40.8	+0.3
AB31	**Akbulak array**	**73.15**	**317**	P	**P**	05 14 03.8	+0.3
ABKAR	**Akbulak array**	**73.15**	**317**	P	**P**	05 14 03.5	0.0
YKA	**Yellowknife Ar**	**78.01**	**28**	P	**P**	05 14 30.8	0.0
	comp=Z,0.7nm,0.5s,baz=291,slow=5.9,SNR=18						
	comp=Z,0.7nm,0.5s						
EPH	**Ephrata**	**79.66**	**44**	P	**P**	05 14 40.5	+0.4
EPH				IAmb	IAmb	05 14 41.4	
	comp=Z,3.4nm,1.1s						
J05D	**Fort Rock, OR**	**79.68**	**48**	P	**P**	05 14 41.3	+0.7
J05D				IAmb	IAmb	05 14 42.7	
	comp=Z,3.4nm,1.0s						
PINE	**Pine Mountain**	**79.75**	**47**	P	**P**	05 14 41.8	+0.8
PINE				IAmb	IAmb	05 14 42.9	
	comp=Z,5.7nm,0.8s						
K05A	**Summer Lake**	**80.08**	**48**	P	**P**	05 14 43.7	+0.9
K05A				IAmb	IAmb	05 14 44.5	
	comp=Z,4.5nm,0.8s						
NVAR	**Mina Array Bea**	**83.24**	**52**	P	**P**	05 15 00.1	+0.7
	comp=Z,2.8nm,0.7s,baz=262,slow=6.2,SNR=25						
	comp=Z,2.8nm,0.7s						
FINES	**FINESS Array B**	**86.73**	**335**	P	**P**	05 15 17.3	+1.4
	comp=Z,3.6nm,0.9s,baz=70,slow=4.7,SNR=5.3						
	comp=Z,3.6nm,0.8s						
FINES	**FINESS Array B**	**86.73**	**335**	P	**P**	05 15 16.1	+0.2
PDAR	**Pinedale Array**	**87.91**	**45**	P	**P**	05 15 22.2	0.0
	comp=Z,0.2nm,0.4s,baz=160,slow=1.9,SNR=6.0						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.91**	**45**	P	**P**	05 15 22.1	-0.2
FCC	**Fort Churchill**	**88.67**	**27**	P	**P**	05 15 25.1	-0.1
LPAZ	**La Paz**	**147.87**	**91**	PKPbc	**PKiKP**	05 22 18.2	-1.3
	comp=Z,0.7nm,0.5s,baz=270,slow=6.1,SNR=2.4						

IDC 23 05:26:30.1±2.1,**5°33N**×**126°16E,h0**km,**mb3.6**/4,
mbtmp3.6/4,**Error ellipse: s-maj=231.1km**
s-min=23.7km az=66.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.39**	**162**	P	P	05 32 08.2	-0.2
	1.8nm,0.9s,baz=342,slow=9.2,SNR=8.6						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**29.81**	**166**	P	P	05 32 39.3	+0.2
	0.3nm,0.8s,baz=352,slow=7.5,SNR=2.0						
ASAR				PcP	PcP	05 35 42.6	-0.2
	0.2nm,0.8s,baz=0.0,slow=1.4,SNR=2.0						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**55.90**	**325**	P	P	05 36 09.5	-0.4
	0.4nm,0.8s,baz=125,slow=7.8,SNR=4.1						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**60.07**	**327**	P	P	05 36 39.3	+0.3
	0.5nm,0.6s,baz=125,slow=6.8,SNR=2.8						
	0.5nm,0.6s						

*JMA **23** 05:35:01.9±0.2,23°N±1°×122°E±°,h45km±4km,MV3.3/13,*
TAIWAN REGION
*TAP **23** 05:35:02.4,23°.18N×121°.51E,h40km,ML3.6,C*
ISC 23 05:35:02.3±0.9,**23°.16N**±0°.02×**121°.58E**±0°.02,**h31**km±3km,
n141,σ**1°17**/245,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKH	**Chenggong**	**0.17**	**280**	*i* P	**Pn**	05 35 08.9	+0.1
CHKH				*i* S	**Sb**	05 35 13.6	+1.2
ECBN	**Changbin**	**0.19**	**323**	*i* P	**Pn**	05 35 09.4	+0.3
ECBN				*i* S	**Sb**	05 35 14.5	+1.6
CHKT	**Chengkung**	**0.21**	**252**	*i* P	**Pn**	05 35 09.3	+0.1
CHKT				S	**Sb**	05 35 14.4	+1.4
FULB	**Fuli**	**0.26**	**278**	*i* P	**Pn**	05 35 09.8	-0.3
FULB				*i* S	**Sn**	05 35 15.4	+0.3
EYUL	**Yuli**	**0.30**	**308**	*i* P	**Pb**	05 35 10.7	+0.8
EYUL				*eS*	**Sb**	05 35 17.2	+2.2
TWF1	**Yuli**	**0.32**	**306**	P	**Pb**	05 35 10.3	+0.1
ECS	**Chishang**	**0.34**	**259**	P	**Pb**	05 35 11.0	+0.6
ECS				*eS*	**Sb**	05 35 17.6	+1.7
YULB	**Yu-li**	**0.34**	**312**	*i* P	**Pb**	05 35 10.3	-0.2
HGSD	**Ruisui**	**0.36**	**337**	P	**Pb**	05 35 10.6	-0.1
HGSD				*eS*	**Sn**	05 35 18.8	+1.4
EHYH	**Wanrong**	**0.39**	**327**	*i* P	**Pb**	05 35 10.9	-0.2
EHYH				S	**Sb**	05 35 17.2	-0.1
EHY	**Hungye**	**0.42**	**326**	*i* P	**Pb**	05 35 11.1	-0.4
EHY				S	**Sb**	05 35 17.3	-0.5
LONT	**Longtian**	**0.48**	**238**	P	**Pb**	05 35 12.0	-0.6
LONT				S	**Sb**	05 35 19.9	+0.3
LDUT	**Ludao**	**0.50**	**192**	*eP*	**Pb**	05 35 13.2	+0.5
LDUT				S	**Sb**	05 35 20.9	+1.0
ELDTW	**Lidau**	**0.52**	**273**	*i* P	**Pb**	05 35 12.3	-0.8
ELDTW				S	**Sb**	05 35 18.9	-1.7
EGFH	**Guangfu**	**0.52**	**345**	*eP*	**Pb**	05 35 12.5	-0.6
EGFH				S	**Sb**	05 35 19.9	-0.7
TEGC	**Jichi Village**	**0.55**	**356**	P	**Pb**	05 35 13.5	-0.1
TEGC				S	**Sb**	05 35 21.9	+0.7
TTN	**Taitung**	**0.57**	**224**	P	**Pb**	05 35 14.0	+0.1
TTN				S	**Sb**	05 35 22.5	+0.7
TWGBT	**Beinan**	**0.57**	**233**	*i* P	**Pb**	05 35 13.3	-0.6
TWGBT				*i* S	**Sb**	05 35 21.1	-0.9
TWG	**Pinlang**	**0.58**	**234**	*i* P	**Pn**	05 35 13.3	-1.1
TWG				S	**Sb**	05 35 21.1	-0.9
WARBT	**Fenglin Townsh**	**0.58**	**342**	*i* P	**Pn**	05 35 13.0	-1.5
WARBT				*eS*	**Sb**	05 35 20.3	-1.9
SHUL	**Shoufeng**	**0.62**	**359**	P	**Pn**	05 35 14.6	-0.4
SHUL				S	**Sb**	05 35 23.9	+0.6
YUS	**Yu-Shan**	**0.66**	**300**	*i* P	**Pn**	05 35 15.1	-0.9
YUS				S	**Sb**	05 35 23.8	-1.1
ESL	**Shilin**	**0.66**	**348**	*i* P	**Pn**	05 35 14.1	-1.4
ESL				S	**Sb**	05 35 22.4	-2.1
TEYL	**Yanliau Villag**	**0.70**	**1**	*eP*	**Pn**	05 35 16.2	+0.1
TEYL				S	**Sn**	05 35 27.1	+1.1
VWDT	**VWDT**	**0.71**	**326**	*i* P	**Pn**	05 35 15.6	-0.7
STYH	**Taoyuan**	**0.74**	**271**	P	**Pn**	05 35 16.0	-0.6
STYH				S	**Sn**	05 35 25.4	-1.4
ALS	**Alishan**	**0.79**	**296**	*i* P	**Pn**	05 35 17.4	-0.2
ALS				S	**Sn**	05 35 28.0	-0.5
ETM	**Tongmen**	**0.80**	**354**	*eP*	**Pn**	05 35 16.6	-0.9
ECL	**Taimali**	**0.81**	**226**	*eP*	**Pn**	05 35 15.9	-1.6
ECL				*eS*	**Sn**	05 35 26.1	-2.3
HWA	**Hwalien**	**0.81**	**2**	*eP*	**Pn**	05 35 17.8	+0.2
HWA				*eS*	**Sn**	05 35 29.0	+0.4
SSLB	**Suanglung**	**0.85**	**318**	*i* P	**Pn**	05 35 17.5	-0.6
SSLB				S	**Sn**	05 35 27.7	-1.8
WHYT	**Xinyi Township**	**0.85**	**309**	*i* P	**Pn**	05 35 18.1	-0.1
WHYT				S	**Sn**	05 35 28.8	-0.8
LXIB	**Xiulin Townshi**	**0.87**	**350**	*i* P	**Pn**	05 35 17.0	-1.5
LXIB				S	**Sn**	05 35 27.5	-2.7
OWD	**Renai**	**0.87**	**335**	P	**Pn**	05 35 17.6	-1.0
OWD				*eS*	**Sn**	05 35 28.3	-2.0
SLGT	**Liugui**	**0.87**	**259**	*i* P	**Pn**	05 35 18.6	+0.1
SLGT				*eS*	**Sn**	05 35 29.8	-0.4
TPUB	**Ta-pu**	**0.88**	**279**	*i* P	**Pn**	05 35 18.9	+0.3
TPUB				*eS*	**Sn**	05 35 30.0	-0.4
WTP	**Ta-pu**	**0.89**	**276**	P	**Pn**	05 35 18.9	+0.2
WTP				*eS*	**Sn**	05 35 30.6	-0.1
TWD	**Chiawan**	**0.91**	**1**	*i* P	**Pn**	05 35 18.2	-0.8
TWD				S	**Sn**	05 35 30.0	-1.1
SGST	**Jiashian**	**0.92**	**265**	*i* P	**Pn**	05 35 18.6	-0.5
SGST				S	**Sn**	05 35 31.5	+0.2
WUSB	**Renai**	**0.93**	**333**	*i* P	**Pn**	05 35 18.7	-0.6
WUSB				S	**Sn**	05 35 29.6	-2.0
CHN5	**Tsauling**	**0.93**	**298**	P	**Pn**	05 35 20.2	+0.8
CHN5				S	**Sn**	05 35 32.5	+0.7
WCKO	**Fanlu**	**0.94**	**287**	P	**Pn**	05 35 20.8	+1.4
WCKO				*eS*	**Sn**	05 35 32.5	+0.8
SMLT	**Sun Moon Lake**	**0.95**	**319**	*i* P	**Pn**	05 35 19.5	-0.1
SMLT				S	**Sn**	05 35 31.4	-0.7
SSD	**Sandimen**	**0.96**	**245**	P	**Pn**	05 35 19.4	-0.3
SSD				*eS*	**Sn**	05 35 31.5	-0.9
CHN1	**Nanshi**	**0.97**	**272**	P	**Pn**	05 35 20.4	+0.6
CHN1				S	**Sn**	05 35 33.7	+1.2
TYC	**Yuchr**	**0.99**	**318**	*i* P	**Pn**	05 35 20.2	+0.1
TYC				S	**Sn**	05 35 33.3	+0.3
ETL	**Fush Village**	**0.99**	**2**	P	**Pn**	05 35 19.6	-0.5
ETL				*eS*	**Sn**	05 35 31.8	-1.4
SNST	**Tainan City**	**1.00**	**274**	*eS*	**Sb**	05 35 36.7	+2.9
NACB	**Ninganchiao**	**1.01**	**1**	*i* P	**Pn**	05 35 19.2	-1.1
NACB				S	**Sn**	05 35 31.3	-2.1
TWK	**Hsinying**	**1.01**	**276**	P	**Pn**	05 35 20.9	+0.6
TWK				*eS*	**Sn**	05 35 34.1	+0.5
WHF	**Hehuan Shan**	**1.02**	**344**	P	**Pn**	05 35 19.8	-1.1
WHF				S	**Sn**	05 35 32.8	-1.5
WJS	**Zhushan**	**1.02**	**310**	P	**Pn**	05 35 21.1	+0.6
WJS				S	**Sn**	05 35 34.2	+0.5
EAST	**Anshuo**	**1.03**	**221**	*eP*	**Pn**	05 35 19.6	-1.0
MASBT	**Mashibuluo**	**1.03**	**238**	*i* P	**Pn**	05 35 20.2	-0.4
SCST	**Cishan**	**1.04**	**255**	*eP*	**Pn**	05 35 21.9	+1.2
ETLH	**Xiulin Townshi**	**1.04**	**355**	*i* P	**Pn**	05 35 19.6	-1.3
ETLH				S	**Sn**	05 35 31.7	-2.8
WGK	**Gukeng**	**1.07**	**299**	P	**Pn**	05 35 22.0	+0.8
WGK				*eS*	**Sn**	05 35 36.2	+1.2
CHN2	**Minshiung**	**1.08**	**290**	*eS*	**Sb**	05 35 37.4	+1.3
WCS	**Beigang Elemen**	**1.08**	**326**	*i* P	**Pn**	05 35 21.5	+0.2
WNT	**Mingjian**	**1.09**	**311**	*eP*	**Pn**	05 35 22.1	+0.7
WNT				*eS*	**Sn**	05 35 36.0	+0.6
WDLH	**Douliu**	**1.09**	**299**	*eP*	**Pn**	05 35 22.4	+1.0
WDLH				S	**Sn**	05 35 36.8	+1.3
SGLT	**Jiouru**	**1.09**	**247**	*eP*	**Pn**	05 35 23.4	+2.0
WDL	**Douliou City**	**1.10**	**300**	*eP*	**Pn**	05 35 21.8	+0.2
WDL				*eS*	**Sb**	05 35 37.9	+1.1
CHY	**Chiayi**	**1.11**	**288**	*eP*	**Pn**	05 35 22.1	+0.4
CHY				*eS*	**Sn**	05 35 36.6	+0.6
TWM1	**Shoushan**	**1.12**	**253**	P	**Pb**	05 35 24.1	+1.0
LAY	**Lan-yu**	**1.12**	**181**	P	**Pn**	05 35 21.4	-0.4
LAY				*eS*	**Sn**	05 35 35.5	-0.6
FUSS	**Fushou**	**1.12**	**344**	P	**Pn**	05 35 21.8	-0.3
FUSS				S	**Sn**	05 35 34.9	-1.7
TWT	**Tachien**	**1.15**	**341**	*eP*	**Pn**	05 35 22.4	0.0
LYUB	**Lan-yu**	**1.16**	**180**	P	**Pn**	05 35 21.6	-0.7
LYUB				*eS*	**Sn**	05 35 35.5	-1.6
EAHA	**Aohua**	**1.17**	**7**	*eS*	**Sn**	05 35 37.1	-0.3
EOS4	**EOS4**	**1.17**	**35**	P	**Pn**	05 35 22.3	0.0
EOS4				*eS*	**Sn**	05 35 36.6	-0.3
SCZT	**Fangliau**	**1.18**	**229**	P	**Pn**	05 35 23.1	+0.4
SCZT				*eS*	**Sn**	05 35 37.4	-0.4
SLIU	**Shizi**	**1.19**	**218**	*eP*	**Pn**	05 35 24.3	+1.5
SLIU				*eS*	**Sn**	05 35 37.0	-0.9
SSHA	**Shanhua**	**1.19**	**269**	*eP*	**Pn**	05 35 24.4	+1.7
SSHA				*eS*	**Sn**	05 35 37.5	-0.4
WHP	**Taichung City**	**1.25**	**333**	*eP*	**Pn**	05 35 24.3	+0.6
WHP				*eS*	**Sn**	05 35 40.9	+1.3
CHN8	**Yiju**	**1.27**	**279**	*eP*	**Pn**	05 35 23.9	0.0
CHN8				*eS*	**Sn**	05 35 41.3	+1.4
NNSB	**Datong**	**1.27**	**352**	P	**Pn**	05 35 23.6	-0.5
NNSB				*eS*	**Sn**	05 35 38.4	-1.8
TCU	**Taichung**	**1.28**	**320**	*eP*	**Pn**	05 35 25.9	+1.8
TCU				*eS*	**Sn**	05 35 41.5	+1.3
EWUT	**Wuta**	**1.29**	**8**	*eP*	**Pn**	05 35 24.3	+0.1
EWUT				*eS*	**Sn**	05 35 39.6	-0.8
WSL	**Shuilin Townsh**	**1.29**	**286**	P	**Pn**	05 35 24.5	+0.3
WSL				*eS*	**Sn**	05 35 41.3	+0.6
WCHH	**Zhanghua**	**1.31**	**315**	*eP*	**Pn**	05 35 25.1	+0.7
WCHH				*eS*	**Sn**	05 35 42.1	+1.3
EOS3	**EOS3**	**1.31**	**31**	*eP*	**Pn**	05 35 24.6	+0.3
EOS3				*eS*	**Sn**	05 35 41.1	+0.5
WCH1	**Changhua City**	**1.31**	**314**	*eS*	**Sn**	05 35 42.5	+1.6
KAU	**Kaohsiung**	**1.31**	**243**	*eP*	**Pn**	05 35 25.5	+1.1
KAU				*eS*	**Sb**	05 35 45.4	+2.6
WSSB	**Gushan**	**1.32**	**247**	*eP*	**Pn**	05 35 26.5	+1.9
WSSB				*eS*	**Sb**	05 35 44.9	+1.8
WRL	**Guolierlin Hig**	**1.32**	**304**	P	**Pn**	05 35 25.0	+0.4
WRL				S	**Sn**	05 35 41.6	+0.3
SMST	**Manzhou Townsh**	**1.33**	**211**	*eP*	**Pn**	05 35 24.3	-0.4
SMST				S	**Sn**	05 35 39.9	-1.4
WSF	**Szhu**	**1.33**	**291**	*eP*	**Pn**	05 35 24.9	+0.1
WSF				*eS*	**Sn**	05 35 41.8	+0.3
RLNB	**Erlin**	**1.33**	**303**	*eS*	**Sn**	05 35 42.5	+1.0
LATG	**Datong**	**1.37**	**358**	P	**Pn**	05 35 24.8	-0.5
TWP	**Hsiaoliuchiu**	**1.39**	**234**	*eP*	**Pb**	05 35 29.7	+2.1
EOS2	**EOS2**	**1.39**	**25**	*eP*	**Pn**	05 35 25.6	+0.2
EOS2				*eS*	**Sn**	05 35 44.1	+1.5
TWQ1	**Liyutan**	**1.39**	**328**	P	**Pn**	05 35 27.0	+1.4
TWQ1				*eS*	**Sn**	05 35 45.0	+2.0
TSEB	**Hengchuen, Pin**	**1.40**	**207**	*eS*	**Sn**	05 35 43.8	+0.6
TWKBT	**Hengchun**	**1.41**	**210**	P	**Pn**	05 35 25.4	-0.4
TWK1	**Hengchun**	**1.41**	**211**	*eP*	**Pn**	05 35 25.1	-0.7
TWK1				*eS*	**Sn**	05 35 43.0	-0.3
NDT	**Datong Townshi**	**1.44**	**358**	*eP*	**Pn**	05 35 27.0	+0.8
NDT				*eS*	**Sn**	05 35 44.5	+0.4
NSY	**Sanyi**	**1.46**	**329**	*eP*	**Pn**	05 35 28.5	+2.0
NSY				*eS*	**Sn**	05 35 46.4	+1.9
WDJ	**Dajia District**	**1.46**	**324**	*eP*	**Pn**	05 35 27.6	+1.1
WDJ				*eS*	**Sn**	05 35 47.2	+2.6
TWC	**Suao**	**1.46**	**10**	*eP*	**Pn**	05 35 27.2	+0.6
TWC				S	**Sn**	05 35 45.0	+0.3
NDS	**Dongshan**	**1.47**	**5**	*eP*	**Pn**	05 35 27.1	+0.4
NDS				*eS*	**Sn**	05 35 43.9	-1.0
ENTT	**Nioudou**	**1.47**	**360**	*eP*	**Pn**	05 35 26.8	+0.1
ENTT				*eS*	**Sn**	05 35 44.6	-0.3
YHNB	**Yeheng**	**1.51**	**353**	P	**Pn**	05 35 27.4	+0.1
YHNB				*eS*	**Sn**	05 35 45.5	-0.5
NSK	**Sanguang**	**1.52**	**352**	P	**Pn**	05 35 28.0	+0.5
NSK				*eS*	**Sn**	05 35 45.5	-0.7
NFF	**Wufeng Townshi**	**1.52**	**344**	P	**Pn**	05 35 28.9	+1.5
NFF				*eS*	**Sn**	05 35 47.1	+0.8
NMLH	**Miaoli**	**1.55**	**332**	*eP*	**Pn**	05 35 29.0	+1.3
NMLH				*eS*	**Sn**	05 35 48.0	+1.2
TWE	**Neicheng**	**1.55**	**3**	*eP*	**Pn**	05 35 28.8	+1.0
TWE				*eS*	**Sn**	05 35 47.8	+0.9
NSTT	**Nanjuang**	**1.56**	**340**	*eP*	**Pn**	05 35 29.0	+1.2
NSTT				*eS*	**Sn**	05 35 49.4	+2.4
LIOB	**Emei**	**1.56**	**341**	*eP*	**Pn**	05 35 29.3	+1.3
LIOB				*eS*	**Sn**	05 35 48.4	+1.1
FUSB	**Fushanzhiwuyua**	**1.59**	**0**	*eP*	**Pn**	05 35 28.8	+0.4
FUSB				*eS*	**Sn**	05 35 48.0	+0.1
NWLT	**Wulai**	**1.61**	**358**	P	**Pn**	05 35 28.9	+0.3
NWLT				S	**Sn**	05 35 47.7	-0.6
KSHI	**Guanxi Townshi**	**1.65**	**347**	P	**Pn**	05 35 30.9	+1.8
KSHI				*eS*	**Sn**	05 35 51.1	+1.8
NTC	**Toucheng**	**1.70**	**8**	*eP*	**Pn**	05 35 32.3	+2.4
SBCB	**Hsinchu**	**1.71**	**342**	*eS*	**Sn**	05 35 52.7	+1.9
HSN	**Hsinchu**	**1.73**	**341**	*eS*	**Sn**	05 35 53.1	+2.0
WDGT	**Dungji**	**1.77**	**274**	*eS*	**Sn**	05 35 51.0	-1.2
JYNG	**Yonagunijimaku**	**1.79**	**44**	*eP*	**Pn**	05 35 31.9	+0.8
JYNG				*eS*	**Sn**	05 35 53.4	+0.6
TIPB	**Shuangxi**	**1.82**	**7**	*eP*	**Pn**	05 35 32.6	+1.1
TIPB				*eS*	**Sn**	05 35 53.8	+0.3
YOJ	**Yonaguni jima**	**1.84**	**45**	*eP*	**Pn**	05 35 32.7	+0.9
YOJ	**Yonaguni jima**	**1.84**	**45**	*i* P	**Pn**	05 35 32.6	+0.9
YOJ				S	**Sn**	05 35 54.9	+0.8
TWB1	**Santiao Chiao**	**1.88**	**11**	*eS*	**Sn**	05 35 55.3	+0.4
PHUB	**P'eng-hu**	**1.88**	**281**	P	**Pn**	05 35 31.8	-0.4
PHUB				S	**Sn**	05 35 53.1	-1.8
PNG	**Penghu**	**1.90**	**283**	P	**Pn**	05 35 32.3	-0.3
PNG				*eS*	**Sn**	05 35 54.7	-0.8
NWF	**Wu-fen Shan**	**1.91**	**6**	*eP*	**Pn**	05 35 33.6	+0.8
NWF				*eS*	**Sn**	05 35 56.6	+0.8
WFSB	**Wu-fen Shan**	**1.91**	**6**	*eS*	**Sn**	05 35 58.1	+2.4
TWS1	**Kuangyinshan**	**1.94**	**356**	*eP*	**Pn**	05 35 34.8	+1.7
SXI1	**Grass Mountain**	**1.94**	**8**	P	**Pn**	05 35 34.6	+1.4
SXI1				*eS*	**Sn**	05 35 58.2	+1.6
YM01	**YM01**	**1.98**	**360**	*eS*	**Sn**	05 35 56.9	-0.5
VCHM	**Qimei**	**1.98**	**272**	*eP*	**Pn**	05 35 33.3	-0.3
VCHM				*eS*	**Sn**	05 35 56.0	-1.4
ZUZH	**Zhuzihu**	**1.99**	**359**	*eS*	**Sn**	05 35 57.2	-0.6
HATJ	**Hateruma jima**	**2.23**	**66**	*eP*	**Pn**	05 35 37.6	+0.5
IRIF	**Iriomote-Funau**	**2.29**	**59**	*eP*	**Pn**	05 35 38.6	+0.7
JKRS	**Kuro-shima**	**2.47**	**64**	*eP*	**Pn**	05 35 41.4	+0.9
JIJ	**Ishigaki jima**	**2.64**	**63**	*eP*	**Pn**	05 35 43.0

ADCV	**BITLIS_Adilcev**	**1.46**	**286**	P	**Pb**	**05 42 55.1**	**-0.2**
ADCV				S	**Sg**	**05 43 16.2**	**+0.6**
ALVK	**Alvank**	**1.52**	**70**	*eP*	**Pg**	**05 42 57.1**	**-0.7**
ALVK				*eS*	**Sg**	**05 43 18.2**	**+0.6**
PERV	**Siirt/Pervari-**	**1.63**	**254**	P	**Pb**	**05 42 58.5**	**+0.2**
PERV				S	**Sg**	**05 43 21.0**	**-0.2**
PERV				IAML		05 43 31.0	
	comp=E,272nm,0.7s						
AGRB	**Hanur-Agry**	**1.65**	**314**	Pn	**Pg**	**05 43 00.5**	**+0.2**
AGRB				Sn	**Sg**	**05 43 23.6**	**+1.7**
DORK	**Agr/Tutak/Do**	**1.66**	**306**	P	**Pb**	**05 42 58.8**	**0.0**
DORK				S	**Sn**	**05 43 17.8**	**-0.4**
MLAZ	**Malazgirt-MUS**	**1.70**	**295**	Pn	**Pg**	**05 43 01.5**	**+0.3**
KOTA	**Agri, Merkez-K**	**1.71**	**324**	P	**Pb**	**05 43 00.3**	**+0.6**
KOTA				S	**Sn**	**05 43 20.4**	**+0.9**
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**05 43 02.8**	**+1.0**
GNI	**Garni**	**1.73**	**6**	*iP*	**Pg**	**05 43 02.3**	**+0.6**
GNI				*iS*	**Sg**	**05 43 27.5**	**+3.2**
GNI	**Garni**	**1.73**	**6**	Pg	**Pg**	**05 43 02.2**	**+0.4**
VNNZ	**Vanand**	**1.76**	**342**	*eP*	**Pg**	**05 43 03.2**	**+0.9**
VNNZ				*eS*		05 44 28.7	
EGVZ	**Egvard**	**1.77**	**63**	*eP*	**Pg**	**05 43 01.4**	**-1.2**
EGVZ				*eS*	**Sg**	**05 43 25.6**	**+0.1**
ARUZ	**Aruch**	**1.88**	**350**	*eP*	**Pg**	**05 43 04.8**	**+0.1**
ARUZ				*eS*		05 44 31.3	
KAPZ	**Kaputan**	**1.90**	**4**	*eP*	**Pg**	**05 43 04.6**	**-0.4**
KAPZ				*eS*		05 44 31.0	
MAHB	**Mahabad**	**1.91**	**150**	Pn	**Pg**	**05 43 07.2**	**+2.1**
SIRN	**Sirnak**	**1.91**	**242**	P	**Pg**	**05 43 04.3**	**-0.8**
SIRN				IAML		05 43 37.0	
	comp=E,185nm,0.6s						
SIRN				IAML		05 43 39.0	
	comp=N,168nm,0.7s						
AYRK	**Ayrk**	**1.95**	**30**	*eP*	**Pg**	**05 43 04.4**	**-1.6**
AYRK				*eS*	**Sg**	**05 43 30.7**	**-0.7**
GURO	**Guroymak-BITLI**	**1.96**	**274**	Pn	**Pb**	**05 43 04.7**	**+0.9**
IHRS	**Heris**	**1.98**	**92**	Pg	**Pg**	**05 43 05.2**	**-1.4**
SRTM	**Siirt_Merkez**	**2.09**	**259**	P	**Pb**	**05 43 06.4**	**+0.3**
SRTM				S	**Sb**	**05 43 32.9**	**+1.0**
DIGO	**Kars**	**2.17**	**336**	P	**Pg**	**05 43 09.8**	**-0.5**
DIGO				S	**Sb**	**05 43 36.9**	**+2.5**
DIGO				IAML		05 43 48.0	
	comp=E,101nm,0.8s						
DIGO				IAML		05 43 49.0	
	comp=N,94nm,0.8s						
MUSM	**Mu-Merkez**	**2.38**	**278**	P	**Pb**	**05 43 10.8**	**-0.1**
QRD	**Qoradiz**	**2.41**	**64**	P	**Pn**	**05 43 05.9**	**-1.4**
QRD				S	**Sn**	**05 43 36.6**	**+0.1**
IHSH	**Hashtrud**	**2.44**	**116**	Pn	**Pg**	**05 43 13.5**	**-1.9**
KARS	**Kars**	**2.46**	**334**	Pn	**Pb**	**05 43 12.0**	**-0.5**
BOZK	**Kars-Merkez-Bo**	**2.47**	**332**	P	**Pb**	**05 43 13.8**	**+1.2**
GDB	**GEDABAY**	**2.48**	**22**	P	**Pn**	**05 43 07.5**	**-0.9**
GDB				S	**Sn**	**05 43 38.0**	**-0.4**
LSVT	**Lusahovit**	**2.54**	**12**	*eP*	**Pg**	**05 43 16.6**	**-0.6**
LSVT				*eS*	**Sg**	**05 43 50.5**	**+0.3**
ISRB	**Sarab**	**2.55**	**103**	Pn	**Pb**	**05 43 13.6**	**-0.4**
HOMI	**Horasan**	**2.60**	**309**	P	**Pg**	**05 43 17.8**	**-0.5**
AGDM	**Agdam**	**2.62**	**49**	P	**Pn**	**05 43 09.3**	**-0.8**
AGDM				S	**Sn**	**05 43 41.8**	**+0.2**
GANJ	**Ganja**	**2.62**	**32**	P	**Pn**	**05 43 09.6**	**-0.5**
GANJ				S	**Sn**	**05 43 41.9**	**+0.4**
SVAN	**Silvan-Diyarba**	**2.63**	**265**	Pn	**Pb**	**05 43 14.2**	**-1.0**
SRTK	**Saratovka**	**2.64**	**357**	*eP*	**Pg**	**05 43 17.4**	**-1.7**
SRTK				*eS*	**Sg**	**05 43 53.0**	**-0.4**
GRMI	**Germi**	**2.67**	**81**	Pn	**Pb**	**05 43 14.9**	**-1.1**
BLQ	**Beylaqan**	**2.69**	**60**	P	**Pn**	**05 43 10.5**	**-0.6**
BLQ				S	**Sn**	**05 43 43.5**	**+0.1**
QZX	**Qazax, Azerbai**	**2.71**	**14**	P	**Pn**	**05 43 10.6**	**-0.8**
QZX				S	**Sn**	**05 43 43.8**	**0.0**
KARO	**Karliova-Bingo**	**2.85**	**289**	Pn	**Pb**	**05 43 17.8**	**-1.3**
YRD	**Yardimli**	**2.95**	**79**	P	**Pn**	**05 43 14.2**	**-0.7**
YRD				S	**Sn**	**05 43 50.3**	**+0.3**
LRK	**Lerik**	**3.00**	**85**	P	**Pn**	**05 43 15.4**	**-0.1**
LRK				S	**Sn**	**05 43 51.2**	**0.0**
BNGB	**Bingl**	**3.06**	**282**	Pn	**Pb**	**05 43 20.5**	**-2.1**
MNGR	**Mingechevir, A**	**3.07**	**39**	P	**Pn**	**05 43 14.5**	**-1.7**
MNGR				S	**Sn**	**05 43 52.5**	**0.0**
ZRD	**Zardab**	**3.07**	**52**	P	**Pn**	**05 43 14.9**	**-1.4**
ZRD				S	**Sn**	**05 43 53.1**	**+0.5**
DGRG	**David-gareji**	**3.09**	**12**	P	**Pg**	**05 43 27.5**	**-0.2**
DGRG				S	**Sg**	**05 44 12.9**	**+5.1**
GLBA	**Clilabad**	**3.13**	**74**	P	**Pn**	**05 43 16.4**	**-0.8**
GLBA				S	**Sn**	**05 43 54.6**	**+0.5**
VSHL	**Vashlovani**	**3.15**	**27**	P	**Pb**	**05 43 23.5**	**-0.6**
VSHL				S	**Sg**	**05 44 11.1**	**+1.4**
LKRN	**Lenkeran, Azer**	**3.35**	**84**	P	**Pn**	**05 43 19.4**	**-0.8**
LKRN				S	**Sn**	**05 44 00.4**	**+0.9**
ASTR	**Astara**	**3.35**	**86**	P	**Pn**	**05 43 19.1**	**-1.1**
ASTR				S	**Sn**	**05 44 00.1**	**+0.4**
SAAT	**Saatly**	**3.35**	**64**	P	**Pn**	**05 43 18.0**	**-2.2**
SAAT				S	**Sn**	**05 43 59.5**	**-0.2**
KDMR	**Kurdemir**	**3.44**	**54**	P	**Pn**	**05 43 20.3**	**-1.1**
KDMR				S	**Sn**	**05 44 02.1**	**+0.3**
SEKA	**Sheki**	**3.46**	**36**	P	**Pn**	**05 43 20.5**	**-1.2**
SEKA				S	**Sn**	**05 44 03.7**	**+1.3**
QBL	**Gabala**	**3.59**	**44**	P	**Pn**	**05 43 22.0**	**-1.5**
QBL				S	**Sn**	**05 44 05.6**	**+0.1**
ZKTA	**Zakatala**	**3.59**	**26**	P	**Pn**	**05 43 22.6**	**-0.8**
ZKTA				S	**Sn**	**05 44 05.5**	**0.0**
IML	**Ismayilli**	**3.68**	**49**	P	**Pn**	**05 43 23.3**	**-1.5**
IML				S	**Sn**	**05 44 07.8**	**-0.1**
ALIB	**&Aumlli-Bayram**	**3.81**	**65**	P	**Pn**	**05 43 25.3**	**-1.1**
ALIB				S	**Sn**	**05 44 11.2**	**+0.5**
XNQ	**Khinaliq**	**3.91**	**44**	P	**Pn**	**05 43 26.2**	**-1.9**
XNQ				S	**Sn**	**05 44 14.0**	**+0.3**
PQL	**Pirkuli**	**3.93**	**52**	P	**Pn**	**05 43 25.8**	**-2.5**
PQL				S	**Sn**	**05 44 14.2**	**+0.1**
GBS	**Qobustan**	**4.02**	**57**	P	**Pn**	**05 43 27.3**	**-2.1**
GBS				S	**Sn**	**05 44 16.1**	**0.0**
ATGJ	**Altiaghaj**	**4.19**	**53**	P	**Pn**	**05 43 30.2**	**-1.6**
ATGJ				S	**Sn**	**05 44 20.5**	**+0.1**
QSAR	**Qusar**	**4.22**	**42**	P	**Pn**	**05 43 29.9**	**-2.1**
QSAR				S	**Sn**	**05 44 21.4**	**+0.5**
QUBA	**Quba, Azerbaij**	**4.23**	**45**	P	**Pn**	**05 43 30.8**	**-1.5**
QUBA				S	**Sn**	**05 44 21.5**	**+0.2**
SHTL	**Shatili**	**4.25**	**6**	P	**Pg**	**05 43 47.1**	**-2.9**
SHTL				S	**Sg**	**05 44 51.1**	**+6.1**
SIZA	**Siyzn**	**4.29**	**51**	S	**Sn**	**05 44 23.4**	**+0.5**
GOBA	**Gobu**	**4.49**	**62**	S	**Sn**	**05 44 28.2**	**+0.5**
NDR	**Nardaran**	**4.74**	**61**	S	**Sn**	**05 44 34.5**	**+0.6**

RSNC 23 05:52:14.6±0.0,7°N±1′×7°3W±′,h143km±1km,M2.1,ML2.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.18**	**184**	P	Pn	05 52 33.9	-0.4
BARC				S	Sn	05 52 48.4	-0.9
BARC	**Barichara**	**0.18**	**184**	P	Pn	05 52 34.2	-0.1
BRJC	**Barrancabermej**	**0.60**	**290**	P	Pn	05 52 35.7	0.0
BRJC				S	Sn	05 52 52.7	+0.9
PAMC	**Pamplona, Colo**	**0.73**	**40**	P	Pn	05 52 37.0	-0.2
PAMC				S	Sn	05 52 54.3	0.0
PAMC	**Pamplona, Colo**	**0.73**	**40**	S	Pn	05 52 54.4	+0.1
PAMC	**Pamplona, Colo**	**0.73**	**40**	P	Pn	05 52 37.2	0.0
PAMC	**Pamplona, Colo**	**0.73**	**40**	P	Pn	05 52 37.3	+0.1
PAMC	**Pamplona, Colo**	**0.73**	**40**	P	Pn	05 52 37.4	+0.2
PAMC	**Pamplona, Colo**	**0.73**	**40**	S	Sn	05 52 54.3	0.0
RUSC	**La Rusia**	**0.88**	**174**	P	Pn	05 52 37.6	-0.7
RUSC				S	Sn	05 52 55.6	-0.6
RUSC	**La Rusia**	**0.88**	**174**	S	Sn	05 52 56.2	0.0
RUSC	**La Rusia**	**0.88**	**174**	P	Pn	05 52 37.7	-0.6
RUSC	**La Rusia**	**0.88**	**174**	P	Pn	05 52 37.8	-0.5
RUSC	**La Rusia**	**0.88**	**174**	P	Pn	05 52 37.9	-0.4
PTBC	**PUERTO BERRIO,**	**1.30**	**260**	P	Pn	05 52 40.6	-0.9
PTBC				S	Sn	05 53 00.7	-1.4
PTBC	**PUERTO BERRIO,**	**1.30**	**260**	S	Sn	05 53 01.5	-0.6
PTBC	**PUERTO BERRIO,**	**1.30**	**260**	P	Pn	05 52 40.8	-0.8
PTBC	**PUERTO BERRIO,**	**1.30**	**260**	P	Pn	05 52 40.8	-0.8
SPBC	**San Pablo de B**	**1.43**	**219**	P	Pn	05 52 42.5	-0.5
SPBC				S	Sn	05 53 04.3	-0.4
OCAC	**Ocana**	**1.47**	**354**	P	Pn	05 52 42.7	-0.8
OCAC				S	Sn	05 53 04.8	-0.8
OCAC	**Ocana**	**1.47**	**354**	S	Sn	05 53 05.2	-0.4
OCAC	**Ocana**	**1.47**	**354**	P	Pn	05 52 43.0	-0.5
OCAC	**Ocana**	**1.47**	**354**	P	Pn	05 52 43.0	-0.5
CHIC	**Chingaza**	**2.20**	**195**	P	Pn	05 52 52.0	-0.1
CHIC				S	Sn	05 53 20.4	-0.5
UREC	**San Jos de Ur**	**2.54**	**293**	P	Pn	05 52 55.0	-0.9
UREC				S	Sn	05 53 25.5	-2.2
GUY2C	**Guyana, Caldas**	**2.67**	**235**	P	Pn	05 52 59.7	+1.7
GUY2C				S	Sn	05 53 31.7	+0.4
GUY2C	**Guyana, Caldas**	**2.67**	**235**	P	Pn	05 52 59.8	+1.8
CBOC	**Ciudad Bolivar**	**2.96**	**252**	P	Pn	05 53 01.3	-0.1
CBOC				S	Sn	05 53 37.8	+0.3
DBBC	**Dabeiba**	**3.03**	**275**	P	Pn	05 53 01.4	-0.7
DBBC				S	Sn	05 53 37.9	-0.9
SDV	**Santo Domingo**	**3.28**	**50**	P	Pn	05 53 03.7	-1.8
PRAC	**Prado**	**3.48**	**209**	P	Pn	05 53 07.5	-0.5
PRAC				S	Sn	05 53 48.6	-0.8
ORTC	**Ortega, Tolima**	**3.51**	**216**	P	Pn	05 53 08.0	-0.4
ORTC				S	Sn	05 53 49.3	-0.8
PLMC	**San Jos del P**	**3.61**	**239**	P	Pn	05 53 09.3	-0.4
PLMC				S	Sn	05 53 52.9	+0.6
SJCC	**San Jacinto, C**	**3.69**	**328**	P	Pn	05 53 08.5	-2.2
SJCC				S	Sn	05 53 51.0	-3.2
URMC	**La Uribe, Meta**	**3.70**	**199**	P	Pn	05 53 10.3	-0.6
URMC				S	Sn	05 53 53.9	-0.6
CRJC	**Cerrejon, Guaj**	**4.23**	**4**	P	Pn	05 53 16.8	-1.1
CRJC				S	Sn	05 54 04.2	-2.8
URIC	**Uribia, Colomb**	**5.04**	**13**	P	Pn	05 53 25.2	-3.2
URIC				S	Sn	05 54 22.3	-3.7

NAO ***23*** *05:52:46.4,36°29N×45°06E,h33km,MB4.3*
NSSP ***23*** *05:52:55.5,38°28N×44°52E,h11km,Ms5.8*
AZER ***23*** *05:52:56.2,38°46N×44°61E,h10km,ml5.8*
ISK ***23*** *05:52:57.4,38°36N×44°54E,h5km,ML5.8/27*
AFAD ***23*** *05:52:57.0,38°44N×44°49E,h15km±5km,MW5.9*
TIF ***23*** *05:52:58.4,38°44N×44°50E,h6km±1km*
DSN ***23*** *05:52:58.9±0.7,38°19N×44°30E,h5km,mb5.7/25,Error ellipse: s-maj=16.7km s-min=5.6km az=72.0*
BGR ***23*** *05:52:58.4,37°41N×44°12E,h10km,mb5.5,Ms5.2*
BJI ***23*** *05:52:58.9,38°27N×43°81E,h31km,mB5.7/61,mb5.3/88, Ms5.8/95,Ms7 5.6/93*
MOS ***23*** *05:52:59.9±1.2,38°35N×44°50E,h11km,mb5.7/55, MS5.4/54,Error ellipse: s-maj=4.0km s-min=2.7km az=110.4*
IDC ***23*** *05:52:59.0±0.3,38°35N×44°50E,h0km,mb5.0/44, mbtmp5.0/56,ML4.4/10,MS5.4/83,Error ellipse: s-maj=7.4km s-min=6.4km az=126.0*
TEH ***23*** *05:52:59.1,38°45N×44°52E,h6km±30km,ML5.7, Presumed earthquake*
NEIC ***23*** *05:53:00.9,38°50N×44°41E,h18km*
NEIC ***23*** *05:53:00.9,38°50N×44°41E,h18km,Moment Tensor Solution. Duration: 4s1 Moment tensor: Scale 1017Nm; Mrr=3.98; Mθθ=2.62; Mϕϕ=6.60; Mrθ=3.07; Mθϕ=0.83; Mϕr=3.05; Fault plane solution: M0 7.25000×1017 NP1: ϕs322.36000°,δ42.43000°,λ=146.42000°. NP2: ϕs206.25000°,δ68.09000°,λ=52.71000°. Principal axes: T 7.4106, Plg15.0000°, Azm270.0000°; N -0.3403, Plg34.0000°, Azm10.0000°; P -7.0704, Plg52.0000°, Azm160.0000°;*
THR ***23*** *05:53:00.6±0.0,38°44N×44°53E,h10km±13km,ML5.8, Presumed earthquake*
GII ***23*** *05:53:00.7±0.0,38°38N×44°72E,h0km±9km,confirmed*
NEIC ***23*** *05:53:01.1±1.6,38°45N±0°05×44°42E±0°05,h10km±1km, mb5.6/382,Ms_20 5.5/562,Mwb5.7/36,Mww5.8/32,Error ellipse: s-maj=8.4km s-min=6.1km az=179.0,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr=2.14; Mθθ=1.61; Mϕϕ3.75; Mrθ1.49; Mθϕ=-1.18; Mϕr0.37; Fault plane solution: M0 3.79000×1017 NP1: ϕs202.10000°,δ58.97000°,λ=-38.13000°. NP2: ϕs314.13000°,δ58.06000°,λ=142.59000°. Principal axes: T 3.9985, Plg1.0000°, Azm258.0000°; N -0.4630, Plg42.0000°, Azm349.0000°; P -3.5355, Plg48.0000°, Azm168.0000°;*
IPGP ***23*** *05:53:01.0,38°50N×44°43E,h8km,Mw5.8,Fault plane solution: NP1:ϕs197.00000°,δ41.00000°,λ=-38.00000°. NP2:ϕs317.00000°,δ66.00000°,λ=-125.00000°.*
ISC-PP ***23*** *05:53:01,38°45N×44°42E,h10km,Mwppsm6.1,Moment Tensor Solution. s50 Moment tensor: Scale 1018Nm; Mrr=0.30±.27; Mθθ=0.53±.26; Mϕϕ0.55±.22; Mrθ0.32±.30; Mθϕ=0.07±.25; Mϕr0.24±.17; Fault plane solution: M0 1.64000×1018 NP1:ϕs332.20000°,δ67.20000°, λ205.00000°. NP2:ϕs232.00000°,δ67.00000°, λ=-24.80000°.*
MCSM ***23*** *05:53:01.9±0.4,38°N±4′×4′4E±′,h11km±2km,mb5.6, mB5.9,MLv5.8,Mw(mB)5.5*
NEIC ***23*** *05:53:01.5,38°49N×44°43E,h10km*
GCMT ***23*** *05:53:02.0±0.1,38°34N±0°01×44°45E,h14km,MW5.8/160, Moment Tensor Solution. s125,c243; s160,c434; Duration: 1s9 Moment tensor: Scale 1017Nm; Mrr=3.52±.05; Mθθ=3.13±.06; Mϕϕ6.65±.05; Mrθ1.91±.12; Mθϕ=-1.61±.04; Mϕr=-1.32±.10; Best double couple: M0 6.20100×1017 NP1:ϕs207.00000°,δ51.00000°, λ=-32.00000°. NP2:ϕs318.00000°,δ66.00000°, λ=-136.00000°. Principal axes: T 7.1560, Plg9.0000°, Azm79.0000°; N -1.9100, Plg41.0000°, Azm342.0000°; P -5.2460, Plg48.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
PTWC ***23*** *05:53:02,38°40N×44°50E,h10km,Mwp5.8/17, TURKEY-IRAN BORDER REGION*
GFZ ***23*** *05:53:06.9,38°43N×44°45E,h15km,MW5.7,Moment Tensor Solution. s189 Moment tensor: Mrr=3.59; Mθθ=1.50; Mϕϕ5.08; Mrθ0.70; Mθϕ=-1.17; Mϕr0.74; Fault plane solution: NP1:ϕs189.00000°,δ52.00000°, λ=-63.00000°. NP2:ϕs331.00000°,δ45.00000°, λ=-118.00000°. Principal axes: T 5.3300, Plg4.0000°, Azm261.0000°; N -1.4000, Plg20.0000°, Azm352.0000°; P -3.9200, Plg70.0000°, Azm160.0000°;*
ISC 23 05:53:00.7±0.5,38°41N±0°02×44°50E±0°01,h6km±2km, n1810,σ1°94/1737,mb5.5/403,MS5.5/423,91C-30D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**303**	P	**Pg**	**05 53 07.0**	**-2.7**
OZAP				S	**Sg**	**05 53 15.9**	**0.0**
YOVA	**Hakkari_Yksek**	**0.84**	**191**	P	**Pg**	**05 53 15.9**	**-0.8**
YOVA				S	**Sb**	**05 53 29.1**	**-0.3**
TVAN	**Van**	**0.86**	**278**	P	**Pg**	**05 53 14.0**	**-3.3**
VANB	**Van**	**0.89**	**282**	Pg	**Pg**	**05 53 16.6**	**-1.1**
ISHB	**Shabestar**	**0.89**	**98**	Pg	**Pg**	**05 53 15.5**	**-2.3**
VMUR	**Van-Muradiye**	**0.93**	**309**	P	**Pg**	**05 53 15.4**	**-3.1**
VMUR				S	**Sg**	**05 53 30.4**	**-0.1**
VMUR	**Van-Muradiye**	**0.93**	**309**	Pg	**Pg**	**05 53 17.3**	**-1.2**
MAKU	**Maku**	**0.96**	**9**	Pg	**Pg**	**05 53 16.0**	**-3.0**
IMRD	**Marand**	**0.99**	**72**	Pg	**Pg**	**05 53 17.9**	**-1.9**
HAKT	**HAKKARI**	**1.05**	**217**	P	**Pg**	**05 53 18.5**	**-2.4**
HAKT				S	**Sg**	**05 53 34.2**	**-0.4**
HAKT	**HAKKARI**	**1.05**	**217**	Pg	**Pg**	**05 53 19.4**	**-1.5**
HAKT	**HAKKARI**	**1.05**	**217**	P	**Pg**	**05 53 19.5**	**-1.5**
HAKT				S	**Sn**	**05 53 36.6**	**-0.7**
ERCV	**ERCIS-VAN**	**1.09**	**304**	Pn	**Pg**	**05 53 19.8**	**-1.9**
ERCV				Sn	**Sn**	**05 53 37.7**	**-0.6**
ERCV	**ERCIS-VAN**	**1.09**	**304**	P	**Pg**	**05 53 19.9**	**-1.7**
ERCV				S	**Sb**	**05 53 37.0**	**+0.3**
NAX	**Nakhchivan**	**1.09**	**45**	P	**Pg**	**05 53 19.7**	**-1.9**
NAX				S	**Sg**	**05 53 32.0**	**-3.9**
GEVA	**Gevas**	**1.13**	**266**	Pg	**Pg**	**05 53 18.9**	**-3.6**
GEVA				Sg	**Sb**	**05 53 37.7**	**-0.2**
GEVA	**Gevas**	**1.13**	**266**	P	**Pg**	**05 53 18.2**	**-4.2**
GEVA				S	**Sb**	**05 53 37.8**	**-0.1**
AKDM	**Akdamar-Van**	**1.19**	**267**	Pn	**Pg**	**05 53 19.7**	**-3.9**
ORD	**Ordubad**	**1.28**	**66**	P	**Pn**	**05 53 23.1**	**-2.2**
ORD				S	**Sg**	**05 53 33.5**	**-8.4**
SBZ	**Shahbuz**	**1.29**	**40**	P	**Pn**	**05 53 22.7**	**-2.6**
SBZ				S	**Sg**	**05 53 41.9**	**-0.1**
DYDN	**Diyadin**	**1.30**	**331**	P	**Pg**	**05 53 21.8**	**-3.7**
DYDN				S	**Sg**	**05 53 40.7**	**-1.7**
DYDN	**Diyadin**	**1.30**	**331**	Pg	**Pg**	**05 53 23.0**	**-2.6**
ITBZ	**Tabriz**	**1.31**	**97**	Pg	**Pn**	**05 53 23.2**	**-2.6**
HYR	**Heyderabad**	**1.34**	**12**	P	**Pn**	**05 53 23.8**	**-2.2**
HYR				S	**Sb**	**05 53 42.6**	**-1.1**
CUKT	**Cukurca**	**1.36**	**212**	Pn	**Pn**	**05 53 24.5**	**-1.8**
CUKT				Sn	**Sb**	**05 53 43.5**	**-0.7**
CUKT	**Cukurca**	**1.36**	**212**	P	**Pn**	**05 53 24.4**	**-1.9**
CUKT				S	**Sb**	**05 53 43.9**	**-0.3**
CUKT	**Cukurca**	**1.36**	**212**	Pg	**Pn**	**05 53 25.4**	**-0.9**
IAZR	**Azarshahr**	**1.38**	**121**	Pg	**Pn**	**05 53 25.6**	**-1.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**287**	P	**Pn**	**05 53 24.8**	**-2.7**
ADCV				S	**Sg**	**05 53 47.3**	**+0.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**287**	Pg	**Pn**	**05 53 26.0**	**-1.6**
VAYK	**Vayk**	**1.47**	**29**	*eP*	**Pn**	**05 53 25.6**	**-2.3**
VAYK				*eS*	**Sn**	**05 53 47.0**	**-0.6**
IGDI	**IGDIR**	**1.49**	**348**	P	**Pn**	**05 53 26.1**	**-2.0**
IGDI				S	**Sg**	**05 53 51.5**	**+2.8**
ALVK	**Alvank**	**1.55**	**69**	*eP*	**Pn**	**05 53 27.2**	**-1.7**
ALVK				*eS*	**Sg**	**05 53 50.5**	**+0.1**
PERV	**Siirt/Pervari-**	**1.61**	**254**	P	**Pn**	**05 53 26.8**	**-3.0**
PERV				S	**Sg**	**05 53 53.1**	**+0.7**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pn**	**05 53 28.8**	**-1.6**
DORK	**Agr/Tutak/Do**	**1.66**	**307**	P	**Pn**	**05 53 27.4**	**-3.1**
DORK				S	**Sn**	**05 53 51.8**	**-0.4**
MLAZ	**Malazgirt-MUS**	**1.69**	**296**	Pn	**Pn**	**05 53 29.7**	**-1.2**
MLAZ				Sn	**Sb**	**05 53 53.9**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.72**	**325**	P	**Pn**	**05 53 29.1**	**-2.2**
KOTA				S	**Sn**	**05 53 52.8**	**-0.9**
GNI	**Garni**	**1.75**	**6**	Pn	**Pb**	**05 53 32.7**	**-0.6**
	2μm,0.3s,baz=268,slow=2.3,SNR=573						
GNI				Sn	**Sg**	**05 53 57.8**	**+0.9**
	930nm,0.3s,baz=198,slow=20,SNR=9.4						
GNI				LR	LR	05 54 27.4	
	comp=Z,124μm,19.4s,baz=138,slow=49						
GNI	**Garni**	**1.75**	**6**		**Pn**	**05 53 30.4**	**-1.3**
GNI	**Garni**	**1.75**	**6**	Pn	**Pn**	**05 53 30.6**	**-1.1**
GNI				Sn	**Sb**	**05 53 55.7**	**+0.1**
GNI	**Garni**	**1.75**	**6**	*eP*	**Pn**	**05 53 31.1**	**-0.6**
GNI				*eS*	**Sg**	**05 53 57.2**	**+0.3**
GNI	**Garni**	**1.75**	**6**	P	**Pn**	**05 53 31.1**	**-0.6**
GNI	**Garni**	**1.75**	**6**	P	**Pb**	**05 53 33.3**	**0.0**
GNI				S	**Sg**	**05 54 01.4**	**+4.5**
GNI	**Garni**	**1.75**	**6**	P	**Pn**	**05 53 30.4**	**-1.3**
GNI	**Garni**	**1.75**	**6**	P	**Pn**	**05 53 30.6**	**-1.1**
GNI	**Garni**	**1.75**	**6**	Pg	**Pn**	**05 53 30.5**	**-1.3**
METS	**Metsamor**	**1.77**	**350**	*eP*	**Pn**	**05 53 31.8**	**-0.1**
METS				*eS*	**Sg**	**05 53 58.3**	**+0.8**
VNNZ	**Vanand**	**1.77**	**343**	*eP*	**Pn**	**05 53 32.5**	**+0.5**
VNNZ				*eS*	**Sg**	**05 53 59.8**	**+2.2**
EGVZ	**Egvard**	**1.79**	**62**	*eP*	**Pn**	**05 53 31.4**	**-0.9**
EGVZ				*eS*	**Sg**	**05 53 57.8**	**-0.6**
GRS	**Goris**	**1.80**	**52**	*iP*	**Pn**	**05 53 28.0**	**-4.4**
GRS				*iS*	**Sb**	**05 53 57.0**	**0.0**
BLIS	**Bitlis-Merkez**	**1.87**	**271**	P	**Pn**	**05 53 30.4**	**-3.0**
BLIS				S	**Sn**	**05 53 57.4**	**-0.1**
BLIS	**Bitlis-Merkez**	**1.87**	**271**	Pn	**Pn**	**05 53 33.7**	**+0.3**
SIRN	**Sirnak**	**1.88**	**242**	P	**Pn**	**05 53 31.9**	**-1.5**
SIRN				S	**Sg**	**05 54 00.2**	**-0.9**
ARUZ	**Aruch**	**1.90**	**351**	*eP*	**Pn**	**05 53 34.2**	**+0.4**
ARUZ				*eS*	**Sg**	**05 54 02.4**	**+0.7**
MAHB	**Mahabad**	**1.90**	**149**	Pn	**Pn**	**05 53 34.6**	**+0.8**
KAPZ	**Kaputan**	**1.92**	**5**	*eP*	**Pn**	**05 53 33.7**	**-0.4**
KAPZ				*eS*	**Sg**	**05 54 01.7**	**-0.6**
GURO	**Guroymak-BITLI**	**1.94**	**275**		**Pn**	**05 53 32.2**	**-2.1**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pn**	**05 53 32.2**	**-2.1**
AYRK	**Ayrk**	**1.98**	**30**	*eP*	**Pn**	**05 53 34.5**	**-0.5**
AYRK				*eS*	**Sb**	**05 54 03.1**	**+0.9**
AMBZ	**Amberd**	**1.98**	**355**	*eP*	**Pn**	**05 53 35.0**	**0.0**
AMBZ				*eS*	**Sg**	**05 54 04.0**	**-0.5**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pn**	**05 53 35.4**	**+0.3**
SRTM	**Siirt_Merkez**	**2.07**	**259**	P	**Pn**	**05 53 36.4**	**+0.3**
SRTM				S	**Sb**	**05 54 05.6**	**+0.8**
SRTM	**Siirt_Merkez**	**2.07**	**259**	Pn	**Pn**	**05 53 37.2**	**+1.1**
DIGO	**Kars**	**2.18**	**337**	P	**Pn**	**05 53 37.6**	**-0.1**
DIGO				S	**Sg**	**05 54 14.0**	**+3.1**
MUSM	**Mu-Merkez**	**2.36**	**279**	P	**Pn**	**05 53 36.8**	**-3.3**
QRD	**Qoradiz**	**2.44**	**64**	P	**Pn**	**05 53 37.9**	**-3

LGD	**Lagodekhi**	**3.67**	**21**	P		**Pn**	**05 54 00.6**	**+2.5**
LGD	**Lagodekhi**	**3.67**	**21**	PN		**Pn**	**05 54 00.5**	**+2.5**
IML	**Ismayilli**	**3.71**	**49**	P		**Pn**	**05 53 55.2**	**-3.4**
IML				S		**Sn**	**05 54 39.8**	**-2.9**
ALIG	**Mtskhetisjvari**	**3.75**	**350**	P		**Pn**	**05 54 02.0**	**+2.9**
ALIG				S		**Sg**	**05 55 08.5**	**+7.4**
ZNJK	**Zanjan**	**3.75**	**116**	*e*Pn		**Pn**	**05 54 01.0**	**+1.6**
ZNJK				IAML			05 54 40.3	
	comp=Z,4.2nm,1.0s							
ALIB	**&Aumlli-Bayram**	**3.83**	**65**	P		**Pn**	**05 53 56.7**	**-3.5**
ALIB				S		**Sn**	**05 54 42.7**	**-2.9**
ERZN	**Erzincan**	**3.90**	**289**	Pn		**Pn**	**05 54 01.8**	**+0.5**
BAYT	**Aydıntepe-Bayb**	**3.91**	**302**	Pn		**Pn**	**05 54 01.7**	**+0.2**
CHRG	**Chargali**	**3.93**	**5**	P		**Pn**	**05 54 03.1**	**+1.5**
CHOM	**Cayeli-Rize**	**3.94**	**314**	Pn		**Pn**	**05 54 02.2**	**+0.5**
XNQ	**Khinaliq**	**3.94**	**44**	P		**Pn**	**05 53 58.5**	**-3.4**
XNQ				S		**Sn**	**05 54 45.7**	**-2.8**
AKT	**Akhty**	**3.95**	**38**	*e*PN		**Pn**	**05 54 02.1**	**+0.2**
AKT				*e*			05 54 09.7	
AKT				*e*S		**Sn**	**05 54 47.2**	**-1.4**
AKT				*e*SS		**SnSn**	**05 54 59.7**	**-0.4**
AKT				pmax	pmax			
	comp=Z,235nm,0.5s							
AKT				smax	smax			
	comp=N,2µm,0.6s							
AKT				smax	smax			
	comp=E,2µm,0.8s							
AKT				smax	smax			
	comp=E,2µm,0.9s							
AKT				MLR	MLR			
	comp=Z,83µm,10.0s							
PQL	**Pirkuli**	**3.96**	**52**	P		**Pn**	**05 53 58.5**	**-3.6**
PQL				S		**Sn**	**05 54 45.9**	**-3.0**
IDHR	**Dehrash**	**4.00**	**157**	Pn		**Pn**	**05 54 04.3**	**+1.5**
GBS	**Qobustan**	**4.04**	**57**	P		**Pn**	**05 53 59.8**	**-3.4**
GBS				S		**Sn**	**05 54 48.1**	**-2.8**
GUDG	**Gudauri**	**4.05**	**360**	P		**Pn**	**05 54 07.1**	**+3.6**
GUDG	**Gudauri**	**4.05**	**360**	PN		**Pn**	**05 54 07.0**	**+3.6**
SVRC	**Sivrice-ELAZID**	**4.08**	**271**	Pn		**Pn**	**05 54 03.3**	**-0.5**
ATGJ	**Altiaghaj**	**4.21**	**53**	P		**Pn**	**05 54 02.2**	**-3.4**
ATGJ				S		**Sn**	**05 54 52.3**	**-2.9**
QSAR	**Qusar**	**4.24**	**42**	P		**Pn**	**05 54 02.5**	**-3.4**
QSAR				S		**Sn**	**05 54 53.0**	**-2.8**
QUBA	**Quba, Azerbaij**	**4.26**	**45**	P		**Pn**	**05 54 02.7**	**-3.4**
QUBA				S		**Sn**	**05 54 53.4**	**-2.7**
SHTL	**Shatili**	**4.27**	**7**	P		**Pn**	**05 54 06.9**	**+0.5**
SHTL	**Shatili**	**4.27**	**7**	PN		**Pn**	**05 54 06.9**	**+0.5**
SIZA	**Siyzn**	**4.31**	**50**	P		**Pn**	**05 54 03.5**	**-3.4**
SIZA				S		**Sn**	**05 54 54.7**	**-2.9**
GLG1	**Gilan-e-Gharb**	**4.44**	**165**	Pn		**Pn**	**05 54 09.7**	**+1.0**
GOBA	**Gobu**	**4.52**	**62**	P		**Pn**	**05 54 06.3**	**-3.3**
GOBA				S		**Sn**	**05 54 59.6**	**-2.9**
GIDE	**GILAN DEYLAMAN**	**4.54**	**107**	*e*Pn		**Pn**	**05 54 12.7**	**+2.5**
ILIC	**ilic-Erzincan**	**4.74**	**285**	Pn		**Pn**	**05 54 13.5**	**+0.7**
NDR	**Nardaran**	**4.77**	**61**	S		**Sn**	**05 55 05.9**	**-2.8**
GALA	**Gala**	**4.82**	**64**	S		**Sn**	**05 55 07.1**	**-2.7**
ARPR	**Arapgir-MALATY**	**4.86**	**280**			**Pn**	**05 54 15.3**	**+0.8**
ARPR	**Arapgir-MALATY**	**4.86**	**280**	Pn		**Pn**	**05 54 15.1**	**+0.5**
ARPR	**Arapgir-MALATY**	**4.86**	**280**	P		**Pn**	**05 54 15.1**	**+0.5**
NEUR	**Neytrino**	**5.04**	**345**	*i* PN		**Pn**	**05 54 18.4**	**+1.5**
MAK	**Makhachkala**	**5.09**	**26**	*e*PN		**Pn**	**05 54 13.1**	**-4.4**
MAK				pmax	pmax			
	comp=Z,400nm,1.6s							
MAK				MLR	MLR			
	comp=Z,102µm,12.0s							
NCK	**Nalchik**	**5.13**	**353**	*i* PN		**Pn**	**05 54 19.9**	**+1.9**
HAGD	**Aghdareh**	**5.17**	**132**	Pn		**Pn**	**05 54 19.6**	**+0.7**
KBZ	**Khabaz**	**5.45**	**348**	Pn		**Pn**	**05 54 25.5**	**+3.1**
	comp=Z,33nm,1.0s,baz=166,slow=7.8,SNR=35							
KBZ				Lg	Lg		05 55 53.1	
	baz=176,slow=16							
KBZ				LR	LR		05 56 55.4	
	comp=Z,50µm,21.4s,baz=174,slow=43							
SHA1	**Shidzhatmaz**	**5.50**	**346**	*ce*P		**Pn**	**05 54 21.4**	**-2.0**
KVAR	**Kislovodsk Arr**	**5.71**	**347**	Pn		**Pn**	**05 54 30.2**	**+4.1**
	baz=90,slow=20							
KVAR				Lg	Lg		05 56 03.4	
	baz=210,slow=20							
KVAR				LR	LR		05 57 09.6	
	comp=Z,33µm,18.1s,baz=144,slow=44							
	comp=Z,9.7nm,0.6s							
KIV	**Kislovodsk**	**5.71**	**347**			**Pn**	**05 54 29.5**	**+3.4**
KIV	**Kislovodsk**	**5.71**	**347**	Pn		**Pn**	**05 54 27.5**	**+1.4**
KIV	**Kislovodsk**	**5.71**	**347**	*i* P		**Pn**	**05 54 29.9**	**+3.9**
	SNR=36							
KIV	**Kislovodsk**	**5.71**	**347**	*e*P		**Pn**	**05 54 25.8**	**-0.3**
KIV				*e*S		**Sn**	**05 55 30.2**	**-1.7**
KIV				pmax	pmax			
	comp=Z,187nm,1.0s							
KIV				MLR	MLR			
	comp=Z,20µm,10.0s							
KIV	**Kislovodsk**	**5.71**	**347**	P		Pn	05 54 31.2	+5.2
KIV	**Kislovodsk**	**5.71**	**347**	P		**Pn**	**05 54 30.2**	**+4.1**
CHTH	**Charan**	**5.85**	**113**	*e*Pn		**Pn**	**05 54 31.1**	**+2.9**
CHTH				IAML			05 56 21.4	
	comp=Z,2µm,1.0s							
ASAO	**Ashtian**	**5.89**	**129**	*e*Pn		**Pn**	**05 54 31.6**	**+2.9**
ASAO				IAML			05 56 51.5	
	comp=Z,4µm,1.0s							
GAZ	**Gaziantep**	**5.90**	**260**			**Pn**	**05 54 28.2**	**-0.5**
GAZ	**Gaziantep**	**5.90**	**260**	Pn		**Pn**	**05 54 28.9**	**+0.2**
SVSK	**Karacayir**	**6.02**	**287**	Pn		**Pn**	**05 54 32.2**	**+2.0**
KMRS	**Kahramanmaras**	**6.07**	**264**	Pn		**Pn**	**05 54 30.7**	**-0.3**
VSLR	**Vesyoloye**	**6.07**	**328**	*i* P		**Pn**	**05 54 33.3**	**+2.3**
SOC	**Sochi**	**6.31**	**327**	*e*P		**Pn**	**05 54 37.7**	**+3.5**
SOC				*e*			05 55 51.7	
SOC				pmax	pmax			
	comp=Z,75nm,0.7s							
SOC				MLR	MLR			
	comp=Z,43µm,12.0s							
SARI	**SarD1z-Kayseri**	**6.34**	**272**	Pn		**Pn**	**05 54 35.6**	**+0.7**
TOKT	**Tokat**	**6.45**	**290**	Pn		**Pn**	**05 54 37.4**	**+1.2**
TOKA	**Tokat**	**6.50**	**290**			**Pn**	**05 54 40.5**	**+3.5**
GOF	**Gofitskoye**	**6.73**	**351**	*ce*P		Pn	05 54 46.5	+6.5
GOF				*e*S		**Sn**	**05 56 04.2**	**+7.2**
BNN	**Bunyan**	**6.79**	**276**			**Pn**	**05 54 43.3**	**+2.3**
LABN	**Labinsk**	**6.84**	**337**	*e*P		**Pn**	**05 54 44.0**	**+2.5**
LABN				*e*S		**Sn**	**05 56 01.0**	**+1.3**
LABN				pmax	pmax			
	comp=Z,179nm,1.3s							
LABN				MLR	MLR			
	comp=Z,73µm,12.0s							
GTMR	**Gotvand**	**7.02**	**146**	*e*Pn		**Pn**	**05 54 45.7**	**+1.6**
GTMR				IAML			05 57 10.7	
	comp=Z,3µm,1.0s							
BEIL	**Beino**	**7.73**	**243**	*e*P		**Pn**	**05 54 54.6**	**+0.8**
ERBR	**Yeremizino-Bor**	**7.89**	**339**	*e*P		**Pn**	**05 54 55.8**	**-0.1**
ERBR				*e*S		**Sn**	**05 56 23.5**	**-1.9**
ERBR				pmax	pmax			
	comp=Z,213nm,0.9s							
ERBR				MLR	MLR			
	comp=Z,43µm,13.0s							
SNOP	**Sinop**	**7.97**	**300**	Pn		**Pn**	**05 54 55.3**	**-1.8**
HWQ	**Hawqa**	**8.04**	**242**	*e*P		**Pn**	**05 54 59.4**	**+1.3**
ANN	**Anapa**	**8.29**	**323**	*e*P		**Pn**	**05 55 05.1**	**+3.7**
ANN				*e*S		**Sn**	**05 56 39.4**	**+4.1**
ANN				pmax	pmax			
	comp=Z,67nm,0.8s							
ANN				MLR	MLR			
	comp=Z,30µm,15.0s							
KIRS	**Kirsehir-Merke**	**8.30**	**278**	⇑P		**Pn**	**05 55 05.8**	**+4.2**
ZAHL	**Zahle**	**8.31**	**240**	*e*P		**Pn**	**05 55 04.0**	**+2.1**
BHL	**Bhannes**	**8.44**	**241**	*e*P		**Pn**	**05 55 06.5**	**+2.8**
BR101	**Keskin Array S**	**8.55**	**282**	P		**Pn**	**05 55 09.4**	**+4.3**
BR131	**Keskin Array S**	**8.55**	**282**			**Pn**	**05 55 04.0**	**-1.1**
BR131	**Keskin Array S**	**8.55**	**282**	*i* P		**Pn**	**05 55 08.0**	**+2.9**
BR131	**Keskin Array S**	**8.55**	**282**	P		**Pn**	**05 55 09.7**	**+4.6**
	SNR=30							
BR131				P		**Pn**	**05 55 09.7**	**+4.6**
	SNR=30							
BRTR	**Keskin Array B**	**8.55**	**282**	Pn		**Pn**	**05 55 09.0**	**+3.8**
	comp=Z,0.6nm,0.3s,baz=108,slow=12,SNR=47							
BRTR				Lg	Lg		05 57 27.1	
	baz=97,slow=24							
BRTR				LR	LR		05 58 22.0	
	comp=Z,25µm,20.3s,baz=96,slow=38							
	comp=Z,16nm,0.9s							
BRTR	**Keskin Array B**	**8.55**	**282**			**Pn**	**05 55 03.0**	**-2.1**
BRTR	**Keskin Array B**	**8.55**	**282**	*i* P		**Pn**	**05 55 09.8**	**+4.6**
BRTR				pmax	pmax			
	comp=Z,22nm,0.8s							
RCY	**Rachaya**	**8.56**	**238**	*e*P		**Pn**	**05 55 06.7**	**+1.4**
DQRL	**Deir Qamar**	**8.62**	**240**	*e*P		**Pn**	**05 55 08.8**	**+2.8**
QRWL	**Qaraoun**	**8.63**	**238**	*e*P		**Pn**	**05 55 08.2**	**+1.9**
NATI	**Neve Ativ**	**8.77**	**237**	P		**Pn**	**05 55 09.7**	**+1.7**
BZK	**Bozkurt**	**8.78**	**297**	Pn		**Pn**	**05 55 06.7**	**-1.4**
ASF	**Jabal al Asfar**	**8.79**	**227**	Pn		**Pn**	**05 55 08.6**	**+0.2**
	comp=Z,8.7nm,0.3s,baz=56,slow=4.3,SNR=46							
ASF				Lg	Lg		05 57 34.0	
	comp=Z,4.5nm,0.3s,baz=31,slow=23,SNR=2.4							
ASF				LR	LR		05 58 38.0	
	comp=Z,25µm,19.4s,baz=40,slow=39							
	comp=Z,123nm,0.9s							
GEM	**Giv'at Ha'Em**	**8.85**	**237**	P		**Pn**	**05 55 10.9**	**+1.7**
KSHT	**Keshet**	**8.90**	**235**	P		**Pn**	**05 55 11.5**	**+1.7**
MMA0B	**Mount Meron ar**	**9.14**	**237**	P		**Pn**	**05 55 15.8**	**+2.6**
MMAI	**Mount Meron Ar**	**9.14**	**237**	Pn		**Pn**	**05 55 13.9**	**+0.7**
	comp=Z,13nm,0.3s,baz=54,slow=16,SNR=29							
MMAI				Lg	Lg		05 57 46.2	
	baz=41,slow=53							
MMAI				LR	LR		05 59 01.1	
	comp=Z,83µm,19.2s,baz=52,slow=40							
	comp=Z,20nm,0.5s							
MMC7	**Mount Meron ar**	**9.14**	**237**	P		**Pn**	**05 55 15.8**	**+2.6**
MRVT	**Maraveh tapeh**	**9.18**	**91**	*e*Pn		**Pn**	**05 55 13.9**	**+0.2**
MRVT				IAML_BB			05 55 28.3	
	comp=Z,5µm,1.0s							
HNTI	**Hanita**	**9.25**	**238**	P		**Pn**	**05 55 17.2**	**+2.5**
KLNJ	**Kolanjah**	**9.41**	**140**	*e*Pn		**Pn**	**05 55 19.7**	**+2.5**
KLNJ				IAML_BB			05 56 15.8	
	comp=Z,4µm,1.0s							
BLGI	**Bet Lehem HaGe**	**9.46**	**236**	P		**Pn**	**05 55 19.8**	**+2.4**
CIDE	**Kastamonu/Cide**	**9.50**	**295**	⇑P		**Pn**	**05 55 21.8**	**+3.9**
SHRO	**Shahrood**	**9.50**	**101**	*e*Pn		**Pn**	**05 55 21.1**	**+3.0**
SHRO				IAML_BB			05 55 33.6	
	comp=Z,5µm,1.0s							
MMLI	**Mount Malkishu**	**9.50**	**234**	P		**Pn**	**05 55 20.7**	**+2.6**
HMDT	**Nahal Hemdat**	**9.56**	**233**	P		**Pn**	**05 55 21.0**	**+2.2**
CSS	**Mathiatis**	**9.60**	**252**			**Pn**	**05 55 18.3**	**-1.2**
OFRI	**`Ofer**	**9.66**	**236**	P		**Pn**	**05 55 22.4**	**+2.1**
SLTI	**Sal'it**	**9.87**	**234**	P		**Pn**	**05 55 25.1**	**+2.0**
DSI	**Dead Sea**	**10.12**	**230**	P		**Pn**	**05 55 28.1**	**+1.6**
SIM	**Simferopol'**	**10.14**	**313**	*e*P		Pn	05 55 32.5	+5.7
SIM				*e*			05 57 33.0	
SIM				pmax	pmax			
	comp=Z,153nm,1.2s							
YZKH	**Yazd**	**10.19**	**123**	*e*Pn		**Pn**	**05 55 30.9**	**+3.3**
YZKH				IAML_BB			05 56 10.7	
	comp=Z,3µm,1.0s							
GHAJ	**Ghor Haditha**	**10.20**	**229**			**Pn**	**05 55 28.9**	**+1.3**
GHAJ	**Ghor Haditha**	**10.20**	**229**	P		**Pn**	**05 55 29.2**	**+1.6**
BJRD	**Bojnurd**	**10.21**	**90**	*i* P		**Pn**	**05 55 28.1**	**+0.2**
BJRD				IAML_BB			05 55 31.6	
	comp=Z,3µm,1.0s							
MSBI	**Mazada**	**10.31**	**229**	P		**Pn**	**05 55 31.1**	**+2.0**
YTIR	**Yattir**	**10.42**	**230**	P		**Pn**	**05 55 33.1**	**+2.3**
ZFRI	**Zfri**	**10.97**	**227**	P		**Pn**	**05 55 40.1**	**+1.9**
ISP	**Isparta**	**11.03**	**271**			**Pn**	**05 55 41.5**	**+2.5**
ISP	**Isparta**	**11.03**	**271**	*ce*P		Pn	05 55 44.3	+5.3
ISP				pmax	pmax			
	comp=Z,653nm,2.5s							
KZIT	**Kziot**	**11.18**	**231**	P		**Pn**	**05 55 42.7**	**+1.6**
PRNI	**Paran**	**11.22**	**227**	P		**Pn**	**05 55 43.5**	**+1.8**
KRMI	**Paran Flat**	**11.56**	**227**	P		**Pn**	**05 55 48.0**	**+1.8**
ELL	**Elmali**	**11.70**	**266**			Pn	05 55 54.0	+5.8
ELL	**Elmali**	**11.70**	**266**	P		Pn	05 55 54.0	+5.8
EIL	**Elat**	**11.77**	**225**	Pn		**Pn**	**05 55 49.6**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=24,slow=5.1,SNR=17							
EIL				Lg	Lg		05 59 11.3	
	comp=Z,1.9nm,0.3s,baz=342,slow=20,SNR=2.1							
EIL				LR	LR		06 00 31.5	
	comp=Z,33µm,19.2s,baz=47,slow=39							
	comp=Z,61nm,1.1s							
EIL	**Elat**	**11.77**	**225**	P		**Pn**	**05 55 51.0**	**+1.9**
MANT	**Manisa**	**12.50**	**275**			**Pn**	**05 55 57.6**	**-1.7**
BAND	**Balkesir-Ban**	**12.84**	**284**	⇑P		**Pn**	**05 56 06.6**	**+2.9**
VRH	**Novokhopyorsk**	**12.94**	**352**	*e*P		**Pn**	**05 56 06.9**	**+1.9**
VRH				pmax	pmax			
	comp=Z,160nm,1.7s							
NE56	**Odesa**	**12.98**	**314**	P		**Pn**	**05 56 05.5**	**0.0**
BALB	**Balikesir**	**12.98**	**281**			**Pn**	**05 56 05.1**	**-0.5**
VORD	**Divnogorie**	**13.08**	**345**	*e*P		**Pn**	**05 56 08.2**	**+1.2**
VORD				pmax	pmax			
	comp=Z,150nm,1.0s							
ARG	**Arkhangelos**	**13.22**	**266**			**Pn**	**05 56 08.3**	**-0.5**
ARG	**Arkhangelos**	**13.22**	**266**	P		**Pn**	**05 56 08.4**	**-0.5**
JURR	**Jurilovca**	**13.30**	**303**	⇑P		**Pn**	**05 56 11.8**	**+1.9**
VSR	**Storozhevoye**	**13.35**	**345**	*e*P		**Pn**	**05 56 10.8**	**+0.2**
VSR				pmax	pmax			
	comp=Z,500nm,2.2s							
SAKB	**Bahrain**	**13.40**	**156**	P		**Pn**	**05 56 09.5**	**-1.9**
SAKB				S		**Sn**	**05 58 42.5**	**+1.8**
TIRR	**Tirgusor**	**13.49**	**302**	⇑P		**Pn**	**05 56 13.9**	**+1.4**
TIRR	**Tirgusor**	**13.49**	**302**			**Pn**	**05 56 09.6**	**-2.9**
TIRR	**Tirgusor**	**13.49**	**302**	P		**Pn**	**05 56 13.9**	**+1.4**
TIRR	**Tirgusor**	**13.49**	**302**	P		**Pn**	**05 56 11.9**	**-0.6**
	comp=Z,79nm,1.6s							
PURM	**Purcari**	**13.49**	**312**	P		**Pn**	**05 56 11.8**	**-0.7**
	comp=Z,5µmcomp=Z,199nm,1.2s							
TLCR		**13.51**	**305**	⇑P		**Pn**	**05 56 15.4**	**+2.7**
TLCR		**13.51**	**305**	P		**Pn**	**05 56 15.4**	**+2.7**
TPGR	**Topolog**	**13.63**	**303**	⇑P		**Pn**	**05 56 15.7**	**+1.2**
SHMA	**Al-Shehemyia**	**13.66**	**155**	P		**Pn**	**05 56 13.0**	**-1.9**
	SNR=34							
VORR	**Voronezh**	**13.77**	**346**	*e*P		**Pn**	**05 56 17.8**	**+1.4**
VORR				pmax	pmax			
	comp=Z,240nm,1.2s							
CFR	**Carcaliu**	**13.94**	**304**	⇑P		**Pn**	**05 56 21.2**	**+2.4**
CFR	**Carcaliu**	**13.94**	**304**	P		**Pn**	**05 56 21.1**	**+2.4**
KARP	**Karpathos**	**14.15**	**264**			**Pn**	**05 56 20.4**	**-1.3**
KARP	**Karpathos**	**14.15**	**264**	P		**Pn**	**05 56 22.3**	**+0.6**
	comp=Z,15µmcomp=Z,903nm,1.1s							
BELG	**Belogornoye**	**14.15**	**8**	Pn		**Pn**	**05 56 22.3**	**+0.7**
	comp=Z,3.7nm,0.3s,baz=110,slow=0.4,SNR=34							
BELG				LR	LR		06 03 11.8	
	comp=Z,17µm,18.4s,baz=206,slow=43							
	comp=Z,298nm,1.1s							
TATR	**Tatarca**	**14.17**	**306**	⇑P		**Pn**	**05 56 24.1**	**+2.3**
SCTR	**Scanteiesti**	**14.23**	**306**	⇑P		**Pn**	**05 56 24.2**	**+1.5**
NEGRR	**Negrea**	**14.25**	**305**	⇑P		**Pn**	**05 56 25.8**	**+2.8**
VLDR	**Vladesti**	**14.25**	**307**	⇑P		**Pn**	**05 56 24.2**	**+1.2**
SCHLR	**Schela**	**14.26**	**305**	⇑P		**Pn**	**05 56 24.3**	**+1.3**
AMRR	**Amara**	**14.26**	**301**	⇑P		**Pn**	**05 56 25.9**	**+2.8**
AMRR	**Amara**	**14.26**	**301**	P		**Pn**	**05 56 25.9**	**+2.8**
SCHL	**Schela**	**14.27**	**305**	⇑P		**Pn**	**05 56 25.5**	**+2.3**
VARL	**Varlezi**	**14.42**	**307**	⇑P		**Pn**	**05 56 27.4**	**+2.1**
ALN	**Alexandroupoli**	**14.43**	**286**			**Pn**	**05 56 23.1**	**-2.3**
ALN	**Alexandroupoli**	**14.43**	**286**	P		**Pn**	**05 56 23.1**	**-2.3**
RAZG	**Razgrad**	**14.52**	**296**	⇑P		**Pn**	**05 56 29.3**	**+2.6**
SMRA	**Abu-Samra**	**14.64**	**157**	P		**Pn**	**05 56 26.0**	**-2.4**
	SNR=51							
SMRA				S		**Sn**	**05 59 10.0**	**-1.0**
LPSR	**Galich'ya Gora**	**14.71**	**347**	*e*P		**Pn**	**05 56 29.4**	**+0.2**
LPSR				pmax	pmax			
	comp=Z,510nm,1.1s							
BIR	**Birlad**	**14.72**	**308**	⇑P		**Pn**	**05 56 31.3**	**+1.9**
BIR	**Birlad**	**14.72**	**308**	P		**Pn**	**05 56 31.2**	**+1.9**
GHRR		**14.77**	**307**	⇑P		**Pn**	**05 56 32.7**	**+2.6**
GHRR		**14.77**	**307**	P		**Pn**	**05 56 29.5**	**-0.5**
GRER		**14.78**	**304**	⇑P		**Pn**	**05 56 32.6**	**+2.4**
TRNA	**Turayna**	**14.78**	**155**	P		**Pn**	**05 56 28.2**	**-2.1**
	SNR=46							
TRNA				S		**Sn**	**05 59 12.2**	**-2.1**
VASR	**Vaslui**	**14.79**	**309**	⇑P		**Pn**	**05 56 32.5**	**+2.2**
SZH	**Strazhitsa**	**14.83**	**295**	*i* P		**Pn**	**05 56 33.6**	**+2.7**
ELND	**Elena**	**14.83**	**294**	⇓P		**P**	**05 56 34.0**	**-2.9**
RDO	**Rodhopi**	**14.83**	**287**			**Pn**	**05 56 30.0**	**-0.9**
HRA	**Herat**	**14.85**	**100**			**Pn**	**05 56 31.4**	**0.0**
PANC	**Panciu**	**14.86**	**306**	⇑P		**Pn**	**05 56 34.1**	**+2.9**
RAYN	**Ar Rayn**	**14.87**	**176**	Pn		**Pn**	**05 56 26.9**	**-4.6**
RAYN	**Ar Rayn**	**14.87**	**176**	*i* P		Pn	05 56 26.2	-5.3
	SNR=122							
RAYN	**Ar Rayn**	**14.87**	**176**	P		**Pn**	**05 56 26.9**	**-4.6**
RAYN	**Ar Rayn**	**14.87**	**176**	P		**Pn**	**05 56 26.8**	**-4.7**
RAYN				S		**Sn**	**05 59 16.4**	**-0.1**
ODBI	**Odobesti**	**14.87**	**305**	⇑P		**Pn**	**05 56 33.5**	**+2.1**
ISR	**Istrita**	**14.97**	**302**	P		**Pn**	**05 56 31.3**	**-1.5**
	comp=Z,318nm,1.4s							
SULR		**15.01**	**300**	⇓P		**Pn**	**05 56 35.8**	**+2.5**
VRI	**Vrincioaia**	**15.12**	**305**	⇑P		**Pn**	**05 56 36.3**	**+1.4**
VRI	**Vrincioaia**	**15.12**	**305**	P		**Pn**	**05 56 36.2**	**+1.4**
VRI	**Vrincioaia**	**15.12**	**305**	P		**Pn**	**05 56 34.0**	**-0.8**
	comp=Z,5µmcomp=Z,124nm,1.4s							
PLOR	**Plostina**	**15.17**	**305**	⇑P		**Pn**	**05 56 36.8**	**+1.3**
PLOR	**Plostina**	**15.17**	**305**	P		**Pn**	**05 56 36.7**	**+1.3**
JRN	**Qarnain Island**	**15.18**	**150**	P		**Pn**	**05 56 34.5**	**-1.1**
SORM	**Soroca**	**15.23**	**315**	⇑P		**Pn**	**05 56 37.2**	**+1.0**
SORM	**Soroca**	**15.23**	**315**	P		**Pn**	**05 56 37.1**	**+1.0**
SORM	**Soroca**	**15.23**	**315**	P		**Pn**	**05 56 34.8**	**-1.4**
	comp=Z,204nm,1.0s							
PLAR	**PLOIESTI**	**15.24**	**301**	⇑P		**Pn**	**05 56 38.8**	**+2.5**
AKTO	**Aktyubinsk**	**15.39**	**34**	Pn		**Pn**	**05 56 36.9**	**-1.5**
	comp=Z,2.4nm,0.3s,baz=132,slow=12,SNR=53							
AKTO				LR	LR		06 03 57.3	
	comp=Z,13µm,19.2s,baz=219,slow=43							
	comp=Z,61nm,0.8s							
TESR	**Tescani**	**15.44**	**307**	P		**Pn**	**05 56 37.9**	**-1.1**
	comp=Z,6µmcomp=Z,334nm,1.2s							
COVR	**Voineasa-Covas**	**15.45**	**305**	⇑P		**Pn**	**05 56 40.4**	**+1.2**
RZN	**Rozhen**	**15.48**	**288**	*i* P		**P**	**05 56 42.8**	**-1.5**
MLR	**Muntele Rosu**	**15.49**	**303**	Pn		**Pn**	**05 56 40.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=132,slow=9.1,SNR=12							
	comp=Z,25nm,1.1s							
MLR	**Muntele Rosu**	**15.49**	**303**	⇑P		**Pn**	**05 56 41.5**	**+1.7**
MLR	**Muntele Rosu**	**15.49**	**303**			**Pn**	**05 56 38.8**	**-1.0**
MLR	**Muntele Rosu**	**15.49**	**303**	P		**Pn**	**05 56 41.5**	**+1.7**
MLR	**Muntele Rosu**	**15.49**	**303**	P		**Pn**	**05 56 38.7**	**-1.1**
	comp=Z,3µmcomp=Z,184nm,1.2s							
AB31	**Akbulak array**	**15.52**	**41**			**Pn**	**05 56 37.4**	**-2.6**
AB31	**Akbulak array**	**15.52**	**41**	*e*P		**Pn**	**05 56 36.4**	**-3.6**
ABKAR	**Akbulak array**	**15.52**	**41**			**Pn**	**05 56 37.2**	**-2.8**
ONER	**Baraj Valea Uz**	**15.52**	**306**	⇓P		**P**	**05 56 42.7**	**-1.9**
PLD	**Plovdiv**	**15.53**	**290**	*i* P		**P**	**05 56 42.9**	**-1.7**
SLWR	**Sila**	**15.55**	**155**	P		**Pn**	**05 56 37.4**	**-3.2**
TURR	**Turia**	**15.65**	**305**	⇑P		**Pn**	**05 56 43.2**	**+1.4**
GIRR	**Girov**	**15.72**	**309**	⇑P		**P**	**05 56 45.6**	**-1.1**
SHME	**Shamm**	**15.76**	**138**	*i* P		**Pn**	**05 56 40.6**	**-2.6**
	SNR=23							
SHME	**Shamm**	**15.76**	**138**	P		**Pn**	**05 56 44.0**	**+0.7**
SHME				S		**Sn**	**05 59 38.6**	**+0.4**
OZUR		**15.82**	**305**	⇑P		**Pn**	**05 56 44.9**	**+1.0**
PLVB	**Pleven**	**15.82**	**295**	⇑P		**Pn**	**05 56 45.3**	**+1.4**
HUMR	**Humele**	**15.84**	**299**	⇑P		**P**	**05 56 46.8**	**-1.3**
BOSR	**Bodos**	**15.89**	**305**	⇑P		**Pn**	**05 56 46.7**	**+1.9**
UMQ	**Umm Al-Quwin**	**15.94**	**140**	*i* P		**Pn**	**05 56 44.6**	**-1.0**
	SNR=14							
UMQ	**Umm Al-Quwin**	**15.94**	**140**	P

SNR=80
HATD S Sn 06 00 03.9 +1.4
HATD S Sn 06 00 03.9 +1.4
TGMR Targu Mures 16.79 305 ⇑P P 05 56 58.7 +0.1
BURAR Bucovina Array 16.80 309 ⇑P P 05 56 58.8 0.0
BURAR Bucovina Array 16.80 309 Pn 05 56 54.2 -2.3
BURAR Bucovina Array 16.80 309 P P 05 56 58.8 0.0
BUR08 Bucovina Ar. S 16.82 309 Pn 05 56 54.9 -2.0
ASHO Ashiyiah 16.84 141 *i* P Pn 05 56 55.0 -2.2
SNR=77
ASHO Ashiyiah 16.84 141 P Pn 05 56 56.9 -0.2
SNR=95
ASHO S Sn 06 00 04.0 -0.6
MI29 MI29, Kamyanyy 16.85 321 P Pn 05 56 56.2 -0.9
comp=Z,1μm,1.5s
HORU Horodok 16.89 316 P Pn 05 56 57.2 -0.4
MI30 MI30,Zelenitsa 16.90 322 P Pn 05 56 56.4 -1.2
comp=Z,260nm,1.1s
LOT Lotru 16.93 301 ⇓P P 05 57 00.3 +0.1
VAY Valandovo 17.08 287 *i* Pn P 05 57 02.0 +0.3
LIT Litokhoron 17.12 283 P Pn 05 56 59.8 -0.8
LIT Litokhoron 17.12 283 P Pn 05 56 59.8 -0.8
LIT pmax pmax
comp=Z,105nm,1.5s
MZR Muzera 17.17 151 *i* P Pn 05 56 57.9 -3.4
SNR=86
MZR Muzera 17.17 151 P Pn 05 57 00.4 -1.0
SNR=79
MZR S Sn 06 00 05.2 -7.4
PUNG Punghina 17.20 297 ⇑P P 05 57 03.6 +0.5
KSV Kosov 17.21 311 P Pn 05 57 00.2 -1.4
ALNE Al Ain 17.22 143 *i* P Pn 05 57 00.4 -1.5
SNR=53
ALNE Al Ain 17.22 143 P P 05 57 02.8 -0.7
SNR=62
ALNE P P 05 57 02.8 -0.7
SNR=62
MI28 Mi28,Pidlybu 17.27 322 P Pn 05 57 00.9 -1.4
SOHO SOHO 17.54 141 *i* P Pn 05 57 04.1 -1.7
SNR=49
SOHO SOHO 17.54 141 P Pn 05 57 05.2 -0.6
SOHO P Pn 05 57 05.2 -0.6
OBN Obninsk 17.55 345 P Pn 05 57 04.2 -1.6
comp=Z,7.5nm,0.3s,baz=113,slow=7.1,SNR=20
OBN LR LR 06 05 13.8
comp=Z,6μm,22.0s,baz=105,slow=42
comp=Z,127nm,0.7s
OBN Obninsk 17.55 345 ⇑P Pn 05 57 04.8 -1.0
OBN Obninsk 17.55 345 P Pn 05 57 04.1 -1.6
OBN IAmb IAmb 05 57 14.1
comp=Z,728nm,1.2s
OBN Obninsk 17.55 345*c* *i* P Pn 05 57 03.6 -2.2
OBN pmax pmax
comp=Z,1μm,2.5s
OBN MLR MLR
comp=Z,17μm,15.0s
OBN Obninsk 17.55 345 P Pn 05 57 04.6 -1.2
comp=Z,11μmcomp=Z,527nm,1.3s
DJES Djerdap 17.57 298 ⇑P P 05 57 08.7 +1.4
GZR Gura Zlata 17.58 300 ⇑P P 05 57 07.9 +0.5
GZR Gura Zlata 17.58 300 P P 05 57 07.9 +0.5
RAKU Rahkiv 17.61 310 P Pn 05 57 06.3 -0.4
DEV Deva 17.64 302 ⇑P P 05 57 08.9 +0.9
DEV Deva 17.64 302 P P 05 57 08.8 +0.9
HERR Herculane 17.70 298 ⇑P P 05 57 09.0 +0.4
MARR Marisel-Cluj 17.75 305 ⇑P P 05 57 10.3 +1.0
ITM Ithomi 17.88 273 P Pn 05 57 08.8 -1.2
BMR Baia Mare 17.88 308 ⇑P P 05 57 11.7 +1.0
BMR Baia Mare 17.88 308 P P 05 57 11.6 +1.0
MOS Moscow 17.94 347 *e*P Pn 05 57 08.2 -2.4
MOS *e*S Sn 06 00 27.1 -3.7
MOS pmax pmax
comp=Z,1μm,1.7s
MOS pmax pmax
comp=N,1μm,1.7s
MOS pmax pmax
comp=E,216nm,1.5s
MOS pmax pmax
comp=Z,4μm,2.3s
MOS pmax pmax
comp=N,3μm,2.4s
MOS MLR MLR
comp=N,17μm,13.0s
MOS MLR MLR
comp=Z,19μm,13.0s
BOVS Bovan 17.95 294 ⇓P P 05 57 12.3 +0.8
SKO Skopje 17.96 289 *i* Pn P 05 57 13.5 +2.0
MESR Meseseni 18.02 306 ⇑P P 05 57 13.4 +1.2
DRGR 18.05 305 ⇑P P 05 57 14.3 +1.7
DRGR 18.05 305 P P 05 57 14.3 +1.7
UMZA Um Al Zommool 18.12 147 P Pn 05 57 11.8 -1.2
UMZA P Pn 05 57 11.8 -1.2
MDVR Moldovita 18.16 298 ⇓P P 05 57 15.4 +1.6
MEZ Mezhgor'ye 18.22 310 P Pn 05 57 13.9 -0.2
RNPP5 Staryi Chortor 18.33 320 P Pn 05 57 14.4 -1.1
HOQ Hoqain 18.39 140 P Pn 05 57 15.8 -0.5
SNR=94
HOQ P Pn 05 57 15.8 -0.5
SNR=94
HOQ P Pn 05 57 15.8 -0.5
SNR=94
RNPP2 Kostyukhnivka 18.39 321 P Pn 05 57 15.1 -1.1
RNPP8 Varash 18.41 321 P Pn 05 57 15.4 -1.0
BZS Buzias 18.43 300 ⇑P Pn 05 57 17.3 +0.6
BZS Buzias 18.43 300 P Pn 05 57 17.3 +0.6
BRIU Brid 18.44 309 P P 05 57 15.6 -1.2
RNPP9 Sopachiv 18.44 321 P P 05 57 15.6 -1.2
LVV L'vov 18.54 315 P Pn 05 57 18.4 +0.4
BERU Beregovo 18.63 309 P P 05 57 18.9 +0.1
SHAA Shahritus 18.64 85 P Pn 05 57 19.9 +0.5
SHAA IAmb IAmb 05 57 30.1
comp=Z,438nm,1.1s
MUKU Mukachevo 18.69 309 P Pn 05 57 19.9 0.0
BIDO Bidbid 18.86 138 P Pn 05 57 22.7 +0.6
SNR=97
HOLU Holmets 18.91 309 P Pn 05 57 22.2 -0.3
BSY Bisya 19.03 141 P Pn 05 57 24.0 -0.2
SNR=149
BSY P Pn 05 57 24.0 -0.2
SNR=149
NGCH Negor - Chabah 19.17 128 P Pn 05 57 27.8 +2.1
SNR=22
SMDO Samad 19.20 139 P P 05 57 25.7 +0.3
SNR=225
SMDO P P 05 57 25.7 +0.3
SNR=225
KWP Kalwaria Pacla 19.20 313 P P 05 57 25.5 +0.4
comp=Z,8μmcomp=Z,257nm,1.7s
KEK Kerkira 19.21 282 IAmb IAmb 05 57 36.7
comp=Z,180nm,0.7s
CHGR Chuyangaron 19.29 82 P Pn 05 57 27.2 0.0
CHGR IAmb IAmb 05 57 29.1
comp=Z,304nm,1.3s
CHGR Chuyangaron 19.29 82*c* *i* P Pn 05 57 28.4 +1.2
CHGR pmax pmax
comp=Z,693nm,2.2s
CHGR MLR MLR
comp=Z,19μm,16.0s
WSAR Wadi Sarin 19.35 137 LR LR 06 06 23.0
comp=Z,44nm,19.6s,baz=327,slow=42
WSAR Wadi Sarin 19.35 137 P Pn 05 57 27.6 -0.5
SNR=46
CHM Chimkent 19.50 70 *e*P Pn 05 57 29.9 +0.2
CHM *e*S S 06 01 09.7 +0.6
CHM Chimkent 19.50 70 *e*P Pn 05 57 29.9 +0.2
CHM *e*S S 06 01 09.8 +0.6
CHM LR LR 06 06 12.2
comp=Z,2μm,10.2s
PDG Podgorica 19.61 290 ⇑P P 05 57 30.0 +0.4
PDG Podgorica 19.61 290 P P 05 57 28.7 -0.9
MNK Minsk 19.67 330 *i* P P 05 57 27.6 -2.6
comp=E,88nm,1.1s
MNK *i* P P 05 57 27.6 -2.6
comp=N,130nm,0.9s
MNK *i* P P 05 57 27.6 -2.6
comp=Z,128nm,0.9s,baz=138
MNK *i* PP PnPn 05 57 42.1 -2.9
MNK *i* S S 06 01 08.0 -4.3
MNK *i* SS SnSn 06 01 24.2 -2.4
MNK *i* LQ LQ 06 03 19.8
MNK *i* LR LR 06 04 06.3
MNK *i* LRM MLR 06 06 37.0
comp=N,6μm,19.8s
MNK *i* LRM MLR 06 06 44.6
comp=Z,9μm,17.5s
MNK *i* LRM MLR 06 06 55.4
comp=E,9μm,17.4s
MNK Minsk 19.67 330 *i* P P 05 57 27.6 -2.6
MNK *i* S S 06 01 07.9 -4.3
MNK pmax pmax
comp=Z,128nm,0.9s
MNK pmax pmax
comp=N,130nm,0.9s
MNK pmax pmax
comp=E,88nm,1.1s
MNK MLR MLR
comp=N,6μm,20.0s
MNK MLR MLR
comp=Z,9μm,18.0s
MNK MLR MLR
comp=E,9μm,17.0s
BRLS Boroldav 19.72 68*c* *i* P P 05 57 30.8 -0.1
BRLS *e*S S 06 01 11.7 -1.9
BRLS Boroldav 19.72 68⇑ *i* P P 05 57 30.9 -0.1
BRLS *e*S S 06 01 11.7 -1.9
JMDO Jabal Madar 19.80 140 P Pn 05 57 32.7 -0.6
SNR=102
JMDO P Pn 05 57 32.7 -0.6
SNR=102
IUG luzhnay 19.81 71*c* *i* P Pn 05 57 33.3 -0.2
IUG *e*S Sn 06 01 16.6 +0.2
IUG luzhnay 19.81 71⇑ *i* P Pn 05 57 33.4 -0.2
IUG *e*S Sn 06 01 16.6 +0.2
STHS Stebnicka Huta 19.96 311 *e*P P 05 57 34.2 +0.8
STHS Stebnicka Huta 19.96 311 *e*P P 05 57 34.2 +0.8
WBK Wadi Bani Khal 20.05 138 P Pn 05 57 35.6 -0.7
SNR=45
WBK P Pn 05 57 35.6 -0.7
SNR=45
WBK P Pn 05 57 35.6 -0.7
SNR=45
KECS Kecovo 20.05 308 *e*P Pn 05 57 36.2 0.0
KECS Kecovo 20.05 308 *e*P Pn 05 57 36.2 0.0
KBL Kabul 20.10 94 P P 05 57 35.6 +0.3
KBL IAmb IAmb 05 57 48.4
comp=Z,256nm,1.2s
KBL Kabul 20.10 94 P P 05 57 35.6 +0.3
KBL pmax pmax
comp=Z,256nm,1.3s
KBL Kabul 20.10 94 P Pn 05 57 39.0 +1.9
SNR=124
KBL P Pn 05 57 39.0 +1.9
SNR=124
KBL Kabul 20.10 94 P Pn 05 57 38.9 +1.9
KK31 Karatay Array 20.22 68 P P 05 57 35.9 -0.5
KK31 IAmb IAmb 05 57 46.4
comp=Z,196nm,0.9s
KK31 Karatay Array 20.22 68 *e*P P 05 57 36.6 +0.2
KKAR Karatay Array 20.22 68 P P 05 57 36.7 +0.3
KKAR Karatay Array 20.22 68 P P 05 57 36.7 +0.3
ARTI Arti 20.23 23 P P 05 57 37.1 +0.9
comp=Z,204nm,0.6s,baz=218,slow=6.1,SNR=66
ARTI S S 06 01 18.1 -5.2
comp=Z,41nm,1.1s,baz=128,slow=3.3,SNR=2.0
ARTI LR LR 06 07 48.7
comp=Z,11μm,18.1s,baz=215,slow=44
comp=Z,204nm,0.6s
ARTI Arti 20.23 23 P P 05 57 36.1 -0.2
ARTI Arti 20.23 23*c* *i* P P 05 57 36.7 +0.5
ARTI 05 57 51.5
ARTI S S 06 01 23.2 -0.1
ARTI pmax pmax
comp=Z,824nm,1.9s
ARTI MLR MLR
comp=Z,13μm,16.0s
PSZ Piszkesteto 20.23 306 ⇑P Pn 05 57 37.5 -0.9
PSZ Piszkesteto 20.23 306 P P 05 57 35.0 -1.5
PSZ IAmb IAmb 05 57 44.1
comp=Z,517nm,1.7s
PSZ Piszkesteto 20.23 306 P P 05 57 37.4 +0.9
PSZ Piszkesteto 20.23 306 *e*P P 05 57 35.2 -1.3
NACGM Naroch 20.40 330 *e*P P 05 57 38.7 +0.6
comp=Z,406nm,1.1s,baz=136
BTK Batken 20.43 77 P P 05 57 39.1 +0.3
BTK Batken 20.43 77 P P 05 57 39.1 +0.3
BTK pmax pmax
comp=Z,177nm,1.0s
KIRV Kirov 20.44 7 P P 05 57 38.1 -0.4
comp=Z,133nm,0.8s,baz=198,slow=4.3,SNR=19
KIRV S S 06 01 23.8 -3.8
comp=Z,12nm,0.7s,baz=179,slow=21,SNR=1.2
KIRV LR LR 06 06 43.5
comp=Z,9μm,19.0s,baz=197,slow=40
comp=Z,133nm,0.8s
KIRV Kirov 20.44 7*c* *e*P P 05 57 38.8 +0.3
NIE Niedzica 20.52 310 *e*P Pn 05 57 43.1 +1.4
NIE *e*S Sn 06 01 40.5 +7.2
MORH Mrgy, Hungar 20.59 301 ⇑P P 05 57 40.6 +0.4
MORH Mrgy, Hungar 20.59 301 P P 05 57 40.0 -0.2
comp=Z,3μmcomp=Z,84nm,1.1s
JLN Jalan Bani Buh 20.65 137 P P 05 57 42.0 +0.8
SNR=107
JLN P P 05 57 42.0 +0.8
SNR=107
DZA Taraz 20.81 69 *e*P Pn 05 57 44.1 -1.1
DZA Taraz 20.81 69 *e*P Pn 05 57 44.1 -1.0
MHTO MHTO 20.90 142 P P 05 57 44.0 +0.2
SNR=105
MHTO P P 05 57 44.0 +0.2
SNR=105
LANS Liptovska Anna 20.92 309 *e*P Pn 05 57 45.3 -1.2
LANS Liptovska Anna 20.92 309 *e*P Pn 05 57 45.3 -1.2
OJC Ojcow 21.14 312 *e*P P 05 57 48.1 +1.9
OJC *e*S S 06 01 43.0 +1.3
OJC *e*L L 06 07 21.5
comp=Z,9μm,18.9s
OJC Ojcow 21.14 312 P P 05 57 44.9 -1.4
OJC Ojcow 21.14 312 P P 05 57 44.9 -1.4
OJC Ojcow 21.14 312 P P 05 57 45.0 -1.3
comp=Z,126nm,1.4s
SRO Srobarova 21.21 305 *e*P P 05 57 49.5 +2.5
SRO Srobarova 21.21 305 *e*P P 05 57 49.5 +2.5
DRK Karamyk 21.24 79 P P 05 57 47.8 +0.1
DRK IAmb IAmb 05 57 59.5
comp=Z,339nm,1.1s
DRK Karamyk 21.24 79 P P 05 57 47.8 +0.1
DRK pmax pmax
comp=Z,339nm,1.1s
SVE Sverdlovsk 21.30 25*c* *e*P P 05 57 50.0 +2.1
SVE *e*S S 06 01 44.4 -0.2
SVE pmax pmax
comp=E,370nm,1.0s
SVE MLR MLR
comp=N,14μm,17.0s
BEL Belsk 21.32 317 *e*P P 05 57 50.1 +2.0
BLY Banja Luka 21.33 296 ⇓P P 05 57 48.8 +0.5
R9F13 Warsaw-Wawer 21.33 318 *e*P P 05 57 48.4 +0.2
R9F13 *e*Pn Pn 05 57 51.2
SUW Suwalki 21.34 324 *e*P P 05 57 47.6 -0.8
SUW *e*S S 06 01 46.7 +1.2
SUW *e*L L 06 07 38.2
comp=N,13μm,18.6s
SUW Suwalki 21.34 324 P P 05 57 47.0 -1.3
SUW Suwalki 21.34 324 P P 05 57 47.1 -1.3
SUW Suwalki 21.34 324 *e*P P 05 57 47.3 -1.1
DOK Doka 21.43 154 P P 05 57 49.0 -0.5
SNR=86
DOK P P 05 57 49.0 -0.5
SNR=86
MATE Matera 21.52 285 ⇑P P 05 57 49.9 -0.4
MATE Matera 21.52 285 *e*P P 05 57 45.0 -5.3
MPLH Magyarpolny 21.55 303 P P 05 57 50.3 -0.3
comp=N,7μmcomp=N,470nm,1.4s
TIP Timpagrande 21.61 281 ⇑P P 05 57 51.3 -0.1
TIP Timpagrande 21.61 281 P P 05 57 49.3 -2.1
TIP IAMs_20 IAMs_20 06 07 13.8
comp=Z,20μm,18.0s
TIP Timpagrande 21.61 281 P P 05 57 50.4 -1.0
comp=Z,4μmcomp=Z,193nm,1.5s
DQM DQM 21.61 145 P P 05 57 50.7 -0.8
SNR=53
BEHE Becsehely 21.90 300 P P 05 57 52.8 -1.6
JAVC Velka Javorina 21.94 307 *e*P P 05 57 57.3 +2.4
JAVC *e*S S 06 02 00.1 +2.7
PABE Paberze 21.97 328 P P 05 57 52.8 -2.2
PABE IAmb IAmb 05 58 03.6
comp=Z,453nm,1.4s
PABE Paberze 21.97 328 *e*P P 05 57 54.0 -1.0
OKC Ostrava-Krasne 21.98 310 *e*P P 05 57 58.4 +3.2
OKC *e*S S 06 02 01.5 +3.5
OKC AMS AMS 06 08 40.0
comp=Z,10μm,15.0s
OKC Ostrava-Krasne 21.98 310 *e*P P 05 57 58.4 +3.2
OKC *e*S S 06 02 01.5 +3.5
OKC MLR MLR
comp=Z,10μm,15.0s
SMOL Smolenice 21.98 306 *e*P P 05 57 57.5 +2.2
MAUC Maruska 22.01 308 *e*P P 05 57 57.4 +1.8
RAC Raciborz 22.04 310 *e*P P 05 57 57.8 +1.9
RAC AMS AMS 06 09 02.0
comp=Z,11nm,17.2s
RAC Raciborz 22.04 310 *e*P P 05 57 57.8 +1.9
RAC MLR MLR
comp=Z,11μm,17.2s
MODS Modra-Piesok 22.04 306 *e*P P 05 57 57.8 +1.9
MODS Modra-Piesok 22.04 306 *e*P P 05 57 57.8 +1.9
ACER Acerenza 22.09 285 IAmb IAmb 05 58 03.6
comp=Z,323nm,1.2s
ZST Bratislava 22.10 305 *e*P P 05 57 56.5 -0.1
ZST Bratislava 22.10 305 *e*P P 05 57 56.5 -0.1
SGRT San Giovanni R 22.21 288 P P 05 57 55.5 -2.4
STEB Steborice 22.24 310 *e*P P 05 57 57.9 -0.1
CUC Castrocucco 22.25 283 P P 05 57 57.0 -1.2
CUC IAmb IAmb 05 58 07.1
comp=Z,163nm,1.1s
CUC IAMs_20 IAMs_20 06 07 21.0
comp=Z,18μm,19.0s
KOGS Kog 22.26 300 *e*P P 05 57 58.3 0.0
KOGS *e*S S 06 02 05.2 +1.8
VSVD Vaisvydziai 22.31 329 *e*P P 05 57 57.5 -1.2
MORC Moravsky Berou 22.32 309 ⇑P P 05 57 59.5 +0.5
MORC Moravsky Berou 22.32 309 P P 05 57 57.5 -1.5
MORC Moravsky Berou 22.32 309 P P 05 57 59.4 +0.5
MORC Moravsky Berou 22.32 309 *e*P P 05 57 58.7 -0.3
MORC *e*S S 06 02 04.7 0.0
CEL Celeste 22.40 279 P P 05 57 58.2 -1.8
CEL IAMs_20 IAMs_20 06 07 29.0
comp=Z,18μm,18.0s
CEL Celeste 22.40 279 P P 05 57 59.0 -0.9
comp=Z,3μmcomp=Z,140nm,1.3s
CEL Celeste 22.40 279 P P 05 57 59.1 -0.9
RONA Rosalia, Austr 22.50 303 *e*pP P 05 58 00.9 +0.1
comp=Z,37nm,1.1s,SNR=22
SHAO Shalim 22.52 151 *i* P P 05 57 59.8 -1.4
SNR=48
SHAO Shalim 22.52 151 P P 05 58 00.7 -0.5
SNR=35
SHAO P P 05 58 00.7 -0.5
SNR=35
DMTO DMTO 22.55 153 P P 05 58 00.6 -0.9
SNR=59
DMTO P P 05 58 00.6 -0.9
SNR=59
EKS2 Erkin-Say 22.60 70 P P 05 58 02.9 +0.8
SNR=65
KLMR Klimovskoe 22.68 354 *e*P P 05 58 03.4 +0.8
KLMR *e* 05 58 27.0
KLMR pmax pmax
comp=Z,1μm,1.8s
KLMR MLR MLR
comp=Z,18μm,12.0s
VRAC Vranov 22.75 308 P P 05 58 04.5 +1.0
comp=Z,48nm,1.1s,baz=105,slow=9.8,SNR=27
VRAC S S 06 02 16.9 +4.3
comp=Z,1.3nm,0.6s,baz=180,slow=11,SNR=0.8
comp=Z,48nm,1.1s
VRAC Vranov 22.75 308 ⇑P P 05 58 04.3 +0.8
VRAC Vranov 22.75 308 *e*P P 05 58 04.5 +1.0
VRAC *e*S S 06 02 12.0 -0.6
KRUC Moravsky 22.80 307 *e*P P 05 58 03.8 -0.2
KRUC *e*S S 06 02 14.0 +0.6
CONA Conrad Observa 22.84 304 *e*pP P 05 58 04.6 +0.1
comp=Z,24nm,1.1s,SNR=21
ARSA Arzberg 22.91 302 *e*pP P 05 58 04.9 -0.3
comp=Z,11nm,0.8s,SNR=25
BORK Borovoye 23.05 42 P P 05 58 06.0 -0.5
BORK IAmb IAmb 05 58 13.7
comp=Z,112nm,0.7s
BORK Borovoye 23.05 42*c* *e*P P 05 58 06.9 +0.3
BORK pmax pmax
comp=Z,142nm,0.8s
BORK MLR MLR
comp=Z,8μm,19.0s
BVA0 Borovoye Array 23.07 42 P P 05 58 05.5 -1.3
BVAR Borovoye Array 23.07 42 P P 05 58 07.7 +0.9
comp=Z,72nm,0.8s,baz=248,slow=7.5,SNR=82
BVAR S S 06 02 18.9 +0.7
comp=Z,2.0nm,0.7s,baz=260,slow=25,SNR=1.5
BVAR LR LR 06 08 28.6
comp=Z,9μm,20.5s,baz=238,slow=40
comp=Z,72nm,0.8s
SOKA Soboth 23.12 300 *e*pP P 05 58 07.1 -0.4
comp=Z,2.6nm,0.2s,SNR=17
AAK Ala-Archa 23.13 70 P P 05 58 08.1 +0.4
SNR=31
AAK Ala-Archa 23.13 70 LR LR 06 09 06.4
comp=Z,8μm,21.3s,baz=274,slow=42
AAK Ala-Archa 23.13 70 P P 05 58 08.0 +0.3
AAK IAmb IAmb 05 58 16.6
comp=Z,190nm,0.9s
AAK Ala-Archa 23.13 70 *i* P P 05 58 06.9 -0.8
SNR=69
AAK Ala-Archa 23.13 70 P P 05 58 08.7 +1.0
AAK Ala-Archa 23.13 70 P P 05 58 08.8 +1.2
AAK P P 05 58 08.8 +1.2
AAK P P 05 58 08.8 +1.2
AAK Ala-Archa 23.13 70 P P 05 58 08.2 +0.5
VSU Vasula 23.13 336*c* *e*P P 05 58 07.4 +0.1
VSU pmax pmax
comp=Z,386nm,1.7s
VSU MLR MLR
comp=Z,16μm,18.0s
VSU Vasula 23.13 336 *e*P P 05 58 06.3 -1.0
UCH Uchtor 23.14 71 P P 05 58 08.4 +0.2
SNR=29
USP Ospenovka 23.14 68 P P 05 58 08.1 +0.4
SNR=28
PUL Pulkovo 23.21 342*c* *e*P P 05 58 10.2 +2.1
PUL pmax pmax
comp=Z,1μm,2.5s
PUL MLR MLR
comp=Z,12μm,15.0s
SGDS Sogindy 23.25 68 *e*P P 05 58 10.2 +1.4
DPC Dobruska-Polom 23.26 310 *e*P P 05 58 09.6 +0.8
DPC *e*S S 06 02 24.1 +2.7
DPC AMS AMS 06 10 00.0
comp=Z,10μm,14.7s
DPC Dobruska-Polom 23.26 310 *e*P P 05 58 09.6 +0.8
DPC *e*S S 06 02 24.1 +2.7
DPC MLR MLR
comp=Z,10μm,14.7s
DPC Dobruska-Polom 23.26 310 P P 05 58 08.2 -0.6
comp=Z,50nm,1.0s
CHMS Chumysh 23.32 69 P P 05 58 09.7 +0.2
SNR=40
LJU Ljubljana 23.37 299 *e*P P 05 58 10.8 +0.9
LJU *e*S S 06 02 25.5 +2.4
OSTC Ostas 23.39 310 *e*P P 05 58 10.2 +0.1
OSTC AMS AMS 06 09 30.0
comp=Z,9μm,12.3s
OSTC Ostas 23.39 310 *e*P P 05 58 10.2 +0.1
OSTC MLR MLR
comp=Z,9μm,12.3s
OBKA Obir 23.42 300 *e*pP P 05 58 11.4 +0.8
comp=Z,2.6nm,0.5s,SNR=15
TREC Trest 23.44 307 *e*P P 05 58 11.4 +0.8
TREC *e*S S 06 02 25.5 +1.2
TREC AMS AMS 06 10 30.0
comp=Z,8μm,22.1s
TREC Trest 23.44 307 *e*P P 05 58 11.4 +0.8
TREC *e*S S 06 02 25.5 +1.2
TREC MLR MLR
comp=Z,8μm,22.1s
KSP Ksiaz 23.45 311 *e*P P 05 58 11.1 +0.5
KSP *e*S S 06 02 28.7 +4.3
KSP Ksiaz 23.45 311 P P 05 58 10.8 +0.2
comp=Z,4μmcomp=Z,87nm,1.4s
KSP pP pP 05 58 13.4 +0.4
comp=Z,4μmcomp=Z,87nm,1.4s
KBK Karagaybulak 23.46 70 P P 05 58 11.9 +0.9
SNR=36
UPC Upice 23.50 310 *e*S S 06 02 29.9 +4.7
UPC AMS AMS 06 10 20.0
comp=Z,8μm,14.7s
CHVC Chvalec 23.50 310 *e*P P 05 58 10.8 -0.4

CHVC AMS AMS 06 09 40.0
comp=Z,9µm,10.9s
CHVC Chvalec 23.50 310 *e*P **P** **05 58 10.8 -0.4**
CHVC MLR MLR
comp=Z,9µm,10.9s
INTR Introdacqua 23.57 289 P **P** **05 58 10.3 -1.8**
INTR IAmb IAmb 05 58 32.8
comp=Z,197nm,1.6s
NIL Nilore 23.69 93 P **P** **05 58 14.1 +0.9**
NIL Nilore 23.69 93 P **P** **05 58 14.1 +0.9**
NIL pmax pmax
comp=Z,485nm,1.4s
NIL Nilore 23.69 93 P **P** **05 58 17.0 +3.8**
VAE Valguarnera 23.70 277 P **P** **05 58 14.5 +1.2**
comp=Z,63nm,0.9s,baz=52,slow=6.6,SNR=17
VAE LR LR 06 08 01.6
comp=Z,13µm,18.5s,baz=105,slow=38
comp=Z,63nm,0.9s
RAFF Raffo Rosso 23.79 277 P **P** **05 58 13.1 -1.0**
TRI Trieste 23.85 298 P **P** **05 58 12.0 -2.6**
TRI Trieste 23.85 298 P **P** **05 58 12.0 -2.6**
TRI pmax pmax
comp=Z,112nm,1.2s
MOA Molln 23.86 303 *e*pP **P** **05 58 14.8 0.0**
comp=Z,25nm,0.7s,SNR=25
GKP Gorka Klasztor 23.92 317 *e*P **P** **05 58 15.9 +0.8**
GKP *e*L L 06 10 02.8
comp=Z,15µm,17.9s
CAMP Campotosto 23.93 290 P **P** **05 58 13.8 -1.8**
CAMP IAmb IAmb 05 58 30.0
comp=Z,126nm,1.0s
CADS Cadrg 23.94 299 *e*P **P** **05 58 15.0 -0.5**
AQU L'Aquila 23.94 289 P **P** **05 58 12.7 -2.9**
AQU L'Aquila 23.94 289 P **P** **05 58 14.9 -0.7**
comp=Z,4µmcomp=Z,210nm,1.2s
TKM2 Tokmak 2 23.94 69 P **P** **05 58 16.2 +0.4**
SNR=57
GUMA Gualdo di Mace 23.99 291 IAmb IAmb 05 58 29.8
comp=Z,220nm,1.1s
CKRC Cesky Krumlov 24.06 305 *e*P **P** **05 58 16.4 -0.2**
CKRC *e*S **S** **06 02 38.4 +4.2**
CKRC AMS AMS 06 09 40.0
comp=Z,8µm,15.9s
CKRC Cesky Krumlov 24.06 305 *e*P **P** **05 58 16.4 -0.2**
CKRC *e*S **S** **06 02 38.4 +4.2**
CKRC MLR MLR
comp=Z,8µm,15.9s
MYKA Terra Mystica 24.06 300 *e*pP **P** **05 58 15.8 -0.9**
comp=Z,4.7nm,0.6s,SNR=12
ARBE Arbavere 24.14 337 *e*P **P** **05 58 17.9 +0.7**
NRCA Norcia 24.15 291 IAmb IAmb 05 58 42.6
comp=Z,280nm,1.5s
FDMO Fiordimonte 24.17 291 IAmb IAmb 05 58 35.1
comp=Z,133nm,1.1s
KSH2 Kashi 24.18 78 P **P** **05 58 19.8 +1.8**
KSH2 PP **PnPn** **05 58 55.5 +8.5**
KSH2 S **S** **06 02 36.3 -0.2**
KSH2 pmax pmax
comp=Z,65nm,2.5s
KSH2 pmax pmax
comp=Z,3µm,6.3s
KSH2 LR LR
comp=Z,16µm,12.7s
KSH2 LR LR
comp=Z,13µm,15.1s
KSH2 LR LR
comp=Z,13µm,15.8s
BOOM Boomskoye usch 24.20 70 IAmb IAmb 05 58 44.3
comp=Z,223nm,1.1s
PRU Pruhonice 24.23 308 *e*P **P** **05 58 18.9 +0.8**
PRU *e*S **S** **06 02 41.2 +4.4**
PRU AMS AMS 06 09 50.0
comp=Z,10µm,16.2s
PRU Pruhonice 24.23 308 *e*P **P** **05 58 18.9 +0.8**
PRU *e*S **S** **06 02 41.2 +4.4**
PRU MLR MLR
comp=Z,10µm,16.2s
BIOA Bad Ischl, Aus 24.25 302 *e*pP **P** **05 58 17.9 -0.4**
comp=Z,8.4nm,0.4s,SNR=37
ZVC Zvikov 24.29 307 *e*P **P** **05 58 18.4 -0.3**
ZVC *e*S **S** **06 02 40.2 +2.3**
ZVC AMS AMS 06 10 50.0
comp=Z,10µm,13.1s
MTSE Matsula 24.31 333 *e*P **P** **05 58 18.2 -0.5**
KBA Koelnbreinsper 24.33 301 *e*pP **P** **05 58 18.7 -0.6**
comp=Z,62nm,0.8s,SNR=34
PVCC Panska Ves 24.38 310 *e*P **P** **05 58 19.0 -0.5**
PVCC AMS AMS 06 11 20.0
comp=Z,7µm,13.5s
PVCC Panska Ves 24.38 310 *e*P **P** **05 58 19.0 -0.5**
PVCC MLR MLR
comp=Z,7µm,13.5s
ULHL Ulahol 24.43 71 P **P** **05 58 22.0 +1.7**
SNR=84
GEC2 GERESS Array S 24.45 305 *e*P **P** **05 58 20.2 -0.1**
comp=Z,1µm,2.8s,baz=103,slow=9.0
GERES GERESS Array B 24.45 305 P **P** **05 58 20.2 -0.1**
comp=Z,9.6nm,0.7s,baz=107,slow=9.1,SNR=33
GERES LR LR 06 10 41.2
comp=Z,4µm,20.9s,baz=115,slow=43
comp=Z,9.6nm,0.7s
KUU Kurty 24.50 67 *e*P **P** **05 58 22.1 +1.4**
KUU *e*S **S** **06 02 42.9 +1.5**
KUU Kurty 24.50 67 *e*P **P** **05 58 22.1 +1.4**
KUU *e*S **S** **06 02 43.0 +1.5**
KUU LR LR 06 08 42.0
comp=Z,2µm,9.6s
CESX Cesi 24.54 290 P **P** **05 58 19.3 -1.8**
CESX IAmb IAmb 05 58 38.9
comp=Z,328nm,1.6s
KHC Kasperske Hory 24.60 306 *e*P **P** **05 58 20.5 -1.1**
KHC *ex* x 05 58 51.0
KHC Kasperske Hory 24.60 306 *e*P **P** **05 58 20.5 -1.1**
KHC *e* 05 58 51.0
CLTB Caltabellotta 24.61 278 P **P** **05 58 21.1 -0.7**
SRNI Srinagar 24.77 91 *e*P **P** **05 58 23.0 -0.4**
SRNI IAmb IAmb 05 58 45.5
comp=Z,53nm,0.4s
SRNI *e*S **S** **06 02 47.2 +0.9**
LESA Schwarzleotal 24.84 302 *i* pP **P** **05 58 22.6 -1.2**
comp=Z,194nm,1.4s,SNR=27
ABTA Abfaltersbach 24.85 300 *e*pP **P** **05 58 22.7 -1.2**
comp=Z,26nm,0.8s,SNR=29
BRG Berggiesshubel 24.86 310 *e*P **P** **05 58 23.4 -0.5**
comp=Z,818nm,3.1s,baz=103,slow=9.0
BRG Berggiesshubel 24.86 310 *e*P **P** **05 58 24.0 +0.1**
BRG Amp 05 58 30.6
comp=Z,39nm,1.1s
AAA Alma-Ata 24.91 69 *e*P **P** **05 58 25.8 +1.3**
AAA pmax pmax
comp=Z,91nm,0.8s
AAA MLR MLR
comp=Z,2µm,12.0s
AAA Alma-Ata 24.91 69 *e*P **P** **05 58 25.8 +1.3**
comp=Z,91nm,0.8s
AAA LR LR 06 09 07.7
comp=Z,2µm,12.3s
TNSS Tian-Shan 24.93 69 *e*P **P** **05 58 26.1 +1.0**
TNSS Tian-Shan 24.93 69 *e*P **P** **05 58 26.1 +1.0**
MDOK Medeo 25.01 69 *e*P **P** **05 58 26.7 +1.3**
MDOK *e*S **S** **06 02 51.4 +1.6**
MDOK Medeo 25.01 69 *e*P **P** **05 58 26.8 +1.3**
MDOK *e*S **S** **06 02 51.5 +1.6**
MDOK LR LR 06 08 42.0
comp=Z,1µm,10.0s
WET Wettzell 25.05 306 *e*P **P** **05 58 25.1 -0.6**
comp=Z,104nm,1.1s,baz=103,slow=9.0
HSKC Hora Svate Kat 25.09 309 *e*P **P** **05 58 25.3 -0.7**
HSKC AMS AMS 06 10 30.0
comp=Z,7µm,15.1s
KDJ Kajisay 25.13 71 IAmb IAmb 05 58 34.4
comp=Z,154nm,0.9s
JMU Jammu 25.23 94 *e*P **P** **05 58 27.3 -0.1**
JMU IAmb IAmb 05 58 35.3
comp=Z,210nm,1.7s
JMU *e*S **S** **06 02 54.2 +0.8**
MEF Metsahovi 25.26 336 *e*P **P** **05 58 25.7 -1.6**
CTI Castel Tesino 25.36 298 IAmb IAmb 05 58 42.0
comp=Z,77nm,0.9s
RUE Ruedersdorf 25.50 313 *e*P **P** **05 58 29.2 -0.3**
RUE Ruedersdorf 25.50 313 *e*P **P** **05 58 29.3 -0.3**
baz=103,slow=9.0
WTTA Wattenberg 25.51 301 *i* pP **P** **05 58 28.7 -1.3**
comp=Z,18nm,0.5s,SNR=31
OSSC Osservatorio P 25.52 292 IAmb IAmb 05 58 53.0
comp=Z,140nm,1.2s
CLL Collm 25.56 311 *i* P **P** **05 58 29.7 -0.5**
CLL pmax pmax
comp=Z,99nm,1.3s
CLL MLR MLR
comp=Z,5µm,19.4s
CLL Collm 25.56 311 P **P** **05 58 29.0 -1.2**
comp=Z,49nm,1.3s
CLL Collm 25.56 311 *i* P **P** **05 58 29.7 -0.5**
comp=Z,99nm,1.3s
CLL *e*S S 06 03 16.0 +18
comp=N,4µm,10.9s
CLL *e*S S 06 03 16.0 +18
CLL *e*S S 06 03 16.0 +18
CLL AMS AMS 06 10 00.0
comp=N,13µm,21.1s
CLL AMS AMS 06 10 00.0
comp=E,8µm,20.1s
CLL AMS AMS 06 10 00.0
comp=Z,5µm,19.4s
CLL Collm 25.56 311 *e*P **P** **05 58 29.9 -0.2**
baz=103,slow=9.0
WATA Walderalm 25.56 301 *i* pP **P** **05 58 29.1 -1.3**
comp=Z,16nm,0.7s,SNR=18
NKC Novy Kostel 25.59 308 *e*P **P** **05 58 31.8 +1.3**
NKC *e*S S 06 03 12.5 +14
NKC AMS AMS 06 10 50.0
comp=Z,9µm,18.4s
NKC Novy Kostel 25.59 308 *e*P **P** **05 58 31.8 +1.3**
NKC MLR MLR
comp=Z,9µm,18.4s
ROTZ Rotzenmuhle 25.62 307 *e*P **P** **05 58 30.7 -0.1**
baz=103,slow=9.0
ZCCA Zocca 25.72 294 IAmb IAmb 05 58 49.8
comp=Z,155nm,1.0s
FIA1 FINESS Array S 25.74 340 P **P** **05 58 29.0 -2.7**
FINES FINESS Array B 25.74 340 P **P** **05 58 31.3 -0.4**
comp=Z,34nm,0.7s,baz=145,slow=13,SNR=27
FINES LR LR 06 10 22.5
comp=Z,6µm,20.3s,baz=148,slow=40
comp=Z,34nm,0.7s
FINES FINESS Array B 25.74 340 P **P** **05 58 30.4 -1.3**
SQTA Sankt Quirin 25.80 301 *e*pP **P** **05 58 31.0 -1.5**
comp=Z,30nm,0.6s,SNR=23
JOF Joensuu 25.82 346 *e*P **P** **05 58 33.2 +0.8**
ADZR Andozero 25.82 354 *e*P **P** **05 58 32.3 -0.1**
ADZR S **S** **06 03 04.9 +2.9**
ADZR pmax pmax
comp=Z,103nm,0.8s
ADZR MLR MLR
comp=Z,19µm,12.0s
MOTA Moosalm 25.88 301 *i* pP **P** **05 58 31.9 -1.5**
comp=Z,27nm,0.8s,SNR=42
FUR Furstenfeldbru 25.89 303 *e*P **P** **05 58 32.8 -0.5**
comp=Z,90nm,0.9s,baz=103,slow=9.0
BSD Bornholm Skovb 25.98 320 *i* P **P** **05 58 33.4 -0.6**
BSD IAmb IAmb 05 58 37.0
comp=Z,41nm,0.7s
BSD Bornholm Skovb 25.98 320 *e*P **P** **05 58 33.3 -0.6**
SATY Saty 26.00 69 *e*P **P** **05 58 35.7 +1.3**
SATY *e*S **S** **06 03 07.0 +1.4**
SATY pmax pmax
comp=Z,81nm,1.2s
SATY Saty 26.00 69 *e*P **P** **05 58 35.8 +1.3**
comp=Z,81nm,1.2s
SATY *e*S **S** **06 03 07.0 +1.4**
TDK Taldyqorghan 26.03 64 *e*P **P** **05 58 35.8 +1.3**
TDK pmax pmax
comp=Z,97nm,0.6s
TDK Taldyqorghan 26.03 64 *e*P **P** **05 58 35.8 +1.3**
comp=Z,97nm,0.6s
TDK LR LR 06 10 19.1
comp=Z,4µm,9.9s
THN Thein Dam 26.08 94 *e*P **P** **05 58 35.1 -0.1**
THN IAmb IAmb 05 59 00.0
comp=Z,210nm,1.6s
THN *e*S **S** **06 03 07.5 +0.6**
FETA Feichten 26.09 300 *i* pP **P** **05 58 33.8 -1.5**
comp=Z,3.5nm,0.5s,SNR=24
SALO Salr 26.10 297 IAmb IAmb 05 59 06.7
comp=Z,146nm,1.1s
BKNR BIKANER 26.12 105 *e*P **P** **05 58 32.6 -2.9**
BKNR IAmb IAmb 05 58 41.2
comp=Z,373nm,1.5s
BKNR *e*S **S** **06 03 06.3 -1.0**
BLEU Blekinge 26.12 323 *i* P **P** **05 58 36.5 +1.3**
RETA Reutte 26.13 301 *e*pP **P** **05 58 34.1 -1.4**
comp=Z,7.4nm,0.5s,SNR=20
VLC Villacollemand 26.14 294 P **P** **05 58 34.1 -1.5**
MOX Moxa 26.21 309 *e*L L 06 11 32.9
comp=Z,8µm,19.0s
GRA1 Grafenberg Arr 26.23 306 IAmb IAmb 05 59 10.4
comp=Z,182nm,1.1s
GRF Grafenberg Arr 26.23 306 *e*L L 06 03 51.3
comp=Z,7µm,19.8s
BHUJ Bhuj 26.25 118 *e*P **P** **05 58 35.7 -0.9**
BHUJ IAmb IAmb 05 58 44.6
comp=Z,186nm,2.1s
BHUJ *e*S **S** **06 03 09.5 +0.1**
TSSA Tissa 26.25 93 *e*P **P** **05 58 36.1 -0.7**
TSSA IAmb IAmb 05 58 48.2
comp=Z,132nm,1.1s
TSSA *e*S **S** **06 03 10.6 +0.8**
FUORN Ofenpass-Fuorn 26.37 299 P **P** **05 58 36.9 -0.9**
UZB Uzynbulak 26.45 69 *e*P **P** **05 58 39.8 +1.3**
UZB *e*S **S** **06 03 14.1 +1.4**
UZB Uzynbulak 26.45 69 *e*P **P** **05 58 39.9 +1.3**
UZB *e*S **S** **06 03 14.2 +1.4**
RGN Rugen 26.56 318 *e*P **P** **05 58 37.2 -1.9**
comp=Z,149nm,0.9s,baz=103,slow=9.0
DHRM DHARAMSHALA 26.58 94 *e*P **P** **05 58 38.9 -0.9**
DHRM IAmb IAmb 05 58 48.7
comp=Z,154nm,1.8s
DHRM *e*S **S** **06 03 15.8 +0.7**
ALCI Alchi Leh 26.59 89 *e*P **P** **05 58 39.1 -1.1**
ALCI IAmb IAmb 05 58 53.9
comp=Z,52nm,1.5s
ALCI *e*S **S** **06 03 15.5 0.0**
UBR Ueberruh 26.60 302 *e*P **P** **05 58 38.8 -0.9**
comp=Z,119nm,1.0s,baz=103,slow=9.0
DAVOX Davos/Dischmat 26.65 299 P **P** **05 58 39.1 -1.2**
comp=Z,37nm,0.7s,baz=95,slow=7.1,SNR=63
DAVOX S **S** **06 03 13.8 -2.0**
comp=Z,3.4nm,1.0s,baz=132,slow=18,SNR=1.5
comp=Z,37nm,0.7s
KEF Kef 26.67 339 *e*P **P** **05 58 39.2 -0.9**
DAVA Damuels 26.70 301 *i* pP **P** **05 58 39.2 -1.6**
comp=Z,20nm,0.5s,SNR=25
RAF Rauma 26.72 335 *e*P **P** **05 58 35.5 -5.0**
AAL Aland 26.72 333 *e*P **P** **05 58 39.4 -1.1**
SHLS Shalkode 26.77 69 *e*P **P** **05 58 45.4 +4.0**
SHLS Shalkode 26.77 69 *e*P **P** **05 58 45.4 +4.0**
SUF Sumiainen 26.78 341 *e*P **P** **05 58 39.9 -1.2**
PDGK Podgornoye 26.79 68 P **P** **05 58 41.4 -0.2**
ATD Arta Tunnel 26.81 184 LR LR 06 10 06.0
comp=Z,469nm,18.0s,baz=4.0,slow=38
FLTG Flechtingen 26.92 312 *e*P **P** **05 58 42.4 0.0**
comp=Z,63nm,0.9s,baz=103,slow=9.0
KURBB Kurchatov Arra 26.92 52 P **P** **05 58 42.0 -0.4**
comp=Z,62nm,0.6s,baz=262,slow=9.1,SNR=9.2
KURBB PKiKP **PKiKP** **06 09 41.0 -1.1**
comp=Z,0.4nm,0.7s,baz=290,slow=1.0,SNR=4.2
KURBB LR LR 06 11 05.6
comp=Z,5µm,19.8s,baz=254,slow=40
comp=Z,62nm,0.6s
KURBB Kurchatov Arra 26.92 52 P **P** **05 58 41.0 -1.5**
TUE Stuetta 26.98 299 P **P** **05 58 42.4 -1.0**
TUE Stuetta 26.98 299 P **P** **05 58 42.2 -1.2**
KURK Kurchatov 27.00 52 P **P** **05 58 41.1 -2.0**
KURK IAmb IAmb 05 58 50.5
comp=Z,153nm,1.0s
KURK Kurchatov 27.00 52 P **P** **05 58 42.1 -1.1**
KURK *i* 06 09 41.0
KURK Kurchatov 27.00 52 P **P** **05 58 44.6 +1.4**
KURK P **P** **05 58 44.6 +1.4**
KURK Kurchatov 27.00 52 P **P** **05 58 44.4 +1.2**
DEL Delary 27.14 322 *i* P **P** **05 58 46.0 +1.6**
VSL Villasalto 27.23 283 P **P** **05 58 43.6 -1.8**
VSL IAmb IAmb 05 59 14.6
comp=Z,132nm,1.1s
CLZ Clausthal 27.29 311 *e*P **P** **05 58 45.9 +0.1**
comp=Z,43nm,1.1s,baz=103,slow=9.0
STU Stuttgart 27.36 304 P **P** **05 58 44.8 -1.7**
STU Stuttgart 27.36 304 P **P** **05 58 44.8 -1.7**
STU pmax pmax
comp=Z,64nm,1.1s
STU MLR MLR
comp=Z,9µm,18.0s
STU Stuttgart 27.36 304 *e*P **P** **05 58 45.7 -0.8**
STU Stuttgart 27.36 304 *e*P **P** **05 58 45.3 -1.2**
comp=Z,122nm,1.1s,baz=103,slow=9.0
BJUU Bjuv 27.38 320 *i* P **P** **05 58 46.8 +0.3**
SMLA Simla 27.70 95 *e*P **P** **05 58 49.0 -0.7**
SMLA IAmb IAmb 05 58 59.6
comp=Z,54nm,1.1s
SMLA *e*S **S** **06 03 33.4 +1.1**
AJM Ajmer 27.98 106 *e*P **P** **05 58 51.0 -1.3**
AJM IAmb IAmb 05 58 59.0
comp=Z,39nm,0.9s
AJM *e*S **S** **06 03 36.9 +0.1**
VAF Ylistaro 27.98 339 *e*P **P** **05 58 50.8 -1.0**
KEST Kesra 28.07 276 P **P** **05 58 52.9 -0.2**
comp=Z,79nm,1.0s,baz=6.1,slow=3.2,SNR=46
comp=Z,79nm,1.0s
KEST Kesra 28.07 276 P **P** **05 58 51.4 -1.6**
KEST IAmb IAmb 05 58 56.0
comp=Z,83nm,0.9s
TNS Taunus Mts 28.09 307 *e*P **P** **05 58 53.2 +0.1**
comp=Z,67nm,1.2s,baz=103,slow=9.0
BORU Boraas 28.24 323 *i* P **P** **05 58 54.0 -0.2**
UDPR Udaipur 28.34 111 *e*P **P** **05 58 54.6 -0.9**
UDPR IAmb IAmb 05 59 04.1
comp=Z,161nm,1.4s
UDPR *e*S **S** **06 03 42.4 -0.1**
KLP Kalpa 28.39 94 *e*P **P** **05 58 56.7 +0.5**
KLP IAmb IAmb 05 59 09.2
comp=Z,158nm,1.6s
KLP *e*S **S** **06 03 42.3 -1.5**
SENIN Lac Senin/Sane 28.39 298 P **P** **05 58 54.6 -1.4**
SENIN IAmb IAmb 05 59 07.2
comp=Z,218nm,1.6s
HNLY HANLEY 28.48 91 *e*P **P** **05 58 57.1 -0.2**
HNLY IAmb IAmb 05 59 52.9
comp=Z,106nm,2.6s
HNLY *e*S **S** **06 03 46.0 +0.4**
KUDL Kundal 28.51 101 *e*P **P** **05 58 56.7 -0.2**
KUDL IAmb IAmb 05 59 05.0
comp=Z,199nm,1.6s
KUDL *e*S **S** **06 03 45.4 +0.3**
MAKZ Makanchi 28.61 61 P **P** **05 58 58.9 +1.2**
MAKZ IAmb IAmb 05 59 05.3
comp=Z,76nm,0.9s
MAKZ Makanchi 28.61 61 P **P** **05 58 58.9 +1.2**
MAKZ pmax pmax
comp=Z,76nm,0.9s
MAKZ MLR MLR
comp=Z,8µm,18.0s
DDI Dehra Dun 28.73 96 *e*P **P** **05 58 58.4 -0.5**
DDI *e*P **sP** **05 59 03.1 +0.6**
DDI IAmb IAmb 05 59 06.9
comp=Z,83nm,0.8s
DDI *e*S **S** **06 03 50.2 +1.5**
BNI Bardonecchia 28.80 296 P **P** **05 58 58.0 -1.5**
BNI IAmb IAmb 05 59 01.3
comp=Z,67nm,0.9s
BNI Bardonecchia 28.80 296 P **P** **05 58 58.0 -1.5**
BNI pmax pmax
comp=Z,67nm,0.9s
MK31 Makanchi Array 28.83 61 P **P** **05 58 59.6 0.0**
MK31 Makanchi Array 28.83 61 *ce*P **P** **05 59 00.5 +0.9**
MK31 Makanchi Array 28.83 61 P **P** **05 59 00.2 +0.6**
MKAR Makanchi Array 28.83 61 P **P** **05 59 00.1 +0.5**
comp=Z,42nm,0.8s,baz=266,slow=6.5,SNR=84
MKAR LR LR 06 12 33.4
comp=Z,7µm,18.4s,baz=258,slow=41
comp=Z,42nm,0.8s
MKAR Makanchi Array 28.83 61 P **P** **05 58 59.7 0.0**
MKAR Makanchi Array 28.83 61 *ce*P **P** **05 59 00.7 +1.1**
MKAR pmax pmax
comp=Z,42nm,0.8s
MK01 Makanchi Array 28.83 61 P **P** **05 59 00.3 +0.6**
BUG Bochum-Univer 29.07 309 *e*P **P** **05 59 02.1 +0.5**
comp=Z,49nm,1.2s,baz=103,slow=9.0
HFS Hagfors 29.15 328 P **P** **05 59 02.0 -0.2**
comp=Z,20nm,0.7s,baz=148,slow=8.7,SNR=16
HFS LR LR 06 11 42.9
comp=Z,9µm,20.3s,baz=126,slow=38
comp=Z,20nm,0.7s
WLF Walferdange 29.46 305 P **P** **05 59 02.0 -3.2**
WLF Walferdange 29.46 305 *d*P **P** **05 59 05.0 -0.1**
comp=Z,33nm,1.1s
WLF Walferdange 29.46 305 *e*P **P** **05 59 04.7 -0.5**
comp=Z,56nm,1.0s,baz=103,slow=9.0
BTNL Ternell 29.61 307 *d*P **P** **05 59 08.1 +1.6**
BHOU Houvegnez 29.66 306 *d*P **P** **05 59 07.9 +1.0**
comp=Z,11nm,1.0s
GOET G??ttrup 29.69 320 *i* P **P** **05 59 06.2 -0.8**
GOET IAmb IAmb 05 59 08.8
comp=Z,34nm,0.5s
MEM Membach 29.70 307 *d*P **P** **05 59 08.1 +0.9**
comp=Z,14nm,1.2s
JOSI Joshimath 29.81 95 *e*P **P** **05 59 06.3 -2.4**
JOSI IAmb IAmb 05 59 16.4
comp=Z,103nm,1.1s
JOSI *e*S **S** **06 04 05.3 -0.6**
FURI Furi 29.85 192 LR LR 06 10 06.8
comp=Z,11µm,20.9s,baz=7.5,slow=34
FURI Furi 29.85 192 IAMs_20 IAMs_20 06 09 55.4
comp=Z,11µm,20.0s
APA Apatity 29.87 351‖ *e*P **P** **05 59 11.8 +3.3**
APA *e*S **S** **06 04 08.8 +3.2**
APA pmax pmax
comp=Z,15nm,1.0s
APA MLR MLR
comp=Z,12µm,14.9s
BEBN Eben Emael 29.93 307 *d*P **P** **05 59 11.0 +1.7**
BGES Gesves 30.24 306 *d*P **P** **05 59 12.6 +0.5**
SSB Saint Sauveur 30.31 296 P **P** **05 59 11.5 -1.3**
SSB Saint Sauveur 30.31 296 P **P** **05 59 11.5 -1.3**
SSB pmax pmax
comp=Z,52nm,1.1s
BMRD Maredsous 30.43 306 *d*P **P** **05 59 14.8 +1.0**
NC405 NORSAR Array S 30.50 329 P **P** **05 59 12.6 -1.7**
NC405 IAmb IAmb 06 00 08.5
comp=Z,148nm,1.4s
DOU Dourbes 30.52 306 *d*P **P** **05 59 14.5 0.0**
comp=Z,14nm,1.0s
ZSN Zaisan 30.61 60 *e*P **P** **05 59 16.7 +1.3**
ZSN Zaisan 30.61 60 *e*P **P** **05 59 16.8 +1.3**
NB2 NORSAR Subarra 30.67 328 P **P** **05 59 15.4 -0.4**
comp=Z,3.3nm,0.7s,baz=124,slow=9.3
NOA NORSAR Array B 30.67 328 P **P** **05 59 15.3 -0.5**
comp=Z,3.5nm,0.7s,baz=125,slow=8.8,SNR=9.5
NOA LR LR 06 12 49.7
comp=Z,11µm,18.5s,baz=130,slow=39
comp=Z,3.5nm,0.7s
UCC Uccle 30.76 307 *d*P **P** **05 59 17.4 +0.8**
comp=Z,20nm,1.1s
MAHO Mahon 31.05 286 P **P** **05 59 18.4 -1.0**
ZAA0 Zalesovo Array 31.45 47 P **P** **05 59 22.3 -0.4**
ZAA0 IAmb IAmb 05 59 26.0
comp=Z,49nm,1.0s
ZALV Zalesovo Beam 31.45 47 P **P** **05 59 22.4 -0.3**
comp=Z,22nm,0.5s,baz=259,slow=9.7,SNR=54
ZALV LR LR 06 13 11.8
comp=Z,6µm,21.7s,baz=253,slow=38
comp=Z,22nm,0.5s
ZALV Zalesovo Beam 31.45 47 P **P** **05 59 21.9 -0.8**
ZALV Zalesovo Beam 31.45 47 *i* P **P** **05 59 22.7 0.0**
ZALV pmax pmax
comp=Z,22nm,0.5s
EJON La Jonquera 31.70 291 P **P** **05 59 20.6 -4.5**
BHPL Bhopal 31.86 109 *e*P **P** **05 59 26.4 -0.3**
BHPL IAmb IAmb 05 59 34.6
comp=Z,177nm,2.2s
BHPL *e*S **S** **06 04 37.5 -0.4**
CLF Chambon-Foret 31.89 301 IAmb IAmb 05 59 28.2
comp=Z,85nm,1.1s
ETOS Mallorca 32.17 286 P **P** **05 59 26.0 -3.2**
POO Poona 32.31 120 *e*P **P** **05 59 29.5 -1.2**
POO IAmb IAmb 05 59 36.8
comp=Z,94nm,1.5s
POO *e*S **S** **06 04 44.7 -0.2**
CORI Orista 32.38 290 IAmb IAmb 05 59 32.3
comp=Z,86nm,1.1s
DGZ Jazzator, Alta 32.44 56 *c* iP **P** **05 59 32.7 +1.1**
DGZ pmax pmax
comp=Z,87nm,1.1s
DGZ MLR MLR
comp=Z,12µm,20.0s

WMQ	**Urumqi**	**32.71**	**66**	*e*P	**P**	**05 59 36.6**	**+2.6**
WMQ				S	**S**	**06 04 54.3**	**+3.5**
WMQ				PcS	**PcS**	**06 05 58.4**	**-6.2**
WMQ				pmax	pmax		
	comp=Z,52nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,340nm,3.7s						
WMQ				LR	LR		
	comp=Z,11µm,10.1s						
WMQ				LR	LR		
	comp=Z,7µm,14.9s						
WMQ				LR	LR		
	comp=Z,8µm,22.3s						
ARCES	**ARCESS Array B**	**32.81**	**348**	P	**P**	**05 59 34.1**	**-0.4**
	comp=Z,5.0nm,0.9s,baz=131,slow=3.4,SNR=8.0						
ARCES				LR	LR	06 13 31.6	
	comp=Z,12µm,18.0s,baz=151,slow=38						
	comp=Z,5.0nm,0.9s						
ARCES	**ARCESS Array B**	**32.81**	**348**	IAmb	IAmb	06 00 43.5	
	comp=Z,146nm,1.5s						
CEST	**Esterri de Car**	**32.88**	**291**	IAmb	IAmb	05 59 36.6	
	comp=Z,59nm,1.2s						
AKL	**Akola**	**33.11**	**113**	*e*P	**P**	**05 59 35.8**	**-1.8**
AKL				IAmb	IAmb	05 59 46.8	
	comp=Z,90nm,1.5s						
AKL				*e*S	**S**	**06 04 57.5**	**+0.3**
EIBI	**Ibiza**	**33.44**	**285**	P	**P**	**05 59 36.2**	**-4.1**
GOA	**Goa**	**34.45**	**123**	*e*P	**P**	**05 59 48.7**	**-0.6**
GOA				IAmb	IAmb	05 59 55.2	
	comp=Z,60nm,1.0s						
HPK	**Haverah Park**	**34.82**	**312**	*e*P	**P**	**05 59 52.3**	**+0.1**
HPK				IAmb	IAmb	05 59 55.6	
	comp=Z,36nm,0.8s						
STRD	**Stroud**	**34.94**	**308**	*e*P	**P**	**05 59 53.2**	**+0.1**
STRD				IAmb	IAmb	05 59 58.2	
	comp=Z,45nm,0.8s						
ECHE	**Chera**	**35.06**	**287**	P	**P**	**05 59 53.0**	**-1.4**
EDMD	**Edmundbyers**	**35.14**	**313**	*e*P	**P**	**05 59 55.3**	**+0.5**
EDMD				IAmb	IAmb	05 59 58.5	
	comp=Z,33nm,0.8s						
MCH1	**Michaelchurch**	**35.47**	**308**	*e*P	**P**	**05 59 57.6**	**-0.1**
MCH1				IAmb	IAmb	05 59 59.0	
	comp=Z,30nm,0.8s						
CART	**Cartagena**	**35.59**	**283**	P	**P**	**05 59 55.4**	**-3.5**
EMUR	**La Murta**	**35.70**	**284**	P	**P**	**05 59 55.7**	**-4.3**
ETOB	**Tobarra**	**35.73**	**285**	P	**P**	**05 59 57.8**	**-2.4**
KESW	**Keswick, Cumbr**	**35.76**	**313**	*e*P	**P**	**06 00 00.7**	**+0.5**
KESW				IAmb	IAmb	06 00 07.6	
	comp=Z,31nm,0.8s						
DRUM	**Mains of Drumt**	**35.78**	**317**	*e*P	**P**	**06 00 00.7**	**+0.4**
DRUM				IAmb	IAmb	06 00 05.9	
	comp=Z,48nm,0.8s						
LODK	**Lodwar**	**35.81**	**196**	P	**P**	**06 00 02.2**	**+1.2**
LODK				IAmb	IAmb	06 00 11.4	
	comp=Z,122nm,1.6s						
LODK				IAMs_20	IAMs_20	06 15 50.6	
	comp=Z,8µm,19.0s						
LODK	**Lodwar**	**35.81**	**196**	P	**P**	**06 00 02.3**	**+1.3**
	SNR=23						
EKA	**Eskdalemuir Ar**	**35.89**	**314**	P	**P**	**06 00 00.1**	**-1.2**
	comp=Z,31nm,0.7s,baz=107,slow=8.3,SNR=57						
EKA				LR	LR	06 18 43.2	
	comp=Z,8µm,18.1s,baz=102,slow=43						
	comp=Z,31nm,0.7s						
ESK	**Eskdalemuir**	**35.91**	**314**	P	**P**	**06 00 00.5**	**-1.0**
ESK				IAmb	IAmb	06 00 13.7	
	comp=Z,103nm,1.2s						
ESK	**Eskdalemuir**	**35.91**	**314**	*e*P	**P**	**06 00 01.7**	**+0.2**
ESK				IAmb	IAmb	06 00 05.0	
	comp=Z,28nm,0.7s						
ESK	**Eskdalemuir**	**35.91**	**314**	P	**P**	**06 00 00.5**	**-1.0**
ESK				pmax	pmax		
	comp=Z,103nm,1.2s						
EDI	**Edinburgh**	**35.99**	**315**	*e*P	**P**	**06 00 03.0**	**+0.9**
EDI				IAmb	IAmb	06 00 10.1	
	comp=Z,25nm,0.7s						
HYB	**Hyderabad**	**36.34**	**116**	*e*P	**P**	**06 00 06.0**	**+0.4**
HYB				IVmB_BB		06 00 08.1	
	comp=Z,650nm,4.1s						
HYB				*e*PcP	**PcP**	**06 02 29.6**	**-0.7**
HYB				*e*S	**S**	**06 05 48.6**	**+1.4**
HYB				IVMs_BB	IVMs_BB	06 17 35.9	
	comp=Z,2µm,12.8s						
UCM	**Universidad Co**	**36.61**	**288**	P	**P**	**06 00 05.0**	**-2.7**
ENIJ	**Nijar**	**36.68**	**283**	P	P	06 00 03.5	-4.8
CCA1	**Carnmenellis**	**36.83**	**305**	*e*P	**P**	**06 00 09.7**	**+0.4**
CCA1				IAmb	IAmb	06 00 11.2	
	comp=Z,50nm,0.9s						
EBER	**Berja**	**37.22**	**283**	P	**P**	**06 00 10.2**	**-2.9**
ESDC	**Sonseca Array**	**37.30**	**288**	P	**P**	**06 00 12.2**	**-1.4**
	comp=Z,42nm,0.9s,baz=68,slow=8.4,SNR=127						
	comp=Z,42nm,0.9s						
ESDC	**Sonseca Array**	**37.30**	**288**	P	**P**	**06 00 11.8**	**-1.7**
DSB	**Dublin**	**37.58**	**310**	P	P	06 00 09.9	-5.8
DSB	**Dublin**	**37.58**	**310**	P	**P**	**06 00 16.7**	**+1.0**
ILTH	**Belurgan, Co L**	**37.60**	**311**	P	**P**	**06 00 16.4**	**+0.6**
PAB	**San Pablo**	**37.62**	**287**	P	**P**	**06 00 14.5**	**-1.8**
PAB	**San Pablo**	**37.62**	**287**	P	**P**	**06 00 14.5**	**-1.8**
PAB				pmax	pmax		
	comp=Z,53nm,1.2s						
IWEX	**Carrickbyrne,**	**37.80**	**309**	P	**P**	**06 00 18.2**	**+0.6**
EMAL	**Malaga-Limoner**	**38.44**	**283**	P	**P**	**06 00 20.6**	**-2.6**
PBRG	**Braganca**	**38.86**	**292**	*e*P	**P**	**06 00 25.1**	**-1.6**
PBRG				*i* IAmb	IAmb	06 00 50.5	
	comp=Z,39nm,2.1s						
KNGR	**Kungurtug, Tuv**	**38.93**	**54**	*i* P	**P**	**06 00 29.1**	**+1.8**
KNGR				pmax	pmax		
	comp=Z,334nm,2.0s						
KNGR				MLR	MLR		
	comp=Z,5µm,15.0s						
MVO	**Moncorvo**	**39.22**	**291**	*e*P	**P**	**06 00 28.8**	**-0.9**
MVO				*i* IAmb	IAmb	06 00 36.7	
	comp=Z,51nm,1.4s						
MVO				*e*S	**S**	**06 06 34.6**	**+4.1**
MVO				*e*LR	LR	06 09 40.0	
MVO				*i* IAMs_20	IAMs_20	06 21 46.3	
	comp=Z,2µm,18.0s						
LSA	**Lhasa**	**39.27**	**88**	P	**P**	**06 00 29.6**	**-1.2**
LSA				S	**S**	**06 06 29.1**	**-3.2**
LSA				LR	LR		
	comp=Z,4µm,21.3s						
LSA				LR	LR		
	comp=Z,3µm,15.1s						
LSA				LR	LR		
	comp=Z,5µm,18.6s						
IGLA	**Glengowla, Co**	**39.39**	**310**	P	**P**	**06 00 31.9**	**+1.0**
CEU	**Ceuta**	**39.44**	**282**	P	**P**	**06 00 28.4**	**-3.1**
GOMU	**GeErMu**	**39.69**	**77**	P	**P**	**06 00 35.6**	**+1.5**
GOMU				PP	**PP**	**06 02 06.4**	**+1.4**
GOMU				S	**S**	**06 06 40.3**	**+2.1**
GOMU				pmax	pmax		
	comp=Z,34nm,1.4s						
GOMU				LR	LR		
	comp=Z,5µm,20.1s						
GOMU				LR	LR		
	comp=Z,3µm,21.0s						
GOMU				LR	LR		
	comp=Z,4µm,20.3s						
PVRL	**Vila Real**	**39.70**	**291**	*e*P	**P**	**06 00 32.6**	**-1.1**
PVRL				*i* IAmb	IAmb	06 00 54.4	
	comp=Z,69nm,1.7s						
POLO	**Lamas de Olo**	**39.73**	**291**	*e*P	**P**	**06 00 32.8**	**-1.2**
POLO				*i* IAmb	IAmb	06 00 41.8	
	comp=Z,33nm,1.3s						
MTE	**Manteigas**	**39.78**	**290**	P	**P**	**06 00 32.7**	**-1.8**
MTE				IAmb	IAmb	06 00 35.8	
	comp=Z,81nm,0.9s						
MTE	**Manteigas**	**39.78**	**290**	*e*P	**P**	**06 00 33.8**	**-0.7**
MTE				*i* IAmb	IAmb	06 00 35.1	
	comp=Z,132nm,1.1s						
MTE				*e*S	**S**	**06 06 44.7**	**+5.7**
MTE				*e*LR	LR	06 10 08.4	
MTE				*i* IAMs_20	IAMs_20	06 18 10.6	
	comp=Z,5µm,18.0s						
MTE	**Manteigas**	**39.78**	**290**	*e*P	**P**	**06 00 33.6**	**-0.8**
CNIL	**Conil**	**39.81**	**283**	P	**P**	**06 00 32.6**	**-2.1**
PCAB	**Cabril**	**39.82**	**292**	*e*P	**P**	**06 00 34.6**	**-0.1**
PCBR	**Castelo Branco**	**39.88**	**289**	*e*P	**P**	**06 00 34.9**	**-0.2**
PCBR				*i* IAmb	IAmb	06 00 36.0	
	comp=Z,72nm,1.1s						
PMRV	**Marv??o**	**39.92**	**288**	*e*P	**P**	**06 00 34.9**	**-0.7**
PMRV				*i* IAmb	IAmb	06 00 52.3	
	comp=Z,44nm,1.5s						
PMRV				*e*S	**S**	**06 06 44.9**	**+3.9**
PMRV				*e*LR	LR	06 10 02.3	
PMRV				*i* IAMs_20	IAMs_20	06 12 57.6	
	comp=Z,3µm,20.0s						
MDT	**Midelt**	**39.93**	**277**	P	**P**	**06 00 35.2**	**-0.6**
	comp=Z,26nm,0.9s,baz=88,slow=9.9,SNR=33						
	comp=Z,26nm,0.9s						
PGAV	**Gavieira, Arco**	**39.94**	**292**	*e*P	**P**	**06 00 35.4**	**-0.5**
PGAV				*i* IAmb	IAmb	06 00 44.0	
	comp=Z,100nm,1.6s						
PGAV				*e*S	**S**	**06 06 46.5**	**+5.1**
PGAV				*e*LR	LR	06 09 54.9	
PGAV				*i* IAMs_20	IAMs_20	06 20 39.4	
	comp=Z,6µm,16.0s						
VAL	**Valentia**	**39.95**	**308**	P	**P**	**06 00 36.5**	**+1.0**
PVIS	**Viseu**	**39.96**	**290**	*e*P	**P**	**06 00 35.4**	**-0.5**
PBAR	**Barrancos**	**40.01**	**286**	*e*P	**P**	**06 00 34.8**	**-1.5**
PBAR				*i* IAmb	IAmb	06 00 57.9	
	comp=Z,75nm,1.6s						
MD01	**Midelt array s**	**40.03**	**278**	P	**P**	**06 00 36.1**	**-0.5**
MD31	**MD31**	**40.03**	**278**	P	**P**	**06 00 35.4**	**-1.2**
IFR	**Ifrane**	**40.07**	**279**	P	**P**	**06 00 35.8**	**-1.3**
PESTR	**Estremoz**	**40.22**	**288**	P	**P**	**06 00 36.9**	**-1.2**
PESTR	**Estremoz**	**40.22**	**288**	*e*P	**P**	**06 00 36.6**	**-1.5**
PESTR				*i* IAmb	IAmb	06 00 38.5	
	comp=Z,91nm,1.0s						
PTO	**Porto**	**40.38**	**291**	*e*P	**P**	**06 00 39.2**	**0.0**
PTO				*i* IAmb	IAmb	06 00 40.2	
	comp=Z,115nm,1.2s						
PSARD	**Sardoal**	**40.45**	**289**	*e*P	**P**	**06 00 39.4**	**-0.5**
PSARD				*i* IAmb	IAmb	06 01 03.1	
	comp=Z,92nm,1.9s						
PARRA	**Arraiolos**	**40.58**	**288**	*e*P	**P**	**06 00 39.3**	**-1.7**
PARRA				*i* IAmb	IAmb	06 00 44.3	
	comp=Z,38nm,1.6s						
PCAS	**Casmilo, Conde**	**40.58**	**290**	*e*P	**P**	**06 00 40.9**	**-0.1**
PCAS				*i* IAmb	IAmb	06 00 54.9	
	comp=Z,67nm,1.7s						
EVO	**Evora**	**40.64**	**287**	P	**P**	**06 00 38.3**	**-3.2**
EVO	**Evora**	**40.64**	**287**	*e*P	**P**	**06 00 40.2**	**-1.3**
EVO				*i* IAmb	IAmb	06 01 21.5	
	comp=Z,53nm,1.9s						
PMTG	**Montargil**	**40.64**	**288**	*e*P	**P**	**06 00 40.2**	**-1.3**
PMTG				*i* IAmb	IAmb	06 00 51.7	
	comp=Z,56nm,1.3s						
PBEJ	**Beja**	**40.67**	**286**	*e*P	**P**	**06 00 41.2**	**-0.6**
PBEJ				*i* IAmb	IAmb	06 00 44.4	
	comp=Z,57nm,1.5s						
PVAQ	**Vaqueiros**	**40.75**	**285**	P	**P**	**06 00 41.3**	**-1.1**
PVAQ				IAmb	IAmb	06 00 42.8	
	comp=Z,104nm,1.3s						
PVAQ	**Vaqueiros**	**40.75**	**285**	*e*P	**P**	**06 00 41.1**	**-1.4**
PVAQ				*i* IAmb	IAmb	06 01 37.0	
	comp=Z,99nm,1.7s						
PVAQ				*e*S	**S**	**06 06 52.0**	**-1.4**
PVAQ				*e*LR	LR	06 10 15.0	
PVAQ				*i* IAMs_20	IAMs_20	06 23 13.2	
	comp=Z,2µm,20.0s						
MBAR	**Mbarara**	**40.84**	**201**	LR	LR	06 18 06.0	
	comp=Z,6µm,19.6s,baz=20,slow=37						
MBAR	**Mbarara**	**40.84**	**201**	P	**P**	**06 00 44.7**	**+1.2**
MBAR	**Mbarara**	**40.84**	**201**	IAMs_20	IAMs_20	06 16 10.6	
	comp=Z,7µm,19.0s						
MBAR	**Mbarara**	**40.84**	**201**	P	**P**	**06 00 44.7**	**+1.2**
MBAR				pmax	pmax		
	comp=Z,29nm,1.2s						
MBAR	**Mbarara**	**40.84**	**201**	P	**P**	**06 00 45.2**	**+1.7**
MOE	**Montemor**	**40.89**	**287**	*e*P	**P**	**06 00 42.7**	**-0.9**
MOE				*i* IAmb	IAmb	06 01 16.6	
	comp=Z,60nm,1.4s						
PCVE	**Castro Verde**	**40.92**	**286**	*e*P	**P**	**06 00 43.2**	**-0.6**
PCVE				*i* IAmb	IAmb	06 01 14.6	
	comp=Z,77nm,1.4s						
PSBE	**So Bento**	**40.94**	**289**	*e*P	**P**	**06 00 43.9**	**-0.2**
PSBE				*i* IAmb	IAmb	06 01 10.4	
	comp=Z,120nm,1.9s						
PBDV	**Barranco-do-Ve**	**40.96**	**285**	*e*P	**P**	**06 00 43.7**	**-0.5**
PBDV				*i* IAmb	IAmb	06 01 05.2	
	comp=Z,143nm,1.5s						
KIBK	**Kibwezi**	**40.98**	**190**	P	**P**	**06 00 45.9**	**+1.3**
KIBK	**Kibwezi**	**40.98**	**190**	P	**P**	**06 00 46.4**	**+1.9**
KIBK				IAMs_20	IAMs_20	06 18 21.5	
	comp=Z,7µm,20.0s						
KIBK	**Kibwezi**	**40.98**	**190**	P	**P**	**06 00 46.5**	**+1.9**
MESJ	**Messejana**	**41.00**	**286**	*e*P	**P**	**06 00 43.8**	**-0.7**
MESJ				*e*S	**S**	**06 06 56.8**	**-0.2**
MESJ				*e*SS	**SS**	**06 09 59.4**	**+0.8**
MESJ				IAMs_20	IAMs_20	06 13 18.0	
	comp=N,7µm,30.0s						
MESJ	**Messejana**	**41.00**	**286**	*e*P	**P**	**06 00 43.8**	**-0.7**
MESJ				*i* IAmb	IAmb	06 01 06.4	
	comp=N,69nm,1.7s						
MESJ	**Messejana**	**41.00**	**286**	*e*P	**P**	**06 00 43.8**	**-0.7**
MESJ				*e*S	**S**	**06 06 56.8**	**-0.2**
MESJ				*e*SS	**SS**	**06 09 59.4**	**+0.8**
MOY	**Mondy**	**41.05**	**52**	*e*P	**P**	**06 00 47.8**	**+2.9**
MOY				pmax	pmax		
	comp=Z,149nm,2.4s						
PMAFR	**Mafra**	**41.46**	**288**	*e*P	**P**	**06 00 48.3**	**0.0**
PMAFR				*i* IAmb	IAmb	06 01 17.9	
	comp=Z,170nm,1.6s						
PTEO	**Sao Teotonio**	**41.47**	**286**	*e*P	**P**	**06 00 48.0**	**-0.4**
PTEO				*i* IAmb	IAmb	06 00 55.4	
	comp=Z,157nm,1.6s						
MORF	**Marmelete**	**41.49**	**286**	*e*P	**P**	**06 00 47.9**	**-0.7**
MORF				IAMs_20	IAMs_20	06 16 13.7	
	comp=E,7µm,35.9s						
MORF	**Marmelete**	**41.49**	**286**	*e*P	**P**	**06 00 49.0**	**+0.4**
MORF				*i* IAmb	IAmb	06 00 55.2	
	comp=E,96nm,1.5s						
MORF	**Marmelete**	**41.49**	**286**	*e*P	**P**	**06 00 47.9**	**-0.7**
SPITS	**Spitsbergen Ar**	**41.56**	**352**	P	**P**	**06 00 48.6**	**0.0**
	comp=E,11nm,0.7s,baz=133,slow=9.6,SNR=18						
SPITS				LR	LR	06 19 52.9	
	comp=E,4µm,18.5s,baz=152,slow=39						
	comp=E,11nm,0.7s						
PFVI	**Vila Bisbo**	**41.68**	**285**	*e*P	**P**	**06 00 49.6**	**-0.5**
PFVI				*i* IAmb	IAmb	06 01 03.9	
	comp=E,200nm,1.8s						
SHL	**Shillong**	**41.76**	**94**	P	**P**	**06 00 50.6**	**-0.5**
SHL				IAmb	IAmb	06 00 55.8	
	comp=Z,67nm,0.8s						
SHL	**Shillong**	**41.76**	**94**	P	**P**	**06 00 50.6**	**-0.5**
SHL				pmax	pmax		
	comp=Z,67nm,0.8s						
SHL	**Shillong**	**41.76**	**94**	P	**P**	**06 00 52.6**	**+1.6**
AVE	**Averroes**	**41.93**	**279**	P	**P**	**06 00 48.9**	**-3.3**
AVE	**Averroes**	**41.93**	**279**	P	**P**	**06 00 51.8**	**-0.4**
AVE				IAmb	IAmb	06 00 53.4	
	comp=Z,168nm,1.2s						
JMIC	**Jan Mayen**	**42.31**	**337**	LR	LR	06 18 44.4	
	comp=Z,6µm,19.2s,baz=110,slow=36						
GTA2	**Gaotai**	**42.41**	**71**	*e*P	**P**	**06 00 57.8**	**+1.6**
GTA2				PP	**PP**	**06 02 38.8**	**+4.5**
GTA2				S	**S**	**06 07 16.6**	**-1.7**
GTA2				pmax	pmax		
	comp=Z,27nm,1.0s						
GTA2				pmax	pmax		
	comp=Z,760nm,10.9s						
GTA2				LR	LR		
	comp=Z,6µm,18.9s						
GTA2				LR	LR		
	comp=Z,4µm,17.8s						
GTA2				LR	LR		
	comp=Z,4µm,17.8s						
ZAK	**Zakamensk**	**42.61**	**54**	*e*P	**P**	**06 00 59.0**	**+1.3**
ZAK				*e*		06 02 38.1	
ZAK				pmax	pmax		
	comp=Z,80nm,2.0s						
ZAK				pmax	pmax		
	comp=Z,57nm,2.0s						
TLY	**Talaya**	**42.69**	**52**	P	**P**	**06 00 57.0**	**-1.1**
TLY	**Talaya**	**42.69**	**52**	*c i*P	**P**	**06 01 00.4**	**+2.3**
TLY				pmax	pmax		
	comp=Z,78nm,1.6s						
TLY				MLR	MLR		
	comp=Z,4µm,16.0s						
TLY	**Talaya**	**42.69**	**52**	P	**P**	**06 01 00.5**	**+2.3**
TIO	**Tiouine**	**42.75**	**276**	P	**P**	**06 00 56.6**	**-2.5**
IRK	**Irkutsk**	**43.02**	**51**	*e*P	**P**	**06 01 01.5**	**+0.7**
IRK				*e*S	**S**	**06 07 33.7**	**+7.1**
IRK				pmax	pmax		
	comp=Z,219nm,2.2s						
BRDH	**Bariadhala**	**43.06**	**97**	LR	LR	06 22 06.3	
	comp=Z,3µm,18.3s,baz=310,slow=41						
MALK	**Mahakanadarawa**	**44.09**	**123**	P	**P**	**06 01 07.6**	**-2.2**
MORE	**Moreh**	**44.32**	**94**	IAMs_20	IAMs_20	06 21 20.6	
	comp=Z,4µm,21.0s						
PALK	**Pallekele**	**45.03**	**124**	LR	LR	06 21 19.9	
	comp=Z,3µm,20.7s,baz=316,slow=38						
PALK	**Pallekele**	**45.03**	**124**	P	**P**	**06 01 18.2**	**+0.8**
PALK	**Pallekele**	**45.03**	**124**	P	**P**	**06 01 18.2**	**+0.8**
PALK				pmax	pmax		
	comp=Z,285nm,1.9s						
PALK				MLR	MLR		
	comp=Z,4µm,19.0s						
PALK	**Pallekele**	**45.03**	**124**	P	**P**	**06 01 21.3**	**+3.9**
SONM	**Songino Array**	**45.05**	**57**	P	**P**	**06 01 17.3**	**0.0**
	comp=Z,6.4nm,0.8s,baz=273,slow=8.4,SNR=25						
SONM				LR	LR	06 22 26.9	
	comp=Z,8µm,18.2s,baz=284,slow=39						
	comp=Z,6.4nm,0.8s						
SONM	**Songino Array**	**45.05**	**57**	P	**P**	**06 01 16.1**	**-1.2**
TORD	**Torodi Ar. Bea**	**45.47**	**248**	P	**P**	**06 01 19.2**	**-1.5**
	comp=Z,22nm,1.1s,baz=27,slow=2.9,SNR=42						
	comp=Z,22nm,1.1s						
TORD	**Torodi Ar. Bea**	**45.47**	**248**	P	**P**	**06 01 16.9**	**-3.9**
ULN	**Ulaanbaatar**	**45.48**	**57**	P	**P**	**06 01 20.2**	**-0.5**
ULN				IAmb	IAmb	06 01 28.4	
	comp=Z,94nm,1.1s						
ULN	**Ulaanbaatar**	**45.48**	**57**	IAMs_20	IAMs_20	06 23 05.8	
	comp=Z,7µm,20.0s						
ULN	**Ulaanbaatar**	**45.48**	**57**	*c e*P	**P**	**06 01 21.9**	**+1.2**
ULN				pmax	pmax		
	comp=Z,121nm,1.7s						
ULN				MLR	MLR		
	comp=Z,6µm,15.0s						
ULN	**Ulaanbaatar**	**45.48**	**57**	P	**P**	**06 01 22.2**	**+1.5**
ULN	**Ulaanbaatar**	**45.48**	**57**	P	**P**	**06 01 21.9**	**+1.2**
BORG	**Borgarnes**	**45.82**	**327**	LR	LR	06 22 08.9	
	comp=Z,5µm,18.1s,baz=98,slow=38						
KAAM	**Kaadhehdhoo**	**45.92**	**138**	IAMs_20	IAMs_20	06 19 53.7	
	comp=Z,7µm,20.0s						
SCO	**Scoresbysund**	**46.51**	**335**	P	**P**	**06 01 27.4**	**-0.9**
SCO				IAmb	IAmb	06 01 37.9	
	comp=Z,52nm,1.3s						
SCO	**Scoresbysund**	**46.51**	**335**	P	**P**	**06 01 27.4**	**-0.9**
SCO				pmax	pmax		
	comp=Z,52nm,1.3s						
SCO	**Scoresbysund**	**46.51**	**335**	*i* P	**P**	**06 01 27.4**	**-0.9**
SCO				IAmb	IAmb	06 01 34.5	
	comp=Z,147nm,1.6s						
LZDM	**Lanzhou Array**	**46.52**	**74**	P	**P**	**06 01 29.6**	**+0.2**
	comp=Z,8.1nm,0.7s,baz=282,slow=7.4,SNR=14						
LZDM				LR	LR	06 26 05.1	
	comp=Z,4µm,18.9s,baz=330,slow=43						
	comp=Z,8.1nm,0.7s						
EDA	**Edea**	**46.55**	**231**	P	**P**	**06 01 28.7**	**-0.6**
EDA				IAmb	IAmb	06 01 35.4	
	comp=Z,76nm,1.7s						
LZH	**Lanzhou**	**46.59**	**74**	*e*P	**P**	**06 01 31.3**	**+1.6**
LZH				pP	sP	06 01 35.3	+2.0
LZH				PP	**PP**	**06 03 24.4**	**+5.5**
LZH				ScP	**ScP**	**06 06 57.3**	**-0.4**
LZH				S	**S**	**06 08 18.9**	**-0.2**
LZH				SS	**SS**	**06 11 41.1**	**-3.8**
LZH				pmax	pmax		
	comp=Z,55nm,1.7s						
LZH				pmax	pmax		
	comp=Z,940nm,6.6s						
LZH				LR	LR		
	comp=Z,7µm,19.2s						
LZH				LR	LR		
	comp=Z,3µm,16.5s						
LZH				LR	LR		
	comp=Z,8µm,20.3s						
DBG	**Daneborg**	**46.63**	**340**	*i* P	**P**	**06 01 29.4**	**+0.1**
DBG				IAmb	IAmb	06 01 36.2	
	comp=Z,77nm,1.3s						
DAG	**Danmarks Havn**	**46.86**	**344**	*i* P	**P**	**06 01 32.4**	**+1.4**
DAG				IAmb	IAmb	06 01 35.4	
	comp=Z,90nm,1.6s						
TNCH	**TengChong**	**47.23**	**90**	⇓P	**P**	**06 01 35.1**	**+0.2**
TNCH				PP	**PP**	**06 03 28.3**	**+2.6**
TNCH				S	**S**	**06 08 26.8**	**-1.8**
TNCH				sS	sS	06 08 40.5	+7.6
TNCH				SS	**SS**	**06 11 49.1**	**-6.6**
TNCH				pmax	pmax		
	comp=Z,110nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,650nm,3.2s						
TNCH				LR	LR		
	comp=Z,2µm,14.8s						
TNCH				LR	LR		
	comp=Z,3µm,14.0s						
TNCH				LR	LR		
	comp=Z,5µm,22.1s						
NOR	**Nord**	**48.11**	**350**	*i* P	**P**	**06 01 41.4**	**+0.6**
NOR				IAmb	IAmb	06 01 45.8	
	comp=Z,340nm,2.2s						
CD2	**Chengdu**	**48.59**	**80**	P	**P**	**06 01 47.0**	**+1.8**
CD2				pP	sP	06 01 52.5	+3.6
CD2				S	**S**	**06 08 46.6**	**-0.9**
CD2				SS	**SS**	**06 12 17.3**	**0.0**
CD2				pmax	pmax		
	comp=Z,80nm,0.9s						
CD2				pmax	pmax		
	comp=Z,810nm,8.0s						
CD2				LR	LR		
	comp=Z,7µm,18.8s						
CD2				LR	LR		
	comp=Z,7µm,19.8s						
CD2				LR	LR		
	comp=Z,5µm,14.5s						
CIT	**Chita**	**48.70**	**50**	*e*P	**P**	**06 01 46.2**	**+0.5**
CIT				*e*		06 03 11.8	
CIT				*e*		06 03 44.4	
CIT				pmax	pmax		
	comp=Z,206nm,2.1s						
PMPST	**Porto Santo, M**	**48.88**	**283**	*e*P	**P**	**06 01 47.5**	**+0.2**
PMPST				*i* IAmb	IAmb	06 01 54.6	
	comp=Z,442nm,1.8s						
PMPS	**Porto Santo**	**48.89**	**283**	*e*P	**P**	**06 01 47.0**	**-0.4**
PMPS				*i* IAmb	IAmb	06 01 48.8	
	comp=Z,258nm,2.0s						
PZH	**PanZhiHua**	**49.04**	**86**	P	**P**	**06 01 49.8**	**+1.0**
PZH				PP	**PP**	**06 03 47.5**	**+5.3**
PZH				S	**S**	**06 08 53.3**	**-0.7**
PZH				SS	**SS**	**06 12 18.3**	**-6.5**
PZH				pmax	pmax		
	comp=Z,80nm,1.4s						
PZH				pmax	pmax		
	comp=Z,650nm,3.5s						
PZH				LR	LR		
	comp=Z,2µm,17.8s						
PZH				LR

HHC SS **SS** **06 12 53.1 +4.6**
HHC pmax pmax
comp=Z,41nm,2.0s
HHC pmax pmax
comp=Z,530nm,8.0s
HHC LR LR
comp=Z,5μm,21.8s
HHC LR LR
comp=Z,4μm,21.8s
HHC LR LR
comp=Z,3μm,23.7s
CHTO Chiang Mai 50.88 97 P **P** **06 02 01.9 -0.7**
CHTO IAmb IAmb 06 02 09.0
comp=Z,82nm,0.9s
CHTO Chiang Mai 50.88 97 P **P** **06 02 04.0 +1.4**
CHTO Chiang Mai 50.88 97 P **P** **06 02 01.9 -0.7**
CHTO pmax pmax
comp=Z,82nm,1.0s
CHTO Chiang Mai 50.88 97 P **P** **06 02 02.4 -0.3**
CHTO Chiang Mai 50.88 97 P **P** **06 02 02.9 +0.3**
comp=Z,2μmcomp=Z,1μmcomp=Z,105nm,1.7s
CM31 Chiang Mai Arr 51.08 97 IAmb IAmb 06 02 08.4
comp=Z,89nm,1.1s
CMAR Chiang Mai Arr 51.08 97 P **P** **06 02 03.9 -0.2**
comp=Z,50nm,0.8s,baz=304,slow=6.4,SNR=7.4
CMAR LR LR 06 28 38.2
comp=Z,2μm,19.2s,baz=290,slow=42
comp=Z,50nm,0.8s
CMAR Chiang Mai Arr 51.08 97 P **P** **06 02 03.8 -0.4**
XAN Xi'an 51.22 74 P **P** **06 02 05.8 +0.7**
XAN pP sP 06 02 13.3 +4.5
XAN PP **PP** **06 04 07.4 +5.6**
XAN S **S** **06 09 24.9 +0.8**
XAN sS sS 06 09 40.4 +12
XAN SS **SS** **06 13 02.8 +3.6**
XAN pmax pmax
comp=Z,83nm,1.1s
XAN pmax pmax
comp=Z,900nm,6.5s
XAN LR LR
comp=Z,3μm,14.8s
XAN LR LR
comp=Z,8μm,14.4s
XAN LR LR
comp=Z,8μm,16.0s
SUMG Summit 51.76 338 P **P** **06 02 05.9 -3.1**
SUMG Summit 51.76 338 *i* P **P** **06 02 08.3 -0.7**
SUMG IAmb IAmb 06 02 14.1
comp=Z,990nm,2.5s
ACRG Accra 51.97 243 P **P** **06 02 10.0 -0.8**
ACRG IAmb IAmb 06 02 20.8
comp=Z,50nm,1.0s
TIXI Tiksi 52.32 23 LR LR 06 28 59.3
comp=Z,6μm,18.3s,baz=294,slow=41
TIXI Tiksi 52.32 23 P **P** **06 02 13.9 +1.2**
TIXI IAmb IAmb 06 02 23.7
comp=Z,97nm,1.2s
TIXI Tiksi 52.32 23 P **P** **06 02 13.9 +1.2**
TIXI pmax pmax
comp=Z,97nm,1.3s
TIY Taiyuan 52.35 68 P **P** **06 02 15.3 +1.8**
TIY S **S** **06 09 35.8 -3.7**
TIY pmax pmax
comp=Z,480nm,4.0s
TIY LR LR
comp=Z,3μm,19.4s
TIY LR LR
comp=Z,3μm,22.3s
TIY LR LR
comp=Z,4μm,18.5s
DGAR Diego Garcia 52.49 144 IAMs_20 IAMs_20 06 28 03.4
comp=Z,4μm,18.0s
ANGG Ammassalik, Gr 52.59 329 *i* P **P** **06 02 16.2 +1.4**
XLT XiLinHaoTe 52.63 60 *eP* **P** **06 02 17.5 +1.9**
XLT pP sP 06 02 23.0 +3.7
XLT sP pP 06 02 25.1 +6.9
XLT PcP **PcP** **06 03 28.0 +2.4**
XLT S **S** **06 09 41.1 -2.2**
XLT pmax pmax
comp=Z,25nm,2.0s
XLT LR LR
comp=Z,570nm,15.7s
XLT LR LR
comp=Z,4μm,15.7s
XLT LR LR
comp=Z,5μm,15.7s
GYA Guiyang 52.92 84 ⇑P **P** **06 02 19.0 +1.1**
GYA S **S** **06 09 48.9 +1.2**
GYA pmax pmax
comp=Z,55nm,0.8s
GYA LR LR
comp=Z,3μm,20.8s
GYA LR LR
comp=Z,4μm,17.9s
GYA LR LR
comp=Z,6μm,18.2s
HILR Hailar Array B 53.15 52 P **P** **06 02 18.5 -0.7**
comp=Z,9.6nm,0.7s,baz=279,slow=6.9,SNR=14
HILR LR LR 06 28 54.8
comp=Z,2μm,18.0s,baz=90,slow=40
comp=Z,9.6nm,0.7s
HIA Hailar 53.23 52 IAMs_20 IAMs_20 06 28 37.0
comp=Z,4μm,18.0s
HIA Hailar 53.23 52 P **P** **06 02 21.8 +1.9**
ENH Enshi 53.30 78 IAMs_20 IAMs_20 06 28 52.0
comp=Z,4μm,18.0s
ENH Enshi 53.30 78 P **P** **06 02 21.6 +1.0**
LYN LuoYang 53.67 72 ⇑P **P** **06 02 25.6 +2.4**
LYN S **S** **06 10 00.8 +3.4**
LYN pmax pmax
comp=Z,60nm,1.4s
LYN pmax pmax
comp=Z,590nm,4.3s
LYN LR LR
comp=Z,10μm,17.3s
LYN LR LR
comp=Z,3μm,15.2s
LYN LR LR
comp=Z,8μm,17.3s
NEEM North Greenlan 54.05 344 *i* P **P** **06 02 24.2 -1.5**
NEEM IAmb IAmb 06 02 30.6
comp=Z,972nm,2.3s
HNS HongShan 54.13 68 ⇓P **P** **06 02 28.3 +1.8**
HNS PP **PP** **06 04 32.0 +4.1**
HNS S **S** **06 10 07.8 +4.2**
HNS SS **SS** **06 13 50.1 +5.3**
HNS pmax pmax
comp=Z,23nm,2.3s
HNS LR LR
comp=Z,5μm,18.4s
HNS LR LR
comp=Z,5μm,18.6s
HNS LR LR
comp=Z,5μm,17.5s
BJT Baijiatuau 54.13 64 P **P** **06 02 29.1 +2.6**
BJI2 Beijing 54.13 64 P **P** **06 02 27.8 +1.3**
BJI2 PP **PP** **06 04 28.3 +0.5**
BJI2 S **S** **06 10 01.3 -2.3**
BJI2 SS **SS** **06 13 48.3 +3.5**
BJI2 pmax pmax
comp=Z,220nm,3.9s
BJI2 LR LR
comp=Z,3μm,17.3s
BJI2 LR LR
comp=Z,2μm,16.9s
BJI2 LR LR
comp=Z,1μm,19.3s
DBIC Dimbokro 54.57 248 P **P** **06 02 28.5 -1.5**
comp=Z,18nm,0.7s,baz=63,slow=7.3,SNR=35
DBIC LR LR 06 29 10.9
comp=Z,4μm,18.0s,baz=76,slow=40
comp=Z,18nm,0.7s
DBIC Dimbokro 54.57 248 P **P** **06 02 28.7 -1.3**
DBIC IAmb IAmb 06 02 36.9
comp=Z,55nm,1.1s
DBIC Dimbokro 54.57 248 P **P** **06 02 28.7 -1.3**
DBIC pmax pmax
comp=Z,55nm,1.1s
YAK Yakutsk 54.78 35 LR LR 06 29 21.6
comp=Z,5μm,19.0s,baz=282,slow=40
YAK Yakutsk 54.78 35 *eP* **P** **06 02 30.2 -0.7**
YAK *e* 06 03 30.7
YAK *e*PPP PPP 06 05 45.0
YAK *e*S **S** **06 10 08.8 -2.9**
YAK *e**SS **sS** **06 10 20.1 +4.1**
YAK *e* 06 12 14.5

YAK *e*SS **SS** **06 13 53.3 -0.8**
YAK *e*SSS SSS 06 15 58.5
YAK pmax pmax
comp=Z,124nm,1.4s
YAK pmax pmax
comp=E,42nm,1.3s
YAK pmax pmax
comp=N,12nm,1.3s
YAK smax smax
comp=E,1μm,8.4s
YAK smax smax
comp=N,725nm,6.1s
YAK MLR MLR
comp=N,8μm,25.0s
YAK MLR MLR
comp=E,5μm,22.0s
LSZ Lusaka 55.55 199 P **P** **06 02 36.8 -0.3**
comp=E,6.3nm,0.5s,baz=20,slow=6.3,SNR=12
LSZ LR LR 06 26 32.9
comp=E,4μm,18.2s,baz=18,slow=36
comp=E,6.3nm,0.5s
LSZ Lusaka 55.55 199 P **P** **06 02 38.1 +1.1**
LSZ IAmb IAmb 06 02 51.2
comp=Z,61nm,1.3s
LSZ Lusaka 55.55 199 P **P** **06 02 38.1 +1.1**
LSZ pmax pmax
comp=Z,61nm,1.3s
ZEA Zeya 56.18 45 *eP* **P** **06 02 43.8 +2.7**
ZEA *e*S **S** **06 10 34.6 +3.9**
ZEA *e* 06 10 48.1
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=N,10.0nm,0.5s
ZEA smax smax
comp=N,500nm,5.4s
ZEA smax smax
comp=E,1μm,13.9s
ZEA MLR MLR
comp=E,1μm,12.0s
ZEA MLR MLR
comp=N,2μm,13.0s
ZEA MLR MLR
comp=Z,4μm,16.0s
SAATT Saattut 56.21 337 *i* P **P** **06 02 40.2 -0.8**
SAATT IAmb IAmb 06 02 44.9
comp=Z,116nm,1.2s
GULI GuiLin 56.38 83 P **P** **06 02 43.8 +0.8**
GULI S **S** **06 10 35.4 +1.3**
GULI pmax pmax
comp=Z,50nm,1.5s
GULI LR LR
comp=Z,3μm,19.2s
GULI LR LR
comp=Z,3μm,21.7s
GULI LR LR
comp=Z,5μm,18.4s
TIA Tai'an 56.38 68 P **P** **06 02 44.6 +1.8**
TIA S **S** **06 10 37.8 +3.9**
TIA pmax pmax
comp=Z,39nm,1.8s
TIA pmax pmax
comp=Z,370nm,6.2s
TIA LR LR
comp=Z,2μm,17.2s
TIA LR LR
comp=Z,950nm,15.1s
TIA LR LR
comp=Z,6μm,21.6s
NUUG Nuugaatsiaq 56.43 338 *i* P **P** **06 02 41.2 -1.4**
NUUG IAmb IAmb 06 02 46.2
comp=Z,84nm,1.6s
SAQQ Saqqaq 56.59 336 *i* P **P** **06 02 44.0 +0.3**
SAQQ IAmb IAmb 06 02 48.1
comp=Z,84nm,1.1s
ILULI Ilulissat 56.59 335 IAmb IAmb 06 02 50.5
comp=Z,96nm,1.4s
ILULI Ilulissat 56.59 335 *i* P **P** **06 02 44.5 +0.7**
ILULI IAmb IAmb 06 02 47.8
comp=Z,50nm,1.1s
OPO Ambohidratompo 56.73 177 LR LR 06 27 10.6
comp=Z,2μm,19.8s,baz=182,slow=36
UPNV Upernavik 56.81 340 *i* P **P** **06 02 45.2 -0.1**
UPNV IAmb IAmb 06 02 49.4
comp=Z,60nm,1.2s
NIAQ Niaqornat 56.84 337 *i* P **P** **06 02 45.2 -0.4**
NIAQ IAmb IAmb 06 02 48.6
comp=Z,12nm,0.8s
WHN Wuhan 56.89 75 P **P** **06 02 46.6 +0.1**
WHN S **S** **06 10 43.0 +2.4**
WHN SS **SS** **06 14 35.5 +7.0**
WHN pmax pmax
comp=Z,600nm,1.7s
WHN LR LR
comp=Z,4μm,11.4s
WHN LR LR
comp=Z,6μm,11.9s
WHN LR LR
comp=Z,9μm,17.3s
CNSH ChangSha 56.94 78 P **P** **06 02 48.0 +1.2**
CNSH S **S** **06 10 44.6 +3.3**
CNSH LR LR
comp=Z,4μm,16.3s
CNSH LR LR
comp=Z,3μm,20.6s
CNSH LR LR
comp=Z,2μm,24.5s
ABPO Ambohimpanom 57.18 177 P **P** **06 02 47.5 -1.2**
ABPO IAmb IAmb 06 02 51.0
comp=Z,46nm,1.1s
ABPO Ambohimpanom 57.18 177 IAMs_20 IAMs_20 06 30 25.1
comp=Z,3μm,18.0s
ABPO Ambohimpanom 57.18 177 P **P** **06 02 47.5 -1.2**
ABPO pmax pmax
comp=Z,46nm,1.1s
ABPO MLR MLR
comp=Z,3μm,18.0s
NRS Narsarsuaq 57.20 325 P **P** **06 02 47.0 -1.1**
NRS Narsarsuaq 57.20 325 P **P** **06 02 47.1 -1.1**
NRS pmax pmax
comp=Z,117nm,1.1s
NRS Narsarsuaq 57.20 325 *i* P **P** **06 02 48.3 +0.1**
NRS IAmb IAmb 06 02 52.6
comp=Z,90nm,1.0s
SFJD Kangerlussuaq 57.22 332 LR LR 06 28 34.8
comp=Z,4μm,18.5s,baz=66,slow=37
SFJD Kangerlussuaq 57.22 332 P **P** **06 02 46.9 -1.4**
SFJD IAmb IAmb 06 02 51.7
comp=Z,40nm,1.1s
SFJD Kangerlussuaq 57.22 332 P **P** **06 02 46.9 -1.4**
SFJD pmax pmax
comp=Z,40nm,1.1s
SFJD Kangerlussuaq 57.22 332 *i* P **P** **06 02 48.3 +0.1**
SFJD IAmb IAmb 06 02 52.0
comp=Z,51nm,1.1s
GDH Godhavn 57.39 335 *i* P **P** **06 02 49.1 -0.2**
GDH IAmb IAmb 06 02 53.6
comp=Z,50nm,1.0s
HEH HeiHe 57.55 49 *eP* **P** **06 02 52.0 +1.2**
HEH pP sP 06 03 04.3 +10
HEH S **S** **06 10 52.4 +3.6**
HEH pmax pmax
comp=Z,33nm,1.5s
HEH LR LR
comp=Z,6μm,15.0s
HEH LR LR
comp=Z,7μm,17.0s
HEH LR LR
comp=Z,7μm,14.8s
TULEG Thule 58.09 345 IAMs_20 IAMs_20 06 29 43.3
comp=Z,3μm,20.0s
TULEG Thule 58.09 345 *i* P **P** **06 02 53.1 -1.1**
TULEG IAmb IAmb 06 02 58.2
comp=Z,305nm,1.9s
IVI Ivigtut 58.42 325 IAMs_20 IAMs_20 06 32 13.1
comp=Z,4μm,18.0s
IVI Ivigtut 58.42 325 *i* P **P** **06 02 55.8 -1.0**
IVI IAmb IAmb 06 03 00.9
comp=Z,84nm,1.1s
DL2 Dalian 58.43 63 P **P** **06 02 58.0 +0.8**
DL2 S **S** **06 11 04.5 +3.8**
DL2 pmax pmax
comp=Z,99nm,1.4s
DL2 pmax pmax
comp=Z,440nm,9.0s
DL2 LR LR
comp=Z,3μm,15.3s
DL2 LR LR
comp=Z,2μm,16.0s
DL2 LR LR
comp=Z,4μm,18.0s
SNY Shenyang 58.52 59 ⇓P **P** **06 03 00.8 +3.1**
SNY S **S** **06 11 08.6 +6.9**
SNY pmax pmax
comp=Z,16nm,0.7s
SNY pmax pmax
comp=Z,350nm,7.2s
SNY LR LR
comp=Z,5μm,14.7s
SNY LR LR
comp=Z,2μm,15.2s
SNY LR LR
comp=Z,3μm,20.4s
NUUK Nuuk 58.74 329 *i* P **P** **06 02 58.7 -0.3**
NUUK IAmb IAmb 06 03 02.8
comp=Z,50nm,1.0s
KSANE Kasane 58.78 202 *i* P **P** **06 02 58.9 -0.9**
MBO M'Bour 58.89 264 IAMs_20 IAMs_20 06 30 53.7
comp=Z,5μm,22.0s
CN2 Changchun 58.92 57 *eP* **P** **06 02 58.0 -2.6**
CN2 *e*S **S** **06 11 00.5 -6.5**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,600nm,4.0s
CN2 LR LR
comp=Z,2μm,15.0s
CN2 LR LR
comp=Z,2μm,15.0s
CN2 LR LR
comp=Z,3μm,16.0s
QIZ Qiongzhong 59.30 89 P **P** **06 03 06.0 +2.5**
QIZ Qiongzhong 59.30 89 P **P** **06 03 04.3 +0.8**
QIZ S **S** **06 11 14.6 +2.1**
QIZ pmax pmax
comp=Z,39nm,1.4s
QIZ pmax pmax
comp=Z,660nm,11.6s
QIZ LR LR
comp=Z,1μm,20.4s
QIZ LR LR
comp=Z,2μm,19.6s
QIZ LR LR
comp=Z,2μm,25.3s
BNX BinXian 59.37 54 ⇓P **P** **06 03 00.6 -3.0**
BNX S **S** **06 11 14.3 +1.7**
BNX pmax pmax
comp=Z,650nm,5.1s
BNX LR LR
comp=Z,7μm,18.4s
BNX LR LR
comp=Z,3μm,17.8s
BNX LR LR
comp=Z,7μm,15.1s
KCSI Kotaezne, Aceh 59.56 112 P **P** **06 03 04.9 -0.5**
comp=Z,26nm,0.9s
NJ2 Nanjing 59.56 72 *eP* **P** **06 03 06.1 +0.9**
NJ2 pP sP 06 03 21.3 +12
NJ2 S **S** **06 11 18.8 +3.3**
NJ2 SS **SS** **06 15 15.4 +4.9**
NJ2 pmax pmax
comp=Z,55nm,1.3s
NJ2 LR LR
comp=Z,3μm,19.8s
NJ2 LR LR
comp=Z,2μm,23.3s
NJ2 LR LR
comp=Z,3μm,17.7s
VOI Vohitsoka 60.03 178 P **P** **06 03 08.6 +0.1**
KULM Kulim 60.50 108 P **P** **06 03 14.0 +2.2**
KULM Kulim 60.50 108 P **P** **06 03 15.0 +3.2**
comp=Z,56nm,1.8s
ROCAM Rodrigues Isla 60.51 160 IAMs_20 IAMs_20 06 29 27.8
comp=Z,4μm,18.0s
KLR Kul'dur 60.53 49 LR LR 06 32 20.8
comp=Z,4μm,18.2s,baz=301,slow=39
KLR Kul'dur 60.53 49 *eP* **P** **06 03 12.9 +1.3**
KLR pmax pmax
comp=Z,15nm,1.7s
KLR MLR MLR
comp=Z,5μm,16.0s
XAUDM Khaudum 60.67 205 *i* P **P** **06 03 12.6 -0.3**
PSI Prapat 60.89 112 P **P** **06 03 13.4 -1.2**
PSI Prapat 60.89 112 P **P** **06 03 13.2 -1.4**
PSI pmax pmax
comp=Z,204nm,1.6s
PSI MLR MLR
comp=Z,3μm,21.0s
PSI Prapat 60.89 112 P **P** **06 03 13.9 -0.7**
comp=Z,982nmcomp=Z,74nm,1.6s
GSI Gunungsitoli 60.94 114 P **P** **06 03 13.4 -1.4**
GSI Gunungsitoli 60.94 114 P **P** **06 03 15.4 +0.6**
GSI Gunungsitoli 60.94 114 P **P** **06 03 17.3 +2.5**
comp=Z,2μmcomp=Z,98nm,0.7s
RPSI Rantau Prapat 60.96 112 P **P** **06 03 13.2 -1.7**
RPSI IAMs_20 IAMs_20 06 30 26.6
comp=Z,3μm,21.0s
MDJ Mudanjiang 61.25 54 IAMs_20 IAMs_20 06 32 08.2
comp=Z,5μm,21.0s
MDJ Mudanjiang 61.25 54 P **P** **06 03 20.8 +4.3**
MDJ S **S** **06 11 37.1 +0.3**
MDJ SS **SS** **06 15 35.5 -0.9**
MDJ pmax pmax
comp=Z,20nm,2.2s
MDJ LR LR
comp=Z,9μm,21.3s
MDJ LR LR
comp=Z,4μm,20.6s
MDJ LR LR
comp=Z,6μm,15.8s
IPM Ipoh 61.32 109 P **P** **06 03 16.4 -1.0**
IPM Ipoh 61.32 109 P **P** **06 03 17.4 0.0**
comp=Z,75nm,0.8s
BROLN Tlhalogang 61.35 198 *i* P **P** **06 03 15.9 -1.5**
SSE Sheshan 61.76 71 P **P** **06 03 17.9 -2.3**
SSE S **S** **06 11 40.4 -3.3**
SSE SS **SS** **06 15 44.5 -0.5**
SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,210nm,3.5s
SSE LR LR
comp=Z,1μm,17.7s
GRNR Gornyy 62.54 46 *eP* **P** **06 03 27.1 +2.0**
GRNR MLR MLR
comp=E,4μm,15.0s
GRNR MLR MLR
comp=N,2μm,16.0s
GRNR MLR MLR
comp=Z,4μm,15.0s
TSUM Tsumeb 62.63 209 P **P** **06 03 24.5 -1.6**
comp=Z,9.9nm,0.9s,baz=42,slow=6.1,SNR=11
TSUM LR LR 06 31 52.9
comp=Z,7μm,18.6s,baz=22,slow=37
comp=Z,9.9nm,0.9s
TSUM Tsumeb 62.63 209 P **P** **06 03 25.4 -0.7**
KHWEE KHWEE 62.64 200 *i* P **P** **06 03 25.3 -0.9**
MNSI Mandailing Nat 62.73 113 P **P** **06 03 29.0 +2.2**
comp=Z,73nm,0.9s
PSTR Posyet 62.94 56 *i* P **P** **06 03 29.7 +1.8**
QZH2 Quanzhou 62.94 79 P **P** **06 03 29.8 +1.6**
QZH2 PP **PP** **06 05 52.8 +6.4**
QZH2 S **S** **06 12 00.9 +2.1**
QZH2 LR LR
comp=Z,5μm,17.2s
QZH2 LR LR
comp=Z,3μm,17.9s
QZH2 LR LR
comp=Z,5μm,17.5s
USRK Ussuriysk Ar. 62.96 54 P **P** **06 03 27.6 -0.4**
comp=Z,11nm,0.8s,baz=295,slow=4.3,SNR=16
comp=Z,11nm,0.8s
GRTLG Ghanzi 63.34 204 *i* P **P** **06 03 29.9 -0.9**
KS19 Wonju Array Si 63.44 62 P **P** **06 03 33.1 +1.8**
KS19 IAmb IAmb 06 03 41.3
comp=Z,34nm,0.8s
KSAR Wonju Array Be 63.48 62 P **P** **06 03 30.1 -1.5**
KSAR Wonju Array Be 63.48 62 P **P** **06 03 30.1 -1.5**
KSRS Korea Array 63.50 62 P **P** **06 03 31.9 +0.2**
comp=Z,24nm,0.9s,baz=285,slow=7.4,SNR=32
KSRS LR LR 06 34 41.6
comp=Z,3μm,18.2s,baz=290,slow=39

comp=Z,24nm,0.9s
TJN Taejon 63.64 63 P **P** **06 03 36.6 +4.0**
LPHEP Lephephe 63.89 199 *i* P **P** **06 03 33.3 -1.1**
SEY Seymchan 63.91 29 LR LR 06 36 21.0
comp=Z,4μm,18.2s,baz=305,slow=41
SEY Seymchan 63.91 29 *ce* P **P** **06 03 34.5 +0.5**
SEY pmax pmax
comp=Z,129nm,1.7s
SEY MLR MLR
comp=Z,4μm,20.0s
RES Resolute Bay 64.03 349 P **P** **06 03 34.6 0.0**
comp=Z,4.2nm,0.9s,baz=30,slow=8.1,SNR=8.4
RES LR LR 06 33 40.6
comp=Z,3μm,18.4s,baz=28,slow=38
comp=Z,4.2nm,0.9s
RES Resolute Bay 64.03 349 IAmb IAmb 06 03 39.5
comp=Z,116nm,1.9s
BKNI Bangkinang 64.11 112 P **P** **06 03 35.8 -0.2**
PPI Padang Panjang 64.18 113 P **P** **06 03 38.2 +1.8**
comp=Z,3μmcomp=Z,61nm,2.0s
KDWAN Kaudwane 64.22 200 *i* P **P** **06 03 34.9 -1.6**
KGCAE Kacgae 64.43 203 *i* P **P** **06 03 35.9 -2.0**
PDSI Padang 64.54 113 P **P** **06 03 38.0 -0.8**
comp=Z,8μmcomp=Z,72nm,1.4s
MA2 Magadan 65.13 33 LR LR 06 37 38.7
comp=Z,4μm,18.0s,baz=304,slow=41
MA2 Magadan 65.13 33 P **P** **06 03 42.5 +0.5**
MA2 Magadan 65.13 33 P **P** **06 03 43.6 +1.6**
MA2 Magadan 65.13 33 *ce* P **P** **06 03 43.7 +1.7**
MA2 pmax pmax
comp=Z,143nm,1.7s
YHNB Yeheng 65.22 77 P **P** **06 03 43.3 0.0**
YHNB Yeheng 65.22 77 P **P** **06 03 46.0 +2.7**
BILL Bilibino 65.31 21 P **P** **06 03 43.7 +0.6**
BILL IAMs_20 IAMs_20 06 36 23.2
comp=Z,3μm,20.0s
BILL Bilibino 65.31 21 *ce* P **P** **06 03 44.2 +1.1**
BILL pmax pmax
comp=Z,137nm,1.7s
BILL MLR MLR
comp=Z,6μm,22.0s
FRB Frobisher Bay 65.33 333 LR LR 06 32 49.5
comp=Z,4μm,18.9s,baz=57,slow=37
SSLB Suanglung 65.38 78 P **P** **06 03 47.3 +3.1**
TPUB Ta-pu 65.39 79 P **P** **06 03 47.1 +2.8**
PPSI Pulau Pagai 65.50 115 P P 06 03 50.3 +5.3
comp=Z,3μmcomp=Z,162nm,1.6s
LBTB Lobatse 65.53 199 P **P** **06 03 43.9 -1.2**
comp=Z,11nm,0.8s,baz=17,slow=7.1,SNR=12
LBTB LR LR 06 32 16.2
comp=Z,5μm,18.0s,baz=16,slow=36
comp=Z,11nm,0.8s
LBTB Lobatse 65.53 199 P **P** **06 03 45.3 +0.3**
LBTB IAmb IAmb 06 04 05.2
comp=Z,24nm,0.8s
LBTB Lobatse 65.53 199 P **P** **06 03 45.3 +0.3**
LBTB pmax pmax
comp=Z,25nm,0.9s
YULB Yu-li 65.85 79 P **P** **06 03 50.6 +3.3**
WIN Windhoek 65.88 208 P **P** **06 03 47.1 -0.4**
WIN IAmb IAmb 06 03 49.5
comp=Z,49nm,1.0s
WIN Windhoek 65.88 208 P **P** **06 03 47.1 -0.4**
WIN pmax pmax
comp=Z,49nm,1.0s
WIN MLR MLR
comp=Z,6μm,18.0s
TYV Tymovskoe 65.92 43 *e* P **P** **06 03 49.7 +2.4**
TYV *e* S **S** **06 12 39.1 +4.2**
TYV pmax pmax
comp=Z,800nm,3.8s
TYV pmax pmax
comp=Z,39nm,1.3s
TYV smax smax
comp=N,2μm,7.5s
TYV smax smax
comp=E,1μm,7.5s
TYV MLR MLR
comp=Z,8μm,14.0s
KRJI Kerinci 66.07 114 P **P** **06 03 51.3 +2.4**
UGL Uglegorsk 66.54 45 *e* P **P** **06 03 55.6 +4.3**
UGL pmax pmax
comp=Z,100nm,1.2s
UGL MLR MLR
comp=N,5μm,14.0s
UGL MLR MLR
comp=E,6μm,14.0s
UGL MLR MLR
comp=Z,5μm,18.0s
MASI Maura Aman, Be 67.36 114 P **P** **06 03 56.4 -0.6**
JNU Nakatsue 67.78 65 LR LR 06 36 17.0
comp=Z,3μm,21.0s,baz=308,slow=38
KSI Kapahiang 67.96 114 P **P** **06 04 02.4 +1.6**
YSS Yuzhno-Sakhali 68.07 47 P **P** **06 04 05.2 +4.2**
YSS Yuzhno-Sakhali 68.07 47 *e* P **P** **06 04 02.3 +1.3**
YSS *e* 06 04 26.4
YSS *e* 06 06 27.9
YSS *e* S **S** **06 13 01.4 +0.5**
YSS *e* SS **SS** **06 17 29.3 +6.9**
YSS pmax pmax
comp=Z,40nm,1.3s
YSS MLR MLR
comp=Z,2μm,15.0s
YSS MLR MLR
comp=N,1μm,14.0s
JSU Suzuyama 68.34 66 P **P** **06 04 06.6 +3.6**
KUQ Kuujjuuaa 68.78 328 IAmb IAmb 06 04 09.2
comp=Z,55nm,1.0s
DRLN Deer Lake 68.88 317 IAmb IAmb 06 04 10.4
comp=Z,74nm,1.3s
BOSA Boshof 69.06 198 P **P** **06 04 05.8 -1.6**
comp=Z,13nm,0.7s,baz=15,slow=5.3,SNR=16
BOSA LR LR 06 38 05.2
comp=Z,4μm,18.1s,baz=22,slow=39
comp=Z,13nm,0.7s
BOSA Boshof 69.06 198 P **P** **06 04 08.0 +0.6**
BOSA Boshof 69.06 198 P **P** **06 04 08.0 +0.6**
BOSA pmax pmax
comp=Z,147nm,1.8s
JOW Kunigami 69.28 72 LR LR 06 37 10.3
comp=Z,3μm,21.8s,baz=307,slow=38
A21K Barrow 69.54 7 P **P** **06 04 07.7 -2.0**
baz=342
A21K S **S** **06 13 16.9 -0.6**
baz=342
ASAJ Asahikawa 69.55 50 LR LR 06 36 14.1
comp=Z,3μm,20.6s,baz=300,slow=37
JMN Monobe 69.57 63 pP 06 04 13.4 0.0
JMN Monobe 69.57 63 P **P** **06 04 10.7 0.0**
A36M Sachs Harbour 69.67 357 P **P** **06 04 09.6 -0.9**
baz=8.6,SNR=49
A36M S **S** **06 13 20.5 +1.5**
baz=8.6
MDSI Maura Dua 69.68 113 P **P** **06 04 08.9 -2.5**
comp=Z,40nm,1.8s
LWLI Liwa 69.96 114 P **P** **06 04 13.6 +0.3**
COCO West Island 70.15 125 IAMs_20 IAMs_20 06 37 01.3
comp=Z,2μm,21.0s
SCHQ Schefferville 70.17 325 P **P** **06 04 12.8 -1.1**
comp=Z,14nm,0.7s,baz=40,slow=5.5,SNR=18
SCHQ LR LR 06 35 41.5
comp=Z,2μm,19.8s,baz=54,slow=36
comp=Z,14nm,0.7s
SCHQ Schefferville 70.17 325 IAmb IAmb 06 04 18.5
comp=Z,44nm,1.0s
KLSI 70.22 113 P **P** **06 04 14.7 0.0**
KASI Kota Agung 70.62 114 P **P** **06 04 15.3 -1.9**
comp=Z,1μmcomp=Z,121nm,0.9s
B20K Meade River 70.74 8 IAMs_20 IAMs_20 06 38 43.1
comp=Z,3μm,20.0s
B20K Meade River 70.74 8 P **P** **06 04 16.5 -0.6**
baz=342
B20K S **S** **06 13 31.4 -0.2**
baz=342
TGY Tagaytay City 70.82 87 LR LR 06 39 05.1
comp=Z,2μm,22.0s,baz=301,slow=39
MJB9 Matsu-Tunnel 70.98 58 IAmb IAmb 06 04 27.9
comp=Z,81nm,1.4s
MAJO Matsushiro 70.98 58 P **P** **06 04 20.0 +0.8**
MAJO IAmb IAmb 06 04 27.9
comp=Z,86nm,1.4s
MAJO Matsushiro 70.98 58 P **P** **06 04 21.0 +1.8**
MAJO Matsushiro 70.98 58 P **P** **06 04 20.0 +0.8**
MAJO pmax pmax
comp=Z,86nm,1.5s
MAJO MLR MLR
comp=Z,4μm,19.0s
MJAR Matsushiro Arr 70.98 58 P **P** **06 04 19.0 -0.2**
comp=Z,8.2nm,0.8s,baz=310,slow=2.4,SNR=18
MJAR LR LR 06 38 21.6
comp=Z,4μm,18.7s,baz=314,slow=38
comp=Z,8.2nm,0.8s
SBUM Sibu 71.11 102 P **P** **06 04 19.4 -0.8**
SBUM IAmb IAmb 06 04 25.7
comp=Z,108nm,1.8s
SBUM Sibu 71.11 102 P **P** **06 04 21.2 +1.0**
SBUM Sibu 71.11 102 P **P** **06 04 23.3 +3.1**
C16K Lisburne Hills 71.31 11 IAMs_20 IAMs_20 06 41 33.2
comp=Z,2μm,18.0s
C16K Lisburne Hills 71.31 11 P **P** **06 04 19.7 -0.8**
baz=336,SNR=41
C16K S **S** **06 13 38.7 +0.5**
baz=336
C19K Lookout Ridge 71.33 9 IAMs_20 IAMs_20 06 40 27.6
comp=Z,3μm,20.0s
C19K Lookout Ridge 71.33 9 P **P** **06 04 19.4 -1.4**
baz=340
C19K S **S** **06 13 37.4 -1.3**
baz=340
B21K Ikpikpuk River 71.37 7 IAMs_20 IAMs_20 06 38 35.7
comp=Z,2μm,20.0s
B21K Ikpikpuk River 71.37 7 P **P** **06 04 19.7 -1.3**
baz=344
B21K S **S** **06 13 38.3 -0.6**
baz=344
C17K DeLong Mountai 71.44 10 P **P** **06 04 19.9 -1.5**
baz=338,SNR=68
C17K S **S** **06 13 40.2 +0.3**
baz=338
C23K Itkillik River 71.50 5 P **P** **06 04 20.5 -1.2**
baz=348
C23K S **S** **06 13 40.1 -0.3**
baz=348
YUK Yuzh-Kuril'sk 71.53 48 *e* P **P** **06 04 22.4 +0.1**
YUK *e* 06 06 57.2
YUK *e* S **S** **06 13 41.3 -0.2**
YUK *e* SSS SSS 06 21 32.5
YUK pmax pmax
comp=N,407nm,1.0s
YUK pmax pmax
comp=Z,506nm,1.0s
YUK pmax pmax
comp=Z,876nm,2.1s
C18K Utukok River 71.55 10 IAMs_20 IAMs_20 06 39 56.6
comp=Z,3μm,21.0s
C18K Utukok River 71.55 10 P **P** **06 04 21.5 -0.7**
baz=339,SNR=65
C18K S **S** **06 13 39.9 -1.3**
baz=339
SHEL Horse Pasture 71.68 231 IAMs_20 IAMs_20 06 32 55.7
comp=Z,2μm,21.0s
C24K Franklin Bluff 71.75 5 P **P** **06 04 22.0 -1.2**
baz=349
C24K S **S** **06 13 43.0 -0.4**
baz=349
C26K Camden Bay 71.77 3 P **P** **06 04 22.0 -1.3**
baz=352
C26K S **S** **06 13 46.2 +2.7**
baz=352
C21K Knifeblade Rid 71.80 7 P **P** **06 04 23.2 -0.4**
baz=344,SNR=45
C21K S **S** **06 13 42.5 -1.5**
baz=344
RDOG Red Dog Mine 71.87 10 IAMs_20 IAMs_20 06 41 07.1
comp=Z,3μm,20.0s
RDOG Red Dog Mine 71.87 10 P **P** **06 04 23.2 -0.9**
baz=338,SNR=9.3
RDOG S **S** **06 13 44.1 -0.8**
baz=338
D20K Etivluk River 72.04 8 IAMs_20 IAMs_20 06 41 16.5
comp=Z,3μm,20.0s
D20K Etivluk River 72.04 8 P **P** **06 04 25.1 0.0**
baz=343
D20K S **S** **06 13 47.9 +1.1**
baz=343
D19K Kuna River 72.08 9 IAMs_20 IAMs_20 06 39 20.5
comp=Z,3μm,21.0s
D19K Kuna River 72.08 9 P **P** **06 04 23.1 -2.3**
baz=342,SNR=58
D19K S **S** **06 13 47.0 -0.3**
baz=342
C27K Jago River 72.11 3 P **P** **06 04 23.0 -2.5**
baz=353
C27K S **S** **06 13 47.1 -0.4**
baz=353
PETK Petropavlovsk- 72.12 36 P **P** **06 04 25.5 -0.3**
comp=Z,4.8nm,0.8s,baz=305,slow=5.1,SNR=9.8
PETK LR LR 06 39 51.7
comp=Z,2μm,18.6s,baz=300,slow=39
comp=Z,4.8nm,0.8s
PETK Petropavlovsk- 72.12 36 P **P** **06 04 25.9 +0.1**
PETK Petropavlovsk- 72.12 36 P **P** **06 04 25.9 +0.1**
D17K Noatak River 72.18 11 P **P** **06 04 24.3 -1.5**
baz=338,SNR=79
D17K S **S** **06 13 47.1 -1.2**
baz=338
C36M Paulatuk 72.23 356 P **P** **06 04 23.2 -2.9**
baz=9.5,SNR=38
C36M S **S** **06 13 45.0 -3.8**
baz=9.5
D22K Ayikyak River 72.27 6 IAMs_20 IAMs_20 06 40 31.4
comp=Z,3μm,21.0s
D22K Ayikyak River 72.27 6 P **P** **06 04 24.8 -1.6**
baz=346,SNR=33
D22K S **S** **06 13 48.7 -0.7**
baz=346
D25K Kavik River 72.28 4 P **P** **06 04 26.0 -0.5**
baz=351,SNR=56
D25K S **S** **06 13 48.2 -1.5**
baz=351
D24K Happy Valley 72.30 5 P **P** **06 04 25.7 -0.9**
baz=349
D24K S **S** **06 13 49.4 -0.3**
baz=349
D23K Nanushuk River 72.35 6 IAMs_20 IAMs_20 06 41 21.5
comp=Z,3μm,20.0s
D23K Nanushuk River 72.35 6 P **P** **06 04 25.3 -1.6**
baz=348
D23K S **S** **06 13 51.4 +1.1**
baz=348
E20K Nigu River 72.52 8 P **P** **06 04 25.0 -3.0**
baz=343
E20K S **S** **06 13 50.8 -1.7**
baz=343
D28M Stokes Point 72.55 1 P **P** **06 04 27.1 -0.9**
baz=357
D28M S **S** **06 13 51.4 -1.1**
baz=357
E21K Killik River 72.57 7 IAMs_20 IAMs_20 06 39 53.5
comp=Z,2μm,20.0s
E21K Killik River 72.57 7 P **P** **06 04 25.5 -2.7**
baz=345,SNR=11
E21K S **S** **06 13 53.9 +0.9**
baz=345
D27M Malcolm River 72.59 2 P **P** **06 04 26.4 -1.9**
baz=356
D27M S **S** **06 13 52.8 -0.4**
baz=356
PET Petropavlovsk 72.61 35 IAMs_20 IAMs_20 06 42 03.3
comp=Z,3μm,19.0s
PET Petropavlovsk 72.61 35 *e* P **P** **06 04 28.6 -0.1**
PET *e* 06 07 08.6
PET *e* S **S** **06 13 51.5 -2.2**
PET *e* PS **PnS** **06 14 23.9 +0.7**
PET *e* SS **SS** **06 18 32.3 +0.5**
PET pmax pmax
comp=Z,400nm,13.5s
PET pmax pmax
comp=Z,200nm,13.4s
PET pmax pmax
comp=Z,21nm,1.3s
PET pmax pmax
comp=Z,100nm,13.3s
TOLK Toolik Lake Re 72.75 5 P **P** **06 04 27.3 -2.1**
baz=349,SNR=38
TOLK S **S** **06 13 54.4 -0.7**
baz=349
E18K Tukpahlearik C 72.78 10 P **P** **06 04 28.0 -1.5**
baz=340,SNR=52
E18K S **S** **06 13 53.5 -1.8**
baz=340
E17K Hotham Inlet 72.93 10 P **P** **06 04 28.8 -1.5**
baz=339,SNR=55
E17K S **S** **06 13 54.4 -2.6**
baz=339
BLKN Baker Lake 72.98 343 IAmb IAmb 06 04 34.6
comp=Z,62nm,1.2s
E22K Anaktuvuk Pass 73.07 6 IAmb IAmb 06 04 35.6
comp=Z,38nm,1.1s
E22K IAMs_20 IAMs_20 06 41 07.6
comp=Z,3μm,20.0s
E22K Anaktuvuk Pass 73.07 6 P **P** **06 04 28.9 -2.3**
baz=347,SNR=18
E22K S **S** **06 13 59.1 +0.4**
baz=347
E19K Redstone River 73.17 9 IAMs_20 IAMs_20 06 41 49.5
comp=Z,3μm,21.0s
E19K Redstone River 73.17 9 P **P** **06 04 30.0 -1.8**
baz=342,SNR=70
E19K S **S** **06 13 57.5 -2.3**
baz=342
E28M Babbage River 73.26 2 P **P** **06 04 30.5 -1.8**
baz=357
E28M S **S** **06 13 59.0 -1.7**
baz=357
E23K Chandalar 73.32 5 P **P** **06 04 31.1 -1.7**
baz=349
E23K S **S** **06 13 59.4 -2.2**
baz=349
TNA Tin City 73.34 13 IAmb IAmb 06 04 37.2
comp=Z,48nm,1.2s
TNA IAMs_20 IAMs_20 06 42 15.1
comp=Z,3μm,21.0s
TNA Tin City 73.34 13 P **P** **06 04 30.2 -2.6**
baz=334,SNR=9.1
TNA S **S** **06 14 01.3 -0.3**
baz=334
GBN Guysborough 73.35 315 IAmb IAmb 06 04 34.6
comp=Z,80nm,1.1s
E24K Your Creek 73.39 5 P **P** **06 04 30.8 -2.3**
baz=350,SNR=27
E24K S **S** **06 14 01.5 -0.8**
baz=350
E29M Blow River 73.51 1 P **P** **06 04 32.8 -1.0**
baz=358
E29M S **S** **06 14 01.0 -2.5**
baz=358
E25K Arctic Village 73.52 4 IAmb IAmb 06 04 38.5
comp=Z,46nm,1.0s
E25K Arctic Village 73.52 4 P **P** **06 04 31.4 -2.5**
baz=352,SNR=30
E25K S **S** **06 14 02.8 -0.9**
baz=352
INK Inuvik 73.59 359 P **P** **06 04 32.5 -1.7**
comp=Z,4.0nm,0.5s,baz=11,slow=7.7,SNR=16
INK LR LR 06 43 11.7
comp=Z,1μm,18.8s,baz=352,slow=41
comp=Z,4.0nm,0.5s
INK Inuvik 73.59 359 P **P** **06 04 31.3 -2.9**
baz=1.7,SNR=5.4
INK S **S** **06 14 02.1 -2.3**
baz=1.7
F17K Baldwin Pennin 73.61 10 IAMs_20 IAMs_20 06 42 31.2
comp=Z,2μm,19.0s
F17K Baldwin Pennin 73.61 10 P **P** **06 04 32.3 -2.1**
baz=339,SNR=35
F17K S **SKiKP** **06 14 05.7 +1.0**
baz=339
E27K Coleen River 73.63 2 P **P** **06 04 31.7 -2.8**
baz=355
E27K S **SKiKP** **06 14 04.5 -0.3**
baz=355
F18K Selawik 73.69 10 P **P** **06 04 32.2 -2.6**
baz=341,SNR=48
F18K S **SKiKP** **06 14 05.0 +0.2**
baz=341
F14K Arctic Creek 73.70 13 P **P** **06 04 33.2 -1.7**
baz=335,SNR=22
F14K S **SKiKP** **06 14 05.1 +0.2**
baz=335
F19K Shaleruckik Mo 73.71 9 IAMs_20 IAMs_20 06 41 04.5
comp=Z,3μm,20.0s
F19K Shaleruckik Mo 73.71 9 P **P** **06 04 32.9 -2.0**
baz=342,SNR=50
F19K S **SKiKP** **06 14 04.5 -0.3**
baz=342
F20K Avaraart Lake 73.74 8 IAMs_20 IAMs_20 06 41 20.4
comp=Z,3μm,20.0s
F20K Avaraart Lake 73.74 8 P **P** **06 04 33.9 -1.2**
baz=344,SNR=28
F20K S **SKiKP** **06 14 05.3 +0.4**
baz=344
LEM Lembang 73.76 113 LR LR 06 40 20.6
comp=Z,2μm,18.7s,baz=314,slow=38
F15K North Star Dit 73.77 12 IAMs_20 IAMs_20 06 43 03.5
comp=Z,2μm,20.0s
F15K North Star Dit 73.77 12 P **P** **06 04 34.5 -0.9**
baz=337,SNR=68
F15K S **SKiKP** **06 14 05.0 -0.1**
baz=337
SUR Sutherland 73.80 201 P **P** **06 04 36.0 -0.1**
comp=Z,10nm,0.6s,baz=15,slow=5.1,SNR=11
SUR LR LR 06 37 30.1
comp=Z,8μm,18.1s,baz=16,slow=36
comp=Z,10nm,0.6s
SUR Sutherland 73.80 201 IAmb IAmb 06 06 09.0
comp=Z,146nm,1.8s
F21K Alatna River 73.81 7 P **P** **06 04 34.6 -0.9**
baz=346,SNR=43
F21K S **S** **06 14 06.8 -0.2**
baz=346
F26K Sheenjek River 74.02 3 P **P** **06 04 36.4 -0.4**
baz=353,SNR=25
F26K S **SKiKP** **06 14 05.2 -0.2**
baz=353
F26K S **S** **06 14 12.4 +3.1**
baz=353
F25K Christian Rive 74.04 4 IAMs_20 IAMs_20 06 42 04.2
comp=Z,2μm,21.0s
F25K Christian Rive 74.04 4 P **P** **06 04 34.6 -2.3**
baz=352,SNR=14
F25K S **S** **06 14 11.5 +1.8**
baz=352
COLD Coldfoot 74.09 6 IAmb IAmb 06 04 41.9
comp=Z,37nm,1.0s
COLD IAMs_20 IAMs_20 06 41 40.6
comp=Z,2μm,21.0s
COLD Coldfoot 74.09 6 P **P** **06 04 34.7 -2.5**
baz=348,SNR=29
COLD S **S** **06 14 10.7 +0.5**
baz=348
GAMB Gambell 74.18 16 IAMs_20 IAMs_20 06 42 02.4
comp=Z,3μm,21.0s
GAMB Gambell 74.18 16 P **P** **06 04 35.8 -1.9**
baz=331,SNR=7.8
BBJI Bungbulang 74.22 113 P **P** **06 04 38.9 +0.1**
BBJI Bungbulang 74.22 113 P **P** **06 04 36.0 -2.8**
comp=Z,42nm,1.0s
F28M Old Crow 74.25 2 IAmb IAmb 06 04 42.5
comp=Z,67nm,1.4s
F28M Old Crow 74.25 2 P **P** **06 04 37.5 -0.7**
baz=356,SNR=26
F28M S **S** **06 14 11.0 -0.9**
baz=356
BMAR Burnt Mountain 74.26 4 P **P** **06 04 38.0 -0.2**
MYLDM Lahad Datu 74.27 96 P P 06 04 46.8 +7.8
G22K Bettles 74.28 6 P **P** **06 04 38.5 +0.3**
baz=347
G22K S **S** **06 14 11.8 -0.4**
baz=347
F30M Barrier River 74.30 0 P **P** **06 04 37.0 -1.4**
baz=360,SNR=23
F30M S **S** **06 14 14.1 +1.6**
baz=360
G16K Koyuk River 74.43 11 IAMs_20 IAMs_20 06 40 45.8
comp=Z,3μm,21.0s
G16K Koyuk River 74.43 11 P **P** **06 04 38.0 -1.2**
baz=338,SNR=42
G16K S **S** **06 14 12.7 -1.2**
baz=338
G19K Purcell Mounta 74.45 9 IAMs_20 IAMs_20 06 42 49.2
comp=Z,3μm,21.0s
G19K Purcell Mounta 74.45 9 P **P** **06 04 38.0 -1.3**
baz=343,SNR=50
G19K S **S** **06 14 13.4 -0.8**
baz=343
F31M Tsiigehtchic 74.47 359 P **P** **06 04 37.5 -1.8**
baz=1.5,SNR=28
F31M S **SKiKP** **06 14 10.0 +4.0**
baz=1.5
G18K Tagagawik 74.49 10 IAMs_20 IAMs_20 06 41 24.2
comp=Z,2μm,20.0s

G18K	**Tagagawik**	**74.49**	**10**	P	**P**	**06 04 38.3**	**-1.3**	
	baz=341							
G18K				S	**S**	**06 14 11.3**	**-3.3**	
	baz=341							
G21K	**Allakaket**	**74.49**	**7**	IAMs_20	IAMs_20	06 41 47.2		
	comp=Z,3µm,20.0s							
G21K	**Allakaket**	**74.49**	**7**	P	**P**	**06 04 38.6**	**-1.0**	
	baz=346							
G21K				S	**S**	**06 14 13.0**	**-1.6**	
	baz=346							
G15K	**Niukluk**	**74.53**	**12**	P	**P**	**06 04 38.7**	**-1.1**	
	baz=337,SNR=66							
G15K				S	**S**	**06 14 15.6**	**+0.5**	
	baz=337							
G17K	**Kiwalik Mounta**	**74.58**	**11**	P	**P**	**06 04 39.7**	**-0.4**	
	baz=340,SNR=30							
G17K				S	**S**	**06 14 14.7**	**-1.0**	
	baz=340							
BATG	**Bathurst New B**	**74.62**	**319**	P	**P**	**06 04 39.3**	**-1.3**	
BATG				IAmb	IAmb	06 04 45.7		
	comp=Z,71nm,1.5s							
G23K	**Bananza Creek**	**74.62**	**6**	IAMs_20	IAMs_20	06 42 27.5		
	comp=Z,2µm,20.0s							
G23K	**Bananza Creek**	**74.62**	**6**	P	**P**	**06 04 39.8**	**-0.5**	
	baz=348,SNR=9.7							
G23K				S	**S**	**06 14 17.6**	**+1.5**	
	baz=348							
ANM	**Nome**	**74.70**	**13**	IAMs_20	IAMs_20	06 43 09.1		
	comp=Z,3µm,21.0s							
ANM	**Nome**	**74.70**	**13**	P	**P**	**06 04 40.4**	**-0.4**	
	baz=336,SNR=37							
ANM				S	**S**	**06 14 17.7**	**+0.6**	
	baz=336							
G26K	**Porcupine Rive**	**74.78**	**3**	P	**P**	**06 04 40.5**	**-0.7**	
	baz=353,SNR=33							
G26K				S	**S**	**06 14 19.1**	**+1.4**	
	baz=353							
G24K	**Hadweenzic Riv**	**74.81**	**5**	P	**P**	**06 04 39.2**	**-2.3**	
	baz=350,SNR=7.9							
G24K				S	**S**	**06 14 18.2**	**0.0**	
	baz=350							
G30M	**tAoh Zraii Nji**	**74.94**	**0**	P	**P**	**06 04 39.8**	**-2.4**	
	baz=360,SNR=33							
G30M				S	**S**	**06 14 20.0**	**+0.3**	
	baz=360							
IMAR	**Indian Mountai**	**74.98**	**8**	P	**P**	**06 04 41.4**	**-1.0**	
HAL	**Halifax**	**74.98**	**315**	IAmb	IAmb	06 04 48.0		
	comp=Z,53nm,0.9s							
G29M	**Pine Creek**	**74.99**	**1**	P	**P**	**06 04 41.1**	**-1.3**	
	baz=358							
G29M				S	**S**	**06 14 19.8**	**-0.5**	
	baz=358							
G31M	**Satah River**	**74.99**	**359**	P	**P**	**06 04 41.0**	**-1.3**	
	baz=1.1							
G31M				S	**S**	**06 14 21.4**	**+1.3**	
	baz=1.1							
G27K	**Doyon Strip**	**75.00**	**3**	P	**P**	**06 04 41.3**	**-1.2**	
	baz=355							
G27K				S	**S**	**06 14 22.1**	**+1.7**	
	baz=355							
H16K	**Elim**	**75.16**	**12**	P	**P**	**06 04 41.9**	**-1.5**	
	baz=339,SNR=33							
H16K				S	**S**	**06 14 23.1**	**+1.0**	
	baz=339							
H17K	**Granite Mounta**	**75.22**	**10**	P	**P**	**06 04 42.7**	**-1.1**	
	baz=340,SNR=22							
H17K				S	**S**	**06 14 20.1**	**-2.7**	
	baz=340							
H18K	**Honhosa River**	**75.23**	**10**	IAMs_20	IAMs_20	06 42 08.0		
	comp=Z,2µm,20.0s							
H18K	**Honhosa River**	**75.23**	**10**	P	**P**	**06 04 42.3**	**-1.6**	
	baz=342,SNR=25							
H18K				S	**S**	**06 14 22.9**	**0.0**	
	baz=342							
H22K	**Ishtalitna Cre**	**75.30**	**7**	IAMs_20	IAMs_20	06 43 59.6		
	comp=Z,2µm,20.0s							
H22K	**Ishtalitna Cre**	**75.30**	**7**	P	**P**	**06 04 42.9**	**-1.4**	
	baz=347,SNR=18							
H22K				S	**S**	**06 14 24.4**	**+0.7**	
	baz=347							
MTKI	**Muara Teweh, K**	**75.32**	**103**	P	**P**	**06 04 47.3**	**+2.2**	
H20K	**Anotleneega Mo**	**75.33**	**8**	P	**P**	**06 04 43.8**	**-0.6**	
	baz=344,SNR=40							
H20K				S	**S**	**06 14 22.4**	**-1.7**	
	baz=344							
H21K	**Melozitna Rive**	**75.39**	**7**	P	**P**	**06 04 44.3**	**-0.5**	
	baz=346,SNR=43							
H21K				S	**S**	**06 14 23.9**	**-0.9**	
	baz=346							
EPYK	**Eagle Plains**	**75.55**	**1**	IAmb	IAmb	06 04 49.5		
	comp=Z,88nm,1.2s							
EPYK	**Eagle Plains**	**75.55**	**1**	P	**P**	**06 04 44.5**	**-1.2**	
	baz=359,SNR=28							
EPYK				S	**S**	**06 14 26.3**	**-0.1**	
	baz=359							
H27K	**Steamboat Moun**	**75.59**	**3**	P	**P**	**06 04 44.5**	**-1.4**	
	baz=355,SNR=23							
H27K				S	**S**	**06 14 27.1**	**+0.2**	
	baz=355							
H24K	**Noodor Dome**	**75.64**	**5**	P	**P**	**06 04 44.4**	**-1.9**	
	baz=350,SNR=13							
H24K				S	**S**	**06 14 28.6**	**+1.0**	
	baz=350							
GCSA	**Galena City Sc**	**75.81**	**9**	P	**P**	**06 04 46.3**	**-0.8**	
	baz=343,SNR=7.5							
GCSA				S	**S**	**06 14 27.4**	**-1.9**	
	baz=343							
I21K	**Tanana**	**75.94**	**7**	P	**P**	**06 04 46.8**	**-1.1**	
	baz=347							
I17K	**Unalakleet**	**76.10**	**11**	IAMs_20	IAMs_20	06 44 50.9		
	comp=Z,2µm,18.0s							
I17K	**Unalakleet**	**76.10**	**11**	P	**P**	**06 04 47.7**	**-1.0**	
	baz=340,SNR=33							
PRP	**Porcupine Dome**	**76.11**	**4**	IAmb	IAmb	06 04 53.6		
	comp=Z,77nm,1.9s							
PRP	**Porcupine Dome**	**76.11**	**4**	P	**P**	**06 04 47.3**	**-1.8**	
	baz=352,SNR=5.9							
H31M	**Peel River**	**76.11**	**360**	P	**P**	**06 04 47.6**	**-1.3**	
	baz=1.0,SNR=17							
I23K	**Minto, Yukon-K**	**76.21**	**6**	IAMs_20	IAMs_20	06 45 02.6		
	comp=Z,2µm,21.0s							
I23K	**Minto, Yukon-K**	**76.21**	**6**	P	**P**	**06 04 47.6**	**-1.8**	
	baz=349,SNR=6.6							
I27K	**Kandik River**	**76.21**	**3**	P	**P**	**06 04 47.8**	**-1.7**	
	baz=355,SNR=13							
POKR	**Poker Plat Res**	**76.39**	**5**	P	**P**	**06 04 49.3**	**-1.2**	
	baz=350,SNR=20							
I28M	**Miner Creek**	**76.42**	**2**	P	**P**	**06 04 48.8**	**-2.0**	
	baz=356,SNR=42							
I26K	**Coal Creek Min**	**76.44**	**3**	P	**P**	**06 04 48.9**	**-1.8**	
	baz=354							
I29M	**Ogilvie Camp,**	**76.54**	**1**	IAmb	IAmb	06 04 55.3		
	comp=Z,85nm,1.2s							
I29M	**Ogilvie Camp,**	**76.54**	**1**	P	**P**	**06 04 49.9**	**-1.4**	
	baz=358,SNR=21							
COLA	**College**	**76.60**	**5**	P	**P**	**06 04 50.8**	**-0.8**	
COLA				IAmb	IAmb	06 04 56.1		
	comp=Z,56nm,1.1s							
COLA	**College**	**76.60**	**5**	P	**P**	**06 04 51.3**	**-0.3**	
COLA	**College**	**76.60**	**5** *i*	P	**P**	**06 04 51.3**	**-0.3**	
COLA				pmax	pmax			
	comp=Z,72nm,1.1s							
COLA	**College**	**76.60**	**5**	P	**P**	**06 04 49.1**	**-2.4**	
	baz=350							
LMQ	**La Malbaie**	**76.60**	**321**	P	**P**	**06 04 50.3**	**-1.7**	
LMQ				IAmb	IAmb	06 04 56.9		
	comp=Z,78nm,1.5s							
J16K	**Anvik River**	**76.68**	**11**	IAMs_20	IAMs_20	06 41 53.3		
	comp=Z,2µm,21.0s							
J16K	**Anvik River**	**76.68**	**11**	P	**P**	**06 04 50.6**	**-1.5**	
	baz=340,SNR=32							
J19K	**Poorman**	**76.69**	**9**	IAMs_20	IAMs_20	06 44 08.6		
	comp=Z,2µm,20.0s							
J19K	**Poorman**	**76.69**	**9**	P	**P**	**06 04 51.8**	**-0.4**	
	baz=344,SNR=32							
J14K	**Nanvaranak Lak**	**76.70**	**13**	IAMs_20	IAMs_20	06 44 20.8		
	comp=Z,3µm,20.0s							
J14K	**Nanvaranak Lak**	**76.70**	**13**	P	**P**	**06 04 50.3**	**-1.9**	
	baz=338,SNR=20							
I30M	**Mount Dempster**	**76.70**	**0**	P	**P**	**06 04 50.4**	**-2.0**	
	baz=359,SNR=60							
F64A	**Sherman**	**76.74**	**319**	P	**P**	**06 04 51.0**	**-1.7**	
F64A				IAmb	IAmb	06 04 54.4		
	comp=Z,42nm,1.1s							
F64A				IAMs_20	IAMs_20	06 39 41.8		
	comp=Z,3µm,20.0s							
IL31		**76.77**	**5**	IAmb	IAmb	06 04 56.6		
	comp=Z,66nm,1.6s							
ILAR	**Eielson Array**	**76.77**	**5**	P	**P**	**06 04 51.6**	**-1.0**	
	comp=Z,2.9nm,0.9s,baz=333,slow=5.3,SNR=28							
ILAR				PP	**PP**	**06 07 42.6**	**-1.8**	
	comp=Z,11nm,1.5s,baz=338,slow=3.7,SNR=4.5							
ILAR				PKKPbc	**PKKPbc**	**06 24 02.3**	**+0.1**	
	comp=Z,0.6nm,0.7s,baz=197,slow=2.8,SNR=8.6							
ILAR				LR	LR	06 42 02.2		
	comp=Z,772nm,20.9s,baz=309,slow=38							
	comp=Z,2.9nm,0.9s							
ILAR	**Eielson Array**	**76.77**	**5**	P	**P**	**06 04 51.9**	**-0.7**	
ILAR	**Eielson Array**	**76.77**	**5**	P	**P**	**06 04 51.9**	**-0.7**	
LDAQ	**Lac Daran**	**76.77**	**322**	P	**P**	**06 04 53.6**	**+0.6**	
LDAQ				IAmb	IAmb	06 04 57.2		
	comp=Z,133nm,1.8s							
NEA2	**Nenana**	**76.78**	**6**	IAmb	IAmb	06 04 56.8		
	comp=Z,56nm,1.3s							
NEA2				IAMs_20	IAMs_20	06 44 14.6		
	comp=Z,2µm,20.0s							
NEA2	**Nenana**	**76.78**	**6**	P	**P**	**06 04 51.1**	**-1.6**	
	baz=349,SNR=20							
CCB	**Clear Creek Bu**	**76.82**	**5**	IAmb	IAmb	06 04 56.9		
	comp=Z,56nm,1.3s							
E62A	**Clayton Lake**	**76.83**	**320**	IAmb	IAmb	06 05 03.6		
	comp=Z,40nm,1.2s							
NGJI	**Ngawi**	**76.93**	**110**	P	**P**	**06 04 58.6**	**+4.3**	
	comp=Z,34nm,1.2s							
J25K	**Salcha River,**	**77.02**	**4**	P	**P**	**06 04 53.1**	**-1.0**	
	baz=352,SNR=16							
EMMW	**East Machias**	**77.04**	**317**	IAMs_20	IAMs_20	06 41 55.8		
	comp=Z,2µm,18.0s							
J18K	**Innoko River**	**77.07**	**10**	IAMs_20	IAMs_20	06 43 14.4		
	comp=Z,3µm,20.0s							
J18K	**Innoko River**	**77.07**	**10**	P	**P**	**06 04 52.3**	**-2.0**	
	baz=343,SNR=24							
BPAW	**Bear Paw Mtn.**	**77.09**	**7**	IAMs_20	IAMs_20	06 43 28.0		
	comp=Z,3µm,20.0s							
BPAW	**Bear Paw Mtn.**	**77.09**	**7**	P	**P**	**06 04 53.8**	**-0.7**	
	baz=348,SNR=7.5							
HDA	**Harding Lake**	**77.12**	**5**	IAmb	IAmb	06 04 58.2		
	comp=Z,36nm,0.9s							
HDA	**Harding Lake**	**77.12**	**5**	P	**P**	**06 04 52.8**	**-1.8**	
	baz=351,SNR=13							
CHUM	**Lake Minchumin**	**77.18**	**8**	P	**P**	**06 04 52.7**	**-2.2**	
	baz=347							
FCC	**Fort Churchill**	**77.23**	**339**	P	**P**	**06 04 54.5**	**-0.8**	
FCC				IAmb	IAmb	06 04 59.8		
	comp=Z,74nm,1.2s							
FCC	**Fort Churchill**	**77.23**	**339**	P	**P**	**06 04 54.5**	**-0.8**	
FCC				pmax	pmax			
	comp=Z,74nm,1.2s							
K13K	**Kusilvak Mount**	**77.25**	**14**	IAMs_20	IAMs_20	06 44 44.6		
	comp=Z,2µm,19.0s							
K13K	**Kusilvak Mount**	**77.25**	**14**	P	**P**	**06 04 54.5**	**-0.8**	
	baz=337,SNR=9.5							
J30M	**Hart River**	**77.35**	**0**	P	**P**	**06 04 54.7**	**-1.4**	
	baz=359,SNR=46							
SJI	**Sawahan**	**77.40**	**111**	P	**P**	**06 04 59.1**	**+2.1**	
	comp=Z,17nm,0.8s							
SNJI	**Sawahan-Nganju**	**77.43**	**111**	P	**P**	**06 05 01.1**	**+3.9**	
J29N	**Klondike Camp**	**77.45**	**1**	IAmb	IAmb	06 05 01.1		
	comp=Z,64nm,1.4s							
J29N	**Klondike Camp**	**77.45**	**1**	P	**P**	**06 04 55.7**	**-0.8**	
	baz=358							
K15K	**Wolf Creek Mou**	**77.47**	**12**	IAMs_20	IAMs_20	06 44 15.1		
	comp=Z,2µm,20.0s							
K15K	**Wolf Creek Mou**	**77.47**	**12**	P	**P**	**06 04 55.9**	**-0.6**	
	baz=339,SNR=19							
K20K	**Telida**	**77.50**	**8**	IAMs_20	IAMs_20	06 43 21.7		
	comp=Z,2µm,20.0s							
K20K	**Telida**	**77.50**	**8**	P	**P**	**06 04 55.6**	**-1.1**	
	baz=345,SNR=26							
K17K	**Iditarod**	**77.56**	**11**	IAMs_20	IAMs_20	06 42 45.6		
	comp=Z,3µm,22.0s							
K17K	**Iditarod**	**77.56**	**11**	P	**P**	**06 04 55.6**	**-1.5**	
	baz=342,SNR=32							
KTH	**Kantishna Hill**	**77.64**	**7**	IAmb	IAmb	06 05 03.9		
	comp=Z,46nm,0.9s							
KTH				IAMs_20	IAMs_20	06 43 54.4		
	comp=Z,3µm,20.0s							
MCK	**McKinley**	**77.64**	**6**	IAMs_20	IAMs_20	06 44 50.4		
	comp=Z,3µm,21.0s							
MCK	**McKinley**	**77.64**	**6**	P	**P**	**06 04 55.5**	**-2.1**	
	baz=349,SNR=7.5							
SCRK	**Sand Creek**	**77.73**	**4**	P	**P**	**06 04 56.6**	**-1.5**	
	baz=353,SNR=29							
TRF	**Thorofare Moun**	**77.80**	**7**	IAmb	IAmb	06 05 05.0		
	comp=Z,50nm,1.2s							
TRF				IAMs_20	IAMs_20	06 43 49.6		
	comp=Z,3µm,20.0s							
TRF	**Thorofare Moun**	**77.80**	**7**	P	**P**	**06 04 56.6**	**-2.0**	
	baz=348,SNR=8.2							
K24K	**Donnelly Dome**	**77.80**	**5**	P	**P**	**06 04 56.6**	**-1.9**	
	baz=352,SNR=27							
DAWY	**Dawson**	**77.82**	**2**	P	**P**	**06 04 56.9**	**-1.7**	
	baz=357,SNR=26							
RIDG	**Independent Ri**	**77.92**	**4**	P	**P**	**06 04 57.2**	**-2.0**	
	baz=353,SNR=17							
RND	**Reindeer**	**77.97**	**6**	IAMs_20	IAMs_20	06 45 00.1		
	comp=Z,2µm,21.0s							
YKAW3	**Yellowknife Wh**	**77.98**	**350**	IAmb	IAmb	06 05 03.2		
	comp=Z,93nm,1.5s							
YKAW1	**Yellowknife Wh**	**78.04**	**350**	IAmb	IAmb	06 05 03.5		
	comp=Z,92nm,1.6s							
YKA	**Yellowknife Ar**	**78.04**	**350**	P	**P**	**06 04 58.3**	**-1.5**	
	comp=Z,2.9nm,0.7s,baz=9.8,slow=6.1,SNR=51							
YKA				LR	LR	06 40 43.3		
	comp=Z,2µm,20.1s,baz=1.5,slow=37							
	comp=Z,2.9nm,0.7s							
YKA	**Yellowknife Ar**	**78.04**	**350**	P	**P**	**06 04 58.4**	**-1.3**	
YKA	**Yellowknife Ar**	**78.04**	**350** *i*	P	**P**	**06 04 59.0**	**-0.7**	
YKA				pmax	pmax			
	comp=Z,4.0nm,0.7s							
L15K	**Ungalak Mounta**	**78.05**	**12**	P	**P**	**06 04 59.6**	**-0.2**	
	baz=340							
K29M	**Barlow Dome**	**78.08**	**1**	P	**P**	**06 04 56.8**	**-3.3**	
	baz=358,SNR=40							
L17K	**Donlin**	**78.12**	**11**	P	**P**	**06 04 59.0**	**-1.3**	
	baz=342,SNR=10							
PPLA	**Purkeypile**	**78.15**	**8**	P	**P**	**06 04 58.8**	**-1.8**	
	baz=347							
L14K	**Kuka Creek**	**78.16**	**13**	IAMs_20	IAMs_20	06 40 18.5		
	comp=Z,3µm,22.0s							
L14K	**Kuka Creek**	**78.16**	**13**	P	**P**	**06 04 59.8**	**-0.6**	
	baz=339							
WRGLY	**Wrigley**	**78.25**	**354**	P	**P**	**06 05 00.1**	**-0.7**	
	baz=9.7,SNR=5.8							
L18K	**Granite Mounta**	**78.27**	**10**	IAMs_20	IAMs_20	06 44 11.1		
	comp=Z,2µm,20.0s							
L18K	**Granite Mounta**	**78.27**	**10**	P	**P**	**06 04 58.6**	**-2.4**	
	baz=343							
WVL	**Waterville**	**78.29**	**318**	IAMs_20	IAMs_20	06 41 54.1		
	comp=Z,2µm,18.0s							
G62A	**West of Eustis**	**78.30**	**319**	IAmb	IAmb	06 05 06.0		
	comp=Z,92nm,1.6s							
MAYO	**Mayo, Yukon**	**78.34**	**0**	P	**P**	**06 04 59.7**	**-1.7**	
	baz=360,SNR=12							
L16K	**Owhat River**	**78.35**	**11**	IAmb	IAmb	06 05 06.3		
	comp=Z,61nm,1.3s							
L16K				IAMs_20	IAMs_20	06 43 51.3		
	comp=Z,2µm,20.0s							
L16K	**Owhat River**	**78.35**	**11**	P	**P**	**06 05 00.5**	**-0.9**	
	baz=341,SNR=9.4							
MPSI	**Mapaga**	**78.37**	**99**	P	**P**	**06 05 03.8**	**+1.5**	
	comp=Z,59nm,1.3s							
M11K	**Mekoryuk**	**78.38**	**15**	IAMs_20	IAMs_20	06 44 24.3		
	comp=Z,3µm,20.0s							
M11K	**Mekoryuk**	**78.38**	**15**	P	**P**	**06 05 00.6**	**-1.0**	
	baz=336,SNR=6.7							
DHY	**Denali Highway**	**78.41**	**5**	IAMs_20	IAMs_20	06 45 06.8		
	comp=Z,2µm,20.0s							
DHY	**Denali Highway**	**78.41**	**5**	P	**P**	**06 05 00.2**	**-1.8**	
	baz=351,SNR=8.6							
L19K	**White Mountain**	**78.54**	**9**	IAMs_20	IAMs_20	06 45 16.4		
	comp=Z,2µm,20.0s							
L19K	**White Mountain**	**78.54**	**9**	P	**P**	**06 05 01.4**	**-1.2**	
	baz=345							
WAT1	**Susitna Watana**	**78.56**	**6**	P	**P**	**06 05 01.4**	**-1.3**	
	baz=350							
TOLI2	**Tolitoli**	**78.57**	**98**	P	**P**	**06 05 02.8**	**-0.7**	
TOLI2				IAmb	IAmb	06 05 07.7		
	comp=Z,65nm,1.3s							
TOLI2	**Tolitoli**	**78.57**	**98**	P	**P**	**06 05 04.2**	**+0.7**	
PAX	**Paxson**	**78.65**	**5**	IAmb	IAmb	06 05 08.2		
	comp=Z,114nm,1.8s							
PAX	**Paxson**	**78.65**	**5**	P	**P**	**06 05 01.2**	**-2.0**	
	baz=352,SNR=7.3							
L22K	**Petersville**	**78.66**	**7**	IAMs_20	IAMs_20	06 44 47.4		
	comp=Z,3µm,19.0s							
DAV	**Davao City (W)**	**78.67**	**90**	LR	LR	06 43 27.2		
	comp=Z,2µm,21.4s,baz=324,slow=38							
L26K	**Log Cabin Wild**	**78.71**	**4**	IAmb	IAmb	06 05 08.2		
	comp=Z,55nm,1.3s							
L26K	**Log Cabin Wild**	**78.71**	**4**	P	**P**	**06 05 02.5**	**-1.1**	
	baz=354,SNR=16							
BCAR	**Beaver Creek A**	**78.74**	**3**	P	**P**	**06 05 03.4**	**-0.3**	
L27K	**Beaver Creek,**	**78.75**	**3**	IAmb	IAmb	06 05 08.4		
	comp=Z,72nm,1.5s							
L27K	**Beaver Creek,**	**78.75**	**3**	P	**P**	**06 05 02.0**	**-1.7**	
	baz=355,SNR=20							
MENT	**Mentasta**	**78.78**	**4**	IAmb	IAmb	06 05 08.7		
	comp=Z,77nm,1.3s							
MENT	**Mentasta**	**78.78**	**4**	P	**P**	**06 05 04.4**	**+0.5**	
L29M	**L29M**	**78.80**	**1**	P	**P**	**06 05 03.5**	**-0.5**	
	baz=358							
CUT	**Chulitna**	**78.83**	**7**	IAmb	IAmb	06 05 57.8		
	comp=Z,106nm,1.5s							
CUT				IAMs_20	IAMs_20	06 44 51.8		
	comp=Z,2µm,19.0s							
CUT	**Chulitna**	**78.83**	**7**	P	**P**	**06 05 02.3**	**-1.8**	
	baz=348							
M14K	**Bethel**	**78.84**	**13**	IAmb	IAmb	06 05 09.0		
	comp=Z,72nm,1.2s							
M14K				IAMs_20	IAMs_20	06 45 47.5		
	comp=Z,2µm,18.0s							
M14K	**Bethel**	**78.84**	**13**	P	**P**	**06 05 02.9**	**-1.3**	
	baz=339,SNR=9.5							
M19K	**Big River Lodg**	**78.87**	**9**	IAMs_20	IAMs_20	06 45 26.0		
	comp=Z,3µm,20.0s							
M19K	**Big River Lodg**	**78.87**	**9**	P	**P**	**06 05 03.0**	**-1.4**	
	baz=345							
WAT6	**Susitna Watana**	**78.87**	**6**	P	**P**	**06 05 03.7**	**-0.9**	
	baz=350,SNR=11							
M13K	**Dall Lake**	**78.91**	**14**	IAMs_20	IAMs_20	06 43 04.2		
	comp=Z,2µm,22.0s							
M13K	**Dall Lake**	**78.91**	**14**	P	**P**	**06 05 03.9**	**-0.6**	
	baz=338,SNR=8.3							
M17K	**Holitna River**	**78.95**	**11**	IAMs_20	IAMs_20	06 45 10.1		
	comp=Z,2µm,19.0s							
M17K	**Holitna River**	**78.95**	**11**	P	**P**	**06 05 02.8**	**-2.0**	
	baz=343							
M20K	**Styx River**	**79.04**	**8**	IAMs_20	IAMs_20	06 44 19.5		
	comp=Z,2µm,20.0s							
M20K	**Styx River**	**79.04**	**8**	P	**P**	**06 05 03.4**	**-2.0**	
	baz=346							
H62A	**Milan**	**79.07**	**319**	P	**P**	**06 05 06.9**	**+1.2**	
H62A				IAMs_20	IAMs_20	06 37 41.4		
	comp=Z,2µm,22.0s							
M16K	**Timber Creek**	**79.08**	**11**	IAMs_20	IAMs_20	06 46 59.7		
	comp=Z,2µm,19.0s							
M16K	**Timber Creek**	**79.08**	**11**	P	**P**	**06 05 04.4**	**-1.1**	
	baz=342,SNR=7.7							
M18K	**Stony River**	**79.08**	**10**	P	**P**	**06 05 04.2**	**-1.3**	
	baz=344,SNR=7.2							
M15K	**Kasigluk River**	**79.11**	**12**	P	**P**	**06 05 04.7**	**-0.9**	
	baz=340							
SKT	**Skwentna**	**79.12**	**8**	P	**P**	**06 05 05.0**	**-0.7**	
	baz=347,SNR=17							
I63A	**Otisfield**	**79.13**	**318**	IAMs_20	IAMs_20	06 42 28.1		
	comp=Z,3µm,19.0s							
HARP	**HAARP**	**79.24**	**5**	P	**P**	**06 05 04.8**	**-1.6**	
	baz=352,SNR=5.9							
JCJ	**Chichijima**	**79.25**	**64**	LR	LR	06 42 49.1		
	comp=Z,1µm,20.8s,baz=318,slow=38							
SHEM	**Shemya Is, Ala**	**79.25**	**28**	LR	LR	06 43 52.5		
	comp=Z,3µm,18.7s,baz=316,slow=38							
ABJI	**Asem Bagus**	**79.27**	**109**	P	P	06 05 15.0	+7.8	
M26K	**Nabesna, AK**	**79.35**	**4**	P	**P**	**06 05 06.3**	**-0.8**	
	baz=354,SNR=6.7							
M30M	**Minto, Yukon**	**79.35**	**1**	P	**P**	**06 05 04.0**	**-3.1**	
	baz=359							
BVCY	**Beaver Creek**	**79.43**	**3**	P	**P**	**06 05 05.6**	**-1.9**	
	baz=356,SNR=7.9							
M27K	**Edge Creek, AK**	**79.45**	**3**	IAmb	IAmb	06 05 24.9		
	comp=Z,68nm,1.4s							
M27K	**Edge Creek, AK**	**79.45**	**3**	P	**P**	**06 05 06.6**	**-1.1**	
	baz=355,SNR=14							
M24K	**Tolsona, Glenn**	**79.46**	**5**	P	**P**	**06 05 06.2**	**-1.5**	
	baz=352,SNR=7.7							
M29M	**Somme Creek**	**79.47**	**1**	P	**P**	**06 05 06.6**	**-1.1**	
	baz=358,SNR=10							
M22K	**Willow**	**79.48**	**7**	P	**P**	**06 05 05.5**	**-2.1**	
	baz=348							
MMSI	**Mamuju**	**79.51**	**102**	P	**P**	**06 05 11.0**	**+2.4**	
	comp=Z,1µmcomp=Z,102nm,0.8s							
SML	**Sawmill**	**79.59**	**6**	IAmb	IAmb	06 05 12.3		
	comp=Z,66nm,1.0s							
SML				IAMs_20	IAMs_20	06 47 21.0		
	comp=Z,2µm,21.0s							
SML	**Sawmill**	**79.59**	**6**	P	**P**	**06 05 06.7**	**-1.7**	
	baz=350,SNR=13							
VLDQ	**Val d'Or**	**79.59**	**325**	IAmb	IAmb	06 05 13.1		
	comp=Z,74nm,1.3s							
TRQ	**Mont Tremblant**	**79.61**	**322**	IAmb	IAmb	06 05 12.7		
	comp=Z,94nm,1.9s							
N16K	**Nishlik Lake**	**79.63**	**11**	P	**P**	**06 05 06.7**	**-1.9**	
	baz=342							
I62A	**Tamworth**	**79.64**	**319**	IAmb	IAmb	06 05 14.3		
	comp=Z,71nm,1.4s							
I62A				IAMs_20	IAMs_20	06 42 43.8		
	comp=Z,3µm,19.0s							
SCM	**Sheep Creek Mo**	**79.64**	**6**	P	**P**	**06 05 05.4**	**-3.3**	
	baz=351,SNR=7.0							
JAGI	**Jajag, Banyuwa

RC01	Rabbit Creek A	80.17	7	P	P	06 05 09.9	-1.6		
	baz=349,SNR=9.5								
HNH	Hanover	80.25	319	IAMs_20	IAMs_20	06 42 56.9			
	comp=Z,2µm,18.0s								
CAPN	Captain Cook N	80.34	8	P	P	06 05 12.0	-0.4		
	baz=348								
MCARA	McCarthy VSAT	80.37	4	P	P	06 05 10.4	-2.1		
	baz=354								
SPIA	Saint Paul Isl	80.37	18	P	P	06 05 10.0	-2.6		
	baz=333								
O14K	Tigyukauivet M	80.37	13	IAMs_20	IAMs_20	06 46 43.9			
	comp=Z,2µm,20.0s								
O14K	Tigyukauivet M	80.37	13	P	P	06 05 11.0	-1.5		
	baz=340,SNR=5.6								
TTSI	Tana Toraja	80.44	102	P	P	06 05 17.4	+3.8		
	comp=Z,37nm,1.1s								
N31M	Braeburn, Yuko	80.45	0	IAMs_20	IAMs_20	06 47 09.6			
	comp=Z,2µm,19.0s								
N31M	Braeburn, Yuko	80.45	0	P	P	06 05 11.3	-1.7		
	baz=360								
DIV	Divide	80.46	5	IAmb	IAmb	06 05 17.6			
	comp=Z,51nm,1.0s								
N30M	Aishikik Lake	80.47	1	P	P	06 05 10.1	-3.1		
	baz=359								
VRDI	Verde Repeater	80.50	4	IAmb	IAmb	06 05 17.6			
	comp=Z,64nm,1.4s								
O19K	Port Alsworth	80.53	9	IAMs_20	IAMs_20	06 45 29.0			
	comp=Z,2µm,20.0s								
O19K	Port Alsworth	80.53	9	P	P	06 05 09.8	-3.6		
	baz=345								
O17K	Koliganek Bris	80.56	11	P	P	06 05 11.5	-2.0		
	baz=343,SNR=7.0								
YUK4	Talbot Arm	80.56	2	P	P	06 05 10.8	-3.1		
	baz=358,SNR=18								
O16K	Kokwok River B	80.58	11	P	P	06 05 12.7	-1.0		
	baz=342,SNR=7.1								
YUK8	Steele Glacier	80.60	2	P	P	06 05 12.1	-2.0		
	baz=357								
BCX	Boston College	80.63	317	IAMs_20	IAMs_20	06 44 02.9			
	comp=Z,2µm,20.0s								
J61A	Chester	80.65	319	IAMs_20	IAMs_20	06 45 05.3			
	comp=Z,2µm,18.0s								
KHKI	Kahang-Kahang	80.66	108	P	P	06 05 16.2	+1.4		
	comp=Z,68nm,1.6s								
WES	Weston	80.67	317	IAMs_20	IAMs_20	06 44 04.1			
	comp=Z,2µm,18.0s								
O15K	Ungalikthiuk R	80.69	12	IAMs_20	IAMs_20	06 46 25.4			
	comp=Z,3µm,20.0s								
O15K	Ungalikthiuk R	80.69	12	P	P	06 05 12.7	-1.6		
	baz=341,SNR=6.6								
BMRM	Bremner River	80.69	4	P	P	06 05 11.5	-2.8		
	baz=353								
SLKM	Skilak Lake	80.70	7	IAmb	IAmb	06 05 24.6			
	comp=Z,65nm,1.2s								
SLKM				IAMs_20	IAMs_20	06 44 37.1			
	comp=Z,2µm,21.0s								
HRV	Adam Dziewonsk	80.71	318	IAMs_20	IAMs_20	06 43 56.1			
	comp=Z,2µm,18.0s								
L64A	Middleborough	80.73	317	IAMs_20	IAMs_20	06 46 33.5			
	comp=Z,2µm,18.0s								
O18K	Koktuh Hills	80.75	10	P	P	06 05 13.0	-1.6		
	baz=345								
LONY	Lake Ozonia	80.77	321	P	P	06 05 13.3	-1.7		
LONY				IAMs_20	IAMs_20	06 44 16.4			
	comp=Z,2µm,18.0s								
N32M	Quiet Lake	80.77	359	P	P	06 05 10.5	-4.2		
	baz=2.0								
O22K	Cooper Landing	80.77	7	IAMs_20	IAMs_20	06 46 14.2			
	comp=Z,2µm,20.0s								
O22K	Cooper Landing	80.77	7	P	P	06 05 11.7	-2.9		
	baz=349								
CTG	Chitna Glacier	80.86	3	P	P	06 05 11.5	-3.9		
	baz=355								
CTGM	Chitina Glacie	80.86	3	IAmb	IAmb	06 05 19.8			
	comp=Z,81nm,1.4s								
M65A	Busby, Falmout	80.88	317	IAMs_20	IAMs_20	06 41 46.7			
	comp=Z,2µm,20.0s								
M65A	Busby, Falmout	80.88	317	P	P	06 05 12.1	-3.5		
	baz=46								
K62A	Royalston	80.96	318	IAMs_20	IAMs_20	06 43 59.6			
	comp=Z,2µm,18.0s								
YUK6	Outpost Mounta	80.97	1	P	P	06 05 12.6	-3.4		
	baz=358								
CRQM	Cirque	80.99	4	IAmb	IAmb	06 05 21.1			
	comp=Z,119nm,1.6s								
CRQE	Cirque	80.99	4	P	P	06 05 12.5	-3.6		
	baz=354								
TGL	Tana Glacier	81.00	4	IAmb	IAmb	06 05 20.2			
	comp=Z,62nm,1.3s								
EYAK	Cordova Ski Ar	81.04	5	IAMs_20	IAMs_20	06 44 58.1			
	comp=Z,3µm,21.0s								
EYAK	Cordova Ski Ar	81.04	5	P	P	06 05 19.3	+3.2		
EYAK	Cordova Ski Ar	81.04	5	P	P	06 05 12.9	-3.2		
	baz=352								
O28M	Mount Upton	81.10	2	P	P	06 05 13.2	-3.6		
	baz=356								
HYT	Haines Junctio	81.10	1	IAmb	IAmb	06 05 21.2			
	comp=Z,49nm,1.0s								
HYT	Haines Junctio	81.10	1	P	P	06 05 13.9	-2.7		
	baz=358,SNR=13								
P16K	Nushagak River	81.13	12	IAMs_20	IAMs_20	06 45 38.9			
	comp=Z,3µm,20.0s								
P16K	Nushagak River	81.13	12	P	P	06 05 14.6	-2.0		
	baz=342,SNR=6.5								
HIN	Hinchinbrook I	81.13	6	IAMs_20	IAMs_20	06 43 01.7			
	comp=Z,3µm,22.0s								
SEW	Seward	81.17	7	P	P	06 05 13.8	-2.9		
	baz=349								
O30N	Mendenhall	81.17	0	IAmb	IAmb	06 05 20.5			
	comp=Z,58nm,1.5s								
O30N	Mendenhall	81.17	0	P	P	06 05 12.7	-4.2		
	baz=360,SNR=5.3								
P18K	Big Mountain,	81.19	10	P	P	06 05 15.1	-1.9		
	baz=345								
P19K	Oil Pt	81.20	9	P	P	06 05 14.9	-2.1		
	baz=346								
P17K	Kvichak River	81.21	11	IAMs_20	IAMs_20	06 46 49.9			
	comp=Z,3µm,20.0s								
P17K	Kvichak River	81.21	11	P	P	06 05 15.7	-1.3		
	baz=344,SNR=7.8								
WHY	Whitehorse	81.28	360	P	P	06 05 16.7	-0.9		
WHY				IAmb	IAmb	06 05 21.9			
	comp=Z,112nm,1.7s								
L61B	Northampton	81.34	318	IAMs_20	IAMs_20	06 44 01.8			
	comp=Z,2µm,19.0s								
BRLK	Bradley Lake	81.36	8	IAMs_20	IAMs_20	06 46 07.0			
	comp=Z,3µm,21.0s								
KOTAN	Kotaneelee Air	81.36	354	P	P	06 05 15.7	-2.2		
	baz=9.1,SNR=12								
BRSE	Bradley Lake S	81.39	8	P	P	06 05 16.7	-1.3		
	baz=348								
P23K	Montague Islan	81.46	6	P	P	06 05 15.6	-2.7		
	baz=351								
J59A	Piesco	81.56	320	IAmb	IAmb	06 05 23.4			
	comp=Z,66nm,1.5s								
J59A				IAMs_20	IAMs_20	06 41 02.4			
	comp=Z,2µm,21.0s								
UCCT	U. Connecticut	81.57	318	IAmb	IAmb	06 05 22.8			
	comp=Z,74nm,1.3s								
O29M	Mount Kennedy	81.61	2	P	P	06 05 15.9	-3.4		
	baz=358								
MESA	MESA	81.62	3	P	P	06 05 16.9	-2.6		
	baz=355								
KAPI	Kappang	81.64	103	LR	LR	06 46 31.3			
	comp=Z,957nm,18.9s,baz=300,slow=39								
KAPI	Kappang	81.64	103	P	P	06 05 19.9	-0.1		
KAPI	Kappang	81.64	103	P	P	06 05 23.3	+3.3		
KAPI	Kappang	81.64	103	P	P	06 05 19.9	-0.1		
KAPI				pmax	pmax				
	comp=Z,212nm,1.6s								
KAPI	Kappang	81.64	103	P	P	06 05 23.6	+3.6		
	comp=Z,799nmcomp=Z,44nm,1.4s								
TRY	Troy	81.66	319	IAMs_20	IAMs_20	06 41 28.0			
	comp=Z,2µm,22.0s								
Q16K	King Salmon	81.67	11	P	P	06 05 16.8	-2.7		
	baz=344								
WTLY	Watson Lake, Y	81.68	357	IAmb	IAmb	06 05 24.1			
	comp=Z,69nm,1.4s								
WTLY	Watson Lake, Y	81.68	357	P	P	06 05 19.0	-0.5		
	baz=5.4,SNR=8.9								
P33M	Teslin, Yukon	81.71	359	P	P	06 05 17.5	-2.2		
	baz=2.2,SNR=6.7								
KAIM	Kayak Island	81.74	5	P	P	06 05 16.6	-3.2		
	baz=353								
M63A	Gales Ferry	81.75	317	IAMs_20	IAMs_20	06 47 05.5			
	comp=Z,2µm,18.0s								
PINM	Pinnacle	81.77	2	P	P	06 05 16.3	-3.8		
	baz=356								
P30M	Million Dollar	81.82	1	P	P	06 05 17.7	-2.6		
	baz=359								
Q23K	Middleton Isla	82.10	6	P	P	06 05 18.6	-3.1		
	baz=352								
Q17K	Contact Creek	82.19	11	P	P	06 05 19.3	-3.1		
	baz=344								
KSCT	Kent School, K	82.28	318	IAmb	IAmb	06 05 28.0			
	comp=Z,70nm,1.6s								
Q20K	Shuyak Island	82.32	9	P	P	06 05 19.3	-3.6		
	baz=347								
DELO	Deloro Mine	82.33	322	IAmb	IAmb	06 05 28.4			
	comp=Z,91nm,1.5s								
P32M	Atlin	82.35	359	P	P	06 05 18.9	-4.2		
	baz=1.5								
J57A	Williamstown	82.35	321	IAMs_20	IAMs_20	06 45 33.2			
	comp=Z,2µm,20.0s								
R33M	Jennings River	82.48	358	P	P	06 05 20.5	-3.4		
	baz=3.7								
SKAG	Skagway	82.49	360	P	P	06 05 20.3	-3.4		
	baz=0.2								
PLAI	Plampang	82.59	107	P	P	06 05 25.9	+1.0		
PLAI	Plampang	82.59	107	P	P	06 05 29.4	+4.5		
	comp=Z,58nm,1.1s								
WSPT	Westport, CT	82.59	318	IAMs_20	IAMs_20	06 45 58.8			
	comp=Z,2µm,18.0s								
L59A	Walton	82.75	319	IAMs_20	IAMs_20	06 44 43.0			
	comp=Z,2µm,19.0s								
SADO	Sadowa	82.86	323	LR	LR	06 42 18.9			
	comp=Z,2µm,20.2s,baz=68,slow=36								
FFC	Flin Flon	82.87	341	P	P	06 05 24.6	-1.3		
FFC				IAmb	IAmb	06 05 29.7			
	comp=Z,41nm,1.2s								
FFC	Flin Flon	82.87	341	IAMs_20	IAMs_20	06 42 50.4			
	comp=Z,2µm,21.0s								
FFC	Flin Flon	82.87	341	P	P	06 05 24.6	-1.3		
FFC				pmax	pmax				
	comp=Z,41nm,1.2s								
FFC				MLR	MLR				
	comp=Z,2µm,21.0s								
KDAK	Kodiak Island	83.10	9	P	P	06 05 26.7	-0.2		
	comp=Z,28nm,0.6s,baz=264,slow=3.5,SNR=14								
KDAK				LR	LR	06 47 04.0			
	comp=Z,3µm,20.8s,baz=331,slow=39								
	comp=Z,28nm,0.6s								
KDAK	Kodiak Island	83.10	9	P	P	06 05 26.9	0.0		
KDAK				IAmb	IAmb	06 05 33.4			
	comp=Z,49nm,0.8s								
KDAK	Kodiak Island	83.10	9	P	P	06 05 26.9	0.0		
KDAK				pmax	pmax				
	comp=Z,49nm,0.8s								
KDAK				MLR	MLR				
	comp=Z,3µm,21.0s								
KDAK	Kodiak Island	83.10	9	P	P	06 05 24.9	-2.0		
	baz=347								
BINY	Binghamton	83.23	320	IAmb	IAmb	06 05 31.1			
	comp=Z,36nm,0.9s								
BINY				IAMs_20	IAMs_20	06 44 39.5			
	comp=Z,2µm,20.0s								
J55A	Hilton	83.35	322	IAMs_20	IAMs_20	06 44 47.7			
	comp=Z,2µm,18.0s								
DLBC	Dease Lake	83.40	357	P	P	06 05 28.5	-0.1		
	comp=Z,9.8nm,0.9s,baz=339,slow=5.1,SNR=17								
DLBC				LR	LR	06 46 02.5			
	comp=Z,1µm,20.6s,baz=320,slow=38								
	comp=Z,9.8nm,0.9s								
DLBC	Dease Lake	83.40	357	P	P	06 05 24.8	-3.8		
	baz=4.4								
KSPA	Keystone Colle	83.58	319	IAmb	IAmb	06 05 49.7			
	comp=Z,38nm,1.2s								
R32K	Eaglecrest	83.67	359	P	P	06 05 26.7	-3.3		
	baz=0.8								
E46A	Sault Ste Mari	83.95	327	IAMs_20	IAMs_20	06 44 45.2			
	comp=Z,2µm,20.0s								
S34M	Telegraph Cree	83.97	358	IAmb	IAmb	06 05 36.5			
	comp=Z,47nm,1.1s								
S34M	Telegraph Cree	83.97	358	P	P	06 05 28.9	-2.6		
	baz=3.5,SNR=6.0								
L56A	Greenwood	84.06	321	IAmb	IAmb	06 05 35.1			
	comp=Z,49nm,0.9s								
FALS	False Pass	84.07	16	IAMs_20	IAMs_20	06 48 01.8			
	comp=Z,3µm,22.0s								
SDPT	Sand Point	84.20	14	P	P	06 05 29.5	-3.1		
	baz=341								
UNV	Unalaska Valle	84.30	18	P	P	06 05 29.9	-3.3		
	baz=336								
S32K	Killisnoo	84.48	359	P	P	06 05 30.8	-3.2		
	baz=0.8								
NIKH	Nikolski High	84.50	20	IAMs_20	IAMs_20	06 48 58.5			
	comp=Z,2µm,19.0s								
NIKH	Nikolski High	84.50	20	P	P	06 05 31.4	-2.9		
	baz=334								
CHIR	Chirikof Islan	84.58	11	P	P	06 05 32.8	-1.8		
	baz=344								
SANI	Sanana	84.60	97	P	P	06 05 30.0	-5.3		
SANI	Sanana	84.60	97	P	P	06 05 34.9	-0.4		
SANI	Sanana	84.60	97	P	P	06 05 36.7	+1.4		
	comp=Z,67nm,1.1s								
N58A	Sunbury	84.60	319	IAMs_20	IAMs_20	06 44 00.8			
	comp=Z,2µm,21.0s								
CHNA	Chernabura Isl	84.86	14	P	P	06 05 34.6	-1.3		
	baz=341								
T35M	Bob Quinn	84.87	357	P	P	06 05 32.3	-3.8		
	baz=4.2								
MVL	Millersville	85.03	319	IAmb	IAmb	06 05 40.8			
	comp=Z,58nm,1.4s								
ULM	Lac du Bonnet	85.07	336	P	P	06 05 36.0	-1.2		
	comp=Z,11nm,0.8s,baz=46,slow=4.5,SNR=20								
	comp=Z,11nm,0.8s								
ULM	Lac du Bonnet	85.07	336	*i* P	P	06 05 36.3	-0.9		
T33K	Petersburg	85.12	359	P	P	06 05 35.6	-1.6		
	baz=2.1								
I49A	Point Hope	85.20	325	IAMs_20	IAMs_20	06 46 12.4			
	comp=Z,2µm,18.0s								
ERPA	Erie	85.27	322	IAMs_20	IAMs_20	06 46 59.5			
	comp=Z,2µm,18.0s								
GLMI	Grayling	85.30	326	IAMs_20	IAMs_20	06 44 47.0			
	comp=Z,3µm,20.0s								
SSPA	Standing Stone	85.34	320	P	P	06 05 37.8	-0.9		
SSPA	Standing Stone	85.34	320	IAMs_20	IAMs_20	06 45 18.6			
	comp=Z,2µm,20.0s								
EDFI	Ende, Flores	85.49	105	P	P	06 05 40.2	+0.3		
	comp=Z,43nm,1.7s								
WRAK	Wrangell Islan	85.50	358	P	P	06 05 37.8	-1.3		
	baz=2.5								
PAOC	Oil Creek Stat	85.58	321	IAmb	IAmb	06 05 44.2			
	comp=Z,66nm,1.4s								
BASI	Baing, Sumba	85.59	107	P	P	06 05 49.8	+10		
R61A	Willards	85.71	317	IAMs_20	IAMs_20	06 45 03.5			
	comp=Z,2µm,19.0s								
SDMD	Soldier's Deli	85.72	318	IAmb	IAmb	06 05 44.8			
	comp=Z,64nm,1.8s								
U35K	Hyder	85.93	357	P	P	06 05 39.3	-1.9		
	baz=4.4								
NBPV	Pedro Velho	86.00	259	*e*P	P	06 05 41.1	-1.2		
F42A	Maple Grove Fa	86.03	329	IAMs_20	IAMs_20	06 44 09.2			
	comp=Z,3µm,22.0s								
RCBR	Riachuelo	86.10	259	LR	LR	06 45 15.3			
	comp=Z,650nm,19.8s,baz=58,slow=36								
RCBR	Riachuelo	86.10	259	IAMs_20	IAMs_20	06 44 00.5			
	comp=Z,2µm,21.0s								
P57A	Homestead Farm	86.27	319	IAMs_20	IAMs_20	06 45 11.0			
	comp=Z,2µm,21.0s								
S61A	Accomac	86.37	317	IAMs_20	IAMs_20	06 45 03.8			
	comp=Z,2µm,21.0s								
M52A	Chesterland	86.37	322	IAMs_20	IAMs_20	06 47 31.5			
	comp=Z,2µm,19.0s								
CRAG	Craig	86.47	359	P	P	06 05 41.4	-2.6		
	baz=1.9								
V35K	Ketchikan	86.57	358	P	P	06 05 41.6	-2.8		
	baz=3.1								
I45A	Fountain	86.63	327	IAMs_20	IAMs_20	06 45 58.1			
	comp=Z,2µm,20.0s								
J47A	Sunmer	86.64	326	IAMs_20	IAMs_20	06 44 45.7			
	comp=Z,2µm,20.0s								
E38A	The Farm, Brul	86.66	331	IAMs_20	IAMs_20	06 44 04.9			
	comp=Z,2µm,22.0s								
N53A	Lisbon	86.68	322	IAMs_20	IAMs_20	06 49 25.9			
	comp=Z,2µm,18.0s								
AGMN	Agassiz Nation	86.76	335	IAmb	IAmb	06 05 50.1			
	comp=Z,100nm,2.0s								
AAM	Ann Arbor	86.86	324	IAMs_20	IAMs_20	06 49 31.3			
	comp=Z,2µm,19.0s								
CBN	Corbin Frederi	86.89	318	IAMs_20	IAMs_20	06 46 30.5			
	comp=Z,2µm,20.0s								
H43A	Windswept, Lux	86.93	328	IAMs_20	IAMs_20	06 46 29.0			
	comp=Z,2µm,20.0s								
O54A	Avella	86.93	321	IAMs_20	IAMs_20	06 42 17.5			
	comp=Z,2µm,22.0s								
NBPA	Parau_RN	86.99	260	*e*P	P	06 05 47.5	+0.3		
MCWV	Mont Chateau	87.07	320	IAmb	IAmb	06 05 53.7			
	comp=Z,48nm,1.2s								
MCWV				IAMs_20	IAMs_20	06 43 59.1			
	comp=Z,2µm,22.0s								
Q56A	Snyder Ridge,	87.20	320	IAMs_20	IAMs_20	06 47 02.7			
	comp=Z,2µm,20.0s								
G40A	Rib Lake	87.26	330	IAmb	IAmb	06 05 51.7			
	comp=Z,29nm,1.0s								
G40A				IAMs_20	IAMs_20	06 47 51.7			
	comp=Z,2µm,18.0s								
KRAI	Karang Ratu	87.26	96	P	P	06 05 49.6	+1.1		
M50A	Fremont	87.28	323	IAMs_20	IAMs_20	06 48 56.5			
	comp=Z,2µm,19.0s								
R58B	Mineral	87.33	318	IAMs_20	IAMs_20	06 46 44.3			
	comp=Z,2µm,20.0s								
N51A	Ashland	87.34	323	IAMs_20	IAMs_20	06 44 44.1			
	comp=Z,2µm,20.0s								
O52A	Adamsville	87.70	322	IAMs_20	IAMs_20	06 47 13.0			
	comp=Z,2µm,20.0s								
I42A	Draeger Farm,	87.87	328	IAMs_20	IAMs_20	06 46 59.0			
	comp=Z,2µm,20.0s								
BATI	Baumata	87.91	105	LR	LR	06 51 38.9			
	comp=Z,1µm,18.9s,baz=298,slow=40								
P53A	Whipple	87.97	321	IAmb	IAmb	06 06 12.7			
	comp=Z,55nm,1.5s								
P53A				IAMs_20	IAMs_20	06 47 48.9			
	comp=Z,2µm,20.0s								
SIJI	Sorong	88.00	93	LR	LR	06 49 46.2			
	comp=Z,406nm,21.8s,baz=30,slow=39								
S57A	Dark Hollow, R	88.05	319	IAMs_20	IAMs_20	06 45 12.2			
	comp=Z,2µm,21.0s								
Q54A	Coxs Mills	88.08	320	IAMs_20	IAMs_20	06 48 08.8			
	comp=Z,2µm,19.0s								
SOEI	Soe	88.09	104	P	P	06 05 54.9	+2.3		
SOEI	Soe	88.09	104	P	P	06 05 55.5	+2.9		
SOEI	Soe	88.09	104	P	P	06 06 01.5	+8.9		
ACSO	Alum Creek Sta	88.16	323	IAMs_20	IAMs_20	06 43 56.0			
	comp=Z,2µm,22.0s								
R55A	Marlinton	88.25	320	IAMs_20	IAMs_20	06 47 43.5			
	comp=Z,2µm,19.0s								
SPMN	Marine on St.	88.30	331	IAmb	IAmb	06 05 56.6			
	comp=Z,36nm,1.2s								
SPMN				IAMs_20	IAMs_20	06 47 24.2			
	comp=Z,2µm,22.0s								
I40A	Norwalk	88.57	329	IAMs_20	IAMs_20	06 45 38.3			
	comp=Z,2µm,20.0s								
Q52A	Bidwell	88.80	321	IAmb	IAmb	06 05 57.3			
	comp=Z,21nm,0.9s								
O49A	Covington	88.84	323	IAmb	IAmb	06 06 01.9			
	comp=Z,83nm,2.0s								
O49A				IAMs_20	IAMs_20	06 47 58.8			
	comp=Z,2µm,18.0s								
L44A	Lake County Fo	88.85	327	IAMs_20	IAMs_20	06 47 05.0			
	comp=Z,2µm,20.0s								
N47A	Urbana	88.91	325	IAMs_20	IAMs_20	06 48 40.8			
	comp=Z,2µm,19.0s								
F33A	5 Mile Ranch,	89.03	334	IAmb	IAmb	06 06 11.5			
	comp=Z,33nm,1.6s								
O48B	Farmland	89.16	324	IAMs_20	IAMs_20	06 48 11.4			
	comp=Z,2µm,20.0s								
JFWS	Jewell Farm	89.23	329	IAMs_20	IAMs_20	06 45 55.9			
	comp=Z,2µm,20.0s								
Q51A	Peebles	89.28	322	IAmb	IAmb	06 06 02.0			
	comp=Z,46nm,1.7s								
Q51A				IAMs_20	IAMs_20	06 49 11.6			
	comp=Z,2µm,19.0s								
NBPS	Pedro II - PI	89.52	264	*e*P	P	06 05 59.4	0.0		
I37A	Lemond, Waseca	89.55	331	IAMs_20	IAMs_20	06 49 10.3			
	comp=Z,2µm,19.0s								
BBB	Bella Bella	89.55	355	LR	LR	06 49 40.8			
	comp=Z,1µm,20.1s,baz=340,slow=38								
M44A	Midewin, Midew	89.55	326	IAMs_20	IAMs_20	06 47 35.5			
	comp=Z,2µm,19.0s								
GUMO	Guam	89.60	73	LR	LR	06 48 22.4			
	comp=Z,597nm,21.5s,baz=310,slow=37								
V58A	Windy Hill, Pi	89.61	317	IAMs_20	IAMs_20	06 49 17.7			
	comp=Z,1µm,18.0s								
L42A	Oliver, Polo	89.74	328	IAmb	IAmb	06 06 03.0			
	comp=Z,32nm,1.2s								
L42A				IAMs_20	IAMs_20	06 45 59.5			
	comp=Z,2µm,20.0s								
U56A	King	89.86	319	IAMs_20	IAMs_20	06 46 37.2			
	comp=Z,2µm,20.0s								
P48A	Milroy	89.92	324	IAMs_20	IAMs_20	06 48 33.5			
	comp=Z,2µm,18.0s								
R50A	Paris	90.34	322	IAmb	IAmb	06 06 06.9			
	comp=Z,71nm,1.7s								
R50A				IAMs_20	IAMs_20	06 49 53.6			
	comp=Z,2µm,19.0s								
U54A	Nelsons Funny	90.47	320	IAMs_20	IAMs_20	06 47 22.2			
	comp=Z,2µm,21.0s								
Y60A	Bolivia	90.47	316	IAMs_20	IAMs_20	06 48 46.6			
	comp=Z,2µm,20.0s								
P46A	Rosedale	90.62	325	IAMs_20	IAMs_20	06 48 04.8			
	comp=Z,2µm,21.0s								
X58A	Rowland	90.67	317	IAMs_20	IAMs_20	06 48 43.7			
	comp=Z,2µm,20.0s								
V55A	Taylorsville	90.67	319	IAMs_20	IAMs_20	06 50 24.7			
	comp=Z,2µm,19.0s								
HDIL	Hopedale	90.77	327	IAmb	IAmb	06 06 08.7			
	comp=Z,53nm,1.3s								
HDIL				IAMs_20	IAMs_20	06 48 13.9			

RSSD			MLR	MLR			
	comp=Z,4μm,20.0s						
SIUC	**Southern Illin**	**93.08 325**	IAmb	IAmb	06 06 17.8		
	comp=Z,22nm,0.8s						
N35A	**Tabor**	**93.11 331**	IAMs_20	IAMs_20	06 49 58.4		
	comp=Z,2μm,19.0s						
S44A	**Carbondale**	**93.11 325**	IAmb	IAmb	06 06 17.9		
	comp=Z,18nm,0.8s						
S44A			IAMs_20	IAMs_20	06 47 49.8		
	comp=Z,2μm,22.0s						
W50A	**Signal Mountai**	**93.26 321**	IAmb	IAmb	06 06 20.4		
	comp=Z,52nm,1.5s						
W50A			IAMs_20	IAMs_20	06 50 53.0		
	comp=Z,2μm,19.0s						
P38A	**Dawn**	**93.33 329**	IAMs_20	IAMs_20	06 48 33.5		
	comp=Z,2μm,21.0s						
RLMT	**Red Lodge**	**93.55 342**	IAmb	IAmb	06 06 32.8		
	comp=Z,57nm,1.6s						
V48A	**Smith Brothers**	**93.56 322**	IAmb	IAmb	06 06 21.0		
	comp=Z,26nm,1.4s						
CGM3	**Cape Girardeau**	**93.62 325**	IAmb	IAmb	06 06 20.2		
	comp=Z,17nm,0.9s						
D08A	**Wollman Farm,**	**93.63 349**	IAmb	IAmb	06 06 47.4		
	comp=Z,26nm,1.6s						
GNW	**Green Mountain**	**93.66 351**	IAmb	IAmb	06 06 23.1		
	comp=Z,53nm,1.7s						
Y52A	**Lilburn**	**93.69 319**	IAmb	IAmb	06 06 22.7		
	comp=Z,25nm,1.2s						
Y52A			IAMs_20	IAMs_20	06 51 02.4		
	comp=Z,2μm,18.0s						
WVT	**Waverly**	**93.73 323**	IAMs_20	IAMs_20	06 50 51.3		
	comp=Z,2μm,19.0s						
GOGA	**Godfrey**	**93.73 319**	IAMs_20	IAMs_20	06 49 15.7		
	comp=Z,2μm,20.0s						
R40A	**Maddies Statio**	**93.93 327**	IAMs_20	IAMs_20	06 50 04.5		
	comp=Z,2μm,20.0s						
WAH2	**Wahluke Slope**	**94.02 349**	IAmb	IAmb	06 06 34.9		
	comp=Z,39nm,1.6s						
E09A	**Wood Farm, Sta**	**94.04 348**	IAmb	IAmb	06 06 23.6		
	comp=Z,36nm,1.8s						
DLMT	**Dillon**	**94.09 344**	IAmb	IAmb	06 06 34.7		
	comp=Z,31nm,1.7s						
SJG	**San Juan**	**94.14 297**	LR	LR	06 44 26.0		
	comp=Z,415nm,21.9s,baz=52,slow=33						
154A	**Montrose**	**94.17 318**	IAMs_20	IAMs_20	06 48 06.3		
	comp=Z,2μm,21.0s						
FITZ	**Fitzroy Crossi**	**94.36 110**	LR	LR	06 50 34.0		
	comp=Z,600nm,21.8s,baz=315,slow=37						
HAWA	**Hanford**	**94.37 349**	IAmb	IAmb	06 06 26.4		
	comp=Z,36nm,1.7s						
HAWA			IAMs_20	IAMs_20	06 53 42.5		
	comp=Z,2μm,19.0s						
T42A	**Van Buren**	**94.48 326**	IAMs_20	IAMs_20	06 48 45.0		
	comp=Z,2μm,20.0s						
X48A	**Hartselle**	**94.71 322**	IAMs_20	IAMs_20	06 51 51.4		
	comp=Z,2μm,18.0s						
Y49A	**Blount Mountai**	**94.88 321**	IAMs_20	IAMs_20	06 53 03.8		
	comp=Z,2μm,20.0s						
S39A	**Bolivar**	**94.88 328**	IAMs_20	IAMs_20	06 50 44.8		
	comp=Z,2μm,20.0s						
152A	**Waverly Hall**	**94.97 319**	IAMs_20	IAMs_20	06 49 16.3		
	comp=Z,2μm,20.0s						
K22A	**Casper**	**95.13 339**	IAmb	IAmb	06 06 39.5		
	comp=Z,34nm,1.4s						
MOOW	**Moose Ponds**	**95.20 342**	IAmb	IAmb	06 06 31.4		
	comp=Z,50nm,1.9s						
LOHW	**Long Hollow**	**95.30 342**	IAmb	IAmb	06 06 30.7		
	comp=Z,54nm,1.9s						
TIGA	**Tifton**	**95.34 317**	IAMs_20	IAMs_20	06 51 47.3		
	comp=Z,2μm,20.0s						
BMO	**Blue Mountains**	**95.51 347**	IAMs_20	IAMs_20	06 55 03.5		
	comp=Z,2μm,20.0s						
OXF	**Oxford**	**95.79 323**	IAMs_20	IAMs_20	06 53 35.0		
	comp=Z,2μm,20.0s						
LRAL	**Lakeview Retre**	**95.83 321**	IAmb	IAmb	06 06 30.8		
	comp=Z,16nm,1.1s						
LRAL			IAMs_20	IAMs_20	06 51 35.9		
	comp=Z,2μm,21.0s						
BW06	**Boulder Array**	**95.83 341**	IAmb	IAmb	06 06 32.7		
	comp=Z,29nm,1.8s						
PD31	**Pinedale Array**	**95.83 341**	IAmb	IAmb	06 06 32.7		
	comp=Z,31nm,1.9s						
PDAR	**Pinedale Array**	**95.83 341**	P	**P**	**06 06 28.1**	**-0.1**	
	comp=Z,0.8nm,0.9s,baz=46,slow=4.3,SNR=7.8						
PDAR			PKKPbc	**PKKPdf**	**06 23 15.0**	**-0.7**	
	comp=Z,0.8nm,0.8s,baz=206,slow=3.2,SNR=5.7						
PDAR			LR	LR	06 50 11.6		
	comp=Z,2μm,21.9s,baz=359,slow=36						
	comp=Z,0.8nm,0.9s						
PDAR	**Pinedale Array**	**95.83 341**	P	**P**	**06 06 26.2**	**-2.1**	
352A	**Blakely**	**96.01 318**	IAMs_20	IAMs_20	06 50 54.4		
	comp=Z,2μm,21.0s						
656A	**Willston**	**96.38 315**	IAMs_20	IAMs_20	06 50 09.0		
	comp=Z,2μm,20.0s						
R32A	**Long Quarter,**	**96.39 332**	IAmb	IAmb	06 06 37.2		
	comp=Z,35nm,1.6s						
JAY	**Jayapura**	**96.42 88**	LR	LR	06 52 58.9		
	comp=Z,792nm,22.0s,baz=356,slow=37						
MFID	**Camas Ranch**	**96.62 346**	IAmb	IAmb	06 06 35.9		
	comp=Z,28nm,1.7s						
T35A	**Sooner Cattle**	**96.85 329**	IAMs_20	IAMs_20	06 53 07.7		
	comp=Z,2μm,22.0s						
SDDR	**Presa de Saban**	**97.08 301**	IAMs_20	IAMs_20	06 55 12.7		
	comp=Z,1μm,18.0s						
HAYD	**Hayden**	**97.31 339**	IAMs_20	IAMs_20	06 51 06.2		
	comp=Z,2μm,21.0s						
BRAL	**Brewton**	**97.35 320**	IAMs_20	IAMs_20	06 50 32.5		
	comp=Z,2μm,19.0s						
TUL3	**Leonard**	**97.43 328**	IAMs_20	IAMs_20	06 55 26.0		
	comp=Z,2μm,20.0s						
OK048	**Pawnee Station**	**97.46 330**	IAMs_20	IAMs_20	06 50 53.7		
	comp=Z,2μm,20.0s						
RDMU	**Red Mountain**	**97.89 340**	IAmb	IAmb	06 06 49.7		
	comp=Z,14nm,1.3s						
NWAO	**Narrogin (SRO)**	**97.97 126**	IAMs_20	IAMs_20	06 49 15.3		
	comp=Z,2μm,20.0s						
WVOR	**Wild Horse Val**	**98.08 347**	IAMs_20	IAMs_20	06 58 12.8		
	comp=Z,2μm,20.0s						
OK029	**Liberty Lake**	**98.20 330**	IAMs_20	IAMs_20	06 51 15.4		
	comp=Z,2μm,21.0s						
VBMS	**Vicksburg**	**98.20 323**	IAMs_20	IAMs_20	06 56 23.8		
	comp=Z,2μm,19.0s						
143A	**Socs Landing,**	**98.22 324**	IAMs_20	IAMs_20	06 55 19.2		
	comp=Z,2μm,20.0s						
BSUT	**Blindstream Ca**	**98.23 341**	IAmb	IAmb	06 06 51.9		
	comp=Z,20nm,1.4s						
346A	**Big Creek Wild**	**98.38 322**	IAMs_20	IAMs_20	06 53 37.5		
	comp=Z,2μm,18.0s						
ELK	**Elko**	**99.07 345**	LR	LR	06 53 18.4		
	comp=Z,2μm,19.0s,baz=5.5,slow=36						
ELK	**Elko**	**99.07 345**	IAMs_20	IAMs_20	06 54 57.9		
	comp=Z,2μm,19.0s						
YBH	**Yreka Blue Hor**	**99.39 350**	LR	LR	06 55 25.7		
	comp=Z,68nm,18.4s,baz=3.5,slow=38						
M02C	**Callahan**	**99.74 350**	IAMs_20	IAMs_20	06 57 42.6		
	comp=Z,1μm,20.0s						
HATC	**Hat Creek Radi**	**100.11 349**	IAMs_20	IAMs_20	06 59 44.4		
	comp=Z,2μm,20.0s						
N02D	**Trinity Center**	**100.13 350**	IAMs_20	IAMs_20	06 55 47.0		
	comp=Z,1μm,19.0s						
Z35A	**Perchaven, San**	**100.26 328**	IAMs_20	IAMs_20	06 55 18.0		
	comp=Z,2μm,20.0s						
NATX	**Nacogdoches**	**100.50 325**	IAMs_20	IAMs_20	06 56 24.4		
	comp=Z,2μm,19.0s						
KHBM	**Hayfork Bally**	**100.51 351**	IAMs_20	IAMs_20	06 56 44.9		
	comp=Z,2μm,20.0s						
O03E	**Paynes Creek**	**100.67 349**	IAMs_20	IAMs_20	07 00 03.3		
	comp=Z,2μm,19.0s						
MVCO	**Mesa Verde**	**100.73 338**	IAMs_20	IAMs_20	06 54 27.3		
	comp=Z,2μm,21.0s						
ORV	**Oroville**	**101.36 349**	IAMs_20	IAMs_20	07 00 33.3		
	comp=Z,2μm,20.0s						
WHTX	**Lake Whitney,**	**101.51 328**	IAMs_20	IAMs_20	07 01 50.0		
	comp=Z,2μm,21.0s						
NVAR	**Mina Array Bea**	**101.92 346**	PKKPbc	PKKPbc	06 22 57.0	-2.8	
	comp=Z,0.7nm,0.8s,baz=234,slow=5.1,SNR=4.4						
WRA	**Warramunga Arr**	**101.99 106**	Pdiff	**Pdif**	**06 06 53.9**	**-2.0**	
	comp=Z,1.2nm,0.8s,baz=320,slow=4.0,SNR=7.7						
WRA			PP	**PP**	**06 11 07.8**	**+0.3**	
	comp=Z,2.4nm,0.9s,baz=313,slow=6.5,SNR=6.8						
WRA	**Warramunga Arr**	**101.99 106**	*i* P	**Pdif**	**06 06 55.7**	**-0.2**	
WRA			pmax	pmax			
	comp=Z,1.0nm,0.8s						
HOPS	**Hopland Field**	**102.13 350**	IAMs_20	IAMs_20	06 52 03.8		
	comp=Z,1μm,20.0s						
ANMO	**Albuquerque**	**102.20 336**	IAMs_20	IAMs_20	06 55 36.2		
	comp=Z,3μm,20.0s						
ANMO	**Albuquerque**	**102.20 336**	IAMs_20	IAMs_20	06 55 36.1		
	comp=Z,3μm,20.0s						
WELL	**Weller Preserv**	**102.33 348**	IAMs_20	IAMs_20	07 00 59.0		
	comp=Z,2μm,19.0s						
CMB	**Columbia Colle**	**102.67 348**	IAMs_20	IAMs_20	06 54 48.0		
	comp=Z,2μm,21.0s						
CVS	**Carmenet Viney**	**102.68 350**	IAMs_20	IAMs_20	07 01 54.4		
	comp=Z,2μm,21.0s						
TIN	**Tinemaha, Big**	**103.23 346**	IAMs_20	IAMs_20	07 01 37.1		
	comp=Z,2μm,21.0s						
MHC	**Mount Hamilton**	**103.55 349**	IAMs_20	IAMs_20	07 00 09.3		
	comp=Z,2μm,20.0s						
JRSC	**Jasper Ridge**	**103.57 349**	IAMs_20	IAMs_20	07 03 34.0		
	comp=Z,2μm,20.0s						
JCT	**Junction City**	**103.80 329**	IAMs_20	IAMs_20	06 57 37.6		
	comp=Z,2μm,19.0s						
CWC	**Cottonwood Cre**	**103.80 346**	IAMs_20	IAMs_20	07 03 21.1		
	comp=Z,2μm,20.0s						
ASAR	**Alice Springs**	**103.86 109**	Pdiff	**Pdif**	**06 07 02.0**	**-2.1**	
	comp=Z,1.1nm,0.9s,baz=301,slow=4.2,SNR=7.0						
ASAR			PKiKP	**PP**	**06 11 20.6**	**-0.9**	
	comp=Z,2.1nm,0.9s,baz=297,slow=2.3,SNR=6.4						
FORD	**Fort Ord Natur**	**104.21 349**	IAMs_20	IAMs_20	06 55 25.8		
	comp=Z,2μm,21.0s						
VES	**Vestal, Richgr**	**104.57 346**	IAMs_20	IAMs_20	06 58 45.5		
	comp=Z,1μm,20.0s						
LRMC	**Laurel Mtn Rad**	**104.65 345**	IAMs_20	IAMs_20	06 57 59.6		
	comp=Z,2μm,20.0s						
PKD	**Bear Valley Ra**	**104.73 347**	IAMs_20	IAMs_20	06 58 50.7		
	comp=Z,2μm,21.0s						
DANC	**Danby, Needles**	**104.96 343**	IAMs_20	IAMs_20	06 56 43.9		
	comp=Z,1μm,22.0s						
OSI	**Osito Audit: C**	**105.69 346**	IAMs_20	IAMs_20	06 57 53.2		
	comp=Z,2μm,20.0s						
PFO	**Pinyon Flats O**	**106.19 344**	IAMs_20	IAMs_20	06 59 01.4		
	comp=Z,2μm,21.0s						
TXAR	**Lajitas Array**	**106.33 331**	Pdiff	**Pdif**	**06 07 16.2**	**+0.9**	
	comp=Z,0.4nm,0.9s,baz=35,slow=4.6,SNR=3.6						
TXAR			PP	**PKiKP**	**06 11 26.0**	**-0.6**	
	comp=Z,0.7nm,1.0s,baz=22,slow=4.0,SNR=3.7						
CPE	**Camp Elliot**	**107.03 344**	IAMs_20	IAMs_20	06 59 19.6		
	comp=Z,2μm,20.0s						
BAR	**Barrett**	**107.13 343**	IAMs_20	IAMs_20	06 57 53.4		
	comp=Z,2μm,20.0s						
TGUH	**Tegucigalpa,Un**	**111.01 309**	IAMs_20	IAMs_20	06 54 17.8		
	comp=Z,1μm,22.0s						
ELIB	**Princess Elisa**	**111.06 187**	*d*PKiKP	**PKiKP**	**06 11 34.5**	**+0.5**	
NVL	**N'lazarevskaya**	**111.38 191**	*i* PKiKP	**PKiKP**	**06 11 35.0**	**+0.6**	
NVL			*e*		06 12 15.4		
NVL			*e*PPP	PPP	06 14 36.1		
NVL			*e*		06 18 47.1		
NVL			*e*SS	SS	06 27 51.0	+1.5	
NVL			*e*SSS	SSS	06 32 00.1		
NVL			pmax	pmax			
	comp=Z,15nm,1.2s						
NVL			MLR	MLR			
	comp=Z,2μm,17.0s						
HDC	**Heredia**	**112.09 304**	IAMs_20	IAMs_20	06 59 38.1		
	comp=Z,1μm,19.0s						
STKA	**Stephens Creek**	**114.06 112**	PKiKP	PKPdf	06 11 39.2	-1.6	
	comp=Z,2.0nm,0.8s,baz=324,slow=8.6,SNR=3.6						
CPUP	**Villa Florida**	**114.67 255**	PKP	PKPdf	06 11 39.9	-2.2	
	comp=Z,1.9nm,0.8s,baz=11,slow=2.1,SNR=5.4						
SNAA	**Sanae**	**114.74 195**	PKP	PKPdf	06 11 39.1	-1.9	
	comp=Z,2.7nm,0.8s,baz=339,slow=6.7,SNR=5.1						
LPAZ	**La Paz**	**117.56 271**	PKP	**PKPdf**	**06 11 47.4**	**-1.4**	
	comp=Z,2.1nm,0.6s,baz=350,slow=6.1,SNR=5.8						
PB18	**Visviri**	**119.36 270**	IAMs_20	IAMs_20	07 07 48.8		
	comp=Z,1μm,18.0s						
GO01	**Chusmiza**	**120.30 268**	IAMs_20	IAMs_20	07 07 19.0		
	comp=Z,1μm,20.0s						
AP01	**Chacalluta**	**120.48 270**	IAMs_20	IAMs_20	07 07 00.7		
	comp=Z,998nm,20.0s						
PB11	**IPOC Station P**	**120.71 268**	IAMs_20	IAMs_20	07 07 43.0		
	comp=Z,1μm,20.0s						
AF01	**San Pedro de A**	**121.27 264**	IAMs_20	IAMs_20	07 06 57.1		
	comp=Z,1μm,22.0s						
PB01	**IPOC Station P**	**121.28 267**	IAMs_20	IAMs_20	07 08 17.1		
	comp=Z,1μm,20.0s						
PB09	**IPOC Station P**	**121.49 266**	IAMs_20	IAMs_20	07 07 29.7		
	comp=Z,1μm,20.0s						
NNA	**Nana**	**121.83 280**	IAMs_20	IAMs_20	07 06 00.8		
	comp=Z,2μm,22.0s						
PB06	**IPOC Station P**	**122.23 265**	IAMs_20	IAMs_20	07 03 21.4		
	comp=Z,1μm,20.0s						
PB10	**IPOC Station P**	**123.42 265**	IAMs_20	IAMs_20	07 08 26.6		
	comp=Z,1μm,21.0s						
GO02	**Mina Guanaco**	**123.52 263**	IAMs_20	IAMs_20	07 12 56.7		
	comp=Z,1μm,19.0s						
AC05	**El Transito**	**125.85 259**	IAMs_20	IAMs_20	07 11 52.7		
	comp=Z,1μm,20.0s						
CO06	**Fray Jorge**	**127.75 258**	IAMs_20	IAMs_20	07 07 01.0		
	comp=Z,1μm,21.0s						
DZM	**Mont Dzumac**	**128.08 89**	*e*PP	**PP**	**06 14 07.0**	**-4.6**	
	comp=Z,113nm,25.1s						
DZM			*e*LR	LR	06 52 28.5		
	comp=Z,2μm,23.1s						
PEL	**Peldehue**	**128.11 255**	IAMs_20	IAMs_20	07 16 48.4		
	comp=Z,1μm,20.0s						
QSPA	**South Pole Qui**	**128.24 180**	PKP	**PKPdf**	**06 12 05.1**	**-1.9**	
	comp=Z,15nm,0.8s,baz=254,slow=1.1,SNR=12						
QSPA	**South Pole Qui**	**128.24 180**		**PKPdf**	**06 12 05.2**	**-1.8**	
MT02	**Curacav**	**128.50 255**	IAMs_20	IAMs_20	07 08 56.0		
	comp=Z,1μm,20.0s						
MT09	**Talagante**	**128.60 254**	IAMs_20	IAMs_20	07 10 11.8		
	comp=Z,1μm,20.0s						
MT01	**Popeta**	**128.84 254**	IAMs_20	IAMs_20	07 10 07.0		
	comp=Z,2μm,22.0s						
BO01	**Tunca**	**128.93 254**	IAMs_20	IAMs_20	07 12 06.5		
	comp=Z,1μm,20.0s						
PLCA	**Paso Flores**	**130.91 246**	PKP	**PKPdf**	**06 12 12.3**	**-0.6**	
	comp=Z,15nm,1.2s,baz=8.6,slow=1.6,SNR=18						
PLCA	**Paso Flores**	**130.91 246**	*e*P	**PKPdf**	**06 12 11.1**	**-1.8**	
TAOE	**Nuu Hiva Isla**	**150.28 9**	*e*P	**PKPdf**	**06 12 44.3**	**-4.0**	
	comp=Z,109nm,27.3s						
TAOE			*e*PP	**PP**	**06 16 25.0**	**-2.0**	
	comp=Z,119nm,24.9s						
TAOE			*e*SS	SS	06 35 43.0	-2.0	
	comp=Z,273nm,26.0s						
TAOE			*e*LR	LR	07 02 29.7		
	comp=Z,2μm,25.2s						
PPT2	**Papeete2**	**155.88 35**	*e*P	**PKPdf**	**06 12 50.2**	**-6.0**	
	comp=Z,77nm,25.0s						
PPT2			*e*SS	SS	06 36 51.9	+4.7	
	comp=Z,394nm,23.0s						
PPT2			*e*LR	LR	07 05 05.8		
	comp=Z,2μm,28.0s						
PPT2			*e*LR	LR	07 05 20.5		
	comp=Z,2μm,24.2s						
TBI	**Tubuai**	**160.83 42**	*e*P	**PKPdf**	**06 12 58.8**	**-3.2**	
	comp=Z,306nm,27.8s						
TBI			*e*PP	**PP**	**06 17 24.7**	**-1.7**	
	comp=Z,347nm,27.0s						
TBI			*e*SS	SS	06 37 38.4	-1.7	
	comp=Z,2μm,32.5s						
TBI			*e*LR	LR	07 07 19.8		
	comp=Z,2μm,24.0s						
TBI			*e*LR	LR	07 07 37.2		
	comp=Z,7μm,24.2s						

ISK ***23*** *06:00:20.4, 38.07N×44.61E, h4km, ML3.1/2*
AZER ***23*** *06:00:22.3, 38.05N×44.97E, h39km, ml3.5*
TEH ***23*** *06:00:23.9, 38.47N×44.55E, h10km±149km, ML2.9, Presumed earthquake*

ISC 23 06:00:25.3±1.2, 38.34N±0.04×44.53E±0.03, h15km±12km, n15, σ1°45/24, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.86**	**94**	Pg	**Pb**	**06 00 40.2**	**-1.9**
VANB	**Van**	**0.93**	**286**	Pg	**Pb**	**06 00 41.1**	**-2.1**
VANB				Sg	**Sg**	**06 00 56.3**	**+0.7**
HAKT	**HAKKARI**	**1.01**	**220**	P	**Pb**	**06 00 44.3**	**-0.5**
HAKT				S	**Sn**	**06 01 01.1**	**+1.7**
MAKU	**Maku**	**1.02**	**7**	Pg	**Pb**	**06 00 41.4**	**-3.4**
NAX	**Nakhchivan**	**1.12**	**42**	P	**Pn**	**06 00 45.4**	**-1.2**
NAX				S	**Sg**	**06 01 02.4**	**+0.6**
AKDM	**Akdamar-Van**	**1.22**	**270**	Pn	**Pn**	**06 00 46.1**	**-1.9**
AKDM				Sn	**Sg**	**06 01 05.1**	**+0.4**
ITBZ	**Tabriz**	**1.28**	**94**	Pg	**Pn**	**06 00 48.4**	**-0.5**
ITBZ				Sg	**Sg**	**06 01 07.6**	**+0.9**
SBZ	**Shahbuz**	**1.32**	**37**	P	**Pn**	**06 00 48.8**	**-0.6**
SBZ				S	**Sg**	**06 01 08.1**	**-0.1**
IAZR	**Azarshahr**	**1.32**	**120**	Pg	**Pg**	**06 00 50.9**	**0.0**
HYR	**Heyderabad**	**1.40**	**10**	P	**Pb**	**06 00 51.3**	**0.0**
HYR				S	**Sg**	**06 01 12.9**	**+2.4**
AGRB	**Hanur-Agry**	**1.72**	**316**	Pn	**Pn**	**06 00 55.5**	**+0.6**
MLAZ	**Malazgirt-MUS**	**1.74**	**298**	Pn	**Pn**	**06 00 55.0**	**-0.2**
MLAZ				Sn	**Sb**	**06 01 20.6**	**+1.8**
GNI	**Garni**	**1.81**	**5**	Pn	**Pn**	**06 00 57.3**	**+1.1**
GNI				Sn	**Sg**	**06 01 24.0**	**+0.2**
GURO	**Guroymak-BITLI**	**1.97**	**277**	Pn	**Pn**	**06 00 57.4**	**-0.9**
IHRS	**Heris**	**1.98**	**90**	Pn	**Pb**	**06 01 01.1**	**-0.1**

ISK 23 06:08:36.2, 38.40N×44.49E, h5km, ML2.4/6, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.88**	**283**	Pg	Pb	06 08 53.8	-0.3
VANB				Sg	Sb	06 09 06.7	+0.5
CUKT	**Cukurca**	**1.35**	**211**	Pn	Pg	06 09 03.1	+1.1
CUKT				Sn	Sn	06 09 22.7	+2.6
AGRB	**Hanur-Agry**	**1.65**	**316**	Pn	Pb	06 09 07.0	-0.2
MLAZ	**Malazgirt-MUS**	**1.68**	**297**	Pn	Pb	06 09 08.0	+0.2
GNI	**Garni**	**1.76**	**6**	Pn	Pb	06 09 09.0	0.0
GURO	**Guroymak-BITLI**	**1.93**	**275**	Pn	Pb	06 09 11.4	-0.6

TEH 23 06:09:24.8, 38.43N×44.56E, h10km, ML2.6, Presumed earthquake, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.84**	**100**	Pg	Pg	06 09 41.1	-0.1
MAKU	**Maku**	**0.93**	**6**	Pg	Pg	06 09 42.8	+0.2
ITBZ	**Tabriz**	**1.26**	**99**	Pg	Pg	06 09 49.6	+0.5
IHRS	**Heris**	**1.95**	**93**	Pn	Pg	06 10 02.0	-0.3

AFAD ***23*** *06:15:19.8, 38.44N×44.67E, h7km±3km, ML2.4*
TEH ***23*** *06:15:21.6, 38.42N×44.45E, h10km±999km, ML2.6, Presumed earthquake*
ISK ***23*** *06:15:22.4, 38.45N×44.49E, h18km, ML2.6/6*

ISC 23 06:15:22.0±1.1, 38.42N±0.03×44.52E±0.03, h11km±10km, n21, σ0°99/33, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**301**	P	**Pb**	**06 15 31.4**	**-1.1**
OZAP				S	**Sg**	**06 15 37.2**	**-0.6**
OZAP				IAML		06 15 40.0	
	comp=N,402nm,0.5s						
OZAP				IAML		06 15 40.0	
	comp=E,566nm,0.4s						
ISHB	**Shabestar**	**0.88**	**98**	Pg	**Pg**	**06 15 38.8**	**-0.1**
TVAN	**Van**	**0.88**	**278**	P	**Pg**	**06 15 38.3**	**-0.7**
TVAN				S	**Sn**	**06 15 53.1**	**-0.2**
TVAN				IAML		06 15 56.0	
	comp=N,175nm,0.3s						
TVAN				IAML		06 15 57.0	
	comp=E,143nm,0.4s						
VANB	**Van**	**0.90**	**282**	Pg	**Pn**	**06 15 40.3**	**-0.4**
VANB				Sg	**Sb**	**06 15 51.7**	**0.0**
VMUR	**Van-Muradiye**	**0.93**	**308**	P	**Pb**	**06 15 39.9**	**-0.4**
VMUR				S	**Sn**	**06 15 54.8**	**+0.1**
VMUR				IAML		06 15 58.0	
	comp=E,94nm,0.4s						
VMUR				IAML		06 16 00.0	
	comp=N,102nm,0.3s						
MAKU	**Maku**	**0.95**	**8**	Pg	**Pg**	**06 15 39.6**	**-0.7**
IMRD	**Marand**	**0.98**	**72**	Pg	**Pn**	**06 15 41.6**	**-0.2**
HAKT	**HAKKARI**	**1.07**	**217**	P	**Pg**	**06 15 41.8**	**-0.8**
HAKT				S	**Sn**	**06 15 59.2**	**+1.2**
HAKT				IAML		06 16 00.0	
	comp=E,140nm,0.4s						
HAKT				IAML		06 16 01.0	
	comp=N,126nm,0.5s						
GEVA	**Gevas**	**1.15**	**265**	P	**Pb**	**06 15 42.5**	**-1.4**
GEVA				S	**Sn**	**06 16 01.0**	**+1.0**
AKDM	**Akdamar-Van**	**1.21**	**266**	Pn	**Pb**	**06 15 43.9**	**-1.1**
AKDM				Sn	**Sn**	**06 16 01.3**	**-0.1**
DYDN	**Diyadin**	**1.30**	**330**	P	**Pg**	**06 15 46.9**	**0.0**
DYDN				S	**Sn**	**06 16 03.5**	**-0.1**
CUKT	**Cukurca**	**1.37**	**212**	Pn	**Pb**	**06 15 47.5**	**-0.2**
CUKT				Sn	**Sg**	**06 16 06.0**	**-0.1**
IAZR	**Azarshahr**	**1.37**	**122**	Pg	**Pg**	**06 15 48.6**	**+0.3**
ADCV	**BITLIS_Adilcev**	**1.46**	**286**	P	**Pg**	**06 15 49.9**	**0.0**
ADCV				S	**Sg**	**06 16 12.7**	**+3.8**
ADCV				IAML		06 16 13.0	
	comp=E,26nm,0.4s						
ADCV				IAML		06 16 15.0	
	comp=N,44nm,0.5s						
AGRB	**Hanur-Agry**	**1.66**	**315**	Pn	**Pn**	**06 15 50.9**	**-0.2**
DORK	**Agr/Tutak/Do**	**1.67**	**306**	P	**Pg**	**06 15 53.2**	**-0.7**
DORK				S	**Sg**	**06 16 17.4**	**+1.8**
DORK				IAML		06 16 21.0

comp=E,420nm,0.7s
DYDN Diyadin 1.30 330 Pg **Pn** **06 17 03.8 -2.4**
IAZR Azarshahr 1.36 122 Pg **Pb** **06 17 07.7 +0.2**
CUKT Cukurca 1.38 212 Pn **Pb** **06 17 07.8 0.0**
CUKT Sn **Sg** **06 17 26.9 +0.8**
CUKT Cukurca 1.38 212 P **Pb** **06 17 07.3 -0.5**
CUKT S **Sb** **06 17 25.2 -0.4**
CUKT IAML 06 17 28.0
comp=E,938nm,0.6s
CUKT IAML 06 17 29.0
comp=N,1µm,0.8s
CUKT Cukurca 1.38 212 Pg **Pb** **06 17 07.2 -0.5**
VAYK Vayk 1.45 28 *i*P **Pb** **06 17 08.5 -0.4**
VAYK *i*S **Sg** **06 17 29.6 +1.2**
ADCV BITLIS_Adilcev 1.47 286 P **Pb** **06 17 08.6 -0.7**
ADCV S **Sg** **06 17 29.9 +0.9**
ADCV IAML 06 17 33.0
comp=N,306nm,0.5s
ADCV IAML 06 17 37.0
comp=E,224nm,0.5s
ALVK Alvank 1.51 69 *e*P **Pb** **06 17 09.6 -0.4**
ALVK *e*S **Sg** **06 17 30.2 -0.3**
PERV Siirt/Pervari- 1.64 254 P **Pn** **06 17 10.9 +0.1**
PERV S **Sg** **06 17 37.9 +3.4**
PERV IAML 06 17 40.0
comp=E,679nm,0.9s
PERV IAML 06 17 44.0
comp=N,875nm,0.6s
AGRB Hanur-Agry 1.67 314 Pn **Pb** **06 17 11.8 -0.9**
AGRB Sn **Sg** **06 17 34.9 -0.4**
DORK Agr/Tutak/Do 1.68 306 P **Pn** **06 17 11.2 -0.2**
DORK S **Sg** **06 17 36.0 +0.4**
DORK IAML 06 17 44.0
comp=N,223nm,0.7s
DORK IAML 06 17 53.0
comp=E,179nm,0.9s
MLAZ Malazgirt-MUS 1.71 296 Pn **Pb** **06 17 13.0 -0.4**
KOTA Agri, Merkez-K 1.72 324 P **Pn** **06 17 11.3 -0.8**
KOTA S **Sg** **06 17 36.9 -0.3**
KOTA IAML 06 17 42.0
comp=N,79nm,0.8s
KOTA IAML 06 17 50.0
comp=E,86nm,1.0s
GNI Garni 1.73 5 Pn **Pb** **06 17 13.2 -0.6**
GNI Garni 1.73 5 *e*P **Pg** **06 17 14.8 -0.3**
GNI *e*S **Sg** **06 17 41.6 +4.1**
EGVZ Egvard 1.76 62 *e*P **Pb** **06 17 13.9 -0.4**
EGVZ *e*S **Sg** **06 17 38.1 -0.3**
VNNZ Vanand 1.77 342 *e*P **Pb** **06 17 14.5 +0.1**
VNNZ *e*S **Sg** **06 17 38.5 -0.1**
ARUZ Aruch 1.89 350 *e*P **Pb** **06 17 17.2 +0.7**
ARUZ *e*S **Sg** **06 17 44.1 +1.6**
MAHB Mahabad 1.89 150 Pn **Pb** **06 17 16.5 0.0**
BLIS Bitlis-Merkez 1.90 271 P **Pb** **06 17 16.4 -0.2**
BLIS S **Sg** **06 17 46.0 +3.2**
BLIS IAML 06 17 47.0
comp=E,104nm,1.3s
BLIS IAML 06 17 55.0
comp=N,125nm,0.9s
BLIS Bitlis-Merkez 1.90 271 Pn **Pb** **06 17 16.4 -0.2**
KAPZ Kaputan 1.90 4 *e*P **Pb** **06 17 16.6 -0.2**
KAPZ *e*S **Sg** **06 17 42.7 -0.3**
AYRK Ayrk 1.95 29 *e*P **Pb** **06 17 17.8 +0.2**
AYRK *e*S **Sg** **06 17 44.7 +0.2**
GURO Guroymak-BITLI 1.97 275 Pn **Pb** **06 17 16.3 -1.5**
IHRS Heris 1.97 92 Pn **Pb** **06 17 17.8 -0.2**
AMBZ Amberd 1.98 354 *e*P **Pb** **06 17 17.9 -0.2**
AMBZ *e*S **Sg** **06 17 45.9 +0.6**
IHSH Hashtrud 2.43 116 Pn **Pb** **06 17 24.1 -1.7**
KARS Kars 2.48 333 Pn **Pn** **06 17 23.6 +1.3**
ISRB Sarab 2.54 103 Pn **Pb** **06 17 25.3 -2.3**
LSVT Lusahovit 2.54 11 *e*P **Pb** **06 17 27.9 +0.3**
LSVT *e*S **Sg** **06 18 02.6 -0.9**
SVAN Silvan-Diyarba 2.64 265 Pn **Pn** **06 17 26.1 +1.6**
SRTK Saratovka 2.65 357 *e*P **Pb** **06 17 30.2 +0.8**
SRTK *e*S **Sg** **06 18 07.9 +1.1**
SENK Senkaya-Erzuru 2.73 322 Pn **Pn** **06 17 27.3 +1.5**
BNGB Bingl 3.07 282 Pn **Pn** **06 17 32.5 +2.0**
VSHL Vashlovani 3.15 27 P **Pb** **06 17 36.0 -2.0**
DYBB Diyarbakir 3.49 264 Pn **Pn** **06 17 38.2 +1.9**
CHRG Chargali 3.92 4 P **Pg** **06 17 55.2 -1.6**
BAYT Aydıntepe-Bayb 3.93 301 Pn **Pn** **06 17 44.0 +1.6**
SHTL Shatili 4.26 6 P **Pb** **06 17 58.8 +1.9**

*AZER **23** 06:22:54.0,38˚.44N×44˚.53E,h7km,ml2.7*
*NSSP **23** 06:22:54.8,38˚.42N×44˚.53E,h10km,Ms3.0*
*AFAD **23** 06:22:55.9,38˚.39N×44˚.50E,h7km±4km,ML2.6*
*TEH **23** 06:22:56.2,38˚.43N×44˚.54E,h10km±999km,ML2.8, Presumed earthquake*
*ISK **23** 06:22:57.5,38˚.41N×44˚.46E,h11km, ML2.8/6*
ISC 23 06:22:56.1±1.1,38˚.42N±0˚.03×44˚.52E±0˚.02,h7km±10km, n29,σ1ş06/47,2D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**301**	P	**Pg**	**06 23 05.1**	**-0.4**
OZAP				S	**Sg**	**06 23 12.7**	**+0.9**
OZAP				IAML		06 23 19.0	
	comp=N,745nm,0.6s						
OZAP				IAML		06 23 24.0	
	comp=E,690nm,1.1s						
ISHB	**Shabestar**	**0.87**	**98**	Pg	**Pg**	**06 23 12.1**	**-0.8**
TVAN	**Van**	**0.88**	**278**	P	**Pg**	**06 23 12.0**	**-1.1**
TVAN				S	**Sb**	**06 23 25.5**	**-0.5**
TVAN				IAML		06 23 34.0	
	comp=N,349nm,0.5s						
TVAN				IAML		06 23 41.0	
	comp=E,410nm,0.9s						
VANB	**Van**	**0.91**	**282**	Pg	**Pb**	**06 23 14.1**	**-0.2**
VANB				Sg	**Sb**	**06 23 25.9**	**-0.7**
VMUR	**Van-Muradiye**	**0.94**	**308**	P	**Pb**	**06 23 14.8**	**-0.1**
VMUR				S	**Sb**	**06 23 27.9**	**+0.3**
VMUR				IAML		06 23 30.0	
	comp=E,220nm,0.3s						
VMUR				IAML		06 23 31.0	
	comp=N,231nm,0.5s						
MAKU	**Maku**	**0.95**	**8**	Pg	**Pg**	**06 23 13.8**	**-0.5**
IMRD	**Marand**	**0.97**	**72**	Pg	**Pb**	**06 23 15.0**	**-0.4**
HAKT	**HAKKARI**	**1.07**	**217**	P	**Pg**	**06 23 16.7**	**-0.1**
HAKT				S	**Sn**	**06 23 34.4**	**+1.4**
HAKT				IAML		06 23 38.0	
	comp=N,179nm,0.4s						
HAKT				IAML		06 23 42.0	
	comp=E,164nm,0.6s						
HAKT	**HAKKARI**	**1.07**	**217**	P	**Pg**	**06 23 16.6**	**-0.1**
HAKT				S	**Sn**	**06 23 34.4**	**+1.4**
NAX	**Nakhchivan**	**1.07**	**45**	P	**Pn**	**06 23 16.9**	**-0.8**
NAX				S	**Sn**	**06 23 32.9**	**0.0**
GEVA	**Gevas**	**1.16**	**265**	P	**Pb**	**06 23 16.2**	**-2.3**
GEVA				S	**Sn**	**06 23 35.6**	**+0.6**
ORD	**Ordubad**	**1.26**	**66**	P	**Pg**	**06 23 20.3**	**0.0**
ORD				S	**Sn**	**06 23 39.2**	**+1.7**
ITBZ	**Tabriz**	**1.29**	**98**	Pg	**Pn**	**06 23 20.0**	**-0.7**
IAZR	**Azarshahr**	**1.37**	**122**	Pg	**Pg**	**06 23 22.3**	**-0.1**
CUKT	**Cukurca**	**1.37**	**212**	Pn	**Pg**	**06 23 22.5**	**+0.1**
CUKT				Sn	**Sg**	**06 23 41.4**	**+1.2**
VAYK	**Vayk**	**1.46**	**29**	*e*P	**Pb**	**06 23 23.2**	**-0.5**
VAYK				⇓*e*S	**Sg**	**06 23 43.6**	**+0.5**
ADCV	**BITLIS_Adilcev**	**1.46**	**286**	P	**Pn**	**06 23 22.8**	**-0.3**
ADCV				S	**Sg**	**06 23 45.7**	**+2.6**
ADCV				IAML		06 23 48.0	
	comp=E,79nm,0.8s						
ADCV				IAML		06 23 49.0	
	comp=N,64nm,0.7s						
ALVK	**Alvank**	**1.52**	**69**	*e*P	**Pb**	**06 23 24.5**	**-0.2**
ALVK				*e*S	**Sg**	**06 23 46.1**	**+1.0**
AGRB	**Hanur-Agry**	**1.66**	**315**	Pn	**Pb**	**06 23 26.7**	**-0.5**
DORK	**Agr/Tutak/Do**	**1.67**	**306**	P	**Pg**	**06 23 27.7**	**-0.4**
DORK				IAML		06 24 01.0	
	comp=N,57nm,0.8s						
DORK				IAML		06 24 02.0	
	comp=E,41nm,0.9s						
MLAZ	**Malazgirt-MUS**	**1.70**	**296**	Pn	**Pb**	**06 23 27.3**	**-0.6**
KOTA	**Agri, Merkez-K**	**1.72**	**324**	P	**Pg**	**06 23 29.0**	**-0.1**
KOTA				S	**Sb**	**06 23 49.6**	**-0.5**
GNI	**Garni**	**1.74**	**6**	Pn	**Pb**	**06 23 28.6**	**+0.1**
GNI	**Garni**	**1.74**	**6**	*e*P	**Pg**	**06 23 30.0**	**+0.5**
GNI				*e*S	**Sg**	**06 23 56.0**	**+3.9**
EGVZ	**Egvard**	**1.77**	**62**	*e*P	**Pb**	**06 23 28.6**	**-0.4**
EGVZ				*e*S	**Sg**	**06 23 52.5**	**-0.6**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn	**Pb**	**06 23 30.9**	**-1.3**
AYRK	**Ayrk**	**1.96**	**30**	*e*P	**Pb**	**06 23 32.1**	**-0.2**
AYRK				*e*S	**Sg**	**06 23 58.8**	**-0.4**
IHRS	**Heris**	**1.98**	**92**	Pn	**Pb**	**06 23 32.7**	**+0.1**
LSVT	**Lusahovit**	**2.55**	**11**	*e*P	**Pg**	**06 23 43.5**	**-1.5**
LSVT				*e*S	**Sg**	**06 24 18.1**	**0.0**

*IDC **23** 06:31:18.9±2.1,37˚.45N×44˚.65E,h0km,mb3.6/5, mbtmp3.5/7,ML2.4/2,MS3.9/2,Error ellipse: s-maj=40.4km s-min=19.1km az=178.0*
*AZER **23** 06:31:21.2,38˚.46N×44˚.51E,h56km,ml3.9*
*AFAD **23** 06:31:22.6,38˚.42N×44˚.48E,h5km±4km,MW3.9*
*TEH **23** 06:31:22.5,38˚.45N×44˚.57E,h6km,ML3.5,Presumed earthquake*
*ISK **23** 06:31:22.9,38˚.40N×44˚.57E,h5km*
*TIF **23** 06:31:22.2,38˚.43N×44˚.48E,h5km±2km*
*NSSP **23** 06:31:23.2,38˚.42N×44˚.52E,h10km,Ms4.0*
ISC 23 06:31:23.3±1.0,38˚.44N±0˚.02×44˚.56E±0˚.02,h14km±8km, n99,σ1ş96/154,mb3.5/5,1C-5D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.50**	**297**	P	**Pg**	**06 31 31.7**	**-1.5**
OZAP				S	**Sg**	**06 31 37.9**	**-2.0**
OZAP				IAML		06 31 42.0	
	comp=E,7µm,0.7s						
OZAP				IAML		06 31 46.0	
	comp=N,9µm,0.7s						
ISHB	**Shabestar**	**0.85**	**100**	Pg	**Pg**	**06 31 38.8**	**-1.0**
TVAN	**Van**	**0.91**	**276**	P	**Pb**	**06 31 38.4**	**-2.6**
TVAN				S	**Sg**	**06 31 51.9**	**-1.0**
TVAN				IAML		06 32 06.0	
	comp=N,3µm,0.9s						
TVAN				IAML		06 32 07.0	
	comp=E,2µm,1.0s						
MAKU	**Maku**	**0.92**	**6**	Pg	**Pb**	**06 31 39.6**	**-1.7**
VANB	**Van**	**0.93**	**280**	Pg	**Pb**	**06 31 40.6**	**-0.7**
VANB				Sg	**Sn**	**06 31 54.4**	**-1.0**
IMRD	**Marand**	**0.94**	**72**	Pg	**Pb**	**06 31 39.9**	**-1.7**
VMUR	**Van-Muradiye**	**0.95**	**306**	P	**Pb**	**06 31 40.8**	**-0.9**
VMUR				S	**Sb**	**06 31 53.9**	**-0.3**
VMUR				IAML		06 31 59.0	
	comp=N,2µm,0.5s						
VMUR				IAML		06 32 01.0	
	comp=E,1µm,0.3s						
VMUR	**Van-Muradiye**	**0.95**	**306**	Pg	**Pb**	**06 31 40.8**	**-0.9**
NAX	**Nakhchivan**	**1.04**	**45**	P	**Pg**	**06 31 43.8**	**+0.4**
NAX				S	**Sn**	**06 31 59.4**	**+1.3**
HAKT	**HAKKARI**	**1.10**	**218**	P	**Pb**	**06 31 42.8**	**-1.6**
HAKT				S	**Sn**	**06 32 00.1**	**+0.3**
HAKT				IAML		06 32 05.0	
	comp=E,2µm,0.8s						
HAKT				IAML		06 32 06.0	
	comp=N,1µm,0.7s						
HAKT	**HAKKARI**	**1.10**	**218**	Pg	**Pb**	**06 31 42.7**	**-1.6**
HAKT	**HAKKARI**	**1.10**	**218**	P	**Pb**	**06 31 42.8**	**-1.6**
HAKT				S	**Sn**	**06 32 00.9**	**+1.1**
GEVA	**Gevas**	**1.18**	**265**	P	**Pn**	**06 31 42.4**	**-3.3**
GEVA				S	**Sb**	**06 32 01.0**	**0.0**
ORD	**Ordubad**	**1.23**	**66**	P	**Pb**	**06 31 47.1**	**+0.7**
ORD				S	**Sg**	**06 32 05.1**	**+2.1**
SBZ	**Shahbuz**	**1.24**	**39**	P	**Pg**	**06 31 47.3**	**+0.2**
SBZ				S	**Sb**	**06 32 02.7**	**+0.3**
ITBZ	**Tabriz**	**1.27**	**99**	Pg	**Pn**	**06 31 46.1**	**-0.7**
DYDN	**Diyadin**	**1.30**	**329**	P	**Pn**	**06 31 47.4**	**+0.1**
DYDN				S	**Sb**	**06 32 03.6**	**-0.7**
DYDN				IAML		06 32 09.0	
	comp=N,1µm,0.7s						
DYDN				IAML		06 32 09.0	
	comp=E,2µm,0.9s						
DYDN	**Diyadin**	**1.30**	**329**	Pg	**Pn**	**06 31 47.4**	**+0.1**
HYR	**Heyderabad**	**1.30**	**10**	P	**Pn**	**06 31 44.8**	**-2.4**
HYR				S	**Sb**	**06 32 01.1**	**-3.2**
CUKT	**Cukurca**	**1.40**	**213**	Pn	**Pb**	**06 31 49.7**	**+0.3**
CUKT				Sn	**Sg**	**06 32 08.7**	**+0.1**
CUKT	**Cukurca**	**1.40**	**213**	P	**Pb**	**06 31 49.6**	**+0.1**
CUKT				S	**Sg**	**06 32 09.4**	**+0.8**
CUKT				IAML		06 32 13.0	
	comp=E,2µm,0.6s						
CUKT				IAML		06 32 14.0	
	comp=N,2µm,0.9s						
CUKT	**Cukurca**	**1.40**	**213**	Pg	**Pb**	**06 31 49.5**	**+0.1**
VAYK	**Vayk**	**1.43**	**28**	*e*P	**Pg**	**06 31 51.1**	**+0.3**
VAYK				⇓*e*S	**Sg**	**06 32 11.3**	**+1.9**
ADCV	**BITLIS_Adilcev**	**1.48**	**285**	P	**Pn**	**06 31 49.7**	**-0.2**
ADCV				S	**Sn**	**06 32 09.2**	**+0.1**
ADCV				IAML		06 32 14.0	
	comp=E,403nm,0.6s						
ADCV				IAML		06 32 15.0	
	comp=N,642nm,0.6s						
ADCV	**BITLIS_Adilcev**	**1.48**	**285**	Pg	**Pn**	**06 31 49.6**	**-0.2**
AGRB	**Hanur-Agry**	**1.67**	**314**	Pn	**Pb**	**06 31 54.1**	**+0.1**
AGRB				Sn	**Sg**	**06 32 16.4**	**-0.7**
DORK	**Agr/Tutak/Do**	**1.68**	**305**	P	**Pn**	**06 31 53.0**	**+0.4**
DORK				IAML		06 32 24.0	
	comp=N,568nm,0.8s						
DORK				IAML		06 32 31.0	
	comp=E,348nm,0.8s						
GNI	**Garni**	**1.72**	**5**	LR	LR	06 33 05.7	
	comp=Z,621nm,20.8s,baz=27,slow=40						
GNI	**Garni**	**1.72**	**5**	Pn	**Pb**	**06 31 54.7**	**-0.1**
GNI	**Garni**	**1.72**	**5**	⇑*i*P	**Pg**	**06 31 55.8**	**-0.5**
GNI				⇑*i*S	**Sg**	**06 32 21.1**	**+2.4**
MLAZ	**Malazgirt-MUS**	**1.72**	**295**	Pn	**Pb**	**06 31 54.6**	**-0.2**
MLAZ				Sn	**Sg**	**06 32 17.8**	**-0.9**
KOTA	**Agri, Merkez-K**	**1.72**	**323**	P	**Pb**	**06 31 54.4**	**-0.5**
KOTA				S	**Sg**	**06 32 18.0**	**-0.8**
KOTA				IAML		06 32 23.0	
	comp=N,305nm,0.9s						
KOTA				IAML		06 32 27.0	
	comp=E,374nm,0.8s						
EGVZ	**Egvard**	**1.74**	**62**	*e*P	**Pb**	**06 31 55.7**	**+0.5**
EGVZ				*e*S	**Sb**	**06 32 18.4**	**+1.4**
GRS	**Goris**	**1.75**	**52**	⇓*i*P	**Pn**	**06 31 52.0**	**-1.4**
GRS				⇓*i*S	**Sb**	**06 32 18.0**	**+0.9**
MAHB	**Mahabad**	**1.90**	**151**	Pn	**Pb**	**06 31 58.2**	**+0.4**
BLIS	**Bitlis-Merkez**	**1.92**	**270**	P	**Pn**	**06 31 56.0**	**+0.2**
BLIS				S	**Sg**	**06 32 24.9**	**-0.1**
SIRN	**Sırnak**	**1.94**	**242**	P	**Pb**	**06 31 58.4**	**-0.1**
SIRN				S	**Sg**	**06 32 25.9**	**+0.3**
SIRN				IAML		06 32 37.0	
	comp=E,1µm,1.0s						
SIRN				IAML		06 32 40.0	
	comp=N,1µm,0.8s						
SIRN	**Sırnak**	**1.94**	**242**	Pn	**Pb**	**06 31 58.4**	**-0.1**
IHRS	**Heris**	**1.96**	**93**	Pn	**Pn**	**06 31 57.9**	**+1.5**
GURO	**Guroymak-BITLI**	**1.98**	**274**	Pn	**Pn**	**06 31 59.0**	**+1.2**
GURO	**Guroymak-BITLI**	**1.98**	**274**	Pn	**Pb**	**06 31 59.0**	**-0.2**
SRTM	**Siirt_Merkez**	**2.12**	**259**	P	**Pb**	**06 32 00.5**	**-1.2**
SRTM				IAML		06 32 41.0	
	comp=E,621nm,1.2s						
SRTM				IAML		06 32 45.0	
	comp=N,1µm,0.9s						
SRTM	**Siirt_Merkez**	**2.12**	**259**	Pn	**Pb**	**06 32 00.4**	**-1.2**
DIGO	**Kars**	**2.18**	**336**	P	**Pb**	**06 32 02.0**	**-0.7**
DIGO				S	**Sg**	**06 32 33.8**	**+0.4**
DIGO				IAML		06 32 41.0	
	comp=E,605nm,0.8s						
DIGO				IAML		06 32 46.0	
	comp=N,506nm,0.8s						
QRD	**Qoradiz**	**2.39**	**64**	P	**Pn**	**06 31 59.5**	**-2.5**
QRD				S	**Sn**	**06 32 29.4**	**-1.8**
MUSM	**Mu-Merkez**	**2.40**	**278**	P	**Pb**	**06 32 04.6**	**-1.9**
GDB	**GEDABAY**	**2.46**	**22**	P	**Pn**	**06 32 01.0**	**-2.3**
GDB				S	**Sn**	**06 32 30.5**	**-2.8**
KARS	**Kars**	**2.47**	**333**	Pn	**Pn**	**06 32 05.3**	**+1.9**
AGDM	**Agdam**	**2.59**	**49**	P	**Pn**	**06 32 03.3**	**-1.6**
AGDM				S	**Sn**	**06 32 33.6**	**-2.6**
GANJ	**Ganja**	**2.60**	**31**	P	**Pn**	**06 32 03.2**	**-1.7**
GANJ				S	**Sn**	**06 32 33.7**	**-2.7**
SVAN	**Silvan-Diyarba**	**2.66**	**265**	Pn	**Pn**	**06 32 07.8**	**+2.0**
BLQ	**Beylaqan**	**2.67**	**60**	P	**Pn**	**06 32 04.2**	**-1.7**
BLQ				S	**Sn**	**06 32 35.7**	**-2.4**
QZX	**Qazax, Azerbai**	**2.69**	**13**	P	**Pn**	**06 32 03.8**	**-2.5**
QZX				S	**Sn**	**06 32 35.7**	**-3.1**
SENK	**Senkaya-Erzuru**	**2.73**	**322**	Pn	**Pn**	**06 32 09.3**	**+2.4**
BRDA	**Brd**	**2.73**	**47**	P	**Pn**	**06 32 05.0**	**-1.8**
BRDA				S	**Sn**	**06 32 37.2**	**-2.5**
KARO	**Karliova-Bingo**	**2.87**	**289**	Pn	**Pn**	**06 32 11.2**	**+2.3**
YRD	**Yardimli**	**2.92**	**79**	P	**Pn**	**06 32 07.8**	**-1.8**
YRD				S	**Sn**	**06 32 42.2**	**-2.5**
LRK	**Lerik**	**2.97**	**85**	P	**Pn**	**06 32 08.3**	**-2.0**
LRK				S	**Sn**	**06 32 43.1**	**-2.8**
MNGR	**Mingechevir, A**	**3.04**	**39**	P	**Pn**	**06 32 08.7**	**-2.4**
MNGR				S	**Sn**	**06 32 44.7**	**-2.7**
ZRD	**Zardab**	**3.04**	**52**	P	**Pn**	**06 32 09.0**	**-2.1**
ZRD				S	**Sn**	**06 32 45.2**	**-2.1**
DGRG	**David-gareji**	**3.08**	**12**	P	**Pb**	**06 32 19.4**	**+1.5**
DGRG				S	**Sg**	**06 33 08.0**	**+5.8**
AKH	**Akhalkalaki**	**3.08**	**345**	P	**Pb**	**06 32 19.5**	**+1.4**
BNGB	**Bingl**	**3.08**	**282**	Pn	**Pn**	**06 32 14.5**	**+2.7**
GLBA	**Clilabad**	**3.10**	**74**	P	**Pn**	**06 32 09.9**	**-2.0**
GLBA				S	**Sn**	**06 32 46.6**	**-2.2**
TRLG	**Trialeti**	**3.12**	**354**	P	**Pb**	**06 32 19.4**	**+0.7**
VSHL	**Vashlovani**	**3.13**	**26**	P	**Pb**	**06 32 17.1**	**-1.7**
VSHL				S	**Sg**	**06 33 09.4**	**+5.5**
DDFL	**Dedoflistskaro**	**3.24**	**21**	P	**Pg**	**06 32 26.1**	**+0.8**
YEDI	**Yedisu-Bingol**	**3.29**	**289**	Pn	**Pn**	**06 32 16.8**	**+2.2**
LKRN	**Lenkeran, Azer**	**3.32**	**84**	P	**Pn**	**06 32 12.9**	**-2.0**
LKRN				S	**Sn**	**06 32 52.1**	**-2.0**
ASTR	**Astara**	**3.33**	**87**	P	**Pn**	**06 32 13.1**	**-1.9**
ASTR				S	**Sn**	**06 32 51.9**	**-2.3**
SAAT	**Saatly**	**3.33**	**63**	P	**Pn**	**06 32 12.8**	**-2.1**
SAAT				S	**Sn**	**06 32 51.5**	**-2.7**
KDMR	**Kurdemir**	**3.41**	**54**	P	**Pn**	**06 32 14.1**	**-2.1**
KDMR				S	**Sn**	**06 32 53.9**	**-2.5**
SEKA	**Sheki**	**3.44**	**35**	P	**Pn**	**06 32 15.2**	**-1.4**
SEKA				S	**Sn**	**06 32 55.4**	**-1.7**
DYBB	**Diyarbakir**	**3.51**	**263**	Pn	**Pn**	**06 32 18.3**	**+0.7**
QBL	**Gabala**	**3.56**	**44**	P	**Pn**	**06 32 16.1**	**-2.2**
QBL				S	**Sn**	**06 32 57.8**	**-2.4**
ZKTA	**Zakatala**	**3.57**	**26**	P	**Pn**	**06 32 16.0**	**-2.3**
ZKTA				S	**Sn**	**06 32 57.9**	**-2.5**
IML	**Ismayilli**	**3.66**	**49**	P	**Pn**	**06 32 17.3**	**-2.3**
IML				S	**Sn**	**06 33 00.0**	**-2.6**
ALIG	**Mtskhetisjvari**	**3.73**	**350**	P	**Pb**	**06 32 30.8**	**+1.8**
ALIB	**&Aumlli-Bayram**	**3.78**	**65**	P	**Pn**	**06 32 19.0**	**-2.2**
ALIB				S	**Sn**	**06 33 02.6**	**-2.8**
XNQ	**Khinaliq**	**3.88**	**44**	P	**Pn**	**06 32 20.7**	**-2.2**
XNQ				S	**Sn**	**06 33 05.7**	**-2.7**
CHRG	**Chargali**	**3.90**	**4**	P	**Pb**	**06 32 29.8**	**-2.2**
PQL	**Pirkuli**	**3.90**	**52**	P	**Pn**	**06 32 20.8**	**-2.3**
PQL				S	**Sn**	**06 33 06.0**	**-2.8**
GBS	**Qobustan**	**3.99**	**57**	P	**Pn**	**06 32 22.1**	**-2.0**
GBS				S	**Sn**	**06 33 08.6**	**-2.2**
ATGJ	**Altiaghaj**	**4.16**	**53**	P	**Pn**	**06 32 24.3**	**-2.2**
ATGJ				S	**Sn**	**06 33 12.1**	**-3.0**
QSAR	**Qusar**	**4.19**	**42**	P	**Pn**	**06 32 24.3**	**-2.6**
QSAR				S	**Sn**	**06 33 13.0**	**-2.7**
QUBA	**Quba, Azerbaij**	**4.20**	**45**	P	**Pn**	**06 32 24.9**	**-2.2**
QUBA				S	**Sn**	**06 33 13.8**	**-2.3**
SHTL	**Shatili**	**4.24**	**6**	P	**Pb**	**06 32 39.5**	**+1.7**
SIZA	**Siyzn**	**4.26**	**50**	P	**Pn**	**06 32 25.7**	**-2.2**
SIZA				S	**Sn**	**06 33 14.8**	**-2.7**
GOBA	**Gobu**	**4.46**	**62**	P	**Pn**	**06 32 28.5**	**-2.1**
GOBA				S	**Sn**	**06 33 20.1**	**-2.2**
NDR	**Nardaran**	**4.71**	**61**	P	**Pn**	**06 32 31.8**	**-2.2**
NDR				S	**Sn**	**06 33 26.3**	**-2.2**
GALA	**Gala**	**4.76**	**64**	P	**Pn**	**06 32 32.4**	**-2.3**
GALA				S	**Sn**	**06 33 27.4**	**-2.3**
KBZ	**Khabaz**	**5.43**	**347**	Pn	**Pb**	**06 32 57.5**	**-0.5**
	0.1nm,0.3s,baz=170,slow=14,SNR=5.5 2.3nm,1.1s						
BRTR	**Keskin Array B**	**8.59**	**282**	Pn	Pn	06 33 32.9	+5.5
	baz=96,slow=13,SNR=2.4 0.4nm,0.6s						
BVAR	**Borovoye Array**	**23.02**	**42**	P	**P**	**06 36 30.8**	**+3.0**
	0.8nm,0.7s,baz=224,slow=8.3,SNR=4.2 0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**26.86**	**52**	P	**P**	**06 37 07.2**	**+3.7**
	1.3nm,0.7s,baz=263,slow=9.1,SNR=7.0 1.3nm,0.7s						
MKAR	**Makanchi Array**	**28.77**	**61**	P	**P**	**06 37 22.4**	**+1.8**
	0.7nm,0.7s,baz=257,slow=8.5,SNR=7.3 0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**31.40**	**47**	P	**P**	**06 37 46.4**	**+2.8**
	0.4nm,0.3s,baz=243,slow=9.2,SNR=2.0 0.4nm,0.3s						
ESDC	**Sonseca Array**	**37.33**	**288**	P	**P**	**06 38 34.9**	**-0.5**
	0.4nm,0.6s,baz=62,slow=7.7,SNR=4.3 0.4nm,0.6s						
TSUM	**Tsumeb**	**62.67**	**209**	LR	LR	07 08 38.5	
	comp=Z,386nm,19.9s,baz=50,slow=36						

*AFAD **23** 06:34:41.6,38˚.40N×44˚.55E,h7km±3km,ML2.6*
*TEH **23** 06:34:42.9,38˚.45N×44˚.57E,h10km±999km,ML2.7, Presumed earthquake*
*ISK **23** 06:34:43.6,38˚.41N×44˚.49E,h16km,ML2.7/10*
*NSSP **23** 06:35:40.6,38˚.30N×44˚.53E,h10km,Ms3.0*
ISC 23 06:34:42.2±1.2,38˚.39N±0˚.03×44˚.55E±0˚.02,h8km±10km, n28,σ1ş24/42,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.51**	**302**	P	**Pg**	**06 34 51.4**	**-0.8**
OZAP				S	**Sg**	**06 34 59.3**	**+0.5**
OZAP				IAML		06 35 04.0	
	comp=E,802nm,0.7s						
OZAP				IAML		06 35 06.0	
	comp=N,989nm,1.1s						
ISHB	**Shabestar**	**0.85**	**97**	Pg	**Pb**	**06 34 58.5**	**-0.8**
TVAN	**Van**	**0.90**	**279**	P	**Pg**	**06 34 58.3**	**-1.3**
TVAN				S	**Sn**	**06 35 14.7**	**-0.1**
TVAN				IAML		06 35 15.0	
	comp=E,193nm,0.5s						
TVAN				IAML		06 35 19.0	
	comp=N,274nm,0.5s						
VANB	**Van**	**0.93**	**283**	Pg	**Pb**	**06 35 00.5**	**-0.1**
VANB				Sg	**Sb**	**06 35 13.0**	**-0.2**
IMRD	**

*IDC **23** 06:49:55.5±2.5, 6°.82S×109°.01E, h214km±45km, mb3.3/4, mbtmp3.9/4, Error ellipse: s-maj=129.0km s-min=21.6km az=50.0*
*NEIC **23** 06:49:55.8±1.2, 6°.88S±0°.09×108°.92E±0°.08, h216km±7km, mb4.1/13, Error ellipse: s-maj=14.1km s-min=10.7km az=200.0*
*DJA **23** 06:49:55.8±0.6, 7°S±11°×10°9E±°, h207km±5km, M3.3/17, MLv3.3/17*
ISC 23 06:49:55.5±0.6, **6°.99S**±0°.08×**108°.97E**±0°.05, **h217**km±6km, **n49**, σ1°**14**/54, **mb4.0**/10, **Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTJI	**Waduk Cacaban**	**0.21**	**95**	P	**Pn**	**06 50 23.2**	**-0.7**
CTJI				S	**S**	**06 50 45.7**	**-0.4**
KPJI	**Karang Pucung**	**0.34**	**187**	P	**Pn**	**06 50 24.7**	**+0.5**
KPJI				S	**S**	**06 50 46.5**	**-0.3**
SCJI	**Gunung Srandil**	**0.72**	**164**	P	**Pn**	**06 50 24.2**	**-1.3**
LEM	**Lembang**	**1.35**	**277**	P	**Pn**	**06 50 31.0**	**+1.2**
	42nm,0.6s,baz=42,slow=14,SNR=8.8						
LEM				S	**S**	**06 50 56.1**	**-0.1**
	138nm,0.8s,baz=143,slow=20,SNR=13						
LEM	**Lembang**	**1.35**	**277**	P	**Pn**	**06 50 29.3**	**-0.5**
BBJI	**Bungbulang**	**1.39**	**250**		**Pn**	**06 50 30.3**	**+0.3**
BBJI				Sn	**S**	**06 50 56.1**	**-0.6**
BBJI	**Bungbulang**	**1.39**	**250**	P	**Pn**	**06 50 30.2**	**+0.2**
BBJI	**Bungbulang**	**1.39**	**250**	S	**S**	**06 50 57.6**	**+0.9**
BBJI	**Bungbulang**	**1.39**	**250**	P	**Pn**	**06 50 29.7**	**-0.3**
BBJI				S	**S**	**06 50 55.0**	**-1.7**
SMRI	**Semarang**	**1.46**	**92**	Pn	**Pn**	**06 50 31.3**	**+0.8**
SMRI	**Semarang**	**1.46**	**92**	P	**Pn**	**06 50 31.4**	**+0.9**
SMRI	**Semarang**	**1.46**	**92**	S	**S**	**06 50 58.2**	**+0.7**
UGM	**Wanagama**	**1.79**	**121**		**Pn**	**06 50 33.0**	**-0.4**
UGM	**Wanagama**	**1.79**	**121**	P	**Pn**	**06 50 32.5**	**-1.0**
UGM	**Wanagama**	**1.79**	**121**	S	**S**	**06 51 00.9**	**-1.8**
UGM	**Wanagama**	**1.79**	**121**	P	**Pn**	**06 50 32.4**	**-1.0**
SKJI	**Sukabumi**	**2.40**	**269**	P	**Pn**	**06 50 39.2**	**-0.2**
PCJI	**Pacitan**	**2.49**	**119**	P	**Pn**	**06 50 39.3**	**-1.1**
SJI	**Sawahan**	**2.87**	**105**	P	**Pn**	**06 50 44.2**	**-0.5**
SNJI	**Sawahan-Nganju**	**2.88**	**106**	P	**Pn**	**06 50 45.5**	**+0.7**
XMI	**Christmas Isla**	**4.73**	**223**	P	**Pn**	**06 51 05.1**	**-1.9**
JAGI	**Jajag, Banyuwa**	**5.34**	**106**		**Pn**	**06 51 12.9**	**-1.7**
JAGI	**Jajag, Banyuwa**	**5.34**	**106**	P	**Pn**	**06 51 13.0**	**-1.7**
JAGI	**Jajag, Banyuwa**	**5.34**	**106**	S	**S**	**06 52 15.6**	**-1.6**
MNAI	**Manna**	**6.53**	**293**	Pn	**Pn**	**06 51 31.9**	**+2.0**
MNAI	**Manna**	**6.53**	**293**	P	**Pn**	**06 51 31.7**	**+1.8**
PLAI	**Plampang**	**8.91**	**102**	P	**Pn**	**06 51 59.1**	**-1.5**
SBUM	**Sibu**	**9.92**	**19**	Pn	**Pn**	**06 52 13.2**	**-0.3**
GSI	**Gunungsitoli**	**14.04**	**305**	Pn	**Pn**	**06 53 03.6**	**-1.9**
SOEI	**Soe**	**15.38**	**101**	P	**Pn**	**06 53 21.1**	**-0.8**
PSA00	**Pilbara Seismi**	**17.91**	**145**	P	**P**	**06 53 49.9**	**+0.6**
PSA00	**Pilbara Seismi**	**17.91**	**145**	P	**P**	**06 53 50.0**	**+0.7**
PSA00				IAmb	IAmb	06 54 14.9	
	comp=Z,7.6nm,1.1s						
KNRA	**Kununurra**	**21.22**	**116**	P	**P**	**06 54 25.1**	**+0.4**
KNRA				IAmb	IAmb	06 54 32.1	
	comp=Z,13nm,1.1s						
MORW	**Morawa**	**22.95**	**164**	P	**P**	**06 54 41.9**	**+0.9**
MORW				IAmb	IAmb	06 54 48.2	
	comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**27.77**	**120**	P	**P**	**06 55 24.9**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=299,slow=8.0,SNR=4.8						
	comp=Z,0.2nm,0.3s						
WR8	**Warramunga Arr**	**27.92**	**120**	P	**P**	**06 55 26.6**	**+0.8**
WR8				IAmb	IAmb	06 55 48.6	
	comp=Z,3.5nm,1.1s						
ASAR	**Alice Springs**	**29.12**	**127**	P	**P**	**06 55 37.1**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=301,slow=8.0,SNR=26						
	comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	**29.12**	**127**	P	**P**	**06 55 36.5**	**+0.1**
AS31	**Alice Springs**	**29.12**	**127**	P	**P**	**06 55 37.3**	**+0.9**
FORT	**Forrest**	**29.67**	**145**	P	**P**	**06 55 41.9**	**+0.8**
FORT				IAmb	IAmb	06 56 03.1	
	comp=Z,6.7nm,1.1s						
COEN	**Coen**	**34.31**	**104**	P	**P**	**06 56 22.9**	**+1.2**
BBOO	**Buckleboo**	**35.96**	**139**	P	**P**	**06 56 36.1**	**+0.5**
BBOO				IAmb	IAmb	06 57 02.1	
	comp=Z,5.0nm,1.1s						
STKA	**Stephens Creek**	**39.21**	**133**	P	**P**	**06 57 04.0**	**+1.1**
	comp=Z,6.3nm,0.5s,baz=312,slow=9.5,SNR=18						
	comp=Z,6.3nm,0.5s						
STKA	**Stephens Creek**	**39.21**	**133**	P	**P**	**06 57 04.3**	**+1.4**
TOO	**Toolangi**	**44.99**	**138**	P	**P**	**06 57 51.5**	**+2.1**
MKAR	**Makanchi Array**	**58.56**	**339**	P	**P**	**06 59 28.7**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=157,slow=6.8,SNR=1.9						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**58.56**	**339**	P	**P**	**06 59 28.4**	**-1.1**
ABKAR	**Akbulak array**	**70.42**	**328**	P	**P**	**07 00 44.2**	**-1.8**
VNDA	**Vanda**	**75.62**	**170**	P	**P**	**07 01 17.5**	**+1.4**
VNDA				IAmb	IAmb	07 01 17.5	
	comp=Z,2.8nm,1.1s						

*IDC **23** 06:50:01.9±4.4, 5°.16S×151°.12E, h207km±34km, mb3.0/6, mbtmp3.6/8, Error ellipse: s-maj=59.9km s-min=24.7km az=107.0*
ISC 23 06:50:00.8±1.4, **5°.2S**±0°.2×**151°.2E**±0°.3, **h200**km, **n9**, σ0**°65**/10, **mb3.3**/6, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.84**	**224**	P	**Pn**	**06 51 26.7**	**+0.6**
	6.3nm,0.7s,baz=0.0,slow=8.1,SNR=1.5						
PMG				S	**Sn**	**06 52 33.4**	**-0.1**
	8.5nm,0.4s,baz=315,slow=24,SNR=4.1						
CTA	**Charters Tower**	**15.61**	**198**	P	**Pn**	**06 53 30.3**	**-0.2**
	4.3nm,0.8s,baz=336,slow=10.0,SNR=5.7						
WRA	**Warramunga Arr**	**22.05**	**227**	P	**P**	**06 54 38.9**	**-0.9**
	1.0nm,0.4s,baz=50,slow=10.0,SNR=20						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**24.85**	**221**	P	**P**	**06 55 05.5**	**+0.3**
	0.3nm,0.4s,baz=50,slow=9.0,SNR=9.1						
	0.3nm,0.4s						
SONM	**Songino Array**	**65.81**	**329**	P	**P**	**07 00 25.4**	**+0.6**
	0.3nm,0.6s,baz=125,slow=7.5,SNR=2.0						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**79.58**	**319**	P	**P**	**07 01 45.6**	**-0.2**
	0.1nm,0.4s,baz=95,slow=7.2,SNR=2.0						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**80.60**	**327**	P	**P**	**07 01 49.9**	**-1.1**
	0.4nm,0.4s,baz=93,slow=7.2,SNR=2.3						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**83.08**	**22**	P	**P**	**07 02 04.0**	**+0.3**
	0.3nm,0.8s,baz=185,slow=12,SNR=2.0						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.94**	**287**	PKPbc	**PKPbc**	**07 09 26.0**	**-0.1**
	0.3nm,0.4s,baz=77,slow=4.7,SNR=2.6						

*NNC **23** 06:54:43.8±2.1, 49°.26N×81°.39E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=41.5km s-min=4.7km az=58.0, Suspected Mining explosion.*
*IDC **23** 06:54:47.2±1.3, 49°.20N×81°.21E, h0km, mbtmp2.3/3, ML1.9/3, Error ellipse: s-maj=28.5km s-min=9.6km az=58.0*
ISC 23 06:54:44.6±1.2, **49°.0N**±0°.1×**80°.9E**±0°.2, **h0**km, **n8**, σ0**°16**/7, **1C-7D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.23**	**317**	Pn	**Pb**	**06 55 26.0**	**+0.1**
	0.1nm,0.3s,baz=126,slow=18,SNR=14						
KURBB				Lg	Lg	06 55 56.0	
	0.3nm,0.3s,baz=124,slow=33,SNR=11						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**2.23**	**317**	⇓Pg	**Pb**	**06 55 25.9**	**+0.1**
	1.0nm,0.3s						
KURBB				⇑Lg	Lg	06 55 56.2	
	4.7nm,0.3s						
KURK	**Kurchatov**	**2.26**	**320**	⇓Pg	**Pb**	**06 55 26.1**	**-0.2**
	0.4nm,0.5s						
KURK				⇓Lg	Lg	06 55 56.7	
	1.5nm,0.5s						
MAKZ	**Makanchi**	**2.31**	**161**	⇓Pg	**Pg**	**06 55 28.8**	**-0.1**
	0.5nm,0.5s						
MAKZ				⇓Lg	Lg	06 56 01.6	
	5.6nm,0.9s						
MK31	**Makanchi Array**	**2.40**	**157**	⇓Pg	**Pg**	**06 55 30.6**	**0.0**
	0.4nm,0.3s,baz=352,slow=14,SNR=23						
MK31				⇓Lg	Lg	06 56 04.7	
	5.8nm,0.6s,baz=358,slow=26,SNR=10						
MKAR	**Makanchi Array**	**2.40**	**157**	Pn	**Pg**	**06 55 30.8**	**+0.2**
	0.7nm,0.3s,baz=347,slow=16,SNR=32						
MKAR				Lg	Lg	06 56 04.7	
	1.3nm,0.3s,baz=347,slow=31,SNR=23						
	1.7nm,0.5s						
ZALV	**Zalesovo Beam**	**5.52**	**25**	Pn	**Pn**	**06 56 08.0**	**0.0**
	0.1nm,0.3s,baz=212,slow=12,SNR=2.8						
	0.4nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.52**	**25**	I	I	07 28 10.0	
	baz=200,slow=335,SNR=3.4						

*IDC **23** 06:57:05.5±2.0, 5°.37S×146°.93E, h155km±25km, mb3.2/5, mbtmp3.7/7, Error ellipse: s-maj=47.2km s-min=11.6km az=109.0*
ISC 23 06:57:05.4±1.1, **5°.32S**±0°.09×**146°.9E**±0°.2, **h150**km, **n7**, σ1°**81**/10, **mb3.5**/5, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.07**	**176**	P	**Pn**	**06 58 08.0**	**+1.4**
	57nm,0.3s,baz=346,slow=12,SNR=58						
PMG				S	**Sn**	**06 58 52.7**	**-1.5**
	49nm,0.5s,baz=24,slow=20,SNR=6.2						
WRA	**Warramunga Arr**	**18.98**	**219**	P	**P**	**07 01 16.4**	**+0.9**
	1.3nm,0.4s,baz=44,slow=9.9,SNR=21						
WRA				S	**S**	**07 04 40.1**	**-3.1**
	0.7nm,0.6s,baz=41,slow=20,SNR=5.2						
ASAR	**Alice Springs**	**22.12**	**213**	P	**P**	**07 01 49.7**	**+0.8**
	1.1nm,0.5s,baz=47,slow=8.0,SNR=27						
ASAR				S	**S**	**07 05 43.9**	**+1.7**
	2.3nm,0.8s,baz=35,slow=21,SNR=9.8						
	1.1nm,0.5s						
SONM	**Songino Array**	**63.75**	**331**	P	**P**	**07 07 22.5**	**+1.1**
	0.4nm,0.6s,baz=124,slow=7.2,SNR=2.9						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**76.90**	**320**	P	**P**	**07 08 41.3**	**+0.1**
	0.2nm,0.6s,baz=96,slow=7.0,SNR=1.8						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**78.38**	**328**	P	**P**	**07 08 47.8**	**-1.3**
	0.4nm,0.4s,baz=115,slow=5.4,SNR=2.3						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**84.90**	**23**	P	**P**	**07 09 21.9**	**-1.2**
	0.5nm,0.9s,baz=257,slow=5.5,SNR=5.0						
	0.5nm,0.9s						

*AFAD **23** 07:16:06.5, 38°.45N×44°.49E, h7km±3km, MW3.8*
*TEH **23** 07:16:06.9, 38°.49N×44°.46E, h6km±97km, ML3.4, Presumed earthquake*
*TIF **23** 07:16:07.0, 38°.52N×44°.47E, h11km±3km*
*ISK **23** 07:16:09.6, 38°.47N×44°.41E, h10km, ML3.6/13*
*AZER **23** 07:16:10.6, 38°.57N×44°.60E, h45km, ml3.6*
ISC 23 07:16:07.6±1.0, **38°.48N**±0°.02×**44°.47E**±0°.02, **h14**km±9km, **n67**, σ1°**50**/112, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.41**	**296**	P	**Pg**	**07 16 15.6**	**-0.3**
OZAP				S	**Sg**	**07 16 21.7**	**+0.1**
TVAN	**Van**	**0.83**	**273**	P	**Pg**	**07 16 22.3**	**-1.6**
TVAN				S	**Sb**	**07 16 35.6**	**+0.4**
TVAN	**Van**	**0.83**	**273**	Pg	**Pg**	**07 16 22.2**	**-1.6**
VANB	**Van**	**0.85**	**278**	Pg	**Pn**	**07 16 25.3**	**-0.1**
VANB				Sg	**Sb**	**07 16 36.7**	**+1.0**
VMUR	**Van-Muradiye**	**0.86**	**306**	P	**Pg**	**07 16 23.6**	**-0.8**
VMUR				S	**Sn**	**07 16 37.3**	**-0.8**
VMUR	**Van-Muradiye**	**0.86**	**306**	Pg	**Pg**	**07 16 23.5**	**-0.8**
MAKU	**Maku**	**0.89**	**11**	Pg	**Pg**	**07 16 23.8**	**-1.0**
ISHB	**Shabestar**	**0.93**	**102**	Pg	**Pg**	**07 16 24.3**	**-1.3**
IMRD	**Marand**	**0.99**	**76**	Pg	**Pg**	**07 16 26.3**	**-0.6**
NAX	**Nakhchivan**	**1.06**	**49**	P	**Pn**	**07 16 27.8**	**-0.4**
NAX				S	**Sn**	**07 16 42.8**	**0.0**
HAKT	**HAKKARI**	**1.10**	**213**	P	**Pg**	**07 16 27.4**	**-1.5**
HAKT				S	**Sn**	**07 16 45.4**	**+1.3**
HAKT	**HAKKARI**	**1.10**	**213**	Pg	**Pg**	**07 16 27.4**	**-1.5**
HAKT	**HAKKARI**	**1.10**	**213**	P	**Pg**	**07 16 27.8**	**-1.1**
HAKT				S	**Sn**	**07 16 45.6**	**+1.6**
GEVA	**Gevas**	**1.12**	**262**	P	**Pg**	**07 16 26.8**	**-2.4**
GEVA				S	**Sn**	**07 16 44.6**	**+0.2**
DYDN	**Diyadin**	**1.22**	**330**	P	**Pb**	**07 16 29.0**	**-1.6**
DYDN				S	**Sn**	**07 16 46.8**	**-0.2**
DYDN	**Diyadin**	**1.22**	**330**	Pg	**Pb**	**07 16 29.0**	**-1.6**
SBZ	**Shahbuz**	**1.25**	**43**	P	**Pg**	**07 16 30.9**	**-0.7**
SBZ				S	**Sn**	**07 16 47.7**	**+0.3**
HYR	**Heyderabad**	**1.27**	**14**	P	**Pg**	**07 16 31.4**	**-0.7**
HYR				S	**Sn**	**07 16 50.0**	**+2.1**
ORD	**Ordubad**	**1.27**	**69**	P	**Pb**	**07 16 31.2**	**-0.2**
ORD				S	**Sn**	**07 16 49.8**	**+1.6**
ITBZ	**Tabriz**	**1.34**	**100**	Pg	**Pn**	**07 16 31.8**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.40**	**284**	P	**Pg**	**07 16 34.1**	**-0.5**
ADCV				S	**Sg**	**07 16 56.6**	**+3.7**
CUKT	**Cukurca**	**1.41**	**209**	Pn	**Pg**	**07 16 35.8**	**+1.1**
CUKT				Sn	**Sg**	**07 16 54.1**	**+1.1**
IAZR	**Azarshahr**	**1.44**	**123**	Pg	**Pb**	**07 16 34.3**	**-0.1**
AGRB	**Hanur-Agry**	**1.58**	**314**	Pn	**Pg**	**07 16 37.2**	**-0.9**
AGRB				Sn	**Sg**	**07 16 59.1**	**+0.4**
DORK	**Agr/Tutak/Do**	**1.60**	**305**	P	**Pn**	**07 16 36.1**	**+0.4**
DORK				S	**Sg**	**07 16 59.0**	**0.0**
MLAZ	**Malazgirt-MUS**	**1.64**	**294**	Pn	**Pg**	**07 16 38.6**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.64**	**324**	P	**Pn**	**07 16 36.6**	**+0.3**
KOTA				S	**Sg**	**07 16 59.4**	**-1.1**
GNI	**Garni**	**1.68**	**7**	Pn	**Pg**	**07 16 40.1**	**+0.3**
BLIS	**Bitlis-Merkez**	**1.85**	**269**	P	**Pg**	**07 16 41.9**	**-1.3**
BLIS				S	**Sg**	**07 17 08.9**	**+1.8**
BLIS	**Bitlis-Merkez**	**1.85**	**269**	Pn	**Pg**	**07 16 41.8**	**-1.3**
GURO	**Guroymak-BITLI**	**1.91**	**273**	Pn	**Pb**	**07 16 42.5**	**+0.1**
MAHB	**Mahabad**	**1.98**	**150**	Pn	**Pb**	**07 16 43.0**	**-0.5**
KARS	**Kars**	**2.40**	**334**	Pn	**Pb**	**07 16 50.2**	**-0.4**
QRD	**Qoradiz**	**2.43**	**65**	P	**Pn**	**07 16 48.3**	**+1.4**
QRD				S	**Sn**	**07 17 15.1**	**-1.4**
GDB	**GEDABAY**	**2.45**	**24**	P	**Pn**	**07 16 48.2**	**+0.8**
GDB				S	**Sn**	**07 17 16.1**	**-1.0**
VRTB	**Varto-Mus**	**2.45**	**287**	Pn	**Pb**	**07 16 50.2**	**-1.3**
GANJ	**Ganja**	**2.59**	**33**	P	**Pn**	**07 16 50.2**	**+0.9**
GANJ				S	**Sn**	**07 17 19.3**	**-1.3**
SVAN	**Silvan-Diyarba**	**2.59**	**264**	Pn	**Pb**	**07 16 52.1**	**-1.8**
AGDM	**Agdam**	**2.61**	**51**	P	**Pn**	**07 16 50.2**	**+0.7**
AGDM				S	**Sn**	**07 17 19.6**	**-1.5**
SENK	**Senkaya-Erzuru**	**2.64**	**322**	Pn	**Pb**	**07 16 53.9**	**-1.0**
QZX	**Qazax, Azerbai**	**2.66**	**15**	P	**Pn**	**07 16 51.0**	**+0.8**
QZX				S	**Sn**	**07 17 20.9**	**-1.4**
BLQ	**Beylaqan**	**2.70**	**62**	P	**Pn**	**07 16 51.3**	**+0.5**
BLQ				S	**Sn**	**07 17 21.9**	**-1.4**
BRDA	**Brd**	**2.75**	**49**	P	**Pn**	**07 16 52.2**	**+0.8**
BRDA				S	**Sn**	**07 17 23.2**	**-1.3**
KARO	**Karliova-Bingo**	**2.79**	**288**	Pn	**Pb**	**07 16 55.6**	**-1.8**
YRD	**Yardimli**	**2.98**	**80**	P	**Pn**	**07 16 55.2**	**+0.5**
YRD				S	**Sn**	**07 17 28.8**	**-1.7**
BNGB	**Bingl**	**3.01**	**281**	Pn	**Pb**	**07 16 58.7**	**-2.3**
AKH	**Akhalkalaki**	**3.02**	**346**	P	**Pb**	**07 17 02.3**	**+1.1**
AKH				S	**Sg**	**07 17 46.9**	**+2.3**
LRK	**Lerik**	**3.04**	**86**	P	**Pn**	**07 16 55.9**	**+0.4**
LRK				S	**Sn**	**07 17 29.9**	**-1.9**
DGRG	**David-gareji**	**3.04**	**13**	P	**Pb**	**07 17 02.9**	**+1.2**
DGRG				S	**Sg**	**07 17 47.4**	**+2.0**
TRLG	**Trialeti**	**3.06**	**355**	P	**Pb**	**07 17 01.6**	**-0.5**
TRLG				S	**Sg**	**07 17 46.6**	**+0.5**
VSHL	**Vashlovani**	**3.12**	**28**	P	**Pb**	**07 17 00.1**	**-2.8**
VSHL				S	**Sg**	**07 17 48.6**	**+0.8**
GLBA	**Clilabad**	**3.16**	**75**	P	**Pn**	**07 16 57.8**	**+0.8**
GLBA				S	**Sn**	**07 17 32.8**	**-1.6**
DDFL	**Dedoflistskaro**	**3.22**	**23**	P	**Pg**	**07 17 08.8**	**-0.5**
DDFL				S	**Sg**	**07 17 57.5**	**+6.5**
LKRN	**Lenkeran, Azer**	**3.39**	**85**	P	**Pn**	**07 17 00.6**	**+0.6**
LKRN				S	**Sn**	**07 17 38.6**	**-1.5**
ASTR	**Astara**	**3.39**	**87**	P	**Pn**	**07 17 00.7**	**+0.6**
ASTR				S	**Sn**	**07 17 38.8**	**-1.4**
SEKA	**Sheki**	**3.44**	**37**	P	**Pn**	**07 17 02.8**	**+1.9**
SEKA				S	**Sn**	**07 17 41.4**	**-0.1**
QBL	**Gabala**	**3.58**	**46**	P	**Pn**	**07 17 04.3**	**+1.6**
QBL				S	**Sn**	**07 17 43.8**	**-1.1**
CHRG	**Chargali**	**3.86**	**5**	P	**Pn**	**07 17 09.8**	**+3.1**
XNQ	**Khinaliq**	**3.90**	**45**	P	**Pn**	**07 17 08.6**	**+1.2**
XNQ				S	**Sn**	**07 17 51.5**	**-1.5**
PQL	**Pirkuli**	**3.93**	**53**	P	**Pn**	**07 17 09.0**	**+1.3**
PQL				S	**Sn**	**07 17 52.1**	**-1.7**
GBS	**Qobustan**	**4.02**	**58**	P	**Pn**	**07 17 10.1**	**+1.2**
GBS				S	**Sn**	**07 17 54.6**	**-1.3**
SVRC	**Sivrice-ELAZID**	**4.05**	**270**	Pn	**Pn**	**07 17 11.4**	**+2.0**
ATGJ	**Altiaghaj**	**4.19**	**54**	P	**Pn**	**07 17 12.4**	**+1.2**
ATGJ				S	**Sn**	**07 17 58.2**	**-1.8**
SHTL	**Shatili**	**4.20**	**7**	P	**Pb**	**07 17 17.2**	**-4.2**
SHTL				S	**Sg**	**07 18 22.1**	**-0.4**
QSAR	**Qusar**	**4.20**	**43**	P	**Pn**	**07 17 12.8**	**+1.5**
QSAR				S	**Sn**	**07 17 59.2**	**-1.1**
QUBA	**Quba, Azerbaij**	**4.22**	**46**	P	**Pn**	**07 17 12.9**	**+1.4**
QUBA				S	**Sn**	**07 17 59.8**	**-1.0**
SIZA	**Siyzn**	**4.29**	**51**	P	**Pn**	**07 17 13.8**	**+1.3**
SIZA				S	**Sn**	**07 18 01.0**	**-1.4**

*UPP **23** 07:16:52.8±0.1, 67°.87N×20°.20E, h1km, ML2.5, Confirmed Induced event*
*HEL **23** 07:16:54.6±0.4, 67°.84N×20°.32E, h0km, ML1.0, Suspected explosion*
ISC 23 07:16:52.7±0.9, **67°.85N**±0°.03×**20°.20E**±0°.03, **h0**km, **n18**, σ1°**03**/27, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**25**	P	**Pg**	**07 16 54.8**	**-0.2**
KUA				S	**Sg**	**07 16 56.8**	**+0.3**
RATU	**Laukkuluspa**	**0.23**	**265**	P	**Pg**	**07 16 57.4**	**+0.3**
KOVU	**Salmi**	**0.38**	**358**	P	**Pg**	**07 16 59.9**	**-0.1**
KOVU				S	**Sg**	**07 17 04.9**	**+0.1**
NIKU	**Nikkaluokta**	**0.44**	**273**	P	**Pg**	**07 17 00.8**	**-0.3**
LANU	**Lannavaara**	**0.71**	**73**	P	**Pg**	**07 17 06.1**	**-0.1**
LANU	**Lannavaara**	**0.71**	**73**	PG	**Pg**	**07 17 06.3**	**+0.1**
LANU				SG	**Sg**	**07 17 14.6**	**-0.7**
SALU	**Saltoluokta**	**0.80**	**235**	P	**Pg**	**07 17 08.1**	**+0.1**
KIF	**Kilpisjarvi**	**1.18**	**11**	PG	**Pn**	**07 17 16.4**	**-0.1**
KIF				smax	smax	07 17 31.4	
	comp=Z,1.7nm,0.2s						
KIF				SG	**Sb**	**07 17 31.5**	**-0.3**
HEF	**Hetta**	**1.41**	**65**	PG	**Pn**	**07 17 19.6**	**-0.1**
HEF				smax	smax	07 17 36.1	
	comp=Z,1.0nm,0.2s						
HEF				SN	**Sn**	**07 17 41.6**	**+2.7**
ERTU	**Ertsjaerv**	**1.51**	**148**	PG	**Pn**	**07 17 21.3**	**+0.3**
ERTU				SN	**Sg**	**07 17 41.2**	**0.0**
KLF	**Kolari**	**1.57**	**111**	smax	smax	07 17 40.5	
	comp=Z,0.8nm,0.2s						
KLF				SN	**Sg**	**07 17 42.9**	**-0.1**
KTK1	**Kautokeino**	**1.62**	**42**	PN	**Pg**	**07 17 24.4**	**+0.7**
KTK1				SN	**Sg**	**07 17 47.0**	**+2.3**
KALU	**Kalix**	**2.35**	**147**	PB	**Pn**	**07 17 33.8**	**+1.3**
KALU				SG	**Sb**	**07 18 05.4**	**0.0**
TOF	**Tornio**	**2.40**	**136**	smax	smax	07 18 04.8	
	comp=Z,0.4nm,0.2s						
TOF				SG	**Sb**	**07 18 07.2**	**+0.4**
ARA0	**ARCESS Array S**	**2.57**	**46**	SB	**Sb**	**07 18 12.1**	**+0.3**
RNF	**Rovaniemi**	**2.58**	**116**	PB	**Pb**	**07 17 37.9**	**-1.8**
RNF				SB	**Sb**	**07 18 11.1**	**-0.9**
RAJF	**Raja-Jooseppi**	**3.10**	**75**	SB	**Sb**	**07 18 26.1**	**-0.7**
KEV	**Kevo**	**3.13**	**49**	SB	**Sb**	**07 18 25.4**	**-2.3**

*NNC **23** 07:18:06.9±1.4, 49°.94N×78°.01E, h26km±18km, mb3.0, mpv2.5, Error ellipse: s-maj=19.1km s-min=6.5km az=100.0, Suspected Mining explosion.*
*IDC **23** 07:18:08.7±1.1, 49°.95N×78°.84E, h0km, mbtmp2.5/3, ML2.0/3, Error ellipse: s-maj=12.6km s-min=8.0km az=56.0*
ISC 23 07:18:09.3±1.0, **49°.97N**±0°.05×**78°.71E**±0°.09, **h0**km, **n17**, σ0**°83**/28, **13C-12D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.63**	**349**	⇑P	**Pg**	**07 18 21.1**	**-0.2**
KUR07				⇓S	**Sb**	**07 18 32.2**	**-0.3**
KUR06	**Kurchatov Arra**	**0.65**	**349**	⇓P	**Pg**	**07 18 21.0**	**-0.6**
KUR06				⇑S	**Sb**	**07 18 32.7**	**-0.3**
KUR14	**Kurchatov Arra**	**0.65**	**353**	⇑P	**Pg**	**07 18 21.3**	**-0.4**
KUR14				⇑S	**Sb**	**07 18 32.1**	**-1.0**
KUR15	**Kurchatov Arra**	**0.66**	**352**	⇓P	**Pg**	**07 18 21.4**	**-0.5**
KUR15				⇑S	**Sb**	**07 18 33.5**	**+0.2**
KURBB	**Kurchatov Arra**	**0.66**	**350**	Pg	**Pg**	**07 18 21.6**	**-0.4**
	1.1nm,0.3s,baz=166,slow=19,SNR=48

MRNZ	**Matariki Terra**	**0.57**	**256**	P	**Pn**	**07 25 14.2**	**+0.6**
MRNZ				S	**Sn**	**07 25 24.9**	**-1.0**
TCW	**Tory Channel**	**0.59**	**85**	P	**Pn**	**07 25 14.6**	**+0.9**
TCW				S	**Sn**	**07 25 25.7**	**-0.6**
TSFS	**Takaka Scotts**	**0.66**	**309**	P	**Pn**	**07 25 14.8**	**+0.5**
TSFS				S	**Sn**	**07 25 26.2**	**-0.9**
THZ	**Tophouse**	**0.67**	**221**	P	**Pn**	**07 25 15.3**	**+0.8**
THZ				S	**Sn**	**07 25 27.3**	**-0.2**
CMWZ	**Cape Campbell**	**0.73**	**132**	P	**Pn**	**07 25 16.2**	**+1.3**
CMWZ				S	**Sn**	**07 25 29.8**	**+1.5**
QRZ	**Quartz Range**	**0.85**	**301**	P	**Pn**	**07 25 16.0**	**-0.1**
QRZ	**Quartz Range**	**0.85**	**301**	S	**Sn**	**07 25 28.8**	**-1.6**
QRZ	**Quartz Range**	**0.85**	**301**	P	**Pn**	**07 25 16.3**	**+0.2**
QRZ				S	**Sn**	**07 25 28.3**	**-2.0**
SNZO	**South Karori**	**0.91**	**93**	P	**Pn**	**07 25 17.0**	**+0.3**
SNZO	**South Karori**	**0.91**	**93**	P	**Sn**	**07 25 30.9**	**-0.5**
WEL	**Wellington**	**0.96**	**92**	P	**Pn**	**07 25 17.8**	**+0.7**
WEL				S	**Sn**	**07 25 32.0**	**-0.4**
BHW	**Baring Head**	**1.05**	**98**	P	**Pn**	**07 25 18.7**	**+0.6**
KIW	**Kapiti Island**	**1.14**	**70**	P	**Pn**	**07 25 19.9**	**+0.7**
KHZ	**Kahutara**	**1.15**	**178**	P	**Pn**	**07 25 20.3**	**+1.0**
KHZ	**Kahutara**	**1.15**	**178**	S	**Sn**	**07 25 35.5**	**-0.6**
KHZ	**Kahutara**	**1.15**	**178**	P	**Pn**	**07 25 20.6**	**+1.3**
CAW	**Cannon Point**	**1.20**	**83**	P	**Pn**	**07 25 20.2**	**+0.4**
MSWZ	**Moikau Station**	**1.33**	**97**	P	**Pn**	**07 25 21.7**	**+0.3**
OGWZ	**Otaki Gorge**	**1.34**	**71**	P	**Pn**	**07 25 22.0**	**+0.5**
DSZ	**Denniston Nort**	**1.36**	**249**	P	**Pn**	**07 25 22.3**	**+0.6**
PLWZ	**Palliser**	**1.36**	**104**	P	**Pn**	**07 25 22.2**	**+0.4**
PAWZ	**Paruwai Farm**	**1.46**	**95**	P	**Pn**	**07 25 23.2**	**+0.3**
MTW	**Mount Morrison**	**1.52**	**87**	P	**Pn**	**07 25 23.7**	**+0.1**
HOWZ	**Holdsworth Sta**	**1.57**	**77**	P	**Pn**	**07 25 24.3**	**+0.1**
TRWZ	**Traveller**	**1.66**	**95**	P	**Pn**	**07 25 25.9**	**+0.5**
MRZ	**Mangatainoka R**	**1.69**	**70**	P	**Pn**	**07 25 25.7**	**0.0**
GVZ	**Greta Valley S**	**1.74**	**191**	P	**Pn**	**07 25 27.3**	**+0.9**
OHWZ	**Ohakea**	**1.74**	**53**	P	**Pn**	**07 25 27.2**	**+0.9**
LTZ	**Lake Taylor**	**1.77**	**211**	P	**Pn**	**07 25 27.6**	**+0.8**
TMWZ	**Te Maipa**	**1.81**	**86**	P	**Pn**	**07 25 27.3**	**0.0**
NMEZ	**Namu Road**	**1.87**	**9**	P	**Pn**	**07 25 29.8**	**+1.7**
TIWZ	**Tintock**	**1.87**	**76**	P	**Pn**	**07 25 28.0**	**-0.1**
WAZ	**Wanganui**	**1.89**	**38**	P	**Pn**	**07 25 30.0**	**+1.7**
LREZ	**Lake Rotokare**	**1.93**	**21**	P	**Pn**	**07 25 31.2**	**+2.4**
POWZ	**Post Office Ro**	**1.93**	**64**	P	**Pn**	**07 25 28.5**	**-0.3**
PREZ	**Palmer Road**	**1.98**	**15**	P	**Pn**	**07 25 31.5**	**+1.9**
KHEZ	**Kahui Hut**	**2.01**	**12**	P	**Pn**	**07 25 31.3**	**+1.4**
KHEZ	**Kahui Hut**	**2.01**	**12**	S	**Sn**	**07 25 54.5**	**-0.4**
KHEZ	**Kahui Hut**	**2.01**	**12**	P	**Pn**	**07 25 31.5**	**+1.7**
PRWZ	**Pori Road**	**2.01**	**70**	P	**Pn**	**07 25 29.7**	**-0.1**
AMCZ	**Amberley**	**2.01**	**198**	P	**Pn**	**07 25 30.6**	**+0.7**
NBEZ	**Newall Road No**	**2.01**	**8**	P	**Pn**	**07 25 31.7**	**+1.8**
INZ	**Inchbonnie**	**2.11**	**226**	P	**Pn**	**07 25 32.1**	**+1.0**
DREZ	**Durham Road**	**2.14**	**15**	P	**Pn**	**07 25 33.2**	**+1.7**
BFZ	**Birch Farm**	**2.16**	**75**	P	**Pn**	**07 25 31.1**	**-0.7**
BFZ	**Birch Farm**	**2.16**	**75**	S	**Sn**	**07 25 57.5**	**-0.9**
BFZ	**Birch Farm**	**2.16**	**75**	P	**Pn**	**07 25 31.3**	**-0.5**
TSZ	**Takapari Road**	**2.23**	**58**	P	**Pn**	**07 25 32.4**	**-0.3**
DVHZ	**Dannevirke**	**2.25**	**65**	P	**Pn**	**07 25 32.2**	**-0.7**
OXZ	**Oxford**	**2.33**	**207**	P	**Pn**	**07 25 33.8**	**-0.2**
VRZ	**Vera Road**	**2.34**	**25**	P	**Pn**	**07 25 36.0**	**+1.8**
ANWZ	**Angora Road**	**2.40**	**71**	P	**Pn**	**07 25 34.6**	**-0.3**
MTVZ	**Mangateitei**	**2.41**	**39**	P	**Pn**	**07 25 36.0**	**+0.9**
PKVZ	**Pokaka**	**2.43**	**36**	P	**Pn**	**07 25 36.2**	**+0.9**
PNHZ	**Pukenui**	**2.46**	**58**	P	**Pn**	**07 25 35.1**	**-0.7**
OKCZ	**Okains Bay**	**2.48**	**187**	P	**Pn**	**07 25 36.5**	**+0.5**
WNVZ	**Wahianoa**	**2.52**	**40**	P	**Pn**	**07 25 37.4**	**+0.8**
MQZ	**McQueen's Vall**	**2.52**	**194**	P	**Pn**	**07 25 35.9**	**-0.5**
MOVZ	**Moawhango**	**2.53**	**44**	P	**Pn**	**07 25 37.0**	**+0.3**
WHZ	**Waipukurau**	**2.54**	**63**	P	**Pn**	**07 25 36.1**	**-0.6**
PRHZ	**Porangahau**	**2.58**	**68**	P	**Pn**	**07 25 36.9**	**-0.4**
TUVZ	**Tukino**	**2.59**	**40**	P	**Pn**	**07 25 38.5**	**+0.9**
AKCZ	**Akaroa Harbour**	**2.64**	**189**	P	**Pn**	**07 25 38.8**	**+0.7**
SNVZ	**South Ngauruho**	**2.65**	**39**	P	**Pn**	**07 25 39.1**	**+0.8**
TWVZ	**Taurewa**	**2.65**	**35**	P	**Pn**	**07 25 39.0**	**+0.7**
RACZ	**Rakaia**	**2.66**	**202**	P	**Pn**	**07 25 37.9**	**-0.3**
OTVZ	**Oturere**	**2.68**	**39**	P	**Pn**	**07 25 39.7**	**+1.0**
NNVZ	**North Ngauruho**	**2.68**	**38**	P	**Pn**	**07 25 39.7**	**+1.0**
MHCZ	**Mount Hutt**	**2.68**	**212**	P	**Pn**	**07 25 38.7**	**+0.1**
WTVZ	**West Tongariro**	**2.68**	**37**	P	**Pn**	**07 25 39.4**	**+0.7**
KRHZ	**Kereru**	**2.73**	**55**	P	**Pn**	**07 25 38.7**	**-0.5**
TMVZ	**Te Maari**	**2.73**	**39**	P	**Pn**	**07 25 40.1**	**+0.7**
WVZ	**Waitaha Valley**	**2.73**	**228**	P	**Pn**	**07 25 39.7**	**+0.5**
KWHZ	**Kaweka Forest**	**2.90**	**52**	P	**Pn**	**07 25 41.0**	**-0.5**
HIZ	**Hauiti**	**2.94**	**21**	P	**Pn**	**07 25 43.2**	**+1.2**
HIZ	**Hauiti**	**2.94**	**21**	S	**Sn**	**07 26 16.2**	**-0.5**
HIZ	**Hauiti**	**2.94**	**21**	P	**Pn**	**07 25 43.3**	**+1.3**
KAHZ	**Kahuranaki**	**2.97**	**61**	P	**Pn**	**07 25 41.6**	**-0.8**
RPZ	**Rata Peaks**	**3.04**	**216**	P	**Pn**	**07 25 45.0**	**+1.6**
BKZ	**Black Stump Fm**	**3.11**	**49**	P	**Pn**	**07 25 43.5**	**-0.8**
BKZ	**Black Stump Fm**	**3.11**	**49**	P	**Pn**	**07 25 43.6**	**-0.7**
ODZ	**Otahua Downs**	**4.32**	**208**	P	**Pn**	**07 26 01.0**	**+0.5**
JCZ	**Jackson Bay**	**4.47**	**229**	P	**Pn**	**07 26 02.9**	**+0.3**
CTZ	**Chatham Island**	**7.71**	**112**	P	**Pn**	**07 26 48.2**	**+1.7**

*IDC **23** 07:31:44.4±0.9, 25°.69N×96°.87E, h0km, mb3.6/9, mbtmp3.6/10, ML4.3/1, MS3.4/1, Error ellipse: s-maj=44.3km s-min=14.1km az=65.0*

ISC 23 07:31:46.7±0.8,**25°.8N**±0°.1×**96°.9E**±0°.3,**h10**km,**n10, σ1$81/11, mb3.6/9, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.59**	**165**	Pn	**Pn**	**07 33 34.9**	**-2.6**
	1.3nm,0.3s,baz=337,slow=12,SNR=5.8						
CMAR				Pg	**Pb**	**07 34 01.7**	**+3.2**
	baz=346,slow=16						
CMAR				Lg	Lg	07 35 40.5	
	0.5nm,0.3s,baz=340,slow=24,SNR=1.8						
CMAR				LR	LR	07 36 51.6	
	comp=Z,263nm,18.3s,baz=355,slow=41						
	1.0nm,0.3s						
SONM	**Songino Array**	**23.20**	**16**	P	**P**	**07 36 54.6**	**+0.8**
	0.3nm,0.5s,baz=198,slow=8.7,SNR=4.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**23.91**	**335**	P	**P**	**07 37 01.6**	**+0.9**
	1.0nm,0.5s,baz=144,slow=10,SNR=5.2						
	1.0nm,0.5s						
AAK	**Ala-Archa**	**24.85**	**318**	P	**P**	**07 37 10.5**	**+1.1**
	0.4nm,0.3s,baz=135,slow=14,SNR=1.6						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**28.48**	**335**	P	**P**	**07 37 42.1**	**+0.3**
	0.4nm,0.7s,baz=144,slow=9.5,SNR=4.9						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**29.48**	**345**	P	**P**	**07 37 51.1**	**+0.4**
	0.8nm,0.6s,baz=173,slow=10.0,SNR=5.6						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**33.63**	**331**	P	**P**	**07 38 27.2**	**0.0**
	0.5nm,0.5s,baz=139,slow=9.9,SNR=4.6						
	0.5nm,0.5s						
BRTR	**Keskin Array B**	**53.92**	**302**	P	**P**	**07 41 10.0**	**-0.6**
	0.4nm,0.8s,baz=111,slow=7.9,SNR=2.3						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**58.27**	**138**	P	**P**	**07 41 41.7**	**0.0**
	0.5nm,0.8s,baz=320,slow=7.1,SNR=1.7						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**60.88**	**141**	P	**P**	**07 41 57.3**	**-2.4**
	0.7nm,0.6s,baz=321,slow=6.6,SNR=12						
	0.7nm,0.6s						

*KRSC **23** 07:42:51.6±2.2, 49°.71N×156°.73E, h42km±26km, Ml4.4*
*MOS **23** 07:42:54.1±0.8, 49°.92N×156°.06E, h78km, mb4.3/5, Error ellipse: s-maj=12.1km s-min=4.2km az=75.1*
*NEIC **23** 07:42:56.9±0.9, 49°.99N±0°.09×155°.9E±0°.2, h84km±9km, mb4.1/15, Error ellipse: s-maj=19.7km s-min=3.0km az=132.0*
*IDC **23** 07:42:57.1±2.0, 49°.93N×155°.97E, h88km±16km, mb3.6/20, mbtmp3.9/26, Error ellipse: s-maj=17.9km s-min=10.7km az=144.0*

ISC 23 07:42:53.7±1.1,**49°.77N**±0°.08×**156°.22E**±0°.07,**h64**km±9km, **n116, σ1$23/126, mb4.0**/31,**1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.92**	**356**	⇓*i* PN	**Pn**	**07 43 09.2**	**-1.6**
SKR				*eS*	**Sn**	**07 43 21.0**	**-2.5**
SKR				pmax	pmax		
	comp=Z,2μm,0.5s						
SKR				smax	smax		
	comp=E,6μm,0.5s						
SKR				smax	smax		
	comp=N,5μm,0.4s						
SKR	**Severo-Kuril's**	**0.92**	**356**	*eP*	**Pn**	**07 43 09.5**	**-1.3**
SKR				*eS*	**Sn**	**07 43 21.8**	**-1.6**
PAU	**Pauzhetka**	**1.74**	**12**	PN	**Pn**	**07 43 21.3**	**-0.3**
PAU				S	**Sn**	**07 43 42.7**	**-0.1**
PAU	**Pauzhetka**	**1.74**	**12**	*eP*	**Pn**	**07 43 21.4**	**-0.3**
PAU				*eS*	**Sn**	**07 43 42.8**	**-0.1**
KDTR	**Khodutka, Kamc**	**2.36**	**29**	PN	**Pn**	**07 43 29.0**	**-1.0**
KDTR				S	**Sn**	**07 43 56.1**	**-1.7**
KDTR	**Khodutka, Kamc**	**2.36**	**29**	*eP*	**Pn**	**07 43 29.0**	**-1.0**
KDTR				*eS*	**Sn**	**07 43 56.2**	**-1.7**
ASAK	**Asacha**	**2.82**	**21**	PN	**Pn**	**07 43 37.1**	**+0.6**
ASAK	**Asacha**	**2.82**	**21**	*eP*	**Pn**	**07 43 37.1**	**+0.6**
MTVR	**Mutnovka**	**2.98**	**24**	PN	**Pn**	**07 43 38.7**	**0.0**
MTVR				S	**Sn**	**07 44 13.8**	**+0.4**
MTVR	**Mutnovka**	**2.98**	**24**	*eP*	**Pn**	**07 43 38.8**	**0.0**
MTVR				*eS*	**Sn**	**07 44 13.8**	**+0.4**
GRL	**Gorelyy**	**3.02**	**22**	PN	**Pn**	**07 43 39.4**	**+0.3**
GRL				S	**Sn**	**07 44 15.8**	**+1.6**
GRL	**Gorelyy**	**3.02**	**22**	*eP*	**Pn**	**07 43 39.5**	**+0.3**
GRL				*eS*	**Sn**	**07 44 15.8**	**+1.6**
RUS	**Russkaya**	**3.03**	**28**	PN	**Pn**	**07 43 38.5**	**-0.7**
RUS				S	**Sn**	**07 44 13.4**	**-0.9**
RUS	**Russkaya**	**3.03**	**28**	*eP*	**Pn**	**07 43 38.5**	**-0.7**
RUS				*eS*	**Sn**	**07 44 13.4**	**-0.9**
APC	**Apacha**	**3.21**	**10**	PN	**Pn**	**07 43 42.7**	**+1.0**
APC	**Apacha**	**3.21**	**10**	*eP*	**Pn**	**07 43 42.7**	**+1.0**
KRMR	**Karymshinskiy**	**3.29**	**21**	PN	**Pn**	**07 43 43.7**	**+1.0**
KRMR	**Karymshinskiy**	**3.29**	**21**	*eP*	**Pn**	**07 43 43.8**	**+1.0**
PEA0B	**Petropavlovsk-**	**3.47**	**15**		**Pn**	**07 43 46.3**	**+1.1**
PEA0B	**Petropavlovsk-**	**3.47**	**15**	PN	**Pn**	**07 43 46.3**	**+1.1**
PETK	**Petropavlovsk-**	**3.47**	**15**	P	**Pn**	**07 43 46.4**	**+1.1**
	comp=N,6.5nm,0.4s,baz=171,slow=12,SNR=98						
PETK				S	**Sn**	**07 44 27.1**	**+2.1**
	comp=N,6.0nm,0.4s,baz=168,slow=13,SNR=5.2						
PETK	**Petropavlovsk-**	**3.47**	**15**		**Pn**	**07 43 46.5**	**+1.3**
PET	**Petropavlovsk**	**3.60**	**24**		**Pn**	**07 43 47.6**	**+0.7**
PET	**Petropavlovsk**	**3.60**	**24**	PN	**Pn**	**07 43 47.5**	**+0.6**
PET	**Petropavlovsk**	**3.60**	**24**	*eP*	**Pn**	**07 43 47.6**	**+0.6**
INSR	**Institute**	**3.62**	**23**	*eS*	**Sn**	**07 44 30.7**	**+2.0**
DALK	**Dalny**	**3.63**	**25**	PN	**Pn**	**07 43 48.2**	**+0.9**
DALK				S	**Sn**	**07 44 30.4**	**+1.5**
DALK	**Dalny**	**3.63**	**25**	*eP*	**Pn**	**07 43 48.3**	**+0.9**
DALK				*eS*	**Sn**	**07 44 30.5**	**+1.5**
UGLR	**Uglovaya**	**3.81**	**24**	PN	**Pn**	**07 43 51.2**	**+1.3**
UGLR	**Uglovaya**	**3.81**	**24**	*eP*	**Pn**	**07 43 51.3**	**+1.3**
KOK	**Koryaka**	**3.83**	**22**	PN	**Pn**	**07 43 52.0**	**+1.7**
KOK	**Koryaka**	**3.83**	**22**	*eP*	**Pn**	**07 43 52.1**	**+1.7**
AVH	**Avacha**	**3.84**	**23**	PN	**Pn**	**07 43 52.6**	**+2.3**
AVH	**Avacha**	**3.84**	**23**	*eP*	**Pn**	**07 43 52.6**	**+2.3**
SMAR	**Somma**	**3.85**	**24**	PN	**Pn**	**07 43 52.2**	**+1.6**
SMAR	**Somma**	**3.85**	**24**	*eP*	**Pn**	**07 43 52.2**	**+1.6**
KRER	**Koryakskii**	**3.88**	**23**	PN	**Pn**	**07 43 52.7**	**+1.8**
KRER	**Koryakskii**	**3.88**	**23**	*eP*	**Pn**	**07 43 52.8**	**+1.8**
SDLR	**Sedlovina**	**3.89**	**24**	PN	**Pn**	**07 43 51.5**	**+0.5**
SDLR	**Sedlovina**	**3.89**	**24**	*eP*	**Pn**	**07 43 51.5**	**+0.5**
KRX	**Arik**	**3.90**	**22**	PN	**Pn**	**07 43 52.2**	**+1.0**
KRX	**Arik**	**3.90**	**22**	*eP*	**Pn**	**07 43 52.2**	**+1.0**
GNL	**Ganaly**	**4.07**	**15**	PN	**Pn**	**07 43 55.0**	**+1.4**
GNL	**Ganaly**	**4.07**	**15**	*eP*	**Pn**	**07 43 55.0**	**+1.4**
SPN	**Mys Shipunski**	**4.09**	**34**	PN	**Pn**	**07 43 53.6**	**-0.1**
SPN	**Mys Shipunski**	**4.09**	**34**	*eP*	**Pn**	**07 43 53.6**	**-0.1**
MKZ	**Mys Kozlova**	**5.87**	**33**	PN	**Pn**	**07 44 16.7**	**-1.2**
MKZ	**Mys Kozlova**	**5.87**	**33**	*eP*	**Pn**	**07 44 16.8**	**-1.2**
KUR	**Kuril'sk**	**7.25**	**234**	*ePN*	**Pn**	**07 44 40.0**	**+3.1**
KUR				*eS*	**Sn**	**07 45 59.8**	**+2.0**
KUR				smax	smax		
	comp=N,33nm,0.2s						
KUR				smax	smax		
	comp=E,31nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**9.12**	**235**	*i* PN	**Pn**	**07 45 00.2**	**-2.2**
YSS	**Yuzhno-Sakhali**	**9.40**	**258**	*ePN*	**Pn**	**07 45 06.6**	**+0.3**
MA2	**Magadan**	**10.32**	**344**	P	**Pn**	**07 45 19.0**	**+0.3**
	comp=E,6.9nm,0.5s,baz=157,slow=9.3,SNR=21						
MA2	**Magadan**	**10.32**	**344**		**Pn**	**07 45 18.0**	**-0.7**
JKA	**Kamikawa-asahi**	**10.89**	**244**		**Pn**	**07 45 28.5**	**+1.9**
ASAJ	**Asahikawa**	**10.89**	**244**	P	**Pn**	**07 45 28.9**	**+2.3**
	comp=E,22nm,0.9s,baz=76,slow=12,SNR=7.2						
SEY	**Seymchan**	**13.36**	**352**	P	**Pn**	**07 46 02.1**	**+2.0**
	comp=E,0.7nm,0.4s,baz=175,slow=13,SNR=4.4						
KLR	**Kul'dur**	**15.89**	**277**	P	**Pn**	**07 46 34.6**	**+1.4**
	comp=E,0.4nm,0.4s,baz=72,slow=6.5,SNR=5.8						
MJAR	**Matsushiro Arr**	**18.58**	**231**	P	**Pn**	**07 47 07.9**	**+1.5**
	comp=E,2.1nm,0.8s,baz=26,slow=14,SNR=2.4						
MJAR	**Matsushiro Arr**	**18.58**	**231**	P	**Pn**	**07 47 06.7**	**+0.3**
BILL	**Bilibino**	**19.00**	**12**	P	**P**	**07 47 08.9**	**-0.8**
BILL	**Bilibino**	**19.00**	**12**	*i* P	**Pn**	**07 47 10.9**	**-0.2**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	**Yakutsk**	**19.11**	**320**	P	**P**	**07 47 08.9**	**-2.2**
YAK				IAmb	IAmb	07 47 13.8	
	comp=Z,11nm,0.8s						
YAK	**Yakutsk**	**19.11**	**320**	*i* P	**P**	**07 47 10.0**	**-1.1**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
KSRS	**Korea Array**	**23.75**	**250**	P	**P**	**07 48 00.9**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=52,slow=11,SNR=5.4						
	comp=Z,1.8nm,0.6s						
KSRS	**Korea Array**	**23.75**	**250**	P	**P**	**07 48 01.0**	**+1.0**
ANM	**Nome**	**25.03**	**39**	P	**P**	**07 48 12.6**	**+1.2**
ANM	**Nome**	**25.03**	**39**	P	**P**	**07 48 12.6**	**+1.2**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**25.24**	**340**	P	**P**	**07 48 12.4**	**-0.8**
	comp=Z,4.4nm,0.3s,baz=143,slow=8.0,SNR=21						
TIXI				PcP	**PcP**	**07 51 45.6**	**+0.9**
	comp=Z,6.8nm,0.3s,baz=63,slow=2.3,SNR=1.7						
	comp=Z,4.4nm,0.3s						
TIXI	**Tiksi**	**25.24**	**340**		**P**	**07 48 11.3**	**-1.9**
TIXI				IAmb	IAmb	07 48 13.2	
	comp=Z,5.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**31.16**	**160**	T	T	08 21 54.2	
	baz=347,slow=76,SNR=26						
H11N3	**WAKE ISLAND Hy**	**31.18**	**160**	T	T	08 21 56.7	
	baz=347,slow=76,SNR=30						
H11N1	**WAKE ISLAND Hy**	**31.18**	**160**	T	T	08 21 58.9	
	baz=347,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**32.30**	**161**	T	T	08 23 24.7	
	baz=347,slow=76,SNR=302						
H11S3	**WAKE ISLAND Hy**	**32.31**	**161**	T	T	08 23 25.0	
	baz=347,slow=76,SNR=498						
H11S2	**WAKE ISLAND Hy**	**32.32**	**161**	T	T	08 23 22.1	
	baz=347,slow=76,SNR=146						
KNK	**Knik Glacier**	**32.34**	**48**	P	**P**	**07 49 17.2**	**+0.8**
SML	**Sawmill**	**32.37**	**47**	P	**P**	**07 49 17.9**	**+1.1**
SONM	**Songino Array**	**32.39**	**286**	P	**P**	**07 49 16.3**	**-1.0**
	comp=Z,0.1nm,0.5s,baz=79,slow=7.5,SNR=1.1						
E24K	**Your Creek**	**32.41**	**35**	P	**P**	**07 49 18.3**	**+1.3**
E24K				IAmb	IAmb	07 49 18.7	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**32.90**	**41**	P	**P**	**07 49 22.0**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=258,slow=6.3,SNR=11						
	comp=Z,0.6nm,0.8s						
J25K	**Salcha River,**	**33.55**	**42**	P	**P**	**07 49 27.1**	**0.0**
J25K				IAmb	IAmb	07 49 27.9	
	comp=Z,1.4nm,0.6s						
C27K	**Jago River**	**34.27**	**33**	P	**P**	**07 49 34.0**	**+0.9**
C27K				IAmb	IAmb	07 49 35.3	
	comp=Z,2.8nm,1.1s						
A36M	**Sachs Harbour**	**40.21**	**28**		**P**	**07 50 24.0**	**+0.7**
C36M	**Paulatuk**	**41.16**	**32**	P	**P**	**07 50 32.4**	**+1.2**
C36M				IAmb	IAmb	07 50 33.2	
	comp=Z,2.1nm,0.7s						
ZAA0	**Zalesovo Array**	**42.58**	**304**	P	**P**	**07 50 41.9**	**-1.0**
ZAA0				IAmb	IAmb	07 50 47.6	
	comp=Z,1.7nm,0.9s						
ZALV	**Zalesovo Beam**	**42.58**	**304**	P	**P**	**07 50 41.6**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=46,slow=5.9,SNR=2.9						
ZALV				PcP	**PcP**	**07 52 34.3**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=48,slow=4.0,SNR=3.5						
	comp=Z,0.7nm,0.4s						
DGZ	**Jazzator, Alta**	**43.00**	**297**	*i* P	**P**	**07 50 45.9**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.2s						
YKA	**Yellowknife Ar**	**47.26**	**39**	P	**P**	**07 51 21.2**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=302,slow=8.5,SNR=11						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**47.26**	**39**	P	**P**	**07 51 20.6**	**+0.6**
MKAR	**Makanchi Array**	**47.43**	**296**	P	**P**	**07 51 20.3**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=59,slow=8.9,SNR=6.2						
MKAR				PcP	**PcP**	**07 52 51.6**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=70,slow=3.2,SNR=2.3						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**47.43**	**296**	P	**P**	**07 51 20.5**	**-1.1**
KURK	**Kurchatov**	**47.45**	**303**	P	**P**	**07 51 20.6**	**-1.0**
KURK				IAmb	IAmb	07 51 21.4	
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**47.45**	**303**	P	**P**	**07 51 21.2**	**-0.4**
KURK				S		07 52 51.5	
KURBB	**Kurchatov Arra**	**47.55**	**302**	P	**P**	**07 51 21.2**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=67,slow=8.1,SNR=15						
KURBB				PcP	**PcP**	**07 52 51.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=65,slow=3.5,SNR=7.4						
	comp=Z,1.3nm,0.5s						
SPITS	**Spitsbergen Ar**	**50.00**	**350**	P	**P**	**07 51 39.6**	**-1.2**
	comp=Z,12nm,1.0s,baz=63,slow=5.8,SNR=5.5						
	comp=Z,12nm,1.0s						
BVAR	**Borovoye Array**	**50.57**	**309**	P	**P**	**07 51 44.1**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=36,slow=8.1,SNR=3.4						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**55.09**	**257**	P	**P**	**07 52 19.8**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=36,slow=8.4,SNR=5.1						
	comp=Z,1.2nm,0.3s						
AKTO	**Aktyubinsk**	**58.26**	**312**	P	**P**	**07 52 39.9**	**-1.3**
	comp=Z,1.0nm,0.5s,baz=54,slow=4.6,SNR=1.5						
	comp=Z,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**59.24**	**66**	P	**P**	**07 52 49.8**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=41,slow=15,SNR=2.7						
	comp=Z,0.5nm,0.8s						
CHGR	**Chuyangaron**	**60.03**	**295**	*i* P	**P**	**07 52 52.7**	**-1.1**
CHGR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PDAR	**Pinedale Array**	**61.32**	**57**	P	**P**	**07 53 03.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=329,slow=5.2,SNR=3.8						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**62.17**	**335**	P	**P**	**07 53 05.9**	**-1.8**
	comp=Z,4.7nm,1.1s,baz=31,slow=5.9,SNR=4.4						
	comp=Z,4.7nm,1.1s						
FINES	**FINESS Array B**	**62.17**	**335**	P	**P**	**07 53 06.7**	**-1.0**
FINES	**FINESS Array B**	**62.17**	**335**	*eP*	**P**	**07 53 06.7**	**-1.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	**Obninsk**	**63.97**	**326**	⇑*eP*	**P**	**07 53 19.6**	**-0.2**
OBN				*e*		07 55 42.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SCHQ	**Schefferville**	**69.70**	**25**	P	**P**	**07 53 56.7**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=342,slow=6.7,SNR=6.9						
	comp=Z,1.1nm,0.4s						
**

AYRK eS Sb 07 51 52.5 +0.3
VRTB Varto-Mus 2.47 289 Pn Pn 07 51 31.3 +0.9
KARS Kars 2.48 335 Pn 07 51 30.6 +0.1
KARS Kars 2.48 335 Pn Pn 07 51 31.3 +0.8
QRD Qoradiz 2.48 63 P Pn 07 51 29.0 -1.5
QRD S Sn 07 52 01.8 +0.6
GDB GEDABAY 2.54 23 P Pn 07 51 31.1 -0.3
GDB S Sb 07 52 04.9 -2.3
SVAN Silvan-Diyarba 2.57 266 Pn Pn 07 51 32.4 +0.7
SVAN Silvan-Diyarba 2.57 266 Pn Pn 07 51 32.4 +0.7
GANJ Ganja 2.68 32 P Pn 07 51 32.8 -0.4
GANJ S Sb 07 52 09.0 -2.1
AGDM Agdam 2.69 49 P Pn 07 51 32.7 -0.6
AGDM S Sn 07 52 08.2 +1.9
SENK Senkaya-Erzuru 2.72 324 Pn Pn 07 51 35.8 +2.0
BLQ Beylaqan 2.76 60 P Pn 07 51 34.0 -0.3
BLQ S Sn 07 52 10.4 +2.3
QZX Qazax, Azerbai 2.77 15 P Pn 07 51 34.6 +0.3
QZX S Sb 07 52 11.3 -2.2
KARO Karliova-Bingo 2.81 290 Pn Pn 07 51 36.1 +1.0
BRDA Brd 2.83 48 P Pn 07 51 35.2 0.0
BRDA S Sn 07 52 12.3 +2.6
BGD Bogdanovka 2.95 347 P Pb 07 51 42.0 -0.5
YRD Yardimli 3.01 79 P Pn 07 51 37.0 -0.8
YRD S Sn 07 52 17.4 +2.8
BNGB Bingl 3.02 283 Pn Pn 07 51 39.3 +1.5
LRK Lerik 3.06 84 P Pn 07 51 37.7 -0.8
LRK S Sn 07 52 17.4 +1.7
MARD Mardin 3.10 251 Pn 07 51 39.3 +0.3
AKH Akhalkalaki 3.11 347 P Pb 07 51 45.2 0.0
AKH S Sg 07 52 33.7 +4.5
DGRG David-gareji 3.15 13 P Pb 07 51 47.1 +1.4
DGRG S Sg 07 52 34.3 +4.1
TRLG Trialeti 3.17 355 P Pb 07 51 44.9 -1.2
GLBA Clilabad 3.20 73 P Pn 07 51 40.1 -0.1
GLBA S Sn 07 52 19.7 +1.0
VSHL Vashlovani 3.22 27 P Pn 07 51 43.1 +2.6
VSHL S Sg 07 52 33.8 +1.4
YEDI Yedisu-Bingol 3.23 290 Pn Pn 07 51 42.4 +1.6
DDFL Dedoflistskaro 3.32 22 P Pb 07 51 46.7 -2.0
LKRN Lenkeran, Azer 3.41 83 P Pn 07 51 42.4 -0.7
LKRN S Sn 07 52 24.1 +0.1
ASTR Astara 3.41 86 P Pn 07 51 42.5 -0.6
ASTR S Sn 07 52 25.1 +1.0
SAAT Saatly 3.42 63 P Pn 07 51 43.1 -0.2
SAAT S Sn 07 52 24.6 +0.3
DYBB Diyarbakir 3.43 264 Pn Pn 07 51 44.3 +0.9
KOPT Kop Dagi 3.48 299 Pn Pn 07 51 42.9 -1.5
SEKA Sheki 3.53 36 P Pn 07 51 45.8 +1.0
SEKA S Sn 07 52 29.2 +2.1
ZKTA Zakatala 3.65 26 P Pn 07 51 46.8 +0.2
ZKTA S Sn 07 52 32.5 +2.4
QBL Gabala 3.66 45 P Pn 07 51 46.4 -0.2
QBL S Sn 07 52 31.3 +1.0
IML Ismayilli 3.75 49 P Pn 07 51 47.4 -0.6
IML S Sn 07 52 33.5 +0.8
ALIB &Aumlli-Bayram 3.87 65 P Pn 07 51 48.8 -0.7
ALIB S Sn 07 52 36.2 +0.8
ERZN Erzincan 3.88 290 Pn Pn 07 51 51.2 +1.5
BAYT Aydıntepe-Bayb 3.90 302 Pn Pn 07 51 51.6 +1.6
CHRG Chargali 3.96 5 P Pb 07 52 00.2 +0.6
XNQ Khinaliq 3.98 44 P Pn 07 51 50.8 -0.4
XNQ S Sn 07 52 38.7 +0.2
PQL Pirkuli 4.00 52 P Pn 07 51 50.9 -0.5
PQL S Sn 07 52 39.4 +0.5
SVRC Sivrice-ELAZID 4.04 272 Pn Pn 07 51 53.1 +1.1
GBS Qobustan 4.09 57 P Pn 07 51 51.6 -0.9
GBS S Sn 07 52 41.7 +0.9
ATGJ Altiaghaj 4.26 53 P Pn 07 51 54.2 -0.7
ATGJ S Sn 07 52 46.5 +1.3
QSAR Qusar 4.29 42 P Pn 07 51 54.9 -0.3
QSAR S Sn 07 52 46.2 +0.5
QUBA Quba, Azerbaij 4.30 45 P Pn 07 51 55.2 -0.2
QUBA S Sn 07 52 46.2 +0.2
SHTL Shatili 4.30 7 P Pb 07 52 05.8 +0.3
SIZA Siyzn 4.36 50 P Pn 07 51 55.8 -0.5
SIZA S Sn 07 52 48.2 +0.7
KBZ Khabaz 5.47 348 Pn Pn 07 52 11.8 +0.3
1.0nm,0.8s,baz=169,slow=10,SNR=3.5
KBZ Pg Pb 07 52 25.3 +0.1
0.1nm,0.3s,baz=150,slow=8.6,SNR=4.9
KVAR Kislovodsk Arr 5.72 347 Pn Pn 07 52 17.5 +2.5
baz=166,slow=8.3
0.9nm,0.3s
BR131 Keskin Array S 8.52 282 Pn Pn 07 52 52.8 -0.6
BRTR Keskin Array B 8.52 282 Pn Pn 07 52 56.5 +3.1
0.7nm,0.7s,baz=114,slow=14,SNR=4.5
BRTR Keskin Array B 8.52 282 Pn Pn 07 52 52.8 -0.6
ASF Jabal al Asfar 8.74 227 Pn Pn 07 52 58.5 +1.9
0.3nm,0.3s,baz=61,slow=13,SNR=2.0
ASF Lg Lg 07 55 25.2
0.4nm,0.3s,baz=102,slow=20,SNR=4.0
1.3nm,0.3s
MMAI Mount Meron Ar 9.10 237 Pn Pn 07 53 03.2 +1.8
1.1nm,0.3s,baz=92,slow=16,SNR=1.8
MMAI Lg Lg 07 55 41.8
baz=44,slow=29
0.4nm,0.3s
EIL Elat 11.72 225 Pn Pn 07 53 38.5 +1.2
0.2nm,0.3s,baz=43,slow=18,SNR=1.1
EIL Lg Lg 07 57 04.2
0.2nm,0.3s,baz=5.6,slow=19,SNR=3.7
3.6nm,0.8s
MANT Manisa 12.47 275 Pn Pn 07 53 46.4 -1.2
BELG Belogornoye 14.19 8 Pn Pn 07 54 10.7 0.0
0.2nm,0.3s,baz=176,slow=13,SNR=2.1
6.1nm,0.8s
AKTO Aktyubinsk 15.43 34 Pn Pn 07 54 26.3 -1.3
0.4nm,0.3s,baz=226,slow=11,SNR=14
0.9nm,0.5s
MLR Muntele Rosu 15.48 303 Pn P 07 54 31.5 -1.5
0.3nm,0.3s,baz=136,slow=18,SNR=3.4
1.3nm,0.5s
MLR Muntele Rosu 15.48 303 P P 07 54 31.5 -0.8
AB31 Akbulak array 15.56 41 Pn 07 54 29.1 -0.2
ABKAR Akbulak array 15.56 41 Pn Pn 07 54 29.4 +0.1
AKASG Malin Array Be 16.38 324 Pn Pn 07 54 38.5 -1.3
0.3nm,0.3s,baz=136,slow=12,SNR=4.2
1.6nm,0.7s
BUR08 Bucovina Ar. S 16.81 310 Pn 07 54 44.2 -1.3
MNK Minsk 19.67 330 *i* P Pn 07 55 20.7 +0.3
comp=E,7.0nm,0.7s
MNK *i* P Pn 07 55 20.7 +0.3
comp=N,40nm,1.0s
MNK *i* P Pn 07 55 20.7 +0.3
comp=Z,9.0nm,1.0s,baz=138
MNK *i* PP PnPn 07 55 35.4 +1.6
MNK *i* PPP PPP 07 55 43.2
MNK *i* S Sn 07 59 01.7 +0.2
MNK *i* SS SnSn 07 59 18.1 +2.4
MNK *i* SSS SSS 07 59 31.1
MNK *i* LQ LQ 08 02 08.7
MNK *i* LR LR 08 04 02.9
MNK *i* LRM MLR 08 04 18.3
comp=E,564nm,15.7s
MNK *i* LRM MLR 08 04 25.4
comp=N,526nm,15.9s
MNK *i* LRM MLR 08 04 49.1
comp=Z,137nm,8.7s
ARTI Arti 20.26 23 P P 07 55 26.2 +0.8
comp=Z,4.9nm,0.7s,baz=208,slow=6.5,SNR=6.2
comp=Z,4.9nm,0.7s
ARTI Arti 20.26 23 P P 07 55 26.3 +0.8
KK31 Karatay Array 20.27 68 P 07 55 26.7 +1.0
KK31 IAmb IAmb 07 55 36.1
comp=Z,4.2nm,0.9s
KKAR Karatay Array 20.27 68 P 07 55 26.6 +1.0
KIRV Kirov 20.47 7 P P 07 55 26.8 -0.9
comp=Z,3.8nm,0.5s,baz=170,slow=11,SNR=1.8
comp=Z,3.8nm,0.5s
BVAR Borovoye Array 23.12 42 P P 07 55 56.0 -0.1
comp=Z,0.4nm,0.4s,baz=252,slow=10,SNR=4.6
comp=Z,0.4nm,0.4s
BOOM Boomskoye usch 24.24 70 P P 07 56 07.8 +0.4
BOOM IAmb IAmb 07 56 25.0
comp=Z,5.5nm,1.3s
NRN Naryn 24.32 73 P P 07 56 08.1 -0.2
NRN IAmb IAmb 07 56 32.1
comp=Z,4.4nm,1.1s
GERES GERESS Array B 24.44 305 P P 07 56 08.7 -0.3
comp=Z,0.3nm,0.4s,baz=106,slow=15,SNR=1.7
comp=Z,0.3nm,0.4s
MURB Monte Urbino 24.56 292 P P 07 56 08.2 -2.0

FINES FINESS Array B 25.76 340 P P 07 56 20.8 +0.2
comp=Z,5.6nm,1.1s,baz=140,slow=9.0,SNR=4.3
comp=Z,5.6nm,1.1s
KURBB Kurchatov Arra 26.96 52 P P 07 56 32.7 +1.1
comp=Z,1.5nm,0.9s,baz=263,slow=9.0,SNR=8.4
comp=Z,1.5nm,0.9s
KURK Kurchatov 27.04 52 P P 07 56 32.0 -0.3
KURK IAmb IAmb 07 56 53.2
comp=Z,3.3nm,1.0s
MKAR Makanchi Array 28.87 61 P P 07 56 48.9 +0.1
comp=Z,0.2nm,0.4s,baz=277,slow=6.1,SNR=7.1
comp=Z,0.2nm,0.4s
MKAR Makanchi Array 28.87 61 P P 07 56 48.8 -0.1
ZALV Zalesovo Beam 31.49 47 P P 07 57 12.5 +0.6
comp=Z,0.6nm,0.4s,baz=261,slow=9.3,SNR=5.2
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 31.49 47 P P 07 57 12.0 +0.1
ESDC Sonseca Array 37.27 288 P P 07 58 01.2 -1.0
comp=Z,0.2nm,0.5s,baz=64,slow=6.8,SNR=4.0
comp=Z,0.2nm,0.5s
PALK Pallekele 45.05 124 LR LR 08 21 02.4
comp=Z,91nm,18.1s,baz=87,slow=40
CMAR Chiang Mai Arr 51.11 97 P P 07 59 53.6 +0.4
comp=Z,1.1nm,0.3s,baz=294,slow=7.6,SNR=9.2
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 51.11 97 P P 07 59 53.2 0.0
ILAR Eielson Array 76.80 5 P P 08 02 41.3 -0.3
comp=Z,0.4nm,1.0s,baz=346,slow=5.7,SNR=3.2
comp=Z,0.4nm,1.0s
YKA Yellowknife Ar 78.06 350 P P 08 02 48.0 -0.7
comp=Z,0.2nm,0.8s,baz=10,slow=7.0,SNR=5.8
comp=Z,0.2nm,0.8s

*AFAD **23** 07:55:48.4, 38°.45N×44°.58E, h7km±2km, ML2.8*
*AZER **23** 07:55:48.1, 38°.35N×44°.61E, h10km, ml3.2*
*NSSP **23** 07:55:49.1, 38°.38N×44°.55E, h10km, Ms3.2*
*ISK **23** 07:55:49.4, 38°.43N×44°.56E, h10km, ML3.2/8*
*TEH **23** 07:55:50.2, 38°.44N×44°.54E, h10km±999km, ML2.9,*
Presumed earthquake
ISC 23 07:55:49.5±1.1, 38°.42N±0°.02×44°.53E±0°.02, h7km±10km, n32, σ0s95/53, 1C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**300**	P	**Pg**	**07 55 58.5**	**-0.4**
OZAP				S	**Sg**	**07 56 06.1**	**+0.9**
OZAP				IAML		07 56 07.0	
	comp=E,3μm,0.5s						
OZAP				IAML		07 56 12.0	
	comp=N,2μm,1.0s						
ISHB	**Shabestar**	**0.87**	**99**	Pg	**Pb**	**07 56 06.3**	**-0.7**
TVAN	**Van**	**0.89**	**277**	P	**Pg**	**07 56 05.1**	**-1.4**
TVAN				S	**Sb**	**07 56 19.4**	**0.0**
VANB	**Van**	**0.91**	**281**	Pg	**Pb**	**07 56 07.3**	**-0.3**
VANB				Sg	**Sb**	**07 56 20.4**	**+0.4**
VMUR	**Van-Muradiye**	**0.94**	**308**	P	**Pg**	**07 56 06.9**	**-0.6**
VMUR				S	**Sb**	**07 56 21.2**	**+0.3**
VMUR				IAML		07 56 23.0	
	comp=N,465nm,0.4s						
VMUR				IAML		07 56 24.0	
	comp=E,663nm,0.3s						
MAKU	**Maku**	**0.94**	**7**	Pg	**Pb**	**07 56 07.6**	**-0.7**
IMRD	**Marand**	**0.97**	**72**	Pg	**Pn**	**07 56 08.7**	**-1.0**
NAX	**Nakhchivan**	**1.07**	**45**	P	**Pn**	**07 56 11.0**	**0.0**
NAX				S	**Sn**	**07 56 26.9**	**+0.8**
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pg**	**07 56 09.7**	**-0.4**
HAKT				S	**Sn**	**07 56 26.7**	**+0.2**
HAKT				IAML		07 56 29.0	
	comp=N,301nm,0.4s						
HAKT				IAML		07 56 29.0	
	comp=E,272nm,0.4s						
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pg**	**07 56 09.9**	**-0.3**
HAKT				S	**Sn**	**07 56 26.9**	**+0.4**
GEVA	**Gevas**	**1.16**	**265**	P	**Pb**	**07 56 09.4**	**-2.5**
GEVA				S	**Sb**	**07 56 26.9**	**-0.3**
ORD	**Ordubad**	**1.26**	**66**	P	**Pg**	**07 56 14.4**	**+0.9**
ORD				S	**Sn**	**07 56 32.0**	**+1.2**
ITBZ	**Tabriz**	**1.29**	**98**	Pg	**Pg**	**07 56 13.9**	**-0.3**
DYDN	**Diyadin**	**1.30**	**330**	P	**Pg**	**07 56 14.2**	**-0.2**
DYDN				S	**Sn**	**07 56 31.3**	**-0.7**
IAZR	**Azarshahr**	**1.37**	**122**	Pg	**Pg**	**07 56 16.3**	**+0.7**
CUKT	**Cukurca**	**1.38**	**212**	Pn	**Pb**	**07 56 15.5**	**-0.1**
CUKT				Sn	**Sg**	**07 56 34.7**	**+0.9**
VAYK	**Vayk**	**1.45**	**29**	*i* P	**Pg**	**07 56 17.2**	**-0.2**
VAYK				*i* S	**Sg**	**07 56 37.9**	**+1.6**
ADCV	**BITLIS_Adilcev**	**1.46**	**286**	P	**Pn**	**07 56 16.4**	**-0.1**
ADCV				S	**Sg**	**07 56 38.1**	**+1.6**
ADCV				IAML		07 56 41.0	
	comp=E,209nm,0.5s						
ADCV				IAML		07 56 44.0	
	comp=N,146nm,0.6s						
ALVK	**Alvank**	**1.52**	**69**	*e*P	**Pg**	**07 56 18.0**	**-0.6**
ALVK				*e*S	**Sg**	**07 56 39.6**	**+1.3**
AGRB	**Hanur-Agry**	**1.66**	**314**	Pn	**Pn**	**07 56 19.3**	**+0.1**
AGRB				Sn	**Sb**	**07 56 41.6**	**-0.1**
DORK	**Agr/Tutak/Do**	**1.67**	**306**	P	**Pb**	**07 56 20.0**	**-0.7**
DORK				S	**Sg**	**07 56 43.6**	**+0.4**
DORK				IAML		07 56 46.0	
	comp=E,104nm,0.6s						
DORK				IAML		07 56 54.0	
	comp=N,111nm,0.9s						
MLAZ	**Malazgirt-MUS**	**1.70**	**296**	Pn	**Pn**	**07 56 20.1**	**+0.3**
KOTA	**Agri, Merkez-K**	**1.72**	**324**	P	**Pb**	**07 56 21.4**	**-0.1**
KOTA				S	**Sg**	**07 56 44.8**	**0.0**
KOTA				IAML		07 56 49.0	
	comp=N,40nm,0.4s						
KOTA				IAML		07 56 51.0	
	comp=E,53nm,0.5s						
GNI	**Garni**	**1.74**	**5**	Pn	**Pb**	**07 56 20.5**	**-1.3**
GNI	**Garni**	**1.74**	**5**	*e*P	**Pg**	**07 56 23.0**	**+0.2**
GNI				*e*S	**Sg**	**07 56 48.5**	**+3.2**
EGVZ	**Egvard**	**1.77**	**62**	*e*P	**Pg**	**07 56 22.4**	**-1.0**
EGVZ				*e*S	**Sg**	**07 56 46.0**	**-0.3**
GRS	**Goris**	**1.77**	**52**	⇑*i* P	**Pn**	**07 56 20.0**	**-0.7**
GRS				⇓*i* S	**Sg**	**07 56 45.0**	**-1.5**
AYRK	**Ayrk**	**1.96**	**30**	*e*P	**Pg**	**07 56 26.2**	**-0.7**
AYRK				*e*S	**Sg**	**07 56 53.0**	**+0.6**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn	**Pn**	**07 56 23.5**	**+0.2**
IHRS	**Heris**	**1.98**	**92**	Pn	**Pg**	**07 56 27.1**	**-0.3**
SVAN	**Silvan-Diyarba**	**2.63**	**265**	Pn	**Pn**	**07 56 33.5**	**+1.1**
SENK	**Senkaya-Erzuru**	**2.72**	**322**	Pn	**Pn**	**07 56 34.5**	**+0.7**

*IDC **23** 07:56:11.1±1.8, 5°.26S×129°.80E, h264km±22km, mb3.3/6, mbtmp3.9/10, Error ellipse: s-maj=39.4km s-min=9.5km az=76.0*
ISC 23 07:56:10.6±0.8, 5°.30S±0°.07×129°.6E±0°.2, h250km, n10, σ1s26/13, mb3.7/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.70**	**21**	P	**Pn**	**07 57 24.2**	**+1.4**
	8.8nm,0.6s,baz=173,slow=17,SNR=6.8						
SIJI				S	**S**	**07 58 18.9**	**-1.3**
	24nm,0.3s,baz=232,slow=19,SNR=17						
FITZ	**Fitzroy Crossi**	**13.30**	**197**	P	**Pn**	**07 59 11.0**	**+0.7**
	1.5nm,0.5s,baz=9.4,slow=9.6,SNR=9.1						
FITZ				S	S	08 01 29.8	-8.2
	1.8nm,0.3s,baz=104,slow=21,SNR=6.3						
WRA	**Warramunga Arr**	**15.27**	**163**	P	**P**	**07 59 33.7**	**+0.2**
	1.0nm,0.6s,baz=350,slow=13,SNR=18						
WRA				S	**S**	**08 02 20.9**	**-1.2**
	1.4nm,0.5s,baz=344,slow=21,SNR=8.2						
ASAR	**Alice Springs**	**18.73**	**168**	P	**P**	**08 00 12.2**	**+1.1**
	5.3nm,0.8s,baz=352,slow=12,SNR=69						
ASAR				S	**S**	**08 03 29.3**	**-1.6**
	3.6nm,0.8s,baz=351,slow=23,SNR=15						
CMAR	**Chiang Mai Arr**	**38.36**	**309**	P	**P**	**08 03 07.7**	**-0.4**
	2.2nm,0.5s,baz=138,slow=7.4,SNR=11						
	2.2nm,0.5s						
SONM	**Songino Array**	**56.72**	**341**	P	**P**	**08 05 29.3**	**+0.8**
	0.3nm,0.5s,baz=150,slow=6.1,SNR=3.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.60**	**327**	P	**P**	**08 06 34.2**	**0.0**
	1.3nm,0.6s,baz=121,slow=8.5,SNR=14						
	1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**69.90**	**334**	P	**P**	**08 06 53.4**	**-1.0**
	0.7nm,0.6s,baz=119,slow=2.9,SNR=3.2						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**70.87**	**328**	P	**P**	**08 06 60.0**	**-0.4**
	1.5nm,0.7s,baz=131,slow=5.0,SNR=22						
	1.5nm,0.7s						
BVAR	**Borovoye Array**	**76.43**	**328**	P	**P**	**08 07 30.5**	**-2.0**
	0.7nm,0.8s,baz=106,slow=3.6,SNR=2.5						
	0.7nm,0.8s						

*MEX **23** 08:00:55.3±0.6, 14°.10N×92°.46W, h68km±28km, MD3.7*
*GCG **23** 08:00:56.7±0.8, 14°.20N×92°.26W, h4km±39km, MD3.4,*
Presumed earthquake
ISC 23 08:00:52.2±2.9, 14°.0N±0°.1×92°.47W±0°.08, h32km±21km, n13, σ1s70/20, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMCA	**Catarina**	**0.94**	**24**	*i* P	**Pn**	**08 01 10.2**	**+1.0**
PATR	**El Naranjo**	**1.14**	**12**	*e*P	**Pn**	**08 01 12.5**	**+0.4**
PATR				*e*S	**Sn**	**08 01 26.5**	**-0.3**
CHUJ	**Union Juarez**	**1.15**	**18**	*e*P	**Pn**	**08 01 13.2**	**+0.9**
CHUJ				*e*S	**Sn**	**08 01 26.9**	**-0.1**
STG2	**El Palmar, Qui**	**1.15**	**67**	*i* P	**Pn**	**08 01 12.6**	**+0.4**
STG2				*i* S	**Sn**	**08 01 25.2**	**-1.7**
STG5	**El Palmar, Qui**	**1.16**	**69**	*i* P	**Pn**	**08 01 12.9**	**+0.6**
STG8	**El Palmar, Qui**	**1.18**	**67**	*i* P	**Pn**	**08 01 13.1**	**+0.5**
PAVE	**Pavencul**	**1.22**	**13**	*e*P	**Pn**	**08 01 14.2**	**+0.9**
PAVE				*e*S	**Sn**	**08 01 28.8**	**-0.1**
QUEO	**Labor Ovalle**	**1.27**	**47**	*i* P	**Pn**	**08 01 16.3**	**+2.3**
CCIG	**Comitan**	**2.29**	**8**	*e*P	**Pn**	**08 01 31.5**	**+3.5**
CCIG				*e*S	**Sn**	**08 01 53.5**	**-1.8**
CCIG	**Comitan**	**2.29**	**8**	*e*P	**Pb**	**08 01 32.5**	**-0.5**
TGIG		**2.84**	**347**	*e*P	**Pn**	**08 01 32.6**	**-2.7**
TGIG				*e*S	**Sn**	**08 02 08.4**	**-0.1**
UXUV	**UXUV**	**3.67**	**334**	*e*P	**Pn**	**08 01 49.4**	**+2.5**
UXUV				*e*S	**Sn**	**08 02 27.3**	**-1.8**
CMIG	**Matias Romero**	**3.86**	**323**	*e*P	**Pn**	**08 01 50.5**	**+1.2**
CMIG				*e*S	Sn	08 02 24.3	-9.3

*IDC **23** 08:09:36.0±0.4, 13°.82N×144°.66E, h142km±3km, mb3.8/13, mbtmp4.2/13, Error ellipse: s-maj=21.1km s-min=11.9km az=83.0*
*NEIC **23** 08:09:37.2±0.8, 13°.78N±0°.08×144°.5E±0°.1, h142km±5km, mb4.4/22, Error ellipse: s-maj=20.5km s-min=11.0km az=104.0*
ISC 23 08:09:36.8±0.5, 13°.78N±0°.07×144°.6E±0°.1, h144km, n47, σ0s75/45, mb4.3/22, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.36**	**121**	P	**Pn**	**08 09 57.0**	**+0.3**
	2μm,0.3s,baz=331,slow=2.5,SNR=323						
GUMO				S	**Sn**	**08 10 11.7**	**-0.2**
	2μm,0.3s,baz=186,slow=22,SNR=28						
GUMO	**Guam**	**0.36**	**121**	Pn	**Pn**	**08 09 57.2**	**+0.4**
GUMO				Sn	**Sn**	**08 10 11.9**	**-0.1**
DPSS	**Saipan**	**1.88**	**39**	Pn	**Pn**	**08 10 10.6**	**+0.4**
DPSS				Sn	**Sn**	**08 10 35.6**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**21.77**	**75**	T	T	08 36 06.2	
	baz=262,slow=74						
H11S1	**WAKE ISLAND Hy**	**21.78**	**75**	T	T	08 36 04.6	
	baz=262,slow=74						
H11S2	**WAKE ISLAND Hy**	**21.78**	**75**	T	T	08 36 07.2	
	baz=262						
H11N1	**WAKE ISLAND Hy**	**22.18**	**72**	T	T	08 37 35.1	
	baz=258,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.19**	**71**	T	T	08 37 35.7	
	baz=258,slow=75						
H11N3	**WAKE ISLAND Hy**	**22.20**	**72**	T	T	08 37 37.0	
	baz=258,slow=75						
YULB	**Yu-li**	**24.00**	**297**	P	**P**	**08 14 38.6**	**+0.3**
COEN	**Coen**	**27.59**	**183**	P	**P**	**08 15 10.5**	**-0.2**
MTN	**Manton Dam**	**29.60**	**207**	P	**P**	**08 15 28.1**	**-0.5**
CTA	**Charters Tower**	**33.69**	**177**	P	**P**	**08 16 04.2**	**-0.1**
	3.8nm,0.8s,baz=354,slow=11,SNR=1.7						
	3.8nm,0.8s						
CTAO	**Charters Tower**	**33.69**	**177**	P	**P**	**08 16 04.4**	**+0.1**
CTAO				IAmb	IAmb	08 16 11.6	
	comp=Z,6.8nm,1.0s						
WB0	**Warramunga Arr**	**34.80**	**197**	P	**P**	**08 16 13.5**	**-0.3**
WR8	**Warramunga Arr**	**34.95**	**197**	P	**P**	**08 16 14.8**	**-0.3**
WR8				IAmb	IAmb	08 16 18.1	
	comp=Z,3.9nm,0.7s						
WRAB	**Tennant Creek**	**34.97**	**197**	P	**P**	**08 16 15.2**	**-0.1**
WRA	**Warramunga Arr**	**34.98**	**197**	P	**P**	**08 16 14.4**	**-1.0**
	comp=Z,5.3nm,0.5s,baz=22,slow=9.5,SNR=65						
	comp=Z,5.3nm,0.5s						
WRA	**Warramunga Arr**	**34.98**	**197**	P	**P**	**08 16 13.5**	**-1.9**
FITZ	**Fitzroy Crossi**	**36.76**	**211**	P	**P**	**08 16 30.3**	**-0.2**
	comp=Z,2.4nm,0.3s,baz=48,slow=8.0,SNR=6.4						
	comp=Z,2.4nm,0.3s						
AS31	**Alice Springs**	**38.64**	**196**	P	**P**	**08 16 46.0**	**-0.3**
AS31				IAmb	IAmb	08 16 47.3	
	comp=Z,2.8nm,0.4s						
ASAR	**Alice Springs**	**38.64**	**196**	P	**P**	**08 16 45.8**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=17,slow=13,SNR=101						
	comp=Z,2.1nm,0.4s						
INKA	**Innaminka**	**41.43**	**185**	P	**P**	**08 17 09.2**	**-0.1**
INKA				IAmb	IAmb	08 17 09.8	
	comp=Z,5.1nm,0.6s						
DZM	**Mont Dzumac**	**41.59**	**149**	P	**P**	**08 17 10.8**	**0.0**
	comp=Z,2.1nm,0.4s,baz=320,slow=14,SNR=6.1						
	comp=Z,2.1nm,0.4s						
DZM	**Mont Dzumac**	**41.59**	**149**	P	**P**	**08 17 11.8**	**+1.1**
DZM				IAmb	IAmb	08 17 20.5	
	comp=Z,12nm,1.1s						
LEM	**Lembang**	**41.99**	**243**	P	**P**	**08 17 16.1**	**+1.8**
	comp=Z,15nm,0.4s,baz=43,slow=18,SNR=2.2						
	comp=Z,15nm,0.4s						
CMAR	**Chiang Mai Arr**	**43.98**	**282**	P	**P**	**08 17 29.6**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=95,slow=8.0,SNR=5.5						
	comp=Z,0.9nm,0.3s						
STKA	**Stephens Creek**	**45.48**	**184**	P	**P**	**08 17 40.9**	**-0.8**
	comp=Z,2.8nm,0.4s,baz=2.2,slow=7.9,SNR=9.1						
	comp=Z,2.8nm,0.4s						
STKA	**Stephens Creek**	**45.48**	**184**	P	**P**	**08 17 41.0**	**-0.6**
SONM	**Songino Array**	**46.41**	**325**	P	**P**	**08 17 49.5**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=128,slow=4.8,SNR=3.7						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**46.41**	**325**	P	**P**	**08 17 49.8**	**+0.8**
BBOO	**Buckleboo**	**47.03**	**190**	P	**P**	**08 17 53.3**	**-0.4**
BBOO				IAmb	IAmb	08 17 54.0	
	comp=Z,11nm,0.8s						
FORT	**Forrest**	**47.05**	**200**	P	**P**	**08 17 53.8**	**-0.2**
FORT				IAmb	IAmb	08 17 54.9	
	comp=Z,4.7nm,0.7s						
CAN	**Canberra**	**49.01**	**175**	P	**P**	**08 18 09.3**	**+0.3**
CAN				IAmb	IAmb	08 18 34.5	
	comp=Z,12nm,1.1s						
MORW	**Morawa**	**50.73**	**213**	P	**P**	**08 18 21.1**	**-0.9**
MORW				IAmb	IAmb	08 18 41.5	
	comp=Z,4.1nm,1.1s						
TOO	**Toolangi**	**51.08**	**179**	P	**P**	**08 18 25.9**	**+1.4**
LSA	**Lhasa**	**51.64**	**297**	P	**P**	**08 18 29.0**	**-0.5**
LSA				IAmb	IAmb	08 18 30.8	
	comp=Z,3.1nm,0.8s						
O15K	**Ungalikthiuk R**	**60.97**	**29**	P	**P**	**08 19 34.8**	**+0.3**
O15K				IAmb	IAmb	08 19 36.8	
	comp=Z,6.5nm,1.1s						
MKAR	**Makanchi Array**	**61.15**	**316**	P	**P**	**08 19 36.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=91,slow=8.8,SNR=14						
	comp=Z,0.5nm,0.3s						
MAKZ	**Makanchi**	**61.36**	**316**	P	**P**	**08 19 37.6**	**+0.1**
K15K	**Wolf Creek Mou**	**61.53**	**25**	P	**P**	**08 19 39.0**	**+0.7**
H17K	**Granite Mounta**	**63.37**	**23**	P	**P**	**08 19 50.5**	**+0.1**
KURK	**Kurchat

ASAR	**Alice Springs**	**43.21**	**261**	P	P	08 18 59.1	-0.3		
	2.4nm,0.8s,baz=98,slow=8.1,SNR=12								
	2.4nm,0.8s								
WRA	**Warramunga Arr**	**43.62**	**266**	P	P	08 19 01.2	-1.6		
	3.0nm,0.6s,baz=103,slow=8.1,SNR=14								
	3.0nm,0.6s								
TXAR	**Lajitas Array**	**89.53**	**57**	P	P	08 23 56.0	+0.1		
	0.2nm,0.6s,baz=201,slow=6.7,SNR=3.6								
	0.2nm,0.6s								

*AZER **23** 08:12:10.6,38°.36N×44°.54E,h11km,ml2.8*
*ISK **23** 08:12:11.7,38°.37N×44°.50E,h5km,ML2.9/5*
*TEH **23** 08:12:12.6,38°.46N×44°.55E,h10km±999km,ML2.7,*
Presumed earthquake
ISC 23 08:12:12.2±1.2,38°.37N±0°.03×44°.52E±0°.03,h5km±12km,
n16,σ1ş35/23,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.87**	**96**	Pg	**Pb**	**08 12 28.4**	**-1.5**
VANB	**Van**	**0.91**	**284**	Pg	**Pg**	**08 12 29.6**	**-0.1**
MAKU	**Maku**	**0.99**	**7**	Pg	**Pg**	**08 12 29.6**	**-1.6**
IMRD	**Marand**	**0.99**	**70**	Pg	**Pb**	**08 12 30.8**	**-1.2**
HAKT	**HAKKARI**	**1.04**	**218**	P	**Pg**	**08 12 31.2**	**-0.8**
HAKT				S	**Sn**	**08 12 48.6**	**+0.1**
NAX	**Nakhchivan**	**1.10**	**43**	P	**Pn**	**08 12 33.5**	**-0.9**
NAX				S	**Sn**	**08 12 50.4**	**+0.3**
ORD	**Ordubad**	**1.28**	**64**	P	**Pg**	**08 12 36.6**	**-0.1**
ORD				S	**Sn**	**08 12 56.0**	**+1.6**
ITBZ	**Tabriz**	**1.29**	**96**	Pg	**Pg**	**08 12 36.2**	**-0.7**
SBZ	**Shahbuz**	**1.30**	**38**	P	**Pg**	**08 12 37.0**	**-0.1**
SBZ				S	**Sn**	**08 12 57.9**	**+2.9**
CUKT	**Cukurca**	**1.34**	**213**	Pn	**Pg**	**08 12 38.1**	**+0.3**
CUKT				Sn	**Sg**	**08 12 57.5**	**+2.4**
IAZR	**Azarshahr**	**1.35**	**121**	Pg	**Pg**	**08 12 38.7**	**+0.7**
HYR	**Heyderabad**	**1.37**	**11**	P	**Pg**	**08 12 38.8**	**+0.3**
HYR				S	**Sg**	**08 12 58.5**	**+2.3**
AGRB	**Hanur-Agry**	**1.69**	**316**	Pn	**Pb**	**08 12 43.1**	**-0.8**
GNI	**Garni**	**1.78**	**6**	Pn	**Pb**	**08 12 44.8**	**-0.6**
GNI				Sn	**Sg**	**08 13 10.0**	**+0.5**
GURO	**Guroymak-BITLI**	**1.96**	**276**	Pn	**Pb**	**08 12 47.1**	**-1.3**
IHRS	**Heris**	**1.98**	**91**	Pn	**Pg**	**08 12 49.3**	**-0.9**

*IDC **23** 08:12:39.6±3.1,8°.57S×118°.49E,h144km±25km,mb2.9/4,*
mbtmp3.5/8,Error ellipse: s-maj=42.9km s-min=12.5km
az=64.0
*DJA **23** 08:12:39.6±0.3,9°.S±3°×11°.8E±°,h120km±4km,M4.1/19,*
mb4.2/2,MLv4.1/19
ISC 23 08:12:38.1±0.8,8°.68S±0°.05×118°.37E±0°.04,h136km±6km,
n30,σ1ş76/39,mb3.3/4,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	**Kabupaten Domp**	**0.18**	**343**	P	**Pn**	**08 12 56.9**	**+0.3**
DBNI				S	**Sn**	**08 13 09.7**	**-1.0**
PLAI	**Plampang**	**0.60**	**255**	P	**Pn**	**08 12 59.0**	**+0.6**
PLAI	**Plampang**	**0.60**	**255**	P	**Pn**	**08 12 59.2**	**+0.8**
PLAI				S	**Sn**	**08 13 13.5**	**-0.3**
WBSI	**Waikabubak, Su**	**1.40**	**134**	P	**Pn**	**08 13 06.4**	**+0.9**
WBSI				S	**Sn**	**08 13 27.1**	**+0.7**
TWSI	**Taliwang, Sumb**	**1.47**	**267**	P	**Pn**	**08 13 07.0**	**+0.8**
TWSI				S	**Sn**	**08 13 28.5**	**+0.8**
WSI	**Waingapu**	**2.15**	**118**	P	**Pn**	**08 13 15.5**	**+1.3**
WSI				S	**Sn**	**08 13 45.6**	**+3.8**
KLNI	**Mataram**	**2.26**	**276**	P	**Pn**	**08 13 15.6**	**0.0**
BASI	**Baing, Sumba**	**2.67**	**125**	P	**Pn**	**08 13 21.8**	**+1.1**
KHKI	**Kahang-Kahang**	**2.75**	**276**	P	**Pn**	**08 13 23.9**	**+2.3**
DNP	**Denpasar**	**3.12**	**270**	P	**Pn**	**08 13 27.2**	**+0.7**
SRBI	**Singaraja**	**3.17**	**280**	P	**Pn**	**08 13 27.8**	**+0.6**
IGBI	**Denpasar**	**3.19**	**267**	P	**Pn**	**08 13 28.6**	**+1.3**
BSSI	**Bau Bau, Buton**	**3.28**	**40**	P	**Pn**	**08 13 29.1**	**+0.5**
EDFI	**Ende, Flores**	**3.29**	**92**	P	**Pn**	**08 13 30.0**	**+1.3**
RTBI	**Rangdo, Negare**	**3.39**	**273**	P	**Pn**	**08 13 30.4**	**+0.3**
MMRI	**Maumere**	**3.83**	**90**	P	Pn	08 13 41.4	+5.7
KAPI	**Kappang**	**3.89**	**21**	P	**Pn**	**08 13 37.8**	**+1.2**
	5.5nm,0.4s,baz=224,slow=18,SNR=4.1								
KAPI				S	**Sn**	**08 14 20.9**	**-1.0**
	6.8nm,0.5s,baz=126,slow=18,SNR=1.6								
KAPI	**Kappang**	**3.89**	**21**	P	**Pn**	**08 13 37.3**	**+0.8**
JAGI	**Jajag, Banyuwa**	**4.17**	**272**	P	**Pn**	**08 13 40.3**	**0.0**
GMJI	**Gumukmas**	**4.88**	**274**	P	**Pn**	**08 13 51.9**	**+2.1**
BATI	**Baumata**	**5.44**	**107**	P	**Pn**	**08 13 58.7**	**+1.4**
	34nm,0.4s,baz=292,slow=3.0,SNR=12								
BATI				S	**Sn**	**08 14 57.8**	**-1.2**
	36nm,0.5s,baz=205,slow=19,SNR=2.3								
BATI	**Baumata**	**5.44**	**107**	P	**Pn**	**08 13 58.1**	**+0.8**
	0.2nm38nm,0.9s								
SOEI	**Soe**	**5.92**	**101**	P	**Pn**	**08 14 06.0**	**+2.2**
SOEI	**Soe**	**5.92**	**101**	P	**Pn**	**08 14 05.5**	**+1.7**
FITZ	**Fitzroy Crossi**	**11.73**	**144**	P	**Pn**	**08 15 22.4**	**+1.0**
	2.7nm,0.6s,baz=346,slow=11,SNR=10								
FITZ				S	**Sn**	**08 17 24.9**	**-6.0**
	4.6nm,0.5s,baz=162,slow=20,SNR=10								
WRA	**Warramunga Arr**	**19.08**	**128**	P	**P**	**08 16 51.9**	**+1.6**
	0.2nm,0.3s,baz=306,slow=12,SNR=1.6								
WRA				S	**S**	**08 20 15.7**	**-4.1**
	0.7nm,0.9s,baz=324,slow=15,SNR=2.4								
ASAR	**Alice Springs**	**21.06**	**137**	P	**P**	**08 17 12.5**	**+1.0**
	0.5nm,0.4s,baz=301,slow=9.2,SNR=5.4								
ASAR				ScP	**ScP**	**08 24 37.2**	**-0.2**
	0.4nm,0.8s,baz=316,slow=2.3,SNR=5.3								
	0.5nm,0.4s								
SONM	**Songino Array**	**57.25**	**350**	P	**P**	**08 22 11.0**	**-0.4**
	0.3nm,0.6s,baz=167,slow=8.3,SNR=2.5								
	0.3nm,0.6s								
MKAR	**Makanchi Array**	**63.88**	**333**	P	**P**	**08 22 56.4**	**+0.1**
	0.2nm,0.6s,baz=157,slow=5.6,SNR=1.8								
	0.2nm,0.6s								
KURBB	**Kurchatov Arra**	**68.40**	**334**	P	**P**	**08 23 25.3**	**+0.3**
	0.2nm,0.5s,baz=141,slow=5.8,SNR=1.9								
	0.2nm,0.5s								

*AZER **23** 08:21:53.0,38°.42N×44°.55E,h2km,ml2.8*
*AFAD **23** 08:21:55.9,38°.47N×44°.52E,h7km±4km,ML2.7*
*TEH **23** 08:21:56.2,38°.42N×44°.53E,h10km±95km,ML2.7,*
Presumed earthquake
*ISK **23** 08:21:57.2,38°.39N×44°.48E,h6km,ML3.0/6*
ISC 23 08:21:56.3±1.2,38°.41N±0°.03×44°.52E±0°.02,h5km±10km,
n28,σ1ş21/47,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**302**	P	**Pg**	**08 22 05.3**	**-0.3**
OZAP				S	**Sg**	**08 22 11.3**	**-0.7**
OZAP				IAML		08 22 16.0	
	comp=E,834nm,0.5s						
OZAP				IAML		08 22 20.0	
	comp=N,1μm,0.7s						
ISHB	**Shabestar**	**0.87**	**98**	Pg	**Pg**	**08 22 12.2**	**-0.9**
TVAN	**Van**	**0.88**	**278**	P	**Pg**	**08 22 12.3**	**-1.0**
TVAN				S	**Sb**	**08 22 26.0**	**-0.3**
TVAN				IAML		08 22 30.0	
	comp=E,200nm,0.5s						
TVAN				IAML		08 22 41.0	
	comp=N,308nm,0.9s						
VANB	**Van**	**0.91**	**282**	Pg	**Pb**	**08 22 14.2**	**-0.4**
VANB				Sg	**Sb**	**08 22 26.3**	**-0.7**
VMUR	**Van-Muradiye**	**0.94**	**308**	P	**Pg**	**08 22 13.9**	**-0.4**
VMUR				S	**Sb**	**08 22 28.1**	**0.0**
VMUR				IAML		08 22 32.0	
	comp=N,383nm,0.3s						
VMUR				IAML		08 22 32.0	
	comp=E,296nm,0.3s						
MAKU	**Maku**	**0.95**	**8**	Pg	**Pg**	**08 22 14.0**	**-0.6**
IMRD	**Marand**	**0.98**	**72**	Pg	**Pb**	**08 22 15.3**	**-0.6**
HAKT	**HAKKARI**	**1.06**	**217**	P	**Pg**	**08 22 16.6**	**-0.1**
HAKT				S	**Sn**	**08 22 33.7**	**+0.4**
HAKT				IAML		08 22 39.0	
	comp=E,168nm,0.8s						
HAKT				IAML		08 22 40.0	
	comp=N,232nm,0.5s						
HAKT	**HAKKARI**	**1.06**	**217**	P	**Pg**	**08 22 16.9**	**+0.1**
HAKT				S	**Sn**	**08 22 33.2**	**-0.2**
NAX	**Nakhchivan**	**1.08**	**45**	P	**Pb**	**08 22 17.3**	**-0.3**
NAX				S	**Sn**	**08 22 33.0**	**-0.6**
GEVA	**Gevas**	**1.15**	**266**	P	**Pg**	**08 22 16.5**	**-1.9**
GEVA				S	**Sn**	**08 22 35.7**	**+0.2**
ORD	**Ordubad**	**1.27**	**65**	P	**Pg**	**08 22 20.5**	**-0.1**
ORD				S	**Sn**	**08 22 38.6**	**+0.4**
SBZ	**Shahbuz**	**1.27**	**39**	P	**Pg**	**08 22 20.8**	**0.0**
SBZ				S	**Sn**	**08 22 39.2**	**+0.7**
ITBZ	**Tabriz**	**1.29**	**97**	Pg	**Pn**	**08 22 20.3**	**-0.9**
DYDN	**Diyadin**	**1.30**	**331**	P	**Pb**	**08 22 21.1**	**-0.4**
DYDN				S	**Sg**	**08 22 37.6**	**-0.7**
HYR	**Heyderabad**	**1.33**	**11**	P	**Pb**	**08 22 21.3**	**-0.5**
HYR				S	**Sn**	**08 22 40.9**	**+1.1**
CUKT	**Cukurca**	**1.37**	**212**	Pn	**Pg**	**08 22 22.7**	**+0.2**
CUKT				Sn	**Sg**	**08 22 41.8**	**+1.6**
IAZR	**Azarshahr**	**1.37**	**122**	Pg	**Pb**	**08 22 22.1**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.46**	**286**	P	**Pb**	**08 22 23.9**	**-0.2**
ADCV				S	**Sg**	**08 22 47.0**	**+3.7**
ADCV				IAML		08 22 49.0	
	comp=N,66nm,0.6s						
ADCV				IAML		08 22 49.0	
	comp=E,74nm,0.5s						
IGDI	**IGDIR**	**1.50**	**347**	P	**Pg**	**08 22 25.4**	**+0.4**
IGDI				S	**Sg**	**08 22 49.2**	**+4.8**
AGRB	**Hanur-Agry**	**1.67**	**315**	Pn	**Pb**	**08 22 26.8**	**-0.8**
AGRB				Sn	**Sg**	**08 22 49.9**	**+0.1**
DORK	**Agr/Tutak/Do**	**1.67**	**306**	P	**Pb**	**08 22 27.2**	**-0.5**
DORK				S	**Sb**	**08 22 48.7**	**-0.4**
DORK				IAML		08 22 57.0	
	comp=E,63nm,1.3s						
DORK				IAML		08 22 58.0	
	comp=N,64nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.70**	**296**	Pn	**Pb**	**08 22 27.8**	**-0.4**
GNI	**Garni**	**1.75**	**6**	Pn	**Pg**	**08 22 29.2**	**-0.6**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn	**Pb**	**08 22 31.4**	**-1.1**
IHRS	**Heris**	**1.99**	**92**	Pn	**Pb**	**08 22 32.9**	**-0.1**
GDB	**GEDABAY**	**2.50**	**22**	P	**Pb**	**08 22 39.5**	**-2.3**
GDB				S	**Sg**	**08 23 15.6**	**-1.0**
GANJ	**Ganja**	**2.63**	**31**	P	**Pn**	**08 22 40.7**	**+1.2**
GANJ				S	**Sb**	**08 23 17.1**	**+0.5**

IDC 23 08:23:12.8±5.2,10°.74S×111°.73E,h0km,mb3.5/5,
mbtmp3.5/5,MS3.4/3,Error ellipse: s-maj=288.1km
s-min=23.8km az=46.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**22.43**	**39**	LR	LR	08 37 58.1	
	comp=Z,99nm,20.6s,baz=326,slow=40						
NWAO	**Narrogin (SRO)**	**22.66**	**168**	LR	LR	08 37 53.8	
	comp=Z,76nm,19.3s,baz=268,slow=39						
WRA	**Warramunga Arr**	**23.62**	**115**	P	P	08 28 25.3	-0.4
	0.4nm,0.8s,baz=291,slow=8.9,SNR=1.8						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**24.73**	**124**	P	P	08 28 36.4	+0.2
	0.6nm,0.8s,baz=298,slow=9.2,SNR=5.1						
	0.6nm,0.8s						
CTA	**Charters Tower**	**34.49**	**110**	LR	LR	08 45 14.8	
	comp=Z,90nm,18.4s,baz=224,slow=38						
MKAR	**Makanchi Array**	**63.03**	**338**	P	P	08 33 42.0	+0.3
	0.4nm,0.6s,baz=141,slow=8.4,SNR=4.5						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**67.60**	**338**	P	P	08 34 10.7	-0.4
	0.4nm,0.6s,baz=141,slow=6.0,SNR=3.0						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**68.37**	**343**	P	P	08 34 16.0	+0.1
	1.3nm,0.7s,baz=158,slow=4.3,SNR=4.6						
	1.3nm,0.7s						

*AFAD **23** 08:28:47.9,38°.43N×44°.57E,h7km±2km,ML2.8*
*NSSP **23** 08:28:48.8,38°.37N×44°.52E,h10km,Ms3.0*
*AZER **23** 08:28:48.1,38°.39N×44°.50E,h10km,ml3.2*
*TEH **23** 08:28:49.1,38°.39N×44°.44E,h10km±999km,ML2.9,*
Presumed earthquake
*ISK **23** 08:28:51.1,38°.34N×44°.42E,h13km,ML3.1/8*
ISC 23 08:28:49.4±1.1,38°.39N±0°.03×44°.47E±0°.02,h9km±10km,
n36,σ1ş24/60,1C-1D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**306**	P	**Pg**	**08 28 58.2**	**-0.4**
OZAP				S	**Sg**	**08 29 05.4**	**+0.7**
OZAP				IAML		08 29 07.0	
	comp=N,2μm,0.7s						
OZAP				IAML		08 29 08.0	
	comp=E,2μm,0.3s						
TVAN	**Van**	**0.85**	**280**	P	**Pg**	**08 29 05.0**	**-0.8**
TVAN				S	**Sn**	**08 29 19.2**	**-1.2**
TVAN				IAML		08 29 26.0	
	comp=E,314nm,0.3s						
TVAN				IAML		08 29 32.0	
	comp=N,449nm,0.7s						
VANB	**Van**	**0.87**	**284**	Pg	**Pn**	**08 29 07.1**	**-0.9**
VANB				Sg	**Sb**	**08 29 19.2**	**+0.6**
ISHB	**Shabestar**	**0.91**	**96**	Pg	**Pb**	**08 29 06.6**	**-0.8**
VMUR	**Van-Muradiye**	**0.93**	**311**	P	**Pb**	**08 29 07.3**	**-0.5**
VMUR				S	**Sn**	**08 29 22.0**	**-0.3**
MAKU	**Maku**	**0.98**	**10**	Pg	**Pg**	**08 29 07.6**	**-0.7**
IMRD	**Marand**	**1.02**	**71**	Pg	**Pb**	**08 29 09.6**	**-0.4**
HAKT	**HAKKARI**	**1.02**	**216**	P	**Pg**	**08 29 08.8**	**-0.4**
HAKT				S	**Sn**	**08 29 25.5**	**+0.7**
HAKT				IAML		08 29 27.0	
	comp=N,514nm,0.4s						
HAKT				IAML		08 29 29.0	
	comp=E,352nm,0.5s						
GEVA	**Gevas**	**1.11**	**267**	P	**Pb**	**08 29 09.3**	**-1.6**
GEVA				S	**Sn**	**08 29 28.0**	**+1.1**
NAX	**Nakhchivan**	**1.12**	**45**	P	**Pn**	**08 29 11.5**	**+0.2**
NAX				S	**Sn**	**08 29 27.5**	**+0.6**
DYDN	**Diyadin**	**1.30**	**332**	P	**Pn**	**08 29 13.0**	**-1.0**
DYDN				S	**Sg**	**08 29 31.0**	**-0.5**
DYDN				IAML		08 29 38.0	
	comp=N,275nm,1.1s						
DYDN				IAML		08 29 41.0	
	comp=E,308nm,0.9s						
ORD	**Ordubad**	**1.31**	**65**	P	**Pg**	**08 29 14.7**	**+0.1**
ORD				S	**Sn**	**08 29 34.1**	**+2.5**
SBZ	**Shahbuz**	**1.31**	**40**	P	**Pg**	**08 29 14.9**	**+0.3**
SBZ				S	**Sg**	**08 29 34.8**	**+3.0**
CUKT	**Cukurca**	**1.33**	**211**	Pn	**Pg**	**08 29 14.9**	**0.0**
CUKT				Sn	**Sg**	**08 29 32.9**	**+0.8**
ITBZ	**Tabriz**	**1.33**	**96**	Pg	**Pg**	**08 29 13.8**	**-1.1**
HYR	**Heyderabad**	**1.36**	**12**	P	**Pg**	**08 29 15.9**	**+0.3**
HYR				S	**Sg**	**08 29 36.5**	**+3.3**
IAZR	**Azarshahr**	**1.39**	**120**	Pg	**Pg**	**08 29 16.1**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.43**	**288**	P	**Pb**	**08 29 16.0**	**-0.3**
ADCV				IAML		08 29 39.0	
	comp=E,102nm,0.4s						
ADCV				S	**Sg**	**08 29 39.5**	**+4.0**
ADCV				IAML		08 29 41.0	
	comp=N,160nm,0.6s						
VAYK	**Vayk**	**1.50**	**29**	*i* P	**Pg**	**08 29 18.0**	**-0.3**
VAYK				*i* S	**Sg**	**08 29 40.2**	**+2.4**
ALVK	**Alvank**	**1.57**	**69**	*e*P	**Pg**	**08 29 18.9**	**-0.6**
ALVK				*e*S	**Sg**	**08 29 40.8**	**+0.8**
AGRB	**Hanur-Agry**	**1.65**	**316**	Pn	**Pb**	**08 29 20.1**	**-0.1**
DORK	**Agr/Tutak/Do**	**1.65**	**308**	P	**Pb**	**08 29 19.9**	**-0.3**
DORK				S	**Sg**	**08 29 42.9**	**+0.2**
DORK				IAML		08 29 49.0	
	comp=E,102nm,1.1s						
DORK				IAML		08 29 53.0	
	comp=N,111nm,1.0s						
MLAZ	**Malazgirt-MUS**	**1.68**	**297**	Pn	**Pg**	**08 29 21.1**	**-0.6**
KOTA	**Agri, Merkez-K**	**1.72**	**326**	P	**Pb**	**08 29 20.4**	**-1.0**
KOTA				S	**Sg**	**08 29 44.7**	**-0.1**
KOTA				IAML		08 29 49.0	
	comp=E,65nm,0.8s						
KOTA				IAML		08 29 53.0	
	comp=N,42nm,0.5s						
GNI	**Garni**	**1.77**	**7**	Pn	**Pg**	**08 29 23.4**	**0.0**
GNI	**Garni**	**1.77**	**7**	*e*P	**Pg**	**08 29 22.9**	**-0.5**
GNI				*e*S	**Sg**	**08 29 47.8**	**+1.4**
EGVZ	**Egvard**	**1.82**	**62**	*e*P	**Pg**	**08 29 23.3**	**-1.1**
EGVZ				*e*S	**Sg**	**08 29 48.1**	**+0.1**
GRS	**Goris**	**1.83**	**52**	⇑*i*P	**Pg**	**08 29 23.0**	**-1.5**
GRS				⇓*i*S	**Sg**	**08 29 48.0**	**-0.2**
GURO	**Guroymak-BITLI**	**1.92**	**276**	Pn	**Pb**	**08 29 23.9**	**-0.8**
GURO				Sn	**Sn**	**08 29 47.5**	**+0.7**
AMBZ	**Amberd**	**2.00**	**355**	*e*P	**Pg**	**08 29 26.9**	**-1.0**
AMBZ				*e*S	**Sg**	**08 29 54.1**	**+0.2**
AYRK	**Ayrk**	**2.01**	**30**	*e*P	**Pg**	**08 29 27.0**	**-0.9**
AYRK				*e*S	**Sg**	**08 29 54.8**	**+0.9**
IHRS	**Heris**	**2.02**	**91**	Pn	**Pg**	**08 29 26.9**	**-1.3**
ISRB	**Sarab**	**2.58**	**102**	Pn	**Pg**	**08 29 37.2**	**-1.7**
LSVT	**Lusahovit**	**2.59**	**12**	*e*P	**Pb**	**08 29 36.0**	**0.0**
LSVT				*e*S	**Sg**	**08 30 11.2**	**-1.3**
SVAN	**Silvan-Diyarba**	**2.59**	**266**	Pn	**Pn**	**08 29 32.8**	**+1.3**
SENK	**Senkaya-Erzuru**	**2.72**	**324**	Pn	**Pb**	**08 29 36.3**	**-2.1**

*AEIC **23** 08:30:25.9±4.1,52°.4N±0°.1×173°.09W±0°.07,h13km±6km,*
Error ellipse: s-maj=16.9km s-min=4.9km az=168.0
NEIC 23 08:30:27.1±1.4,52°.17N±0°.07×173°.15W±0°.04,h10km±7km,
mb3.5/12,ML3.7/20,ML3.2(AEIC),Error ellipse:
s-maj=10.5km s-min=2.3km az=196.0,Andreanof
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.59**	**281**		Pg	08 30 38.5	-0.1
KOFP					Sg	08 30 46.9	+0.5
KONE	**Korovin Northe**	**0.64**	**291**		Pg	08 30 38.7	-0.7
KONE					Sg	08 30 47.3	-0.4
ATKA	**Atka Island**	**0.64**	**274**		Pg	08 30 38.9	-0.6
ATKA				Sg	Sg	08 30 47.6	-0.4
KOKV	**Korovin Volcan**	**0.65**	**288**		Pg	08 30 39.2	-0.5
KOKV					Sg	08 30 48.0	-0.3
GSIG	**Igitkin Island**	**1.72**	**265**		Pn	08 30 56.8	-0.3
GSIG					Sn	08 31 19.2	0.0
GSTR	**Great Sitkin T**	**1.79**	**269**		Pn	08 30 57.5	-0.7
GSTR				IAML		08 31 29.6	
	comp=E,989nm,0.8s						
GSMY	**Great Sitkin M**	**1.79**	**267**		Pn	08 30 57.9	-0.3
GSMY					Sn	08 31 21.8	+0.8
ETKA	**Kagalaska Isla**	**2.03**	**263**		Pn	08 31 01.4	-0.1
CLES	**Cleveland East**	**2.10**	**70**	Pn	Pn	08 31 01.6	-0.7
CLES				IAML		08 31 39.6	
	comp=E,583nm,0.4s						
CLES				IAML		08 31 42.2	
	comp=N,649nm,1.0s						
ADAG	**Mount Adagdak**	**2.14**	**266**		Pn	08 31 02.4	-0.4
ADK	**Adak**	**2.20**	**264**		Pn	08 31 04.1	+0.4
ADK	**Adak**	**2.20**	**264**	Pn	Pn	08 31 03.8	+0.1
ADK				IAML		08 31 32.3	
	comp=N,675nm,0.3s						
ADK				IAML		08 31 32.3	
	comp=N,801nm,0.3s						
KIWB	**Kanaga Island**	**2.49**	**264**	Pn	Pn	08 31 07.2	-0.5
KIWB				IAML		08 31 43.9	
	comp=E,320nm,0.5s						
KIWB				IAML		08 31 49.3	
	comp=N,282nm,0.8s						
KIKV	**Kanaga Island**	**2.50**	**265**		Pn	08 31 07.8	0.0
KIKV					Sn	08 31 40.5	+2.1
KICM	**Kanaga Island**	**2.51**	**266**		Pn	08 31 08.0	+0.1
KIMD	**Kanaga Island**	**2.56**	**262**		Pn	08 31 09.0	+0.4
NIKH	**Nikolski High**	**2.74**	**71**	Pn	Pn	08 31 10.2	-1.0
NIKH				IAML		08 31 52.6	
	comp=N,271nm,0.7s						
UNV	**Unalaska Valle**	**4.35**	**65**	Pn	Pn	08 31 35.3	+2.0
LVA	**Lava Point**	**4.73**	**62**	Pn	Pn	08 31 39.7	+1.3
LVA				IAML		08 33 33.5	
	comp=E,58nm,0.9s						
AKUT	**Akutan**	**4.86**	**63**	Pn	Pn	08 31 41.6	+1.4
AKUT				IAML		08 33 23.6	
	comp=N,47nm,1.2s						
AKUT				IAML		08 34 39.1	
	comp=E,46nm,0.2s						
SPIA	**Saint Paul Isl**	**5.30**	**17**	Pn	Pn	08 31 46.3	+0.1
SDPT	**Sand Point**	**8.16**	**62**	Pn	Pn	08 32 26.3	+0.8
M11K	**Mekoryuk**	**9.10**	**22**	Pn	Pn	08 32 37.5	-0.8
O14K	**Tigyukauivet M**	**9.76**	**39**	Pn	Pn	08 32 47.4	0.0
M13K	**Dall Lake**	**9.89**	**29**	Pn	Pn	08 32 50.3	+1.2
N14K	**Kuskokwak Cree**	**10.06**	**35**	Pn	Pn	08 32 51.6	0.0
O15K	**Ungalikthiuk R**	**10.28**	**42**	Pn	Pn	08 32 55.1	+0.5
M14K	**Bethel**	**10.59**	**31**	Pn	Pn	08 32 58.8	+0.2
N15K	**Kwethluk River**	**10.81**	**37**	Pn	Pn	08 33 01.8	-0.1
P16K	**Nushagak River**	**10.98**	**45**	Pn	Pn	08 33 03.5	-0.6
O16K	**Kokwok River B**	**11.24**	**43**	Pn	Pn	08 33 08.1	+0.4
GAMB	**Gambell**	**11.67**	**3**	Pn	Pn	08 33 11.9	-1.5
J14K	**Nanvaranak Lak**	**11.78**	**22**	Pn	Pn	08 33 15.3	+0.3
M16K	**Timber Creek**	**11.80**	**36**	Pn	Pn	08 33 15.8	+0.4
L16K	**Owhat River**	**12.11**	**32**	Pn	Pn	08 33 20.0	+0.5
N17K	**Nushagak Hills**	**12.16**	**40**	Pn	Pn	08 33 20.6	+0.3
M17K	**Holitna River**	**12.61**	**37**	Pn	Pn	08 33 26.1	-0.2
K17K	**Iditarod**	**13.21**	**31**	Pn	Pn	08 33 34.8	+0.2
L18K	**Granite Mounta**	**13.41**	**35**	Pn	Pn	08 33 37.9	+0.6
N19K	**Bonanza Creek**	**13.42**	**43**	Pn	Pn	08 33 35.5	-2.1
G16K	**Koyuk River**	**14.36**	**18**	Pn	Pn	08 33 49.6	-0.7
P23K	**Montague Islan**	**16.28**	**51**	Pn	Pn	08 34 16.1	+0.5
KNK	**Knik Glacier**	**16.29**	**46**	Pn	Pn	08 34 15.4	-0.4
KNK				IAmb	IAmb	08 34 17.9	
	comp=Z,11nm,1.2s						
SCM	**Sheep Creek Mo**	**16.95**	**45**	P	Pn	08 34 24.4	+0.1
SNH	**Sunshine Point**	**18.54**	**52**	P	P	08 34 42.4	-1.2
J25K	**Salcha River,

comp=E,33nm,0.6s
MLAZ Malazgirt-MUS 1.68 296 Pn **Pn** **08 39 34.3 -0.1**
KOTA Agri, Merkez-K 1.70 325 P **Pg** **08 39 38.2 +0.6**
KOTA S **Sg** **08 40 01.2 +1.5**
GNI Garni 1.74 7 Pn **Pn** **08 39 34.9 -0.4**
GURO Guroymak-BITLI 1.93 275 Pn **Pn** **08 39 38.1 +0.3**
SVAN Silvan-Diyarba 2.60 265 Pn **Pn** **08 39 47.6 +0.6**
SENK Senkaya-Erzuru 2.70 323 Pn **Pn** **08 39 48.7 +0.1**

AFAD ***23*** *08:45:40.5,38′.45N×44′.60E,h7km±3km,ML2.3*
AZER ***23*** *08:45:41.4,38′.36N×44′.53E,h13km,ml2.6*
ISK ***23*** *08:45:43.1,38′.39N×44′.48E,h9km,ML2.5/7*
TEH ***23*** *08:45:43.9,38′.48N×44′.59E,h10km±990km,ML2.5, Presumed earthquake*
ISC 23 08:45:42.7±1.1,**38′.38N**±0′.03×**44′.52E**±0′.02,**h7**km±10km, **n26**,σ1°**40**/44,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.87**	**96**	Pg	**Pg**	**08 45 58.9**	**-0.5**
TVAN	**Van**	**0.89**	**280**	P	**Pg**	**08 45 58.3**	**-1.5**
TVAN				S	**Sg**	**08 46 12.9**	**+1.6**
TVAN				IAML		08 46 17.0	
	comp=E,120nm,0.4s						
TVAN				IAML		08 46 20.0	
	comp=N,103nm,0.7s						
VANB	**Van**	**0.91**	**284**	Pg	**Pg**	**08 46 00.3**	**+0.1**
VANB				Sg	**Sg**	**08 46 11.9**	**-0.2**
MAKU	**Maku**	**0.98**	**7**	Pg	**Pg**	**08 46 00.6**	**-1.0**
IMRD	**Marand**	**0.98**	**70**	Pg	**Pb**	**08 46 01.4**	**-0.8**
HAKT	**HAKKARI**	**1.04**	**218**	P	**Pg**	**08 46 02.1**	**-0.6**
HAKT				S	**Sg**	**08 46 19.2**	**+2.9**
HAKT				IAML		08 46 20.0	
	comp=E,60nm,0.4s						
HAKT				IAML		08 46 21.0	
	comp=N,96nm,0.3s						
HAKT	**HAKKARI**	**1.04**	**218**	P	**Pg**	**08 46 01.8**	**-1.0**
HAKT				S	**Sg**	**08 46 18.4**	**+2.1**
NAX	**Nakhchivan**	**1.10**	**44**	P	**Pn**	**08 46 03.9**	**-0.7**
NAX				S	**Sn**	**08 46 19.9**	**-0.2**
GEVA	**Gevas**	**1.15**	**267**	P	**Pb**	**08 46 02.4**	**-2.6**
GEVA				S	**Sb**	**08 46 20.8**	**+0.6**
AKDM	**Akdamar-Van**	**1.21**	**268**	Pn	**Pn**	**08 46 04.1**	**-2.1**
AKDM				Sn	**Sb**	**08 46 22.9**	**+0.9**
ORD	**Ordubad**	**1.28**	**64**	P	**Pg**	**08 46 07.3**	**+0.1**
ORD				S	**Sn**	**08 46 26.1**	**+1.6**
ITBZ	**Tabriz**	**1.29**	**96**	Pg	**Pg**	**08 46 07.9**	**+0.5**
SBZ	**Shahbuz**	**1.30**	**38**	P	**Pg**	**08 46 07.1**	**-0.4**
SBZ				S	**Sn**	**08 46 25.9**	**+0.9**
DYDN	**Diyadin**	**1.33**	**331**	P	**Pg**	**08 46 08.0**	**-0.3**
DYDN				S	**Sb**	**08 46 24.0**	**-1.4**
CUKT	**Cukurca**	**1.34**	**213**	Pn	**Pn**	**08 46 08.2**	**+0.2**
CUKT				Sn	**Sn**	**08 46 27.0**	**+0.9**
IAZR	**Azarshahr**	**1.35**	**121**	Pg	**Pg**	**08 46 09.7**	**+1.2**
HYR	**Heyderabad**	**1.36**	**11**	P	**Pg**	**08 46 10.3**	**+1.5**
HYR				S	**Sn**	**08 46 29.9**	**+3.3**
ADCV	**BITLIS_Adilcev**	**1.47**	**287**	P	**Pn**	**08 46 10.4**	**+0.6**
ADCV				S	**Sg**	**08 46 32.7**	**+2.7**
AGRB	**Hanur-Agry**	**1.69**	**316**	Pn	**Pn**	**08 46 12.9**	**+0.1**
AGRB				Sn	**Sb**	**08 46 34.9**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.69**	**307**	P	**Pn**	**08 46 13.2**	**+0.4**
DORK				S	**Sg**	**08 46 36.8**	**-0.3**
DORK				IAML		08 46 38.0	
	comp=N,27nm,0.7s						
DORK				IAML		08 46 41.0	
	comp=E,25nm,1.3s						
MLAZ	**Malazgirt-MUS**	**1.72**	**297**	Pn	**Pn**	**08 46 13.5**	**+0.3**
KOTA	**Agri, Merkez-K**	**1.75**	**325**	P	**Pb**	**08 46 15.0**	**-0.2**
KOTA				S	**Sb**	**08 46 37.4**	**-0.1**
GNI	**Garni**	**1.77**	**5**	Pn	**Pb**	**08 46 14.5**	**-1.2**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn	**Pn**	**08 46 16.9**	**+0.4**
GDB	**GEDABAY**	**2.52**	**22**	P	**Pb**	**08 46 27.9**	**-0.6**
GDB				S	**Sb**	**08 46 59.4**	**-0.4**
YRD	**Yardimli**	**2.96**	**78**	P	**Pb**	**08 46 33.2**	**-2.7**
YRD				S	**Sb**	**08 47 10.2**	**-2.2**

IDC ***23*** *08:53:25.1±1.1,3′.29N×83′.03W,h0km,mb3.9/8, mbtmp4.0/11,ML2.8/2,MS3.7/24,Error ellipse: s-maj=37.8km s-min=19.6km az=43.0*
NEIC ***23*** *08:53:27.4±1.1,3′.41N±0′.03×82′.91W±0′.07,h10km±1km, mb4.5/24,Error ellipse: s-maj=12.4km s-min=3.2km az=114.0*
RSNC ***23*** *08:53:31.3±0.4,3°.N±2°×8°.3W±°,h20km,M3.8,mb4.5, mB5.2,ML2.9,Mw(mB)4.5*
ISC 23 08:53:26.1±0.5,**3′.25N**±0′.05×**83′.01W**±0′.06,**h10**km,**n110**, σ1°**66**/109,**mb4.4**/17,**MS3.7**/21,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIRO	**Carate, Puerto**	**5.13**	**356**		**Pn**	**08 54 39.6**	**-3.4**
PAC1	**Pacto, Paraso**	**5.16**	**125**	P	**Pn**	**08 54 43.7**	**+0.2**
PAC1				S	**Sn**	**08 55 39.5**	**-3.7**
PPLP	**Puerto Lpez**	**5.26**	**155**	P	**Pn**	**08 54 45.1**	**+0.2**
PPLP				S	**Sn**	**08 55 43.2**	**-2.5**
OTAV	**Otavalo**	**5.45**	**123**		**Pn**	**08 54 47.1**	**-0.8**
OTAV				Sn	**Sn**	**08 55 48.6**	**-2.4**
OTAV	**Otavalo**	**5.45**	**123**	P	**Pn**	**08 54 47.4**	**-0.5**
	12nm,1.1s						
OTAV				S	**Sn**	**08 55 46.6**	**-4.3**
	12nm,1.1s						
BRU2	**Volcan**	**5.52**	**3**		**Pn**	**08 54 46.1**	**-2.4**
CMBC	**Cumbal**	**5.67**	**114**	P	**Pn**	**08 54 50.8**	**0.0**
TULM	**Tulcn-Chalpat**	**5.80**	**116**	P	**Pn**	**08 54 54.0**	**+1.4**
	33nm,0.7s						
TULM				S	**Sn**	**08 55 57.1**	**-2.4**
	33nm,0.7s						
BBAC	**Balboa, Cauca**	**5.89**	**102**	P	**Pn**	**08 54 52.8**	**-0.8**
	456nm23nm,0.4s						
BBAC				S	**Sn**	**08 55 57.3**	**-4.0**
	456nm23nm,0.4s						
PIZC	**Pizarro, Choco**	**5.89**	**73**	P	**Pn**	**08 54 53.8**	**+0.3**
	150nm,1.0s						
PIZC				S	**Sn**	**08 55 59.9**	**-1.2**
	150nm,1.0s						
SLOR	**San Lorenzo -**	**6.00**	**131**		**Pn**	**08 54 56.6**	**+1.2**
GCUF	**Volcan Galeras**	**6.01**	**109**	P	**Pn**	**08 54 56.0**	**+0.5**
	34nm,0.5s						
GCUF				S	**Sn**	**08 56 02.7**	**-2.0**
	34nm,0.5s						
BONI	**La Bonita**	**6.14**	**117**	P	**Pn**	**08 54 59.3**	**+2.1**
CRUC	**La Cruz**	**6.28**	**105**	P	**Pn**	**08 54 59.6**	**+0.4**
CRUC				S	**Sn**	**08 56 09.3**	**-2.0**
JAMC	**Jamundi, Valle**	**6.33**	**90**	P	**Pn**	**08 54 59.0**	**-0.7**
	25nm,0.5s						
JAMC				S	**Sn**	**08 56 07.5**	**-4.7**
	25nm,0.5s						
POPC	**Popayan, Colom**	**6.37**	**96**	P	**Pn**	**08 55 00.0**	**-0.2**
	15nm,0.6s						
POPC				S	**Sn**	**08 56 10.7**	**-2.5**
	15nm,0.6s						
CASC	**Dorado de Casc**	**6.46**	**119**	P	**Pn**	**08 55 04.9**	**+3.5**
CASC				S	**Sn**	**08 56 13.7**	**-1.6**
BCIP	**Isla Barro Col**	**6.67**	**28**	P	**Pn**	**08 55 05.0**	**+0.8**
YOTC	**Yotoco, Valle**	**6.69**	**84**	P	**Pn**	**08 55 04.0**	**-0.6**
	18nm,0.5s						
YOTC				S	**Sn**	**08 56 18.6**	**-2.5**
	18nm,0.5s						
RAFA	**San Farael, Vo**	**6.71**	**353**	Pn	**Pn**	**08 55 03.5**	**-1.5**
HDC	**Heredia**	**6.80**	**351**		**Pn**	**08 55 05.1**	**-0.9**
JTS	**Las Juntas de**	**7.26**	**345**	Pn	**Pn**	**08 55 11.3**	**-0.9**
	16nm,0.3s,baz=198,slow=9.6,SNR=30						
JTS				Sn	**Sn**	**08 56 31.4**	**-3.4**
	baz=317,slow=23						
JTS	**Las Juntas de**	**7.26**	**345**		**Pn**	**08 55 10.9**	**-1.4**
JTS	**Las Juntas de**	**7.26**	**345**	P	**Pn**	**08 55 10.5**	**-1.8**
JUD3	**Juan Diaz 3**	**7.32**	**340**		**Pn**	**08 55 11.7**	**-1.4**
CBOC	**Ciudad Bolivar**	**7.45**	**69**	P	**Pn**	**08 55 15.4**	**+0.4**
	42nm,0.8s						
CBOC				S	**Sn**	**08 56 39.1**	**-0.6**
	42nm,0.8s						
FLOC	**Florencia**	**7.54**	**103**	P	**Pn**	**08 55 17.1**	**+1.0**
	14nm,1.4s						
FLOC				S	**Sn**	**08 56 40.4**	**-1.3**
	14nm,1.4s						
GARC	**Garzon, Huila**	**7.58**	**98**	P	**Pn**	**08 55 17.8**	**+0.8**
	14nm,0.5s						
GARC				S	**Sn**	**08 56 40.9**	**-2.3**
	14nm,0.5s						
ANIL	**Santa Ana**	**7.69**	**81**	P	**Pn**	**08 55 20.5**	**+2.0**
ANIL				S	**Sn**	**08 56 47.0**	**+1.1**
DBBC	**Dabeiba**	**7.74**	**61**	P	**Pn**	**08 55 20.8**	**+1.8**
GUY2C	**Guyana, Caldas**	**7.87**	**75**	P	**Pn**	**08 55 23.8**	**+2.6**
GUY2C				S	**Sn**	**08 56 51.2**	**+0.5**
APAC	**Apartado, Choc**	**7.89**	**54**	P	**Pn**	**08 55 24.1**	**+3.1**
	16nm,0.8s						
PRAC	**Prado**	**8.12**	**87**	P	**Pn**	**08 55 25.5**	**+1.3**
	20nm,1.2s						
PRAC				S	**Sn**	**08 56 57.3**	**+1.1**
	20nm,1.2s						
MCRA	**Macar, Loja**	**8.16**	**158**	P	**Pn**	**08 55 24.2**	**-0.6**
	4.9nm,1.9s						
MCRA				S	**Sn**	**08 56 54.6**	**-2.6**
	4.9nm,1.9s						
URMC	**La Uribe, Meta**	**8.62**	**90**	P	**Pn**	**08 55 31.2**	**+0.1**
	12nm,0.7s						
URMC				S	**Sn**	**08 57 07.4**	**-1.1**
	12nm,0.7s						
UREC	**San Jos de Ur**	**8.68**	**59**	P	**Pn**	**08 55 34.0**	**+2.1**
	12nm,0.9s						
ROSC	**El Rosal**	**8.81**	**79**	Pn	**Pn**	**08 55 35.7**	**+1.7**
	4.7nm,0.3s,baz=297,slow=18,SNR=6.4						
ROSC				LR	LR	08 58 58.0	
	comp=Z,249nm,19.9s,baz=268,slow=38						
	12nm,0.4s						
ROSC	**El Rosal**	**8.81**	**79**		**Pn**	**08 55 33.4**	**-0.6**
PTBC	**PUERTO BERRIO,**	**9.13**	**69**	P	**Pn**	**08 55 40.8**	**+2.8**
	28nm,0.9s						
PTBC				S	**Sn**	**08 57 21.4**	**+0.5**
	28nm,0.9s						
MACC	**Macarena, Meta**	**9.22**	**97**	P	**Pn**	**08 55 40.0**	**+0.8**
	30nm,0.6s						
SPBC	**San Pablo de B**	**9.23**	**75**	P	**Pn**	**08 55 41.4**	**+2.0**
	10nm,0.8s						
VILC	**Villavicencio,**	**9.34**	**84**	P	**Pn**	**08 55 43.2**	**+2.2**
VILC				S	**Sn**	**08 57 26.3**	**+0.1**
CHIC	**Chingaza**	**9.36**	**81**	P	**Pn**	**08 55 43.4**	**+1.9**
CHIC				S	**Sn**	**08 57 26.4**	**-0.7**
BOAB	**BOACO BROADBAN**	**9.51**	**344**	Pn	**Pn**	**08 55 42.1**	**-1.1**
HERN	**Volcan Telica**	**10.04**	**338**	Pn	**Pn**	**08 55 50.0**	**-0.5**
SIUN	**Universidad Ur**	**10.54**	**351**	Pn	**Pn**	**08 55 56.5**	**-0.9**
ATAH	**Atahualpa**	**11.30**	**156**	LR	LR	09 00 23.0	
	comp=Z,942nm,18.7s,baz=328,slow=37						
SDV	**Santo Domingo**	**13.52**	**65**	Pn	**Pn**	**08 56 39.5**	**+1.2**
	0.2nm,0.3s,baz=278,slow=11,SNR=4.6						
SDV				LR	LR	09 01 42.6	
	comp=Z,244nm,19.0s,baz=254,slow=37						
	3.5nm,0.6s						
SDV	**Santo Domingo**	**13.52**	**65**		**Pn**	**08 56 36.6**	**-1.7**
APG	**El Apazote**	**13.80**	**328**	LR	LR	09 01 11.8	
	comp=Z,30nm,21.5s,baz=292,slow=34						
NNA	**Nana**	**16.33**	**158**	Pn	**P**	**08 57 20.2**	**+1.5**
	0.3nm,0.3s,baz=320,slow=8.7,SNR=5.0						
NNA	**Nana**	**16.33**	**158**		**Pn**	**08 57 18.0**	**+2.2**
NNA				IAmb	IAmb	08 57 23.1	
	comp=Z,52nm,1.5s						
CMIG	**Matias Romero**	**18.03**	**321**	LR	LR	09 03 12.1	
	comp=Z,158nm,20.5s,baz=148,slow=33						
SJG	**San Juan**	**22.16**	**47**	LR	LR	09 06 20.1	
	comp=Z,124nm,21.9s,baz=234,slow=35						
BOAV	**Boa Vista**	**22.48**	**92**	P	**P**	**08 58 25.7**	**-0.1**
LPAZ	**La Paz**	**24.36**	**143**	P	**P**	**08 58 47.0**	**+1.8**
	comp=Z,4.0nm,0.9s,baz=327,slow=5.4,SNR=12						
	comp=Z,4.0nm,0.9s						
LPAZ	**La Paz**	**24.36**	**143**	P	**P**	**08 58 45.9**	**+0.7**
LPAZ				IAmb	IAmb	08 58 49.3	
	comp=Z,13nm,1.4s						
PB12	**IPOC Station P**	**25.06**	**151**	P	**P**	**08 58 52.2**	**+1.2**
PB16	**IPOC Station P**	**25.24**	**149**	P	**P**	**08 58 54.2**	**+1.1**
PB16				IAmb	IAmb	08 58 59.0	
	comp=Z,10.0nm,1.1s						
PB11	**IPOC Station P**	**26.37**	**151**	P	**P**	**08 59 03.8**	**+0.9**
PB11				IAmb	IAmb	08 59 11.2	
	comp=Z,16nm,1.3s						
GO01	**Chusmiza**	**26.52**	**150**	P	**P**	**08 59 06.3**	**+1.7**
GO01				IAmb	IAmb	08 59 10.9	
	comp=Z,18nm,1.5s						
TKL	**Tuckaleechee C**	**32.26**	**359**	LR	LR	09 12 07.6	
	comp=Z,154nm,18.5s,baz=174,slow=35						
LCAR	**Lake Charles**	**33.51**	**348**	P	**P**	**09 00 05.8**	**-0.1**
LCAR				IAmb	IAmb	09 00 07.3	
	comp=Z,8.2nm,1.3s						
LPIG	**La Paz**	**33.52**	**311**	LR	LR	09 10 03.3	
	comp=Z,72nm,20.7s,baz=48,slow=30						
H03N2	**Juan Fernandez**	**36.70**	**174**	T	T	09 39 32.3	
	baz=354,slow=76,SNR=8.7						
H03N1	**Juan Fernandez**	**36.70**	**174**	T	T	09 39 30.6	
	baz=354,slow=76,SNR=8.3						
H03N3	**Juan Fernandez**	**36.71**	**174**	T	T	09 39 31.4	
	baz=354,slow=76,SNR=13						
RTBA	**Rita Blanca**	**37.70**	**334**	P	**P**	**09 00 42.2**	**+0.1**
RTBA				IAmb	IAmb	09 00 45.1	
	comp=Z,8.8nm,1.2s						
CPUP	**Villa Florida**	**38.50**	**141**	LR	LR	09 19 17.2	
	comp=Z,99nm,20.1s,baz=340,slow=40						
T25A	**Trinidad**	**39.04**	**332**	P	**P**	**09 00 53.2**	**-0.3**
BDFB	**Brasilia**	**39.39**	**119**	LR	LR	09 18 08.0	
	comp=Z,64nm,20.3s,baz=217,slow=38						
RPN	**Rapa Nui**	**39.46**	**218**	LR	LR	09 12 47.1	
	comp=Z,138nm,20.1s,baz=33,slow=29						
SADO	**Sadowa**	**41.49**	**4**	LR	LR	09 17 35.4	
	comp=Z,165nm,19.8s,baz=176,slow=35						
PFO	**Pinyon Flats O**	**43.43**	**318**	LR	LR	09 18 14.1	
	comp=Z,75nm,19.1s,baz=142,slow=34						
PDAR	**Pinedale Array**	**45.91**	**333**	P	**P**	**09 01 50.6**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=129,slow=9.8,SNR=4.5						
PDAR				PcP	**PcP**	**09 03 26.3**	**0.0**
	comp=Z,0.5nm,0.7s,baz=152,slow=3.3,SNR=4.9						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**45.91**	**333**	P	**P**	**09 01 49.7**	**+0.4**
NVAR	**Mina Array Bea**	**47.55**	**322**	P	**P**	**09 02 03.7**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=132,slow=8.0,SNR=8.1						
NVAR				LR	LR	09 19 53.3	
	comp=Z,68nm,18.8s,baz=66,slow=34						
	comp=Z,1.1nm,0.8s						
ULM	**Lac du Bonnet**	**48.08**	**349**	LR	LR	09 23 21.3	
	comp=Z,78nm,18.7s,baz=57,slow=37						
YBH	**Yreka Blue Hor**	**52.24**	**323**	LR	LR	09 24 05.1	
	comp=Z,4.7nm,19.4s,baz=95,slow=35						
SCHQ	**Schefferville**	**53.08**	**12**	LR	LR	09 25 46.1	
	comp=Z,50nm,19.4s,baz=133,slow=37						
EDM	**Edmonton**	**55.73**	**338**	P	**P**	**09 03 02.7**	**-0.2**
GNW	**Green Mountain**	**55.89**	**328**	P	**P**	**09 03 04.6**	**+0.6**
BBB	**Bella Bella**	**61.43**	**330**	LR	LR	09 30 31.4	
	comp=Z,32nm,19.2s,baz=64,slow=36						
YKA	**Yellowknife Ar**	**63.59**	**344**	P	**P**	**09 03 56.9**	**0.0**
	comp=Z,0.8nm,1.0s,baz=143,slow=5.7,SNR=10.0						
YKA				LR	LR	09 33 15.7	
	comp=Z,48nm,18.8s,baz=323,slow=38						
	comp=Z,0.8nm,1.0s						
YKAW3	**Yellowknife Wh**	**63.65**	**344**	P	**P**	**09 03 57.5**	**+0.3**
YKAW3				IAmb	IAmb	09 04 13.3	
	comp=Z,3.2nm,1.2s						
ILON	**Igloolik, Nuna**	**66.02**	**0**	P	**P**	**09 04 11.6**	**-0.9**
ILON				IAmb	IAmb	09 04 14.8	
	comp=Z,3.5nm,1.3s						
SFJD	**Kangerlussuaq**	**67.47**	**13**	LR	LR	09 34 46.2	
	comp=Z,110nm,19.3s,baz=96,slow=37						
PPT	**Papeete**	**68.78**	**250**	LR	LR	09 25 46.4	
	comp=Z,72nm,21.4s,baz=114,slow=28						
RES	**Resolute Bay**	**71.70**	**357**	LR	LR	09 36 31.0	
	comp=Z,128nm,18.1s,baz=34,slow=36						
K29M	**Barlow Dome**	**72.10**	**338**	P	**P**	**09 04 51.5**	**+0.9**
K29M				IAmb	IAmb	09 05 04.9	
	comp=Z,6.1nm,1.4s						
I30M	**Mount Dempster**	**72.41**	**339**	P	**P**	**09 04 53.7**	**+1.2**
I30M				IAmb	IAmb	09 05 12.9	
	comp=Z,4.6nm,1.2s						
G31M	**Satah River**	**72.66**	**341**	P	**P**	**09 04 54.9**	**+1.2**
DAWY	**Dawson**	**72.92**	**337**	P	**P**	**09 04 56.0**	**+0.6**
DAWY				IAmb	IAmb	09 05 30.0	
	comp=Z,6.5nm,1.4s						
INK	**Inuvik**	**73.24**	**343**	P	**P**	**09 04 57.4**	**+0.3**
	comp=Z,2.3nm,1.1s,baz=161,slow=5.0,SNR=3.1						
	comp=Z,2.3nm,1.1s						
INK	**Inuvik**	**73.24**	**343**	P	**P**	**09 04 57.8**	**+0.7**
A36M	**Sachs Harbour**	**73.53**	**347**	P	**P**	**09 04 59.1**	**+0.3**
ILAR	**Eielson Array**	**76.16**	**337**	P	**P**	**09 05 14.6**	**+0.5**
	comp=Z,1.2nm,1.1s,baz=125,slow=7.1,SNR=7.1						
ILAR				LR	LR	09 41 40.3	
	comp=Z,22nm,19.6s,baz=8.0,slow=38						
	comp=Z,1.2nm,1.1s						
ILAR	**Eielson Array**	**76.16**	**337**	P	**P**	**09 05 14.2**	**+0.1**
KDAK	**Kodiak Island**	**76.45**	**329**	LR	LR	09 41 00.3	
	comp=Z,44nm,18.6s,baz=58,slow=37						
ESDC	**Sonseca Array**	**79.50**	**50**	P	**P**	**09 05 34.0**	**+0.6**
	comp=Z,1.8nm,1.2s,baz=266,slow=5.5,SNR=4.6						
	comp=Z,1.8nm,1.2s						
J19K	**Poorman**	**79.51**	**335**	P	**P**	**09 05 33.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**84.12**	**77**	P	**P**	**09 05 58.0**	**0.0**
	comp=Z,1.1nm,0.6s,baz=255,slow=7.2,SNR=5.0						
	comp=Z,1.1nm,0.6s						
SNAA	**Sanae**	**89.97**	**162**	LR	LR	09 46 30.0	
	comp=Z,49nm,18.2s,baz=216,slow=35						
VNDA	**Vanda**	**98.47**	**191**	LR	LR	09 43 02.0	
	comp=Z,66nm,18.7s,baz=96,slow=30						
SONM	**Songino Array**	**128.46**	**352**	PKP	**PKPdf**	**09 12 32.9**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=0.0,slow=2.9,SNR=2.5						
ASAR	**Alice Springs**	**138.97**	**237**	PKP	**PKPdf**	**09 12 52.3**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=129,slow=2.5,SNR=4.6						
WRA	**Warramunga Arr**	**139.97**	**243**	PKP	**PKPdf**	**09 12 55.0**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=103,slow=2.0,SNR=1.7						
H01W1	**Cape Leeuwin H**	**144.71**	**205**	T	T	11 55 25.0	
	baz=150						
H01W2	**Cape Leeuwin H**	**144.71**	**205**	T	T	11 55 24.2	
	baz=150						
H01W3	**Cape Leeuwin H**	**144.72**	**205**	T	T	11 55 22.0	
	baz=150						

ISK ***23*** *08:54:32.4,39′.03N×27′.87E,h5km,ML2.5/12*
AFAD ***23*** *08:54:32.6,39′.03N×27′.84E,h7km±2km,ML2.0*
ISC 23 08:54:32.8±0.9,**39′.03N**±0′.03×**27′.86E**±0′.03,**h12**km±8km, **n20**,σ0°**37**/32,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.15**	**193**	P	**Pg**	**08 54 36.3**	**-0.1**
AKHS				IAML		08 54 39.0	
	comp=E,646nm,0.2s						
AKHS				S	**Sg**	**08 54 39.3**	**+0.3**
AKS	**Akhisar**	**0.15**	**193**	Pg	**Pg**	**08 54 35.8**	**-0.6**
AKS				Sg	**Sg**	**08 54 38.9**	**0.0**
GORD	**Gordes-Manisa**	**0.28**	**116**	Pg	**Pg**	**08 54 38.3**	**-0.2**
GORD				Sg	**Sg**	**08 54 42.5**	**+0.2**
SOMA	**Soma-Manisa**	**0.28**	**297**	Pg	**Pg**	**08 54 38.4**	**-0.2**
SOMA				Sg	**Sg**	**08 54 42.9**	**+0.5**
ZEDA	**zmir-Bergama**	**0.61**	**264**	P	**Pb**	**08 54 45.0**	**-0.4**
ZEDA				S	**Sb**	**08 54 53.7**	**-0.3**
ZEDA				IAML		08 54 54.0	
	comp=N,175nm,0.3s						
ZEDA				IAML		08 54 54.0	
	comp=E,117nm,0.2s						
BKES	**Balkesir-Mer**	**0.70**	**5**	P	**Pg**	**08 54 46.3**	**-0.1**
BKES				S	**Sg**	**08 54 56.0**	**+0.3**
BKES				IAML		08 55 01.0	
	comp=N,68nm,0.7s						
BKES				IAML		08 55 02.0	
	comp=E,42nm,0.2s						
BALY	**Balya**	**0.73**	**346**	P	**Pg**	**08 54 46.9**	**-0.1**
BALY				S	**Sb**	**08 54 57.3**	**-0.2**
BALY				IAML		08 55 01.0	
	comp=N,122nm,0.6s						
BALY				IAML		08 55 01.0	
	comp=E,129nm,0.4s						
DURS	**Dursunbey**	**0.74**	**40**	P	**Pg**	**08 54 46.9**	**-0.3**
DURS				S	**Sb**	**08 54 58.1**	**+0.2**
DURS				IAML		08 55 02.0	
	comp=E,33nm,0.2s						
DURS				IAML		08 55 06.0	
	comp=N,37nm,1.0s						
BUHA	**Balkesir, Bur**	**0.77**	**308**	P	**Pb**	**08 54 48.2**	**+0.1**
BUHA				S	**Sg**	**08 54 58.0**	**+0.3**
BUHA				IAML		08 55 01.0	
	comp=E,58nm,0.7s						
BUHA				IAML		08 55 02.0	
	comp=N,67nm,0.3s						
ODEM	**Odemis-Izmir**	**0.77**	**167**	Pg	**Pb**	**08 54 47.9**	**-0.3**
ODEM				Sg	**Sg**	**08 54 58.1**	**+0.3**
KULA	**Kula-Manisa**	**0.81**	**129**	Pg	**Pg**	**08 54 48.2**	**-0.3**
YAYO	**Edremit-Balk**	**0.84**	**314**	Pg	**Pb**	**08 54 49.5**	**+0.2**
BLKS	**Balkesir-Sus**	**0.85**	**6**	P	**Pg**	**08 54 48.8**	**-0.4**
BLKS				S	**Sg**	**08 55 00.5**	**+0.3**
BLKS				IAML		08 55 04.0	
	comp=N,32nm,0.4s						
BLKS				IAML		08 55 04.0	
	comp=E,46nm,0.5s						
BLCB	**Balcova**	**0.91**	**225**	Pg	**Pb**	**08 54 50.7**	**+0.3**
FOCM	**Foa**	**0.94**	**251**	Pg	**Pb**	**08 54 50.9**	**0.0**
CMHT	**Manyas**	**0.98**	**5**	P	**Pg**	**08 54 50.5**	**-1.2**
CMHT				S	**Sb**	**08 55 05.1**	**+0.4**
CMHT				IAML		08 55 07.0	
	comp=E,149nm,0.6s						
CMHT				IAML		08 55 33.0	
	comp=N,103nm,1.3s						
AYDB	**Zeytinkoy-Aydi**	**1.08**	**179**	Pg	**Pb**	**08 54 53.8**	**+0.3**
NAZL	**Nazilli-Aydin**	**1.12**	**162**	Pn	**Pb**	**08 54 54.4**	**+0.3**
CHOS	**Chios island**	**1.55**	**246**	Pn	**Pb**	**08 55 01.6**	**+0.1**
SIGR	**SIGRI**	**1.57**	**277**	Pn	**Pb**	**08 55 02.0**	**+0.3**

NEIC ***23*** *08:58:57.7±1.2,5′.9S±0′.1×152′.9E±0′.1,h10km±1km, mb4.2/14,Error ellipse: s-maj=21.4km s-

comp=Z,1.2nm,0.5s
ZALV Zalesovo Beam 82.10 326 P P 09 11 17.6 -0.5
ILAR Eielson Array 83.21 22 P P 09 11 23.6 -0.1
comp=Z,1.3nm,0.6s,baz=243,slow=5.5,SNR=33
comp=Z,1.3nm,0.6s
ILAR Eielson Array 83.21 22 P P 09 11 23.7 0.0
KURK Kurchatov 84.66 322 P P 09 11 31.3 -0.1
KURK Kurchatov 84.66 322 IAmb IAmb 09 11 32.6
comp=Z,4.3nm,1.1s
KURBB Kurchatov Arra 84.69 322 P P 09 11 31.3 -0.3
comp=Z,1.9nm,0.2s,baz=112,slow=4.2,SNR=6.4
comp=Z,1.9nm,0.2s
INK Inuvik 89.51 21 P P 09 11 54.8 +0.3
comp=Z,1.0nm,0.8s,baz=276,slow=4.5,SNR=6.5
comp=Z,1.0nm,0.8s
INK Inuvik 89.51 21 IAmb IAmb 09 11 56.6
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 90.15 323 P P 09 11 57.7 -0.2
comp=Z,1.3nm,0.6s,baz=107,slow=5.0,SNR=6.7
comp=Z,1.3nm,0.6s
NVAR Mina Array Bea 92.78 52 P P 09 12 12.3 +1.6
comp=Z,0.7nm,0.8s,baz=262,slow=5.5,SNR=4.5
comp=Z,0.7nm,0.8s
PDAR Pinedale Array 99.61 48 P Pdif 09 12 42.2 +0.5
comp=Z,0.2nm,0.6s,baz=276,slow=5.7,SNR=2.0
comp=Z,0.2nm,0.6s
TORD Torodi Ar. Bea 150.65 286 PKPbc **PKPbc 09 18 50.8 +0.1**
comp=Z,1.0nm,0.7s,baz=163,slow=2.1,SNR=6.2

*FUNV **23** 09:06:58.2, 7˚.40N×73˚.53W, h13km, MW3.9, Presumed earthquake*
*RSNC **23** 09:06:59.0±0.0, 7˚N±1˚×7˚.3W±˚, h110km±1km, M3.1, ML2.8*
ISC 23 09:06:57.5±1.2**, 7˚.36N**±0˚.03×**73˚.51W**±0˚.03**, h113**km±6km**,
n43,** σ1**§**12/84**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VMM09	**Lebrija**	**0.31**	**137**	P	**Pn**	**09 07 13.9**	**+0.1**
VMM09				S	**Sn**	**09 07 25.4**	**-0.7**
EZNC	**La Esperanza**	**0.32**	**35**	P	**Pn**	**09 07 14.1**	**+0.3**
EZNC				S	**Sn**	**09 07 26.4**	**+0.4**
VMM07	**Puerto Wilches**	**0.34**	**270**	P	**Pn**	**09 07 14.5**	**+0.7**
VMM07				S	**Sn**	**09 07 27.1**	**+1.1**
BRJC	**Barrancabermej**	**0.45**	**212**	P	**Pn**	**09 07 14.3**	**-0.1**
BRJC				S	**Sn**	**09 07 26.9**	**-0.1**
VMM05	**San Martn**	**0.55**	**355**	P	**Pn**	**09 07 16.1**	**+1.1**
VMM05				S	**Sn**	**09 07 29.2**	**+1.0**
PAMC	**Pamplona, Colo**	**0.80**	**91**	P	**Pn**	**09 07 17.9**	**+0.4**
PAMC				S	**Sn**	**09 07 33.0**	**+0.4**
BARC	**Barichara**	**0.82**	**157**	P	**Pn**	**09 07 17.6**	**+0.1**
BARC				S	**Sn**	**09 07 32.5**	**-0.1**
OCAC	**Ocana**	**0.89**	**12**	P	**Pn**	**09 07 18.5**	**+0.4**
OCAC				S	**Sn**	**09 07 34.4**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.25**	**229**	P	**Pn**	**09 07 21.0**	**-0.6**
PTBC				S	**Sn**	**09 07 39.6**	**-0.2**
CAPV	**Capacho**	**1.28**	**67**	*e*P	**Pn**	**09 07 22.7**	**+0.5**
CAPV				*e*S	**Sn**	**09 07 39.2**	**-1.7**
RUSC	**La Rusia**	**1.52**	**164**	P	**Pn**	**09 07 24.6**	**-0.6**
RUSC				S	**Sn**	**09 07 45.3**	**-0.8**
RUSC	**La Rusia**	**1.52**	**164**	*e*P	**Pn**	**09 07 24.9**	**-0.3**
RUSC				*e*S	**Sn**	**09 07 45.5**	**-0.6**
SPBC	**San Pablo de B**	**1.79**	**198**	P	**Pn**	**09 07 27.8**	**-0.3**
SPBC				S	**Sn**	**09 07 50.8**	**-0.6**
LL8C	**La Loma 8 Chim**	**1.99**	**352**	P	**Pn**	**09 07 30.6**	**+0.1**
LL8C				S	**Sn**	**09 07 56.4**	**+0.7**
UREC	**San Jos de Ur**	**2.05**	**281**	P	**Pn**	**09 07 31.3**	**+0.1**
UREC				S	**Sn**	**09 07 56.0**	**-1.1**
ARGC	**Ariguani, Magd**	**2.59**	**344**	P	**Pn**	**09 07 40.3**	**+2.1**
ARGC				S	**Sn**	**09 08 12.3**	**+2.8**
DBBC	**Dabeiba**	**2.71**	**263**	P	**Pn**	**09 07 40.3**	**+0.5**
DBBC				S	**Sn**	**09 08 12.0**	**-0.3**
CHIC	**Chingaza**	**2.72**	**185**	P	**Pn**	**09 07 41.6**	**+1.3**
CHIC				S	**Sn**	**09 08 15.4**	**+2.2**
SOCV	**Socops**	**2.78**	**71**	*e*P	**Pn**	**09 07 41.7**	**+1.0**
SOCV				*e*S	**Sn**	**09 08 14.2**	**+0.2**
GUY2C	**Guyana, Caldas**	**2.81**	**221**	P	**Pn**	**09 07 42.9**	**+1.3**
GUY2C				S	**Sn**	**09 08 16.2**	**+0.8**
MCQV	**Machiques**	**2.84**	**20**	*e*P	**Pn**	**09 07 42.5**	**+1.0**
MCQV				*e*S	**Sn**	**09 08 14.2**	**-1.3**
CBOC	**Ciudad Bolivar**	**2.90**	**239**	P	**Pn**	**09 07 43.1**	**+0.7**
CBOC				S	**Sn**	**09 08 17.1**	**+0.1**
SJCC	**San Jacinto, C**	**3.02**	**327**	P	**Pn**	**09 07 43.6**	**-0.3**
SJCC				S	**Sn**	**09 08 17.6**	**-2.1**
SJCC	**San Jacinto, C**	**3.02**	**327**	*e*P	**Pn**	**09 07 43.8**	**-0.1**
SJCC				*e*S	**Sn**	**09 08 18.6**	**-1.1**
APAC	**Apartado, Choc**	**3.10**	**280**	P	**Pn**	**09 07 44.8**	**-0.1**
APAC				S	**Sn**	**09 08 21.2**	**-0.2**
SDV	**Santo Domingo**	**3.22**	**62**	P	**Pn**	**09 07 46.8**	**+0.1**
SDV				S	**Sn**	**09 08 23.7**	**-1.0**
SDV	**Santo Domingo**	**3.22**	**62**	*e*P	**Pn**	**09 07 47.5**	**+0.7**
SDV				*e*S	**Sn**	**09 08 24.2**	**-0.5**
VILC	**Villavicencio,**	**3.23**	**183**	P	**Pn**	**09 07 47.4**	**+0.6**
VILC				S	**Sn**	**09 08 25.8**	**+1.0**
CRJC	**Cerrejon, Guaj**	**3.69**	**10**	P	**Pn**	**09 07 52.0**	**-0.9**
CRJC				S	**Sn**	**09 08 35.4**	**-0.3**
PRAC	**Prado**	**3.87**	**201**	P	**Pn**	**09 07 55.2**	**-0.1**
PRAC				S	**Sn**	**09 08 40.3**	**+0.3**
CAPC	**Capurgana**	**4.02**	**289**	P	**Pn**	**09 07 56.9**	**-0.2**
CAPC				S	**Sn**	**09 08 41.0**	**-2.4**
URMC	**La Uribe, Meta**	**4.18**	**192**	P	**Pn**	**09 08 00.3**	**+0.9**
URMC				S	**Sn**	**09 08 47.1**	**-0.3**
YOTC	**Yotoco, Valle**	**4.38**	**220**	P	**Pn**	**09 08 02.2**	**0.0**
PIZC	**Pizarro, Choco**	**4.51**	**238**	P	**Pn**	**09 08 04.1**	**+0.3**
URIC	**Uribia, Colomb**	**4.57**	**19**	P	**Pn**	**09 08 03.0**	**-1.5**
URIC				S	**Sn**	**09 08 53.8**	**-2.8**
URIC	**Uribia, Colomb**	**4.57**	**19**	*e*P	**Pn**	**09 08 04.9**	**+0.3**
URIC				*e*S	**Sn**	**09 08 54.2**	**-2.5**
JAMC	**Jamundi, Valle**	**5.19**	**218**	P	**Pn**	**09 08 13.4**	**+0.3**
JAMC				S	**Sn**	**09 09 12.0**	**+0.1**
MACC	**Macarena, Meta**	**5.19**	**184**	P	**Pn**	**09 08 11.3**	**-1.7**
MACC				S	**Sn**	**09 09 08.9**	**-2.9**
GARC	**Garzon, Huila**	**5.51**	**201**	P	**Pn**	**09 08 17.4**	**-0.1**
GARC				S	**Sn**	**09 09 19.8**	**+0.1**
POPC	**Popayan, Colom**	**5.74**	**214**	P	**Pn**	**09 08 22.8**	**+2.2**
POPC				S	**Sn**	**09 09 23.4**	**-1.9**
FLOC	**Florencia**	**6.12**	**201**	P	**Pn**	**09 08 25.6**	**0.0**
FLOC				S	**Sn**	**09 09 35.1**	**+0.7**
BENV	**Beln**	**6.39**	**66**	*e*P	**Pn**	**09 08 29.3**	**+0.1**
BENV				*e*S	**Sn**	**09 09 38.6**	**-2.2**
BBAC	**Balboa, Cauca**	**6.48**	**215**	P	**Pn**	**09 08 32.3**	**+1.7**
BBAC				S	**Sn**	**09 09 41.8**	**-1.5**

*AZER **23** 09:07:28.9, 38˚.42N×44˚.54E, h10km, ml2.6*
*AFAD **23** 09:07:30.4, 38˚.50N×44˚.52E, h7km±3km, ML2.5*
*TEH **23** 09:07:30.1, 38˚.45N×44˚.42E, h10km±924km, ML2.5, Presumed earthquake*
*ISK **23** 09:07:31.9, 38˚.42N×44˚.43E, h12km, ML2.5/7*
ISC 23 09:07:30.8±1.1**, 38˚.44N**±0˚.02×**44˚.49E**±0˚.02**, h7**km±10km**,
n28,** σ1**§**17/47**, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**300**	P	**Pg**	**09 07 39.4**	**-0.1**
OZAP				S	**Sg**	**09 07 43.9**	**-1.5**
OZAP				IAML		09 07 48.0	
	comp=N,358nm,0.8s						
OZAP				IAML		09 07 49.0	
	comp=E,516nm,0.6s						
TVAN	**Van**	**0.85**	**276**	P	**Pg**	**09 07 46.3**	**-0.9**
TVAN				S	**Sb**	**09 08 00.2**	**+0.3**
VANB	**Van**	**0.88**	**281**	Pg	**Pb**	**09 07 48.4**	**0.0**
VANB				Sg	**Sg**	**09 07 59.2**	**+0.2**
ISHB	**Shabestar**	**0.90**	**99**	Pg	**Pb**	**09 07 48.1**	**-0.8**
VMUR	**Van-Muradiye**	**0.90**	**308**	P	**Pg**	**09 07 47.3**	**-0.8**
VMUR				S	**Sb**	**09 08 01.2**	**-0.1**
VMUR				IAML		09 08 03.0	
	comp=N,239nm,0.3s						
VMUR				IAML		09 08 04.0	
	comp=E,185nm,0.3s						
MAKU	**Maku**	**0.93**	**9**	Pg	**Pg**	**09 07 47.6**	**-1.0**
IMRD	**Marand**	**0.99**	**74**	Pg	**Pn**	**09 07 50.1**	**-1.2**
HAKT	**HAKKARI**	**1.07**	**215**	P	**Pb**	**09 07 51.8**	**0.0**
HAKT				S	**Sn**	**09 08 08.9**	**+1.1**
HAKT				IAML		09 08 09.0	
	comp=E,108nm,0.4s						
HAKT				IAML		09 08 11.0	
	comp=N,94nm,0.6s						
HAKT	**HAKKARI**	**1.07**	**215**	P	**Pg**	**09 07 51.0**	**-0.4**
HAKT				S	**Sn**	**09 08 08.5**	**+0.7**
NAX	**Nakhchivan**	**1.08**	**47**	P	**Pn**	**09 07 51.7**	**-0.7**
NAX				S	**Sn**	**09 08 07.8**	**+0.1**
GEVA	**Gevas**	**1.13**	**264**	P	**Pb**	**09 07 50.6**	**-2.1**
GEVA				S	**Sn**	**09 08 09.4**	**+0.3**
DYDN	**Diyadin**	**1.27**	**331**	P	**Pb**	**09 07 54.5**	**-0.7**
DYDN				S	**Sb**	**09 08 10.6**	**-1.1**
DYDN				IAML		09 08 17.0	
	comp=N,98nm,0.7s						
DYDN				IAML		09 08 18.0	
	comp=E,94nm,0.6s						
SBZ	**Shahbuz**	**1.27**	**41**	P	**Pg**	**09 07 55.0**	**-0.1**
SBZ				S	**Sn**	**09 08 12.4**	**-0.1**
ORD	**Ordubad**	**1.28**	**67**	P	**Pg**	**09 07 55.4**	**+0.1**
ORD				S	**Sn**	**09 08 13.3**	**+0.7**
HYR	**Heyderabad**	**1.31**	**12**	P	**Pg**	**09 07 55.5**	**-0.5**
HYR				S	**Sg**	**09 08 16.5**	**+3.6**
ITBZ	**Tabriz**	**1.32**	**98**	Pg	**Pg**	**09 07 55.9**	**-0.2**
CUKT	**Cukurca**	**1.38**	**211**	Pn	**Pb**	**09 07 56.9**	**-0.1**
CUKT				Sn	**Sg**	**09 08 15.5**	**+0.5**
IAZR	**Azarshahr**	**1.40**	**122**	Pg	**Pg**	**09 07 57.6**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.43**	**286**	P	**Pb**	**09 07 57.6**	**-0.2**
ADCV				IAML		09 08 20.0	
	comp=E,50nm,0.5s						
ADCV				S	**Sg**	**09 08 20.2**	**+3.4**
ADCV				IAML		09 08 22.0	
	comp=N,73nm,0.7s						
IGDI	**IGDIR**	**1.46**	**348**	P	**Pg**	**09 07 59.1**	**+0.2**
IGDI				S	**Sg**	**09 08 21.4**	**+3.6**
AGRB	**Hanur-Agry**	**1.63**	**315**	Pn	**Pb**	**09 08 00.5**	**-0.8**
AGRB				Sn	**Sb**	**09 08 22.2**	**+0.1**
DORK	**Agr/Tutak/Do**	**1.64**	**306**	P	**Pn**	**09 07 59.8**	**-0.3**
DORK				S	**Sg**	**09 08 23.9**	**+0.6**
MLAZ	**Malazgirt-MUS**	**1.67**	**295**	Pn	**Pb**	**09 08 01.2**	**-0.8**
MLAZ				Sn	**Sb**	**09 08 22.9**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.69**	**324**	P	**Pg**	**09 08 02.4**	**-0.8**
KOTA				S	**Sg**	**09 08 24.6**	**-0.5**
GNI	**Garni**	**1.72**	**6**	Pn	**Pb**	**09 08 02.4**	**-0.5**
GURO	**Guroymak-BITLI**	**1.93**	**274**	Pn	**Pn**	**09 08 04.8**	**+0.6**
IHRS	**Heris**	**2.01**	**93**	Pn	**Pg**	**09 08 08.2**	**-1.1**
VRTB	**Varto-Mus**	**2.48**	**288**	Pn	**Pn**	**09 08 12.5**	**+0.8**

*CATAC **23** 09:16:52.6±0.5, 13˚N±2˚×9˚0W±˚, h21km±2km, M3.9/20, MLv3.9/20, Error ellipse: s-maj=5.6km s-min=3.3km az=29.1, confirmed*
*SNET **23** 09:16:52.5±1.2, 13˚.01N×89˚.55W, h30km, ML3.8, Presumed earthquake*
*GCG **23** 09:16:54.9±0.9, 13˚.16N×89˚.59W, h35km±5km, MD4.1, Presumed earthquake*
ISC 23 09:16:53.1±1.6**, 13˚.05N**±0˚.06×**89˚.53W**±0˚.04**, h26**km±13km**,
n42,** σ0**§**65/70**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.48**	**25**	*i* P	**Pn**	**09 17 03.9**	**-0.3**
LALI				*i* S	**Sn**	**09 17 11.3**	**-0.5**
JAYA	**Jayaque - finc**	**0.60**	**7**	P	**Pn**	**09 17 05.6**	**-0.6**
JAYA	**Jayaque - finc**	**0.60**	**7**	*e*P	**Pn**	**09 17 05.6**	**-0.6**
JAYA	**Jayaque - finc**	**0.60**	**7**	*i* P	**Pn**	**09 17 05.6**	**-0.6**
JAYA				*i* S	**Sn**	**09 17 14.5**	**-0.6**
PANCS	**Alcalda de**	**0.65**	**31**	P	**Pn**	**09 17 06.0**	**-0.7**
PANCS				S	**Sn**	**09 17 15.3**	**-0.9**
PMON	**Piamonte**	**0.69**	**17**	P	**Pn**	**09 17 06.7**	**-0.6**
PMON				S	**Sn**	**09 17 16.8**	**-0.4**
SEMO	**Seminario San**	**0.71**	**24**	P	**Pn**	**09 17 06.9**	**-0.7**
SEMO				S	**Sn**	**09 17 17.3**	**-0.4**
UEES	**Universidad Ev**	**0.71**	**23**	P	**Pn**	**09 17 07.1**	**-0.5**
UEES				S	**Sn**	**09 17 17.5**	**-0.3**
UTEC	**Universidad Te**	**0.72**	**26**	P	**Pn**	**09 17 07.1**	**-0.6**
UTEC				S	**Sn**	**09 17 17.7**	**-0.2**
BOQS	**Boqueron**	**0.72**	**19**	*i* P	**Pn**	**09 17 07.3**	**-0.5**
IGN	**Direccin Gen**	**0.74**	**28**	P	**Pn**	**09 17 07.6**	**-0.4**
IGN				S	**Sn**	**09 17 18.3**	**-0.1**
CEDA	**San Andres**	**0.76**	**10**	P	**Pb**	**09 17 07.7**	**0.0**
CEDA				S	**Sn**	**09 17 18.6**	**-0.2**
CEDA	**San Andres**	**0.76**	**10**	*e*P	**Pb**	**09 17 07.6**	**-0.1**
CEVE	**Cerro Verde**	**0.78**	**353**	P	**Pn**	**09 17 08.2**	**-0.4**
CEVE	**Cerro Verde**	**0.78**	**353**	*e*P	**Pn**	**09 17 08.2**	**-0.4**
CEVE				*e*S	**Sn**	**09 17 20.0**	**+0.4**
LBRS	**Las Brisas**	**0.83**	**35**	*e*P	**Pb**	**09 17 08.8**	**-0.1**
PAVA	**Las Pavas**	**0.87**	**41**	P	**Pb**	**09 17 09.5**	**-0.2**
PAVA				S	**Sn**	**09 17 21.7**	**0.0**
TECO	**Alcaldia de Te**	**0.87**	**56**	S	**Sn**	**09 17 21.1**	**-0.5**
NUBE	**Las Nubes**	**0.88**	**344**	P	**Pn**	**09 17 09.2**	**-0.8**
NUBE				S	**Sn**	**09 17 21.3**	**-0.7**
NUBE	**Las Nubes**	**0.88**	**344**	*i* P	**Pn**	**09 17 09.2**	**-0.8**
NUBE				*i* S	**Sb**	**09 17 20.5**	**-0.8**
FAME	**Alcaldia de Sa**	**0.92**	**329**	P	**Pn**	**09 17 09.6**	**-0.8**
FAME				S	**Sb**	**09 17 21.9**	**-0.4**
UNIC	**Universidad Ca**	**0.92**	**359**	P	**Pb**	**09 17 10.2**	**-0.4**
UNIC				S	**Sb**	**09 17 23.4**	**+0.9**
LOAL	**Lomas de Alarc**	**0.97**	**345**	P	**Pb**	**09 17 11.3**	**-0.1**
LOAL				S	**Sb**	**09 17 24.9**	**+1.1**
SLOZ	**Alcaldia de Sa**	**1.00**	**346**	P	**Pb**	**09 17 11.3**	**-0.5**
SLOZ				S	**Sb**	**09 17 25.3**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.01**	**50**	P	**Pn**	**09 17 11.2**	**-0.5**
SCLA				S	**Sb**	**09 17 25.3**	**+0.3**
PQSS	**Presa 15 de Se**	**1.10**	**59**	P	**Pn**	**09 17 12.0**	**-0.8**
PQSS				S	**Sn**	**09 17 26.5**	**-0.6**
LLGN	**La Laguna**	**1.24**	**27**	S	**Sn**	**09 17 26.5**	**-0.4**
LLGN				S	**Sb**	**09 17 31.8**	**+0.2**
PACA	**Pacayal**	**1.24**	**70**	P	**Pn**	**09 17 14.9**	**-0.1**
PACA				S	**Sn**	**09 17 30.8**	**-0.1**
RANC	**El Ranchito**	**1.26**	**72**	P	**Pn**	**09 17 15.1**	**-0.1**
RANC				S	**Sn**	**09 17 31.5**	**0.0**
MTO3	**Montecristo**	**1.35**	**7**	P	**Pn**	**09 17 16.2**	**-0.3**
MTO3				S	**Sn**	**09 17 33.6**	**0.0**
MTO3	**Montecristo**	**1.35**	**7**	*i* P	**Pn**	**09 17 16.2**	**-0.3**
CNRM	**Centro Naciona**	**1.39**	**72**	P	**Pn**	**09 17 16.8**	**0.0**
CNRM				S	**Sn**	**09 17 34.4**	**+0.2**
CNRM	**Centro Naciona**	**1.39**	**72**	*e*P	**Pn**	**09 17 17.0**	**+0.2**
ESQI	**Esquipulas**	**1.51**	**7**	P	**Pn**	**09 17 18.5**	**0.0**
ESQI				S	**Sb**	**09 17 38.6**	**-0.7**
ZAFR2	**Estanzuela, Za**	**1.52**	**6**	*i* P	**Pb**	**09 17 24.0**	**+3.3**
LCND	**La Caada**	**1.61**	**81**	P	**Pn**	**09 17 19.9**	**-0.1**
LCND				S	**Sb**	**09 17 41.2**	**-1.1**
LCND	**La Caada**	**1.61**	**81**	*e*P	**Pn**	**09 17 19.6**	**-0.3**
SARH	**Santa Rosa de**	**1.87**	**23**	P	**Pn**	**09 17 23.7**	**+0.2**
SARH				S	**Sn**	**09 17 47.0**	**+0.7**
SARH	**Santa Rosa de**	**1.87**	**23**	*i* P	**Pn**	**09 17 23.8**	**+0.3**
CSGN	**Cosiguina Volc**	**1.92**	**92**	P	**Pn**	**09 17 24.1**	**-0.1**
CSGN				S	**Sn**	**09 17 48.0**	**+0.4**
STG5	**El Palmar, Qui**	**2.22**	**307**	*i* P	**Pb**	**09 17 33.2**	**+0.6**
STG2	**El Palmar, Qui**	**2.26**	**308**	*i* P	**Pb**	**09 17 34.1**	**+0.7**

*AFAD **23** 09:28:30.8, 38˚.44N×44˚.58E, h6km±2km, ML2.5*
*TEH **23** 09:28:32.5, 38˚.47N×44˚.48E, h7km±138km, ML2.6, Presumed earthquake*
*AZER **23** 09:28:32.1, 38˚.45N×44˚.57E, h15km, ml2.6*
*ISK **23** 09:28:33.5, 38˚.41N×44˚.48E, h10km, ML2.6/5*
ISC 23 09:28:33.0±1.1**, 38˚.41N**±0˚.02×**44˚.50E**±0˚.02**, h10**km±10km**,
n25,** σ1**§**06/41**, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**302**	P	**Pg**	**09 28 40.9**	**-1.3**
OZAP				S	**Sg**	**09 28 48.8**	**+0.3**
OZAP				IAML		09 28 49.0	
	comp=E,584nm,0.4s						
OZAP				IAML		09 28 54.0	
	comp=N,519nm,1.0s						
TVAN	**Van**	**0.87**	**278**	P	**Pg**	**09 28 48.2**	**-1.5**
TVAN				IAML		09 29 09.0	
	comp=E,149nm,0.6s						
TVAN				IAML		09 29 15.0	
	comp=N,170nm,0.6s						
ISHB	**Shabestar**	**0.89**	**98**	Pg	**Pg**	**09 28 49.4**	**-0.7**
VANB	**Van**	**0.89**	**282**	Pg	**Pg**	**09 28 50.2**	**0.0**
VANB				Sg	**Sg**	**09 29 02.4**	**+0.6**
MAKU	**Maku**	**0.95**	**9**	Pg	**Pg**	**09 28 49.4**	**-2.0**
IMRD	**Marand**	**0.99**	**72**	Pg	**Pb**	**09 28 51.8**	**-0.5**
HAKT	**HAKKARI**	**1.06**	**217**	P	**Pb**	**09 28 52.7**	**-0.9**
HAKT				S	**Sb**	**09 29 07.2**	**-0.3**
HAKT				IAML		09 29 11.0	
	comp=E,96nm,0.4s						
HAKT				IAML		09 29 12.0	
	comp=N,83nm,0.4s						
NAX	**Nakhchivan**	**1.09**	**45**	P	**Pn**	**09 28 53.6**	**-0.8**
NAX				S	**Sn**	**09 29 09.1**	**-0.5**
GEVA	**Gevas**	**1.14**	**266**	P	**Pb**	**09 28 52.5**	**-2.3**
GEVA				S	**Sn**	**09 29 10.7**	**-0.2**
ORD	**Ordubad**	**1.28**	**66**	P	**Pg**	**09 28 57.0**	**-0.6**
ORD				S	**Sg**	**09 29 14.8**	**+0.6**
SBZ	**Shahbuz**	**1.28**	**39**	P	**Pb**	**09 28 56.9**	**-0.4**
SBZ				S	**Sg**	**09 29 15.8**	**+1.5**
ITBZ	**Tabriz**	**1.31**	**97**	Pg	**Pb**	**09 28 57.2**	**-0.6**
HYR	**Heyderabad**	**1.33**	**12**	P	**Pg**	**09 28 59.0**	**+0.4**
HYR				S	**Sg**	**09 29 17.7**	**+1.7**
CUKT	**Cukurca**	**1.36**	**212**	Pn	**Pg**	**09 28 59.0**	**-0.1**
CUKT				Sn	**Sg**	**09 29 17.6**	**+0.9**
CUKT	**Cukurca**	**1.36**	**212**	P	**Pb**	**09 28 58.3**	**-0.3**
CUKT				S	**Sg**	**09 29 18.3**	**+1.5**
CUKT				IAML		09 29 23.0	
	comp=N,122nm,0.8s						
CUKT				IAML		09 29 23.0	
	comp=E,136nm,0.7s						
IAZR	**Azarshahr**	**1.38**	**122**	Pg	**Pg**	**09 28 59.7**	**+0.2**
ADCV	**BITLIS_Adilcev**	**1.45**	**286**	P	**Pn**	**09 28 59.5**	**0.0**
ADCV				S	**Sg**	**09 29 21.6**	**+2.0**
ADCV				IAML		09 29 24.0	
	comp=N,31nm,0.7s						
ADCV				IAML		09 29 24.0	
	comp=E,46nm,0.6s						
IGDI	**IGDIR**	**1.49**	**347**	P	**Pg**	**09 29 01.2**	**-0.4**
IGDI				S	**Sg**	**09 29 23.0**	**+2.0**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pb**	**09 29 03.0**	**-0.7**
AGRB				Sn	**Sb**	**09 29 24.9**	**+0.2**
DORK	**Agr/Tutak/Do**	**1.66**	**307**	P	**Pb**	**09 29 03.1**	**-0.6**
DORK				S	**Sb**	**09 29 25.8**	**+1.0**
DORK				IAML		09 29 29.0	
	comp=E,23nm,0.7s						
DORK				IAML		09 29 33.0	
	comp=N,34nm,0.7s						
KOTA	**Agri, Merkez-K**	**1.72**	**324**	P	**Pn**	**09 29 03.5**	**+0.4**
KOTA				S	**Sb**	**09 29 27.3**	**+0.8**
GNI	**Garni**	**1.75**	**6**	Pn	**Pb**	**09 29 04.8**	**-0.5**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pn**	**09 29 07.1**	**+0.9**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pg**	**09 29 10.1**	**-1.2**
SRTM	**Siirt_Merkez**	**2.07**	**259**	P	**Pb**	**09 29 10.3**	**-0.5**
SRTM				S	**Sg**	**09 29 40.9**	**+1.3**
SRTM				IAML		09 29 45.0	
	comp=E,40nm,0.6s						
SRTM				IAML		09 29 48.0	
	comp=N,50nm,1.1s						

*IDC **23** 09:30:25.7±0.6, 6˚.80S×146˚.84E, h0km, mb4.3/18, mbtmp4.3/23, ML3.9/4, MS3.7/23, Error ellipse: s-maj=22.8km s-min=10.2km az=80.0*
*DJA **23** 09:30:33.1±0.4, 7˚.5S×14˚.7E±˚, h10km, M5.3/15, mB6.2/5, mb4.9/15, MLv5.2/4, Mw(mB)5.9/5*
*NEIC **23** 09:30:35.4±1.3, 7˚.13S±0˚.07×147˚.0E±0˚.1, h79km±8km, mb4.8/38, Error ellipse: s-maj=18.3km s-min=10.1km az=94.0*
ISC 23 09:30:31.3±0.4**, 7˚.01S**±0˚.05×**146˚.68E**±0˚.07**, h30**km**, n124**, σ**2**§**10**/105**, mb4.7**/46**, MS3.8**/22**, 1C-1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.43**	**169**	Pn	**Pn**	**09 31 09.9**	**+0.9**
	196nm,0.4s,baz=19,slow=5.5,SNR=49						
PMG				Pg	**Pb**	**09 31 14.3**	**-0.1**
	142nm,0.3s,baz=342,slow=10,SNR=88						
PMG				Sn	**Sn**	**09 31 39.8**	**+2.0**
	77nm,0.3s,baz=183,slow=12,SNR=3.6						
PMG				Lg	Lg	09 31 46.8	
	64nm,0.3s,baz=116,slow=31,SNR=5.1						
PMG				LR	LR	09 32 29.6	
	comp=Z,2µm,18.1s,baz=114,slow=47						
PMG	**Port Moresby**	**2.43**	**169**	P	**Pn**	**09 31 09.7**	**+0.7**
MANU	**Manus Island**	**4.98**	**8**		**Pn**	**09 31 47.2**	**+3.1**
RABL	**Rabaul**	**6.13**	**63**		**Pn**	**09 32 00.8**	**+0.8**
MMPI	**Merauke**	**6.40**	**257**	P	Pn	09 32 11.1	+7.4
JAY	**Jayapura**	**7.44**	**307**	Pn	**Pn**	**09 32 17.1**	**-0.9**
	1.0nm,0.3s,baz=357,slow=14,SNR=1.5						
	10.0nm,0.6s						
JAY	**Jayapura**	**7.44**	**307**	P	Pn	09 32 23.7	+5.7
COEN	**Coen**	**7.72**	**206**		**Pn**	**09 32 24.6**	**+2.8**
GENI	**Genyem**	**7.83**	**304**	P	**Pn**	**09 32 24.7**	**+1.4**
	0.7nm16µm100nm,1.0s						
CTA	**Charters Tower**	**13.01**	**182**	Pn	**Pn**	**09 33 36.5**	**+2.2**
	0.5nm,0.3s,baz=3.8,slow=14,SNR=6.3						
CTA				LR	LR	09 38 27.2	

comp=Z,2.7nm,0.9s
USRK Ussuriysk Ar. 52.67 347 P **P** 09 39 41.6 -1.3
comp=Z,1.4nm,0.6s,baz=167,slow=8.9,SNR=4.1
comp=Z,1.4nm,0.6s
HNS HongShan 53.32 328 ⇓P **P** 09 39 50.8 +3.0
HNS pmax pmax
comp=Z,9.0nm,1.4s
KMI2 Kunming 53.37 308 P **P** 09 39 51.1 +2.4
KMI2 pmax pmax
comp=Z,18nm,1.1s
KMI2 pmax pmax
comp=Z,180nm,4.4s
CM31 Chiang Mai Arr 53.45 299 P **P** 09 39 49.6 +0.5
CM31 IAmb IAmb 09 39 56.1
comp=Z,9.3nm,0.8s
CMAR Chiang Mai Arr 53.45 299 P **P** 09 39 49.5 +0.4
comp=Z,4.8nm,0.9s,baz=120,slow=5.9,SNR=18
CMAR LR LR 10 03 16.4
comp=Z,27nm,20.5s,baz=160,slow=37
comp=Z,4.8nm,0.9s
RAR Rarotonga 53.57 111 LR LR 09 59 50.1
comp=Z,23nm,19.4s,baz=274,slow=33
CHTO Chiang Mai 53.59 299 **P** 09 39 50.4 +0.3
CHTO IAmb IAmb 09 39 57.3
comp=Z,4.7nm,0.7s
CHTO Chiang Mai 53.59 299 P P 09 39 56.6 +6.4
comp=Z,6.7nm,0.9s
MDJ Mudanjiang 53.64 345 P P 09 39 55.1 +5.1
MDJ pmax pmax
comp=Z,15nm,2.3s
XAN Xi'an 54.26 321 P P 09 40 00.0 +5.2
XAN pmax pmax
comp=Z,15nm,1.0s
PZH PanZhiHua 54.84 309 P **P** 09 40 02.8 +3.5
PZH pmax pmax
comp=Z,10.0nm,1.0s
BNX BinXian 55.27 344 ⇑P **P** 09 40 03.6 +1.8
BNX pmax pmax
comp=Z,11nm,1.8s
CD2 Chengdu 55.75 315 P **P** 09 40 06.6 +0.9
HHC Hu-ho-hao-te 57.52 329 *e*P **P** 09 40 22.6 +4.5
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.8s
LZH Lanzhou 58.77 320 *e*P **P** 09 40 30.8 +3.8
LZH sP sP 09 40 58.4 +18
LZH pmax pmax
comp=Z,12nm,1.6s
LZH LR LR
comp=N,330nm,13.7s
LZH LR LR
comp=E,270nm,16.1s
LZH LR LR
comp=Z,260nm,15.5s
LZDM Lanzhou Array 58.78 320 P **P** 09 40 26.2 -1.2
comp=Z,0.6nm,0.3s,baz=190,slow=7.5,SNR=3.7
comp=Z,0.6nm,0.3s
PETK Petropavlovsk- 60.61 8 P **P** 09 40 36.7 -2.5
comp=Z,4.6nm,1.0s,baz=163,slow=4.6,SNR=5.0
PETK LR LR 10 04 40.6
comp=Z,61nm,19.8s,baz=206,slow=34
comp=Z,4.6nm,1.0s
SHL Shillong 62.30 304 **P** 09 40 51.3 -0.1
SHL IAmb IAmb 09 40 59.4
comp=Z,13nm,0.9s
PPT Papeete 62.92 106 LR LR 10 03 52.4
comp=Z,31nm,20.6s,baz=293,slow=32
PPT2 Papeete2 62.92 106 *e*LR LR 09 59 43.8
comp=Z,49nm,24.2s
TBI Tubuai 63.28 113 *e*LR LR 09 59 52.6
comp=Z,248nm,26.0s
LSA Lhasa 64.59 307 **P** 09 41 06.7 -0.1
LSA IAmb IAmb 09 41 14.1
comp=Z,10nm,0.9s
ULN Ulaanbaatar 64.84 332 **P** 09 41 06.8 -0.9
ULN IAmb IAmb 09 41 12.5
comp=Z,14nm,1.8s
ULN Ulaanbaatar 64.84 332 P P 09 41 13.4 +5.7
GOMU GeErMu 64.88 315 P **P** 09 41 09.5 +1.1
GOMU pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 65.13 331 P **P** 09 41 07.8 -1.7
comp=Z,0.8nm,1.0s,baz=152,slow=6.4,SNR=7.2
comp=Z,0.8nm,1.0s
EVN Everest 67.40 304 **P** 09 41 24.7 -0.4
EVN IAmb IAmb 09 41 33.7
comp=Z,15nm,0.9s
CCD Concordia, Ant 69.34 186 P **P** 09 41 40.2 +4.0
CCD x x 09 42 08.3
CCD x x 09 42 15.5
VNDA Vanda 70.93 177 LR LR 10 10 33.0
comp=Z,69nm,18.7s,baz=342,slow=34
VNDA Vanda 70.93 177 P **P** 09 41 42.7 -2.7
WMQ Urumqi 73.34 320 *e*P **P** 09 42 02.8 +2.3
WMQ LR LR
comp=Z,140nm,24.2s
BILL Bilibino 76.15 7 P **P** 09 42 15.1 -1.0
WUS Wushi 78.02 315 **P** 09 42 26.2 -1.2
MK31 Makanchi Array 78.07 321 P **P** 09 42 26.1 -1.2
MKAR Makanchi Array 78.07 321 P **P** 09 42 26.4 -1.0
comp=Z,1.4nm,0.8s,baz=102,slow=7.5,SNR=14
comp=Z,1.4nm,0.8s
MAKZ Makanchi 78.27 321 **P** 09 42 28.0 -0.5
MAKZ Makanchi 78.27 321 P **P** 09 42 27.8 -0.7
MAKZ x x 09 42 32.7
MAKZ pP **sP** 09 42 48.9 +6.8
MAKZ x x 09 42 51.2
MAKZ x x 09 42 53.2
MAKZ sP pP 09 42 57.9 +19
M14K Bethel 78.53 23 **P** 09 42 28.0 -1.5
ZALV Zalesovo Beam 79.69 328 P **P** 09 42 33.6 -2.4
comp=Z,0.6nm,0.3s,baz=93,slow=5.0,SNR=4.5
comp=Z,0.6nm,0.3s
ANM Nome 79.76 19 **P** 09 42 35.4 -0.8
KDJ Kajisay 79.77 315 **P** 09 42 36.3 -0.7
KDJ IAmb IAmb 09 42 43.7
comp=Z,11nm,1.0s
KSH2 Kashi 80.00 312 P **P** 09 42 39.5 +1.2
KSH2 pmax pmax
comp=Z,4.0nm,0.8s
L16K Owhat River 80.07 23 P **P** 09 42 37.0 -0.9
NIL Nilore 80.25 306 P **P** 09 42 38.6 -1.0
F15K North Star Dit 80.75 18 **P** 09 42 40.4 -1.1
F15K IAmb IAmb 09 42 50.0
comp=Z,13nm,1.4s
BOOM Boomskoye usch 80.76 315 **P** 09 42 41.8 -0.5
BOOM IAmb IAmb 09 42 49.0
comp=Z,13nm,1.3s
I17K Unalakleet 80.91 21 **P** 09 42 41.5 -0.8
KDAK Kodiak Island 80.93 28 LR LR 10 11 35.4
comp=Z,44nm,20.1s,baz=277,slow=31
MAW Mawson 81.20 203 LR LR 10 15 00.4
comp=Z,49nm,21.7s,baz=42,slow=33
AAK Ala-Archa 81.82 315 **P** 09 42 47.1 -0.8
AAK IAmb IAmb 09 42 58.5
comp=Z,12nm,1.4s
KURK Kurchatov 81.82 323 P **P** 09 42 46.1 -1.4
KURBB Kurchatov Arra 81.84 323 P **P** 09 42 45.5 -2.1
comp=Z,0.4nm,0.2s,baz=111,slow=4.0,SNR=12
comp=Z,0.4nm,0.2s
M20K Styx River 82.70 24 P **P** 09 42 50.5 -1.5
M20K IAmb IAmb 09 43 02.0
comp=Z,24nm,1.5s
RDOG Red Dog Mine 82.79 17 P **P** 09 42 50.6 -1.6
RDOG IAmb IAmb 09 42 59.1
comp=Z,11nm,0.8s
G18K Tagagawik 82.80 20 **P** 09 42 50.5 -1.9
QSPA South Pole Qui 82.97 180 P **P** 09 42 54.5 +1.0
comp=Z,8.1nm,1.0s,baz=342,slow=1.6,SNR=6.6
comp=Z,8.1nm,1.0s
C19K Lookout Ridge 84.40 17 P **P** 09 42 59.3 -1.3
C19K IAmb IAmb 09 43 00.7
comp=Z,12nm,0.8s
IMAR Indian Mountai 84.54 21 P **P** 09 43 00.1 -1.2
CHGR Chuyangaron 84.69 310 **P** 09 43 01.9 -0.9
KK31 Karatay Array 84.76 314 **P** 09 43 01.9 -1.0
KK31 IAmb IAmb 09 43 09.1
comp=Z,10nm,1.1s
KKAR Karatay Array 84.76 314 **P** 09 43 01.9 -1.1
G21K Allakaket 84.90 20 P **P** 09 43 01.5 -1.5
G21K IAmb IAmb 09 44 13.6
comp=Z,25nm,1.9s
DHY Denali Highway 85.63 25 P **P** 09 43 05.3 -1.6
DHY IAmb IAmb 09 43 06.1
comp=Z,7.3nm,0.9s

COLA College 86.20 23 P **P** 09 43 07.2 -2.3
COLA College 86.20 23 P **P** 09 43 06.8 -2.7
COLA pP **sP** 09 43 27.6 +4.3
COLA x x 09 43 29.5
D22K Ayikyak River 86.36 18 **P** 09 43 09.1 -1.2
D22K IAmb IAmb 09 43 17.0
comp=Z,7.1nm,0.8s
IL31 86.53 23 P **P** 09 43 08.2 -2.9
IL31 IAmb IAmb 09 43 09.0
comp=Z,7.8nm,0.8s
ILAR Eielson Array 86.53 23 P **P** 09 43 08.3 -2.9
comp=Z,6.1nm,0.7s,baz=252,slow=5.0,SNR=72
comp=Z,6.1nm,0.7s
J25K Salcha River, 87.06 24 P **P** 09 43 11.4 -2.4
BVAR Borovoye Array 87.39 324 P **P** 09 43 13.7 -1.9
comp=Z,0.9nm,0.6s,baz=110,slow=5.2,SNR=6.3
comp=Z,0.9nm,0.6s
BCAR Beaver Creek A 87.98 26 P **P** 09 43 17.4 -0.9
BMAR Burnt Mountain 88.44 21 P **P** 09 43 19.5 -0.9
AB31 Akbulak array 93.12 319 **P** 09 43 40.3 -2.2
ABKAR Akbulak array 93.12 319 P **P** 09 43 40.6 -1.9
NVAR Mina Airbag Bea 98.23 52 P **P** 09 44 04.7 -1.7
comp=Z,0.7nm,0.8s,baz=240,slow=8.4,SNR=4.5
comp=Z,0.7nm,0.8s
PFO Pinyon Flats O 99.54 57 LR LR 10 21 18.8
comp=Z,39nm,21.3s,baz=248,slow=31
YKA Yellowknife Ar 100.21 28 P **Pdif** 09 44 12.8 -1.5
comp=Z,0.3nm,0.8s,baz=281,slow=5.0,SNR=5.6
comp=Z,0.3nm,0.8s
PDAR Pinedale Array 104.83 48 Pdiff **Pdif** 09 44 35.1 -0.6
comp=Z,0.6nm,0.9s,baz=294,slow=8.2,SNR=3.0
PLCA Paso Flores 121.45 147 PKP **PKPdf** 09 49 21.6 -0.8
comp=Z,0.9nm,0.8s,baz=281,slow=4.0,SNR=3.2
TORD Torodi Ar. Bea 145.01 283 PKPbc **PKPbc** 09 50 05.7 -0.5
comp=Z,7.8nm,0.8s,baz=143,slow=1.6,SNR=42
DBIC Dimbokro 151.74 271 PKPbc **PKPbc** 09 50 23.8 -0.3
comp=Z,7.7nm,0.5s,baz=142,slow=2.8,SNR=8.4
BDFB Brasilia 153.20 147 PKPbc **PKPbc** 09 50 26.6 -0.9
comp=Z,2.5nm,0.5s,baz=165,slow=7.4,SNR=4.1

*AZER **23** 09:37:45.9,38.45N×44.51E,h9km,ml2.4*
*AFAD **23** 09:37:46.5,38.46N×44.61E,h7km±2km,ML2.3*
*ISK **23** 09:37:48.6,38.52N×44.50E,h15km,ML2.6/7*
*TEH **23** 09:37:49.1,38.53N×44.56E,h10km±999km,ML2.5,*
Presumed earthquake
ISC 23 09:37:48.5±1.1,38.47N±0.03×44.52E±0.02,h8km±10km,
n26,σ1§06/42,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**295**	P	**Pg**	**09 37 56.6**	**-0.8**
OZAP				S	**Sg**	**09 38 04.9**	**+1.6**
OZAP				IAML		09 38 07.0	
	comp=E,322nm,0.4s						
OZAP				IAML		09 38 09.0	
	comp=N,273nm,0.7s						
TVAN	**Van**	**0.87**	**274**	P	**Pg**	**09 38 04.0**	**-1.4**
TVAN				S	**Sb**	**09 38 18.5**	**+0.5**
TVAN				IAML		09 38 22.0	
	comp=N,119nm,0.7s						
TVAN				IAML		09 38 32.0	
	comp=E,107nm,0.6s						
ISHB	**Shabestar**	**0.89**	**102**	Pg	**Pg**	**09 38 05.0**	**-0.6**
MAKU	**Maku**	**0.89**	**8**	Pg	**Pg**	**09 38 04.8**	**-0.9**
VANB	**Van**	**0.89**	**278**	Pg	**Pg**	**09 38 06.1**	**+0.4**
VANB				Sg	**Sg**	**09 38 17.9**	**+0.6**
VMUR	**Van-Muradiye**	**0.90**	**305**	P	**Pg**	**09 38 05.3**	**-0.6**
VMUR				S	**Sb**	**09 38 18.8**	**0.0**
VMUR				IAML		09 38 21.0	
	comp=E,109nm,0.3s						
VMUR				IAML		09 38 22.0	
	comp=N,107nm,0.2s						
IMRD	**Marand**	**0.96**	**75**	Pg	**Pb**	**09 38 06.6**	**-0.9**
NAX	**Nakhchivan**	**1.04**	**47**	P	**Pn**	**09 38 08.8**	**-0.6**
NAX				S	**Sn**	**09 38 24.4**	**+0.2**
HAKT	**HAKKARI**	**1.11**	**215**	P	**Pb**	**09 38 09.0**	**-1.2**
HAKT				S	**Sn**	**09 38 27.1**	**+0.8**
HAKT				IAML		09 38 29.0	
	comp=E,101nm,0.4s						
HAKT				IAML		09 38 30.0	
	comp=N,108nm,0.5s						
HAKT	**HAKKARI**	**1.11**	**215**	P	**Pb**	**09 38 09.0**	**-1.2**
HAKT				S	**Sg**	**09 38 26.0**	**+1.6**
GEVA	**Gevas**	**1.16**	**262**	P	**Pb**	**09 38 08.5**	**-2.4**
GEVA				S	**Sb**	**09 38 26.8**	**+0.7**
AKDM	**Akdamar-Van**	**1.22**	**264**	Pn	**Pn**	**09 38 10.1**	**-1.9**
AKDM				Sn	**Sb**	**09 38 28.4**	**+0.6**
SBZ	**Shahbuz**	**1.23**	**41**	P	**Pn**	**09 38 12.1**	**0.0**
SBZ				S	**Sn**	**09 38 30.2**	**+1.3**
ORD	**Ordubad**	**1.24**	**68**	P	**Pg**	**09 38 12.5**	**+0.1**
ORD				S	**Sn**	**09 38 30.1**	**+0.9**
DYDN	**Diyadin**	**1.25**	**329**	P	**Pg**	**09 38 13.2**	**+0.7**
DYDN				S	**Sn**	**09 38 29.8**	**+0.1**
ITBZ	**Tabriz**	**1.30**	**100**	Pg	**Pn**	**09 38 12.5**	**-0.8**
IAZR	**Azarshahr**	**1.40**	**124**	Pg	**Pg**	**09 38 15.9**	**+0.5**
CUKT	**Cukurca**	**1.42**	**211**	Pn	**Pn**	**09 38 14.9**	**+0.2**
CUKT				Sn	**Sn**	**09 38 34.3**	**+0.6**
ADCV	**BITLIS_Adilcev**	**1.44**	**284**	P	**Pn**	**09 38 15.7**	**+0.5**
ADCV				S	**Sg**	**09 38 37.8**	**+2.8**
ADCV				IAML		09 38 39.0	
	comp=E,46nm,0.5s						
ADCV				IAML		09 38 40.0	
	comp=N,33nm,0.5s						
AGRB	**Hanur-Agry**	**1.62**	**313**	Pn	**Pn**	**09 38 17.1**	**-0.5**
DORK	**Agr/Tutak/Do**	**1.63**	**305**	P	**Pb**	**09 38 18.4**	**-0.6**
DORK				S	**Sg**	**09 38 42.8**	**+1.7**
DORK				IAML		09 38 47.0	
	comp=N,21nm,0.8s						
DORK				IAML		09 38 49.0	
	comp=E,22nm,0.8s						
KOTA	**Agri, Merkez-K**	**1.67**	**323**	P	**Pb**	**09 38 19.6**	**-0.1**
KOTA				S	**Sg**	**09 38 41.6**	**-0.7**
MLAZ	**Malazgirt-MUS**	**1.68**	**294**	Pn	**Pn**	**09 38 17.8**	**-0.5**
GNI	**Garni**	**1.68**	**6**	Pn	**Pn**	**09 38 17.5**	**-0.9**
GURO	**Guroymak-BITLI**	**1.95**	**273**	Pn	**Pn**	**09 38 21.8**	**-0.3**
IHRS	**Heris**	**1.99**	**94**	Pn	**Pg**	**09 38 26.2**	**-0.5**

*IDC **23** 09:46:33.0±1.5,6.88S×132.24E,h0km,mb3.7/2,*
mbtmp4.1/6,ML4.2/4,Error ellipse: s-maj=42.5km
s-min=27.3km az=90.0
ISC 23 09:46:35.7±0.8,6.93S±0.07×132.41E±0.08,h10km,n15,
σ2§86/17,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.52**	**227**	P	**Pg**	**09 47 08.8**	**+3.9**
BNDI	**Bandanaira**	**3.46**	**314**	P	**Pn**	**09 47 27.9**	**-1.7**
DRS	**Darwin Rock St**	**5.67**	**195**	P	**Pn**	**09 48 02.5**	**+2.5**
SANI	**Sanana**	**8.03**	**307**	P	**Pn**	**09 48 32.7**	**+0.2**
JAY	**Jayapura**	**9.36**	**62**	Pn	**Pn**	**09 48 50.8**	**0.0**
	2.4nm,0.3s,baz=213,slow=15,SNR=5.7						
	38nm,0.8s						
COEN	**Coen**	**12.68**	**124**	P	**Pn**	**09 49 39.1**	**+2.9**
FITZ	**Fitzroy Crossi**	**12.91**	**210**	Pn	**Pn**	**09 49 36.8**	**-2.6**
	2.1nm,0.3s,baz=30,slow=11,SNR=36						
FITZ				Sn	**Sn**	09 51 53.3	-10
	2.2nm,0.3s,baz=183,slow=18,SNR=5.3						
	3.9nm,0.3s						
WRA	**Warramunga Arr**	**13.07**	**172**	Pn	**Pn**	**09 49 41.3**	**-0.2**
	0.9nm,0.3s,baz=352,slow=12,SNR=34						
WRA				Sn	**Sn**	**09 52 01.6**	**-5.5**
	1.7nm,0.3s,baz=341,slow=26,SNR=6.1						
	1.5nm,0.5s						
PLAI	**Plampang**	**14.62**	**262**	P	**Pn**	**09 50 03.9**	**+1.1**
QIS	**Mount Isa**	**15.23**	**153**	P	**Pn**	**09 50 13.9**	**+2.8**
ASAR	**Alice Springs**	**16.70**	**175**	Pn	**Pn**	**09 50 29.7**	**-0.3**
	0.8nm,0.3s,baz=350,slow=8.7,SNR=55						
ASAR				Sn	**Sn**	**09 53 30.4**	**-5.3**
	0.5nm,0.3s,baz=350,slow=26,SNR=5.0						
	1.0nm,0.3s						
MBWA	**Marble Bar**	**18.72**	**220**	P	**P**	**09 50 55.4**	**+0.8**
PSA00	**Pilbara Seismi**	**18.96**	**219**	P	**P**	**09 50 57.9**	**+0.7**
MKAR	**Makanchi Array**	**69.50**	**326**	P	**P**	**09 57 42.7**	**-1.8**
	0.7nm,0.6s,baz=109,slow=8.1,SNR=4.3						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**73.72**	**328**	P	**P**	**09 58 08.1**	**-1.8**
	0.2nm,0.4s,baz=122,slow=5.2,SNR=1.5						
	0.2nm,0.4s						

*AFAD **23** 09:48:19.5,38.46N×44.64E,h4km±1km,MW4.3*
*TIF **23** 09:48:20.7,38.46N×44.51E,h3km±1km*

*MOS **23** 09:48:22.5±1.0,38.35N×44.41E,h12km,mb4.5/24,Error*
ellipse: s-maj=7.7km s-min=4.9km az=81.0
*NSSP **23** 09:48:22.3,38.47N×44.55E,h18km,Ms4.2*
*IDC **23** 09:48:22.5±0.8,38.45N×44.45E,h0km,mb4.0/18,*
mbtmp4.0/25,ML3.6/6,MS3.8/9,Error ellipse:
s-maj=15.3km s-min=10.6km az=161.0
*AZER **23** 09:48:22.0,38.39N×44.66E,h16km,ml4.3*
*ISK **23** 09:48:22.9,38.40N×44.49E,h8km,ML4.2/19*
*TEH **23** 09:48:22.0,38.45N×44.50E,h6km±47km,ML4.0,*
Presumed earthquake
*NEIC **23** 09:48:24.7±1.3,38.42N±0.05×44.38E±0.04,h10km±1km,*
mb4.4/21,Error ellipse: s-maj=8.9km s-min=5.0km az=9.0
*MCSM **23** 09:48:24.3±0.4,38°N±5'×4°4E±°,h10km±3km,mb4.4,*
MLv4.5
ISC 23 09:48:22.5±1.1,38.39N±0.02×44.47E±0.02,h2km±7km,
n250,σ1§46/305,mb4.3/39,MS4.0/6,13C-2D,Turkey-Iran
border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**307**	P	**Pg**	**09 48 30.5**	**-0.9**
OZAP				S	**Sg**	**09 48 36.7**	**-0.9**
TVAN	**Van**	**0.85**	**280**	P	**Pg**	**09 48 37.7**	**-1.1**
TVAN				S	**Sb**	**09 48 50.1**	**-2.0**
TVAN	**Van**	**0.85**	**280**	Pg	**Pg**	**09 48 38.0**	**-0.8**
VANB	**Van**	**0.88**	**284**	Pg	**Pn**	**09 48 39.9**	**-2.1**
VANB				Sg	**Sn**	**09 48 52.3**	**-3.1**
ISHB	**Shabestar**	**0.91**	**96**	Pg	**Pg**	**09 48 38.6**	**-1.3**
VMUR	**Van-Muradiye**	**0.93**	**311**	P	**Pg**	**09 48 39.2**	**-1.2**
VMUR				S	**Sb**	**09 48 53.3**	**-1.0**
VMUR	**Van-Muradiye**	**0.93**	**311**	Pg	**Pg**	**09 48 39.1**	**-1.2**
MAKU	**Maku**	**0.98**	**10**	Pg	**Pg**	**09 48 39.1**	**-2.3**
IMRD	**Marand**	**1.02**	**71**	Pg	**Pb**	**09 48 41.1**	**-1.9**
HAKT	**HAKKARI**	**1.02**	**216**	P	**Pn**	**09 48 42.1**	**-2.0**
HAKT				S	**Sn**	**09 48 59.2**	**-0.1**
HAKT	**HAKKARI**	**1.02**	**216**	Pg	**Pn**	**09 48 42.1**	**-2.0**
HAKT	**HAKKARI**	**1.02**	**216**	P	**Pn**	**09 48 42.0**	**-2.1**
HAKT				S	**Sn**	**09 48 59.1**	**-0.1**
ERCV	**ERCIS-VAN**	**1.09**	**306**	Pn	**Pn**	**09 48 44.3**	**-0.7**
ERCV				Sn	**Sn**	**09 48 59.6**	**-1.2**
GEVA	**Gevas**	**1.11**	**267**	Pg	**Pb**	**09 48 42.0**	**-2.6**
GEVA				Sg	**Sn**	**09 48 58.5**	**-2.8**
GEVA	**Gevas**	**1.11**	**267**	P	**Pb**	**09 48 41.8**	**-2.8**
GEVA				S	**Sn**	**09 48 59.3**	**-2.0**
NAX	**Nakhchivan**	**1.12**	**45**	P	**Pb**	**09 48 42.5**	**-2.3**
NAX				S	**Sb**	**09 48 59.0**	**-0.8**
DYDN	**Diyadin**	**1.31**	**332**	P	**Pn**	**09 48 44.6**	**-3.5**
DYDN				S	**Sb**	**09 49 02.8**	**-2.5**
DYDN	**Diyadin**	**1.31**	**332**	Pg	**Pn**	**09 48 45.8**	**-2.2**
ORD	**Ordubad**	**1.31**	**65**	P	**Pn**	**09 48 45.6**	**-2.3**
ORD				S	**Sb**	**09 49 04.1**	**-1.1**
SBZ	**Shahbuz**	**1.32**	**40**	P	**Pn**	**09 48 45.9**	**-2.2**
SBZ				S	**Sg**	**09 49 06.7**	**+1.9**
CUKT	**Cukurca**	**1.33**	**211**	Pn	**Pg**	**09 48 48.4**	**+0.5**
CUKT				Sn	**Sg**	**09 49 07.8**	**+2.7**
CUKT	**Cukurca**	**1.33**	**211**	P	**Pg**	**09 48 47.8**	**-0.1**
CUKT				S	**Sg**	**09 49 08.2**	**+3.1**
CUKT	**Cukurca**	**1.33**	**211**	Pg	**Pg**	**09 48 48.6**	**+0.7**
ITBZ	**Tabriz**	**1.33**	**96**	Pg	**Pn**	**09 48 46.3**	**-1.9**
HYR	**Heyderabad**	**1.36**	**12**	P	**Pn**	**09 48 47.0**	**-1.7**
HYR				S	**Sg**	**09 49 10.0**	**+3.6**
IAZR	**Azarshahr**	**1.38**	**120**	Pg	**Pn**	**09 48 48.5**	**-0.6**
ADCV	**BITLIS_Adilcev**	**1.43**	**288**	P	**Pb**	**09 48 48.6**	**-1.4**
ADCV				S	**Sg**	**09 49 05.5**	**+1.9**
ADCV	**BITLIS_Adilcev**	**1.43**	**288**	Pg	**Pg**	**09 48 49.1**	**-0.9**
VAYK	**Vayk**	**1.50**	**29**	*i* P	**Pn**	**09 48 48.9**	**-1.7**
VAYK				*i* S	**Sn**	**09 49 08.7**	**-2.3**
ALVK	**Alvank**	**1.57**	**69**	*e*P	**Pn**	**09 48 50.2**	**-1.3**
ALVK				*e*S	**Sn**	**09 49 10.2**	**-2.3**
PERV	**Siirt/Pervari-**	**1.58**	**255**	P	**Pb**	**09 48 51.1**	**-1.5**
PERV				S	**Sg**	**09 49 18.7**	**+5.3**
AGRB	**Hanur-Agry**	**1.66**	**316**	Pn	**Pn**	**09 48 52.2**	**-0.6**
AGRB				Sn	**Sg**	**09 49 15.1**	**-0.7**
DORK	**Agr/Tutak/Do**	**1.66**	**308**	P	**Pn**	**09 48 51.7**	**-1.1**
DORK				S	**Sg**	**09 49 17.0**	**+1.2**
MLAZ	**Malazgirt-MUS**	**1.68**	**297**	Pn	**Pb**	**09 48 53.2**	**-1.1**
KOTA	**Agri, Merkez-K**	**1.72**	**326**	P	**Pn**	**09 48 52.0**	**-1.8**
KOTA				S	**Sb**	**09 49 17.0**	**-0.3**
GNI	**Garni**	**1.77**	**7**	Pn	**Pb**	**09 48 55.5**	**-0.4**
	206nm,0.3s,baz=226,slow=2.4,SNR=432						
GNI	**Garni**	**1.77**	**7**		**Pb**	**09 48 55.4**	**-0.6**
GNI	**Garni**	**1.77**	**7**	Pn	**Pn**	**09 48 54.6**	**+0.2**
GNI	**Garni**	**1.77**	**7**	⇑*i*P	**Pb**	**09 48 55.0**	**-0.9**
GNI				⇑*i*S	**Sb**	**09 49 19.1**	**+0.4**
GNI	**Garni**	**1.77**	**7**	*i* PN	**Pn**	**09 48 53.8**	**-0.6**
GNI	**Garni**	**1.77**	**7**	P	**Pb**	**09 48 55.3**	**-0.6**
VNNZ	**Vanand**	**1.79**	**344**	*e*P	**Pb**	**09 48 55.4**	**-0.7**
VNNZ				*e*S	**Sg**	**09 49 19.7**	**-0.3**
EGVZ	**Egvard**	**1.82**	**62**	*e*P	**Pn**	**09 48 54.4**	**-0.6**
EGVZ				*e*S	**Sn**	**09 49 18.1**	**-0.7**
BLIS	**Bitlis-Merkez**	**1.85**	**272**	P	**Pb**	**09 48 55.4**	**-1.8**
BLIS				S	**Sg**	**09 49 23.2**	**+1.2**
SIRN	**Sırnak**	**1.85**	**242**	P	**Pg**	**09 48 57.8**	**-0.2**
SIRN				S	**Sg**	**09 49 24.8**	**+2.7**
MAHB	**Mahabad**	**1.89**	**148**	Pn	**Pg**	**09 48 58.2**	**-0.6**
ARUZ	**Aruch**	**1.92**	**351**	*e*P	**Pb**	**09 48 58.1**	**-0.2**
ARUZ				*e*S	**Sg**	**09 49 24.2**	**0.0**
GURO	**Guroymak-BITLI**	**1.92**	**276**		**Pb**	**09 48 56.0**	**-2.4**
GURO	**Guroymak-BITLI**	**1.92**	**276**	Pn	**Pb**	**09 48 56.4**	**-2.0**
GURO	**Guroymak-BITLI**	**1.92**	**276**	Pn	**Pb**	**09 48 57.5**	**-0.9**
KAPZ	**Kaputan**	**1.94**	**5**	*e*P	**Pb**	**09 48 57.6**	**-1.2**
KAPZ				*e*S	**Sb**	**09 49 23.1**	**-0.4**
AMBZ	**Amberd**	**2.01**	**355**	*e*P	**Pb**	**09 48 58.6**	**-1.3**
AMBZ				*e*S	**Sb**	**09 49 25.5**	**+0.1**
AYRK	**Ayrk**	**2.01**	**30**	*e*P	**Pn**	**09 48 57.9**	**+0.2**
AYRK				*e*S	**Sn**	**09 49 23.6**	**+0.1**
SRTM	**Siirt_Merkez**	**2.05**	**260**	P	**Pb**	**09 48 59.5**	**-0.9**
SRTM				S	**Sg**	**09 49 30.2**	**+1.9**
DIGO	**Kars**	**2.20**	**338**	P	**Pg**	**09 49 04.4**	**-0.3**
MUSM	**Mu-Merkez**	**2.34**	**279**	P	**Pb**	**09 49 04.5**	**-1.1**
MUSM				S	**Sg**	**09 49 38.4**	**+0.5**
IHSH	**Hashtrud**	**2.46**	**115**	Pn	**Pb**	**09 49 05.6**	**-2.1**
QRD	**Qoradiz**	**2.47**	**63**	P	**Pn**	**09 49 02.4**	**-1.4**
QRD				S	**Sn**	**09 49 33.8**	**-0.7**
YRDB	**Varto-Mus**	**2.48**	**289**	Pn	**Pb**	**09 49 04.9**	**-3.0**
KARS	**Kars**	**2.49**	**335**		**Pn**	**09 49 03.8**	**-0.3**
KARS	**Kars**	**2.49**	**335**	Pn	**Pn**	**09 49 04.6**	**+0.4**
KARS	**Kars**	**2.49**	**335**	PN	**Pn**	**09 49 03.8**	**-0.3**
GDB	**GEDABAY**	**2.54**	**23**	P	**Pn**	**09 49 05.0**	**+0.1**
GDB				S	**Sn**	**09 49 38.1**	**+1.7**
SVAN	**Silvan-Diyarba**	**2.59**	**266**	Pn	**Pb**	**09 49 06.3**	**-3.4**
LSVT	**Lusahovit**	**2.59**	**12**	*e*P	**Pn**	**09 49 07.0**	**+1.5**
LSVT				*e*S	**Sb**	**09 49 39.7**	**-2.3**
GANJ	**Ganja**	**2.67**	**32**	P	**Pn**	**09 49 06.6**	**0.0**
GANJ				S	**Sn**	**09 49 40.4**	**+0.8**
AGDM	**Agdam**	**2.67**	**49**	P	**Pn**	**09 49 06.0**	**-0.7**
AGDM				S	**Sn**	**09 49 39.1**	**-0.5**
SRTK	**Saratovka**	**2.68**	**358**	*e*P	**Pb**	**09 49 11.0**	**-0.3**
SRTK				*e*S	**Sb**	**09 49 46.4**	**+1.7**
GRMI	**Germi**	**2.71**	**80**	Pn	**Pn**	**09 49 08.4**	**+1.1**
SENK	**Senkaya-Erzuru**	**2.72**	**324**	Pn	**Pn**	**09 49 08.2**	**+0.7**
BLQ	**Beylaqan**	**2.75**	**60**	P	**Pn**	**09 49 06.7**	**-1.0**
BLQ				S	**Sn**	**09 49 40.8**	**-0.7**
QZX	**Qazax, Azerbai**	**2.76**	**14**	P	**Pn**	**09 49

GLBA	**Clilabad**	**3.18**	**73**	P		**Pn**	**09 49 12.5**	**-1.1**
GLBA				S		**Sn**	**09 49 50.9**	**-1.1**
VSHL	**Vashlovani**	**3.21**	**27**	P		**Pn**	**09 49 16.2**	**+2.3**
VSHL				S		**Sg**	**09 50 05.3**	**-0.3**
YEDI	**Yedisu-Bingol**	**3.24**	**290**	Pn		**Pn**	**09 49 15.7**	**+1.2**
DDFL	**Dedoflistskaro**	**3.31**	**22**	P		**Pg**	**09 49 26.0**	**+0.1**
TBLG	**Delisi**	**3.35**	**3**	Pn		**Pn**	**09 49 16.9**	**+1.0**
LKRN	**Lenkeran, Azer**	**3.39**	**83**	P		**Pn**	**09 49 15.5**	**-1.0**
LKRN				S		**Sn**	**09 49 54.9**	**-2.4**
ASTR	**Astara**	**3.40**	**86**	P		**Pn**	**09 49 15.4**	**-1.1**
ASTR				S		**Sn**	**09 49 55.6**	**-1.7**
SAAT	**Saatly**	**3.41**	**63**	P		**Pn**	**09 49 16.0**	**-0.7**
SAAT				S		**Sn**	**09 49 54.6**	**-3.0**
DYBB	**Diyarbakir**	**3.44**	**264**	Pn		**Pn**	**09 49 17.9**	**+0.7**
KDMR	**Kurdemir**	**3.50**	**54**	P		**Pn**	**09 49 17.8**	**-0.1**
KDMR				S		**Sn**	**09 49 57.4**	**-2.4**
SEKA	**Sheki**	**3.52**	**36**	P		**Pn**	**09 49 19.1**	**+0.8**
SEKA				S		**Sn**	**09 49 59.6**	**-0.8**
QBL	**Gabala**	**3.65**	**44**	P		**Pn**	**09 49 19.6**	**-0.4**
QBL				S		**Sn**	**09 50 01.6**	**-2.1**
ZKTA	**Zakatala**	**3.65**	**26**	P		**Pn**	**09 49 20.0**	**0.0**
ZKTA				S		**Sn**	**09 50 03.3**	**-0.3**
IML	**Ismayilli**	**3.74**	**49**	P		**Pn**	**09 49 20.9**	**-0.4**
IML				S		**Sn**	**09 50 05.0**	**-1.0**
ALIB	**&Aumlli-Bayram**	**3.86**	**65**	P		**Pn**	**09 49 22.0**	**-0.8**
ALIB				S		**Sn**	**09 50 07.5**	**-1.3**
ERZN	**Erzincan**	**3.89**	**289**	Pn		**Pn**	**09 49 25.1**	**+1.6**
BAYT	**Aydıntepe-Bayb**	**3.91**	**302**	Pn		**Pn**	**09 49 25.1**	**+1.3**
CHRG	**Chargali**	**3.96**	**5**	P		**Pn**	**09 49 25.1**	**+0.8**
CHRG				S		**Sg**	**09 50 30.1**	**+0.5**
XNQ	**Khinaliq**	**3.97**	**44**	P		**Pn**	**09 49 24.1**	**-0.5**
XNQ				S		**Sn**	**09 50 10.7**	**-1.1**
AKT	**Akhty**	**3.98**	**38**	*e*PN		**Pn**	**09 49 26.6**	**+1.9**
AKT				*e*S		**Sn**	**09 50 11.4**	**-0.5**
AKT				*e*SS		**SnSn**	**09 50 23.1**	**-0.3**
AKT				smax	smax			
	comp=N,89nm,0.6s							
AKT				smax	smax			
	comp=E,76nm,0.5s							
AKT				MLR	MLR			
	comp=Z,537nm,10.0s							
PQL	**Pirkuli**	**3.99**	**52**	P		**Pn**	**09 49 24.1**	**-0.8**
PQL				S		**Sn**	**09 50 11.7**	**-0.5**
SVRC	**Sivrice-ELAZID**	**4.06**	**272**	Pn		**Pn**	**09 49 26.9**	**+1.1**
GBS	**Qobustan**	**4.07**	**57**	P		**Pn**	**09 49 25.1**	**-0.8**
GBS				S		**Sn**	**09 50 13.2**	**-1.0**
ATGJ	**Altiaghaj**	**4.24**	**53**	P		**Pn**	**09 49 27.7**	**-0.6**
ATGJ				S		**Sn**	**09 50 16.6**	**-1.8**
QSAR	**Qusar**	**4.27**	**42**	P		**Pn**	**09 49 28.3**	**-0.3**
QSAR				S		**Sn**	**09 50 18.1**	**-1.0**
QUBA	**Quba, Azerbaij**	**4.29**	**45**	P		**Pn**	**09 49 28.5**	**-0.3**
QUBA				S		**Sn**	**09 50 19.1**	**-0.3**
SHTL	**Shatili**	**4.30**	**7**	P		**Pb**	**09 49 38.2**	**-0.7**
SHTL	**Shatili**	**4.30**	**7**	PN		**Pb**	**09 49 38.2**	**-0.7**
SIZA	**Siyzn**	**4.34**	**50**	P		**Pn**	**09 49 29.2**	**-0.5**
SIZA				S		**Sn**	**09 50 20.8**	**-0.1**
ARPR	**Arapgir-MALATY**	**4.85**	**280**			**Pn**	**09 49 38.3**	**+1.7**
ARPR	**Arapgir-MALATY**	**4.85**	**280**	Pn		**Pn**	**09 49 38.9**	**+2.2**
NEUR	**Neytrino**	**5.05**	**345**	*i* PN		**Pn**	**09 49 40.2**	**+0.7**
MAK	**Makhachkala**	**5.12**	**26**	*e*PN		**Pn**	**09 49 36.8**	**-3.4**
MAK				pmax	pmax			
	comp=Z,173nm,1.4s							
MAK				MLR	MLR			
	comp=Z,617nm,7.0s							
KBZ	**Khabaz**	**5.47**	**348**	Pn		**Pn**	**09 49 47.2**	**+2.2**
	comp=Z,2.4nm,1.1s,baz=177,slow=12,SNR=4.0							
SHA1	**Shidzhatmaz**	**5.52**	**346**	*i* P		**Pn**	**09 49 46.6**	**+0.7**
KIV	**Kislovodsk**	**5.73**	**347**	Pn		**Pn**	**09 49 49.1**	**+0.5**
KIV	**Kislovodsk**	**5.73**	**347**	*e*P		**Pn**	**09 49 49.6**	**+1.0**
KIV				pmax	pmax			
	comp=Z,8.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,99nm,10.0s							
GAZ	**Gaziantep**	**5.88**	**260**	Pn		**Pn**	**09 49 49.8**	**-0.9**
SOC	**Sochi**	**6.32**	**327**	*e*P		**Pn**	**09 49 56.5**	**-0.1**
SOC				*e*			09 51 07.8	
SOC				MLR	MLR			
	comp=Z,489nm,14.0s							
BNN	**Bunyan**	**6.77**	**277**			**Pn**	**09 50 03.4**	**+0.4**
BRTR	**Keskin Array B**	**8.53**	**282**	Pn		Pn	09 50 30.8	+3.6
	comp=Z,0.1nm,0.3s,baz=113,slow=12,SNR=5.6							
BRTR				LR	LR		09 54 15.1	
	comp=Z,196nm,20.2s,baz=262,slow=42							
	comp=Z,1.9nm,1.0s							
BR105	**Keskin Array S**	**8.55**	**282**	P		**Pn**	**09 50 27.4**	**-0.1**
	comp=Z,3.7nm,1.0s							
ASF	**Jabal al Asfar**	**8.76**	**227**	Pn		**Pn**	**09 50 31.4**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=86,slow=3.5,SNR=4.0							
ASF				Lg	Lg		09 52 55.3	
	comp=Z,0.1nm,0.3s,baz=54,slow=22,SNR=2.2							
ASF				LR	LR		09 54 20.4	
	comp=Z,328nm,19.2s,baz=27,slow=41							
	comp=Z,2.8nm,0.7s							
MMAI	**Mount Meron Ar**	**9.11**	**237**	Pn		**Pn**	**09 50 37.4**	**+2.2**
	comp=Z,1.1nm,0.3s,baz=49,slow=18,SNR=3.6							
MMAI				Lg	Lg		09 53 05.4	
	comp=Z,0.7nm,0.3s,baz=84,slow=29,SNR=1.7							
MMAI				LR	LR		09 54 34.2	
	comp=Z,501nm,20.1s,baz=50,slow=41							
	comp=Z,3.0nm,0.6s							
CSS	**Mathiatis**	**9.58**	**253**	P		**Pn**	**09 50 41.2**	**-0.2**
	comp=Z,20nm,2.1s							
EIL	**Elat**	**11.74**	**225**	Lg	Lg		09 54 26.1	
	comp=Z,0.1nm,0.3s,baz=113,slow=18,SNR=1.9							
EIL				LR	LR		09 56 14.6	
	comp=Z,296nm,19.2s,baz=53,slow=40							
NE56	**Odesa**	**12.98**	**314**	P		**Pn**	**09 51 26.9**	**-1.0**
BELG	**Belogornoye**	**14.18**	**8**	Pn		**Pn**	**09 51 44.8**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=269,slow=0.5,SNR=5.3							
	comp=Z,7.4nm,0.4s							
BELG	**Belogornoye**	**14.18**	**8**	*i* P		**Pn**	**09 51 45.3**	**+1.1**
AKTO	**Aktyubinsk**	**15.42**	**34**	Pn		**Pn**	**09 51 59.0**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=227,slow=11,SNR=6.7							
	comp=Z,3.5nm,0.5s							
AKTO	**Aktyubinsk**	**15.42**	**34**	P		**Pn**	**09 51 59.0**	**-2.1**
AB31	**Akbulak array**	**15.55**	**41**			**Pn**	**09 52 01.6**	**-1.1**
ABKAR	**Akbulak array**	**15.55**	**41**	Pn		**Pn**	**09 52 01.6**	**-1.1**
AK07	**Malin Array Si**	**16.29**	**323**	P		**Pn**	**09 52 11.6**	**-0.7**
AK09	**Malin Array Si**	**16.30**	**324**	P		**Pn**	**09 52 11.7**	**-0.7**
AK10	**Malin Array Si**	**16.30**	**323**	P		**Pn**	**09 52 11.9**	**-0.5**
AK06	**Malin Array Si**	**16.32**	**323**	P		**Pn**	**09 52 12.1**	**-0.5**
AK08	**Malin Array Si**	**16.32**	**324**	P		**Pn**	**09 52 12.2**	**-0.5**
AK05	**Malin Array Si**	**16.34**	**323**	P		**Pn**	**09 52 12.3**	**-0.6**
AK12	**Malin Array Si**	**16.38**	**323**	P		**Pn**	**09 52 12.8**	**-0.6**
AK01	**Malin Array Si**	**16.38**	**324**	P		**Pn**	**09 52 12.9**	**-0.5**
AKASG	**Malin Array Be**	**16.38**	**324**	Pn		**Pn**	**09 52 13.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=134,slow=12,SNR=9.1							
	comp=Z,5.3nm,1.0s							
AKBB	**Malin Array Si**	**16.38**	**324**	*i* P		**P**	**09 52 15.0**	**-1.4**
AKBB				pmax	pmax			
	comp=Z,5.0nm,0.9s							
AK11	**Malin Array Si**	**16.39**	**323**	P		**Pn**	**09 52 13.1**	**-0.5**
AK13	**Malin Array Si**	**16.40**	**323**	P		**Pn**	**09 52 13.1**	**-0.6**
AK16	**Malin Array Si**	**16.42**	**323**	P		**Pn**	**09 52 13.4**	**-0.5**
AK19	**Malin Array Si**	**16.50**	**323**	P		**Pn**	**09 52 14.4**	**-0.5**
LUBAR	**Lubar, Ukraine**	**16.59**	**319**	P		**P**	**09 52 17.3**	**-1.5**
UOSS	**Minazif**	**16.69**	**140**	P		**P**	**09 52 18.6**	**-1.4**
UOSS				IAmb	IAmb		09 52 24.8	
	comp=Z,47nm,1.5s							
BURAR	**Bucovina Array**	**16.80**	**309**	⇑P		**P**	**09 52 23.2**	**+2.0**
MI28	**Mi28,Pidlybu**	**17.27**	**322**	P		**P**	**09 52 24.2**	**-2.1**
OBN	**Obninsk**	**17.57**	**345**	Pn		**P**	**09 52 27.8**	**-1.7**
OBN	**Obninsk**	**17.57**	**345**	*e*P		**P**	**09 52 28.6**	**-0.9**
OBN				*e*S		**Sn**	**09 55 40.2**	**-4.1**
OBN				pmax	pmax			
	comp=Z,11nm,1.0s							
OBN				MLR	MLR			
	comp=Z,261nm,10.0s							
MDVR	**Moldovita**	**18.16**	**298**	⇑P		**P**	**09 52 39.8**	**+3.7**
RNPP8	**Varash**	**18.42**	**321**	P		**Pn**	**09 52 38.5**	**-0.4**
RNPP9	**Sopachiv**	**18.45**	**321**	P		**Pn**	**09 52 38.9**	**-0.3**
CHGR	**Chuyangaron**	**19.31**	**81**	*i* P		**Pn**	**09 52 49.3**	**-0.6**
CHGR				pmax	pmax			
	comp=Z,7.0nm,0.9s							
MNK	**Minsk**	**19.68**	**330**	*i* P		**Pn**	**09 52 53.8**	**-0.3**
	comp=E,19nm,0.9s							
MNK				*i* P		**Pn**	**09 52 53.8**	**-0.3**
	comp=N,25nm,1.0s							
MNK				*i* P		**Pn**	**09 52 53.8**	**-0.3**
	comp=Z,9.0nm,0.7s,baz=138							
MNK				*i* PP		**PnPn**	**09 53 08.6**	**+1.1**
MNK				*i* PPP		PPP	09 53 16.4	
MNK				*i* S		**Sn**	**09 56 35.5**	**+0.1**
MNK				*i* SS		**SnSn**	**09 56 52.1**	**+2.5**
MNK				*i* SSS		SSS	09 57 05.0	
MNK				*i* LQ		LQ	09 58 48.5	
MNK				*i* LR		LR	09 59 58.0	
MNK				*i* LRM		MLR	10 00 38.5	
	comp=Z,201nm,13.9s							
MNK				*i* LRM		MLR	10 00 53.1	
	comp=N,1μm,19.3s							
MNK				*i* LRM		MLR	10 00 55.6	
	comp=E,2μm,21.6s							
MNK	**Minsk**	**19.68**	**330**	*i* P		**Pn**	**09 52 53.7**	**-0.3**
MNK				*i* S		**Sn**	**09 56 35.5**	**+0.1**
MNK				pmax	pmax			
	comp=N,25nm,1.0s							
MNK				pmax	pmax			
	comp=E,19nm,0.9s							
MNK				pmax	pmax			
	comp=Z,9.0nm,0.7s							
MNK				MLR	MLR			
	comp=Z,201nm,14.0s							
MNK				MLR	MLR			
	comp=N,1μm,19.0s							
MNK				MLR	MLR			
	comp=E,2μm,22.0s							
KK31	**Karatay Array**	**20.25**	**68**			Pn	09 52 59.5	-1.5
KK31				IAmb	IAmb		09 53 08.5	
	comp=Z,16nm,0.8s							
KK31	**Karatay Array**	**20.25**	**68**	P		Pn	09 52 59.5	-1.5
KK31				pmax	pmax			
	comp=Z,16nm,0.9s							
KKAR	**Karatay Array**	**20.25**	**68**			Pn	09 52 59.7	-1.3
KKAR	**Karatay Array**	**20.25**	**68**	P		Pn	09 52 59.7	-1.3
ARTI	**Arti**	**20.25**	**23**	P		**P**	**09 52 58.4**	**-0.5**
	comp=Z,14nm,0.7s,baz=213,slow=6.6,SNR=21							
	comp=Z,14nm,0.7s							
ARTI	**Arti**	**20.25**	**23**			Pn	09 52 59.7	-1.1
ARTI	**Arti**	**20.25**	**23**	*c i* P		Pn	09 52 59.2	-1.7
ARTI				S		Sn	09 56 47.8	-1.4
ARTI				pmax	pmax			
	comp=Z,15nm,0.7s							
BTK	**Batken**	**20.46**	**77**	P		Pn	09 53 02.4	-1.1
BTK				IAmb	IAmb		09 53 07.3	
	comp=Z,9.3nm,0.6s							
BTK	**Batken**	**20.46**	**77**	P		Pn	09 53 02.4	-1.1
BTK				pmax	pmax			
	comp=Z,9.0nm,0.6s							
KIRV	**Kirov**	**20.47**	**7**	P		**P**	**09 52 60.0**	**-1.3**
	comp=Z,11nm,0.9s,baz=116,slow=4.4,SNR=3.9							
	comp=Z,11nm,0.9s							
KIRV	**Kirov**	**20.47**	**7**	*ce*P		Pn	09 53 02.0	-1.3
MORH	**Mrgy, Hungar**	**20.58**	**301**	⇓P		Pn	09 53 04.3	-0.5
MORH	**Mrgy, Hungar**	**20.58**	**301**	P		Pn	09 53 02.2	-2.6
	comp=Z,10nm,2.5s							
DRK	**Karamyk**	**21.26**	**78**	P		**P**	**09 53 11.2**	**+0.9**
DRK				IAmb	IAmb		09 53 16.8	
	comp=Z,21nm,1.2s							
DRK	**Karamyk**	**21.26**	**78**	P		**P**	**09 53 11.2**	**+0.9**
DRK				pmax	pmax			
	comp=Z,21nm,1.2s							
SVE	**Sverdlovsk**	**21.33**	**25**	*e*P		**P**	**09 53 12.4**	**+1.8**
MODS	**Modra-Piesok**	**22.04**	**306**	*e*P		P	09 53 26.5	+8.2
MODS	**Modra-Piesok**	**22.04**	**306**	*e*P		P	09 53 26.5	+8.2
ARSB	**Arslanbob**	**22.04**	**73**	P		**P**	**09 53 18.8**	**+0.2**
ARSB				IAmb	IAmb		09 53 27.3	
	comp=Z,22nm,1.0s							
ARSB	**Arslanbob**	**22.04**	**73**	P		**P**	**09 53 18.8**	**+0.2**
ARSB				pmax	pmax			
	comp=Z,22nm,1.0s							
KLMR	**Klimovskoe**	**22.71**	**354**	*e*P		**P**	**09 53 26.2**	**+0.9**
KLMR				pmax	pmax			
	comp=Z,45nm,1.7s							
BORK	**Borovoye**	**23.08**	**42**			**P**	**09 53 29.9**	**+0.6**
BORK	**Borovoye**	**23.08**	**42**	P		**P**	**09 53 29.9**	**+0.6**
BORK				pmax	pmax			
	comp=Z,6.0nm,0.8s							
BVAR	**Borovoye Array**	**23.11**	**42**	P		**P**	**09 53 29.7**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=217,slow=4.7,SNR=11							
	comp=Z,2.3nm,0.6s							
AAK	**Ala-Archa**	**23.16**	**70**			**P**	**09 53 32.2**	**+1.9**
AAK	**Ala-Archa**	**23.16**	**70**	P		**P**	**09 53 32.2**	**+1.9**
AAK				pmax	pmax			
	comp=Z,7.0nm,1.0s							
FRU1	**Bishkek**	**23.26**	**69**	P		**P**	**09 53 33.1**	**+1.8**
FRU1	**Bishkek**	**23.26**	**69**	P		**P**	**09 53 33.1**	**+1.8**
FRU1				pmax	pmax			
	comp=Z,16nm,0.8s							
KSH2	**Kashi**	**24.20**	**78**	P		**P**	**09 53 46.0**	**+5.4**
KSH2				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BOOM	**Boomskoye usch**	**24.22**	**70**			**P**	**09 53 40.4**	**-0.4**
BOOM				IAmb	IAmb		09 54 05.1	
	comp=Z,7.3nm,1.0s							
BOOM	**Boomskoye usch**	**24.22**	**70**	P		**P**	**09 53 40.4**	**-0.4**
BOOM				pmax	pmax			
	comp=Z,7.0nm,1.0s							
NRN	**Naryn**	**24.31**	**73**			**P**	**09 53 42.6**	**+0.8**
NRN				IAmb	IAmb		09 53 49.8	
	comp=Z,7.0nm,0.8s							
NRN	**Naryn**	**24.31**	**73**	P		**P**	**09 53 42.6**	**+0.8**
NRN				pmax	pmax			
	comp=Z,7.0nm,0.8s							
GERES	**GERESS Array B**	**24.45**	**305**	P		**P**	**09 53 43.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=114,slow=9.6,SNR=2.1							
	comp=Z,0.4nm,0.5s							
MURB	**Monte Urbino**	**24.57**	**292**	P		**P**	**09 53 43.4**	**-0.5**
KDJ	**Kajisay**	**25.15**	**71**			**P**	**09 53 50.6**	**+1.4**
KDJ				IAmb	IAmb		09 53 54.1	
	comp=Z,8.5nm,0.9s							
KDJ	**Kajisay**	**25.15**	**71**	P		**P**	**09 53 50.6**	**+1.4**
KDJ				pmax	pmax			
	comp=Z,9.0nm,0.9s							
FINES	**FINESS Array B**	**25.76**	**340**	P		**P**	**09 53 54.1**	**-0.1**
	comp=Z,9.4nm,1.0s,baz=147,slow=11,SNR=6.6							
	comp=Z,9.4nm,1.0s							
FINES	**FINESS Array B**	**25.76**	**340**	*ce*P		**P**	**09 53 58.0**	**+3.7**
FINES				pmax	pmax			
	comp=Z,10.0nm,1.0s							
PRZ	**Przheval'sk**	**26.04**	**70**	P		**P**	**09 53 59.4**	**+2.1**
PRZ	**Przheval'sk**	**26.04**	**70**	P		**P**	**09 53 59.4**	**+2.1**
PRZ				pmax	pmax			
	comp=Z,7.0nm,0.4s							
KURBB	**Kurchatov Arra**	**26.95**	**52**	P		**P**	**09 54 06.2**	**+1.1**
	comp=Z,4.9nm,0.7s,baz=263,slow=9.1,SNR=40							
	comp=Z,4.9nm,0.7s							
KURK	**Kurchatov**	**27.03**	**52**			**P**	**09 54 06.7**	**+0.8**
KURK				IAmb	IAmb		09 54 12.3	
	comp=Z,12nm,1.1s							
KURK	**Kurchatov**	**27.03**	**52**	P		**P**	**09 54 06.7**	**+0.8**
KURK				pmax	pmax			
	comp=Z,12nm,1.2s							
KEST	**Kesra**	**28.05**	**276**	P		**P**	**09 54 16.1**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=53,slow=6.6,SNR=3.6							
	comp=Z,2.9nm,0.7s							
MAKZ	**Makanchi**	**28.64**	**61**			**P**	**09 54 21.6**	**+1.2**
MAKZ	**Makanchi**	**28.64**	**61**	P		**P**	**09 54 21.6**	**+1.2**
MAKZ				pmax	pmax			
	comp=Z,3.0nm,0.6s							
MK31	**Makanchi Array**	**28.86**	**61**	*ce*P		**P**	**09 54 23.4**	**+1.1**
MKAR	**Makanchi Array**	**28.86**	**61**	P		**P**	**09 54 23.1**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=266,slow=6.9,SNR=34							
	comp=Z,2.8nm,0.7s							
MKAR	**Makanchi Array**	**28.86**	**61**	P		**P**	**09 54 23.2**	**+0.9**
HFS	**Hagfors**	**29.16**	**328**	P		**P**	**09 54 24.0**	**-0.8**
	comp=Z,4.3nm,0.9s,baz=186,slow=25,SNR=1.6							
	comp=Z,4.3nm,0.9s							
HFS	**Hagfors**	**29.16**	**328**	P		**P**	**09 54 24.0**	**-0.8**
ZALV	**Zalesovo Beam**	**31.48**	**47**	P		**P**	**09 54 45.4**	**0.0**
	comp=Z,1.7nm,0.4s,baz=257,slow=10,SNR=8.6							
	comp=Z,1.7nm,0.4s							
DGZ	**Jazzator, Alta**	**32.46**	**56**	*i* P		**P**	**09 54 54.7**	**+0.4**
DGZ				pmax	pmax			
	comp=Z,5.0nm,1.0s							
WMQ	**Urumqi**	**32.73**	**66**	*e*P		**P**	**09 54 59.6**	**+3.0**
WMQ				LR	LR			
	comp=Z,140nm,17.7s							
EKA	**Eskdalemuir Ar**	**35.89**	**314**	P		**P**	**09 55 23.5**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=115,slow=7.5,SNR=5.6							
	comp=Z,3.7nm,0.8s							
EVN	**Everest**	**36.66**	**94**			**P**	**09 55 33.1**	**+1.7**
EVN				IAmb	IAmb		09 55 34.9	
	comp=Z,5.3nm,0.9s							
ESDC	**Sonseca Array**	**37.28**	**288**	P		**P**	**09 55 34.4**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=61,slow=8.7,SNR=11							
	comp=Z,1.3nm,0.8s							
JMIC	**Jan Mayen**	**42.33**	**337**	LR	LR		10 14 51.2	
	comp=Z,243nm,18.5s,baz=240,slow=38							
SONM	**Songino Array**	**45.08**	**57**	P		**P**	**09 56 40.4**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=282,slow=7.2,SNR=1.8							
	comp=Z,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**45.44**	**248**	P		**P**	**09 56 42.6**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=39,slow=5.5,SNR=3.9							
	comp=Z,0.6nm,0.8s							
ULN	**Ulaanbaatar**	**45.50**	**57**	P		**P**	**09 56 45.0**	**+1.6**
ULN	**Ulaanbaatar**	**45.50**	**57**	P		**P**	**09 56 45.0**	**+1.6**
ULN				pmax	pmax			
	comp=Z,3.0nm,1.1s							
ULN				pmax	pmax			
	comp=Z,6.0nm,0.9s							
LZH	**Lanzhou**	**46.61**	**74**	*e*P		**P**	**09 56 55.8**	**+3.5**
LZH				sP	sP		09 57 02.3	+8.1
LZH				pmax	pmax			
	comp=Z,16nm,1.7s							
PZH	**PanZhiHua**	**49.06**	**86**	P		**P**	**09 57 13.8**	**+2.4**
HHC	**Hu-ho-hao-te**	**50.58**	**65**	*e*P		**P**	**09 57 22.8**	**0.0**
HHC				pmax	pmax			
	comp=Z,7.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,130nm,5.2s							
CM31	**Chiang Mai Arr**	**51.09**	**97**	P		**P**	**09 57 25.9**	**-0.8**
CM31				IAmb	IAmb		09 57 27.8	
	comp=Z,5.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**51.09**	**97**	P		**P**	**09 57 27.1**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=297,slow=8.8,SNR=12							
CMAR				LR	LR		10 22 52.5	
	comp=Z,44nm,18.2s,baz=0.0,slow=40							
	comp=Z,3.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**51.09**	**97**	*ce*P		**P**	**09 57 27.2**	**+0.5**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
TIXI	**Tiksi**	**52.35**	**23**	*ce*P		**P**	**09 57 36.0**	**+0.6**
TIXI				pmax	pmax			
	comp=Z,10.0nm,2.5s							
YAK	**Yakutsk**	**54.81**	**35**	*i* P		**P**	**09 57 54.2**	**+0.7**
YAK				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KSRS	**Korea Array**	**63.53**	**62**	P		**P**	**09 58 54.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=279,slow=6.5,SNR=5.5							
	comp=Z,1.4nm,0.7s							
SEY	**Seymchan**	**63.94**	**29**	*ce*P		**P**	**09 58 56.9**	**+0.3**
SEY				pmax	pmax			
	comp=Z,20nm,2.5s							
MA2	**Magadan**	**65.16**	**33**	*ce*P		**P**	**09 59 06.1**	**+1.4**
MA2				pmax	pmax			
	comp=Z,10.0nm,2.5s							
BILL	**Bilibino**	**65.34**	**21**	*i* P		**P**	**09 59 06.8**	**+1.1**
BILL				pmax	pmax			
	comp=Z,2.0nm,1.1s							
BOSA	**Boshof**	**69.03**	**198**	LR	LR		10 34 07.1	
	comp=Z,71nm,18.6s,baz=61,slow=40							
SKR	**Severo-Kuril's**	**72.98**	**38**	*ce*P		**P**	**09 59 53.2**	**-0.2**
SUR	**Sutherland**	**73.77**	**201**	LR	LR		10 33 30.9	
	comp=Z,93nm,18.4s,baz=67,slow=37							
ILAR	**Eielson Array**	**76.79**	**5**	P		**P**	**10 00 13.9**	**-1.4**
	comp=Z,0.7nm,1.0s,baz=336,slow=5.3,SNR=4.9							
	comp=Z,0.7nm,1.0s							
YKA	**Yellowknife Ar**	**78.06**	**350**	P		**P**	**10 00 20.5**	**-1.8**
	comp=Z,0.7nm,1.0s,baz=8.3,slow=6.0,SNR=9.4							
	comp=Z,0.7nm,1.0s							
SADO	**Sadowa**	**82.87**	**323**	LR	LR		10 40 42.3	
	comp=Z,112nm,18.1s,baz=40,slow=38							

IDC ***23*** *09:48:53.0±1.8,35.˚19N×140.˚22E,h74km±13km,mb3.7/11, mbtmp4.1/17,Error ellipse: s-maj=27.4km s-min=5.8km az=70.0*

NIED ***23*** *09:48:54.2,35.˚18N×139.˚98E,h81km,MW4.1,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.04; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-0.15; $M_{r\theta}$-0.50; $M_{\theta\phi}$-1.41; $M_{\phi r}$-1.19; Fault plane solution: $M_0$1.86000×10^{15} NP1: ϕ_s92.00000°,δ53.00000°,λ-171.00000°. NP2: ϕ_s357.00000°,δ83.00000°,λ-37.00000°.*

NEIC ***23*** *09:48:54.8±1.4,35.˚20N±0.˚07×140.˚1E±0.˚1,h74km±10km, mb4.2/8 Error ellipse: s-maj=13.6km s-min=9.9km az=81.0*

JMA ***23*** *09:48:54.2±0.2,

H11N3	**WAKE ISLAND Hy**	**28.28**	**116**	T		T		10 24 03.7	
	baz=308,slow=75,SNR=56								
H11S3	**WAKE ISLAND Hy**	**28.89**	**118**	T		T		10 24 55.8	
	baz=311,slow=76								
H11S1	**WAKE ISLAND Hy**	**28.89**	**118**	T		T		10 24 53.4	
	baz=311,slow=76								
H11S2	**WAKE ISLAND Hy**	**28.91**	**118**	T		T		10 24 50.2	
	baz=311,slow=76								
ZALV	**Zalesovo Beam**	**42.35**	**314**	P		**P**		**09 56 39.5**	**-0.5**
	comp=E,1.2nm,0.4s,baz=106,slow=7.3,SNR=6.5								
ZALV				PcP		**PcP**		**09 58 32.2**	**+0.2**
	comp=E,0.4nm,0.3s,baz=98,slow=3.1,SNR=2.1								
	comp=E,1.2nm,0.4s								
MKAR	**Makanchi Array**	**44.17**	**304**	P		**P**		**09 56 55.8**	**+1.0**
	comp=E,2.0nm,0.6s,baz=89,slow=9.9,SNR=16								
MKAR				PcP		**PcP**		**09 58 38.6**	**+0.3**
	comp=E,0.2nm,0.5s,baz=113,slow=3.3,SNR=1.0								
	comp=E,2.0nm,0.6s								
MKAR	**Makanchi Array**	**44.17**	**304**	P		**P**		**09 56 55.2**	**+0.3**
KURK	**Kurchatov**	**46.20**	**309**	P		**P**		**09 57 11.4**	**+0.6**
KURBB	**Kurchatov Arra**	**46.27**	**309**	P		**P**		**09 57 12.1**	**+0.8**
	comp=E,2.5nm,0.6s,baz=82,slow=7.4,SNR=29								
	comp=E,2.5nm,0.6s								
C18K	**Utukok River**	**46.42**	**26**	P		**P**		**09 57 14.4**	**+2.1**
C18K				IAmb		IAmb		09 57 40.6	
	comp=Z,2.7nm,1.2s								
G18K	**Tagagawik**	**46.80**	**30**	P		**P**		**09 57 17.8**	**+2.5**
C19K	**Lookout Ridge**	**47.10**	**25**	P		**P**		**09 57 20.4**	**+2.8**
C19K				IAmb		IAmb		09 57 49.6	
	comp=Z,6.2nm,1.4s								
E19K	**Redstone River**	**47.62**	**28**	P		**P**		**09 57 22.5**	**+0.9**
E19K				IAmb		IAmb		09 57 57.3	
	comp=Z,7.4nm,1.5s								
BVAR	**Borovoye Array**	**50.99**	**313**	P		**P**		**09 57 48.1**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=103,slow=7.9,SNR=7.2								
	comp=Z,0.8nm,0.3s								
WRA	**Warramunga Arr**	**55.10**	**187**	P		**P**		**09 58 17.9**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=0.7,slow=7.6,SNR=7.3								
	comp=Z,0.9nm,0.4s								
WRA	**Warramunga Arr**	**55.10**	**187**	P		**P**		**09 58 17.3**	**-0.7**
ARTI	**Arti**	**57.11**	**319**	P		**P**		**09 58 32.3**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=101,slow=23,SNR=2.0								
	comp=Z,0.9nm,0.3s								
AB31	**Akbulak array**	**58.27**	**311**	P		**P**		**09 58 40.8**	**+0.6**
AS31	**Alice Springs**	**58.82**	**187**	P		**P**		**09 58 44.9**	**+0.7**
AS31				IAmb		IAmb		09 59 21.3	
	comp=Z,1.1nm,0.6s								
ASAR	**Alice Springs**	**58.83**	**187**	P		**P**		**09 58 42.4**	**-1.8**
	comp=Z,0.3nm,0.6s,baz=11,slow=14,SNR=1.9								
	comp=Z,0.3nm,0.6s								
ASAR	**Alice Springs**	**58.83**	**187**	P		**P**		**09 58 44.8**	**+0.5**
SPITS	**Spitsbergen Ar**	**62.11**	**349**	P		**P**		**09 59 06.2**	**+0.3**
	comp=Z,8.0nm,1.1s,baz=108,slow=4.7,SNR=1.7								
	comp=Z,8.0nm,1.1s								
FINES	**FINESS Array B**	**69.91**	**332**	P		**P**		**09 59 56.7**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=54,slow=6.4,SNR=12								
	comp=Z,2.6nm,0.8s								
AKASG	**Malin Array Be**	**75.06**	**322**	P		**P**		**10 00 25.8**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=52,slow=5.9,SNR=1.8								
	comp=Z,0.3nm,0.3s								

*SFS **23** 10:01:29.9, 36.55N×7.12W, h45km, ML2.5/7, ML1.9/7, MLv1.5/7*
*IGIL **23** 10:01:30.5, 36.60N×7.24W, h18km, ML1.5*
*MDD **23** 10:01:30.2±0.7, 36.59N×7.12W, h34km±2km, mb_Lg2.1/5, Error ellipse: s-maj=7.8km s-min=3.3km az=5.0*
*INMG **23** 10:01:30.0±1.8, 36.59N×7.22W, h16km±4km, ML1.6, Error ellipse: s-maj=6.3km s-min=5.3km az=48.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Golfo de Cadiz*

ISC 23 10:01:28.7±1.7, **36.53N**±0.08×**7.12W**±0.04, **h44**km±46km, **n37**,σ1**9**04/66, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.97**	**318**	Pn	**Pn**	**10 01 46.0**	**+0.2**
PBDV	**Barranco-do-Ve**	**0.97**	**318**	*e*P	**Pn**	**10 01 45.8**	**0.0**
PBDV				*e*S	**Sn**	**10 01 57.4**	**-1.0**
PBDV				*i* IAML		10 01 58.1	
PBDV				*i* IAML		10 01 58.5	
PBDV				*i* IAML		10 01 58.8	
PVAQ	**Vaqueiros**	**1.00**	**331**	*e*P	**Pn**	**10 01 46.4**	**+0.2**
PVAQ				*e*S	**Sn**	**10 01 58.6**	**-0.5**
PVAQ				*i* IAML		10 01 59.2	
PVAQ				*i* IAML		10 01 59.3	
PVAQ				*i* IAML		10 01 59.3	
EGRO	**El Granado**	**1.04**	**344**	Pn	**Pn**	**10 01 47.3**	**+0.4**
EGRO				Sn	**Sn**	**10 02 00.5**	**+0.2**
EGRO	**El Granado**	**1.04**	**344**	Pg	**Pn**	**10 01 47.2**	**+0.4**
EGRO				Sg	**Sn**	**10 02 00.1**	**-0.2**
EGRO				*i* lVmb_Lg		10 02 01.6	
EMIN	**Mina Concepcio**	**1.29**	**16**	Pn	**Pn**	**10 01 50.5**	**+0.2**
EMIN				Sn	**Sn**	**10 02 05.3**	**-0.9**
EMIN	**Mina Concepcio**	**1.29**	**16**	Pg	**Pn**	**10 01 50.4**	**+0.2**
EMIN				Sg	**Sn**	**10 02 05.3**	**-0.9**
EMIN				*i* lVmb_Lg		10 02 09.9	
PCVE	**Castro Verde**	**1.32**	**326**	Pn	**Pn**	**10 01 51.0**	**+0.3**
PCVE				Sn	**Sn**	**10 02 06.5**	**-0.7**
PCVE	**Castro Verde**	**1.32**	**326**	*e*P	**Pn**	**10 01 51.1**	**+0.4**
PCVE				*e*S	**Sn**	**10 02 06.7**	**-0.5**
PCVE				*i* IAML		10 02 07.0	
PCVE				*i* IAML		10 02 07.2	
PCVE				*i* IAML		10 02 08.1	
MORF	**Marmelete**	**1.45**	**303**	*e*S	**Sn**	**10 02 08.9**	**-1.4**
MORF				IAML		10 02 10.6	
	comp=N,6.5nm,0.1s						
MORF	**Marmelete**	**1.45**	**303**	*e*P	**Pn**	**10 01 53.0**	**+0.5**
MORF				*e*S	**Sn**	**10 02 09.0**	**-1.4**
MORF				*i* IAML		10 02 10.5	
MORF				*i* IAML		10 02 10.6	
MORF				*i* IAML		10 02 10.8	
PFVI	**Vila Bisbo**	**1.50**	**294**	*e*P	**Pn**	**10 01 53.5**	**+0.4**
PFVI				*e*S	**Sn**	**10 02 10.4**	**-1.0**
PFVI				*i* IAML		10 02 12.9	
PFVI				*i* IAML		10 02 19.5	
MESJ	**Messejana**	**1.58**	**326**	*e*P	**Pn**	**10 01 54.5**	**+0.3**
MESJ				*e*S	**Sn**	**10 02 11.9**	**-1.5**
MESJ				IAML		10 02 13.9	
	comp=N,4.1nm,0.2s						
MESJ	**Messejana**	**1.58**	**326**	*e*P	**Pn**	**10 01 54.5**	**+0.3**
MESJ				*e*S	**Sn**	**10 02 12.4**	**-1.0**
MESJ				*i* IAML		10 02 13.6	
MESJ				*i* IAML		10 02 14.3	
MESJ				*i* IAML		10 02 15.8	
PBEJ	**Beja**	**1.61**	**338**	*e*P	**Pn**	**10 01 57.0**	**+2.4**
PBEJ				*e*S	**Sn**	**10 02 13.8**	**-0.4**
PBEJ				*i* IAML		10 02 17.7	
PBEJ				*i* IAML		10 02 20.0	
PBEJ				*i* IAML		10 02 25.5	
E1302	**La Puebla de C**	**1.62**	**68**	Pg	**Pn**	**10 01 56.6**	**+1.9**
E1302				*i* lVmb_Lg		10 02 19.7	
PTEO	**Sao Teotonio**	**1.64**	**309**	*e*P	**Pn**	**10 01 55.2**	**+0.2**
PTEO				*e*S	**Sn**	**10 02 13.9**	**-1.0**
PTEO				*i* IAML		10 02 14.5	
PTEO				*i* IAML		10 02 15.2	
PTEO				*i* IAML		10 02 24.9	
PBAR	**Barrancos**	**1.64**	**2**	Pn	**Pn**	**10 01 55.6**	**+0.5**
PBAR				Sn	**Sn**	**10 02 14.6**	**-0.4**
PBAR	**Barrancos**	**1.64**	**2**	*e*P	**Pn**	**10 01 55.7**	**+0.5**
PBAR				*e*S	**Sn**	**10 02 15.0**	**-0.1**
PBAR				*i* IAML		10 02 19.0	
PBAR				*i* IAML		10 02 19.8	
PBAR				*i* IAML		10 02 21.9	
ECAB	**El Cabril**	**2.05**	**41**	Pn	**Pn**	**10 02 01.3**	**+0.5**
ECAB	**El Cabril**	**2.05**	**41**	Pn	**Pn**	**10 02 01.0**	**+0.2**
ECAB				Sn	**Sn**	**10 02 23.2**	**-2.0**
ECAB				*i* lVmb_Lg		10 02 33.6	
EVO	**Evora**	**2.12**	**341**	Pn	**Pn**	**10 02 02.1**	**+0.5**
EVO				Sn	**Sn**	**10 02 25.2**	**-1.6**
EVO	**Evora**	**2.12**	**341**	*e*P	**Pn**	**10 02 02.2**	**+0.5**
EVO				*e*S	**Sn**	**10 02 26.7**	**-0.1**
MOE	**Montemor**	**2.22**	**334**	*e*P	**Pn**	**10 02 03.5**	**+0.5**
MOE				*e*S	**Sn**	**10 02 28.4**	**-0.8**
MOE				*i* IAML		10 02 29.5	
MOE				*i* IAML		10 02 29.5	
MOE				*i* IAML		10 02 29.9	
PARRA	**Arraiolos**	**2.40**	**342**	*e*P	**Pn**	**10 02 05.9**	**+0.5**
PARRA				*e*S	**Sn**	**10 02 32.3**	**-1.3**
PARRA				*i* IAML		10 02 33.7	
PARRA				*i* IAML		10 02 34.1	
PARRA				*i* IAML		10 02 35.4	

EADA	**Adamuz**	**2.60**	**50**	Pn		**Pn**		**10 02 09.1**	**+0.8**
EADA				Sn		**Sn**		**10 02 36.9**	**-1.8**
EADA				*i* lVmb_Lg				10 02 41.5	
PMTG	**Montargil**	**2.68**	**341**	*e*P		**Pn**		**10 02 10.0**	**+0.6**
PMTG				*e*S		**Sn**		**10 02 39.8**	**-0.8**
PMTG				*i* IAML				10 02 41.0	
PMTG				*i* IAML				10 02 41.3	
PMTG				*i* IAML				10 02 42.0	
PMRV	**Marv??o**	**2.90**	**356**	*e*P		**Pn**		**10 02 13.8**	**+1.4**
PMRV				*e*S		**Sn**		**10 02 45.8**	**-0.2**
PMRV				*i* IAML				10 02 46.4	
PMRV				*i* IAML				10 02 46.7	
PMRV				*i* IAML				10 02 47.6	
PMAFR	**Mafra**	**2.97**	**325**	*e*P		**Pn**		**10 02 14.4**	**+1.1**
PMAFR				erx		rx		10 02 48.7	
PMAFR				*e*S		**S**		**10 02 48.7**	**+1.1**
PSARD	**Sardoal**	**3.17**	**345**	*e*P		**Pn**		**10 02 17.1**	**+1.0**
PSARD				*e*S		**Sn**		**10 02 51.0**	**-1.7**
PSARD				*i* IAML				10 02 53.5	
PSARD				*i* IAML				10 02 53.5	
PSARD				*i* IAML				10 02 54.6	
PSBE	**So Bento**	**3.26**	**337**	*e*P		**Pn**		**10 02 17.4**	**+0.1**
PSBE				*e*S		**Sn**		**10 02 54.4**	**-0.5**
PSBE				*i* IAML				10 02 55.8	
PCBR	**Castelo Branco**	**3.32**	**355**	*e*P		**Pn**		**10 02 18.7**	**+0.6**
PCBR				*e*S		**Sn**		**10 02 56.0**	**-0.2**
PCBR				*i* IAML				10 02 56.8	
PCBR				*i* IAML				10 02 58.1	
CIBOR	**Castaar de Ib**	**3.38**	**23**	Pn		**Pn**		**10 02 20.3**	**+1.4**
CIBOR				Sn		**Sn**		**10 02 55.3**	**-2.4**
EQES	**Quesada**	**3.47**	**67**	Pn		**Pn**		**10 02 22.0**	**+1.7**
PSIM	**Granatula de C**	**3.51**	**48**	Sn		**Sn**		**10 02 58.3**	**-2.8**
MVO	**Moncorvo**	**4.63**	**1**	*e*P		**Pn**		**10 02 36.7**	**+0.6**
ETOB	**Tobarra**	**4.90**	**63**	Pn		**Pn**		**10 02 39.9**	**+0.1**

*NEIC **23** 10:03:36.0±1.5, 33.69N±0.06×141.34E±0.10, h10km±1km, mb4.7/25, Error ellipse: s-maj=13.6km s-min=10.8km az=96.0*
*BJI **23** 10:03:35.4, 33.94N×141.10E, h10km, mB4.9/4, mb4.4/20*
*NIED **23** 10:03:39.6, 33.84N×141.21E, h59km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.13; Mθθ1.37; Mϕϕ-2.50; Mrθ-0.80; Mθϕ0.06; Mrϕ0.29; Fault plane solution: M₀2.29000×10¹⁵ NP1: ϕs217.00000°, δs58.00000°, λs152.00000°. NP2: ϕs323.00000°, δs66.00000°, λs35.00000°.*
*IDC **23** 10:03:39.4±1.9, 33.71N×141.31E, h40km±16km, mb3.9/23, mbtmp4.1/29, ML3.8/6, MS3.2/7 Error ellipse: s-maj=13.3km s-min=8.3km az=104.0*
*JMA **23** 10:03:39.6±0.3, 33.8N±0.6×141.1E±, h59km±4km, MV4.3/37, E OFF HACHIJOJIMA ISLAND*

ISC 23 10:03:38.9±0.6, **33.74N**±0.04×**141.34E**±0.07, **h36**km±2km, **n101**,σ1**9**02/102, **mb4.4**/41, **1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.96**	**342**	P	**Pn**	**10 03 55.5**	**+0.2**
BSO1				X		10 04 07.2	
BSO3	**Boso 3**	**1.26**	**327**	P	**Pn**	**10 03 59.8**	**+0.1**
JHJ2	**Mitsune**	**1.42**	**244**		**Pn**	**10 04 01.8**	**-0.3**
JHJ2	**Mitsune**	**1.42**	**244**	P	**Pn**	**10 04 03.0**	**+0.9**
JHJ2				*e*S	**Sn**	**10 04 20.5**	**+0.9**
JHJ	**Hachijo jima 2**	**1.44**	**245**	P	**Pn**	**10 04 03.0**	**+0.6**
	2μm,0.3s,baz=93,slow=16,SNR=64						
JHJ				S	**Sn**	**10 04 19.4**	**-0.8**
	5μm,0.4s,baz=52,slow=22,SNR=28						
JHCJ	**Hachijojimakas**	**1.45**	**243**	P	**Pn**	**10 04 03.4**	**+0.8**
JHCJ				S	**Sn**	**10 04 20.6**	**+0.2**
JMKN	**Mikurajimanish**	**1.47**	**276**	P	**Pn**	**10 04 02.9**	**+0.1**
JMKN				*e*S	**Sn**	**10 04 20.2**	**-0.5**
BSO4	**Boso 4**	**1.50**	**327**	P	**Pn**	**10 04 03.4**	**+0.2**
JMYK	**Miyake Tsubota**	**1.52**	**283**	P	**Pn**	**10 04 03.4**	**-0.1**
JMYK				*e*S	**Sn**	**10 04 20.9**	**-1.2**
KTR	**Katsuura**	**1.64**	**329**	*e*P	**Pn**	**10 04 05.0**	**-0.2**
KTR				*e*S	**Sn**	**10 04 23.9**	**-1.1**
JIM2	**Oshima 3**	**1.86**	**302**	*i* P	**Pn**	**10 04 07.5**	**-0.7**
JTHY	**Toshimahigashi**	**1.87**	**295**	P	**Pn**	**10 04 08.3**	**-0.1**
JIZS	**Izushimoda**	**2.26**	**296**	*i* P	**Pn**	**10 04 13.7**	**0.0**
JIZS				*e*S	**Sn**	**10 04 39.9**	**-0.5**
JOD2	**Odawara 2**	**2.40**	**310**	*i* P	**Pn**	**10 04 15.2**	**-0.4**
JOD2				S	**Sn**	**10 04 42.5**	**-1.4**
JSG	**Sagara**	**2.78**	**290**		**Pn**	**10 04 21.8**	**+1.0**
JGF	**Kuroka**	**3.77**	**301**		**Pn**	**10 04 36.3**	**+1.7**
MJAR	**Matsushiro Arr**	**3.79**	**318**	P	**Pn**	**10 04 35.5**	**+0.7**
	8.6nm,0.3s,baz=166,slow=14,SNR=524						
MJAR				S	**Sn**	**10 05 18.1**	**-0.1**
	55nm,0.7s,baz=131,slow=19,SNR=8.3						
	59nm,0.5s						
MAJO	**Matsushiro**	**3.80**	**318**		**Pn**	**10 04 35.9**	**+1.0**
INU	**Inuyama**	**3.91**	**295**		**Pn**	**10 04 37.6**	**+1.2**
JMN	**Monobe**	**6.22**	**272**	Pn	**Pn**	**10 05 10.0**	**+1.9**
JCJ	**Chichijima**	**6.66**	**174**	P	**Pn**	**10 05 13.3**	**-0.9**
	302nm,0.3s,baz=68,slow=5.3,SNR=117						
JCJ				S	Sn	10 06 22.9	-6.1
	125nm,0.3s,baz=290,slow=20,SNR=5.5						
JCJ	**Chichijima**	**6.66**	**174**		**Pn**	**10 05 13.0**	**-1.3**
JNU	**Nakatsue**	**8.77**	**269**	P	**Pn**	**10 05 43.7**	**+0.6**
	1.1nm,0.3s,baz=124,slow=4.5,SNR=9.8						
JNU				LR	LR	10 09 14.6	
	comp=Z,208nm,18.6s,baz=69,slow=38						
	4.4nm,0.4s						
ASAJ	**Asahikawa**	**10.41**	**5**	P	**Pn**	**10 06 04.9**	**-0.6**
	1.6nm,0.3s,baz=209,slow=16,SNR=8.2						
ASAJ				S	Sn	10 07 52.4	-8.4
	47nm,1.4s,baz=168,slow=23,SNR=2.0						
ASAJ				LR	LR	10 11 17.9	
	comp=Z,135nm,18.7s,baz=137,slow=44						
	7.0nm,0.5s						
JKA	**Kamikawa-asahi**	**10.41**	**5**	Pn	**Pn**	**10 06 04.2**	**-1.3**
KSRS	**Korea Array**	**11.53**	**293**	P	**Pn**	**10 06 22.6**	**+1.6**
	0.1nm,0.3s,baz=103,slow=14,SNR=6.5						
KSRS				LR	LR	10 10 37.8	
	comp=Z,107nm,21.0s,baz=55,slow=36						
	2.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**12.72**	**328**	P	**Pn**	**10 06 39.4**	**+2.3**
	0.2nm,0.3s,baz=151,slow=16,SNR=2.5						
	1.9nm,0.7s						
JOW	**Kunigami**	**13.22**	**242**	LR	LR	10 11 51.3	
	comp=Z,69nm,19.4s,baz=310,slow=37						
BNX	**BinXian**	**16.05**	**322**	||P	**P**	**10 07 21.9**	**-2.8**
KLR	**Kul'dur**	**17.04**	**338**	P	**P**	**10 07 33.7**	**-2.0**
	0.6nm,0.3s,baz=164,slow=9.5,SNR=12						
KLR				LR	LR	10 15 12.0	
	comp=Z,95nm,18.4s,baz=152,slow=41						
	2.3nm,0.5s						
NJ2	**Nanjing**	**18.96**	**271**	*e*P	**Pn**	**10 07 55.5**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HEH	**HeiHe**	**19.42**	**332**	*e*P	**P**	**10 07 59.5**	**-2.4**
NACB	**Ninganchiao**	**19.70**	**246**	P	**P**	**10 08 04.1**	**-1.0**
NACB				IAmb	IAmb	10 08 05.6	
	comp=Z,43nm,1.2s						
TPUB	**Ta-pu**	**20.92**	**246**	P	**P**	**10 08 17.1**	**-1.4**
TPUB				IAmb	IAmb	10 08 33.0	
	comp=Z,87nm,1.4s						
XLT	**XiLinHaoTe**	**22.06**	**305**	*e*P	P	10 08 39.8	+9.2
XLT				pP	pwP	10 08 44.8	+1.1
XLT				sP	sP	10 08 48.8	+5.1
XLT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HILR	**Hailar Array B**	**22.46**	**321**	P	**P**	**10 08 35.5**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=130,slow=13,SNR=5.8						
	comp=Z,2.9nm,0.5s						
PETK	**Petropavlovsk-**	**22.61**	**26**	LR	LR	10 20 49.8	
	comp=Z,28nm,18.4s,baz=246,slow=46						
HHC	**Hu-ho-hao-te**	**24.65**	**295**	*e*P	**P**	**10 08 56.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,220nm,7.9s						
H11N2	**WAKE ISLAND Hy**	**26.66**	**115**	T	T	10 38 19.6	
	baz=306,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**26.66**	**115**	T	T	10 38 20.0	
	baz=306,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**26.68**	**115**	T	T	10 38 17.0	
	baz=306,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	**27.26**	**117**	T	T	10 39 09.1	
	baz=307						
H11S1	**WAKE ISLAND Hy**	**27.26**	**117**	T	T	10 39 10.1	
	baz=307						
H11S2	**WAKE ISLAND Hy**	**27.27**	**117**	T	T	10 39 08.6	
	baz=307						

ULN	**Ulaanbaatar**	**29.27**	**309**			**P**		**10 09 38.4**	**+0.7**
ULN				IAmb		IAmb		10 09 39.5	
	comp=Z,5.5nm,0.7s								
SONM	**Songino Array**	**29.69**	**309**	P		**P**		**10 09 42.3**	**+1.0**
	comp=Z,3.7nm,0.8s,baz=109,slow=8.6,SNR=11								
	comp=Z,3.7nm,0.8s								
LZH	**Lanzhou**	**30.72**	**285**	*e*P		**P**		**10 09 49.9**	**-0.7**
LZH				pP		pP		10 09 56.4	-3.5
LZH				pmax		pmax			
	comp=Z,7.0nm,1.2s								
TLY	**Talaya**	**32.53**	**315**			**P**		**10 10 07.3**	**+1.1**
PZH	**PanZhiHua**	**34.84**	**269**	P		**P**		**10 10 28.3**	**+1.6**
GOMU	**GeErMu**	**37.93**	**287**	P		**P**		**10 10 52.1**	**-1.1**
GOMU				pmax		pmax			
	comp=Z,3.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**40.70**	**259**	P		**P**		**10 11 15.9**	**-0.2**
	comp=Z,2.3nm,0.3s,baz=193,slow=20,SNR=4.6								
	comp=Z,2.3nm,0.3s								
WMQ	**Urumqi**	**42.35**	**300**	*e*P		P		10 11 31.8	+2.3
WMQ				pmax		pmax			
	comp=Z,11nm,0.9s								
ZALV	**Zalesovo Beam**	**44.14**	**315**	P		**P**		**10 11 43.3**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=99,slow=9.2,SNR=5.2								
ZALV				PcP		**PcP**		**10 13 27.7**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=107,slow=3.2,SNR=3.0								
	comp=Z,0.7nm,0.3s								
ZALV	**Zalesovo Beam**	**44.14**	**315**	P		**P**		**10 11 44.3**	**+0.7**
MKAR	**Makanchi Array**	**45.88**	**305**	P		**P**		**10 11 57.5**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=86,slow=9.4,SNR=24								
MKAR				PcP		**PcP**		**10 13 34.7**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=85,slow=5.5,SNR=2.1								
	comp=Z,2.5nm,0.7s								
MKAR	**Makanchi Array**	**45.88**	**305**			**P**		**10 11 57.9**	**+0.2**
MAKZ	**Makanchi**	**46.09**	**305**			**P**		**10 12 00.4**	**+1.0**
EVN	**Everest**	**46.72**	**278**	P		**P**		**10 12 04.4**	**-0.8**
MTN	**Manton Dam**	**47.33**	**194**			**P**		**10 12 08.8**	**-0.5**
COEN	**Coen**	**47.46**	**178**	P		**P**		**10 12 10.1**	**-0.2**
KURK	**Kurchatov**	**47.97**	**310**			**P**		**10 12 14.0**	**+0.2**
KURK				IAmb		IAmb		10 12 18.9	
	comp=Z,4.5nm,0.7s								
KURBB	**Kurchatov Arra**	**48.03**	**310**	P		**P**		**10 12 13.9**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=82,slow=7.6,SNR=12								
KURBB				PcP		**PcP**		**10 13 41.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=89,slow=4.1,SNR=2.7								
	comp=Z,2.2nm,0.6s								
B20K	**Meade River**	**49.01**	**24**	P		**P**		**10 12 23.2**	**+1.6**
B20K				IAmb		IAmb		10 12 46.7	
	comp=Z,3.6nm,0.7s								
K20K	**Telida**	**49.10**	**33**	P		**P**		**10 12 24.2**	**+1.8**
K20K				IAmb		IAmb		10 12 54.6	
	comp=Z,8.0nm,1.4s								
D22K	**Ayikyak River**	**50.34**	**25**	P		**P**		**10 12 34.0**	**+2.2**
D22K				IAmb		IAmb		10 13 05.4	
	comp=Z,9.7nm,1.4s								
KNRA	**Kununurra**	**50.58**	**196**			**P**		**10 12 33.8**	**-0.3**
KSH2	**Kashi**	**52.16**	**296**	P		**P**		**10 12 47.4**	**+1.4**
KSH2				pmax		pmax			
	comp=Z,4.0nm,1.3s								
ILAR	**Eielson Array**	**52.32**	**31**	P		**P**		**10 12 47.2**	**+0.6**
	comp=Z,0.7nm,1.1s,baz=257,slow=6.1,SNR=4.8								
	comp=Z,0.7nm,1.1s								
D25K	**Kavik River**	**52.64**	**25**	P		**P**		**10 12 49.8**	**+0.8**
BVAR	**Borovoye Array**	**52.78**	**314**	P		**P**		**10 12 49.4**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=103,slow=8.1,SNR=4.5								
	comp=Z,1.2nm,0.6s								
BMAR	**Burnt Mountain**	**53.26**	**28**	P		**P**		**10 12 55.3**	**+1.7**
WB0	**Warramunga Arr**	**53.62**	**188**	P		**P**		**10 12 56.2**	**-0.4**
WB0				IAmb		IAmb		10 13 03.6	
	comp=Z,11nm,0.7s								
WRAB	**Tennant Creek**	**53.79**	**188**	P		**P**		**10 12 57.7**	**-0.1**
WRAB				IAmb		IAmb		10 13 04.5	
	comp=Z,8.4nm,0.8s								
WRA	**Warramunga Arr**	**53.80**	**188**	P		**P**		**10 12 57.5**	**-0.4**
	comp=Z,3.3nm,0.4s,baz=6.8,slow=7.7,SNR=120								
	comp=Z,3.3nm,0.4s								
WRA	**Warramunga Arr**	**53.80**	**188**	P		**P**		**10 12 56.5**	**-1.5**
KK31	**Karatay Array**	**54.77**	**302**	P		**P**		**10 13 04.9**	**0.0**
KK31				IAmb		IAmb		10 13 08.4	
	comp=Z,4.8nm,0.9s					

VANB				Sg	Sb	10 06 36.7	-0.2		
VMUR	**Van-Muradiye**	**0.93**	**306**	P	Pg	**10 06 24.0**	**+0.8**		
VMUR				S	Sb	**10 06 37.6**	**+0.2**		
IMRD	**Marand**	**0.95**	**74**	Pg	Pn	**10 06 25.5**	**-0.5**		
NAX	**Nakhchivan**	**1.04**	**46**	P	Pn	**10 06 27.2**	**0.0**		
NAX				S	Sn	**10 06 42.1**	**-0.2**		
ERCV	**ERCIS-VAN**	**1.10**	**301**	Pn	Pn	**10 06 28.8**	**+0.7**		
ERCV				Sn	Sn	**10 06 44.9**	**+0.8**		
HAKT	**HAKKARI**	**1.11**	**217**	P	Pg	**10 06 26.8**	**+0.1**		
HAKT				S	Sn	**10 06 43.3**	**-1.1**		
HAKT	**HAKKARI**	**1.11**	**217**	Pg	Pg	**10 06 26.8**	**+0.1**		
HAKT	**HAKKARI**	**1.11**	**217**	P	Pg	**10 06 26.2**	**-0.4**		
HAKT				S	Sn	**10 06 42.8**	**-1.6**		
GEVA	**Gevas**	**1.18**	**264**	P	Pg	**10 06 26.5**	**-1.5**		
GEVA				S	Sn	**10 06 45.2**	**-0.7**		
SBZ	**Shahbuz**	**1.23**	**40**	P	Pn	**10 06 30.5**	**+0.6**		
SBZ				S	Sn	**10 06 49.2**	**+2.0**		
ORD	**Ordubad**	**1.23**	**67**	P	Pn	**10 06 30.6**	**+0.7**		
ORD				S	Sn	**10 06 48.9**	**+1.7**		
DYDN	**Diyadin**	**1.28**	**329**	P	Pn	**10 06 28.9**	**-1.8**		
DYDN				S	Sg	**10 06 47.3**	**+0.8**		
DYDN	**Diyadin**	**1.28**	**329**	Pg	Pn	**10 06 28.8**	**-1.8**		
ITBZ	**Tabriz**	**1.28**	**99**	Pg	Pg	**10 06 30.7**	**+0.7**		
HYR	**Heyderabad**	**1.29**	**11**	P	Pg	**10 06 31.2**	**+1.1**		
HYR				S	Sn	**10 06 49.9**	**+1.3**		
IAZR	**Azarshahr**	**1.37**	**124**	Pg	Pg	**10 06 32.9**	**+1.2**		
CUKT	**Cukurca**	**1.41**	**212**	Pn	Pg	**10 06 32.8**	**+0.3**		
CUKT				Sn	Sg	**10 06 51.7**	**+0.9**		
CUKT	**Cukurca**	**1.41**	**212**	P	Pg	**10 06 32.6**	**+0.1**		
CUKT				S	Sg	**10 06 52.5**	**+1.7**		
VAYK	**Vayk**	**1.42**	**29**	*i* P	Pg	**10 06 33.5**	**+0.8**		
VAYK				*i* S	Sg	**10 06 52.4**	**+2.3**		
ADCV	**BITLIS_Adilcev**	**1.47**	**285**	P	Pn	**10 06 32.6**	**-0.6**		
ADCV				S	Sg	**10 06 56.1**	**+3.5**		
ADCV	**BITLIS_Adilcev**	**1.47**	**285**	Pg	Pn	**10 06 32.6**	**-0.6**		
ALVK	**Alvank**	**1.50**	**70**	*e*P	Pg	**10 06 34.5**	**+0.4**		
ALVK				*e*S	Sg	**10 06 55.1**	**+1.7**		
AGRB	**Hanur-Agry**	**1.65**	**313**	Pn	Pb	**10 06 37.2**	**+0.5**		
AGRB				Sn	Sb	**10 06 58.6**	**+0.5**		
PERV	**Siirt/Pervari-**	**1.66**	**253**	P	Pb	**10 06 35.9**	**-0.9**		
PERV				S	Sg	**10 07 02.7**	**+4.1**		
DORK	**Agr/Tutak/Do**	**1.66**	**305**	P	Pb	**10 06 36.7**	**-0.3**		
DORK				S	Sg	**10 07 01.0**	**+2.1**		
GNI	**Garni**	**1.70**	**5**	Pg	Pg	**10 06 39.1**	**+1.1**		
	77nm,0.3s,baz=292,slow=2.1,SNR=115								
GNI				LR	LR	10 07 00.7			
	comp=Z,72nm,20.5s,baz=7.5,slow=32								
GNI				Lg	Lg	10 07 01.9			
	44nm,0.3s,baz=196,slow=23,SNR=5.9								
GNI	**Garni**	**1.70**	**5**	Pn	Pg	**10 06 39.3**	**+1.2**		
GNI				Sn	Sg	**10 07 02.1**	**+1.9**		
GNI	**Garni**	**1.70**	**5**	*e*P	Pg	**10 06 38.8**	**+0.8**		
GNI				*e*S	Sg	**10 07 02.7**	**+2.5**		
KOTA	**Agri, Merkez-K**	**1.70**	**323**	P	Pn	**10 06 36.9**	**+0.5**		
KOTA				S	Sg	**10 07 00.6**	**+0.4**		
MLAZ	**Malazgirt-MUS**	**1.70**	**294**	Pn	Pg	**10 06 38.2**	**+0.1**		
METS	**Metsamor**	**1.73**	**348**	*e*P	Pb	**10 06 38.7**	**+0.6**		
METS				*e*S	Sg	**10 07 02.2**	**+1.0**		
VNNZ	**Vanand**	**1.74**	**342**	*e*P	Pg	**10 06 39.5**	**+0.7**		
VNNZ				*e*S	Sg	**10 07 03.8**	**+2.4**		
EGVZ	**Egvard**	**1.74**	**63**	*e*P	Pg	**10 06 38.8**	**0.0**		
EGVZ				*e*S	Sg	**10 07 02.5**	**+1.1**		
GRS	**Goris**	**1.75**	**53**	⇑*i*P	Pn	**10 06 38.0**	**-0.3**		
GRS				⇓*i*S	Sg	**10 07 02.0**	**+0.5**		
ARUZ	**Aruch**	**1.86**	**349**	*e*P	Pb	**10 06 40.4**	**+0.1**		
ARUZ				*e*S	Sg	**10 07 05.2**	**0.0**		
KAPZ	**Kaputan**	**1.87**	**4**	*e*P	Pb	**10 06 40.8**	**+0.2**		
KAPZ				*e*S	Sg	**10 07 05.9**	**+0.3**		
MAHB	**Mahabad**	**1.92**	**151**	Pn	Pg	**10 06 42.1**	**-0.1**		
AYRK	**Ayrk**	**1.92**	**30**	*e*P	Pg	**10 06 42.1**	**-0.1**		
AYRK				*e*S	Sg	**10 07 08.3**	**+1.1**		
AMBZ	**Amberd**	**1.95**	**354**	*e*P	Pb	**10 06 42.0**	**+0.2**		
AMBZ				*e*S	Sg	**10 07 08.0**	**0.0**		
GURO	**Guroymak-BITLI**	**1.97**	**274**	Pn	Pb	**10 06 41.2**	**-1.0**		
GURO	**Guroymak-BITLI**	**1.97**	**274**	Pn	Pb	**10 06 41.7**	**-0.5**		
QRD	**Qoradiz**	**2.39**	**64**	P	Pb	**10 06 50.0**	**+0.7**		
QRD				S	Sb	**10 07 19.4**	**+0.2**		
IHSH	**Hashtrud**	**2.44**	**117**	Pn	Pb	**10 06 50.1**	**-0.1**		
KARS	**Kars**	**2.45**	**333**	Pn	Pb	**10 06 49.3**	**-1.1**		
GDB	**GEDABAY**	**2.45**	**22**	P	Pb	**10 06 49.9**	**-0.5**		
GDB				S	Sb	**10 07 20.7**	**-0.5**		
VRTB	**Varto-Mus**	**2.51**	**287**	Pn	Pb	**10 06 49.8**	**-1.6**		
ISRB	**Sarab**	**2.54**	**103**	Pn	Pb	**10 06 51.5**	**-0.5**		
GANJ	**Ganja**	**2.59**	**32**	P	Pb	**10 06 52.1**	**-0.5**		
GANJ				S	Sb	**10 07 24.0**	**-1.0**		
AGDM	**Agdam**	**2.59**	**49**	P	Pb	**10 06 51.7**	**-1.0**		
AGDM				S	Sb	**10 07 23.8**	**-1.1**		
GRMI	**Germi**	**2.65**	**81**	Pn	Pb	**10 06 52.7**	**-1.0**		
SVAN	**Silvan-Diyarba**	**2.65**	**265**	Pn	Pn	**10 06 50.8**	**+1.5**		
SVAN	**Silvan-Diyarba**	**2.65**	**265**	Pn	Pn	**10 06 50.9**	**+1.6**		
BLQ	**Beylaqan**	**2.67**	**61**	P	Pb	**10 06 54.0**	**+0.1**		
BLQ				S	Sb	**10 07 25.8**	**-1.4**		
QZX	**Qazax, Azerbai**	**2.68**	**14**	P	Pb	**10 06 53.9**	**-0.3**		
QZX				S	Sb	**10 07 26.3**	**-1.3**		
SENK	**Senkaya-Erzuru**	**2.71**	**322**	Pn	Pb	**10 06 52.9**	**-1.8**		
BRDA	**Brd**	**2.73**	**48**	P	Pb	**10 06 54.6**	**-0.4**		
BRDA				S	Sb	**10 07 27.4**	**-1.6**		
KARO	**Karliova-Bingo**	**2.86**	**289**	Pn	Pn	**10 06 54.6**	**+2.3**		
BGD	**Bogdanovka**	**2.90**	**346**	P	Pn	**10 06 55.4**	**+2.4**		
YRD	**Yardimli**	**2.93**	**80**	P	Pb	**10 06 57.4**	**-1.2**		
YRD				S	Sb	**10 07 33.4**	**-1.6**		
LRK	**Lerik**	**2.98**	**85**	P	Pb	**10 06 58.2**	**-1.2**		
LRK				S	Sb	**10 07 35.4**	**-1.1**		
MNGR	**Mingechevir, A**	**3.04**	**39**	P	Pb	**10 06 58.1**	**-2.1**		
MNGR				S	Sb	**10 07 35.0**	**-2.9**		
DGRG	**David-gareji**	**3.06**	**12**	P	Pb	**10 07 00.7**	**0.0**		
DGRG				S	Sg	**10 07 49.0**	**+5.2**		
AKH	**Akhalkalaki**	**3.06**	**345**	P	Pb	**10 07 00.6**	**-0.2**		
BNGB	**Bingl**	**3.07**	**281**	Pn	Pn	**10 06 56.2**	**+1.0**		
GLBA	**Clilabad**	**3.11**	**74**	P	Pb	**10 06 59.9**	**-1.5**		
GLBA				S	Sb	**10 07 38.4**	**-1.4**		
VSHL	**Vashlovani**	**3.12**	**27**	P	Pb	**10 06 59.0**	**-2.7**		
VSHL				S	Sg	**10 07 49.0**	**+3.3**		
DDFL	**Dedoflistskaro**	**3.23**	**22**	P	Pb	**10 07 03.2**	**-0.4**		
YEDI	**Yedisu-Bingol**	**3.27**	**289**	Pn	Pn	**10 07 00.3**	**+2.3**		
TBLG	**Delisi**	**3.28**	**3**	Pn	Pb	**10 07 01.8**	**-2.6**		
TBLG	**Delisi**	**3.28**	**3**	P	Pb	**10 07 02.2**	**-2.2**		
TBLG				S	Sg	10 08 01.6	+11		
SAAT	**Saatly**	**3.33**	**64**	P	Pb	**10 07 03.0**	**-2.3**		
SAAT				S	Sn	**10 07 41.4**	**+2.6**		
LKRN	**Lenkeran, Azer**	**3.33**	**84**	P	Pb	**10 07 03.1**	**-2.1**		
LKRN				S	Sb	**10 07 43.2**	**-3.1**		
ASTR	**Astara**	**3.33**	**87**	P	Pb	**10 07 03.3**	**-2.0**		
ASTR				S	Sb	**10 07 43.5**	**-2.9**		
SEKA	**Sheki**	**3.43**	**36**	P	Pb	**10 07 04.5**	**-2.5**		
SEKA				S	Sb	**10 07 46.0**	**-3.2**		
DYBB	**Diyarbakir**	**3.50**	**263**	Pn	Pn	**10 07 02.8**	**+1.7**		
QBL	**Gabala**	**3.56**	**45**	P	Pb	**10 07 05.9**	**-3.3**		
QBL				S	Sn	**10 07 47.6**	**+3.0**		
ZKTA	**Zakatala**	**3.56**	**26**	P	Pb	10 07 05.5	-3.7		
ZKTA				S	Sb	**10 07 49.0**	**-4.0**		
LGD	**Lagodekhi**	**3.62**	**21**	P	Pg	**10 07 14.0**	**-0.8**		
IML	**Ismayilli**	**3.66**	**49**	P	Pb	10 07 06.9	-3.9		
IML				S	Sb	**10 07 51.3**	**-4.4**		
ALIG	**Mtskhetisjvari**	**3.71**	**350**	P	Pb	**10 07 08.4**	**-3.5**		
ALIB	**&Aumlli-Bayram**	**3.78**	**65**	P	Pb	10 07 08.6	-4.3		
ALIB				S	Sb	**10 07 54.3**	**-4.9**		
XNQ	**Khinaliq**	**3.88**	**44**	P	Pn	**10 07 09.6**	**+3.2**		
XNQ				S	Sn	**10 07 56.5**	**+3.8**		
CHRG	**Chargali**	**3.88**	**4**	P	Pn	**10 07 10.5**	**+4.1**		
PQL	**Pirkuli**	**3.90**	**52**	P	Pn	**10 07 10.3**	**+3.7**		
PQL				S	Sb	**10 07 57.9**	**-5.0**		
BAYT	**Aydıntepe-Bayb**	**3.92**	**301**	Pn	Pn	**10 07 09.7**	**+2.8**		
ERZN	**Erzincan**	**3.92**	**288**	Pn	Pn	**10 07 10.1**	**+3.2**		
GBS	**Qobustan**	**3.99**	**57**	P	Pn	**10 07 11.4**	**+3.6**		
GBS				S	Sb	**10 08 00.1**	**-5.2**		
IDHR	**Dehrash**	**4.03**	**158**	Pn	Pn	**10 07 11.4**	**+3.0**		
SVRC	**Sivrice-ELAZID**	**4.11**	**271**	Pn	Pn	**10 07 12.0**	**+2.4**		
ATGJ	**Altiaghaj**	**4.16**	**53**	P	Pn	**10 07 14.0**	**+3.9**		
ATGJ				S	Sn	**10 08 03.2**	**+3.7**		
QSAR	**Qusar**	**4.19**	**42**	P	Pn	**10 07 13.9**	**+3.5**		
QSAR				S	Sn	**10 08 03.8**	**+3.8**		
QUBA	**Quba, Azerbaij**	**4.20**	**45**	P	Pn	**10 07 14.2**	**+3.5**		
QUBA				S	Sn	**10 08 04.7**	**+4.3**		
SHTL	**Shatili**	**4.23**	**6**	P	Pb	**10 07 23.4**	**+2.8**		
GARIG	**Gari**	**4.23**	**349**	P	Pb	10 07 16.1	-4.5		
SIZA	**Siyzn**	**4.26**	**51**	P	Pn	**10 07 14.7**	**+3.2**		
SIZA				S	Sn	**10 08 06.8**	**+5.0**		
KBZ	**Khabaz**	**5.42**	**347**	Pn	Pn	10 07 32.2	+4.9		
	1.0nm,0.8s,baz=151,slow=7.6,SNR=6.9								
KVAR	**Kislovodsk Arr**	**5.67**	**346**	Pn	Pn	**10 07 33.1**	**+2.2**		
	baz=307,slow=17								
	2.1nm,0.3s								
BRTR	**Keskin Array B**	**8.57**	**282**	Pn	Pn	10 08 15.4	+4.6		
	baz=114,slow=12,SNR=6.2								
BRTR				LR	LR	10 12 16.5			
	comp=Z,95nm,19.3s,baz=333,slow=43								
	0.6nm,0.8s								
ASF	**Jabal al Asfar**	**8.85**	**227**	Pn	Pn	**10 08 16.8**	**+2.4**		
	0.2nm,0.3s,baz=267,slow=21,SNR=1.3								
	2.0nm,0.7s								
MMAI	**Mount Meron Ar**	**9.20**	**237**	Pn	Pn	**10 08 21.6**	**+2.4**		
	0.7nm,0.3s,baz=78,slow=13,SNR=2.1								
MMAI				LR	LR	10 11 41.2			
	comp=Z,93nm,19.2s,baz=66,slow=36								
	0.8nm,0.4s								
EIL	**Elat**	**11.82**	**225**	LR	LR	10 13 40.1			
	comp=Z,90nm,21.5s,baz=53,slow=38								
BELG	**Belogornoye**	**14.11**	**8**	Pn	Pn	**10 09 28.4**	**+2.2**		
	0.1nm,0.3s,baz=339,slow=6.6,SNR=2.9								
	6.7nm,0.9s								
AKTO	**Aktyubinsk**	**15.34**	**34**	Pn	Pn	**10 09 44.4**	**+1.5**		
	0.2nm,0.3s,baz=221,slow=8.4,SNR=5.6								
	0.8nm,0.3s								
AKASG	**Malin Array Be**	**16.36**	**323**	Pn	P	**10 09 57.5**	**-1.7**		
	0.2nm,0.3s,baz=134,slow=12,SNR=4.9								
	1.1nm,0.6s								
ARTI	**Arti**	**20.17**	**23**	P	Pn	10 10 43.5	+0.6		
	5.0nm,0.6s,baz=220,slow=6.0,SNR=7.4								
	5.0nm,0.6s								
VRAC	**Vranov**	**22.75**	**308**	LR	LR	10 22 02.1			
	comp=Z,207nm,19.1s,baz=350,slow=42								
BVAR	**Borovoye Array**	**23.02**	**42**	P	P	**10 11 14.7**	**+3.0**		
	1.0nm,0.6s,baz=227,slow=7.7,SNR=4.1								
	1.0nm,0.6s								
GERES	**GERESS Array B**	**24.46**	**305**	P	P	**10 11 26.4**	**+0.6**		
	0.2nm,0.3s,baz=112,slow=7.7,SNR=1.4								
	0.2nm,0.3s								
FINES	**FINESS Array B**	**25.72**	**339**	P	P	**10 11 37.9**	**+1.0**		
	7.3nm,1.1s,baz=127,slow=8.2,SNR=5.8								
	7.3nm,1.1s								
KURBB	**Kurchatov Arra**	**26.86**	**52**	P	P	**10 11 49.6**	**+2.1**		
	1.7nm,0.6s,baz=263,slow=9.2,SNR=18								
	1.7nm,0.6s								
ZALV	**Zalesovo Beam**	**31.39**	**47**	P	P	**10 12 29.9**	**+2.2**		
	0.7nm,0.4s,baz=262,slow=10.0,SNR=4.1								
	0.7nm,0.4s								
CMAR	**Chiang Mai Arr**	**51.04**	**97**	P	P	**10 15 11.2**	**+1.8**		
	0.5nm,0.3s,baz=307,slow=8.0,SNR=5.1								
	0.5nm,0.3s								
YKA	**Yellowknife Ar**	**78.01**	**350**	P	P	**10 18 06.4**	**+1.3**		
	0.2nm,1.0s,baz=359,slow=6.5,SNR=3.2								
	0.2nm,1.0s								

CATAC ***23*** *10:24:20.8, 13˚N±2˚×9˚1W±˚, h12km±3km, M3.2/16, MLv3.2/16, confirmed*

GCG ***23*** *10:24:21.1±1.6, 13˚.48N×90˚.82W, h56km±26km, MD3.9, ML3.7, Presumed earthquake*

SNET ***23*** *10:24:25.9±3.8, 13˚.65N×90˚.44W, h76km, ML3.1, Presumed earthquake*

ISC 23 10:24:19.9±2.3, 13˚.41N±0˚.09×90˚.74W±0˚.06, h5km±14km, n34, σ1°911/50, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.28**	**56**	*i* P	**Pn**		**10 24 33.2**	**+2.5**
FAME	**Alcaldia de Sa**	**0.83**	**58**	P	**Pg**		**10 24 36.4**	**+0.6**
FG8	**Yepocapa, Chim**	**0.86**	**11**	*i* P	**Pn**		**10 24 38.8**	**-0.1**
FG16	**Alotenango, Sa**	**0.89**	**14**	*i* P	**Pn**		**10 24 39.0**	**-0.4**
FG16				IAML			10 24 57.5	
	comp=N,4μm,0.2s							
NUBE	**Las Nubes**	**1.05**	**62**	P	**Pb**		**10 24 40.2**	**-0.5**
NUBE				S	**Sb**		**10 24 54.5**	**-0.4**
NUBE	**Las Nubes**	**1.05**	**62**	P	**Pb**		**10 24 39.8**	**-1.0**
LOAL	**Lomas de Alarc**	**1.10**	**58**	P	**Pb**		**10 24 41.1**	**-0.4**
LOAL				S	**Sb**		**10 24 56.6**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.11**	**56**	P	**Pb**		**10 24 41.2**	**-0.5**
SLOZ				S	**Sb**		**10 24 56.7**	**+0.1**
STG5	**El Palmar, Qui**	**1.16**	**329**	*i* P	**Pn**		**10 24 44.6**	**+1.7**
CEVE	**Cerro Verde**	**1.16**	**69**	P	**Pn**		**10 24 42.1**	**-1.0**
CEVE				S	**Sb**		**10 24 58.3**	**+0.2**
CEVE	**Cerro Verde**	**1.16**	**69**	*e*P	**Pn**		**10 24 42.1**	**-1.0**
CEVE				*e*S	**Sb**		**10 24 59.4**	**+1.3**
STG8	**El Palmar, Qui**	**1.20**	**330**	*i* P	**Pn**		**10 24 45.6**	**+2.0**
STG8				IAML			10 25 07.3	
	comp=E,651nm,0.2s							
STG2	**El Palmar, Qui**	**1.20**	**329**	*i* P	**Pn**		**10 24 45.8**	**+2.3**
JAYA	**Jayaque - finc**	**1.28**	**79**	P	**Pn**		**10 24 43.3**	**-1.3**
JAYA	**Jayaque - finc**	**1.28**	**79**	*e*P	**Pn**		**10 24 43.4**	**-1.3**
JAYA				*e*S	**Sb**		**10 25 01.1**	**-0.3**
JAYA	**Jayaque - finc**	**1.28**	**79**	*i* P	**Pn**		**10 24 43.4**	**-1.2**
UNIC	**Universidad Ca**	**1.29**	**64**	P	**Pn**		**10 24 43.5**	**-1.2**
UNIC				S	**Sb**		**10 25 00.8**	**-0.9**
PMON	**Piamonte**	**1.42**	**77**	P	**Pn**		**10 24 45.7**	**-0.8**
PMON				S	**Sn**		**10 25 05.7**	**+0.1**
UEES	**Universidad Ev**	**1.49**	**78**	P	**Pn**		**10 24 46.9**	**-0.6**
UEES				S	**Sn**		**10 25 06.6**	**-0.8**
SOKI	**Kika Raxquin**	**1.55**	**335**	*i* P	**Pn**		**10 24 46.6**	**-2.0**
APG	**El Apazote**	**1.61**	**9**	*i* P	**Pn**		**10 24 48.7**	**-0.6**
MTO3	**Montecristo**	**1.66**	**53**	P	**Pn**		**10 24 49.1**	**-0.8**
MTO3				S	**Sn**		**10 25 11.8**	**0.0**
MTO3	**Montecristo**	**1.66**	**53**	*e*P	**Pn**		**10 24 49.2**	**-0.8**
MTO3	**Montecristo**	**1.66**	**53**	*i* P	**Pn**		**10 24 49.3**	**-0.7**
ESQI	**Esquipulas**	**1.78**	**50**	P	**Pn**		**10 24 51.0**	**-0.4**
ESQI				S	**Sn**		**10 25 14.2**	**-0.2**
PAVA	**Las Pavas**	**1.78**	**80**	P	**Pn**		**10 24 51.5**	**0.0**
PAVA				S	**Sn**		**10 25 15.5**	**+1.0**
LLGN	**La Laguna**	**1.90**	**66**	P	**Pn**		**10 24 52.2**	**-0.9**
LLGN				S	**Sn**		**10 25 18.0**	**+0.5**
SMCA	**Catarina**	**1.94**	**318**	*i* P	**Pn**		**10 24 50.8**	**-2.8**
SCLA	**Alcaldia de Sa**	**1.98**	**81**	P	**Pn**		**10 24 54.0**	**-0.2**
SCLA				S	**Sn**		**10 25 20.9**	**+1.5**
P5NO	**Presa 5 de nov**	**2.01**	**73**	P	**Pn**		**10 24 53.4**	**-1.1**
P5NO				S	**Sn**		**10 25 20.5**	**+0.5**
PQSS	**Presa 15 de Se**	**2.13**	**84**	P	**Pn**		**10 24 55.8**	**-0.4**
PACA	**Pacayal**	**2.35**	**88**	P	**Pn**		**10 25 00.0**	**+0.7**
PACA				S	**Sn**		**10 25 30.4**	**+1.7**
SARH	**Santa Rosa de**	**2.35**	**54**	P	**Pn**		**10 24 59.1**	**-0.2**
LCND	**La Caada**	**2.77**	**92**	P	**Pn**		**10 25 05.1**	**+0.1**

AFAD ***23*** *10:25:37.4, 38˚.44N×44˚.57E, h8km±2km, MW4.1*

NSSP ***23*** *10:25:38.8, 38˚.48N×44˚.57E, h10km, Ms4.0*

TIF ***23*** *10:25:38.0, 38˚.42N×44˚.47E, h7km±1km*

ISK ***23*** *10:25:39.1, 38˚.38N×44˚.46E, h5km, ML4.1/19*

TEH ***23*** *10:25:39.0, 38˚.45N×44˚.51E, h6km±31km, ML4.0, Presumed earthquake*

IDC ***23*** *10:25:40.8±0.7, 38˚.54N×44˚.47E, h0km, mb3.8/19, mbtmp3.8/29, ML3.8/8, MS3.5/4, Error ellipse: s-maj=11.4km s-min=9.1km az=114.0*

NEIC ***23*** *10:25:41.8±1.1, 38˚.44N±0˚.05×44˚.31E±0˚.06, h10km±2km, mb4.1/16, Error ellipse: s-maj=9.4km s-min=6.4km az=133.0*

MCSM ***23*** *10:25:41.1±0.5, 38˚N±7˚×4˚4E±˚, h10km±3km, mb4.1, mB6.0, MLv4.4, Mw(mB)5.6*

AZER ***23*** *10:25:43.0, 38˚.57N×44˚.69E, h20km, ml4.2*

ISC 23 10:25:41.1±0.4, 38˚.45N±0˚.02×44˚.48E±0˚.02, h10km, n189, σ1°960/249, mb4.0/27, 4C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**300**	P	**Pg**		**10 25 47.5**	**-2.3**
OZAP				S	**Sg**		**10 25 54.8**	**-0.8**
OZAP				IAML			10 26 02.0	
	comp=N,2μm,0.7s							
OZAP				IAML			10 26 07.0	
	comp=E,2μm,1.2s							
TVAN	**Van**	**0.84**	**276**	P	**Pg**		**10 25 54.6**	**-2.8**
TVAN				IAML			10 26 23.0	
	comp=N,6μm,1.2s							
TVAN				IAML			10 26 24.0	
	comp=E,6μm,1.0s							
VANB	**Van**	**0.87**	**280**	Pg	**Pg**		**10 25 56.5**	**-1.3**
VANB				Sg	**Sb**		**10 26 09.7**	**-0.3**
VANB	**Van**	**0.87**	**280**	Pg	**Pg**		**10 25 56.0**	**-1.8**
VMUR	**Van-Muradiye**	**0.89**	**308**	P	**Pg**		**10 25 56.2**	**-2.2**
VMUR				S	**Sb**		**10 26 10.1**	**-0.8**
VMUR				IAML			10 26 15.0	
	comp=N,3μm,0.8s							
VMUR				IAML			10 26 18.0	
	comp=E,3μm,0.8s							
VMUR	**Van-Muradiye**	**0.89**	**308**	Pg	**Pg**		**10 25 56.2**	**-2.2**
ISHB	**Shabestar**	**0.91**	**100**	Pg	**Pg**		**10 25 55.3**	**-3.4**
MAKU	**Maku**	**0.92**	**10**	Pg	**Pg**		**10 25 56.2**	**-2.8**
IMRD	**Marand**	**1.00**	**74**	Pg	**Pg**		**10 25 57.8**	**-2.5**
ERCV	**ERCIS-VAN**	**1.06**	**303**	Pn	**Pn**		**10 26 00.8**	**-1.4**
ERCV				Sn	**Sn**		**10 26 16.5**	**-0.6**
HAKT	**HAKKARI**	**1.07**	**215**	P	**Pg**		**10 25 58.8**	**-3.1**
HAKT				S	**Sn**		**10 26 16.2**	**-1.3**
NAX	**Nakhchivan**	**1.08**	**47**	P	**Pg**		**10 26 00.1**	**-1.8**
NAX				S	**Sg**		**10 26 14.2**	**-1.7**
GEVA	**Gevas**	**1.12**	**264**	Pn	**Pg**		**10 25 58.8**	**-3.9**
GEVA	**Gevas**	**1.12**	**264**	P	**Pg**		**10 25 58.6**	**-4.1**
GEVA				S	**Sn**		**10 26 17.2**	**-1.5**
DYDN	**Diyadin**	**1.26**	**331**	P	**Pn**		**10 26 01.4**	**-3.6**
DYDN				S	**Sb**		**10 26 19.4**	**-2.0**
DYDN				IAML			10 26 25.0	
	comp=E,3μm,1.0s							
DYDN				IAML			10 26 26.0	
	comp=N,2μm,0.8s							
DYDN	**Diyadin**	**1.26**	**331**	Pg	**Pn**		**10 26 03.1**	**-1.9**
SBZ	**Shahbuz**	**1.27**	**41**	P	**Pn**		**10 26 03.2**	**-1.9**
SBZ				S	**Sn**		**10 26 21.3**	**-0.9**
ORD	**Ordubad**	**1.28**	**67**	P	**Pn**		**10 26 03.3**	**-1.9**
ORD				S	**Sn**		**10 26 22.2**	**-0.3**
HYR	**Heyderabad**	**1.30**	**13**	P	**Pn**		**10 26 03.9**	**-1.6**
HYR				S	**Sg**		**10 26 23.2**	**0.0**
ITBZ	**Tabriz**	**1.33**	**99**	Pg	**Pn**		**10 26 03.3**	**-2.6**
CUKT	**Cukurca**	**1.38**	**210**	Pn	**Pn**		**10 26 05.5**	**-1.1**
CUKT	**Cukurca**	**1.38**	**210**	P	**Pn**		**10 26 05.0**	**-1.6**
CUKT				S	**Sg**		**10 26 25.0**	**-0.5**
CUKT				IAML			10 26 29.0	
	comp=E,4μm,0.8s							
CUKT				IAML			10 26 33.0	
	comp=N,5μm,0.8s							
CUKT	**Cukurca**	**1.38**	**210**	Pg	**Pn**		**10 26 05.2**	**-1.4**
IAZR	**Azarshahr**	**1.41**	**122**	Pg	**Pn**		**10 26 05.4**	**-1.7**
ADCV	**BITLIS_Adilcev**	**1.42**	**285**	P	**Pn**		**10 26 05.2**	**-2.0**
ADCV				S	**Sg**		**10 26 27.5**	**+0.7**
ADCV				IAML			10 26 31.0	
	comp=N,1μm,0.8s							
ADCV				IAML			10 26 31.0	
	comp=E,1μm,0.7s							
ADCV	**BITLIS_Adilcev**	**1.42**	**285**	Pg	**Pn**		**10 26 05.2**	**-2.0**
VAYK	**Vayk**	**1.45**	**30**	*i* P	**Pn**		**10 26 06.1**	**-1.5**
VAYK				*i* S	**Sb**		**10 26 25.8**	**-1.0**
ALVK	**Alvank**	**1.55**	**71**	*e*P	**Pn**		**10 26 07.3**	**-1.5**
ALVK				*e*S	**Sb**		**10 26 28.0**	**-1.6**
PERV	**Siirt/Pervari-**	**1.60**	**252**	P	**Pn**		**10 26 07.8**	**-1.9**
PERV				S	**Sg**

TBLG	**Delisi**	**3.29**	**3**	Pn	**Pb**	**10 26 34.9**	**-4.7**
TBLG	**Delisi**	**3.29**	**3**	P	**Pn**	**10 26 31.9**	**-0.8**
LKRN	**Lenkeran, Azer**	**3.38**	**84**	P	**Pn**	**10 26 34.3**	**+0.3**
LKRN				S	**Sn**	**10 27 14.6**	**+0.5**
ASTR	**Astara**	**3.39**	**87**	P	**Pn**	**10 26 34.8**	**+0.8**
ASTR				S	**Sn**	**10 27 14.9**	**+0.6**
DYBB	**Diyarbakir**	**3.45**	**263**	Pn	**Pn**	**10 26 34.6**	**-0.4**
KDMR	**Kurdemir**	**3.46**	**55**	P	**Pn**	**10 26 35.9**	**+0.9**
KDMR				S	**Sn**	**10 27 15.8**	**-0.2**
SEKA	**Sheki**	**3.46**	**36**	P	**Pn**	**10 26 36.9**	**+1.7**
SEKA				S	**Sn**	**10 27 17.2**	**+0.9**
KOPT	**Kop Dagi**	**3.47**	**298**		**Pn**	**10 26 35.1**	**-0.3**
ZKTA	**Zakatala**	**3.59**	**27**	P	**Pn**	**10 26 37.5**	**+0.6**
ZKTA				S	**Sn**	**10 27 19.8**	**+0.5**
QBL	**Gabala**	**3.60**	**45**	P	**Pn**	**10 26 38.1**	**+1.1**
QBL				S	**Sn**	**10 27 19.0**	**-0.6**
LGD	**Lagodekhi**	**3.65**	**21**	P	**Pg**	**10 26 47.0**	**-3.9**
IML	**Ismayilli**	**3.70**	**50**	P	**Pn**	**10 26 38.6**	**+0.2**
IML				S	**Sn**	**10 27 22.2**	**+0.1**
ALIG	**Mtskhetisjvari**	**3.71**	**350**	P	**Pb**	**10 26 45.6**	**-1.1**
ALIG				S	**Sb**	**10 27 31.0**	**-0.8**
ALIB	**&Aumlli-Bayram**	**3.83**	**65**	P	**Pn**	**10 26 40.4**	**+0.3**
ALIB				S	**Sn**	**10 27 24.5**	**-0.6**
ERZN	**Erzincan**	**3.87**	**289**	Pn	**Pn**	**10 26 42.1**	**+1.2**
BAYT	**Aydıntepe-Bayb**	**3.88**	**301**	Pn	**Pn**	**10 26 42.5**	**+1.5**
CHRG	**Chargali**	**3.89**	**5**	P	**Pn**	**10 26 43.9**	**+2.8**
XNQ	**Khinaliq**	**3.92**	**45**	P	**Pn**	**10 26 42.5**	**+0.9**
XNQ				S	**Sn**	**10 27 28.5**	**+0.7**
PQL	**Pirkuli**	**3.95**	**52**	P	**Pn**	**10 26 43.2**	**+1.3**
PQL				S	**Sn**	**10 27 28.2**	**-0.1**
GBS	**Qobustan**	**4.04**	**57**	P	**Pn**	**10 26 43.2**	**+0.2**
GBS				S	**Sn**	**10 27 30.3**	**-0.1**
SVRC	**Sivrice-ELAZID**	**4.06**	**271**	Pn	**Pn**	**10 26 43.9**	**+0.4**
ATGJ	**Altiaghaj**	**4.20**	**54**	P	**Pn**	**10 26 45.6**	**+0.2**
ATGJ				S	**Sn**	**10 27 35.8**	**+1.2**
QSAR	**Qusar**	**4.23**	**42**	P	**Pn**	**10 26 46.1**	**+0.5**
QSAR				S	**Sn**	**10 27 35.0**	**0.0**
SHTL	**Shatili**	**4.24**	**7**	P	**Pb**	**10 26 54.5**	**-1.4**
QUBA	**Quba, Azerbaij**	**4.24**	**45**	P	**Pn**	**10 26 46.0**	**+0.1**
QUBA				S	**Sn**	**10 27 35.2**	**-0.2**
SIZA	**Siyzn**	**4.30**	**51**	P	**Pn**	**10 26 47.0**	**+0.3**
SIZA				S	**Sn**	**10 27 36.1**	**-0.9**
ARPR	**Arapgir-MALATY**	**4.84**	**280**		**Pn**	**10 26 52.7**	**-1.5**
KBZ	**Khabaz**	**5.41**	**348**	Pn	**Pn**	**10 27 04.9**	**+3.1**
	1.1nm,0.7s,baz=141,slow=3.1,SNR=5.0						
KBZ				Pg	**Pb**	**10 27 14.6**	**-1.1**
	0.1nm,0.3s,baz=154,slow=8.3,SNR=9.6						
KBZ				Lg	Lg	10 28 28.5	
	0.1nm,0.3s,baz=175,slow=20,SNR=1.3						
KBZ				LR	LR	10 29 27.5	
	comp=Z,307nm,21.1s,baz=100,slow=43						
KVAR	**Kislovodsk Arr**	**5.67**	**347**	Pn	**Pn**	**10 27 07.8**	**+2.3**
	baz=269,slow=19						
	2.1nm,0.4s						
KIV	**Kislovodsk**	**5.67**	**347**	Pn	**Pn**	**10 27 05.6**	**+0.1**
GAZ	**Gaziantep**	**5.89**	**260**		**Pn**	**10 27 08.0**	**-0.6**
TOKA	**Tokat**	**6.47**	**289**	Pn	**Pn**	**10 27 17.1**	**+0.6**
BRTR	**Keskin Array B**	**8.53**	**282**	Pn	Pn	10 27 49.4	+4.7
	0.9nm,0.9s,baz=120,slow=14,SNR=4.7						
BRTR				LR	LR	10 31 32.1	
	comp=Z,228nm,19.2s,baz=111,slow=41						
BR106	**Keskin Array S**	**8.54**	**282**	P	**Pn**	**10 27 43.9**	**-1.1**
	3.7nm,0.9s						
ASF	**Jabal al Asfar**	**8.80**	**227**	Pn	**Pn**	**10 27 49.3**	**+0.7**
	0.5nm,0.3s,baz=42,slow=10,SNR=2.3						
ASF				Lg	Lg	10 30 20.2	
	0.3nm,0.3s,baz=314,slow=22,SNR=6.4						
	2.3nm,0.6s						
MMAI	**Mount Meron Ar**	**9.15**	**236**	Pn	**Pn**	**10 27 55.0**	**+1.7**
	1.0nm,0.3s,baz=60,slow=17,SNR=2.3						
MMAI				LR	LR	10 31 40.8	
	comp=Z,285nm,18.2s,baz=58,slow=39						
	0.9nm,0.4s						
EIL	**Elat**	**11.78**	**225**	Pn	**Pn**	**10 28 30.9**	**+1.7**
	0.5nm,0.3s,baz=359,slow=19,SNR=1.4						
EIL				Lg	Lg	10 31 54.9	
	0.4nm,0.3s,baz=15,slow=20,SNR=1.5						
	1.6nm,0.4s						
NE56	**Odesa**	**12.94**	**314**	P	**Pn**	**10 28 43.7**	**-1.3**
PURM	**Purcari**	**13.45**	**312**	P	**Pn**	**10 28 50.7**	**-1.3**
BELG	**Belogornoye**	**14.12**	**8**	Pn	**Pn**	**10 29 01.8**	**+0.8**
	0.2nm,0.3s,baz=207,slow=12,SNR=3.7						
	11nm,0.9s						
ALN	**Alexandroupoli**	**14.41**	**286**	Pn	**Pn**	**10 29 04.1**	**-0.9**
AKTO	**Aktyubinsk**	**15.37**	**34**	Pn	**Pn**	**10 29 16.3**	**-1.7**
	0.2nm,0.3s,baz=223,slow=9.9,SNR=4.6						
	0.8nm,0.3s						
MLR	**Muntele Rosu**	**15.46**	**303**	Pn	**P**	**10 29 20.3**	**-3.6**
	0.2nm,0.3s,baz=114,slow=20,SNR=2.0						
	1.4nm,0.5s						
AB31	**Akbulak array**	**15.50**	**41**	Pn	**Pn**	**10 29 18.4**	**-1.3**
ABKAR	**Akbulak array**	**15.50**	**41**	Pn	**Pn**	**10 29 18.0**	**-1.6**
IDI	**Anoyia**	**15.99**	**265**	Pn	**P**	**10 29 29.5**	**-0.2**
	0.5nm,0.3s,baz=41,slow=22,SNR=1.6						
VOIR		**16.03**	**302**	⇑P	**P**	**10 29 32.7**	**+2.5**
AK07	**Malin Array Si**	**16.24**	**323**	P	**Pn**	**10 29 28.3**	**-1.0**
AK09	**Malin Array Si**	**16.25**	**323**	P	**Pn**	**10 29 28.4**	**-0.9**
AK10	**Malin Array Si**	**16.25**	**323**	P	**Pn**	**10 29 28.5**	**-0.9**
AK06	**Malin Array Si**	**16.27**	**323**	P	**Pn**	**10 29 28.7**	**-0.9**
AK08	**Malin Array Si**	**16.28**	**323**	P	**Pn**	**10 29 28.7**	**-1.0**
AK05	**Malin Array Si**	**16.29**	**323**	P	**Pn**	**10 29 28.8**	**-1.1**
AK12	**Malin Array Si**	**16.33**	**323**	P	**Pn**	**10 29 29.3**	**-1.1**
AK01	**Malin Array Si**	**16.33**	**323**	P	**Pn**	**10 29 30.0**	**-0.4**
AKASG	**Malin Array Be**	**16.34**	**324**	Pn	**Pn**	**10 29 29.5**	**-0.9**
	0.5nm,0.3s,baz=133,slow=12,SNR=1.6						
	0.8nm,0.6s						
AK11	**Malin Array Si**	**16.35**	**323**	P	**Pn**	**10 29 30.0**	**-0.6**
AK16	**Malin Array Si**	**16.37**	**323**	P	**Pn**	**10 29 29.5**	**-1.4**
AK17	**Malin Array Si**	**16.40**	**323**	P	**Pn**	**10 29 30.4**	**-0.9**
AK22	**Malin Array Si**	**16.45**	**323**	P	**Pn**	**10 29 31.0**	**-0.9**
BURAR	**Bucovina Array**	**16.76**	**309**		**P**	**10 29 37.2**	**-1.1**
BUR08	**Bucovina Ar. S**	**16.79**	**309**	P	**P**	**10 29 38.9**	**+0.4**
ITM	**Ithomi**	**17.86**	**273**		**P**	**10 29 49.9**	**-0.5**
ITM				IAmb	IAmb	10 30 14.2	
	comp=Z,40nm,1.5s						
SHAA	**Shahritus**	**18.65**	**85**	P	**Pn**	**10 29 59.3**	**-0.2**
SHAA				IAmb	IAmb	10 30 03.0	
	comp=Z,14nm,1.0s						
MNK	**Minsk**	**19.63**	**330**	*i* P	**Pn**	**10 30 09.9**	**-1.0**
	comp=E,18nm,0.8s						
MNK				*i* P	**Pn**	**10 30 09.9**	**-1.0**
	comp=N,10.0nm,0.8s						
MNK				*i* P	**Pn**	**10 30 09.9**	**-1.0**
	comp=Z,7.0nm,0.7s,baz=137						
MNK				*i* PP	**PnPn**	**10 30 24.5**	**0.0**
MNK				*i* PPP	PPP	10 30 32.2	
MNK				*i* S	**Sn**	**10 33 50.4**	**-0.8**
MNK				*i* SS	**SnSn**	**10 34 06.7**	**+1.3**
MNK				*i* SSS	SSS	10 34 19.7	
MNK				*i* LQ	LQ	10 36 02.4	
MNK				*i* LR	LR	10 37 31.5	
MNK				*i* LRM	MLR	10 38 49.8	
	comp=Z,136nm,8.6s						
ARTI	**Arti**	**20.20**	**23**	P	Pn	10 30 15.5	-2.2
	comp=Z,5.0nm,0.6s,baz=218,slow=5.0,SNR=7.4						
	comp=Z,5.0nm,0.6s						
ARTI	**Arti**	**20.20**	**23**		Pn	10 30 16.2	-1.5
KK31	**Karatay Array**	**20.22**	**68**		Pn	10 30 16.5	-1.7
KKAR	**Karatay Array**	**20.22**	**68**	P	Pn	10 30 16.9	-1.3
KIRV	**Kirov**	**20.41**	**7**	P	Pn	10 30 18.1	-2.1
	comp=Z,5.3nm,0.5s,baz=199,slow=18,SNR=1.5						
	comp=Z,5.3nm,0.5s						
DRK	**Karamyk**	**21.25**	**79**	P	**P**	**10 30 28.8**	**+1.1**
DRK				IAmb	IAmb	10 30 53.6	
	comp=Z,9.5nm,1.0s						
MPLH	**Magyarpolny**	**21.52**	**303**	P	**P**	**10 30 28.6**	**-1.5**
	comp=Z,19nm,1.4s						
BORK	**Borovoye**	**23.03**	**42**		**P**	**10 30 47.8**	**+1.6**
BORK				IAmb	IAmb	10 31 10.7	
	comp=Z,4.6nm,0.8s						
BVAR	**Borovoye Array**	**23.06**	**42**	P	**P**	**10 30 46.0**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=231,slow=9.4,SNR=8.1						
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**23.13**	**70**	P	**P**	**10 30 50.2**	**+2.6**
AAK				IAmb	IAmb	10 30 55.6	
	comp=Z,7.5nm,1.1s						
AQU	**L'Aquila**	**23.91**	**289**	P	**P**	**10 30 53.6**	**-1.6**
	comp=Z,8.4nm,0.9s						
BOOM	**Boomskoye usch**	**24.20**	**70**	P	**P**	**10 30 59.1**	**+1.1**
BOOM				IAmb	IAmb	10 31 03.5	
	comp=Z,4.1nm,0.9s						
GERES	**GERESS Array B**	**24.42**	**305**	P	**P**	**10 31 00.3**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=106,slow=10,SNR=1.7						
	comp=Z,0.3nm,0.5s						
MURB	**Monte Urbino**	**24.55**	**292**	P	**P**	**10 31 02.2**	**+1.1**
KDJ	**Kajisay**	**25.13**	**71**	P	**P**	**10 31 07.0**	**+0.5**
OSSC	**Osservatorio P**	**25.49**	**292**	P	**P**	**10 31 10.4**	**+1.0**
OSSC				IAmb	IAmb	10 31 52.4	
	comp=Z,5.1nm,1.0s						
FINES	**FINESS Array B**	**25.70**	**340**	P	**P**	**10 31 11.9**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=154,slow=7.7,SNR=1.0						
	comp=Z,1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**26.91**	**52**	P	**P**	**10 31 23.2**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=263,slow=9.1,SNR=21						
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**26.99**	**52**		**P**	**10 31 24.0**	**+1.1**
KURK				IAmb	IAmb	10 31 29.4	
	comp=Z,5.3nm,1.1s						
MKAR	**Makanchi Array**	**28.82**	**61**	P	**P**	**10 31 40.7**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=270,slow=6.5,SNR=15						
	comp=Z,1.5nm,0.8s						
HFS	**Hagfors**	**29.11**	**328**	P	**P**	**10 31 42.8**	**+1.1**
	comp=Z,6.3nm,1.0s,baz=134,slow=8.4,SNR=2.2						
	comp=Z,6.3nm,1.0s						
ZALV	**Zalesovo Beam**	**31.44**	**47**	P	**P**	**10 32 02.9**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=260,slow=8.9,SNR=5.8						
	comp=Z,0.7nm,0.4s						
WMQ	**Urumqi**	**32.71**	**67**	*e*P	P	10 32 17.6	+3.8
EKA	**Eskdalemuir Ar**	**35.85**	**314**	P	**P**	**10 32 40.9**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=108,slow=7.3,SNR=2.1						
	comp=Z,1.3nm,0.7s						
ESDC	**Sonseca Array**	**37.27**	**288**	P	**P**	**10 32 52.1**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=81,slow=8.5,SNR=5.8						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**45.04**	**57**	P	**P**	**10 33 58.1**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=321,slow=11,SNR=1.9						
SONM				LR	LR	10 55 51.5	
	comp=Z,97nm,19.9s,baz=259,slow=40						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**45.46**	**248**	P	**P**	**10 34 02.3**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=54,slow=7.4,SNR=1.4						
	comp=Z,0.3nm,0.6s						
PZH	**PanZhiHua**	**49.06**	**86**	P	**P**	**10 34 30.1**	**+1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**50.55**	**65**	*e*P	**P**	**10 34 41.5**	**+1.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,220nm,5.0s						
CMAR	**Chiang Mai Arr**	**51.09**	**97**	P	**P**	**10 34 44.3**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=310,slow=5.4,SNR=8.2						
	comp=Z,0.5nm,0.3s						
KSRS	**Korea Array**	**63.49**	**62**	P	**P**	**10 36 13.4**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=288,slow=6.2,SNR=4.1						
	comp=Z,1.3nm,0.8s						
BOSA	**Boshof**	**69.09**	**198**	P	**P**	**10 36 49.0**	**+1.7**
	comp=Z,4.7nm,1.1s,baz=162,slow=8.5,SNR=2.3						
	comp=Z,4.7nm,1.1s						
SCHQ	**Schefferville**	**70.13**	**325**	P	**P**	**10 36 54.9**	**+1.4**
	comp=Z,1.8nm,1.0s,baz=229,slow=18,SNR=1.6						
	comp=Z,1.8nm,1.0s						
INK	**Inuvik**	**73.56**	**359**	P	**P**	**10 37 13.7**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=268,slow=22,SNR=2.0						
	comp=Z,0.7nm,0.9s						
YKA	**Yellowknife Ar**	**78.00**	**350**	P	**P**	**10 37 39.3**	**0.0**
	comp=Z,0.1nm,0.6s,baz=16,slow=5.4,SNR=3.7						
	comp=Z,0.1nm,0.6s						
BBB	**Bella Bella**	**89.51**	**355**	P	**P**	**10 38 39.6**	**+1.3**
	comp=Z,18nm,1.1s,baz=157,slow=17,SNR=1.9						

AFAD ***23*** *10:29:33.5,38.51N×44.61E,6*^{km}*,MW3.9*
TIF ***23*** *10:29:34.1,38.48N×44.47E,h1*$^{km}\pm$*1km*
NSSP ***23*** *10:29:35.5,38.55N×44.53E,h10*^{km}*,Ms3.9*
IDC ***23*** *10:29:35.9±1.6,38.47N×44.25E,h0*^{km}*,mb3.8/5, mbtmp3.7/7,ML2.9/2, Error ellipse: s-maj=24.1km s-min=15.8km az=96.0*
TEH ***23*** *10:29:35.4,38.50N×44.47E,h5*^{km}*,ML3.7, Presumed earthquake*
AZER ***23*** *10:29:35.5,38.58N×44.56E,h3*^{km}*,ml3.9*
ISK ***23*** *10:29:36.8,38.38N×44.46E,h10*^{km}*,ML3.8/14*
ISC 23 10:29:35.8±1.1**,38.45N**±0.02×**44.46E**±0.02**,h1**km±9km**,**
n102,σ1$63/153,mb3.6/4,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
OZAP	**Van, Ozalp-Mer**	**0.42**	**300**	P	**Pg**	**10 29 43.7**	**-0.2**
TVAN	**Van**	**0.83**	**276**	P	**Pg**	**10 29 50.9**	**-0.7**
TVAN				S	**Sn**	**10 30 05.4**	**-2.3**
TVAN	**Van**	**0.83**	**276**	Pg	**Pg**	**10 29 50.9**	**-0.7**
VANB	**Van**	**0.85**	**280**	Pg	**Pn**	**10 29 53.7**	**-1.2**
VANB				Sg	**Sn**	**10 30 06.2**	**-1.9**
VMUR	**Van-Muradiye**	**0.88**	**308**	P	**Pg**	**10 29 52.1**	**-0.5**
VMUR				S	**Sn**	**10 30 07.6**	**-1.3**
VMUR	**Van-Muradiye**	**0.88**	**308**	Pg	**Pg**	**10 29 52.1**	**-0.5**
MAKU	**Maku**	**0.92**	**11**	Pg	**Pg**	**10 29 52.1**	**-1.3**
ISHB	**Shabestar**	**0.93**	**100**	Pg	**Pg**	**10 29 52.5**	**-1.1**
IMRD	**Marand**	**1.01**	**74**	Pg	**Pg**	**10 29 54.9**	**-0.3**
ERCV	**ERCIS-VAN**	**1.04**	**303**	Pn	**Pn**	**10 29 57.5**	**-0.2**
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pg**	**10 29 56.3**	**+0.1**
HAKT				S	**Sn**	**10 30 13.3**	**-0.3**
HAKT				IAML		10 30 14.0	
	comp=N,2μm,0.5s						
HAKT				IAML		10 30 14.0	
	comp=E,2μm,0.5s						
HAKT	**HAKKARI**	**1.07**	**214**	Pg	**Pg**	**10 29 56.3**	**+0.1**
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pg**	**10 29 56.1**	**-0.1**
HAKT				S	**Sn**	**10 30 13.1**	**-0.5**
NAX	**Nakhchivan**	**1.09**	**48**	P	**Pg**	**10 29 56.3**	**-0.3**
NAX				S	**Sb**	**10 30 11.9**	**-0.2**
GEVA	**Gevas**	**1.11**	**263**	P	**Pg**	**10 29 55.1**	**-1.9**
GEVA				S	**Sn**	**10 30 13.7**	**-0.8**
DYDN	**Diyadin**	**1.25**	**332**	P	**Pn**	**10 29 57.5**	**-3.0**
DYDN				S	**Sb**	**10 30 15.3**	**-1.6**
DYDN				IAML		10 30 21.0	
	comp=N,2μm,0.9s						
DYDN				IAML		10 30 21.0	
	comp=E,2μm,0.4s						
DYDN	**Diyadin**	**1.25**	**332**	Pg	**Pn**	**10 29 57.5**	**-3.0**
SBZ	**Shahbuz**	**1.28**	**42**	P	**Pn**	**10 29 59.7**	**-1.1**
SBZ				S	**Sn**	**10 30 17.8**	**-0.9**
ORD	**Ordubad**	**1.29**	**68**	P	**Pn**	**10 29 59.9**	**-1.1**
ORD				S	**Sg**	**10 30 18.6**	**+1.3**
HYR	**Heyderabad**	**1.31**	**14**	P	**Pn**	**10 29 60.0**	**-1.2**
HYR				S	**Sg**	**10 30 18.6**	**+0.8**
ITBZ	**Tabriz**	**1.35**	**99**	Pg	**Pn**	**10 30 00.2**	**-1.7**
CUKT	**Cukurca**	**1.38**	**210**	Pn	**Pb**	**10 30 01.8**	**-0.5**
CUKT				Sn	**Sg**	**10 30 20.0**	**+0.1**
CUKT	**Cukurca**	**1.38**	**210**	P	**Pg**	**10 30 02.1**	**0.0**
CUKT				IAML		10 30 24.0	
	comp=E,3μm,0.7s						
CUKT				IAML		10 30 25.0	
	comp=N,3μm,0.6s						
CUKT	**Cukurca**	**1.38**	**210**	Pg	**Pg**	**10 30 02.1**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.40**	**285**	P	**Pn**	**10 30 02.0**	**-0.7**
ADCV				S	**Sg**	**10 30 24.9**	**+4.0**
ADCV				IAML		10 30 26.0	
	comp=N,1μm,0.7s						
ADCV				IAML		10 30 28.0	
	comp=E,818nm,0.6s						
ADCV	**BITLIS_Adilcev**	**1.40**	**285**	Pg	**Pn**	**10 30 01.9**	**-0.7**
IAZR	**Azarshahr**	**1.43**	**122**	Pg	**Pb**	**10 30 02.7**	**-0.6**
VAYK	**Vayk**	**1.46**	**31**	*i* P	**Pn**	**10 30 02.8**	**-0.4**
VAYK				*i* S	**Sb**	**10 30 22.9**	**+0.2**
ALVK	**Alvank**	**1.56**	**71**	*e*P	**Pn**	**10 30 04.0**	**-0.7**
ALVK				*e*S	**Sn**	**10 30 24.5**	**-1.1**
PERV	**Siirt/Pervari-**	**1.59**	**252**	P	**Pb**	**10 30 05.6**	**-0.4**
PERV				IAML		10 30 32.0	
	comp=N,2μm,0.5s						
PERV				IAML		10 30 37.0	
	comp=E,1μm,0.7s						
AGRB	**Hanur-Agry**	**1.60**	**315**	Pn	**Pg**	**10 30 06.6**	**+0.1**
AGRB				Sn	**Sg**	**10 30 28.2**	**+0.9**
DORK	**Agr/Tutak/Do**	**1.61**	**306**	P	**Pn**	**10 30 05.3**	**-0.1**
DORK				S	**Sg**	**10 30 28.1**	**+0.7**
DORK				IAML		10 30 31.0	
	comp=N,753nm,1.1s						
DORK				IAML		10 30 35.0	
	comp=E,715nm,0.8s						
MLAZ	**Malazgirt-MUS**	**1.64**	**295**	Pn	**Pb**	**10 30 06.6**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.67**	**325**	P	**Pn**	**10 30 05.1**	**-1.1**
KOTA				S	**Sb**	**10 30 28.5**	**-0.4**
GNI	**Garni**	**1.71**	**7**	Pg	**Pb**	**10 30 08.4**	**+0.3**
	60nm,0.3s,baz=9.0,slow=7.6,SNR=17						
GNI				Lg	Lg	10 30 31.5	
	85nm,0.3s,baz=103,slow=19,SNR=4.2						
GNI	**Garni**	**1.71**	**7**	Pn	**Pg**	**10 30 08.7**	**+0.1**
GNI				Sn	**Sg**	**10 30 31.7**	**+0.9**
GNI	**Garni**	**1.71**	**7**	*e*P	**Pb**	**10 30 07.8**	**-0.3**
GNI				*e*S	**Sg**	**10 30 33.5**	**+2.7**
METS	**Metsamor**	**1.72**	**350**	*e*P	**Pb**	**10 30 08.0**	**-0.2**
METS				*e*S	**Sg**	**10 30 31.6**	**+0.4**
VNNZ	**Vanand**	**1.72**	**344**	*e*P	**Pb**	**10 30 07.8**	**-0.4**
VNNZ				*e*S	**Sg**	**10 30 31.2**	**0.0**
EGVZ	**Egvard**	**1.80**	**64**	*e*P	**Pn**	**10 30 08.1**	**+0.1**
EGVZ				*e*S	**Sb**	**10 30 31.8**	**-1.0**
BLIS	**Bitlis-Merkez**	**1.84**	**270**	P	**Pb**	**10 30 09.2**	**-1.1**
BLIS				S	**Sg**	**10 30 37.8**	**+2.9**
BLIS	**Bitlis-Merkez**	**1.84**	**270**	Pn	**Pb**	**10 30 09.2**	**-1.1**
ARUZ	**Aruch**	**1.85**	**351**	*e*P	**Pb**	**10 30 09.4**	**-1.1**
ARUZ				*e*S	**Sb**	**10 30 33.9**	**-0.4**
SIRN	**Sırnak**	**1.87**	**240**	P	**Pg**	**10 30 11.0**	**-0.7**
SIRN				S	**Sg**	**10 30 39.5**	**+3.5**
SIRN				IAML		10 30 48.0	
	comp=N,1μm,0.8s						
SIRN				IAML		10 30 54.0	
	comp=E,1μm,1.1s						
SIRN	**Sırnak**	**1.87**	**240**	Pn	**Pg**	**10 30 11.0**	**-0.7**
KAPZ	**Kaputan**	**1.88**	**6**	*e*P	**Pn**	**10 30 09.8**	**+0.6**
KAPZ				*e*S	**Sb**	**10 30 34.6**	**-0.5**
GURO	**Guroymak-BITLI**	**1.91**	**274**	Pn	**Pn**	**10 30 09.4**	**-0.1**
AMBZ	**Amberd**	**1.94**	**356**	*e*P	**Pn**	**10 30 10.5**	**+0.4**
AMBZ				*e*S	**Sb**	**10 30 35.7**	**-1.2**
MAHB	**Mahabad**	**1.95**	**149**	Pn	**Pb**	**10 30 11.7**	**-0.5**
AYRK	**Ayrk**	**1.96**	**31**	*e*P	**Pb**	**10 30 11.1**	**-1.2**
AYRK				*e*S	**Sb**	**10 30 36.6**	**-0.7**
IHRS	**Heris**	**2.04**	**93**	Pn	**Pb**	**10 30 12.9**	**-0.8**
KARS	**Kars**	**2.42**	**334**	Pn	**Pb**	**10 30 18.1**	**-2.1**
QRD	**Qoradiz**	**2.45**	**65**	P	**Pb**	**10 30 19.0**	**-1.6**
QRD				S	**Sb**	**10 30 49.3**	**-1.9**
GDB	**GEDABAY**	**2.48**	**23**	P	**Pn**	**10 30 18.6**	**+1.2**
GDB				S	**Sb**	**10 30 51.2**	**-1.1**
IHSH	**Hashtrud**	**2.50**	**116**	Pn	**Pn**	**10 30 19.0**	**+1.2**
LSVT	**Lusahovit**	**2.53**	**13**	*e*P	**Pn**	**10 30 19.1**	**+1.1**
LSVT				*e*S	**Sn**	**10 30 50.7**	**+1.2**
SVAN	**Silvan-Diyarba**	**2.58**	**264**	Pn	**Pn**	**10 30 19.5**	**+0.8**
ISRB	**Sarab**	**2.61**	**103**	Pn	**Pn**	**10 30 19.9**	**+0.7**
SRTK	**Saratovka**	**2.62**	**358**	*e*P	**Pb**	**10 30 23.0**	**-0.5**
SRTK				*e*S	**Sb**	**10 30 57.2**	**+1.0**
GANJ	**Ganja**	**2.63**	**33**	P	**Pn**	**10 30 21.0**	**+1.7**
GANJ				S	**Sb**	**10 30 54.9**	**-1.4**
AGDM	**Agdam**	**2.64**	**50**	P	**Pn**	**10 30 20.9**	**+1.4**
AGDM				S	**Sb**	**10 30 55.1**	**-1.8**
SENK	**Senkaya-Erzuru**	**2.67**	**323**	Pn	**Pb**	**10 30 22.3**	**-2.1**
QZX	**Qazax, Azerbai**	**2.70**	**15**	P	**Pn**	**10 30 21.7**	**+1.4**
QZX				S	**Sb**	**10 30 55.9**	**-2.6**
GRMI	**Germi**	**2.72**	**81**	Pn	**Pn**	**10 30 21.8**	**+1.2**
BRDA	**Brd**	**2.78**	**48**	P	**Pn**	**10 30 22.8**	**+1.4**
BRDA				S	**Sn**	**10 30 57.1**	**+1.5**
BGD	**Bogdanovka**	**2.89**	**347**	P	**Pn**	**10 30 24.1**	**+1.0**
YRD	**Yardimli**	**3.00**	**80**	P	**Pb**	**10 30 27.0**	**-3.1**
YRD				S	**Sb**	**10 31 05.0**	**-2.2**
BNGB	**Bingl**	**3.00**	**282**	Pn	**Pn**	**10 30 26.3**	**+1.7**
AKH	**Akhalkalaki**	**3.05**	**346**	P	**P

GEVA				IAML		10 31 50.0	
	comp=E,430nm,0.5s						
GEVA				IAML		10 31 51.0	
	comp=N,405nm,0.4s						
ORD	**Ordubad**	**1.27**	**66**	P	**Pg**	**10 31 31.5**	**-0.8**
ORD				S	**Sg**	**10 31 49.8**	**+1.0**
SBZ	**Shahbuz**	**1.27**	**39**	P	**Pg**	**10 31 31.7**	**-0.7**
SBZ				S	**Sg**	**10 31 50.7**	**+1.8**
HYR	**Heyderabad**	**1.33**	**11**	P	**Pg**	**10 31 33.6**	**+0.1**
HYR				S	**Sg**	**10 31 54.4**	**+3.3**
CUKT	**Cukurca**	**1.37**	**212**	Pn	**Pg**	**10 31 33.5**	**-0.8**
CUKT				Sn	**Sg**	**10 31 52.6**	**+0.5**
CUKT	**Cukurca**	**1.37**	**212**	P	**Pg**	**10 31 34.0**	**-0.3**
CUKT				S	**Sg**	**10 31 53.3**	**+1.2**
PERV	**Siirt/Pervari-**	**1.62**	**254**	P	**Pg**	**10 31 39.7**	**+0.6**
PERV				S	**Sg**	**10 32 03.9**	**+3.7**
AGRB	**Hanur-Agry**	**1.66**	**315**	Pn	**Pn**	**10 31 36.6**	**-0.2**
DORK	**Agr/Tutak/Do**	**1.66**	**306**	P	**Pb**	**10 31 37.9**	**-0.6**
DORK				S	**Sg**	**10 32 03.3**	**+1.8**
DORK				IAML		10 32 07.0	
	comp=E,165nm,0.6s						
DORK				IAML		10 32 09.0	
	comp=N,190nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.70**	**296**	Pn	**Pn**	**10 31 37.6**	**+0.2**
KOTA	**Agri, Merkez-K**	**1.72**	**324**	P	**Pg**	**10 31 39.9**	**-1.0**
KOTA				S	**Sg**	**10 32 02.5**	**-0.7**
KOTA				IAML		10 32 08.0	
	comp=N,67nm,1.0s						
KOTA				IAML		10 32 12.0	
	comp=E,94nm,1.3s						
GNI	**Garni**	**1.74**	**6**	Pn	**Pn**	**10 31 37.1**	**-0.8**
BLIS	**Bitlis-Merkez**	**1.88**	**271**	P	**Pb**	**10 31 42.8**	**+0.5**
BLIS				S	**Sg**	**10 32 09.6**	**+1.1**
BLIS				IAML		10 32 16.0	
	comp=N,140nm,1.3s						
BLIS				IAML		10 32 18.0	
	comp=E,113nm,0.6s						
GURO	**Guroymak-BITLI**	**1.95**	**275**	Pn	**Pn**	**10 31 41.5**	**+0.7**
VRTB	**Varto-Mus**	**2.50**	**288**	Pn	**Pn**	**10 31 49.1**	**+0.7**
SVAN	**Silvan-Diyarba**	**2.62**	**265**	Pn	**Pn**	**10 31 51.0**	**+1.0**

*IDC **23** 10:33:07.4±1.2,25˚.41N×96˚.55E,h0km,mb3.4/6, mbtmp3.4/6,MS3.0/2,Error ellipse: s-maj=63.2km s-min=16.7km az=67.0*

ISC 23 10:33:12.1±1.1,25˚.6N±0˚.2×96˚.7E±0˚.4,h25km,n8,σ1§63/7, mb3.4/6,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.38**	**163**	Pg	**Pb**	**10 35 20.6**	**+1.1**
	0.1nm,0.3s,baz=339,slow=15,SNR=5.1						
CMAR				Lg	Lg	10 36 59.6	
	0.8nm,0.3s,baz=283,slow=26,SNR=4.3						
CMAR				LR	LR	10 37 11.5	
	comp=Z,23nm,20.5s,baz=330,slow=34						
SONM	**Songino Array**	**23.50**	**17**	P	**P**	**10 38 21.7**	**+1.6**
	1.0nm,1.1s,baz=198,slow=9.1,SNR=3.8						
	1.0nm,1.1s						
MKAR	**Makanchi Array**	**24.08**	**335**	P	**P**	**10 38 24.7**	**-0.8**
	0.9nm,0.7s,baz=145,slow=9.7,SNR=9.3						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**28.65**	**336**	P	**P**	**10 39 06.6**	**0.0**
	0.2nm,0.3s,baz=146,slow=10,SNR=2.4						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**33.78**	**331**	P	**P**	**10 39 52.0**	**+0.2**
	0.4nm,0.5s,baz=134,slow=9.0,SNR=2.6						
	0.4nm,0.5s						
ASAJ	**Asahikawa**	**41.36**	**52**	LR	LR	10 58 31.1	
	comp=Z,92nm,18.2s,baz=100,slow=37						
WRA	**Warramunga Arr**	**58.18**	**137**	P	**P**	**10 43 01.8**	**-2.4**
	0.3nm,0.9s,baz=320,slow=7.3,SNR=1.4						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**60.78**	**141**	P	**P**	**10 43 21.6**	**-0.6**
	0.3nm,0.6s,baz=322,slow=7.1,SNR=5.6						
	0.3nm,0.6s						

IDC 23 10:42:59.5±7.3,18˚.76S×173˚.30W,h0km,mb3.4/2, mbtmp3.4/2,Error ellipse: s-maj=407.0km s-min=56.1km az=149.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**49.24**	**255**	P	P	10 51 50.2	0.0
	0.5nm,0.9s,baz=94,slow=7.1,SNR=4.7						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**49.26**	**260**	P	P	10 51 50.2	-0.2
	0.2nm,0.3s,baz=96,slow=8.1,SNR=14						
	0.2nm,0.3s						
GERES	**GERESS Array B**	**149.46**	**351**	PKPbc	PKPbc	11 02 50.2	-0.5
	0.2nm,0.3s,baz=34,slow=3.7,SNR=1.5						

*AZER **23** 10:50:54.7,38˚.45N×44˚.48E,h2km,ml3.2*
*NSSP **23** 10:50:55.4,38˚.50N×44˚.52E,h10km,Ms3.5*
*AFAD **23** 10:50:56.8,38˚.48N×44˚.51E,h7km±1km,ML3.2*
*TEH **23** 10:50:57.5,38˚.47N×44˚.44E,h5km,ML3.3,Presumed earthquake*
*ISK **23** 10:50:58.9,38˚.47N×44˚.46E,h10km,ML3.3/7*

ISC 23 10:50:58.1±1.1,38˚.46N±0˚.02×44˚.46E±0˚.02,h8km±9km, n51,σ1§32/83,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**300**	P	**Pg**	**10 51 05.8**	**-0.5**
OZAP				S	**Sg**	**10 51 12.6**	**+0.7**
OZAP				IAML		10 51 14.0	
	comp=N,3μm,0.5s						
OZAP				IAML		10 51 16.0	
	comp=E,3μm,0.8s						
TVAN	**Van**	**0.83**	**275**	P	**Pg**	**10 51 12.9**	**-1.1**
TVAN				S	**Sg**	**10 51 24.3**	**-0.6**
TVAN				IAML		10 51 33.0	
	comp=E,734nm,0.7s						
TVAN				IAML		10 51 34.0	
	comp=N,998nm,0.6s						
TVAN	**Van**	**0.83**	**275**	Pg	**Pg**	**10 51 12.9**	**-1.1**
VANB	**Van**	**0.85**	**280**	Pg	**Pb**	**10 51 15.4**	**+0.2**
VANB				Sg	**Sb**	**10 51 27.4**	**+0.6**
VMUR	**Van-Muradiye**	**0.88**	**308**	P	**Pg**	**10 51 14.2**	**-0.8**
VMUR				S	**Sn**	**10 51 28.8**	**-1.1**
VMUR				IAML		10 51 31.0	
	comp=E,865nm,0.8s						
VMUR				IAML		10 51 32.0	
	comp=N,1μm,0.4s						
VMUR	**Van-Muradiye**	**0.88**	**308**	Pg	**Pg**	**10 51 14.1**	**-0.8**
ISHB	**Shabestar**	**0.93**	**100**	Pg	**Pg**	**10 51 14.9**	**-1.0**
IMRD	**Marand**	**1.01**	**75**	Pg	**Pg**	**10 51 17.2**	**-0.3**
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pg**	**10 51 18.3**	**-0.5**
HAKT				S	**Sn**	**10 51 36.0**	**+1.1**
HAKT				IAML		10 51 37.0	
	comp=N,439nm,0.4s						
HAKT				IAML		10 51 38.0	
	comp=E,450nm,0.6s						
HAKT	**HAKKARI**	**1.07**	**214**	Pg	**Pg**	**10 51 18.2**	**-0.5**
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pg**	**10 51 18.4**	**-0.5**
HAKT				S	**Sn**	**10 51 35.7**	**+0.9**
NAX	**Nakhchivan**	**1.08**	**48**	P	**Pg**	**10 51 18.5**	**-0.4**
NAX				S	**Sn**	**10 51 34.5**	**-0.3**
GEVA	**Gevas**	**1.11**	**263**	P	**Pg**	**10 51 17.3**	**-2.1**
GEVA				S	**Sn**	**10 51 35.6**	**-0.1**
GEVA	**Gevas**	**1.11**	**263**	Pg	**Pg**	**10 51 17.3**	**-2.1**
DYDN	**Diyadin**	**1.24**	**331**	P	**Pn**	**10 51 19.8**	**-2.2**
DYDN				S	**Sb**	**10 51 37.4**	**-0.8**
DYDN				IAML		10 51 44.0	
	comp=N,524nm,0.4s						
DYDN				IAML		10 51 52.0	
	comp=E,329nm,0.7s						
DYDN	**Diyadin**	**1.24**	**331**	Pg	**Pn**	**10 51 19.7**	**-2.2**
SBZ	**Shahbuz**	**1.27**	**42**	P	**Pn**	**10 51 21.6**	**-0.6**
SBZ				S	**Sn**	**10 51 40.2**	**+0.7**
ORD	**Ordubad**	**1.29**	**68**	P	**Pn**	**10 51 22.3**	**-0.2**
ORD				S	**Sg**	**10 51 40.6**	**+1.0**
HYR	**Heyderabad**	**1.30**	**14**	P	**Pg**	**10 51 22.9**	**-0.2**
HYR				S	**Sg**	**10 51 44.9**	**+5.0**
ITBZ	**Tabriz**	**1.35**	**99**	Pg	**Pn**	**10 51 22.3**	**-1.0**
CUKT	**Cukurca**	**1.38**	**209**	Pn	**Pg**	**10 51 25.1**	**+0.5**
CUKT				Sn	**Sg**	**10 51 44.3**	**+1.8**
ADCV	**BITLIS_Adilcev**	**1.40**	**285**	P	**Pb**	**10 51 24.1**	**-0.5**
ADCV				S	**Sg**	**10 51 46.3**	**+3.0**
ADCV				IAML		10 51 47.0	
	comp=N,385nm,0.5s						
ADCV				IAML		10 51 50.0	
	comp=E,269nm,0.5s						
ADCV	**BITLIS_Adilcev**	**1.40**	**285**	Pg	**Pb**	**10 51 24.1**	**-0.5**
IAZR	**Azarshahr**	**1.43**	**122**	Pg	**Pb**	**10 51 25.1**	**-0.1**
IGDI	**IGDIR**	**1.44**	**348**	P	**Pb**	**10 51 24.7**	**-0.5**
IGDI				S	**Sg**	**10 51 48.4**	**+3.9**
VAYK	**Vayk**	**1.45**	**31**	eP	**Pn**	**10 51 24.8**	**+0.1**
VAYK				eS	**Sg**	**10 51 44.8**	**+0.1**
ALVK	**Alvank**	**1.56**	**71**	eP	**Pn**	**10 51 26.4**	**+0.3**
ALVK				eS	**Sg**	**10 51 47.7**	**-0.5**
AGRB	**Hanur-Agry**	**1.60**	**315**	Pn	**Pb**	**10 51 27.7**	**-0.3**
AGRB				Sn	**Sg**	**10 51 49.1**	**-0.4**
DORK	**Agr/Tutak/Do**	**1.61**	**306**	P	**Pb**	**10 51 27.4**	**-0.7**
DORK				S	**Sg**	**10 51 50.5**	**+0.7**
DORK				IAML		10 51 52.0	
	comp=N,210nm,0.6s						
DORK				IAML		10 51 56.0	
	comp=E,143nm,0.6s						
MLAZ	**Malazgirt-MUS**	**1.64**	**295**	Pn	**Pb**	**10 51 28.5**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.66**	**324**	P	**Pn**	**10 51 27.3**	**-0.4**
KOTA				S	**Sb**	**10 51 50.5**	**+0.3**
GNI	**Garni**	**1.71**	**7**	Pn	**Pb**	**10 51 29.5**	**-0.3**
GNI	**Garni**	**1.71**	**7**	eP	**Pg**	**10 51 30.4**	**-0.5**
GNI				eS	**Sg**	**10 51 56.4**	**+3.4**
GNI	**Garni**	**1.71**	**7**	Pg	**Pb**	**10 51 29.4**	**-0.4**
VNNZ	**Vanand**	**1.72**	**344**	eP	**Pb**	**10 51 30.0**	**0.0**
VNNZ				eS	**Sg**	**10 51 53.9**	**+0.6**
GRS	**Goris**	**1.79**	**54**	iP	**Pn**	**10 51 29.0**	**-0.5**
GRS				i/eS	**Sb**	**10 51 54.0**	**0.0**
EGVZ	**Egvard**	**1.80**	**64**	eP	**Pn**	**10 51 30.2**	**+0.7**
EGVZ				eS	**Sb**	**10 51 54.4**	**+0.3**
ARUZ	**Aruch**	**1.85**	**351**	eP	**Pb**	**10 51 32.6**	**+0.4**
ARUZ				eS	**Sg**	**10 51 58.5**	**+1.0**
KAPZ	**Kaputan**	**1.87**	**6**	eP	**Pn**	**10 51 31.1**	**+0.5**
KAPZ				eS	**Sb**	**10 51 55.9**	**-0.4**
GURO	**Guroymak-BITLI**	**1.91**	**274**	Pn	**Pb**	**10 51 32.5**	**-0.7**
AMBZ	**Amberd**	**1.94**	**355**	eP	**Pb**	**10 51 33.3**	**-0.5**
AMBZ				eS	**Sg**	**10 51 59.7**	**-0.6**
AYRK	**Ayrk**	**1.95**	**31**	eP	**Pb**	**10 51 33.9**	**-0.1**
AYRK				eS	**Sg**	**10 52 00.6**	**-0.3**
IHRS	**Heris**	**2.04**	**93**	Pn	**Pb**	**10 51 35.1**	**-0.3**
QRD	**Qoradiz**	**2.45**	**65**	P	**Pn**	**10 51 40.0**	**+1.7**
QRD				S	**Sb**	**10 52 11.1**	**-1.5**
GDB	**GEDABAY**	**2.47**	**23**	P	**Pn**	**10 51 40.7**	**+1.8**
GDB				S	**Sb**	**10 52 14.9**	**+1.3**
IHSH	**Hashtrud**	**2.50**	**116**	Pn	**Pb**	**10 51 41.3**	**-2.1**
LSVT	**Lusahovit**	**2.52**	**13**	eP	**Pb**	**10 51 41.5**	**-2.2**
LSVT				eS	**Sb**	**10 52 13.9**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.58**	**264**	Pn	**Pn**	**10 51 42.1**	**+1.9**
ISRB	**Sarab**	**2.61**	**103**	Pn	**Pb**	**10 51 43.0**	**-2.1**
SRTK	**Saratovka**	**2.61**	**358**	eP	**Pb**	**10 51 45.9**	**+0.7**
SRTK				eS	**Sg**	**10 52 21.4**	**-0.6**
GRMI	**Germi**	**2.71**	**81**	Pn	**Pn**	**10 51 43.9**	**+1.8**

*IDC **23** 10:53:38.1±1.6,6˚.74S×125˚.39E,h523km±25km,mb3.1/4, mbtmp4.1/9,Error ellipse: s-maj=49.7km s-min=14.9km az=59.0*
*NEIC **23** 10:53:38.7±0.8,6˚.8S±0˚.1×125˚.2E±0˚.2,h533km±13km, mb4.1/11,Error ellipse: s-maj=27.3km s-min=15.1km az=51.0*

ISC 23 10:53:37.7±0.6,6˚.78S±0˚.07×125˚.4E±0˚.1,h511km,n32, σ1§50/31,mb4.0/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**3.14**	**200**		**P**	**10 54 52.9**	**+2.2**
BATI	**Baumata**	**3.79**	**206**	P	**P**	**10 54 57.5**	**+2.2**
	93nm,0.4s,baz=35,slow=1.9,SNR=15						
BATI				S	**S**	**10 56 00.8**	**+2.3**
	32nm,0.6s,baz=348,slow=22,SNR=1.7						
KAPI	**Kappang**	**5.85**	**287**	P	**P**	**10 55 15.5**	**+2.4**
	20nm,0.7s,baz=142,slow=4.6,SNR=7.8						
KAPI	**Kappang**	**5.85**	**287**	P	**P**	**10 55 14.9**	**+1.8**
MTN	**Manton Dam**	**8.29**	**137**	P	**P**	**10 55 39.9**	**+2.6**
TOLI2	**Tolitoli**	**9.07**	**330**	P	**P**	**10 55 45.6**	**+0.1**
KNRA	**Kununurra**	**9.45**	**160**	P	**P**	**10 55 50.9**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.25**	**179**	P	**P**	**10 56 08.2**	**-0.1**
	1.1nm,0.3s,baz=0.8,slow=8.3,SNR=12						
FITZ				S	**S**	**10 58 08.8**	**-3.5**
	3.0nm,0.9s,baz=188,slow=5.5,SNR=1.5						
WB0	**Warramunga Arr**	**15.61**	**147**	P	**P**	**10 56 53.9**	**-0.3**
WB0				IAmb	IAmb	10 57 19.0	
	comp=Z,6.8nm,1.1s						
WRA	**Warramunga Arr**	**15.72**	**147**	P	**P**	**10 56 55.0**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=336,slow=9.1,SNR=84						
WRA	**Warramunga Arr**	**15.72**	**147**	P	**P**	**10 56 53.9**	**-1.4**
AS31	**Alice Springs**	**18.69**	**155**		**P**	**10 57 23.5**	**-0.3**
AS31				IAmb	IAmb	10 57 26.1	
	comp=Z,2.8nm,0.4s						
ASAR	**Alice Springs**	**18.69**	**155**	P	**P**	**10 57 24.1**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=330,slow=8.9,SNR=122						
ASAR	**Alice Springs**	**18.69**	**155**	P	**P**	**10 57 23.7**	**-0.2**
COEN	**Coen**	**18.91**	**114**	P	**P**	**10 57 26.4**	**+0.5**
FORT	**Forrest**	**24.01**	**174**	P	**P**	**10 58 10.8**	**-0.8**
FORT				IAmb	IAmb	10 58 18.2	
	comp=Z,5.5nm,0.9s						
STKA	**Stephens Creek**	**29.21**	**151**	P	**P**	**10 58 57.9**	**+0.4**
	comp=Z,0.0nm,0.4s,baz=328,slow=7.1,SNR=10.0						
	comp=Z,2.0nm,0.4s						
YULB	**Yu-li**	**30.25**	**353**	P	P	10 59 10.9	+4.3
SSLB	**Suanglung**	**30.69**	**352**	P	P	**10 59 12.2**	**+1.8**
NACB	**Ninganchiao**	**30.99**	**353**	P	P	10 59 04.0	-8.9
YHNB	**Yeheng**	**31.50**	**353**	P	P	10 59 09.7	-7.8
ARMA	**Armidale**	**34.07**	**137**	P	**P**	**10 59 40.3**	**+1.0**
ARMA				IAmb	IAmb	11 00 03.0	
	comp=Z,8.9nm,1.1s						
CAN	**Canberra**	**35.76**	**146**	P	**P**	**10 59 54.2**	**+0.9**
KHZ	**Kahutara**	**55.31**	**138**	P	**P**	**11 02 22.2**	**-0.3**
KHZ				IAmb	IAmb	11 02 35.5	
	comp=Z,9.6nm,1.0s						
MKAR	**Makanchi Array**	**65.59**	**329**	P	**P**	**11 03 29.6**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=125,slow=7.2,SNR=9.4						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**65.59**	**329**	P	**P**	**11 03 28.9**	**-1.8**
PETK	**Petropavlovsk-**	**65.66**	**21**	P	**P**	**11 03 30.2**	**-0.7**
	comp=Z,3.3nm,0.9s,baz=210,slow=7.1,SNR=7.5						
	comp=Z,3.3nm,0.9s						
PETK	**Petropavlovsk-**	**65.66**	**21**	P	**P**	**11 03 30.5**	**-0.4**
BVAR	**Borovoye Array**	**75.47**	**329**	P	**P**	**11 04 27.8**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=112,slow=6.4,SNR=2.4						
	comp=Z,0.3nm,0.5s						
TIXI	**Tiksi**	**78.31**	**1**	P	**P**	**11 04 42.6**	**-1.5**
TIXI				IAmb	IAmb	11 04 43.2	
	comp=Z,1.6nm,0.6s						
O14K	**Tigyukauivet M**	**87.41**	**30**	P	**P**	**11 05 29.9**	**-0.2**
O14K				IAmb	IAmb	11 05 43.2	
	comp=Z,3.4nm,1.1s						
C19K	**Lookout Ridge**	**91.01**	**20**	P	**P**	**11 05 46.6**	**0.0**

*HEL **23** 10:54:42.8±0.2,67˚.64N×20˚.85E,h0km,ML1.5,Suspected explosion*
*UPP **23** 10:54:43.4±0.0,67˚.63N×21˚.03E,h0km,ML2.9,Suspected explosion*
*DNK **23** 10:54:43.7±1.0,67˚.61N×20˚.98E,h0km,ML2.9(UPP), Explosion*

ISC 23 10:54:43.2±0.8,67˚.62N±0˚.02×21˚.01E±0˚.02,h0km,n43, σ0§99/60,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.41**	**112**	P	**Pg**	**10 54 51.4**	**+0.3**
MASU				S	**Sg**	**10 54 57.0**	**+0.6**
MASU	**Masugnsbyn**	**0.41**	**112**	P	**Pg**	**10 54 51.4**	**+0.3**
MASU				S	**Sg**	**10 54 57.0**	**+0.6**
KUA	**Kurravaara**	**0.43**	**323**	P	**Pg**	**10 54 51.5**	**+0.1**
	baz=147						
KUA				S	**Sg**	**10 54 57.2**	**+0.3**
KUA	**Kurravaara**	**0.43**	**323**	P	**Pg**	**10 54 51.5**	**+0.1**
	baz=147						
KUA				S	**Sg**	**10 54 57.2**	**+0.3**
DUNU	**Dundret**	**0.53**	**199**	P	**Pg**	**10 54 53.7**	**+0.4**
DUNU	**Dundret**	**0.53**	**199**	P	**Pg**	**10 54 53.7**	**+0.4**
LANU	**Lannavaara**	**0.57**	**40**	P	**Pg**	**10 54 53.8**	**-0.3**
LANU	**Lannavaara**	**0.57**	**40**	P	**Pg**	**10 54 53.8**	**-0.3**
LANU	**Lannavaara**	**0.57**	**40**	PG	**Pg**	**10 54 53.6**	**-0.5**
LANU				SG	**Sg**	**10 55 01.8**	**+0.2**
RATU	**Laukkuluspa**	**0.58**	**292**	P	**Pg**	**10 54 54.3**	**0.0**
RATU	**Laukkuluspa**	**0.58**	**292**	P	**Pg**	**10 54 54.3**	**0.0**
KOVU	**Salmi**	**0.69**	**333**	P	**Pg**	**10 54 56.2**	**-0.2**
	baz=159						
KOVU	**Salmi**	**0.69**	**333**	P	**Pg**	**10 54 56.2**	**-0.2**
	baz=159						
NIKU	**Nikkaluokta**	**0.79**	**289**	P	**Pg**	**10 54 58.2**	**-0.2**
NIKU	**Nikkaluokta**	**0.79**	**289**	P	**Pg**	**10 54 58.2**	**-0.2**
SALU	**Saltoluokta**	**0.99**	**257**	P	**Pg**	**10 55 02.0**	**-0.2**
SALU	**Saltoluokta**	**0.99**	**257**	P	**Pg**	**10 55 02.0**	**-0.2**
PAJU	**Pajala**	**1.01**	**125**	P	**Pg**	**10 55 01.9**	**-0.6**
PAJU	**Pajala**	**1.01**	**125**	P	**Pg**	**10 55 01.9**	**-0.6**
ERTU	**Ertsjaerv**	**1.16**	**156**	P	**Pg**	**10 55 04.9**	**-0.6**
ERTU	**Ertsjaerv**	**1.16**	**156**	P	**Pg**	**10 55 04.9**	**-0.6**
ERTU	**Ertsjaerv**	**1.16**	**156**	PG	**Pg**	**10 55 04.8**	**-0.6**
ERTU				SG	**Sb**	**10 55 20.7**	**-1.0**
KLF	**Kolari**	**1.20**	**107**	PG	**Pg**	**10 55 05.6**	**-0.6**
KLF				smax	smax	10 55 21.2	
	comp=Z,2.2nm,0.2s						
KLF				SG	**Sg**	**10 55 21.6**	**-0.2**
HEF	**Hetta**	**1.28**	**50**	eP	**Pg**	**10 55 06.6**	**-1.1**
HEF	**Hetta**	**1.28**	**50**	PG	**Pg**	**10 55 06.1**	**-1.6**
	baz=235						
HEF				smax	smax	10 55 22.2	
	comp=Z,3.1nm,0.2s						
HEF				SG	**Sg**	**10 55 23.0**	**-1.1**
KIF	**Kilpisjarvi**	**1.40**	**357**	eP	**Pn**	**10 55 09.2**	**-0.7**
KIF	**Kilpisjarvi**	**1.40**	**357**	PN	**Pn**	**10 55 09.1**	**-0.8**
KIF				smax	smax	10 55 25.1	
	comp=Z,9.0nm,0.2s						
KIF				SN	**Sg**	**10 55 27.9**	**-0.2**
HARU	**Harads**	**1.46**	**181**	P	**Pn**	**10 55 10.3**	**-0.5**
HARU	**Harads**	**1.46**	**181**	P	**Pn**	**10 55 10.3**	**-0.5**
KTK1	**Kautokeino**	**1.63**	**30**	PN	**Pn**	**10 55 13.2**	**+0.1**
KTK1				SN	**Sg**	**10 55 35.7**	**+0.3**
TOF	**Tornio**	**2.02**	**138**	PG	**Pb**	**10 55 20.0**	**-0.8**
TOF				smax	smax	10 55 44.7	
	comp=Z,3.3nm,0.2s						
TOF				SG	**Sb**	**10 55 46.6**	**+0.1**
RNF	**Rovaniemi**	**2.20**	**115**	PG	**Pb**	**10 55 22.3**	**-1.5**
	baz=302						
RNF				SG	**Sb**	**10 55 51.7**	**+0.1**
ARA0	**ARCESS Array S**	**2.54**	**39**	PB	**Pn**	**10 55 26.2**	**+0.6**
ARA0				SB	**Sn**	**10 55 58.9**	**+1.7**
RANF	**Ranua**	**2.79**	**122**	PG	**Pb**	**10 55 34.5**	**+0.5**
RANF				SB	**Sn**	**10 56 05.6**	**+2.1**
RAJF	**Raja-Jooseppi**	**2.88**	**69**	SB	**Sb**	**10 56 10.2**	**-0.8**
KEV	**Kevo**	**3.07**	**43**	PB	**Pn**	**10 55 33.5**	**+0.6**
KEV				SN	**Sn**	**10 56 10.4**	**+0.2**
VRF	**Varrio**	**3.28**	**84**	SG	**Sb**	**10 56 23.4**	**+0.6**
OLKF	**Oulanka, Finla**	**3.54**	**108**	SN	**Sn**	**10 56 24.0**	**+2.1**
MSF	**Maaselka**	**3.61**	**115**	SN	**Sn**	**10 56 25.8**	**+2.2**
UMAU	**Umeaa**	**3.75**	**182**	SN	**Sn**	**10 56 28.6**	**+1.5**
KU6	**Riekki**	**3.86**	**110**	PN	**Pn**	**10 55 45.5**	**+1.8**
	baz=297						
KU6				SN	**Sn**	**10 56 29.0**	**-0.6**
KU1	**Kurvinen**	**3.98**	**117**	PN	**Pn**	**10 55 47.4**	**+1.9**
KU1				SN	**Sn**	**10 56 32.7**	**0.0**
VAF	**Ylistaro**	**4.65**	**171**	SG	**Sg**	**10 57 08.7**	**-3.6**

*NEIC **23** 10:55:44.8±1.2,4˚.51S±0˚.07×151˚.20E±0˚.09,h284km±6km, mb4.5/25,Error ellipse: s-maj=14.3km s-min=8.8km az=116.0*
*IDC **23** 10:55:45.9±1.6,4˚.60S×151˚.14E,h297km±13km,mb3.6/12, mbtmp4.3/15,Error ellipse: s-maj=19.5km s-min=9.9km az=113.0*

ISC 23 10:55:46.1±0.4,4˚.59S±0˚.05×151˚.11E±0˚.06,h300km,n83, σ1§16/90,mb4.4/28,1D,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.12**	**69**		**Pn**	**10 56 23.6**	**-3.6**
MANU	**Manus Island**	**4.51**	**304**		**Pn**	**10 56 57.0**	**-1.1**
PMG	**Port Moresby**	**6.18**	**219**	P	**Pn**	**10 57 17.0**	**-0.8**
	145nm,0.7s,baz=37,slow=5.2,SNR=31						
PMG				S	**S**	**10 58 27.6**	**-4.0**
	16nm,0.7s,baz=180,slow=20,SNR=1.2						
PMG	**Port Moresby**	**6.18**	**219**		**Pn**	**10 57 16.8**	**-0.9**
PMG	**Port Moresby**	**6.18**	**219**	P	**Pn**	**10 57 16.9**	**-0.8**
TATA	**Tatamba Isabel**	**9.43**	**114**	P	**Pn**	**10 57 56.2**	**-1.1**
SAVO	**Savo Central**	**9.75**	**118**	P	**P**	**10 58 03.6**	**-1.6**
JAY	**Jayapura**	**10.59**	**281**	P	**Pn**	**10 58 11.6**	**0.0**
	16nm,0.4s,baz=142,slow=3.6,SNR=11						
NGOA	**Tingoa Renbel**	**11.24**	**129**	P	**P**	**10 58 21.8**	**+0.1**
COEN	**Coen**	**12.16**	**220**		**P**	**10 58 31.6**	**-0.3**
COEN	**Coen**	**12.16**	**220**	P	**P**	**10 58 32.5**	**+0.6**
MTSU	**Mount Surprise**	**15.01**	**206**	P	**Pn**	**10 59 04.5**	**-0.3**
CTA	**Charters Tower**	**16.11**	**197**	P	**Pn**	**10 59 17.1**	**-0.6**
	11nm,0.6s,baz=13,slow=11,SNR=17						
CTAO	**Charters Tower**	**16.11**	**197**	P	**P**	**10 59 15.6**	**+0.1**
CTAO				IAmb	IAmb	10 59 25.3	
	comp=Z,45nm,

	comp=Z,34nm,1.3s							
KLBR	**Kellerberrin**		**41.24**	**225**	P	**P**	**11 03 01.7**	**-0.9**
BKZ	**Black Stump Fm**		**41.40**	**150**	P	**P**	**11 03 04.1**	**+0.3**
BKZ					IAmb	IAmb	11 03 10.5	
	comp=Z,34nm,1.3s							
BKZ	**Black Stump Fm**		**41.40**	**150**	P	**P**	**11 03 05.1**	**+1.2**
BLDU	**Ballidu**		**41.46**	**227**	P	**P**	**11 03 03.9**	**-0.6**
MUN	**Mundaring**		**42.55**	**226**	P	**P**	**11 03 13.4**	**+0.2**
KHZ	**Kahutara**		**42.63**	**155**	P	**P**	**11 03 13.7**	**+0.1**
NJ2	**Nanjing**		**47.63**	**322**	*eP*	**P**	**11 03 52.8**	**-0.1**
NJ2					pmax	pmax		
	comp=Z,8.0nm,0.5s							
BNX	**BinXian**		**54.38**	**340**	⇓P	**P**	**11 04 42.8**	**+0.3**
BNX					pmax	pmax		
	comp=Z,5.0nm,1.8s							
CMAR	**Chiang Mai Arr**		**56.27**	**296**	P	**P**	**11 04 58.3**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=104,slow=7.5,SNR=8.6							
	comp=Z,0.7nm,0.3s							
PZH	**PanZhiHua**		**56.88**	**306**	P	**P**	**11 05 02.5**	**+1.7**
PETK	**Petropavlovsk-**		**57.75**	**5**	P	**P**	**11 05 05.0**	**-1.1**
	comp=Z,3.9nm,0.9s,baz=146,slow=6.0,SNR=12							
	comp=Z,3.9nm,0.9s							
PETK	**Petropavlovsk-**		**57.75**	**5**	P	**P**	**11 05 04.0**	**-2.2**
HHC	**Hu-ho-hao-te**		**57.91**	**325**	*eP*	**P**	**11 05 09.0**	**+1.4**
HHC					pmax	pmax		
	comp=Z,13nm,0.6s							
HHC					pmax	pmax		
	comp=Z,190nm,4.4s							
LZH	**Lanzhou**		**59.91**	**317**	*eP*	**P**	**11 05 24.3**	**+2.8**
LZH					pmax	pmax		
	comp=Z,11nm,1.0s							
SONM	**Songino Array**		**65.26**	**329**	P	**P**	**11 05 57.7**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=145,slow=5.2,SNR=4.0							
	comp=Z,0.4nm,0.6s							
SONM	**Songino Array**		**65.26**	**329**	P	**P**	**11 05 57.3**	**+0.9**
VNDA	**Vanda**		**73.10**	**178**	P	**P**	**11 06 44.4**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=41,slow=6.4,SNR=2.0							
	comp=Z,1.8nm,0.8s							
M13K	**Dall Lake**		**73.89**	**22**	P	**P**	**11 06 47.9**	**-0.5**
M13K					IAmb	IAmb	11 06 50.7	
	comp=Z,9.8nm,0.8s							
O14K	**Tigyukauivet M**		**73.92**	**23**	P	**P**	**11 06 48.7**	**+0.1**
O14K					IAmb	IAmb	11 07 05.4	
	comp=Z,18nm,1.5s							
O15K	**Ungalikthiuk R**		**74.45**	**24**	P	**P**	**11 06 51.5**	**0.0**
WMQ	**Urumqi**		**74.45**	**318**	*eP*	**P**	**11 06 53.6**	**+1.6**
WMQ					PcP	**PcP**	**11 07 03.6**	**-1.4**
WMQ					pP	pP	11 07 59.8	-0.3
WMQ					LR	LR		
	comp=Z,150nm,23.9s							
MKAR	**Makanchi Array**		**79.07**	**319**	P	**P**	**11 07 18.1**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=98,slow=7.1,SNR=4.4							
	comp=Z,0.6nm,0.9s							
G18K	**Tagagawik**		**79.08**	**19**	P	**P**	**11 07 17.1**	**-0.2**
ILAR	**Eielson Array**		**82.61**	**22**	P	**P**	**11 07 34.6**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=256,slow=4.9,SNR=20							
	comp=Z,1.1nm,0.7s							
J25K	**Salcha River,**		**83.12**	**23**	P	**P**	**11 07 38.2**	**-0.3**
J25K					IAmb	IAmb	11 07 40.6	
	comp=Z,3.0nm,0.6s							
BVAR	**Borovoye Array**		**88.07**	**323**	P	**P**	**11 08 01.9**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=61,slow=7.4,SNR=2.9							
	comp=Z,0.3nm,0.4s							
NVAR	**Mina Array Bea**		**93.28**	**52**	P	**P**	**11 08 28.2**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=291,slow=4.4,SNR=2.7							
	comp=Z,0.3nm,0.5s							
TORD	**Torodi Ar. Bea**		**148.64**	**288**	PKPbc	**PKPbc**	**11 14 58.8**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=212,slow=2.6,SNR=14							

*NSSP **23** 11:08:36.5,38°.37N×44°.55E,h10km,Ms3.2*
*AZER **23** 11:08:36.2,38°.46N×44°.45E,h10km,ml3.2*
*AFAD **23** 11:08:37.3,38°.38N×44°.53E,h7km±4km,ML2.7*
*ISK **23** 11:08:39.4,38°.38N×44°.45E,h8km,ML3.1/9*
*TEH **23** 11:08:39.0,38°.47N×44°.58E,h7km±87km,ML2.8,*
Presumed earthquake

ISC 23 11:08:37.7±1.2,**38°.39N**±0°.02×**44°.51E**±0°.02,**h5**km±10km,
n42,σ1**913/70,1C-3D,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**304**	P	**Pg**	**11 08 47.4**	**+0.3**
OZAP				S	**Sb**	**11 08 55.5**	**-0.8**
OZAP				IAML		11 09 03.0	
	comp=E,1μm,1.3s						
TVAN	**Van**	**0.88**	**279**	P	**Pg**	**11 08 53.7**	**-0.8**
TVAN				S	**Sb**	**11 09 06.8**	**-0.8**
TVAN				IAML		11 09 22.0	
	comp=E,741nm,1.1s						
TVAN				IAML		11 09 25.0	
	comp=N,558nm,1.7s						
ISHB	**Shabestar**	**0.88**	**97**	Pg	**Pb**	**11 08 54.6**	**-1.0**
VANB	**Van**	**0.90**	**283**	Pg	**Pb**	**11 08 55.7**	**-0.1**
VANB				Sg	**Sb**	**11 09 07.7**	**-0.5**
VMUR	**Van-Muradiye**	**0.94**	**310**	P	**Pg**	**11 08 55.3**	**-0.5**
VMUR				S	**Sb**	**11 09 09.6**	**+0.1**
VMUR				IAML		11 09 12.0	
	comp=N,206nm,0.5s						
VMUR				IAML		11 09 18.0	
	comp=E,207nm,0.4s						
MAKU	**Maku**	**0.97**	**8**	Pg	**Pg**	**11 08 55.7**	**-0.7**
IMRD	**Marand**	**0.99**	**71**	Pg	**Pb**	**11 08 56.8**	**-0.6**
HAKT	**HAKKARI**	**1.04**	**217**	P	**Pn**	**11 08 58.2**	**-0.9**
HAKT				S	**Sn**	**11 09 15.4**	**+1.2**
HAKT				IAML		11 09 17.0	
	comp=N,327nm,0.3s						
HAKT				IAML		11 09 18.0	
	comp=E,454nm,0.6s						
HAKT	**HAKKARI**	**1.04**	**217**	P	**Pn**	**11 08 58.5**	**-0.6**
HAKT				S	**Sn**	**11 09 15.2**	**+1.0**
NAX	**Nakhchivan**	**1.10**	**44**	P	**Pn**	**11 08 59.4**	**-0.4**
NAX				S	**Sn**	**11 09 15.8**	**+0.4**
GEVA	**Gevas**	**1.14**	**267**	P	**Pg**	**11 08 57.4**	**-2.2**
GEVA				S	**Sn**	**11 09 16.8**	**+0.3**
ORD	**Ordubad**	**1.28**	**65**	P	**Pg**	**11 09 02.7**	**+0.5**
ORD				S	**Sn**	**11 09 21.5**	**+1.6**
SBZ	**Shahbuz**	**1.29**	**39**	P	**Pg**	**11 09 02.6**	**+0.1**
SBZ				S	**Sn**	**11 09 20.8**	**+0.5**
ITBZ	**Tabriz**	**1.30**	**96**	Pg	**Pb**	**11 09 01.9**	**-0.8**
DYDN	**Diyadin**	**1.32**	**331**	P	**Pg**	**11 09 03.1**	**+0.2**
DYDN				S	**Sb**	**11 09 18.7**	**-1.5**
DYDN				IAML		11 09 32.0	
	comp=N,261nm,1.0s						
DYDN				IAML		11 09 33.0	
	comp=E,169nm,1.0s						
CUKT	**Cukurca**	**1.34**	**212**	Pn	**Pg**	**11 09 04.4**	**+1.0**
CUKT				Sn	**Sn**	**11 09 22.9**	**+1.4**
HYR	**Heyderabad**	**1.35**	**11**	P	**Pb**	**11 09 03.1**	**-0.4**
HYR				S	**Sg**	**11 09 22.4**	**+1.2**
IAZR	**Azarshahr**	**1.36**	**121**	Pg	**Pg**	**11 09 05.1**	**+1.3**
ADCV	**BITLIS_Adilcev**	**1.46**	**287**	P	**Pb**	**11 09 05.1**	**-0.2**
ADCV				S	**Sg**	**11 09 27.6**	**+3.1**
ADCV				IAML		11 09 28.0	
	comp=E,101nm,1.0s						
ADCV				IAML		11 09 30.0	
	comp=N,111nm,1.0s						
VAYK	**Vayk**	**1.49**	**29**	⇓*eP*	**Pg**	**11 09 06.0**	**-0.1**
VAYK				⇓eS	**Sg**	**11 09 27.1**	**+1.7**
IGDI	**IGDIR**	**1.51**	**347**	P	**Pb**	**11 09 05.6**	**-0.6**
IGDI				S	**Sg**	**11 09 26.6**	**+0.3**
ALVK	**Alvank**	**1.54**	**69**	*eP*	**Pg**	**11 09 06.5**	**-0.7**
ALVK				*eS*	**Sg**	**11 09 28.5**	**+1.2**
AGRB	**Hanur-Agry**	**1.67**	**316**	Pn	**Pb**	**11 09 08.6**	**-0.4**
AGRB				Sn	**Sg**	**11 09 31.3**	**-0.1**
DORK	**Agr/Tutak/Do**	**1.68**	**307**	P	**Pb**	**11 09 08.5**	**-0.5**
DORK				S	**Sg**	**11 09 31.9**	**+0.4**
DORK				IAML		11 09 47.0	
	comp=N,90nm,1.1s						
DORK				IAML		11 09 49.0	
	comp=E,109nm,1.1s						
MLAZ	**Malazgirt-MUS**	**1.70**	**297**	Pn	**Pg**	**11 09 10.0**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.74**	**325**	P	**Pb**	**11 09 10.1**	**0.0**
KOTA				S	**Sg**	**11 09 33.5**	**0.0**
KOTA				IAML		11 09 39.0	
	comp=E,82nm,1.5s						
KOTA				IAML		11 09 56.0	
	comp=N,53nm,1.9s						
GNI	**Garni**	**1.77**	**6**	Pn	**Pg**	**11 09 11.3**	**-0.2**
GNI	**Garni**	**1.77**	**6**	*eP*	**Pg**	**11 09 11.2**	**-0.4**
GNI				*eS*	**Sg**	**11 09 36.0**	**+1.6**
EGVZ	**Egvard**	**1.80**	**62**	*eP*	**Pg**	**11 09 11.0**	**-1.1**
EGVZ				*eS*	**Sg**	**11 09 36.1**	**+0.7**
GRS	**Goris**	**1.81**	**52**	⇑*iP*	**Pb**	**11 09 10.0**	**-1.3**
GRS				⇓*iS*	**Sg**	**11 09 35.0**	**-0.7**
KAPZ	**Kaputan**	**1.94**	**4**	*eP*	**Pg**	**11 09 13.9**	**-0.8**
KAPZ				*eS*	**Sg**	**11 09 41.3**	**+1.4**
GURO	**Guroymak-BITLI**	**1.95**	**275**	Pn	**Pb**	**11 09 13.2**	**-0.5**
AYRK	**Ayrk**	**1.99**	**30**	*eP*	**Pg**	**11 09 14.9**	**-0.9**
AYRK				*eS*	**Sg**	**11 09 42.9**	**+1.3**
IHRS	**Heris**	**2.00**	**91**	Pn	**Pg**	**11 09 14.7**	**-1.2**
AMBZ	**Amberd**	**2.00**	**355**	*eP*	**Pg**	**11 09 16.0**	**-0.1**
AMBZ				*eS*	**Sg**	**11 09 44.8**	**+2.7**
IHSH	**Hashtrud**	**2.44**	**116**	Pn	**Pb**	**11 09 20.9**	**-1.3**
GDB	**GEDABAY**	**2.52**	**22**	P	**Pn**	**11 09 20.2**	**+0.8**
LSVT	**Lusahovit**	**2.58**	**12**	*eP*	**Pg**	**11 09 25.5**	**-1.5**
LSVT				*eS*	**Sg**	**11 10 00.9**	**+0.5**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn	**Pb**	**11 09 22.4**	**-2.6**
SRTK	**Saratovka**	**2.68**	**357**	*eP*	**Pb**	**11 09 27.0**	**+0.9**
SRTK				*eS*	**Sg**	**11 10 03.5**	**-0.2**
SENK	**Senkaya-Erzuru**	**2.74**	**323**	Pn	**Pb**	**11 09 24.5**	**-2.7**
BNGB	**Bingl**	**3.06**	**283**	Pn	**Pn**	**11 09 28.6**	**+1.9**

*IDC **23** 11:09:51.5±0.6,7°.05S×124°.95E,h545km±7km,mb3.6/23,*
mbtmp4.6/29,Error ellipse: s-maj=13.8km s-min=6.8km
az=70.0
*NEIC **23** 11:09:51.6±1.2,7°.00S±0°.06×125°.0E±0°.1,h544km±11km,*
mb4.3/21,Error ellipse: s-maj=18.9km s-min=7.8km
az=103.0
*DJA **23** 11:09:51.6±0.4,7°.S±3°×12°.5E±°,h534km±5km,M4.4/35,*
mB4.9/13,mb4.5/23,MLv4.8/35,Mw(mB)4.2/13

ISC 23 11:09:51.1±0.3,**7°.04S**±0°.05×**124°.93E**±0°.06,**h543**km,**n136,**
σ0**995**/146,**mb4.2**/44,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.77**	**194**		**P**	**11 11 04.4**	**+0.1**
SOEI	**Soe**	**2.77**	**194**	P	**P**	**11 11 05.3**	**+1.0**
SOEI	**Soe**	**2.77**	**194**	S	**S**	**11 12 03.8**	**-0.1**
SOEI	**Soe**	**2.77**	**194**	P	**P**	**11 11 04.0**	**-0.3**
SOEI				S	**S**	**11 12 03.1**	**-0.8**
MMRI	**Maumere**	**3.10**	**239**	P	**P**	**11 11 07.3**	**+1.1**
MMRI	**Maumere**	**3.10**	**239**	P	**P**	**11 11 08.2**	**+2.0**
MMRI	**Maumere**	**3.10**	**239**	S	**S**	**11 12 07.7**	**+0.3**
MMRI	**Maumere**	**3.10**	**239**	P	**P**	**11 11 06.5**	**+0.3**
BATI	**Baumata**	**3.38**	**202**	P	**P**	**11 11 08.7**	**+0.6**
	369nm,0.4s,baz=112,slow=1.0,SNR=51						
BATI				S	**S**	**11 12 11.5**	**+0.7**
	228nm,0.5s,baz=48,slow=18,SNR=6.9						
BATI	**Baumata**	**3.38**	**202**	P	**P**	**11 11 09.0**	**+0.9**
EDFI	**Ende, Flores**	**3.63**	**242**	P	**P**	**11 11 09.5**	**-0.4**
KKSI	**Kolaka, Sulawe**	**4.34**	**311**	P	**P**	**11 11 16.8**	**+1.7**
NLAI	**Namlea**	**4.35**	**30**	P	**P**	**11 11 15.9**	**+0.7**
BSSI	**Bau Bau, Buton**	**4.50**	**281**	P	**P**	**11 11 17.7**	**+1.3**
AAI	**Ambon**	**4.65**	**44**	P	**P**	**11 11 17.7**	**0.0**
KRAI	**Karang Ratu**	**5.06**	**43**	P	**P**	**11 11 19.5**	**-1.6**
SANI	**Sanana**	**5.07**	**12**	P	**P**	**11 11 21.4**	**+0.2**
SANI	**Sanana**	**5.07**	**12**	P	**P**	**11 11 20.9**	**-0.3**
LBFI	**Labuhan Bajo,**	**5.20**	**254**	P	**P**	**11 11 22.9**	**+0.7**
WSI	**Waingapu**	**5.28**	**240**	P	**P**	**11 11 22.3**	**-0.6**
BASI	**Baing, Sumba**	**5.34**	**233**	P	**P**	**11 11 24.1**	**+0.7**
	180nm,0.7s						
KAPI	**Kappang**	**5.53**	**291**	P	**P**	**11 11 27.2**	**+2.0**
	73nm,0.5s,baz=116,slow=4.3,SNR=39						
KAPI				S	**S**	**11 12 43.2**	**+1.1**
	5.1nm,0.5s,baz=52,slow=21,SNR=0.7						
KAPI	**Kappang**	**5.53**	**291**		**P**	**11 11 26.5**	**+1.3**
KAPI	**Kappang**	**5.53**	**291**	P	**P**	**11 11 27.5**	**+2.3**
KAPI	**Kappang**	**5.53**	**291**	P	**P**	**11 11 27.6**	**+2.3**
	0.2nm80nm,1.0s						
SPSI	**Sidrap Palu**	**5.98**	**300**	P	**P**	**11 11 30.5**	**+1.2**
	0.6nm2μm168nm,0.6s						
WBSI	**Waikabubak, Su**	**6.06**	**244**	P	**P**	**11 11 29.4**	**-0.6**
	77nm,1.1s						
LUWI	**Luwuk**	**6.34**	**340**	P	**P**	**11 11 32.8**	**+0.2**
DBNI	**Kabupaten Domp**	**6.72**	**257**	P	**P**	**11 11 36.1**	**-0.1**
PMSI	**Majene**	**6.95**	**300**	P	**P**	**11 11 40.5**	**+2.1**
	0.9nm4μm281nm,0.9s						
PLAI	**Plampang**	**7.31**	**255**	P	**P**	**11 11 41.3**	**-0.5**
PLAI	**Plampang**	**7.31**	**255**	P	**P**	**11 11 41.3**	**-0.5**
	0.5nm41nm,1.1s						
MMSI	**Mamuju**	**7.40**	**305**	P	**P**	**11 11 45.0**	**+2.2**
	0.5nm142nm,0.8s						
GTOI	**Gorontalo**	**7.87**	**346**	P	**P**	**11 11 50.0**	**+2.6**
	73nm,0.7s						
DRS	**Darwin Rock St**	**7.95**	**133**	P	**P**	**11 11 48.8**	**+0.7**
TWSI	**Taliwang, Sumb**	**8.15**	**258**	P	**P**	**11 11 50.8**	**+0.6**
	1μm24nm,0.6s						
MTN	**Manton Dam**	**8.40**	**134**		**P**	**11 11 52.3**	**-0.3**
SIJI	**Sorong**	**8.80**	**46**	P	**P**	**11 11 57.4**	**+0.6**
	14nm,0.7s,baz=293,slow=1.6,SNR=3.6						
SIJI				S	**S**	**11 13 41.7**	**+1.8**
	5.8nm,0.4s,baz=334,slow=20,SNR=4.3						
TOLI2	**Tolitoli**	**9.10**	**333**	P	**P**	**11 11 59.9**	**+0.2**
KNRA	**Kununurra**	**9.37**	**157**		**P**	**11 12 02.5**	**+0.1**
JAGI	**Jajag, Banyuwa**	**10.78**	**262**		**P**	**11 12 15.9**	**-1.1**
JAGI	**Jajag, Banyuwa**	**10.78**	**262**	P	**P**	**11 12 16.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**11.01**	**176**	P	**P**	**11 12 19.6**	**+0.3**
	13nm,0.4s,baz=14,slow=9.4,SNR=79						
FITZ				S	**S**	**11 14 18.2**	**-3.0**
	9.6nm,0.6s,baz=357,slow=22,SNR=6.4						
MBWA	**Marble Bar**	**14.91**	**199**	P	**P**	**11 12 59.7**	**0.0**
PSA00	**Pilbara Seismi**	**15.26**	**198**	P	**P**	**11 13 03.6**	**+0.2**
WB0	**Warramunga Arr**	**15.63**	**145**		**P**	**11 13 06.1**	**-1.1**
KKM	**Kota Kinabalu**	**15.64**	**326**	P	**P**	**11 13 07.6**	**+0.1**
WRAB	**Tennant Creek**	**15.74**	**145**	P	**P**	**11 13 07.4**	**-0.9**
WRA	**Warramunga Arr**	**15.74**	**145**	P	**P**	**11 13 07.3**	**-1.0**
	16nm,0.7s,baz=324,slow=10,SNR=122						
WRA				S	**S**	**11 15 48.4**	**-1.5**
	4.5nm,0.9s,baz=313,slow=16,SNR=4.7						
WRA	**Warramunga Arr**	**15.74**	**145**		**P**	**11 13 06.9**	**-1.4**
AS31	**Alice Springs**	**18.64**	**153**		**P**	**11 13 35.8**	**+0.5**
ASAR	**Alice Springs**	**18.64**	**153**	P	**P**	**11 13 36.0**	**+0.8**
	19nm,0.6s,baz=347,slow=15,SNR=431						
ASAR				S	**S**	**11 16 38.5**	**+1.0**
	2.9nm,0.9s,baz=342,slow=22,SNR=7.7						
ASAR				ScP	**ScP**	**11 20 19.8**	**-0.7**
	1.4nm,0.6s,baz=340,slow=2.0,SNR=13						
ASAR	**Alice Springs**	**18.64**	**153**		**P**	**11 13 35.9**	**+0.8**
COEN	**Coen**	**19.20**	**112**	P	**P**	**11 13 39.7**	**-0.7**
COEN	**Coen**	**19.20**	**112**	P	**P**	**11 13 40.0**	**-0.4**
QIS	**Mount Isa**	**19.56**	**135**	P	**P**	**11 13 43.8**	**+0.2**
MEEK	**Meekatharra**	**20.39**	**196**	P	**P**	**11 13 51.7**	**+0.6**
BLDU	**Ballidu**	**24.69**	**197**	P	**P**	**11 14 29.8**	**+0.4**
INKA	**Innaminka**	**25.46**	**146**		**P**	**11 14 37.2**	**+0.9**
INKA				IAmb	IAmb	11 14 38.2	
	comp=Z,5.7nm,0.8s						
NWAO	**Narrogin (SRO)**	**26.73**	**195**	P	**P**	**11 14 47.7**	**+0.3**
QLP	**Quilpie**	**26.74**	**139**	P	**P**	**11 14 48.7**	**+1.1**
BBOO	**Buckleboo**	**27.65**	**160**	P	**P**	**11 14 55.6**	**+0.1**
STKA	**Stephens Creek**	**29.19**	**150**	P	**P**	**11 15 09.1**	**+0.2**
	comp=Z,18nm,0.6s,baz=322,slow=9.1,SNR=44						
	comp=Z,18nm,0.6s						
STKA	**Stephens Creek**	**29.19**	**150**	P	**P**	**11 15 09.5**	**+0.6**
HTT	**Hallett**	**29.29**	**156**	P	**P**	**11 15 10.6**	**+0.8**
TPUB	**Ta-pu**	**30.45**	**352**	P	**P**	**11 15 18.9**	**-1.0**
YULB	**Yu-li**	**30.46**	**353**	P	**P**	**11 15 17.3**	**-2.7**
SSLB	**Suanglung**	**30.89**	**353**	P	**P**	**11 15 22.5**	**-1.2**
CMSA	**Cobar Meteorol**	**31.14**	**144**	P	**P**	**11 15 26.5**	**+0.8**
NACB	**Ninganchiao**	**31.20**	**354**	P	**P**	**11 15 25.2**	**-1.1**
YHNB	**Yeheng**	**31.71**	**354**	P	**P**	**11 15 29.4**	**-1.3**
JOW	**Kunigami**	**33.83**	**5**	P	**P**	**11 15 49.0**	**+0.4**
	comp=Z,6.8nm,0.5s,baz=308,slow=29,SNR=1.4						
	comp=Z,6.8nm,0.5s						
ARMA	**Armidale**	**34.17**	**136**	P	**P**	**11 15 53.2**	**+1.6**
TATA	**Tatamba Isabel**	**34.57**	**95**	P	**P**	**11 15 54.2**	**-0.8**
SAVO	**Savo Central**	**34.59**	**96**	P	**P**	**11 15 54.1**	**-1.1**
CAN	**Canberra**	**35.78**	**145**	P	**P**	**11 16 06.6**	**+1.7**
PATS	**Pohnpei**	**36.04**	**68**	P	**P**	**11 16 06.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**36.05**	**315**	P	**P**	**11 16 07.7**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=147,slow=7.0,SNR=13						
CMAR				PcP	**PcP**	**11 18 18.1**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=154,slow=1.4,SNR=4.5						
CMAR				ScP	**ScP**	**11 21 14.2**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=170,slow=3.3,SNR=6.5						
	comp=Z,1.8nm,0.7s						
ENH	**Enshi**	**39.95**	**339**	P	**P**	**11 16 38.7**	**-0.1**
ENH	**Enshi**	**39.95**	**339**	P	**P**	**11 16 38.9**	**+0.1**
DZM	**Mont Dzumac**	**42.70**	**115**	P	**P**	**11 17 01.4**	**+0.6**
	comp=Z,5.6nm,0.7s,baz=68,slow=20,SNR=2.1						
	comp=Z,5.6nm,0.7s						
LYN	**LuoYang**	**43.02**	**345**	P	**P**	**11 17 03.0**	**+0.1**
LYN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN	**Xi'an**	**43.58**	**341**	P	**P**	**11 17 06.6**	**-0.8**
XAN				pmax	pmax		
	comp=Z,51nm,0.6s						
KSRS	**Korea Array**	**44.35**	**3**	P	**P**	**11 17 13.5**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=182,slow=9.4,SNR=11						
	comp=Z,2.7nm,0.7s						
MJAR	**Matsushiro Arr**	**45.11**	**15**	P	**P**	**11 17 18.3**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=189,slow=9.0,SNR=15						
	comp=Z,4.2nm,0.7s						
LZDM	**Lanzhou Array**	**47.20**	**336**	P	**P**	**11 17 36.0**	**+0.6**
	comp=Z,6.1nm,0.4s,baz=161,slow=9.4,SNR=17						
	comp=Z,6.1nm,0.4s						
LZH	**Lanzhou**	**47.26**	**337**	P	**P**	**11 17 36.8**	**+1.2**
LZH				pmax	pmax		
	comp=Z,52nm,1.3s						
LSA	**Lhasa**	**48.87**	**320**	P	**P**	**11 17 45.8**	**-2.3**
LSA				pmax	pmax		
	comp=Z,24nm,0.6s						
XLT	**XiLinHaoTe**	**51.33**	**352**	*eP*	**P**	**11 18 05.6**	**+0.2**
XLT				pP	pP	11 19 48.4	+1.6
XLT				pmax	pmax		
	comp=Z,14nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.40**	**6**	P	**P**	**11 18 06.0**	**+0.3**
	comp=Z,4.8nm,0.5s,baz=182,slow=6.7,SNR=8.4						
	comp=Z,4.8nm,0.5s						
GOMU	**GeErMu**	**51.48**	**329**	P	**P**	**11 18 07.4**	**+0.4**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MDJ	**Mudanjiang**	**51.59**	**4**	P	**P**	**11 18 07.4**	**+0.2**
MDJ				IAmb	IAmb	11 18 08.7	
	comp=Z,13nm,0.8s						
GTA2	**Gaotai**	**51.83**	**335**	*eP*	**P**	**11 18 09.9**	**+0.8**
GTA2				pmax	pmax		
	comp=Z,12nm,0.7s						
ASAJ	**Asahikawa**	**53.37**	**16**	P	**P**	**11 18 20.5**	**+0.6**
	comp=Z,8.6nm,0.8s,baz=256,slow=15,SNR=4.9						
	comp=Z,8.6nm,0.8s						
QRZ	**Quartz Range**	**54.04**	**136**	P	**P**	**11 18 24.5**	**-0.2**
RPZ	**Rata Peaks**	**54.36**	**140**	P	**P**	**11 18 26.6**	**-0.4**
KHZ	**Kahutara**	**55.40**	**138**	P	**P**	**11 18 34.5**	**+0.3**
BKZ	**Black Stump Fm**	**56.20**	**133**	P	**P**	**11 18 39.6**	**-0.3**
	comp=Z,33nm,2.8s						
URZ	**Urewera**	**56.34**	**132**	P	**P**	**11 18 40.3**	**-0.5**
	comp=Z,4.0nm,0.4s,baz=350,slow=17,SNR=1.8						
	comp=Z,4.0nm,0.4s						
URZ	**Urewera**	**56.34**	**132**	P	**P**	**11 18 40.7**	**-0.1**
KLR	**Kul'dur**	**56.35**	**5**	P	**P**	**11 18 40.7**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=197,slow=7.8,SNR=9.5						
	comp=Z,1.5nm,0.4s						
HILR	**Hailar Array B**	**56.54**	**356**	P	**P**	**11 18 42.6**	**+0.6**
	comp=Z,3.3nm,0.4s,baz=182,slow=10,SNR=7.2						
	comp=Z,3.3nm,0.4s						
ULN	**Ulaanbaatar**	**56.91**	**346**		**P**	**11 18 44.6**	**-0.1**
MXZ	**Matakaoa Point**	**57.01**	**131**	P	**P**	**11 18 46.1**	**+0.7**
SONM	**Songino Array**	**57.04**	**345**	P	**P**	**11 18 45.9**	**+0.3**
	comp=Z,3.1nm,0.7s,baz=160,slow=8.4,SNR=19						
	comp=Z,3.1nm,0.7s						
HEH	**HeiHe**	**57.10**	**2**	*eP*	**P**	**11 18 45.9**	**+0.2**
HEH				pmax	pmax		
	comp=Z,19nm,0.8s						
KSH2	**Kashi**	**64.78**	**319**	P	**P**	**11 19 37.0**	**+0.3**
KSH2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR	**Makanchi Array**	**65.60**	**329**	P	**P**	**11 19 42.0**	**+0.5**
	comp=Z,7.5nm,0.7s,baz=124,slow=7.4,SNR=104						
	comp=Z,7.5nm,0.7s						
MAKZ	**Makanchi**	**65.77**	**329**	P	**P**	**11 19 42.8**	**+0.3**
PETK	**Petropavlovsk-**	**66.05**	**21**	P	**P**	**11 19 44.9**	**+0.8**
	comp=Z,3.9nm,0.6s,baz=196,slow=1.8,SNR=35						
	comp=Z,3.9nm,0.6s						
BOOM	**Boomskoye usch**	**66.44**	**322**	P	**P**	**11 19 47.2**	**+0.2**
BOOM				IA

HAKT				IAML			11 15 24.0	
	comp=N,854nm,0.4s							
HAKT				IAML			11 15 26.0	
	comp=E,901nm,1.0s							
HAKT	**HAKKARI**	**1.05**	**217**	P		**Pb**	**11 15 06.4**	**-0.4**
HAKT				S		**Sn**	**11 15 23.5**	**+0.9**
NAX	**Nakhchivan**	**1.09**	**44**	P		**Pb**	**11 15 06.9**	**-0.4**
NAX				S		**Sn**	**11 15 23.3**	**+0.1**
ERCV	**ERCIS-VAN**	**1.11**	**304**	Pn		**Pn**	**11 15 07.9**	**-0.3**
GEVA	**Gevas**	**1.15**	**266**	P		**Pb**	**11 15 05.7**	**-2.7**
GEVA				S		**Sn**	**11 15 24.2**	**-0.7**
ORD	**Ordubad**	**1.27**	**65**	P		**Pg**	**11 15 10.3**	**-0.1**
ORD				S		**Sn**	**11 15 29.1**	**+1.4**
SBZ	**Shahbuz**	**1.28**	**39**	P		**Pg**	**11 15 10.8**	**+0.2**
SBZ				S		**Sn**	**11 15 29.7**	**+1.6**
ITBZ	**Tabriz**	**1.29**	**97**	Pg		**Pg**	**11 15 10.7**	**-0.1**
DYDN	**Diyadin**	**1.31**	**331**	P		**Pg**	**11 15 11.4**	**+0.2**
DYDN				S		**Sb**	**11 15 27.4**	**-0.9**
HYR	**Heyderabad**	**1.34**	**11**	P		**Pg**	**11 15 11.7**	**-0.1**
HYR				S		**Sg**	**11 15 35.2**	**+5.9**
CUKT	**Cukurca**	**1.36**	**212**	Pn		**Pg**	**11 15 12.7**	**+0.7**
CUKT				Sn		**Sg**	**11 15 31.6**	**+2.0**
CUKT	**Cukurca**	**1.36**	**212**	Pg		**Pg**	**11 15 12.7**	**+0.7**
IAZR	**Azarshahr**	**1.36**	**121**	Pg		**Pg**	**11 15 12.9**	**+0.8**
VAYK	**Vayk**	**1.48**	**28**⇓	*eP*		**Pb**	**11 15 13.8**	**-0.1**
VAYK			⇓	*eS*		**Sg**	**11 15 35.3**	**+1.8**
IGDI	**IGDIR**	**1.51**	**347**	P		**Pg**	**11 15 14.8**	**-0.1**
IGDI				S		**Sg**	**11 15 38.5**	**+4.1**
ALVK	**Alvank**	**1.54**	**69**	*eP*		**Pb**	**11 15 14.3**	**-0.5**
ALVK				*eS*		**Sg**	**11 15 34.9**	**-0.4**
AGRB	**Hanur-Agry**	**1.67**	**315**	Pn		**Pb**	**11 15 16.8**	**-0.5**
AGRB				Sn		**Sg**	**11 15 39.0**	**-0.7**
AGRB	**Hanur-Agry**	**1.67**	**315**	Pg		**Pb**	**11 15 17.1**	**-0.2**
DORK	**Agr/Tutak/Do**	**1.68**	**307**	P		**Pb**	**11 15 16.7**	**-0.6**
DORK				IAML			11 15 46.0	
	comp=E,226nm,0.8s							
DORK				IAML			11 15 55.0	
	comp=N,153nm,0.8s							
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pn		**Pb**	**11 15 17.2**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pg		**Pb**	**11 15 17.6**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.73**	**324**	P		**Pb**	**11 15 17.5**	**-0.8**
KOTA				IAML			11 15 47.0	
	comp=E,121nm,1.2s							
KOTA				S		**Sg**	**11 15 47.3**	**+5.6**
KOTA				IAML			11 15 51.0	
	comp=N,97nm,0.8s							
GNI	**Garni**	**1.76**	**6**	Pn		**Pb**	**11 15 18.6**	**-0.1**
VNNZ	**Vanand**	**1.78**	**343**	*eP*		**Pg**	**11 15 19.9**	**-0.3**
VNNZ				*eS*		**Sg**	**11 15 44.5**	**+1.1**
EGVZ	**Egvard**	**1.79**	**62**	*eP*		**Pb**	**11 15 18.7**	**-0.5**
EGVZ				*eS*		**Sg**	**11 15 42.5**	**-0.9**
GRS	**Goris**	**1.79**	**52**⇑	*iP*		**Pb**	**11 15 19.0**	**-0.3**
GRS			⇓	*iS*		**Sg**	**11 15 44.0**	**+0.3**
MAHB	**Mahabad**	**1.88**	**150**	Pn		**Pg**	**11 15 21.7**	**-0.5**
ARUZ	**Aruch**	**1.91**	**350**	*eP*		**Pg**	**11 15 22.7**	**+0.1**
ARUZ				*eS*		**Sg**	**11 15 49.5**	**+2.1**
KAPZ	**Kaputan**	**1.93**	**4**	*eP*		**Pg**	**11 15 22.4**	**-0.5**
KAPZ				*eS*		**Sg**	**11 15 48.9**	**+1.0**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn		**Pb**	**11 15 20.9**	**-1.2**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn		**Pb**	**11 15 21.8**	**-0.3**
AYRK	**Ayrk**	**1.98**	**30**	*eP*		**Pb**	**11 15 22.5**	**0.0**
AYRK				*eS*		**Sg**	**11 15 49.0**	**-0.6**
IHRS	**Heris**	**1.99**	**92**	Pn		**Pb**	**11 15 23.0**	**+0.3**
AMBZ	**Amberd**	**2.00**	**354**	*eP*		**Pb**	**11 15 23.0**	**+0.2**
AMBZ				*eS*		**Sg**	**11 15 49.8**	**-0.4**
QRD	**Qoradiz**	**2.43**	**63**	P		**Pb**	**11 15 27.9**	**-2.2**
QRD				S		**Sb**	**11 16 00.8**	**+0.4**
IHSH	**Hashtrud**	**2.43**	**116**	Pn		**Pb**	**11 15 28.6**	**-1.7**
KARS	**Kars**	**2.49**	**334**	Pn		**Pn**	**11 15 28.4**	**+1.3**
GDB	**GEDABAY**	**2.51**	**22**	P		**Pb**	**11 15 30.1**	**-1.5**
GDB				S		**Sg**	**11 16 05.3**	**-1.3**
VRTB	**Varto-Mus**	**2.51**	**289**	Pn		**Pb**	**11 15 28.9**	**-2.6**
ISRB	**Sarab**	**2.55**	**102**	Pn		**Pb**	**11 15 30.7**	**-1.6**
LSVT	**Lusahovit**	**2.57**	**11**	*eP*		**Pb**	**11 15 31.1**	**-1.4**
LSVT				*eS*		**Sb**	**11 16 03.8**	**-0.6**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn		**Pb**	**11 15 30.6**	**-2.8**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn		**Pb**	**11 15 30.9**	**-2.5**
AGDM	**Agdam**	**2.64**	**49**	P		**Pn**	**11 15 29.4**	**+0.3**
AGDM				S		**Sb**	**11 16 04.9**	**-1.5**
GANJ	**Ganja**	**2.64**	**31**	P		**Pb**	**11 15 31.6**	**-2.1**
GANJ				S		**Sg**	**11 16 08.5**	**-2.4**
SRTK	**Saratovka**	**2.67**	**357**	*eP*		**Pb**	**11 15 35.1**	**+0.8**
SRTK				*eS*		**Sg**	**11 16 10.7**	**-1.0**
GRMI	**Germi**	**2.68**	**80**	Pn		**Pb**	**11 15 32.1**	**-2.3**
SENK	**Senkaya-Erzuru**	**2.73**	**323**	Pn		**Pb**	**11 15 32.5**	**-2.9**
SENK	**Senkaya-Erzuru**	**2.73**	**323**	Pn		**Pb**	**11 15 32.8**	**-2.6**
QZX	**Qazax, Azerbai**	**2.74**	**14**	P		**Pb**	**11 15 34.0**	**-1.3**
QZX				S		**Sb**	**11 16 10.8**	**+1.7**
KARO	**Karliova-Bingo**	**2.85**	**290**	Pn		**Pn**	**11 15 33.3**	**+1.1**
YRD	**Yardimli**	**2.96**	**79**	P		**Pb**	**11 15 37.1**	**-2.2**
YRD				S		**Sb**	**11 16 14.7**	**-1.1**
LRK	**Lerik**	**3.01**	**84**	P		**Pb**	**11 15 36.8**	**-3.3**
LRK				S		**Sn**	**11 16 12.9**	**+2.2**
BNGB	**Bingl**	**3.06**	**282**	Pn		**Pn**	**11 15 36.6**	**+1.6**
DYBB	**Diyarbakir**	**3.48**	**264**	Pn		**Pn**	**11 15 42.0**	**+1.3**

*NSSP **23** 11:36:33.5,38°.35N×44°.58E,h10km,Ms3.0*
*AFAD **23** 11:36:34.8,38°.47N×44°.64E,h7km±3km,ML2.9*
*AZER **23** 11:36:35.4,38°.39N×44°.58E,h10km,ml2.8*
*TEH **23** 11:36:37.3,38°.47N×44°.59E,h10km±919km,ML2.7,*
Presumed earthquake
*ISK **23** 11:36:38.5,38°.48N×44°.47E,h13km,ML3.0/5*
ISC 23 11:36:36.7±1.1,**38°.43N**±0°.02×**44°.52E**±0°.02,**h12**km±9km,
n30,σ1°**67**/52,**1C-3D**,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**299**	P	**Pg**	**11 36 45.3**	**-0.9**
OZAP				S	**Sb**	**11 36 53.5**	**-0.7**
OZAP				IAML		11 36 54.0	
	comp=N,1μm,0.4s						
OZAP				IAML		11 36 56.0	
	comp=E,1μm,0.5s						
ISHB	**Shabestar**	**0.87**	**99**	Pg	**Pn**	**11 36 53.2**	**-1.9**
TVAN	**Van**	**0.88**	**277**	P	**Pg**	**11 36 52.3**	**-1.5**
TVAN				S	**Sn**	**11 37 07.6**	**-0.4**
VANB	**Van**	**0.90**	**281**	Pg	**Pn**	**11 36 54.9**	**-0.5**
VANB				Sg	**Sb**	**11 37 07.1**	**+0.6**
VMUR	**Van-Muradiye**	**0.93**	**307**	P	**Pb**	**11 36 54.3**	**-0.6**
VMUR				S	**Sn**	**11 37 08.4**	**-0.8**
VMUR				IAML		11 37 11.0	
	comp=E,411nm,0.4s						
VMUR				IAML		11 37 12.0	
	comp=N,411nm,0.3s						
MAKU	**Maku**	**0.93**	**8**	Pg	**Pn**	**11 36 54.0**	**-1.8**
IMRD	**Marand**	**0.97**	**73**	Pg	**Pn**	**11 36 55.0**	**-1.3**
NAX	**Nakhchivan**	**1.06**	**45**	P	**Pn**	**11 36 57.6**	**+0.1**
NAX				S	**Sn**	**11 37 13.7**	**+1.3**
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pg**	**11 36 57.0**	**-0.5**
HAKT				S	**Sn**	**11 37 14.9**	**+2.0**
HAKT				IAML		11 37 16.0	
	comp=N,246nm,0.5s						
HAKT				IAML		11 37 16.0	
	comp=E,237nm,0.3s						
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pn**	**11 36 57.7**	**-0.2**
HAKT				S	**Sn**	**11 37 14.8**	**+1.9**
GEVA	**Gevas**	**1.16**	**265**	P	**Pb**	**11 36 56.9**	**-1.9**
GEVA				S	**Sb**	**11 37 14.1**	**+0.4**
ORD	**Ordubad**	**1.26**	**66**	P	**Pg**	**11 37 00.9**	**+0.1**
ORD				S	**Sn**	**11 37 19.9**	**+2.8**
SBZ	**Shahbuz**	**1.26**	**39**	P	**Pg**	**11 37 00.9**	**0.0**
SBZ				S	**Sn**	**11 37 19.5**	**+2.3**
DYDN	**Diyadin**	**1.29**	**330**	P	**Pg**	**11 37 01.3**	**-0.2**
DYDN				S	**Sn**	**11 37 17.9**	**-0.2**
ITBZ	**Tabriz**	**1.29**	**98**	Pg	**Pg**	**11 37 00.6**	**-1.0**
HYR	**Heyderabad**	**1.31**	**11**	P	**Pg**	**11 37 03.0**	**+1.0**
HYR				S	**Sn**	**11 37 23.2**	**+4.7**
IAZR	**Azarshahr**	**1.37**	**123**	Pg	**Pg**	**11 37 03.0**	**-0.1**
CUKT	**Cukurca**	**1.38**	**212**	Pn	**Pg**	**11 37 04.1**	**+0.8**
CUKT				Sn	**Sg**	**11 37 23.5**	**+2.2**
VAYK	**Vayk**	**1.45**	**29**⇓	*eP*	**Pg**	**11 37 04.3**	**-0.2**
VAYK			⇓	*eS*	**Sg**	**11 37 25.4**	**+2.1**
ADCV	**BITLIS_Adilcev**	**1.46**	**286**	P	**Pg**	**11 37 03.8**	**-0.9**
ADCV				S	**Sg**	**11 37 26.8**	**+3.1**
ADCV				IAML		11 37 28.0	
	comp=N,122nm,0.8s						
ADCV				IAML		11 37 29.0	
	comp=E,114nm,0.6s						
IGDI	**IGDIR**	**1.48**	**347**	P	**Pg**	**11 37 05.8**	**+0.7**
IGDI				S	**Sg**	**11 37 28.4**	**+4.1**
AGRB	**Hanur-Agry**	**1.65**	**314**	Pn	**Pg**	**11 37 07.6**	**-0.9**
AGRB				Sn	**Sb**	**11 37 27.5**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.66**	**306**	P	**Pg**	**11 37 08.5**	**-0.1**
DORK				S	**Sg**	**11 37 30.2**	**0.0**
KOTA	**Agri, Merkez-K**	**1.71**	**324**	P	**Pg**	**11 37 09.6**	**0.0**
KOTA				S	**Sg**	**11 37 32.1**	**+0.3**
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**11 37 08.6**	**-1.3**
GNI	**Garni**	**1.73**	**6**	*eP*	**Pg**	**11 37 09.7**	**-0.2**
GNI				*eS*	**Sg**	**11 37 35.5**	**+3.1**
GRS	**Goris**	**1.77**	**52**⇑	*iP*	**Pg**	**11 37 10.0**	**-0.7**
GRS			⇓	*iS*	**Sg**	**11 37 35.0**	**+1.3**
GURO	**Guroymak-BITLI**	**1.96**	**274**	Pn	**Pb**	**11 37 11.6**	**-0.8**
IHRS	**Heris**	**1.98**	**92**	Pn	**Pg**	**11 37 12.9**	**-1.9**
GDB	**GEDABAY**	**2.48**	**22**	P	**Pb**	**11 37 19.6**	**-1.7**
GDB				S	**Sg**	**11 37 53.4**	**-3.1**

*AFAD **23** 11:47:20.5,38°.46N×44°.62E,h7km±1km,ML2.3*
*AZER **23** 11:47:20.4,38°.37N×44°.58E,h16km,ml2.5*
*ISK **23** 11:47:21.9,38°.32N×44°.55E,h6km,ML2.5/7*
*TEH **23** 11:47:21.7,38°.43N×44°.51E,h10km±999km,ML2.7,*
Presumed earthquake
ISC 23 11:47:21.8±1.2,**38°.41N**±0°.03×**44°.56E**±0°.02,**h7**km±10km,
n30,σ1°**20**/48,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.51**	**300**	P	**Pg**	**11 47 31.2**	**-0.5**
OZAP				IAML		11 47 39.0	
	comp=N,524nm,0.4s						
OZAP				S	**Sg**	**11 47 39.1**	**+0.7**
OZAP				IAML		11 47 41.0	
	comp=E,469nm,0.6s						
ISHB	**Shabestar**	**0.84**	**98**	Pg	**Pb**	**11 47 38.2**	**-0.8**
TVAN	**Van**	**0.91**	**278**	P	**Pg**	**11 47 37.8**	**-1.6**
TVAN				S	**Sb**	**11 47 53.0**	**+0.5**
VANB	**Van**	**0.93**	**282**	Pg	**Pg**	**11 47 39.8**	**0.0**
VANB				Sg	**Sb**	**11 47 53.5**	**+0.4**
IMRD	**Marand**	**0.95**	**71**	Pg	**Pn**	**11 47 40.9**	**-0.9**
MAKU	**Maku**	**0.95**	**6**	Pg	**Pg**	**11 47 39.4**	**-0.8**
VMUR	**Van-Muradiye**	**0.96**	**307**	P	**Pg**	**11 47 39.4**	**-1.0**
VMUR				S	**Sb**	**11 47 54.2**	**+0.1**
VMUR				IAML		11 47 56.0	
	comp=E,166nm,0.5s						
VMUR				IAML		11 47 57.0	
	comp=N,167nm,0.3s						
NAX	**Nakhchivan**	**1.06**	**44**	P	**Pn**	**11 47 42.9**	**-0.4**
NAX				S	**Sn**	**11 47 58.9**	**+0.6**
HAKT	**HAKKARI**	**1.08**	**219**	P	**Pg**	**11 47 42.6**	**+0.1**
HAKT				S	**Sn**	**11 47 59.2**	**+0.2**
HAKT				IAML		11 48 01.0	
	comp=N,105nm,0.5s						
HAKT				IAML		11 48 01.0	
	comp=E,78nm,0.3s						
HAKT	**HAKKARI**	**1.08**	**219**	P	**Pg**	**11 47 42.7**	**+0.1**
HAKT				S	**Sn**	**11 47 59.4**	**+0.4**
GEVA	**Gevas**	**1.18**	**266**	P	**Pb**	**11 47 42.1**	**-2.5**
GEVA				S	**Sb**	**11 48 00.3**	**+0.1**
ORD	**Ordubad**	**1.24**	**65**	P	**Pg**	**11 47 46.2**	**+0.5**
ORD				S	**Sn**	**11 48 04.2**	**+1.5**
SBZ	**Shahbuz**	**1.26**	**38**	P	**Pg**	**11 47 46.3**	**+0.3**
SBZ				S	**Sn**	**11 48 05.0**	**+1.8**
ITBZ	**Tabriz**	**1.26**	**97**	Pg	**Pb**	**11 47 45.5**	**-0.7**
DYDN	**Diyadin**	**1.32**	**330**	P	**Pg**	**11 47 47.7**	**+0.5**
DYDN				S	**Sb**	**11 48 03.2**	**-1.1**
HYR	**Heyderabad**	**1.33**	**10**	P	**Pg**	**11 47 47.9**	**+0.5**
HYR				S	**Sg**	**11 48 06.5**	**+1.9**
IAZR	**Azarshahr**	**1.34**	**122**	Pg	**Pg**	**11 47 48.2**	**+0.6**
CUKT	**Cukurca**	**1.38**	**213**	Pn	**Pn**	**11 47 47.6**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.49**	**286**	P	**Pn**	**11 47 49.2**	**0.0**
ADCV				S	**Sg**	**11 48 12.2**	**+2.4**
ADCV				IAML		11 48 14.0	
	comp=N,44nm,0.5s						
ADCV				IAML		11 48 14.0	
	comp=E,45nm,0.6s						
IGDI	**IGDIR**	**1.50**	**346**	P	**Pg**	**11 47 50.9**	**+0.2**
IGDI				S	**Sg**	**11 48 12.6**	**+2.3**
AGRB	**Hanur-Agry**	**1.69**	**314**	Pn	**Pb**	**11 47 53.3**	**0.0**
DORK	**Agr/Tutak/Do**	**1.70**	**306**	P	**Pb**	**11 47 52.4**	**-1.0**
DORK				S	**Sg**	**11 48 15.6**	**-0.7**
DORK				IAML		11 48 26.0	
	comp=N,31nm,0.5s						
DORK				IAML		11 48 28.0	
	comp=E,29nm,0.9s						
MLAZ	**Malazgirt-MUS**	**1.73**	**296**	Pn	**Pb**	**11 47 54.2**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.74**	**323**	P	**Pb**	**11 47 54.0**	**-0.3**
KOTA				S	**Sg**	**11 48 17.6**	**-0.3**
KOTA				IAML		11 48 22.0	
	comp=N,19nm,0.5s						
KOTA				IAML		11 48 26.0	
	comp=E,19nm,1.2s						
GNI	**Garni**	**1.75**	**5**	Pn	**Pg**	**11 47 55.1**	**-0.2**
IHRS	**Heris**	**1.96**	**92**	Pn	**Pg**	**11 47 59.0**	**-0.4**
GURO	**Guroymak-BITLI**	**1.98**	**275**	Pn	**Pb**	**11 47 57.2**	**-1.2**
GDB	**GEDABAY**	**2.49**	**21**	P	**Pb**	**11 48 05.1**	**-1.9**
GDB				S	**Sb**	**11 48 35.8**	**-2.2**
VRTB	**Varto-Mus**	**2.54**	**288**	Pn	**Pn**	**11 48 05.1**	**+1.5**
GANJ	**Ganja**	**2.62**	**31**	P	**Pn**	**11 48 05.9**	**+1.2**
GANJ				S	**Sb**	**11 48 38.4**	**-3.2**

*NSSP **23** 11:57:52.2,38°.40N×44°.48E,h10km,Ms3.1*
*TEH **23** 11:57:52.9,38°.40N×44°.45E,h10km±166km,ML2.9,*
Presumed earthquake
*AZER **23** 11:57:52.0,38°.39N×44°.53E,h10km,ml3.2*
*AFAD **23** 11:57:53.3,38°.44N×44°.58E,h7km±1km,ML3.0*
*ISK **23** 11:57:56.1,38°.44N×44°.47E,h10km,ML3.3/6*
ISC 23 11:57:54.3±1.0,**38°.42N**±0°.03×**44°.50E**±0°.02,**h17**km±9km,
n32,σ1°**36**/56,**1C-3D**,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**301**	P	**Pb**	**11 58 03.5**	**-0.7**
OZAP				S	**Sb**	**11 58 11.2**	**+0.4**
OZAP				IAML		11 58 12.0	
	comp=N,2μm,0.5s						
OZAP				IAML		11 58 13.0	
	comp=E,1μm,0.5s						
TVAN	**Van**	**0.86**	**277**	P	**Pb**	**11 58 09.9**	**-1.1**
VANB	**Van**	**0.89**	**281**	Pg	**Pn**	**11 58 12.4**	**+0.2**
VANB				Sg	**Sn**	**11 58 24.8**	**+0.1**
ISHB	**Shabestar**	**0.89**	**99**	Pg	**Pb**	**11 58 10.6**	**-0.8**
ISHB				Sg	**Sn**	**11 58 24.9**	**0.0**
VMUR	**Van-Muradiye**	**0.92**	**308**	P	**Pn**	**11 58 11.9**	**-0.8**
VMUR				S	**Sn**	**11 58 25.6**	**0.0**
VMUR				IAML		11 58 29.0	
	comp=N,425nm,0.3s						
VMUR				IAML		11 58 29.0	
	comp=E,602nm,0.4s						
MAKU	**Maku**	**0.94**	**9**	Pg	**Pb**	**11 58 11.9**	**-0.4**
IMRD	**Marand**	**0.99**	**73**	Pg	**Pn**	**11 58 13.6**	**0.0**
HAKT	**HAKKARI**	**1.07**	**216**	P	**Pn**	**11 58 14.4**	**-0.3**
HAKT				S	**Sn**	**11 58 29.3**	**0.0**
NAX	**Nakhchivan**	**1.08**	**46**	P	**Pn**	**11 58 15.2**	**+0.4**
NAX				S	**Sn**	**11 58 31.2**	**+1.8**
GEVA	**Gevas**	**1.14**	**265**	P	**Pg**	**11 58 14.3**	**-2.0**
GEVA				S	**Sn**	**11 58 33.6**	**+2.6**
ORD	**Ordubad**	**1.27**	**66**	P	**Pg**	**11 58 18.5**	**-0.4**
ORD				S	**Sg**	**11 58 36.6**	**+1.1**
SBZ	**Shahbuz**	**1.27**	**40**	P	**Pg**	**11 58 18.5**	**-0.4**
SBZ				S	**Sg**	**11 58 37.2**	**+1.7**
DYDN	**Diyadin**	**1.28**	**331**	P	**Pg**	**11 58 18.7**	**-0.4**
DYDN				S	**Sn**	**11 58 35.5**	**+0.9**
DYDN				IAML		11 58 41.0	
	comp=N,312nm,0.5s						
DYDN				IAML		11 58 41.0	
	comp=E,376nm,0.5s						
ITBZ	**Tabriz**	**1.31**	**98**	Pg	**Pg**	**11 58 18.2**	**-1.4**
HYR	**Heyderabad**	**1.32**	**12**	P	**Pg**	**11 58 19.9**	**+0.1**
HYR				S	**Sg**	**11 58 38.9**	**+1.8**
CUKT	**Cukurca**	**1.37**	**211**	Pn	**Pg**	**11 58 22.1**	**+1.4**
CUKT				Sn	**Sg**	**11 58 40.6**	**+2.0**
IAZR	**Azarshahr**	**1.39**	**122**	Pg	**Pg**	**11 58 20.6**	**-0.5**
ADCV	**BITLIS_Adilcev**	**1.44**	**286**	P	**Pg**	**11 58 21.4**	**-0.7**
ADCV				S	**Sg**	**11 58 44.3**	**+3.4**
ADCV				IAML		11 58 46.0	
	comp=N,159nm,0.7s						
ADCV				IAML		11 58 47.0	
	comp=E,143nm,0.8s						
VAYK	**Vayk**	**1.46**	**29**⇓	*eP*	**Pg**	**11 58 22.0**	**-0.5**
VAYK			⇓	*eS*	**Sg**	**11 58 42.4**	**+1.0**
IGDI	**IGDIR**	**1.48**	**347**	P	**Pg**	**11 58 22.3**	**-0.5**
IGDI				S	**Sg**	**11 58 44.1**	**+2.1**
ALVK	**Alvank**	**1.54**	**70**	*eP*	**Pg**	**11 58 22.6**	**-1.3**
ALVK				*eS*	**Sg**	**11 58 43.3**	**-0.6**
AGRB	**Hanur-Agry**	**1.64**	**315**	Pn	**Pg**	**11 58 25.1**	**-0.9**
AGRB				Sn	**Sg**	**11 58 46.9**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.68**	**296**	Pn	**Pg**	**11 58 25.9**	**-0.8**
MLAZ				Sn	**Sg**	**11 58 47.4**	**-1.2**
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**11 58 26.9**	**-0.8**
GNI	**Garni**	**1.73**	**6**	*eP*	**Pg**	**11 58 28.8**	**+1.2**
GNI				*eS*	**Sg**	**11 58 54.4**	**+4.1**
EGVZ	**Egvard**	**1.79**	**63**	*eP*	**Pb**	**11 58 26.7**	**+0.1**
EGVZ				*eS*	**Sg**	**11 58 50.6**	**-1.2**
GRS	**Goris**	**1.79**	**52**⇑	*iP*	**Pg**	**11 58 28.0**	**-0.7**
GRS			⇓	*iS*	**Sg**	**11 58 53.0**	**+1.0**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pg**	**11 58 29.6**	**-2.0**
AYRK	**Ayrk**	**1.96**	**30**	*eP*	**Pg**	**11 58 30.7**	**-1.3**
AYRK				*eS*	**Sg**	**11 58 57.4**	**-0.1**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pg**	**11 58 31.4**	**-1.3**
LSVT	**Lusahovit**	**2.55**	**12**	*eP*	**Pg**	**11 58 42.1**	**-1.0**
LSVT				*eS*	**Sg**	**11 59 16.8**	**+0.6**
SRTK	**Saratovka**	**2.64**	**357**	*eP*	**Pg**	**11 58 42.6**	**-2.4**
SRTK				*eS*	**Sg**	**11 59 17.6**	**-1.6**

*AZER **23** 11:58:48.0,38°.49N×44°.46E,h10km,ml2.8*
*AFAD **23** 11:58:48.6,38°.48N×44°.64E,h7km±1km,ML2.8*
*ISK **23** 11:58:49.1,38°.35N×44°.53E,h6km,ML2.6/7*
*TEH **23** 11:58:50.9,38°.36N×44°.55E,h10km±990km,ML2.8,*
Presumed earthquake
ISC 23 11:58:49.7±1.2,**38°.42N**±0°.03×**44°.51E**±0°.02,**h7**km±10km,
n24,σ0°**84**/40,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**301**	P	**Pg**	**11 58 59.2**	**+0.3**
OZAP				S	**Sb**	**11 59 07.4**	**-0.4**
OZAP				IAML		11 59 08.0	
	comp=E,1μm,0.5s						
OZAP				IAML		11 59 09.0	
	comp=N,1μm,0.5s						
TVAN	**Van**	**0.88**	**278**	P	**Pb**	**11 59 07.1**	**-0.2**
TVAN				IAML		11 59 32.0	
	comp=N,377nm,0.5s						
TVAN				IAML		11 59 35.0	
	comp=E,321nm,1.2s						
ISHB	**Shabestar**	**0.88**	**98**	Pg	**Pn**	**11 59 06.8**	**-1.9**
VANB	**Van**	**0.90**	**282**	Pg	**Pb**	**11 59 07.4**	**-0.3**
VANB				Sg	**Sb**	**11 59 19.7**	**-0.2**
VMUR	**Van-Muradiye**	**0.93**	**308**	P	**Pg**	**11 59 07.5**	**-0.1**
VMUR				S	**Sn**	**11 59 22.0**	**-1.0**
VMUR				IAML		11 59 29.0	
	comp=N,296nm,0.4s						
VMUR				IAML		11 59 29.0	
	comp=E,186nm,0.5s						
MAKU	**Maku**	**0.95**	**8**	Pg	**Pn**	**11 59 10.5**	**+0.9**
IMRD	**Marand**	**0.98**	**72**	Pg	**Pn**	**11 59 09.6**	**-0.5**
IMRD				Sg	**Sn**	**11 59 24.3**	**0.0**
HAKT	**HAKKARI**	**1.07**	**217**	P	**Pn**	**11 59 11.4**	**+0.1**
HAKT				S	**Sn**	**11 59 28.0**	**+1.5**
HAKT				IAML		11 59 29.0	
	comp=N,208nm,0.5s						
HAKT				IAML		11 59 34.0	
	comp=E,200nm,0.8s						
HAKT	**HAKKARI**	**1.07**	**217**	P	**Pn**	**11 59 10.9**	**-0.3**
HAKT				S	**Sn**	**11 59 27.9**	**+1.5**
NAX	**Nakhchivan**	**1.08**	**45**	P	**Pn**	**11 59 10.9**	**-0.4**
NAX				S	**Sn**	**11 59 27.4**	**+0.8**
GEVA	**Gevas**	**1.15**	**265**	P	**Pb**	**11 59 10.6**	**-1.4**
GEVA				S	**Sn**	**11 59 29.9**	**+1.6**
AKDM	**Akdamar-Van**	**1.21**	**266**	Pn	**Pn**	**11 59 12.3**	**-0.9**
ORD	**Ordubad**	**1.27**	**66**	P	**Pg**	**11 59 14.4**	**+0.4**
ORD				S	**Sn**	**11 59 32.0**	**+0.8**
SBZ	**Shahbuz**	**1.27**	**39**	P	**Pg**	**11 59 14.0**	**-0.1**
SBZ				S	**Sn**	**11 59 31.9**	**+0.5**
ITBZ	**Tabriz**	**1.30**	**98**	Pg	**Pg**

CUKT	**Cukurca**	**1.39 211**	P	**Pg**	**12 07 17.8**	**+1.0**
CUKT			S	**Sg**	**12 07 36.3**	**+1.6**
IAZR	**Azarshahr**	**1.39 123**	Pg	**Pg**	**12 07 16.6**	**-0.2**
ADCV	**BITLIS_Adilcev**	**1.44 285**	P	**Pn**	**12 07 16.6**	**+0.1**
ADCV			S	**Sg**	**12 07 38.7**	**+2.2**
ADCV			IAML		12 07 41.0	
	comp=N,62nm,0.5s					
ADCV			IAML		12 07 41.0	
	comp=E,54nm,0.8s					
AGRB	**Hanur-Agry**	**1.63 314**	Pn	**Pb**	**12 07 20.4**	**-0.1**
KOTA	**Agri, Merkez-K**	**1.69 324**	P	**Pg**	**12 07 22.4**	**-0.2**
KOTA			S	**Sg**	**12 07 45.2**	**+0.7**
GNI	**Garni**	**1.71 6**	Pn	**Pg**	**12 07 22.9**	**-0.1**
GURO	**Guroymak-BITLI**	**1.94 274**	Pn	**Pn**	**12 07 24.6**	**+1.2**
IHRS	**Heris**	**2.00 93**	Pn	**Pb**	**12 07 27.1**	**+0.3**

*IDC **23** 12:10:27.6±0.8, 14˚.15S×167˚.71E, h0km, mb4.4/14, mbtmp4.3/15, ML3.7/2, MS3.5/10, Error ellipse: s-maj=30.0km s-min=16.9km az=137.0*
*NEIC **23** 12:10:28.9±1.9, 14˚.07S±0˚.06×167˚.78E±0˚.09, h7km±6km, mb4.6/16, Error ellipse: s-maj=14.5km s-min=2.6km az=124.0*
*NOU **23** 12:10:29.3, 14˚.24S×167˚.76E, h0km, mb4.8/27, Vanuatu Islands*

ISC 23 12:10:29.2±0.5, 14˚.14S±0˚.06×167˚.79E±0˚.08, h10km, n74, σ1°93/67, mb4.4/21, MS3.5/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DVP	**Devils Point**	**3.58**	**174**	P		**Pn**	**12 11 25.4**	**+0.6**
DVP	**Devils Point**	**3.58**	**174**	S		**Sn**	**12 12 08.8**	**+1.5**
KOUNC	**Koumac, New Ca**	**7.20**	**207**	P		**Pn**	**12 12 15.9**	**+1.3**
KOUNC	**Koumac, New Ca**	**7.20**	**207**	S		**Sn**	**12 13 37.0**	**+0.6**
NGOA	**Tingoa Renbel**	**7.96**	**288**	P		**Pn**	**12 12 25.0**	**0.0**
DZM	**Mont Dzumac**	**7.99**	**189**	Pn		**Pn**	**12 12 26.2**	**+0.7**
	2.0nm,0.3s,baz=119,slow=4.7,SNR=63							
DZM				Sn		**Sn**	**12 13 53.5**	**-2.6**
	0.9nm,0.3s,baz=149,slow=23,SNR=1.8							
DZM				LR		LR	12 14 34.8	
	comp=Z,88nm,18.2s,baz=14,slow=31							
	8.0nm,0.4s							
DZM	**Mont Dzumac**	**7.99**	**189**	*e*Pn		**Pn**	**12 12 27.0**	**+1.5**
DZM	55nm,1.4s			*e*Sn		**Sn**	**12 13 56.1**	**0.0**
	54nm,1.1s							
DZM	**Mont Dzumac**	**7.99**	**189**			**Pn**	**12 12 25.8**	**+0.4**
DZM	**Mont Dzumac**	**7.99**	**189**	P		**Pn**	**12 12 25.9**	**+0.4**
DZM	**Mont Dzumac**	**7.99**	**189**	S		**Sn**	**12 13 55.4**	**-0.7**
ONTNC	**Ouen Toro**	**8.22**	**189**	Pn		**Pn**	**12 12 29.4**	**+0.8**
ONTNC	**Ouen Toro**	**8.22**	**189**	P		**Pn**	**12 12 28.4**	**-0.2**
ONTNC	**Ouen Toro**	**8.22**	**189**	S		**Sn**	**12 14 01.0**	**-0.6**
OUENC	**Ouen Island, N**	**8.28**	**186**	P		**Pn**	**12 12 30.6**	**+1.2**
HNR	**Honiara**	**8.99**	**301**	Pn		**Pn**	**12 12 38.3**	**-0.9**
	0.5nm,0.3s,baz=221,slow=16,SNR=1.8							
HNR				LR		LR	12 15 25.0	
	comp=Z,7.7nm,22.0s,baz=215,slow=33							
HNR	**Honiara**	**8.99**	**301**	Pn		**Pn**	**12 12 38.1**	**-1.1**
HNR	**Honiara**	**8.99**	**301**	P		**Pn**	**12 12 39.3**	**+0.1**
SAVO	**Savo Central**	**9.26**	**302**	P		**Pn**	**12 12 45.3**	**+2.5**
TATA	**Tatamba Isabel**	**9.70**	**305**	P		**Pn**	**12 12 50.5**	**+1.7**
FUNA	**Funafuti**	**12.49**	**65**	Pn		**Pn**	**12 13 26.4**	**-0.8**
EIDS	**Eidsvold**	**19.27**	**232**	P		**Pn**	**12 14 55.7**	**+0.7**
EIDS	**Eidsvold**	**19.27**	**232**	P		**Pn**	**12 14 56.4**	**+1.4**
PMG	**Port Moresby**	**20.73**	**281**	P		Pn	12 15 11.3	-1.2
	15nm,1.0s,baz=103,slow=11,SNR=3.5							
CTA	**Charters Tower**	**21.41**	**251**	P		**P**	**12 15 16.9**	**-0.5**
	8.3nm,0.7s,baz=70,slow=12,SNR=13							
CTA				LR		LR	12 22 53.0	
	comp=Z,109nm,18.1s,baz=52,slow=35							
	8.3nm,0.7s							
CTAO	**Charters Tower**	**21.41**	**251**	P		**P**	**12 15 17.9**	**+0.5**
CTAO	**Charters Tower**	**21.41**	**251**	P		**P**	**12 15 18.6**	**+1.2**
MTSU	**Mount Surprise**	**22.89**	**257**	P		**P**	**12 15 33.9**	**+0.6**
COEN	**Coen**	**23.88**	**267**	P		**P**	**12 15 43.8**	**+0.6**
COEN				IAmb		IAmb	12 15 51.6	
	comp=Z,30nm,1.2s							
QLP	**Quilpie**	**25.26**	**237**	P		**P**	**12 15 56.4**	**+0.7**
URZ	**Urewera**	**25.41**	**163**	LR		LR	12 23 32.6	
	comp=Z,146nm,21.1s,baz=17,slow=31							
BKZ	**Black Stump Fm**	**26.08**	**164**	P		**P**	**12 16 03.5**	**+0.4**
BKZ	**Black Stump Fm**	**26.08**	**164**	P		**P**	**12 16 03.7**	**+0.6**
CMSA	**Cobar Meteorol**	**26.64**	**226**	P		**P**	**12 16 09.0**	**+0.8**
QIS	**Mount Isa**	**27.62**	**253**	P		**P**	**12 16 17.6**	**+0.4**
INKA	**Innaminka**	**28.57**	**237**			**P**	**12 16 25.3**	**-0.2**
INKA				IAmb		IAmb	12 16 26.8	
	comp=Z,9.9nm,0.7s							
STKA	**Stephens Creek**	**29.76**	**229**	P		**P**	**12 16 35.6**	**-0.4**
	comp=Z,18nm,0.6s,baz=47,slow=8.2,SNR=44							
STKA				LR		LR	12 27 26.1	
	comp=Z,168nm,20.4s,baz=31,slow=34							
	comp=Z,18nm,0.6s							
STKA	**Stephens Creek**	**29.76**	**229**	P		**P**	**12 16 36.4**	**+0.4**
RAR	**Rarotonga**	**31.65**	**108**	LR		LR	12 27 12.3	
	comp=Z,45nm,20.7s,baz=246,slow=32							
WB0	**Warramunga Arr**	**32.40**	**255**	P		**P**	**12 16 57.7**	**-1.7**
WRA	**Warramunga Arr**	**32.46**	**255**	P		**P**	**12 16 57.8**	**-2.2**
	comp=Z,4.3nm,0.8s,baz=84,slow=9.2,SNR=31							
	comp=Z,4.3nm,0.8s							
WRA	**Warramunga Arr**	**32.46**	**255**	P		**P**	**12 16 57.3**	**-2.7**
HTT	**Hallett**	**32.48**	**229**	P		**P**	**12 17 00.6**	**+0.5**
AS31	**Alice Springs**	**33.35**	**248**			**P**	**12 17 06.3**	**-1.5**
ASAR	**Alice Springs**	**33.36**	**248**	P		**P**	**12 17 06.3**	**-1.5**
	comp=Z,3.5nm,0.5s,baz=74,slow=9.7,SNR=163							
ASAR				LR		LR	12 29 52.6	
	comp=Z,89nm,18.0s,baz=100,slow=35							
	comp=Z,3.5nm,0.5s							
ASAR	**Alice Springs**	**33.36**	**248**	P		**P**	**12 17 06.0**	**-1.9**
BBOO	**Buckleboo**	**34.34**	**232**			**P**	**12 17 16.3**	**+0.1**
BBOO	**Buckleboo**	**34.34**	**232**	P		**P**	**12 17 16.4**	**+0.1**
FORT	**Forrest**	**40.03**	**239**			**P**	**12 18 04.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**40.62**	**259**	LR		LR	12 33 21.3	
	comp=Z,81nm,21.7s,baz=62,slow=34							
PPT2	**Papeete2**	**41.09**	**101**	*e*S		S	12 24 16.1	-11
	comp=Z,41nm,25.0s							
PPT2				*e*LQ		LQ	12 27 33.8	
	comp=Z,245nm,32.8s							
PPT2				*e*LR		LR	12 29 20.7	
	comp=Z,94nm,28.0s							
PPT2				*e*LR		LR	12 29 22.2	
	comp=Z,103nm,37.8s							
PPT	**Papeete**	**41.09**	**101**	LR		LR	12 30 58.8	
	comp=Z,90nm,18.9s,baz=160,slow=30							
TBI	**Tubuai**	**41.38**	**109**	*e*S		S	12 24 20.8	-10
	comp=Z,195nm,27.5s							
TBI				*e*LQ		LQ	12 27 51.2	
	comp=Z,749nm,27.2s							
TBI				*e*LR		LR	12 30 11.7	
	comp=Z,331nm,27.2s							
PSA00	**Pilbara Seismi**	**46.09**	**254**			**P**	**12 18 53.0**	**-0.8**
PSA00				IAmb		IAmb	12 18 54.2	
	comp=Z,7.5nm,0.9s							
ASAJ	**Asahikawa**	**62.37**	**340**	P		**P**	**12 20 53.1**	**+1.1**
	comp=Z,14nm,1.1s,baz=129,slow=23,SNR=2.2							
	comp=Z,14nm,1.1s							
SHEM	**Shemya Is, Ala**	**66.82**	**4**	LR		LR	12 43 08.7	
	comp=Z,66nm,20.7s,baz=40,slow=29							
PETK	**Petropavlovsk-**	**67.53**	**353**	P		**P**	**12 21 25.4**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=164,slow=4.9,SNR=1.9							
	comp=Z,2.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**75.17**	**294**	P		**P**	**12 22 12.9**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=133,slow=4.7,SNR=13							
	comp=Z,2.2nm,0.7s							
J18K	**Innoko River**	**82.08**	**15**	P		**P**	**12 22 49.4**	**-0.1**
J18K				IAmb		IAmb	12 23 10.5	
	comp=Z,4.7nm,1.4s							
F15K	**North Star Dit**	**82.25**	**11**	P		**P**	**12 22 51.0**	**+0.7**
F15K				IAmb		IAmb	12 22 52.2	
	comp=Z,3.3nm,1.1s							
SONM	**Songino Array**	**82.33**	**323**	P		**P**	**12 22 51.5**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=134,slow=6.4,SNR=5.4							
	comp=Z,1.1nm,1.0s							
H17K	**Granite Mounta**	**82.55**	**13**	P		**P**	**12 22 52.6**	**+0.7**
H17K				IAmb		IAmb	12 23 27.7	
	comp=Z,5.5nm,1.4s							
IL31		**85.81**	**18**	P		**P**	**12 23 07.8**	**-0.7**
IL31				IAmb		IAmb	12 23 11.9	
	comp=Z,5.3nm,1.2s							
ILAR	**Eielson Array**	**85.81**	**18**	P		**P**	**12 23 07.6**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=240,slow=5.1,SNR=32							
	comp=Z,2.0nm,0.7s							
BBB	**Bella Bella**	**86.01**	**34**	LR		LR	12 52 07.2	
	comp=Z,45nm,21.9s,baz=246,slow=29							
D20K	**Etivluk River**	**86.44**	**12**	P		**P**	**12 23 12.2**	**+0.7**
D20K				IAmb		IAmb	12 23 13.4	
	comp=Z,5.5nm,0.9s							
NVAR	**Mina Array Bea**	**86.50**	**49**	P		**P**	**12 23 13.6**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=234,slow=7.7,SNR=9.9							
	comp=Z,1.1nm,0.7s							
TXAR	**Lajitas Array**	**95.55**	**61**	P		**P**	**12 23 55.8**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=246,slow=3.6,SNR=2.8							
	comp=Z,0.2nm,0.6s							
YKA	**Yellowknife Ar**	**96.80**	**27**	P		**P**	**12 23 58.8**	**-1.0**
	comp=Z,0.2nm,0.8s,baz=265,slow=4.8,SNR=4.2							
	comp=Z,0.2nm,0.8s							
MKAR	**Makanchi Array**	**97.13**	**316**	P		Pdif	12 24 01.5	-0.4
	comp=Z,0.9nm,0.7s,baz=96,slow=6.8,SNR=7.9							
	comp=Z,0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**97.22**	**324**	P		**P**	**12 24 01.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=96,slow=1.5,SNR=3.6							
	comp=Z,0.3nm,0.3s							
AKASG	**Malin Array Be**	**130.53**	**326**	PKP		**PKPdf**	**12 29 40.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=70,slow=1.9,SNR=1.9							
BRTR	**Keskin Array B**	**132.51**	**311**	PKP		**PKPdf**	**12 29 43.7**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=113,slow=3.3,SNR=2.7							
KEST	**Kesra**	**151.07**	**322**	PKPbc		**PKiKP**	**12 30 23.2**	**-0.4**
	comp=Z,11nm,0.8s,baz=330,slow=0.4,SNR=14							
ESDC	**Sonseca Array**	**153.55**	**346**	PKPbc		**PKiKP**	**12 30 28.7**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=46,slow=4.8,SNR=3.5							
ESDC				PKPab		**PKPab**	**12 30 41.0**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=10,slow=3.4,SNR=8.5							

*IDC **23** 12:12:50.0±1.0, 36˚.80N×141˚.47E, h0km, mb3.6/8, mbtmp3.7/14, ML3.1/5, MS3.1/4, Error ellipse: s-maj=23.7km s-min=16.2km az=75.0*
*NIED **23** 12:12:54.7, 36˚.63N×141˚.16E, h34km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr=4.51; Mθθ=3.78; Mφφ=8.29; Mrθ=0.60; Mθφ=2.37; Mφr=5.18; Fault plane solution: Mo=8.69000×10^14 NP1:φs=44.00000°, δ=35.00000°, λ=-40.00000°. NP2:φs=168.00000°, δ=68.00000°, λ=-118.00000°.*
*JMA **23** 12:12:54.7±0.1, 36˚.6N±0˚.2×141˚.2E±0˚.5, h34km±1km, MD4.2/40, MV4.0/40, E OFF IBARAKI PREF*
JMA Felt II J1 at E OFF IBARAKI PREF .

ISC 23 12:12:53.7±1.8, 36˚.67N±0˚.04×141˚.24E±0˚.08, h24km±13km, n38, σ1°29/31, mb3.6/8, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHO	**Hitachi**	**0.54**	**264**	*i* P		**Pb**	**12 13 04.4**	**-0.2**
JHO				A		A	12 13 04.4	
	comp=N,9.0nm,6.6s,comp=E,7.0nm,0.7s							
JHO				S		**Sb**	**12 13 11.2**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.55**	**321**	*i* P		**Pn**	**12 13 05.6**	**-0.6**
ONAJ				A		A	12 13 05.6	
	comp=N,14nm,0.3s,comp=E,41nm,0.3s							
ONAJ				S		**Sb**	**12 13 13.5**	**+1.1**
JHYU	**Hitachinakayam**	**0.62**	**238**	↓*i* P		**Pn**	**12 13 05.7**	**-1.2**
JHYU				A		A	12 13 05.7	
	comp=N,28nm,0.3s,comp=E,32nm,0.7s							
JHYU				↓S		**Sn**	**12 13 13.8**	**-2.3**
JFFD	**Fukushimafurud**	**0.68**	**308**	*i* P		**Pn**	**12 13 07.3**	**-0.6**
JFFD				A		A	12 13 07.3	
	comp=N,8.0nm,1.7s,comp=E,9.0nm,1.2s							
JFFD				S		**Sn**	**12 13 16.4**	**-1.4**
JFK	**Kawauchi**	**0.75**	**337**	*i* P		**Pn**	**12 13 08.7**	**-0.2**
JFK				S		**Sn**	**12 13 19.3**	**-0.2**
JIHU	**Itakohorinouch**	**0.91**	**219**	A		A	12 13 10.1	
	comp=N,46nm,3.0s,comp=E,46nm,1.8s							
JYT	**Yasato**	**0.95**	**242**	*i* P		**Pn**	**12 13 10.6**	**-0.9**
JYT				A		A	12 13 10.6	
	comp=N,10.0nm,0.9s,comp=E,10.0nm,1.1s							
JCAJ	**Choshiashikaji**	**1.00**	**198**	A		A	12 13 11.7	
	comp=N,6.0nm,2.3s,comp=E,5.0nm,3.2s							
JSB	**Shiboa**	**1.10**	**286**	A		A	12 13 13.4	
	comp=N,11nm,1.1s,comp=E,28nm,1.2s							
JOTO	**OTAMA OYAMA**	**1.14**	**321**	*i* P		**Pb**	**12 13 15.3**	**+0.5**
JOTO				A		A	12 13 15.3	
	comp=N,13nm,1.1s,comp=E,8.0nm,4.2s							
JMM	**Marumori**	**1.24**	**344**	*e*P		**Pn**	**12 13 16.4**	**+0.8**
JFY	**Yanaizu**	**1.43**	**301**	P		**Pb**	**12 13 19.5**	**-0.1**
JAG	**Ashikaga**	**1.46**	**261**	P		**Pn**	**12 13 18.4**	**-0.2**
MJAR	**Matsushiro Arr**	**2.44**	**268**	Pn		**Pn**	**12 13 33.4**	**+1.3**
	comp=E,1.4nm,0.3s,baz=113,slow=10,SNR=75							
MJAR				Sn		**Sb**	**12 14 06.1**	**-0.4**
	comp=E,3.7nm,0.3s,baz=215,slow=36,SNR=3.7							
MJAR				LR		LR	12 14 58.2	
	comp=E,282nm,21.1s,baz=22,slow=49							
	comp=E,16nm,0.4s							
JHJ	**Hachijo jima 2**	**3.74**	**199**	Pn		**Pn**	**12 13 52.0**	**+2.0**
	comp=E,18nm,0.3s,baz=324,slow=23,SNR=6.1							
JHJ				Sn		**Sn**	**12 14 35.3**	**+2.1**
	comp=E,13nm,0.3s,baz=84,slow=23,SNR=1.5							
JHJ				LR		LR	12 14 47.8	
	comp=E,315nm,19.2s,baz=106,slow=30							
	comp=E,95nm,0.5s							
ASAJ	**Asahikawa**	**7.51**	**8**	Pn		**Pn**	**12 14 40.4**	**-1.2**
	comp=E,0.4nm,0.3s,baz=220,slow=10,SNR=5.2							
	comp=E,9.8nm,1.2s							
JNU	**Nakatsue**	**9.21**	**250**	LR		LR	12 19 04.0	
	comp=E,118nm,21.5s,baz=48,slow=40							
JCJ	**Chichijima**	**9.58**	**175**	Pn		**Pn**	**12 15 08.6**	**-1.6**
	comp=E,18nm,0.4s,baz=289,slow=21,SNR=5.5							
USRK	**Ussuriysk Ar.**	**10.30**	**320**	Pn		**Pn**	**12 15 18.8**	**-1.1**
	comp=E,0.1nm,0.3s,baz=113,slow=11,SNR=1.1							
	comp=E,0.8nm,0.5s							
KSRS	**Korea Array**	**10.67**	**278**	Pn		**Pn**	**12 15 27.2**	**+2.2**
	comp=E,0.1nm,0.3s,baz=87,slow=14,SNR=1.3							
KSRS				LR		LR	12 19 04.3	
	comp=E,83nm,21.9s,baz=100,slow=34							
	comp=E,0.6nm,0.7s							
SONM	**Songino Array**	**27.87**	**305**	P		**P**	**12 18 43.0**	**+1.4**
	comp=E,0.4nm,0.7s,baz=104,slow=11,SNR=4.6							
	comp=E,0.4nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**28.09**	**120**	T		T	12 48 12.3	
	baz=313,slow=75,SNR=239							
H11N1	**WAKE ISLAND Hy**	**28.09**	**120**	T		T	12 48 12.9	
	baz=313,slow=75,SNR=180							
H11N3	**WAKE ISLAND Hy**	**28.11**	**120**	T		T	12 48 12.2	
	baz=313,slow=75,SNR=186							
H11S1	**WAKE ISLAND Hy**	**28.79**	**122**	T		T	12 49 03.1	
	baz=315,slow=76,SNR=168							
H11S3	**WAKE ISLAND Hy**	**28.79**	**122**	T		T	12 49 03.3	
	baz=315,slow=76,SNR=174							
H11S2	**WAKE ISLAND Hy**	**28.80**	**122**	T		T	12 49 04.5	
	baz=315,slow=76,SNR=156							
ZALV	**Zalesovo Beam**	**42.05**	**313**	P		**P**	**12 20 43.5**	**+0.3**
	comp=E,0.6nm,0.4s,baz=76,slow=6.3,SNR=6.2							
	comp=E,0.6nm,0.4s							
MKAR	**Makanchi Array**	**44.19**	**302**	P		**P**	**12 21 01.4**	**+0.8**
	comp=E,0.6nm,0.9s,baz=95,slow=8.6,SNR=3.9							
	comp=E,0.6nm,0.9s							
KURBB	**Kurchatov Arra**	**46.11**	**308**	P		**P**	**12 21 15.8**	**0.0**
	comp=E,0.5nm,0.5s,baz=82,slow=7.7,SNR=5.7							
	comp=E,0.5nm,0.5s							
ILAR	**Eielson Array**	**49.88**	**32**	P		**P**	**12 21 42.6**	**-2.1**
	comp=E,0.2nm,1.0s,baz=273,slow=8.4,SNR=4.7							
	comp=E,0.2nm,1.0s							
BVAR	**Borovoye Array**	**50.71**	**313**	P		**P**	**12 21 50.2**	**-1.0**
	comp=E,0.2nm,0.5s,baz=73,slow=4.8,SNR=1.7							
	comp=E,0.2nm,0.5s							
WRA	**Warramunga Arr**	**56.68**	**188**	P		**P**	**12 22 36.2**	**+1.0**
	comp=E,1.4nm,0.5s,baz=4.2,slow=7.3,SNR=23							
	comp=E,1.4nm,0.5s							
ASAR	**Alice Springs**	**60.41**	**188**	P		**P**	**12 23 02.8**	**+1.6**
	comp=E,0.8nm,0.8s,baz=16,slow=12,SNR=7.8							
	comp=E,0.8nm,0.8s							
DZM	**Mont Dzumac**	**63.09**	**154**	LR		LR	12 44 18.8	
	comp=E,401nm,21.2s,baz=210,slow=30							
H03N2	**Juan Fernandez**	**147.13**	**96**	T		T	15 17 03.5	
	baz=291,slow=76,SNR=21							
H03N3	**Juan Fernandez**	**147.14**	**96**	T		T	15 17 01.3	
	baz=291,slow=76,SNR=19							
H03N1	**Juan Fernandez**	**147.14**	**96**	T		T	15 17 01.9	
	baz=291,slow=76,SNR=21							

*JMA **23** 12:14:44.7±0.3, 31˚.N±2˚×13˚.8E±˚, h493km, MV4.1/38, NEAR TORISHIMA IS*
*IDC **23** 12:14:45.5±0.7, 30˚.65N×138˚.05E, h460km±8km, mb3.1/15, mbtmp4.0/23, Error ellipse: s-maj=14.6km s-min=8.9km az=76.0*

ISC 23 12:14:45.9±0.6, 30˚.71N±0˚.07×138˚.25E±0˚.09, h477km, n30, σ1°93/39, mb3.4/15, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHJ	**Hachijo jima 2**	**2.74**	**28**	P		**P**	**12 15 52.8**	**-0.3**
	108nm,0.4s,baz=78,slow=16,SNR=2.1							
JHJ				S		**S**	**12 16 48.9**	**+0.9**
	109nm,0.6s,baz=232,slow=24,SNR=1.4							
JIE	**Ise**			**3.90**	**341**	*e*P	**P**	**12 16 02.5**	**+0.7**
BSO1	**Boso 1**			**4.56**	**30**	P	**P**	**12 16 07.1**	**+0.2**
JOD2	**Odawara 2**			**4.60**	**9**	P	**P**	**12 16 07.6**	**-0.3**
JOD2						*e*S	**S**	**12 17 13.9**	**-0.9**
CBIJ	**Chichi jima**			**4.98**	**135**	*e*P	**P**	**12 16 11.1**	**-0.5**
CBIJ						*e*S	**S**	**12 17 20.4**	**-0.9**
JCJ	**Chichijima**			**4.98**	**135**	P	**P**	**12 16 10.3**	**-1.3**
	20nm,0.4s,baz=189,slow=20,SNR=1.2							
JCJ				S			**S**	**12 17 18.3**	**-3.1**
	126nm,0.3s,baz=288,slow=22,SNR=17							
JYT	**Yasato**			**5.74**	**16**	*e*P	**P**	**12 16 17.4**	**-1.1**
JYT						*e*S	**S**	**12 17 28.7**	**-5.6**
JAG	**Ashikaga**			**5.79**	**10**	P	**P**	**12 16 17.7**	**-1.4**
JAG						*e*S	**S**	**12 17 30.3**	**-5.0**
MJAR	**Matsushiro Arr**			**5.82**	**360**	P	**P**	**12 16 18.6**	**-0.7**
	2.5nm,0.6s,baz=175,slow=9.7,SNR=1.4							
MJAR						S	**S**	**12 17 31.7**	**-4.1**
	1.6nm,0.6s,baz=118,slow=9.5,SNR=1.6							
JNU	**Nakatsue**			**6.71**	**293**	P	**P**	**12 16 26.8**	**-1.6**
	5.1nm,0.6s,baz=177,slow=5.5,SNR=5.8							
JMK	**Ichinoseki**			**8.58**	**16**	*e*P	**P**	**12 16 49.1**	**+1.4**
JMK						*e*S	**S**	**12 18 24.6**	**-3.2**
KSRS	**Korea Array**			**10.89**	**311**	P	**P**	**12 17 11.8**	**-0.6**
	4.1nm,0.5s,baz=126,slow=10,SNR=20							
ASAJ	**Asahikawa**			**13.82**	**13**	P	**P**	**12 17 45.5**	**+1.7**
	5.9nm,0.4s,baz=227,slow=13,SNR=11							
USRK	**Ussuriysk Ar.**			**14.35**	**342**	P	**P**	**12 17 49.5**	**+0.2**
	16nm,0.5s,baz=143,slow=10,SNR=41							
KLR	**Kul'dur**			**19.15**	**347**	P	**P**	**12 18 38.6**	**+0.9**
	6.8nm,0.6s,baz=169,slow=7.9,SNR=23							
HILR	**Hailar Array B**			**23.44**	**329**	P	**P**	**12 19 16.9**	**+0.3**
	0.9nm,0.3s,baz=147,slow=12,SNR=3.3							
	0.9nm,0.3s							
PETK	**Petropavlovsk-**			**26.49**	**27**	P	**P**	**12 19 46.4**	**+2.8**
	2.8nm,0.9s,baz=165,slow=5.9,SNR=5.2							
	2.8nm,0.9s							
SONM	**Songino Array**			**29.73**	**314**	P	**P**	**12 20 11.9**	**-0.3**
	0.4nm,0.4s,baz=127,slow=8.6,SNR=5.9							
	0.4nm,0.4s							
CMAR	**Chiang Mai Arr**			**37.58**	**260**	P	**P**	**12 21 18.1**	**-0.8**
	1.0nm,0.7s,baz=63,slow=8.2,SNR=9.6							
	1.0nm,0.7s							
MKAR	**Makanchi Array**			**45.54**	**307**	P	**P**	**12 22 21.4**	**-0.3**
	0.2nm,0.3s,baz=82,slow=11,SNR=9.2							
MKAR						ScP	**ScP**	**12 26 58.2**	**+0.6**
	0.1nm,0.6s,baz=90,slow=2.9,SNR=3.5							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**			**48.06**	**312**	P	**P**	**12 22 40.2**	**-0.5**
	0.9nm,0.6s,baz=91,slow=9.5,SNR=6.2							
	0.9nm,0.6s							
WRA	**Warramunga Arr**			**50.50**	**185**	P	**P**	**12 22 59.6**	**+0.4**
	1.4nm,0.5s,baz=2.1,slow=7.5,SNR=15							
	1.4nm,0.5s							
BVAR	**Borovoye Array**			**53.06**	**316**	P	**P**	**12 23 17.4**	**0.0**
	0.6nm,0.3s,baz=97,slow=8.6,SNR=6.8							
	0.6nm,0.3s							
ASAR	**Alice Springs**			**54.22**	**185**	P	**P**	**12 23 27.1**	**+1.1**
	0.6nm,0.7s,baz=5.4,slow=6.5,SNR=11							
	0.6nm,0.7s							
ARCES	**ARCESS Array B**			**68.99**	**340**	P	**P**	**12 25 03.5**	**+1.4**
	1.3nm,0.4s,baz=64,slow=8.6,SNR=16							
	1.3nm,0.4s							
YKA	**Yellowknife Ar**			**

	comp=E,488nm,0.5s							
NARI				IAML		12 23 32.0		
	comp=N,711nm,0.4s							
SVRC	**Sivrice-ELAZID**	**0.40**	**73**	Pg	**Pg**	**12 23 20.4**	**-0.6**
SVRC				Sg	**Sg**	**12 23 27.1**	**+0.8**
KAHTU	**Kahta**	**0.49**	**200**	P	**Pb**	**12 23 23.2**	**-0.8**
KAHTU				S	**Sb**	**12 23 30.2**	**-1.2**
KAHTU				IAML		12 23 35.0		
	comp=N,460nm,0.7s							
KAHTU				IAML		12 23 36.0		
	comp=E,884nm,0.6s							
ELZ	**Elazig**	**0.52**	**36**	P	**Pg**	**12 23 23.2**	**-0.1**
ELZ				IAML		12 23 31.0		
	comp=E,343nm,0.2s							
ELZ				S	**Sb**	**12 23 31.0**	**-1.5**
ELZ				IAML		12 23 33.0		
	comp=N,270nm,0.4s							
MDNT	**Maden**	**0.69**	**79**	P	**Pg**	**12 23 25.9**	**-0.6**
MDNT				S	**Sb**	**12 23 36.6**	**-0.7**
MDNT				IAML		12 23 38.0		
	comp=E,157nm,0.4s							
MDNT				IAML		12 23 40.0		
	comp=N,344nm,0.4s							
MCKZ	**Bingol**	**0.86**	**8**	P	**Pg**	**12 23 29.2**	**-0.5**
MCKZ				S	**Sb**	**12 23 41.8**	**-0.5**
MCKZ				IAML		12 23 42.0		
	comp=N,182nm,0.5s							
MCKZ				IAML		12 23 42.0		
	comp=E,242nm,0.4s							
KOVA	**Elazig, Kovanc**	**0.90**	**60**	P	**Pg**	**12 23 30.1**	**-0.3**
KOVA				S	**Sn**	**12 23 49.3**	**+3.8**
KOVA				IAML		12 23 54.0		
	comp=E,72nm,0.5s							
KOVA				IAML		12 23 57.0		
	comp=N,88nm,1.4s							
ARPR	**Arapgir-MALATY**	**0.91**	**336**	Pg	**Pg**	**12 23 30.3**	**-0.3**
DYBB	**Diyarbakir**	**1.09**	**106**	Pg	**Pg**	**12 23 33.4**	**-0.6**
DYBB				Sg	**Sn**	**12 23 49.6**	**-0.6**
ILIC	**ilic-Erzincan**	**1.20**	**351**	Pn	**Pb**	**12 23 35.9**	**-0.4**
ERZN	**Erzincan**	**1.50**	**28**	Pn	**Pb**	**12 23 40.9**	**-0.4**
GAZ	**Gaziantep**	**1.68**	**230**	Pn	**Pb**	**12 23 44.2**	**-0.1**
KMRS	**Kahramanmaras**	**1.69**	**244**	Pn	**Pb**	**12 23 44.2**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.88**	**93**	Pn	**Pn**	**12 23 46.1**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.89**	**275**	Pn	**Pb**	**12 23 47.6**	**-0.5**
SVSK	**Karacayir**	**2.17**	**320**	Pn	**Pb**	**12 23 51.3**	**-1.5**

*IDC **23** 12:29:39.6±1.2,9°.55S×149°.82E,h0km,mb3.9/9, mbtmp3.9/12,ML3.7/2,MS3.3/4,Error ellipse: s-maj=30.4km s-min=19.5km az=119.0*

ISC 23 12:29:44.8±0.9,**9.74S**±0°.08×**149.8E**±0°.1,**h35**km,**n24,** σ1**966/21**,**mb4.0/8**,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.58**	**277**	Pn	**Pn**	**12 30 23.4**	**-0.7**
	84nm,0.3s,baz=84,slow=6.9,SNR=42						
PMG				Sn	**Sn**	**12 30 57.5**	**+3.2**
	69nm,0.3s,baz=100,slow=23,SNR=7.4						
PMG	**Port Moresby**	**2.58**	**277**	P	**Pn**	**12 30 23.3**	**-0.9**
KAVG	**Kavieng**	**7.19**	**8**	P	Pn	12 31 35.6	+8.1
COEN	**Coen**	**7.69**	**236**	P	**Pn**	**12 31 33.5**	**-0.9**
COEN	**Coen**	**7.69**	**236**	S	**Sn**	**12 32 56.1**	**-4.2**
MTSU	**Mount Surprise**	**9.87**	**212**	P	**Pn**	**12 32 05.3**	**+0.9**
HNR	**Honiara**	**10.06**	**89**	LR	LR	12 35 28.2	
	comp=Z,5.6nm,19.1s,baz=334,slow=35						
CTA	**Charters Tower**	**10.83**	**198**	Pn	**Pn**	**12 32 17.9**	**+0.4**
	0.4nm,0.3s,baz=32,slow=14,SNR=7.0						
CTA				Sn	**Sn**	**12 34 15.6**	**-2.0**
	0.1nm,0.3s,baz=340,slow=12,SNR=2.2						
CTA				LR	LR	12 36 12.2	
	comp=Z,86nm,18.9s,baz=302,slow=36						
	0.9nm,0.3s						
CTAO	**Charters Tower**	**10.83**	**198**	P	**Pn**	**12 32 19.6**	**+2.1**
JAY	**Jayapura**	**11.51**	**308**	LR	LR	12 38 04.4	
	comp=Z,119nm,18.8s,baz=215,slow=44						
EIDS	**Eidsvold**	**15.60**	**176**	P	**P**	**12 33 26.3**	**+0.3**
WRA	**Warramunga Arr**	**18.01**	**234**	P	**Pn**	**12 33 52.4**	**-0.2**
	0.2nm,0.3s,baz=48,slow=13,SNR=5.1						
WRA				S	Sn	12 37 03.0	-10
	0.6nm,0.9s,baz=59,slow=23,SNR=1.9						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**20.52**	**226**	P	**P**	**12 34 22.0**	**+1.7**
	1.7nm,0.7s,baz=60,slow=11,SNR=14						
	1.7nm,0.7s						
STKA	**Stephens Creek**	**23.29**	**198**	P	**P**	**12 34 51.7**	**+2.1**
	4.1nm,1.0s,baz=36,slow=5.8,SNR=3.8						
	4.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**24.81**	**248**	P	**P**	**12 35 04.3**	**+0.3**
	15nm,0.7s,baz=47,slow=11,SNR=15						
	15nm,0.7s						
RAO	**Raoul Island**	**35.94**	**127**	LR	LR	12 47 48.5	
	comp=Z,63nm,21.4s,baz=198,slow=30						
LEM	**Lembang**	**41.78**	**271**	LR	LR	12 56 43.6	
	comp=Z,40nm,18.2s,baz=146,slow=39						
CMAR	**Chiang Mai Arr**	**57.43**	**299**	P	**P**	**12 39 31.0**	**+0.5**
	1.1nm,0.6s,baz=118,slow=5.6,SNR=9.6						
	1.1nm,0.6s						
SONM	**Songino Array**	**68.98**	**330**	P	**P**	**12 40 46.1**	**-0.7**
	0.5nm,0.6s,baz=141,slow=5.4,SNR=3.6						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**82.10**	**320**	P	**P**	**12 42 01.6**	**-0.2**
	0.4nm,0.7s,baz=96,slow=7.2,SNR=5.2						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**83.61**	**327**	P	**P**	**12 42 08.2**	**-1.3**
	1.3nm,0.7s,baz=110,slow=5.1,SNR=6.5						
	1.3nm,0.7s						
KURBB	**Kurchatov Arra**	**85.84**	**323**	P	**P**	**12 42 20.5**	**-0.3**
	0.4nm,0.6s,baz=108,slow=3.6,SNR=2.8						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**87.84**	**23**	P	**P**	**12 42 29.6**	**-0.7**
	0.7nm,0.6s,baz=258,slow=4.5,SNR=14						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.53**	**279**	PKPbc	**PKiKP**	**12 49 29.9**	**-0.7**
	1.7nm,0.7s,baz=170,slow=1.4,SNR=6.4						

*AFAD **23** 12:34:14.8,38°.29N×44°.62E,h7km±1km,ML2.4*
*AZER **23** 12:34:15.9,38°.37N×44°.52E,h10km, ml2.7*
*ISK **23** 12:34:17.1,38°.36N×44°.63E,h12km, ML2.7/7*
*TEH **23** 12:34:18.1,38°.42N×44°.51E,h6km±166km,ML2.7, Presumed earthquake*

ISC 23 12:34:18.0±1.1,**38°.36N**±0°.03×**44°.53E**±0°.02,**h9**km±10km, **n26,** σ1**926/45**,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.52**	**306**	P	**Pg**	**12 34 26.7**	**-1.5**
OZAP				S	**Sg**	**12 34 35.9**	**+0.8**
OZAP				IAML		12 34 37.0	
	comp=E,386nm,0.9s						
OZAP				IAML		12 34 41.0	
	comp=N,470nm,1.0s						
ISHB	**Shabestar**	**0.85**	**95**	Pg	**Pn**	**12 34 34.2**	**-2.3**
ISHB				Sg	**Sn**	**12 34 47.4**	**-1.8**
TVAN	**Van**	**0.90**	**281**	P	**Pg**	**12 34 33.8**	**-1.6**
TVAN				S	**Sg**	**12 34 48.0**	**+0.9**
TVAN				IAML		12 34 58.0	
	comp=N,189nm,0.5s						
TVAN				IAML		12 34 58.0	
	comp=E,108nm,1.0s						
VANB	**Van**	**0.93**	**285**	Pg	**Pg**	**12 34 36.2**	**+0.3**
VANB				Sg	**Sb**	**12 34 50.3**	**+1.4**
VMUR	**Van-Muradiye**	**0.98**	**310**	P	**Pg**	**12 34 35.7**	**-1.2**
VMUR				S	**Sn**	**12 34 51.4**	**-0.9**
VMUR				IAML		12 34 53.0	
	comp=N,146nm,0.3s						
VMUR				IAML		12 34 53.0	
	comp=E,129nm,0.3s						
IMRD	**Marand**	**0.98**	**68**	Pg	**Pn**	**12 34 37.4**	**-0.8**
MAKU	**Maku**	**1.00**	**7**	Pg	**Pg**	**12 34 35.8**	**-1.5**
HAKT	**HAKKARI**	**1.03**	**220**	P	**Pg**	**12 34 37.6**	**-0.2**
HAKT				S	**Sn**	**12 34 55.0**	**+1.4**
NAX	**Nakhchivan**	**1.11**	**42**	P	**Pn**	**12 34 39.3**	**-0.5**
NAX				S	**Sn**	**12 34 55.5**	**+0.2**
GEVA	**Gevas**	**1.16**	**268**	P	**Pn**	**12 34 38.2**	**-2.4**
GEVA				S	**Sb**	**12 34 55.7**	**+0.1**
GEVA				IAML		12 35 00.0	
	comp=E,70nm,0.6s						
GEVA				IAML		12 35 02.0	
	comp=N,128nm,0.5s						
AKDM	**Akdamar-Van**	**1.22**	**269**	Pn	**Pn**	**12 34 39.8**	**-1.7**
AKDM				Sn	**Sn**	**12 34 59.4**	**+1.2**
ITBZ	**Tabriz**	**1.27**	**95**	Pg	**Pg**	**12 34 41.9**	**-0.6**
ORD	**Ordubad**	**1.28**	**63**	P	**Pg**	**12 34 42.6**	**+0.1**
ORD				S	**Sn**	**12 35 01.2**	**+1.7**
SBZ	**Shahbuz**	**1.31**	**37**	P	**Pg**	**12 34 42.8**	**-0.3**
SBZ				S	**Sn**	**12 35 02.4**	**+2.1**
CUKT	**Cukurca**	**1.33**	**214**	Pn	**Pb**	**12 34 43.0**	**-0.2**
CUKT				Sn	**Sg**	**12 35 01.6**	**+0.9**
IAZR	**Azarshahr**	**1.33**	**120**	Pg	**Pg**	**12 34 44.5**	**+1.0**
DYDN	**Diyadin**	**1.36**	**331**	P	**Pg**	**12 34 44.4**	**+0.4**
DYDN				S	**Sb**	**12 35 00.8**	**-0.5**
HYR	**Heyderabad**	**1.38**	**10**	P	**Pg**	**12 34 45.7**	**+1.1**
HYR				S	**Sg**	**12 35 05.1**	**+2.6**
ADCV	**BITLIS_Adilcev**	**1.49**	**288**	P	**Pn**	**12 34 45.1**	**0.0**
ADCV				S	**Sg**	**12 35 08.6**	**+2.8**
ADCV				IAML		12 35 09.0	
	comp=E,36nm,0.5s						
ADCV				IAML		12 35 10.0	
	comp=N,42nm,0.5s						
AGRB	**Hanur-Agry**	**1.71**	**316**	Pn	**Pn**	**12 34 48.2**	**0.0**
AGRB				Sn	**Sb**	**12 35 10.9**	**-0.5**
DORK	**Agr/Tutak/Do**	**1.71**	**307**	P	**Pn**	**12 34 48.6**	**+0.4**
DORK				IAML		12 35 14.0	
	comp=N,29nm,0.5s						
DORK				S	**Sg**	**12 35 14.1**	**+1.1**
DORK				IAML		12 35 23.0	
	comp=E,41nm,0.9s						
MLAZ	**Malazgirt-MUS**	**1.74**	**297**	Pn	**Pn**	**12 34 48.8**	**+0.3**
MLAZ				Sn	**Sb**	**12 35 11.9**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.77**	**325**	P	**Pb**	**12 34 49.9**	**-1.0**
KOTA				S	**Sg**	**12 35 14.1**	**-1.0**
KOTA				IAML		12 35 18.0	
	comp=N,16nm,0.4s						
KOTA				IAML		12 35 18.0	
	comp=E,24nm,1.1s						
GNI	**Garni**	**1.80**	**5**	Pn	**Pn**	**12 34 48.8**	**-0.6**
GURO	**Guroymak-BITLI**	**1.97**	**276**	Pn	**Pn**	**12 34 52.4**	**+0.6**
IHRS	**Heris**	**1.97**	**90**	P	**Pg**	**12 34 55.4**	**-0.5**

*ISK **23** 12:35:22.3,36°.33N×29°.53E,h60km±1km,ML3.2/30*
*NIC **23** 12:35:22.6,36°.26N×29°.62E,h59km±1km,Ml3.2/15*
*THE **23** 12:35:23.6,36°.N±9°×3°.0E±2°.0,h53km±15km,M3.3/8, MLh3.3/8*
*ATH **23** 12:35:23.3,36°.27N×29°.56E,h41km±10km,ML3.6/16, Manual Solution by D.Makaris First location: 2020/02/23 12:36:27, This location: 2020/02/23 17:51:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
*AFAD **23** 12:35:25.8,36°.48N×29°.28E,h7km±1km,ML2.7*

ISC 23 12:35:22.9±1.1,**36°.33N**±0°.03×**29°.55E**±0°.02,**h55**km±5km, **n90,** σ1**903**/127,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.11**	**157**	Pg	**Pn**	**12 35 31.7**	**0.0**
AKAS				Sg	**Sn**	**12 35 38.5**	**+0.6**
AKAS	**Kas**	**0.11**	**157**	P	**Pn**	**12 35 31.7**	**0.0**
AKAS				S	**Sn**	**12 35 39.0**	**+1.1**
KSL	**Kastellorizon**	**0.18**	**172**	P	**Pn**	**12 35 32.1**	**+0.2**
KSL				S	**Sn**	**12 35 38.8**	**+0.7**
KSL	**Kastellorizon**	**0.18**	**172**	P	**Pn**	**12 35 32.0**	**+0.2**
KSL				S	**Sn**	**12 35 38.7**	**+0.5**
KSL				AML	AML	12 35 40.2	
	4.7nm,0.5s						
KSL				AML	AML	12 35 40.3	
	2.8nm,0.4s						
IZZE	**Mula-Seydike**	**0.28**	**291**	P	**Pn**	**12 35 32.3**	**-0.2**
IZZE				S	**Sn**	**12 35 39.6**	**+0.2**
DEMR	**Demre-Antalya**	**0.30**	**109**	Pg	**Pn**	**12 35 32.7**	**+0.1**
FETY	**Fethiye**	**0.48**	**309**	P	Pn	12 35 25.2	-9.2
FETY				S	**Sn**	**12 35 34.3**	**-8.4**
ELL	**Elmali**	**0.50**	**35**	Pg	**Pn**	**12 35 35.1**	**+0.3**
ELL				Sg	**Sn**	**12 35 44.2**	**+0.9**
ELL	**Elmali**	**0.50**	**35**	P	**Pn**	**12 35 34.9**	**+0.2**
ELL				S	**Sn**	**12 35 44.9**	**+1.6**
ELL				AML	AML	12 35 45.3	
	24nm,0.5s						
ELL				AML	AML	12 35 45.4	
	13nm,0.5s						
KNIK	**Mula-Seydike**	**0.51**	**2**	P	**Pn**	**12 35 34.4**	**-0.4**
KNIK				IAML		12 35 43.0	
	comp=E,468nm,0.3s						
KNIK				S	**Sn**	**12 35 43.8**	**+0.4**
KNIK				IAML		12 35 44.0	
	comp=N,587nm,0.4s						
CAME	**Cameli-Denizli**	**0.64**	**342**	Pg	**Pn**	**12 35 36.5**	**+0.1**
SABU	**Mula-Dalaman**	**0.68**	**316**	P	**Pn**	**12 35 36.4**	**-0.3**
SABU				S	**Sn**	**12 35 46.0**	**-0.7**
CAEL	**Denizli, Camel**	**0.81**	**347**	P	**Pn**	**12 35 38.4**	**-0.1**
CAEL				S	**Sn**	**12 35 50.3**	**+0.5**
CAEL				IAML		12 35 53.0	
	comp=E,435nm,0.4s						
KEMT	**Kemer-ANTALYA**	**0.85**	**71**	Pg	**Pn**	**12 35 39.8**	**+0.9**
DALY	**Dalyan (Mula)**	**0.87**	**304**	Pg	**Pn**	**12 35 39.2**	**+0.1**
GOLH	**Golhisar**	**0.90**	**1**	P	**Pn**	**12 35 40.1**	**+0.4**
GOLH				S	**Sn**	**12 35 52.6**	**+0.7**
KORT	**Korkueli**	**0.93**	**44**	Pg	**Pn**	**12 35 40.6**	**+0.6**
DNZT	**Denizli-Tavas-**	**1.03**	**336**	P	**Pn**	**12 35 41.4**	**0.0**
DNZT				S	**Sn**	**12 35 54.7**	**-0.3**
TURN	**Turunc**	**1.14**	**293**	Pn	**Pn**	**12 35 43.0**	**+0.3**
APMY	**Acipayam-Deniz**	**1.15**	**350**	Pn	**Pn**	**12 35 43.2**	**+0.2**
ARG	**Arkhangelos**	**1.16**	**265**	Pn	**Pn**	**12 35 42.8**	**-0.1**
ARG	**Arkhangelos**	**1.16**	**265**	P	**Pn**	**12 35 42.9**	**0.0**
ARG				S	**Sn**	**12 35 57.6**	**-0.2**
ARG	**Arkhangelos**	**1.16**	**265**	P	**Pn**	**12 35 43.0**	**+0.1**
ARG	**Arkhangelos**	**1.16**	**265**	P	**Pn**	**12 35 43.2**	**+0.3**
ARG				S	**Sn**	**12 35 57.7**	**-0.1**
YER	**Yerkesik**	**1.29**	**308**	Pn	**Pn**	**12 35 44.6**	**-0.2**
YER	**Yerkesik**	**1.29**	**308**	P	**Pn**	**12 35 45.2**	**+0.4**
YER				S	**Sn**	**12 36 01.6**	**+0.5**
BCK	**Bucak**	**1.40**	**36**	Pn	**Pn**	**12 35 46.7**	**+0.5**
DATC	**Datca-Mugla**	**1.58**	**286**	Pn	**Pn**	**12 35 49.1**	**+0.5**
BASM	**Basmaki-Afyon**	**1.63**	**14**	Pn	**Pn**	**12 35 49.6**	**+0.2**
DAT	**Datca**	**1.64**	**285**	Pn	**Pn**	**12 35 49.1**	**-0.4**
ISP	**Isparta**	**1.68**	**27**	Pn	**Pn**	**12 35 50.6**	**+0.6**
MLSB	**Milas**	**1.72**	**304**	Pn	**Pn**	**12 35 50.8**	**+0.3**
NAZL	**Nazilli-Aydin**	**1.91**	**329**	Pn	**Pn**	**12 35 53.8**	**+0.6**
BODT	**Bodrum**	**1.94**	**293**	Pn	**Pn**	**12 35 53.8**	**+0.2**
YKAV	**Yalikavak-Bodr**	**1.99**	**294**	Pn	**Pn**	**12 35 54.1**	**0.0**
ALAN	**Alanya-ANTALYA**	**2.01**	**83**	Pn	**Pn**	**12 35 55.3**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.09**	**321**	Pn	**Pn**	**12 35 56.1**	**+0.5**
KARP	**Karpathos**	**2.09**	**249**	Pn	**Pn**	**12 35 56.4**	**+0.8**
KARP	**Karpathos**	**2.09**	**249**	P	**Pn**	**12 35 56.5**	**+0.8**
KARP	**Karpathos**	**2.09**	**249**	P	**Pn**	**12 35 55.9**	**+0.3**
KARP				S	**Sn**	**12 36 22.2**	**+1.7**
KARP				AML	AML	12 36 22.3	
	0.6nm,0.2s						
KARP				AML	AML	12 36 22.4	
	0.6nm,0.2s						
KARP	**Karpathos**	**2.09**	**249**	P	**Pn**	**12 35 56.4**	**+0.8**
KARP				S	**Sn**	**12 36 20.1**	**-0.4**
SEYD	**Seydisehir-KON**	**2.12**	**59**	Pn	**Pn**	**12 35 56.8**	**+0.7**
GAZI	**Gazipasa**	**2.24**	**92**	Pn	**Pn**	**12 35 57.3**	**-0.3**
ODEM	**Odemis-Izmir**	**2.27**	**329**	Pn	**Pn**	**12 35 57.9**	**-0.2**
KULA	**Kula-Manisa**	**2.29**	**342**	Pn	**Pn**	**12 35 57.6**	**-0.8**
GCAM	**G?zelcaml?**	**2.30**	**307**	Pn	**Pn**	**12 35 59.1**	**+0.7**
SHUT	**Suhut-Afyon**	**2.35**	**19**	Pn	**Pn**	**12 36 00.0**	**+0.7**
SDAG	**Sultandagi-AFY**	**2.37**	**27**	Pn	**Pn**	**12 36 00.3**	**+0.8**
HDMB	**Hadim**	**2.44**	**74**	Pn	**Pn**	**12 36 01.5**	**+0.9**
SMG	**Samos**	**2.57**	**303**	P	**Pn**	**12 36 01.6**	**-0.6**
SMG	**Samos**	**2.57**	**303**	P	**Pn**	**12 36 02.9**	**+0.7**
AKMS	**Akamas**	**2.62**	**119**	P	**Pn**	**12 36 02.2**	**-0.6**
AKMS				S	**Sn**	**12 36 32.0**	**-1.4**
AKMS				AML	AML	12 36 34.1	
	0.5nm,0.2s						
AKMS				AML	AML	12 36 34.7	
	0.6nm,0.2s						
AKMS	**Akamas**	**2.62**	**119**	P	**Pn**	**12 36 02.7**	**-0.1**
AKMS				S	**Sn**	**12 36 31.7**	**-1.7**
ALFC	**Alefka**	**2.74**	**114**	P	**Pn**	**12 36 03.8**	**-0.7**
ALFC				S	**Sn**	**12 36 35.8**	**-0.7**
ALFC				AML	AML	12 36 37.0	
	0.4nm,0.2s						
ALFC				AML	AML	12 36 39.3	
	0.6nm,0.3s						
ALFC	**Alefka**	**2.74**	**114**	P	**Pn**	**12 36 03.7**	**-0.8**
ALFC				S	**Sn**	**12 36 35.9**	**-0.6**
BLCB	**Balcova**	**2.86**	**316**	P	**Pn**	**12 36 05.7**	**-0.4**
NATA	**Nata**	**2.91**	**121**	P	**Pn**	**12 36 06.8**	**0.0**
NATA				S	**Sn**	**12 36 39.6**	**-1.0**
NATA				AML	AML	12 36 43.6	
	1.0nm,0.3s						
NATA				AML	AML	12 36 46.8	
	0.7nm,0.5s						
NATA	**Nata**	**2.91**	**121**	P	**Pn**	**12 36 06.9**	**+0.1**
NATA				S	**Sn**	**12 36 40.0**	**-0.6**
ZKR	**Zakros**	**2.97**	**247**	P	**Pn**	**12 36 09.1**	**+1.4**
ZKR	**Zakros**	**2.97**	**247**	P	**Pn**	**12 36 08.8**	**+1.2**
ZKR				S	**Sn**	**12 36 43.5**	**+1.4**
ZKR				AML	AML	12 36 44.1	
	0.1nm,0.6s						
ZKR				AML	AML	12 36 47.8	
	0.3nm,1.4s						
TROD	**Troodos**	**3.03**	**116**	P	**Pn**	**12 36 07.8**	**-0.9**
TROD				S	**Sn**	**12 36 42.5**	**-1.3**
TROD				AML	AML	12 36 51.6	
	0.2nm,0.5s						
TROD				AML	AML	12 36 55.3	
	0.2nm,0.4s						
XYLS	**Xyliatos**	**3.14**	**114**	P	**Pn**	**12 36 08.9**	**-1.0**
XYLS				S	**Sn**	**12 36 44.9**	**-1.3**
XYLS				AML	AML	12 36 49.0	
	0.2nm,0.4s						
XYLS				AML	AML	12 36 50.5	
	0.2nm,0.4s						
OSC1	**CSNet OBS 1**	**3.16**	**153**	P	**Pn**	**12 36 09.7**	**-0.5**
OSC1				S	**Sn**	**12 36 45.7**	**-1.0**
APOL	**The Sanctuary**	**3.17**	**121**	P	**Pn**	**12 36 09.8**	**-0.5**
APOL				S	**Sn**	**12 36 46.3**	**-0.6**
APOL				AML	AML	12 36 47.4	
	0.3nm,0.2s						
APOL				AML	AML	12 36 48.6	
	0.3nm,0.3s						
THERA	**Ancient Thera,**	**3.29**	**272**	P	**Pn**	**12 36 12.2**	**+0.2**
THR3	**Thira Island,**	**3.35**	**273**	P	**Pn**	**12 36 13.0**	**+0.2**
THR6	**Thira Island,**	**3.35**	**272**	P	**Pn**	**12 36 13.3**	**+0.4**
SNT5	**Nea Kammeni, S**	**3.35**	**272**	P	**Pn**	**12 36 13.3**	**+0.5**
CSS	**Mathiatis**	**3.37**	**113**	P	**Pn**	**12 36 12.7**	**-0.4**
CSS				S	**Sn**	**12 36 50.5**	**-1.3**
CSS				AML	AML	12 36 57.9	
	0.1nm,0.6s						
CSS				AML	AML	12 37 01.1	
	0.1nm,0.4s						
CSS	**Mathiatis**	**3.37**	**113**	P	**Pn**	**12 36 12.7**	**-0.4**
CSS				S	**Sn**	**12 36 51.8**	**0.0**
THR9	**Santorini-Faro**	**3.39**	**272**	P	**Pn**	**12 36 13.0**	**-0.3**
ASGA	**Asgata**	**3.39**	**116**	P	**Pn**	**12 36 13.4**	**+0.1**
ASGA				S	**Sn**	**12 36 51.4**	**-0.9**
ASGA				AML	AML	12 36 59.5	
	0.2nm,0.2s						
ASGA				AML	AML	12 37 02.5	
	0.2nm,0.2s						
ASGA	**Asgata**	**3.39**	**116**	P	**Pn**	**12 36 13.3**	**0.0**
ASGA				S	**Sn**	**12 36 51.5**	**-0.7**
MVOU	**Mavrovouni**	**3.57**	**110**	P	**Pn**	**12 36 15.1**	**-0.7**
MVOU				AML	AML	12 37 00.5	
	0.1nm,0.7s						
MVOU				AML	AML	12 37 00.7	
	0.1nm,0.4s						
MVOU	**Mavrovouni**	**3.57**	**110**	P	**Pn**	**12 36 15.3**	**-0.5**
MVOU				S	**Sn**	**12 36 56.4**	**-0.4**
PARAL	**Paralimni**	**3.89**	**109**	S	**Sn**	**12 37 05.1**	**+0.5**
PARAL				AML	AML	12 37 15.0	
	0.2nm,1.0s						
IDI	**Anoyia**	**3.93**	**256**	P	**Pn**	**12 36 20.6**	**-0.2**
IDI	**Anoyia**	**3.93**	**256**	P	**Pn**	**12 36 20.5**	**-0.2**
IDI				S	**Sn**	**12 37 04.5**	**-1.2**
OSC2	**CSNet OBS 4**	**3.95**	**145**	P	**Pn**	**12 36 21.2**	**+0.2**
OSC2				S	**Sn**	**12 37 05.1**	**-0.9**
OSC2				AML	AML	12 37 17.9	
	0.1nm,0.5s						
OSC2				AML	AML	12 37 18.4	
	0.2nm,0.4s						
IMMV	**Iera Moni Meta**	**4.61**	**261**	P	**Pn**	**12 36 30.5**	**+0.5**
IMMV				S	**Sn**	**12 37 22.4**	**+0.2**
DION	**Dionisos Attik**	**4.81**	**293**	P	**Pn**	**12 36 34.0**	**+1.2**
VLY	**Voula,Athens**	**4.84**	**290**	P	**Pn**	**12 36 34.4**	**+1.1**
ATHU	**Athens Univers**	**4.89**	**291**	P	**Pn**	**12 36 35.2**	**+1.4**
LIA	**Limnos Island**	**4.95**	**317**	P	**Pn**	**12 36 35.3**	**+0.6**
VLI	**Veliai**	**5.34**	**276**	P	**Pn**	**12 36 41.3**	**+1.2**
VLI				S	**Sn**	**12 37 39.6**	**-0.6**
VIL2	**Platees**	**5.35**	**292**	P	**Pn**	**12 36 39.7**	**-0.5**
GUR	**Goura**	**5.98**	**288**	P	**Pn**	**12 36 49.6**	**+0.8**
KLV	**Kalavryta, Ach**	**6.15**	**288**	P	**Pn**	**12 36 51.7**	**+0.5**
ITM	**Ithomi**	**6.18**	**280**	P	**Pn**	**12 36 52.8**	**+1.2**
ANX	**Ano Chora**	**6.47**	**293**	P	**Pn**	**12 36 55.4**	**-0.3**

*IDC **23** 12:37:46.2±1.3,5°.45N×125°.20E,h194km±18km,mb3.5/5, mbtmp4.2/6,Error ellipse: s-maj=44.9km s-min=14.0km az=61.0*
*NEIC **23** 12:37:46.6±1.3,5°.54N±0°.08×125°.3E±0°.1,h197km±8km, mb4.2/13,Error ellipse: s-maj=16.9km s-min=11.8km az=80.0*

ISC 23 12:37:46.4±0.6,**5°.52N**±0°.06×**125°.37E**±0°.09,**h200**km,**n27,** σ0°**77/28**,**mb4.0/12**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.56**	**8**	P	**Pn

mB5.0/1,mb4.5/3,MLv4.1/26,Mw(mB)4.4/1
ISC 23 12:39:21.6±0.5,**7°49S**±0.0″05×**120°27E**±0.0″05,**h374**km±5km,
n76,σ0ᵗ95/86,mb4.0/14,Flores Sea

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
LBFI	**Labuhan Bajo,**	**1.05**	**201**	P	**Pn**	**12 40 09.7**	**-0.4**
BSSI	**Bau Bau, Buton**	**1.35**	**9**	P	**Pn**	**12 40 12.3**	**+0.8**
BSSI				S	**S**	**12 40 52.0**	**+0.5**
EDFI	**Ende, Flores**	**1.89**	**132**	P	**Pn**	**12 40 14.3**	**-0.2**
EDFI				S	**S**	**12 40 54.7**	**-2.4**
WSI	**Waingapu**	**2.17**	**179**	P	**Pn**	**12 40 16.1**	**-0.1**
WSI				S	**S**	**12 40 58.7**	**-1.6**
DBNI	**Kabupaten Domp**	**2.18**	**242**	P	**Pn**	**12 40 16.6**	**+0.2**
DBNI				S	**S**	**12 40 59.8**	**-0.6**
MMRI	**Maumere**	**2.26**	**120**	P	**Pn**	**12 40 17.4**	**+0.5**
WBSI	**Waikabubak, Su**	**2.31**	**202**	P	**Pn**	**12 40 17.4**	**+0.1**
MKS	**Makassar**	**2.39**	**341**	P	**Pn**	**12 40 18.5**	**+0.6**
KAPI	**Kappang**	**2.51**	**348**	P	**Pn**	**12 40 20.2**	**+1.4**
	365nm,0.5s,baz=179,slow=5.7,SNR=111						
KAPI				S	**S**	**12 41 05.9**	**+1.0**
	7.9nm,0.4s,baz=27,slow=23,SNR=0.6						
KAPI	**Kappang**	**2.51**	**348**		**Pn**	**12 40 20.0**	**+1.3**
KAPI	**Kappang**	**2.51**	**348**	P	**Pn**	**12 40 20.1**	**+1.3**
KAPI	**Kappang**	**2.51**	**348**	S	**S**	**12 41 06.7**	**+1.8**
KAPI	**Kappang**	**2.51**	**348**	P	**Pn**	**12 40 20.1**	**+1.3**
BASI	**Baing, Sumba**	**2.73**	**174**	P	**Pn**	**12 40 21.7**	**+1.2**
BASI				S	**S**	**12 41 09.1**	**+1.1**
PLAI	**Plampang**	**2.80**	**241**	P	**Pn**	**12 40 21.0**	**-0.1**
PLAI	**Plampang**	**2.80**	**241**	S	**S**	**12 41 07.9**	**-1.2**
PLAI	**Plampang**	**2.80**	**241**	P	**Pn**	**12 40 21.3**	**+0.2**
SPSI	**Sidrap Palu**	**3.53**	**352**	P	**Pn**	**12 40 29.2**	**+1.6**
KKSI	**Kolaka, Sulawe**	**3.57**	**23**	P	**Pn**	**12 40 30.1**	**+2.1**
TWSI	**Taliwang, Sumb**	**3.57**	**249**	P	**Pn**	**12 40 28.0**	**+0.1**
PMSI	**Majene**	**4.18**	**341**	P	**Pn**	**12 40 35.5**	**+1.5**
BATI	**Baumata**	**4.31**	**129**	P	**Pn**	**12 40 35.6**	**+0.5**
	72nm,0.4s,baz=38,slow=0.3,SNR=18						
BATI				S	**S**	**12 41 34.7**	**0.0**
	86nm,0.5s,baz=239,slow=6.1,SNR=4.3						
BATI	**Baumata**	**4.31**	**129**	P	**Pn**	**12 40 35.8**	**+0.6**
TTSI	**Tana Toraja**	**4.43**	**354**	P	**Pn**	**12 40 37.4**	**+0.9**
SOEI	**Soe**	**4.55**	**120**		**Pn**	**12 40 37.3**	**-0.5**
SOEI	**Soe**	**4.55**	**120**	P	**Pn**	**12 40 38.6**	**+0.8**
SOEI	**Soe**	**4.55**	**120**	S	**S**	**12 41 40.3**	**+0.9**
SOEI	**Soe**	**4.55**	**120**	P	**Pn**	**12 40 37.8**	**0.0**
IGBI	**Denpasar**	**5.24**	**255**	P	**Pn**	**12 40 45.4**	**+0.5**
	3µm89nm,0.8s						
RTBI	**Rangdo, Negare**	**5.36**	**259**	P	**Pn**	**12 40 47.7**	**+1.4**
JAGI	**Jajag, Banyuwa**	**6.13**	**260**	P	**Pn**	**12 40 55.2**	**+0.4**
TOLI2	**Tolitoli**	**8.56**	**3**	P	**Pn**	**12 41 22.8**	**+0.1**
TOLI2	**Tolitoli**	**8.56**	**3**	P	**P**	**12 41 23.2**	**-0.9**
UGM	**Wanagama**	**9.66**	**267**		**Pn**	**12 41 35.7**	**0.0**
UGM	**Wanagama**	**9.66**	**267**	P	**Pn**	**12 41 36.3**	**+0.5**
DRS	**Darwin Rock St**	**11.57**	**116**	P	**Pn**	**12 41 58.4**	**+0.3**
KNRA	**Kununurra**	**11.64**	**135**	P	**Pn**	**12 41 58.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**11.77**	**154**	P	**Pn**	**12 42 01.9**	**+1.4**
	16nm,0.8s,baz=332,slow=7.3,SNR=25						
BBJI	**Bungbulang**	**12.51**	**269**		**P**	**12 42 07.5**	**-0.6**
BBJI	**Bungbulang**	**12.51**	**269**	P	**P**	**12 42 08.1**	**+0.1**
LEM	**Lembang**	**12.57**	**272**	P	**P**	**12 42 09.8**	**+1.1**
	45nm,0.6s,baz=66,slow=7.5,SNR=9.5						
SIJI	**Sorong**	**12.79**	**60**	P	**Pn**	**12 42 10.5**	**-1.9**
	10nm,0.7s,baz=272,slow=13,SNR=5.0						
XMI	**Christmas Isla**	**14.70**	**257**	P	**P**	**12 42 32.1**	**+0.1**
WRA	**Warramunga Arr**	**18.42**	**134**	P	**P**	**12 43 12.5**	**+0.5**
	6.8nm,0.6s,baz=311,slow=9.0,SNR=22						
WRA				S	**S**	**12 46 21.0**	**-1.7**
	0.7nm,1.0s,baz=304,slow=17,SNR=1.5						
WRAB	**Tennant Creek**	**18.43**	**134**	P	**P**	**12 43 11.8**	**-0.2**
MEEK	**Meekatharra**	**19.11**	**185**	P	**P**	**12 43 20.0**	**+0.9**
AS31	**Alice Springs**	**20.74**	**142**		**P**	**12 43 35.6**	**+0.8**
AS31				IAmb	IAmb	12 43 37.3	
	comp=Z,6.0nm,0.6s						
ASAR	**Alice Springs**	**20.74**	**142**	P	**P**	**12 43 35.9**	**+1.1**
	comp=Z,14nm,0.5s,baz=319,slow=8.7,SNR=368						
ASAR				S	**S**	**12 47 03.4**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=339,slow=26,SNR=4.0						
ASAR				ScP	**ScP**	**12 50 27.6**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=318,slow=2.3,SNR=2.4						
	comp=Z,14nm,0.5s						
ASAR	**Alice Springs**	**20.74**	**142**		**P**	**12 43 35.3**	**+0.5**
MORW	**Morawa**	**21.83**	**190**	P	**P**	**12 43 44.4**	**-0.2**
QIS	**Mount Isa**	**22.79**	**127**	P	**P**	**12 43 53.8**	**+0.4**
BLDU	**Ballidu**	**23.25**	**188**	P	**P**	**12 43 56.8**	**-0.6**
KULM	**Kulim**	**23.33**	**302**	P	**P**	**12 43 59.0**	**+0.7**
COEN	**Coen**	**23.40**	**108**	P	**P**	**12 43 59.5**	**+0.5**
BBOO	**Buckleboo**	**29.15**	**152**	P	**P**	**12 44 50.1**	**+0.2**
BBOO	**Buckleboo**	**29.15**	**152**	P	**P**	**12 44 50.8**	**+0.9**
STKA	**Stephens Creek**	**31.37**	**144**	P	**P**	**12 45 10.8**	**+1.6**
	comp=Z,11nm,0.4s,baz=324,slow=8.5,SNR=36						
	comp=Z,11nm,0.4s						
CMAR	**Chiang Mai Arr**	**33.28**	**321**	P	**P**	**12 45 26.4**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=148,slow=6.9,SNR=14						
	comp=Z,1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**33.28**	**321**	P	**P**	**12 45 26.1**	**+0.3**
CHTO	**Chiang Mai**	**33.54**	**321**	P	**P**	**12 45 27.9**	**-0.2**
CHTO				IAmb	IAmb	12 45 29.1	
	comp=Z,3.4nm,0.5s						
LSA	**Lhasa**	**46.38**	**324**	P	**P**	**12 47 12.5**	**-0.3**
LSA				IAmb	IAmb	12 47 14.0	
	comp=Z,7.7nm,0.6s						
EVN	**Everest**	**47.82**	**319**	P	**P**	**12 47 23.6**	**-0.4**
EVN				IAmb	IAmb	12 47 24.6	
	comp=Z,5.9nm,0.7s						
XLT	**XiLinHaoTe**	**51.29**	**356**	*e*P	**P**	**12 47 48.3**	**-0.7**
XLT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**56.43**	**349**	P	**P**	**12 48 25.5**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=164,slow=8.4,SNR=4.3						
	comp=Z,0.7nm,0.6s						
SONM	**Songino Array**	**56.43**	**349**	P	**P**	**12 48 25.1**	**-0.6**
KSH2	**Kashi**	**62.18**	**322**	P	**P**	**12 49 04.3**	**-0.6**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	**63.71**	**332**	P	**P**	**12 49 14.3**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=143,slow=7.7,SNR=19						
	comp=Z,1.8nm,0.5s						
MAKZ	**Makanchi**	**63.86**	**332**	P	**P**	**12 49 14.8**	**-0.8**
MAKZ				IAmb	IAmb	12 49 57.5	
	comp=Z,5.8nm,1.4s						
ZALV	**Zalesovo Beam**	**68.09**	**338**	P	**P**	**12 49 40.9**	**-1.1**
	comp=Z,2.0nm,0.3s,baz=139,slow=5.7,SNR=14						
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**68.09**	**338**	P	**P**	**12 49 40.6**	**-1.4**
KURBB	**Kurchatov Arra**	**68.19**	**333**	P	**P**	**12 49 42.0**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=138,slow=5.6,SNR=6.3						
	comp=Z,0.7nm,0.6s						
KURK	**Kurchatov**	**68.22**	**333**	P	**P**	**12 49 42.0**	**-0.8**
VNDA	**Vanda**	**73.28**	**171**	P	**P**	**12 50 13.7**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=301,slow=7.9,SNR=10						
	comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**73.28**	**171**	P	**P**	**12 50 12.8**	**+0.1**
BVAR	**Borovoye Array**	**73.57**	**331**	P	**P**	**12 50 14.0**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=2.7						
	comp=Z,0.5nm,0.4s						
ABKAR	**Akbulak array**	**77.06**	**324**	P	**P**	**12 50 33.9**	**-0.6**

*IDC **23** 12:40:16.4±0.6,38.9°N×27.9°E,h0km,mb4.1/21,*
mbtmp4.1/37,ML4.1/11,MS3.8/25,Error ellipse:
s-maj=11.1km s-min=9.8km az=14.0
*THE **23** 12:40:17.9,39.9°N±4.1°×2.9°E±1.1°,h0km±19km,M4.6/12,*
MLh4.6/12
*ISK **23** 12:40:17.4,39.00°N×27.88°E,h12km,ML4.8/97*
*AFAD **23** 12:40:17.8,38.98°N×27.89°E,h7km±2km,MW4.5*
*MCSM **23** 12:40:18.4±0.5,39.1°N±3.1°×2.8°E±1.1°,h11km±4km,mb4.7,*
mB5.6,MLv5.0,Mw(mB)5.1
*NEIC **23** 12:40:18.8±1.9,39.01°N±0.05°×27.93E±0.06,h10km±2km,*
mb4.4/7,Error ellipse: s-maj=8.3km s-min=7.3km
az=311.0
*MED_RC **23** 12:40:18.0±0.6,39.00°N×27.87°E,h10km,MW4.6/11,*
Moment Tensor Solution.Mantle waves: s11,c13;
Duration: 1ᵗ1 Moment tensor: Scale 10¹⁶Nm;
M_{rr}-0.61±.06; $M_{\theta\theta}$0.47±.06; $M_{\phi\phi}$0.14±.05; $M_{r\theta}$-0.12±.17;
$M_{\theta\phi}$-0.73±.05; $M_{\phi r}$-0.19±.15; Best double couple:
$M_0$0.91000×10¹⁶ NP1:ϕ_s99.00000°,δ54.00000°,
λ-135.00000°. NP2:ϕ_s338.00000°,δ55.00000°,
λ-46.00000°. Principal axes: T 1.0600, Plg1.0000°,
Azm39.0000°; N -0.2900, Plg35.0000°, Azm130.0000°; P
-0.7700, Plg55.0000°, Azm307.0000°; nsta1 refers to
body waves. nsta2 refers to surface waves, cutoff=35s.

*SOF **23** 12:40:20.5,39.3°N±0.1°×27.71E±0.08,h2km±72km,*
MD4.8/7
*CFUSG **23** 12:40:25.3,39.37°N×28.35E,h5km,Mb3.7/6,MD3.8/8,*
MSH4.0/8
ISC 23 12:40:18.1±0.7,**39°00N**±0.01°×**27°89E**±0.01°,**h11**km±4km,
n386,σ1ᵗ12/435,mb4.3/40,MS3.8/16,37C-26D,Turkey

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.13**	**207**	P	**Pg**	**12 40 20.9**	**-0.3**
AKHS				S	**Sg**	**12 40 23.6**	**0.0**
AKS	**Akhisar**	**0.13**	**207**	Pg	**Pg**	**12 40 20.5**	**-0.8**
AKS				Sg	**Sg**	**12 40 23.1**	**-0.5**
GORD	**Gordes-Manisa**	**0.24**	**111**	Pg	**Pg**	**12 40 23.4**	**+0.3**
GORD				Sg	**Sg**	**12 40 27.5**	**+1.0**
GOMA	**Golmarmara-Man**	**0.29**	**176**	Pg	**Pg**	**12 40 23.8**	**-0.2**
GOMA				Sg	**Sg**	**12 40 28.5**	**+0.6**
SOMA	**Soma-Manisa**	**0.32**	**300**	Pg	**Pg**	**12 40 24.3**	**-0.3**
SOMA				Sg	**Sg**	**12 40 29.7**	**+0.8**
KTTT	**Salihli**	**0.35**	**153**	P	**Pg**	**12 40 25.0**	**-0.1**
KTTT				S	**Sg**	**12 40 30.0**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.40**	**341**	P	**Pg**	**12 40 25.8**	**-0.3**
STEP				S	**Sb**	**12 40 32.6**	**-0.9**
CAMT	**Merkez**	**0.51**	**241**	P	**Pg**	**12 40 28.1**	**-0.1**
CAMT				S	**Sb**	**12 40 36.3**	**-0.3**
ZEDA	**zmir-Bergama**	**0.63**	**268**	P	**Pg**	**12 40 30.2**	**-0.1**
ZEDA				S	**Sb**	**12 40 39.6**	**-0.5**
BALB	**Balikesir**	**0.64**	**359**		**Pg**	**12 40 30.4**	**-0.2**
BALB	**Balikesir**	**0.64**	**359**	Pg	**Pg**	**12 40 30.4**	**-0.2**
DEMI	**Demirci**	**0.65**	**86**	P	**Pg**	**12 40 30.8**	**+0.2**
DEMI				S	**Sg**	**12 40 39.2**	**0.0**
MANT	**Manisa**	**0.73**	**134**		**Pg**	**12 40 31.9**	**-0.3**
MANT	**Manisa**	**0.73**	**134**	P	**Pg**	**12 40 32.1**	**-0.1**
MANT				S	**Sb**	**12 40 42.6**	**-0.3**
ODEM	**Odemis-Izmir**	**0.73**	**169**	Pg	**Pg**	**12 40 32.1**	**-0.2**
BKES	**Balkesir-Mer**	**0.74**	**2**	P	**Pg**	**12 40 32.4**	**0.0**
BKES				S	**Sb**	**12 40 42.6**	**-0.5**
IZMD	**zmir-Dikili-**	**0.75**	**269**	P	**Pg**	**12 40 32.5**	**-0.1**
IZMD				S	**Sg**	**12 40 42.8**	**+0.4**
DURS	**Dursunbey**	**0.76**	**37**	P	**Pg**	**12 40 32.4**	**-0.3**
DURS				S	**Sb**	**12 40 44.7**	**+1.0**
KULA	**Kula-Manisa**	**0.77**	**128**	Pg	**Pg**	**12 40 32.8**	**-0.2**
BUHA	**Balikesir, Bur**	**0.81**	**309**	P	**Pg**	**12 40 33.8**	**+0.1**
BUHA				S	**Sg**	**12 40 44.2**	**0.0**
DSTI	**Dursunbey**	**0.83**	**43**	Pg	**Pg**	**12 40 33.0**	**-0.8**
DUVT	**Torbali**	**0.85**	**204**	P	**Pg**	**12 40 33.8**	**-0.6**
DUVT				S	**Sb**	**12 40 45.9**	**-0.3**
SIMA	**Simav-Kutahya**	**0.85**	**84**	Pg	**Pg**	**12 40 34.7**	**+0.1**
SMAA	**Simav-Kutahya**	**0.86**	**83**	Pg	**Pb**	**12 40 35.1**	**+0.1**
IZMR	**zmir-demi**	**0.86**	**177**	P	**Pg**	**12 40 34.4**	**-0.3**
IZMR				S	**Sg**	**12 40 45.9**	**0.0**
BAGT	**Foa**	**0.88**	**248**	P	**Pg**	**12 40 34.8**	**-0.2**
BAGT				S	**Sb**	**12 40 47.4**	**+0.3**
BLKS	**Balkesir-Sus**	**0.88**	**4**	P	**Pg**	**12 40 34.8**	**-0.2**
BLKS				S	**Sg**	**12 40 46.7**	**+0.2**
YAYO	**Edremit-Balk**	**0.88**	**314**	Pg	**Pg**	**12 40 35.1**	**0.0**
KIRA	**zmir-Kiraz**	**0.89**	**153**	P	**Pg**	**12 40 35.2**	**-0.1**
KIRA				S	**Sb**	**12 40 48.0**	**+0.4**
BLCB	**Balcova**	**0.90**	**228**	Pg	**Pg**	**12 40 34.8**	**-0.7**
BLCB	**Balcova**	**0.90**	**228**	P	**Pg**	**12 40 34.5**	**-1.0**
BLCB				S	**Sb**	**12 40 48.0**	**+0.3**
USAK	**Uak-Merkez**	**0.93**	**107**	P	**Pg**	**12 40 35.8**	**-0.2**
USAK				S	**Sg**	**12 40 48.1**	**+0.1**
FOCM	**Foa**	**0.95**	**253**	Pg	**Pg**	**12 40 35.7**	**-0.7**
SUSR	**Susurluk-Balik**	**0.98**	**9**	Pg	**Pg**	**12 40 36.0**	**-0.9**
AYVA	**Ayvalik**	**0.98**	**289**	P	**Pb**	**12 40 37.2**	**+0.1**
AYVA				S	**Sn**	**12 40 51.1**	**-0.6**
CMHT	**Manyas**	**1.02**	**3**	P	**Pg**	**12 40 37.5**	**-0.2**
CMHT				S	**Sb**	**12 40 51.3**	**+0.2**
SHAP	**Saphane-Kutahy**	**1.04**	**88**	Pg	**Pb**	**12 40 38.3**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**180**	Pg	**Pg**	**12 40 38.1**	**-0.2**
GONE	**Gonen-Balikesi**	**1.06**	**352**	Pg	**Pb**	**12 40 38.4**	**-0.1**
YENI	**Yenice-Canakka**	**1.06**	**332**	Pg	**Pb**	**12 40 38.4**	**-0.1**
NAZL	**Nazilli-Aydin**	**1.08**	**163**	Pn	**Pb**	**12 40 38.3**	**-0.5**
KRBN	**Karaburun**	**1.12**	**249**	Pn	**Pb**	**12 40 39.1**	**-0.3**
SULTU	**Buldan**	**1.17**	**144**	P	**Pb**	**12 40 40.3**	**0.0**
SULTU				S	**Sn**	**12 40 56.7**	**+0.3**
GEDZ	**Gediz**	**1.19**	**87**	Pn	**Pg**	**12 40 41.1**	**+0.2**
GMLL	**Gumuldur**	**1.20**	**220**	Pn	**Pn**	**12 40 40.4**	**-0.6**
KARB	**zmir-Karabur**	**1.20**	**254**	P	**Pn**	**12 40 40.4**	**-0.4**
KARB				S	**Sn**	**12 40 58.0**	**+1.0**
CANM	**Can-anakkale**	**1.20**	**328**	Pn	**Pn**	**12 40 40.4**	**-0.5**
KUSD	**Kusadasi-Aydin**	**1.23**	**203**	Pn	**Pb**	**12 40 41.4**	**+0.1**
DGB	**zmir**	**1.23**	**220**	P	**Pn**	**12 40 40.2**	**-0.9**
DGB				S	**Sb**	**12 40 57.0**	**-0.1**
ESEN	**Aydn-Nazilli**	**1.25**	**163**	P	**Pn**	**12 40 41.4**	**0.0**
ESEN				S	**Sb**	**12 40 57.5**	**-0.2**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pn**	**12 40 41.9**	**0.0**
PRK				S	**Sg**	**12 40 59.4**	**0.0**
TVSB	**Tavsanli**	**1.30**	**69**	Pn	**Pb**	**12 40 42.7**	**+0.1**
ORLT	**Orhaneli**	**1.31**	**36**	Pn	**Pb**	**12 40 42.9**	**+0.2**
KCTX	**Karacabey (Bur**	**1.32**	**16**	Pn	**Pn**	**12 40 42.4**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**1.32**	**236**	P	**Pn**	**12 40 41.9**	**-0.6**
EDC	**Edincik**	**1.35**	**359**	Pn	**Pn**	**12 40 42.8**	**-0.1**
BAND	**Balkesir-Ban**	**1.37**	**7**	⇓P	**Pn**	**12 40 43.4**	**+0.3**
BAND				⇓S	**Sg**	**12 41 02.3**	**+0.1**
GCMM	**G?zelcaml?**	**1.39**	**202**	Pn	**Pb**	**12 40 44.1**	**0.0**
EZNE	**Ezine-Canakkal**	**1.40**	**303**	Pn	**Pn**	**12 40 43.9**	**+0.3**
BIGA	**Biga-Canakkale**	**1.41**	**336**	Pn	**Pn**	**12 40 43.9**	**+0.3**
CESE	**eme**	**1.41**	**242**	Pn	**Pn**	**12 40 43.4**	**-0.3**
GPNR	**Gulpinar-Canak**	**1.44**	**289**	Pn	**Pn**	**12 40 44.1**	**0.0**
KHL	**Karahalli**	**1.44**	**117**	Pn	**Pn**	**12 40 44.3**	**+0.1**
EZN	**Ezine**	**1.47**	**305**	Pn	**Pn**	**12 40 44.6**	**+0.1**
EZN	**Ezine**	**1.47**	**305**	P	**Pn**	**12 40 44.5**	**+0.1**
EZN				S	**Sb**	**12 41 03.9**	**-0.1**
EZN	**Ezine**	**1.47**	**305**	P	**Pn**	**12 40 44.8**	**+0.3**
KRBG	**Karabiga-Canak**	**1.47**	**342**	Pn	**Pn**	**12 40 44.4**	**-0.1**
SMG	**Samos**	**1.53**	**213**	P	**Pb**	**12 40 46.0**	**-0.4**
SMG				S	**Sg**	**12 41 07.7**	**+0.4**
CHOS	**Chios island**	**1.56**	**248**	Pn	**Pn**	**12 40 45.6**	**-0.2**
CHOS	**Chios island**	**1.56**	**248**	P	**Pn**	**12 40 45.6**	**-0.2**
CHOS				S	**Sg**	**12 41 08.9**	**+0.6**
MDNY	**Mudanya-Bursa**	**1.57**	**29**	Pn	**Pn**	**12 40 45.9**	**0.0**
SIGR	**SIGRI**	**1.60**	**278**	Pn	**Pn**	**12 40 46.2**	**-0.1**
SIGR	**SIGRI**	**1.60**	**278**	P	**Pn**	**12 40 46.0**	**-0.3**
SIGR				S	**Sg**	**12 41 09.5**	**0.0**
MRMT	**Marmara Adasi**	**1.62**	**352**	Pn	**Pn**	**12 40 46.0**	**-0.7**
LPK	**Lapseki**	**1.63**	**328**	Pn	**Pn**	**12 40 46.9**	**+0.2**
BOZC	**Bozcaada**	**1.66**	**301**	Pn	**Pn**	**12 40 47.0**	**-0.1**
MLSB	**Milas**	**1.70**	**183**	Pn	**Pn**	**12 40 48.5**	**+0.8**
ARMT	**Armutlu**	**1.74**	**25**	Pn	**Pn**	**12 40 48.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.78**	**322**	Pn	**Pn**	**12 40 48.6**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.78**	**342**	Pn	**Pn**	**12 40 48.9**	**+0.1**
GAZK	**Gazikoy-TEKIRD**	**1.80**	**346**	Pn	**Pn**	**12 40 49.4**	**+0.3**
YER	**Yerkesik**	**1.88**	**170**	Pn	**Pn**	**12 40 50.2**	**-0.1**
YER	**Yerkesik**	**1.88**	**170**	P	**Pn**	**12 40 49.9**	**-0.4**
APMY	**Acipayam-Deniz**	**1.89**	**143**	Pn	**Pn**	**12 40 50.4**	**+0.1**
YKAV	**Yalikavak-Bodr**	**1.93**	**195**	Pn	**Pn**	**12 40 50.7**	**-0.1**
GADA	**Gvkgeada**	**1.95**	**308**	Pn	**Pn**	**12 40 51.5**	**+0.4**
GADA	**Gvkgeada**	**1.95**	**308**	P	**Pn**	**12 40 51.4**	**+0.3**
GADA				S	**Sn**	**12 41 16.2**	**+0.7**
ERIK	**Erikli-Kesan**	**1.98**	**328**	Pn	**Pn**	**12 40 51.9**	**+0.4**
BODT	**Bodrum**	**1.98**	**194**	Pn	**Pn**	**12 40 51.9**	**+0.3**
BODT	**Bodrum**	**1.98**	**194**	P	**Pn**	**12 40 52.5**	**+0.9**
BOTS	**Marmara Eregli**	**1.99**	**2**	Pn	**Pn**	**12 40 52.6**	**+0.9**
BASM	**Basmaki-Afyon**	**2.01**	**122**	Pn	**Pn**	**12 40 52.3**	**+0.3**
TKR	**Tekirdag**	**2.01**	**352**	Pn	**Pn**	**12 40 52.4**	**+0.5**
ADVT	**Abdulvahap**	**2.02**	**44**	Pn	**Pn**	**12 40 52.2**	**+0.1**
YLVH	**Yalova**	**2.04**	**33**	Pn	**Pn**	**12 40 52.5**	**+0.1**
SINB	**Sinanoba-Istan**	**2.06**	**14**	Pn	**Pn**	**12 40 52.5**	**-0.1**
YKBL	**Yakuplu-Istanb**	**2.08**	**16**	Pn	**Pn**	**12 40 53.4**	**+0.5**
HYBA	**Heybeliada-Ist**	**2.09**	**26**	Pn	**Pn**	**12 40 53.5**	**+0.5**
BRGA	**Burgazada-Ista**	**2.09**	**25**	Pn	**Pn**	**12 40 53.5**	**+0.5**
LAFA	**Gebze-Kocaeli**	**2.09**	**32**	Pn	**Pn**	**12 40 53.8**	**+0.8**
AVCI	**Avcilar-stanb**	**2.10**	**17**	Pn	**Pn**	**12 40 52.8**	**-0.3**
BUYA	**Buyukada-Istan**	**2.10**	**27**	Pn	**Pn**	**12 40 53.8**	**+0.7**
ENZZ	**Sultanice-Enez**	**2.10**	**321**	Pn	**Pn**	**12 40 52.5**	**-0.6**
TUZL	**Tuzla-Istanbul**	**2.10**	**30**	Pn	**Pn**	**12 40 53.5**	**+0.3**
HVHR	**Bakirkoy-Istan**	**2.10**	**20**	Pn	**Pn**	**12 40 53.4**	**+0.2**
OSMT	**Osmaniye**	**2.12**	**40**	Pn	**Pn**	**12 40 53.5**	**-0.1**
SHUT	**Suhut-Afyon**	**2.13**	**101**	Pn	**Pn**	**12 40 54.7**	**+1.0**
CRLT	**Corlu**	**2.13**	**357**	Pn	**Pn**	**12 40 54.1**	**+0.5**
CAVK	**Edirne/Enez-Ca**	**2.15**	**322**	⇑P	**Pn**	**12 40 55.1**	**+1.2**
CAVK				⇓S	**Sb**	**12 41 22.1**	**-1.6**
BORA	**Eskisehir**	**2.17**	**65**		**Pn**	**12 40 54.1**	**-0.1**
ENEZ	**Enez**	**2.19**	**323**	Pn	**Pn**	**12 40 54.9**	**+0.5**
ENEZ	**Enez**	**2.19**	**323**	P	**Pn**	**12 40 55.1**	**+0.6**
ENEZ				S	**Sn**	**12 41 22.9**	**+1.4**
TURN	**Turunc**	**2.23**	**173**	Pn	**Pn**	**12 40 54.8**	**-0.2**
DATC	**Datca-Mugla**	**2.24**	**185**	Pn	**Pn**	**12 40 55.9**	**+0.8**
SLVT	**Silivri**	**2.25**	**6**	Pn	**Pn**	**12 40 54.7**	**-0.5**
KAVV	**Kandilli-Istan**	**2.25**	**23**	Pn	**Pn**	**12 40 55.2**	**-0.1**
ISK	**Istanbul-Kandi**	**2.25**	**23**	Pn	**Pn**	**12 40 54.7**	**-0.6**
DALY	**Dalyan (Mula)**	**2.26**	**164**	Pn	**Pn**	**12 40 55.8**	**+0.5**
GPA	**Golpazari**	**2.27**	**55**	Pn	**Pn**	**12 40 55.3**	**-0.3**
DAT	**Datca**	**2.28**	**186**	Pn	**Pn**	**12 40 55.8**	**+0.1**
HRT	**Hereke**	**2.28**	**36**	Pn	**Pn**	**12 40 55.3**	**-0.4**
LIA	**Limnos Island**	**2.28**	**294**	P	**Pn**	**12 40 56.0**	**+0.3**
BGKT	**Bogazkoy**	**2.29**	**17**	Pn	**Pn**	**12 40 55.3**	**-0.4**
CTKS	**Kestanelik-??a**	**2.29**	**12**	Pn	**Pn**	**12 40 55.5**	**-0.2**
CAME	**Cameli-Denizli**	**2.33**	**151**	Pn	**Pn**	**12 40 56.3**	**-0.2**
UKOP	**Uzunkopru-Edir**	**2.34**	**336**	Pn	**Pn**	**12 40 57.2**	**+0.8**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**12 40 56.7**	**+0.2**
ALN	**Alexandroupoli**	**2.37**	**324**		**Pn**	**12 40 57.5**	**+0.6**
ALN	**Alexandroupoli**	**2.37**	**324**	Pn	**Pn**	**12 40 57.5**	**+0.6**
ALN	**Alexandroupoli**	**2.37**	**324**	P	**Pn**	**12 40 57.2**	**+0.4**
ISP	**Isparta**	**2.38**	**119**		**Pn**	**12 40 57.1**	**0.0**
ISP	**Isparta**	**2.38**	**119**	Pn	**Pn**	**12 40 57.3**	**+0.2**
KLYT	**Kilyos**	**2.42**	**21**	Pn	**Pn**	**12 40 57.4**	**-0.1**
KLYT	**Kilyos**	**2.42**	**21**	P	**Pn**	**12 40 57.5**	**-0.1**
SDAG	**Sultandagi-AFY**	**2.43**	**102**	Pn	**Pn**	**12 40 58.9**	**+1.0**
GULT	**Gulveren**	**2.48**	**54**	Pn	**Pn**	**12 40 59.0**	**+0.5**
CIFT	**Cifteler, Eski**	**2.49**	**81**	Pn	**Pn**	**12 40 59.3**	**+0.6**
CTYL	**Yalikoy Yolu**	**2.50**	**7**	P

OZUR 7.26 348 ⇑P Pn 12 42 05.1 +0.9
BIR Birlad 7.27 359 ⇑P Pn 12 42 05.5 +1.3
MDVR Moldovita 7.39 323 ⇓P Pn 12 42 06.3 +0.4
PDG Podgorica 7.40 300 ⇑P Pn 12 42 06.8 +0.8
PDG Podgorica 7.40 300 Pn 12 42 08.6 +2.6
ONER Baraj Valea Uz 7.42 352 ⇑P Pn 12 42 07.7 +1.4
GZR Gura Zlata 7.43 331 ⇓P Pn 12 42 07.0 +0.5
ALU Alushta 7.48 38 *ex* Pn 12 42 09.5 +2.5
ALU pmax pmax 12 42 22.1
comp=Z,16nm,0.4s
ALU *i* S Sn 12 43 30.9 -0.8
ALU smax smax 12 43 36.3
comp=N,272nm,0.5s
ALU smax smax 12 43 36.3
comp=E,184nm,0.4s
DNZ2 Donuzlav2 7.50 30 *ex* Pn 12 42 08.7 +1.4
DNZ2 pmax pmax 12 42 24.7
comp=Z,27nm,0.3s
DNZ2 *e*S Sn 12 43 28.6 -3.7
DNZ2 smax smax 12 43 34.9
comp=N,82nm,0.7s
DNZ2 smax smax 12 43 34.9
comp=E,153nm,0.8s
SIM Simferopol' 7.54 36 *ex* Pn 12 42 08.6 +0.7
SIM pmax pmax 12 42 22.4
comp=Z,79nm,0.5s
SIM *e*S Sn 12 43 29.8 -3.5
SIM smax smax 12 43 35.3
comp=N,112nm,0.6s
SIM smax smax 12 43 35.3
comp=E,37nm,0.4s
TESR Tescani 7.57 353 ⇓P Pn 12 42 09.1 +0.8
TESR Tescani 7.57 353 P Pn 12 42 08.5 +0.2
comp=E,0.5nmcomp=E,144nm,0.8s
MDB Medias 7.59 341 ⇓P Pn 12 42 10.2 +1.5
PURM Purcari 7.67 10 ⇑P Pn 12 42 10.7 +1.0
PURM Purcari 7.67 10 P Pn 12 42 09.8 +0.2
comp=E,0.9nmcomp=E,6µmcomp=E,138nm,0.9s
DEV Deva 7.81 333 ⇓P Pn 12 42 13.1 +1.5
SUDU Sudak 7.92 40 *ex* Pn 12 42 12.8 -0.3
SUDU pmax pmax 12 42 30.9
comp=Z,12nm,0.4s
SUDU *e*S Sn 12 43 37.9 -4.7
SUDU smax smax 12 43 43.6
comp=N,181nm,0.6s
SUDU smax smax 12 43 43.6
comp=E,57nm,0.5s
NE56 Odesa 7.99 15 P Pn 12 42 14.1 +0.1
BZS Buzias 8.08 327 ⇑P Pn 12 42 15.3 -0.1
ARPR Arapgir-MALATY 8.13 86 Pn 12 42 18.1 +2.0
FEO Feodosiya 8.21 40 *ex* Pn 12 42 18.0 +1.0
FEO pmax pmax 12 42 27.5
comp=Z,15nm,0.3s
FEO *ex* x 12 43 46.6
FEO smax smax 12 43 54.4
comp=N,26nm,0.3s
FEO smax smax 12 43 54.4
comp=E,32nm,0.4s
MARR Marisel-Cluj 8.44 337 ⇑P Pn 12 42 21.7 +1.4
MMAI Mount Meron Ar 8.52 132 Pn Pn 12 42 20.1 -1.4
comp=E,5.8nm,0.3s,baz=325,slow=14,SNR=13
MMAI Sn Sn 12 43 53.5 -4.2
comp=E,5.5nm,0.3s,baz=315,slow=25,SNR=4.4
MMAI LR LR 12 46 07.7
comp=E,203nm,21.0s,baz=288,slow=42
comp=E,5.9nm,0.4s
TIP Timpagrande 8.66 275 ⇑P Pn 12 42 24.2 +0.8
TIP Timpagrande 8.66 275 Pn 12 42 24.7 +1.3
TIP Timpagrande 8.66 275 P Pn 12 42 24.0 +0.6
comp=E,21nm,1.3s
MATE Matera 8.77 284 ⇑P Pn 12 42 25.5 +0.8
BURAR Bucovina Array 8.83 348 ⇑P Pn 12 42 26.3 +0.6
BURAR Bucovina Array 8.83 348 Pn Pn 12 42 26.7 +1.0
BUR08 Bucovina Ar. S 8.86 348 Pn 12 42 26.3 +0.1
BAL3X Bal3x, Balta 9.02 7 P Pn 12 42 28.4 +0.2
SORM Soroca 9.14 2 ⇑P Pn 12 42 30.4 +0.5
SORM Soroca 9.14 2 P Pn 12 42 29.1 -0.7
comp=E,40nm,0.8s
BMR Baia Mare 9.24 341 ⇓P Pn 12 42 32.8 +1.6
ACER Acerenza 9.36 285 Pn 12 42 34.4 +1.5
CUC Castrocucco 9.39 280 Pn 12 42 35.0 +1.7
CEL Celeste 9.42 269 Pn Pn 12 42 36.9 +3.2
CEL Celeste 9.42 269 P Pn 12 42 34.3 +0.6
comp=E,25nm,1.2s
KMPD K-Podol'skiy 9.62 354 P Pn 12 42 35.8 -0.6
SGRT San Giovanni R 9.67 290 Pn 12 42 37.4 +0.2
BLY Banja Luka 9.83 309 ⇑P Pn 12 42 40.6 +1.2
MORH Mrgy, Hungar 9.92 320 ⇓P Pn 12 42 40.8 +0.3
MORH Mrgy, Hungar 9.92 320 P Pn 12 42 40.0 -0.5
ASF Jabal al Asfar 10.00 130 Pn Pn 12 42 41.8 0.0
comp=E,0.6nm,0.3s,baz=281,slow=22,SNR=4.1
ASF Sn Sn 12 44 30.4 -3.7
comp=E,0.3nm,0.3s,baz=332,slow=21,SNR=1.2
ASF LR LR 12 47 18.5
comp=E,252nm,20.2s,baz=28,slow=42
comp=E,3.2nm,0.7s
PAOL Paolisi 10.42 285 Pn 12 42 49.7 +2.2
VAE Valguarnera 10.71 266 Pn Pn 12 42 52.4 +1.0
comp=E,7.5nm,0.4s,baz=242,slow=11,SNR=2.6
RAFF Raffo Rosso 10.81 265 Pn Pn 12 42 52.5 -0.2
LUBAR Lubar, Ukraine 10.92 360 P Pn 12 42 53.3 -0.9
EIL Elat 10.98 146 Pn Pn 12 42 53.0 -2.1
comp=E,1.5nm,0.3s,baz=332,slow=12,SNR=7.1
EIL Sn Sn 12 44 48.1 -10
comp=E,1.4nm,0.3s,baz=50,slow=11,SNR=4.2
comp=E,7.9nm,0.6s
INTR Introdacqua 11.07 290 Pn Pn 12 42 56.8 +0.5
AK06 Malin Array Si 11.63 4 P Pn 12 43 03.6 -0.2
AK10 Malin Array Si 11.64 4 P Pn 12 43 03.5 -0.5
AK13 Malin Array Si 11.64 4 P Pn 12 43 03.5 -0.6
AK05 Malin Array Si 11.66 4 P Pn 12 43 03.8 -0.5
AK09 Malin Array Si 11.66 4 P Pn 12 43 03.8 -0.5
AK14 Malin Array Si 11.66 4 P Pn 12 43 03.9 -0.5
AK08 Malin Array Si 11.68 4 P Pn 12 43 04.1 -0.4
AK12 Malin Array Si 11.68 4 P Pn 12 43 04.1 -0.5
AK11 Malin Array Si 11.72 4 P Pn 12 43 04.4 -0.7
AK17 Malin Array Si 11.72 4 P Pn 12 43 04.4 -0.7
AK01 Malin Array Si 11.73 4 P Pn 12 43 04.6 -0.7
AKASG Malin Array Be 11.74 4 Pn Pn 12 43 04.0 -1.4
comp=E,1.4nm,0.3s,baz=188,slow=12,SNR=10
AKASG Sn Sn 12 45 09.0 -7.4
comp=E,1.5nm,0.3s,baz=193,slow=26,SNR=1.8
AKASG LR LR 12 47 35.0
comp=E,416nm,21.6s,baz=228,slow=37
comp=E,1.1nm,0.5s
AK18 Malin Array Si 11.76 4 P Pn 12 43 04.7 -0.9
AK04 Malin Array Si 11.76 4 P Pn 12 43 05.0 -0.7
AK03 Malin Array Si 11.77 4 P Pn 12 43 05.2 -0.6
AK20 Malin Array Si 11.77 3 P Pn 12 43 05.1 -0.7
AK22 Malin Array Si 11.79 4 P Pn 12 43 05.4 -0.7
AK21 Malin Array Si 11.81 4 P Pn 12 43 05.5 -0.8
NRCA Norcia 11.82 294 Pn 12 43 05.6 -1.0
FDMO Fiordimonte 11.89 295 Pn 12 43 07.0 -0.5
MI28 Mi28,Pidlybu 11.94 359 P Pn 12 43 07.3 -0.8
RONA Rosalia, Austr 12.11 320 *e*Pn Pn 12 43 11.4 +0.9
comp=E,3.9nm,0.7s
SOKA Soboth 12.15 313 *e*Pn Pn 12 43 11.8 +0.6
comp=E,0.2nm,0.2s
ARSA Arzberg 12.22 316 *e*Pn Pn 12 43 13.1 +1.1
comp=E,3.3nm,0.9s
KBZ Khabaz 12.22 62 Pn Pn 12 43 14.6 +2.6
comp=E,4.8nm,1.0s,baz=314,slow=6.9,SNR=6.4
KBZ LR LR 12 49 13.1
comp=E,602nm,19.7s,baz=259,slow=44
OBKA Obir 12.34 312 *e*Pn Pn 12 43 14.7 +1.0
comp=E,3.1nm,1.7s
TRI Trieste 12.41 307 Pn 12 43 15.2 +0.7
RNPP8 Varash 12.42 354 P Pn 12 43 14.2 -0.5
CONA Conrad Observa 12.48 320 *e*Pn Pn 12 43 16.6 +1.0
comp=E,4.5nm,0.9s
RNPP9 Sopachiv 12.49 354 P Pn 12 43 14.9 -0.8
SABO M.te Sabotino 12.64 308 Pn 12 43 18.9 +1.2
MYKA Terra Mystica 12.93 311 *i* Pn Pn 12 43 23.2 +1.4
comp=E,1.0nm,0.4s
GNI Garni 13.06 80 Pn Pn 12 43 25.0 +1.4
comp=E,0.7nm,0.3s,baz=209,slow=22,SNR=1.3
GNI LR LR 12 48 31.5
comp=E,706nm,18.6s,baz=278,slow=38
comp=E,3.0nm,0.4s
VRAC Vranov 13.10 326 Pn Pn 12 43 25.6 +1.6
comp=E,1.0nm,0.5s,baz=114,slow=24,SNR=1.7
ABTA Abfaltersbach 13.67 309 *e*Pn Pn 12 43 33.0 +1.2
comp=E,2.5nm,0.8s
CTI Castel Tesino 13.88 306 Pn 12 43 36.0 +1.2
LESA Schwarzleotal 13.91 312 *e*Pn Pn 12 43 36.0 +0.8
comp=E,0.3nm,0.2s
GERES GERESS Array B 14.17 319 Pn Pn 12 43 40.0 +1.3
comp=E,0.4nm,0.4s,baz=115,slow=14,SNR=1.6
WTTA Wattenberg 14.44 310 *e*Pn Pn 12 43 43.4 +0.9
comp=E,0.3nm,0.1s
WATA Walderalm 14.51 310 *i* Pn Pn 12 43 44.0 +0.6
comp=E,0.1nm,0.1s
SQTA Sankt Quirin 14.68 309 *e*Pn Pn 12 43 46.5 +0.9
comp=E,0.3nm,0.2s
MOTA Moosalm 14.80 310 *e*P P 12 43 53.2 -0.2
comp=E,3.5nm,0.6s
FETA Feichten 14.88 308 P P 12 43 53.9 -0.3
comp=E,11nm,1.1s
RETA Reutte 15.07 310 *e*P P 12 43 56.4 +0.1
comp=E,2.7nm,0.8s
KEST Kesra 15.10 263 Pn Pn 12 43 52.8 +1.3
comp=E,0.4nm,0.3s,baz=33,slow=10,SNR=19
comp=E,2.2nm,0.8s
DAVOX Davos/Dischmat 15.30 306 Pn Pn 12 43 55.5 +1.4
comp=E,0.5nm,0.3s,baz=124,slow=14,SNR=17
DAVOX LR LR 12 50 59.1
comp=E,388nm,20.8s,baz=78,slow=42
comp=E,0.7nm,0.5s
BRG Berggiesshubel 15.41 325 *e*P P 12 44 03.0 +3.1
BRG Amp 12 44 04.1
comp=E,6.2nm,1.0s
MNK Minsk 15.51 360 *i* P Pn 12 43 54.8 -1.8
comp=E,28nm,1.0s
MNK *i* P Pn 12 43 54.8 -1.8
comp=N,21nm,0.9s
MNK *i* P Pn 12 43 54.8 -1.8
comp=E,10.0nm,0.7s,baz=180
MNK *i* PP pP 12 44 03.0 -1.2
MNK *i* PPP PPP 12 44 10.7
MNK *i* S Sn 12 46 46.9 -1.4
MNK *i* SS SnSn 12 47 01.0 -0.1
MNK *i* SSS SSS 12 47 13.6
MNK *i* LQ LQ 12 48 27.4
MNK *i* LR LR 12 49 38.0
MNK *i* LRM MLR 12 50 07.8
comp=N,582nm,16.3s
MNK *i* LRM MLR 12 50 36.6
comp=Z,298nm,10.8s
MNK *i* LRM MLR 12 50 44.5
comp=E,425nm,13.1s
DAVA Damuels 15.51 308 *e*Pn Pn 12 43 57.6 +0.7
comp=E,0.5nm,0.1s
CLL Colm 16.14 325 *i* P P 12 44 08.0 0.0
comp=Z,3.0nm,0.6s
SENIN Lac Senin/Sane 16.81 303 Pn 12 44 13.3 -0.2
OBN Obninsk 17.15 17 P Pn 12 44 17.6 +0.1
comp=Z,4.3nm,0.3s,baz=152,slow=20,SNR=3.1
OBN LR LR 12 51 20.6
comp=Z,328nm,19.4s,baz=168,slow=39
comp=Z,11nm,0.5s
BELG Belogorno ye 19.14 39 P P 12 44 40.9 -0.2
comp=Z,0.7nm,0.3s,baz=158,slow=1.5,SNR=4.7
comp=Z,32nm,1.0s
FINES FINESS Array B 22.50 358 P P 12 45 18.2 +0.9
comp=Z,10nm,1.0s,baz=168,slow=11,SNR=8.5
comp=Z,10nm,1.0s
HFS Hagfors 22.98 342 P P 12 45 23.2 +0.9
comp=Z,6.0nm,0.8s,baz=150,slow=15,SNR=5.3
HFS LR LR 12 55 52.2
comp=Z,740nm,20.8s,baz=347,slow=41
comp=Z,6.0nm,0.8s
KIRV Kirov 24.00 28 LR LR 12 55 28.3
comp=Z,166nm,18.4s,baz=230,slow=38
NOA NORSAR Array B 24.39 340 P P 12 45 36.1 0.0
comp=Z,2.4nm,0.9s,baz=145,slow=8.9,SNR=4.6
NOA LR LR 12 56 16.9
comp=Z,183nm,19.3s,baz=165,slow=39
comp=Z,2.4nm,0.9s
ESDC Sonseca Array 24.58 282 P P 12 45 38.9 +0.8
comp=Z,1.9nm,0.9s,baz=69,slow=10,SNR=13
comp=Z,1.9nm,0.9s
PAB San Pablo 24.90 282 P P 12 45 41.4 +0.4
PAB IAmb IAmb 12 45 45.6
comp=Z,9.6nm,1.0s
EKA Eskdalemuir Ar 26.39 318 P P 12 45 55.1 +0.9
comp=Z,2.7nm,0.8s,baz=292,slow=8.9,SNR=3.7
comp=Z,2.7nm,0.8s
PBRG Braganca 26.42 287 *e*P P 12 45 57.0 +2.3
PBRG *i* IAmb IAmb 12 45 58.9
comp=Z,22nm,1.5s
ARTI Arti 26.58 39 LR LR 12 59 03.7
comp=Z,125nm,18.4s,baz=278,slow=42
ARTI Arti 26.58 39 P P 12 45 56.8 +0.8
ARTI IAmb IAmb 12 46 02.4
comp=Z,12nm,0.7s
MVO Moncorvo 26.70 286 *e*P P 12 45 59.9 +2.6
MVO *i* IAmb IAmb 12 46 02.5
comp=Z,54nm,1.6s
MTE Manteigas 27.19 284 *e*P P 12 46 03.0 +1.2
MTE *i* IAmb IAmb 12 46 08.5
comp=Z,31nm,1.6s
PCBR Castelo Branco 27.23 283 *e*P P 12 46 02.9 +0.9
PCBR *i* IAmb IAmb 12 46 07.3
comp=Z,25nm,1.4s
PMRV Marv??o 27.24 282 *e*P P 12 46 04.8 +2.7
PMRV *i* IAmb IAmb 12 46 06.4
comp=Z,18nm,2.0s
PVIS Viseu 27.41 285 *e*P P 12 46 02.1 -1.5
PESTR Estremoz 27.50 281 *e*P P 12 46 04.8 +0.3
PESTR *i* IAmb IAmb 12 46 06.8
comp=Z,26nm,2.0s
PSARD Sardoal 27.79 283 *e*P P 12 46 09.3 +2.2
PSARD *i* IAmb IAmb 12 46 11.8
comp=Z,47nm,1.5s
PBEJ Beja 27.89 279 *e*P P 12 46 08.8 +0.9
PBEJ *i* IAmb IAmb 12 46 23.7
comp=Z,18nm,3.1s
PMTG Montargil 27.94 282 *e*P P 12 46 12.2 +3.8
PMTG *i* IAmb IAmb 12 46 26.8
comp=Z,24nm,1.9s
ARCES ARCESS Array B 30.63 358 P P 12 46 32.6 +0.7
comp=Z,3.7nm,0.9s,baz=176,slow=8.8,SNR=2.6
comp=Z,3.7nm,0.9s
CHGR Chuyangaron 31.96 77 P P 12 46 44.9 +0.8
BVAR Borovoye Array 32.17 50 PP PP 12 47 53.3 -4.8
comp=Z,1.4nm,0.8s,baz=277,slow=12,SNR=3.7
BVAR LR LR 13 01 34.4
comp=Z,170nm,21.8s,baz=280,slow=40
TORD Torodi Ar. Bea 34.64 229 P P 12 47 08.0 +0.5
comp=Z,1.5nm,0.6s,baz=43,slow=13,SNR=10.0
comp=Z,1.5nm,0.6s
AAK Ala-Archa 35.11 69 P P 12 47 12.4 +0.8
AAK IAmb IAmb 12 47 16.4
comp=Z,3.2nm,0.7s
NRN Naryn 36.45 70 P P 12 47 23.0 -0.2
NRN IAmb IAmb 12 47 25.8
comp=Z,3.9nm,0.9s
KSH2 Kashi 36.67 74 P P 12 47 26.9 +1.9
KSH2 sP sP 12 47 35.0 +5.0
KSH2 pmax pmax
comp=Z,3.0nm,1.2s
PMOZ Porto Moniz, M 36.74 275 *e*P P 12 47 25.2 -0.3
PMOZ *i* IAmb IAmb 12 47 28.7
comp=Z,232nm,1.5s
KURBB Kurchatov Arra 37.07 55 P P 12 47 26.9 -1.0
comp=Z,1.2nm,0.7s,baz=276,slow=8.9,SNR=12
KURBB PP PP 12 48 55.1 +2.8
comp=Z,2.2nm,1.1s,baz=280,slow=12,SNR=4.5
KURBB LR LR 13 07 24.2
comp=Z,184nm,18.8s,baz=158,slow=44
comp=Z,1.2nm,0.7s
JMIC Jan Mayen 37.09 341 LR LR 13 03 31.3
comp=Z,168nm,19.2s,baz=112,slow=38
MKAR Makanchi Array 39.91 61 P P 12 47 52.4 +0.4
comp=Z,1.8nm,0.6s,baz=281,slow=6.5,SNR=22
comp=Z,1.8nm,0.6s
ZALV Zalesovo Beam 40.81 49 P P 12 47 59.5 +0.2
comp=Z,0.9nm,0.7s,baz=260,slow=8.7,SNR=5.5
comp=Z,0.9nm,0.7s
DBIC Dimbokro 43.67 231 P P 12 48 23.4 +0.4
comp=Z,5.4nm,0.9s,baz=86,slow=8.6,SNR=5.3
DBIC LR LR 13 07 45.9
comp=Z,123nm,18.0s,baz=78,slow=38
comp=Z,5.4nm,0.9s
WMQ Urumqi 44.27 64 *e*P P 12 48 29.8 +2.2
WMQ sP sP 12 48 37.4 +4.7
WMQ PP PP 12 50 10.8 +0.1
WMQ pmax pmax
comp=Z,1.0nm,2.2s
EVN Everest 49.60 84 P P 12 49 09.4 -0.8
EVN IAmb IAmb 12 49 10.8
comp=Z,3.1nm,0.8s
GTA2 Gaotai 54.23 65 *e*P P 12 49 44.5 +0.5
GTA2 pmax pmax
comp=Z,6.0nm,0.8s
SONM Songino Array 55.41 53 P P 12 49 53.0 +0.6
comp=Z,0.8nm,0.7s,baz=292,slow=9.4,SNR=5.2
comp=Z,0.8nm,0.7s
PALK Pallekele 56.90 109 LR LR 13 17 50.1
comp=Z,62nm,18.3s,baz=342,slow=40
LZDM Lanzhou Array 58.57 67 P P 12 50 14.9 -0.4
comp=Z,1.2nm,0.3s,baz=297,slow=13,SNR=4.5
comp=Z,1.2nm,0.3s
LZH Lanzhou 58.62 67 *e*P P 12 50 15.8 +0.4
LZH sP sP 12 50 24.3 +3.8
LZH pmax pmax
comp=Z,13nm,1.0s
TSUM Tsumeb 58.69 191 LR LR 13 19 05.2
comp=Z,98nm,18.8s,baz=322,slow=40
SCHQ Schefferville 61.70 319 P P 12 50 35.6 -0.4
comp=Z,4.5nm,0.9s,baz=15,slow=4.4,SNR=7.1
SCHQ LR LR 13 15 12.7
comp=Z,47nm,19.3s,baz=36,slow=34
comp=Z,4.5nm,0.9s
HHC Hu-ho-hao-te 61.74 59 *e*P P 12 50 37.9 +1.3
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,89nm,4.6s
PZH PanZhiHua 61.81 78 P P 12 50 37.6 +0.3
PZH pmax pmax
comp=Z,10.0nm,1.5s
LBTB Lobatse 63.71 182 LR LR 13 18 04.5
comp=Z,43nm,19.6s,baz=330,slow=36
CMAR Chiang Mai Arr 64.06 87 P P 12 50 51.0 -1.3
comp=Z,0.5nm,0.3s,baz=310,slow=7.7,SNR=5.2
CMAR LR LR 13 23 47.6
comp=Z,49nm,19.8s,baz=100,slow=41
comp=Z,0.5nm,0.3s
KSRS Korea Array 74.25 55 P P 12 51 55.1 0.0
comp=Z,2.9nm,1.1s,baz=304,slow=3.8,SNR=4.9
comp=Z,2.9nm,1.1s
YKA Yellowknife Ar 74.45 343 P P 12 51 56.2 +0.3
comp=Z,0.4nm,0.8s,baz=4.3,slow=8.4,SNR=7.3
comp=Z,0.4nm,0.8s
ILAR Eielson Array 76.49 358 P P 12 52 07.2 -0.4
comp=Z,0.3nm,0.7s,baz=348,slow=4.3,SNR=6.3
comp=Z,0.3nm,0.7s
ULM Lac du Bonnet 78.32 327 P P 12 52 17.1 -1.0
comp=Z,1.5nm,0.7s,baz=61,slow=6.3,SNR=3.6
comp=Z,1.5nm,0.7s
MDP Montagnes des 79.45 268 LR LR 13 26 00.2
comp=Z,60nm,20.0s,baz=327,slow=34
TKL Tuckaleechee C 82.56 310 LR LR 13 30 23.8
comp=Z,70nm,18.5s,baz=22,slow=36
BDFB Brasília 89.14 249 P P 12 53 15.4 +1.3
comp=Z,4.7nm,0.8s,baz=88,slow=5.3,SNR=6.1
BDFB LR LR 13 32 57.6
comp=Z,90nm,19.8s,baz=45,slow=35
comp=Z,4.7nm,0.8s
TXAR Lajitas Array 98.39 319 P P 12 53 55.6 -0.9
comp=Z,0.4nm,0.9s,baz=18,slow=7.2,SNR=3.0
comp=Z,0.4nm,0.9s
ASAR Alice Springs 116.57 100 PKP PKPdf 12 59 01.4 -0.9
comp=Z,0.6nm,1.0s,baz=294,slow=1.5,SNR=5.9

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*THE **23** 12:43:22.7,39°N±3°×2°8E±°, h0km±16km, M3.8/10, MLh3.8/10*
*ISK **23** 12:43:22.7,38°.97N×27°.85E, h5km, ML3.9/55*
*AFAD **23** 12:43:22.6,38°.98N×27°.88E, h7km±2km, MW3.5*
ISC 23 12:43:23.1±0.8,**38°.98N**±0.02×**27°.85E**±0.02,**h9**km±6km,
n82,σ0°70/106,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.10**	**196**	P	**Pg**	**12 43 25.6**	**-0.1**
AKHS				IAML		12 43 28.0	
	comp=E,2µm,0.3s						
AKHS				S	**Sg**	**12 43 28.2**	**+0.7**
AKS	**Akhisar**	**0.10**	**196**	Pg	**Pg**	**12 43 25.1**	**-0.6**
AKS				Sg	**Sg**	**12 43 27.6**	**+0.1**
GORD	**Gordes-Manisa**	**0.27**	**106**	Pg	**Pg**	**12 43 27.9**	**-0.5**
GORD				Sg	**Sg**	**12 43 32.4**	**+0.4**
GOMA	**Golmarmara-Man**	**0.28**	**169**	Pg	**Pg**	**12 43 28.4**	**-0.2**
GOMA				Sg	**Sg**	**12 43 32.8**	**+0.5**
SOMA	**Soma-Manisa**	**0.30**	**306**	Pg	**Pg**	**12 43 29.6**	**+0.5**
SOMA				Sg	**Sg**	**12 43 34.0**	**+0.8**
KTTT	**Salihli**	**0.35**	**147**	P	**Pg**	**12 43 29.7**	**-0.3**
KTTT				S	**Sg**	**12 43 34.5**	**0.0**
KTTT				IAML		12 43 35.0	
	comp=N,4µm,0.6s						
STEP	**BALIKESIR_Sava**	**0.41**	**346**	P	**Pg**	**12 43 30.7**	**-0.5**
STEP				IAML		12 43 37.0	
	comp=N,3µm,0.7s						
STEP				IAML		12 43 37.0	
	comp=E,3µm,0.3s						
STEP				S	**Sg**	**12 43 37.1**	**+0.6**
CAMT	**Merkez**	**0.48**	**241**	P	**Pb**	**12 43 33.1**	**-0.6**
CAMT				S	**Sb**	**12 43 40.9**	**0.0**
CAMT				IAML		12 43 41.0	
	comp=N,9µm,0.4s						
CAMT				IAML		12 43 41.0	
	comp=E,1µm,0.5s						
ZEDA	**zmir-Bergama**	**0.60**	**269**	P	**Pg**	**12 43 34.8**	**+0.1**
ZEDA				S	**Sb**	**12 43 44.0**	**-0.4**
ZEDA				IAML		12 43 44.0	
	comp=N,3µm,0.4s						
ZEDA				IAML		12 43 44.0	
	comp=E,2µm,0.4s						
BALB	**Balikesir**	**0.66**	**2**	Pg	**Pb**	**12 43 36.3**	**-0.5**
BALB				Sg	**Sb**	**12 43 45.4**	**-0.6**
DEMI	**Demirci**	**0.68**	**84**	P	**Pg**	**12 43 35.5**	**-0.6**
DEMI				S	**Sg**	**12 43 44.6**	**-0.5**
DEMI				IAML		12 43 48.0	
	comp=N,4µm,0.4s						
DEMI				IAML		12 43 49.0	
	comp=E,3µm,0.5s						
IZMD	**zmir-Dikili-**	**0.72**	**271**	P	**Pb**	**12 43 37.4**	**-0.4**
IZMD				S	**Sb**	**12 43 47.4**	**-0.4**
IZMD				IAML		12 43 50.0	
	comp=N,699nm,0.9s						
IZMD				IAML		12 43 51.0	
	comp=E,811nm,0.9s						
ODEM	**Odemis-Izmir**	**0.72**	**166**	Pg	**Pb**	**12 43 37.2**	**-0.7**
ODEM				Sg	**Sg**	**12 43 46.8**	**+0.3**
MANT	**Manisa**	**0.74**	**131**	P	**Pg**	**12 43 36.7**	**-0.7**
MANT				S	**Sg**	**12 43 46.9**	**-0.2**
MANT				IAML		12 43 50.0	
	comp=N,2µm,0.5s						
MANT				IAML		12 43 50.0	
	comp=E,2µm,0.5s						
DUVT	**Torbali**	**0.82**	**203**	P	**Pg**	**12 43 38.8**	**-0.1**
DUVT				S	**Sg**	**12 43 49.5**	**-0.1**
DUVT				IAML		12 43 53.0	
	comp=E,1µm,0.3s						
DUVT				IAML		12 44 10.0	
	comp=N,1µm,1.2s						
DST	**Dursunbey**	**0.86**	**44**	Pg	**Pb**	**12 43 40.2**	**-0.1**
BLCB	**Balcova**	**0.87**	**227**	Pg	**Pg**	**12 43 39.6**	**-0.2**
BLCB				Sg	**Sb**	**12 43 51.8**	**-0.2**
BLCB	**Balcova**	**0.87**	**227**	P	**Pg**	**12 43 39.4**	**-0.4**
BLCB				S	**Sb**	**12 43 51.7**	**-0.2**
YAYO	**Edremit-Balk**	**0.87**	**317**	Pg	**Pb**	**12 43 40.2**	**-0.2**
SIMA	**Simav-Kutahya**	**0.89**	**83**	Pg	**Pb**	**12 43 40.2**	**-0.5**
SMAA	**Simav-Kutahya**	**0.89**	**82**	Pg	**Pg**	**12 43 39.9**	**-0.3**
FOCM	**Foa**	**0.91**	**253**	Pg	**Pg**	**12 43 40.4**	**-0.3**
SUSR	**Susurluk-Balik**	**1.00**	**10**	Pg	**Pb**	**12 43 42.8**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**178**	Pg	**Pg**	**12 43 42.7**	**-0.2**
YENI	**Yenice-Canakka**	**1.06**	**334**	Pg	**Pg**	**12 43 42.9**	**-0.7**
SHAP	**Saphane-Kutahy**	**1.07**	**87**	Pg	**Pb**	**12 43 43.6**	**-0.2**
GONE	**Gonen-Balikesi**	**1.07**	**353**	Pn	**Pb**	**12 43 43.8**	**0.0**
NAZL	**Nazilli-Aydin**	**1.07**	**161**	Pg	**Pb**	**12 43 43.6**	**-0.2**
GMLD	**Gumuldur**	**1.16**	**219**	Pn	**Pn**	**12 43 45.7**	**+0.2**
CANM	**Can-anakkale**	**1.20**	**329**	Pn	**Pn**	**12 43 46.1**	**0.0**
GEDZ	**Gediz**	**1.22**	**86**	Pn	**Pg**	**12 43 45.6**	**-0.9**
PRK	**Paraskevi**	**1.26**	**283**	P	**Pg**	**12 43 46.3**	**-0.9**
PRK				S	**Sn**	**12 44 03.9**	**0.0**
ORLT	**Orhaneli**	**1.34**	**37**	Pn	**Pn**	**12 43 47.9**	**-0.1**
TVSB	**Tavsanli**	**1.34**	**69**	Pn	**Pn**	**12 43 48.1**	**+0.1**
KCTX	**Karacabey (Bur**	**1.34**	**17**	Pn	**Pn**	**12 43 46.8**	**-1.2**
EDC	**Edincik**	**1.36**	**0**	Pn	**Pn**	**12 43 47.2**	**-1.1**
GCAM	**G?zelcaml?**	**1.37**	**201**	Pn	**Pg**	**12 43 48.9**	**-0.4**
EZNE	**Ezine-Canakkal**	**1.39**	**304**	Pn	**Pg**	**12 43 49.4**	**-0.3**
BIGA	**Biga-Canakkale**	**1.41**	**338**	Pn	**Pg**	**12 43 49.9**	**-0.2**
GPNR	**Gulpinar-Canak**	**1.42**	**290**	Pn	**Pn**	**12 43 49.1**	**+0.1**
EZN	**Ezine**	**1.45**	**306**	Pn	**Pg**	**12 43 50.5**	**-0.4**
EZN	**Ezine**	**1.45**	**306**	P	**Pn**	**12 43 48.9**	**-0.5**

EZN				S	Sg	12 44 10.7	+1.0	
KRBG	Karabiga-Canak	1.47	343	Pn	Pg	12 43 51.1	-0.3	
SMG	Samos	1.50	212	P	Pn	12 43 50.6	+0.4	
SMG				S	Sg	12 44 11.9	+0.7	
CHOS	Chios island	1.52	248	P	Pn	12 43 50.1	-0.5	
CHOS				S	Sg	12 44 13.2	+1.1	
SIGR	SIGRI	1.57	279	Pn	Pb	12 43 51.8	-0.5	
SIGR	SIGRI	1.57	279	P	Pn	12 43 50.4	-0.7	
SIGR				S	Sg	12 44 13.8	+0.2	
MDNY	Mudanya-Bursa	1.60	30	Pn	Pb	12 43 52.4	-0.4	
LPK	Lapseki	1.62	329	Pn	Pb	12 43 52.9	-0.3	
BOZC	Bozcaada	1.64	302	Pn	Pn	12 43 51.9	-0.1	
MLSB	Milas	1.68	182	Pn	Pb	12 43 53.6	-0.6	
ARMT	Armutlu	1.77	26	Pn	Pb	12 43 54.9	-0.7	
GELI	Tayfur-Gelibol	1.77	324	Pn	Pb	12 43 54.9	-0.8	
RKY	Sarkoy-Tekirda	1.78	343	Pn	Pb	12 43 55.4	-0.6	
GAZK	Gazikoy-TEKIRD	1.81	347	Pn	Pb	12 43 55.6	-0.8	
YER	Yerkesik	1.87	169	Pn	Pn	12 43 56.0	+0.6	
YER	Yerkesik	1.87	169	P	Pn	12 43 54.5	-0.9	
YER				S	Sb	12 44 21.9	+0.9	
APMY	Acipayam-Deniz	1.89	142	Pn	Pn	12 43 56.3	+0.7	
GADA	Gvkgeada	1.93	309	Pn	Pn	12 43 57.0	+0.9	
GADA	Gvkgeada	1.93	309	P	Pn	12 43 55.9	-0.3	
BODT	Bodrum	1.96	193	Pn	Pn	12 43 57.3	+0.8	
ADVT	Abdulvahap	2.06	45	Pn	Pn	12 43 58.8	+1.0	
SINB	Sinanoba-Istan	2.08	14	Pn	Pb	12 43 59.7	-1.4	
HYBA	Heybeliada-Ist	2.12	26	Pn	Pn	12 43 59.7	+1.0	
BUYA	Buyukada-Istan	2.13	27	Pn	Pb	12 44 00.3	-1.5	
CRLT	Corlu	2.15	358	Pn	Pn	12 43 58.7	-0.4	
SHUT	Suhut-Afyon	2.15	101	Pn	Pn	12 44 00.1	+0.8	
OSMT	Osmaniye	2.16	41	Pn	Pn	12 44 00.5	+1.2	
ENEZ	Enez	2.19	324	Pn	Pn	12 44 00.9	+1.3	
ENEZ	Enez	2.19	324	P	Pn	12 43 59.8	+0.2	
ENEZ				S	Sn	12 44 27.7	+0.9	
LIA	Limnos Island	2.26	295	P	Pn	12 44 00.3	-0.3	
SLVT	Silivri	2.26	7	Pn	Pn	12 44 02.1	+1.4	
CTKS	Kestanelik-??a	2.31	12	Pn	Pn	12 44 02.7	+1.4	
HRT	Hereke	2.31	37	Pn	Pn	12 44 02.4	+1.0	
SMTH	Samothraki Isl	2.33	311	P	Pn	12 44 01.1	-0.4	
CAME	Cameli-Denizli	2.33	150	Pn	Pn	12 44 02.6	+0.8	
SRCK	Saricakaya, Es	2.40	63	Pn	Pn	12 44 03.9	+1.4	
KLYT	Kilyos	2.45	22	Pn	Pn	12 44 04.4	+1.2	
CTYL	Yalikoy Yolu	2.51	8	Pn	Pn	12 44 05.3	+1.2	
GULT	Gulveren	2.52	54	Pn	Pn	12 44 05.3	+1.1	
SILT	Sile	2.57	32	Pn	Pn	12 44 06.2	+1.3	
SAUV	Serdivan-Sakar	2.59	47	Pn	Pn	12 44 06.6	+1.4	

IDC ***23*** *12:47:52.7±1.4,26.°77N×143.°28E,h0km,mb3.5/6, mbtmp3.5/7,ML3.0/1,Error ellipse: s-maj=42.0km s-min=22.8km az=84.0*

ISC 23 12:47:57.7±1.3,26.°9N±0.°1×143.°2E±0.°2,h35km,n7, σ1s87/7,mb3.5/6,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	10.53	338	Pn	Pn	12 50 24.6	-1.5
	0.1nm,0.3s,baz=155,slow=9.8,SNR=6.3 0.9nm,0.4s						
CMAR	Chiang Mai Arr	41.50	268	P	P	12 55 40.7	-1.0
	0.2nm,0.3s,baz=82,slow=12,SNR=2.2 0.2nm,0.3s						
WRA	Warramunga Arr	47.31	191	P	P	12 56 27.7	-0.4
	1.2nm,0.9s,baz=12,slow=8.4,SNR=7.0 1.2nm,0.9s						
ASAR	Alice Springs	51.03	191	P	P	12 56 56.1	-0.4
	0.3nm,0.7s,baz=5.0,slow=6.2,SNR=5.2 0.3nm,0.7s						
MKAR	Makanchi Array	51.30	310	P	P	12 57 00.1	+1.8
	0.2nm,0.6s,baz=92,slow=8.1,SNR=1.9 0.2nm,0.6s						
KURBB	Kurchatov Arra	53.83	315	P	P	12 57 19.6	+2.7
	0.4nm,0.6s,baz=90,slow=7.6,SNR=6.8 0.4nm,0.6s						
ILAR	Eielson Array	57.49	29	P	P	12 57 42.9	-0.1
	0.6nm,1.0s,baz=263,slow=7.5,SNR=3.0 0.6nm,1.0s						

BGR ***23*** *12:56:58.4,46.°45N×148.°29E,h33km,mb5.5*

MOS ***23*** *12:57:06.7±1.0,45.°67N×148.°39E,h168km,mb5.4/62, Error ellipse: s-maj=6.1km s-min=4.1km az=106.3*

BJI ***23*** *12:57:06.4,45.°66N×148.°56E,h177km,mB5.3/24, mb5.3/78*

SKHL ***23*** *12:57:07.0±0.2,45.°50N×148.°60E,h162km±6km,mb5.9/12, mbv5.5/3,msha6.6/6*

NEIC ***23*** *12:57:08.6,45.°72N×148.°41E,h180km*

NEIC ***23*** *12:57:08.4±1.3,45.°72N±0.°09×148.°4E±0.°1,h168km±7km, mb5.2/99,Mww4.9/12,Error ellipse: s-maj=13.7km s-min=10.8km az=146.0*

IDC ***23*** *12:57:08.7±0.4,45.°70N×148.°37E,h174km±3km,mb4.8/36, mbtmp5.3/47,MS3.7/9,Error ellipse: s-maj=7.7km s-min=6.3km az=133.0*

NEIC ***23*** *12:57:08.6,45.°42N×148.°84E,h180km,Moment Tensor Solution. Duration: 1ŝ4 Moment tensor: Scale 10^16Nm; Mrr0.26; Mθθ0.16; Mϕϕ-0.42; Mrθ2.67; Mθϕ-0.69; Mϕr1.27; Fault plane solution: M0 3.06000×10^16 NP1: ϕs170.26000°,δ13.00000°,λ15.43000°. NP2:ϕs65.21000°, δ86.57000°,λ102.55000°. Principal axes: T 2.9467, Plg47.0000°, Azm348.0000°; N 0.2162, Plg13.0000°, Azm244.0000°; P -3.1629, Plg40.0000°, Azm144.0000°;*

GCMT ***23*** *12:57:09.6±0.3,45.°53N±0.°02×148.°48E±0.°03, h182km±2km,MW5.0/110,Moment Tensor Solution. s29,c33; s110,c143; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.56±.13; Mθθ-0.40±.18; Mϕϕ-0.16±.16; Mrθ3.54±.10; Mθϕ-0.26±.15; Mϕr1.60±.09; Best double couple: M0 3.92600×10^16 NP1:ϕs230.00000°,δ4.00000°, λ74.00000°. NP2:ϕs66.00000°,δ86.00000°,λ91.00000°. Principal axes: T 3.9320, Plg49.0000°, Azm337.0000°; N -0.0120, Plg1.0000°, Azm246.0000°; P -3.9190, Plg41.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

JMA ***23*** *12:57:10.0±0.4,45.°N±2.°×14.°9E±.°,h175km,MD4.9/17, MV5.1/17,NEAR ETOROFU ISLAND*

JMA Felt II J1 at NEAR ETOROFU ISLAND .

NIED ***23*** *12:57:10.0,45.°06N×148.°58E,h175km,MW4.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr3.31; Mθθ-4.40; Mϕϕ1.08; Mrθ0.90; Mθϕ-9.21; Mϕr1.91; Fault plane solution: M0 9.83000×10^15 NP1: ϕs278.00000°,δ76.00000°,λ177.00000°. NP2:ϕs9.00000°, δ87.00000°,λ14.00000°.*

ISC 23 12:57:08.5±0.3,45.°60N±0.°03×148.°48E±0.°03,h176km±1km, h176km:pP-P,n1061,σ1s25/1196,mb5.2/252,88C-48D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.56	230	c iPN	Pn	12 57 31.2	-1.9
KUR				i S	Sn	12 57 49.7	-2.2
KUR	Kuril'sk	0.56	230	eP	Pn	12 57 33.0	-0.1
KUR				AMB	AMB	12 57 33.7	
	22μm,0.4s						
KUR				eS	Sn	12 57 51.6	-0.3
KUR				A	A	12 57 51.9	
	148μm,3.0s						
KUR				A	A	12 57 51.9	
	52μm,3.0s						
KUR				A	A	12 57 52.4	
	29μm,0.7s						
KUR				A	A	12 57 52.4	
	44μm,0.7s						
YUK	Yuzh-Kuril'sk	2.43	231	c iPN	Pn	12 57 50.0	-0.2
YUK				i S	Sn	12 58 20.9	-1.5
YUK				pmax	pmax		
	comp=Z,29μm,0.4s						
YUK				pmax	pmax		
	comp=N,3μm,0.3s						
YUK				pmax	pmax		
	comp=E,2μm,0.4s						
YUK				smax	smax		
	comp=N,6μm,0.2s						
YUK				smax	smax		
	comp=E,16μm,0.5s						
YUK				smax	smax		
	comp=E,19μm,1.0s						
YUK				smax	smax		
	comp=N,34μm,1.6s						
YUK	Yuzh-Kuril'sk	2.43	231	eP	Pn	12 57 50.0	-0.2
YUK				AMB	AMB	12 57 50.4	
	comp=N,28μm,0.6s						
YUK				eS	Sn	12 58 21.1	-1.3
YUK				A	A	12 58 22.2	
	comp=N,16μm,0.6s						
YUK				A	A	12 58 22.2	
	comp=N,14μm,0.6s						
RUSJ	Misakicho	2.74	238	ePN	Pn	12 57 54.8	+1.0
GLVR	Golovnino	2.81	230	⇑iPN	Pn	12 57 54.2	-0.5
GLVR				i S	Sn	12 58 28.9	-1.6
GLVR				pmax	pmax		
	comp=N,300nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,5μm,0.3s						
GLVR				pmax	pmax		
	comp=E,299nm,0.1s						
GLVR				smax	smax		
	comp=E,8μm,0.2s						
GLVR				smax	smax		
	comp=N,14μm,0.3s						
GLVR	Golovnino	2.81	230	i P	Pn	12 57 54.2	-0.5
GLVR				AMB	AMB	12 57 54.8	
	comp=N,5μm,0.3s						
GLVR				eS	Sn	12 58 28.9	-1.6
GLVR				A	A	12 58 29.4	
	comp=N,14μm,0.5s						
GLVR				A	A	12 58 29.4	
	comp=N,15μm,0.5s						
JRA	Rausu	2.91	236	P	Pn	12 57 55.7	-0.2
JRA				A	A	12 57 55.7	
	comp=N,9.0nm,3.4s,comp=E,7.0nm,3.7s						
JRA				S	Sn	12 58 30.9	-1.8
NEM2	Nemuro 2	2.97	222	P	Pn	12 57 54.4	-2.2
NEM2				A	A	12 57 54.4	
	comp=N,7.0nm,2.0s,comp=E,5.0nm,0.7s						
NEM2				S	Sn	12 58 27.9	-6.1
NMR	Nemuro--Hokkai	2.97	222	⇑iPN	Pn	12 57 54.3	-2.3
NMR				i S	Sn	12 58 27.8	-6.2
NMR	Nemuro--Hokkai	2.97	222	eP	Pn	12 57 54.4	-2.2
JNSB	Nemuroshibetsu	3.08	235	A	A	12 57 57.2	
	comp=N,20nm,4.5s,comp=E,15nm,3.7s						
JNK	Nakash	3.36	234	P	Pn	12 58 00.9	-0.4
JNK				eS	Sn	12 58 40.1	-2.4
JKHN	Kushirohamanak	3.46	225	A	A	12 58 00.8	
	comp=N,10.0nm,1.8s,comp=E,11nm,0.5s						
JTKR	Abashiri--Toko	3.64	245	i P	Pn	12 58 05.0	+0.1
JTKR				S	Sn	12 58 47.9	-0.9
AKK	Akkeshi	3.67	227	eP	Pn	12 58 03.2	-2.1
JAK	Akkeshi	3.76	228	i P	Pn	12 58 04.5	-1.9
JAK				A	A	12 58 04.5	
	comp=N,10.0nm,1.7s,comp=E,10.0nm,0.7s						
JAK				S	Sn	12 58 46.2	-5.4
JAR	Ashorobuto	4.08	237	P	Pn	12 58 10.7	+0.1
JAR				A	A	12 58 10.7	
	comp=N,7.0nm,1.7s,comp=E,5.0nm,0.7s						
JAR				eS	Sn	12 58 57.0	-2.0
YSS	Yuzhno-Sakhali	4.19	291	P	Pn	12 58 12.7	+0.8
YSS	Yuzhno-Sakhali	4.19	291	P	Pn	12 58 13.1	+1.2
YSS	Yuzhno-Sakhali	4.19	291	cePN	Pn	12 58 13.2	+1.3
YSS				eS	Sn	12 59 03.2	+1.7
YSS				pmax	pmax		
	comp=Z,3μm,2.9s						
YSS				pmax	pmax		
	comp=E,2μm,2.8s						
YSS				pmax	pmax		
	comp=Z,950nm,0.6s						
YSS				smax	smax		
	comp=N,310nm,1.0s						
YSS				smax	smax		
	comp=E,380nm,1.1s						
YSS				smax	smax		
	comp=E,3μm,3.8s						
YSS	Yuzhno-Sakhali	4.19	291	eP	Pn	12 58 13.2	+1.3
YSS				AMB	AMB	12 58 13.7	
	comp=E,3μm,2.9s						
JOB	Onbets	4.29	233	i P	Pn	12 58 12.2	-0.9
JOB				S	Sn	12 58 59.7	-4.0
JKK2	Kamakawa 2	4.43	249	i P	Pn	12 58 15.9	+0.9
JKK2				eS	Sn	12 59 06.3	-0.7
JKA	Kamikawa-asahi	4.43	253		Pn	12 58 16.1	+1.0
ASAJ	Asahikawa	4.44	253	P	Pn	12 58 16.6	+1.6
	comp=E,114nm,0.5s,baz=76,slow=14,SNR=238						
ASAJ				S	Sn	12 59 08.4	+1.3
	comp=E,314nm,0.9s,baz=205,slow=15,SNR=8.3						
JWK2	Keihoku	4.64	269	P	Pn	12 58 20.2	+2.5
JWK2				eS	Sn	12 59 15.9	+4.1
JCH	Churui	4.74	233	P	Pn	12 58 17.3	-1.7
JCH				S	Sn	12 59 08.2	-5.9
JAB	Ashibetsu	4.94	247	eP	Pn	12 58 22.7	+1.1
JRBN	Rebuntou	5.21	271	P	Pn	12 58 26.6	+1.5
JEM	Erimo	5.26	229	P	Pn	12 58 24.2	-1.5
JNBK	Urakawa-nobuka	5.30	233	P	Pn	12 58 23.7	-2.6
JNBK				A	A	12 58 23.7	
	comp=N,4.0nm,0.4s,comp=E,5.0nm,3.4s						
UGL	Uglegorsk	5.58	311	⇓ePN	Pn	12 58 31.6	+1.8
UGL				pmax	pmax		
	comp=Z,620nm,0.8s						
UGL	Uglegorsk	5.58	311	eP	Pn	12 58 31.2	+1.4
UGL				AMB	AMB	12 58 35.6	
	comp=Z,480nm,0.7s						
TYV	Tymovskoe	6.55	326	ePN	Pn	12 58 44.1	+1.6
TYV				pmax	pmax		
	comp=Z,500nm,2.5s						
TYV				pmax	pmax		
	comp=Z,72nm,0.9s						
TYV	Tymovskoe	6.55	326	eP	Pn	12 58 43.8	+1.3
TYV				AMB	AMB	12 58 46.9	
	comp=Z,700nm,2.5s						
TYV				eS	Sn	12 59 59.5	+2.9
SKR	Severo-Kuril's	7.21	42	ePN	Pn	12 58 50.2	-1.0
SKR				eS	Sn	13 00 08.7	-3.6
SKR				pmax	pmax		
	comp=Z,330nm,0.7s						
SKR				pmax	pmax		
	comp=Z,800nm,4.7s						
SKR				smax	smax		
	comp=N,238nm,0.4s						
SKR				smax	smax		
	comp=E,173nm,0.6s						
SKR				MLR	MLR		
	comp=Z,1μm,10.0s						
SKR	Severo-Kuril's	7.21	42	eP	Pn	12 58 50.9	-0.3
SKR				AMB	AMB	12 58 52.4	
	comp=Z,320nm,0.5s						
SKR				AMB	AMB	12 58 53.8	
	comp=Z,800nm,4.7s						
SKR				eS	Sn	13 00 11.0	-1.3
SKR				A	A	13 00 16.1	
	comp=Z,250nm,0.5s						
SKR				A	A	13 00 16.1	
	comp=Z,180nm,0.5s						
JANG	Nango	7.30	227	P	Pn	12 58 48.1	-4.5
JANG				S	Sn	13 00 03.5	-11
JTH	Tanohata	7.46	223	eS	Sn	13 00 07.6	-11
PAU	Pauzhetka	8.06	40	eP	Pn	12 59 01.1	-1.4
PAU				AMB	AMB	12 59 03.3	
	comp=Z,250nm,0.6s						
PAU				eS	Sn	13 00 28.4	-4.3
PAU				A	A	13 00 32.2	
	comp=Z,260nm,0.3s						
PAU				A	A	13 00 32.2	
	comp=Z,220nm,0.3s						
TEY	Ternei	8.39	270	ePN	Pn	12 59 08.3	+1.4
TEY	Ternei	8.39	270	eP	Pn	12 59 08.3	+1.4
OKH	Okha	8.73	338	dePN	Pn	12 59 05.7	-5.6
OKH				pmax	pmax		
	comp=Z,200nm,6.3s						
OKH				MLR	MLR		
	comp=Z,200nm,15.0s						
OKH				MLR	MLR		
	comp=N,500nm,13.0s						
OKH	Okha	8.73	338	eP	Pn	12 59 12.1	+0.8
OKH				AMB	AMB	12 59 20.5	
	comp=N,150nm,0.3s						
NKL	Nikolayevsk	9.11	329	eP	Pn	12 59 16.8	+0.6
NKL				AMB	AMB	12 59 33.1	
	comp=N,90nm,0.6s						
GRNR	Gornyy	9.57	307	⇑iPN	Pn	12 59 23.7	+1.4
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=N,8.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,870nm,13.0s						
GRNR	Gornyy	9.57	307	eP	Pn	12 59 23.7	+1.4
PEA0B	Petropavlovsk-	9.62	35		Pn	12 59 22.1	-0.9
PEA0B	Petropavlovsk-	9.62	35	PN	Pn	12 59 22.1	-0.9
PETK	Petropavlovsk-	9.62	35	P	Pn	12 59 22.3	-0.7
	comp=Z,64nm,0.6s,baz=192,slow=8.3,SNR=252						
PETK				S	Sn	13 01 09.7	-0.3
	comp=Z,9.1nm,0.9s,baz=236,slow=33,SNR=2.1						
PETK				ScP	ScP	13 08 36.9	+0.4
	comp=Z,6.6nm,0.9s,baz=108,slow=4.8,SNR=4.6						
PETK	Petropavlovsk-	9.62	35		Pn	12 59 21.9	-1.1
PET	Petropavlovsk	9.96	38		Pn	12 59 25.3	-2.1
PET	Petropavlovsk	9.96	38	P	Pn	12 59 25.6	-1.9
PET	Petropavlovsk	9.96	38	ePN	Pn	12 59 25.3	-2.1
PET				pmax	pmax		
	comp=Z,44nm,0.7s						
PET				pmax	pmax		
	comp=Z,100nm,13.7s						
PET				MLR	MLR		
	comp=Z,200nm,12.0s						
PET	Petropavlovsk	9.96	38	eP	Pn	12 59 25.5	-1.9
USRK	Ussuriysk Ar.	11.78	269	P	Pn	12 59 50.6	-0.5
	comp=Z,19nm,0.7s,baz=88,slow=14,SNR=19						
KLR	Kul'dur	11.90	294	P	Pn	12 59 52.2	-0.5
	comp=Z,13nm,0.7s,baz=107,slow=14,SNR=22						
KLR				PcP	PcP	13 05 23.4	-0.1
	comp=Z,2.6nm,0.5s,baz=252,slow=1.8,SNR=3.0						
KLR				ScP	ScP	13 08 40.2	+0.7
	comp=Z,6.5nm,0.8s,baz=115,slow=1.7,SNR=10						
MJAR	Matsushiro Arr	11.90	224	P	Pn	12 59 50.7	-2.1
	comp=Z,3.5nm,0.5s,baz=29,slow=13,SNR=19						
MJAR				LR	LR	13 05 11.6	
	comp=Z,116nm,18.1s,baz=33,slow=40						
MJAR	Matsushiro Arr	11.90	224		Pn	12 59 51.6	-1.2
MJAR	Matsushiro Arr	11.90	224	PN	Pn	12 59 51.6	-1.2
MJB9	Matsu-Tunnel	11.90	224		Pn	12 59 52.2	-0.6
MAJO	Matsushiro	11.90	224		Pn	12 59 51.5	-1.3
MAJO	Matsushiro	11.90	224	P	Pn	12 59 51.5	-1.3
MAJO	Matsushiro	11.90	224	i PN	Pn	12 59 51.5	-1.3
MAJO				pmax	pmax		
	comp=Z,28nm,0.8s						
JGF	Kuroka	13.07	224		Pn	13 00 08.1	+0.4
JGF	Kuroka	13.07	224	P	Pn	13 00 08.0	+0.3
MDJ	Mudanjiang	13.38	273	P	Pn	13 00 11.3	-0.2
MDJ				S	Sn	13 02 36.8	-3.3
MDJ				pmax	pmax		
	comp=Z,110nm,0.8s						
INU	Inuyama	13.44	224		Pn	13 00 11.5	-0.8
INU	Inuyama	13.44	224	P	Pn	13 00 12.7	+0.4
MA2	Magadan	14.07	5	P	Pn	13 00 19.7	-0.2
	comp=Z,111nm,0.7s,baz=189,slow=10,SNR=77						
MA2				LR	LR	13 05 22.9	
	comp=Z,96nm,18.6s,baz=178,slow=35						
MA2	Magadan	14.07	5		Pn	13 00 19.3	-0.7
MA2	Magadan	14.07	5	P	Pn	13 00 20.7	+0.7
MA2	Magadan	14.07	5	ceP	Pn	13 00 19.8	-0.2
MA2				pmax	pmax		
	comp=Z,343nm,1.7s						
MA2	Magadan	14.07	5	P	Pn	13 00 18.9	-1.1
	comp=Z,2μmcomp=Z,231nm,1.6s						
JHJ	Hachijo jima 2	14.15	211	P	Pn	13 00 21.2	0.0
	comp=Z,311nm,0.9s,baz=31,slow=18,SNR=3.0						
JHJ				S	Sn	13 02 49.1	-10
	comp=Z,137nm,0.4s,baz=69,slow=22,SNR=5.1						
BNX	BinXian	14.73	278	⇓P	Pn	13 00 27.9	-0.5
BNX				pmax	pmax		
	comp=Z,32nm,1.1s						
HEH	HeiHe	14.86	296	eP	Pn	13 00 29.8	0.0
HEH				S	Sn	13 03 15.6	+0.3
HEH				pmax	pmax		
	comp=Z,86nm,0.8s						
ZEA	Zeya	15.93	308	eP	P	13 00 43.6	+0.6
ZEA				pmax	pmax		
	comp=E,40nm,0.9s						
ZEA				pmax	pmax		
	comp=N,30nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.8s						
ZEA	Zeya	15.93	308	eP	P	13 00 43.6	+0.6
JMN	Monobe	16.30	228	P	P	13 00 47.4	0.0
JMN	Monobe	16.30	228	P	Pn	13 00 52.1	+4.4
CN2	Changchun	16.46	272	⇑P	P	13 00 48.3	-0.7
CN2				esP	sP	13 01 35.5	-3.7
CN2				eS	S	13 03 44.0	-7.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,600nm,4.0s						
KSRS	Korea Array	17.38	249	P	P	13 00 59.6	+0.6
	comp=Z,14nm,0.7s,baz=57,slow=11,SNR=38						
KSRS				PcP	PcP	13 05 32.0	+0.8
	comp=Z,2.9nm,0.7s,baz=29,slow=1.4,SNR=7.1						
KSRS				LR	LR	13 07 24.3	
	comp=Z,70nm,19.2s,baz=45,slow=35						
KSRS				ScP	ScP	13 08 50.0	+0.6
	comp=Z,6.2nm,0.9s,baz=24,slow=1.2,SNR=14						
KS19	Wonju Array Si	17.39	250	P	P	13 00 59.7	+0.5
KSAR	Wonju Array Be	17.41	249	P	P	13 00 58.7	-0.7
KSAR	Wonju Array Be	17.41	249	P	P	13 00 58.7	-0.7
SEY	Seymchan	17.51	6	P	P	13 01 00.9	+0.6
	comp=Z,122nm,0.7s,baz=184,slow=8.5,SNR=293						
SHEM	Shemya Is, Ala	18.15	58	P	Pn	13 01 09.1	-0.2
	comp=Z,156nm,1.0s,baz=266,slow=19,SNR=4.1						
SMY	Shemya	18.15	58	P	P	13 01 08.1	+0.8
SMY	Shemya	18.15	58	P	P	13 01 08.1	+0.8
INCN	Inchon	18.21	251		P	13 01 07.8	-0.4
INCN	Inchon	18.21	251	P	P	13 01 07.8	-0.4
JTU	Tsushima	18.27	239	P	Pn	13 01 13.0	+2.1
JNU	Nakatsue	18.40	233	P	P	13 01 11.4	+1.1
	comp=Z,16nm,0.9s,baz=34,slow=2.9,SNR=8.8						
JCJ	Chichijima	19.14	197	P	P	13 01 17.1	-1.2
	comp=Z,169nm,0.6s,baz=297,slow=15,SNR=11						
JCJ				S	S	13 04 48.3	+2.5
	comp=Z,33nm,0.7s,baz=299,slow=20,SNR=1.1						
JCJ	Chichijima	19.14	197		P	13 01 18.1	-0.2
JCJ	Chichijima	19.14	197	P	P	13 01 19.2	+0.9
HILR	Hailar Array B	19.72	292	P	P	13 01 22.0	-2.4
	comp=Z,9.7nm,0.5s,baz=98,slow=11,SNR=20						
HILR				pP	pP	13 01 53.8	+0.5
	comp=Z,9.6nm,0.5s,baz=86,slow=11,SNR=2.7						
HILR				PcP	PcP	13 05 35.0	-0.1
	comp=Z,1.7nm,0.5s,baz=354,slow=1.4,SNR=2.3						
HILR				ScP	ScP	13 08 54.2	-0.3
	comp=Z,1.6nm,0.4s,baz=132,slow=2.2,SNR=6.5						
YAK	Yakutsk	19.72	333	P	P	13 01 22.2	-2.0
	comp=Z,296nm,0.7s,baz=114,slow=2.7,SNR=110						
YAK				S	S	13 04 54.4	-2.3
	comp=Z,28nm,0.8s,baz=154,slow=21,SNR=5.9						
YAK	Yakutsk	19.72	333		P	13 01 22.3	-1.9
YAK	Yakutsk	19.72	333	eP	P	13 01 22.6	-1.6
YAK				eS	S	13 04 52.2	-4.4
YAK				pmax	pmax		
	comp=Z,552nm,1.1s						
YAK				pmax	pmax		
	comp=N,203nm,1.2s						
YAK				pmax	pmax		
	comp=E,114nm,1.2s						
YAK				smax	smax		
	comp=E,288nm,2.3s						
YAK				smax	smax		
	comp=N,687nm,3.0s						
JSU	Suzuyama	19.85	231	P	Pn	13 01 29.8	+0.1
DL2	Dalian	20.91	261	P	P	13 01 37.8	+0.7

CIT e 13 02 34.0
CIT e 13 02 49.6
CIT eS **S** **13 06 08.0 +1.9**
CIT pmax pmax
comp=Z,188nm,1.4s
BJI2 Beijing 24.25 268 P **P**
BJI2 S **S** **13 06 12.3 -2.4**
BJI2 sS **sS** **13 07 15.3 -1.9**
BJI2 pmax pmax
comp=Z,21nm,0.9s
BILL Bilibino 24.32 16 **P** **13 02 08.9 -0.6**
BILL lAmb lAmb 13 02 10.6
comp=Z,112nm,1.3s
BILL Bilibino 24.32 16*c iP* **P** **13 02 08.1 -1.4**
BILL pmax pmax
comp=Z,62nm,1.1s
TIA Tai'an 25.35 259 P **P** **13 02 18.8 -0.4**
TIA pmax pmax
comp=Z,62nm,0.6s
HNS HongShan 26.43 264 ⇑P **P** **13 02 29.6 +0.7**
HNS S **S** **13 06 56.6 +7.3**
HNS pmax pmax
comp=Z,39nm,0.8s
HNS LR LR
comp=Z,250nm,17.5s
HNS LR LR
comp=Z,210nm,12.7s
NJ2 Nanjing 26.58 250 *eP* **P** **13 02 29.8 -0.4**
NJ2 pmax pmax
comp=Z,15nm,0.6s
HHC Hu-ho-hao-te 27.15 273 ⇑*iP* **P** **13 02 36.4 +1.0**
HHC S **S** **13 07 02.6 +1.8**
HHC sS sS 13 08 05.3 +0.6
HHC SS **SnSn** **13 08 28.8 -1.4**
HHC pmax pmax
comp=Z,130nm,0.9s
HHC pmax pmax
comp=Z,240nm,5.1s
TIXI Tiksi 27.76 347 **P** **13 02 38.0 -2.3**
TIXI lAmb lAmb 13 02 38.9
comp=Z,49nm,0.7s
TIXI Tiksi 27.76 347 *i* P **P** **13 02 38.0 -2.3**
TIXI pmax pmax
comp=Z,45nm,0.9s
SPIA Saint Paul Isl 27.80 50 P **P** **13 02 41.2 +0.4**
baz=264
TIY Taiyuan 27.88 266 P **P** **13 02 43.5 +1.7**
TIY pmax pmax
comp=Z,53nm,0.5s
ULN Ulaanbaatar 28.24 290 **P** **13 02 43.7 -1.4**
ULN lAmb lAmb 13 02 46.8
comp=Z,28nm,0.6s
ULN Ulaanbaatar 28.24 290*ceP* **P** **13 02 44.0 -1.0**
ULN pmax pmax
comp=Z,50nm,1.3s
ULN Ulaanbaatar 28.24 290 P **P** **13 02 44.4 -0.7**
ULN Ulaanbaatar 28.24 290 P **P** **13 02 44.1 -1.0**
comp=Z,154nm,1.1s
BTO2 Baotou 28.37 274 *eP* **P** **13 02 46.8 +0.5**
BTO2 pP **pP** **13 03 23.3 +1.7**
BTO2 sP **sP** **13 03 43.0 +1.5**
BTO2 PP **PnPn** **13 03 45.5 +0.4**
BTO2 pmax pmax
comp=Z,82nm,1.2s
BTO2 pmax pmax
comp=Z,650nm,4.7s
NIKH Nikolski High 28.44 59 P **P** **13 02 47.7 +1.2**
baz=273
GAMB Gambell 28.65 36 **P** **13 02 48.9 +0.6**
GAMB Gambell 28.65 36 P **P** **13 02 48.6 +0.3**
baz=250
SONM Songino Array 28.68 290 P **P** **13 02 47.8 -1.1**
comp=Z,26nm,0.7s,baz=81,slow=7.7,SNR=85
SONM PcP **PcP** **13 05 54.9 +0.1**
comp=Z,1.8nm,0.6s,baz=105,slow=2.7,SNR=2.5
SONM ScP **ScP** **13 09 18.7 -0.7**
comp=Z,4.5nm,1.0s,baz=91,slow=3.0,SNR=10
comp=Z,26nm,0.7s
SONM Songino Array 28.68 290 **P** **13 02 48.0 -1.0**
SONM lAmb lAmb 13 02 50.6
comp=Z,25nm,0.7s
LYN LuoYang 29.45 261 ⇑P **P** **13 02 56.8 +1.1**
LYN pP pwP 13 03 35.4 +0.1
LYN ScP **ScP** **13 09 23.1 +1.3**
LYN pmax pmax
comp=Z,39nm,0.8s
UNV Unalaska Valle 29.81 57 P **P** **13 02 59.4 +0.7**
baz=273
TLY Talaya 29.86 298 **P** **13 02 57.8 -1.4**
TLY Talaya 29.86 298*ceP* **P** **13 02 58.2 -1.0**
TLY pmax pmax
comp=Z,28nm,1.3s
TLY Talaya 29.86 298 P **P** **13 02 58.3 -0.9**
TLY Talaya 29.86 298 *eP* **P** **13 02 58.2 -1.0**
H11N2 WAKE ISLAND Hy 29.95 143 T T 13 34 21.0
baz=334,slow=75,SNR=158
H11N1 WAKE ISLAND Hy 29.96 143 T T 13 34 24.4
baz=334,slow=75,SNR=1388
H11N3 WAKE ISLAND Hy 29.97 143 T T 13 34 22.7
baz=334,slow=75,SNR=1383
ZAK Zakamensk 30.26 296 *eP* **P** **13 03 01.3 -1.5**
ZAK *e* 13 03 39.7
ZAK pmax pmax
comp=Z,31nm,1.4s
M11K Mekoryuk 30.32 44 P **P** **13 03 04.2 +1.2**
baz=262,SNR=6.0
WHN Wuhan 30.52 252 P **P** **13 03 05.4 +0.3**
WHN pmax pmax
comp=Z,94nm,0.6s
TNA Tin City 30.79 34 **P** **13 03 07.5 +0.5**
TNA Tin City 30.79 34 P **P** **13 03 08.1 +1.0**
baz=251,SNR=51
H11S1 WAKE ISLAND Hy 30.96 145 T T 13 35 35.2
baz=331,slow=76,SNR=2197
H11S3 WAKE ISLAND Hy 30.97 145 T T 13 35 40.3
baz=331,slow=76,SNR=1409
H11S2 WAKE ISLAND Hy 30.98 145 T T 13 35 45.1
baz=331,slow=76,SNR=1086
K13K Kusilvak Mount 31.30 42 P **P** **13 03 12.7 +1.1**
baz=261,SNR=24
F14K Arctic Creek 31.39 35 P **P** **13 03 13.9 +1.4**
baz=253,SNR=69
MOY Mondy 31.50 299 *eP* **P** **13 03 12.7 -1.0**
MOY pmax pmax
comp=Z,31nm,1.4s
ANM Nome 31.54 37 P **P** **13 03 14.9 +1.2**
baz=256,SNR=21
M13K Dall Lake 31.73 45 P **P** **13 03 17.3 +1.9**
baz=264
J14K Nanvaranak Lak 31.95 40 P **P** **13 03 18.4 +1.1**
baz=260,SNR=29
F15K North Star Dit 32.13 35 P **P** **13 03 20.1 +1.2**
baz=255,SNR=17
L14K Kuka Creek 32.15 43 P **P** **13 03 20.7 +1.6**
baz=264,SNR=22
XAN Xi'an 32.19 263 ⇑P **P** **13 03 19.8 -0.1**
XAN ScP **ScP** **13 09 32.3 +1.3**
XAN pmax pmax
comp=Z,68nm,0.9s
G15K Niukluk 32.20 36 P **P** **13 03 20.6 +1.2**
baz=256
M14K Bethel 32.44 44 P **P** **13 03 23.0 +1.4**
baz=265,SNR=20
N14K Kuskokwak Cree 32.52 46 P **P** **13 03 23.7 +1.4**
baz=267
C16K Lisburne Hills 32.66 30 P **P** **13 03 23.5 +0.1**
baz=250,SNR=143
O14K Tigyukauivet M 32.70 47 P **P** **13 03 25.2 +1.4**
baz=268,SNR=24
L15K Ungalak Mounta 32.76 42 P **P** **13 03 25.4 +1.0**
baz=264,SNR=11
K15K Wolf Creek Mou 32.81 41 P **P** **13 03 26.1 +1.3**
baz=263
H16K Elim 32.87 37 P **P** **13 03 26.1 +0.8**
baz=259,SNR=34
G16K Koyuk River 32.98 36 P **P** **13 03 26.9 +0.7**
baz=258,SNR=23
M15K Kasigluk River 33.06 44 P **P** **13 03 28.0 +1.1**
baz=266,SNR=33
D17K Noatak River 33.28 31 P **P** **13 03 29.6 +0.7**
baz=253,SNR=87
N15K Kwethluk River 33.33 45 P **P** **13 03 30.8 +1.4**
baz=268
J16K Anvik River 33.36 40 P **P** **13 03 30.9 +1.3**
baz=263,SNR=14
I17K Unalakleet 33.40 39 P **P** **13 03 31.1 +1.2**
baz=262,SNR=29
O15K Ungalikthiuk R 33.44 47 P **P** **13 03 31.4 +1.1**
baz=270,SNR=35
RDOG Red Dog Mine 33.45 31 P **P** **13 03 30.6 +0.3**
baz=253,SNR=22
C17K DeLong Mountai 33.48 30 P **P** **13 03 31.2 +0.6**
baz=252,SNR=125
E17K Hotham Inlet 33.58 33 P **P** **13 03 32.5 +1.0**
baz=256,SNR=92
F17K Baldwin Pennin 33.65 34 P **P** **13 03 33.3 +1.3**
baz=257,SNR=82
G17K Kiwalik Mounta 33.70 36 P **P** **13 03 33.7 +1.3**
baz=259,SNR=75
L16K Owhat River 33.72 43 P **P** **13 03 33.7 +1.0**
baz=266,SNR=32
CHNA Chernabura Isl 33.77 55 P **P** **13 03 34.1 +0.9**
baz=256
H17K Granite Mounta 33.90 37 P **P** **13 03 35.6 +1.3**
baz=261
M16K Timber Creek 33.92 44 P **P** **13 03 35.8 +1.3**
baz=268
N16K Nishlik Lake 33.99 45 P **P** **13 03 36.4 +1.3**
baz=268,SNR=49
E18K Tukpahlearik C 34.13 32 P **P** **13 03 37.1 +0.9**
baz=256,SNR=46
C18K Utukok River 34.23 30 P **P** **13 03 37.4 +0.3**
baz=254,SNR=181
L17K Donlin 34.30 42 P **P** **13 03 39.3 +1.6**
baz=266
F18K Selawik 34.31 34 P **P** **13 03 38.6 +0.9**
baz=259,SNR=40
O16K Kokwok River B 34.32 46 P **P** **13 03 38.4 +0.5**
O16K Kokwok River B 34.32 46 P **P** **13 03 39.0 +1.1**
baz=270,SNR=12
K17K Iditarod 34.34 41 P **P** **13 03 39.6 +1.6**
baz=266,SNR=40
P16K Nushagak River 34.38 47 P **P** **13 03 39.9 +1.5**
baz=271,SNR=25
G18K Tagagawik 34.58 35 P **P** **13 03 41.1 +1.1**
baz=261
H18K Honhosa River 34.59 37 P **P** **13 03 40.8 +0.7**
H18K lAmb lAmb 13 03 41.8
comp=Z,62nm,0.7s
H18K Honhosa River 34.59 37 P **P** **13 03 41.3 +1.2**
baz=262,SNR=76
M17K Holitna River 34.67 43 P **P** **13 03 42.6 +1.7**
baz=268,SNR=41
LZH Lanzhou 34.69 270 P **P** **13 03 42.9 +1.4**
LZH pP pwP 13 04 21.8 +0.1
LZH sP sP 13 04 38.0 +0.8
LZH PP **PP** **13 05 03.3 -0.4**
LZH pmax pmax
comp=Z,220nm,0.8s
LZH pmax pmax
comp=Z,330nm,4.3s
N17K Nushagak Hills 34.78 45 P **P** **13 03 43.3 +1.5**
baz=270,SNR=19
O17K Koliganek Bris 34.83 46 P **P** **13 03 43.8 +1.6**
baz=271,SNR=22
LZDM Lanzhou Array 34.86 270 P **P** **13 03 44.0 +0.8**
comp=Z,48nm,0.9s,baz=57,slow=5.5,SNR=83
LZDM PcP **PcP** **13 06 12.4 +0.3**
comp=Z,2.5nm,0.4s,baz=116,slow=3.4,SNR=3.0
LZDM ScP **ScP** **13 09 40.4 -0.3**
comp=Z,1.7nm,0.5s,baz=259,slow=1.5,SNR=4.0
comp=Z,48nm,0.9s
C19K Lookout Ridge 34.92 30 P **P** **13 03 43.7 +0.8**
baz=255
L18K Granite Mounta 35.06 42 P **P** **13 03 45.9 +1.7**
baz=268
Q16K King Salmon 35.09 48 P **P** **13 03 45.6 +1.2**
baz=273,SNR=8.1
F19K Shaleruckik Mo 35.09 34 P **P** **13 03 45.0 +0.6**
baz=266,SNR=52
J18K Innoko River 35.12 40 P **P** **13 03 45.8 +1.0**
baz=266
GCSA Galena City Sc 35.16 37 P **P** **13 03 45.5 +0.5**
baz=264,SNR=26
P17K Kvichak River 35.18 47 P **P** **13 03 46.5 +1.3**
baz=272
G19K Purcell Mounta 35.25 35 P **P** **13 03 46.4 +0.5**
baz=262,SNR=45
D19K Kuna River 35.29 31 P **P** **13 03 46.7 +0.5**
baz=258
R17L Mt. Peulik Vol 35.31 50 P **P** **13 03 46.5 0.0**
baz=275
E19K Redstone River 35.41 33 P **P** **13 03 48.2 +1.1**
baz=260
N18K Kilae Creek 35.42 45 P **P** **13 03 49.3 +1.9**
baz=271,SNR=16
M18K Stony River 35.45 43 P **P** **13 03 49.2 +1.7**
baz=270
Q17K Contact Creek 35.52 49 P **P** **13 03 49.6 +1.4**
baz=274
J19K Poorman 35.64 39 P **P** **13 03 50.0 +0.8**
baz=266,SNR=56
O18K Koktuh Hills 35.78 46 P **P** **13 03 51.9 +1.5**
baz=272,SNR=6.6
P18K Big Mountain, 35.79 47 P **P** **13 03 51.8 +1.3**
baz=273,SNR=22
D20K Etivluk River 35.87 31 P **P** **13 03 51.8 +0.7**
baz=259
CHIR Chirikof Islan 35.90 53 P **P** **13 03 52.6 +1.2**
baz=278
L19K White Mountain 35.92 42 P **P** **13 03 52.9 +1.4**
baz=270,SNR=11
F20K Avaraart Lake 35.92 34 P **P** **13 03 52.3 +0.8**
baz=262
E20K Nigu River 35.94 31 P **P** **13 03 52.5 +0.7**
baz=260,SNR=147
GTA2 Gaotai 35.96 278 P **P** **13 03 53.3 +1.0**
GTA2 pP pwP 13 04 34.8 +2.1
GTA2 PcP **PcP** **13 06 16.5 +1.5**
GTA2 S **S** **13 09 16.8 -0.8**
GTA2 ScP **ScP** **13 09 45.5 +1.1**
GTA2 ScS **ScS** **13 13 50.4 0.0**
GTA2 pmax pmax
comp=Z,230nm,0.8s
B20K Meade River 35.97 28 P **P** **13 03 52.4 +0.6**
baz=256
H20K Anotleneega Mo 36.08 36 P **P** **13 03 53.9 +1.1**
baz=265,SNR=80
N19K Bonanza Creek 36.11 44 P **P** **13 03 54.4 +1.1**
N19K lAmb lAmb 13 03 55.7
comp=Z,36nm,0.8s
N19K Bonanza Creek 36.11 44 P **P** **13 03 54.9 +1.6**
baz=272,SNR=12
M19K Big River Lodg 36.13 42 P **P** **13 03 54.9 +1.5**
baz=270
O19K Port Alsworth 36.21 45 P **P** **13 03 54.0 +0.1**
O19K Port Alsworth 36.21 45 P **P** **13 03 55.3 +1.3**
baz=273
K20K Telida 36.30 40 P **P** **13 03 56.0 +1.2**
baz=269,SNR=16
A21K Barrow 36.47 26 P **P** **13 03 56.2 +0.1**
baz=255,SNR=186
IMAR Indian Mountai 36.59 36 P **P** **13 03 57.5 +0.3**
C21K Knifeblade Rid 36.61 30 P **P** **13 03 58.2 +1.0**
baz=260
Q19K Cape Douglas, 36.63 47 P **P** **13 03 58.0 +0.3**
baz=275
G21K Allakaket 36.73 35 P **P** **13 03 59.6 +1.2**
baz=265
M20K Styx River 36.73 42 P **P** **13 04 00.4 +1.8**
baz=272
B21K Ikpikpuk River 36.75 29 P **P** **13 03 59.3 +0.9**
baz=260
E21K Killik River 36.78 31 P **P** **13 03 59.3 +0.5**
baz=262
P19K Oil Pt 36.79 46 P **P** **13 04 00.2 +1.3**
baz=274
F21K Alatna River 36.81 33 P **P** **13 03 59.8 +0.7**
baz=264
H21K Melozitna Rive 36.95 36 P **P** **13 04 01.4 +1.1**
baz=267,SNR=45
OHAK Old Harbor 37.01 50 P **P** **13 04 00.7 -0.1**
baz=278,SNR=5.3
CHUM Lake Minchumin 37.09 39 P **P** **13 04 03.2 +1.7**
baz=270
PPLA Purkeypile 37.15 41 P **P** **13 04 04.1 +1.9**
baz=271,SNR=9.7
SPCR Spurr Chakacha 37.20 44 P **P** **13 04 03.9 +1.5**
baz=273,SNR=7.7
KDAK Kodiak Island 37.31 49 P **P** **13 04 03.5 +0.2**
baz=277
D22K Ayikyak River 37.31 31 P **P** **13 04 04.0 +0.8**
baz=263
Q20K Shuyak Island 37.31 48 P **P** **13 04 03.5 +0.1**
baz=276
SKT Skwentna 37.48 42 P **P** **13 04 05.3 +0.6**
baz=273,SNR=9.0
E22K Anaktuvuk Pass 37.54 32 P **P** **13 04 06.1 +0.8**
baz=264,SNR=124
H22K Ishtalitna Cre 37.55 36 P **P** **13 04 06.7 +1.4**
baz=268,SNR=58
CD2 Chengdu 37.56 263 P **P** **13 04 06.1 +0.3**
CD2 pmax pmax
comp=Z,100nm,0.5s
HOM Homer 37.59 46 P **P** **13 04 06.6 +1.0**
baz=276
BPAW Bear Paw Mtn. 37.68 39 P **P** **13 04 07.5 +1.1**
baz=270,SNR=23
SUA Susitna One 37.89 43 P **P** **13 04 08.5 +0.2**
baz=274,SNR=15
TRF Thorofare Moun 38.00 40 P **P** **13 04 10.0 +0.7**
baz=272,SNR=20
BRSE Bradley Lake S 38.04 46 P **P** **13 04 10.5 +1.0**
baz=276,SNR=7.3
D23K Nanushuk River 38.04 31 P **P** **13 04 10.3 +1.0**
baz=264
CUT Chulitna 38.05 41 P **P** **13 04 10.0 +0.5**
baz=273,SNR=12
COLD Coldfoot 38.09 34 P **P** **13 04 10.7 +1.0**
baz=267,SNR=46
G23K Bananza Creek 38.13 34 P **P** **13 04 11.0 +0.8**
baz=268,SNR=66
M22K Willow 38.16 43 P **P** **13 04 10.7 +0.3**
baz=274
GYA Guiyang 38.31 255 ⇑P **P** **13 04 12.1 -0.1**
GYA pmax pmax
comp=Z,21nm,0.8s
E23K Chandalar 38.36 32 P **P** **13 04 13.1 +1.0**
baz=267,SNR=79
I23K Minto, Yukon-K 38.38 37 P **P** **13 04 13.5 +1.3**
baz=270,SNR=35
RC01 Rabbit Creek A 38.40 44 P **P** **13 04 12.7 +0.2**
baz=275,SNR=19
TOLK Toolik Lake Re 38.41 31 P **P** **13 04 13.1 +0.6**
baz=266,SNR=50
O22K Cooper Landing 38.47 45 P **P** **13 04 13.2 +0.3**
baz=276,SNR=13
NEA2 Nenana 38.51 38 P **P** **13 04 14.5 +1.2**
baz=272,SNR=73
MCK McKinley 38.60 39 P **P** **13 04 14.7 +0.6**
baz=273,SNR=36
SEW Seward 38.64 45 P **P** **13 04 14.5 +0.1**
baz=277
PMR Palmer 38.65 43 P **P** **13 04 14.7 +0.3**
baz=275,SNR=11
D24K Happy Valley 38.72 31 P **P** **13 04 15.7 +0.6**
baz=266
E24K Your Creek 38.78 32 P **P** **13 04 16.6 +1.0**
baz=268
C24K Franklin Bluff 38.81 30 P **P** **13 04 16.2 +0.6**
baz=265
WAT1 Susitna Watana 38.82 41 P **P** **13 04 16.1 +0.1**
baz=274
KNK Knik Glacier 38.99 43 P **P** **13 04 18.0 +0.6**
baz=276,SNR=19
H24K Noodor Dome 38.99 36 P **P** **13 04 18.8 +1.5**
baz=271,SNR=33
SML Sawmill 39.01 42 P **P** **13 04 18.4 +0.9**
baz=276,SNR=40
COLA College 39.02 37*c iP* **P** **13 04 18.4 +0.9**
COLA pmax pmax
comp=Z,91nm,0.6s
COLA College 39.02 37 P **P** **13 04 18.6 +1.1**
baz=272
COLA College 39.02 37 P **P** **13 04 18.6 +1.1**
COLA x x 13 05 00.4
COLA PcP **PcP** **13 06 24.7 +0.9**
TGY Tagaytay City 39.07 225 P **P** **13 04 19.3 +0.8**
comp=Z,107nm,0.3s,baz=268,slow=8.8,SNR=3.4
comp=Z,107nm,0.3s
G24K Hadweenzic Riv 39.15 35 P **P** **13 04 20.0 +1.4**
baz=270,SNR=38
POKR Poker Plat Res 39.19 37 P **P** **13 04 20.3 +1.3**
baz=272,SNR=44
WAT6 Susitna Watana 39.21 41 P **P** **13 04 19.5 +0.1**
baz=275,SNR=18
M23K Glacier View 39.30 42 P **P** **13 04 20.4 +0.5**
baz=276,SNR=18
DHY Denali Highway 39.34 40 P **P** **13 04 20.8 +0.5**
baz=275,SNR=33
HDA Harding Lake 39.44 38 P **P** **13 04 21.0 0.0**
baz=274,SNR=75
ILAR Eielson Array 39.44 38 P **P** **13 04 21.2 +0.2**
comp=Z,19nm,0.7s,baz=274,slow=9.7,SNR=239
ILAR PcP **PcP** **13 06 24.1 -1.0**
comp=Z,3.9nm,0.7s,baz=288,slow=3.4,SNR=5.1
ILAR LR LR 13 23 01.6
comp=Z,47nm,18.0s,baz=292,slow=39
comp=Z,19nm,0.7s
SCM Sheep Creek Mo 39.48 42 P **P** **13 04 22.3 +0.8**
baz=276,SNR=16
D25K Kavik River 39.60 30 P **P** **13 04 22.8 +0.5**
baz=268
P23K Montague Islan 39.68 45 P **P** **13 04 23.3 +0.3**
baz=278
GLI Glacier Island 39.71 44 P **P** **13 04 23.5 +0.3**
baz=278
F25K Christian Rive 39.85 33 P **P** **13 04 25.8 +1.4**
baz=271,SNR=31
E25K Arctic Village 39.88 32 P **P** **13 04 25.8 +1.2**
baz=270,SNR=54
PRP Porcupine Dome 39.97 36 P **P** **13 04 26.4 +0.8**
baz=274,SNR=75
M24K Tolsona, Glenn 39.99 42 P **P** **13 04 27.2 +1.5**
baz=277,SNR=13
K24K Donnelly Dome 39.99 39 P **P** **13 04 25.9 +0.2**
baz=275,SNR=34
J25K Salcha River, 40.10 38 P **P** **13 04 25.8 -0.8**
baz=275,SNR=21
C26K Camden Bay 40.13 29 P **P** **13 04 27.6 +1.0**
baz=269
KLU Klutina 40.19 43 P **P** **13 04 28.2 +0.9**
baz=278,SNR=29
PAX Paxson 40.22 40 P **P** **13 04 28.6 +1.0**
baz=277,SNR=16
Q23K Middleton Isla 40.30 46 P **P** **13 04 29.4 +1.3**
baz=280
DGZ Jazzator, Alta 40.34 299*c iP* **P** **13 04 28.6 -0.2**
DGZ pmax pmax
comp=Z,9.0nm,0.8s
EYAK Cordova Ski Ar 40.41 44 P **P** **13 04 30.0 +1.0**
baz=279
RIDG Independent Ri 40.41 39 P **P** **13 04 29.2 +0.1**
baz=276,SNR=25
F26K Sheenjek River 40.42 33 P **P** **13 04 30.8 +1.7**
baz=272,SNR=66
HARP HAARP 40.43 41 P **P** **13 04 30.4 +1.2**
baz=278,SNR=18
C27K Jago River 40.55 30 P **P** **13 04 30.9 +0.8**
baz=270
G26K Porcupine Rive 40.60 34 P **P** **13 04 32.1 +1.7**
baz=275,SNR=84
ZAA0 Zalesovo Array 40.67 306 **P** **13 04 29.6 -1.7**
ZALV Zalesovo Beam 40.67 306 P **P** **13 04 29.6 -1.6**
comp=Z,6.1nm,0.4s,baz=66,slow=6.6,SNR=58
ZALV PcP **PcP** **13 06 29.1 -0.2**
comp=Z,13nm,0.7s,baz=78,slow=3.1,SNR=11
ZALV ScP **ScP** **13 10 01.3 -0.7**
comp=Z,2.0nm,0.6s,baz=61,slow=3.0,SNR=5.1
ZALV PKiKP **PKiKP** **13 13 36.1 -1.5**
comp=Z,2.0nm,0.3s,baz=47,slow=2.6,SNR=3.7
comp=Z,6.1nm,0.4s
SCRK Sand Creek 40.76 39 **P** **13 04 31.7 -0.3**
SCRK lAmb lAmb 13 04 33.1
comp=Z,40nm,0.8s
SCRK Sand Creek 40.76 39 P **P** **13 04 32.2 +0.1**
baz=277,SNR=46
N25K Chitina, Valde 40.80 42 P **P** **13 04 33.4 +1.1**
baz=279,SNR=10
BMRM Bremner River 40.90 43 P **P** **13 04 34.2 +1.1**
baz=280,SNR=19
GOMU GeErMu 40.96 276 P **P** **13 04 33.8 -0.5**
GOMU PcP **PcP** **13 06 32.6 +1.5**
GOMU pmax pmax
comp=Z,84nm,1.0s
I26K Coal Creek Min 40.98 37 P **P** **13 04 33.1 -0.5**
baz=276
KAIM Kayak Island 41.17 45 P **P** **13 04 36.6 +1.4**
baz=281
L26K Log Cabin Wild 41.17 40 P **P** **13 04 36.5 +1.2**
baz=278,SNR=38
E27K Coleen River 41.36 32 P **P** **13 04 37.9 +1.1**

baz=274,SNR=27
M26K Nabesna, AK 41.42 41 P P 13 04 39.2 +1.8
baz=279,SNR=58
G27K Doyon Strip 41.45 34 P P 13 04 38.8 +1.3
baz=275
D27M Malcolm River 41.53 30 P P 13 04 39.0 +0.8
baz=273
H27K Steamboat Moun 41.55 35 P P 13 04 40.3 +2.0
baz=276,SNR=45
MCARA McCarthy VSAT 41.58 42 P P 13 04 40.3 +1.7
baz=280,SNR=14
I27K Kandik River 41.59 36 P P 13 04 39.2 +0.6
baz=277,SNR=18
PZH PanZhiHua 41.65 259 P P 13 04 39.8 +0.1
PZH pP pwP 13 05 19.8 -1.1
PZH sP sP 13 05 33.8 -2.3
PZH S S 13 10 43.8 +0.8
PZH pmax pmax
comp=Z,30nm,0.7s
CRQE Cirque 41.66 43 P P 13 04 41.0 +1.6
baz=281,SNR=23
KMI2 Kunming 41.83 257 ⇓P P 13 04 42.8 +1.5
KMI2 S S 13 10 47.8 +1.9
KMI2 pmax pmax
comp=Z,15nm,0.9s
L27K Beaver Creek, 41.85 40 P P 13 04 42.7 +1.9
baz=280,SNR=90
BCAR Beaver Creek A 41.87 40 P 13 04 42.5 +1.5
M27K Edge Creek, AK 41.94 41 P P 13 04 43.4 +1.7
baz=280,SNR=48
F28M Old Crow 42.06 33 P P 13 04 43.9 +1.5
baz=276,SNR=62
E28M Babbage River 42.09 31 P P 13 04 43.6 +1.0
baz=275
BARN Barnard Glacie 42.29 43 P P 13 04 45.7 +1.1
BARN IAmb IAmb 13 04 47.0
comp=Z,64nm,0.8s
I28M Miner Creek 42.30 36 P P 13 04 46.0 +1.5
baz=278,SNR=130
D28M Stokes Point 42.31 30 P P 13 04 45.3 +0.9
baz=275
WMQ Urumqi 42.32 290 *eP* P 13 04 46.3 +1.4
WMQ PcP PcP 13 06 35.9 +0.9
WMQ pmax pmax
comp=Z,87nm,1.3s
WMQ LR LR
comp=Z,150nm,24.1s
WMQ Urumqi 42.32 290 P P 13 04 45.7 +0.8
MESA MESA 42.33 44 P P 13 04 46.3 +1.4
baz=282,SNR=5.1
BVCY Beaver Creek 42.40 41 P P 13 04 46.8 +1.5
baz=281,SNR=42
CTG Chitna Glacier 42.46 43 P P 13 04 47.3 +1.5
baz=282,SNR=22
YUK3 Moose Creek 42.71 42 P P 13 04 49.0 +1.0
baz=282,SNR=20
E29M Blow River 42.71 32 P P 13 04 49.1 +1.5
baz=277
ZSN Zaisan 42.71 296 *eP* P 13 04 47.9 0.0
ZSN Zaisan 42.71 296 *eP* P 13 04 48.0 0.0
DAWY Dawson 42.75 38 P P 13 04 48.7 +0.6
baz=280,SNR=17
G29M Pine Creek 42.86 34 P P 13 04 50.6 +1.8
baz=278
I29M Ogilvie Camp, 42.99 36 P P 13 04 51.2 +1.3
baz=280,SNR=108
O28M Mount Upton 43.05 43 P P 13 04 51.8 +1.0
baz=283,SNR=13
YUK8 Steele Glacier 43.14 42 P P 13 04 52.5 +1.0
baz=283,SNR=8.2
PINM Pinnacle 43.18 44 P P 13 04 52.8 +1.2
baz=284
J29N Klondike Camp 43.19 37 P P 13 04 53.2 +1.6
baz=281,SNR=13
EPYK Eagle Plains 43.46 34 P P 13 04 55.1 +1.4
baz=280,SNR=76
M29M Somme Creek 43.49 40 P P 13 04 55.7 +1.6
baz=283,SNR=16
L29M L29M 43.49 39 P P 13 04 56.2 +2.2
baz=282,SNR=35
G30M tAoh Zraii Nji 43.55 34 P P 13 04 55.6 +1.2
baz=280,SNR=71
K29M Barlow Dome 43.61 38 P P 13 04 56.4 +1.4
baz=282,SNR=8.8
F30M Barrier River 43.61 33 P P 13 04 56.7 +1.9
baz=280,SNR=155
YUK4 Talbot Arm 43.65 42 P P 13 04 57.0 +1.5
baz=284,SNR=12
I30M Mount Dempster 43.81 36 P P 13 04 58.0 +1.4
baz=282,SNR=182
YUK6 Outpost Mounta 43.88 42 P P 13 04 58.7 +1.4
baz=284
O29M Mount Kennedy 43.94 43 P P 13 04 59.2 +1.5
baz=285
J30M Hart River 43.96 37 P P 13 04 59.1 +1.2
baz=282,SNR=48
M30M Minto, Yukon 44.21 40 P P 13 05 01.7 +2.0
baz=284,SNR=14
G31M Satah River 44.31 33 P P 13 05 01.4 +1.0
baz=282,SNR=49
HYT Haines Junctio 44.32 42 P P 13 05 03.1 +2.3
baz=285,SNR=87
INK Inuvik 44.33 31 P P 13 05 01.4 +0.9
baz=281,SNR=80
N30M Aishikik Lake 44.35 41 P P 13 05 02.3 +1.4
baz=285
MAYO Mayo, Yukon 44.37 38 P P 13 05 02.5 +1.6
baz=284,SNR=20
F31M Tsiigehtchic 44.41 33 P P 13 05 02.1 +1.0
baz=282,SNR=61
H31M Peel River 44.52 35 P P 13 05 02.9 +0.8
H31M IAmb IAmb 13 05 04.3
comp=Z,67nm,0.7s
H31M Peel River 44.52 35 P P 13 05 03.4 +1.2
baz=283,SNR=59
MK31 Makanchi Array 44.59 296 *ceP* P 13 05 02.2 -0.7
MKAR Makanchi Array 44.59 296 P P 13 05 02.3 -0.6
comp=Z,28nm,0.6s,baz=75,slow=7.7,SNR=259
MKAR ScP ScP 13 10 17.9 0.0
comp=Z,2.3nm,0.6s,baz=61,slow=3.5,SNR=6.6
MKAR LR LR 13 23 45.9
comp=Z,149nm,18.7s,baz=40,slow=36
comp=Z,28nm,0.6s
P30M Million Dollar 44.77 43 P P 13 05 06.5 +2.3
baz=286
MAKZ Makanchi 44.78 297 P P 13 05 04.1 -0.4
MAKZ IAmb IAmb 13 05 05.9
comp=Z,41nm,0.7s
MAKZ Makanchi 44.78 297 P P 13 05 04.1 -0.4
MAKZ pmax pmax
comp=Z,41nm,0.7s
MAKZ Makanchi 44.78 297 P P 13 05 03.9 -0.6
MAKZ sP sP 13 05 59.7 -1.5
TNCH TengChong 44.82 260 P P 13 05 06.0 +0.8
TNCH pP pwP 13 05 46.3 -0.6
TNCH S S 13 11 28.6 -0.7
TNCH pmax pmax
comp=Z,46nm,1.2s
N31M Braeburn, Yuko 44.95 41 P P 13 05 07.9 +2.3
baz=286,SNR=16
O30N Mendenhall 45.00 42 P P 13 05 07.0 +1.0
O30N Mendenhall 45.00 42 P P 13 05 07.7 +1.7
baz=286,SNR=12
KURK Kurchatov 45.30 303 P 13 05 07.5 -1.0
KURK Kurchatov 45.30 303 P P 13 05 08.0 -0.4
KURK *PP pP 13 05 47.2 +1.2
KURK 13 06 45.5
KURK Kurchatov 45.30 303 P P 13 05 07.4 -1.0
KURK Kurchatov 45.30 303 *eP* P 13 05 08.0 -0.4
M31M Drury Creek, Y 45.39 40 P P 13 05 10.8 +1.8
baz=286,SNR=32
KURBB Kurchatov Arra 45.39 303 P P 13 05 08.0 -1.2
comp=Z,21nm,0.6s,baz=70,slow=8.6,SNR=177
KURBB pP pP 13 05 47.2 +0.5
comp=Z,22nm,0.9s,baz=69,slow=8.5,SNR=2.0
KURBB PcP PcP 13 06 45.5 +0.3
comp=Z,11nm,0.8s,baz=66,slow=3.7,SNR=6.7
KURBB ScP ScP 13 10 20.7 -0.4
comp=Z,1.3nm,0.8s,baz=68,slow=3.5,SNR=5.7
KURBB S S 13 11 32.4 -4.2
comp=Z,0.9nm,0.9s,baz=56,slow=13,SNR=4.5
comp=Z,21nm,0.6s
WHY Whitehorse 45.60 42 P P 13 05 12.7 +1.9
baz=287,SNR=11
SKAG Skagway 45.75 44 P P 13 05 13.7 +1.9
baz=288
S31K Pelican 45.77 46 P P 13 05 13.5 +1.5
baz=289
N32M Quiet Lake 46.29 41 P P 13 05 17.3 +1.2
baz=288
A36M Sachs Harbour 46.30 25 P P 13 05 16.2 +0.3
A36M Sachs Harbour 46.30 25 P P 13 05 16.5 +0.6
baz=284,SNR=146
P32M Atlin 46.49 43 P P 13 05 19.2 +1.6
P32M Atlin 46.49 43 P P 13 05 19.1 +1.4
baz=289
R32K Eaglecrest 46.53 45 P P 13 05 19.7 +1.8
baz=290,SNR=5.3
SIT Sitka 46.53 47 P P 13 05 20.1 +2.2
baz=290
P33M Teslin, Yukon 46.71 42 P P 13 05 21.4 +1.9
baz=289,SNR=20
S32K Killisnoo 46.77 46 P P 13 05 21.8 +2.0
baz=290
LSA Lhasa 47.09 271 P P 13 05 21.3 -2.0
LSA pmax pmax
comp=Z,38nm,0.7s
LSA Lhasa 47.09 271 P P 13 05 24.6 +1.3
LSA Lhasa 47.09 271 P P 13 05 24.6 +1.3
LSA x x 13 06 08.8
C36M Paulatuk 47.40 29 P P 13 05 24.9 +0.4
baz=288,SNR=75
MANU Manus Island 47.45 182 P 13 05 26.1 +0.6
MANU IAmb IAmb 13 05 26.5
comp=Z,32nm,0.7s
TDK Taldyqorghan 47.81 296 *eP* P 13 05 28.2 +0.2
TDK pmax pmax
comp=Z,90nm,0.7s
TDK Taldyqorghan 47.81 296 *eP* P 13 05 28.2 +0.2
comp=Z,90nm,0.7s
T33K Petersburg 47.84 47 P P 13 05 29.5 +1.5
baz=292
R33M Jennings River 47.87 43 P P 13 05 30.6 +2.1
baz=291,SNR=11
SHLS Shalkode 47.99 293 *eP* P 13 05 27.4 -2.1
SHLS Shalkode 47.99 293 *eP* P 13 05 27.5 -2.1
U33K Whale Pass 48.01 48 P P 13 05 31.4 +2.0
baz=292
CRAG Craig 48.26 48 P P 13 05 33.5 +2.2
baz=293
UZB Uzynbulak 48.27 293 *c iP* P 13 05 31.9 +0.1
UZB Uzynbulak 48.27 293 ⇑*iP* P 13 05 32.0 +0.1
WRAK Wrangell Islan 48.30 47 P P 13 05 33.6 +2.1
baz=293
S34M Telegraph Cree 48.34 45 P P 13 05 33.9 +2.0
baz=292,SNR=5.1
KPKS Kokpek 48.34 294 *eP* P 13 05 32.5 +0.3
KPKS Kokpek 48.34 294 *eP* P 13 05 32.6 +0.3
JAY Jayapura 48.40 190 P P 13 05 32.1 -0.7
comp=Z,21nm,0.7s,baz=26,slow=4.9,SNR=4.1
comp=Z,21nm,0.7s
ARXS Arharly 48.54 295 *eP* P 13 05 31.9 -1.8
WTLY Watson Lake, Y 48.63 41 P P 13 05 35.7 +1.5
baz=292,SNR=10
DLBC Dease Lake 48.68 44 P P 13 05 36.7 +2.1
baz=293,SNR=8.5
CHTO Chiang Mai 48.71 254 P 13 05 35.0 -0.2
CHTO Chiang Mai 48.71 254 P P 13 05 35.0 -0.2
CHTO pmax pmax
comp=Z,13nm,0.9s
CHTO Chiang Mai 48.71 254 P P 13 05 35.9 +0.7
CHTO Chiang Mai 48.71 254 P P 13 05 35.4 +0.2
SATY Saty 48.71 294 *c iP* P 13 05 35.2 +0.1
SATY Saty 48.71 294 ⇑*iP* P 13 05 35.3 +0.1
SIJI Sorong 48.71 203 P P 13 05 35.3 +0.1
comp=Z,18nm,0.7s,baz=18,slow=13,SNR=6.1
comp=Z,18nm,0.7s
CMAR Chiang Mai Arr 48.96 253 P P 13 05 37.2 0.0
comp=Z,5.2nm,0.8s,baz=40,slow=7.4,SNR=36
CMAR pP pP 13 06 16.5 +1.2
comp=Z,4.5nm,0.7s,baz=39,slow=7.3,SNR=4.6
CMAR PcP PcP 13 06 59.4 +0.8
comp=Z,3.2nm,0.6s,baz=5.8,slow=1.2,SNR=10.0
CMAR ScP ScP 13 10 38.1 +1.4
comp=Z,9.5nm,0.8s,baz=44,slow=3.9,SNR=39
comp=Z,5.2nm,0.8s
CMAR Chiang Mai Arr 48.96 253 P 13 05 36.7 -0.4
PRZ Przheval'sk 48.99 293 P P 13 05 38.1 +0.7
PRZ Przheval'sk 48.99 293 P P 13 05 38.1 +0.7
PRZ pmax pmax
comp=Z,124nm,0.8s
BVAR Borovoye Array 49.08 309 P P 13 05 36.5 -1.1
comp=Z,33nm,0.7s,baz=44,slow=7.7,SNR=130
BVAR PcP PcP 13 06 58.8 +0.3
comp=Z,59nm,1.1s,baz=64,slow=3.4,SNR=9.4
BVAR S S 13 12 27.4 -1.2
comp=Z,1.4nm,1.0s,baz=74,slow=12,SNR=2.5
comp=Z,33nm,0.7s
BRZS Berezniki 49.08 304 *eP* P 13 05 37.9 +0.2
BRZS Berezniki 49.08 304 *eP* P 13 05 37.9 +0.2
SHL Shillong 49.10 266 P 13 05 37.7 -0.7
SHL Shillong 49.10 266 P P 13 05 37.7 -0.7
SHL pmax pmax
comp=Z,97nm,0.7s
SHL Shillong 49.10 266 P P 13 05 38.4 +0.1
SNR=26
V35K Ketchikan 49.10 48 P P 13 05 39.3 +1.6
baz=294
BORK Borovoye 49.11 309 P 13 05 36.8 -1.0
BORK IAmb IAmb 13 05 37.8
comp=Z,45nm,0.7s
BORK Borovoye 49.11 309 *ceP* P 13 05 36.8 -1.0
BORK pmax pmax
comp=Z,126nm,1.7s
BORK Borovoye 49.11 309 P P 13 05 36.7 -1.0
BORK x x 13 06 17.4
BORK PcP PcP 13 06 58.9 +0.3
T35M Bob Quinn 49.14 46 P P 13 05 40.4 +2.3
baz=294,SNR=14
MDOK Medeo 49.53 294 *eP* P 13 05 41.5 +0.1
MDOK Medeo 49.53 294 *eP* P 13 05 41.6 +0.1
AAA Alma-Ata 49.60 294 *eP* P 13 05 41.9 +0.2
AAA pmax pmax
comp=Z,111nm,0.9s
AAA Alma-Ata 49.60 294 *eP* P 13 05 41.9 +0.2
AAA Alma-Ata 49.60 294 *eP* P 13 05 42.0 +0.2
comp=Z,112nm,0.9s
KIP Kipapa 49.64 101 *ceP* P 13 05 44.0 +1.8
KIP pmax pmax
comp=Z,113nm,1.7s
TNSS Tian-Shan 49.66 294 *eP* P 13 05 42.5 -0.1
TNSS Tian-Shan 49.66 294 *eP* P 13 05 42.5 -0.1
RABL Rabaul 49.68 175 P P 13 05 43.1 +0.6
U35K Hyder 49.69 47 P P 13 05 44.1 +2.0
baz=295
WRGLY Wrigley 49.79 36 P P 13 05 44.5 +1.8
baz=293,SNR=9.0
KDJ Kajisay 49.96 293 P P 13 05 44.7 +0.1
KDJ Kajisay 49.96 293 P P 13 05 44.7 +0.1
KDJ pmax pmax
comp=Z,167nm,0.9s
ULHL Ulahol 50.50 294 P P 13 05 49.4 +0.6
SNR=215
TKM2 Tokmak 2 50.58 295 P P 13 05 50.0 +0.6
SNR=94
MRSI Marisa 50.66 215 P P 13 05 49.9 0.0
comp=Z,966nmcomp=Z,68nm,1.1s
KOTAN Kotaneelee Air 50.80 40 P P 13 05 52.0 +1.5
baz=295,SNR=5.7
SGDS Sogindy 50.93 296 *eP* P 13 05 51.9 +0.1
NRN Naryn 51.07 293 P P 13 05 53.0 -0.2
NRN IAmb IAmb 13 05 54.9
comp=Z,54nm,1.1s
NRN Naryn 51.07 293 P P 13 05 53.0 -0.2
NRN pmax pmax
comp=Z,54nm,1.1s
CHMS Chumysh 51.08 295 P P 13 05 53.7 +0.8
SNR=17
USP Ospenovka 51.11 296 P P 13 05 53.6 +0.5
SNR=116
BRDH Bariadhala 51.12 263 P P 13 05 53.1 -0.2
comp=Z,84nm,0.3s,baz=72,slow=12,SNR=5.0
comp=Z,84nm,0.3s
KBK Karagaybulak 51.13 295 P P 13 05 53.7 +0.3
SNR=81
EVN Everest 51.18 272 P P 13 05 55.0 +0.6
EVN IAmb IAmb 13 05 56.5
comp=Z,72nm,0.7s
AAK Ala-Archa 51.43 295 P P 13 05 56.0 +0.5
SNR=90
AAK Ala-Archa 51.43 295 LR LR 13 30 00.5
comp=Z,120nm,19.8s,baz=0.5,slow=38
AAK Ala-Archa 51.43 295 *i* P P 13 05 56.0 +0.5
SNR=105
AAK Ala-Archa 51.43 295 *ce*P P 13 05 56.0 +0.5
AAK pmax pmax
comp=Z,111nm,1.3s
AAK Ala-Archa 51.43 295 P P 13 05 56.1 +0.5
AAK Ala-Archa 51.43 295 *e*P P 13 05 56.0 +0.5
AAK Ala-Archa 51.43 295 P P 13 05 55.9 +0.3
UCH Uchtor 51.62 294 P P 13 05 57.8 +0.4
SNR=28
EKS2 Erkin-Say 51.87 295 P P 13 05 59.5 +0.6
SNR=49
KRAI Karang Ratu 51.88 206 P P 13 06 01.5 +2.6
comp=Z,49nm,1.2s
SVE Sverdlovsk 52.46 316 *e*P P 13 06 02.2 -0.5
SVE pmax pmax
comp=E,30nm,0.7s
KSH2 Kashi 52.55 291 P P 13 06 05.0 +1.1
KSH2 S S 13 13 17.4 +0.4
KSH2 pmax pmax
comp=E,79nm,0.9s
NOR Nord 52.80 357 *i* P P 13 06 03.1 -1.8
NOR IAmb IAmb 13 06 03.7
comp=Z,6.6nm,0.6s
RES Resolute Bay 52.92 17 P 13 06 05.2 -0.7
RES Resolute Bay 52.92 17 P P 13 06 05.2 -0.7
RES pmax pmax
comp=Z,59nm,0.5s
HOPEN Hopen 53.04 346 *e*P P 13 06 05.0 -1.8
KBS Kingsbay 53.12 350 *e*P P 13 06 06.0 -1.3
KBS Kingsbay 53.12 350 *i* P P 13 06 06.0 -1.3
SPA0 Spitsbergen Ar 53.15 349 *e*P P 13 06 05.3 -2.3
SPITS Spitsbergen Ar 53.15 349 P P 13 06 05.5 -2.1
comp=Z,2.2nm,0.3s,baz=56,slow=9.5,SNR=26
SPITS PcP PcP 13 07 13.2 0.0
comp=Z,4.7nm,0.6s,baz=333,slow=5.2,SNR=5.0
comp=Z,2.2nm,0.3s
DZA Taraz 53.30 297 *e*P P 13 06 09.4 +0.3
DZA pmax pmax
comp=Z,38nm,0.9s
DZA Taraz 53.30 297 *e*P P 13 06 09.4 +0.3
comp=Z,38nm,0.9s
YKA Yellowknife Ar 53.74 35 P P 13 06 12.1 0.0
comp=Z,18nm,0.7s,baz=303,slow=7.6,SNR=233
YKA PcP PcP 13 07 16.3 +0.7
comp=Z,4.9nm,0.9s,baz=305,slow=4.5,SNR=5.9
comp=Z,18nm,0.7s
ARTI Arti 53.76 316 P P 13 06 10.8 -1.5
ARTI Arti 53.76 316 *c iP* P 13 06 10.9 -1.4
ARTI *PP pP 13 06 53.0 +1.9
ARTI 13 07 14.7
ARTI S S 13 13 30.2 -2.4
ARTI SS SKiKP 13 17 10.7 +4.3
ARTI pmax pmax
comp=Z,95nm,0.9s
ARTI Arti 53.76 316 P P 13 06 10.9 -1.4
ARTI x x 13 06 51.7
ARTI x x 13 06 56.0
ARTI PcP PcP 13 07 16.1 +0.3
YKAW1 Yellowknife Wh 53.80 35 P 13 06 12.6 +0.1
YKAW1 IAmb IAmb 13 06 13.8
comp=Z,23nm,0.8s
BRLS Boroldav 54.16 298 *c iP* P 13 06 16.9 +1.5
BRLS Boroldav 54.16 298 ⇑*iP* P 13 06 17.0 +1.5
IUG Iuzhnay 54.50 297 *c iP* P 13 06 18.4 +0.4
IUG pmax pmax
comp=Z,86nm,0.8s
IUG Iuzhnay 54.50 297 ⇑*iP* P 13 06 18.4 +0.4
comp=Z,86nm,0.8s
CHM Chimkent 54.68 297 *e*P P 13 06 19.5 +0.4
CHM pmax pmax
comp=Z,81nm,0.8s
CHM Chimkent 54.68 297 *e*P P 13 06 19.6 +0.4
comp=Z,81nm,0.8s
PMG Port Moresby 54.76 182 P P 13 06 20.8 +0.9
comp=Z,16nm,0.7s,baz=26,slow=8.2,SNR=7.0
comp=Z,16nm,0.7s
DRK Karamyk 54.82 293 P P 13 06 21.0 +0.4
DRK Karamyk 54.82 293 P P 13 06 21.0 +0.4
TULEG Thule 55.84 10 *i* P P 13 06 25.3 -1.7
TULEG IAmb IAmb 13 06 26.7
comp=Z,42nm,1.0s
VADS Vadso 56.48 339 *e*P P 13 06 30.0 -1.5
LVZ Lovozero 56.51 335 *ce*P P 13 06 29.5 -2.3
LVZ pmax pmax
comp=Z,56nm,1.7s
NEEM North Greenlan 56.63 5 *i* P P 13 06 31.3 -1.6
NEEM IAmb IAmb 13 06 32.9
comp=Z,80nm,0.8s
AB31 Akbulak array 56.65 308 P P 13 06 32.3 -0.7
KIRV Kirov 56.72 322 *ce*P P 13 06 32.0 -1.4
CHGR Chuyangaron 56.98 293 P P 13 06 35.8 +0.2
CHGR Chuyangaron 56.98 293 *c iP* P 13 06 35.9 +0.2
APA Apatity 57.09 336 ⇓*eP* P 13 06 33.0 -2.8
APA *e*PP pP 13 07 13.2 -1.8
APA *e* 13 07 25.6
APA *e* 13 08 42.2
APA *e*S S 13 14 12.4 -3.9
APA *e*SS SS 13 18 06.5 -0.5
APA pmax pmax
comp=Z,18nm,1.0s
NIL Nilore 57.17 286 P P 13 06 38.1 +1.0
HAMF Hammerfest 57.47 341 *eP* P 13 06 36.7 -1.7
DAG Danmarks Havn 57.63 357 *i* P P 13 06 37.1 -2.4
DAG IAmb IAmb 13 06 39.2
comp=Z,17nm,1.0s
POIN Pond Inlet 57.67 15 P 13 06 38.9 -1.0
POIN IAmb IAmb 13 06 39.6
comp=Z,23nm,0.6s
ARA0 ARCESS Array S 57.84 340 *eP* P 13 06 39.9 -1.2
ARCES ARCESS Array B 57.84 340 P P 13 06 39.9 -1.3
comp=Z,14nm,0.8s,baz=43,slow=8.1,SNR=27
ARCES pP pP 13 07 20.8 +0.3
comp=Z,6.8nm,0.9s,baz=7.5,slow=8.3,SNR=2.1
ARCES PcP PcP 13 07 31.1 -0.4
comp=Z,12nm,0.9s,baz=46,slow=5.2,SNR=5.0
comp=Z,14nm,0.8s
ARCES ARCESS Array B 57.84 340 P P 13 06 39.8 -1.3
SHAA Shahritus 58.28 293 P P 13 06 44.9 +0.2
SHAA IAmb IAmb 13 06 46.5
comp=Z,213nm,0.7s
KTK1 Kautokeino 58.78 340 *eP* P 13 06 46.4 -1.2
JETT Jettan, Norway 59.03 341 *eP* P 13 06 48.4 -0.9
TRO Tromso 59.30 342 *eP* P 13 06 49.8 -1.3
KLMR Klimovskoe 59.38 327 *eP* P 13 06 49.5 -2.3
KLMR *e*PP pwP 13 07 33.5 -2.2
KLMR pmax pmax
comp=Z,81nm,0.8s
KBL Kabul 59.46 290 P P 13 06 52.6 -0.4
SNR=28
COEN Coen 59.47 186 P P 13 06 53.5 +0.7
COEN IAmb IAmb 13 06 55.3
comp=Z,22nm,0.7s
DBG Daneborg 60.14 356 *i* P P 13 06 55.0 -1.8
DBG IAmb IAmb 13 06 56.5
comp=Z,8.6nm,0.6s
WIFE Three Sisters- 60.26 56 P P 13 06 59.6 +1.2
WIFE IAmb IAmb 13 07 01.0
comp=Z,23nm,0.8s
NEW Newport 60.41 50 P P 13 06 59.8 +0.7
NEW IAmb IAmb 13 07 01.1
comp=Z,36nm,0.9s
NEW Newport 60.41 50 P P 13 06 59.8 +0.7
NEW pmax pmax
comp=Z,36nm,0.9s
UPNV Upernavik 60.68 8 *i* P P 13 06 59.0 -1.4
UPNV IAmb IAmb 13 07 00.4
comp=Z,33nm,0.8s
BELG Belogornoye 61.20 317 *c iP* P 13 07 03.6 -0.7
BELG pmax pmax
comp=Z,15nm,0.9s
STEI Steigen 61.48 342 *eP* P 13 07 04.3 -1.5
LOF Lofoten 61.68 342 *eP* P 13 07 06.4 -0.8
FAUS Fauske 61.91 341 *eP* P 13 07 07.7 -1.1
SUMG Summit 62.03 2 P P 13 07 09.5 -0.5
SUMG Summit 62.03 2 P P 13 07 09.5 -0.5
SUMG pmax pmax
comp=Z,94nm,1.0s
SUMG Summit 62.03 2 *i* P P 13 07 09.2 -0.8
SUMG IAmb IAmb 13 07 11.3
comp=Z,83nm,0.9s
NUUG Nuugaatsiaq 62.15 8 *i* P P 13 07 08.5 -1.8
NUUG IAmb IAmb 13 07 10.6
comp=Z,14nm,0.5s
NIAQ Niaqornat 62.83 8 *i* P P 13 07 14.0 -0.8

NIAQ IAmb IAmb 13 07 15.6
comp=Z,37nm,0.7s
VAGH Vaagaholmen 62.90 342 *e*P P 13 07 14.3 -1.0
SAATT Saattut 63.00 7 *i* P P 13 07 12.1 -3.8
MOR8 Moi Rana 63.10 341 *e*P P 13 07 14.3 -2.4
LEIR Leirfjorden 63.45 341 *e*P P 13 07 17.6 -1.4
PUL Pulkovo 63.47 330 *ce*P P 13 07 18.6 -0.6
PUL pmax pmax
comp=Z,69nm,0.4s
PUL Pulkovo 63.47 330 *e*P P 13 07 18.6 -0.6
MOS Moscow 63.52 324 *e*P P 13 07 18.3 -1.3
MOS pmax pmax
comp=Z,83nm,1.0s
FFC Flin Flon 63.65 38 P P 13 07 20.8 +0.3
FFC IAmb IAmb 13 07 22.3
comp=Z,48nm,0.8s
FFC Flin Flon 63.65 38 P P 13 07 20.8 +0.3
FFC pmax pmax
comp=Z,48nm,0.8s
FFC Flin Flon 63.65 38 P P 13 07 21.2 +0.6
FFC PcP **PcP 13 07 55.7 +0.5**
FFC pP **pP 13 08 01.0 +0.4**
FFC x x 13 08 05.2
FIA1 FINESS Array S 63.66 333 P P 13 07 19.4 -1.0
FINES FINESS Array B 63.66 333 P P 13 07 19.2 -1.2
comp=Z,70nm,0.6s,baz=41,slow=7.5,SNR=293
comp=Z,70nm,0.6s
SAQQ Saqqaq 63.74 8 *i* P P 13 07 20.2 -0.6
SAQQ IAmb IAmb 13 07 21.3
comp=Z,29nm,0.8s
HYB Hyderabad 63.77 268 *e*P P 13 07 21.8 -0.1
HYB *e*PcP **PcP 13 07 56.6 +0.3**
HYB *e*pP **pP 13 08 01.3 -0.9**
HYB *e*sP **sP 13 08 20.7 -0.2**
HYB *e*PP **PP 13 09 44.1 -0.1**
SCO Scoresbysund 64.02 356 P P 13 07 22.1 -0.6
SCO IAmb IAmb 13 07 24.4
comp=Z,28nm,0.8s
SCO Scoresbysund 64.02 356 P P 13 07 22.1 -0.6
SCO pmax pmax
comp=Z,28nm,0.8s
SCO Scoresbysund 64.02 356 *i* P P 13 07 21.7 -1.0
SCO IAmb IAmb 13 07 24.5
comp=Z,24nm,0.6s
GDH Godhavn 64.32 9 *i* P P 13 07 22.8 -1.8
GDH IAmb IAmb 13 07 24.6
comp=Z,22nm,0.7s
PAHR Pah Rah Range 64.35 59 P P 13 07 26.2 +0.7
PAHR IAmb IAmb 13 07 27.6
comp=Z,27nm,1.1s
OBN Obninsk 64.39 324 ⇑P P 13 07 24.8 -0.4
OBN Obninsk 64.39 324 *ce*P P 13 07 24.1 -1.1
OBN *e**PP **pP 13 08 04.3 -1.1**
OBN *e* 13 09 45.6
OBN *e*S S 13 16 23.4 +34
OBN *e*SS **SS 13 19 59.2 -2.2**
OBN pmax pmax
comp=Z,119nm,1.3s
OBN Obninsk 64.39 324 P P 13 07 23.8 -1.4
comp=Z,90nm,1.0s
OBN Obninsk 64.39 324 *e*P P 13 07 24.1 -1.1
LRM Limekiln Ridge 64.43 50 P P 13 07 26.5 +0.4
ILULI Ilulissat 64.59 8 *i* P P 13 07 25.0 -1.4
VRH Novokhopyorsk 64.78 318 *e*P P 13 07 26.6 -1.2
VRH pmax pmax
comp=Z,76nm,0.6s
NSS Namsos 65.05 341 *e*P P 13 07 28.4 -1.0
LPSR Galich'ya Gora 65.10 321 *e*P P 13 07 28.9 -1.0
LPSR pmax pmax
comp=Z,113nm,0.9s
VORR Voronezh 65.61 320 *e*P P 13 07 32.4 -0.8
VORR pmax pmax
comp=Z,42nm,0.4s
VSU Vasula 65.69 331 *ce*P P 13 07 31.6 -2.0
VSU pmax pmax
comp=Z,111nm,1.7s
NVAR Mina Array Bea 65.81 59 P P 13 07 36.4 +1.4
comp=Z,21nm,0.8s,baz=294,slow=6.9,SNR=156
comp=Z,21nm,0.8s
VSR Storozhevoye 65.95 319 *e*P P 13 07 33.9 -1.5
VSR pmax pmax
comp=Z,50nm,0.6s
WRAB Tennant Creek 66.47 195 *ce*P P 13 07 38.8 -0.2
WRAB pmax pmax
comp=Z,33nm,1.3s
WRA Warramunga Arr 66.48 195 P P 13 07 38.5 -0.6
comp=Z,19nm,0.5s,baz=10,slow=6.6,SNR=286
comp=Z,19nm,0.5s
FITZ Fitzroy Crossi 66.70 204 P P 13 07 41.0 +0.5
comp=Z,11nm,0.6s,baz=15,slow=6.2,SNR=24
comp=Z,11nm,0.6s
SFJD Kangerlussuaq 66.79 8 *i* P P 13 07 39.2 -1.3
SFJD IAmb IAmb 13 07 40.8
comp=Z,29nm,0.8s
MOL Molde 67.75 342 *e*P P 13 07 46.2 -0.3
DOMB Dombas 67.87 341 *e*P P 13 07 46.6 -0.8
FURC Furnace Creek, 67.95 60 P P 13 07 49.3 +1.1
PDAR Pinedale Array 68.00 51 P P 13 07 49.6 +0.8
comp=Z,18nm,0.6s,baz=291,slow=1.6,SNR=261
comp=Z,18nm,0.6s
NC405 NORSAR Array S 68.03 339 P P 13 07 47.2 -1.2
KHAM Kharkiv 68.13 320 P P 13 07 48.7 -0.5
TPO Tropico Hills 68.15 62 P P 13 07 50.7 +1.1
TPO IAmb IAmb 13 07 51.9
comp=Z,40nm,1.1s
NB201 NORSAR Array S 68.19 339 P P 13 07 48.3 -1.1
AKT Akhty 68.19 307 *e*P P 13 07 50.6 +0.7
AKT *e* 13 08 14.7
AKT *e**PP **pP 13 08 32.3 +1.9**
AKT *e**SP **sP 13 08 52.3 +3.3**
AKT *e* 13 10 23.4
AKT pmax pmax
comp=Z,240nm,1.0s
NB2 NORSAR Subarra 68.22 339 P P 13 07 48.5 -1.1
comp=Z,16nm,0.5s,baz=30,slow=6.5
NB2 NORSAR Subarra 68.22 339 P P 13 07 48.5 -1.1
NB2 AMP 13 07 48.5
comp=Z,16nm,0.5s
NOA NORSAR Array B 68.22 339 P P 13 07 48.6 -1.1
comp=Z,24nm,0.6s,baz=30,slow=6.5,SNR=111
comp=Z,24nm,0.6s
MNK Minsk 68.28 327 *i* P P 13 07 50.0 0.0
comp=E,72nm,0.9s
MNK *i* P P 13 07 50.0 0.0
comp=N,42nm,0.9s
MNK *i* P P 13 07 50.0 0.0
comp=Z,156nm,0.9s,baz=40
MNK *i* pP **pP 13 08 32.6 +2.0**
MNK *i* PP **PP 13 10 23.1 +0.7**
MNK *i* PPP PPP 13 12 04.5
MNK *i* S **S 13 16 37.2 +1.0**
MNK *i* sS **sS 13 17 51.9 +4.6**
MNK *i* SS **SS 13 21 05.2 +3.5**
MNK *i* SSS SSS 13 24 22.9
MNK *i* LR LR 13 38 58.4
MNK *i* LRM MLR 13 40 01.2
comp=Z,152nm,8.6s
MNK Minsk 68.28 327 *i* P P 13 07 50.0 0.0
MNK *i**PP **pP 13 08 32.6 +2.0**
MNK *i* 13 10 23.1
MNK *i* PPP PPP 13 12 04.4
MNK *i* S **S 13 16 37.1 +1.0**
MNK *i* 13 17 31.9
MNK *i* SS **SS 13 21 05.2 +3.5**
MNK pmax pmax
comp=N,42nm,0.9s
MNK pmax pmax
comp=Z,156nm,0.9s
MNK pmax pmax
comp=E,72nm,0.9s
MNK MLR MLR
comp=Z,152nm,9.0s
GOF Gofitskoye 68.29 313 *ce*P P 13 07 50.9 +0.6
HFS Hagfors 68.35 338 P P 13 07 49.0 -1.4
comp=Z,43nm,0.5s,baz=43,slow=5.0,SNR=187
comp=Z,43nm,0.5s
HFS Hagfors 68.35 338 P P 13 07 49.0 -1.4
NC602 NORSAR Array S 68.40 339 *e*P P 13 07 49.4 -1.3
ANGG Ammassalik, Gr 69.02 3 *i* P P 13 07 53.1 -1.3
ANGG IAmb IAmb 13 07 53.9
comp=Z,35nm,0.5s
NCK Nalchik 69.07 311 *i* P P 13 07 54.1 -1.1
NCK pmax pmax
comp=Z,161nm,1.0s

ERBR Yeremizino-Bor 69.14 315 *e*P P 13 07 54.9 -0.6
ERBR *e**PP **pP 13 08 37.5 +1.2**
ERBR *e*S **S 13 16 42.9 -3.6**
ERBR pmax pmax
comp=Z,225nm,0.9s
KIV Kislovodsk 69.23 312 *i* P P 13 07 57.0 +0.8
SNR=94
KIV Kislovodsk 69.23 312 *e*P P 13 07 56.2 0.0
KIV pmax pmax
comp=Z,322nm,1.1s
KIV Kislovodsk 69.23 312 P P 13 07 56.6 +0.4
KIV Kislovodsk 69.23 312 *e*P P 13 07 56.2 0.0
KIV Kislovodsk 69.23 312 P P 13 07 57.4 +1.1
SKAR Skarslia 69.24 340 *e*P P 13 07 55.8 -0.1
KBZ Khabaz 69.28 312 P P 13 07 57.4 +1.0
comp=Z,149nm,0.9s,baz=53,slow=5.0,SNR=308
KBZ LR LR 13 42 03.4
comp=Z,152nm,19.5s,baz=342,slow=39
HYA Hoyanger 69.29 342 *e*P P 13 07 55.6 -0.5
PALK Pallekele 69.33 259 P P 13 07 57.1 0.0
comp=Z,9.4nm,0.7s,baz=12,slow=3.6,SNR=2.6
comp=Z,9.4nm,0.7s
SHA1 Shidzhatmaz 69.40 312 *ce*P P 13 07 58.1 +0.7
NUUK Nuuk 69.41 9 *i* P P 13 07 56.8 0.0
NUUK IAmb IAmb 13 07 58.4
comp=Z,88nm,1.0s
ULM Lac du Bonnet 69.46 38 P P 13 07 57.4 0.0
comp=Z,21nm,0.6s,baz=314,slow=6.5,SNR=44
comp=Z,21nm,0.6s
NEUR Neytrino 69.70 311 *d* *i* P P 13 08 01.4 +2.1
NEUR pmax pmax
comp=Z,21nm,0.8s
K22A Casper 69.72 49 P P 13 07 59.7 +0.4
K22A IAmb IAmb 13 08 01.2
comp=Z,23nm,0.6s
LABN Labinsk 69.77 314 *e*P P 13 07 58.9 -0.5
LABN *e* 13 10 32.9
LABN *e*S **S 13 16 48.3 -5.6**
LABN pmax pmax
comp=Z,210nm,1.1s
KONO Kongsberg 69.83 339 *e*P P 13 07 59.0 -0.4
STRU Stroemstad 69.96 338 *i* P P 13 07 59.6 -0.6
ASK Askoy 70.12 342 *e*P P 13 08 00.8 -0.4
BER Bergen 70.18 342 *e*P P 13 08 01.0 -0.6
AS31 Alice Springs 70.20 194 P P 13 08 02.6 +0.5
ASAR Alice Springs 70.20 194 P P 13 08 02.8 +0.6
comp=Z,21nm,0.6s,baz=11,slow=6.8,SNR=479
comp=Z,21nm,0.6s
ASAR Alice Springs 70.20 194 P P 13 08 02.6 +0.5
ODD1 Odda 70.31 341 *e*P P 13 08 01.6 -0.9
O20A White River Ci 70.52 52 P P 13 08 04.6 +0.3
AK03 Malin Array Si 70.63 324 P P 13 08 03.4 -1.1
AK23 Malin Array Si 70.64 324 P P 13 08 03.4 -1.1
AKASG Malin Array Be 70.65 324 P P 13 08 03.8 -0.8
comp=Z,30nm,0.5s,baz=39,slow=6.3,SNR=117
AKASG LR LR 13 40 54.8
comp=Z,171nm,18.0s,baz=294,slow=37
comp=Z,30nm,0.5s
AKBB Malin Array Si 70.65 324 *ce*P P 13 08 03.9 -0.7
AKBB pmax pmax
comp=Z,20nm,0.4s
AKBB Malin Array Si 70.65 324 P P 13 08 03.4 -1.2
AK04 Malin Array Si 70.65 324 P P 13 08 03.4 -1.2
KIEV Kiev 70.66 324 P P 13 08 04.0 -0.7
KIEV IAmb IAmb 13 08 04.9
comp=Z,47nm,0.7s
KIEV Kiev 70.66 324 *i* P P 13 08 03.5 -1.2
SNR=26
KIEV Kiev 70.66 324 P P 13 08 04.0 -0.7
KIEV pmax pmax
comp=Z,47nm,0.7s
KIEV Kiev 70.66 324 P P 13 08 03.4 -1.2
comp=Z,288nm,1.0s
AK01 Malin Array Si 70.66 324 P P 13 08 03.5 -1.1
AK22 Malin Array Si 70.66 324 P P 13 08 03.5 -1.2
AK21 Malin Array Si 70.67 324 P P 13 08 03.5 -1.2
BC3 Big Chuckawall 70.68 62 P P 13 08 05.4 +0.2
AK08 Malin Array Si 70.69 324 P P 13 08 03.6 -1.2
AK09 Malin Array Si 70.69 324 P P 13 08 03.6 -1.2
AK11 Malin Array Si 70.69 324 P P 13 08 03.6 -1.2
AK02 Malin Array Si 70.69 324 P P 13 08 03.6 -1.2
AK15 Malin Array Si 70.69 324 P P 13 08 03.7 -1.2
AK18 Malin Array Si 70.69 324 P P 13 08 03.7 -1.2
AK20 Malin Array Si 70.70 324 P P 13 08 03.7 -1.2
TJOU Tjoern 70.70 337 *i* P P 13 08 03.5 -1.3
AK10 Malin Array Si 70.71 324 P P 13 08 03.8 -1.2
BORU Boraas 70.73 337 *i* P P 13 08 04.2 -0.8
GNI Garni 70.76 308 P P 13 08 06.9 +1.2
GNI Garni 70.76 308 P P 13 08 07.6 +1.9
GNI Garni 70.76 308 P P 13 08 06.9 +1.2
GNI pmax pmax
comp=Z,88nm,1.0s
GNI Garni 70.76 308 P P 13 08 07.6 +1.9
AK07 Malin Array Si 70.77 324 P P 13 08 04.2 -1.1
BLS5 Blasjo 70.79 341 *e*P P 13 08 04.2 -1.1
EPLO Experimental L 70.81 37 P P 13 08 04.9 -0.8
EPLO IAmb IAmb 13 08 06.4
comp=Z,56nm,0.9s
VSLR Vesyoloye 70.95 313 *i* P P 13 08 07.0 +0.4
VSLR pmax pmax
comp=Z,190nm,0.9s
BLEU Blekinge 70.97 334 *i* P P 13 08 04.9 -1.5
SOC Sochi 71.03 313 *e*P P 13 08 06.4 -0.6
SOC *e* 13 10 45.6
SOC *e*PPP PPP 13 12 28.3
SOC *e*S S **13 17 07.7 -0.8**
SOC *e*SS **SS 13 21 44.8 +0.5**
SOC pmax pmax
comp=Z,90nm,0.7s
MI28 Mi28,Pidlybu 71.11 325 P P 13 08 05.6 -1.7
ONAU Onsala 71.17 337 *i* P P 13 08 06.1 -1.5
FABU Falkenberg 71.29 336 *i* P P 13 08 07.4 -0.9
ANN Anapa 71.30 315 *e*P P 13 08 07.9 -0.7
ANN *e* 13 10 49.0
ANN *e*S **S 13 17 12.4 +0.8**
ANN pmax pmax
comp=Z,50nm,0.8s
HOMB Homborsund 71.31 339 *i* P P 13 08 09.1 +0.7
PV19 Morning Glory 71.36 54 P P 13 08 10.2 +0.8
DEL Delary 71.41 335 *i* P P 13 08 07.3 -1.8
RNPP9 Sopachiv 71.44 326 P P 13 08 08.1 -1.2
RNPP8 Varash 71.51 326 P P 13 08 08.6 -1.2
SNART Snartemo 71.57 340 *e*P P 13 08 09.6 -0.4
SNART Snartemo 71.57 340 *i* P P 13 08 10.0 0.0
RNPP5 Staryi Chortor 71.58 326 P P 13 08 09.0 -1.2
LUBAR Lubar, Ukraine 71.85 324 P P 13 08 10.6 -1.2
BJUU Bjuv 72.00 336 *i* P P 13 08 11.8 -0.8
BSD Bornholm Skovb 72.25 334 *i* P P 13 08 13.4 -0.7
BSD IAmb IAmb 13 08 14.8
comp=Z,42nm,0.6s
MVCO Mesa Verde 72.39 55 P P 13 08 16.3 +0.7
MVCO IAmb IAmb 13 08 17.6
comp=Z,28nm,0.7s
COP Copenhagen 72.50 336 *i* P P 13 08 14.7 -0.9
COP IAmb IAmb 13 08 16.5
comp=Z,129nm,0.6s
IVI Ivigtut 72.70 8 *i* P P 13 08 15.8 -0.8
SIM Simferopol' 72.80 317 *e*P P 13 08 18.3 +0.8
SIM pmax pmax
comp=Z,120nm,1.5s
SORM Soroca 72.98 323 ⇑P P 13 08 18.2 -0.3
SORM Soroca 72.98 323 P P 13 08 18.2 -0.3
BEL Belsk 73.02 329 *e*P P 13 08 18.8 +0.1
GKP Gorka Klasztor 73.06 332 *e*P P 13 08 18.5 -0.4
BANOM Banah 73.41 290 *i* P P 13 08 21.9 +0.5
SNR=31
BANOM Banah 73.41 290 P P 13 08 22.2 +0.7
SHME Shamm 73.42 290 *i* P P 13 08 21.7 +0.2
SNR=28
SHME Shamm 73.42 290 P P 13 08 21.8 +0.3
SNR=6.9
PURM Purcari 73.56 321 ⇓P P 13 08 22.0 +0.1
WSAR Wadi Sarin 73.67 287 P P 13 08 24.1 +1.1
SDCO Great Sand Dun 73.71 53 P P 13 08 24.1 +0.7
BIDO Bidbid 73.82 287 P P 13 08 25.5 +1.7
SNR=6.3
MDH Madha 73.83 290 P P 13 08 23.8 -0.1
WBK Wadi Bani Khal 73.87 286 P P 13 08 25.6 +1.4
SNR=8.6
MASF Masafi 73.87 290 P P 13 08 24.7 +0.5
MSFE Esma-Masafi 73.88 290 *i* P P 13 08 24.5 +0.2
SNR=7.5
JLN Jalan Bani Buh 73.89 285 P P 13 08 25.4 +1.2
SNR=7.4
UOSS Minazif 74.13 289 *i* P P 13 08 25.7 0.0
SNR=16
UOSS Minazif 74.13 289 P P 13 08 26.1 +0.4
UOSS Minazif 74.13 289 P P 13 08 25.7 0.0
UOSS PcP **PcP 13 08 38.8 -1.0**
UOSS pP **pP 13 09 06.6 -0.4**
SHIU Shidnytsya 74.16 326 P P 13 08 25.1 -0.4
SHIU pP **pP 13 09 07.2 +0.5**
SMDO Samad 74.19 287 P P 13 08 27.0 +0.9
HATD Hatta, Dubai 74.26 289 *i* P P 13 08 26.7 +0.3
SNR=19
HATD Hatta, Dubai 74.26 289 P P 13 08 27.1 +0.7
SNR=7.8
HOQ Hoqain 74.33 288 P P 13 08 27.5 +0.7
SNR=9.4
ASHO Ashiyiah 74.41 289 *i* P P 13 08 27.5 +0.2
SNR=13
ASHO Ashiyiah 74.41 289 P P 13 08 27.9 +0.6
SNR=6.0
NAZ Nazwa, Dubai 74.46 290 *i* P P 13 08 27.8 +0.3
SNR=6.2
NAZ Nazwa, Dubai 74.46 290 P P 13 08 28.3 +0.8
SOHO SOHO 74.47 289 *i* P P 13 08 27.6 0.0
SNR=7.8
SOHO SOHO 74.47 289 P P 13 08 27.9 +0.4
JMDO Jabal Madar 74.62 286 P P 13 08 29.3 +0.8
SNR=8.9
FAQ Al Faqa, Dubai 74.67 290 *i* P P 13 08 28.8 0.0
SNR=6.8
FAQ Al Faqa, Dubai 74.67 290 P P 13 08 29.0 +0.2
SNR=6.6
OJC Ojcow 74.70 329 *e*P P 13 08 28.7 +0.2
BURAR Bucovina Array 74.70 324 ⇑P P 13 08 28.9 +0.2
BURAR Bucovina Array 74.70 324 P P 13 08 28.9 +0.2
BIR Birlad 74.75 322 ⇓P P 13 08 30.0 +1.1
BIR Birlad 74.75 322 P P 13 08 29.9 +1.1
STHS Stebnicka Huta 74.82 327 *e*P P 13 08 29.1 -0.2
STHS pmax pmax
comp=Z,33nm,1.0s
STHS Stebnicka Huta 74.82 327 *e*P P 13 08 29.0 -0.2
VLDR Vladesti 74.88 321 ⇑P P 13 08 30.2 +0.6
ASUD Al Ashush, Dub 74.93 290 *i* P P 13 08 30.7 +0.5
SNR=13
ASUD Al Ashush, Dub 74.93 290 P P 13 08 31.1 +0.8
SNR=5.4
BSY Bisya 74.97 287 P P 13 08 31.4 +0.9
SNR=14
TESR Tescani 74.97 323 ⇑P P 13 08 30.4 +0.3
GHRR 75.00 322 ⇑P P 13 08 31.0 +0.7
ALNE Al Ain 75.04 289 *i* P P 13 08 31.2 +0.3
SNR=12
ALNE Al Ain 75.04 289 P P 13 08 31.5 +0.6
SNR=11
SCTR Scanteiesti 75.05 321 ⇑P P 13 08 31.3 +0.7
TLCR 75.06 321 ⇓P P 13 08 31.3 +0.6
TLCR 75.06 321 P P 13 08 31.2 +0.6
BZK Bozkurt 75.08 315 ⇓P P 13 08 31.6 +0.8
ANMO Albuquerque 75.16 55 P P 13 08 32.9 +1.2
ANMO Albuquerque 75.16 55 *ce*P P 13 08 32.7 +1.0
ANMO pmax pmax
comp=Z,20nm,1.3s
ANMO Albuquerque 75.16 55 P P 13 08 32.9 +1.2
ANMO pP **pP 13 09 13.3 +0.2**
KPL Plockton 75.18 346 *e*P P 13 08 30.7 -0.4
KPL IAmb IAmb 13 08 32.7
comp=Z,51nm,0.7s
AJN Ajban 75.20 290 P P 13 08 31.8 0.0
COSR Cosmesti PH 75.20 322 ⇓P P 13 08 32.4 +1.0
NEGRR Negrea 75.20 321 ⇓P P 13 08 32.4 +0.9
ONER Baraj Valea Uz 75.22 323 ⇓P P 13 08 32.1 +0.5
PANC Panciu 75.26 322 ⇑P P 13 08 32.9 +1.1
SCHLR Schela 75.28 321 ⇑P P 13 08 32.3 +0.4
BMR Baia Mare 75.36 325 ⇓P P 13 08 33.0 +0.7
BMR Baia Mare 75.36 325 P P 13 08 33.0 +0.7
CFR Carcaliu 75.37 321 ⇑P P 13 08 32.7 +0.3
CFR Carcaliu 75.37 321 P P 13 08 32.7 +0.3
ODBI Odobesti 75.39 322 ⇑P P 13 08 33.5 +1.0
KSP Ksiaz 75.42 331 *e*P P 13 08 32.5 -0.1
VRI Vrincioaia 75.45 322 ⇑P P 13 08 34.0 +1.0
VRI Vrincioaia 75.45 322 P P 13 08 33.9 +1.0
PLOR Plostina 75.49 322 ⇑P P 13 08 34.2 +1.0
PLOR Plostina 75.49 322 P P 13 08 34.1 +1.0
TPGR Topolog 75.50 321 ⇑P P 13 08 33.8 +0.6
SCHQ Schefferville 75.56 20 P P 13 08 33.7 +0.3
comp=Z,17nm,0.7s,baz=352,slow=5.3,SNR=63
comp=Z,17nm,0.7s
TURR Turia 75.60 323 ⇓P P 13 08 34.6 +0.8
OKC Ostrava-Krasne 75.61 329 *e*P P 13 08 34.6 +0.9
OKC Ostrava-Krasne 75.61 329 *e*P P 13 08 34.6 +0.9
MHTO MHTO 75.66 285 P P 13 08 35.5 +1.1
SNR=21
STEB Steborice 75.67 330 *e*P P 13 08 34.4 +0.4
OZUR 75.67 323 ⇑P P 13 08 35.2 +1.1
OSTA Ostas 75.69 331 *e*P P 13 08 34.4 +0.2
OSTC Ostas 75.69 331 *e*P P 13 08 34.4 +0.2
COVR Voineasa-Covas 75.69 322 ⇑P P 13 08 35.0 +0.7
LANS Liptovska Anna 75.70 328 *e*P P 13 08 35.4 +1.1
LANS pmax pmax
comp=Z,41nm,0.8s
LANS Liptovska Anna 75.70 328 *e*P P 13 08 35.4 +1.1
CHVC Chvalec 75.71 331 *e*P P 13 08 34.6 +0.3
CHVC Chvalec 75.71 331 *e*P P 13 08 34.6 +0.3
FLTG Flechtingen 75.77 335 *e*P P 13 08 33.8 -0.7
comp=Z,26nm,0.8s,baz=29,slow=5.6
UPC Upice 75.80 331 *e*P P 13 08 35.1 +0.3
UPC Upice 75.80 331 *e*P P 13 08 35.1 +0.3
TIRR Tirgusor 75.81 320 ⇑P P 13 08 35.2 +0.3
TIRR Tirgusor 75.81 320 P P 13 08 35.2 +0.3
DPC Dobruska-Polom 75.82 331 *e*P P 13 08 35.6 +0.6
DPC Dobruska-Polom 75.82 331 *e*P P 13 08 35.6 +0.6
KECS Kecovo 75.87 327 *e*P P 13 08 36.3 +1.1
KECS pmax pmax
comp=Z,36nm,1.1s
KECS Kecovo 75.87 327 *e*P P 13 08 36.3 +1.1
MORC Moravsky Berou 75.88 330 P P 13 08 35.0 -0.3
MORC IAmb IAmb 13 08 37.1
comp=Z,56nm,0.9s
MORC Moravsky Berou 75.88 330 P P 13 08 35.0 -0.3
MORC pmax pmax
comp=Z,56nm,0.9s
MORC Moravsky Berou 75.88 330 *e*P P 13 08 35.7 +0.4
KRLC Kraliky 75.90 330 *e*P P 13 08 35.6 +0.2
KRLC Kraliky 75.90 330 *e*P P 13 08 35.6 +0.2
DOPR Dopca 75.94 323 ⇑P P 13 08 36.8 +1.1
RETH Rethem/Aller, 75.96 336 *e*P P 13 08 35.5 0.0
comp=Z,29nm,0.8s,baz=29,slow=5.6
MESR Meseseni 76.00 325 ⇑P P 13 08 37.0 +1.0
MFTR Murfatlar 76.02 320 ⇓P P 13 08 37.1 +1.0
CVDA Cernavoda 76.08 320 ⇓P P 13 08 37.6 +1.2
MLR Muntele Rosu 76.08 322 ⇓P P 13 08 37.2 +0.5
MLR Muntele Rosu 76.08 322 P P 13 08 37.1 +0.5
CJR Cluj-Napoca 76.09 324 ⇑P P 13 08 37.6 +1.0
CJR Cluj-Napoca 76.09 324 P P 13 08 37.5 +1.0
CLL Collm 76.11 333 *i* P P 13 08 36.0 -0.5
CLL pmax pmax
comp=Z,109nm,0.6s
CLL Collm 76.11 333 ⇑*i* P P 13 08 36.0 -0.5
comp=Z,109nm,0.6s
CLL *i* sP **sP 13 09 35.7 -0.5**
comp=Z,12nm,1.0s
CLL Collm 76.11 333 *e*P P 13 08 35.9 -0.6
comp=Z,99nm,0.5s,baz=29,slow=5.6
ISR Istrita 76.12 322 ⇑P P 13 08 37.9 +1.1
ISR Istrita 76.12 322 P P 13 08 37.8 +1.1
MAUC Maruska 76.12 329 *e*P P 13 08 37.3 +0.6
LAWE Loch Awe, Argy 76.16 345 *e*P P 13 08 36.3 -0.4
LAWE IAmb IAmb 13 08 38.2
comp=Z,39nm,0.6s
BRG Berggiesshubel 76.18 332 *e*P P 13 08 36.4 -0.5
comp=Z,30nm,1.0s,baz=29,slow=5.6
BRG Berggiesshubel 76.18 332 *e*P P 13 08 36.8 -0.1
BRG Amp 13 08 38.6
comp=Z,30nm,1.0s
MDB Medias 76.22 324 ⇓P P 13 08 38.3 +1.0
MDB Medias 76.22 324 P P 13 08 38.2 +1.0
PVCC Panska Ves 76.27 332 *e*P P 13 08 37.7 +0.3
PVCC Panska Ves 76.27 332 *e*P P 13 08 37.7 +0.3
MARR Marisel-Cluj 76.31 325 ⇑P P 13 08 38.1 +0.3
JRN Qarnain Island 76.34 292 P P 13 08 37.9 -0.3
ICOR Ion Corvin 76.35 320 ⇓P P 13 08 39.1 +1.2
UMZA Um Al Zommool 76.36 288 P P 13 08 38.6 +0.2
DRGR 76.38 325 ⇓P P 13 08 39.1 +0.9

DRGR		**76.38**	**325**	P	**P**	**13 08 39.1**	**+0.9**
CLZ	**Clausthal**	**76.45**	**335**	*e*P	**P**	**13 08 38.6**	**+0.1**
	comp=Z,46nm,0.9s,baz=29,slow=5.6						
VOIR		**76.50**	**323**	⇓P	**P**	**13 08 40.0**	**+1.0**
VOIR		**76.50**	**323**	P	**P**	**13 08 39.9**	**+1.0**
PSZ	**Piszkesteto**	**76.56**	**327**	⇑P	**P**	**13 08 39.9**	**+0.6**
PSZ	**Piszkesteto**	**76.56**	**327**	P	**P**	**13 08 39.8**	**+0.6**
PSN	**Preselentsi**	**76.57**	**320**	*i* P	**P**	**13 08 40.1**	**+0.9**
JAVC	**Velka Javorina**	**76.60**	**329**	*e*P	**P**	**13 08 40.8**	**+1.4**
VRAC	**Vranov**	**76.61**	**330**	LR	LR	13 46 16.7	
	comp=Z,139nm,18.0s,baz=348,slow=38						
VRAC	**Vranov**	**76.61**	**330**	⇑P	**P**	**13 08 40.0**	**+0.6**
VRAC	**Vranov**	**76.61**	**330**	P	**P**	**13 08 39.9**	**+0.6**
VRAC	**Vranov**	**76.61**	**330**	*e*P	**P**	**13 08 39.9**	**+0.6**
EKA	**Eskdalemuir Ar**	**76.62**	**344**	P	**P**	**13 08 39.0**	**-0.3**
	comp=Z,23nm,0.5s,baz=21,slow=4.9,SNR=66						
	comp=Z,23nm,0.5s						
EKA	**Eskdalemuir Ar**	**76.62**	**344**	P	**P**	**13 08 39.0**	**-0.3**
CICN	**Ciocanesti**	**76.63**	**321**	⇓P	**P**	**13 08 40.6**	**+1.1**
ESK	**Eskdalemuir**	**76.64**	**344**	*e*P	**P**	**13 08 39.4**	**0.0**
ESK				IAmb	IAmb	13 08 41.0	
	comp=Z,35nm,0.8s						
TNR	**Turnu Rosu**	**76.66**	**323**	⇓P	**P**	**13 08 40.5**	**+0.7**
TNR	**Turnu Rosu**	**76.66**	**323**	P	**P**	**13 08 40.4**	**+0.7**
PRU	**Pruhonice**	**76.74**	**331**	*e*P	**P**	**13 08 40.3**	**+0.3**
PRU	**Pruhonice**	**76.74**	**331**	*e*P	**P**	**13 08 40.3**	**+0.3**
ARR	**Arges**	**76.74**	**323**	⇑P	**P**	**13 08 41.3**	**+1.0**
GTTG	**Gottingen**	**76.83**	**335**	*e*P	**P**	**13 08 40.5**	**-0.1**
	comp=Z,45nm,0.9s,baz=29,slow=5.6						
KRUC	**Moravsky**	**76.89**	**330**	*e*P	**P**	**13 08 41.3**	**+0.4**
SHMA	**Al-Shehemyia**	**76.93**	**294**	P	**P**	**13 08 41.5**	**0.0**
	SNR=6.0						
BR131	**Keskin Array S**	**76.95**	**314**	*i* P	**P**	**13 08 42.3**	**+0.7**
BR131	**Keskin Array S**	**76.95**	**314**	P	**P**	**13 08 42.5**	**+0.8**
	SNR=34						
BRTR	**Keskin Array B**	**76.95**	**314**	P	**P**	**13 08 42.4**	**+0.8**
	comp=Z,46nm,0.7s,baz=84,slow=4.2,SNR=240						
BRTR				PP	**PP**	**13 11 39.2**	**+2.6**
	comp=Z,1.8nm,0.9s,baz=38,slow=6.3,SNR=3.9						
	comp=Z,46nm,0.7s						
SMOL	**Smolenice**	**76.98**	**329**	*e*P	**P**	**13 08 42.5**	**+1.0**
SMOL				pmax	pmax		
	comp=Z,33nm,0.8s						
GHWR	**Ruwais**	**77.00**	**291**	P	**P**	**13 08 41.9**	**-0.1**
TREC	**Trest**	**77.01**	**331**	*e*P	**P**	**13 08 42.6**	**+1.0**
TREC	**Trest**	**77.01**	**331**	*e*P	**P**	**13 08 42.6**	**+1.0**
DEV	**Deva**	**77.04**	**324**	⇓P	**P**	**13 08 42.8**	**+1.0**
DEV	**Deva**	**77.04**	**324**	P	**P**	**13 08 42.8**	**+1.0**
TANN	**Tannenbergstha**	**77.05**	**333**	*e*P	**P**	**13 08 41.6**	**-0.3**
	comp=Z,21nm,0.8s,baz=29,slow=5.6						
PLN	**Plauen**	**77.09**	**333**	*e*P	**P**	**13 08 41.8**	**-0.2**
	comp=Z,10nm,0.7s,baz=29,slow=5.6						
MOX	**Moxa**	**77.12**	**333**	*e*P	**P**	**13 08 42.0**	**-0.2**
	comp=Z,36nm,0.7s,baz=29,slow=5.6						
SAKB	**Bahrain**	**77.12**	**294**	P	**P**	**13 08 42.5**	**-0.1**
MODS	**Modra-Piesok**	**77.15**	**329**	*e*P	**P**	**13 08 43.6**	**+1.2**
MODS				pmax	pmax		
	comp=Z,155nm,1.1s						
MODS	**Modra-Piesok**	**77.15**	**329**	*e*P	**P**	**13 08 43.6**	**+1.2**
NKC	**Novy Kostel**	**77.21**	**333**	*e*P	**P**	**13 08 43.8**	**+1.1**
NKC	**Novy Kostel**	**77.21**	**333**	*e*P	**P**	**13 08 43.8**	**+1.1**
SRO	**Srobarova**	**77.24**	**328**	*e*P	**P**	**13 08 44.5**	**+1.6**
SRO				pmax	pmax		
	comp=Z,78nm,0.9s						
SRO	**Srobarova**	**77.24**	**328**	*e*P	**P**	**13 08 44.5**	**+1.6**
KIRS	**Kirsehir-Merke**	**77.25**	**314**	⇓P	**P**	**13 08 44.1**	**+0.8**
MZR	**Muzera**	**77.27**	**290**	*i* P	**P**	**13 08 43.6**	**+0.1**
	SNR=37						
MZR	**Muzera**	**77.27**	**290**	P	**P**	**13 08 43.9**	**+0.4**
	SNR=16						
ZVC	**Zvikov**	**77.32**	**331**	*e*P	**P**	**13 08 43.6**	**+0.3**
GAL1	**Galloway**	**77.36**	**345**	*e*P	**P**	**13 08 43.4**	**0.0**
GAL1				IAmb	IAmb	13 08 45.3	
	comp=Z,50nm,0.7s						
RAZG	**Razgrad**	**77.36**	**321**	⇑P	**P**	**13 08 44.3**	**+0.6**
STKA	**Stephens Creek**	**77.36**	**186**	P	**P**	**13 08 44.4**	**+0.8**
	comp=Z,2.8nm,0.4s,baz=13,slow=6.1,SNR=13						
STKA				pP	**pP**	**13 09 24.8**	**-1.4**
	comp=Z,3.6nm,0.7s,baz=355,slow=8.0,SNR=3.5						
	comp=Z,2.8nm,0.4s						
ZST	**Bratislava**	**77.36**	**329**	*e*P	**P**	**13 08 44.5**	**+0.9**
ZST	**Bratislava**	**77.36**	**329**	*e*P	**P**	**13 08 44.5**	**+0.9**
CLGH	**Cloghs, Cushen**	**77.41**	**345**	*e*P	**P**	**13 08 43.3**	**-0.4**
CLGH				IAmb	IAmb	13 08 45.4	
	comp=Z,64nm,0.7s						
UBBA	**Unterbreizbach**	**77.46**	**334**	*e*P	**P**	**13 08 43.6**	**-0.4**
	comp=Z,21nm,0.6s,baz=29,slow=5.6						
SAHE	**Sakarya_HENDEK**	**77.46**	**316**	⇑P	**P**	**13 08 45.4**	**+1.1**
COPA	**Copaceanca**	**77.47**	**322**	⇑P	**P**	**13 08 44.4**	**+0.2**
LOZB	**Loznitsa**	**77.48**	**321**	⇑P	**P**	**13 08 45.0**	**+0.7**
GZR	**Gura Zlata**	**77.49**	**324**	⇑P	**P**	**13 08 44.7**	**+0.3**
GZR	**Gura Zlata**	**77.49**	**324**	P	**P**	**13 08 44.7**	**+0.3**
KASTN	**Kahler Asten**	**77.59**	**336**	*e*P	**P**	**13 08 44.7**	**-0.1**
	comp=Z,36nm,0.9s,baz=29,slow=5.6						
HPK	**Haverah Park**	**77.60**	**342**	*e*P	**P**	**13 08 45.2**	**+0.5**
HPK				IAmb	IAmb	13 08 46.6	
	comp=Z,172nm,0.6s						
IDGL	**Inch Island, C**	**77.66**	**346**	P	**P**	**13 08 44.6**	**-0.5**
ROTZ	**Rotzenmuhle**	**77.69**	**333**	*e*P	**P**	**13 08 45.5**	**+0.1**
	comp=Z,12nm,1.1s,baz=29,slow=5.6						
BUG	**Bochum--Univer**	**77.71**	**336**	*e*P	**P**	**13 08 45.0**	**-0.4**
	comp=Z,54nm,0.9s,baz=29,slow=5.6						
BZS	**Buzias**	**77.78**	**325**	⇓P	**P**	**13 08 46.3**	**+0.4**
BZS	**Buzias**	**77.78**	**325**	P	**P**	**13 08 46.3**	**+0.4**
KHC	**Kasperske Hory**	**77.79**	**332**	*e*P	**P**	**13 08 45.0**	**-1.0**
KHC	**Kasperske Hory**	**77.79**	**332**	*e*P	**P**	**13 08 45.0**	**-1.0**
SMRA	**Abu-Samra**	**77.80**	**293**	P	**P**	**13 08 46.3**	**0.0**
	SNR=5.3						
CKRC	**Cesky Krumlov**	**77.81**	**331**	*e*P	**P**	**13 08 46.5**	**+0.4**
CKRC	**Cesky Krumlov**	**77.81**	**331**	*e*P	**P**	**13 08 46.5**	**+0.4**
VLAD	**Vladila**	**77.93**	**322**	⇑P	**P**	**13 08 47.9**	**+1.1**
GEC2	**GERESS Array S**	**78.00**	**331**	*e*P	**P**	**13 08 46.9**	**-0.3**
	comp=Z,29nm,0.8s,baz=29,slow=5.6						
GERES	**GERESS Array B**	**78.00**	**331**	P	**P**	**13 08 47.2**	**0.0**
	comp=Z,13nm,0.5s,baz=38,slow=6.1,SNR=27						
	comp=Z,13nm,0.5s						
WET	**Wettzell**	**78.02**	**332**	*e*P	**P**	**13 08 47.5**	**+0.3**
	comp=Z,72nm,0.9s,baz=29,slow=5.6						
CONA	**Conrad Observa**	**78.04**	**330**	*e*P	**P**	**13 08 48.2**	**+0.8**
	comp=Z,37nm,0.7s,SNR=20						
HERR	**Herculane**	**78.06**	**324**	⇓P	**P**	**13 08 47.7**	**+0.2**
GRF	**Grafenberg Arr**	**78.07**	**333**	*e*P	**P**	**13 08 47.9**	**+0.3**
	comp=Z,119nm,0.7s,baz=29,slow=5.6						
RONA	**Rosalia, Austr**	**78.08**	**329**	*i* P	**P**	**13 08 48.5**	**+1.0**
	comp=Z,87nm,1.3s,SNR=23						
ELND	**Elena**	**78.15**	**321**	⇑P	**P**	**13 08 48.5**	**+0.5**
DJES	**Djerdap**	**78.19**	**324**	⇑P	**P**	**13 08 48.5**	**+0.2**
PLVB	**Pleven**	**78.33**	**322**	⇑P	**P**	**13 08 49.3**	**+0.3**
PUNG	**Punghina**	**78.33**	**323**	⇓P	**P**	**13 08 49.5**	**+0.5**
MDVR	**Moldovita**	**78.43**	**324**	⇑P	**P**	**13 08 49.7**	**+0.1**
MORH	**Mrgy, Hungar**	**78.45**	**327**	⇑P	**P**	**13 08 49.5**	**-0.2**
TNS	**Taunus Mts**	**78.45**	**335**	*e*P	**P**	**13 08 49.5**	**-0.2**
	comp=Z,43nm,0.8s,baz=29,slow=5.6						
ILTH	**Belurgan, Co L**	**78.46**	**345**	P	**P**	**13 08 48.6**	**-0.8**
MOA	**Molln**	**78.66**	**331**	*i* P	**P**	**13 08 50.8**	**+0.1**
	comp=Z,19nm,0.9s,SNR=6.3						
CWF	**Charnwood Fore**	**78.67**	**342**	*e*P	**P**	**13 08 50.8**	**+0.1**
CWF				IAmb	IAmb	13 08 52.5	
	comp=Z,24nm,0.6s						
BEBN	**Eben Emael**	**78.73**	**337**	*d*P	**P**	**13 08 51.0**	**-0.1**
	comp=Z,108nm,0.8s						
ARSA	**Arzberg**	**78.73**	**329**	*i* P	**P**	**13 08 51.6**	**+0.5**
	comp=Z,33nm,1.2s,SNR=19						
MPEP	**Malo Peshtene**	**78.74**	**322**	*i* P	**P**	**13 08 51.9**	**+0.7**
ELMS	**Elmsett, Ipswi**	**78.75**	**340**	*e*P	**P**	**13 08 50.7**	**-0.4**
ELMS				IAmb	IAmb	13 08 53.0	
	comp=Z,137nm,0.6s						
BTNL	**Ternell**	**78.80**	**337**	*d*P	**P**	**13 08 51.8**	**+0.3**
	comp=Z,33nm,0.9s						
MEM	**Membach**	**78.81**	**337**	*d*P	**P**	**13 08 51.1**	**-0.3**
	comp=Z,40nm,1.0s						
BSTI	**Sart Tilman**	**78.95**	**337**	*d*P	**P**	**13 08 53.1**	**+0.8**
	comp=Z,14nm,0.6s						
BIOA	**Bad Ischl, Aus**	**79.02**	**331**	*i* P	**P**	**13 08 53.0**	**+0.3**
	comp=Z,43nm,0.9s,SNR=28						
BHOU	**Houvegnez**	**79.04**	**337**	*d*P	**P**	**13 08 53.6**	**+0.8**
	comp=Z,36nm,0.9s						
UCC	**Uccle**	**79.08**	**338**	*d*P	**P**	**13 08 53.1**	**+0.2**
KOGS	**Kog**	**79.15**	**329**	*e*P	**P**	**13 08 53.2**	**-0.2**
BAND	**Balkesir-Ban**	**79.17**	**318**	⇑P	**P**	**13 08 54.6**	**+1.0**
BCLA	**Clavier**	**79.17**	**337**	*d*P	**P**	**13 08 53.2**	**-0.3**
	comp=Z,39nm,1.0s						
DSB	**Dublin**	**79.21**	**345**	P	**P**	**13 08 53.5**	**-0.1**
HLM1	**Long Mynd**	**79.21**	**343**	*e*P	**P**	**13 08 53.7**	**0.0**
HLM1				IAmb	IAmb	13 08 56.7	
	comp=Z,36nm,0.8s						
DKNS	**Dickens**	**79.23**	**53**	P	**P**	**13 08 54.8**	**+0.7**
DKNS				IAmb	IAmb	13 08 57.2	
	comp=Z,26nm,0.8s						
PGB	**Panagyurishte**	**79.23**	**322**	*i* P	**P**	**13 08 54.5**	**+0.5**
BGES	**Gesves**	**79.27**	**337**	*d*P	**P**	**13 08 53.7**	**-0.2**
	comp=Z,38nm,0.8s						
SHAO	**Shalim**	**79.30**	**285**	P	**P**	**13 08 55.1**	**+0.4**
SHAO	**Shalim**	**79.30**	**285**	P	**P**	**13 08 55.6**	**+0.9**
BOVS	**Bovan**	**79.37**	**324**	⇑P	**P**	**13 08 54.7**	**+0.1**
FUR	**Furstenfeldbru**	**79.39**	**332**	*e*P	**P**	**13 08 54.8**	**+0.1**
	comp=Z,179nm,1.3s,baz=29,slow=5.6						
SOKA	**Soboth**	**79.40**	**329**	*i* P	**P**	**13 08 55.1**	**+0.2**
	comp=Z,66nm,0.9s,SNR=36						
PERS	**Pernice**	**79.40**	**329**	*i* P	**P**	**13 08 55.1**	**+0.2**
BMRD	**Maredsous**	**79.43**	**337**	*d*P	**P**	**13 08 55.5**	**+0.7**
	comp=Z,53nm,0.9s						
RCHB	**Rochefort**	**79.43**	**337**	*d*P	**P**	**13 08 55.4**	**+0.5**
	comp=Z,28nm,1.0s						
VTS	**Vitosha**	**79.55**	**322**	*i* P	**P**	**13 08 56.7**	**+0.8**
IGLA	**Glengowla, Co**	**79.56**	**347**	P	**P**	**13 08 55.1**	**-0.3**
IGLA	**Glengowla, Co**	**79.56**	**347**	*e*P	**P**	**13 08 55.3**	**-0.2**
IGLA				IAmb	IAmb	13 08 56.6	
	comp=Z,35nm,0.7s						
LESA	**Schwarzleotal**	**79.57**	**331**	*i* P	**P**	**13 08 56.3**	**+0.5**
	comp=Z,48nm,0.7s,SNR=29						
WMOK	**Wichita Mounta**	**79.61**	**51**	P	**P**	**13 08 56.6**	**+0.5**
WMOK	**Wichita Mounta**	**79.61**	**51**	P	**P**	**13 08 56.6**	**+0.5**
WMOK				pmax	pmax		
	comp=Z,23nm,0.9s						
WLF	**Walferdange**	**79.62**	**336**	*d*P	**P**	**13 08 58.0**	**+2.1**
	comp=Z,23nm,1.0s						
RZN	**Rozhen**	**79.64**	**321**	*i* P	**P**	**13 08 57.1**	**+0.7**
KBA	**Koelnbreinsper**	**79.64**	**331**	*i* P	**P**	**13 08 56.8**	**+0.4**
	comp=Z,77nm,0.7s,SNR=61						
DOU	**Dourbes**	**79.66**	**337**	*d*P	**P**	**13 08 56.0**	**-0.1**
	comp=Z,18nm,1.2s						
OBKA	**Obir**	**79.71**	**330**	*i* P	**P**	**13 08 56.8**	**+0.2**
	comp=Z,35nm,0.8s,SNR=13						
MCH1	**Michaelchurch**	**79.73**	**343**	*e*P	**P**	**13 08 56.8**	**+0.4**
MCH1				IAmb	IAmb	13 08 58.2	
	comp=Z,72nm,0.7s						
STRD	**Stroud**	**79.76**	**342**	*e*P	**P**	**13 08 57.4**	**+0.8**
STRD				IAmb	IAmb	13 08 59.9	
	comp=Z,127nm,0.7s						
CAVK	**Edirne/Enez-Ca**	**79.80**	**319**	⇓P	**P**	**13 08 57.7**	**+0.7**
DOK	**Doka**	**79.89**	**286**	P	**P**	**13 08 58.2**	**+0.3**
	SNR=9.4						
SWN1	**Swindon**	**79.93**	**342**	*e*P	**P**	**13 08 58.2**	**+0.7**
SWN1				IAmb	IAmb	13 08 59.5	
	comp=Z,188nm,0.6s						
MYKA	**Terra Mystica**	**79.93**	**330**	*e*P	**P**	**13 08 57.5**	**-0.2**
	comp=Z,31nm,0.7s,SNR=17						
ISP	**Isparta**	**79.97**	**315**	*c*e*P*	**P**	**13 08 58.5**	**+0.4**
ISP				pmax	pmax		
	comp=Z,55nm,0.8s						
DMTO	**DMTO**	**79.97**	**285**	P	**P**	**13 08 58.5**	**+0.2**
WOL	**Wolverton**	**79.98**	**341**	*e*P	**P**	**13 08 57.7**	**-0.1**
WOL				IAmb	IAmb	13 09 00.4	
	comp=Z,155nm,0.7s						
WATA	**Walderalm**	**80.02**	**332**	*i* P	**P**	**13 08 58.7**	**+0.4**
	comp=Z,68nm,0.6s,SNR=41						
WTTA	**Wattenberg**	**80.06**	**332**	*i* P	**P**	**13 08 59.2**	**+0.6**
	comp=Z,93nm,0.7s,SNR=33						
IWEX	**Carrickbyrne,**	**80.11**	**345**	P	**P**	**13 08 58.5**	**0.0**
LJU	**Ljubljana**	**80.12**	**329**	*e*P	**P**	**13 08 58.4**	**-0.3**
RETA	**Reutte**	**80.15**	**332**	*i* P	**P**	**13 08 59.2**	**+0.3**
	comp=Z,45nm,1.0s,SNR=21						
MOTA	**Moosalm**	**80.17**	**332**	*i* P	**P**	**13 08 59.3**	**+0.2**
	comp=Z,77nm,0.8s,SNR=41						
BFO	**Black Forest**	**80.17**	**334**	*e*P	**P**	**13 08 58.5**	**-0.4**
	comp=Z,50nm,1.1s,baz=29,slow=5.6						
MMB	**Mumishta**	**80.20**	**321**	*i* P	**P**	**13 08 59.7**	**+0.5**
ABTA	**Abfaltersbach**	**80.22**	**331**	*i* P	**P**	**13 08 58.9**	**-0.3**
	comp=Z,45nm,1.2s,SNR=15						
KKB	**Krupnik**	**80.23**	**322**	*i* P	**P**	**13 08 59.7**	**+0.4**
SQTA	**Sankt Quirin**	**80.24**	**332**	*i* P	**P**	**13 08 59.8**	**+0.4**
	comp=Z,71nm,0.7s,SNR=28						
BLY	**Banja Luka**	**80.24**	**327**	⇓P	**P**	**13 08 59.6**	**+0.2**
CEY	**Cerknica**	**80.42**	**329**	*i* P	**P**	**13 08 59.9**	**-0.5**
FETA	**Feichten**	**80.57**	**332**	*e*P	**P**	**13 09 01.6**	**+0.3**
	comp=Z,40nm,0.9s,SNR=17						
DAVA	**Damuels**	**80.61**	**333**	*i* P	**P**	**13 09 01.5**	**0.0**
	comp=Z,70nm,1.0s,SNR=16						
ECH	**Echery**	**80.63**	**335**	P	**P**	**13 09 01.4**	**+0.1**
TXAR	**Lajitas Array**	**80.84**	**57**	P	**P**	**13 09 03.9**	**+1.0**
	comp=Z,21nm,0.7s,baz=297,slow=4.0,SNR=279						
TXAR				pP	**pwP**	**13 09 46.4**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=301,slow=4.3,SNR=1.6						
TXAR				PKKPbc	**PKKPbc**	**13 27 37.9**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=154,slow=4.9,SNR=4.2						
	comp=Z,21nm,0.7s						
VAY	**Valandovo**	**80.89**	**322**	*i* P	**P**	**13 09 03.5**	**+0.7**
MMAI	**Mont Meron Ar**	**81.08**	**309**	P	**P**	**13 09 05.2**	**+1.1**
	comp=Z,43nm,0.7s,baz=27,slow=12,SNR=49						
	comp=Z,43nm,0.7s						
VAL	**Valentia**	**81.13**	**347**	P	**P**	**13 09 03.7**	**-0.1**
ABTO	**Aybut**	**81.34**	**286**	P	**P**	**13 09 05.6**	**0.0**
	SNR=5.3						
PDG	**Podgorica**	**81.37**	**325**	⇑P	**P**	**13 09 05.4**	**0.0**
T42A	**Van Buren**	**81.81**	**44**	P	**P**	**13 09 07.8**	**+0.1**
T42A				IAmb	IAmb	13 09 08.8	
	comp=Z,31nm,0.8s						
CCA1	**Carmenellis**	**81.90**	**343**	*e*P	**P**	**13 09 08.0**	**0.0**
CCA1				IAmb	IAmb	13 09 09.7	
	comp=Z,78nm,0.9s						
D62A	**Allapoint, All**	**81.99**	**25**	P	**P**	**13 09 08.3**	**-0.1**
RAYN	**Ar Rayn**	**82.07**	**295**	P	**P**	**13 09 09.7**	**+0.3**
RAYN	**Ar Rayn**	**82.07**	**295**	*i* P	**P**	**13 09 10.1**	**+0.7**
	SNR=27						
RAYN	**Ar Rayn**	**82.07**	**295**	P	**P**	**13 09 10.4**	**+1.0**
RAYN	**Ar Rayn**	**82.07**	**295**	P	**P**	**13 09 10.2**	**+0.8**
JSA	**Saint Aubin**	**82.19**	**341**	*e*P	**P**	**13 09 10.0**	**+0.6**
JSA				IAmb	IAmb	13 09 11.2	
	comp=Z,36nm,0.7s						
FCAR	**Ozark Folk Cen**	**82.20**	**46**	P	**P**	**13 09 10.0**	**+0.2**
FCAR				IAmb	IAmb	13 09 10.6	
	comp=Z,43nm,0.7s						
CGM3	**Cape Girardeau**	**82.29**	**43**	P	**P**	**13 09 10.2**	**0.0**
PBMO	**Poplar Bluff**	**82.33**	**44**	P	**P**	**13 09 11.0**	**+0.5**
PBMO				IAmb	IAmb	13 09 11.9	
	comp=Z,46nm,0.8s						
M52A	**Chesterland**	**82.50**	**35**	P	**P**	**13 09 11.4**	**+0.1**
LCAR	**Lake Charles**	**82.54**	**45**	P	**P**	**13 09 11.8**	**+0.2**
NCB	**Newcomb**	**83.10**	**30**	P	**P**	**13 09 13.7**	**-0.6**
WCI	**Wyandotte Cave**	**83.11**	**40**	P	**P**	**13 09 15.2**	**+0.7**
WCI				PcP	**PcP**	**13 09 19.8**	**+1.1**
WCI				sP	**sP**	**13 10 14.3**	**-0.6**
N53A	**Lisbon**	**83.33**	**35**	P	**P**	**13 09 15.5**	**-0.1**
N53A				IAmb	IAmb	13 09 16.7	
	comp=Z,43nm,0.9s						
H62A	**Milan**	**83.59**	**27**	P	**P**	**13 09 16.9**	**+0.1**
ACCN	**Adirondack Com**	**83.81**	**29**	P	**P**	**13 09 17.7**	**-0.2**
MATE	**Matera**	**83.90**	**325**	⇑P	**P**	**13 09 18.5**	**+0.1**
O54A	**Avella**	**84.05**	**35**	P	**P**	**13 09 19.9**	**+0.7**
O54A				IAmb	IAmb	13 09 20.5	
	comp=Z,38nm,0.7s						
G65A	**Princeton**	**84.13**	**25**	P	**P**	**13 09 19.6**	**+0.1**
G65A				IAmb	IAmb	13 09 20.8	
	comp=Z,40nm,1.1s						
K62A	**Royalston**	**84.93**	**29**	P	**P**	**13 09 23.8**	**+0.2**
TIP	**Timpagrande**	**85.13**	**324**	⇓P	**P**	**13 09 25.4**	**+0.6**
HRV	**Adam Dziewonsk**	**85.30**	**29**	P	**P**	**13 09 25.8**	**+0.3**
HRV				IAmb	IAmb	13 09 27.0	
	comp=Z,33nm,1.0s						
HRV	**Adam Dziewonsk**	**85.30**	**29**	P	**P**	**13 09 25.8**	**+0.3**
HRV				pmax	pmax		
	comp=Z,33nm,1.0s						
HRV	**Adam Dziewonsk**	**85.30**	**29**	P	**P**	**13 09 25.7**	**+0.3**
HRV				pP	**pP**	**13 10 07.3**	**-0.5**
WES	**Weston**	**85.49**	**28**	P	**P**	**13 09 26.6**	**+0.3**
WES				IAmb	IAmb	13 09 27.8	
	comp=Z,39nm,0.8s						
WES	**Weston**	**85.49**	**28**	P	**P**	**13 09 26.6**	**+0.3**
WES				pmax	pmax		
	comp=Z,39nm,0.8s						
SWET	**Sewanee**	**85.74**	**42**	P	**P**	**13 09 27.5**	**-0.3**
SWET				IAmb	IAmb	13 09 28.8	
	comp=Z,49nm,0.7s						
W50A	**Signal Mountai**	**86.05**	**41**	P	**P**	**13 09 29.4**	**+0.1**
W50A				IAmb	IAmb	13 09 30.5	
	comp=Z,26nm,0.8s						
CPCT	**Cooper Cave**	**86.20**	**41**	P	**P**	**13 09 30.0**	**0.0**
CPCT				IAmb	IAmb	13 09 31.3	
	comp=Z,26nm,0.8s						
TOZ	**Tahuroa Road**	**86.45**	**159**	P	**P**	**13 09 32.7**	**+1.9**
U54A	**Nelsons Funny**	**86.52**	**38**	P	**P**	**13 09 31.6**	**-0.1**
U54A				IAmb	IAmb	13 09 33.5	
	comp=Z,32nm,1.0s						
BLA	**Blacksburg**	**86.54**	**37**	P	**P**	**13 09 32.1**	**+0.4**
BLA				IAmb	IAmb	13 09 33.1	
	comp=Z,53nm,1.2s						
BLA	**Blacksburg**	**86.54**	**37**	P	**P**	**13 09 32.1**	**+0.4**
BLA				pmax	pmax		
	comp=Z,53nm,1.2s						
BKZ	**Black Stump Fm**	**88.06**	**159**	P	**P**	**13 09 38.6**	**+0.1**
QRZ	**Quartz Range**	**88.69**	**162**	P	**P**	**13 09 42.5**	**+1.1**
MRZ	**Mangatainoka R**	**89.24**	**160**	P	**P**	**13 09 44.7**	**+0.7**
NNZ	**Nelson**	**89.26**	**161**	P	**P**	**13 09 45.4**	**+1.4**
X58A	**Rowland**	**89.26**	**38**	P	**P**	**13 09 45.0**	**+0.5**
X58A				IAmb	IAmb	13 09 46.0	
	comp=Z,34nm,0.8s						
MRNZ	**Matariki Terra**	**89.29**	**162**	P	**P**	**13 09 45.3**	**+1.1**
DSZ	**Denniston Nort**	**89.42**	**163**	P	**P**	**13 09 46.6**	**+1.8**
TCW	**Tory Channel**	**89.45**	**161**	P	**P**	**13 09 45.6**	**+0.7**
TUWZ	**Tuamarina**	**89.58**	**161**	P	**P**	**13 09 46.0**	**+0.4**
THZ	**Tophouse**	**89.67**	**162**	P	**P**	**13 09 47.0**	**+0.9**
MSWZ	**Moikau Station**	**89.88**	**160**	P	**P**	**13 09 47.9**	**+0.9**
PLWZ	**Palliser**	**90.02**	**160**	P	**P**	**13 09 48.7**	**+1.1**
PBRG	**Braganca**	**90.21**	**342**	*e*P	**P**	**13 09 47.1**	**-1.8**
PBRG				*i* IAmb	IAmb	13 09 49.2	
	comp=Z,47nm,1.4s						
PGAV	**Gavieira, Arco**	**90.38**	**343**	*e*P	**P**	**13 09 48.9**	**-0.9**
PGAV				*i* IAmb	IAmb	13 09 51.7	
	comp=Z,63nm,1.4s						
LTZ	**Lake Taylor**	**90.51**	**163**	P	**P**	**13 09 51.3**	**+1.4**
POLO	**Lamas de Olo**	**90.85**	**342**	*e*P	**P**	**13 09 51.2**	**-0.8**
POLO				*i* IAmb	IAmb	13 10 19.5	
	comp=Z,15nm,1.8s						
MVO	**Moncorvo**	**90.89**	**342**	*e*P	**P**	**13 09 51.0**	**-1.1**
MVO				*i* IAmb	IAmb	13 10 04.4	
	comp=Z,26nm,2.6s						
PVRL	**Vila Real**	**90.93**	**342**	*e*P	**P**	**13 09 51.4**	**-0.9**
PVRL				*i* IAmb	IAmb	13 09 56.0	
	comp=Z,20nm,1.5s						
OXZ	**Oxford**	**90.99**	**163**	P	**P**	**13 09 53.3**	**+1.3**
OXZ				IAmb	IAmb	13 09 54.0	
	comp=Z,23nm,1.0s						
OXZ	**Oxford**	**90.99**	**163**	P	**P**	**13 09 53.3**	**+1.3**
KEST	**Kesra**	**91.03**	**328**	P	**P**	**13 09 52.9**	**0.0**
	comp=Z,9.9nm,0.6s,baz=2.7,slow=1.9,SNR=13						
	comp=Z,9.9nm,0.6s						
KEST	**Kesra**	**91.03**	**328**	P	**P**	**13 09 53.0**

H01W1	**Cape Leeuwin H**	**15.42**	**24**	T	T	13 30 17.6		
	baz=202,slow=74,SNR=80							
H01W3	**Cape Leeuwin H**	**15.42**	**23**	T	T	13 30 23.4		
	baz=202,slow=74,SNR=97							
MAW	**Mawson**	**28.45**	**214**	LR	LR	13 25 15.2		
	comp=Z,62nm,19.8s,baz=39,slow=30							
STKA	**Stephens Creek**	**31.33**	**69**	LR	LR	13 27 40.4		
	comp=Z,152nm,20.2s,baz=205,slow=32							
ASAR	**Alice Springs**	**33.32**	**50**	P	P	13 17 31.6	0.0	
	0.8nm,0.9s,baz=209,slow=8.0,SNR=7.4							
ASAR				LR	LR	13 31 00.2		
	comp=Z,42nm,18.3s,baz=280,slow=36							
	0.8nm,0.9s							
FITZ	**Fitzroy Crossi**	**34.69**	**33**	LR	LR	13 30 49.2		
	comp=Z,78nm,20.4s,baz=255,slow=34							
VNDA	**Vanda**	**34.97**	**162**	LR	LR	13 30 53.9		
	comp=Z,64nm,21.1s,baz=277,slow=34							
WRA	**Warramunga Arr**	**36.69**	**47**	P	P	13 18 00.3	-0.2	
	1.1nm,1.0s,baz=204,slow=8.0,SNR=2.7							
	1.1nm,1.0s							
BOSA	**Boshof**	**63.54**	**256**	LR	LR	13 43 32.3		
	comp=Z,43nm,18.4s,baz=184,slow=31							
PMSA	**Palmer Station**	**66.02**	**184**	LR	LR	13 51 49.6		
	comp=Z,50nm,18.4s,baz=310,slow=37							
JHJ	**Hachijo jima 2**	**87.19**	**27**	LR	LR	14 02 27.9		
	comp=Z,114nm,19.8s,baz=60,slow=36							
H10S2	**ASCENSION HYDR**	**02.69**	**240**	T	T	15 19 03.4		
	baz=141,slow=74,SNR=7.0							
H10S3	**ASCENSION HYDR**	**02.70**	**240**	T	T	15 19 03.7		
	baz=79,slow=74,SNR=8.0							
NVAR	**Mina Array Bea**	**146.23**	**92**	PKPbc	PKPbc	13 30 33.9	-0.3	
	0.5nm,0.6s,baz=251,slow=3.8,SNR=3.8							
TXAR	**Lajitas Array**	**149.47**	**120**	PKPbc	PKPbc	13 30 42.5	-0.5	
	0.7nm,0.8s,baz=230,slow=4.7,SNR=7.0							

AFAD ***23*** *13:15:58.3,38˚.51N×44˚.65E,h7km±1km,ML2.4*
TEH ***23*** *13:15:58.1,38˚.39N×44˚.38E,h10km±828km,ML2.5, Presumed earthquake*
ISK ***23*** *13:16:01.8,38˚.47N×44˚.45E,h5km,ML2.5/7*

ISC 23 13:16:01.1±1.1,38˚.51N±0˚.03×44˚.51E±0˚.03,h20km±7km, n19,σ1ş13/32,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**291**	P		**Pg**	**13 16 09.0**	**-1.2**
OZAP				S		**Sb**	**13 16 17.0**	**+0.6**
OZAP				IAML			13 16 19.0	
	comp=N,293nm,0.7s							
OZAP				IAML			13 16 23.0	
	comp=E,352nm,0.6s							
MAKU	**Maku**	**0.85**	**9**	Pg		**Pb**	**13 16 16.8**	**-0.5**
VMUR	**Van-Muradiye**	**0.88**	**303**	P		**Pb**	**13 16 17.0**	**-0.8**
VMUR				S		**Sn**	**13 16 32.6**	**+1.8**
VMUR				IAML			13 16 33.0	
	comp=N,80nm,0.3s							
VMUR				IAML			13 16 38.0	
	comp=E,81nm,0.3s							
VANB	**Van**	**0.89**	**276**	Pg		**Pn**	**13 16 18.2**	**-0.3**
VANB				Sg		**Sn**	**13 16 30.1**	**-0.8**
ISHB	**Shabestar**	**0.90**	**104**	Pg		**Pb**	**13 16 16.5**	**-1.5**
IMRD	**Marand**	**0.95**	**77**	Pg		**Pb**	**13 16 18.9**	**-0.1**
IMRD				Sg		**Sn**	**13 16 34.0**	**+1.3**
HAKT	**HAKKARI**	**1.14**	**214**	P		**Pn**	**13 16 21.1**	**-1.1**
HAKT				S		**Sg**	**13 16 38.9**	**+0.6**
HAKT				IAML			13 16 39.0	
	comp=N,71nm,0.4s							
HAKT				IAML			13 16 43.0	
	comp=E,88nm,0.7s							
GEVA	**Gevas**	**1.16**	**261**	P		**Pn**	**13 16 20.7**	**-1.7**
GEVA				S		**Sg**	**13 16 39.3**	**+0.5**
AKDM	**Akdamar-Van**	**1.22**	**262**	Pn		**Pn**	**13 16 22.3**	**-0.8**
ADCV	**BITLIS_Adilcev**	**1.43**	**283**	P		**Pg**	**13 16 28.8**	**+0.1**
ADCV				S		**Sg**	**13 16 49.8**	**+2.3**
CUKT	**Cukurca**	**1.45**	**210**	Pn		**Pg**	**13 16 28.5**	**-0.6**
CUKT				Sn		**Sg**	**13 16 48.0**	**0.0**
CUKT	**Cukurca**	**1.45**	**210**	P		**Pg**	**13 16 30.2**	**+1.1**
CUKT				S		**Sg**	**13 16 48.3**	**+0.3**
AGRB	**Hanur-Agry**	**1.59**	**312**	Pn		**Pg**	**13 16 31.1**	**-0.7**
AGRB				Sn		**Sg**	**13 16 52.8**	**+0.2**
KOTA	**Agri, Merkez-K**	**1.64**	**322**	P		**Pg**	**13 16 32.3**	**-0.4**
KOTA				S		**Sg**	**13 16 54.7**	**+0.5**
GNI	**Garni**	**1.65**	**6**	Pn		**Pg**	**13 16 32.8**	**0.0**
GNI				Sn		**Sg**	**13 16 55.7**	**+1.4**
PERV	**Siirt/Pervari-**	**1.65**	**251**	P		**Pg**	**13 16 33.0**	**+0.1**
PERV				S		**Sg**	**13 16 57.5**	**+3.1**
MLAZ	**Malazgirt-MUS**	**1.66**	**293**	Pn		**Pg**	**13 16 32.2**	**-0.8**
GURO	**Guroymak-BITLI**	**1.95**	**272**	Pn		**Pb**	**13 16 35.8**	**-0.1**
IHRS	**Heris**	**2.00**	**95**	Pn		**Pb**	**13 16 37.3**	**+0.4**

BJI ***23*** *13:25:37.2,28˚.45N×142˚.77E,h10km,mB5.3/35,mb4.8/77, Ms4.7/64,Ms7 4.6/64*
IDC ***23*** *13:25:38.6±0.5,28˚.54N×142˚.79E,h0km,mb4.6/25, mbtmp4.6/30,ML3.6/5,MS4.3/70,Error ellipse: s-maj=15.1km s-min=12.2km az=76.0*
MOS ***23*** *13:25:38.7±0.9,28˚.52N×142˚.69E,h10km,mb5.2/46, MS4.6/6,Error ellipse: s-maj=10.1km s-min=4.6km az=120.6*
NEIC ***23*** *13:25:40.6,28˚.51N×142˚.77E,h14km,Moment Tensor Solution. Duration: 1ş9 Moment tensor: Scale 10¹⁶Nm; Mrr3.09; Mθθ-0.44; Mϕϕ-2.64; Mrθ2.06; Mθϕ-0.10; Mϕr-3.17; Fault plane solution: Mo4.76000×10¹⁶ NP1:φs12.15000°, δ21.75000°,λ123.99000°. NP2:φs156.18000°,δ72.11000°, λ77.43000°. Principal axes: T 5.1629, Plg61.0000°, Azm48.0000°; N -0.9414, Plg12.0000°, Azm160.0000°; P -4.2215, Plg26.0000°, Azm256.0000°;*
NEIC ***23*** *13:25:40.6±1.2,28˚.51N±0˚.05×142˚.8E±0˚.1,h10km±1km, mb5.1/308,Mww5.1/19 Error ellipse: s-maj=17.1km s-min=8.9km az=97.0*
NEIC ***23*** *13:25:40.6,28˚.51N×142˚.77E,h14km*
JMA ***23*** *13:25:42.2±0.1,28˚.6N±0˚.3×14˚.3E±˚,h49km,MV4.6/32, NEAR CHICHIJIMA ISLAND*
NIED ***23*** *13:25:42.2,28˚.57N×142˚.56E,h49km,MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr3.41; Mθθ-0.43; Mϕϕ-2.98; Mrθ-1.08; Mθϕ0.33; Mϕr0.51; Fault plane solution: Mo3.40000×10¹⁶ NP1: φs185.00000°,δ41.00000°,λ111.00000°. NP2: φs338.00000°,δ52.00000°,λ73.00000°.*
GCMT ***23*** *13:25:43.6±0.2,28˚.54N±0˚.02×142˚.86E±0˚.01,h12km, MW4.9/130,Moment Tensor Solution. s46,c62; s130,c194; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.14±.05; Mθθ-0.38±.05; Mϕϕ-2.76±.05; Mrθ0.20±.22; Mθϕ-0.12±.05; Mϕr1.27±.17; Best double couple: Mo3.22000×10¹⁶ NP1:φs181.00000°,δ33.00000°, λ87.00000°. NP2:φs5.00000°,δ57.00000°,λ92.00000°. Principal axes: T 3.4090, Plg78.0000°, Azm282.0000°; N -0.3770, Plg2.0000°, Azm184.0000°; P -3.0310, Plg12.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 13:25:41.1±0.5,28˚.53N±0˚.03×142˚.75E±0˚.04,h14km±2km, h14km:pP-P,n733,σ1ş47/616,mb5.1/246,MS4.5/94, 16C-5D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.51**	**199**	P		**Pn**	**13 26 07.3**	**-0.4**
CBIJ				A		A	13 26 07.3	
	comp=N,101nm,4.9s,comp=E,104nm,6.9s							
CBIJ				eS		**Sn**	**13 26 25.8**	**-1.5**
JCJ	**Chichijima**	**1.51**	**199**	Pn		**Pn**	**13 26 06.9**	**-0.9**
	comp=E,52nm,0.3s,baz=276,slow=22,SNR=32							
JCJ				Sn		**Sn**	**13 26 25.6**	**-1.7**
	comp=E,329nm,0.3s,baz=298,slow=23,SNR=8.4							
JCJ	**Chichijima**	**1.51**	**199**			**Pn**	**13 26 07.2**	**-0.5**
JHH2	**Haha-jima-NKT2**	**1.96**	**195**	*e*P		**Pn**	**13 26 13.8**	**-0.1**
JHH2				A		A	13 26 13.8	
	comp=N,58nm,5.2s,comp=E,70nm,7.8s							
JHH2				eS		**Sn**	**13 26 37.4**	**-0.8**
JHJ2	**Mitsune**	**5.22**	**332**	eS		**Sn**	**13 27 55.7**	**-2.9**
JHJ	**Hachijo jima 2**	**5.24**	**332**	Sn		**Sn**	**13 27 53.0**	**-6.1**
	comp=E,11nm,0.3s,baz=66,slow=21,SNR=1.0							
JHJ				LR		LR	13 28 45.6	
	comp=E,3μm,19.8s,baz=104,slow=36							
BSO1	**Boso 1**	**6.29**	**347**	*e*P		**Pn**	**13 27 10.0**	**-2.9**
BSO1				S		**Sn**	**13 28 21.7**	**-2.6**
BSO3	**Boso 3**	**6.54**	**344**	*e*P		**Pn**	**13 27 15.8**	**-0.8**
BSO4	**Boso 4**	**6.76**	**343**	*e*P		**Pn**	**13 27 20.5**	**+0.7**
BSO4				*e*S		**Sn**	**13 28 34.6**	**-1.9**
JOD2	**Odawara 2**	**7.40**	**336**	P		**Pn**	**13 27 28.6**	**-0.1**
JYT	**Yasato**	**7.97**	**345**	*e*P		**Pn**	**13 27 36.7**	**+0.2**
JTNC	**Tanabenakahech**	**8.07**	**313**	*e*P		**Pn**	**13 27 41.4**	**+3.5**
JRY	**Ryogami san**	**8.14**	**337**	*e*P		**Pn**	**13 27 38.5**	**-0.4**
JRY				*e*S		**Sn**	**13 29 07.9**	**-2.8**
JAG	**Ashikaga**	**8.35**	**341**	*e*P		**Pn**	**13 27 40.0**	**-1.7**
JAG				*e*S		**Sn**	**13 29 09.3**	**-6.4**
INU	**Inuyama**	**8.36**	**326**	Pn		**Pn**	**13 27 42.8**	**+0.9**
JGF	**Kuroka**	**8.40**	**328**	Pn		**Pn**	**13 27 43.8**	**+1.3**
MJAR	**Matsushiro Arr**	**8.86**	**336**	Pn		**Pn**	**13 27 48.2**	**-0.5**
	comp=E,0.5nm,0.3s,baz=90,slow=25,SNR=34							
MJAR				LR		LR	13 30 47.4	
	comp=E,1μm,20.6s,baz=139,slow=35							
	comp=E,21nm,0.9s							
MJAR	**Matsushiro Arr**	**8.86**	**336**			**Pn**	**13 27 47.6**	**-1.1**
MAJO	**Matsushiro**	**8.86**	**336**			**Pn**	**13 27 48.5**	**-0.2**
MAJO	**Matsushiro**	**8.86**	**336**	*i* P		**Pn**	**13 27 48.5**	**-0.2**
MJB9	**Matsu-Tunnel**	**8.86**	**336**			**Pn**	**13 27 49.0**	**+0.3**
JNU	**Nakatsue**	**11.18**	**297**	Pn		**Pn**	**13 28 21.9**	**+1.4**
	comp=E,0.1nm,0.3s,baz=72,slow=7.7,SNR=3.9							
JNU				LR		LR	13 32 22.0	
	comp=E,2μm,19.8s,baz=118,slow=36							
	comp=E,39nm,1.3s							
JOW	**Kunigami**	**12.94**	**266**	LR		LR	13 32 58.4	
	comp=E,1μm,21.3s,baz=58,slow=34							
TJN	**Taejon**	**15.15**	**305**			**Pn**	**13 29 14.3**	**-0.3**
TJN	**Taejon**	**15.15**	**305**	P		**Pn**	**13 29 14.3**	**-0.3**
TJN				pmax	pmax			
	comp=Z,623nm,1.8s							
KSRS	**Korea Array**	**15.28**	**309**	Pn		**Pn**	**13 29 15.4**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=114,slow=13,SNR=14							
KSRS				LR		LR	13 35 18.4	
	comp=Z,1μm,18.4s,baz=125,slow=38							
	comp=Z,5.5nm,1.0s							
KSAR	**Wonju Array Be**	**15.30**	**309**			**Pn**	**13 29 17.1**	**+0.5**
KSAR	**Wonju Array Be**	**15.30**	**309**	P		**Pn**	**13 29 17.1**	**+0.5**
ASAJ	**Asahikawa**	**15.56**	**360**	Pn		**Pn**	**13 29 17.7**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=199,slow=12,SNR=7.2							
ASAJ				LR		LR	13 36 17.0	
	comp=Z,1μm,20.9s,baz=172,slow=41							
	comp=Z,4.4nm,0.3s							
INCN	**Inchon**	**16.18**	**308**	P		**P**	**13 29 31.9**	**+0.7**
PSTR	**Posyet**	**17.09**	**329**	*i* P		**Pn**	**13 29 40.5**	**+1.0**
TEY	**Ternei**	**17.18**	**345**	*e*P		P	13 29 50.6	+8.4
USRK	**Ussuriysk Ar.**	**17.85**	**334**	P		**Pn**	**13 29 47.7**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=159,slow=11,SNR=14							
	comp=Z,17nm,1.0s							
YOJ	**Yonaguni jima**	**18.12**	**262**			**Pn**	**13 29 50.9**	**-1.6**
YOJ	**Yonaguni jima**	**18.12**	**262**	P		**Pn**	**13 29 50.9**	**-1.6**
YOJ				pmax	pmax			
	comp=Z,106nm,1.1s							
YSS	**Yuzhno-Sakhali**	**18.39**	**0**	*e*P		**P**	**13 29 55.6**	**0.0**
YSS				*e*S		**Sn**	**13 33 16.1**	**-4.7**
YSS				pmax	pmax			
	comp=Z,30nm,1.0s							
YSS				MLR	MLR			
	comp=Z,2μm,15.0s							
SSE	**Sheshan**	**18.88**	**283**	P		**P**	**13 29 59.5**	**-1.6**
SSE				S		**Sn**	**13 33 33.6**	**+0.8**
SSE				pmax	pmax			
	comp=Z,81nm,4.5s							
SSE				LR	LR			
	comp=Z,310nm,16.8s							
SSE				LR	LR			
	comp=Z,220nm,17.2s							
MDJ	**Mudanjiang**	**19.18**	**330**			**P**	**13 30 03.9**	**-0.3**
MDJ				IAmb	IAmb		13 30 17.8	
	comp=Z,136nm,1.4s							
MDJ	**Mudanjiang**	**19.18**	**330**	P		**P**	**13 30 04.0**	**-0.2**
MDJ				PP		**PnPn**	**13 30 16.8**	**-1.2**
MDJ				S		**Sn**	**13 33 37.1**	**-2.7**
MDJ				SS		**SnSn**	**13 33 56.3**	**+2.3**
MDJ				pmax	pmax			
	comp=Z,61nm,1.9s							
MDJ				LR	LR			
	comp=Z,2μm,16.5s							
MDJ				LR	LR			
	comp=Z,1μm,11.7s							
MDJ				LR	LR			
	comp=Z,1μm,15.1s							
TATO	**Taipei**	**19.31**	**264**	P		**P**	**13 30 06.2**	**+0.4**
TATO	**Taipei**	**19.31**	**264**	P		**Pn**	**13 30 08.4**	**+1.5**
NACB	**Ninganchiao**	**19.44**	**262**	P		**Pn**	**13 30 08.7**	**+0.3**
YHNB	**Yeheng**	**19.49**	**264**			**P**	**13 30 08.3**	**+0.4**
YHNB				IAmb	IAmb		13 30 15.9	
	comp=Z,136nm,1.4s							
YHNB	**Yeheng**	**19.49**	**264**	P		**Pn**	**13 30 09.2**	**+0.1**
YULB	**Yu-li**	**19.95**	**260**	P		**Pn**	**13 30 14.5**	**0.0**
SSLB	**Suanglung**	**20.12**	**261**			**P**	**13 30 15.5**	**+0.9**
SSLB	**Suanglung**	**20.12**	**261**	P		Pn	13 30 17.4	+0.9
TWGBT	**Beinan**	**20.33**	**259**	P		Pn	13 30 21.3	+2.3
TWG	**Pinlang**	**20.34**	**259**	P		**P**	**13 30 16.7**	**-0.3**
DL2	**Dalian**	**20.34**	**306**	P		**P**	**13 30 16.8**	**-0.2**
DL2				S		**S**	**13 34 01.8**	**-2.8**
DL2				pmax	pmax			
	comp=Z,52nm,1.2s							
DL2				pmax	pmax			
	comp=Z,500nm,6.1s							
DL2				LR	LR			
	comp=Z,1μm,16.0s							
DL2				LR	LR			
	comp=Z,2μm,16.7s							
DL2				LR	LR			
	comp=Z,2μm,16.5s							
TPUB	**Ta-pu**	**20.55**	**260**			**P**	**13 30 20.3**	**+0.9**
TPUB				IAmb	IAmb		13 30 25.3	
	comp=Z,194nm,1.3s							
TPUB	**Ta-pu**	**20.55**	**260**	P		**P**	**13 30 20.9**	**+1.5**
CN2	**Changchun**	**20.61**	**322**	*e*P		Pn	13 30 23.0	+0.9
CN2				*e*S		pwP	13 30 30.0	+0.6
CN2				eS		**S**	**13 34 09.0**	**-0.8**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,300nm,5.0s							
CN2				LR	LR			
	comp=Z,1μm,11.0s							
CN2				LR	LR			
	comp=Z,500nm,11.0s							
CN2				LR	LR			
	comp=Z,600nm,12.0s							
NJ2	**Nanjing**	**20.92**	**286**	*e*P		**P**	**13 30 22.0**	**-1.3**
NJ2				sP		**pwP**	**13 30 33.8**	**+2.8**
NJ2				S		**S**	**13 34 13.5**	**-2.6**
NJ2				pmax	pmax			
	comp=Z,50nm,1.0s							
NJ2				pmax	pmax			
	comp=Z,650nm,3.7s							
NJ2				LR	LR			
	comp=Z,700nm,12.8s							
NJ2				LR	LR			
	comp=Z,400nm,12.8s							
NJ2				LR	LR			
	comp=Z,750nm,14.2s							
BNX	**BinXian**	**21.02**	**329**	⇓P		**P**	**13 30 24.5**	**+0.2**
BNX				S		Sn	13 34 21.8	-2.4
BNX				pmax	pmax			
	comp=Z,82nm,1.4s							
BNX				pmax	pmax			
	comp=Z,700nm,4.1s							
BNX				LR	LR			
	comp=Z,1μm,14.9s							
BNX				LR	LR			
	comp=Z,1μm,16.2s							
BNX				LR	LR			
	comp=Z,760nm,16.0s							
QZH2	**Quanzhou**	**21.85**	**266**	P		**P**	**13 30 35.8**	**+2.5**
QZH2				S		**S**	**13 34 36.6**	**+2.0**
QZH2				LR	LR			
	comp=Z,930nm,14.1s							
QZH2				LR	LR			
	comp=Z,680nm,12.4s							
TYV	**Tymovskoe**	**22.31**	**360**	*e*P		**P**	**13 30 42.5**	**+4.5**
TYV				pmax	pmax			
	comp=Z,200nm,4.3s							
TYV				pmax	pmax			
	comp=Z,19nm,1.3s							
KLR	**Kul'dur**	**22.33**	**341**	P		**P**	**13 30 38.8**	**+0.6**
	comp=Z,9.5nm,0.8s,baz=149,slow=9.9,SNR=18							
	comp=Z,9.5nm,0.8s							
KLR	**Kul'dur**	**22.33**	**341**	*ce*P		**P**	**13 30 39.5**	**+1.2**
KLR				pmax	pmax			
	comp=Z,9.0nm,1.7s							
GRNR	**Gornyy**	**22.72**	**350**	⇓*i*P		**P**	**13 30 43.5**	**+1.0**
GRNR				pmax	pmax			
	comp=Z,10.0nm,1.0s							
TIA	**Tai'an**	**22.91**	**296**	P		**P**	**13 30 43.3**	**-1.3**
TIA				pmax	pmax			
	comp=Z,19nm,1.2s							
TIA				LR	LR			
	comp=Z,720nm,12.4s							
TIA				LR	LR			
	comp=Z,660nm,12.0s							
TIA				LR	LR			
	comp=Z,1μm,15.8s							
H11N2	**WAKE ISLAND Hy**	**23.68**	**106**	T	T	13 55 53.6		
	baz=297,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy**	**23.68**	**106**	T	T	13 55 52.5		
	baz=297,slow=75,SNR=12							
H11N3	**WAKE ISLAND Hy**	**23.70**	**106**	T	T	13 55 54.2		
	baz=297,slow=75,SNR=14							
SKR	**Severo-Kuril's**	**24.33**	**21**	*e*P		**P**	**13 31 03.5**	**+5.3**
SKR				pmax	pmax			
	comp=Z,800nm,3.8s							
HEH	**HeiHe**	**24.63**	**336**	*e*P		**P**	**13 31 01.3**	**+0.4**
HEH				sP		**sP**	**13 31 05.5**	**+0.3**
HEH				S		**S**	**13 35 24.3**	**+2.6**
HEH				SS		**SnSn**	**13 36 11.4**	**+4.1**
HEH				pmax	pmax			
	comp=Z,31nm,1.2s							
HEH				pmax	pmax			
	comp=Z,920nm,4.8s							
HEH				LR	LR			
	comp=Z,2μm,15.2s							
HEH				LR	LR			
	comp=Z,1μm,16.3s							
HEH				LR	LR			
	comp=Z,840nm,17.3s							
BJI2	**Beijing**	**24.68**	**305**	P		**P**	**13 30 59.4**	**-2.2**
BJI2				S		**S**	**13 35 16.0**	**-6.8**
BJI2				pmax	pmax			
	comp=Z,10.0nm,1.2s							
BJI2				LR	LR			
	comp=Z,520nm,16.1s							
BJI2				LR	LR			
	comp=Z,600nm,18.8s							
BJI2				LR	LR			
	comp=Z,830nm,19.6s							
BJT	**Baijiatuan**	**24.68**	**305**	IAmb	IAmb		13 31 11.9	
	comp=Z,58nm,1.4s							
WHN	**Wuhan**	**24.76**	**282**	P		**P**	**13 31 00.9**	**-1.5**
WHN				LR	LR			
	comp=Z,2μm,14.0s							
WHN				LR	LR			
	comp=Z,2μm,14.0s							
WHN				LR	LR			
	comp=Z,3μm,12.2s							
HNS	**HongShan**	**25.06**	**298**	⇓P		**P**	**13 31 02.9**	**-2.1**
HNS				S		**S**	**13 35 27.3**	**-1.6**
HNS				SS		**SnSn**	**13 36 29.9**	**+12**
HNS				pmax	pmax			
	comp=Z,17nm,1.9s							
HNS				LR	LR			
	comp=Z,640nm,14.0s							
HNS				LR	LR			
	comp=Z,1μm,15.7s							
HNS				LR	LR			
	comp=Z,1μm,15.1s							
XLT	**XiLinHaoTe**	**26.27**	**313**	*e*P		**P**	**13 31 14.8**	**-1.2**
XLT				sP		pwP	13 31 21.5	-3.5
XLT				PP		**PnPn**	**13 31 56.5**	**+1.4**
XLT				PcP		**PcP**	**13 34 43.8**	**+1.5**
XLT				S		**S**	**13 35 48.8**	**+0.6**
XLT				SS		**SnSn**	**13 36 54.6**	**+6.8**
XLT				pmax	pmax			
	comp=Z,21nm,1.3s							
XLT				pmax	pmax			
	comp=Z,460nm,5.5s							
XLT				LR	LR			
	comp=Z,79nm,14.9s							
XLT				LR	LR			
	comp=Z,780nm,16.2s							
XLT				LR	LR			
	comp=Z,690nm,21.3s							
LYN	**LuoYang**	**26.43**	**291**	*e*P		**P**	**13 31 15.1**	**-2.4**
LYN				pmax	pmax			
	comp=Z,16nm,0.6s							
LYN				pmax	pmax			
	comp=Z,390nm,6.8s							
LYN				LR	LR			
	comp=Z,630nm,12.2s							
LYN				LR	LR			
	comp=Z,1μm,19.6s							
LYN				LR	LR			
	comp=Z,2μm,21.1s							
DAV	**Davao City (W)**	**26.81**	**221**	LR		LR	13 40 14.6	
	comp=Z,659nm,21.7s,baz=85,slow=33							
PETK	**Petropavlovsk-**	**26.93**	**20**	LR		LR	13 42 46.7	
	comp=Z,642nm,20.1s,baz=209,slow=38							
HIA	**Hailar**	**27.18**	**326**	P		**P**	**13 31 23.5**	**-0.7**
HIA				IAmb	IAmb		13 31 39.5	
	comp=Z,84nm,1.4s							
HIA	**Hailar**	**27.18**	**326**	*i* P		**P**	**13 31 24.7**	**+0.6**
HIA				pmax	pmax			
	comp=Z,39nm,1.1s							
HILR	**Hailar Array B**	**27.37**	**326**	P		**P**	**13 31 25.0**	**-0.9**
	comp=Z,52nm,1.1s,baz=139,slow=12,SNR=26							
	comp=Z,52nm,1.1s							
ZEA	**Zeya**	**27.63**	**340**	*e*P		**P**	**13 31 28.9**	**+0.8**
ZEA				*e*			13 42 12.1	
ZEA				pmax	pmax			
	comp=E,10.0nm,1.1s							
ZEA				pmax	pmax			
	comp=N,20nm,1.6s							
ZEA				pmax	pmax			
	comp=Z,40nm,1.6s							
HHC	**Hu-ho-hao-te**	**28.28**	**304**	⇑*i*P		**P**	**13 31 33.8**	**-0.4**
HHC				sP		pwP	13 31 45.3	+2.1
HHC				pmax	pmax			
	comp=Z,17nm,1.1s							
HHC				pmax	pmax			
	comp=Z,170nm,5.7s							
HHC				LR	LR			
	comp=Z,400nm,18.2s							
HHC				LR	LR			
	comp=Z,1μm,19.0s							
HHC				LR	LR			
	comp=Z,2μm,19.0s							
XAN	**Xi'an**	**29.34**	**289**	P		**P**	**13 31 41.1**	**-2.5**
XAN				S		**S**	**13 36 33.8**	**-2.9**
XAN				pmax	pmax			
	comp=Z,32nm,1.4s							
XAN				pmax	pmax			
	comp=Z,150nm,3.8s							
XAN				LR	LR			
	comp=Z,1μm,16.0s							
XAN				LR	LR			
	comp=Z,1μm,12.7s							
XAN				LR	LR			
	comp=Z,2μm,13.6s							
BTO2	**Baotou**	**29.49**	**303**	*e*P		**P**	**13 31 44.3**	**-0.6**
BTO2				pP		**sP**	**13 31 48.8**	**-0.2**
BTO2				sP		**pwP**	**13 31 51.5**	**-2.5**
BTO2				S		**S**	**13 36 37.5**	**-1.6**
BTO2				sS		**sS**	**13 36 46.1**	**+2.1**
BTO2				SS		**SnSn**	**13 38 10.3**	**+3.9**
BTO2				pmax

MA2 pmax pmax
comp=Z,14nm,1.3s
MA2 Magadan 31.52 8 P **P** **13 32 03.0 +0.5**
comp=Z,14nm,2.1s
MNI Manado 31.91 216 P **P** **13 32 06.9 +0.6**
GYA Guiyang 32.00 275 ⇑P **P** **13 32 05.6 -1.6**
GYA pmax pmax
comp=Z,45nm,1.1s
SHEM Shemya Is, Ala 33.47 35 LR LR 13 44 32.3
comp=Z,534nm,20.1s,baz=242,slow=34
GTOI Gorontalo 33.55 218 P **P** **13 32 17.7 -3.0**
comp=Z,49nm,1.2s
LZH Lanzhou 33.56 293 *e*P **P** **13 32 19.1 -1.8**
LZH sP pwP 13 32 26.8 -3.2
LZH S **S** **13 37 36.6 -6.2**
LZH pmax pmax
comp=Z,12nm,1.1s
LZH LR LR
comp=Z,600nm,14.1s
LZH LR LR
comp=Z,1μm,15.8s
LZH LR LR
comp=Z,1μm,16.1s
ULN Ulaanbaatar 33.65 315 P **P** **13 32 21.6 +0.1**
ULN Ulaanbaatar 33.65 315 P **P** **13 32 21.6 +0.1**
ULN pmax pmax
comp=Z,56nm,1.3s
ULN Ulaanbaatar 33.65 315 P **P** **13 32 22.2 +0.7**
ULN Ulaanbaatar 33.65 315 P **P** **13 32 21.5 +0.1**
LZDM Lanzhou Array 33.68 293 P **P** **13 32 20.5 -1.5**
comp=Z,0.6nm,0.3s,baz=95,slow=12,SNR=8.9
LZDM LR LR 13 47 00.5
comp=Z,505nm,20.2s,baz=80,slow=38
comp=Z,0.6nm,0.3s
CD2 Chengdu 33.83 284 P **P** **13 32 21.6 -1.5**
CD2 pP pP 13 32 25.3 -0.7
CD2 sP sP 13 32 26.4 -0.8
CD2 S **S** **13 37 39.5 -7.4**
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,250nm,7.4s
CD2 LR LR
comp=Z,2μm,13.7s
CD2 LR LR
comp=Z,1μm,12.7s
CD2 LR LR
comp=Z,1μm,14.9s
SONM Songino Array 34.05 314 P **P** **13 32 24.5 -0.4**
comp=Z,22nm,1.2s,baz=128,slow=7.8,SNR=38
SONM LR LR 13 47 02.1
comp=Z,920nm,18.1s,baz=126,slow=38
comp=Z,22nm,1.2s
SONM Songino Array 34.05 314 P **P** **13 32 24.2 -0.7**
SONM IAmb IAmb 13 32 39.3
comp=Z,69nm,1.9s
MRSI Marisa 34.27 219 P **P** **13 32 25.0 -1.9**
comp=Z,1μmcomp=Z,81nm,1.5s
SANI Sanana 34.40 211 P **P** **13 32 25.1 -2.9**
comp=Z,31nm,1.4s
TOLI2 Tolitoli 34.41 221 P **P** **13 32 27.3 -0.8**
TOLI2 IAmb IAmb 13 32 40.9
comp=Z,42nm,1.2s
KRAI Karang Ratu 34.54 206 P **P** **13 32 29.8 +0.5**
comp=Z,49nm,1.4s
YAK Yakutsk 34.60 349 LR LR 13 47 56.0
comp=Z,360nm,21.0s,baz=127,slow=39
YAK Yakutsk 34.60 349 P **P** **13 32 28.1 -1.2**
YAK Yakutsk 34.60 349 *e*P **P** **13 32 28.5 -0.8**
YAK *e**PP **pwP** **13 32 37.3 -1.2**
YAK *e* 13 33 40.0
YAK *e*PPP PPP 13 33 57.8
YAK *e* 13 35 05.1
YAK *e*S **S** **13 37 57.5 -0.4**
YAK *e*SSS SSS 13 40 39.9
YAK *e* 13 42 49.6
YAK pmax pmax
comp=Z,25nm,1.5s
YAK pmax pmax
comp=N,12nm,1.6s
YAK pmax pmax
comp=E,2.0nm,1.6s
YAK pmax pmax
comp=Z,336nm,4.8s
YAK pmax pmax
comp=N,217nm,4.8s
YAK pmax pmax
comp=E,173nm,4.6s
YAK smax smax
comp=N,290nm,6.2s
YAK smax smax
comp=E,328nm,5.5s
YAK MLR MLR
comp=Z,412nm,17.0s
YAK MLR MLR
comp=N,153nm,14.0s
YAK MLR MLR
comp=E,208nm,13.0s
SEY Seymchan 34.98 8*ce*P **P** **13 32 33.4 +0.8**
SEY pmax pmax
comp=Z,22nm,1.7s
LUWI Luwuk 35.09 216 P **P** **13 32 31.5 -2.5**
APSI Ampana 35.58 218 P **P** **13 32 37.2 -1.0**
comp=Z,70nm,1.2s
KMI2 Kunming 35.74 274 P **P** **13 32 39.8 -0.1**
KMI2 S **S** **13 38 16.1 -0.6**
KMI2 pmax pmax
comp=Z,33nm,1.5s
KMI2 LR LR
comp=Z,360nm,13.2s
KMI2 LR LR
comp=Z,600nm,19.5s
KMI2 LR LR
comp=Z,650nm,20.9s
PZH PanZhiHua 36.30 277 P **P** **13 32 44.0 -0.5**
PZH PP PP **13 34 10.5 +3.4**
PZH S **S** **13 38 21.8 -3.3**
PZH PcS **PcS** **13 38 56.3 -1.0**
PZH pmax pmax
comp=Z,60nm,1.3s
PZH pmax pmax
comp=Z,290nm,4.8s
PZH LR LR
comp=Z,300nm,14.3s
PZH LR LR
comp=Z,450nm,15.5s
PZH LR LR
comp=Z,620nm,17.7s
ZAK Zakamensk 36.88 317 *e*P **P** **13 32 49.1 -0.1**
ZAK pmax pmax
comp=Z,71nm,1.7s
GTA2 Gaotai 36.96 299 P **P** **13 32 48.8 -1.3**
GTA2 S **S** **13 38 29.3 -5.7**
GTA2 pmax pmax
comp=Z,18nm,1.4s
GTA2 LR LR
comp=Z,630nm,17.1s
GTA2 LR LR
comp=Z,550nm,18.9s
GTA2 LR LR
comp=Z,840nm,17.4s
IRK Irkutsk 37.03 321 *e*P **P** **13 32 51.2 +0.8**
IRK pmax pmax
comp=Z,136nm,2.4s
TLY Talaya 37.16 319 P **P** **13 32 51.9 +0.4**
TLY IAmb IAmb 13 33 05.8
comp=Z,62nm,1.2s
TLY Talaya 37.16 319*ce*P **P** **13 32 51.1 -0.4**
TLY pmax pmax
comp=Z,62nm,1.3s
TLY Talaya 37.16 319 P **P** **13 32 53.5 +2.0**
PMG Port Moresby 37.95 173 LR LR 13 48 37.5
comp=Z,150nm,18.4s,baz=356,slow=36
MOY Mondy 38.69 318 *e*P **P** **13 33 05.1 +0.6**
MOY pmax pmax
comp=Z,60nm,1.4s
TNCH TengChong 39.47 276 P **P** **13 33 10.6 -0.8**
TNCH S **S** **13 39 12.1 -1.3**
TNCH pmax pmax
comp=Z,100nm,1.2s
TNCH pmax pmax
comp=Z,210nm,3.6s
TNCH LR LR
comp=Z,380nm,17.6s
TNCH LR LR
comp=Z,340nm,18.4s

TNCH LR LR
comp=Z,1μm,17.5s
KAPI Kappang 40.03 217 LR LR 13 48 33.9
comp=Z,210nm,21.9s,baz=42,slow=34
GOMU GeErMu 40.87 293 P **P** **13 33 21.8 -1.3**
GOMU PP **PP** **13 34 55.9 -1.3**
GOMU S **S** **13 39 31.8 -2.6**
GOMU pmax pmax
comp=Z,28nm,1.2s
GOMU LR LR
comp=Z,500nm,19.4s
GOMU LR LR
comp=Z,300nm,17.3s
GOMU LR LR
comp=Z,480nm,14.0s
CHTO Chiang Mai 41.08 266 P **P** **13 33 23.4 -1.1**
CHTO Chiang Mai 41.08 266 P **P** **13 33 23.4 -1.1**
CHTO pmax pmax
comp=Z,30nm,1.2s
CHTO Chiang Mai 41.08 266 P **P** **13 33 24.8 +0.2**
CHTO Chiang Mai 41.08 266 P **P** **13 33 22.9 -1.7**
CMAR Chiang Mai Arr 41.21 266 P **P** **13 33 25.6 -0.1**
comp=Z,6.5nm,1.1s,baz=57,slow=7.7,SNR=32
CMAR LR LR 13 49 59.2
comp=Z,265nm,21.8s,baz=75,slow=35
comp=Z,6.5nm,1.1s
CMAR Chiang Mai Arr 41.21 266 P **P** **13 33 24.9 -0.8**
HNR Honiara 41.24 154 LR LR 13 48 34.9
comp=Z,13nm,19.4s,baz=44,slow=33
BILL Bilibino 41.95 13 P **P** **13 33 30.8 -0.3**
BILL Bilibino 41.95 13*ce*P **P** **13 33 31.1 0.0**
BILL pmax pmax
comp=Z,36nm,1.7s
SOEI Soe 42.04 208 P **P** **13 33 32.3 -0.3**
BATI Baumata 42.70 208 LR LR 13 51 19.3
comp=Z,271nm,19.5s,baz=9.0,slow=36
NIKH Nikolski High 42.97 42 P **P** **13 33 39.7 +0.1**
baz=255
SPIA Saint Paul Isl 43.51 35 P **P** **13 33 43.8 -0.1**
baz=249
TIXI Tiksi 43.84 354 LR LR 13 53 00.8
comp=Z,168nm,21.4s,baz=190,slow=38
TIXI Tiksi 43.84 354 P **P** **13 33 46.2 -0.1**
TIXI Tiksi 43.84 354*ce*P **P** **13 33 46.8 +0.4**
TIXI pmax pmax
comp=Z,11nm,1.7s
UNV Unalaska Valle 44.55 41 P **P** **13 33 52.1 -0.2**
baz=256
SHL Shillong 45.13 279 IAmb IAmb 13 34 09.4
comp=Z,55nm,1.4s
SHL Shillong 45.13 279 P **P** **13 33 57.6 +0.1**
SNR=20
GAMB Gambell 45.62 26 P **P** **13 34 00.5 -0.1**
GAMB IAmb IAmb 13 34 14.1
comp=Z,24nm,1.2s
GAMB Gambell 45.62 26 P **P** **13 34 01.0 +0.4**
baz=241
KULM Kulim 46.08 248 P **P** **13 34 04.8 -0.1**
KULM Kulim 46.08 248 P **P** **13 34 01.6 -3.3**
comp=Z,46nm,1.7s
WMQ Urumqi 46.16 305 *e*P **P** **13 34 05.3 0.0**
WMQ sP pwP 13 34 17.0 +2.6
WMQ PcP **PcP** **13 35 43.3 +2.2**
WMQ PP **PP** **13 35 53.5 0.0**
WMQ ScP **ScP** **13 39 34.6 +0.6**
WMQ pmax pmax
comp=Z,25nm,1.5s
WMQ LR LR
comp=Z,770nm,7.3s
WMQ LR LR
comp=Z,370nm,10.7s
BRDH Bariadhala 46.18 275 LR LR 13 55 28.3
comp=Z,209nm,19.0s,baz=50,slow=39
FALS False Pass 46.54 40 P **P** **13 34 07.5 -0.5**
baz=258
M11K Mekoryuk 46.60 32 P **P** **13 34 08.3 0.0**
M11K Mekoryuk 46.60 32 P **P** **13 34 07.7 -0.6**
baz=250
DGZ Jazzator, Alta 46.65 313 *i* P **P** **13 34 09.4 +0.2**
DGZ pmax pmax
comp=Z,59nm,1.1s
K13K Kusilvak Mount 47.82 30 P **P** **13 34 17.9 0.0**
baz=250
TNA Tin City 47.88 25 P **P** **13 34 18.7 +0.4**
TNA IAmb IAmb 13 34 21.7
comp=Z,21nm,1.3s
TNA Tin City 47.88 25 P **P** **13 34 18.3 0.0**
baz=244
M13K Dall Lake 47.95 33 P **P** **13 34 18.5 -0.4**
baz=253
ZSN Zaisan 48.20 310 *e*P **P** **13 34 21.3 +0.2**
ZSN pmax pmax
comp=Z,23nm,1.4s
ZSN Zaisan 48.20 310 *e*P **P** **13 34 21.3 +0.2**
comp=Z,23nm,1.4s
SDPT Sand Point 48.29 40 P **P** **13 34 20.9 -0.7**
baz=260
F14K Arctic Creek 48.45 26 P **P** **13 34 22.3 -0.4**
baz=246,SNR=25
CTA Charters Tower 48.45 176 LR LR 13 54 22.1
comp=Z,162nm,20.6s,baz=8.5,slow=36
ANM Nome 48.46 27 P **P** **13 34 23.0 +0.2**
ANM Nome 48.46 27 P **P** **13 34 23.0 +0.2**
ANM pmax pmax
comp=Z,43nm,1.3s
ANM Nome 48.46 27 P **P** **13 34 22.5 -0.4**
baz=248,SNR=20
L14K Kuka Creek 48.53 32 IAmb IAmb 13 34 26.9
comp=Z,26nm,1.2s
L14K Kuka Creek 48.53 32 P **P** **13 34 22.8 -0.6**
baz=253
J14K Nanvaranak Lak 48.58 30 IAmb IAmb 13 34 40.0
comp=Z,32nm,1.3s
J14K Nanvaranak Lak 48.58 30 P **P** **13 34 23.6 -0.1**
baz=251
N14K Kuskokwak Cree 48.62 34 P **P** **13 34 24.1 0.0**
baz=255
O14K Tigyukauivet M 48.66 35 IAmb IAmb 13 34 37.2
comp=Z,24nm,1.3s
O14K Tigyukauivet M 48.66 35 P **P** **13 34 23.4 -1.1**
baz=256
WB0 Warramunga Arr 48.69 190 P **P** **13 34 24.7 -0.3**
M14K Bethel 48.70 33 P **P** **13 34 24.8 0.0**
M14K Bethel 48.70 33 P **P** **13 34 24.0 -0.7**
baz=254,SNR=6.6
CHNA Chernabura Isl 48.71 41 P **P** **13 34 23.9 -1.0**
baz=262
ZAA0 Zalesovo Array 48.74 318 P **P** **13 34 25.1 0.0**
ZALV Zalesovo Beam 48.74 318 P **P** **13 34 25.1 -0.1**
comp=Z,4.3nm,0.4s,baz=87,slow=8.5,SNR=26
ZALV PcP **PcP** **13 35 49.1 -0.9**
comp=Z,4.4nm,0.8s,baz=113,slow=3.3,SNR=4.2
ZALV LR LR 13 55 40.9
comp=Z,617nm,18.2s,baz=98,slow=37
comp=Z,4.3nm,0.4s
ZALV Zalesovo Beam 48.74 318 P **P** **13 34 24.8 -0.4**
LEM Lembang 48.81 229 LR LR 13 54 53.3
comp=Z,148nm,21.7s,baz=7.5,slow=36
WRAB Tennant Creek 48.86 191 P **P** **13 34 25.9 -0.4**
WRAB Tennant Creek 48.86 191 *i* P **P** **13 34 26.1 -0.2**
WRAB pmax pmax
comp=Z,34nm,1.0s
WRA Warramunga Arr 48.87 191 P **P** **13 34 26.2 -0.3**
comp=Z,39nm,1.0s,baz=13,slow=8.3,SNR=68
comp=Z,39nm,1.0s
WRA Warramunga Arr 48.87 191 P **P** **13 34 25.0 -1.5**
PSI Prapat 48.92 247 P **P** **13 34 27.4 +0.3**
comp=Z,32nm,1.0s
G15K Niukluk 49.15 27 P **P** **13 34 27.3 -0.8**
baz=249
L15K Ungalak Mounta 49.18 31 P **P** **13 34 27.7 -0.7**
baz=254
F15K North Star Dit 49.18 26 IAmb IAmb 13 34 32.1
comp=Z,38nm,1.3s
F15K North Star Dit 49.18 26 P **P** **13 34 28.9 +0.5**
baz=247
FITZ Fitzroy Crossi 49.22 202 LR LR 13 56 01.6
comp=Z,112nm,19.7s,baz=14,slow=37
M15K Kasigluk River 49.29 33 P **P** **13 34 28.4 -0.8**
baz=256
K15K Wolf Creek Mou 49.33 31 IAmb IAmb 13 34 33.1
comp=Z,29nm,1.2s
K15K Wolf Creek Mou 49.33 31 P **P** **13 34 29.1 -0.5**
baz=253,SNR=6.3
O15K Ungalikthiuk R 49.37 35 IAmb IAmb 13 34 32.8
comp=Z,30nm,1.1s
O15K Ungalikthiuk R 49.37 35 P **P** **13 34 29.3 -0.5**
baz=258
N15K Kwethluk River 49.45 34 IAmb IAmb 13 34 33.8
comp=Z,40nm,1.2s
N15K Kwethluk River 49.45 34 P **P** **13 34 30.3 -0.2**
baz=257,SNR=5.7
H16K Elim 49.75 28 P **P** **13 34 32.5 -0.2**
baz=251
G16K Koyuk River 49.96 27 P **P** **13 34 34.4 +0.1**
baz=250
MK31 Makanchi Array 49.96 309*ce*P **P** **13 34 34.7 +0.1**
MKAR Makanchi Array 49.96 309 P **P** **13 34 34.4 -0.2**
comp=Z,2.5nm,0.6s,baz=92,slow=8.7,SNR=31
MKAR PcP **PcP** **13 35 53.8 -0.8**
comp=Z,1.3nm,0.8s,baz=84,slow=4.0,SNR=4.4
MKAR ScP **ScP** **13 39 52.3 +2.3**
comp=Z,0.6nm,0.9s,baz=75,slow=6.0,SNR=3.1
MKAR LR LR 13 56 30.6
comp=Z,762nm,20.2s,baz=80,slow=37
comp=Z,2.5nm,0.6s
MKAR Makanchi Array 49.96 309 P **P** **13 34 34.0 -0.6**
C16K Lisburne Hills 49.98 22 IAmb IAmb 13 34 48.1
comp=Z,40nm,1.2s
C16K Lisburne Hills 49.98 22 P **P** **13 34 33.4 -0.9**
baz=245
J16K Anvik River 50.02 30 IAmb IAmb 13 34 51.4
comp=Z,54nm,2.0s
J16K Anvik River 50.02 30 P **P** **13 34 34.6 -0.2**
baz=254
L16K Owhat River 50.11 32 IAmb IAmb 13 34 37.0
comp=Z,39nm,1.7s
L16K Owhat River 50.11 32 P **P** **13 34 34.9 -0.6**
baz=256
I17K Unalakleet 50.16 29 IAmb IAmb 13 34 49.6
comp=Z,39nm,1.4s
I17K Unalakleet 50.16 29 P **P** **13 34 34.6 -1.2**
baz=253,SNR=7.8
N16K Nishlik Lake 50.16 33 P **P** **13 34 34.8 -1.2**
baz=258,SNR=8.5
MAKZ Makanchi 50.17 309 P **P** **13 34 36.0 -0.2**
MAKZ Makanchi 50.17 309 P **P** **13 34 36.0 -0.2**
MAKZ pmax pmax
comp=Z,24nm,1.5s
M16K Timber Creek 50.19 33 IAmb IAmb 13 34 52.0
comp=Z,29nm,1.3s
M16K Timber Creek 50.19 33 P **P** **13 34 35.5 -0.6**
baz=257
R16K Pilot Point 50.24 37 P **P** **13 34 35.5 -0.9**
baz=261
P16K Nushagak River 50.27 35 P **P** **13 34 35.9 -0.8**
baz=260,SNR=6.0
O16K Kokwok River B 50.32 35 IAmb IAmb 13 34 40.1
comp=Z,25nm,1.3s
O16K Kokwok River B 50.32 35 P **P** **13 34 36.1 -1.0**
baz=259
D17K Noatak River 50.52 24 P **P** **13 34 38.6 +0.1**
baz=248,SNR=14
G17K Kiwalik Mounta 50.67 27 P **P** **13 34 39.1 -0.5**
baz=252,SNR=13
RDOG Red Dog Mine 50.72 23 IAmb IAmb 13 34 54.3
comp=Z,46nm,1.2s
RDOG Red Dog Mine 50.72 23 P **P** **13 34 40.2 +0.1**
baz=247,SNR=8.0
F17K Baldwin Pennin 50.74 25 IAmb IAmb 13 34 43.8
comp=Z,39nm,1.3s
F17K Baldwin Pennin 50.74 25 P **P** **13 34 39.7 -0.5**
baz=250,SNR=15
L17K Donlin 50.76 31 P **P** **13 34 39.4 -1.0**
baz=257,SNR=5.8
H17K Granite Mounta 50.79 28 P **P** **13 34 40.3 -0.3**
baz=253,SNR=8.3
C17K DeLong Mountai 50.79 23 P **P** **13 34 40.4 -0.1**
baz=247,SNR=14
O17K Koliganek Bris 50.85 34 P **P** **13 34 40.1 -1.0**
baz=260
Q16K King Salmon 50.89 36 P **P** **13 34 41.0 -0.3**
baz=261
K17K Iditarod 50.89 31 P **P** **13 34 41.3 0.0**
baz=256
R17L Mt. Peulik Vol 50.89 37 P **P** **13 34 41.1 -0.4**
baz=262
N17K Nushagak Hills 50.94 33 IAmb IAmb 13 34 45.5
comp=Z,46nm,1.3s
N17K Nushagak Hills 50.94 33 P **P** **13 34 41.4 -0.3**
baz=259
M17K Holitna River 50.99 32 P **P** **13 34 41.7 -0.5**
baz=258
P17K Kvichak River 51.08 35 P **P** **13 34 42.6 -0.2**
baz=261
CHIR Chirikof Islan 51.08 40 P **P** **13 34 42.5 -0.4**
baz=264
Q17K Contact Creek 51.23 37 P **P** **13 34 43.6 -0.5**
baz=262
E18K Tukpahlearik C 51.31 24 IAmb IAmb 13 34 59.0
comp=Z,31nm,1.2s
E18K Tukpahlearik C 51.31 24 P **P** **13 34 43.7 -0.8**
baz=250,SNR=14
F18K Selawik 51.40 26 P **P** **13 34 45.0 -0.1**
baz=252,SNR=25
H18K Honhosa River 51.48 28 IAmb IAmb 13 35 01.6
comp=Z,34nm,1.2s
H18K Honhosa River 51.48 28 P **P** **13 34 45.2 -0.6**
baz=254,SNR=12
L18K Granite Mounta 51.51 31 P **P** **13 34 45.9 -0.2**
baz=258
C18K Utukok River 51.53 23 IAmb IAmb 13 34 49.2
comp=Z,28nm,1.2s
C18K Utukok River 51.53 23 P **P** **13 34 46.4 +0.2**
baz=249
G18K Tagagawik 51.57 27 IAmb IAmb 13 34 49.6
comp=Z,50nm,1.4s
G18K Tagagawik 51.57 27 P **P** **13 34 46.7 +0.3**
baz=253,SNR=20
N18K Kilae Creek 51.60 33 IAmb IAmb 13 35 00.4
comp=Z,56nm,1.6s
N18K Kilae Creek 51.60 33 P **P** **13 34 47.3 +0.5**
baz=260
P18K Big Mountain, 51.73 35 P **P** **13 34 47.9 +0.1**
baz=262
J18K Innoko River 51.76 30 P **P** **13 34 47.8 -0.2**
baz=257
M18K Stony River 51.77 32 P **P** **13 34 48.0 0.0**
baz=260
O18K Koktuh Hills 51.80 35 P **P** **13 34 47.9 -0.4**
baz=261
SII Sitkinak Islan 51.95 39 P **P** **13 34 49.0 -0.5**
baz=265
GCSA Galena City Sc 51.99 28 P **P** **13 34 49.4 -0.2**
baz=256
SHLS Shalkode 52.17 304 *e*P **P** **13 34 48.8 -2.6**
SHLS pmax pmax
comp=Z,15nm,1.4s
SHLS Shalkode 52.17 304 *e*P **P** **13 34 48.8 -2.6**
comp=Z,14nm,1.4s
F19K Shaleruckik Mo 52.18 26 P **P** **13 34 50.8 -0.1**
baz=254
C19K Lookout Ridge 52.24 23 P **P** **13 34 50.9 -0.5**
baz=250,SNR=21
G19K Purcell Mounta 52.26 26 P **P** **13 34 51.4 -0.2**
baz=255
O19K Port Alsworth 52.29 34 P **P** **13 34 50.9 -0.9**
baz=262
N19K Bonanza Creek 52.30 33 P **P** **13 34 51.5 -0.6**
baz=261
KURK Kurchatov 52.35 314 P **P** **13 34 52.3 -0.2**
KURK Kurchatov 52.35 314 P **P** **13 34 53.0 +0.6**
KURK Kurchatov 52.35 314 P **P** **13 34 52.3 -0.2**
L19K White Mountain 52.35 32 P **P** **13 34 52.8 +0.5**
L19K IAmb IAmb 13 34 56.2
comp=Z,30nm,1.4s
L19K White Mountain 52.35 32 P **P** **13 34 51.5 -0.8**
baz=260,SNR=5.8
J19K Poorman 52.35 29 P **P** **13 34 51.7 -0.6**
baz=258,SNR=12
KURBB Kurchatov Arra 52.41 314 P **P** **13 34 53.0 +0.1**
comp=Z,36nm,1.0s,baz=89,slow=7.1,SNR=164
KURBB LR LR 13 57 55.2
comp=Z,405nm,19.2s,baz=182,slow=37
comp=Z,36nm,1.0s
Q19K Cape Douglas, 52.48 36 P **P** **13 34 52.8 -0.6**
baz=264
UZB Uzynbulak 52.49 304 *e*P **P** **13 34 53.4 -0.4**
UZB pmax pmax
comp=Z,18nm,1.4s
UZB Uzynbulak 52.49 304 *e*P **P** **13 34 53.5 -0.4**
comp=Z,18nm,1.4s
OHAK Old Harbor 52.50 38 P **P** **13 34 52.8 -0.6**
baz=265
M19K Big River Lodg 52.52 32 P **P** **13 34 52.8 -0.8**

baz=261
D19K **Kuna River** 52.55 23 P P 13 34 52.2 -1.5
baz=252
E19K **Redstone River** 52.56 25 P P 13 34 53.0 -0.7
baz=254
AS31 **Alice Springs** 52.59 190 P P 13 34 53.0 -1.5
ASAR **Alice Springs** 52.59 190 P P 13 34 54.0 -0.5
comp=Z,5.9nm,1.0s,baz=13,slow=8.4,SNR=30
ASAR LR LR 13 55 26.5
comp=Z,378nm,21.8s,baz=346,slow=34
comp=Z,5.9nm,1.0s
ASAR **Alice Springs** 52.59 190 P 13 34 53.8 -0.7
ASAR **Alice Springs** 52.59 190 P P 13 34 54.0 -0.5
KPKS **Kokpek** 52.71 305 eP P 13 34 55.4 +0.1
KPKS **Kokpek** 52.71 305 eP P 13 34 55.5 +0.1
TDK **Taldyqorghan** 52.76 307 eP P 13 34 55.8 +0.2
TDK pmax pmax
comp=Z,17nm,0.6s
TDK **Taldyqorghan** 52.76 307 eP P 13 34 55.9 +0.2
comp=Z,17nm,0.6s
P19K **Oil Pt** 52.77 35 P P 13 34 53.4 -2.0
baz=263
K20K **Telida** 52.91 30 IAmb IAmb 13 35 12.9
comp=Z,34nm,1.2s
K20K **Telida** 52.91 30 P P 13 34 55.2 -1.2
baz=260
KDAK **Kodiak Island** 52.92 37 LR LR 13 56 40.1
comp=Z,586nm,20.2s,baz=244,slow=35
KDAK **Kodiak Island** 52.92 37 P P 13 34 54.8 -1.8
baz=265
SATY **Saty** 52.95 304 eP P 13 34 57.1 -0.1
SATY pmax pmax
comp=Z,18nm,1.3s
SATY **Saty** 52.95 304 eP P 13 34 57.2 0.0
comp=Z,18nm,1.3s
H20K **Anotleneega Mo** 52.98 28 P P 13 34 56.0 -0.9
baz=258,SNR=9.4
F20K **Avaraart Lake** 53.02 26 P P 13 34 56.3 -0.8
baz=256
Q20K **Shuyak Island** 53.09 36 P P 13 34 56.5 -1.3
baz=265
M20K **Styx River** 53.10 32 P P 13 34 57.1 -0.9
baz=262
D20K **Etivluk River** 53.14 23 P P 13 34 57.0 -1.1
baz=253
E20K **Nigu River** 53.16 24 P P 13 34 57.2 -1.1
baz=254
B20K **Meade River** 53.34 22 P P 13 34 58.9 -0.5
baz=252
SPCR **Spurr Chakacha** 53.45 33 P P 13 34 59.5 -1.1
baz=263
IMAR **Indian Mountai** 53.55 27 P P 13 35 01.1 +0.1
HOM **Homer** 53.57 35 P P 13 35 00.3 -1.0
baz=265
PPLA **Purkeypile** 53.68 31 P P 13 35 01.7 -0.6
baz=262,SNR=5.7
G21K **Allakaket** 53.75 26 P P 13 35 01.9 -0.7
baz=258
CHUM **Lake Minchumin** 53.77 30 P P 13 35 02.3 -0.4
baz=261
H21K **Melozitna Rive** 53.86 28 IAmb IAmb 13 35 18.0
comp=Z,40nm,1.3s
H21K **Melozitna Rive** 53.86 28 P P 13 35 03.1 -0.3
baz=259,SNR=17
SKT **Skwentna** 53.87 32 IAmb IAmb 13 35 16.7
comp=Z,30nm,1.3s
SKT **Skwentna** 53.87 32 P P 13 35 02.3 -1.2
baz=263
C21K **Knifeblade Rid** 53.90 23 P P 13 35 02.6 -1.0
baz=255,SNR=11
F21K **Alatna River** 53.91 26 P P 13 35 02.7 -1.0
baz=258
CAPN **Captain Cook N** 53.92 34 P P 13 35 02.4 -1.4
baz=264
MDOK **Medeo** 53.93 304 eP P 13 35 04.3 -0.1
MDOK **Medeo** 53.93 304 eP P 13 35 04.3 -0.1
A21K **Barrow** 53.93 20 P P 13 35 03.2 -0.5
baz=252
KDJ **Kajisay** 53.97 303 IAmb IAmb 13 35 18.7
comp=Z,38nm,1.6s
E21K **Killik River** 54.01 24 P P 13 35 03.1 -1.3
baz=256
TNSS **Tian-Shan** 54.02 304 eP P 13 35 05.1 -0.3
TNSS **Tian-Shan** 54.02 304 eP P 13 35 05.1 -0.3
AAA **Alma-Ata** 54.02 304 eP P 13 35 04.1 -0.9
comp=Z,8.2nm,0.5s
BRSE **Bradley Lake S** 54.03 35 P P 13 35 03.2 -1.6
baz=266
B21K **Ikpikpuk River** 54.08 23 P P 13 35 03.6 -1.2
baz=255
SUA **Susitna One** 54.18 33 P P 13 35 04.5 -1.4
baz=264
L22K **Petersville** 54.28 32 IAmb IAmb 13 35 21.6
comp=Z,26nm,1.3s
BPAW **Bear Paw Mtn.** 54.38 30 IAmb IAmb 13 35 23.2
comp=Z,37nm,1.6s
BPAW **Bear Paw Mtn.** 54.38 30 P P 13 35 06.6 -0.6
baz=262,SNR=5.2
H22K **Ishtalitna Cre** 54.48 27 IAmb IAmb 13 35 22.8
comp=Z,22nm,1.3s
H22K **Ishtalitna Cre** 54.48 27 P P 13 35 07.0 -0.9
baz=261,SNR=11
PSA00 **Pilbara Seismi** 54.49 206 P P 13 35 07.7 -0.7
PSA00 IAmb IAmb 13 35 20.5
comp=Z,25nm,1.4s
CUT **Chulitna** 54.50 32 P P 13 35 07.1 -1.0
baz=264
M22K **Willow** 54.51 33 P P 13 35 07.4 -0.7
baz=265
D22K **Ayikyak River** 54.57 24 P P 13 35 08.0 -0.5
baz=257,SNR=24
O22K **Cooper Landing** 54.60 34 P P 13 35 08.0 -0.7
baz=266
TRF **Thorofare Moun** 54.61 30 IAmb IAmb 13 35 21.7
comp=Z,33nm,1.4s
TRF **Thorofare Moun** 54.61 30 P P 13 35 07.4 -1.6
baz=263,SNR=5.5
RC01 **Rabbit Creek A** 54.63 33 P P 13 35 08.9 -0.2
baz=266
ULHL **Ulahol** 54.64 303 P P 13 35 09.6 -0.1
SNR=9.7
SEW **Seward** 54.71 35 P P 13 35 09.3 -0.3
baz=266
E22K **Anaktuvuk Pass** 54.72 25 IAmb IAmb 13 35 13.2
comp=Z,26nm,1.1s
E22K **Anaktuvuk Pass** 54.72 25 P P 13 35 09.7 +0.1
baz=259,SNR=18
NRN **Naryn** 54.94 302 IAmb IAmb 13 35 16.0
comp=Z,28nm,1.3s
PMR **Palmer** 54.97 33 IAmb IAmb 13 35 13.3
comp=Z,24nm,1.2s
PMR **Palmer** 54.97 33 P P 13 35 10.9 -0.5
baz=266,SNR=5.2
TKM2 **Tokmak 2** 55.01 304 P P 13 35 12.8 +0.4
SNR=13
WRKA **Warakurna** 55.04 196 P P 13 35 12.3 -0.1
comp=Z,8.1nm,1.5s
G23K **Bananza Creek** 55.15 27 P P 13 35 13.4 +0.6
baz=261
COLD **Coldfoot** 55.16 26 IAmb IAmb 13 35 26.7
comp=Z,28nm,1.4s
COLD **Coldfoot** 55.16 26 P P 13 35 13.1 +0.3
baz=261,SNR=8.6
I23K **Minto, Yukon-K** 55.21 28 IAmb IAmb 13 35 29.4
comp=Z,35nm,1.4s
I23K **Minto, Yukon-K** 55.21 28 P P 13 35 12.7 -0.4
baz=263,SNR=5.7
MCK **McKinley** 55.24 30 IAmb IAmb 13 35 16.4
comp=Z,44nm,1.4s
MCK **McKinley** 55.24 30 P P 13 35 11.7 -1.7
baz=264,SNR=9.2
DZM **Mont Dzumac** 55.26 153 LR LR 13 58 28.3
comp=Z,344nm,19.6s,baz=34,slow=36
NEA2 **Nenana** 55.27 29 IAmb IAmb 13 35 16.5
comp=Z,30nm,1.2s
NEA2 **Nenana** 55.27 29 P P 13 35 12.2 -1.5
baz=264,SNR=9.5
KNK **Knik Glacier** 55.27 33 IAmb IAmb 13 35 44.7
comp=Z,24nm,1.0s
KNK **Knik Glacier** 55.27 33 P P 13 35 12.5 -1.2
baz=266
D23K **Nanushuk River** 55.29 24 P P 13 35 12.7 -1.0
baz=259
WAT1 **Susitna Watana** 55.33 31 P P 13 35 12.6 -1.6
baz=265
SML **Sawmill** 55.36 33 IAmb IAmb 13 35 17.1
comp=Z,21nm,1.0s
SML **Sawmill** 55.36 33 P P 13 35 12.4 -1.9
baz=266
E23K **Chandalar** 55.52 25 IAmb IAmb 13 35 19.4
comp=Z,31nm,1.2s
E23K **Chandalar** 55.52 25 P P 13 35 14.6 -0.9
baz=261
KBK **Karagaybulak** 55.52 304 P P 13 35 16.3 +0.3
SNR=9.6
CHMS **Chrysh** 55.62 304 P P 13 35 17.0 +0.5
SNR=7.3
TOLK **Toolik Lake Re** 55.63 24 P P 13 35 15.5 -0.7
baz=260,SNR=9.9
SGDS **Sogindy** 55.64 305 eP P 13 35 16.7 0.0
M23K **Glacier View** 55.65 33 P P 13 35 15.5 -0.9
baz=267
KSH2 **Kashi** 55.66 300 P P 13 35 16.8 -0.2
KSH2 sP pwP 13 35 29.0 +2.8
KSH2 pmax pmax
comp=Z,14nm,1.3s
KSH2 pmax pmax
comp=Z,560nm,6.2s
KSH2 LR LR
comp=Z,620nm,8.9s
KSH2 LR LR
comp=Z,780nm,8.9s
KSH2 LR LR
comp=Z,300nm,11.0s
WAT6 **Susitna Watana** 55.69 32 P P 13 35 15.6 -1.3
baz=266,SNR=5.1
P23K **Montague Islan** 55.73 35 P P 13 35 15.6 -1.3
baz=268
USP **Ospenovka** 55.76 305 P P 13 35 14.3 -3.2
SNR=6.2
CCB **Clear Creek Bu** 55.82 29 IAmb IAmb 13 35 21.0
comp=Z,42nm,2.0s
COLA **College** 55.82 29 P P 13 35 16.9 -0.6
baz=265
SCM **Sheep Creek Mo** 55.84 33 P P 13 35 16.8 -1.1
baz=267
AAK **Ala-Archa** 55.86 304 P P 13 35 18.7 +0.2
SNR=9.1
AAK **Ala-Archa** 55.86 304 P P 13 35 18.1 -0.3
AAK **Ala-Archa** 55.86 304 *i* P P 13 35 18.0 -0.4
SNR=12
AAK **Ala-Archa** 55.86 304 *ce*P P 13 35 18.5 +0.1
AAK pmax pmax
comp=Z,15nm,1.3s
AAK **Ala-Archa** 55.86 304 P P 13 35 17.8 -0.6
DHY **Denali Highway** 55.88 31 P P 13 35 16.9 -1.4
baz=266
H24K **Noodor Dome** 55.90 28 IAmb IAmb 13 35 21.7
comp=Z,22nm,1.2s
H24K **Noodor Dome** 55.90 28 P P 13 35 17.1 -1.2
baz=264,SNR=8.7
GLI **Glacier Island** 55.91 34 P P 13 35 17.2 -1.0
baz=268
UCH **Uchtor** 55.91 304 P P 13 35 20.0 +0.9
SNR=21
E24K **Your Creek** 55.94 25 P P 13 35 18.1 -0.3
baz=262
D24K **Happy Valley** 55.98 24 P P 13 35 17.8 -0.8
baz=261
POKR **Poker Plat Res** 56.02 29 P P 13 35 17.9 -1.1
baz=265
C24K **Franklin Bluff** 56.12 23 P P 13 35 19.0 -0.6
baz=260
G24K **Hadweenzic Riv** 56.16 27 IAmb IAmb 13 35 24.0
comp=Z,35nm,1.3s
G24K **Hadweenzic Riv** 56.16 27 P P 13 35 19.5 -0.5
baz=264,SNR=8.8
HDA **Harding Lake** 56.17 29 P P 13 35 19.2 -0.8
baz=266,SNR=6.4
BRZS **Berezniki** 56.19 313 eP P 13 35 20.6 +0.2
BRZS **Berezniki** 56.19 313 eP P 13 35 20.7 +0.2
IL31 56.22 29 IAmb IAmb 13 35 35.8
comp=Z,34nm,1.4s
ILAR **Eielson Array** 56.22 29 P P 13 35 19.2 -1.2
comp=Z,9.5nm,1.1s,baz=257,slow=5.1,SNR=31
ILAR LR LR 13 57 18.9
comp=Z,234nm,20.8s,baz=260,slow=34
comp=Z,9.5nm,1.1s
ILAR **Eielson Array** 56.22 29 P P 13 35 19.9 -0.5
ILAR **Eielson Array** 56.22 29 P P 13 35 19.9 -0.5
Q23K **Middleton Isla** 56.25 36 P P 13 35 20.0 -0.7
baz=270
EKS2 **Erin-Say** 56.38 304 P P 13 35 22.6 +0.5
SNR=6.1
M24K **Tolsona, Glenn** 56.39 32 P P 13 35 21.3 -0.5
baz=268
KLU **Klutina** 56.49 33 P P 13 35 21.8 -0.7
baz=269
EYAK **Cordova Ski Ar** 56.56 34 P P 13 35 22.0 -0.9
baz=269
K24K **Donnelly Dome** 56.64 30 P P 13 35 22.6 -0.9
baz=267
PAX **Paxson** 56.75 31 IAmb IAmb 13 35 27.2
comp=Z,34nm,1.5s
PAX **Paxson** 56.75 31 P P 13 35 23.0 -1.3
baz=268,SNR=6.6
PRP **Porcupine Dome** 56.85 28 P P 13 35 24.1 -1.0
baz=266
J25K **Salcha River,** 56.86 29 P P 13 35 24.5 -0.6
baz=267
D25K **Kavik River** 56.87 24 P P 13 35 24.8 -0.3
baz=263
HARP **HAARP** 56.88 32 P P 13 35 24.5 -0.7
baz=269
F25K **Christian Rive** 56.96 26 IAmb IAmb 13 35 30.0
comp=Z,27nm,1.3s
F25K **Christian Rive** 56.96 26 P P 13 35 24.9 -0.9
baz=265
E25K **Arctic Village** 57.03 25 P P 13 35 26.4 +0.1
baz=265,SNR=22
RIDG **Independent Ri** 57.05 30 IAmb IAmb 13 35 28.8
comp=Z,37nm,1.4s
RIDG **Independent Ri** 57.05 30 P P 13 35 26.1 -0.4
baz=268,SNR=6.2
BMRM **Bremner River** 57.13 34 P P 13 35 26.8 -0.2
baz=270
N25K **Chitina, Valde** 57.13 33 P P 13 35 26.6 -0.5
baz=270
KAIM **Kayak Island** 57.23 35 P P 13 35 26.2 -1.5
baz=271
BVAR **Borovoye Array** 57.33 317 P P 13 35 29.1 +0.6
comp=Z,6.9nm,0.5s,baz=87,slow=7.0,SNR=54
BVAR LR LR 14 00 59.1
comp=Z,355nm,19.3s,baz=77,slow=37
comp=Z,6.9nm,0.5s
BMAR **Burnt Mountain** 57.35 26 P P 13 35 29.4 +0.9
BORK **Borovoye** 57.37 317 P P 13 35 29.4 +0.6
BORK IAmb IAmb 13 35 42.6
comp=Z,13nm,0.7s
BORK **Borovoye** 57.37 317 P P 13 35 29.4 +0.6
BORK pmax pmax
comp=Z,13nm,0.7s
DOT **Dot Lake** 57.40 30 IAmb IAmb 13 37 35.2
comp=Z,43nm,1.3s
SCRK **Sand Creek** 57.44 30 IAmb IAmb 13 35 31.7
comp=Z,28nm,1.2s
SCRK **Sand Creek** 57.44 30 P P 13 35 28.4 -0.9
baz=269,SNR=9.8
C26K **Camden Bay** 57.45 23 P P 13 35 28.9 -0.1
baz=264
GLB **Gilahina Butte** 57.51 33 IAmb IAmb 13 35 33.3
comp=Z,36nm,1.3s
F26K **Sheenjek River** 57.54 26 IAmb IAmb 13 35 44.4
comp=Z,34nm,1.4s
F26K **Sheenjek River** 57.54 26 P P 13 35 28.6 -1.1
baz=266,SNR=13
MENT **Mentasta** 57.55 31 IAmb IAmb 13 36 03.1
comp=Z,23nm,1.2s
G26K **Porcupine Rive** 57.63 27 IAmb IAmb 13 35 34.7
comp=Z,46nm,1.6s
G26K **Porcupine Rive** 57.63 27 P P 13 35 30.2 -0.2
baz=267,SNR=9.9
L26K **Log Cabin Wild** 57.72 31 IAmb IAmb 13 35 47.9
comp=Z,25nm,1.3s
L26K **Log Cabin Wild** 57.72 31 P P 13 35 30.9 -0.3
baz=270
I26K **Coal Creek Min** 57.83 29 P P 13 35 31.3 -0.5
baz=269
C27K **Jago River** 57.84 23 IAmb IAmb 13 35 35.7
comp=Z,28nm,1.1s
C27K **Jago River** 57.84 23 P P 13 35 32.0 +0.1
baz=265
CRQE **Cirque** 57.87 34 P P 13 35 32.1 -0.2
baz=272
M26K **Nabesna, AK** 57.88 32 P P 13 35 31.8 -0.5
baz=271
MCARA **McCarthy VSAT** 57.89 33 P P 13 35 32.3 0.0
baz=271
DZA **Taraz** 58.11 305 eP P 13 35 34.4 +0.2
DZA pmax pmax
comp=Z,10.0nm,1.3s
DZA **Taraz** 58.11 305 eP P 13 35 34.4 +0.2
comp=Z,10nm,1.3s
M27K **Edge Creek, AK** 58.41 32 P P 13 35 35.8 -0.3
baz=272
L27K **Beaver Creek,** 58.41 31 IAmb IAmb 13 35 39.9
comp=Z,28nm,1.6s
L27K **Beaver Creek,** 58.41 31 P P 13 35 34.9 -1.1
baz=271
BCAR **Beaver Creek A** 58.43 31 P P 13 35 36.4 +0.3
MESA **MESA** 58.46 35 P P 13 35 35.7 -0.8
baz=273
G27K **Doyon Strip** 58.47 27 P P 13 35 36.5 +0.1
baz=269
I27K **Kandik River** 58.48 28 P P 13 35 36.2 -0.2
baz=270
H27K **Steamboat Moun** 58.51 27 P P 13 35 36.3 -0.3
baz=270
E27K **Coleen River** 58.52 25 IAmb IAmb 13 35 51.6
comp=Z,25nm,1.4s
E27K **Coleen River** 58.52 25 P P 13 35 36.6 0.0
baz=268
KKAR **Karatay Array** 58.66 305 P P 13 35 38.1 +0.1
KKAR **Karatay Array** 58.66 305 P P 13 35 38.1 +0.1
CTG **Chitna Glacier** 58.72 34 P P 13 35 37.3 -1.0
baz=273
NIL **Nilore** 58.72 294 P P 13 35 38.5 -0.1
NIL **Nilore** 58.72 294 P P 13 35 38.6 -0.1
NIL pmax pmax
comp=Z,83nm,1.7s
D27M **Malcolm River** 58.78 24 P P 13 35 38.5 0.0
baz=268
BVCY **Beaver Creek** 58.88 32 P P 13 35 38.7 -0.5
baz=272
BTK **Batken** 59.06 302 IAmb IAmb 13 36 02.5
comp=Z,38nm,1.8s
YUK3 **Moose Creek** 59.10 33 P P 13 35 40.1 -0.9
baz=273
BRLS **Boroldav** 59.16 305 *c* iP P 13 35 42.7 +1.2
BRLS pmax pmax
comp=Z,23nm,1.7s
BRLS **Boroldav** 59.16 305 ⇑ *i* P P 13 35 42.8 +1.2
comp=Z,23nm,1.7s
F28M **Old Crow** 59.17 26 P P 13 35 40.3 -0.9
baz=270,SNR=12
I28M **Miner Creek** 59.18 28 IAmb IAmb 13 35 57.5
comp=Z,29nm,1.5s
I28M **Miner Creek** 59.18 28 P P 13 35 40.5 -0.8
baz=272
IUG **Iuzhnay** 59.20 304 *c* iP P 13 35 41.9 0.0
IUG pmax pmax
comp=Z,18nm,1.3s
IUG **Iuzhnay** 59.20 304 ⇑ *i* P P 13 35 42.0 0.0
comp=Z,18nm,1.3s
E28M **Babbage River** 59.29 25 P P 13 35 41.3 -0.7
baz=270
O28M **Mount Upton** 59.29 34 P P 13 35 41.3 -1.1
baz=274
PINM **Pinnacle** 59.31 35 P P 13 35 40.7 -1.6
baz=274
YUK8 **Steele Glacier** 59.46 33 P P 13 35 42.6 -1.0
baz=274
DAWY **Dawson** 59.46 30 IAmb IAmb 13 35 57.6
comp=Z,34nm,1.5s
DAWY **Dawson** 59.46 30 P P 13 35 42.9 -0.4
baz=273,SNR=7.0
CHM **Chimkent** 59.47 305 eP P 13 35 43.8 +0.1
CHM pmax pmax
comp=Z,15nm,0.8s
CHM **Chimkent** 59.47 305 eP P 13 35 43.9 +0.2
comp=Z,15nm,0.8s
D28M **Stokes Point** 59.58 24 P P 13 35 42.9 -1.0
baz=270
I29M **Ogilvie Camp,** 59.86 28 IAmb IAmb 13 36 19.0
comp=Z,38nm,1.5s
I29M **Ogilvie Camp,** 59.86 28 P P 13 35 46.1 +0.2
baz=273,SNR=9.0
E29M **Blow River** 59.90 25 P P 13 35 46.2 +0.1
baz=272
G29M **Pine Creek** 59.90 27 P P 13 35 46.3 0.0
baz=272
J29N **Klondike Camp** 59.95 29 IAmb IAmb 13 36 17.3
comp=Z,21nm,1.4s
J29N **Klondike Camp** 59.95 29 P P 13 35 45.6 -1.1
baz=274
M29M **Somme Creek** 59.99 32 IAmb IAmb 13 36 00.8
comp=Z,25nm,1.4s
M29M **Somme Creek** 59.99 32 P P 13 35 45.6 -1.4
baz=275
YUK4 **Talbot Arm** 59.99 33 P P 13 35 46.5 -0.7
baz=275,SNR=5.6
STKA **Stephens Creek** 60.08 181 P P 13 35 47.8 +0.1
comp=Z,3.2nm,0.8s,baz=330,slow=4.3,SNR=5.2
STKA LR LR 14 01 16.0
comp=Z,275nm,20.5s,baz=14,slow=36
comp=Z,3.2nm,0.8s
STKA **Stephens Creek** 60.08 181 P P 13 35 47.9 +0.1
STKA **Stephens Creek** 60.08 181 *i* P P 13 35 48.1 +0.3
L29M **L29M** 60.09 31 P P 13 35 47.1 -0.5
baz=274
O29M **Mount Kennedy** 60.13 34 P P 13 35 47.0 -1.0
baz=276
YUK6 **Outpost Mounta** 60.17 34 P P 13 35 47.7 -0.7
baz=276
K29M **Barlow Dome** 60.30 30 IAmb IAmb 13 35 52.7
comp=Z,17nm,1.2s
K29M **Barlow Dome** 60.30 30 P P 13 35 48.3 -0.8
baz=275
EPYK **Eagle Plains** 60.45 27 P P 13 35 49.0 -1.0
baz=274,SNR=8.5
HYT **Haines Junctio** 60.60 34 IAmb IAmb 13 36 22.2
comp=Z,23nm,1.2s
HYT **Haines Junctio** 60.60 34 P P 13 35 50.2 -1.0
baz=276
G30M **tAoh Zraii Nji** 60.61 26 P P 13 35 50.7 -0.4
baz=274
CHGR **Chuyangaron** 60.65 300 *i* P P 13 35 51.0 -0.9
CHGR pmax pmax
comp=Z,41nm,1.0s
N30M **Aishikik Lake** 60.73 33 P P 13 35 50.8 -1.2
baz=276
F30M **Barrier River** 60.73 26 P P 13 35 51.3 -0.5
baz=274
M30M **Minto, Yukon** 60.75 32 IAmb IAmb 13 35 55.5
comp=Z,25nm,1.4s
M30M **Minto, Yukon** 60.75 32 P P 13 35 51.5 -0.6
baz=276
J30M **Hart River** 60.76 29 IAmb IAmb 13 36 44.4
comp=Z,22nm,1.4s
J30M **Hart River** 60.76 29 P P 13 35 51.3 -1.0
baz=275
P30M **Million Dollar** 60.95 34 P P 13 35 52.5 -1.1
baz=277
MAYO **Mayo, Yukon** 61.05 30 P P 13 35 53.5 -0.6
baz=276
O30N **Mendenhall** 61.29 34 P P 13 35 55.3 -0.6
baz=278
N31M **Braeburn, Yuko** 61.35 33 P P 13 35 55.3 -0.9
baz=277
G31M **Satah River** 61.38 26 P P 13 35 55.1 -1.1
baz=276,SNR=7.6
H31M **Peel River** 61.47 28 IAmb IAmb 13 36 26.4
comp=Z,26nm,1.4s
H31M **Peel River** 61.47 28 P P 13 35 56.4 -0.6
baz=276
INK **Inuvik** 61.52 25 IAmb IAmb 13 36 10.9
comp=Z,17nm,1.1s
INK **Inuvik** 61.52 25 P P 13 35 56.0 -1.1
baz=276
F31M **Tsiigehtchic** 61.53 26 IAmb IAmb 13 36 00.1
comp=Z,27nm,1.4s
S31K **Pelican** 61.63 37 P P 13 35 57.4 -0.6
baz=279
SHAA **Shahritus** 61.72 300 IAmb IAmb 13 36 20.1
comp=Z,51nm,1.1s
KBL **Kabul** 61.84 296 P P 13 35 59.9 -0.2
SNR=6.5
SKAG **Skagway** 61.86 35 P P 13 35 58.7 -0.8
baz=279
WHY **Whitehorse** 61.90 34 P P 13 35 58.9 -1.1
baz=279
M31M **Drury Creek, Y** 61.90 32 IAmb IAmb 13 36 29.8
comp=Z,12nm,1.1s
M31M **Drury Creek, Y** 61.90 32 P P 13 35 59.2 -0.7

baz=278
PALK Pallekele 62.03 263 LR LR 14 02 15.6
comp=Z,79nm,21.6s,baz=67,slow=35
SIT Sitka 62.26 38 P **P** **13 36 01.3 -1.0**
baz=280
R32K Eaglecrest 62.47 36 P **P** **13 36 02.8 -0.9**
baz=280
S32K Killisnoo 62.59 37 P **P** **13 36 03.5 -1.0**
baz=280
P32M Atlin 62.65 35 P **P** **13 36 04.1 -0.8**
baz=280
N32M Quiet Lake 62.69 33 P **P** **13 36 03.8 -1.4**
baz=280
P33M Teslin, Yukon 62.98 34 IAmb IAmb 13 36 16.1
comp=Z,27nm,1.4s
P33M Teslin, Yukon 62.98 34 P **P** **13 36 05.9 -1.3**
baz=281
T33K Petersburg 63.58 38 P **P** **13 36 10.1 -1.0**
baz=282
U33K Whale Pass 63.64 38 P **P** **13 36 10.0 -1.5**
baz=282
ARTI Arti 63.71 322 LR LR 14 06 32.5
comp=Z,323nm,18.6s,baz=52,slow=38
ARTI Arti 63.71 322 P **P** **13 36 11.3 -0.6**
ARTI Arti 63.71 322*c iP* **P** **13 36 11.7 -0.3**
ARTI 13 36 47.0
ARTI S **S** **13 44 46.9 +1.0**
ARTI SS **SS** **13 48 54.1 +1.0**
ARTI pmax pmax
comp=Z,21nm,1.2s
A36M Sachs Harbour 63.77 20 IAmb IAmb 13 36 42.9
comp=Z,21nm,1.1s
A36M Sachs Harbour 63.77 20 P **P** **13 36 11.8 -0.3**
baz=281,SNR=14
CRAG Craig 63.78 39 P **P** **13 36 11.4 -1.0**
baz=283
R33M Jennings River 64.06 35 P **P** **13 36 13.4 -1.1**
baz=282
S34M Telegraph Cree 64.31 36 P **P** **13 36 15.2 -0.7**
baz=283
ABKAR Akbulak array 64.46 314 P **P** **13 36 17.0 0.0**
V35K Ketchikan 64.65 39 P **P** **13 36 17.3 -0.8**
baz=284
C36M Paulatuk 64.73 23 P **P** **13 36 18.1 -0.4**
baz=284,SNR=16
DLBC Dease Lake 64.75 36 LR LR 14 02 30.2
comp=Z,472nm,21.4s,baz=290,slow=34
DLBC Dease Lake 64.75 36 P **P** **13 36 17.8 -1.1**
baz=284
WTLY Watson Lake, Y 64.97 34 IAmb IAmb 13 36 23.6
comp=Z,23nm,1.3s
WTLY Watson Lake, Y 64.97 34 P **P** **13 36 19.9 -0.4**
baz=284
T35M Bob Quinn 64.99 37 P **P** **13 36 20.1 -0.3**
baz=284
AKTO Aktyubinsk 65.36 316 LR LR 14 05 58.4
comp=Z,526nm,19.1s,baz=85,slow=37
TOO Toolangi 65.80 178 P **P** **13 36 25.5 -0.3**
TOO IAmb IAmb 13 36 40.1
comp=Z,28nm,1.5s
TOO Toolangi 65.80 178 P **P** **13 36 25.5 -0.3**
TOO pmax pmax
comp=Z,28nm,1.5s
KOTAN Kotaneelee Air 67.25 33 P **P** **13 36 33.9 -0.9**
baz=288
BBB Bella Bella 67.51 42 LR LR 14 04 05.7
comp=Z,143nm,20.1s,baz=274,slow=34
KIRV Kirov 67.79 326 LR LR 14 09 41.8
comp=Z,187nm,20.1s,baz=45,slow=39
RAO Raoul Island 68.67 144 LR LR 14 02 27.6
comp=Z,222nm,19.2s,baz=316,slow=32
SPITS Spitsbergen Ar 69.06 350 LR LR 14 13 59.7
comp=Z,164nm,18.1s,baz=38,slow=42
RES Resolute Bay 70.55 14 LR LR 14 09 12.4
comp=Z,75nm,19.5s,baz=18,slow=37
RES Resolute Bay 70.55 14 IAmb IAmb 13 37 08.0
comp=Z,17nm,1.3s
YKAW3 Yellowknife Wh 70.62 29 P **P** **13 36 55.6 -0.1**
YKAW3 IAmb IAmb 13 36 58.3
comp=Z,24nm,1.4s
YKA Yellowknife Ar 70.65 29 P **P** **13 36 55.8 -0.1**
comp=Z,4.6nm,1.1s,baz=296,slow=6.3,SNR=34
YKA LR LR 14 09 57.5
comp=Z,94nm,18.9s,baz=296,slow=38
comp=Z,4.6nm,1.1s
YKA Yellowknife Ar 70.65 29 P **P** **13 36 55.4 -0.5**
YKAW1 Yellowknife Wh 70.70 29 P **P** **13 36 55.9 -0.3**
YKAW1 IAmb IAmb 13 36 58.8
comp=Z,16nm,1.2s
BELG Belogornoye 70.89 320 *i* P **P** **13 36 58.3 +0.8**
BELG pmax pmax
comp=Z,5.0nm,1.0s
APA Apatity 70.92 337|| *e*P **P** **13 37 01.4 +3.9**
APA *e* 13 39 37.9
APA pmax pmax
comp=Z,10.0nm,1.4s
KLMR Klimovskoe 71.59 330 *e*P **P** **13 37 03.3 +1.6**
KLMR *e* 13 39 41.2
KLMR pmax pmax
comp=Z,24nm,1.4s
ARCES ARCESS Array B 72.36 341 LR LR 14 13 54.8
comp=Z,279nm,19.0s,baz=84,slow=40
TULEG Thule 73.37 7 IAmb IAmb 13 37 25.4
comp=Z,20nm,1.1s
TULEG Thule 73.37 7 *i* P **P** **13 37 14.2 +2.3**
TULEG IAmb IAmb 13 37 15.9
comp=Z,36nm,1.7s
URZ Urewera 73.81 152 LR LR 14 06 38.8
comp=Z,93nm,21.0s,baz=332,slow=33
NEEM North Greenlan 73.94 3 *i* P **P** **13 37 16.4 +0.7**
NEEM IAmb IAmb 13 37 18.6
comp=Z,15nm,1.2s
MXC Moxie City 74.31 45 IAmb IAmb 13 37 32.1
comp=Z,21nm,1.3s
RAR Rarotonga 74.31 125 LR LR 14 04 51.9
comp=Z,453nm,19.6s,baz=298,slow=32
DAG Danmarks Havn 74.32 356 *i* P **P** **13 37 18.3 +0.8**
DAG IAmb IAmb 13 37 21.0
comp=Z,24nm,1.4s
WBK Wadi Bani Khal 74.35 287 P **P** **13 37 19.9 +1.2**
MAK Makhachkala 74.72 311 *e*P **P** **13 37 16.0 -4.4**
MAK *e* 13 40 05.9
MAK *e*PPP PPP 13 41 52.2
MAK *e*S **SKiKP** **13 46 49.6 +4.1**
MAK *e*SS **SS** **13 51 43.3 +0.1**
MAK *e*SSS SSS 13 55 00.0
MAK pmax pmax
comp=Z,157nm,1.2s
MAK MLR MLR
comp=Z,1µm,16.0s
VRH Novokhopyorsk 74.72 320 *e*P **P** **13 37 25.1 +4.8**
VRH pmax pmax
comp=Z,8.0nm,0.7s
YBH Yreka Blue Hor 74.76 51 LR LR 14 04 40.5
comp=Z,26nm,20.9s,baz=300,slow=31
MOS Moscow 74.81 326 *e*P **P** **13 37 19.9 -0.8**
MOS *e* 13 37 31.2
PINE Pine Mountain 75.07 48 IAmb IAmb 13 37 26.3
comp=Z,27nm,1.2s
J05D Fort Rock, OR 75.09 49 IAmb IAmb 13 37 27.0
comp=Z,43nm,1.6s
AKT Akhty 75.19 309 *e*P **P** **13 37 23.7 +0.3**
AKT *e* 13 37 36.7
AKT *e* 13 40 10.8
AKT pmax pmax
comp=Z,45nm,1.1s
BANOM Banah 75.19 292 P **P** **13 37 24.2 +0.7**
BANOM Banah 75.19 292 P **P** **13 37 24.6 +1.0**
SHME Shamm 75.26 292 *i* P **P** **13 37 24.3 +0.3**
SNR=13
SHME Shamm 75.26 292 P **P** **13 37 25.0 +1.1**
SNR=11
HOQ Hoqain 75.33 289 P **P** **13 37 24.9 +0.5**
SNR=13
M03C McCloud 75.35 51 IAmb IAmb 13 37 42.5
comp=Z,33nm,1.4s
EDM Edmonton 75.37 37 IAmb IAmb 13 37 37.8
comp=Z,32nm,1.3s
MDH Madha 75.45 291 P **P** **13 37 27.4 +2.4**
NEW Newport 75.52 43 LR LR 14 05 52.9
comp=Z,186nm,20.1s,baz=308,slow=32
NEW Newport 75.52 43 IAmb IAmb 13 37 42.4
comp=Z,20nm,1.3s
MASF Masafi 75.53 291 P **P** **13 37 26.6 +1.0**
MSFE Esma-Masafi 75.54 291 P **P** **13 37 25.9 +0.4**
OBN Obninsk 75.64 325 LR LR 14 12 58.4
comp=Z,409nm,18.3s,baz=12,slow=38
OBN Obninsk 75.64 325|| *e*P **P** **13 37 26.0 +0.5**
OBN *e* 13 37 36.7
OBN *e* 13 40 16.8
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN MLR MLR
comp=Z,426nm,18.0s
UOSS Minazif 75.67 291 P **P** **13 37 25.4 -1.0**
UOSS IAmb IAmb 13 37 39.3
comp=Z,24nm,1.2s
UOSS Minazif 75.67 291 P **P** **13 37 26.4 +0.1**
SOHO SOHO 75.74 290 *i* P **P** **13 37 26.6 -0.1**
SNR=8.6
SOHO SOHO 75.74 290 P **P** **13 37 27.3 +0.6**
BSY Bisya 75.78 288 P **P** **13 37 27.5 +0.5**
SNR=7.3
HATD Hatta, Dubai 75.78 291 *i* P **P** **13 37 27.1 +0.2**
SNR=7.3
HATD Hatta, Dubai 75.78 291 P **P** **13 37 28.1 +1.1**
SNR=7.6
MHTO MHTO 75.88 286 P **P** **13 37 28.1 +0.6**
SNR=10
ASHO Ashiyiah 75.90 291 *i* P **P** **13 37 27.9 +0.2**
SNR=6.7
ASHO Ashiyiah 75.90 291 P **P** **13 37 28.3 +0.6**
VORR Voronezh 75.91 321 *e*P P 13 37 32.6 +5.5
VORR pmax pmax
comp=Z,30nm,0.4s
O03E Paynes Creek 75.99 52 IAmb IAmb 13 37 42.9
comp=Z,32nm,1.4s
NAZ Nazwa, Dubai 76.10 291 P **P** **13 37 28.7 0.0**
PUL Pulkovo 76.11 331 *i* P **P** **13 37 28.5 +0.4**
VSR Storozhevoye 76.15 321 *e*P **P** **13 37 28.1 -0.4**
VSR pmax pmax
comp=Z,20nm,1.4s
VORD Divnogorie 76.19 321 *e*P **P** **13 37 26.5 -2.3**
VORD pmax pmax
comp=Z,10.0nm,0.8s
FAQ Al Faqa, Dubai 76.26 291 P **P** **13 37 29.6 0.0**
ALNE Al Ain 76.42 290 P **P** **13 37 31.3 +0.7**
SNR=13
RPZ Rata Peaks 76.44 159 LR LR 14 07 49.0
comp=Z,115nm,21.8s,baz=248,slow=33
SUTB Sutter Butte 76.46 53 IAmb IAmb 13 37 47.4
comp=Z,21nm,1.4s
ORV Oroville 76.52 52 IAmb IAmb 13 37 33.3
comp=Z,17nm,1.2s
ASUD Al Ashush, Dub 76.53 291 P **P** **13 37 30.8 -0.3**
ASUD Al Ashush, Dub 76.53 291 P **P** **13 37 32.3 +1.1**
BLKN Baker Lake 76.78 22 IAmb IAmb 13 37 44.3
comp=Z,28nm,1.3s
J08A Circle Bar Ran 76.87 48 IAmb IAmb 13 37 36.1
comp=Z,17nm,1.2s
FINES FINESS Array B 76.88 334 P **P** **13 37 32.8 +0.3**
comp=Z,1.6nm,0.5s,baz=65,slow=4.9,SNR=11
comp=Z,1.6nm,0.5s
FINES FINESS Array B 76.88 334 *i* P **P** **13 37 34.9 +2.4**
FINES pmax pmax
comp=Z,2.0nm,0.5s
BMO Blue Mountains 76.95 46 IAmb IAmb 13 37 37.1
comp=Z,48nm,1.9s
AFDM Forest Hills D 77.15 53 P **P** **13 37 34.3 -0.2**
ILON Igloolik, Nuna 77.16 15 P **P** **13 37 33.5 -0.5**
ILON IAmb IAmb 13 37 46.4
comp=Z,22nm,1.2s
WVOR Wild Horse Val 77.18 49 IAmb IAmb 13 37 38.6
comp=Z,48nm,2.0s
KBZ Khabaz 77.40 313 P **P** **13 37 36.5 +0.8**
comp=Z,17nm,1.0s,baz=74,slow=0.8,SNR=25
KBZ LR LR 14 14 41.0
comp=Z,372nm,19.0s,baz=60,slow=38
comp=Z,17nm,1.0s
KIV Kislovodsk 77.43 313 P **P** **13 37 36.4 +0.3**
KIV Kislovodsk 77.43 313 *i* P **P** **13 37 36.8 +0.7**
SNR=6.3
KIV Kislovodsk 77.43 313 *e*P **P** **13 37 37.0 +1.0**
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,250nm,19.0s
KIV Kislovodsk 77.43 313 P **P** **13 37 37.7 +1.7**
SHA1 Shidzhatmaz 77.55 313 *i* P **P** **13 37 37.1 +0.2**
MPK Martis Peak 77.65 52 IAmb IAmb 13 37 40.6
comp=Z,28nm,1.2s
NEUR Neytrino 77.74 313 *i* P **P** **13 37 38.2 +0.3**
NEUR pmax pmax
comp=Z,4.0nm,1.1s
GNI Garni 77.81 309 LR LR 14 14 59.1
comp=Z,209nm,19.0s,baz=342,slow=38
PAHR Pah Rah Range 77.91 51 IAmb IAmb 13 37 56.9
comp=Z,20nm,1.4s
CMB Columbia Colle 77.97 53 IAmb IAmb 13 37 57.0
comp=Z,19nm,1.3s
ERBR Yeremizino-Bor 77.99 316 *e*P **P** **13 37 39.2 +0.2**
ERBR *e*S **S** **13 47 31.7 -0.5**
ERBR *e* 13 47 56.8
ERBR pmax pmax
comp=Z,31nm,1.1s
ERBR MLR MLR
comp=Z,473nm,19.0s
PNTR Pine Nut 78.04 52 IAmb IAmb 13 37 57.3
comp=Z,15nm,1.1s
LABN Labinsk 78.35 315 *e*P **P** **13 37 41.1 +0.1**
LABN pmax pmax
comp=Z,30nm,0.7s
MFID Camas Ranch 78.56 47 IAmb IAmb 13 37 45.5
comp=Z,28nm,1.3s
MZR Muzera 78.76 290 *i* P **P** **13 37 43.7 0.0**
SNR=7.1
MZR Muzera 78.76 290 P **P** **13 37 44.3 +0.6**
SNR=10
GHWR Ruwais 78.83 291 P **P** **13 37 44.8 +0.7**
SUMG Summit 79.16 0 IAmb IAmb 13 38 03.8
comp=Z,47nm,1.6s
SUMG Summit 79.16 0 *i* P **P** **13 37 47.1 +1.6**
SUMG IAmb IAmb 13 37 49.6
comp=Z,76nm,1.7s
LHV Little Huntoon 79.19 52 IAmb IAmb 13 38 02.4
comp=Z,22nm,1.3s
NVAR Mina Array Bea 79.25 52 P **P** **13 37 46.1 -0.2**
comp=Z,4.8nm,1.0s,baz=288,slow=3.1,SNR=20
NVAR LR LR 14 08 28.2
comp=Z,318nm,19.0s,baz=270,slow=32
comp=Z,4.8nm,1.0s
SHMA Al-Shehemyia 79.55 294 P **P** **13 37 48.2 +0.3**
PPT Papeete 79.85 116 LR LR 14 11 29.8
comp=Z,180nm,18.6s,baz=306,slow=34
DMTO DMTO 79.87 285 P **P** **13 37 50.2 +0.4**
DOK Doka 80.16 286 P **P** **13 37 51.5 +0.2**
SNR=8.0
MNK Minsk 80.20 328 *i* P **P** **13 37 52.6 +1.6**
comp=E,19nm,0.7s
MNK *i* P **P** **13 37 52.6 +1.6**
comp=N,23nm,1.1s
MNK *i* P **P** **13 37 52.6 +1.6**
comp=Z,11nm,0.6s,baz=54
MNK *i* PcP **pwP** **13 37 59.5 -0.4**
MNK *i* PP **PP** **13 40 54.9 +2.2**
MNK *i* PPP PPP 13 42 44.2
MNK *i* S **S** **13 47 58.8 +3.3**
MNK *i* ScS **ScS** **13 48 18.1 +2.2**
MNK *i* SS **SS** **13 53 10.8 +5.5**
MNK *i* SSS SSS 13 56 37.1
MNK *i* LR LR 14 13 52.7
MNK *i* LRM MLR 14 15 39.7
comp=Z,124nm,7.6s
MNK *i* LRM MLR 14 15 46.0
comp=E,798nm,18.8s
MNK *i* LRM MLR 14 16 15.8
comp=N,950nm,19.4s
MNK Minsk 80.20 328 *i* P **P** **13 37 52.5 +1.6**
MNK *i* 13 37 59.4
MNK *i* 13 40 54.9
MNK *i* PPP PPP 13 42 44.2
MNK *i* S **S** **13 47 58.7 +3.3**
MNK *i* SS **SS** **13 53 10.7 +5.5**
MNK pmax pmax
comp=E,19nm,0.7s
MNK pmax pmax
comp=Z,11nm,0.6s
MNK pmax pmax
comp=N,23nm,1.1s
MNK MLR MLR
comp=Z,124nm,8.0s
MNK MLR MLR
comp=E,798nm,19.0s
MNK MLR MLR
comp=N,950nm,19.0s
FFC Flin Flon 80.27 32 P **P** **13 37 51.3 0.0**
FFC IAmb IAmb 13 38 05.0
comp=Z,22nm,1.1s
FFC Flin Flon 80.27 32 P **P** **13 37 51.3 0.0**
FFC pmax pmax
comp=Z,22nm,1.2s
ANN Anapa 80.32 316 *e*P **P** **13 37 53.3 +1.6**
ANN pmax pmax
comp=Z,94nm,1.6s
SAATT Saattut 80.41 5 *i* P P 13 37 58.6 +6.9
SAATT IAmb IAmb 13 38 02.5
comp=Z,8.8nm,0.8s
NACGM Naroch 80.48 328 *e*P **P** **13 37 53.7 +1.3**
comp=Z,27nm,0.9s,baz=53
YHB Horse Butte 80.80 44 IAmb IAmb 13 38 09.0
comp=Z,26nm,1.2s
TPO Tropico Hills 80.97 55 P **P** **13 37 54.9 -0.6**
TPO IAmb IAmb 13 37 58.6
comp=Z,35nm,1.3s
CCCA Chr Cany lake 81.28 54 IAmb IAmb 13 38 00.1
comp=Z,23nm,1.3s
QSM Queen of Sheba 81.42 54 IAmb IAmb 13 38 15.8
comp=Z,24nm,1.4s
YMP Mirror Lake Pl 81.43 44 IAmb IAmb 13 38 15.1
comp=Z,27nm,1.3s
ABTO Aybut 81.44 285 P **P** **13 37 58.3 0.0**
SNR=8.2
FLWY Flagg Ranch 81.45 44 IAmb IAmb 13 38 13.2
comp=Z,42nm,1.6s
GWY Greenwater Val 81.46 54 IAmb IAmb 13 38 00.8
comp=Z,20nm,1.2s
AKASG Malin Array Be 81.76 324 P **P** **13 37 58.4 -0.9**
comp=Z,1.3nm,0.6s,baz=52,slow=6.2,SNR=5.6
AKASG LR LR 14 16 42.3
comp=Z,554nm,18.2s,baz=45,slow=38
comp=Z,1.3nm,0.6s
AKASG Malin Array Be 81.76 324 *i* P **P** **13 37 59.2 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
RLMT Red Lodge 81.77 43 IAmb IAmb 13 38 14.3
comp=Z,25nm,1.4s
AK04 Malin Array Si 81.78 324 P **P** **13 38 00.2 +0.8**
AK09 Malin Array Si 81.78 324 P **P** **13 38 00.2 +0.8**
AK21 Malin Array Si 81.81 324 P **P** **13 37 59.6 0.0**
AK05 Malin Array Si 81.81 324 P **P** **13 38 00.2 +0.6**
AK20 Malin Array Si 81.84 324 P **P** **13 37 59.0 -0.7**
MARD Mardin 81.88 308 P **P** **13 38 00.2 -0.2**
MARD IAmb IAmb 13 38 15.8
comp=Z,29nm,1.1s
HWUT Hardware Ranch 82.19 47 IAmb IAmb 13 38 16.1
comp=Z,17nm,1.2s
HFS Hagfors 82.31 337 P **P** **13 38 00.8 -1.2**
comp=Z,2.8nm,0.8s,baz=64,slow=3.4,SNR=6.8
comp=Z,2.8nm,0.8s
NB2 NORSAR Subarra 82.47 338 P **P** **13 38 02.8 -0.1**
comp=Z,1.2nm,0.6s,baz=41,slow=5.1
NOA NORSAR Array B 82.47 338 P **P** **13 38 02.2 -0.6**
comp=Z,3.7nm,0.8s,baz=41,slow=5.3,SNR=6.3
NOA LR LR 14 19 39.8
comp=Z,249nm,20.7s,baz=20,slow=39
comp=Z,3.7nm,0.8s
TCUT Toone Canyon 82.55 47 IAmb IAmb 13 38 19.5
comp=Z,25nm,1.6s
PDAR Pinedale Array 82.85 45 P **P** **13 38 04.8 -0.8**
comp=Z,3.3nm,1.1s,baz=267,slow=3.0,SNR=10
PDAR LR LR 14 10 08.4
comp=Z,212nm,20.6s,baz=320,slow=32
comp=Z,3.3nm,1.1s
PDAR Pinedale Array 82.85 45 P **P** **13 38 04.6 -0.9**
PFO Pinyon Flats O 82.86 56 LR LR 14 09 59.5
comp=Z,192nm,19.2s,baz=250,slow=32
PMD Palm Desert 82.90 56 IAmb IAmb 13 38 08.1
comp=Z,14nm,1.2s
LUBAR Lubar, Ukraine 82.98 324 P **P** **13 38 04.9 -0.8**
P17A Butcher Ranch, 83.84 48 IAmb IAmb 13 38 13.6
comp=Z,22nm,1.3s
HMU Henry Mountain 84.65 50 IAmb IAmb 13 38 28.1
comp=Z,12nm,1.0s
FRB Frobisher Bay 84.77 13 LR LR 14 21 31.7
comp=Z,149nm,18.0s,baz=22,slow=40
RAYN Ar Rayn 85.03 294 P **P** **13 38 16.8 +0.1**
RAYN Ar Rayn 85.03 294 *i* P **P** **13 38 17.6 +0.8**
SNR=42
RAYN Ar Rayn 85.03 294 P **P** **13 38 16.8 +0.1**
RAYN pmax pmax
comp=Z,44nm,0.8s
RAYN Ar Rayn 85.03 294 P **P** **13 38 17.9 +1.2**
Y14A Wickenburg 85.18 54 IAmb IAmb 13 38 20.2
comp=Z,15nm,1.3s
BR131 Keskin Array S 85.39 313 IAmb IAmb 13 38 31.9
comp=Z,16nm,1.1s
BR131 Keskin Array S 85.39 313 P **P** **13 38 20.0 +1.6**
BRTR Keskin Array B 85.39 313 P **P** **13 38 18.8 +0.3**
comp=Z,4.2nm,1.0s,baz=108,slow=3.1,SNR=17
BRTR LR LR 14 20 36.6
comp=Z,138nm,19.6s,baz=33,slow=39
comp=Z,4.2nm,1.0s
BRTR Keskin Array B 85.39 313 P **P** **13 38 17.9 -0.5**
BRTR Keskin Array B 85.39 313 *i* P **P** **13 38 19.6 +1.2**
BRTR pmax pmax
comp=Z,4.0nm,1.0s
WUAZ Wupatki 85.50 52 IAmb IAmb 13 38 22.7
comp=Z,19nm,1.2s
HAYD Hayden 85.52 46 IAmb IAmb 13 38 32.6
comp=Z,14nm,1.1s
PV05 Paradox Valley 85.67 49 P **P** **13 38 19.6 -0.3**
PV05 IAmb IAmb 13 38 22.6
comp=Z,19nm,1.2s
BURAR Bucovina Array 85.72 323 P **P** **13 38 20.0 +0.2**
PV13 Radium Mtn., P 85.81 49 IAmb IAmb 13 38 37.8
comp=Z,24nm,1.4s
ULM Lac du Bonnet 85.98 33 P **P** **13 38 20.8 -0.1**
comp=Z,1.9nm,0.7s,baz=7.2,slow=2.3,SNR=5.4
ULM LR LR 14 15 28.4
comp=Z,165nm,21.9s,baz=356,slow=35
comp=Z,1.9nm,0.7s
ULM Lac du Bonnet 85.98 33 IAmb IAmb 13 38 23.1
comp=Z,16nm,1.4s
MLR Muntele Rosu 86.64 321 LR LR 14 21 33.2
comp=Z,229nm,18.0s,baz=44,slow=39
AGMN Agassiz Nation 87.27 35 IAmb IAmb 13 38 40.3
comp=Z,16nm,1.2s
EPLO Experimental L 87.39 33 IAmb IAmb 13 38 40.9
comp=Z,16nm,1.1s
MMAI Mount Meron Ar 87.86 307 P **P** **13 38 31.0 +0.5**
comp=Z,1.0nm,0.4s,baz=46,slow=4.2,SNR=3.6
comp=Z,1.0nm,0.4s
F33A 5 Mile Ranch, 88.67 37 IAmb IAmb 13 38 46.9
comp=Z,11nm,1.0s
VRAC Vranov 88.88 328 LR LR 14 21 35.2
comp=Z,244nm,18.3s,baz=7.0,slow=38
ANMO Albuquerque 89.18 50 LR LR 14 15 38.7
comp=Z,200nm,19.5s,baz=314,slow=34
ANMO Albuquerque 89.18 50*c eP* **P** **13 38 38.2 +1.3**
ANMO pmax pmax
comp=Z,8.0nm,2.5s
EYMN Ely 89.65 33 IAmb IAmb 13 38 41.1
comp=Z,26nm,1.4s
KUQ Kuujjuaa 89.83 16 IAmb IAmb 13 38 52.5
comp=Z,18nm,1.2s
GERES GERESS Array B 90.54 329 LR LR 14 24 31.6
comp=Z,266nm,18.1s,baz=54,slow=39
EKA Eskdalemuir Ar 91.51 341 LR LR 14 24 51.5
comp=Z,185nm,18.0s,baz=4.0,slow=39
LPIG La Paz 92.37 61 LR LR 14 14 30.1
comp=Z,164nm,19.5s,baz=313,slow=32
SCHQ Schefferville 93.16 17 LR LR 14 22 13.8
comp=Z,142nm,21.4s,baz=340,slow=36
SMWD Samnorwood 93.19 47 IAmb IAmb 13 38 58.4
comp=Z,9.8nm,1.0s
TPB05 Hovey Rd 93.66 52 IAmb IAmb 13 39 11.5
comp=Z,16nm,1.4s
ALPN Alpine 93.76 53 IAmb IAmb 13 39 01.2
comp=Z,12nm,1.5s
DAVOX Davos/Dischmat 93.80 330 LR LR 14 24 25.8
comp=Z,165nm,19.2s,baz=62,slow=38
TX31 Lajitas Ar. Si 94.35 53 IAmb IAmb 13 39 15.0
comp=Z,17nm,1.4s
TXAR Lajitas Array 94.35 53 P **P** **13 39 01.4 +0.6**
comp=Z,6.0nm,1.1s,baz=290,slow=3.6,SNR=20
TXAR LR LR 14 18 16.2
comp=Z,212nm,19.1s,baz=322,slow=34
comp=Z,6.0nm,1.1s
SAND Sanderson 95.06 52 IAmb IAmb 13 39 16.9
comp=Z,13nm,1.5s

BRDY	**Brady**	**96.38**	**49**	IAmb	IAmb	13 39 12.5	
	comp=Z,6.2nm,1.2s						
SADO	**Sadowa**	**97.65**	**29**	LR	LR	14 22 59.5	
	comp=Z,150nm,21.0s,baz=2.0,slow=35						
TORD	**Torodi Ar. Bea**	**124.00**	**312**	PKP	**PKPdf**	**13 44 39.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=302,slow=17,SNR=4.1						
LPAZ	**La Paz**	**149.06**	**73**	PKPbc	**PKPbc**	**13 45 29.0**	**-1.3**
	comp=Z,7.3nm,0.8s,baz=356,slow=4.2,SNR=20						
LPAZ	**La Paz**	**149.06**	**73**		**PKPbc**	**13 45 29.4**	**-0.9**
LPAZ	**La Paz**	**149.06**	**73**	PKP2	**PKPbc**	**13 45 29.4**	**-0.9**
PLCA	**Paso Flores**	**150.20**	**123**	PKPbc	**PKPbc**	**13 45 32.0**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=272,slow=2.0,SNR=6.0						

IDC ***23*** *13:53:32.6±0.6,26˚.85N×143˚.75E, h0km, mb4.0/18, mbtmp4.0/21, ML3.7/3, MS3.4/2, Error ellipse: s-maj=17.5km s-min=13.9km az=73.0*

NIED ***23*** *13:53:34.7,27˚.09N×143˚.81E, h31km, MW4.3, Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁵Nm; Mrr=0.96; Mθθ=0.47; Mφφ=0.48; Mrθ=2.67; Mθφ=-0.70; Mφr=0.62; Fault plane solution: M0=2.89000×10¹⁵ NP1: φs=149.00000°, δ=16.00000°, λ=-26.00000°. NP2: φs=264.00000°, δ=83.00000°, λ=-104.00000°.*

JMA ***23*** *13:53:34.7±0.4,27˚N±2˚×14˚4E±1˚, h31km, MV4.6/20, NEAR CHICHIJIMA ISLAND*

NEIC ***23*** *13:53:34.9±1.5,26˚.96N±0˚.08×143˚.72E±0˚.03, h10km±1km, mb4.7/38, Error ellipse: s-maj=14.0km s-min=3.9km az=166.0*

ISC 23 13:53:37.9±0.5, 27˚.00N±0˚.06×143˚.72E±0˚.06, h35km, n94, σ1§39/96, mb4.4/38, 1C, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.37**	**274**	P	**Pn**	**13 53 59.8**	**-0.8**
CBIJ				*e*S	**Sn**	**13 54 17.5**	**0.0**
JCJ	**Chichijima**	**1.37**	**274**	Pn	**Pn**	**13 53 59.0**	**-1.5**
	29nm,0.3s,baz=259,slow=22,SNR=24						
JCJ				Sn	**Sn**	**13 54 16.2**	**-1.3**
	130nm,0.3s,baz=276,slow=23,SNR=8.7						
JCJ	**Chichijima**	**1.37**	**274**		**Pn**	**13 53 59.9**	**-0.7**
JCJ				Sn	**Sn**	**13 54 17.3**	**-0.2**
JHH2	**Haha-jima-NKT2**	**1.43**	**255**	P	**Pn**	**13 54 00.5**	**-0.9**
JHH2				S	**Sn**	**13 54 20.8**	**+1.9**
BSO1	**Boso 1**	**7.98**	**344**	*e*S	**Sn**	**13 56 56.0**	**-3.7**
BSO3	**Boso 3**	**8.25**	**341**	P	**Pn**	**13 55 33.9**	**-1.0**
JOD2	**Odawara 2**	**9.14**	**335**	*e*P	**Pn**	**13 55 45.7**	**-1.6**
JRY	**Ryogami san**	**9.88**	**337**	*e*P	**Pn**	**13 55 56.1**	**-1.4**
MJAR	**Matsushiro Arr**	**10.60**	**335**	Pn	**Pn**	**13 56 04.5**	**-2.8**
	0.4nm,0.3s,baz=18,slow=13,SNR=45						
MJAR				Sn	**Sn**	**13 58 03.6**	**-1.2**
	0.1nm,0.3s,baz=149,slow=31,SNR=1.4						
MJAR	**Matsushiro Arr**	**10.60**	**335**		**Pn**	**13 56 04.9**	**-2.4**
MAJO	**Matsushiro**	**10.60**	**335**		**Pn**	**13 56 06.3**	**-1.0**
MAT	**Matsushiro**	**10.60**	**335**	*e*P	**Pn**	**13 56 06.2**	**-1.2**
MJB9	**Matsu-Tunnel**	**10.61**	**335**		**Pn**	**13 56 07.1**	**-0.3**
KSRS	**Korea Array**	**16.93**	**312**	P	**P**	**13 57 33.4**	**-0.3**
	0.2nm,0.3s,baz=118,slow=11,SNR=9.3						
	2.0nm,0.6s						
ASAJ	**Asahikawa**	**17.10**	**357**	P	**Pn**	**13 57 34.4**	**+0.2**
	0.4nm,0.3s,baz=236,slow=17,SNR=5.2						
	4.2nm,0.6s						
JKA	**Kamikawa-asahi**	**17.10**	**357**	Pn	**Pn**	**13 57 34.3**	**+0.2**
JKA				IAmb	IAmb	13 57 54.7	
	comp=Z,64nm,1.5s						
USRK	**Ussuriysk Ar.**	**19.60**	**334**	P	**Pn**	**13 58 04.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=135,slow=9.4,SNR=2.5						
	comp=Z,1.7nm,0.5s						
YHNB	**Yeheng**	**20.24**	**268**	P	**P**	**13 58 10.6**	**+0.3**
YHNB				IAmb	IAmb	13 58 42.1	
	comp=Z,48nm,1.2s						
YULB	**Yu-li**	**20.60**	**265**	P	**P**	**13 58 14.6**	**+0.4**
YULB				IAmb	IAmb	13 58 51.2	
	comp=Z,35nm,1.2s						
SSLB	**Suanglung**	**20.81**	**266**	P	**P**	**13 58 16.9**	**+0.5**
SSLB				IAmb	IAmb	13 58 37.8	
	comp=Z,58nm,1.5s						
TWG	**Pinlang**	**20.95**	**264**	P	**P**	**13 58 18.6**	**+0.7**
TWG				IAmb	IAmb	13 58 25.8	
	comp=Z,72nm,1.5s						
NJ2	**Nanjing**	**22.19**	**289**	*e*P	**P**	**13 58 30.1**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**22.45**	**104**	T	T	14 21 44.9	
	baz=291						
H11N1	**WAKE ISLAND Hy**	**22.45**	**104**	T	T	14 21 47.2	
	baz=291						
H11N3	**WAKE ISLAND Hy**	**22.47**	**104**	T	T	14 21 48.2	
	baz=291						
BNX	**BinXian**	**22.77**	**329**	⇑P	**P**	**13 58 37.3**	**+0.1**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.5s						
H11S3	**WAKE ISLAND Hy**	**22.78**	**107**	T	T	14 22 12.9	
	baz=295						
H11S1	**WAKE ISLAND Hy**	**22.79**	**107**	T	T	14 22 10.1	
	baz=295						
H11S2	**WAKE ISLAND Hy**	**22.80**	**107**	T	T	14 22 04.0	
	baz=295						
HHC	**Hu-ho-hao-te**	**29.86**	**306**	*e*P	**P**	**13 59 43.8**	**+1.7**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
LZH	**Lanzhou**	**34.97**	**295**	*e*P	**P**	**14 00 28.8**	**+1.8**
SONM	**Songino Array**	**35.73**	**316**	P	**P**	**14 00 34.1**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=120,slow=8.7,SNR=4.8						
	comp=Z,0.5nm,0.5s						
PZH	**PanZhiHua**	**37.36**	**279**	P	**P**	**14 00 47.5**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KAPI	**Kappang**	**39.38**	**220**	LR	LR	14 17 42.9	
	comp=Z,30nm,20.0s,baz=254,slow=37						
COEN	**Coen**	**40.72**	**181**	P	**P**	**14 01 14.8**	**-0.6**
MTN	**Manton Dam**	**41.45**	**199**	P	**P**	**14 01 20.6**	**-0.8**
BATI	**Baumata**	**41.80**	**210**	LR	LR	14 16 18.1	
	comp=Z,78nm,19.1s,baz=282,slow=33						
CMAR	**Chiang Mai Arr**	**41.99**	**268**	P	**P**	**14 01 25.7**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=70,slow=10,SNR=4.1						
	comp=Z,0.4nm,0.3s						
GOMU	**GeErMu**	**42.28**	**295**	P	**P**	**14 01 28.3**	**-0.2**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KNRA	**Kununurra**	**44.84**	**201**	P	**P**	**14 01 48.0**	**-0.8**
KNRA				IAmb	IAmb	14 02 02.7	
	comp=Z,15nm,1.1s						
TIXI	**Tiksi**	**45.45**	**353**		**P**	**14 01 53.4**	**+0.3**
CTA	**Charters Tower**	**46.88**	**177**	P	**P**	**14 02 03.7**	**-1.1**
	comp=Z,4.7nm,0.7s,baz=1.6,slow=12,SNR=2.6						
	comp=Z,4.7nm,0.7s						
CTAO	**Charters Tower**	**46.88**	**177**	P	**P**	**14 02 03.9**	**-1.0**
WB0	**Warramunga Arr**	**47.36**	**192**	P	**P**	**14 02 07.5**	**-1.2**
WRAB	**Tennant Creek**	**47.53**	**192**	P	**P**	**14 02 08.8**	**-1.2**
WRA	**Warramunga Arr**	**47.54**	**192**	P	**P**	**14 02 09.2**	**-0.9**
	comp=Z,8.7nm,0.9s,baz=12,slow=8.5,SNR=34						
	comp=Z,8.7nm,0.9s						
WRA	**Warramunga Arr**	**47.54**	**192**		**P**	**14 02 08.8**	**-1.3**
WMQ	**Urumqi**	**47.74**	**306**	*e*P	**P**	**14 02 13.8**	**+2.3**
WMQ				PcP	**PcP**	**14 03 32.8**	**-7.5**
WMQ				LR	LR		
	comp=N,1μm,6.9s						
M13K	**Dall Lake**	**48.78**	**32**	P	**P**	**14 02 19.9**	**+0.8**
M13K				IAmb	IAmb	14 02 23.6	
	comp=Z,10nm,0.7s						
RPSI	**Rantau Prapat**	**49.19**	**248**	P	**P**	**14 02 22.8**	**-0.1**
RPSI				IAmb	IAmb	14 02 51.1	
	comp=Z,6.6nm,1.1s						
L14K	**Kuka Creek**	**49.39**	**31**	P	**P**	**14 02 25.1**	**+1.3**
L14K				IAmb	IAmb	14 03 05.9	
	comp=Z,5.1nm,1.1s						
K15K	**Wolf Creek Mou**	**50.22**	**30**	P	**P**	**14 02 31.2**	**+1.2**
K15K				IAmb	IAmb	14 02 50.4	
	comp=Z,5.0nm,1.4s						
ZALV	**Zalesovo Beam**	**50.46**	**319**	P	**P**	**14 02 32.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=114,slow=6.6,SNR=4.4						
ZALV				PcP	**PcP**	**14 03 50.1**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=102,slow=2.9,SNR=3.8						
	comp=Z,0.8nm,0.6s						
C16K	**Lisburne Hills**	**51.06**	**22**	P	**P**	**14 02 37.0**	**+0.6**
AS31	**Alice Springs**	**51.26**	**192**	P	**P**	**14 02 36.8**	**-1.6**
ASAR	**Alice Springs**	**51.26**	**192**	P	**P**	**14 02 37.1**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=1.4,slow=5.5,SNR=28						
ASAR				PcP	**PcP**	**14 03 51.8**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=16,slow=4.6,SNR=2.4						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**51.26**	**192**	P	**P**	**14 02 36.7**	**-1.7**
MKAR	**Makanchi Array**	**51.59**	**310**	P	**P**	**14 02 41.4**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=89,slow=8.3,SNR=16						
MKAR				PcP	**PcP**	**14 03 54.5**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=82,slow=5.0,SNR=1.9						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**51.59**	**310**	P	**P**	**14 02 41.7**	**+1.0**
H17K	**Granite Mounta**	**51.75**	**27**	P	**P**	**14 02 41.8**	**+0.2**
M17K	**Holitna River**	**51.83**	**32**	P	**P**	**14 02 43.8**	**+1.5**
M17K				IAmb	IAmb	14 02 46.9	
	comp=Z,9.5nm,1.2s						
OHAK	**Old Harbor**	**53.18**	**37**	P	**P**	**14 02 52.3**	**0.0**
C19K	**Lookout Ridge**	**53.32**	**22**	P	**P**	**14 02 54.4**	**+1.2**
C19K				IAmb	IAmb	14 02 57.4	
	comp=Z,4.3nm,0.7s						
KURK	**Kurchatov**	**54.03**	**315**		**P**	**14 02 59.1**	**+0.5**
KURK				IAmb	IAmb	14 03 02.4	
	comp=Z,3.3nm,0.8s						
KURBB	**Kurchatov Arra**	**54.08**	**314**	P	**P**	**14 02 60.0**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=92,slow=8.0,SNR=21						
	comp=Z,2.8nm,0.7s						
IMAR	**Indian Mountai**	**54.52**	**26**	P	**P**	**14 03 02.5**	**+0.6**
SLKM	**Skilak Lake**	**55.14**	**33**	P	**P**	**14 03 06.7**	**+0.1**
D22K	**Ayikyak River**	**55.62**	**23**	P	**P**	**14 03 11.3**	**+1.4**
G23K	**Bananza Creek**	**56.14**	**26**	P	**P**	**14 03 14.8**	**+1.1**
G23K				IAmb	IAmb	14 03 18.3	
	comp=Z,8.9nm,1.2s						
E23K	**Chandalar**	**56.54**	**24**	P	**P**	**14 03 17.6**	**+1.0**
E23K				IAmb	IAmb	14 03 21.1	
	comp=Z,3.6nm,0.7s						
ILAR	**Eielson Array**	**57.14**	**29**	P	**P**	**14 03 20.3**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=270,slow=5.6,SNR=10.0						
	comp=Z,1.0nm,0.8s						
KLU	**Klutina**	**57.31**	**32**	P	**P**	**14 03 22.9**	**+0.8**
KLU				IAmb	IAmb	14 03 38.8	
	comp=Z,14nm,1.4s						
BMAR	**Burnt Mountain**	**58.35**	**26**	P	**P**	**14 03 30.9**	**+1.6**
STKA	**Stephens Creek**	**58.59**	**182**	P	**P**	**14 03 29.4**	**-1.8**
	comp=Z,2.3nm,0.6s,baz=334,slow=8.5,SNR=5.6						
	comp=Z,2.3nm,0.6s						
BVAR	**Borovoye Array**	**59.04**	**318**	P	**P**	**14 03 35.9**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=81,slow=7.1,SNR=8.2						
BVAR				PcP	**PcP**	**14 04 22.6**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=80,slow=3.4,SNR=2.4						
	comp=Z,1.0nm,0.4s						
H27K	**Steamboat Moun**	**59.47**	**27**	P	**P**	**14 03 38.2**	**+1.1**
H27K				IAmb	IAmb	14 03 39.4	
	comp=Z,4.7nm,0.9s						
BBOO	**Buckleboo**	**59.93**	**187**	P	**P**	**14 03 39.5**	**-1.0**
BBOO				IAmb	IAmb	14 03 58.3	
	comp=Z,17nm,1.3s						
KK31	**Karatay Array**	**60.25**	**306**		**P**	**14 03 43.3**	**+0.5**
KK31				IAmb	IAmb	14 03 46.4	
	comp=Z,3.1nm,0.7s						
KKAR	**Karatay Array**	**60.25**	**306**	P	**P**	**14 03 43.6**	**+0.8**
HYT	**Haines Junctio**	**61.40**	**33**	P	**P**	**14 03 51.7**	**+1.3**
HYT				IAmb	IAmb	14 04 05.5	
	comp=Z,17nm,1.5s						
TOO	**Toolangi**	**64.25**	**178**	P	**P**	**14 04 09.7**	**+0.2**
AB31	**Akbulak array**	**66.14**	**315**	P	**P**	**14 04 21.1**	**-0.6**
ABKAR	**Akbulak array**	**66.14**	**315**	P	**P**	**14 04 20.9**	**-0.7**
YKA	**Yellowknife Ar**	**71.57**	**29**	P	**P**	**14 04 55.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=295,slow=6.7,SNR=5.6						
	comp=Z,0.4nm,0.7s						
KAAM	**Kaadhehdhoo**	**72.64**	**261**	P	**P**	**14 05 02.3**	**-0.1**
FINES	**FINESS Array B**	**78.63**	**334**	P	**P**	**14 05 38.0**	**+2.1**
	comp=Z,8.8nm,1.1s,baz=58,slow=4.7,SNR=5.4						
	comp=Z,8.8nm,1.1s						
FINES	**FINESS Array B**	**78.63**	**334**	P	**P**	**14 05 36.6**	**+0.7**
KBZ	**Khabaz**	**79.07**	**314**	P	**P**	**14 05 40.5**	**+1.8**
	comp=Z,1.7nm,0.8s,baz=319,slow=1.2,SNR=6.8						
	comp=Z,1.7nm,0.8s						
NVAR	**Mina Array Bea**	**79.50**	**52**	P	**P**	**14 05 42.4**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=289,slow=6.4,SNR=8.0						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**83.31**	**45**	P	**P**	**14 06 03.0**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=298,slow=8.8,SNR=3.7						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**87.06**	**314**	P	**P**	**14 06 20.3**	**0.0**
	comp=Z,0.8nm,0.8s,baz=48,slow=3.7,SNR=4.4						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**94.56**	**54**	P	**P**	**14 06 55.8**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=333,slow=6.4,SNR=1.7						
	comp=Z,0.1nm,0.5s						
LPAZ	**La Paz**	**148.62**	**77**	PKPbc	**PKPbc**	**14 13 22.7**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=7.1,slow=3.7,SNR=5.7						
LPAZ	**La Paz**	**148.62**	**77**		**PKiKP**	**14 13 25.6**	**+1.4**

IDC ***23*** *14:00:34.3±1.0,6˚.13S×146˚.76E, h90km±7km, mb3.4/8, mbtmp3.9/12, MS3.3/3, Error ellipse: s-maj=29.9km s-min=10.0km az=80.0*

NEIC ***23*** *14:00:35.1±1.0,6˚.13S±0˚.06×146˚.7E±0˚.1, h91km±7km, mb4.3/18, Error ellipse: s-maj=17.2km s-min=9.1km az=91.0*

ISC 23 14:00:35.1±0.5, 6˚.14S±0˚.06×146˚.64E±0˚.09, h100km, n42, σ1§23/47, mb4.1/13, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.29**	**171**	P	**Pn**	**14 01 24.2**	**-0.5**
	186nm,0.6s,baz=359,slow=6.1,SNR=166						
PMG				S	**Sn**	**14 02 01.5**	**-1.6**
	100nm,0.3s,baz=151,slow=21,SNR=17						
PMG	**Port Moresby**	**3.29**	**171**		**Pn**	**14 01 24.1**	**-0.7**
MANU	**Manus Island**	**4.13**	**10**		**Pn**	**14 01 35.6**	**-0.5**
COEN	**Coen**	**8.48**	**203**		**Pn**	**14 02 35.5**	**+0.2**
CTA	**Charters Tower**	**13.87**	**182**	P	**Pn**	**14 03 48.4**	**+0.9**
	7.4nm,0.5s,baz=3.2,slow=13,SNR=22						
CTA				LR	LR	14 08 34.1	
	comp=Z,65nm,20.0s,baz=28,slow=35						
SIJI	**Sorong**	**16.21**	**288**	P	**Pn**	**14 04 17.9**	**+0.8**
	9.0nm,0.6s,baz=56,slow=22,SNR=4.3						
MTN	**Manton Dam**	**16.68**	**245**		**Pn**	**14 04 23.2**	**+0.3**
MTN				IAmb	IAmb	14 04 41.1	
	comp=Z,30nm,1.3s						
WB0	**Warramunga Arr**	**18.04**	**220**	P	**P**	**14 04 38.4**	**-0.1**
WB0				IAmb	IAmb	14 05 19.7	
	comp=Z,12nm,1.2s						
WR8	**Warramunga Arr**	**18.11**	**220**	P	**P**	**14 04 39.5**	**+0.2**
WR8				IAmb	IAmb	14 04 57.8	
	comp=Z,8.9nm,0.9s						
WRA	**Warramunga Arr**	**18.20**	**220**	P	**P**	**14 04 40.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=40,slow=11,SNR=15						
WRA				S	**S**	**14 07 59.6**	**-3.9**
	comp=Z,0.6nm,0.6s,baz=28,slow=21,SNR=1.8						
WRA	**Warramunga Arr**	**18.20**	**220**	P	**P**	**14 04 39.1**	**-1.2**
KNRA	**Kununurra**	**19.93**	**240**	P	**P**	**14 04 58.6**	**-0.7**
KNRA				IAmb	IAmb	14 05 31.6	
	comp=Z,18nm,1.1s						
AS31	**Alice Springs**	**21.30**	**214**	P	**P**	**14 05 14.1**	**+0.1**
ASAR	**Alice Springs**	**21.30**	**214**	P	**P**	**14 05 14.4**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=54,slow=8.9,SNR=26						
ASAR				S	**S**	**14 09 08.8**	**+3.6**
	comp=Z,0.7nm,0.7s,baz=31,slow=18,SNR=5.3						
ASAR				LR	LR	14 14 56.8	
	comp=Z,65nm,18.4s,baz=308,slow=40						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**21.30**	**214**	P	**P**	**14 05 13.7**	**-0.3**
INKA	**Innaminka**	**22.20**	**194**	P	**P**	**14 05 23.4**	**0.0**
ARMA	**Armidale**	**24.60**	**170**	P	**P**	**14 05 46.5**	**+0.3**
STKA	**Stephens Creek**	**26.04**	**190**	P	**P**	**14 06 01.3**	**+2.2**
	comp=Z,0.7nm,0.4s,baz=9.8,slow=8.4,SNR=1.7						
	comp=Z,0.7nm,0.4s						
STKA	**Stephens Creek**	**26.04**	**190**	P	**P**	**14 05 59.5**	**+0.4**
STKA				IAmb	IAmb	14 06 02.1	
	comp=Z,16nm,1.1s						
BBOO	**Buckleboo**	**28.31**	**199**	P	**P**	**14 06 19.6**	**+0.2**
BBOO				IAmb	IAmb	14 06 59.6	
	comp=Z,17nm,1.4s						
TGY	**Tagaytay City**	**32.48**	**308**	LR	LR	14 20 50.9	
	comp=Z,135nm,19.6s,baz=128,slow=37						
MRNZ	**Matariki Terra**	**42.13**	**150**	P	**P**	**14 08 18.0**	**+0.4**
BKZ	**Black Stump Fm**	**42.50**	**145**	P	**P**	**14 08 21.0**	**+0.2**
JOHN	**Johnston Islan**	**48.93**	**62**	P	**P**	**14 09 10.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**53.00**	**298**	P	**P**	**14 09 42.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=106,slow=6.8,SNR=1.6						
CMAR				pP	**pP**	**14 10 05.6**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=115,slow=5.5,SNR=4.6						
	comp=Z,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.00**	**298**	P	**P**	**14 09 42.5**	**+0.4**
PETK	**Petropavlovsk-**	**59.76**	**8**	P	**P**	**14 10 29.5**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=172,slow=5.8,SNR=1.2						
	comp=Z,1.3nm,0.7s						
PETK	**Petropavlovsk-**	**59.76**	**8**	P	**P**	**14 10 30.0**	**+0.6**
SONM	**Songino Array**	**64.35**	**331**	P	**P**	**14 11 01.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=104,slow=6.1,SNR=2.1						
	comp=Z,0.1nm,0.3s						
EVN	**Everest**	**66.88**	**304**	P	**P**	**14 11 17.8**	**+0.1**
EVN				IAmb	IAmb	14 11 54.6	
	comp=Z,3.0nm,1.1s						
VNDA	**Vanda**	**71.80**	**177**	P	**P**	**14 11 47.3**	**+0.9**
	comp=Z,3.2nm,1.0s,baz=350,slow=8.6,SNR=2.3						
	comp=Z,3.2nm,1.0s						
VNDA	**Vanda**	**71.80**	**177**	P	**P**	**14 11 47.5**	**+1.1**
MKAR	**Makanchi Array**	**77.38**	**321**	P	**P**	**14 12 18.2**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=114,slow=5.4,SNR=1.5						
MKAR				pP	**pP**	**14 12 42.5**	**-3.4**
	comp=Z,0.3nm,0.8s,baz=131,slow=4.4,SNR=1.9						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**77.38**	**321**	P	**P**	**14 12 18.6**	**-0.6**
L14K	**Kuka Creek**	**77.84**	**22**	P	**P**	**14 12 22.5**	**+1.1**
L14K				IAmb	IAmb	14 12 25.0	
	comp=Z,5.1nm,1.2s						
E19K	**Redstone River**	**83.36**	**19**	P	**P**	**14 12 51.7**	**+1.0**
E19K				IAmb	IAmb	14 13 31.2	
	comp=Z,2.7nm,1.1s						
ILAR	**Eielson Array**	**85.75**	**23**	P	**P**	**14 13 02.1**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=262,slow=4.7,SNR=5.0						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**85.75**	**23**	P	**P**	**14 13 02.4**	**-0.5**
J25K	**Salcha River,**	**86.28**	**24**	P	**P**	**14 13 05.7**	**+0.1**
J25K				IAmb	IAmb	14 13 37.5	
	comp=Z,9.1nm,1.5s						
TORD	**Torodi Ar. Bea**	**144.78**	**284**	PKP	**PKPdf**	**14 20 01.8**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=82,slow=4.0,SNR=11						
TORD				pPKP	**pPKPdf**	**14 20 28.2**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=60,slow=3.6,SNR=3.2						
TORD	**Torodi Ar. Bea**	**144.78**	**284**		**PKPdf**	**14 20 01.4**	**0.0**
DBIC	**Dimbokro**	**151.67**	**273**	PKPbc	**PKiKP**	**14 20 20.1**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=171,slow=1.6,SNR=3.3						

ISK ***23*** *14:05:35.4,38˚.39N×44˚.62E, h10km, ML2.3/6*

AZER ***23*** *14:05:35.0,38˚.33N×44˚.62E, h21km, ml2.5*

AFAD ***23*** *14:05:37.6,38˚.42N×44˚.48E, h7km±1km, ML1.8*

ISC 23 14:05:36.5±1.2, 38˚.37N±0˚.03×44˚.54E±0˚.03, h12km±9km, n22, σ1§43/40, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.52**	**304**	P	**Pg**	**14 05 44.9**	**-1.8**
OZAP				S	**Sg**	**14 05 53.4**	**-0.3**
YOVA	**Hakkari_Yksek**	**0.81**	**194**	P	**Pn**	**14 05 54.0**	**+0.1**
YOVA				S	**Sn**	**14 06 06.4**	**+0.3**
YOVA				IAML		14 06 11.0	
	comp=N,50nm,1.0s						
YOVA				IAML		14 06 11.0	
	comp=E,46nm,0.8s						
TVAN	**Van**	**0.91**	**280**	P	**Pg**	**14 05 52.8**	**-1.2**
VANB	**Van**	**0.93**	**284**	Pg	**Pb**	**14 05 54.6**	**-0.1**
VANB				Sg	**Sb**	**14 06 07.9**	**+0.8**
VMUR	**Van-Muradiye**	**0.98**	**309**	P	**Pb**	**14 05 55.1**	**-0.4**
VMUR				S	**Sg**	**14 06 08.2**	**0.0**
VMUR				IAML		14 06 14.0	
	comp=E,42nm,0.6s						
VMUR				IAML		14 06 15.0	
	comp=N,49nm,0.7s						
HAKT	**HAKKARI**	**1.05**	**219**	P	**Pb**	**14 05 56.6**	**-0.2**
HAKT				S	**Sn**	**14 06 13.1**	**+1.2**
HAKT	**HAKKARI**	**1.05**	**219**	P	**Pg**	**14 05 56.4**	**-0.3**
HAKT				S	**Sn**	**14 06 13.1**	**+1.2**
NAX	**Nakhchivan**	**1.09**	**43**	P	**Pn**	**14 05 57.1**	**-0.6**
NAX				S	**Sn**	**14 06 13.7**	**+0.9**
GEVA	**Gevas**	**1.17**	**267**	P	**Pn**	**14 05 56.4**	**-2.5**
GEVA				S	**Sn**	**14 06 15.3**	**+0.4**
AKDM	**Akdamar-Van**	**1.23**	**268**	Pn	**Pn**	**14 05 58.2**	**-1.5**
ORD	**Ordubad**	**1.26**	**64**	P	**Pg**	**14 06 00.4**	**-0.4**
ORD				S	**Sn**	**14 06 18.9**	**+1.8**
SBZ	**Shahbuz**	**1.29**	**37**	P	**Pg**	**14 06 00.9**	**-0.4**
SBZ				S	**Sn**	**14 06

ITBZ	**Tabriz**	**1.29**	**99**	Pg		**Pg**	**14 26 14.1**	**0.0**
CUKT	**Cukurca**	**1.41**	**211**	Pn		**Pg**	**14 26 16.9**	**+0.7**
CUKT				Sn		**Sg**	**14 26 37.4**	**+2.9**
VAYK	**Vayk**	**1.42**	**29**	⇓*e*P		**Pg**	**14 26 16.2**	**-0.3**
VAYK				⇓*e*S		**Sg**	**14 26 37.2**	**+2.2**
ADCV	**BITLIS_Adilcev**	**1.45**	**285**	P		**Pg**	**14 26 17.1**	**0.0**
ADCV				S		**Sg**	**14 26 38.2**	**+2.3**
ADCV	comp=N,72nm,0.8s			IAML			14 26 41.0	
ADCV	comp=E,102nm,0.6s			IAML			14 26 41.0	
ALVK	**Alvank**	**1.51**	**71**	*e*P		**Pg**	**14 26 17.4**	**-0.8**
ALVK				*e*S		**Sg**	**14 26 37.6**	**-0.2**
AGRB	**Hanur-Agry**	**1.64**	**314**	Pn		**Pg**	**14 26 20.0**	**-0.6**
AGRB				Sn		**Sg**	**14 26 40.9**	**-0.9**
MLAZ	**Malazgirt-MUS**	**1.69**	**295**	Pn		**Pg**	**14 26 20.8**	**-0.8**
KOTA	**Agri, Merkez-K**	**1.69**	**323**	P		**Pg**	**14 26 21.8**	**+0.1**
KOTA				S		**Sg**	**14 26 44.4**	**+0.8**
GNI	**Garni**	**1.70**	**6**	Pn		**Pg**	**14 26 20.9**	**-0.9**
GNI	**Garni**	**1.70**	**6**	⇑*i*P		**Pg**	**14 26 22.3**	**+0.5**
GNI				⇑*i*S		**Sg**	**14 26 48.9**	**+5.0**
EGVZ	**Egvard**	**1.75**	**63**	*e*P		**Pg**	**14 26 21.8**	**-1.1**
EGVZ				*e*S		**Sg**	**14 26 45.7**	**+0.1**
AYRK	**Ayrk**	**1.93**	**30**	*e*P		**Pg**	**14 26 25.3**	**-0.9**
AYRK				*e*S		**Sg**	**14 26 51.2**	**0.0**
AMBZ	**Amberd**	**1.94**	**354**	*e*P		**Pg**	**14 26 26.0**	**-0.4**
AMBZ				*e*S		**Sg**	**14 26 52.4**	**+0.8**
GURO	**Guroymak-BITLI**	**1.96**	**274**	Pn		**Pb**	**14 26 24.9**	**-0.3**
IHRS	**Heris**	**1.98**	**93**	Pn		**Pg**	**14 26 26.7**	**-0.6**
GDB	**GEDABAY**	**2.45**	**22**	P		**Pg**	**14 26 34.2**	**-2.1**
GDB				S		**Sg**	**14 27 08.6**	**+0.5**
LSVT	**Lusahovit**	**2.51**	**12**	*e*P		**Pg**	**14 26 37.0**	**-0.4**
LSVT				*e*S		**Sg**	**14 27 09.9**	**0.0**
YRD	**Yardimli**	**2.94**	**80**	P		**Pb**	**14 26 40.6**	**-1.5**
YRD				S		**Sb**	**14 27 18.2**	**-0.1**
LRK	**Lerik**	**3.00**	**85**	P		**Pb**	**14 26 41.1**	**-1.9**
LRK				S		**Sb**	**14 27 19.4**	**-0.4**

NSSP ***23*** *14:28:35.5,38°.22N×44°.48E,h10km,Ms4.2*
AZER ***23*** *14:28:35.5,38°.28N×44°.50E,h12km,ml4.3*
AFAD ***23*** *14:28:37.2,38°.43N×44°.58E,h5km±4km,MW4.2*
ISK ***23*** *14:28:38.2,38°.30N×44°.55E,h3km,ML4.1/18*
IDC ***23*** *14:28:39.1±0.8,38°.35N×44°.43E,h0km,mb3.9/14, mbtmp4.0/22,ML3.7/7,MS3.6/9,Error ellipse: s-maj=13.1km s-min=10.4km az=158.0*
TIF ***23*** *14:28:39.0,38°.38N×44°.50E,h4km±1km*
TEH ***23*** *14:28:39.1,38°.40N×44°.44E,h6km±68km,ML4.0, Presumed earthquake*
MCSM ***23*** *14:28:40.2±0.5,38°N±5°×4°4E±°,h10km±3km,mb4.2, mB5.6,MLv4.1,Mw(mB)5.1*
NEIC ***23*** *14:28:40.8±1.4,38°.36N±0°.05×44°.24E±0°.05,h10km±1km, mb4.3/30,Error ellipse: s-maj=8.6km s-min=7.1km az=178.0*

ISC 23 14:28:39.2±1.1,38°.35N±0°.02×44°.46E±0°.02,h2km±7km, n199,σ1§65/250,mb4.2/30,MS3.6/5,4C-1D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**311**	P		**Pg**	**14 28 47.8**	**-0.7**
OZAP				S		**Sg**	**14 28 55.1**	**+0.2**
TVAN	**Van**	**0.85**	**283**	P		**Pg**	**14 28 54.5**	**-1.1**
TVAN	**Van**	**0.85**	**283**	Pg		**Pg**	**14 28 54.4**	**-1.1**
VANB	**Van**	**0.88**	**287**	Pg		**Pb**	**14 28 56.7**	**-0.6**
VANB				Sg		**Sn**	**14 29 10.4**	**-1.8**
ISHB	**Shabestar**	**0.91**	**94**	Pg		**Pg**	**14 28 56.0**	**-0.7**
ISHB				Sg		**Sb**	**14 29 09.9**	**-0.6**
VMUR	**Van-Muradiye**	**0.95**	**313**	P		**Pg**	**14 28 56.8**	**-0.7**
VMUR				S		**Sn**	**14 29 12.4**	**-1.6**
VMUR	**Van-Muradiye**	**0.95**	**313**	Pg		**Pg**	**14 28 56.7**	**-0.7**
HAKT	**HAKKARI**	**0.99**	**218**	P		**Pg**	**14 28 58.2**	**0.0**
HAKT				S		**Sn**	**14 29 15.1**	**+0.1**
HAKT	**HAKKARI**	**0.99**	**218**	Pg		**Pg**	**14 28 58.1**	**0.0**
HAKT	**HAKKARI**	**0.99**	**218**	P		**Pg**	**14 28 57.8**	**-0.3**
HAKT				S		**Sn**	**14 29 13.6**	**-1.5**
MAKU	**Maku**	**1.02**	**10**	Pg		**Pg**	**14 28 57.6**	**-1.2**
IMRD	**Marand**	**1.04**	**69**	Pg		**Pg**	**14 28 58.9**	**-0.2**
GEVA	**Gevas**	**1.11**	**269**			**Pg**	**14 28 58.5**	**-1.9**
GEVA	**Gevas**	**1.11**	**269**	P		**Pg**	**14 28 59.1**	**-1.3**
GEVA				S		**Sn**	**14 29 18.4**	**+0.5**
ERCV	**ERCIS-VAN**	**1.11**	**308**	Pn		**Pn**	**14 29 01.1**	**-0.9**
NAX	**Nakhchivan**	**1.16**	**44**	P		**Pb**	**14 29 00.8**	**-1.1**
NAX				S		**Sn**	**14 29 17.7**	**-1.2**
CUKT	**Cukurca**	**1.29**	**212**	Pn		**Pg**	**14 29 03.9**	**0.0**
CUKT				Sn		**Sn**	**14 29 21.7**	**-0.6**
CUKT	**Cukurca**	**1.29**	**212**	P		**Pg**	**14 29 04.6**	**+0.7**
CUKT				S		**Sn**	**14 29 23.4**	**+1.0**
CUKT	**Cukurca**	**1.29**	**212**	Pg		**Pg**	**14 29 04.6**	**+0.7**
ORD	**Ordubad**	**1.33**	**64**	P		**Pn**	**14 29 04.0**	**-1.0**
ORD				S		**Sg**	**14 29 23.4**	**+1.4**
DYDN	**Diyadin**	**1.34**	**333**	P		**Pg**	**14 29 05.4**	**+0.5**
DYDN				S		**Sb**	**14 29 20.2**	**-2.8**
SBZ	**Shahbuz**	**1.35**	**39**	P		**Pn**	**14 29 04.0**	**-1.2**
SBZ				S		**Sg**	**14 29 26.5**	**+3.9**
IAZR	**Azarshahr**	**1.37**	**119**	Pg		**Pg**	**14 29 06.0**	**+0.6**
HYR	**Heyderabad**	**1.41**	**12**	P		**Pb**	**14 29 05.5**	**-0.8**
HYR				S		**Sg**	**14 29 27.6**	**+3.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**289**	P		**Pn**	**14 29 04.9**	**-1.7**
ADCV				S		**Sg**	**14 29 26.4**	**+0.9**
ADCV	**BITLIS_Adilcev**	**1.44**	**289**	Pg		**Pn**	**14 29 04.8**	**-1.7**
VAYK	**Vayk**	**1.54**	**29**	*i* P		**Pb**	**14 29 07.5**	**-1.1**
VAYK				*i* S		**Sg**	**14 29 30.3**	**+1.6**
IGDI	**IGDIR**	**1.55**	**349**	P		**Pb**	**14 29 07.9**	**-0.8**
IGDI				S		**Sg**	**14 29 31.6**	**+2.6**
IGDI	**IGDIR**	**1.55**	**349**	Pg		**Pb**	**14 29 07.9**	**-0.8**
IGDI	**IGDIR**	**1.55**	**349**	P		**Pb**	**14 29 08.1**	**-0.6**
IGDI				S		**Sg**	**14 29 31.2**	**+2.2**
PERV	**Siirt/Pervari-**	**1.57**	**256**	P		**Pg**	**14 29 09.3**	**0.0**
ALVK	**Alvank**	**1.59**	**67**	*e*P		**Pn**	**14 29 07.7**	**-0.8**
ALVK				*e*S		**Sg**	**14 29 30.2**	**-0.2**
AGRB	**Hanur-Agry**	**1.68**	**317**	Pn		**Pb**	**14 29 09.8**	**-1.2**
AGRB				Sn		**Sg**	**14 29 34.4**	**+1.2**
MLAZ	**Malazgirt-MUS**	**1.69**	**299**	Pn		**Pb**	**14 29 10.9**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.75**	**326**	P		**Pn**	**14 29 10.7**	**-0.2**
KOTA				S		**Sg**	**14 29 38.8**	**+3.3**
GNI	**Garni**	**1.81**	**7**	Pn		**Pb**	**14 29 12.1**	**-1.2**
	38nm,0.3s,baz=312,slow=2.9,SNR=21							
GNI				Lg		Lg	14 29 38.8	
	63nm,0.3s,baz=165,slow=21,SNR=11							
GNI				LR		LR	14 30 08.2	
	comp=Z,360nm,20.9s,baz=304,slow=49							
GNI	**Garni**	**1.81**	**7**			**Pb**	**14 29 11.7**	**-1.6**
GNI	**Garni**	**1.81**	**7**	Pn		**Pb**	**14 29 11.9**	**-1.4**
GNI	**Garni**	**1.81**	**7**	⇑*i*P		**Pb**	**14 29 12.0**	**-1.2**
GNI				⇑*i*S		**Sg**	**14 29 39.5**	**+2.0**
GNI	**Garni**	**1.81**	**7**	P		**Pn**	**14 29 11.5**	**-0.2**
VNNZ	**Vanand**	**1.82**	**344**	*e*P		**Pg**	**14 29 13.6**	**-0.6**
VNNZ				*e*S		**Sg**	**14 29 41.5**	**+3.7**
EGVZ	**Egvard**	**1.85**	**61**	*e*P		**Pb**	**14 29 12.4**	**-1.4**
EGVZ				*e*S		**Sg**	**14 29 39.5**	**+0.9**
BLIS	**Bitlis-Merkez**	**1.85**	**273**	P		**Pb**	**14 29 12.7**	**-1.2**
BLIS				S		**Sg**	**14 29 42.1**	**+3.6**
BLIS	**Bitlis-Merkez**	**1.85**	**273**	Pn		**Pb**	**14 29 12.6**	**-1.2**
MAHB	**Mahabad**	**1.86**	**148**	Pn		**Pg**	**14 29 15.1**	**+0.2**
GURO	**Guroymak-BITLI**	**1.92**	**277**			**Pn**	**14 29 10.3**	**-2.8**
GURO	**Guroymak-BITLI**	**1.92**	**277**	Pn		**Pb**	**14 29 13.9**	**-1.2**
ARUZ	**Aruch**	**1.96**	**352**	*e*P		**Pb**	**14 29 15.0**	**-0.6**
ARUZ				*e*S		**Sg**	**14 29 44.3**	**+2.2**
KAPZ	**Kaputan**	**1.98**	**5**	*e*P		**Pb**	**14 29 14.7**	**-1.5**
KAPZ				*e*S		**Sg**	**14 29 43.8**	**+0.9**
AYRK	**Ayrk**	**2.04**	**30**	*e*P		**Pb**	**14 29 16.2**	**-1.0**
AYRK				*e*S		**Sg**	**14 29 45.8**	**+0.9**
AMBZ	**Amberd**	**2.05**	**356**	*e*P		**Pb**	**14 29 16.6**	**-0.7**
AMBZ				*e*S		**Sg**	**14 29 47.3**	**+2.3**
IHSH	**Hashtrud**	**2.45**	**114**	Pn		**Pb**	**14 29 23.2**	**-1.0**
VRTB	**Varto-Mus**	**2.49**	**290**	Pn		**Pb**	**14 29 22.3**	**-2.5**
QRD	**Qoradiz**	**2.49**	**63**	P		**Pn**	**14 29 19.1**	**-1.7**
QRD				S		**Sn**	**14 29 51.8**	**-0.1**
KARS	**Kars**	**2.52**	**335**			**Pn**	**14 29 20.3**	**-1.1**
KARS	**Kars**	**2.52**	**335**	Pn		**Pb**	**14 29 22.5**	**-2.8**
GDB	**GEDABAY**	**2.57**	**22**	P		**Pn**	**14 29 21.9**	**-0.2**
GDB				S		**Sb**	**14 29 55.0**	**-3.4**
SVAN	**Silvan-Diyarba**	**2.58**	**267**	Pn		**Pn**	**14 29 23.3**	**+1.2**
SVAN	**Silvan-Diyarba**	**2.58**	**267**	Pn		**Pb**	**14 29 24.3**	**-1.9**
LSVT	**Lusahovit**	**2.63**	**12**	*e*P		**Pb**	**14 29 24.6**	**-2.5**
LSVT				*e*S		**Sb**	**14 30 00.9**	**+1.0**
AGDM	**Agdam**	**2.71**	**49**	P		**Pn**	**14 29 22.1**	**-1.6**
AGDM				S		**Sn**	**14 29 57.3**	**+0.2**
GANJ	**Ganja**	**2.71**	**31**	P		**Pn**	**14 29 22.5**	**-1.4**
GANJ				S		**Sb**	**14 29 58.7**	**-3.5**
SRTK	**Saratovka**	**2.72**	**358**	*e*P		**Pb**	**14 29 27.8**	**-0.8**
SRTK				*e*S		**Sg**	**14 30 07.3**	**+0.8**
GRMI	**Germi**	**2.73**	**79**	Pn		**Pb**	**14 29 25.6**	**-3.2**
SENK	**Senkaya-Erzuru**	**2.75**	**324**	Pn		**Pn**	**14 29 25.7**	**+1.1**
BLQ	**Beylaqan**	**2.77**	**59**	P		**Pn**	**14 29 23.0**	**-1.7**
BLQ				S		**Sn**	**14 29 57.4**	**-1.4**
QZX	**Qazax, Azerbai**	**2.80**	**14**	P		**Pn**	**14 29 23.9**	**-1.2**
QZX				S		**Sn**	**14 29 58.9**	**-0.6**
KARO	**Karliova-Bingo**	**2.84**	**291**	Pn		**Pn**	**14 29 26.9**	**+1.2**
BRDA	**Brd**	**2.85**	**47**	P		**Pn**	**14 29 24.3**	**-1.4**
BRDA				S		**Sn**	**14 29 59.6**	**-0.9**
BGD	**Bogdanovka**	**2.99**	**347**	P		**Pn**	**14 29 34.0**	**+0.6**
YRD	**Yardimli**	**3.01**	**78**	P		**Pn**	**14 29 26.0**	**-2.1**
YRD				S		**Sn**	**14 30 02.2**	**-2.7**
BNGB	**Bingl**	**3.03**	**283**	Pn		**Pn**	**14 29 30.3**	**+1.9**
LRK	**Lerik**	**3.06**	**83**	P		**Pn**	**14 29 26.6**	**-2.2**
LRK				S		**Sn**	**14 30 03.9**	**-2.1**
MARD	**Mardin**	**3.09**	**252**			**Pn**	**14 29 27.6**	**-1.7**
AKH	**Akhalkalaki**	**3.15**	**347**	P		**Pb**	**14 29 32.7**	**-3.4**
ZRD	**Zardab**	**3.16**	**51**	P		**Pn**	**14 29 28.4**	**-1.5**
ZRD				S		**Sn**	**14 30 07.2**	**-1.0**
MNGR	**Mingechevir, A**	**3.16**	**39**	P		**Pn**	**14 29 28.6**	**-1.3**
MNGR				S		**Sn**	**14 30 10.1**	**+1.8**
DGRG	**David-gareji**	**3.18**	**12**	P		**Pb**	**14 29 32.9**	**-3.5**
GLBA	**Cilabad**	**3.20**	**73**	P		**Pn**	**14 29 28.6**	**-1.9**
GLBA				S		**Sn**	**14 30 08.9**	**-0.3**
TRLG	**Trialeti**	**3.20**	**355**	P		**Pb**	**14 29 35.6**	**-1.3**
TRLG				S		**Sg**	**14 30 21.3**	**-0.7**
VSHL	**Vashlovani**	**3.24**	**27**	P		**Pb**	**14 29 33.7**	**-3.9**
VSHL				S		**Sg**	**14 30 23.1**	**-0.3**
YEDI	**Yedisu-Bingol**	**3.25**	**291**	Pn		**Pn**	**14 29 33.2**	**+1.8**
DDFL	**Dedoflistskaro**	**3.35**	**22**	P		**Pb**	**14 29 38.2**	**-1.1**
LKRN	**Lenkeran, Azer**	**3.40**	**83**	P		**Pn**	**14 29 31.1**	**-2.2**
LKRN				S		**Sn**	**14 30 14.7**	**+0.4**
SAAT	**Saatly**	**3.43**	**63**	P		**Pn**	**14 29 31.5**	**-2.2**
SAAT				S		**Sn**	**14 30 15.4**	**+0.4**
DYBB	**Diyarbakir**	**3.43**	**265**	Pn		**Pn**	**14 29 34.3**	**+0.5**
KDMR	**Kurdemir**	**3.52**	**54**	P		**Pn**	**14 29 33.3**	**-1.7**
KDMR				S		**Sn**	**14 30 18.7**	**+1.4**
SEKA	**Sheki**	**3.55**	**36**	P		**Pn**	**14 29 34.8**	**-0.7**
SEKA				S		**Sn**	**14 30 20.6**	**+2.5**
QBL	**Gabala**	**3.68**	**44**	P		**Pn**	**14 29 35.6**	**-1.6**
QBL				S		**Sn**	**14 30 21.9**	**+0.7**
ZKTA	**Zakatala**	**3.68**	**26**	P		**Pn**	**14 29 36.1**	**-1.2**
ZKTA				S		**Sn**	**14 30 23.4**	**+2.2**
LGD	**Lagodekhi**	**3.74**	**21**	P		**Pn**	**14 29 44.2**	**-1.8**
IML	**Ismayilli**	**3.77**	**48**	P		**Pn**	**14 29 36.7**	**-1.7**
IML				S		**Sn**	**14 30 24.9**	**+1.5**
ALIG	**Mtskhetisjvari**	**3.81**	**351**	P		Pb	14 29 42.4	-4.8
ALIB	**&Aumlli-Bayram**	**3.88**	**64**	P		**Pn**	**14 29 38.2**	**-1.7**
ALIB				S		**Sn**	**14 30 26.8**	**+0.8**
ERZN	**Erzincan**	**3.90**	**290**	Pn		**Pn**	**14 29 42.4**	**+2.1**
BAYT	**Aydıntepe-Bayb**	**3.93**	**303**	Pn		**Pn**	**14 29 42.7**	**+2.0**
CHOM	**Cayeli-Rize**	**3.96**	**315**	Pn		**Pn**	**14 29 43.2**	**+2.1**
CHRG	**Chargali**	**4.00**	**5**	P		**Pn**	**14 29 43.7**	**+2.1**
XNQ	**Khinaliq**	**4.00**	**44**	P		**Pn**	**14 29 40.0**	**-1.7**
XNQ				S		**Sn**	**14 30 29.9**	**+0.6**
PQL	**Pirkuli**	**4.02**	**51**	P		**Pn**	**14 29 40.1**	**-1.8**
PQL				S		**Sn**	**14 30 29.1**	**-0.5**
SVRC	**Sivrice-ELAZID**	**4.05**	**272**	Pn		**Pn**	**14 29 43.0**	**+0.5**
GBS	**Qobustan**	**4.10**	**56**	P		**Pn**	**14 29 41.1**	**-1.9**
GBS				S		**Sn**	**14 30 30.9**	**-0.7**
ATGJ	**Altiaghaj**	**4.27**	**53**	P		**Pn**	**14 29 43.4**	**-2.0**
ATGJ				S		**Sn**	**14 30 36.0**	**+0.2**
QSAR	**Qusar**	**4.31**	**41**	P		**Pn**	**14 29 44.0**	**-1.8**
QSAR				S		**Sn**	**14 30 37.7**	**+1.0**
QUBA	**Quba, Azerbaij**	**4.32**	**45**	P		**Pn**	**14 29 44.3**	**-1.7**
QUBA				S		**Sn**	**14 30 37.1**	**+0.2**
GARIG	**Gari**	**4.32**	**350**	P		**Pn**	**14 29 49.1**	**+3.1**
SHTL	**Shatili**	**4.34**	**7**	P		**Pb**	**14 29 57.6**	**+1.4**
SHTL				S		**Sg**	**14 31 02.6**	**+4.1**
SIZA	**Siyzn**	**4.37**	**50**	P		**Pn**	**14 29 44.9**	**-1.9**
SIZA				S		**Sn**	**14 30 38.0**	**-0.4**
KBZ	**Khabaz**	**5.51**	**348**	Pn		**Pn**	**14 30 06.0**	**+3.8**
	1.1nm,0.6s,baz=145,slow=9.6,SNR=6.4							
BRTR	**Keskin Array B**	**8.54**	**283**	Pn		**Pn**	**14 30 47.1**	**+3.1**
	0.2nm,0.3s,baz=108,slow=14,SNR=17							
BRTR				LR		LR	14 34 52.5	
	comp=Z,189nm,19.8s,baz=28,slow=44 2.3nm,0.7s							
BRTR	**Keskin Array B**	**8.54**	**283**			**Pn**	**14 30 42.4**	**-1.6**
ASF	**Jabal al Asfar**	**8.73**	**227**	Pn		**Pn**	**14 30 48.1**	**+1.6**
	0.9nm,0.3s,baz=51,slow=11,SNR=6.8							
ASF				LR		LR	14 34 43.7	
	comp=Z,178nm,20.5s,baz=26,slow=42 3.1nm,0.4s							
MMAI	**Mount Meron Ar**	**9.09**	**237**	Pn		**Pn**	**14 30 52.6**	**+1.2**
	1.3nm,0.3s,baz=64,slow=15,SNR=5.1							
MMAI				LR		LR	14 34 31.8	
	comp=Z,239nm,19.4s,baz=49,slow=39 2.4nm,0.6s							
EIL	**Elat**	**11.71**	**225**	LR		LR	14 36 35.3	
	comp=Z,240nm,19.6s,baz=46,slow=41							
BELG	**Belogornoye**	**14.22**	**8**	Pn		**Pn**	**14 32 01.8**	**+0.2**
	0.3nm,0.3s,baz=65,slow=23,SNR=4.7 22nm,1.1s							
RAYN	**Ar Rayn**	**14.80**	**176**			**Pn**	**14 32 09.7**	**0.0**
SORM	**Soroca**	**15.26**	**315**	P		**Pn**	**14 32 12.9**	**-2.7**
AKTO	**Aktyubinsk**	**15.46**	**34**	Pn		**Pn**	**14 32 17.9**	**-0.3**
	0.3nm,0.3s,baz=228,slow=10,SNR=12 16nm,0.9s							
MLR	**Muntele Rosu**	**15.51**	**303**	Pn		**P**	**14 32 20.3**	**-3.3**
	0.1nm,0.3s,baz=155,slow=8.9,SNR=4.2 0.5nm,0.3s							
DOPR	**Dopca**	**16.04**	**304**	⇑P		**P**	**14 32 32.1**	**+2.6**
AK07	**Malin Array Si**	**16.32**	**323**	P		**Pn**	**14 32 28.9**	**-0.5**
AK09	**Malin Array Si**	**16.32**	**324**	P		**Pn**	**14 32 28.5**	**-0.9**
AK10	**Malin Array Si**	**16.33**	**324**	P		**Pn**	**14 32 28.5**	**-1.0**
AK06	**Malin Array Si**	**16.34**	**323**	P		**Pn**	**14 32 28.1**	**-1.6**
AK08	**Malin Array Si**	**16.35**	**324**	P		**Pn**	**14 32 28.1**	**-1.7**
AK05	**Malin Array Si**	**16.36**	**323**	P		**Pn**	**14 32 28.3**	**-1.7**
AK02	**Malin Array Si**	**16.39**	**324**	P		**Pn**	**14 32 29.2**	**-1.1**
AK12	**Malin Array Si**	**16.40**	**323**	P		**Pn**	**14 32 29.4**	**-1.1**
AKASG	**Malin Array Be**	**16.41**	**324**	Pn		**Pn**	**14 32 29.9**	**-0.6**
	0.9nm,0.3s,baz=134,slow=12,SNR=5.6 4.3nm,1.0s							
AK14	**Malin Array Si**	**16.42**	**323**	P		**Pn**	**14 32 29.3**	**-1.3**
AK11	**Malin Array Si**	**16.42**	**324**	P		**Pn**	**14 32 29.3**	**-1.4**
AK13	**Malin Array Si**	**16.43**	**323**	P		**Pn**	**14 32 29.8**	**-1.0**
AK16	**Malin Array Si**	**16.45**	**323**	P		**Pn**	**14 32 28.9**	**-2.1**
AK04	**Malin Array Si**	**16.45**	**324**	P		**Pn**	**14 32 29.0**	**-2.1**
AK17	**Malin Array Si**	**16.48**	**323**	P		**Pn**	**14 32 29.3**	**-2.1**
AK18	**Malin Array Si**	**16.50**	**324**	P		**Pn**	**14 32 29.6**	**-2.1**
AK20	**Malin Array Si**	**16.54**	**324**	P		**Pn**	**14 32 30.9**	**-1.3**
AK21	**Malin Array Si**	**16.55**	**324**	P		**Pn**	**14 32 30.7**	**-1.6**
UOSS	**Minazif**	**16.66**	**140**			**P**	**14 32 37.8**	**+1.4**
BURAR	**Bucovina Array**	**16.82**	**310**	⇓P		**P**	**14 32 40.2**	**+2.0**
GZR	**Gura Zlata**	**17.59**	**301**	⇑P		**P**	**14 32 48.1**	**+1.5**
BRIU	**Brid**	**18.46**	**310**	P		**P**	**14 32 54.5**	**-1.6**
RNPP9	**Sopachiv**	**18.48**	**321**	P		**P**	**14 32 53.4**	**-2.8**
HOLU	**Holmets**	**18.93**	**310**	P		**P**	**14 33 00.1**	**-1.1**
ARTI	**Arti**	**20.29**	**23**	P		Pn	14 33 17.0	-1.0
	7.6nm,0.6s,baz=216,slow=6.2,SNR=16							
ARTI				LR		LR	14 43 37.6	
	comp=Z,314nm,19.7s,baz=248,slow=44 7.6nm,0.6s							
ARTI	**Arti**	**20.29**	**23**			Pn	14 33 17.0	-1.1
ARTI					IAmb	IAmb	14 33 22.3	
	comp=Z,13nm,0.6s							
KIRV	**Kirov**	**20.51**	**7**	P		Pn	14 33 18.6	-1.9
	comp=Z,8.2nm,0.7s,baz=320,slow=3.9,SNR=3.8 comp=Z,8.2nm,0.7s							
NIE	**Niedzica**	**20.55**	**310**	P		**P**	**14 33 17.2**	**-1.8**
MORH	**Mrgy, Hungar**	**20.60**	**301**	P		**P**	**14 33 17.7**	**-1.8**
	comp=Z,5.7nm,2.6s							
OJC	**Ojcow**	**21.17**	**312**	P		**P**	**14 33 24.2**	**-1.5**
TIP	**Timpagrande**	**21.59**	**281**	P		**P**	**14 33 28.3**	**-2.0**
TIP					IAmb	IAmb	14 33 30.8	
	comp=Z,9.5nm,1.1s							
MODS	**Modra-Piesok**	**22.06**	**306**	*e*P		**P**	**14 33 41.0**	**+5.8**
ARSB	**Arslanbob**	**22.06**	**73**	P		**P**	**14 33 37.4**	**+1.9**
BORK	**Borovoye**	**23.11**	**42**	P		**P**	**14 33 48.6**	**+2.2**
BORK					IAmb	IAmb	14 33 56.6	
	comp=Z,5.0nm,0.8s							
BVAR	**Borovoye Array**	**23.14**	**42**	P		**P**	**14 33 46.6**	**0.0**
	comp=Z,1.4nm,0.6s,baz=264,slow=8.8,SNR=7.9 comp=Z,1.4nm,0.6s							
AAK	**Ala-Archa**	**23.17**	**70**			**P**	**14 33 49.5**	**+2.2**
AAK					IAmb	IAmb	14 34 07.2	
	comp=Z,7.1nm,1.1s							
KSH2	**Kashi**	**24.22**	**78**	P		**P**	**14 34 00.1**	**+2.6**
KSH2				pmax	pmax			
	comp=Z,2.0nm,0.8s							
BOOM	**Boomskoye usch**	**24.24**	**70**			**P**	**14 33 59.3**	**+1.6**
BOOM					IAmb	IAmb	14 34 07.5	
	comp=Z,5.0nm,0.9s							
NRN	**Naryn**	**24.32**	**73**			**P**	**14 34 00.2**	**+1.6**
NRN					IAmb	IAmb	14 34 05.8	
	comp=Z,5.7nm,1.1s							
GERES	**GERESS Array B**	**24.47**	**305**	P		**P**	**14 33 59.5**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=97,slow=8.3,SNR=2.1 comp=Z,1.1nm,0.8s							
TEOL	**Teolo**	**25.29**	**297**	P		**P**	**14 34 07.0**	**+0.1**
CTI	**Castel Tesino**	**25.36**	**298**	P		**P**	**14 34 07.3**	**-0.4**
CTI					IAmb	IAmb	14 34 22.0	
	comp=Z,8.8nm,1.4s							
FINES	**FINESS Array B**	**25.79**	**340**	P		**P**	**14 34 11.0**	**-0.3**
	comp=Z,5.4nm,1.0s,baz=164,slow=7.5,SNR=4.8 comp=Z,5.4nm,1.0s							
FUORN	**Ofenpass-Fuorn**	**26.38**	**299**	P		**P**	**14 34 17.3**	**+0.1**
FUORN					IAmb	IAmb	14 34 17.4	
	comp=Z,9.8nm,1.5s							
KURBB	**Kurchatov Arra**	**26.98**	**52**	P		**P**	**14 34 23.8**	**+1.6**
	comp=Z,2.2nm,0.7s,baz=262,slow=9.0,SNR=21 comp=Z,2.2nm,0.7s							
KURK	**Kurchatov**	**27.05**	**52**			**P**	**14 34 23.3**	**+0.4**
MAKZ	**Makanchi**	**28.66**	**61**			**P**	**14 34 39.0**	**+1.7**
MKAR	**Makanchi Array**	**28.88**	**61**	P		**P**	**14 34 40.5**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=260,slow=7.3,SNR=13							
MKAR					LR	LR	14 46 19.0	
	comp=Z,108nm,20.5s,baz=306,slow=37 comp=Z,1.6nm,0.8s							
ZALV	**Zalesovo Beam**	**31.51**	**47**	P		**P**	**14 35 03.5**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=245,slow=9.7,SNR=5.2 comp=Z,0.9nm,0.5s							
WMQ	**Urumqi**	**32.76**	**66**	*e*P		P	14 35 17.5	+3.9
EKA	**Eskdalemuir Ar**	**35.92**	**314**	P		**P**	**14 35 40.3**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=84,slow=7.6,SNR=3.5 comp=Z,1.6nm,0.6s							
EVN	**Everest**	**36.66**	**94**			**P**	**14 35

PRSN				IAML			14 36 37.5	
	comp=N,352nm,0.2s							
PRSN				IAML			14 36 40.0	
	comp=N,353nm,0.2s							
PRSN	**Puerto Rico Se**	**0.89**	**146**⇑	*eP*g	**Pb**		**14 36 18.5**	**-0.4**
PRSN				IAML			14 36 42.9	
	comp=N,201nm,0.2s							
PRSN	**Puerto Rico Se**	**0.89**	**146**⇓	*eP*	**Pn**		**14 36 19.5**	**-0.1**
PRSN				*eS*	**Sn**		**14 36 33.1**	**+0.9**
LSP	**Las Mesas**	**0.96**	**145**		**Pn**		**14 36 20.9**	**+0.3**
LSP				*eS*	**Sn**		**14 36 34.5**	**+0.7**
LSP	**Las Mesas**	**0.96**	**145**⇓	*iP*	**Pn**		**14 36 20.9**	**+0.3**
LSP				*eS*	**Sn**		**14 36 34.5**	**+0.7**
HIDR	**Higuey Centro**	**1.06**	**250**⇑	*eP*g	**Pb**		**14 36 21.1**	**-0.7**
HIDR				⇑*eS*g	**Sg**		**14 36 36.3**	**-0.1**
HIDR				IAML			14 36 39.1	
	comp=N,111nm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.09**	**151**		**Pg**		**14 36 22.5**	**-0.5**
CRPR					**Sn**		**14 36 38.9**	**+1.9**
CRPR				IAML			14 36 44.7	
	comp=N,106nm,0.4s							
CRPR	**Cabo Rojo, PR**	**1.09**	**151**⇑	*eP*g	**Pg**		**14 36 23.1**	**+0.2**
CRPR				IAML			14 36 41.9	
	comp=N,93nm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.09**	**151**⇑	*eP*	**Pn**		**14 36 22.2**	**-0.2**
CRPR				*eS*	**Sn**		**14 36 39.9**	**+2.9**
UUPR	**Utuado, UPR, P**	**1.14**	**128**		**Pb**		**14 36 22.9**	**-0.2**
MLPR	**Magueyes Islan**	**1.15**	**149**		**Pg**		**14 36 23.7**	**-0.4**
MLPR				IAML			14 36 43.6	
	comp=N,111nm,0.4s							
GBPR	**Guanica, Bosqu**	**1.23**	**143**		**Pg**		**14 36 25.1**	**-0.6**
GBPR					**Sg**		**14 36 43.0**	**+1.2**
GBPR	**Guanica, Bosqu**	**1.23**	**143**⇓	*iP*	**Pg**		**14 36 25.1**	**-0.6**
GBPR				*eS*	**Sg**		**14 36 43.0**	**+1.2**
CELP	**Cerrillos**	**1.36**	**130**		**Pb**		**14 36 26.4**	**-0.4**
CELP					**Sg**		**14 36 46.5**	**+0.7**
CELP				IAML			14 36 51.5	
	comp=N,78nm,0.2s							
CELP				IAML			14 36 52.3	
	comp=N,102nm,0.3s							
OBIP	**Obispado Ponce**	**1.36**	**132**		**Pb**		**14 36 26.4**	**-0.5**
OBIP	**Obispado Ponce**	**1.36**	**132**⇑	*eP*	**Pb**		**14 36 26.6**	**-0.2**
OBIP				*eS*	**Sg**		**14 36 45.6**	**-0.2**
ECPR	**Experimental S**	**1.39**	**117**		**Pn**		**14 36 26.5**	**-0.1**
ECPR	**Experimental S**	**1.39**	**117**⇓	*iP*	**Pn**		**14 36 26.7**	**+0.2**
ECPR				*eS*	**Sg**		**14 36 46.7**	**-0.1**
SMDR	**Samana, DR**	**1.48**	**283**⇑	*eP*g	**Pg**		**14 36 30.3**	**0.0**
SMDR				⇓*eS*g	**Sg**		**14 36 50.8**	**+1.2**
SMDR				IAML			14 36 51.7	
	comp=N,70nm,0.2s							
GCPR	**Guaynabo City**	**1.63**	**113**		**Pb**		**14 36 30.7**	**-0.9**
GCPR	**Guaynabo City**	**1.63**	**113**	Pn	**Pn**		**14 36 29.8**	**-0.1**
GCPR	**Guaynabo City**	**1.63**	**113**⇓	*eP*	**Pb**		**14 36 30.7**	**-0.9**
GCPR				*eS*	**Sb**		**14 36 52.0**	**0.0**
HATOM	**Hato Mayor del**	**1.64**	**264**⇑	*eP*g	**Pg**		**14 36 32.9**	**-0.5**
HATOM				⇑*eS*g	**Sg**		**14 36 55.3**	**+0.7**
HATOM				IAML			14 36 55.9	
	comp=N,30nm,0.7s							
HUMP	**Col San Antoni**	**1.91**	**115**		**Pn**		**14 36 33.7**	**+0.1**
HUMP	**Col San Antoni**	**1.91**	**115**		**Sb**		**14 37 00.6**	**+0.8**
HUMP	**Col San Antoni**	**1.91**	**115**⇑	*eP*	**Pn**		**14 36 34.4**	**+0.8**
HUMP				*eS*	**Sb**		**14 37 00.6**	**+0.8**

*NOU **23** 14:38:30.9, 42°.21S×171°.45E, h194km, MLv4.0/9, South Island, New Zealand*
*WEL **23** 14:38:32.2±0.3, 43°.3S×17°.3E±°, h5km, M2.8/9, ML2.7/10, MLv2.8/9, Error ellipse: s-maj=4.6km s-min=2.2km az=126.4*
ISC 23 14:38:32.0±0.9, **42°.64S**±0°.02×**173°.38E**±0°.03, **h15**km±7km, **n68**, σ1°.16/74, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CECS	**Cheviot Emerge**	**0.19**	**204**	P	**Pg**	**14 38 36.4**	**-0.1**
CECS				S	**Sg**	**14 38 41.3**	**+1.7**
WTMC	**Te Mara Farm W**	**0.24**	**274**	P	**Pg**	**14 38 36.6**	**-0.8**
KHZ	**Kahutara**	**0.25**	**28**	P	**Pg**	**14 38 36.3**	**-1.2**
KHZ				S	**Sg**	**14 38 40.4**	**-0.9**
KIKS	**Kaikoura**	**0.31**	**47**	P	**Pg**	**14 38 38.5**	**0.0**
GVZ	**Greta Valley S**	**0.41**	**218**	P	**Pg**	**14 38 41.1**	**+0.7**
GVZ				S	**Sb**	**14 38 48.7**	**+1.5**
HSES	**Hanmer Springs**	**0.42**	**286**	P	**Pg**	**14 38 39.6**	**-0.9**
WIGC	**Waiau Gorge**	**0.43**	**261**	P	**Pg**	**14 38 40.4**	**-0.3**
WIGC				S	**Sb**	**14 38 47.4**	**-0.2**
MOLW	**Molesworth Sta**	**0.56**	**351**	P	**Pg**	**14 38 41.8**	**-1.3**
WAKC	**Waikari**	**0.59**	**237**	P	**Pg**	**14 38 44.0**	**+0.3**
WAKC				S	**Sb**	**14 38 53.7**	**+1.4**
LOKS	**Mount Lookout**	**0.63**	**7**	P	**Pg**	**14 38 43.7**	**-0.7**
AMCZ	**Amberley**	**0.76**	**225**	P	**Pb**	**14 38 47.8**	**+0.9**
KEKS	**Kekerengu Vall**	**0.82**	**33**	P	**Pb**	**14 38 48.3**	**+0.4**
LTZ	**Lake Taylor**	**0.83**	**260**	P	**Pg**	**14 38 47.8**	**-0.3**
LTZ				S	**Sb**	**14 38 59.9**	**+0.8**
GLOS	**29 km south-we**	**0.85**	**23**	P	**Pb**	**14 38 48.6**	**+0.1**
SJFS	**Springs Juncti**	**0.94**	**289**	P	**Pg**	**14 38 49.4**	**-0.8**
THZ	**Tophouse**	**0.94**	**338**	P	**Pg**	**14 38 49.1**	**-1.2**
THZ				S	**Sg**	**14 39 01.2**	**-1.5**
WDFS	**Ward Fire Stat**	**0.99**	**35**	P	**Pb**	**14 38 51.3**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.99**	**22**	P	**Pg**	**14 38 50.6**	**-0.6**
CMWZ	**Cape Campbell**	**1.08**	**35**	P	**Pb**	**14 38 52.9**	**+0.5**
SEDS	**Seddon Fire St**	**1.10**	**28**	P	**Pb**	**14 38 53.1**	**+0.5**
OKCZ	**Okains Bay**	**1.11**	**192**	P	**Pg**	**14 38 52.9**	**-0.6**
MCASZ	**Murchison**	**1.15**	**317**	P	**Pn**	**14 38 54.7**	**+1.3**
MQZ	**McQueen's Vall**	**1.19**	**206**	P	**Pg**	**14 38 52.5**	**-2.5**
OXZ	**Oxford**	**1.20**	**235**	P	**Pg**	**14 38 53.3**	**-1.8**
BWRS	**Waikakaho Road**	**1.26**	**18**	P	**Pg**	**14 38 55.2**	**-1.1**
TUWZ	**Tuamarina**	**1.28**	**19**	P	**Pg**	**14 38 55.6**	**-1.1**
AKCZ	**Akaroa Harbour**	**1.28**	**195**	P	**Pn**	**14 38 54.7**	**-0.7**
MRNZ	**Matariki Terra**	**1.32**	**339**	P	**Pg**	**14 38 56.1**	**-1.4**
RACZ	**Rakaia**	**1.42**	**219**	P	**Pn**	**14 38 56.3**	**-0.9**
NNZ	**Nelson**	**1.42**	**0**	P	**Pn**	**14 38 57.6**	**+0.4**
INZ	**Inchbonnie**	**1.43**	**266**	P	**Pn**	**14 38 57.7**	**+0.4**
DSZ	**Denniston Nort**	**1.47**	**307**	P	**Pn**	**14 38 58.3**	**+0.3**
MOTS	**Motueka DOC wo**	**1.54**	**350**	P	**Pb**	**14 39 00.1**	**-0.1**
TCW	**Tory Channel**	**1.58**	**25**	P	**Pn**	**14 38 58.9**	**-0.5**
MHCZ	**Mount Hutt**	**1.60**	**235**	P	**Pn**	**14 38 59.0**	**-0.8**
TKNZ	**Takaka Hill**	**1.63**	**349**	P	**Pn**	**14 39 01.2**	**+0.9**
BHW	**Baring Head**	**1.66**	**43**	P	**Pn**	**14 38 59.7**	**-0.8**
WACZ	**Wakanui South**	**1.72**	**220**	P	**Pn**	**14 39 00.5**	**-0.9**
PLWZ	**Palliser**	**1.76**	**53**	P	**Pn**	**14 39 00.7**	**-1.2**
MSWZ	**Moikau Station**	**1.85**	**49**	P	**Pn**	**14 39 02.0**	**-1.2**
DUWZ	**D'Urville Isla**	**1.88**	**13**	P	**Pn**	**14 39 04.3**	**+0.7**
QRZ	**Quartz Range**	**1.92**	**340**	P	**Pn**	**14 39 05.2**	**+1.0**
QRZ	**Quartz Range**	**1.92**	**340**	S	**Sg**	**14 39 31.8**	**-2.0**
QRZ	**Quartz Range**	**1.92**	**340**	P	**Pn**	**14 39 05.1**	**+1.0**
PAWZ	**Paruwai Farm**	**1.98**	**51**	P	**Pn**	**14 39 03.5**	**-1.4**
CAW	**Cannon Point**	**1.98**	**40**	P	**Pn**	**14 39 04.2**	**-0.8**
WVZ	**Waitaha Valley**	**1.99**	**256**	P	**Pn**	**14 39 05.6**	**+0.5**
RPZ	**Rata Peaks**	**2.01**	**237**	P	**Pn**	**14 39 04.9**	**-0.5**
RPZ	**Rata Peaks**	**2.01**	**237**	P	**Pn**	**14 39 04.8**	**-0.6**
ARCZ	**Arundel**	**2.07**	**230**	P	**Pn**	**14 39 05.6**	**-0.7**
KIW	**Kapiti Island**	**2.11**	**33**	P	**Pn**	**14 39 06.5**	**-0.3**
OGWZ	**Otaki Gorge**	**2.26**	**37**	P	**Pn**	**14 39 08.1**	**-0.8**
HOWZ	**Holdsworth Sta**	**2.36**	**43**	P	**Pg**	**14 39 16.6**	**-0.7**
TMZ	**Timaru**	**2.45**	**224**	P	**Pn**	**14 39 11.2**	**-0.3**
MRZ	**Mangatainoka R**	**2.57**	**41**	P	**Pn**	**14 39 11.8**	**-1.3**
BFZ	**Birch Farm**	**2.91**	**49**	P	**Pg**	**14 39 30.2**	**+2.5**
ODZ	**Otahua Downs**	**3.11**	**219**	P	**Pn**	**14 39 19.3**	**-1.2**
WAZ	**Wanganui**	**3.13**	**23**	P	**Pn**	**14 39 22.9**	**+2.2**
LREZ	**Lake Rotokare**	**3.27**	**14**	P	**Pb**	**14 39 29.7**	**0.0**
KHEZ	**Kahui Hut**	**3.38**	**8**	P	**Pn**	**14 39 27.5**	**+3.3**
KHEZ	**Kahui Hut**	**3.38**	**8**	P	**Pn**	**14 39 26.2**	**+2.0**
VRZ	**Vera Road**	**3.66**	**17**	P	**Pn**	**14 39 29.5**	**+1.4**
WNVZ	**Wahianoa**	**3.71**	**28**	P	**Pn**	**14 39 29.8**	**+0.9**
OTVZ	**Oturere**	**3.88**	**27**	P	**Pn**	**14 39 33.1**	**+1.9**
BKZ	**Black Stump Fm**	**4.20**	**35**	P	**Pb**	**14 39 45.1**	**-0.4**
HIZ	**Hauiti**	**4.27**	**16**	P	**Pn**	**14 39 38.0**	**+1.5**
HIZ	**Hauiti**	**4.27**	**16**	P	**Pn**	**14 39 37.7**	**+1.3**
PYZ	**Puysegur Point**	**5.95**	**231**	P	Pn	14 39 47.5	-12

IDC 23 14:42:51.5±2.9, **9°.51S**×**149°.83E**, **h0**km, **mb3.5**/3, **mbtmp3.5**/4, **ML3.0/1**, **Error ellipse: s-maj=158.4km s-min=31.1km az=135.0**, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.20**	**234**	P	P	14 47 07.1	+0.9
	0.1nm,0.3s,baz=61,slow=12,SNR=2.6 0.8nm,1.0s						
ASAR	**Alice Springs**	**20.73**	**225**	P	P	14 47 34.0	+0.1
	0.3nm,0.8s,baz=58,slow=10.0,SNR=6.1 0.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.97**	**247**	P	P	14 48 16.3	-0.7
	4.4nm,0.8s,baz=62,slow=10,SNR=6.4 4.4nm,0.8s						
ILAR	**Eielson Array**	**87.60**	**23**	P	P	14 55 41.5	+0.2
	0.6nm,0.9s,baz=256,slow=4.7,SNR=4.7 0.6nm,0.9s						

*IDC **23** 14:47:50.9±1.7, 8°.60S×135°.09E, h0km, mb3.7/3, mbtmp3.9/7, ML3.8/4, MS3.4/5, Error ellipse: s-maj=51.5km s-min=21.2km az=73.0*
*NEIC **23** 14:47:53.9±1.9, 8°.61S±0°.07×134°.86E±0°.05, h14km±4km, mb4.4/8, Error ellipse: s-maj=10.7km s-min=7.6km az=171.0*
ISC 23 14:47:52.4±0.6, **8°.63S**±0°.06×**134°.84E**±0°.09, **h10**km, **n30**, σ2°.29/29, **mb3.9/5**, **Arafura Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.56**	**280**	Pn	**Pn**	**14 48 49.5**	**+1.7**
MTN	**Manton Dam**	**5.55**	**221**		**Pn**	**14 49 19.0**	**+3.9**
SIJI	**Sorong**	**8.49**	**335**	Pn	**Pn**	**14 49 55.2**	**-0.4**
	1.9nm,0.3s,baz=337,slow=23,SNR=8.4						
SIJI				Sn	**Sn**	**14 51 26.2**	**-5.5**
	3.7nm,0.3s,baz=262,slow=24,SNR=8.8 4.9nm,0.3s						
KNRA	**Kununurra**	**9.18**	**220**		**Pn**	**14 50 07.6**	**+2.6**
COEN	**Coen**	**9.74**	**124**	Pn	**Pn**	**14 50 13.5**	**+0.8**
WB0	**Warramunga Arr**	**11.08**	**182**	Pn	**Pn**	**14 50 31.1**	**+0.1**
WRAB	**Tennant Creek**	**11.24**	**182**	Pn	**Pn**	**14 50 34.1**	**+0.8**
WRA	**Warramunga Arr**	**11.25**	**182**	Pn	**Pn**	**14 50 32.6**	**-0.9**
	0.4nm,0.3s,baz=7.2,slow=13,SNR=19						
WRA				Sn	**Sn**	**14 52 35.1**	**-4.3**
	2.1nm,0.3s,baz=0.9,slow=23,SNR=8.2 1.0nm,0.6s						
WRA	**Warramunga Arr**	**11.25**	**182**		**Pn**	**14 50 31.5**	**-2.0**
WR8	**Warramunga Arr**	**11.26**	**182**	Pn	**Pn**	**14 50 34.3**	**+0.7**
PMG	**Port Moresby**	**12.19**	**95**	LR	LR	14 56 19.1	
	comp=Z,128nm,19.2s,baz=178,slow=42						
PMG	**Port Moresby**	**12.19**	**95**	Pn	**Pn**	**14 50 47.3**	**+1.0**
FITZ	**Fitzroy Crossi**	**12.98**	**223**	Pn	**Pn**	**14 50 57.4**	**+0.4**
	0.8nm,0.3s,baz=41,slow=10,SNR=33						
FITZ				Sn	Sn	14 53 14.5	-7.2
	6.1nm,0.3s,baz=164,slow=8.7,SNR=12 3.0nm,0.3s						
AS31	**Alice Springs**	**14.97**	**183**		**Pn**	**14 51 23.4**	**-0.9**
ASAR	**Alice Springs**	**14.97**	**183**	Pn	**Pn**	**14 51 23.6**	**-0.8**
	0.3nm,0.3s,baz=0.0,slow=14,SNR=23						
ASAR				Sn	**Sn**	**14 54 04.2**	**-6.2**
	0.7nm,0.3s,baz=2.3,slow=25,SNR=7.7						
ASAR				LR	LR	14 57 30.9	
	comp=Z,163nm,20.7s,baz=14,slow=39 2.3nm,0.7s						
ASAR	**Alice Springs**	**14.97**	**183**		**Pn**	**14 51 23.9**	**-0.4**
KAPI	**Kappang**	**15.40**	**283**	LR	LR	14 57 47.2	
	comp=Z,58nm,21.2s,baz=94,slow=38						
CTA	**Charters Tower**	**15.86**	**137**	LR	LR	14 58 12.7	
	comp=Z,127nm,18.5s,baz=152,slow=40						
INKA	**Innaminka**	**19.81**	**164**	Pn	**P**	**14 52 25.3**	**+2.1**
INKA				IAmb	IAmb	14 52 30.7	
	comp=Z,7.3nm,1.4s						
STKA	**Stephens Creek**	**23.97**	**166**	P	**P**	**14 53 08.3**	**+1.2**
	comp=Z,3.6nm,0.9s,baz=320,slow=7.9,SNR=3.8 comp=Z,3.6nm,0.9s						
GIRL	**Giralia**	**24.20**	**232**	P	**P**	**14 53 08.4**	**-1.0**
HNR	**Honiara**	**24.81**	**94**	P	**P**	**14 53 13.4**	**-1.6**
HNR				IAmb	IAmb	14 53 42.7	
	comp=Z,35nm,0.9s						
PATS	**Pohnpei**	**28.00**	**57**	P	**P**	**14 53 43.6**	**-0.1**
NWAO	**Narrogin (SRO)**	**29.15**	**211**	LR	LR	15 06 07.8	
	comp=Z,155nm,19.5s,baz=108,slow=37						
MGBR	**Mount Gambier**	**29.43**	**171**	P	**P**	**14 53 57.6**	**+1.4**
CMAR	**Chiang Mai Arr**	**44.49**	**307**	P	**P**	**14 56 05.7**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=139,slow=7.1,SNR=5.4 comp=Z,0.4nm,0.4s						
KSAR	**Wonju Array Be**	**46.29**	**352**	P	**P**	**14 56 18.7**	**+0.4**
MKAR	**Makanchi Array**	**72.25**	**325**	P	**P**	**14 59 19.0**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=112,slow=7.8,SNR=6.9 comp=Z,0.3nm,0.5s						
L16K	**Owhat River**	**86.40**	**26**	P	**P**	**15 00 35.0**	**+0.3**
L16K				IAmb	IAmb	15 01 19.1	
	comp=Z,2.7nm,1.1s						
ILSW	**Iliamna Southw**	**88.59**	**29**	P	**P**	**15 00 46.4**	**+0.8**

IDC 23 14:58:07.0±6.4, **4°.58N**×**104°.89W**, **h0**km, **mb3.6**/4, **mbtmp3.6**/4, **MS3.4/3**, **Error ellipse: s-maj=275.3km s-min=63.8km az=108.0**, **Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**15.84**	**38**	LR	LR	15 06 23.7	
	comp=Z,125nm,18.8s,baz=182,slow=31						
JTS	**Las Juntas de**	**20.56**	**73**	LR	LR	15 08 04.4	
	comp=Z,179nm,18.8s,baz=235,slow=29						
TXAR	**Lajitas Array**	**24.65**	**3**	P	P	15 03 29.3	-0.3
	0.6nm,0.9s,baz=179,slow=12,SNR=7.4 0.6nm,0.9s						
PDAR	**Pinedale Array**	**38.25**	**354**	P	P	15 05 30.9	+1.7
	1.6nm,1.1s,baz=165,slow=6.2,SNR=8.6 1.6nm,1.1s						
PPT	**Papeete**	**49.29**	**242**	LR	LR	15 21 58.7	
	comp=Z,24nm,21.1s,baz=174,slow=29						
YKA	**Yellowknife Ar**	**58.23**	**355**	P	P	15 08 01.7	-1.2
	0.4nm,0.8s,baz=169,slow=5.7,SNR=8.3 0.4nm,0.8s						
ILAR	**Eielson Array**	**67.10**	**342**	P	P	15 09 01.4	-0.7
	1.1nm,1.0s,baz=163,slow=5.3,SNR=5.2 1.1nm,1.0s						
H11N3	**WAKE ISLAND Hy**	**86.78**	**289**	T	T	16 47 41.5	
	baz=84						
H11N2	**WAKE ISLAND Hy**	**86.80**	**289**	T	T	16 47 41.6	
	baz=84						
H11N1	**WAKE ISLAND Hy**	**86.80**	**289**	T	T	16 47 41.3	
	baz=84						
H11S2	**WAKE ISLAND Hy**	**87.06**	**288**	T	T	16 48 03.1	
	baz=86,slow=75,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	**87.06**	**288**	T	T	16 48 03.5	
	baz=86,slow=75,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**87.07**	**288**	T	T	16 48 04.3	
	baz=86,slow=75,SNR=4.3						
CMAR	**Chiang Mai Arr**	**147.20**	**315**	PKPbc	PKPbc	15 17 53.2	-0.1
	0.3nm,0.3s,baz=21,slow=3.3,SNR=4.8						

*IDC **23** 14:59:50.2±0.9, 36°.95N×27°.81E, h0km, mb3.6/7, mbtmp3.7/12, ML3.5/3, MS3.4/1, Error ellipse: s-maj=24.6km s-min=16.7km az=160.0*
*THE **23** 14:59:52.4, 37°.2N±2°.8E±°, h12km±4km, M3.5/14, MLh3.5/14*
*ISK **23** 14:59:52.0, 36°.91N×27°.86E, h16km, ML3.8/15*
*AFAD **23** 14:59:52.2, 36°.92N×27°.84E, h7km±2km, MW3.7*
*ATH **23** 14:59:52.3, 36°.92N×27°.89E, h19km±8km, ML3.5/11, Manual Solution by M.Papanikolaou First location: 2020/02/23 15:01:15, This location: 2020/02/23 21:35:05 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 4 km*
ISC 23 14:59:52.5±0.8, **36°.92N**±0°.02×**27°.86E**±0°.02, **h17**km±5km, **n85**, σ0°.80/113, **mb3.6**/6, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DATC	**Datca-Mugla**	**0.23**	**224**	Pg	**Pb**	**14 59 57.6**	**-0.5**
DATC				Sg	**Sg**	**15 00 01.5**	**+0.3**
DAT	**Datca**	**0.29**	**229**	Pg	**Pg**	**14 59 58.5**	**-0.4**
DAT				Sg	**Sb**	**15 00 03.4**	**-0.6**
DAT	**Datca**	**0.29**	**229**	P	**Pg**	**14 59 58.5**	**-0.4**
DAT				S	**Sb**	**15 00 03.3**	**-0.7**
TURN	**Turunc**	**0.35**	**115**	Pg	**Pg**	**14 59 59.3**	**-0.4**
TURN				Sg	**Sg**	**15 00 04.9**	**+0.3**
TURN	**Turunc**	**0.35**	**115**	P	**Pg**	**14 59 59.4**	**-0.3**
TURN				S	**Sg**	**15 00 04.7**	**0.0**
BDRM	**Kayabasi**	**0.36**	**293**	P	**Pg**	**14 59 59.6**	**-0.3**
BDRM				S	**Sg**	**15 00 04.8**	**-0.2**
MLSB	**Milas**	**0.38**	**350**	Pg	**Pb**	**15 00 00.5**	**-0.2**
MLSB				Sg	**Sb**	**15 00 06.7**	**+0.4**
YAZI	**Mula-Dat§a-**	**0.40**	**233**	P	**Pg**	**15 00 00.4**	**-0.3**
YAZI				S	**Sg**	**15 00 06.3**	**0.0**
YER	**Yerkesik**	**0.40**	**58**	Pg	**Pg**	**15 00 00.6**	**-0.2**
YER	**Yerkesik**	**0.40**	**58**	P	**Pg**	**15 00 00.8**	**0.0**
YER				S	**Sg**	**15 00 06.6**	**+0.3**
BODT	**Bodrum**	**0.46**	**288**	Pg	**Pb**	**15 00 02.5**	**+0.4**
BODT	**Bodrum**	**0.46**	**288**	P	**Pb**	**15 00 02.8**	**+0.8**
BODT				S	**Sb**	**15 00 09.8**	**+1.2**
MULA	**Mugla, Merkez-**	**0.50**	**48**	P	**Pg**	**15 00 02.5**	**0.0**
MULA				S	**Sg**	**15 00 09.5**	**+0.2**
YKAV	**Yalikavak-Bodr**	**0.50**	**294**	Pg	**Pg**	**15 00 01.6**	**-0.9**
DALY	**Dalyan (Mula)**	**0.65**	**99**	Pg	**Pg**	**15 00 05.2**	**0.0**
DIDI	**Didim-Aydin**	**0.67**	**313**	Pg	**Pb**	**15 00 05.8**	**+0.2**
DDIM	**Aydin, Didim**	**0.72**	**318**	P	**Pb**	**15 00 06.7**	**+0.1**
DDIM				S	**Sb**	**15 00 16.1**	**-0.1**
AYDN	**Tasoluk**	**0.74**	**2**	P	**Pb**	**15 00 06.8**	**-0.1**
ARG	**Arkhangelos**	**0.74**	**163**	Pg	**Pg**	**15 00 06.5**	**-0.4**
ARG	**Arkhangelos**	**0.74**	**163**	P	**Pg**	**15 00 06.5**	**-0.4**
ARG				S	**Sn**	**15 00 19.0**	**0.0**
ARG	**Arkhangelos**	**0.74**	**163**	P	**Pg**	**15 00 06.5**	**-0.4**
ARG				S	**Sg**	**15 00 16.4**	**-0.3**
SABU	**Mula-Dalaman**	**0.90**	**96**	P	**Pg**	**15 00 09.7**	**-0.2**
GCAM	**G?zelcaml?**	**0.92**	**328**	Pg	**Pn**	**15 00 10.5**	**-0.1**
GCAM	**G?zelcaml?**	**0.92**	**328**	P	**Pb**	**15 00 10.1**	**+0.2**
GCAM				S	**Sb**	**15 00 23.0**	**+1.1**
ESEN	**Aydn-Nazilli**	**0.96**	**24**	P	**Pg**	**15 00 10.5**	**-0.6**
ESEN				S	**Sg**	**15 00 23.0**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.00**	**57**	P	**Pn**	**15 00 12.2**	**+0.3**
TAVA				S	**Sn**	**15 00 26.0**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.02**	**2**	Pg	**Pn**	**15 00 12.2**	**+0.1**
FETY	**Fethiye**	**1.03**	**106**	P	Pb	15 00 02.3	-9.4
KUSD	**Kusadasi-Aydin**	**1.04**	**334**	Pg	**Pg**	**15 00 12.3**	**-0.3**
NAZL	**Nazilli-Aydin**	**1.10**	**18**	Pn	**Pg**	**15 00 13.3**	**-0.4**
SMG	**Samos**	**1.13**	**314**	P	**Pb**	**15 00 13.1**	**-0.4**
SMG				S	**Sg**	**15 00 28.6**	**-0.5**
SMG	**Samos**	**1.13**	**314**	P	**Pb**	**15 00 13.2**	**-0.3**
SMG				S	**Sb**	**15 00 28.1**	**+0.2**
CAME	**Cameli-Denizli**	**1.16**	**89**	Pn	**Pb**	**15 00 14.1**	**0.0**
IZMR	**zmir-demi**	**1.21**	**4**	P	**Pn**	**15 00 15.0**	**+0.3**
IZMR				S	**Sb**	**15 00 31.0**	**+0.6**
APMY	**Acipayam-Deniz**	**1.28**	**64**	Pn	**Pn**	**15 00 16.0**	**+0.4**
DUVT	**Torbali**	**1.33**	**346**	P	**Pn**	**15 00 16.0**	**-0.3**
DUVT				S	**Sb**	**15 00 32.8**	**-1.0**
KIRA	**zmir-Kiraz**	**1.34**	**19**	P	**Pb**	**15 00 17.2**	**-0.1**
KIRA				S	**Sb**	**15 00 34.5**	**+0.3**
ODEM	**Odemis-Izmir**	**1.36**	**7**	Pn	**Pn**	**15 00 16.8**	**0.0**
DGB	**zmir**	**1.37**	**326**	P	**Pn**	**15 00 16.4**	**-0.3**
DGB				S	**Sn**	**15 00 33.1**	**-1.3**
GMLD	**Gumuldur**	**1.37**	**327**	Pn	**Pb**	**15 00 17.4**	**-0.3**
KARP	**Karpathos**	**1.48**	**202**	Pn	**Pn**	**15 00 18.5**	**+0.1**
KARP	**Karpathos**	**1.48**	**202**	P	**Pn**	**15 00 18.2**	**-0.2**
KARP				S	**Sn**	**15 00 36.9**	**-0.5**
KARP	**Karpathos**	**1.48**	**202**	P	**Pn**	**15 00 18.2**	**-0.2**
KARP				S	**Sn**	**15 00 37.2**	**-0.1**
AKAS	**Kas**	**1.57**	**116**	Pn	**Pn**	**15 00 20.0**	**+0.4**
BLCB	**Balcova**	**1.60**	**336**	Pn	**Pn**	**15 00 19.5**	**-0.4**
BLCB	**Balcova**	**1.60**	**336**	P	**Pn**	**15 00 19.4**	**-0.5**
THERA	**Ancient Thera,**	**1.99**	**255**	P	**Pn**	**15 00 26.1**	**+0.8**
ZKR	**Zakros**	**2.24**	**217**	P	**Pn**	**15 00 29.8**	**+1.0**
NPS	**Neapolis**	**2.46**	**228**	P	**Pn**	**15 00 31.6**	**-0.2**
NPS				S	**Sn**	**15 01 03.9**	**+2.4**
NPS	**Neapolis**	**2.46**	**228**	P	**Pn**	**15 00 31.6**	**-0.2**
PRK	**Paraskevi**	**2.63**	**332**	P	**Pn**	**15 00 34.4**	**+0.3**
PRK	**Paraskevi**	**2.63**	**332**	P	**Pn**	**15 00 33.7**

IDC ***23*** *16:00:29.9±0.4,38.˙41N×44.˙47E,h0km,mb5.2/34, mbtmp5.2/46,ML4.3/10,MS5.8/81,Error ellipse: s-maj=8.7km s-min=7.7km az=164.0*

TEH ***23*** *16:00:30.0,38.˙49N×44.˙56E,h6km±40km,ML5.9, Presumed earthquake*

MOS ***23*** *16:00:30.3±1.3,38.˙41N×44.˙55E,h10km,mb5.8/55, MS5.8/65,Error ellipse: s-maj=4.2km s-min=2.7km az=107.7*

IPGP ***23*** *16:00:31.0,38.˙47N×44.˙37E,h13km,Mw6.0,Fault plane solution: NP1:φs208.00000°,δ86.00000°,λ13.00000°. NP2:φs118.00000°,δ77.00000°,λ176.00000°.*

NEIC ***23*** *16:00:31.6±1.9,38.˙50N±0.˙04×44.˙37E±0.˙04,h10km±1km, mb5.6/432,Ms_20 5.9/742,Mwb5.9/76,Mww6.0/38,Error ellipse: s-maj=8.1km s-min=3.6km az=25.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.50; Mθθ-6.34; Mφφ5.84; Mrθ0.68; Mθφ-4.84; Mφr-1.54; Fault plane solution: Mo7.97000×10¹⁷ NP1: φs206.47000°,δ80.34000°,λ8.43000°. NP2:φs115.05000°, δ81.69000°,λ170.24000°. Principal axes: T 7.9113, Plg13.0000°, Azm71.0000°; N 0.1230, Plg77.0000°, Azm255.0000°; P -8.0342, Plg1.0000°, Azm161.0000°;*

NEIC ***23*** *16:00:31.6,38.˙49N×44.˙36E,h10km*

NEIC ***23*** *16:00:31.6,38.˙49N×44.˙37E,h18km*

NEIC ***23*** *16:00:31.6,38.˙49N×44.˙50E,h18km,Moment Tensor Solution. Duration: 5s1 Moment tensor: Scale 10¹⁸Nm; Mrr-0.21; Mθθ-0.89; Mφφ1.10; Mrθ-0.26; Mθφ-0.54; Mφr0.15; Fault plane solution: Mo1.19000×10¹⁸ NP1:φs30.34000°, δ73.97000°,λ-4.22000°. NP2:φs121.51000°,δ85.94000°, λ-163.92000°. Principal axes: T 1.2685, Plg8.0000°, Azm255.0000°; N -0.1849, Plg73.0000°, Azm135.0000°; P -1.0836, Plg14.0000°, Azm347.0000°;*

ISC-PP ***23*** *16:00:31,38.˙50N×44.˙37E,h4km,Mwppsm6.1,Moment Tensor Solution. s50 Moment tensor: Scale 10¹⁸Nm; Mrr-0.60±.10; Mθθ0.46±.22; Mφφ0.19±.18; Mrθ0.13±.15; Mθφ0.30±.19; Mφr0.29±.24; Fault plane solution: Mo1.70000×10¹⁸ NP1:φs222.90000°,δ58.60000°, λ254.10000°. NP2:φs71.60000°,δ34.80000°,λ-65.80000°.*

GFZ ***23*** *16:00:32.8,38.˙41N×44.˙49E,h10km,MW5.9,Moment Tensor Solution. s143 Moment tensor: Mrr-1.12; Mθθ-7.06; Mφφ8.18; Mrθ2.46; Mθφ-5.18; Mφr1.34; Fault plane solution: NP1:φs299.00000°,δ75.00000°, λ-168.00000°. NP2:φs206.00000°,δ80.00000°, λ-14.00000°. Principal axes: T 9.8000, Plg3.0000°, Azm253.0000°; N -0.2500, Plg72.0000°, Azm353.0000°; P -9.5500, Plg18.0000°, Azm162.0000°;*

GCMT ***23*** *16:00:32.6±0.1,38.˙32N×44.˙47E,h14km,MW6.0/164, Moment Tensor Solution. s141,c288; s164,c548; Duration: 2s4 Moment tensor: Scale 10¹⁸Nm; Mrr-0.12±.01; Mθθ-0.87±.01; Mφφ0.98±.01; Mrθ0.03±.01; Mθφ-0.67±.01; Mφr-0.17±.02; Best double couple: Mo1.15800×10¹⁸ NP1:φs117.00000°,δ84.00000°, λ176.00000°. NP2:φs207.00000°,δ86.00000°,λ6.00000°. Principal axes: T 1.2310, Plg7.0000°, Azm72.0000°; N -0.1460, Plg82.0000°, Azm242.0000°; P -1.0860, Plg1.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

THR ***23*** *16:00:33.8±0.3,38.˙35N×44.˙43E,h10km,ML5.9, Presumed earthquake*

MCSM ***23*** *16:00:33.1±0.4,39.˚N±4.˚×4.˚4E±.˚,h10km±3km,mb5.6, mB6.0,MLv5.8,Mw(mB)5.7*

GII ***23*** *16:00:33.7±0.0,38.˙42N×44.˙51E,h0km,confirmed*

BJI ***23*** *16:00:34.2,38.˙44N×44.˙31E,h40km,mB5.9/71,mb5.5/83, Ms6.2,Ms7 6.1*

PTWC ***23*** *16:00:37,38.˙40N×44.˙50E,h62km,Mwp6.0/21, TURKEY-IRAN BORDER REGION*

NAO ***23*** *16:00:39.6,38.˙44N×43.˙62E,h33km,MB4.5*

ISC 23 16:00:31.3±0.5,38.˙42N±0.˙02×44.˙50E±0.˙01,h6km±2km, h6km:pP-P,n2037,σt²79/1905,mb5.5/410,MS5.9/521, 142C-113D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**301**	P	**Pg**	**16 00 39.2**	**-1.0**
OZAP				S	**Sg**	**16 00 47.1**	**+0.7**
YOVA	**Hakkari_Yksek**	**0.85**	**191**	P	**Pg**	**16 00 46.6**	**-1.0**
TVAN	**Van**	**0.87**	**277**	P	**Pg**	**16 00 45.1**	**-2.8**
ISHB	**Shabestar**	**0.89**	**99**	Pg	**Pg**	**16 00 45.7**	**-2.6**
VANB	**Van**	**0.89**	**282**	Pg	**Pg**	**16 00 47.1**	**-1.2**
VANB	**Van**	**0.89**	**282**	Pg	**Pg**	**16 00 48.1**	**-0.2**
VMUR	**Van-Muradiye**	**0.92**	**308**	P	**Pg**	**16 00 48.3**	**-0.7**
VMUR				S	**Sg**	**16 01 01.3**	**+0.3**
VMUR	**Van-Muradiye**	**0.92**	**308**	Pg	**Pg**	**16 00 47.1**	**-1.9**
MAKU	**Maku**	**0.94**	**9**	Pg	**Pg**	**16 00 46.4**	**-2.9**
IMRD	**Marand**	**0.99**	**72**	Pg	**Pg**	**16 00 48.3**	**-1.9**
HAKT	**HAKKARI**	**1.07**	**216**	P	**Pg**	**16 00 50.5**	**-1.2**
HAKT				S	**Sb**	**16 01 07.4**	**+0.8**
HAKT	**HAKKARI**	**1.07**	**216**	P	**Pg**	**16 00 49.5**	**-2.2**
HAKT				S	**Sn**	**16 01 07.9**	**-0.5**
NAX	**Nakhchivan**	**1.08**	**46**	P	**Pg**	**16 00 50.4**	**-1.6**
NAX				S	**Sb**	**16 01 06.5**	**-0.4**
ERCV	**ERCIS-VAN**	**1.09**	**304**	Pn	**Pg**	**16 00 50.4**	**-1.7**
ERCV				Sn	**Sg**	**16 01 06.4**	**+0.1**
ERCV	**ERCIS-VAN**	**1.09**	**304**	P	**Pg**	**16 00 51.8**	**-0.4**
GEVA	**Gevas**	**1.14**	**265**	Pn	**Pg**	**16 00 49.2**	**-3.9**
GEVA	**Gevas**	**1.14**	**265**	P	**Pg**	**16 00 50.5**	**-2.6**
GEVA				S	**Sg**	**16 01 06.6**	**-1.3**
AKDM	**Akdamar-Van**	**1.20**	**266**	Pn	**Pg**	**16 00 50.7**	**-3.6**
AKDM				Sn	**Sg**	**16 01 09.8**	**0.0**
ORD	**Ordubad**	**1.27**	**66**	P	**Pg**	**16 00 53.6**	**-2.0**
ORD				S	**Sb**	**16 01 12.3**	**-0.1**
SBZ	**Shahbuz**	**1.27**	**40**	P	**Pg**	**16 00 53.7**	**-2.0**
SBZ				S	**Sg**	**16 01 11.2**	**-1.0**
DYDN	**Diyadin**	**1.29**	**331**	P	**Pg**	**16 00 53.0**	**-2.9**
DYDN				S	**Sg**	**16 01 11.7**	**-0.9**
DYDN	**Diyadin**	**1.29**	**331**	Pg	**Pg**	**16 00 53.0**	**-2.9**
ITBZ	**Tabriz**	**1.31**	**98**	Pg	**Pn**	**16 00 53.6**	**-2.7**
HYR	**Heyderabad**	**1.32**	**12**	P	**Pn**	**16 00 54.0**	**-2.5**
HYR				S	**Sn**	**16 01 14.2**	**-0.2**
CUKT	**Cukurca**	**1.37**	**211**	Pn	**Pn**	**16 00 55.3**	**-1.8**
CUKT				Sn	**Sb**	**16 01 15.2**	**0.0**
CUKT	**Cukurca**	**1.37**	**211**	P	**Pn**	**16 00 57.2**	**0.0**
CUKT				S	**Sb**	**16 01 15.2**	**0.0**
CUKT	**Cukurca**	**1.37**	**211**	Pg	**Pn**	**16 00 57.1**	**0.0**
IAZR	**Azarshahr**	**1.38**	**122**	Pg	**Pn**	**16 00 55.8**	**-1.6**
ADCV	**BITLIS_Adilcev**	**1.44**	**286**	P	**Pn**	**16 00 57.0**	**-1.1**
ADCV				S	**Sg**	**16 01 17.7**	**0.0**
VAYK	**Vayk**	**1.46**	**29**	⇓*e*P	**Pn**	**16 00 56.7**	**-1.7**
VAYK				⇓*e*S	**Sg**	**16 01 18.7**	**+0.5**
IGDI	**IGDIR**	**1.48**	**347**	P	**Pn**	**16 00 58.2**	**-0.4**
IGDI	**IGDIR**	**1.48**	**347**	P	**Pn**	**16 00 57.1**	**-1.5**
IGDI				S	**Sg**	**16 01 19.3**	**+0.5**
ALVK	**Alvank**	**1.54**	**70**	*e*P	**Pn**	**16 00 57.5**	**-1.8**
ALVK				*e*S	**Sn**	**16 01 19.5**	**-0.1**
NRKZ	**NAREK**	**1.58**	**4**	*e*P	Pg	16 01 15.6	+14
NRKZ				*e*S	Sg	16 01 41.5	+19
PERV	**Siirt/Pervari-**	**1.62**	**253**	P	**Pn**	**16 01 00.5**	**0.0**
PERV				S	**Sg**	**16 01 23.9**	**+0.8**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pn**	**16 00 59.4**	**-1.6**
DORK	**Agr/Tutak/Do**	**1.65**	**306**	P	**Pn**	**16 01 00.4**	**-0.6**
DORK				S	**Sn**	**16 01 20.6**	**-2.1**
MLAZ	**Malazgirt-MUS**	**1.69**	**296**	Pn	**Pn**	**16 01 00.1**	**-1.4**
KOTA	**Agri, Merkez-K**	**1.71**	**324**	P	**Pn**	**16 01 01.0**	**-0.8**
GNI	**Garni**	**1.73**	**6**	Pn	**Pn**	**16 01 02.1**	**-0.1**
	539nm,0.3s,baz=275,slow=2.0,SNR=902						
GNI				Lg	Lg	16 01 28.4	
	2μm,0.3s,baz=95,slow=23,SNR=44						
GNI				LR	LR	16 01 57.6	
	comp=Z,87μm,19.3s,baz=196,slow=50						
GNI	**Garni**	**1.73**	**6**		**Pn**	**16 01 01.5**	**-0.7**
GNI	**Garni**	**1.73**	**6**	Pn	**Pn**	**16 01 01.1**	**-1.1**
GNI	**Garni**	**1.73**	**6**	⇓*i*P	**Pn**	**16 01 01.4**	**-0.8**
GNI				⇑*i*S	**Sb**	**16 01 26.4**	**+0.6**
GNI	**Garni**	**1.73**	**6**	*i* PN	**Pn**	**16 01 00.3**	**-1.9**
GNI	**Garni**	**1.73**	**6**	P	**Pb**	**16 01 04.0**	**+0.3**
GNI				S	**Sg**	**16 01 32.0**	**+5.0**
GNI	**Garni**	**1.73**	**6**	P	**Pn**	**16 01 01.2**	**-1.0**
GNI	**Garni**	**1.73**	**6**	⇓P	**Pn**	**16 01 00.9**	**-1.2**
METS	**Metsamor**	**1.76**	**349**	*e*P	**Pn**	**16 01 01.9**	**-0.4**
METS				*e*S	**Sg**	**16 01 27.3**	**-0.4**
VNNZ	**Vanand**	**1.76**	**343**	*e*P	**Pn**	**16 01 02.2**	**-0.2**
VNNZ				*e*S	**Sg**	**16 01 27.8**	**0.0**
EGVZ	**Egvard**	**1.79**	**63**	*e*P	**Pn**	**16 01 01.7**	**-1.1**
EGVZ	**Egvard**	**1.79**	**63**	*e*P	**Pn**	**16 01 01.9**	**-0.9**
EGVZ				*e*S	**Sn**	**16 01 24.6**	**-1.4**
EGVZ				*e*S	**Sb**	**16 01 27.1**	**-0.1**
BLIS	**Bitlis-Merkez**	**1.87**	**270**	P	**Pb**	**16 01 05.2**	**-0.8**
BLIS				S	**Sg**	**16 01 33.4**	**+1.9**
BLIS	**Bitlis-Merkez**	**1.87**	**270**	Pn	**Pb**	**16 01 05.2**	**-0.8**
ARUZ	**Aruch**	**1.89**	**350**	*e*P	**Pn**	**16 01 03.6**	**-0.5**
ARUZ				*e*S	**Sb**	**16 01 30.2**	**+0.1**
SIRN	**Sırnak**	**1.89**	**241**	P	**Pb**	**16 01 06.2**	**-0.1**
KAPZ	**Kaputan**	**1.90**	**5**	*e*P	**Pn**	**16 01 04.2**	**-0.3**
KAPZ				*e*S	**Sb**	**16 01 31.2**	**+0.6**
MAHB	**Mahabad**	**1.91**	**150**	Pn	**Pb**	**16 01 06.3**	**-0.3**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pn**	**16 01 04.1**	**-0.8**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pn**	**16 01 03.2**	**-1.8**
GURO	**Guroymak-BITLI**	**1.94**	**275**	⇑P	**Pn**	**16 01 02.5**	**-2.5**
AYRK	**Ayrk**	**1.96**	**30**	*e*P	**Pn**	**16 01 06.0**	**+0.6**
AYRK				*e*S	**Sg**	**16 01 34.4**	**0.0**
AMBZ	**Amberd**	**1.97**	**355**	*e*P	**Pn**	**16 01 04.8**	**-0.7**
AMBZ				*e*S	**Sb**	**16 01 32.3**	**-0.4**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pn**	**16 01 06.0**	**+0.2**
SRTM	**Siirt_Merkez**	**2.08**	**259**	P	**Pn**	**16 01 07.4**	**+0.6**
SRTM				S	**Sn**	**16 01 33.8**	**+0.7**
EATA	**Eleskirt**	**2.12**	**313**	P	**Pn**	**16 01 08.4**	**+0.7**
MUSM	**Mu-Merkez**	**2.36**	**278**	P	**Pn**	**16 01 10.8**	**+0.1**
QRD	**Qoradiz**	**2.43**	**64**	P	**Pn**	**16 01 09.5**	**-2.0**
QRD				S	**Sn**	**16 01 43.1**	**+1.5**
IHSH	**Hashtrud**	**2.45**	**116**	Pn	**Pn**	**16 01 13.2**	**+1.0**
KARS	**Kars**	**2.46**	**334**		**Pn**	**16 01 10.8**	**-1.3**
KARS	**Kars**	**2.46**	**334**	Pn	**Pn**	**16 01 11.2**	**-0.9**
KARS	**Kars**	**2.46**	**334**	PN	**Pn**	**16 01 10.8**	**-1.3**
KARS	**Kars**	**2.46**	**334**	⇓P	**Pn**	**16 01 11.7**	**-0.4**
GDB	**GEDABAY**	**2.49**	**22**	P	**Pn**	**16 01 10.9**	**-1.7**
GDB				S	**Sn**	**16 01 45.2**	**+1.8**
VRTB	**Varto-Mus**	**2.49**	**288**	Pn	**Pn**	**16 01 11.7**	**-0.8**
VRTB	**Varto-Mus**	**2.49**	**288**	P	**Pb**	**16 01 16.2**	**-0.4**
LSVT	**Lusahovit**	**2.55**	**12**	*e*P	**Pb**	**16 01 16.9**	**-0.5**
LSVT				*e*S	**Sg**	**16 01 53.0**	**0.0**
ISRB	**Sarab**	**2.57**	**102**	Pn	**Pn**	**16 01 14.5**	**+0.9**
HOMI	**Horasan**	**2.59**	**310**	P	**Pb**	**16 01 16.9**	**-1.3**
BTMN	**Batman**	**2.60**	**259**	P	**Pn**	**16 01 14.7**	**+0.7**
BTMN				S	**Sb**	**16 01 49.4**	**-1.2**
SVAN	**Silvan-Diyarba**	**2.61**	**265**	Pn	**Pn**	**16 01 13.5**	**-0.6**
SVAN	**Silvan-Diyarba**	**2.61**	**265**	P	**Pn**	**16 01 15.0**	**+0.8**
SVAN				S	**Sn**	**16 01 47.3**	**+1.1**
GANJ	**Ganja**	**2.63**	**32**	P	**Pn**	**16 01 13.4**	**-0.9**
GANJ				S	**Sn**	**16 01 46.9**	**+0.3**
AGDM	**Agdam**	**2.63**	**49**	P	**Pn**	**16 01 13.7**	**-0.7**
AGDM				S	**Sn**	**16 01 48.5**	**+1.8**
SRTK	**Saratovka**	**2.64**	**357**	*e*P	**Pb**	**16 01 18.8**	**-0.3**
SRTK				*e*S	**Sg**	**16 01 56.2**	**0.0**
MIDY	**Mardin/Midyat-**	**2.66**	**248**	P	**Pb**	**16 01 15.5**	**+0.8**
MIDY				S	**Sb**	**16 01 52.7**	**+0.5**
GRMI	**Germi**	**2.69**	**81**	Pn	**Pn**	**16 01 15.5**	**+0.3**
GRMI	**Germi**	**2.69**	**81**	*e*Pn	**Pn**	**16 01 16.4**	**+1.2**
GRMI				IAML		16 02 16.0	
	comp=Z,17μm,1.0s						
SENK	**Senkaya-Erzuru**	**2.71**	**323**	Pn	**Pn**	**16 01 14.8**	**-0.8**
BLQ	**Beylaqan**	**2.71**	**60**	P	**Pn**	**16 01 14.3**	**-1.1**
BLQ				S	**Sn**	**16 01 49.2**	**+0.6**
QZX	**Qazax, Azerbai**	**2.72**	**14**	P	**Pn**	**16 01 14.5**	**-1.0**
QZX				S	**Sn**	**16 01 50.1**	**+1.4**
BRDA	**Brd**	**2.77**	**48**	P	**Pn**	**16 01 15.3**	**-1.0**
BRDA				S	**Sn**	**16 01 50.4**	**+0.3**
SLHN	**Bingol, Solhan**	**2.77**	**282**	P	**Pn**	**16 01 18.3**	**+1.9**
KARO	**Karliova-Bingo**	**2.84**	**289**	Pn	**Pn**	**16 01 16.8**	**-0.5**
BGD	**Bogdanovka**	**2.92**	**347**	P	**Pn**	**16 01 18.9**	**+0.3**
BGD	**Bogdanovka**	**2.92**	**347**	PN	**Pn**	**16 01 18.8**	**+0.3**
KZRT	**Kazreti**	**2.96**	**359**	P	**Pn**	**16 01 18.0**	**-1.0**
KZRT				S	**Sg**	**16 02 04.4**	**-2.1**
KZRT	**Kazreti**	**2.96**	**359**	PN	**Pn**	**16 01 17.9**	**-1.0**
KZRT				S	**Sg**	**16 02 04.3**	**-2.1**
YRD	**Yardimli**	**2.97**	**79**	P	**Pn**	**16 01 18.4**	**-0.8**
YRD				S	**Sn**	**16 01 56.5**	**+1.4**
LRK	**Lerik**	**3.02**	**85**	P	**Pn**	**16 01 18.8**	**-1.0**
LRK				S	**Sn**	**16 01 56.6**	**+0.2**
BNGB	**Bingl**	**3.04**	**282**	Pn	**Pn**	**16 01 19.5**	**-0.6**
MNGR	**Mingechevir, A**	**3.08**	**40**	P	**Pn**	**16 01 20.0**	**-0.5**
MNGR				S	**Sn**	**16 01 58.1**	**+0.5**
AKH	**Akhalkalaki**	**3.08**	**346**	P	**Pn**	**16 01 20.9**	**+0.2**
AKH				S	**Sg**	**16 02 11.0**	**+0.7**
AKH	**Akhalkalaki**	**3.08**	**346**	PN	**Pn**	**16 01 20.9**	**+0.2**
AKH				S	**Sg**	**16 02 11.0**	**+0.7**
ZRD	**Zardab**	**3.09**	**52**	P	**Pn**	**16 01 19.8**	**-0.7**
ZRD				S	**Sn**	**16 01 58.5**	**+0.8**
DGRG	**David-gareji**	**3.10**	**12**	P	**Pn**	**16 01 22.2**	**+1.3**
DGRG	**David-gareji**	**3.10**	**12**	PN	**Pn**	**16 01 22.1**	**+1.3**
TRLG	**Trialeti**	**3.13**	**354**	P	**Pn**	**16 01 21.2**	**-0.2**
TRLG				S	**Sg**	**16 02 13.6**	**+1.8**
TRLG	**Trialeti**	**3.13**	**354**	PN	**Pn**	**16 01 21.1**	**-0.2**
TRLG				S	**Sg**	**16 02 13.5**	**+1.8**
MARD	**Mardin**	**3.15**	**251**		**Pn**	**16 01 20.5**	**-1.1**
MARD	**Mardin**	**3.15**	**251**	P	**Pn**	**16 01 22.0**	**+0.5**
GLBA	**Clilabad**	**3.15**	**74**	P	**Pn**	**16 01 20.6**	**-0.8**
GLBA				S	**Sn**	**16 02 00.9**	**+1.6**
VSHL	**Vashlovani**	**3.16**	**27**	P	**Pn**	**16 01 23.4**	**+1.7**
YEDI	**Yedisu-Bingol**	**3.25**	**289**	Pn	**Pn**	**16 01 22.9**	**-0.1**
TBLG	**Delisi**	**3.31**	**3**	Pn	**Pn**	**16 01 23.6**	**-0.1**
TBLG	**Delisi**	**3.31**	**3**	P	**Pn**	**16 01 23.9**	**+0.2**
TBLG				S	**Sg**	**16 02 14.9**	**-2.7**
LKRN	**Lenkeran, Azer**	**3.37**	**84**	P	**Pn**	**16 01 23.4**	**-1.0**
LKRN				S	**Sn**	**16 02 07.3**	**+2.7**
ASTR	**Astara**	**3.37**	**86**	P	**Pn**	**16 01 23.1**	**-1.3**
ASTR				S	**Sn**	**16 02 06.9**	**+2.1**
SAAT	**Saatly**	**3.37**	**64**	P	**Pn**	**16 01 23.6**	**-0.8**
SAAT				S	**Sn**	**16 02 06.1**	**+1.3**
KDMR	**Kurdemir**	**3.46**	**54**	P	**Pn**	**16 01 25.0**	**-0.6**
KDMR				S	**Sn**	**16 02 09.4**	**+2.5**
DYBB	**Diyarbakir**	**3.47**	**264**	Pn	**Pn**	**16 01 24.8**	**-1.1**
SEKA	**Sheki**	**3.47**	**36**	P	**Pn**	**16 01 25.7**	**-0.3**
SEKA				S	**Sn**	**16 02 10.7**	**+3.2**
ZKTA	**Zakatala**	**3.60**	**26**	P	**Pn**	**16 01 27.1**	**-0.6**
ZKTA				S	**Sn**	**16 02 13.7**	**+3.1**
QBL	**Gabala**	**3.60**	**45**	P	**Pn**	**16 01 27.1**	**-0.6**
QBL				S	**Sn**	**16 02 12.7**	**+2.0**
LGD	**Lagodekhi**	**3.66**	**21**	P	**Pn**	**16 01 29.5**	**+0.9**
LGD	**Lagodekhi**	**3.66**	**21**	PN	**Pn**	**16 01 29.4**	**+0.9**
IML	**Ismayilli**	**3.70**	**49**	P	**Pn**	**16 01 28.4**	**-0.6**
IML				S	**Sn**	**16 02 16.8**	**+2.6**
ALIG	**Mtskhetisjvari**	**3.73**	**350**	P	**Pn**	**16 01 29.2**	**-0.4**
ALIG				S	**Sg**	**16 02 34.8**	**+3.6**
ZNJK	**Zanjan**	**3.76**	**116**	*e*Pn	**Pn**	**16 01 31.6**	**+1.6**
ZNJK				IAML		16 02 24.4	
	comp=Z,4.0nm,1.0s						
ALIB	**&Aumlli-Bayram**	**3.82**	**65**	P	**Pn**	**16 01 30.0**	**-0.6**
ALIB				S	**Sn**	**16 02 18.6**	**+2.6**
ERZN	**Erzincan**	**3.90**	**289**	Pn	**Pn**	**16 01 31.7**	**-0.2**
BAYT	**Aydıntepe-Bayb**	**3.91**	**302**	Pn	**Pn**	**16 01 31.9**	**-0.2**
CHRG	**Chargali**	**3.92**	**5**	P	**Pn**	**16 01 31.6**	**-0.5**
CHRG				S	**Sg**	**16 02 40.0**	**+2.9**
XNQ	**Khinaliq**	**3.92**	**44**	P	**Pn**	**16 01 31.6**	**-0.6**
XNQ				S	**Sn**	**16 02 21.7**	**+2.9**
CHOM	**Cayeli-Rize**	**3.93**	**314**	Pn	**Pn**	**16 01 32.3**	**+0.1**
AKT	**Akhty**	**3.94**	**38**	⇓*e*PN	**Pn**	**16 01 33.3**	**+1.0**
AKT				*e*		16 01 40.4	
AKT				*e*S	**Sn**	**16 02 19.0**	**+0.1**
AKT				*e*SS	**SbSb**	**16 02 32.3**	**-1.9**
AKT				pmax	pmax		
	comp=Z,113nm,0.3s						
AKT				smax	smax		
	comp=E,812nm,0.9s						
AKT				smax	smax		
	comp=N,1μm,0.9s						
AKT				smax	smax		
	comp=N,1μm,0.6s						
AKT				MLR	MLR		
	comp=Z,216μm,12.0s						
PQL	**Pirkuli**	**3.95**	**52**	P	**Pn**	**16 01 31.8**	**-0.8**
PQL				S	**Sn**	**16 02 21.2**	**+2.0**
IDHR	**Dehrash**	**4.01**	**157**	Pn	**Pn**	**16 01 35.3**	**+1.8**
GBS	**Qobustan**	**4.03**	**57**	P	**Pn**	**16 02 32.5**	**-1.2**
GBS				S	**Sn**	**16 02 22.6**	**+1.4**
SVRC	**Sivrice-ELAZID**	**4.08**	**271**	Pn	**Pn**	**16 01 33.7**	**-0.7**
ATGJ	**Altiaghaj**	**4.20**	**53**	P	**Pn**	**16 01 34.5**	**-1.5**
ATGJ				S	**Sn**	**16 02 28.1**	**+2.6**
QSAR	**Qusar**	**4.23**	**42**	P	**Pn**	**16 01 35.3**	**-1.1**
QSAR				S	**Sn**	**16 02 29.1**	**+3.0**
QUBA	**Quba, Azerbaij**	**4.24**	**45**	P	**Pn**	**16 01 35.6**	**-0.9**
QUBA				S	**Sn**	**16 02 27.4**	**+1.0**
GARIG	**Gari**	**4.25**	**350**	P	**Pn**	**16 01 37.5**	**+0.8**
GARIG				S	**Sg**	**16 02 50.6**	**+2.8**
SHTL	**Shatili**	**4.26**	**6**	P	**Pn**	**16 01 37.8**	**+1.0**
SHTL				S	**Sb**	**16 02 34.5**	**-3.9**
SHTL	**Shatili**	**4.26**	**6**	PN	**Pn**	**16 01 37.8**	**+1.0**
SIZA	**Siyzn**	**4.30**	**51**	P	**Pn**	**16 01 37.4**	**0.0**
SIZA				S	**Sn**	**16 02 29.2**	**+1.2**
GLG1	**Gilan-e-Gharb**	**4.45**	**165**	Pn	**Pn**	**16 01 41.0**	**+1.6**
GOBA	**Gobu**	**4.51**	**62**	P	**Pn**	**16 01 39.6**	**-0.5**
GOBA				S	**Sn**	**16 02 33.0**	**+0.1**
GIDE	**GILAN DEYLAMAN**	**4.54**	**108**	*e*Pn	**Pn**	**16 01 43.2**	**+2.4**
GIDE				IAML		16 03 26.8	
	comp=Z,17μm,1.0s						
KCHF	**Cheshme Sefid,**	**4.62**	**153**	Pn	**Pn**	**16 01 43.5**	**+1.7**
ILIC	**ilic-Erzincan**	**4.74**	**284**	P	**Pn**	**16 01 43.8**	**+0.4**
NDR	**Nardaran**	**4.76**	**61**	P	**Pn**	**16 01 43.4**	**-0.2**
NDR				S	**Sn**	**16 02 39.0**	**0.0**
ARPR	**Arapgir-MALATY**	**4.87**	**280**	Pn	**Pn**	**16 01 45.2**	**0.0**
ARPR	**Arapgir-MALATY**	**4.87**	**280**	P	**Pn**	**16 01 49.3**	**+4.1**
QABG	**Abgarm-Qazvin**	**4.88**	**122**	Pn	**Pn**	**16 01 46.6**	**+1.1**
NEUR	**Neytrino**	**5.02**	**345**	*i* PN	**Pn**	**16 01 48.3**	**+0.9**
NEUR				MLR	MLR		
	comp=Z,14μm,3.0s						
MAK	**Makhachkala**	**5.08**	**26**	*e*PN	**Pn**	**16 01 45.0**	**-2.9**
MAK				*e*S	**Sn**	**16 02 42.9**	**-3.9**
MAK				pmax	pmax		
	comp=Z,382nm,1.1s						
MAK				MLR	MLR		
	comp=Z,216μm,13.0s						
NCK	**Nalchik**	**5.11**	**353**	*i* PN	**Pn**	**16 01 48.3**	**-0.2**
NCK				MLR	MLR		
	comp=Z,53μm,9.0s						
HAGD	**Aghdareh**	**5.18**	**133**	Pn	**Pn**	**16 01 50.9**	**+1.3**
KBZ	**Khabaz**	**5.44**	**348**	Pn	**Pn**	**16 01 55.9**	**+3.0**
	comp=Z,71nm,1.0s,baz=144,slow=7.2,SNR=60						
KBZ				LR	LR	16 04 21.4	
	comp=Z,153μm,20.1s,baz=160,slow=42						
SHA1	**Shidzhatmaz**	**5.49**	**346**	*i* P	**Pn**	**16 01 53.3**	**-0.5**
THKV	**Tehran--Karaj**	**5.67**	**114**	*e*Pn	**Pn**	**16 01 58.6**	**+2.3**
THKV				IAML		16 04 03.9	
	comp=Z,4μm,1.0s						
KVAR	**Kislovodsk Arr**	**5.69**	**347**	Pn	**Pn**	**16 01 59.8**	**+3.3**
	baz=90,slow=20						
KVAR				LR	LR	16 03 56.9	
	comp=Z,86μm,20.2s,baz=171,slow=36						
	comp=Z,150nm,1.3s						
KIV	**Kislovodsk**	**5.70**	**347**	⇑P	**Pn**	**16 02 00.0**	**+3.5**
KIV	**Kislovodsk**	**5.70**	**347**		**Pn**	**16 01 54.9**	**-1.6**
KIV	**Kislovodsk**	**5.70**	**347**	Pn	**Pn**	**16 01 57.8**	**+1.3**
KIV	**Kislovodsk**	**5.70**	**347**	*i* P	**Pn**	**16 01 58.0**	**+1.5**
	SNR=38						
KIV	**Kislovodsk**	**5.70**	**347**	*e*P	**Pn**	**16 01 56.1**	**-0.4**
KIV				*e*S	**Sn**	**16 03 01.9**	**-0.3**
KIV				pmax	pmax		
	comp=Z,313nm,1.0s						
KIV				MLR	MLR		
	comp=Z,35μm,10.0s						
KIV	**Kislovodsk**	**5.70**	**347**	P	Pn	16 02 01.5	+5.0
KIV				P	Pn	16 02 01.5	+5.0
KIV	**Kislovodsk**	**5.70**	**347**	P	**Pn**	**16 01 59.9**	**+3.4**
KIV	**Kislovodsk**	**5.70**	**347**	⇓P	**Pn**	**16 01 58.9**	**+2.4**
CHTH	**Charan**	**5.86**	**113**	*e*Pn	**Pn**	**16 02 00.9**	**+2.0**
CHTH				IAML		16 04 05.0	

SHRO Shahrood 9.50 101 eP n Pn 16 02 51.7 +3.0
MMLI Mount Malkishu 9.51 234 P Pn 16 02 50.2 +1.3
MMLI Mount Malkishu 9.51 234 P Pn 16 02 51.3 +2.4
HMDT Nahal Hemdat 9.57 233 P Pn 16 02 51.5 +1.9
CSS Mathiatis 9.61 252 Pn 16 02 49.7 -0.5
CSS Mathiatis 9.61 252 P Pn 16 02 51.6 +1.4
comp=Z,6µmcomp=Z,142nm,1.2s
CSS Mathiatis 9.61 252 P Pn 16 02 52.9 +2.7
CSS Mathiatis 9.61 252 ⇑P Pn 16 02 51.1 +0.9
OFRI `Ofer 9.67 236 P Pn 16 02 53.2 +2.1
SLTI Sal'it 9.88 234 P Pn 16 02 56.2 +2.3
SALP Salfit 9.90 233 ⇓P Pn 16 02 55.7 +1.5
DSI Dead Sea 10.13 230 P Pn 16 02 59.5 +2.3
SIM Simferopol' 10.14 313 eP Pn 16 03 02.0 +4.7
SIM 16 05 03.0
SIM pmax pmax
comp=Z,1µm,4.0s
SIM smax smax
comp=N,2µm,4.2s
GHAJ Ghor Haditha 10.21 229 Pn 16 02 58.0 -0.4
MSBI Mazada 10.33 229 P Pn 16 03 02.1 +2.1
MSBI Mazada 10.33 229 ⇑P Pn 16 03 02.3 +2.4
YTIR Yattir 10.44 230 P Pn 16 03 03.9 +2.3
AMAZ Amatzia 10.44 232 ⇑P Pn 16 03 03.3 +1.7
MDUB Mudurnu 10.49 285 ⇓P Pn 16 03 06.5 +4.2
ZFRI Zfri 10.98 227 P Pn 16 03 11.0 +2.0
BORA Eskisehir 11.01 282 Pn 16 03 07.3 -2.0
ISP Isparta 11.03 271 i P Pn 16 03 11.1 +1.4
ISP Isparta 11.03 271 P Pn 16 03 14.6 +4.9
ISP Isparta 11.03 271 ⇑P Pn 16 03 13.7 +3.9
KZIT Kziot 11.19 231 P Pn 16 03 14.3 +2.5
KZIT Kziot 11.19 231 ⇑P Pn 16 03 13.1 +1.3
PRNI Paran 11.23 227 P Pn 16 03 14.8 +2.4
HRFI Mount Harif 11.45 226 P Pn 16 03 17.8 +2.3
KRMI Paran Flat 11.57 227 P Pn 16 03 19.4 +2.3
ELL Elmali 11.70 266 ⇑P Pn 16 03 22.5 +3.6
EIL Elat 11.78 225 Pn Pn 16 03 20.6 +0.7
comp=N,1.3nm,0.3s,baz=5.7,slow=4.9,SNR=25
EIL Lg Lg 16 06 56.2
comp=N,2.6nm,0.3s,baz=85,slow=23,SNR=3.7
EIL LR LR 16 08 03.7
comp=N,99µm,20.5s,baz=48,slow=39
comp=N,27nm,0.8s
EIL Elat 11.78 225 P Pn 16 03 22.2 +2.3
MANT Manisa 12.50 275 Pn 16 03 27.2 -2.8
CTYL Yalikoy Yolu 12.81 289 P Pn 16 03 35.4 +1.5
comp=N,5µmcomp=N,156nm,1.1s
BAND Balkesir-Ban 12.84 284 ⇑P Pn 16 03 37.3 +3.0
VRH Novokhopyorsk 12.93 352 eP Pn 16 03 36.9 +1.4
VRH pmax pmax
comp=Z,79nm,1.0s
NE56 Odesa 12.97 314 P Pn 16 03 35.8 -0.2
VORD Divnogorie 13.07 345 eP Pn 16 03 37.0 -0.4
VORD pmax pmax
comp=Z,500nm,1.1s
JURR Jurilovca 13.29 303 ⇓P Pn 16 03 44.0 +3.6
VSR Storozhevoye 13.34 345 eP Pn 16 03 41.8 +0.8
VSR pmax pmax
comp=Z,200nm,1.1s
PSN Preselentsi 13.40 298 P Pn 16 03 43.0 +1.0
SAKB Bahrain 13.41 156 P Pn 16 03 42.1 -0.1
PURM Purcari 13.48 312 P Pn 16 03 42.4 -0.6
comp=Z,8µmcomp=Z,271nm,1.4s
TIRR Tirgusor 13.48 302 ⇑P Pn 16 03 46.3 +3.2
TIRR Tirgusor 13.48 302 P Pn 16 03 46.2 +3.2
TIRR Tirgusor 13.48 302 ⇑P Pn 16 03 44.3 +1.2
TLCR 13.50 305 ⇑P Pn 16 03 46.7 +3.4
TLCR 13.50 305 P Pn 16 03 46.7 +3.4
BSRN Basiran 13.58 114 i P Pn 16 03 47.8 +3.2
TPGR Topolog 13.63 303 ⇑P Pn 16 03 48.8 +3.7
SHRT Shahrakht 13.63 106 i P Pn 16 03 48.4 +3.1
SHMA Al-Shehemyia 13.67 155 P Pn 16 03 44.9 -0.8
SNR=53
VORR Voronezh 13.76 346 eP Pn 16 03 47.1 +0.3
VORR pmax pmax
comp=Z,133nm,0.9s
ICOR Ion Corvin 13.78 300 ⇑P P 16 03 51.6 -4.2
PRD Provadia 13.78 295 P Pn 16 03 50.9 +3.7
NEF NEVSHA 13.90 296 P P 16 03 54.7 -2.5
CFR Carcaliu 13.94 304 ⇑P P 16 03 53.5 -4.0
CFR Carcaliu 13.94 304 P P 16 03 53.5 -4.0
BELG Belogornoye 14.14 8 Pn Pn 16 03 51.4 -0.6
comp=Z,4.7nm,0.3s,baz=142,slow=1.3,SNR=43
BELG LR LR 16 10 55.4
comp=Z,47µm,19.4s,baz=201,slow=44
comp=Z,613nm,1.0s
BELG Belogornoye 14.14 8 i P Pn 16 03 52.0 0.0
BELG MLR MLR
comp=Z,5µm,14.0s
KARP Karpathos 14.16 264 Pn 16 03 51.1 -1.2
KARP Karpathos 14.16 264 P Pn 16 03 52.4 0.0
comp=Z,12µmcomp=Z,847nm,1.2s
KARP Karpathos 14.16 264 ⇑P Pn 16 03 52.8 +0.4
EZN Ezine 14.18 281 P Pn 16 03 53.6 +0.9
comp=Z,5µmcomp=Z,155nm,1.3s
VLDR Vladesti 14.25 307 ⇓P Pn 16 03 56.3 +2.8
JMB Yambol 14.27 292 P P 16 03 58.4 -2.9
CICN Ciocanesti 14.34 299 ⇓P P 16 03 58.4 -3.6
LOZB Loznitsa 14.41 296 ⇓P P 16 03 59.3 -3.5
VARL Varlezi 14.42 307 ⇑P Pn 16 03 58.2 +2.4
BAL3X Bal3x, Balta 14.42 316 P Pn 16 03 56.6 +0.7
RAZG Razgrad 14.52 296 ⇓P Pn 16 04 00.5 +3.2
SMRA Abu-Samra 14.65 157 P Pn 16 03 56.2 -3.0
SNR=82
LPSR Galich'ya Gora 14.70 347 eP Pn 16 03 59.8 +0.1
LPSR pmax pmax
comp=Z,400nm,1.0s
BIR Birlad 14.72 308 ⇓P Pn 16 04 02.3 +2.4
BIR Birlad 14.72 308 P Pn 16 04 02.3 +2.4
GHRR 14.77 307 ⇑P P 16 04 04.3 -2.5
VASR Vaslui 14.79 309 ⇑P P 16 04 04.0 -3.0
SZH Strazhitsa 14.83 295 P Pn 16 04 02.5 +1.1
ELND Elena 14.83 294 ⇑P P 16 04 04.8 -2.7
RDO Rodhopi 14.83 287 ⇑P Pn 16 04 02.7 +1.2
HRA Herat 14.84 304 Pn 16 04 02.5 +0.3
PANC Panciu 14.85 306 ⇑P Pn 16 04 04.3 +2.6
ODBI Odobesti 14.87 305 ⇑P P 16 04 05.4 -2.5
RAYN Ar Rayn 14.88 176 Pn 16 03 56.7 -5.6
RAYN Ar Rayn 14.88 176 i P Pn 16 03 56.7 -5.6
SNR=139
RAYN Ar Rayn 14.88 176 P Pn 16 03 56.7 -5.6
RAYN Ar Rayn 14.88 176 P Pn 16 03 58.4 -3.9
RAYN S Sn 16 06 45.7 -1.8
DIM Dimitrovgrad 14.90 290 P P 16 04 06.8 -1.4
ISR Istrita 14.96 302 ⇓P P 16 04 06.3 -2.8
ISR Istrita 14.96 302 P P 16 04 06.2 -2.8
SULR 15.01 300 ⇑P P 16 04 07.4 -2.1
SGRR Singureni 15.07 298 ⇑P P 16 04 07.8 -2.2
VRI Vrincioaia 15.12 305 ⇑P Pn 16 04 07.9 +2.5
VRI Vrincioaia 15.12 305 P P 16 04 09.6 -1.1
VRI Vrincioaia 15.12 305 P Pn 16 04 05.9 +0.5
comp=Z,7µmcomp=Z,177nm,1.4s
PLOR Plostina 15.16 305 ⇓P Pn 16 04 08.2 +2.2
PLOR Plostina 15.16 305 P Pn 16 04 08.2 +2.2
IASR Iasi 15.17 311 ⇓P Pn 16 04 08.6 +2.6
JRN Qarnain Island 15.19 150 P Pn 16 04 05.8 -0.6
SNR=18
JRN P Pn 16 04 05.8 -0.6
SNR=18
SORM Soroca 15.22 315 ⇑P Pn 16 04 07.8 +1.1
SORM Soroca 15.22 315 P Pn 16 04 07.8 +1.1
SORM Soroca 15.22 315 P Pn 16 04 06.1 -0.6
comp=Z,4µmcomp=Z,223nm,1.0s
NEHR Nehoiu 15.23 303 ⇓P Pn 16 04 08.8 +1.9
PVL Pavlikeni 15.37 294 P Pn 16 04 10.4 +1.7
AKTO Aktyubinsk 15.38 34 Pn Pn 16 04 07.9 -0.8
comp=Z,1.4nm,0.3s,baz=224,slow=12,SNR=55
AKTO LR LR 16 11 23.8
comp=Z,26µm,21.7s,baz=214,slow=42
comp=Z,176nm,1.1s
TESR Tescani 15.43 307 ⇑P P 16 04 12.6 -1.5
TESR Tescani 15.43 307 P Pn 16 04 08.5 -1.0
comp=Z,423nm,1.5s
COVR Voineasa-Covas 15.45 305 ⇑P P 16 04 12.2 -2.1
RZN Rozhen 15.48 288 P Pn 16 04 11.2 +0.9
MLR Muntele Rosu 15.49 303 Pn Pn 16 04 10.1 -0.3
comp=Z,0.2nm,0.3s,baz=132,slow=9.3,SNR=14
comp=Z,18nm,1.0s
MLR Muntele Rosu 15.49 303 ⇑P P 16 04 13.2 -1.7
MLR Muntele Rosu 15.49 303 Pn Pn 16 04 08.3 -2.1
MLR Muntele Rosu 15.49 303 P P 16 04 13.2 -1.7
MLR Muntele Rosu 15.49 303 P Pn 16 04 09.9 -0.5
comp=Z,6µmcomp=Z,175nm,1.2s

AB31 Akbulak array 15.50 41 Pn 16 04 07.1 -3.3
ABKAR Akbulak array 15.50 41 Pn 16 04 06.9 -3.5
ONER Baraj Valea Uz 15.52 306 ⇑P P 16 04 13.1 -2.1
PLD Plovdiv 15.52 290 P Pn 16 04 12.2 +1.5
COPA Copaceanca 15.57 298 ⇓P P 16 04 13.6 -2.1
TURR Turia 15.65 305 ⇑P P 16 04 14.6 -2.0
GIRR Girov 15.72 309 ⇑P P 16 04 15.9 -1.4
SHME Shamm 15.77 138 i P Pn 16 04 11.2 -2.7
SNR=38
SHME Shamm 15.77 138 P Pn 16 04 13.1 -0.8
SNR=53
SHME P Pn 16 04 13.1 -0.8
SNR=53
OZUR 15.81 305 ⇑P P 16 04 17.6 -0.9
PLVB Pleven 15.82 295 ⇑P P 16 04 17.0 -1.5
HUMR Humele 15.84 299 ⇑P P 16 04 18.2 -0.5
BOSR Bodos 15.89 305 ⇑P P 16 04 18.9 -0.4
UMQ Umm Al-Quwin 15.95 140 i P Pn 16 04 14.8 -1.6
SNR=30
UMQ Umm Al-Quwin 15.95 140 P Pn 16 04 16.8 +0.4
SNR=31
BANOM Banah 15.95 138 i P Pn 16 04 14.1 -2.3
SNR=37
PGB Panagyurishte 15.99 291 P Pn 16 04 18.6 +1.7
IDI Anoyia 16.01 265 P Pn 16 04 17.2 +0.2
IDI Anoyia 16.01 265 Pn Pn 16 04 15.8 -1.3
comp=Z,77nm,1.0s,baz=38,slow=14,SNR=13
DOPR Dopca 16.02 304 ⇑P P 16 04 19.7 -1.0
VOIR 16.06 302 ⇓P Pn 16 04 19.1 +1.3
VOIR 16.06 302 P Pn 16 04 19.1 +1.3
PRAR RASCA 16.07 310 ⇑P P 16 04 20.5 -0.7
GHWR Ruwais 16.08 151 P Pn 16 04 17.7 -0.3
GHWR Pn 16 04 17.7 -0.3
VLAD Vladila 16.10 297 ⇑P P 16 04 21.1 -0.5
MMB Musomishta 16.21 288 P Pn 16 04 19.9 +0.3
AK07 Malin Array Si 16.27 323 P Pn 16 04 19.0 -1.3
AK09 Malin Array Si 16.28 323 P Pn 16 04 21.1 +0.7
AK10 Malin Array Si 16.28 323 P Pn 16 04 19.5 -1.0
AK06 Malin Array Si 16.30 323 P Pn 16 04 19.7 -1.0
AK08 Malin Array Si 16.31 323 P Pn 16 04 19.6 -1.1
ARR Arges 16.32 301 ⇑P P 16 04 24.3 +0.3
AK05 Malin Array Si 16.32 323 P Pn 16 04 19.7 -1.2
MASF Masafi 16.33 139 P Pn 16 04 20.1 -1.1
SNR=73
MASF P Pn 16 04 20.1 -1.1
SNR=73
MSFE Esma-Masafi 16.34 139 i P Pn 16 04 19.0 -2.4
SNR=56
AK02 Malin Array Si 16.34 323 P Pn 16 04 20.3 -1.0
AK12 Malin Array Si 16.36 323 P Pn 16 04 20.5 -0.9
AK01 Malin Array Si 16.36 323 P Pn 16 04 20.6 -0.9
AK01 Malin Array Si 16.36 323 P Pn 16 04 21.2 -0.3
AKASG Malin Array Be 16.37 324 Pn Pn 16 04 20.7 -0.8
comp=Z,2.0nm,0.3s,baz=133,slow=12,SNR=94
AKASG LR LR 16 11 30.6
comp=Z,41µm,21.6s,baz=141,slow=40
comp=Z,281nm,1.0s
AKASG Malin Array Be 16.37 324 Pn 16 04 20.2 -1.4
AKASG IAmb IAmb 16 04 24.6
comp=Z,644nm,1.1s
AKBB Malin Array Si 16.37 324 Pn 16 04 20.2 -1.3
AKBB IAmb IAmb 16 04 24.6
comp=Z,574nm,1.2s
AKBB Malin Array Si 16.37 324 P Pn 16 04 20.2 -1.3
AKBB pmax pmax
comp=Z,575nm,1.3s
AKBB Malin Array Si 16.37 324 P Pn 16 04 20.6 -0.9
KIEV Kiev 16.37 323 ⇓P P 16 04 23.3 -1.2
KIEV Kiev 16.37 323 Pn 16 04 20.7 -0.8
KIEV IAmb IAmb 16 04 24.6
comp=Z,564nm,1.3s
KIEV Kiev 16.37 323 i P Pn 16 04 19.0 -2.6
SNR=146
KIEV Kiev 16.37 323 P P 16 04 23.3 -1.2
KIEV Kiev 16.37 323 P Pn 16 04 20.6 -1.0
comp=Z,29µmcomp=Z,1µm,1.6s
KIEV Kiev 16.37 323 P Pn 16 04 21.1 -0.5
KIEV Kiev 16.37 323 ⇓P Pn 16 04 20.4 -1.1
AK14 Malin Array Si 16.37 323 P Pn 16 04 20.7 -0.9
AK11 Malin Array Si 16.38 323 P Pn 16 04 20.7 -1.0
AK13 Malin Array Si 16.38 323 P Pn 16 04 20.8 -0.9
AK03 Malin Array Si 16.39 324 P Pn 16 04 20.8 -1.0
NAZ Nazwa, Dubai 16.40 142 i P Pn 16 04 20.5 -1.6
SNR=54
NAZ Nazwa, Dubai 16.40 142 P Pn 16 04 21.8 -0.4
SNR=186
NAZ P Pn 16 04 21.8 -0.4
SNR=186
AK16 Malin Array Si 16.40 323 P Pn 16 04 21.0 -1.0
AK04 Malin Array Si 16.41 323 P Pn 16 04 21.1 -1.0
AK15 Malin Array Si 16.41 323 P Pn 16 04 21.1 -1.0
AJN Ajban 16.44 144 i P Pn 16 04 20.0 -2.6
SNR=18
AJN Ajban 16.44 144 P Pn 16 04 22.7 +0.1
SNR=74
AJN P Pn 16 04 22.7 +0.1
SNR=74
MPEP Malo Peshtene 16.44 294 P P 16 04 24.1 -1.3
MDH Madha 16.46 139 i P Pn 16 04 20.3 -2.6
SNR=58
MDH Madha 16.46 139 P Pn 16 04 21.8 -1.0
SNR=81
MDH P Pn 16 04 21.8 -1.0
SNR=81
AK21 Malin Array Si 16.50 323 P Pn 16 04 21.9 -1.4
KMPD K-Podol'skiy 16.52 314 P Pn 16 04 22.0 -1.4
KMPD P Pn 16 04 22.0 -1.4
PLNA Plana 16.54 291 P P 16 04 25.5 -1.1
ASUD Al Ashush, Dub 16.55 143 i P Pn 16 04 21.9 -2.0
SNR=88
ASUD Al Ashush, Dub 16.55 143 P Pn 16 04 23.5 -0.4
SNR=82
ASUD P Pn 16 04 23.5 -0.4
SNR=82
FAQ Al Faqa, Dubai 16.57 142 i P Pn 16 04 22.4 -1.9
SNR=104
FAQ Al Faqa, Dubai 16.57 142 P Pn 16 04 23.8 -0.4
SNR=156
LUBAR Lubar, Ukraine 16.58 319 P Pn 16 04 23.9 -0.4
TNR Turnu Rosu 16.65 302 ⇑P P 16 04 27.9 +0.2
TNR Turnu Rosu 16.65 302 P P 16 04 27.8 +0.2
MZWR Madinat Zayed 16.66 149 P Pn 16 04 24.2 -1.2
MZWR P Pn 16 04 24.2 -1.2
MZWR P Pn 16 04 24.2 -1.2
KKB Krupnik 16.69 289 P P 16 04 27.6 -0.6
VTS Vitosha 16.70 291 P P 16 04 27.3 -1.0
UOSS Minazif 16.70 140 P P 16 04 27.9 -0.4
UOSS IAmb IAmb 16 04 33.4
comp=Z,642nm,1.1s
UOSS Minazif 16.70 140 i P Pn 16 04 23.3 -2.7
SNR=82
UOSS Minazif 16.70 140 P Pn 16 04 25.3 -0.7
UOSS P Pn 16 04 25.3 -0.7
UOSS Minazif 16.70 140 P Pn 16 04 25.8 -0.2
UOSS Minazif 16.70 140 ⇓P Pn 16 04 23.3 -2.7
VALD Valchedram 16.72 295 P P 16 04 28.2 -0.3
MDB Medias 16.74 304 ⇑P P 16 04 29.6 +0.9
MDB Medias 16.74 304 P P 16 04 29.5 +0.9
HATD Hatta, Dubai 16.77 141 i P Pn 16 04 24.7 -2.1
SNR=103
HATD Hatta, Dubai 16.77 141 P Pn 16 04 26.8 0.0
SNR=155
HATD P Pn 16 04 26.8 0.0
SNR=155
HATD P Pn 16 04 26.8 0.0
SNR=155
TGMR Targu Mures 16.79 305 ⇓P P 16 04 29.7 +0.6
BURAR Bucovina Array 16.79 309 ⇑P P 16 04 30.9 +1.5
BURAR Bucovina Array 16.79 309 Pn Pn 16 04 25.4 -1.7
BURAR Bucovina Array 16.79 309 P P 16 04 30.8 +1.5
MI29 MI29, Kamyanyy 16.84 321 P Pn 16 04 27.3 -0.3
comp=Z,53µmcomp=Z,3µm,1.0s
ASHO Ashiyiah 16.85 141 i P Pn 16 04 25.6 -2.2
SNR=190
ASHO Ashiyiah 16.85 141 P P 16 04 29.0 -1.0
SNR=178
ASHO P P 16 04 29.0 -1.0
SNR=178
JASK Jask - Hormozg 16.85 134 P Pn 16 04 28.1 +0.3
SNR=33
HORU Horodok 16.88 316 P Pn 16 04 27.2 -0.9
MI30 MI30,Zelenitsa 16.89 322 P Pn 16 04 26.1 -2.0
comp=Z,357nm,1.3s
LOT Lotru 16.92 301 ⇑P P 16 04 31.4 +0.6

VAY Valandovo 17.08 287 i P P 16 04 32.3 -0.1
TRAN Tran 17.15 292 P P 16 04 35.3 +2.0
MZR Muzera 17.18 151 i P Pn 16 04 28.6 -3.4
SNR=76
MZR Muzera 17.18 151 P Pn 16 04 31.0 -1.0
SNR=158
MZR P Pn 16 04 31.0 -1.0
SNR=158
MZR P Pn 16 04 31.0 -1.0
SNR=158
KSV Kosov 17.20 311 P Pn 16 04 31.5 -0.6
ALNE Al Ain 17.23 143 i P Pn 16 04 30.4 -2.2
SNR=57
ALNE Al Ain 17.23 143 P Pn 16 04 32.3 -0.4
SNR=104
ALNE P Pn 16 04 32.3 -0.4
SNR=104
AGG Agios Georgios 17.31 279 ⇑P P 16 04 34.8 -0.2
CJR Cluj-Napoca 17.45 305 ⇑P P 16 04 37.7 +1.1
CJR Cluj-Napoca 17.45 305 P P 16 04 37.6 +1.1
OBN Obninsk 17.54 345 P Pn 16 04 34.4 -1.8
comp=Z,4.6nm,0.3s,baz=76,slow=0.5,SNR=55
OBN LR LR 16 11 45.9
comp=Z,53µm,18.0s,baz=104,slow=38
comp=Z,786nm,1.1s
OBN Obninsk 17.54 345 d i P Pn 16 04 33.9 -2.3
OBN i S S 16 07 58.4 -1.4
OBN pmax pmax
comp=Z,985nm,1.1s
OBN MLR MLR
comp=Z,45µm,13.0s
OBN Obninsk 17.54 345 P Pn 16 04 35.0 -1.2
comp=Z,12µmcomp=Z,922nm,1.1s
OBN Obninsk 17.54 345 ⇑P Pn 16 04 34.4 -1.8
SOHO SOHO 17.54 141 i P Pn 16 04 34.0 -2.5
SNR=70
SOHO SOHO 17.54 141 P Pn 16 04 36.1 -0.4
SOHO P Pn 16 04 36.1 -0.4
DJES Djerdap 17.57 298 ⇓P P 16 04 39.0 +1.1
GZR Gura Zlata 17.58 300 ⇓P P 16 04 38.0 -0.1
GZR Gura Zlata 17.58 300 P P 16 04 37.9 -0.1
DEV Deva 17.63 302 ⇑P P 16 04 40.3 +1.7
DEV Deva 17.63 302 P P 16 04 40.2 +1.7
HERR Herculane 17.70 298 ⇑P P 16 04 39.7 +0.5
BMR Baia Mare 17.88 308 ⇑P P 16 04 42.7 +1.5
BMR Baia Mare 17.88 308 P P 16 04 42.6 +1.5
ITM Ithomi 17.88 273 Pn 16 04 39.0 -1.7
ITM Ithomi 17.88 273 P Pn 16 04 40.3 -0.4
ITM Ithomi 17.88 273 ⇑P Pn 16 04 40.4 -0.2
MOS Moscow 17.93 347 eP Pn 16 04 39.4 -1.7
MOS eS Sn 16 08 01.9 +0.8
MOS pmax pmax
comp=Z,2µm,1.3s
MOS pmax pmax
comp=Z,1µm,1.1s
MOS pmax pmax
comp=N,2µm,1.1s
MOS pmax pmax
comp=N,2µm,1.1s
MOS pmax pmax
comp=E,389nm,1.1s
MOS smax smax
comp=E,16µm,7.0s
MOS MLR MLR
comp=N,34µm,16.0s
MOS MLR MLR
comp=Z,45µm,16.0s
BOVS Bovan 17.95 294 ⇑P P 16 04 43.6 +1.6
MESR Meseseni 18.02 306 ⇑P P 16 04 44.5 +1.7
DRGR 18.05 305 ⇑P P 16 04 44.8 +1.6
DRGR 18.05 305 P P 16 04 44.7 +1.6
UMZA Um Al Zommool 18.13 147 P Pn 16 04 43.4 -0.3
UMZA P Pn 16 04 43.4 -0.3
MDVR Moldovita 18.16 298 ⇑P P 16 04 45.9 +1.5
MEZ Mezhgor'ye 18.21 310 P Pn 16 04 44.5 -0.2
RNPP5 Staryi Chortor 18.32 320 P Pn 16 04 46.0 0.0
RNPP5 pP pP 16 04 48.2 -0.1
RNPP2 Kostyukhnivka 18.38 321 P Pn 16 04 46.7 0.0
HOQ Hoqain 18.39 140 P Pn 16 04 46.5 -0.5
SNR=91
HOQ P Pn 16 04 46.5 -0.5
SNR=91
HOQ P Pn 16 04 46.5 -0.5
SNR=91
RNPP8 Varash 18.41 321 P Pn 16 04 46.9 -0.1
BZS Buzias 18.42 300 ⇑P P 16 04 47.4 +0.2
BZS Buzias 18.42 300 P P 16 04 47.4 +0.2
BZS Buzias 18.42 300 ⇑P P 16 04 47.8 +0.6
RNPP9 Sopachiv 18.43 321 P Pn 16 04 47.7 +0.4
BRIU Brid 18.44 309 P Pn 16 04 47.7 +0.3
SRVN Saravan 18.58 121 P Pn 16 04 50.1 +0.7
CHBR Chabahar 18.60 129 P Pn 16 04 50.3 +0.8
BERU Beregovo 18.62 309 P Pn 16 04 49.9 +0.3
SHIU Shidnytsya 18.62 312 P Pn 16 04 49.8 +0.1
SHAA Shahritus 18.63 85 P P 16 04 49.2 -0.5
SHAA IAmb IAmb 16 04 54.3
comp=Z,463nm,1.1s
MUKU Mukachevo 18.69 309 P Pn 16 04 50.7 +0.3
BANR Banloc 18.69 299 ⇑P Pn 16 04 52.2 +1.7
BORR Bors 18.75 305 ⇓P Pn 16 04 52.5 +1.4
LTVH Ltavrtes, Hu 18.77 306 ⇓P Pn 16 04 52.2 +0.8
BIDO Bidbid 18.86 138 P P 16 04 52.1 -0.1
SNR=158
HOLU Holmets 18.90 309 P Pn 16 04 53.1 +0.1
UZHM Uzhgorod 19.00 310 P Pn 16 04 54.0 -0.2
UZHM pP sP 16 04 56.3 -0.5
BSY Bisya 19.04 142 P P 16 04 54.5 +0.3
SNR=146
PVY Plav 19.10 290 ⇓i P Pn 16 04 55.9 +0.3
IVA Berane 19.17 291 ⇓i P Pn 16 04 56.9 +0.5
NGCH Negor - Chabah 19.17 128 P Pn 16 04 56.3 -0.2
SNR=20
KWP Kalwaria Pacla 19.19 313 eP Pn 16 05 00.0 +3.5
KWP eL L 16 15 34.1
comp=Z,29µm,16.1s
KWP Kalwaria Pacla 19.19 313 ⇑P Pn 16 04 58.1 +1.6
SMDO Samad 19.20 139 P P 16 04 56.4 +0.3
SNR=234
SMDO P P 16 04 56.4 +0.3
SNR=234
KEK Kerkira 19.21 282 IAmb IAmb 16 05 04.2
comp=Z,390nm,1.2s
KEK Kerkira 19.21 282 ⇑P Pn 16 04 57.2 +0.4
CHGR Chuyangaron 19.28 82 P P 16 04 56.9 +0.1
CHGR IAmb IAmb 16 05 11.2
comp=Z,580nm,1.4s
CHGR Chuyangaron 19.28 82 i P P 16 04 57.2 +0.4
CHGR pmax pmax
comp=Z,659nm,1.4s
CHGR MLR MLR
comp=Z,53µm,13.0s
WSAR Wadi Sarin 19.36 137 LR LR 16 12 38.3
comp=Z,176nm,21.2s,baz=334,slow=38
WSAR Wadi Sarin 19.36 137 P Pn 16 04 58.4 -0.3
SNR=67
KOME Kolasin 19.45 291 ⇓i P P 16 04 58.2 -0.4
PLE Pljevlja 19.58 292 ⇓i P P 16 05 00.3 +0.2
ULC Ulcinj 19.59 288 ⇓i P P 16 04 59.6 -0.5
PDG Podgorica 19.61 290 ⇑i P P 16 05 00.4 +0.2
PDG Podgorica 19.61 290 P P 16 05 00.6 +0.4
PDG Podgorica 19.61 290 ⇓i P P 16 05 00.4 +0.2
PDG Podgorica 19.61 290 ⇓P P 16 05 00.2 -0.1
DRME Dracevica, Mon 19.65 289 ⇑i P P 16 05 00.7 0.0
MNK Minsk 19.66 330 i P P 16 05 00.3 -0.3
comp=E,339nm,1.0s
MNK i P P 16 05 00.3 -0.3
comp=N,576nm,1.0s
MNK i P P 16 05 00.3 -0.3
comp=Z,627nm,1.0s,baz=138
MNK i PP PnPn 16 05 15.1 -0.4
MNK i PPP PPP 16 05 22.9
MNK i S S 16 08 41.8 -0.8
MNK i SS SnSn 16 08 58.3 +1.2
MNK i SSS SSS 16 09 11.2
MNK i LQ LQ 16 10 54.5
MNK i LR LR 16 12 23.8
MNK i LRM MLR 16 13 47.8
comp=E,20µm,16.6s
MNK i LRM MLR 16 13 47.8
comp=N,19µm,18.1s
MNK i LRM MLR 16 13 47.8
comp=Z,33µm,18.8s
MNK Minsk 19.66 330 i P P 16 05 00.3 -0.3
MNK i S S 16 08 41.8 -0.8

MNK pmax pmax
comp=Z,627nm,1.0s
MNK pmax pmax
comp=N,576nm,1.0s
MNK pmax pmax
comp=E,339nm,1.0s
MNK MLR MLR
comp=E,20µm,17.0s
MNK MLR MLR
comp=N,19µm,18.0s
MNK MLR MLR
comp=Z,33µm,19.0s
BRLS Boroldaу 19.71 68 *d i*P **P 16 05 01.5 0.0**
BRLS *eS* **S 16 08 43.1 -1.0**
BRLS Boroldaу 19.71 68 ⇓ *i*P **P 16 05 01.5 0.0**
BRLS *eS* **S 16 08 43.2 -0.9**
BSZH Besenyszg 19.79 304 ⇓P **Pn 16 05 03.7 0.0**
JMDO Jabal Madar 19.80 140 P **P 16 05 02.4 -0.1**
SNR=87
IUG luzhnay 19.80 71 *d i*P **Pn 16 05 03.8 -0.2**
IUG *eS* **Sn 16 08 47.9 +1.1**
IUG luzhnay 19.80 71 ⇓ *i*P **Pn 16 05 03.9 -0.1**
IUG *eS* **Sn 16 08 48.0 +1.1**
NKME Niksic 19.85 291 ⇓ *i*P **P 16 05 03.2 +0.2**
CEME Cevo 19.86 290 ⇓ *i*P **P 16 05 03.0 -0.1**
BUM Brajici-Budva 19.87 289 ⇑ *i*P **P 16 05 03.6 +0.4**
UPM Unac-Piva 19.92 292 ⇓ *i*P **P 16 05 04.7 +0.8**
STHS Stebnicka Huta 19.95 311 *e*P **Pn 16 05 05.3 -0.4**
STHS Stebnicka Huta 19.95 311 *e*P **Pn 16 05 05.3 -0.4**
STHS *e* 16 05 08.3
WBK Wadi Bani Khal 20.05 138 P **P 16 05 05.4 +0.1**
SNR=65
WBK P **P 16 05 05.4 +0.1**
SNR=65
WBK P **P 16 05 05.4 +0.1**
SNR=65
KBL Kabul 20.09 94 P **P 16 05 06.2 +0.3**
KBL IAmb IAmb 16 05 17.6
comp=Z,212nm,1.1s
KBL Kabul 20.09 94 P **P 16 05 06.2 +0.3**
KBL pmax pmax
comp=Z,212nm,1.1s
KBL Kabul 20.09 94 P Pn 16 05 07.8 +0.2
SNR=144
KBL P Pn 16 05 07.8 +0.2
SNR=144
KBL P Pn 16 05 07.8 +0.2
SNR=144
BRY Bratogost 20.16 291 ⇓ *i*P **P 16 05 06.0 -0.5**
HCY Herceg Novi 20.17 290 ⇑ *i*P **P 16 05 06.0 -0.4**
ARTI Arti 20.21 23 P **P 16 05 06.4 -0.3**
comp=Z,195nm,0.8s,baz=212,slow=8.1,SNR=75
ARTI LR LR 16 15 20.4
comp=Z,37µm,18.6s,baz=215,slow=44
comp=Z,195nm,0.8s
ARTI Arti 20.21 23 P **P 16 05 05.4 -1.3**
ARTI Arti 20.21 23 *d i*P **P 16 05 06.4 -0.3**
ARTI PPP PPP 16 05 31.9
ARTI S **S 16 08 53.7 0.0**
ARTI pmax pmax
comp=Z,437nm,1.2s
ARTI MLR MLR
comp=Z,37µm,16.0s
ARTI Arti 20.21 23 P **P 16 05 05.7 -1.0**
ARTI Arti 20.21 23 ⇓P **P 16 05 05.7 -1.0**
KKAR Karatay Array 20.21 68 P **P 16 05 07.0 +0.1**
KKAR Karatay Array 20.21 68 P **P 16 05 07.0 +0.1**
PSZ Piszkesteto 20.23 306 ⇓P Pn 16 05 08.1 -0.9
PSZ Piszkesteto 20.23 306 P **P 16 05 08.0 +0.9**
PSZ Piszkesteto 20.23 306 ⇓P **P 16 05 07.8 +0.7**
NACGM Naroch 20.39 330 ⇓ *i*P **P 16 05 08.4 -0.2**
comp=Z,697nm,1.0s,baz=137
BTK Batken 20.43 77 IAmb IAmb 16 05 13.6
comp=Z,283nm,1.1s
KIRV Kirov 20.43 7 P **P 16 05 08.4 -0.6**
comp=Z,254nm,0.8s,baz=197,slow=12,SNR=38
KIRV LR LR 16 14 08.0
comp=Z,35µm,20.4s,baz=198,slow=40
comp=Z,254nm,0.8s
NIE Niedzica 20.52 310 *e*P Pn 16 05 15.1 +2.8
NIE *eS* Sn 16 09 02.9 -0.9
NIE *eL* L 16 15 07.1
comp=Z,22µm,19.2s
NIE Niedzica 20.52 310 P **P 16 05 11.0 +0.8**
comp=Z,5µmcomp=Z,200nm,1.4s
MORH Mrgy, Hungar 20.58 301 ⇑P **P 16 05 11.2 +0.4**
MORH Mrgy, Hungar 20.58 301 P **P 16 05 11.2 +0.4**
comp=Z,4µmcomp=Z,107nm,1.0s
JLN Jalan Bani Buh 20.66 137 P **P 16 05 11.8 0.0**
SNR=135
JLN P **P 16 05 11.8 0.0**
SNR=135
JLN P **P 16 05 11.8 0.0**
SNR=135
DZA Taraz 20.80 69 *e*P Pn 16 05 14.7 -1.0
DZA pmax pmax
comp=Z,193nm,1.2s
DZA Taraz 20.80 69 *e*P Pn 16 05 14.8 -0.9
comp=Z,193nm,1.2s
MHTO MHTO 20.90 142 P **P 16 05 14.2 -0.3**
SNR=95
MHTO P **P 16 05 14.2 -0.3**
SNR=95
LANS Liptovska Anna 20.92 309 *e*P **P 16 05 14.6 +0.1**
LANS Liptovska Anna 20.92 309 *e*P **P 16 05 14.6 +0.1**
OJC Ojcow 21.14 312 *e*P **P 16 05 19.3 +2.5**
OJC *eS* **S 16 09 11.4 -0.8**
OJC Ojcow 21.14 312 P **P 16 05 16.5 -0.3**
comp=Z,139nm,1.0s
OJC Ojcow 21.14 312 ⇑P **P 16 05 17.0 +0.1**
SRO Srobarova 21.21 305 *e*P **P 16 05 18.7 +1.1**
SRO *e* 16 05 22.9
SRO Srobarova 21.21 305 *e*P **P 16 05 18.7 +1.1**
SRO *e* 16 05 22.9
SVE Sverdlovsk 21.29 25 *de*P **P 16 05 18.7 +0.4**
SVE *eS* Sn 16 09 18.6 -3.4
SVE pmax pmax
comp=N,410nm,1.0s
SVE MLR MLR
comp=N,41µm,16.0s
BEL Belsk 21.32 317 *e*P **P 16 05 20.2 +1.5**
BEL *eS* Sn 16 09 20.7 -2.1
BEL *eL* L 16 14 51.5
comp=N,39µm,19.1s
BEL Belsk 21.32 317 ⇑P **P 16 05 20.3 +1.5**
R9F13 Warsaw-Wawer 21.32 318 *e*P **P 16 05 14.7 -4.1**
comp=N,13nm,0.8s
R9F13 *e*Pn **pP 16 05 20.4 -0.6**
R9F13 *eS* **S 16 09 16.7 +0.9**
BLY Banja Luka 21.33 296 ⇓P **P 16 05 19.1 +0.2**
BLY Banja Luka 21.33 296 ⇑P **P 16 05 19.3 +0.4**
SUW Suwalki 21.34 324 *e*P **P 16 05 19.9 +1.0**
SUW *eS* **S 16 09 18.3 +2.3**
SUW *eL* L 16 14 00.0
comp=N,26µm,26.9s
SUW Suwalki 21.34 324 P **P 16 05 16.9 -2.0**
SUW Suwalki 21.34 324 P **P 16 05 16.9 -2.0**
SUW MLR MLR
comp=Z,26µm,22.0s
SUW Suwalki 21.34 324 ⇓P **P 16 05 18.5 -0.4**
DOK Doka 21.44 154 P **P 16 05 19.7 -0.5**
SNR=91
MATE Matera 21.52 285 ⇑P **P 16 05 20.3 -0.7**
MATE Matera 21.52 285 ⇑P **P 16 05 19.7 -1.3**
MPLH Magyarpolny 21.55 303 P **P 16 05 20.9 -0.3**
comp=Z,10µmcomp=Z,598nm,2.0s
TIP Timpagrande 21.61 281 ⇑P **P 16 05 21.5 -0.5**
TIP Timpagrande 21.61 281 IAmb IAmb 16 05 26.7
comp=Z,195nm,1.1s
TIP IAMs_20 IAMs_20 16 14 45.4
comp=Z,57µm,18.0s
TIP Timpagrande 21.61 281 P **P 16 05 20.1 -1.9**
DQM DQM 21.62 145 P **P 16 05 21.3 -0.9**
SNR=32
MRVN Minervino Murg 21.89 286 ⇑P **P 16 05 22.9 -2.1**
JAVC Velka Javorina 21.93 307 *e*P **P 16 05 25.0 -0.4**
JAVC *eS* Sn 16 09 33.4 -4.4
PABE Paberze 21.96 328 P **P 16 05 24.5 -1.1**
OKC Ostrava-Krasne 21.97 310 *e*P **P 16 05 29.4 +3.6**
OKC *eS* Sn 16 09 34.1 -4.5
comp=Z,21µm,13.5s
OKC Ostrava-Krasne 21.97 310 *e*P **P 16 05 29.4 +3.6**
OKC *eS* Sn 16 09 34.1 -4.5
OKC MLR MLR
comp=Z,21µm,13.5s
SMOL Smolenice 21.98 306 *e*P **P 16 05 27.5 +1.6**
MAUC Maruska 22.00 308 *e*P **P 16 05 28.1 +2.0**
RAC Raciborz 22.03 310 *e*P **P 16 05 27.7 +1.3**
RAC AMS AMS 16 16 34.0
comp=Z,25nm,15.8s
RAC Raciborz 22.03 310 *e*P **P 16 05 27.7 +1.3**
RAC MLR MLR
comp=Z,25µm,15.8s
MODS Modra-Piesok 22.04 306 *e*P **P 16 05 27.9 +1.4**
MODS *eS* **S 16 09 31.5 +1.6**
MODS MLR MLR
comp=Z,79µm,14.2s
MODS Modra-Piesok 22.04 306 *e*P **P 16 05 27.9 +1.4**
MODS *eS* **S 16 09 31.5 +1.6**
MODS *eL* L 16 15 59.5
ACER Acerenza 22.09 285 P **P 16 05 25.4 -1.8**
ZST Bratislava 22.10 305 *e*P **P 16 05 29.1 +2.0**
ZST *eS* **S 16 09 29.6 -1.4**
ZST MLR MLR
comp=Z,7µm,10.7s
ZST Bratislava 22.10 305 *e*P **P 16 05 29.1 +2.0**
ZST *eS* **S 16 09 29.6 -1.4**
ZST *eL* L 16 17 08.1
SGRT San Giovanni R 22.21 288 IAmb IAmb 16 05 31.0
comp=Z,458nm,1.5s
STEB Steborice 22.23 310 *e*P **P 16 05 30.1 +1.5**
CUC Castrocucco 22.25 283 IAmb IAmb 16 05 33.3
comp=Z,189nm,1.0s
CUC IAMs_20 IAMs_20 16 14 52.3
comp=Z,42µm,18.0s
CUC Castrocucco 22.25 283 P **P 16 05 28.3 -0.6**
CUC Castrocucco 22.25 283 ⇑P **P 16 05 27.5 -1.4**
KOGS Kog 22.25 300 *e*P **P 16 05 28.5 -0.5**
KOGS *eS* **S 16 09 34.2 +0.2**
MORC Moravsky Berou 22.32 309 ⇑P **P 16 05 29.8 +0.2**
MORC Moravsky Berou 22.32 309 P **P 16 05 30.3 +0.8**
MORC Moravsky Berou 22.32 309 ⇑P **P 16 05 30.1 +0.6**
MORC Moravsky Berou 22.32 309 *e*P **P 16 05 29.3 -0.2**
MORC *eS* **S 16 09 38.2 +3.0**
ABTO Aybut 22.36 157 P **P 16 05 29.2 -1.0**
SNR=137
ABTO P **P 16 05 29.2 -1.0**
SNR=137
CEL Celeste 22.41 279 P **P 16 05 28.4 -2.2**
CEL IAMs_20 IAMs_20 16 15 00.5
comp=Z,52µm,18.0s
CEL Celeste 22.41 279 P **P 16 05 30.4 -0.2**
CEL Celeste 22.41 279 ⇑P **P 16 05 30.0 -0.6**
RONA Rosalia, Austr 22.49 303 *e*P **P 16 05 31.0 -0.4**
comp=Z,182nm,1.3s,SNR=14
RBK Rabkut 22.50 155 P **P 16 05 31.0 -0.8**
SNR=129
RBK P **P 16 05 31.0 -0.8**
SNR=129
SHAO Shalim 22.53 151 *i*P **P 16 05 29.4 -2.6**
SNR=36
SHAO Shalim 22.53 151 P **P 16 05 32.0 0.0**
SNR=33
DMTO DMTO 22.56 153 P **P 16 05 31.1 -1.2**
SNR=50
DMTO P **P 16 05 31.1 -1.2**
SNR=50
EKS2 Erkin-Say 22.59 70 P **P 16 05 34.4 +1.8**
SNR=269
KLMR Klimovskoe 22.67 354 *e*P **P 16 05 33.5 +0.4**
KLMR S **S 16 09 41.3 -0.2**
KLMR pmax pmax
comp=Z,525nm,1.4s
KLMR MLR MLR
comp=Z,32µm,13.0s
VRAC Vranov 22.75 308 P **P 16 05 34.3 +0.3**
comp=Z,53nm,1.2s,baz=96,slow=8.4,SNR=11
comp=Z,53nm,1.2s
VRAC Vranov 22.75 308 ⇑P **P 16 05 34.6 +0.5**
VRAC Vranov 22.75 308 P **P 16 05 34.5 +0.5**
VRAC Vranov 22.75 308 *e*P **P 16 05 34.2 +0.1**
VRAC *eS* **S 16 09 44.9 +1.8**
KRUC Moravsky 22.80 307 *e*P **P 16 05 34.1 -0.5**
KRUC *eS* **S 16 09 49.2 +5.2**
CONA Conrad Observa 22.83 304 *e*P **P 16 05 34.6 -0.5**
comp=Z,119nm,1.3s,SNR=41
KRLC Kraliky 22.88 310 AMS AMS 16 17 00.0
comp=Z,23µm,14.2s
ARSA Arzberg 22.90 302 IAmb IAmb 16 05 43.3
comp=Z,315nm,1.6s
ARSA Arzberg 22.90 302 *e*P **P 16 05 35.2 -0.5**
comp=Z,94nm,1.3s,SNR=42
BORK Borovoye 23.04 42 P **P 16 05 35.6 -1.4**
BORK IAmb IAmb 16 05 54.9
comp=Z,143nm,1.0s
BORK Borovoye 23.04 42 *ce*P **P 16 05 37.1 +0.1**
BORK pmax pmax
comp=Z,285nm,1.3s
BORK MLR MLR
comp=Z,20µm,16.0s
BORK Borovoye 23.04 42 ⇓P **P 16 05 37.2 +0.1**
BVAR Borovoye Array 23.06 42 P **P 16 05 36.7 -0.6**
comp=Z,88nm,1.0s,baz=261,slow=9.8,SNR=80
BVAR LR LR 16 15 55.4
comp=Z,13µm,19.9s,baz=240,slow=40
comp=Z,88nm,1.0s
PAOL Paolisi 23.12 286 P **P 16 05 35.9 -2.2**
PAOL IAmb IAmb 16 05 46.4
comp=Z,200nm,1.3s
AAK Ala-Archa 23.12 70 P **P 16 05 39.3 +1.1**
SNR=89
AAK Ala-Archa 23.12 70 LR LR 16 16 44.9
comp=Z,26µm,18.3s,baz=280,slow=42
AAK Ala-Archa 23.12 70 P **P 16 05 38.8 +0.6**
AAK Ala-Archa 23.12 70 *i*P **P 16 05 39.0 +0.8**
SNR=121
AAK Ala-Archa 23.12 70 P **P 16 05 38.8 +0.6**
AAK pmax pmax
comp=Z,397nm,1.3s
AAK MLR MLR
comp=Z,8µm,18.0s
AAK Ala-Archa 23.12 70 P **P 16 05 40.1 +1.9**
AAK P **P 16 05 40.1 +1.9**
AAK Ala-Archa 23.12 70 P **P 16 05 39.2 +1.0**
AAK Ala-Archa 23.12 70 ⇑P **P 16 05 38.9 +0.6**
SOKA Soboth 23.12 300 *i*pP **P 16 05 38.9 +0.8**
comp=Z,107nm,1.3s,SNR=45
VSU Vasula 23.12 336 *ce*P **P 16 05 37.2 -0.6**
VSU pmax pmax
comp=Z,560nm,1.3s
VSU MLR MLR
comp=Z,42µm,17.0s
VSU Vasula 23.12 336 P **P 16 05 35.7 -2.1**
VSU Vasula 23.12 336 ⇑P **P 16 05 36.2 -1.6**
BRZS Berezniki 23.13 51 *e*P **P 16 05 39.4 +1.4**
BRZS *eS* **S 16 09 51.7 +2.0**
BRZS Berezniki 23.13 51 *e*P **P 16 05 39.4 +1.4**
BRZS *eS* **S 16 09 51.8 +2.0**
UCH Uchtor 23.14 71 P **P 16 05 39.9 +1.2**
SNR=99
USP Ospenovka 23.14 68 P **P 16 05 38.4 +0.1**
SNR=25
PUL Pulkovo 23.20 342 *i*P **P 16 05 38.5 -0.1**
PUL pmax pmax
comp=Z,259nm,0.7s
PUL MLR MLR
comp=Z,32µm,17.0s
SGDS Sogindy 23.24 68 *e*P **P 16 05 40.7 +1.4**
SGDS *eS* **S 16 09 54.2 +2.3**
DPC Dobruska-Polom 23.25 310 *e*P **P 16 05 39.5 +0.2**
DPC *eS* **S 16 09 54.7 +2.8**
DPC AMS AMS 16 17 20.0
comp=Z,32µm,13.5s
DPC Dobruska-Polom 23.25 310 *e*P **P 16 05 39.5 +0.2**
DPC *eS* **S 16 09 54.7 +2.8**
DPC MLR MLR
comp=Z,32µm,13.5s
DPC Dobruska-Polom 23.25 310 P **P 16 05 38.5 -0.8**
comp=Z,4µmcomp=Z,62nm,1.0s
CHMS Chumysh 23.31 69 P **P 16 05 40.7 +0.7**
SNR=163
LJU Ljubljana 23.36 299 *e*P **P 16 05 40.8 +0.3**
LJU *eS* **S 16 09 52.8 -1.0**
OSTC Ostas 23.39 310 *e*P **P 16 05 41.3 +0.6**
OSTC AMS AMS 16 17 30.0
comp=Z,34µm,13.4s
OSTC Ostas 23.39 310 *e*P **P 16 05 41.3 +0.6**
OSTC MLR MLR
comp=Z,34µm,13.4s
OBKA Obir 23.42 300 *e*pP **P 16 05 41.2 0.0**
comp=Z,38nm,1.2s,SNR=28
KSP Ksiaz 23.44 311 *e*P **P 16 05 44.4 +3.2**
KSP Ksiaz 23.44 311 P **P 16 05 40.3 -0.9**
comp=Z,5µmcomp=Z,111nm,2.0s
KSP Ksiaz 23.44 311 ⇓P **P 16 05 40.8 -0.4**
KBK Karagaybulak 23.45 70 P **P 16 05 42.9 +1.2**
SNR=323
UPC Upice 23.49 310 *e*P **P 16 05 41.6 -0.1**
UPC AMS AMS 16 17 40.0
comp=Z,38µm,14.5s
UPC Upice 23.49 310 *e*P **P 16 05 41.6 -0.1**
UPC MLR MLR
comp=Z,38µm,14.5s
CHVC Chvalec 23.50 310 AMS AMS 16 17 30.0
comp=Z,34µm,12.8s
INTR Introdacqua 23.57 288 P **P 16 05 40.8 -1.9**
INTR IAmb IAmb 16 06 06.9
comp=Z,208nm,1.2s
NIL Nilore 23.68 93 P **P 16 05 43.9 +0.1**
NIL Nilore 23.68 93 P **P 16 05 43.9 +0.1**
NIL pmax pmax
comp=Z,405nm,1.1s
NIL Nilore 23.68 93 P **P 16 05 44.9 +1.1**
NIL P **P 16 05 44.9 +1.1**
VAE Valguarnera 23.70 277 LR LR 16 15 32.3
comp=Z,35µm,18.6s,baz=117,slow=38
RAFF Raffo Rosso 23.79 277 P **P 16 05 43.0 -1.7**
TRI Trieste 23.85 298 P **P 16 05 42.6 -2.6**
TRI Trieste 23.85 298 P **P 16 05 42.6 -2.6**
TRI pmax pmax
comp=Z,642nm,2.0s
MOA Molln 23.86 303 *e*P **P 16 05 44.3 -1.0**
comp=Z,76nm,1.3s,SNR=28
GKP Gorka Klasztor 23.91 317 *e*P **P 16 05 46.9 +1.2**
GKP *eS* **S 16 10 11.8 +9.5**
GKP *eL* L 16 16 35.4
comp=Z,38µm,20.5s
TKM2 Tokmak 2 23.93 69 P **P 16 05 47.4 +1.1**
SNR=93
CADS Cadrg 23.93 299 *i*P **P 16 05 45.4 -0.7**
AQU L'Aquila 23.94 289 P **P 16 05 44.7 -1.5**
AQU L'Aquila 23.94 289 P **P 16 05 45.6 -0.6**
comp=Z,4µmcomp=Z,236nm,1.3s
AQU L'Aquila 23.94 289 P **P 16 05 45.7 -0.5**
AQU L'Aquila 23.94 289 ⇑P **P 16 05 43.7 -2.5**
CKRC Cesky Krumlov 24.05 305 *e*P **P 16 05 47.4 +0.2**
CKRC *eS* **S 16 10 12.8 +8.0**
CKRC AMS AMS 16 17 20.0
comp=Z,25µm,14.1s
CKRC Cesky Krumlov 24.05 305 *e*P **P 16 05 47.4 +0.2**
CKRC MLR MLR
comp=Z,25µm,14.1s
MYKA Terra Mystica 24.06 300 *e*P **P 16 05 46.4 -0.9**
comp=Z,22nm,1.0s,SNR=15
ACOM Acomizza, Ital 24.13 300 P **P 16 05 48.4 +0.3**
NRCA Norcia 24.15 291 IAmb IAmb 16 06 04.8
comp=Z,148nm,1.1s
KSH2 Kashi 24.17 79 P **P 16 05 50.3 +1.8**
KSH2 sP sP 16 06 00.1 +8.2
KSH2 S **S 16 10 05.6 -1.5**
KSH2 pmax pmax
comp=Z,90nm,1.2s
KSH2 pmax pmax
comp=Z,4µm,5.8s
KSH2 LR LR
comp=Z,64µm,16.8s
KSH2 LR LR
comp=Z,33µm,14.8s
KSH2 LR LR
comp=Z,39µm,16.1s
PTCC Patocco-Chiusa 24.22 299 ⇓P **P 16 05 48.9 +0.1**
PRU Pruhonice 24.22 308 *e*P **P 16 05 49.4 +0.7**
PRU *eS* S **16 10 17.6 +10**
PRU AMS AMS 16 17 10.0
comp=Z,22µm,15.8s
PRU Pruhonice 24.22 308 *e*P **P 16 05 49.4 +0.7**
PRU MLR MLR
comp=Z,22µm,15.8s
BIOA Bad Ischl, Aus 24.24 302 *e*P **P 16 05 48.4 -0.6**
comp=Z,70nm,1.3s,SNR=49
ZVC Zvikov 24.29 307 AMS AMS 16 17 50.0
comp=Z,23µm,16.5s
KBA Koelnbreinsper 24.33 301 *e*P **P 16 05 49.4 -0.6**
comp=Z,86nm,0.9s,SNR=7.4
PVCC Panska Ves 24.37 309 *e*P **P 16 05 50.9 +0.9**
PVCC AMS AMS 16 17 30.0
comp=Z,20µm,17.0s
PVCC Panska Ves 24.37 309 *e*P **P 16 05 50.9 +0.9**
PVCC MLR MLR
comp=Z,20µm,17.0s
ULHL Ulahol 24.42 71 P **P 16 05 52.7 +1.8**
SNR=225
GEC2 GERESS Array S 24.45 305 *e*P **P 16 05 50.4 -0.5**
baz=103,slow=8.8
GERES GERESS Array B 24.45 305 P **P 16 05 50.0 -0.9**
comp=Z,24nm,0.8s,baz=94,slow=9.4,SNR=20
GERES LR LR 16 16 46.3
comp=Z,20µm,20.9s,baz=114,slow=40
comp=Z,24nm,0.8s
KUU Kurty 24.49 67 *e*P **P 16 05 52.5 +1.2**
KUU *eS* **S 16 10 13.8 +1.9**
KUU pmax pmax
comp=Z,221nm,1.1s
KUU Kurty 24.49 67 *e*P **P 16 05 52.5 +1.2**
comp=Z,221nm,1.1s
KUU *eS* **S 16 10 13.9 +2.0**
KUU LR LR 16 15 48.0
comp=Z,9µm,11.6s
KHC Kasperske Hory 24.60 306 *e*P **P 16 05 51.0 -1.2**
KHC *ex* x 16 05 59.0
KHC Kasperske Hory 24.60 306 *e*P **P 16 05 51.0 -1.2**
KHC *e* 16 05 59.0
STAL STALIGIAL 24.64 299 IAmb IAmb 16 06 21.6
comp=Z,134nm,1.2s
RICC Richard 24.66 309 *e*P **P 16 05 53.0 +0.3**
LESA Schwarzleotal 24.84 302 *e*P **P 16 05 53.5 -0.9**
comp=Z,36nm,0.8s,SNR=34
ABTA Abfaltersbach 24.84 300 *e*P **P 16 05 53.6 -0.9**
comp=Z,74nm,1.0s,SNR=30
BRG Berggiesshubel 24.86 310 *e*P **P 16 05 54.9 +0.5**
comp=Z,232nm,1.9s,baz=103,slow=8.8
BRG Berggiesshubel 24.86 310 *e*P **P 16 05 54.0 -0.4**
BRG Amp 16 05 58.1
comp=Z,28nm,1.2s
BRG Berggiesshubel 24.86 310 P **P 16 06 00.4 +5.9**
BRG Amp 16 06 01.7
comp=Z,35nm,1.0s
MGAB Montegabbione 24.88 291 ⇑P **P 16 05 53.8 -1.0**
AAA Alma-Ata 24.90 69 *e*P **P 16 05 56.2 +1.2**
AAA pmax pmax
comp=Z,203nm,0.9s
AAA Alma-Ata 24.90 69 *e*P **P 16 05 56.3 +1.2**
comp=Z,203nm,0.9s
AAA LR LR 16 16 07.5
comp=Z,13µm,11.0s
TNSS Tian-Shan 24.92 69 *e*P **P 16 05 56.5 +0.9**
TNSS *eS* **S 16 10 21.0 +1.4**
TNSS Tian-Shan 24.92 69 *e*P **P 16 05 56.6 +0.9**
TNSS *eS* **S 16 10 21.1 +1.4**
MDOK Medeo 25.00 69 *e*P **P 16 05 57.5 +1.6**
MDOK *eS* **S 16 10 22.8 +2.5**
MDOK Medeo 25.00 69 *e*P **P 16 05 57.6 +1.6**
MDOK *eS* **S 16 10 22.9 +2.5**
MDOK LR LR 16 16 15.3
HSKC Hora Svate Kat 25.09 309 *e*P **P 16 05 56.5 0.0**
HSKC AMS AMS 16 18 10.0
comp=Z,23µm,13.6s
JMU Jammu 25.23 94 *e*P **P 16 05 56.3 -1.7**
JMU IAmb IAmb 16 06 03.0
comp=Z,94nm,0.9s
JMU *eS* **S 16 10 24.8 +0.8**
CGRP Cima Grappa 25.23 298 P **P 16 05 57.3 -0.8**
RUE Ruedersdorf 25.49 313 ⇑P **P 16 06 00.4 +0.3**
RUE Ruedersdorf 25.49 313 *e*P **P 16 06 00.9 +0.8**
comp=Z,363nm,1.1s,baz=103,slow=8.8
WTTA Wattenberg 25.51 301 *i*P **P 16 05 59.9 -0.7**
comp=Z,30nm,1.2s,SNR=18
CLL Collm 25.55 311 *e*P **P 16 06 01.0 +0.3**
CLL pmax pmax
comp=Z,308nm,2.0s
CLL MLR MLR
comp=Z,30µm,12.9s
CLL Collm 25.55 311 P **P 16 06 01.0 +0.3**

comp=Z,80nm,1.1s
CLL Collm 25.55 311 *e*P **P** **16 06 01.0 +0.3**
comp=Z,308nm,2.0s
CLL *e*Plp 16 06 03.0
CLL *e*S S 16 10 41.0 +12
comp=N,3µm,10.0s
CLL *e*S S 16 10 41.0 +12
comp=E,9µm,13.5s
CLL *e*S S 16 10 41.0 +12
comp=Z,4µm,15.0s
CLL *e*SSS SSS 16 11 42.0
CLL Collm 25.55 311 *e*P **P** **16 06 01.7 +0.9**
comp=Z,44nm,0.9s,baz=103,slow=8.8
WATA Walderalm 25.56 301 *e*P **P** **16 05 59.6 -1.5**
comp=Z,48nm,1.4s,SNR=22
ARXS Arharly 25.57 66 *e*P **P** **16 06 01.2 +0.1**
NKC Novy Kostel 25.59 308 AMS AMS 16 19 20.0
comp=Z,18µm,14.7s
ROTZ Rotzenmuhle 25.62 307 *e*P **P** **16 06 00.6 -0.8**
comp=Z,152nm,1.7s,baz=103,slow=8.8
FIB1 FINESS Array S 25.73 340 P **P** **16 06 02.7 +0.5**
FINES FINESS Array B 25.73 340 P **P** **16 06 00.5 -1.7**
comp=Z,56nm,0.8s,baz=134,slow=8.2,SNR=46
FINES LR LR 16 16 52.3
comp=Z,30µm,19.9s,baz=153,slow=38
comp=Z,56nm,0.8s
FINES FINESS Array B 25.73 340 **P** **16 06 01.7 -0.5**
FINES FINESS Array B 25.73 340 P **P** **16 06 01.7 -0.5**
MANZ Manzenberg 25.73 307 *e*P **P** **16 06 03.5 +1.1**
comp=Z,39nm,1.4s,baz=103,slow=8.8
SQTA Sankt Quirin 25.79 301 *e*P **P** **16 06 01.9 -1.3**
comp=Z,36nm,0.9s,SNR=21
ADZR Andozero 25.81 354 *e*P **P** **16 06 02.4 -0.5**
ADZR S **S** **16 10 30.7 -1.8**
ADZR pmax pmax
comp=Z,378nm,1.0s
ADZR MLR MLR
comp=Z,39µm,14.0s
MOTA Moosalm 25.88 301 *e*P **P** **16 06 02.5 -1.4**
comp=Z,96nm,1.1s,SNR=35
FUR Furstenfeldbru 25.89 303 *e*P **P** **16 06 02.8 -1.1**
comp=Z,117nm,0.9s,baz=103,slow=8.8
BSD Bornholm Skovb 25.97 320 *i*P **P** **16 06 05.1 +0.6**
BSD IAmb IAmb 16 06 08.3
comp=Z,22nm,0.8s
BSD Bornholm Skovb 25.97 320 ⇓P **P** **16 06 04.8 +0.3**
SATY Saty 25.99 69 *e*P **P** **16 06 06.5 +1.5**
SATY pmax pmax
comp=Z,155nm,1.3s
SATY Saty 25.99 69 *e*P **P** **16 06 06.5 +1.5**
comp=Z,155nm,1.3s
TDK Taldyqorghan 26.02 64*d i*P **P** **16 06 06.4 +1.4**
TDK *e*S **S** **16 10 38.4 +2.2**
TDK pmax pmax
comp=Z,246nm,1.1s
TDK MLR MLR
comp=Z,18µm,15.0s
TDK Taldyqorghan 26.02 64 ⇓*i*P **P** **16 06 06.4 +1.4**
comp=Z,246nm,1.1s
TDK *e*S **S** **16 10 38.4 +2.2**
TDK LR LR 16 16 40.3
comp=Z,18µm,15.0s
THN Thein Dam 26.08 94 *e*P **P** **16 06 05.7 -0.1**
THN IAmb IAmb 16 06 13.6
comp=Z,72nm,0.9s
THN *e*S **S** **16 10 39.0 +1.5**
FETA Feichten 26.09 300 *i*P **P** **16 06 05.2 -0.6**
comp=Z,84nm,1.0s,SNR=31
SALO Salr 26.10 297 IAmb IAmb 16 06 40.5
comp=Z,189nm,1.2s
SALO Salr 26.10 297 ⇓P **P** **16 06 05.8 0.0**
BLEU Blekinge 26.12 323 *i*P **P** **16 06 07.4 +1.7**
BKNR BIKANER 26.12 105 *e*P **P** **16 06 05.1 -1.0**
BKNR IAML 16 06 09.4
comp=Z,48nm,0.4s
BKNR *e*S **S** **16 10 37.4 -0.6**
RETA Reutte 26.13 301 *e*P **P** **16 06 04.7 -1.4**
comp=Z,38nm,1.0s,SNR=26
VLC Villacollemand 26.14 294 P **P** **16 06 06.2 +0.1**
VLC Villacollemand 26.14 294 P **P** **16 06 07.4 +1.2**
VLC Villacollemand 26.14 294 ⇑P **P** **16 06 07.2 +1.0**
KPKS Kokpek 26.19 68 *e*P **P** **16 06 07.9 +1.2**
KPKS Kokpek 26.19 68 *e*P **P** **16 06 08.0 +1.2**
MOX Moxa 26.21 308 *e*L L 16 18 08.2
comp=Z,12µm,20.4s
GRF Grafenberg Arr 26.22 306 *e*L L 16 20 12.5
comp=Z,14µm,19.6s
TSSA Tissa 26.24 93 *e*P **P** **16 06 07.3 -0.1**
TSSA IAmb IAmb 16 06 14.4
comp=Z,65nm,0.7s
TSSA *e*S **S** **16 10 41.0 +0.7**
BHUJ Bhuj 26.25 118 *e*P **P** **16 06 07.2 0.0**
BHUJ IAmb IAmb 16 06 28.8
comp=Z,189nm,1.8s
BHUJ *e*S **S** **16 10 40.8 +0.7**
FUORN Ofenpass-Fuorn 26.37 299 IAmb IAmb 16 06 14.5
comp=Z,82nm,0.9s
FUORN IAMs_20 IAMs_20 16 18 08.2
comp=Z,25µm,18.0s
UZB Uzynbulak 26.44 69 *e*P **P** **16 06 10.3 +1.3**
UZB Uzynbulak 26.44 69 *e*P **P** **16 06 10.4 +1.3**
DHRM DHARAMSHALA 26.58 94 *e*P **P** **16 06 10.7 +0.2**
DHRM IAmb IAmb 16 06 21.1
comp=Z,172nm,1.4s
DHRM *e*S **S** **16 10 46.5 +0.8**
ALCI Alchi Leh 26.59 89 *e*P **P** **16 06 11.3 +0.6**
ALCI IAmb IAmb 16 06 14.9
comp=Z,87nm,0.8s
ALCI *e*S **S** **16 10 46.8 +0.7**
UBR Ueberruh 26.59 302 *e*P **P** **16 06 08.7 -1.6**
comp=Z,149nm,1.0s,baz=103,slow=8.8
DAVOX Davos/Dischmat 26.64 299 P **P** **16 06 10.4 -0.5**
comp=Z,75nm,0.8s,baz=102,slow=6.3,SNR=40
DAVOX LR LR 16 17 58.4
comp=Z,27µm,18.8s,baz=92,slow=39
comp=Z,75nm,0.8s
DAVA Damuels 26.70 301 *e*P **P** **16 06 09.7 -1.6**
comp=Z,141nm,1.2s,SNR=25
SHLS Shalkode 26.76 69 *e*P **P** **16 06 16.0 +4.1**
SHLS pmax pmax
comp=Z,82nm,1.0s
SHLS Shalkode 26.76 69 *e*P **P** **16 06 16.1 +4.1**
comp=Z,82nm,1.0s
ATD Arta Tunnel 26.82 184 P **P** **16 06 12.3 -0.2**
comp=Z,0.9nm,1.0s,baz=23,slow=7.6,SNR=7.3
ATD LR LR 16 16 09.8
comp=Z,802nm,20.3s,baz=4.5,slow=35
ATD Arta Tunnel 26.82 184 **P** **16 06 12.1 -0.5**
ATD IAmb IAmb 16 06 28.0
comp=Z,121nm,1.3s
BOB Bobbio (Coli) 26.82 295 ⇓P **P** **16 06 12.8 +0.4**
KURBB Kurchatov Arra 26.91 52 P **P** **16 06 13.8 +0.9**
comp=Z,100nm,0.8s,baz=262,slow=9.1,SNR=285
KURBB LR LR 16 18 41.9
comp=Z,22µm,18.9s,baz=254,slow=40
comp=Z,100nm,0.8s
FLTG Flechtingen 26.91 312 ⇓P **P** **16 06 13.1 +0.1**
FLTG Flechtingen 26.91 312 *e*P **P** **16 06 12.5 -0.5**
comp=Z,269nm,1.6s,baz=103,slow=8.8
BHK Bhakra 26.98 95 *e*P **P** **16 06 17.4 +3.6**
BHK IAmb IAmb 16 06 21.0
comp=Z,61nm,1.3s
BHK *e*S **S** **16 10 59.0 +7.5**
TUE Stuetta 26.98 299 P **P** **16 06 12.7 -1.3**
TUE Stuetta 26.98 299 P **P** **16 06 13.1 -0.9**
TUE Stuetta 26.98 299 ⇓P **P** **16 06 13.2 -0.8**
KURK Kurchatov 26.98 52 P **P** **16 06 13.9 +0.3**
KURK Kurchatov 26.98 52 IAMs_20 IAMs_20 16 18 33.0
comp=Z,24µm,18.0s
KURK Kurchatov 26.98 52*ce*P **P** **16 06 14.2 +0.5**
KURK pmax pmax
comp=Z,404nm,1.3s
KURK MLR MLR
comp=Z,17µm,17.0s
KURK Kurchatov 26.98 52 P **P** **16 06 15.5 +1.8**
KURK P **P** **16 06 15.5 +1.8**
DEL Delary 27.14 322 *i*P **P** **16 06 15.1 +0.1**
ASSE Asse, Remlinge 27.18 311 *e*P **P** **16 06 15.3 -0.1**
comp=Z,255nm,1.9s,baz=103,slow=8.8
PGF Pioggiola 27.19 290 ⇑P **P** **16 06 15.2 -0.6**
VSL Villasalto 27.23 283 IAmb IAmb 16 06 19.3
comp=Z,123nm,1.0s
VSL Villasalto 27.23 283 ⇓P **P** **16 06 15.6 -0.4**
CLZ Clausthal 27.28 311 *e*P **P** **16 06 17.9 +1.5**
comp=Z,212nm,1.7s,baz=103,slow=8.8
BJUU Bjuv 27.37 320 *i*P **P** **16 06 17.9 +0.8**

COP Copenhagen 27.50 319 *i*P **P** **16 06 18.5 +0.3**
COP IAmb IAmb 16 06 24.7
comp=Z,347nm,1.1s
SMLA Simla 27.70 95⇓*e*P **P** **16 06 21.4 +1.2**
SMLA IAmb IAmb 16 06 26.2
comp=Z,70nm,1.0s
SMLA *e*S **S** **16 11 03.6 +0.8**
BFO Black Forest 27.86 303 P **P** **16 06 18.6 -3.0**
BFO IAmb IAmb 16 07 02.0
comp=Z,158nm,1.8s
BFO Black Forest 27.86 303 P **P** **16 06 18.6 -3.0**
BFO pmax pmax
comp=Z,158nm,1.8s
BFO MLR MLR
comp=Z,20µm,20.0s
MONC Moncucco Torin 27.91 296 ⇑P **P** **16 06 23.7 +1.6**
FABU Falkenberg 27.95 322 *i*P **P** **16 06 21.7 -0.5**
AJM Ajmer 27.98 106 *e*P **P** **16 06 23.7 +0.8**
AJM IAmb IAmb 16 06 33.0
comp=Z,65nm,1.1s
AJM *e*S **S** **16 11 08.7 +1.2**
KEST Kesra 28.07 275 P **P** **16 06 24.4 +0.7**
comp=Z,123nm,1.0s,baz=59,slow=2.7,SNR=43
KEST LR LR 16 19 24.3
comp=Z,29µm,19.8s,baz=64,slow=40
comp=Z,123nm,1.0s
KEST Kesra 28.07 275 **P** **16 06 22.4 -1.3**
KEST Kesra 28.07 275 P **P** **16 06 24.8 +1.1**
SNR=25
KEST P **P** **16 06 24.8 +1.1**
SNR=25
KEST P **P** **16 06 24.8 +1.1**
SNR=25
TNS Taunus Mts 28.09 307 *e*P **P** **16 06 23.2 -0.5**
comp=Z,183nm,1.5s,baz=103,slow=8.8
BORU Boraas 28.23 323 *i*P **P** **16 06 24.5 -0.2**
KASTN Kahler Asten 28.31 309 *e*P **P** **16 06 25.5 -0.1**
comp=Z,110nm,1.5s,baz=103,slow=8.8
UDPR Udaipur 28.34 111 *e*P **P** **16 06 27.0 +0.9**
UDPR IAmb IAmb 16 06 32.1
comp=Z,51nm,0.8s
UDPR *e*S **S** **16 11 13.3 +0.2**
KLP Kalpa 28.38 94 *e*P **P** **16 06 27.7 +0.9**
KLP IAmb IAmb 16 06 36.6
comp=Z,82nm,1.2s
KLP *e*S **S** **16 11 15.1 +0.8**
SENIN Lac Senin/Sane 28.39 298 IAmb IAmb 16 07 07.2
comp=Z,107nm,1.2s
KUDL Kundal 28.51 101 *e*P **P** **16 06 27.4 -0.1**
KUDL IAML 16 06 43.1
comp=Z,50nm,1.3s
KUDL *e*S **S** **16 11 17.8 +2.1**
ONAU Onsala 28.52 322 *i*P **P** **16 06 26.8 -0.5**
CBOGS Bougous 28.54 278 P **P** **16 06 28.9 +1.1**
MAKZ Makanchi 28.60 61 **P** **16 06 28.7 +0.5**
MAKZ IAmb IAmb 16 06 37.0
comp=Z,95nm,1.1s
MAKZ Makanchi 28.60 61 P **P** **16 06 28.7 +0.5**
MAKZ pmax pmax
comp=Z,95nm,1.1s
MAKZ MLR MLR
comp=Z,38µm,18.0s
MAKZ Makanchi 28.60 61 ⇑P **P** **16 06 28.9 +0.7**
ECH Echery 28.63 302 ⇑P **P** **16 06 29.8 +1.3**
DDI Dehra Dun 28.73 96 *e*P **P** **16 06 30.6 +1.0**
DDI IAmb IAmb 16 06 40.0
DDI *e*S **S** **16 11 19.1 -0.2**
BNI Bardonecchia 28.80 296 IAmb IAmb 16 06 34.3
comp=Z,91nm,1.0s
BNI Bardonecchia 28.80 296 ⇓P **P** **16 06 29.6 -0.6**
MK31 Makanchi Array 28.82 61*ce*P **P** **16 06 31.0 +0.8**
MKAR Makanchi Array 28.82 61 P **P** **16 06 30.8 +0.7**
comp=Z,39nm,0.7s,baz=264,slow=7.4,SNR=220
MKAR LR LR 16 20 00.5
comp=Z,31µm,18.4s,baz=256,slow=41
MKAR P3KPbc 16 38 43.1
comp=Z,0.7nm,0.8s,baz=90,slow=2.7,SNR=6.0
comp=Z,39nm,0.7s
MKAR Makanchi Array 28.82 61 **P** **16 06 30.4 +0.2**
BUG Bochum--Univer 29.06 309 *e*P **P** **16 06 32.1 -0.1**
baz=103,slow=8.8
HFS Hagfors 29.14 328 P **P** **16 06 32.6 -0.2**
comp=Z,82nm,1.0s,baz=130,slow=6.0,SNR=31
HFS LR LR 16 19 34.1
comp=Z,32µm,18.7s,baz=124,slow=39
comp=Z,82nm,1.0s
CMAH Djebel Manchou 29.34 278 P **P** **16 06 35.9 +1.0**
CRHA Rehia 29.39 276 P **P** **16 06 35.5 0.0**
WLF Walferdange 29.46 305 P **P** **16 06 35.7 -0.1**
WLF Walferdange 29.46 305 IAMs_20 IAMs_20 16 20 09.8
comp=Z,24µm,18.0s
WLF Walferdange 29.46 305 *d*P **P** **16 06 35.2 -0.6**
MUD Monsted U'grnd 29.48 319 *i*P **P** **16 06 38.3 +2.5**
MUD IAmb IAmb 16 06 42.5
comp=Z,197nm,1.4s
BTNL Ternell 29.61 307 *d*P **P** **16 06 37.4 +0.3**
CBST Bordj Sabath 29.65 278 P **P** **16 06 38.4 +0.7**
MEM Membach 29.69 307 *d*P **P** **16 06 40.0 +2.2**
CAEH 'Ain El Ouahch 29.74 279 P **P** **16 06 36.7 -1.8**
JOSI Joshimath 29.81 95 *e*P **P** **16 06 38.9 -0.4**
JOSI IAmb IAmb 16 06 44.7
comp=Z,12nm,1.2s
JOSI *e*S **S** **16 11 36.8 +0.3**
APA Apatity 29.85 351 ⇓*i*P **P** **16 06 38.4 -0.6**
APA *i* 16 07 33.6
APA *i* 16 09 47.0
APA *i*S **S** **16 11 34.0 -2.1**
APA pmax pmax
comp=Z,23nm,1.2s
APA MLR MLR
comp=Z,26µm,21.5s
FURI Furi 29.86 192 IAMs_20 IAMs_20 16 17 24.8
comp=Z,29µm,20.0s
CBBAR Babar 29.93 275 P **P** **16 06 40.3 0.0**
CKFL Kef-Lekhel 29.94 278 P **P** **16 06 39.1 -1.3**
CSGS Sigus 30.02 277 P **P** **16 06 41.4 +0.4**
BCLA Clavier 30.11 306 *d*P **P** **16 06 44.9 +3.4**
RCHB Rochefort 30.12 306 *d*P **P** **16 06 41.7 +0.1**
CBOS Bilal Ibnou Ra 30.15 279 P **P** **16 06 41.7 -0.4**
CASM Ain Smara 30.16 278 P **P** **16 06 42.5 +0.3**
BGES Gesves 30.24 306 *d*P **P** **16 06 45.9 +3.2**
CBHR Beni Haroun da 30.25 279 P **P** **16 06 43.9 +1.0**
CTEI Djebel Teioual 30.28 277 P **P** **16 06 43.9 +0.6**
OSL Oslo 30.30 326 *e*P **P** **16 06 44.2 +1.2**
OSL IVmB_BB 16 08 48.6
comp=Z,2µm,1.1s
SSB Saint Sauveur 30.30 296 IAMs_20 IAMs_20 16 20 26.2
comp=Z,20µm,19.0s
SSB Saint Sauveur 30.30 296 IAmb IAmb 16 06 46.2
comp=Z,118nm,1.3s
SSB Saint Sauveur 30.30 296 ⇓P **P** **16 06 42.2 -1.1**
COAT Oued Athmania 30.33 278 P **P** **16 06 43.2 -0.5**
CTGD Timgad 30.33 276 P **P** **16 06 43.2 -0.6**
NC602 NORSAR Array S 30.36 328 *e*P **P** **16 06 43.7 +0.1**
BMRD Maredsous 30.43 306 *d*P **P** **16 06 46.7 +2.4**
NC405 NORSAR Array S 30.49 329 IAmb IAmb 16 07 40.6
comp=Z,99nm,1.1s
DOU Dourbes 30.51 306 *d*P **P** **16 06 47.5 +2.4**
comp=Z,16nm,1.1s
DFRA Djebel Bou Aff 30.56 279 P **P** **16 06 45.8 0.0**
ZSN Zaisan 30.60 60 *e*P **P** **16 06 47.2 +1.3**
ZSN Zaisan 30.60 60 *e*P **P** **16 06 47.3 +1.3**
KONO Kongsberg 30.65 325 P **P** **16 06 45.5 -0.7**
KONO Kongsberg 30.65 325 *e*P **P** **16 06 44.3 -1.9**
KONO *e*S **S** **16 11 52.1 +3.4**
KONO IVMs_BB IVMs_BB 16 19 58.9
comp=Z,10µm,19.7s
KONO Kongsberg 30.65 325 *i*P **P** **16 06 45.8 -0.4**
KONO pmax pmax
comp=Z,172nm,2.6s
KONO MLR MLR
comp=Z,17µm,19.0s
KONO Kongsberg 30.65 325 ⇑P **P** **16 06 47.0 +0.8**
NB2 NORSAR Subarra 30.66 328 P **P** **16 06 47.1 +0.8**
comp=Z,4.7nm,0.7s,baz=123,slow=9.3
NB2 NORSAR Subarra 30.66 328 P **P** **16 06 47.1 +0.8**
NOA NORSAR Array B 30.66 328 P **P** **16 06 44.9 -1.5**
comp=Z,19nm,1.0s,baz=124,slow=8.5,SNR=22
NOA LR LR 16 20 31.3
comp=Z,27µm,18.9s,baz=130,slow=39
comp=Z,19nm,1.0s
CJSR Ain Djasser 30.69 277 P **P** **16 06 47.6 +0.7**
PTH Pithoragarh 30.73 96 *e*P **P** **16 06 47.0 -0.4**
PTH IAmb IAmb 16 06 52.4
comp=Z,50nm,1.0s
PTH *e*S **S** **16 11 52.5 +1.6**
UCC Uccle 30.76 307 *d*P **P** **16 06 47.3 +0.1**
LOR Lormes 30.79 300 ⇑P **P** **16 06 47.0 -0.6**
NC204 NORSAR Array S 30.97 329 IAmb IAmb 16 07 53.7
comp=Z,97nm,1.2s
MAHO Mahon 31.05 286 P **P** **16 06 49.4 -0.5**
CKTS El Kantara 31.08 276 P **P** **16 06 50.5 +0.2**
CAZD Ain Tagrout 31.22 278 P **P** **16 06 51.6 0.0**
ZALV Zalesovo Beam 31.44 47 P **P** **16 06 52.0 -1.1**
comp=Z,21nm,0.6s,baz=259,slow=9.6,SNR=67
ZALV LR LR 16 21 25.7
comp=Z,18µm,19.0s,baz=253,slow=40
comp=Z,21nm,0.6s
ZALV Zalesovo Beam 31.44 47 P **P** **16 06 52.3 -0.9**
ZALV Zalesovo Beam 31.44 47 P **P** **16 06 52.3 -0.9**
CTCHA Tamokra 31.54 279 P **P** **16 06 53.1 -1.2**
EJON La Jonquera 31.70 291 P **P** **16 06 54.2 -1.5**
SKAR Skarslia 31.71 326 *e*P **P** **16 06 57.1 +1.5**
SKAR IVmB_BB 16 07 05.2
comp=Z,7µm,5.3s
BHPL Bhopal 31.87 109 *e*P **P** **16 06 59.0 +1.6**
BHPL IAmb IAmb 16 07 01.8
comp=Z,42nm,0.8s
BHPL *e*S **S** **16 12 10.4 +1.9**
CLF Chambon-Foret 31.89 301 IAmb IAmb 16 07 01.6
comp=Z,97nm,1.2s
BLS5 Blasjo 31.99 324 *e*P **P** **16 06 59.1 +1.0**
BLS5 *e*S **S** **16 12 05.3 -4.5**
DOMB Dombas 32.06 329 *e*P **P** **16 06 60.0 +1.3**
DOMB *e*S **S** **16 12 08.6 -2.3**
DOMB IVMs_BB IVMs_BB 16 21 01.3
comp=Z,20µm,18.4s
MTLF Montolieu 32.09 292 ⇑P **P** **16 06 58.4 -0.6**
ODD1 Odda 32.11 324 *e*P **P** **16 07 01.0 +1.9**
ODD1 IVmB_BB 16 07 11.3
comp=Z,5µm,3.7s
ETOS Mallorca 32.17 286 P **P** **16 06 59.1 -0.8**
ABSD Ouled Sidi Bra 32.18 277 P **P** **16 06 58.2 -1.8**
AKET Djebel Ketaf 32.25 279 P **P** **16 07 00.1 -0.6**
NSS Namsos 32.39 334 *e*P **P** **16 07 02.5 +1.0**
DGZ Jazzator, Alta 32.42 56*c i*P **P** **16 07 03.1 +1.0**
DGZ pmax pmax
comp=Z,147nm,1.1s
DGZ MLR MLR
comp=Z,37µm,20.0s
MOR8 Moi Rana 32.68 338 *e*P **P** **16 07 03.6 -0.4**
WMQ Urumqi 32.70 67 P **P** **16 07 06.3 +1.8**
WMQ PP **PP** **16 08 18.3 +0.1**
WMQ S **S** **16 12 26.6 +5.3**
WMQ SS **SnSn** **16 14 14.8 -1.1**
WMQ pmax pmax
comp=Z,170nm,1.5s
WMQ pmax pmax
comp=Z,790nm,3.8s
WMQ LR LR
comp=Z,17µm,9.1s
WMQ LR LR
comp=Z,18µm,18.9s
WMQ LR LR
comp=Z,20µm,23.5s
KTK1 Kautokeino 32.75 346 *e*P **P** **16 07 04.8 +0.3**
KTK1 IVMs_BB IVMs_BB 16 20 36.7
comp=Z,15µm,13.4s
KEV Kevo 32.76 349 IAMs_20 IAMs_20 16 20 53.7
comp=Z,22µm,21.0s
VADS Vadso 32.76 350 *e*P **P** **16 07 05.3 +0.7**
VADS *e*S **S** **16 12 20.9 -0.6**
VADS IVMs_BB IVMs_BB 16 20 38.0
comp=Z,13µm,13.1s
ARA0 ARCESS Array S 32.80 348 *e*P **P** **16 07 05.2 +0.2**
ARA0 IVMs 16 20 44.6
comp=Z,13µm,7.3s
ARCES ARCESS Array B 32.80 348 P **P** **16 07 05.3 +0.3**
comp=Z,13nm,0.8s,baz=151,slow=5.5,SNR=11
ARCES LR LR 16 21 07.5
comp=Z,26µm,19.3s,baz=146,slow=38
comp=Z,13nm,0.8s
ARCES ARCESS Array B 32.80 348 P **P** **16 07 04.9 -0.1**
ARCES IAmb IAmb 16 08 06.2
comp=Z,76nm,1.2s
CEST Esterri de Car 32.88 291 IAmb IAmb 16 07 08.6
comp=Z,99nm,1.2s
BER Bergen 32.90 325 *e*S **S** **16 12 21.1 -2.6**
ACHR Chrea 32.92 280 P **P** **16 07 07.0 +0.4**
ADCK Dar Chioukh 32.92 277 P **P** **16 07 06.3 -0.3**
MOL Molde 32.94 329 *e*P **P** **16 07 07.1 +0.8**
ABRIN Birine 32.96 278 P **P** **16 07 06.3 -0.5**
AKN Aaknes 32.98 328 *e*P **P** **16 07 08.6 +1.9**
AKN IVMs_BB IVMs_BB 16 21 38.4
comp=Z,14µm,8.6s
LEIR Leirfjorden 33.04 337 *e*P **P** **16 07 08.2 +1.2**
LEIR IVMs_BB IVMs_BB 16 21 40.5
comp=Z,22µm,18.4s
STOK Stokkvaagen 33.21 337 *e*P **P** **16 07 09.3 +0.7**
STOK *e*S **S** **16 12 28.4 -0.2**
STOK IVMs 16 21 47.6
comp=Z,19µm,10.5s
FAUS Fauske 33.29 340 *e*P **P** **16 07 10.6 +1.3**
KONS Konsvik 33.29 338 *e*P **P** **16 07 08.3 -1.0**
ABKD Sidi Amar 33.33 280 P **P** **16 07 08.5 -1.5**
VAGH Vaagaholmen 33.41 338 *e*P **P** **16 07 11.4 +1.1**
EIBI Ibiza 33.44 285 P **P** **16 07 09.3 -1.7**
AFDJ Sidi Ladjel 33.45 278 P **P** **16 07 10.3 -0.9**
MFF Saint Martin d 33.53 299 ⇑P **P** **16 07 10.9 -0.8**
EDDR Deurdeur 33.55 279 P **P** **16 07 11.4 -0.6**
JETT Jettan, Norway 33.76 345 *e*P **P** **16 07 13.2 -0.3**
JETT *e*S **S** **16 12 34.9 -2.2**
TRO Tromso 34.13 344 *e*P **P** **16 07 16.9 +0.4**
TRO IVMs_BB IVMs_BB 16 21 23.9
comp=Z,19µm,10.6s
GOA Goa 34.46 123 *e*P **P** **16 07 20.4 +0.4**
GOA IAmb IAmb 16 07 22.6
comp=Z,38nm,0.4s
GOA *e*S **S** **16 12 49.9 +1.1**
ECHE Chera 35.07 287 P **P** **16 07 25.1 0.0**
CART Cartagena 35.59 283 P **P** **16 07 27.7 -1.8**
ROSF Rostrenen 35.59 302 ⇓P **P** **16 07 29.0 -0.2**
EMUR La Murta 35.70 284 P **P** **16 07 31.2 +0.7**
ETOB Tobarra 35.73 285 P **P** **16 07 31.3 +0.5**
LODK Lodwar 35.82 196 P **P** **16 07 31.9 +0.1**
LODK Lodwar 35.82 196 P **P** **16 07 33.2 +1.4**
SNR=55
EKA Eskdalemuir Ar 35.88 314 P **P** **16 07 30.6 -1.3**
comp=Z,26nm,0.7s,baz=106,slow=8.4,SNR=42
EKA LR LR 16 26 14.4
comp=Z,20µm,18.1s,baz=102,slow=43
comp=Z,26nm,0.7s
ESK Eskdalemuir 35.91 314 P **P** **16 07 31.7 -0.4**
ESK IAmb IAmb 16 07 34.1
comp=Z,56nm,0.9s
ESK Eskdalemuir 35.91 314 IAMs_20 IAMs_20 16 24 55.3
comp=Z,18µm,19.0s
ESK Eskdalemuir 35.91 314 P **P** **16 07 31.7 -0.4**
ESK pmax pmax
comp=Z,56nm,1.0s
ESK MLR MLR
comp=Z,18µm,19.0s
ESK Eskdalemuir 35.91 314 ⇓P **P** **16 07 32.2 +0.1**
TLOR Lorca, Murcia 36.09 284 P **P** **16 07 32.5 -1.4**
HYB Hyderabad 36.35 116 *e*P **P** **16 07 36.3 +0.1**
HYB *e*PcP **PcP** **16 10 00.9 0.0**
HYB *e*S **S** **16 13 19.5 +1.6**
UCM Universidad Co 36.61 288 P **P** **16 07 36.4 -2.0**
ENIJ Nijar 36.68 283 P **P** **16 07 37.4 -1.6**
TAM Tamanrasset 36.69 256 ⇑P **P** **16 07 39.0 -0.3**
EBER Berja 37.23 283 P **P** **16 07 42.7 -1.1**
ESBB Sonseca Array 37.29 288 IAmb IAmb 16 07 46.0
comp=Z,83nm,1.1s
ESDC Sonseca Array 37.30 288 P **P** **16 07 42.1 -2.0**
comp=Z,57nm,1.0s,baz=66,slow=7.9,SNR=137
ESDC LR LR 16 24 19.5
comp=Z,8µm,19.9s,baz=82,slow=38
comp=Z,57nm,1.0s
ESDC Sonseca Array 37.30 288 P **P** **16 07 41.5 -2.7**
DSB Dublin 37.58 310 P **P** **16 07 46.6 +0.3**
ILTH Belurgan, Co L 37.59 311 P **P** **16 07 47.4 +1.0**
PAB San Pablo 37.62 287 P **P** **16 07 44.7 -2.2**
PAB San Pablo 37.62 287 P **P** **16 07 44.7 -2.2**
PAB pmax pmax
comp=Z,73nm,1.1s
IWEX Carrickbyrne, 37.80 309 P **P** **16 07 49.0 +0.8**
BJO1 Bjornoya 38.12 349 *e*PP **PP** **16 09 13.2 -4.2**
EMAL Malaga-Limoner 38.45 283 P **P** **16 07 54.0 +0.1**
PBRG Braganca 38.86 292 *e*P **P** **16 07 55.8 -1.5**

PBRG *i* IAmb IAmb 16 08 01.7
comp=Z,82nm,2.1s
KNGR Kungurtug, Tuv 38.91 54 *i* P **P** **16 07 57.8 0.0**
KNGR pmax pmax
comp=Z,59nm,0.8s
KNGR MLR MLR
comp=Z,16µm,17.0s
MVO Moncorvo 39.22 291 *eP* **P** **16 07 59.1 -1.3**
MVO *i* IAmb IAmb 16 08 04.7
comp=Z,106nm,2.1s
MVO *eS* **S** **16 14 08.2 +7.1**
MVO *eLR* LR 16 17 35.7
MVO *i* IAMs_20 IAMs_20 16 26 05.5
comp=Z,8µm,18.0s
LSA Lhasa 39.27 88 IAMs_20 IAMs_20 16 27 00.4
comp=Z,17µm,22.0s
LSA Lhasa 39.27 88 P **P** **16 07 58.8 -2.6**
LSA S **S** **16 14 00.0 -2.8**
LSA pmax pmax
comp=Z,25nm,1.1s
LSA LR LR
comp=Z,12µm,21.2s
LSA LR LR
comp=Z,6µm,19.9s
LSA LR LR
comp=Z,15µm,21.3s
LSA Lhasa 39.27 88 P **P** **16 08 01.9 +0.6**
IGLA Glengowla, Co 39.38 310 P **P** **16 08 00.3 -1.1**
GOMU GeErMu 39.68 77 P **P** **16 08 04.5 -0.1**
GOMU S **S** **16 14 07.9 -0.9**
GOMU pmax pmax
comp=Z,76nm,1.7s
GOMU LR LR
comp=Z,4µm,21.2s
GOMU LR LR
comp=Z,9µm,22.4s
GOMU LR LR
comp=Z,19µm,22.0s
PVRL Vila Real 39.70 291 *eP* **P** **16 08 03.4 -0.9**
PVRL *i* IAmb IAmb 16 08 08.8
comp=Z,120nm,1.7s
POLO Lamas de Olo 39.73 291 *eP* **P** **16 08 03.8 -0.9**
POLO *i* IAmb IAmb 16 08 09.2
comp=Z,61nm,1.7s
MTE Manteigas 39.78 290 IAmb IAmb 16 08 07.8
comp=Z,146nm,1.1s
MTE IAMs_20 IAMs_20 16 24 59.2
comp=Z,16µm,19.0s
MTE Manteigas 39.78 290 *eP* **P** **16 08 04.4 -0.7**
MTE *i* IAmb IAmb 16 08 11.6
comp=Z,219nm,1.6s
MTE *eS* **S** **16 14 16.9 +7.3**
MTE *eLR* LR 16 18 25.1
MTE *i* IAMs_20 IAMs_20 16 25 33.5
comp=Z,14µm,18.0s
MTE Manteigas 39.78 290 ⇓P **P** **16 08 04.1 -1.0**
CNIL Conil 39.81 283 P **P** **16 08 03.5 -1.8**
PCAB Cabril 39.82 292 *eP* **P** **16 08 04.5 -0.8**
PCAB *i* IAmb IAmb 16 08 10.1
comp=Z,98nm,1.5s
PCBR Castelo Branco 39.88 289 *eP* **P** **16 08 04.9 -0.9**
PCBR *i* IAmb IAmb 16 08 11.4
comp=Z,208nm,1.9s
KMBO Kilima Mbogo 39.92 191 LR LR 16 23 41.5
comp=Z,27µm,18.4s,baz=6.0,slow=35
PMRV Marv??o 39.92 288 *eP* **P** **16 08 05.2 -1.0**
PMRV *i* IAmb IAmb 16 08 10.6
comp=Z,163nm,1.8s
PMRV *eS* **S** **16 14 16.8 +5.2**
PMRV *eLR* LR 16 17 32.8
PMRV *i* IAMs_20 IAMs_20 16 26 36.3
comp=Z,8µm,18.0s
VAL Valentia 39.94 308 P **P** **16 08 06.8 +0.7**
PGAV Gavieira, Arco 39.94 292 *eP* **P** **16 08 05.9 -0.5**
PGAV *eS* **S** **16 14 14.1 +2.1**
PGAV *i* IAMs_20 IAMs_20 16 25 57.2
comp=Z,17µm,20.0s
PVIS Viseu 39.96 290 *eP* **P** **16 08 05.8 -0.7**
PBAR Barrancos 40.01 286 *eP* **P** **16 08 05.7 -1.2**
PBAR *i* IAmb IAmb 16 08 12.0
comp=Z,165nm,1.9s
MD01 Midelt array s 40.03 278 P **P** **16 08 05.7 -1.7**
IFR Ifrane 40.08 279 P **P** **16 08 06.2 -1.5**
PESTR Estremoz 40.22 287 P **P** **16 08 06.5 -2.2**
PESTR IAmb IAmb 16 08 10.3
comp=Z,119nm,1.1s
PESTR Estremoz 40.22 287 *eP* **P** **16 08 07.5 -1.2**
PESTR *i* IAmb IAmb 16 08 12.9
comp=Z,189nm,1.5s
PESTR Estremoz 40.22 287 ⇓P **P** **16 08 07.1 -1.6**
PTO Porto 40.38 291 *eP* **P** **16 08 09.5 -0.4**
PTO *i* IAmb IAmb 16 08 13.1
comp=Z,137nm,1.2s
PSARD Sardoal 40.45 289 *eP* **P** **16 08 10.2 -0.4**
PSARD *i* IAmb IAmb 16 08 15.4
comp=Z,208nm,1.7s
PARRA Arraiolos 40.58 288 *eP* **P** **16 08 10.2 -1.4**
PARRA *i* IAmb IAmb 16 08 15.9
comp=Z,101nm,1.8s
PCAS Casmilo, Conde 40.58 290 *eP* **P** **16 08 11.0 -0.6**
PCAS *i* IAmb IAmb 16 08 16.7
comp=Z,120nm,1.8s
EVO Evora 40.64 287 P **P** **16 08 11.6 -0.5**
EVO Evora 40.64 287 *eP* **P** **16 08 11.7 -0.4**
EVO *i* IAmb IAmb 16 08 16.6
comp=Z,86nm,1.7s
PMTG Montargil 40.64 288 *eP* **P** **16 08 10.7 -1.5**
PMTG *i* IAmb IAmb 16 08 17.3
comp=Z,118nm,1.9s
PBEJ Beja 40.67 286 *eP* **P** **16 08 11.9 -0.6**
PBEJ *i* IAmb IAmb 16 08 17.9
comp=Z,171nm,1.6s
PVAQ Vaqueiros 40.75 285 P **P** **16 08 10.9 -2.2**
PVAQ IAmb IAmb 16 08 16.6
comp=Z,329nm,1.9s
PVAQ Vaqueiros 40.75 285 *eP* **P** **16 08 11.9 -1.2**
PVAQ *i* IAmb IAmb 16 08 18.3
comp=Z,205nm,1.7s
PVAQ *eS* **S** **16 14 23.9 -0.1**
PVAQ *eLR* LR 16 17 42.3
PVAQ *i* IAMs_20 IAMs_20 16 26 07.7
comp=Z,4µm,20.0s
PVAQ Vaqueiros 40.75 285 ⇑P **P** **16 08 11.8 -1.3**
MBAR Mbarara 40.85 201 LR LR 16 25 39.2
comp=Z,12µm,18.3s,baz=21,slow=37
MBAR Mbarara 40.85 201 IAMs_20 IAMs_20 16 23 41.5
comp=Z,18µm,18.0s
MBAR Mbarara 40.85 201 *i* P **P** **16 08 13.8 -0.4**
MBAR pmax pmax
comp=Z,16nm,1.0s
MBAR MLR MLR
comp=Z,11µm,18.0s
MOE Montemor 40.89 287 *eP* **P** **16 08 13.8 -0.4**
MOE *i* IAmb IAmb 16 08 19.8
comp=Z,155nm,1.8s
PCVE Castro Verde 40.92 286 *eP* **P** **16 08 13.3 -1.1**
PCVE *i* IAmb IAmb 16 08 19.9
comp=Z,162nm,1.7s
PSBE So Bento 40.94 289 *eP* **P** **16 08 14.2 -0.5**
PSBE *i* IAmb IAmb 16 08 20.8
comp=Z,273nm,1.9s
PBDV Barranco-do-Ve 40.96 285 *eP* **P** **16 08 13.9 -1.0**
PBDV *i* IAmb IAmb 16 08 19.4
comp=Z,209nm,1.8s
KIBK Kibwezi 41.00 190 P **P** **16 08 16.7 +1.4**
KIBK Kibwezi 41.00 190 P **P** **16 08 15.1 -0.2**
KIBK IAmb IAmb 16 08 22.6
comp=Z,220nm,2.0s
KIBK Kibwezi 41.00 190 P **P** **16 08 18.2 +3.0**
SNR=25
MESJ Messejana 41.00 286 *eS* **S** **16 14 26.0 -1.7**
MESJ IAMs_20 IAMs_20 16 20 47.4
comp=N,19µm,32.5s
MESJ Messejana 41.00 286 *eP* **P** **16 08 15.5 +0.4**
MESJ *i* IAmb IAmb 16 08 20.6
comp=N,109nm,1.8s
LIS Lisbon 41.44 288 *eS* **S** **16 14 32.6 -1.5**
LIS IAMs_20 IAMs_20 16 21 18.3
comp=N,23µm,25.7s
PMAFR Mafra 41.46 288 *eP* **P** **16 08 18.3 -0.6**
PMAFR *i* IAmb IAmb 16 08 36.9
comp=N,257nm,1.4s
MORF Marmelete 41.49 286 *eS* **S** **16 14 33.5 -1.5**
MORF IAMs_20 IAMs_20 16 20 39.2
comp=N,34µm,42.6s

MORF Marmelete 41.49 286 *eP* **P** **16 08 19.5 +0.3**
MORF *i* IAmb IAmb 16 08 24.5
comp=N,152nm,2.0s
SPB2 Spitsbergen Ar 41.54 352 P **P** **16 08 18.5 -0.5**
SPB2 IAmb IAmb 16 08 45.2
comp=Z,158nm,1.2s
SPITS Spitsbergen Ar 41.55 352 P **P** **16 08 19.4 +0.3**
comp=Z,59nm,1.1s,baz=129,slow=7.9,SNR=16
SPITS LR LR 16 26 37.9
comp=Z,14µm,18.1s,baz=155,slow=38
comp=Z,59nm,1.1s
PFVI Vila Bisbo 41.68 285 *eP* **P** **16 08 20.0 -0.7**
PFVI *i* IAmb IAmb 16 08 25.3
comp=Z,226nm,1.7s
SHL Shillong 41.76 94 P **P** **16 08 20.4 -1.2**
SHL IAmb IAmb 16 08 26.0
comp=Z,110nm,1.0s
SHL Shillong 41.76 94 P **P** **16 08 20.5 -1.2**
SHL pmax pmax
comp=Z,110nm,1.0s
SHL Shillong 41.76 94 P **P** **16 08 21.8 +0.1**
SNR=59
AVE Averroes 41.93 279 P **P** **16 08 21.8 -1.0**
AVE Averroes 41.93 279 P **P** **16 08 20.8 -2.0**
AVE Averroes 41.93 279 ⇓P **P** **16 08 22.3 -0.5**
JMIC Jan Mayen 42.30 337 LR LR 16 26 19.5
comp=Z,14µm,19.7s,baz=120,slow=37
GTA2 Gaotai 42.41 71 P **P** **16 08 27.8 +1.0**
GTA2 PP **PP** **16 10 07.9 +3.1**
GTA2 S **S** **16 14 49.6 +0.8**
GTA2 SS **SS** **16 17 48.9 -8.5**
GTA2 pmax pmax
comp=Z,1µm,7.3s
GTA2 LR LR
comp=Z,9µm,18.5s
GTA2 LR LR
comp=Z,8µm,19.6s
GTA2 LR LR
comp=Z,10µm,18.5s
ZAK Zakamensk 42.60 54 *eP* **P** **16 08 29.0 +0.8**
ZAK *e* 16 10 10.8
ZAK pmax pmax
comp=Z,108nm,1.6s
ZAK pmax pmax
comp=Z,80nm,1.9s
KBS Kingsbay 42.67 351 IAMs_20 IAMs_20 16 28 57.7
comp=Z,15µm,19.0s
KBS Kingsbay 42.67 351 *i* P **P** **16 08 30.1 +1.9**
TLY Talaya 42.68 52 P **P** **16 08 28.9 +0.2**
TLY Talaya 42.68 52 *i* P **P** **16 08 29.5 +0.8**
TLY pmax pmax
comp=Z,103nm,1.5s
TLY MLR MLR
comp=Z,13µm,17.0s
TLY Talaya 42.68 52 P **P** **16 08 30.6 +1.9**
TIO Tiouine 42.76 276 P **P** **16 08 28.6 -1.1**
IRK Irkutsk 43.01 51 *eP* **P** **16 08 32.1 +0.7**
IRK *e* 16 10 11.5
IRK pmax pmax
comp=Z,363nm,3.0s
BRDH Bariadhala 43.05 97 P **P** **16 08 32.6 +0.6**
comp=Z,183nm,0.3s,baz=65,slow=6.6,SNR=11
BRDH LR LR 16 30 19.4
comp=Z,13µm,18.2s,baz=315,slow=42
MALK Mahakanadarawa 44.09 123 P **P** **16 08 39.9 -0.6**
MALK Mahakanadarawa 44.09 123 ⇓P **P** **16 08 41.3 +0.8**
SONM Songino Array 45.04 57 P **P** **16 08 47.7 -0.1**
comp=Z,3.7nm,0.8s,baz=280,slow=10,SNR=22
SONM PP **PP** **16 10 38.8 +6.0**
comp=Z,12nm,1.1s,baz=264,slow=7.3,SNR=5.4
SONM LR LR 16 29 55.0
comp=Z,36µm,18.3s,baz=284,slow=39
comp=Z,3.7nm,0.8s
SONM Songino Array 45.04 57 P **P** **16 08 48.2 +0.4**
SONM Songino Array 45.04 57 P **P** **16 08 48.2 +0.4**
SONM pmax pmax
comp=Z,81nm,1.8s
PALK Pallekele 45.04 124 LR LR 16 30 33.0
comp=Z,6µm,18.1s,baz=317,slow=40
PALK Pallekele 45.04 124 P **P** **16 08 48.4 +0.3**
PALK IAmb IAmb 16 08 52.1
comp=Z,172nm,1.7s
PALK Pallekele 45.04 124 P **P** **16 08 48.4 +0.3**
PALK pmax pmax
comp=Z,172nm,1.7s
PALK MLR MLR
comp=Z,8µm,18.0s
PALK Pallekele 45.04 124 P **P** **16 08 49.0 +0.9**
ULN Ulaanbaatar 45.46 57 P **P** **16 08 51.4 +0.1**
ULN Ulaanbaatar 45.46 57*ce*P **P** **16 08 51.9 +0.6**
ULN pmax pmax
comp=Z,179nm,1.3s
ULN Ulaanbaatar 45.46 57 P **P** **16 08 52.2 +0.9**
ULN P **P** **16 08 52.2 +0.9**
ULN Ulaanbaatar 45.46 57 ⇑P **P** **16 08 52.0 +0.8**
ULN Ulaanbaatar 45.46 57 P **P** **16 08 52.2 +0.9**
TORD Torodi Ar. Bea 45.47 248 P **P** **16 08 49.5 -2.0**
comp=Z,17nm,1.1s,baz=48,slow=4.3,SNR=23
TORD LR LR 16 32 27.8
comp=Z,7µm,20.5s,baz=60,slow=42
comp=Z,17nm,1.1s
TORD Torodi Ar. Bea 45.47 248 IAmb IAmb 16 08 53.4
comp=Z,116nm,1.8s
BORG Borgarnes 45.81 327 LR LR 16 29 51.6
comp=Z,10µm,18.2s,baz=99,slow=38
KAAM Kaadhehdhoo 45.93 138 IAMs_20 IAMs_20 16 28 00.5
comp=Z,11µm,18.0s
SCO Scoresbysund 46.50 335 IAmb IAmb 16 09 06.6
comp=Z,59nm,1.1s
SCO IAMs_20 IAMs_20 16 27 52.4
comp=Z,15µm,22.0s
SCO Scoresbysund 46.50 335 *i* P **P** **16 09 00.4 +1.5**
SCO IAmb IAmb 16 09 03.2
comp=Z,49nm,1.1s
SCO Scoresbysund 46.50 335 ⇑P **P** **16 09 01.6 +2.8**
LZDM Lanzhou Array 46.52 74 P **P** **16 09 01.0 +1.1**
comp=Z,13nm,0.8s,baz=284,slow=6.0,SNR=24
LZDM LR LR 16 32 49.5
comp=Z,12µm,18.3s,baz=330,slow=42
comp=Z,13nm,0.8s
EDA Edea 46.56 231 P **P** **16 08 57.6 -2.4**
EDA IAmb IAmb 16 09 03.9
comp=Z,117nm,1.8s
LZH Lanzhou 46.58 74 *eP* **P** **16 09 01.8 +1.6**
LZH pP sP 16 09 07.6 +3.9
LZH S **S** **16 15 50.5 +0.9**
LZH SS **SS** **16 19 08.8 -6.6**
LZH pmax pmax
comp=Z,110nm,1.6s
LZH pmax pmax
comp=Z,1µm,7.6s
LZH LR LR
comp=Z,16µm,18.9s
LZH LR LR
comp=Z,7µm,20.5s
LZH LR LR
comp=Z,10µm,21.0s
DBG Daneborg 46.62 340 *i* P **P** **16 09 00.4 +0.6**
DBG IAmb IAmb 16 09 04.9
comp=Z,251nm,1.9s
DBG Daneborg 46.62 340 ⇑P **P** **16 09 01.2 +1.4**
DAG Danmarks Havn 46.85 344 *i* P **P** **16 09 00.4 -1.1**
DAG IAmb IAmb 16 09 05.6
comp=Z,139nm,1.6s
DAG Danmarks Havn 46.85 344 ⇑P **P** **16 09 00.6 -1.0**
TNCH TengChong 47.23 90 P **P** **16 09 06.8 +1.3**
TNCH PP **PP** **16 10 57.4 +1.1**
TNCH S **S** **16 15 59.0 -0.2**
TNCH SS **SS** **16 19 19.8 -6.5**
TNCH pmax pmax
comp=Z,120nm,1.1s
TNCH pmax pmax
comp=Z,820nm,4.7s
TNCH LR LR
comp=Z,6µm,14.2s
TNCH LR LR
comp=Z,7µm,14.7s
TNCH LR LR
comp=Z,15µm,25.4s
NOR Nord 48.10 350 *i* P **P** **16 09 11.4 +0.1**
NOR IAmb IAmb 16 09 15.4
comp=Z,209nm,2.1s
NOR Nord 48.10 350 ⇓P **P** **16 09 10.8 -0.5**
CD2 Chengdu 48.59 80 P **P** **16 09 16.3 +0.5**
CD2 PP **PP** **16 11 07.6 -0.9**
CD2 S **S** **16 16 16.8 -1.2**

CD2 pmax pmax
comp=Z,70nm,1.3s
CD2 pmax pmax
comp=Z,980nm,5.1s
CD2 LR LR
comp=Z,16µm,14.7s
CD2 LR LR
comp=Z,27µm,19.4s
CD2 LR LR
comp=Z,18µm,16.3s
CIT Chita 48.69 50 *eP* **P** **16 09 20.0 +3.7**
CIT *e* 16 11 16.6
CIT *e* 16 11 55.6
CIT *e* 16 19 13.4
CIT *e* 16 21 05.4
CIT pmax pmax
comp=Z,292nm,2.6s
PMPST Porto Santo, M 48.88 283 *eP* **P** **16 09 17.6 -0.3**
PMPST *i* IAmb IAmb 16 09 24.7
comp=Z,458nm,1.5s
PZH PanZhiHua 49.04 86 P **P** **16 09 19.6 +0.2**
PZH PP **PP** **16 11 16.3 +3.5**
PZH S **S** **16 16 26.3 +1.7**
PZH SS **SS** **16 19 46.3 -9.1**
PZH pmax pmax
comp=Z,100nm,1.2s
PZH pmax pmax
comp=Z,690nm,6.1s
PZH LR LR
comp=Z,5µm,21.1s
PZH LR LR
comp=Z,10µm,18.0s
PZH LR LR
comp=Z,10µm,17.3s
BTO2 Baotou 49.38 66 *eP* **P** **16 09 22.8 +1.0**
BTO2 PP **PP** **16 11 17.0 +1.4**
BTO2 S **S** **16 16 29.4 +0.3**
BTO2 SS **SS** **16 19 54.5 -5.9**
BTO2 pmax pmax
comp=Z,63nm,1.2s
BTO2 pmax pmax
comp=Z,2µm,6.3s
BTO2 LR LR
comp=Z,27µm,19.6s
BTO2 LR LR
comp=Z,15µm,20.0s
BTO2 LR LR
comp=Z,21µm,17.4s
PMAR Madeira 49.48 283 *eP* **P** **16 09 22.6 -0.1**
PMAR *i* IAmb IAmb 16 09 28.7
comp=Z,413nm,1.8s
PMOZ Porto Moniz, M 49.65 283 *eS* S 16 16 43.6 +11
PMOZ *i* IAMs_20 IAMs_20 16 31 55.8
comp=Z,2µm,18.0s
KMI2 Kunming 50.49 87 ⇑P **P** **16 09 31.1 +0.5**
KMI2 S **S** **16 16 45.8 +0.6**
KMI2 SS **SS** **16 20 11.8 -7.1**
KMI2 pmax pmax
comp=Z,140nm,1.1s
KMI2 pmax pmax
comp=Z,700nm,4.4s
KMI2 LR LR
comp=Z,8µm,20.5s
KMI2 LR LR
comp=Z,6µm,24.8s
KMI2 LR LR
comp=Z,12µm,20.6s
HHC Hu-ho-hao-te 50.55 65 ⇑P **P** **16 09 31.8 +1.2**
HHC S **S** **16 16 43.4 -1.9**
HHC pmax pmax
comp=Z,66nm,1.7s
HHC pmax pmax
comp=Z,1µm,4.3s
HHC LR LR
comp=Z,12µm,19.6s
HHC LR LR
comp=Z,6µm,20.1s
HHC LR LR
comp=Z,5µm,22.1s
CHTO Chiang Mai 50.87 97 P **P** **16 09 32.1 -1.1**
CHTO Chiang Mai 50.87 97 P **P** **16 09 32.9 -0.3**
CHTO Chiang Mai 50.87 97 P **P** **16 09 32.1 -1.1**
CHTO pmax pmax
comp=Z,107nm,1.0s
CHTO MLR MLR
comp=Z,4µm,20.0s
CHTO Chiang Mai 50.87 97 P **P** **16 09 33.4 +0.1**
CHTO P **P** **16 09 33.4 +0.1**
CHTO P **P** **16 09 33.4 +0.1**
CHTO Chiang Mai 50.87 97 ⇓P **P** **16 09 33.0 -0.3**
CHTO Chiang Mai 50.87 97 P **P** **16 09 33.0 -0.3**
comp=Z,3µmcomp=Z,1µmcomp=Z,120nm,1.0s
CM31 Chiang Mai Arr 51.07 97 P **P** **16 09 35.6 +0.9**
SNR=68
CMAR Chiang Mai Arr 51.07 97 P **P** **16 09 34.5 -0.2**
comp=Z,76nm,0.9s,baz=300,slow=8.0,SNR=151
comp=Z,76nm,0.9s
XAN Xi'an 51.21 74 P **P** **16 09 35.4 -0.3**
XAN PP **PP** **16 11 36.3 +4.0**
XAN S **S** **16 16 53.3 -1.3**
XAN SS **SS** **16 20 30.0 +0.3**
XAN pmax pmax
comp=Z,61nm,1.0s
XAN pmax pmax
comp=Z,1µm,5.0s
XAN LR LR
comp=Z,14µm,16.3s
XAN LR LR
comp=Z,16µm,15.1s
XAN LR LR
comp=Z,17µm,16.3s
SUMG Summit 51.74 338 P **P** **16 09 38.8 -0.7**
SUMG Summit 51.74 338 P **P** **16 09 38.5 -1.0**
SUMG IAMs_20 IAMs_20 16 31 14.2
comp=Z,13µm,20.0s
SUMG Summit 51.74 338 P **P** **16 09 38.5 -1.0**
SUMG pmax pmax
comp=Z,188nm,1.4s
SUMG MLR MLR
comp=Z,14µm,20.0s
SUMG Summit 51.74 338 *i* P **P** **16 09 37.3 -2.2**
SUMG IAmb IAmb 16 09 42.5
comp=Z,89nm,1.0s
SUMG Summit 51.74 338 ⇑P **P** **16 09 39.1 -0.4**
SBV Sambava 51.86 173 P **P** **16 09 42.1 +1.7**
SNR=7.4
ACRG Accra 51.98 243 P **P** **16 09 39.2 -2.3**
ACRG IAmb IAmb 16 09 54.2
comp=Z,122nm,1.4s
TIXI Tiksi 52.30 23 LR LR 16 34 57.0
comp=Z,9µm,20.7s,baz=295,slow=40
TIXI Tiksi 52.30 23 P **P** **16 09 42.4 -0.8**
TIXI IAmb IAmb 16 09 54.3
comp=Z,102nm,1.3s
TIXI Tiksi 52.30 23*ce*P **P** **16 09 42.8 -0.4**
TIXI pmax pmax
comp=Z,35nm,1.0s
TIXI MLR MLR
comp=Z,20µm,17.0s
TIXI Tiksi 52.30 23 ⇑P **P** **16 09 42.9 -0.3**
TIY Taiyuan 52.34 68 P **P** **16 09 47.5 +3.4**
TIY S **S** **16 17 07.3 -2.8**
TIY pmax pmax
comp=Z,47nm,1.3s
TIY pmax pmax
comp=Z,610nm,3.5s
TIY LR LR
comp=Z,5µm,16.2s
TIY LR LR
comp=Z,9µm,15.9s
TIY LR LR
comp=Z,11µm,19.2s
DGAR Diego Garcia 52.50 144 P **P** **16 09 44.7 -0.6**
DGAR Diego Garcia 52.50 144 IAMs_20 IAMs_20 16 30 55.6
comp=Z,10µm,22.0s
DGAR Diego Garcia 52.50 144*ce*P **P** **16 09 45.7 +0.4**
DGAR pmax pmax
comp=Z,266nm,1.7s
DGAR MLR MLR
comp=Z,7µm,15.0s
ANGG Ammassalik, Gr 52.58 329 *i* P **P** **16 09 46.3 +1.0**
ANGG IAmb IAmb 16 09 48.4
comp=Z,55nm,1.0s
XLT XiLinHaoTe 52.62 60 *eP* **P** **16 09 47.3 +1.2**
XLT sP sP 16 09 59.1 +10
XLT ScP **ScP** **16 14 52.1 -1.9**

XLT S **S** **16 17 13.3 -0.6**
XLT SS **SS** **16 20 50.3 -1.4**
XLT pmax pmax
comp=Z,42nm,1.6s
XLT LR LR
comp=Z,13µm,16.6s
XLT LR LR
comp=Z,16µm,17.0s
GYA Guiyang 52.91 84 ⇑P **P** **16 09 48.4 -0.1**
GYA S **S** **16 17 16.1 -2.2**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA LR LR
comp=Z,8µm,24.1s
GYA LR LR
comp=Z,9µm,20.3s
GYA LR LR
comp=Z,15µm,22.1s
HILR Hailar Array B 53.14 52 P **P** **16 09 49.6 -0.2**
comp=Z,7.1nm,0.8s,baz=254,slow=4.3,SNR=20
HILR LR LR 16 35 12.2
comp=Z,10µm,20.0s,baz=95,slow=39
comp=Z,7.1nm,0.8s
HIA Hailar 53.22 52 P **P** **16 09 52.1 +1.7**
ENH Enshi 53.29 78 IAmb IAmb 16 10 08.1
comp=Z,70nm,1.2s
ENH IAMs_20 IAMs_20 16 36 21.8
comp=Z,10µm,19.0s
ENH Enshi 53.29 78 P **P** **16 09 51.3 +0.1**
LYN LuoYang 53.66 72 ⇑P **P** **16 09 54.6 +0.9**
LYN S **S** **16 17 28.3 +0.3**
LYN pmax pmax
comp=Z,86nm,1.4s
LYN pmax pmax
comp=Z,1µm,4.3s
LYN LR LR
comp=Z,26µm,17.9s
LYN LR LR
comp=Z,21µm,16.6s
LYN LR LR
comp=Z,30µm,16.9s
CMLA Cha da Macela 53.84 293 IAMs_20 IAMs_20 16 32 22.2
comp=Z,12µm,21.0s
NEEM North Greenlan 54.04 344 *i* P **P** **16 09 56.8 +0.5**
NEEM IAmb IAmb 16 10 01.3
comp=Z,104nm,1.2s
NEEM North Greenlan 54.04 344 ⇑P **P** **16 09 56.7 +0.5**
BJT Baijiatuau 54.12 64 IAMs_20 IAMs_20 16 35 28.5
comp=Z,9µm,21.0s
BJT Baijiatuau 54.12 64 P **P** **16 09 57.9 +0.9**
HNS HongShan 54.12 68 ⇓P **P** **16 09 58.4 +1.4**
HNS S **S** **16 17 37.6 +3.5**
HNS pmax pmax
comp=Z,37nm,1.4s
HNS pmax pmax
comp=Z,940nm,7.4s
HNS LR LR
comp=Z,13µm,20.1s
HNS LR LR
comp=Z,11µm,17.5s
HNS LR LR
comp=Z,10µm,19.1s
BJI2 Beijing 54.12 64 P **P** **16 09 56.9 -0.1**
BJI2 S **S** **16 17 34.3 +0.2**
BJI2 pmax pmax
comp=Z,240nm,3.5s
BJI2 LR LR
comp=Z,6µm,13.1s
BJI2 LR LR
comp=Z,5µm,17.7s
BJI2 LR LR
comp=Z,5µm,19.6s
DBIC Dimbokro 54.58 248 P **P** **16 09 58.7 -2.0**
comp=Z,14nm,0.6s,baz=68,slow=7.4,SNR=12
DBIC LR LR 16 36 10.8
comp=Z,8µm,18.1s,baz=68,slow=39
comp=Z,14nm,0.6s
DBIC Dimbokro 54.58 248 P **P** **16 09 57.5 -3.1**
DBIC Dimbokro 54.58 248 ⇓P **P** **16 09 58.6 -2.0**
YAK Yakutsk 54.77 35 P **P** **16 09 59.8 -1.5**
YAK IAmb IAmb 16 10 06.3
comp=Z,54nm,0.9s
YAK Yakutsk 54.77 35 *e*P **P** **16 10 00.5 -0.9**
YAK *e**PP **sP** **16 10 07.9 +3.0**
YAK *e* 16 11 00.7
YAK *e* 16 12 03.1
YAK *e*S **S** **16 17 41.9 -0.2**
YAK *e**SS sS 16 18 01.6 +15
YAK *e* 16 19 42.0
YAK *e*SS **SS** **16 21 26.3 +1.8**
YAK pmax pmax
comp=Z,65nm,1.0s
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.4s
YAK pmax pmax
comp=Z,497nm,5.4s
YAK pmax pmax
comp=E,390nm,6.3s
YAK pmax pmax
comp=N,247nm,5.8s
YAK smax smax
comp=N,1µm,8.9s
YAK smax smax
comp=E,1µm,9.1s
YAK MLR MLR
comp=N,14µm,22.0s
YAK MLR MLR
comp=E,11µm,23.0s
YAK MLR MLR
comp=Z,17µm,22.0s
YAK Yakutsk 54.77 35 ⇓P **P** **16 10 01.7 +0.3**
LSZ Lusaka 55.56 199 LR LR 16 34 26.5
comp=Z,10µm,18.6s,baz=19,slow=37
LSZ Lusaka 55.56 199 P **P** **16 10 07.5 -0.3**
LSZ IAmb IAmb 16 10 13.4
comp=Z,130nm,1.6s
LSZ Lusaka 55.56 199 P **P** **16 10 07.5 -0.3**
LSZ pmax pmax
comp=Z,130nm,1.6s
LSZ MLR MLR
comp=Z,12µm,19.0s
LSZ Lusaka 55.56 199 P **P** **16 10 10.0 +2.2**
LSZ P **P** **16 10 10.0 +2.2**
LSZ Lusaka 55.56 199 ⇑P **P** **16 10 11.5 +3.8**
ZEA Zeya 56.17 45 *e*P **P** **16 10 15.5 +3.9**
ZEA *e* 16 12 15.2
ZEA *e*S **S** **16 18 01.8 +0.6**
ZEA *e*SS **SS** **16 21 52.8 +5.8**
ZEA pmax pmax
comp=E,20nm,1.1s
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA pmax pmax
comp=E,200nm,4.0s
ZEA pmax pmax
comp=N,200nm,4.1s
ZEA pmax pmax
comp=Z,500nm,6.8s
ZEA pmax pmax
comp=E,300nm,4.2s
ZEA pmax pmax
comp=N,100nm,5.4s
ZEA pmax pmax
comp=Z,500nm,6.2s
ZEA smax smax
comp=N,500nm,12.2s
ZEA smax smax
comp=E,1µm,9.6s
ZEA MLR MLR
comp=E,8µm,15.0s
ZEA MLR MLR
comp=Z,9µm,14.0s
SAATT Saattut 56.20 337 *i* P **P** **16 10 11.2 -0.4**
SAATT IAmb IAmb 16 10 14.3
comp=Z,88nm,0.9s
TIA Tai'an 56.38 68 P **P** **16 10 13.3 -0.1**
TIA PcP **PcP** **16 11 13.0 +2.4**
TIA S **S** **16 18 02.3 -2.1**
TIA pmax pmax
comp=Z,13nm,0.9s
TIA pmax pmax
comp=Z,940nm,4.5s
TIA LR LR
comp=Z,5µm,16.5s
TIA LR LR
comp=Z,2µm,16.5s
TIA LR LR
comp=Z,13µm,19.9s
GULI GuiLin 56.38 83 P **P** **16 10 13.1 -0.5**
GULI S **S** **16 18 03.8 -0.9**
GULI pmax pmax
comp=Z,51nm,1.2s
GULI LR LR
comp=Z,9µm,19.9s
GULI LR LR
comp=Z,6µm,20.8s
GULI LR LR
comp=Z,9µm,19.4s
NUUG Nuugaatsiaq 56.42 338 *i* P **P** **16 10 13.2 +0.1**
NUUG IAmb IAmb 16 10 17.4
comp=Z,41nm,1.2s
NUUG Nuugaatsiaq 56.42 338 ⇑P **P** **16 10 13.2 +0.1**
SAQQ Saqqaq 56.58 336 *i* P **P** **16 10 14.5 +0.2**
SAQQ IAmb IAmb 16 10 17.1
comp=Z,88nm,1.0s
ILULI Ilulissat 56.58 335 *i* P **P** **16 10 14.2 -0.2**
ILULI IAmb IAmb 16 10 18.1
comp=Z,50nm,0.9s
ILULI Ilulissat 56.58 335 ⇓P **P** **16 10 14.9 +0.6**
OPO Ambohidratompo 56.75 177 LR LR 16 35 54.2
comp=Z,6µm,18.9s,baz=180,slow=37
UPNV Upernavik 56.80 340 *i* P **P** **16 10 16.2 +0.4**
UPNV IAmb IAmb 16 10 18.8
comp=Z,37nm,0.9s
NIAQ Niaqornat 56.83 337 *i* P **P** **16 10 16.7 +0.6**
NIAQ IAmb IAmb 16 10 20.2
comp=Z,37nm,1.0s
WHN Wuhan 56.88 75 P **P** **16 10 17.1 +0.1**
WHN S **S** **16 18 14.3 +3.1**
WHN pmax pmax
comp=Z,74nm,0.9s
WHN pmax pmax
comp=Z,1µm,5.4s
WHN LR LR
comp=Z,24µm,21.1s
WHN LR LR
comp=Z,12µm,12.6s
WHN LR LR
comp=Z,24µm,18.0s
CNSH ChangSha 56.93 78 P **P** **16 10 17.8 +0.4**
CNSH S **S** **16 18 07.4 -4.5**
CNSH pmax pmax
comp=Z,26nm,1.1s
CNSH LR LR
comp=Z,11µm,18.1s
CNSH LR LR
comp=Z,5µm,19.6s
CNSH LR LR
comp=Z,8µm,18.4s
ABPO Ambohimpanom 57.19 177 P **P** **16 10 19.6 +0.2**
ABPO Ambohimpanom 57.19 177 IAMs_20 IAMs_20 16 38 12.7
comp=Z,9µm,18.0s
ABPO Ambohimpanom 57.19 177 P **P** **16 10 19.6 +0.2**
ABPO Ambohimpanom 57.19 177 ⇑P **P** **16 10 20.3 +0.9**
NRS Narsarsuaq 57.19 325 IAMs_20 IAMs_20 16 38 23.1
comp=Z,10µm,18.0s
NRS Narsarsuaq 57.19 325 *i* P **P** **16 10 19.1 +0.4**
NRS IAmb IAmb 16 10 20.9
comp=Z,147nm,1.1s
NRS Narsarsuaq 57.19 325 ⇑P **P** **16 10 19.8 +1.0**
SFJD Kangerlussuaq 57.21 332 LR LR 16 35 06.6
comp=Z,13µm,19.9s,baz=68,slow=36
SFJD Kangerlussuaq 57.21 332 P **P** **16 10 18.0 -0.8**
SFJD IAmb IAmb 16 10 20.6
comp=Z,70nm,1.1s
SFJD Kangerlussuaq 57.21 332 IAMs_20 IAMs_20 16 34 45.5
comp=Z,11µm,21.0s
SFJD Kangerlussuaq 57.21 332 P **P** **16 10 18.0 -0.8**
SFJD pmax pmax
comp=Z,70nm,1.2s
SFJD MLR MLR
comp=Z,11µm,21.0s
SFJD Kangerlussuaq 57.21 332 *i* P **P** **16 10 17.2 -1.7**
SFJD IAmb IAmb 16 10 20.9
comp=Z,62nm,1.1s
SFJD Kangerlussuaq 57.21 332 ⇓P **P** **16 10 18.9 +0.1**
GDH Godhavn 57.38 335 *i* P **P** **16 10 19.1 -0.8**
GDH IAmb IAmb 16 10 22.0
comp=Z,101nm,1.1s
HEH HeiHe 57.54 49 *e*P **P** **16 10 20.3 -1.1**
HEH PP **PP** **16 12 28.9 +0.3**
HEH S **S** **16 18 17.9 -1.4**
HEH SS **SS** **16 22 10.3 +1.7**
HEH pmax pmax
comp=Z,71nm,0.9s
HEH pmax pmax
comp=Z,1µm,5.0s
HEH LR LR
comp=Z,17µm,18.2s
HEH LR LR
comp=Z,8µm,17.7s
HEH LR LR
comp=Z,21µm,16.9s
LHMI Lhok Sumawe 57.80 111 IAMs_20 IAMs_20 16 38 43.9
comp=Z,7µm,20.0s
UBPT Khong Chiam 58.00 96 P **P** **16 10 25.0 -0.1**
UBPT Khong Chiam 58.00 96 ⇑P **P** **16 10 24.9 -0.2**
TULEG Thule 58.08 345 IAmb IAmb 16 10 38.1
comp=Z,39nm,0.9s
TULEG IAMs_20 IAMs_20 16 35 26.7
comp=Z,10µm,21.0s
TULEG Thule 58.08 345 *i* P **P** **16 10 25.1 +0.4**
TULEG IAmb IAmb 16 10 27.0
comp=Z,48nm,1.1s
TULEG Thule 58.08 345 ⇓P **P** **16 10 23.9 -0.9**
IVI Ivigtut 58.41 325 IAMs_20 IAMs_20 16 39 24.4
comp=Z,8µm,20.0s
IVI Ivigtut 58.41 325 *i* P **P** **16 10 27.1 -0.2**
IVI IAmb IAmb 16 10 29.2
comp=Z,130nm,1.2s
DL2 Dalian 58.42 63 P **P** **16 10 27.4 -0.4**
DL2 S **S** **16 18 30.9 -0.3**
DL2 pmax pmax
comp=Z,87nm,0.9s
DL2 pmax pmax
comp=Z,1µm,5.0s
DL2 LR LR
comp=Z,8µm,22.7s
DL2 LR LR
comp=Z,8µm,16.9s
DL2 LR LR
comp=Z,10µm,15.2s
SNY Shenyang 58.50 59 ⇓P **P** **16 10 27.4 -0.9**
SNY S **S** **16 18 36.1 +3.9**
SNY pmax pmax
comp=Z,750nm,4.7s
SNY LR LR
comp=Z,8µm,17.2s
SNY LR LR
comp=Z,4µm,16.7s
SNY LR LR
comp=Z,7µm,18.8s
NUUK Nuuk 58.73 329 *i* P **P** **16 10 30.1 +0.6**
NUUK IAmb IAmb 16 10 31.7
comp=Z,43nm,0.8s
KSANE Kasane 58.80 202 *i* P **P** **16 10 32.5 +1.9**
CN2 Changchun 58.91 57 ⇑P **P** **16 10 31.5 +0.4**
CN2 *e*S **S** **16 18 34.0 -3.5**
CN2 pmax pmax
comp=Z,30nm,0.7s
CN2 pmax pmax
comp=Z,600nm,6.0s
CN2 LR LR
comp=Z,10µm,13.0s
CN2 LR LR
comp=Z,8µm,13.0s
CN2 LR LR
comp=Z,12µm,15.0s
QIZ Qiongzhong 59.30 89 P **P** **16 10 36.1 +2.0**
QIZ Qiongzhong 59.30 89 P **P** **16 10 33.8 -0.3**
QIZ S **S** **16 18 42.8 -0.3**
QIZ SS **SS** **16 22 35.6 -1.9**
QIZ pmax pmax
comp=Z,39nm,1.9s
QIZ LR LR
comp=Z,5µm,20.8s
QIZ LR LR
comp=Z,9µm,19.6s
QIZ LR LR
comp=Z,7µm,22.8s
BNX BinXian 59.35 54 ⇓P **P** **16 10 35.1 +1.0**
BNX PcP **PcP** **16 11 21.6 -0.5**
BNX S **S** **16 18 44.3 +1.2**
BNX pmax pmax
comp=Z,47nm,0.9s
BNX pmax pmax
comp=Z,850nm,9.1s
BNX LR LR
comp=Z,15µm,24.1s
BNX LR LR
comp=Z,8µm,25.8s
BNX LR LR
comp=Z,19µm,16.2s
NJ2 Nanjing 59.55 72 ⇓P **P** **16 10 36.3 +0.6**
NJ2 PP **PP** **16 12 50.1 +3.2**
NJ2 S **S** **16 18 50.0 +3.9**
NJ2 sS sS 16 19 02.3 +12
NJ2 pmax pmax
comp=Z,25nm,1.0s
NJ2 pmax pmax
comp=Z,460nm,3.6s
NJ2 LR LR
comp=Z,13µm,17.1s
NJ2 LR LR
comp=Z,7µm,18.0s
NJ2 LR LR
comp=Z,12µm,17.9s
KCSI Kotacane, Aceh 59.56 112 P **P** **16 10 33.0 -3.0**
comp=Z,23nm,0.9s
GZH2 Guangzhou 59.79 83 P **P** **16 10 34.8 -2.6**
GZH2 S **S** **16 18 51.0 +1.7**
GZH2 pmax pmax
comp=Z,39nm,1.8s
GZH2 LR LR
comp=Z,11µm,22.6s
GZH2 LR LR
comp=Z,13µm,23.7s
GZH2 LR LR
comp=Z,12µm,29.4s
SUJ Sinuiju 59.88 61 P **P** **16 10 36.2 -1.7**
VOI Vohitsoka 60.05 178 IAMs_20 IAMs_20 16 36 56.2
comp=Z,10µm,20.0s
RER Riviere de l'E 60.20 168 IAMs_20 IAMs_20 16 34 45.0
comp=Z,9µm,19.0s
KULM Kulim 60.50 108 P **P** **16 10 40.1 -2.3**
KLR Kul'dur 60.52 49 LR LR 16 41 53.3
comp=Z,8µm,19.0s,baz=304,slow=41
KLR Kul'dur 60.52 49 *ce*P **P** **16 10 42.4 +0.3**
KLR pmax pmax
comp=Z,12nm,1.7s
KLR MLR MLR
comp=Z,8µm,16.0s
PSI Prapat 60.89 112 P **P** **16 10 43.3 -1.9**
PSI Prapat 60.89 112 P **P** **16 10 44.0 -1.2**
comp=Z,905nmcomp=Z,44nm,1.6s
GSI Gunungsitoli 60.94 114 P **P** **16 10 44.3 -1.2**
GSI IAMs_20 IAMs_20 16 42 17.1
comp=Z,6µm,18.0s
GSI Gunungsitoli 60.94 114 P **P** **16 10 44.2 -1.2**
GSI Gunungsitoli 60.94 114 ⇓P **P** **16 10 44.9 -0.5**
GSI Gunungsitoli 60.94 114 P **P** **16 10 46.2 +0.8**
comp=Z,2µmcomp=Z,83nm,1.4s
RPSI Rantau Prapat 60.96 112 IAmb IAmb 16 10 49.2
comp=Z,58nm,1.2s
RPSI IAMs_20 IAMs_20 16 37 55.7
comp=Z,9µm,22.0s
SOOWA Sowa 61.13 200 *i* P **P** **16 10 46.1 -0.5**
PYAG Pyongyang 61.23 61 S **S** **16 19 04.9 -2.5**
MDJ Mudanjiang 61.24 54 IAMs_20 IAMs_20 16 39 50.1
comp=Z,12µm,22.0s
MDJ Mudanjiang 61.24 54 P **P** **16 10 50.5 +3.4**
MDJ Mudanjiang 61.24 54 P **P** **16 10 49.4 +2.3**
MDJ S **S** **16 19 10.3 +3.0**
MDJ SS **SS** **16 23 10.8 +3.9**
MDJ LR LR
comp=Z,10µm,21.3s
MDJ LR LR
comp=Z,12µm,18.5s
MDJ LR LR
comp=Z,16µm,20.6s
IPM Ipoh 61.32 109 P **P** **16 10 46.0 -2.0**
IPM IAmb IAmb 16 10 55.2
comp=Z,36nm,0.9s
IPM Ipoh 61.32 109 P **P** **16 10 46.4 -1.6**
IPM Ipoh 61.32 109 ⇓P **P** **16 10 46.5 -1.5**
IPM Ipoh 61.32 109 P **P** **16 10 50.8 +2.8**
comp=Z,49nm,1.5s
BROLN Tlhalogang 61.36 198 *i* P **P** **16 10 46.3 -1.8**
HJU Haeju 61.68 62 P **P** **16 10 50.4 +0.2**
HJU S **S** **16 19 10.8 -2.3**
HJU AmB
comp=Z,627nm,2.3s
HJU AMS AMS
comp=Z,372nm,4.5s
SSE Sheshan 61.76 71 P **P** **16 10 50.8 0.0**
SSE S **S** **16 19 11.9 -2.4**
SSE ScS **SKKSac** **16 20 41.3 -1.9**
SSE pmax pmax
comp=Z,360nm,5.4s
SSE LR LR
comp=Z,3µm,20.6s
HHU Hamhung 62.03 60 P **P** **16 10 53.2 +0.7**
HHU AMS AMS
comp=Z,16µm,16.3s
POIN Pond Inlet 62.33 343 IAmb IAmb 16 10 57.0
comp=Z,49nm,1.1s
PBSI Pulau Batu 62.38 114 P **P** **16 10 54.3 -0.8**
comp=Z,2µmcomp=Z,101nm,1.6s
GRNR Gornyy 62.52 46 ⇓*i*P **P** **16 10 57.3 +1.7**
GRNR pmax pmax
comp=E,6.0nm,1.1s
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=E,8µm,14.0s
GRNR MLR MLR
comp=N,6µm,15.0s
GRNR MLR MLR
comp=Z,8µm,14.0s
INCN Inchon 62.58 63 P **P** **16 10 56.6 +0.4**
INCN IAmb IAmb 16 11 00.6
comp=Z,37nm,0.8s
INCN Inchon 62.58 63 IAMs_20 IAMs_20 16 41 46.3
comp=Z,8µm,19.0s
INCN Inchon 62.58 63 P **P** **16 10 58.1 +1.9**
INCN Inchon 62.58 63 P **P** **16 10 56.6 +0.4**
INCN pmax pmax
comp=Z,37nm,0.9s
INCN MLR MLR
comp=Z,8µm,19.0s
INCN Inchon 62.58 63 P **P** **16 10 57.4 +1.2**
INCN P **P** **16 10 57.4 +1.2**
TSUM Tsumeb 62.64 209 LR LR 16 39 46.2
comp=Z,13µm,18.6s,baz=20,slow=38
TSUM Tsumeb 62.64 209 P **P** **16 10 56.4 -0.4**
KHWEE KHWEE 62.66 200 *i* P **P** **16 10 55.8 -1.1**
MNSI Mandailing Nat 62.73 113 P **P** **16 10 56.7 -0.8**
comp=Z,34nm,0.7s
QZH2 Quanzhou 62.94 79 P **P** **16 11 00.4 +1.6**
QZH2 PP **PP** **16 13 20.8 +3.8**
QZH2 S **S** **16 19 32.9 +3.6**
QZH2 SS **SS** **16 23 30.3 -4.0**
QZH2 LR LR
comp=Z,12µm,16.5s
QZH2 LR LR
comp=Z,8µm,16.8s
QZH2 LR LR
comp=Z,16µm,17.9s
USRK Ussuriysk Ar. 62.95 54 P **P** **16 10 57.1 -1.5**
comp=Z,11nm,0.9s,baz=289,slow=5.0,SNR=16
USRK PP **PP** **16 13 21.5 +4.8**
comp=Z,10nm,1.1s,baz=308,slow=7.1,SNR=4.8
comp=Z,11nm,0.9s
FOMA Nahampoana Res 63.11 177 P **P** **16 10 58.5 -1.1**
GRTLG Ghanzi 63.36 204 *i* P **P** **16 11 01.1 -0.4**
KSAR Wonju Array Be 63.47 62 P **P** **16 11 00.4 -1.7**
KSAR Wonju Array Be 63.47 62 P **P** **16 11 00.4 -1.7**
KSRS Korea Array 63.49 62 P **P** **16 11 01.2 -1.0**
comp=Z,20nm,0.9s,baz=288,slow=6.1,SNR=45
KSRS LR LR 16 41 59.3
comp=Z,9µm,18.1s,baz=290,slow=39
comp=Z,20nm,0.9s
TJN Taejon 63.63 63 P **P** **16 11 06.2 +3.0**
SEY Seymchan 63.90 29 LR LR 16 43 39.9

comp=Z,22µm,18.6s,baz=308,slow=40
SEY Seymchan 63.90 29 *ce* P **P 16 11 04.9 +0.4**
SEY pmax pmax
comp=Z,105nm,1.3s
SEY MLR MLR
comp=Z,21µm,17.0s
LPHEP Lephephe 63.90 199 *i* P **P 16 11 03.2 -1.8**
RES Resolute Bay 64.02 349 LR LR 16 41 31.7
comp=Z,6µm,19.2s,baz=31,slow=38
RES Resolute Bay 64.02 349 IAmb IAmb 16 11 14.2
comp=Z,30nm,1.1s
RES Resolute Bay 64.02 349 ⇓P **P 16 11 06.5 +1.3**
BKNI Bangkinang 64.11 112 P **P 16 11 02.8 -3.8**
BKNI Bangkinang 64.11 112 P **P 16 11 04.5 -2.1**
BKNI Bangkinang 64.11 112 P **P 16 11 06.3 -0.3**
PPI Padang Panjang 64.18 113 P **P 16 11 07.2 +0.1**
comp=Z,2µmcomp=Z,32nm,0.9s
KDWAN Kaudwane 64.23 200 *i* P **P 16 11 05.9 -1.4**
KGCAE Kacgae 64.44 203 *i* P **P 16 11 08.0 -0.6**
PDSI Padang 64.54 113 P **P 16 11 07.8 -1.7**
comp=Z,71nm,1.4s
MA2 Magadan 65.12 33 LR LR 16 42 56.4
comp=Z,8µm,21.4s,baz=304,slow=39
MA2 Magadan 65.12 33 P **P 16 11 12.3 -0.3**
MA2 IAmb IAmb 16 11 20.6
comp=Z,49nm,0.9s
MA2 IAMs_20 IAMs_20 16 43 26.7
comp=Z,8µm,19.0s
MA2 Magadan 65.12 33 P **P 16 11 12.8 +0.2**
MA2 Magadan 65.12 33 P **P 16 11 12.3 -0.3**
MA2 pmax pmax
comp=Z,49nm,0.9s
MA2 Magadan 65.12 33 ⇓P **P 16 11 13.3 +0.7**
TATO Taipei 65.14 77 P **P 16 11 14.5 +1.3**
KOOLE Kule 65.21 205 *i* P **P 16 11 13.2 -0.5**
YHNB Yeheng 65.22 77 P **P 16 11 15.5 +1.6**
BILL Bilibino 65.30 21 P **P 16 11 13.0 -0.6**
BILL IAmb IAmb 16 11 17.9
comp=Z,37nm,1.0s
BILL IAMs_20 IAMs_20 16 44 42.3
comp=Z,8µm,20.0s
BILL Bilibino 65.30 21 *ce* P **P 16 11 13.7 +0.1**
BILL pmax pmax
comp=Z,40nm,1.0s
BILL MLR MLR
comp=Z,13µm,22.0s
FRB Frobisher Bay 65.32 333 LR LR 16 39 28.2
comp=Z,12µm,21.9s,baz=56,slow=36
FRB Frobisher Bay 65.32 333 ⇑P **P 16 11 15.2 +1.5**
SSLB Suanglung 65.37 78 P **P 16 11 17.0 +2.2**
TPUB Ta-pu 65.38 79 IAMs_20 IAMs_20 16 44 39.1
comp=Z,9µm,19.0s
TPUB Ta-pu 65.38 79 P **P 16 11 16.2 +1.3**
LBTB Lobatse 65.55 199 LR LR 16 39 56.5
comp=Z,5µm,21.2s,baz=16,slow=36
LBTB Lobatse 65.55 199 P **P 16 11 14.8 -1.0**
LBTB IAmb IAmb 16 11 36.6
comp=Z,35nm,1.0s
LBTB Lobatse 65.55 199 P **P 16 11 14.8 -1.0**
LBTB pmax pmax
comp=Z,35nm,1.0s
LBTB Lobatse 65.55 199 ⇓P **P 16 11 16.7 +1.0**
YULB Yu-li 65.85 79 P **P 16 11 19.4 +1.5**
WIN Windhoek 65.89 208 P **P 16 11 17.4 -0.7**
WIN Windhoek 65.89 208 P **P 16 11 17.5 -0.7**
WIN pmax pmax
comp=Z,199nm,1.7s
WIN MLR MLR
comp=Z,16µm,19.0s
TYV Tymovskoe 65.91 43 *e* P **P 16 11 21.1 +3.3**
TYV *e* S **S 16 20 11.7 +6.3**
TYV pmax pmax
comp=Z,41nm,1.0s
TYV pmax pmax
comp=Z,800nm,4.3s
TYV smax smax
comp=N,1µm,5.6s
TYV smax smax
comp=E,2µm,5.6s
TYV MLR MLR
comp=Z,18µm,14.0s
TWG Pinlang 65.98 79 IAMs_20 IAMs_20 16 45 10.2
comp=Z,8µm,18.0s
TWGBT Beinan 65.99 79 P **P 16 11 21.2 +2.4**
KRJI Kerinci 66.08 114 P **P 16 11 19.0 -0.5**
UGL Uglegorsk 66.53 45 *e* P P 16 11 27.2 +5.4
UGL *e* S **S 16 20 19.7 +6.8**
UGL pmax pmax
comp=Z,100nm,0.8s
UGL smax smax
comp=E,3µm,13.0s
UGL smax smax
comp=N,1µm,4.8s
UGL MLR MLR
comp=E,14µm,14.0s
UGL MLR MLR
comp=N,7µm,17.0s
UGL MLR MLR
comp=Z,12µm,15.0s
MASI Maura Aman, Be 67.36 114 P **P 16 11 26.7 -0.9**
JNU Nakatsue 67.78 65 LR LR 16 45 53.2
comp=Z,7µm,18.6s,baz=307,slow=40
YSS Yuzhno-Sakhali 68.06 47 P **P 16 11 33.0 +1.4**
YSS Yuzhno-Sakhali 68.06 47 *e* P **P 16 11 33.2 +1.6**
YSS *e* 16 11 54.5
YSS *e* S **S 16 20 33.5 +2.1**
YSS *e* 16 21 28.5
YSS *e* SS **SS 16 25 00.0 +7.1**
YSS pmax pmax
comp=E,30nm,1.1s
YSS pmax pmax
comp=Z,60nm,1.1s
YSS pmax pmax
comp=Z,1µm,6.9s
YSS MLR MLR
comp=Z,9µm,15.0s
YSS MLR MLR
comp=N,6µm,13.0s
YSS MLR MLR
comp=E,6µm,14.0s
JSU Suzuyama 68.33 66 IAmb IAmb 16 11 39.4
comp=Z,53nm,1.2s
JSU Suzuyama 68.33 66 P **P 16 11 34.1 +0.5**
DRLN Deer Lake 68.87 317 ⇑P **P 16 11 37.3 +0.7**
EGSI Enggano, Bengk 68.92 115 P **P 16 11 36.8 -0.5**
comp=Z,97nm,1.5s
BOSA Boshof 69.08 198 P **P 16 11 37.1 -1.0**
comp=Z,17nm,0.9s,baz=19,slow=6.2,SNR=15
BOSA LR LR 16 41 43.9
comp=Z,12µm,18.4s,baz=22,slow=36
comp=Z,17nm,0.9s
BOSA Boshof 69.08 198 P **P 16 11 37.1 -1.0**
BOSA IAmb IAmb 16 11 47.7
comp=Z,32nm,0.9s
BOSA Boshof 69.08 198 ⇑P **P 16 11 38.0 -0.2**
JOW Kunigami 69.27 72 LR LR 16 45 50.0
comp=Z,6µm,20.0s,baz=302,slow=39
A21K Barrow 69.52 7 P **P 16 11 38.7 -1.6**
baz=343,SNR=16
A21K S **S 16 20 47.0 -1.0**
baz=343
ASAJ Asahikawa 69.53 50 LR LR 16 43 44.7
comp=Z,9µm,21.7s,baz=310,slow=37
JMN Monobe 69.56 63 P **P 16 11 42.8 +1.6**
A36M Sachs Harbour 69.65 357 P **P 16 11 39.7 -1.4**
baz=8.7,SNR=67
A36M S **S 16 20 50.7 +1.1**
baz=8.7
MDSI Maura Dua 69.68 113 P **P 16 11 39.8 -2.3**
comp=Z,775nmcomp=Z,31nm,1.2s
LWLI Liwa 69.96 114 P **P 16 11 41.6 -2.3**
SCHQ Schefferville 70.16 325 P **P 16 11 43.8 -0.7**
comp=Z,28nm,1.0s,baz=56,slow=6.6,SNR=16
SCHQ LR LR 16 43 35.9
comp=Z,5µm,19.2s,baz=58,slow=37
comp=Z,28nm,1.0s
COCO West Island 70.16 125 IAMs_20 IAMs_20 16 44 41.5
comp=Z,6µm,19.0s
KLSI 70.22 113 P **P 16 11 46.3 +0.9**
KASI Kota Agung 70.62 114 P **P 16 11 45.8 -2.0**
comp=Z,998nmcomp=Z,79nm,1.0s
B20K Meade River 70.73 8 IAMs_20 IAMs_20 16 46 25.8
comp=Z,6µm,21.0s
B20K Meade River 70.73 8 P **P 16 11 46.5 -1.1**
baz=342
B20K S **S 16 21 03.3 +1.2**
baz=342
TGY Tagaytay City 70.82 87 LR LR 16 48 06.9
comp=Z,4µm,20.7s,baz=308,slow=40
INU Inuyama 70.84 60 IAMs_20 IAMs_20 16 46 02.9
comp=Z,6µm,18.0s
JGF Kuroka 70.93 59 P **P 16 11 51.2 +1.6**
MJB9 Matsu-Tunnel 70.97 58 IAmb IAmb 16 11 55.8
comp=Z,51nm,1.2s
MAJO Matsushiro 70.97 58 P **P 16 11 50.1 +0.3**
MAJO IAmb IAmb 16 11 54.8
comp=Z,53nm,1.2s
MAJO Matsushiro 70.97 58 P **P 16 11 52.2 +2.4**
MAJO Matsushiro 70.97 58 P **P 16 11 50.1 +0.3**
MAJO pmax pmax
comp=Z,53nm,1.2s
MAJO MLR MLR
comp=Z,13µm,18.0s
MAJO Matsushiro 70.97 58 ⇓P **P 16 11 53.1 +3.3**
MJAR Matsushiro Arr 70.97 58 P **P 16 11 49.5 -0.3**
comp=Z,34nm,1.1s,baz=313,slow=4.0,SNR=24
MJAR LR LR 16 45 58.4
comp=Z,13µm,18.3s,baz=313,slow=38
comp=Z,34nm,1.1s
MJAR Matsushiro Arr 70.97 58 P **P 16 11 50.3 +0.5**
MJAR Matsushiro Arr 70.97 58 P **P 16 11 50.3 +0.5**
MJAR pmax pmax
comp=Z,28nm,1.1s
SBUM Sibu 71.11 102 P **P 16 11 50.7 -0.2**
SBUM Sibu 71.11 102 P **P 16 11 51.6 +0.8**
SBUM Sibu 71.11 102 ⇑P **P 16 11 51.6 +0.8**
SBUM Sibu 71.11 102 P **P 16 11 49.3 -1.5**
ALKP Alkanpan, Nort 71.12 200 ⇑P **P 16 11 53.0 +2.4**
C16K Lisburne Hills 71.29 11 IAMs_20 IAMs_20 16 46 55.1
comp=Z,8µm,21.0s
C16K Lisburne Hills 71.29 11 P **P 16 11 49.7 -1.4**
baz=336
C16K S **S 16 21 07.3 -1.5**
baz=336
C19K Lookout Ridge 71.31 9 IAmb IAmb 16 12 05.2
comp=Z,75nm,1.4s
C19K IAMs_20 IAMs_20 16 48 11.4
comp=Z,8µm,21.0s
C19K Lookout Ridge 71.31 9 P **P 16 11 49.5 -1.8**
baz=340
C19K S **S 16 21 09.8 +0.7**
baz=340
B21K Ikpikpuk River 71.36 7 IAMs_20 IAMs_20 16 46 18.4
comp=Z,7µm,20.0s
B21K Ikpikpuk River 71.36 7 P **P 16 11 49.5 -2.0**
baz=344
B21K S **S 16 21 11.0 +1.6**
baz=344
C17K DeLong Mountai 71.43 10 P **P 16 11 50.5 -1.5**
baz=338
C17K S **S 16 21 12.0 +1.6**
baz=338
ASCN Ascension 71.49 243 IAMs_20 IAMs_20 16 45 17.8
comp=Z,5µm,18.0s
C18K Utukok River 71.54 10 IAMs_20 IAMs_20 16 48 03.4
comp=Z,8µm,21.0s
C18K Utukok River 71.54 10 P **P 16 11 51.0 -1.8**
baz=339
C18K S **S 16 21 12.7 +0.9**
baz=339
SHEL Horse Pasture 71.69 231 IAMs_20 IAMs_20 16 41 23.9
comp=Z,6µm,20.0s
C24K Franklin Bluff 71.73 5 P **P 16 11 51.9 -1.9**
baz=349,SNR=48
C24K S **S 16 21 14.8 +1.0**
baz=349
C26K Camden Bay 71.75 3 P **P 16 11 51.4 -2.5**
baz=352,SNR=9.9
C26K S **S 16 21 14.9 +0.8**
baz=352
C21K Knifeblade Rid 71.79 7 P **P 16 11 52.4 -1.7**
baz=344
C21K S **S 16 21 14.1 -0.4**
baz=344
RDOG Red Dog Mine 71.86 10 P **P 16 11 53.2 -1.4**
baz=338,SNR=46
RDOG S **S 16 21 14.1 -1.2**
baz=338
KKM Kota Kinabalu 71.95 97 IAMs_20 IAMs_20 16 49 49.3
comp=Z,7µm,21.0s
D20K Etivluk River 72.03 8 IAMs_20 IAMs_20 16 46 19.3
comp=Z,7µm,22.0s
D20K Etivluk River 72.03 8 P **P 16 11 54.0 -1.6**
baz=343,SNR=32
D20K S **S 16 21 17.6 +0.2**
baz=343
D19K Kuna River 72.06 9 P **P 16 11 54.4 -1.5**
baz=342
D19K S **S 16 21 17.3 -0.5**
baz=342
C27K Jago River 72.09 3 IAMs_20 IAMs_20 16 43 50.7
comp=Z,5µm,22.0s
C27K Jago River 72.09 3 P **P 16 11 54.5 -1.5**
baz=353
C27K S **S 16 21 18.4 +0.3**
baz=353
PETK Petropavlovsk- 72.11 36 P **P 16 11 55.0 -1.4**
comp=Z,8.1nm,1.1s,baz=242,slow=3.2,SNR=8.3
PETK LR LR 16 49 13.8
comp=Z,6µm,18.1s,baz=303,slow=40
comp=Z,8.1nm,1.1s
PETK Petropavlovsk- 72.11 36 P **P 16 11 55.0 -1.4**
D17K Noatak River 72.16 11 P **P 16 11 55.1 -1.3**
baz=338,SNR=163
D17K S **S 16 21 18.4 -0.4**
baz=338
C36M Paulatuk 72.21 356 P **P 16 11 55.0 -1.6**
C36M IAmb IAmb 16 12 00.3
comp=Z,43nm,0.9s
C36M IAMs_20 IAMs_20 16 46 47.6
comp=Z,5µm,19.0s
C36M Paulatuk 72.21 356 P **P 16 11 54.5 -2.1**
baz=9.5,SNR=45
C36M S **S 16 21 19.5 +0.2**
baz=9.5
D22K Ayikyak River 72.25 6 IAmb IAmb 16 12 01.9
comp=Z,63nm,1.2s
D22K IAMs_20 IAMs_20 16 48 03.1
comp=Z,8µm,21.0s
D22K Ayikyak River 72.25 6 P **P 16 11 54.7 -2.3**
baz=346
D22K S **S 16 21 20.4 +0.5**
baz=346
D25K Kavik River 72.27 4 IAMs_20 IAMs_20 16 47 36.4
comp=Z,5µm,20.0s
D25K Kavik River 72.27 4 P **P 16 11 54.9 -2.2**
baz=351
D25K S **S 16 21 19.0 -1.2**
baz=351
D24K Happy Valley 72.28 5 P **P 16 11 55.1 -2.0**
baz=349
D24K S **S 16 21 18.6 -1.6**
baz=349
D23K Nanushuk River 72.33 6 IAmb IAmb 16 12 02.4
comp=Z,66nm,1.3s
D23K IAMs_20 IAMs_20 16 48 42.3
comp=Z,5µm,21.0s
D23K Nanushuk River 72.33 6 P **P 16 11 55.9 -1.5**
baz=348
D23K S **S 16 21 18.4 -2.4**
baz=348
E20K Nigu River 72.51 8 P **P 16 11 56.5 -2.1**
baz=343
E20K S **S 16 21 20.9 -2.0**
baz=343
D28M Stokes Point 72.54 1 P **P 16 11 56.6 -1.9**
baz=357,SNR=25
D28M S **S 16 21 23.5 +0.5**
baz=357
E21K Killik River 72.56 7 P **P 16 11 57.1 -1.7**
baz=345
E21K S **S 16 21 22.7 -0.8**
baz=345
D27M Malcolm River 72.57 2 P **P 16 11 57.2 -1.8**
baz=356
D27M S **S 16 21 26.2 +2.5**
baz=356
PET Petropavlovsk 72.60 35 *e* P **P 16 11 57.2 -2.0**
PET *e* 16 14 37.7
PET *e* S **S 16 21 19.6 -4.6**
PET *e* 16 22 03.8
PET *e* SS **SS 16 25 59.6 -2.6**
PET pmax pmax
comp=Z,300nm,9.2s
PET pmax pmax
comp=Z,300nm,14.4s
PET smax smax
comp=E,700nm,19.8s
PET MLR MLR
comp=Z,9µm,16.0s
PET MLR MLR
comp=Z,8µm,15.0s
TOLK Toolik Lake Re 72.74 5 P **P 16 11 58.0 -1.9**
baz=349,SNR=38
TOLK S **S 16 21 24.2 -1.3**
baz=349
E18K Tukpahlearik C 72.77 10 IAmb IAmb 16 12 04.6
comp=Z,68nm,1.1s
E18K IAMs_20 IAMs_20 16 47 55.0
comp=Z,7µm,20.0s
E18K Tukpahlearik C 72.77 10 P **P 16 11 58.4 -1.6**
baz=340,SNR=81
E18K S **S 16 21 26.5 +0.7**
baz=340
E17K Hotham Inlet 72.92 10 P **P 16 11 59.6 -1.3**
baz=339,SNR=62
E17K S **S 16 21 28.8 +1.4**
baz=339
BLKN Baker Lake 72.97 343 P **P 16 12 00.0 -1.1**
BLKN IAmb IAmb 16 12 09.4
comp=Z,64nm,1.1s
E22K Anaktuvuk Pass 73.06 6 IAmb IAmb 16 12 06.2
comp=Z,43nm,1.1s
E22K IAMs_20 IAMs_20 16 48 49.4
comp=Z,5µm,20.0s
E22K Anaktuvuk Pass 73.06 6 P **P 16 11 60.0 -1.8**
baz=347,SNR=23
E22K S **S 16 21 29.6 +0.4**
baz=347
E19K Redstone River 73.16 9 IAMs_20 IAMs_20 16 47 29.2
comp=Z,8µm,21.0s
E19K Redstone River 73.16 9 P **P 16 12 00.9 -1.4**
baz=342
E19K S **S 16 21 29.2 -1.0**
baz=342
E28M Babbage River 73.25 2 IAmb IAmb 16 12 14.3
comp=Z,45nm,1.1s
E28M Babbage River 73.25 2 P **P 16 12 00.8 -2.1**
baz=357
E28M S **S 16 21 30.7 -0.6**
baz=357
E23K Chandalar 73.31 5 IAmb IAmb 16 12 17.5
comp=Z,75nm,1.3s
E23K Chandalar 73.31 5 P **P 16 12 01.6 -1.8**
baz=349,SNR=32
E23K S **S 16 21 31.1 -1.0**
baz=349
TNA Tin City 73.33 13 IAMs_20 IAMs_20 16 49 48.0
comp=Z,6µm,21.0s
TNA Tin City 73.33 13 P **P 16 12 01.8 -1.5**
baz=334,SNR=11
TNA S **S 16 21 30.8 -1.3**
baz=334
TNA Tin City 73.33 13 ⇓P **P 16 12 04.5 +1.2**
E24K Your Creek 73.37 5 P **P 16 12 01.8 -1.9**
baz=350
E24K S **S 16 21 33.4 +0.6**
baz=350
E29M Blow River 73.49 1 P **P 16 12 02.0 -2.3**
baz=358
E29M S **S 16 21 32.6 -1.4**
baz=358
E25K Arctic Village 73.51 4 IAmb IAmb 16 12 09.1
comp=Z,51nm,1.1s
E25K IAMs_20 IAMs_20 16 47 38.2
comp=Z,5µm,21.0s
E25K Arctic Village 73.51 4 P **P 16 12 02.4 -2.0**
baz=352,SNR=45
E25K S **S 16 21 33.2 -1.0**
baz=352
INK Inuvik 73.58 359 LR LR 16 47 53.2
comp=Z,4µm,21.1s,baz=358,slow=39
INK Inuvik 73.58 359 P **P 16 12 03.3 -1.5**
baz=1.7,SNR=14
INK S **S 16 21 33.6 -1.3**
baz=1.7
INK Inuvik 73.58 359 ⇓P **P 16 12 03.7 -1.1**
F17K Baldwin Pennin 73.60 10 IAmb IAmb 16 12 09.3
comp=Z,50nm,1.1s
F17K IAMs_20 IAMs_20 16 50 33.0
comp=Z,5µm,19.0s
F17K Baldwin Pennin 73.60 10 P **P 16 12 03.2 -1.6**
baz=339,SNR=36
F17K S **SKiKP 16 21 35.8 +0.5**
baz=339
E27K Coleen River 73.61 2 P **P 16 12 03.3 -1.8**
baz=355
E27K S **S 16 21 35.3 -0.2**
baz=355
F18K Selawik 73.67 10 P **P 16 12 03.0 -2.4**
baz=341,SNR=68
F18K S **S 16 21 36.7 +0.7**
baz=341
F14K Arctic Creek 73.69 13 P **P 16 12 03.7 -1.8**
baz=335,SNR=38
F14K S **S 16 21 36.9 +0.6**
baz=335
F19K Shaleruckik Mo 73.69 9 IAmb IAmb 16 12 09.4
comp=Z,68nm,1.1s
F19K IAMs_20 IAMs_20 16 48 58.4
comp=Z,7µm,21.0s
F19K Shaleruckik Mo 73.69 9 P **P 16 12 03.5 -2.0**
baz=342
F19K S **SKiKP 16 21 33.9 -1.6**
baz=342
F20K Avaraart Lake 73.72 8 IAMs_20 IAMs_20 16 49 42.1
comp=Z,6µm,20.0s
F20K Avaraart Lake 73.72 8 P **P 16 12 03.6 -2.0**
baz=344
F20K S **S 16 21 36.5 -0.1**
baz=344
F15K North Star Dit 73.76 12 IAMs_20 IAMs_20 16 47 00.4
comp=Z,6µm,21.0s
F15K North Star Dit 73.76 12 P **P 16 12 03.2 -2.7**
baz=337
F15K S **SKiKP 16 21 36.3 +0.6**
baz=337
LEM Lembang 73.76 113 LR LR 16 48 08.1
comp=Z,5µm,18.1s,baz=296,slow=39
F21K Alatna River 73.79 7 IAMs_20 IAMs_20 16 49 07.8
comp=Z,7µm,22.0s
F21K Alatna River 73.79 7 P **P 16 12 03.4 -2.7**
baz=346
F21K S **S 16 21 37.4 -0.1**
baz=346
SUR Sutherland 73.81 201 LR LR 16 44 52.9
comp=Z,10µm,19.0s,baz=20,slow=36
SUR Sutherland 73.81 201 P **P 16 12 09.3 +2.5**
F26K Sheenjek River 74.00 3 P **P 16 12 06.0 -1.3**
baz=353,SNR=16
F26K S **S 16 21 39.1 -0.8**
baz=353
F25K Christian Rive 74.03 4 IAMs_20 IAMs_20 16 48 59.9
comp=Z,6µm,21.0s
F25K Christian Rive 74.03 4 P **P 16 12 06.0 -1.6**
baz=352,SNR=29
F25K S **SKiKP 16 21 35.8 -0.4**
baz=352
COLD Coldfoot 74.08 6 IAmb IAmb 16 12 12.4
comp=Z,48nm,1.1s
COLD IAMs_20 IAMs_20 16 51 05.4
comp=Z,6µm,21.0s
COLD Coldfoot 74.08 6 P **P 16 12 06.5 -1.3**
baz=348,SNR=31
COLD S **S 16 21 39.0 -1.6**
baz=348
GAMB Gambell 74.17 16 IAMs_20 IAMs_20 16 50 24.4
comp=Z,5µm,20.0s
GAMB Gambell 74.17 16 P **P 16 12 07.4 -0.8**
baz=331,SNR=16
GAMB S **S 16 21 42.7 +1.1**
baz=331
BBJI Bungbulang 74.22 113 P **P 16 12 06.4 -3.0**
BBJI Bungbulang 74.22 113 P **P 16 12 07.3 -2.1**
comp=Z,39nm,1.1s
F28M Old Crow 74.23 2 IAmb IAmb 16 12 13.0
comp=Z,48nm,1.2s
F28M Old Crow 74.23 2 P **P 16 12 06.6 -2.0**
baz=357,SNR=29
F28M S **S 16 21 41.9 -0.6**
baz=357
BMAR Burnt Mountain 74.25 4 P **P 16 12 08.5 -0.3**

F30M	**Barrier River**	**74.29**	**0**	IAmb	IAmb	16 12 13.1		
	comp=Z,61nm,1.1s							
F30M	**Barrier River**	**74.29**	**0**	P	**P**	**16 12 07.2**	**-1.8**	
F30M	baz=360,SNR=30			S	**S**	**16 21 42.7**	**-0.3**	
	baz=360							
G16K	**Koyuk River**	**74.42**	**11**	IAmb	IAmb	16 12 14.5		
G16K	comp=Z,69nm,1.1s			IAMs_20	IAMs_20	16 50 17.7		
	comp=Z,8µm,20.0s							
G16K	**Koyuk River**	**74.42**	**11**	P	**P**	**16 12 07.6**	**-2.1**	
G16K	baz=338			S	**S**	**16 21 43.6**	**-0.9**	
	baz=338							
G19K	**Purcell Mounta**	**74.44**	**9**	IAmb	IAmb	16 12 14.4		
G19K	comp=Z,81nm,1.0s			IAMs_20	IAMs_20	16 49 30.0		
	comp=Z,6µm,21.0s							
G19K	**Purcell Mounta**	**74.44**	**9**	P	**P**	**16 12 08.5**	**-1.3**	
G19K	baz=343,SNR=73			S	**S**	**16 21 44.1**	**-0.5**	
	baz=343							
F31M	**Tsiigehtchic**	**74.45**	**359**	P	**P**	**16 12 08.4**	**-1.4**	
F31M	**Tsiigehtchic**	**74.45**	**359**	P	**P**	**16 12 08.7**	**-1.2**	
F31M	baz=1.5,SNR=24			S	**S**	**16 21 43.6**	**-1.1**	
	baz=1.5							
G18K	**Tagagawik**	**74.47**	**10**	IAmb	IAmb	16 12 14.3		
G18K	comp=Z,62nm,1.1s			IAMs_20	IAMs_20	16 49 18.1		
	comp=Z,7µm,19.0s							
G18K	**Tagagawik**	**74.47**	**10**	P	**P**	**16 12 07.7**	**-2.3**	
G18K	baz=341			S	**S**	**16 21 44.9**	**-0.3**	
	baz=341							
G21K	**Allakaket**	**74.47**	**7**	IAmb	IAmb	16 12 14.5		
G21K	comp=Z,62nm,1.1s			IAMs_20	IAMs_20	16 49 30.0		
	comp=Z,6µm,20.0s							
G21K	**Allakaket**	**74.47**	**7**	P	**P**	**16 12 08.0**	**-2.0**	
G21K	baz=346			S	**S**	**16 21 44.8**	**-0.3**	
	baz=346							
G15K	**Niukluk**	**74.52**	**12**	P	**P**	**16 12 08.6**	**-1.7**	
G15K	baz=337			S	**S**	**16 21 45.7**	**0.0**	
	baz=337							
G17K	**Kiwalik Mounta**	**74.57**	**11**	P	**P**	**16 12 08.9**	**-1.8**	
G17K	baz=340			S	**S**	**16 21 46.4**	**+0.2**	
	baz=340							
G23K	**Bananza Creek**	**74.60**	**6**	P	**P**	**16 12 08.7**	**-2.1**	
G23K	baz=348			S	**S**	**16 21 47.0**	**+0.4**	
	baz=348							
BATG	**Bathurst New B**	**74.61**	**319**	IAmb	IAmb	16 12 15.3		
	comp=Z,53nm,1.2s							
ANM	**Nome**	**74.69**	**13**	IAMs_20	IAMs_20	16 51 30.0		
	comp=Z,7µm,19.0s							
ANM	**Nome**	**74.69**	**13**	P	**P**	**16 12 10.0**	**-1.3**	
ANM	baz=336,SNR=40			S	**S**	**16 21 47.6**	**+0.1**	
	baz=336							
G26K	**Porcupine Rive**	**74.76**	**3**	IAmb	IAmb	16 12 27.3		
	comp=Z,130nm,1.6s							
G26K	**Porcupine Rive**	**74.76**	**3**	P	**P**	**16 12 09.9**	**-1.8**	
G26K	baz=353,SNR=27			S	**S**	**16 21 47.9**	**-0.3**	
	baz=353							
G24K	**Hadweenzic Riv**	**74.80**	**5**	IAmb	IAmb	16 12 17.1		
	comp=Z,70nm,1.4s							
G24K	**Hadweenzic Riv**	**74.80**	**5**	P	**P**	**16 12 10.5**	**-1.5**	
G24K	baz=350,SNR=9.2			S	**S**	**16 21 50.6**	**+1.9**	
	baz=350							
LMN	**Caledonia Moun**	**74.86**	**317**	IAmb	IAmb	16 12 16.5		
	comp=Z,56nm,1.2s							
G30M	**tAoh Zraii Nji**	**74.92**	**0**	IAmb	IAmb	16 12 16.5		
	comp=Z,51nm,1.2s							
G30M	**tAoh Zraii Nji**	**74.92**	**0**	P	**P**	**16 12 10.4**	**-2.3**	
G30M	baz=360,SNR=27			S	**S**	**16 21 48.3**	**-1.9**	
	baz=360							
IMAR	**Indian Mountai**	**74.97**	**8**	P	**P**	**16 12 12.1**	**-0.8**	
G29M	**Pine Creek**	**74.97**	**1**	P	**P**	**16 12 10.3**	**-2.6**	
G29M	baz=358			S	**S**	**16 21 51.6**	**+0.9**	
	baz=358							
G31M	**Satah River**	**74.98**	**359**	P	**P**	**16 12 10.5**	**-2.4**	
G31M	baz=1.1			S	**S**	**16 21 50.1**	**-0.5**	
	baz=1.1							
G27K	**Doyon Strip**	**74.99**	**3**	IAMs_20	IAMs_20	16 45 55.2		
	comp=Z,5µm,22.0s							
G27K	**Doyon Strip**	**74.99**	**3**	P	**P**	**16 12 11.4**	**-1.7**	
G27K	baz=355			S	**S**	**16 21 49.7**	**-1.2**	
	baz=355							
KPJI	**Karang Pucung**	**75.06**	**112**	P	**P**	**16 12 13.2**	**-1.0**	
H16K	**Elim**	**75.14**	**12**	P	**P**	**16 12 12.4**	**-1.5**	
H16K	baz=339			S	**S**	**16 21 50.2**	**-2.3**	
	baz=339							
H17K	**Granite Mounta**	**75.21**	**10**	IAMs_20	IAMs_20	16 48 56.6		
	comp=Z,5µm,21.0s							
H17K	**Granite Mounta**	**75.21**	**10**	P	**P**	**16 12 12.3**	**-2.0**	
H17K	baz=340			S	**S**	**16 21 54.1**	**+0.7**	
	baz=340							
H18K	**Honhosa River**	**75.22**	**10**	IAMs_20	IAMs_20	16 49 39.8		
	comp=Z,8µm,21.0s							
H18K	**Honhosa River**	**75.22**	**10**	P	**P**	**16 12 13.0**	**-1.4**	
H18K	baz=342			S	**S**	**16 21 52.6**	**-0.8**	
	baz=342							
H22K	**Ishtalitna Cre**	**75.29**	**7**	IAmb	IAmb	16 12 20.2		
	comp=Z,54nm,1.1s							
H22K				IAMs_20	IAMs_20	16 50 58.4		
	comp=Z,5µm,20.0s							
H22K	**Ishtalitna Cre**	**75.29**	**7**	P	**P**	**16 12 13.4**	**-1.4**	
H22K	baz=347,SNR=44			S	**S**	**16 21 54.9**	**+0.7**	
	baz=347							
H20K	**Anotleneega Mo**	**75.32**	**8**	P	**P**	**16 12 12.4**	**-2.6**	
H20K	baz=344,SNR=36			S	**S**	**16 21 54.2**	**-0.4**	
	baz=344							
H21K	**Melozitna Rive**	**75.38**	**7**	IAmb	IAmb	16 12 20.4		
H21K	comp=Z,66nm,1.0s			IAMs_20	IAMs_20	16 50 07.9		
	comp=Z,7µm,20.0s							
H21K	**Melozitna Rive**	**75.38**	**7**	P	**P**	**16 12 13.3**	**-2.1**	
H21K	baz=346,SNR=46			S	**S**	**16 21 55.5**	**+0.2**	
	baz=346							
EPYK	**Eagle Plains**	**75.53**	**1**	IAmb	IAmb	16 12 20.1		
	comp=Z,71nm,1.1s							
EPYK	**Eagle Plains**	**75.53**	**1**	P	**P**	**16 12 14.2**	**-2.1**	
EPYK	baz=359,SNR=23			S	**S**	**16 21 55.3**	**-1.7**	
	baz=359							
H27K	**Steamboat Moun**	**75.57**	**3**	IAmb	IAmb	16 12 31.9		
	comp=Z,79nm,1.4s							
H27K	**Steamboat Moun**	**75.57**	**3**	P	**P**	**16 12 14.4**	**-2.0**	
H27K	baz=355,SNR=21			S	**S**	**16 21 58.0**	**+0.6**	
	baz=355							
H24K	**Noodor Dome**	**75.63**	**5**	P	**P**	**16 12 15.1**	**-1.7**	
	baz=350,SNR=12							
GCSA	**Galena City Sc**	**75.80**	**9**	P	**P**	**16 12 15.8**	**-1.9**	
GCSA	baz=343,SNR=19			S	**S**	**16 22 00.4**	**+0.6**	
	baz=343							
I21K	**Tanana**	**75.93**	**7**	IAMs_20	IAMs_20	16 50 36.3		
	comp=Z,7µm,21.0s							
I17K	**Unalakleet**	**76.09**	**11**	IAMs_20	IAMs_20	16 51 07.8		
	comp=Z,7µm,20.0s							
I17K	**Unalakleet**	**76.09**	**11**	P	**P**	**16 12 17.7**	**-1.6**	
I17K	baz=340,SNR=46			S	**S**	**16 22 02.1**	**-0.9**	
	baz=340							
PRP	**Porcupine Dome**	**76.10**	**4**	IAmb	IAmb	16 12 28.3		
	comp=Z,70nm,2.0s							
PRP				IAMs_20	IAMs_20	16 47 44.7		
	comp=Z,5µm,22.0s							
PRP	**Porcupine Dome**	**76.10**	**4**	P	**P**	**16 12 17.3**	**-2.3**	
PRP	baz=352			S	**S**	**16 22 02.5**	**-0.9**	
	baz=352							
H31M	**Peel River**	**76.10**	**360**	IAmb	IAmb	16 12 32.9		
	comp=Z,70nm,1.2s							
H31M	**Peel River**	**76.10**	**360**	P	**P**	**16 12 17.5**	**-1.9**	
H31M	baz=1.0,SNR=27			S	**S**	**16 22 03.0**	**-0.3**	
	baz=1.0							
I23K	**Minto, Yukon-K**	**76.19**	**6**	IAMs_20	IAMs_20	16 52 24.3		
	comp=Z,7µm,20.0s							
I23K	**Minto, Yukon-K**	**76.19**	**6**	P	**P**	**16 12 18.3**	**-1.7**	
I23K	baz=349,SNR=15			S	**S**	**16 22 05.1**	**+0.9**	
	baz=349							
I27K	**Kandik River**	**76.20**	**3**	P	**P**	**16 12 18.1**	**-1.9**	
I27K	baz=355,SNR=13			S	**S**	**16 22 06.0**	**+1.7**	
	baz=355							
POKR	**Poker Plat Res**	**76.37**	**5**	P	**P**	**16 12 19.7**	**-1.3**	
POKR	baz=350,SNR=33			S	**S**	**16 22 06.1**	**-0.1**	
	baz=350							
I28M	**Miner Creek**	**76.40**	**2**	P	**P**	**16 12 19.5**	**-1.8**	
I28M	baz=356,SNR=28			S	**S**	**16 22 07.2**	**+0.5**	
	baz=356							
GGN	**Saint George**	**76.43**	**317**	IAmb	IAmb	16 12 26.3		
	comp=Z,90nm,1.3s							
I26K	**Coal Creek Min**	**76.43**	**3**	P	**P**	**16 12 19.2**	**-2.1**	
I26K	baz=354			S	**S**	**16 22 06.4**	**-0.4**	
	baz=354							
I29M	**Ogilvie Camp,**	**76.53**	**1**	IAmb	IAmb	16 12 36.2		
	comp=Z,107nm,1.6s							
I29M	**Ogilvie Camp,**	**76.53**	**1**	P	**P**	**16 12 20.1**	**-1.8**	
	baz=358,SNR=30							
COLA	**College**	**76.58**	**5**	P	**P**	**16 12 20.4**	**-1.7**	
COLA				IAmb	IAmb	16 12 26.5		
	comp=Z,61nm,1.0s							
COLA	**College**	**76.58**	**5**	P	**P**	**16 12 21.7**	**-0.4**	
COLA	**College**	**76.58**	**5**	P	**P**	**16 12 20.5**	**-1.7**	
COLA				pmax	pmax			
	comp=Z,61nm,1.0s							
COLA				MLR	MLR			
	comp=Z,4µm,22.0s							
COLA	**College**	**76.58**	**5**	P	**P**	**16 12 20.1**	**-2.0**	
	baz=350							
COLA	**College**	**76.58**	**5**	⇑P	**P**	**16 12 21.7**	**-0.4**	
LMQ	**La Malbaie**	**76.60**	**321**	IAmb	IAmb	16 12 26.6		
	comp=Z,53nm,1.1s							
J16K	**Anvik River**	**76.67**	**11**	IAMs_20	IAMs_20	16 51 37.2		
	comp=Z,8µm,21.0s							
J16K	**Anvik River**	**76.67**	**11**	P	**P**	**16 12 20.6**	**-2.1**	
J16K	baz=340,SNR=57			S	**S**	**16 22 08.8**	**-0.6**	
	baz=340							
J19K	**Poorman**	**76.68**	**9**	IAmb	IAmb	16 12 27.7		
	comp=Z,78nm,1.1s							
J19K				IAMs_20	IAMs_20	16 52 48.4		
	comp=Z,5µm,21.0s							
J19K	**Poorman**	**76.68**	**9**	P	**P**	**16 12 21.5**	**-1.2**	
J19K	baz=344,SNR=44			S	**S**	**16 22 10.8**	**+1.2**	
	baz=344							
J14K	**Nanvaranak Lak**	**76.68**	**13**	IAMs_20	IAMs_20	16 51 52.7		
	comp=Z,7µm,19.0s							
J14K	**Nanvaranak Lak**	**76.68**	**13**	P	**P**	**16 12 21.1**	**-1.6**	
J14K	baz=338			S	**S**	**16 22 09.4**	**-0.1**	
	baz=338							
I30M	**Mount Dempster**	**76.69**	**0**	P	**P**	**16 12 20.7**	**-2.2**	
I30M	baz=359,SNR=67			S	**S**	**16 22 09.3**	**-0.6**	
	baz=359							
F64A	**Sherman**	**76.73**	**319**	IAmb	IAmb	16 12 27.6		
	comp=Z,57nm,1.2s							
F64A				IAMs_20	IAMs_20	16 47 15.0		
	comp=Z,6µm,21.0s							
ILAR	**Eielson Array**	**76.75**	**5**	P	**P**	**16 12 22.7**	**-0.5**	
	comp=Z,8.5nm,1.0s,baz=340,slow=1.7,SNR=43							
ILAR				PP	**PP**	**16 15 19.7**	**+4.8**	
	comp=Z,5.8nm,1.0s,baz=355,slow=7.6,SNR=6.7							
ILAR				PKKPbc	**PKKPbc**	**16 31 32.5**	**-0.4**	
	comp=Z,0.5nm,0.9s,baz=201,slow=2.6,SNR=5.4							
ILAR				LR	LR	16 48 38.4		
	comp=Z,3µm,21.8s,baz=312,slow=38							
	comp=Z,8.5nm,1.0s							
G65A	**Princeton**	**76.76**	**318**	IAMs_20	IAMs_20	16 47 39.8		
	comp=Z,5µm,20.0s							
LDAQ	**Lac Daran**	**76.76**	**322**	IAmb	IAmb	16 12 28.5		
	comp=Z,78nm,1.5s							
NEA2	**Nenana**	**76.77**	**6**	IAMs_20	IAMs_20	16 51 46.4		
	comp=Z,5µm,21.0s							
NEA2	**Nenana**	**76.77**	**6**	P	**P**	**16 12 21.6**	**-1.6**	
	baz=349,SNR=24			S	**S**	**16 22 10.3**	**-0.2**	
NEA2	baz=349							
E62A	**Clayton Lake**	**76.82**	**320**	P	**P**	**16 12 23.2**	**-0.7**	
E62A				IAmb	IAmb	16 12 27.8		
	comp=Z,70nm,1.1s							
BBKI	**Banjar Baru**	**76.90**	**105**	P	**P**	**16 12 24.3**	**-0.4**	
	comp=Z,3µmcomp=Z,52nm,1.0s							
J25K	**Salcha River,**	**77.01**	**4**	IAMs_20	IAMs_20	16 51 14.7		
	comp=Z,5µm,21.0s							
J25K	**Salcha River,**	**77.01**	**4**	P	**P**	**16 12 23.1**	**-1.6**	
	baz=352,SNR=9.0							
EMMW	**East Machias**	**77.03**	**317**	IAMs_20	IAMs_20	16 49 37.0		
	comp=Z,5µm,19.0s							
J18K	**Innoko River**	**77.05**	**10**	IAmb	IAmb	16 12 29.8		
	comp=Z,65nm,1.3s							
J18K				IAMs_20	IAMs_20	16 50 57.2		
	comp=Z,7µm,21.0s							
J18K	**Innoko River**	**77.05**	**10**	P	**P**	**16 12 23.4**	**-1.5**	
	baz=343							
J18K				S	**S**	**16 22 14.9**	**+1.2**	
	baz=343							
BKB	**Balikpapan**	**77.06**	**102**	IAMs_20	IAMs_20	16 51 58.5		
	comp=Z,6µm,20.0s							
BPAW	**Bear Paw Mtn.**	**77.08**	**7**	IAmb	IAmb	16 12 29.4		
	comp=Z,66nm,1.1s							
BPAW				IAMs_20	IAMs_20	16 51 19.8		
	comp=Z,6µm,21.0s							
BPAW	**Bear Paw Mtn.**	**77.08**	**7**	P	**P**	**16 12 23.4**	**-1.6**	
	baz=348,SNR=18							
BPAW				S	**S**	**16 22 12.6**	**-1.5**	
	baz=348							
HDA	**Harding Lake**	**77.11**	**5**	IAmb	IAmb	16 12 28.7		
	comp=Z,38nm,1.0s							
HDA				IAMs_20	IAMs_20	16 49 46.4		
	comp=Z,5µm,22.0s							
HDA	**Harding Lake**	**77.11**	**5**	P	**P**	**16 12 23.3**	**-1.8**	
	baz=351,SNR=20							
HDA				S	**S**	**16 22 13.2**	**-1.1**	
	baz=351							
CHUM	**Lake Minchumin**	**77.16**	**8**	P	**P**	**16 12 22.7**	**-2.7**	
	baz=347							
CHUM				S	**S**	**16 22 16.0**	**+1.2**	
	baz=347							
FCC	**Fort Churchill**	**77.22**	**339**	IAmb	IAmb	16 12 30.4		
	comp=Z,60nm,1.1s							
K13K	**Kusilvak Mount**	**77.24**	**14**	IAMs_20	IAMs_20	16 50 25.5		
	comp=Z,5µm,21.0s							
K13K	**Kusilvak Mount**	**77.24**	**14**	P	**P**	**16 12 23.0**	**-2.9**	
	baz=337							
K13K				S	**S**	**16 22 15.5**	**-0.2**	
	baz=337							
J30M	**Hart River**	**77.34**	**0**	IAmb	IAmb	16 12 41.7		
	comp=Z,64nm,1.1s							
J30M	**Hart River**	**77.34**	**0**	P	**P**	**16 12 24.5**	**-2.1**	
	baz=359,SNR=33							
J30M				S	**S**	**16 22 17.9**	**+0.9**	
	baz=359							
J29N	**Klondike Camp**	**77.44**	**1**	IAmb	IAmb	16 12 31.8		
	comp=Z,45nm,1.1s							
J29N				IAMs_20	IAMs_20	16 51 37.0		
	comp=Z,5µm,22.0s							
J29N	**Klondike Camp**	**77.44**	**1**	P	**P**	**16 12 24.7**	**-2.5**	
	baz=358,SNR=13							
K15K	**Wolf Creek Mou**	**77.45**	**12**	IAMs_20	IAMs_20	16 50 60.0		
	comp=Z,5µm,20.0s							
K15K	**Wolf Creek Mou**	**77.45**	**12**	P	**P**	**16 12 25.3**	**-1.8**	
	baz=340							
K15K				S	**S**	**16 22 15.7**	**-2.3**	
	baz=340							
K20K	**Telida**	**77.48**	**8**	IAmb	IAmb	16 12 32.0		
	comp=Z,63nm,1.0s							
K20K	**Telida**	**77.48**	**8**	P	**P**	**16 12 25.7**	**-1.6**	
	baz=345,SNR=38							
K20K				S	**S**	**16 22 18.3**	**-0.1**	
	baz=345							
K17K	**Iditarod**	**77.55**	**11**	IAMs_20	IAMs_20	16 50 18.5		
	comp=Z,7µm,20.0s							
K17K	**Iditarod**	**77.55**	**11**	P	**P**	**16 12 25.9**	**-1.8**	
	baz=342							
KTH	**Kantishna Hill**	**77.62**	**7**	IAmb	IAmb	16 12 32.5		
	comp=Z,63nm,1.0s							
KTH				IAMs_20	IAMs_20	16 51 56.2		
	comp=Z,5µm,20.0s							
MCK	**McKinley**	**77.62**	**6**	IAmb	IAmb	16 12 32.0		
	comp=Z,56nm,1.2s							
MCK				IAMs_20	IAMs_20	16 51 58.1		
	comp=Z,5µm,22.0s							
MCK	**McKinley**	**77.62**	**6**	P	**P**	**16 12 25.9**	**-2.2**	
	baz=349,SNR=14							
SCRK	**Sand Creek**	**77.72**	**4**	IAmb	IAmb	16 12 33.4		
	comp=Z,56nm,1.1s							
SCRK	**Sand Creek**	**77.72**	**4**	P	**P**	**16 12 26.6**	**-2.1**	
	baz=353,SNR=36							
TRF	**Thorofare Moun**	**77.78**	**7**	IAmb	IAmb	16 12 44.0		
	comp=Z,63nm,1.4s							
TRF	**Thorofare Moun**	**77.78**	**7**	P	**P**	**16 12 27.3**	**-1.9**	
	baz=348,SNR=7.4							
K24K	**Donnelly Dome**	**77.79**	**5**	P	**P**	**16 12 27.5**	**-1.5**	
	baz=352,SNR=45							
DAWY	**Dawson**	**77.80**	**2**	IAmb	IAmb	16 12 33.3		
	comp=Z,60nm,1.0s							
DAWY	**Dawson**	**77.80**	**2**	P	**P**	**16 12 27.2**	**-1.9**	
DAWY	baz=357,SNR=44			S	**S**	**16 22 23.4**	**+1.5**	
	baz=357							
RIDG	**Independent Ri**	**77.91**	**4**	P	**P**	**16 12 28.1**	**-1.6**	
	baz=353,SNR=18							
RND	**Reindeer**	**77.95**	**6**	IAmb	IAmb	16 12 33.2		
	comp=Z,51nm,1.0s							
RND				IAMs_20	IAMs_20	16 52 29.8		
	comp=Z,6µm,21.0s							
YKAW3	**Yellowknife Wh**	**77.96**	**350**	IAmb	IAmb	16 12 33.9		
	comp=Z,41nm,1.1s							
YKAW1	**Yellowknife Wh**	**78.02**	**350**	IAmb	IAmb	16 12 34.2		
	comp=Z,44nm,1.1s							
YKA	**Yellowknife Ar**	**78.03**	**350**	P	**P**	**16 12 29.1**	**-1.2**	
	comp=Z,18nm,1.0s,baz=8.3,slow=5.6,SNR=63							
YKA				LR	LR	16 48 26.7		
	comp=Z,6µm,19.7s,baz=10,slow=37							
	comp=Z,18nm,1.0s							
YKA	**Yellowknife Ar**	**78.03**	**350**	P	**P**	**16 12 29.2**	**-1.1**	
L15K	**Ungalak Mounta**	**78.04**	**12**	P	**P**	**16 12 29.4**	**-1.0**	
	baz=340							
L15K				S	**S**	**16 22 25.4**	**+1.0**	
	baz=340							
K29M	**Barlow Dome**	**78.06**	**1**	IAmb	IAmb	16 12 35.2		
	comp=Z,62nm,1.0s							
K29M	**Barlow Dome**	**78.06**	**1**	P	**P**	**16 12 28.8**	**-1.8**	
	baz=358,SNR=49							
L17K	**Donlin**	**78.11**	**11**	P	**P**	**16 12 30.1**	**-0.6**	
	baz=342							
L17K				S	**S**	**16 22 27.2**	**+2.1**	
	baz=342							
PPLA	**Purkeypile**	**78.14**	**8**	IAmb	IAmb	16 12 46.5		
	comp=Z,45nm,1.1s							
PPLA				IAMs_20	IAMs_20	16 50 46.8		
	comp=Z,5µm,21.0s							
PPLA	**Purkeypile**	**78.14**	**8**	P	**P**	**16 12 30.1**	**-1.1**	
	baz=347,SNR=8.1							
L14K	**Kuka Creek**	**78.15**	**13**	IAmb	IAmb	16 12 35.8		
	comp=Z,74nm,1.1s							
L14K				IAMs_20	IAMs_20	16 47 49.4		
	comp=Z,5µm,22.0s							
L14K	**Kuka Creek**	**78.15**	**13**	P	**P**	**16 12 30.0**	**-1.0**	
	baz=339,SNR=33							
WRGLY	**Wrigley**	**78.23**	**354**	P	**P**	**16 12 29.8**	**-1.6**	
	baz=9.7,SNR=21							
L18K	**Granite Mounta**	**78.25**	**10**	IAMs_20	IAMs_20	16 52 03.9		
	comp=Z,7µm,21.0s							
L18K	**Granite Mounta**	**78.25**	**10**	P	**P**	**16 12 29.9**	**-1.7**	
	baz=343							
G62A	**West of Eustis**	**78.29**	**319**	IAmb	IAmb	16 12 37.4		
	comp=Z,66nm,1.3s							
MAYO	**Mayo, Yukon**	**78.32**	**0**	P	**P**	**16 12 30.4**	**-1.6**	
	baz=360,SNR=39							
L16K	**Owhat River**	**78.33**	**11**	IAmb	IAmb	16 12 36.9		
	comp=Z,45nm,1.1s							
L16K				IAMs_20	IAMs_20	16 52 38.2		
	comp=Z,7µm,20.0s							
L16K	**Owhat River**	**78.33**	**11**	P	**P**	**16 12 30.3**	**-1.7**	
	baz=341,SNR=20							
M11K	**Mekoryuk**	**78.36**	**15**	IAMs_20	IAMs_20	16 52 46.3		
	comp=Z,5µm,20.0s							
M11K	**Mekoryuk**	**78.36**	**15**	P	**P**	**16 12 30.5**	**-1.7**	
	baz=336							
MPSI	**Mapaga**	**78.37**	**99**	P	**P**	**16 12 32.7**	**-0.2**	
	comp=Z,2µmcomp=Z,838nmcomp=Z,66nm,1.1s							
DHY	**Denali Highway**	**78.40**	**5**	IAMs_20	IAMs_20	16 53 01.5		
	comp=Z,5µm,22.0s							
DHY	**Denali Highway**	**78.40**	**5**	P	**P**	**16 12 30.8**	**-1.8**	
	baz=351,SNR=10							
L19K	**White Mountain**	**78.53**	**9**	IAmb	IAmb	16 12 37.9		
	comp=Z,62nm,1.1s							
L19K				IAMs_20	IAMs_20	16 51 13.2		
	comp=Z,6µm,20.0s							
L19K	**White Mountain**	**78.53**	**9**	P	**P**	**16 12 31.2**	**-2.0**	
	baz=345							
WAT1	**Susitna Watana**	**78.55**	**6**	P	**P**	**16 12 30.8**	**-2.5**	
	baz=350							
TOLI2	**Tolitoli**	**78.57**	**98**	P	**P**	**16 12 35.1**	**+1.0**	
PAX	**Paxson**	**78.63**	**5**	P	**P**	**16 12 31.6**	**-2.1**	
	baz=352,SNR=7.7							
L22K	**Petersville**	**78.65**	**7**	IAmb	IAmb	16 12 47.8		
	comp=Z,57nm,1.3s							
L22K				IAMs_20	IAMs_20	16 52 57.2		
	comp=Z,7µm,20.0s							
DAV	**Davao City (W)**	**78.66**	**90**	IAMs_20	IAMs_20	16 50 35.8		
	comp=Z,5µm,22.0s							
L26K	**Log Cabin Wild**	**78.70**	**4**	P	**P**	**16 12 32.0**	**-2.1**	
	baz=354,SNR=12							
L27K	**Beaver Creek,**	**78.73**	**3**	IAMs_20	IAMs_20	16 50 54.2		
	comp=Z,5µm,21.0s							
L27K	**Beaver Creek,**	**78.73**	**3**	P	**P**	**16 12 32.6**	**-1.7**	
	baz=355,SNR=20							
MENT	**Mentasta**	**78.77**	**4**	IAmb	IAmb	16 12 41.3		
	comp=Z,51nm,1.0s							
MENT	**Mentasta**	**78.77**	**4**	P	**P**	**16 12 34.6**	**+0.1**	
L29M	**L29M**	**78.79**	**1**	P	**P**	**16 12 32.6**	**-2.0**	
	baz=358							
CUT	**Chulitna**	**78.81**	**7**	IAmb	IAmb	16 13 12.5		
	comp=Z,43nm,1.0s							
CUT				IAMs_20	IAMs_20	16 52 52.6		
	comp=Z,4µm,20.0s							
CUT	**Chulitna**	**78.81**	**7**	P	**P**	**16 12 32.5**	**-2.2**	
	baz=348							
M14K	**Bethel**	**78.83**	**13**	IAmb	IAmb	16 12 39.6		
	comp=Z,68nm,1.1s							
M14K	**Bethel**	**78.83**	**13**	P	**P**	**16 12 33.1**	**-1.6**	
	baz=339,SNR=19							
M19K	**Big River Lodg**	**78.85**	**9**	IAMs_20	IAMs_20	16 51 22.7		
	comp=Z,6µm,20.0s							
M19K	**Big River Lodg**	**78.85**	**9**	P	**P**	**16 12 32.0**	**-2.9**	
	baz=345							
WAT6	**Susitna Watana**	**78.86**	**6**	P	**P**	**16 12 33.1**	**-2.0**	
	baz=350,SNR=24							
M13K	**Dall Lake**	**78.89**	**14**	IAMs_20	IAMs_20	16 50 36.1		
	comp=Z,6µm,22.0s							
M13K	**Dall Lake**	**78.89**

baz=347,SNR=23
I63A Otisfield 79.12 318 IAMs_20 IAMs_20 16 50 01.3
comp=Z,6µm,20.0s
HARP HAARP 79.22 5 P P 16 12 34.7 -2.3
baz=352,SNR=9.1
SHEM Shemya Is, Ala 79.23 28 LR LR 16 52 39.8
comp=Z,6µm,18.1s,baz=316,slow=40
M26K Nabesna, AK 79.34 4 P P 16 12 35.7 -1.9
baz=354,SNR=14
M30M Minto, Yukon 79.34 1 P P 16 12 35.2 -2.4
baz=359,SNR=14
BVCY Beaver Creek 79.42 3 P P 16 12 35.5 -2.5
baz=356,SNR=13
M27K Edge Creek, AK 79.43 3 IAmb IAmb 16 12 43.2
comp=Z,76nm,1.2s
M27K Edge Creek, AK 79.43 3 P P 16 12 35.8 -2.4
baz=355,SNR=24
M24K Tolsona, Glenn 79.44 5 P P 16 12 35.8 -2.4
baz=352,SNR=16
M29M Somme Creek 79.45 1 P P 16 12 35.4 -2.9
baz=358,SNR=10
M22K Willow 79.47 7 P P 16 12 36.1 -2.1
baz=348
MMSI Mamuju 79.51 102 P P 16 12 41.9 +2.6
comp=Z,1µmcomp=Z,70nm,0.9s
GHO Glory Hole Cre 79.56 6 IAmb IAmb 16 12 51.1
comp=Z,43nm,1.0s
GHO IAMs_20 IAMs_20 16 50 42.3
comp=Z,4µm,20.0s
SML Sawmill 79.58 6 IAmb IAmb 16 12 42.8
comp=Z,55nm,1.0s
SML IAMs_20 IAMs_20 16 50 21.7
comp=Z,5µm,22.0s
SML Sawmill 79.58 6 P P 16 12 36.5 -2.4
baz=350,SNR=15
VLDQ Val d'Or 79.59 325 IAmb IAmb 16 12 43.7
comp=Z,84nm,1.2s
N16K Nishlik Lake 79.62 11 P P 16 12 37.2 -1.9
baz=342,SNR=13
I62A Tamworth 79.64 319 IAMs_20 IAMs_20 16 50 16.9
comp=Z,5µm,20.0s
M23K Glacier View 79.64 6 P P 16 12 37.3 -2.0
baz=350
JAGI Jajag, Banyuwa 79.65 109 P P 16 12 40.0 +0.1
N14K Kuskokwak Cree 79.65 13 IAMs_20 IAMs_20 16 53 45.2
comp=Z,6µm,20.0s
N14K Kuskokwak Cree 79.65 13 P P 16 12 37.3 -2.0
baz=340
LBNH Lisbon 79.69 319 IAmb IAmb 16 12 44.5
comp=Z,70nm,1.1s
LBNH IAMs_20 IAMs_20 16 49 55.2
comp=Z,4µm,19.0s
LBNH Lisbon 79.69 319 ⇓P P 16 12 41.3 +1.5
SUA Susitna One 79.69 7 IAmb IAmb 16 12 43.7
comp=Z,90nm,1.1s
SUA IAMs_20 IAMs_20 16 53 39.8
comp=Z,5µm,19.0s
SUA Susitna One 79.69 7 P P 16 12 37.6 -2.1
baz=348,SNR=22
N15K Kwethluk River 79.69 12 IAMs_20 IAMs_20 16 52 20.3
comp=Z,5µm,22.0s
N15K Kwethluk River 79.69 12 P P 16 12 38.1 -1.5
baz=341
M31M Drury Creek, Y 79.72 359 IAmb IAmb 16 12 44.2
comp=Z,59nm,1.1s
M31M Drury Creek, Y 79.72 359 P P 16 12 37.6 -2.0
baz=1.0,SNR=21
PMR Palmer 79.72 7 IAmb IAmb 16 12 43.7
comp=Z,52nm,1.1s
PMR Palmer 79.72 7 P P 16 12 39.6 0.0
PMR Palmer 79.72 7 P P 16 12 38.4 -1.2
baz=349,SNR=11
SPCR Spurr Chakacha 79.79 8 P P 16 12 38.9 -1.2
baz=347
N17K Nushagak Hills 79.81 11 IAMs_20 IAMs_20 16 51 37.1
comp=Z,7µm,22.0s
N17K Nushagak Hills 79.81 11 P P 16 12 38.2 -1.9
baz=343
N18K Kilae Creek 79.84 10 IAMs_20 IAMs_20 16 53 12.0
comp=Z,5µm,20.0s
N18K Kilae Creek 79.84 10 P P 16 12 37.7 -2.6
baz=344,SNR=10
MRSI Marisa 79.87 97 P P 16 12 41.1 -0.1
N19K Bonanza Creek 79.90 9 IAMs_20 IAMs_20 16 53 06.5
comp=Z,5µm,22.0s
N19K Bonanza Creek 79.90 9 P P 16 12 38.3 -2.4
baz=345,SNR=44
KNK Knik Glacier 79.95 6 IAmb IAmb 16 12 45.4
comp=Z,72nm,1.1s
KNK IAMs_20 IAMs_20 16 50 53.7
comp=Z,5µm,21.0s
KNK Knik Glacier 79.95 6 P P 16 12 38.6 -2.4
baz=350,SNR=8.1
N25K Chitina, Valde 80.05 4 P P 16 12 39.2 -2.3
baz=353
YUK3 Moose Creek 80.07 2 P P 16 12 39.7 -2.1
baz=356,SNR=35
KLU Klutina 80.07 5 IAMs_20 IAMs_20 16 53 53.8
comp=Z,5µm,21.0s
KLU Klutina 80.07 5 P P 16 12 39.5 -2.1
baz=352,SNR=36
RC01 Rabbit Creek A 80.16 7 IAmb IAmb 16 12 46.1
comp=Z,62nm,0.9s
RC01 Rabbit Creek A 80.16 7 P P 16 12 39.3 -2.7
baz=349,SNR=15
HNH Hanover 80.25 319 IAMs_20 IAMs_20 16 50 37.1
comp=Z,5µm,19.0s
CAPN Captain Cook N 80.33 8 P P 16 12 41.2 -1.7
baz=348
MCARA McCarthy VSAT 80.35 4 P P 16 12 41.4 -1.7
baz=354
SPIA Saint Paul Isl 80.35 18 IAMs_20 IAMs_20 16 54 49.2
comp=Z,6µm,20.0s
SPIA Saint Paul Isl 80.35 18 P P 16 12 41.3 -1.8
baz=333
O14K Tigyukauivet M 80.36 13 IAMs_20 IAMs_20 16 52 03.8
comp=Z,5µm,21.0s
O14K Tigyukauivet M 80.36 13 P P 16 12 41.5 -1.5
baz=340
GAC Glen Almond 80.42 322 ⇓P P 16 12 46.5 +2.9
TTSI Tana Toraja 80.44 102 P P 16 12 44.6 +0.4
comp=Z,31nm,1.0s
N31M Braeburn, Yuko 80.44 0 IAmb IAmb 16 12 57.0
comp=Z,61nm,1.2s
N31M Braeburn, Yuko 80.44 0 P P 16 12 41.4 -2.2
baz=360
DIV Divide 80.44 5 IAmb IAmb 16 12 48.2
comp=Z,92nm,1.0s
DIV IAMs_20 IAMs_20 16 50 47.6
comp=Z,4µm,20.0s
N30M Aishikik Lake 80.46 1 P P 16 12 41.1 -2.6
baz=359
O19K Port Alsworth 80.52 9 IAMs_20 IAMs_20 16 53 35.9
comp=Z,6µm,22.0s
O19K Port Alsworth 80.52 9 P P 16 12 41.7 -2.3
baz=345
O17K Koliganek Bris 80.54 11 P P 16 12 42.3 -1.7
baz=343,SNR=12
YUK4 Talbot Arm 80.55 2 P P 16 12 40.7 -3.7
baz=358,SNR=16
O16K Kokwok River B 80.56 11 IAMs_20 IAMs_20 16 53 45.1
comp=Z,5µm,21.0s
O16K Kokwok River B 80.56 11 P P 16 12 42.3 -1.9
baz=342
YUK8 Steele Glacier 80.58 2 P P 16 12 41.7 -3.0
baz=357
GLI Glacier Island 80.59 6 IAMs_20 IAMs_20 16 51 05.5
comp=Z,5µm,22.0s
GLI Glacier Island 80.59 6 P P 16 12 43.2 -1.2
baz=351
BCX Boston College 80.62 317 IAMs_20 IAMs_20 16 52 37.0
comp=Z,5µm,20.0s
J61A Chester 80.64 319 IAMs_20 IAMs_20 16 52 28.4
comp=Z,6µm,18.0s
WES Weston 80.67 317 IAMs_20 IAMs_20 16 50 03.2
comp=Z,6µm,19.0s
O15K Ungalikthiuk R 80.68 12 IAMs_20 IAMs_20 16 53 02.3
comp=Z,6µm,22.0s
O15K Ungalikthiuk R 80.68 12 P P 16 12 43.5 -1.3
baz=341
BMRM Bremner River 80.68 4 P P 16 12 43.4 -1.5
baz=353
SLKM Skilak Lake 80.68 7 IAmb IAmb 16 12 53.0
comp=Z,62nm,1.1s
SLKM IAMs_20 IAMs_20 16 54 12.9
comp=Z,5µm,19.0s
HRV Adam Dziewonsk 80.71 318 IAMs_20 IAMs_20 16 49 55.3
comp=Z,5µm,20.0s

L64A Middleborough 80.72 317 IAMs_20 IAMs_20 16 48 34.7
comp=Z,6µm,21.0s
O18K Koktuh Hills 80.73 10 P P 16 12 42.8 -2.3
baz=345
N32M Quiet Lake 80.76 359 P P 16 12 43.6 -1.7
baz=2.0
O22K Cooper Landing 80.76 7 IAMs_20 IAMs_20 16 51 41.0
comp=Z,4µm,20.0s
LONY Lake Ozonia 80.76 321 IAmb IAmb 16 12 50.2
comp=Z,53nm,1.1s
LONY IAMs_20 IAMs_20 16 47 27.6
comp=Z,5µm,22.0s
LONY Lake Ozonia 80.76 321 ⇓P P 16 12 46.3 +0.7
CTG Chitna Glacier 80.85 3 P P 16 12 43.7 -2.2
baz=356,SNR=5.8
M65A Busby, Falmout 80.88 317 IAMs_20 IAMs_20 16 49 17.8
comp=Z,6µm,20.0s
K62A Royalston 80.95 318 IAMs_20 IAMs_20 16 50 05.8
comp=Z,5µm,20.0s
YUK6 Outpost Mounta 80.96 1 P P 16 12 43.8 -2.8
baz=358
CRQM Cirque 80.97 4 IAmb IAmb 16 12 53.6
comp=Z,104nm,1.2s
CRQE Cirque 80.98 4 P P 16 12 44.7 -1.9
baz=354,SNR=9.7
TGL Tana Glacier 80.99 4 IAmb IAmb 16 13 06.2
comp=Z,55nm,1.2s
LOGN Logan Glacier 81.00 3 IAmb IAmb 16 12 51.2
comp=Z,60nm,1.1s
EYAK Cordova Ski Ar 81.02 5 IAmb IAmb 16 12 51.6
comp=Z,66nm,1.1s
EYAK IAMs_20 IAMs_20 16 53 34.9
comp=Z,6µm,20.0s
EYAK Cordova Ski Ar 81.02 5 P P 16 12 47.9 +1.3
EYAK Cordova Ski Ar 81.02 5 P P 16 12 44.9 -1.7
baz=352,SNR=8.3
GRNC Granite Creek 81.06 3 IAmb IAmb 16 12 51.6
comp=Z,54nm,1.0s
O28M Mount Upton 81.08 2 IAMs_20 IAMs_20 16 54 09.3
comp=Z,4µm,21.0s
O28M Mount Upton 81.08 2 P P 16 12 45.2 -2.2
baz=356
HYT Haines Junctio 81.09 1 IAmb IAmb 16 12 51.8
comp=Z,81nm,1.0s
HYT Haines Junctio 81.09 1 P P 16 12 45.3 -1.9
baz=358,SNR=27
P16K Nushagak River 81.12 12 IAMs_20 IAMs_20 16 53 01.8
comp=Z,6µm,20.0s
P16K Nushagak River 81.12 12 P P 16 12 45.2 -1.9
baz=342,SNR=11
HIN Hinchinbrook I 81.12 6 IAMs_20 IAMs_20 16 51 22.5
comp=Z,6µm,22.0s
SEW Seward 81.15 7 IAmb IAmb 16 12 54.2
comp=Z,55nm,1.2s
SEW IAMs_20 IAMs_20 16 51 54.5
comp=Z,5µm,20.0s
SEW Seward 81.15 7 P P 16 12 45.5 -1.8
baz=349
O30N Mendenhall 81.16 0 P P 16 12 45.5 -1.9
baz=360,SNR=9.5
P18K Big Mountain, 81.18 10 P P 16 12 45.1 -2.5
baz=345
P19K Oil Pt 81.18 9 IAMs_20 IAMs_20 16 54 32.4
comp=Z,6µm,22.0s
P19K Oil Pt 81.18 9 P P 16 12 45.6 -2.0
baz=346
P17K Kvichak River 81.19 11 IAMs_20 IAMs_20 16 53 30.8
comp=Z,4µm,21.0s
P17K Kvichak River 81.19 11 P P 16 12 45.9 -1.7
baz=344
RAGM Ragged Mountai 81.25 5 IAMs_20 IAMs_20 16 54 23.0
comp=Z,4µm,21.0s
WHY Whitehorse 81.27 360 IAmb IAmb 16 13 43.3
comp=Z,84nm,1.5s
WHY Whitehorse 81.27 360 P P 16 12 46.1 -2.0
baz=0.6
BERG Berg Lake 81.31 4 IAMs_20 IAMs_20 16 54 29.2
comp=Z,4µm,21.0s
L61B Northampton 81.34 318 IAMs_20 IAMs_20 16 50 16.9
comp=Z,5µm,21.0s
BRLK Bradley Lake 81.34 8 IAmb IAmb 16 12 52.2
comp=Z,56nm,1.1s
BRLK IAMs_20 IAMs_20 16 54 27.8
comp=Z,6µm,19.0s
KOTAN Kotaneelee Air 81.35 354 P P 16 12 46.5 -1.9
baz=9.2,SNR=14
HOM Homer 81.36 8 IAMs_20 IAMs_20 16 52 54.1
comp=Z,4µm,20.0s
HOM Homer 81.36 8 P P 16 12 46.7 -1.7
baz=347
BRSE Bradley Lake S 81.38 8 P P 16 12 46.4 -2.2
P23K Montague Islan 81.44 6 IAMs_20 IAMs_20 16 51 51.0
comp=Z,4µm,20.0s
P23K Montague Islan 81.44 6 P P 16 12 46.3 -2.5
baz=351
CNPM China Poot 81.54 8 IAMs_20 IAMs_20 16 54 53.7
comp=Z,5µm,22.0s
J59A Piesco 81.55 320 P P 16 12 49.1 -0.8
J59A IAmb IAmb 16 12 54.7
comp=Z,47nm,1.0s
J59A IAMs_20 IAMs_20 16 51 22.5
comp=Z,4µm,19.0s
SNH Sunshine Point 81.56 4 IAMs_20 IAMs_20 16 54 01.2
comp=Z,5µm,21.0s
O29M Mount Kennedy 81.60 2 P P 16 12 47.7 -2.2
baz=358
BGLC Bering Glacier 81.60 4 P P 16 12 47.7 -2.0
baz=354
MESA MESA 81.61 3 IAmb IAmb 16 12 54.8
comp=Z,69nm,1.1s
MESA IAMs_20 IAMs_20 16 52 54.3
comp=Z,4µm,22.0s
MESA MESA 81.61 3 P P 16 12 47.7 -2.3
baz=355
SUCK Suckling Hills 81.62 4 IAMs_20 IAMs_20 16 54 47.7
comp=Z,5µm,21.0s
KAPI Kappang 81.63 103 P P 16 12 51.5 +0.9
KAPI Kappang 81.63 103 P P 16 12 49.9 -0.7
Q16K King Salmon 81.66 11 P P 16 12 47.9 -2.1
baz=344,SNR=7.9
WTLY Watson Lake, Y 81.66 357 IAmb IAmb 16 12 54.7
comp=Z,42nm,1.1s
WTLY Watson Lake, Y 81.66 357 P P 16 12 47.9 -2.2
baz=5.4,SNR=14
P33M Teslin, Yukon 81.69 359 P P 16 12 47.7 -2.6
baz=2.2,SNR=6.4
KAIM Kayak Island 81.73 5 P P 16 12 47.7 -2.7
baz=353
M63A Gales Ferry 81.74 317 IAMs_20 IAMs_20 16 54 36.6
comp=Z,5µm,18.0s
PCA Pinnacle 81.76 2 IAMs_20 IAMs_20 16 52 52.2
comp=Z,5µm,21.0s
PINM Pinnacle 81.76 2 P P 16 12 47.7 -3.0
baz=356
P30M Million Dollar 81.80 1 P P 16 12 48.5 -2.4
baz=359
Q19K Cape Douglas, 81.83 9 P P 16 12 49.1 -2.0
baz=346
Q23K Middleton Isla 82.09 6 P P 16 12 50.3 -2.0
baz=352
Q17K Contact Creek 82.17 11 P P 16 12 50.8 -2.1
baz=344
Q20K Shuyak Island 82.30 9 P P 16 12 51.2 -2.2
baz=347
SYI Shuyak Island 82.30 9 IAMs_20 IAMs_20 16 53 19.9
comp=Z,5µm,22.0s
DELO Deloro Mine 82.32 322 IAmb IAmb 16 12 58.5
comp=Z,48nm,1.2s
P32M Atlin 82.33 359 P P 16 12 51.1 -2.6
baz=1.5
J57A Williamstown 82.34 321 IAMs_20 IAMs_20 16 52 55.4
comp=Z,5µm,20.0s
R33M Jennings River 82.47 358 IAMs_20 IAMs_20 16 52 50.7
comp=Z,5µm,21.0s
R33M Jennings River 82.47 358 P P 16 12 51.8 -2.6
baz=3.7
BUKO Buck Lake 82.47 324 IAmb IAmb 16 12 58.6
comp=Z,43nm,1.1s
SKAG Skagway 82.47 360 P P 16 12 52.5 -1.8
baz=0.2
KKSI Kolaka, Sulawe 82.56 101 P P 16 12 56.1 +0.6
comp=Z,2µmcomp=Z,2µmcomp=Z,79nm,0.9s
R16K Pilot Point 82.58 12 P P 16 12 53.0 -1.9
baz=343
PLAI Plampang 82.59 107 P P 16 12 55.3 -0.3
PLAI Plampang 82.59 107 P P 16 12 57.4 +1.8
comp=Z,60nm,1.4s

PLK4 Peulik 4 82.71 11 IAMs_20 IAMs_20 16 55 39.8
comp=Z,5µm,20.0s
R17L Mt. Peulik Vol 82.71 11 P P 16 12 53.6 -2.0
baz=344
L59A Walton 82.75 319 P P 16 12 55.4 -0.7
L59A IAMs_20 IAMs_20 16 49 21.2
comp=Z,6µm,22.0s
SADO Sadowa 82.85 323 LR LR 16 50 42.2
comp=Z,3µm,19.2s,baz=68,slow=36
SADO Sadowa 82.85 323 IAmb IAmb 16 13 01.2
comp=Z,113nm,1.9s
FFC Flin Flon 82.86 341 P P 16 12 54.6 -1.8
FFC IAmb IAmb 16 13 00.3
comp=Z,44nm,1.0s
FFC Flin Flon 82.86 341 IAMs_20 IAMs_20 16 54 41.8
comp=Z,6µm,19.0s
FFC Flin Flon 82.86 341 P P 16 12 54.6 -1.8
FFC pmax pmax
comp=Z,44nm,1.0s
FFC MLR MLR
comp=Z,6µm,19.0s
PAL Palisades 83.01 318 IAmb IAmb 16 13 01.7
comp=Z,42nm,1.2s
PAL IAMs_20 IAMs_20 16 51 24.2
comp=Z,4µm,18.0s
KDAK Kodiak Island 83.08 9 P P 16 12 57.0 -0.5
comp=Z,50nm,0.9s,baz=299,slow=1.5,SNR=11
KDAK LR LR 16 54 36.0
comp=Z,4µm,21.2s,baz=334,slow=39
comp=Z,50nm,0.9s
KDAK Kodiak Island 83.08 9 P P 16 12 57.4 -0.1
KDAK Kodiak Island 83.08 9 IAMs_20 IAMs_20 16 54 23.7
comp=Z,5µm,21.0s
KDAK Kodiak Island 83.08 9 P P 16 12 57.4 -0.1
KDAK pmax pmax
comp=Z,73nm,1.1s
KDAK MLR MLR
comp=Z,5µm,21.0s
KDAK Kodiak Island 83.08 9 P P 16 12 55.4 -2.1
baz=347
K57A Scipio Center 83.10 321 IAMs_20 IAMs_20 16 48 58.4
comp=Z,4µm,22.0s
BINY Binghamton 83.22 320 IAmb IAmb 16 13 03.2
comp=Z,53nm,1.1s
BINY IAMs_20 IAMs_20 16 54 34.7
comp=Z,5µm,18.0s
BINY Binghamton 83.22 320 ⇑P P 16 12 58.5 0.0
J55A Hilton 83.34 322 IAmb IAmb 16 13 03.5
comp=Z,54nm,1.0s
DLBC Dease Lake 83.39 357 LR LR 16 55 26.3
comp=Z,3µm,19.9s,baz=320,slow=40
DLBC Dease Lake 83.39 357 P P 16 12 57.0 -2.3
baz=4.4,SNR=6.3
OHAK Old Harbor 83.54 10 P P 16 13 01.7 +1.9
OHAK Old Harbor 83.54 10 P P 16 12 57.7 -2.2
baz=346
KSPA Keystone Colle 83.58 319 IAmb IAmb 16 13 04.9
comp=Z,49nm,1.4s
R32K Eaglecrest 83.66 359 P P 16 12 58.3 -2.1
baz=0.9
S34M Telegraph Cree 83.95 358 IAMs_20 IAMs_20 16 53 15.0
comp=Z,4µm,21.0s
S34M Telegraph Cree 83.95 358 P P 16 12 59.7 -2.3
baz=3.5
S31K Pelican 83.97 0 P P 16 13 00.2 -1.8
baz=360
FALS False Pass 84.05 16 IAMs_20 IAMs_20 16 57 28.8
comp=Z,5µm,20.0s
FALS False Pass 84.05 16 P P 16 13 00.0 -2.5
baz=338
SII Sitkinak Islan 84.06 10 IAMs_20 IAMs_20 16 56 00.6
comp=Z,4µm,21.0s
SII Sitkinak Islan 84.06 10 P P 16 13 00.1 -2.6
baz=346
SDPT Sand Point 84.18 14 P P 16 13 00.9 -2.3
baz=341
UNV Unalaska Valle 84.28 18 P P 16 13 01.3 -2.4
baz=336
M57A Sunshine Farm, 84.43 320 IAmb IAmb 16 13 08.5
comp=Z,55nm,1.3s
M57A IAMs_20 IAMs_20 16 52 13.8
comp=Z,6µm,21.0s
P61A Hammonton 84.44 317 IAMs_20 IAMs_20 16 55 10.1
comp=Z,4µm,20.0s
S32K Killisnoo 84.47 359 P P 16 13 02.4 -2.2
baz=0.8
NIKH Nikolski High 84.49 20 P P 16 13 01.8 -2.9
baz=334
CHIR Chirikof Islan 84.57 11 IAMs_20 IAMs_20 16 56 02.0
comp=Z,4µm,20.0s
CHIR Chirikof Islan 84.57 11 P P 16 13 02.2 -2.9
baz=344
N58A Sunbury 84.59 319 IAmb IAmb 16 13 09.1
comp=Z,50nm,1.3s
N58A IAMs_20 IAMs_20 16 54 15.0
comp=Z,5µm,19.0s
SANI Sanana 84.59 97 P P 16 13 03.2 -2.7
SANI Sanana 84.59 97 P P 16 13 03.7 -2.2
SANI Sanana 84.59 97 ⇓P P 16 13 05.4 -0.6
SANI Sanana 84.59 97 P P 16 13 06.5 +0.6
comp=Z,74nm,1.0s
CHNA Chernabura Isl 84.84 14 P P 16 13 04.6 -1.9
baz=341
EPLO Experimental L 84.84 334 IAmb IAmb 16 13 13.7
comp=Z,46nm,1.3s
T35M Bob Quinn 84.86 357 IAmb IAmb 16 13 31.1
comp=Z,33nm,1.2s
T35M IAMs_20 IAMs_20 16 55 59.8
comp=Z,4µm,21.0s
T35M Bob Quinn 84.86 357 P P 16 13 04.5 -2.2
baz=4.2
SIT Sitka 84.88 360 P P 16 13 04.3 -2.4
baz=0.2
MVL Millersville 85.02 319 IAmb IAmb 16 13 12.1
comp=Z,72nm,1.6s
ULM Lac du Bonnet 85.06 336 P P 16 13 07.5 -0.2
comp=Z,22nm,0.9s,baz=52,slow=4.1,SNR=16
ULM LR LR 16 51 08.4
comp=Z,6µm,21.9s,baz=26,slow=36
comp=Z,22nm,0.9s
ULM Lac du Bonnet 85.06 336 IAmb IAmb 16 13 11.1
comp=Z,41nm,1.1s
T33K Petersburg 85.10 359 P P 16 13 05.4 -2.4
baz=2.1
I49A Point Hope 85.19 325 IAMs_20 IAMs_20 16 53 52.6
comp=Z,5µm,18.0s
ERPA Erie 85.26 322 IAMs_20 IAMs_20 16 55 03.7
comp=Z,5µm,18.0s
SSPA Standing Stone 85.34 320 P P 16 13 07.9 -1.4
SSPA Standing Stone 85.34 320 IAMs_20 IAMs_20 16 51 38.7
comp=Z,5µm,20.0s
SSPA Standing Stone 85.34 320 ⇓P P 16 13 09.7 +0.4
WRAK Wrangell Islan 85.48 358 IAMs_20 IAMs_20 16 56 51.5
comp=Z,4µm,19.0s
WRAK Wrangell Islan 85.48 358 P P 16 13 07.0 -2.7
baz=2.6
EDFI Ende, Flores 85.49 105 P P 16 13 11.6 +1.1
comp=Z,624nmcomp=Z,29nm,0.8s
EYMN Ely 85.51 332 IAmb IAmb 16 13 14.0
comp=Z,45nm,1.2s
PAOC Oil Creek Stat 85.57 321 IAmb IAmb 16 13 14.7
comp=Z,30nm,1.1s
BASI Baing, Sumba 85.59 107 P P 16 13 11.2 +0.4
R61A Willards 85.71 317 IAMs_20 IAMs_20 16 52 04.7
comp=Z,5µm,20.0s
U33K Whale Pass 85.81 359 IAMs_20 IAMs_20 16 54 59.0
comp=Z,4µm,22.0s
U33K Whale Pass 85.81 359 P P 16 13 08.1 -3.2
baz=2.0
U35K Hyder 85.91 357 IAMs_20 IAMs_20 16 55 52.8
comp=Z,5µm,21.0s
U35K Hyder 85.91 357 P P 16 13 09.3 -2.6
baz=4.4
K50A Casco 86.00 324 IAMs_20 IAMs_20 16 51 20.2
comp=Z,4µm,22.0s
NBPV Pedro Velho 86.01 259 eP P 16 13 12.4 -0.6
F42A Maple Grove Fa 86.02 329 IAMs_20 IAMs_20 16 52 33.4
comp=Z,4µm,19.0s
RCBR Riachuelo 86.11 259 LR LR 16 52 55.9
comp=Z,2µm,18.7s,baz=58,slow=36
RCBR Riachuelo 86.11 259 IAMs_20 IAMs_20 16 48 53.2
comp=Z,5µm,22.0s
RCBR Riachuelo 86.11 259 ⇑P P 16 13 15.5 +2.0
RCBR Riachuelo 86.11 259 eP P 16 13 11.7 -1.8
M52A Chesterland 86.36 322 IAMs_20 IAMs_20 16 52 17.7
comp=Z,4µm,20.0s
S61A Accomac 86.36 317 IAMs_20 IAMs_20 16 54 60.0
comp=Z,4µm,20.0s

CRAG	Craig	86.45	359	P	P	16 13 12.1	-2.4	
	baz=2.0							
V35K	Ketchikan	86.56	358	IAMs_20	IAMs_20	16 55 40.9		
	comp=Z,4µm,20.0s							
V35K	Ketchikan	86.56	358	P	P	16 13 12.4	-2.6	
	baz=3.1							
I45A	Fountain	86.62	327	IAMs_20	IAMs_20	16 54 34.3		
	comp=Z,5µm,19.0s							
J47A	Sunner	86.64	326	IAMs_20	IAMs_20	16 51 58.9		
	comp=Z,5µm,20.0s							
E38A	The Farm, Brul	86.65	331	IAmb	IAmb	16 13 19.1		
	comp=Z,67nm,1.2s							
E38A				IAMs_20	IAMs_20	16 51 26.2		
	comp=Z,5µm,22.0s							
N53A	Lisbon	86.67	322	IAmb	IAmb	16 13 19.2		
	comp=Z,73nm,1.8s							
AGMN	Agassiz Nation	86.75	335	IAmb	IAmb	16 13 19.7		
	comp=Z,28nm,1.1s							
AAM	Ann Arbor	86.85	324	IAMs_20	IAMs_20	16 54 05.5		
	comp=Z,5µm,18.0s							
O54A	Avella	86.93	321	IAMs_20	IAMs_20	16 54 51.7		
	comp=Z,5µm,18.0s							
NBPA	Parau_RN	87.00	260	*e*P	P	16 13 17.1	-0.8	
MCWV	Mont Chateau	87.06	320	IAMs_20	IAMs_20	16 51 31.3		
	comp=Z,6µm,22.0s							
Q56A	Snyder Ridge,	87.19	320	IAMs_20	IAMs_20	16 54 12.9		
	comp=Z,5µm,20.0s							
G40A	Rib Lake	87.25	330	IAmb	IAmb	16 13 22.2		
	comp=Z,44nm,1.1s							
G40A				IAMs_20	IAMs_20	16 53 11.9		
	comp=Z,4µm,20.0s							
KRAI	Karang Ratu	87.26	96	P	P	16 13 19.9	+0.8	
	comp=Z,2µmcomp=Z,970nmcomp=Z,89nm,1.1s							
R58B	Mineral	87.33	318	IAMs_20	IAMs_20	16 54 18.5		
	comp=Z,5µm,21.0s							
N51A	Ashland	87.33	323	IAMs_20	IAMs_20	16 52 58.3		
	comp=Z,5µm,21.0s							
AAI	Ambon	87.33	97	P	P	16 13 19.5	0.0	
	comp=Z,1µmcomp=Z,88nm,1.0s							
BATI	Baumata	87.91	105	LR	LR	16 59 09.2		
	comp=Z,3µm,19.2s,baz=300,slow=40							
P53A	Whipple	87.96	321	IAmb	IAmb	16 13 25.6		
	comp=Z,56nm,1.3s							
P53A				IAMs_20	IAMs_20	16 55 33.0		
	comp=Z,5µm,20.0s							
SWI	Sorong	87.99	93	P	P	16 13 24.8	+2.2	
	comp=Z,80nm,1.0s							
SIJI	Sorong	87.99	93	LR	LR	16 57 27.6		
	comp=Z,1µm,22.0s,baz=340,slow=39							
SIJI	Sorong	87.99	93	P	P	16 13 21.7	-1.0	
	comp=Z,63nm,1.3s							
Q54A	Coxs Mills	88.07	320	IAMs_20	IAMs_20	16 52 23.0		
	comp=Z,6µm,22.0s							
SOEI	Soe	88.09	104	P	P	16 13 25.3	+2.1	
SOEI	Soe	88.09	104	P	P	16 13 23.8	+0.6	
SOEI	Soe	88.09	104	⇓P	P	16 13 28.1	+4.9	
SOEI	Soe	88.09	104	P	P	16 13 23.6	+0.4	
	comp=Z,55nm,1.0s							
ACSO	Alum Creek Sta	88.15	323	IAMs_20	IAMs_20	16 53 21.1		
	comp=Z,5µm,20.0s							
V61A	Roper	88.24	316	IAMs_20	IAMs_20	16 54 21.8		
	comp=Z,6µm,20.0s							
R55A	Marlinton	88.24	320	IAMs_20	IAMs_20	16 55 26.7		
	comp=Z,6µm,19.0s							
SPMN	Marine on St.	88.29	331	IAmb	IAmb	16 13 28.1		
	comp=Z,39nm,1.3s							
SPMN				IAMs_20	IAMs_20	16 53 43.4		
	comp=Z,5µm,20.0s							
MDND	Maddock	88.35	337	IAMs_20	IAMs_20	16 58 11.9		
	comp=Z,5µm,19.0s							
I40A	Norwalk	88.56	329	IAMs_20	IAMs_20	16 55 10.6		
	comp=Z,5µm,21.0s							
Q52A	Bidwell	88.80	321	IAmb	IAmb	16 13 29.2		
	comp=Z,49nm,1.3s							
Q52A				IAMs_20	IAMs_20	16 56 44.2		
	comp=Z,4µm,18.0s							
O49A	Covington	88.83	323	IAmb	IAmb	16 13 29.1		
	comp=Z,35nm,1.3s							
O49A				IAMs_20	IAMs_20	16 55 32.0		
	comp=Z,5µm,19.0s							
L44A	Lake County Fo	88.84	327	IAMs_20	IAMs_20	16 54 49.2		
	comp=Z,5µm,18.0s							
O48B	Farmland	89.16	324	IAMs_20	IAMs_20	16 55 42.6		
	comp=Z,5µm,19.0s							
BLA	Blacksburg	89.22	319	IAMs_20	IAMs_20	16 58 05.4		
	comp=Z,5µm,19.0s							
S54A	Dingess, Beckl	89.22	320	IAMs_20	IAMs_20	16 55 57.4		
	comp=Z,5µm,20.0s							
Q51A	Peebles	89.27	322	IAmb	IAmb	16 13 31.4		
	comp=Z,27nm,1.2s							
Q51A				IAMs_20	IAMs_20	16 56 43.7		
	comp=Z,4µm,19.0s							
NBPS	Pedro II - PI	89.53	264	*e*P	P	16 13 29.2	-0.8	
BBB	Bella Bella	89.54	355	LR	LR	16 57 32.8		
	comp=Z,3µm,20.2s,baz=343,slow=38							
I37A	Lemond, Waseca	89.54	331	IAmb	IAmb	16 13 34.1		
	comp=Z,40nm,1.0s							
M44A	Midewin, Midew	89.54	326	IAMs_20	IAMs_20	16 56 59.7		
	comp=Z,5µm,20.0s							
GUMO	Guam	89.60	73	LR	LR	16 59 04.7		
	comp=Z,2µm,18.1s,baz=316,slow=39							
V58A	Windy Hill, Pi	89.61	317	IAMs_20	IAMs_20	16 55 31.9		
	comp=Z,4µm,20.0s							
L42A	Oliver, Polo	89.73	328	IAmb	IAmb	16 13 34.4		
	comp=Z,32nm,1.1s							
E28A	Huff	89.82	337	IAMs_20	IAMs_20	16 53 19.8		
	comp=Z,5µm,22.0s							
U56A	King	89.86	319	IAMs_20	IAMs_20	16 54 22.4		
	comp=Z,4µm,20.0s							
P48A	Milroy	89.92	324	IAMs_20	IAMs_20	16 54 28.7		
	comp=Z,4µm,20.0s							
R50A	Paris	90.33	322	IAmb	IAmb	16 13 37.4		
	comp=Z,32nm,1.3s							
U54A	Nelsons Funny	90.46	320	IAMs_20	IAMs_20	16 58 45.4		
	comp=Z,5µm,18.0s							
Y60A	Bolivia	90.47	316	IAMs_20	IAMs_20	16 57 45.8		
	comp=Z,4µm,19.0s							
S51A	Beattyville	90.48	321	IAMs_20	IAMs_20	16 58 21.8		
	comp=Z,4µm,18.0s							
LLLB	Lillooet	90.54	351	IAmb	IAmb	16 13 45.0		
	comp=Z,55nm,1.2s							
P46A	Rosedale	90.61	325	IAMs_20	IAMs_20	16 56 32.0		
	comp=Z,4µm,18.0s							
V55A	Taylorsville	90.67	319	IAMs_20	IAMs_20	16 54 54.9		
	comp=Z,4µm,20.0s							
R49A	Shelbyville	90.73	323	IAmb	IAmb	16 13 39.0		
	comp=Z,53nm,1.4s							
R49A				IAMs_20	IAMs_20	16 57 31.2		
	comp=Z,5µm,18.0s							
HDIL	Hopedale	90.77	327	IAmb	IAmb	16 13 39.2		
	comp=Z,36nm,1.3s							
EGMT	Eagleton	90.93	343	IAmb	IAmb	16 13 43.2		
	comp=Z,48nm,1.8s							
EGMT	Eagleton	90.93	343	⇑P	P	16 13 40.1	+4.1	
KMSC	Kings Mountain	91.27	318	IAMs_20	IAMs_20	16 55 17.0		
	comp=Z,3µm,19.0s							
N41A	Harden Midland	91.31	328	IAmb	IAmb	16 13 41.2		
	comp=Z,29nm,1.1s							
N41A				IAMs_20	IAMs_20	16 59 27.4		
	comp=Z,4µm,19.0s							
WCI	Wyandotte Cave	91.31	323	IAMs_20	IAMs_20	16 55 29.6		
	comp=Z,5µm,20.0s							
TZTN	Tazewell	91.32	321	IAmb	IAmb	16 13 40.4		
	comp=Z,43nm,1.4s							
TZTN				IAMs_20	IAMs_20	16 59 55.0		
	comp=Z,5µm,18.0s							
TZTN	Tazewell	91.32	321	⇑P	P	16 13 38.7	+0.8	
T50A	Nancy	91.58	322	IAMs_20	IAMs_20	16 56 12.8		
	comp=Z,4µm,20.0s							
P43A	Skaggs, Pawnee	91.62	326	IAMs_20	IAMs_20	16 55 12.7		
	comp=Z,6µm,22.0s							
V53A	Saluda	91.63	320	IAmb	IAmb	16 13 43.9		
	comp=Z,41nm,1.1s							
SMRT	St. Maarten	92.01	295	IAMs_20	IAMs_20	16 51 04.0		
	comp=Z,4µm,22.0s							
MBWA	Marble Bar	92.02	115	IAMs_20	IAMs_20	16 56 28.7		
	comp=Z,5µm,20.0s							
TKL	Tuckaleechee C	92.12	320	LR	LR	16 59 01.0		
	comp=Z,3µm,18.9s,baz=47,slow=38							
NEW	Newport	92.16	348	LR	LR	16 56 00.9		
	comp=Z,5µm,21.9s,baz=14,slow=36							
NEW	Newport	92.16	348	IAMs_20	IAMs_20	16 57 08.7		
	comp=Z,5µm,21.0s							
NEW	Newport	92.16	348	IAmb	IAmb	16 13 52.1		
	comp=Z,30nm,1.1s							
NEW	Newport	92.16	348	⇓P	P	16 13 42.8	+1.1	
L34A	Svendsen Farm,	92.42	332	IAmb	IAmb	16 13 45.7		
	comp=Z,26nm,0.9s							
U49A	Red Boiling Sp	92.44	322	IAmb	IAmb	16 13 46.7		
	comp=Z,36nm,1.3s							
U49A				IAMs_20	IAMs_20	16 56 40.5		
	comp=Z,5µm,20.0s							
MDP	Montagnes des	92.44	278	LR	LR	16 57 17.4		
	comp=Z,2µm,18.5s,baz=100,slow=37							
HODGE	Hodges	92.46	318	IAmb	IAmb	16 13 47.7		
	comp=Z,50nm,1.4s							
W52A	Murphy	92.64	320	IAMs_20	IAMs_20	16 57 05.2		
	comp=Z,4µm,20.0s							
CPCT	Cooper Cave	92.66	321	IAmb	IAmb	16 13 48.4		
	comp=Z,37nm,1.2s							
T47A	Sharon Grove	92.69	323	IAmb	IAmb	16 13 47.6		
	comp=Z,23nm,1.1s							
MSO	Missoula	92.96	345	IAMs_20	IAMs_20	17 02 17.9		
	comp=Z,5µm,20.0s							
RSSD	Black Hills	93.05	338	P	P	16 13 43.5	-2.6	
RSSD	Black Hills	93.05	338	IAMs_20	IAMs_20	16 56 12.2		
	comp=Z,3µm,20.0s							
RSSD	Black Hills	93.05	338	P	P	16 13 43.5	-2.6	
RSSD				pmax	pmax			
	comp=Z,16nm,1.1s							
RSSD				MLR	MLR			
	comp=Z,3µm,20.0s							
S44A	Carbondale	93.10	325	IAMs_20	IAMs_20	16 55 46.0		
	comp=Z,5µm,21.0s							
W50A	Signal Mountai	93.25	321	IAmb	IAmb	16 13 50.7		
	comp=Z,33nm,1.2s							
W50A				IAMs_20	IAMs_20	16 58 36.2		
	comp=Z,4µm,19.0s							
T45A	Paducah	93.38	324	IAMs_20	IAMs_20	16 56 37.4		
	comp=Z,3µm,20.0s							
X51A	Calhoun	93.53	320	IAMs_20	IAMs_20	16 57 33.6		
	comp=Z,3µm,21.0s							
RLMT	Red Lodge	93.54	342	IAmb	IAmb	16 13 57.7		
	comp=Z,39nm,1.6s							
RLMT				IAMs_20	IAMs_20	16 56 02.2		
	comp=Z,6µm,22.0s							
RLMT	Red Lodge	93.54	342	⇑P	P	16 13 49.1	+0.8	
RLMT				⇑P	pP	16 13 51.2	+0.2	
257A	Skidaway Islan	93.54	316	IAMs_20	IAMs_20	16 58 06.1		
	comp=Z,5µm,19.0s							
V48A	Smith Brothers	93.56	322	IAMs_20	IAMs_20	16 57 15.2		
	comp=Z,4µm,18.0s							
CGM3	Cape Girardeau	93.61	325	IAmb	IAmb	16 13 52.3		
	comp=Z,35nm,1.1s							
BOZ	Bozeman (W)	93.65	343	IAMs_20	IAMs_20	16 59 05.1		
	comp=Z,4µm,18.0s							
BOZ	Bozeman (W)	93.65	343	⇑P	P	16 13 52.1	+3.4	
Y52A	Lilburn	93.68	319	IAmb	IAmb	16 13 53.1		
	comp=Z,42nm,1.3s							
Y52A				IAMs_20	IAMs_20	16 57 26.6		
	comp=Z,4µm,21.0s							
CCM	Cathedral Cave	93.68	326	P	P	16 13 47.8	-1.0	
CCM	Cathedral Cave	93.68	326	IAMs_20	IAMs_20	16 56 37.3		
	comp=Z,6µm,21.0s							
CCM	Cathedral Cave	93.68	326	P	P	16 13 47.8	-1.0	
CCM				pmax	pmax			
	comp=Z,11nm,1.2s							
CCM				MLR	MLR			
	comp=Z,6µm,21.0s							
GOGA	Godfrey	93.73	319	IAMs_20	IAMs_20	16 59 05.9		
	comp=Z,5µm,20.0s							
R40A	Maddies Statio	93.92	327	IAMs_20	IAMs_20	16 55 27.7		
	comp=Z,4µm,22.0s							
NLWA	Neilton Lookou	93.94	352	IAMs_20	IAMs_20	17 03 52.8		
	comp=Z,5µm,18.0s							
WAH2	Wahluke Slope	94.01	349	IAmb	IAmb	16 14 00.3		
	comp=Z,27nm,1.1s							
DLMT	Dillon	94.08	344	IAMs_20	IAMs_20	16 59 12.6		
	comp=Z,6µm,21.0s							
SJG	San Juan	94.14	297	LR	LR	16 52 59.6		
	comp=Z,2µm,21.9s,baz=56,slow=34							
HAWA	Hanford	94.36	349	IAMs_20	IAMs_20	17 00 05.9		
	comp=Z,4µm,20.0s							
FITZ	Fitzgerald Crossi	94.36	110	LR	LR	17 02 02.1		
	comp=Z,1µm,18.2s,baz=314,slow=39							
X48A	Hartselle	94.70	322	IAMs_20	IAMs_20	16 59 33.6		
	comp=Z,3µm,20.0s							
Y49A	Blount Mountai	94.87	321	IAmb	IAmb	16 13 57.8		
	comp=Z,23nm,1.3s							
Y49A				IAMs_20	IAMs_20	17 01 35.0		
	comp=Z,4µm,18.0s							
152A	Waverly Hall	94.96	319	IAMs_20	IAMs_20	16 56 38.5		
	comp=Z,4µm,22.0s							
PLID	Pearl Lake	95.03	346	IAMs_20	IAMs_20	16 57 56.7		
	comp=Z,5µm,21.0s							
456A	Hilliard	95.04	316	IAMs_20	IAMs_20	16 58 59.9		
	comp=Z,5µm,20.0s							
K22A	Casper	95.12	339	IAmb	IAmb	16 13 59.3		
	comp=Z,20nm,1.1s							
FXWY	Fox Creek	95.36	342	IAMs_20	IAMs_20	17 00 11.4		
	comp=Z,5µm,20.0s							
BMO	Blue Mountains	95.50	347	IAMs_20	IAMs_20	17 01 02.0		
	comp=Z,5µm,19.0s							
OXF	Oxford	95.78	323	IAMs_20	IAMs_20	17 01 56.1		
	comp=Z,4µm,19.0s							
LRAL	Lakeview Retre	95.82	321	IAmb	IAmb	16 14 02.1		
	comp=Z,15nm,1.0s							
LRAL				IAMs_20	IAMs_20	16 59 07.1		
	comp=Z,4µm,22.0s							
PDAR	Pinedale Array	95.82	341	P	P	16 13 58.7	-0.2	
	comp=Z,1.2nm,0.9s,baz=3.8,slow=2.2,SNR=7.3							
PDAR				PP	PP	16 17 53.2	+3.7	
	comp=Z,1.9nm,1.0s,baz=18,slow=6.8,SNR=4.2							
PDAR				PKKPbc	PKKPbc	16 30 50.0	+2.6	
	comp=Z,0.4nm,0.7s,baz=155,slow=5.1,SNR=4.5							
PDAR				LR	LR	16 58 55.1		
	comp=Z,3µm,18.4s,baz=0.0,slow=37							
	comp=Z,1.2nm,0.9s							
PDAR	Pinedale Array	95.82	341	P	P	16 13 56.4	-2.5	
AHID	Auburn Hatcher	96.20	342	IAMs_20	IAMs_20	17 00 37.7		
	comp=Z,5µm,19.0s							
Z47A	Carrollton	96.22	322	IAMs_20	IAMs_20	17 00 27.6		
	comp=Z,4µm,20.0s							
250A	Grady	96.30	320	IAMs_20	IAMs_20	16 57 22.0		
	comp=Z,5µm,22.0s							
656A	Willston	96.37	315	IAMs_20	IAMs_20	16 57 40.1		
	comp=Z,5µm,21.0s							
R32A	Long Quarter,	96.38	332	IAmb	IAmb	16 14 04.2		
	comp=Z,18nm,1.1s							
Y45A	Yeager Larm, C	96.38	323	IAMs_20	IAMs_20	17 03 18.9		
	comp=Z,5µm,19.0s							
JAY	Jayapura	96.42	88	LR	LR	17 01 12.8		
	comp=Z,2µm,21.9s,baz=314,slow=38							
COR	Corvallis	96.64	351	IAMs_20	IAMs_20	17 00 34.4		
	comp=Z,5µm,21.0s							
DWPF	Disney Wildern	96.72	314	IAMs_20	IAMs_20	17 01 45.6		
	comp=Z,3µm,18.0s							
060A	Indiantown	96.93	313	IAMs_20	IAMs_20	17 01 10.1		
	comp=Z,3µm,19.0s							
SDDR	Presa de Saban	97.08	301	IAMs_20	IAMs_20	16 55 52.0		
	comp=Z,4µm,21.0s							
146A	Union	97.15	322	IAMs_20	IAMs_20	17 00 58.4		
	comp=Z,4µm,18.0s							
HAYD	Hayden	97.30	339	IAMs_20	IAMs_20	16 58 51.5		
	comp=Z,5µm,21.0s							
BRAL	Brewton	97.35	320	IAMs_20	IAMs_20	16 58 02.7		
	comp=Z,5µm,21.0s							
RDMU	Red Mountain	97.88	340	IAmb	IAmb	16 14 12.0		
	comp=Z,13nm,1.1s							
NWAO	Narrogin (SRO)	97.97	126	IAMs_20	IAMs_20	16 58 28.5		
	comp=Z,5µm,19.0s							
061Z	Ochoppi	98.14	312	IAMs_20	IAMs_20	16 55 51.0		
	comp=Z,3µm,20.0s							
VBMS	Vicksburg	98.20	323	IAMs_20	IAMs_20	17 00 02.0		
	comp=Z,5µm,21.0s							
143A	Socs Landing,	98.21	324	IAMs_20	IAMs_20	17 02 48.4		
	comp=Z,3µm,20.0s							
BSUT	Blindstream Ca	98.22	341	IAmb	IAmb	16 14 14.1		
	comp=Z,13nm,1.2s							
DUG	Dugway, Tooele	99.05	343	IAMs_20	IAMs_20	17 00 49.0		
	comp=Z,5µm,19.0s							
ELK	Elko	99.06	345	LR	LR	17 02 33.0		
	comp=Z,5µm,18.2s,baz=5.0,slow=38							
YBH	Yreka Blue Hor	99.38	350	LR	LR	17 03 07.0		
	comp=Z,150nm,18.9s,baz=16,slow=38							
WMOK	Wichita Mounta	99.64	330	IAMs_20	IAMs_20	17 00 39.9		
	comp=Z,5µm,21.0s							
PV23	Carpenter Ridg	99.71	339	IAmb	IAmb	16 14 24.1		
	comp=Z,16nm,1.0s							
M02C	Callahan	99.73	350	IAMs_20	IAMs_20	17 06 47.1		
	comp=Z,4µm,19.0s							
HATC	Hat Creek Radi	100.10	349	IAMs_20	IAMs_20	17 07 36.9		
	comp=Z,5µm,20.0s							
N02D	Trinity Center	100.12	350	IAMs_20	IAMs_20	17 03 31.4		
	comp=Z,4µm,20.0s							
Z35A	Perchaven, San	100.25	328	IAMs_20	IAMs_20	17 03 42.2		
	comp=Z,4µm,18.0s							
KHMM	Horse Mountain	100.35	351	IAMs_20	IAMs_20	17 00 09.5		
	comp=Z,5µm,22.0s							
NATX	Nacogdoches	100.49	325	IAMs_20	IAMs_20	17 04 03.6		
	comp=Z,4µm,19.0s							
KHBM	Hayfork Bally	100.50	351	IAMs_20	IAMs_20	17 07 32.4		
	comp=Z,5µm,20.0s							
O03E	Paynes Creek	100.66	349	IAMs_20	IAMs_20	17 07 45.8		
	comp=Z,4µm,20.0s							
441A	DeRidder	100.67	324	IAMs_20	IAMs_20	17 01 21.6		
	comp=Z,3µm,21.0s							
MVCO	Mesa Verde	100.72	338	IAMs_20	IAMs_20	17 02 38.6		
	comp=Z,4µm,18.0s							
KMRM	Mail Ridge	100.99	351	IAMs_20	IAMs_20	17 07 60.0		
	comp=Z,5µm,20.0s							
ORV	Oroville	101.34	349	IAMs_20	IAMs_20	17 06 14.8		
	comp=Z,4µm,19.0s							
BDFB	Brasilia	101.48	259	PP	PP	16 18 31.3	-3.1	
	comp=Z,1.6nm,0.4s,baz=38,slow=12,SNR=3.5							
WHTX	Lake Whitney,	101.50	328	IAMs_20	IAMs_20	17 00 50.2		
	comp=Z,5µm,22.0s							
KCPM	Cahto Peak	101.50	351	IAMs_20	IAMs_20	17 00 53.0		
	comp=Z,4µm,22.0s							
SUTB	Sutter Butte	101.70	349	IAMs_20	IAMs_20	17 08 25.3		
	comp=Z,3µm,20.0s							
NVAR	Mina Array Bea	101.90	346	PP	PP	16 18 38.0	+2.0	
	comp=Z,1.8nm,0.9s,baz=22,slow=6.0,SNR=6.4							
WRA	Warramunga Arr	101.99	106	P	Pdif	16 14 25.9	-0.6	
	comp=Z,2.1nm,1.1s,baz=312,slow=4.6,SNR=4.2							
WRA				PP	PP	16 18 37.6	-0.5	
	comp=Z,2.7nm,1.0s,baz=314,slow=7.6,SNR=4.9							
HOPS	Hopland Field	102.12	350	IAMs_20	IAMs_20	17 03 42.3		
	comp=Z,4µm,22.0s							
MNRC	McLaughlin Min	102.14	350	IAMs_20	IAMs_20	17 09 01.0		
	comp=Z,4µm,18.0s							
ANMO	Albuquerque	102.19	336	IAMs_20	IAMs_20	17 01 28.3		
	comp=Z,6µm,21.0s							
ANMO	Albuquerque	102.19	336	IAMs_20	IAMs_20	17 01 28.4		
	comp=Z,7µm,21.0s							
CMB	Columbia Colle	102.65	348	IAMs_20	IAMs_20	17 08 29.5		
	comp=Z,3µm,19.0s							
CVS	Carmenet Viney	102.67	350	IAMs_20	IAMs_20	17 09 14.9		
	comp=Z,4µm,20.0s							
MCCM	Marconi Confer	102.93	350	IAMs_20	IAMs_20	17 06 12.7		
	comp=Z,3µm,21.0s							
MHC	Mount Hamilton	103.53	349	IAMs_20	IAMs_20	17 10 56.7		
	comp=Z,4µm,19.0s							
JRSC	Jasper Ridge	103.56	349	IAMs_20	IAMs_20	17 07 43.5		
	comp=Z,4µm,20.0s							
CWC	Cottonwood Cre	103.79	346	IAMs_20	IAMs_20	17 03 19.5		
	comp=Z,4µm,21.0s							
ASAR	Alice Springs	103.86	109	Pdiff	Pdif	16 14 34.0	-0.7	
	comp=Z,1.2nm,1.0s,baz=298,slow=4.1,SNR=5.3							
ASAR				PP	PP	16 18 52.2	+0.1	
	comp=Z,2.4nm,1.1s,baz=316,slow=7.8,SNR=4.4							
MPMC	Manual Prospec	104.04	345	IAMs_20	IAMs_20	17 07 58.1		
	comp=Z,4µm,19.0s							
FORD	Fort Ord Natur	104.19	349	IAMs_20	IAMs_20	17 04 43.2		
	comp=Z,4µm,22.0s							
735A	Kenedy	104.36	326	IAMs_20	IAMs_20	17 02 38.2		
	comp=Z,4µm,22.0s							
VES	Vestal, Richgr	104.56	346	IAMs_20	IAMs_20	17 04 31.9		
	comp=Z,3µm,20.0s							
ISA	Isabella, Lake	104.62	346	IAMs_20	IAMs_20	17 06 16.4		
	comp=Z,5µm,20.0s							
LRMC	Laurel Mtn Rad	104.64	345	IAMs_20	IAMs_20	17 05 33.0		
	comp=Z,4µm,20.0s							
NEE2	Needles Airpor	104.65	342	IAMs_20	IAMs_20	17 04 27.2		
	comp=Z,4µm,20.0s							
PKD	Bear Valley Ra	104.72	347	IAMs_20	IAMs_20	17 06 34.1		
	comp=Z,5µm,21.0s							
DANC	Danby, Needles	104.95	343	IAMs_20	IAMs_20	17 04 17.2		
	comp=Z,3µm,22.0s							
IRM	Iron Mountain	105.36	343	IAMs_20	IAMs_20	17 04 51.9		
	comp=Z,5µm,21.0s							
SPB	Sao Paulo	105.70	252	IAMs_20	IAMs_20	17 02 33.7		
	comp=Z,4µm,21.0s							
BFSC	Mount Baldy Ra	105.83	345	IAMs_20	IAMs_20	17 05 07.6		
	comp=Z,4µm,21.0s							
PASC	Pasadena Art C	106.00	345	IAMs_20	IAMs_20	17 07 25.2		
	comp=Z,4µm,19.0s							
PFO	Pinyon Flats O	106.18	344	IAMs_20	IAMs_20	17 05 06.8		
	comp=Z,4µm,21.0s							
TXAR	Lajitas Array	106.32	331	PP	PP	16 19 13.6	+4.5	
	comp=Z,1.0nm,1.0s,baz=72,slow=4.1,SNR=3.6							
GLA	Glamis	106.34	342	IAMs_20	IAMs_20	17 11 42.9		
	comp=Z,4µm,19.0s							
TEIG	Tepich	106.75	314	IAMs_20	IAMs_20	17 07 29.2		
	comp=Z,3µm,19.0s							

	comp=Z,260nm,24.9s							
DZM				*e*SS	SS	16 38 57.2	+0.1	
	comp=Z,739nm,26.4s							
DZM				*e*LR	LR	16 59 59.0		
	comp=Z,5μm,28.4s							
MT16	**CCHEN**	**128.11 254**		IAMs_20	IAMs_20	17 20 39.3		
	comp=Z,3μm,20.0s							
QSPA	**South Pole Qui**	**128.25 180**		PKP	**PKPdf**	**16 19 35.8**	**-1.9**	
	comp=Z,5.7nm,0.7s,baz=265,slow=1.0,SNR=6.1							
MT05	**Renca**	**128.26 255**		IAMs_20	IAMs_20	17 13 25.2		
	comp=Z,3μm,21.0s							
MT02	**Curacav**	**128.51 255**		IAMs_20	IAMs_20	17 16 26.7		
	comp=Z,3μm,21.0s							
BO02	**Sierra Bellavi**	**128.88 253**			**PKPdf**	**16 19 39.1**	**-0.7**	
BI02	**San Fabin de**	**129.98 251**		IAMs_20	IAMs_20	17 16 44.9		
	comp=Z,3μm,21.0s							
PLCA	**Paso Flores**	**130.92 246**		PKP	**PKPdf**	**16 19 41.7**	**-1.8**	
	comp=Z,4.0nm,1.0s,baz=86,slow=3.6,SNR=4.5							
PLCA	**Paso Flores**	**130.92 246**		*e*P	**PKPdf**	**16 19 43.3**	**-0.3**	
BI05	**Punta Hualpn**	**131.44 252**		IAMs_20	IAMs_20	17 19 17.5		
	comp=Z,3μm,21.0s							
LL02	**Futaleuf**	**132.61 243**		IAMs_20	IAMs_20	17 18 10.6		
	comp=Z,3μm,20.0s							
LL07	**Hotel Espejo d**	**133.66 244**		IAMs_20	IAMs_20	17 19 17.2		
	comp=Z,3μm,20.0s							
DCZ	**Deep Cove**	**137.56 119**		IAMs_20	IAMs_20	17 17 25.3		
	comp=Z,3μm,19.0s							
OUZ	**Omahuta**	**139.54 102**		P	**Pdif**	**16 17 11.1**	**-1.9**	
WCZ	**Waipu Caves**	**140.36 102**		P	**Pdif**	**16 17 10.8**	**-5.9**	
OXZ	**Oxford**	**140.57 114**		IAMs_20	IAMs_20	17 24 35.2		
	comp=Z,3μm,21.0s							
LTZ	**Lake Taylor**	**140.63 113**		IAMs_20	IAMs_20	17 24 08.8		
	comp=Z,3μm,22.0s							
NNZ	**Nelson**	**141.09 111**		IAMs_20	IAMs_20	17 19 32.2		
	comp=Z,3μm,21.0s							
HIZ	**Hauiti**	**141.52 106**		IAMs_20	IAMs_20	17 20 29.5		
	comp=Z,3μm,22.0s							
TOZ	**Tahuroa Road**	**141.79 105**		IAMs_20	IAMs_20	17 31 30.7		
	comp=Z,3μm,21.0s							
SNZO	**South Karori**	**142.09 111**		IAMs_20	IAMs_20	17 26 51.6		
	comp=Z,3μm,20.0s							
BHW	**Baring Head**	**142.23 111**		IAMs_20	IAMs_20	17 26 55.4		
	comp=Z,2μm,22.0s							
TAOE	**Nuku Hiva Isla**	**150.26 9**		*e*P	**PKPdf**	**16 20 14.3**	**-4.6**	
	comp=Z,181nm,22.6s							
TAOE				*e*SS	SS	16 43 24.8	+9.3	
	comp=Z,964nm,24.5s							
TAOE				*e*LQ	LQ	17 03 43.3		
	comp=Z,3μm,42.2s							
TAOE				*e*LR	LR	17 10 00.2		
	comp=Z,3μm,24.7s							
PPT2	**Papeete2**	**155.87 35**		*e*P	**PKPdf**	**16 20 23.0**	**-3.8**	
	comp=Z,95nm,23.5s							
PPT2				*e*PP	**PP**	**16 24 24.5**	**-5.3**	
	comp=Z,167nm,26.0s							
PPT2				*e*SS	SS	16 44 20.6	+2.9	
	comp=Z,897nm,22.8s							
PPT2				*e*LQ	LQ	17 06 16.0		
	comp=Z,8μm,38.2s							
PPT2				*e*LR	LR	17 12 44.1		
	comp=Z,5μm,24.5s							
PPT2				*e*LR	LR	17 12 51.0		
	comp=Z,7μm,24.2s							
TBI	**Tubuai**	**160.82 42**		*e*P	**PKPdf**	**16 20 31.1**	**-1.5**	
	comp=Z,448nm,25.2s							
TBI				*e*PP	**PP**	**16 24 54.7**	**-2.3**	
	comp=Z,791nm,23.5s							
TBI				*e*SS	SS	16 45 06.0	-4.7	
	comp=Z,4μm,31.0s							
TBI				*e*LQ	LQ	17 08 17.3		
	comp=Z,19μm,39.5s							
TBI				*e*LR	LR	17 15 08.0		
	comp=Z,4μm,25.5s							
TBI				*e*LR	LR	17 15 10.3		
	comp=Z,19μm,33.0s							

AFAD ***23*** *16:00:59.4, 38˚.95N×27˚.90E, h7km±2km, ML1.4*
ISK 23 16:00:59.0, 38˚.96N×27˚.88E, h6km±2km, ML1.9/14, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.09**	**214**	P	Pg	16 01 02.3	+1.2
AKHS				IAML		16 01 04.0	
	comp=E,238nm,0.1s						
AKHS				S	Sg	16 01 04.2	+1.7
AKS	**Akhisar**	**0.09**	**214**	Pg	Pg	16 01 01.6	+0.5
AKS				Sg	Sg	16 01 03.5	+1.0
GORD	**Gordes-Manisa**	**0.24**	**102**	Pg	Pg	16 01 04.2	+0.5
GORD				Sg	Sg	16 01 08.1	+1.3
GOMA	**Golmarmara-Man**	**0.25**	**173**	Pg	Pg	16 01 04.5	+0.6
GOMA				Sg	Sg	16 01 08.7	+1.5
KTTT	**Salihli**	**0.32**	**148**	P	Pg	16 01 06.0	+0.8
KTTT				S	Sg	16 01 10.5	+1.2
KTTT				IAML		16 01 11.0	
	comp=N,55nm,0.7s						
SOMA	**Soma-Manisa**	**0.34**	**307**	Pg	Pg	16 01 05.9	+0.4
SOMA				Sg	Sg	16 01 11.3	+1.3
CAMT	**Merkez**	**0.49**	**245**	P	Pb	16 01 09.9	-0.1
CAMT				S	Sb	16 01 17.4	-0.1
ZEDA	**zmir-Bergama**	**0.63**	**271**	P	Pb	16 01 11.9	-0.4
ZEDA				S	Sb	16 01 20.6	-0.8
ZEDA				IAML		16 01 21.0	
	comp=N,27nm,0.8s						
ZEDA				IAML		16 01 21.0	
	comp=E,21nm,0.3s						
BALB	**Balikesir**	**0.68**	**0**	Pg	Pb	16 01 13.1	-0.2
ODEM	**Odemis-Izmir**	**0.70**	**167**	Pg	Pb	16 01 12.9	+0.5
MANT	**Manisa**	**0.70**	**131**	P	Pb	16 01 13.2	-0.6
MANT				S	Sg	16 01 22.3	+0.6
MANT				IAML		16 01 26.0	
	comp=N,19nm,0.5s						
MANT				IAML		16 01 26.0	
	comp=E,16nm,0.5s						
IZMD	**zmir-Dikili-**	**0.74**	**272**	P	Pb	16 01 14.2	-0.2
IZMD				S	Sg	16 01 22.6	-0.3
IZMD				IAML		16 01 28.0	
	comp=E,27nm,1.6s						
IZMD				IAML		16 01 36.0	
	comp=N,23nm,1.6s						
KULA	**Kula-Manisa**	**0.75**	**126**	Pg	Pg	16 01 14.0	+0.5
SIMA	**Simav-Kutahya**	**0.87**	**81**	Pg	Pg	16 01 15.9	+0.2
BLCB	**Balcova**	**0.87**	**229**	Pg	Pb	16 01 16.1	-0.4
YAYO	**Edremit-Balk**	**0.91**	**316**	Pg	Pb	16 01 16.9	-0.2
FOCM	**Foa**	**0.93**	**255**	Pg	Pb	16 01 17.3	-0.2
AYDB	**Zeytinkoy-Aydi**	**1.01**	**180**	Pg	Pb	16 01 18.8	-0.1
SUSR	**Susurluk-Balik**	**1.02**	**9**	Pg	Pb	16 01 18.9	-0.1
GONE	**Gonen-Balikesi**	**1.10**	**352**	Pn	Pb	16 01 20.5	+0.1
CANM	**Can-anakkale**	**1.23**	**329**	Pn	Pn	16 01 23.1	+0.3

AFAD ***23*** *16:07:48.9, 38˚.43N×44˚.44E, h7km±2km, ML3.5*
ISK ***23*** *16:07:50.4, 38˚.47N×44˚.46E, h21km, ML3.1/6*
ISC 23 16:07:49.0±1.8, 38˚.46N±0˚.05×44˚.50E±0˚.08, h14km±10km, n13, σ1=26/20, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**297**	P	**Pg**	**16 07 57.9**	**0.0**
OZAP				S	**Sg**	**16 08 03.9**	**-0.1**
OZAP				IAML		16 08 10.0	
	comp=N,3μm,0.8s						
TVAN	**Van**	**0.86**	**275**	P	**Pg**	**16 08 04.5**	**-1.2**
TVAN				IAML		16 08 16.0	
	comp=N,2μm,2.4s						
VANB	**Van**	**0.88**	**279**	Pg	**Pn**	**16 08 07.1**	**0.0**
VANB				Sg	**Sn**	**16 08 19.3**	**-0.5**
VMUR	**Van-Muradiye**	**0.90**	**307**	P	**Pg**	**16 08 06.2**	**-0.2**
VMUR				S	**Sb**	**16 08 18.7**	**+0.3**
GEVA	**Gevas**	**1.14**	**263**	P	**Pb**	**16 08 08.8**	**-1.8**
GEVA				S	**Sn**	**16 08 26.3**	**0.0**
DYDN	**Diyadin**	**1.25**	**330**	P	**Pn**	**16 08 10.4**	**-1.9**
DYDN				IAML		16 08 26.0	
	comp=N,1μm,2.0s						
DYDN				S	**Sn**	**16 08 29.4**	**+0.2**
CUKT	**Cukurca**	**1.40**	**211**	Pn	**Pb**	**16 08 15.2**	**+0.2**
CUKT				Sn	**Sg**	**16 08 33.7**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.43**	**285**	P	**Pn**	**16 08 14.9**	**+0.1**
ADCV				IAML		16 08 34.0	
	comp=E,1μm,5.2s						
ADCV				S	**Sg**	**16 08 38.5**	**+3.3**
ADCV				IAML		16 09 02.0	
	comp=N,747nm,4.6s						
MLAZ	**Malazgirt-MUS**	**1.67**	**295**	Pn	**Pn**	**16 08 18.9**	**+0.9**
GNI	**Garni**	**1.70**	**6**	Pn	**Pn**	**16 08 19.7**	**+1.2**
GURO	**Guroymak-BITLI**	**1.94**	**274**	Pn	**Pn**	**16 08 22.8**	**+1.1**
VRTB	**Varto-Mus**	**2.48**	**287**	Pn	**Pn**	**16 08 29.7**	**+0.6**
SVAN	**Silvan-Diyarba**	**2.61**	**264**	Pn	**Pn**	**16 08 31.9**	**+1.0**

NEIC ***23*** *16:08:44.7±0.3, 17˚.69N±0˚.03×66˚.88W±0˚.01, h10km±1km, ML3.5/35, Md3.5/5(RSPR), Mwr3.4/7(SLM), Error ellipse: s-maj=4.2km s-min=2.5km az=177.0*
SDD ***23*** *16:08:45.6±1.6, 17˚.70N×66˚.94W, h15km±31km, MD3.1, ML3.2, MW3.4, Presumed earthquake*
NEIC ***23*** *16:08:46, 17˚.78N×66˚.90W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=0.37; Mθθ=0.11; Mφφ=0.26; Mrθ=0.49; Mrφ=1.51; Mθφ=-0.51; Fault plane solution: M0=1.70000×10^14^ NP1:ϕ=2.00000°, δ=71.00000°, λ=-159.00000°. NP2:ϕ=265.00000°, δ=70.00000°, λ=-20.00000°. Principal axes: T 1.6988, Plg=1.0000°, Azm=133.0000°; N 0.0002, Plg=62.0000°, Azm=42.0000°; P -1.6991, Plg=28.0000°, Azm=224.0000°;*
RSPR ***23*** *16:08:46.4, 17˚.78N×66˚.90W, h5km±1km, MD3.5/5*
ISC 23 16:08:44.0±1.4, 17˚.69N±0˚.06×66˚.90W±0˚.02, h17km±7km, n41, σ0=51/65, 9C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.28**	**3**		**Pb**	**16 08 50.5**	**-0.2**
GBPR					**Sg**	**16 08 54.2**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.28**	**3**	⇓*i*P	**Pb**	**16 08 50.5**	**-0.2**
GBPR				*e*S	**Sg**	**16 08 54.2**	**-0.1**
MLPR	**Magueyes Islan**	**0.31**	**333**		**Pb**	**16 08 51.1**	**0.0**
MLPR				IAML		16 08 55.9	
	4μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.37**	**327**		**Pb**	**16 08 52.3**	**+0.1**
CRPR				IAML		16 08 57.6	
	6μm,0.4s						
CRPR				IAML		16 08 57.7	
	6μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.37**	**327**		**Sg**	**16 08 57.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**0.37**	**327**	⇑*e*Pg	**Pb**	**16 08 52.4**	**+0.1**
CRPR				⇑*e*Sg	**Sg**	**16 08 56.7**	**-0.3**
CRPR				IAML		16 08 57.6	
	comp=N,8μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.37**	**327**	*e*S	**Sg**	**16 08 57.4**	**+0.4**
OBIP	**Obispado Ponce**	**0.44**	**38**		**Pb**	**16 08 53.4**	**-0.1**
OBIP					**Sg**	**16 08 59.0**	**-0.1**
OBIP	**Obispado Ponce**	**0.44**	**38**	⇑*i*P	**Pb**	**16 08 53.6**	**+0.1**
OBIP				*e*S	**Sb**	**16 09 00.2**	**+0.4**
CELP	**Cerrillos**	**0.48**	**38**		**Pb**	**16 08 54.3**	**+0.1**
CELP					**Sg**	**16 08 59.7**	**-0.7**
CELP				IAML		16 09 01.9	
	comp=N,3μm,0.4s						
CELP				IAML		16 09 02.4	
	comp=N,2μm,0.3s						
LSP	**Las Mesas**	**0.51**	**339**		**Pb**	**16 08 55.0**	**+0.3**
LSP					**Sb**	**16 09 02.2**	**+0.3**
LSP	**Las Mesas**	**0.51**	**339**	⇑*i*P	**Pb**	**16 08 55.0**	**+0.3**
LSP				*e*S	**Sb**	**16 09 02.2**	**+0.3**
PRSN	**Puerto Rico Se**	**0.57**	**336**		**Pb**	**16 08 55.8**	**+0.2**
PRSN					**Sb**	**16 09 03.9**	**+0.3**
PRSN	**Puerto Rico Se**	**0.57**	**336**	⇑*e*Pg	**Pb**	**16 08 55.8**	**+0.2**
PRSN				⇑*e*Sg	**Sb**	**16 09 03.3**	**-0.2**
PRSN				IAML		16 09 06.8	
	comp=N,5μm,0.2s						
PRSN	**Puerto Rico Se**	**0.57**	**336**	⇑*i*P	**Pb**	**16 08 55.8**	**+0.2**
PRSN				*e*S	**Sb**	**16 09 03.9**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.58**	**17**		**Pb**	**16 08 55.6**	**-0.2**
AGPR	**Aguadilla, PR**	**0.80**	**345**		**Pg**	**16 08 59.5**	**-0.1**
AGPR				IAML		16 09 11.5	
	comp=N,2μm,0.5s						
AGPR				IAML		16 09 14.7	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.80**	**345**	⇑*e*Pg	**Pg**	**16 08 59.6**	**-0.1**
AGPR				⇓*e*Sg	**Sb**	**16 09 09.5**	**-0.5**
AGPR				IAML		16 09 10.3	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.80**	**345**	⇑*i*P	**Pg**	**16 08 59.7**	**+0.1**
AGPR				*e*S	**Sb**	**16 09 09.8**	**-0.3**
ECPR	**Experimental S**	**0.80**	**39**		**Pg**	**16 08 59.6**	**-0.2**
ECPR				IAML		16 09 11.8	
	comp=N,2μm,0.3s						
ECPR				IAML		16 09 13.6	
	comp=N,2μm,0.2s						
ECPR	**Experimental S**	**0.80**	**39**	⇑*i*P	**Pg**	**16 08 60.0**	**+0.2**
ECPR				*e*S	**Sg**	**16 09 10.7**	**+0.4**
SJG	**San Juan**	**0.82**	**60**		**Pg**	**16 09 00.2**	**0.0**
SJG				IAML		16 09 15.6	
	comp=N,2μm,0.4s						
SJG	**San Juan**	**0.82**	**60**	*e*P	**Pn**	**16 09 00.9**	**0.0**
SJG	**San Juan**	**0.82**	**60**	⇓*e*Pg	**Pg**	**16 09 00.3**	**+0.2**
SJG				⇓*e*Sg	**Sn**	**16 09 12.7**	**0.0**
SJG	**San Juan**	**0.82**	**60**	⇑*i*P	**Pn**	**16 09 00.9**	**0.0**
SJG				*e*S	**Sn**	**16 09 12.7**	**0.0**
EMPR	**Esperanza - Ma**	**0.85**	**24**		**Pn**	**16 09 01.2**	**-0.1**
EMPR					**Sn**	**16 09 12.9**	**-0.5**
EMPR	**Esperanza - Ma**	**0.85**	**24**	⇑*i*P	**Pn**	**16 09 01.2**	**-0.1**
EMPR				*e*S	**Sn**	**16 09 12.9**	**-0.5**
IDE	**Isla Desecheo**	**0.88**	**322**		**Pg**	**16 09 01.3**	**+0.1**
IDE					**Sb**	**16 09 11.9**	**-0.6**
IDE	**Isla Desecheo**	**0.88**	**322**	⇓*i*P	**Pg**	**16 09 01.3**	**+0.1**
IDE				*e*S	**Sb**	**16 09 11.9**	**-0.6**
PDPR	**Patillas Dam,**	**0.89**	**69**		**Pn**	**16 09 01.6**	**-0.3**
PDPR				IAML		16 09 18.0	
	comp=N,1μm,0.7s						
GCPR	**Guaynabo City**	**0.99**	**52**		**Pg**	**16 09 03.1**	**-0.1**
GCPR	**Guaynabo City**	**0.99**	**52**		**Sn**	**16 09 16.5**	**-0.3**
GCPR	**Guaynabo City**	**0.99**	**52**	⇓*i*P	**Pg**	**16 09 03.3**	**+0.1**
GCPR				*e*S	**Sn**	**16 09 16.5**	**-0.3**
HUMP	**Col San Antoni**	**1.09**	**66**		**Pg**	**16 09 05.2**	**+0.1**
HUMP					**Sg**	**16 09 20.8**	**+1.3**
HUMP	**Col San Antoni**	**1.09**	**66**	Pg	**Pg**	**16 09 05.0**	**-0.2**
HUMP				IAML		16 09 23.8	
	comp=N,918nm,0.2s						
HUMP				IAML		16 09 23.8	
	comp=N,627nm,0.4s						
HUMP	**Col San Antoni**	**1.09**	**66**	⇑*i*P	**Pg**	**16 09 05.2**	**+0.1**
HUMP				*e*S	**Sg**	**16 09 20.8**	**+1.3**
PCDR	**Punta Cana, DR**	**1.63**	**300**	*e*Pg	**Pb**	**16 09 13.3**	**-0.4**
PCDR				⇑*e*Sg	**Sb**	**16 09 34.0**	**-0.1**
PCDR				IAML		16 09 47.2	
	comp=N,296nm,0.7s						
PCDR				IAML		16 09 49.8	
	comp=N,224nm,1.6s						
CUPR	**Culebra, Puert**	**1.65**	**68**		**Pb**	**16 09 13.5**	**-0.6**
HIDR	**Higuey Centro**	**1.95**	**298**	⇑*e*Pg	**Pb**	**16 09 19.3**	**+0.1**
HIDR				IAML		16 10 05.2	
	comp=N,119nm,0.3s						
DR12	**Loma Pena Alta**	**2.60**	**295**		**Pn**	**16 09 27.2**	**+1.8**
HATOM	**Hato Mayor del**	**2.60**	**295**	⇑*e*Pg	**Pb**	**16 09 28.1**	**-2.2**
HATOM				IAML		16 10 13.8	
	comp=N,48nm,0.7s						

IDC ***23*** *16:10:54.9±3.0, 38˚.47N×43˚.95E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=68.9km s-min=19.6km az=93.0*
AZER ***23*** *16:10:54.5, 38˚.43N×44˚.48E, h17km, ml3.9*
AFAD ***23*** *16:10:55.5, 38˚.39N×44˚.48E, h8km±2km, ML3.3*
TEH ***23*** *16:10:56.9, 38˚.44N×44˚.55E, h6km±49km, ML3.4, Presumed earthquake*
NSSP ***23*** *16:10:56.3, 38˚.55N×44˚.55E, h10km, Ms3.7*
ISK ***23*** *16:10:57.5, 38˚.34N×44˚.51E, h5km, ML3.3/11*
TIF ***23*** *16:10:57.3, 38˚.33N×44˚.47E, h11km±2km*
ISC 23 16:10:56.2±0.9, 38˚.43N±0˚.02×44˚.50E±0˚.02, h2km±7km, n66, σ1=51/89, mb3.6/5, 2D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**300**	P	**Pg**	**16 11 04.7**	**-0.4**
OZAP				S	**Sg**	**16 11 11.8**	**+0.7**
TVAN	**Van**	**0.87**	**277**	P	**Pg**	**16 11 12.0**	**-0.8**
TVAN				S	**Sn**	**16 11 28.2**	**-0.8**
TVAN				IAML		16 11 31.0	
	comp=E,1μm,0.6s						
TVAN				IAML		16 11 38.0	
	comp=N,2μm,1.0s						
ISHB	**Shabestar**	**0.89**	**99**	Pg	**Pg**	**16 11 12.6**	**-0.6**
VANB	**Van**	**0.89**	**281**	Pg	**Pn**	**16 11 14.5**	**-1.4**
VANB				Sg	**Sn**	**16 11 27.5**	**-1.9**
VANB	**Van**	**0.89**	**281**	Pg	**Pn**	**16 11 15.0**	**-0.9**
VMUR	**Van-Muradiye**	**0.92**	**308**	P	**Pb**	**16 11 13.8**	**-1.2**
VMUR				S	**Sb**	**16 11 26.5**	**-1.2**
VMUR				IAML		16 11 30.0	
	comp=E,1μm,0.7s						
VMUR				IAML		16 11 33.0	
	comp=N,936nm,0.8s						
MAKU	**Maku**	**0.94**	**9**	Pg	**Pg**	**16 11 13.6**	**-0.5**
IMRD	**Marand**	**0.98**	**73**	Pg	**Pb**	**16 11 15.0**	**-1.1**
HAKT	**HAKKARI**	**1.07**	**216**	P	**Pn**	**16 11 16.7**	**-1.8**
HAKT				S	**Sn**	**16 11 33.5**	**-0.5**
NAX	**Nakhchivan**	**1.07**	**46**	P	**Pn**	**16 11 16.9**	**-1.5**
NAX				S	**Sn**	**16 11 32.9**	**-1.0**
GEVA	**Gevas**	**1.14**	**265**	P	**Pb**	**16 11 16.3**	**-2.5**
GEVA				S	**Sn**	**16 11 33.4**	**-2.3**
GEVA				IAML		16 11 41.0	
	comp=E,552nm,0.7s						
GEVA				IAML		16 11 42.0	
	comp=N,848nm,0.5s						
SBZ	**Shahbuz**	**1.27**	**40**	P	**Pg**	**16 11 20.4**	**-0.1**
SBZ				S	**Sn**	**16 11 39.7**	**+1.0**
ORD	**Ordubad**	**1.27**	**66**	P	**Pg**	**16 11 20.2**	**-0.3**
ORD				S	**Sn**	**16 11 38.6**	**-0.1**
DYDN	**Diyadin**	**1.28**	**331**	P	**Pg**	**16 11 20.5**	**-0.3**
DYDN				S	**Sb**	**16 11 35.5**	**-2.8**
ITBZ	**Tabriz**	**1.31**	**98**	Pg	**Pb**	**16 11 20.3**	**-1.3**
HYR	**Heyderabad**	**1.32**	**12**	P	**Pg**	**16 11 21.0**	**-0.4**
HYR				S	**Sg**	**16 11 40.7**	**+2.1**
CUKT	**Cukurca**	**1.38**	**211**	Pn	**Pg**	**16 11 22.8**	**+0.2**
CUKT				Sn	**Sg**	**16 11 41.1**	**+0.7**
CUKT	**Cukurca**	**1.38**	**211**	Pg	**Pg**	**16 11 22.7**	**+0.2**
IAZR	**Azarshahr**	**1.39**	**122**	Pg	**Pg**	**16 11 23.0**	**+0.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**286**	P	**Pn**	**16 11 21.8**	**-1.8**
ADCV				S	**Sg**	**16 11 44.8**	**+2.2**
VAYK	**Vayk**	**1.46**	**29**	⇓*e*P	**Pg**	**16 11 23.3**	**-0.8**
VAYK				⇓*e*S	**Sg**	**16 11 43.4**	**+0.4**
ALVK	**Alvank**	**1.53**	**70**	*e*P	**Pb**	**16 11 24.5**	**-0.9**
ALVK				*e*S	**Sg**	**16 11 45.0**	**-0.5**
AGRB	**Hanur-Agry**	**1.64**	**315**	Pn	**Pg**	**16 11 28.2**	**+0.5**
AGRB				Sn	**Sg**	**16 11 51.4**	**+2.4**
AGRB	**Hanur-Agry**	**1.64**	**315**	Pg	**Pg**	**16 11 28.5**	**+0.8**
MLAZ	**Malazgirt-MUS**	**1.69**	**296**	Pn	**Pg**	**16 11 29.2**	**+0.7**
MLAZ				Sn	**Sg**	**16 11 52.1**	**+1.8**
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**16 11 28.5**	**-0.8**
	43nm,0.3s,baz=280,slow=2.5,SNR=14						
GNI				Lg	Lg	16 11 52.6	
	37nm,0.3s,baz=201,slow=19,SNR=3.8						
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**16 11 29.6**	**+0.2**
VNNZ	**Vanand**	**1.75**	**343**	*e*P	**Pg**	**16 11 29.4**	**-0.4**
VNNZ				*e*S	**Sg**	**16 11 53.4**	**+0.8**
EGVZ	**Egvard**	**1.78**	**63**	*e*P	**Pb**	**16 11 28.8**	**-0.9**
EGVZ				*e*S	**Sg**	**16 11 52.5**	**-1.0**
ARUZ	**Aruch**	**1.88**	**350**	*e*P	**Pg**	**16 11 31.5**	**-0.7**
ARUZ				*e*S	**Sg**	**16 11 57.0**	**+0.3**
KAPZ	**Kaputan**	**1.90**	**5**	*e*P	**Pb**	**16 11 31.2**	**-0.4**
KAPZ				*e*S	**Sg**	**16 11 56.7**	**-0.5**
MAHB	**Mahabad**	**1.91**	**150**	Pn	**Pg**	**16 11 32.1**	**-0.7**
GURO	**Guroymak-BITLI**	**1.94**	**274**	Pn	**Pg**	**16 11 31.9**	**-0.5**
GURO				Sn	**Sg**	**16 11 57.6**	**-1.0**
GURO	**Guroymak-BITLI**	**1.94**	**274**	Pn	**Pg**	**16 11 32.6**	**-0.8**
AYRK	**Ayrk**	**1.96**	**30**	*e*P	**Pg**	**16 11 33.2**	**-0.5**
AYRK				*e*S	**Sg**	**16 11 58.4**	**-0.7**
AMBZ	**Amberd**	**1.97**	**355**	*e*P	**Pb**	**16 11 31.9**	**-0.9**
AMBZ				*e*S	**Sb**	**16 11 57.9**	**0.0**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pg**	**16 11 33.0**	**-1.5**
IHSH	**Hashtrud**	**2.46**	**116**	Pn	**Pb**	**16 11 40.2**	**-1.0**
KARS	**Kars**	**2.46**	**334**	Pn	**Pb**	**16 11 40.7**	**-0.5**
VRTB	**Varto-Mus**	**2.49**	**288**	Pn	**Pb**	**16 11 40.7**	**-1.1**
LSVT	**Lusahovit**	**2.54**	**12**	*e*P	**Pb**	**16 11 40.6**	**-2.0**
LSVT				*e*S	**Sb**	**16 12 12.7**	**-1.6**
ISRB	**Sarab**	**2.57**	**103**	Pn	**Pb**	**16 11 41.4**	**-1.6**
SVAN	**Silvan-Diyarba**	**2.62**	**265**	Pn	**Pb**	**16 11 41.6**	**-2.2**
SVAN	**Silvan-Diyarba**	**2.62**	**265**	Pn	**Pb**	**16 11 41.7**	**-2.1**
SRTK	**Saratovka**	**2.64**	**357**	*e*P	**Pb**	**16 11 43.8**	**-0.5**
SRTK				*e*S	**Sb**	**16 12 18.1**	**+0.9**
GRMI	**Germi**	**2.68**	**81**	Pn	**Pb**	**16 11 42.6**	**-2.4**
SENK	**Senkaya-Erzuru**	**2.71**	**323**	Pn	**Pb**	**16 11 44.2**	**-1.2**
KARO	**Karliova-Bingo**	**2.84**	**289**	Pn	**Pb**	**16 11 45.7**	**-2.0**
KZRT	**Kazreti**	**2.96**	**358**	P	**Pb**	**16 11 48.5**	**-1.1**
BNGB	**Bingl**	**3.04**	**282**	Pn	**Pb**	**16 11 48.1**	**-3.1**
AKH	**Akhalkalaki**	**3.08**	**346**	P	**Pb**	**16 11 52.1**	**+0.3**
DGRG	**David-gareji**	**3.09**	**12**	P	**Pb**	**16 11 51.5**	**-0.5**
TRLG	**Trialeti**	**3.12**	**354**	P	**Pb**	**16 11 48.4**	**-4.1**
VSHL

SBZ				S	Sn	16 14 36.6	-0.6	
ITBZ	**Tabriz**	**1.34**	**95**	Pg	Pn	16 14 17.5	-1.8	
HYR	**Heyderabad**	**1.38**	**13**	P	Pn	16 14 18.7	-1.1	
HYR				S	Sg	16 14 38.8	-0.1	
IAZR	**Azarshahr**	**1.39**	**119**	Pg	Pg	16 14 19.8	-1.3	
ADCV	**BITLIS_Adilcev**	**1.42**	**288**	P	Pg	16 14 20.4	-1.4	
ADCV				S	Sg	16 14 39.5	-0.8	
ADCV	**BITLIS_Adilcev**	**1.42**	**288**	Pg	Pg	16 14 20.3	-1.4	
IGDI	**IGDIR**	**1.52**	**349**	P	Pn	16 14 20.7	-1.1	
IGDI				S	Sg	16 14 42.7	-0.7	
VAYK	**Vayk**	**1.52**	**29**	*i* P	Pn	16 14 20.0	-1.8	
VAYK				*i* S	Sn	16 14 40.7	-1.1	
ALVK	**Alvank**	**1.59**	**68**	*e*P	Pn	16 14 20.9	-1.7	
ALVK				*e*S	Sn	16 14 41.9	-1.4	
DORK	**Agr/Tutak/Do**	**1.66**	**308**	P	Pb	16 14 23.2	-1.9	
AGRB	**Hanur-Agry**	**1.66**	**317**	Pn	Pg	16 14 24.8	-1.4	
MLAZ	**Malazgirt-MUS**	**1.68**	**298**	Pn	Pg	16 14 26.1	-0.5	
MLAZ				Sn	Sg	16 14 49.5	+1.2	
GNI	**Garni**	**1.79**	**7**	Pn	Pb	16 14 26.4	-1.0	
	41nm,0.3s,baz=60,slow=0.3,SNR=11							
GNI				Lg	Lg	16 14 50.8		
	60nm,0.3s,baz=260,slow=22,SNR=6.1							
GNI	**Garni**	**1.79**	**7**	Pn	Pb	16 14 26.3	-1.1	
GNI				Sn	Sg	16 14 51.3	-0.7	
GNI	**Garni**	**1.79**	**7**	*e*P	Pb	16 14 26.7	-0.7	
GNI				*e*S	Sg	16 14 51.7	-0.3	
VNNZ	**Vanand**	**1.80**	**344**	*e*P	Pb	16 14 26.0	-1.4	
VNNZ				*e*S	Sg	16 14 50.8	-1.5	
EGVZ	**Egvard**	**1.84**	**62**	*e*P	Pb	16 14 25.7	-0.5	
EGVZ				*e*S	Sb	16 14 50.0	-1.4	
MAHB	**Mahabad**	**1.89**	**148**	Pn	Pg	16 14 29.4	-1.2	
GURO	**Guroymak-BITLI**	**1.91**	**276**	Pn	Pg	16 14 29.2	-1.8	
ARUZ	**Aruch**	**1.93**	**352**	*e*P	Pb	16 14 28.8	-1.0	
ARUZ				*e*S	Sg	16 14 55.5	-1.0	
KAPZ	**Kaputan**	**1.96**	**5**	*e*P	Pb	16 14 28.1	-2.2	
KAPZ				*e*S	Sb	16 14 54.1	-0.7	
AMBZ	**Amberd**	**2.02**	**356**	*e*P	Pb	16 14 29.9	-1.5	
AMBZ				*e*S	Sb	16 14 56.0	-0.6	
AYRK	**Ayrk**	**2.03**	**30**	*e*P	Pb	16 14 29.4	-2.1	
AYRK				*e*S	Sb	16 14 56.5	-0.3	
IHRS	**Heris**	**2.04**	**91**	Pn	Pb	16 14 30.4	-1.2	
IHSH	**Hashtrud**	**2.46**	**115**	Pn	Pb	16 14 37.5	-1.5	
VRTB	**Varto-Mus**	**2.47**	**290**	Pn	Pb	16 14 37.8	-1.2	
QRD	**Qoradiz**	**2.49**	**63**	P	Pn	16 14 33.4	-1.6	
QRD				S	Sn	16 15 05.4	0.0	
KARS	**Kars**	**2.49**	**335**	Pn	Pb	16 14 37.3	-2.1	
GDB	**GEDABAY**	**2.55**	**23**	P	Pn	16 14 34.2	-1.8	
GDB				S	Sn	16 15 08.1	+0.9	
SVAN	**Silvan-Diyarba**	**2.57**	**266**	Pn	Pb	16 14 38.7	-1.9	
LSVT	**Lusahovit**	**2.61**	**12**	*e*P	Pb	16 14 39.5	-1.7	
LSVT				*e*S	Sb	16 15 14.1	+0.7	
GANJ	**Ganja**	**2.69**	**32**	P	Pn	16 14 36.5	-1.4	
GANJ				S	Sn	16 15 10.0	-0.5	
AGDM	**Agdam**	**2.69**	**49**	P	Pn	16 14 36.1	-1.7	
AGDM				S	Sn	16 15 11.0	+0.5	
SRTK	**Saratovka**	**2.69**	**358**	*e*P	Pb	16 14 41.2	-1.6	
SRTK				*e*S	Sb	16 15 16.8	+0.8	
SENK	**Senkaya-Erzuru**	**2.73**	**324**	Pn	Pb	16 14 41.2	-2.2	
BLQ	**Beylaqan**	**2.77**	**60**	P	Pn	16 14 37.6	-1.2	
BLQ				S	Sn	16 15 11.4	-0.9	
QZX	**Qazax, Azerbai**	**2.78**	**14**	P	Pn	16 14 37.9	-1.1	
QZX				S	Sn	16 15 12.1	-0.5	
KARO	**Karliova-Bingo**	**2.82**	**290**	Pn	Pb	16 14 42.5	-2.4	
BRDA	**Brd**	**2.83**	**47**	P	Pn	16 14 38.3	-1.4	
BRDA				S	Sn	16 15 13.8	-0.1	
BGD	**Bogdanovka**	**2.96**	**347**	P	Pb	16 14 46.6	-0.8	
KZRT	**Kazreti**	**3.01**	**359**	P	Pn	16 14 43.5	+1.3	
YRD	**Yardimli**	**3.02**	**78**	P	Pn	16 14 40.5	-1.9	
YRD				S	Sn	16 15 17.9	-0.8	
BNGB	**Bingl**	**3.02**	**283**	Pn	Pb	16 14 45.3	-3.0	
LRK	**Lerik**	**3.06**	**84**	P	Pn	16 14 42.4	-0.6	
LRK				S	Sn	16 15 19.8	+0.1	
AKH	**Akhalkalaki**	**3.12**	**347**	P	Pn	16 14 45.1	+1.3	
MNGR	**Mingechevir, A**	**3.15**	**39**	P	Pn	16 14 42.1	-1.9	
MNGR				S	Sn	16 15 22.8	+1.3	
ZRD	**Zardab**	**3.15**	**52**	P	Pn	16 14 41.9	-2.1	
ZRD				S	Sn	16 15 22.6	+1.0	
DGRG	**David-gareji**	**3.16**	**13**	P	Pn	16 14 45.6	+1.4	
DGRG				S	Sn	16 15 23.3	+1.3	
TRLG	**Trialeti**	**3.18**	**355**	P	Pn	16 14 45.7	+1.1	
GLBA	**Cilabad**	**3.20**	**73**	P	Pn	16 14 43.4	-1.3	
GLBA				S	Sn	16 15 24.9	+2.0	
VSHL	**Vashlovani**	**3.23**	**27**	P	Pg	16 14 53.2	-3.0	
VSHL				S	Sb	16 15 31.6	+0.4	
YEDI	**Yedisu-Bingol**	**3.23**	**290**	Pn	Pb	16 14 48.1	-3.8	
DDFL	**Dedoflistskaro**	**3.33**	**22**	P	Pb	16 14 51.4	-2.1	
TBLG	**Delisi**	**3.36**	**4**	P	Pb	16 14 53.5	-0.6	
LKRN	**Lenkeran, Azer**	**3.41**	**83**	P	Pn	16 14 47.2	-0.4	
LKRN				S	Sn	16 15 29.0	+1.0	
ASTR	**Astara**	**3.41**	**85**	P	Pn	16 14 47.1	-0.5	
ASTR				S	Sn	16 15 29.7	+1.7	
DYBB	**Diyarbakir**	**3.43**	**264**	Pn	Pb	16 14 50.7	-4.5	
KDMR	**Kurdemir**	**3.52**	**54**	P	Pn	16 14 48.0	-1.0	
KDMR				S	Sn	16 15 32.2	+1.5	
SEKA	**Sheki**	**3.54**	**36**	P	Pn	16 14 49.4	-0.1	
SEKA				S	Sn	16 15 34.0	+2.6	
ZKTA	**Zakatala**	**3.66**	**26**	P	Pn	16 14 50.4	-0.8	
ZKTA				S	Sn	16 15 36.9	+2.5	
QBL	**Gabala**	**3.67**	**44**	P	Pn	16 14 50.2	-1.0	
QBL				S	Sn	16 15 36.3	+1.9	
LGD	**Lagodekhi**	**3.72**	**21**	P	Pb	16 15 01.4	+1.2	
IML	**Ismayilli**	**3.76**	**49**	P	Pn	16 14 51.7	-0.8	
IML				S	Sn	16 15 39.0	+2.1	
ALIG	**Mtskhetisjvari**	**3.78**	**351**	P	Pn	16 14 52.8	0.0	
CHRG	**Chargali**	**3.97**	**5**	P	Pb	16 15 02.1	-2.4	
XNQ	**Khinaliq**	**3.99**	**44**	P	Pn	16 14 55.5	-0.3	
XNQ				S	Sn	16 15 44.7	+2.0	
PQL	**Pirkuli**	**4.01**	**52**	P	Pn	16 14 55.5	-0.4	
PQL				S	Sn	16 15 43.6	+0.5	
GBS	**Qobustan**	**4.09**	**57**	P	Pn	16 14 56.1	-1.0	
GBS				S	Sn	16 15 45.5	+0.5	
ATGJ	**Altiaghaj**	**4.26**	**53**	P	Pn	16 14 58.4	-1.0	
ATGJ				S	Sn	16 15 48.4	-0.9	
QSAR	**Qusar**	**4.29**	**42**	P	Pn	16 14 58.6	-1.2	
QSAR				S	Sn	16 15 50.1	+0.2	
GARG	**Gari**	**4.29**	**350**	P	Pn	16 14 59.7	-0.1	
QUBA	**Quba, Azerbaij**	**4.31**	**45**	P	Pn	16 14 59.1	-0.8	
QUBA				S	Sn	16 15 50.3	0.0	
SHTL	**Shatili**	**4.31**	**7**	P	Pb	16 15 07.2	-3.2	
SIZA	**Siyzn**	**4.36**	**50**	P	Pn	16 15 00.3	-0.6	
SIZA				S	Sn	16 15 51.5	-0.2	
KBZ	**Khabaz**	**5.48**	**348**	Pn	Pn	16 15 20.2	+4.2	
	0.1nm,0.3s,baz=168,slow=20,SNR=1.3 0.9nm,0.8s							
BRTR	**Keskin Array B**	**8.52**	**282**	Pn	Pn	16 16 02.1	+4.1	
	baz=108,slow=12,SNR=3.7							
MMAI	**Mount Meron Ar**	**9.09**	**237**	Pn	**Pn**	**16 16 07.4**	**+1.6**	
	0.5nm,0.3s,baz=57,slow=19,SNR=1.9 0.7nm,0.5s							
AKTO	**Aktyubinsk**	**15.44**	**34**	Pn	**Pn**	**16 17 30.2**	**-1.9**	
	0.3nm,0.3s,baz=225,slow=10,SNR=4.9 0.9nm,0.3s							
AKASG	**Malin Array Be**	**16.39**	**324**	Pn	**P**	**16 17 44.7**	**-2.5**	
	0.7nm,0.6s,baz=130,slow=12,SNR=3.6							
ARTI	**Arti**	**20.27**	**23**	P	**P**	**16 18 29.5**	**-0.3**	
	3.7nm,0.6s,baz=214,slow=5.6,SNR=5.0 3.7nm,0.6s							
BVAR	**Borovoye Array**	**23.13**	**42**	P	**P**	**16 19 01.4**	**+0.9**	
	1.8nm,0.7s,baz=236,slow=11,SNR=5.5 1.8nm,0.7s							
GERES	**GERESS Array B**	**24.45**	**305**	P	**P**	**16 19 15.3**	**+2.0**	
	1.1nm,0.9s,baz=144,slow=7.2,SNR=1.3 1.1nm,0.9s							
FINES	**FINESS Array B**	**25.77**	**340**	P	**P**	**16 19 26.2**	**+1.2**	
	4.2nm,1.0s,baz=172,slow=9.7,SNR=2.2 4.2nm,1.0s							
DAVOX	**Davos/Dischmat**	**26.64**	**300**	P	**P**	**16 19 35.3**	**+2.0**	
	1.9nm,0.7s,baz=11,slow=4.0,SNR=4.4 1.9nm,0.7s							
KURBB	**Kurchatov Arra**	**26.97**	**52**	P	**P**	**16 19 36.8**	**+0.8**	
	1.3nm,0.5s,baz=262,slow=8.9,SNR=8.3 1.3nm,0.5s							
MKAR	**Makanchi Array**	**28.87**	**61**	P	**P**	**16 19 54.8**	**+1.6**	
	1.1nm,0.7s,baz=267,slow=6.6,SNR=7.7 1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**31.50**	**47**	P	**P**	**16 20 16.9**	**+0.7**	
	0.9nm,0.5s,baz=270,slow=12,SNR=4.2 0.9nm,0.5s							
CMAR	**Chiang Mai Arr**	**51.10**	**97**	P	**P**	**16 22 58.0**	**+0.6**	
	0.4nm,0.8s,baz=301,slow=5.9,SNR=2.5 0.4nm,0.8s							
KSRS	**Korea Array**	**63.55**	**62**	P	**P**	**16 24 27.3**	**+2.3**	
	0.7nm,0.7s,baz=273,slow=7.2,SNR=2.6 0.7nm,0.7s							
SEY	**Seymchan**	**63.96**	**29**	P	**P**	**16 24 29.6**	**+2.2**	
	1.1nm,0.7s,baz=281,slow=21,SNR=5.3 1.1nm,0.7s							
SCHQ	**Schefferville**	**70.18**	**325**	P	**P**	**16 25 08.7**	**+1.7**	
	2.9nm,0.9s,baz=125,slow=2.1,SNR=3.8 2.9nm,0.9s							
ILAR	**Eielson Array**	**76.81**	**5**	P	**P**	**16 25 46.8**	**+0.9**	
	0.3nm,0.9s,baz=334,slow=5.3,SNR=2.8 0.3nm,0.9s							

*IDC **23** 16:14:54.4±1.0,30.44S×177.63W,h0km,mb4.6/4, mbtmp4.5/5,ML3.7/1,MS5.6/2,Error ellipse: s-maj=32.7km s-min=21.9km az=116.0*
*NEIC **23** 16:15:03.1±1.8,30.16S±0.08×177.7W±0.2,h47km±7km, mb4.9/16,Error ellipse: s-maj=23.3km s-min=11.9km az=83.0*

ISC 23 16:14:59.9±0.7,30.46S±0.06×177.7W±0.1,h33km,n69, σ1§80/61,mb4.8/11,1D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.22**	**352**	Pn	**Pn**		**16 15 19.0**	**-1.5**
	263nm,0.3s,baz=268,slow=22,SNR=12							
RAO				Sn	**Sn**		16 15 32.3	-3.5
	3µm,0.3s,baz=163,slow=23,SNR=16							
RAO				LR	LR		16 15 34.3	
	comp=Z,207nm,18.4s,baz=220,slow=33							
RIZ	**Raoul Island**	**1.22**	**351**	P	Pn		16 15 12.9	-7.7
RIZ				S	Sn		16 15 25.9	-10
PKGZ	**Pakihiroa**	**8.17**	**204**	P	**Pn**		**16 16 54.1**	**-2.0**
PKGZ				S	**Sn**		**16 18 26.5**	**-0.8**
HAZ	**Te Kaha**	**8.18**	**206**	P	**Pn**		**16 16 54.9**	**-1.3**
HAZ				S	**Sn**		**16 18 29.3**	**+1.9**
RUGZ	**Raukumara Rang**	**8.40**	**206**	P	**Pn**		**16 16 58.4**	**-1.0**
TWGZ	**Tauwhareparae**	**8.48**	**204**	P	**Pn**		**16 16 58.8**	**-1.6**
TWGZ				S	**Sn**		**16 18 35.6**	**+0.6**
CNGZ	**Carnagh Statio**	**8.68**	**202**	P	**Pn**		**16 17 00.9**	**-2.2**
TKGZ	**Te Karaka**	**8.76**	**203**	P	**Pn**		**16 17 02.0**	**-2.2**
TKGZ				S	**Sn**		**16 18 40.6**	**-1.1**
MWZ	**Matawai**	**8.78**	**205**	P	**Pn**		**16 17 02.2**	**-2.3**
MWZ				S	**Sn**		**16 18 40.2**	**-2.1**
URZ	**Urewera**	**8.88**	**207**	Pn	**Pn**		**16 17 03.1**	**-2.6**
	0.7nm,0.3s,baz=264,slow=4.2,SNR=14							
URZ				Sn	**Sn**		**16 18 43.1**	**-1.5**
	3.4nm,0.3s,baz=44,slow=11,SNR=3.6 8.1nm,0.9s							
URZ	**Urewera**	**8.88**	**207**	P	**Pn**		**16 17 03.2**	**-2.6**
URZ				S	**Sn**		**16 18 42.0**	**-2.6**
SNGZ	**Shannon Statio**	**9.25**	**205**	P	**Pn**		**16 17 09.9**	**-0.9**
MTHZ	**Maungataniwha**	**9.49**	**207**	P	**Pn**		**16 17 12.5**	**-1.9**
BKZ	**Black Stump Fm**	**9.90**	**207**	P	**Pn**		**16 17 17.0**	**-2.9**
MCHZ	**McNeill Hill**	**10.07**	**206**	P	**Pn**		**16 17 20.0**	**-2.0**
KAHZ	**Kahuranaki**	**10.31**	**204**	P	**Pn**		**16 17 21.3**	**-4.2**
PNHZ	**Pukenui**	**10.66**	**206**	P	**Pn**		**16 17 26.1**	**-4.2**
PRHZ	**Porangahau**	**10.81**	**204**	P	**Pn**		**16 17 27.8**	**-4.6**
MRZ	**Mangatainoka R**	**11.55**	**206**	P	Pn		16 17 36.6	-5.7
KHZ	**Kahutara**	**13.84**	**208**	P	Pn		16 18 08.3	-5.4
DZM	**Mont Dzumac**	**16.47**	**297**	LR	LR		16 23 43.8	
	comp=Z,895nm,21.6s,slow=32							
EIDS	**Eidsvold**	**27.98**	**273**	P	**P**		**16 20 48.7**	**+1.0**
EIDS				IAmb	IAmb		16 21 02.4	
	comp=Z,28nm,1.4s							
CAN	**Canberra**	**28.29**	**251**	P	**P**		**16 20 52.2**	**+1.9**
CAN				IAmb	IAmb		16 21 05.8	
	comp=Z,66nm,1.8s							
TOO	**Toolangi**	**31.16**	**247**	P	**P**		**16 21 17.9**	**+2.0**
CTAO	**Charters Tower**	**34.05**	**279**	P	**P**		**16 21 42.6**	**+1.4**
CTAO				IAmb	IAmb		16 21 44.0	
	comp=Z,16nm,0.7s							
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**		**16 21 47.5**	**+0.8**
	comp=Z,8.9nm,0.7s,baz=109,slow=8.7,SNR=16 comp=Z,8.9nm,0.7s							
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**		**16 21 48.8**	**+2.0**
INKA	**Innaminka**	**36.25**	**264**	P	**P**		**16 22 01.6**	**+1.5**
BBOO	**Buckleboo**	**39.19**	**254**	P	**P**		**16 22 25.5**	**+0.6**
BBOO				IAmb	IAmb		16 22 26.8	
	comp=Z,11nm,0.6s							
AS31	**Alice Springs**	**43.35**	**267**	P	**P**		**16 22 59.2**	**0.0**
ASAR	**Alice Springs**	**43.35**	**267**	P	**P**		**16 22 59.0**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=105,slow=7.4,SNR=105							
ASAR				ScP	**ScP**		**16 28 39.5**	**+3.0**
	comp=Z,0.5nm,0.9s,baz=123,slow=3.9,SNR=4.1 comp=Z,1.6nm,0.4s							
ASAR	**Alice Springs**	**43.35**	**267**	P	**P**		**16 22 59.0**	**-0.2**
WR8	**Warramunga Arr**	**44.20**	**272**	P	**P**		**16 23 05.9**	**-0.1**
WR8				IAmb	IAmb		16 23 38.5	
	comp=Z,65nm,1.9s							
WRA	**Warramunga Arr**	**44.34**	**272**	P	**P**		**16 23 06.8**	**-0.3**
	comp=Z,4.8nm,0.3s,baz=111,slow=8.1,SNR=94 comp=Z,4.8nm,0.3s							
WB0	**Warramunga Arr**	**44.37**	**272**	P	**P**		**16 23 07.2**	**-0.2**
WB0				IAmb	IAmb		16 23 08.5	
	comp=Z,10nm,0.6s							
MTN	**Manton Dam**	**50.23**	**279**	P	**P**		**16 23 54.1**	**+1.1**
KNRA	**Kununurra**	**50.95**	**274**	P	**P**		**16 23 59.1**	**+0.6**
GIRL	**Giralia**	**60.58**	**260**	P	**P**		**16 25 08.4**	**+0.9**
MAW	**Mawson**	**72.34**	**201**	LR	LR		16 57 12.1	
	comp=Z,3µm,22.0s,baz=338,slow=35							
ELIB	**Princess Elisa**	**76.82**	**187**	*d*P	**P**		**16 26 49.9**	**+1.8**
	comp=Z,1.9nm,0.7s							
H03S2	**Juan Fernandez**	**80.23**	**123**	T	T		17 56 18.9	
	baz=238,slow=74,SNR=34							
H03S1	**Juan Fernandez**	**80.24**	**123**	T	T		17 56 21.7	
	baz=238,slow=74,SNR=33							
H03S3	**Juan Fernandez**	**80.25**	**123**	T	T		17 56 23.4	
	baz=238,slow=74,SNR=36							
H03N3	**Juan Fernandez**	**80.42**	**123**	T	T		17 56 35.1	
	baz=241,slow=72,SNR=39							
H03N2	**Juan Fernandez**	**80.42**	**123**	T	T		17 56 35.9	
	baz=241,slow=72,SNR=36							
H03N1	**Juan Fernandez**	**80.44**	**123**	T	T		17 56 30.6	
	baz=241,slow=72,SNR=50							
ADK	**Adak**	**81.99**	**1**	P	**P**		**16 27 16.7**	**+0.7**
UNV	**Unalaska Valle**	**84.51**	**7**	P	**P**		**16 27 29.2**	**+0.3**
HOPS	**Hopland Field**	**85.80**	**40**	P	**P**		**16 27 36.7**	**+0.9**
PETK	**Petropavlovsk-**	**85.93**	**345**	P	**P**		**16 27 36.3**	**+0.2**
	comp=Z,4.7nm,1.1s,baz=117,slow=6.9,SNR=4.5 comp=Z,4.7nm,1.1s							
PETK	**Petropavlovsk-**	**85.93**	**345**	P	**P**		**16 27 35.6**	**-0.5**
ANMO	**Albuquque**	**93.42**	**51**	LR	LR		17 01 17.7	
	comp=Z,6µm,21.6s,baz=22,slow=30							
MKAR	**Makanchi Array**	**118.00**	**310**	PKP	**PKPdf**		**16 33 41.6**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=86,slow=2.8,SNR=14							
KURK	**Kurchatov**	**121.27**	**314**		**PKPdf**		**16 33 48.3**	**-0.7**
KURBB	**Kurchatov Arra**	**121.30**	**314**	PKP	**PKPdf**		**16 33 48.3**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=106,slow=1.9,SNR=8.9							
BVAR	**Borovoye Array**	**126.62**	**316**	PKP	**PKPdf**		**16 33 59.3**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=130,slow=1.3,SNR=16							
ARTI	**Arti**	**133.39**	**321**	PKP	**PKPdf**		**16 34 12.0**	**0.0**
	comp=Z,1.8nm,0.5s,baz=189,slow=0.8,SNR=4.9							
H10S3	**ASCENSION HYDR**	**137.57**	**155**	T	T		19 08 49.5	
	baz=204,slow=74,SNR=27							
H10S2	**ASCENSION HYDR**	**137.57**	**155**	T	T		19 08 55.3	
	baz=16,slow=74,SNR=29							
H10N3	**ASCENSION HYDR**	**138.65**	**154**	T	T		19 10 08.7	
	baz=203,slow=75,SNR=77							
H10N1	**ASCENSION HYDR**	**138.66**	**154**	T	T		19 10 06.7	
	baz=203,slow=75,SNR=88							
H10N2	**ASCENSION HYDR**	**138.67**	**154**	T	T		19 09 58.9	
	baz=203,slow=75,SNR=88							
FINES	**FINESS Array B**	**145.28**	**340**	PKPbc	**PKPbc**		**16 34 32.7**	**-0.5**
	comp=Z,7.4nm,0.4s,baz=53,slow=4.0,SNR=107							
NOA	**NORSAR Array B**	**148.84**	**352**	PKPbc	**PKPbc**		**16 34 42.5**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=15,slow=4.3,SNR=4.2							
HFS	**Hagfors**	**149.35**	**349**	PKPbc	**PKPbc**		**16 34 43.2**	**-1.5**
	comp=Z,3.4nm,0.9s,baz=94,slow=4.5,SNR=5.3							
AKASG	**Malin Array Be**	**151.49**	**323**	PKPbc	**PKPbc**		**16 34 49.7**	**-0.3**
	comp=Z,3.9nm,0.5s,baz=50,slow=2.9,SNR=14							
AKASG	**Malin Array Be**	**151.49**	**323**		**PKPbc**		**16 34 50.0**	**-0.1**
MMAI	**Mount Meron Ar**	**151.78**	**284**	PKPbc	**PKiKP**		**16 34 52.4**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=95,slow=5.9,SNR=4.6							
TORD	**Torodi Ar. Bea**	**162.76**	**178**	PKPab	**PKPab**		**16 35 48.9**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=200,slow=5.6,SNR=3.6							

*IDC **23** 16:15:41.0±1.3,60.92N×151.44W,h48km±16km,mb3.2/4, mbtmp3.5/8,ML3.7/4,Error ellipse: s-maj=25.6km s-min=9.1km az=109.0*
*NEIC **23** 16:15:42.7±0.4,60.95N±0.03×151.29W±0.06,h69km±7km, mb3.6/2,ML3.7/210,ML3.5(AEIC),Error ellipse: s-maj=4.6km s-min=3.9km az=215.0*

*ANF **23** 16:15:42.9±0.1,60.91N×151.24W,h64km±3km,ML3.9/99, Error ellipse: s-maj=1.3km s-min=0.9km az=171.0*
*AEIC **23** 16:15:43.4±0.7,60.91N±0.03×151.25W±0.06,h69km±1km, Error ellipse: s-maj=4.5km s-min=3.9km az=195.0*

ISC 23 16:15:43.1±0.7,60.94N±0.03×151.28W±0.03,h74km±6km, n435,σ0§81/417,mb3.3/4,Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CAPN	**Captain Cook N**	**0.18**	**160**			**Pn**	**16 15 54.6**	**+0.7**
CAPN	**Captain Cook N**	**0.18**	**160**	P		**Pn**	**16 15 54.7**	**+0.7**
	baz=346,SNR=90							
CAPN				S		**Sn**	**16 16 03.7**	**+1.6**
	baz=346							
SPU	**Mount Spurr**	**0.45**	**303**			**Pn**	**16 15 55.0**	**-0.9**
SPCG	**Spurr Capps Gl**	**0.51**	**315**			**Pn**	**16 15 55.3**	**-1.1**
SPCG						**Sn**	**16 16 04.8**	**-1.5**
SPCR	**Spurr Chakacha**	**0.52**	**301**			**Pn**	**16 15 55.5**	**-1.0**
SPCR						**Sn**	**16 16 05.2**	**-1.3**
SPCR	**Spurr Chakacha**	**0.52**	**301**	P		**Pn**	**16 15 55.7**	**-0.9**
	baz=119,SNR=174							
SPCR				S		**Sn**	**16 16 05.5**	**-1.0**
	baz=119							
SPCN	**Chakachatna No**	**0.53**	**304**			**Pn**	**16 15 55.8**	**-0.8**
CKL	**Chakachamna La**	**0.58**	**297**			**Pn**	**16 15 56.1**	**-1.0**
SUA	**Susitna One**	**0.59**	**26**			**Pn**	**16 15 56.3**	**-0.9**
SUA				IAML			16 16 07.7	
	comp=N,3µm,0.4s							
SUA	**Susitna One**	**0.59**	**26**			**Sn**	**16 16 06.7**	**-1.0**
SUA	**Susitna One**	**0.59**	**26**	P		**Pn**	**16 15 56.4**	**-0.8**
	baz=204,SNR=373							
SUA				S		**Sn**	**16 16 06.9**	**-0.8**
	baz=204							
SPBG	**Spurr Blockage**	**0.62**	**302**			**Pn**	**16 15 56.7**	**-0.8**
SPBG						**Sn**	**16 16 07.2**	**-1.0**
STLK	**Strandline Lak**	**0.62**	**335**			**Pn**	**16 15 56.6**	**-0.9**
STLK				IAML			16 16 07.3	
	comp=N,3µm,0.5s							
STLK	**Strandline Lak**	**0.62**	**335**			**Sn**	**16 16 07.1**	**-1.1**
RDT	**Redoubt**	**0.66**	**237**			**Pn**	**16 15 57.0**	**-0.9**
RDT						**Sn**	**16 16 08.1**	**-0.9**
SLKM	**Skilak Lake**	**0.68**	**129**			**Pn**	**16 15 57.2**	**-0.9**
SLKM	**Skilak Lake**	**0.68**	**129**			**Sn**	**16 16 08.4**	**-0.7**
RC01	**Rabbit Creek A**	**0.77**	**78**			**Pn**	**16 15 58.2**	**-0.8**
RC01				IAML			16 16 11.7	
	comp=E,1µm,0.4s							
RC01				IAML			16 16 11.9	
	comp=N,1µm,0.3s							
RC01	**Rabbit Creek A**	**0.77**	**78**	P		**Pn**	**16 15 58.3**	**-0.7**
	baz=259,SNR=106							
RC01				S		**Sn**	**16 16 10.0**	**-0.8**
	baz=259							
DFR	**Drift River**	**0.77**	**244**			**Pn**	**16 15 58.3**	**-0.8**
RDJH	**Redoubt Jeurge**	**0.83**	**246**			**Sn**	**16 16 11.7**	**-0.5**
RDWB	**Redoubt West**	**0.89**	**240**			**Pn**	**16 15 59.9**	**-0.7**
O22K	**Cooper Landing**	**0.89**	**120**			**Pn**	**16 15 59.8**	**-0.6**
O22K	**Cooper Landing**	**0.89**	**120**			**Sn**	**16 16 13.2**	**-0.1**
O22K	**Cooper Landing**	**0.89**	**120**	P		**Pn**	**16 16 00.0**	**-0.4**
	baz=302,SNR=112							
O22K				S		**Sn**	**16 16 13.3**	**-0.1**
	baz=302							
RED	**Redoubt Vol

M19K Big River Lodg 1.78 304 Pn 16 16 11.6 -0.3
M19K Big River Lodg 1.78 304 IAML 16 16 34.3
comp=N,847nm,0.6s
M19K Big River Lodg 1.78 304 P Pn 16 16 11.6 -0.3
baz=121
M19K S Sn 16 16 33.2 -0.5
baz=121
M23K Glacier View 1.91 62 P Pn 16 16 12.9 -0.8
baz=245,SNR=38
AUCH Augustine Cone 1.92 215 Pn 16 16 13.7 0.0
AUJK Augustine Jueg 1.92 215 Pn 16 16 13.7 0.0
AUI Augustine Isla 1.94 215 Pn 16 16 13.9 0.0
PPLA Purkeypile 2.01 348 Pn 16 16 14.5 -0.6
PPLA IAML 16 16 41.2
comp=N,373nm,0.7s
PPLA IAML 16 16 53.7
comp=E,434nm,0.9s
PPLA Purkeypile 2.01 348 P Pn 16 16 14.6 -0.4
baz=167,SNR=28
GLI Glacier Island 2.04 90 Pn 16 16 13.3 -2.1
GLI Glacier Island 2.04 90 IAML 16 16 47.7
comp=N,713nm,0.6s
GLI IAML 16 16 54.0
comp=E,520nm,0.8s
GLI Glacier Island 2.04 90 P Pn 16 16 13.3 -2.1
baz=273
GLI S Sn 16 16 37.9 -2.1
baz=273
L19K White Mountain 2.12 308 Pn 16 16 16.3 0.0
L19K White Mountain 2.12 308 IAML 16 16 42.5
comp=E,378nm,0.5s
L19K IAML 16 16 42.7
comp=N,386nm,0.6s
L19K White Mountain 2.12 308 P Pn 16 16 16.4 0.0
baz=124
L19K S Sn 16 16 41.3 -0.5
baz=124
P23K Montague Islan 2.14 114 Pn 16 16 15.0 -1.6
P23K Montague Islan 2.14 114 IAML 16 16 41.6
comp=E,744nm,0.5s
P23K IAML 16 16 52.2
comp=N,704nm,0.6s
P23K Montague Islan 2.14 114 P Pn 16 16 15.1 -1.6
baz=298,SNR=9.0
P23K S Sn 16 16 40.3 -1.9
baz=298
O18K Koktuh Hills 2.23 243 P Pn 16 16 17.0 -1.0
baz=59,SNR=8.4
O18K S Sn 16 16 42.8 -1.8
baz=59
M18K Stony River 2.27 286 Pn 16 16 17.5 -0.8
M18K Stony River 2.27 286 P Pn 16 16 17.6 -0.8
baz=102
M18K S Sn 16 16 44.0 -1.4
baz=102
N18K Kilae Creek 2.27 265 P Pn 16 16 17.4 -1.1
baz=82,SNR=13
WAT1 Susitna Watana 2.29 33 P Pn 16 16 18.5 -0.3
baz=215
Q19K Cape Douglas, 2.34 212 Pn 16 16 19.5 +0.1
Q19K Cape Douglas, 2.34 212 P Pn 16 16 19.5 +0.1
baz=30,SNR=13
Q19K S Sn 16 16 48.4 +1.2
baz=30
WAT6 Susitna Watana 2.35 44 P Pn 16 16 19.2 -0.5
baz=227,SNR=26
Q20K Shuyak Island 2.40 194 P Pn 16 16 20.3 +0.1
baz=14,SNR=7.2
Q20K S Sn 16 16 48.9 +0.3
baz=14
HIN Hinchinbrook I 2.41 101 Pn 16 16 18.3 -2.1
HIN Hinchinbrook I 2.41 101 IAML 16 17 01.6
comp=N,312nm,0.8s
HIN IAML 16 17 03.6
comp=E,442nm,0.7s
P18K Big Mountain, 2.51 234 Pn 16 16 20.7 -1.0
P18K Big Mountain, 2.51 234 P Pn 16 16 20.7 -1.0
baz=50
TRF Thorofare Moun 2.56 10 P Pn 16 16 22.2 -0.3
baz=190,SNR=44
KTH Kantishna Hill 2.63 3 Pn 16 16 23.0 -0.3
KTH Kantishna Hill 2.63 3 IAML 16 16 57.6
comp=E,416nm,0.8s
KLU Klutina 2.65 76 IAML 16 17 05.4
comp=N,298nm,0.5s
KLU IAML 16 17 09.6
comp=E,230nm,0.7s
KLU Klutina 2.65 76 P Pn 16 16 22.4 -1.2
baz=260,SNR=40
KLU S Sn 16 16 53.3 -1.4
baz=260
DIV Divide 2.69 84 IAML 16 17 07.5
comp=N,216nm,0.5s
M24K Tolsona, Glenn 2.71 62 IAML 16 17 20.2
comp=N,379nm,0.9s
M24K Tolsona, Glenn 2.71 62 P Pn 16 16 24.3 -0.2
baz=246,SNR=28
RND Reindeer 2.73 24 IAML 16 17 12.0
comp=N,266nm,0.9s
RND IAML 16 17 12.3
comp=E,323nm,0.8s
EYAK Cordova Ski Ar 2.74 96 Pn 16 16 22.9 -1.9
EYAK Cordova Ski Ar 2.74 96 P Pn 16 16 22.9 -1.9
baz=281
K20K Telida 2.76 333 P Pn 16 16 24.7 -0.3
baz=150,SNR=267
DHY Denali Highway 2.83 39 IAML 16 17 15.3
comp=E,314nm,1.1s
DHY IAML 16 17 17.1
comp=N,294nm,0.9s
DHY Denali Highway 2.83 39 P Pn 16 16 25.8 -0.3
baz=222,SNR=11
L18K Granite Mounta 2.89 299 Pn 16 16 26.4 -0.4
L18K Granite Mounta 2.89 299 P Pn 16 16 26.4 -0.4
baz=114
N17K Nushagak Hills 2.93 264 Pn 16 16 26.4 -0.9
N17K Nushagak Hills 2.93 264 P Pn 16 16 26.5 -0.9
baz=79
KAHG Katmai Hook Gl 2.96 215 Pn 16 16 27.8 0.0
CHUM Lake Minchumin 2.99 351 Pn 16 16 27.9 -0.3
CHUM Lake Minchumin 2.99 351 P Pn 16 16 27.9 -0.3
baz=170
KARR Katmai Rainbow 3.00 217 Pn 16 16 28.3 0.0
MCK McKinley 3.01 20 Pn 16 16 28.5 +0.1
MCK McKinley 3.01 20 IAML 16 17 08.7
comp=N,320nm,0.7s
MCK IAML 16 17 08.7
comp=E,340nm,0.5s
MCK McKinley 3.01 20 P Pn 16 16 28.5 +0.1
baz=202,SNR=28
M17K Holitna River 3.02 282 IAML 16 17 26.1
comp=E,250nm,0.7s
M17K IAML 16 17 33.7
comp=N,282nm,0.8s
M17K Holitna River 3.02 282 P Pn 16 16 27.8 -0.7
baz=96,SNR=15
O17K Koliganek Bris 3.12 251 P Pn 16 16 29.1 -0.8
baz=66
P17K Kvichak River 3.12 238 Pn 16 16 29.7 -0.2
P17K Kvichak River 3.12 238 P Pn 16 16 29.7 -0.2
baz=54
KAWH Katmai 3.12 216 Pn 16 16 29.9 -0.2
BPAW Bear Paw Mtn. 3.18 2 IAML 16 17 09.8
comp=N,284nm,0.5s
BPAW Bear Paw Mtn. 3.18 2 P Pn 16 16 29.4 -1.2
baz=182,SNR=65
KDAK Kodiak Island 3.24 192 P Pn 16 16 30.0 -1.5
comp=N,4.9nm,0.3s,baz=34,slow=4.3,SNR=285
KDAK S Sn 16 17 05.7 -3.1
comp=N,67nm,0.3s,baz=104,slow=23,SNR=7.1
comp=N,19nm,0.2s
KDAK Kodiak Island 3.24 192 IAML 16 17 23.1
comp=N,275nm,0.7s
KDAK Kodiak Island 3.24 192 P Pn 16 16 30.0 -1.5
baz=12
BMRM Bremner River 3.26 87 IAML 16 17 28.7
comp=N,161nm,0.7s
BMRM IAML 16 17 36.1
comp=E,137nm,0.7s
BMRM Bremner River 3.26 87 P Pn 16 16 29.7 -2.1
baz=272
HARP HAARP 3.27 61 Pn 16 16 31.6 -0.3
HARP HAARP 3.27 61 P Pn 16 16 31.6 -0.3
baz=246,SNR=25
KAKN Katmai Knife C 3.27 218 Pn 16 16 31.7 -0.4
N25K Chitina, Valde 3.29 75 IAML 16 17 26.9
comp=E,123nm,0.8s
N25K IAML 16 17 27.6
comp=N,154nm,0.9s
N25K Chitina, Valde 3.29 75 P Pn 16 16 31.1 -1.2
baz=261,SNR=7.1
RAGM Ragged Mountai 3.30 97 Pn 16 16 29.8 -2.6
KABU Katmai Buttres 3.36 219 Pn 16 16 33.3 0.0
PAX Paxson 3.42 51 Pn 16 16 34.1 +0.1
PAX Paxson 3.42 51 IAML 16 17 26.3
comp=N,158nm,0.7s
PAX IAML 16 17 37.1
comp=E,114nm,0.8s
PAX Paxson 3.42 51 P Pn 16 16 34.2 +0.2
baz=236,SNR=36
ACHA Angle Creek He 3.42 219 Pn 16 16 34.4 +0.2
ANCK Angle Creek 3.49 220 Pn 16 16 35.1 +0.1
WACK Wrangell Chich 3.50 69 Pn 16 16 34.6 -0.7
Q16K King Salmon 3.54 232 P Pn 16 16 35.3 -0.2
baz=48
CNTC Contact Creek 3.56 223 Pn 16 16 36.1 +0.1
Q17K Contact Creek 3.56 223 P Pn 16 16 35.7 -0.3
baz=39
L17K Donlin 3.57 293 Pn 16 16 35.5 -0.5
L17K Donlin 3.57 293 P Pn 16 16 35.5 -0.5
baz=106
J18K Innoko River 3.59 317 Pn 16 16 35.9 -0.5
J18K Innoko River 3.59 317 P Pn 16 16 36.0 -0.3
baz=132
GLB Gilahina Butte 3.65 79 IAML 16 17 44.8
comp=N,127nm,0.9s
O16K Kokwok River B 3.65 251 IAML 16 17 46.6
comp=N,81nm,0.9s
O16K Kokwok River B 3.65 251 P Pn 16 16 36.5 -0.6
baz=66,SNR=7.2
J19K Poorman 3.67 329 P Pn 16 16 36.8 -0.6
baz=144,SNR=29
N16K Nishlik Lake 3.71 266 P Pn 16 16 37.3 -0.7
baz=80,SNR=11
M16K Timber Creek 3.74 275 Pn 16 16 37.8 -0.7
M16K Timber Creek 3.74 275 P Pn 16 16 37.7 -0.7
baz=88
BERG Berg Lake 3.77 95 Pn 16 16 36.0 -2.8
BERG Berg Lake 3.77 95 IAML 16 17 55.0
comp=N,158nm,0.9s
BERG IAML 16 17 55.0
comp=E,204nm,1.2s
K17K Iditarod 3.78 301 Pn 16 16 38.7 -0.1
K17K Iditarod 3.78 301 IAML 16 17 22.3
comp=N,131nm,0.6s
K17K Iditarod 3.78 301 P Pn 16 16 38.7 -0.1
baz=115
NEA2 Nenana 3.81 15 IAML 16 17 23.8
comp=E,94nm,0.9s
NEA2 IAML 16 17 25.2
comp=N,88nm,0.3s
NEA2 Nenana 3.81 15 P Pn 16 16 39.3 +0.1
baz=196,SNR=28
VRDI Verde Repeater 3.81 82 IAML 16 17 49.7
comp=E,72nm,0.7s
WRH Wood River Hil 3.84 21 IAML 16 17 37.5
comp=N,79nm,0.6s
WRH IAML 16 17 48.0
comp=E,86nm,0.9s
K24K Donnelly Dome 3.85 39 Pn 16 16 41.6 +1.8
K24K Donnelly Dome 3.85 39 P Pn 16 16 41.5 +1.6
baz=224,SNR=47
OHAK Old Harbor 3.87 196 IAML 16 17 22.9
comp=N,122nm,0.5s
OHAK IAML 16 17 31.6
comp=E,103nm,0.7s
OHAK Old Harbor 3.87 196 P Pn 16 16 38.4 -1.7
baz=15
P16K Nushagak River 3.88 243 Pn 16 16 40.1 -0.1
P16K Nushagak River 3.88 243 IAML 16 18 02.7
comp=E,152nm,0.8s
P16K IAML 16 18 09.2
comp=N,178nm,0.8s
P16K Nushagak River 3.88 243 P Pn 16 16 40.0 -0.1
baz=58,SNR=6.1
CRQM Cirque 3.99 89 Pn 16 16 39.9 -2.0
CRQM Cirque 3.99 89 IAML 16 17 56.1
comp=E,138nm,0.8s
CRQM IAML 16 18 00.5
comp=N,140nm,0.9s
CRQE Cirque 4.01 89 P Pn 16 16 40.0 -2.1
baz=276
HDA Harding Lake 4.01 28 Pn 16 16 41.8 -0.3
HDA Harding Lake 4.01 28 IAML 16 17 48.8
comp=E,155nm,0.4s
HDA IAML 16 17 50.1
comp=N,176nm,0.8s
HDA Harding Lake 4.01 28 P Pn 16 16 41.7 -0.3
baz=212,SNR=25
MCARA McCarthy VSAT 4.02 80 Pn 16 16 41.0 -1.3
MCARA McCarthy VSAT 4.02 80 P Pn 16 16 41.1 -1.1
baz=267
L16K Owhat River 4.03 285 P Pn 16 16 41.4 -0.8
baz=98,SNR=9.0
CCB Clear Creek Bu 4.05 22 IAML 16 17 55.1
comp=N,59nm,0.8s
CCB IAML 16 17 56.8
comp=E,69nm,0.7s
MENT Mentasta 4.10 57 IAML 16 17 49.0
comp=N,155nm,0.6s
PLK5 Peulik 5 4.11 227 Pn 16 16 42.7 -0.6
RIDG Independent Ri 4.11 44 Pn 16 16 42.4 -1.0
RIDG Independent Ri 4.11 44 P Pn 16 16 43.9 +0.5
baz=230,SNR=43
TGL Tana Glacier 4.14 89 Pn 16 16 41.8 -2.1
TGL Tana Glacier 4.14 89 IAML 16 17 53.9
comp=E,104nm,0.5s
TGL IAML 16 17 59.6
comp=N,88nm,0.9s
PLK1 Peulik 1 4.16 223 Pn 16 16 44.2 +0.1
M26K Nabesna, AK 4.21 66 Pn 16 16 44.1 -0.7
M26K Nabesna, AK 4.21 66 IAML 16 18 04.2
comp=N,79nm,0.6s
M26K IAML 16 18 06.1
comp=E,64nm,0.7s
M26K Nabesna, AK 4.21 66 P Pn 16 16 44.4 -0.4
baz=253,SNR=13
PLK4 Peulik 4 4.22 220 Pn 16 16 45.3 +0.4
PLK4 Peulik 4 4.22 220 IAML 16 18 02.4
comp=N,151nm,1.0s
PLK4 IAML 16 18 19.0
comp=E,102nm,0.9s
R17L Mt. Peulik Vol 4.22 220 P Pn 16 16 45.2 +0.3
baz=36
COLA College 4.25 20 P Pn 16 16 45.1 -0.1
baz=203
MDM Murphy Dome 4.27 18 Pn 16 16 45.0 -0.5
L26K Log Cabin Wild 4.29 57 IAML 16 18 06.0
comp=N,115nm,0.4s
L26K Log Cabin Wild 4.29 57 P Pn 16 16 45.7 -0.1
baz=244,SNR=10
PLBL Peulik Blue Cr 4.31 224 Pn 16 16 46.9 +0.7
I23K Minto, Yukon-K 4.32 11 Pn 16 16 45.8 -0.3
I23K Minto, Yukon-K 4.32 11 IAML 16 18 03.4
comp=E,57nm,1.1s
I23K IAML 16 18 09.0
comp=N,101nm,0.8s
I23K Minto, Yukon-K 4.32 11 P Pn 16 16 46.3 +0.1
baz=192,SNR=40
ILAR Eielson Array 4.34 26 P Pn 16 16 45.5 -0.9
comp=N,9.8nm,0.3s,baz=216,slow=13,SNR=232
ILAR S Sn 16 17 34.9 -0.9
comp=N,8.2nm,0.4s,baz=212,slow=16,SNR=6.5
comp=N,21nm,0.4s
N15K Kwethluk River 4.42 264 Pn 16 16 47.4 -0.2
N15K Kwethluk River 4.42 264 IAML 16 18 14.7
comp=E,85nm,0.8s
N15K IAML 16 18 20.7
comp=N,62nm,0.7s
N15K Kwethluk River 4.42 264 P Pn 16 16 47.5 -0.1
baz=76
POKR Poker Plat Res 4.54 21 P Pn 16 16 49.3 0.0
baz=204,SNR=16
SCRK Sand Creek 4.55 45 IAML 16 18 09.2
comp=E,67nm,0.9s
SCRK IAML 16 18 10.3
comp=N,61nm,0.9s
SCRK Sand Creek 4.55 45 P Pn 16 16 49.0 -0.5
baz=231,SNR=13
J25K Salcha River, 4.58 34 Pn 16 16 50.0 +0.3
J25K Salcha River, 4.58 34 P Pn 16 16 50.1 +0.3
baz=219,SNR=32
GCSA Galena City Sc 4.60 329 P Pn 16 16 49.7 -0.3
baz=143,SNR=47
M15K Kasigluk River 4.61 271 P Pn 16 16 49.5 -0.7
baz=83
O15K Ungalikthiuk R 4.63 251 Pn 16 16 50.2 -0.3
O15K Ungalikthiuk R 4.63 251 P Pn 16 16 50.5 0.0
baz=64
SII Sitkinak Islan 4.65 200 P Pn 16 16 50.3 -0.4
baz=18
GRNC Granite Creek 4.67 88 Pn 16 16 49.2 -2.0
GRNC Granite Creek 4.67 88 IAML 16 18 12.5
comp=N,68nm,1.0s
MESA MESA 4.67 95 IAML 16 17 44.5
comp=N,66nm,0.7s
MESA IAML 16 18 21.3
comp=E,61nm,1.0s
MESA MESA 4.67 95 P Pn 16 16 49.5 -1.6
baz=283
R16K Pilot Point 4.68 226 IAML 16 18 33.1
comp=N,87nm,1.1s
R16K IAML 16 18 36.8
comp=E,84nm,1.2s
R16K Pilot Point 4.68 226 P Pn 16 16 51.7 +0.6
baz=41
BARN Barnard Glacie 4.69 84 Pn 16 16 50.1 -1.3
BARN Barnard Glacie 4.69 84 IAML 16 18 12.0
comp=N,54nm,1.2s
BARN IAML 16 18 20.6
comp=E,43nm,1.1s
M27K Edge Creek, AK 4.70 68 Pn 16 16 51.4 -0.2
M27K Edge Creek, AK 4.70 68 P Pn 16 16 51.5 -0.1
baz=256
H21K Melozitna Rive 4.79 352 IAML 16 17 49.4
comp=N,38nm,0.8s
H21K Melozitna Rive 4.79 352 P Pn 16 16 52.3 -0.3
baz=171,SNR=68
CTG Chitna Glacier 4.85 85 P Pn 16 16 52.6 -0.9
baz=274
CTGM Chitina Glacie 4.85 85 Pn 16 16 52.5 -1.1
CTGM Chitina Glacie 4.85 85 IAML 16 18 19.3
comp=N,34nm,0.7s
H20K Anotleneega Mo 4.85 342 Pn 16 16 53.2 -0.3
H20K Anotleneega Mo 4.85 342 P Pn 16 16 53.4 -0.1
baz=159,SNR=26
RKAV Rock Avalanche 4.94 93 Pn 16 16 53.1 -1.6
L27K Beaver Creek, 4.94 60 P Pn 16 16 54.1 -0.5
baz=248,SNR=6.8
J16K Anvik River 4.97 302 P Pn 16 16 54.9 -0.2
baz=114,SNR=35
H22K Ishtalitna Cre 4.97 360 IAML 16 17 53.3
comp=E,39nm,0.6s
H22K IAML 16 17 53.4
comp=N,36nm,0.7s
H22K Ishtalitna Cre 4.97 360 P Pn 16 16 55.0 -0.2
baz=179,SNR=14
L15K Ungalak Mounta 4.98 283 Pn 16 16 54.2 -1.0
L15K Ungalak Mounta 4.98 283 P Pn 16 16 54.5 -0.7
baz=94
LOGN Logan Glacier 5.02 87 Pn 16 16 54.7 -1.3
LOGN Logan Glacier 5.02 87 IAML 16 17 54.0
comp=N,33nm,0.5s
LOGN IAML 16 18 25.5
comp=E,34nm,1.0s
K15K Wolf Creek Mou 5.08 290 Pn 16 16 56.3 -0.3
K15K Wolf Creek Mou 5.08 290 P Pn 16 16 56.5 -0.1
baz=101
YUK2 White River 5.09 76 Pn 16 16 55.8 -1.1
H24K Noodor Dome 5.15 16 Pn 16 16 57.6 +0.1
H24K Noodor Dome 5.15 16 IAML 16 17 58.8
comp=E,56nm,0.5s
H24K IAML 16 18 43.0
comp=N,34nm,0.9s
H24K Noodor Dome 5.15 16 P Pn 16 16 57.9 +0.3
baz=199,SNR=20
BVCY Beaver Creek 5.18 69 P Pn 16 16 57.2 -0.7
baz=258
M14K Bethel 5.23 273 Pn 16 16 58.2 -0.4
M14K Bethel 5.23 273 IAML 16 18 48.0
comp=N,26nm,0.8s
M14K Bethel 5.23 273 P Pn 16 16 58.1 -0.4
baz=83,SNR=9.4
N14K Kuskokwak Cree 5.25 263 Pn 16 16 58.9 -0.1
N14K Kuskokwak Cree 5.25 263 IAML 16 18 47.8
comp=E,52nm,1.0s
N14K IAML 16 19 06.5
comp=N,46nm,1.2s
N14K Kuskokwak Cree 5.25 263 P Pn 16 16 59.1 +0.2
baz=74
YUK3 Moose Creek 5.27 76 Pn 16 16 58.4 -1.0
YUK3 Moose Creek 5.27 76 P Pn 16 16 58.5 -0.9
baz=266
O14K Tigyukauivet M 5.28 256 Pn 16 16 59.1 -0.1
O14K Tigyukauivet M 5.28 256 IAML 16 18 55.3
comp=N,31nm,0.8s
O14K Tigyukauivet M 5.28 256 P Pn 16 16 59.3 0.0
baz=67
PRP Porcupine Dome 5.28 27 Pn 16 16 59.1 -0.3
PRP Porcupine Dome 5.28 27 IAML 16 18 03.1
comp=N,54nm,0.7s
PRP IAML 16 18 32.7
comp=E,47nm,0.7s
PRP Porcupine Dome 5.28 27 P Pn 16 16 59.9 +0.5
baz=212,SNR=33
I17K Unalakleet 5.28 308 Pn 16 16 59.4 +0.1
I17K Unalakleet 5.28 308 P Pn 16 16 59.3 +0.1
baz=120,SNR=22
H18K Honhosa River 5.32 326 Pn 16 16 59.8 0.0
H18K Honhosa River 5.32 326 P Pn 16 16 59.7 0.0
baz=139
O28M Mount Upton 5.42 87 Pn 16 17 00.5 -1.1
O28M Mount Upton 5.42 87 P Pn 16 17 00.6 -1.0
baz=277,SNR=5.0
PCA Pinnacle 5.51 94 Pn 16 17 00.6 -2.0
PINM Pinnacle 5.51 94 P Pn 16 17 00.8 -1.7
baz=284
L14K Kuka Creek 5.54 279 Pn 16 17 02.6 -0.2
L14K Kuka Creek 5.54 279 P Pn 16 17 02.8 0.0
baz=89,SNR=16
YUK8 Steele Glacier 5.59 81 Pn 16 17 03.4 -0.5
YUK8 Steele Glacier 5.59 81 P Pn 16 17 03.4 -0.5
baz=271
CHIR Chirikof Islan 5.62 206 Pn 16 17 02.5 -1.4
H17K Granite Mounta 5.62 319 Pn 16 17 04.1 +0.1
H17K Granite Mounta 5.62 319 P Pn 16 17 04.3 +0.3
baz=132
G21K Allakaket 5.69 351 Pn 16 17 04.4 -0.4
G21K Allakaket 5.69 351 P Pn 16 17 04.8 -0.1
baz=169
I26K Coal Creek Min 5.72 37 Pn 16 17 04.9 -0.4
I26K Coal Creek Min 5.72 37 P Pn 16 17 05.0 -0.3
baz=224
G23K Bananza Creek 5.82 5 Pn 16 17 06.6 -0.2
G23K Bananza Creek 5.82 5 P Pn 16 17 07.1 +0.4
baz=186
G19K Purcell Mounta 5.83 336 Pn 16 17 06.2 -0.6
G19K Purcell Mounta 5.83 336 P Pn 16 17 06.3 -0.5
baz=151,SNR=11
M13K Dall Lake 5.96 270 P Pn 16 17 08.8 +0.2
baz=80
G18K Tagagawik 5.97 330 Pn 16 17 08.6 -0.2
G18K Tagagawik 5.97 330 P Pn 16 17 08.6 -0.2
baz=143
G24K Hadweenzic Riv 6.02 15 Pn 16 17 09.4 0.0
G24K Hadweenzic Riv 6.02 15 P Pn 16 17 09.4 0.0
baz=133
J14K Nanvaranak Lak 6.09 293 Pn 16 17 10.2 -0.1
J14K Nanvaranak Lak 6.09 293 P Pn 16 17 10.4 +0.1
baz=102
YUK4 Talbot Arm 6.13 81 P Pn 16 17 11.2 +0.1
baz=271
G17K Kiwalik Mounta 6.23 321 Pn 16 17 12.1 -0.2
G17K Kiwalik Mounta 6.23 321 P Pn 16 17 12.3 0.0
baz=133
H16K Elim 6.25 311 Pn 16 17 12.3 -0.2
H16K Elim 6.25 311 P Pn 16 17 12.5 +0.1
baz=121
M29M Somme Creek 6.28 71 Pn 16 17 12.5 -0.6
M29M Somme Creek 6.28 71 P Pn 16 17 12.7 -0.4
baz=262
O29M Mount Kennedy 6.29 90 Pn 16 17 12.1 -1.1
YUK6 Outpost Mounta 6.30 84 P Pn 16 17 12.9 -0.5
baz=276
COLD Coldfoot 6.33 4 Pn 16 17 14.2 +0.5
COLD Coldfoot 6.33 4 P Pn 16 17 14.1 +0.5
baz=185,SNR=18
DAWY Dawson 6.33 55 Pn 16 17 13.4 -0.4
DAWY Dawson 6.33 55 P Pn 16 17 13.3 -0.4
baz=246,SNR=8.6

F21K	Alatna River	6.38	352			Pn	16 17 14.3	0.0
F21K	Alatna River baz=170	6.38	352	P		Pn	16 17 14.4	+0.1
I27K	Kandik River	6.39	39			Pn	16 17 14.1	-0.4
I27K	Kandik River baz=227	6.39	39	P		Pn	16 17 14.2	-0.4
F20K	Avaraart Lake	6.44	344			Pn	16 17 15.0	-0.1
F20K	Avaraart Lake baz=160	6.44	344	P		Pn	16 17 15.4	+0.4
YUK7	Dusty Glacier	6.46	88			Pn	16 17 14.6	-1.0
YUK5	Granite Creek	6.52	82			Pn	16 17 15.2	-1.2
L29M	L29M	6.56	65			Pn	16 17 16.3	-0.6
L29M	L29M baz=256	6.56	65	P		Pn	16 17 16.2	-0.6
F19K	Shaleruckik Mo	6.57	337			Pn	16 17 16.5	-0.3
F19K	Shaleruckik Mo baz=151,SNR=8.0	6.57	337	P		Pn	16 17 16.5	-0.3
G16K	Koyuk River	6.71	317			Pn	16 17 18.3	-0.5
G16K	Koyuk River baz=127	6.71	317	P		Pn	16 17 18.4	-0.5
HYT	Haines Junctio	6.73	85			Pn	16 17 18.2	-1.0
HYT	Haines Junctio baz=277	6.73	85	P		Pn	16 17 18.5	-0.7
F18K	Selawik	6.78	330			Pn	16 17 19.6	-0.1
F18K	Selawik baz=143	6.78	330	P		Pn	16 17 20.0	+0.3
I28M	Miner Creek	6.83	44			Pn	16 17 20.1	-0.5
I28M	Miner Creek baz=234,SNR=21	6.83	44	P		Pn	16 17 20.5	-0.1
H27K	Steamboat Moun	6.86	35			Pn	16 17 20.0	-0.9
H27K	Steamboat Moun baz=224	6.86	35	P		Pn	16 17 20.2	-0.7
G26K	Porcupine Rive	6.87	25			Pn	16 17 20.4	-0.6
G26K	Porcupine Rive baz=212,SNR=5.6	6.87	25	P		Pn	16 17 20.5	-0.6
N30M	Aishikik Lake	6.88	79			Pn	16 17 19.1	-2.1
N30M	Aishikik Lake baz=272	6.88	79	P		Pn	16 17 19.3	-1.9
J29N	Klondike Camp baz=245,SNR=6.5	6.96	54	P		Pn	16 17 22.5	+0.2
K29M	Barlow Dome baz=252	7.02	60	P		Pn	16 17 23.0	-0.2
E19K	Redstone River	7.04	341			Pn	16 17 23.3	0.0
E19K	Redstone River baz=156	7.04	341	P		Pn	16 17 23.3	0.0
F17K	Baldwin Pennin baz=137	7.07	326	P		Pn	16 17 24.4	+0.7
G15K	Niukluk	7.09	310			Pn	16 17 23.8	-0.2
G15K	Niukluk baz=119	7.09	310	P		Pn	16 17 23.9	0.0
P30M	Million Dollar baz=283	7.11	90	P		Pn	16 17 24.2	-0.2
F25K	Christian Rive	7.11	18			Pn	16 17 23.8	-0.6
F25K	Christian Rive baz=203	7.11	18	P		Pn	16 17 24.0	-0.4
E23K	Chandalar baz=186,SNR=7.5	7.18	5	P		Pn	16 17 25.7	+0.4
E22K	Anaktuvuk Pass baz=178	7.23	358	P		Pn	16 17 26.3	+0.4
G27K	Doyon Strip	7.26	32			Pn	16 17 26.0	-0.3
G27K	Doyon Strip baz=220	7.26	32	P		Pn	16 17 25.9	-0.3
E24K	Your Creek baz=191	7.26	8	P		Pn	16 17 26.6	+0.2
M11K	Mekoryuk	7.35	272			Pn	16 17 27.9	+0.4
M11K	Mekoryuk baz=79,SNR=5.2	7.35	272	P		Pn	16 17 28.0	+0.4
ANM	Nome	7.42	305			Pn	16 17 28.6	+0.2
ANM	Nome baz=113,SNR=8.4	7.42	305	P		Pn	16 17 28.9	+0.4
F26K	Sheenjek River	7.45	21			Pn	16 17 28.4	-0.6
F26K	Sheenjek River baz=208	7.45	21	P		Pn	16 17 28.5	-0.4
E25K	Arctic Village	7.62	16			Pn	16 17 30.7	-0.5
E25K	Arctic Village baz=201,SNR=8.3	7.62	16	P		Pn	16 17 30.7	-0.5
E21K	Killik River baz=170	7.62	352	P		Pn	16 17 32.0	+0.8
E20K	Nigu River baz=162,SNR=14	7.64	346	P		Pn	16 17 32.3	+0.7
E18K	Tukpahlearik C baz=144	7.67	332	P		Pn	16 17 32.6	+0.8
F15K	North Star Dit	7.68	314			Pn	16 17 31.9	-0.1
F15K	North Star Dit baz=122	7.68	314	P		Pn	16 17 32.0	0.0
E17K	Hotham Inlet	7.70	328			Pn	16 17 32.8	+0.5
E17K	Hotham Inlet baz=138,SNR=26	7.70	328	P		Pn	16 17 33.0	+0.7
J30M	Hart River	7.76	56			Pn	16 17 33.6	+0.3
J30M	Hart River baz=249	7.76	56	P		Pn	16 17 33.6	+0.3
TOLK	Toolik Lake Re baz=186,SNR=22	7.77	5	P		Pn	16 17 34.8	+1.5
D22K	Ayikyak River baz=175	8.00	356	P		Pn	16 17 37.5	+1.1
I30M	Mount Dempster	8.00	51			Pn	16 17 36.4	-0.1
I30M	Mount Dempster baz=244	8.00	51	P		Pn	16 17 36.3	-0.3
D23K	Nanushuk River baz=182	8.06	2	P		Pn	16 17 38.8	+1.5
D19K	Kuna River baz=156	8.12	342	P		Pn	16 17 39.1	+1.0
D20K	Ettivluk River baz=161	8.13	346	P		Pn	16 17 39.1	+0.9
F14K	Arctic Creek	8.17	310			Pn	16 17 39.1	+0.4
F14K	Arctic Creek baz=117	8.17	310	P		Pn	16 17 39.1	+0.4
D24K	Happy Valley	8.31	6			Pn	16 17 41.5	+0.8
D24K	Happy Valley baz=188	8.31	6	P		Pn	16 17 41.5	+0.8
F28M	Old Crow	8.32	32			Pn	16 17 40.9	+0.1
F28M	Old Crow baz=222	8.32	32	P		Pn	16 17 40.9	+0.1
G29M	Pine Creek baz=230	8.35	39	P		Pn	16 17 41.4	+0.2
E27K	Coleen River	8.37	26			Pn	16 17 40.7	-0.8
E27K	Coleen River baz=214	8.37	26	P		Pn	16 17 40.8	-0.8
C21K	Knifeblade Rid	8.38	351			Pn	16 17 42.1	+0.5
C21K	Knifeblade Rid baz=168	8.38	351	P		Pn	16 17 42.1	+0.5
D17K	Noatak River baz=137	8.49	328	P		Pn	16 17 43.3	+0.3
D25K	Kavik River baz=196	8.66	12	P		Pn	16 17 45.9	+0.4
RDOG	Red Dog Mine baz=139,SNR=5.8	8.71	330	P		Pn	16 17 47.6	+1.6
C18K	Utukok River baz=147	8.81	336	P		Pn	16 17 47.9	+0.5
TNA	Tin City	8.81	309			Pn	16 17 48.0	+0.6
TNA	Tin City baz=114,SNR=6.1	8.81	309	P		Pn	16 17 48.0	+0.6
B21K	Ikpikpuk River	8.83	352			Pn	16 17 48.2	+0.6
B21K	Ikpikpuk River baz=169	8.83	352	P		Pn	16 17 48.2	+0.6
N32M	Quiet Lake baz=277	8.83	81	P		Pn	16 17 46.6	-1.2
C24K	Franklin Bluff	8.88	6			Pn	16 17 48.6	+0.2
C24K	Franklin Bluff baz=188	8.88	6	P		Pn	16 17 48.8	+0.4
C19K	Lookout Ridge baz=153	8.91	340	P		Pn	16 17 49.4	+0.6
G30M	tAoh Zraii Nji baz=234	8.96	41	P		Pn	16 17 47.7	-1.8
H31M	Peel River baz=245	9.02	50	P		Pn	16 17 49.7	-0.6
C17K	DeLong Mountai baz=140	9.10	331	P		Pn	16 17 51.5	+0.1
P33M	Teslin, Yukon baz=283	9.12	86	P		Pn	16 17 51.5	-0.2
E28M	Babbage River baz=216	9.16	28	P		Pn	16 17 51.5	-0.8
S32K	Killisnoo baz=299	9.24	105	P		Pn	16 17 52.5	-0.8
C27K	Jago River baz=203	9.27	17	P		Pn	16 17 53.5	-0.2
D27M	Malcolm River baz=212	9.39	23	P		Pn	16 17 55.0	-0.3
C26K	Camden Bay	9.39	14			Pn	16 17 55.6	+0.2
C26K	Camden Bay baz=199	9.39	14	P		Pn	16 17 55.5	+0.2
E29M	Blow River	9.40	32			Pn	16 17 55.4	0.0
E29M	Blow River baz=224	9.40	32	P		Pn	16 17 55.4	0.0
B20K	Meade River baz=162	9.42	348	P		Pn	16 17 56.0	+0.3
F30M	Barrier River baz=232	9.47	38	P		Pn	16 17 56.4	0.0
C16K	Lisburne Hills baz=134	9.50	327	P		Pn	16 17 57.4	+0.6
G31M	Satah River baz=239	9.57	44	P		Pn	16 17 57.2	-0.5
GAMB	Gambell	9.89	296	P		Pn	16 18 02.6	+0.4
D28M	Stokes Point baz=218,SNR=5.7	9.91	27	P		Pn	16 18 03.1	+0.6
F31M	Tsiigehtchic baz=238	10.02	42	P		Pn	16 18 03.1	-0.8
INK	Inuvik comp=E,0.3nm,0.3s,baz=254,slow=12,SNR=9.7	10.57	38	P		Pn	16 18 11.0	-0.4
INK	comp=E,1.7nm,0.6s,baz=276,slow=6.5,SNR=3.7 comp=E,1.6nm,0.6s			S		Sn	16 20 10.7	+2.9
INK	Inuvik baz=234	10.57	38	P		Pn	16 18 10.9	-0.5
A21K	Barrow baz=166	10.64	351	P		Pn	16 18 11.4	-1.0
S34M	Telegraph Cree baz=295	10.69	98	P		Pn	16 18 12.9	-0.2
WRAK	Wrangell Islan baz=303	10.83	106	P		Pn	16 18 15.2	+0.2
UNV	Unalaska Valle baz=43	10.84	236	P		Pn	16 18 15.5	+0.3
CRAG	Craig baz=307	11.02	112	P		Pn	16 18 17.2	-0.3
DLBC	Dease Lake baz=292	11.02	94	P		Pn	16 18 17.3	-0.3
T35M	Bob Quinn baz=299	11.54	101	P		Pn	16 18 24.4	-0.2
V35K	Ketchikan baz=306	11.79	110	P		Pn	16 18 28.2	+0.1
C36M	Paulatuk baz=247	14.07	42	P		Pn	16 18 58.3	-0.2
A36M	Sachs Harbour comp=Z,12nm,0.6s	15.01	32	IAmb		IAmb	16 19 15.3	
A36M	Sachs Harbour baz=236,SNR=6.4	15.01	32	P		Pn	16 19 10.5	-0.1
YKA	Yellowknife Ar comp=Z,0.2nm,0.3s,baz=283,slow=10,SNR=12 comp=Z,0.2nm,0.4s	17.30	69	P		Pn	16 19 38.5	-0.9
YKA	Yellowknife Ar	17.30	69			Pn	16 19 38.7	-0.7
NVAR	Mina Array Bea comp=Z,0.9nm,0.7s,baz=322,slow=8.5,SNR=4.9 comp=Z,0.9nm,0.7s	30.47	123	P		P	16 21 50.0	+1.2
PDAR	Pinedale Array comp=Z,0.4nm,0.6s,baz=309,slow=11,SNR=2.9 comp=Z,0.4nm,0.6s	30.82	107	P		P	16 21 53.2	+1.3
PDAR	Pinedale Array	30.82	107	P		P	16 21 51.6	-0.3
TXAR	Lajitas Array comp=Z,0.1nm,0.6s,baz=327,slow=13,SNR=1.9 comp=Z,0.1nm,0.6s	44.54	113	P		P	16 23 47.7	+0.4
SONM	Songino Array comp=Z,0.5nm,0.7s,baz=33,slow=6.0,SNR=3.8 comp=Z,0.5nm,0.7s	54.92	306	P		P	16 25 06.0	+0.1
SONM	Songino Array comp=Z,0.1nm,0.9s	54.92	306	IAmb		IAmb	16 25 15.1	

*AZER **23** 16:20:14.7,38°.37N×44°.61E,h4km,ml3.6*
*AFAD **23** 16:20:15.4,38°.40N×44°.60E,h7km±2km,ML3.5*
*NSSP **23** 16:20:16.2,38°.40N×44°.57E,h10km,Ms3.5*
*ISK **23** 16:20:17.5,38°.38N×44°.55E,h5km,ML3.7/12*
*TIF **23** 16:20:17.1,38°.45N×44°.47E,h2km±3km*
*TEH **23** 16:20:17.7,38°.48N×44°.54E,h6km±30km,ML3.5, Presumed earthquake*
*IDC **23** 16:20:19.3±1.1,38°.51N×44°.55E,h0km,mb3.8/9, mbtmp3.8/14,ML3.6/3,Error ellipse: s-maj=15.1km s-min=14.3km az=167.0*
*NEIC **23** 16:20:20.7±2.4,38°.41N±0°.05×44°.33E±0°.06,h10km±1km, mb4.0/10,Error ellipse: s-maj=9.3km s-min=7.6km az=153.0*

ISC 23 16:20:19.2±0.5,**38°.41N**±0°.02×**44°.51E**±0°.02,**h10**km,**n92,** σ**2s05**/100,**mb4.0**/13,**2D,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**302**	P		**Pg**	**16 20 26.5**	**-2.2**
OZAP				S		**Sg**	**16 20 34.2**	**-0.7**
TVAN	**Van**	**0.87**	**278**	P		**Pg**	**16 20 33.5**	**-2.6**
TVAN				S		**Sb**	**16 20 47.7**	**-0.8**
TVAN	comp=E,3μm,1.1s			IAML			16 21 01.0	
TVAN	comp=N,3μm,1.2s			IAML			16 21 02.0	
ISHB	**Shabestar**	**0.88**	**98**	Pg		**Pg**	**16 20 33.7**	**-2.5**
VANB	**Van**	**0.90**	**282**	Pg		**Pn**	**16 20 36.0**	**-2.1**
VANB				Sg		**Sn**	**16 20 49.6**	**-1.6**
VMUR	**Van-Muradiye**	**0.94**	**309**	P		**Pg**	**16 20 34.9**	**-2.4**
VMUR				S		**Sg**	**16 20 48.7**	**-0.8**
VMUR	**Van-Muradiye**	**0.94**	**309**	Pg		**Pg**	**16 20 34.8**	**-2.4**
MAKU	**Maku**	**0.96**	**8**	Pg		**Pg**	**16 20 34.4**	**-3.3**
IMRD	**Marand**	**0.98**	**72**	Pg		**Pg**	**16 20 35.9**	**-2.3**
HAKT	**HAKKARI**	**1.06**	**217**	P		**Pn**	**16 20 38.4**	**-2.0**
HAKT				S		**Sn**	**16 20 56.1**	**+0.8**
NAX	**Nakhchivan**	**1.09**	**45**	P		**Pg**	**16 20 37.7**	**-2.4**
NAX				S		**Sn**	**16 20 54.5**	**-1.3**
ERCV	**ERCIS-VAN**	**1.10**	**304**	Pn		**Pn**	**16 20 40.4**	**-0.5**
ERCV				Sn		**Sn**	**16 20 57.3**	**+1.0**
GEVA	**Gevas**	**1.14**	**266**			**Pb**	**16 20 37.8**	**-3.4**
GEVA	**Gevas**	**1.14**	**266**	P		**Pb**	**16 20 38.5**	**-2.8**
GEVA				S		**Sn**	**16 20 55.8**	**-1.5**
GEVA	comp=E,805nm,0.7s			IAML			16 21 06.0	
AKDM	**Akdamar-Van**	**1.20**	**267**	Pg		**Pb**	**16 20 40.7**	**-1.5**
ORD	**Ordubad**	**1.27**	**65**	P		**Pn**	**16 20 40.9**	**-2.3**
ORD				S		**Sn**	**16 20 59.9**	**-0.4**
SBZ	**Shahbuz**	**1.28**	**39**	P		**Pn**	**16 20 41.2**	**-2.1**
SBZ				S		**Sn**	**16 21 01.1**	**+0.4**
DYDN	**Diyadin**	**1.30**	**331**	P		**Pn**	**16 20 40.4**	**-3.3**
DYDN				S		**Sb**	**16 20 58.8**	**-2.0**
DYDN	comp=E,1μm,0.8s			IAML			16 21 08.0	
DYDN	comp=N,1μm,1.5s			IAML			16 21 12.0	
DYDN	**Diyadin**	**1.30**	**331**	Pg		**Pn**	**16 20 40.4**	**-3.3**
HYR	**Heyderabad**	**1.34**	**11**	P		**Pb**	**16 20 42.6**	**-1.8**
HYR				S		**Sg**	**16 21 04.7**	**+2.4**
CUKT	**Cukurca**	**1.36**	**212**	Pn		**Pg**	**16 20 44.2**	**-1.1**
CUKT				Sn		**Sg**	**16 21 04.5**	**+1.5**
CUKT	**Cukurca**	**1.36**	**212**	Pg		**Pg**	**16 20 44.4**	**-0.9**
IAZR	**Azarshahr**	**1.37**	**122**	Pg		**Pg**	**16 20 44.1**	**-1.5**
ADCV	**BITLIS_Adilcev**	**1.45**	**287**	P		**Pg**	**16 20 45.7**	**-1.5**
ADCV				S		**Sg**	**16 21 07.4**	**+1.4**
ADCV	comp=E,488nm,1.1s			IAML			16 21 09.0	
ADCV	comp=N,497nm,0.9s			IAML			16 21 09.0	
ADCV	**BITLIS_Adilcev**	**1.45**	**287**	Pg		**Pg**	**16 20 45.6**	**-1.5**
VAYK	**Vayk**	**1.47**	**29**	∥eP		**Pn**	**16 20 44.4**	**-1.6**
VAYK				∥eS		**Sg**	**16 21 05.2**	**-1.4**
AGRB	**Hanur-Agry**	**1.66**	**315**	Pn		**Pb**	**16 20 48.5**	**-1.5**
AGRB				Sn		**Sg**	**16 21 12.9**	**+0.2**
AGRB	**Hanur-Agry**	**1.66**	**315**	Pg		**Pb**	**16 20 48.5**	**-1.5**
MLAZ	**Malazgirt-MUS**	**1.70**	**296**	Pn		**Pg**	**16 20 50.0**	**-1.8**
GNI	**Garni** 35nm,0.3s,baz=222,slow=2.5,SNR=33	**1.75**	**6**	Pn		**Pb**	**16 20 50.0**	**-1.5**
GNI	35nm,0.3s,baz=359,slow=23,SNR=12			Lg		Lg	16 21 13.8	
GNI	**Garni**	**1.75**	**6**	Pn		**Pg**	**16 20 50.5**	**-2.3**
GNI	**Garni**	**1.75**	**6**	*e*P		**Pg**	**16 20 50.9**	**-2.0**
GNI				*e*S		**Sg**	**16 21 16.1**	**+0.5**
MAHB	**Mahabad**	**1.89**	**149**	Pn		**Pg**	**16 20 53.3**	**-2.3**
GURO	**Guroymak-BITLI**	**1.95**	**275**			**Pg**	**16 20 53.8**	**-1.1**
GURO	**Guroymak-BITLI**	**1.95**	**275**	Pn		**Pb**	**16 20 53.6**	**-1.3**
GURO	**Guroymak-BITLI**	**1.95**	**275**	Pn		**Pb**	**16 20 53.6**	**-1.3**
IHRS	**Heris**	**1.99**	**92**	Pn		**Pb**	**16 20 54.0**	**-1.8**
IHSH	**Hashtrud**	**2.44**	**116**	Pn		**Pb**	**16 21 00.7**	**-2.8**
KARS	**Kars**	**2.48**	**334**	Pn		**Pb**	**16 21 00.9**	**-3.0**
VRTB	**Varto-Mus**	**2.50**	**288**	Pn		**Pb**	**16 21 01.6**	**-2.8**
ISRB	**Sarab**	**2.56**	**102**	Pn		**Pb**	**16 21 02.0**	**-3.3**
SVAN	**Silvan-Diyarba**	**2.62**	**265**	Pn		**Pb**	**16 21 03.1**	**-3.2**
SVAN	**Silvan-Diyarba**	**2.62**	**265**	Pn		**Pb**	**16 21 03.1**	**-3.2**
GRMI	**Germi**	**2.68**	**80**	Pn		**Pb**	**16 21 03.3**	**-4.2**
SENK	**Senkaya-Erzuru**	**2.72**	**323**	Pn		**Pb**	**16 21 04.6**	**-3.6**
KARO	**Karliova-Bingo**	**2.85**	**290**	Pn		**Pb**	**16 21 06.4**	**-3.9**
BGD	**Bogdanovka**	**2.94**	**346**	P		**Pb**	**16 21 11.5**	**-0.4**
BNGB	**Bingl**	**3.05**	**282**	Pn		**Pn**	**16 21 09.1**	**+1.4**
AKH	**Akhalkalaki**	**3.10**	**346**	P		**Pb**	**16 21 14.6**	**0.0**
DGRG	**David-gareji**	**3.11**	**12**	P		**Pg**	**16 21 15.6**	**-3.3**
TRLG	**Trialeti**	**3.14**	**354**	P		**Pb**	**16 21 13.4**	**-1.9**
MARD	**Mardin**	**3.15**	**251**			**Pn**	**16 21 07.3**	**-1.7**
VSHL	**Vashlovani**	**3.17**	**27**	P		**Pg**	**16 21 21.4**	**+1.4**
YEDI	**Yedisu-Bingol**	**3.26**	**290**	Pn		Pb	16 21 12.4	-4.9
DDFL	**Dedoflistskaro**	**3.28**	**22**	P		**Pg**	**16 21 21.3**	**-0.8**
TBLG	**Delisi**	**3.33**	**3**	P		**Pg**	**16 21 23.6**	**+0.7**
DYBB	**Diyarbakir**	**3.47**	**264**	Pn		**Pn**	**16 21 14.9**	**+1.5**
LGD	**Lagodekhi**	**3.67**	**21**	P		**Pg**	**16 21 26.0**	**-3.6**
ALIG	**Mtskhetisjvari**	**3.75**	**350**	P		**Pb**	**16 21 24.9**	**-0.8**
CHRG	**Chargali**	**3.93**	**5**	P		**Pb**	**16 21 27.5**	**-1.2**
IDHR	**Dehrash**	**4.00**	**157**	Pn		Pb	16 21 23.1	-6.8
GARIG	**Gari**	**4.27**	**350**	P		**Pn**	**16 21 27.2**	**+2.9**
SHTL	**Shatili**	**4.27**	**6**	P		**Pb**	**16 21 33.3**	**-1.3**
GLG1	**Gilan-e-Gharb**	**4.43**	**165**	Pn		**Pn**	**16 21 28.8**	**+2.2**
KBZ	**Khabaz** 1.6nm,1.0s,baz=167,slow=6.9,SNR=4.7	**5.45**	**348**	Pn		**Pn**	**16 21 43.1**	**+2.6**
BRTR	**Keskin Array B** 0.6nm,0.8s,baz=125,slow=11,SNR=3.9	**8.56**	**282**	Pn		Pn	16 22 28.8	+5.4
BELG	**Belogornoye** 0.3nm,0.3s,baz=340,slow=12,SNR=3.9 11nm,1.0s	**14.15**	**8**	Pn		**Pn**	**16 23 38.8**	**-0.8**
AKTO	**Aktyubinsk** 0.2nm,0.3s,baz=212,slow=8.5,SNR=8.2 0.7nm,0.3s	**15.39**	**34**	Pn		**Pn**	**16 23 54.3**	**-2.0**
ABKAR	**Akbulak array**	**15.51**	**41**	P		**P**	**16 24 05.0**	**+2.6**
AKASG	**Malin Array Be** 0.3nm,0.3s,baz=134,slow=12,SNR=4.2 0.9nm,0.7s	**16.38**	**324**	Pn		**Pn**	**16 24 08.9**	**-0.3**
BUR08	**Bucovina Ar. S**	**16.83**	**309**			**P**	**16 24 17.1**	**-0.1**
BUR08	comp=Z,6.5nm,0.8s			IAmb		IAmb	16 24 20.1	
ITM	**Ithomi**	**17.89**	**273**	P		**P**	**16 24 28.0**	**-0.8**
KK31	**Karatay Array**	**20.21**	**68**			Pn	16 24 57.6	+1.5
KK31	comp=Z,8.3nm,1.0s			IAmb		IAmb	16 25 01.8	
KKAR	**Karatay Array**	**20.21**	**68**	P		Pn	16 24 57.6	+1.4
ARTI	**Arti** comp=Z,2.7nm,0.9s,baz=209,slow=6.7,SNR=3.2 comp=Z,2.7nm,0.9s	**20.22**	**23**	P		Pn	16 24 54.0	-2.1
ARTI	**Arti**	**20.22**	**23**	P		Pn	16 24 56.7	+0.6
ARTI	comp=Z,7.6nm,1.1s			IAmb		IAmb	16 24 59.4	
ARSB	**Arslanbob**	**22.01**	**73**	P		**P**	**16 25 16.6**	**+2.8**
BVAR	**Borovoye Array** comp=Z,1.6nm,0.7s,baz=235,slow=6.5,SNR=5.5 comp=Z,1.6nm,0.7s	**23.07**	**42**	P		**P**	**16 25 26.2**	**+1.4**
BOOM	**Boomskoye usch**	**24.19**	**70**			**P**	**16 25 38.1**	**+2.1**
KDJ	**Kajisay**	**25.12**	**71**			**P**	**16 25 47.4**	**+3.0**
KDJ	comp=Z,3.5nm,0.9s			IAmb		IAmb	16 25 49.8	
FINES	**FINESS Array B** comp=Z,2.2nm,0.8s,baz=131,slow=19,SNR=1.2 comp=Z,2.2nm,0.8s	**25.75**	**340**	P		**P**	**16 25 50.3**	**+0.6**
KURBB	**Kurchatov Arra** comp=Z,1.4nm,0.3s,baz=262,slow=8.9,SNR=9.5 comp=Z,1.4nm,0.3s	**26.91**	**52**	P		**P**	**16 26 02.2**	**+1.9**
KURK	**Kurchatov**	**26.99**	**52**	P		**P**	**16 26 02.9**	**+1.9**
KURK	comp=Z,2.6nm,0.8s			IAmb		IAmb	16 26 03.5	
MAKZ	**Makanchi**	**28.60**	**61**	P		**P**	**16 26 16.7**	**+1.2**
MAKZ	comp=Z,3.9nm,1.4s			IAmb		IAmb	16 26 32.1	
MKAR	**Makanchi Array** comp=Z,1.6nm,0.7s,baz=264,slow=6.9,SNR=19 comp=Z,1.6nm,0.7s	**28.82**	**61**	P		**P**	**16 26 18.5**	**+1.0**
MKAR	**Makanchi Array**	**28.82**	**61**	P		**P**	**16 26 18.7**	**+1.2**
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.5s,baz=261,slow=9.8,SNR=3.8 comp=Z,0.6nm,0.5s	**31.44**	**47**	P		**P**	**16 26 41.4**	**+0.8**
WMQ	**Urumqi**	**32.70**	**66**	*e*P		P	16 26 58.8	+7.0
WMQ	comp=Z,24nm,2.3s			pmax		pmax		
ESDC	**Sonseca Array** comp=Z,0.8nm,0.9s,baz=65,slow=8.3,SNR=4.2 comp=Z,0.8nm,0.9s	**37.31**	**288**	P		**P**	**16 27 31.9**	**+0.3**
PZH	**PanZhiHua**	**49.03**	**86**	P		P	16 29 10.9	+4.3
HHC	**Hu-ho-hao-te**	**50.55**	**65**	*e*P		**P**	**16 29 20.5**	**+2.6**
HHC	comp=Z,7.0nm,0.6s			pmax		pmax		
HHC	comp=Z,1μm,6.9s			pmax		pmax		
CMAR	**Chiang Mai Arr** comp=Z,0.8nm,0.7s,baz=309,slow=6.6,SNR=4.9 comp=Z,0.8nm,0.7s	**51.06**	**97**	P		**P**	**16 29 23.3**	**+1.3**
SEY	**Seymchan** comp=Z,0.6nm,0.5s,baz=273,slow=20,SNR=5.4 comp=Z,0.6nm,0.5s	**63.91**	**29**	P		**P**	**16 30 52.7**	**+0.9**

*AZER **23** 16:24:51.5,38°.37N×44°.54E,h11km,ml3.9*
*NSSP **23** 16:24:52.8,38°.47N×44°.52E,h10km,Ms3.7*
*TIF **23** 16:24:53.0,38°.45N×44°.48E,h5km±1km*
*AFAD **23** 16:24:53.6,38°.45N×44°.46E,h7km±4km,ML3.5*
*IDC **23** 16:24:54.7±1.0,38°.43N×44°.47E,h0km,mb3.8/9, mbtmp3.7/14,ML3.4/4,Error ellipse: s-maj=15.1km s-min=13.3km az=142.0*
*ISK **23** 16:24:54.2,38°.38N×44°.54E,h4km,ML3.4/10*
*TEH **23** 16:24:54.0,38°.43N×44°.48E,h5km,ML3.5,Presumed earthquake*

ISC 23 16:24:54.0±1.1,**38°.42N**±0°.02×**44°.47E**±0°.02,**h1**km±8km, **n84,**σ**1s65**/113,**mb3.8**/8,**2D,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**303**	P		**Pg**	**16 25 02.8**	**+0.2**
OZAP				S		**Sg**	**16 25 08.7**	**+0.3**
OZAP	comp=N,6μm,0.7s			IAML			16 25 17.0	
YOVA	**Hakkari_Yksek**	**0.84**	**190**	P		**Pb**	**16 25 10.7**	**-0.9**
YOVA				S		**Sb**	**16 25 23.3**	**-0.2**
YOVA	comp=E,1μm,0.5s			IAML			16 25 28.0	
YOVA	comp=N,1μm,0.7s			IAML			16 25 29.0	
YOVA	**Hakkari_Yksek**	**0.84**	**190**	Pg		**Pb**	**16 25 10.7**	**-0.9**
TVAN	**Van**	**0.84**	**278**	P		**Pg**	**16 25 08.9**	**-1.3**
TVAN	comp=N,3μm,1.0s			IAML			16 25 38.0	
TVAN	comp=E,2μm,0.7s			IAML			16 25 38.0	
VANB	**Van**	**0.87**	**282**	Pg		**Pb**	**16 25 11.8**	**-0.2**
VANB				Sg		**Sn**	**16 25 25.5**	**-1.4**
VMUR	**Van-

ADCV	**BITLIS_Adilcev**	**1.42**	**286**	Pg		**Pb**	**16 25 20.6**	**-0.9**
VAYK	**Vayk**	**1.48**	**30**	⇓*e*P		**Pb**	**16 25 21.3**	**-1.1**
VAYK				⇓*e*S		**Sg**	**16 25 42.0**	**+0.5**
IGDI	**IGDIR**	**1.48**	**348**	P		**Pb**	**16 25 22.0**	**-0.4**
IGDI				S		**Sg**	**16 25 45.2**	**+3.6**
ALVK	**Alvank**	**1.56**	**70**	*e*P		**Pn**	**16 25 22.1**	**-0.9**
ALVK				*e*S		**Sg**	**16 25 43.5**	**-0.7**
AGRB	**Hanur-Agry**	**1.63**	**316**	Pn		**Pg**	**16 25 24.9**	**-0.4**
DORK	**Agr/Tutak/Do**	**1.64**	**307**	P		**Pb**	**16 25 23.8**	**-1.3**
MLAZ	**Malazgirt-MUS**	**1.67**	**296**	Pn		**Pg**	**16 25 25.8**	**-0.2**
GNI	**Garni**	**1.74**	**7**	Pn		**Pb**	**16 25 26.6**	**-0.4**
	59nm,0.3s,baz=330,slow=1.8,SNR=31							
GNI				Lg		Lg	16 25 52.1	
	48nm,0.3s,baz=296,slow=20,SNR=8.8							
GNI	**Garni**	**1.74**	**7**	Pn		**Pb**	**16 25 26.8**	**-0.1**
GNI	**Garni**	**1.74**	**7**	*e*P		**Pg**	**16 25 27.3**	**-0.1**
GNI				*e*S		**Sg**	**16 25 54.0**	**+3.9**
METS	**Metsamor**	**1.76**	**350**	*e*P		**Pb**	**16 25 26.9**	**-0.2**
METS				*e*S		**Sg**	**16 25 50.6**	**+0.2**
VNNZ	**Vanand**	**1.76**	**344**	*e*P		**Pg**	**16 25 27.1**	**-0.6**
VNNZ				*e*S		**Sg**	**16 25 52.0**	**+1.5**
EGVZ	**Egvard**	**1.81**	**63**	*e*P		**Pb**	**16 25 26.6**	**-1.4**
EGVZ				*e*S		**Sg**	**16 25 51.1**	**-1.0**
ARUZ	**Aruch**	**1.89**	**351**	*e*P		**Pb**	**16 25 28.6**	**-0.7**
ARUZ				*e*S		**Sg**	**16 25 54.7**	**+0.1**
KAPZ	**Kaputan**	**1.91**	**5**	*e*P		**Pb**	**16 25 28.9**	**-0.9**
KAPZ				*e*S		**Sg**	**16 25 55.1**	**-0.3**
GURO	**Guroymak-BITLI**	**1.92**	**275**	Pn		**Pb**	**16 25 29.4**	**-0.5**
GURO	**Guroymak-BITLI**	**1.92**	**275**	Pn		**Pb**	**16 25 29.3**	**-0.6**
MAHB	**Mahabad**	**1.92**	**149**	Pn		**Pb**	**16 25 28.9**	**-1.0**
AMBZ	**Amberd**	**1.97**	**355**	*e*P		**Pb**	**16 25 30.6**	**-0.4**
AMBZ				*e*S		**Sg**	**16 25 58.0**	**+0.5**
AYRK	**Ayrk**	**1.98**	**31**	*e*P		**Pb**	**16 25 30.2**	**-0.8**
AYRK				*e*S		**Sg**	**16 25 57.6**	**0.0**
IHRS	**Heris**	**2.02**	**92**	Pn		**Pb**	**16 25 31.0**	**-0.8**
KARS	**Kars**	**2.46**	**334**	Pn		**Pb**	**16 25 36.8**	**-2.3**
VRTB	**Varto-Mus**	**2.47**	**288**	Pn		**Pb**	**16 25 37.7**	**-1.6**
IHSH	**Hashtrud**	**2.47**	**116**	Pn		**Pb**	**16 25 37.0**	**-2.5**
LSVT	**Lusahovit**	**2.56**	**12**	*e*P		**Pb**	**16 25 38.6**	**-2.1**
LSVT				*e*S		**Sb**	**16 26 11.8**	**-0.9**
ISRB	**Sarab**	**2.59**	**102**	Pn		**Pn**	**16 25 37.7**	**+0.4**
SVAN	**Silvan-Diyarba**	**2.59**	**265**	Pn		**Pb**	**16 25 39.1**	**-2.2**
SVAN	**Silvan-Diyarba**	**2.59**	**265**	Pn		**Pb**	**16 25 39.0**	**-2.2**
SRTK	**Saratovka**	**2.65**	**358**	*e*P		**Pb**	**16 25 41.6**	**-0.7**
SRTK				*e*S		**Sg**	**16 26 17.3**	**-1.8**
SENK	**Senkaya-Erzuru**	**2.70**	**323**	Pn		**Pb**	**16 25 40.4**	**-2.8**
GRMI	**Germi**	**2.71**	**81**	Pn		**Pb**	**16 25 41.0**	**-2.4**
KARO	**Karliova-Bingo**	**2.81**	**289**	Pn		**Pb**	**16 25 42.5**	**-2.7**
BGD	**Bogdanovka**	**2.92**	**347**	P		**Pg**	**16 25 50.9**	**+0.9**
KZRT	**Kazreti**	**2.97**	**359**	P		**Pb**	**16 25 46.7**	**-1.0**
BNGB	**Bingl**	**3.02**	**282**	Pn		**Pb**	**16 25 45.4**	**-3.3**
AKH	**Akhalkalaki**	**3.08**	**346**	P		**Pg**	**16 25 51.5**	**-1.6**
AKH				S		**Sg**	**16 26 33.1**	**0.0**
DGRG	**David-gareji**	**3.11**	**13**	P		**Pn**	**16 25 46.0**	**+1.7**
DGRG				S		**Sg**	**16 26 37.6**	**+3.7**
TRLG	**Trialeti**	**3.13**	**355**	P		**Pb**	**16 25 51.0**	**+0.4**
VSHL	**Vashlovani**	**3.18**	**27**	P		**Pn**	**16 25 46.6**	**+1.4**
VSHL				S		**Sg**	**16 26 39.3**	**+3.1**
DDFL	**Dedoflistskaro**	**3.28**	**22**	P		**Pb**	**16 25 51.0**	**-2.1**
LGD	**Lagodekhi**	**3.67**	**21**	P		**Pg**	**16 26 01.9**	**-2.5**
ALIG	**Mtskhetisjvari**	**3.74**	**351**	P		**Pb**	**16 25 57.1**	**-3.7**
CHRG	**Chargali**	**3.92**	**5**	P		**Pn**	**16 25 58.6**	**+3.0**
IDHR	**Dehrash**	**4.02**	**157**	Pn		**Pn**	**16 25 58.5**	**+1.6**
GARIG	**Gari**	**4.25**	**350**	P		**Pn**	**16 26 01.2**	**+1.2**
SHTL	**Shatili**	**4.27**	**7**	P		**Pb**	**16 26 06.2**	**-3.8**
SHTL				S		**Sg**	**16 27 12.1**	**+1.0**
KBZ	**Khabaz**	**5.44**	**348**	Pn		**Pn**	**16 26 19.1**	**+2.9**
	1.5nm,0.9s,baz=114,slow=12,SNR=2.9							
BRTR	**Keskin Array B**	**8.53**	**282**	Pn		Pn	16 27 03.5	+4.7
	0.1nm,0.3s,baz=121,slow=16,SNR=4.1							
	0.4nm,0.7s							
MMAI	**Mount Meron Ar**	**9.13**	**237**	Pn		**Pn**	**16 27 08.8**	**+1.8**
	0.4nm,0.3s,baz=66,slow=21,SNR=1.7							
	0.4nm,0.4s							
AKTO	**Aktyubinsk**	**15.39**	**34**	Pn		**Pn**	**16 28 32.4**	**0.0**
	0.6nm,0.3s,baz=224,slow=9.9,SNR=14							
	1.6nm,0.4s							
AKASG	**Malin Array Be**	**16.36**	**324**	Pn		**P**	**16 28 45.4**	**-2.4**
	0.2nm,0.3s,baz=134,slow=12,SNR=2.0							
	0.6nm,0.6s							
ARTI	**Arti**	**20.22**	**23**	P		Pn	16 29 30.1	-2.1
	5.2nm,0.7s,baz=205,slow=6.4,SNR=7.9							
	5.2nm,0.7s							
BVAR	**Borovoye Array**	**23.08**	**42**	P		**P**	**16 30 01.2**	**+0.2**
	0.5nm,0.6s,baz=262,slow=5.7,SNR=5.0							
	0.5nm,0.6s							
FINES	**FINESS Array B**	**25.73**	**340**	P		**P**	**16 30 27.4**	**+1.7**
	4.2nm,1.0s,baz=221,slow=12,SNR=2.1							
	4.2nm,1.0s							
KURBB	**Kurchatov Arra**	**26.93**	**52**	P		**P**	**16 30 38.3**	**+1.6**
	1.2nm,0.3s,baz=264,slow=9.4,SNR=6.0							
	1.2nm,0.3s							
MKAR	**Makanchi Array**	**28.84**	**61**	P		**P**	**16 30 55.2**	**+1.3**
	0.9nm,0.6s,baz=260,slow=7.5,SNR=11							
	0.9nm,0.6s							
ZALV	**Zalesovo Beam**	**31.46**	**47**	P		**P**	**16 31 17.4**	**+0.5**
	0.5nm,0.5s,baz=279,slow=9.6,SNR=3.2							
	0.5nm,0.5s							
ESDC	**Sonseca Array**	**37.27**	**288**	P		**P**	**16 32 06.5**	**-1.0**
	0.5nm,0.6s,baz=70,slow=8.5,SNR=4.7							
	0.5nm,0.6s							
CMAR	**Chiang Mai Arr**	**51.10**	**97**	P		**P**	**16 33 59.0**	**+0.6**
	1.0nm,0.7s,baz=299,slow=8.1,SNR=8.8							
	1.0nm,0.7s							
SEY	**Seymchan**	**63.91**	**29**	P		**P**	**16 35 29.4**	**+1.2**
	0.9nm,0.9s,baz=71,slow=23,SNR=4.2							
	0.9nm,0.9s							

*TEH **23** 16:29:34.9,38°.43N×44°.48E,h10km±174km,ML2.7, Presumed earthquake*
*AZER **23** 16:29:34.3,38°.39N×44°.58E,h11km,ml2.8*
*ISK **23** 16:29:37.0,38°.43N×44°.46E,h11km,ML2.7/6*
ISC 23 16:29:36.0±1.1,**38°.43N**±0°.03×**44°.48E**±0°.03,**h16**km±10km, **n16**,σ1§**31**/24,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.88**	**281**	Pg	**Pn**	**16 29 53.3**	**-0.4**
VANB				Sg	**Sn**	**16 30 05.6**	**-0.6**
ISHB	**Shabestar**	**0.90**	**99**	Pg	**Pg**	**16 29 51.9**	**-1.6**
MAKU	**Maku**	**0.94**	**10**	Pg	**Pg**	**16 29 53.0**	**-1.2**
IMRD	**Marand**	**1.00**	**73**	Pg	**Pn**	**16 29 54.7**	**-0.8**
IMRD				Sg	**Sn**	**16 30 09.1**	**-0.2**
HAKT	**HAKKARI**	**1.06**	**215**	P	**Pn**	**16 29 56.0**	**-0.4**
HAKT				S	**Sn**	**16 30 13.4**	**+2.4**
NAX	**Nakhchivan**	**1.09**	**46**	P	**Pn**	**16 29 56.6**	**0.0**
NAX				S	**Sn**	**16 30 12.6**	**+1.2**
SBZ	**Shahbuz**	**1.28**	**40**	P	**Pg**	**16 30 00.1**	**-0.5**
SBZ				S	**Sg**	**16 30 19.5**	**+2.2**
ORD	**Ordubad**	**1.28**	**67**	P	**Pg**	**16 29 59.8**	**-0.9**
ORD				S	**Sg**	**16 30 18.3**	**+0.8**
HYR	**Heyderabad**	**1.32**	**12**	P	**Pg**	**16 30 01.9**	**+0.4**
HYR				S	**Sg**	**16 30 21.1**	**+2.4**
CUKT	**Cukurca**	**1.37**	**211**	Pn	**Pg**	**16 30 02.6**	**+0.3**
CUKT				Sn	**Sg**	**16 30 21.1**	**+0.9**
IAZR	**Azarshahr**	**1.40**	**122**	Pg	**Pg**	**16 30 02.3**	**-0.6**
AGRB	**Hanur-Agry**	**1.63**	**315**	Pn	**Pg**	**16 30 06.2**	**-1.2**
MLAZ	**Malazgirt-MUS**	**1.67**	**296**	Pn	**Pg**	**16 30 06.5**	**-1.6**
GNI	**Garni**	**1.73**	**7**	Pn	**Pg**	**16 30 08.1**	**-1.2**
GURO	**Guroymak-BITLI**	**1.93**	**274**	Pn	**Pb**	**16 30 10.4**	**-0.4**
IHRS	**Heris**	**2.01**	**92**	Pn	**Pg**	**16 30 13.2**	**-1.5**

*AZER **23** 16:37:47.8,38°.44N×44°.55E,h4km,ml3.8*
*TIF **23** 16:37:50.0,38°.44N×44°.48E,h7km±1km*
*TEH **23** 16:37:50.6,38°.46N×44°.48E,h5km±40km,ML3.6, Presumed earthquake*
*AFAD **23** 16:37:50.2,38°.45N×44°.52E,h7km±2km,ML3.5*
*NSSP **23** 16:37:50.1,38°.47N×44°.45E,h10km,Ms3.8*
*ISK **23** 16:37:51.9,38°.41N×44°.52E,h5km,ML3.6/19*
*IDC **23** 16:37:51.6±1.0,38°.49N×44°.41E,h0km,mb3.8/10, mbtmp3.7/15,ML2.2/2, Error ellipse: s-maj=15.7km s-min=12.6km az=148.0*
*NEIC **23** 16:37:53.4±0.9,38°.47N±0°.05×44°.36E±0°.06,h10km±1km, mb4.1/26, Error ellipse: s-maj=9.5km s-min=6.4km az=149.0*
ISC 23 16:37:51.3±1.1,**38°.44N**±0°.02×**44°.46E**±0°.02,**h1**km±8km, **n135**,σ1§**41**/165,**mb4.1**/23,**1C-2D**,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**301**	P	**Pg**	**16 37 59.7**	**+0.1**
OZAP				S	**Sb**	**16 38 06.7**	**-2.2**
TVAN	**Van**	**0.83**	**276**	P	**Pg**	**16 38 06.9**	**-0.4**
TVAN				IAML		16 38 32.0	
	comp=N,3μm,0.7s						
TVAN				IAML		16 38 32.0	
	comp=E,3μm,0.5s						
TVAN	**Van**	**0.83**	**276**	Pg	**Pg**	**16 38 06.8**	**-0.4**
VANB	**Van**	**0.86**	**281**	Pg	**Pb**	**16 38 09.1**	**+0.1**
VANB				Sg	**Sn**	**16 38 21.7**	**-2.1**
YOVA	**Hakkari_Yksek**	**0.86**	**189**	P	**Pg**	**16 38 07.9**	**+0.1**
YOVA				S	**Sg**	**16 38 19.9**	**+1.0**
YOVA	**Hakkari_Yksek**	**0.86**	**189**	Pg	**Pg**	**16 38 07.9**	**+0.1**
VMUR	**Van-Muradiye**	**0.89**	**309**	P	**Pg**	**16 38 07.7**	**-0.7**
VMUR				S	**Sn**	**16 38 22.1**	**-2.6**
VMUR				IAML		16 38 24.0	
	comp=E,2μm,0.7s						
VMUR				IAML		16 38 28.0	
	comp=N,2μm,0.5s						
VMUR	**Van-Muradiye**	**0.89**	**309**	Pg	**Pg**	**16 38 07.6**	**-0.7**
ISHB	**Shabestar**	**0.92**	**99**	Pg	Pg	16 38 07.4	-1.5
MAKU	**Maku**	**0.93**	**11**	Pg	**Pg**	**16 38 08.0**	**-1.1**
IMRD	**Marand**	**1.01**	**74**	Pg	**Pg**	**16 38 09.7**	**-0.9**
ERCV	**ERCIS-VAN**	**1.05**	**304**	Pn	**Pn**	**16 38 13.7**	**+0.3**
HAKT	**HAKKARI**	**1.06**	**214**	P	**Pg**	**16 38 10.9**	**-0.7**
HAKT				IAML		16 38 36.0	
	comp=N,1μm,1.2s						
HAKT				IAML		16 38 38.0	
	comp=E,1μm,1.1s						
HAKT	**HAKKARI**	**1.06**	**214**	Pg	**Pg**	**16 38 10.9**	**-0.7**
HAKT	**HAKKARI**	**1.06**	**214**	P	**Pg**	**16 38 10.7**	**-0.9**
HAKT				S	**Sn**	**16 38 29.4**	**+0.4**
NAX	**Nakhchivan**	**1.09**	**47**	P	**Pb**	**16 38 11.3**	**-1.7**
NAX				S	**Sg**	**16 38 27.2**	**+0.8**
GEVA	**Gevas**	**1.11**	**264**	Pg	**Pg**	**16 38 10.8**	**-1.8**
GEVA	**Gevas**	**1.11**	**264**	P	**Pg**	**16 38 11.4**	**-1.2**
GEVA				S	**Sn**	**16 38 28.3**	**-1.8**
GEVA				IAML		16 38 34.0	
	comp=E,1μm,0.9s						
GEVA				IAML		16 38 36.0	
	comp=N,1μm,0.4s						
GEVA	**Gevas**	**1.11**	**264**	Pg	**Pg**	**16 38 11.3**	**-1.2**
DYDN	**Diyadin**	**1.26**	**332**	P	**Pb**	**16 38 13.5**	**-2.5**
DYDN				S	**Sb**	**16 38 31.0**	**-1.7**
DYDN				IAML		16 38 37.0	
	comp=N,938nm,0.6s						
DYDN				IAML		16 38 41.0	
	comp=E,1μm,0.6s						
DYDN	**Diyadin**	**1.26**	**332**	Pg	**Pb**	**16 38 13.4**	**-2.5**
SBZ	**Shahbuz**	**1.28**	**41**	P	**Pn**	**16 38 14.5**	**-1.9**
SBZ				S	**Sb**	**16 38 33.1**	**-0.1**
ORD	**Ordubad**	**1.29**	**67**	P	**Pn**	**16 38 14.7**	**-1.9**
ORD				S	**Sb**	**16 38 33.4**	**-0.3**
HYR	**Heyderabad**	**1.31**	**13**	P	**Pn**	**16 38 15.4**	**-1.4**
HYR				S	**Sg**	**16 38 35.8**	**+2.3**
CUKT	**Cukurca**	**1.37**	**210**	Pn	**Pn**	**16 38 17.7**	**+0.1**
CUKT				Sn	**Sg**	**16 38 37.5**	**+2.3**
CUKT	**Cukurca**	**1.37**	**210**	Pg	**Pn**	**16 38 16.7**	**-0.9**
ADCV	**BITLIS_Adilcev**	**1.41**	**286**	P	**Pn**	**16 38 17.4**	**-0.9**
ADCV				S	**Sg**	**16 38 37.1**	**+0.5**
ADCV				IAML		16 38 42.0	
	comp=E,734nm,0.6s						
ADCV	**BITLIS_Adilcev**	**1.41**	**286**	Pg	**Pn**	**16 38 17.3**	**-0.9**
IAZR	**Azarshahr**	**1.42**	**122**	Pg	**Pn**	**16 38 17.4**	**-1.1**
IGDI	**IGDIR**	**1.46**	**348**	P	**Pn**	**16 38 18.0**	**-0.8**
IGDI				S	**Sg**	**16 38 38.8**	**+0.6**
IGDI	**IGDIR**	**1.46**	**348**	P	**Pn**	**16 38 18.0**	**-0.8**
IGDI				S	**Sg**	**16 38 43.2**	**+5.1**
VAYK	**Vayk**	**1.46**	**31**	⇓*e*P	**Pn**	**16 38 17.7**	**-1.2**
VAYK				⇓*e*S	**Sn**	**16 38 38.6**	**-0.1**
ALVK	**Alvank**	**1.56**	**71**	*e*P	**Pn**	**16 38 19.0**	**-1.2**
ALVK				*e*S	**Sn**	**16 38 40.1**	**-1.0**
PERV	**Siirt/Pervari-**	**1.59**	**253**	P	**Pn**	**16 38 21.0**	**+0.3**
AGRB	**Hanur-Agry**	**1.61**	**315**	Pn	**Pn**	**16 38 21.1**	**0.0**
AGRB				Sn	**Sg**	**16 38 44.6**	**+1.5**
DORK	**Agr/Tutak/Do**	**1.62**	**306**	P	**Pn**	**16 38 20.4**	**-0.7**
DORK				IAML		16 38 53.0	
	comp=N,824nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.65**	**296**	Pn	**Pg**	**16 38 23.6**	**+0.7**
GNI	**Garni**	**1.72**	**7**	Pn	**Pn**	**16 38 23.0**	**+0.5**
	43nm,0.3s,baz=220,slow=2.4,SNR=32						
GNI				Lg	Lg	16 38 47.1	
	58nm,0.3s,baz=261,slow=4.5,SNR=6.1						
GNI	**Garni**	**1.72**	**7**		**Pn**	**16 38 23.0**	**+0.5**
GNI	**Garni**	**1.72**	**7**	Pn	**Pn**	**16 38 23.3**	**+0.8**
GNI	**Garni**	**1.72**	**7**	*e*P	**Pn**	**16 38 23.1**	**+0.5**
GNI				*e*S	**Sg**	**16 38 47.7**	**+1.0**
METS	**Metsamor**	**1.73**	**350**	*e*P	**Pn**	**16 38 22.9**	**+0.3**
METS				*e*S	**Sb**	**16 38 46.7**	**+0.4**
VNNZ	**Vanand**	**1.73**	**344**	*e*P	**Pn**	**16 38 23.0**	**+0.3**
VNNZ				*e*S	**Sg**	**16 38 47.0**	**-0.1**
EGVZ	**Egvard**	**1.80**	**64**	*e*P	**Pn**	**16 38 23.2**	**-0.5**
EGVZ				*e*S	**Sn**	**16 38 47.2**	**-0.1**
ARUZ	**Aruch**	**1.86**	**351**	*e*P	**Pn**	**16 38 24.8**	**+0.3**
ARUZ				*e*S	**Sb**	**16 38 50.2**	**+0.1**
KAPZ	**Kaputan**	**1.89**	**5**	*e*P	**Pn**	**16 38 25.4**	**+0.6**
KAPZ				*e*S	**Sb**	**16 38 51.1**	**+0.2**
GURO	**Guroymak-BITLI**	**1.91**	**274**		**Pn**	**16 38 24.9**	**-0.3**
GURO	**Guroymak-BITLI**	**1.91**	**274**	Pn	**Pb**	**16 38 26.5**	**-0.5**
MAHB	**Mahabad**	**1.94**	**149**	Pn	**Pn**	**16 38 26.8**	**+1.3**
AMBZ	**Amberd**	**1.95**	**355**	*e*P	**Pn**	**16 38 26.6**	**+0.8**
AMBZ				*e*S	**Sb**	**16 38 53.2**	**+0.4**
AYRK	**Ayrk**	**1.96**	**31**	*e*P	**Pn**	**16 38 26.9**	**+0.9**
AYRK				*e*S	**Sb**	**16 38 53.6**	**+0.5**
IHRS	**Heris**	**2.03**	**93**	Pn	**Pn**	**16 38 27.5**	**+0.7**
KARS	**Kars**	**2.43**	**334**		**Pn**	**16 38 33.6**	**+1.2**
KARS	**Kars**	**2.43**	**334**	Pn	**Pn**	**16 38 33.9**	**+1.6**
VRTB	**Varto-Mus**	**2.46**	**288**	Pn	**Pb**	**16 38 34.8**	**-1.5**
IHSH	**Hashtrud**	**2.49**	**116**	Pn	**Pn**	**16 38 34.2**	**+1.0**
LSVT	**Lusahovit**	**2.54**	**13**	*e*P	**Pn**	**16 38 34.9**	**+1.2**
LSVT				*e*S	**Sn**	**16 39 07.5**	**+2.3**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn	**Pn**	**16 38 36.3**	**+2.0**
ISRB	**Sarab**	**2.60**	**103**	Pn	**Pn**	**16 38 35.4**	**+0.8**
SRTK	**Saratovka**	**2.63**	**358**	*e*P	**Pn**	**16 38 37.1**	**+2.2**
SRTK				*e*S	**Sb**	**16 39 11.3**	**-0.7**
SENK	**Senkaya-Erzuru**	**2.68**	**323**	Pn	**Pb**	**16 38 38.4**	**-1.7**
GRMI	**Germi**	**2.71**	**81**	Pn	**Pn**	**16 38 37.1**	**+1.0**
KARO	**Karliova-Bingo**	**2.80**	**289**	Pn	**Pn**	**16 38 39.6**	**+2.2**
BGD	**Bogdanovka**	**2.90**	**347**	P	**Pb**	**16 38 41.9**	**-2.0**
BGD				S	**Sg**	**16 39 24.5**	**0.0**
KZRT	**Kazreti**	**2.94**	**359**	P	**Pn**	**16 38 41.3**	**+2.1**
BNGB	**Bingl**	**3.01**	**282**	Pn	**Pn**	**16 38 42.2**	**+2.0**
AKH	**Akhalkalaki**	**3.06**	**346**	P	**Pb**	**16 38 47.1**	**+0.5**
DGRG	**David-gareji**	**3.09**	**13**	P	**Pn**	**16 38 43.6**	**+2.4**
TRLG	**Trialeti**	**3.11**	**355**	P	**Pn**	**16 38 42.6**	**+1.0**
TRLG				S	**Sg**	**16 39 30.6**	**-0.6**
MARD	**Mardin**	**3.12**	**250**		**Pn**	**16 38 41.4**	**-0.4**
VSHL	**Vashlovani**	**3.16**	**28**	P	**Pn**	**16 38 44.8**	**+2.6**
VSHL				S	**Sg**	**16 39 33.6**	**+0.8**
YEDI	**Yedisu-Bingol**	**3.21**	**289**	Pn	**Pn**	**16 38 45.4**	**+2.3**
DDFL	**Dedoflistskaro**	**3.26**	**22**	P	**Pn**	**16 38 46.8**	**+3.2**
TBLG	**Delisi**	**3.29**	**4**	Pn	**Pn**	**16 38 46.1**	**+2.1**
TBLG	**Delisi**	**3.29**	**4**	P	**Pg**	**16 38 54.3**	**-0.2**
DYBB	**Diyarbakir**	**3.44**	**263**	Pn	**Pn**	**16 38 47.9**	**+1.8**
LGD	**Lagodekhi**	**3.66**	**21**	P	**Pg**	**16 39 00.8**	**-0.5**
ALIG	**Mtskhetisjvari**	**3.71**	**351**	P	**Pb**	**16 38 58.9**	**+1.2**
ERZN	**Erzincan**	**3.87**	**289**	Pn	**Pn**	**16 38 54.6**	**+2.6**
BAYT	**Aydıntepe-Bayb**	**3.88**	**302**	Pn	**Pn**	**16 38 54.8**	**+2.7**
CHRG	**Chargali**	**3.90**	**5**	P	**Pn**	**16 38 54.4**	**+1.9**
IDHR	**Dehrash**	**4.04**	**157**	Pn	**Pn**	**16 38 55.2**	**+0.7**
SVRC	**Sivrice-ELAZID**	**4.05**	**271**	Pn	**Pn**	**16 38 56.6**	**+2.0**
GARIG	**Gari**	**4.23**	**350**	P	**Pn**	**16 38 59.9**	**+3.0**
SHTL	**Shatili**	**4.25**	**7**	P	**Pb**	**16 39 04.0**	**-2.8**
KBZ	**Khabaz**	**5.42**	**348**	Pn	**Pn**	**16 39 15.0**	**+1.9**
	baz=144,slow=17,SNR=2.2						
	1.1nm,0.9s						
GAZ	**Gaziantep**	**5.88**	**260**	Pn	**Pn**	**16 39 19.9**	**+0.3**
BRTR	**Keskin Array B**	**8.52**	**282**	Pn	**Pn**	**16 39 58.6**	**+2.8**
	0.1nm,0.3s,baz=96,slow=12,SNR=4.0						
	0.4nm,0.7s						
MMAI	**Mount Meron Ar**	**9.14**	**236**	Pn	**Pn**	**16 40 06.7**	**+2.4**
	0.4nm,0.3s,baz=92,slow=14,SNR=1.0						
AKTO	**Aktyubinsk**	**15.39**	**34**	Pn		**16 41 28.2**	**-1.2**
	1.1nm,0.4s,baz=220,slow=8.5,SNR=16						
MLR	**Muntele Rosu**	**15.45**	**303**	Pn	**Pn**	**16 41 27.9**	**-2.6**
AB31	**Akbulak array**	**15.51**	**41**	Pn	**Pn**	**16 41 30.3**	**-0.8**
ABKAR	**Akbulak array**	**15.51**	**41**	Pn	**Pn**	**16 41 30.2**	**-0.9**
AKASG	**Malin Array Be**	**16.34**	**324**	Pn	**Pn**	**16 41 41.6**	**-0.1**
	0.3nm,0.3s,baz=134,slow=12,SNR=6.9						

BURAR	**Bucovina Array**	**16.76**	**309**	P		**P**	**16 41 49.5**	**-0.2**
BUR08	**Bucovina Ar. S**	**16.78**	**309**			**P**	**16 41 49.4**	**-0.5**
ITM	**Ithomi**	**17.85**	**273**	P		**P**	**16 42 01.7**	**0.0**
ITM				IAmb	IAmb		16 42 05.0	
	comp=Z,31nm,1.3s							
ARTI	**Arti**	**20.21**	**23**	P		**P**	**16 42 27.6**	**+0.2**
	comp=Z,5.2nm,0.6s,baz=201,slow=6.3,SNR=10							
	comp=Z,5.2nm,0.6s							
ARTI	**Arti**	**20.21**	**23**			**P**	**16 42 27.8**	**+0.5**
ARTI				IAmb	IAmb		16 42 29.0	
	comp=Z,9.3nm,0.6s							
KK31	**Karatay Array**	**20.24**	**68**			**P**	**16 42 29.2**	**+1.4**
KK31				IAmb	IAmb		16 42 35.4	
	comp=Z,4.5nm,0.8s							
KKAR	**Karatay Array**	**20.24**	**68**	P		**P**	**16 42 29.2**	**+1.4**
ARSB	**Arslanbob**	**22.03**	**73**	P		**P**	**16 42 49.3**	**+1.9**
ARSB				IAmb	IAmb		16 43 05.6	
	comp=Z,8.3nm,1.1s							
BVAR	**Borovoye Array**	**23.07**	**42**	P		**P**	**16 42 58.5**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=248,slow=7.8,SNR=7.2							
	comp=Z,1.3nm,0.7s							
AAK	**Ala-Archa**	**23.14**	**70**	P		**P**	**16 43 01.1**	**+1.9**
AAK				IAmb	IAmb		16 43 06.5	
	comp=Z,4.7nm,1.3s							
BOOM	**Boomskoye usch**	**24.21**	**70**	P		**P**	**16 43 11.4**	**+1.8**
KDJ	**Kajisay**	**25.14**	**71**	P		**P**	**16 43 19.8**	**+1.7**
KDJ				IAmb	IAmb		16 43 22.7	
	comp=Z,3.6nm,1.0s							
FIA1	**FINESS Array S**	**25.70**	**340**	P		**P**	**16 43 20.8**	**-1.9**
FINES	**FINESS Array B**	**25.70**	**340**	P		**P**	**16 43 22.5**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=137,slow=8.8,SNR=4.0							
	comp=Z,2.4nm,0.9s							
FUORN	**Ofenpass-Fuorn**	**26.33**	**299**	P		**P**	**16 43 29.0**	**+0.2**
FUORN				IAmb	IAmb		16 43 58.7	
	comp=Z,3.0nm,1.0s							
KURBB	**Kurchatov Arra**	**26.92**	**52**	P		**P**	**16 43 34.3**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=263,slow=9.1,SNR=9.8							
	comp=Z,1.1nm,0.3s							
KURK	**Kurchatov**	**27.00**	**52**	P		**P**	**16 43 34.3**	**-0.2**
KURK	**Kurchatov**	**27.00**	**52**	IAmb	IAmb		16 43 38.0	
	comp=Z,2.0nm,0.8s							
SENIN	**Lac Senin/Sane**	**28.36**	**298**	P		**P**	**16 43 46.6**	**-0.3**
SENIN				IAmb	IAmb		16 43 58.9	
	comp=Z,5.8nm,1.2s					

comp=E,3µm,0.6s
ORD Ordubad 1.30 63 P **Pn** 16 40 21.6 **-1.8**
ORD S **Sb** 16 40 40.0 **-0.6**
CUKT Cukurca 1.31 213 Pn **Pb** 16 40 24.1 **+0.6**
CUKT Sn **Sn** 16 40 45.1 **+3.3**
SBZ Shahbuz 1.33 38 P **Pn** 16 40 21.6 **-2.2**
SBZ S **Sn** 16 40 43.7 **+1.4**
IAZR Azarshahr 1.34 119 Pg **Pg** 16 40 24.2 **+0.5**
DYDN Diyadin 1.35 332 P **Pn** 16 40 20.6 **-3.7**
DYDN S **Sb** 16 40 39.7 **-2.5**
DYDN Diyadin 1.35 332 Pg **Pn** 16 40 20.5 **-3.7**
HYR Heyderabad 1.40 11 P **Pn** 16 40 23.1 **-1.6**
HYR S **Sg** 16 40 45.6 **+2.7**
ADCV BITLIS_Adilcev 1.47 289 P **Pn** 16 40 24.7 **-1.1**
ADCV S **Sg** 16 40 46.8 **+1.6**
ADCV IAML 16 40 51.0
comp=E,2µm,0.5s
ADCV BITLIS_Adilcev 1.47 289 Pg **Pn** 16 40 24.7 **-1.1**
VAYK Vayk 1.52 28⇓*eP* **Pn** 16 40 24.8 **-1.7**
VAYK ⇓*eS* **Sn** 16 40 45.4 **-1.7**
IGDI IGDIR 1.55 348 P **Pn** 16 40 24.9 **-2.0**
IGDI S **Sb** 16 40 49.1 **+1.2**
IGDI IGDIR 1.55 348 P **Pn** 16 40 25.9 **-1.0**
IGDI S **Sg** 16 40 49.9 **+1.9**
ALVK Alvank 1.56 67 *eP* **Pn** 16 40 25.9 **-1.1**
ALVK *eS* **Sn** 16 40 47.2 **-0.7**
PERV Siirt/Pervari- 1.60 256 P **Pb** 16 40 28.5 **+0.1**
PERV S **Sg** 16 40 53.6 **+4.2**
DORK Agr/Tutak/Do 1.70 308 P **Pn** 16 40 27.5 **-1.5**
DORK S **Sn** 16 40 51.0 **-0.6**
AGRB Hanur-Agry 1.70 317 Pn **Pn** 16 40 28.7 **-0.3**
AGRB Sn **Sb** 16 40 52.9 **+0.7**
MLAZ Malazgirt-MUS 1.72 298 Pn **Pn** 16 40 30.3 **+1.0**
MLAZ Sn **Sg** 16 40 54.4 **+1.1**
KOTA Agri, Merkez-K 1.77 326 P **Pn** 16 40 28.4 **-1.5**
GNI Garni 1.81 6 Pn **Pn** 16 40 31.2 **+0.7**
68nm,0.3s,baz=252,slow=3.9,SNR=7.9
GNI Lg Lg 16 40 54.9
62nm,0.3s,baz=213,slow=20,SNR=4.0
GNI Garni 1.81 6 **Pn** 16 40 30.0 **-0.5**
GNI Garni 1.81 6 Pn **Pn** 16 40 30.1 **-0.4**
GNI Garni 1.81 6 *eP* **Pn** 16 40 31.1 **+0.7**
GNI *eS* 16 41 57.2
EGVZ Egvard 1.82 61 *eP* **Pn** 16 40 30.1 **-0.5**
EGVZ *eS* **Sn** 16 40 54.5 **+0.1**
METS Metsamor 1.83 350 *eP* **Pn** 16 40 30.7 **0.0**
METS *eS* **Sn** 16 40 55.5 **+1.0**
VNNZ Vanand 1.83 343 *eP* **Pn** 16 40 31.1 **+0.4**
VNNZ *eS* **Sb** 16 40 56.3 **+0.5**
MAHB Mahabad 1.84 148 Pn **Pg** 16 40 33.6 **+0.2**
GURO Guroymak-BITLI 1.95 277 **Pn** 16 40 32.3 **-0.1**
GURO Guroymak-BITLI 1.95 277 Pn **Pb** 16 40 33.9 **-0.6**
GURO Guroymak-BITLI 1.95 277 Pn **Pn** 16 40 32.3 **-0.1**
ARUZ Aruch 1.96 351 *eP* **Pn** 16 40 32.5 **-0.1**
ARUZ *eS* **Sn** 16 40 58.5 **+0.6**
KAPZ Kaputan 1.98 4 *eP* **Pn** 16 40 32.8 **0.0**
KAPZ *eS* **Sn** 16 40 59.1 **+0.8**
IHRS Heris 2.00 90 Pn **Pb** 16 40 34.2 **-1.1**
AYRK Ayrk 2.03 29 *eP* **Pn** 16 40 33.7 **+0.2**
AYRK *eS* **Sn** 16 41 00.7 **+1.0**
AMBZ Amberd 2.05 355 *eP* **Pn** 16 40 34.0 **+0.1**
AMBZ *eS* **Sn** 16 41 01.2 **+1.1**
IHSH Hashtrud 2.42 115 Pn **Pb** 16 40 41.3 **-1.3**
VRTB Varto-Mus 2.52 290 Pn **Pn** 16 40 41.9 **+1.7**
KARS Kars 2.53 335 Pn **Pn** 16 40 40.8 **+0.4**
ISRB Sarab 2.55 101 Pn **Pb** 16 40 42.6 **-2.1**
SVAN Silvan-Diyarba 2.61 267 Pn **Pn** 16 40 42.8 **+1.4**
LSVT Lusahovit 2.62 11 *eP* **Pn** 16 40 42.7 **+1.2**
LSVT *eS* **Sn** 16 41 16.1 **+2.1**
GRMI Germi 2.70 79 Pn **Pn** 16 40 43.8 **+1.2**
SRTK Saratovka 2.72 357 *eP* **Pb** 16 40 46.5 **-1.1**
SRTK *eS* **Sb** 16 41 22.8 **+1.3**
SENK Senkaya-Erzuru 2.77 324 Pn **Pn** 16 40 44.1 **+0.4**
SLY Sulaymaniyah 2.86 163 Pn **Pb** 16 40 47.5 **-2.4**
KARO Karliova-Bingo 2.86 291 Pn **Pn** 16 40 46.6 **+1.6**
BGD Bogdanovka 3.00 347 P **Pb** 16 40 52.6 **+0.3**
KZRT Kazreti 3.04 358 P **Pn** 16 40 50.3 **+3.0**
BNGB Bingl 3.06 283 Pn **Pn** 16 40 49.7 **+2.0**
MARD Mardin 3.12 252 Pn **Pn** 16 40 49.8 **+1.2**
AKH Akhalkalaki 3.15 346 P **Pb** 16 40 55.4 **+0.4**
DGRG David-gareji 3.17 12 P **Pb** 16 40 56.4 **+1.2**
TRLG Trialeti 3.20 355 P **Pb** 16 40 54.8 **-1.0**
VSHL Vashlovani 3.23 26 P **Pn** 16 40 52.7 **+2.8**
VSHL S **Sg** 16 41 43.5 **+1.9**
YEDI Yedisu-Bingol 3.28 291 Pn **Pn** 16 40 52.5 **+1.8**
DDFL Dedoflistskaro 3.33 21 P **Pg** 16 41 01.5 **-0.4**
TBLG Delisi 3.38 3 P **Pb** 16 40 59.5 **+0.7**
GAS1 Astara - Iran 3.41 88 Pn **Pn** 16 40 53.6 **+1.3**
DYBB Diyarbakir 3.46 265 Pn **Pn** 16 40 53.7 **+0.5**
LGD Lagodekhi 3.73 20 P **Pg** 16 41 09.7 **+0.2**
ALIG Mtskhetisjvari 3.81 350 P **Pb** 16 41 06.2 **+0.1**
IDHR Dehrash 3.94 157 Pn Pb 16 41 03.3 -5.1
CHRG Chargali 3.99 4 P **Pb** 16 41 10.1 **+0.9**
GARIG Gari 4.32 350 P **Pg** 16 41 20.2 **-0.6**
SHTL Shatili 4.33 6 P **Pb** 16 41 14.7 **-0.3**
KBZ Khabaz 5.51 348 Pn **Pn** 16 41 24.0 **+2.8**
0.1nm,0.3s,baz=286,slow=15,SNR=1.9
1.9nm,0.9s
BRTR Keskin Array B 8.57 283 Pn **Pn** 16 42 06.6 **+3.3**
0.1nm,0.3s,baz=105,slow=13,SNR=5.4
0.4nm,0.6s
MMAI Mount Meron Ar 9.12 237 Pn **Pn** 16 42 12.8 **+2.1**
0.9nm,0.3s,baz=73,slow=11,SNR=2.5
1.3nm,0.5s
AKTO Aktyubinsk 15.44 34 Pn **Pn** 16 43 35.0 **-1.9**
0.2nm,0.3s,baz=227,slow=7.6,SNR=3.6
1.4nm,0.5s
AB31 Akbulak array 15.56 41 Pn **Pn** 16 43 37.5 **-1.0**
ABKAR Akbulak array 15.56 41 Pn **Pn** 16 43 37.5 **-1.0**
AKASG Malin Array Be 16.43 324 Pn **Pn** 16 43 46.3 **-3.4**
0.4nm,0.3s,baz=134,slow=12,SNR=9.0
3.5nm,0.8s
BUR08 Bucovina Ar. S 16.86 310 Pn **Pn** 16 43 54.8 **-0.6**
KK31 Karatay Array 20.24 68 **P** 16 44 35.0 **+0.4**
KK31 IAmb IAmb 16 44 44.7
comp=Z,5.7nm,0.9s
KKAR Karatay Array 20.24 68 P **P** 16 44 35.1 **+0.5**
ARTI Arti 20.28 23 P **P** 16 44 33.4 **-1.5**
comp=Z,6.3nm,0.7s,baz=226,slow=7.9,SNR=8.5
comp=Z,6.3nm,0.7s
ARTI Arti 20.28 23 **P** 16 44 35.5 **+0.6**
ARTI IAmb IAmb 16 44 37.5
comp=Z,9.0nm,0.8s
ARSB Arslanbob 22.03 73 P **P** 16 44 56.3 **+2.2**
ARSB IAmb IAmb 16 45 01.0
comp=Z,7.5nm,1.0s
BORK Borovoye 23.09 42 **P** 16 45 05.8 **+0.7**
BVAR Borovoye Array 23.11 42 P **P** 16 45 05.1 **-0.2**
comp=Z,2.2nm,0.8s,baz=240,slow=8.4,SNR=7.2
comp=Z,2.2nm,0.8s
BOOM Boomskoye usch 24.21 70 **P** 16 45 18.2 **+1.8**
BOOM IAmb IAmb 16 45 40.8
comp=Z,3.6nm,0.9s
NRN Naryn 24.29 73 P **P** 16 45 19.0 **+1.7**
NRN IAmb IAmb 16 45 20.0
comp=Z,4.5nm,1.2s
KDJ Kajisay 25.14 71 **P** 16 45 26.7 **+1.9**
KDJ IAmb IAmb 16 45 29.2
comp=Z,3.6nm,1.0s
FINES FINESS Array B 25.80 340 P **P** 16 45 31.4 **+1.1**
comp=Z,3.5nm,0.9s,baz=130,slow=13,SNR=2.3
comp=Z,3.5nm,0.9s
KURBB Kurchatov Arra 26.95 52 P **P** 16 45 41.9 **+1.0**
comp=Z,0.9nm,0.3s,baz=263,slow=9.2,SNR=8.8
comp=Z,0.9nm,0.3s
KURK Kurchatov 27.03 52 P **P** 16 45 42.3 **+0.8**
KURK IAmb IAmb 16 45 45.8
comp=Z,2.9nm,0.8s
VSL Villasalto 27.25 284 P **P** 16 45 43.6 **-0.1**
MAKZ Makanchi 28.64 61 P **P** 16 45 55.9 **-0.2**
MKAR Makanchi Array 28.85 61 P **P** 16 45 58.8 **+0.9**
comp=Z,1.0nm,0.7s,baz=260,slow=7.9,SNR=8.2
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 28.85 61 P **P** 16 45 58.7 **+0.7**
ZAA0 Zalesovo Array 31.49 47 P **P** 16 46 21.4 **+0.2**
ZAA0 IAmb IAmb 16 46 25.7
comp=Z,2.8nm,1.2s
ZALV Zalesovo Beam 31.49 47 P **P** 16 46 20.7 **-0.4**
comp=Z,0.6nm,0.4s,baz=271,slow=9.0,SNR=5.1
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 31.49 47 P **P** 16 46 21.4 **+0.2**
WMQ Urumqi 32.73 66 *eP* P 16 46 38.6 +6.4
WMQ PcP **PcP** **16 49 14.8 -2.9**
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ LR LR
comp=Z,1µm,24.0s
ESDC Sonseca Array 37.32 288 P **P** 16 47 10.8 **-1.1**
comp=Z,1.8nm,1.1s,baz=66,slow=8.9,SNR=7.3
comp=Z,1.8nm,1.1s
PZH PanZhiHua 49.04 86 P **P** 16 48 48.1 **+1.2**
HHC Hu-ho-hao-te 50.58 65 *eP* **P** 16 48 58.9 **+0.5**
CMAR Chiang Mai Arr 51.06 97 P **P** 16 49 02.1 **-0.1**
comp=Z,0.5nm,0.6s,baz=299,slow=8.4,SNR=6.0
comp=Z,0.5nm,0.6s
D25K Kavik River 72.34 4 P **P** 16 51 25.6 **+0.5**
D25K IAmb IAmb 16 51 37.5
comp=Z,3.5nm,1.2s
D23K Nanushuk River 72.41 6 P **P** 16 51 26.2 **+0.8**
F31M Tsiigehtchic 74.53 359 P **P** 16 51 37.6 **-0.3**
IMAR Indian Mountai 75.04 8 P **P** 16 51 41.1 **+0.2**
H21K Melozitna Rive 75.45 7 P **P** 16 51 43.4 **+0.1**
I30M Mount Dempster 76.76 0 P **P** 16 51 50.8 **-0.1**
I30M IAmb IAmb 16 51 57.3
comp=Z,2.5nm,1.1s
BCX Boston College 80.68 317 P **P** 16 52 12.5 **-0.2**

*NEIC **23** 16:45:17.3±1.1,53.˚42N±0.˚02×165.˚35W±0.˚08, h35km±2km, mb3.7/6, ML3.7/10, ML3.4(AEIC), Error ellipse: s-maj=8.2km s-min=3.3km az=286.0*
*AEIC **23** 16:45:17.2±2.1,53.˚49N±0.˚07×165.˚34W±0.˚04, h49km±8km, Error ellipse: s-maj=10.0km s-min=2.6km az=192.0*
*IDC **23** 16:45:20.7±8.6,53.˚90N×165.˚16W, h47km±63km, mb3.4/5, mbtmp3.6/7, ML3.1/2, Error ellipse: s-maj=68.8km s-min=31.6km az=47.0*
ISC 23 16:45:18.7±1.9,53.˚5N±0.˚1×165.˚33W±0.˚06, h45km±17km, n52, σ1§44/59, mb3.6/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.63**	**340**		**Pn**	**16 45 30.5**	**-0.8**
AKSA					**Sn**	**16 45 41.0**	**+0.6**
AHB	**Akutan Harbor**	**0.64**	**334**		**Pn**	**16 45 31.1**	**-0.4**
AHB					**Sn**	**16 45 41.8**	**+1.1**
AKUT	**Akutan**	**0.65**	**337**		**Pn**	**16 45 31.0**	**-0.5**
AKUT				IAML		16 45 42.3	
	comp=N,3µm,0.6s						
AKUT	**Akutan**	**0.65**	**337**		**Sn**	**16 45 41.9**	**+1.2**
AKBBA	**Akutan Broad B**	**0.66**	**328**		**Pn**	**16 45 31.2**	**-0.5**
AKBBA					**Sn**	**16 45 42.4**	**+1.3**
ZRO	**Akutan Zero**	**0.67**	**325**		**Pn**	**16 45 31.3**	**-0.5**
ZRO					**Sn**	**16 45 42.7**	**+1.4**
AKMO	**Akutan Morgan**	**0.68**	**324**		**Pn**	**16 45 31.7**	**-0.3**
AKMO					**Sn**	**16 45 42.7**	**+1.1**
AKV	**Akutan Volcano**	**0.69**	**328**		**Pn**	**16 45 31.7**	**-0.5**
AKV					**Sn**	**16 45 43.2**	**+1.3**
AKLV	**Akutan Long Va**	**0.72**	**330**		**Pn**	**16 45 32.0**	**-0.6**
AKLV					**Sn**	**16 45 43.4**	**+0.8**
LVA	**Lava Point**	**0.75**	**326**		**Pn**	**16 45 32.4**	**-0.4**
LVA				IAML		16 45 46.8	
	comp=E,2µm,0.7s						
LVA				IAML		16 45 47.2	
	comp=N,3µm,0.7s						
LVA	**Lava Point**	**0.75**	**326**		**Sn**	**16 45 44.2**	**+1.1**
UNV	**Unalaska Vale**	**0.76**	**294**		**Pn**	**16 45 32.1**	**-0.9**
UNV				IAML		16 45 44.3	
	comp=N,3µm,0.4s						
UNV				IAML		16 45 44.4	
	comp=E,2µm,0.4s						
UNV	**Unalaska Valle**	**0.76**	**294**		**Sn**	**16 45 43.6**	**+0.2**
AKGG	**Akutan Green G**	**0.77**	**330**		**Sn**	**16 45 44.7**	**+1.2**
MGOD	**Makushin Gods**	**0.95**	**286**		**Pn**	**16 45 34.9**	**-0.7**
MAPS	**Pakushin South**	**0.99**	**286**		**Pn**	**16 45 35.6**	**-0.5**
SSBA	**Shishaldin**	**1.42**	**29**		**Pn**	**16 45 41.1**	**-1.0**
FALS	**False Pass**	**1.73**	**40**		**Pn**	**16 45 44.8**	**-1.4**
DT1	**Dutton Round H**	**2.38**	**48**		**Pn**	**16 45 54.3**	**-0.8**
DTNA	**Dutton South F**	**2.42**	**47**		**Pn**	**16 45 55.1**	**-0.5**
HAG	**Hague Volcano**	**2.68**	**47**		**Pn**	**16 46 00.1**	**+0.9**
PS4A	**Pavlof South-4**	**2.72**	**47**		**Pn**	**16 46 00.8**	**+1.1**
PS1A	**Pavlof South-1**	**2.82**	**47**		**Pn**	**16 46 01.9**	**+0.8**
SDPT	**Sand Point**	**3.36**	**55**		**Pn**	**16 46 08.3**	**-0.3**
SDPT				IAML		16 47 03.2	
	comp=N,145nm,0.9s						
P08K	**Saint George I**	**3.91**	**323**		**Sn**	**16 46 56.7**	**-3.8**
O15K	**Ungaliikthiuk R**	**6.42**	**26**	Pn	**Pn**	**16 46 51.1**	**+0.6**
N14K	**Kuskokwak Cree**	**6.70**	**16**		**Pn**	**16 46 54.9**	**+0.5**
O16K	**Kokwok River B**	**7.26**	**30**		**Pn**	**16 47 03.8**	**+1.8**
ACHA	**Angle Creek He**	**7.32**	**46**	Pn	**Pn**	**16 47 05.4**	**+2.5**
L14K	**Kuka Creek**	**7.95**	**9**		**Pn**	**16 47 11.7**	**+0.3**
N17K	**Nushagak Hills**	**8.29**	**29**	Pn	**Pn**	**16 47 17.7**	**+1.6**
KDAK	**Kodiak Island**	**8.36**	**54**	P	**Pn**	**16 47 15.1**	**-2.0**
KDAK	comp=N,0.4nm,0.3s,baz=82,slow=0.9,SNR=8.4			S	**Sn**	**16 48 45.0**	**-5.1**
	comp=N,11nm,1.1s,baz=74,slow=22,SNR=1.3						
	comp=N,11nm,0.9s						
Q19K	**Cape Douglas,**	**8.45**	**46**	Pn	**Pn**	**16 47 20.4**	**+2.1**
L16K	**Owhat River**	**8.77**	**19**	Pn	**Pn**	**16 47 23.5**	**+0.8**
M17K	**Holitna River**	**8.95**	**25**	Pn	**Pn**	**16 47 26.4**	**+1.3**
STLK	**Strandline Lak**	**10.76**	**37**	Pn	**Pn**	**16 47 51.8**	**+1.8**
KLU	**Klutina**	**13.08**	**45**		**Pn**	**16 48 19.3**	**-2.3**
F20K	**Avaraart Lake**	**14.33**	**15**	P	**P**	**16 48 43.7**	**-0.9**
K24K	**Donnelly Dome**	**14.39**	**37**	Pn	**Pn**	**16 48 39.6**	**+0.3**
ILAR	**Eielson Array**	**14.63**	**32**	P	**Pn**	**16 48 41.1**	**-1.3**
	comp=N,0.1nm,0.3s,baz=223,slow=14,SNR=6.1						
	comp=N,0.2nm,0.4s						
ILAR	**Eielson Array**	**14.63**	**32**		**Pn**	**16 48 43.1**	**+0.7**
L27K	**Beaver Creek,**	**15.51**	**43**	Pn	**Pn**	**16 48 54.9**	**+0.9**
L27K				IAmb	IAmb	16 49 13.9	
	comp=Z,6.3nm,1.5s						
M29M	**Somme Creek**	**16.68**	**47**	Pn	**P**	**16 49 09.1**	**-1.8**
M29M				IAmb	IAmb	16 49 35.5	
	comp=Z,9.0nm,1.4s						
K29M	**Barlow Dome**	**17.59**	**43**		**P**	**16 49 21.8**	**+0.9**
K29M				IAmb	IAmb	16 49 27.5	
	comp=Z,2.7nm,0.7s						
J30M	**Hart River**	**18.36**	**42**	P	**Pn**	**16 49 29.5**	**-0.2**
INK	**Inuvik**	**21.02**	**33**	P	**P**	**16 49 55.8**	**-2.3**
	comp=Z,0.6nm,0.6s,baz=250,slow=8.8,SNR=6.3						
	comp=Z,0.6nm,0.6s						
INK	**Inuvik**	**21.02**	**33**	IAmb	IAmb	16 50 03.3	
	comp=Z,7.9nm,1.4s						
C36M	**Paulatuk**	**24.58**	**34**	P	**P**	**16 50 34.3**	**+0.3**
YKA	**Yellowknife Ar**	**27.62**	**51**	P	**P**	**16 51 01.1**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=277,slow=11,SNR=2.4						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**35.30**	**96**	P	**P**	**16 52 11.3**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=324,slow=11,SNR=2.8						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**50.33**	**93**	P	**P**	**16 54 11.4**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=300,slow=4.9,SNR=7.2						
	comp=Z,0.7nm,0.8s						
HFS	**Hagfors**	**66.67**	**1**	P	**P**	**16 56 03.5**	**-0.6**
	comp=Z,5.2nm,1.0s,baz=4.8,slow=3.0,SNR=14						
	comp=Z,5.2nm,1.0s						

*IDC **23** 16:49:30.9±1.9,37.˚12S×74.˚09W, h0km, mb3.3/2, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=34.3km s-min=20.8km az=71.0*
*GUC **23** 16:49:31.4±0.8,37.˚09S×74.˚09W, h34km±4km, ML3.5*
ISC 23 16:49:34.6±1.2,37.˚15S±0.˚07×73.˚9W±0.˚1, h35km, n12, σ1§79/12, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.71**	**56**⇑*iP*		**Pn**	**16 49 45.7**	**-2.5**
BI05				*eS*	**Sn**	**16 49 56.3**	**-1.5**
BI05				IAML		16 50 00.4	
	comp=N,3µm,0.1s						
BI04	**Isla Mocha**	**1.27**	**179**	*eP*	**Pn**	**16 49 54.4**	**-1.4**
BI04				*eS*	**Sn**	**16 50 10.2**	**-1.4**
BI04				IAML		16 50 27.5	
	comp=E,2µm,0.7s						
BI02	**San Fabin de**	**2.18**	**78**	*eP*	**Pn**	**16 50 07.9**	**-0.6**
BI02				*eS*	**Sn**	**16 50 35.8**	**+1.5**
BI02				IAML		16 50 45.3	
	comp=E,354nm,0.6s						
GO05	**Hualane**	**2.67**	**38**	*eP*	**Pn**	**16 50 13.3**	**-2.0**
GO05				IAML		16 51 13.1	
	comp=N,203nm,0.8s						
BO01	**Tunca**	**3.59**	**41**	*eP*	**Pn**	**16 50 26.4**	**-1.4**
PLCA	**Paso Flores**	**4.45**	**145**	Pn	**Pn**	**16 50 41.3**	**+1.7**
PLCA	comp=N,0.1nm,0.3s,baz=319,slow=9.4,SNR=5.9			Lg	Lg	16 51 54.6	
	comp=N,0.6nm,0.3s,baz=61,slow=23,SNR=4.5						
	comp=N,1.3nm,0.5s						
H03S1	**Juan Fernandez**	**5.23**	**308**	T	T	16 56 00.1	
	baz=128,slow=74,SNR=364						
H03S3	**Juan Fernandez**	**5.24**	**308**	T	T	16 56 04.2	
	baz=128,slow=74,SNR=257						
H03S2	**Juan Fernandez**	**5.25**	**307**	T	T	16 55 59.9	
	baz=128,slow=74,SNR=341						
CFA	**Coronel Fontan**	**7.25**	**42**	Pn	**Pn**	**16 51 19.8**	**+1.6**
CFA	comp=N,0.3nm,0.3s,baz=215,slow=18,SNR=6.0			Lg	Lg	16 53 22.5	
	baz=139,slow=15						
	comp=N,0.4nm,0.3s						
LPAZ	**La Paz**	**21.40**	**15**	P	**P**	**16 54 21.1**	**+1.1**
	comp=N,1.1nm,0.7s,baz=208,slow=8.1,SNR=6.0						
	comp=N,1.1nm,0.7s						
TXAR	**Lajitas Array**	**71.77**	**333**	P	**P**	**17 00 54.5**	**+1.0**
	comp=N,0.2nm,0.5s,baz=163,slow=6.6,SNR=3.8						
	comp=N,0.2nm,0.5s						

*IDC **23** 16:50:24.8±1.8,0.˚98N×126.˚68E, h0km, mb3.8/3, mbtmp3.9/4, ML3.6/1, Error ellipse: s-maj=117.1km s-min=18.3km az=69.0*
*DJA **23** 16:50:29.8±0.4,1.˚1N±3.˚×12.˚7E±.˚, h14km±4km, M4.1/18, mB7.0/1, mb4.3/2, MLv4.0/18, Mw(mB)7.0/1*
*NEIC **23** 16:50:30.9±0.5,1.˚10N±0.˚09×126.˚95E±0.˚09, h47km±8km, mb4.3/8, Error ellipse: s-maj=16.9km s-min=7.8km az=224.0*
ISC 23 16:50:29.6±0.9,1.˚17N±0.˚10×126.˚98E±0.˚07, h35km, n26, σ1§62/27, mb4.0/5, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.56**	**135**		**Pn**	**16 50 41.9**	**+0.9**
TNTI	**Ternate**	**0.56**	**135**	P	**Pn**	**16 50 42.0**	**+0.9**
TNTI				S	**Sn**	**16 50 51.3**	**+2.2**
MNI	**Manado**	**2.15**	**277**	P	**Pn**	**16 51 04.6**	**+1.5**
SANI	**Sanana**	**3.34**	**197**	P	**Pn**	**16 51 18.3**	**-1.2**
GTOI	**Gorontalo**	**4.00**	**262**	P	**Pn**	**16 51 30.8**	**+2.3**
NLAI	**Namlea**	**4.38**	**178**	P	**Pn**	**16 51 34.2**	**+0.5**
KRAI	**Karang Ratu**	**4.68**	**162**	P	**Pn**	**16 51 40.9**	**+3.1**
LUWI	**Luwuk**	**4.74**	**242**	P	**Pn**	**16 51 40.0**	**+1.3**
MRSI	**Marisa**	**5.08**	**262**	P	**Pn**	**16 51 44.6**	**+1.2**
TOLI2	**Tolitoli**	**6.19**	**270**	Pn	**Pn**	**16 51 58.8**	**+0.2**
SBUM	**Sibu**	**14.80**	**275**	P	Pn	16 54 02.4	+5.8
KNRA	**Kununurra**	**16.83**	**174**	Pn	**Pn**	**16 54 21.9**	**-0.8**
KNRA				IAmb	IAmb	16 54 22.7	
	comp=Z,35nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.19**	**184**	P	**P**	**16 54 49.4**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=16,slow=11,SNR=2.8						
	comp=Z,5.4nm,1.0s						
WB0	**Warramunga Arr**	**22.04**	**161**	P	**P**	**16 55 20.2**	**-1.2**
WB0				IAmb	IAmb	16 55 34.2	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**22.19**	**161**	P	**P**	**16 55 21.2**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=337,slow=11,SNR=10.0						
	comp=Z,0.9nm,0.4s						
WRA	**Warramunga Arr**	**22.19**	**161**	P	**P**	**16 55 20.3**	**-2.7**
WR8	**Warramunga Arr**	**22.25**	**161**	P	**P**	**16 55 22.4**	**-1.3**
WR8				IAmb	IAmb	16 55 40.0	
	comp=Z,9.5nm,1.2s						
AS31	**Alice Springs**	**25.59**	**165**	P	**P**	**16 55 54.5**	**-1.2**
ASAR	**Alice Springs**	**25.59**	**165**	P	**P**	**16 55 54.4**	**-1.3**
	comp=Z,1.5nm,0.5s,baz=344,slow=9.6,SNR=46						
ASAR				S	**S**	**17 00 25.1**	**+3.5**
	comp=Z,0.4nm,0.9s,baz=346,slow=22,SNR=4.3						
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**25.59**	**165**	P	**P**	**16 55 54.8**	**-0.9**
MKAR	**Makanchi Array**	**59.79**	**326**	P	**P**	**17 00 31.9**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=119,slow=7.7,SNR=26						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.79**	**326**	P	**P**	**17 00 31.3**	**-0.1**
BSWZ	**Blackbirch Sta**	**60.13**	**141**	P	**P**	**17 00 33.5**	**-0.3**
ZAA0	**Zalesovo Array**	**62.97**	**334**	P	**P**	**17 00 52.6**	**-0.1**
KURK	**Kurchatov**	**64.02**	**328**	P	**P**	**17 00 59.6**	**-0.1**
NIUE	**Niue**	**65.09**	**112**	P	**P**	**17 01 05.8**	**-1.5**

*DSN **23** 16:54:35.6±1.2,38.˚32N×43.˚74E, h10km, mb4.5/15, Error ellipse: s-maj=22.6km s-min=5.6km az=86.0*
*NSSP **23** 16:54:37.0,38.˚50N×44.˚43E, h10km, Ms3.8*
*TIF **23** 16:54:36.1,38.˚45N×44.˚45E, h2km±1km*
*ISK **23** 16:54:37.8,38.˚34N×44.˚56E, h4km, ML4.3/12*
*TEH **23** 16:54:37.6,38.˚45N×44.˚46E, h5km, ML4.2, Presumed earthquake*
*AFAD **23** 16:54:37.0,38.˚49N×44.˚54E, h5km±2km, MW4.2*
*AZER **23** 16:54:37.2,38.˚44N×44.˚47E, h33km, ml4.3*
*IDC **23** 16:54:38.6±0.7,38.˚47N×44.˚45E, h0km, mb4.1/18, mbtmp4.0/26, ML3.8/7, Error ellipse: s-maj=12.6km s-min=9.9km az=154.0*
*MOS **23** 16:54:38.7±1.1,38.˚39N×44.˚49E, h11km, mb4.5/17, Error ellipse: s-maj=7.2km s-min=4.1km az=87.4*
*NEIC **23** 16:54:40.0±1.1,38.˚45N±0.˚05×44.˚34E±0.˚05, h10km±1km, mb4.4/39, Error ellipse: s-maj=8.6km s-min=6.4km az=10.0*
*MCSM **23** 16:54:40.8±0.4,39.˚5N±5.˚×4.˚4E±.˚, h11km±3km, mb4.5, mB4.5, MLv4.6, Mw(mB)3.7*
ISC 23 16:54:39.8±0.3,38.˚43N±0.˚02×44.˚45E±0.˚01, h10km, n323, σ1§84/336, mb4.3/53, MS4.6/3, 22C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**304**	P	**Pg**	**16 54 45.6**	**-2.7**
OZAP				S	**Sg**	**16 54 52.0**	**-1.9**
TVAN	**Van**	**0.82**	**277**	P	**Pg**	**16 54 53.1**	**-2.7**
TVAN				S	**Sn**	**16 55 08.4**	**-1.6**
TVAN	**Van**	**0.82**	**277**	Pg	**Pg**	**16 54 53.0**	**-2.7**
YOVA	**Hakkari_Yksek**	**0.85**	**189**	P	**Pg**	**16 54 54.2**	**-2.0**
YOVA				S	**Sb**	**16 55 07.6**	**-0.6**
YOVA				IAML		16 55 10.0	
	comp=E,7µm,0.5s						
YOVA				IAML		16 55 14.0	
	comp=N,1µm,0.7s						
YOVA	**Hakkari_Yksek**	**0.85**	**189**	Pg	**Pg**	**16 54 54.1**	**-2.0**
VANB	**Van**	**0.85**	**282**	Pg	**Pn**	**16 54 56.1**	**-1.8**
VANB				S

ADCV	**BITLIS_Adilcev**	**1.40**	**286**	P		**Pn**	**16 55 04.0**	**-1.7**
ADCV				S		**Sg**	**16 55 23.9**	**-1.0**
ADCV	**BITLIS_Adilcev**	**1.40**	**286**	Pg		**Pn**	**16 55 03.9**	**-1.7**
IAZR	**Azarshahr**	**1.42**	**121**	Pg		**Pb**	**16 55 04.5**	**-2.0**
IGDI	**IGDIR**	**1.47**	**349**	P		**Pn**	**16 55 04.8**	**-1.6**
IGDI				S		**Sg**	**16 55 25.3**	**-1.8**
IGDI				IAML			16 55 31.0	
	comp=N,3μm,0.9s							
IGDI	**IGDIR**	**1.47**	**349**	Pg		**Pn**	**16 55 04.8**	**-1.6**
VAYK	**Vayk**	**1.48**	**31**	*i* P		**Pn**	**16 55 04.8**	**-1.7**
VAYK				*i* S		**Sg**	**16 55 25.8**	**-1.6**
ALVK	**Alvank**	**1.57**	**70**	*e*P		**Pn**	**16 55 06.2**	**-1.6**
ALVK				*e*S		**Sb**	**16 55 27.6**	**-1.4**
PERV	**Siirt/Pervari-**	**1.58**	**253**	P		**Pn**	**16 55 03.4**	**-4.5**
PERV				IAML			16 55 35.0	
	comp=N,4μm,0.7s							
PERV				IAML			16 55 38.0	
	comp=E,4μm,0.6s							
AGRB	**Hanur-Agry**	**1.61**	**316**	Pn		**Pb**	**16 55 08.2**	**-1.6**
DORK	**Agr/Tutak/Do**	**1.62**	**307**	P		**Pn**	**16 55 06.6**	**-1.9**
DORK				S		**Sg**	**16 55 30.8**	**-1.1**
DORK				IAML			16 55 39.0	
	comp=N,2μm,0.8s							
DORK				IAML			16 55 41.0	
	comp=Z,1μm,0.7s							
DORK				IAML			16 55 48.0	
	comp=E,1μm,1.1s							
MLAZ	**Malazgirt-MUS**	**1.65**	**296**	Pn		**Pg**	**16 55 09.9**	**-1.5**
MLAZ				Sn		**Sg**	**16 55 33.5**	**+0.7**
KOTA	**Agri, Merkez-K**	**1.68**	**325**	P		**Pn**	**16 55 07.6**	**-1.8**
KOTA				S		**Sg**	**16 55 31.8**	**-2.0**
KOTA				IAML			16 55 40.0	
	comp=E,896nm,0.8s							
KOTA				IAML			16 55 47.0	
	comp=N,944nm,1.8s							
GNI	**Garni**	**1.74**	**7**	Pn		**Pb**	**16 55 09.9**	**-2.0**
	124nm,0.3s,baz=239,slow=2.1,SNR=205							
GNI				Lg		Lg	16 55 35.2	
	127nm,0.3s,baz=217,slow=21,SNR=6.7							
GNI	**Garni**	**1.74**	**7**			**Pb**	**16 55 09.8**	**-2.1**
GNI	**Garni**	**1.74**	**7**	Pn		**Pg**	**16 55 10.8**	**-2.3**
GNI	**Garni**	**1.74**	**7**	*e*P		**Pb**	**16 55 09.9**	**-2.0**
GNI				*e*S		**Sg**	**16 55 35.3**	**-0.3**
GNI	**Garni**	**1.74**	**7**	P		**Pb**	**16 55 09.5**	**-2.3**
GNI	**Garni**	**1.74**	**7**	P		**Pb**	**16 55 10.4**	**-1.4**
GNI	**Garni**	**1.74**	**7**	P		**Pb**	**16 55 10.1**	**-1.8**
VNNZ	**Vanand**	**1.74**	**344**	*e*P		**Pb**	**16 55 10.8**	**-1.1**
VNNZ				*e*S		**Sg**	**16 55 35.5**	**-0.4**
METS	**Metsamor**	**1.75**	**351**	*e*P		**Pb**	**16 55 10.2**	**-1.8**
METS				*e*S		**Sg**	**16 55 34.5**	**-1.4**
EGVZ	**Egvard**	**1.82**	**63**	*e*P		**Pb**	**16 55 10.6**	**-2.7**
EGVZ				*e*S		**Sb**	**16 55 34.9**	**-1.3**
BLIS	**Bitlis-Merkez**	**1.83**	**270**	P		**Pb**	**16 55 11.7**	**-1.9**
BLIS				S		**Sg**	**16 55 38.0**	**-0.7**
BLIS				IAML			16 55 47.0	
	comp=N,1μm,1.6s							
BLIS				IAML			16 55 53.0	
	comp=E,2μm,0.8s							
BLIS	**Bitlis-Merkez**	**1.83**	**270**	Pn		**Pb**	**16 55 11.6**	**-1.9**
SIRN	**Sırnak**	**1.86**	**241**	P		**Pb**	**16 55 12.3**	**-1.6**
SIRN				S		**Sb**	**16 55 36.1**	**-1.1**
SIRN	**Sırnak**	**1.86**	**241**	Pn		**Pb**	**16 55 12.2**	**-1.6**
ARUZ	**Aruch**	**1.88**	**352**	*e*P		**Pb**	**16 55 12.0**	**-2.2**
ARUZ				*e*S		**Sg**	**16 55 37.4**	**-2.7**
GURO	**Guroymak-BITLI**	**1.90**	**275**			**Pn**	**16 55 11.0**	**-1.4**
GURO	**Guroymak-BITLI**	**1.90**	**275**	Pn		**Pb**	**16 55 13.0**	**-1.6**
KAPZ	**Kaputan**	**1.90**	**6**	*e*P		**Pb**	**16 55 12.5**	**-2.2**
KAPZ				*e*S		**Sg**	**16 55 38.2**	**-2.8**
MAHB	**Mahabad**	**1.93**	**149**	Pn		**Pb**	**16 55 13.5**	**-1.7**
AMBZ	**Amberd**	**1.96**	**356**	*e*P		**Pb**	**16 55 13.4**	**-2.4**
AMBZ				*e*S		**Sg**	**16 55 40.0**	**-3.0**
AYRK	**Ayrk**	**1.98**	**31**	*e*P		**Pb**	**16 55 13.5**	**-2.6**
AYRK				*e*S		**Sb**	**16 55 40.0**	**-1.0**
SRTM	**Siirt_Merkez**	**2.04**	**258**	P		**Pb**	**16 55 15.5**	**-1.5**
SRTM				S		**Sg**	**16 55 43.2**	**-2.0**
SRTM				IAML			16 55 52.0	
	comp=E,3μm,0.7s							
SRTM				IAML			16 56 00.0	
	comp=N,3μm,0.9s							
IHRS	**Heris**	**2.04**	**92**	Pn		**Pb**	**16 55 14.6**	**-2.5**
DIGO	**Kars**	**2.15**	**338**	P		**Pb**	**16 55 15.9**	**-3.1**
MUSM	**Mu-Merkez**	**2.32**	**278**	P		**Pb**	**16 55 19.4**	**-2.4**
MUSM				S		**Sb**	**16 55 50.8**	**+0.2**
MUSM				IAML			16 56 08.0	
	comp=N,336nm,0.9s							
MUSM				IAML			16 56 11.0	
	comp=E,275nm,1.1s							
KARS	**Kars**	**2.44**	**335**			**Pn**	**16 55 19.0**	**-0.8**
KARS	**Kars**	**2.44**	**335**	Pn		**Pb**	**16 55 20.9**	**-3.0**
KARS	**Kars**	**2.44**	**335**	PN		**Pn**	**16 55 19.0**	**-0.8**
BOZK	**Kars-Merkez-Bo**	**2.44**	**333**	P		**Pb**	**16 55 23.0**	**-0.9**
VRTB	**Varto-Mus**	**2.45**	**288**	Pn		**Pb**	**16 55 21.8**	**-2.2**
VRTB	**Varto-Mus**	**2.45**	**288**	P		**Pg**	**16 55 24.5**	**-2.2**
IHSH	**Hashtrud**	**2.49**	**116**	Pn		**Pn**	**16 55 20.8**	**+0.1**
HOMI	**Horasan**	**2.55**	**310**	P		**Pb**	**16 55 23.0**	**-2.8**
HOMI				S		**Sg**	**16 56 03.3**	**+1.5**
HOMI				IAML			16 56 22.0	
	comp=E,1μm,1.3s							
HOMI				IAML			16 56 29.0	
	comp=N,582nm,1.1s							
LSVT	**Lusahovit**	**2.55**	**13**	*e*P		**Pb**	**16 55 22.0**	**-3.7**
LSVT				*e*S		**Sb**	**16 55 54.8**	**-2.4**
BTMN	**Batman**	**2.56**	**259**	P		**Pb**	**16 55 22.7**	**-3.2**
BTMN				S		**Sg**	**16 55 59.2**	**-2.9**
BTMN				IAML			16 56 12.0	
	comp=E,2μm,1.0s							
BTMN				IAML			16 56 33.0	
	comp=N,1μm,1.6s							
SVAN	**Silvan-Diyarba**	**2.57**	**265**	Pn		**Pb**	**16 55 22.7**	**-3.3**
SVAN	**Silvan-Diyarba**	**2.57**	**265**	P		**Pn**	**16 55 20.9**	**-0.7**
SVAN				S		**Sb**	**16 55 56.8**	**-0.9**
SVAN				IAML			16 56 11.0	
	comp=N,436nm,1.3s							
SVAN				IAML			16 56 16.0	
	comp=E,329nm,1.6s							
ISRB	**Sarab**	**2.61**	**102**	Pn		**Pb**	**16 55 22.5**	**+0.3**
SRTK	**Saratovka**	**2.64**	**358**	*e*P		**Pn**	**16 55 23.1**	**+0.6**
SRTK				*e*S		**Sb**	**16 55 56.9**	**-2.9**
SENK	**Senkaya-Erzuru**	**2.68**	**323**	Pn		**Pb**	**16 55 25.2**	**-2.8**
SLHN	**Bingol, Solhan**	**2.73**	**282**	P		**Pg**	**16 55 29.8**	**-2.3**
KARO	**Karliova-Bingo**	**2.80**	**289**	Pn		**Pb**	**16 55 26.5**	**-3.4**
GOLE	**Ardahan-G¶le**	**2.80**	**330**	P		**Pb**	**16 55 29.2**	**-0.8**
ERZM	**Erzurum**	**2.81**	**303**	P		**Pb**	**16 55 29.5**	**-0.8**
EJDE	**Erzurum, Palan**	**2.82**	**301**	P		**Pb**	**16 55 29.5**	**-0.9**
EJDE				IAML			16 56 16.0	
	comp=E,826nm,0.7s							
EOLT	**Oltu**	**2.85**	**319**	P		**Pb**	**16 55 30.0**	**-0.9**
BGD	**Bogdanovka**	**2.91**	**347**	P		**Pb**	**16 55 31.4**	**-0.5**
BGD	**Bogdanovka**	**2.91**	**347**	PN		**Pb**	**16 55 31.4**	**-0.5**
KZRT	**Kazreti**	**2.96**	**359**	P		**Pb**	**16 55 29.0**	**-2.8**
KZRT	**Kazreti**	**2.96**	**359**	PN		**Pb**	**16 55 29.8**	**-2.8**
BNGB	**Bingl**	**3.00**	**282**	Pn		**Pb**	**16 55 29.2**	**-4.2**
AKH	**Akhalkalaki**	**3.07**	**346**	P		**Pb**	**16 55 34.3**	**-0.3**
AKH	**Akhalkalaki**	**3.07**	**346**	PN		**Pb**	**16 55 34.3**	**-0.3**
DGRG	**David-gareji**	**3.10**	**13**	P		**Pb**	**16 55 30.8**	**-4.4**
DGRG	**David-gareji**	**3.10**	**13**	PN		**Pb**	**16 55 30.7**	**-4.4**
MARD	**Mardin**	**3.11**	**250**			**Pn**	**16 55 28.0**	**-1.0**
TRLG	**Trialeti**	**3.12**	**355**	P		**Pn**	**16 55 30.5**	**+1.3**
TRLG	**Trialeti**	**3.12**	**355**	PN		**Pn**	**16 55 30.5**	**+1.3**
VSHL	**Vashlovani**	**3.18**	**28**	P		**Pb**	**16 55 31.6**	**-4.8**
VSHL				S		**Sg**	**16 56 21.3**	**-0.6**
YEDI	**Yedisu-Bingol**	**3.21**	**290**	Pn		**Pb**	**16 55 32.4**	**-4.5**
DDFL	**Dedoflistskaro**	**3.28**	**23**	P		**Pb**	**16 55 35.2**	**-2.9**
DDFL	**Dedoflistskaro**	**3.28**	**23**	PN		**Pb**	**16 55 35.2**	**-2.9**
TBLG	**Delisi**	**3.31**	**4**	P		**Pb**	**16 55 38.9**	**+0.3**
DYBB	**Diyarbakir**	**3.43**	**263**	Pn		**Pn**	**16 55 33.5**	**+0.2**
LGD	**Lagodekhi**	**3.67**	**21**	P		Pb	16 55 38.9	-5.8
LGD	**Lagodekhi**	**3.67**	**21**	PN		Pb	16 55 38.9	-5.8
ALIG	**Mtskhetisjvari**	**3.73**	**351**	P		**Pb**	**16 55 45.5**	**-0.3**
ALIG	**Mtskhetisjvari**	**3.73**	**351**	PN		**Pb**	**16 55 45.4**	**-0.3**
CHRG	**Chargali**	**3.92**	**5**	P		**Pn**	**16 55 42.2**	**+2.1**
AKT	**Akhty**	**3.96**	**39**	*e*PN		**Pn**	**16 55 38.8**	**-1.8**
AKT				*e*			16 55 48.3	
AKT				*e*S		**Sn**	**16 56 24.5**	**-2.7**
AKT				*e*			16 56 44.7	
AKT				pmax	pmax			
	comp=Z,120nm,0.7s							
AKT				pmax	pmax			
	comp=Z,120nm,0.7s							
AKT				smax	smax			
	comp=N,91nm,0.6s							
AKT				smax	smax			
	comp=E,118nm,0.6s							
AKT				smax	smax			
	comp=E,119nm,0.6s							
AKT				MLR	MLR			
	comp=Z,661nm,3.0s							
GARIG	**Gari**	**4.24**	**350**	P	Pb		16 55 48.0	-6.5
SHTL	**Shatili**	**4.26**	**7**	P	**Pb**		**16 55 52.6**	**-2.3**
SHTL	**Shatili**	**4.26**	**7**	PN	**Pb**		**16 55 52.5**	**-2.3**
NEUR	**Neytrino**	**5.01**	**345**	*i* PN	**Pn**		**16 55 57.2**	**+2.0**
MAK	**Makhachkala**	**5.09**	**26**	*e*PN	**Pn**		**16 55 56.4**	**+0.3**
MAK				*e*S	**Sn**		**16 56 56.2**	**+1.3**
MAK				pmax	pmax			
	comp=Z,88nm,1.2s							
MAK				MLR	MLR			
	comp=E,716nm,8.0s							
NCK	**Nalchik**	**5.11**	**353**	*i* PN	**Pn**		**16 55 58.5**	**+2.2**
KBZ	**Khabaz**	**5.43**	**348**	Pn	**Pn**		**16 56 02.9**	**+2.2**
	comp=Z,3.0nm,0.8s,baz=177,slow=11,SNR=9.0							
SHA1	**Shidzhatmaz**	**5.48**	**346**	*i* P	**Pn**		**16 56 03.6**	**+2.0**
KIV	**Kislovodsk**	**5.68**	**347**	*e*P	**Pn**		**16 56 06.5**	**+2.2**
KIV				pmax	pmax			
	comp=Z,10.0nm,1.1s							
VSLR	**Vesyoloye**	**6.04**	**328**	*i* P	**Pn**		**16 56 11.2**	**+2.1**
BRTR	**Keskin Array B**	**8.51**	**282**	Pn	**Pn**		**16 56 45.8**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=104,slow=14,SNR=9.7							
	comp=Z,0.9nm,0.6s							
ASF	**Jabal al Asfar**	**8.77**	**227**	Pn	**Pn**		**16 56 49.1**	**+2.3**
	comp=Z,1.1nm,0.3s,baz=46,slow=10,SNR=7.6							
	comp=Z,3.6nm,0.4s							
MMAI	**Mount Meron Ar**	**9.12**	**236**	Pn	**Pn**		**16 56 53.1**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=53,slow=18,SNR=5.8							
	comp=Z,2.0nm,0.5s							
ISP	**Isparta**	**10.99**	**271**	*i* P	**Pn**		**16 57 19.0**	**+1.9**
VRH	**Novokhopyorsk**	**12.92**	**352**	*e*P	Pn		16 57 53.7	+10
VRH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
VSR	**Storozhevoye**	**13.32**	**345**	*e*P	**P**		**16 57 55.5**	**-3.1**
VSR				pmax	pmax			
	comp=Z,8.0nm,0.6s							
VORR	**Voronezh**	**13.75**	**346**	*e*P	**P**		**16 58 03.1**	**-0.2**
VORR				pmax	pmax			
	comp=Z,30nm,0.4s							
BELG	**Belogornoye**	**14.14**	**8**	Pn	**Pn**		**16 57 59.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=162,slow=7.1,SNR=5.3							
	comp=Z,15nm,0.9s							
LPSR	**Galich'ya Gora**	**14.69**	**347**	*e*P	**Pn**		**16 58 07.9**	**+0.4**
LPSR				pmax	pmax			
	comp=Z,20nm,1.0s							
RAYN	**Ar Rayn**	**14.88**	**176**	Pn	**Pn**		**16 58 05.6**	**-4.8**
RAYN	**Ar Rayn**	**14.88**	**176**	*i* P	**Pn**		**16 58 05.6**	**-4.8**
	SNR=10							
RAYN	**Ar Rayn**	**14.88**	**176**	⇓P	Pn		16 58 05.3	-5.0
RAYN	**Ar Rayn**	**14.88**	**176**	P	**Pn**		**16 58 06.1**	**-4.3**
PLOR	**Plostina**	**15.13**	**305**	⇑P	**P**		**16 58 19.0**	**+0.3**
PLOR	**Plostina**	**15.13**	**305**	⇑P	**P**		**16 58 19.0**	**+0.3**
AKTO	**Aktyubinsk**	**15.40**	**34**	Pn	**Pn**		**16 58 15.7**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=233,slow=11,SNR=12							
	comp=Z,9.6nm,0.8s							
MLR	**Muntele Rosu**	**15.45**	**303**	Pn	**P**		**16 58 20.2**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=171,slow=14,SNR=4.3							
	comp=Z,0.7nm,0.3s							
MLR	**Muntele Rosu**	**15.45**	**303**	⇑P	**P**		**16 58 24.0**	**+1.6**
AB31	**Akbulak array**	**15.53**	**41**	Pn	**Pn**		**16 58 14.8**	**-3.9**
ABKAR	**Akbulak array**	**15.53**	**41**		**Pn**		**16 58 14.5**	**-4.2**
TURR	**Turia**	**15.61**	**305**	⇓P	**P**		**16 58 24.9**	**+0.8**
SHME	**Shamm**	**15.80**	**138**	P	**P**		**16 58 23.1**	**-3.1**
SHME	**Shamm**	**15.80**	**138**	P	**P**		**16 58 26.7**	**+0.6**
BANOM	**Banah**	**15.98**	**138**	P	**Pn**		**16 58 24.2**	**-0.5**
BANOM	**Banah**	**15.98**	**138**	P	**P**		**16 58 26.3**	**-2.0**
DOPR	**Dopca**	**15.99**	**304**	⇑P	**P**		**16 58 30.5**	**+2.3**
VOIR		**16.03**	**302**	⇑P	**P**		**16 58 31.6**	**+2.9**
VOIR		**16.03**	**302**	⇑P	**P**		**16 58 31.6**	**+2.9**
GHWR	**Ruwais**	**16.11**	**151**	P	**P**		**16 58 30.1**	**+0.5**
AK07	**Malin Array Si**	**16.25**	**323**	P	**Pn**		**16 58 27.2**	**-0.7**
AK09	**Malin Array Si**	**16.25**	**323**	P	**Pn**		**16 58 27.3**	**-0.7**
AK10	**Malin Array Si**	**16.26**	**323**	P	**Pn**		**16 58 27.4**	**-0.7**
AK06	**Malin Array Si**	**16.27**	**323**	P	**Pn**		**16 58 27.6**	**-0.7**
AK08	**Malin Array Si**	**16.28**	**323**	P	**Pn**		**16 58 27.6**	**-0.7**
AK05	**Malin Array Si**	**16.29**	**323**	P	**Pn**		**16 58 27.8**	**-0.7**
AK02	**Malin Array Si**	**16.32**	**323**	P	**Pn**		**16 58 28.1**	**-0.7**
AK12	**Malin Array Si**	**16.33**	**323**	P	**Pn**		**16 58 28.3**	**-0.7**
AK01	**Malin Array Si**	**16.34**	**324**	P	**Pn**		**16 58 28.4**	**-0.7**
AKASG	**Malin Array Be**	**16.34**	**324**	Pn	**Pn**		**16 58 28.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=132,slow=12,SNR=9.7							
	comp=Z,2.0nm,0.7s							
AKASG	**Malin Array Be**	**16.34**	**324**	IAmb	IAmb		16 58 35.7	
	comp=Z,7.4nm,1.1s							
AKBB	**Malin Array Si**	**16.34**	**324**		**P**		**16 58 31.5**	**-0.5**
AKBB				IAmb	IAmb		16 58 35.8	
	comp=Z,21nm,1.1s							
AKBB	**Malin Array Si**	**16.34**	**324**	*i* P	**P**		**16 58 30.4**	**-1.6**
AKBB				pmax	pmax			
	comp=Z,15nm,1.1s							
AKBB	**Malin Array Si**	**16.34**	**324**	P	**Pn**		**16 58 28.3**	**-0.8**
KIEV	**Kiev**	**16.34**	**324**		**P**		**16 58 31.7**	**-0.4**
KIEV	**Kiev**	**16.34**	**324**	P	**P**		**16 58 31.7**	**-0.4**
KIEV				pmax	pmax			
	comp=Z,20nm,1.2s							
AK14	**Malin Array Si**	**16.35**	**323**	P	**Pn**		**16 58 28.8**	**-0.4**
AK13	**Malin Array Si**	**16.36**	**323**	P	**Pn**		**16 58 28.7**	**-0.6**
AK03	**Malin Array Si**	**16.36**	**324**	P	**Pn**		**16 58 28.8**	**-0.6**
MASF	**Masafi**	**16.36**	**139**	P	**P**		**16 58 31.8**	**-0.7**
MSFE	**Esma-Masafi**	**16.37**	**139**	P	**Pn**		**16 58 28.1**	**-1.7**
AK16	**Malin Array Si**	**16.37**	**323**	P	**Pn**		**16 58 29.0**	**-0.6**
AK04	**Malin Array Si**	**16.38**	**324**	P	**Pn**		**16 58 29.1**	**-0.5**
NAZ	**Nazwa, Dubai**	**16.43**	**141**	*i* P	**P**		**16 58 30.6**	**-2.6**
	SNR=6.6							
NAZ	**Nazwa, Dubai**	**16.43**	**141**	P	**P**		**16 58 35.0**	**+1.8**
	SNR=8.6							
AJN	**Ajban**	**16.47**	**144**	P	**P**		**16 58 34.7**	**+1.1**
AK20	**Malin Array Si**	**16.47**	**323**	P	**Pn**		**16 58 29.5**	**-1.3**
AK21	**Malin Array Si**	**16.48**	**324**	P	**Pn**		**16 58 29.6**	**-1.3**
MDH	**Madha**	**16.49**	**139**	P	**P**		**16 58 31.6**	**-2.3**
MDH	**Madha**	**16.49**	**139**	P	**P**		**16 58 34.9**	**+1.0**
ASUD	**Al Ashush, Dub**	**16.57**	**143**	P	**Pn**		**16 58 31.6**	**-0.7**
ASUD	**Al Ashush, Dub**	**16.57**	**143**	P	**P**		**16 58 36.4**	**+1.6**
FAQ	**Al Faqa, Dubai**	**16.60**	**142**	P	**P**		**16 58 37.0**	**+2.0**
	SNR=6.2							
UOSS	**Minazif**	**16.73**	**140**	P	**Pn**		**16 58 33.0**	**-1.3**
UOSS	**Minazif**	**16.73**	**140**	P	**P**		**16 58 37.5**	**+0.9**
BURAR	**Bucovina Array**	**16.76**	**309**	⇑P	**P**		**16 58 38.9**	**+2.0**
BURAR	**Bucovina Array**	**16.76**	**309**	Pn	**P**		**16 58 34.1**	**-2.8**
BURAR	**Bucovina Array**	**16.76**	**309**	⇑P	**P**		**16 58 38.9**	**+2.0**
BUR08	**Bucovina Ar. S**	**16.78**	**309**	P	**P**		**16 58 36.6**	**-0.5**
HATD	**Hatta, Dubai**	**16.80**	**140**	*i* P	**P**		**16 58 35.2**	**-2.1**
	SNR=7.5							
HATD	**Hatta, Dubai**	**16.80**	**140**	P	**P**		**16 58 38.4**	**+1.1**
	SNR=5.3							
ASHO	**Ashiyiah**	**16.88**	**141**	*i* P	**P**		**16 58 36.6**	**-1.6**
	SNR=15							
ASHO	**Ashiyiah**	**16.88**	**141**	P	**P**		**16 58 39.0**	**+0.7**
	SNR=8.0							
MZR	**Muzera**	**17.21**	**151**	*i* P	**P**		**16 58 39.6**	**-2.2**
	SNR=11							
MZR	**Muzera**	**17.21**	**151**	P	**P**		**16 58 39.7**	**-2.2**
	SNR=11							
MI28	**MI28,Pidlybu**	**17.23**	**322**	P	**P**		**16 58 39.9**	**-2.0**
ALNE	**Al Ain**	**17.26**	**143**	P	**P**		**16 58 40.0**	**-2.4**
ALNE	**Al Ain**	**17.26**	**143**	P	**P**		**16 58 44.4**	**+2.0**
OBN	**Obninsk**	**17.52**	**345**	⇑*e*P	**Pn**		**16 58 42.8**	**-1.2**
OBN				pmax	pmax			
	comp=Z,13nm,0.9s							
OBN				MLR	MLR			
	comp=Z,713nm,19.0s							
SOHO	**SOHO**	**17.57**	**141**	*i* P	**P**		**16 58 43.7**	**-2.2**
	SNR=10							
SOHO	**SOHO**	**17.57**	**141**	P	**P**		**16 58 46.5**	**+0.6**
MOS	**Moscow**	**17.92**	**347**	*e*P	**P**		**16 58 49.0**	**-0.4**
MOS				pmax	pmax			
	comp=Z,62nm,1.2s							
MDVR	**Moldovita**	**18.12**	**298**	⇓P	**P**		**16 58 55.9**	**+4.0**
UMZA	**Um Al Zommool**	**18.15**	**147**	P	**P**		**16 58 54.9**	**+2.6**
BRIU	**Brid**	**18.40**	**309**	P	**Pn**		**16 58 55.5**	**+0.6**
RNPP9	**Sopachiv**	**18.41**	**321**	P	**Pn**		**16 58 55.5**	**+0.6**
HOQ	**Hoqain**	**18.42**	**140**	P	**Pn**		**16 58 56.8**	**+1.5**
	SNR=6.6							
HOLU	**Holmets**	**18.87**	**309**	P	**Pn**		**16 58 59.9**	**-0.6**
BIDO	**Bidbid**	**18.89**	**138**	P	**Pn**		**16 59 02.4**	**+1.4**
	SNR=9.6							
BSY	**Bisya**	**19.07**	**141**	P	**Pn**		**16 59 02.6**	**-0.6**
	SNR=7.4							
SMDO	**Samad**	**19.23**	**139**	P	**Pn**		**16 59 05.1**	**-0.1**
	SNR=12							
CHGR	**Chuyangaron**	**19.32**	**82**	P	**Pn**		**16 59 06.2**	**0.0**
CHGR				IAmb	IAmb		16 59 13.3	
	comp=Z,30nm,0.9s							
CHGR	**Chuyangaron**	**19.32**	**82**	P	**Pn**		**16 59 06.2**	**0.0**
CHGR				pmax	pmax			
	comp=Z,30nm,0.9s							
WSAR	**Wadi Sarin**	**19.39**	**137**	P	**Pn**		**16 59 08.0**	**+1.0**
MNK	**Minsk**	**19.64**	**330**	*i* P	**Pn**		**16 59 10.3**	**+0.6**
	comp=E,18nm,1.0s							
MNK				*i* P	**Pn**		**16 59 10.3**	**+0.6**
	comp=N,34nm,0.9s							
MNK				*i* P	**Pn**		**16 59 10.3**	**+0.6**
	comp=Z,20nm,0.8s,baz=138							
MNK				*i* PP	**PnPn**		**16 59 25.3**	**+2.2**
MNK				*i* PPP	PPP		16 59 33.1	
MNK				*i* S	**Sn**		**17 02 52.7**	**+2.7**
MNK				*i* SS	**SnSn**		**17 03 09.4**	**+5.3**
MNK				*i* SSS	SSS		17 03 22.4	
MNK				*i* LQ	LQ		17 05 06.3	
MNK				*i* LR	LR		17 07 26.1	
MNK				*i* LRM	MLR		17 08 25.0	
	comp=N,770nm,18.8s							
MNK				*i* LRM	MLR		17 08 45.9	
	comp=E,860nm,23.7s							
MNK				*i* LRM	MLR		17 08 58.6	
	comp=Z,277nm,11.5s							
MNK	**Minsk**	**19.64**	**330**	*i* P	**Pn**		**16 59 10.3**	**+0.6**
MNK				*i* S	**Sn**		**17 02 52.7**	**+2.7**
MNK				pmax	pmax			
	comp=E,18nm,1.0s							
MNK				pmax	pmax			
	comp=Z,20nm,0.8s							
MNK				pmax	pmax			
	comp=N,34nm,0.9s							
MNK				MLR	MLR			
	comp=N,770nm,19.0s							
MNK				MLR	MLR			
	comp=E,860nm,24.0s							
MNK				MLR	MLR			
	comp=Z,277nm,11.0s							
JMDO	**Jabal Madar**	**19.83**	**140**	P	**Pn**		**16 59 11.8**	**-0.5**
	SNR=5.5							
WBK	**Wadi Bani Khal**	**20.08**	**138**	P	Pn		16 59 15.3	0.0
KBL	**Kabul**	**20.14**	**94**	P	Pn		16 59 18.1	+2.0
	SNR=5.5							
ARTI	**Arti**	**20.22**	**23**	P	Pn		16 59 14.3	-2.4
	comp=Z,7.0nm,0.5s,baz=224,slow=5.6,SNR=18							
	comp=Z,7.0nm,0.5s							
ARTI	**Arti**	**20.22**	**23**	P	Pn		16 59 15.1	-1.6
ARTI	**Arti**	**20.22**	**23***c*	*i* P	Pn		16 59 14.6	-2.1
ARTI							16 59 29.5	
ARTI				S	Sn		17 03 01.1	-3.1
ARTI				pmax	pmax			
	comp=Z,9.0nm,0.8s							
KK31	**Karatay Array**	**20.25**	**68**	P	Pn		16 59 15.1	-2.1
KK31				IAmb	IAmb		16 59 23.9	
	comp=Z,20nm,0.8s							
KK31	**Karatay Array**	**20.25**	**68**	P	Pn		16 59 15.1	-2.1
KK31				pmax	pmax			
	comp=Z,20nm,0.9s							
KKAR	**Karatay Array**	**20.25**	**68**	P	Pn		16 59 15.1	-2.1
KKAR	**Karatay Array**	**20.25**	**

MAKZ Makanchi 28.64 61 P 17 00 37.6 +1.3
MAKZ IAmb IAmb 17 00 38.5
comp=Z,5.2nm,0.7s
MAKZ Makanchi 28.64 61 P **P 17 00 37.7 +1.3**
MAKZ pmax pmax
comp=Z,5.0nm,0.7s
MK31 Makanchi Array 28.85 61 *ce*P **P 17 00 38.8 +0.5**
MKAR Makanchi Array 28.85 61 P **P 17 00 39.3 +1.0**
comp=Z,4.2nm,0.7s,baz=262,slow=8.1,SNR=23
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 28.85 61 P 17 00 39.5 +1.2
MKAR Makanchi Array 28.85 61 *ce*P **P 17 00 38.5 +0.2**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
HFS Hagfors 29.11 328 P **P 17 00 40.6 +0.2**
comp=Z,11nm,1.2s,baz=126,slow=11,SNR=2.3
comp=Z,11nm,1.2s
ZAA0 Zalesovo Array 31.47 47 P **P 17 01 01.8 +0.5**
ZAA0 IAmb IAmb 17 01 09.0
comp=Z,1.9nm,0.7s
ZALV Zalesovo Beam 31.47 47 P 17 01 01.3 0.0
comp=Z,2.1nm,0.4s,baz=260,slow=9.5,SNR=18
comp=Z,2.1nm,0.4s
DGZ Jazzator, Alta 32.46 56 *i* P **P 17 01 11.2 +1.0**
DGZ pmax pmax
comp=Z,6.0nm,1.0s
WMQ Urumqi 32.74 67 *e*P **P 17 01 14.9 +2.2**
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ LR LR
comp=Z,800nm,22.1s
EKA Eskdalemuir Ar 35.85 314 P **P 17 01 38.8 -0.6**
comp=Z,2.1nm,0.7s,baz=106,slow=7.2,SNR=5.3
comp=Z,2.1nm,0.7s
ESDC Sonseca Array 37.26 288 P **P 17 01 50.8 -0.8**
comp=Z,1.1nm,0.7s,baz=68,slow=8.3,SNR=11
comp=Z,1.1nm,0.7s
KNGR Kungurtug, Tuv 38.95 54 *i* P **P 17 02 07.3 +1.4**
KNGR pmax pmax
comp=Z,6.0nm,1.0s
MOY Mondy 41.07 52 *e*P **P 17 02 25.7 +2.2**
GTA2 Gaotai 42.45 71 *e*P **P 17 02 37.0 +2.1**
GTA2 PP **PP 17 04 15.1 +2.0**
GTA2 pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 45.07 57 P **P 17 02 55.8 -0.1**
comp=Z,0.6nm,0.7s,baz=286,slow=9.0,SNR=4.8
comp=Z,0.6nm,0.7s
TORD Torodi Ar. Bea 45.44 248 P **P 17 03 00.5 +1.5**
comp=Z,0.4nm,0.6s,baz=38,slow=5.4,SNR=3.3
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 45.44 248 IAmb IAmb 17 03 25.1
comp=Z,3.3nm,0.8s
ULN Ulaanbaatar 45.50 57 P **P 17 02 59.7 +0.3**
ULN IAmb IAmb 17 03 02.7
comp=Z,5.5nm,0.9s
ULN Ulaanbaatar 45.50 57 *ce*P **P 17 03 00.2 +0.9**
ULN pmax pmax
comp=Z,7.0nm,1.0s
LZH Lanzhou 46.62 74 *e*P P 17 03 11.6 +3.3
LZH pP sP 17 03 18.1 +4.4
LZH pmax pmax
comp=Z,19nm,1.5s
PZH PanZhiHua 49.08 86 P **P 17 03 28.9 +1.4**
HHC Hu-ho-hao-te 50.58 65 *e*P **P 17 03 39.4 +0.7**
HHC pmax pmax
comp=Z,3.0nm,0.5s
HHC pmax pmax
comp=Z,290nm,5.5s
CHTO Chiang Mai 50.91 97 P **P 17 03 41.7 +0.3**
CMAR Chiang Mai Arr 51.11 97 P **P 17 03 42.5 -0.4**
comp=Z,1.9nm,0.8s,baz=294,slow=7.7,SNR=15
comp=Z,1.9nm,0.8s
XAN Xi'an 51.25 74 P P 17 03 48.8 +5.0
XAN pmax pmax
comp=Z,9.0nm,1.1s
TIXI Tiksi 52.32 23 *ce*P **P 17 03 52.3 +1.2**
TIXI pmax pmax
comp=Z,6.0nm,1.7s
HNS HongShan 54.15 68 ⇑P **P 17 04 08.0 +2.9**
HNS pmax pmax
comp=Z,6.0nm,1.4s
YAK Yakutsk 54.79 35 *i* P **P 17 04 11.3 +2.0**
YAK pmax pmax
comp=Z,3.0nm,0.9s
ZEA Zeya 56.20 45 *e*P P 17 04 28.9 +9.3
NJ2 Nanjing 59.59 72 *e*P **P 17 04 42.3 -1.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
KLR Kul'dur 60.55 49 *i* P **P 17 04 51.7 +1.6**
KLR pmax pmax
comp=Z,2.0nm,1.0s
KSRS Korea Array 63.52 62 P **P 17 05 10.6 +0.3**
comp=Z,2.0nm,0.7s,baz=293,slow=7.2,SNR=7.6
comp=Z,2.0nm,0.7s
SEY Seymchan 63.91 29 *ce*P **P 17 05 12.7 +0.3**
SEY pmax pmax
comp=Z,7.0nm,1.3s
MA2 Magadan 65.14 33 *ce*P **P 17 05 23.1 +2.6**
MA2 pmax pmax
comp=Z,5.0nm,1.7s
BILL Bilibino 65.31 21 *ce*P **P 17 05 22.7 +1.2**
BILL pmax pmax
comp=Z,4.0nm,1.7s
ILON Igloolik, Nuna 65.54 342 P **P 17 05 22.7 -0.2**
SCHQ Schefferville 70.13 325 P **P 17 05 51.4 -0.7**
comp=Z,2.0nm,0.8s,baz=22,slow=5.4,SNR=2.6
comp=Z,2.0nm,0.8s
SCHQ Schefferville 70.13 325 P **P 17 05 51.8 -0.4**
C36M Paulatuk 72.21 356 P **P 17 06 03.3 -1.1**
C36M IAmb IAmb 17 06 13.1
comp=Z,3.5nm,1.1s
E22K Anaktuvuk Pass 73.06 6 P **P 17 06 08.8 -0.8**
E22K IAmb IAmb 17 06 14.7
comp=Z,3.3nm,1.1s
INK Inuvik 73.58 359 P **P 17 06 12.0 -0.5**
INK IAmb IAmb 17 06 48.6
comp=Z,4.0nm,1.4s
INK Inuvik 73.58 359 P **P 17 06 12.0 -0.5**
INK pmax pmax
comp=Z,4.0nm,1.5s
G19K Purcell Mounta 74.44 9 IAmb IAmb 17 06 23.7
comp=Z,5.1nm,0.9s
F31M Tsiigehtchic 74.45 359 P **P 17 06 17.0 -0.7**
IMAR Indian Mountai 74.97 8 P **P 17 06 20.5 -0.3**
I30M Mount Dempster 76.68 0 IAmb IAmb 17 06 34.9
comp=Z,4.0nm,0.8s
ILAR Eielson Array 76.75 5 P **P 17 06 31.1 +0.1**
comp=Z,0.6nm,0.9s,baz=321,slow=3.4,SNR=6.3
comp=Z,0.6nm,0.9s
ILAR Eielson Array 76.75 5 P **P 17 06 30.9 0.0**
YKA Yellowknife Ar 78.02 350 P **P 17 06 37.5 -0.6**
comp=Z,0.5nm,0.9s,baz=8.2,slow=5.9,SNR=6.7
comp=Z,0.5nm,0.9s
BCAR Beaver Creek A 78.73 3 P **P 17 06 42.3 +0.2**
SKT Skwentna 79.11 8 P **P 17 06 44.1 0.0**
GHO Glory Hole Cre 79.56 6 P **P 17 06 46.5 -0.2**
O30N Mendenhall 81.15 0 P **P 17 06 54.7 -0.5**
O30N IAmb IAmb 17 07 21.9
comp=Z,2.2nm,0.9s
NVL N'lazarevskaya 111.39 191 *i* PKIKP **PKiKP 17 13 12.8 0.0**
NVL *e* 17 13 53.4
NVL ePPP PPP 17 16 14.1
NVL *e* 17 20 25.0
NVL eSS SS 17 29 29.1 +1.5
NVL eSSS SSS 17 33 38.2
NVL pmax pmax
comp=Z,15nm,1.6s
NVL MLR MLR
comp=Z,588nm,19.0s

AFAD ***23*** *16:56:20.8, 38.47N×44.49E, h7km±2km, MW4.3*
AZER ***23*** *16:56:20.3, 38.43N×44.51E, h25km, ml4.2*
IDC ***23*** *16:56:21.5±0.9, 38.39N×44.38E, h0km, mb4.0/15, mbtmp3.9/19, ML3.5/4, Error ellipse: s-maj=16.3km s-min=11.9km az=155.0*
NSSP ***23*** *16:56:21.6, 38.48N×44.50E, h10km, Ms4.1*
TEH ***23*** *16:56:21.3, 38.46N×44.47E, h6km±68km, ML4.0, Presumed earthquake*
ISK ***23*** *16:56:22.6, 38.37N×44.46E, h6km, ML4.0/14*
NEIC ***23*** *16:56:24.3±1.3, 38.51N±0.04×44.32E±0.04, h10km±1km, mb4.3/22, Error ellipse: s-maj=8.4km s-min=2.9km az=217.0*

ISC 23 16:56:21.6±1.1, 38.45N±0.02×44.47E±0.02, h1km±8km, n113, σ1°19/143, mb4.2/23, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**299**	P	**Pg**	**16 56 29.7**	**-0.2**
OZAP				S	**Sg**	**16 56 35.9**	**+0.4**
TVAN	**Van**	**0.84**	**276**	P	**Pg**	**16 56 36.5**	**-1.2**
TVAN				S	**Sb**	**16 56 49.6**	**-1.6**
TVAN	**Van**	**0.84**	**276**	Pg	**Pg**	**16 56 36.5**	**-1.2**
VANB	**Van**	**0.86**	**280**	Pg	**Pb**	**16 56 38.9**	**-0.6**
VANB				Sg	**Sb**	**16 56 51.6**	**0.0**
YOVA	**Hakkari_Yksek**	**0.87**	**190**	P	**Pg**	**16 56 38.2**	**-0.2**
YOVA				S	**Sb**	**16 56 51.3**	**-0.7**
YOVA	**Hakkari_Yksek**	**0.87**	**190**	Pg	**Pg**	**16 56 38.2**	**-0.2**
VMUR	**Van-Muradiye**	**0.89**	**308**	P	**Pg**	**16 56 37.7**	**-1.0**
VMUR				S	**Sb**	**16 56 51.0**	**-1.4**
VMUR	**Van-Muradiye**	**0.89**	**308**	Pg	**Pg**	**16 56 37.6**	**-1.0**
ISHB	**Shabestar**	**0.91**	**100**	Pg	**Pg**	**16 56 38.2**	**-1.0**
MAKU	**Maku**	**0.92**	**10**	Pg	**Pg**	**16 56 38.7**	**-0.5**
IMRD	**Marand**	**1.00**	**74**	Pg	**Pg**	**16 56 40.0**	**-0.7**
ERCV	**ERCIS-VAN**	**1.05**	**303**	Pn	**Pn**	**16 56 43.7**	**-0.1**
ERCV	**ERCIS-VAN**	**1.05**	**303**	P	**Pg**	**16 56 41.5**	**-0.3**
ERCV				S	**Sn**	**16 56 58.4**	**-0.9**
NAX	**Nakhchivan**	**1.08**	**48**	P	**Pg**	**16 56 41.9**	**-0.3**
NAX				S	**Sn**	**16 56 58.0**	**-1.6**
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**16 56 41.8**	**-0.5**
HAKT				S	**Sn**	**16 56 58.5**	**-1.4**
HAKT	**HAKKARI**	**1.08**	**214**	Pg	**Pg**	**16 56 41.8**	**-0.5**
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**16 56 41.7**	**-0.6**
HAKT				S	**Sn**	**16 56 58.5**	**-1.4**
GEVA	**Gevas**	**1.12**	**263**	Pn	**Pg**	**16 56 41.3**	**-1.8**
GEVA	**Gevas**	**1.12**	**263**	P	**Pg**	**16 56 41.5**	**-1.6**
GEVA				S	**Sb**	**16 56 58.2**	**-0.9**
AKDM	**Akdamar-Van**	**1.18**	**265**	Pg	**Pg**	**16 56 42.7**	**-1.6**
DYDN	**Diyadin**	**1.25**	**331**	P	**Pn**	**16 56 45.8**	**-0.8**
DYDN				S	**Sg**	**16 57 01.0**	**-0.9**
DYDN	**Diyadin**	**1.25**	**331**	Pg	**Pn**	**16 56 45.7**	**-0.8**
SBZ	**Shahbuz**	**1.27**	**41**	P	**Pn**	**16 56 45.5**	**-1.1**
SBZ				S	**Sn**	**16 57 05.2**	**+0.8**
ORD	**Ordubad**	**1.28**	**68**	P	**Pn**	**16 56 45.6**	**-1.2**
ORD				S	**Sn**	**16 57 04.0**	**-0.8**
HYR	**Heyderabad**	**1.30**	**13**	P	**Pg**	**16 56 46.7**	**+0.1**
HYR				S	**Sn**	**16 57 05.1**	**-0.1**
CUKT	**Cukurca**	**1.38**	**210**	Pn	**Pg**	**16 56 48.2**	**+0.1**
CUKT				Sn	**Sn**	**16 57 06.9**	**-0.3**
CUKT	**Cukurca**	**1.38**	**210**	Pg	**Pn**	**16 56 47.6**	**-0.6**
ADCV	**BITLIS_Adilcev**	**1.42**	**285**	P	**Pb**	**16 56 48.1**	**-0.8**
ADCV				S	**Sg**	**16 57 10.0**	**+2.9**
IAZR	**Azarshahr**	**1.42**	**122**	Pg	**Pb**	**16 56 48.7**	**-0.3**
VAYK	**Vayk**	**1.45**	**31**	*i* P	**Pn**	**16 56 48.4**	**-0.7**
VAYK				*i* S	**Sg**	**16 57 09.2**	**+1.1**
IGDI	**IGDIR**	**1.45**	**348**	P	**Pg**	**16 56 49.1**	**-0.3**
IGDI				S	**Sg**	**16 57 09.6**	**+1.4**
IGDI	**IGDIR**	**1.45**	**348**	P	**Pg**	**16 56 49.8**	**+0.4**
IGDI				S	**Sg**	**16 57 10.9**	**+2.7**
ALVK	**Alvank**	**1.55**	**71**	*e*P	**Pn**	**16 56 49.6**	**-0.8**
ALVK				*e*S	**Sn**	**16 57 09.9**	**-1.3**
PERV	**Siirt/Pervari-**	**1.60**	**252**	P	**Pb**	**16 56 51.6**	**-0.5**
PERV				S	**Sg**	**16 57 17.3**	**+4.2**
AGRB	**Hanur-Agry**	**1.61**	**315**	Pn	**Pb**	**16 56 51.6**	**-0.7**
AGRB				Sn	**Sg**	**16 57 15.3**	**+1.9**
AGRB	**Hanur-Agry**	**1.61**	**315**	Pg	**Pb**	**16 56 51.8**	**-0.5**
DORK	**Agr/Tutak/Do**	**1.62**	**306**	P	**Pn**	**16 56 51.0**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.65**	**295**	Pn	**Pg**	**16 56 52.9**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.67**	**324**	P	**Pg**	**16 56 53.1**	**-0.6**
KOTA				S	**Sb**	**16 57 14.1**	**-0.9**
GNI	**Garni**	**1.71**	**7**	Pn	**Pg**	**16 56 54.1**	**-0.3**
	110nm,0.3s,baz=337,slow=12,SNR=6.3						
GNI				Lg	Lg	16 57 20.2	
	144nm,0.3s,baz=3.2,slow=18,SNR=4.4						
GNI	**Garni**	**1.71**	**7**		**Pb**	**16 56 53.7**	**-0.3**
GNI	**Garni**	**1.71**	**7**	Pn	**Pg**	**16 56 55.3**	**+0.9**
GNI				Sn	**Sg**	**16 57 18.9**	**+2.3**
GNI	**Garni**	**1.71**	**7**	*e*P	**Pg**	**16 56 54.3**	**-0.1**
GNI				*e*S	**Sg**	**16 57 19.7**	**+3.2**
METS	**Metsamor**	**1.72**	**350**	*e*P	**Pb**	**16 56 53.8**	**-0.4**
METS				*e*S	**Sg**	**16 57 17.2**	**+0.1**
VNNZ	**Vanand**	**1.73**	**343**	*e*P	**Pb**	**16 56 53.9**	**-0.3**
VNNZ				*e*S	**Sg**	**16 57 17.3**	**+0.2**
EGVZ	**Egvard**	**1.79**	**64**	*e*P	**Pb**	**16 56 54.2**	**-1.2**
EGVZ				*e*S	**Sb**	**16 57 17.7**	**-0.7**
ARUZ	**Aruch**	**1.85**	**351**	*e*P	**Pb**	**16 56 55.4**	**-1.1**
ARUZ				*e*S	**Sb**	**16 57 19.7**	**-0.5**
KAPZ	**Kaputan**	**1.88**	**5**	*e*P	**Pb**	**16 56 56.6**	**-0.3**
KAPZ				*e*S	**Sg**	**16 57 22.1**	**+0.1**
GURO	**Guroymak-BITLI**	**1.92**	**274**	Pn	**Pn**	**16 56 55.6**	**0.0**
GURO	**Guroymak-BITLI**	**1.92**	**274**	Pn	**Pb**	**16 56 56.7**	**-0.8**
GURO				Sn	**Sb**	**16 57 21.8**	**-0.2**
AMBZ	**Amberd**	**1.94**	**355**	*e*P	**Pb**	**16 56 57.7**	**-0.3**
AMBZ				*e*S	**Sg**	**16 57 23.9**	**-0.1**
MAHB	**Mahabad**	**1.94**	**149**	Pn	**Pb**	**16 56 57.6**	**-0.4**
AYRK	**Ayrk**	**1.95**	**31**	*e*P	**Pg**	**16 56 58.5**	**-0.5**
AYRK				*e*S	**Sg**	**16 57 25.1**	**+0.8**
IHRS	**Heris**	**2.02**	**93**	Pn	**Pb**	**16 56 58.1**	**-1.3**
KARS	**Kars**	**2.43**	**334**	Pn	**Pb**	**16 57 04.8**	**-1.4**
VRTB	**Varto-Mus**	**2.46**	**288**	Pn	**Pb**	**16 57 04.2**	**-2.6**
LSVT	**Lusahovit**	**2.52**	**12**	*e*P	**Pb**	**16 57 07.2**	**-0.6**
LSVT				*e*S	**Sb**	**16 57 40.2**	**+0.8**
SVAN	**Silvan-Diyarba**	**2.59**	**264**	Pn	**Pn**	**16 57 05.7**	**+0.9**
SRTK	**Saratovka**	**2.62**	**357**	*e*P	**Pb**	**16 57 08.0**	**-1.5**
SRTK				*e*S	**Sb**	**16 57 41.8**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.67**	**323**	Pn	**Pb**	**16 57 08.3**	**-2.1**
KARO	**Karliova-Bingo**	**2.81**	**289**	Pn	**Pn**	**16 57 08.9**	**+1.0**
BNGB	**Bingl**	**3.02**	**281**	Pn	**Pn**	**16 57 12.3**	**+1.6**
MARD	**Mardin**	**3.14**	**250**	Pn	**Pn**	**16 57 13.2**	**+0.9**
YEDI	**Yedisu-Bingol**	**3.22**	**289**	Pn	**Pn**	**16 57 15.3**	**+1.8**
TBLG	**Delisi**	**3.28**	**3**	Pn	**Pb**	**16 57 17.4**	**-3.3**
DYBB	**Diyarbakir**	**3.45**	**263**	Pn	**Pn**	**16 57 17.4**	**+0.8**
BAYT	**Aydıntepe-Bayb**	**3.88**	**301**	Pn	**Pn**	**16 57 24.8**	**+2.2**
CHOM	**Cayeli-Rize**	**3.89**	**314**	Pn	**Pn**	**16 57 25.6**	**+2.9**
SVRC	**Sivrice-ELAZID**	**4.06**	**271**	Pn	**Pn**	**16 57 26.3**	**+1.2**
BRTR	**Keskin Array B**	**8.52**	**282**	Pn	**Pn**	**16 58 27.9**	**+1.6**
	0.1nm,0.3s,baz=110,slow=9.4,SNR=3.9						
	1.0nm,0.8s						
MMAI	**Mount Meron Ar**	**9.15**	**236**	Pn	**Pn**	**16 58 35.1**	**+0.2**
	0.9nm,0.3s,baz=70,slow=14,SNR=1.4						
	1.4nm,0.5s						
AKTO	**Aktyubinsk**	**15.37**	**34**	Pn	**Pn**	**16 59 59.6**	**+0.1**
	0.6nm,0.3s,baz=212,slow=8.7,SNR=5.5						
	1.7nm,0.3s						
AB31	**Akbulak array**	**15.50**	**41**	Pn	**P**	**17 00 04.3**	**-1.6**
ABKAR	**Akbulak array**	**15.50**	**41**	Pn	**P**	**17 00 03.7**	**-2.2**
AKASG	**Malin Array Be**	**16.33**	**323**	Pn	**Pn**	**17 00 12.1**	**0.0**
	0.3nm,0.3s,baz=135,slow=11,SNR=6.5						
	0.5nm,0.5s						
AKBB	**Malin Array Si**	**16.33**	**323**		**P**	**17 00 13.7**	**-1.4**
KIEV	**Kiev**	**16.33**	**323**		**P**	**17 00 13.7**	**-1.5**
BURAR	**Bucovina Array**	**16.76**	**309**	P	**P**	**17 00 21.4**	**+1.4**
BUR08	**Bucovina Ar. S**	**16.78**	**309**	P	**P**	**17 00 21.3**	**+1.0**
ARTI	**Arti**	**20.19**	**23**	P	Pn	17 00 57.6	-1.9
	7.0nm,0.8s,baz=217,slow=8.7,SNR=4.0						
	7.0nm,0.8s						
ARTI	**Arti**	**20.19**	**23**	P	Pn	17 00 59.2	-0.2
ARTI					IAmb	IAmb	17 01 01.2
	comp=Z,15nm,1.0s						
KK31	**Karatay Array**	**20.23**	**68**	P	Pn	17 00 59.8	-0.2
KK31					IAmb	IAmb	17 01 06.6
	comp=Z,7.9nm,0.8s						
KKAR	**Karatay Array**	**20.23**	**68**		Pn	17 01 00.0	+0.1
TIP	**Timpagrande**	**21.58**	**281**	P	**P**	**17 01 13.1**	**+0.2**
TIP					IAmb	IAmb	17 01 42.7
	comp=Z,11nm,1.1s						
BVAR	**Borovoye Array**	**23.06**	**42**	P	**P**	**17 01 30.1**	**+1.8**
	comp=Z,1.6nm,0.6s,baz=252,slow=14,SNR=2.3						
	comp=Z,1.6nm,0.6s						
GERES	**GERESS Array B**	**24.41**	**305**	P	**P**	**17 01 41.5**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=73,slow=11,SNR=1.7						
	comp=Z,1.0nm,0.6s						
KDJ	**Kajisay**	**25.13**	**71**	P	**P**	**17 01 49.4**	**+1.0**
KDJ					IAmb	IAmb	17 01 56.1
	comp=Z,9.4nm,0.9s						
CTI	**Castel Tesino**	**25.32**	**298**	P	**P**	**17 01 49.9**	**0.0**
CTI					IAmb	IAmb	17 02 01.2
	comp=Z,3.1nm,0.8s						
FINES	**FINESS Array B**	**25.70**	**340**	P	**P**	**17 01 53.4**	**+0.4**
	comp=Z,1.0nm,1.1s,baz=174,slow=7.7,SNR=4.4						
	comp=Z,1.0nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**26.33**	**299**	P	**P**	**17 02 00.0**	**+0.7**
FUORN					IAmb	IAmb	17 02 00.7
	comp=Z,6.9nm,1.2s						
KURBB	**Kurchatov Arra**	**26.91**	**52**	P	**P**	**17 02 04.9**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=263,slow=9.2,SNR=6.8						
	comp=Z,3.3nm,0.7s						
KURK	**Kurchatov**	**26.98**	**52**	P	**P**	**17 02 06.1**	**+1.3**
KURK					IAmb	IAmb	17 02 09.7
	comp=Z,4.1nm,0.8s						
VSL	**Villasalto**	**27.20**	**283**	P	**P**	**17 02 07.7**	**+0.8**
KEST	**Kesra**	**28.05**	**275**	P	**P**	**17 02 15.6**	**+1.0**
	comp=Z,4.8nm,0.9s,baz=11,slow=3.5,SNR=3.7						
	comp=Z,4.8nm,0.9s						
KEST	**Kesra**	**28.05**	**275**	IAmb	IAmb	17 02 25.5	
	comp=Z,9.0nm,1.1s						
SENIN	**Lac Senin/Sane**	**28.36**	**298**	P	**P**	**17 02 16.3**	**-1.1**
SENIN					IAmb	IAmb	17 02 47.8
	comp=Z,10nm,1.4s						
MAKZ	**Makanchi**	**28.61**	**61**	P	**P**	**17 02 19.2**	**-0.2**
MAKZ					IAmb	IAmb	17 02 28.2
	comp=Z,3.8nm,1.3s						
BNI	**Bardonecchia**	**28.76**	**295**	P	**P**	**17 02 20.6**	**-0.3**
MKAR	**Makanchi Array**	**28.82**	**61**	P	**P**	**17 02 22.9**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=267,slow=6.3,SNR=3.9						
	comp=Z,1.5nm,0.7s						
HFS	**Hagfors**	**29.10**	**328**	P	**P**	**17 02 24.6**	**+1.0**
	comp=Z,4.3nm,0.9s,baz=156,slow=12,SNR=1.7						
	comp=Z,4.3nm,0.9s						
ZALV	**Zalesovo Beam**	**31.43**	**47**	P	**P**	**17 02 44.6**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=262,slow=9.6,SNR=2.4						
	comp=Z,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**31.43**	**47**	P	**P**	**17 02 45.1**	**+0.8**
EKA	**Eskdalemuir Ar**	**35.85**	**314**	P	**P**	**17 03 22.0**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=110,slow=7.3,SNR=4.5						
	comp=Z,1.3nm,0.6s						
ESDC	**Sonseca Array**	**37.27**	**288**	P	**P**	**17 03 33.5**	**-1.6**
	comp=Z,2.2nm,0.9s,baz=66,slow=8.6,SNR=10						
	comp=Z,2.2nm,0.9s						
ESDC	**Sonseca Array**	**37.27**	**288**	P	**P**	**17 03 34.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**51.10**	**97**	P	**P**	**17 05 26.1**	**0.0**
	comp=Z,0.8nm,0.7s,baz=300,slow=8.2,SNR=6.2						
	comp=Z,0.8nm,0.7s						
KSRS	**Korea Array**	**63.49**	**62**	P	**P**	**17 06 54.5**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=292,slow=7.7,SNR=2.3						
	comp=Z,1.3nm,0.9s						
ILON	**Igloolik, Nuna**	**65.52**	**342**	P	**P**	**17 07 06.5**	**+0.4**
ILON					IAmb	IAmb	17 07 14.8
	comp=Z,2.3nm,1.0s						
SCHQ	**Schefferville**	**70.12**	**325**	P	**P**	**17 07 36.2**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=72,slow=9.6,SNR=2.0						
	comp=Z,1.8nm,0.9s						
B20K	**Meade River**	**70.70**	**8**	P	**P**	**17 07 39.8**	**+1.1**
C27K	**Jago River**	**72.07**	**3**	P	**P**	**17 07 47.8**	**+0.8**
I28M	**Miner Creek**	**76.38**	**2**	P	**P**	**17 08 12.6**	**+0.3**
I28M					IAmb	IAmb	17 08 34.4
	comp=Z,5.7nm,1.4s						
YKA	**Yellowknife Ar**	**78.00**	**350**	P	**P**	**17 08 21.4**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=9.4,slow=5.7,SNR=3.2						
	comp=Z,0.2nm,0.6s						

AFAD ***23*** *16:59:03.7, 38.44N×44.45E, h7km±5km, ML2.4*
ISK ***23*** *16:59:05.9, 38.43N×44.41E, h19km, ML2.5/4*
ISC 23 16:59:03.4±1.5, 38.45N±0.03×44.49E±0.06, h16km±10km, n12, σ0°84/22, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**298**	P	**Pb**	**16 59 12.7**	**-0.3**
OZAP				S	**Sb**	**16 59 19.5**	**0.0**
OZAP				IAML		16 59 26.0	
	comp=N,832nm,0.7s						
TVAN	**Van**	**0.85**	**275**	P	**Pg**	**16 59 18.8**	**-1.2**
TVAN				S	**Sb**	**16 59 31.1**	**-0.1**
TVAN				IAML		16 59 40.0	
	comp=E,156nm,0.4s						
TVAN				IAML		16 59 46.0	
	comp=N,155nm,0.4s						
VANB	**Van**	**0.87**	**280**	Pg	**Pn**	**16 59 21.6**	**+0.4**
VANB				Sg	**Sn**	**16 59 33.4**	**-0.3**
YOVA	**Hakkari_Yksek**	**0.88**	**190**	P	**Pb**	**16 59 20.6**	**+0.1**
YOVA				S	**Sn**	**16 59 33.3**	**-0.7**
YOVA				IAML		16 59 37.0	
	comp=E,126nm,0.5s						
YOVA				IAML		16 59 40.0	
	comp=N,154nm,0.6s						
VMUR	**Van-Muradiye**	**0.89**	**307**	P	**Pb**	**16 59 20.5**	**-0.2**
VMUR				S	**Sn**	**16 59 34.3**	**0.0**
VMUR				IAML		16 59 37.0	
	comp=E,133nm,0.5s						
VMUR				IAML		16 59 39.0	
	comp=N,156nm,0.4s						
GEVA	**Gevas**	**1.13**	**263**	P	**Pb**	**16 59 23.7**	**-1.1**
GEVA				S	**Sn**	**16 59 41.2**	**+1.1**
GEVA				IAML		16 59 46.0	
	comp=N,82nm,0.3s						
GEVA				IAML		16 59 49.0	
	comp=E,89nm,0.7s						
DYDN	**Diyadin**	**1.25**	**331**	P	**Pg**	**16 59 27.4**	**-0.3**
DYDN				S	**Sb**	**16 59 41.9**	**-0.9**
DYDN				IAML		16 59 54.0	
	comp=E,115nm,0.5s						
DYDN				IAML		16 59 56.0	
	comp=N,119nm,0.5s						
CUKT	**Cukurca**	**1.39**	**210**	Pn	**Pg**	**16 59 30.5**	**+0.2**
CUKT				Sn	**Sg**	**16 59 48.2**	**-0.2**
ADCV	**BITLIS_Adilcev**	**1.43**	**285**	P	**Pg**	**16 59 30.3**	**-0.6**
ADCV				S	**Sg**	**16 59 51.8**	**+2.3**
ADCV				IAML		16 59 56.0	
	comp=N,54nm,0.4s						
AGRB	**Hanur-Agry**	**1.62**	**314**	Pn	**Pg**	**16 59 34.0**	**-0.5**
AGRB				Sn	**Sb**	**16 59 54.1**	**+0.8**
GNI	**Garni**	**1.71**	**7**	Pn	**Pg**	**16 59 36.0**	**-0.2**
GURO	**Guroymak-BITLI**	**1.93**	**274**	Pn	**Pb**	**16 59 37.9**	**-0.4**

AZER ***23*** *17:00:37.2, 38.37N×44.50E, h13km, ml4.1*
AFAD ***23*** *17:00:37.1, 38.32N×44.62E, h11km±3km, MW3.9*
TIF ***23*** *17:00:39.8, 38.48N×44.49E, h2km±2km*
IDC ***23*** *17:00:41.6±1.1, 38.49N×44.30E, h0km, mb3.7/11, mbtmp3.7/16, ML3.7/4, Error ellipse: s-maj=18.6km s-min=13.5km az=172.0*
TEH ***23*** *17:00:41.0, 38.47N×44.51E, h6km±47km, ML3.9, Presumed earthquake*
ISK ***23*** *17:00:42.3, 38.43N×44.48E, h3km, ML4.0/20*
**ISC 23 17:00:41.3±1.1, 38.46N±0.02×44.50E±0.02, h1km±8km, n107, σ1°71/147, mb3.6/

AGRB	**Hanur-Agry**	**1.61**	**314**	Pn	**Pg**	**17 01 11.7**	**-0.5**
AGRB				Sn	**Sg**	**17 01 34.8**	**+1.6**
DORK	**Agr/Tutak/Do**	**1.62**	**305**	P	**Pn**	**17 01 09.8**	**-1.4**
DORK				S	**Sg**	**17 01 33.5**	**0.0**
MLAZ	**Malazgirt-MUS**	**1.66**	**295**	Pn	**Pg**	**17 01 13.3**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.67**	**324**	P	**Pb**	**17 01 11.4**	**-1.6**
KOTA				S	**Sg**	**17 01 37.3**	**+2.3**
GNI	**Garni**	**1.70**	**6**	Pn	**Pg**	**17 01 14.3**	**+0.5**
	111nm,0.3s,baz=315,slow=23,SNR=29						
GNI	**Garni**	**1.70**	**6**	Pn	**Pg**	**17 01 13.7**	**-0.1**
GNI				Sn	**Sg**	**17 01 37.7**	**+1.9**
GURO	**Guroymak-BITLI**	**1.93**	**273**	Pn	**Pb**	**17 01 16.9**	**-0.5**
GURO	**Guroymak-BITLI**	**1.93**	**273**	Pn	**Pb**	**17 01 17.4**	**0.0**
MAHB	**Mahabad**	**1.95**	**150**	Pn	**Pb**	**17 01 17.3**	**-0.3**
IHRS	**Heris**	**2.01**	**93**	Pn	**Pb**	**17 01 17.6**	**-1.0**
DIGO	**Kars**	**2.13**	**336**	P	**Pn**	**17 01 17.9**	**-0.4**
DIGO				S	**Sg**	**17 01 48.2**	**-1.6**
QRD	**Qoradiz**	**2.42**	**65**	P	**Pn**	**17 01 19.8**	**-2.1**
QRD				S	**Sn**	**17 01 50.9**	**-1.3**
KARS	**Kars**	**2.42**	**334**	Pn	**Pb**	**17 01 24.1**	**-1.7**
BOZK	**Kars-Merkez-Bo**	**2.43**	**332**	P	**Pb**	**17 01 24.7**	**-1.2**
GDB	**GEDABAY**	**2.46**	**23**	P	**Pn**	**17 01 21.4**	**-1.3**
GDB				S	**Sb**	**17 01 53.9**	**-3.2**
VRTB	**Varto-Mus**	**2.48**	**287**	Pn	**Pb**	**17 01 24.9**	**-1.7**
IHSH	**Hashtrud**	**2.48**	**117**	Pn	**Pb**	**17 01 25.0**	**-1.7**
ISRB	**Sarab**	**2.58**	**103**	Pn	**Pn**	**17 01 25.4**	**+1.0**
GANJ	**Ganja**	**2.60**	**32**	P	**Pn**	**17 01 23.4**	**-1.1**
GANJ				S	**Sb**	**17 01 58.4**	**-2.7**
AGDM	**Agdam**	**2.61**	**50**	P	**Pn**	**17 01 22.9**	**-1.8**
AGDM				S	**Sn**	**17 01 56.7**	**-0.3**
SVAN	**Silvan-Diyarba**	**2.61**	**264**	Pn	**Pb**	**17 01 26.8**	**-2.1**
SVAN	**Silvan-Diyarba**	**2.61**	**264**	Pn	**Pb**	**17 01 27.1**	**-1.8**
SENK	**Senkaya-Erzuru**	**2.67**	**322**	Pn	**Pb**	**17 01 28.2**	**-1.8**
QZX	**Qazax, Azerbai**	**2.68**	**14**	P	**Pn**	**17 01 24.9**	**-0.7**
QZX				S	**Sb**	**17 02 01.0**	**-2.4**
GRMI	**Germi**	**2.68**	**82**	Pn	**Pb**	**17 01 26.9**	**-3.3**
BLQ	**Beylaqan**	**2.69**	**61**	P	**Pn**	**17 01 23.9**	**-1.9**
BLQ				S	**Sn**	**17 01 59.3**	**+0.3**
BRDA	**Brd**	**2.75**	**48**	P	**Pn**	**17 01 25.2**	**-1.3**
BRDA				S	**Sb**	**17 02 02.6**	**-2.8**
KARO	**Karliova-Bingo**	**2.82**	**289**	Pn	**Pb**	**17 01 29.9**	**-2.6**
BGD	**Bogdanovka**	**2.88**	**346**	P	**Pg**	**17 01 35.1**	**-1.4**
YRD	**Yardimli**	**2.97**	**80**	P	**Pn**	**17 01 27.0**	**-2.6**
YRD				S	**Sn**	**17 02 05.7**	**-0.3**
LRK	**Lerik**	**3.02**	**85**	P	**Pn**	**17 01 27.6**	**-2.8**
LRK				S	**Sn**	**17 02 07.2**	**-0.1**
BNGB	**Bingl**	**3.03**	**281**	Pn	**Pb**	**17 01 32.8**	**-3.3**
AKH	**Akhalkalaki**	**3.04**	**346**	P	**Pg**	**17 01 37.6**	**-2.0**
MNGR	**Mingechevir, A**	**3.05**	**40**	P	**Pn**	**17 01 28.5**	**-2.2**
MNGR				S	**Sn**	**17 02 07.5**	**-0.3**
DGRG	**David-gareji**	**3.06**	**12**	P	**Pg**	**17 01 38.6**	**-1.3**
ZRD	**Zardab**	**3.07**	**53**	P	**Pn**	**17 01 28.5**	**-2.3**
ZRD				S	**Sb**	**17 02 09.8**	**-4.7**
TRLG	**Trialeti**	**3.09**	**355**	P	**Pb**	**17 01 36.7**	**-0.3**
VSHL	**Vashlovani**	**3.13**	**27**	P	**Pb**	**17 01 35.4**	**-2.3**
GLBA	**Clilabad**	**3.14**	**74**	P	**Pn**	**17 01 29.4**	**-2.4**
GLBA				S	**Sn**	**17 02 09.0**	**-1.0**
DDFL	**Dedoflistskaro**	**3.23**	**22**	P	**Pb**	**17 01 37.9**	**-1.5**
YEDI	**Yedisu-Bingol**	**3.23**	**289**	Pn	**Pn**	**17 01 35.3**	**+2.0**
TBLG	**Delisi**	**3.27**	**3**	Pn	**Pb**	**17 01 36.5**	**-3.6**
TBLG	**Delisi**	**3.27**	**3**	P	**Pg**	**17 01 42.7**	**-1.2**
LKRN	**Lenkeran, Azer**	**3.37**	**84**	P	**Pn**	**17 01 32.2**	**-2.7**
LKRN				S	**Sn**	**17 02 14.5**	**-1.1**
ASTR	**Astara**	**3.37**	**87**	P	**Pn**	**17 01 32.3**	**-2.7**
ASTR				S	**Sn**	**17 02 14.4**	**-1.3**
SEKA	**Sheki**	**3.44**	**36**	P	**Pn**	**17 01 34.8**	**-1.3**
SEKA				S	**Sn**	**17 02 19.1**	**+1.5**
DYBB	**Diyarbakir**	**3.47**	**263**	Pn	**Pn**	**17 01 38.7**	**+2.3**
ZKTA	**Zakatala**	**3.57**	**27**	P	**Pn**	**17 01 36.6**	**-1.2**
ZKTA				S	**Sn**	**17 02 21.8**	**+1.2**
QBL	**Gabala**	**3.58**	**45**	P	**Pn**	**17 01 36.2**	**-1.7**
QBL				S	**Sn**	**17 02 20.6**	**-0.2**
IML	**Ismayilli**	**3.68**	**50**	P	**Pn**	**17 01 37.7**	**-1.6**
IML				S	**Sn**	**17 02 23.6**	**+0.3**
ALIG	**Mtskhetisjvari**	**3.69**	**350**	P	**Pb**	**17 01 48.6**	**+1.2**
CHRG	**Chargali**	**3.88**	**5**	P	**Pn**	**17 01 45.1**	**+3.0**
ERZN	**Erzincan**	**3.88**	**288**	Pn	**Pn**	**17 01 45.2**	**+3.0**
BAYT	**Aydıntepe-Bayb**	**3.88**	**301**	Pn	Pb	17 01 45.6	-5.1
CHOM	**Cayeli-Rize**	**3.90**	**314**	Pn	Pb	17 01 45.6	-5.2
XNQ	**Khinaliq**	**3.90**	**45**	P	**Pn**	**17 01 41.1**	**-1.4**
XNQ				S	**Sn**	**17 02 28.6**	**-0.4**
PQL	**Pirkuli**	**3.93**	**52**	P	**Pn**	**17 01 41.0**	**-1.8**
PQL				S	**Sn**	**17 02 29.8**	**+0.2**
GBS	**Qobustan**	**4.01**	**58**	P	**Pn**	**17 01 42.2**	**-1.7**
GBS				S	**Sn**	**17 02 32.3**	**+0.6**
SVRC	**Sivrice-ELAZID**	**4.08**	**270**	Pn	**Pn**	**17 01 47.6**	**+2.7**
ATGJ	**Altiaghaj**	**4.18**	**54**	P	**Pn**	**17 01 44.6**	**-1.7**
ATGJ				S	**Sn**	**17 02 35.6**	**-0.3**
QSAR	**Qusar**	**4.20**	**42**	P	**Pn**	**17 01 45.0**	**-1.5**
QSAR				S	**Sn**	**17 02 36.2**	**0.0**
GARIG	**Gari**	**4.21**	**350**	P	Pb	17 01 51.1	-5.1
QUBA	**Quba, Azerbaij**	**4.22**	**46**	P	**Pn**	**17 01 45.8**	**-1.0**
QUBA				S	**Sn**	**17 02 36.6**	**0.0**
SHTL	**Shatili**	**4.22**	**7**	P	**Pb**	**17 01 56.3**	**0.0**
SIZA	**Siyzn**	**4.28**	**51**	P	**Pn**	**17 01 45.9**	**-1.8**
SIZA				S	**Sn**	**17 02 38.5**	**+0.2**
URFA	**Urfa**	**4.60**	**259**	Pn	**Pn**	**17 01 55.5**	**+3.5**
KBZ	**Khabaz**	**5.40**	**348**	Pn	**Pn**	**17 02 05.6**	**+2.8**
	1.4nm,0.9s,baz=149,slow=18,SNR=1.7						
BRTR	**Keskin Array B**	**8.54**	**282**	Pn	**Pn**	**17 02 46.3**	**+0.2**
	baz=108,slow=14,SNR=1.7						
MMAI	**Mount Meron Ar**	**9.17**	**236**	Pn	**Pn**	**17 02 55.4**	**+0.7**
	0.6nm,0.3s,baz=86,slow=10,SNR=1.3						
	0.3nm,0.3s						
BELG	**Belogornoye**	**14.10**	**8**	Pn	**Pn**	**17 04 03.5**	**+1.4**
	0.3nm,0.3s,baz=217,slow=1.6,SNR=4.1						
	5.3nm,0.8s						
AKTO	**Aktyubinsk**	**15.35**	**34**	Pn	**Pn**	**17 04 18.6**	**-0.3**
	0.5nm,0.3s,baz=219,slow=9.1,SNR=8.9						
	0.9nm,0.3s						
AKASG	**Malin Array Be**	**16.33**	**323**	Pn	**Pn**	**17 04 31.1**	**-0.6**
	0.2nm,0.3s,baz=134,slow=12,SNR=5.0						
	1.1nm,0.6s						
ARTI	**Arti**	**20.18**	**23**	P	Pn	17 05 17.4	-1.4
	4.1nm,0.6s,baz=214,slow=6.6,SNR=6.5						
	4.1nm,0.6s						
BVAR	**Borovoye Array**	**23.04**	**42**	P	**P**	**17 05 48.4**	**+0.7**
	1.6nm,0.8s,baz=244,slow=9.7,SNR=4.8						
	1.6nm,0.8s						
AAK	**Ala-Archa**	**23.11**	**70**	P	**P**	**17 05 51.2**	**+2.5**
	1.7nm,0.8s,baz=260,slow=7.9,SNR=5.7						
	1.7nm,0.8s						
FINES	**FINESS Array B**	**25.69**	**340**	P	**P**	**17 06 12.0**	**-0.5**
	2.5nm,0.8s,baz=147,slow=11,SNR=4.0						
	2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**26.89**	**52**	P	**P**	**17 06 25.5**	**+2.0**
	1.5nm,0.7s,baz=264,slow=9.3,SNR=9.7						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**28.80**	**61**	P	**P**	**17 06 42.5**	**+1.8**
	1.3nm,0.7s,baz=268,slow=6.1,SNR=10						
	1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**31.41**	**47**	P	**P**	**17 07 04.7**	**+1.0**
	0.7nm,0.4s,baz=260,slow=11,SNR=4.8						
	0.7nm,0.4s						
ESDC	**Sonseca Array**	**37.28**	**288**	P	**P**	**17 07 54.3**	**-0.4**
	0.9nm,1.1s,baz=86,slow=7.4,SNR=4.1						
	0.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**51.08**	**97**	P	**P**	**17 09 47.1**	**+1.6**
	0.5nm,0.7s,baz=301,slow=8.8,SNR=6.6						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**76.71**	**5**	P	**P**	**17 12 33.6**	**-0.1**
	0.2nm,0.8s,baz=349,slow=6.6,SNR=1.9						
	0.2nm,0.8s						
YKA	**Yellowknife Ar**	**77.99**	**350**	P	**P**	**17 12 40.1**	**-0.7**
	0.2nm,0.7s,baz=7.5,slow=7.2,SNR=4.1						
	0.2nm,0.7s						

IDC ***23*** *17:01:05.4±1.0, 38°.38N×44°.27E, h0km, mb4.0/13, mbtmp4.1/17, ML3.3/5, MS3.9/1, Error ellipse: s-maj=14.9km s-min=12.7km az=177.0*

ISC 23 17:01:06.9±1.0, 38°.4N±0°.1×44°.37E±0°.09, h7km, n20, σ0s90/19, mb4.0/12, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GNI	**Garni**	**1.74**	**9**	Pn	**Pb**	**17 01 39.5**	**+0.1**
	248nm,0.3s,baz=163,slow=18,SNR=12						
GNI				Lg	Lg	17 02 03.8	
	73nm,0.3s,baz=34,slow=13,SNR=4.4						
KBZ	**Khabaz**	**5.41**	**349**	Pn	**Pn**	**17 02 29.0**	**+1.0**
	0.3nm,0.3s,baz=267,slow=10,SNR=4.3						
	5.7nm,0.8s						

BRTR	**Keskin Array B**	**8.45**	**282**	Pn	**Pn**	**17 03 11.4**	**+1.6**
	baz=109,slow=13,SNR=3.0						
BELG	**Belogornoye**	**14.15**	**8**	Pn	**Pn**	**17 04 26.8**	**-0.8**
	0.3nm,0.3s,baz=177,slow=3.4,SNR=5.7						
	16nm,0.9s						
AKTO	**Aktyubinsk**	**15.43**	**35**	Pn	**Pn**	**17 04 44.6**	**-0.3**
	0.4nm,0.3s,baz=218,slow=12,SNR=5.2						
	4.9nm,0.6s						
AKASG	**Malin Array Be**	**16.30**	**324**	Pn	**Pn**	**17 04 55.4**	**-0.8**
	0.4nm,0.3s,baz=135,slow=12,SNR=10						
	5.1nm,0.9s						
OBN	**Obninsk**	**17.51**	**345**	LR	LR	17 13 10.3	
	comp=Z,422nm,19.3s,baz=168,slow=41						
ARTI	**Arti**	**20.25**	**23**	P	**P**	**17 05 43.3**	**+0.7**
	7.8nm,0.6s,baz=220,slow=7.9,SNR=8.8						
	7.8nm,0.6s						
BVAR	**Borovoye Array**	**23.13**	**42**	P	**P**	**17 06 14.7**	**+1.2**
	4.1nm,0.8s,baz=228,slow=11,SNR=8.9						
	4.1nm,0.8s						
AAK	**Ala-Archa**	**23.21**	**70**	P	**P**	**17 06 14.9**	**+0.3**
	2.2nm,0.7s,baz=191,slow=14,SNR=7.6						
	2.2nm,0.7s						
GERES	**GERESS Array B**	**24.36**	**305**	P	**P**	**17 06 24.9**	**-0.7**
	1.2nm,0.7s,baz=119,slow=14,SNR=1.8						
	1.2nm,0.7s						
FINES	**FINESS Array B**	**25.69**	**340**	P	**P**	**17 06 36.5**	**-0.8**
	3.1nm,0.9s,baz=151,slow=8.7,SNR=3.4						
	3.1nm,0.9s						
KURBB	**Kurchatov Arra**	**26.98**	**52**	P	**P**	**17 06 49.6**	**+0.5**
	4.2nm,0.8s,baz=263,slow=9.4,SNR=15						
	4.2nm,0.8s						
MKAR	**Makanchi Array**	**28.90**	**61**	P	**P**	**17 07 07.5**	**+1.1**
	3.2nm,0.7s,baz=270,slow=6.8,SNR=17						
	3.2nm,0.7s						
HFS	**Hagfors**	**29.08**	**328**	P	**P**	**17 07 08.7**	**+1.0**
	2.6nm,0.8s,baz=122,slow=19,SNR=1.4						
	2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**31.51**	**47**	P	**P**	**17 07 29.2**	**-0.1**
	1.6nm,0.6s,baz=272,slow=9.9,SNR=6.9						
	1.6nm,0.6s						
ESDC	**Sonseca Array**	**37.20**	**288**	P	**P**	**17 08 17.9**	**-0.9**
	1.3nm,0.9s,baz=62,slow=10,SNR=7.3						
	1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**51.17**	**97**	P	**P**	**17 10 10.2**	**-0.7**
	1.4nm,0.8s,baz=299,slow=8.4,SNR=11						
	1.4nm,0.8s						
KSRS	**Korea Array**	**63.58**	**62**	P	**P**	**17 11 38.7**	**+0.5**
	1.2nm,0.9s,baz=283,slow=7.3,SNR=4.6						
	1.2nm,0.9s						
YKA	**Yellowknife Ar**	**78.01**	**350**	P	**P**	**17 13 04.7**	**-0.9**
	0.5nm,1.0s,baz=8.1,slow=6.7,SNR=5.1						
	0.5nm,1.0s						

AFAD ***23*** *17:07:20.3, 38°.33N×44°.55E, h7km±3km, ML3.6*
TIF ***23*** *17:07:21.6, 38°.44N×44°.50E, h1km±1km*
AZER ***23*** *17:07:21.7, 38°.39N×44°.53E, h17km, ml3.9*
NSSP ***23*** *17:07:23.0, 38°.45N×44°.55E, h10km, Ms3.7*
TEH ***23*** *17:07:23.3, 38°.47N×44°.47E, h6km±40km, ML3.8, Presumed earthquake*
ISK ***23*** *17:07:23.4, 38°.31N×44°.55E, h5km, ML3.9/16*
IDC ***23*** *17:07:24.1±1.0, 38°.43N×44°.41E, h0km, mb3.8/8, mbtmp3.7/13, ML3.3/4, Error ellipse: s-maj=14.6km s-min=12.6km az=155.0*

ISC 23 17:07:24.0±1.2, 38°.41N±0°.02×44°.46E±0°.02, h3km±9km, n81, σ1s72/106, mb3.8/7, 2C-2D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**305**	P	**Pg**	**17 07 31.3**	**-1.3**
OZAP				S	**Sg**	**17 07 39.5**	**+1.1**
OZAP				IAML		17 07 46.0	
	comp=N,1μm,0.8s						
OZAP	**Van, Ozalp-Mer**	**0.44**	**305**	Pg	**Pg**	**17 07 31.3**	**-1.3**
TVAN	**Van**	**0.83**	**279**	P	**Pg**	**17 07 38.7**	**-1.4**
TVAN				S	**Sg**	**17 07 51.5**	**+0.6**
TVAN				IAML		17 08 02.0	
	comp=N,4μm,0.7s						
TVAN				IAML		17 08 08.0	
	comp=E,5μm,0.8s						
TVAN	**Van**	**0.83**	**279**	Pg	**Pg**	**17 07 38.6**	**-1.4**
VANB	**Van**	**0.86**	**283**	Pg	**Pg**	**17 07 41.3**	**+0.8**
VANB				Sg	**Sn**	**17 07 54.6**	**-1.7**
VMUR	**Van-Muradiye**	**0.91**	**310**	P	**Pg**	**17 07 39.7**	**-1.8**
VMUR				S	**Sb**	**17 07 54.8**	**-0.2**
VMUR				IAML		17 08 03.0	
	comp=N,2μm,0.7s						
VMUR				IAML		17 08 04.0	
	comp=E,2μm,1.1s						
VMUR	**Van-Muradiye**	**0.91**	**310**	Pg	**Pg**	**17 07 39.6**	**-1.8**
ISHB	**Shabestar**	**0.92**	**97**	Pg	**Pg**	**17 07 40.3**	**-1.4**
MAKU	**Maku**	**0.96**	**11**	Pg	**Pg**	**17 07 40.7**	**-1.8**
IMRD	**Marand**	**1.02**	**72**	Pg	**Pg**	**17 07 42.6**	**-1.1**
HAKT	**HAKKARI**	**1.03**	**215**	P	**Pg**	**17 07 43.8**	**-0.1**
HAKT				S	**Sn**	**17 08 00.7**	**-0.1**
ERCV	**ERCIS-VAN**	**1.07**	**305**	Pn	**Pn**	**17 07 46.6**	**+0.5**
GEVA	**Gevas**	**1.10**	**266**	P	**Pg**	**17 07 42.7**	**-2.5**
GEVA				S	**Sn**	**17 08 01.7**	**-0.7**
GEVA				IAML		17 08 03.0	
	comp=N,2μm,0.7s						
GEVA				IAML		17 08 07.0	
	comp=E,2μm,0.8s						
NAX	**Nakhchivan**	**1.12**	**46**	P	**Pg**	**17 07 44.2**	**-1.2**
NAX				S	**Sn**	**17 08 05.6**	**+3.0**
DYDN	**Diyadin**	**1.28**	**332**	P	**Pn**	**17 07 46.3**	**-2.8**
DYDN				S	**Sb**	**17 08 03.0**	**-3.0**
DYDN				IAML		17 08 14.0	
	comp=E,1μm,0.8s						
DYDN				IAML		17 08 21.0	
	comp=N,964nm,1.1s						
DYDN	**Diyadin**	**1.28**	**332**	Pg	**Pn**	**17 07 46.3**	**-2.8**
SBZ	**Shahbuz**	**1.31**	**41**	P	**Pn**	**17 07 47.2**	**-2.1**
SBZ				S	**Sn**	**17 08 07.8**	**+0.4**
ORD	**Ordubad**	**1.31**	**66**	P	**Pn**	**17 07 47.6**	**-1.8**
ORD				S	**Sn**	**17 08 06.6**	**-0.8**
CUKT	**Cukurca**	**1.34**	**210**	Pn	**Pn**	**17 07 48.7**	**-1.1**
CUKT				Sn	**Sb**	**17 08 07.0**	**-0.4**
CUKT	**Cukurca**	**1.34**	**210**	Pg	**Pb**	**17 07 49.7**	**-0.1**
HYR	**Heyderabad**	**1.35**	**13**	P	**Pb**	**17 07 49.3**	**-0.6**
HYR				S	**Sg**	**17 08 10.7**	**+3.3**
IAZR	**Azarshahr**	**1.41**	**121**	Pg	**Pb**	**17 07 50.3**	**-0.8**
ADCV	**BITLIS_Adilcev**	**1.42**	**287**	P	**Pn**	**17 07 49.0**	**-1.8**
ADCV				S	**Sg**	**17 08 13.0**	**+3.4**
ADCV				IAML		17 08 13.0	
	comp=E,330nm,0.6s						
ADCV				IAML		17 08 16.0	
	comp=N,794nm,0.8s						
IGDI	**IGDIR**	**1.49**	**349**	P	**Pn**	**17 07 50.5**	**-1.3**
IGDI				S	**Sg**	**17 08 13.1**	**+1.2**
IGDI				IAML		17 08 18.0	
	comp=E,686nm,1.0s						
IGDI				IAML		17 08 28.0	
	comp=N,457nm,0.4s						
IGDI	**IGDIR**	**1.49**	**349**	Pg	**Pn**	**17 07 50.4**	**-1.3**
IGDI	**IGDIR**	**1.49**	**349**	P	**Pn**	**17 07 51.3**	**-0.5**
IGDI				S	**Sg**	**17 08 14.2**	**+2.2**
VAYK	**Vayk**	**1.49**	**30⇓**	*e*P	**Pn**	**17 07 50.5**	**-1.4**
VAYK			*⇓*	*e*S	**Sb**	**17 08 10.6**	**-1.2**
ALVK	**Alvank**	**1.57**	**70**	*e*P	**Pn**	**17 07 52.0**	**-0.9**
ALVK				*e*S	**Sb**	**17 08 12.5**	**-1.7**
AGRB	**Hanur-Agry**	**1.63**	**316**	Pn	**Pb**	**17 07 54.2**	**-0.7**
DORK	**Agr/Tutak/Do**	**1.63**	**307**	P	**Pn**	**17 07 52.4**	**-1.5**
DORK				S	**Sg**	**17 08 16.6**	**0.0**
DORK				IAML		17 08 25.0	
	comp=E,593nm,0.6s						
DORK				IAML		17 08 28.0	
	comp=N,632nm,1.2s						
MLAZ	**Malazgirt-MUS**	**1.66**	**297**	Pn	**Pb**	**17 07 55.4**	**0.0**
KOTA	**Agri, Merkez-K**	**1.70**	**325**	P	**Pn**	**17 07 53.8**	**-1.0**
KOTA				IAML		17 08 32.0	
	comp=E,307nm,1.3s						
KOTA				IAML		17 08 33.0	
	comp=N,236nm,0.6s						
GNI	**Garni**	**1.75**	**7**	Pn	**Pb**	**17 07 56.4**	**-0.6**
	42nm,0.3s,baz=225,slow=3.1,SNR=26						
GNI				Lg	Lg	17 08 20.4	
	60nm,0.3s,baz=282,slow=5.7,SNR=7.7						
GNI	**Garni**	**1.75**	**7**	Pn	**Pb**	**17 07 56.1**	**-0.9**
GNI	**Garni**	**1.75**	**7⇑**	*i*S	Sn	17 07 21.9	-57
GNI			*⇑*	*i*P	**Pb**	**17 07 56.4**	**-0.6**
EGVZ	**Egvard**	**1.82**	**63**	*e*P	**Pn**	**17 07 55.9**	**-0.5**
EGVZ				*e*S	**Sb**	**17 08 19.2**	**-2.2**
GURO	**Guroymak-BITLI**	**1.91**	**275**	Pn	**Pb**	**17 07 58.7**	**-0.9**

MAHB	**Mahabad**	**1.91**	**148**	Pn	**Pb**	**17 07 59.6**	**0.0**
KAPZ	**Kaputan**	**1.92**	**6**	*e*P	**Pb**	**17 07 58.2**	**-1.7**
KAPZ				*e*S	**Sb**	**17 08 22.9**	**-1.4**
AMBZ	**Amberd**	**1.98**	**356**	*e*P	**Pb**	**17 07 59.6**	**-1.4**
AMBZ				*e*S	**Sb**	**17 08 25.4**	**-0.8**
AYRK	**Ayrk**	**2.00**	**31**	*e*P	**Pb**	**17 07 59.4**	**-1.7**
AYRK				*e*S	**Sb**	**17 08 25.2**	**-1.3**
IHRS	**Heris**	**2.03**	**92**	Pn	**Pb**	**17 08 00.3**	**-1.5**
KARS	**Kars**	**2.46**	**335**	Pn	**Pb**	**17 08 06.7**	**-2.3**
VRTB	**Varto-Mus**	**2.46**	**289**	Pn	**Pb**	**17 08 07.4**	**-1.7**
IHSH	**Hashtrud**	**2.48**	**115**	Pn	**Pb**	**17 08 07.0**	**-2.5**
LSVT	**Lusahovit**	**2.57**	**12**	*e*P	**Pb**	**17 08 09.8**	**-1.0**
LSVT				*e*S	**Sb**	**17 08 42.7**	**-0.1**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn	**Pn**	**17 08 07.8**	**+1.1**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn	**Pb**	**17 08 08.6**	**-2.3**
ISRB	**Sarab**	**2.60**	**102**	Pn	**Pb**	**17 08 08.5**	**-2.9**
SENK	**Senkaya-Erzuru**	**2.70**	**324**	Pn	**Pb**	**17 08 11.2**	**-1.9**
GRMI	**Germi**	**2.72**	**80**	Pn	**Pn**	**17 08 09.6**	**+0.8**
KARO	**Karliova-Bingo**	**2.81**	**290**	Pn	**Pn**	**17 08 11.5**	**+1.5**
BGD	**Bogdanovka**	**2.93**	**347**	P	**Pb**	**17 08 17.8**	**+0.7**
BNGB	**Bingl**	**3.01**	**282**	Pn	**Pn**	**17 08 14.7**	**+1.9**
AKH	**Akhalkalaki**	**3.09**	**346**	P	**Pb**	**17 08 19.9**	**+0.1**
DGRG	**David-gareji**	**3.12**	**13**	P	**Pb**	**17 08 19.7**	**-0.5**
DGRG				S	**Sg**	**17 09 08.9**	**+4.6**
TRLG	**Trialeti**	**3.14**	**355**	P	**Pb**	**17 08 20.5**	**-0.1**
VSHL	**Vashlovani**	**3.19**	**27**	P	**Pn**	**17 08 16.2**	**+1.0**
VSHL				S	**Sg**	**17 09 09.7**	**+3.1**
YEDI	**Yedisu-Bingol**	**3.22**	**290**	Pn	**Pn**	**17 08 18.1**	**+2.4**
DDFL	**Dedoflistskaro**	**3.29**	**22**	P	**Pb**	**17 08 21.5**	**-1.7**
TBLG	**Delisi**	**3.33**	**4**	Pn	**Pn**	**17 08 18.9**	**+1.9**
DYBB	**Diyarbakir**	**3.43**	**264**	Pn	**Pn**	**17 08 19.9**	**+1.4**
LGD	**Lagodekhi**	**3.69**	**21**	P	**Pb**	**17 08 26.2**	**-3.7**
ALIG	**Mtskhetisjvari**	**3.75**	**351**	P	**Pb**	**17 08 31.5**	**+0.7**
CHRG	**Chargali**	**3.94**	**5**	P	**Pn**	**17 08 27.6**	**+2.2**
IDHR	**Dehrash**	**4.01**	**157**	Pn	**Pn**	**17 08 29.1**	**+2.5**
GARIG	**Gari**	**4.26**	**350**	P	**Pn**	**17 08 33.7**	**+3.8**
SHTL	**Shatili**	**4.28**	**7**	P	**Pb**	**17 08 40.1**	**+0.1**
SHTL				S	**Sg**	**17 09 42.5**	**+1.0**
KBZ	**Khabaz**	**5.45**	**348**	Pn	**Pn**	**17 08 48.4**	**+2.3**
	1.6nm,1.1s,baz=192,slow=14,SNR=2.2						
BRTR	**Keskin Array B**	**8.52**	**282**	Pn	**Pn**	**17 09 31.4**	**+2.9**
	baz=101,slow=13,SNR=5.1						
	0.5nm,0.7s						
MMAI	**Mount Meron Ar**	**9.12**	**237**	Pn	**Pn**	**17 09 38.1**	**+1.6**
	0.6nm,0.3s,baz=59,slow=14,SNR=1.9						
	0.7nm,0.4s						
AKTO	**Aktyubinsk**	**15.41**	**34**	Pn	**Pn**	**17 11 02.3**	**0.0**
	0.3nm,0.3s,baz=237,slow=11,SNR=12						
	1.3nm,0.4s						
AKASG	**Malin Array Be**	**16.36**	**324**	Pn	**Pn**	**17 11 14.5**	**0.0**
	0.2nm,0.3s,baz=133,slow=12,SNR=6.5						
	1.7nm,0.8s						
ARTI	**Arti**	**20.24**	**23**	P	Pn	17 12 00.6	-1.5
	7.7nm,0.8s,baz=209,slow=7.3,SNR=9.4						
	7.7nm,0.8s						
BVAR	**Borovoye Array**	**

AGRB	**Hanur-Agry**	**1.67**	**315**	Pn	**Pb**	**17 11 10.1**	**-0.5**
AGRB				Sn	**Sb**	**17 11 31.8**	**-0.4**
DORK	**Agr/Tutak/Do**	**1.68**	**307**	P	**Pn**	**17 11 09.2**	**-0.4**
DORK				IAML		17 11 40.0	
	comp=E,307nm,0.6s						
DORK				IAML		17 11 41.0	
	comp=N,404nm,0.8s						
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pn	**Pb**	**17 11 10.7**	**-0.5**
KOTA	**Agri, Merkez-K**	**1.73**	**324**	P	**Pb**	**17 11 10.7**	**-0.9**
KOTA				S	**Sb**	**17 11 33.8**	**-0.2**
KOTA				IAML		17 11 44.0	
	comp=E,146nm,0.8s						
KOTA				IAML		17 11 53.0	
	comp=N,148nm,0.8s						
GNI	**Garni**	**1.75**	**6**	Pn	**Pg**	**17 11 12.2**	**-0.3**
	34nm,0.3s,baz=342,slow=4.6,SNR=8.1						
GNI				Lg	Lg	17 11 35.0	
	28nm,0.3s,baz=130,slow=9.5,SNR=3.9						
GNI	**Garni**	**1.75**	**6**	Pn	**Pg**	**17 11 12.5**	**0.0**
GNI	**Garni**	**1.75**	**6**	*i*P	**Pg**	**17 11 12.4**	**-0.2**
GNI				*i*S	**Sg**	**17 11 38.8**	**+3.5**
METS	**Metsamor**	**1.78**	**349**	*e*P	**Pg**	**17 11 12.4**	**-0.6**
METS				*e*S	**Sg**	**17 11 36.9**	**+0.8**
EGVZ	**Egvard**	**1.78**	**62**	*e*P	**Pb**	**17 11 11.1**	**-1.3**
EGVZ				*e*S	**Sb**	**17 11 34.7**	**-0.6**
VNNZ	**Vanand**	**1.78**	**343**	*e*P	**Pg**	**17 11 12.6**	**-0.5**
VNNZ				*e*S	**Sg**	**17 11 37.1**	**+0.8**
MAHB	**Mahabad**	**1.88**	**150**	Pn	**Pg**	**17 11 14.9**	**-0.1**
ARUZ	**Aruch**	**1.91**	**350**	*e*P	**Pb**	**17 11 14.6**	**0.0**
ARUZ				*e*S	**Sg**	**17 11 40.8**	**+0.5**
KAPZ	**Kaputan**	**1.92**	**4**	*e*P	**Pb**	**17 11 14.1**	**-0.8**
KAPZ				*e*S	**Sg**	**17 11 39.6**	**-1.1**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn	**Pb**	**17 11 13.9**	**-1.5**
AYRK	**Ayrk**	**1.98**	**29**	*e*P	**Pb**	**17 11 15.2**	**-0.6**
AYRK				*e*S	**Sg**	**17 11 41.8**	**-0.6**
IHRS	**Heris**	**1.98**	**92**	Pn	**Pb**	**17 11 15.5**	**-0.4**
AMBZ	**Amberd**	**2.00**	**354**	*e*P	**Pb**	**17 11 15.9**	**-0.2**
AMBZ				*e*S	**Sg**	**17 11 43.0**	**0.0**
DIGO	**Kars**	**2.20**	**337**	P	**Pb**	**17 11 18.7**	**-0.9**
DIGO				S	**Sg**	**17 11 53.5**	**+3.9**
DIGO				IAML		17 11 55.0	
	comp=N,333nm,0.8s						
DIGO				IAML		17 12 08.0	
	comp=E,392nm,0.7s						
KARS	**Kars**	**2.49**	**334**	Pn	**Pb**	**17 11 22.7**	**-1.8**
VRTB	**Varto-Mus**	**2.51**	**289**	Pn	**Pn**	**17 11 21.9**	**+0.9**
LSVT	**Lusahovit**	**2.57**	**11**	*e*P	**Pb**	**17 11 23.0**	**-2.8**
LSVT				*e*S	**Sb**	**17 11 55.1**	**-2.7**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn	**Pn**	**17 11 23.3**	**+0.8**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn	**Pn**	**17 11 23.2**	**+0.8**
SRTK	**Saratovka**	**2.67**	**357**	*e*P	**Pb**	**17 11 27.4**	**-0.1**
SRTK				*e*S	**Sg**	**17 12 03.0**	**-1.6**
GRMI	**Germi**	**2.67**	**80**	Pn	**Pb**	**17 11 24.8**	**-2.9**
SENK	**Senkaya-Erzuru**	**2.73**	**323**	Pn	**Pb**	**17 11 25.9**	**-2.8**
BGD	**Bogdanovka**	**2.95**	**346**	P	**Pg**	**17 11 34.9**	**-0.4**
BNGB	**Bingl**	**3.06**	**282**	Pn	**Pn**	**17 11 29.9**	**+1.4**
AKH	**Akhalkalaki**	**3.11**	**346**	P	**Pg**	**17 11 39.2**	**+0.7**
DGRG	**David-gareji**	**3.12**	**12**	P	**Pg**	**17 11 37.9**	**-0.7**
TRLG	**Trialeti**	**3.15**	**354**	P	**Pb**	**17 11 36.4**	**+0.6**
VSHL	**Vashlovani**	**3.18**	**27**	P	**Pg**	**17 11 38.3**	**-1.5**
YEDI	**Yedisu-Bingol**	**3.27**	**290**	Pn	**Pn**	**17 11 32.6**	**+1.2**
DDFL	**Dedoflistskaro**	**3.28**	**22**	P	**Pg**	**17 11 43.9**	**+2.1**
DYBB	**Diyarbakir**	**3.48**	**264**	Pn	**Pn**	**17 11 34.8**	**+0.6**
LGD	**Lagodekhi**	**3.68**	**21**	P	**Pg**	**17 11 50.8**	**+1.5**
ALIG	**Mtskhetisjvari**	**3.76**	**350**	P	**Pb**	**17 11 47.8**	**+1.7**
CHRG	**Chargali**	**3.94**	**4**	P	**Pg**	**17 11 51.5**	**-2.8**
SHTL	**Shatili**	**4.28**	**6**	P	**Pg**	**17 11 57.6**	**-3.2**
AKTO	**Aktyubinsk**	**15.39**	**34**	Pn	**Pn**	**17 14 17.3**	**+0.3**
	0.3nm,0.3s,baz=226,slow=8.6,SNR=6.6 1.0nm,0.3s						
ARTI	**Arti**	**20.23**	**23**	P	Pn	17 15 15.5	-1.5
	2.0nm,0.7s,baz=265,slow=7.0,SNR=3.6 2.0nm,0.7s						
BVAR	**Borovoye Array**	**23.07**	**42**	P	**P**	**17 15 47.4**	**+1.7**
	0.7nm,0.7s,baz=236,slow=11,SNR=3.5 0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**26.91**	**52**	P	**P**	**17 16 23.2**	**+1.9**
	1.0nm,0.7s,baz=263,slow=9.0,SNR=5.6 1.0nm,0.7s						
MKAR	**Makanchi Array**	**28.81**	**61**	P	**P**	**17 16 40.3**	**+1.8**
	0.3nm,0.7s,baz=265,slow=8.8,SNR=6.0 0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**31.44**	**47**	P	**P**	**17 17 02.4**	**+0.8**
	0.4nm,0.6s,baz=246,slow=11,SNR=2.5 0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.06**	**97**	P	**P**	**17 19 43.0**	**0.0**
	0.5nm,0.6s,baz=301,slow=9.5,SNR=5.1 0.5nm,0.6s						

*IDC **23** 17:10:43.8±1.1,28˚.74N×130˚.22E, h0km, mb3.5/4, mbtmp3.6/8, ML3.4/3, Error ellipse: s-maj=39.1km s-min=16.7km az=104.0*
*JMA **23** 17:10:44.2±0.2,29˚.0N±0˚.7×13˚0E±˚, h42km, MV3.4/22, NEAR AMAMI-OSHIMA ISLAND*
ISC 23 17:10:43.5±1.4,**28˚96N**±0˚03×**129˚97E**±0˚06,**h6**km±11km, **n24,**σ1**s90/29,mb3.6/4,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.63**	**210**	P	**Pg**	**17 10 55.4**	**-0.3**
JAM				*e*S	**Sg**	**17 11 03.5**	**-0.4**
JZK	**Kikaishima**	**0.64**	**180**	P	**Pg**	**17 10 57.2**	**+1.3**
JZK				S	**Sb**	**17 11 07.6**	**+1.3**
JTAJ	**Takarajima**	**0.70**	**286**	*e*P	**Pg**	**17 10 57.1**	**+0.2**
JTAJ				*e*S	**Sg**	**17 11 07.1**	**+1.1**
JNN	**Nakanoshima**	**0.88**	**355**	P	**Pg**	**17 11 00.3**	**-0.2**
JNN				*e*S	**Sg**	**17 11 12.5**	**+0.6**
JAMN	**Amaminishikomi**	**1.00**	**224**	P	**Pg**	**17 11 01.5**	**-1.2**
JYAK	**Yakushimahirau**	**1.36**	**20**	P	**Pn**	**17 11 07.2**	**-1.8**
JTK	**Tokunoshima**	**1.47**	**218**	P	**Pn**	**17 11 08.7**	**-1.9**
JKC	**Kuchinoerabu**	**1.51**	**7**	P	**Pn**	**17 11 09.3**	**-1.7**
JMTN	**Minamitane**	**1.65**	**29**	*e*P	**Pn**	**17 11 12.2**	**-0.8**
JTN	**Tanegashima 3**	**1.90**	**27**	P	**Pn**	**17 11 15.8**	**-0.7**
JOKE	**Okinoerabujima**	**2.02**	**218**	*e*P	**Pn**	**17 11 18.5**	**-0.8**
JYRO	**Yoronjima**	**2.35**	**215**	*e*P	**Pn**	**17 11 21.8**	**-0.8**
JOW	**Kunigami**	**2.60**	**216**	Pn	**Pn**	**17 11 26.1**	**0.0**
	20nm,0.3s,baz=96,slow=18,SNR=35						
JOW				Sn	**Sb**	**17 12 00.8**	**-1.9**
	13nm,0.3s,baz=122,slow=26,SNR=4.2 101nm,0.4s						
JOW	**Kunigami**	**2.60**	**216**	*e*P	**Pn**	**17 11 25.3**	**-0.7**
JIH	**Iheya**	**2.61**	**223**	*e*P	**Pn**	**17 11 24.7**	**-1.5**
JMZ	**Minamidaito 2**	**3.32**	**160**	P	**Pn**	**17 11 34.4**	**-1.5**
JKE	**Kume jima 2**	**3.85**	**228**	*e*P	**Pn**	**17 11 42.5**	**-0.8**
JNU	**Nakatsue**	**4.22**	**10**	Pn	**Pn**	**17 11 50.0**	**+1.6**
	2.7nm,0.3s,baz=238,slow=1.2,SNR=36						
JNU				Sn	**Sb**	**17 12 44.2**	**-5.2**
	0.6nm,0.3s,baz=84,slow=13,SNR=1.1 21nm,0.5s						
KSRS	**Korea Array**	**8.64**	**349**	Pn	**Pn**	**17 12 53.4**	**+4.3**
	0.6nm,0.7s,baz=163,slow=13,SNR=1.6						
MJAR	**Matsushiro Arr**	**10.26**	**40**	Pn	**Pn**	**17 13 11.2**	**0.0**
	0.1nm,0.3s,baz=231,slow=15,SNR=9.3 0.7nm,0.6s						
WRA	**Warramunga Arr**	**48.80**	**175**	P	**P**	**17 19 28.4**	**-1.1**
	1.2nm,1.1s,baz=355,slow=7.9,SNR=2.8 1.2nm,1.1s						
ASAR	**Alice Springs**	**52.46**	**175**	P	**P**	**17 19 56.3**	**-0.9**
	0.2nm,0.7s,baz=9.5,slow=13,SNR=8.9 0.2nm,0.7s						
FINES	**FINESS Array B**	**71.25**	**330**	P	**P**	**17 22 06.4**	**+3.1**
	1.4nm,0.8s,baz=87,slow=7.1,SNR=3.7 1.4nm,0.8s						
YKA	**Yellowknife Ar**	**75.41**	**26**	P	P	17 22 31.5	+3.8
	0.2nm,0.7s,baz=297,slow=6.4,SNR=3.6 0.2nm,0.7s						

*AFAD **23** 17:13:00.2, 38˚.34N×44˚.62E, h7km±2km, ML2.5*
*AZER **23** 17:13:01.1, 38˚.23N×44˚.83E, h9km, ml3.0*
*ISK **23** 17:13:01.6, 38˚.31N×44˚.60E, h5km, ML2.5/7*
*TEH **23** 17:13:03.7, 38˚.47N×44˚.67E, h10km, ML2.8, Presumed earthquake*
ISC 23 17:13:03.2±1.2,**38˚35N**±0˚03×**44˚55E**±0˚03,**h8**km±10km, **n23,**σ1**s75/35,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.54**	**305**	P	**Pg**	**17 13 11.9**	**-1.7**
OZAP				S	**Sg**	**17 13 20.3**	**-0.4**
OZAP				IAML		17 13 31.0	
	comp=N,662nm,0.8s						
ISHB	**Shabestar**	**0.84**	**94**	Pg	**Pn**	**17 13 18.5**	**-3.1**
VANB	**Van**	**0.94**	**285**	Pg	**Pg**	**17 13 21.6**	**+0.3**
VANB				Sg	**Sb**	**17 13 35.7**	**+1.1**
MAKU	**Maku**	**1.00**	**6**	Pg	**Pg**	**17 13 21.1**	**-1.5**
HAKT	**HAKKARI**	**1.04**	**220**	P	**Pn**	**17 13 24.6**	**+0.4**
HAKT				S	**Sn**	**17 13 41.6**	**+2.5**
NAX	**Nakhchivan**	**1.10**	**42**	P	**Pn**	**17 13 23.9**	**-1.1**
NAX				S	**Sn**	**17 13 39.7**	**-0.8**
GEVA	**Gevas**	**1.18**	**268**	P	**Pn**	**17 13 23.5**	**-2.6**
GEVA				S	**Sn**	**17 13 42.9**	**+0.5**
GEVA				IAML		17 13 45.0	
	comp=E,94nm,0.7s						
GEVA				IAML		17 13 46.0	
	comp=N,130nm,0.4s						
AKDM	**Akdamar-Van**	**1.24**	**269**	Pn	**Pn**	**17 13 25.6**	**-1.4**
AKDM				Sn	**Sg**	**17 13 45.6**	**+2.6**
ORD	**Ordubad**	**1.27**	**63**	P	**Pn**	**17 13 27.0**	**-0.3**
ORD				S	**Sn**	**17 13 45.4**	**+0.8**
SBZ	**Shahbuz**	**1.30**	**37**	P	**Pg**	**17 13 27.2**	**-1.0**
SBZ				S	**Sn**	**17 13 47.0**	**+1.5**
IAZR	**Azarshahr**	**1.31**	**120**	Pg	**Pg**	**17 13 28.9**	**+0.5**
CUKT	**Cukurca**	**1.33**	**214**	Pn	**Pg**	**17 13 28.2**	**-0.6**
CUKT				Sn	**Sg**	**17 13 47.4**	**+1.3**
DYDN	**Diyadin**	**1.37**	**331**	P	**Pn**	**17 13 27.6**	**-1.2**
DYDN				IAML		17 13 51.0	
	comp=N,132nm,0.8s						
DYDN				IAML		17 13 51.0	
	comp=E,175nm,0.9s						
HYR	**Heyderabad**	**1.38**	**10**	P	**Pg**	**17 13 30.5**	**+0.7**
HYR				S	**Sg**	**17 13 53.9**	**+6.2**
ADCV	**BITLIS_Adilcev**	**1.50**	**288**	P	**Pn**	**17 13 29.7**	**-0.9**
ADCV				S	**Sg**	**17 13 52.5**	**+1.0**
ADCV				IAML		17 13 56.0	
	comp=N,77nm,0.6s						
ADCV				IAML		17 13 56.0	
	comp=E,55nm,0.5s						
IGDI	**IGDIR**	**1.56**	**346**	P	**Pb**	**17 13 31.6**	**-0.7**
IGDI				IAML		17 13 58.0	
	comp=N,50nm,0.6s						
IGDI				IAML		17 14 00.0	
	comp=E,83nm,0.7s						
AGRB	**Hanur-Agry**	**1.72**	**316**	Pn	**Pb**	**17 13 34.7**	**-0.5**
DORK	**Agr/Tutak/Do**	**1.73**	**307**	P	**Pb**	**17 13 34.4**	**-0.9**
DORK				IAML		17 14 06.0	
	comp=N,55nm,0.9s						
DORK				IAML		17 14 14.0	
	comp=E,40nm,0.8s						
MLAZ	**Malazgirt-MUS**	**1.75**	**297**	Pn	**Pb**	**17 13 35.1**	**-0.6**
MLAZ				Sn	**Sg**	**17 13 59.8**	**+0.3**
KOTA	**Agri, Merkez-K**	**1.79**	**325**	P	**Pn**	**17 13 34.3**	**-0.3**
KOTA				IAML		17 14 09.0	
	comp=E,38nm,0.8s						
KOTA				IAML		17 14 18.0	
	comp=N,26nm,0.9s						
GNI	**Garni**	**1.80**	**5**	Pn	**Pb**	**17 13 35.5**	**-1.0**
IHRS	**Heris**	**1.96**	**90**	Pn	**Pg**	**17 13 39.7**	**-1.1**
GURO	**Guroymak-BITLI**	**1.99**	**276**	Pn	**Pb**	**17 13 38.3**	**-1.4**

*IDC **23** 17:17:29.5±3.2,27˚.90N×57˚.10E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=79.6km s-min=27.8km az=156.0*
*DSN **23** 17:17:31.1±2.1,28˚.56N×56˚.98E, h10km, ML3.2/12, Error ellipse: s-maj=31.2km s-min=20.1km az=101.0*
*TEH **23** 17:17:33.6,28˚.28N×57˚.23E, h9km±28km, ML3.6, Presumed earthquake*
*OMAN **23** 17:17:36.8±1.0,27˚.99N×57˚.03E, h10km, mb3.4/8, ml3.5/16, Error ellipse: s-maj=8.3km s-min=5.5km az=23.0*
ISC 23 17:17:33.9±0.8,**28˚23N**±0˚04×**57˚15E**±0˚04,**h10**km,**n55,** σ1**s70/75,mb3.4/4,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.57**	**120**	Pg	**Pg**	**17 17 44.9**	**-0.1**
IBND	**Bandar-abas**	**0.95**	**215**	Pg	**Pg**	**17 17 53.5**	**+1.3**
IBND				Sg	**Sn**	**17 18 08.4**	**+1.5**
GENO	**Geno**	**1.20**	**226**	Pg	**Pb**	**17 17 58.2**	**+1.4**
NGRK	**Negar Kerman**	**1.45**	**346**	Pg	**Pn**	**17 18 00.7**	**+0.2**
KBAM	**BAM**	**1.46**	**52**	Pg	**Pn**	**17 18 00.2**	**-0.2**
CHMN	**Cheshme madani**	**1.66**	**12**	Pg	**Pn**	**17 18 03.8**	**+0.5**
KHGB	**Koh Gabri**	**2.21**	**345**	Pn	**Pn**	**17 18 13.0**	**+2.1**
SHME	**Shamm**	**2.35**	**203**	*e*P	**Pn**	**17 18 12.9**	**+0.3**
	SNR=7.4						
SHME				S	**Sb**	**17 18 46.1**	**+0.6**
SHME	**Shamm**	**2.35**	**203**	P	**Pn**	**17 18 13.7**	**+1.1**
	SNR=7.5						
BANOM	**Banah**	**2.42**	**198**	*e*P	**Pn**	**17 18 14.1**	**+0.5**
	SNR=27						
BANOM	**Banah**	**2.42**	**198**	P	**Pn**	**17 18 14.5**	**+0.9**
JASK	**Jask - Hormozg**	**2.44**	**165**	P	**Pn**	**17 18 15.3**	**+1.5**
	SNR=43						
JASK				S	**Sn**	**17 18 45.5**	**+1.7**
JASK	**Jask - Hormozg**	**2.44**	**165**	Pn	**Pn**	**17 18 15.3**	**+1.5**
MSFE	**Esma-Masafi**	**3.00**	**197**	P	**Pn**	**17 18 24.0**	**+2.5**
MDH	**Madha**	**3.02**	**195**	P	**Pn**	**17 18 22.9**	**+1.0**
MDH	**Madha**	**3.02**	**195**	P	**Pn**	**17 18 22.8**	**+1.0**
UOSS	**Minazif**	**3.38**	**195**	P	**Pn**	**17 18 27.8**	**+1.0**
HATD	**Hatta, Dubai**	**3.52**	**195**	P	**Pn**	**17 18 29.5**	**+0.8**
ASHO	**Ashiyiah**	**3.67**	**196**	P	**Pn**	**17 18 32.5**	**+1.7**
ASHO	**Ashiyiah**	**3.67**	**196**	P	**Pn**	**17 18 31.5**	**+0.7**
FAQ	**Al Faqa, Dubai**	**3.74**	**202**	P	**Pn**	**17 18 32.8**	**+1.0**
FAQ				S	**Sn**	**17 19 14.2**	**-1.7**
ASUD	**Al Ashush, Dub**	**3.95**	**205**	*i*P	**Pn**	**17 18 35.9**	**+1.4**
	SNR=6.9						
ASUD	**Al Ashush, Dub**	**3.95**	**205**	P	**Pn**	**17 18 36.5**	**+2.0**
	SNR=7.0						
ASUD				S	**Sn**	**17 19 19.6**	**-1.2**
CHBR	**Chabahar**	**3.97**	**131**	Pn	**Pn**	**17 18 36.3**	**+1.4**
SOHO	**SOHO**	**4.12**	**188**	P	**Pn**	**17 18 36.3**	**-0.6**
SOHO	**SOHO**	**4.12**	**188**	P	**Pn**	**17 18 37.1**	**+0.2**
SOHO				S	**Sn**	**17 19 22.5**	**-2.7**
AJN	**Ajban**	**4.14**	**208**	*i*P	**Pn**	**17 18 38.4**	**+1.3**
	SNR=12						
AJN	**Ajban**	**4.14**	**208**	P	**Pn**	**17 18 38.3**	**+1.1**
AJN				S	**Sn**	**17 19 23.2**	**-2.4**
TAFT	**Taft - Yazd**	**4.33**	**324**	Pn	**Pn**	**17 18 42.3**	**+2.3**
NGCH	**Negor - Chabah**	**4.57**	**128**	P	**Pn**	**17 18 45.3**	**+2.2**
	SNR=8.9						
NGCH				S	**Sn**	**17 19 37.8**	**+1.4**
NGCH	**Negor - Chabah**	**4.57**	**128**	Pn	**Pn**	**17 18 44.7**	**+1.5**
HOQ	**Hoqain**	**4.63**	**178**	P	**Pn**	**17 18 44.0**	**-0.1**
	SNR=14						
HOQ				S	**Sn**	**17 19 34.2**	**-3.7**
BIDO	**Bidbid**	**4.78**	**169**	P	**Pn**	**17 18 46.2**	**+0.3**
BIDO				S	**Sn**	**17 19 38.9**	**-2.5**
JRN	**Qarnain Island**	**5.05**	**231**	P	**Pn**	**17 18 50.6**	**+0.8**
JRN				S	**Sn**	**17 19 45.4**	**-2.9**
WSAR	**Wadi Sarin**	**5.15**	**165**	P	**Pn**	**17 18 51.8**	**+0.7**
WSAR				S	**Sn**	**17 19 48.1**	**-2.5**
DSBU	**Dashti - Bushe**	**5.19**	**273**	Pn	**Pn**	**17 18 54.7**	**+3.0**
SMDO	**Samad**	**5.22**	**171**	P	**Pn**	**17 18 52.6**	**+0.5**
SMDO				S	**Sn**	**17 19 50.2**	**-2.2**
MZWR	**Madinat Zayed**	**5.34**	**214**	P	**Pn**	**17 18 53.7**	**+0.1**
MZWR				S	**Sn**	**17 19 51.8**	**-3.4**
BSY	**Bisya**	**5.47**	**179**	P	**Pn**	**17 18 57.1**	**+1.6**
BSY				S	**Sn**	**17 19 57.5**	**-0.9**
KLNJ	**Kolanjah**	**5.57**	**301**	Pn	**Pn**	**17 18 59.8**	**+2.6**
WBK	**Wadi Bani Khal**	**5.84**	**163**	P	**Pn**	**17 19 01.3**	**+0.7**
	SNR=25						
WBK				S	**Sn**	**17 20 05.1**	**-2.5**
JMDO	**Jabal Madar**	**5.90**	**171**	P	**Pn**	**17 19 02.3**	**+0.8**
SHMA	**Al-Shehemyia**	**6.00**	**248**	P	**Pn**	**17 19 04.1**	**+1.4**
	SNR=14						
SHMA				S	**Sn**	**17 20 08.5**	**-3.0**
MZR	**Muzera**	**6.17**	**213**	P	**Pn**	**17 19 03.9**	**-1.2**
MZR	**Muzera**	**6.17**	**213**	P	**Pn**	**17 19 04.8**	**-0.4**
MZR				S	**Sn**	**17 20 12.4**	**-3.4**
JLN	**Jalan Bani Buh**	**6.39**	**161**	P	**Pn**	**17 19 08.7**	**+0.5**
JLN				S	**Sn**	**17 20 18.7**	**-2.6**
SMRA	**Abu-Samra**	**6.65**	**240**	P	**Pn**	**17 19 12.6**	**+1.0**
SMRA				S	**Sn**	**17 20 24.8**	**-2.7**
MHTO	**MHTO**	**7.25**	**174**	P	**Pn**	**17 19 20.8**	**+0.8**
MHTO				S	**Sn**	**17 20 39.5**	**-3.0**
DMTO	**DMTO**	**10.66**	**191**	P	**Pn**	**17 20 06.4**	**-0.4**
KIV	**Kislovodsk**	**19.52**	**327**	P	**P**	**17 22 01.7**	**+0.3**
BRTR	**Keskin Array B**	**22.55**	**307**	P	**P**	**17 22 33.1**	**-1.1**
	0.6nm,0.8s,baz=110,slow=11,SNR=4.9 0.6nm,0.8s						
BVAR	**Borovoye Array**	**26.64**	**18**	P	**P**	**17 23 12.8**	**+0.2**
	0.9nm,0.6s,baz=201,slow=7.9,SNR=7.7 0.9nm,0.6s						
MKAR	**Makanchi Array**	**27.04**	**40**	P	**P**	**17 23 16.4**	**+0.2**
	0.1nm,0.5s,baz=220,slow=7.6,SNR=2.4 0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**32.70**	**31**	P	**P**	**17 24 05.6**	**-0.7**
	0.7nm,0.4s,baz=230,slow=8.5,SNR=6.4 0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**53.57**	**266**	P	P	17 26 52.1	-3.4
	0.2nm,0.4s,baz=60,slow=8.4,SNR=1.7 0.2nm,0.4s						

*AFAD **23** 17:21:56.9, 38˚.41N×44˚.52E, h3km±3km, MW3.6*
*AZER **23** 17:21:56.9, 38˚.38N×44˚.52E, h10km, ml3.4*
*NSSP **23** 17:21:58.5, 38˚.43N×44˚.57E, h10km, Ms3.4*
*TEH **23** 17:21:59.0, 38˚.46N×44˚.45E, h6km±45km, ML3.2, Presumed earthquake*
*ISK **23** 17:22:01.6, 38˚.42N×44˚.36E, h16km, ML3.2/11*
ISC 23 17:21:58.8±1.1,**38˚41N**±0˚02×**44˚50E**±0˚02,**h3**km±10km, **n71,**σ1**s31/99,2C,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**302**	P	**Pg**	**17 22 07.4**	**-0.4**
OZAP				S	**Sg**	**17 22 14.2**	**+0.4**
OZAP	**Van, Ozalp-Mer**	**0.47**	**302**	Pg	**Pg**	**17 22 07.3**	**-0.4**
TVAN	**Van**	**0.86**	**278**	P	**Pg**	**17 22 13.8**	**-1.5**
TVAN				S	**Sb**	**17 22 27.8**	**-0.7**
TVAN	**Van**	**0.86**	**278**	Pg	**Pg**	**17 22 13.8**	**-1.5**
VANB	**Van**	**0.89**	**282**	Pg	**Pb**	**17 22 16.9**	**0.0**
VANB				Sg	**Sg**	**17 22 27.7**	**+0.4**
ISHB	**Shabestar**	**0.89**	**98**	Pg	**Pb**	**17 22 15.8**	**-1.2**
VMUR	**Van-Muradiye**	**0.92**	**309**	P	**Pg**	**17 22 15.7**	**-0.8**
VMUR				S	**Sb**	**17 22 30.3**	**+0.1**
VMUR	**Van-Muradiye**	**0.92**	**309**	Pg	**Pg**	**17 22 15.7**	**-0.8**
MAKU	**Maku**	**0.95**	**9**	Pg	**Pg**	**17 22 16.5**	**-0.5**
IMRD	**Marand**	**0.99**	**72**	Pg	**Pn**	**17 22 18.5**	**-1.3**
HAKT	**HAKKARI**	**1.06**	**216**	P	**Pg**	**17 22 18.9**	**-0.1**
HAKT				S	**Sn**	**17 22 36.8**	**+0.7**
NAX	**Nakhchivan**	**1.09**	**46**	P	**Pn**	**17 22 19.9**	**-1.1**
NAX				S	**Sn**	**17 22 36.5**	**-0.1**
GEVA	**Gevas**	**1.13**	**265**	P	**Pb**	**17 22 17.9**	**-3.2**
GEVA				S	**Sb**	**17 22 35.9**	**-0.4**
AKDM	**Akdamar-Van**	**1.19**	**266**	Pg	**Pb**	**17 22 20.1**	**-2.0**
ORD	**Ordubad**	**1.28**	**66**	P	**Pg**	**17 22 23.3**	**0.0**
ORD				S	**Sn**	**17 22 42.4**	**+1.0**
SBZ	**Shahbuz**	**1.28**	**40**	P	**Pg**	**17 22 23.2**	**-0.2**
SBZ				S	**Sn**	**17 22 43.2**	**+1.8**
DYDN	**Diyadin**	**1.29**	**331**	P	**Pn**	**17 22 20.1**	**-3.8**
HYR	**Heyderabad**	**1.33**	**12**	P	**Pg**	**17 22 24.8**	**+0.5**
HYR				S	**Sg**	**17 22 43.1**	**+1.5**
CUKT	**Cukurca**	**1.36**	**211**	Pn	**Pg**	**17 22 25.5**	**+0.7**
CUKT				Sn	**Sg**	**17 22 43.7**	**+1.2**
CUKT	**Cukurca**	**1.36**	**211**	Pg	**Pg**	**17 22 25.8**	**+1.0**
IAZR	**Azarshahr**	**1.38**	**122**	Pg	**Pg**	**17 22 26.0**	**+0.7**
ADCV	**BITLIS_Adilcev**	**1.44**	**286**	P	**Pn**	**17 22 24.7**	**-1.2**
VAYK	**Vayk**	**1.47**	**29**	*i*P	**Pg**	**17 22 26.4**	**-0.6**
VAYK				*i*S	**Sg**	**17 22 46.4**	**+0.3**
IGDI	**IGDIR**	**1.49**	**348**	P	**Pn**	**17 22 25.9**	**-0.6**
IGDI	**IGDIR**	**1.49**	**348**	Pg	**Pn**	**17 22 25.8**	**-0.6**
IGDI	**IGDIR**	**1.49**	**348**	P	**Pg**	**17 22 27.4**	**+0.1**
ALVK	**Alvank**	**1.54**	**70**	*e*P	**Pb**	**17 22 27.2**	**-0.8**
ALVK				*e*S	**Sg**	**17 22 48.0**	**-0.4**
PERV	**Siirt/Pervari-**	**1.61**	**254**	P	**Pb**	**17 22 28.2**	**-1.0**
PERV				S	**Sg**	**17 22 53.9**	**+3.4**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pb**	**17 22 29.1**	**-0.8**
AGRB				Sn	**Sb**	**17 22 50.0**	**-1.1**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pg	**Pb**	**17 22 29.0**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.65**	**307**	P	**Pn**	**17 22 27.1**	**-1.8**
DORK				S	**Sg**	**17 22 51.8**	**-0.1**
MLAZ	**Malazgirt

ADCV					IAML		17 27 36.0	
	comp=N,82nm,0.7s							
CUKT	**Cukurca**	**1.37**	**208**	Pn	**Pb**	**17 27 10.1**	**+0.4**
CUKT				Sn	**Sg**	**17 27 29.1**	**+0.9**
IGDI	**IGDIR**	**1.43**	**350**	P	**Pg**	**17 27 10.8**	**-0.5**
IGDI				IAML		17 27 36.0	
	comp=N,42nm,1.2s						
IGDI				IAML		17 27 43.0	
	comp=E,38nm,0.9s						
PERV	**Siirt/Pervari-**	**1.56**	**251**	P	**Pg**	**17 27 13.8**	**-0.2**
PERV				IAML		17 27 45.0	
	comp=E,164nm,0.6s						
PERV				IAML		17 27 46.0	
	comp=N,162nm,0.5s						
AGRB	**Hanur-Agry**	**1.57**	**315**	Pn	**Pg**	**17 27 14.8**	**+0.7**
AGRB				Sn	**Sg**	**17 27 36.2**	**+1.8**
DORK	**Agr/Tutak/Do**	**1.57**	**306**	P	**Pb**	**17 27 12.9**	**-0.2**
DORK				IAML		17 27 45.0	
	comp=E,34nm,0.7s						
DORK				IAML		17 27 51.0	
	comp=N,48nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.61**	**295**	Pn	**Pg**	**17 27 15.4**	**+0.6**
KOTA	**Agri, Merkez-K**	**1.63**	**325**	P	**Pb**	**17 27 14.1**	**-0.1**
KOTA				IAML		17 27 44.0	
	comp=N,27nm,0.9s						
KOTA				IAML		17 27 48.0	
	comp=E,21nm,0.7s						
GNI	**Garni**	**1.70**	**8**	Pn	**Pg**	**17 27 16.2**	**-0.4**
GURO	**Guroymak-BITLI**	**1.87**	**273**	Pn	**Pg**	**17 27 18.9**	**-1.0**
SRTM	**Siirt_Merkez**	**2.02**	**257**	P	**Pb**	**17 27 20.5**	**-0.2**
SRTM				IAML		17 28 02.0	
	comp=N,81nm,0.7s						
SRTM				IAML		17 28 02.0	
	comp=E,56nm,0.8s						
SENK	**Senkaya-Erzuru**	**2.63**	**323**	Pn	**Pb**	**17 27 30.1**	**-1.1**

*IDC **23** 17:27:00.3±1.0,26°.83N×143°.64E,h0km,mb3.7/9, mbtmp3.7/11,ML3.1/2,Error ellipse: s-maj=25.0km s-min=16.6km az=67.0*

ISC 23 17:27:05.3±0.9,26°.9N±0°.1×143°.6E±0°.1,h35km,n12, σ1f10/13,mb3.7/9,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.30**	**278**	Pn	**Pn**	**17 27 26.8**	**-0.2**
	9.2nm,0.3s,baz=353,slow=23,SNR=11						
JCJ				Sn	**Sn**	**17 27 43.7**	**+0.5**
	29nm,0.3s,baz=267,slow=23,SNR=9.5						
MJAR	**Matsushiro Arr**	**10.65**	**336**	Pn	**Pn**	**17 29 33.0**	**-2.2**
	0.2nm,0.3s,baz=152,slow=9.9,SNR=23						
	4.8nm,0.9s						
KSRS	**Korea Array**	**16.93**	**312**	P	**P**	**17 31 00.5**	**-0.5**
	0.1nm,0.3s,baz=122,slow=12,SNR=3.8						
	1.6nm,0.9s						
KLR	**Kul'dur**	**24.10**	**341**	P	**P**	**17 32 19.1**	**+1.6**
	1.7nm,0.7s,baz=162,slow=4.8,SNR=5.9						
	1.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.91**	**268**	P	**P**	**17 34 52.4**	**-0.2**
	0.2nm,0.6s,baz=78,slow=8.4,SNR=2.1						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**47.45**	**192**	P	**P**	**17 35 36.5**	**-0.1**
	3.1nm,0.8s,baz=12,slow=8.4,SNR=12						
	3.1nm,0.8s						
ASAR	**Alice Springs**	**51.16**	**191**	P	**P**	**17 36 04.0**	**-1.0**
	0.3nm,0.6s,baz=2.3,slow=5.5,SNR=11						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**51.58**	**310**	P	**P**	**17 36 09.0**	**+1.0**
	0.4nm,0.7s,baz=92,slow=7.7,SNR=6.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**54.09**	**314**	P	**P**	**17 36 27.2**	**+0.9**
	1.0nm,0.6s,baz=92,slow=7.8,SNR=10						
	1.0nm,0.6s						
ILAR	**Eielson Array**	**57.25**	**29**	P	**P**	**17 36 49.1**	**+0.2**
	0.4nm,0.8s,baz=271,slow=7.3,SNR=2.8						
	0.4nm,0.8s						
STKA	**Stephens Creek**	**58.50**	**182**	P	**P**	**17 36 57.7**	**-0.2**
	1.6nm,0.8s,baz=350,slow=12,SNR=3.1						
	1.6nm,0.8s						
BVAR	**Borovoye Array**	**59.05**	**318**	P	**P**	**17 37 02.7**	**+1.1**
	0.5nm,0.5s,baz=106,slow=6.1,SNR=4.2						
	0.5nm,0.5s						

TEH 23 17:27:32.8,38°.42N×44°.52E,h10km±990km,ML2.7, Presumed earthquake,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.88**	**99**	Pg	Pg	17 27 49.5	-0.3
MAKU	**Maku**	**0.94**	**8**	Pg	Pb	17 27 51.3	0.0
MAKU				Sg	Sb	17 28 04.7	+0.8
IMRD	**Marand**	**0.97**	**72**	Pg	Pn	17 27 52.3	-0.4

*SDD **23** 17:27:53.8±0.9, 17°.86N×66°.77W,h21km±11km,MD3.7, ML2.8,MW3.4,Presumed earthquake*
*NEIC **23** 17:27:53.5±0.5, 17°.92N±0°.02×66°.757W±0°.009, h10km±1km,ML2.9/33,Md3.3/7(RSPR),Error ellipse: s-maj=4.1km s-min=1.9km az=176.0*
*RSPR **23** 17:27:53.5, 17°.91N×66°.77W,h4km,MD3.3/7*

ISC 23 17:27:52.0±1.3, 17°.84N±0°.07×66°.77W±0°.02,h17km±7km, n38,σ0s35/57,10C-7D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.17**	**321**		**Pg**	**17 27 56.6**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.17**	**321**	⇓*iP*	**Pg**	**17 27 56.6**	**+0.2**
OBIP	**Obispado Ponce**	**0.25**	**37**		**Pg**	**17 27 57.7**	**0.0**
OBIP	**Obispado Ponce**	**0.25**	**37**		**Sg**	**17 28 01.3**	**-0.2**
OBIP	**Obispado Ponce**	**0.25**	**37**	⇑*iP*	**Pb**	**17 27 57.8**	**-0.3**
OBIP				*eS*	**Sg**	**17 28 01.3**	**-0.2**
CELP	**Cerrillos**	**0.29**	**37**		**Pb**	**17 27 58.5**	**-0.3**
CELP				IAML		17 28 02.7	
	2μm,0.4s						
MLPR	**Magueyes Islan**	**0.29**	**296**		**Pb**	**17 27 59.2**	**+0.4**
MLPR				IAML		17 28 06.1	
	2μm,0.3s						
MLPR				IAML		17 28 06.3	
	2μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.37**	**297**		**Pb**	**17 28 00.3**	**+0.3**
CRPR					**Sb**	**17 28 05.6**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.37**	**297**	IAML		17 28 07.6	
	1μm,0.6s						
CRPR				IAML		17 28 09.1	
	1μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.37**	**297**	⇑*eP*	**Pb**	**17 28 00.2**	**+0.1**
CRPR				⇑*eSg*	**Sb**	**17 28 05.7**	**+0.3**
CRPR				IAML		17 28 06.9	
	comp=N,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.37**	**297**	⇑*iP*	**Pb**	**17 28 00.3**	**+0.3**
CRPR				*eS*	**Sb**	**17 28 05.6**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.41**	**6**		**Pg**	**17 28 00.1**	**-0.3**
LSP	**Las Mesas**	**0.45**	**318**		**Pb**	**17 28 01.6**	**0.0**
LSP					**Sb**	**17 28 08.5**	**+0.6**
LSP	**Las Mesas**	**0.45**	**318**	⇑*iP*	**Pb**	**17 28 01.6**	**0.0**
LSP				*eS*	**Sb**	**17 28 08.5**	**+0.6**
PRSN	**Puerto Rico Se**	**0.52**	**316**		**Pb**	**17 28 02.6**	**0.0**
PRSN					**Sb**	**17 28 10.0**	**+0.1**
PRSN	**Puerto Rico Se**	**0.52**	**316**	IAML		17 28 10.5	
	comp=N,3μm,0.3s						
PRSN				IAML		17 28 14.4	
	comp=N,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.52**	**316**	⇑*ePg*	**Pb**	**17 28 02.6**	**0.0**
PRSN				⇑*eSg*	**Sb**	**17 28 10.0**	**+0.1**
PRSN				IAML		17 28 10.4	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.52**	**316**	⇓*iP*	**Pb**	**17 28 02.6**	**0.0**
PRSN				*eS*	**Sb**	**17 28 10.0**	**+0.1**
ECPR	**Experimental S**	**0.61**	**39**		**Pb**	**17 28 04.2**	**-0.1**
ECPR	**Experimental S**	**0.61**	**39**	⇑*iP*	**Pb**	**17 28 04.5**	**+0.3**
ECPR				*eS*	**Sb**	**17 28 12.7**	**+0.1**
SJG	**San Juan**	**0.65**	**65**		**Pg**	**17 28 05.2**	**+0.5**
SJG	**San Juan**	**0.65**	**65**	⇑*ePg*	**Pg**	**17 28 05.2**	**+0.5**
SJG				⇓*eSg*	**Sb**	**17 28 14.4**	**+0.9**
SJG	**San Juan**	**0.65**	**65**	⇑*eP*	**Pn**	**17 28 05.9**	**-0.4**
SJG				*eS*	**Sb**	**17 28 14.4**	**+0.9**
EMPR	**Esperanza - Ma**	**0.67**	**19**		**Pg**	**17 28 05.5**	**+0.3**
EMPR					**Sg**	**17 28 14.6**	**+0.4**
EMPR	**Esperanza - Ma**	**0.67**	**19**	⇓*eP*	**Pg**	**17 28 05.5**	**+0.3**
EMPR				*eS*	**Sg**	**17 28 14.6**	**+0.4**
AGPR	**Aguadilla, PR**	**0.71**	**332**		**Pb**	**17 28 05.5**	**-0.2**
AGPR				IAML		17 28 18.2	
	comp=N,579nm,0.3s						
AGPR				IAML		17 28 19.6	
	comp=N,460nm,0.6s						
AGPR	**Aguadilla, PR**	**0.71**	**332**	⇑*ePg*	**Pb**	**17 28 05.6**	**-0.2**
AGPR				⇑*eSg*	**Sg**	**17 28 15.4**	**+0.1**
AGPR				IAML		17 28 18.3	
	comp=N,514nm,0.3s						
AGPR	**Aguadilla, PR**	**0.71**	**332**	⇑*iP*	**Pb**	**17 28 05.6**	**-0.2**
AGPR				*eS*	**Sg**	**17 28 15.6**	**+0.3**
PDPR	**Patillas Dam,**	**0.73**	**76**		**Pn**	**17 28 06.8**	**-0.7**
GCPR	**Guaynabo City**	**0.80**	**54**		**Pg**	**17 28 07.5**	**-0.1**
GCPR					**Sg**	**17 28 18.1**	**-0.1**
GCPR	**Guaynabo City**	**0.80**	**54**	⇓*eP*	**Pg**	**17 28 07.5**	**-0.1**
GCPR				*eS*	**Sg**	**17 28 18.1**	**-0.1**
IDE	**Isla Desecheo**	**0.87**	**309**		**Pg**	**17 28 08.9**	**0.0**
IDE					**Sg**	**17 28 20.7**	**+0.4**
IDE	**Isla Desecheo**	**0.87**	**309**	⇓*iP*	**Pg**	**17 28 08.9**	**0.0**
IDE				*eS*	**Sg**	**17 28 20.7**	**+0.4**
HUMP	**Col San Antoni**	**0.92**	**71**		**Pn**	**17 28 10.0**	**-0.2**
HUMP					**Sn**	**17 28 22.8**	**-0.1**
HUMP	**Col San Antoni**	**0.92**	**71**	IAML		17 28 26.9	
	comp=N,240nm,0.3s						
HUMP				IAML		17 28 28.5	
	comp=N,246nm,0.2s						
HUMP	**Col San Antoni**	**0.92**	**71**	⇓*iP*	**Pn**	**17 28 10.0**	**-0.2**
HUMP				*eS*	**Sn**	**17 28 22.8**	**-0.1**
PCDR	**Punta Cana, DR**	**1.68**	**294**	⇑*ePg*	**Pb**	**17 28 22.1**	**-0.3**
PCDR				IAML		17 28 53.2	
	comp=N,155nm,0.7s						
HATOM	**Hato Mayor del**	**2.66**	**291**	⇑*ePg*	**Pb**	**17 28 38.3**	**-0.9**
HATOM				IAML		17 29 25.4	
	comp=N,24nm,0.3s						

*MOS **23** 17:29:18.6±1.0,33°.87N×140°.67E,h65km,mb4.7/14,Error ellipse: s-maj=17.4km s-min=7.4km az=122.1*
*IDC **23** 17:29:19.2±1.6,33°.93N×140°.69E,h53km±14km,mb3.7/19, mbtmp4.1/25,ML4.2/6,Error ellipse: s-maj=19.4km s-min=12.3km az=84.0*
*NEIC **23** 17:29:19.9±2.1,33°.79N±0°.07×140°.6E±0°.1,h68km±8km, mb4.4/22,Error ellipse: s-maj=12.6km s-min=9.3km az=106.0*
*JMA **23** 17:29:20.1±0.1,33°.9N±0°.4×140°.5E±0°.7,h58km±3km, MD4.4/37,MV4.3/37,FAR S OFF BOSO PENINSULA*
JMA Felt I J1 at FAR S OFF BOSO PENINSULA.

ISC 23 17:29:18.7±0.9,33°.88N±0°.03×140°.67E±0°.06,h49km±8km, n127,σ1f83/132,mb4.2/44,5C-10D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.81**	**18**	*iP*	**Pn**	**17 29 35.7**	**+2.3**
BSO1				X		17 29 48.2	
JMKN	**Mikurajimanish**	**0.89**	**271**	*iP*	**Pn**	**17 29 35.2**	**+0.2**
JMKN				A	A	17 29 35.2	
	comp=N,22nm,0.3s,comp=E,28nm,1.1s						
JMKN				S	**Sn**	**17 29 45.8**	**-1.1**
BSO3	**Boso 3**	**0.93**	**352**	*iP*	**Pn**	**17 29 36.9**	**+1.7**
BSO3				X		17 29 49.8	
JMYK	**Miyake Tsubota**	**0.95**	**281**	*iP*	**Pn**	**17 29 35.9**	**+0.2**
JMYK				A	A	17 29 35.9	
	comp=N,15nm,0.3s,comp=E,17nm,0.4s						
JMYK				S	**Sn**	**17 29 47.3**	**-0.8**
JHJ2	**Mitsune**	**1.04**	**223**		**Pn**	**17 29 37.8**	**+0.8**
JHJ2				Sn	**Sn**	**17 29 50.5**	**0.0**
JHJ2	**Mitsune**	**1.04**	**223**	*iP*	**Pn**	**17 29 38.2**	**+1.2**
JHJ2				A	A	17 29 38.2	
	comp=N,22nm,0.3s,comp=E,34nm,0.3s						
JHJ2				S	**Sn**	**17 29 51.6**	**+1.2**
JHJ	**Hachijo jima 2**	**1.06**	**224**	P	**Pn**	**17 29 38.1**	**+0.9**
	comp=E,4μm,0.3s,baz=101,slow=23,SNR=868						
JHJ				S	**Sn**	**17 29 49.4**	**-1.4**
	comp=E,11μm,0.3s,baz=109,slow=24,SNR=24						
JHCJ	**Hachijojimakas**	**1.08**	**222**	*iP*	**Pn**	**17 29 38.5**	**+1.0**
JHCJ				S	**Sn**	**17 29 52.0**	**+0.6**
BSO4	**Boso 4**	**1.14**	**346**	*iP*	**Pn**	**17 29 39.8**	**+1.5**
JNIO	**Niijimaoohara**	**1.25**	**293**	A	A	17 29 39.6	
	comp=N,15nm,2.4s,comp=E,22nm,2.1s						
JTHY	**Toshimahigashi**	**1.31**	**300**	*eP*	**Pn**	**17 29 40.8**	**+0.1**
JTHY				*eS*	**Sn**	**17 29 55.8**	**-1.2**
JIM2	**Oshima 3**	**1.32**	**310**	⇓*iP*	**Pn**	**17 29 40.7**	**-0.1**
JIM2				A	A	17 29 40.7	
	comp=N,18nm,0.3s,comp=E,16nm,0.3s						
JIM2				⇓S	**Sn**	**17 29 55.3**	**-2.0**
JYO	**Yokosk**	**1.57**	**329**	A	A	17 29 44.8	
	comp=N,10.0nm,0.8s,comp=E,13nm,0.4s						
JAOM	**Aogashimamukai**	**1.60**	**208**	P	**Pn**	**17 29 46.5**	**+1.9**
JAOM				*eS*	**Sn**	**17 30 05.9**	**+1.8**
KTJ3	**Kamata3**	**1.69**	**309**	⇓*iP*	**Pn**	**17 29 45.7**	**-0.1**
KTJ3				⇓S	**Sn**	**17 30 03.9**	**-2.3**
JIZS	**Izushimoda**	**1.70**	**300**	⇓*iP*	**Pn**	**17 29 46.3**	**+0.3**
JIZS				A	A	17 29 46.3	
	comp=E,2.0nm,0.7s						
JIZS				⇓S	**Sn**	**17 30 05.3**	**-1.2**
JOD2	**Odawara 2**	**1.90**	**317**	⇓*iP*	**Pn**	**17 29 48.9**	**+0.2**
JOD2				⇓*eS*	**Sn**	**17 30 09.7**	**-1.8**
TOK	**Tokyo**	**1.95**	**338**	A	A	17 29 50.2	
	comp=N,13nm,0.3s,comp=E,15nm,0.3s						
JSG	**Sagara**	**2.20**	**292**		**Pn**	**17 29 53.9**	**+1.1**
JGF	**Kuroka**	**3.22**	**303**		**Pn**	**17 30 08.7**	**+1.9**
MJAR	**Matsushiro Arr**	**3.33**	**324**	P	**Pn**	**17 30 09.5**	**+1.1**
	comp=E,13nm,0.3s,baz=153,slow=9.7,SNR=462						
MJAR				S	**Sn**	**17 30 46.0**	**-0.7**
	comp=E,86nm,0.6s,baz=128,slow=28,SNR=2.7						
	comp=E,55nm,0.3s						
MJAR	**Matsushiro Arr**	**3.33**	**324**		**Pn**	**17 30 10.3**	**+2.0**
MJAR	**Matsushiro Arr**	**3.33**	**324**	P	**Pn**	**17 30 10.3**	**+2.0**
MAJO	**Matsushiro**	**3.33**	**324**		**Pn**	**17 30 10.5**	**+2.1**
MAJO	**Matsushiro**	**3.33**	**324**	*iP*	**Pn**	**17 30 10.9**	**+2.5**
MJB9	**Matsu-Tunnel**	**3.34**	**324**		**Pn**	**17 30 11.4**	**+2.9**
INU	**Inuyama**	**3.35**	**297**		**Pn**	**17 30 09.9**	**+1.3**
JMN	**Monobe**	**5.65**	**270**	Pn	**Pn**	**17 30 40.7**	**+0.5**
JCJ	**Chichijima**	**6.89**	**169**	P	**Pn**	**17 30 56.8**	**-0.3**
	comp=E,20nm,0.3s,baz=104,slow=24,SNR=6.5						
JCJ				S	**Sn**	**17 32 12.2**	**-2.0**
	comp=E,72nm,0.3s,baz=270,slow=22,SNR=3.0						
	comp=E,37nm,0.3s						
JCJ	**Chichijima**	**6.89**	**169**	Pn	**Pn**	**17 30 55.6**	**-1.6**
JNU	**Nakatsue**	**8.21**	**267**	P	**Pn**	**17 31 16.4**	**+1.1**
	comp=E,2.7nm,0.3s,baz=74,slow=3.1,SNR=4.4						
	comp=E,8.1nm,0.4s						
JSU	**Suzuyama**	**8.92**	**257**	Pn	**Pn**	**17 31 25.3**	**+0.2**
NMR	**Nemuro--Hokkai**	**10.27**	**21**	*eP*	**Pn**	**17 31 40.6**	**-2.7**
ASAJ	**Asahikawa**	**10.33**	**8**	P	**Pn**	**17 31 43.4**	**-0.8**
	comp=E,4.3nm,0.3s,baz=220,slow=9.7,SNR=48						
	comp=E,21nm,0.5s						
JKA	**Kamikawa-asahi**	**10.33**	**8**		**Pn**	**17 31 42.5**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**10.91**	**20**	P	**Pn**	**17 31 49.6**	**-2.6**
KSRS	**Korea Array**	**10.96**	**293**	P	**Pn**	**17 31 53.6**	**+0.8**
	comp=E,0.3nm,0.3s,baz=110,slow=14,SNR=13						
	comp=E,5.4nm,0.9s						
KSAR	**Wonju Array Be**	**10.99**	**293**	Pn	**Pn**	**17 31 51.0**	**-2.2**
KSAR	**Wonju Array Be**	**10.99**	**293**	P	**Pn**	**17 31 51.0**	**-2.2**
YSS	**Yuzhno-Sakhali**	**13.16**	**6**	Pn	**Pn**	**17 32 20.0**	**-2.8**
KLR	**Kul'dur**	**16.71**	**339**	P	**Pn**	**17 33 08.5**	**-0.7**
	comp=E,0.9nm,0.3s,baz=164,slow=12,SNR=12						
	comp=E,2.4nm,0.4s						
YULB	**Yu-li**	**19.92**	**243**	P	**P**	**17 33 42.9**	**-3.5**
YULB				IAmb	IAmb	17 33 53.3	
	comp=E,34nm,1.4s						
TWG	**Pinlang**	**20.43**	**242**	P	**P**	**17 33 47.5**	**-4.5**
TWG				IAmb	IAmb	17 33 58.7	
	comp=E,32nm,1.2s						
HNS	**HongShan**	**21.36**	**287**	⇓P	P	17 34 10.3	+8.4
XLT	**XiLinHaoTe**	**21.52**	**305**	*eP*	**P**	**17 34 06.8**	**+3.1**
XLT				sP	sP	17 34 25.9	+5.3
XLT				PP	**PnPn**	**17 34 33.6**	**+8.1**
XLT				pmax	pmax		
	comp=E,6.0nm,0.8s						
HILR	**Hailar Array B**	**22.00**	**322**	P	**P**	**17 34 08.0**	**-0.7**
	comp=E,0.9nm,0.4s,baz=161,slow=18,SNR=5.4						
	comp=E,0.9nm,0.4s						
ZEA	**Zeya**	**22.02**	**338**	*eP*	**P**	**17 34 09.2**	**+0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**24.08**	**295**	*eP*	**P**	**17 34 31.0**	**+1.3**
HHC				pmax	pmax		
	comp=E,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=E,150nm,5.2s						
MA2	**Magadan**	**26.56**	**12**	P	**P**	**17 34 51.8**	**0.0**
	comp=E,1.2nm,0.4s,baz=196,slow=8.6,SNR=5.7						
	comp=E,1.2nm,0.4s						
MA2	**Magadan**	**26.56**	**12**	*iP*	**P**	**17 34 52.9**	**+1.1**
MA2				pmax	pmax		
	comp=E,2.0nm,0.9s						

H11N2	**WAKE ISLAND Hy**	**27.23**	**114**	T	T	18 03 53.0	
	baz=306,slow=75,SNR=113						
H11N1	**WAKE ISLAND Hy**	**27.23**	**115**	T	T	18 04 02.9	
	baz=306,slow=75,SNR=150						
H11N3	**WAKE ISLAND Hy**	**27.25**	**114**	T	T	18 04 03.8	
	baz=306,slow=75,SNR=97						
H11S3	**WAKE ISLAND Hy**	**27.82**	**117**	T	T	18 04 37.3	
	baz=308,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**27.82**	**117**	T	T	18 04 31.8	
	baz=308,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**27.84**	**117**	T	T	18 04 43.9	
	baz=308,slow=75,SNR=12						
ULN	**Ulaanbaatar**	**28.75**	**309**	P	**P**	**17 35 10.7**	**-1.0**
ULN	**Ulaanbaatar**	**28.75**	**309**	*iP*	**P**	**17 35 11.5**	**-0.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YAK	**Yakutsk**	**29.03**	**349**	*iP*	**P**	**17 35 15.5**	**+1.7**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**29.16**	**309**	P	**P**	**17 35 15.3**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=110,slow=8.4,SNR=5.7						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	**29.16**	**309**	P	**P**	**17 35 15.1**	**-0.2**
LZH	**Lanzhou**	**30.14**	**285**	*eP*	**P**	**17 35 27.5**	**+3.4**
PZH	**PanZhiHua**	**34.28**	**268**	P	**P**	**17 36 01.8**	**+1.3**
KNGR	**Kungurtug, Tuv**	**35.47**	**311**	*iP*	**P**	**17 36 12.0**	**+1.5**
KNGR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL	**Bilibino**	**37.22**	**16**	*iP*	**P**	**17 36 29.2**	**+4.2**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.9s						
CMAR	**Chiang Mai Arr**	**40.18**	**258**	P	**P**	**17 36 50.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=60,slow=8.7,SNR=1.9						
	comp=Z,0.2nm,0.5s						
WMQ	**Urumqi**	**41.80**	**300**	*eP*	**P**	**17 37 04.5**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DGZ	**Jazzator, Alta**	**41.81**	**309**	*iP*	**P**	**17 37 03.4**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZALV	**Zalesovo Beam**	**43.65**	**315**	P	**P**	**17 37 17.6**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=101,slow=8.0,SNR=7.6						
ZALV				PcP	**PcP**	**17 39 03.2**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=81,slow=3.3,SNR=3.6						
	comp=Z,1.0nm,0.3s						
MK31	**Makanchi Array**	**45.34**	**305**	*ceP*	**P**	**17 37 31.7**	**-0.2**
MKAR	**Makanchi Array**	**45.34**	**305**	P	**P**	**17 37 31.2**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=87,slow=10.0,SNR=26						
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**45.34**	**305**	P	**P**	**17 37 29.4**	**-2.5**
MKAR	**Makanchi Array**	**45.34**	**305**	*ceP*	**P**	**17 37 34.5**	**+2.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MAKZ	**Makanchi**	**45.55**	**305**		**P**	**17 37 30.7**	**-2.9**
MAKZ				IAmb	IAmb	17 37 37.3	
	comp=Z,3.6nm,1.1s						
MAKZ	**Makanchi**	**45.55**	**305**	P	**P**	**17 37 30.7**	**-2.9**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
N15K	**Kwethluk River**	**46.11**	**37**	P	**P**	**17 37 35.6**	**-2.2**
F17K	**Baldwin Pennin**	**46.78**	**28**	P	**P**	**17 37 44.1**	**+1.2**
F17K				IAmb	IAmb	17 37 46.6	
	comp=Z,2.5nm,0.8s						
KURK	**Kurchatov**	**47.45**	**310**		**P**	**17 37 48.2**	**-0.1**
KURK				IAmb	IAmb	17 37 52.6	
	comp=Z,3.8nm,0.7s						
KURK	**Kurchatov**	**47.45**	**310**	*ceP*	**P**	**17 37 50.4**	**+2.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURBB	**Kurchatov Arra**	**47.51**	**310**	P	**P**	**17 37 48.5**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=83,slow=6.4,SNR=8.3						
	comp=Z,1.2nm,0.3s						
H18K	**Honhosa River**	**47.66**	**30**	P	**P**	**17 37 48.5**	**-1.3**
H18K				IAmb	IAmb	17 37 53.9	
	comp=Z,7.2nm,1.4s						
B20K	**Meade River**	**49.11**	**24**	P	**P**	**17 38 01.6**	**+0.7**
IMAR	**Indian Mountai**	**49.69**	**29**	P	**P**	**17 38 05.9**	**+0.6**
PPLA	**Purkeypile**	**50.12**	**33**	P	**P**	**17 38 08.1**	**-0.7**
BOOM	**Boomskoye usch**	**50.49**	**300**		**P**	**17 38 11.0**	**-1.1**
BOOM	**Boomskoye usch**	**50.49**	**300**	P	**P**	**17 38 11.0**	**-1.1**
BOOM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**52.28**	**314**	P	**P**	**17 38 24.9**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=106,slow=9.2,SNR=6.4						
	comp=Z,0.6nm,0.4s						
ILAR	**Eielson Array**	**52.49**	**31**	P	**P**	**17 38 25.9**	**-0.5**
	com

HFS	**Hagfors**	**76.71**	**336**	P	**P**	**17**	**41**	**04.6 +0.3**
	comp=Z,6.6nm,1.0s,baz=95,slow=9.2,SNR=6.3							
	comp=Z,6.6nm,1.0s							
NOA	**NORSAR Array B**	**76.85**	**337**	P	**P**	**17**	**41**	**05.5 +0.3**
	comp=Z,0.9nm,0.8s,baz=48,slow=5.2,SNR=1.4							
	comp=Z,0.9nm,0.8s							
PDAR	**Pinedale Array**	**80.32**	**45**	P	**P**	**17**	**41**	**24.1 -0.8**
	comp=Z,0.3nm,0.8s,baz=287,slow=6.2,SNR=2.5							
	comp=Z,0.3nm,0.8s							
BRTR	**Keskin Array B**	**80.48**	**312**	P	**P**	**17**	**41**	**26.0 +0.3**
	comp=Z,0.9nm,0.8s,baz=125,slow=4.1,SNR=5.3							
	comp=Z,0.9nm,0.8s							
NVL	**N'lazarevskaya**	**134.14**	**201**	*e*PKIKP	**PKPdf**	**17**	**48**	**28.0 -1.7**
NVL				pmax	pmax			
	comp=Z,17nm,1.1s							
H03N2	**Juan Fernandez**	**147.18**	**101**	T	T	20	34	08.6
	baz=285,slow=76,SNR=7.7							
H03N3	**Juan Fernandez**	**147.19**	**101**	T	T	20	34	10.0
	baz=285,slow=76,SNR=7.8							
H03N1	**Juan Fernandez**	**147.19**	**100**	T	T	20	34	10.0
	baz=285,slow=76,SNR=5.7							

*TEH **23** 17:30:37.8, 38.42N×44.44E, h10km±188km, ML2.8,*
Presumed earthquake
*AZER **23** 17:30:37.2, 38.41N×44.59E, h6km, ml3.2*
*AFAD **23** 17:30:38.1, 38.40N×44.53E, h7km±2km, ML2.7*
*NSSP **23** 17:30:38.5, 38.40N×44.60E, h10km, Ms3.0*
*ISK **23** 17:30:41.4, 38.42N×44.43E, h12km, ML2.7/8*
ISC 23 17:30:39.1±1.1**, 38.42N**±0.03×**44.54E**±0.02**, h14**km±9km**,**
n29,σ1°**62**/49**, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**300**	P	**Pg**	**17 30 48.2**	**-0.8**
OZAP				S	**Sb**	**17 30 55.4**	**-1.5**
OZAP				IAML		17 31 03.0	
	comp=N,1μm,0.8s						
ISHB	**Shabestar**	**0.86**	**99**	Pg	**Pn**	**17 30 56.0**	**-1.1**
TVAN	**Van**	**0.90**	**278**	P	**Pb**	**17 30 55.6**	**-1.0**
TVAN				S	**Sn**	**17 31 10.0**	**-0.4**
TVAN				IAML		17 31 14.0	
	comp=E,435nm,0.4s						
TVAN				IAML		17 31 23.0	
	comp=N,294nm,0.6s						
VANB	**Van**	**0.92**	**282**	Pg	**Pn**	**17 30 57.6**	**-0.1**
VANB				Sg	**Sb**	**17 31 09.2**	**+0.2**
MAKU	**Maku**	**0.94**	**7**	Pg	**Pg**	**17 30 56.3**	**-1.1**
VMUR	**Van-Muradiye**	**0.95**	**307**	P	**Pg**	**17 30 56.6**	**-0.9**
VMUR				S	**Sn**	**17 31 10.8**	**-0.8**
IMRD	**Marand**	**0.96**	**72**	Pg	**Pn**	**17 30 58.6**	**+0.2**
IMRD				Sg	**Sn**	**17 31 13.1**	**+1.2**
NAX	**Nakhchivan**	**1.06**	**44**	P	**Pn**	**17 30 60.0**	**+0.3**
NAX				S	**Sn**	**17 31 16.1**	**+1.7**
HAKT	**HAKKARI**	**1.08**	**218**	P	**Pn**	**17 30 60.0**	**0.0**
HAKT				S	**Sn**	**17 31 18.0**	**+3.1**
GEVA	**Gevas**	**1.17**	**265**	P	**Pb**	**17 30 59.5**	**-1.6**
GEVA				S	**Sn**	**17 31 17.7**	**+0.6**
GEVA				IAML		17 31 20.0	
	comp=N,130nm,0.3s						
GEVA				IAML		17 31 23.0	
	comp=E,144nm,0.5s						
ORD	**Ordubad**	**1.25**	**65**	P	**Pg**	**17 31 03.4**	**+0.2**
ORD				S	**Sn**	**17 31 21.7**	**+2.7**
SBZ	**Shahbuz**	**1.26**	**39**	P	**Pg**	**17 31 03.3**	**-0.1**
SBZ				S	**Sn**	**17 31 22.2**	**+3.0**
DYDN	**Diyadin**	**1.31**	**330**	P	**Pg**	**17 31 03.8**	**-0.5**
DYDN				S	**Sb**	**17 31 19.6**	**-0.7**
DYDN				IAML		17 31 28.0	
	comp=E,118nm,0.7s						
DYDN				IAML		17 31 33.0	
	comp=N,108nm,0.5s						
HYR	**Heyderabad**	**1.32**	**11**	P	**Pg**	**17 31 04.3**	**-0.3**
HYR				S	**Sg**	**17 31 24.7**	**+2.8**
CUKT	**Cukurca**	**1.38**	**213**	Pn	**Pg**	**17 31 06.4**	**+0.7**
CUKT				Sn	**Sg**	**17 31 25.0**	**+1.4**
VAYK	**Vayk**	**1.45**	**28**	⇓*e*P	**Pg**	**17 31 06.2**	**-0.9**
VAYK				⇓*e*S	**Sg**	**17 31 27.2**	**+1.2**
ADCV	**BITLIS_Adilcev**	**1.47**	**286**	P	**Pn**	**17 31 05.2**	**-0.2**
ADCV				S	**Sg**	**17 31 28.9**	**+2.3**
ADCV				IAML		17 31 32.0	
	comp=N,86nm,0.9s						
IGDI	**IGDIR**	**1.49**	**346**	P	**Pg**	**17 31 07.9**	**0.0**
IGDI				S	**Sg**	**17 31 32.6**	**+5.3**
ALVK	**Alvank**	**1.51**	**69**	*e*P	**Pg**	**17 31 07.6**	**-0.6**
ALVK				*e*S	**Sg**	**17 31 27.8**	**-0.1**
AGRB	**Hanur-Agry**	**1.67**	**314**	Pn	**Pg**	**17 31 10.0**	**-1.2**
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pn	**Pg**	**17 31 11.0**	**-1.0**
GNI	**Garni**	**1.74**	**5**	Pn	**Pg**	**17 31 12.5**	**0.0**
GNI	**Garni**	**1.74**	**5**	*e*P	**Pg**	**17 31 12.3**	**-0.2**
GNI				*e*S	**Sg**	**17 31 38.3**	**+3.2**
EGVZ	**Egvard**	**1.76**	**62**	*e*P	**Pg**	**17 31 11.4**	**-1.6**
EGVZ				*e*S	**Sg**	**17 31 34.5**	**-1.3**
AYRK	**Ayrk**	**1.96**	**29**	*e*P	**Pg**	**17 31 15.1**	**-1.6**
AYRK				*e*S	**Sg**	**17 31 40.9**	**-1.2**
GURO	**Guroymak-BITLI**	**1.97**	**275**	Pn	**Pb**	**17 31 14.4**	**-0.5**
IHRS	**Heris**	**1.97**	**92**	Pn	**Pg**	**17 31 16.8**	**-0.1**
VRTB	**Varto-Mus**	**2.52**	**288**	Pn	**Pb**	**17 31 22.4**	**-1.8**
SVAN	**Silvan-Diyarba**	**2.64**	**265**	Pn	**Pb**	**17 31 23.9**	**-2.3**

*AFAD **23** 17:53:08.6, 38.21N×44.69E, h6km±3km, ML2.3*
*AZER **23** 17:53:11.0, 38.39N×44.49E, h10km, ml2.6*
*ISK **23** 17:53:12.8, 38.46N×44.64E, h9km, ML2.4/8*
*TEH **23** 17:53:12.3, 38.41N×44.46E, h10km±990km, ML2.8,*
Presumed earthquake
ISC 23 17:53:13.3±1.2**, 38.40N**±0.03×**44.53E**±0.03**, h5**km±11km**,**
n22,σ1°**66**/35**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**302**	P	**Pg**	**17 53 21.9**	**-0.9**
OZAP				S	**Sg**	**17 53 29.9**	**+0.6**
ISHB	**Shabestar**	**0.86**	**97**	Pg	**Pn**	**17 53 30.2**	**-2.1**
ISHB				Sg	**Sn**	**17 53 43.7**	**-1.7**
TVAN	**Van**	**0.89**	**279**	P	**Pg**	**17 53 28.7**	**-1.7**
VANB	**Van**	**0.92**	**283**	Pg	**Pb**	**17 53 31.8**	**+0.1**
VANB				Sg	**Sb**	**17 53 45.8**	**+1.6**
VMUR	**Van-Muradiye**	**0.95**	**309**	P	**Pg**	**17 53 31.5**	**-0.1**
VMUR				S	**Sn**	**17 53 47.5**	**0.0**
VMUR				IAML		17 53 49.0	
	comp=N,96nm,0.4s						
VMUR				IAML		17 53 49.0	
	comp=E,84nm,0.3s						
MAKU	**Maku**	**0.96**	**7**	Pg	**Pb**	**17 53 30.8**	**-1.7**
IMRD	**Marand**	**0.97**	**71**	Pg	**Pn**	**17 53 32.7**	**-1.1**
HAKT	**HAKKARI**	**1.06**	**218**	P	**Pg**	**17 53 32.9**	**-0.7**
HAKT				S	**Sg**	**17 53 46.9**	**-0.5**
NAX	**Nakhchivan**	**1.08**	**44**	P	**Pn**	**17 53 34.3**	**-0.8**
NAX				S	**Sn**	**17 53 52.7**	**+2.2**
GEVA	**Gevas**	**1.16**	**266**	P	**Pn**	**17 53 33.2**	**-3.0**
GEVA				S	**Sb**	**17 53 51.9**	**+0.6**
GEVA				IAML		17 53 54.0	
	comp=N,83nm,0.8s						
GEVA				IAML		17 54 04.0	
	comp=E,73nm,0.7s						
AKDM	**Akdamar-Van**	**1.22**	**267**	Pn	**Pn**	**17 53 35.7**	**-1.4**
ORD	**Ordubad**	**1.26**	**65**	P	**Pg**	**17 53 37.8**	**+0.3**
ORD				S	**Sn**	**17 53 57.0**	**+1.9**
SBZ	**Shahbuz**	**1.28**	**38**	P	**Pg**	**17 53 37.9**	**+0.1**
SBZ				S	**Sn**	**17 53 58.4**	**+2.9**
DYDN	**Diyadin**	**1.32**	**330**	P	**Pb**	**17 53 38.1**	**-0.5**
DYDN				S	**Sb**	**17 53 52.7**	**-3.2**
DYDN				IAML		17 54 04.0	
	comp=E,41nm,0.8s						
DYDN				IAML		17 54 09.0	
	comp=N,48nm,0.7s						
HYR	**Heyderabad**	**1.34**	**11**	P	**Pg**	**17 53 38.7**	**-0.3**
HYR				S	**Sg**	**17 53 59.3**	**+2.9**
CUKT	**Cukurca**	**1.36**	**213**	Pn	**Pg**	**17 53 40.1**	**+0.7**
CUKT				Sn	**Sg**	**17 53 59.8**	**+2.8**
ADCV	**BITLIS_Adilcev**	**1.47**	**287**	P	**Pn**	**17 53 38.4**	**-2.2**
ADCV				IAML		17 54 05.0	
	comp=E,34nm,1.2s						
ADCV				IAML		17 54 09.0	
	comp=N,29nm,0.6s						
AGRB	**Hanur-Agry**	**1.68**	**315**	Pn	**Pn**	**17 53 43.4**	**0.0**
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pn	**Pn**	**17 53 44.0**	**+0.1**
MLAZ				Sn	**Sb**	**17 54 07.4**	**+0.1**
GNI	**Garni**	**1.76**	**5**	Pn	**Pn**	**17 53 43.4**	**-1.1**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn	**Pn**	**17 53 48.3**	**+1.0**
SVAN	**Silvan-Diyarba**	**2.63**	**266**	Pn	**Pn**	**17 53 58.2**	**+1.8**

*ISK **23** 18:12:43.7, 37.99N×44.57E, h5km, ML3.7/6*
*IDC **23** 18:12:46.3±4.0, 38.33N×43.83E, h0km, mb3.6/5,*
mbtmp3.6/5, Error ellipse: s-maj=84.1km s-min=19.0km
az=91.0
*AZER **23** 18:12:46.2, 38.35N×44.52E, h4km, ml3.8*
*TIF **23** 18:12:47.4, 38.40N×44.42E, h2km±1km*
*NSSP **23** 18:12:48.0, 38.33N×44.48E, h10km, Ms3.6*
*AFAD **23** 18:12:47.8, 38.38N×44.48E, h7km±3km, ML3.4*
*TEH **23** 18:12:48.7, 38.40N×44.44E, h6km±46km, ML3.6,*
Presumed earthquake
ISC 23 18:12:48.7±1.2**, 38.36N**±0.02×**44.45E**±0.02**, h3**km±9km**,**
n50,σ1°**49**/73**, mb3.6/5, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**310**	P	**Pg**	**18 12 57.3**	**-0.4**
OZAP				S	**Sg**	**18 13 04.0**	**+0.2**
OZAP				IAML		18 13 12.0	
	comp=N,4μm,0.8s						
OZAP	**Van, Ozalp-Mer**	**0.47**	**310**	Pg	**Pg**	**18 12 57.3**	**-0.4**
TVAN	**Van**	**0.84**	**282**	P	**Pg**	**18 13 03.9**	**-0.8**
TVAN				S	**Sb**	**18 13 17.4**	**-0.4**
TVAN				IAML		18 13 29.0	
	comp=E,1μm,0.7s						
TVAN				IAML		18 13 31.0	
	comp=N,1μm,0.7s						
TVAN	**Van**	**0.84**	**282**	Pg	**Pg**	**18 13 03.9**	**-0.8**
ISHB	**Shabestar**	**0.92**	**95**	Pg	**Pg**	**18 13 05.6**	**-0.7**
VMUR	**Van-Muradiye**	**0.93**	**313**	P	**Pg**	**18 13 06.3**	**-0.2**
VMUR				S	**Sn**	**18 13 20.7**	**-2.1**
VMUR				IAML		18 13 26.0	
	comp=E,1μm,0.7s						
VMUR				IAML		18 13 34.0	
	comp=N,973nm,0.7s						
VMUR	**Van-Muradiye**	**0.93**	**313**	Pg	**Pg**	**18 13 06.3**	**-0.2**
HAKT	**HAKKARI**	**1.00**	**216**	P	**Pb**	**18 13 07.7**	**-1.0**
HAKT				S	**Sn**	**18 13 24.8**	**+0.3**
MAKU	**Maku**	**1.01**	**10**	Pg	**Pg**	**18 13 07.2**	**-0.8**
IMRD	**Marand**	**1.04**	**70**	Pg	**Pb**	**18 13 08.8**	**-0.7**
GEVA	**Gevas**	**1.10**	**268**	P	**Pg**	**18 13 09.3**	**-0.5**
GEVA				S	**Sn**	**18 13 25.0**	**-1.9**
GEVA				IAML		18 13 26.0	
	comp=N,662nm,0.8s						
GEVA	**Gevas**	**1.10**	**268**	Pg	**Pg**	**18 13 09.2**	**-0.5**
NAX	**Nakhchivan**	**1.15**	**45**	P	**Pn**	**18 13 10.8**	**-1.0**
NAX				S	**Sn**	**18 13 28.0**	**-0.1**
AKDM	**Akdamar-Van**	**1.16**	**269**	Pn	**Pb**	**18 13 09.6**	**-1.9**
AKDM				Sn	**Sn**	**18 13 28.6**	**+0.2**
CUKT	**Cukurca**	**1.30**	**211**	Pg	**Pg**	**18 13 13.6**	**0.0**
DYDN	**Diyadin**	**1.32**	**333**	P	**Pn**	**18 13 12.8**	**-1.5**
DYDN				S	**Sb**	**18 13 29.6**	**-2.1**
DYDN				IAML		18 13 38.0	
	comp=N,901nm,0.7s						
DYDN				IAML		18 13 40.0	
	comp=E,934nm,0.6s						
DYDN	**Diyadin**	**1.32**	**333**	Pg	**Pn**	**18 13 12.8**	**-1.5**
ORD	**Ordubad**	**1.33**	**64**	P	**Pg**	**18 13 14.0**	**-0.3**
ORD				S	**Sg**	**18 13 33.8**	**+2.3**
SBZ	**Shahbuz**	**1.34**	**39**	P	**Pg**	**18 13 14.1**	**-0.4**
SBZ				S	**Sg**	**18 13 34.1**	**+2.3**
IAZR	**Azarshahr**	**1.39**	**119**	Pg	**Pg**	**18 13 15.5**	**+0.2**
HYR	**Heyderabad**	**1.39**	**13**	P	**Pg**	**18 13 15.0**	**-0.3**
HYR				S	**Sg**	**18 13 37.4**	**+4.0**
ADCV	**BITLIS_Adilcev**	**1.43**	**289**	P	**Pb**	**18 13 15.5**	**-0.5**
ADCV				S	**Sg**	**18 13 37.1**	**+2.6**
VAYK	**Vayk**	**1.53**	**29**	⇓*e*P	**Pb**	**18 13 17.1**	**-0.7**
VAYK				⇓*e*S	**Sg**	**18 13 38.7**	**+0.8**
ALVK	**Alvank**	**1.59**	**68**	*e*P	**Pb**	**18 13 17.9**	**-0.9**
ALVK				*e*S	**Sg**	**18 13 39.1**	**-0.8**
AGRB	**Hanur-Agry**	**1.66**	**317**	Pn	**Pb**	**18 13 19.9**	**-0.2**
MLAZ	**Malazgirt-MUS**	**1.68**	**298**	Pn	**Pb**	**18 13 19.4**	**-0.9**
MLAZ				Sn	**Sg**	**18 13 45.2**	**+2.6**
GNI	**Garni**	**1.80**	**7**	Pn	**Pg**	**18 13 22.7**	**-0.4**
	12nm,0.3s,baz=252,slow=2.6,SNR=28						
GNI				Lg	Lg	18 13 48.0	
	21nm,0.3s,baz=270,slow=15,SNR=5.6						
GNI	**Garni**	**1.80**	**7**	*e*P	**Pg**	**18 13 23.1**	**-0.1**
GNI				*e*S	**Sg**	**18 13 49.0**	**+2.5**
VNNZ	**Vanand**	**1.81**	**345**	*e*P	**Pg**	**18 13 22.8**	**-0.5**
VNNZ				*e*S	**Sg**	**18 13 48.5**	**+1.8**
EGVZ	**Egvard**	**1.85**	**62**	*e*P	**Pb**	**18 13 22.1**	**-1.1**
EGVZ				*e*S	**Sg**	**18 13 47.0**	**-1.1**
MAHB	**Mahabad**	**1.88**	**148**	Pn	**Pg**	**18 13 24.3**	**-0.4**
GURO	**Guroymak-BITLI**	**1.91**	**276**	Pn	**Pn**	**18 13 20.9**	**-1.4**
KAPZ	**Kaputan**	**1.97**	**6**	*e*P	**Pb**	**18 13 24.7**	**-0.5**
KAPZ				*e*S	**Sg**	**18 13 52.3**	**+0.4**
AMBZ	**Amberd**	**2.03**	**356**	*e*P	**Pb**	**18 13 25.6**	**-0.8**
AMBZ				*e*S	**Sg**	**18 13 53.8**	**-0.1**
AYRK	**Ayrk**	**2.04**	**30**	*e*P	**Pb**	**18 13 26.0**	**-0.4**
AYRK				*e*S	**Sg**	**18 13 53.8**	**-0.3**
IHRS	**Heris**	**2.04**	**90**	Pn	**Pb**	**18 13 26.0**	**-0.5**
IHSH	**Hashtrud**	**2.46**	**115**	Pn	**Pb**	**18 13 32.4**	**-1.5**
KARS	**Kars**	**2.50**	**335**	Pn	**Pb**	**18 13 32.3**	**-2.0**
GRMI	**Germi**	**2.73**	**80**	Pn	**Pb**	**18 13 35.3**	**-3.0**
KARO	**Karliova-Bingo**	**2.82**	**291**	Pn	**Pn**	**18 13 34.9**	**0.0**
AKH	**Akhalkalaki**	**3.13**	**347**	P	**Pg**	**18 13 46.6**	**-2.1**
DGRG	**David-gareji**	**3.17**	**13**	P	**Pg**	**18 13 48.0**	**-1.3**
DGRG				S	**Sg**	**18 14 31.1**	**+0.8**
TRLG	**Trialeti**	**3.18**	**355**	P	**Pb**	**18 13 46.3**	**+0.3**
VSHL	**Vashlovani**	**3.23**	**27**	P	**Pb**	**18 13 44.0**	**-2.8**
VSHL				S	**Sg**	**18 14 36.7**	**+4.1**
SHTL	**Shatili**	**4.32**	**7**	P	**Pb**	**18 14 06.9**	**+1.5**
BVAR	**Borovoye Array**	**23.13**	**42**	P	**P**	**18 17 56.2**	**+0.3**
	0.5nm,0.5s,baz=239,slow=10,SNR=3.7						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**26.97**	**52**	P	**P**	**18 18 34.2**	**+2.8**
	0.4nm,0.3s,baz=262,slow=9.1,SNR=5.5						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**28.88**	**61**	P	**P**	**18 18 50.7**	**+2.1**
	0.4nm,0.7s,baz=282,slow=9.9,SNR=5.4						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**31.51**	**47**	P	**P**	**18 19 13.8**	**+2.1**
	0.4nm,0.4s,baz=256,slow=5.8,SNR=2.6						
	0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**51.10**	**97**	P	**P**	**18 21 53.9**	**+1.1**
	0.9nm,0.8s,baz=295,slow=7.9,SNR=9.3						
	0.9nm,0.8s						

*AZER **23** 18:25:44.0, 38.36N×44.51E, h3km, ml3.9*
*NSSP **23** 18:25:45.3, 38.33N×44.45E, h10km, Ms3.7*
*AFAD **23** 18:25:45.9, 38.40N×44.48E, h3km±3km, ML3.6*
*TIF **23** 18:25:45.7, 38.33N×44.42E, h13km±2km*
*ISK **23** 18:25:47.7, 38.27N×44.51E, h8km, ML3.8/18*
*TEH **23** 18:25:47.0, 38.45N×44.41E, h6km±42km, ML3.7,*
Presumed earthquake
*IDC **23** 18:25:47.3±1.0, 38.45N×44.20E, h0km, mb3.5/7,*
mbtmp3.4/13, ML3.3/5, Error ellipse: s-maj=16.3km
s-min=11.4km az=143.0
ISC 23 18:25:47.3±1.1**, 38.37N**±0.02×**44.44E**±0.02**, h4**km±9km**,**
n84,σ1°**64**/107**, mb3.4/6, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**310**	P	**Pg**	**18 25 55.7**	**-0.4**
OZAP				S	**Sg**	**18 26 02.7**	**+0.7**
OZAP				IAML		18 26 11.0	
	comp=N,10μm,1.0s						
OZAP	**Van, Ozalp-Mer**	**0.45**	**310**	Pg	**Pg**	**18 25 55.7**	**-0.4**
TVAN	**Van**	**0.82**	**281**	P	**Pg**	**18 26 02.3**	**-0.9**
TVAN				IAML		18 26 28.0	
	comp=E,3μm,0.6s						
TVAN				IAML		18 26 30.0	
	comp=N,3μm,0.7s						
TVAN	**Van**	**0.82**	**281**	Pg	**Pg**	**18 26 02.2**	**-0.9**
VANB	**Van**	**0.85**	**286**	Pg	**Pn**	**18 26 05.2**	**-1.0**
VANB				Sg	**Sn**	**18 26 18.4**	**-0.8**
VMUR	**Van-Muradiye**	**0.92**	**313**	P	**Pg**	**18 26 04.4**	**-0.5**
VMUR				S	**Sb**	**18 26 17.7**	**-0.8**
VMUR				IAML		18 26 21.0	
	comp=E,2μm,0.9s						
VMUR				IAML		18 26 24.0	
	comp=N,2μm,1.3s						
ISHB	**Shabestar**	**0.93**	**95**	Pg	**Pg**	**18 26 04.2**	**-1.0**
HAKT	**HAKKARI**	**1.00**	**216**	P	**Pb**	**18 26 06.5**	**-0.7**
HAKT				S	**Sn**	**18 26 22.8**	**-0.1**
MAKU	**Maku**	**1.00**	**11**	Pg	**Pg**	**18 26 04.8**	**-1.7**
IMRD	**Marand**	**1.05**	**71**	Pg	**Pb**	**18 26 07.0**	**-1.1**
ERCV	**ERCIS-VAN**	**1.08**	**307**	Pn	**Pn**	**18 26 10.6**	**+1.3**
GEVA	**Gevas**	**1.09**	**267**	P	**Pg**	**18 26 05.9**	**-2.2**
GEVA				S	**Sn**	**18 26 24.3**	**-0.7**
GEVA				IAML		18 26 29.0	
	comp=E,1μm,0.8s						
GEVA				IAML		18 26 31.0	
	comp=N,1μm,0.5s						
AKDM	**Akdamar-Van**	**1.15**	**268**	Pg	**Pg**	**18 26 07.7**	**-1.6**
NAX	**Nakhchivan**	**1.15**	**46**	P	**Pn**	**18 26 09.2**	**-1.0**
NAX				S	**Sn**	**18 26 25.9**	**-0.6**
CUKT	**Cukurca**	**1.30**	**211**	Pn	**Pg**	**18 26 12.5**	**+0.3**
CUKT	**Cukurca**	**1.30**	**211**	Pg	**Pg**	**18 26 12.7**	**+0.5**
DYDN	**Diyadin**	**1.31**	**334**	P	**Pn**	**18 26 09.6**	**-2.9**
DYDN				S	**Sb**	**18 26 29.0**	**-0.8**
DYDN				IAML		18 26 36.0	
	comp=N,1μm,1.2s						
DYDN				IAML		18 26 39.0	
	comp=E,1μm,0.8s						
DYDN	**Diyadin**	**1.31**	**334**	Pg	**Pn**	**18 26 09.6**	**-2.9**
ORD	**Ordubad**	**1.34**	**65**	P	**Pg**	**18 26 12.4**	**-0.6**
ORD				S	**Sg**	**18 26 32.1**	**+1.8**
SBZ	**Shahbuz**	**1.34**	**40**	P	**Pb**	**18 26 12.4**	**-0.7**
SBZ				S	**Sg**	**18 26 32.2**	**+1.7**
HYR	**Heyderabad**	**1.38**	**13**	P	**Pg**	**18 26 13.6**	**-0.3**
HYR				S	**Sg**	**18 26 36.8**	**+5.0**
IAZR	**Azarshahr**	**1.40**	**119**	Pg	**Pg**	**18 26 14.2**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.41**	**289**	P	**Pn**	**18 26 12.7**	**-1.2**
ADCV				S	**Sg**	**18 26 34.8**	**+2.1**
ADCV				IAML		18 26 38.0	
	comp=N,916nm,0.6s						
ADCV				IAML		18 26 43.0	
	comp=E,724nm,0.6s						
ADCV	**BITLIS_Adilcev**	**1.41**	**289**	Pg	**Pn**	**18 26 12.7**	**-1.2**
IGDI	**IGDIR**	**1.52**	**349**	P	**Pn**	**18 26 13.8**	**-1.6**
IGDI				S	**Sg**	**18 26 38.6**	**+2.5**
IGDI				IAML		18 26 40.0	
	comp=N,504nm,1.2s						
IGDI				IAML		18 26 40.0	
	comp=E,794nm,1.2s						
IGDI	**IGDIR**	**1.52**	**349**	Pg	**Pn**	**18 26 13.7**	**-1.6**
VAYK	**Vayk**	**1.53**	**30**	⇓*e*P	**Pb**	**18 26 15.6**	**-0.6**
VAYK				⇓*e*S	**Sg**	**18 26 36.4**	**0.0**
PERV	**Siirt/Pervari-**	**1.55**	**255**	P	**Pn**	**18 26 15.0**	**-0.8**
PERV				IAML		18 26 48.0	
	comp=E,2μm,0.6s						
PERV				IAML		18 26 50.0	
	comp=N,3μm,0.8s						
ALVK	**Alvank**	**1.60**	**69**	*e*P	**Pb**	**18 26 16.4**	**-1.1**
ALVK				*e*S	**Sg**	**18 26 38.6**	**-0.2**
DORK	**Agr/Tutak/Do**	**1.64**	**309**	P	**Pn**	**18 26 16.2**	**-0.9**
DORK				S	**Sb**	**18 26 39.0**	**-0.4**
DORK				IAML		18 26 47.0	
	comp=E,730nm,1.2s						
DORK				IAML		18 26 48.0	
	comp=N,662nm,0.9s						
AGRB	**Hanur-Agry**	**1.65**	**317**	Pn	**Pb**	**18 26 18.1**	**-0.2**
AGRB				Sn	**Sg**	**18 26 42.7**	**+2.4**
MLAZ	**Malazgirt-MUS**	**1.67**	**298**	Pn	**Pg**	**18 26 19.5**	**+0.3**
MLAZ				Sn	**Sg**	**18 26 42.8**	**+2.0**
KOTA	**Agri, Merkez-K**	**1.72**	**327**	P	**Pb**	**18 26 18.3**	**-1.3**
KOTA				IAML		18 26 47.0	
	comp=E,261nm,0.7s						
KOTA				IAML		18 27 07.0	
	comp=N,237nm,1.4s						
GNI	**Garni**	**1.79**	**7**	Pn	**Pb**	**18 26 20.6**	**-0.2**
	23nm,0.3s,baz=266,slow=1.6,SNR=87						
GNI				Lg	Lg	18 26 43.9	
	36nm,0.3s,baz=20,slow=22,SNR=6.7						
GNI	**Garni**	**1.79**	**7**	Pn	**Pg**	**18 26 21.0**	**-0.6**
GNI	**Garni**	**1.79**	**7**	*e*P	**Pb**	**18 26 20.4**	**-0.3**
GNI				*e*S	**Sg**	**18 26 46.2**	**+1.4**
VNNZ	**Vanand**	**1.79**	**345**	*e*P	**Pg**	**18 26 21.1**	**-0.6**
VNNZ				*e*S	**Sg**	**18 26 48.2**	**+3.3**
BLIS	**Bitlis-Merkez**	**1.83**	**272**	P	**Pn**	**18 26 19.1**	**-0.5**
BLIS				IAML		18 26 56.0	
	comp=N,645nm,0.7s						
BLIS				IAML		18 26 59.0	
	comp=E,315nm,0.7s						
EGVZ	**Egvard**	**1.85**	**62**	*e*P	**Pb**	**18 26 20.8**	**-1.0**
EGVZ				*e*S	**Sg**	**18 26 46.8**	**0.0**
MAHB	**Mahabad**	**1.89**	**147**	Pn	**Pg**	**18 26 23.3**	**-0.2**
GURO	**Guroymak-BITLI**	**1.90**	**276**	Pn	**Pb**	**18 26 21.7**	**-0.9**
ARUZ	**Aruch**	**1.93**	**352**	*e*P	**Pg**	**18 26 23.4**	**-0.9**
ARUZ				*e*S	**Sg**	**18 26 51.7**	**+2.4**
KAPZ	**Kaputan**	**1.96**	**6**	*e*P	**Pb**	**18 26 22.3**	**-1.3**
KAPZ				*e*S	**Sg**	**18 26 50.1**	**-0.2**
SRTM	**Siirt_Merkez**	**2.02**	**260**	P	**Pb**	**18 26 23.

0.4nm,0.7s,baz=297,slow=8.4,SNR=5.8
0.4nm,0.7s

*AZER **23** 18:33:20.4, 38˚.38N×44˚.52E, h10km, ml3.7*
*NSSP **23** 18:33:20.9, 38˚.40N×44˚.48E, h10km, Ms3.6*
*TEH **23** 18:33:22.4, 38˚.46N×44˚.47E, h5km±43km, ML3.5, Presumed earthquake*
*AFAD **23** 18:33:22.3, 38˚.37N×44˚.41E, h8km±4km, ML3.3*
*ISK **23** 18:33:23.7, 38˚.33N×44˚.47E, h10km, ML3.5/14*
*IDC **23** 18:33:23.5±1.7, 38˚.49N×44˚.49E, h0km, mb3.5/5, mbtmp3.4/8, ML2.1/2, Error ellipse: s-maj=30.4km s-min=18.1km az=180.0*

ISC 23 18:33:22.4±1.1, **38˚.40N**±0˚.02×**44˚.46E**±0˚.02, **h3**km±9km, **n63**, σ1s**28**/84, **mb3.4**/4, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**305**	P	**Pg**	**18 33 31.5**	**+0.4**
OZAP				S	**Sg**	**18 33 37.7**	**+0.7**
OZAP	**Van, Ozalp-Mer**	**0.45**	**305**	Pg	**Pg**	**18 33 31.5**	**+0.4**
TVAN	**Van**	**0.84**	**279**	P	**Pg**	**18 33 37.9**	**-0.6**
TVAN				S	**Sn**	**18 33 53.1**	**-1.1**
TVAN				IAML		18 33 59.0	
	comp=N,2μm,0.7s						
TVAN				IAML		18 34 08.0	
	comp=E,1μm,0.7s						
TVAN	**Van**	**0.84**	**279**	Pg	**Pg**	**18 33 37.9**	**-0.6**
VANB	**Van**	**0.86**	**283**	Pg	**Pb**	**18 33 40.3**	**+0.2**
VANB				Sg	**Sn**	**18 33 53.4**	**-1.3**
VMUR	**Van-Muradiye**	**0.91**	**310**	P	**Pg**	**18 33 39.8**	**-0.1**
VMUR				S	**Sb**	**18 33 53.5**	**0.0**
VMUR				IAML		18 33 57.0	
	comp=N,930nm,0.4s						
VMUR				IAML		18 34 01.0	
	comp=E,1μm,0.8s						
VMUR	**Van-Muradiye**	**0.91**	**310**	Pg	**Pg**	**18 33 39.8**	**-0.1**
ISHB	**Shabestar**	**0.92**	**97**	Pg	**Pg**	**18 33 39.0**	**-1.0**
MAKU	**Maku**	**0.97**	**10**	Pg	**Pg**	**18 33 40.2**	**-0.8**
IMRD	**Marand**	**1.02**	**72**	Pg	**Pg**	**18 33 41.6**	**-0.4**
HAKT	**HAKKARI**	**1.03**	**215**	P	**Pg**	**18 33 42.2**	**0.0**
HAKT				S	**Sn**	**18 33 58.8**	**-0.3**
ERCV	**ERCIS-VAN**	**1.07**	**305**	Pn	**Pn**	**18 33 45.7**	**+1.2**
ERCV				Sn	**Sn**	**18 34 00.7**	**+0.7**
GEVA	**Gevas**	**1.11**	**266**	P	**Pg**	**18 33 41.7**	**-2.0**
GEVA				S	**Sb**	**18 33 58.8**	**-0.3**
GEVA				IAML		18 34 06.0	
	comp=N,964nm,0.6s						
GEVA				IAML		18 34 07.0	
	comp=E,692nm,0.5s						
NAX	**Nakhchivan**	**1.12**	**46**	P	**Pb**	**18 33 43.9**	**-0.6**
NAX				S	**Sn**	**18 34 00.3**	**-0.7**
DYDN	**Diyadin**	**1.29**	**332**	P	**Pn**	**18 33 45.0**	**-2.6**
DYDN				S	**Sb**	**18 34 03.0**	**-1.5**
DYDN				IAML		18 34 10.0	
	comp=E,559nm,0.6s						
DYDN				IAML		18 34 16.0	
	comp=N,862nm,0.7s						
DYDN	**Diyadin**	**1.29**	**332**	Pg	**Pn**	**18 33 44.9**	**-2.6**
SBZ	**Shahbuz**	**1.31**	**40**	P	**Pb**	**18 33 47.1**	**-0.6**
SBZ				S	**Sg**	**18 34 06.1**	**+1.6**
ORD	**Ordubad**	**1.31**	**66**	P	**Pb**	**18 33 47.0**	**-0.7**
ORD				S	**Sg**	**18 34 06.0**	**+1.4**
CUKT	**Cukurca**	**1.34**	**211**	Pn	**Pb**	**18 33 47.9**	**-0.3**
CUKT				Sn	**Sg**	**18 34 05.9**	**+0.5**
CUKT	**Cukurca**	**1.34**	**211**	Pg	**Pg**	**18 33 48.2**	**+0.1**
HYR	**Heyderabad**	**1.35**	**13**	P	**Pg**	**18 33 48.2**	**-0.2**
HYR				S	**Sg**	**18 34 08.4**	**+2.6**
IAZR	**Azarshahr**	**1.40**	**121**	Pg	**Pg**	**18 33 49.0**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.42**	**287**	P	**Pn**	**18 33 48.6**	**-0.7**
ADCV				S	**Sg**	**18 34 08.5**	**+0.5**
ADCV	**BITLIS_Adilcev**	**1.42**	**287**	Pg	**Pn**	**18 33 48.6**	**-0.7**
VAYK	**Vayk**	**1.49**	**30**	*iP*	**Pb**	**18 33 50.5**	**-0.3**
VAYK				*iS*	**Sg**	**18 34 11.5**	**+1.0**
ALVK	**Alvank**	**1.57**	**69**	*eP*	**Pb**	**18 33 51.2**	**-1.0**
ALVK				*eS*	**Sg**	**18 34 13.2**	**+0.1**
AGRB	**Hanur-Agry**	**1.64**	**316**	Pn	**Pg**	**18 33 53.7**	**-0.1**
MLAZ	**Malazgirt-MUS**	**1.67**	**297**	Pn	**Pg**	**18 33 54.5**	**+0.1**
GNI	**Garni**	**1.76**	**7**	LR	LR	18 34 48.3	
	comp=Z,121nm,19.3s,baz=81,slow=51						
GNI	**Garni**	**1.76**	**7**	Pn	**Pg**	**18 33 56.0**	**-0.2**
GNI	**Garni**	**1.76**	**7**	*eP*	**Pb**	**18 33 55.3**	**-0.2**
GNI				*eS*	**Sg**	**18 34 20.0**	**+1.0**
VNNZ	**Vanand**	**1.77**	**344**	*eP*	**Pb**	**18 33 55.7**	**+0.2**
VNNZ				*eS*	**Sg**	**18 34 21.4**	**+2.1**
EGVZ	**Egvard**	**1.82**	**63**	*eP*	**Pb**	**18 33 55.3**	**-1.2**
EGVZ				*eS*	**Sg**	**18 34 20.4**	**-0.7**
ARUZ	**Aruch**	**1.90**	**351**	*eP*	**Pb**	**18 33 57.2**	**-0.6**
ARUZ				*eS*	**Sg**	**18 34 24.0**	**+0.5**
MAHB	**Mahabad**	**1.91**	**148**	Pn	**Pg**	**18 33 58.9**	**-0.2**
GURO	**Guroymak-BITLI**	**1.91**	**275**	Pn	**Pb**	**18 33 57.6**	**-0.4**
GURO	**Guroymak-BITLI**	**1.91**	**275**	Pn	**Pb**	**18 33 57.7**	**-0.3**
AMBZ	**Amberd**	**1.99**	**356**	*eP*	**Pb**	**18 33 58.2**	**-1.2**
AMBZ				*eS*	**Sg**	**18 34 25.8**	**-0.5**
AYRK	**Ayrk**	**2.00**	**31**	*eP*	**Pb**	**18 33 59.2**	**-0.3**
AYRK				*eS*	**Sg**	**18 34 27.2**	**+0.6**
IHRS	**Heris**	**2.03**	**92**	Pn	**Pb**	**18 33 59.1**	**-1.0**
KARS	**Kars**	**2.47**	**335**	Pn	**Pb**	**18 34 06.1**	**-1.4**
VRTB	**Varto-Mus**	**2.47**	**289**	Pn	**Pb**	**18 34 05.7**	**-1.8**
IHSH	**Hashtrud**	**2.47**	**115**	Pn	**Pb**	**18 34 05.7**	**-2.0**
LSVT	**Lusahovit**	**2.57**	**12**	*eP*	**Pb**	**18 34 07.3**	**-1.9**
LSVT				*eS*	**Sb**	**18 34 41.3**	**0.0**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn	**Pb**	**18 34 06.9**	**-2.5**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn	**Pb**	**18 34 06.9**	**-2.5**
ISRB	**Sarab**	**2.59**	**102**	Pn	**Pb**	**18 34 07.0**	**-2.7**
SRTK	**Saratovka**	**2.66**	**358**	*eP*	**Pb**	**18 34 10.4**	**-0.4**
SRTK				*eS*	**Sg**	**18 34 47.7**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.70**	**324**	Pn	**Pb**	**18 34 09.6**	**-2.0**
GRMI	**Germi**	**2.72**	**80**	Pn	**Pn**	**18 34 08.4**	**+1.3**
KARO	**Karliova-Bingo**	**2.81**	**290**	Pn	**Pb**	**18 34 10.7**	**-2.7**
BNGB	**Bingl**	**3.02**	**282**	Pn	**Pn**	**18 34 13.4**	**+2.2**
YEDI	**Yedisu-Bingol**	**3.22**	**290**	Pn	**Pn**	**18 34 16.7**	**+2.6**
DYBB	**Diyarbakir**	**3.43**	**264**	Pn	**Pn**	**18 34 18.9**	**+2.0**
IDHR	**Dehrash**	**4.01**	**157**	Pn	**Pn**	**18 34 27.6**	**+2.7**
KBZ	**Khabaz**	**5.45**	**348**	Pn	**Pn**	**18 34 46.1**	**+1.6**
	baz=156,slow=10.0,SNR=1.9						
	0.5nm,0.6s						
BRTR	**Keskin Array B**	**8.52**	**282**	Pn	Pn	18 35 31.8	+5.0
	baz=85,slow=16,SNR=2.1						
	0.2nm,0.5s						
AKTO	**Aktyubinsk**	**15.41**	**34**	Pn	**Pn**	**18 37 00.9**	**+0.3**
	0.7nm,0.3s,baz=251,slow=8.3,SNR=8.8						
ARTI	**Arti**	**20.24**	**23**	P	Pn	18 37 59.5	-0.9
	3.6nm,0.8s,baz=219,slow=8.2,SNR=6.3						
	3.6nm,0.8s						
BVAR	**Borovoye Array**	**23.10**	**42**	P	**P**	**18 38 29.2**	**0.0**
	0.5nm,0.5s,baz=240,slow=8.7,SNR=6.2						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**26.95**	**52**	P	**P**	**18 39 06.6**	**+1.7**
	0.5nm,0.3s,baz=262,slow=9.1,SNR=5.8						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**28.85**	**61**	P	**P**	**18 39 22.2**	**+0.2**
	0.2nm,0.6s,baz=268,slow=9.9,SNR=9.4						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.10**	**97**	P	**P**	**18 42 27.1**	**+0.6**
	0.2nm,0.4s,baz=301,slow=5.4,SNR=2.4						
	0.2nm,0.4s						

*IDC **23** 18:34:16.5±5.8, 8˚.91S×124˚.53E, h66km±68km, mb3.4/2, mbtmp3.8/5, ML3.9/3, Error ellipse: s-maj=57.6km s-min=28.1km az=17.0*
*DJA **23** 18:34:20.6±0.5, 9˚S±2˚×122˚±4˚, h66km±8km, M3.5/10, mb3.9/1, MLv3.3/10*

ISC 23 18:34:15.4±1.3, **8.77S**±0˚.08×**124˚.5E**±0˚.1, **h50**km, **n13**, σ1s**78**/17, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.00**	**191**	P	**Pn**	**18 34 36.6**	**+3.3**
SOEI				S	**Sn**	**18 34 49.5**	**+3.1**
BATI	**Baumata**	**1.63**	**209**	P	**Pn**	**18 34 42.9**	**+1.1**
	73nm,0.4s,baz=27,slow=2.8,SNR=42						
BATI				S	**Sn**	**18 35 01.1**	**-0.5**
	146nm,0.4s,baz=106,slow=5.1,SNR=9.1						
BATI	**Baumata**	**1.63**	**209**	P	**Pn**	**18 34 42.9**	**+1.1**
BATI				S	**Sn**	**18 35 00.2**	**-1.4**
MMRI	**Maumere**	**2.20**	**273**	P	**Pn**	**18 34 51.0**	**+1.5**
MMRI				S	**Sn**	**18 35 14.6**	**-1.0**
EDFI	**Ende, Flores**	**2.74**	**270**	P	**Pn**	**18 34 58.2**	**+1.2**
BASI	**Baing, Sumba**	**4.09**	**249**	P	**Pn**	**18 35 15.2**	**-0.3**
WSI	**Waingapu**	**4.21**	**257**	P	**Pn**	**18 35 16.7**	**-0.3**
LBFI	**Labuhan Bajo,**	**4.53**	**273**	P	**Pn**	**18 35 23.0**	**+1.5**
FITZ	**Fitzroy Crossi**	**9.35**	**173**	P	**Pn**	**18 36 25.6**	**-1.9**
	1.7nm,0.3s,baz=358,slow=9.9,SNR=72						
FITZ				S	Sn	18 38 00.3	-11
	18nm,0.5s,baz=204,slow=10,SNR=20						
	3.0nm,0.3s						
WRA	**Warramunga Arr**	**14.65**	**140**	P	**Pn**	**18 37 38.3**	**-1.6**
	0.4nm,0.3s,baz=320,slow=14,SNR=10						
WRA				S	Sn	18 40 10.7	-10
	1.7nm,0.6s,baz=316,slow=24,SNR=8.3						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**17.36**	**150**	P	**Pn**	**18 38 12.8**	**-1.5**
	0.4nm,0.3s,baz=318,slow=11,SNR=30						
ASAR				S	Sn	18 41 17.9	-8.7
	0.7nm,0.5s,baz=309,slow=21,SNR=8.2						
	1.5nm,0.5s						
MKAR	**Makanchi Array**	**66.84**	**330**	P	**P**	**18 45 01.3**	**-0.8**
	0.2nm,0.5s,baz=126,slow=7.3,SNR=5.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**71.27**	**331**	P	**P**	**18 45 30.9**	**+1.5**
	0.6nm,0.3s,baz=126,slow=6.1,SNR=4.0						
	0.6nm,0.3s						

*AFAD **23** 18:35:21.1, 38˚.43N×44˚.59E, h7km±3km, ML2.5*
*TEH **23** 18:35:22.6, 38˚.41N×44˚.47E, h10km±287km, ML2.8, Presumed earthquake*
*ISK **23** 18:35:24.9, 38˚.35N×44˚.44E, h11km, ML2.2/7*

ISC 23 18:35:23.2±1.2, **38˚.41N**±0˚.04×**44˚.50E**±0˚.03, **h17**km±10km, **n18**, σ0s**92**/26, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**303**	P	**Pg**	**18 35 31.9**	**-0.8**
OZAP				S	**Sb**	**18 35 39.6**	**-0.3**
OZAP				IAML		18 35 41.0	
	comp=N,664nm,0.7s						
TVAN	**Van**	**0.86**	**278**	P	**Pg**	**18 35 39.0**	**-1.0**
TVAN				S	**Sn**	**18 35 53.2**	**0.0**
TVAN				IAML		18 36 04.0	
	comp=N,217nm,0.6s						
TVAN				IAML		18 36 08.0	
	comp=E,174nm,0.9s						
VANB	**Van**	**0.89**	**282**	Pg	**Pn**	**18 35 41.4**	**+0.3**
VANB				Sg	**Sn**	**18 35 53.5**	**-0.2**
ISHB	**Shabestar**	**0.89**	**98**	Pg	**Pg**	**18 35 40.0**	**-0.6**
VMUR	**Van-Muradiye**	**0.93**	**309**	P	**Pb**	**18 35 41.1**	**+0.1**
VMUR				S	**Sn**	**18 35 54.1**	**-0.6**
VMUR				IAML		18 35 59.0	
	comp=E,134nm,0.9s						
VMUR				IAML		18 36 02.0	
	comp=N,129nm,0.7s						
MAKU	**Maku**	**0.96**	**9**	Pg	**Pg**	**18 35 41.1**	**-0.7**
IMRD	**Marand**	**0.99**	**72**	Pg	**Pn**	**18 35 43.0**	**+0.4**
GEVA	**Gevas**	**1.13**	**266**	P	**Pg**	**18 35 43.6**	**-1.6**
GEVA				S	**Sn**	**18 36 01.2**	**+1.4**
GEVA				IAML		18 36 04.0	
	comp=N,96nm,0.8s						
GEVA				IAML		18 36 06.0	
	comp=E,79nm,0.5s						
AKDM	**Akdamar-Van**	**1.20**	**267**	Pn	**Pb**	**18 35 44.8**	**-0.7**
DYDN	**Diyadin**	**1.30**	**331**	P	**Pn**	**18 35 45.9**	**-0.9**
DYDN				S	**Sn**	**18 36 04.4**	**+0.5**
DYDN				IAML		18 36 11.0	
	comp=E,75nm,0.5s						
DYDN				IAML		18 36 17.0	
	comp=N,88nm,0.7s						
CUKT	**Cukurca**	**1.36**	**212**	Pn	**Pg**	**18 35 49.3**	**-0.1**
CUKT				Sn	**Sg**	**18 36 07.2**	**+0.1**
IAZR	**Azarshahr**	**1.38**	**121**	Pg	**Pg**	**18 35 50.0**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.44**	**287**	P	**Pg**	**18 35 51.7**	**+0.7**
ADCV				S	**Sg**	**18 36 12.5**	**+2.6**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pg**	**18 35 54.8**	**-0.2**
MLAZ	**Malazgirt-MUS**	**1.69**	**296**	Pn	**Pg**	**18 35 54.8**	**-0.9**
GNI	**Garni**	**1.75**	**6**	Pn	**Pg**	**18 35 57.0**	**+0.1**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pb**	**18 35 58.2**	**0.0**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pg**	**18 36 00.7**	**-1.0**

*ISK **23** 18:41:06.9, 38˚.28N×44˚.55E, h10km, ML2.3/6*
*TEH **23** 18:41:06.4, 38˚.44N×44˚.46E, h10km±191km, ML2.6, Presumed earthquake*
*AFAD **23** 18:41:07.9, 38˚.36N×44˚.36E, h7km±4km, ML2.1*

ISC 23 18:41:07.0±1.1, **38˚.39N**±0˚.04×**44˚.46E**±0˚.03, **h11**km±10km, **n17**, σ0s**91**/28, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**307**	P	**Pg**	**18 41 16.6**	**+0.5**
OZAP				S	**Sg**	**18 41 22.6**	**+0.3**
OZAP				IAML		18 41 30.0	
	comp=N,268nm,0.7s						
TVAN	**Van**	**0.84**	**280**	P	**Pg**	**18 41 23.2**	**-0.1**
TVAN				S	**Sg**	**18 41 34.2**	**-0.2**
TVAN				IAML		18 41 50.0	
	comp=E,65nm,0.4s						
TVAN				IAML		18 41 52.0	
	comp=N,98nm,0.6s						
VANB	**Van**	**0.87**	**284**	Pg	**Pn**	**18 41 25.1**	**-0.2**
VANB				Sg	**Sn**	**18 41 38.4**	**+0.4**
ISHB	**Shabestar**	**0.91**	**96**	Pg	**Pg**	**18 41 23.9**	**-0.8**
VMUR	**Van-Muradiye**	**0.92**	**311**	P	**Pb**	**18 41 25.9**	**+0.7**
VMUR				S	**Sb**	**18 41 38.2**	**+0.7**
VMUR				IAML		18 41 44.0	
	comp=E,58nm,0.3s						
VMUR				IAML		18 41 50.0	
	comp=N,54nm,0.6s						
MAKU	**Maku**	**0.98**	**10**	Pg	**Pg**	**18 41 24.6**	**-1.4**
IMRD	**Marand**	**1.03**	**71**	Pg	**Pg**	**18 41 25.9**	**-0.9**
IMRD				Sg	**Sb**	**18 41 41.2**	**+0.7**
GEVA	**Gevas**	**1.11**	**267**	P	**Pg**	**18 41 26.9**	**-1.4**
GEVA				S	**Sn**	**18 41 44.9**	**+1.0**
GEVA				IAML		18 41 46.0	
	comp=N,51nm,0.5s						
AKDM	**Akdamar-Van**	**1.17**	**268**	Pn	**Pb**	**18 41 28.5**	**-0.8**
DYDN	**Diyadin**	**1.30**	**333**	P	**Pn**	**18 41 31.1**	**-0.3**
DYDN				S	**Sb**	**18 41 46.8**	**-1.7**
DYDN				IAML		18 41 55.0	
	comp=N,41nm,0.7s						
DYDN				IAML		18 41 55.0	
	comp=E,48nm,0.4s						
CUKT	**Cukurca**	**1.32**	**211**	Pn	**Pn**	**18 41 31.2**	**-0.4**
CUKT				Sn	**Sn**	**18 41 48.9**	**-0.4**
IAZR	**Azarshahr**	**1.39**	**120**	Pg	**Pg**	**18 41 34.4**	**+0.6**
ADCV	**BITLIS_Adilcev**	**1.43**	**288**	P	**Pb**	**18 41 33.6**	**-0.1**
ADCV				S	**Sg**	**18 41 55.0**	**+2.1**
AGRB	**Hanur-Agry**	**1.65**	**316**	Pn	**Pb**	**18 41 38.4**	**+0.8**
AGRB				Sn	**Sg**	**18 42 01.3**	**+1.2**
GNI	**Garni**	**1.77**	**7**	Pn	**Pb**	**18 41 39.8**	**+0.1**
GNI				Sn	**Sg**	**18 42 04.0**	**-0.1**
GURO	**Guroymak-BITLI**	**1.91**	**276**	Pn	**Pb**	**18 41 41.5**	**-0.5**
IHRS	**Heris**	**2.03**	**91**	Pn	**Pb**	**18 41 44.7**	**+0.6**

*ISK **23** 18:43:35.3, 39˚.00N×27˚.83E, h11km, ML3.8/39*
*AFAD **23** 18:43:35.7, 38˚.99N×27˚.85E, h7km±2km, ML3.5*
*THE **23** 18:43:37.2, 39˚N±4˚×28˚E±˚, h17km±19km, M3.6/11, MLh3.6/11*

ISC 23 18:43:35.9±0.8, **38˚.99N**±0˚.02×**27˚.85E**±0˚.02, **h12**km±6km, **n92**, σ0s**44**/112, **11C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.12**	**192**	P	**Pg**	**18 43 38.9**	**0.0**
AKHS				S	**Sg**	**18 43 41.2**	**0.0**
AKHS				IAML		18 43 42.0	
	comp=E,2μm,0.5s						
AKS	**Akhisar**	**0.12**	**192**	Pg	**Pg**	**18 43 38.5**	**-0.5**
AKS				Sg	**Sg**	**18 43 41.1**	**-0.1**
GORD	**Gordes-Manisa**	**0.27**	**108**	Pg	**Pg**	**18 43 41.6**	**+0.1**
GORD				Sg	**Sg**	**18 43 46.1**	**+0.8**
GOMA	**Golmarmara-Man**	**0.29**	**169**	Pg	**Pg**	**18 43 41.8**	**0.0**
GOMA				Sg	**Sg**	**18 43 46.5**	**+0.7**
SOMA	**Soma-Manisa**	**0.29**	**304**	Pg	**Pg**	**18 43 41.4**	**-0.5**
SOMA				Sg	**Sg**	**18 43 46.1**	**+0.2**
KTTT	**Salihli**	**0.36**	**148**	P	**Pg**	**18 43 43.1**	**0.0**
KTTT				S	**Sg**	**18 43 48.3**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.40**	**346**	P	**Pg**	**18 43 43.9**	**+0.2**
STEP				S	**Sg**	**18 43 49.1**	**0.0**
CAMT	**Merkez**	**0.48**	**240**	P	**Pb**	**18 43 46.0**	**-0.2**
CAMT				S	**Sb**	**18 43 53.7**	**+0.3**
CAMT				IAML		18 43 54.0	
	comp=N,4μm,0.5s						
CAMT				IAML		18 43 58.0	
	comp=E,5μm,0.6s						
ZEDA	**zmir-Bergama**	**0.60**	**268**	P	**Pg**	**18 43 47.7**	**+0.1**
ZEDA				S	**Sb**	**18 43 56.6**	**-0.1**
ZEDA				IAML		18 43 57.0	
	comp=N,4μm,0.7s						
BALB	**Balikesir**	**0.65**	**2**	Pg	**Pg**	**18 43 48.3**	**-0.1**
BALB				Sg	**Sb**	**18 43 58.1**	**0.0**
DEMI	**Demirci**	**0.68**	**86**	P	**Pg**	**18 43 49.1**	**0.0**
DEMI				S	**Sg**	**18 43 57.9**	**-0.2**
DEMI				IAML		18 44 02.0	
	comp=N,2μm,0.3s						
DEMI				IAML		18 44 03.0	
	comp=E,3μm,0.2s						
IZMD	**zmir-Dikili-**	**0.71**	**270**	P	**Pb**	**18 43 50.1**	**-0.2**
IZMD				S	**Sb**	**18 43 59.8**	**-0.3**
ODEM	**Odemis-Izmir**	**0.74**	**166**	Pg	**Pg**	**18 43 50.2**	**0.0**
ODEM				Sg	**Sb**	**18 44 00.9**	**+0.1**
MANT	**Manisa**	**0.75**	**132**	P	**Pg**	**18 43 50.6**	**+0.1**
MANT				S	**Sn**	**18 44 02.8**	**-1.0**
MANT				IAML		18 44 04.0	
	comp=N,3μm,0.3s						
MANT				IAML		18 44 04.0	
	comp=E,3μm,0.3s						
KULA	**Kula-Manisa**	**0.80**	**127**	Pg	**Pg**	**18 43 51.2**	**-0.1**
DUVT	**Torbali**	**0.83**	**202**	P	**Pb**	**18 43 52.0**	**-0.2**
DUVT				S	**Sb**	**18 44 03.7**	**+0.3**
DUVT				IAML		18 44 07.0	
	comp=E,1μm,0.5s						
DST	**Dursunbey**	**0.86**	**44**	Pg	**Pg**	**18 43 52.2**	**-0.2**
YAYO	**Edremit-Balk**	**0.86**	**316**	Pg	**Pg**	**18 43 52.1**	**-0.4**
BLCB	**Balcova**	**0.87**	**226**	Pg	**Pg**	**18 43 52.5**	**-0.2**
BLCB	**Balcova**	**0.87**	**226**	P	**Pb**	**18 43 52.9**	**0.0**
BLCB				S	**Sn**	**18 44 05.9**	**-0.8**
SIMA	**Simav-Kutahya**	**0.89**	**84**	Pg	**Pg**	**18 43 52.9**	**-0.2**
SMAA	**Simav-Kutahya**	**0.89**	**83**	Pg	**Pb**	**18 43 53.2**	**-0.1**
FOCM	**Foa**	**0.91**	**253**	Pg	**Pg**	**18 43 53.9**	**-0.3**
SUSR	**Susurluk-Balik**	**0.98**	**11**	Pg	**Pg**	**18 43 54.5**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**178**	Pg	**Pb**	**18 43 56.0**	**0.0**
YENI	**Yenice-Canakka**	**1.05**	**334**	Pg	**Pg**	**18 43 55.7**	**-0.4**
GONE	**Gonen-Balikesi**	**1.06**	**353**	Pg	**Pg**	**18 43 56.1**	**-0.2**
SHAP	**Saphane-Kutahy**	**1.07**	**88**	Pn	**Pn**	**18 43 56.7**	**-0.1**
KRBN	**Karaburun**	**1.09**	**249**	Pg	**Pb**	**18 43 56.4**	**-0.2**
NAZL	**Nazilli-Aydin**	**1.09**	**161**	Pn	**Pg**	**18 43 56.7**	**-0.1**
GMLD	**Gumuldur**	**1.17**	**219**	Pn	**Pg**	**18 43 58.5**	**+0.1**
CANM	**Can-anakkale**	**1.19**	**329**	Pn	**Pb**	**18 43 58.2**	**-0.1**
KUSD	**Kusadasi-Aydin**	**1.21**	**201**	Pn	**Pb**	**18 43 58.7**	**-0.1**
GEDZ	**Gediz**	**1.22**	**87**	Pn	**Pb**	**18 43 59.0**	**+0.1**
PRK	**Paraskevi**	**1.25**	**282**	P	**Pg**	**18 43 59.5**	**-0.4**
PRK				S	**Sn**	**18 44 16.6**	**+0.7**
ORLT	**Orhaneli**	**1.33**	**37**	Pn	**Pn**	**18 44 00.2**	**-0.1**
KCTX	**Karacabey (Bur**	**1.33**	**17**	Pn	**Pn**	**18 43 59.9**	**-0.4**
TVSB	**Tavsanli**	**1.33**	**70**	Pn	**Pb**	**18 44 00.7**	**-0.2**
EDC	**Edincik**	**1.35**	**1**	Pn	**Pn**	**18 44 00.7**	**+0.1**
BAND	**Balkesir-Ban**	**1.37**	**8**	⇓P	**Pn**	**18 44 00.7**	**-0.2**
BAND				⇓S	**Sg**	**18 44 19.8**	**-0.3**
EZNE	**Ezine-Canakkal**	**1.38**	**304**	Pn	**Pn**	**18 44 00.9**	**0.0**
GCAM	**G?zelcaml?**	**1.38**	**201**	Pn	**Pn**	**18 44 00.8**	**-0.1**
CESE	**eme**	**1.38**	**242**	Pn	**Pn**	**18 44 00.9**	**0.0**
BIGA	**Biga-Canakkale**	**1.39**	**338**	Pn	**Pn**	**18 44 01.3**	**+0.2**
GPNR	**Gulpinar-Canak**	**1.41**	**290**	Pn	**Pn**	**18 44 01.4**	**+0.1**
EZN	**Ezine**	**1.44**	**306**	Pn	**Pn**	**18 44 01.9**	**+0.1**
EZN	**Ezine**	**1.44**	**306**	P	**Pn**	**18 44 01.9**	**+0.1**
EZN				S	**Sn**	**18 44 20.6**	**0.0**
KRBG	**Karabiga-Canak**	**1.46**	**343**	Pn	**Pn**	**18 44 02.1**	**+0.1**
SMG	**Samos**	**1.51**	**212**	P	**Pn**	**18 44 02.5**	**-0.3**
SIGR	**SIGRI**	**1.56**	**279**	Pn	**Pn**	**18 44 03.6**	**+0.1**
SIGR	**SIGRI**	**1.56**	**279**	P	**Pn**	**18 44 03.5**	**+0.1**
SIGR				S	**Sn**	**18 44 23.9**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.59**	**30**	Pn	**Pn**	**18 44 03.8**	**0.0**
LPK	**Lapseki**	**1.61**	**329**	Pn	**Pn**	**18 44 04.3**	**+0.2**
MRMT	**Marmara Adasi**	**1.62**	**353**	Pn	**Pn**	**18 44 04.6**	**+0.3**
BOZC	**Bozcaada**	**1.63**	**302**	Pn	**Pn**	**18 44 04.4**	**+0.1**
MLSB	**Milas**	**1.70**	**182**	Pn	**Pn**	**18 44 05.8**	**+0.5**
YER	**Yerkesik**	**1.89**

WNVZ	Wahianoa	8.10	193	P	Pn	18 46 30.5 +2.4
KRHZ	Kereru	8.29	188	P	Pn	18 46 30.1 -0.5
KAHZ	Kahuranaki	8.39	185	P	Pn	18 46 31.6 -0.4
PNHZ	Pukenui	8.58	189	S	Sn	18 48 09.2 -2.0
TSZ	Takapari Road	8.75	190	P	Pn	18 46 35.8 -1.1
TSZ				S	Sn	18 48 13.0 -2.6
PRHZ	Porangahau	8.88	186	P	Pn	18 46 35.6 -3.0
PRHZ				S	Sn	18 48 14.1 -4.5
BFZ	Birch Farm	9.33	188	P	Pn	18 46 42.3 -2.5
TIWZ	Tintock	9.47	189	P	Pn	18 46 44.2 -2.5
OGWZ	Otaki Gorge	9.62	192	P	Pn	18 46 45.2 -3.6
HOWZ	Holdsworth Sta	9.64	191	P	Pn	18 46 45.6 -3.5
TCW	Tory Channel	10.19	196	P	Pn	18 46 53.2 -3.3
MSWZ	Moikau Station	10.19	191	P	Pn	18 46 51.7 -5.0

IDC 23 19:04:07.5±2.0, 1.76N×126.11E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=182.3km s-min=24.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.03	160	P	P	19 09 14.8	+0.4
	0.6nm,0.4s,baz=339,slow=11,SNR=10.0 0.6nm,0.4s						
ASAR	Alice Springs	26.38	164	P	P	19 09 45.5	-0.3
	0.3nm,0.7s,baz=343,slow=9.3,SNR=7.1 0.3nm,0.7s						
MKAR	Makanchi Array	58.83	326	P	P	19 14 07.9	-0.1
	0.2nm,0.4s,baz=124,slow=8.3,SNR=7.6 0.2nm,0.4s						

IDC 23 19:08:27.9±2.5, 6.06S×146.55E, h111km±23km, mb3.4/5, mbtmp4.0/10, Error ellipse: s-maj=35.9km s-min=18.3km az=68.0

ISC 23 19:08:27.4±1.6, 6.0S±0.1×146.5E±0.2, h100km, n11, σ1§09/12, mb3.5/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.44	169	P	Pn	19 09 20.3	+1.2
	31nm,0.5s,baz=30,slow=3.9,SNR=38						
PMG				S	Sn	19 09 58.5	-0.5
	42nm,0.3s,baz=358,slow=15,SNR=6.2						
JAY	Jayapura	6.74	301	P	Pn	19 10 05.0	+1.1
	6.6nm,0.5s,baz=200,slow=16,SNR=1.1						
CTA	Charters Tower	14.00	181	P	Pn	19 11 41.5	0.0
	6.8nm,0.7s,baz=0.9,slow=14,SNR=9.8						
SIJI	Sorong	16.04	288	P	Pn	19 12 06.7	-0.7
	15nm,0.4s,baz=71,slow=15,SNR=12						
WRA	Warramunga Arr	18.21	219	P	P	19 12 31.5	-1.2
	0.6nm,0.4s,baz=31,slow=11,SNR=7.9						
ASAR	Alice Springs	21.34	213	P	P	19 13 06.6	0.0
	1.0nm,0.4s,baz=47,slow=8.8,SNR=32 1.0nm,0.4s						
FITZ	Fitzroy Crossi	23.64	238	P	P	19 13 28.7	-1.1
	3.9nm,0.9s,baz=48,slow=9.6,SNR=10 3.9nm,0.9s						
CMAR	Chiang Mai Arr	52.81	298	P	P	19 17 34.0	+1.0
	2.0nm,0.6s,baz=121,slow=5.9,SNR=26 2.0nm,0.6s						
MKAR	Makanchi Array	77.19	321	P	P	19 20 09.7	-0.8
	0.2nm,0.4s,baz=98,slow=8.7,SNR=6.8 0.2nm,0.4s						
ZALV	Zalesovo Beam	78.75	328	P	P	19 20 17.2	-1.7
	0.3nm,0.4s,baz=101,slow=7.5,SNR=1.7 0.3nm,0.4s						
TORD	Torodi Ar. Bea	144.61	284	PKP	PKPab	19 27 52.6	+0.4
	1.4nm,0.4s,baz=63,slow=3.6,SNR=15						

NEIC 23 19:29:22.1±0.8, 53.41N±0.06×165.28W±0.08, h35km±2km, mb3.7/4, ML3.4/10, ML3.1(AEIC), Error ellipse: s-maj=10.8km s-min=7.1km az=159.0

AEIC 23 19:29:22.7±1.9, 53.54N±0.09×165.37W±0.09, h58km±8km, Error ellipse: s-maj=13.5km s-min=6.6km az=156.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.63	342		Pn	19 29 36.1	+0.1
AKSA					Sn	19 29 46.4	+0.7
AHB	Akutan Harbor	0.64	336		Pn	19 29 36.6	+0.5
AHB					Sn	19 29 47.0	+1.1
AKUT	Akutan	0.65	339		Pn	19 29 36.7	+0.6
AKUT					Sn	19 29 47.2	+1.3
AKUT	Akutan	0.65	339	IAML		19 29 47.7	
	comp=N,1μm,0.6s						
AKBBA	Akutan Broad B	0.65	330		Pn	19 29 36.8	+0.5
AKBBA					Sn	19 29 47.7	+1.6
ZRO	Akutan Zero	0.66	327		Pn	19 29 36.8	+0.5
ZRO					Sn	19 29 48.0	+1.6
AKV	Akutan Volcano	0.69	330		Pn	19 29 37.2	+0.5
AKV					Sn	19 29 48.6	+1.7
AKRB	Akutan Reef Bi	0.72	326		Pn	19 29 37.6	+0.5
LVA	Lava Point	0.74	328		Pn	19 29 38.0	+0.6
LVA					Sn	19 29 49.6	+1.7
LVA	Lava Point	0.74	328	IAML		19 29 52.2	
	comp=E,950nm,0.6s						
LVA				IAML		19 29 52.6	
	comp=N,1μm,0.6s						
UNV	Unalaska Valle	0.74	295		Pn	19 29 37.6	+0.3
UNV				IAML		19 29 49.6	
	comp=E,1μm,0.6s						
UNV				IAML		19 29 49.6	
	comp=N,1μm,0.4s						
UNV	Unalaska Valle	0.74	295		Sn	19 29 49.1	+1.1
MGOD	Makushin Gods	0.93	287		Pn	19 29 40.2	+0.5
MAPS	Pakushin South	0.97	287		Pn	19 29 40.8	+0.5
SSBA	Shishaldin	1.44	30		Pn	19 29 46.7	+0.2
SSLN	Shishaldin Nor	1.51	32		Pn	19 29 47.5	0.0
ISNN	Isanotski Nort	1.60	35		Pn	19 29 49.2	+0.5
FALS	False Pass	1.75	40	Pn	Pn	19 29 50.5	-0.1
DTNA	Dutton South F	2.44	47		Pn	19 30 01.8	+1.7
HAG	Hague Volcano	2.70	47		Pn	19 30 05.4	+1.7
PS1A	Pavlof South-1	2.84	47		Pn	19 30 07.3	+1.8
SDPT	Sand Point	3.39	56	Pn	Pn	19 30 12.6	-0.4
SDPT				IAML		19 31 08.8	
	comp=N,85nm,1.0s						
O14K	Tigyukauivet M	6.17	20	Pn	Pn	19 30 51.7	+0.7
O15K	Ungalikthiuk R	6.44	26	Pn	Pn	19 30 52.6	-2.2
N14K	Kuskokwak Cree	6.72	16	Pn	Pn	19 30 57.0	-1.5
O16K	Kokwok River B	7.28	31	Pn	Pn	19 31 06.7	+0.5
SPU	Mount Spurr	10.49	38	Pn	Pn	19 31 47.6	-2.6
HIN	Hinchinbrook I	12.35	49	Pn	Pn	19 32 15.2	-0.3
KLU	Klutina	13.10	45	Pn	Pn	19 32 23.7	-2.1
N25K	Chitina, Valde	13.71	46	Pn	Pn	19 32 30.2	-3.9
VRDI	Verde Repeater	14.05	48	Pn	Pn	19 32 36.1	-2.6
PCA	Pinnacle	15.17	54	Pn	Pn	19 32 51.5	-1.7
H31M	Peel River	19.64	39	P	P	19 33 46.8	+0.5
H31M				IAmb	IAmb	19 33 54.1	
	comp=Z,8.7nm,1.5s						
E29M	Blow River	19.71	30	P	P	19 33 46.1	-0.8
INK	Inuvik	21.04	33	P	P	19 34 00.3	-1.0
INK				IAmb	IAmb	19 34 44.8	
	comp=Z,2.6nm,1.1s						

AZER 23 19:33:09.3, 38.28N×44.66E, h8km, ml2.7
AFAD 23 19:33:09.5, 38.40N×44.40E, h29km±1km, ML2.3
TEH 23 19:33:09.6, 38.52N×44.49E, h10km±310km, ML2.8, Presumed earthquake
ISK 23 19:33:11.8, 38.42N×44.44E, h12km, ML2.3/6

ISC 23 19:33:10.2±1.3, 38.45N±0.03×44.46E±0.02, h6km±11km, n21, σ1§52/32, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.42	300	P	Pb	19 33 18.9	-1.3
OZAP				S	Sb	19 33 26.4	-0.5
OZAP				IAML		19 33 34.0	
	comp=N,543nm,1.0s						
TVAN	Van	0.83	276	P	Pg	19 33 25.6	-0.5
TVAN				IAML		19 33 52.0	
	comp=E,163nm,0.9s						
TVAN				IAML		19 33 54.0	
	comp=N,154nm,0.8s						
VANB	Van	0.85	280	Pg	Pn	19 33 28.0	-0.9
VANB				Sg	Sb	19 33 39.5	+0.3
MAKU	Maku	0.92	11	Pg	Pg	19 33 25.7	-2.2
ISHB	Shabestar	0.93	100	Pg	Pg	19 33 27.2	-0.8
ISHB				Sg	Sb	19 33 40.7	-0.9
IMRD	Marand	1.01	75	Pg	Pn	19 33 30.0	-1.1
HAKT	HAKKARI	1.07	214	P	Pg	19 33 31.5	+0.7
HAKT				S	Sn	19 33 47.7	+0.3
NAX	Nakhchivan	1.08	48	P	Pn	19 33 33.0	+0.9
NAX				S	Sn	19 33 47.5	0.0
GEVA	Gevas	1.11	263	P	Pb	19 33 29.5	-2.3
GEVA				S	Sg	19 33 44.7	-1.1
GEVA				IAML		19 33 55.0	
	comp=N,83nm,0.4s						
GEVA				IAML		19 33 57.0	
	comp=E,78nm,0.6s						
DYDN	Diyadin	1.24	331	P	Pb	19 33 32.5	-1.7
DYDN				S	Sn	19 33 51.1	-0.5
DYDN				IAML		19 33 58.0	
	comp=E,59nm,0.4s						
DYDN				IAML		19 34 02.0	
	comp=N,51nm,0.9s						
SBZ	Shahbuz	1.27	42	P	Pg	19 33 36.0	+1.4
SBZ				S	Sn	19 33 55.7	+3.5
ORD	Ordubad	1.29	68	P	Pg	19 33 35.1	+0.1
ORD				S	Sn	19 33 53.6	+1.0
HYR	Heyderabad	1.30	14	P	Pg	19 33 38.0	+2.8
HYR				S	Sn	19 34 01.1	+8.3
CUKT	Cukurca	1.38	209	Pn	Pb	19 33 36.7	+0.2
CUKT				Sn	Sb	19 33 55.4	+1.0
ADCV	BITLIS_Adilcev	1.40	285	P	Pg	19 33 37.8	+0.7
ADCV				S	Sg	19 33 59.3	+4.0
ADCV				IAML		19 34 01.0	
	comp=N,35nm,0.8s						
IAZR	Azarshahr	1.43	122	Pg	Pg	19 33 37.7	0.0
AGRB	Hanur-Agry	1.60	315	Pn	Pg	19 33 40.5	-0.4
MLAZ	Malazgirt-MUS	1.64	295	Pn	Pg	19 33 41.6	0.0
GNI	Garni	1.71	7	Pn	Pg	19 33 42.6	-0.4
GURO	Guroymak-BITLI	1.90	274	Pn	Pb	19 33 44.8	-0.7
IHRS	Heris	2.04	93	Pn	Pg	19 33 48.1	-1.1

IDC 23 19:33:24.9±1.1, 25.71N×97.10E, h0km, mb3.7/6, mbtmp3.6/7, ML4.0/1, MS3.8/3, Error ellipse: s-maj=43.1km s-min=15.5km az=70.0

ISC 23 19:33:26.8±0.7, 25.48N±0.08×96.52E±0.05, h10km, n22, σ1§96/30, mb3.6/7, MS3.4/3, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNCH	TengChong	1.86	103	Pg	Pn	19 33 56.4	-2.5
TNCH				Sg	Sn	19 34 19.5	-3.1
TNCH				smax	smax		
	comp=N,2μm,0.9s						
TNCH				smax	smax		
	comp=E,2μm,1.1s						
TNCH				LR	LR		
	comp=N,10μm,2.8s						
TNCH				LR	LR		
	comp=E,3μm,2.0s						
TNCH				LR	LR		
	comp=Z,1μm,3.3s						
PZH	PanZhiHua	4.81	77	Pn	Pn	19 34 39.8	+0.4
PZH				Pg	Pb	19 34 55.0	+3.8
PZH				Sg	Sb	19 35 52.3	+3.1
PZH				smax	smax		
	comp=N,30nm,1.2s						
PZH				smax	smax		
	comp=E,30nm,1.0s						
LSA	Lhasa	6.36	313	Pn	Pn	19 35 00.9	-0.1
LSA				Sn	Sn	19 36 12.6	-1.3
LSA				smax	smax		
	comp=N,18nm,1.2s						
LSA				smax	smax		
	comp=E,14nm,1.1s						
CMAR	Chiang Mai Arr	7.34	162	Pn	Pn	19 35 13.8	-0.3
	comp=E,0.6nm,0.3s,baz=338,slow=13,SNR=10						
CMAR				Pg	Pb	19 35 41.3	+7.0
	comp=E,0.4nm,0.3s,baz=336,slow=15,SNR=8.6						
CMAR				Lg	Lg	19 37 19.4	
	baz=346,slow=27 comp=E,0.6nm,0.3s						
ODAN	Odare	8.32	282	Pn	Pn	19 35 29.5	+1.7
	baz=277,slow=0.0						
RAMN	Ramite	9.03	282	Pn	Pn	19 35 38.9	+1.4
	baz=278,slow=0.0						
RAMN				Sn	Sn	19 37 22.7	+3.2
	comp=E,31nm,0.6s,baz=278,slow=0.0						
GUN	Gumba	9.82	287	Sn	Sn	19 37 39.2	+0.2
	comp=E,42nm,0.8s,baz=283,slow=0.0						
PKI	Pulchoki	10.17	284	Pn	Pn	19 35 54.1	+0.9
	baz=281,slow=0.0						
PKIN	Phulchoki	10.18	284	Pn	Pn	19 35 54.4	+1.1
	baz=281,slow=0.0						
PKIN				Sn	Sn	19 37 48.2	+0.5
	comp=E,12nm,0.5s,baz=281,slow=0.0						
KKN	Kakani	10.32	285	Pn	Pn	19 35 56.4	+1.2
	baz=282,slow=0.0						
KKN				Sn	Sn	19 37 50.9	-0.2
	baz=282,slow=0.0						
DMN	Daman	10.44	284	Pn	Pn	19 35 58.2	+1.3
	baz=281,slow=0.0						
GOMU	GeErMu	10.79	353	P	Pn	19 36 00.4	-1.3
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GKN	Gorkha	10.92	286	Pn	Pn	19 36 04.1	+0.8
	baz=282,slow=0.0						
GKN				Sn	Sn	19 38 05.9	+0.3
	comp=Z,49nm,1.0s,baz=282,slow=0.0						
DANN	Dangsing	11.74	287	Pn	Pn	19 36 15.4	+0.7
	baz=284,slow=0.0						
DANN				Sn	Sn	19 38 24.3	-1.8
	comp=Z,12nm,0.5s,baz=284,slow=0.0						
KSH2	Kashi	22.28	313	P	P	19 38 24.5	+0.2
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	23.64	17	P	P	19 38 33.1	-5.2
	comp=Z,0.6nm,0.8s,baz=193,slow=11,SNR=4.0						
SONM				LR	LR	19 49 06.6	
	comp=Z,126nm,18.3s,baz=272,slow=40 comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	24.11	336	P	P	19 38 41.9	-0.8
	comp=Z,1nm,0.6s,baz=148,slow=10,SNR=20						
MKAR				LR	LR	19 47 46.4	
	comp=Z,118nm,19.2s,baz=284,slow=36 comp=Z,2.1nm,0.6s						
KURBB	Kurchatov Arra	28.67	336	P	P	19 39 24.5	+0.7
	comp=Z,0.4nm,0.5s,baz=144,slow=9.5,SNR=2.7 comp=Z,0.4nm,0.5s						
ZALV	Zalesovo Beam	29.75	346	P	P	19 39 31.3	-1.9
	comp=Z,0.6nm,0.6s,baz=166,slow=7.6,SNR=4.5 comp=Z,0.6nm,0.6s						
BVAR	Borovoye Array	33.79	331	P	P	19 40 09.8	+1.0
	comp=Z,0.8nm,0.5s,baz=137,slow=11,SNR=4.6 comp=Z,0.8nm,0.5s						
JHJ	Hachijo jima 2	38.28	68	LR	LR	19 56 34.0	
	comp=Z,442nm,21.5s,baz=284,slow=37						
ASAR	Alice Springs	60.80	140	P	P	19 43 38.1	-1.3
	comp=Z,0.7nm,0.8s,baz=322,slow=6.7,SNR=9.4 comp=Z,0.7nm,0.8s						

NSSP 23 19:42:35.1, 38.25N×44.55E, h10km, Ms3.5
AZER 23 19:42:36.1, 38.36N×44.60E, h4km, ml3.9
ISK 23 19:42:37.9, 38.40N×44.56E, h5km, ML3.9/17
AFAD 23 19:42:38.4, 38.44N×44.47E, h7km±3km, ML3.7
TIF 23 19:42:38.1, 38.43N×44.47E, h9km±2km
TEH 23 19:42:38.6, 38.44N×44.47E, h5km±45km, ML3.6, Presumed earthquake
IDC 23 19:42:39.5±1.2, 38.41N×44.41E, h0km, mb3.7/6, mbtmp3.6/10, ML3.2/3, MS3.4/8, Error ellipse: s-maj=16.2km s-min=14.9km az=146.0

ISC 23 19:42:39.0±1.1, 38.41N±0.02×44.50E±0.02, h2km±9km, n84, σ1§60/112, mb3.6/5, MS3.5/3, 2D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.47	303	P	Pg	19 42 47.9	-0.2
OZAP				S	Sg	19 42 53.3	-0.9
OZAP				IAML		19 43 03.0	
	comp=N,1μm,1.8s						
OZAP	Van, Ozalp-Mer	0.47	303	Pg	Pg	19 42 47.9	-0.2
TVAN	Van	0.87	279	P	Pg	19 42 54.2	-1.5
TVAN				S	Sg	19 43 07.4	+0.5
TVAN				IAML		19 43 18.0	
	comp=N,4μm,0.7s						
TVAN				IAML		19 43 23.0	
	comp=E,3μm,1.2s						
TVAN	Van	0.87	279	Pg	Pg	19 42 54.1	-1.5
ISHB	Shabestar	0.89	98	Pg	Pg	19 42 55.2	-0.9
VANB	Van	0.89	283	Pg	Pb	19 42 56.7	-0.6
VANB				Sg	Sn	19 43 10.5	-1.8
VMUR	Van-Muradiye	0.93	309	P	Pg	19 42 56.1	-0.9
VMUR				S	Sb	19 43 10.0	-0.9
VMUR				IAML		19 43 14.0	
	comp=E,2μm,0.9s						
VMUR	Van-Muradiye	0.93	309	Pg	Pg	19 42 56.0	-0.9
MAKU	Maku	0.96	9	Pg	Pg	19 42 56.2	-1.3
IMRD	Marand	0.99	72	Pg	Pg	19 42 57.7	-0.3
HAKT	HAKKARI	1.05	217	P	Pg	19 42 59.1	-0.1
HAKT				S	Sb	19 43 14.0	-0.5
HAKT				IAML		19 43 23.0	
	comp=N,2μm,0.7s						
HAKT	HAKKARI	1.05	217	Pg	Pg	19 42 59.1	-0.1
HAKT	HAKKARI	1.05	217	P	Pg	19 42 58.6	-0.6
HAKT				S	Sn	19 43 16.4	-0.1
NAX	Nakhchivan	1.09	45	P	Pg	19 42 59.5	-0.5
NAX				S	Sn	19 43 15.8	-1.5
ERCV	ERCIS-VAN	1.10	304	Pn	Pb	19 43 00.4	-0.5
ERCV				Sn	Sn	19 43 16.9	-0.6
GEVA	Gevas	1.14	266	P	Pg	19 42 58.7	-2.1
GEVA				S	Sn	19 43 16.4	-2.0
ORD	Ordubad	1.28	66	P	Pn	19 43 02.8	-1.3
ORD				S	Sn	19 43 22.1	+0.1
SBZ	Shahbuz	1.29	39	P	Pn	19 43 02.9	-1.3
SBZ				S	Sn	19 43 22.0	-0.1
DYDN	Diyadin	1.30	331	P	Pn	19 43 01.6	-2.9
DYDN				S	Sb	19 43 19.3	-2.3
DYDN				IAML		19 43 26.0	
	comp=E,1μm,0.6s						
DYDN				IAML		19 43 33.0	
	comp=N,1μm,0.5s						
DYDN	Diyadin	1.30	331	Pg	Pn	19 43 01.5	-2.9
HYR	Heyderabad	1.34	12	P	Pn	19 43 03.6	-1.3
HYR				S	Sg	19 43 26.6	+4.5
CUKT	Cukurca	1.35	212	Pn	Pb	19 43 04.8	-0.4
CUKT				Sn	Sg	19 43 25.3	+2.8
CUKT	Cukurca	1.35	212	Pg	Pn	19 43 04.1	-1.0
IAZR	Azarshahr	1.38	121	Pg	Pn	19 43 05.2	-0.4
ADCV	BITLIS_Adilcev	1.45	287	P	Pn	19 43 05.3	-1.2
ADCV				S	Sg	19 43 27.3	+1.7
ADCV				IAML		19 43 31.0	
	comp=N,890nm,1.3s						
VAYK	Vayk	1.48	29	‖ eP	Pn	19 43 06.3	-0.5
VAYK				‖ eS	Sg	19 43 26.5	0.0
IGDI	IGDIR	1.50	348	P	Pn	19 43 06.3	-0.8
IGDI				S	Sg	19 43 26.8	-0.4
IGDI				IAML		19 43 32.0	
	comp=N,854nm,1.0s						
IGDI				IAML		19 43 36.0	
	comp=E,828nm,1.0s						
ALVK	Alvank	1.54	69	eP	Pn	19 43 06.8	-0.9
ALVK				eS	Sg	19 43 29.2	+0.5
AGRB	Hanur-Agry	1.66	315	Pn	Pn	19 43 08.9	-0.5
AGRB				Sn	Sg	19 43 33.3	+1.0
DORK	Agr/Tutak/Do	1.66	307	P	Pn	19 43 08.5	-0.9
DORK				S	Sb	19 43 31.5	-0.5
MLAZ	Malazgirt-MUS	1.69	296	Pn	Pb	19 43 10.6	-0.4
GNI	Garni	1.75	6	Pn	Pg	19 43 12.3	-0.4
	59nm,0.3s,baz=280,slow=1.4,SNR=157						
GNI				Lg	Lg	19 43 36.7	
	46nm,0.3s,baz=16,slow=24,SNR=6.6						
GNI	Garni	1.75	6	Pn	Pb	19 43 11.2	-0.8
GNI	Garni	1.75	6	eP	Pn	19 43 10.5	-0.2
GNI				eS	Sg	19 43 37.2	+1.9
VNNZ	Vanand	1.77	343	eP	Pb	19 43 11.7	-0.7
VNNZ				eS	Sg	19 43 38.4	+2.9
EGVZ	Egvard	1.79	62	eP	Pn	19 43 11.2	0.0
EGVZ				eS	Sg	19 43 36.5	-0.2
MAHB	Mahabad	1.90	149	Pn	Pb	19 43 14.4	-0.1
ARUZ	Aruch	1.90	351	eP	Pb	19 43 14.2	-0.4
ARUZ				eS	Sg	19 43 44.2	+4.0
KAPZ	Kaputan	1.92	5	eP	Pb	19 43 14.4	-0.6
KAPZ				eS	Sg	19 43 43.8	+3.1
GURO	Guroymak-BITLI	1.94	275	Pn	Pb	19 43 14.1	-1.1
AYRK	Ayrk	1.98	30	eP	Pb	19 43 14.9	-1.1
AYRK				eS	Sg	19 43 43.3	+0.7
AMBZ	Amberd	1.99	355	eP	Pb	19 43 15.4	-0.7
AMBZ				eS	Sg	19 43 45.7	+2.7
IHRS	Heris	2.00	92	Pn	Pb	19 43 15.6	-0.8
IHSH	Hashtrud	2.45	116	Pn	Pb	19 43 21.8	-2.2
KARS	Kars	2.48	334	Pn	Pn	19 43 21.6	+1.0
VRTB	Varto-Mus	2.49	289	Pn	Pn	19 43 21.6	+0.8
ISRB	Sarab	2.56	102	Pn	Pb	19 43 23.7	-2.2
LSVT	Lusahovit	2.56	12	eP	Pn	19 43 22.6	+0.9
LSVT				eS	Sb	19 43 57.9	+0.1
SVAN	Silvan-Diyarba	2.61	265	Pn	Pn	19 43 23.5	+1.2
SVAN	Silvan-Diyarba	2.61	265	Pn	Pn	19 43 22.3	0.0
SRTK	Saratovka	2.66	357	eP	Pb	19 43 27.2	-0.3
SRTK				eS	Sg	19 44 06.7	+2.1
GRMI	Germi	2.69	80	Pn	Pn	19 43 25.0	+1.5
SENK	Senkaya-Erzuru	2.72	323	Pn	Pn	19 43 24.8	+0.8
KARO	Karliova-Bingo	2.84	290	Pn	Pn	19 43 26.9	+1.3
BGD	Bogdanovka	2.94	347	P	Pb	19 43 31.6	-0.6
BNGB	Bingl	3.04	282	Pn	Pn	19 43 29.9	+1.5
AKH	Akhalkalaki	3.10	346	P	Pb	19 43 34.1	-1.0
DGRG	David-gareji	3.12	12	P	Pb	19 43 32.2	-3.0
DGRG				S	Sb	19 44 15.9	+2.2
TRLG	Trialeti	3.15	355	P	Pb	19 43 34.2	-1.6
TRLG				S	Sg	19 44 19.1	-1.0
VSHL	Vashlovani	3.18	27	P	Pb	19 43 33.0	-3.3
VSHL				S	Sg	19 44 22.7	+1.5
YEDI	Yedisu-Bingol	3.25	290	Pn	Pn	19 43 32.6	+1.3
TBLG	Delisi	3.33	3	Pn	Pn	19 43 33.1	+0.9
DYBB	Diyarbakir	3.46	264	Pn	Pn	19 43 34.9	+0.8
LGD	Lagodekhi	3.68	21	P	Pb	19 43 43.5	-1.2
ALIG	Mtskhetisjvari	3.75	350	P	Pn	19 43 40.0	+1.9
BAYT	Aydıntepe-Bayb	3.92	302	Pn	Pn	19 43 42.1	+1.7
CHRG	Chargali	3.93	5	P	Pn	19 43 42.8	+2.2
CHRG				S	Sg	19 44 42.3	-3.1
SVRC	Sivrice-ELAZID	4.08	271	Pn	Pn	19 43 44.3	+1.7
GARIG	Gari	4.27	350	P	Pn	19 43 48.1	+2.9
SHTL	Shatili	4.28	6	P	Pb	19 43 54.9	-0.2
KBZ	Khabaz	5.45	348	Pn	Pn	19 44 05.1	+3.8
	2.6nm,1.2s,baz=159,slow=14,SNR=2.4						
KBZ				LR	LR	19 46 28.4	
	comp=Z,212nm,21.7s,baz=100,slow=42						
BRTR	Keskin Array B	8.55	282	Pn	Pn	19 44 47.5	+3.5
	baz=63,slow=7.0,SNR=2.5						
BRTR				LR	LR	19 48 37.5	
	comp=Z,103nm,18.2s,baz=51,slow=42 0.2nm,0.3s						
ASF	Jabal al Asfar	8.79	227	LR	LR	19 48 18.8	
	comp=Z,134nm,19.8s,baz=28,slow=39						
MMAI	Mount Meron Ar	9.14	237	LR	LR	19 48 39.9	
	comp=Z,304nm,18.6s,baz=58,slow=40						
EIL	Elat	11.77	225	LR	LR	19 50 10.4	
	comp=Z,164nm,19.3s,baz=50,slow=38						
AKTO	Aktyubinsk	15.39

az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**4.13**	**117**	Pn	Pn	19 49 54.1	-0.2
	0.3nm,0.3s,baz=299,slow=14,SNR=8.9						
STKA				Sn	Sn	19 50 45.4	+2.0
	0.7nm,0.3s,baz=104,slow=8.7,SNR=6.8						
STKA				Lg	Lg	19 51 00.9	
	0.6nm,0.3s,baz=5.6,slow=19,SNR=3.8 0.6nm,0.2s						
ASAR	**Alice Springs**	**7.04**	**334**	Pn	Pn	19 50 34.8	+0.6
	0.1nm,0.3s,baz=176,slow=8.4,SNR=10						
ASAR				Sn	Sn	19 51 54.8	-0.2
	0.1nm,0.3s,baz=157,slow=23,SNR=5.4 0.1nm,0.3s						
WRA	**Warramunga Arr**	**10.42**	**345**	Pn	Pn	19 51 20.5	-0.1
	0.1nm,0.3s,baz=164,slow=13,SNR=2.0 0.6nm,0.6s						

TEH ***23*** *19:49:36.2,38˚.34N×44˚.43E,h10km±135km,ML2.5, Presumed earthquake*
ISK ***23*** *19:49:41.7,38˚.44N×44˚.40E,h16km,ML2.7/5*
ISC 23 19:49:38.6±1.2, 38˚.47N±0˚.05×44˚.52E±0˚.04, h11km±13km, n9, σ1ᵍ19/14, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.89**	**102**	Pg	Pg	19 49 54.6	-1.2
ISHB				Sg	Sg	19 50 08.4	+1.0
MAKU	**Maku**	**0.89**	**8**	Pg	Pb	19 49 56.2	-0.1
VANB	**Van**	**0.89**	**278**	Pg	Pn	19 49 57.3	0.0
VANB				Sg	Sn	19 50 08.8	-1.5
IMRD	**Marand**	**0.96**	**75**	Pg	Pb	19 49 57.4	-0.1
CUKT	**Cukurca**	**1.42**	**211**	Pn	Pg	19 50 06.4	+0.5
CUKT				Sn	Sg	19 50 24.4	+0.1
AGRB	**Hanur-Agry**	**1.62**	**313**	Pn	Pg	19 50 09.8	+0.1
AGRB				Sn	Sb	19 50 30.3	+1.1
MLAZ	**Malazgirt-MUS**	**1.68**	**294**	Pn	Pg	19 50 10.2	-0.6
MLAZ				Sn	Sg	19 50 30.8	-1.7
GNI	**Garni**	**1.68**	**6**	Pn	Pb	19 50 11.9	+2.1
IHRS	**Heris**	**1.99**	**94**	Pn	Pb	19 50 15.3	+0.3

AZER ***23*** *19:57:30.7,38˚.26N×44˚.61E,h2km,ml2.7*
AFAD ***23*** *19:57:31.0,38˚.34N×44˚.57E,h6km±2km,ML2.6*
TEH ***23*** *19:57:33.9,38˚.39N×44˚.49E,h10km±200km,ML2.5, Presumed earthquake*
ISK ***23*** *19:57:34.9,38˚.34N×44˚.51E,h8km,ML2.7/5*
ISC 23 19:57:34.0±1.2, 38˚.33N±0˚.03×44˚.48E±0˚.02, h5km±11km, n20, σ1ᵍ76/34, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.50**	**311**	P	Pg	19 57 42.3	-1.4
OZAP				S	Sg	19 57 50.6	+0.3
OZAP				IAML		19 57 58.0	
	comp=N,452nm,0.6s						
TVAN	**Van**	**0.86**	**284**	P	Pg	19 57 49.1	-1.5
TVAN				S	Sg	19 58 02.7	+0.9
TVAN				IAML		19 58 09.0	
	comp=E,160nm,0.5s						
TVAN				IAML		19 58 14.0	
	comp=N,170nm,0.4s						
VANB	**Van**	**0.89**	**288**	Pg	Pg	19 57 52.1	+1.0
VANB				Sg	Sg	19 58 04.9	+2.1
ISHB	**Shabestar**	**0.90**	**93**	Pg	Pb	19 57 50.6	-1.6
ISHB				Sg	Sn	19 58 04.9	-2.2
VMUR	**Van-Muradiye**	**0.97**	**313**	P	Pg	19 57 51.6	-1.0
VMUR				S	Sg	19 58 04.8	-0.4
VMUR				IAML		19 58 10.0	
	comp=N,164nm,0.6s						
VMUR				IAML		19 58 12.0	
	comp=E,186nm,0.9s						
HAKT	**HAKKARI**	**0.98**	**219**	P	Pg	19 57 52.7	-0.1
HAKT				S	Sn	19 58 09.2	+0.1
IMRD	**Marand**	**1.04**	**68**	Pg	Pn	19 57 53.8	-1.6
MAKU	**Maku**	**1.04**	**9**	Pg	Pg	19 57 52.9	-1.0
GEVA	**Gevas**	**1.11**	**270**	P	Pg	19 57 52.4	-3.0
GEVA				S	Sg	19 58 10.7	+0.8
GEVA				IAML		19 58 15.0	
	comp=N,90nm,0.7s						
GEVA				IAML		19 58 17.0	
	comp=E,111nm,0.5s						
NAX	**Nakhchivan**	**1.16**	**43**	P	Pn	19 57 55.9	-1.1
NAX				S	Sn	19 58 13.3	0.0
CUKT	**Cukurca**	**1.28**	**213**	Pn	Pg	19 57 59.9	+1.3
CUKT				Sn	Sn	19 58 18.2	+1.9
ORD	**Ordubad**	**1.33**	**63**	P	Pg	19 57 58.9	-0.6
ORD				S	Sn	19 58 18.0	+0.5
IAZR	**Azarshahr**	**1.35**	**118**	Pg	Pg	19 58 00.9	+1.0
SBZ	**Shahbuz**	**1.36**	**38**	P	Pg	19 57 59.0	-1.0
SBZ				S	Sn	19 58 22.6	+4.4
HYR	**Heyderabad**	**1.42**	**12**	P	Pg	19 58 02.0	+0.8
HYR				S	Sg	19 58 24.9	+5.3
AGRB	**Hanur-Agry**	**1.70**	**318**	Pn	Pb	19 58 05.6	-0.2
AGRB				Sn	Sb	19 58 28.0	+0.4
MLAZ	**Malazgirt-MUS**	**1.71**	**299**	Pn	Pb	19 58 05.9	-0.1
MLAZ				Sn	Sb	19 58 28.6	+0.7
GNI	**Garni**	**1.83**	**6**	Pn	Pb	19 58 07.2	-0.8
GURO	**Guroymak-BITLI**	**1.93**	**277**	Pn	Pb	19 58 09.6	-0.2
IHRS	**Heris**	**2.02**	**90**	Pn	Pg	19 58 11.6	-1.1

IDC ***23*** *20:04:39.2±2.1,6˚.57S×129˚.81E,h137km±22km,mb3.4/2, mbtmp3.9/7, Error ellipse: s-maj=28.4km s-min=18.6km az=107.0*
ISC 23 20:04:37.3±0.9, 6˚.70S±0˚.06×130˚.1E±0˚.1, h146km, n7, σ3ᵍ78/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.91**	**12**	P	Pn	20 06 03.8	+0.9
	4.7nm,0.2s,baz=127,slow=20,SNR=16						
SIJI				S	Sn	20 07 04.5	-5.2
	8.5nm,0.2s,baz=278,slow=24,SNR=9.5						
BATI	**Baumata**	**7.23**	**241**	P	Pn	20 06 20.6	0.0
	12nm,0.5s,baz=80,slow=18,SNR=4.0						
BATI				S	Sn	20 07 39.9	-1.6
	13nm,0.7s,baz=268,slow=17,SNR=1.7						
FITZ	**Fitzroy Crossi**	**12.13**	**200**	P	Pn	20 07 27.8	+2.4
	6.1nm,1.0s,baz=24,slow=10,SNR=19						
FITZ				S	Sn	20 09 34.7	-4.7
	1.4nm,0.3s,baz=323,slow=20,SNR=7.1						
WRA	**Warramunga Arr**	**13.80**	**163**	P	Pn	20 07 50.6	+3.6
	0.9nm,0.5s,baz=344,slow=14,SNR=11						
WRA				S	Sn	20 10 14.4	-5.5
	0.6nm,0.4s,baz=332,slow=22,SNR=2.1						
ASAR	**Alice Springs**	**17.27**	**168**	P	Pn	20 08 34.4	+4.7
	0.9nm,0.4s,baz=344,slow=9.8,SNR=19						
ASAR				S	S	20 11 40.3	-1.3
	0.3nm,0.4s,baz=360,slow=28,SNR=5.1						
MKAR	**Makanchi Array**	**68.01**	**327**	P	P	20 15 21.5	+0.7
	0.7nm,0.5s,baz=120,slow=7.3,SNR=11 0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**72.29**	**328**	P	P	20 15 48.8	+2.0
	0.3nm,0.4s,baz=125,slow=6.2,SNR=10.0 0.3nm,0.4s						

AFAD ***23*** *20:17:19.7,38˚.44N×44˚.64E,h7km±4km,ML2.1*
TEH ***23*** *20:17:20.9,38˚.40N×44˚.44E,h10km±154km,ML2.5, Presumed earthquake*
AZER ***23*** *20:17:22.0,38˚.40N×44˚.51E,h33km,ml2.6*
ISC 23 20:17:21.5±1.3, 38˚.41N±0˚.04×44˚.48E±0˚.03, h6km±11km, n15, σ1ᵍ04/25, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**303**	P	Pb	20 17 31.1	-1.1
OZAP				S	Sb	20 17 38.3	-1.0
OZAP				IAML		20 17 55.0	
	comp=N,169nm,1.2s						
TVAN	**Van**	**0.85**	**278**	P	Pg	20 17 38.1	+0.2
TVAN				IAML		20 17 53.0	
	comp=N,91nm,0.6s						
TVAN				S	Sn	20 17 53.1	-0.1
TVAN				IAML		20 18 04.0	
	comp=E,79nm,0.5s						
ISHB	**Shabestar**	**0.90**	**98**	Pg	Pb	20 17 38.7	-0.9
VMUR	**Van-Muradiye**	**0.92**	**309**	P	Pg	20 17 39.2	0.0
VMUR				S	Sn	20 17 56.1	+1.3
VMUR				IAML		20 17 59.0	
	comp=N,58nm,0.5s						
VMUR				IAML		20 17 59.0	
	comp=E,50nm,0.3s						
MAKU	**Maku**	**0.96**	**9**	Pg	Pb	20 17 39.7	-0.9
IMRD	**Marand**	**1.00**	**72**	Pg	Pn	20 17 41.5	-0.7
IMRD				Sg	Sn	20 17 56.3	-0.5
HAKT	**HAKKARI**	**1.05**	**216**	P	Pn	20 17 43.5	+0.5
HAKT				S	Sn	20 18 00.0	+2.0
NAX	**Nakhchivan**	**1.10**	**46**	P	Pn	20 17 44.0	+0.4
GEVA	**Gevas**	**1.12**	**266**	P	Pn	20 17 43.6	-0.3
GEVA				S	Sn	20 18 00.7	+0.9
GEVA				IAML		20 18 08.0	
	comp=N,54nm,0.4s						
GEVA				IAML		20 18 08.0	
	comp=E,46nm,0.5s						
ORD	**Ordubad**	**1.29**	**66**	P	Pg	20 17 46.4	+0.2
ORD				S	Sn	20 18 04.9	+1.1
DYDN	**Diyadin**	**1.29**	**332**	P	Pn	20 17 45.3	-1.0
DYDN				S	Sg	20 18 03.1	0.0
DYDN				IAML		20 18 11.0	
	comp=E,34nm,0.7s						
DYDN				IAML		20 18 19.0	
	comp=N,31nm,0.5s						
SBZ	**Shahbuz**	**1.29**	**40**	P	Pg	20 17 46.2	-0.1
SBZ				S	Sn	20 18 05.5	+1.7
HYR	**Heyderabad**	**1.34**	**12**	P	Pg	20 17 48.5	+1.3
HYR				S	Sg	20 18 06.4	+1.9
IAZR	**Azarshahr**	**1.39**	**121**	Pg	Pg	20 17 48.4	+0.3
IHRS	**Heris**	**2.01**	**92**	Pn	Pg	20 17 59.5	-0.6

IDC 23 20:35:18.0±8.2, 32˚.43S×179˚.94E, h374km±98km, mb2.9/2, mbtmp3.8/3, Error ellipse: s-maj=116.0km s-min=49.3km az=1.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.26**	**201**	P	Pn	20 36 53.2	+0.8
	5.5nm,0.2s,baz=266,slow=5.2,SNR=16						
URZ				S	S	20 38 08.8	-0.5
	14nm,0.3s,baz=273,slow=23,SNR=9.3						
ASAR	**Alice Springs**	**41.30**	**270**	P	P	20 42 28.9	+0.1
	0.6nm,0.7s,baz=102,slow=7.1,SNR=6.9 0.6nm,0.7s						
WRA	**Warramunga Arr**	**42.48**	**275**	P	P	20 42 37.9	-0.3
	0.5nm,0.3s,baz=112,slow=8.1,SNR=11 0.5nm,0.3s						
FINES	**FINESS Array B**	**146.40**	**338**	PKPbc	PKPbc	20 54 13.8	-1.0
	3.0nm,0.9s,baz=64,slow=3.2,SNR=1.9						

CATAC ***23*** *20:39:52.8±0.2, 11˚.N±1˚.×8˚.5W±˚., h7km±1km, M3.0/17, MLv3.0/17, Error ellipse: s-maj=3.8km s-min=2.2km az=66.4, confirmed*
UCR ***23*** *20:39:52.2±0.7, 10˚.95N×85˚.51W, h2km±2km, MW4.0, Presumed earthquake*
ISC 23 20:39:53.3±0.8, 10˚.95N±0˚.02×85˚.51W±0˚.03, h16km±5km, n36, σ0ᵍ72/51, 4C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRUZ	**La Cruz**	**0.18**	**318**	*eP*	Pg	20 39 57.2	-0.6
BUAI	**Buenos Aires**	**0.18**	**112**	*eP*	Pg	20 39 57.8	0.0
BUAI				*eS*	Sg	20 40 01.3	+0.3
LAPC	**Finca la Perla**	**0.19**	**158**	*eP*	Pg	20 39 57.4	-0.5
LAPC				*eS*	Sg	20 40 00.6	-0.5
PEJA	**Penjamo Buenos**	**0.20**	**105**	*eP*	Pg	20 39 58.0	-0.1
VORI	**VORI**	**0.20**	**129**	*eP*	Pg	20 39 57.8	-0.4
VRLE	**La Escondida,**	**0.21**	**138**	*eP*	Pg	20 39 58.0	-0.3
VRLE				*eS*	Sg	20 40 01.4	-0.2
GPS3	**Bodega del ICE**	**0.23**	**144**	*eP*	Pg	20 39 58.6	0.0
CARN	**Rivas**	**0.24**	**356**	P	Pg	20 39 57.6	-1.1
CARN				S	Sg	20 40 02.8	+0.4
CARN	**Rivas**	**0.24**	**356**	*eP*	Pg	20 39 58.4	-0.3
GPS2	**Hotel Rincn d**	**0.24**	**142**	*eP*	Pg	20 39 58.7	-0.1
ELI1	**Hacienda Flor**	**0.30**	**189**	P	Pb	20 39 59.8	-0.5
ELI1				S	Sb	20 40 04.9	-0.1
ELI1	**Hacienda Flor**	**0.30**	**189**	*eP*	Pb	20 40 00.1	-0.2
MESS	**Mesas**	**0.37**	**124**	*eP*	Pb	20 40 00.9	-0.6
HORNC	**Hornillas**	**0.40**	**126**	*eP*	Pb	20 40 01.4	-0.5
VMAR	**Armenia, Volca**	**0.41**	**109**	*eP*	Pb	20 40 01.7	-0.4
CUI	**Cuipilapa**	**0.44**	**130**	*eP*	Pb	20 40 02.2	-0.5
BAGA	**Bagaces**	**0.48**	**150**	*eP*	Pb	20 40 03.1	-0.2
OMEN	**Al SSO del Vol**	**0.57**	**348**	P	Pb	20 40 04.3	-0.7
TENO	**El Achiote**	**0.57**	**115**	*eP*	Pb	20 40 04.8	-0.2
ARIN	**Rivas**	**0.60**	**328**	P	Pg	20 40 04.2	-1.0
ARIN				S	Sb	20 40 13.2	-0.4
PLVR	**Palo Verde**	**0.61**	**166**	*eP*	Pb	20 40 05.3	-0.5
MORN	**Al O del Volca**	**0.61**	**347**	P	Pb	20 40 05.5	-0.2
MORN				S	Sg	20 40 13.4	-0.2
JTS	**Las Juntas de**	**0.85**	**140**	P	Pb	20 40 09.2	-0.4
JTS				S	Sb	20 40 20.7	-0.1
JTS	**Las Juntas de**	**0.85**	**140**	*eP*	Pg	20 40 09.0	-0.8
CMARA	**Lajas Hojancha**	**0.92**	**175**	P	Pg	20 40 10.7	-0.5
CMARA				S	Sb	20 40 23.4	+0.3
NYURE	**Nandayure**	**0.98**	**165**	*eP*	Pg	20 40 11.0	-1.3
ACON	**Acoyapa**	**1.07**	**18**	P	Pg	20 40 12.9	-1.1
ACON				S	Sb	20 40 27.2	+0.1
COVE	**Coope Vega, Sa**	**1.11**	**102**	P	Pg	20 40 13.4	-1.4
NANN	**Nandasmo**	**1.16**	**329**	P	Pg	20 40 14.7	-1.0
NANN				S	Sb	20 40 30.4	+0.7
MASN	**Masaya**	**1.21**	**329**	P	Pg	20 40 15.4	-1.4
UNAN	**Cigeo UNAN**	**1.38**	**327**	P	Pn	20 40 17.7	-0.2
UNAN				S	Sb	20 40 36.7	+0.5
BOAB	**BOACO BROADBAN**	**1.50**	**354**	P	Pn	20 40 19.8	+0.2
BOAB				S	Sn	20 40 39.6	+0.7
COPN	**Copaltepe**	**1.62**	**319**	P	Pn	20 40 21.6	+0.4
TRT2	**Tortugero**	**1.78**	**102**	P	Pn	20 40 23.5	+0.1
TRT2				S	Sn	20 40 46.6	+0.8
MACN	**El Madrono**	**1.90**	**323**	P	Pn	20 40 26.3	+1.3
LIMN	**Finca el Limon**	**2.27**	**338**	P	Pn	20 40 30.9	+0.7
LIMN				S	Sn	20 40 60.0	+2.1

AFAD ***23*** *20:44:36.9,38˚.42N×44˚.45E,h7km±2km,MW3.9*
AZER ***23*** *20:44:36.4,38˚.39N×44˚.49E,h24km,ml4.2*
TIF ***23*** *20:44:36.4,38˚.39N×44˚.41E,h6km±2km*
NSSP ***23*** *20:44:36.8,38˚.35N×44˚.48E,h10km,Ms3.7*
IDC ***23*** *20:44:37.4±0.8,38˚.41N×44˚.44E,h0km,mb3.7/13, mbtmp3.7/20,ML3.5/6,MS3.1/5, Error ellipse: s-maj=14.1km s-min=10.7km az=146.0*
ISK ***23*** *20:44:37.2,38˚.36N×44˚.52E,h6km,ML3.9/18*
TEH ***23*** *20:44:37.0,38˚.40N×44˚.43E,h6km±28km,ML3.7, Presumed earthquake*
ISC 23 20:44:37.3±1.1, 38˚.36N±0˚.02×44˚.44E±0˚.02, h2km±8km, n99, σ1ᵍ27/128, mb3.8/12, 2D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**311**	P	Pg	20 44 45.8	-0.4
OZAP				S	Sg	20 44 51.9	-0.4
OZAP	**Van, Ozalp-Mer**	**0.46**	**311**	Pg	Pg	20 44 45.7	-0.4
TVAN	**Van**	**0.83**	**282**	P	Pg	20 44 52.7	-0.5
TVAN				S	Sb	20 45 06.6	+0.4
TVAN	**Van**	**0.83**	**282**	Pg	Pg	20 44 52.6	-0.5
VANB	**Van**	**0.86**	**286**	Pg	Pb	20 44 55.1	+0.1
VANB				Sg	Sn	20 45 07.7	-2.0
VMUR	**Van-Muradiye**	**0.93**	**313**	P	Pg	20 44 54.4	-0.6
VMUR				S	Sg	20 45 07.7	+0.7
VMUR	**Van-Muradiye**	**0.93**	**313**	Pg	Pg	20 44 54.4	-0.6
ISHB	**Shabestar**	**0.93**	**94**	Pg	Pg	20 44 53.8	-1.3
HAKT	**HAKKARI**	**0.99**	**216**	P	Pb	20 44 56.9	-0.3
HAKT				S	Sn	20 45 12.3	-0.7
HAKT	**HAKKARI**	**0.99**	**216**	Pg	Pb	20 44 56.9	-0.3
HAKT	**HAKKARI**	**0.99**	**216**	P	Pg	20 44 56.1	-0.1
HAKT				S	Sn	20 45 13.6	+0.6
MAKU	**Maku**	**1.01**	**11**	Pg	Pg	20 44 55.4	-1.3
IMRD	**Marand**	**1.05**	**70**	Pg	Pg	20 44 56.9	-0.6
ERCV	**ERCIS-VAN**	**1.08**	**308**	Pn	Pg	20 44 57.8	-0.3
ERCV				Sn	Sn	20 45 15.1	-0.3
ERCV	**ERCIS-VAN**	**1.08**	**308**	P	Pg	20 44 57.6	-0.5
ERCV				S	Sn	20 45 14.6	-0.8
GEVA	**Gevas**	**1.08**	**268**	P	Pg	20 44 57.0	-1.1
GEVA				S	Sn	20 45 14.4	-1.0
AKDM	**Akdamar-Van**	**1.15**	**269**	Pg	Pg	20 44 58.0	-1.3
NAX	**Nakhchivan**	**1.16**	**45**	P	Pg	20 44 59.0	-0.6
NAX				S	Sg	20 45 15.2	+0.6
CUKT	**Cukurca**	**1.29**	**211**	Pn	Pn	20 45 02.6	+0.2
CUKT				Sn	Sn	20 45 21.8	+1.5
CUKT	**Cukurca**	**1.29**	**211**	P	Pn	20 45 02.6	+0.2
CUKT				S	Sn	20 45 21.0	+0.7
CUKT	**Cukurca**	**1.29**	**211**	Pg	Pg	20 45 01.5	-0.5
DYDN	**Diyadin**	**1.32**	**334**	P	Pg	20 45 00.9	-1.8
DYDN				S	Sg	20 45 17.6	-2.1
DYDN	**Diyadin**	**1.32**	**334**	Pg	Pg	20 45 00.8	-1.8
ORD	**Ordubad**	**1.34**	**64**	P	Pn	20 45 02.0	-1.2
ORD				S	Sg	20 45 21.2	+0.7
SBZ	**Shahbuz**	**1.35**	**40**	P	Pn	20 45 02.0	-1.4
IAZR	**Azarshahr**	**1.40**	**119**	Pg	Pn	20 45 03.6	-0.4
HYR	**Heyderabad**	**1.40**	**13**	P	Pn	20 45 03.0	-0.9
HYR				S	Sn	20 45 25.3	+2.4
ADCV	**BITLIS_Adilcev**	**1.42**	**289**	P	Pn	20 45 03.7	-0.5
ADCV				S	Sn	20 45 25.3	+1.8
IGDI	**IGDIR**	**1.53**	**350**	P	Pn	20 45 05.3	-0.4
IGDI				S	Sg	20 45 28.5	+1.9
IGDI	**IGDIR**	**1.53**	**350**	Pg	Pn	20 45 05.3	-0.4
VAYK	**Vayk**	**1.54**	**30**	*iP*	Pn	20 45 05.2	-0.7
VAYK				*iS*	Sn	20 45 25.4	-1.2
PERV	**Siirt/Pervari-**	**1.55**	**255**	P	Pg	20 45 06.5	-0.5
ALVK	**Alvank**	**1.61**	**68**	*eP*	Pn	20 45 06.0	-0.7
ALVK				*eS*	Sn	20 45 27.7	-0.4
DORK	**Agr/Tutak/Do**	**1.65**	**309**	P	Pn	20 45 07.3	-0.2
DORK				S	Sg	20 45 31.1	+0.7
AGRB	**Hanur-Agry**	**1.66**	**318**	Pn	Pn	20 45 08.1	+0.5
AGRB				Sn	Sg	20 45 31.4	+0.8
MLAZ	**Malazgirt-MUS**	**1.67**	**298**	Pn	Pb	20 45 08.9	0.0
KOTA	**Agri, Merkez-K**	**1.73**	**327**	P	Pn	20 45 07.9	-0.7
GNI	**Garni**	**1.80**	**7**	Pn	Pn	20 45 10.2	+0.6
	33nm,0.3s,baz=308,slow=2.4,SNR=70						
GNI				Sn	Sb	20 45 35.1	+0.8
	102nm,0.3s,baz=140,slow=19,SNR=9.3						
GNI				LR	LR	20 46 05.6	
	comp=Z,202nm,20.9s,baz=306,slow=50						
GNI	**Garni**	**1.80**	**7**	Pn	Pn	20 45 09.7	+0.1
GNI	**Garni**	**1.80**	**7**	*eP*	Pn	20 45 10.6	+1.0
GNI				*eS*	Sg	20 45 36.7	+1.4
VNNZ	**Vanand**	**1.81**	**345**	*eP*	Pb	20 45 11.0	-0.2
VNNZ				*eS*	Sg	20 45 36.3	+0.9
EGVZ	**Egvard**	**1.86**	**62**	*eP*	Pn	20 45 10.2	-0.1
EGVZ				*eS*	Sn	20 45 34.8	+0.4
MAHB	**Mahabad**	**1.88**	**147**	Pn	Pb	20 45 12.3	-0.1
GURO	**Guroymak-BITLI**	**1.90**	**277**	Pn	Pb	20 45 12.1	-0.6
ARUZ	**Aruch**	**1.94**	**352**	*eP*	Pn	20 45 12.1	+0.7
ARUZ				*eS*	Sb	20 45 39.3	+1.1
KAPZ	**Kaputan**	**1.97**	**6**	*eP*	Pn	20 45 12.3	+0.4
KAPZ				*eS*	Sb	20 45 39.5	+0.4
AMBZ	**Amberd**	**2.03**	**356**	*eP*	Pn	20 45 13.2	+0.5
AMBZ				*eS*	Sb	20 45 41.0	+0.1
AYRK	**Ayrk**	**2.04**	**30**	*eP*	Pn	20 45 14.0	+1.1
AYRK				*eS*	Sb	20 45 42.4	+1.2
IHRS	**Heris**	**2.05**	**90**	Pn	Pn	20 45 14.3	+1.3
VRTB	**Varto-Mus**	**2.46**	**290**	Pn	Pn	20 45 19.9	+1.3
VRTB	**Varto-Mus**	**2.46**	**290**	Pn	Pn	20 45 19.4	+0.8
IHSH	**Hashtrud**	**2.47**	**114**	Pn	Pn	20 45 20.5	+1.6
KARS	**Kars**	**2.50**	**336**	Pn	Pn	20 45 20.0	+0.9
SVAN	**Silvan-Diyarba**	**2.56**	**266**	Pn	Pn	20 45 21.3	+1.5
SVAN	**Silvan-Diyarba**	**2.56**	**266**	Pn	Pn	20 45 20.2	+0.4
ISRB	**Sarab**	**2.60**	**101**	Pn	Pn	20 45 22.1	+1.5
LSVT	**Lusahovit**	**2.62**	**13**	*eP*	Pn	20 45 21.8	+1.1
LSVT				*eS*	Sb	20 45 58.6	+0.9
SRTK	**Saratovka**	**2.71**	**358**	*eP*	Pb	20 45 25.0	-1.6
SRTK				*eS*	Sg	20 46 04.8	+0.6
SENK	**Senkaya-Erzuru**	**2.73**	**324**	Pn	Pn	20 45 23.5	+1.2
KARO	**Karliova-Bingo**	**2.81**	**291**	Pn	Pn	20 45 24.9	+1.5
BGD	**Bogdanovka**	**2.97**	**348**	P	Pb	20 45 32.3	+1.2
BNGB	**Bingl**	**3.01**	**283**	Pn	Pn	20 45 28.0	+1.9
AKH	**Akhalkalaki**	**3.13**	**347**	P	Pb	20 45 34.7	+0.9
DGRG	**David-gareji**	**3.17**	**13**	P	Pn	20 45 30.8	+2.5
TRLG	**Trialeti**	**3.19**	**355**	P	Pb	20 45 34.7	-0.1
YEDI	**Yedisu-Bingol**	**3.22**	**291**	Pn	Pn	20 45 30.8	+1.7
VSHL	**Vashlovani**	**3.24**	**27**	P	Pn	20 45 31.7	+2.5
VSHL				S	Sg	20 46 24.9	+3.5
DDFL	**Dedoflistskaro**	**3.34**	**22**	P	Pb	20 45 34.7	-2.7
DYBB	**Diyarbakir**	**3.41**	**265**	Pn	Pn	20 45 32.4	+0.8
LGD	**Lagodekhi**	**3.74**	**21**	P	Pn	20 45 38.2	+2.2
ERZN	**Erzincan**	**3.87**	**290**	Pn	Pn	20 45 40.0	+2.0
BAYT	**Aydıntepe-Bayb**	**3.90**	**303**	Pn	Pn	20 45 40.3	+1.9
CHOM	**Cayeli-Rize**	**3.94**	**315**	Pn	Pn	20 45 40.7	+1.9
CHRG	**Chargali**	**3.98**	**5**	P	Pn	20 45 41.5	+2.1
SVRC	**Sivrice-ELAZID**	**4.03**	**272**	Pn	Pn	20 45 41.8	+1.6
SHTL	**Shatili**	**4.33**	**7**	P	Pb	20 45 55.1	+1.0
KBZ	**Khabaz**	**5.49**	**348**	Pn	Pn	20 46 03.9	+3.9
	1.2nm,0.8s,baz=133,slow=5.3,SNR=4.3						
BRTR	**Keskin Array B**	**8.51**	**283**	Pn	Pn	20 46 46.4	+4.6
	0.1nm,0.3s,baz=110,slow=14,SNR=10						
BRTR				LR	LR	20 49 28.5	
	comp=Z,49nm,19.1s,baz=80,slow=34 1.2nm,0.7s						
ASF	**Jabal al Asfar**	**8.72**	**227**	Pn	Pn	20 46 45.8	+1.3
	0.8nm,0.3s,baz=338,slow=6.1,SNR=3.1						
ASF				Lg

JNKS				⇓*i*S	Sg	20 47 05.0	+0.1
NRN	**Naryn**	**1.75**	**329**	⇑*i*P	Pn	20 46 44.8	+0.5
NRN				⇑*i*S	Sg	20 47 08.7	0.0
KDJ	**Kajisay**	**2.20**	**360**	⇑*i*P	Pb	20 46 51.7	-1.4
KDJ				⇑*i*S	Sb	20 47 20.5	-0.4
ULHL	**Ulahol**	**2.42**	**343**	⇓*i*P	Pn	20 46 55.0	+1.6
ULHL				⇓*i*S	Sb	20 47 26.1	-1.3
BOOM	**Boomskoye usch**	**2.73**	**340**	⇑*i*P	Pn	20 46 59.2	+1.7
BOOM				⇑*i*S	Sn	20 47 33.5	+2.2
SALK	**Salom-Alik**	**2.74**	**291**	⇓*i*P	Pn	20 46 59.4	+1.7
SALK				⇓*i*S	Sn	20 47 33.8	+2.1
ANVS	**Anan'yevo**	**2.87**	**7**	⇓*e*P	Pn	20 47 01.6	+2.1
ANVS				⇓*e*S	Sn	20 47 37.0	+2.1

*NNC **23** 20:46:51.4±1.5, 41.°15N×77.°32E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=10.1km s-min=7.4km az=11.0*
*SOME **23** 20:46:51.4, 41.°15N×77.°25E, h10km*
ISC 23 20:46:49.6±3.5, 41.°1N±0.°1×77.°11E±0.°06, h9km±21km, n26, σ1°01/37, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**1.94**	**356**	Pg	**Pg**	**20 47 26.6**	**-0.2**
	0.4nm,0.2s						
TNSS				Lg	Lg	20 47 52.3	
	2.5nm,0.5s						
TNSS	**Tian-Shan**	**1.94**	**356**	*e*P	**Pg**	**20 47 26.8**	**0.0**
	0.4nm,0.2s						
TNSS				*e*S	**Sg**	**20 47 52.3**	**+0.4**
	2.5nm,0.5s						
IZV	**Izvestkoviy**	**1.97**	**349**	Pg	**Pg**	**20 47 27.3**	**-0.1**
	0.8nm,0.2s						
IZV				Lg	Lg	20 47 54.0	
	9.9nm,0.2s						
IZV	**Izvestkoviy**	**1.97**	**349**	*e*P	**Pg**	**20 47 27.7**	**+0.4**
	0.8nm,0.2s						
IZV				*e*S	**Sg**	**20 47 54.0**	**+1.1**
	9.9nm,0.2s						
MDOK	**Medeo**	**2.06**	**359**	Pg	**Pg**	**20 47 29.8**	**+0.7**
	2.1nm,0.5s						
MDOK				Lg	Lg	20 47 56.4	
	12nm,0.8s						
MTBS	**Maitube**	**2.09**	**346**	Pg	**Pg**	**20 47 29.2**	**-0.5**
	0.5nm,0.1s						
MTBS				Lg	Lg	20 47 56.7	
	7.3nm,0.3s						
MTBS	**Maitube**	**2.09**	**346**	*e*P	**Pg**	**20 47 29.3**	**-0.3**
	0.5nm,0.1s						
MTBS				*e*S	**Sg**	**20 47 56.7**	**0.0**
	7.3nm,0.3s						
KST	**Kastek**	**2.12**	**337**	Pg	**Pg**	**20 47 29.5**	**-0.8**
	1.3nm,0.4s						
KST				Lg	Lg	20 47 57.2	
	5.7nm,0.5s						
KST	**Kastek**	**2.12**	**337**	*e*P	**Pg**	**20 47 29.6**	**-0.6**
	1.3nm,0.4s						
KST				*e*S	**Sg**	**20 47 57.2**	**-0.5**
	5.7nm,0.5s						
KOTS	**Kotyrbulak**	**2.13**	**0**	Pg	**Pg**	**20 47 30.4**	**0.0**
	0.5nm,0.1s						
KOTS				Lg	Lg	20 47 59.2	
	30nm,0.6s						
KOTS	**Kotyrbulak**	**2.13**	**0**	*e*P	**Pg**	**20 47 30.7**	**+0.3**
	0.5nm,0.1s						
KOTS				*e*S	**Sg**	**20 47 59.2**	**+1.1**
	30nm,0.6s						
SATY	**Saty**	**2.18**	**26**	Pg	**Pb**	**20 47 29.7**	**+0.3**
	2.0nm,0.3s						
SATY				Lg	Lg	20 47 57.7	
	4.6nm,0.3s						
DGS	**Degeres**	**2.36**	**335**	Pg	**Pg**	**20 47 34.5**	**-0.3**
	0.9nm,0.3s						
DGS				Lg	Lg	20 48 04.9	
	4.3nm,0.4s						
DGS	**Degeres**	**2.36**	**335**	*e*P	**Pg**	**20 47 34.6**	**-0.2**
	1.1nm,0.4s						
DGS				*e*S	**Sg**	**20 48 05.6**	**+0.2**
	4.4nm,0.5s						
UZB	**Uzynbulak**	**2.49**	**34**	Pg	**Pb**	**20 47 33.8**	**-0.8**
	3.7nm,0.3s						
UZB				Lg	Lg	20 48 04.5	
	4.2nm,0.5s						
UZB	**Uzynbulak**	**2.49**	**34**	*e*P	**Pb**	**20 47 34.5**	**-0.1**
	2.8nm,0.1s						
UZB				*e*S	**Sb**	**20 48 05.3**	**-0.2**
	4.3nm,0.5s						
KURS	**Kuram**	**2.51**	**18**	Pg	**Pb**	**20 47 35.6**	**+0.7**
	0.7nm,0.3s						
KURS				Lg	Lg	20 48 08.3	
	3.5nm,0.5s						
KTBS	**Karatobe**	**2.63**	**353**	Pg	**Pg**	**20 47 39.3**	**-0.7**
	0.8nm,0.4s						
KTBS				Lg	Lg	20 48 14.5	
	0.4nm,0.5s						
KTBS	**Karatobe**	**2.63**	**353**	*e*P	**Pg**	**20 47 39.7**	**-0.3**
	0.8nm,0.4s						
KTBS				*e*S	**Sg**	**20 48 14.4**	**+0.5**
	0.4nm,0.5s						
KPKS	**Kokpek**	**2.63**	**26**	Pg	**Pb**	**20 47 37.8**	**+0.8**
	0.1nm,0.1s						
KPKS				Lg	Lg	20 48 11.7	
	4.3nm,0.4s						
KPKS	**Kokpek**	**2.63**	**26**	*e*P	**Pb**	**20 47 38.0**	**+1.0**
	0.1nm,0.1s						
KPKS				*e*S	**Sg**	**20 48 11.7**	**-2.6**
	4.3nm,0.4s						
SHLS	**Shalkode**	**2.70**	**40**	Pg	**Pg**	**20 47 40.3**	**-0.9**
	0.3nm,0.1s						
SHLS				Lg	Lg	20 48 15.2	
	5.4nm,0.5s						
SHLS	**Shalkode**	**2.70**	**40**	*e*P	**Pg**	**20 47 42.5**	**+1.2**
	1.8nm,0.3s						
SHLS				*e*S	**Sg**	**20 48 19.1**	**+2.9**
	4.2nm,0.5s						
ARXS	**Arharly**	**3.15**	**9**	Pg	**Pg**	**20 47 48.3**	**-1.7**
	0.2nm,0.1s						
ARXS				Lg	Lg	20 48 30.7	
	4.3nm,0.2s						
ARXS	**Arharly**	**3.15**	**9**	*e*P	**Pg**	**20 47 49.2**	**-0.8**
	0.2nm,0.1s						
ARXS				*e*S	**Sg**	**20 48 30.7**	**-0.1**
	4.3nm,0.2s						
KNOS	**Konyrlen**	**3.59**	**24**	Pg	**Pg**	**20 47 56.3**	**-2.1**
	0.3nm,0.3s						
KNOS				Lg	Lg	20 48 43.1	
	0.8nm,0.2s						

*AFAD **23** 20:47:32.7, 38.°37N×44.°45E, h7km±5km, ML3.1*
*TEH **23** 20:47:32.0, 38.°40N×44.°47E, h10km±320km, ML2.9, Presumed earthquake*
*ISK **23** 20:47:33.8, 38.°32N×44.°49E, h10km, ML3.2/10*
ISC 23 20:47:32.9±1.1, 38.°37N±0.°03×44.°46E±0.°03, h8km±10km, n25, σ1°20/36, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**309**	P	**Pg**	**20 47 42.2**	**+0.1**
OZAP				S	**Sg**	**20 47 48.9**	**+0.7**
OZAP				IAML		20 47 51.0	
	comp=N,2μm,1.0s						
TVAN	**Van**	**0.84**	**281**	P	**Pg**	**20 47 48.3**	**-0.8**
TVAN				S	**Sg**	**20 48 00.6**	**+0.5**
TVAN				IAML		20 48 09.0	
	comp=N,839nm,0.7s						
TVAN				IAML		20 48 18.0	
	comp=E,714nm,0.7s						
VANB	**Van**	**0.87**	**285**	Pg	**Pn**	**20 47 51.2**	**-0.3**
VANB				Sg	**Sn**	**20 48 03.8**	**-0.6**
ISHB	**Shabestar**	**0.91**	**95**	Pg	**Pg**	**20 47 49.4**	**-1.0**
VMUR	**Van-Muradiye**	**0.93**	**312**	P	**Pg**	**20 47 50.9**	**+0.1**
VMUR				S	**Sn**	**20 48 04.9**	**-1.1**
VMUR				IAML		20 48 09.0	
	comp=E,543nm,0.9s						
MAKU	**Maku**	**1.00**	**10**	Pg	**Pg**	**20 47 50.8**	**-1.3**
HAKT	**HAKKARI**	**1.01**	**217**	P	**Pn**	**20 47 53.2**	**-0.3**
HAKT				S	**Sn**	**20 48 09.8**	**+1.9**
HAKT				IAML		20 48 12.0	
	comp=N,679nm,0.3s						
HAKT				IAML		20 48 12.0	
	comp=E,502nm,0.4s						
IMRD	**Marand**	**1.03**	**70**	Pg	**Pg**	**20 47 52.5**	**-0.2**
ERCV	**ERCIS-VAN**	**1.09**	**307**	Pn	**Pn**	**20 47 55.9**	**+1.3**
ERCV				Sn	**Sn**	**20 48 11.7**	**+1.7**
GEVA	**Gevas**	**1.10**	**267**	P	**Pg**	**20 47 53.1**	**-0.9**
GEVA				S	**Sn**	**20 48 10.1**	**-0.1**
GEVA				IAML		20 48 17.0	
	comp=N,372nm,0.6s						
CUKT	**Cukurca**	**1.31**	**211**	Pn	**Pg**	**20 47 57.8**	**-0.2**
CUKT				Sn	**Sg**	**20 48 16.2**	**+1.2**
DYDN	**Diyadin**	**1.32**	**333**	P	**Pg**	**20 47 58.7**	**+0.5**
DYDN				S	**Sb**	**20 48 13.1**	**-2.0**
DYDN				IAML		20 48 21.0	
	comp=N,275nm,0.6s						
DYDN				IAML		20 48 21.0	
	comp=E,291nm,0.5s						
IAZR	**Azarshahr**	**1.39**	**119**	Pg	**Pg**	**20 47 59.2**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.43**	**288**	P	**Pb**	**20 47 59.7**	**-0.2**
ADCV				S	**Sg**	**20 48 20.8**	**+1.9**
IGDI	**IGDIR**	**1.52**	**349**	P	**Pb**	**20 48 01.5**	**+0.1**
IGDI				S	**Sg**	**20 48 22.8**	**+0.9**
AGRB	**Hanur-Agry**	**1.66**	**317**	Pn	**Pg**	**20 48 04.2**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.68**	**298**	Pn	**Pg**	**20 48 05.0**	**-0.1**
GNI	**Garni**	**1.79**	**7**	Pn	**Pb**	**20 48 06.3**	**+0.3**
GURO	**Guroymak-BITLI**	**1.92**	**276**	Pn	**Pb**	**20 48 07.9**	**-0.2**
IHRS	**Heris**	**2.03**	**91**	Pn	**Pb**	**20 48 09.9**	**-0.2**
VRTB	**Varto-Mus**	**2.48**	**289**	Pn	**Pb**	**20 48 16.2**	**-1.5**
KARS	**Kars**	**2.50**	**335**	Pn	**Pb**	**20 48 16.5**	**-1.5**
SVAN	**Silvan-Diyarba**	**2.58**	**266**	Pn	**Pb**	**20 48 17.2**	**-2.1**
SENK	**Senkaya-Erzuru**	**2.73**	**324**	Pn	**Pb**	**20 48 20.1**	**-1.9**
BNGB	**Bingl**	**3.02**	**283**	Pn	**Pn**	**20 48 23.8**	**+2.7**

*IDC **23** 20:54:26.8±1.6, 34.°83N×141.°39E, h0km, mb3.5/4, mbtmp3.6/7, ML2.9/3, MS2.8/3, Error ellipse: s-maj=36.7km s-min=19.4km az=79.0*
*JMA **23** 20:54:32.0±0.2, 35.°0N±0.°5×14.°1E±.°, h32km, MV2.6/35, E OFF BOSO PENINSULA*
ISC 23 20:54:30.2±1.3, 34.°87N±0.°06×141.°4E±0.°1, h27km, n24, σ1°04/18, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.43**	**240**	P	**Pn**	**20 54 40.7**	**+0.7**
BSO1				X		20 54 47.5	
BSO2	**Boso 2**	**0.56**	**258**	X		20 54 51.2	
BSO3	**Boso 3**	**0.76**	**265**	*i*P	**Pn**	**20 54 44.7**	**-0.1**
BSO3				X		20 54 53.9	
BSO4	**Boso 4**	**0.90**	**278**	P	**Pn**	**20 54 46.6**	**-0.4**
BSO4				*e*X		20 54 56.6	
KTR	**Katsuura**	**0.95**	**287**	P	**Pn**	**20 54 46.7**	**-1.1**
JKUC	**kamogawauchiur**	**1.05**	**286**	P	**Pn**	**20 54 48.0**	**-1.1**
JIM2	**Oshima 3**	**1.65**	**265**	P	**Pn**	**20 54 56.3**	**-1.1**
JYT	**Yasato**	**1.69**	**324**	P	**Pn**	**20 54 58.1**	**+0.2**
JMYK	**Miyake Tsubota**	**1.75**	**243**	P	**Pn**	**20 54 59.5**	**+0.8**
JMYK				*e*S	**Sn**	**20 55 18.7**	**-1.4**
JHJ	**Hachijo jima 2**	**2.21**	**219**	Pn	**Pn**	**20 55 03.2**	**-1.9**
	5.4nm,0.3s,baz=82,slow=17,SNR=1.7						
JHJ				Sn	**Sn**	**20 55 31.6**	**-0.1**
	14nm,0.3s,baz=76,slow=22,SNR=1.4						
	151nm,0.8s						
MJAR	**Matsushiro Arr**	**3.11**	**303**	Pn	**Pn**	**20 55 16.9**	**-0.5**
	0.4nm,0.3s,baz=125,slow=15,SNR=36						
MJAR				Sn	**Sn**	**20 55 54.8**	**+1.1**
	0.3nm,0.3s,baz=139,slow=24,SNR=5.7						
MJAR				LR	LR	20 56 18.1	
	comp=Z,35nm,21.9s,baz=11,slow=36						
	1.2nm,0.3s						
ASAJ	**Asahikawa**	**9.28**	**5**	Pn	**Pn**	**20 56 40.6**	**-1.5**
	0.3nm,0.3s,baz=132,slow=32,SNR=0.9						
	4.5nm,0.7s						
KSRS	**Korea Array**	**11.22**	**287**	LR	LR	21 01 43.7	
	comp=Z,39nm,19.6s,baz=345,slow=39						
HILR	**Hailar Array B**	**21.64**	**319**	LR	LR	21 07 18.5	
	comp=Z,196nm,21.3s,baz=55,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.09**	**117**	T	T	21 28 48.8	
	baz=311						
H11N1	**WAKE ISLAND Hy**	**27.10**	**117**	T	T	21 28 45.6	
	baz=311						
H11N3	**WAKE ISLAND Hy**	**27.11**	**117**	T	T	21 28 48.7	
	baz=311						
H11S1	**WAKE ISLAND Hy**	**27.73**	**119**	T	T	21 29 38.2	
	baz=312						
H11S3	**WAKE ISLAND Hy**	**27.73**	**120**	T	T	21 29 41.2	
	baz=312						
H11S2	**WAKE ISLAND Hy**	**27.75**	**119**	T	T	21 29 36.5	
	baz=312						
MKAR	**Makanchi Array**	**45.30**	**304**	P	**P**	**21 02 45.9**	**+0.2**
	0.3nm,0.8s,baz=92,slow=7.3,SNR=2.4						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**47.36**	**310**	P	**P**	**21 03 02.8**	**+1.1**
	0.7nm,0.5s,baz=85,slow=7.8,SNR=7.4						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**54.92**	**188**	P	**P**	**21 03 59.6**	**+0.9**
	0.8nm,0.5s,baz=6.4,slow=7.5,SNR=8.1						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**58.65**	**188**	P	**P**	**21 04 25.1**	**0.0**
	0.4nm,0.9s,baz=357,slow=5.5,SNR=2.5						
	0.4nm,0.9s						

*UPP **23** 20:55:45.8±0.1, 67.°85N×20.°20E, h0km, ML2.5, Confirmed Induced event*
*HEL **23** 20:55:47.2±1.0, 67.°80N×20.°21E, h0km, ML0.9, Suspected explosion*
ISC 23 20:55:46.2±1.0, 67.°85N±0.°04×20.°19E±0.°03, h0km, n15, σ0°58/17, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**28**	P	**Pg**	**20 55 48.0**	**-0.4**
RATU	**Laukkuluspa**	**0.23**	**264**	P	**Pg**	**20 55 50.4**	**-0.1**
KOVU	**Salmi**	**0.37**	**358**	P	**Pg**	**20 55 53.4**	**+0.1**
KOVU				S	**Sg**	**20 55 58.4**	**+0.3**
NIKU	**Nikkaluokta**	**0.44**	**273**	P	**Pg**	**20 55 54.3**	**-0.2**
LANU	**Lannavaara**	**0.71**	**73**	P	**Pg**	**20 55 59.4**	**-0.3**
LANU	**Lannavaara**	**0.71**	**73**	SG	**Sg**	**20 56 09.0**	**+0.1**
KIF	**Kilpisjarvi**	**1.18**	**11**	PG	**Pn**	**20 56 09.9**	**0.0**
KIF				smax	smax	20 56 25.6	
	comp=Z,1.1nm,0.2s						
KIF				SB	**Sn**	**20 56 26.8**	**+0.2**
HEF	**Hetta**	**1.42**	**65**	smax	smax	20 56 30.2	
	comp=Z,0.7nm,0.2s						
HEF				SG	**Sn**	**20 56 33.2**	**+0.7**
ERTU	**Ertsjaerv**	**1.52**	**148**	SG	**Sn**	**20 56 36.0**	**+1.1**
KLF	**Kolari**	**1.58**	**111**	smax	smax	20 56 33.9	
	comp=Z,0.7nm,0.2s						
KLF				SG	**Sg**	**20 56 37.5**	**+0.7**
KTK1	**Kautokeino**	**1.62**	**43**	PG	**Pg**	**20 56 17.2**	**0.0**
KTK1				SN	**Sg**	**20 56 39.2**	**+1.0**
TRO	**Tromso**	**1.85**	**346**	SN	**Sg**	**20 56 45.9**	**+0.4**
TOF	**Tornio**	**2.41**	**136**	smax	smax	20 56 57.4	
	comp=Z,0.4nm,0.2s						
ARA0	**ARCESS Array S**	**2.58**	**46**	SB	**Sb**	**20 57 05.0**	**-0.4**
RNF	**Rovaniemi**	**2.59**	**116**	PN	**Pb**	**20 56 32.5**	**-0.8**

*AZER **23** 20:57:32.6, 38.°42N×44.°53E, h4km, ml3.5*
*AFAD **23** 20:57:33.6, 38.°38N×44.°55E, h6km±2km, ML3.4*
*NSSP **23** 20:57:34.0, 38.°42N×44.°52E, h10km, Ms3.6*
*TEH **23** 20:57:35.9, 38.°45N×44.°49E, h6km±57km, ML3.3, Presumed earthquake*
*ISK **23** 20:57:36.0, 38.°35N×44.°49E, h6km, ML3.4/13*
*IDC **23** 20:57:36.8±1.2, 38.°49N×44.°40E, h0km, mb3.5/5, mbtmp3.4/10, ML3.6/3, Error ellipse: s-maj=16.9km s-min=15.2km az=129.0*
ISC 23 20:57:34.6±1.1, 38.°42N±0.°02×44.°49E±0.°02, h9km±9km, n75, σ2°03/101, mb3.6/4, 2C, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**302**	P	**Pb**	**20 57 44.4**	**-0.5**
OZAP				S	**Sb**	**20 57 51.7**	**-0.1**
OZAP				IAML		20 57 54.0	
	comp=N,4μm,0.6s						
TVAN	**Van**	**0.85**	**277**	P	**Pn**	**20 57 51.0**	**-2.0**
TVAN				IAML		20 58 17.0	
	comp=N,1μm,0.6s						
TVAN				IAML		20 58 27.0	
	comp=E,976nm,0.7s						
VANB	**Van**	**0.88**	**282**	Pg	**Pn**	**20 57 53.8**	**+0.6**
VANB				Sg	**Sn**	**20 58 05.2**	**-1.0**
VANB	**Van**	**0.88**	**282**	Pg	**Pn**	**20 57 53.2**	**0.0**
ISHB	**Shabestar**	**0.90**	**99**	Pg	**Pn**	**20 57 52.3**	**-1.4**
VMUR	**Van-Muradiye**	**0.91**	**309**	P	**Pn**	**20 57 52.8**	**-1.0**
VMUR				S	**Sn**	**20 58 06.2**	**-1.0**
VMUR				IAML		20 58 21.0	
	comp=E,637nm,0.8s						
MAKU	**Maku**	**0.94**	**9**	Pg	**Pn**	**20 57 52.8**	**-1.4**
IMRD	**Marand**	**1.00**	**73**	Pg	**Pn**	**20 57 54.6**	**-0.4**
HAKT	**HAKKARI**	**1.06**	**216**	P	**Pn**	**20 57 55.8**	**0.0**
HAKT				S	**Sn**	**20 58 14.0**	**+3.1**
ERCV	**ERCIS-VAN**	**1.08**	**304**	Pn	**Pn**	**20 57 58.1**	**+2.1**
ERCV				Sn	**Sn**	**20 58 13.5**	**+2.3**
NAX	**Nakhchivan**	**1.09**	**46**	P	**Pn**	**20 57 56.2**	**+0.1**
NAX				S	**Sn**	**20 58 12.1**	**+0.7**
GEVA	**Gevas**	**1.13**	**265**	P	**Pn**	**20 57 55.9**	**-0.8**
GEVA				S	**Sn**	**20 58 13.3**	**+0.8**
DYDN	**Diyadin**	**1.28**	**331**	P	**Pg**	**20 57 58.0**	**-1.2**
DYDN				S	**Sn**	**20 58 21.9**	**+5.6**
DYDN				IAML		20 58 22.0	
	comp=N,709nm,0.6s						
SBZ	**Shahbuz**	**1.28**	**40**	P	**Pg**	**20 57 59.6**	**+0.5**
SBZ				S	**Sn**	**20 58 19.2**	**+3.1**
ORD	**Ordubad**	**1.28**	**66**	P	**Pg**	**20 57 59.6**	**+0.4**
ORD				P	**Pg**	**20 57 59.6**	**+0.4**
ORD				S	**Sn**	**20 58 18.7**	**+2.6**
HYR	**Heyderabad**	**1.32**	**12**	P	**Pg**	**20 58 01.0**	**+0.9**
HYR				S	**Sg**	**20 58 21.7**	**+4.5**
CUKT	**Cukurca**	**1.36**	**211**	Pn	**Pg**	**20 58 01.5**	**+0.7**
CUKT				Sn	**Sg**	**20 58 19.4**	**+0.9**
CUKT	**Cukurca**	**1.36**	**211**	Pg	**Pg**	**20 58 01.4**	**+0.7**
IAZR	**Azarshahr**	**1.40**	**122**	Pg	**Pg**	**20 58 02.4**	**+1.1**
ADCV	**BITLIS_Adilcev**	**1.43**	**286**	P	**Pg**	**20 58 02.8**	**+0.8**
ADCV				S	**Sg**	**20 58 22.1**	**+1.5**
VAYK	**Vayk**	**1.47**	**30**	*i*P	**Pg**	**20 58 02.4**	**-0.3**
VAYK				*i*S	**Sg**	**20 58 22.0**	**+0.2**
IGDI	**IGDIR**	**1.48**	**348**	S	**Sg**	**20 58 27.6**	**+5.5**
ALVK	**Alvank**	**1.55**	**70**	*e*P	**Pg**	**20 58 03.4**	**-0.8**
ALVK				*e*S	**Sg**	**20 58 25.5**	**+1.1**
AGRB	**Hanur-Agry**	**1.64**	**315**	Pn	**Pg**	**20 58 05.7**	**-0.3**
AGRB				Sn	**Sg**	**20 58 29.6**	**+2.4**
AGRB	**Hanur-Agry**	**1.64**	**315**	Pg	**Pg**	**20 58 06.2**	**+0.2**
MLAZ	**Malazgirt-MUS**	**1.67**	**296**	Pn	**Pg**	**20 58 07.4**	**+0.7**
MLAZ				Sn	**Sg**	**20 58 29.9**	**+1.5**
MLAZ	**Malazgirt-MUS**	**1.67**	**296**	Pg	**Pg**	**20 58 07.4**	**+0.7**
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**20 58 08.6**	**+0.8**
	28nm,0.3s,baz=340,slow=23,SNR=20						
GNI				Sn	**Sg**	**20 58 33.6**	**+3.2**
	24nm,0.3s,baz=203,slow=22,SNR=8.6						
GNI				LR	LR	20 59 01.2	
	comp=Z,125nm,18.5s,baz=258,slow=50						
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**20 58 07.9**	**0.0**
GNI	**Garni**	**1.73**	**6**	⇑*i*P	**Pg**	**20 58 08.7**	**+0.8**
GNI				⇑*i*S	**Sg**	**20 58 33.8**	**+3.4**
VNNZ	**Vanand**	**1.75**	**343**	*e*P	**Pg**	**20 58 08.2**	**0.0**
VNNZ				*e*S	**Sg**	**20 58 33.2**	**+2.2**
EGVZ	**Egvard**	**1.79**	**63**	*e*P	**Pg**	**20 58 07.4**	**-1.6**
EGVZ				*e*S	**Sg**	**20 58 32.4**	**+0.1**
ARUZ	**Aruch**	**1.88**	**351**	*e*P	**Pg**	**20 58 09.5**	**-1.1**
ARUZ				*e*S	**Sg**	**20 58 35.4**	**+0.3**
KAPZ	**Kaputan**	**1.90**	**5**	*e*P	**Pg**	**20 58 10.2**	**-0.9**
KAPZ				*e*S	**Sg**	**20 58 37.1**	**+1.4**
MAHB	**Mahabad**	**1.92**	**149**	Pn	**Pg**	**20 58 11.8**	**+0.5**
GURO	**Guroymak-BITLI**	**1.93**	**275**	Pn	**Pg**	**20 58 10.6**	**-1.0**
GURO	**Guroymak-BITLI**	**1.93**	**275**	Pn	**Pg**	**20 58 10.6**	**-1.0**
AYRK	**Ayrk**	**1.97**	**30**	*e*P	**Pg**	**20 58 11.4**	**-0.9**
AYRK				*e*S	**Sg**	**20 58 39.2**	**+1.3**
AMBZ	**Amberd**	**1.97**	**355**	*e*P	**Pg**	**20 58 11.2**	**-1.2**
AMBZ				*e*S	**Sg**	**20 58 39.3**	**+1.4**
IHRS	**Heris**	**2.01**	**92**	Pn	**Pg**	**20 58 12.6**	**-0.6**
KARS	**Kars**	**2.46**	**334**	Pn	**Pg**	**20 58 18.6**	**-3.0**
IHSH	**Hashtrud**	**2.47**	**116**	Pn	**Pg**	**20 58 19.6**	**-2.2**
LSVT	**Lusahovit**	**2.55**	**12**	*e*P	**Pg**	**20 58 21.4**	**-2.0**
LSVT				*e*S	**Sg**	**20 58 56.2**	**-0.2**
ISRB	**Sarab**	**2.58**	**102**	Pn	**Pg**	**20 58 20.7**	**-3.4**
SVAN	**Silvan-Diyarba**	**2.60**	**265**	Pn	**Pb**	**20 58 19.9**	**-1.5**
SVAN	**Silvan-Diyarba**	**2.60**	**265**	Pn	**Pb**	**20 58 19.9**	**-1.5**
SRTK	**Saratovka**	**2.64**	**357**	*e*P	**Pg**	**20 58 23.4**	**-1.8**
SRTK				*e*S	**Sg**	**20 58 59.2**	**-0.3**
GRMI	**Germi**	**2.70**	**81**	Pn	**Pb**	**20 58 22.0**	**-1.1**
SENK	**Senkaya-Erzuru**	**2.70**	**323**	Pn	**Pb**	**20 58 21.9**	**-1.3**
KARO	**Karliova-Bingo**	**2.82**	**289**	Pn	**Pb**	**20 58 23.5**	**-1.8**
BGD	**Bogdanovka**	**2.92**	**347**	P	**Pg**	**20 58 29.7**	**-0.8**
BGD				S	**Sg**	**20 59 07.5**	**-0.8**
KZRT	**Kazreti**	**2.96**	**359**	P	**Pg**	**20 58 28.0**	**-3.3**
BNGB	**Bingl**	**3.03**	**282**	Pn	**Pg**	**20 58 26.3**	**-2.5**
AKH	**Akhalkalaki**	**3.08**	**346**	P	**Pg**	**20 58 32.1**	**-1.5**
AKH				S	**Sb**	**20 59 05.2**	**-2.2**
DGRG	**David-gareji**	**3.10**	**12**	P	**Pg**	**20 58 31.8**	**-2.2**
DGRG				S	**Sg**	**20 59 18.6**	**+4.5**
TRLG	**Trialeti**	**3.12**	**355**	P	**Pg**	**20 58 32.1**	**-2.3**
TRLG				S	**Sg**	**20 59 18.4**	**+3.4**
VSHL	**Vashlovani**	**3.17**	**27**	P	**Pb**	**20 58 29.9**	**-1.2**
YEDI	**Yedisu-Bingol**	**3.24**	**289**	Pn	**Pb**	**20 58 29.2**	**-3.1**
DDFL	**Dedoflistskaro**	**3.27**	**22**	P	**Pb**	**20 58 32.2**	**-0.6**
DDFL				S	**Sg**	**20 59 21.0**	**+1.4**
DYBB	**Diyarbakir**	**3.46**	**264**	Pn	**Pb**	**20 58 31.9**	**-4.1**
LGD	**Lagodekhi**	**3.66**	**21**	P	**Pb**	**20 58 38.3**	**-1.2**
ALIG	**Mtskhetisjvari**	**3.73**	**350**	P	**Pb**	**20 58 38.8**	**-1.9**
CHRG	**Chargali**	**3.92**	**5**	P	P	20 58 38.1	-5.8
CHRG				S	**Sg**	**20 59 44

GEVA			IAML		21 00 52.0	
	comp=N,106nm,0.6s					
GEVA			IAML		21 00 54.0	
	comp=E,97nm,0.5s					
DYDN	**Diyadin**	**1.28 331**	P	**Pg**	**21 00 35.9**	**+0.7**
DYDN			S	**Sb**	**21 00 50.7**	**-0.9**
CUKT	**Cukurca**	**1.36 211**	Pn	**Pg**	**21 00 37.9**	**+1.4**
CUKT			Sn	**Sg**	**21 00 56.0**	**+1.8**
ADCV	**BITLIS_Adilcev**	**1.43 286**	P	**Pb**	**21 00 37.1**	**-0.3**
ADCV			S	**Sg**	**21 00 59.1**	**+2.5**
ADCV			IAML		21 01 32.0	
	comp=E,65nm,0.7s					
ADCV			IAML		21 01 36.0	
	comp=N,60nm,0.4s					
IGDI	**IGDIR**	**1.48 348**	P	**Pb**	**21 00 38.4**	**+0.2**
IGDI			S	**Sb**	**21 00 57.8**	**+0.6**
IGDI			IAML		21 01 03.0	
	comp=N,76nm,0.9s					
IGDI			IAML		21 01 03.0	
	comp=E,94nm,0.6s					
PERV	**Siirt/Pervari-**	**1.60 254**	P	**Pg**	**21 00 41.2**	**0.0**
AGRB	**Hanur-Agry**	**1.64 315**	Pn	**Pb**	**21 00 41.3**	**+0.3**
AGRB			Sn	**Sg**	**21 01 03.0**	**-0.3**
DORK	**Agr/Tutak/Do**	**1.65 307**	P	**Pb**	**21 00 40.4**	**-0.6**
DORK			S	**Sn**	**21 00 59.2**	**-1.8**
DORK			IAML		21 01 14.0	
	comp=N,57nm,0.7s					
DORK			IAML		21 01 17.0	
	comp=E,48nm,0.9s					
MLAZ	**Malazgirt-MUS**	**1.68 296**	Pn	**Pg**	**21 00 42.7**	**0.0**
GNI	**Garni**	**1.74 7**	Pn	**Pb**	**21 00 43.3**	**+0.6**
GURO	**Guroymak-BITLI**	**1.93 275**	Pn	**Pb**	**21 00 46.1**	**+0.3**

*TEH **23** 21:00:57.7, 38°.27N×44°.38E, h10km±990km, ML2.9, Presumed earthquake*
*AFAD **23** 21:00:58.6, 38°.36N×44°.47E, h6km±2km, ML3.1*
*ISK **23** 21:01:01.5, 38°.34N×44°.42E, h6km, ML3.1/9*
ISC 23 21:00:59.5±1.4**, 38°.35N**±0°.04×**44°.43E**±0°.03**, h8**km±11km**, n19**, σ1°.27/27**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**312**	P	**Pg**		**21 01 08.4**	**-0.2**
OZAP				S	**Sb**		**21 01 15.8**	**-1.4**
OZAP				IAML			21 01 24.0	
	comp=N,2μm,0.6s							
TVAN	**Van**	**0.82**	**283**	P	**Pb**		**21 01 15.1**	**-1.1**
TVAN				IAML			21 01 34.0	
	comp=E,793nm,0.5s							
TVAN				IAML			21 01 40.0	
	comp=N,823nm,0.4s							
VANB	**Van**	**0.85**	**287**	Pg	**Pn**		**21 01 17.4**	**-0.6**
VANB				Sg	**Sn**		**21 01 29.4**	**-1.3**
VMUR	**Van-Muradiye**	**0.93**	**314**	P	**Pg**		**21 01 16.2**	**-1.2**
VMUR				S	**Sn**		**21 01 32.2**	**-0.4**
VMUR				IAML			21 01 36.0	
	comp=N,738nm,0.6s							
VMUR				IAML			21 01 38.0	
	comp=E,870nm,0.9s							
ISHB	**Shabestar**	**0.94**	**94**	Pg	**Pg**		**21 01 16.6**	**-0.9**
MAKU	**Maku**	**1.02**	**11**	Pg	**Pb**		**21 01 19.1**	**-0.5**
IMRD	**Marand**	**1.06**	**70**	Pg	**Pn**		**21 01 20.1**	**-0.7**
IMRD				Sg	**Sn**		**21 01 36.2**	**+0.3**
GEVA	**Gevas**	**1.08**	**268**	P	**Pg**		**21 01 18.9**	**-1.4**
GEVA				S	**Sn**		**21 01 36.1**	**-0.3**
GEVA				IAML			21 01 41.0	
	comp=N,461nm,0.7s							
GEVA				IAML			21 01 43.0	
	comp=E,561nm,0.5s							
ERCV	**ERCIS-VAN**	**1.08**	**308**	Pn	**Pn**		**21 01 22.9**	**+1.7**
CUKT	**Cukurca**	**1.28**	**211**	Pn	**Pn**		**21 01 25.7**	**+1.8**
CUKT				Sn	**Sn**		**21 01 44.3**	**+3.0**
ADCV	**BITLIS_Adilcev**	**1.41**	**289**	P	**Pg**		**21 01 26.0**	**-0.6**
ADCV				S	**Sn**		**21 01 45.1**	**+0.5**
ADCV				IAML			21 01 51.0	
	comp=N,207nm,0.8s							
ADCV				IAML			21 01 51.0	
	comp=E,235nm,0.6s							
IGDI	**IGDIR**	**1.54**	**350**	P	**Pg**		**21 01 28.4**	**-0.6**
IGDI				S	**Sg**		**21 01 51.6**	**+2.7**
IGDI				IAML			21 01 53.0	
	comp=E,188nm,0.9s							
IGDI				IAML			21 01 54.0	
	comp=N,156nm,0.9s							
AGRB	**Hanur-Agry**	**1.66**	**318**	Pn	**Pg**		**21 01 32.0**	**+0.7**
MLAZ	**Malazgirt-MUS**	**1.67**	**299**	Pn	**Pg**		**21 01 31.9**	**+0.4**
GNI	**Garni**	**1.81**	**8**	Pn	**Pg**		**21 01 34.3**	**+0.1**
GURO	**Guroymak-BITLI**	**1.89**	**277**	Pn	**Pg**		**21 01 34.9**	**-0.9**
SRTM	**Siirt_Merkez**	**2.01**	**260**	P	**Pg**		**21 01 37.3**	**-0.8**
SRTM				IAML			21 02 12.0	
	comp=E,254nm,0.6s							
SRTM				IAML			21 02 17.0	
	comp=N,264nm,1.0s							
VRTB	**Varto-Mus**	**2.46**	**290**	Pn	**Pb**		**21 01 44.1**	**0.0**
SVAN	**Silvan-Diyarba**	**2.55**	**266**	Pn	**Pb**		**21 01 44.6**	**-1.0**

*AZER **23** 21:02:14.0, 38°.33N×44°.57E, h7km, ml3.5*
*NSSP **23** 21:02:14.1, 38°.30N×44°.47E, h10km, Ms3.4*
*AFAD **23** 21:02:15.7, 38°.35N×44°.38E, h7km±3km, ML2.9*
*TEH **23** 21:02:16.3, 38°.42N×44°.44E, h6km±55km, ML3.1, Presumed earthquake*
*ISK **23** 21:02:17.4, 38°.35N×44°.45E, h10km, ML3.1/8*
ISC 23 21:02:16.2±1.1**, 38°.38N**±0°.02×**44°.43E**±0°.02**, h8**km±10km**, n42**, σ1°.29/64**, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**310**	P	**Pg**		**21 02 24.3**	**-0.7**
OZAP				S	**Sg**		**21 02 30.4**	**-0.4**
OZAP				IAML			21 02 39.0	
	comp=N,2μm,1.0s							
OZAP	**Van, Ozalp-Mer**	**0.45**	**310**	Pg	**Pg**		**21 02 24.3**	**-0.7**
TVAN	**Van**	**0.82**	**281**	P	**Pg**		**21 02 31.2**	**-0.8**
TVAN				IAML			21 02 50.0	
	comp=E,517nm,0.4s							
TVAN				IAML			21 03 00.0	
	comp=N,755nm,0.7s							
TVAN	**Van**	**0.82**	**281**	Pg	**Pg**		**21 02 31.1**	**-0.8**
VANB	**Van**	**0.84**	**285**	Pg	**Pn**		**21 02 33.9**	**-0.6**
VANB				Sg	**Sn**		**21 02 46.3**	**-0.9**
VMUR	**Van-Muradiye**	**0.91**	**313**	P	**Pg**		**21 02 33.6**	**-0.2**
VMUR				IAML			21 02 53.0	
	comp=N,454nm,0.7s							
VMUR				IAML			21 02 54.0	
	comp=E,431nm,0.5s							
VMUR	**Van-Muradiye**	**0.91**	**313**	Pg	**Pg**		**21 02 33.5**	**-0.2**
ISHB	**Shabestar**	**0.94**	**95**	Pg	**Pg**		**21 02 32.9**	**-1.4**
MAKU	**Maku**	**1.00**	**11**	Pg	**Pg**		**21 02 34.3**	**-1.1**
HAKT	**HAKKARI**	**1.00**	**215**	P	**Pb**		**21 02 35.2**	**-0.6**
HAKT				S	**Sn**		**21 02 52.4**	**+1.3**
IMRD	**Marand**	**1.05**	**71**	Pg	**Pg**		**21 02 35.9**	**-0.6**
ERCV	**ERCIS-VAN**	**1.07**	**307**	Pn	**Pn**		**21 02 38.2**	**+0.6**
ERCV				Sn	**Sn**		**21 02 53.9**	**+1.1**
GEVA	**Gevas**	**1.08**	**267**	P	**Pg**		**21 02 35.5**	**-1.4**
GEVA				S	**Sn**		**21 02 52.5**	**-0.5**
GEVA				IAML			21 02 59.0	
	comp=N,391nm,0.5s							
GEVA				IAML			21 02 59.0	
	comp=E,330nm,0.5s							
NAX	**Nakhchivan**	**1.15**	**46**	P	**Pg**		**21 02 37.6**	**-0.8**
NAX				S	**Sn**		**21 02 54.6**	**-0.1**
DYDN	**Diyadin**	**1.30**	**334**	P	**Pb**		**21 02 41.2**	**+0.1**
DYDN				S	**Sn**		**21 02 59.0**	**+0.5**
DYDN				IAML			21 03 08.0	
	comp=N,258nm,0.6s							
DYDN				IAML			21 03 08.0	
	comp=E,371nm,0.5s							
DYDN	**Diyadin**	**1.30**	**334**	Pg	**Pb**		**21 02 41.1**	**+0.1**
CUKT	**Cukurca**	**1.30**	**210**	Pn	**Pg**		**21 02 41.8**	**+0.6**
CUKT				Sn	**Sn**		**21 02 59.9**	**+1.5**
CUKT	**Cukurca**	**1.30**	**210**	Pg	**Pg**		**21 02 41.9**	**+0.7**
ORD	**Ordubad**	**1.34**	**65**	P	**Pb**		**21 02 41.2**	**-0.5**
ORD				S	**Sn**		**21 02 59.9**	**+0.5**
SBZ	**Shahbuz**	**1.34**	**40**	P	**Pb**		**21 02 41.3**	**-0.4**
SBZ				S	**Sn**		**21 03 02.1**	**+2.6**
HYR	**Heyderabad**	**1.38**	**14**	P	**Pg**		**21 02 43.7**	**+1.0**
HYR				S	**Sg**		**21 03 04.0**	**+3.3**
ADCV	**BITLIS_Adilcev**	**1.40**	**288**	P	**Pn**		**21 02 41.2**	**-1.1**
ADCV				IAML			21 03 07.0	
	comp=N,186nm,0.7s							
ADCV				IAML			21 03 07.0	
	comp=E,157nm,0.9s							
IAZR	**Azarshahr**	**1.41**	**119**	Pg	**Pg**		**21 02 43.8**	**+0.5**
IGDI	**IGDIR**	**1.51**	**350**	P	**Pn**		**21 02 43.9**	**+0.2**
IGDI				S	**Sg**		**21 03 06.9**	**+1.9**
IGDI				IAML			21 03 09.0	
	comp=N,201nm,0.8s							
IGDI				IAML			21 03 09.0	
	comp=E,252nm,0.8s							
VAYK	**Vayk**	**1.53**	**30**	*e*P	**Pb**		**21 02 44.3**	**-0.6**
VAYK				*e*S	**Sg**		**21 03 07.0**	**+1.6**
PERV	**Siirt/Pervari-**	**1.55**	**254**	P	**Pg**		**21 02 45.4**	**-0.5**
PERV				S	**Sg**		**21 03 11.0**	**+4.9**
PERV				IAML			21 03 19.0	
	comp=N,581nm,0.6s							
PERV				IAML			21 03 19.0	
	comp=E,586nm,0.7s							
ALVK	**Alvank**	**1.60**	**69**	*e*P	**Pn**		**21 02 44.1**	**-0.8**
ALVK				*e*S	**Sb**		**21 03 06.0**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.64**	**309**	P	**Pn**		**21 02 44.3**	**-1.2**
DORK				S	**Sg**		**21 03 09.9**	**+1.0**
DORK				IAML			21 03 16.0	
	comp=E,135nm,1.1s							
DORK				IAML			21 03 19.0	
	comp=N,165nm,0.9s							
AGRB	**Hanur-Agry**	**1.64**	**317**	Pn	**Pg**		**21 02 47.4**	**-0.3**
AGRB				Sn	**Sg**		**21 03 09.6**	**+0.6**
MLAZ	**Malazgirt-MUS**	**1.66**	**298**	Pn	**Pg**		**21 02 47.8**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.71**	**327**	P	**Pb**		**21 02 47.9**	**-0.1**
KOTA				S	**Sg**		**21 03 12.3**	**+1.1**
KOTA				IAML			21 03 16.0	
	comp=E,84nm,1.5s							
KOTA				IAML			21 03 19.0	
	comp=N,47nm,0.8s							
GNI	**Garni**	**1.79**	**8**	Pn	**Pg**		**21 02 49.9**	**-0.6**
EGVZ	**Egvard**	**1.86**	**62**	*e*P	**Pb**		**21 02 49.0**	**-1.4**
EGVZ				*e*S	**Sg**		**21 03 14.5**	**-1.4**
GURO	**Guroymak-BITLI**	**1.89**	**276**	Pn	**Pb**		**21 02 50.8**	**-0.2**
KAPZ	**Kaputan**	**1.95**	**6**	*e*P	**Pg**		**21 02 53.3**	**-0.4**
KAPZ				*e*S	**Sg**		**21 03 21.7**	**+2.7**
AMBZ	**Amberd**	**2.01**	**356**	*e*P	**Pb**		**21 02 53.1**	**-0.1**
AMBZ				*e*S	**Sg**		**21 03 21.5**	**+0.6**
AYRK	**Ayrk**	**2.03**	**31**	*e*P	**Pb**		**21 02 53.3**	**-0.2**
AYRK				*e*S	**Sg**		**21 03 21.9**	**+0.4**
IHRS	**Heris**	**2.06**	**91**	Pn	**Pb**		**21 02 53.4**	**-0.5**
VRTB	**Varto-Mus**	**2.45**	**290**	Pn	**Pb**		**21 02 59.1**	**-1.6**
VRTB	**Varto-Mus**	**2.45**	**290**	Pn	**Pb**		**21 02 59.0**	**-1.6**
SVAN	**Silvan-Diyarba**	**2.55**	**266**	Pn	**Pb**		**21 03 00.1**	**-2.2**
SVAN	**Silvan-Diyarba**	**2.55**	**266**	Pn	**Pb**		**21 03 00.3**	**-2.0**

*IDC **23** 21:19:41.1±0.9, 41°.52N×140°.60E, h0km, mb3.7/9, mbtmp3.6/13, ML3.0/4, MS2.5/2, Error ellipse: s-maj=22.7km s-min=18.0km az=110.0*
*JMA **23** 21:19:43.0±0.0, 41°.6N±0°.1×140°.8E±0°.1, h11km, MV3.3/39, TSUGARU STRAIT REGION*
JMA Felt II J1 at TSUGARU STRAIT REGION .
ISC 23 21:19:42.9±0.9**, 41°.59N**±0°.03×**140°.73E**±0°.03**, h13**km±6km**, n30**, σ0°.76/33**, mb3.8/9, 12D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JSR	**Shiriuchi**	**0.24**	**257**	⇓P	**Pg**		**21 19 48.5**	**+0.4**
JSR				⇓S	**Sg**		**21 19 52.4**	**+0.8**
JOT	**Ohata**	**0.31**	**130**	P	**Pg**		**21 19 49.2**	**-0.1**
JOT				S	**Sg**		**21 19 53.6**	**0.0**
JKB	**Kayabe**	**0.38**	**37**	⇓P	**Pg**		**21 19 50.1**	**-0.4**
JKB				⇓S	**Sg**		**21 19 55.1**	**-0.5**
JOMM	**Oshimamatsumae**	**0.55**	**264**	*e*S	**Sb**		**21 20 01.6**	**-0.5**
JAHD	**Aomorihigashid**	**0.56**	**125**	*i*P	**Pg**		**21 19 53.7**	**-0.1**
JAHD				S	**Sg**		**21 20 01.6**	**+0.4**
JSI2	**Shiura 2**	**0.58**	**205**	⇓*i*P	**Pb**		**21 19 54.5**	**-0.4**
JSI2				⇓S	**Sb**		**21 20 02.6**	**-0.4**
JYM2	**Yakumo 2**	**0.60**	**333**	⇓*i*P	**Pg**		**21 19 54.5**	**-0.1**
JYM2				⇓S	**Sg**		**21 20 02.8**	**+0.3**
JARK	**Aomorirokkasho**	**0.75**	**140**	P	**Pb**		**21 19 57.8**	**-0.1**
JTM	**Tenmabayashi**	**0.84**	**162**	⇓P	**Pb**		**21 19 58.7**	**-0.6**
JTM				⇓S	**Sb**		**21 20 09.7**	**-0.8**
JNB	**Noboribetsu**	**0.91**	**14**	⇓*i*P	**Pg**		**21 19 59.6**	**-1.0**
JNB				⇓S	**Sg**		**21 20 11.6**	**-0.9**
ASAJ	**Asahikawa**	**2.88**	**28**	Pn	**Pn**		**21 20 30.9**	**+2.4**
	2.0nm,0.3s,baz=202,slow=11,SNR=14							
ASAJ				Sn	**Sn**		**21 21 03.4**	**+0.5**
	1.6nm,0.3s,baz=244,slow=19,SNR=4.2 6.4nm,0.3s							
MJAR	**Matsushiro Arr**	**5.41**	**202**	Pn	**Pn**		**21 21 03.3**	**0.0**
	0.1nm,0.3s,baz=21,slow=14,SNR=6.4 0.6nm,0.3s							
USRK	**Ussuriysk Ar.**	**6.93**	**295**	Pn	**Pn**		**21 21 24.4**	**+0.2**
	0.6nm,0.3s,baz=98,slow=16,SNR=2.6 1.9nm,0.4s							
KSRS	**Korea Array**	**10.72**	**252**	Pn	**Pn**		**21 22 14.4**	**-1.7**
	0.2nm,0.3s,baz=62,slow=14,SNR=1.7							
KSRS				LR	LR		21 26 05.0	
	comp=Z,25nm,18.1s,baz=25,slow=36 1.6nm,0.9s							
JCJ	**Chichijima**	**14.50**	**175**	LR	LR		21 28 42.5	
	comp=Z,19nm,18.7s,baz=106,slow=38							
H11N2	**WAKE ISLAND Hy**	**31.11**	**126**	T	T		21 58 16.0	
	baz=321							
H11N1	**WAKE ISLAND Hy**	**31.12**	**127**	T	T		21 58 19.0	
	baz=321,slow=74,SNR=3.5							
H11N3	**WAKE ISLAND Hy**	**31.13**	**126**	T	T		21 58 17.0	
	baz=321,slow=74,SNR=3.1							
H11S1	**WAKE ISLAND Hy**	**31.94**	**128**	T	T		21 59 22.5	
	baz=323							
H11S3	**WAKE ISLAND Hy**	**31.94**	**128**	T	T		21 59 22.0	
	baz=323							
H11S2	**WAKE ISLAND Hy**	**31.96**	**128**	T	T		21 59 22.0	
	baz=323							
ZALV	**Zalesovo Beam**	**38.57**	**308**	P	**P**		**21 27 04.6**	**-0.5**
	0.6nm,0.6s,baz=80,slow=11,SNR=3.5							
ZALV				PcP	**PcP**		**21 29 17.3**	**-0.2**
	0.3nm,0.3s,baz=98,slow=2.9,SNR=2.3 0.6nm,0.6s							
MKAR	**Makanchi Array**	**41.39**	**298**	P	**P**		**21 27 28.8**	**0.0**
	0.5nm,0.8s,baz=83,slow=9.1,SNR=4.7 0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**42.90**	**304**	P	**P**		**21 27 40.6**	**-0.3**
	1.1nm,0.9s,baz=79,slow=8.5,SNR=4.2 1.1nm,0.9s							
ILAR	**Eielson Array**	**45.99**	**35**	P	**P**		**21 28 06.5**	**+1.0**
	1.1nm,0.9s,baz=260,slow=6.7,SNR=8.0 1.1nm,0.9s							
BVAR	**Borovoye Array**	**47.20**	**309**	P	**P**		**21 28 15.1**	**0.0**
	0.3nm,0.4s,baz=56,slow=7.7,SNR=1.7 0.3nm,0.4s							
YKA	**Yellowknife Ar**	**60.17**	**31**	P	**P**		**21 29 50.9**	**+1.0**
	0.4nm,0.5s,baz=310,slow=6.5,SNR=9.7 0.4nm,0.5s							
WRA	**Warramunga Arr**	**61.50**	**187**	P	**P**		**21 29 58.6**	**-0.8**
	1.0nm,0.7s,baz=4.2,slow=7.0,SNR=5.4 1.0nm,0.7s							
FINES	**FINESS Array B**	**64.56**	**331**	P	**P**		**21 30 19.1**	**-0.2**
	1.2nm,0.8s,baz=155,slow=23,SNR=3.6 1.2nm,0.8s							
ASAR	**Alice Springs**	**65.23**	**187**	P	**P**		**21 30 24.1**	**+0.1**
	0.6nm,0.8s,baz=14,slow=5.5,SNR=4.3 0.6nm,0.8s							

*AFAD **23** 21:33:52.7, 38°.42N×44°.55E, h7km±2km, ML2.4*
*TEH **23** 21:33:53.1, 38°.34N×44°.46E, h10km±168km, ML2.6, Presumed earthquake*
*ISK **23** 21:33:56.0, 38°.38N×44°.45E, h16km, ML2.6/7*
ISC 23 21:33:54.1±1.1**, 38°.42N**±0°.03×**44°.47E**±0°.03**, h14**km±10km**, n22**, σ1°.21/34**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**303**	P	**Pb**		**21 34 02.9**	**-1.0**
OZAP				S	**Sb**		**21 34 10.6**	**0.0**
OZAP				IAML			21 34 12.0	
	comp=N,490nm,0.5s							
TVAN	**Van**	**0.84**	**278**	P	**Pb**		**21 34 09.8**	**-0.9**
TVAN				S	**Sn**		**21 34 22.9**	**-1.2**
TVAN				IAML			21 34 30.0	
	comp=N,214nm,0.9s							
VANB	**Van**	**0.87**	**282**	Pg	**Pn**		**21 34 12.6**	**+0.6**
VANB				Sg	**Sn**		**21 34 24.6**	**0.0**
VMUR	**Van-Muradiye**	**0.91**	**309**	P	**Pg**		**21 34 11.0**	**-0.6**
VMUR				S	**Sn**		**21 34 27.4**	**+1.8**
VMUR				IAML			21 34 31.0	
	comp=E,110nm,0.4s							
ISHB	**Shabestar**	**0.91**	**98**	Pg	**Pg**		**21 34 10.9**	**-0.8**
ISHB				Sg	**Sb**		**21 34 24.4**	**+0.5**
MAKU	**Maku**	**0.95**	**10**	Pg	**Pb**		**21 34 12.8**	**+0.4**
IMRD	**Marand**	**1.01**	**73**	Pg	**Pn**		**21 34 13.9**	**-0.1**
HAKT	**HAKKARI**	**1.05**	**215**	P	**Pn**		**21 34 13.3**	**-1.3**
HAKT				S	**Sn**		**21 34 30.1**	**+0.8**
HAKT				IAML			21 34 32.0	
	comp=N,83nm,0.6s							
HAKT				IAML			21 34 37.0	
	comp=E,92nm,0.4s							
GEVA	**Gevas**	**1.12**	**265**	P	**Pg**		**21 34 14.2**	**-1.4**
GEVA				S	**Sn**		**21 34 32.3**	**+1.5**
GEVA				IAML			21 34 34.0	
	comp=N,99nm,0.6s							
GEVA				IAML			21 34 35.0	
	comp=E,113nm,0.4s							
CUKT	**Cukurca**	**1.35**	**211**	Pn	**Pg**		**21 34 20.2**	**+0.1**
CUKT				Sn	**Sg**		**21 34 37.9**	**+0.1**
CUKT	**Cukurca**	**1.35**	**211**	P	**Pg**		**21 34 19.4**	**-0.8**
CUKT				S	**Sg**		**21 34 41.8**	**+4.0**
CUKT				IAML			21 34 45.0	
	comp=N,98nm,0.6s							
CUKT				IAML			21 34 49.0	
	comp=E,90nm,0.6s							
ADCV	**BITLIS_Adilcev**	**1.42**	**286**	P	**Pg**		**21 34 20.8**	**-0.7**
ADCV				S	**Sg**		**21 34 41.8**	**+1.8**
ADCV				IAML			21 34 45.0	
	comp=N,41nm,0.7s							
ADCV				IAML			21 34 46.0	
	comp=E,47nm,0.5s							
IGDI	**IGDIR**	**1.48**	**348**	P	**Pg**		**21 34 22.2**	**-0.3**
IGDI				IAML			21 34 47.0	
	comp=N,35nm,0.7s							
IGDI				IAML			21 34 47.0	
	comp=E,54nm,0.8s							
PERV	**Siirt/Pervari-**	**1.59**	**253**	P	**Pg**		**21 34 24.6**	**-0.1**
PERV				IAML			21 34 52.0	
	comp=N,124nm,0.8s							
PERV				IAML			21 34 52.0	
	comp=E,164nm,0.6s							
AGRB	**Hanur-Agry**	**1.63**	**316**	Pn	**Pg**		**21 34 24.9**	**-0.5**
AGRB				Sn	**Sg**		**21 34 46.3**	**-0.3**
DORK	**Agr/Tutak/Do**	**1.64**	**307**	P	**Pb**		**21 34 23.3**	**-0.8**
DORK				S	**Sg**		**21 34 48.2**	**+1.4**
DORK				IAML			21 34 59.0	
	comp=E,29nm,1.0s							
DORK				IAML			21 35 06.0	
	comp=N,34nm,1.0s							
MLAZ	**Malazgirt-MUS**	**1.67**	**296**	Pn	**Pg**		**21 34 25.7**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.70**	**325**	P	**Pg**		**21 34 25.8**	**-0.8**
GNI	**Garni**	**1.74**	**7**	Pn	**Pg**		**21 34 27.0**	**-0.5**
GURO	**Guroymak-BITLI**	**1.92**	**275**	Pn	**Pb**		**21 34 28.8**	**-0.1**
IHRS	**Heris**	**2.02**	**92**	Pn	**Pg**		**21 34 31.9**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.59**	**265**	Pn	**Pb**		**21 34 38.5**	**-1.8**

*TEH **23** 21:36:56.8, 38°.33N×44°.39E, h10km±232km, ML2.8, Presumed earthquake*
*AFAD **23** 21:36:56.7, 38°.44N×44°.63E, h7km±5km, ML2.6*
*ISK **23** 21:36:59.4, 38°.28N×44°.55E, h9km, ML2.9/8*
ISC 23 21:36:58.0±1.4**, 38°.37N**±0°.03×**44°.50E**±0°.03**, h6**km±12km**, n23**, σ0°.96/33**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**306**	P	**Pb**		**21 37 08.2**	**-1.0**
OZAP				S	**Sb**		**21 37 16.4**	**-0.2**
OZAP				IAML			21 37 22.0	
	comp=N,903nm,0.7s							
TVAN	**Van**	**0.87**	**281**	P	**Pg**		**21 37 14.4**	**-0.4**
TVAN				S	**Sb**		**21 37 27.4**	**-0.2**
TVAN				IAML			21 37 43.0	
	comp=N,302nm,0.7s							
ISHB	**Shabestar**	**0.88**	**96**	Pg	**Pn**		**21 37 15.8**	**-1.3**
ISHB				Sg	**Sn**		**21 37 30.0**	**-0.4**
VANB	**Van**	**0.90**	**285**	Pg	**Pn**		**21 37 17.4**	**+0.1**
VANB				Sg	**Sn**		**21 37 31.4**	**+0.8**
VMUR	**Van-Muradiye**	**0.95**	**311**	P	**Pg**		**21 37 16.1**	**-0.2**
VMUR				S	**Sb**		**21 37 30.6**	**+0.7**
VMUR				IAML			21 37 33.0	
	comp=E,329nm,0.4s							
VMUR				IAML			21 37 34.0	
	comp=N,305nm,0.3s							
MAKU	**Maku**	**0.99**	**8**	Pg	**Pb**		**21 37 16.9**	**-0.7**
IMRD	**Marand**	**1.00**	**70**	Pg	**Pn**		**21 37 18.9**	**+0.1**
HAKT	**HAKKARI**	**1.03**	**218**	P	**Pn**		**21 37 19.2**	**+0.1**
HAKT				S	**Sn**		**21 37 36.1**	**+2.1**
HAKT				IAML			21 37 38.0	
	comp=E,275nm,0.3s							
HAKT				IAML			21 37 40.0	
	comp=N,210nm,0.3s							
GEVA	**Gevas**	**1.14**	**267**	P	**Pn**		**21 37 19.5**	**-1.0**
GEVA				S	**Sn**		**21 37 37.1**	**+0.6**
GEVA				IAML			21 37 41.0	
	comp=N,138nm,0.9s							
GEVA				IAML			21 37 45.0	
	comp=E,108nm,0.4s							
CUKT	**Cukurca**	**1.33**	**212**	Pn	**Pg**		**21 37 23.9**	**+0.4**
CUKT				Sn	**Sn**		**21 37 41.9**	**+0.7**
CUKT	**Cukurca**	**1.33**	**212**	P	**Pg**		**21 37 25.2**	**+1.7**
CUKT				IAML			21 37 49.0	
	comp=E,249nm,0.6s							
CUKT				IAML			21 37 53.0	
	comp=N,205nm,0.6s							
PERV	**Siirt/Pervari-**	**1.60**	**255**	P	**Pg**		**21 37 28.5**	**-0.2**
AGRB	**Hanur-Agry**	**1.68**	**316**	Pn	**Pg**		**21 37 30.3**	**+0.1**
DORK	**Agr/Tutak/Do**	**1.68**	**308**	P	**Pb**		**21 37 28.8**	**-0.7**
DORK	

GEVA				S	**Sn**	**21 53 42.8**	**+1.1**
GEVA				IAML		21 53 46.0	
	comp=N,204nm,0.4s						
AKDM	**Akdamar-Van**	**1.24**	**267**	Pn	**Pn**	**21 53 25.4**	**-0.9**
DYDN	**Diyadin**	**1.32**	**330**	P	**Pg**	**21 53 29.1**	**+1.0**
DYDN				S	**Sn**	**21 53 45.2**	**-0.2**
DYDN				IAML		21 53 50.0	
	comp=E,197nm,0.3s						
DYDN				IAML		21 53 51.0	
	comp=N,162nm,0.4s						
IAZR	**Azarshahr**	**1.34**	**122**	Pg	**Pg**	**21 53 29.7**	**+1.3**
CUKT	**Cukurca**	**1.37**	**213**	Pn	**Pn**	**21 53 27.7**	**-0.4**
CUKT				Sn	**Sb**	**21 53 44.9**	**-1.4**
ADCV	**BITLIS_Adilcev**	**1.49**	**286**	P	**Pb**	**21 53 30.5**	**-0.1**
ADCV				S	**Sg**	**21 53 52.2**	**+1.6**
ADCV				IAML		21 53 58.0	
	comp=N,129nm,0.4s						
AGRB	**Hanur-Agry**	**1.69**	**314**	Pn	**Pb**	**21 53 33.9**	**-0.1**
AGRB				Sn	**Sg**	**21 53 56.6**	**-0.4**
MLAZ	**Malazgirt-MUS**	**1.73**	**296**	Pn	**Pb**	**21 53 34.2**	**-0.5**
GNI	**Garni**	**1.75**	**5**	Pn	**Pb**	**21 53 35.3**	**+0.3**
IHRS	**Heris**	**1.96**	**92**	Pn	**Pg**	**21 53 40.0**	**-0.2**
GURO	**Guroymak-BITLI**	**1.98**	**275**	Pn	**Pn**	**21 53 37.6**	**+1.1**
KARS	**Kars**	**2.50**	**333**	Pn	**Pb**	**21 53 45.7**	**-2.1**
VRTB	**Varto-Mus**	**2.54**	**288**	Pn	**Pn**	**21 53 45.8**	**+1.7**
SVAN	**Silvan-Diyarba**	**2.65**	**266**	Pn	**Pn**	**21 53 46.8**	**+1.2**
SENK	**Senkaya-Erzuru**	**2.75**	**322**	Pn	**Pb**	**21 53 49.9**	**-2.2**
KARO	**Karliova-Bingo**	**2.88**	**289**	Pn	**Pn**	**21 53 50.8**	**+1.9**
BNGB	**Bingl**	**3.09**	**282**	Pn	**Pn**	**21 53 53.5**	**+1.9**

*IDC **23** 21:58:36.7±1.0,5.°06N×125.°82E,h0km,mb3.7/6, mbtmp3.7/8,ML3.8/2,MS2.8/2,Error ellipse: s-maj=78.5km s-min=16.1km az=66.0*
*NEIC **23** 21:58:42.0±1.8,5.°31N±0.°03×126.°55E±0.°09,h35km±2km, mb4.6/14,Error ellipse: s-maj=15.8km s-min=5.2km az=88.0*

ISC 23 21:58:41.5±0.7,**5.°29N**±0.°06×**126.°52E**±0.°09,**h35**km,**n29,** σ1§**49**/30,**mb4.3**/13,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
DAV	**Davao City (W)**	**2.00**	**332**	Pn		**Pn**	**21**	**59**	**13.0**	**+0.1**
	43nm,0.3s,baz=39,slow=11,SNR=3.7									
DAV				Sn		**Sn**	**21**	**59**	**42.2**	**+5.4**
	56nm,0.3s,baz=105,slow=22,SNR=8.4									
	141nm,0.4s									
DAV	**Davao City (W)**	**2.00**	**332**			**Pn**	**21**	**59**	**13.2**	**+0.3**
DAV						**Sn**	**21**	**59**	**36.8**	**+0.1**
TOLI2	**Tolitoli**	**7.07**	**234**	Pn		**Pn**	**22**	**00**	**23.9**	**+1.3**
TOLI2				Sn		**Sn**	**22**	**01**	**42.7**	**+0.9**
SIJI	**Sorong**	**7.74**	**142**	Pn		**Pn**	**22**	**00**	**33.5**	**+1.6**
	0.9nm,0.3s,baz=258,slow=23,SNR=1.6									
	5.1nm,0.7s									
MYLDM	**Lahad Datu**	**7.99**	**270**	Pn		**Pn**	**22**	**00**	**36.0**	**+0.8**
KNRA	**Kununurra**	**20.95**	**174**	P		**P**	**22**	**03**	**21.9**	**+0.3**
KNRA				IAmb		IAmb	22	03	48.0	
	comp=Z,38nm,1.5s									
WB0	**Warramunga Arr**	**26.08**	**163**	P		**P**	**22**	**04**	**13.4**	**+1.4**
WRA	**Warramunga Arr**	**26.23**	**163**	P		**P**	**22**	**04**	**13.0**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=342,slow=10,SNR=6.6									
	comp=Z,0.3nm,0.5s									
WRA	**Warramunga Arr**	**26.23**	**163**	P		**P**	**22**	**04**	**12.9**	**-0.5**
WR8	**Warramunga Arr**	**26.29**	**163**	P		**P**	**22**	**04**	**15.0**	**+1.1**
WR8				IAmb		IAmb	22	04	27.1	
	comp=Z,13nm,1.2s									
GSI	**Gunungsitoli**	**29.16**	**263**	P		**P**	**22**	**04**	**39.7**	**-0.1**
GSI				IAmb		IAmb	22	04	51.0	
	comp=Z,36nm,1.3s									
ASAR	**Alice Springs**	**29.67**	**166**	P		**P**	**22**	**04**	**43.7**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=347,slow=9.0,SNR=1.6									
	comp=Z,0.2nm,0.5s									
ASAR	**Alice Springs**	**29.67**	**166**	P		**P**	**22**	**04**	**43.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**29.93**	**298**	LR		LR	22	16	29.9	
	comp=Z,21nm,21.5s,baz=335,slow=36									
KSRS	**Korea Array**	**32.04**	**2**	LR		LR	22	20	37.6	
	comp=Z,16nm,18.6s,baz=350,slow=41									
MORW	**Morawa**	**35.61**	**196**	P		**P**	**22**	**05**	**34.6**	**-1.5**
MORW				IAmb		IAmb	22	06	11.2	
	comp=Z,18nm,1.4s									
BBOO	**Buckleboo**	**38.96**	**167**	P		**P**	**22**	**06**	**05.2**	**+0.8**
BBOO				IAmb		IAmb	22	06	07.9	
	comp=Z,9.3nm,1.1s									
NWAO	**Narrogin (SRO)**	**39.01**	**192**	P		**P**	**22**	**06**	**04.6**	**-0.2**
STKA	**Stephens Creek**	**39.65**	**160**	P		**P**	**22**	**06**	**12.1**	**+1.9**
	comp=Z,1.4nm,0.7s,baz=322,slow=8.9,SNR=3.3									
	comp=Z,1.4nm,0.7s									
STKA	**Stephens Creek**	**39.65**	**160**	P		**P**	**22**	**06**	**10.5**	**+0.3**
MKAR	**Makanchi Array**	**56.17**	**325**	P		**P**	**22**	**08**	**16.4**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=126,slow=6.6,SNR=11									
	comp=Z,0.4nm,0.5s									
MKAR	**Makanchi Array**	**56.17**	**325**	P		**P**	**22**	**08**	**16.9**	**-1.0**
KURBB	**Kurchatov Arra**	**60.32**	**327**	P		**P**	**22**	**08**	**45.1**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=125,slow=6.2,SNR=12									
	comp=Z,1.1nm,0.6s									
KURK	**Kurchatov**	**60.32**	**327**	P		**P**	**22**	**08**	**45.4**	**-1.4**
KURK				IAmb		IAmb	22	09	03.3	
	comp=Z,2.6nm,0.7s									
BVAR	**Borovoye Array**	**65.91**	**327**	P		**P**	**22**	**09**	**23.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=120,slow=8.8,SNR=6.7									
	comp=Z,0.9nm,0.7s									
BORK	**Borovoye**	**65.96**	**327**	P		**P**	**22**	**09**	**24.1**	**-0.1**
BORK				IAmb		IAmb	22	09	40.8	
	comp=Z,2.2nm,0.8s									
AB31	**Akbulak array**	**70.82**	**320**	P		**P**	**22**	**09**	**53.9**	**-0.8**
ABKAR	**Akbulak array**	**70.82**	**320**	P		**P**	**22**	**09**	**54.2**	**-0.5**
MBAR	**Mbarara**	**95.81**	**270**	P		**P**	**22**	**12**	**03.2**	**-2.1**
MBAR				IAmb		IAmb	22	12	12.4	
	comp=Z,2.1nm,0.7s									

*MOS **23** 22:00:20.3±2.5,53.°42N×116.°17E,h10km,mb3.7/1,Error ellipse: s-maj=12.5km s-min=10.4km az=95.4*
*IDC **23** 22:00:20.9±1.4,53.°39N×116.°14E,h0km,mb3.0/3, mbtmp3.4/6,ML3.9/3,Error ellipse: s-maj=25.2km s-min=16.3km az=34.0*
*BYKL **23** 22:00:22.0±0.2,53.°53N×116.°15E*

ISC 23 22:00:23.5±0.6,**53.°50N**±0.°03×**116.°15E**±0.°03,**h10**km,**n59,** σ3§**25**/104,**mb3.2**/3,**1C-2D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
CIT	**Chita**	**2.16**	**228**	*e*PN		**Pn**	**22**	**01**	**00.8**	**+1.2**
CIT				*e*			22	01	29.7	
CIT				pmax		pmax				
	comp=Z,178nm,0.4s									
CIT				smax		smax				
	comp=N,725nm,0.6s									
CIT	**Chita**	**2.16**	**228**	*e*Pg		**Pn**	**22**	**01**	**01.5**	**+1.9**
CIT				*e*			22	01	06.9	
CIT				*e*Sg		**Sb**	**22**	**01**	**30.0**	**+0.4**
CIT				max						
	comp=N,178nm,0.4s									
CIT				max						
	comp=N,726nm,0.6s									
TUP	**Tupik**	**2.43**	**66**	*e*PN		**Pn**	**22**	**01**	**01.8**	**-1.5**
TUP				*e*			22	01	07.2	
TUP				*e*			22	01	37.4	
TUP				pmax		pmax				
	comp=Z,106nm,0.3s									
TUP				smax		smax				
	comp=N,811nm,0.5s									
TUP	**Tupik**	**2.43**	**66**	⇑*i*Pn		**Pn**	**22**	**01**	**01.8**	**-1.5**
TUP				*e*Pg		Pb	22	01	05.6	-1.8
TUP				*e*PgPg		**Pg**	**22**	**01**	**09.2**	**-0.9**
TUP				*e*			22	01	15.2	
TUP				*e*Sg		**Sn**	**22**	**01**	**37.4**	**+4.2**
TUP				*e*SgSg		**Sg**	**22**	**01**	**43.4**	**+1.7**
TUP				max						
	comp=N,107nm,0.3s									
TUP				max						
	comp=N,806nm,0.4s									
UKT	**Uakit**	**2.48**	**325**	*e*PN		**Pn**	**22**	**01**	**01.7**	**-2.3**
UKT				*e*			22	01	05.4	
UKT				*e*			22	01	37.6	
UKT				pmax		pmax				
	comp=Z,18nm,0.2s									
UKT				smax		smax				
	comp=N,668nm,0.5s									
UKT	**Uakit**	**2.48**	**325**	⇓*i*Pn		**Pn**	**22**	**01**	**01.6**	**-2.4**
UKT				*e*Pg		**Pb**	**22**	**01**	**05.6**	**-2.6**
UKT				*e*			22	01	09.2	
UKT				*e*			22	01	13.2	
UKT				*e*Sn		**Sn**	**22**	**01**	**31.3**	**-3.1**
UKT				*e*Sg		**Sb**	**22**	**01**	**37.6**	**-1.2**
UKT				*e*SgSg		**SnSn**	**22**	**01**	**46.5**	**+1.2**
UKT				max						
	comp=N,124nm,0.5s									
UKT				max						
	comp=N,698nm,0.6s									
NLYR	**Nelyaty**	**3.01**	**355**	*e*PN		Pn	22	01	08.7	-2.6
NLYR				*e*			22	01	17.5	
NLYR				*e*			22	01	54.4	
NLYR				pmax		pmax				
	comp=Z,86nm,0.5s									
NLYR				smax		smax				
	comp=E,919nm,0.8s									
NLYR	**Nelyaty**	**3.01**	**355**	*e*Pn		Pn	22	01	08.7	-2.6
NLYR				*e*Pg		**Pb**	**22**	**01**	**15.5**	**-1.7**
NLYR				*e*PgPg		**PnPn**	**22**	**01**	**17.6**	**-1.0**
NLYR				*e*Sg		**Sb**	**22**	**01**	**53.7**	**-0.3**
NLYR				*e*SgSg		**SnSn**	**22**	**01**	**58.3**	**-0.2**
NLYR				max						
	comp=E,90nm,0.3s									
NLYR				max						
	comp=E,913nm,0.8s									
SVKR	**Severomuysk**	**3.02**	**331**	*e*PN		**Pb**	**22**	**01**	**18.3**	**+0.9**
SVKR				*e*			22	01	55.8	
SVKR				pmax		pmax				
	comp=Z,210nm,0.2s									
SVKR				smax		smax				
	comp=N,2μm,0.6s									
SVKR	**Severomuysk**	**3.02**	**331**	*e*Pg		**Pb**	**22**	**01**	**16.6**	**-0.8**
SVKR				*e*Sg		**Sb**	**22**	**01**	**56.3**	**+1.9**
SVKR				Pmax						
	comp=N,211nm,0.2s									
SVKR				Smax						
	comp=N,2μm,0.6s									
YLYR	**Ulyunkhan**	**3.24**	**297**	*e*PN		**Pn**	**22**	**01**	**12.2**	**-2.1**
YLYR				*e*			22	01	18.8	
YLYR				*e*S		**Sn**	**22**	**01**	**49.9**	**-3.1**
YLYR				*e*			22	01	59.5	
YLYR				pmax		pmax				
	comp=Z,52nm,0.2s									
YLYR				smax		smax				
	comp=N,468nm,0.5s									
YLYR	**Ulyunkhan**	**3.24**	**297**	⇓*i*Pn		**Pn**	**22**	**01**	**12.3**	**-2.1**
YLYR				*e*			22	01	17.9	
YLYR				*e*Pg		**Pb**	**22**	**01**	**20.6**	**-0.5**
YLYR				*e*Sg		**Sb**	**22**	**02**	**02.4**	**+1.9**
YLYR				Pmax						
	comp=N,52nm,0.2s									
YLYR				Smax						
	comp=N,465nm,0.5s									
CRS	**Chara**	**3.62**	**19**	*e*Pn		**Pn**	**22**	**01**	**19.5**	**-0.2**
CRS				*e*Pg		**Pb**	**22**	**01**	**27.1**	**-0.5**
CRS				*e*			22	01	33.6	
CRS				*e*Sg		**Sb**	**22**	**02**	**13.9**	**+2.3**
CRS				max						
	comp=N,40nm,0.6s									
CRS				Smax						
	comp=N,224nm,0.8s									
SYVR	**Suvo**	**3.67**	**275**	*e*PN		**Pn**	**22**	**01**	**18.3**	**-2.0**
SYVR				*e*			22	01	26.6	
SYVR				*e*			22	02	14.6	
SYVR				pmax		pmax				
	comp=Z,55nm,0.5s									
SYVR				smax		smax				
	comp=E,421nm,0.7s									
SYVR	**Suvo**	**3.67**	**275**	*e*Pn		**Pn**	**22**	**01**	**18.6**	**-1.7**
SYVR				*e*Pg		**Pb**	**22**	**01**	**27.4**	**-1.0**
SYVR				*e*			22	01	33.8	
SYVR				*e*Sg		**Sb**	**22**	**02**	**15.6**	**+2.7**
SYVR				max						
	comp=E,35nm,0.4s									
SYVR				Smax						
	comp=E,378nm,0.5s									
YOAB	**Uoyan, Buryati**	**3.68**	**318**	*e*Pg		**Pb**	**22**	**01**	**27.3**	**-1.3**
YOAB				*e*Sg		**Sb**	**22**	**02**	**15.6**	**+2.3**
YOAB				Pmax						
	comp=E,111nm,0.6s									
YOAB				Smax						
	comp=E,921nm,0.6s									
KMO	**Kumora**	**3.74**	**312**	*e*PN		**Pn**	**22**	**01**	**19.0**	**-2.2**
KMO				*e*			22	01	27.8	
KMO				*e*			22	02	16.1	
KMO				pmax		pmax				
	comp=Z,80nm,0.5s									
KMO				smax		smax				
	comp=E,851nm,1.0s									
KMO	**Kumora**	**3.74**	**312**	*e*Pn		**Pn**	**22**	**01**	**19.1**	**-2.2**
KMO				*e*Pg		**Pb**	**22**	**01**	**28.7**	**-0.9**
KMO				*e*Sg		**Sb**	**22**	**02**	**16.5**	**+1.6**
KMO				*e*SgSg		**SbSb**	**22**	**02**	**21.4**	**+1.4**
KMO				Pmax						
	comp=E,75nm,0.5s									
KMO				max						
	comp=E,851nm,0.7s									
YKLR	**Yuktali**	**4.43**	**43**	*e*Pn		Pn	22	01	28.7	-2.1
YKLR				*e*Pg		**Pb**	**22**	**01**	**41.9**	**+0.5**
YKLR				*e*Sg		**Sb**	**22**	**02**	**39.3**	**+4.5**
MXMB	**Maximikha**	**4.44**	**270**	*e*Pn		**Pn**	**22**	**01**	**29.0**	**-1.9**
MXMB				*e*Pg		**Pb**	**22**	**01**	**42.1**	**+0.6**
MXMB				*e*Sg		**Sb**	**22**	**02**	**39.5**	**+4.5**
NIZB	**Nizh Angarsk**	**4.46**	**303**	*e*Pn		**Pn**	**22**	**01**	**29.4**	**-1.8**
NIZB				*e*Pg		**Pb**	**22**	**01**	**42.1**	**+0.2**
NIZB				*e*Sg		**Sb**	**22**	**02**	**39.7**	**+4.0**
NIZB				Pmax						
	comp=E,47nm,0.7s									
NIZB				Smax						
	comp=E,215nm,0.9s									
KPC	**Khapcheranga**	**4.46**	**213**	*e*PN		**Pn**	**22**	**01**	**29.8**	**-1.5**
KPC				*e*			22	01	42.3	
KPC				*e*S		**Sn**	**22**	**02**	**18.6**	**-4.7**
KPC				*e*			22	02	39.6	
KPC				pmax		pmax				
	comp=Z,9.0nm,0.4s									
KPC				smax		smax				
	comp=E,103nm,1.0s									
KPC	**Khapcheranga**	**4.46**	**213**	*e*Pn		**Pn**	**22**	**01**	**29.8**	**-1.5**
KPC				*e*			22	01	39.9	
KPC				*e*Pg		**Pb**	**22**	**01**	**42.7**	**+0.7**
KPC				*e*Sn		**Sn**	**22**	**02**	**21.3**	**-2.0**
KPC				*e*Sg		**Sb**	**22**	**02**	**42.6**	**+6.7**
KPC				Pmax						
	comp=E,15nm,0.3s									
KPC				Smax						
	comp=E,90nm,0.8s									
BOD	**Bodaibo**	**4.50**	**345**	*e*Pn		**Pn**	**22**	**01**	**31.4**	**-0.2**
BOD				*e*Pg		**Pb**	**22**	**01**	**42.6**	**+0.1**
BOD				*e*Sg		**Sb**	**22**	**02**	**41.1**	**+4.4**
BOD				Pmax						
	comp=E,28nm,0.4s									
BOD				Smax						
	comp=E,229nm,0.4s									
HILR	**Hailar Array B**	**4.54**	**149**	Pn		Pn	22	01	29.8	-2.5
	baz=328,slow=14									
HILR				Pg		**Pb**	**22**	**01**	**42.1**	**-1.2**
	baz=330,slow=16									
HILR				Sn		**Sn**	**22**	**02**	**22.9**	**-2.2**
	baz=332,slow=21									
HILR				Lg		Lg	22	02	43.1	
	baz=329,slow=30									
	comp=E,17nm,0.3s									
GORB	**Goryachinsk**	**4.75**	**267**	*e*Pn		**Pn**	**22**	**01**	**33.8**	**-1.3**
GORB				*e*Pg		**Pb**	**22**	**01**	**47.1**	**+0.3**
GORB				*e*			22	01	55.3	
GORB				*e*Sg		**Sb**	**22**	**02**	**48.5**	**+4.5**
HIA	**Hailar**	**4.80**	**151**	*e*		Pn	22	01	33.0	-2.8
HIA				*e*Pg		**Pb**	**22**	**01**	**48.9**	**+1.3**
HIA				*e*Sn		**Sn**	**22**	**02**	**28.0**	**-3.4**
HIA				*e*Sg		**Sb**	**22**	**02**	**52.2**	**+6.8**
KELR	**Kotokel**	**4.91**	**265**	*e*Pg		**Pb**	**22**	**01**	**49.7**	**+0.1**
KELR				*e*Sg		**Sb**	**22**	**02**	**53.1**	**+4.4**
UZR	**Uzur**	**5.03**	**271**	*e*Pn		**Pn**	**22**	**01**	**36.8**	**-2.2**
UZR				*e*Pg		**Pb**	**22**	**01**	**51.8**	**+0.2**
UZR				*e*			22	01	59.9	
UZR				*e*Sg		**Sb**	**22**	**02**	**57.1**	**+5.0**
UZR				max						
	comp=E,17nm,0.4s									
UZR				Smax						
	comp=E,253nm,0.7s									
OGRR	**Ongureny**	**5.10**	**275**	*e*PN		**Pn**	**22**	**01**	**37.7**	**-2.2**
OGRR				*e*			22	01	52.7	
OGRR				*e*			22	02	59.6	
OGRR				pmax		pmax				
	comp=Z,10.0nm,0.7s									
OGRR				smax		smax				
	comp=N,132nm,1.9s									
OGRR	**Ongureny**	**5.10**	**275**	*e*Pn		**Pn**	**22**	**01**	**37.7**	**-2.2**
OGRR				*e*Pg		**Pb**	**22**	**01**	**53.4**	**+0.6**
OGRR				*e*			22	02	00.2	
OGRR				*e*Sg		**Sb**	**22**	**02**	**59.6**	**+5.6**
OGRR				max						
	comp=N,12nm,0.5s									
OGRR				Smax						
	comp=N,125nm,0.6s									
UUDB	**Ulan-Yde**	**5.41**	**256**	*e*Pn		**Pn**	**22**	**01**	**42.4**	**-1.8**
UUDB				*e*Pg		**Pb**	**22**	**01**	**59.2**	**+1.1**
UUDB				*e*Sg		**Sb**	**22**	**03**	**09.3**	**+6.2**
UUDB				Pmax						
	comp=N,23nm,0.8s									
UUDB				Smax						
	comp=N,220nm,1.2s									
ZRHB	**Zarechye**	**5.51**	**264**	*e*Pg		**Pb**	**22**	**02**	**00.6**	**+0.8**
ZRHB				*e*Sg		**Sb**	**22**	**03**	**11.7**	**+5.8**
ZRHB				Pmax						
	comp=N,45nm,0.6s									
ZRHB				Smax						
	comp=N,673nm,1.1s									
FFNB	**Fofonovo**	**5.88**	**259**	*e*Pg		**Pb**	**22**	**02**	**07.8**	**+1.8**
FFNB				*e*Sg		**Sb**	**22**	**03**	**24.1**	**+7.7**
KAB	**Kabansk**	**5.94**	**260**	*e*Sg		**Sb**	**22**	**03**	**25.3**	**+7.1**
KAB				Smax						
	comp=N,812nm,0.9s									
TRG	**Tyrgan**	**5.95**	**267**	*e*PN		**Pn**	**22**	**01**	**48.7**	**-2.9**
TRG				*e*			22	02	08.6	
TRG				*e*S		**Sn**	**22**	**02**	**56.9**	**-2.8**
TRG				*e*			22	03	25.0	
TRG				pmax		pmax				
	comp=Z,6.0nm,0.4s									
TRG				smax		smax				
	comp=N,97nm,0.7s									
TRG	**Tyrgan**	**5.95**	**267**	*e*Pn		**Pn**	**22**	**01**	**49.1**	**-2.5**
TRG				*e*Pg		**Pb**	**22**	**02**	**08.9**	**+1.7**
TRG				*e*Sn		**Sn**	**22**	**02**	**54.6**	**-5.1**
TRG				*e*			22	03	12.6	
TRG				*e*Sg		**Sb**	**22**	**03**	**26.5**	**+8.1**
TRG				Pmax						
	comp=N,10.0nm,0.4s									
TRG				Smax						
	comp=N,96nm,0.9s									
CLNS	**Chul'man**	**6.03**	**53**	*e*Pg		**Pb**	**22**	**02**	**09.9**	**+1.4**
CLNS				*e*Sg		**Sb**	**22**	**03**	**27.8**	**+7.1**
STDB	**Stepnoy Dvoret**	**6.08**	**261**	*e*Sg		**Sb**	**22**	**03**	**30.5**	**+8.4**
VTMR	**Vitim**	**6.28**	**343**	*e*Pn		**Pn**	**22**	**01**	**54.6**	**-1.5**
VTMR				*e*Pg		**Pb**	**22**	**02**	**13.9**	**+1.1**
VTMR				*e*Sg		**Sb**	**22**	**03**	**36.0**	**+8.1**
VBR	**Suhoy Ruchey**	**6.40**	**259**	*e*Sg		**Sb**	**22**	**03**	**39.3**	**+8.0**
ZEA	**Zeya**	**6.61**	**83**	*e*PN		**Pn**	**22**	**02**	**00.3**	**-0.4**
ZEA				*e*			22	03	53.5	
ZEA				smax		smax				
	comp=E,80nm,0.6s									
ZEA				smax		smax				
	comp=N,1μm,0.8s									
BGT	**Bolshoye Golou**	**6.68**	**262**	*e*Sg		Sb	22	03	49.4	+10
BGT				Smax						
	comp=N,125nm,0.9s									
LSTR	**Listvyanka**	**7.07**	**261**	*e*Pg		**Pb**	**22**	**02**	**29.5**	**+3.2**
LSTR				*e*Sg		Sb	22	04	01.2	+11
LSTR				Pmax						
	comp=N,2.0nm,0.3s									
LSTR				Smax						
	comp=N,77nm,1.3s									
IRK	**Irkutsk**	**7.30**	**265**	*e*Sg		Sb	22	04	07.7	+10
IRK				Smax						
	comp=N,120nm,0.5s									
IVK	**Ivanovka**	**7.34**	**261**	*e*Pg		**Pb**	**22**	**02**	**34.3**	**+3.4**
IVK				*e*Sg		Sb	22	04	09.5	+11
IVK				Pmax						
	comp=N,5.0nm,0.2s									
IVK				Smax						
	comp=N,130nm,1.1s									
TLY	**Talaya**	**7.83**	**262**	*e*Sg		Sb	22	04	23.9	+11
TLY				Smax						
	comp=N,36nm,1.4s									
ULN	**Ulaanbaatar**	**8.07**	**229**	*e*Sg		Sg	22	04	32.3	-10
ULN				Smax						
	comp=N,92nm,1.5s									
SONM	**Songino Array**	**8.39**	**231**	Pn		**Pn**	**22**	**02**	**23.6**	**-1.6**
	comp=N,0.4nm,0.3s,baz=41,slow=13,SNR=14									
SONM				Lg		Lg	22	04	41.5	
	comp=N,1.5nm,0.3s,baz=52,slow=9.6,SNR=4.1									
	comp=N,0.5nm,0.3s									
ARS	**Arshan**	**8.48**	**265**	*e*Sg		Sg	22	04	44.8	-11
ARS				Smax						
	comp=N,147nm,0.9s									
ZAK	**Zakamensk**	**8.54**	**254**	*e*Sg			22	04	45.7	
ZAK				Smax						
	comp=N,110nm,1.4s									
KLR	**Kul'dur**	**10.65**	**107**	Pn		Pn	22	02	53.6	-2.4
	comp=N,0.5nm,0.3s,baz=303,slow=11,SNR=8.3									
KLR				Lg		Lg	22	05	55.6	
	comp=N,1.1nm,0.3s,baz=240,slow=23,SNR=7.8									
	comp=N,2.1nm,0.5s									
YAK	**Yakutsk**	**11.18**	**35**	Lg		Lg	22	06	02.9	
	comp=N,1.7nm,0.3s,baz=155,slow=22,SNR=10									
USRK	**Ussuriysk Ar.**	**13.95**	**125**	Lg		Lg	22	07	37.2	
	comp=N,0.2nm,0.3s,baz=321,slow=32,SNR=1.4									
MKAR	**Makanchi Array**	**22.55**	**266**	P		**P**	**22**	**05**	**22.0**	**-1.6**
	comp=N,0.3nm,0.8s

ISC 23 22:17:23.0±1.1, 38°45N±0°03×44°53E±0°02, h6km±10km, n30, σ1§21/49, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**297**	P	**Pg**	**22 17 31.6**	**-0.5**
OZAP				S	**Sg**	**22 17 39.2**	**+0.8**
OZAP				IAML		22 17 42.0	
	comp=N,2μm,0.5s						
ISHB	**Shabestar**	**0.87**	**101**	Pg	**Pb**	**22 17 39.6**	**-1.0**
TVAN	**Van**	**0.89**	**276**	P	**Pg**	**22 17 39.1**	**-0.9**
TVAN				S	**Sb**	**22 17 53.1**	**+0.1**
TVAN				IAML		22 18 03.0	
	comp=E,585nm,0.8s						
TVAN				IAML		22 18 10.0	
	comp=N,553nm,0.9s						
VANB	**Van**	**0.91**	**280**	Pg	**Pb**	**22 17 41.1**	**-0.1**
VANB				Sg	**Sb**	**22 17 53.8**	**+0.3**
MAKU	**Maku**	**0.91**	**7**	Pg	**Pg**	**22 17 39.9**	**-0.6**
VMUR	**Van-Muradiye**	**0.92**	**306**	P	**Pg**	**22 17 40.1**	**-0.6**
VMUR				S	**Sb**	**22 17 54.1**	**0.0**
VMUR				IAML		22 17 59.0	
	comp=N,424nm,0.4s						
VMUR				IAML		22 18 09.0	
	comp=E,314nm,0.9s						
IMRD	**Marand**	**0.96**	**74**	Pg	**Pn**	**22 17 41.9**	**-1.1**
IMRD				Sg	**Sn**	**22 17 55.8**	**-1.3**
NAX	**Nakhchivan**	**1.04**	**46**	P	**Pn**	**22 17 43.5**	**-0.7**
NAX				S	**Sn**	**22 17 59.8**	**+0.6**
ERCV	**ERCIS-VAN**	**1.09**	**302**	Pn	**Pn**	**22 17 44.5**	**-0.5**
ERCV				Sn	**Sn**	**22 18 00.9**	**+0.4**
HAKT	**HAKKARI**	**1.10**	**216**	P	**Pg**	**22 17 43.7**	**-0.4**
HAKT				S	**Sn**	**22 18 01.6**	**+0.9**
GEVA	**Gevas**	**1.17**	**264**	P	**Pb**	**22 17 43.2**	**-2.3**
GEVA				S	**Sn**	**22 18 01.8**	**-0.4**
GEVA				IAML		22 18 06.0	
	comp=E,189nm,0.5s						
GEVA				IAML		22 18 08.0	
	comp=N,233nm,0.7s						
SBZ	**Shahbuz**	**1.24**	**40**	P	**Pg**	**22 17 47.0**	**+0.2**
SBZ				S	**Sn**	**22 18 05.6**	**+1.6**
ORD	**Ordubad**	**1.24**	**67**	P	**Pg**	**22 17 47.2**	**+0.4**
ORD				S	**Sn**	**22 18 05.1**	**+1.1**
DYDN	**Diyadin**	**1.27**	**329**	P	**Pg**	**22 17 47.3**	**-0.1**
DYDN				S	**Sb**	**22 18 02.3**	**-2.0**
DYDN				IAML		22 18 13.0	
	comp=N,165nm,0.5s						
DYDN				IAML		22 18 16.0	
	comp=E,175nm,0.5s						
HYR	**Heyderabad**	**1.29**	**11**	P	**Pg**	**22 17 48.3**	**+0.5**
HYR				S	**Sn**	**22 18 07.2**	**+2.0**
IAZR	**Azarshahr**	**1.38**	**123**	Pg	**Pg**	**22 17 49.3**	**-0.2**
CUKT	**Cukurca**	**1.40**	**212**	Pn	**Pg**	**22 17 49.8**	**-0.1**
CUKT				Sn	**Sg**	**22 18 09.5**	**+1.4**
VAYK	**Vayk**	**1.43**	**29**	⇓*e*P	**Pg**	**22 17 49.9**	**-0.5**
VAYK				⇓*e*S	**Sg**	**22 18 09.7**	**+0.8**
ADCV	**BITLIS_Adilcev**	**1.46**	**285**	P	**Pg**	**22 17 51.2**	**+0.2**
ADCV				S	**Sg**	**22 18 11.7**	**+1.8**
ADCV				IAML		22 18 16.0	
	comp=N,127nm,1.2s						
ADCV				IAML		22 18 16.0	
	comp=E,138nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.69**	**295**	Pn	**Pb**	**22 17 54.5**	**-0.1**
MLAZ				Sn	**Sg**	**22 18 17.6**	**+0.1**
GNI	**Garni**	**1.71**	**5**	Pn	**Pg**	**22 17 55.3**	**-0.4**
GNI	**Garni**	**1.71**	**5**	*e*P	**Pg**	**22 17 55.7**	**0.0**
GNI				*e*S	**Sg**	**22 18 19.7**	**+1.9**
GRS	**Goris**	**1.75**	**53**	⇓*i*P	**Pg**	**22 17 58.0**	**+1.4**
GRS				⇓*i*S	**Sg**	**22 18 21.0**	**+1.6**
GURO	**Guroymak-BITLI**	**1.96**	**274**	Pn	**Pb**	**22 17 58.2**	**-1.0**
IHRS	**Heris**	**1.98**	**93**	Pn	**Pg**	**22 18 00.1**	**-0.8**
KARS	**Kars**	**2.45**	**333**	Pn	**Pb**	**22 18 05.6**	**-1.9**
VRTB	**Varto-Mus**	**2.50**	**287**	Pn	**Pb**	**22 18 06.1**	**-2.3**
SVAN	**Silvan-Diyarba**	**2.64**	**265**	Pn	**Pn**	**22 18 07.8**	**+1.7**
SENK	**Senkaya-Erzuru**	**2.70**	**322**	Pn	**Pb**	**22 18 09.3**	**-2.5**
YEDI	**Yedisu-Bingol**	**3.26**	**289**	Pn	**Pn**	**22 18 16.9**	**+2.1**

DJA 23 22:19:28.8±0.2, 6°S±2°×10°4E±°, h10km, M4.0/21, mb4.7/1, MLv3.7/21, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**0.83**	**33**	P	Pg	22 19 45.0	+0.2
KASI				S	Sb	22 19 56.3	-0.2
LWLI	**Liwa**	**1.20**	**1**	P	Pb	22 19 51.1	-0.5
LWLI				S	Sb	22 20 06.7	-0.5
BLSI	**Bandar Lampung**	**1.47**	**55**	P	Pn	22 19 55.2	-0.2
BLSI				S	Sn	22 20 14.2	-0.5
KLI	**Kotabumi**	**1.57**	**31**	P	Pn	22 19 55.4	-1.4
KLSI		**1.67**	**24**	P	Pn	22 19 58.7	+0.6
MDSI	**Maura Dua**	**1.73**	**5**	P	Pn	22 19 59.3	+0.4
MDSI				S	Sb	22 20 22.4	0.0
EGSI	**Enggano, Bengk**	**1.96**	**296**	P	Pn	22 20 01.1	-0.9
MNAI	**Manna**	**2.14**	**330**	P	Pn	22 20 05.2	+0.6
MASI	**Maura Aman, Be**	**3.55**	**330**	P	Pn	22 20 24.1	+0.5
LEM	**Lembang**	**3.60**	**100**	P	Pn	22 20 25.3	+0.4
BBJI	**Bungbulang**	**3.79**	**109**	P	Pn	22 20 26.9	-0.5
COCO	**West Island**	**9.26**	**230**	P	Pn	22 21 40.9	-1.6

*RSPR **23** 22:26:01.5, 17°.82N×66°.87W, h7km, MD3.1/7*
*NEIC **23** 22:26:01.2±0.9, 17°.81N±0°.03×66°.85W±0°.02, h10km±2km, ML2.6/35, Md3.1/7(RSPR), Error ellipse: s-maj=5.3km s-min=3.0km az=14.0*
*SDD **23** 22:26:02.2±1.1, 17°.85N×66°.84W, h12km±15km, MD2.9, ML2.5, MW2.6, Presumed earthquake*

ISC 23 22:26:01.6±1.3, 17°.84N±0°.06×66°.85W±0°.02, h15km±7km, n31, σ0§66/56, 14C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.14**	**348**		**Pg**	**22 26 05.2**	**-0.3**
GBPR					**Sg**	**22 26 07.8**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.14**	**348**	⇑*e*P	**Pg**	**22 26 05.2**	**-0.3**
GBPR				*e*S	**Sg**	**22 26 07.8**	**-0.1**
MLPR	**Magueyes Islan**	**0.23**	**305**		**Pg**	**22 26 06.4**	**-0.4**
MLPR				Sg	**Sg**	**22 26 09.8**	**-0.4**
MLPR				IAML		22 26 10.1	
	1μm,0.3s						
MLPR				IAML		22 26 10.9	
	761nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.30**	**304**		**Pg**	**22 26 07.5**	**-0.5**
CRPR				Sg	**Sg**	**22 26 11.8**	**-0.5**
CRPR				IAML		22 26 12.4	
	1μm,0.3s						
CRPR				IAML		22 26 14.0	
	740nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.30**	**304**	⇑*e*Pg	**Pg**	**22 26 07.5**	**-0.5**
CRPR				⇑*e*Sg	**Sg**	**22 26 12.0**	**-0.3**
CRPR				IAML		22 26 12.3	
	comp=N,714nm,0.2s						
OBIP	**Obispado Ponce**	**0.31**	**48**		**Pg**	**22 26 07.9**	**-0.1**
OBIP					**Sg**	**22 26 13.0**	**+0.4**
OBIP	**Obispado Ponce**	**0.31**	**48**	⇑*e*P	**Pg**	**22 26 08.0**	**-0.1**
OBIP				*e*S	**Sb**	**22 26 13.4**	**-0.3**
CELP	**Cerrillos**	**0.35**	**47**		**Pg**	**22 26 08.6**	**-0.2**
CELP				Sg	**Sg**	**22 26 14.0**	**+0.2**
CELP				IAML		22 26 15.5	
	comp=N,531nm,0.2s						
LSP	**Las Mesas**	**0.41**	**326**		**Pg**	**22 26 09.5**	**-0.4**
LSP	**Las Mesas**	**0.41**	**326**	⇑*e*P	**Pg**	**22 26 09.5**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.43**	**16**		**Pg**	**22 26 09.8**	**-0.5**
UUPR				Sg	**Sg**	**22 26 15.6**	**-0.6**
PRSN	**Puerto Rico Se**	**0.47**	**323**		**Pg**	**22 26 10.6**	**-0.5**
PRSN					**Sg**	**22 26 18.3**	**+0.8**
PRSN	**Puerto Rico Se**	**0.47**	**323**	⇑*e*Pg	**Pg**	**22 26 10.0**	**-1.1**
PRSN				⇑*e*Sg	**Sg**	**22 26 15.9**	**-1.5**
PRSN				IAML		22 26 23.3	
	comp=N,616nm,0.3s						
PRSN	**Puerto Rico Se**	**0.47**	**323**	⇓*e*P	**Pg**	**22 26 10.6**	**-0.5**
PRSN				*e*S	**Sg**	**22 26 18.3**	**+0.8**
ECPR	**Experimental S**	**0.67**	**44**		**Pg**	**22 26 13.8**	**-0.9**
ECPR				Sg	**Sg**	**22 26 23.4**	**-0.2**
ECPR	**Experimental S**	**0.67**	**44**	⇓*e*P	**Pg**	**22 26 14.1**	**-0.6**
ECPR				*e*S	**Sg**	**22 26 23.7**	**+0.1**
AGPR	**Aguadilla, PR**	**0.68**	**338**		**Pg**	**22 26 13.9**	**-0.9**
AGPR				Sg	**Sg**	**22 26 22.8**	**-1.0**
AGPR				IAML		22 26 24.3	
	comp=N,186nm,0.3s						
AGPR				IAML		22 26 25.3	
	comp=N,137nm,0.3s						
AGPR	**Aguadilla, PR**	**0.68**	**338**	⇑*e*Pg	**Pg**	**22 26 14.0**	**-0.9**
AGPR				*e*Sg	**Sg**	**22 26 23.3**	**-0.5**
AGPR				IAML		22 26 30.5	
	comp=N,158nm,0.2s						
AGPR	**Aguadilla, PR**	**0.68**	**338**	⇓*e*P	**Pg**	**22 26 14.1**	**-0.8**
AGPR				*e*S	**Sg**	**22 26 24.1**	**+0.2**
EMPR	**Esperanza - Ma**	**0.70**	**25**		**Pg**	**22 26 15.1**	**-0.3**
EMPR					**Sg**	**22 26 25.4**	**+0.6**
EMPR	**Esperanza - Ma**	**0.70**	**25**	⇑*e*P	**Pg**	**22 26 15.1**	**-0.3**
EMPR				*e*S	**Sg**	**22 26 25.4**	**+0.6**
SJG	**San Juan**	**0.72**	**68**		**Pg**	**22 26 14.9**	**-0.8**
SJG				Sg	**Sg**	**22 26 25.2**	**0.0**
SJG	**San Juan**	**0.72**	**68**	⇑*e*Pg	**Pg**	**22 26 14.5**	**-1.2**
SJG				⇑*e*Sg	**Sg**	**22 26 25.3**	**+0.1**
SJG	**San Juan**	**0.72**	**68**	⇑*e*P	**Pg**	**22 26 15.1**	**-0.6**
SJG				*e*S	**Sb**	**22 26 25.8**	**+0.3**
PDPR	**Patillas Dam,**	**0.81**	**77**	Pg	**Pg**	**22 26 16.8**	**-0.6**
GCPR	**Guaynabo City**	**0.87**	**57**		**Pg**	**22 26 17.5**	**-1.0**
GCPR					**Sg**	**22 26 29.2**	**-0.7**
GCPR	**Guaynabo City**	**0.87**	**57**	⇑*e*P	**Pg**	**22 26 17.6**	**-0.9**
GCPR				*e*S	**Sg**	**22 26 29.9**	**0.0**
HUMP	**Col San Antoni**	**1.00**	**72**		**Pg**	**22 26 19.9**	**-1.0**
HUMP					**Sg**	**22 26 33.9**	**-0.1**
HUMP	**Col San Antoni**	**1.00**	**72**	IAML		22 26 34.5	
	comp=N,86nm,0.2s						
HUMP				IAML		22 26 38.8	
	comp=N,102nm,0.2s						
HUMP	**Col San Antoni**	**1.00**	**72**	⇑*e*P	**Pg**	**22 26 19.9**	**-1.0**
HUMP				*e*S	**Sg**	**22 26 33.9**	**-0.1**
HATOM	**Hato Mayor del**	**2.59**	**292**	⇑*e*Pg	**Pb**	**22 26 49.0**	**+1.3**
HATOM				IAML		22 27 29.1	
	comp=N,24nm,1.4s						

*IDC **23** 22:29:29.8±2.3, 39°.85N×142°.36E, h0km, mb3.6/4, mbtmp3.6/7, ML2.7/2, Error ellipse: s-maj=46.7km s-min=30.0km az=153.0*
*JMA **23** 22:29:34.6±0.1, 39°.3N±0°.2×142°.4E±0°.6, h47km, MV3.9/40, E OFF IWATE PREF*
JMA Felt I.J1 at E OFF IWATE PREF .

ISC 23 22:29:33.3±2.0, 39°34N±0°.05×142°5E±0°.1, h48km±16km, n26, σ1§23/26, mb3.6/4, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.56**	**295**	⇓P	**Pn**	**22 29 45.7**	**+0.5**
MIYJ				⇓S	**Sn**	**22 29 53.6**	**-0.2**
OFUJ	**Ofunato**	**0.69**	**248**	P	**Pn**	**22 29 47.1**	**+0.3**
OFUJ				S	**Sn**	**22 29 56.1**	**-0.5**
JTH	**Tanohata**	**0.76**	**321**	⇓P	**Pn**	**22 29 48.6**	**+0.8**
JOM	**Ohasama**	**0.93**	**278**	⇓*i*P	**Pn**	**22 29 50.7**	**+0.6**
JOM				⇓S	**Sn**	**22 30 02.4**	**0.0**
JKMT	**Kesennumamotoy**	**0.95**	**236**	*i* P	**Pn**	**22 29 50.7**	**+0.4**
JKMT				*e*S	**Sn**	**22 30 02.2**	**-0.6**
JMK	**Ichinoseki**	**1.06**	**249**	*i* P	**Pn**	**22 29 52.3**	**+0.5**
JMK				S	**Sn**	**22 30 04.7**	**-0.7**
JKZ	**Kuzumaki**	**1.10**	**306**	⇓*i*P	**Pn**	**22 29 53.5**	**+1.2**
JKZ				⇓S	**Sn**	**22 30 07.4**	**+0.9**
JIO	**Ouri**	**1.25**	**225**	*i* P	**Pn**	**22 29 54.9**	**+0.5**
JANG	**Nango**	**1.27**	**324**	⇓*i*P	**Pn**	**22 29 55.5**	**+0.9**
JANG				⇓S	**Sn**	**22 30 11.3**	**+0.7**
JRG	**Rokugo**	**1.44**	**273**	*i* P	**Pn**	**22 29 57.8**	**+0.9**
JAH	**Hinai**	**1.66**	**301**	P	**Pn**	**22 30 01.2**	**+1.3**
JYK	**Kaneyama**	**1.71**	**256**	P	**Pn**	**22 30 01.7**	**+1.1**
JOU	**Okura**	**1.73**	**236**	P	**Pn**	**22 30 02.0**	**+1.2**
MJAR	**Matsushiro Arr**	**4.39**	**232**	Pn	**Pn**	**22 30 40.7**	**+3.3**
	0.3nm,0.3s,baz=44,slow=11,SNR=23 4.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**9.22**	**305**	Pn	Pn	22 31 38.3	-5.2
	0.1nm,0.3s,baz=115,slow=15,SNR=2.0 0.6nm,0.4s						
HILR	**Hailar Array B**	**19.10**	**310**	P	**P**	**22 33 48.9**	**-3.1**
	1.1nm,0.3s,baz=111,slow=8.3,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**28.71**	**126**	T	T	23 06 03.8	
	baz=318,slow=76,SNR=101						
H11N1	**WAKE ISLAND Hy**	**28.72**	**126**	T	T	23 05 59.7	
	baz=318,slow=76,SNR=105						
H11N3	**WAKE ISLAND Hy**	**28.73**	**126**	T	T	23 06 05.1	
	baz=318,slow=76,SNR=68						
H11S1	**WAKE ISLAND Hy**	**29.50**	**128**	T	T	23 06 56.3	
	baz=319,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.51**	**128**	T	T	23 07 01.2	
	baz=319,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**29.52**	**128**	T	T	23 07 04.8	
	baz=319,slow=76,SNR=9.6						
ZALV	**Zalesovo Beam**	**41.02**	**310**	P	**P**	**22 37 10.7**	**-0.8**
	0.5nm,0.4s,baz=99,slow=7.8,SNR=3.7 0.5nm,0.4s						
MKAR	**Makanchi Array**	**43.65**	**300**	P	**P**	**22 37 33.8**	**+0.8**
	0.3nm,0.6s,baz=85,slow=9.6,SNR=6.4 0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**45.28**	**306**	P	**P**	**22 37 46.1**	**+0.2**
	1.1nm,0.5s,baz=82,slow=8.3,SNR=5.0 1.1nm,0.5s						
ILAR	**Eielson Array**	**47.10**	**34**	P	**P**	**22 37 60.0**	**0.0**
	0.4nm,0.6s,baz=275,slow=6.2,SNR=6.6 0.4nm,0.6s						

*AFAD **23** 22:30:20.8, 38°.42N×44°.74E, h7km±3km, ML2.7*
*TEH **23** 22:30:24.1, 38°.39N×44°.39E, h10km±269km, ML2.9, Presumed earthquake*

ISC 23 22:30:25.5±1.2, 38°41N±0°.05×44°45E±0°.03, h15km±10km, n15, σ1§64/26, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**305**	P	**Pb**	**22 30 33.8**	**-1.2**
OZAP				S	**Sb**	**22 30 42.9**	**+1.3**
OZAP				IAML		22 30 49.0	
	comp=N,696nm,0.7s						
TVAN	**Van**	**0.83**	**279**	P	**Pn**	**22 30 41.0**	**-1.8**
TVAN				S	**Sn**	**22 30 56.1**	**+1.3**
TVAN				IAML		22 31 10.0	
	comp=N,293nm,0.7s						
TVAN				IAML		22 31 10.0	
	comp=E,211nm,1.2s						
VMUR	**Van-Muradiye**	**0.90**	**310**	P	**Pn**	**22 30 42.2**	**-1.5**
VMUR				S	**Sn**	**22 30 56.4**	**-0.1**
VMUR				IAML		22 31 00.0	
	comp=E,249nm,0.4s						
VMUR				IAML		22 31 01.0	
	comp=N,259nm,0.3s						
ISHB	**Shabestar**	**0.93**	**98**	Pg	**Pg**	**22 30 42.2**	**-1.2**
MAKU	**Maku**	**0.96**	**11**	Pg	**Pb**	**22 30 43.5**	**-0.5**
IMRD	**Marand**	**1.03**	**72**	Pg	**Pb**	**22 30 45.2**	**+0.1**
IMRD				Sg	**Sn**	**22 31 01.2**	**+1.5**
ERCV	**ERCIS-VAN**	**1.06**	**305**	P	**Pn**	**22 30 45.0**	**-1.0**
ERCV				S	**Sn**	**22 31 02.9**	**+2.3**
ERCV				IAML		22 31 04.0	
	comp=N,321nm,0.5s						
ERCV				IAML		22 31 06.0	
	comp=E,424nm,0.4s						
GEVA	**Gevas**	**1.10**	**265**	P	**Pn**	**22 30 45.5**	**-1.0**
GEVA				S	**Sn**	**22 31 03.5**	**+2.0**
GEVA				IAML		22 31 07.0	
	comp=N,76nm,0.5s						
GEVA				IAML		22 31 20.0	
	comp=E,103nm,0.5s						
DYDN	**Diyadin**	**1.28**	**333**	P	**Pg**	**22 30 50.4**	**+0.3**
DYDN				S	**Sn**	**22 31 06.1**	**+0.1**
DYDN				IAML		22 31 13.0	
	comp=N,156nm,0.6s						
DYDN				IAML		22 31 13.0	
	comp=E,127nm,0.6s						
IAZR	**Azarshahr**	**1.41**	**121**	Pg	**Pg**	**22 30 52.7**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.41**	**287**	P	**Pg**	**22 30 51.2**	**-1.4**
ADCV				S	**Sg**	**22 31 14.8**	**+3.7**
ADCV				IAML		22 31 18.0	
	comp=N,51nm,0.6s						
ADCV				IAML		22 31 18.0	
	comp=E,73nm,0.6s						
IGDI	**IGDIR**	**1.48**	**349**	P	**Pg**	**22 30 52.7**	**-1.4**
IGDI				S	**Sg**	**22 31 16.4**	**+3.0**
IGDI				IAML		22 31 18.0	
	comp=N,83nm,1.1s						
IGDI				IAML		22 31 18.0	
	comp=E,120nm,0.6s						
DORK	**Agr/Tutak/Do**	**1.63**	**307**	P	**Pb**	**22 30 54.2**	**-1.2**
DORK				S	**Sg**	**22 31 19.4**	**+1.4**
KOTA	**Agri, Merkez-K**	**1.69**	**325**	P	**Pg**	**22 30 57.0**	**-1.1**
KOTA				S	**Sg**	**22 31 20.1**	**0.0**
IHRS	**Heris**	**2.04**	**92**	Pn	**Pg**	**22 31 03.2**	**-1.4**

*IDC **23** 22:35:32.3±1.2, 11°.09S×163°.14E, h0km, mb4.0/7, mbtmp4.0/8, ML3.1/2, MS3.3/4, Error ellipse: s-maj=29.7km s-min=23.6km az=81.0*
*NEIC **23** 22:35:33.9±1.5, 11°.22S±0°.07×163°.3E±0°.1, h10km±1km, mb4.6/12, Error ellipse: s-maj=20.9km s-min=9.3km az=68.0*

ISC 23 22:35:37.6±0.8, 11°18S±0°.09×163°1E±0°.1, h34km, n34, σ1§05/28, mb4.2/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.59**	**299**	Pn	**Pn**	**22 36 28.7**	**-2.3**
	0.7nm,0.3s,baz=275,slow=6.8,SNR=6.1						
HNR				Sn	**Sn**	**22 37 13.8**	**+1.5**
	2.1nm,0.3s,baz=171,slow=15,SNR=9.6						
HNR				LR	LR	22 37 59.4	
	comp=Z,9.0nm,18.9s,baz=246,slow=41						
HNR	**Honiara**	**3.59**	**299**		**Pn**	**22 36 30.7**	**-0.3**
HNR					**Sn**	**22 37 14.2**	**+1.9**
DZM	**Mont Dzumac**	**11.28**	**164**	Pn	**Pn**	**22 38 18.4**	**+1.8**
	0.3nm,0.3s,baz=175,slow=15,SNR=1.9						
DZM				Sn	**Sn**	**22 40 21.0**	**-0.5**
	0.1nm,0.3s,baz=127,slow=13,SNR=1.5						
DZM				LR	LR	22 41 58.6	
	comp=Z,167nm,18.8s,baz=334,slow=34 5.7nm,0.9s						
DZM	**Mont Dzumac**	**11.28**	**164**	Pn	Pn	22 38 12.4	-4.2
PMG	**Port Moresby**	**15.83**	**275**	LR	LR	22 44 38.4	
	comp=Z,66nm,19.1s,baz=55,slow=34						
STKA	**Stephens Creek**	**28.63**	**221**	P	**P**	**22 41 30.8**	**-0.3**
	0.7nm,0.5s,baz=26,slow=12,SNR=1.7						
STKA				LR	LR	22 51 36.8	
	comp=Z,74nm,18.2s,baz=216,slow=34 0.7nm,0.5s						
STKA	**Stephens Creek**	**28.63**	**221**	P	**P**	**22 41 29.8**	**-1.3**
STKA				IAmb	IAmb	22 41 33.3	
	comp=Z,13nm,1.2s						
WR8	**Warramunga Arr**	**28.90**	**249**	P	**P**	**22 41 34.2**	**+0.5**
WB0	**Warramunga Arr**	**28.96**	**249**	P	**P**	**22 41 34.5**	**+0.3**
WB0				IAmb	IAmb	22 41 35.1	
	comp=Z,7.1nm,1.1s						
WB2	**Warramunga Arr**	**29.03**	**249**	P	**P**	**22 41 35.4**	**+0.5**
WRA	**Warramunga Arr**	**29.04**	**249**	P	**P**	**22 41 34.1**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=80,slow=9.4,SNR=9.6 comp=Z,1.4nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**29.69**	**7**	T	T	23 12 27.6	
	baz=188,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**29.70**	**7**	T	T	23 12 24.6	
	baz=188,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**29.71**	**7**	T	T	23 12 29.2	
	baz=188,slow=76,SNR=13						
AS31	**Alice Springs**	**30.46**	**242**	P	**P**	**22 41 47.4**	**-0.1**
ASAR	**Alice Springs**	**30.46**	**242**	P	**P**	**22 41 47.7**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=67,slow=9.6,SNR=18 comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**30.46**	**242**	P	**P**	**22 41 45.3**	**-2.2**
H11N1	**WAKE ISLAND Hy**	**30.92**	**7**	T	T	23 14 00.4	
	baz=188,slow=76,SNR=7.8						
H11N3	**WAKE ISLAND Hy**	**30.93**	**7**	T	T	23 14 09.0	
	baz=188,slow=76,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**30.94**	**7**	T	T	23 14 01.2	
	baz=188,slow=76,SNR=7.9						
KNRA	**Kununurra**	**33.71**	**259**	P	**P**	**22 42 16.2**	**+0.2**
MBWA	**Marble Bar**	**42.74**	**251**	P	**P**	**22 43 31.4**	**-0.6**
MBWA				IAmb	IAmb	22 43 34.8	
	comp=Z,14nm,1.4s						
MORW	**Morawa**	**47.32**	**241**	P	**P**	**22 44 08.3**	**0.0**
VNDA	**Vanda**	**66.33**	**180**	P	**P**	**22 46 22.7**	**+0.3**
	comp=Z,3.2nm,1.1s,baz=3.3,slow=6.5,SNR=1.8 comp=Z,3.2nm,1.1s						
VNDA	**Vanda**	**66.33**	**180**	P	**P**	**22 46 21.9**	**-0.5**
VNDA				IAmb	IAmb	22 46 26.3	
	comp=Z,12nm,1.4s						
CMAR	**Chiang Mai Arr**	**69.83**	**294**	LR	LR	23 19 04.5	
	comp=Z,20nm,18.9s,baz=145,slow=37						
O15K	**Ungalikthiuk R**	**76.22**	**19**	P	**P**	**22 47 21.2**	**-1.1**
SONM	**Songino Array**	**77.28**	**325**	P	**P**	**22 47 29.0**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=154,slow=5.5,SNR=6.1 comp=Z,0.7nm,0.8s						
SONM	**Songino Array**	**77.28**	**325**	P	**P**	**22 47 29.6**	**+0.9**
M16K	**Timber Creek**	**77.95**	**18**	P	**P**	**22 47 32.3**	**+0.3**
M16K				IAmb	IAmb	22 47 32.6	
	comp=Z,14nm,1.5s						
BILL	**Bilibino**	**79.05**	**1**	P	**P**	**22 47 38.6**	**+0.7**
BILL				IAmb	IAmb	22 47 40.0	
	comp=Z,6.3nm,1.1s						
ILAR	**Eielson Array**	**84.47**	**19**	P	**P**	**22 48 05.2**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=246,slow=5.5,SNR=2.3 comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**84.47**	**19**	P	**P**	**22 48 06.0**	**-0.6**
MKAR	**Makanchi Array**	**91.88**	**317**	P	**P**	**22 48 42.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=96,slow=5.6,SNR=12 comp=Z,0.8nm,0.7s						

*NSSP **23** 22:36:36.6, 38°.47N×44°.45E, h10km, Ms3.5*
*AZER **23** 22:36:36.8, 38°.52N×44°.25E, h5km, ml3.9*
*AFAD **23** 22:36:37.8, 38°.38N×44°.38E, h7km±1km, ML3.4*
*TEH **23** 22:36:39.9, 38°.52N×44°.34E, h6km±48km, ML3.1, Presumed earthquake*
*ISK **23** 22:36:40.3, 38°.45N×44°.38

VNNZ	**Vanand**	**1.67**	**347**	*eP*		**Pb**	**22 37 11.1**	**-0.3**
VNNZ				*eS*		**Sg**	**22 37 36.0**	**+2.2**
GNI	**Garni**	**1.70**	**11**	Pn		**Pg**	**22 37 12.0**	**-0.8**
GNI				Sn		**Sg**	**22 37 35.6**	**+0.8**
GNI	**Garni**	**1.70**	**11**	⇑*iP*		**Pb**	**22 37 11.8**	**-0.2**
GNI				⇑*iS*		**Sg**	**22 37 37.5**	**+2.6**
GURO	**Guroymak-BITLI**	**1.80**	**273**	Pn		**Pb**	**22 37 13.8**	**0.0**
GURO				Sn		**Sg**	**22 37 38.8**	**+0.6**
ARUZ	**Aruch**	**1.81**	**354**	*eP*		**Pb**	**22 37 13.1**	**-0.8**
ARUZ				*eS*		**Sg**	**22 37 39.3**	**+0.9**
KAPZ	**Kaputan**	**1.86**	**9**	*eP*		**Pb**	**22 37 13.4**	**-1.4**
KAPZ				*eS*		**Sg**	**22 37 40.1**	**0.0**
GRS	**Goris**	**1.87**	**56**	⇑*iP*		**Pg**	**22 37 18.0**	**+1.9**
GRS				⇓*iS*		**Sg**	**22 37 43.0**	**+2.7**
EGVZ	**Egvard**	**1.88**	**66**	*eP*		**Pb**	**22 37 14.2**	**-1.0**
EGVZ				*eS*		**Sg**	**22 37 41.2**	**+0.4**
AMBZ	**Amberd**	**1.91**	**358**	*eP*		**Pb**	**22 37 14.8**	**-0.8**
AMBZ				*eS*		**Sg**	**22 37 42.5**	**+1.0**
AYRK	**Ayrk**	**1.99**	**34**	*eP*		**Pb**	**22 37 16.6**	**-0.5**
AYRK				*eS*		**Sg**	**22 37 45.4**	**+1.2**
MAHB	**Mahabad**	**2.03**	**147**	Pn		**Pb**	**22 37 17.8**	**+0.1**
IHRS	**Heris**	**2.14**	**94**	Pn		**Pb**	**22 37 18.8**	**-0.9**
VRTB	**Varto-Mus**	**2.34**	**288**	Pn		**Pb**	**22 37 21.6**	**-1.4**
KARS	**Kars**	**2.35**	**336**	Pn		**Pb**	**22 37 21.3**	**-1.9**
SVAN	**Silvan-Diyarba**	**2.48**	**263**	Pn		**Pb**	**22 37 23.5**	**-1.8**
SVAN	**Silvan-Diyarba**	**2.48**	**263**	Pn		**Pb**	**22 37 23.7**	**-1.6**
LSVT	**Lusahovit**	**2.52**	**15**	*eP*		**Pn**	**22 37 23.1**	**+1.2**
LSVT				*eS*		**Sb**	**22 37 56.7**	**-0.7**
SENK	**Senkaya-Erzuru**	**2.58**	**324**	Pn		**Pb**	**22 37 25.5**	**-1.6**
SRTK	**Saratovka**	**2.58**	**360**	*eP*		**Pb**	**22 37 24.6**	**-2.5**
SRTK				*eS*		**Sb**	**22 37 59.4**	**+0.3**
IHSH	**Hashtrud**	**2.60**	**116**	Pn		**Pb**	**22 37 25.4**	**-2.2**
KARO	**Karliova-Bingo**	**2.69**	**289**	Pn		**Pb**	**22 37 26.7**	**-2.2**
ISRB	**Sarab**	**2.71**	**103**	Pn		**Pb**	**22 37 27.0**	**-2.4**
BGD	**Bogdanovka**	**2.83**	**349**	P		**Pb**	**22 37 32.5**	**+1.1**
BNGB	**Bingl**	**2.90**	**281**	Pn		**Pb**	**22 37 29.5**	**-3.0**
AKH	**Akhalkalaki**	**2.99**	**348**	P		**Pb**	**22 37 34.1**	**0.0**
TRLG	**Trialeti**	**3.06**	**357**	P		**Pb**	**22 37 35.6**	**+0.4**
DGRG	**David-gareji**	**3.07**	**15**	P		**Pg**	**22 37 37.3**	**-1.9**
YEDI	**Yedisu-Bingol**	**3.10**	**289**	Pn		**Pn**	**22 37 32.3**	**+2.4**
VSHL	**Vashlovani**	**3.17**	**30**	P		**Pb**	**22 37 35.2**	**-2.0**
DDFL	**Dedoflistskaro**	**3.27**	**24**	P		**Pg**	**22 37 42.2**	**-0.6**
DYBB	**Diyarbakir**	**3.34**	**262**	Pn		**Pn**	**22 37 35.8**	**+2.7**
ALIG	**Mtskhetisjvari**	**3.66**	**352**	P		**Pb**	**22 37 42.2**	**-3.1**
LGD	**Lagodekhi**	**3.66**	**23**	P		**Pg**	**22 37 47.4**	**-2.9**
BAYT	**Aydıntepe-Bayb**	**3.76**	**302**	Pn		**Pn**	**22 37 41.6**	**+2.6**
CHRG	**Chargali**	**3.87**	**7**	P		**Pn**	**22 37 43.3**	**+2.8**
SVRC	**Sivrice-ELAZID**	**3.94**	**270**	Pn		**Pn**	**22 37 44.8**	**+3.3**
SHTL	**Shatili**	**4.22**	**8**	P		**Pb**	**22 37 56.7**	**+1.8**

*AFAD **23** 22:40:39.9, 38°.36N×44°.61E, h7km±4km, ML2.4*
*TEH **23** 22:40:41.5, 38°.36N×44°.44E, h9km±687km, ML2.6, Presumed earthquake*
*ISK **23** 22:40:45.4, 38°.44N×44°.45E, h16km, ML2.4/8*
ISC 23 22:40:43.1±1.2**, 38°.42N**±0°.03×**44°.48E**±0°.03**, h10**km±10km**, n20**, σ1°.79/33**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**303**	P	**Pb**	**22 40 51.6**	**-1.6**
OZAP				S	**Sb**	**22 40 58.9**	**-1.2**
OZAP				IAML		22 41 01.0	
	comp=N,388nm,0.5s						
TVAN	**Van**	**0.85**	**278**	P	**Pb**	**22 40 58.0**	**-2.0**
TVAN				S	**Sn**	**22 41 14.7**	**+0.9**
TVAN				IAML		22 41 20.0	
	comp=N,129nm,0.4s						
VANB	**Van**	**0.87**	**282**	Pg	**Pn**	**22 41 01.3**	**-0.2**
VANB				Sg	**Sn**	**22 41 13.9**	**-0.4**
ISHB	**Shabestar**	**0.91**	**98**	Pg	**Pb**	**22 40 59.5**	**-1.5**
ISHB				Sg	**Sb**	**22 41 13.2**	**0.0**
VMUR	**Van-Muradiye**	**0.91**	**309**	P	**Pb**	**22 40 59.7**	**-1.3**
VMUR				S	**Sn**	**22 41 14.9**	**-0.4**
VMUR				IAML		22 41 20.0	
	comp=N,92nm,0.3s						
VMUR				IAML		22 41 20.0	
	comp=E,146nm,0.3s						
MAKU	**Maku**	**0.95**	**10**	Pg	**Pg**	**22 41 00.9**	**-0.5**
IMRD	**Marand**	**1.01**	**73**	Pg	**Pn**	**22 41 02.4**	**-0.9**
ERCV	**ERCIS-VAN**	**1.07**	**304**	Pg	**Pn**	**22 41 05.9**	**+1.6**
ERCV				Sg	**Sn**	**22 41 21.1**	**+1.7**
GEVA	**Gevas**	**1.12**	**265**	P	**Pg**	**22 41 02.2**	**-2.4**
GEVA				S	**Sn**	**22 41 22.2**	**+1.7**
GEVA				IAML		22 41 26.0	
	comp=N,57nm,0.5s						
CUKT	**Cukurca**	**1.36**	**211**	Pn	**Pg**	**22 41 10.6**	**+1.5**
CUKT				Sn	**Sn**	**22 41 28.8**	**+2.5**
ADCV	**BITLIS_Adilcev**	**1.43**	**286**	P	**Pg**	**22 41 09.7**	**-0.8**
ADCV				S	**Sg**	**22 41 32.4**	**+3.4**
IGDI	**IGDIR**	**1.48**	**348**	P	**Pb**	**22 41 10.4**	**-0.3**
IGDI				IAML		22 41 35.0	
	comp=N,40nm,0.4s						
IGDI				IAML		22 41 35.0	
	comp=E,39nm,0.5s						
IGDI				S	**Sg**	**22 41 35.5**	**+4.8**
AGRB	**Hanur-Agry**	**1.64**	**315**	Pn	**Pg**	**22 41 14.0**	**-0.5**
AGRB				Sn	**Sg**	**22 41 34.6**	**-1.1**
DORK	**Agr/Tutak/Do**	**1.64**	**307**	P	**Pb**	**22 41 12.5**	**-1.0**
DORK				S	**Sg**	**22 41 37.6**	**+1.8**
DORK				IAML		22 41 44.0	
	comp=N,24nm,0.9s						
DORK				IAML		22 41 50.0	
	comp=E,22nm,0.8s						
MLAZ	**Malazgirt-MUS**	**1.67**	**296**	Pn	**Pg**	**22 41 14.4**	**-0.7**
GNI	**Garni**	**1.74**	**7**	Pn	**Pg**	**22 41 15.9**	**-0.6**
GURO	**Guroymak-BITLI**	**1.92**	**275**	Pn	**Pg**	**22 41 18.1**	**-1.9**
IHRS	**Heris**	**2.02**	**92**	Pn	**Pg**	**22 41 20.5**	**-1.3**
SRTM	**Siirt_Merkez**	**2.06**	**259**	P	**Pg**	**22 41 20.2**	**-2.3**
SRTM				S	**Sg**	**22 41 50.9**	**+1.7**
SRTM				IAML		22 41 59.0	
	comp=N,41nm,0.8s						
SENK	**Senkaya-Erzuru**	**2.70**	**323**	Pn	**Pg**	**22 41 33.7**	**-1.1**

*AZER **23** 22:46:32.4, 38°.37N×44°.61E, h2km, ml3.1*
*NSSP **23** 22:46:33.9, 38°.52N×44°.57E, h10km, Ms3.1*
*TEH **23** 22:46:33.9, 38°.43N×44°.44E, h10km±248km, ML2.9, Presumed earthquake*
*AFAD **23** 22:46:34.1, 38°.51N×44°.60E, h7km±3km, ML2.8*
*ISK **23** 22:46:36.3, 38°.42N×44°.47E, h2km, ML2.9/10*
ISC 23 22:46:35.0±1.2**, 38°.45N**±0°.03×**44°.51E**±0°.02**, h2**km±10km**, n37**, σ1°.34/61**, 4D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**298**	P	**Pg**	**22 46 44.1**	**+0.4**
OZAP				S	**Sg**	**22 46 51.3**	**+1.7**
OZAP				IAML		22 46 59.0	
	comp=N,1μm,0.8s						
TVAN	**Van**	**0.87**	**275**	P	**Pg**	**22 46 51.2**	**-0.4**
TVAN				S	**Sn**	**22 47 07.9**	**0.0**
TVAN				IAML		22 47 10.0	
	comp=N,324nm,0.6s						
TVAN				IAML		22 47 27.0	
	comp=E,260nm,0.7s						
VANB	**Van**	**0.89**	**280**	Pg	**Pb**	**22 46 53.2**	**0.0**
ISHB	**Shabestar**	**0.89**	**101**	Pg	**Pg**	**22 46 51.7**	**-0.4**
VMUR	**Van-Muradiye**	**0.91**	**307**	P	**Pg**	**22 46 52.4**	**0.0**
VMUR				S	**Sb**	**22 47 06.1**	**-0.2**
VMUR				IAML		22 47 09.0	
	comp=E,220nm,0.6s						
MAKU	**Maku**	**0.91**	**9**	Pg	**Pg**	**22 46 52.3**	**-0.3**
IMRD	**Marand**	**0.97**	**74**	Pg	**Pb**	**22 46 54.4**	**-0.4**
IMRD				Sg	**Sn**	**22 47 09.3**	**-1.1**
NAX	**Nakhchivan**	**1.06**	**47**	P	**Pn**	**22 46 56.0**	**-1.0**
NAX				S	**Sn**	**22 47 11.8**	**-0.6**
ERCV	**ERCIS-VAN**	**1.07**	**302**	Pg	**Pn**	**22 46 57.4**	**+0.1**
HAKT	**HAKKARI**	**1.09**	**216**	P	**Pb**	**22 46 56.2**	**-0.6**
HAKT				S	**Sn**	**22 47 14.1**	**+0.7**
GEVA	**Gevas**	**1.15**	**263**	P	**Pg**	**22 46 55.3**	**-1.7**
GEVA				S	**Sn**	**22 47 15.7**	**+1.0**
GEVA				IAML		22 47 21.0	
	comp=N,140nm,0.5s						
SBZ	**Shahbuz**	**1.25**	**41**	P	**Pn**	**22 46 59.1**	**-0.5**
SBZ				S	**Sn**	**22 47 20.8**	**+3.6**
ORD	**Ordubad**	**1.26**	**67**	P	**Pn**	**22 46 59.1**	**-0.6**
ORD				S	**Sn**	**22 47 17.5**	**+0.2**
HYR	**Heyderabad**	**1.29**	**12**	P	**Pn**	**22 47 01.9**	**+1.7**
IAZR	**Azarshahr**	**1.40**	**123**	Pg	**Pb**	**22 47 02.2**	**+0.2**
CUKT	**Cukurca**	**1.40**	**211**	Pn	**Pg**	**22 47 02.7**	**+0.9**
CUKT				Sn	**Sn**	**22 47 22.3**	**+1.5**
VAYK	**Vayk**	**1.43**	**30**	⇓*eP*	**Pg**	**22 47 02.6**	**+0.1**
VAYK				⇓*eS*	**Sn**	**22 47 22.7**	**+1.0**
ALVK	**Alvank**	**1.52**	**71**	*eP*	**Pb**	**22 47 03.2**	**-0.9**
ALVK				*eS*	**Sg**	**22 47 23.4**	**-0.5**
AGRB	**Hanur-Agry**	**1.63**	**314**	Pn	**Pg**	**22 47 06.1**	**-0.1**
AGRB				Sn	**Sg**	**22 47 28.9**	**+1.6**
MLAZ	**Malazgirt-MUS**	**1.68**	**295**	Pn	**Pg**	**22 47 07.3**	**+0.2**
MLAZ				Sn	**Sg**	**22 47 29.9**	**+1.0**
GNI	**Garni**	**1.71**	**6**	Pn	**Pg**	**22 47 08.4**	**+0.7**
GNI	**Garni**	**1.71**	**6**	*eP*	**Pg**	**22 47 08.0**	**+0.3**
GNI				*eS*	**Sg**	**22 47 34.3**	**+4.5**
VNNZ	**Vanand**	**1.73**	**342**	*eP*	**Pg**	**22 47 08.4**	**+0.2**
VNNZ				*eS*	**Sg**	**22 47 32.7**	**+2.0**
EGVZ	**Egvard**	**1.77**	**63**	*eP*	**Pb**	**22 47 07.7**	**-0.6**
EGVZ				*eS*	**Sg**	**22 47 31.2**	**-0.6**
GRS	**Goris**	**1.77**	**53**	⇓*iP*	**Pg**	**22 47 11.0**	**+2.1**
GRS				⇓*iS*	**Sg**	**22 47 35.0**	**+3.2**
ARUZ	**Aruch**	**1.86**	**350**	*eP*	**Pb**	**22 47 09.3**	**-0.5**
ARUZ				*eS*	**Sg**	**22 47 34.4**	**-0.3**
KAPZ	**Kaputan**	**1.87**	**5**	*eP*	**Pg**	**22 47 10.1**	**-0.8**
KAPZ				*eS*	**Sg**	**22 47 35.6**	**+0.3**
AYRK	**Ayrk**	**1.94**	**31**	*eP*	**Pg**	**22 47 11.0**	**-1.1**
AYRK				*eS*	**Sg**	**22 47 37.2**	**-0.1**
AMBZ	**Amberd**	**1.94**	**354**	*eP*	**Pb**	**22 47 10.9**	**-0.5**
AMBZ				*eS*	**Sg**	**22 47 37.0**	**-0.5**
GURO	**Guroymak-BITLI**	**1.94**	**274**	Pn	**Pb**	**22 47 10.9**	**-0.4**
IHRS	**Heris**	**2.00**	**93**	Pn	**Pg**	**22 47 12.2**	**-1.1**
KARS	**Kars**	**2.44**	**334**	Pn	**Pb**	**22 47 18.7**	**-1.0**
LSVT	**Lusahovit**	**2.52**	**12**	*eP*	**Pn**	**22 47 19.7**	**-1.4**
LSVT				*eS*	**Sb**	**22 47 52.1**	**-0.4**
SRTK	**Saratovka**	**2.62**	**357**	*eP*	**Pg**	**22 47 23.4**	**-1.8**
SRTK				*eS*	**Sg**	**22 47 58.5**	**-0.5**
SVAN	**Silvan-Diyarba**	**2.62**	**264**	Pn	**Pb**	**22 47 20.6**	**-2.1**
SENK	**Senkaya-Erzuru**	**2.69**	**322**	Pn	**Pb**	**22 47 22.2**	**-1.8**
KARO	**Karliova-Bingo**	**2.83**	**289**	Pn	**Pb**	**22 47 23.6**	**-2.8**

*IDC **23** 22:47:28.5±1.9, 23°.96S×66°.83W, h196km±18km, mb3.5/4, mbtmp4.0/9, MS2.7/1, Error ellipse: s-maj=24.2km s-min=19.0km az=45.0*
*SJA **23** 22:47:28.1±0.7, 23°.94S×66°.91W, h216km±8km, ML4.1, MW3.9*
*NEIC **23** 22:47:29.2±1.2, 23°.96S±0°.08×67°.1W±0°.1, h238km±10km, mb4.6/5, ML4.3(GUC), Error ellipse: s-maj=17.5km s-min=10.7km az=108.0*
*GUC **23** 22:47:29.7±0.8, 24°.01S×66°.97W, h208km±9km, ML4.4*
*VAO **23** 22:47:29.0±2.7, 24°.05S×67°.36W, h260km±19km, mb4.4, Presumed earthquake*
ISC 23 22:47:28.7±0.6**, 23°.99S**±0°.04×**66°.94W**±0°.04**, h207**km±7km**, n97**, σ1°.37/116**, mb4.1/4, 12C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.59**	**114**	⇓*iP*	**Pn**	**22 47 58.1**	**+0.5**
SALTA		**0.59**	**114**	*eP*	Pn	22 47 52.4	-5.2
SALTA				*eP*		22 47 52.7	
SALTA				*eP*		22 47 58.1	
SLA	**San Lorenzo**	**1.50**	**120**	*eP*	**Pn**	**22 48 04.0**	**+0.8**
SLA				*eS*	**S**	**22 48 30.5**	**+0.8**
SLA	**San Lorenzo**	**1.50**	**120**	*eP*	**Pn**	**22 48 04.3**	**+1.1**
SLA				*eS*	**S**	**22 48 27.2**	**-2.5**
AF01	**San Pedro de A**	**1.54**	**312**		**Pn**	**22 48 05.1**	**+1.3**
AF01				Sn	**S**	**22 48 33.5**	**+2.9**
AF01	**San Pedro de A**	**1.54**	**312**	*eP*	**Pn**	**22 48 04.6**	**+0.8**
AF01	**San Pedro de A**	**1.54**	**312**	*eP*	**Pn**	**22 48 05.3**	**+1.5**
AF01				*eS*	S	22 48 18.5	-12
AF01				IAML		22 48 40.7	
	comp=Z,382nm,0.6s						
HJA	**Humahuaca**	**1.60**	**61**	*eP*	**Pn**	**22 48 04.7**	**+0.3**
YJA	**Yavi**	**2.23**	**36**	*eP*	**Pn**	**22 48 10.8**	**+0.2**
YJA	**Yavi**	**2.23**	**36**	*eP*	**Pn**	**22 48 11.4**	**+0.7**
GO02	**Mina Guanaco**	**2.69**	**244**		**Pn**	**22 48 16.8**	**+1.3**
GO02	**Mina Guanaco**	**2.69**	**244**	⇑*eP*	**Pn**	**22 48 16.6**	**+1.1**
GO02				*i* S	**S**	**22 48 51.9**	**+0.6**
GO02				IAML		22 48 53.9	
	comp=N,1μm,0.6s						
GO02	**Mina Guanaco**	**2.69**	**244**	*eP*	**Pn**	**22 48 16.8**	**+1.3**
GO02				IAML		22 48 56.6	
	comp=Z,760nm,0.6s						
PB06	**IPOC Station P**	**2.74**	**297**		**Pn**	**22 48 16.9**	**+1.0**
PB06				Sn	**S**	**22 48 51.3**	**-0.9**
PB06	**IPOC Station P**	**2.74**	**297**	⇑*iP*	**Pn**	**22 48 16.9**	**+1.0**
PB06				IAML		22 48 53.5	
	comp=E,733nm,0.2s						
PB06	**IPOC Station P**	**2.74**	**297**	*eP*	**Pn**	**22 48 16.2**	**+0.3**
PB06				*eS*	**S**	**22 48 52.1**	**-0.1**
PB06				IAML		22 48 55.8	
	comp=Z,415nm,0.3s						
PB09	**IPOC Station P**	**3.05**	**315**		**Pn**	**22 48 20.4**	**+0.9**
PB09	**IPOC Station P**	**3.05**	**315**	⇑*eP*	**Pn**	**22 48 20.6**	**+1.1**
PB09				IAML		22 49 00.6	
	comp=N,263nm,0.5s						
PB09	**IPOC Station P**	**3.05**	**315**	*eP*	**Pn**	**22 48 20.1**	**+0.6**
PB09				*eS*	**S**	**22 48 59.4**	**+0.8**
PB09				IAML		22 49 02.3	
	comp=Z,193nm,0.3s						
PB05	**IPOC Station P**	**3.21**	**290**		**Pn**	**22 48 21.5**	**+0.2**
PB05	**IPOC Station P**	**3.21**	**290**	*eP*	**Pn**	**22 48 22.1**	**+0.7**
PB05				IAML		22 49 05.1	
	comp=N,328nm,0.2s						
PB05	**IPOC Station P**	**3.21**	**290**	*eP*	**Pn**	**22 48 21.2**	**-0.1**
PB05				*eS*	**S**	**22 49 01.6**	**-0.3**
PB05				IAML		22 49 03.9	
	comp=Z,241nm,0.3s						
PB14	**IPOC Station P**	**3.23**	**258**		**Pn**	**22 48 22.5**	**+0.7**
PB14	**IPOC Station P**	**3.23**	**258**	⇑*iP*	**Pn**	**22 48 22.4**	**+0.7**
PB14				IAML		22 49 05.5	
	comp=E,271nm,0.5s						
PB14	**IPOC Station P**	**3.23**	**258**	*eP*	**Pn**	**22 48 21.8**	**+0.1**
PB14				*eS*	**S**	**22 49 02.0**	**-0.6**
PB14				IAML		22 49 03.6	
	comp=Z,275nm,0.3s						
PB03	**IPOC Station P**	**3.23**	**306**		**Pn**	**22 48 21.9**	**+0.3**
PB03	**IPOC Station P**	**3.23**	**306**	⇑*eP*	**Pn**	**22 48 22.2**	**+0.5**
PB03	**IPOC Station P**	**3.23**	**306**	*eP*	**Pn**	**22 48 21.6**	**-0.1**
PB03				*eS*	**S**	**22 49 01.3**	**-1.3**
PB03				IAML		22 49 05.1	
	comp=Z,597nm,0.3s						
PB10	**IPOC Station P**	**3.35**	**277**		**Pn**	**22 48 23.5**	**+0.6**
PB10	**IPOC Station P**	**3.35**	**277**	⇑*iP*	**Pn**	**22 48 23.8**	**+0.9**
PB10	**IPOC Station P**	**3.35**	**277**	*eP*	**Pn**	**22 48 23.8**	**+0.9**
PB10				*eS*	**S**	**22 49 04.5**	**-0.2**
PB10				IAML		22 49 08.0	
	comp=Z,261nm,0.3s						
AC02	**Maricunga**	**3.46**	**215**		**Pn**	**22 48 25.7**	**+1.0**
AC02	**Maricunga**	**3.46**	**215**	*eP*	**Pn**	**22 48 25.5**	**+0.8**
AC02				*eS*	**S**	**22 49 11.1**	**+3.0**
PB07	**IPOC Station P**	**3.53**	**309**		**Pn**	**22 48 25.2**	**0.0**
PB07	**IPOC Station P**	**3.53**	**309**	⇑*eP*	**Pn**	**22 48 25.5**	**+0.3**
PB07	**IPOC Station P**	**3.53**	**309**	*eP*	**Pn**	**22 48 24.9**	**-0.4**
PB07				*eS*	**S**	**22 49 07.9**	**-1.1**
PB07				IAML		22 49 11.9	
	comp=Z,354nm,0.3s						
PB01	**IPOC Station P**	**3.76**	**321**		**Pn**	**22 48 27.8**	**-0.2**
PB01	**IPOC Station P**	**3.76**	**321**	⇑*eP*	**Pn**	**22 48 27.8**	**-0.2**
PB01	**IPOC Station P**	**3.76**	**321**	*eP*	**Pn**	**22 48 27.5**	**-0.5**
PB01				*eS*	**S**	**22 49 12.5**	**-1.5**
PB01				IAML		22 49 15.1	
	comp=Z,194nm,0.4s						
PB02	**IPOC Station P**	**3.81**	**314**		**Pn**	**22 48 28.4**	**-0.2**
PB02	**IPOC Station P**	**3.81**	**314**	⇑*eP*	**Pn**	**22 48 28.4**	**-0.2**
PB02	**IPOC Station P**	**3.81**	**314**	*eP*	**Pn**	**22 48 28.1**	**-0.5**
PB02				*eS*	**S**	**22 49 13.4**	**-1.7**
PB02				IAML		22 49 14.7	
	comp=Z,758nm,0.4s						
AC01	**Pan de Azucar**	**3.96**	**236**		**Pn**	**22 48 30.4**	**+0.1**
AC01	**Pan de Azucar**	**3.96**	**236**	*eP*	**Pn**	**22 48 30.2**	**0.0**
AC01				*eS*	**S**	**22 49 16.2**	**-2.0**
AC01				IAML		22 49 17.3	
	comp=Z,188nm,0.6s						
PB08	**IPOC Station P**	**4.34**	**331**		**Pn**	**22 48 36.0**	**+0.5**
PB08	**IPOC Station P**	**4.34**	**331**	⇑*eP*	**Pn**	**22 48 36.0**	**+0.5**
PB08	**IPOC Station P**	**4.34**	**331**	*eP*	**Pn**	**22 48 35.7**	**+0.2**
PB08				*eS*	**S**	**22 49 27.2**	**-0.4**
PB08				IAML		22 49 30.7	
	comp=Z,116nm,0.9s						
HMBC	**Humberstone**	**4.59**	**323**		**Pn**	**22 48 37.0**	**-1.4**
HMBC	**Humberstone**	**4.59**	**323**	⇑*eP*	**Pn**	**22 48 37.0**	**-1.4**
GO03	**Copiapo**	**4.66**	**219**		**Pn**	**22 48 39.0**	**-0.1**
GO03	**Copiapo**	**4.66**	**219**	*eP*	**Pn**	**22 48 38.7**	**-0.4**
GO03	**Copiapo**	**4.66**	**219**	*eP*	**Pn**	**22 48 38.5**	**-0.5**
GO03				IAML		22 49 36.0	
	comp=Z,132nm,0.2s						
GO01	**Chusmiza**	**4.78**	**334**		**Pn**	**22 48 41.3**	**+0.3**
GO01	**Chusmiza**	**4.78**	**334**	*eP*	**Pn**	**22 48 41.0**	**-0.1**
GO01	**Chusmiza**	**4.78**	**334**	*eP*	**Pn**	**22 48 41.4**	**+0.3**
GO01				*eS*	**S**	**22 49 36.1**	**-1.5**
GO01				IAML		22 49 40.6	
	comp=Z,78nm,0.2s						
PB11	**IPOC Station P**	**4.91**	**328**		**Pn**	**22 48 41.6**	**-0.8**
PB11	**IPOC Station P**	**4.91**	**328**	⇑*eP*	**Pn**	**22 48 41.2**	**-1.2**
PB11	**IPOC Station P**	**4.91**	**328**	*eP*	**Pn**	**22 48 41.0**	**-1.4**
PB11				*eS*	**S**	**22 49 37.0**	**-3.0**
PB11				IAML		22 49 38.9	
	comp=Z,169nm,0.3s						
AC04	**Llanos de Chal**	**5.61**	**221**		**Pn**	**22 48 50.5**	**-0.6**
AC05	**El Transito**	**5.68**	**211**		**Pn**	**22 48 52.3**	**+0.2**
LCO	**Las Campanas**	**6.03**	**213**		**Pn**	**22 48 56.2**	**-0.6**
PB16	**IPOC Station P**	**6.11**	**336**		**Pn**	**22 48 57.3**	**-0.9**
PB12	**IPOC Station P**	**6.21**	**329**		**Pn**	**22 48 57.9**	**-1.1**
CO01	**Juntas del Tor**	**6.60**	**205**	Pn	**Pn**	**22 49 04.1**	**+0.1**
PB18	**Visviri**	**6.79**	**339**	Pn	**Pn**	**22 49 06.3**	**-0.6**
CO03	**El Pedregal**	**7.59**	**205**	Pn	**Pn**	**22 49 15.9**	**-0.9**
CFA	**Coronel Fontan**	**7.68**	**188**	P	**Pn**	**22 49 18.1**	**+0.3**
	comp=Z,1.1nm,0.2s,baz=68,slow=18,SNR=2.3						
CFA				S	**S**	**22 50 38.9**	**-5.8**
	comp=Z,4.0nm,0.3s,baz=164,slow=20,SNR=15						
CFA				LR	LR	22 52 32.8	
	comp=Z,61nm,20.2s,baz=216,slow=40						
LPAZ	**La Paz**	**7.74**	**351**	P	**Pn**	**22 49 19.6**	**+0.2**
	comp=Z,4.7nm,0.5s,baz=123,slow=3.5,SNR=15						
LPAZ				S	**S**	**22 50 40.8**	**-6.4**
	comp=Z,0.8nm,0.4s,baz=299,slow=3.7,SNR=1.2						
LPAZ	**La Paz**	**7.74**	**351**		**Pn**	**22 49 18.8**	**-0.5**
LPAZ	**La Paz**	**7.74**	**351**	*eP*	**Pn**	**22 49 19.3**	**0.0**
CPUP	**Villa Florida**	**9.01**	**107**	P	**Pn**	**22 49 33.3**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=289,slow=13,SNR=5.2						
SIV	**San Ignacio**	**9.68**	**36**	P	**Pn**	**22 49 41.3**	**-2.5**
	comp=Z,1.9nm,0.4s,baz=274,slow=7.4						
PTLB	**Pontes e Lacer**	**11.22**	**42**	Pn	**Pn**	**22 50 04.1**	**+0.5**
BO02	**Sierra Bellavi**	**11.28**	**196**	Pn	**Pn**	**22 50 04.8**	**+0.5**
TRCB	**Terra Rica**	**13.19**	**88**		**Pn**	**22 50 30.3**	**+1.8**
PTGB	**Pitanga**	**13.58**	**96**	*eP*	**P**	**22 50 37.2**	**+1.6**
ITAB	**Concordia**	**13.74**	**107**		**Pn**	**22 50 37.0**	**+1.7**
PLTB	**Pedras Altas**	**14.10**	**126**		**Pn**	**22 50 39.9**	**+0.3**
LDASE	**Londrina, Braz**	**14.51**	**91**	*eP*	**P**	**22 50 47.3**	**+1.5**
TRQA	**Tornquist**	**14.65**	**164**		**Pn**	**22 50 46.0**	**-0.3**
ARAG	**Araguaiana, MT**	**16.43**	**63**	*eP*	**Pn**	**22 51 09.1**	**+1.1**
PLCA	**Paso Flores**	**16.97**	**189**	P	**P**	**22 51 08.6**	**-4.3**
VAO	**Valinhos**	**18.34**	**91**	P	**P**	**22 51 28.0**	**0.0**
VAO				IAmb	IAmb	22 51 29.9	
	comp=Z,22nm,0.7s						
VAO	**Valinhos**	**18.34**	**91**	*eP*	**P**	**22 51 28.2**	**+0.1**
IPMB	**Ipameri, GO**	**18.47**	**75**	*eP*	**P**	**22 51 29.9**	**+0.5**
SNDB	**Serra Nova Dou**	**19.06**	**54**	*eP*	**P**	**22 51 35.5**	**-0.2**
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**22 51 42.3**	**+0.3**
	comp=Z,23nm,0.6s,baz=245,slow

14nm,0.9s
KAPI Kappang 10.63 259 P **Pn** **22 50 03.0 +1.5**
27nm,0.9s
BASI Baing, Sumba 11.94 233 P **Pn** **22 50 22.0 +2.6**
WBSI Waikabubak, Su 12.60 238 P **Pn** **22 50 31.4 +2.9**
109nm,1.0s
KNRA Kununurra 12.63 186 **Pn** **22 50 26.9 -2.0**
DBNI Kabupaten Domp 13.03 245 P **Pn** **22 50 36.8 +2.4**
22nm,1.0s
PLAI Plampang 13.64 245 P **Pn** **22 50 44.6 +1.8**
PLAI Plampang 13.64 245 P **Pn** **22 50 44.5 +1.8**
72nm,1.1s
FITZ Fitzroy Crossi 15.62 196 Pn **Pn** **22 51 07.2 -2.2**
1.7nm,0.3s,baz=30,slow=9.7,SNR=37
FITZ Sn **Sn** **22 53 53.0 -8.8**
0.7nm,0.3s,baz=122,slow=17,SNR=1.7
FITZ LR LR 22 58 59.0
comp=Z,240nm,18.2s,baz=20,slow=44
33nm,0.7s
COEN Coen 16.76 131 **Pn** **22 51 24.9 +0.9**
COEN IAmb IAmb 22 51 46.7
comp=Z,62nm,1.1s
COEN Coen 16.76 131 P **P** **22 51 26.2 +0.1**
JAGI Jajag, Banyuwa 16.87 251 Pn **Pn** **22 51 24.4 -0.9**
JAGI IAmb IAmb 22 51 28.6
comp=Z,34nm,0.9s
JAGI Jajag, Banyuwa 16.87 251 P **Pn** **22 51 25.6 +0.2**
comp=Z,39nm,1.0s
WB0 Warramunga Arr 17.11 167 Pn **Pn** **22 51 24.3 -4.0**
MANU Manus Island 17.15 87 Pn **Pn** **22 51 28.4 -0.5**
BLJI Banyuglugur 17.20 254 P **P** **22 51 33.0 +2.1**
comp=Z,2µmcomp=Z,89nm,0.9s
WRAB Tennant Creek 17.26 167 P **P** **22 51 31.7 +0.2**
WRA Warramunga Arr 17.27 167 Pn **Pn** **22 51 27.7 -2.6**
comp=Z,1.9nm,0.3s,baz=347,slow=13,SNR=38
WRA S **Sn** **22 54 31.7 -10**
comp=Z,3.5nm,0.7s,baz=339,slow=23,SNR=2.0
comp=Z,4.6nm,0.4s
WRA Warramunga Arr 17.27 167 Pn **Pn** **22 51 27.4 -2.9**
WB2 Warramunga Arr 17.27 167 Pn **Pn** **22 51 28.0 -2.3**
WR0 Warramunga Arr 17.33 166 **Pn** **22 51 31.2 +0.1**
PMG Port Moresby 17.97 111 P **Pn** **22 51 36.3 -2.8**
comp=Z,6.3nm,0.6s,baz=304,slow=4.2,SNR=3.6
SJI Sawahan 18.95 255 P **Pn** **22 51 51.7 +0.6**
comp=Z,22nm,0.6s
SNJI Sawahan-Nganju 18.97 255 P **Pn** **22 51 52.8 +1.4**
comp=Z,30nm,0.8s
PCJI Pacitan 19.63 254 P **P** **22 51 58.4 +0.8**
comp=Z,36nm,1.1s
QIS Mount Isa 19.66 153 P **P** **22 51 58.8 +0.8**
UGM Wanagama 20.19 255 P **P** **22 52 03.1 -0.8**
UGM Wanagama 20.19 255 P Pn 22 52 05.1 -0.8
MBWA Marble Bar 20.70 209 **P** **22 52 06.2 -3.0**
MBWA IAmb IAmb 22 52 28.6
comp=Z,24nm,1.0s
MBWA Marble Bar 20.70 209 P **P** **22 52 09.8 +0.6**
AS31 Alice Springs 20.80 170 **P** **22 52 10.6 +0.2**
ASAR Alice Springs 20.80 170 P **P** **22 52 10.7 +0.3**
comp=Z,60nm,0.6s,baz=346,slow=11,SNR=528
ASAR S **S** **22 55 55.6 -5.9**
comp=Z,13nm,0.8s,baz=351,slow=21,SNR=16
ASAR LR LR 23 01 12.5
comp=Z,331nm,18.4s,baz=340,slow=40
comp=Z,60nm,0.6s
PSA00 Pilbara Seismi 21.00 208 P **P** **22 52 10.9 -1.6**
PSA00 IAmb IAmb 22 52 22.0
comp=Z,24nm,0.8s
PSA00 Pilbara Seismi 21.00 208 **P** **22 52 10.0 -2.5**
PSA00 IAmb IAmb 22 52 21.9
comp=Z,14nm,1.0s
PSA00 Pilbara Seismi 21.00 208 P **P** **22 52 12.7 +0.2**
KPJI Karang Pucung 21.62 258 P **P** **22 52 19.8 +0.5**
comp=Z,33nm,1.1s
LEM Lembang 22.83 260 LR LR 23 02 46.2
comp=Z,634nm,20.5s,baz=96,slow=40
BBJI Bungbulang 22.90 258 **P** **22 52 28.2 -4.7**
CTA Charters Tower 23.05 138 P **P** **22 52 34.3 -0.1**
comp=Z,7.5nm,0.6s,baz=314,slow=11,SNR=11
CTA LR LR 23 03 05.0
comp=Z,86nm,21.1s,baz=248,slow=41
comp=Z,7.5nm,0.6s
CTA Charters Tower 23.05 138 P **P** **22 52 35.4 +1.0**
CTAO Charters Tower 23.05 138 **P** **22 52 35.8 +1.3**
CTAO Charters Tower 23.05 138 P **P** **22 52 35.3 +0.9**
KASI Kota Agung 25.77 264 P **P** **22 52 58.3 -1.6**
comp=Z,26nm,0.9s
INKA Innaminka 26.53 159 **P** **22 53 07.4 +0.8**
INKA IAmb IAmb 22 53 18.8
comp=Z,11nm,0.7s
PDSI Padang 29.82 273 P **P** **22 53 35.5 -0.7**
comp=Z,17nm,0.8s
PPI Padang Panjang 29.92 274 P **P** **22 53 37.6 +0.6**
comp=Z,30nm,0.9s
BBOO Buckleboo 30.11 170 P **P** **22 53 38.3 -0.2**
BBOO IAmb IAmb 22 53 51.7
comp=Z,11nm,0.8s
HNR Honiara 30.20 103 LR LR 23 07 20.7
comp=Z,7.3nm,20.5s,baz=348,slow=40
STKA Stephens Creek 30.61 161 P **P** **22 53 43.3 +0.4**
comp=Z,6.5nm,0.3s,baz=339,slow=8.3,SNR=39
STKA LR LR 23 06 45.1
comp=Z,190nm,21.4s,baz=345,slow=38
comp=Z,6.5nm,0.3s
STKA Stephens Creek 30.61 161 **P** **22 53 43.1 +0.3**
JCJ Chichijima 32.12 20 LR LR 23 05 00.7
comp=Z,119nm,20.8s,baz=274,slow=33
JNU Nakatsue 35.98 1 LR LR 23 10 35.5
comp=Z,142nm,18.1s,baz=72,slow=39
NJ2 Nanjing 36.54 344 *e*P **P** **22 54 37.8 +3.4**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
CMAR Chiang Mai Arr 37.49 306 P **P** **22 54 43.5 +0.7**
comp=Z,1.7nm,0.3s,baz=137,slow=7.8,SNR=17
comp=Z,1.7nm,0.3s
CHTO Chiang Mai 37.68 306 **P** **22 54 44.4 +0.1**
CHTO IAmb IAmb 22 54 45.7
comp=Z,7.5nm,0.8s
CHTO Chiang Mai 37.68 306 P **P** **22 54 45.0 +0.6**
comp=Z,10nm,0.9s
DZM Mont Dzumac 39.91 121 *e*LR LR 23 06 13.1
comp=Z,199nm,28.3s
MJAR Matsushiro Arr 40.09 10 P **P** **22 55 02.4 -1.9**
comp=Z,1.7nm,0.8s,baz=190,slow=9.2,SNR=4.3
comp=Z,1.7nm,0.8s
PZH PanZhiHua 40.26 319 P **P** **22 55 08.8 +2.8**
KSRS Korea Array 40.35 357 P **P** **22 55 06.7 +0.3**
comp=Z,1.1nm,0.7s,baz=172,slow=9.8,SNR=5.1
KSRS LR LR 23 10 18.3
comp=Z,71nm,21.8s,baz=155,slow=34
comp=Z,1.1nm,0.7s
XAN Xi'an 42.00 333 P **P** **22 55 19.8 -0.3**
XAN pmax pmax
comp=Z,10.0nm,1.2s
LZDM Lanzhou Array 46.05 330 P **P** **22 55 52.9 -0.1**
comp=Z,0.6nm,0.3s,baz=133,slow=8.5,SNR=1.4
comp=Z,0.6nm,0.3s
HHC Hu-ho-hao-te 46.90 341 *e*P **P** **22 56 02.4 +3.1**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,72nm,4.0s
USRK Ussuriysk Ar. 47.06 2 P **P** **22 56 00.0 -0.3**
comp=Z,5.8nm,1.0s,baz=137,slow=6.5,SNR=5.0
comp=Z,5.8nm,1.0s
XLT XiLinHaoTe 48.44 346 *e*P **P** **22 56 11.6 +0.5**
XLT sP pP 22 56 18.9 +0.1
XLT pmax pmax
comp=Z,4.0nm,0.9s
BNX BinXian 48.64 357 ⇓P **P** **22 56 16.9 +4.4**
BNX pmax pmax
comp=Z,5.0nm,0.8s
LSA Lhasa 49.58 314 P **P** **22 56 17.8 -2.8**
LSA pmax pmax
comp=Z,2.0nm,0.3s
PALK Pallekele 50.47 282 LR LR 23 19 24.1
comp=Z,76nm,20.5s,baz=102,slow=38
GTA2 Gaotai 50.76 330 *e*P **P** **22 56 29.8 +0.8**
GTA2 pP pP 22 56 38.0 +1.3
GTA2 pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 54.61 341 **P** **22 56 58.6 +1.2**
ULN IAmb IAmb 22 57 07.9
comp=Z,5.4nm,0.8s
ULN Ulaanbaatar 54.61 341 P **P** **22 56 59.2 +1.8**
comp=Z,30nm,1.0s
SONM Songino Array 54.80 341 P **P** **22 56 59.3 +0.6**
comp=Z,2.9nm,1.0s,baz=157,slow=7.2,SNR=12
comp=Z,2.9nm,1.0s
SONM Songino Array 54.80 341 IAmb IAmb 22 57 02.2
comp=Z,7.9nm,1.4s
URZ Urewera 55.26 136 LR LR 23 23 41.8
comp=Z,98nm,18.1s,baz=284,slow=39
RAO Raoul Island 55.62 124 LR LR 23 20 15.9
comp=Z,44nm,19.0s,baz=112,slow=35
WMQ Urumqi 60.25 326 *e*P **P** **22 57 36.8 -0.3**
WMQ pP sP 22 57 56.3 +8.4
WMQ PcS **PcS** **23 02 21.4 -3.3**
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ LR LR
comp=Z,110nm,23.8s
PETK Petropavlovsk- 60.53 19 P **P** **22 57 38.6 -0.2**
comp=Z,1.8nm,0.8s,baz=226,slow=7.5,SNR=1.1
PETK LR LR 23 21 02.5
comp=Z,27nm,21.2s,baz=200,slow=33
comp=Z,1.8nm,0.8s
YAK Yakutsk 64.90 360 **P** **22 58 09.0 +1.3**
MKAR Makanchi Array 65.08 326 P **P** **22 58 09.3 +0.1**
comp=Z,1.5nm,0.3s,baz=113,slow=8.3,SNR=47
comp=Z,1.5nm,0.3s
MAKZ Makanchi 65.27 326 **P** **22 58 10.5 0.0**
MAKZ IAmb IAmb 22 58 17.4
comp=Z,3.8nm,0.9s
KSH2 Kashi 65.42 316 P **P** **22 58 11.9 +0.1**
KSH2 pmax pmax
comp=Z,3.0nm,0.7s
KDJ Kajisay 65.72 319 P **P** **22 58 14.1 +0.4**
KDJ IAmb IAmb 22 58 14.8
comp=Z,2.9nm,0.8s
BOOM Boomskoye usch 66.70 319 P **P** **22 58 19.9 0.0**
BOOM IAmb IAmb 22 58 22.9
comp=Z,5.8nm,1.4s
AAK Ala-Archa 67.71 319 LR LR 23 31 34.4
comp=Z,269nm,19.1s,baz=310,slow=39
ARSB Arslanbob 68.15 317 P **P** **22 58 28.6 -0.6**
ZAA0 Zalesovo Array 68.17 333 **P** **22 58 28.7 -0.1**
ZAA0 IAmb IAmb 22 58 38.9
comp=Z,8.4nm,1.4s
ZALV Zalesovo Beam 68.17 333 P **P** **22 58 28.4 -0.3**
comp=Z,2.7nm,0.8s,baz=97,slow=3.6,SNR=12
comp=Z,2.7nm,0.8s
ZALV Zalesovo Beam 68.17 333 **P** **22 58 28.6 -0.1**
KURBB Kurchatov Arra 69.30 328 P **P** **22 58 36.1 +0.2**
comp=Z,3.8nm,0.5s,baz=128,slow=5.8,SNR=45
comp=Z,3.8nm,0.5s
KURK Kurchatov 69.30 328 **P** **22 58 36.1 +0.3**
RAR Rarotonga 70.27 111 LR LR 23 28 10.7
comp=Z,23nm,21.3s,baz=256,slow=35
TIXI Tiksi 74.57 360 LR LR 23 34 14.0
comp=Z,60nm,18.1s,baz=192,slow=38
TIXI Tiksi 74.57 360 **P** **22 59 07.6 +0.6**
BVAR Borovoye Array 74.87 327 P **P** **22 59 08.5 -0.8**
comp=Z,4.0nm,0.9s,baz=124,slow=11,SNR=9.0
comp=Z,4.0nm,0.9s
BORK Borovoye 74.92 327 **P** **22 59 09.6 +0.1**
BORK IAmb IAmb 22 59 10.8
comp=Z,4.2nm,0.8s
VNDA Vanda 76.32 173 P **P** **22 59 16.1 -0.9**
comp=Z,1.9nm,0.8s,baz=322,slow=9.1,SNR=1.7
comp=Z,1.9nm,0.8s
MAW Mawson 78.69 201 LR LR 23 32 58.0
comp=Z,65nm,18.2s,baz=140,slow=35
AB31 Akbulak array 79.58 321 **P** **22 59 35.7 0.0**
AB31 IAmb IAmb 22 59 37.4
comp=Z,5.9nm,1.0s
ABKAR Akbulak array 79.58 321 **P** **22 59 35.5 -0.2**
PPT Papeete 79.75 107 LR LR 23 34 23.2
comp=Z,34nm,19.0s,baz=350,slow=35
PPT2 Papeete2 79.75 107 *e*LR LR 23 24 35.8
comp=Z,80nm,27.0s
TBI Tubuai 79.91 113 *e*LR LR 23 24 46.0
comp=Z,275nm,32.8s
L14K Kuka Creek 81.89 27 **P** **22 59 49.5 +1.7**
L14K IAmb IAmb 22 59 51.6
comp=Z,6.4nm,1.0s
F15K North Star Dit 82.78 22 **P** **22 59 54.6 +2.2**
F15K IAmb IAmb 22 59 55.6
comp=Z,3.6nm,1.1s
G16K Koyuk River 83.54 23 P **P** **22 59 58.3 +2.0**
G16K IAmb IAmb 23 00 08.3
comp=Z,6.3nm,1.2s
C16K Lisburne Hills 83.60 20 **P** **22 59 58.6 +2.0**
C16K IAmb IAmb 22 59 59.8
comp=Z,5.8nm,1.1s
H17K Granite Mounta 84.34 24 P **P** **23 00 02.7 +2.3**
H17K IAmb IAmb 23 00 03.4
comp=Z,3.7nm,0.9s
L19K White Mountain 85.69 27 **P** **23 00 08.9 +1.6**
KDAK Kodiak Island 85.76 32 LR LR 23 36 55.0
comp=Z,68nm,19.4s,baz=230,slow=35
RAYN Ar Rayn 86.37 294 **P** **23 00 11.5 0.0**
ILAR Eielson Array 89.70 25 P **P** **23 00 24.4 -2.1**
comp=Z,0.3nm,0.6s,baz=237,slow=4.9,SNR=5.2
ILAR LR LR 23 35 13.8
comp=Z,40nm,19.8s,baz=258,slow=32
comp=Z,0.3nm,0.6s
ILAR Eielson Array 89.70 25 P **P** **23 00 25.7 -0.8**
EIL Elat 96.08 299 LR LR 23 52 16.8
comp=Z,33nm,18.3s,baz=302,slow=40
MBAR Mbarara 99.44 269 LR LR 23 41 05.8
comp=Z,40nm,21.3s,baz=110,slow=32
TXAR Lajitas Array 122.66 57 PKP **PKiKP** **23 06 25.3 -0.1**
comp=Z,0.2nm,0.6s,baz=250,slow=3.5,SNR=2.5
TXAR Lajitas Array 122.66 57 PKP **PKPdf** **23 06 24.9 -0.2**
TORD Torodi Ar. Bea 128.16 284 PKP **PKiKP** **23 06 36.3 -0.2**
comp=Z,0.3nm,0.7s,baz=56,slow=2.0,SNR=3.7
CPUP Villa Florida 149.89 166 PKPbc **PKiKP** **23 07 20.5 -0.1**
comp=Z,2.4nm,0.8s,baz=303,slow=0.2,SNR=4.8
CPUP Villa Florida 149.89 166 PKPbc **PKiKP** **23 07 20.2 -0.4**
LPAZ La Paz 153.57 137 PKPbc **PKiKP** **23 07 29.7 +0.5**
comp=Z,0.8nm,0.4s,baz=37,slow=4.4,SNR=3.6
LPAZ La Paz 153.57 137 **PKPbc** **23 07 28.1 -1.0**

IDC 23 22:57:59.9±4.2, 5°22S×153°83E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=133.2km s-min=28.0km az=110.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.95**	**231**	P	P	23 03 17.8	+1.7
	0.7nm,0.5s,baz=57,slow=10,SNR=7.5						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.55**	**224**	P	P	23 03 38.6	-1.1
	0.7nm,1.0s,baz=47,slow=9.3,SNR=2.1						
	0.7nm,1.0s						
SONM	**Songino Array**	**67.23**	**327**	P	P	23 08 58.0	+1.7
	0.4nm,0.5s,baz=140,slow=6.1,SNR=5.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**81.32**	**319**	P	P	23 10 18.9	+0.5
	0.8nm,0.6s,baz=103,slow=6.7,SNR=15						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**82.07**	**326**	P	P	23 10 21.1	-1.0
	0.4nm,0.3s,baz=108,slow=4.7,SNR=3.1						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**84.76**	**322**	P	P	23 10 35.1	-1.0
	0.2nm,0.5s,baz=100,slow=4.8,SNR=5.1						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**90.19**	**323**	P	P	23 11 00.4	-1.9
	0.5nm,0.6s,baz=92,slow=4.7,SNR=4.0						
	0.5nm,0.6s						

AFAD ***23*** *23:02:44.8, 38°.30N×44°.48E, h7km±1km, ML2.7*
AZER ***23*** *23:02:45.8, 38°.38N×44°.57E, h12km, ml3.0*
ISK ***23*** *23:02:48.3, 38°.41N×44°.50E, h9km, ML2.9/9*

ISC 23 23:02:47.5±1.2, 38°.41N±0°.03×44°.43E±0°.03, h11km±10km, n24, σ1°53/38, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**306**	P	**Pg**	**23 02 55.3**	**-0.7**
OZAP				S	**Sg**	**23 03 02.8**	**+1.2**
OZAP				IAML		23 03 08.0	
	comp=E,3.1nm,0.8s						
OZAP				IAML		23 03 11.0	
	comp=N,775nm,1.3s						
TVAN	**Van**	**0.81**	**279**	P	**Pg**	**23 03 01.8**	**-1.5**
TVAN				IAML		23 03 29.0	
	comp=E,326nm,0.5s						
TVAN				IAML		23 03 31.0	
	comp=N,361nm,1.1s						
VANB	**Van**	**0.84**	**283**	Pg	**Pn**	**23 03 05.5**	**+0.1**
VANB				Sg	**Sn**	**23 03 17.9**	**+0.1**
VMUR	**Van-Muradiye**	**0.89**	**311**	P	**Pg**	**23 03 04.1**	**-0.5**
VMUR				S	**Sn**	**23 03 19.2**	**+0.1**
VMUR				IAML		23 03 22.0	
	comp=E,292nm,0.3s						
VMUR				IAML		23 03 24.0	
	comp=N,202nm,0.4s						
HAKT	**HAKKARI**	**1.03**	**214**	P	**Pn**	**23 03 06.9**	**-1.2**
HAKT				S	**Sn**	**23 03 24.6**	**+1.9**
ERCV	**ERCIS-VAN**	**1.05**	**306**	Pn	**Pn**	**23 03 09.4**	**+1.0**
ERCV				Sn	**Sn**	**23 03 25.4**	**+2.3**
GEVA	**Gevas**	**1.08**	**265**	P	**Pg**	**23 03 06.3**	**-2.0**
GEVA				S	**Sn**	**23 03 26.1**	**+2.1**
GEVA				IAML		23 03 29.0	
	comp=E,160nm,0.8s						
GEVA				IAML		23 03 31.0	
	comp=N,120nm,0.5s						
NAX	**Nakhchivan**	**1.13**	**47**	P	**Pn**	**23 03 08.5**	**-0.9**
NAX				S	**Sn**	**23 03 24.7**	**-0.2**
DYDN	**Diyadin**	**1.27**	**333**	P	**Pb**	**23 03 10.9**	**-0.7**
DYDN				S	**Sb**	**23 03 28.2**	**+0.2**
DYDN				IAML		23 03 35.0	
	comp=N,176nm,0.5s						
DYDN				IAML		23 03 35.0	
	comp=E,304nm,0.8s						
SBZ	**Shahbuz**	**1.32**	**41**	P	**Pg**	**23 03 11.8**	**-1.0**
SBZ				S	**Sn**	**23 03 31.1**	**+1.5**
ORD	**Ordubad**	**1.33**	**67**	P	**Pg**	**23 03 11.5**	**-1.5**
ORD				S	**Sn**	**23 03 30.2**	**+0.4**
CUKT	**Cukurca**	**1.33**	**210**	Pn	**Pg**	**23 03 14.0**	**+0.9**
CUKT				Sn	**Sg**	**23 03 32.7**	**+2.3**
HYR	**Heyderabad**	**1.34**	**14**	P	**Pg**	**23 03 13.6**	**+0.3**
HYR				S	**Sg**	**23 03 35.1**	**+4.3**
ADCV	**BITLIS_Adilcev**	**1.40**	**287**	P	**Pn**	**23 03 12.5**	**-0.6**
ADCV				IAML		23 03 39.0	
	comp=N,83nm,0.9s						
ADCV				IAML		23 03 39.0	
	comp=E,93nm,0.9s						
IGDI	**IGDIR**	**1.48**	**349**	P	**Pg**	**23 03 14.8**	**-1.1**
IGDI				S	**Sg**	**23 03 37.7**	**+2.6**
IGDI				IAML		23 03 40.0	
	comp=E,159nm,1.2s						
IGDI				IAML		23 03 41.0	
	comp=N,128nm,0.9s						
AGRB	**Hanur-Agry**	**1.62**	**316**	Pn	**Pg**	**23 03 17.9**	**-0.6**
AGRB				Sn	**Sg**	**23 03 40.2**	**+0.7**
DORK	**Agr/Tutak/Do**	**1.62**	**308**	P	**Pn**	**23 03 15.7**	**-0.4**
DORK				IAML		23 03 43.0	
	comp=N,60nm,0.6s						
DORK				IAML		23 03 45.0	
	comp=E,81nm,0.9s						
MLAZ	**Malazgirt-MUS**	**1.64**	**297**	Pn	**Pg**	**23 03 18.6**	**-0.4**
GNI	**Garni**	**1.75**	**8**	Pn	**Pg**	**23 03 19.7**	**-1.4**
GURO	**Guroymak-BITLI**	**1.89**	**275**	Pn	**Pg**	**23 03 22.4**	**-1.3**
SRTM	**Siirt_Merkez**	**2.02**	**259**	P	**Pb**	**23 03 23.7**	**-0.7**
SRTM				IAML		23 03 57.0	
	comp=E,119nm,0.8s						
SRTM				IAML		23 04 00.0	
	comp=N,138nm,0.7s						
SVAN	**Sivan-Eyyarba**	**2.56**	**265**	Pn	**Pb**	**23 03 31.8**	**-1.7**
SENK	**Senkaya-Erzuru**	**2.68**	**324**	Pn	**Pb**	**23 03 33.8**	**-1.9**
KARO	**Karliova-Bingo**	**2.79**	**290**	Pn	**Pb**	**23 03 35.3**	**-2.2**

AFAD ***23*** *23:08:45.7, 35°.00N×27°.86E, h15km±2km, MW3.9*
IDC ***23*** *23:08:48.1±0.8, 35°.34N×27°.93E, h0km, mb3.9/13, mbtmp3.8/25, ML3.5/9, Error ellipse: s-maj=18.0km s-min=12.4km az=174.0*
HLW ***23*** *23:08:50.2, 35°.23N×28°.02E, h2km±5km, Ml3.5*
NIC ***23*** *23:08:50.5, 35°.19N×27°.97E, h16km±2km, Ml3.4/15*
ISK ***23*** *23:08:51.1, 35°.31N×27°.92E, h10km, ML3.5/27*
ATH ***23*** *23:08:54.0, 35°.45N×27°.78E, h8km±2km, ML3.4/9, Manual Solution by A.Fokaefs First location: 2020/02/23 23:10:17, This location: 2020/07/06 22:59:02 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
THE ***23*** *23:08:54.1, 35°N±19"×2°8E±2°1, h17km±32km, M3.4/20, MLh3.4/20*

ISC 23 23:08:49.3±1.2, 35°.16N±0°.03×27°.91E±0°.03, h11km±8km, n156, σ1°59/191, mb3.8/12, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.72**	**302**	Pg	**Pb**	**23 09 03.7**	**-0.3**
KARP				Sg	**Sb**	**23 09 14.6**	**+0.6**
KARP	**Karpathos**	**0.72**	**302**	P	**Pb**	**23 09 04.0**	**-0.1**
KARP				S	**Sn**	**23 09 16.0**	**-0.7**
KARP				AML	AML	23 09 23.4	
	6.2nm,0.8s						
KARP				AML	AML	23 09 28.7	
	7.5nm,0.7s						
KARP	**Karpathos**	**0.72**	**302**	P	**Pb**	**23 09 04.1**	**+0.1**
KARP				S	**Sg**	**23 09 10.9**	**-2.0**
ARG	**Arkhangelos**	**1.07**	**9**	Pg	**Pg**	**23 09 09.6**	**-0.2**
ARG				Sg	**Sg**	**23 09 22.3**	**-1.4**
ARG	**Arkhangelos**	**1.07**	**9**	P	**Pg**	**23 09 09.7**	**-0.2**
ARG	**Arkhangelos**	**1.07**	**9**	P	**Pg**	**23 09 09.7**	**-0.2**
ARG				S	**Sb**	**23 09 25.2**	**+1.4**
ARG				AML	AML	23 09 35.5	
	4.8nm,0.8s						
ARG				AML	AML	23 09 35.9	
	3.7nm,1.1s						
ARG	**Arkhangelos**	**1.07**	**9**	P	**Pg**	**23 09 09.8**	**-0.2**
ARG				S	**Sg**	**23 09 20.2**	**-3.6**
ZKR	**Zakros**	**1.39**	**269**	Pn	**Pg**	**23 09 17.6**	**+1.6**
ZKR	**Zakros**	**1.39**	**269**	P	**Pg**	**23 09 17.8**	**-0.2**
ZKR				AML	AML	23 09 46.2	
	2.3nm,0.6s						
ZKR				AML	AML	23 09 51.3	
	1.3nm,0.6s						
ZKR	**Zakros**	**1.39**	**269**	P	**Pg**	**23 09 18.3**	**+2.3**
ZKR				S	**Sn**	**23 09 35.7**	**+2.6**
STIA	**Sitia Lasithi**	**1.49**	**272**	P	**Pg**	**23 09 19.9**	**+1.9**
DAT	**Datca**	**1.59**	**350**	Pn	**Pn**	**23 09 18.0**	**+0.5**
DAT	**Datca**	**1.59**	**350**	P	**Pn**	**23 09 17.9**	**+0.3**
DAT				S	**Sg**	**23 09 42.3**	**+1.9**
TURN	**Turunc**	**1.63**	**9**	Pn	**Pn**	**23 09 18.6**	**+0.6**
TURN	**Turunc**	**1.63**	**9**	P	**Pn**	**23 09 19.6**	**+1.6**
TURN				S	**Sg**	**23 09 43.3**	**+1.5**
IZZE	**Mula-Seydike**	**1.66**	**40**	P	**Pn**	**23 09 18.9**	**+0.4**
KSL	**Kastellorizon**	**1.68**	**54**	P	**Pn**	**23 09 19.7**	**+1.0**
KSL	**Kastellorizon**	**1.68**	**54**	P	**Pn**	**23 09 18.5**	**-0.1**
KSL				AML	AML	23 10 06.8	
	0.3nm,1.5s						
KSL				AML	AML	23 10 09.7	
	0.9nm,1.0s						
AKAS	**Kas**	**1.74**	**52**	Pn	**Pn**	**23 09 21.1**	**+1.4**
FETY	**Fethiye**	**1.75**	**33**	P	Pn	23 09 11.9	-7.8
FETY				S	**Sn**	**23 09 41.6**	**-0.5**
DALY	**Dalyan (Mula)**	**1.76**	**20**	Pn	**Pn**	**23 09 20.3**	**+0.6**
SABU	**Mula-Dalaman**	**1.87**	**27**	P	**Pn**	**23 09 21.8**	**+0.5**
SABU				S	**Sg**	**23 09 53.0**	**+3.6**
NPS	**Neapolis**	**1.89**	**274**	P	**Pg**	**23 09 25.7**	**+0.2**
NPS	**Neapolis**	**1.89**	**274**	P	**Pg**	**23 09 25.3**	**-0.2**
BDRM	**Kayabasi**	**1.94**	**349**	P	**Pn**	**23 09 22.3**	**+0.1**
BDRM				S	**Sg**	**23 09 51.0**	**-0.6**
BODT	**Bodrum**	**1.96**	**346**	Pn	**Pn**	**23 09 23.4**	**+0.9**
BODT	**Bodrum**	**1.96**	**346**	P	**Pn**	**23 09 24.3**	**+1.8**
YER	**Yerkesik**	**1.99**	**9**	Pn	**Pn**	**23 09 23.9**	**+0.8**
YER	**Yerkesik**	**1.99**	**9**	P	**Pn**	**23 09 24.9**	**+1.8**
YKAV	**Yalikavak-Bodr**	**2.02**	**346**	Pn	**Pn**	**23 09 24.3**	**+0.9**
CAME	**Cameli-Denizli**	**2.10**	**32**	Pn	**Pn**	**23 09 25.5**	**+0.8**
MULA	**Mugla, Merkez-**	**2.12**	**9**	P	**Pn**	**23 09 26.0**	**+1.2**
MULA				S	**Sg**	**23 09 58.2**	**+0.8**
MLSB	**Milas**	**2.13**	**357**	Pn	**Pn**	**23 09 23.8**	**-1.2**
KNIK	**Mula-Seydike**	**2.15**	**38**	P	**Pn**	**23 09 26.8**	**+1.4**
CAEL	**Denizli, Camel**	**2.26**	**30**	P	**Pn**	**23 09 28.0**	**+1.1**
CAEL				S	**Sb**	**23 09 59.9**	**+1.5**
ELL	**Elmali**	**2.27**	**45**	Pn	**Pn**	**23 09 28.3**	**+1.4**
DIDI	**Didim-Aydin**	**2.28**	**346**	Pn	**Pn**	**23 09 27.9**	**+1.0**
THERA	**Ancient Thera,**	**2.32**	**302**	P	**Pn**	**23 09 29.5**	**-1.7**
THERA	**Ancient Thera,**	**2.32**	**302**	P	**Pn**	**23 09 29.0**	**+1.5**
THR8	**Santorini-Mono**	**2.34**	**303**	P	**Pn**	**23 09 29.5**	**+1.8**
THR3	**Thira Island,**	**2.39**	**302**	P	**Pb**	**23 09 30.9**	**-1.5**
SNT5	**Nea Kammeni, S**	**2.39**	**302**	P	**Pn**	**23 09 30.3**	**+1.9**
SNT5	**Nea Kammeni, S**	**2.39**	**302**	P	**Pn**	**23 09 30.4**	**+1.9**
THR9	**Santorini-Faro**	**2.40**	**301**	P	**Pb**	**23 09 30.6**	**-1.9**
THR5	**Thira Island,**	**2.43**	**302**	P	**Pn**	**23 09 30.0**	**+0.9**
TAVA	**DENIZLI_Tavas**	**2.44**	**19**	P	**Pn**	**23 09 27.8**	**-1.4**
TAVA				S	**Sb**	**23 10 05.8**	**+2.5**

SAP3	Santorini-Thir	2.44	302	P		Pb	23 09 31.4	-1.9	
GOLH	Golhisar	2.46	32	P		Pn	23 09 30.7	+1.2	
GOLH				S		Sn	23 10 03.4	+3.6	
IDI	Anoyia	2.48	274	Pn		Pb	23 09 31.8	-2.1	
	30nm,0.4s,baz=71,slow=19,SNR=25								
IDI	Anoyia	2.48	274	Pn		Pb	23 09 32.7	-1.2	
IDI	Anoyia	2.48	274	P		Pb	23 09 34.0	0.0	
IDI	Anoyia	2.48	274	P		Pb	23 09 33.8	-0.1	
AYDN	Tasoluk	2.49	359	P		Pn	23 09 30.7	+0.8	
AYDN				S		Sb	23 10 04.8	-0.1	
APMY	Acipayam-Deniz	2.56	26	Pn		Pn	23 09 31.8	+0.9	
GCAM	G?zelcami?	2.59	346	Pn		Pn	23 09 32.2	+1.0	
DNIZ	Denizli-Tavas-	2.62	20	P		Pn	23 09 31.0	-0.8	
ESEN	Aydn-Nazilli	2.65	7	P		Pn	23 09 33.2	+1.1	
ESEN				S		Sn	23 10 08.3	+4.0	
SMG	Samos	2.69	341	P		Pn	23 09 33.5	+1.0	
SMG	Samos	2.69	341	P		Pn	23 09 33.0	+0.5	
KORT	Korkueli	2.70	46	Pn		Pn	23 09 34.4	+1.6	
AYDB	Zeytinkoy-Aydi	2.78	360	Pn		Pn	23 09 34.7	+0.8	
NAZL	Nazilli-Aydin	2.81	6	Pn		Pn	23 09 35.1	+0.8	
ANTB	Antalya	2.82	51	Pn		Pn	23 09 36.2	+1.9	
INCE	Denizli-Bozkur	2.87	27	P		Pn	23 09 36.2	+1.0	
IZMR	zmir-demi	2.97	1	P		Pn	23 09 37.4	+1.0	
IZMR				S		Sb	23 10 17.0	-1.6	
VAM	Vamos	3.05	276	P		Pb	23 09 40.8	-2.8	
KIRA	zmir-Kiraz	3.05	7	P		Pn	23 09 38.6	+0.9	
ODEM	Odemis-Izmir	3.11	2	Pn		Pn	23 09 39.4	+1.0	
GVD	Gavdhos	3.16	265	P		Pb	23 09 43.2	-2.3	
GVD	Gavdhos	3.16	265	P		Pb	23 09 43.5	-2.0	
IMMV	Iera Moni Meta	3.23	276	P		Pb	23 09 44.3	-2.4	
IMMV	Iera Moni Meta	3.23	276	P		Pb	23 09 43.8	-2.9	
OSC1	CSNet OBS 1	3.24	120	P		Pn	23 09 40.3	+0.1	
OSC1				S		Sn	23 10 19.4	+0.7	
OSC1				AML	AML		23 10 22.6		
	0.1nm,0.5s								
OSC1				AML	AML		23 10 24.9		
	0.1nm,0.7s								
BASM	Basmaki-Afyon	3.25	31	Pn		Pn	23 09 41.9	+1.6	
BLCB	Balcova	3.29	348	Pn		Pn	23 09 42.3	+1.4	
BLCB	Balcova	3.29	348	P		Pn	23 09 41.5	+0.7	
MANT	Manisa	3.36	9	P		Pn	23 09 42.6	+0.5	
ISP	Isparta	3.39	38	Pn		Pn	23 09 44.1	+1.8	
KULA	Kula-Manisa	3.40	10	Pn		Pn	23 09 43.8	+1.4	
KNDR	Palaiochora Ch	3.51	272	P		Pb	23 09 47.3	-4.2	
CHOS	Chios Island	3.55	336	P		Pn	23 09 45.9	+1.5	
AKMS	Akamas	3.63	91	P		Pn	23 09 45.9	+0.4	
AKMS				S		Sn	23 10 29.0	+0.7	
AKMS				AML	AML		23 10 32.3		
	0.3nm,0.4s								
AKMS				AML	AML		23 10 32.6		
	0.3nm,0.5s								
GORD	Gordes-Manisa	3.75	3	Pn		Pn	23 09 48.6	+1.4	
ANKY	Antikythira Is	3.83	282	P		Pb	23 09 53.2	-3.7	
ANKY	Antikythira Is	3.83	282	P		Pn	23 09 50.2	+2.0	
ALFC	Alefka	3.84	89	P		Pn	23 09 48.9	+0.5	
ALFC				S		Sn	23 10 34.9	+1.3	
ALFC				AML	AML		23 10 38.1		
	0.3nm,0.6s								
ALFC				AML	AML		23 10 43.4		
	0.3nm,0.6s								
NATA	Nata	3.84	94	P		Pn	23 09 49.2	+0.8	
NATA				S		Sn	23 10 34.0	+0.3	
NATA				AML	AML		23 10 39.7		
	0.8nm,0.5s								
NATA				AML	AML		23 10 41.0		
	0.7nm,0.6s								
KARY	Karystos	4.00	317	P		Pn	23 09 53.5	+2.9	
SIMA	Simav-Kutahya	4.01	12	Pn		Pn	23 09 51.9	+1.1	
GEDZ	Gediz	4.06	17	Pn		Pn	23 09 53.2	+1.8	
SDAG	Sultandagi-AFY	4.06	36	Pn		Pn	23 09 53.2	+1.6	
TROD	Troodos	4.07	92	P		Pn	23 09 52.1	+0.3	
TROD				S		Sn	23 10 40.0	+0.5	
TROD				AML	AML		23 10 47.6		
	0.2nm,0.5s								
TROD				AML	AML		23 10 49.0		
	0.2nm,0.5s								
KTHA	Kythira Island	4.09	287	P		Pn	23 09 53.8	+1.9	
APOL	The Sanctuary	4.10	95	P		Pn	23 09 52.2	+0.2	
APOL				S		Sn	23 10 40.6	+0.7	
APOL				AML	AML		23 10 44.3		
	0.2nm,0.6s								
APOL				AML	AML		23 10 46.6		
	0.2nm,0.6s								
OSC2	CSNet OBS 4	4.17	119	P		Pn	23 09 54.2	+1.3	
OSC2				S		Sn	23 10 42.9	+1.3	
OSC2				AML	AML		23 10 57.8		
	0.2nm,1.0s								
OSC2				AML	AML		23 11 07.7		
	0.2nm,1.0s								
XYLS	Xyliatos	4.21	91	P		Pn	23 09 54.0	+0.4	
XYLS				S		Sn	23 10 44.1	+1.2	
XYLS				AML	AML		23 10 47.7		
	0.2nm,0.9s								
XYLS				AML	AML		23 10 48.3		
	0.2nm,0.7s								
VLY	Voula,Athens	4.27	310	P		Pn	23 09 56.7	+2.4	
VLY	Voula,Athens	4.27	310	P		Pn	23 09 56.3	+2.0	
PRK	Paraskevi	4.28	343	P		Pn	23 09 54.9	+0.4	
PRK	Paraskevi	4.28	343	P		Pn	23 09 54.7	+0.3	
VLI	Veliai	4.33	292	P		Pn	23 09 56.5	+1.4	
VLI	Veliai	4.33	292	P		Pn	23 09 57.0	+1.9	
DION	Dionisos Attik	4.33	313	P		Pn	23 09 57.7	+2.6	
DION	Dionisos Attik	4.33	313	P		Pn	23 09 57.6	+2.6	
PTL	Penteli	4.35	313	P		Pn	23 09 58.4	+3.0	
SIGR	SIGRI	4.36	338	P		Pn	23 09 56.9	+1.3	
ASGA	Asgata	4.40	93	P		Pn	23 09 56.5	+0.4	
ASGA				S		Sn	23 10 47.9	+0.6	
ASGA				AML	AML		23 10 53.1		
	0.3nm,0.5s								
ASGA				AML	AML		23 10 55.2		
	0.5nm,0.6s								
CSS	Mathiatis	4.45	91	P		Pn	23 09 57.4	+0.6	
CSS				S		Sn	23 10 49.0	+0.4	
CSS				AML	AML		23 10 55.7		
	0.2nm,0.6s								
CSS				AML	AML		23 11 00.9		
	0.2nm,0.9s								
KYMI	Kymi, Euboea I	4.62	320	P		Pn	23 10 01.5	+2.4	
KYMI	Kymi, Euboea I	4.62	320	P		Pn	23 10 01.3	+2.2	
STFN	Stefani	4.62	312	P		Pn	23 10 02.0	+2.8	
MVOU	Mavrovouni	4.69	90	P		Pn	23 10 01.0	+0.9	
MVOU				S		Sn	23 10 56.8	+2.3	
MVOU				AML	AML		23 11 02.0		
	0.1nm,0.8s								
MVOU				AML	AML		23 11 11.1		
	0.1nm,1.2s								
VIL2	Platees	4.82	311	P		Pn	23 10 02.9	+1.1	
LIA	Limnos Island	5.20	336	P		Pn	23 10 09.1	+2.0	
GUR	Goura	5.27	303	P		Pn	23 10 10.8	+2.7	
SWA2		6.26	200	P		Pn	23 10 25.1	+3.5	
SWA2				S		Sn	23 11 34.1	+0.9	
BRTR	Keskin Array B	6.44	43	Pn		Pn	23 10 25.6	+1.3	
	0.3nm,0.3s,baz=224,slow=16,SNR=9.2								
BRTR				Sn		Sn	23 11 35.1	-2.8	
	0.3nm,0.3s,baz=212,slow=28,SNR=6.3								
	0.9nm,0.5s								
MMAI	Mount Meron Ar	6.57	107	Pn		Pn	23 10 26.0	0.0	
	2.6nm,0.3s,baz=314,slow=14,SNR=16								
MMAI				Sn		Sn	23 11 38.8	-2.3	
	4.9nm,0.3s,baz=345,slow=31,SNR=6.4								
	1.2nm,0.3s								
SUZ	Suez	6.74	141	P		Pn	23 10 30.5	+2.2	
ZNM	Zenema	7.14	143	P		Pn	23 10 35.7	+2.0	
ASF	Jabal al Asfar	8.06	109	Pn		Pn	23 10 46.6	+0.1	
	0.5nm,0.3s,baz=275,slow=12,SNR=6.9								
ASF				Sn		Sn	23 12 15.4	-2.2	
	0.2nm,0.3s,baz=295,slow=13,SNR=1.4								
	2.3nm,0.5s								
EIL	Elat	8.09	131	Pn		Pn	23 10 46.5	-0.2	
	1.7nm,0.3s,baz=339,slow=8.5,SNR=17								
EIL				Sn		Sn	23 12 14.8	-3.4	
	3.3nm,0.3s,baz=275,slow=12,SNR=7.7								
	9.6nm,0.5s								
HBST	Basata	8.28	134	P		Pn	23 10 50.7	+1.3	
NUB	Nuweibaa	8.37	135	P		Pn	23 10 52.3	+1.7	
HDK1	Dakhla	9.67	172	P		Pn	23 11 12.4	+3.9	
VAE	Valguarnera	11.13	286	Pn		Pn	23 11 27.9	-0.7	
	17nm,1.2s,baz=72,slow=22,SNR=1.7								
KVAR	Kislovodsk Arr	14.38	48	Pn		Pn	23 12 13.4	+0.5	
	baz=241,slow=11								
	1.4nm,0.8s								
KBZ	Khabaz	14.38	49	Pn		Pn	23 12 14.0	+1.2	
	baz=211,slow=21,SNR=1.0								
	0.6nm,0.9s								

SOKA	Soboth	15.05	324	*e*Pn		Pn	23 12 22.8	+0.9	
	1.0nm,0.4s								
KEST	Kesra	15.15	278	Pn		Pn	23 12 23.2	-0.1	
	0.1nm,0.3s,baz=60,slow=16,SNR=3.6								
	1.8nm,0.8s								
OBKA	Obir	15.17	322	*e*Pn		Pn	23 12 25.1	+1.5	
	3.3nm,0.7s								
AKASG	Malin Array Be	15.56	3	Pn		Pn	23 12 26.2	-2.4	
	0.6nm,0.3s,baz=196,slow=11,SNR=5.5								
	0.1nm,0.2s								
KBA	Koelnbreinsper	16.16	322	*e*Pn		Pn	23 12 37.7	+1.2	
	3.0nm,0.6s								
ABTA	Abfaltersbach	16.38	320	*e*Pn		Pn	23 12 40.1	+0.9	
	1.3nm,0.7s								
LESA	Schwarzleotal	16.73	322	*e*Pn		Pn	23 12 44.6	+0.9	
	4.6nm,0.6s								
GERES	GERESS Array B	17.23	327	P		Pn	23 12 49.4	-0.7	
	2.3nm,0.8s,baz=147,slow=7.9,SNR=2.8								
WATA	Walderalm	17.24	320	*e*Pn		P	23 12 51.5	-0.3	
	13nm,1.4s								
SQTA	Sankt Quirin	17.37	319	*e*Pn		Pn	23 12 52.7	+0.9	
	3.4nm,0.9s								
MOTA	Moosalm	17.50	319	*e*Pn		Pn	23 12 54.2	+0.7	
	2.6nm,0.8s								
FETA	Feichten	17.51	318	*e*Pn		P	23 12 55.4	+0.7	
	7.3nm,0.9s								
RETA	Reutte	17.77	319	*e*Pn		P	23 12 58.4	+0.9	
	2.1nm,0.8s								
DAVOX	Davos/Dischmat	17.84	316	P		Pn	23 12 56.8	-0.9	
	0.4nm,0.3s,baz=111,slow=20,SNR=6.1								
	0.7nm,0.4s								
DAVA	Damuels	18.13	317	*e*Pn		P	23 13 01.9	+0.3	
	3.4nm,0.7s								
ESDC	Sonseca Array	25.64	290	P		P	23 14 19.1	+0.1	
	1.6nm,0.6s,baz=79,slow=9.2,SNR=29								
	1.6nm,0.6s								
FINES	FINESS Array B	26.33	358	P		P	23 14 23.4	-1.5	
	1.4nm,0.6s,baz=162,slow=10,SNR=14								
	1.4nm,0.6s								
HFS	Hagfors	26.64	344	P		P	23 14 25.9	-1.9	
	3.2nm,0.8s,baz=137,slow=11,SNR=6.0								
	3.2nm,0.8s								
NOA	NORSAR Array B	28.02	343	P		P	23 14 38.2	-2.0	
	1.0nm,0.8s,baz=139,slow=9.0,SNR=1.3								
	1.0nm,0.8s								
EKA	Eskdalemuir Ar	29.37	323	P		P	23 14 51.6	-0.6	
	0.8nm,0.7s,baz=112,slow=9.7,SNR=1.6								
	0.8nm,0.7s								
TORD	Torodi Ar. Bea	32.26	234	P		P	23 15 19.1	+0.9	
	1.0nm,0.6s,baz=32,slow=5.2,SNR=18								
	1.0nm,0.6s								
ARCES	ARCESS Array B	34.45	359	P		P	23 15 34.5	-2.2	
	2.3nm,0.9s,baz=167,slow=6.9,SNR=4.7								
	2.3nm,0.9s								
KURBB	Kurchatov Arra	39.37	51	P		P	23 16 18.9	+0.2	
	0.4nm,0.6s,baz=275,slow=8.8,SNR=4.7								
	0.4nm,0.6s								
MKAR	Makanchi Array	41.89	57	P		P	23 16 39.8	+0.1	
	0.3nm,0.4s,baz=271,slow=8.6,SNR=9.0								
MKAR				PcP		PcP	23 18 34.8	-0.4	
	0.3nm,0.8s,baz=285,slow=3.2,SNR=2.2								
	0.3nm,0.4s								
ZALV	Zalesovo Beam	43.38	46	P		P	23 16 51.5	-0.1	
	0.4nm,0.4s,baz=274,slow=8.5,SNR=2.5								
	0.4nm,0.4s								
SPITS	Spitsbergen Ar	43.41	357	P		P	23 16 50.7	-0.9	
	17nm,1.1s,baz=164,slow=5.8,SNR=2.1								
	17nm,1.1s								
SONM	Songino Array	57.73	51	P		P	23 18 41.5	+1.2	
	0.3nm,0.5s,baz=285,slow=6.6,SNR=6.3								
	0.3nm,0.5s								
SCHQ	Schefferville	64.64	320	P		P	23 19 26.1	-0.7	
	1.7nm,0.6s,baz=87,slow=3.3,SNR=5.7								
	1.7nm,0.6s								

AFAD ***23*** *23:11:25.5,38˚.38N×44˚.68E,h7km±4km,ML3.1*
NSSP ***23*** *23:11:27.2,38˚.33N×44˚.53E,h10km,Ms3.1*
AZER ***23*** *23:11:28.1,38˚.41N×44˚.50E,h28km,ml3.4*
ISK ***23*** *23:11:30.0,38˚.39N×44˚.47E,h2km,ML3.0/12*
ISC 23 23:11:29.2±1.1,38˚.40N±0˚.03×44˚.48E±0˚.02,h10km±9km, n36,σ1°69/62,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.47	305	P	Pg	23 11 38.1	-0.3
OZAP				S	Sg	23 11 44.8	+0.2
OZAP				IAML		23 11 48.0	
	comp=N,2μm,0.7s						
TVAN	Van	0.86	279	P	Pg	23 11 44.8	-0.9
TVAN				S	Sg	23 11 57.0	+0.1
TVAN				IAML		23 12 14.0	
	comp=N,532nm,0.5s						
TVAN				IAML		23 12 16.0	
	comp=E,620nm,1.1s						
VANB	Van	0.88	283	Pg	Pn	23 11 47.4	-0.4
VANB				Sg	Sb	23 11 59.4	+0.8
VMUR	Van-Muradiye	0.93	310	P	Pg	23 11 45.9	-1.2
VMUR				S	Sn	23 12 01.3	-0.7
VMUR				IAML		23 12 05.0	
	comp=N,362nm,0.3s						
VMUR				IAML		23 12 06.0	
	comp=E,424nm,0.3s						
HAKT	HAKKARI	1.04	217	P	Pn	23 11 49.7	-0.4
HAKT				S	Sn	23 12 05.4	+0.7
ERCV	ERCIS-VAN	1.09	305	Pn	Pn	23 11 51.5	+0.8
ERCV				Sn	Sn	23 12 07.6	+1.6
ERCV	ERCIS-VAN	1.09	305	P	Pg	23 11 48.5	-1.7
ERCV				S	Sn	23 12 06.3	+0.3
ERCV				IAML		23 12 10.0	
	comp=E,728nm,0.4s						
ERCV				IAML		23 12 18.0	
	comp=N,1μm,0.7s						
NAX	Nakhchivan	1.11	45	P	Pn	23 11 50.1	-0.8
NAX				S	Sn	23 12 06.2	-0.1
GEVA	Gevas	1.12	266	P	Pb	23 11 48.9	-2.0
GEVA				S	Sn	23 12 08.6	+1.8
GEVA				IAML		23 12 11.0	
	comp=N,270nm,0.7s						
GEVA				IAML		23 12 15.0	
	comp=E,262nm,0.9s						
ORD	Ordubad	1.30	65	P	Pg	23 11 53.3	-0.8
ORD				S	Sn	23 12 12.0	+1.1
SBZ	Shahbuz	1.30	39	P	Pg	23 11 53.2	-1.0
SBZ				S	Sn	23 12 12.2	+1.0
DYDN	Diyadin	1.30	332	P	Pn	23 11 52.4	-1.3
DYDN				S	Sn	23 12 10.7	-0.6
DYDN				IAML		23 12 18.0	
	comp=N,179nm,0.4s						
DYDN				IAML		23 12 21.0	
	comp=E,189nm,0.7s						
CUKT	Cukurca	1.34	211	Pn	Pg	23 11 56.1	+1.2
CUKT				Sn	Sg	23 12 15.2	+2.9
ADCV	BITLIS_Adilcev	1.44	287	P	Pn	23 11 55.3	-0.2
ADCV				S	Sg	23 12 17.6	+2.1
ADCV				IAML		23 12 20.0	
	comp=N,196nm,0.5s						
ADCV				IAML		23 12 21.0	
	comp=E,175nm,0.5s						
VAYK	Vayk	1.49	29	⇓*e*P	Pb	23 11 56.1	-1.0
VAYK				⇓*e*S	Sg	23 12 16.7	-0.5
ALVK	Alvank	1.56	69	*e*P	Pb	23 11 56.9	-1.2
ALVK				*e*S	Sg	23 12 19.2	-0.1
AGRB	Hanur-Agry	1.66	316	Pn	Pb	23 11 59.9	0.0
AGRB				Sn	Sg	23 12 23.6	+1.1
MLAZ	Malazgirt-MUS	1.69	297	Pn	Pg	23 12 01.1	-0.4
GNI	Garni	1.76	6	Pn	Pg	23 12 02.5	-0.5
GNI	Garni	1.76	6	*e*P	Pg	23 12 02.5	-0.5
GNI				*e*S	Sg	23 12 29.4	+3.4
METS	Metsamor	1.78	350	*e*P	Pg	23 12 05.1	+1.8
METS				*e*S	Sg	23 12 33.2	+6.8
VNNZ	Vanand	1.78	343	*e*P	Pg	23 12 02.3	-1.1
VNNZ				*e*S	Sg	23 12 28.5	+2.0
EGVZ	Egvard	1.81	62	*e*P	Pg	23 12 01.8	-2.1
EGVZ				*e*S	Sg	23 12 27.3	0.0
GRS	Goris	1.82	52	⇑*i*P	Pg	23 12 05.0	+1.0
GRS				⇓*i*S	Sg	23 12 30.0	+2.4
ARUZ	Aruch	1.91	351	*e*P	Pg	23 12 04.8	-1.1
ARUZ				*e*S	Sg	23 12 32.8	+2.2
GURO	Guroymak-BITLI	1.93	275	Pn	Pb	23 12 04.5	-0.1
KAPZ	Kaputan	1.93	5	*e*P	Pb	23 12 04.2	-0.4
KAPZ				*e*S	Sg	23 12 32.0	+0.7
AYRK	Ayrk	1.99	30	*e*P	Pb	23 12 05.2	-0.5
AYRK				*e*S	Sg	23 12 35.6	+2.3
KARS	Kars	2.48	334	Pn	Pb	23 12 12.6	-1.3
VRTB	Varto-Mus	2.49	289	Pn	Pb	23 12 12.8	-1.3
SVAN	Silvan-Diyarba	2.60	266	Pn	Pb	23 12 14.1	-1.8
SRTK	Saratovka	2.67	357	*e*P	Pb	23 12 17.7	+0.5
SRTK				*e*S	Sg	23 12 54.0	-1.0
SENK	Senkaya-Erzuru	2.72	323	Pn	Pb	23 12 16.6	-1.5
KARO	Karliova-Bingo	2.83	290	Pn	Pb	23 12 17.8	-2.2
BNGB	Bingl	3.04	282	Pn	Pb	23 12 20.6	-2.8
YEDI	Yedisu-Bingol	3.25	290	Pn	Pb	23 12 23.6	-3.4

IDC ***23*** *23:16:29.4±1.2,34˚.83N×141˚.29E,h0km,mb3.6/7, mbtmp3.5/9,ML2.7/2,MS3.2/6,Error ellipse: s-maj=29.4km s-min=18.1km az=78.0*
JMA ***23*** *23:16:33.3±0.2,35˚.0N±0˚.4×14˚1E±˚,h34km,MV3.1/32,E OFF BOSO PENINSULA*
ISC 23 23:16:34.6±1.0,34˚.83N±0˚.07×141˚.3E±0˚.1,h35km,n28, σ1°09/19,mb3.5/7,MS3.3/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.29	232	P	Pn	23 16 42.1	+0.3
BSO1				X		23 16 49.0	
BSO2	Boso 2	0.42	259	*e*X		23 16 52.3	
BSO3	Boso 3	0.61	267	P	Pn	23 16 46.0	-0.6
BSO3				X		23 16 55.5	
BSO4	Boso 4	0.77	282	P	Pn	23 16 48.0	-0.9
BSO4				X		23 16 59.1	
KTR	Katsuura	0.83	292	P	Pn	23 16 48.1	-1.8
JKUC	kamogawauchiur	0.93	291	P	Pn	23 16 49.4	-1.7
JIM2	Oshima 3	1.51	266	P	Pn	23 16 57.7	-1.5
JHJ	Hachijo jima 2	2.10	216	Pn	Pn	23 17 05.6	-1.7
	11nm,0.3s,baz=322,slow=16,SNR=1.1						
JHJ				Sn	Sn	23 17 33.1	+0.9
	46nm,0.3s,baz=266,slow=23,SNR=5.4						
	102nm,0.5s						
MJAR	Matsushiro Arr	3.01	305	Pn	Pn	23 17 19.5	-0.3
	0.6nm,0.3s,baz=104,slow=14,SNR=13						
MJAR				Sn	Sn	23 17 56.0	+1.3
	0.7nm,0.3s,baz=150,slow=14,SNR=8.8						
MJAR				LR	LR	23 18 49.5	
	comp=Z,309nm,21.1s,baz=21,slow=46						
	2.2nm,0.3s						
JNU	Nakatsue	8.79	262	LR	LR	23 22 09.9	
	comp=Z,123nm,20.7s,baz=46,slow=39						
KSRS	Korea Array	11.10	287	LR	LR	23 23 46.7	
	comp=Z,134nm,18.2s,baz=95,slow=39						
MA2	Magadan	25.53	11	LR	LR	23 33 21.8	
	comp=Z,52nm,21.2s,baz=252,slow=40						
H11N2	WAKE ISLAND Hy	27.20	117	T	T	23 50 49.8	
	baz=308,slow=74,SNR=4.6						
H11N1	WAKE ISLAND Hy	27.21	117	T	T	23 50 48.7	
	baz=308,slow=74,SNR=3.6						
H11N3	WAKE ISLAND Hy	27.22	117	T	T	23 50 49.3	
	baz=308						
H11S3	WAKE ISLAND Hy	27.84	119	T	T	23 51 48.2	
	baz=312,slow=74,SNR=6.5						
H11S1	WAKE ISLAND Hy	27.84	119	T	T	23 51 47.6	
	baz=312,slow=74,SNR=7.0						
H11S2	WAKE ISLAND Hy	27.85	119	T	T	23 51 45.9	
	baz=312						
SONM	Songino Array	28.96	307	P	P	23 22 32.1	+1.4
	0.2nm,0.7s,baz=98,slow=10,SNR=1.5						
	0.2nm,0.7s						
ZALV	Zalesovo Beam	43.33	314	PcP	PcP	23 26 20.7	-0.5
	0.5nm,0.5s,baz=97,slow=3.3,SNR=2.6						
MKAR	Makanchi Array	45.21	304	P	P	23 24 47.3	-0.9
	0.2nm,0.5s,baz=91,slow=9.7,SNR=4.9						
MKAR				PcP	PcP	23 26 27.7	-0.2
	0.2nm,0.5s,baz=94,slow=4.6,SNR=2.0						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	47.28	310	P	P	23 25 03.7	-0.6
	1.3nm,0.6s,baz=85,slow=7.5,SNR=12						
	1.3nm,0.6s						
ILAR	Eielson Array	51.43	31	P	P	23 25 35.7	-0.1
	0.3nm,0.7s,baz=277,slow=8.1,SNR=2.1						
	0.3nm,0.7s						
BVAR	Borovoye Array	51.98	314	P	P	23 25 40.7	+0.6
	0.4nm,0.8s,baz=90,slow=5.8,SNR=2.8						
	0.4nm,0.8s						
WRA	Warramunga Arr	54.87	188	P	P	23 26 02.1	+0.5
	1.4nm,0.6s,baz=4.6,slow=7.3,SNR=15						
	1.4nm,0.6s						
ASAR	Alice Springs	58.60	188	P	P	23 26 27.6	-0.4
	0.2nm,0.5s,baz=13,slow=8.1,SNR=2.1						
	0.2nm,0.3s						
NWAO	Narrogin (SRO)	71.08	201	LR	LR	23 57 43.5	
	comp=Z,16nm,20.5s,baz=239,slow=35						
PPT	Papeete	83.77	116	LR	LR	00 01 01.2	
	comp=Z,22nm,21.8s,baz=184,slow=32						

AFAD ***23*** *23:31:25.9,38˚.48N×44˚.47E,h6km±1km,ML2.4*
ISK ***23*** *23:31:27.4,38˚.36N×44˚.45E,h7km,ML2.8/7*
ISC 23 23:31:26.7±1.6,38˚.42N±0˚.04×44˚.44E±0˚.06,h3km±11km, n15,σ0°99/26,Turkey-Iran border region

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

PB01 IAML 23 43 49.3
comp=Z,3μm,0.2s
PB02 IPOC Station P 0.97 276⇑ eP Pn 23 43 36.9 +0.7
PB02 eS Sn **23 43 53.1 0.0**
PB02 IAML 23 43 53.7
comp=N,5μm,0.2s
PB02 IPOC Station P 0.97 276 eP Pn 23 43 36.7 +0.5
PB02 eS Sn **23 43 53.5 +0.3**
PB02 IAML 23 43 53.7
comp=Z,2μm,0.2s
PB07 IPOC Station P 1.00 252⇑ eP Pn 23 43 37.2 +0.6
PB07 eS Sn **23 43 53.8 -0.1**
PB07 IAML 23 43 54.1
comp=N,2μm,0.6s
PB07 IPOC Station P 1.00 252 eP Pn 23 43 37.2 +0.6
PB07 eS Sn **23 43 54.7 +0.9**
PB07 IAML 23 43 54.9
comp=Z,713nm,0.2s
PB03 IPOC Station P 1.04 233⇑ eP Pn 23 43 37.7 +0.8
PB03 eS Sn **23 43 54.4 -0.2**
PB03 IAML 23 43 54.8
comp=N,3μm,0.3s
PB03 IPOC Station P 1.04 233 eP Pn 23 43 37.0 +0.1
PB03 eS Sn **23 43 54.6 +0.1**
PB03 IAML 23 43 57.6
comp=Z,2μm,0.2s
PB08 IPOC Station P 1.30 348⇓ eP Pn 23 43 41.0 +1.1
PB08 eS Sn **23 43 60.0 +0.4**
PB08 IAML 23 44 01.4
comp=E,2μm,0.7s
PB08 IPOC Station P 1.30 348 eP Pn 23 43 41.0 +1.1
PB08 eS Sn **23 44 00.8 +1.2**
PB08 IAML 23 44 01.4
comp=Z,560nm,0.3s
PB06 IPOC Station P 1.44 207⇑ eP Pn 23 43 42.2 +1.1
PB06 eS Sn **23 44 02.6 +0.6**
PB06 IAML 23 44 03.1
comp=E,3μm,0.1s
PB06 IPOC Station P 1.44 207 eP Pn 23 43 42.1 +0.9
PB06 eS Sn **23 44 02.3 +0.3**
PB06 IAML 23 44 03.5
comp=Z,830nm,0.6s
HMBC Humberstone 1.48 320⇑ eP Pn 23 43 42.0 +0.4
HMBC eS Sn **23 44 02.8 0.0**
HMBC IAML 23 44 04.4
comp=E,2μm,0.4s
TA02 Huaiquique 1.65 314 eP Pn 23 43 43.8 +0.5
TA02 eS Sn **23 44 05.5 -0.4**
TA02 IAML 23 44 10.3
comp=Z,759nm,0.1s
AF01 San Pedro de A 1.65 158 eP Pn 23 43 43.5 -0.3
AF01 eS Sn **23 44 06.0 -0.6**
AF01 IAML 23 44 29.3
comp=Z,318nm,0.7s
GO01 Chusmiza 1.77 350⇓ eP Pn 23 43 46.2 +0.9
GO01 eS Sn **23 44 10.7 +1.4**
GO01 IAML 23 44 12.6
comp=E,1μm,0.1s
GO01 Chusmiza 1.77 350 eP Pn 23 43 46.1 +0.9
GO01 eS Sn **23 44 10.3 +1.1**
GO01 IAML 23 44 11.9
comp=Z,362nm,0.6s
PB11 IPOC Station P 1.81 336⇓ eP Pn 23 43 46.1 +0.6
PB11 eS Sn **23 44 09.5 0.0**
PB11 IAML 23 44 11.2
comp=N,1μm,0.3s
PB11 IPOC Station P 1.81 336 eP Pn 23 43 46.0 +0.6
PB11 eS Sn **23 44 10.4 +0.8**
PB11 IAML 23 44 13.7
comp=Z,457nm,0.3s
PB05 IPOC Station P 1.89 221⇑ eP Pn 23 43 47.1 +0.8
PB05 eS Sn **23 44 10.9 -0.4**
PB05 IPOC Station P 1.89 221 eP Pn 23 43 47.1 +0.8
PB05 eS Sn **23 44 13.3 +2.0**
PB05 IAML 23 44 18.1
comp=Z,259nm,0.4s
PB10 IPOC Station P 2.61 217 eP Pn 23 43 56.0 +0.8
PB10 eS Sn **23 44 22.7 -4.3**
PB12 IPOC Station P 3.11 333 eP Pn 23 44 01.5 -0.3
PB12 eS Sn 23 44 27.4 -12
PB12 IAML 23 44 43.0
comp=Z,82nm,0.4s
PB16 IPOC Station P 3.12 349 eP Pn 23 44 03.9 +1.5
PB16 eS Sn 23 44 30.1 -10
PB16 IAML 23 44 48.7
comp=Z,52nm,0.4s
YJA Yavi 3.20 104 eP Pn 23 44 08.0 +4.7
YJA eS **Sn 23 44 41.5 0.0**
AP01 Chacalluta 3.33 335 eP Pn 23 44 08.4 +3.8
AP01 IAML 23 44 59.9
comp=Z,208nm,0.6s
PB14 IPOC Station P 3.50 204 eP Pn 23 44 07.4 +0.4
PB14 eS Sn 23 45 01.2 +13
PB14 IAML 23 45 09.8
comp=Z,67nm,0.6s
HJA Humahuaca 3.66 120 eP Pn 23 44 12.3 +3.0
HJA eS Sn 23 45 00.4 +8.1
GO02 Mina Guanaco 3.79 190 eP Pn 23 44 11.6 +0.7
GO02 eS **Sn 23 44 56.4 +1.3**
GO02 IAML 23 44 57.9
comp=Z,77nm,0.4s
AC01 Pan de Azucar 4.97 198 eP Pn 23 44 23.4 -3.0
AC01 IAML 23 45 58.3
comp=Z,26nm,0.7s
LPAZ La Paz 5.15 8 P **Pn 23 44 31.6 +2.2**
comp=Z,3.2nm,0.3s,baz=179,slow=6.7,SNR=25
LPAZ S **Sn 23 45 20.9 -7.3**
comp=Z,3.2nm,0.6s,baz=193,slow=12,SNR=4.2
LPAZ La Paz 5.15 8 eP Pn 23 44 32.0 +2.6
LPAZ eS Sn 23 45 07.9 -20
AC02 Maricunga 5.40 183 eP Pn 23 44 33.3 +0.7
AC02 eS **Sn 23 45 35.9 +2.0**
AC02 IAML 23 45 40.0
comp=Z,14nm,0.2s
SIV San Ignacio 9.14 55 P **Pn 23 45 19.4 -3.3**
comp=Z,1.3nm,0.5s,baz=274,slow=13
BDFB Brasilia 20.58 77 P **P 23 47 41.2 -1.7**
comp=Z,0.9nm,0.4s,baz=240,slow=8.1,SNR=9.1
TORD Torodi Ar. Bea 77.29 70 P **P 23 54 54.1 -0.5**
comp=Z,0.5nm,0.5s,baz=246,slow=6.2,SNR=5.8
comp=Z,0.5nm,0.5s
MKAR Makanchi Array 145.54 36 PKP **PKPab 00 02 38.6 +1.0**
comp=Z,0.4nm,0.6s,baz=301,slow=1.7,SNR=6.0

*IDC **23** 23:58:23.9±1.2,55°.59S×26°.13W,h0km,mb4.1/3,*
mbtmp4.1/4,ML4.3/1,Error ellipse: s-maj=50.3km
s-min=28.4km az=42.0
*NEIC **23** 23:58:27.1±2.1,55°.8S±0°.2×26°.5W±0°.2,h10km±2km,*
mb4.5/23,Error ellipse: s-maj=31.2km s-min=16.7km
az=27.0
ISC 23 23:58:30.1±0.7,55°.7S±0°.1×26°.5W±0°.1,h38km,n39,
σ1s07/40,mb4.5/14,1C-3D,South Sandwich Islands
region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.92**	**280**	Pn	**Pn**	**23 59 55.2**	**+0.1**
HOPE				Sn	**Sn**	**00 01 00.5**	**-1.1**
VNA1	**Neumayer--Stat**	**17.00**	**159**	⇓P	**Pn**	**00 02 25.1**	**+0.7**
	comp=Z,25nm,1.0s						
VNA3	**Neumayer Olymp**	**17.21**	**162**	⇓P	**Pn**	**00 02 27.3**	**+0.1**
	comp=Z,11nm,0.7s						
VNA2	**Neumayer--Watz**	**17.39**	**159**	⇓P	**Pn**	**00 02 29.5**	**+0.1**
	comp=Z,5.3nm,0.4s,baz=320,slow=14						
SNAA	**Sanae**	**18.93**	**157**	⇑P	**Pn**	**00 02 48.4**	**+0.3**
	comp=Z,86nm,0.4s						
SNAA	**Sanae**	**18.93**	**157**	P	**P**	**00 02 45.8**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=327,slow=12,SNR=5.2						
	comp=Z,2.4nm,0.5s						
SNAA	**Sanae**	**18.93**	**157**	P	**P**	**00 02 46.4**	**-0.8**
TROLL	**Troll, Antarti**	**20.41**	**154**	P	**P**	**00 03 04.8**	**+1.3**
BELA	**Belgrano 2**	**22.48**	**184**	P	**P**	**00 03 23.8**	**-1.7**
MG03	**Isla Dawson**	**25.12**	**256**	P	**P**	**00 03 52.1**	**+1.2**
GO08	**Villa O'Higgin**	**28.76**	**265**	P	**P**	**00 04 23.6**	**-0.1**
TRQA	**Tornquist**	**29.55**	**292**	P	**P**	**00 04 31.6**	**+0.7**
TRQA				IAmb	IAmb	00 04 32.4	
	comp=Z,6.4nm,0.9s						
PLTB	**Pedras Altas**	**30.55**	**310**	P	**P**	**00 04 40.3**	**+0.5**
QSPA	**South Pole Qui**	**34.57**	**180**	P	**P**	**00 05 15.1**	**+0.3**
QSPA				IAmb	IAmb	00 05 27.2	
	comp=Z,3.9nm,0.7s						
CPUP	**Villa Florida**	**36.87**	**310**	P	**P**	**00 05 33.2**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=158,slow=8.9,SNR=7.8						
	comp=Z,1.6nm,0.6s						
CPUP	**Villa Florida**	**36.87**	**310**	P	**P**	**00 05 34.2**	**-0.4**
MT09	**Talagante**	**37.58**	**287**	P	**P**	**00 05 40.0**	**-0.7**
MT09				IAmb	IAmb	00 06 03.0	
	comp=Z,11nm,1.4s						
MT01	**Popeta**	**37.65**	**286**	P	**P**	**00 05 40.2**	**-1.0**
MT01				IAmb	IAmb	00 06 06.2	
	comp=Z,4.9nm,1.0s						
MT02	**Curacav**	**38.05**	**287**	P	**P**	**00 05 44.1**	**-0.5**
MT02				IAmb	IAmb	00 06 12.6	
	comp=Z,16nm,1.4s						
CO02	**Combarbal**	**39.56**	**289**	P	**P**	**00 05 58.1**	**+0.7**
CO02				IAmb	IAmb	00 06 17.8	
	comp=Z,8.0nm,0.9s						
CO03	**El Pedregal**	**39.68**	**290**	P	**P**	**00 05 59.0**	**+0.7**
CO01	**Juntas del Tor**	**40.04**	**292**	P	**P**	**00 06 02.7**	**+1.1**
CO01				IAmb	IAmb	00 06 03.5	
	comp=Z,4.9nm,0.7s						
AC05	**El Transito**	**41.04**	**292**	P	**P**	**00 06 10.5**	**+0.8**
AC05				IAmb	IAmb	00 06 11.4	
	comp=Z,13nm,0.8s						
LCO	**Las Campanas**	**41.13**	**292**	P	**P**	**00 06 09.7**	**-0.9**
LCO				IAmb	IAmb	00 06 11.6	
	comp=Z,18nm,1.2s						
AQDB	**Aquidauana**	**41.40**	**316**	P	**P**	**00 06 11.1**	**-1.4**
GO02	**Mina Guanaco**	**43.67**	**296**	P	**P**	**00 06 32.2**	**+0.9**
GO02				IAmb	IAmb	00 06 56.9	
	comp=Z,18nm,1.5s						
PB14	**IPOC Station P**	**44.53**	**296**	P	**P**	**00 06 38.5**	**+0.2**
PB14				IAmb	IAmb	00 06 52.1	
	comp=Z,15nm,1.3s						
PB07	**IPOC Station P**	**46.69**	**299**	P	**P**	**00 06 56.1**	**+1.0**
PB08	**IPOC Station P**	**47.67**	**301**	P	**P**	**00 07 03.9**	**+0.9**
GO01	**Chusmiza**	**48.09**	**301**	P	**P**	**00 07 07.3**	**+0.9**
GO01				IAmb	IAmb	00 07 08.3	
	comp=Z,3.2nm,0.8s						
LPAZ	**La Paz**	**50.49**	**304**	P	**P**	**00 07 25.9**	**+1.0**
	comp=Z,4.7nm,0.6s,baz=144,slow=5.7,SNR=20						
	comp=Z,4.7nm,0.6s						
LPAZ	**La Paz**	**50.49**	**304**	P	**P**	**00 07 25.8**	**+0.9**
LPAZ				IAmb	IAmb	00 07 26.7	
	comp=Z,5.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.54**	**29**	P	**P**	**00 09 51.6**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=198,slow=5.4,SNR=4.3						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**150.16**	**312**	PKPbc	**PKPbc**	**00 18 15.2**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=119,slow=1.6,SNR=23						
SONM	**Songino Array**	**150.31**	**85**	PKPbc	**PKPbc**	**00 18 14.8**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=242,slow=3.4,SNR=2.7						
GHO	**Glory Hole Cre**	**150.40**	**306**	PKPbc	**PKPbc**	**00 18 16.0**	**+0.1**
D25K	**Kavik River**	**150.53**	**321**	PKPbc	**PKPbc**	**00 18 15.9**	**-0.1**
WRH	**Wood River Hil**	**150.62**	**311**	PKPbc	**PKiKP**	**00 18 19.4**	**+2.5**
BRLK	**Bradley Lake**	**150.78**	**301**	PKPdf	**PKPdf**	**00 18 13.6**	**+2.3**

*AZER **23** 23:59:57.3,38°.39N×44°.60E,h10km,ml2.5*
*ISK **23** 23:59:58.8,38°.39N×44°.54E,h3km,ML2.5/7*
*TEH **23** 23:59:58.4,38°.41N×44°.48E,h10km±999km,ML2.6,*
Presumed earthquake
*AFAD **23** 23:59:59.1,38°.46N×44°.50E,h7km±2km,ML2.3*
ISC 23 23:59:59.2±1.1,38°.41N±0°.03×44°.53E±0°.02,h10km±10km,
n22,σ0s99/37,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**301**	P	**Pg**	**00 00 08.6**	**-0.2**
OZAP				S	**Sg**	**00 00 14.9**	**-0.5**
OZAP				IAML		00 00 23.0	
	comp=N,363nm,0.7s						
ISHB	**Shabestar**	**0.86**	**98**	Pg	**Pg**	**00 00 14.8**	**-1.1**
VANB	**Van**	**0.92**	**282**	Pg	**Pb**	**00 00 17.1**	**-0.2**
VANB				Sg	**Sb**	**00 00 29.9**	**+0.3**
VMUR	**Van-Muradiye**	**0.95**	**308**	P	**Pg**	**00 00 16.3**	**-1.2**
VMUR				S	**Sn**	**00 00 31.4**	**-1.2**
VMUR				IAML		00 00 36.0	
	comp=N,139nm,0.5s						
VMUR				IAML		00 00 39.0	
	comp=E,118nm,0.5s						
MAKU	**Maku**	**0.95**	**7**	Pg	**Pg**	**00 00 16.7**	**-0.8**
IMRD	**Marand**	**0.97**	**71**	Pg	**Pb**	**00 00 17.6**	**-0.7**
IMRD				Sg	**Sn**	**00 00 32.1**	**-0.9**
HAKT	**HAKKARI**	**1.07**	**218**	P	**Pg**	**00 00 18.8**	**-1.0**
HAKT				S	**Sn**	**00 00 36.3**	**+0.7**
HAKT				IAML		00 00 40.0	
	comp=E,109nm,0.4s						
HAKT				IAML		00 00 45.0	
	comp=N,52nm,0.4s						
HAKT	**HAKKARI**	**1.07**	**218**	P	**Pg**	**00 00 18.8**	**-1.0**
HAKT				S	**Sn**	**00 00 36.5**	**+0.8**
NAX	**Nakhchivan**	**1.07**	**44**	P	**Pb**	**00 00 19.5**	**-0.5**
NAX				S	**Sn**	**00 00 35.3**	**-0.1**
ERCV	**ERCIS-VAN**	**1.11**	**304**	Pn	**Pn**	**00 00 20.6**	**-0.5**
ERCV				Sn	**Sn**	**00 00 37.7**	**+1.1**
ORD	**Ordubad**	**1.26**	**65**	P	**Pg**	**00 00 22.9**	**-0.5**
ORD				S	**Sn**	**00 00 40.8**	**+0.8**
SBZ	**Shahbuz**	**1.27**	**39**	P	**Pn**	**00 00 22.7**	**-0.4**
SBZ				S	**Sn**	**00 00 40.4**	**+0.1**
HYR	**Heyderabad**	**1.33**	**11**	P	**Pg**	**00 00 24.4**	**-0.4**
HYR				S	**Sg**	**00 00 43.1**	**+1.0**
IAZR	**Azarshahr**	**1.36**	**122**	Pg	**Pg**	**00 00 25.6**	**+0.3**
CUKT	**Cukurca**	**1.37**	**212**	Pn	**Pg**	**00 00 25.5**	**0.0**
CUKT				Sn	**Sg**	**00 00 44.9**	**+1.6**
ADCV	**BITLIS_Adilcev**	**1.47**	**286**	P	**Pg**	**00 00 27.4**	**0.0**
ADCV				S	**Sg**	**00 00 47.6**	**+1.0**
ADCV				IAML		00 00 53.0	
	comp=N,37nm,0.5s						
ADCV				IAML		00 00 53.0	
	comp=E,45nm,0.7s						
IGDI	**IGDIR**	**1.50**	**347**	P	**Pg**	**00 00 28.0**	**0.0**
IGDI				S	**Sg**	**00 00 51.2**	**+3.7**
AGRB	**Hanur-Agry**	**1.67**	**315**	Pn	**Pb**	**00 00 29.6**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pn	**Pb**	**00 00 31.0**	**+0.1**
MLAZ				Sn	**Sg**	**00 00 54.3**	**0.0**
GNI	**Garni**	**1.75**	**5**	Pn	**Pb**	**00 00 31.4**	**-0.1**
GURO	**Guroymak-BITLI**	**1.97**	**275**	Pn	**Pb**	**00 00 34.4**	**-0.8**
IHRS	**Heris**	**1.98**	**92**	Pn	**Pb**	**00 00 35.5**	**0.0**

IDC 24 00:06:34.7±42.0,23°.46N×97°.69E,h0km,mb3.4/5,
mbtmp3.4/5,Error ellipse: s-maj=731.8km
s-min=79.6km az=171.0,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**25.30**	**14**	P	P	00 12 03.1	+0.1
	0.2nm,0.6s,baz=209,slow=14,SNR=1.9						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**26.38**	**336**	P	P	00 12 13.3	+0.6
	0.3nm,0.5s,baz=145,slow=9.4,SNR=5.0						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**30.94**	**336**	P	P	00 12 52.7	-0.5
	0.3nm,0.3s,baz=151,slow=11,SNR=1.4						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**31.96**	**346**	P	P	00 13 01.9	-0.3
	0.3nm,0.4s,baz=157,slow=7.8,SNR=2.0						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**36.06**	**332**	P	P	00 13 37.8	-0.1
	0.3nm,0.6s,baz=131,slow=4.4,SNR=2.5						
	0.3nm,0.6s						

TRN 24 00:08:15.0,17°.71N×61°.65W,h28km,MD3.6,Near East
of Barbuda.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.13**	**253**	eP	Pn	00 08 21.6	+0.4
ANWB				eS	Sb	00 08 26.0	+2.1
MBWH	**Windy Hill**	**1.09**	**208**	eP	Pb	00 08 35.5	+0.2
MBWH				eS	Sb	00 08 50.4	+1.3
MBFL	**Flemmings, Mon**	**1.09**	**209**	eP	Pb	00 08 35.6	+0.3
MBFL				eS	Sb	00 08 51.4	+2.3
SKI	**Saint Kitts**	**1.10**	**250**	eP	Pb	00 08 36.0	+0.5
SKI				eS	Sb	00 08 51.2	+1.8
MLYT	**Lee's Yard**	**1.11**	**208**	eP	Pb	00 08 35.9	+0.4
MLYT				eS	Sb	00 08 51.8	+2.2
SEUS	**St. Eustatius**	**1.28**	**261**	eP	Pb	00 08 39.2	+0.7
SEUS				eS	Sb	00 08 56.3	+1.6
SMRT	**St. Maarten**	**1.40**	**284**	eP	Pb	00 08 39.9	-0.6
SMRT				eS	Sb	00 08 57.8	0.0
DHSZ	**Broadband at M**	**1.43**	**184**	eP	Pb	00 08 41.0	0.0
DHSZ				eS	Sb	00 08 59.6	+0.8
DSDZ	**La Diserade, G**	**1.50**	**158**	eP	Pn	00 08 41.0	+1.0
DSDZ				eS	Sb	00 09 01.1	+0.4
SABA	**Saba**	**1.52**	**267**	eP	Pb	00 08 42.8	+0.3
MMLZ	**Guadeloupe Bro**	**1.65**	**181**	eP	Pb	00 08 43.8	-1.0
MMLZ				eS	Sb	00 09 04.8	-0.4
TBG	**Guadaloupe-3**	**1.84**	**180**	eP	Pb	00 08 46.5	-1.6
DSLB	**Salisbury**	**2.27**	**174**	eP	Pn	00 08 52.2	+1.6
DSLB				eS	Sn	00 09 19.7	+2.1

*AZER **24** 00:10:37.1,38°.42N×44°.52E,h2km,ml2.6*
*AFAD **24** 00:10:39.2,38°.46N×44°.60E,h7km±2km,ML2.5*
*TEH **24** 00:10:41.0,38°.49N×44°.60E,h12km±999km,ML2.6,*
Presumed earthquake
ISC 24 00:10:40.9±1.1,38°.42N±0°.03×44°.54E±0°.03,h6km±11km,
n19,σ1s32/34,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**299**	P	**Pg**	**00 10 49.5**	**-0.9**
OZAP				S	**Sg**	**00 10 56.9**	**0.0**
OZAP				IAML		00 11 08.0	
	comp=N,366nm,0.6s						
ISHB	**Shabestar**	**0.86**	**99**	Pg	**Pg**	**00 10 56.4**	**-1.0**
ISHB				Sg	**Sb**	**00 11 10.1**	**-0.2**
TVAN	**Van**	**0.89**	**277**	P	**Pg**	**00 10 57.2**	**-0.9**
TVAN				S	**Sg**	**00 11 11.1**	**+1.4**
TVAN				IAML		00 11 16.0	
	comp=E,161nm,0.4s						
TVAN				IAML		00 11 20.0	
	comp=N,164nm,0.7s						
MAKU	**Maku**	**0.94**	**7**	Pg	**Pg**	**00 10 58.1**	**-0.9**
IMRD	**Marand**	**0.96**	**72**	Pg	**Pg**	**00 10 59.1**	**-0.2**
NAX	**Nakhchivan**	**1.06**	**45**	P	**Pg**	**00 11 00.9**	**-0.4**
NAX				S	**Sn**	**00 11 16.8**	**-0.7**
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pg**	**00 11 01.1**	**-0.7**
HAKT				S	**Sg**	**00 11 17.8**	**+2.0**
HAKT				IAML		00 11 21.0	
	comp=E,111nm,0.4s						
HAKT				IAML		00 11 22.0	
	comp=N,91nm,0.4s						
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pg**	**00 11 01.0**	**-0.7**
HAKT				S	**Sg**	**00 11 17.8**	**+2.0**
ORD	**Ordubad**	**1.25**	**66**	P	**Pb**	**00 11 04.2**	**-0.7**
ORD				S	**Sn**	**00 11 22.4**	**+0.3**
SBZ	**Shahbuz**	**1.25**	**39**	P	**Pb**	**00 11 04.2**	**-0.8**
SBZ				S	**Sn**	**00 11 24.2**	**+1.9**
HYR	**Heyderabad**	**1.32**	**11**	P	**Pn**	**00 11 05.7**	**-0.3**
HYR				S	**Sn**	**00 11 25.6**	**+1.7**
IAZR	**Azarshahr**	**1.36**	**123**	Pg	**Pn**	**00 11 07.2**	**+0.6**
ADCV	**BITLIS_Adilcev**	**1.47**	**286**	P	**Pn**	**00 11 08.0**	**-0.1**
ADCV				S	**Sg**	**00 11 29.7**	**+1.5**
ADCV				IAML		00 11 34.0	
	comp=N,53nm,0.5s						
IGDI	**IGDIR**	**1.49**	**346**	P	**Pn**	**00 11 08.4**	**+0.1**
IGDI				S	**Sg**	**00 11 31.8**	**+3.0**
IHRS	**Heris**	**1.97**	**92**	Pn	**Pb**	**00 11 16.5**	**-0.9**
QRD	**Qoradiz**	**2.41**	**64**	P	**Pn**	**00 11 21.7**	**+0.9**
QRD				S	**Sb**	**00 11 54.8**	**+0.3**
GANJ	**Ganja**	**2.61**	**31**	P	**Pn**	**00 11 25.2**	**+1.4**
GANJ				S	**Sb**	**00 11 58.7**	**-1.9**
YRD	**Yardimli**	**2.94**	**79**	P	**Pn**	**00 11 28.8**	**+0.4**
YRD				S	**Sb**	**00 12 07.2**	**-2.9**
LRK	**Lerik**	**2.99**	**85**	P	**Pn**	**00 11 29.8**	**+0.7**
LRK				S	**Sb**	**00 12 10.3**	**-1.2**

*AFAD **24** 00:16:19.9,38°.38N×44°.58E,h7km±3km,ML2.8*
*AZER **24** 00:16:19.3,38°.41N×44°.54E,h3km,ml3.0*
*TEH **24** 00:16:22.1,38°.44N×44°.45E,h6km±53km,ML2.6,*
Presumed earthquake
ISC 24 00:16:21.3±1.3,38°.38N±0°.03×44°.50E±0°.02,h7km±11km,
n26,σ1s57/37,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**306**	P	**Pb**	**00 16 30.9**	**-1.5**
OZAP				S	**Sb**	**00 16 37.7**	**-2.0**
OZAP				IAML		00 16 45.0	
	comp=N,675nm,0.7s						
OZAP	**Van, Ozalp-Mer**	**0.49**	**306**	Pg	**Pb**	**00 16 30.8**	**-1.5**
TVAN	**Van**	**0.87**	**280**	P	**Pg**	**00 16 37.5**	**-0.6**
TVAN				IAML		00 17 06.0	
	comp=E,244nm,1.3s						
TVAN				IAML		00 17 07.0	
	comp=N,282nm,0.5s						
TVAN	**Van**	**0.87**	**280**	Pg	**Pg**	**00 16 37.4**	**-0.6**
ISHB	**Shabestar**	**0.89**	**96**	Pg	**Pn**	**00 16 39.1**	**-1.3**
VMUR	**Van-Muradiye**	**0.95**	**310**	P	**Pb**	**00 16 38.9**	**-1.3**
VMUR				S	**Sb**	**00 16 52.9**	**-0.1**
VMUR				IAML		00 16 57.0	
	comp=N,182nm,0.7s						
VMUR				IAML		00 16 58.0	
	comp=E,256nm,0.4s						
VMUR	**Van-Muradiye**	**0.95**	**310**	Pg	**Pb**	**00 16 38.8**	**-1.3**
MAKU	**Maku**	**0.99**	**8**	Pg	**Pb**	**00 16 39.4**	**-1.5**
IMRD	**Marand**	**1.00**	**70**	Pg	**Pn**	**00 16 41.9**	**0.0**
HAKT	**HAKKARI**	**1.03**	**218**	P	**Pn**	**00 16 42.7**	**+0.4**
HAKT				S	**Sn**	**00 17 00.1**	**+3.0**
ERCV	**ERCIS-VAN**	**1.11**	**306**	P	**Pb**	**00 16 42.0**	**-1.0**
ERCV				IAML		00 17 03.0	
	comp=N,404nm,0.5s						
ERCV				IAML		00 17 09.0	
	comp=E,377nm,0.5s						
NAX	**Nakhchivan**	**1.11**	**44**	P	**Pn**	**00 16 43.5**	**+0.1**
NAX				S	**Sn**	**00 16 58.5**	**-0.6**
GEVA	**Gevas**	**1.13**	**267**	P	**Pb**	**00 16 42.6**	**-0.7**
GEVA				S	**Sn**	**00 17 00.3**	**+0.7**
GEVA				IAML		00 17 05.0	
	comp=E,158nm,0.5s						
GEVA				IAML		00 17 07.0	
	comp=N,113nm,0.4s						
ORD	**Ordubad**	**1.29**	**64**	P	**Pn**	**00 16 47.0**	**+1.1**
ORD				S	**Sn**	**00 17 05.0**	**+1.5**
SBZ	**Shahbuz**	**1.31**	**39**	P	**Pn**	**00 16 46.7**	**+0.6**
SBZ				S	**Sn**	**00 17 06.5**	**+2.6**
DYDN	**Diyadin**	**1.32**	**332**	P	**Pb**	**00 16 45.6**	**-1.1**
DYDN				S	**Sn**	**00 17 02.7**	**-1.7**
DYDN				IAML		00 17 08.0	
	comp=E,213nm,1.0s						
DYDN				IAML		00 17 09.0	
	comp=N,183nm,0.3s						
DYDN	**Diyadin**	**1.32**	**332**	Pg	**Pb**	**00 16 45.5**	**-1.1**
IAZR	**Azarshahr**	**1.36**	**120**	Pg	**Pg**	**00 16 49.2**	**+1.7**
HYR	**Heyderabad**	**1.37**	**12**	P	**Pg**	**00 16 47.1**	**-0.5**
HYR				S	**Sn**	**00 17 07.5**	**+2.2**
ADCV	**BITLIS_Adilcev**	**1.45**	**288**	P	**Pg**	**00 16 48.4**	**-0.9**
ADCV				S	**Sg**	**00 17 10.6**	**+2.5**
ADCV	**BITLIS_Adilcev**	**1.45**	**288**	Pg	**Pg**	**00 16 48.3**	**-0.9**
IGDI	**IGDIR**	**1.52**	**348**	P	**Pg**	**00 16 50.8**	**+0.3**
IGDI				S	**Sg**	**00 17 13.2**	**+2.9**
IHRS	**Heris**	**2.00**	**91**	Pn	**Pg**	**00 16 59.8**	**+0.1**
IHSH	**Hashtrud**	**2.44**	**115**	Pn	**Pg**	**00 17 05.8**	**-2.3**
ISRB	**Sarab**	**2.56**	**101**	Pn	**Pg**	**00 17 07.7**	**-2.7**
GRMI	**Germi**	**2.70**	**80**	Pn	**Pb**	**00 17 09.0**	**-0.9**

IDC 24 00:17:19.9±2.9,4°.13S×135°.24E,h0km,mb3.4/1,
mbtmp3.7/4,ML3.7/3,Error ellipse: s-maj=95.6km
s-min=28.2km az=72.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.13**	**309**	Pn	Pn	00

IDC ***24*** *00:24:02.9±1.4, 5°.80N×125°.41E, h70km±12km, mb3.7/15, mbtmp4.0/15, MS3.1/2, Error ellipse: s-maj=27.8km s-min=10.6km az=79.0*

ISC 24 00:24:00.1±0.6,**5°.84N**±0°.04×**125°.05E**±0°.07,**h40**km,**n43,** σ1§**61**/46,**mb4.1**/20,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**1.33**	**23**	P		**Pn**	**00 24 22.9**	**+0.6**
	298nm,0.4s,baz=137,slow=2.0,SNR=9.8							
DAV				S		**Sn**	**00 24 41.4**	**+2.7**
	892nm,0.3s,baz=259,slow=24,SNR=16							
DAV				LR		LR	00 24 59.4	
	comp=Z,502nm,20.5s,baz=202,slow=45							
DAV	**Davao City (W)**	**1.33**	**23**			**Pn**	**00 24 21.9**	**-0.3**
DAV						**Sn**	**00 24 40.1**	**+1.4**
DAV	**Davao City (W)**	**1.33**	**23**	P		**Pn**	**00 24 22.2**	**0.0**
DAV				S		**Sn**	**00 24 39.1**	**+0.3**
SGSI	**Sangihe**	**2.19**	**167**	P		**Pn**	**00 24 36.5**	**+2.5**
SGSI				S		**Sn**	**00 25 04.4**	**+4.6**
MNI	**Manado**	**4.37**	**183**	P		**Pn**	**00 25 06.3**	**+2.3**
GAMI	**Galela, Maluku**	**4.82**	**145**	P		**Pn**	**00 25 11.4**	**+1.2**
TNTI	**Ternate**	**5.54**	**155**	Pn		**Pn**	**00 25 16.5**	**-3.5**
MRSI	**Marisa**	**6.16**	**210**	P		**Pn**	**00 25 29.4**	**+0.8**
TOLI2	**Tolitoli**	**6.34**	**222**	Pn		**Pn**	**00 25 30.1**	**-1.0**
TOLI2						**Sn**	**00 26 41.6**	**-0.6**
MYLDM	**Lahad Datu**	**6.55**	**265**	Pn		**Pn**	**00 25 34.5**	**+0.5**
LUWI	**Luwuk**	**7.20**	**199**	Pn		**Pn**	**00 25 41.2**	**-1.7**
SIJI	**Sorong**	**9.10**	**137**	P		**Pn**	**00 26 07.2**	**-1.8**
	23nm,0.2s,baz=290,slow=23,SNR=14							
JOW	**Kunigami**	**21.11**	**8**	P		**P**	**00 28 43.0**	**+1.6**
	17nm,0.8s,baz=124,slow=6.7,SNR=3.6 17nm,0.8s							
LEM	**Lembang**	**21.47**	**234**	LR		LR	00 38 32.6	
	comp=Z,66nm,18.1s,baz=224,slow=40							
FITZ	**Fitzroy Crossi**	**23.79**	**179**	P		**P**	**00 29 09.9**	**+0.7**
	1.6nm,0.5s,baz=1.2,slow=8.6,SNR=5.9 1.6nm,0.5s							
WB0	**Warramunga Arr**	**27.05**	**160**	P		**P**	**00 29 37.6**	**-1.3**
WRA	**Warramunga Arr**	**27.20**	**161**	P		**P**	**00 29 38.4**	**-1.8**
	0.6nm,0.3s,baz=340,slow=10,SNR=15 0.6nm,0.3s							
WRA	**Warramunga Arr**	**27.20**	**161**	P		**P**	**00 29 37.8**	**-2.4**
WR8	**Warramunga Arr**	**27.26**	**160**	P		**P**	**00 29 39.7**	**-1.1**
WR8				IAmb		IAmb	00 29 54.4	
	comp=Z,6.3nm,1.0s							
CMAR	**Chiang Mai Arr**	**28.39**	**299**	P		**P**	**00 29 53.1**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=109,slow=6.8,SNR=5.0 comp=Z,0.5nm,0.3s							
ASAR	**Alice Springs**	**30.57**	**164**	P		**P**	**00 30 09.2**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=344,slow=7.1,SNR=26 comp=Z,1.4nm,0.5s							
ASAR	**Alice Springs**	**30.57**	**164**	P		**P**	**00 30 08.2**	**-2.0**
KSRS	**Korea Array**	**31.58**	**4**	P		**P**	**00 30 18.4**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=184,slow=11,SNR=2.2							
KSRS				LR		LR	00 45 20.8	
	comp=Z,19nm,18.6s,baz=320,slow=40 comp=Z,0.6nm,0.3s							
MJAR	**Matsushiro Arr**	**32.85**	**20**	P		**P**	**00 30 28.6**	**-1.6**
	comp=Z,1.3nm,0.6s,baz=193,slow=9.2,SNR=2.2 comp=Z,1.3nm,0.6s							
BBOO	**Buckleboo**	**39.83**	**165**	P		**P**	**00 31 28.9**	**-0.8**
BBOO				IAmb		IAmb	00 31 41.4	
	comp=Z,9.0nm,1.1s							
STKA	**Stephens Creek**	**40.69**	**158**	P		**P**	**00 31 35.6**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=317,slow=10,SNR=5.0 comp=Z,0.8nm,0.4s							
STKA	**Stephens Creek**	**40.69**	**158**	P		**P**	**00 31 35.2**	**-1.6**
STKA				IAmb		IAmb	00 31 42.7	
	comp=Z,6.5nm,0.7s							
SONM	**Songino Array**	**44.79**	**342**	P		**P**	**00 32 09.8**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=163,slow=6.0,SNR=2.3 comp=Z,0.4nm,0.9s							
PETK	**Petropavlovsk-**	**54.15**	**24**	P		**P**	**00 33 19.1**	**-2.1**
	comp=Z,8.1nm,1.1s,baz=224,slow=7.2,SNR=5.5 comp=Z,8.1nm,1.1s							
PETK	**Petropavlovsk-**	**54.15**	**24**	P		**P**	**00 33 20.6**	**-0.6**
MKAR	**Makanchi Array**	**54.88**	**325**	P		**P**	**00 33 28.2**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=113,slow=7.7,SNR=14 comp=Z,0.3nm,0.4s							
MKAR	**Makanchi Array**	**54.88**	**325**	P		**P**	**00 33 27.7**	**+1.0**
KURBB	**Kurchatov Arra**	**59.08**	**327**	P		**P**	**00 33 57.6**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=126,slow=6.7,SNR=6.1 comp=Z,0.6nm,0.8s							
KURK	**Kurchatov**	**59.08**	**328**	P		**P**	**00 33 56.7**	**+0.5**
E19K	**Redstone River**	**79.93**	**22**	P		**P**	**00 36 04.9**	**+0.2**
B21K	**Ikpikpuk River**	**81.19**	**20**	P		**P**	**00 36 11.5**	**+0.2**
B21K				IAmb		IAmb	00 36 12.7	
	comp=Z,3.0nm,0.7s							
G21K	**Allakaket**	**81.27**	**24**	P		**P**	**00 36 12.2**	**+0.4**
G21K				IAmb		IAmb	00 36 16.8	
	comp=Z,2.4nm,1.0s							
ILAR	**Eielson Array**	**83.93**	**26**	P		**P**	**00 36 24.2**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=240,slow=4.8,SNR=14 comp=Z,0.9nm,0.7s							
D25K	**Kavik River**	**84.08**	**21**	P		**P**	**00 36 26.8**	**+0.4**
D25K				IAmb		IAmb	00 36 27.5	
	comp=Z,1.6nm,0.8s							
K24K	**Donnelly Dome**	**84.44**	**26**	P		**P**	**00 36 27.9**	**-0.4**
K24K				IAmb		IAmb	00 36 38.6	
	comp=Z,3.6nm,0.9s							
C27K	**Jago River**	**85.00**	**21**	P		**P**	**00 36 32.0**	**+1.0**
RES	**Resolute Bay**	**96.05**	**10**	P		**P**	**00 37 22.1**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=298,slow=3.5,SNR=4.0 comp=Z,0.7nm,0.7s							
YKA	**Yellowknife Ar**	**98.27**	**24**	P		Pdif	00 37 32.7	-0.5
	comp=Z,0.2nm,0.8s,baz=303,slow=5.8,SNR=3.7 comp=Z,0.2nm,0.8s							

IDC ***24*** *00:33:47.0±0.6, 31°.18N×56°.63E, h0km, mb4.2/26, mbtmp4.3/32, ML3.8/5, MS4.0/63, Error ellipse: s-maj=16.7km s-min=11.7km az=11.0*

BJI ***24*** *00:33:46.8, 31°.24N×56°.60E, h9km, mB5.2/5, mb4.5/29, Ms4.7/26, Ms7 4.5/26*

MOS ***24*** *00:33:46.9±1.4, 31°.14N×56°.66E, h11km, mb4.6/32, Error ellipse: s-maj=5.8km s-min=4.2km az=90.2*

TEH ***24*** *00:33:46.6, 31°.25N×56°.62E, h7km±16km, ML4.9, Presumed earthquake*

OMAN ***24*** *00:33:47.4±0.8, 31°.39N×56°.47E, h10km, mb4.2/34, ml4.3/1, ms3.5/7, Error ellipse: s-maj=12.0km s-min=7.6km az=89.0*

NEIC ***24*** *00:33:48.0±1.5, 31°.20N±0°.07×56°.64E±0°.09, h10km±1km, mb4.6/74, Error ellipse: s-maj=13.1km s-min=11.6km az=137.0*

DSN ***24*** *00:33:49.3±0.6, 31°.21N×56°.45E, h10km, mb4.9/2, ML4.0/18, Error ellipse: s-maj=11.4km s-min=5.8km az=90.0*

GCMT ***24*** *00:33:50.0±0.3, 31°.16N±0°.02×56°.64E±0°.02, h22km±2km, MW4.8/72, Moment Tensor Solution. s13,c14; s72,c104; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.06±.11; Mθθ=-1.60±.09; Mφφ=1.54±.08; Mrθ=0.18±.13; Mrφ=-0.73±.07; Mθφ=-0.78±.15; Best double couple: Mo=1.89300×10^16 NP1:ϕ1=215.00000°, δ74.00000°, λ.16.00000°. NP2: ϕs=120.00000°, δ75.00000°, λ.164.00000°. Principal axes: T 2.0250, Plg22.0000°, Azm78.0000°; N -0.2630, Plg68.0000°, Azm258.0000°; P -1.7610, Plg0.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GII ***24*** *00:34:45.7±0.0, 31°.21N×51°.61E, h0km, confirmed*

ISC 24 00:33:49.6±0.5,**31°.26N**±0°.03×**56°.57E**±0°.04,**h15**km±3km, **h15**km:**pP-P,n402,** σ1§**57**/395,**mb4.5**/97,**MS4.1**/69,**15C-1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZRDN	**Zarand Kerman**	**0.29**	**185**	Pg		**Pg**	**00 33 52.6**	**-3.2**
KHGB	**Koh Gabri**	**0.88**	**185**	Pg		**Pb**	**00 34 03.4**	**-3.3**
KRM1	**Kerman Provinc**	**0.97**	**141**	Pg		**Pb**	**00 34 05.0**	**-3.1**
KRM1				Sg		**Sb**	**00 34 20.4**	**-0.4**
NGRK	**Negar Kerman**	**1.61**	**175**	Pg		**Pn**	**00 34 17.5**	**-0.3**
CHMN	**Cheshme madani**	**1.62**	**149**	Pg		**Pn**	**00 34 16.7**	**-1.3**
TPRV	**Parvadeh(Tabas**	**1.77**	**3**	Pg		**Pn**	**00 34 19.7**	**-0.1**
DOBD	**Dorbid, Yazd**	**1.90**	**293**	Pn		**Pn**	**00 34 22.3**	**+0.7**
TAFT	**Taft - Yazd**	**2.10**	**283**	Pn		**Pn**	**00 34 25.0**	**+0.6**
BSRN	**Basiran**	**2.29**	**71**	Pn		**Pn**	**00 34 26.0**	**-1.1**
TKDS	**Koohdasht(Taba**	**2.40**	**11**	Pn		**Pn**	**00 34 29.0**	**+0.6**
TNSJ	**Nastanj**	**2.70**	**1**	Pn		**Pn**	**00 34 32.8**	**+0.2**
ANAR	**Anarak**	**3.08**	**309**	Pn		**Pn**	**00 34 38.6**	**+0.7**
KHNJ	**Kahnooj**	**3.44**	**163**	Pn		**Pn**	**00 34 43.2**	**+0.5**
IRAM	**Ramesheh**	**3.62**	**280**	Pn		**Pn**	**00 34 46.1**	**+0.8**
TAPT	**Tabas- Tapeh t**	**3.65**	**8**	Pn		**Pn**	**00 34 46.5**	**+0.8**
JHRM	**Jahrom**	**3.78**	**224**	Pn		**Pn**	**00 34 48.4**	**+1.1**
SHI	**Shiraz**	**3.85**	**246**	Pn		**Pn**	**00 34 49.6**	**+1.2**
SHRT	**Shahrakht**	**3.95**	**52**	Pn		**Pn**	**00 34 49.6**	**-0.1**
LAR1	**LAR**	**4.05**	**209**	Pn		**Pn**	**00 34 51.8**	**+0.6**
ZHDN	**Zahedan**	**4.11**	**116**	Pn		**Pn**	**00 34 51.8**	**-0.2**
KLNJ	**Kolanjah**	**4.27**	**268**	Pn		**Pn**	**00 34 55.7**	**+1.2**
KAZ2	**Kazeron-Fars-I**	**4.54**	**250**	Pn		**Pn**	**00 34 59.1**	**+1.2**
IBRJ	**Brojen**	**4.58**	**280**	Pn		**Pn**	**00 35 00.0**	**+1.5**
KHL1	**Khalili_Fars**	**4.60**	**219**	Pn		**Pn**	**00 34 59.3**	**+0.8**
TBHD	**Torbat heydari**	**4.71**	**28**	Pn		**Pn**	**00 35 00.5**	**+0.3**
ISFB	**Sefidab**	**4.77**	**311**	Pn		**Pn**	**00 35 02.4**	**+1.4**
LMD1	**Lamerd**	**4.91**	**218**	Pn		**Pn**	**00 35 03.7**	**+0.8**
TBJM	**Torbat-e-JAM**	**5.09**	**37**	Pn		**Pn**	**00 35 05.7**	**+0.2**
SHME	**Shamm**	**5.20**	**184**	*i* P		**Pn**	**00 35 06.0**	**-0.9**
	SNR=19							
SHME	**Shamm**	**5.20**	**184**	P		**Pn**	**00 35 09.2**	**+2.3**
	SNR=10							
SHME				S		**Sn**	**00 36 10.9**	**+4.3**
BANOM	**Banah**	**5.32**	**183**	*i* P		**Pn**	**00 35 08.8**	**+0.3**
	SNR=31							
BANOM	**Banah**	**5.32**	**183**	P		**Pn**	**00 35 09.8**	**+1.3**
BANOM				S		**Sn**	**00 36 15.4**	**+5.8**
IMOG	**Moghan**	**5.36**	**25**	Pn		**Pn**	**00 35 10.2**	**+0.9**
DSBU	**Dashti - Bushe**	**5.44**	**239**	Pn		**Pn**	**00 35 10.8**	**+0.6**
JRKH	**Jarkhoshk**	**5.61**	**33**	Pn		**Pn**	**00 35 13.0**	**+0.4**
IGLO	**Ghaloghah**	**5.71**	**337**	Pn		**Pn**	**00 35 15.4**	**+1.5**
HRA	**Herat**	**5.71**	**55**	Pn		**Pn**	**00 35 12.5**	**-1.5**
UMQ	**Umm Al-Quwin**	**5.77**	**188**	P		**Pn**	**00 35 17.2**	**+2.5**
	SNR=11							
UMQ				S		**Sn**	**00 36 27.6**	**+7.1**
MASF	**Masafi**	**5.88**	**184**	P		**Pn**	**00 35 16.9**	**+0.8**
	SNR=40							
MASF				P		**Pn**	**00 35 16.9**	**+0.8**
	SNR=23							
MASF				S		**Sn**	**00 36 29.3**	**+5.9**
MSFE	**Esma-Masafi**	**5.89**	**184**	*i* P		**Pn**	**00 35 15.8**	**-0.6**
	SNR=45							
MDH	**Madha**	**5.94**	**182**	P		**Pn**	**00 35 16.1**	**-1.0**
MDH	**Madha**	**5.94**	**182**	P		**Pn**	**00 35 16.3**	**-0.8**
IMND	**Minoodasht**	**6.06**	**351**	Pn		**Pn**	**00 35 19.6**	**+1.0**
NAZ	**Nazwa, Dubai**	**6.30**	**188**	*i* P		**Pn**	**00 35 22.2**	**+0.3**
	SNR=51							
NAZ	**Nazwa, Dubai**	**6.30**	**188**	P		**Pn**	**00 35 22.9**	**+1.0**
	SNR=62							
NAZ				P		**Pn**	**00 35 23.0**	**+1.0**
	SNR=42							
NAZ				S		**Sn**	**00 36 39.5**	**+5.9**
UOSS	**Minazif**	**6.30**	**183**			**Pn**	**00 35 19.5**	**-2.5**
UOSS	**Minazif**	**6.30**	**183**	*i* P		**Pn**	**00 35 22.6**	**+0.7**
	SNR=9.3							
UOSS	**Minazif**	**6.30**	**183**	P		**Pn**	**00 35 22.8**	**+0.9**
HATD	**Hatta, Dubai**	**6.42**	**184**	*i* P		**Pn**	**00 35 23.9**	**+0.3**
	SNR=17							
HATD	**Hatta, Dubai**	**6.42**	**184**	P		**Pn**	**00 35 24.4**	**+0.8**
	SNR=21							
FAQ	**Al Faqa, Dubai**	**6.54**	**188**	*i* P		**Pn**	**00 35 25.4**	**+0.1**
	SNR=20							
FAQ	**Al Faqa, Dubai**	**6.54**	**188**	P		**Pn**	**00 35 27.1**	**+1.8**
	SNR=31							
ASHO	**Ashiyiah**	**6.56**	**184**	*i* P		**Pn**	**00 35 25.8**	**+0.2**
	SNR=52							
ASHO				S		**Sn**	**00 36 41.9**	**+1.6**
ASHO	**Ashiyiah**	**6.56**	**184**	P		**Pn**	**00 35 26.1**	**+0.4**
	SNR=38							
ASHO				S		**Sn**	**00 36 41.8**	**+1.6**
ASUD	**Al Ashush, Dub**	**6.70**	**190**	*i* P		**Pn**	**00 35 28.0**	**+0.6**
	SNR=18							
ASUD	**Al Ashush, Dub**	**6.70**	**190**	P		**Pn**	**00 35 29.5**	**+2.1**
	SNR=26							
AJN	**Ajban**	**6.81**	**192**	*i* P		**Pn**	**00 35 28.7**	**-0.3**
	SNR=22							
AJN	**Ajban**	**6.81**	**192**	P		**Pn**	**00 35 30.2**	**+1.2**
	SNR=20							
JRN	**Qarnain Island**	**7.10**	**208**	P		**Pn**	**00 35 32.2**	**-0.7**
SOHO	**SOHO**	**7.10**	**180**	P		**Pn**	**00 35 33.4**	**+0.5**
SOHO				P		**Pn**	**00 35 33.4**	**+0.5**
NGCH	**Negor - Chabah**	**7.12**	**144**	P		**Pn**	**00 35 32.2**	**-1.0**
NGCH				S		**Sn**	**00 36 58.0**	**+4.0**
ALNE	**Al Ain**	**7.21**	**186**	*i* P		**Pn**	**00 35 34.0**	**-0.5**
	SNR=15							
ALNE	**Al Ain**	**7.21**	**186**	P		**Pn**	**00 35 35.1**	**+0.6**
	SNR=15							
ALNE				P		**Pn**	**00 35 35.2**	**+0.8**
	SNR=17							
SHMA	**Al-Shehemyia**	**7.29**	**224**	P		**Pn**	**00 35 35.4**	**-0.2**
	SNR=14							
SAKB	**Bahrain**	**7.47**	**227**	P		**Pn**	**00 35 38.2**	**+0.2**
HOQ	**Hoqain**	**7.67**	**175**	P		**Pn**	**00 35 39.9**	**-1.0**
	SNR=8.9							
HOQ				P		**Pn**	**00 35 39.9**	**-1.0**
	SNR=8.9							
BIDO	**Bidbid**	**7.83**	**169**	P		**Pn**	**00 35 42.4**	**-0.6**
	SNR=16							
MZWR	**Madinat Zayed**	**7.84**	**198**	P		**Pn**	**00 35 43.4**	**+0.3**
MZWR				S		**Sn**	**00 37 12.8**	**+1.2**
WSAR	**Wadi Sarin**	**8.20**	**167**	P		**Pn**	**00 35 47.2**	**-0.8**
SMRA	**Abu-Samra**	**8.23**	**219**	P		**Pn**	**00 35 49.0**	**+0.4**
	SNR=18							
SMDO	**Samad**	**8.27**	**170**	P		**Pn**	**00 35 48.8**	**-0.3**
	SNR=17							
SMDO				P		**Pn**	**00 35 48.8**	**-0.3**
	SNR=17							
BSY	**Bisya**	**8.50**	**176**	P		**Pn**	**00 35 54.0**	**+1.8**
	SNR=27							
BSY				P		**Pn**	**00 35 54.0**	**+1.8**
	SNR=27							
MZR	**Muzera**	**8.67**	**199**	P		**Pn**	**00 35 54.4**	**-0.1**
MZR	**Muzera**	**8.67**	**199**	P		**Pn**	**00 35 54.6**	**+0.1**
	SNR=12							
WBK	**Wadi Bani Khal**	**8.88**	**165**	P		**Pn**	**00 35 56.6**	**-0.7**
	SNR=14							
JMDO	**Jabal Madar**	**8.96**	**171**	P		**Pn**	**00 36 01.0**	**+2.5**
	SNR=11							
JMDO				P		**Pn**	**00 36 01.0**	**+2.5**
	SNR=11							
JLN	**Jalan Bani Buh**	**9.42**	**164**	P		**Pn**	**00 36 05.0**	**+0.2**
	SNR=13							
JLN				P		**Pn**	**00 36 05.0**	**+0.2**
	SNR=13							
MHTO	**MHTO**	**10.31**	**173**	P		**Pn**	**00 36 17.5**	**+0.5**
	SNR=17							
MHTO				S		**Sn**	**00 38 15.1**	**+2.8**
KBL	**Kabul**	**10.99**	**69**			**Pn**	**00 36 25.1**	**-1.3**
KBL	**Kabul**	**10.99**	**69**	P		**Pn**	**00 36 25.1**	**-1.3**
SHAA	**Shahritus**	**11.43**	**53**			**Pn**	**00 36 31.4**	**-0.9**
AKT	**Akhty**	**12.43**	**328**	*eP*		**Pn**	**00 36 46.4**	**+0.3**
AKT				*eS*		**Sn**	**00 39 06.9**	**+2.5**
AKT				pmax		pmax		
	comp=Z,5.0nm,0.9s							
AKT				smax		smax		
	comp=E,4.0nm,0.6s							
AKT				smax		smax		
	comp=N,5.0nm,1.0s							
RAYN	**Ar Rayn**	**12.48**	**235**			**Pn**	**00 36 42.8**	**-4.0**
RAYN	**Ar Rayn**	**12.48**	**235**	*i* P		**Pn**	**00 36 43.7**	**-3.1**
	SNR=21							
RAYN	**Ar Rayn**	**12.48**	**235**	P		**Pn**	**00 36 42.8**	**-4.0**
RAYN	**Ar Rayn**	**12.48**	**235**	P		**Pn**	**00 36 43.5**	**-3.3**
CHGR	**Chuyangaron**	**12.69**	**51**			**Pn**	**00 36 47.4**	**-2.2**
CHGR	**Chuyangaron**	**12.69**	**51**	*i* P		**Pn**	**00 36 50.0**	**+0.5**
DOK	**Doka**	**12.78**	**191**	P		**Pn**	**00 36 49.0**	**-1.7**
	SNR=12							
GNI	**Garni**	**13.07**	**316**	Pn		Pn	00 36 59.8	+5.0
	comp=N,5.6nm,0.9s,baz=188,slow=12,SNR=1.1							
GNI				LR		LR	00 42 12.8	
	comp=N,393nm,18.3s,baz=110,slow=38							
GNI	**Garni**	**13.07**	**316**	Pn		**Pn**	**00 36 53.9**	**-0.9**
GEVA	**Gevas**	**13.14**	**306**	Pn		**Pn**	**00 36 56.9**	**+1.1**
SHAO	**Shalim**	**13.21**	**184**	*i* P		**Pn**	**00 36 55.3**	**-1.4**
	SNR=7.9							
SHAO	**Shalim**	**13.21**	**184**	P		**Pn**	**00 36 55.2**	**-1.4**
	SNR=5.2							
SHAO				P		**Pn**	**00 36 55.3**	**-1.4**
	SNR=8.0							
DMTO	**DMTO**	**13.56**	**187**	P		**Pn**	**00 36 58.3**	**-3.2**
MAK	**Makhachkala**	**13.73**	**331**	*eP*		**Pn**	**00 37 00.5**	**-3.1**
MAK				*eS*		**Sn**	**00 39 32.6**	**-3.2**
MAK				pmax		pmax		
	comp=Z,50nm,1.3s							
MAK				MLR		MLR		
	comp=Z,715nm,16.0s							
RBK	**Rabkut**	**13.86**	**189**	P		**Pn**	**00 37 02.0**	**-3.6**
GURO	**Guroymak-BITLI**	**13.96**	**305**			**P**	**00 37 14.1**	**-1.0**
ABTO	**Aybut**	**14.16**	**193**	P		Pn	00 37 05.0	-4.7
NIL	**Nilore**	**14.29**	**76**			**Pn**	**00 37 13.5**	**+2.1**
NIL	**Nilore**	**14.29**	**76**	P		**Pn**	**00 37 13.5**	**+2.1**
NIL	**Nilore**	**14.29**	**76**	P		**Pn**	**00 37 12.6**	**+1.2**
KARS	**Kars**	**14.37**	**314**	Pn		**Pn**	**00 37 11.1**	**-1.4**
KARS	**Kars**	**14.37**	**314**	P		**Pn**	**00 37 11.1**	**-1.4**
MARD	**Mardin**	**14.38**	**299**			**Pn**	**00 37 11.7**	**-1.0**
BTK	**Batken**	**14.52**	**49**			**Pn**	**00 37 12.9**	**-1.7**
BTK	**Batken**	**14.52**	**49**	P		**Pn**	**00 37 12.9**	**-1.7**
DRK	**Karamyk**	**14.88**	**52**			**Pn**	**00 37 17.3**	**-2.4**
DRK	**Karamyk**	**14.88**	**52**	P		**Pn**	**00 37 17.3**	**-2.4**
KOPT	**Kop Dagi**	**15.70**	**308**			**Pn**	**00 37 30.2**	**-0.3**
KOPT				IAmb		IAmb	00 37 49.5	
	comp=Z,44nm,1.3s							
NCK	**Nalchik**	**15.96**	**324**	*i* P		**P**	**00 37 35.9**	**-1.2**
NCK				pmax		pmax		
	comp=Z,15nm,0.8s							
KK31	**Karatay Array**	**16.20**	**39**			**Pn**	**00 37 34.6**	**-2.1**
KK31	**Karatay Array**	**16.20**	**39**	*i* P		**Pn**	**00 37 35.9**	**-0.7**
KKAR	**Karatay Array**	**16.20**	**39**			**Pn**	**00 37 34.7**	**-1.9**
KKAR	**Karatay Array**	**16.20**	**39**	P		**Pn**	**00 37 34.7**	**-1.9**
NEUR	**Neytrino**	**16.27**	**321**	*i* P		**P**	**00 37 41.0**	**+0.4**
KBZ	**Khabaz**	**16.48**	**323**	Pn		**P**	**00 37 43.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=110,slow=12,SNR=11 comp=Z,2.8nm,0.7s							
KBZ	**Khabaz**	**16.48**	**323**	P		**P**	**00 37 43.0**	**+0.2**
ARSB	**Arslanbob**	**16.59**	**48**	P		**Pn**	**00 37 39.3**	**-2.4**
ARSB	**Arslanbob**	**16.59**	**48**	P		**Pn**	**00 37 39.3**	**-2.4**
ARSB				pmax		pmax		
	comp=Z,24nm,1.2s							
SHA1	**Shidzhatmaz**	**16.61**	**322**	*ceP*		**P**	**00 37 45.9**	**+1.3**
KVAR	**Kislovodsk Arr**	**16.75**	**323**	Pn		**P**	**00 37 46.3**	**+0.4**
	baz=151,slow=19 comp=Z,3.8nm,0.7s							
KIV	**Kislovodsk**	**16.75**	**323**			**Pn**	**00 37 42.5**	**-1.2**
KIV				IAmb		IAmb	00 37 51.5	
	comp=Z,34nm,0.7s							
KIV	**Kislovodsk**	**16.75**	**323**	*i* P		**P**	**00 37 45.8**	**-0.1**
	SNR=14							
KIV	**Kislovodsk**	**16.75**	**323**	*eP*		**P**	**00 37 46.5**	**+0.6**
KIV				pmax		pmax		
	comp=Z,36nm,1.1s							
KIV				MLR		MLR		
	comp=Z,81nm,14.0s							
KIV	**Kislovodsk**	**16.75**	**323**	P		**Pn**	**00 37 38.8**	**-4.9**
ASF	**Jabal al Asfar**	**16.77**	**278**	Pn		**Pn**	**00 37 41.8**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=86,slow=11,SNR=15							
ASF				LR		LR	00 45 35.6	
	comp=Z,720nm,20.0s,baz=79,slow=42							
ARPR	**Arapgir-MALATY**	**16.81**	**303**			**Pn**	**00 37 42.9**	**-1.7**
ARPR				IAmb		IAmb	00 37 59.6	
	comp=Z,39nm,1.0s							
GAZ	**Gaziantep**	**17.05**	**295**			**Pn**	**00 37 46.2**	**-1.3**
KSH2	**Kashi**	**17.39**	**58**	P		**Pn**	**00 37 50.3**	**-1.5**
KSH2				PP		**PnPn**	**00 38 07.8**	**+5.9**
KSH2				LR		LR		
	comp=Z,1μm,12.7s							
KSH2				LR		LR		
	comp=Z,2μm,10.7s							
KSH2				LR		LR		
	comp=Z,2μm,10.7s							
GEM	**Giv'at Ha'Em**	**17.79**	**282**	P		**P**	**00 37 58.8**	**+1.4**
EKS2	**Erkin-Say**	**17.82**	**46**	P		**Pn**	**00 37 57.3**	**+0.2**
	SNR=15							
HMDT	**Nahal Hemdat**	**17.92**	**279**	P		**P**	**00 37 59.8**	**+1.0**
GHAJ	**Ghor Haditha**	**17.95**	**276**	P		**Pn**	**00 37 58.7**	**0.0**
GHAJ				IAmb		IAmb	00 38 14.5	
	comp=Z,49nm,1.1s							
GHAJ	**Ghor Haditha**	**17.95**	**276**	P		**P**	**00 37 59.9**	**+0.7**
MMAI	**Mount Meron Ar**	**18.01**	**281**	P		**P**	**00 38 00.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=138,slow=13,SNR=10							
MMAI				LR		LR	00 46 16.4	
	comp=Z,764nm,18.1s,baz=82,slow=42 comp=Z,8.8nm,0.8s							
UCH	**Uchtor**	**18.04**	**48**	P		**Pn**	**00 37 59.8**	**-0.3**
	SNR=20							
DSI	**Dead Sea**	**18.09**	**277

PRZ Przheval'sk 20.69 51 P **P** **00 38 29.0 -0.3**
PRZ IAmb IAmb 00 38 46.4
comp=Z,27nm,1.4s
PRZ Przheval'sk 20.69 51 P **P** **00 38 29.0 -0.3**
PRZ pmax pmax
comp=Z,27nm,1.4s
ILGA Ilgaz 20.83 304 P **P** **00 38 30.1 -0.7**
ILGA IAmb IAmb 00 38 34.5
comp=Z,24nm,1.0s
BZK Bozkurt 20.97 307 P **P** **00 38 32.1 0.0**
PDGK Podgornoye 21.78 50 P **P** **00 38 41.2 +0.3**
BELG Belogornoye 22.11 345 P **P** **00 38 44.3 +0.1**
comp=Z,23nm,0.7s,baz=338,slow=1.9,SNR=11
BELG LR LR 00 50 07.6
comp=Z,356nm,20.3s,baz=162,slow=44
comp=Z,23nm,0.7s
BELG Belogornoye 22.11 345 *i* P **P** **00 38 45.0 +0.8**
BELG pmax pmax
comp=Z,10.0nm,1.1s
ISP Isparta 22.39 294 P **P** **00 38 47.2 -0.3**
ISP IAmb IAmb 00 38 52.1
comp=Z,19nm,0.8s
ISP Isparta 22.39 294 *ce*P **P** **00 38 50.0 +2.5**
ISP pmax pmax
comp=Z,23nm,1.0s
MDUB Mudurnu 22.46 301 P **P** **00 38 47.1 -1.1**
MDUB IAmb IAmb 00 39 28.0
comp=Z,16nm,1.0s
ELL Elmali 22.73 291 P **P** **00 38 50.4 -0.8**
ELL Elmali 22.73 291 P **P** **00 38 50.4 -0.8**
ELL pmax pmax
comp=Z,31nm,1.1s
VRH Novokhopyorsk 22.76 335 *e*P **P** **00 38 52.0 +0.9**
VRH pmax pmax
comp=Z,21nm,0.7s
BORA Eskisehir 22.86 299 P **P** **00 38 51.6 -0.8**
ATD Arta Tunnel 23.38 216 LR LR 00 48 39.3
comp=Z,17nm,19.2s,baz=23,slow=38
ATD Arta Tunnel 23.38 216 P **P** **00 38 56.2 -1.6**
ATD Arta Tunnel 23.38 216 S **S** **00 43 14.3 +3.9**
SNR=9.4
VORD Divnogorie 23.49 332 *e*P **P** **00 38 58.7 +0.1**
VORD pmax pmax
comp=Z,10.0nm,1.5s
VSR Storozhevoye 23.74 332 *e*P **P** **00 39 01.8 +0.8**
VSR pmax pmax
comp=Z,30nm,1.9s
BORK Borovoye 23.96 21 P **P** **00 39 02.8 -0.3**
BORK IAmb IAmb 00 39 29.6
comp=Z,13nm,0.9s
BORK Borovoye 23.96 21 *ce*P **P** **00 39 04.8 +1.7**
BORK pmax pmax
comp=Z,13nm,1.7s
BVA0 Borovoye Array 23.96 21 P **P** **00 39 04.2 +1.0**
BVAR Borovoye Array 23.96 21 P **P** **00 39 04.2 +1.0**
comp=Z,3.8nm,0.6s,baz=206,slow=7.5,SNR=17
BVAR PcP **PcP** **00 42 44.7 -0.4**
comp=Z,1.0nm,0.6s,baz=216,slow=3.9,SNR=2.7
BVAR LR LR 00 49 48.4
comp=Z,314nm,21.1s,baz=210,slow=40
comp=Z,3.8nm,0.6s
MANT Manisa 24.03 295 P **P** **00 39 02.9 -1.3**
VORR Voronezh 24.08 333 *e*P **P** **00 39 05.5 +1.3**
VORR pmax pmax
comp=Z,30nm,0.6s
BALB Balikesir 24.74 298 P **P** **00 39 09.5 -1.0**
BALB IAmb IAmb 00 39 14.4
comp=Z,23nm,1.2s
LPSR Galich'ya Gora 24.91 334 *e*P **P** **00 39 12.1 +0.3**
LPSR pmax pmax
comp=Z,15nm,0.7s
MAKZ Makanchi 24.96 44 P **P** **00 39 12.1 -0.3**
MAKZ Makanchi 24.96 44 P **P** **00 39 12.1 -0.3**
MAKZ pmax pmax
comp=Z,17nm,0.8s
MK31 Makanchi Array 25.14 45 *ce*P **P** **00 39 14.9 +0.9**
MKAR Makanchi Array 25.14 45 P **P** **00 39 14.2 +0.1**
comp=Z,6.0nm,0.6s,baz=230,slow=6.7,SNR=76
MKAR PcP **PcP** **00 42 47.9 0.0**
comp=Z,0.2nm,0.5s,baz=243,slow=2.3,SNR=1.5
MKAR LR LR 00 50 21.4
comp=Z,344nm,18.4s,baz=244,slow=40
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 25.14 45 P **P** **00 39 13.4 -0.6**
ARTI Arti 25.16 2 LR LR 00 49 42.8
comp=Z,362nm,21.9s,baz=192,slow=38
ARTI Arti 25.16 2 P **P** **00 39 14.3 +0.3**
ARTI Arti 25.16 2 *ce*P **P** **00 39 16.4 +2.4**
ARTI pmax pmax
comp=Z,8.0nm,1.0s
KURBB Kurchatov Arra 25.32 34 P **P** **00 39 16.1 +0.5**
comp=Z,4.4nm,0.6s,baz=233,slow=9.7,SNR=33
KURBB PcP **PcP** **00 42 47.8 -0.2**
comp=Z,0.7nm,0.8s,baz=230,slow=2.9,SNR=4.8
KURBB LR LR 00 51 21.4
comp=Z,268nm,19.6s,baz=157,slow=42
comp=Z,4.4nm,0.6s
KURK Kurchatov 25.42 34 P **P** **00 39 16.1 -0.4**
KURK IAmb IAmb 00 39 21.8
comp=Z,12nm,1.1s
KURK Kurchatov 25.42 34 P **P** **00 39 16.1 -0.4**
KURK 00 42 47.8
PURM Purcari 25.61 314 P **P** **00 39 19.6 +1.4**
comp=Z,99nm,0.8s
TIRR Tirgusor 25.70 309 P **P** **00 39 18.5 -0.5**
TIRR IAmb IAmb 00 39 28.1
comp=Z,16nm,1.0s
TIRR Tirgusor 25.70 309 P **P** **00 39 18.5 -0.5**
TIRR pmax pmax
comp=Z,17nm,1.0s
SVE Sverdlovsk 25.72 5 *e*P **P** **00 39 22.3 +3.2**
EZN Ezine 25.96 298 P **P** **00 39 22.5 +1.1**
comp=Z,13nm,1.1s
RDO Rodhopi 26.79 300 P **P** **00 39 27.8 -1.2**
RDO IAmb IAmb 00 39 52.9
comp=Z,9.1nm,1.0s
WMQ Urumqi 27.52 54 *e*P **P** **00 39 36.6 +1.0**
WMQ LR LR
comp=Z,770nm,14.1s
WMQ LR LR
comp=Z,320nm,20.9s
MLR Muntele Rosu 27.70 310 LR LR 00 52 27.0
comp=Z,251nm,18.8s,baz=201,slow=40
MLR Muntele Rosu 27.70 310 P **P** **00 39 36.6 -0.6**
MLR IAmb IAmb 00 39 48.8
comp=Z,14nm,0.9s
MLR Muntele Rosu 27.70 310 P **P** **00 39 36.7 -0.6**
MLR pmax pmax
comp=Z,14nm,0.9s
OBN Obninsk 27.75 335 LR LR 00 52 34.1
comp=Z,227nm,19.3s,baz=30,slow=40
OBN Obninsk 27.75 335 *i* P **P** **00 39 38.6 +1.2**
OBN *i* PPP PPP 00 40 33.0
OBN pmax pmax
comp=Z,8.0nm,0.9s
KIRV Kirov 27.76 352 LR LR 00 53 22.0
comp=Z,860nm,19.1s,baz=161,slow=42
KIRV Kirov 27.76 352 *i* P **P** **00 39 38.8 +1.4**
FURI Furi 27.79 221 LR LR 00 52 00.1
comp=Z,205nm,19.1s,baz=28,slow=39
MOS Moscow 27.88 337 *e*P **P** **00 39 38.6 0.0**
AK09 Malin Array Si 28.01 322 P **P** **00 39 40.0 +0.2**
AK02 Malin Array Si 28.07 322 P **P** **00 39 42.0 +1.6**
AKASG Malin Array Be 28.09 322 P **P** **00 39 41.3 +0.8**
comp=Z,0.7nm,0.5s,baz=127,slow=8.5,SNR=6.1
comp=Z,0.7nm,0.5s
AKASG Malin Array Be 28.09 322 *ce*P **P** **00 39 43.2 +2.7**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 28.09 322 P **P** **00 39 40.1 -0.4**
AKBB IAmb IAmb 00 40 13.4
comp=Z,14nm,1.1s
AKBB Malin Array Si 28.09 322 *ce*P **P** **00 39 43.5 +3.0**
AKBB pmax pmax
comp=Z,5.0nm,1.0s
AK01 Malin Array Si 28.09 322 P **P** **00 39 40.7 +0.2**
KIEV Kiev 28.09 322 P **P** **00 39 40.3 -0.2**
KIEV IAmb IAmb 00 40 13.4
comp=Z,14nm,1.2s
KIEV Kiev 28.09 322 P **P** **00 39 40.3 -0.2**
KIEV pmax pmax
comp=Z,14nm,1.2s
KIEV Kiev 28.09 322 P **P** **00 39 40.7 +0.2**
AK12 Malin Array Si 28.09 322 P **P** **00 39 40.8 +0.3**
AK03 Malin Array Si 28.10 322 P **P** **00 39 40.7 +0.1**
AK11 Malin Array Si 28.11 322 P **P** **00 39 40.8 +0.2**
AK04 Malin Array Si 28.13 322 P **P** **00 39 41.2 +0.3**
AK18 Malin Array Si 28.18 322 P **P** **00 39 41.7 +0.4**
AK22 Malin Array Si 28.20 322 P **P** **00 39 41.9 +0.4**
AK19 Malin Array Si 28.21 322 P **P** **00 39 42.0 +0.4**
AK20 Malin Array Si 28.22 322 P **P** **00 39 42.1 +0.4**
AK21 Malin Array Si 28.23 322 P **P** **00 39 42.1 +0.4**
LUBAR Lubar, Ukraine 28.48 319 P **P** **00 39 44.2 +0.2**
LUBAR pP **pP** **00 39 47.7 -1.5**
HMDM Hanimaadhoo 28.90 144 P **P** **00 39 52.6 +4.6**
BURAR Bucovina Array 28.95 313 P **P** **00 39 48.4 0.0**
DGZ Jazzator, Alta 29.54 42 *i* P **P** **00 39 54.7 +1.1**
DGZ pmax pmax
comp=Z,5.0nm,0.6s
LSA Lhasa 29.78 84 P **P** **00 39 57.0 +0.7**
ZAA0 Zalesovo Array 30.41 34 P **P** **00 40 00.1 -1.0**
ZAA0 IAmb IAmb 00 40 03.5
comp=Z,9.3nm,1.1s
ZALV Zalesovo Beam 30.41 34 P **P** **00 40 00.9 -0.2**
comp=Z,3.8nm,0.7s,baz=242,slow=9.3,SNR=23
ZALV LR LR 00 54 43.4
comp=Z,107nm,18.7s,baz=231,slow=41
comp=Z,3.8nm,0.7s
ZALV Zalesovo Beam 30.41 34 P **P** **00 40 00.0 -1.1**
KLMR Klimovskoe 31.67 344 *e*P **P** **00 40 13.2 +1.1**
KLMR *e* 00 41 18.2
KLMR pmax pmax
comp=Z,8.0nm,1.2s
GOMU GeErMu 32.05 71 P **P** **00 40 15.8 -0.4**
GOMU S **S** **00 45 27.3 -0.6**
GOMU LR LR
comp=Z,370nm,11.0s
GOMU LR LR
comp=Z,120nm,8.3s
GOMU LR LR
comp=Z,420nm,10.9s
BRDH Bariadhala 32.30 97 LR LR 00 57 14.8
comp=Z,526nm,19.4s,baz=336,slow=44
PALK Pallekele 32.83 132 LR LR 00 55 33.3
comp=Z,312nm,19.6s,baz=320,slow=40
LODK Lodwar 34.15 220 P **P** **00 40 32.7 -1.6**
LODK IAmb IAmb 00 40 38.6
comp=Z,8.4nm,1.3s
MODS Modra-Piesok 34.23 311 *e*P **P** **00 40 39.4 +4.7**
MODS Modra-Piesok 34.23 311 *e*P **P** **00 40 39.4 +4.7**
KAAM Kaadhehdhoo 34.33 150 P **P** **00 40 38.7 +2.9**
MORC Moravsky Berou 34.47 314 P **P** **00 40 36.4 -0.3**
MORC IAmb IAmb 00 40 51.4
comp=Z,7.0nm,1.3s
MORC Moravsky Berou 34.47 314 P **P** **00 40 36.4 -0.3**
MORC pmax pmax
comp=Z,7.0nm,1.3s
VRAC Vranov 34.92 313 LR LR 00 57 06.8
comp=Z,212nm,19.0s,baz=126,slow=40
CONA Conrad Observa 35.04 310 *e*P **P** **00 40 42.1 +0.3**
comp=Z,7.0nm,1.2s
ARSA Arberg 35.12 309 *e*P **P** **00 40 41.8 -0.6**
comp=Z,4.2nm,1.0s
VAE Valguarnera 35.12 292 LR LR 00 56 54.0
comp=Z,288nm,18.0s,baz=338,slow=39
MSEY Mahe Island 35.74 182 P **P** **00 40 46.0 -2.0**
MSEY Mahe Island 35.74 182 P **P** **00 40 46.0 -2.0**
MSEY pmax pmax
comp=Z,49nm,1.4s
GTA2 Gaotai 35.88 65 *e*P **P** **00 40 51.4 +2.2**
GTA2 pmax pmax
comp=Z,12nm,0.9s
GTA2 LR LR
comp=Z,300nm,16.7s
GTA2 LR LR
comp=Z,610nm,16.7s
GTA2 LR LR
comp=Z,710nm,17.1s
KNGR Kungurtug, Tuv 35.90 45 *i* P **P** **00 40 50.8 +1.7**
KNGR pmax pmax
comp=Z,7.0nm,1.0s
CAMP Campotosto 35.95 301 P **P** **00 40 49.7 0.0**
CAMP IAmb IAmb 00 40 58.1
comp=Z,9.2nm,1.1s
FINES FINESS Array B 36.16 336 P **P** **00 40 51.6 +0.6**
comp=Z,3.6nm,0.7s,baz=134,slow=8.0,SNR=11
FINES LR LR 00 56 42.6
comp=Z,224nm,18.5s,baz=86,slow=38
comp=Z,3.6nm,0.7s
FINES FINESS Array B 36.16 336 P **P** **00 40 50.1 -0.9**
FDMO Fiordimonte 36.22 301 P **P** **00 40 51.9 -0.1**
PRED Cave del Predi 36.29 307 P **P** **00 40 52.1 -0.4**
KBA Koelnbreinsper 36.54 308 *i* P **P** **00 40 55.3 +0.5**
comp=Z,5.7nm,1.0s
CESX Cesi 36.57 301 P **P** **00 40 53.7 -1.1**
MURB Monte Urbino 36.65 302 P **P** **00 40 55.8 +0.2**
MURB IAmb IAmb 00 41 29.5
comp=Z,14nm,1.1s
GEC2 GERESS Array S 36.65 311 P **P** **00 40 55.5 -0.1**
GERES GERESS Array B 36.65 311 P **P** **00 40 56.0 +0.5**
comp=Z,2.7nm,0.7s,baz=112,slow=8.8,SNR=6.0
comp=Z,2.7nm,0.7s
KHC Kasperske Hory 36.79 312 *e*P **P** **00 40 56.5 -0.2**
KHC Kasperske Hory 36.79 312 *e*P **P** **00 40 56.5 -0.2**
LESA Schwarzleotal 37.05 309 *e*P **P** **00 40 58.4 -0.5**
comp=Z,5.8nm,1.1s
ABTA Abfaltersbach 37.05 307 *e*P **P** **00 40 59.5 +0.5**
comp=Z,4.4nm,1.0s
CLL Collm 37.68 315 P **P** **00 41 03.8 -0.3**
CLL IAmb IAmb 00 41 15.7
comp=Z,12nm,1.3s
CLL Collm 37.68 315 P **P** **00 41 03.8 -0.3**
CLL pmax pmax
comp=Z,12nm,1.3s
CLL Collm 37.68 315 *i* P P 00 41 11.9 +7.8
comp=Z,19nm,1.5s
WTTA Wattenberg 37.72 308 *i* P **P** **00 41 04.9 +0.1**
comp=Z,6.2nm,0.8s
WATA Walderalm 37.77 308 *e*P **P** **00 41 05.1 -0.1**
comp=Z,9.1nm,1.1s
KIBK Kibwezi 37.77 211 P **P** **00 41 04.4 -1.0**
SQTA Sankt Quirin 38.00 308 *e*P **P** **00 41 07.1 0.0**
comp=Z,6.1nm,1.1s
MOTA Moosalm 38.09 308 *e*P **P** **00 41 07.5 -0.4**
comp=Z,15nm,1.6s
MOY Mondy 38.29 45 *e*P **P** **00 41 11.1 +1.6**
MOY pmax pmax
comp=Z,16nm,1.5s
FETA Feichten 38.30 308 P **P** **00 41 08.1 -1.6**
comp=Z,8.7nm,1.0s
RETA Reutte 38.34 308 *i* P **P** **00 41 09.5 -0.4**
comp=Z,6.5nm,1.2s
DAVOX Davos/Dischmat 38.85 307 LR LR 00 59 11.3
comp=Z,203nm,18.1s,baz=79,slow=39
DAVA Damuels 38.91 308 *e*P **P** **00 41 14.6 -0.1**
comp=Z,7.4nm,0.8s
LZDM Lanzhou Array 39.23 70 P **P** **00 41 17.2 -0.6**
comp=Z,0.7nm,0.3s,baz=264,slow=9.9,SNR=2.1
comp=Z,0.7nm,0.3s
KEST Kesra 39.34 290 LR LR 01 00 54.1
comp=Z,70nm,19.9s,baz=1.2,slow=41
LZH Lanzhou 39.34 70 *e*P **P** **00 41 17.8 -0.7**
LZH pP **sP** **00 41 25.9 +0.2**
LZH pmax pmax
comp=Z,18nm,1.3s
LZH LR LR
comp=Z,530nm,13.1s
LZH LR LR
comp=Z,370nm,13.1s
LZH LR LR
comp=Z,600nm,15.1s
PZH PanZhiHua 39.63 85 P **P** **00 41 21.0 0.0**
TLY Talaya 39.90 45 *ce*P **P** **00 41 24.4 +1.6**
TLY pmax pmax
comp=Z,5.0nm,1.7s
MBAR Mbarara 40.06 223 LR LR 00 58 22.9
comp=Z,290nm,18.6s,baz=40,slow=37
CHTO Chiang Mai 40.11 98 P **P** **00 41 23.3 -1.6**
CHTO IAmb IAmb 00 41 26.5
comp=Z,12nm,0.9s
CHTO Chiang Mai 40.11 98 P **P** **00 41 23.3 -1.6**
CHTO pmax pmax
comp=Z,13nm,0.9s
CHTO Chiang Mai 40.11 98 P **P** **00 41 25.4 +0.5**
comp=Z,15nm,0.8s
CMAR Chiang Mai Arr 40.27 98 P **P** **00 41 26.1 -0.1**
comp=Z,4.6nm,0.7s,baz=294,slow=8.2,SNR=28
CMAR PcP **PcP** **00 43 29.7 -0.2**
comp=Z,0.8nm,0.4s,baz=297,slow=2.1,SNR=1.6
CMAR LR LR 01 03 28.9
comp=Z,126nm,18.0s,baz=295,slow=44
comp=Z,4.6nm,0.7s
CMAR Chiang Mai Arr 40.27 98 P **P** **00 41 24.7 -1.5**
HFS Hagfors 40.44 328 P **P** **00 41 27.5 +0.4**
comp=Z,2.3nm,0.7s,baz=99,slow=8.9,SNR=4.3
comp=Z,2.3nm,0.7s
KMI2 Kunming 40.92 87 ⇓P **P** **00 41 32.8 +1.0**
KMI2 pmax pmax
comp=Z,8.0nm,0.7s
KMI2 LR LR
comp=Z,200nm,8.1s
KMI2 LR LR
comp=Z,240nm,13.8s
KMI2 LR LR
comp=Z,250nm,21.9s
SONM Songino Array 41.08 52 P **P** **00 41 32.9 +0.1**
comp=Z,4.1nm,1.2s,baz=263,slow=8.4,SNR=12
SONM LR LR 01 00 31.3
comp=Z,280nm,19.2s,baz=268,slow=39
comp=Z,4.1nm,1.2s
ULN Ulaanbaatar 41.53 52 P **P** **00 41 34.1 -2.4**
ULN Ulaanbaatar 41.53 52 *ce*P **P** **00 41 36.9 +0.5**
ULN pmax pmax
comp=Z,6.0nm,1.7s
ULN Ulaanbaatar 41.53 52 P **P** **00 41 39.0 +2.6**
comp=Z,14nm,1.1s
NOA NORSAR Array B 41.93 329 P **P** **00 41 39.4 0.0**
comp=Z,0.8nm,0.7s,baz=114,slow=8.1,SNR=3.5
NOA LR LR 01 01 00.7
comp=Z,124nm,18.8s,baz=355,slow=39
comp=Z,0.8nm,0.7s
ARCES ARCESS Array B 42.15 344 LR LR 01 02 32.4
comp=Z,304nm,19.2s,baz=128,slow=41
BTO2 Baotou 43.58 62 *e*P **P** **00 41 54.6 +1.4**
BTO2 pP **pP** **00 41 59.3 +1.0**
BTO2 sP **sP** **00 42 01.8 +1.4**
BTO2 S **S** **00 48 22.4 +0.4**
BTO2 sS **sS** **00 48 34.6 +4.3**
BTO2 pmax pmax
comp=Z,22nm,0.9s
BTO2 LR LR
comp=Z,990nm,18.5s
BTO2 LR LR
comp=Z,1μm,21.9s
BTO2 LR LR
comp=Z,2μm,21.0s
XAN Xi'an 43.78 72 P **P** **00 41 55.3 +0.5**
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN LR LR
comp=Z,650nm,13.4s
XAN LR LR
comp=Z,430nm,14.1s
XAN LR LR
comp=Z,730nm,15.1s
HHC Hu-ho-hao-te 44.84 62 *e*P **P** **00 42 03.3 0.0**
HHC pmax pmax
comp=Z,9.0nm,0.6s
LYN LuoYang 46.55 70 P **P** **00 42 17.9 +1.2**
LYN pmax pmax
comp=Z,18nm,0.6s
LYN LR LR
comp=Z,530nm,17.5s
LYN LR LR
comp=Z,530nm,17.5s
LYN LR LR
comp=Z,710nm,19.0s
EKA Eskdalemuir Ar 47.90 318 P **P** **00 42 26.3 -0.7**
comp=Z,2.8nm,0.8s,baz=116,slow=7.5,SNR=4.6
EKA LR LR 01 07 09.0
comp=Z,166nm,18.5s,baz=53,slow=42
comp=Z,2.8nm,0.8s
ESDC Sonseca Array 49.20 297 P **P** **00 42 37.3 0.0**
comp=Z,0.7nm,0.9s,baz=65,slow=7.0,SNR=7.3
ESDC LR LR 01 04 20.9
comp=Z,107nm,18.7s,baz=72,slow=37
comp=Z,0.7nm,0.9s
TIA Tai'an 49.90 67 P **P** **00 42 42.6 0.0**
TIA pmax pmax
comp=Z,8.0nm,1.1s
TIA LR LR
comp=Z,380nm,16.9s
TIA LR LR
comp=Z,180nm,8.8s
TIA LR LR
comp=Z,330nm,19.4s
SPITS Spitsbergen Ar 50.20 350 P **P** **00 42 43.6 -0.7**
comp=Z,11nm,1.0s,baz=165,slow=6.0,SNR=2.0
SPITS LR LR 01 08 09.6
comp=Z,233nm,18.2s,baz=158,slow=41
comp=Z,11nm,1.0s
NJ2 Nanjing 52.35 72 *e*P **P** **00 42 59.1 -1.9**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
TORD Torodi Ar. Bea 53.37 263 P **P** **00 43 07.8 -0.9**
comp=Z,1.0nm,0.5s,baz=58,slow=8.7,SNR=9.9
TORD LR LR 01 08 51.7
comp=Z,191nm,19.5s,baz=44,slow=39
comp=Z,1.0nm,0.5s
LSZ Lusaka 53.70 215 LR LR 01 08 07.0
comp=Z,256nm,18.6s,baz=52,slow=38
YAK Yakutsk 55.07 33 LR LR 01 08 11.2
comp=Z,84nm,18.2s,baz=276,slow=38
TIXI Tiksi 55.09 22 LR LR 01 12 22.4
comp=Z,99nm,18.6s,baz=276,slow=42
TIXI Tiksi 55.09 22 *ce*P **P** **00 43 21.3 +0.8**
TIXI pmax pmax
comp=Z,10.0nm,2.5s
BORG Borgarnes 57.08 330 LR LR 01 09 11.1
comp=Z,102nm,19.0s,baz=82,slow=37
KLR Kul'dur 57.76 49 LR LR 01 12 14.6
comp=Z,189nm,18.9s,baz=288,slow=40
KLR Kul'dur 57.76 49 *i* P **P** **00 43 39.5 -0.4**
KLR pmax pmax
comp=Z,2.0nm,1.0s
KSRS Korea Array 57.96 63 P **P** **00 43 40.8 -0.6**
comp=Z,1.9nm,0.8s,baz=277,slow=6.9,SNR=4.8
KSRS LR LR 01 11 21.0
comp=Z,305nm,20.0s,baz=275,slow=39
comp=Z,1.9nm,0.8s
JNU Nakatsue 61.63 67 LR LR 01 14 58.1
comp=Z,143nm,21.1s,baz=280,slow=40
JOW Kunigami 61.84 74 LR LR 01 14 09.5
comp=Z,153nm,18.3s,baz=112,slow=39
DBIC Dimbokro 62.19 260 LR LR 01 12 58.6
comp=Z,282nm,20.4s,baz=89,slow=38
TSUM Tsumeb 62.59 222 LR LR 01 13 30.2
comp=Z,124nm,19.0s,baz=21,slow=38
TSUM Tsumeb 62.59 222 P **P** **00 44 11.4 -2.0**
LBTB Lobatse 63.31 212 LR LR 01 13 51.8
comp=Z,234nm,18.1s,baz=30,slow=38
SEY Seymchan 65.20 30 *ce*P **P** **00 44 30.4 +0.5**
SEY pmax pmax
comp=Z,5.0nm,1.3s
YSS Yuzhno-Sakhali 65.47 49 *e*P **P** **00 44 32.2 +0.3**
YSS MLR MLR
comp=Z,700nm,14.0s
MA2 Magadan 65.64 34 *ce*P **P** **00 44 32.3 -0.5**
MA2 pmax pmax
comp=Z,6.0nm,1.3s
MJAR Matsushiro Arr 66.02 61 LR LR 01 16 04.3
comp=Z,103nm,18.3s,baz=332,slow=38
ASAJ Asahikawa 66.37 52 LR LR 01 16 49.7
comp=Z,290nm,18.4s,baz=332,slow=39
BOSA Boshof 66.59 210 P **P** **00 44 40.1 +0.7**
comp=Z,5.2nm,0.9s,baz=36,slow=2.3,SNR=3.4
BOSA LR LR 01 15 59.8
comp=Z,98nm,18.4s,baz=27,slow=38
comp=Z,5.2nm,0.9s
TULEG Thule 67.31 348 P **P** **00 44 41.8 -1.4**
SFJD Kangerlussuaq 67.96 336 LR LR 01 16 34.3
comp=Z,158nm,18.7s,baz=34,slow=38
BILL Bilibino 68.30 22 *i* P **P** **00 44 52.5 +2.9**
BILL pmax pmax
comp=Z,2.0nm,1.0s
KAPI Kappang 70.12 109 LR LR 01 19 52.5
comp=Z,57nm,18.6s,baz=282,slow=40
SUR Sutherland 71.77 211 LR LR 01 17 15.1
comp=Z,175nm,18.8s,baz=20,slow=36
PETK Petropavlovsk- 71.80 39 P **P** **00 45 10.2 -1.2**
comp=Z,4.3nm,0.9s,baz=280,slow=8.5,SNR=3.8
PETK LR LR 01 19 32.3
comp=Z,119nm,18.2s,baz=297,slow=38
comp=Z,4.3nm,0.9s
JCJ Chichijima 73.01 68 LR LR 01 22 40.7
comp=Z,67nm,18.1s,baz=1.5,slow=40
ILON Igloolik, Nuna 75.17 346 P **P** **00 45 30.4 -0.5**
ILON IAmb IAmb 00 45 43.9
comp=Z,5.7nm,1.3s
FRB Frobisher Bay 75.91 338 LR LR 01 20 06.2

comp=Z,76nm,18.1s,baz=74,slow=37
A36M Sachs Harbour 77.03 1 P 00 45 40.2 -1.2
TNA Tin City 77.56 17 P **P 00 45 43.0 -1.5**
TNA IAmb IAmb 00 45 47.2
comp=Z,10nm,1.5s
ANM Nome 79.01 17 P 00 45 52.1 -0.5
ANM IAmb IAmb 00 45 56.1
comp=Z,9.6nm,1.3s
ANM Nome 79.01 17 P **P 00 45 52.1 -0.5**
ANM pmax pmax
comp=Z,10.0nm,1.3s
G16K Koyuk River 79.05 16 IAmb IAmb 00 45 56.1
comp=Z,7.3nm,1.2s
G19K Purcell Mounta 79.53 13 IAmb IAmb 00 45 58.6
comp=Z,7.3nm,1.0s
E25K Arctic Village 79.55 8 P 00 45 53.6 -1.9
E25K IAmb IAmb 00 45 57.9
comp=Z,4.9nm,1.0s
C36M Paulatuk 79.69 0 P 00 45 55.1 -1.1
C36M IAmb IAmb 00 45 58.1
comp=Z,5.1nm,0.9s
COLD Coldfoot 79.75 10 P 00 45 55.8 -0.7
BMAR Burnt Mountain 80.33 8 P **P 00 45 59.5 -0.2**
INK Inuvik 80.45 4 LR LR 01 27 37.9
comp=Z,66nm,18.1s,baz=330,slow=40
INK Inuvik 80.45 4 P **P 00 45 59.5 -0.8**
INK IAmb IAmb 00 46 03.6
comp=Z,6.2nm,1.4s
INK Inuvik 80.45 4 P **P 00 45 59.5 -0.8**
INK pmax pmax
comp=Z,6.0nm,1.4s
F28M Old Crow 80.66 6 P **P 00 46 00.5 -1.0**
F28M IAmb IAmb 00 46 04.7
comp=Z,9.2nm,1.4s
I17K Unalakleet 80.71 16 P 00 46 01.8 0.0
I17K IAmb IAmb 00 46 04.8
comp=Z,8.9nm,1.1s
DRLN Deer Lake 80.72 323 P **P 00 46 01.4 -0.7**
F31M Tsiigehtchic 81.30 4 P 00 46 04.5 -0.4
SCHQ Schefferville 81.47 331 P **P 00 46 05.8 -0.2**
comp=Z,1.8nm,0.6s,baz=36,slow=5.7,SNR=9.4
SCHQ LR LR 01 26 52.0
comp=Z,47nm,18.1s,baz=46,slow=39
comp=Z,1.8nm,0.6s
NEA2 Nenana 82.37 11 P **P 00 46 09.5 -1.1**
NEA2 IAmb IAmb 00 46 12.4
comp=Z,4.6nm,1.0s
BPAW Bear Paw Mtn. 82.51 12 P P 00 46 09.0 -2.3
ILAR Eielson Array 82.54 10 P **P 00 46 11.3 -0.1**
comp=Z,1.2nm,0.7s,baz=325,slow=4.4,SNR=15
ILAR LR LR 01 27 26.6
comp=Z,53nm,19.0s,baz=288,slow=39
comp=Z,1.2nm,0.7s
L16K Owhat River 82.87 16 P P 00 46 11.1 -2.2
I29M Ogilvie Camp, 83.00 6 P P 00 46 13.4 -0.5
DAWY Dawson 84.16 7 IAmb IAmb 00 46 39.1
comp=Z,5.1nm,1.2s
YKA Yellowknife Ar 86.31 356 P P 00 46 31.0 +0.4
comp=Z,1.1nm,0.7s,baz=356,slow=5.6,SNR=23
YKA LR LR 01 30 56.7
comp=Z,65nm,18.5s,baz=314,slow=40
comp=Z,1.1nm,0.7s
YKA Yellowknife Ar 86.31 356 P P 00 46 31.0 +0.4
KDAK Kodiak Island 87.97 15 LR LR 01 31 41.1
comp=Z,72nm,18.3s,baz=328,slow=40
WRA Warramunga Arr 90.25 113 P P 00 46 49.1 -0.9
comp=Z,1.2nm,0.7s,baz=318,slow=3.9,SNR=8.7
comp=Z,1.2nm,0.7s
WRA Warramunga Arr 90.25 113 *ce* **P P 00 46 49.7 -0.4**
WRA pmax pmax
comp=Z,1.0nm,0.7s
DLBC Dease Lake 90.48 3 LR LR 01 31 23.8
comp=Z,75nm,18.6s,baz=315,slow=38
ASAR Alice Springs 91.95 116 P P 00 46 57.0 -0.9
comp=Z,1.1nm,0.9s,baz=306,slow=5.2,SNR=6.6
ASAR LR LR 01 32 32.3
comp=Z,42nm,18.1s,baz=304,slow=38
comp=Z,1.1nm,0.9s
ASAR Alice Springs 91.95 116 P P 00 46 57.0 -0.9
FFC Flin Flon 92.39 348 *ce* **P P 00 47 02.5 +3.1**
SADO Sadowa 94.26 330 LR LR 01 31 38.8
comp=Z,52nm,19.4s,baz=156,slow=37
RCBR Riachuelo 95.09 266 LR LR 01 30 59.7
comp=Z,62nm,19.2s,baz=72,slow=36
ULM Lac du Bonnet 95.25 343 LR LR 01 34 49.6
comp=Z,60nm,18.2s,baz=12,slow=38
CTA Charters Tower 99.90 107 LR LR 01 39 48.4
comp=Z,27nm,18.8s,baz=244,slow=40

*AFAD **24** 01:00:31.5,38˚.37N×44˚.56E,h4km±4km,ML2.8*
*TEH **24** 01:00:32.6,38˚.40N×44˚.41E,h17km±999km,ML2.9,*
Presumed earthquake
*AZER **24** 01:00:32.9,38˚.40N×44˚.61E,h10km,ml2.9*
*ISK **24** 01:00:34.9,38˚.33N×44˚.52E,h6km,ML2.8/11*
ISC 24 01:00:33.6±1.1,38˚.41N±0˚.03×44˚.51E±0˚.02,h8km±10km,
n31,σ1s28/47,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**302**	P	**Pg**	**01 00 42.9**	**0.0**
OZAP				S	**Sg**	**01 00 48.6**	**-0.6**
OZAP				IAML		01 00 57.0	
	comp=N,2μm,0.6s						
TVAN	**Van**	**0.87**	**278**	P	**Pg**	**01 00 49.4**	**-1.1**
TVAN				S	**Sb**	**01 01 02.9**	**-0.3**
TVAN				IAML		01 01 10.0	
	comp=N,523nm,0.4s						
TVAN				IAML		01 01 19.0	
	comp=E,612nm,0.9s						
ISHB	**Shabestar**	**0.88**	**98**	Pg	**Pb**	**01 00 50.3**	**-1.1**
VANB	**Van**	**0.90**	**282**	Pg	**Pn**	**01 00 52.1**	**-0.6**
VANB				Sg	**Sn**	**01 01 05.5**	**-0.5**
VMUR	**Van-Muradiye**	**0.93**	**308**	P	**Pg**	**01 00 49.9**	**-1.7**
VMUR				S	**Sn**	**01 01 05.9**	**-1.1**
VMUR				IAML		01 01 08.0	
	comp=N,320nm,0.7s						
VMUR				IAML		01 01 09.0	
	comp=E,307nm,0.3s						
MAKU	**Maku**	**0.95**	**8**	Pg	**Pg**	**01 00 51.3**	**-0.6**
IMRD	**Marand**	**0.98**	**72**	Pg	**Pn**	**01 00 53.0**	**-1.0**
HAKT	**HAKKARI**	**1.06**	**217**	P	**Pn**	**01 00 54.6**	**-0.5**
HAKT				S	**Sn**	**01 01 12.4**	**+2.1**
NAX	**Nakhchivan**	**1.08**	**45**	P	**Pn**	**01 00 54.8**	**-0.4**
NAX				S	**Sn**	**01 01 10.6**	**+0.1**
ERCV	**ERCIS-VAN**	**1.10**	**304**	Pn	**Pn**	**01 00 57.3**	**+1.7**
GEVA	**Gevas**	**1.15**	**265**	P	**Pb**	**01 00 53.8**	**-2.0**
GEVA				S	**Sn**	**01 01 13.1**	**+0.9**
GEVA				IAML		01 01 18.0	
	comp=N,137nm,0.4s						
GEVA				IAML		01 01 18.0	
	comp=E,202nm,0.5s						
ORD	**Ordubad**	**1.27**	**66**	P	**Pg**	**01 00 58.2**	**+0.1**
ORD				S	**Sn**	**01 01 15.7**	**+0.6**
SBZ	**Shahbuz**	**1.28**	**39**	P	**Pg**	**01 00 58.0**	**-0.1**
SBZ				S	**Sn**	**01 01 17.4**	**+2.1**
DYDN	**Diyadin**	**1.30**	**331**	P	**Pn**	**01 00 57.8**	**-0.5**
DYDN				S	**Sg**	**01 01 15.8**	**+0.4**
DYDN				IAML		01 01 20.0	
	comp=E,246nm,1.0s						
DYDN				IAML		01 01 23.0	
	comp=N,223nm,0.5s						
CUKT	**Cukurca**	**1.36**	**212**	Pn	**Pg**	**01 01 00.3**	**+0.5**
CUKT				Sn	**Sg**	**01 01 18.7**	**+1.2**
IAZR	**Azarshahr**	**1.37**	**122**	Pg	**Pg**	**01 01 00.2**	**+0.2**
ADCV	**BITLIS_Adilcev**	**1.45**	**286**	P	**Pn**	**01 00 59.9**	**-0.5**
ADCV				S	**Sg**	**01 01 23.4**	**+3.0**
ADCV				IAML		01 01 26.0	
	comp=E,117nm,0.5s						
ADCV				IAML		01 01 27.0	
	comp=N,143nm,0.6s						
IGDI	**IGDIR**	**1.49**	**347**	P	**Pb**	**01 01 00.9**	**-0.8**
IGDI				S	**Sg**	**01 01 24.0**	**+2.4**
IGDI				IAML		01 01 26.0	
	comp=N,91nm,0.5s						
IGDI				IAML		01 01 33.0	
	comp=E,99nm,1.1s						
AGRB	**Hanur-Agry**	**1.66**	**315**	Pn	**Pg**	**01 01 05.7**	**+0.3**
DORK	**Agr/Tutak/Do**	**1.66**	**306**	P	**Pn**	**01 01 03.3**	**0.0**
DORK				IAML		01 01 33.0	
	comp=E,60nm,0.8s						
DORK				IAML		01 01 42.0	
	comp=N,90nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.70**	**296**	Pn	**Pg**	**01 01 06.6**	**+0.4**
KOTA	**Agri, Merkez-K**	**1.72**	**324**	P	**Pn**	**01 01 04.2**	**+0.1**
KOTA				S	**Sg**	**01 01 28.9**	**-0.1**
KOTA				IAML		01 01 34.0	
	comp=N,53nm,0.9s						
KOTA				IAML		01 01 38.0	
	comp=E,60nm,0.7s						
GNI	**Garni**	**1.74**	**6**	Pn	**Pg**	**01 01 07.4**	**+0.3**
GNI				Sn	**Sg**	**01 01 31.5**	**+1.8**
BLIS	**Bitlis-Merkez**	**1.88**	**271**	P	**Pb**	**01 01 07.4**	**-1.0**
BLIS				S	**Sg**	**01 01 37.2**	**+3.1**
BLIS				IAML		01 01 40.0	
	comp=N,55nm,0.4s						
BLIS				IAML		01 01 45.0	
	comp=E,56nm,0.8s						
GURO	**Guroymak-BITLI**	**1.95**	**275**	Pn	**Pb**	**01 01 09.8**	**+0.3**
IHRS	**Heris**	**1.99**	**92**	Pn	**Pg**	**01 01 10.4**	**-1.5**
KARS	**Kars**	**2.47**	**334**	Pn	**Pb**	**01 01 18.4**	**-0.1**
VRTB	**Varto-Mus**	**2.50**	**288**	Pn	**Pb**	**01 01 17.8**	**-1.1**
SVAN	**Silvan-Diyarba**	**2.62**	**265**	Pn	**Pb**	**01 01 19.0**	**-1.9**
SENK	**Senkaya-Erzuru**	**2.72**	**323**	Pn	**Pb**	**01 01 21.9**	**-0.8**
KARO	**Karliova-Bingo**	**2.85**	**289**	Pn	**Pb**	**01 01 22.5**	**-2.3**

*AFAD **24** 01:10:53.8,38˚.98N×27˚.87E,h13km±1km,MW3.5*
*THE **24** 01:10:54.1,39˚.N±3˚×2˚.8E±˚,h0km±15km,M3.1/22,*
MLh3.1/22
*ISK **24** 01:10:54.1,38˚.98N×27˚.87E,h6km,ML3.5/21*
*ATH **24** 01:10:54.4±0.4,38˚.98N×27˚.89E,h10km,ML3.4/6,Manual*
Solution by A.Fokaefs First location: 2020/02/24 01:11:40,
This location: 2020/02/24 08:13:16 ML Amplitudes are
expressed in micrometers, All distances are expressed in
degrees Latitude uncertainty: 3 km; Longitude uncertainty:
3 km
ISC 24 01:10:54.3±0.8,38˚.99N±0˚.01×27˚.89E±0˚.02,h11km±6km,
n81,σ0s47/119,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.12**	**207**	P	**Pg**	**01 10 57.3**	**0.0**
AKHS				S	**Sg**	**01 10 59.9**	**+0.5**
AKS	**Akhisar**	**0.12**	**208**	Pg	**Pg**	**01 10 56.9**	**-0.4**
AKS				Sg	**Sg**	**01 10 59.2**	**-0.2**
GORD	**Gordes-Manisa**	**0.24**	**109**	Pg	**Pg**	**01 10 59.5**	**+0.2**
GOMA	**Golmarmara-Man**	**0.28**	**175**	Pg	**Pg**	**01 11 00.3**	**+0.3**
GOMA				Sg	**Sg**	**01 11 04.6**	**+0.8**
SOMA	**Soma-Manisa**	**0.32**	**302**	Pg	**Pg**	**01 11 00.7**	**-0.1**
SOMA				Sg	**Sg**	**01 11 05.4**	**+0.3**
CAMT	**Merkez**	**0.51**	**242**	P	**Pg**	**01 11 04.2**	**0.0**
CAMT				S	**Sb**	**01 11 12.8**	**+0.1**
DEMI	**Demirci**	**0.65**	**85**	P	**Pg**	**01 11 06.8**	**-0.1**
DEMI				S	**Sb**	**01 11 16.2**	**-0.7**
BALB	**Balikesir**	**0.65**	**360**	Pg	**Pg**	**01 11 07.2**	**+0.2**
BALB				Sg	**Sb**	**01 11 17.3**	**+0.5**
ODEM	**Odemis-Izmir**	**0.73**	**168**	Pg	**Pg**	**01 11 08.4**	**+0.1**
BKES	**Balkesir-Mer**	**0.74**	**3**	P	**Pg**	**01 11 08.1**	**-0.6**
BKES				S	**Sb**	**01 11 19.2**	**-0.3**
DURS	**Dursunbey**	**0.76**	**36**	P	**Pg**	**01 11 08.3**	**-0.8**
DURS				S	**Sb**	**01 11 20.5**	**+0.3**
KULA	**Kula-Manisa**	**0.77**	**128**	Pg	**Pg**	**01 11 09.1**	**-0.1**
BALY	**Balya**	**0.78**	**345**	P	**Pg**	**01 11 08.9**	**-0.5**
BALY				S	**Sg**	**01 11 19.9**	**+0.3**
BUHA	**Balikesir, Bur**	**0.81**	**309**	P	**Pg**	**01 11 09.4**	**-0.6**
BUHA				S	**Sg**	**01 11 20.8**	**+0.2**
DST	**Dursunbey**	**0.84**	**43**	Pg	**Pb**	**01 11 10.9**	**-0.1**
DUVT	**Torbali**	**0.84**	**204**	P	**Pg**	**01 11 09.9**	**-0.6**
DUVT				S	**Sb**	**01 11 22.2**	**0.0**
IZMR	**zmir-demi**	**0.85**	**176**	P	**Pg**	**01 11 10.6**	**-0.1**
IZMR				P	**Pg**	**01 11 10.6**	**-0.1**
IZMR				S	**Sb**	**01 11 22.0**	**-0.6**
IZMR				S	**Sg**	**01 11 22.4**	**+0.6**
SIMA	**Simav-Kutahya**	**0.86**	**83**	Pg	**Pb**	**01 11 11.2**	**-0.1**
SMAA	**Simav-Kutahya**	**0.86**	**82**	Pg	**Pb**	**01 11 11.4**	**+0.1**
BAGT	**Foa**	**0.87**	**248**	P	**Pg**	**01 11 10.6**	**-0.6**
BAGT				S	**Sb**	**01 11 23.5**	**+0.3**
KIRA	**zmir-Kiraz**	**0.89**	**153**	P	**Pg**	**01 11 11.0**	**-0.4**
KIRA				S	**Sb**	**01 11 24.0**	**+0.3**
YAYO	**Edremit-Balk**	**0.89**	**315**	Pg	**Pb**	**01 11 11.5**	**-0.2**
BLCB	**Balcova**	**0.89**	**228**	Pg	**Pg**	**01 11 11.1**	**-0.4**
BLCB	**Balcova**	**0.89**	**228**	P	**Pg**	**01 11 11.4**	**-0.1**
BLCB				S	**Sb**	**01 11 24.5**	**+0.7**
FOCM	**Foa**	**0.94**	**253**	Pg	**Pb**	**01 11 12.5**	**-0.2**
AYVA	**Ayvalik**	**0.98**	**289**	P	**Pb**	**01 11 13.4**	**0.0**
AYVA				S	**Sn**	**01 11 27.5**	**-0.6**
SUSR	**Susurluk-Balik**	**0.99**	**9**	Pg	**Pg**	**01 11 12.8**	**-0.5**
CMHT	**Manyas**	**1.02**	**4**	P	**Pg**	**01 11 13.2**	**-0.8**
CMHT				S	**Sg**	**01 11 27.1**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.04**	**180**	Pg	**Pb**	**01 11 14.5**	**+0.1**
SHAP	**Saphane-Kutahy**	**1.04**	**88**	Pg	**Pb**	**01 11 14.7**	**-0.3**
GONE	**Gonen-Balikesi**	**1.07**	**352**	Pg	**Pb**	**01 11 14.9**	**0.0**
NAZL	**Nazilli-Aydin**	**1.07**	**163**	Pg	**Pb**	**01 11 14.9**	**0.0**
YENI	**Yenice-Canakka**	**1.07**	**332**	Pg	**Pb**	**01 11 14.8**	**-0.1**
KRBN	**Karaburun**	**1.11**	**250**	Pn	**Pb**	**01 11 15.4**	**-0.2**
ATIT	**Gnen**	**1.12**	**347**	P	**Pb**	**01 11 14.8**	**-0.9**
ATIT				S	**Sg**	**01 11 30.6**	**+0.1**
EMET	**Ktahya-Emet**	**1.18**	**70**	P	**Pb**	**01 11 16.7**	**-0.1**
EMET				S	**Sg**	**01 11 32.3**	**0.0**
GMLD	**Gumuldur**	**1.19**	**220**	Pn	**Pg**	**01 11 17.2**	**+0.1**
GEDZ	**Gediz**	**1.19**	**87**	Pn	**Pg**	**01 11 17.8**	**+0.6**
KARB	**zmir-Karabur**	**1.20**	**255**	P	**Pb**	**01 11 16.4**	**-0.6**
KARB				S	**Sn**	**01 11 33.8**	**+0.5**
CANM	**Can-anakkale**	**1.21**	**328**	Pn	**Pg**	**01 11 17.5**	**0.0**
KUSD	**Kusadasi-Aydin**	**1.22**	**203**	Pn	**Pg**	**01 11 17.7**	**0.0**
DGB	**zmir**	**1.22**	**220**	P	**Pn**	**01 11 16.7**	**-0.7**
DGB				S	**Sn**	**01 11 34.1**	**+0.3**
ESEN	**Aydn-Nazilli**	**1.24**	**163**	P	**Pn**	**01 11 16.8**	**-0.8**
ESEN				S	**Sb**	**01 11 33.4**	**-0.4**
GDZ	**Gediz**	**1.25**	**85**	P	**Pn**	**01 11 17.5**	**-0.3**
GDZ				S	**Sn**	**01 11 34.8**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.28**	**306**	P	**Pn**	**01 11 18.0**	**-0.2**
BAYC				S	**Sg**	**01 11 35.5**	**-0.1**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pb**	**01 11 18.4**	**-0.1**
PRK				S	**Sg**	**01 11 36.8**	**+1.2**
PRK	**Paraskevi**	**1.28**	**282**	P	**Pb**	**01 11 18.2**	**-0.2**
PRK				S	**Sg**	**01 11 35.5**	**-0.1**
ORLT	**Orhaneli**	**1.31**	**36**	P	**Pn**	**01 11 18.5**	**-0.2**
ORLT				S	**Sg**	**01 11 37.1**	**+0.5**
GCAM	**G?zelcaml?**	**1.38**	**202**	Pn	**Pg**	**01 11 20.4**	**-0.5**
EAG2	**Marmaro, Chios**	**1.46**	**253**	P	**Pn**	**01 11 20.5**	**-0.1**
EAG2				S	**Sn**	**01 11 39.5**	**-0.2**
EZN	**Ezine**	**1.47**	**305**	P	**Pn**	**01 11 21.1**	**+0.3**
EZN				S	**Sg**	**01 11 42.8**	**+1.2**
KRL1	**Karlovasi Samo**	**1.51**	**218**	P	**Pb**	**01 11 21.9**	**-0.5**
SMG	**Samos**	**1.52**	**213**	P	**Pb**	**01 11 22.4**	**-0.2**
SMG				S	**Sg**	**01 11 43.9**	**+0.7**
SMG	**Samos**	**1.52**	**213**	P	**Pn**	**01 11 20.6**	**-0.8**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**01 11 22.5**	**0.0**
SIGR				S	**Sg**	**01 11 46.4**	**+0.8**
SIGR	**SIGRI**	**1.60**	**279**	P	**Pn**	**01 11 22.4**	**0.0**
SIGR				S	**Sb**	**01 11 43.5**	**-0.4**
DOMA	**Ktahya-Doman**	**1.61**	**60**	P	**Pn**	**01 11 23.3**	**+0.5**
YER	**Yerkesik**	**1.88**	**170**	P	**Pn**	**01 11 26.3**	**-0.1**
GADA	**Gvkgeada**	**1.95**	**309**	P	**Pn**	**01 11 27.9**	**+0.5**
GADA				S	**Sb**	**01 11 53.8**	**-0.4**
BODT	**Bodrum**	**1.98**	**193**	P	**Pb**	**01 11 29.2**	**-1.1**
ENEZ	**Enez**	**2.20**	**323**	P	**Pn**	**01 11 31.4**	**+0.7**
ENEZ				S	**Sb**	**01 12 00.5**	**-0.8**
LIA	**Limnos Island**	**2.28**	**294**	P	**Pn**	**01 11 32.3**	**+0.3**
LIA				S	**Sn**	**01 12 01.7**	**+1.6**
LIA	**Limnos Island**	**2.28**	**294**	P	**Pn**	**01 11 32.1**	**+0.2**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**01 11 33.2**	**+0.4**
SMTH	**Samothraki Isl**	**2.34**	**310**	P	**Pn**	**01 11 33.1**	**+0.3**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**01 11 33.6**	**+0.4**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**01 11 33.1**	**-0.1**
ISP	**Isparta**	**2.38**	**119**	P	**Pn**	**01 11 33.2**	**-0.1**
SFL1	**Soufli**	**2.51**	**332**	P	**Pn**	**01 11 35.4**	**+0.3**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**01 11 38.5**	**-0.2**
ARG	**Arkhangelos**	**2.77**	**176**	P	**Pn**	**01 11 38.4**	**-0.3**
RDO	**Rodhopi**	**2.81**	**321**	P	**Pn**	**01 11 40.1**	**+0.9**
KARY	**Karystos**	**2.87**	**252**	P	**Pn**	**01 11 39.9**	**-0.2**
THAS	**Thassos island**	**2.93**	**305**	P	**Pn**	**01 11 40.6**	**-0.2**
DION	**Dionisos Attik**	**3.23**	**255**	P	**Pn**	**01 11 45.3**	**+0.2**
KAVA	**Kavala**	**3.28**	**309**	P	**Pn**	**01 11 45.7**	**+0.1**
OUR	**Ouranopolis**	**3.30**	**295**	P	**Pn**	**01 11 46.3**	**+0.4**
KARP	**Karpathos**	**3.48**	**190**	P	**Pn**	**01 11 48.5**	**0.0**
PLG	**Polygyros**	**3.69**	**293**	P	**Pn**	**01 11 51.9**	**+0.5**
NVR	**Nevrokopi**	**3.88**	**309**	P	**Pn**	**01 11 54.4**	**+0.4**
SRS	**Serrai**	**3.92**	**304**	P	**Pn**	**01 11 54.7**	**+0.2**

*AZER **24** 01:20:56.4,38˚.27N×44˚.54E,h13km,ml2.5*

*AFAD **24** 01:20:58.4,38˚.39N×44˚.42E,h7km±3km,ML2.3*
*ISK **24** 01:20:59.2,38˚.34N×44˚.33E,h5km,ML2.5/7*
ISC 24 01:20:58.9±1.2,38˚.34N±0˚.04×44˚.42E±0˚.03,h11km±10km,
n18,σ1s35/31,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**314**	P	**Pg**	**01 21 07.2**	**-0.8**
OZAP				S	**Sg**	**01 21 13.1**	**-1.0**
OZAP				IAML		01 21 17.0	
	comp=N,510nm,0.6s						
TVAN	**Van**	**0.81**	**283**	P	**Pg**	**01 21 14.2**	**-0.5**
TVAN				S	**Sg**	**01 21 25.5**	**+0.2**
TVAN				IAML		01 21 36.0	
	comp=N,138nm,0.4s						
TVAN				IAML		01 21 38.0	
	comp=E,126nm,0.8s						
VANB	**Van**	**0.84**	**288**	Pg	**Pg**	**01 21 14.9**	**-0.3**
VMUR	**Van-Muradiye**	**0.92**	**315**	P	**Pb**	**01 21 17.1**	**0.0**
VMUR				S	**Sn**	**01 21 31.0**	**-0.4**
VMUR				IAML		01 21 35.0	
	comp=N,161nm,0.5s						
VMUR				IAML		01 21 35.0	
	comp=E,118nm,0.3s						
HAKT	**HAKKARI**	**0.96**	**216**	P	**Pb**	**01 21 17.2**	**-0.6**
HAKT				S	**Sn**	**01 21 33.7**	**+1.3**
GEVA	**Gevas**	**1.07**	**269**	P	**Pg**	**01 21 18.2**	**-1.3**
GEVA				S	**Sn**	**01 21 35.3**	**+0.3**
GEVA				IAML		01 21 38.0	
	comp=N,84nm,0.5s						
GEVA				IAML		01 21 40.0	
	comp=E,73nm,0.3s						
ERCV	**ERCIS-VAN**	**1.08**	**309**	Pg	**Pn**	**01 21 20.1**	**-0.1**
AKDM	**Akdamar-Van**	**1.13**	**270**	Pg	**Pg**	**01 21 20.2**	**-0.4**
AKDM				Sg	**Sn**	**01 21 36.5**	**0.0**
NAX	**Nakhchivan**	**1.18**	**45**	P	**Pg**	**01 21 20.9**	**-0.8**
NAX				S	**Sn**	**01 21 37.8**	**+0.1**
CUKT	**Cukurca**	**1.27**	**211**	Pn	**Pg**	**01 21 23.9**	**+0.6**
CUKT				Sn	**Sn**	**01 21 41.8**	**+2.0**
ORD	**Ordubad**	**1.37**	**64**	P	**Pn**	**01 21 21.8**	**-2.3**
ORD				S	**Sg**	**01 21 42.5**	**-0.4**
SBZ	**Shahbuz**	**1.38**	**40**	P	**Pn**	**01 21 23.8**	**-0.5**
SBZ				S	**Sg**	**01 21 45.2**	**+2.0**
ADCV	**BITLIS_Adilcev**	**1.40**	**290**	P	**Pg**	**01 21 25.6**	**-0.3**
ADCV				S	**Sg**	**01 21 45.9**	**+1.7**
ADCV				IAML		01 21 49.0	
	comp=N,62nm,0.9s						
ADCV				IAML		01 21 50.0	
	comp=E,36nm,0.4s						
HYR	**Heyderabad**	**1.42**	**14**	P	**Pg**	**01 21 26.4**	**+0.3**
HYR				S	**Sg**	**01 21 48.6**	**+4.1**
IGDI	**IGDIR**	**1.54**	**350**	P	**Pg**	**01 21 28.1**	**-0.4**
IGDI				S	**Sg**	**01 21 51.3**	**+2.7**
AGRB	**Hanur-Agry**	**1.66**	**318**	Pn	**Pg**	**01 21 29.9**	**-0.8**
GNI	**Garni**	**1.82**	**8**	Pn	**Pg**	**01 21 33.2**	**-0.7**
GURO	**Guroymak-BITLI**	**1.88**	**277**	Pn	**Pb**	**01 21 32.9**	**-0.5**

*AZER **24** 01:24:52.5,38˚.38N×44˚.57E,h9km,ml3.1*
*AFAD **24** 01:24:53.3,38˚.34N×44˚.53E,h7km±2km,ML3.1*
*TEH **24** 01:24:54.9,38˚.42N×44˚.52E,h6km±40km,ML2.9,*
Presumed earthquake
*ISK **24** 01:24:55.6,38˚.40N×44˚.48E,h4km,ML3.2/10*
ISC 24 01:24:54.7±1.2,38˚.39N±0˚.02×44˚.53E±0˚.02,h1km±11km,
n45,σ1s22/59,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.50**	**303**	P	**Pg**	**01 25 03.8**	**-0.6**
OZAP				S	**Sg**	**01 25 10.5**	**-0.3**
OZAP				IAML		01 25 13.0	
	comp=N,2μm,1.1s						
ISHB	**Shabestar**	**0.86**	**97**	Pg	**Pg**	**01 25 10.8**	**-0.5**
TVAN	**Van**	**0.89**	**279**	P	**Pg**	**01 25 10.8**	**-1.1**
TVAN				S	**Sb**	**01 25 24.4**	**-1.2**
TVAN				IAML		01 25 30.0	
	comp=E,608nm,0.5s						
TVAN				IAML		01 25 34.0	
	comp=N,654nm,0.9s						
VANB	**Van**	**0.92**	**283**	Pg	**Pg**	**01 25 12.6**	**+0.2**
VANB				Sg	**Sg**	**01 25 24.8**	**+0.6**
VANB	**Van**	**0.92**	**283**	Pg	**Pg**	**01 25 12.5**	**+0.2**
VMUR	**Van-Muradiye**	**0.96**	**309**	P	**Pg**	**01 25 12.2**	**-0.9**
VMUR				S	**Sb**	**01 25 26.4**	**-1.1**
VMUR				IAML		01 25 30.0	
	comp=E,581nm,0.4s						
VMUR				IAML		01 25 34.0	
	comp=N,537nm,0.5s						
MAKU	**Maku**	**0.97**	**7**	Pg	**Pg**	**01 25 12.4**	**-0.9**
IMRD	**Marand**	**0.98**	**70**	Pg	**Pg**	**01 25 13.6**	**+0.1**
HAKT	**HAKKARI**	**1.05**	**218**	P	**Pg**	**01 25 14.5**	**-0.5**
HAKT				S	**Sn**	**01 25 31.9**	**-0.4**
NAX	**Nakhchivan**	**1.09**	**44**	P	**Pg**	**01 25 15.5**	**-0.2**
NAX				S	**Sn**	**01 25 31.5**	**-1.5**
ERCV	**ERCIS-VAN**	**1.12**	**304**	Pn	**Pn**	**01 25 17.1**	**-0.7**
ERCV				Sn	**Sn**	**01 25 32.8**	**-1.2**
GEVA	**Gevas**	**1.16**	**267**	P	**Pg**	**01 25 14.9**	**-2.0**
GEVA				S	**Sg**	**01 25 31.6**	**-0.3**
GEVA				IAML		01 25 35.0	
	comp=N,324nm,0.4s						
GEVA				IAML		01 25 42.0	
	comp=E,299nm,0.7s						
ORD	**Ordubad**	**1.27**	**64**	P	**Pn**	**01 25 18.8**	**-0.9**
ORD				S	**Sn**	**01 25 37.0**	**-0.4**
SBZ	**Shahbuz**	**1.28**	**38**	P	**Pn**	**01 25 18.9**	**-1.0**
SBZ				S	**Sn**	**01 25 38.5**	**+0.6**
DYDN	**Diyadin**	**1.32**	**331**	P	**Pn**	**01 25 19.5**	**-1.1**
DYDN				IAML		01 25

comp=N,588nm,0.7s
TVAN Van 0.87 277 P **Pg** **01 29 35.9 -1.8**
TVAN S **Sb** **01 29 48.9 -0.5**
TVAN IAML 01 29 56.0
comp=E,317nm,0.4s
TVAN IAML 01 29 57.0
comp=N,349nm,0.7s
ISHB Shabestar 0.89 99 Pg **Pg** **01 29 36.2 -1.9**
ISHB Sg **Sb** **01 29 49.8 -0.3**
VANB Van 0.89 281 Pg **Pn** **01 29 38.8 -0.3**
VANB Sg **Sn** **01 29 51.3 -0.6**
VMUR Van-Muradiye 0.92 308 P **Pg** **01 29 37.8 -0.8**
VMUR S **Sn** **01 29 52.5 -0.3**
VMUR IAML 01 29 57.0
comp=N,216nm,0.5s
MAKU Maku 0.93 9 Pg **Pg** **01 29 37.5 -1.4**
IMRD Marand 0.98 73 Pg **Pg** **01 29 39.0 -0.9**
NAX Nakhchivan 1.07 46 P **Pg** **01 29 40.7 -0.9**
NAX S **Sn** **01 29 56.5 +0.1**
HAKT HAKKARI 1.07 216 P **Pb** **01 29 40.8 -0.6**
HAKT S **Sn** **01 29 57.7 +1.0**
ERCV ERCIS-VAN 1.08 303 Pg **Pn** **01 29 43.2 +1.3**
SBZ Shahbuz 1.27 40 P **Pn** **01 29 44.0 -0.3**
SBZ S **Sn** **01 30 03.9 +2.7**
ORD Ordubad 1.27 66 P **Pn** **01 29 44.0 -0.3**
ORD S **Sn** **01 30 02.0 +0.8**
DYDN Diyadin 1.28 331 P **Pg** **01 29 44.9 -0.7**
HYR Heyderabad 1.31 12 P **Pg** **01 29 45.5 -0.6**
HYR S **Sg** **01 30 04.6 +1.3**
CUKT Cukurca 1.38 211 Pn **Pg** **01 29 47.9 +0.5**
CUKT Sn **Sg** **01 30 06.9 +1.6**
ADCV BITLIS_Adilcev 1.44 286 P **Pg** **01 29 47.4 -1.2**
IGDI IGDIR 1.47 347 P **Pg** **01 29 49.1 -0.1**
IGDI S **Sg** **01 30 12.3 +4.0**
AGRB Hanur-Agry 1.64 315 Pn **Pb** **01 29 50.8 -0.2**
MLAZ Malazgirt-MUS 1.68 296 Pn **Pg** **01 29 52.4 -0.8**
GNI Garni 1.73 6 Pn **Pg** **01 29 53.2 -0.8**
GURO Guroymak-BITLI 1.94 274 Pn **Pb** **01 29 56.2 0.0**
IHRS Heris 2.00 92 Pn **Pb** **01 29 56.8 -0.4**
KARS Kars 2.46 334 Pn **Pb** **01 30 03.3 -1.6**

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*AZER **24** 01:32:34.9, 38°.37N×44°.58E, h10km, ml2.7*
*TEH **24** 01:32:35.0, 38°.37N×44°.42E, h10km±131km, ML2.8, Presumed earthquake*
*AFAD **24** 01:32:36.2, 38°.45N×44°.50E, h7km±4km, ML2.4*
*ISK **24** 01:32:37.2, 38°.36N×44°.45E, h5km, ML2.7/7*
ISC 24 01:32:36.9±1.1, 38°.39N±0°.03×44°.50E±0°.02, h9km±10km, n25, σ1s32/40, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**304**	P	**Pg**	**01 32 45.6**	**-0.6**
OZAP				S	**Sg**	**01 32 51.5**	**-1.0**
OZAP				IAML		01 33 00.0	
	comp=N,570nm,0.6s						
YOVA	**Hakkari_Yksek**	**0.82**	**191**	P	**Pn**	**01 32 53.6**	**-1.2**
YOVA				S	**Sn**	**01 33 06.3**	**-0.8**
YOVA				IAML		01 33 11.0	
	comp=E,117nm,0.5s						
YOVA				IAML		01 33 13.0	
	comp=N,167nm,0.7s						
TVAN	**Van**	**0.87**	**279**	P	**Pg**	**01 32 52.0**	**-1.6**
TVAN				S	**Sb**	**01 33 06.0**	**0.0**
TVAN				IAML		01 33 20.0	
	comp=N,308nm,0.6s						
ISHB	**Shabestar**	**0.89**	**97**	Pg	**Pg**	**01 32 53.4**	**-0.6**
VANB	**Van**	**0.89**	**283**	Pg	**Pn**	**01 32 54.6**	**-1.1**
VMUR	**Van-Muradiye**	**0.94**	**310**	P	**Pg**	**01 32 54.0**	**-0.9**
VMUR				S	**Sb**	**01 33 08.3**	**+0.4**
VMUR				IAML		01 33 11.0	
	comp=N,154nm,0.5s						
VMUR				IAML		01 33 12.0	
	comp=E,114nm,0.3s						
MAKU	**Maku**	**0.97**	**9**	Pg	**Pg**	**01 32 54.5**	**-1.1**
IMRD	**Marand**	**1.00**	**71**	Pg	**Pb**	**01 32 56.0**	**-0.4**
IMRD				Sg	**Sn**	**01 33 11.2**	**-0.3**
HAKT	**HAKKARI**	**1.04**	**217**	P	**Pb**	**01 32 56.4**	**-0.8**
HAKT				S	**Sn**	**01 33 15.3**	**+2.7**
HAKT				IAML		01 33 20.0	
	comp=N,123nm,0.4s						
HAKT				IAML		01 33 22.0	
	comp=E,125nm,0.6s						
HAKT	**HAKKARI**	**1.04**	**217**	P	**Pn**	**01 32 57.3**	**-0.5**
HAKT				S	**Sn**	**01 33 14.4**	**+1.7**
NAX	**Nakhchivan**	**1.10**	**45**	P	**Pg**	**01 32 57.7**	**-0.4**
NAX				S	**Sn**	**01 33 13.7**	**-0.3**
GEVA	**Gevas**	**1.13**	**266**	P	**Pb**	**01 32 56.3**	**-2.4**
GEVA				S	**Sn**	**01 33 14.8**	**0.0**
GEVA				IAML		01 33 17.0	
	comp=E,97nm,0.6s						
GEVA				IAML		01 33 18.0	
	comp=N,129nm,0.7s						
AKDM	**Akdamar-Van**	**1.19**	**267**	Pn	**Pg**	**01 32 59.3**	**-0.5**
AKDM				Sn	**Sn**	**01 33 17.5**	**+1.2**
ORD	**Ordubad**	**1.29**	**65**	P	**Pg**	**01 33 01.0**	**-0.6**
ORD				S	**Sg**	**01 33 19.2**	**+0.8**
SBZ	**Shahbuz**	**1.30**	**39**	P	**Pg**	**01 33 01.2**	**-0.6**
SBZ				S	**Sg**	**01 33 21.7**	**+3.1**
CUKT	**Cukurca**	**1.34**	**212**	Pn	**Pg**	**01 33 03.2**	**+0.6**
CUKT				Sn	**Sg**	**01 33 22.1**	**+2.0**
HYR	**Heyderabad**	**1.35**	**12**	P	**Pb**	**01 33 01.9**	**-0.6**
HYR				S	**Sg**	**01 33 23.0**	**+2.6**
ADCV	**BITLIS_Adilcev**	**1.45**	**287**	P	**Pn**	**01 33 02.8**	**-0.6**
ADCV				S	**Sg**	**01 33 26.5**	**+3.1**
ADCV				IAML		01 33 28.0	
	comp=E,54nm,0.4s						
ADCV				IAML		01 33 29.0	
	comp=N,74nm,0.8s						
IGDI	**IGDIR**	**1.51**	**348**	P	**Pn**	**01 33 04.1**	**-0.1**
IGDI				IAML		01 33 29.0	
	comp=N,40nm,0.4s						
IGDI				IAML		01 33 29.0	
	comp=E,58nm,1.2s						
AGRB	**Hanur-Agry**	**1.66**	**316**	Pn	**Pg**	**01 33 08.5**	**-0.3**
DORK	**Agr/Tutak/Do**	**1.67**	**307**	P	**Pn**	**01 33 06.5**	**+0.1**
DORK				IAML		01 33 39.0	
	comp=E,33nm,0.6s						
DORK				IAML		01 33 45.0	
	comp=N,37nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.69**	**297**	Pn	**Pg**	**01 33 08.9**	**-0.5**
GNI	**Garni**	**1.76**	**6**	Pn	**Pg**	**01 33 10.4**	**-0.3**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pb**	**01 33 12.3**	**-0.2**
IHRS	**Heris**	**2.00**	**91**	Pn	**Pg**	**01 33 14.1**	**-1.2**

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*AZER **24** 01:45:55.2, 38°.34N×44°.57E, h8km, ml2.7*
*AFAD **24** 01:45:56.5, 38°.36N×44°.40E, h7km±4km, ML2.4*
*TEH **24** 01:45:56.7, 38°.42N×44°.54E, h11km±234km, ML2.7, Presumed earthquake*
*ISK **24** 01:45:57.9, 38°.35N×44°.43E, h6km, ML2.6/8*
ISC 24 01:45:57.0±1.1, 38°.38N±0°.03×44°.45E±0°.02, h7km±10km, n24, σ1s25/38, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**308**	P	**Pg**	**01 46 05.7**	**-0.2**
OZAP				S	**Sg**	**01 46 11.8**	**-0.1**
OZAP				IAML		01 46 15.0	
	comp=N,533nm,0.5s						
TVAN	**Van**	**0.83**	**281**	P	**Pg**	**01 46 11.0**	**-2.0**
TVAN				S	**Sg**	**01 46 24.1**	**+0.2**
TVAN				IAML		01 46 34.0	
	comp=N,182nm,0.4s						
TVAN				IAML		01 46 36.0	
	comp=E,180nm,0.7s						
VANB	**Van**	**0.86**	**285**	Pg	**Pg**	**01 46 13.9**	**+0.3**
VANB				Sg	**Sb**	**01 46 26.2**	**+0.1**
VMUR	**Van-Muradiye**	**0.92**	**312**	P	**Pb**	**01 46 15.1**	**-0.2**
VMUR				S	**Sn**	**01 46 28.8**	**-1.2**
VMUR				IAML		01 46 32.0	
	comp=N,221nm,0.5s						
VMUR				IAML		01 46 32.0	
	comp=E,133nm,0.3s						
ISHB	**Shabestar**	**0.92**	**96**	Pg	**Pg**	**01 46 13.2**	**-1.6**
MAKU	**Maku**	**0.99**	**10**	Pg	**Pg**	**01 46 15.0**	**-1.0**
HAKT	**HAKKARI**	**1.01**	**216**	P	**Pg**	**01 46 15.2**	**-1.2**
HAKT				S	**Sn**	**01 46 33.5**	**+1.1**
IMRD	**Marand**	**1.04**	**71**	Pg	**Pg**	**01 46 16.0**	**-0.9**
ERCV	**ERCIS-VAN**	**1.08**	**307**	Pn	**Pn**	**01 46 19.1**	**+0.4**
ERCV				Sn	**Sn**	**01 46 34.5**	**+0.5**
GEVA	**Gevas**	**1.10**	**267**	P	**Pg**	**01 46 16.4**	**-1.6**
GEVA				S	**Sg**	**01 46 32.5**	**+0.2**
GEVA				IAML		01 46 38.0	
	comp=E,104nm,0.4s						
GEVA				IAML		01 46 39.0	
	comp=N,103nm,0.6s						
NAX	**Nakhchivan**	**1.14**	**46**	P	**Pg**	**01 46 18.4**	**-0.5**
NAX				S	**Sn**	**01 46 35.1**	**-0.1**
DYDN	**Diyadin**	**1.30**	**333**	P	**Pn**	**01 46 20.8**	**-1.0**
DYDN				S	**Sb**	**01 46 36.9**	**-2.1**
DYDN				IAML		01 46 46.0	
	comp=N,66nm,0.7s						
DYDN				IAML		01 46 49.0	
	comp=E,90nm,0.6s						
CUKT	**Cukurca**	**1.31**	**211**	Pn	**Pg**	**01 46 22.7**	**+0.5**
CUKT				Sn	**Sg**	**01 46 40.7**	**+1.4**
ORD	**Ordubad**	**1.33**	**65**	P	**Pn**	**01 46 21.6**	**-0.4**
ORD				S	**Sn**	**01 46 40.6**	**+0.6**
SBZ	**Shahbuz**	**1.33**	**40**	P	**Pb**	**01 46 22.0**	**-0.4**
SBZ				S	**Sn**	**01 46 41.0**	**+0.9**
HYR	**Heyderabad**	**1.37**	**13**	P	**Pg**	**01 46 23.9**	**+0.5**
HYR				S	**Sg**	**01 46 45.5**	**+4.4**
IAZR	**Azarshahr**	**1.40**	**120**	Pg	**Pb**	**01 46 23.3**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.42**	**288**	P	**Pb**	**01 46 23.5**	**-0.4**
ADCV				S	**Sg**	**01 46 44.3**	**+1.7**
ADCV				IAML		01 46 47.0	
	comp=N,77nm,0.8s						
ADCV				IAML		01 46 48.0	
	comp=E,53nm,0.4s						
AGRB	**Hanur-Agry**	**1.65**	**317**	Pn	**Pg**	**01 46 28.3**	**-0.3**
MLAZ	**Malazgirt-MUS**	**1.67**	**298**	Pn	**Pg**	**01 46 28.6**	**-0.4**
GNI	**Garni**	**1.78**	**7**	Pn	**Pg**	**01 46 30.5**	**-0.7**
GURO	**Guroymak-BITLI**	**1.91**	**276**	Pn	**Pb**	**01 46 31.7**	**-0.5**
IHRS	**Heris**	**2.04**	**91**	Pn	**Pb**	**01 46 34.0**	**-0.5**
SVAN	**Silvan-Diyarba**	**2.57**	**266**	Pn	**Pn**	**01 46 40.9**	**+1.8**

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*IDC **24** 01:47:00.7±1.1, 39°.73N×77°.48E, h0km, mb3.7/10, mbtmp3.7/16, ML3.1/6, MS3.4/2, Error ellipse: s-maj=18.0km s-min=16.6km az=132.0*
*KRNET **24** 01:47:02.2±0.1, 39°.89N×77°.41E, mb4.2*
*SOME **24** 01:47:03.7, 40°.05N×77°.40E, h0km, MS3.7*
*NNC **24** 01:47:05.5±0.8, 40°.03N×77°.44E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=5.8km s-min=4.6km az=163.0*
ISC 24 01:47:04.7±2.0, 39°.99N±0°.06×77°.37E±0°.03, h3km±12km, n93, σ2s06/125, mb3.6/9, 36C-18D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH2	**Kashi**	**1.63**	**239**	Pg	Pn	01 47 33.3	-1.0
KSH2				Sg	**Sn**	**01 47 56.8**	**+1.0**
KSH2				smax	smax		
	comp=N,1μm,0.9s						
KSH2				smax	smax		
	comp=E,770nm,1.2s						
JNKS	**Jany-Kuch**	**1.70**	**309**	↑*i*P	**Pn**	**01 47 35.4**	**0.0**
JNKS				↑*i*S	**Sg**	**01 47 59.8**	**+0.4**
NRN	**Naryn**	**1.78**	**325**	↑*i*P	**Pn**	**01 47 37.4**	**+0.8**
NRN				↑*i*S	**Sg**	**01 48 03.0**	**+1.1**
KDJ	**Kajisay**	**2.15**	**356**	↑*i*P	**Pn**	**01 47 42.9**	**+1.4**
KDJ				↑*i*S	**Sg**	**01 48 12.4**	**-1.2**
ULHL	**Ulahol**	**2.41**	**340**	P	**Pn**	**01 47 48.1**	**+3.0**
	SNR=180						
ULHL	**Ulahol**	**2.41**	**340**	↑*i*P	**Pn**	**01 47 46.5**	**+1.3**
ULHL				↑*i*S	**Sb**	**01 48 18.8**	**-0.2**
PRZ	**Przheval'sk**	**2.61**	**17**	↑*i*P	**Pn**	**01 47 49.3**	**+1.4**
PRZ				↑*i*S	**Sb**	**01 48 23.5**	**-1.2**
BOOM	**Boomskoye usch**	**2.72**	**337**	↓*e*P	**Pn**	**01 47 50.9**	**+1.5**
BOOM				↓*i*S	**Sb**	**01 48 26.3**	**-1.6**
ANVS	**Anan'yevo**	**2.80**	**4**	↑*i*P	**Pn**	**01 47 51.8**	**+1.3**
ANVS				↑*i*S	**Sb**	**01 48 28.3**	**-1.9**
SALK	**Salom-Alik**	**2.85**	**289**	↑*i*P	**Pn**	**01 47 52.1**	**+0.9**
SALK				↑*i*S	**Sn**	**01 48 28.4**	**+2.3**
SFK	**Sufi-Kurgan**	**2.97**	**272**	↓*i*P	**Pn**	**01 47 53.5**	**+0.7**
SFK				↓*i*S	**Sn**	**01 48 30.7**	**+1.6**
ARLS	**Aral**	**2.97**	**310**	↑*i*P	**Pn**	**01 47 53.9**	**+1.1**
ARLS				↑*i*S	**Sb**	**01 48 31.6**	**-3.4**
TNSS	**Tian-Shan**	**3.06**	**354**	Pg	**Pb**	**01 48 01.1**	**+1.1**
	comp=E,35nm,0.7s						
TNSS				Lg	Lg	01 48 42.3	
	comp=E,203nm,0.8s						
TNSS	**Tian-Shan**	**3.06**	**354**	*e*P	**Pb**	**01 48 01.1**	**+1.1**
	comp=E,36nm,0.6s						
TNSS				*e*S	**Sg**	**01 48 42.3**	**-0.8**
	comp=E,203nm,0.8s						
IZV	**Izvestkoviy**	**3.10**	**350**	Pg	**Pb**	**01 48 02.3**	**+1.8**
	comp=E,79nm,0.7s						
IZV				Lg	Lg	01 48 44.2	
	comp=E,435nm,0.6s						
IZV	**Izvestkoviy**	**3.10**	**350**	*e*P	**Pb**	**01 48 02.3**	**+1.8**
	comp=E,79nm,0.7s						
IZV				*e*S	**Sg**	**01 48 44.2**	**0.0**
	comp=E,508nm,0.6s						
UCH	**Uchtor**	**3.11**	**317**	P	**Pn**	**01 47 57.8**	**+2.9**
	SNR=87						
UCH	**Uchtor**	**3.11**	**317**	↑*i*P	**Pn**	**01 47 56.3**	**+1.3**
UCH				↑*i*S	**Sb**	**01 48 35.6**	**-3.7**
SATY	**Saty**	**3.17**	**14**	Pg	**Pb**	**01 48 02.6**	**+1.0**
	comp=E,193nm,0.7s						
SATY				Lg	Lg	01 48 44.7	
	comp=E,358nm,0.7s						
MDOK	**Medeo**	**3.18**	**356**	Pg	**Pb**	**01 48 03.3**	**+1.4**
	comp=E,158nm,0.8s						
MDOK				Lg	Lg	01 48 46.0	
	comp=E,867nm,0.7s						
MTBS	**Maitube**	**3.22**	**348**	Pg	**Pb**	**01 48 03.7**	**+1.3**
	comp=E,23nm,0.4s						
MTBS				Lg	Lg	01 48 46.7	
	comp=E,162nm,0.6s						
MTBS	**Maitube**	**3.22**	**348**	*e*P	**Pb**	**01 48 03.7**	**+1.3**
	comp=E,23nm,0.4s						
MTBS				*e*S	**Sg**	**01 48 46.7**	**-1.3**
	comp=E,162nm,0.6s						
TKM2	**Tokmak 2**	**3.22**	**336**	P	**Pn**	**01 47 59.4**	**+3.1**
	SNR=21						
TKM2	**Tokmak 2**	**3.22**	**336**	↓*i*P	**Pn**	**01 47 57.7**	**+1.4**
TKM2				↓*i*S	**Sb**	**01 48 38.3**	**-3.9**
KBK	**Karagaybulak**	**3.23**	**326**	P	**Pn**	**01 47 59.5**	**+3.1**
	SNR=60						
KBK	**Karagaybulak**	**3.23**	**326**	↓*i*P	**Pn**	**01 47 58.0**	**+1.6**
KBK				↓*i*S	**Sb**	**01 48 38.3**	**-4.2**
KST	**Kastek**	**3.23**	**341**	Pg	**Pb**	**01 48 04.3**	**+1.6**
	comp=E,42nm,0.9s						
KST				Lg	Lg	01 48 47.9	
	comp=E,230nm,0.8s						
KST	**Kastek**	**3.23**	**341**	*e*P	**Pb**	**01 48 04.3**	**+1.6**
	comp=E,42nm,0.9s						
KST				*e*S	**Sg**	**01 48 47.9**	**-0.5**
	comp=E,230nm,0.8s						
AAA	**Alma-Ata**	**3.24**	**354**	Pg	**Pb**	**01 48 04.9**	**+2.1**
	comp=E,229nm,0.6s						
AAA				Lg	Lg	01 48 49.3	
	comp=E,42nm,0.6s						
AAA	**Alma-Ata**	**3.24**	**354**	*e*P	**Pb**	**01 48 04.0**	**+1.3**
	comp=E,229nm,0.6s						
AAA				*e*S	**Sg**	**01 48 47.0**	**-1.6**
	comp=E,42nm,0.6s						
KNDC	**Almaty**	**3.24**	**355**	↓Pg	**Pb**	**01 48 04.0**	**+1.2**
	comp=E,209nm,0.6s						
KNDC				↓Lg	Lg	01 48 49.1	
	comp=E,1μm,0.7s						
KOTS	**Kotyrbulak**	**3.25**	**357**	Pg	**Pb**	**01 48 05.0**	**+2.0**
	comp=E,126nm,0.7s						
KOTS				Lg	Lg	01 48 49.3	
	comp=E,866nm,0.8s						
KOTS	**Kotyrbulak**	**3.25**	**357**	*e*P	**Pb**	**01 48 03.5**	**+0.4**
	comp=E,126nm,0.7s						
KOTS				*e*S	**Sg**	**01 48 46.1**	**-3.0**
	comp=E,819nm,0.7s						
UZB	**Uzynbulak**	**3.39**	**21**	Pg	**Pb**	**01 48 06.3**	**+0.9**
	comp=E,58nm,0.7s						
UZB				Lg	Lg	01 48 51.3	
	comp=E,326nm,0.7s						
UZB	**Uzynbulak**	**3.39**	**21**	*e*P	**Pb**	**01 48 06.3**	**+0.9**
	comp=E,58nm,0.7s						
UZB				*e*S	**Sg**	**01 48 51.3**	**-2.3**
	comp=E,326nm,0.7s						
AAK	**Ala-Archa**	**3.42**	**322**	P	**Pn**	**01 48 02.2**	**+3.2**
	SNR=22						
AAK	**Ala-Archa**	**3.42**	**322**	Pn	**Pn**	**01 48 02.4**	**+3.5**
	comp=E,2.3nm,0.3s,baz=133,slow=7.4,SNR=33						
AAK				Pg	**Pb**	**01 48 07.5**	**+1.6**
	comp=E,4.0nm,0.3s,baz=155,slow=9.9,SNR=50						
AAK				Lg	Lg	01 48 54.3	
	comp=E,15nm,0.3s,baz=299,slow=20,SNR=11						
AAK				LR	LR	01 49 23.7	
	comp=E,169nm,19.7s,baz=126,slow=39						
	comp=E,34nm,0.8s						
AAK	**Ala-Archa**	**3.42**	**322**	↑Pn	**Pn**	**01 48 02.1**	**+3.2**
	comp=E,14nm,0.9s						
AAK				↓Pg	**Pb**	**01 48 07.0**	**+1.0**
	comp=E,28nm,0.6s						
AAK				↑Lg	Lg	01 48 54.0	
	comp=E,175nm,1.0s						
DGS	**Degeres**	**3.46**	**340**	Pg	**Pb**	**01 48 07.9**	**+1.2**
	comp=E,44nm,0.5s						
DGS				Lg	Lg	01 48 54.4	
	comp=E,238nm,0.6s						
DGS	**Degeres**	**3.46**	**340**	*e*P	**Pb**	**01 48 07.9**	**+1.2**
	comp=E,44nm,0.5s						
DGS				*e*S	**Sg**	**01 48 54.4**	**-1.6**
	comp=E,238nm,0.6s						
FRU1	**Bishkek**	**3.49**	**325**	↑*e*P	**Pn**	**01 48 01.8**	**+1.9**
FRU1				↑*e*S	**Sb**	**01 48 45.5**	**-4.4**
SHLS	**Shalkode**	**3.54**	**26**	Pg	**Pb**	**01 48 11.7**	**+3.8**
	comp=E,131nm,0.4s						
SHLS				Lg	Lg	01 49 00.7	
	comp=E,427nm,0.4s						
SHLS	**Shalkode**	**3.54**	**26**	*e*P	**Pb**	**01 48 11.7**	**+3.8**
	comp=E,131nm,0.4s						
SHLS				*e*S	**Sg**	**01 49 00.7**	**+2.5**
	comp=E,427nm,0.4s						
KURS	**Kuram**	**3.55**	**9**	Pg	**Pb**	**01 48 09.7**	**+1.6**
	comp=E,74nm,0.8s						
KURS				Lg	Lg	01 48 57.1	
	comp=E,151nm,0.9s						
ARSB	**Arslanbob**	**3.59**	**293**	↑*e*P	**Pn**	**01 48 02.1**	**+0.8**
ARSB				↑*e*S	**Sn**	**01 48 46.6**	**+2.3**
CHMS	**Chumysh**	**3.59**	**328**	P	**Pn**	**01 48 04.3**	**+3.1**
	SNR=20						
CHMS	**Chumysh**	**3.59**	**328**	↑*e*P	**Pn**	**01 48 02.9**	**+1.7**
CHMS				↑*i*S	**Sn**	**01 48 46.9**	**+2.7**
KPKS	**Kokpek**	**3.61**	**15**	Pg	**Pb**	**01 48 10.5**	**+1.3**
	comp=E,76nm,1.2s						
KPKS				Lg	Lg	01 48 58.4	
	comp=E,172nm,0.7s						
KPKS	**Kokpek**	**3.61**	**15**	*e*P	**Pb**	**01 48 10.5**	**+1.3**
	comp=E,76nm,1.2s						
KPKS				*e*S	**Sg**	**01 48 58.4**	**-2.3**
	comp=E,172nm,0.7s						
PDGK	**Podgornoye**	**3.70**	**25**	↑Pn	**Pn**	**01 48 03.8**	**+1.0**
	comp=E,23nm,0.7s						
PDGK				↓Pg	**Pb**	**01 48 11.4**	**+0.7**
	comp=E,140nm,1.1s						
PDGK				↑Lg	Lg	01 49 00.2	
	comp=E,509nm,0.8s						
KTBS	**Karatobe**	**3.76**	**352**	Pg	**Pb**	**01 48 13.5**	**+1.9**
	comp=E,68nm,0.7s						
KTBS				Lg	Lg	01 49 03.5	
	comp=E,152nm,1.0s						
KTBS	**Karatobe**	**3.76**	**352**	*e*P	**Pb**	**01 48 13.5**	**+1.9**
	comp=E,68nm,0.7s						
KTBS				*e*S	**Sg**	**01 49 03.5**	**-1.9**
	comp=E,152nm,1.0s						
EKS2	**Erkin-Say**	**3.80**	**316**	P	**Pn**	**01 48 07.8**	**+3.6**
	SNR=92						
KRBS	**Karabastau**	**3.92**	**342**	Pg	**Pb**	**01 48 16.5**	**+2.2**
	comp=E,39nm,0.8s						
KRBS				Lg	Lg	01 49 08.9	
	comp=E,217nm,0.6s						
KRBS	**Karabastau**	**3.92**	**342**	*e*P	**Pb**	**01 48 16.5**	**+2.2**
	comp=E,39nm,0.8s						
KRBS				*e*S	**Sg**	**01 49 08.9**	**-1.5**
	comp=E,217nm,0.6s						
USP	**Ospenovka**	**3.92**	**328**	P	**Pn**	**01 48 08.4**	**+2.7**
	SNR=8.6						
KUU	**Kurty**	**3.98**	**349**	Pg	**Pb**	**01 48 16.5**	**+1.2**
KUU				Lg	Lg	01 49 08.9	
KUU	**Kurty**	**3.98**	**349**	*e*P	**Pb**	**01 48 17.2**	**+1.8**
	comp=E,17nm,0.7s						
KUU				*e*S	**Sg**	**01 49 09.6**	**-2.8**
	comp=E,189nm,0.9s						
SGDS	**Sogindy**	**4.02**	**330**	Pg	**Pb**	**01 48 18.3**	**+2.1**
SGDS				Lg	Lg	01 49 11.7	
KTMS	**Ketmen**	**4.11**	**32**	Pg	**Pb**	**01 48 18.0**	**+0.3**
	comp=E,14nm,0.8s						
KTMS				Lg	Lg	01 49 11.6	
	comp=E,119nm,0.8s						
KTMS	**Ketmen**	**4.11**	**32**	*e*P	**Pb**	**01 48 19.8**	**+2.0**
	comp=E,14nm,0.6s						
KTMS				*e*S	**Sg**	**01 49 14.1**	**-2.7**
	comp=E,119nm,0.8s						
MRKS	**Merke**	**4.16**	**313**	Pg	**Pb**	**01 48 19.9**	**+1.4**
	comp=E,36nm,0.8s						
MRKS				Lg	Lg	01 49 14.9	
	comp=E,63nm,0.7s						
MRKS	**Merke**	**4.16**	**313**	*e*P	**Pb**	**01 48 19.9**	**+1.4**
	comp=E,36nm,0.8s						
MRKS				*e*S	**Sg**	**01 49 14.9**	**-3.4**
	comp=E,63nm,0.7s						
ARXS	**Arharly**	**4.24**	**4**	Pg	**Pb**	**01 48 22.0**	**+2.2**
	comp=E,75nm,0.7s						
ARXS				Lg	Lg	01 49 18.4	
	comp=E,209nm,0.7s						
ARXS	**Arharly**	**4.24**	**4**	*e*P	**Pb**	**01 48 22.0**	**+2.2**
	comp=E,75nm,0.7s						
ARXS				*e*S	**Sg**	**01 49 18.4**	**-2.3**
	comp=E,209nm,0.7s						
KNOS	**Konyrlen**	**4.57**	**17**	Pg	**Pb**	**01 48 28.2**	**+2.7**
	comp=E,52nm,0.8s						
KNOS				Lg	Lg	01 49 29.3	
	comp=E,92nm,0.7s						
KAPS	**Kapalarasan**	**5.49**	**15**	Pg	**Pb**	**01 48 44.8**	**+3.6**
	comp=E,20nm,0.8s						
KAPS				Lg	Lg	01 49 57.5	
	comp=E,86nm,0.7s						
KK31	**Karatay Array**	**6.01**	**303**	↑Pn	**Pn**	**01 48 36.4**	**+2.0**
	comp=E,1.7nm,0.7s,baz=108,slow=13,SNR=14						
KK31				↑Pg	**Pb**	**01 48 53.0**	**+3.0**
	comp=E,7.0nm,0.7s,baz=122,slow=17,SNR=7.7						
KK31				↓Lg	Lg	01 50 18.7	
	comp=E,24nm,0.8s,baz=112,slow=26,SNR=4.7						
BRLS	**Borolday**	**6.42**	**301**	*e*P	Pb	01 49 03.1	+6.2
	comp=E,4.3nm,0.8s						
BRLS				*e*S	**Sg**	**01 50 28.8**	**-2.0**
	comp=E,12nm,0.6s						
MAKZ	**Makanchi**	**7.60**	**25**	↓Pn	**Pn**	**01 48 57.0**	**+0.8**
	comp=E,2.0nm,0.7s						
MAKZ				↓Pg	Pb	01 49 23.7	+6.7
	com

	comp=Z,6.0nm,0.8s								
ZALV	**Zalesovo Beam**	**14.85**	**17**	Pn	**Pn**	**01 50 33.5**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=197,slow=14,SNR=8.9								
ZALV				Lg	Lg	01 54 58.4	
	comp=Z,0.1nm,0.3s,baz=195,slow=27,SNR=3.5								
	comp=Z,1.3nm,0.8s								
AKTO	**Aktyubinsk**	**17.13**	**314**	P	**Pn**	**01 51 04.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=119,slow=11,SNR=5.8								
	comp=Z,0.8nm,0.2s								
GTA2	**Gaotai**	**17.23**	**84**	*eP*	**Pn**	**01 51 03.6**	**-2.7**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s								
ARTI	**Arti**	**20.61**	**329**	P	**P**	**01 51 44.3**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=18,slow=19,SNR=2.7								
	comp=Z,2.2nm,0.8s								
LZH	**Lanzhou**	**21.18**	**92**	*eP*	P	01 51 42.9	-8.4
LZH				pP	pP	01 51 53.3	+0.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s								
SONM	**Songino Array**	**22.24**	**60**	P	**P**	**01 52 00.4**	**-2.1**
	comp=Z,1.2nm,0.9s,baz=272,slow=9.8,SNR=8.3								
	comp=Z,1.2nm,0.9s								
KIRV	**Kirov**	**25.75**	**326**	LR	LR	02 04 34.2	
	comp=Z,216nm,19.9s,baz=332,slow=40								
BRTR	**Keskin Array B**	**33.32**	**284**	P	**P**	**01 53 41.9**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=90,slow=6.2,SNR=3.7								
	comp=Z,0.4nm,0.6s								
FINES	**FINESS Array B**	**37.61**	**322**	P	**P**	**01 54 17.4**	**-2.7**
	comp=Z,2.9nm,0.9s,baz=96,slow=8.5,SNR=4.6								
	comp=Z,2.9nm,0.9s								
ARCES	**ARCESS Array B**	**40.00**	**335**	P	**P**	**01 54 39.0**	**-1.1**
	comp=Z,5.3nm,0.9s,baz=82,slow=9.3,SNR=3.2								
	comp=Z,5.3nm,0.9s								
ESDC	**Sonseca Array**	**60.24**	**298**	P	**P**	**01 57 13.6**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=69,slow=6.9,SNR=2.1								
	comp=Z,0.5nm,0.8s								
ILAR	**Eielson Array**	**69.97**	**19**	P	P	01 58 14.2	-2.7
	comp=Z,0.4nm,0.8s,baz=340,slow=5.9,SNR=4.5								
	comp=Z,0.4nm,0.8s								
TORD	**Torodi Ar. Bea**	**70.74**	**271**	P	P	01 58 19.3	-3.0
	comp=Z,2.3nm,0.9s,baz=48,slow=2.5,SNR=10								
	comp=Z,2.3nm,0.9s								
YKA	**Yellowknife Ar**	**77.41**	**6**	P	P	01 58 57.8	-2.8
	comp=Z,0.4nm,0.8s,baz=345,slow=6.1,SNR=6.6								
	comp=Z,0.4nm,0.8s								
ASAR	**Alice Springs**	**82.36**	**129**	P	P	01 59 23.7	-4.2
	comp=Z,0.4nm,0.9s,baz=320,slow=4.7,SNR=4.8								
	comp=Z,0.4nm,0.9s								

IDC 24 01:53:16.7±7.5, 7.6°64S×129.6°5E, h232km±84km, mb2.8/1, mbtmp3.4/3, Error ellipse: s-maj=117.1km s-min=32.4km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.05**	**160**	P	Pn	01 56 13.3	-0.5
	0.9nm,1.0s,baz=340,slow=13,SNR=7.9						
WRA				S	S	01 58 35.0	-3.4
	1.0nm,0.4s,baz=343,slow=22,SNR=8.9						
ASAR	**Alice Springs**	**16.45**	**166**	P	Pn	01 56 55.4	+0.5
	0.4nm,0.5s,baz=337,slow=9.7,SNR=8.8						
ASAR				S	S	01 59 55.6	+1.6
	0.4nm,0.8s,baz=343,slow=25,SNR=1.5						
MKAR	**Makanchi Array**	**68.57**	**327**	P	P	02 03 54.4	-0.1
	0.1nm,0.3s,baz=125,slow=7.4,SNR=5.8						
	0.1nm,0.3s						

IDC 24 02:02:47.6±1.0, 13.°78S×166.°64E, h0km, mb4.2/13, mbtmp4.2/14, ML3.9/1, MS3.7/9, Error ellipse: s-maj=35.6km s-min=18.9km az=119.0
NEIC 24 02:02:51.8±1.9, 13.°82S±0.°09×166.°6E±0.°2, h20km±4km, mb4.7/23, Error ellipse: s-maj=22.3km s-min=13.5km az=83.0

ISC 24 02:02:53.9±0.5, 13.°91S±0.°07×166.°6E±0.°1, h43km, n65, σ0°93/61, mb4.5/26, MS3.7/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.63**	**160**		**Pn**	**02 03 20.0**	**-0.1**
HNR	**Honiara**	**7.92**	**303**	LR	LR	02 07 30.9	
	comp=Z,11nm,20.2s,baz=262,slow=36						
DZM	**Mont Dzumac**	**8.12**	**181**	Pn	**Pn**	**02 04 50.1**	**+0.7**
	1.7nm,0.3s,baz=9.0,slow=19,SNR=9.6						
DZM				Sn	**Sn**	**02 06 18.6**	**-1.4**
	baz=130,slow=20						
	1.6nm,0.3s						
DZM	**Mont Dzumac**	**8.12**	**181**	Pn	**Pn**	**02 04 50.3**	**+0.9**
CTA	**Charters Tower**	**20.43**	**250**	P	**P**	**02 07 27.7**	**0.0**
	7.8nm,1.1s,baz=69,slow=14,SNR=2.3						
CTA				LR	LR	02 14 02.7	
	comp=Z,102nm,20.8s,baz=112,slow=33						
	7.8nm,1.1s						
STKA	**Stephens Creek**	**29.07**	**228**	P	**P**	**02 08 50.8**	**+0.4**
	1.3nm,0.5s,baz=61,slow=7.2,SNR=6.2						
STKA				LR	LR	02 19 50.8	
	comp=Z,165nm,18.3s,baz=30,slow=35						
	1.3nm,0.5s						
STKA	**Stephens Creek**	**29.07**	**228**	P	**P**	**02 08 51.5**	**+1.1**
WRA	**Warramunga Arr**	**31.44**	**255**	P	**P**	**02 09 11.2**	**-0.2**
	0.4nm,0.6s,baz=84,slow=9.1,SNR=1.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**32.41**	**248**	P	**P**	**02 09 20.0**	**+0.1**
	1.0nm,0.7s,baz=72,slow=9.3,SNR=13						
ASAR				LR	LR	02 21 43.8	
	comp=Z,84nm,18.3s,baz=116,slow=35						
	1.0nm,0.7s						
BBOO	**Buckleboo**	**33.61**	**231**	P	**P**	**02 09 31.1**	**+0.8**
BBOO				IAmb	IAmb	02 09 39.2	
	comp=Z,8.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.57**	**258**	LR	LR	02 26 36.6	
	comp=Z,167nm,18.0s,baz=38,slow=36						
BATI	**Baumata**	**42.15**	**270**	LR	LR	02 26 07.8	
	comp=Z,119nm,18.1s,baz=318,slow=33						
MJAR	**Matsushiro Arr**	**56.90**	**333**	P	**P**	**02 12 33.3**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=162,slow=8.6,SNR=6.7						
	comp=Z,2.2nm,0.6s						
MJAR	**Matsushiro Arr**	**56.90**	**333**	P	**P**	**02 12 33.9**	**-0.7**
JNU	**Nakatsue**	**57.90**	**325**	LR	LR	02 34 20.6	
	comp=Z,31nm,20.8s,baz=90,slow=33						
LEM	**Lembang**	**58.36**	**270**	LR	LR	02 39 47.8	
	comp=Z,42nm,18.1s,baz=220,slow=38						
VNDA	**Vanda**	**63.67**	**181**	P	**P**	**02 13 20.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**65.88**	**333**	P	**P**	**02 13 34.6**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=114,slow=7.1,SNR=11						
	comp=Z,4.1nm,0.8s						
PETK	**Petropavlovsk-**	**67.18**	**354**	P	**P**	**02 13 43.8**	**+0.5**
	comp=Z,3.9nm,0.9s,baz=190,slow=6.4,SNR=1.7						
	comp=Z,3.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**74.06**	**294**	P	**P**	**02 14 24.7**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=119,slow=5.2,SNR=5.4						
	comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**74.06**	**294**	P	**P**	**02 14 25.8**	**-0.1**
HiLR	**Hailar Array B**	**75.47**	**331**	P	**P**	**02 14 33.2**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=119,slow=12,SNR=2.2						
	comp=Z,0.7nm,0.3s						
M14K	**Bethel**	**78.52**	**15**	P	**P**	**02 14 52.2**	**+1.9**
M14K				IAmb	IAmb	02 14 59.7	
	comp=Z,22nm,1.5s						
M16K	**Timber Creek**	**79.54**	**16**	P	**P**	**02 14 57.2**	**+1.3**
M16K				IAmb	IAmb	02 15 09.2	
	comp=Z,14nm,1.5s						
J16K	**Anvik River**	**81.02**	**14**	P	**P**	**02 15 05.4**	**+1.6**
SONM	**Songino Array**	**81.47**	**324**	P	**P**	**02 15 07.2**	**+0.4**
	comp=Z,1.4nm,1.0s,baz=138,slow=5.3,SNR=8.4						
	comp=Z,1.4nm,1.0s						
SONM	**Songino Array**	**81.47**	**324**	P	**P**	**02 15 08.3**	**+1.6**
GTA2	**Gaotai**	**81.73**	**314**	*eP*	**P**	**02 15 09.4**	**+1.1**
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
J18K	**Innoko River**	**82.15**	**16**	P	**P**	**02 15 10.7**	**+0.9**
J18K				IAmb	IAmb	02 15 12.3	
	comp=Z,5.7nm,1.4s						
KMPM	**Mount Pierce**	**83.77**	**46**	P	**P**	**02 15 19.4**	**+0.7**
RND	**Reindeer**	**84.35**	**18**	P	**P**	**02 15 21.1**	**-0.1**
RND				IAmb	IAmb	02 16 03.6	
	comp=Z,6.7nm,1.1s						
I21K	**Tanana**	**84.78**	**16**	P	**P**	**02 15 24.7**	**+1.5**
I21K				IAmb	IAmb	02 15 25.2	
	comp=Z,12nm,1.5s						
CTGM	**Chitina Glacie**	**85.24**	**23**	P	**P**	**02 15 25.5**	**-0.3**
CTGM				IAmb	IAmb	02 15 32.5	
	comp=Z,12nm,1.2s						
C18K	**Utukok River**	**85.48**	**11**	P	**P**	**02 15 26.6**	**-0.2**
O28M	**Mount Upton**	**85.55**	**23**	P	**P**	**02 15 28.0**	**+0.4**
HDA	**Harding Lake**	**85.66**	**18**	P	**P**	**02 15 28.5**	**+0.9**
IL31		**85.94**	**18**	P	**P**	**02 15 28.6**	**-0.3**
ILAR	**Eielson Array**	**85.94**	**18**	P	**P**	**02 15 29.2**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=240,slow=4.8,SNR=36						
	comp=Z,1.2nm,0.5s						
J25K	**Salcha River,**	**86.29**	**19**	P	**P**	**02 15 31.9**	**+1.0**
J25K				IAmb	IAmb	02 15 32.8	
	comp=Z,2.5nm,0.6s						
G23K	**Bananza Creek**	**86.46**	**16**	P	**P**	**02 15 32.3**	**+0.6**
G23K				IAmb	IAmb	02 15 58.2	
	comp=Z,5.4nm,1.2s						
PFO	**Pinyon Flats O**	**87.02**	**54**	LR	LR	02 47 26.8	
	comp=Z,58nm,19.5s,baz=324,slow=31						
E22K	**Anaktuvuk Pass**	**87.09**	**14**	P	**P**	**02 15 36.2**	**+1.6**
I26K	**Coal Creek Min**	**87.46**	**19**	P	**P**	**02 15 36.9**	**+0.4**
B21K	**Ikpikpuk River**	**87.62**	**13**	P	**P**	**02 15 37.3**	**+0.2**
B21K				IAmb	IAmb	02 15 55.1	
	comp=Z,4.5nm,1.5s						
E24K	**Your Creek**	**87.87**	**15**	P	**P**	**02 15 39.6**	**+1.1**
E24K				IAmb	IAmb	02 16 01.1	
	comp=Z,3.6nm,1.4s						
D23K	**Nanushuk River**	**87.99**	**14**	P	**P**	**02 15 40.8**	**+1.9**
D23K				IAmb	IAmb	02 16 05.2	
	comp=Z,2.6nm,1.1s						
BMAR	**Burnt Mountain**	**88.47**	**17**	P	**P**	**02 15 42.9**	**+1.6**
D24K	**Happy Valley**	**88.58**	**15**	P	**P**	**02 15 41.4**	**-0.3**
D24K				IAmb	IAmb	02 16 19.9	
	comp=Z,6.6nm,1.4s						
ELK	**Elko**	**90.20**	**48**	LR	LR	02 47 34.5	
	comp=Z,51nm,20.4s,baz=292,slow=30						
MKAR	**Makanchi Array**	**96.19**	**317**	P	**P**	**02 16 17.5**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=94,slow=6.6,SNR=16						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**96.19**	**317**	P	**P**	**02 16 17.1**	**-0.3**
ZALV	**Zalesovo Beam**	**96.37**	**324**	P	**P**	**02 16 16.9**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=118,slow=5.2,SNR=8.6						
	comp=Z,1.6nm,0.6s						
ARCES	**ARCESS Array B**	**119.31**	**345**	PKP	**PKPdf**	**02 21 36.2**	**-1.7**
	comp=Z,1.9nm,0.5s,baz=99,slow=1.6,SNR=7.8						
ARCES	**ARCESS Array B**	**119.31**	**345**	PKPdf	**PKPdf**	**02 21 36.5**	**-1.5**
FINES	**FINESS Array B**	**124.73**	**338**	PKP	**PKPdf**	**02 21 47.8**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=95,slow=2.9,SNR=6.0						
FINES	**FINESS Array B**	**124.73**	**338**	PKPdf	**PKPdf**	**02 21 47.2**	**-1.3**
NOA	**NORSAR Array B**	**129.67**	**345**	PKP	**PKPdf**	**02 21 57.7**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=13,slow=4.1,SNR=1.9						
BURAR	**Bucovina Array**	**133.59**	**324**	PKPdf	**PKPdf**	**02 22 06.4**	**+0.5**
CEL	**Celeste**	**144.51**	**318**	PKPdf	**PKPab**	**02 22 23.7**	**-0.8**
BNI	**Bardonecchia**	**144.60**	**335**	PKPdf	**PKPab**	**02 22 24.9**	**+0.2**
KEST	**Kesra**	**150.19**	**321**	PKPbc	**PKPbc**	**02 22 40.8**	**0.0**
	comp=Z,5.0nm,0.7s,baz=356,slow=0.5,SNR=7.0						
KEST	**Kesra**	**150.19**	**321**		**PKPbc**	**02 22 40.2**	**-0.5**
ESDC	**Sonseca Array**	**153.03**	**344**	PKPbc	**PKPbc**	**02 22 46.5**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=13,slow=5.2,SNR=4.5						
ESDC				PKPab	**PKPab**	**02 22 57.9**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=22,slow=4.4,SNR=10						
ESDC	**Sonseca Array**	**153.03**	**344**	PKPbc	**PKPbc**	**02 22 46.0**	**-1.1**
TORD	**Torodi Ar. Bea**	**165.34**	**269**	PKP	**PKPdf**	**02 22 54.2**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=273,slow=1.7,SNR=3.2						
TORD				PKPab	**PKPab**	**02 23 53.1**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=85,slow=1.7,SNR=2.8						

IDC 24 02:08:53.5±3.5, 6.°06S×104.°54E, h0km, mb3.8/3, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=107.8km s-min=59.0km az=28.0
DJA 24 02:09:11.7±0.5, 6.°5S±7.°1×105.°5E±.°, h58km±10km, M3.4/15, MLv3.4/15

ISC 24 02:09:08.2±1.1, 6.°5S±0.°1×105.°30E±0.°09, h50km, n16, σ2°79/15, mb3.5/3, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBJI	**Serang**	**0.89**	**68**	P	**Pn**	**02 09 26.0**	**+1.5**
BLSI	**Bandar Lampung**	**1.09**	**357**	P	**Pn**	**02 09 27.5**	**+0.3**
KASI	**Kota Agung**	**1.23**	**319**	P	**Pn**	**02 09 32.0**	**+3.0**
KASI				S	**Sn**	**02 09 47.7**	**+3.2**
DBJI	**Dramaga**	**1.44**	**94**	P	**Pn**	**02 09 34.8**	**+2.9**
KLI	**Kotabumi**	**1.65**	**344**	P	**Pn**	**02 09 36.3**	**+1.5**
KLSI		**1.85**	**342**	P	**Pn**	**02 09 39.0**	**+1.5**
MDSI	**Maura Dua**	**2.26**	**330**	P	**Pn**	**02 09 45.3**	**+2.2**
LEM	**Lembang**	**2.33**	**99**	Pn	**Pn**	**02 09 45.8**	**+1.6**
	14nm,0.3s,baz=360,slow=17,SNR=6.0						
LEM				Sn	**Sn**	**02 10 15.1**	**+3.3**
	4.4nm,0.3s,baz=294,slow=20,SNR=1.7						
	42nm,0.5s						
BBJI	**Bungbulang**	**2.54**	**113**	P	**Pn**	**02 09 49.8**	**+2.9**
WRA	**Warramunga Arr**	**31.21**	**118**	P	**P**	**02 15 20.8**	**-2.3**
	0.3nm,0.5s,baz=294,slow=8.2,SNR=1.5						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**32.38**	**125**	P	**P**	**02 15 32.2**	**-1.1**
	0.3nm,0.4s,baz=302,slow=8.2,SNR=5.2						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**42.25**	**132**	P	**P**	**02 16 56.0**	**-0.8**
	2.3nm,0.6s,baz=308,slow=8.5,SNR=9.7						
	2.3nm,0.6s						
H04N2	**CROZET ISLANDS**	**60.58**	**220**	T	T	03 24 48.5	
	baz=67,slow=75,SNR=7.0						
H04N1	**CROZET ISLANDS**	**60.59**	**220**	T	T	03 24 49.1	
	baz=67,slow=75,SNR=6.7						
H04N3	**CROZET ISLANDS**	**60.59**	**220**	T	T	03 24 47.5	
	baz=67,slow=75,SNR=6.2						
TXAR	**Lajitas Array**	**144.46**	**47**	PKP	**PKPab**	**02 28 33.1**	**-5.0**
	0.2nm,0.6s,baz=266,slow=1.8,SNR=3.6						

AFAD 24 02:10:31.7, 38.°39N×44.°49E, h7km±4km, ML2.3
AZER 24 02:10:31.0, 38.°32N×44.°58E, h6km, ml2.5
ISK 24 02:10:33.1, 38.°28N×44.°42E, h5km, ML2.5/7
TEH 24 02:10:33.8, 38.°43N×44.°50E, h10km±174km, ML2.6, Presumed earthquake

ISC 24 02:10:32.9±1.2, 38.°36N±0.°02×44.°45E±0.°02, h0km±11km, n27, σ1°20/46, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**310**	P	**Pg**	**02 10 41.7**	**-0.2**
OZAP				S	**Sg**	**02 10 47.9**	**-0.2**
OZAP				IAML		02 10 51.0	
	comp=N,416nm,0.6s						
YOVA	**Hakkari_Yksek**	**0.78**	**190**	P	**Pg**	**02 10 47.5**	**-0.3**
YOVA				S	**Sg**	**02 10 59.9**	**+2.0**
YOVA				IAML		02 11 10.0	
	comp=N,56nm,0.4s						
YOVA				IAML		02 11 10.0	
	comp=E,62nm,0.5s						
TVAN	**Van**	**0.84**	**282**	P	**Pg**	**02 10 47.9**	**-1.0**
TVAN				S	**Sg**	**02 11 00.9**	**+1.1**
TVAN				IAML		02 11 04.0	
	comp=E,121nm,0.5s						
TVAN				IAML		02 11 10.0	
	comp=N,180nm,0.8s						
VANB	**Van**	**0.87**	**286**	Pg	**Pg**	**02 10 50.4**	**+0.9**
VANB				Sg	**Sb**	**02 11 02.9**	**-0.2**
ISHB	**Shabestar**	**0.92**	**94**	Pg	**Pg**	**02 10 50.2**	**-0.2**
VMUR	**Van-Muradiye**	**0.93**	**313**	P	**Pg**	**02 10 49.7**	**-1.1**
VMUR				S	**Sn**	**02 11 06.3**	**-1.2**
VMUR				IAML		02 11 09.0	
	comp=N,202nm,0.4s						
VMUR				IAML		02 11 09.0	
	comp=E,103nm,0.5s						
HAKT	**HAKKARI**	**0.99**	**217**	P	**Pg**	**02 10 51.1**	**-0.8**
HAKT				S	**Sb**	**02 11 07.6**	**+0.9**
HAKT				IAML		02 11 12.0	
	comp=N,91nm,0.4s						
HAKT				IAML		02 11 13.0	
	comp=E,62nm,0.5s						
HAKT	**HAKKARI**	**0.99**	**217**	P	**Pg**	**02 10 51.5**	**-0.4**
HAKT				S	**Sn**	**02 11 09.5**	**+0.4**
MAKU	**Maku**	**1.01**	**10**	Pg	**Pg**	**02 10 51.8**	**-0.4**
IMRD	**Marand**	**1.04**	**70**	Pg	**Pn**	**02 10 53.4**	**-1.5**
GEVA	**Gevas**	**1.10**	**268**	P	**Pg**	**02 10 51.8**	**-2.1**
GEVA				S	**Sg**	**02 11 08.8**	**+0.7**
GEVA				IAML		02 11 12.0	
	comp=N,90nm,0.5s						
GEVA				IAML		02 11 15.0	
	comp=E,62nm,0.3s						
NAX	**Nakhchivan**	**1.15**	**45**	P	**Pn**	**02 10 54.9**	**-1.4**
NAX				S	**Sn**	**02 11 11.9**	**-0.9**
AKDM	**Akdamar-Van**	**1.16**	**269**	Pn	**Pg**	**02 10 54.3**	**-0.8**
AKDM				Sn	**Sn**	**02 11 12.8**	**-0.3**
CUKT	**Cukurca**	**1.30**	**211**	Pn	**Pn**	**02 10 57.5**	**-0.8**
CUKT				Sn	**Sb**	**02 11 15.5**	**+0.1**
DYDN	**Diyadin**	**1.32**	**334**	P	**Pn**	**02 10 57.0**	**-1.9**
DYDN				S	**Sg**	**02 11 15.0**	**-0.5**
DYDN				IAML		02 11 20.0	
	comp=N,41nm,0.8s						
DYDN				IAML		02 11 25.0	
	comp=E,58nm,0.7s						
ORD	**Ordubad**	**1.33**	**64**	P	**Pg**	**02 10 58.0**	**-0.4**
ORD				S	**Sn**	**02 11 17.2**	**-0.1**
SBZ	**Shahbuz**	**1.35**	**39**	P	**Pg**	**02 10 58.6**	**-0.1**
SBZ				S	**Sn**	**02 11 18.6**	**+1.0**
IAZR	**Azarshahr**	**1.38**	**119**	Pg	**Pg**	**02 10 59.8**	**+0.4**
HYR	**Heyderabad**	**1.39**	**13**	P	**Pg**	**02 11 01.0**	**+1.4**
HYR				S	**Sn**	**02 11 23.2**	**+4.5**
ADCV	**BITLIS_Adilcev**	**1.43**	**289**	P	**Pn**	**02 10 58.8**	**-1.4**
ADCV				S	**Sg**	**02 11 20.5**	**+1.7**
ADCV				IAML		02 11 23.0	
	comp=N,59nm,0.8s						
ADCV				IAML		02 11 25.0	
	comp=E,46nm,0.5s						
IGDI	**IGDIR**	**1.54**	**349**	P	**Pn**	**02 11 00.8**	**-0.8**
IGDI				S	**Sg**	**02 11 21.9**	**-0.3**
IGDI				IAML		02 11 27.0	
	comp=N,30nm,1.0s						
IGDI				IAML		02 11 27.0	
	comp=E,35nm,0.6s						
DORK	**Agr/Tutak/Do**	**1.66**	**309**	P	**Pn**	**02 11 03.2**	**-0.2**
DORK				S	**Sg**	**02 11 26.4**	**+0.2**
DORK				IAML		02 11 32.0	
	comp=N,32nm,0.8s						
DORK				IAML		02 11 32.0	
	comp=E,28nm,0.8s						
AGRB	**Hanur-Agry**	**1.67**	**317**	Pn	**Pg**	**02 11 05.2**	**+0.4**
MLAZ	**Malazgirt-MUS**	**1.68**	**298**	Pn	**Pb**	**02 11 04.8**	**0.0**
MLAZ				Sn	**Sg**	**02 11 28.3**	**+1.4**
GNI	**Garni**	**1.80**	**7**	Pn	**Pg**	**02 11 07.9**	**+0.5**
GURO	**Guroymak-BITLI**	**1.91**	**277**	Pn	**Pn**	**02 11 07.8**	**+1.0**
IHRS	**Heris**	**2.04**	**90**	Pn	**Pg**	**02 11 10.8**	**-1.1**

AFAD 24 02:16:13.6, 38.°28N×44.°61E, h7km±2km, ML2.2
TEH 24 02:16:15.0, 38.°39N×44.°41E, h10km±279km, ML2.5, Presumed earthquake
AZER 24 02:16:15.7, 38.°36N×44.°60E, h10km, ml2.1
ISK 24 02:16:18.6, 38.°40N×44.°39E, h3km, ML2.3/7

ISC 24 02:16:17.1±1.1, 38.°40N±0.°03×44.°51E±0.°03, h10km±10km, n21, σ1°41/33, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**303**	P	**Pg**	**02 16 25.6**	**-1.0**
OZAP				S	**Sg**	**02 16 34.7**	**+1.7**
OZAP				IAML		02 16 41.0	
	comp=N,187nm,0.9s						
TVAN	**Van**	**0.88**	**279**	P	**Pg**	**02 16 32.6**	**-1.5**
TVAN				S	**Sg**	**02 16 46.4**	**+1.0**
TVAN				IAML		02 17 01.0	
	comp=N,69nm,0.9s						
TVAN				IAML		02 17 02.0	
	comp=E,82nm,0.8s						
ISHB	**Shabestar**	**0.88**	**97**	Pg	**Pn**	**02 16 33.2**	**-2.5**
VANB	**Van**	**0.90**	**283**	Pg	**Pg**	**02 16 34.5**	**0.0**
VANB				Sg	**Sg**	**02 16 46.1**	**-0.1**
VMUR	**Van-Muradiye**	**0.94**	**309**	P	**Pg**	**02 16 34.5**	**-0.8**
VMUR				S	**Sn**	**02 16 49.9**	**-0.2**
VMUR				IAML		02 16 56.0	
	comp=E,40nm,0.6s						
MAKU	**Maku**	**0.96**	**8**	Pg	**Pg**	**02 16 34.1**	**-1.5**
IMRD	**Marand**	**0.99**	**71**	Pg	**Pn**	**02 16 36.3**	**-0.9**
HAKT	**HAKKARI**	**1.05**	**217**	P	**Pn**	**02 16 37.1**	**-1.1**
HAKT				S	**Sn**	**02 16 54.5**	**+1.4**
NAX	**Nakhchivan**	**1.09**	**45**	P	**Pn**	**02 16 38.2**	**-0.3**
NAX				S	**Sn**	**02 16 54.2**	**+0.6**
GEVA	**Gevas**	**1.14**	**266**	P	**Pb**	**02 16 36.8**	**-2.2**
GEVA				S	**Sb**	**02 16 54.7**	**+0.7**
AKDM	**Akdamar-Van**	**1.20**	**267**	Pn	**Pb**	**02 16 39.9**	**-0.2**
AKDM				Sn	**Sg**	**02 16 56.8**	**+0.9**
ORD	**Ordubad**	**1.28**	**65**	P	**Pg**	**02 16 41.2**	**-0.5**
ORD				S	**Sn**	**02 16 59.9**	**+1.7**
SBZ	**Shahbuz**	**1.28**	**39**	P	**Pg**	**02 16 42.5**	**+0.7**
SBZ				S	**Sn**	**02 17 00.5**	**+2.0**
CUKT	**Cukurca**	**1.36**	**212**	Pn	**Pg**	**02 16 44.7**	**+1.5**
CUKT				Sn	**Sg**	**02 17 03.1**	**+2.3**
IAZR	**Azarshahr**	**1.37**	**121**	Pg	**Pg**	**02 16 42.8**	**-0.6**
IGDI	**IGDIR**	**1.50**	**347**	P	**Pg**	**02 16 46.0**	**+0.1**
IGDI				S	**Sg**	**02 17 08.9**	**+3.5**
AGRB	**Hanur-Agry**	**1.66**	**315**	Pn	**Pg**	**02 16 48.6**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.70**	**296**	Pn	**Pg**	**02 16 49.1**	**-0.7**
GNI	**Garni**	**1.75**	**6**	Pn	**Pg**	**02 16 50.9**	**+0.1**
GURO	**Guroymak-BITLI**	**1.95**	**275**	Pn	**Pb**	**02 16 52.3**	**-0.5**

M14K	**Bethel**	**7.58**	**13**	Pn	**Pn**	**02 28 16.4**	**+2.4**
M15K	**Kasigluk River**	**7.72**	**17**		**Pn**	**02 28 18.1**	**+2.1**
O17K	**Koliganek Bris**	**7.82**	**32**		**Pn**	**02 28 18.8**	**+1.4**
OHAK	**Old Harbor**	**7.86**	**56**	Pn	**Pn**	**02 28 17.9**	**-0.1**
L14K	**Kuka Creek**	**8.07**	**9**	Pn	**Pn**	**02 28 23.4**	**+2.6**
M16K	**Timber Creek**	**8.37**	**22**	Pn	**Pn**	**02 28 26.8**	**+1.8**
N17K	**Nushagak Hills**	**8.40**	**29**	Pn	**Pn**	**02 28 27.0**	**+1.7**
KDAK	**Kodiak Island**	**8.45**	**54**	Pn	**Pn**	**02 28 25.2**	**-0.8**
	comp=E,0.7nm,0.3s,baz=200,slow=4.5,SNR=5.2						
KDAK				Sn	Sn	02 29 50.6	-9.4
	comp=E,0.2nm,0.3s,baz=105,slow=9.5,SNR=2.2						
	comp=E,7.5nm,0.7s						
KDAK	**Kodiak Island**	**8.45**	**54**	Pn	**Pn**	**02 28 25.4**	**-0.6**
K13K	**Kusilvak Mount**	**8.54**	**2**	Pn	**Pn**	**02 28 30.2**	**+2.9**
L16K	**Owhat River**	**8.88**	**18**	Pn	**Pn**	**02 28 34.0**	**+2.0**
K15K	**Wolf Creek Mou**	**9.12**	**11**	Pn	**Pn**	**02 28 38.1**	**+2.8**
J14K	**Nanvaranak Lak**	**9.40**	**5**	Pn	**Pn**	**02 28 41.0**	**+1.9**
N19K	**Bonanza Creek**	**9.47**	**34**	Pn	**Pn**	**02 28 42.5**	**+2.4**
RED	**Redoubt Volcan**	**9.81**	**39**	Pn	**Pn**	**02 28 47.7**	**+3.0**
CNPM	**China Poot**	**9.91**	**46**	Pn	**Pn**	**02 28 48.1**	**+2.1**
L19K	**White Mountain**	**10.40**	**28**	Pn	**Pn**	**02 28 54.8**	**+2.0**
SLKM	**Skilak Lake**	**10.87**	**43**	Pn	**Pn**	**02 28 59.2**	**-0.1**
GAMB	**Gambell**	**10.89**	**345**	Pn	**Pn**	**02 29 01.9**	**+2.6**
ANM	**Nome**	**11.17**	**360**	Pn	**Pn**	**02 29 06.1**	**+2.7**
K20K	**Telida**	**11.56**	**26**	Pn	**Pn**	**02 29 10.9**	**+2.2**
PPLA	**Purkeypile**	**11.74**	**31**	Pn	**Pn**	**02 29 13.3**	**+2.1**
TNA	**Tin City**	**12.24**	**355**	Pn	**Pn**	**02 29 20.3**	**+2.5**
F15K	**North Star Dit**	**12.33**	**1**	Pn	**Pn**	**02 29 22.1**	**+3.0**
HIN	**Hinchinbrook I**	**12.41**	**48**	Pn	**Pn**	**02 29 19.3**	**-1.0**
KLU	**Klutina**	**13.17**	**44**	Pn	**Pn**	**02 29 28.3**	**-2.4**
M24K	**Tolsona, Glenn**	**13.38**	**42**	Pn	**Pn**	**02 29 32.3**	**-1.2**
BMRM	**Bremner River**	**13.50**	**48**	Pn	**Pn**	**02 29 37.2**	**+2.0**
H21K	**Melozitna Rive**	**13.78**	**22**	Pn	**Pn**	**02 29 41.0**	**+2.2**
N25K	**Chitina, Valde**	**13.79**	**45**	Pn	**Pn**	**02 29 37.4**	**-1.7**
F19K	**Shaleruckik Mo**	**13.95**	**13**	Pn	**P**	**02 29 45.8**	**-3.1**
GLB	**Gilahina Butte**	**14.05**	**47**	Pn	**Pn**	**02 29 40.9**	**-1.8**
CRQM	**Cirque**	**14.08**	**50**	Pn	**Pn**	**02 29 41.4**	**-1.8**
VRDI	**Verde Repeater**	**14.12**	**48**	Pn	**Pn**	**02 29 41.7**	**-2.0**
H22K	**Ishtalitna Cre**	**14.31**	**24**	Pn	**Pn**	**02 29 48.1**	**+2.0**
GRNC	**Granite Creek**	**14.71**	**51**	Pn	**Pn**	**02 29 50.1**	**-1.7**
ILAR	**Eielson Array**	**14.73**	**32**	Pn	Pn	02 29 47.1	-4.8
	baz=234,slow=13,SNR=1.7						
	comp=E,0.3nm,0.7s						
M26K	**Nabesna, AK**	**14.82**	**44**	Pn	**Pn**	**02 29 50.8**	**-2.3**
C16K	**Lisburne Hills**	**14.90**	**0**		**P**	**02 29 58.0**	**-1.4**
CTGM	**Chitina Glacie**	**14.98**	**50**	Pn	**Pn**	**02 29 53.7**	**-1.7**
LOGN	**Logan Glacier**	**15.09**	**51**	Pn	**Pn**	**02 29 57.0**	**+0.2**
M27K	**Edge Creek, AK**	**15.27**	**45**	Pn	**Pn**	**02 29 57.5**	**-1.6**
M27K				IAmb	IAmb	02 30 06.2	
	comp=Z,5.9nm,1.0s						
G23K	**Bananza Creek**	**15.29**	**23**		**P**	**02 30 03.1**	**-0.7**
G23K				IAmb	IAmb	02 30 07.8	
	comp=Z,7.6nm,1.2s						
COLD	**Coldfoot**	**15.67**	**22**	Pn	**Pn**	**02 30 05.9**	**+1.7**
C19K	**Lookout Ridge**	**15.96**	**8**		**P**	**02 30 13.2**	**+2.0**
HYT	**Haines Junctio**	**16.73**	**53**	P	**P**	**02 30 21.8**	**+1.9**
HYT				IAmb	IAmb	02 30 25.4	
	comp=Z,9.9nm,1.4s						
B21K	**Ikpikpuk River**	**16.99**	**13**		**P**	**02 30 22.9**	**+0.4**
B21K				IAmb	IAmb	02 30 25.2	
	comp=Z,3.3nm,0.7s						
B20K	**Meade River**	**17.06**	**10**	P	**P**	**02 30 24.1**	**+0.9**
BMAR	**Burnt Mountain**	**17.24**	**28**		**Pn**	**02 30 25.0**	**+0.8**
M30M	**Minto, Yukon**	**17.55**	**47**		**P**	**02 30 29.3**	**+0.5**
B22K	**Teshekpuk Lake**	**17.82**	**13**		**P**	**02 30 32.4**	**+0.8**
WHY	**Whitehorse**	**17.96**	**54**	Pn	**P**	**02 30 36.9**	**+3.4**
C24K	**Franklin Bluff**	**18.05**	**19**		**P**	**02 30 35.6**	**+1.5**
C24K				IAmb	IAmb	02 30 43.4	
	comp=Z,12nm,1.5s						
D25K	**Kavik River**	**18.21**	**22**		**Pn**	**02 30 36.3**	**+0.3**
P32M	**Atlin**	**18.39**	**58**	P	**Pn**	**02 30 41.1**	**+2.8**
P32M				IAmb	IAmb	02 31 08.9	
	comp=Z,9.7nm,1.2s						
M31M	**Drury Creek, Y**	**18.52**	**49**	P	**Pn**	**02 30 41.8**	**+2.1**
M31M				IAmb	IAmb	02 30 55.5	
	comp=Z,4.9nm,0.8s						
P33M	**Teslin, Yukon**	**18.91**	**56**	P	**Pn**	**02 30 46.1**	**+1.5**
P33M				IAmb	IAmb	02 31 08.3	
	comp=Z,10nm,1.2s						
G30M	**tAoh Zraii Nji**	**19.58**	**35**	P	**P**	**02 30 49.3**	**-1.8**
G30M				IAmb	IAmb	02 31 05.8	
	comp=Z,7.0nm,1.5s						
G31M	**Satah River**	**20.23**	**36**	P	**P**	**02 30 55.5**	**-2.5**
G31M				IAmb	IAmb	02 31 14.7	
	comp=Z,4.8nm,1.3s						
DLBC	**Dease Lake**	**20.25**	**61**	P	**P**	**02 30 58.9**	**+0.4**
	comp=Z,2.4nm,0.9s,baz=264,slow=9.2,SNR=2.6						
	comp=Z,2.4nm,0.9s						
INK	**Inuvik**	**21.13**	**33**	P	**P**	**02 31 05.2**	**-2.5**
	comp=Z,0.7nm,0.4s,baz=261,slow=12,SNR=11						
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**21.13**	**33**	P	**P**	**02 31 04.9**	**-2.8**
INK				IAmb	IAmb	02 31 13.2	
	comp=Z,6.7nm,1.4s						
PETK	**Petropavlovsk-**	**21.94**	**284**	P	**P**	**02 31 14.7**	**-2.0**
	comp=Z,6.4nm,1.2s,baz=69,slow=10,SNR=1.3						
	comp=Z,6.4nm,1.2s						
YKAW3	**Yellowknife Wh**	**27.70**	**51**	P	**P**	**02 32 11.7**	**+0.9**
YKAW3				IAmb	IAmb	02 32 11.8	
	comp=Z,4.8nm,1.5s						
YKA	**Yellowknife Ar**	**27.70**	**51**	P	**P**	**02 32 11.9**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=278,slow=7.9,SNR=9.4						
	comp=Z,0.5nm,0.8s						
NVAR	**Mina Array Bea**	**35.30**	**96**	P	**P**	**02 33 21.1**	**+3.0**
	comp=Z,0.8nm,0.7s,baz=312,slow=8.7,SNR=3.6						
	comp=Z,0.8nm,0.7s						
FCC	**Fort Churchill**	**38.38**	**53**	P	**P**	**02 33 44.5**	**+0.8**
H11N2	**WAKE ISLAND Hy**	**39.84**	**223**	T	T	03 16 36.5	
	baz=25,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**39.85**	**223**	T	T	03 16 43.9	
	baz=25,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**39.86**	**223**	T	T	03 16 44.7	
	baz=25,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**41.02**	**223**	T	T	03 18 10.9	
	baz=25,slow=76,SNR=49						
H11S2	**WAKE ISLAND Hy**	**41.03**	**223**	T	T	03 18 05.3	
	baz=25,slow=76,SNR=49						
H11S3	**WAKE ISLAND Hy**	**41.04**	**223**	T	T	03 18 12.1	
	baz=25,slow=76,SNR=39						
SPITS	**Spitsbergen Ar**	**48.66**	**360**	P	**P**	**02 35 05.6**	**-0.7**
	comp=Z,11nm,0.9s,baz=0.0,slow=7.2,SNR=2.3						
	comp=Z,11nm,0.9s						
SUMG	**Summit**	**49.03**	**19**	P	**P**	**02 35 10.6**	**+1.0**
P40A	**Paris**	**50.15**	**75**	P	**P**	**02 35 18.1**	**0.0**
TXAR	**Lajitas Array**	**50.34**	**93**	P	**P**	**02 35 21.5**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=304,slow=5.8,SNR=7.6						
	comp=Z,0.6nm,0.7s						
ULN	**Ulaanbaatar**	**52.46**	**302**	P	**P**	**02 35 35.8**	**+0.3**
ULN				IAmb	IAmb	02 36 19.1	
	comp=Z,2.3nm,1.4s						
SONM	**Songino Array**	**52.82**	**302**	P	**P**	**02 35 38.9**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=28,slow=5.9,SNR=2.2						
	comp=Z,0.4nm,0.8s						
SONM	**Songino Array**	**52.82**	**302**	P	**P**	**02 35 38.9**	**+0.8**
MKAR	**Makanchi Array**	**64.80**	**315**	P	**P**	**02 37 00.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=54,slow=7.3,SNR=5.1						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**64.80**	**315**	P	**P**	**02 36 59.7**	**-1.5**
MAKZ	**Makanchi**	**64.92**	**316**	P	**P**	**02 37 00.9**	**-1.1**
MAKZ				IAmb	IAmb	02 37 25.4	
	comp=Z,0.9nm,0.6s						
FINES	**FINESS Array B**	**65.12**	**354**	P	**P**	**02 37 02.6**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=16,slow=6.9,SNR=11						
	comp=Z,2.5nm,0.7s						
FINES	**FINESS Array B**	**65.12**	**354**	P	**P**	**02 37 02.1**	**-0.9**
NOA	**NORSAR Array B**	**65.85**	**2**	P	**P**	**02 37 07.4**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=0.5,slow=6.2,SNR=1.4						
	comp=Z,0.6nm,0.7s						
HFS	**Hagfors**	**66.79**	**1**	P	**P**	**02 37 13.7**	**0.0**
	comp=Z,2.0nm,0.4s,baz=9.4,slow=3.7,SNR=30						
	comp=Z,2.0nm,0.4s						
EKA	**Eskdalemuir Ar**	**70.61**	**11**	P	**P**	**02 37 36.8**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=354,slow=6.4,SNR=2.1						
	comp=Z,1.5nm,0.8s						
AKASG	**Malin Array Be**	**75.52**	**350**	P	**P**	**02 38 05.9**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=15,slow=6.3,SNR=2.9						
	comp=Z,0.4nm,0.4s						
KIEV	**Kiev**	**75.53**	**350**	P	**P**	**02 38 05.0**	**-1.8**
SC01	**Santiago de lo**	**77.33**	**75**	P	**P**	**02 38 16.5**	**-1.0**
H03N2	**Juan Fernandez**	**114.09**	**114**	T	T	04 49 38.6	
	baz=322,slow=77,SNR=28						
H03N1	**Juan Fernandez**	**114.11**	**114**	T	T	04 49 39.8	
	baz=322,slow=77,SNR=20						
H03N3	**Juan Fernandez**	**114.11**	**114**	T	T	04 49 35.7	
	baz=322,slow=77,SNR=20						

NEIC ***24*** *02:29:18.0±0.9, 17.°88N±0.°03×66.°821W±0.°009, h10km±1km, ML3.3/39, Md3.3/8(RSPR), Error ellipse: s-maj=5.6km s-min=2.8km az=9.0*
RSPR ***24*** *02:29:18.1, 17.°88N×66.°84W, h6km, MD3.3/8*
OSPL ***24*** *02:29:18.4±0.6, 17.°81N×66.°84W, h2km±999km, ML2.6, Presumed earthquake*
SDD ***24*** *02:29:18.6±1.1, 17.°88N×66.°86W, h20km±9km, MD3.7, ML2.9, MW3.2, Presumed earthquake*

ISC 24 02:29:17.6±1.0, 17.°88N±0.°05×66.°83W±0.°02, h14km±5km, n44, σ0°51/76, 14C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.10**	**336**		**Pg**	**02 29 20.9**	**+0.1**
GBPR					**Sg**	**02 29 22.6**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.10**	**336**	*ie*P	**Pg**	**02 29 20.9**	**+0.1**
GBPR				*e*S	**Sg**	**02 29 22.6**	**-0.4**
MLPR	**Magueyes Islan**	**0.22**	**294**		**Pg**	**02 29 22.7**	**+0.2**
MLPR				Sg	**Sg**	**02 29 26.0**	**+0.2**
MLPR				IAML		02 29 27.6	
	7μm,0.2s						
MLPR				IAML		02 29 28.1	
	5μm,0.3s						
OBIP	**Obispado Ponce**	**0.27**	**53**	Pg	**Pg**	**02 29 23.7**	**+0.3**
OBIP				Sg	**Sg**	**02 29 26.9**	**-0.4**
OBIP	**Obispado Ponce**	**0.27**	**53**	*ie*P	**Pb**	**02 29 23.8**	**-0.4**
OBIP				*e*S	**Sb**	**02 29 28.4**	**-0.3**
OBIP	**Obispado Ponce**	**0.27**	**53**	*i*P	**Pb**	**02 29 23.9**	**-0.4**
OBIP				*e*S	**Sb**	**02 29 28.4**	**-0.3**
OBIP				IAML		02 29 29.8	
	comp=Z,479nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**296**	Pg	**Pg**	**02 29 23.9**	**+0.3**
CRPR				Sg	**Sb**	**02 29 28.8**	**-0.5**
CRPR				IAML		02 29 29.9	
	comp=Z,2μm,0.2s						
CRPR				IAML		02 29 29.0	
	comp=Z,3μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**296**	*ie*Pg	**Pb**	**02 29 24.1**	**-0.4**
CRPR				*ie*Sg	**Sg**	**02 29 27.9**	**+0.1**
CRPR				IAML		02 29 29.8	
	comp=N,3μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.29**	**296**	*ie*P	**Pb**	**02 29 24.2**	**-0.4**
CRPR				*e*S	**Sb**	**02 29 28.6**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.29**	**296**	*i*P	**Pb**	**02 29 24.2**	**-0.4**
CRPR				*e*S	**Sg**	**02 29 28.4**	**+0.5**
CRPR				IAML		02 29 28.9	
	comp=Z,3μm,0.2s						
CELP	**Cerrillos**	**0.31**	**51**	Pg	**Pb**	**02 29 24.6**	**-0.3**
CELP				Sg	**Sg**	**02 29 28.5**	**+0.1**
LSP	**Las Mesas**	**0.38**	**321**		**Pg**	**02 29 25.6**	**+0.3**
LSP					**Sb**	**02 29 31.8**	**-0.1**
LSP	**Las Mesas**	**0.38**	**321**	*ie*P	**Pg**	**02 29 25.6**	**+0.3**
LSP				*e*S	**Sb**	**02 29 31.8**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.39**	**16**	Pg	**Pg**	**02 29 25.4**	**0.0**
UUPR				Sg	**Sg**	**02 29 29.8**	**-0.9**
PRSN	**Puerto Rico Se**	**0.45**	**319**	Pg	**Pg**	**02 29 26.6**	**+0.1**
PRSN				Sg	**Sg**	**02 29 32.5**	**-0.1**
PRSN				IAML		02 29 35.8	
	comp=Z,3μm,0.2s						
PRSN				IAML		02 29 37.8	
	comp=Z,4μm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**319**	*ie*Pg	**Pg**	**02 29 26.6**	**+0.1**
PRSN				*ie*Sg	**Sb**	**02 29 33.6**	**-0.1**
PRSN				IAML		02 29 37.7	
	comp=N,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**319**	*ie*P	**Pg**	**02 29 26.7**	**+0.1**
PRSN				*e*S	**Sb**	**02 29 33.7**	**-0.1**
ECPR	**Experimental S**	**0.63**	**46**	Pg	**Pg**	**02 29 29.5**	**-0.3**
ECPR				Sg	**Sg**	**02 29 37.7**	**-0.4**
ECPR				IAML		02 29 40.1	
	comp=N,2μm,0.2s						
AGPR	**Aguadilla, PR**	**0.64**	**336**	Pg	**Pg**	**02 29 29.7**	**-0.5**
AGPR	**Aguadilla, PR**	**0.64**	**336**	*ie*Pg	**Pg**	**02 29 29.9**	**-0.2**
AGPR				*ie*Sg	**Sg**	**02 29 38.5**	**-0.1**
AGPR				IAML		02 29 40.7	
	comp=N,548nm,0.6s						
AGPR	**Aguadilla, PR**	**0.64**	**336**	*ie*P	**Pg**	**02 29 30.1**	**-0.1**
AGPR				*e*S	**Sg**	**02 29 38.9**	**+0.2**
EMPR	**Esperanza - Ma**	**0.66**	**26**		**Pg**	**02 29 30.9**	**0.0**
EMPR					**Sb**	**02 29 40.3**	**+0.3**
EMPR	**Esperanza - Ma**	**0.66**	**26**	*ie*P	**Pb**	**02 29 30.9**	**0.0**
EMPR				*e*S	**Sb**	**02 29 40.3**	**+0.3**
SJG	**San Juan**	**0.69**	**70**	Pg	**Pg**	**02 29 31.1**	**+0.1**
SJG				Sg	**Sb**	**02 29 40.5**	**-0.3**
SJG				IAML		02 29 42.7	
	comp=N,642nm,0.2s						
SJG				IAML		02 29 42.8	
	comp=N,666nm,0.2s						
SJG	**San Juan**	**0.69**	**70**	*ie*Pg	**Pg**	**02 29 31.2**	**+0.1**
SJG				*e*Sg	**Sb**	**02 29 41.0**	**+0.2**
SJG	**San Juan**	**0.69**	**70**	*ie*P	**Pb**	**02 29 31.3**	**-0.1**
SJG				*e*S	**Sb**	**02 29 41.8**	**+1.1**
SJG	**San Juan**	**0.69**	**70**	*i*P	**Pb**	**02 29 31.3**	**-0.1**
SJG				*e*S	**Sb**	**02 29 41.3**	**+0.5**
SJG				IAML		02 29 42.5	
	comp=Z,276nm,0.1s						
PDPR	**Patillas Dam,**	**0.79**	**80**	Pg	**Pg**	**02 29 32.8**	**0.0**
IDE	**Isla Desecheo**	**0.79**	**310**		**Pg**	**02 29 32.7**	**-0.3**
IDE					**Sb**	**02 29 44.0**	**+0.3**
IDE	**Isla Desecheo**	**0.79**	**310**	*ie*P	**Pg**	**02 29 32.7**	**-0.3**
IDE				*e*S	**Sb**	**02 29 44.0**	**+0.3**
GCPR	**Guaynabo City**	**0.83**	**59**	Pg	**Pg**	**02 29 33.3**	**-0.4**
GCPR				Sg	**Sg**	**02 29 44.3**	**-0.4**
GCPR	**Guaynabo City**	**0.83**	**59**	*ie*P	**Pg**	**02 29 33.5**	**-0.2**
GCPR				*e*S	**Sb**	**02 29 45.1**	**+0.3**
HUMP	**Col San Antoni**	**0.97**	**74**	Pg	**Pb**	**02 29 35.8**	**-0.4**
HUMP				Sg	**Sg**	**02 29 49.0**	**-0.1**
HUMP				IAML		02 29 53.7	
	comp=Z,429nm,0.2s						
HUMP				IAML		02 29 54.1	
	comp=Z,510nm,0.2s						
HUMP	**Col San Antoni**	**0.97**	**74**	*ie*P	**Pb**	**02 29 35.9**	**-0.3**
HUMP				*e*S	**Sb**	**02 29 48.8**	**-0.1**
CUPR	**Culebra, Puert**	**1.54**	**74**	Pn	**Pn**	**02 29 45.0**	**+0.4**
PCDR	**Punta Cana, DR**	**1.60**	**293**	*ie*Pg	**Pb**	**02 29 46.6**	**-0.3**
PCDR				IAML		02 30 13.2	
	comp=N,161nm,0.5s						
HIDR	**Higuey Centro**	**1.93**	**292**	*ie*Pg	**Pb**	**02 29 51.8**	**-0.7**
HIDR				IAML		02 30 31.1	
	comp=N,84nm,0.2s						
DR12	**Loma Pena Alta**	**2.58**	**291**	Pn	**Pn**	**02 30 00.8**	**+1.8**
HATOM	**Hato Mayor del**	**2.58**	**291**	*ie*Pg	**Pb**	**02 30 01.6**	**-2.1**
HATOM				IAML		02 30 45.3	
	comp=N,36nm,0.5s						
BANI	**BANI**	**3.39**	**279**	Pn	**Pn**	**02 30 11.2**	**+1.1**
SABA	**Saba**	**3.43**	**94**	Pn	**Pn**	**02 30 11.9**	**+1.2**
SMRT	**St. Maarten**	**3.58**	**87**	Pn	**Pn**	**02 30 13.2**	**+0.4**
GDHS	**Morne Mazeau,**	**5.10**	**107**	Pn	**Pn**	**02 30 33.6**	**-0.1**
CBE	**Ff, Capester**	**5.32**	**109**	Pn	**Pn**	**02 30 36.2**	**-0.4**

DNK ***24*** *02:38:08.2±1.3, 51.°35N×16.°35E, h2km±58km, ML2.9, Presumed earthquake*
VIE ***24*** *02:38:11.2±0.5, 51.°40N×16.°45E, h0km, mb2.6/1, ml2.4/2, Error ellipse: s-maj=4.5km s-min=3.1km az=66.0 52 km NW of Wroclaw Suspected Mining induced.*
PRU ***24*** *02:38:12.8, 51.°38N×16.°23E, h0km*

ISC 24 02:38:09.7±0.9, 51.°47N±0.°03×16.°26E±0.°03, h0km, n24, σ1°36/48, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**178**	*ie*Pg	**Pg**	**02 38 22.5**	**+0.7**
KSP				*e*Sg	**Sg**	**02 38 30.1**	**+0.1**
CHVC	**Chvalec**	**0.90**	**188**	*ie*PG	**Pg**	**02 38 27.6**	**+0.7**
CHVC				*e*SG	**Sg**	**02 38 37.9**	**-0.6**
OSTC	**Ostas**	**0.92**	**182**	*ie*PG	**Pb**	**02 38 28.1**	**-0.5**
OSTC				*e*SG	**Sg**	**02 38 39.8**	**+0.6**
UPC	**Upice**	**0.98**	**189**	*ie*PG	**Pg**	**02 38 29.0**	**+0.5**
UPC				*e*SG	**Sg**	**02 38 41.8**	**+0.6**
DPC	**Dobruska-Polom**	**1.13**	**178**	*ie*PG	**Pg**	**02 38 31.3**	**0.0**
DPC				*e*SG	**Sg**	**02 38 46.1**	**+0.2**
	comp=Z,13nm,0.5s						
PVCC	**Panska Ves**	**1.43**	**229**	*ie*PG	**Pb**	**02 38 37.9**	**+0.7**
PVCC				*e*SG	**Sg**	**02 38 56.3**	**+0.7**
	comp=Z,49nm,0.2s						
KRLC	**Kraliky**	**1.44**	**167**	*ie*PG	**Pg**	**02 38 37.2**	**-0.1**
KRLC				*e*SG	**Sg**	**02 38 55.7**	**-0.2**
	comp=Z,8.7nm,0.3s						
BRG	**Berggiesshubel**	**1.58**	**248**	Pg	**Pg**	**02 38 40.4**	**+0.4**
BRG				Sg	**Sg**	**02 39 01.2**	**+0.8**
BRG				Amp		02 39 03.9	
	comp=Z,11nm,0.3s						
RICC	**Richard**	**1.65**	**237**	*e*PG	**Pn**	**02 38 40.8**	**+0.8**
STEB	**Steborice**	**1.82**	**147**	*e*PG	**Pb**	**02 38 44.0**	**+0.2**
STEB				*e*SG	**Sb**	**02 39 07.0**	**-0.1**
	comp=Z,16nm,0.3s						
PRU	**Pruhonice**	**1.85**	**217**	*e*PG	**Pb**	**02 38 44.7**	**+0.4**
PRU				*e*SG	**Sb**	**02 39 08.1**	**+0.2**
MORC	**Moravsky Berou**	**1.89**	**154**	*e*PN	**Pn**	**02 38 42.9**	**-0.3**
MORC				*e*SG	**Sn**	**02 39 07.3**	**-0.4**
HSKC	**Hora Svate Kat**	**1.99**	**245**	*e*PG	**Pb**	**02 38 47.0**	**+0.3**
HSKC				*e*SG	**Sb**	**02 39 13.1**	**+1.1**
CLL	**Collm**	**2.05**	**267**	*i* Pn	**Pb**	**02 38 47.1**	**-0.7**
CLL				*i* Pg	**Pg**	**02 38 48.8**	**-0.2**
CLL				*i* x	x	02 38 51.8	
CLL				*e*(Sn)	**Sn**	**02 39 05.0**	**-6.6**
CLL				*i* Sg	**Sg**	**02 39 16.8**	**+1.3**
	comp=Z,6.0nm,0.3s						
VRAC	**Vranov**	**2.18**	**174**	*e*PN	**Pn**	**02 38 47.8**	**+0.6**
VRAC				*e*SG	**Sb**	**02 39 17.4**	**-0.2**
KRUC	**Moravsky**	**2.42**	**178**	*e*SG	**Sb**	**02 39 25.1**	**+0.7**
KHC	**Kasperske Hory**	**2.91**	**217**	*e*PG	**Pb**	**02 39 03.0**	**+0.5**
KHC				*e*SN	**Sn**	**02 39 30.0**	**-3.0**
KHC				*e*SG	**Sb**	**02 39 41.0**	**+2.4**
CKRC	**Cesky Krumlov**	**2.94**	**206**	*e*PG	**Pb**	**02 39 04.6**	**+1.6**
CKRC				*e*SG	**Sb**	**02 39 41.3**	**+1.9**
CONA	**Conrad Observa**	**3.56**	**184**	*i* Pn	**Pn**	**02 39 06.9**	**+0.7**
	comp=Z,0.1nm,0.1s						
CONA				*e*Sg	**Sg**	**02 40 02.4**	**-1.6**
	comp=Z,3.5nm,0.3s						
BSD	**Bornholm Skovb**	**3.73**	**348**	*i* P	**Pn**	**02 39 09.0**	**+0.4**
BSD				*i* S	**Sn**	**02 39 52.7**	**-0.5**
BSD				IAML		02 40 24.3	
	comp=Z,14nm,0.8s						
MOA	**Moln**	**3.85**	**200**	*e*Sg	**Sg**	**02 40 12.4**	**-1.1**
	comp=Z,0.9nm,0.2s						
BLEU	**Blekinge**	**4.85**	**357**	*i* P	**Pn**	**02 39 24.4**	**+0.6**
BLEU				*i* S	**Sn**	**02 40 19.5**	**-1.0**
BJUU	**Bjuv**	**4.99**	**339**	*i* P	**Pn**	**02 39 25.2**	**-0.6**
BJUU				*i* S	**Sn**	**02 40 24.0**	**-0.2**
DEL	**Delary**	**5.20**	**345**	*i* P	**Pn**	**02 39 29.1**	**+0.4**
DEL				*i* S	**Sn**	**02 40 28.1**	**-1.3**

IDC ***24*** *02:43:32.7±0.5, 39.°06N×27.°94E, h0km, mb4.2/27, mbtmp4.2/42, ML3.9/13, MS4.2/74, Error ellipse: s-maj=8.8km s-min=8.2km az=162.0*
MED_RC ***24*** *02:43:33.0±0.3, 38.°94N×27.°80E, h20km±1km, MW5.0/76, Moment Tensor Solution. Mantle waves: s76,c114; Duration: 1s1 Moment tensor: Scale 10^16Nm; Mrr-1.43±.19; Mθθ 1.31±.18; Mϕϕ 0.12±.09; Mrθ-0.71±.18; Mθϕ-4.05±.12; Mϕr-0.47±.17; Best double couple: M=4.25000×10^16 NP1:ϕs354.00000°,δ74.00000°, λ-13.00000°. NP2:ϕs88.00000°,δ78.00000°, λ-164.00000°. Principal axes: T 4.8200, Plg2.0000°, Azm221.0000°; N -1.1400, Plg70.0000°, Azm125.0000°; P -3.6800, Plg20.0000°, Azm311.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
AFAD ***24*** *02:43:33.8, 38.°98N×27.°87E, h9km±1km, MW4.8*
MOS ***24*** *02:43:33.0±0.8, 39.°07N×27.°92E, h9km, mb4.7/23, MS4.0/11, Error ellipse: s-maj=5.2km s-min=3.2km az=82.6*
ISK ***24*** *02:43:33.4, 38.°99N×27.°88E, h10km, ML5.0/6*
NEIC ***24*** *02:43:35.0±1.7, 39.°06N±0.°05×27.°92E±0.°06

BKES **Balkesir-Mer** 0.74 2 P Pg 02 43 48.6 -0.6
BKES S Sg 02 43 58.5 -0.4
BKES IAML 02 44 01.0
comp=N,6µm,0.6s
BKES IAML 02 44 06.0
comp=E,6µm,0.6s
IZMD zmir-Dikili- 0.76 270 P Pg 02 43 48.7 -0.8
IZMD S Sg 02 43 58.0 -1.4
IZMD IAML 02 44 03.0
comp=N,2µm,0.4s
IZMD IAML 02 44 04.0
comp=E,2µm,1.1s
DURS Dursunbey 0.76 36 P Pg 02 43 48.6 -0.9
DURS S Sg 02 43 59.6 +0.2
KULA Kula-Manisa 0.76 128 Pg Pg 02 43 49.1 -0.5
BALY Balya 0.78 344 P Pg 02 43 49.5 -0.4
BALY S Sg 02 43 59.8 -0.4
BUHA Balikesir, Bur 0.81 309 P Pg 02 43 49.6 -0.9
BUHA S Sg 02 44 00.3 -1.0
BUHA IAML 02 44 04.0
comp=N,4µm,0.4s
BUHA IAML 02 44 04.0
comp=E,6µm,0.6s
DST Dursunbey 0.83 42 Pg Pg 02 43 49.5 -1.4
DUVT Torbali 0.85 205 P Pg 02 43 49.9 -1.3
DUVT S Sg 02 44 01.1 -1.1
DUVT IAML 02 44 04.0
comp=N,1µm,0.3s
DUVT IAML 02 44 04.0
comp=E,2µm,0.4s
SIMA Simav-Kutahya 0.85 83 Pg Pg 02 43 50.6 -0.7
SMAA Simav-Kutahya 0.85 82 Pg Pg 02 43 50.7 -0.6
IZMR zmir-demi 0.85 177 P Pg 02 43 50.5 -0.8
IZMR S Sg 02 44 01.8 -0.7
IZMR IAML 02 44 05.0
comp=N,2µm,1.3s
IZMR IAML 02 44 05.0
comp=E,4µm,0.7s
BAGT Foa 0.88 248 P Pg 02 43 50.9 -0.9
BAGT S Sg 02 44 03.1 -0.3
BAGT IAML 02 44 06.0
comp=N,6µm,1.0s
BAGT IAML 02 44 07.0
comp=E,7µm,0.9s
BLKS Balkesir-Sus 0.88 4 P Pg 02 43 51.1 -0.8
BLKS S Sg 02 44 01.0 -2.5
KIRA zmir-Kiraz 0.89 153 P Pg 02 43 51.3 -0.6
KIRA S Sg 02 44 03.5 -0.1
KIRA IAML 02 44 06.0
comp=N,3µm,0.6s
KIRA IAML 02 44 07.0
comp=E,5µm,0.6s
YAYO Edremit-Balk 0.89 314 Pg Pg 02 43 50.9 -1.1
BLCB Balcova 0.90 228 Pg Pg 02 43 50.9 -1.3
BLCB Balcova 0.90 228 P Pg 02 43 50.8 -1.4
BLCB S Sg 02 44 03.2 -0.8
USAK Uak-Merkez 0.92 107 P Pg 02 43 51.6 -0.9
USAK S Sg 02 44 03.4 -1.1
FOCM Foa 0.95 253 Pg Pb 02 43 51.9 -1.1
SUSR Susurluk-Balik 0.98 8 Pg Pb 02 43 52.4 -1.1
AYVA Ayvalik 0.99 289 P Pb 02 43 53.0 -0.7
AYVA S Sg 02 44 06.7 -0.1
CMHT Manyas 1.02 3 P Pb 02 43 53.5 -0.7
CMHT S Sb 02 44 05.6 -1.9
SHAP Saphane-Kutahy 1.03 88 Pg Pb 02 43 54.1 -0.4
AYDB Zeytinkoy-Aydi 1.04 180 Pg Pb 02 43 53.7 -1.0
GONE Gonen-Balikesi 1.07 351 Pg Pb 02 43 54.4 -0.6
YENI Yenice-Canakka 1.07 332 Pg Pb 02 43 54.1 -1.0
NAZL Nazilli-Aydin 1.07 163 Pg Pb 02 43 54.1 -1.0
ATIT Gnen 1.12 347 P Pb 02 43 55.6 -0.3
ATIT S Sb 02 44 09.8 -0.5
KRBN Karaburun 1.12 250 Pn Pb 02 43 55.1 -0.8
SULTU Buldan 1.16 144 P Pb 02 43 56.3 -0.3
SULTU S Sn 02 44 12.8 +0.4
EMET Ktahya-Emet 1.17 70 P Pb 02 43 56.7 -0.1
EMET S Sg 02 44 12.3 -0.3
GEDZ Gediz 1.18 87 Pn Pn 02 43 56.8 -0.1
GMLD Gumuldur 1.19 220 Pn Pn 02 43 56.0 -1.0
KARB zmir-Karabur 1.21 255 P Pb 02 43 56.5 -0.6
KARB S Sb 02 44 12.6 -0.2
KUSD Kusadasi-Aydin 1.23 203 Pn Pn 02 43 57.0 -0.5
DGB zmir 1.23 221 P Pn 02 43 56.5 -1.0
DGB S Sb 02 44 13.2 -0.3
GDZ Gediz 1.24 85 P Pb 02 43 58.2 +0.2
GDZ S Sg 02 44 15.4 +0.7
ESEN Aydn-Nazilli 1.24 163 P Pn 02 43 57.1 -0.6
ESEN S Sb 02 44 12.7 -1.2
BAYC CANAKKALE_Bayr 1.29 306 P Pn 02 43 58.2 -0.2
BAYC S Sb 02 44 14.2 -1.0
PRK Paraskevi 1.29 282 P Pn 02 43 57.7 -0.6
PRK S Sb 02 44 14.6 -0.6
TVSB Tavsanli 1.30 69 Pn Pn 02 43 58.5 -0.1
ORLT Orhaneli 1.31 36 Pn Pn 02 43 58.5 -0.1
ORLT Orhaneli 1.31 36 P Pn 02 43 58.7 +0.1
ORLT S Sg 02 44 16.9 0.0
KCTX Karacabey (Bur 1.32 15 Pn Pn 02 43 58.2 -0.6
ZEYE Izmir, Urla-Ze 1.32 236 P Pn 02 43 57.7 -1.1
ZEYE S Sb 02 44 15.3 -0.9
AYDN Tasoluk 1.33 181 P Pn 02 43 58.1 -0.9
AYDN S Sb 02 44 15.6 -0.8
EDC Edincik 1.35 359 Pn Pn 02 43 58.7 -0.5
BAND Balkesir-Ban 1.37 6 ⇓P Pn 02 43 59.1 -0.4
BAND Balkesir-Ban 1.37 6 P Pn 02 43 59.1 -0.4
BAND S Sb 02 44 17.7 +0.1
GCAM G?zelcaml? 1.39 202 Pn Pn 02 43 58.0 -1.7
GCAM G?zelcaml? 1.39 202 P Pn 02 43 58.2 -1.5
GCAM S Sn 02 44 16.2 -1.6
PASA Karahalli, USA 1.40 117 P Pn 02 44 00.2 +0.2
PASA S Sn 02 44 17.9 -0.5
BIGA Biga-Canakkale 1.41 336 Pn Pn 02 43 59.7 -0.3
EZNE Ezine-Canakkal 1.41 303 Pn Pn 02 44 00.2 +0.2
CESE eme 1.41 243 Pn Pn 02 43 59.9 -0.3
KHL Karahalli 1.44 117 Pn Pn 02 44 00.4 -0.1
GPNR Gulpinar-Canak 1.45 289 Pn Pn 02 44 00.0 -0.5
KOCA Canakkale, Ayv 1.46 291 P Pn 02 44 00.2 -0.4
KOCA S Sn 02 44 18.2 -1.3
KRBG Karabiga-Canak 1.47 342 Pn Pn 02 44 00.5 -0.4
EZN Ezine 1.48 305 Pn Pn 02 44 00.4 -0.4
EZN Ezine 1.48 305 P Pn 02 44 00.2 -0.7
EZN S Sn 02 44 19.4 -0.6
EZN Ezine 1.48 305 P Pn 02 44 00.5 -0.4
ULDT Uludag 1.50 39 P Pn 02 44 01.5 +0.2
ULDT S Sb 02 44 21.8 +0.4
LAPS Lapseki, ANA 1.50 327 P Pn 02 44 01.2 -0.1
LAPS S Sn 02 44 20.0 -0.6
SMG Samos 1.53 213 P Pn 02 44 00.5 -1.1
SMG S Sn 02 44 20.7 -0.6
CHOS Chios island 1.56 248 Pn Pn 02 44 01.3 -0.9
MDNY Mudanya-Bursa 1.57 29 Pn Pn 02 44 01.7 -0.5
BNAZ Uak-Banaz 1.58 101 P Pb 02 44 03.6 -0.2
BNAZ S Sn 02 44 23.3 +0.6
CNKL anakkale-Mer 1.59 313 P Pn 02 44 02.5 +0.1
CNKL S Sn 02 44 23.0 +0.3
SIGR SIGRI 1.60 279 Pn Pn 02 44 01.8 -0.8
SIGR SIGRI 1.60 279 P Pn 02 44 01.7 -1.0
SIGR S Sn 02 44 22.6 -0.5
DOMA Ktahya-Doman 1.60 60 P Pb 02 44 04.4 +0.2
DOMA S Sg 02 44 25.6 -0.8
DDIM Aydin, Didim 1.62 199 P Pn 02 44 02.4 -0.4
MADA Marmara adas 1.62 351 P Pn 02 44 02.8 -0.1
MADA S Sn 02 44 23.2 -0.3
IGD Bursa 1.62 38 P Pn 02 44 03.2 +0.3
IGD S Sg 02 44 26.3 -0.7
MRMT Marmara Adasi 1.63 352 Pn Pn 02 44 03.0 -0.1
DNIZ Denizli-Tavas- 1.63 146 P Pn 02 44 02.9 -0.2
DNIZ S Sg 02 44 28.1 +0.8
LPK Lapseki 1.64 328 Pn Pn 02 44 02.7 -0.4
ANDZ Kutahya, Merke 1.64 71 P Pb 02 44 04.3 -0.5
ANDZ S Sg 02 44 27.7 +0.2
BOZC Bozcaada 1.66 301 Pn Pn 02 44 02.9 -0.6
BOZC Bozcaada 1.66 301 P Pn 02 44 03.3 -0.2
BOZC S Sb 02 44 26.6 +0.7
DIDI Didim-Aydin 1.69 198 Pn Pn 02 44 04.3 +0.4
MLSB Milas 1.70 183 Pn Pn 02 44 03.5 -0.5
ECEA Canakkale, Ece 1.70 309 P Pn 02 44 04.1 +0.2
ECEA S Sn 02 44 24.9 -0.6
KUTH Kutahya 1.70 76 P Pg 02 44 06.7 -0.7
KUTH S Sg 02 44 30.9 +1.4
KUTH IAML 02 44 32.0
comp=E,7µm,0.6s
KUTH IAML 02 44 34.0
comp=N,6µm,0.4s
TAVA DENIZLI_Tavas 1.72 152 P Pn 02 44 03.4 -0.9
ARMT Armutlu 1.74 25 Pn Pn 02 44 05.0 +0.4
MULA Mugla, Merkez- 1.77 169 P Pn 02 44 04.1 -0.8
MULA S Sg 02 44 30.4 -1.1
RKY Sarkoy-Tekirda 1.78 342 Pn Pn 02 44 04.4 -0.8
GELI Tayfur-Gelibol 1.78 322 Pn Pn 02 44 04.9 -0.2
SART Tekirdag 1.78 342 P Pn 02 44 05.9 +0.7
SART S Sn 02 44 27.5 -0.2
SART IAML 02 44 32.0
comp=E,4µm,1.1s
SART IAML 02 44 34.0
comp=N,3µm,0.4s
GAZK Gazikoy-TEKIRD 1.81 346 Pn Pn 02 44 05.3 -0.2
IZI Iznik 1.81 42 Pn Pn 02 44 06.0 +0.4
INCE Denizli-Bozkur 1.84 134 P Pn 02 44 06.0 0.0
APMY Acipayam-Deniz 1.88 143 Pn Pn 02 44 05.9 -0.6
YER Yerkesik 1.88 171 Pn Pn 02 44 05.9 -0.6
YER Yerkesik 1.88 171 P Pn 02 44 05.7 -0.8
AFYO Afyonkarahisar 1.89 95 P Pn 02 44 07.8 +1.1
AFYO S Sg 02 44 35.5 +0.1
AFYO IAML 02 44 41.0
comp=N,1µm,0.7s
AFYO IAML 02 44 44.0
comp=E,3µm,0.8s
KZIL AFYON_Kizioren 1.91 112 P Pn 02 44 07.5 +0.6
YKAV Yalikavak-Bodr 1.93 195 Pn Pn 02 44 07.8 +0.7
DNZT Denizli-Tavas- 1.93 152 P Pn 02 44 06.7 -0.5
GOAD anakkale-G¶ 1.93 308 P Pn 02 44 07.3 +0.2
GOAD S Sg 02 44 35.4 -1.4
GOAD IAML 02 44 37.0
comp=E,3µm,0.5s
GOAD IAML 02 44 38.0
comp=N,2µm,0.8s
GADA Gvkgeada 1.95 308 Pn Pn 02 44 07.1 -0.4
GADA Gvkgeada 1.95 308 P Pn 02 44 07.1 -0.4
GADA S Sn 02 44 31.9 +0.1
BDRM Kayabasi 1.96 191 P Pn 02 44 08.5 +1.0
BODT Bodrum 1.98 194 Pn Pn 02 44 08.3 +0.4
BODT Bodrum 1.98 194 P Pn 02 44 08.0 +0.2
ERIK Erikli-Kesan 1.99 328 Pn Pn 02 44 07.8 -0.1
BOTS Marmara Eregli 2.00 2 Pn Pn 02 44 08.3 +0.2
BASM Basmaki-Afyon 2.00 122 Pn Pn 02 44 07.9 -0.3
TKR Tekirdag 2.02 352 Pn Pn 02 44 08.4 +0.1
ADVT Abdulvahap 2.02 44 Pn Pn 02 44 07.9 -0.5
YLVH Yalova 2.04 33 Pn Pn 02 44 08.8 +0.1
SINB Sinanoba-Istan 2.06 14 Pn Pn 02 44 09.5 +0.5
YKBL Yakuplu-Istanb 2.08 16 Pn Pn 02 44 09.9 +0.7
HYBA Heybeliada-Ist 2.09 26 Pn Pn 02 44 09.5 +0.1
BRGA Burgazada-Ista 2.09 25 Pn Pn 02 44 09.6 +0.2
LAFA Gebze-Kocaeli 2.09 32 Pn Pn 02 44 09.2 -0.2
BUYA Buyukada-Istan 2.10 26 Pn Pn 02 44 10.2 +0.7
TUZL Tuzla-Istanbul 2.10 30 Pn Pn 02 44 09.9 +0.4
ENZZ Sultanice-Enez 2.11 321 Pn Pn 02 44 09.2 -0.3
HVHR Bakirkoy-Istan 2.11 20 Pn Pn 02 44 09.5 -0.1
SHUT Suhut-Afyon 2.12 101 Pn Pn 02 44 10.4 +0.5
OSMT Osmaniye 2.13 40 Pn Pn 02 44 10.0 +0.1
CRLT Corlu 2.14 357 Pn Pn 02 44 09.9 -0.1
GBZT Gebze 2.15 33 P Pn 02 44 09.2 -1.0
GBZT S Sb 02 44 41.7 +1.6
BORA Eskisehir 2.17 65 Pn Pn 02 44 10.2 -0.4
MURA Muratl, TEK 2.18 352 P Pn 02 44 10.9 +0.4
MURA S Sn 02 44 37.5 +0.1
ELBA Catalca 2.19 11 P Pn 02 44 10.2 -0.5
ELBA S Sb 02 44 40.2 -1.0
ENEZ Enez 2.20 323 Pn Pn 02 44 11.1 +0.3
ENEZ Enez 2.20 323 P Pn 02 44 11.1 +0.3
ENEZ S Sn 02 44 38.7 +0.9
TURN Turunc 2.23 173 Pn Pn 02 44 10.5 -0.7
DATC Datca-Mugla 2.24 185 Pn Pn 02 44 11.7 +0.4
SLVT Silivri 2.25 6 Pn Pn 02 44 11.5 0.0
DALY Dalyan (Mula) 2.25 164 Pn Pn 02 44 11.7 +0.2
KAVV Kandilli-Istan 2.25 23 Pn Pn 02 44 10.9 -0.7
ISK Istanbul-Kandi 2.26 23 Pn Pn 02 44 11.2 -0.4
GPA Golpazari 2.27 54 Pn Pn 02 44 11.7 -0.2
DAT Datca 2.27 186 Pn Pn 02 44 11.9 -0.1
DAT Datca 2.27 186 P Pn 02 44 11.7 -0.3
HRT Hereke 2.28 36 Pn Pn 02 44 11.0 -1.0
SATE Sancaktepe, 2.28 27 P Pn 02 44 11.3 -0.7
SATE S Sg 02 44 46.1 -2.1
BGKT Bogazkoy 2.29 17 Pn Pn 02 44 12.2 +0.1
LIA Limnos Island 2.29 294 P Pn 02 44 11.9 -0.1
LIA S Sn 02 44 39.0 -1.0
CTKS Kestanelik-??a 2.29 12 Pn Pn 02 44 11.2 -0.9
UKOP Uzunkopru-Edir 2.34 336 Pn Pn 02 44 13.4 +0.6
SGAZ Eskisehir, Sey 2.35 76 P Pn 02 44 14.3 +1.4
SGAZ S Sg 02 44 49.2 -0.9
SMTH Samothraki Isl 2.35 310 P Pn 02 44 12.6 -0.3
SMTH S Sn 02 44 41.9 +0.3
SEMS Kocaeli-K¶rfe 2.35 36 P Pg 02 44 18.9 -1.4
SEMS S Sg 02 44 48.8 -1.5
ESKT Eskisehir 2.35 76 Pn Pn 02 44 13.7 +0.6
SRCK Saricakaya, Es 2.36 63 Pn Pn 02 44 13.5 +0.5
ISP Isparta 2.37 119 Pn Pn 02 44 12.5 -0.8
ISP Isparta 2.37 119 *i* P Pn 02 44 12.9 -0.4
ISP Isparta 2.37 119 P Pn 02 44 13.2 -0.1
ALN Alexandroupoli 2.38 324 Pn Pn 02 44 13.0 -0.3
ALN Alexandroupoli 2.38 324 Pn Pn 02 44 13.1 -0.1
ALN Alexandroupoli 2.38 324 P Pn 02 44 13.2 -0.1
ALN Alexandroupoli 2.38 324 P Pn 02 44 13.0 -0.3
KURO Afyon-Bolvadin 2.38 95 P Pn 02 44 14.0 +0.5
BYAT Afyon-Bayat 2.41 90 P Pn 02 44 14.7 +0.9
BYAT S Sg 02 44 54.4 +2.3
KLYT Kilyos 2.42 21 Pn Pn 02 44 13.7 -0.2
KLYT Kilyos 2.42 21 P Pn 02 44 13.4 -0.5
SDAG Sultandagi-AFY 2.43 102 Pn Pn 02 44 14.6 +0.5
BAGD Egridir - ISPA 2.48 113 P Pn 02 44 15.3 +0.5
GULT Gulveren 2.48 54 Pn Pn 02 44 15.1 +0.3
FETI Fethiye-Mugla 2.49 157 Pn Pn 02 44 15.2 +0.4
CIFT Cifteler, Eski 2.49 80 Pn Pn 02 44 15.4 +0.5
CTYL Yalikoy Yolu 2.50 7 Pn Pn 02 44 14.5 -0.5
CTYL Yalikoy Yolu 2.50 7 P Pn 02 44 14.2 -0.8
KNIK Mula-Seydike 2.52 148 P Pn 02 44 15.9 +0.6
FETY Fethiye 2.53 158 P Pn 02 44 08.4 -7.1
SILT Sile 2.54 31 ⇑P Pn 02 44 15.5 0.0
SILT Sile 2.54 31 Pn Pn 02 44 15.2 -0.3
SAUV Serdivan-Sakar 2.56 46 Pn Pn 02 44 15.4 -0.4
BCK Bucak 2.61 125 Pn Pn 02 44 16.8 +0.2
PHSR Pinarhisar 2.65 354 Pn Pn 02 44 16.8 -0.3
APE Apeiranthos 2.68 225 ⇓P Pn 02 44 17.1 -0.4
APE Apeiranthos 2.68 225 *i* P Pn 02 44 19.7 +2.2
APE Apeiranthos 2.68 225 P Pg 02 44 26.5 +0.4
APE S Sg 02 45 01.8 +1.0
ELL Elmali 2.75 144 Pn Pn 02 44 19.4 +0.9
ELL Elmali 2.75 144 Pn Pn 02 44 19.8 +1.3
ELL Elmali 2.75 144 P Pn 02 44 19.4 -0.9
KORT Korkuleli 2.78 135 Pn Pn 02 44 19.3 +0.4
ARG Arkhangelos 2.78 176 Pn Pn 02 44 18.0 -0.8
ARG Arkhangelos 2.78 176 Pn Pn 02 44 18.9 +0.1
ARG Arkhangelos 2.78 176 P Pn 02 44 18.2 -0.6
ARG S Sn 02 44 53.1 +1.0
ARG Arkhangelos 2.78 176 P Pn 02 44 18.0 -0.8
RDO Rodhopi 2.81 321 Pn Pn 02 44 19.2 -0.1
RDO Rodhopi 2.81 321 Pn Pn 02 44 19.5 +0.2
RDO Rodhopi 2.81 321 P Pn 02 44 19.4 +0.1
SVRH Sivrihisar-ESK 2.85 80 Pn Pn 02 44 20.7 +0.8
KARY Karystos 2.88 252 P Pn 02 44 19.1 -1.0
THAS Thassos island 2.93 304 P Pn 02 44 20.4 -0.5
SAHE Sakarya_HENDEK 2.94 50 ⇑P Pn 02 44 21.0 0.0
MDUB Mudurnu 2.94 59 Pn Pn 02 44 21.4 +0.2
MDUB Mudurnu 2.94 59 Pn Pn 02 44 21.5 +0.3
EDRB Edirne 2.98 343 Pn Pn 02 44 21.9 +0.2
KYMI Kymi, Euboea I 2.99 264 P Pn 02 44 21.2 -0.5
UVEZ Uvezbeli-DUZCE 3.00 49 Pn Pn 02 44 22.9 +1.0
ANTB Antalya 3.02 133 Pn Pn 02 44 22.9 +0.8
AKAS Kas 3.07 153 Pn Pn 02 44 24.2 +1.2
AKAS Kas 3.07 153 Pn Pn 02 44 23.9 +0.9
KIZT Kizilcal 3.11 91 Pn Pn 02 44 22.4 -1.1
AOS Alonnisos 3.13 275 P Pn 02 44 24.3 +0.6
KSL Kastellorizon 3.14 154 P Pn 02 44 24.2 +0.4
DEMR Demre-Antalya 3.18 149 Pn Pn 02 44 25.1 +0.8
KEMT Kemer-ANTALYA 3.18 138 Pn Pn 02 44 25.1 +0.8
THR8 Santorini-Mono 3.21 217 P Pn 02 44 23.7 -1.1
DION Dionisos Attik 3.24 255 P Pn 02 44 24.7 -0.4
THERA Ancient Thera, 3.25 217 P Pn 02 44 23.6 -1.7
THR3 Thira Island, 3.25 218 P Pn 02 44 24.7 -0.6
SAP3 Santorini-Thir 3.26 219 P Pn 02 44 24.6 -0.8
SNT5 Nea Kammeni, S 3.26 218 P Pn 02 44 24.7 -0.7
KAVA Kavala 3.28 309 P Pn 02 44 25.2 -0.5
THR6 Thira Island, 3.29 218 P Pn 02 44 24.7 -1.2
PTL Penteli 3.30 255 P Pn 02 44 25.8 -0.2
OUR Ouranopolis 3.31 295 P Pn 02 44 25.7 -0.3
THR9 Santorini-Faro 3.31 218 P Pn 02 44 24.9 -1.3
VLY Voula,Athens 3.42 252 P Pn 02 44 26.8 -0.8
ATH Athens Observa 3.43 254 P Pn 02 44 27.7 -0.1
KARP Karpathos 3.49 190 Pn Pn 02 44 28.5 0.0
KARP Karpathos 3.49 190 P Pn 02 44 28.6 0.0
KARP S Sn 02 45 09.2 -0.5
KARP Karpathos 3.49 190 P Pn 02 44 29.6 +1.0
STFN Stefani 3.51 258 P Pn 02 44 28.8 -0.1
DIM Dimitrovgrad 3.53 331 P Pn 02 44 29.1 0.0
DIM Dimitrovgrad 3.53 331 P Pn 02 44 29.2 +0.1
MAGU Magoula 3.56 257 P Pn 02 44 29.7 +0.2
RZN Rozhen 3.62 319 P Pn 02 44 30.9 +0.4
RZN Rozhen 3.62 319 ⇓*i*P Pn 02 44 30.7 +0.1
JMB Yambol 3.65 344 P Pn 02 44 30.9 +0.2
NEO Neokhori 3.65 276 P Pn 02 44 30.4 -0.4
VILL Villia 3.69 258 P Pn 02 44 31.4 0.0
PLG Polygyros 3.70 293 P Pn 02 44 31.7 +0.1
ATAL Atalanti 3.82 267 P Pn 02 44 33.2 0.0
LKR Lokris 3.84 266 P Pn 02 44 33.5 +0.1
NVR Nevrokopi 3.89 309 P Pn 02 44 34.0 -0.1
SRS Serrai 3.93 304 P Pn 02 44 34.4 -0.2
PLD Plovdiv 3.96 324 P Pn 02 44 35.2 +0.1
PLD Plovdiv 3.96 324 ⇓*i*P Pn 02 44 35.2 +0.1
LTK Loutraki 3.99 257 P Pn 02 44 35.7 +0.3
HORT Hortiatis 4.03 295 P Pn 02 44 36.1 +0.1
MMB Musomishta 4.07 310 P Pn 02 44 37.0 +0.3
MMB Musomishta 4.07 310 P Pn 02 44 36.7 +0.1
AXAR Agios Charalam 4.09 268 P Pn 02 44 37.3 +0.4
AVR AVREN 4.13 358 P Pn 02 44 37.3 -0.1
THE Thessaloniki 4.14 295 P Pn 02 44 37.8 +0.4
NPS Neapolis 4.14 207 P Pn 02 44 36.6 +1.0
PRD Provadia 4.18 355 P Pn 02 44 38.1 0.0
ELND Elena 4.22 339 ⇑P Pn 02 44 39.1 +0.5
NEF NEVSHA 4.29 354 P Pn 02 44 39.4 -0.3
LIT Litokhoron 4.32 287 Pn Pn 02 44 40.3 +0.2
LIT Litokhoron 4.32 287 P Pn 02 44 40.2 +0.2
LIT Litokhoron 4.32 287 P Pn 02 44 40.3 +0.2
AGG Agios Georgios 4.34 272 P Pn 02 44 40.8 +0.5
KNT Kendrikon 4.40 301 P Pn 02 44 41.7 +0.5
IDI Anoyia 4.41 214 Pn Pn 02 44 41.0 -0.3
27nm,0.6s,baz=28,slow=7.7,SNR=29
IDI Pg Pb 02 44 53.9 +1.9
14nm,0.3s,baz=44,slow=12,SNR=15
IDI Sn Sn 02 45 29.0 -3.4
16nm,0.3s,baz=23,slow=14,SNR=2.2
IDI Lg Lg 02 45 54.4
20nm,0.3s,baz=335,slow=15,SNR=5.2
IDI LR LR 02 47 01.5
comp=Z,916nm,20.1s,baz=6.5,slow=47
IDI Anoyia 4.41 214 Pn Pn 02 44 40.3 -1.1
IDI Anoyia 4.41 214 P Pn 02 44 40.2 -1.1
GUR Goura 4.49 258 P Pn 02 44 42.5 +0.1
MAKR Makrakomi, Fth 4.49 272 P Pn 02 44 42.3 -0.1
BR105 Keskin Array S 4.49 79 P Pn 02 44 42.9 +0.4
BR106 Keskin Array S 4.50 79 P Pn 02 44 43.7 +1.1
SZH Strazhitsa 4.51 342 P Pn 02 44 42.6 0.0
SZH Strazhitsa 4.51 342 P Pn 02 44 42.9 +0.3
BR104 Keskin Array S 4.51 79 P Pn 02 44 43.5 +0.7
BR131 Keskin Array S 4.51 79 Pn Pn 02 44 43.6 +0.8
BR131 Keskin Array S 4.51 79 *i* P Pn 02 44 43.6 +0.8
BRTR Keskin Array B 4.51 79 Pn Pn 02 44 43.8 +1.0
20nm,0.3s,baz=254,slow=14,SNR=508
BRTR Pg Pb 02 44 56.7 +2.9
41nm,0.3s,baz=255,slow=14,SNR=36
BRTR Lg Lg 02 45 53.9
16nm,0.3s,baz=259,slow=24,SNR=15
BRTR LR LR 02 46 44.6
comp=Z,4µm,21.3s,baz=266,slow=43
57nm,0.4s
BRTR Keskin Array B 4.51 79 Pn Pn 02 44 43.3 +0.6
PGB Panagyurishte 4.51 322 ⇓*i*P Pn 02 44 42.9 +0.2
VLI Veliai 4.53 242 P Pn 02 44 41.8 -1.1
THL Klokotos Trika 4.60 279 P Pn 02 44 44.3 +0.4
KLV Kalavryta, Ach 4.61 260 P Pn 02 44 43.9 -0.1
PVL Pavlikeni 4.61 334 P Pn 02 44 44.6 +0.6
KKB Krupnik 4.62 310 P Pn 02 44 44.7 +0.5
KKB Krupnik 4.62 310 P Pn 02 44 44.5 +0.4
VAM Vamos 4.64 221 P Pn 02 44 43.3 -1.1
GRG Griva 4.66 297 P Pn 02 44 45.7 +1.0
ANX Ano Chora 4.69 267 P Pn 02 44 45.7 +0.6
KIRS Kirsehir-Merke 4.69 86 ⇑P Pn 02 44 45.7 +0.5
KTHA Kythira Island 4.71 236 P Pn 02 44 44.7 -0.7
EFP Efpalio 4.72 265 P Pn 02 44 45.7 +0.2
EVR Evrytania 4.75 271 P Pn 02 44 46.4 +0.4
ANKY Antikythira Is 4.81 231 P Pn 02 44 46.2 -0.5
CIDE Kastamonu/Cide 4.81 52 ⇓P Pn 02 44 48.0 +1.2
MANR Mangalia 4.85 6 ⇓P Pn 02 44 48.1 +0.9
PLNA Plana 4.86 317 P Pn 02 44 48.3 +0.7
KZN Kozani 4.91 287 P Pn 02 44 48.7 +0.6
ILGA Ilgaz 4.92 63 Pn Pn 02 44 48.7 +0.3
DRO Drossia 4.96 260 P Pn 02 44 50.0 +1.1
SOF Sofia 5.03 318 P Pn 02 44 51.3 +1.5
ITM Ithomi 5.04 251 Pn Pn 02 44 50.7 +0.7
ITM Ithomi 5.04 251 P Pn 02 44 50.6 +0.6
VTS Vitosha 5.06 317 P Pn 02 44 50.7 +0.3
175nm,0.9s
VTS Vitosha 5.06 317 P Pn 02 44 50.7 +0.3
AMT Artemida-Makis 5.08 255 P Pn 02 44 52.1 +1.6
RLS Riolos of Patr 5.13 262 P Pn 02 44 52.5 +1.4
0.6nm127nm,1.2s
KPRO Kipourio 5.15 283 P Pn 02 44 52.6 +1.1
0.8nm70nm,0.6s
TETR Tetrakomo, Epi 5.16 276 P Pn 02 44 52.3 +0.7
1.0nm183nm,1.0s
MFTR Murfatlar 5.20 4 ⇑P Pn 02 44 52.1 +0.1
PYL PYLOS 5.29 249 P Pn 02 44 54.4 +1.0
PRMD Pramanda 5.30 278 P Pn 02 44 54.7 +1.1
0.7nm158nm,0.9s
MPEP Malo Peshtene 5.37 326 P Pn 02 44 54.6 +0.2
SGRR Singureni 5.42 345 ⇓P Pn 02 44 56.2 +1.1
NEST Nestorio 5.47 287 P Pn 02 44 57.1 +1.2
TIRR Tirgusor 5.48 4 Pn Pn 02 44 55.4 -0.5
TIRR Tirgusor 5.48 4 P Pn 02 44 55.4 -0.5
TIRR Tirgusor 5.48 4 P Pn 02 44 54.6 -1.3
2.2nm3µm213nm,1.0s
COPA Copaceanca 5.52 340 ⇑P Pn 02 44 56.7 +0.3
BZK Bozkurt 5.52 56 ⇓P Pn 02 44 56.4 0.0
BZK Bozkurt 5.52 56 Pn Pn 02 44 56.6 +0.1
BZK Bozkurt 5.52 56 P Pn 02 44 56.3 -0.2
3.8nm7µm305nm,0.7s
TRAN Tran 5.52 316 P Pn 02 44 57.5 +0.9
LEHL Lehliu 5.54 352 ⇓P Pn 02 44 57.7 +0.5
VLAD Vladila 5.65 333 ⇓P Pn 02 44 59.7 +1.5
SKO Skopje 5.75 303 *i* Pn Pn 02 45 01.3 +1.6
VALD Valchedram 5.77 326 P Pn 02 45 00.3 +0.4
TPGR Topolog 5.87 4 ⇓P Pn 02 45 02.7 +1.3
CSS Mathiatis 5.92 131 Pn Pn 02 45 01.2 -0.9
CSS Mathiatis 5.92 131 P Pn 02 45 02.4 +0.3
0.4nm946nm111nm,0.8s
CSS Mathiatis 5.92 131 P Pn 02 45 00.4 -1.7
CSS S Sn 02 46 03.2 -6.6
BAIL Bailesti 6.08 327 ⇓P Pn 02 45 04.9 +0.8
CFR Carcaliu 6.18 2 ⇓P Pn 02 45 06.2 +0.6
CFR Carcaliu 6.18 2 P Pn 02 45 06.2 +0.6
BNN Bunyan 6.20 89 Pn Pn 02 45 07.0 +1.1
ISR Istrita 6.21 351 P Pn 02 45 06.3 +0.4
4.7nm162nm,0.7s
TLCR 6.23 6 ⇑P Pn 02 45 06.5 +0.3
TLCR 6.23 6 P Pn 02 45 06.5 +0.3
KEK Kerkira 6.32 279 Pn Pn 02 45 10.5 +3.1
SNOP Sinop 6.34 59 Pn Pn 02 45 09.1 +1.3
GRER 6.42 354 ⇑P Pn 02 45 10.7 +1.8
SCHLR Schela 6.47 360 ⇑P Pn 02 45 10.3 +0.8
GIUM Giurgiulesti 6.49 2 ⇑P Pn 02 45 10.2 +0.4
SCHL Schela 6.50 360 ⇑P Pn 02 45 11.2 +1.2
NEGRR Negrea 6.54 360 ⇓P Pn 02 45 12.1 +1.6
IZVR Izvoarele 6.55 359 ⇑P Pn 02 45 11.1 +0.6
MLR Muntele Rosu 6.65 348 Pn Pn 02 45 13.5 +1.3
5.7nm,0.3s,baz=207,slow=6.8,SNR=56
MLR Sn Sn 02 46 28.0 +0.2
22nm,0.3s,baz=104,slow=20,SNR=6.2
MLR Lg Lg 02 47 01.6
7.6nm,0.3s,baz=258,slow=13,SNR=3.1
MLR LR LR 02 48 18.5
comp=Z,2µm,20.8s,baz=198,slow=43
MLR Muntele Rosu 6.65 348 ⇓P Pn 02 45 13.4 +1.2
MLR Muntele Rosu 6.65 348 Pn Pn 02 45 12.9 +0.7
SRE Strehaia 6.66 330 ⇑P Pn 02 45 13.6 +1.4
SRE Strehaia 6.66 330 P Pn 02 45 13.5 +1.4
SCTR Scanteiesti 6.68 1 ⇑P Pn 02 45 13.2 +0.8

TOKA Tokat 6.75 76 Pn **Pn** 02 45 14.4 +0.9
VOIR 6.78 343 ⇑P **Pn** 02 45 14.4 +0.6
VOIR 6.78 343 P **Pn** 02 45 14.4 +0.6
ODBI Odobesti 6.80 355 ⇑P **Pn** 02 45 15.4 +1.4
VLDR Vladesti 6.85 1 ⇓P **Pn** 02 45 15.6 +0.9
VARL Varlezi 6.90 360 ⇑P **Pn** 02 45 16.8 +1.4
PLOR Plostina 6.92 353 ⇓P **Pn** 02 45 17.4 +1.6
PLOR Plostina 6.92 353 P **Pn** 02 45 17.3 +1.6
VRI Vrincioaia 6.92 353 ⇓P **Pn** 02 45 17.1 +1.3
VRI Vrincioaia 6.92 353 P **Pn** 02 45 17.1 +1.3
VRI Vrincioaia 6.92 353 P **Pn** 02 45 16.1 +0.3
2.6nm3µm231nm,1.1s
COVR Voineasa-Covas 6.96 350 ⇑P **Pn** 02 45 17.7 +1.4
PVY Plav 7.01 303 ⇓*i*Pn **Pn** 02 45 18.6 +1.5
SEV Sevastopol' 7.03 36 x x 02 45 16.5
SEV pmax pmax 02 45 26.1
comp=Z,24nm,0.3s
SEV *ex* x 02 46 30.6
SEV *i* S **Sn** **02 46 34.0 -2.8**
SEV smax smax 02 46 37.6
comp=N,57nm,0.4s
SEV smax smax 02 46 37.6
comp=E,105nm,0.6s
GHRR 7.07 357 ⇓P **Pn** **02 45 19.3 +1.5**
GHRR 7.07 357 P **Pn** **02 45 18.1 +0.3**
LOT Lotru 7.14 336 ⇓P **Pn** **02 45 19.8 +0.9**
HERR Herculane 7.16 327 ⇑P **Pn** **02 45 19.3 +0.2**
IVA Berane 7.19 305 ⇑*i*Pn **Pn** **02 45 21.1 +1.6**
DOPR Dopca 7.21 346 ⇑P **Pn** **02 45 21.6 +1.9**
YAL Yalta 7.21 38 ⇓*e*P **Pn** **02 45 19.2 -0.5**
YAL *i* S **Sn** **02 46 38.5 -2.9**
YAL pmax pmax
comp=Z,34nm,0.4s
YAL Yalta 7.21 38 ⇓*e*P **Pn** **02 45 19.2 -0.5**
YAL pmax pmax 02 45 28.6
comp=Z,34nm,0.4s
YAL *i* S **Sn** **02 46 38.5 -2.9**
YAL smax smax 02 46 42.2
comp=N,82nm,0.3s
YAL smax smax 02 46 42.2
comp=E,150nm,0.3s
ULC Ulcinj 7.23 297 ⇑*i*Pn **Pn** **02 45 22.2 +2.2**
TARU Tarkhankut 7.25 27 ⇓*e*P **Pn** **02 45 20.2 0.0**
TARU pmax pmax 02 45 27.9
comp=Z,64nm,0.3s
TARU *i* S **Sn** **02 46 38.9 -3.3**
TARU smax smax 02 46 41.1
comp=N,168nm,0.4s
TARU smax smax 02 46 41.1
comp=E,63nm,0.5s
OZUR 7.27 348 ⇑P **Pn** **02 45 21.9 +1.4**
BOSR Bodos 7.27 348 ⇑P **Pn** **02 45 22.3 +1.8**
BIR Birlad 7.27 359 ⇓P **Pn** **02 45 21.5 +0.9**
BIR Birlad 7.27 359 P **Pn** **02 45 21.4 +0.9**
DRME Dracevica, Mon 7.36 298 *e*Pn **Pn** **02 45 23.0 +1.3**
DRME *i* Sn **Sn** **02 46 43.1 -1.9**
MDVR Moldovita 7.40 323 ⇑P **Pn** **02 45 22.7 +0.4**
PDG Podgorica 7.41 300 ⇑P **Pn** **02 45 23.7 +1.3**
PDG Podgorica 7.41 300 Pn **Pn** **02 45 24.5 +2.1**
PDG Podgorica 7.41 300 *e*Pn **Pn** **02 45 23.5 +1.1**
PDG *i* Sn **Sn** **02 46 44.7 -1.5**
ONER Baraj Valea Uz 7.42 352 ⇑P **Pn** **02 45 24.0 +1.4**
KOME Kolasin 7.42 304 ⇓*i*Pn **Pn** **02 45 24.5 +1.8**
KOME *i* Sn **Sn** **02 46 44.9 -1.9**
GZR Gura Zlata 7.44 331 ⇑P **Pn** **02 45 23.1 +0.2**
GZR Gura Zlata 7.44 331 P **Pn** **02 45 23.1 +0.2**
ALU Alushta 7.48 38 ⇓*e*P **Pn** **02 45 24.8 +1.5**
ALU *i* S **Sn** **02 46 45.9 -2.0**
ALU pmax pmax
comp=Z,22nm,0.3s
ALU Alushta 7.48 38 ⇓*e*P **Pn** **02 45 24.8 +1.5**
ALU pmax pmax 02 45 34.1
comp=Z,22nm,0.3s
ALU *i* S **Sn** **02 46 45.9 -2.0**
ALU smax smax 02 46 52.2
comp=N,592nm,0.4s
ALU smax smax 02 46 52.2
comp=E,206nm,0.4s
DNZ2 Donuzlav2 7.50 30 *ex* x 02 45 24.0
DNZ2 pmax pmax 02 45 29.5
comp=Z,36nm,0.3s
DNZ2 *e*S **Sn** **02 46 44.8 -3.6**
DNZ2 smax smax 02 46 50.2
comp=N,98nm,0.4s
DNZ2 smax smax 02 46 50.2
comp=E,23nm,0.3s
SIM Simferopol' 7.54 36 *e*P **Pn** **02 45 24.4 +0.2**
SIM *e*S **Sn** **02 46 44.6 -4.9**
SIM pmax pmax
comp=Z,65nm,0.3s
SIM smax smax
comp=N,243nm,0.8s
SIM smax smax
comp=E,266nm,0.6s
SIM MLR MLR
comp=Z,2µm,17.0s
SIM Simferopol' 7.54 36 ⇓*e*P **Pn** **02 45 24.2 0.0**
SIM pmax pmax 02 45 30.5
comp=Z,110nm,0.3s
SIM *i* S **Sn** **02 46 45.0 -4.5**
SIM smax smax 02 46 49.8
comp=N,163nm,0.5s
SIM smax smax 02 46 49.8
comp=E,120nm,0.6s
GAZ Gaziantep 7.57 101 Pn **Pn** **02 45 25.4 +0.7**
TESR Tescani 7.57 353 ⇑P **Pn** **02 45 25.5 +0.9**
TESR Tescani 7.57 353 P **Pn** **02 45 24.3 -0.4**
comp=E,0.9nmcomp=E,273nm,0.9s
BUM Brajici-Budva 7.60 299 ⇓*i*Pn **Pn** **02 45 27.5 +2.4**
BUM *i* Sn **Sn** **02 46 49.1 -2.0**
MDB Medias 7.60 341 ⇓P **Pn** **02 45 25.7 +0.6**
MDB Medias 7.60 341 P **Pn** **02 45 25.6 +0.6**
PURM Purcari 7.67 10 ⇑P **Pn** **02 45 26.5 +0.5**
PURM Purcari 7.67 10 P **Pn** **02 45 25.2 -0.8**
comp=E,1.3nmcomp=E,4µmcomp=E,281nm,0.8s
CEME Cevo 7.68 300 ⇓*i*Pn **Pn** **02 45 28.7 +2.5**
CEME *i* Sn **Sn** **02 46 51.1 -2.0**
PLE Pljevlja 7.74 307 ⇑*i*Pn **Pn** **02 45 27.8 +0.7**
NKME Niksic 7.75 302 *e*Pn **Pn** **02 45 28.2 +1.0**
DEV Deva 7.81 333 ⇑P **Pn** **02 45 29.0 +1.0**
DEV Deva 7.81 333 P **Pn** **02 45 28.9 +1.0**
SUDU Sudak 7.92 40 ⇓*i*P **Pn** **02 45 29.6 +0.2**
SUDU *i* S **Sn** **02 46 56.5 -2.3**
SUDU pmax pmax
comp=Z,36nm,0.4s
SUDU Sudak 7.92 40 ⇓*i*P **Pn** **02 45 29.6 +0.2**
SUDU pmax pmax 02 45 39.5
comp=Z,36nm,0.4s
SUDU *i* S **Sn** **02 46 56.5 -2.3**
SUDU smax smax 02 47 00.8
comp=N,326nm,0.5s
SUDU smax smax 02 47 00.8
comp=E,116nm,0.3s
HCY Herceg Novi 7.93 299 ⇑*i*Pn **Pn** **02 45 31.7 +2.1**
UPM Unac-Piva 7.99 305 ⇑*i*Pn **Pn** **02 45 32.4 +1.9**
NE56 Odesa 7.99 15 P **Pn** **02 45 29.5 -0.8**
GIRR Girov 8.03 353 ⇑P **Pn** **02 45 32.6 +1.8**
KIS Kishinev 8.03 5 ⇑P **Pn** **02 45 31.1 +0.1**
KIS Kishinev 8.03 5 P **Pn** **02 45 31.0 +0.1**
KIS Kishinev 8.03 5 P **Pn** **02 45 30.0 -0.9**
comp=E,0.8nmcomp=E,2µmcomp=E,194nm,0.6s
BRY Bratogost 8.09 302 ⇓*i*Pn **Pn** **02 45 34.5 +2.6**
BZS Buzias 8.09 327 ⇑P **Pn** **02 45 31.6 -0.1**
BZS Buzias 8.09 327 P **Pn** **02 45 31.6 -0.1**
BANR Banloc 8.12 324 ⇑P **Pn** **02 45 33.2 +1.1**
ARPR Arapgir-MALATY 8.13 86 Pn **Pn** **02 45 33.5 +1.1**
FEO Feodosiya 8.21 40 *e*P **Pn** **02 45 33.8 +0.5**
FEO *e*S **Sn** **02 47 01.8 -4.0**
FEO Feodosiya 8.21 40 *ex* x 02 45 33.8
FEO *e*S **Sn** **02 47 01.8 -4.0**
FEO smax smax 02 47 08.6
comp=N,75nm,0.3s
FEO smax smax 02 47 08.6
comp=E,43nm,0.3s
PRAR RASCA 8.46 352 ⇓P **Pn** **02 45 38.6 +1.9**
MMC7 Mount Meron ar 8.50 132 P **Pn** **02 45 35.9 -1.6**
MMA0B Mount Meron ar 8.52 132 P **Pn** **02 45 36.4 -1.3**
MMA0B S **Sn** **02 47 07.1 -6.5**
MMAI Mount Meron Ar 8.52 132 Pn **Pn** **02 45 36.0 -1.8**
comp=E,9.8nm,0.3s,baz=320,slow=14,SNR=35
MMAI Sn **Sn** **02 47 10.1 -3.5**
comp=E,10nm,0.3s,baz=158,slow=18,SNR=6.7
comp=E,4.3nm,0.3s

GEM Giv'at Ha'Em 8.53 130 P **Pn** **02 45 36.2 -1.6**
GEM S **Sn** **02 47 07.4 -6.4**
NATI Neve Ativ 8.54 130 P **Pn** **02 45 36.4 -1.4**
NATI S **Sn** **02 47 07.5 -6.5**
OFRI `Ofer 8.57 136 P **Pn** **02 45 37.2 -1.3**
OFRI S **Sn** **02 47 09.1 -5.9**
TIP Timpagrande 8.66 275 ⇓P **Pn** **02 45 39.3 -0.5**
TIP Timpagrande 8.66 275 Pn **Pn** **02 45 40.4 +0.7**
TIP Timpagrande 8.66 275 P **Pn** **02 45 40.3 +0.6**
comp=E,32nm,1.2s
DRGR 8.67 336 ⇓P **Pn** **02 45 40.7 +0.8**
DRGR 8.67 336 P **Pn** **02 45 40.6 +0.8**
KSHT Keshet 8.78 131 P **Pn** **02 45 39.7 -1.6**
KSHT S **Sn** **02 47 13.8 -6.2**
BURAR Bucovina Array 8.84 348 ⇓P **Pn** **02 45 43.4 +1.2**
BURAR Bucovina Array 8.84 348 Pn **Pn** **02 45 42.3 +0.2**
BURAR Bucovina Array 8.84 348 P **Pn** **02 45 43.3 +1.2**
BUR08 Bucovina Ar. S 8.87 348 Pn **Pn** **02 45 42.9 +0.4**
SLTI Sal'it 8.90 137 P **Pn** **02 45 41.8 -1.1**
SLTI S **Sn** **02 47 16.9 -6.0**
MMLI Mount Malkishu 8.95 135 P **Pn** **02 45 42.4 -1.3**
MMLI S **Sn** **02 47 18.0 -6.3**
BAL3X Bal3x, Balta 9.03 7 P **Pn** **02 45 43.4 -1.2**
SALP Salfit 9.11 137 P **Pn** **02 45 44.6 -1.2**
SALP S **Sn** **02 47 22.5 -5.7**
SORM Soroca 9.15 2 ⇑P **Pn** **02 45 47.2 +1.0**
SORM Soroca 9.15 2 P **Pn** **02 45 47.2 +1.0**
SORM Soroca 9.15 2 P **Pn** **02 45 45.0 -1.2**
comp=E,3µmcomp=E,74nm,0.9s
HMDT Nahal Hemdat 9.15 135 P **Pn** **02 45 45.1 -1.2**
HMDT S **Sn** **02 47 23.1 -6.0**
ANN Anapa 9.18 48 *e*P Pn 02 45 38.0 -8.6
ANN pmax pmax
comp=Z,186nm,1.1s
UJAP Al Uja 9.35 136 P **Pn** **02 45 47.6 -1.4**
UJAP S **Sn** **02 47 28.0 -5.9**
ACER Acerenza 9.36 285 Pn **Pn** **02 45 49.7 +0.4**
AMAZ Amatzia 9.39 140 P **Pn** **02 45 48.7 -1.0**
AMAZ S **Sn** **02 47 29.8 -5.3**
CUC Castrocucco 9.39 280 Pn **Pn** **02 45 51.2 +1.5**
CEL Celeste 9.42 269 Pn **Pn** **02 45 50.6 +0.5**
CEL Celeste 9.42 269 P **Pn** **02 45 50.0 -0.1**
comp=Z,58nm,1.4s
DSI Dead Sea 9.60 138 P **Pn** **02 45 51.1 -1.4**
DSI S **Sn** **02 47 34.2 -6.0**
KMPD K-Podol'skiy 9.62 354 P **Pn** **02 45 51.5 -1.3**
YTIR Yattir 9.63 140 P **Pn** **02 45 52.1 -0.9**
YTIR S **Sn** **02 47 35.7 -5.3**
KZIT Kziot 9.67 145 P **Pn** **02 45 52.0 -1.5**
KZIT S **Sn** **02 47 37.0 -4.8**
SGRT San Giovanni R 9.68 290 Pn **Pn** **02 45 52.1 -1.5**
KOPT Kop Dagi 9.79 80 Pn **Pn** **02 45 57.7 +2.3**
MSBI Mazada 9.79 139 P **Pn** **02 45 54.1 -1.0**
MSBI S **Sn** **02 47 39.1 -5.7**
BLY Banja Luka 9.84 309 ⇑P **Pn** **02 45 56.9 +1.1**
GHAJ Ghor Haditha 9.91 138 Pn **Pn** **02 45 58.5 +1.8**
GHAJ Ghor Haditha 9.91 138 P **Pn** **02 45 55.5 -1.2**
GHAJ S **Sn** **02 47 42.1 -5.6**
MORH Mrgy, Hungar 9.93 320 ⇑P **Pn** **02 45 56.7 -0.2**
MORH Mrgy, Hungar 9.93 320 P **Pn** **02 45 55.9 -1.0**
comp=Z,49nm,0.8s
ASF Jabal al Asfar 10.00 130 Pn **Pn** **02 45 57.5 -0.5**
comp=Z,0.4nm,0.3s,baz=319,slow=17,SNR=4.7
ASF Sn **Sn** **02 47 42.5 -7.5**
comp=Z,0.2nm,0.3s,baz=109,slow=22,SNR=0.8
ASF LR LR 02 50 34.7
comp=Z,990nm,21.9s,baz=322,slow=42
comp=Z,4.5nm,0.5s
SOC Sochi 10.01 59 *e*P **Pn** **02 45 59.6 +1.6**
SOC *e*S **Sn** **02 47 51.6 +1.5**
SOC pmax pmax
comp=Z,28nm,0.8s
SOC MLR MLR
comp=Z,895nm,18.0s
RMNI Mount Ramon 10.10 144 P **Pn** **02 45 57.9 -1.5**
RMNI S **Sn** **02 47 47.6 -4.9**
IDAN Idan 10.14 141 P **Pn** **02 45 58.6 -1.3**
IDAN S **Sn** **02 47 47.9 -5.6**
VSLR Vesyoloye 10.17 60 *i* P **Pn** **02 46 00.2 -0.1**
PRNI Paran 10.41 144 P **Pn** **02 46 02.7 -0.9**
PRNI S **Sn** **02 47 55.1 -5.1**
PAOL Paolisi 10.43 285 Pn **Pn** **02 46 04.7 +0.9**
KRMI Paran Flat 10.49 146 P **Pn** **02 46 03.1 -1.6**
KRMI S **Sn** **02 47 57.3 -4.7**
PSZ Piszkesteto 10.64 330 Pn **Pn** **02 46 07.1 +0.3**
PSZ Piszkesteto 10.64 330 P **Pn** **02 46 07.1 +0.3**
HRFI Mount Harif 10.70 144 P **Pn** **02 46 06.3 -1.3**
HRFI S **Sn** **02 48 02.4 -4.7**
VAE Valguarnera 10.72 266 Pn **Pn** **02 46 09.2 +1.4**
comp=Z,12nm,0.9s,baz=116,slow=16,SNR=3.8
RAFF Raffo Rosso 10.81 265 Pn **Pn** **02 46 09.5 +0.4**
LUBAR Lubar, Ukraine 10.93 360 P **Pn** **02 46 09.8 -0.8**
EIL Elat 10.97 146 Pn **Pn** **02 46 08.0 -3.3**
comp=Z,2.8nm,0.3s,baz=349,slow=12,SNR=33
EIL Sn **Sn** **02 48 06.9 -6.9**
comp=Z,3.1nm,0.3s,baz=17,slow=14,SNR=4.3
EIL Elat 10.97 146 P **Pn** **02 46 08.1 -3.1**
EIL S **Sn** **02 48 09.1 -4.7**
GURO Guroymak-BITLI 11.05 88 Pn **Pn** **02 46 13.7 +1.2**
LABN Labinsk 11.11 55 *e*P Pn 02 46 19.3 +6.2
LABN *e*S Sn 02 48 27.4 +10
LABN pmax pmax
comp=Z,27nm,1.1s
LABN MLR MLR
comp=Z,859nm,10.0s
MPLH Magyarpolny 11.13 321 P **Pn** **02 46 12.9 -0.6**
comp=Z,193nm,1.0s
BOJS Bojanci 11.40 309 *i* Pn **Pn** **02 46 19.9 +2.8**
ERBR Yeremizino-Bor 11.48 50 *e*P **Pn** **02 46 16.6 -1.5**
ERBR *e*S **Sn** **02 48 21.5 -4.6**
ERBR pmax pmax
comp=Z,21nm,1.3s
ERBR MLR MLR
comp=E,1µm,10.0s
ERBR MLR MLR
comp=Z,759nm,13.0s
ERBR MLR MLR
comp=N,1µm,11.0s
AK07 Malin Array Si 11.60 4 P **Pn** **02 46 18.5 -1.2**
AK06 Malin Array Si 11.63 4 P **Pn** **02 46 19.1 -1.1**
AK10 Malin Array Si 11.65 4 P **Pn** **02 46 19.3 -1.1**
AK13 Malin Array Si 11.65 4 P **Pn** **02 46 19.4 -1.1**
AK05 Malin Array Si 11.66 4 P **Pn** **02 46 19.5 -1.2**
AK09 Malin Array Si 11.66 4 P **Pn** **02 46 19.2 -1.5**
AK14 Malin Array Si 11.67 4 P **Pn** **02 46 18.8 -1.9**
AK08 Malin Array Si 11.68 4 P **Pn** **02 46 19.3 -1.6**
AK12 Malin Array Si 11.69 4 P **Pn** **02 46 18.9 -2.0**
GBRS Gornja Briga 11.69 308 *i* Pn **Pn** **02 46 23.4 +2.4**
AK02 Malin Array Si 11.70 4 P **Pn** **02 46 19.7 -1.5**
AK16 Malin Array Si 11.71 4 P **Pn** **02 46 19.8 -1.5**
AK11 Malin Array Si 11.72 4 P **Pn** **02 46 19.9 -1.5**
AK17 Malin Array Si 11.72 4 P **Pn** **02 46 20.0 -1.4**
KIEV Kiev 11.74 4 Pn **Pn** **02 46 19.8 -1.9**
KIEV Kiev 11.74 4 P **Pn** **02 46 20.5 -1.1**
KIEV Kiev 11.74 4 P **Pn** **02 46 19.8 -1.9**
AKASG Malin Array Be 11.75 4 Pn **Pn** **02 46 19.4 -2.4**
comp=N,2.9nm,0.3s,baz=103,slow=12,SNR=14
AKASG Sn **Sn** **02 48 25.1 -7.5**
comp=N,3.9nm,0.3s,baz=193,slow=22,SNR=6.1
AKASG Lg Lg 02 49 40.0
baz=181,slow=28
AKASG LR LR 02 50 50.2
comp=N,1µm,18.1s,baz=186,slow=38
comp=N,0.5nm,0.2s
AKASG Malin Array Be 11.75 4 Pn **Pn** **02 46 18.8 -3.0**
AKBB Malin Array Si 11.75 4 Pn **Pn** **02 46 19.6 -2.2**
AKBB Malin Array Si 11.75 4 *ce*P **Pn** **02 46 21.1 -0.7**
VISS Visnje 11.80 309 *i* Pn **Pn** **02 46 25.5 +2.9**
FDMO Fiordimonte 11.89 295 Pn **Pn** **02 46 23.6 -0.2**
NEUR Neytrino 11.95 64 *i* P **Pn** **02 46 25.7 +0.9**
SHA1 Shidzhatmaz 12.06 62 *i* P **Pn** **02 46 27.2 +0.9**
ZST Bratislava 12.07 323 *e*P **Pn** **02 46 28.7 +2.5**
ZST Bratislava 12.07 323 *e*PN **Pn** **02 46 28.7 +2.5**
MODS Modra-Piesok 12.11 324 *e*P **P** **02 46 34.8 -4.8**
MODS Modra-Piesok 12.11 324 *e*PN **P** **02 46 34.8 -4.8**
RONA Rosalia, Austr 12.12 320 *i* P **Pn** **02 46 29.3 +2.4**
comp=N,20nm,0.7s
KIV Kislovodsk 12.15 61 Pn **Pn** **02 46 29.3 +1.9**
KIV Kislovodsk 12.15 61 P **Pn** **02 46 28.1 +0.7**
KIV Kislovodsk 12.15 61 *e*P **Pn** **02 46 28.5 +1.1**
KIV pmax pmax
comp=Z,8.0nm,1.1s

KIV MLR MLR
comp=Z,529nm,13.0s
KVAR Kislovodsk Arr 12.15 61 Pn **Pn** **02 46 27.4 -0.1**
baz=248,slow=18
comp=Z,1.0nm,0.5s
SOKA Soboth 12.16 313 *e*P **Pn** **02 46 29.1 +1.5**
comp=Z,5.9nm,1.0s
KBZ Khabaz 12.22 62 Pn **Pn** **02 46 30.2 +1.9**
comp=Z,0.1nm,0.3s,baz=273,slow=9.5,SNR=12
KBZ LR LR 02 52 29.4
comp=Z,2µm,18.3s,baz=254,slow=44
comp=Z,9.3nm,1.0s
KBZ Khabaz 12.22 62 *i* P **Pn** **02 46 29.4 +1.1**
ARSA Arzberg 12.23 316 *e*Pn **Pn** **02 46 29.2 +0.7**
comp=Z,12nm,1.0s
OBKA Obir 12.35 312 *i* P **Pn** **02 46 33.6 +3.4**
comp=Z,6.5nm,0.8s
TRI Trieste 12.41 307 Pn **Pn** **02 46 32.3 +1.4**
TRI Trieste 12.41 307 P **Pn** **02 46 32.3 +1.4**
RNPP8 Varash 12.43 354 P **Pn** **02 46 29.9 -1.2**
CONA Conrad Observa 12.49 320 *e*P **Pn** **02 46 33.9 +1.9**
comp=Z,25nm,1.0s
RNPP9 Sopachiv 12.50 354 P **Pn** **02 46 30.8 -1.3**
NCK Nalchik 12.64 64 *i* P **Pn** **02 46 35.2 +1.1**
MYKA Terra Mystica 12.94 311 *i* P **Pn** **02 46 39.6 +1.4**
comp=Z,12nm,1.2s
KRUC Moravsky 13.02 324 *e*PN **Pn** **02 46 39.2 0.0**
GNI Garni 13.05 80 Pn **Pn** **02 46 41.3 +1.4**
comp=Z,3.4nm,0.8s,baz=169,slow=3.6,SNR=5.5
GNI LR LR 02 51 48.2
comp=Z,3µm,18.8s,baz=278,slow=38
GNI Garni 13.05 80 Pn **Pn** **02 46 41.9 +2.1**
GNI Garni 13.05 80 P **Pn** **02 46 37.9 -2.0**
GNI Garni 13.05 80 P **Pn** **02 46 41.9 +2.1**
MORC Moravsky Berou 13.06 329 *e*PN **Pn** **02 46 40.9 +1.0**
VRAC Vranov 13.11 326 Pn **Pn** **02 46 40.3 -0.1**
comp=Z,0.2nm,0.3s,baz=145,slow=12,SNR=4.3
VRAC LR LR 02 51 54.3
comp=Z,736nm,18.8s,baz=168,slow=38
comp=Z,2.0nm,0.6s
VRAC Vranov 13.11 326 *e*PN **Pn** **02 46 40.7 +0.3**
MOA Molln 13.27 316 *i* P **Pn** **02 46 44.0 +1.3**
comp=Z,23nm,1.8s
KBA Koelnbreinsper 13.35 312 *e*Pn **Pn** **02 46 44.3 +0.4**
comp=Z,3.8nm,0.8s
BIOA Bad Ischl, Aus 13.52 315 *i* P **Pn** **02 46 49.8 +3.7**
comp=Z,11nm,1.0s
KRLC Kraliky 13.61 328 AMS AMS 02 53 50.0
comp=Z,2µm,12.7s
ABTA Abfaltersbach 13.67 309 *e*P **Pn** **02 46 50.8 +2.6**
comp=Z,4.0nm,0.7s
CKRC Cesky Krumlov 13.85 320 *e*P **P** **02 47 00.2 +1.3**
CKRC Cesky Krumlov 13.85 320 *e*P **P** **02 47 00.2 +1.3**
CTI Castel Tesino 13.89 306 Pn **Pn** **02 46 50.0 -1.2**
CTI Castel Tesino 13.89 306 P **Pn** **02 46 50.0 -1.2**
LESA Schwarzleotal 13.92 312 *e*P **P** **02 46 55.9 -3.8**
comp=Z,3.9nm,0.5s
DPC Dobruska-Polom 14.01 328 AMS AMS 02 53 30.0
comp=Z,2µm,11.6s
GERES GERESS Array B 14.18 319 Pn **Pn** **02 46 56.4 +1.3**
baz=141,slow=14,SNR=4.0
GERES LR LR 02 52 24.4
comp=Z,898nm,20.5s,baz=131,slow=38
comp=Z,0.8nm,0.6s
UPC Upice 14.26 328 AMS AMS 02 53 40.0
comp=Z,2µm,9.0s
ZVC Zvikov 14.32 321 *e*P **P** **02 47 03.8 -0.2**
VORD Divnogorie 14.41 30 *e*P **Pn** **02 46 56.9 -1.3**
VORD pmax pmax
comp=Z,20nm,0.6s
KHC Kasperske Hory 14.42 319 *e*P **P** **02 47 04.0 -1.3**
KHC *ex* x 02 47 13.5
KHC Kasperske Hory 14.42 319 *e*P **P** **02 47 04.0 -1.3**
SALO Salr 14.45 303 Pn **Pn** **02 46 58.2 -0.6**
WTTA Wattenberg 14.45 310 *e*P **P** **02 47 04.1 -1.6**
comp=Z,13nm,0.8s
WATA Walderalm 14.52 310 *e*P **P** **02 47 05.2 -1.3**
comp=Z,6.7nm,0.9s
PRU Pruhonice 14.52 324 AMS AMS 02 55 20.0
comp=Z,2µm,9.4s
VSR Storozhevoye 14.56 29 *e*P **Pn** **02 46 58.7 -1.6**
VSR pmax pmax
comp=Z,20nm,1.0s
SQTA Sankt Quirin 14.68 309 *e*P **P** **02 47 06.6 -1.7**
comp=Z,14nm,1.2s
MOTA Moosalm 14.80 310 *i* P **P** **02 47 08.4 -1.2**
comp=Z,9.4nm,0.7s
FETA Feichten 14.88 308 *e*P **P** **02 47 09.3 -1.3**
comp=Z,16nm,1.1s
VORR Voronezh 14.94 28 *e*P **Pn** **02 47 03.9 -1.5**
VORR pmax pmax
comp=Z,27nm,0.9s
RETA Reutte 15.08 310 *e*P **P** **02 47 12.2 -0.4**
comp=Z,7.1nm,1.0s
KEST Kesra 15.11 263 Pn **Pn** **02 47 09.9 +2.2**
comp=Z,0.4nm,0.3s,baz=48,slow=7.9,SNR=21
KEST LR LR 02 54 10.4
comp=Z,621nm,20.7s,baz=59,slow=42
comp=Z,2.5nm,0.9s
KEST Kesra 15.11 263 P **P** **02 47 15.3 +2.3**
KEST IAmb IAmb 02 47 20.1
comp=Z,44nm,0.9s
DAVOX Davos/Dischmat 15.31 306 Pn **Pn** **02 47 12.0 +1.5**
comp=Z,0.7nm,0.3s,baz=126,slow=11,SNR=17
DAVOX LR LR 02 54 23.1
comp=Z,765nm,20.3s,baz=79,slow=42
comp=Z,0.7nm,0.3s
MAK Makhachkala 15.33 69 *e*P **Pn** **02 47 06.9 -3.7**
MAK *e*S **Sn** **02 49 56.0 -4.1**
MAK pmax pmax
comp=Z,90nm,1.3s
MAK MLR MLR
comp=Z,1µm,18.0s
AKT Akhty 15.35 74 *e*P **Pn** **02 47 11.2 +0.2**
AKT pmax pmax
comp=Z,22nm,1.4s
AKT MLR MLR
comp=Z,1µm,15.0s
SUW Suwalki 15.37 349 Pn **Pn** **02 47 09.3 -1.7**
SUW Suwalki 15.37 349 P **Pn** **02 47 09.3 -1.7**
BRG Berggiesshubel 15.42 325 *e*P **P** **02 47 17.9 +1.6**
BRG Amp 02 47 20.7
comp=Z,7.6nm,0.9s
HSKC Hora Svate Kat 15.47 323 AMS AMS 02 55 30.0
comp=Z,3µm,9.8s
MNK Minsk 15.52 360 *i* P **Pn** **02 47 13.9 +0.9**
comp=E,24nm,0.7s
MNK *i* P **Pn** **02 47 13.9 +0.9**
comp=N,15nm,0.9s
MNK *i* P **Pn** **02 47 13.9 +0.9**
comp=Z,24nm,0.7s,baz=181
MNK *i* PP **PnPn** **02 47 22.1 +0.8**
MNK *i* S **Sn** **02 50 04.7 +0.2**
MNK *i* SS **SnSn** **02 50 18.7 +1.4**
MNK *i* LQ LQ 02 51 51.1
MNK *i* LR LR 02 52 54.4
MNK *i* LRM MLR 02 53 55.7
comp=Z,880nm,13.8s
MNK *i* LRM MLR 02 53 59.4
comp=E,883nm,14.0s
MNK *i* LRM MLR 02 54 17.6
comp=N,440nm,11.3s
MNK Minsk 15.52 360 *i* P **Pn** **02 47 13.8 +0.9**
MNK *i* S **Sn** **02 50 04.7 +0.2**
MNK pmax pmax
comp=Z,24nm,0.7s
MNK pmax pmax
comp=E,24nm,0.7s
MNK pmax pmax
comp=N,15nm,0.9s
MNK MLR MLR
comp=Z,880nm,14.0s
MNK MLR MLR
comp=E,883nm,14.0s
MNK MLR MLR
comp=N,440nm,11.0s
DAVA Damuels 15.52 308 *i* pP **P** **02 47 19.4 +1.8**
comp=N,34nm,1.2s
TUE Stuetta 15.52 305 IAmb IAmb 02 47 26.3
comp=Z,44nm,1.4s
VRH Novokhopyorsk 15.60 34 *e*P **Pn** **02 47 12.5 -1.5**
VRH pmax pmax
comp=Z,77nm,1.1s
LPSR Galich'ya Gora 15.61 26 *e*P **Pn** **02 47 12.0 -2.1**
LPSR pmax pmax
comp=Z,45nm,0.7s

NACGM **Naroch** 15.94 358 *e*P Pn 02 47 18.9 +0.5
comp=Z,20nm,0.8s,baz=177
CLL Collm 16.15 325 Pn Pn 02 47 21.2 +0.1
CLL Collm 16.15 325 *i* P P 02 47 23.6 -0.7
CLL pmax pmax
comp=Z,94nm,2.1s
CLL MLR MLR
comp=Z,2μm,16.1s
CLL Collm 16.15 325 *i* P P 02 47 23.6 -0.7
comp=Z,94nm,2.1s
BNI Bardonecchia 16.87 298 P P 02 47 34.4 +1.9
BNI IAmb IAmb 02 47 51.2
comp=Z,46nm,1.2s
BNI Bardonecchia 16.87 298 P P 02 47 34.4 +1.9
BNI pmax pmax
comp=Z,46nm,1.3s
OBN Obninsk 17.15 17 P Pn 02 47 31.0 -2.8
comp=Z,2.0nm,0.3s,baz=164,slow=6.6,SNR=7.8
OBN S Sn 02 50 26.2 -18
comp=Z,8.4nm,0.4s,baz=128,slow=24,SNR=1.6
OBN LR LR 02 53 52.6
comp=Z,315nm,19.1s,baz=152,slow=36
comp=Z,9.9nm,0.5s
OBN Obninsk 17.15 17 Pn Pn 02 47 30.5 -3.3
OBN Obninsk 17.15 17 *c i* P Pn 02 47 29.9 -3.9
OBN pmax pmax
comp=Z,76nm,1.5s
OBN MLR MLR
comp=Z,1μm,16.0s
MOS Moscow 17.97 18 *e*P Pn 02 47 40.4 -3.6
MOS *e*S Sn 02 50 51.9 -12
MOS pmax pmax
comp=Z,122nm,1.5s
MOS MLR MLR
comp=Z,900nm,15.0s
WLF Walferdange 18.80 312 *d*P Pn 02 47 56.9 +2.8
BELG Belogornoye 19.14 39 P P 02 47 55.1 -2.2
comp=Z,0.6nm,0.3s,baz=97,slow=3.9,SNR=11
comp=Z,71nm,1.1s
BELG Belogornoye 19.14 39 *i* P Pn 02 47 58.3 +0.1
BELG pmax pmax
comp=Z,11nm,1.0s
VSU Vasula 19.50 358 *ce*P Pn 02 48 03.0 +0.5
VSU pmax pmax
comp=Z,90nm,1.7s
BCLA Clavier 19.62 313 *d*P Pn 02 48 09.4 +5.4
BMRD Maredsous 19.88 312 *d*P Pn 02 48 07.2 +0.1
PUL Pulkovo 20.86 3 *i* P Pn 02 48 17.5 -0.9
PUL pmax pmax
comp=Z,39nm,1.0s
RAYN Ar Rayn 21.49 131 P P 02 48 24.8 +1.7
RAYN Ar Rayn 21.49 131 *i* P P 02 48 25.5 +2.4
SNR=12
RAYN Ar Rayn 21.49 131 P P 02 48 24.8 +1.7
RAYN pmax pmax
comp=Z,13nm,1.1s
FIA1 FINESS Array S 22.51 358 P P 02 48 33.3 -0.3
FINES FINESS Array B 22.51 358 P P 02 48 32.9 -0.7
comp=Z,15nm,1.0s,baz=138,slow=20,SNR=24
FINES S S 02 52 39.7 -0.3
comp=Z,5.1nm,0.9s,baz=180,slow=18,SNR=4.2
FINES LR LR 02 57 28.2
comp=Z,782nm,20.5s,baz=174,slow=37
comp=Z,15nm,1.0s
FINES FINESS Array B 22.51 358 P P 02 48 32.4 -1.3
HFS Hagfors 22.98 342 P P 02 48 38.6 -0.1
comp=Z,3.9nm,0.9s,baz=134,slow=11,SNR=4.5
HFS LR LR 02 58 41.0
comp=Z,1μm,20.1s,baz=150,slow=40
comp=Z,3.9nm,0.9s
KLMR Klimovskoe 23.06 15 *e*P P 02 48 38.3 -1.1
KLMR pmax pmax
comp=Z,102nm,1.3s
KLMR MLR MLR
comp=Z,1μm,11.0s
KIRV Kirov 24.00 28 P P 02 48 48.6 -0.1
comp=Z,7.2nm,0.5s,baz=227,slow=4.9,SNR=4.9
comp=Z,7.2nm,0.5s
KIRV Kirov 24.00 28 *ce*P P 02 48 49.0 +0.3
AKTO Aktyubinsk 24.10 52 P P 02 48 49.2 -0.5
comp=Z,7.4nm,1.1s,baz=247,slow=8.8,SNR=12
AKTO LR LR 03 01 02.5
comp=Z,738nm,20.2s,baz=260,slow=44
comp=Z,7.4nm,1.1s
NB2 NORSAR Subarra 24.39 340 P P 02 48 52.3 -0.1
comp=Z,16nm,1.2s,baz=147,slow=9.3
NOA NORSAR Array B 24.39 340 P P 02 48 52.3 -0.1
comp=Z,2.4nm,0.9s,baz=144,slow=9.4,SNR=5.7
NOA LR LR 02 58 56.2
comp=Z,599nm,19.2s,baz=160,slow=38
comp=Z,2.4nm,0.9s
ESDC Sonseca Array 24.59 282 P P 02 48 54.7 +0.2
comp=Z,1.4nm,1.0s,baz=72,slow=10,SNR=14
ESDC LR LR 02 58 07.9
comp=Z,318nm,18.4s,baz=81,slow=36
comp=Z,1.4nm,1.0s
ESDC Sonseca Array 24.59 282 P P 02 48 53.2 -1.2
TAM Tamanrasset 24.99 236 P P 02 48 57.6 -0.6
TAM IAmb IAmb 02 49 07.5
comp=Z,7.4nm,0.7s
TAM Tamanrasset 24.99 236 P P 02 48 57.6 -0.6
TAM pmax pmax
comp=Z,7.0nm,0.7s
ABKAR Akbulak array 25.02 55 P P 02 48 57.8 -0.3
EKA Eskdalemuir Ar 26.40 318 P P 02 49 10.1 -0.5
comp=Z,1.8nm,0.6s,baz=117,slow=11,SNR=5.2
EKA LR LR 03 01 32.8
comp=Z,644nm,19.1s,baz=86,slow=41
comp=Z,1.8nm,0.6s
PBRG Braganca 26.42 287 *e*P P 02 49 14.4 +3.4
PBRG *i* IAmb IAmb 02 49 51.2
comp=Z,30nm,1.7s
ARTI Arti 26.58 39 P P 02 49 11.9 -0.3
comp=Z,17nm,0.9s,baz=232,slow=8.1,SNR=16
ARTI LR LR 03 00 20.6
comp=Z,380nm,20.6s,baz=244,slow=38
comp=Z,17nm,0.9s
ARTI Arti 26.58 39 P P 02 49 11.6 -0.6
ARTI Arti 26.58 39 *ce*P P 02 49 12.7 +0.5
ARTI pmax pmax
comp=Z,55nm,1.7s
MVO Moncorvo 26.71 286 *e*P P 02 49 18.7 +5.1
MVO *i* IAmb IAmb 02 49 47.5
comp=Z,28nm,1.5s
SHME Shamm 26.97 110 *i* P P 02 49 16.8 +0.9
SNR=9.1
MD01 Midelt array s 27.05 267 P P 02 49 17.9 +1.1
BANOM Banah 27.16 110 *i* P P 02 49 18.7 +1.0
SNR=9.1
PBAR Barrancos 27.23 279 *e*P P 02 49 21.0 +2.8
ASUD Al Ashush, Dub 27.23 114 P P 02 49 17.8 -0.6
PCBR Castelo Branco 27.24 283 *e*P P 02 49 22.1 +3.8
PCBR *i* IAmb IAmb 02 49 23.8
comp=Z,27nm,1.8s
PMRV Marv??o 27.24 282 *e*P P 02 49 24.5 +6.2
NAZ Nazwa, Dubai 27.25 113 P P 02 49 19.5 +1.0
MSFE Esma-Masafi 27.39 111 P P 02 49 20.1 +0.3
PESTR Estremoz 27.50 281 *e*P P 02 49 25.0 +4.3
MDH Madha 27.52 111 P P 02 49 19.5 -1.4
UOSS Minazif 27.66 112 P P 02 49 24.1 +1.9
HATD Hatta, Dubai 27.69 112 P P 02 49 23.3 +0.9
ASHO Ashiyiah 27.72 113 *i* P P 02 49 23.0 +0.2
SNR=6.5
PARRA Arraiolos 27.86 281 *e*P P 02 49 29.4 +5.5
PBEJ Beja 27.89 279 *e*P P 02 49 28.0 +3.8
SVE Sverdlovsk 27.89 39 *e*P P 02 49 25.3 +1.3
PCVE Castro Verde 28.12 279 *e*P P 02 49 29.9 +3.7
SOHO SOHO 28.40 113 *i* P P 02 49 29.6 +0.8
SNR=5.7
LVZ Lovozero 29.20 5 *i* P P 02 49 36.1 +0.6
LVZ pmax pmax
comp=Z,14nm,1.1s
ATD Arta Tunnel 30.42 150 LR LR 03 02 50.9
comp=Z,15nn,18.3s,baz=332,slow=38
ARCES ARCESS Array B 30.63 358 LR LR 03 02 16.1
comp=Z,831nm,19.4s,baz=173,slow=37
FURI Furi 31.49 159 LR LR 03 06 16.8
comp=Z,359nm,18.2s,baz=342,slow=43
CHGR Chuyangaron 31.95 77 P P 02 50 00.5 +0.3
CHGR Chuyangaron 31.95 77 *i* P P 02 50 01.5 +1.3
CHGR pmax pmax
comp=Z,35nm,0.9s
BORK Borovoye 32.13 50 *ce*P P 02 50 02.9 +1.4
BORK pmax pmax
comp=Z,7.0nm,1.7s
KK31 Karatay Array 32.15 69 IAmb IAmb 02 50 03.8
comp=Z,10nm,1.1s
KKAR Karatay Array 32.15 69 P P 02 50 02.2 +0.4
KKAR Karatay Array 32.15 69 P P 02 50 02.2 +0.4
BVAR Borovoye Array 32.17 50 P P 02 50 01.8 -0.1
comp=Z,0.8nm,0.9s,baz=242,slow=8.0,SNR=3.3
BVAR LR LR 03 05 37.8
comp=Z,517nm,18.7s,baz=253,slow=41
comp=Z,0.8nm,0.9s
BTK Batken 32.89 74 IAmb IAmb 02 50 11.1
comp=Z,11nm,1.1s
DRK Karamyk 33.76 75 P P 02 50 16.9 +0.6
DRK Karamyk 33.76 75 P P 02 50 16.9 +0.6
DRK pmax pmax
comp=Z,17nm,1.2s
ARSB Arslanbob 34.24 71 IAmb IAmb 02 50 28.8
comp=Z,13nm,1.2s
TORD Torodi Ar. Bea 34.64 229 P P 02 50 23.6 -0.1
comp=Z,2.0nm,0.6s,baz=18,slow=4.0,SNR=22
comp=Z,2.0nm,0.6s
AAK Ala-Archa 35.11 69 P P 02 50 28.1 +0.4
comp=Z,5.4nm,0.9s,baz=243,slow=6.1,SNR=16
AAK LR LR 03 08 02.4
comp=Z,593nm,18.9s,baz=282,slow=42
comp=Z,5.4nm,0.9s
AAK Ala-Archa 35.11 69 P P 02 50 27.9 +0.1
AAK IAmb IAmb 02 50 30.4
comp=Z,9.0nm,1.0s
AAK Ala-Archa 35.11 69 *i* P P 02 50 28.5 +0.8
SNR=11
LODK Lodwar 36.05 167 P P 02 50 37.8 +1.8
BOOM Boomskoye usch 36.19 69 IAmb IAmb 02 50 40.0
comp=Z,9.7nm,1.0s
NRN Naryn 36.45 70 IAmb IAmb 02 50 42.2
comp=Z,15nm,1.2s
NIL Nilore 36.64 84 P P 02 50 41.2 +0.4
NIL IAmb IAmb 02 50 44.5
comp=Z,8.4nm,0.8s
NIL Nilore 36.64 84 P P 02 50 41.2 +0.4
NIL pmax pmax
comp=Z,8.0nm,0.8s
KSH2 Kashi 36.67 74 P P 02 50 43.0 +1.8
KSH2 pmax pmax
comp=Z,7.0nm,1.0s
KURBB Kurchatov Arra 37.07 55 P P 02 50 44.4 +0.2
comp=Z,3.6nm,0.8s,baz=279,slow=8.8,SNR=22
KURBB LR LR 03 08 13.1
comp=Z,542nm,20.6s,baz=230,slow=40
comp=Z,3.6nm,0.8s
JMIC Jan Mayen 37.10 341 LR LR 03 07 57.9
comp=Z,326nm,18.1s,baz=62,slow=40
KURK Kurchatov 37.12 55 P P 02 50 43.9 -0.7
KURK Kurchatov 37.12 55 *ce*P P 02 50 45.2 +0.5
KURK pmax pmax
comp=Z,5.0nm,1.7s
KDJ Kajisay 37.16 69 IAmb IAmb 02 50 48.1
comp=Z,11nm,1.1s
BORG Borgarnes 38.34 328 LR LR 03 09 10.7
comp=Z,719nm,20.1s,baz=109,slow=40
MAKZ Makanchi 39.70 61 P P 02 51 06.1 -0.3
MAKZ Makanchi 39.70 61 P P 02 51 06.1 -0.3
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 39.91 61 *ce*P P 02 51 08.9 +0.7
MKAR Makanchi Array 39.91 61 P P 02 51 08.8 +0.6
comp=Z,6.2nm,0.8s,baz=275,slow=5.6,SNR=46
MKAR LR LR 03 09 45.2
comp=Z,436nm,21.5s,baz=268,slow=40
comp=Z,6.2nm,0.8s
MKAR Makanchi Array 39.91 61 P P 02 51 07.9 -0.3
ZAA0 Zalesovo Array 40.81 49 P P 02 51 15.4 -0.1
ZALV Zalesovo Beam 40.81 49 P P 02 51 15.3 -0.2
comp=Z,4.3nm,0.9s,baz=271,slow=8.7,SNR=14
ZALV LR LR 03 10 59.3
comp=Z,351nm,18.5s,baz=265,slow=40
comp=Z,4.3nm,0.9s
ZALV Zalesovo Beam 40.81 49 P P 02 51 15.1 -0.4
ZALV Zalesovo Beam 40.81 49 *i* P P 02 51 15.8 +0.3
ZALV pmax pmax
comp=Z,4.0nm,0.9s
DGZ Jazzator, Alta 42.85 55 *i* P P 02 51 33.1 +0.7
DGZ pmax pmax
comp=Z,3.0nm,0.8s
DBIC Dimbokro 43.67 231 P P 02 51 39.5 +0.4
comp=Z,6.8nm,0.7s,baz=58,slow=8.9,SNR=6.5
DBIC LR LR 03 12 24.2
comp=Z,248nm,19.0s,baz=58,slow=40
comp=Z,6.8nm,0.7s
DBIC Dimbokro 43.67 231 P P 02 51 39.6 +0.4
DBIC IAmb IAmb 02 51 43.2
comp=Z,16nm,1.1s
DBIC Dimbokro 43.67 231 P P 02 51 39.6 +0.4
DBIC pmax pmax
comp=Z,16nm,1.1s
WMQ Urumqi 44.26 64 *e*P P 02 51 45.8 +2.0
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ LR LR
comp=Z,360nm,15.1s
SFJD Kangerlussuaq 50.42 330 LR LR 03 14 36.7
comp=Z,255nm,19.5s,baz=94,slow=37
GOMU GeErMu 52.01 71 P P 02 52 43.9 -0.2
GOMU pmax pmax
comp=Z,3.0nm,1.0s
GOMU LR LR
comp=N,150nm,15.5s
GOMU LR LR
comp=E,270nm,16.0s
GOMU LR LR
comp=Z,340nm,16.8s
LSA Lhasa 52.12 80 P P 02 52 42.6 -2.5
LSA pmax pmax
comp=Z,5.0nm,0.8s
TLY Talaya 52.42 50 *ce*P P 02 52 47.3 +0.7
TLY pmax pmax
comp=Z,12nm,2.5s
ZAK Zakamensk 52.61 51 *e*P P 02 52 47.8 -0.3
ZAK pmax pmax
comp=Z,9.0nm,1.8s
TULEG Thule 54.00 343 P P 02 52 56.6 -1.1
TULEG IAmb IAmb 02 53 00.1
comp=Z,11nm,1.1s
GTA2 Gaotai 54.22 65 *e*P P 02 53 00.8 +0.7
GTA2 pmax pmax
comp=Z,12nm,0.9s
GTA2 LR LR
comp=N,290nm,14.9s
GTA2 LR LR
comp=E,410nm,18.5s
GTA2 LR LR
comp=Z,270nm,16.7s
SONM Songino Array 55.41 53 P P 02 53 09.5 +0.9
comp=Z,3.4nm,1.0s,baz=289,slow=7.3,SNR=21
SONM LR LR 03 21 45.2
comp=Z,319nm,19.1s,baz=306,slow=41
comp=Z,3.4nm,1.0s
SONM Songino Array 55.41 53 P P 02 53 08.8 +0.2
SONM IAmb IAmb 02 53 10.4
comp=Z,4.9nm,1.1s
ULN Ulaanbaatar 55.80 53 P P 02 53 12.0 +0.5
ULN IAmb IAmb 02 53 13.3
comp=Z,7.1nm,1.1s
ULN Ulaanbaatar 55.80 53 P P 02 53 12.0 +0.5
ULN pmax pmax
comp=Z,7.0nm,1.1s
TIXI Tiksi 56.81 22 LR LR 03 20 57.9
comp=Z,610nm,19.9s,baz=312,slow=40
TIXI Tiksi 56.81 22 P P 02 53 17.8 -0.3
TIXI Tiksi 56.81 22 *ce*P P 02 53 18.7 +0.7
TIXI pmax pmax
comp=Z,4.0nm,0.8s
PALK Pallekele 56.90 109 LR LR 03 21 16.5
comp=Z,220nm,18.0s,baz=318,slow=40
POIN Pond Inlet 57.71 340 P P 02 53 24.5 +0.2
FRB Frobisher Bay 58.51 329 LR LR 03 20 48.5
comp=Z,309nm,18.4s,baz=59,slow=38
LZDM Lanzhou Array 58.57 67 P P 02 53 32.1 +0.7
comp=Z,1.6nm,0.5s,baz=278,slow=4.0,SNR=5.6
comp=Z,1.6nm,0.5s
LZH Lanzhou 58.62 67 *e*P P 02 53 32.4 +0.9
LZH pP sP 02 53 41.4 +3.5
LZH pmax pmax
comp=Z,14nm,1.2s
LZH LR LR
comp=N,360nm,19.4s
LZH LR LR
comp=E,240nm,19.0s
LZH LR LR
comp=Z,460nm,19.2s
TSUM Tsumeb 58.69 191 LR LR 03 21 49.2
comp=Z,268nm,18.0s,baz=354,slow=39
ILON Igloolik, Nuna 60.48 337 P P 02 53 42.5 -1.1
ILON IAmb IAmb 02 53 44.2
comp=Z,6.3nm,1.2s
RES Resolute Bay 60.53 345 LR LR 03 20 25.6
comp=Z,172nm,19.5s,baz=5.0,slow=37
RES Resolute Bay 60.53 345 P P 02 53 43.8 -0.1
RES Resolute Bay 60.53 345 P P 02 53 43.8 -0.1
RES pmax pmax
comp=Z,3.0nm,1.0s
BTO2 Baotou 60.66 60 *e*P P 02 53 46.8 +1.3
BTO2 pP sP 02 53 51.5 -0.4
BTO2 sP pP 02 53 53.9 +3.8
BTO2 pmax pmax
comp=Z,20nm,0.8s
BTO2 pmax pmax
comp=Z,320nm,7.8s
KUQ Kuujjuuaa 60.95 323 P P 02 53 46.4 -0.6
KUQ IAmb IAmb 02 54 23.3
comp=Z,9.4nm,1.3s
YAK Yakutsk 61.47 32 LR LR 03 21 55.3
comp=Z,213nm,20.6s,baz=294,slow=38
YAK Yakutsk 61.47 32 *ce*P P 02 53 50.7 +0.2
YAK pmax pmax
comp=Z,8.0nm,0.5s
SCHQ Schefferville 61.71 319 P P 02 53 51.6 -0.6
comp=Z,2.1nm,0.5s,baz=64,slow=4.8,SNR=14
SCHQ LR LR 03 20 47.1
comp=Z,177nm,18.3s,baz=56,slow=36
comp=Z,2.1nm,0.5s
HHC Hu-ho-hao-te 61.74 59 ⇓ *i* P P 02 53 54.1 +1.3
HHC pmax pmax
comp=Z,16nm,1.0s
PZH PanZhiHua 61.81 78 P P 02 53 54.0 +0.5
HILR Hailar Array B 62.67 47 LR LR 03 25 03.8
comp=Z,225nm,20.0s,baz=45,slow=40
XAN Xi'an 63.25 67 P P 02 54 03.3 +0.4
XAN pmax pmax
comp=Z,10.0nm,1.3s
XAN LR LR
comp=N,600nm,16.3s
XAN LR LR
comp=E,470nm,16.3s
XAN LR LR
comp=Z,430nm,18.4s
LBTB Lobatse 63.71 182 LR LR 03 23 22.0
comp=Z,112nm,18.4s,baz=359,slow=38
CMAR Chiang Mai Arr 64.06 87 P P 02 54 08.0 -0.4
comp=Z,1.2nm,0.3s,baz=297,slow=6.9,SNR=8.0
CMAR LR LR 03 27 03.9
comp=Z,147nm,21.0s,baz=300,slow=41
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 64.06 87 *i* P P 02 54 09.3 +0.9
CMAR pmax pmax
comp=Z,1.0nm,0.3s
HNS HongShan 65.57 61 ⇓ P P 02 54 18.9 +0.9
HNS S S 03 03 04.3 +1.4
HNS pmax pmax
comp=Z,6.0nm,1.0s
HNS LR LR
comp=N,300nm,12.8s
HNS LR LR
comp=E,350nm,14.9s
HNS LR LR
comp=Z,470nm,15.9s
HEH HeiHe 66.56 44 *e*P P 02 54 24.8 +0.7
HEH pmax pmax
comp=Z,9.0nm,0.8s
BOSA Boshof 67.30 183 LR LR 03 27 33.1
comp=Z,122nm,20.5s,baz=0.5,slow=39
A36M Sachs Harbour 67.71 351 P P 02 54 30.6 -0.5
BILL Bilibino 68.81 16 *i* P P 02 54 38.1 +0.1
BILL pmax pmax
comp=Z,1.0nm,0.9s
BNX BinXian 69.07 48 ⇑ P P 02 54 39.8 -0.2
BNX pmax pmax
comp=Z,3.0nm,0.8s
SEY Seymchan 69.18 24 *ce*P P 02 54 41.5 +1.1
SEY pmax pmax
comp=Z,6.0nm,1.3s
KLR Kul'dur 69.46 43 LR LR 03 29 58.2
comp=Z,334nm,18.6s,baz=304,slow=40
KLR Kul'dur 69.46 43 *ce*P P 02 54 42.5 +0.1
KLR pmax pmax
comp=Z,1.0nm,1.0s
MA2 Magadan 71.09 27 LR LR 03 29 44.2
comp=Z,426nm,18.7s,baz=314,slow=39
MA2 Magadan 71.09 27 *ce*P P 02 54 53.2 +1.1
MA2 pmax pmax
comp=Z,13nm,1.7s
MA2 Magadan 71.09 27 P P 02 54 51.7 -0.4
SUR Sutherland 71.31 186 LR LR 03 27 27.1
comp=Z,142nm,19.1s,baz=4.0,slow=37
NJ2 Nanjing 71.34 64 *e*P P 02 54 53.4 -0.8
NJ2 pmax pmax
comp=Z,6.0nm,0.7s
INK Inuvik 72.12 353 P P 02 54 57.6 -0.5
comp=Z,2.0nm,1.1s,baz=18,slow=3.2,SNR=3.7
INK LR LR 03 29 27.0
comp=Z,116nm,19.4s,baz=354,slow=38
comp=Z,2.0nm,1.1s
INK Inuvik 72.12 353 IAmb IAmb 02 55 32.2
comp=Z,7.0nm,1.3s
USRK Ussuriysk Ar. 72.61 47 P P 02 55 01.6 0.0
comp=Z,4.5nm,0.8s,baz=278,slow=8.7,SNR=5.9
comp=Z,4.5nm,0.8s
RCBR Riachuelo 73.79 248 LR LR 03 28 47.2
comp=Z,68nm,18.1s,baz=62,slow=37
SADO Sadowa 73.91 315 LR LR 03 27 56.3
comp=Z,233nm,18.6s,baz=122,slow=36
F21K Alatna River 74.11 1 P P 02 55 10.8 +0.8
F21K IAmb IAmb 02 55 44.0
comp=Z,6.8nm,1.2s
G26K Porcupine Rive 74.19 357 P P 02 55 11.7 +1.2
KSAR Wonju Array Be 74.23 55 P P 02 55 10.6 -0.6
KSAR Wonju Array Be 74.23 55 P P 02 55 10.6 -0.6
KSRS Korea Array 74.25 55 P P 02 55 10.9 -0.4
comp=Z,5.0nm,0.9s,baz=308,slow=5.2,SNR=8.4
KSRS LR LR 03 31 35.2
comp=Z,501nm,18.8s,baz=310,slow=39
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 74.46 343 P P 02 55 11.7 -0.4
comp=Z,0.5nm,0.9s,baz=33,slow=5.8,SNR=10
YKA LR LR 03 28 49.5
comp=Z,167nm,18.7s,baz=330,slow=36
comp=Z,0.5nm,0.9s
YKA Yellowknife Ar 74.46 343 P P 02 55 12.3 +0.2
YKA Yellowknife Ar 74.46 343 *i* P P 02 55 13.0 +0.9
IMAR Indian Mountai 75.35 1 P P 02 55 17.6 +0.4
I30M Mount Dempster 75.39 353 IAmb IAmb 02 55 21.7
comp=Z,5.7nm,1.1s
H21K Melozitna Rive 75.68 0 P P 02 55 18.9 -0.2
ILAR Eielson Array 76.49 358 P P 02 55 23.9 +0.1
comp=Z,0.4nm,0.8s,baz=347,slow=4.4,SNR=5.2
comp=Z,0.4nm,0.8s
YSS Yuzhno-Sakhali 76.58 40 *e*P P 02 55 25.0 +0.5
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,700nm,13.0s
YSS MLR MLR
comp=N,300nm,17.0s
YSS MLR MLR
comp=E,800nm,14.0s
BCAR Beaver Creek A 77.95 355 P P 02 55 32.7 +0.7
M29M Somme Creek 78.31 354 P P 02 55 34.2 +0.1
M29M IAmb IAmb 02 56 07.9
comp=Z,10nm,1.2s
ULM Lac du Bonnet 78.33 327 LR LR 03 32 17.0
comp=Z,190nm,18.5s,baz=25,slow=37
ASAJ Asahikawa 78.45 42 LR LR 03 34 18.4
comp=Z,429nm,18.4s,baz=340,slow=39
PETK Petropavlovsk- 78.51 28 LR LR 03 32 36.9
comp=Z,341nm,19.7s,baz=322,slow=38
JNU Nakatsue 78.82 56 LR LR 03 36 54.3
comp=Z,268nm,18.3s,baz=336,slow=41
MDP Montagnes des 79.46 268 LR LR 03 29 47.8
comp=Z,112nm,20.6s,baz=334,slow=35
I42A Draeger Farm, 79.70 319 P P 02 55 43.0 +1.0
N19K Bonanza Creek 80.53 1 P P 02 55 45.8 -0.5
N19K IAmb IAmb 02 56 10.8
comp=Z,8.4nm,1.1s
JOW Kunigami 81.03 63 LR LR 03 39 27.9
comp=Z,96nm,19.5s,baz=351,slow=41
MJAR Matsushiro Arr 81.16 50 P P 02 55 50.1 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.2nm,0.9s,baz=296,slow=5.7,SNR=6.0						
MJAR				LR	LR	03 35 35.6	
	comp=Z,150nm,18.6s,baz=322,slow=38						
	comp=Z,3.2nm,0.9s						
DLBC	Dease Lake	81.19	348	LR	LR	03 33 29.9	
	comp=Z,232nm,18.4s,baz=344,slow=37						
SJG	San Juan	81.88	287	LR	LR	03 27 01.3	
	comp=Z,28nm,21.4s,baz=49,slow=32						
TKL	Tuckaleechee C	82.57	310	LR	LR	03 32 34.7	
	comp=Z,204nm,21.0s,baz=50,slow=36						
KDAK	Kodiak Island	83.59	0	LR	LR	03 34 59.1	
	comp=Z,89nm,21.7s,baz=354,slow=37						
SHEM	Shemya Is, Ala	84.05	20	LR	LR	03 36 52.9	
	comp=Z,141nm,19.3s,baz=84,slow=38						
T42A	Van Buren	85.78	315	P	P	02 56 13.5	-0.1
T42A				IAmb	IAmb	02 56 29.8	
	comp=Z,5.5nm,1.0s						
LRAL	Lakeview Retre	86.31	310	P	P	02 56 15.7	-0.7
LRAL				IAmb	IAmb	02 56 24.2	
	comp=Z,3.5nm,0.8s						
LEM	Lembang	86.33	102	LR	LR	03 38 57.1	
	comp=Z,76nm,18.6s,baz=332,slow=38						
NEW	Newport	87.73	337	LR	LR	03 40 06.1	
	comp=Z,168nm,18.2s,baz=12,slow=39						
BDFB	Brasilia	89.15	249	P	P	02 56 31.8	+1.6
	comp=Z,2.3nm,0.7s,baz=56,slow=7.5,SNR=4.8						
BDFB				LR	LR	03 36 25.3	
	comp=Z,179nm,20.2s,baz=36,slow=36						
	comp=Z,2.3nm,0.7s						
PDAR	Pinedale Array	89.93	330	P	P	02 56 33.6	-0.2
	comp=Z,0.2nm,0.7s,baz=306,slow=3.0,SNR=2.0						
PDAR				LR	LR	03 38 27.1	
	comp=Z,117nm,19.2s,baz=20,slow=37						
	comp=Z,0.2nm,0.7s						
JCJ	Chichijima	90.11	54	LR	LR	03 40 40.7	
	comp=Z,208nm,19.3s,baz=329,slow=38						
SDV	Santo Domingo	91.03	282	LR	LR	03 33 47.6	
	comp=Z,53nm,20.7s,baz=69,slow=33						
DAV	Davao City (W)	91.53	80	LR	LR	03 43 26.1	
	comp=Z,99nm,18.5s,baz=358,slow=39						
ANMO	Albuquerque	95.18	324	LR	LR	03 42 30.2	
	comp=Z,114nm,18.8s,baz=37,slow=37						
YBH	Yreka Blue Hor	95.32	338	LR	LR	03 42 19.2	
	comp=Z,12nm,18.1s,baz=8.5,slow=37						
ROSC	El Rosal	96.42	281	LR	LR	03 35 27.9	
	comp=Z,33nm,21.2s,baz=72,slow=32						
NVAR	Mina Array Bea	96.93	334	LR	LR	03 44 04.6	
	comp=Z,122nm,18.0s,baz=74,slow=38						
TXAR	Lajitas Array	98.40	319	LR	LR	03 42 21.2	
	comp=Z,171nm,19.9s,baz=34,slow=36						
NVL	N'lazarevskaya	110.06	186	*i* PKIKP	PKiKP	03 02 06.0	+1.4
NVL				*e*		03 09 18.1	
NVL				*e*SS	SS	03 18 06.4	+2.6
NVL				*e*SSS	SSS	03 22 12.9	
NVL				pmax	pmax		
	comp=Z,59nm,2.0s						
NVL				MLR	MLR		
	comp=Z,311nm,19.0s						
FORT	Forrest	115.94	110	PKPdf	PKPdf	03 02 16.9	-0.2
ASAR	Alice Springs	116.56	100	PKP	PKPdf	03 02 18.1	-0.5
	comp=Z,1.9nm,1.2s,baz=294,slow=0.9,SNR=6.4						
ASAR	Alice Springs	116.56	100	PKPdf	PKPdf	03 02 17.7	-0.8
DZM	Mont Dzumac	140.89	77	*e*LR	LR	03 48 43.0	
	comp=Z,96nm,28.9s						
TAOE	Nuku Hiva Isla	148.13	337	*e*LR	LR	03 52 08.6	
	comp=Z,105nm,23.4s						
PPT2	Papeete2	158.56	353	*e*LR	LR	03 56 58.2	
	comp=Z,144nm,28.5s						
PPT2				*e*LR	LR	03 57 06.6	
	comp=Z,147nm,27.5s						
TBI	Tubuai	164.24	351	*e*LR	LR	03 59 39.9	
	comp=Z,447nm,26.0s						

*ISK **24** 02:48:24.4, 38°.97N×27°.87E, h6km, ML3.7/20*
*AFAD **24** 02:48:24.5, 38°.95N×27°.88E, h8km±1km, ML3.6*
*THE **24** 02:48:25.8, 39°N±4°×2°8E±°, h4km±17km, M3.3/13, MLh3.3/13*

ISC 24 02:48:24.8±0.8**, 38°.97N**±0°.02×**27°.87E**±0°.02**, h10**km±6km**,**
n42, σ0.s39/57**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.10	206	P	Pg	02 48 27.4	0.0
AKHS				S	Sg	02 48 29.4	+0.1
AKS	Akhisar	0.10	207	Pg	Pg	02 48 27.0	-0.4
AKS				Sg	Sg	02 48 29.2	0.0
GORD	Gordes-Manisa	0.25	105	Pg	Pg	02 48 29.2	-0.6
GORD				Sg	Sg	02 48 33.7	+0.5
GOMA	Golmarmara-Man	0.27	172	Pg	Pg	02 48 30.3	+0.2
GOMA				Sg	Sg	02 48 34.3	+0.6
SOMA	Soma-Manisa	0.32	305	Pg	Pg	02 48 31.0	-0.2
SOMA				Sg	Sg	02 48 36.3	+0.8
KTTT	Salihli	0.33	149	P	Pg	02 48 31.3	-0.1
KTTT				S	Sg	02 48 35.7	0.0
STEP	BALIKESIR_Sava	0.42	344	P	Pg	02 48 33.4	+0.4
STEP				S	Sg	02 48 39.5	+0.8
STEP				IAML		02 48 40.0	
	comp=N,7µm,0.5s						
STEP				IAML		02 48 40.0	
	comp=E,4µm,0.3s						
CAMT	Merkez	0.49	243	P	Pb	02 48 35.3	-0.2
CAMT				S	Sb	02 48 42.0	-0.8
CAMT				IAML		02 48 43.0	
	comp=E,5µm,0.4s						
CAMT				IAML		02 48 45.0	
	comp=N,6µm,0.4s						
ZEDA	zmir-Bergama	0.62	270	P	Pb	02 48 37.5	-0.1
ZEDA				S	Sb	02 48 45.9	-0.5
BALB	Balikesir	0.67	1	Pg	Pb	02 48 38.0	-0.5
ODEM	Odemis-Izmir	0.71	167	Pg	Pg	02 48 38.6	+0.1
KULA	Kula-Manisa	0.77	126	Pg	Pg	02 48 39.1	-0.5
DST	Dursunbey	0.86	42	Pg	Pb	02 48 41.5	-0.3
SIMA	Simav-Kutahya	0.87	82	Pg	Pb	02 48 41.8	-0.3
SMAA	Simav-Kutahya	0.87	81	Pg	Pb	02 48 41.8	-0.3
BLCB	Balcova	0.87	228	Pg	Pg	02 48 41.4	-0.2
BLCB	Balcova	0.87	228	P	Pg	02 48 41.2	-0.4
BLCB				S	Sb	02 48 53.5	-0.3
YAYO	Edremit-Balk	0.89	316	Pg	Pg	02 48 41.9	0.0
FOCM	Foa	0.93	254	Pg	Pb	02 48 42.6	-0.3
SUSR	Susurluk-Balik	1.00	9	Pg	Pb	02 48 44.1	-0.2
AYDB	Zeytinkoy-Aydi	1.02	179	Pg	Pg	02 48 44.2	-0.2
SHAP	Saphane-Kutahy	1.05	87	Pg	Pb	02 48 45.2	0.0
NAZL	Nazilli-Aydin	1.06	162	Pg	Pb	02 48 45.3	+0.1
YENI	Yenice-Canakka	1.08	333	Pn	Pg	02 48 45.2	-0.3
GONE	Gonen-Balikesi	1.08	352	Pn	Pb	02 48 45.8	+0.2
KRBN	Karaburun	1.10	250	Pn	Pb	02 48 45.9	+0.1
GMLD	Gumuldur	1.17	220	Pn	Pn	02 48 47.3	+0.2
GEDZ	Gediz	1.20	86	Pn	Pn	02 48 47.9	+0.2
CANM	Can-anakkale	1.22	329	Pn	Pn	02 48 48.1	+0.2
PRK	Paraskevi	1.27	283	P	Pn	02 48 48.5	-0.1
PRK				S	Sn	02 49 06.2	+0.4
GCAM	G?zelcaml?	1.36	202	Pn	Pb	02 48 50.4	0.0
EZN	Ezine	1.47	306	P	Pn	02 48 50.9	-0.4
EZN				S	Sb	02 49 11.3	+0.3
SMG	Samos	1.50	213	P	Pb	02 48 52.6	-0.1
SMG				S	Sg	02 49 13.0	0.0
SIGR	SIGRI	1.59	279	P	Pn	02 48 52.8	-0.1
SIGR				S	Sn	02 49 13.3	-0.2
GADA	Gvkgeada	1.95	309	P	Pn	02 48 58.1	+0.1
GADA				S	Sb	02 49 24.5	-0.3
BODT	Bodrum	1.96	193	P	Pn	02 48 59.2	+1.1
ENEZ	Enez	2.20	324	P	Pn	02 49 00.7	-0.7
LIA	Limnos Island	2.28	295	P	Pn	02 49 02.3	-0.1
SMTH	Samothraki Isl	2.35	310	P	Pn	02 49 03.6	+0.2
RDO	Rodhopi	2.82	321	P	Pn	02 49 10.6	+0.8
KAVA	Kavala	3.28	309	P	Pn	02 49 16.4	+0.2
OUR	Ouranopolis	3.30	296	P	Pn	02 49 16.8	+0.3

*JMA **24** 02:51:12.8±0.2, 25°N±3°×122°.7E±0°.6, h114km±1km, MV2.1/12, NW OFF ISHIGAKIJIMA IS*
*TAP **24** 02:51:12.2, 24°.71N×122°.73E, h117km, ML3.4, D*

ISC 24 02:51:13.0±1.6**, 24°.66N**±0°.05×**122°.72E**±0°.03**, h112**km±9km**,**
n65, σ0.s71/122**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.29	135	P	Pn	02 51 29.0	0.0
JYNG				*e*S	Sn	02 51 41.4	+0.5
YOJ	Yonaguni jima	0.33	127	*e*P	Pn	02 51 29.3	+0.2
YOJ				*e*S	Sn	02 51 41.3	0.0
YOJ	Yonaguni jima	0.33	127	P	Pn	02 51 26.7	-2.4
YOJ				S	Sn	02 51 41.5	+0.3
EOS2	EOS2	0.50	242	*i* P	Pn	02 51 30.5	+0.6
EOS2				*i* S	Sn	02 51 44.1	+1.4
EOS3	EOS3	0.52	225	*i* P	Pn	02 51 30.7	+0.7
EOS3				*i* S	Sn	02 51 44.7	+1.9
EOS4	EOS4	0.65	214	*e*P	Pn	02 51 30.9	+0.2
EOS4				S	Sn	02 51 44.8	+0.7
TWC	Suao	0.79	266	*e*P	Pn	02 51 32.1	-0.2
TWC				*i* S	Sn	02 51 45.8	-1.1
TIPB	Shuangxi	0.87	291	*e*P	Pn	02 51 33.3	+0.2
TIPB				S	Sn	02 51 47.7	-0.5
SXI1	Grass Mountain	0.88	300	P	Pn	02 51 33.2	0.0
SXI1				S	Sn	02 51 49.0	+0.4
EWUT	Wuta	0.88	256	*e*P	Pn	02 51 33.1	0.0
EWUT				*e*S	Sn	02 51 48.4	0.0
NDS	Dongshan	0.91	269	*e*P	Pn	02 51 33.4	-0.1
NDS				*e*S	Sn	02 51 47.7	-1.3
EAHA	Aohua	0.95	250	P	Pn	02 51 33.6	-0.2
EAHA				*e*S	Sn	02 51 50.0	+0.4
TWE	Neicheng	0.96	274	*e*P	Pn	02 51 33.8	-0.1
TWE				*e*S	Sn	02 51 49.8	+0.1
IRIF	Iriomote-Funau	0.98	109	*e*P	Pn	02 51 34.1	0.0
IRIF				*e*S	Sn	02 51 50.0	0.0
FUSB	Fushanzhiwuyua	1.03	276	P	Pn	02 51 34.9	+0.2
FUSB				S	Sn	02 51 50.6	-0.6
ENTT	Nioudou	1.05	269	*e*P	Pn	02 51 35.5	+0.6
ENTT				*e*S	Sn	02 51 51.2	-0.2
LATG	Datong	1.09	264	*e*P	Pn	02 51 35.7	+0.3
LATG				*e*S	Sn	02 51 52.8	+0.4
NDT	Datong Townshi	1.10	267	*e*P	Pn	02 51 35.7	+0.4
NDT				*e*S	Sn	02 51 53.0	+0.7
NWLT	Wulai	1.11	276	*e*P	Pn	02 51 35.5	0.0
NWLT				*e*S	Sn	02 51 51.5	-1.1
ETL	Fush Village	1.12	244	*e*P	Pn	02 51 35.3	-0.4
ETL				S	Sn	02 51 52.2	-0.5
NACB	Ninganchiao	1.13	245	P	Pn	02 51 35.2	-0.6
NACB				S	Sn	02 51 52.0	-0.9
YM01	YM01	1.15	295	P	Pn	02 51 35.9	-0.1
YM01				S	Sn	02 51 53.0	-0.3
HATJ	Hateruma jima	1.16	121	*e*P	Pn	02 51 36.5	+0.5
TWD	Chiawan	1.18	241	*i* P	Pn	02 51 35.8	-0.4
TWD				*i* S	Sn	02 51 53.2	-0.6
ZUZH	Zhuzihu	1.18	295	*e*P	Pn	02 51 36.3	0.0
ZUZH				*e*S	Sn	02 51 53.3	-0.6
ETLH	Xiulin Townshi	1.21	248	*e*P	Pn	02 51 36.6	-0.2
ETLH				*e*S	Sn	02 51 54.4	-0.4
YHNB	Yeheng	1.22	271	P	Pn	02 51 37.0	+0.2
YHNB				S	Sn	02 51 54.5	-0.3
NNSB	Datong	1.24	260	P	Pn	02 51 36.7	-0.3
NNSB				*e*S	Sn	02 51 55.1	-0.1
NSK	Sanguang	1.24	271	*i* P	Pn	02 51 37.3	+0.3
NSK				S	Sn	02 51 54.8	-0.3
NNS	Nan Shan	1.24	260	*e*P	Pn	02 51 37.3	+0.2
NNS				*i* S	Sn	02 51 55.4	0.0
JKRS	Kuro-shima	1.25	109	*e*P	Pn	02 51 37.3	+0.3
JKRS				*e*S	Sn	02 51 55.7	+0.5
TEYL	Yanliau Villag	1.29	233	*e*P	Pn	02 51 37.3	-0.2
TEYL				*e*S	Sn	02 51 56.3	+0.2
ETM	Tongmen	1.31	238	P	Pn	02 51 37.2	-0.6
ETM				*e*S	Sn	02 51 55.8	-0.8
JIJ	Ishigaki jima	1.33	103	*e*P	Pn	02 51 38.0	+0.1
JIJ				*e*S	Sn	02 51 56.1	-0.7
LXIB	Xiulin Townshi	1.35	242	P	Pn	02 51 37.8	-0.6
LXIB				*e*S	Sn	02 51 56.4	-1.2
SHUL	Shoufeng	1.37	231	*e*P	Pn	02 51 39.4	+1.0
SHUL				*e*S	Sn	02 51 57.5	-0.1
FUSS	Fushou	1.41	253	*e*P	Pn	02 51 39.4	+0.3
FUSS				*e*S	Sn	02 51 58.4	-0.4
KSHI	Guanxi Townshi	1.41	275	*e*P	Pn	02 51 39.1	+0.2
KSHI				*e*S	Sn	02 51 58.8	+0.4
WHF	Hehuan Shan	1.42	249	*e*P	Pn	02 51 39.5	+0.1
WHF				*e*S	Sn	02 51 58.9	-0.5
TEGC	Jichi Village	1.43	229	*e*P	Pn	02 51 39.0	-0.1
ESL	Shilin	1.45	235	*e*P	Pn	02 51 38.3	-1.0
ESL				*e*S	Sn	02 51 57.9	-1.3
JISG	Ishigakijimahi	1.45	93	P	Pn	02 51 39.5	+0.1
JISG				*e*S	Sn	02 51 58.7	-0.6
NFF	Wufeng Townshi	1.46	269	*e*P	Pn	02 51 39.5	0.0
NFF				*e*S	Sn	02 51 59.2	-0.4
TWT	Tachien	1.46	254	*e*P	Pn	02 51 40.3	+0.6
TWT				*e*S	Sn	02 52 00.2	+0.3
TDCB	Techi	1.48	254	*e*P	Pn	02 51 40.6	+0.8
TDCB				*e*S	Sn	02 51 59.9	-0.3
WARBT	Fenglin Townsh	1.54	233	*e*P	Pn	02 51 39.8	-0.6
WARBT				*e*S	Sn	02 51 59.8	-1.4
LIOB	Emei	1.55	270	*e*P	Pn	02 51 40.2	-0.3
LIOB				*e*S	Sn	02 52 01.4	-0.1
NSTT	Nanjuang	1.56	269	*i* P	Pn	02 51 39.7	-1.0
NSTT				*i* S	Sn	02 52 01.4	-0.4
OWD	Renai	1.57	244	*e*P	Pn	02 51 40.9	-0.1
OWD				*i* S	Sn	02 52 01.3	-0.8
WUSB	Renai	1.60	246	P	Pn	02 51 41.8	+0.5
WUSB				S	Sn	02 52 02.5	-0.4
HGSD	Ruisui	1.66	226	*e*P	Pn	02 51 41.9	0.0
HGSD				S	Sn	02 52 03.9	+0.1
WHP	Taichung City	1.66	257	*i* P	Pn	02 51 42.9	+0.9
WHP				*e*S	Sn	02 52 04.3	+0.4
VWDT	VWDT	1.70	238	*e*P	Pn	02 51 42.9	+0.6
VWDT				*e*S	Sn	02 52 04.3	-0.4
EHYH	Wanrong	1.71	227	*e*P	Pn	02 51 42.2	-0.3
EHY	Hungye	1.72	228	*e*P	Pn	02 51 41.9	-0.7
JTJ	Tarama	1.81	90	*e*P	Pn	02 51 43.9	+0.3
YULB	Yu-li	1.81	226	*e*P	Pn	02 51 42.6	-1.1
YULB				*e*S	Sn	02 52 05.5	-1.7
SSLB	Suanglung	1.83	242	*e*P	Pn	02 51 44.1	+0.1
SSLB				*e*S	Sn	02 52 08.2	+0.6
SMLT	Sun Moon Lake	1.83	245	*e*P	Pn	02 51 44.9	+0.9
SMLT				*e*S	Sn	02 52 09.9	+2.1
TWF1	Yuli	1.84	225	*e*P	Pn	02 51 43.6	-0.5
TYC	Yuchr	1.86	246	*e*P	Pn	02 51 45.3	+1.0
TYC				*e*S	Sn	02 52 08.7	+0.6
FULB	Fuli	1.95	222	*e*P	Pn	02 51 45.4	-0.2
FULB				S	Sn	02 52 10.5	+0.1
WHYT	Xinyi Township	1.96	241	*e*P	Pn	02 51 47.0	+1.4
WHYT				*e*S	Sn	02 52 12.6	+2.2
ALS	Alishan	2.09	237	*e*P	Pn	02 51 48.3	+0.8
LDUT	Ludao	2.29	210	*e*P	Pn	02 51 49.2	-0.5

*OSPL **24** 02:59:36.8±0.3, 17°.90N×66°.98W, h14km±63km, ML3.0, Presumed earthquake*
*SDD **24** 02:59:36.6±1.1, 17°.91N×66°.98W, h18km±6km, MD3.6, ML3.0, MW3.4, Presumed earthquake*
*NEIC **24** 02:59:36.1±1.8, 17°.88N±0°.03×66°.93W±0°.02, h10km±1km, ML3.4/37, Md3.2/7(RSPR), Error ellipse: s-maj=5.8km s-min=2.8km az=16.0*
*RSPR **24** 02:59:36.9, 17°.93N×66°.96W, h11km, MD3.2/7*

ISC 24 02:59:36.3±0.9**, 17°.93N**±0°.05×**66°.95W**±0°.02**, h16**km±5km**,**
n48, σ0.s62/79**, 15C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.08	55		Pg	02 59 39.7	+0.2
GBPR					Sg	02 59 41.7	+0.2
GBPR	Guanica, Bosqu	0.08	55	⇓*e*P	Pg	02 59 39.7	+0.2
GBPR				*e*S	Sg	02 59 41.7	+0.2
MLPR	Magueyes Islan	0.10	293	Pg	Pg	02 59 39.4	-0.3
MLPR				Sg	Sg	02 59 41.4	-0.5
MLPR				IAML		02 59 42.2	
	17µm,0.3s						
CRPR	Cabo Rojo, PR	0.17	296	Pg	Pg	02 59 40.5	0.0
CRPR				Sg	Sg	02 59 43.6	+0.1
CRPR				IAML		02 59 44.5	
	10µm,0.3s						
CRPR	Cabo Rojo, PR	0.17	296	⇑*e*Pg	Pg	02 59 40.6	0.0
CRPR				⇑*e*Sg	Sg	02 59 43.2	-0.3
CRPR				IAML		02 59 43.4	
	comp=N,11µm,0.7s						
CRPR	Cabo Rojo, PR	0.17	296	⇑*e*P	Pg	02 59 40.6	0.0
CRPR				*e*S	Sg	02 59 43.1	-0.3
CRPR	Cabo Rojo, PR	0.17	296	*i* P	Pg	02 59 40.6	0.0
CRPR				*e*S	Sg	02 59 43.2	-0.3
CRPR				IAML		02 59 44.0	
	comp=Z,8µm,0.4s						
LSP	Las Mesas	0.28	332		Pg	02 59 42.4	+0.1
LSP	Las Mesas	0.28	332	⇓*e*P	Pg	02 59 42.4	+0.1
PRSN	Puerto Rico Se	0.34	327	Pg	Pg	02 59 43.3	-0.1
PRSN				Sg	Sb	02 59 48.9	-0.5
PRSN				IAML		02 59 49.9	
	comp=Z,4µm,0.3s						
PRSN				IAML		02 59 52.0	
	comp=Z,5µm,0.3s						
PRSN	Puerto Rico Se	0.34	327	⇑*e*Pg	Pg	02 59 43.4	-0.1
PRSN				*e*Sg	Sb	02 59 48.8	-0.5
PRSN				IAML		02 59 52.1	
	comp=N,3µm,0.3s						
PRSN	Puerto Rico Se	0.34	327	⇑*e*P	Pg	02 59 43.5	0.0
PRSN				*e*S	Sb	02 59 48.8	-0.5
OBIP	Obispado Ponce	0.34	71	Pg	Pb	02 59 43.7	-0.3
OBIP				Sg	Sb	02 59 49.1	-0.2
OBIP	Obispado Ponce	0.34	71	⇓*e*P	Pb	02 59 43.9	-0.2
OBIP				*e*S	Sb	02 59 49.3	0.0
OBIP	Obispado Ponce	0.34	71	*i* P	Pb	02 59 43.9	-0.1
OBIP				*e*S	Sb	02 59 49.2	-0.1
OBIP				IAML		02 59 49.4	
	comp=Z,894nm,0.7s						
CELP	Cerrillos	0.38	67	Pg	Pb	02 59 44.4	-0.3
CELP				Sg	Sb	02 59 50.1	-0.2
CELP				IAML		02 59 50.7	
	comp=Z,4µm,0.4s						
UUPR	Utuado, UPR, P	0.39	34	Pg	Pg	02 59 44.2	0.0
UUPR				Sg	Sg	02 59 49.4	-0.2
AGPR	Aguadilla, PR	0.56	344	Pg	Pg	02 59 47.1	-0.2
AGPR				Sg	Sg	02 59 54.7	-0.1
AGPR				IAML		02 59 55.2	
	comp=Z,2µm,0.7s						
AGPR	Aguadilla, PR	0.56	344	⇑*e*Pg	Pg	02 59 47.3	-0.1
AGPR				*e*Sg	Sg	02 59 54.7	-0.1
AGPR				IAML		02 59 57.3	
	comp=N,978nm,0.3s						
AGPR	Aguadilla, PR	0.56	344	⇑*e*P	Pg	02 59 47.3	-0.1
AGPR				*e*S	Sg	02 59 55.0	+0.1
ECPR	Experimental S	0.68	55	Pg	Pg	02 59 49.2	-0.4
ECPR				Sg	Sb	02 59 58.8	-0.1
ECPR				IAML		03 00 01.5	
	comp=N,1µm,0.2s						
ECPR				IAML		03 00 01.8	
	comp=N,1µm,0.2s						
ECPR	Experimental S	0.68	55	⇓*e*P	Pg	02 59 49.4	-0.2
ECPR				*e*S	Sb	02 59 59.1	+0.1
IDE	Isla Desecheo	0.68	312		Pg	02 59 49.2	-0.4
IDE					Sg	02 59 58.7	+0.2
IDE	Isla Desecheo	0.68	312	⇑*e*P	Pg	02 59 49.2	-0.4
IDE				*e*S	Sg	02 59 58.7	+0.2
SJG	San Juan	0.78	76	Pg	Pb	02 59 51.0	-0.5
SJG				Sg	Sb	03 00 00.6	-1.2
SJG	San Juan	0.78	76	*e*P	Pb	02 59 51.2	-0.3
SJG	San Juan	0.78	76	⇓*e*Pg	Pb	02 59 51.2	-0.3
SJG				⇑*e*Sg	Sg	03 00 02.0	+0.1
SJG	San Juan	0.78	76	⇓*e*P	Pb	02 59 51.2	-0.3
SJG				*e*S	Sg	03 00 02.5	+0.7
SJG	San Juan	0.78	76	*i* P	Pb	02 59 51.2	-0.3
SJG				*e*S	Sg	03 00 02.0	+0.1
SJG				IAML		03 00 06.4	
	comp=Z,496nm,0.3s						
PDPR	Patillas Dam,	0.89	84	Pg	Pb	02 59 52.9	-0.4
GCPR	Guaynabo City	0.90	65	Pg	Pb	02 59 53.0	-0.7
GCPR				Sg	Sb	03 00 04.8	-0.6
GCPR	Guaynabo City	0.90	65	⇑*e*P	Pb	02 59 53.1	-0.5
GCPR				*e*S	Sg	03 00 05.5	-0.3
HUMP	Col San Antoni	1.06	78	Pg	Pb	02 59 55.7	-0.7
HUMP				Sg	Sb	03 00 09.2	-0.9
HUMP				IAML		03 00 13.9	
	comp=Z,570nm,0.4s						
HUMP				IAML		03 00 14.2	
	comp=Z,643nm,0.3s						
HUMP	Col San Antoni	1.06	78	⇑*e*P	Pb	02 59 55.8	-0.7
HUMP				*e*S	Sb	03 00 09.6	-0.5
PCDR	Punta Cana, DR	1.48	293	⇑*e*Pg	Pn	03 00 02.5	+0.2
PCDR				IAML		03 00 35.5	
	comp=N,213nm,0.9s						
CUPR	Culebra, Puert	1.63	76	Pn	Pb	03 00 05.2	-0.8
HIDR	Higuey Centro	1.81	292	⇑*e*Pg	Pn	03 00 07.3	+0.5
HIDR				IAML		03 00 36.9	
	comp=N,85nm,0.2s						
DR12	Loma Pena Alta	2.46	291	Pn	Pn	03 00 17.9	+2.0
HATOM	Hato Mayor del	2.46	291	⇑*e*Pg	Pn	03 00 17.5	+1.6
HATOM				⇑*e*Sg	Sb	03 00 49.9	-0.5
HATOM				IAML		03 01 02.3	
	comp=N,52nm,0.9s						
BANI	BANI	3.28	279	Pn	Pn	03 00 28.9	+1.8
SABA	Saba	3.54	94	Pn	Pn	03 00 31.1	+0.4
SMRT	St. Maarten	3.69	88	Pn	Pn	03 00 33.4	+0.6
SMRT	St. Maarten	3.69	88	*e*P	Pn	03 00 33.8	+1.1
SDDR	Presa de Saban	4.25	285	Pn	Pn	03 00 42.5	+2.0
GDHS	Morne Mazeau,	5.22	108	Pn	Pn	03 00 52.9	-0.9
TBG	Guadaloupe-3	5.48	111	*e*P	Pn	03 00 58.0	+0.6
TBG				x	x	03 06 19.4	
DSLB	Salisbury	5.85	114	*e*P	Pn	03 01 03.9	+1.5
DSLB				x	x	03 06 50.5	
BIM	Bigot	6.58	120	Pn	Pn	03 01 12.4	-0.1

*ISK **24** 03:15:03.3, 38°.99N×27°.82E, h6km, ML3.5/99*
*AFAD **24** 03:15:03.5, 38°.99N×27°.88E, h7km±1km, MW3.4*
*THE **24** 03:15:06.0, 39°N±4°×2°8E±°, h57km±21km, M3.2/14, MLh3.2/14*

ISC 24 03:15:03.8±0.8**, 38°.99N**±0°.02×**27°.82E**±0°.02**, h11**km±6km**,**
n121, σ0.s88/135**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.11	183	P	Pg	03 15 06.7	0.0
AKHS				S	Sg	03 15 09.0	+0.2
AKS	Akhisar	0.11	184	Pg	Pg	03 15 06.2	-0.5
AKS				Sg	Sg	03 15 08.7	-0.1
SOMA	Soma-Manisa	0.28	307	Pg	Pg	03 15 09.7	+0.1
GORD	Gordes-Manisa	0.29	106	Pg	Pg	03 15 09.2	-0.5
GOMA	Golmarmara-Man	0.29	165	Pg	Pg	03 15 09.6	-0.1
GOMA				Sg	Sg	03 15 14.3	+0.7
KTTT	Salihli	0.37	145	P	Pg	03 15 10.8	-0.3
KTTT				S	Sg	03 15 15.8	-0.2
STEP	BALIKESIR_Sava	0.40	348	P	Pg	03 15 11.5	-0.3
STEP				S	Sg	03 15 17.5	+0.4
CAMT	Merkez	0.46	239	P	Pb	03 15 13.8	-0.1
CAMT				S	Sb	03 15 21.6	+0.7
ZEDA	zmir-Bergama	0.58	268	P	Pb	03 15 15.9	-0.1
ZEDA				S	Sb	03 15 24.2	0.0
BALB	Balikesir	0.65	4	Pg	Pg	03 15 15.9	-0.6
BALB				Sg	Sb	03 15 25.7	-0.6
IZMD	zmir-Dikili-	0.70	270	P	Pb	03 15 18.0	0.0
IZMD				S	Sb	03 15 27.4	-0.2
ODEM	Odemis-Izmir	0.74	164	Pg	Pg	03 15 17.9	-0.2
ODEM				Sg	Sg	03 15 27.9	+0.2
MANT	Manisa	0.76	130	P	Pg	03 15 17.8	-0.7
MANT				S	Sg	03 15 26.7	-1.9
KULA	Kula-Manisa	0.81	125	Pg	Pg	03 15 18.6	-0.8
YAYO	Edremit-Balk	0.85	317	Pg	Pg	03 15 20.2	-0.1
BLCB	Balcova	0.86	226	Pg	Pg	03 15 20.2	-0.2
DST	Dursunbey	0.87	45	Pg	Pg	03 15 20.3	-0.4
FOCM	Foa	0.90	253	Pg	Pb	03 15 21.4	+0.1
SIMA	Simav-Kutahya	0.91	84	Pg	Pg	03 15 20.7	-0.7
SMAA	Simav-Kutahya	0.91	82	Pg	Pg	03 15 20.9	-0.5
SUSR	Susurluk-Balik	0.99	12	Pg	Pb	03 15 23.4	+0.3
AYDB	Zeytinkoy-Aydi	1.04	177	Pg	Pg	03 15 23.3	-0.6
YENI	Yenice-Canakka	1.05	335	Pg	Pg	03 15 23.6	-0.4
GONE	Gonen-Balikesi	1.06	354	Pg	Pb	03 15 24.4	+0.2
KRBN	Karaburun	1.07	249	Pg	Pn	03 15 24.8	+0.1
NAZL	Nazilli-Aydin	1.09	160	Pn	Pg	03 15 24.3	-0.4
SHAP	Saphane-Kutahy	1.09	88	Pn	Pg	03 15 24.3	-0.5
GMLD	Gumuldur	1.15	218	Pn	Pg	03 15 25.6	-0.4
KUSD	Kusadasi-Aydin	1.20	201	Pn	Pb	03 15 26.6	0.0
PRK	Paraskevi	1.23	283	P	Pb	03 15 26.8	-0.3
PRK				S	Sn	03 15 43.8	+0.3
GEDZ	Gediz	1.24	87	Pn	Pb	03 15 27.0	-0.3
KCTX	Karacabey (Bur	1.34	18	Pn	Pg	03 15 29.1	-0.5
ORLT	Orhaneli	1.34	38	Pn	Pg	03 15 29.3	-0.4
TVSB	Tavsanli	1.35	70	Pn	Pn	03 15 29.0	+0.2
EDC	Edincik	1.36	1	Pn	Pn	03 15 29.0	+0.3
CESE	eme	1.36	242	Pn	Pb	03 15 29.1	-0.2
GCAM	G?zelcaml?	1.36	200	Pn	Pg	03 15 29.6	-0.4
EZNE	Ezine-Canakkal	1.37	305	Pn	Pb	03 15 29.4	0.0
BIGA	Biga-Canakkale	1.39	338	Pn	Pb	03 15 29.6	-0.2
GPNR	Gulpinar-Canak	1.39	290	Pn	Pn	03 15 29.3	+0.1
EZN	Ezine	1.43	306	Pn	Pn	03 15 29.8	+0.1
EZN	Ezine	1.43	306	P	Pn	03 15 29.8	+0.1
EZN				S	Sb	03 15 48.5	-0.2
KRBG	Karabiga-Canak	1.46	344	Pn	Pn	03 15 29.8	-0.3
KHL	Karahalli	1.49	116	Pn	Pb	03 15 31.5	0.0
SMG	Samos	1.49	212	P	Pn	03 15 29.8	-0.8
CHOS	Chios island	1.51	247	Pn	Pb	03 15 31.5	-0.3

SIGR	SIGRI	1.55	279	Pn		Pb	03 15 32.6	+0.2
SIGR	SIGRI	1.55	279	P		Pn	03 15 31.5	+0.2
MDNY	Mudanya-Bursa	1.60	30	Pn		Pn	03 15 32.6	+0.5
LPK	Lapseki	1.61	330	Pn		Pn	03 15 32.7	+0.6
BOZC	Bozcaada	1.61	302	Pn		Pn	03 15 32.4	+0.2
MLSB	Milas	1.69	181	Pn		Pb	03 15 34.5	-0.4
GELI	Tayfur-Gelibol	1.75	324	Pn		Pn	03 15 34.8	+0.7
ARMT	Armutlu	1.77	27	Pn		Pn	03 15 35.3	+0.9
RKY	Sarkoy-Tekirda	1.77	344	Pn		Pn	03 15 34.9	+0.5
GAZK	Gazikoy-TEKIRD	1.80	348	Pn		Pb	03 15 35.9	-0.9
IZI	Iznik	1.85	43	Pn		Pn	03 15 36.4	+0.8
YER	Yerkesik	1.89	169	Pn		Pb	03 15 37.8	-0.5
YER	Yerkesik	1.89	169	P		Pn	03 15 35.5	-0.5
APMY	Acipayam-Deniz	1.91	142	Pn		Pn	03 15 36.9	+0.5
GADA	Gvkgeada	1.91	310	Pn		Pn	03 15 36.6	+0.3
GADA	Gvkgeada	1.91	310	P		Pn	03 15 36.5	+0.3
ERIK	Erikli-Kesan	1.96	329	Pn		Pn	03 15 37.3	+0.3
BODT	Bodrum	1.96	192	Pn		Pn	03 15 37.9	+0.9
BODT	Bodrum	1.96	192	P		Pn	03 15 38.0	+0.9
BOTS	Marmara Eregli	2.00	3	Pn		Pn	03 15 38.6	+1.0
TKR	Tekirdag	2.01	354	Pn		Pb	03 15 39.6	-0.8
BASM	Basmaki-Afyon	2.05	121	Pn		Pn	03 15 38.3	0.0
ADVT	Abdulvahap	2.07	45	Pn		Pb	03 15 40.4	-0.9
ENZZ	Sultanice-Enez	2.07	322	Pn		Pn	03 15 39.1	+0.6
YLVH	Yalova	2.08	34	Pn		Pb	03 15 40.5	-1.1
SINB	Sinanoba-Istan	2.08	15	Pn		Pn	03 15 39.4	+0.7
HYBA	Heybeliada-Ist	2.12	27	Pn		Pn	03 15 40.5	+1.3
BRGA	Burgazada-Ista	2.12	26	Pn		Pn	03 15 40.7	+1.5
BUYA	Buyukada-Istan	2.13	28	Pn		Pn	03 15 40.7	+1.4
HVHR	Bakirkoy-Istan	2.13	21	Pn		Pn	03 15 39.9	+0.6
TUZL	Tuzla-Istanbul	2.14	31	Pn		Pn	03 15 40.8	+1.4
CRLT	Corlu	2.14	358	Pn		Pn	03 15 40.7	+1.2
OSMT	Osmaniye	2.17	41	Pn		Pn	03 15 41.4	+1.5
ENEZ	Enez	2.17	324	Pn		Pn	03 15 40.6	+0.8
ENEZ	Enez	2.17	324	P		Pn	03 15 40.6	+0.8
SHUT	Suhut-Afyon	2.18	101	Pn		Pn	03 15 41.5	+1.4
TURN	Turunc	2.23	171	Pn		Pn	03 15 42.1	+1.4
LIA	Limnos Island	2.24	295	P		Pn	03 15 41.4	+0.6
LIA				S		Sn	03 16 08.1	-0.2
SLVT	Silivri	2.26	7	Pn		Pn	03 15 42.7	+1.6
DAT	Datca	2.26	185	Pn		Pn	03 15 42.4	+1.2
DALY	Dalyan (Mula)	2.26	163	Pn		Pn	03 15 41.4	+0.3
KAVV	Kandilli-Istan	2.28	24	Pn		Pn	03 15 42.8	+1.4
ISK	Istanbul-Kandi	2.28	24	Pn		Pb	03 15 43.3	-1.7
SMTH	Samothraki Isl	2.31	311	P		Pn	03 15 42.2	+0.4
CTKS	Kestanelik-??a	2.31	13	Pn		Pn	03 15 42.3	+0.6
BGKT	Bogazkoy	2.31	18	Pn		Pn	03 15 43.2	+1.4
HRT	Hereke	2.32	37	Pn		Pn	03 15 42.9	+1.0
GPA	Golpazari	2.32	55	Pn		Pn	03 15 43.1	+1.2
UKOP	Uzunkopru-Edir	2.33	337	Pn		Pn	03 15 43.2	+1.2
ALN	Alexandroupoli	2.35	325	Pn		Pn	03 15 43.3	+1.0
ALN	Alexandroupoli	2.35	325	P		Pn	03 15 42.5	+0.2
ESKT	Eskisehir	2.41	76	Pn		Pn	03 15 44.5	+1.2
SRCK	Saricakaya, Es	2.41	63	Pn		Pn	03 15 45.0	+1.8
KLYT	Kilyos	2.45	22	Pn		Pn	03 15 44.7	+1.0
SDAG	Sultandagi-AFY	2.48	102	Pn		Pn	03 15 45.8	+1.5
CTYL	Yalikoy Yolu	2.51	8	Pn		Pn	03 15 45.5	+1.0
GULT	Gulveren	2.53	54	Pn		Pn	03 15 46.4	+1.5
CIFT	Cifteler, Eski	2.55	81	Pn		Pn	03 15 46.9	+1.8
SILT	Sile	2.58	32	Pn		Pn	03 15 46.8	+1.4
SAUV	Serdivan-Sakar	2.60	47	Pn		Pn	03 15 47.2	+1.4
PHSR	Pinarhisar	2.65	355	Pn		Pn	03 15 47.5	+1.0
ARG	Arkhangelos	2.78	175	Pn		Pn	03 15 49.5	+1.3
ARG	Arkhangelos	2.78	175	P		Pn	03 15 47.9	-0.3
ELL	Elmali	2.78	143	Pn		Pn	03 15 50.1	+1.8
RDO	Rodhopi	2.78	322	Pn		Pn	03 15 48.9	+0.7
RDO	Rodhopi	2.78	322	P		Pn	03 15 48.6	+0.4
KORT	Korkueli	2.81	134	Pn		Pn	03 15 50.4	+1.6
KARY	Karystos	2.82	251	P		Pn	03 15 48.6	-0.3
THAS	Thassos island	2.89	305	P		Pn	03 15 49.5	-0.2
SVRH	Sivrihisar-ESK	2.91	80	Pn		Pn	03 15 52.3	+2.2
EDRB	Edirne	2.97	344	Pn		Pn	03 15 52.6	+1.7
MDUB	Mudurnu	3.00	59	Pn		Pn	03 15 53.3	+2.0
UVEZ	Uvezbeli-DUZCE	3.04	50	Pn		Pn	03 15 53.9	+2.0
AKAS	Kas	3.09	152	Pn		Pn	03 15 53.9	+1.2
KIZT	Kizilcal	3.17	91	Pn		Pn	03 15 53.9	+0.2

AFAD ***24*** *03:29:35.7, 38.47N×44.64E, h6km±3km, ML3.0*
AZER ***24*** *03:29:35.3, 38.40N×44.53E, h11km, ml3.0*
ISK ***24*** *03:29:36.7, 38.38N×44.67E, h2km, ML3.1/8*
TEH ***24*** *03:29:37.8, 38.44N×44.55E, h6km±77km, ML2.9, Presumed earthquake*

ISC 24 03:29:36.9±1.2, 38.45N±0.03×44.55E±0.03, h6km±11km, n30, σ1§31/47, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.49	296	P	Pg	03 29 46.1	-0.3
OZAP				S	Sb	03 29 54.6	-1.0
OZAP				IAML		03 29 57.0	
	comp=N,1μm,0.4s						
ISHB	Shabestar	0.85	101	Pg	Pn	03 29 53.3	-2.4
YOVA	Hakkari_Yksek	0.88	194	P	Pb	03 29 54.4	-0.4
YOVA				S	Sb	03 30 06.9	+0.1
TVAN	Van	0.90	276	P	Pg	03 29 53.8	-0.5
TVAN				S	Sb	03 30 08.4	+0.9
TVAN				IAML		03 30 22.0	
	comp=N,529nm,1.0s						
TVAN				IAML		03 30 23.0	
	comp=E,541nm,1.0s						
MAKU	Maku	0.91	6	Pg	Pn	03 29 55.2	-1.3
MAKU				Sg	Sn	03 30 08.3	-1.8
VANB	Van	0.93	280	Pg	Pn	03 29 56.3	-0.3
VANB				Sg	Sn	03 30 11.8	+1.6
VMUR	Van-Muradiye	0.94	306	P	Pg	03 29 54.7	-0.3
VMUR				S	Sb	03 30 09.2	+0.7
VMUR				IAML		03 30 13.0	
	comp=E,402nm,0.5s						
VMUR				IAML		03 30 17.0	
	comp=N,401nm,0.4s						
IMRD	Marand	0.94	73	Pg	Pn	03 29 56.3	-0.5
NAX	Nakhchivan	1.03	45	P	Pn	03 29 58.1	+0.1
NAX				S	Sn	03 30 14.2	+1.3
HAKT	HAKKARI	1.11	217	P	Pb	03 29 58.6	0.0
HAKT				S	Sb	03 30 14.1	+0.7
HAKT				IAML		03 30 16.0	
	comp=N,332nm,0.3s						
HAKT				IAML		03 30 21.0	
	comp=E,266nm,0.5s						
HAKT	HAKKARI	1.11	217	P	Pg	03 29 57.5	-0.8
HAKT				S	Sg	03 30 13.4	+0.8
GEVA	Gevas	1.18	264	P	Pg	03 29 57.8	-1.8
GEVA				S	Sg	03 30 15.4	+0.4
ORD	Ordubad	1.23	66	P	Pn	03 30 01.4	+0.7
ORD				S	Sn	03 30 19.5	+1.9
SBZ	Shahbuz	1.23	39	P	Pn	03 30 01.5	+0.7
SBZ				S	Sn	03 30 20.3	+2.5
DYDN	Diyadin	1.29	329	P	Pb	03 30 01.6	0.0
DYDN				S	Sn	03 30 18.3	-0.9
DYDN				IAML		03 30 25.0	
	comp=N,302nm,0.6s						
DYDN				IAML		03 30 25.0	
	comp=E,415nm,0.5s						
IAZR	Azarshahr	1.36	124	Pg	Pg	03 30 03.8	+0.7
CUKT	Cukurca	1.41	212	Pn	Pg	03 30 04.3	+0.3
CUKT				Sn	Sg	03 30 23.9	+1.6
ADCV	BITLIS_Adilcev	1.48	285	P	Pb	03 30 04.8	-0.1
ADCV				S	Sg	03 30 27.3	+2.7
AGRB	Hanur-Agry	1.66	313	Pn	Pg	03 30 08.1	-0.7
DORK	Agr/Tutak/Do	1.67	305	P	Pb	03 30 07.6	-0.6
DORK				S	Sg	03 30 31.1	+0.4
GNI	Garni	1.71	5	Pn	Pg	03 30 09.6	-0.1
GNI	Garni	1.71	5	Pg	Pg	03 30 09.7	0.0
MLAZ	Malazgirt-MUS	1.71	295	Pn	Pg	03 30 09.9	+0.1
MLAZ				Sn	Sg	03 30 34.2	+2.2
IHRS	Heris	1.96	93	Pn	Pg	03 30 14.2	-0.3
GURO	Guroymak-BITLI	1.98	274	Pn	Pb	03 30 13.8	+0.4
VRTB	Varto-Mus	2.52	287	Pn	Pb	03 30 21.7	-1.0
ISRB	Sarab	2.53	103	Pn	Pg	03 30 22.8	-2.7
SVAN	Silvan-Diyarba	2.66	265	Pn	Pb	03 30 23.3	-1.6
SENK	Senkaya-Erzuru	2.71	322	Pn	Pb	03 30 24.4	-1.6
BNGB	Bingl	3.08	281	Pn	Pb	03 30 29.4	-2.8

IDC 24 03:36:26.7±1.2, 2.14N×128.15E, h0km, mb3.3/5, mbtmp3.4/6, ML3.9/1, Error ellipse: s-maj=83.3km s-min=19.6km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.32	134	Pn		03 37 32.2	-1.5
	7.1nm,0.3s,baz=350,slow=22,SNR=6.0						
SIJI				Sn		03 38 18.7	-6.2
	3.8nm,0.3s,baz=137,slow=23,SNR=2.0						
	15nm,0.3s						
WRA	Warramunga Arr	22.77	165	P		03 41 30.6	-0.4
	1.0nm,0.8s,baz=343,slow=10,SNR=5.4						
	1.0nm,0.8s						
ASAR	Alice Springs	26.26	168	P		03 42 04.4	+0.5
	0.1nm,0.4s,baz=350,slow=8.5,SNR=4.5						
	0.1nm,0.4s						
SONM	Songino Array	49.25	341	P		03 45 17.3	0.0
	0.3nm,0.8s,baz=148,slow=8.5,SNR=1.9						
	0.3nm,0.8s						
MKAR	Makanchi Array	59.66	325	P		03 46 31.7	-1.2
	0.2nm,0.5s,baz=118,slow=8.2,SNR=6.4						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	63.83	327	P		03 47 02.6	+1.7
	0.2nm,0.5s,baz=122,slow=6.2,SNR=2.2						
	0.2nm,0.5s						

RSPR ***24*** *03:38:31.6, 17.90N×66.85W, h15km, MD3.0/9*
NEIC ***24*** *03:38:31.1±1.4, 17.89N±0.04×66.816W±0.006, h10km±1km, ML2.8/35, Md3.0/9(RSPR), Error ellipse: s-maj=6.2km s-min=2.9km az=6.0*
SDD ***24*** *03:38:32.0±1.7, 17.92N×66.85W, h20km±14km, MD3.5, ML2.7, MW3.2, Presumed earthquake*

ISC 24 03:38:31.1±1.0, 17.94N±0.05×66.82W±0.02, h18km±2km, n35, σ0§47/65, 19C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.07	306		Pg	03 38 34.7	+0.2
GBPR					Sg	03 38 37.1	+0.3
GBPR	Guanica, Bosqu	0.07	306	⇓eP	Pg	03 38 34.7	+0.2
GBPR				eS	Sg	03 38 37.1	+0.3
MLPR	Magueyes Islan	0.21	279	Pg	Pb	03 38 36.1	+0.1
MLPR				Sg	Sb	03 38 39.6	+0.3
MLPR				IAML		03 38 39.9	
	2μm,0.3s						
MLPR				IAML		03 38 40.0	
	3μm,0.3s						
OBIP	Obispado Ponce	0.23	63	Pg	Pg	03 38 36.7	+0.1
OBIP				Sg	Sg	03 38 41.0	+0.7
OBIP	Obispado Ponce	0.23	63	⇑eP	Pg	03 38 37.0	+0.4
OBIP				eS	Sg	03 38 41.4	+1.1
CELP	Cerrillos	0.27	59	Pg	Pb	03 38 37.4	0.0
CELP				Sg	Sg	03 38 41.8	+0.5
CELP				IAML		03 38 42.6	
	1μm,0.3s						
CELP				IAML		03 38 42.7	
	1μm,0.2s						
CRPR	Cabo Rojo, PR	0.28	284	Pg	Pg	03 38 37.2	0.0
CRPR				Sg	Sg	03 38 41.3	-0.3
CRPR				IAML		03 38 41.8	
	2μm,0.2s						
CRPR				IAML		03 38 42.2	
	2μm,0.2s						
CRPR	Cabo Rojo, PR	0.28	284	⇑ePg	Pg	03 38 37.3	0.0
CRPR				⇑eSg	Sg	03 38 40.9	-0.6
CRPR				IAML		03 38 41.5	
	comp=N,1μm,0.2s						
CRPR	Cabo Rojo, PR	0.28	284	⇑eP	Pg	03 38 37.3	0.0
CRPR				eS	Sg	03 38 41.4	-0.3
UUPR	Utuado, UPR, P	0.33	17	Pg	Pg	03 38 38.2	0.0
UUPR				Sg	Sg	03 38 43.0	0.0
LSP	Las Mesas	0.34	314		Pg	03 38 38.7	+0.2
LSP					Sb	03 38 44.2	+0.3
LSP	Las Mesas	0.34	314	⇑eP	Pg	03 38 38.7	+0.2
LSP				eS	Sb	03 38 44.2	+0.3
PRSN	Puerto Rico Se	0.41	312	Pg	Pg	03 38 39.4	-0.1
PRSN				Sg	Sg	03 38 45.3	-0.1
PRSN	Puerto Rico Se	0.41	312	⇑ePg	Pg	03 38 39.5	-0.1
PRSN				⇑eSg	Sg	03 38 44.3	-1.1
PRSN				IAML		03 38 46.5	
	comp=N,2μm,0.3s						
PRSN	Puerto Rico Se	0.41	312	⇑eP	Pg	03 38 39.7	+0.1
PRSN				eS	Sg	03 38 45.7	+0.3
ECPR	Experimental S	0.58	49	Pg	Pb	03 38 42.5	-0.2
ECPR				Sg	Sg	03 38 50.8	+0.3
ECPR				IAML		03 38 52.7	
	comp=N,573nm,0.2s						
ECPR	Experimental S	0.58	49	⇑eP	Pb	03 38 42.5	-0.1
ECPR				eS	Sn	03 38 52.1	-1.4
AGPR	Aguadilla, PR	0.59	333	Pg	Pb	03 38 42.5	-0.4
AGPR				Sg	Sb	03 38 50.9	0.0
AGPR				IAML		03 38 51.4	
	comp=N,482nm,0.4s						
AGPR				IAML		03 38 51.6	
	comp=N,362nm,0.5s						
AGPR	Aguadilla, PR	0.59	333	⇑ePg	Pb	03 38 42.8	-0.1
AGPR				⇑eSg	Sb	03 38 50.8	-0.1
AGPR				IAML		03 38 51.3	
	comp=N,566nm,0.3s						
AGPR	Aguadilla, PR	0.59	333	⇑eP	Pb	03 38 43.0	+0.1
AGPR				eS	Sg	03 38 51.3	+0.4
SJG	San Juan	0.66	75	Pg	Pb	03 38 43.6	-0.5
SJG				Sg	Sg	03 38 53.2	+0.1
SJG				IAML		03 38 54.1	
	comp=N,350nm,0.6s						
SJG	San Juan	0.66	75	⇓ePg	Pb	03 38 43.9	-0.1
SJG				⇓eSg	Sg	03 38 53.5	+0.5
SJG	San Juan	0.66	75	⇑eP	Pb	03 38 44.0	-0.1
SJG				eS	Sg	03 38 53.6	+0.5
IDE	Isla Desecheo	0.76	306		Pb	03 38 45.3	-0.5
IDE					Sb	03 38 55.4	-0.5
IDE	Isla Desecheo	0.76	306	⇑eP	Pb	03 38 45.3	-0.5
IDE				eS	Sb	03 38 55.4	-0.5
PDPR	Patillas Dam,	0.77	84	Pg	Pb	03 38 45.3	-0.6
PDPR				Sg	Sg	03 38 56.2	-0.1
GCPR	Guaynabo City	0.80	62	Pg	Pb	03 38 45.8	-0.6
GCPR				Sg	Sb	03 38 56.8	0.0
GCPR	Guaynabo City	0.80	62	⇑eP	Pb	03 38 46.2	-0.1
GCPR				eS	Sg	03 38 57.2	0.0
HUMP	Col San Antoni	0.95	77	Pg	Pb	03 38 48.5	-0.4
HUMP				Sg	Sb	03 39 01.4	+0.2
HUMP				IAML		03 39 04.8	
	comp=N,203nm,0.2s						
HUMP	Col San Antoni	0.95	77	⇑eP	Pb	03 38 48.7	-0.3
HUMP				eS	Sb	03 39 00.7	-0.5
CUPR	Culebra, Puert	1.51	76	Pn	Pn	03 38 57.1	-0.1
PCDR	Punta Cana, DR	1.59	291	⇑eP	Pb	03 38 59.9	0.0
PCDR				IAML		03 40 01.4	
	comp=N,138nm,1.8s						
HIDR	Higuey Centro	1.91	290	⇑eP	Pb	03 39 04.8	-0.6
HIDR				IAML		03 39 38.0	
	comp=N,32nm,0.3s						
HATOM	Hato Mayor del	2.57	290	⇑eP	Pn	03 39 13.6	+1.8
HATOM				IAML		03 40 05.0	
	comp=N,26nm,4.2s						
SMRT	St. Maarten	3.57	88	Pn	Pn	03 39 25.6	+0.1

AZER ***24*** *03:39:12.0, 38.40N×44.55E, h10km, ml2.3*
AFAD ***24*** *03:39:12.0, 38.37N×44.56E, h7km±2km, ML2.3*
ISK ***24*** *03:39:13.8, 38.35N×44.61E, h4km, ML2.6/4*

ISC 24 03:39:14.1±1.4, 38.42N±0.04×44.50E±0.03, h8km±10km, n15, σ1§00/26, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.46	301	P	Pg	03 39 22.6	-0.6
OZAP				S	Sg	03 39 30.3	+1.1
OZAP				IAML		03 39 37.0	
	comp=N,231nm,0.6s						
TVAN	Van	0.86	277	P	Pg	03 39 29.4	-1.4
TVAN				IAML		03 39 58.0	
	comp=N,73nm,0.9s						
VANB	Van	0.89	282	Pg	Pn	03 39 32.3	-0.6
VANB				Sg	Sn	03 39 47.1	+1.1
VMUR	Van-Muradiye	0.92	308	P	Pn	03 39 32.8	-0.7
VMUR				S	Sb	03 39 44.9	0.0
VMUR				IAML		03 39 49.0	
	comp=N,80nm,0.3s						
VMUR				IAML		03 39 50.0	
	comp=E,68nm,0.5s						
HAKT	HAKKARI	1.06	216	P	Pn	03 39 34.6	-0.9
HAKT				S	Sn	03 39 51.1	+0.5
NAX	Nakhchivan	1.08	46	P	Pn	03 39 34.8	-0.8
NAX				S	Sn	03 39 50.8	-0.1
GEVA	Gevas	1.14	265	P	Pg	03 39 34.1	-1.8
GEVA				S	Sn	03 39 52.1	-0.2
SBZ	Shahbuz	1.27	40	P	Pg	03 39 38.5	-0.1
SBZ				S	Sn	03 39 56.9	+1.3
ORD	Ordubad	1.28	66	P	Pg	03 39 38.2	-0.4
ORD				S	Sn	03 39 56.4	+0.8
DYDN	Diyadin	1.28	331	P	Pg	03 39 38.4	-0.4
DYDN				S	Sb	03 39 54.6	-0.8
DYDN				IAML		03 40 00.0	
	comp=E,57nm,0.8s						
DYDN				IAML		03 40 01.0	
	comp=N,49nm,0.3s						
CUKT	Cukurca	1.37	211	Pn	Pg	03 39 40.6	+0.3
CUKT				Sn	Sn	03 39 59.4	+1.5
ADCV	BITLIS_Adilcev	1.44	286	P	Pg	03 39 41.3	-0.5
ADCV				S	Sg	03 40 02.5	+2.1
AGRB	Hanur-Agry	1.64	315	Pn	Pg	03 39 46.2	+0.6
MLAZ	Malazgirt-MUS	1.68	296	Pn	Pg	03 39 46.7	+0.3
GNI	Garni	1.74	6	Pn	Pg	03 39 46.5	-0.9

WEL ***24*** *03:57:44.7±0.9, 32.5°S±15°×178.0°W±3°1, h12km, M4.4/2, ML4.5/7, MLv4.4/2, Error ellipse: s-maj=44.9km s-min=5.0km az=115.4*
IDC ***24*** *03:57:51.8±7.4, 32.35S×179.47W, h308km±73km, mb3.6/2, mbtmp4.2/3, Error ellipse: s-maj=83.4km s-min=30.4km az=11.0*
NOU ***24*** *03:58:36.9, 35.69S×179.06E, h267km, MLv4.0/7, Off E. Coast of N. Island, N.Z.*

ISC 24 03:57:51.2±1.3, 32.2S±0.1×179.6W±0.3, h300km, n32, σ1§91/39, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.23	27	P	Pn	03 58 29.5	-20
GLKZ				S	S	03 59 06.3	-29
MXZ	Matakaoa Point	5.66	197	P	Pn	03 59 19.5	+3.2
WMGZ	Waiomatatini S	5.87	196	P	Pn	03 59 21.9	+3.0
WMGZ				S	S	04 00 30.1	+0.6
HAZ	Te Kaha	5.98	201	P	Pn	03 59 18.6	-1.6
HAZ				S	S	04 00 31.5	-0.4
CNGZ	Carnagh Statio	6.56	195	P	Pn	03 59 24.7	-2.4
MWZ	Matawai	6.59	200	P	Pn	03 59 25.1	-2.5
MWZ				S	S	04 00 43.6	-1.7
URZ	Urewera	6.65	203	P	Pn	03 59 27.3	-1.0
	4.2nm,0.3s,baz=237,slow=3.7,SNR=9.6						
URZ				S	S	04 00 45.4	-1.2
	6.9nm,0.3s,baz=175,slow=22,SNR=8.7						
URZ	Urewera	6.65	203	P	Pn	03 59 31.0	+2.8
URZ	Urewera	6.65	203	P	Pn	03 59 24.2	-4.1
URZ				S	S	04 00 44.7	-1.9
MTHZ	Maungataniwha	7.28	203	P	Pn	03 59 35.0	-0.9
MTHZ				S	S	04 01 01.7	+1.1
NMHZ	Naumai	7.51	202	P	Pn	03 59 41.0	+2.2
NMHZ				S	S	04 01 08.1	+2.2
BKZ	Black Stump Fm	7.68	203	P	Pn	03 59 41.6	+0.8
HIZ	Hauiti	7.79	214	P	Pn	03 59 46.6	+4.5
MCHZ	McNeill Hill	7.87	202	S	S	04 01 16.8	+3.2
TMVZ	Te Maari	7.92	208	P	Pn	03 59 44.9	+1.0
KWHZ	Kaweka Forest	7.94	203	P	Pn	03 59 44.8	+0.9
KWHZ				S	S	04 01 17.9	+2.5
ETVZ	East Tongariro	7.94	208	P	Pn	03 59 45.0	+1.0
KAHZ	Kahuranaki	8.13	200	P	Pn	03 59 47.4	+1.0
PNHZ	Pukenui	8.45	203	P	Pn	03 59 49.2	-1.0
PNHZ				S	S	04 01 23.4	-3.5
DVHZ	Dannevirke	8.81	202	P	Pn	03 59 54.8	+0.1
DVHZ				S	S	04 01 32.3	-2.7
BFZ	Birch Farm	9.14	200	P	Pn	03 59 59.3	+0.7
KHZ	Kahutara	11.60	206	P	Pn	04 00 28.4	-0.3
CTZ	Chatham Island	11.78	169	P	P	04 00 39.2	+6.7
ASAR	Alice Springs	41.70	270	P	P	04 05 12.3	+0.8
	1.8nm,0.5s,baz=105,slow=7.5,SNR=20						
	1.8nm,0.5s						
WRA	Warramunga Arr	42.86	275	P	P	04 05 20.9	+0.1
	2.2nm,0.4s,baz=112,slow=8.2,SNR=33						
	2.2nm,0.4s						
MKAR	Makanchi Array	117.86	310	PKP	PKPdf	04 16 02.4	+0.6
	0.2nm,0.7s,baz=104,slow=2.5,SNR=1.3						
ZALV	Zalesovo Beam	118.44	318	PKP	PKPdf	04 15 60.0	-2.6
	0.3nm,0.4s,baz=54,slow=2.5,SNR=1.7						
KURBB	Kurchatov Arra	121.32	313	PKP	PKPdf	04 16 07.7	-0.5
	0.4nm,0.5s,baz=119,slow=1.8,SNR=4.5						
BVAR	Borovoye Array	126.71	315	PKP	PKPdf	04 16 18.0	-0.6
	0.4nm,0.5s,baz=126,slow=2.5,SNR=2.7						
FINES	FINESS Array B	146.30	338	PKPbc	PKPbc	04 16 56.4	+0.5
	3.0nm,0.5s,baz=50,slow=3.7,SNR=29						
HFS	Hagfors	150.67	346	PKPbc	PKPbc	04 17 05.9	-1.2
	3.8nm,1.1s,baz=52,slow=2.4,SNR=5.2						
BRTR	Keskin Array B	152.19	295	PKPbc	PKPbc	04 17 12.3	+0.9
	0.5nm,0.5s,baz=122,slow=1.9,SNR=5.4						

ISK ***24*** *04:24:58.5, 39.00N×27.87E, h4km, ML2.8/9*
AFAD ***24*** *04:24:58.5, 38.99N×27.89E, h7km±2km, ML2.4*

ISC 24 04:24:59.0±1.0, 38.99N±0.03×27.87E±0.03, h11km±7km, n16, σ0§41/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.12	201	P	Pg	04 25 01.8	-0.3
AKHS				S	Sg	04 25 04.8	+0.6
AKHS				IAML		04 25 05.0	
	comp=E,1μm,0

	comp=N,660nm,0.9s							
YOVA	**Hakkari_Yksek**	**0.79**	**190**	P		**Pg**	**04 41 07.0**	**-0.2**
YOVA				S		**Sg**	**04 41 18.6**	**+1.1**
YOVA				IAML			04 41 23.0	
	comp=E,151nm,0.9s							
YOVA				IAML			04 41 24.0	
	comp=N,186nm,0.5s							
TVAN	**Van**	**0.84**	**281**	P		**Pg**	**04 41 07.0**	**-1.2**
TVAN				S		**Sg**	**04 41 20.3**	**+1.2**
TVAN				IAML			04 41 24.0	
	comp=N,336nm,0.6s							
TVAN				IAML			04 41 31.0	
	comp=E,413nm,0.6s							
VANB	**Van**	**0.87**	**285**	Pg		**Pg**	**04 41 09.2**	**+0.5**
VANB				Sg		**Sg**	**04 41 21.4**	**+1.5**
ISHB	**Shabestar**	**0.92**	**95**	Pg		**Pg**	**04 41 08.9**	**-0.7**
VMUR	**Van-Muradiye**	**0.93**	**312**	P		**Pg**	**04 41 09.6**	**-0.2**
VMUR				S		**Sg**	**04 41 24.1**	**+2.2**
VMUR				IAML			04 41 31.0	
	comp=N,98nm,0.3s							
VMUR				IAML			04 41 31.0	
	comp=E,181nm,0.6s							
MAKU	**Maku**	**1.00**	**10**	Pg		**Pg**	**04 41 11.0**	**-0.2**
MAKU				Sg		**Sg**	**04 41 24.4**	**+0.2**
IMRD	**Marand**	**1.04**	**70**	Pg		**Pg**	**04 41 11.6**	**-0.3**
GEVA	**Gevas**	**1.10**	**268**	P		**Pg**	**04 41 10.8**	**-2.4**
GEVA				S		**Sg**	**04 41 27.5**	**+0.1**
GEVA				IAML			04 41 33.0	
	comp=N,239nm,0.7s							
GEVA				IAML			04 41 35.0	
	comp=E,206nm,0.8s							
CUKT	**Cukurca**	**1.30**	**211**	Pn		**Pn**	**04 41 16.8**	**-0.3**
CUKT				Sn		**Sg**	**04 41 34.4**	**+0.5**
IAZR	**Azarshahr**	**1.39**	**119**	Pg		**Pg**	**04 41 19.0**	**+0.4**
ADCV	**BITLIS_Adilcev**	**1.43**	**288**	P		**Pn**	**04 41 17.9**	**-1.0**
ADCV				S		**Sb**	**04 41 38.8**	**+1.0**
ADCV				IAML			04 41 43.0	
	comp=N,59nm,0.5s							
ADCV				IAML			04 41 48.0	
	comp=E,58nm,0.6s							
AGRB	**Hanur-Agry**	**1.66**	**317**	Pn		**Pb**	**04 41 23.9**	**+0.6**
GNI	**Garni**	**1.79**	**7**	Pn		**Pg**	**04 41 26.6**	**+0.2**
MAHB	**Mahabad**	**1.88**	**148**	Pn		**Pg**	**04 41 28.2**	**+0.2**
GURO	**Guroymak-BITLI**	**1.91**	**276**	Pn		**Pn**	**04 41 25.9**	**+0.4**
IHRS	**Heris**	**2.03**	**91**	Pn		**Pb**	**04 41 29.4**	**-0.2**
GRMI	**Germi**	**2.73**	**80**	Pn		**Pb**	**04 41 39.7**	**-1.7**

*OSPL **24** 04:41:06.9±3.3, 19°.63N×70°.11W, h4km±18km, ML2.4, Presumed earthquake*
*SDD **24** 04:41:08.5±2.7, 19°.51N×70°.20W, h15km±21km, MD3.5, ML2.5, MW3.3, Presumed earthquake*
ISC 24 04:41:08.3±1.0, 19°.50N±0°.04×70°.21W±0°.03, h14km±9km, n23, σ1§69/33, 17C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFDR	**San Fco. de Ma**	**0.21**	**189**	⇑*e*P**g**	**Pg**	**04 41 13.3**	**+0.3**
SFDR				IAML		04 41 19.4	
	comp=N,1μm,0.3s						
CADR	**Cabrera**	**0.30**	**56**	⇑*e*S**g**	**Sg**	**04 41 18.6**	**-0.3**
CADR				IAML		04 41 20.1	
	comp=N,971nm,0.2s						
LONA1	**Toro Cenizo, N**	**0.34**	**109**	*i* P	**Pn**	**04 41 20.4**	**+1.5**
LONA1				*e*S	**Sn**	**04 41 28.2**	**+2.6**
NADR	**Nagua**	**0.36**	**113**	⇑*e*P**g**	**Pg**	**04 41 15.5**	**0.0**
NADR				IAML		04 41 24.3	
	comp=N,2μm,0.3s						
SODR	**Sosua Marina B**	**0.43**	**306**	⇑*e*S**g**	**Sg**	**04 41 23.5**	**+0.8**
SODR				IAML		04 41 37.9	
	comp=N,517nm,0.9s						
SC01	**Santiago de lo**	**0.50**	**262**	⇑*e*P**g**	**Pg**	**04 41 17.2**	**-0.8**
SC01				IAML		04 41 29.1	
	comp=N,282nm,0.2s						
SC01	**Santiago de lo**	**0.50**	**262**	*i* P	**Pg**	**04 41 17.5**	**-0.5**
SC01				*e*S	**Sb**	**04 41 27.0**	**+1.0**
DR08	**Loma La Naviza**	**0.56**	**162**	⇑*e*P**g**	**Pg**	**04 41 18.2**	**-1.0**
DR08				⇑*e*S**g**	**Sb**	**04 41 28.1**	**+0.3**
DR08				IAML		04 41 30.0	
	comp=N,5μm,0.1s						
ABDR	**Alto Bandera**	**0.79**	**210**	⇑*e*P**g**	**Pg**	**04 41 22.0**	**-1.7**
ABDR				IAML		04 42 13.9	
	comp=N,0.2nm,0.7s						
LUDR	**Luperon**	**0.81**	**300**	⇑*e*S**g**	**Sb**	**04 41 35.0**	**+0.1**
MADR	**Mao Valverde**	**0.85**	**275**	⇑*e*P**g**	**Pb**	**04 41 22.6**	**-2.2**
MADR				IAML		04 41 41.7	
	comp=N,294nm,0.3s						
LOPP1	**Punta Rusia, P**	**1.00**	**291**	*i* P	**Pb**	**04 41 25.9**	**-1.5**
LOPP1				*e*S	**Sb**	**04 41 40.7**	**+0.2**
LOPP1				IAML		04 41 44.8	
	comp=Z,89nm,0.6s						
HATOM	**Hato Mayor del**	**1.05**	**132**	⇑*e*P**g**	**Pb**	**04 41 26.7**	**-1.6**
HATOM				IAML		04 41 47.0	
	comp=N,57nm,0.2s						
SDD	**Santo Domingo**	**1.07**	**165**	⇑*e*P**g**	**Pb**	**04 41 25.9**	**-2.6**
SDD				⇑*e*S**g**	**Sb**	**04 41 41.2**	**-1.2**
SDD				IAML		04 41 43.0	
	comp=N,56nm,0.9s						
SDD	**Santo Domingo**	**1.07**	**165**	*i* P	**Pb**	**04 41 27.0**	**-1.6**
SDD				*e*S	**Sb**	**04 41 42.7**	**+0.3**
BANI	**BANI**	**1.11**	**187**	⇑*e*P**g**	**Pb**	**04 41 27.9**	**-1.4**
BANI				*e*S**g**	**Sb**	**04 41 43.9**	**+0.3**
BANI				IAML		04 41 45.4	
	comp=N,146nm,0.2s						
SDDR	**Presa de Saban**	**1.14**	**244**	⇑*e*P**g**	**Pn**	**04 41 27.0**	**-2.9**
SDDR				*e*S**g**	**Sb**	**04 41 44.3**	**-0.3**
SDDR				IAML		04 41 45.9	
	comp=N,48nm,0.2s						
SDDR	**Presa de Saban**	**1.14**	**244**	*i* P	**Pn**	**04 41 28.2**	**-1.8**
SDDR				IAML		04 41 49.2	
	comp=Z,25nm,0.2s						
REDR	**Restauracion**	**1.17**	**254**	⇑*e*P**g**	**Pg**	**04 41 32.0**	**+1.2**
REDR				⇑*e*S**g**	**Sg**	**04 41 51.3**	**+5.3**
REDR				IAML		04 41 56.1	
	comp=N,229nm,0.1s						
LONE3	**El Aguacate, B**	**1.48**	**233**	*i* P	**Pn**	**04 41 34.7**	**0.0**
LONE3				*e*S	**Sb**	**04 41 54.6**	**+0.2**
LONE3				IAML		04 41 59.4	
	comp=Z,26nm,0.9s						
LODU1	**El Espartillar**	**1.65**	**227**	*i* P	**Pn**	**04 41 38.0**	**+1.1**
LODU1				IAML		04 42 07.9	
	comp=Z,40nm,1.8s						
PODR	**Polo**	**1.67**	**218**	*i* P	**Pn**	**04 41 37.5**	**+0.2**
LOVI	**El Cajuil, Ovi**	**2.02**	**213**	*i* P	**Pb**	**04 41 43.6**	**-1.1**
LOVI				IAML		04 42 16.9	
	comp=Z,30nm,2.7s						

*IDC **24** 04:41:54.3±1.4, 13°.76S×166°.72E, h0km, mb3.9/7, mbtmp3.8/8, ML3.2/1, Error ellipse: s-maj=50.8km s-min=25.2km az=122.0*
ISC 24 04:41:59.3±1.1, 13°.90S±0°.09×166°.8E±0°.2, h35km, n9, σ1§35/10, mb3.8/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.13**	**183**	Pn	**Pn**	**04 43 56.1**	**+1.1**
	0.3nm,0.3s,baz=356,slow=19,SNR=1.4						
DZM				Sn	**Sn**	**04 45 24.5**	**-1.3**
	baz=108,slow=22						
	1.5nm,0.3s						
STKA	**Stephens Creek**	**29.21**	**228**	P	**P**	**04 47 58.5**	**+0.7**
	1.0nm,0.5s,baz=38,slow=12,SNR=2.2						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**31.62**	**255**	P	**P**	**04 48 20.3**	**+1.0**
	1.0nm,1.0s,baz=77,slow=9.0,SNR=2.6						
	1.0nm,1.0s						
ASAR	**Alice Springs**	**32.58**	**248**	P	**P**	**04 48 26.2**	**-1.4**
	0.4nm,0.6s,baz=76,slow=9.2,SNR=7.5						
	0.4nm,0.6s						
SONM	**Songino Array**	**81.58**	**324**	P	**P**	**04 54 14.3**	**+0.7**
	0.2nm,0.5s,baz=119,slow=5.1,SNR=2.1						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**85.88**	**18**	P	**P**	**04 54 36.0**	**+0.9**
	0.3nm,0.5s,baz=239,slow=4.9,SNR=18						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**96.31**	**317**	P	**P**	**04 55 23.8**	**-0.5**
	0.5nm,0.7s,baz=101,slow=6.3,SNR=6.2						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**96.48**	**324**	P	**P**	**04 55 23.1**	**-1.8**
	0.6nm,0.6s,baz=104,slow=3.0,SNR=2.9						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**119.35**	**345**	PKP	**PKPdf**	**05 00 43.1**	**-1.3**
	1.7nm,0.7s,baz=60,slow=1.4,SNR=4.3						

*AFAD **24** 04:45:43.1, 38°.34N×44°.52E, h7km±4km, ML2.5*
*TEH **24** 04:45:45.8, 38°.40N×44°.45E, h6km±70km, ML2.9, Presumed earthquake*
*ISK **24** 04:45:47.7, 38°.39N×44°.33E, h2km, ML2.8/7*
ISC 24 04:45:44.4±1.2, 38°.38N±0°.04×44°.49E±0°.02, h6km±11km, n23, σ1§32/33, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**306**	P	**Pg**	**04 45 53.3**	**-0.5**
OZAP				S	**Sg**	**04 45 59.0**	**-1.1**
OZAP				IAML		04 46 07.0	
	comp=N,478nm,0.9s						
TVAN	**Van**	**0.87**	**280**	P	**Pg**	**04 45 59.7**	**-1.4**
TVAN				S	**Sb**	**04 46 13.6**	**-0.3**
TVAN				IAML		04 46 25.0	
	comp=N,280nm,0.6s						
TVAN				IAML		04 46 28.0	
	comp=E,242nm,0.6s						
ISHB	**Shabestar**	**0.89**	**96**	Pg	**Pn**	**04 46 02.9**	**-0.8**
ISHB				Sg	**Sn**	**04 46 16.4**	**-0.6**
VANB	**Van**	**0.89**	**284**	Pg	**Pn**	**04 46 02.9**	**-0.7**
VANB				Sg	**Sb**	**04 46 14.2**	**-0.4**
VMUR	**Van-Muradiye**	**0.94**	**310**	P	**Pg**	**04 46 02.0**	**-0.5**
VMUR				S	**Sb**	**04 46 16.1**	**0.0**
VMUR				IAML		04 46 22.0	
	comp=N,183nm,0.7s						
VMUR				IAML		04 46 24.0	
	comp=E,136nm,0.4s						
MAKU	**Maku**	**0.98**	**9**	Pg	**Pn**	**04 46 04.1**	**-0.8**
IMRD	**Marand**	**1.00**	**70**	Pg	**Pn**	**04 46 05.6**	**+0.4**
GEVA	**Gevas**	**1.13**	**267**	P	**Pg**	**04 46 04.7**	**-1.4**
GEVA				S	**Sn**	**04 46 22.0**	**-0.8**
GEVA				IAML		04 46 25.0	
	comp=E,119nm,0.4s						
GEVA				IAML		04 46 26.0	
	comp=N,220nm,0.5s						
AKDM	**Akdamar-Van**	**1.19**	**268**	Pg	**Pn**	**04 46 07.7**	**-0.1**
AKDM				Sg	**Sn**	**04 46 24.4**	**0.0**
CUKT	**Cukurca**	**1.33**	**212**	Pn	Pg	04 46 13.1	+3.2
CUKT				Sn	**Sn**	**04 46 31.2**	**+3.4**
IAZR	**Azarshahr**	**1.37**	**120**	Pg	**Pg**	**04 46 12.7**	**+2.1**
ADCV	**BITLIS_Adilcev**	**1.45**	**288**	P	**Pg**	**04 46 11.7**	**-0.5**
ADCV				S	**Sg**	**04 46 33.3**	**+2.3**
ADCV				IAML		04 46 39.0	
	comp=N,71nm,0.5s						
ADCV				IAML		04 46 40.0	
	comp=E,86nm,0.6s						
IGDI	**IGDIR**	**1.52**	**348**	P	**Pg**	**04 46 14.6**	**+1.1**
IGDI				IAML		04 46 38.0	
	comp=E,35nm,0.8s						
IGDI				IAML		04 46 40.0	
	comp=N,42nm,0.9s						
PERV	**Siirt/Pervari-**	**1.60**	**255**	P	**Pg**	**04 46 15.6**	**+0.6**
PERV				S	**Sg**	**04 46 38.1**	**+2.3**
PERV				IAML		04 46 42.0	
	comp=N,154nm,0.5s						
PERV				IAML		04 46 43.0	
	comp=E,173nm,0.5s						
AGRB	**Hanur-Agry**	**1.67**	**316**	Pn	**Pg**	**04 46 17.3**	**+0.9**
MLAZ	**Malazgirt-MUS**	**1.70**	**297**	Pn	**Pg**	**04 46 17.9**	**+1.0**
KOTA	**Agri, Merkez-K**	**1.74**	**325**	P	**Pg**	**04 46 17.2**	**-0.5**
KOTA				S	**Sg**	**04 46 39.9**	**-0.3**
KOTA				IAML		04 46 47.0	
	comp=N,13nm,0.5s						
KOTA				IAML		04 46 50.0	
	comp=E,12nm,0.5s						
GNI	**Garni**	**1.78**	**6**	Pn	**Pg**	**04 46 20.7**	**+2.3**
GURO	**Guroymak-BITLI**	**1.94**	**276**	Pn	**Pg**	**04 46 21.1**	**-0.5**
IHRS	**Heris**	**2.00**	**91**	Pn	**Pg**	**04 46 22.9**	**+0.1**
IHSH	**Hashtrud**	**2.44**	**115**	Pn	**Pg**	**04 46 29.3**	**-1.1**
ISRB	**Sarab**	**2.56**	**102**	Pn	**Pg**	**04 46 32.0**	**-1.6**
GRMI	**Germi**	**2.70**	**80**	Pn	**Pb**	**04 46 32.5**	**-0.6**

*THE **24** 04:49:26.0, 39°.N±3°.×2°.8E±°, h0km±20km, M3.3/14, MLh3.3/14*
*ISK **24** 04:49:26.2, 38°.97N×27°.86E, h7km, ML3.7/20*
*AFAD **24** 04:49:26.0, 38°.97N×27°.88E, h8km±1km, MW3.4*
ISC 24 04:49:26.6±0.8, 38°.96N±0°.02×27°.87E±0°.02, h10km±5km, n51, σ0§63/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.09**	**209**	P	**Pg**	**04 49 29.0**	**-0.2**
AKHS				S	**Sg**	**04 49 31.1**	**+0.1**
AKS	**Akhisar**	**0.09**	**210**	Pg	**Pg**	**04 49 28.9**	**-0.2**
AKS				Sg	**Sg**	**04 49 30.8**	**-0.2**
GORD	**Gordes-Manisa**	**0.24**	**102**	Pg	**Pg**	**04 49 31.8**	**+0.2**
GORD				Sg	**Sg**	**04 49 36.0**	**+1.0**
GOMA	**Golmarmara-Man**	**0.26**	**172**	Pg	**Pb**	**04 49 32.2**	**-1.0**
GOMA				Sg	**Sg**	**04 49 36.2**	**+1.0**
KTTT	**Salihli**	**0.32**	**148**	P	**Pg**	**04 49 33.1**	**+0.1**
KTTT				S	**Sg**	**04 49 37.8**	**+0.5**
SOMA	**Soma-Manisa**	**0.33**	**307**	Pg	**Pg**	**04 49 32.8**	**-0.3**
SOMA				Sg	**Sg**	**04 49 37.9**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.43**	**344**	P	**Pg**	**04 49 34.1**	**-0.9**
STEP				S	**Sg**	**04 49 41.0**	**+0.2**
CAMT	**Merkez**	**0.49**	**244**	P	**Pg**	**04 49 36.3**	**+0.2**
CAMT				S	**Sb**	**04 49 44.1**	**-0.3**
ZEDA	**zmir-Bergama**	**0.62**	**271**	P	**Pg**	**04 49 38.3**	**-0.3**
ZEDA				S	**Sb**	**04 49 47.9**	**-0.3**
DEMI	**Demirci**	**0.66**	**83**	P	**Pg**	**04 49 39.0**	**-0.4**
DEMI				S	**Sg**	**04 49 47.8**	**-0.3**
ODM	**Odemis-Izmir**	**0.70**	**167**	Pg	**Pb**	**04 49 40.7**	**-0.2**
MANT	**Manisa**	**0.71**	**131**	P	**Pg**	**04 49 40.3**	**-0.1**
MANT				S	**Sb**	**04 49 51.1**	**0.0**
KULA	**Kula-Manisa**	**0.76**	**126**	Pg	**Pb**	**04 49 41.2**	**-0.7**
DUVT	**Torbali**	**0.81**	**204**	P	**Pg**	**04 49 41.8**	**-0.4**
IZMR	**zmir-demi**	**0.82**	**176**	P	**Pg**	**04 49 42.1**	**-0.4**
IZMR				S	**Sg**	**04 49 53.4**	**+0.2**
BAGT	**Foa**	**0.85**	**249**	P	**Pg**	**04 49 42.2**	**-0.8**
BAGT				S	**Sb**	**04 49 55.0**	**0.0**
DST	**Dursunbey**	**0.86**	**42**	Pg	**Pb**	**04 49 43.5**	**-0.2**
BLCB	**Balcova**	**0.87**	**229**	Pg	**Pg**	**04 49 43.1**	**-0.2**
BLCB	**Balcova**	**0.87**	**229**	P	**Pb**	**04 49 43.3**	**-0.4**
BLCB				S	**Sn**	**04 49 57.1**	**-0.4**
KIRA	**zmir-Kiraz**	**0.87**	**151**	P	**Pg**	**04 49 42.8**	**-0.5**
KIRA				S	**Sb**	**04 49 54.9**	**-0.6**
SIMA	**Simav-Kutahya**	**0.87**	**82**	Pg	**Pb**	**04 49 43.4**	**-0.5**
SMAA	**Simav-Kutahya**	**0.87**	**80**	Pg	**Pb**	**04 49 43.7**	**-0.2**
YAYO	**Edremit-Balk**	**0.90**	**317**	Pg	**Pg**	**04 49 43.4**	**-0.5**
FOCM	**Foa**	**0.93**	**255**	Pg	**Pb**	**04 49 44.3**	**-0.4**
USAK	**Uak-Merkez**	**0.93**	**105**	P	**Pg**	**04 49 43.9**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**179**	Pg	**Pb**	**04 49 45.9**	**-0.4**
SUSR	**Susurluk-Balik**	**1.01**	**9**	Pg	**Pg**	**04 49 45.5**	**-0.6**
NAZL	**Nazilli-Aydin**	**1.05**	**162**	Pg	**Pn**	**04 49 47.2**	**-0.1**
SHAP	**Saphane-Kutahy**	**1.05**	**86**	Pg	**Pn**	**04 49 47.2**	**-0.3**
YENI	**Yenice-Canakka**	**1.09**	**334**	Pg	**Pb**	**04 49 47.2**	**-0.3**
GONE	**Gonen-Balikesi**	**1.09**	**352**	Pn	**Pn**	**04 49 47.6**	**-0.3**
KRBN	**Karaburun**	**1.09**	**251**	Pn	**Pb**	**04 49 47.4**	**-0.2**
GMLD	**Gumuldur**	**1.16**	**221**	Pn	**Pn**	**04 49 48.9**	**+0.1**
KARB	**zmir-Karabur**	**1.18**	**256**	P	**Pg**	**04 49 47.9**	**-1.3**
KARB				S	**Sb**	**04 50 04.6**	**+0.3**
GEDZ	**Gediz**	**1.20**	**86**	Pn	**Pn**	**04 49 49.9**	**+0.4**
CANM	**Can-anakkale**	**1.23**	**329**	Pn	**Pn**	**04 49 50.1**	**+0.3**
PRK	**Paraskevi**	**1.28**	**283**	P	**Pg**	**04 49 50.6**	**-0.5**
PRK				S	**Sn**	**04 50 10.0**	**+2.4**
ZEYE	**Izmir, Urla-Ze**	**1.29**	**237**	P	**Pn**	**04 49 49.1**	**+0.4**
ZEYE				S	**Sn**	**04 50 08.1**	**+0.1**
GCAM	**G?zelcaml?**	**1.35**	**202**	Pn	**Pg**	**04 49 52.1**	**-0.5**
EZN	**Ezine**	**1.48**	**306**	S	**Sg**	**04 50 14.7**	**+0.6**
SMG	**Samos**	**1.49**	**213**	P	**Pb**	**04 49 54.2**	**-0.1**
SMG				S	**Sg**	**04 50 16.0**	**+1.5**
SIGR	**SIGRI**	**1.59**	**280**	P	**Pn**	**04 49 54.7**	**-0.1**
YER	**Yerkesik**	**1.85**	**170**	P	**Pn**	**04 49 58.0**	**-0.4**
BODT	**Bodrum**	**1.95**	**193**	P	**Pn**	**04 50 00.6**	**+1.0**
GADA	**Gvkgeada**	**1.96**	**309**	P	**Pn**	**04 50 00.4**	**+0.6**
ENEZ	**Enez**	**2.21**	**324**	P	**Pn**	**04 50 04.0**	**+0.7**
LIA	**Limnos Island**	**2.28**	**295**	P	**Pn**	**04 50 04.4**	**+0.1**
SMTH	**Samothraki Isl**	**2.35**	**311**	P	**Pn**	**04 50 05.5**	**+0.2**
ALN	**Alexandroupoli**	**2.39**	**325**	P	**Pn**	**04 50 06.0**	**+0.2**
ARG	**Arkhangelos**	**2.75**	**176**	P	**Pn**	**04 50 11.0**	**+0.3**
RDO	**Rodhopi**	**2.82**	**321**	P	**Pn**	**04 50 12.2**	**+0.5**

*OSPL **24** 05:01:36.4±0.3, 18°.02N×66°.81W, h20km±2km, ML3.4, Presumed earthquake*
*NEIC **24** 05:01:36.3±2.0, 17°.94N±0°.03×66°.79W±0°.01, h10km±1km, ML3.7/41, Md3.6/6(RSPR), Error ellipse: s-maj=4.3km s-min=2.6km az=1.0*
*RSPR **24** 05:01:36.9, 18°.02N×66°.80W, h11km, MD3.5/6*
*SDD **24** 05:01:36.3±0.7, 17°.96N×66°.80W, h22km±6km, MD3.8, ML3.3, MW3.6, Presumed earthquake*
ISC 24 05:01:35.6±0.9, 17°.96N±0°.05×66°.81W±0°.02, h23km±5km, n57, σ0§84/82, 21C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.07**	**284**				
GBPR	**Guanica, Bosqu**	**0.07**	**284**	⇑*i*P	**Pb**	**05 01 39.7**	**-0.1**
OBIP	**Obispado Ponce**	**0.21**	**66**	Pg	**Pb**	**05 01 39.7**	**-0.1**
OBIP				Sg	**Sb**	**05 01 41.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.21**	**66**	⇑*e*P	**Pb**	**05 01 44.4**	**-0.5**
OBIP				*e*S	**Sb**	**05 01 41.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.21**	**66**	*i* P	**Pb**	**05 01 44.6**	**-0.5**
OBIP				*e*S	**Sb**	**05 01 41.0**	**-0.2**
OBIP				IAML		05 01 44.5	**-0.5**
	comp=Z,5μm,0.2s					05 01 45.1	
MLPR	**Magueyes Islan**	**0.23**	**273**	Pg	**Pb**	**05 01 41.3**	**-0.1**
MLPR				Sg	**Sb**	**05 01 44.8**	**-0.6**
MLPR				IAML		05 01 46.0	
	comp=Z,12μm,0.5s						
MLPR				IAML		05 01 46.7	
	comp=Z,8μm,0.2s						
CELP	**Cerrillos**	**0.25**	**62**	Pg	**Pb**	**05 01 41.5**	**-0.2**
CELP				Sg	**Sb**	**05 01 45.4**	**-0.5**
CELP				IAML		05 01 45.9	
	comp=Z,8μm,0.3s						
CELP				IAML		05 01 46.0	
	comp=Z,13μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.29**	**279**	Pg	**Pb**	**05 01 42.5**	**+0.1**
CRPR				Sg	**Sb**	**05 01 46.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.29**	**279**	⇑*e*P**g**	**Pb**	**05 01 42.4**	**+0.1**
CRPR				⇑*e*S**g**	**Sb**	**05 01 46.8**	**-0.2**
CRPR				IAML		05 01 49.5	
	comp=N,6μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.29**	**279**	⇑*e*P	**Pb**	**05 01 42.4**	**+0.1**
CRPR				*e*S	**Sb**	**05 01 46.8**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.29**	**279**	*i* P	**Pb**	**05 01 42.5**	**+0.1**
CRPR				*e*S	**Sb**	**05 01 46.8**	**-0.1**
CRPR				IAML		05 01 50.3	
	comp=Z,4μm,0.2s						
UUPR	**Utuado, UPR, P**	**0.30**	**16**	Pg	**Pb**	**05 01 42.2**	**-0.4**
UUPR				Sg	**Sb**	**05 01 46.4**	**-0.9**
LSP	**Las Mesas**	**0.34**	**309**		**Pb**	**05 01 43.2**	**+0.1**
LSP	**Las Mesas**	**0.34**	**309**	‖*e*P	**Pb**	**05 01 43.2**	**+0.1**
PRSN	**Puerto Rico Se**	**0.41**	**309**	Pg	**Pb**	**05 01 44.2**	**0.0**
PRSN				Sg	**Sb**	**05 01 49.7**	**-0.5**
PRSN	**Puerto Rico Se**	**0.41**	**309**	⇑*e*P**g**	**Pb**	**05 01 44.2**	**0.0**
PRSN				⇑*e*S**g**	**Sb**	**05 01 49.2**	**-1.0**
PRSN				IAML		05 01 52.4	
	comp=N,10μm,0.2s						
PRSN	**Puerto Rico Se**	**0.41**	**309**	⇑*e*P	**Pb**	**05 01 44.3**	**0.0**
PRSN				*e*S	**Sb**	**05 01 50.2**	**+0.1**
ECPR	**Experimental S**	**0.55**	**50**	Pg	**Pb**	**05 01 46.5**	**-0.2**
ECPR				Sg	**Sb**	**05 01 53.0**	**-1.2**
ECPR				IAML		05 01 57.8	
	comp=N,3μm,0.2s						
ECPR	**Experimental S**	**0.55**	**50**	⇑*e*P	**Pb**	**05 01 46.3**	**-0.4**
ECPR				*e*S	**Sb**	**05 01 53.9**	**-0.3**
AGPR	**Aguadilla, PR**	**0.58**	**330**	Pg	**Pb**	**05 01 46.9**	**-0.2**
AGPR				IAML		05 01 55.7	
	comp=N,3μm,0.5s						
AGPR				IAML		05 01 60.0	
	comp=N,2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.58**	**330**	⇑*e*P**g**	**Pb**	**05 01 47.1**	**-0.1**
AGPR				⇑*e*S**g**	**Sb**	**05 01 55.1**	**0.0**
AGPR				IAML		05 01 59.8	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**330**	⇑*e*P	**Pb**	**05 01 47.1**	**-0.1**
AGPR				*e*S	**Sb**	**05 01 55.0**	**-0.1**
SJG	**San Juan**	**0.64**	**76**	Pg	**Pb**	**05 01 47.9**	**-0.3**
SJG				IAML		05 01 57.6	
	comp=N,2μm,0.5s						
SJG				IAML		05 01 57.8	
	comp=N,3μm,0.2s						
SJG	**San Juan**	**0.64**	**76**	*e*P	**Pb**	**05 01 48.0**	**-0.2**
SJG	**San Juan**	**0.64**	**76**	⇑*e*Pg	**Pb**	**05 01 47.8**	**-0.3**
SJG				⇑*e*S**g**	**Sb**	**05 01 56.3**	**-0.5**
SJG	**San Juan**	**0.64**	**76**	⇑*e*P	**Pb**	**05 01 47.9**	**-0.3**
SJG				*e*S	**Sb**	**05 01 56.9**	**+0.1**
SJG	**San Juan**	**0.64**	**76**	*i* P	**Pb**	**05 01 47.9**	**-0.3**
SJG				*e*S	**Sb**	**05 01 56.4**	**-0.4**
SJG				IAML		05 01 57.4	
	comp=Z,3μm,0.3s						
PDPR	**Pat

XYLS				AML	AML	05 07 55.4
	0.1nm,0.2s					
ASGA	**Asgata**	**0.62**	**195**	P	**Pb**	**05 07 47.6 +1.0**
ASGA				AML	AML	05 07 57.0
	0.1nm,0.7s					
ASGA				AML	AML	05 07 57.1
	0.1nm,0.3s					
ASGA				S	**Sn**	**05 07 57.7 0.0**
TROD	**Troodos**	**0.64**	**227**	P	**Pg**	**05 07 47.8 +0.7**
TROD				S	**Sb**	**05 07 57.1 +1.2**
TROD				AML	AML	05 08 01.5
	0.1nm,0.4s					
TROD				AML	AML	05 08 01.5
	0.1nm,0.3s					
ALFC	**Alefka**	**0.73**	**252**	P	**Pg**	**05 07 48.7 +0.1**
ALFC				S	**Sg**	**05 07 58.3 0.0**
ALFC				AML	AML	05 07 59.7
	0.1nm,0.3s					
ALFC				AML	AML	05 08 00.0
	0.1nm,0.2s					
APOL	**The Sanctuary**	**0.86**	**214**	S	**Sg**	**05 07 59.9 -2.5**
APOL				AML	AML	05 08 03.2
	0.1nm,0.2s					
NATA	**Nata**	**0.94**	**230**	P	**Pb**	**05 07 51.2 -0.9**
NATA				S	**Sg**	**05 08 03.1 -1.8**
NATA				AML	AML	05 08 11.2
	0.1nm,0.3s					
AKMS	**Akamas**	**0.98**	**248**	P	**Pb**	**05 07 51.9 -0.8**
AKMS				S	**Sb**	**05 08 04.5 -0.9**
AKMS				AML	AML	05 08 06.1
	0.1nm,0.2s					
AKMS				AML	AML	05 08 09.7
	0.1nm,0.2s					
GEM	**Giv'at Ha'Em**	**2.84**	**139**	P	**Pn**	**05 08 20.7 +1.8**
GEM				S	**Sn**	**05 08 50.3 -2.4**
NATI	**Neve Ativ**	**2.84**	**137**	P	**Pn**	**05 08 19.9 +1.0**
NATI				S	**Sn**	**05 08 51.1 -1.5**
MMC7	**Mount Meron ar**	**2.86**	**145**	P	**Pn**	**05 08 20.7 +1.6**
MMA0B	**Mount Meron ar**	**2.87**	**145**	P	**Pn**	**05 08 20.5 +1.2**
MMA0B				S	**Sn**	**05 08 50.5 -2.9**
MMLI	**Mount Malkishu**	**3.37**	**150**	P	**Pn**	**05 08 27.6 +1.4**
MMLI				S	**Sn**	**05 09 02.6 -3.1**
HMDT	**Nahal Hemdat**	**3.57**	**150**	P	**Pn**	**05 08 29.9 +1.0**
HMDT				S	**Sn**	**05 09 07.4 -3.3**
DSI	**Dead Sea**	**4.14**	**156**	P	**Pn**	**05 08 37.8 +1.2**
DSI				S	**Sn**	**05 09 21.2 -3.4**
RMNI	**Mount Ramon**	**4.90**	**167**	P	**Pn**	**05 08 48.4 +1.2**
RMNI				S	**Sn**	**05 09 41.4 -2.2**
PRNI	**Paran**	**5.19**	**165**	P	**Pn**	**05 08 52.4 +1.3**
PRNI				S	**Sn**	**05 09 47.9 -2.7**

AFAD ***24*** *05:19:15.3,38˚.36N×44˚.61E,h7km±7km, ML2.9*
ISK ***24*** *05:19:16.0,38˚.27N×44˚.67E,h5km, ML3.4/5*
AZER ***24*** *05:19:16.2,38˚.24N×44˚.58E,h10km, ml3.3*
NSSP ***24*** *05:19:17.6,38˚.37N×44˚.50E,h10km, Ms3.0*
TEH ***24*** *05:19:18.5,38˚.38N×44˚.49E,h6km±80km, ML2.9, Presumed earthquake*

ISC 24 05:19:18.8±1.1,38˚.36N±0˚.02×44˚.42E±0˚.02,h9km±10km, n37,σ1°83/61,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**312**	P	**Pg**	**05 19 26.9**	**-0.9**
OZAP				S	**Sb**	**05 19 34.2**	**-1.8**
OZAP				IAML		05 19 42.0	
	comp=N,2μm,0.7s						
TVAN	**Van**	**0.81**	**282**	P	**Pg**	**05 19 32.2**	**-2.3**
TVAN				S	**Sn**	**05 19 48.4**	**-0.6**
TVAN				IAML		05 20 01.0	
	comp=N,581nm,0.7s						
VANB	**Van**	**0.84**	**287**	Pg	**Pn**	**05 19 36.5**	**-0.5**
VMUR	**Van-Muradiye**	**0.92**	**314**	P	**Pg**	**05 19 34.7**	**-1.8**
VMUR				S	**Sn**	**05 19 51.4**	**-0.1**
VMUR				IAML		05 19 53.0	
	comp=E,203nm,0.2s						
VMUR				IAML		05 19 56.0	
	comp=N,442nm,0.7s						
ISHB	**Shabestar**	**0.94**	**94**	Pg	**Pg**	**05 19 35.1**	**-1.9**
HAKT	**HAKKARI**	**0.98**	**215**	P	**Pg**	**05 19 37.1**	**-0.6**
HAKT				S	**Sn**	**05 19 51.9**	**-1.2**
HAKT				IAML		05 19 56.0	
	comp=E,262nm,0.6s						
HAKT				IAML		05 20 02.0	
	comp=N,351nm,0.7s						
HAKT	**HAKKARI**	**0.98**	**215**	P	**Pb**	**05 19 37.7**	**-0.3**
HAKT				S	**Sb**	**05 19 51.6**	**+0.4**
MAKU	**Maku**	**1.02**	**12**	Pg	**Pg**	**05 19 37.0**	**-1.4**
IMRD	**Marand**	**1.07**	**70**	Pg	**Pn**	**05 19 38.2**	**-1.1**
GEVA	**Gevas**	**1.07**	**268**	P	**Pg**	**05 19 36.6**	**-2.8**
GEVA				S	**Sn**	**05 19 55.3**	**+0.1**
GEVA				IAML		05 19 58.0	
	comp=E,262nm,0.8s						
GEVA				IAML		05 20 05.0	
	comp=N,297nm,0.5s						
NAX	**Nakhchivan**	**1.17**	**46**	P	**Pg**	**05 19 40.4**	**-1.0**
NAX				S	**Sn**	**05 19 57.3**	**-0.4**
CUKT	**Cukurca**	**1.28**	**210**	Pn	**Pn**	**05 19 42.4**	**-0.6**
CUKT				Sn	**Sn**	**05 20 01.8**	**+1.4**
CUKT	**Cukurca**	**1.28**	**210**	P	**Pn**	**05 19 41.5**	**-1.6**
CUKT				S	**Sn**	**05 20 03.3**	**+3.0**
CUKT				IAML		05 20 05.0	
	comp=N,586nm,0.8s						
CUKT				IAML		05 20 11.0	
	comp=E,372nm,0.7s						
ORD	**Ordubad**	**1.36**	**65**	P	**Pn**	**05 19 43.6**	**-0.5**
ORD				S	**Sn**	**05 20 02.8**	**+0.5**
SBZ	**Shahbuz**	**1.36**	**40**	P	**Pg**	**05 19 44.1**	**-1.0**
SBZ				S	**Sn**	**05 20 04.1**	**+1.6**
ITBZ	**Tabriz**	**1.36**	**95**	Pg	**Pn**	**05 19 42.8**	**-1.4**
HYR	**Heyderabad**	**1.40**	**14**	P	**Pg**	**05 19 46.7**	**+1.0**
HYR				S	**Sg**	**05 20 09.3**	**+5.4**
ADCV	**BITLIS_Adilcev**	**1.40**	**289**	P	**Pn**	**05 19 44.0**	**-0.8**
ADCV				S	**Sn**	**05 20 06.5**	**+3.0**
ADCV				IAML		05 20 09.0	
	comp=E,119nm,0.7s						
ADCV				IAML		05 20 10.0	
	comp=N,179nm,0.8s						
IAZR	**Azarshahr**	**1.41**	**118**	Pg	**Pb**	**05 19 45.1**	**-0.3**
IGDI	**IGDIR**	**1.53**	**350**	P	**Pn**	**05 19 46.0**	**-0.4**
IGDI				S	**Sg**	**05 20 10.9**	**+2.8**
IGDI				IAML		05 20 12.0	
	comp=N,195nm,0.8s						
IGDI				IAML		05 20 12.0	
	comp=E,294nm,0.9s						
IGDI	**IGDIR**	**1.53**	**350**	P	**Pg**	**05 19 47.9**	**-0.3**
IGDI				S	**Sg**	**05 20 11.5**	**+3.4**
PERV	**Siirt/Pervari-**	**1.54**	**255**	P	**Pb**	**05 19 46.7**	**-0.9**
PERV				S	**Sg**	**05 20 14.2**	**+6.0**
PERV				IAML		05 20 18.0	
	comp=E,446nm,0.8s						
PERV				IAML		05 20 20.0	
	comp=N,447nm,0.6s						
VAYK	**Vayk**	**1.55**	**30**	⇓*e*P	**Pb**	**05 19 47.0**	**-0.7**
VAYK				⇓*e*S	**Sg**	**05 20 08.5**	**-0.2**
ALVK	**Alvank**	**1.62**	**68**	*e*P	**Pn**	**05 19 47.5**	**-0.1**
ALVK				*e*S	**Sb**	**05 20 09.5**	**0.0**
DORK	**Agr/Tutak/Do**	**1.64**	**309**	P	**Pb**	**05 19 48.2**	**-1.1**
DORK				S	**Sg**	**05 20 13.6**	**+2.0**
DORK				IAML		05 20 16.0	
	comp=N,122nm,0.7s						
DORK				IAML		05 20 19.0	
	comp=E,107nm,0.7s						
AGRB	**Hanur-Agry**	**1.65**	**318**	Pn	**Pg**	**05 19 50.2**	**-0.3**
MLAZ	**Malazgirt-MUS**	**1.66**	**299**	Pn	**Pg**	**05 19 50.7**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.72**	**327**	P	**Pn**	**05 19 48.9**	**-0.3**
KOTA				S	**Sg**	**05 20 14.2**	**-0.1**
KOTA				IAML		05 20 30.0	
	comp=E,77nm,0.8s						
KOTA				IAML		05 20 33.0	
	comp=N,41nm,1.1s						
GNI	**Garni**	**1.81**	**8**	Pn	**Pn**	**05 19 50.4**	**+0.1**
EGVZ	**Egvard**	**1.87**	**62**	*e*P	**Pb**	**05 19 51.9**	**-1.4**
EGVZ				*e*S	**Sb**	**05 20 17.1**	**+0.3**
GRS	**Goris**	**1.88**	**52**	⇑*i*P	Pg	05 19 59.0	+4.1
GRS				⇓*i*S	**Sg**	**05 20 24.0**	**+4.8**
GURO	**Guroymak-BITLI**	**1.88**	**277**	Pn	**Pg**	**05 19 53.7**	**-1.3**
AYRK	**Ayrk**	**2.05**	**31**	*e*P	**Pb**	**05 19 55.6**	**-0.8**
AYRK				*e*S	**Sg**	**05 20 23.5**	**-1.3**
IHRS	**Heris**	**2.06**	**90**	Pn	**Pb**	**05 19 55.7**	**-0.9**
LSVT	**Lusahovit**	**2.62**	**13**	*e*P	**Pb**	**05 20 05.8**	**-0.2**
LSVT				*e*S	**Sg**	**05 20 41.0**	**-2.1**
SRTK	**Saratovka**	**2.71**	**358**	*e*P	**Pb**	**05 20 07.8**	**+0.3**
SRTK				*e*S	**Sg**	**05 20 44.6**	**-1.2**
GRMI	**Germi**	**2.76**	**80**	Pn	**Pn**	**05 20 04.6**	**+1.3**

THE ***24*** *05:23:53.3,39˚.N±4˚×2˚.8E±˚, h1km±35km, M3.6/21, MLh3.6/21*
ISK ***24*** *05:23:53.2,38˚.97N×27˚.84E, h13km, ML3.6/22*
AFAD ***24*** *05:23:53.1,38˚.99N×27˚.87E, h7km±2km, MW3.8*
SOF ***24*** *05:24:11.4,40˚.01N±0˚.02×26˚.63E±0˚.07, h10km±72km, MD3.5/5*

ISC 24 05:23:53.8±0.9,38˚.97N±0˚.02×27˚.88E±0˚.02,h11km±6km, n70,σ0°91/86,9C-4D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.11**	**209**	Pg	**Pg**	**05 23 56.2**	**-0.4**
AKS				Sg	**Sg**	**05 23 58.8**	**+0.2**
GORD	**Gordes-Manisa**	**0.24**	**106**	Pg	**Pg**	**05 23 59.1**	**+0.3**
GORD				Sg	**Sg**	**05 24 03.4**	**+1.2**
GOMA	**Golmarmara-Man**	**0.27**	**174**	Pg	**Pb**	**05 23 59.6**	**-1.0**
GOMA				Sg	**Sb**	**05 24 04.0**	**-1.2**
SOMA	**Soma-Manisa**	**0.33**	**304**	Pg	**Pg**	**05 23 59.8**	**-0.5**
SOMA				Sg	**Sg**	**05 24 04.7**	**0.0**
CAMT	**Merkez**	**0.50**	**243**	P	**Pg**	**05 24 03.2**	**-0.2**
CAMT				S	**Sg**	**05 24 11.2**	**+1.2**
ZEDA	**zmir-Bergama**	**0.63**	**270**	P	**Pg**	**05 24 05.8**	**-0.1**
ZEDA				S	**Sg**	**05 24 14.5**	**+0.3**
ODEM	**Odemis-Izmir**	**0.71**	**168**	Pg	**Pb**	**05 24 07.6**	**-0.7**
MANT	**Manisa**	**0.72**	**132**	P	**Pb**	**05 24 07.2**	**-1.2**
MANT				S	**Sb**	**05 24 18.3**	**0.0**
KULA	**Kula-Manisa**	**0.76**	**127**	Pg	**Pb**	**05 24 08.7**	**-0.4**
DUVT	**Torbali**	**0.82**	**204**	P	**Pg**	**05 24 09.5**	**-0.2**
DUVT				S	**Sg**	**05 24 19.9**	**+0.6**
IZMR	**zmir-demi**	**0.84**	**176**	P	**Pg**	**05 24 09.6**	**-0.4**
IZMR				P	**Pb**	**05 24 10.1**	**-0.3**
IZMR				S	**Sb**	**05 24 21.1**	**-0.5**
DST	**Dursunbey**	**0.85**	**42**	Pg	**Pn**	**05 24 10.1**	**-1.7**
BAGT	**Foa**	**0.86**	**249**	P	**Pg**	**05 24 09.9**	**-0.5**
BAGT				S	**Sg**	**05 24 22.2**	**+0.5**
SIMA	**Simav-Kutahya**	**0.87**	**82**	Pg	**Pn**	**05 24 10.9**	**-1.1**
SMAA	**Simav-Kutahya**	**0.87**	**81**	Pg	**Pn**	**05 24 11.2**	**-0.8**
BLCB	**Balcova**	**0.88**	**228**	Pg	**Pg**	**05 24 10.2**	**-0.5**
YAYO	**Edremit-Balk**	**0.89**	**316**	Pg	**Pg**	**05 24 10.3**	**-0.7**
FOCM	**Foa**	**0.93**	**254**	Pg	**Pg**	**05 24 11.2**	**-0.6**
SUSR	**Susurluk-Balik**	**1.00**	**9**	Pg	**Pn**	**05 24 12.8**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**1.02**	**180**	Pg	**Pb**	**05 24 13.2**	**-0.4**
SHAP	**Saphane-Kutahy**	**1.05**	**87**	Pg	**Pn**	**05 24 14.6**	**+0.1**
NAZL	**Nazilli-Aydin**	**1.06**	**162**	Pg	**Pb**	**05 24 13.9**	**-0.2**
YENI	**Yenice-Canakka**	**1.08**	**333**	Pg	**Pb**	**05 24 14.0**	**-0.5**
GONE	**Gonen-Balikesi**	**1.08**	**352**	Pg	**Pn**	**05 24 14.5**	**-0.4**
KRBN	**Karaburun**	**1.10**	**250**	Pg	**Pg**	**05 24 14.1**	**-0.9**
GMLD	**Gumuldur**	**1.17**	**220**	Pn	**Pg**	**05 24 15.7**	**-0.6**
GEDZ	**Gediz**	**1.20**	**86**	Pn	**Pn**	**05 24 16.7**	**+0.2**
KUSD	**Kusadasi-Aydin**	**1.21**	**203**	Pn	**Pg**	**05 24 16.1**	**-0.8**
CANM	**Can-anakkale**	**1.22**	**329**	Pn	**Pg**	**05 24 16.2**	**-1.0**
PRK	**Paraskevi**	**1.28**	**283**	P	**Pn**	**05 24 17.3**	**-0.3**
PRK				S	**Sn**	**05 24 36.4**	**+1.6**
GCAM	**G?zelcaml?**	**1.37**	**202**	Pn	**Pn**	**05 24 17.9**	**-0.9**
BAND	**Balkesir-Ban**	**1.39**	**7**	⇑P	Pg	05 24 24.7	+4.2
BAND				⇓S	**Sn**	**05 24 37.2**	**-0.3**
EZN	**Ezine**	**1.48**	**306**	P	**Pn**	**05 24 19.8**	**-0.4**
EZN				S	**Sb**	**05 24 40.5**	**+0.6**
SMG	**Samos**	**1.51**	**213**	P	**Pb**	**05 24 21.7**	**0.0**
SMG				S	**Sg**	**05 24 42.9**	**+0.7**
CHOS	**Chios island**	**1.54**	**248**	P	**Pn**	**05 24 21.2**	**-0.1**
CHOS				S	**Sg**	**05 24 43.9**	**+0.5**
SIGR	**SIGRI**	**1.59**	**279**	P	**Pn**	**05 24 21.6**	**-0.3**
SIGR				S	**Sn**	**05 24 43.6**	**+1.1**
YER	**Yerkesik**	**1.86**	**170**	P	**Pn**	**05 24 25.5**	**-0.2**
GADA	**Gvkgeada**	**1.96**	**309**	P	**Pn**	**05 24 26.7**	**-0.1**
BODT	**Bodrum**	**1.96**	**193**	P	**Pn**	**05 24 28.2**	**+1.2**
CAVK	**Edirne/Enez-Ca**	**2.16**	**323**	⇑P	**Pn**	**05 24 30.3**	**+0.5**
CAVK				⇑S	**Sb**	**05 25 01.2**	**+1.4**
ENEZ	**Enez**	**2.21**	**323**	P	**Pn**	**05 24 30.6**	**+0.3**
LIA	**Limnos Island**	**2.28**	**295**	P	**Pn**	**05 24 31.4**	**0.0**
SMTH	**Samothraki Isl**	**2.35**	**310**	P	**Pn**	**05 24 32.2**	**-0.1**
ALN	**Alexandroupoli**	**2.38**	**324**	P	**Pn**	**05 24 32.8**	**0.0**
RDO	**Rodhopi**	**2.82**	**321**	P	**Pn**	**05 24 39.0**	**+0.2**
KARY	**Karystos**	**2.86**	**252**	P	**Pn**	**05 24 38.6**	**-0.7**
THAS	**Thassos island**	**2.93**	**305**	P	**Pn**	**05 24 39.6**	**-0.7**
KAVA	**Kavala**	**3.28**	**309**	P	**Pn**	**05 24 45.1**	**0.0**
OUR	**Ouranopolis**	**3.30**	**296**	P	**Pn**	**05 24 45.1**	**-0.2**
KARP	**Karpathos**	**3.47**	**190**	P	**Pn**	**05 24 47.9**	**+0.1**
PLG	**Polygyros**	**3.70**	**294**	P	**Pn**	**05 24 51.0**	**+0.1**
SRS	**Serrai**	**3.93**	**304**	P	**Pn**	**05 24 54.0**	**0.0**
PLD	**Plovdiv**	**3.97**	**324**	P	**Pn**	**05 24 54.9**	**+0.6**
MMB	**Musomishta**	**4.07**	**310**	P	**Pn**	**05 24 56.5**	**+0.5**
MMB	**Musomishta**	**4.07**	**310**	P	**Pn**	**05 24 56.3**	**+0.2**
KNT	**Kendrikon**	**4.40**	**301**	P	**Pn**	**05 25 01.3**	**+0.7**
KKB	**Krupnik**	**4.62**	**310**	P	**Pn**	**05 25 04.3**	**+0.7**
PVL	**Pavlikeni**	**4.62**	**335**	*e*P	**Pn**	**05 25 04.3**	**+0.8**
KIRS	**Kirsehir-Merke**	**4.70**	**86**	⇓P	**Pg**	**05 25 25.6**	**+1.8**
PLNA	**Plana**	**4.87**	**317**	P	**Pn**	**05 25 08.2**	**+1.2**
PLVB	**Pleven**	**5.05**	**332**	⇑P	**Pn**	**05 25 11.6**	**+2.2**
VTS	**Vitosha**	**5.07**	**317**	P	**Pn**	**05 25 10.4**	**+0.6**
MPEP	**Malo Peshtene**	**5.38**	**326**	P	**Pn**	**05 25 13.9**	**0.0**
TIRR	**Tirgusor**	**5.50**	**4**	⇑P	**Pg**	**05 25 36.2**	**-2.8**
CFR	**Carcaliu**	**6.20**	**2**	⇑P	**Pn**	**05 25 26.0**	**+0.7**
MLR	**Muntele Rosu**	**6.67**	**348**	⇑P	**Pn**	**05 25 35.9**	**+4.1**
VRI	**Vrincioaia**	**6.94**	**353**	⇑P	Pn	05 25 40.1	+4.7
MDVR	**Moldovita**	**7.40**	**324**	⇑P	**Pn**	**05 25 41.7**	**-0.1**
GZR	**Gura Zlata**	**7.45**	**331**	⇓P	**Pn**	**05 25 41.9**	**-0.6**
BZS	**Buzias**	**8.10**	**327**	⇓P	**Pn**	**05 25 50.6**	**-0.7**

UPP ***24*** *05:28:16.5±0.1,67˚.85N×20˚.21E, h0km, ML2.8, Confirmed Induced event*
DNK ***24*** *05:28:16.9±0.3,67˚.85N×20˚.21E, h0km, ML2.8(UPP), Suspected explosion*
HEL ***24*** *05:28:17.8±0.3,67˚.92N×20˚.25E, h0km, ML1.1, Suspected explosion*

ISC 24 05:28:16.5±0.8,67˚.84N±0˚.02×20˚.23E±0˚.03,h0km,n27, σ0°87/38,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**19**	P	**Pg**	**05 28 19.0**	**+0.2**
KUA				S	**Sg**	**05 28 20.6**	**+0.3**
KUA	**Kurravaara**	**0.12**	**19**	P	**Pg**	**05 28 19.0**	**+0.2**
KUA				S	**Sg**	**05 28 20.6**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**266**	P	**Pg**	**05 28 21.1**	**0.0**
RATU	**Laukkuluspa**	**0.24**	**266**	P	**Pg**	**05 28 21.1**	**0.0**
KOVU	**Salmi** baz=176	**0.38**	**356**	P	**Pg**	**05 28 23.8**	**-0.1**
KOVU				S	**Sg**	**05 28 28.9**	**+0.1**
KOVU	**Salmi** baz=176	**0.38**	**356**	P	**Pg**	**05 28 23.8**	**-0.1**
KOVU				S	**Sg**	**05 28 28.9**	**+0.1**
NIKU	**Nikkaluokta**	**0.46**	**274**	P	**Pg**	**05 28 25.1**	**-0.1**
NIKU	**Nikkaluokta**	**0.46**	**274**	P	**Pg**	**05 28 25.1**	**-0.1**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**	**05 28 29.9**	**0.0**
LANU				S	**Sg**	**05 28 39.2**	**+0.3**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**	**05 28 29.9**	**0.0**
LANU				S	**Sg**	**05 28 39.2**	**+0.3**
LANU	**Lannavaara**	**0.70**	**72**	PG	**Pg**	**05 28 29.9**	**0.0**
LANU				SG	**Sg**	**05 28 39.2**	**+0.3**
DUNU	**Dundret**	**0.74**	**170**	S	**Sg**	**05 28 40.3**	**+0.2**
DUNU	**Dundret**	**0.74**	**170**	S	**Sg**	**05 28 40.3**	**+0.2**
SALU	**Saltoluokta**	**0.81**	**236**	P	**Pg**	**05 28 31.7**	**-0.3**
SALU	**Saltoluokta**	**0.81**	**236**	P	**Pg**	**05 28 31.7**	**-0.3**
KIF	**Kilpisjarvi** baz=186	**1.19**	**10**	PN	**Pn**	**05 28 41.0**	**+0.7**
KIF				smax	smax	05 28 52.5	
	comp=Z,2.0nm,0.2s						
KIF				SN	**Sb**	**05 28 55.0**	**-0.7**
HEF	**Hetta** comp=Z,1.3nm,0.2s	**1.40**	**65**	smax	smax	05 28 59.0	
HEF				SB	**Sg**	**05 29 00.6**	**-0.9**
ERTU	**Ertsjaerv**	**1.50**	**149**	PN	**Pg**	**05 28 47.1**	**+1.9**
ERTU				SG	**Sb**	**05 29 04.9**	**+0.1**
KLF	**Kolari** comp=Z,1.0nm,0.2s	**1.56**	**111**	smax	smax	05 29 05.2	
KLF				SG	**Sn**	**05 29 06.3**	**0.0**
KTK1	**Kautokeino**	**1.62**	**42**	PN	**Pb**	**05 28 46.8**	**-0.3**
TRO	**Tromso**	**1.86**	**346**	SN	**Sb**	**05 29 15.5**	**+0.4**
TOF	**Tornio**	**2.39**	**136**	PB	**Pb**	**05 29 00.6**	**+0.2**
TOF				smax	smax	05 29 30.1	
	comp=Z,0.9nm,0.2s						
TOF				SB	**Sb**	**05 29 31.1**	**+0.7**
RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pb**	**05 29 01.9**	**-1.5**
RNF				SB	**Sb**	**05 29 34.9**	**-0.5**
ARA0	**ARCESS Array S**	**2.57**	**46**	SG	**Sb**	**05 29 34.4**	**-1.1**
RAJF	**Raja-Jooseppi**	**3.09**	**74**	SG	**Sb**	**05 29 50.5**	**+0.2**
KEV	**Kevo**	**3.12**	**49**	SB	**Sn**	**05 29 45.9**	**+1.1**
MSF	**Maaselka**	**3.98**	**115**	SG	**Sg**	**05 30 20.3**	**-3.8**

IDC ***24*** *05:51:11.1±2.0,54˚.31N×163˚.90E, h0km, mb3.5/4, mbtmp3.4/5, ML2.2/1, Error ellipse: s-maj=71.7km s-min=21.8km az=167.0*
KRSC ***24*** *05:51:12.7±0.7,54˚.43N×163˚.98E, h58km±22km, Ml3.7*

ISC 24 05:51:14.9±1.0,54˚.48N±0˚.07×163˚.95E±0˚.05,h25km,n21, σ0°83/25,mb3.5/4,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.30**	**274**	*e*P	**Pn**	**05 51 36.4**	**-1.0**
BKI	**Bering**	**1.38**	**58**	*e*P	**Pn**	**05 51 38.0**	**-0.5**
BKI				*e*S	**Sn**	**05 51 54.7**	**-1.2**
KBTR	**Krutoberegovo**	**1.84**	**340**	*e*P	**Pn**	**05 51 44.0**	**-1.0**
KBTR				*e*S	**Sn**	**05 52 06.8**	**-0.7**
KBG	**Krutoberegovo**	**1.91**	**339**	*e*S	**Sn**	**05 52 08.9**	**-0.2**
KMNR	**Kamenistaya**	**2.48**	**302**	*e*P	**Pn**	**05 51 55.1**	**+1.3**
SMKR	**Semkarok**	**2.53**	**327**	*e*P	**Pn**	**05 51 54.6**	**+0.1**
KLY	**Klyuchi**	**2.63**	**316**	*e*P	**Pn**	**05 51 55.0**	**-0.6**
KII	**Karymskiy**	**2.68**	**262**	*e*P	**Pn**	**05 51 56.5**	**+0.1**
KII				*e*S	**Sn**	**05 52 27.7**	**-0.4**
SDLR	**Sedlovina**	**3.23**	**250**	*e*P	**Pn**	**05 52 03.7**	**-0.4**
SMAR	**Somma**	**3.28**	**250**	*e*P	**Pn**	**05 52 04.6**	**-0.3**
UGLR	**Uglovaya**	**3.29**	**249**	*e*P	**Pn**	**05 52 04.5**	**-0.4**
AVH	**Avacha**	**3.32**	**251**	*e*P	**Pn**	**05 52 05.4**	**+0.1**
KRX	**Arik**	**3.33**	**252**	*e*P	**Pn**	**05 52 05.3**	**-0.2**
KOK	**Koryaka**	**3.36**	**251**	*e*P	**Pn**	**05 52 05.3**	**-0.6**
GNL	**Ganaly**	**3.62**	**260**	*e*P	**Pn**	**05 52 09.9**	**+0.3**
PETK	**Petropavlovsk-** 0.8nm,0.3s,baz=73,slow=16,SNR=11	**3.95**	**252**	Pn	**Pn**	**05 52 14.0**	**+0.1**
PETK				Sn	**Sn**	**05 52 57.8**	**-1.7**
	0.6nm,0.3s,baz=265,slow=34,SNR=2.4 1.2nm,0.3s						
ASAK	**Asacha**	**4.18**	**242**	*e*P	**Pn**	**05 52 17.6**	**+0.5**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=254,slow=8.9,SNR=7.1 0.3nm,0.7s	**26.20**	**47**	P	**P**	**05 56 49.3**	**+2.1**
KURBB	**Kurchatov Array** 0.7nm,0.4s,baz=54,slow=8.2,SNR=4.7 0.7nm,0.4s	**49.02**	**303**	P	**P**	**05 59 59.8**	**+0.5**
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=60,slow=7.2,SNR=4.0 0.4nm,0.7s	**49.59**	**297**	P	**P**	**06 00 02.9**	**-0.8**
TXAR	**Lajitas Array** 0.3nm,0.7s,baz=327,slow=6.6,SNR=3.8 0.3nm,0.7s	**68.00**	**70**	P	**P**	**06 02 11.9**	**0.0**

SJA ***24*** *06:02:47.2±0.7,22˚.25S×68˚.80W, h131km±5km, ML3.5, MW3.5*
GUC ***24*** *06:02:49.7±0.7,22˚.24S×68˚.82W, h119km±4km, ML3.5*

ISC 24 06:02:49.0±1.5,22˚.26S±0˚.03×68˚.86W±0˚.07,h123km±9km, n29,σ1°15/46,4C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.58**	**322**	*e*P	**Pn**	**06 03 08.3**	**+0.3**
PB09				*e*S	**Sn**	**06 03 22.1**	**-0.2**
PB09				IAML		06 03 23.8	
	comp=N,2μm,0.1s						
PB06	**IPOC Station P**	**0.80**	**236**	⇑*i*P	**Pn**	**06 03 09.9**	**+0.3**
PB06				*e*S	**Sn**	**06 03 25.3**	**+0.1**
PB06				IAML		06 03 26.0	
	comp=N,1μm,0.4s						
PB06	**IPOC Station P**	**0.80**	**236**	*e*P	**Pn**	**06 03 09.3**	**-0.2**
PB06				*e*S	**Sn**	**06 03 26.4**	**+1.2**
PB06				IAML		06 03 26.6	
	comp=Z,582nm,0.3s						
PB03	**IPOC Station P**	**0.86**	**284**	⇑*i*P	**Pn**	**06 03 10.4**	**+0.3**
PB03				*e*S	**Sn**	**06 03 26.1**	**0.0**
PB03				IAML		06 03 27.2	
	comp=E,2μm,0.2s						
PB03	**IPOC Station P**	**0.86**	**284**	*e*P	**Pn**	**06 03 08.3**	**-1.8**
PB03				*e*S	**Sn**	**06 03 27.2**	**+1.1**
PB03				IAML		06 03 28.1	
	comp=Z,2μm,0.1s						
AF01	**San Pedro de A**	**0.93**	**138**	*e*P	**Pn**	**06 03 10.6**	**-0.3**
AF01				IAML		06 03 28.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.01**	**314**		**Pg**	**06 22 07.9**	**0.0**
GBPR					**Sg**	**06 22 08.9**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.01**	**314**	⇓*eP*	**Pg**	**06 22 07.9**	**0.0**
GBPR				*eS*	**Sg**	**06 22 08.9**	**-0.1**
MLPR	**Magueyes Islan**	**0.17**	**271**		**Pg**	**06 22 09.9**	**+0.1**
MLPR	1μm,0.2s			IAML		06 22 14.0	
MLPR	1μm,0.3s			IAML		06 22 14.2	
CRPR	**Cabo Rojo, PR**	**0.23**	**280**		**Pg**	**06 22 11.3**	**+0.4**
CRPR					**Sg**	**06 22 15.3**	**+1.2**
CRPR	**Cabo Rojo, PR**	**0.23**	**280**	IAML		06 22 16.1	
CRPR	792nm,0.3s			IAML		06 22 16.3	
CRPR	**Cabo Rojo, PR**	**0.23**	**280**	⇑*eP*	**Pg**	**06 22 11.1**	**+0.2**
CRPR				⇑*eS*	**Sg**	**06 22 14.9**	**+0.8**
CRPR				IAML		06 22 15.9	
CRPR	comp=N,670nm,0.2s	**0.23**	**280**	⇓*eP*	**Pg**	**06 22 11.3**	**+0.4**
CRPR				*eS*	**Sg**	**06 22 15.3**	**+1.2**
OBIP	**Obispado Ponce**	**0.26**	**73**		**Pg**	**06 22 12.3**	**+0.8**
OBIP					**Sb**	**06 22 17.6**	**0.0**
OBIP	**Obispado Ponce**	**0.26**	**73**	IAML		06 22 19.1	
OBIP	comp=N,94nm,0.5s **Obispado Ponce**	**0.26**	**73**	⇓*eP*	**Pg**	**06 22 12.3**	**+0.8**
OBIP				*eS*	**Sb**	**06 22 17.6**	**0.0**
LSP	**Las Mesas**	**0.29**	**315**		**Pg**	**06 22 13.0**	**+0.9**
LSP					**Sb**	**06 22 18.3**	**-0.3**
LSP	**Las Mesas**	**0.29**	**315**	⇑*eP*	**Pg**	**06 22 13.0**	**+0.9**
LSP				*eS*	**Sb**	**06 22 18.3**	**-0.3**
CELP	**Cerrillos**	**0.30**	**69**		**Pg**	**06 22 13.1**	**+0.9**
CELP	comp=N,264nm,0.6s			IAML		06 22 21.4	
UUPR	**Utuado, UPR, P**	**0.32**	**27**		**Pb**	**06 22 13.9**	**-0.1**
PRSN	**Puerto Rico Se**	**0.36**	**314**		**Pg**	**06 22 14.2**	**+0.8**
PRSN					**Sb**	**06 22 19.7**	**-0.8**
PRSN	**Puerto Rico Se**	**0.36**	**314**	IAML		06 22 21.3	
PRSN	comp=N,668nm,0.3s			IAML		06 22 23.4	
PRSN	comp=N,614nm,0.3s **Puerto Rico Se**	**0.36**	**314**	⇑*eP*	**Pg**	**06 22 12.6**	**-0.8**
PRSN				*eS*	**Sg**	**06 22 16.2**	**-2.0**
PRSN				IAML		06 22 21.3	
PRSN	comp=N,408nm,0.2s **Puerto Rico Se**	**0.36**	**314**	⇓*eP*	**Pg**	**06 22 14.2**	**+0.8**
PRSN				*eS*	**Sb**	**06 22 19.7**	**-0.8**
AGPR	**Aguadilla, PR**	**0.55**	**335**		**Pg**	**06 22 17.6**	**+0.8**
AGPR				IAML		06 22 26.0	
AGPR	comp=N,172nm,1.8s			IAML		06 22 26.6	
AGPR	comp=N,150nm,0.5s **Aguadilla, PR**	**0.55**	**335**	⇑*eP*	**Pg**	**06 22 16.2**	**-0.7**
AGPR				⇑*eS*	**Sg**	**06 22 24.6**	**+0.4**
AGPR				IAML		06 22 27.9	
AGPR	comp=N,124nm,0.8s **Aguadilla, PR**	**0.55**	**335**	⇓*eP*	**Pg**	**06 22 17.6**	**+0.7**
AGPR				*eS*	**Sb**	**06 22 26.1**	**+0.2**
ECPR	**Experimental S**	**0.60**	**54**	IAML		06 22 29.0	
ECPR	comp=N,320nm,0.2s **Experimental S**	**0.60**	**54**	⇓*eP*	**Pg**	**06 22 18.4**	**+0.6**
ECPR				*eS*	**Sb**	**06 22 27.9**	**+0.7**
SJG	**San Juan**	**0.70**	**78**		**Pg**	**06 22 20.0**	**+0.2**
SJG	**San Juan**	**0.70**	**78**	⇑*eP*	**Pg**	**06 22 20.0**	**+0.2**
SJG				⇑*eS*	**Sb**	**06 22 29.8**	**-0.5**
SJG	**San Juan**	**0.70**	**78**	⇓*eP*	**Pg**	**06 22 20.0**	**+0.2**
SJG				*eS*	**Sb**	**06 22 31.1**	**+0.8**
PDPR	**Patillas Dam,**	**0.81**	**86**		**Pg**	**06 22 22.1**	**+0.3**
GCPR	**Guaynabo City**	**0.82**	**65**		**Pg**	**06 22 22.4**	**+0.3**
GCPR	**Guaynabo City**	**0.82**	**65**		**Sb**	**06 22 34.0**	**+0.3**
GCPR	**Guaynabo City**	**0.82**	**65**	⇓*eP*	**Pg**	**06 22 22.3**	**+0.3**
GCPR				*eS*	**Sb**	**06 22 34.0**	**+0.3**
HUMP	**Col San Antoni**	**0.99**	**80**		**Sg**	**06 22 37.2**	**-0.9**
HUMP	**Col San Antoni**	**0.99**	**80**	⇓*eP*	**Pg**	**06 22 24.8**	**-0.4**
HUMP				*eS*	**Sg**	**06 22 37.2**	**-0.9**
PCDR	**Punta Cana, DR**	**1.54**	**291**	⇑*eP*	**Pg**	**06 22 36.3**	**+0.6**
PCDR	comp=N,175nm,2.0s			IAML		06 23 17.3	
HIDR	**Higuey Centro**	**1.86**	**290**	⇑*eP*	**Pb**	**06 22 40.5**	**+0.2**
HIDR	comp=N,35nm,1.8s			IAML		06 23 35.9	
HATOM	**Hato Mayor del**	**2.52**	**289**	⇑*eP*	**Pb**	**06 22 50.7**	**-0.9**
HATOM	comp=N,24nm,3.8s			IAML		06 23 48.7	

AFAD ***24*** *06:45:53.3, 38.°98N×27.°89E, h7km±1km, ML1.8*
ISK 24 06:45:52.9, 38.°98N×27.°86E, h10km, ML2.1/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.11**	**200**	P	Pg	06 45 56.3	+0.7
AKHS				S	Sg	06 45 59.0	+1.3
AKHS	comp=E,685nm,0.2s			IAML		06 45 59.0	
AKS	**Akhisar**	**0.11**	**201**	Pg	Pg	06 45 55.9	+0.2
AKS				Sg	Sg	06 45 58.3	+0.7
GORD	**Gordes-Manisa**	**0.26**	**107**	Pg	Pg	06 45 58.7	+0.6
GORD				Sg	Sg	06 46 02.8	+1.1
GOMA	**Golmarmara-Man**	**0.28**	**171**	Pg	Pg	06 45 59.0	+0.5
SOMA	**Soma-Manisa**	**0.31**	**304**	Pg	Pg	06 45 59.7	+0.6
KTTT	**Salihli**	**0.34**	**148**	P	Pb	06 46 00.5	-0.6
KTTT				S	Sg	06 46 05.3	+1.0
KTTT	comp=N,50nm,0.6s			IAML		06 46 06.0	
STEP	**BALIKESIR_Sava**	**0.41**	**344**	P	Pg	06 46 01.6	+0.6
STEP				S	Sb	06 46 07.9	-0.6
STEP	comp=N,331nm,0.3s			IAML		06 46 08.0	
STEP	comp=E,401nm,0.3s			IAML		06 46 08.0	
STEP	**BALIKESIR_Sava**	**0.41**	**344**	P	Pn	06 46 04.3	-0.6
STEP				S	Sb	06 46 07.6	-1.0
STEP	comp=N,332nm,0.3s			IAML		06 46 08.0	
STEP	comp=E,400nm,0.3s			IAML		06 46 08.0	
CAMT	**Merkez**	**0.49**	**242**	P	Pb	06 46 03.7	+0.1
CAMT				S	Sb	06 46 11.6	+0.8
CAMT	comp=N,85nm,0.3s			IAML		06 46 12.0	
CAMT	comp=E,77nm,0.4s			IAML		06 46 12.0	
CAMT	**Merkez**	**0.49**	**242**	P	Pb	06 46 03.9	+0.3
CAMT				S	Sb	06 46 11.7	+0.9
ZEDA	**zmir-Bergama**	**0.61**	**269**	P	Pb	06 46 05.8	+0.2
ZEDA				S	Sb	06 46 14.6	+0.2
ZEDA	comp=N,45nm,0.7s			IAML		06 46 15.0	
ZEDA	comp=E,34nm,0.4s			IAML		06 46 15.0	
ZEDA	**zmir-Bergama**	**0.61**	**269**	P	Pb	06 46 06.0	+0.3
ZEDA				S	Sb	06 46 14.3	-0.1
ODEM	**Odemis-Izmir**	**0.72**	**167**	Pg	Pb	06 46 07.3	-0.3
IZMD	**zmir-Dikili-**	**0.73**	**270**	P	Pn	06 46 11.6	+2.3
IZMD				S	Sb	06 46 18.4	+0.6
IZMD	comp=E,12nm,1.1s			IAML		06 46 25.0	
IZMD	comp=N,15nm,1.3s			IAML		06 46 27.0	
KULA	**Kula-Manisa**	**0.78**	**127**	Pg	Pb	06 46 08.4	-0.2
BLCB	**Balcova**	**0.88**	**227**	Pg	Pb	06 46 10.1	-0.1
SIMA	**Simav-Kutahya**	**0.88**	**83**	Pg	Pb	06 46 10.1	-0.2
YAVO	**Edremit-Balk**	**0.88**	**316**	Pg	Pb	06 46 13.2	0.0
AYDB	**Zeytinkoy-Aydi**	**1.03**	**179**	Pg	Pb	06 46 13.2	-0.2
NAZL	**Nazilli-Aydin**	**1.07**	**162**	Pg	Pn	06 46 13.9	-0.1

AFAD ***24*** *06:46:00.0, 39.°32N×27.°47E, h7km±3km, ML1.4*
ISK 24 06:46:12.3, 38.°99N×27.°87E, h10km±1km, ML1.4/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.11**	**201**	P	Pg	06 46 15.7	+0.6
AKHS				S	Sg	06 46 18.3	+1.3
AKS	**Akhisar**	**0.11**	**201**	Pg	Pg	06 46 15.3	+0.2
AKS				Sg	Sg	06 46 17.7	+0.7
GORD	**Gordes-Manisa**	**0.25**	**107**	Pg	Pg	06 46 18.0	+0.5
GORD				Sg	Sg	06 46 21.9	+0.9
GOMA	**Golmarmara-Man**	**0.28**	**172**	Pg	Pg	06 46 18.4	+0.5
GOMA				Sg	Sg	06 46 22.8	+1.1
SOMA	**Soma-Manisa**	**0.31**	**304**	Pg	Pg	06 46 18.9	+0.4
SOMA				Sg	Sg	06 46 23.8	+1.1
KTTT	**Salihli**	**0.35**	**149**	P	Pg	06 46 19.5	+0.4
KTTT				S	Sg	06 46 24.5	+0.7

NIED ***24*** *06:52:45.2, 41.°48N×142.°97E, h23km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr=1.29; Mθθ=0.34; Mφφ=0.94; Mrθ=-2.58; Mrφ=2.46; Mθφ=-1.11; Fault plane solution: M0=3.80000×10^14 NP1: φs=181.00000°, δs=35.00000°, λs=-157.00000°. NP2: φs=72.00000°, δs=77.00000°, λs=-57.00000°.*
JMA ***24*** *06:52:45.2±0.1, 41.°5N±0.°5×143.°0E±0.°9, h23km±2km, MV3.6/38, E OFF AOMORI PREF*
IDC ***24*** *06:52:50.9±2.1, 41.°48N×142.°76E, h67km±18km, mb3.4/14, mbtmp3.7/16, MS3.4/2, Error ellipse: s-maj=20.2km s-min=13.8km az=106.0*
ISC 24 06:52:45.8±1.1, 41.°51N±0.°05×142.°90E±0.°05, h22km±8km, n38, σ0°94/42, mb3.7/14, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.54**	**21**	*eP*	**Pb**	**06 52 55.9**	**-0.8**
JEM				S	**Sb**	**06 53 03.7**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.78**	**352**	*iP*	**Pb**	**06 53 00.5**	**-0.2**
JTHR	**Tokachihiroo**	**0.84**	**21**	*eP*	**Pb**	**06 53 01.0**	**-0.7**
JTHR				S	**Sb**	**06 53 12.0**	**-0.5**
JSHD	**Hidakashinhida**	**0.96**	**340**	*eP*	**Pb**	**06 53 03.4**	**-0.3**
JSHD				*eS*	**Sb**	**06 53 16.7**	**+0.8**
JCH	**Churui**	**1.16**	**17**	*eP*	**Pn**	**06 53 06.2**	**-0.5**
JCH				*eS*	**Sb**	**06 53 21.1**	**-0.7**
JARK	**Aomorirokkasho**	**1.26**	**247**	P	**Pn**	**06 53 08.3**	**+0.3**
JBT2	**Biratori 2**	**1.33**	**343**	P	**Pb**	**06 53 10.1**	**0.0**
JBT2				*eS*	**Sb**	**06 53 27.7**	**+1.0**
JOT	**Ohata**	**1.40**	**265**	*eP*	**Pn**	**06 53 10.3**	**+0.4**
JOT				*eS*	**Sb**	**06 53 28.6**	**0.0**
JKB	**Kayabe**	**1.45**	**286**	*eP*	**Pn**	**06 53 10.9**	**+0.3**
JANG	**Nango**	**1.54**	**223**	*eP*	**Pn**	**06 53 11.9**	**-0.1**
JOB	**Onbets**	**1.56**	**26**	*eP*	**Pn**	**06 53 13.0**	**+0.8**
JOB				S	**Sb**	**06 53 35.2**	**+2.0**
JTM	**Tenmabayashi**	**1.56**	**243**	*eP*	**Pn**	**06 53 13.2**	**+1.0**
JTM				S	**Sb**	**06 53 33.0**	**-0.3**
JFR	**Furan**	**1.67**	**352**	P	**Pn**	**06 53 14.3**	**+0.5**
JNB	**Noboribetsu**	**1.69**	**305**	P	**Pn**	**06 53 14.3**	**+0.4**
JNB				S	**Sn**	**06 53 35.6**	**+0.7**
JEW	**Eniwo**	**1.71**	**321**	*eP*	**Pb**	**06 53 16.1**	**-0.5**
JEW				*eS*	**Sb**	**06 53 38.0**	**+0.3**
ASAJ	**Asahikawa**	**2.62**	**355**	P	**Pn**	**06 53 29.5**	**+2.8**
ASAJ	44nm,0.6s,baz=165,slow=11,SNR=23			S	**Sb**	**06 54 03.1**	**-0.6**
MJAR	62nm,0.8s,baz=180,slow=20,SNR=9.5 **Matsushiro Arr**	**6.16**	**218**	P	**Pn**	**06 54 18.1**	**+2.7**
KLR	2.6nm,0.6s,baz=32,slow=12,SNR=6.5 **Kul'dur**	**11.00**	**318**	LR	LR	07 00 03.3	
SONM	comp=Z,38nm,18.5s,baz=130,slow=40 **Songino Array**	**26.54**	**296**	P	**P**	**06 58 22.0**	**+0.1**
H11N2	0.2nm,0.4s,baz=95,slow=9.1,SNR=2.8 0.2nm,0.4s **WAKE ISLAND Hy**	**29.78**	**130**	T	T	07 30 15.3	
H11N1	baz=323,slow=75,SNR=16 **WAKE ISLAND Hy**	**29.79**	**130**	T	T	07 30 11.2	
H11N3	baz=323,slow=75,SNR=15 **WAKE ISLAND Hy**	**29.80**	**130**	T	T	07 30 14.0	
H11S1	baz=323,slow=75,SNR=14 **WAKE ISLAND Hy**	**30.64**	**131**	T	T	07 31 19.1	
H11S3	baz=324,slow=76,SNR=19 **WAKE ISLAND Hy**	**30.64**	**131**	T	T	07 31 18.6	
H11S2	baz=324,slow=76,SNR=16 **WAKE ISLAND Hy**	**30.65**	**131**	T	T	07 31 15.6	
ZALV	baz=324,slow=76,SNR=9.8 **Zalesovo Beam**	**39.89**	**309**	P	**P**	**07 00 17.0**	**-0.7**
MKAR	0.4nm,0.3s,baz=82,slow=8.9,SNR=2.6 0.4nm,0.3s **Makanchi Array**	**42.87**	**298**	P	**P**	**07 00 41.8**	**-0.4**
KURBB	0.5nm,0.7s,baz=79,slow=9.0,SNR=3.7 0.5nm,0.7s **Kurchatov Arra**	**44.28**	**305**	P	**P**	**07 00 53.0**	**-0.6**
ILAR	1.0nm,0.6s,baz=77,slow=8.6,SNR=7.2 1.0nm,0.6s **Eielson Array**	**45.13**	**35**	P	**P**	**07 01 00.2**	**+0.1**
BVAR	0.6nm,0.7s,baz=269,slow=6.3,SNR=11 0.6nm,0.7s **Borovoye Array**	**48.51**	**310**	P	**P**	**07 01 26.5**	**-0.3**
YKA	0.3nm,0.4s,baz=67,slow=11,SNR=2.1 0.3nm,0.4s **Yellowknife Ar**	**59.38**	**32**	P	**P**	**07 02 45.7**	**-0.2**
WRA	0.3nm,0.8s,baz=308,slow=8.0,SNR=5.3 0.4nm,0.8s **Warramunga Arr**	**61.65**	**189**	P	**P**	**07 03 01.2**	**-0.7**
FINES	0.6nm,0.6s,baz=8.3,slow=6.6,SNR=5.0 0.6nm,0.6s **FINESS Array B**	**65.41**	**332**	P	**P**	**07 03 25.7**	**-0.6**
FINES	1.8nm,0.9s,baz=51,slow=6.4,SNR=6.6			LR	LR	07 37 08.9	
ASAR	comp=Z,145nm,19.6s,baz=244,slow=41 **Alice Springs**	**65.38**	**189**	P	**P**	**07 03 26.2**	**-0.2**
HFS	0.5nm,0.7s,baz=9.1,slow=7.7,SNR=5.5 0.5nm,0.7s **Hagfors**	**70.49**	**336**	P	**P**	**07 03 57.3**	**-1.0**
NVAR	1.8nm,0.9s **Hagfors** 4.1nm,1.0s,baz=42,slow=6.6,SNR=1.6 4.1nm,1.0s **Mina Array Bea**	**71.43**	**55**	P	**P**	**07 04 06.6**	**+1.9**
AKASG	0.5nm,0.7s,baz=314,slow=6.4,SNR=2.7 0.5nm,0.7s **Malin Array Be**	**71.47**	**322**	P	**P**	**07 04 03.8**	**-0.6**
PDAR	0.5nm,0.5s,baz=179,slow=23,SNR=2.1 0.5nm,0.5s **Pinedale Array**	**73.74**	**47**	P	**P**	**07 04 18.6**	**+0.3**
	0.2nm,0.6s,baz=308,slow=3.0,SNR=2.1 0.2nm,0.6s						

AFAD ***24*** *07:09:39.9, 37.°00N×44.°99E, h2km±1km, ML2.8*
TEH ***24*** *07:09:41.7, 37.°18N×45.°09E, h6km±85km, ML2.9, Presumed earthquake*
ISC 24 07:09:40.9±1.3, 37.°14N±0.°05×45.°04E±0.°03, h6km±15km, n14, σ1°31/19, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.65**	**124**	Pg	**Pg**	**07 09 53.8**	**+0.3**
YOVA	**Hakkari_Yksek**	**0.75**	**307**	P	**Pg**	**07 09 54.7**	**-0.6**
YOVA				S	**Sg**	**07 10 04.9**	**-0.2**
YOVA	comp=E,147nm,0.7s			IAML		07 10 09.0	
IAZR	**Azarshahr**	**0.93**	**54**	Pg	**Pb**	**07 09 59.2**	**-0.4**
HAKT	**HAKKARI**	**1.14**	**292**	P	**Pb**	**07 10 00.4**	**-2.8**
HAKT				S	**Sg**	**07 10 18.8**	**+1.1**
CUKT	**Cukurca**	**1.15**	**276**	P	**Pb**	**07 10 01.8**	**-1.4**
CUKT				S	**Sb**	**07 10 18.2**	**-0.2**
CUKT	comp=E,384nm,0.8s			IAML		07 10 24.0	
CUKT	comp=N,226nm,0.5s			IAML		07 10 25.0	
ISHB	**Shabestar**	**1.23**	**22**	Pg	**Pb**	**07 10 03.4**	**-1.4**
ITBZ	**Tabriz**	**1.41**	**38**	Pg	**Pn**	**07 10 06.8**	**-0.5**
IMRD	**Marand**	**1.66**	**18**	Pg	**Pg**	**07 10 12.2**	**-0.6**
IHSH	**Hashtrud**	**1.79**	**84**	Pg	**Pb**	**07 10 13.6**	**-0.7**
GEVA	**Gevas**	**1.96**	**307**	P	**Pb**	**07 10 18.0**	**+0.9**
GEVA				S	**Sg**	**07 10 45.9**	**+2.0**
IHRS	**Heris**	**1.98**	**53**	Pn	**Pb**	**07 10 17.2**	**-0.3**
PERV	**Siirt/Pervari-**	**2.14**	**293**	P	**Pn**	**07 10 19.5**	**+2.1**
PERV				S	**Sg**	**07 10 49.9**	**+0.1**
PERV	comp=N,94nm,0.5s			IAML		07 10 55.0	
PERV	comp=E,80nm,0.7s			IAML		07 10 57.0	
ISRB	**Sarab**	**2.20**	**71**	Pn	**Pb**	**07 10 20.8**	**-0.5**
IDHR	**Dehrash**	**2.67**	**155**	Pn	**Pb**	**07 10 28.0**	**-1.2**

ASRS ***24*** *07:19:53.0±1.1, 49.°65N×81.°70E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC ***24*** *07:19:55.3±2.3, 49.°73N×81.°98E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=28.8km s-min=8.3km az=52.0, Suspected Mining explosion.*
IDC ***24*** *07:20:01.1±2.0, 49.°59N×82.°56E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=66.1km s-min=14.9km az=101.0*
ISC 24 07:19:56.2±1.2, 49.°47N±0.°09×81.°4E±0.°1, h0km, n7, σ0°18/8, 3C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.17**	**303**	⇑Pn	**Pb**	**07 20 36.6**	**+0.1**
KURBB	3.3nm,0.4s			⇑Sn	**Sg**	**07 21 06.0**	**0.0**
KURK	51nm,0.8s **Kurchatov**	**2.18**	**306**	⇓Pn	**Pb**	**07 20 36.6**	**+0.1**
KURK	1.8nm,0.7s			⇓Sn	**Sg**	**07 21 05.9**	**-0.3**
MAKZ	2.0nm,0.3s **Makanchi**	**2.69**	**171**	⇓Pg	**Pg**	**07 20 47.8**	**0.0**
MAKZ	2.2nm,0.8s			⇑Lg	Lg	07 21 28.3	
MK31	17nm,1.1s **Makanchi Array**	**2.75**	**167**	Pg	**Pg**	**07 20 49.0**	**+0.1**
MK31	1.6nm,0.6s,baz=355,slow=15,SNR=34			⇓Lg	Lg	07 21 28.7	
MKAR	8.2nm,0.8s,baz=360,slow=27,SNR=18 **Makanchi Array**	**2.75**	**167**	Pn	**Pg**	**07 20 48.6**	**-0.2**
MKAR	0.8nm,0.3s,baz=1.0,slow=14,SNR=29			Lg	Lg	07 21 28.2	
ZALV	0.4nm,0.3s,baz=357,slow=16,SNR=3.7 1.8nm,0.6s **Zalesovo Beam**	**4.96**	**24**	Pn	**Pn**	**07 21 11.9**	**0.0**
ZALV	0.2nm,0.3s,baz=204,slow=13,SNR=2.9			Lg	Lg	07 22 24.8	
I46RU	0.3nm,0.3s,baz=198,slow=26,SNR=14 0.4nm,0.3s **ZALESOVO INFRA** 0.1nm,1.2s,baz=199,slow=323,SNR=3.4	**4.96**	**24**	I	I	07 49 30.0	

AZER ***24*** *07:20:50.7, 38.°58N×44.°55E, h8km, ml2.5*
ISK ***24*** *07:20:51.5, 38.°55N×44.°47E, h5km, ML2.3/5*
AFAD ***24*** *07:20:51.7, 38.°42N×44.°48E, h8km±1km, ML2.1*
ISC 24 07:20:52.1±1.4, 38.°60N±0.°04×44.°47E±0.°03, h3km±11km, n16, σ1°34/30, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.38**	**280**	P	**Pb**	**07 21 00.8**	**-0.9**
OZAP				S	**Sb**	**07 21 07.8**	**-0.2**
OZAP	comp=N,226nm,0.7s			IAML		07 21 19.0	
VMUR	**Van-Muradiye**	**0.80**	**299**	P	**Pn**	**07 21 09.6**	**-1.0**
VMUR				S	**Sn**	**07 21 22.4**	**-0.7**
VMUR	comp=E,54nm,0.2s			IAML		07 21 25.0	
VMUR	comp=N,59nm,0.3s			IAML		07 21 26.0	
TVAN	**Van**	**0.83**	**266**	P	**Pb**	**07 21 08.4**	**-1.0**
TVAN				S	**Sb**	**07 21 20.7**	**-0.5**
TVAN	comp=E,98nm,0.5s			IAML		07 21 31.0	
TVAN	comp=N,72nm,0.4s			IAML		07 21 32.0	
VANB	**Van**	**0.84**	**270**	Pg	**Pg**	**07 21 05.9**	**-2.4**
VANB				Sg	**Sb**	**07 21 21.4**	**0.0**
NAX	**Nakhchivan**	**0.99**	**54**	P	**Pb**	**07 21 11.6**	**-0.4**
NAX				S	**Sb**	**07 21 26.1**	**+0.6**
GEVA	**Gevas**	**1.14**	**256**	P	**Pg**	**07 21 13.2**	**-0.9**
GEVA				S	**Sn**	**07 21 31.5**	**0.0**
GEVA	comp=N,56nm,0.6s			IAML		07 21 34.0	
GEVA	comp=E,46nm,0.5s			IAML		07 21 37.0	
SBZ	**Shahbuz**	**1.16**	**46**	P	**Pg**	**07 21 14.5**	**0.0**
SBZ				S	**Sn**	**07 21 31.5**	**-0.5**
AKDM	**Akdamar-Van**	**1.20**	**257**	Pn	**Pn**	**07 21 15.1**	**-0.9**
AKDM				Sn	**Sn**	**07 21 32.9**	**0.0**
HAKT	**HAKKARI**	**1.20**	**210**	P	**Pn**	**07 21 15.7**	**-0.4**
HAKT				S	**Sn**	**07 21 35.9**	**+2.9**
HAKT	**HAKKARI**	**1.20**	**210**	P	**Pn**	**07 21 16.3**	**+0.2**
HAKT				S	**Sn**	**07 21 36.5**	**+3.5**
ORD	**Ordubad**	**1.24**	**74**	P	**Pb**	**07 21 15.6**	**-0.6**
ORD				S	**Sn**	**07 21 32.8**	**-1.0**
ADCV	**BITLIS_Adilcev**	**1.38**	**279**	P	**Pg**	**07 21 20.1**	**+1.5**
ADCV				S	**Sn**	**07 21 39.0**	**+1.6**
AGRB	**Hanur-Agry**	**1.51**	**311**	Pn	**Pg**	**07 21 21.4**	**+0.4**
AGRB				Sn	**Sg**	**07 21 42.9**	**+2.3**
CUKT	**Cukurca**	**1.51**	**207**	Pn	**Pg**	**07 21 20.3**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.53**	**301**	P	**Pg**	**07 21 22.4**	**+0.9**
DORK				S	**Sg**	**07 21 42.2**	**+0.8**
DORK	comp=N,24nm,1.0s			IAML		07 21 50.0	
GNI	**Garni**	**1.56**	**8**	Pn	**Pg**	**07 21 22.3**	**+0.2**

IDC ***24*** *07:23:52.3±6.4, 17.°92S×178.°17W, h618km±72km, mb3.3/9, mbtmp4.3/9, Error ellipse: s-maj=48.1km s-min=26.0km az=125.0*
NEIC ***24*** *07:23:52.3±0.8, 18.°1S±0.°2×178.°0W±0.°2, h620km±13km, mb4.3/19, Error ellipse: s-maj=44.4km s-min=4.6km az=134.0*
ISC 24 07:23:50.7±1.1, 18.°0S±0.°2×178.°1W±0.°2, h600km, n35, σ0°68/37, mb4.2/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.71**	**274**	P	P	07 25 18.5	+4.2
XMAS	**Kiritimati**	**28.47**	**48**	P	**P**	**07 29 00.0**	**+0.5**
CTAO	**Charters Tower**	**33.75**	**261**	P	**P**	**07 29 45.1**	**+0.7**
COEN	**Coen**	**37.43**	**270**	P	**P**	**07 30 16.4**	**+1.6**
COEN	comp=Z,15nm,1.1s			IAmb	IAmb	07 30 57.2	
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**07 30 26.9**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=84,slow=10,SNR=6.0 comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**07 30 26.9**	**+0.9**
BBOO	**Buckleboo**	**43.63**	**241**	P	**P**	**07 31 03.7**	**+0.1**
BBOO	comp=Z,18nm,1.4s			IAmb	IAmb	07 31 30.1	
WR8	**Warramunga Arr**	**44.78**	**260**	P	**P**	**07 31 13.0**	**+0.3**
WR8	comp=Z,17nm,1.4s			IAmb	IAmb	07 31 47.7	
WB0	**Warramunga Arr**	**44.90**	**260**	P	**P**	**07 31 13.7**	**+0.1**
WB0	comp=Z,10.0nm,1.1s			IAmb	IAmb	07 31 16.4	
WRA	**Warramunga Arr**	**44.93**	**260**	P	**P**	**07 31 13.2**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=96,slow=7.4,SNR=24						
WRA				PcP	**PcP**	**07 32 41.3**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=87,slow=3.3,SNR=2.2 comp=Z,1.4nm,0.3s						
WRA	**Warramunga Arr**	**44.93**	**260**	P	**P**	**07 31 13.6**	**-0.2**
WRA					**PcP**	**07 32 41.5**	**-0.6**
AS31	**Alice Springs**	**45.07**	**254**	P	**P**	**07 31 15.1**	**+0.1**
ASAR	**Alice Springs**	**45.07**	**254**	P	**P**	**07 31 14.7**	**-0.2**
	comp=Z,18nm,1.1s,baz=94,slow=8.1,SNR=78						
ASAR				PcP	**PcP**	**07 32 41.7**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=94,slow=3.6,SNR=7.1 comp=Z,18nm,1.1s						
SIJI	**Sorong**	**52.58**	**283**	P	**P**	**07 32 09.7**	**-0.6**
	comp=Z,7.4nm,0.2s,baz=142,slow=19,SNR=2.4 com

L18K					IAmb	IAmb	07 35 10.2		
	comp=Z,9.4nm,1.4s								
J19K	**Poorman**	**83.60**	**10**	P	**P**	**P**	**07 35 16.7**	**+0.2**	
TXAR	**Lajitas Array**	**85.79**	**57**	P	**P**	**P**	**07 35 28.8**	**+0.6**	
	comp=Z,0.3nm,0.8s,baz=212,slow=2.5,SNR=2.3								
	comp=Z,0.3nm,0.8s								
IL31		**85.94**	**13**	P	**P**	**P**	**07 35 27.5**	**-0.3**	
IL31					IAmb	IAmb	07 35 53.6		
	comp=Z,9.6nm,1.5s								
ILAR	**Eielson Array**	**85.94**	**13**	P	**P**	**P**	**07 35 26.1**	**-1.8**	
	comp=Z,0.3nm,0.4s,baz=207,slow=4.3,SNR=14								
	comp=Z,0.3nm,0.4s								
ILAR	**Eielson Array**	**85.94**	**13**	P	**P**	**P**	**07 35 27.5**	**-0.4**	
BURAR	**Bucovina Array**	**144.88**	**332**	PKPab	**PKPab**	**PKPab**	**07 42 22.2**	**0.0**	
BRTR	**Keskin Array B**	**145.10**	**315**	PKP	**PKPbc**	**PKPbc**	**07 42 21.5**	**-0.8**	
	comp=Z,1.0nm,0.7s,baz=45,slow=3.8,SNR=4.1								
BRTR	**Keskin Array B**	**145.10**	**315**	PKPbc	**PKPbc**	**PKPbc**	**07 42 21.7**	**-0.6**	
GERES	**GERESS Array B**	**147.82**	**345**	PKPbc	**PKPbc**	**PKPbc**	**07 42 28.3**	**-1.0**	
	comp=Z,0.4nm,0.5s,baz=15,slow=1.5,SNR=2.1								

IDC ***24*** *07:45:15.8±2.9, 27.26°N×54.84°E, h0km, mb3.5/4, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=63.3km s-min=30.1km az=150.0*
DSN ***24*** *07:45:18.3±1.9, 27.48°N×54.68°E, h10km, ML3.3/9, Error ellipse: s-maj=25.8km s-min=9.7km az=20.0*
TEH ***24*** *07:45:19.4, 27.32°N×54.86°E, h9km±29km, ML3.5, Presumed earthquake*

ISC 24 07:45:19.3±0.8, 27.32N±0.04×54.85E±0.04, h10km, n31, σ1s96/34, mb3.4/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.55**	**309**	**Pg**	**Pg**	**07 45 29.4**	**-0.7**
BNDS	**Bandar-Abbas**	**1.17**	**86**	Pg	**Pb**	**07 45 42.3**	**+0.5**
GENO	**Geno**	**1.18**	**86**	Pg	**Pb**	**07 45 42.4**	**+0.5**
KHL1	**Khalili_Fars**	**1.42**	**283**	Pg	**Pn**	**07 45 46.7**	**+1.5**
LMD1	**Lamerd**	**1.50**	**271**	Pg	**Pn**	**07 45 48.1**	**+1.7**
LMD1				Sg	**Sg**	**07 46 10.7**	**+3.0**
IBND	**Bandar-abas**	**1.50**	**85**	Pg	**Pn**	**07 45 47.6**	**+1.3**
JHRM	**Jahrom**	**1.63**	**317**	Pg	**Pn**	**07 45 50.5**	**+2.2**
SHME	**Shamm**	**1.71**	**137**	P	**Pb**	**07 45 51.5**	**+0.6**
SHME				S	**Sg**	**07 46 15.4**	**+1.0**
BANOM	**Banah**	**1.90**	**137**	*e*P	**Pn**	**07 45 52.5**	**+0.6**
	SNR=5.6						
BANOM				S	**Sg**	**07 46 22.2**	**+1.8**
QIR1	**Qir**	**1.97**	**306**	Pn	**Pn**	**07 45 55.2**	**+2.4**
MSFE	**Esma-Masafi**	**2.28**	**149**	*e*P	**Pn**	**07 45 58.4**	**+1.4**
	SNR=5.3						
MDH	**Madha**	**2.40**	**147**	*e*P	**Pn**	**07 46 00.9**	**+2.3**
	SNR=15						
KHNJ	**Kahnooj**	**2.61**	**75**	Pn	**Pn**	**07 46 04.0**	**+2.5**
ASUD	**Al Ashush, Dub**	**2.72**	**171**	P	**Pn**	**07 46 05.2**	**+2.1**
HATD	**Hatta, Dubai**	**2.74**	**155**	P	**Pn**	**07 46 06.4**	**+3.0**
ASHO	**Ashiyiah**	**2.84**	**157**	*i* P	**Pn**	**07 46 05.6**	**+0.8**
	SNR=9.1						
NGRK	**Negar Kerman**	**2.84**	**35**	Pn	**Pn**	**07 46 06.5**	**+1.4**
DSBU	**Dashti - Bushe**	**3.35**	**289**	Pn	**Pn**	**07 46 13.8**	**+2.0**
KHGB	**Koh Gabri**	**3.36**	**25**	Pn	**Pn**	**07 46 14.9**	**+2.8**
CHMN	**Cheshme madani**	**3.46**	**42**	Pn	**Pn**	**07 46 15.9**	**+2.3**
KBAM	**BAM**	**3.65**	**60**	Pn	**Pn**	**07 46 18.3**	**+2.3**
TAFT	**Taft - Yazd**	**4.43**	**352**	Pn	**Pn**	**07 46 29.0**	**+2.2**
KLNJ	**Kolanjah**	**4.65**	**323**	Pn	**Pn**	**07 46 32.3**	**+2.3**
DOBD	**Dorbid, Yazd**	**4.66**	**356**	Pn	**Pn**	**07 46 32.3**	**+2.3**
IRAM	**Ramesheh**	**4.96**	**335**	Pn	**Pn**	**07 46 35.9**	**+1.8**
WBK	**Wadi Bani Khal**	**6.00**	**141**	Pn	**Pn**	**07 46 49.7**	**+1.5**
KBZ	**Khabaz**	**19.01**	**333**	P	**P**	**07 49 39.7**	**-1.5**
	0.1nm,0.3s,baz=142,slow=7.4,SNR=4.8						
	0.7nm,0.7s						
BRTR	**Keskin Array B**	**21.52**	**310**	P	**P**	**07 50 07.2**	**-1.5**
	0.4nm,0.6s,baz=112,slow=11,SNR=2.0						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**28.16**	**20**	P	**P**	**07 51 09.7**	**-2.0**
	0.4nm,0.6s,baz=209,slow=7.9,SNR=3.7						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**34.53**	**31**	P	**P**	**07 52 06.6**	**-1.1**
	0.4nm,0.4s,baz=249,slow=9.8,SNR=4.8						
	0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**51.48**	**265**	P	**P**	**07 54 23.1**	**-2.3**
	0.8nm,0.6s,baz=66,slow=7.0,SNR=6.0						
	0.8nm,0.6s						

IDC ***24*** *07:48:31.8±8.0, 11.03°S×166.33°E, h136km±80km, mb3.5/7, mbtmp3.9/8, Error ellipse: s-maj=53.5km s-min=27.8km az=148.0*
NEIC ***24*** *07:48:33.4±1.2, 11.08°S±0.04×166.4°E±0.2, h140km±9km, mb4.5/12, Error ellipse: s-maj=27.2km s-min=3.5km az=81.0*

ISC 24 07:48:33.1±0.8, 11.10S±0.08×166.3E±0.2, h146km, n26, σ0s64/29, mb4.0/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.40**	**169**	Pn	**Pn**	**07 49 38.6**	**+0.1**
DZM	**Mont Dzumac**	**10.91**	**179**	P	**Pn**	**07 51 06.2**	**+0.9**
	5.6nm,0.9s,baz=9.9,slow=19,SNR=6.5						
DZM				S	**Sn**	**07 53 05.0**	**-0.9**
	baz=336,slow=20						
EIDS	**Eidsvold**	**20.24**	**223**	P	**P**	**07 52 56.8**	**-0.2**
EIDS				IAmb	IAmb	07 53 16.2	
	comp=Z,19nm,1.2s						
BKZ	**Black Stump Fm**	**29.38**	**164**	P	**P**	**07 54 22.3**	**-0.3**
STKA	**Stephens Creek**	**30.79**	**224**	P	**P**	**07 54 35.5**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=50,slow=17,SNR=4.8						
	comp=Z,2.3nm,0.9s						
THZ	**Tophouse**	**31.08**	**170**	P	**P**	**07 54 37.9**	**+0.4**
WB0	**Warramunga Arr**	**31.91**	**250**	P	**P**	**07 54 45.3**	**+0.2**
WB0				IAmb	IAmb	07 55 16.2	
	comp=Z,13nm,1.4s						
LTZ	**Lake Taylor**	**31.98**	**172**	P	**P**	**07 54 45.1**	**-0.3**
WRA	**Warramunga Arr**	**31.99**	**250**	P	**P**	**07 54 45.3**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=83,slow=9.7,SNR=7.7						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**31.99**	**250**	P	**P**	**07 54 45.7**	**-0.1**
AS31	**Alice Springs**	**33.27**	**244**	P	**P**	**07 54 57.7**	**+0.8**
ASAR	**Alice Springs**	**33.27**	**244**	P	**P**	**07 54 56.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=68,slow=10,SNR=6.5						
ASAR				PcP	**PcP**	**07 57 35.6**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=76,slow=2.6,SNR=2.3						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**33.27**	**244**	P	**P**	**07 54 57.2**	**+0.3**
ASAR					**PcP**	**07 57 36.0**	**0.0**
BBOO	**Buckleboo**	**35.20**	**227**	P	**P**	**07 55 14.0**	**+0.5**
BBOO				IAmb	IAmb	07 55 14.5	
	comp=Z,8.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**72.65**	**293**	P	**P**	**07 59 45.8**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=109,slow=5.9,SNR=4.8						
	comp=Z,0.8nm,0.3s						
GAMB	**Gambell**	**76.53**	**10**	P	**P**	**08 00 07.4**	**+0.7**
P18K	**Big Mountain,**	**76.77**	**19**	P	**P**	**08 00 08.1**	**-0.1**
P18K				IAmb	IAmb	08 00 34.7	
	comp=Z,16nm,1.5s						
K15K	**Wolf Creek Mou**	**77.33**	**15**	P	**P**	**08 00 12.1**	**+0.8**
K15K				IAmb	IAmb	08 00 26.8	
	comp=Z,14nm,1.5s						
L18K	**Granite Mounta**	**78.56**	**17**	P	**P**	**08 00 19.2**	**+1.1**
L18K				IAmb	IAmb	08 01 02.2	
	comp=Z,8.0nm,1.4s						
SONM	**Songino Array**	**79.05**	**324**	P	**P**	**08 00 19.9**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=102,slow=4.4,SNR=2.7						
	comp=Z,0.3nm,0.5s						
IMAR	**Indian Mountai**	**82.33**	**15**	P	**P**	**08 00 38.4**	**+0.3**
ILAR	**Eielson Array**	**83.39**	**18**	P	**P**	**08 00 42.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=232,slow=5.1,SNR=12						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**83.39**	**18**	P	**P**	**08 00 43.7**	**0.0**
BMAR	**Burnt Mountain**	**85.90**	**17**	P	**P**	**08 00 57.4**	**+1.2**
MKAR	**Makanchi Array**	**93.95**	**317**	P	**P**	**08 01 33.7**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=98,slow=5.4,SNR=10						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**93.95**	**317**	P	**P**	**08 01 34.3**	**-0.1**

IDC ***24*** *07:55:23.8±2.9, 27.14°N×54.87°E, h0km, mb3.7/4, mbtmp3.7/5, ML3.2/1, MS3.6/1, Error ellipse: s-maj=60.3km s-min=33.6km az=145.0*
DSN ***24*** *07:55:25.4±2.0, 27.58°N×54.70°E, h10km, ML3.4/10, Error ellipse: s-maj=26.2km s-min=9.3km az=22.0*
TEH ***24*** *07:55:27.8, 27.38°N×54.84°E, h9km±21km, ML3.6, Presumed earthquake*

ISC 24 07:55:27.7±0.7, 27.32N±0.04×54.84E±0.04, h10km, n24, σ1s68/26, mb3.8/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.54**	**310**	Pg	**Pg**	**07 55 38.2**	**-0.1**
LAR1				Sg	**Sg**	**07 55 46.6**	**+1.1**
BNDS	**Bandar-Abbas**	**1.19**	**86**	Pg	**Pn**	**07 55 51.3**	**+0.7**
GENO	**Geno**	**1.19**	**86**	Pg	**Pn**	**07 55 51.3**	**+0.7**
KHL1	**Khalili_Fars**	**1.41**	**283**	Pg	**Pg**	**07 55 55.1**	**+0.4**
LMD1	**Lamerd**	**1.49**	**271**	Pg	**Pg**	**07 55 57.3**	**+1.0**
IBND	**Bandar-abas**	**1.52**	**85**	Pg	**Pg**	**07 55 57.4**	**+0.6**
JHRM	**Jahrom**	**1.63**	**317**	Pg	**Pg**	**07 55 59.4**	**+0.5**
SHME	**Shamm**	**1.72**	**137**	*e*P	**Pb**	**07 55 58.9**	**-0.5**
	SNR=5.6						
SHME				S	**Sg**	**07 56 23.5**	**+0.5**
BANOM	**Banah**	**1.91**	**136**	*e*P	**Pn**	**07 56 01.3**	**+1.0**
	SNR=5.7						
BANOM				S	**Sg**	**07 56 31.5**	**+2.5**
MSFE	**Esma-Masafi**	**2.28**	**148**	*e*P	**Pn**	**07 56 07.3**	**+1.8**
	SNR=6.2						
MDH	**Madha**	**2.40**	**147**	*e*P	**Pn**	**07 56 08.8**	**+1.7**
	SNR=13						
NAZ	**Nazwa, Dubai**	**2.43**	**162**	*e*P	**Pn**	**07 56 09.7**	**+2.2**
	SNR=8.3						
HATD	**Hatta, Dubai**	**2.74**	**155**	P	**Pn**	**07 56 13.5**	**+1.8**
ASHO	**Ashiyiah**	**2.84**	**157**	*i* P	**Pn**	**07 56 14.6**	**+1.4**
	SNR=11						
DSBU	**Dashti - Bushe**	**3.34**	**289**	Pn	**Pn**	**07 56 22.6**	**+2.6**
KHGB	**Koh Gabri**	**3.37**	**25**	Pn	**Pn**	**07 56 23.1**	**+2.4**
CHMN	**Cheshme madani**	**3.47**	**42**	Pn	**Pn**	**07 56 25.3**	**+3.1**
KBAM	**BAM**	**3.67**	**60**	Pn	**Pn**	**07 56 26.7**	**+2.1**
KBZ	**Khabaz**	**19.01**	**333**	P	**P**	**07 59 49.2**	**-0.3**
	0.1nm,0.3s,baz=139,slow=11,SNR=1.3						
	1.1nm,0.9s						
BRTR	**Keskin Array B**	**21.52**	**310**	P	**P**	**08 00 15.3**	**-1.8**
	0.4nm,0.5s,baz=124,slow=12,SNR=1.7						
	0.4nm,0.5s						
KIRV	**Kirov**	**31.48**	**355**	LR	LR	08 17 26.0	
	comp=Z,103nm,18.6s,baz=341,slow=42						
ZALV	**Zalesovo Beam**	**34.54**	**31**	P	**P**	**08 02 14.7**	**-1.5**
	0.6nm,0.4s,baz=238,slow=8.8,SNR=4.8						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**39.19**	**339**	P	**P**	**08 02 55.2**	**-0.4**
	3.9nm,0.9s,baz=138,slow=8.2,SNR=4.1						
	3.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**51.46**	**265**	P	**P**	**08 04 31.4**	**-2.2**
	1.1nm,0.8s,baz=72,slow=6.6,SNR=8.2						
	1.1nm,0.8s						

RSNC 24 08:03:04.5±0.0, 7°N±1°×7°4W±°, h111km±1km, M2.2, mb3.6, ML1.9, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.36**	**83**	P	Pn	08 03 20.2	-0.7
BARC				S	Sn	08 03 32.4	-0.9
BRJC	**Barrancabermej**	**0.47**	**334**	P	Pn	08 03 20.4	-0.9
BRJC				S	Sn	08 03 32.7	-1.2
VMM09	**Lebrija**	**0.62**	**23**	P	Pn	08 03 21.7	-0.8
VMM09				S	Sn	08 03 35.6	-0.5
RUSC	**La Rusia**	**0.80**	**145**	P	Pn	08 03 23.1	-1.3
RUSC				S	Sn	08 03 38.3	-0.9
VMM07	**Puerto Wilches**	**0.86**	**339**	P	Pn	08 03 26.1	+1.7
VMM07				S	Sn	08 03 40.6	+1.1
PTBC	**PUERTO BERRIO,**	**0.91**	**269**	P	Pn	08 03 23.0	-1.9
PTBC				S	Sn	08 03 37.9	-2.4
SPBC	**San Pablo de B**	**1.04**	**211**	P	Pn	08 03 25.0	-1.3
SPBC				S	Sn	08 03 41.5	-1.2
EZNC	**La Esperanza**	**1.09**	**12**	P	Pn	08 03 25.7	-1.1
EZNC				S	Sn	08 03 42.3	-1.4
PAMC	**Pamplona, Colo**	**1.15**	**47**	P	Pn	08 03 26.8	-1.0
PAMC				S	Sn	08 03 44.8	-0.6
VMM05	**San Martn**	**1.35**	**359**	P	Pn	08 03 29.2	-0.4
VMM05				S	Sn	08 03 48.3	-0.3
OCAC	**Ocana**	**1.69**	**7**	P	Pn	08 03 32.5	-1.4
OCAC				S	Sn	08 03 55.7	-0.5
ROSC	**El Rosal**	**1.87**	**205**	P	Pn	08 03 35.8	-0.5
ROSC				S	Sn	08 03 59.4	-1.0
CHIC	**Chingaza**	**1.92**	**186**	P	Pn	08 03 35.9	-1.0
CHIC				S	Sn	08 04 00.6	-1.0
CVER	**Cruz Verde, Cu**	**2.08**	**195**	P	Pn	08 03 39.4	+0.3
GUY2C	**Guyana, Caldas**	**2.24**	**234**	P	Pn	08 03 41.0	-0.1
GUY2C				S	Sn	08 04 08.3	-0.8
UREC	**San Jos de Ur**	**2.31**	**301**	P	Pn	08 03 40.0	-1.5
UREC				S	Sn	08 04 08.6	-1.3
VILC	**Villavicencio,**	**2.43**	**184**	P	Pn	08 03 42.5	-0.7
VILC				S	Sn	08 04 11.8	-1.0
CBOC	**Ciudad Bolivar**	**2.55**	**255**	P	Pn	08 03 44.3	-0.5
CBOC				S	Sn	08 04 14.8	-0.9
DBBC	**Dabeiba**	**2.69**	**280**	P	Pn	08 03 46.2	-0.4
DBBC				S	Sn	08 04 18.3	-0.6
PRAC	**Prado**	**3.12**	**206**	P	Pn	08 03 50.7	-1.5
PRAC				S	Sn	08 04 27.9	-1.1
APAC	**Apartado, Choc**	**3.30**	**294**	P	Pn	08 03 53.4	-1.1
APAC				S	Sn	08 04 32.7	-0.5
ARGC	**Ariguani, Magd**	**3.36**	**348**	P	Pn	08 03 56.1	+0.7
ARGC				S	Sn	08 04 34.9	+0.3
URMC	**La Uribe, Meta**	**3.39**	**194**	P	Pn	08 03 54.7	-1.1
URMC				S	Sn	08 04 34.6	-0.8
SDV	**Santo Domingo**	**3.70**	**51**	P	Pn	08 03 58.1	-1.9
SDV				S	Sn	08 04 39.6	-3.4
SJCC	**San Jacinto, C**	**3.70**	**334**	P	Pn	08 03 57.4	-2.5
SJCC				S	Sn	08 04 38.8	-4.0
MACC	**Macarena, Meta**	**4.39**	**184**	P	Pn	08 04 06.3	-2.8
MACC				S	Sn	08 04 55.4	-3.9
CRJC	**Cerrejon, Guaj**	**4.49**	**8**	P	Pn	08 04 07.9	-2.7
CRJC				S	Sn	08 04 59.1	-2.8
URIC	**Uribia, Colomb**	**5.34**	**17**	P	Pn	08 04 19.2	-2.8
URIC				S	Sn	08 05 19.2	-3.1

IDC 24 08:16:47.8±2.2, 4.80N×126.08E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=137.7km s-min=25.5km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.75**	**181**	P	P	08 21 52.5	+0.7
	3.5nm,0.8s,baz=360,slow=6.4,SNR=10						
	3.5nm,0.8s						
WRA	**Warramunga Arr**	**25.89**	**162**	P	P	08 22 21.1	-0.6
	1.2nm,0.9s,baz=337,slow=9.6,SNR=5.3						
	1.2nm,0.9s						
ASAR	**Alice Springs**	**29.30**	**165**	P	P	08 22 52.2	-0.1
	0.5nm,0.5s,baz=345,slow=9.1,SNR=14						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**56.31**	**325**	P	P	08 26 30.5	0.0
	0.1nm,0.4s,baz=130,slow=5.8,SNR=4.7						
	0.1nm,0.4s						

AZER ***24*** *08:20:39.0, 41.82°N×49.27°E, h38km, ml2.5*
DRS ***24*** *08:20:40.3, 41.70°N×49.25°E, h30km*

ISC 24 08:20:45.3±1.8, 41.61N±0.04×49.08E±0.09, h35km, n19, σ2s33/38, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUBA	**Quba, Azerbaij**	**0.51**	**240**	P	**Pn**	**08 20 55.0**	**-1.2**
QUBA				S	**Sn**	**08 21 07.7**	**+4.0**
SIZA	**Siyzn**	**0.55**	**194**	P	**Pn**	**08 20 54.3**	**-2.5**
SIZA				S	**Sn**	**08 21 06.4**	**+1.6**
QSAR	**Qusar**	**0.62**	**261**	P	**Pn**	**08 20 55.8**	**-1.9**
QSAR				S	**Sn**	**08 21 08.0**	**+1.6**
KSMR	**Kasumkent**	**0.71**	**270**	*e*Pg	**Pn**	**08 20 57.0**	**-2.0**
	59nm,0.2s						
KSMR				*e*Sg	**Sn**	**08 21 10.3**	**+1.5**
	901nm,0.4s						
ATGJ	**Altiaghaj**	**0.76**	**188**	P	**Pn**	**08 20 57.7**	**-1.9**
ATGJ				S	**Sn**	**08 21 13.0**	**+3.1**
XNQ	**Khinaliq**	**0.83**	**238**	P	**Pn**	**08 20 59.7**	**-1.1**
XNQ				S	**Sn**	**08 21 14.9**	**+2.9**
PQL	**Pirkuli**	**0.90**	**204**	P	**Pn**	**08 21 01.1**	**-0.5**
PQL				S	**Sn**	**08 21 17.4**	**+3.9**
AKT	**Akhty**	**1.02**	**263**	*e*Pg	**Pn**	**08 21 01.8**	**-1.4**
	61nm,0.1s						
AKT				*e*Sg	**Sn**	**08 21 19.3**	**+2.9**
	301nm,0.2s						
URKR	**Urkarakh**	**1.21**	**298**	*e*Pg	**Pn**	**08 21 04.1**	**-1.8**
	38nm,0.3s						
URKR				*e*Sg	**Sn**	**08 21 22.7**	**+1.6**
	183nm,0.2s						
SGKR	**Sergokala**	**1.36**	**309**	*e*Pg	**Pn**	**08 21 05.2**	**-2.6**
	33nm,0.1s						
SGKR				*e*Sg	**Sn**	**08 21 24.6**	**+0.1**
	73nm,0.6s						
SEKA	**Sheki**	**1.47**	**255**	Pn	**Pn**	**08 21 07.9**	**-1.5**
SEKA				Sn	**Sn**	**08 21 27.0**	**-0.5**
KMKR	**Kumukh**	**1.57**	**290**	*e*Pg	**Pn**	**08 21 09.8**	**-1.1**
	18nm,0.2s						
KMKR				*e*Sg	**Sn**	**08 21 32.6**	**+2.6**
	172nm,0.4s						
GNBR	**Gunib**	**1.76**	**297**	*e*Pg	**Pn**	**08 21 12.6**	**-0.7**
	20nm,0.3s						
GNBR				*e*Sg	**Sn**	**08 21 37.9**	**+3.3**
	86nm,0.6s						
ARKR	**Arakani**	**1.84**	**303**	*e*Pg	**Pn**	**08 21 13.3**	**-1.1**
	6.0nm,0.2s						
ARKR				*e*Sg	**Sn**	**08 21 39.2**	**+2.7**
	30nm,0.3s						
BUJR	**Buynaksk**	**1.90**	**310**	*e*Pg	**Pn**	**08 21 14.0**	**-1.2**
	69nm,0.4s						
BUJR				*e*Sg	**Sn**	**08 21 40.4**	**+2.4**
	89nm,0.4s						
XNZR	**Khunzakh**	**2.00**	**298**	*e*Pg	**Pn**	**08 21 15.6**	**-1.1**
	8.0nm,0.4s						
XNZR				*e*Sg	**Sn**	**08 21 43.7**	**+3.1**
	26nm,0.4s						
KRNR	**Karanay**	**2.02**	**308**	*e*Pg	**Pn**	**08 21 14.7**	**-2.3**
	7.0nm,0.3s						
KRNR				*e*Sg	**Sn**	**08 21 42.4**	**+1.3**
	25nm,0.4s						
UNCR	**Uncukul**	**2.02**	**304**	*e*Pg	**Pn**	**08 21 15.9**	**-1.1**
	12nm,0.2s						
UNCR				*e*Sg	**Sn**	**08 21 44.2**	**+3.1**
	28nm,0.6s						
GDB	**GEDABAY**	**2.66**	**252**	Pn	**Pn**	**08 21 21.8**	**-4.1**
GDB				Sn	**Sn**	**08 21 54.1**	**-3.0**

AZER ***24*** *08:23:45.3, 38.39°N×44.50°E, h12km, ml2.5*
AFAD ***24*** *08:23:46.9, 38.43°N×44.48°E, h7km±1km, ML2.4*
ISK ***24*** *08:23:48.7, 38.35°N×44.26°E, h5km, ML2.3/4*

ISC 24 08:23:47.6±1.2, 38.39N±0.03×44.45E±0.03, h8km±10km, n18, σ0s95/34, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**307**	P	**Pg**	**08 23 55.9**	**-0.5**
OZAP				S	**Sg**	**08 24 02.7**	**+0.4**
OZAP				IAML		08 24 05.0	
	comp=N,223nm,1.0s						
YOVA	**Hakkari_Yksek**	**0.81**	**189**	P	**Pb**	**08 24 03.6**	**-0.5**
YOVA				S	**Sb**	**08 24 15.6**	**+0.2**
TVAN	**Van**	**0.83**	**280**	P	**Pg**	**08 24 02.6**	**-1.0**
TVAN				S	**Sb**	**08 24 15.7**	**-0.1**
TVAN				IAML		08 24 26.0	
	comp=N,99nm,0.4s						
HAKT	**HAKKARI**	**1.02**	**215**	P	**Pg**	**08 24 06.9**	**-0.3**
HAKT				IAML	**Sn**	**08 24 23.0**	**0.0**
	comp=N,103nm,0.3s						
HAKT				S	**Sn**	**08 24 23.0**	**0.0**
HAKT	**HAKKARI**	**1.02**	**215**	P	**Pb**	**08 24 07.2**	**-0.4**
HAKT				S	**Sn**	**08 24 23.1**	**+0.1**
GEVA	**Gevas**	**1.10**	**266**	P	**Pg**	**08 24 06.9**	**-1.8**
GEVA				S	**Sb**	**08 24 24.1**	**+0.7**
NAX	**Nakhchivan**	**1.13**	**46**	P	**Pb**	**08 24 08.5**	**-0.9**
NAX				S	**Sn**	**08 24 25.0**	**-0.5**
AKDM	**Akdamar-Van**	**1.16**	**267**	Pg	**Pg**	**08 24 08.7**	**-1.2**
ORD	**Ordubad**	**1.32**	**66**	P	**Pg**	**08 24 11.9**	**-1.1**
ORD				S	**Sn**	**08 24 30.6**	**+0.4**
SBZ	**Shahbuz**	**1.32**	**40**	P	**Pn**	**08 24 11.6**	**-0.8**
SBZ				S	**Sn**	**08 24 31.2**	**+1.0**
CUKT	**Cukurca**	**1.32**	**211**	Pn	**Pg**	**08 24 13.2**	**+0.2**
CUKT				Sn	**Sn**	**08 24 31.1**	**+0.7**
CUKT	**Cukurca**	**1.32**	**211**	P	**Pg**	**08 24 13.7**	**+0.7**
CUKT				S	**Sn**	**08 24 30.4**	**0.0**
CUKT				IAML		08 24 35.0	
	comp=E,96nm,0.6s						
CUKT				IAML		08 24 38.0	
	comp=N,67nm,0.6s						
HYR	**Heyderabad**	**1.36**	**13**	P	**Pg**	**08 24 13.8**	**+0.1**
HYR				S	**Sn**	**08 24 33.1**	**+1.9**
IGDI	**IGDIR**	**1.50**	**349**	P	**Pg**	**08 24 16.1**	**-0.3**
IGDI				S	**Sg**	**08 24 37.4**	**+1.5**
PERV	**Siirt/Pervari-**	**1.57**	**254**	P	**Pg**	**08 24 17.9**	**+0.2**
PERV				S	**Sg**	**08 24 40.6**	**+2.5**
PERV				IAML		08 24 44.0	
	comp=N,55nm,0.4s						
PERV				IAML		08 24 58.0	
	comp=E,50nm,0.5s						
AGRB	**Hanur-Agry**	**1.64**	**317**	Pn	**Pg**	**08 24 18.4**	**-0.7**
AGRB				Sn	**Sg**	**08 24 41.2**	**+0.9**
GNI	**Garni**	**1.77**	**7**	Pn	**Pg**	**08 24 22.5**	**+1.0**
GURO	**Guroymak-BITLI**	**1.91**	**275**	Pn	**Pb**	**08 24 21.9**	**-0.

OZAP Van, Ozalp-Mer 0.47 298 P **Pg** 08 53 18.6 -0.3
OZAP S **Sg** 08 53 25.9 +0.9
OZAP Van, Ozalp-Mer 0.47 298 Pg **Pg** 08 53 18.6 -0.3
ISHB Shabestar 0.88 100 Pg **Pg** 08 53 25.8 -0.8
YOVA Hakkari_Yksek 0.88 192 P **Pb** 08 53 27.0 -0.6
YOVA S **Sn** 08 53 41.7 -0.6
YOVA Hakkari_Yksek 0.88 192 Pg **Pb** 08 53 27.0 -0.6
TVAN Van 0.88 276 P **Pg** 08 53 26.3 -0.4
TVAN S **Sn** 08 53 41.7 -0.8
TVAN Van 0.88 276 Pg **Pg** 08 53 26.3 -0.4
MAKU Maku 0.92 8 Pg **Pg** 08 53 26.5 -1.0
VMUR Van-Muradiye 0.92 306 P **Pg** 08 53 27.2 -0.3
VMUR S **Sb** 08 53 40.9 -0.2
VMUR Van-Muradiye 0.92 306 Pg **Pg** 08 53 27.2 -0.3
IMRD Marand 0.96 73 Pg **Pg** 08 53 28.1 -0.2
NAX Nakhchivan 1.05 46 P **Pb** 08 53 30.0 -0.7
NAX S **Sn** 08 53 45.9 -0.7
ERCV ERCIS-VAN 1.09 302 Pg **Pn** 08 53 32.9 +0.9
ERCV Sg **Sn** 08 53 48.4 +0.8
HAKT HAKKARI 1.09 216 P **Pg** 08 53 30.0 -0.9
HAKT S **Sn** 08 53 48.6 +0.9
HAKT HAKKARI 1.09 216 Pg **Pg** 08 53 29.9 -0.9
HAKT HAKKARI 1.09 216 P **Pg** 08 53 30.1 -0.7
HAKT S **Sn** 08 53 48.3 +0.5
GEVA Gevas 1.16 264 P **Pg** 08 53 29.8 -2.2
GEVA S **Sn** 08 53 48.6 -0.6
AKDM Akdamar-Van 1.22 265 Pg **Pg** 08 53 31.8 -1.4
SBZ Shahbuz 1.25 40 P **Pg** 08 53 33.1 -0.6
SBZ S **Sn** 08 53 52.2 +0.8
ORD Ordubad 1.25 67 P **Pg** 08 53 33.2 -0.5
ORD S **Sn** 08 53 52.5 +1.2
DYDN Diyadin 1.27 330 P **Pg** 08 53 33.8 -0.7
DYDN S **Sg** 08 53 49.5 -1.3
DYDN Diyadin 1.27 330 Pg **Pg** 08 53 33.6 -0.7
ITBZ Tabriz 1.29 99 Pg **Pn** 08 53 33.2 -1.6
HYR Heyderabad 1.30 11 P **Pg** 08 53 35.0 +0.2
HYR S **Sn** 08 53 53.6 +1.0
IAZR Azarshahr 1.38 123 Pg **Pg** 08 53 36.2 -0.1
CUKT Cukurca 1.40 211 Pn **Pg** 08 53 38.1 +1.5
CUKT Sn **Sg** 08 53 57.3 +2.6
CUKT Cukurca 1.40 211 Pg **Pg** 08 53 37.0 +0.4
VAYK Vayk 1.43 29 *i* P **Pn** 08 53 36.0 -0.6
VAYK *i* S **Sg** 08 53 56.8 +0.9
ADCV BITLIS_Adilcev 1.45 285 P **Pn** 08 53 36.6 -0.4
ADCV S **Sg** 08 53 58.7 +2.1
IGDI IGDIR 1.46 346 P **Pn** 08 53 36.4 -0.7
IGDI S **Sg** 08 53 59.0 +2.2
IGDI IGDIR 1.46 346 Pg **Pn** 08 53 36.3 -0.7
ALVK Alvank 1.51 70 *eP* **Pn** 08 53 37.4 -0.3
ALVK *eS* **Sg** 08 53 57.7 -0.7
PERV Siirt/Pervari- 1.64 253 P **Pb** 08 53 40.4 -0.2
PERV S **Sg** 08 54 05.2 +2.8
DORK Agr/Tutak/Do 1.65 305 P **Pn** 08 53 39.5 -0.3
DORK S **Sg** 08 54 02.1 -0.8
MLAZ Malazgirt-MUS 1.69 295 Pn **Pg** 08 53 42.6 +0.4
MLAZ Sn **Sg** 08 54 05.4 +1.2
KOTA Agri, Merkez-K 1.70 323 P **Pg** 08 53 41.9 -0.5
KOTA S **Sg** 08 54 04.9 +0.5
GNI Garni 1.71 6 Pn **Pg** 08 53 42.2 -0.4
129nm,0.3s,baz=229,slow=9.3,SNR=252
GNI Garni 1.71 6 ‖ *iP* **Pg** 08 53 42.0 -0.6
GNI ‖ *iS* **Sg** 08 54 07.9 +3.1
METS Metsamor 1.74 349 *eP* **Pg** 08 53 42.9 -0.2
METS *eS* **Sg** 08 54 07.2 +1.6
VNNZ Vanand 1.74 342 *eP* **Pg** 08 53 43.1 -0.1
VNNZ *eS* **Sg** 08 54 07.7 +1.8
EGVZ Egvard 1.76 63 *eP* **Pb** 08 53 41.4 -1.3
EGVZ *eS* **Sb** 08 54 04.7 -0.5
GRS Goris 1.76 53 ‖ *iP* **Pn** 08 53 38.0 -3.2
GRS ‖ *iS* **Sb** 08 54 04.0 -1.2
ARUZ Aruch 1.87 350 *eP* **Pg** 08 53 46.0 +0.4
ARUZ *eS* **Sg** 08 54 12.5 +2.7
KAPZ Kaputan 1.88 4 *eP* **Pb** 08 53 44.4 -0.4
KAPZ *eS* **Sg** 08 54 09.3 -0.9
MAHB Mahabad 1.92 150 Pn **Pb** 08 53 45.5 0.0
AMBZ Amberd 1.95 354 *eP* **Pg** 08 53 46.3 -0.9
AMBZ *eS* **Sg** 08 54 13.1 +0.6
GURO Guroymak-BITLI 1.96 274 Pn **Pb** 08 53 46.1 0.0
IHRS Heris 1.98 93 Pn **Pb** 08 53 45.8 -0.8
IHSH Hashtrud 2.45 117 Pn **Pb** 08 53 52.8 -1.8
VRTB Varto-Mus 2.50 288 Pn **Pb** 08 53 54.0 -1.3
LSVT Lusahovit 2.52 12 *eP* **Pb** 08 53 53.7 -2.0
LSVT *eS* **Sb** 08 54 25.8 -1.3
ISRB Sarab 2.56 103 Pn **Pb** 08 53 54.5 -1.9
SRTK Saratovka 2.62 357 *eP* **Pb** 08 53 57.5 +0.1
SRTK *eS* **Sg** 08 54 32.2 -1.9
SVAN Silvan-Diyarba 2.63 265 Pn **Pb** 08 53 55.3 -2.2
SVAN Silvan-Diyarba 2.63 265 Pn **Pb** 08 53 55.0 -2.5
KARO Karliova-Bingo 2.84 289 Pn **Pb** 08 53 59.0 -2.2
BNGB Bingl 3.06 281 Pn **Pb** 08 54 02.1 -2.7
AKH Akhalkalaki 3.07 345 P **Pg** 08 54 06.8 -1.7
AKH S **Sg** 08 54 50.8 +2.4
DGRG David-gareji 3.07 12 P **Pg** 08 54 07.9 -0.8
DGRG S **Sg** 08 54 46.4 -2.1
TRLG Trialeti 3.11 354 P **Pb** 08 54 05.7 0.0
VSHL Vashlovani 3.13 27 P **Pb** 08 54 02.4 -3.7
VSHL S **Sg** 08 54 53.1 +2.6
DDFL Dedoflistskaro 3.24 22 P **Pg** 08 54 12.4 +0.5
YEDI Yedisu-Bingol 3.26 289 Pn **Pb** 08 54 05.7 -2.5
TBLG Delisi 3.29 3 P **Pg** 08 54 14.5 +1.7
TBLG S **Sg** 08 55 01.5 +6.1
LGD Lagodekhi 3.63 21 P **Pg** 08 54 18.5 -0.9
LGD S **Sg** 08 55 08.3 +1.8
ALIG Mtskhetisjvari 3.72 350 P **Pb** 08 54 17.2 +1.2
CHRG Chargali 3.89 4 P **Pb** 08 54 21.0 +1.9
CHRG S **Sg** 08 55 19.2 +4.3
GUDG Gudauri 4.02 360 P **Pg** 08 54 24.7 -2.0
SHTL Shatili 4.24 6 P **Pb** 08 54 25.9 +1.0
KBZ Khabaz 5.42 347 Pn Pn 08 54 36.9 +5.6
0.1nm,0.3s,baz=166,slow=8.3,SNR=0.7
ASF Jabal al Asfar 8.83 227 Pn **Pn** 08 55 17.1 -1.1
0.4nm,0.3s,baz=51,slow=6.5,SNR=2.1
ASF Lg Lg 08 57 39.2
0.3nm,0.3s,baz=34,slow=17,SNR=2.7
ASF LR LR 08 59 10.2
comp=Z,162nm,18.4s,baz=28,slow=41
1.1nm,0.3s
MMAI Mount Meron Ar 9.18 237 Pn **Pn** 08 55 24.9 +1.9
0.9nm,0.3s,baz=68,slow=16,SNR=1.5
MMAI Lg Lg 08 57 53.8
6.3nm,0.3s,baz=52,slow=38,SNR=7.4
MMAI LR LR 08 59 23.6
comp=Z,209nm,21.0s,baz=44,slow=41
0.5nm,0.3s
EIL Elat 11.81 225 Pn **Pn** 08 56 00.7 +1.8
0.4nm,0.3s,baz=29,slow=16,SNR=2.4
EIL Lg Lg 08 59 20.1
0.4nm,0.3s,baz=58,slow=16,SNR=1.5
EIL LR LR 09 01 03.4
comp=Z,107nm,19.6s,baz=56,slow=40
4.3nm,0.7s
AKTO Aktyubinsk 15.35 34 Pn **Pn** 08 56 45.5 -1.6
0.2nm,0.3s,baz=225,slow=8.5,SNR=3.8
2.7nm,1.0s
AKASG Malin Array Be 16.36 323 Pn **Pn** 08 56 59.3 -0.8
0.4nm,0.3s,baz=135,slow=12,SNR=5.7
1.6nm,0.7s
ARTI Arti 20.18 23 P Pn 08 57 46.3 -0.6
4.2nm,0.5s,baz=205,slow=8.9,SNR=8.3
ARTI LR LR 09 07 04.7
comp=Z,101nm,18.0s,baz=318,slow=41
4.2nm,0.5s
BVAR Borovoye Array 23.04 42 P **P** 08 58 18.1 +2.4
2.1nm,0.8s,baz=229,slow=8.8,SNR=8.0
2.1nm,0.8s
AAK Ala-Archa 23.10 70 LR LR 09 08 26.2
comp=Z,63nm,20.2s,baz=314,slow=40
GERES GERESS Array B 24.45 305 P **P** 08 58 28.6 -1.0
0.5nm,0.8s,baz=98,slow=8.1,SNR=3.5
0.5nm,0.8s
CLL Collm 25.55 310 *i* P **P** 08 58 36.3 -3.1
comp=Z,3.0nm,0.8s
FINES FINESS Array B 25.72 339 P **P** 08 58 40.8 0.0
comp=Z,0.9nm,0.5s,baz=137,slow=10,SNR=4.1
comp=Z,0.9nm,0.5s
KURBB Kurchatov Arra 26.88 52 P **P** 08 58 53.5 +2.0
comp=Z,4.7nm,1.0s,baz=261,slow=8.9,SNR=9.9
comp=Z,4.7nm,1.0s
MKAR Makanchi Array 28.79 61 P **P** 08 59 10.3 +1.6
comp=Z,1.2nm,0.7s,baz=266,slow=6.5,SNR=10
comp=Z,1.2nm,0.7s
HFS Hagfors 29.13 328 LR LR 09 13 23.6
comp=Z,178nm,18.6s,baz=337,slow=42

ZALV Zalesovo Beam 31.41 47 P **P** 08 59 33.5 +1.8
comp=Z,0.8nm,0.4s,baz=256,slow=9.7,SNR=5.0
comp=Z,0.8nm,0.4s
ESDC Sonseca Array 37.30 288 P **P** 09 00 22.6 -0.3
comp=Z,1.0nm,0.8s,baz=73,slow=8.5,SNR=6.4
comp=Z,1.0nm,0.8s
SONM Songino Array 45.01 57 LR LR 09 24 13.2
comp=Z,30nm,19.1s,baz=337,slow=41
CMAR Chiang Mai Arr 51.06 97 P **P** 09 02 15.1 +1.8
comp=Z,1.4nm,0.3s,baz=307,slow=5.2,SNR=5.9
comp=Z,1.4nm,0.3s
YKA Yellowknife Ar 78.01 350 P **P** 09 05 08.8 -0.1
comp=Z,0.1nm,0.5s,baz=11,slow=5.5,SNR=5.4
comp=Z,0.1nm,0.5s

*AZER **24** 08:58:11.8, 38˚.41N×44˚.47E, h5km, ml2.9*
*TEH **24** 08:58:12.7, 38˚.40N×44˚.38E, h5km±349km, ML2.8, Presumed earthquake*
*AFAD **24** 08:58:12.9, 38˚.48N×44˚.48E, h7km±4km, ML2.8*
*ISK **24** 08:58:17.0, 38˚.48N×44˚.30E, h12km, ML2.6/5*

ISC 24 08:58:13.8±1.2, **38˚.44N**±0˚.03×**44˚.45E**±0˚.02, **h1**km±11km, **n25**, σ1§31/42, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**302**	P	**Pg**	**08 58 22.1**	**+0.2**
OZAP				S	**Sg**	**08 58 28.6**	**+1.3**
OZAP				IAML		08 58 30.0	
	comp=N,2μm,0.4s						
TVAN	**Van**	**0.82**	**277**	P	**Pg**	**08 58 28.7**	**-0.8**
TVAN				S	**Sb**	**08 58 41.7**	**-0.9**
TVAN				IAML		08 58 43.0	
	comp=N,337nm,0.6s						
TVAN				IAML		08 58 57.0	
	comp=E,315nm,0.5s						
YOVA	**Hakkari_Yksek**	**0.86**	**188**	P	**Pg**	**08 58 30.6**	**+0.3**
YOVA				S	**Sb**	**08 58 43.3**	**-0.4**
YOVA				IAML		08 58 48.0	
	comp=N,243nm,0.5s						
VMUR	**Van-Muradiye**	**0.88**	**309**	P	**Pg**	**08 58 30.0**	**-0.6**
VMUR				S	**Sb**	**08 58 44.9**	**+0.6**
VMUR				IAML		08 58 47.0	
	comp=E,277nm,1.1s						
ISHB	**Shabestar**	**0.93**	**99**	Pg	**Pg**	**08 58 31.3**	**-0.4**
MAKU	**Maku**	**0.93**	**11**	Pg	**Pg**	**08 58 31.1**	**-0.6**
IMRD	**Marand**	**1.02**	**74**	Pg	**Pb**	**08 58 33.9**	**-0.5**
IMRD				Sg	**Sn**	**08 58 48.3**	**-2.1**
HAKT	**HAKKARI**	**1.06**	**214**	P	**Pg**	**08 58 33.9**	**-0.1**
HAKT				S	**Sn**	**08 58 50.6**	**-0.8**
HAKT				IAML		08 58 52.0	
	comp=N,227nm,0.3s						
HAKT	**HAKKARI**	**1.06**	**214**	P	**Pg**	**08 58 34.1**	**+0.1**
HAKT				S	**Sn**	**08 58 51.0**	**-0.3**
GEVA	**Gevas**	**1.10**	**264**	P	**Pg**	**08 58 33.1**	**-1.7**
GEVA				S	**Sn**	**08 58 51.3**	**-1.0**
NAX	**Nakhchivan**	**1.10**	**48**	P	**Pn**	**08 58 35.0**	**-1.1**
NAX				S	**Sn**	**08 58 53.0**	**+0.7**
DYDN	**Diyadin**	**1.25**	**332**	P	**Pg**	**08 58 36.2**	**-1.6**
DYDN				S	**Sg**	**08 58 52.4**	**-1.6**
DYDN				IAML		08 58 59.0	
	comp=N,143nm,0.7s						
SBZ	**Shahbuz**	**1.29**	**42**	P	**Pn**	**08 58 38.6**	**-0.5**
SBZ				S	**Sn**	**08 58 58.6**	**+1.7**
ORD	**Ordubad**	**1.30**	**68**	P	**Pb**	**08 58 39.8**	**+0.7**
HYR	**Heyderabad**	**1.32**	**14**	P	**Pb**	**08 58 41.0**	**+1.6**
HYR				S	**Sn**	**08 59 01.1**	**+3.4**
ITBZ	**Tabriz**	**1.35**	**98**	Pg	**Pn**	**08 58 38.6**	**-1.3**
CUKT	**Cukurca**	**1.36**	**209**	Pn	**Pg**	**08 58 42.4**	**+2.5**
CUKT				Sn	**Sn**	**08 59 00.6**	**+1.8**
ADCV	**BITLIS_Adilcev**	**1.40**	**286**	P	**Pn**	**08 58 39.8**	**-0.8**
ADCV				S	**Sn**	**08 59 00.4**	**+0.7**
IGDI	**IGDIR**	**1.46**	**349**	P	**Pb**	**08 58 41.2**	**-0.5**
IGDI				S	**Sg**	**08 59 03.4**	**+2.9**
AGRB	**Hanur-Agry**	**1.60**	**315**	Pn	**Pg**	**08 58 44.6**	**+0.1**
AGRB				Sn	**Sb**	**08 59 04.5**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.61**	**307**	P	**Pn**	**08 58 42.7**	**-0.7**
DORK				S	**Sg**	**08 59 05.8**	**+0.3**
GNI	**Garni**	**1.72**	**8**	Pn	**Pg**	**08 58 47.2**	**+0.4**
GURO	**Guroymak-BITLI**	**1.90**	**274**	Pn	**Pb**	**08 58 48.4**	**-0.9**
IHRS	**Heris**	**2.04**	**93**	Pn	**Pg**	**08 58 51.9**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.57**	**265**	Pn	**Pn**	**08 58 57.9**	**+1.3**

*IDC **24** 09:00:21.0±0.6, 14˚.14N×92˚.34W, h0km, mb4.5/19, mbtmp4.5/22, ML4.3/3, MS4.1/49, Error ellipse: s-maj=23.7km s-min=11.6km az=50.0*
*NEIC **24** 09:00:23.3±2.4, 13˚.97N±0˚.04×92˚.69W±0˚.05, h10km±1km, mb5.0/494, Mww4.9/20, Md4.7/41(MEX), Error ellipse: s-maj=7.8km s-min=7.5km az=139.0*
*MEX **24** 09:00:23.0±0.4, 13˚.80N×92˚.94W, h13km±18km*
*GCG **24** 09:00:23.6±2.2, 13˚.83N×92˚.74W, h29km±91km, MD5.2, ML4.8, Presumed earthquake*
*SNET **24** 09:00:23.6±5.3, 13˚.90N×92˚.70W, h10km, ML4.8, Presumed earthquake*
*GCMT **24** 09:00:24.3±0.4, 13˚.83N±0˚.02×93˚.01W±0˚.03, h14km±1km, MW4.9/92, Moment Tensor Solution. s37,c40; s92,c127; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.09±.12; Mθθ=1.26±.07; Mϕϕ=0.82±.08; Mrθ=1.15±.17; Mθϕ=0.58±.04; Mϕr=1.75±.21; Best double couple: Mo=2.79900×10¹⁶ NP1:ϕs=299.00000°, δ=22.00000°, λ=70.00000°. NP2: ϕs=140.00000°, δ=69.00000°, λ=98.00000°. Principal axes: T 3.0630, Plg65.0000°, Azm63.0000°; N -0.5260, Plg7.0000°, Azm317.0000°; P -2.5350, Plg24.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*CATAC **24** 09:00:26.5±0.3, 14˚.N±2˚×9˚.3W±˚, h66km, M4.8/31, mb4.7/1, mB4.5/1, MLv4.8/31, Mw(mB)3.7/1 Error ellipse: s-maj=5.4km s-min=2.7km az=39.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=1.33; Mθθ=0.98; Mϕϕ=0.36; Mrθ=0.06; Mϕθ=0.64; Mϕr=0.56; Fault plane solution: M0=1.46876×10¹⁶ NP1:ϕs=104.50812°, δ=42.82425°, λ=61.87030°. NP2:ϕs=320.59696°, δ=53.16868°, λ=113.60321°. Principal axes: T 1.5264, Plg70.4766°, Azm288.5049°; N -0.1231, Plg18.6921°, Azm125.9188°; P -1.4033, Plg5.4363°, Azm34.0737°; confirmed*

ISC 24 09:00:21.7±1.4, **13.88N**±0˚.04×**92.79W**±0.03, **h11**km±8km, **n814**, σ1§73/656, **mb5.0**/232, **MS4.1**/47, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.14**	**27**		**Pb**	**09 00 42.7**	**-0.8**
THIG					**Sb**	**09 00 57.6**	**-0.7**
THIG		**1.14**	**27**	*eP*	**Pb**	**09 00 42.7**	**-0.8**
THIG				*eS*	**Sb**	**09 00 57.6**	**-0.7**
THIG		**1.14**	**27**	*i* P	**Pg**	**09 00 43.3**	**-0.4**
THIG				IAML		09 01 25.1	
	comp=N,12μm,1.4s						
SMCA	**Catarina**	**1.19**	**36**	*i* P	**Pn**	**09 00 44.1**	**-0.3**
SMCA				IAML		09 01 47.2	
	comp=Z,7μm,1.4s						
RTAL	**Retalhuleu**	**1.24**	**59**		**Pg**	**09 00 45.3**	**-0.3**
RTAL				Sn	**Sb**	**09 00 59.3**	**-1.9**
RTAL	**Retalhuleu**	**1.24**	**59**	*eP*	**Pg**	**09 00 45.2**	**-0.3**
RTAL				*i* S	**Sn**	**09 01 03.0**	**+1.2**
RTAL	**Retalhuleu**	**1.24**	**59**	P	**Pg**	**09 00 45.2**	**-0.4**
RTAL				S	**Sb**	**09 01 00.2**	**-1.1**
PATR	**El Naranjo**	**1.34**	**24**		**Pn**	**09 00 45.8**	**-0.8**
PATR					**Sn**	**09 01 04.0**	**-0.6**
PATR	**El Naranjo**	**1.34**	**24**	*eP*	**Pn**	**09 00 45.8**	**-0.8**
PATR				*eS*	**Sn**	**09 01 04.0**	**-0.6**
CHUJ	**Union Juarez**	**1.38**	**29**	*eP*	**Pn**	**09 00 46.5**	**-0.6**
CHUJ				*eS*	**Sb**	**09 01 04.3**	**-1.0**
PAVE	**Pavencul**	**1.43**	**25**		**Pn**	**09 00 47.2**	**-0.7**
PAVE					**Sn**	**09 01 06.2**	**-0.7**
PAVE	**Pavencul**	**1.43**	**25**	*eP*	**Pn**	**09 00 47.2**	**-0.7**
PAVE				*eS*	**Sn**	**09 01 06.2**	**-0.7**
STG2	**El Palmar, Qui**	**1.48**	**68**	*i* P	**Pn**	**09 00 47.0**	**-1.4**
STG5	**El Palmar, Qui**	**1.49**	**70**	*i* P	**Pn**	**09 00 46.9**	**-1.7**
STG8	**El Palmar, Qui**	**1.51**	**68**	*i* P	**Pn**	**09 00 47.6**	**-1.3**
QUEO	**Labor Ovalle**	**1.58**	**51**	*i* P	**Pb**	**09 00 50.3**	**-0.9**
QUEO				*i* S	**Sg**	**09 01 11.8**	**-0.9**
QUEO				IAML		09 01 46.7	
	comp=N,15μm,0.9s						
SOKI	**Kika Raxquin**	**1.64**	**55**	*i* P	**Pn**	**09 00 50.9**	**0.0**
SOKI				IAML		09 01 27.9	
	comp=E,10μm,1.3s						
PCIG		**1.86**	**347**		**Pn**	**09 00 52.1**	**-1.4**
PCIG					**Sn**	**09 01 14.8**	**-2.2**
PCIG		**1.86**	**347**	*eP*	**Pn**	**09 00 52.1**	**-1.4**
PCIG				*i* S	**Sn**	**09 01 14.8**	**-2.2**
HUEH	**Huehuetenango**	**1.90**	**41**		**Pb**	**09 00 55.5**	**-1.0**
HUEH	**Huehuetenango**	**1.90**	**41**	Sn	**Sn**	**09 01 16.3**	**-2.0**
HUEH	**Huehuetenango**	**1.90**	**41**	*eP*	**Pb**	**09 00 55.5**	**-1.0**
HUEH				*i* S	**Sg**	**09 01 23.9**	**+1.1**
HUEH	**Huehuetenango**	**1.90**	**41**	P	**Pb**	**09 00 55.8**	**-0.7**
HUEH				S	**Sn**	**09 01 17.1**	**-1.2**
HUEH	**Huehuetenango**	**1.90**	**41**	*i* P	**Pb**	**09 00 55.6**	**-0.9**
HUEH				IAML		09 01 32.7	
	comp=E,16μm,0.9s						
FG8	**Yepocapa, Chim**	**2.20**	**80**	*i* P	Pn	09 00 53.4	-4.9
FG16	**Alotenango, Sa**	**2.25**	**80**	*i* P	**Pn**	**09 00 54.5**	**-4.6**
GCG4	**OSOP**	**2.30**	**72**	*i* P	**Pn**	**09 01 00.2**	**+0.5**
GCG4				IAML		09 01 51.6	
	comp=E,8μm,1.0s						
CCIG	**Comitan**	**2.47**	**15**		**Pb**	**09 01 04.1**	**-2.1**
CCIG					**Sn**	**09 01 32.4**	**+0.1**
CCIG	**Comitan**	**2.47**	**15**	*eP*	**Pb**	**09 01 04.1**	**-2.1**
CCIG				*eS*	**Sn**	**09 01 32.4**	**+0.1**
CCIG	**Comitan**	**2.47**	**15**	P	**Pb**	**09 01 04.0**	**-2.1**
CCIG				S	**Sn**	**09 01 33.5**	**+1.1**
CCIG	**Comitan**	**2.47**	**15**	*i* P	**Pb**	**09 01 04.1**	**-2.1**
CCIG				IAML		09 01 45.5	
	comp=N,5μm,1.0s						
APG	**El Apazote**	**2.52**	**63**	Pn	**Pn**	**09 01 02.9**	**+0.1**
	comp=N,1.6nm,0.3s,baz=206,slow=14,SNR=444						
APG				Lg	Lg	09 01 36.6	
	comp=N,4.0nm,0.3s,baz=195,slow=12,SNR=6.5						
APG	**El Apazote**	**2.52**	**63**	*i* P	**Pn**	**09 01 03.9**	**+1.1**
CARR	**Arriaga**	**2.59**	**335**	*eP*	**Pn**	**09 01 02.1**	**-1.4**
CARR				*eS*	**Sn**	**09 01 30.6**	**-4.5**
FAME	**Alcaldia de Sa**	**2.70**	**90**	P	**Pn**	**09 01 05.3**	**+0.3**
FAME				S	**Sn**	**09 01 35.4**	**-2.4**
AVCB	**Coban**	**2.80**	**55**	IAML		09 02 06.9	
	comp=E,9μm,0.6s						
TGBT	**Tuxtla Gutierr**	**2.89**	**354**	*eS*	**Sn**	**09 01 39.0**	**-3.5**
TGIG		**2.90**	**354**		**Pn**	**09 01 08.8**	**+0.9**
TGIG					**Sn**	**09 01 41.7**	**-1.1**
TGIG		**2.90**	**354**	*eP*	**Pn**	**09 01 08.8**	**+0.9**
TGIG				*eS*	**Sn**	**09 01 41.7**	**-1.1**
TGIG		**2.90**	**354**	*i* P	**Pn**	**09 01 08.7**	**+0.9**
SLOZ	**Alcaldia de Sa**	**2.92**	**87**	P	**Pn**	**09 01 08.9**	**+0.7**
SLOZ				S	**Sn**	**09 01 41.9**	**-1.5**
SLOZ	**Alcaldia de Sa**	**2.92**	**87**	*eP*	**Pn**	**09 01 08.1**	**-0.1**
NUBE	**Las Nubes**	**2.93**	**89**	P	**Pn**	**09 01 08.5**	**+0.1**
NUBE				S	**Sn**	**09 01 41.6**	**-2.0**
NUBE	**Las Nubes**	**2.93**	**89**	*i* P	**Pn**	**09 01 08.1**	**-0.3**
LOAL	**Lomas de Alarc**	**2.93**	**87**	P	**Pn**	**09 01 08.4**	**+0.1**
LOAL				S	**Sn**	**09 01 41.6**	**-1.9**
RBDL	**Robledal**	**3.02**	**85**	*i* P	**Pn**	**09 01 09.7**	**0.0**
CEVE	**Cerro Verde**	**3.08**	**91**	*i* P	**Pn**	**09 01 11.0**	**+0.5**
CEVE				S	**Sn**	**09 01 45.3**	**-2.2**
CEVE	**Cerro Verde**	**3.08**	**91**	*eP*	**Pn**	**09 01 10.4**	**-0.1**
UNIC	**Universidad Ca**	**3.15**	**88**	P	**Pn**	**09 01 11.3**	**0.0**
UNIC				S	**Sn**	**09 01 47.2**	**-1.8**
UNIC	**Universidad Ca**	**3.15**	**88**	*eP*	**Pn**	**09 01 10.7**	**-0.6**
JAYA	**Jayaque - finc**	**3.26**	**94**	P	**Pn**	**09 01 13.0**	**+0.1**
JAYA				S	**Sn**	**09 01 49.2**	**-2.6**
JAYA	**Jayaque - finc**	**3.26**	**94**	*i* P	**Pn**	**09 01 12.5**	**-0.4**
CEDA	**San Andres**	**3.30**	**91**	P	**Pn**	**09 01 13.6**	**+0.2**
CEDA				S	**Sn**	**09 01 50.3**	**-2.4**
CEDA	**San Andres**	**3.30**	**91**	*eP*	**Pb**	**09 01 18.0**	**-2.3**
MTO3	**Montecristo**	**3.37**	**81**		**Pn**	**09 01 14.2**	**-0.3**
MTO3	**Montecristo**	**3.37**	**81**	P	**Pn**	**09 01 14.2**	**-0.3**
MTO3				S	**Sn**	**09 01 51.9**	**-2.7**
MTO3	**Montecristo**	**3.37**	**81**	*i* P	**Pn**	**09 01 14.2**	**-0.3**
PMON	**Piamonte**	**3.38**	**92**	P	**Pn**	**09 01 14.9**	**+0.2**
PMON				S	**Sn**	**09 01 53.0**	**-1.8**
PMON	**Piamonte**	**3.38**	**92**	*eP*	**Pn**	**09 01 14.4**	**-0.2**
LALI	**Alcalda de L**	**3.40**	**96**	P	**Pn**	**09 01 14.9**	**+0.2**
LALI				S	**Sn**	**09 01 53.2**	**-1.8**
ZAFR2	**Estanzuela, Za**	**3.41**	**78**	*i* P	**Pn**	**09 01 13.2**	**-1.6**
ESQI	**Esquipulas**	**3.41**	**78**		**Pn**	**09 01 15.2**	**+0.2**
ESQI	**Esquipulas**	**3.41**	**78**	P	**Pn**	**09 01 15.5**	**+0.5**
ESQI				S	**Sn**	**09 01 54.0**	**-1.6**
BOQS	**Boqueron**	**3.42**	**92**	*eP*	**Pn**	**09 01 14.8**	**-0.3**
UEES	**Universidad Ev**	**3.46**	**92**	P	**Pn**	**09 01 15.4**	**-0.2**
UEES				S	**Sn**	**09 01 54.9**	**-1.7**
UEES	**Universidad Ev**	**3.46**	**92**	*eP*	**Pn**	**09 01 16.6**	**+1.0**
SEMO	**Seminario San**	**3.47**	**93**	P	**Pn**	**09 01 16.2**	**+0.4**
SEMO				S	**Sn**	**09 01 55.1**	**-1.9**
UTEC	**Universidad Te**	**3.49**	**93**	P	**Pn**	**09 01 16.8**	**+0.7**
UTEC				S	**Sn**	**09 01 56.0**	**-1.5**
PANCS	**Alcalda de**	**3.52**	**94**	P	**Pn**	**09 01 16.6**	**+0.2**
PANCS				S	**Sn**	**09 01 56.6**	**-1.6**
IGN	**Direccin Gen**	**3.52**	**92**	S	**Sn**	**09 01 56.9**	**-1.3**
LOMA	**Loma Larga**	**3.53**	**93**	*eP*	**Pb**	**09 01 24.8**	**+0.5**
UDBS	**Universidad Do**	**3.54**	**92**	P	**Pn**	**09 01 17.0**	**+0.3**
UDBS				S	**Sn**	**09 01 56.8**	**-1.8**
UXUV	**UXUV**	**3.66**	**339**		**Pn**	**09 01 19.1**	**+0.9**
UXUV					**Sn**	**09 02 03.7**	**+2.2**
UXUV	**UXUV**	**3.66**	**339**	*eP*	**Pn**	**09 01 19.1**	**+0.9**
UXUV				*eS*	**Sn**	**09 02 03.7**	**+2.2**
HUIG	**Huatulco**	**3.71**	**301**	*eP*	**Pn**	**09 01 15.8**	**-3.3**
HUIG				*eS*	**Sn**	**09 01 56.5**	**-6.4**
HUIG	**Huatulco**	**3.71**	**301**	*i* P	**Pn**	**09 01 16.7**	**-2.4**
LLGN	**La Laguna**	**3.75**	**85**	P	**Pn**	**09 01 19.5**	**0.0**
LLGN				S	**Sn**	**09 02 01.4**	**-2.4**
LLGN	**La Laguna**	**3.75**	**85**	*eP*	**Pn**	**09 01 17.7**	**-1.9**
PAVA	**Las Pavas**	**3.75**	**92**	P	**Pn**	**09 01 19.6**	**-0.1**
PAVA				S	**Sn**	**09 02 01.2**	**-2.7**
PAVA	**Las Pavas**	**3.75**	**92**	*eP*	**Pn**	**09 01 20.1**	**+0.4**
CMIG	**Matias Romero**	**3.77**	**328**	Pn	**Pn**	**09 01 19.7**	**-0.2**
	comp=E,7.1nm,

TOIG *i* S Sn 09 02 42.8 -13
HERN Volcan Telica 5.94 102 Pn 09 01 48.4 -1.3
CNGN Cerro Negro 6.09 102 Pn 09 01 52.1 +0.3
CNGN Cerro Negro 6.09 102 P Pn 09 01 50.1 -1.7
comp=E,87µmcomp=E,33µmcomp=E,3µm,1.2s
HLIG Huajuapan de L 6.22 310 *e*P **Pn 09 01 54.8 +1.1**
HLIG *e*S **Sn 09 02 57.0 -7.9**
TPIG Tehuac#an 6.29 316 *e*P **Pn 09 01 57.0 +2.3**
TPIG *e*S **Sn 09 03 03.5 -3.3**
FTIG Fresnillo de T 6.51 309 *e*P **Pn 09 01 59.2 +1.6**
FTIG *e*S Sn 09 03 03.4 -8.7
MGIG Malinaltepec 6.54 301 *e*P **Pn 09 01 59.0 +0.9**
MGIG *e*S **Sn 09 03 10.7 -2.2**
MGAN Managua 6.61 104 Pn 09 02 01.0 +2.1
MGAN Managua 6.61 104 P **Pn 09 01 56.9 -2.0**
comp=E,350nm,1.1s
JAUV Jalcomulco 6.67 325 *e*P **Pn 09 01 57.3 -2.5**
JAUV *i* S **Sn 09 03 12.8 -3.1**
LVIG Laguna Verde 6.77 330 *e*P **Pn 09 02 04.4 +3.3**
DAIG Los Arroyos 7.31 296 *e*P **Pn 09 02 08.6 0.0**
DAIG *e*S **Sn 09 03 30.2 -1.4**
PBCV Popocatepetl 7.51 313 *e*P **Pn 09 02 14.6 +3.1**
PBCV *e*S **Sn 09 03 34.0 -2.9**
PPSX Xalitzintla 7.54 314 *e*P **Pn 09 02 15.6 +3.7**
PPSX *e*S **Sn 09 03 40.2 +2.6**
PBXN Popocatepetl 7.59 313 *e*P Pn 09 02 06.3 -6.5
PBXN *e*P **Pn 09 02 14.4 +1.5**
PBXN *e*S **Sn 09 03 34.5 -4.7**
PBXN *e*S **Sn 09 03 37.9 -1.3**
PPM Popocatepetl 7.61 313 *e*P **Pn 09 02 16.0 +2.9**
MYIG Merida 7.62 22 *e*P **Pn 09 02 12.3 -0.4**
MYIG *e*S **Sn 09 03 39.5 +0.4**
TEIG Tepich 7.64 34 Pn 09 02 13.5 +0.4
TEIG Tepich 7.64 34 P **Pn 09 02 09.5 -3.6**
comp=E,4µmcomp=E,618nm,1.1s
MEIG Mezcala 7.70 302 *e*P **Pn 09 02 15.4 +1.5**
MEIG *e*S Sn 09 03 32.8 -8.5
CXUV Coxquihui 7.76 324 *e*P **Pn 09 02 13.7 -1.0**
SIUN Universidad Ur 7.79 90 Pn 09 02 14.4 -0.8
PLIG Platanillo 7.85 306 *e*P **Pn 09 02 18.2 +2.1**
PLIG *e*S Sn 09 03 32.4 -13
CAIG El Cayaco 7.86 295 *e*P **Pn 09 02 16.9 +0.8**
CAIG *e*S **Sn 09 03 38.2 -7.0**
MPVM San Francisco 7.97 312 Pn 09 02 18.9 +1.1
MPVM San Francisco 7.97 312 *e*P **Pn 09 02 18.9 +1.1**
THVM De Xico 8.02 313 *e*P Pn 09 02 24.5 +6.1
THVM *e*S **Sn 09 03 42.2 -7.1**
TLVM San Miguel Top 8.08 312 *e*P **Pn 09 02 21.3 +2.0**
TLVM *e*S **Sn 09 03 49.3 -1.6**
XCVM Xochimilco 8.08 312 *e*P **Pn 09 02 21.8 +2.5**
XCVM *e*S **Sn 09 03 44.9 -6.0**
MZVM 8.12 311 *e*P **Pn 09 02 23.3 +3.7**
MZVM *e*S **Sn 09 03 52.1 +0.6**
UNM Universidad Na 8.17 312 Pn **Pn 09 02 24.8 +4.2**
UNM Universidad Na 8.17 312 *e*P **Pn 09 02 23.5 +2.9**
UNM *e*S **Sn 09 03 45.0 -8.2**
MAVM Malinalco, Edo 8.17 309 Pn 09 02 22.7 +2.2
MAVM Malinalco, Edo 8.17 309 *e*P **Pn 09 02 22.7 +2.2**
VTVM Tizayuca 8.19 316 *e*P **Pn 09 02 18.7 -2.1**
VTVM *e*S **Sn 09 03 47.3 -6.3**
MCRU Las Cruces 8.22 312 *e*P **Pn 09 02 21.7 +0.4**
MCRU *e*S **Sn 09 03 53.9 -0.6**
AOVM Tlapan 8.24 311 Pn 09 02 23.2 +1.5
AOVM Tlapan 8.24 311 *e*P **Pn 09 02 23.2 +1.5**
AOVM *e*S **Sn 09 03 50.7 -4.3**
INVM La Marquesa 8.30 311 *e*P **Pn 09 02 23.5 +1.1**
INVM *e*S **Sn 09 03 55.8 -0.6**
PTVM Pico Tres Padr 8.30 314 *e*P Pn 09 02 17.7 -4.6
PTVM *e*S **Sn 09 03 55.9 -0.4**
AZVM Cuida Lopez Ma 8.41 313 *e*P Pn 09 02 16.5 -7.5
AZVM *e*S **Sn 09 03 57.7 -1.5**
ZUVM ZUMPANGO 8.43 315 *e*S **Sn 09 03 57.9 -1.7**
JTS Las Juntas de 8.46 114 Pn **Pn 09 02 23.0 -1.2**
comp=E,0.2nm,0.3s,baz=233,slow=22,SNR=0.9
JTS Lg Lg 09 04 43.3
baz=27,slow=20
JTS Las Juntas de 8.46 114 Pn 09 02 27.2 +3.0
JTS Las Juntas de 8.46 114 P **Pn 09 02 23.1 -1.2**
comp=E,108nm,1.5s
ARIG Puente Sto Nin 8.48 302 *e*P **Pn 09 02 26.7 +2.2**
ARIG *e*S **Sn 09 03 55.7 -4.6**
TOVM TOLUCA 8.51 310 *e*P **Pn 09 02 27.4 +2.1**
TOVM *e*S **Sn 09 03 57.0 -4.6**
DEIG Demacu 8.74 318 *e*P **Pn 09 02 31.4 +3.1**
DEIG *e*S **Sn 09 04 07.8 +0.7**
ACIG Acambay 9.10 313 *e*P **Pn 09 02 35.4 +2.2**
ACIG *e*S Sn 09 04 04.9 -11
ZIIG Zihuatanejo 9.13 295 *e*P **Pn 09 02 33.9 +0.4**
CTUV Llano Grande 9.22 326 *e*P **Pn 09 02 34.3 -0.4**
HDC Heredia 9.33 113 Pn **Pn 09 02 37.7 +1.4**
HDC Heredia 9.33 113 *e*P **Pn 09 02 36.9 -0.2**
MOIG Morelia 9.89 307 Pn 09 02 47.8 +3.7
MOIG Morelia 9.89 307 *e*P **Pn 09 02 45.9 +1.7**
PIRO Carate, Puerto 10.76 119 Pn 09 02 57.8 +2.0
GTIG Gomez Farias 10.95 327 *e*P **Pn 09 03 01.5 +3.0**
MMIG Aquila 11.05 295 *e*P **Pn 09 02 56.6 -3.1**
BRU2 Volcan 11.12 116 Pn 09 03 02.4 +1.5
INCO Volcan de Coli 11.78 300 *e*P **Pn 09 03 13.5 +3.4**
SOMAC Volcano de Col 11.80 300 *e*P **Pn 09 03 13.8 +3.4**
CDAR Ciudad de Arme 11.88 297 *e*P **Pn 09 03 13.0 +1.8**
CEGR Campo Tres 11.93 299 *e*P **Pn 09 03 15.8 +3.8**
ZAIG Zacatecas 12.81 315 Pn 09 03 26.4 +2.3
ZAIG Zacatecas 12.81 315 *e*P **Pn 09 03 25.6 +1.4**
MTDJ Mount Denham 15.29 72 Pn **Pn 09 03 59.5 +1.8**
833A Chaparral WMA, 15.63 338 Pn 09 04 03.5 +1.5
833A IAmb IAmb 09 04 09.1
comp=Z,61nm,1.0s
EF02 Christine 15.75 341 Pn **Pn 09 04 04.7 +1.1**
EF02 IAmb IAmb 09 04 13.0
comp=Z,24nm,0.6s
HKT Hockley 16.24 351 P 09 04 11.6 -1.2
PDIG Papasquiaro 16.25 315 *e*P **P 09 04 12.3 -1.1**
APAC Apartado, Choc 16.99 109 P **P 09 04 21.0 -0.4**
DRIO Del Rio 17.08 336 P 09 04 22.3 0.0
435B Jarrell 17.39 346 P **Pn 09 04 24.4 0.0**
DBBC Dabeiba 17.67 111 P **P 09 04 30.3 +1.3**
SJCC San Jacinto, C 17.68 101 P **Pn 09 04 27.5 -0.7**
comp=Z,43nm,1.1s
346A Big Creek Wild 17.69 9 P **Pn 09 04 27.8 -0.3**
HPIG 17.71 319 P **P 09 04 30.4 +0.9**
JCT Junction City 17.74 340 P **P 09 04 31.0 +1.4**
NATX Nacogdoches 17.88 355 P 09 04 32.2 +1.1
BRAL Brewton 18.00 16 IAmb IAmb 09 04 42.2
comp=Z,82nm,0.8s
UREC San Jos de Ur 18.01 108 P **Pn 09 04 31.6 -0.6**
comp=Z,21nm,1.1s
SAND Sanderson 18.17 333 P 09 04 35.8 +1.4
BRDY Brady 18.24 343 P 09 04 35.9 +0.8
CBOC Ciudad Bolivar 18.34 114 P **P 09 04 36.5 0.0**
comp=Z,2µmcomp=Z,36nm,1.1s
VBMS Vicksburg 18.37 6 P **P 09 04 38.7 +2.2**
TXAR Lajitas Array 18.38 329 P **P 09 04 38.6 +1.8**
comp=Z,0.2nm,0.3s,baz=153,slow=17,SNR=62
TXAR LR LR 09 12 43.8
comp=Z,382nm,20.7s,baz=146,slow=40
comp=Z,8.4nm,0.9s
TXAR Lajitas Array 18.38 329 P 09 04 39.2 +2.4
WHTX Lake Whitney, 18.53 347 Pn 09 04 39.6 +1.2
OZNA Ozona 18.61 337 Pn 09 04 42.1 +2.5
143A Socs Landing, 18.78 4 P **Pn 09 04 42.4 +1.0**
352A Blakely 18.95 21 Pn 09 04 43.6 +0.1
352A IAmb IAmb 09 04 53.8
comp=Z,72nm,1.0s
YOTC Yotoco, Valle 18.98 120 P **P 09 04 41.9 -1.6**
JAMC Jamundi, Valle 19.12 122 P **Pn 09 04 46.0 0.0**
comp=Z,27nm,0.9s
CMAN1 Manizales, Cal 19.14 116 P **P 09 04 44.3 -1.1**
GUY2C Guyana, Caldas 19.20 115 P **Pn 09 04 47.7 +0.4**
ALPN Alpine 19.22 330 Pn 09 04 48.6 +1.6
BBAC Balboa, Cauca 19.37 126 P **Pn 09 04 49.3 +0.4**
comp=Z,30nm,1.3s
PAC1 Pacto, Paraso 19.37 133 P **P 09 04 45.9 -1.9**
Z38A Mt. Pleasant 19.39 354 Pn 09 04 48.9 -0.1
LPIG La Paz 19.41 304 P **Pn 09 04 53.2 +4.0**
comp=Z,1.9nm,0.3s,baz=34,slow=7.4,SNR=3.8
comp=Z,7.3nm,0.3s
PTBC PUERTO BERRIO, 19.45 110 P **Pn 09 04 49.6 -0.2**
comp=Z,32nm,1.1s
FW06 Azle 19.50 348 IAmb IAmb 09 04 55.6
comp=Z,78nm,0.7s
SGCY Sterling City 19.51 338 Pn 09 04 50.8 +0.5
SGCY IAmb IAmb 09 04 51.3
comp=Z,51nm,0.8s
PLPT Palo Pinto 19.51 346 Pn 09 04 50.8 +0.5
POPC Popayan, Colom 19.51 124 P **Pn 09 04 51.1 +0.4**
comp=Z,634nmcomp=Z,27nm,1.4s
ANIL Santa Ana 19.52 117 P **P 09 04 48.5 -1.1**
CMBC Cumbal 19.61 130 P **P 09 04 49.5 -1.3**
OTAV Otavalo 19.63 132 Pn 09 04 53.4 +1.0
OTAV Otavalo 19.63 132 *e*P **P 09 04 50.3 -0.7**
MNHN Monahans 19.64 334 IAmb IAmb 09 04 55.1
comp=Z,81nm,0.9s
TMB01 Midkiff 19.65 336 IAmb IAmb 09 05 05.7
comp=Z,20nm,0.9s
ABTX Abilene, Hawle 19.68 343 IAmb IAmb 09 04 54.6
comp=Z,52nm,1.0s
Z47A Carrollton 19.71 12 P 09 04 51.5 +0.3
WLAR White Oak Lake 19.72 359 IAmb IAmb 09 05 03.8
comp=Z,66nm,1.0s
TPB01 Permian Basin 19.76 331 IAmb IAmb 09 05 06.8
comp=Z,36nm,0.9s
LRAL Lakeview Retre 19.79 15 Pn 09 04 52.7 -0.8
GCUF Volcan Galeras 19.79 128 P **Pn 09 04 54.3 0.0**
comp=E,846nmcomp=Z,29nm,1.1s
TULM Tulcn-Chalpat 19.79 130 P **P 09 04 53.2 +0.4**
comp=Z,874nmcomp=Z,36nm,1.2s
229A Bryant Ranch, 19.81 337 IAmb IAmb 09 04 55.7
comp=Z,34nm,1.1s
CRUC La Cruz 19.88 127 P **P 09 04 51.1 -2.5**
OCAC Ocana 19.91 104 P **P 09 04 52.5 -1.2**
comp=Z,30nm,0.8s
BRJC Barrancabermej 19.94 108 P **P 09 04 52.9 -1.0**
comp=Z,909nmcomp=Z,54nm,0.8s
TPB06 Permian Basin 20.10 333 IAmb IAmb 09 05 00.8
comp=Z,30nm,0.9s
Y45A Yeager Farm, C 20.11 8 IAmb IAmb 09 05 07.0
comp=Z,73nm,1.0s
SPBC San Pablo de B 20.17 112 P **P 09 04 55.0 -1.5**
comp=Z,29nm,1.6s
VHRN Van Horn 20.23 328 IAmb IAmb 09 05 12.1
comp=Z,135nm,1.8s
ODSA Odessa 20.23 335 IAmb IAmb 09 04 59.6
comp=Z,82nm,0.9s
ROSC El Rosal 20.30 115 P Pn 09 04 59.7 -0.6
comp=Z,32nm,0.8s,baz=169,slow=3.5,SNR=13
ROSC El Rosal 20.30 115 Pn 09 05 01.4 +1.1
ROSC El Rosal 20.30 115 P **P 09 04 57.8 -0.5**
comp=Z,2µmcomp=Z,150nm,1.4s
PRAC Prado 20.36 118 P **P 09 04 59.2 +0.7**
comp=Z,1000nmcomp=Z,53nm,1.1s
129A Stewart Farms, 20.42 338 IAmb IAmb 09 05 01.9
comp=Z,77nm,0.9s
WTFS Witchita Falls 20.46 346 IAmb IAmb 09 05 04.8
comp=Z,75nm,0.9s
SN07 Snyder 07 20.50 340 P **P 09 05 01.1 +1.2**
SN07 IAmb IAmb 09 05 02.2
comp=Z,87nm,0.9s
CASC Dorado de Casc 20.51 130 P **P 09 04 59.2 -1.0**
BARC Barichara 20.60 109 P Pn 09 05 03.4 -0.2
154A Montrose 20.64 24 P **P 09 05 01.1 -0.2**
128A Castleberry Fa 20.65 336 IAmb IAmb 09 05 04.1
comp=Z,79nm,0.8s
CVER Cruz Verde, Cu 20.67 115 P **P 09 05 01.6 -0.7**
comp=Z,2µmcomp=Z,145nm,1.0s
GARC Garzon, Huila 20.67 123 P **P 09 05 01.9 -0.3**
comp=Z,39nm,1.2s
Y49A Blount Mountai 20.71 15 P 09 05 02.1 -0.1
PAMC Pamplona, Colo 20.78 106 P **P 09 05 04.1 +0.5**
comp=Z,293nmcomp=Z,39nm,1.0s
UALR University of 20.81 1 P 09 05 03.6 +0.4
CHIC Chingaza 20.92 114 P Pn 09 05 06.8 -0.7
RUSC La Rusia 20.96 110 P **P 09 05 06.1 +0.6**
comp=Z,1µmcomp=Z,106nm,1.4s
URMC La Uribe, Meta 21.03 118 P **P 09 05 06.0 +0.2**
comp=Z,656nmcomp=Z,37nm,1.0s
DKNS Dickens 21.04 341 P **P 09 05 06.8 +1.0**
DKNS IAmb IAmb 09 05 07.9
comp=Z,73nm,0.8s
GDL2 Guadalupe Moun 21.09 332 P 09 05 08.2 +1.9
X34A Smith Ranch, M 21.13 348 IAmb IAmb 09 05 11.5
comp=Z,58nm,0.8s
X48A Hartselle 21.13 13 P 09 05 06.3 -0.3
MNTX Cornudas Mount 21.16 329 IAmb IAmb 09 05 23.6
comp=Z,60nm,1.2s
VILC Villavicencio, 21.20 115 P **P 09 05 08.9 +1.2**
comp=Z,548nmcomp=Z,52nm,1.0s
Y52A Lilburn 21.41 20 IAmb IAmb 09 05 20.3
comp=Z,59nm,1.2s
W35A Tecumseh 21.50 351 P **P 09 05 10.9 +0.3**
MSTX Muleshoe 21.95 337 IAmb IAmb 09 05 23.3
comp=Z,36nm,0.9s
MACC Macarena, Meta 22.06 120 P **P 09 05 16.5 -0.4**
comp=Z,44nm,1.4s
TUL3 Leonard 22.10 354 IAmb IAmb 09 05 38.4
comp=Z,38nm,1.0s
DEOK Depew 22.12 352 IAmb IAmb 09 05 19.4
comp=Z,55nm,0.8s
SDV Santo Domingo 22.28 101 P **P 09 05 18.0 -1.4**
comp=Z,11nm,0.8s,baz=292,slow=4.0,SNR=22
SDV LR LR 09 15 42.6
comp=Z,387nm,18.1s,baz=296,slow=42
comp=Z,11nm,0.8s
SDV Santo Domingo 22.28 101 P 09 05 18.9 -0.5
SDV Santo Domingo 22.28 101 *e*P **P 09 05 16.8 -2.6**
SDV Santo Domingo 22.28 101 P **P 09 05 18.1 -1.3**
PTLC Puerto Leguiza 22.43 126 P **P 09 05 24.1 +3.3**
U38A Gravette 22.51 357 IAmb IAmb 09 05 23.5
comp=Z,32nm,0.8s
HSIG 22.59 315 P 09 05 24.1 +1.7
HSIG IAmb IAmb 09 05 40.9
comp=Z,98nm,1.8s
WVT Waverly 22.60 11 P **P 09 05 21.4 -1.0**
BG3 Lake Jocassee 22.83 21 IAmb IAmb 09 05 26.0
comp=Z,31nm,0.9s
JSC Jenkinsville 22.84 25 IAmb IAmb 09 05 46.6
comp=Z,28nm,0.6s
PARMO Parma 22.85 6 IAmb IAmb 09 05 40.1
comp=Z,51nm,0.8s
PBMO Poplar Bluff 22.90 5 IAmb IAmb 09 05 41.6
comp=Z,28nm,0.9s
PH02 Texas Public H 22.95 341 IAmb IAmb 09 05 27.5
comp=Z,124nm,0.9s
319A Douglas 23.07 322 IAmb IAmb 09 05 52.7
comp=Z,34nm,1.0s
PAULI Pauline 23.09 24 IAmb IAmb 09 05 42.4
comp=Z,43nm,1.0s
TKL Tuckaleechee C 23.15 19 LR LR 09 15 40.8
comp=Z,846nm,19.9s,baz=211,slow=40
TKL Tuckaleechee C 23.15 19 IAmb IAmb 09 05 51.7
comp=Z,94nm,1.4s
T35A Sooner Cattle 23.18 352 IAmb IAmb 09 05 50.8
comp=Z,60nm,1.0s
MGMO Mountain Grove 23.18 1 IAmb IAmb 09 05 45.1
comp=Z,34nm,1.1s
T45A Paducah 23.34 8 P **P 09 05 29.0 -1.0**
V53A Saluda 23.48 21 IAmb IAmb 09 05 51.5
comp=Z,32nm,0.9s
BIRD Birdtown, Kers 23.49 26 IAmb IAmb 09 05 44.3
comp=Z,49nm,1.4s
KMSC Kings Mountain 23.56 24 IAmb IAmb 09 05 32.1
comp=Z,50nm,0.8s
T47A Sharon Grove 23.57 11 IAmb IAmb 09 05 32.3
comp=Z,44nm,0.9s
Y22A Socorro 23.75 330 IAmb IAmb 09 05 45.6
comp=Z,37nm,0.9s
S44A Carbondale 23.92 7 IAmb IAmb 09 06 00.8
comp=Z,40nm,0.9s
SIUC Southern Illin 23.95 7 IAmb IAmb 09 06 01.1
comp=Z,40nm,0.9s
TZTN Tazewell 24.04 19 IAmb IAmb 09 05 37.4
comp=Z,59nm,0.9s
T50A Nancy 24.11 16 IAmb IAmb 09 05 37.1
comp=Z,38nm,0.8s
V55A Taylorsville 24.23 23 IAmb IAmb 09 05 38.6
comp=Z,56nm,0.8s
R40A Maddies Statio 24.32 1 IAmb IAmb 09 05 39.6
comp=Z,26nm,0.8s
ANMO Albuquerque 24.33 332 P **P 09 05 41.2 +1.3**
USIN University of 24.41 10 IAmb IAmb 09 05 40.5
comp=Z,44nm,1.0s
U54A Nelsons Funny 24.59 22 IAmb IAmb 09 06 09.1
comp=Z,37nm,0.9s
TUC Tucson 24.64 321 P 09 05 44.5 +2.0
TUC IAmb IAmb 09 06 04.7
comp=Z,41nm,1.3s
SLM Saint Louis 24.76 5 IAmb IAmb 09 05 44.0
comp=Z,38nm,0.8s
WCI Wyandotte Cave 24.93 12 P **P 09 05 42.8 -2.1**
S51A Beattyville 25.04 17 IAmb IAmb 09 05 46.4
comp=Z,31nm,0.8s
V58A Windy Hill, Pi 25.05 27 IAmb IAmb 09 05 45.8
comp=Z,32nm,1.0s
Q44A Meyer Farm, Va 25.15 7 IAmb IAmb 09 06 10.7
comp=Z,24nm,1.0s
R49A Shelbyville 25.23 14 IAmb IAmb 09 06 08.3
comp=Z,20nm,1.0s
ATAH Atahualpa 25.30 145 LR LR 09 13 21.5
comp=Z,307nm,20.0s,baz=333,slow=31
R50A Paris 25.44 16 IAmb IAmb 09 05 50.1
comp=Z,27nm,1.0s
P40A Paris 25.56 1 IAmb IAmb 09 06 26.1
comp=Z,60nm,1.7s
P38A Dawn 25.65 359 IAmb IAmb 09 06 27.5
comp=Z,56nm,1.6s
BLA Blacksburg 25.72 23 IAmb IAmb 09 05 59.5
comp=Z,27nm,0.9s
X18A Snowflake 25.76 326 IAmb IAmb 09 06 13.1
comp=Z,28nm,1.3s
BLO Bloomington 25.79 11 IAmb IAmb 09 05 53.5
comp=Z,24nm,0.8s
P43A Skaggs, Pawnee 25.82 6 IAmb IAmb 09 06 27.8
comp=Z,91nm,1.9s
SJG San Juan 25.94 77 LR LR 09 17 01.3
comp=Z,947nm,19.2s,baz=252,slow=39
P46A Rosedale 26.10 10 IAmb IAmb 09 05 57.2
comp=Z,42nm,0.9s
P48A Milroy 26.29 13 IAmb IAmb 09 05 56.1
comp=Z,27nm,0.9s
SDCO Great Sand Dun 26.32 337 IAmb IAmb 09 06 01.1
comp=Z,37nm,1.2s
Q51A Peebles 26.40 17 IAmb IAmb 09 06 00.3
comp=Z,24nm,0.8s
KSCO Kaye Shedlock' 26.50 343 IAmb IAmb 09 06 01.2
comp=Z,38nm,1.1s
Q52A Bidwell 26.66 19 IAmb IAmb 09 05 59.8
comp=Z,30nm,1.0s
R55A Marlinton 26.78 23 IAmb IAmb 09 06 01.7
comp=Z,27nm,0.9s
113A Mohawk Valley, 26.82 318 P 09 06 03.8 +1.6
P51A Williamsport 26.90 17 IAmb IAmb 09 06 42.5
comp=Z,29nm,1.0s
N35A Tabor 26.99 355 IAmb IAmb 09 06 45.3
comp=Z,30nm,1.0s
Q54A Coxs Mills 27.14 21 IAmb IAmb 09 06 04.3
comp=Z,24nm,1.0s
P53A Whipple 27.41 19 IAmb IAmb 09 06 47.6
comp=Z,37nm,1.5s
N47A Urbana 27.60 12 IAmb IAmb 09 06 07.6
comp=Z,15nm,0.8s
Q56A Snyder Ridge, 27.79 23 IAmb IAmb 09 06 10.5
comp=Z,16nm,0.9s
O52A Adamsville 27.85 18 IAmb IAmb 09 06 10.3
comp=Z,17nm,0.8s
PV01 Paradox Valley 27.92 333 IAmb IAmb 09 06 30.0
comp=Z,49nm,1.4s
PV13 Radium Mtn., P 28.05 332 IAmb IAmb 09 06 31.0
comp=Z,53nm,1.3s
PV05 Paradox Valley 28.11 332 IAmb IAmb 09 06 47.9
comp=Z,41nm,1.3s
OGNE Ogallala 28.14 345 IAmb IAmb 09 07 08.3
comp=Z,28nm,1.0s
PV07 Paradox Valley 28.21 333 IAmb IAmb 09 06 31.8
comp=Z,39nm,1.2s
PV14 Lion Creek, Pa 28.32 332 IAmb IAmb 09 06 37.6
comp=Z,43nm,1.2s
PV22 Blue Mesa, Par 28.35 333 IAmb IAmb 09 06 33.4
comp=Z,51nm,1.4s
O54A Avella 28.38 20 IAmb IAmb 09 06 14.6
comp=Z,14nm,0.7s
PV21 Cone Mtn., Par 28.45 333 IAmb IAmb 09 06 33.5
comp=Z,25nm,1.3s
BC3 Big Chuckanall 28.48 318 IAmb IAmb 09 06 33.6
comp=Z,45nm,1.3s
HMU Henry Mountain 28.78 330 IAmb IAmb 09 06 37.6
comp=Z,32nm,1.1s
N53A Lisbon 28.79 19 IAmb IAmb 09 06 18.5
comp=Z,23nm,1.1s
PFO Pinyon Flats O 29.11 316 LR LR 09 17 59.4
comp=Z,386nm,20.5s,baz=129,slow=36
PAMR Moraine State 29.15 20 IAmb IAmb 09 06 21.8
comp=Z,18nm,0.9s
KNB Kanab 29.16 326 IAmb IAmb 09 06 50.1
comp=Z,28nm,1.5s
K30B Basset 29.29 350 IAmb IAmb 09 06 33.6
comp=Z,31nm,0.9s
HAYD Hayden 29.41 337 IAmb IAmb 09 06 29.0
comp=Z,24nm,1.3s
V12A Nelson 29.43 322 IAmb IAmb 09 06 40.6
comp=Z,21nm,1.1s
O20A White River Ci 29.46 335 IAmb IAmb 09 06 43.9
comp=Z,49nm,1.4s
MTPU Mount Pierson 29.59 328 IAmb IAmb 09 06 42.2
comp=Z,54nm,2.0s
SRU San Rafael Swe 29.61 331 IAmb IAmb 09 06 52.5
comp=Z,49nm,1.9s
SSPA Standing Stone 29.67 23 P 09 06 25.5 -2.0
SSPA IAmb IAmb 09 06 26.5
comp=Z,15nm,0.8s
SZCU Shurtz Canyon 29.73 326 IAmb IAmb 09 06 45.3
comp=Z,59nm,2.0s
MVL Millersville 29.75 26 IAmb IAmb 09 06 27.6
comp=Z,18nm,0.9s
Q16A Castle Valley 29.76 330 IAmb IAmb 09 07 16.5
comp=Z,22nm,1.2s
ECSD EROS Data Cent 29.93 354 IAmb IAmb 09 06 31.5
comp=Z,13nm,0.8s
P17A Butcher Ranch, 30.00 332 IAmb IAmb 09 06 48.9
comp=Z,22nm,1.3s
NNA Nana 30.18 148 LR LR 09 16 32.5
comp=Z,206nm,18.6s,baz=328,slow=32
N58A Sunbury 30.31 25 IAmb IAmb 09 06 33.7
comp=Z,13nm,0.9s
M57A Sunshine Farm, 30.57 24 IAmb IAmb 09 06 34.5
comp=Z,25nm,0.9s
PSUT Pine Spring 30.83 327 IAmb IAmb 09 06 48.4
comp=Z,12nm,0.8s
BSUT Blindstream Ca 30.86 333 IAmb IAmb 09 06 55.4
comp=Z,33nm,1.5s
SUSD Miller 30.91 351 IAmb IAmb 09 06 40.8
comp=Z,25nm,0.7s
K22A Casper 31.02 340 IAmb IAmb 09 06 41.9
comp=Z,20nm,1.0s
TPNV Topopah Spring 31.09 322 IAmb IAmb 09 06 56.0
comp=Z,24nm,1.4s
L56A Greenwood 31.09 22 IAmb IAmb 09 06 38.7
comp=Z,14nm,0.9s
CLC China Lake 31.20 319 IAmb IAmb 09 06 56.8
comp=Z,25nm,1.7s
SPMN Marine on St. 31.24 360 IAmb IAmb 09 06 43.3
comp=Z,12nm,0.8s
S11A Rachel 31.26 323 IAmb IAmb 09 06 53.7
comp=Z,19nm,1.0s
RSSD Black Hills 31.64 344 P 09 06 45.9 +0.8
RSSD IAmb IAmb 09 06 47.2
comp=Z,9.2nm,0.8s
PAL Palisades 31.65 28 IAmb IAmb 09 06 44.7
comp=Z,14nm,1.0s
K57A Scipio Center 32.00 23 IAmb IAmb 09 06 46.6
comp=Z,30nm,0.9s
BW06 Boulder Array 32.22 337 IAmb IAmb 09 07 22.9
comp=Z,21nm,1.6s
PD31 Pinedale Array 32.22 337 IAmb IAmb 09 07 22.9
comp=Z,18nm,1.4s
PDAR Pinedale Array 32.22 337 P **P 09 06 51.4 +1.2**
comp=Z,3.6nm,0.8s,baz=138,slow=8.7,SNR=27
PDAR PcP **PcP 09 09 39.5 +0.7**
comp=Z,1.6nm,0.8s,baz=163,slow=1.3,SNR=4.7
comp=Z,3.6nm,0.8s
DSP Deep Springs 32.40 321 IAmb IAmb 09 07 13.1
comp=Z,25nm,1.6s
KSCT Kent School, K 32.42 27 IAmb IAmb 09 06 50.7
comp=Z,29nm,1.1s
J57A Williamstown 32.77 23 IAmb IAmb 09 06 53.1
comp=Z,22nm,0.9s
SADO Sadowa 32.91 18 LR LR 09 21 42.3
comp=Z,708nm,19.1s,baz=221,slow=39
TRY Troy 33.15 26 IAmb IAmb 09 06 57.7
comp=Z,20nm,0.9s
DELO Deloro Mine 33.16 20 IAmb IAmb 09 06 56.6
comp=Z,22nm,0.8s
ELK Elko 33.18 328 LR LR 09 22 21.5
comp=Z,528nm,18.5s,baz=140,slow=40
MDPB Devils Postpil 33.25 320 IAmb IAmb 09 07 14.7
comp=Z,14nm,1.1s
NVAR Mina Array Bea 33.28 322 P **P 09 07 02.3 +2.7**
comp=Z,7.6nm,0.7s,baz=138,slow=8.7,SNR=71
NVAR PcP **PcP 09 09 42.5 +0.7**

comp=Z,1.2nm,0.6s,baz=105,slow=3.0,SNR=4.4
NVAR LR LR 09 22 16.6
comp=Z,620nm,19.2s,baz=133,slow=40
comp=Z,7.6nm,0.7s
LHV Little Huntoon 33.29 322 IAmb IAmb 09 07 26.3
comp=Z,17nm,1.1s
LOHW Long Hollow 33.34 336 IAmb IAmb 09 07 20.2
comp=Z,28nm,1.0s
J59A Piesco 33.40 25 IAmb IAmb 09 06 59.9
comp=Z,15nm,0.8s
BUKO Buck Lake 33.44 17 IAmb IAmb 09 06 59.0
comp=Z,17nm,0.9s
MOOW Moose Ponds 33.51 336 IAmb IAmb 09 07 21.6
comp=Z,24nm,1.1s
FXWY Fox Creek 33.53 336 IAmb IAmb 09 07 18.6
comp=Z,26nm,1.2s
FLWY Flagg Ranch 33.77 337 IAmb IAmb 09 07 41.8
comp=Z,15nm,1.1s
BOAV Boa Vista 33.87 107 P P 09 07 04.0 -0.7
BOAV IAmb IAmb 09 07 13.5
comp=Z,21nm,1.0s
BOAV Boa Vista 33.87 107 *e*P **P 09 07 04.4 -0.4**
BOAV Boa Vista 33.87 107 P **P 09 07 03.2 -1.5**
YPP Pitchstone Pla 33.97 337 IAmb IAmb 09 07 32.3
comp=Z,16nm,1.3s
H17A Grant Village 33.99 337 IAmb IAmb 09 07 26.5
comp=Z,16nm,1.1s
RLMT Red Lodge 34.14 339 IAmb IAmb 09 07 09.4
comp=Z,59nm,1.9s
YNR Norris Junctio 34.30 337 IAmb IAmb 09 07 47.3
comp=Z,34nm,1.6s
YNE Yellowstone No 34.30 338 IAmb IAmb 09 07 13.6
comp=Z,22nm,1.1s
CMB Columbia Colle 34.32 320 P 09 07 10.2 +1.8
LONY Lake Ozonia 34.34 23 IAmb IAmb 09 07 07.1
comp=Z,24nm,0.9s
WBO Williamsburg 34.40 22 IAmb IAmb 09 07 07.5
comp=Z,19nm,0.9s
AGMN Agassiz Nation 34.41 356 IAmb IAmb 09 07 09.1
comp=Z,12nm,0.8s
YHB Horse Butte 34.53 337 IAmb IAmb 09 07 31.8
comp=Z,16nm,1.2s
LAO LASA Array 34.59 344 IAmb IAmb 09 07 34.1
comp=Z,20nm,1.2s
YHL Hebgen Lake 34.60 337 IAmb IAmb 09 07 29.4
comp=Z,32nm,1.2s
MPK Martis Peak 34.87 322 IAmb IAmb 09 07 29.6
comp=Z,36nm,1.3s
FRNY Flat Rock 34.91 24 IAmb IAmb 09 07 11.9
comp=Z,12nm,0.9s
MNTQ Montreal, Queb 35.45 23 IAmb IAmb 09 07 16.6
comp=Z,22nm,0.9s
EPLO Experimental L 35.70 359 IAmb IAmb 09 07 19.6
comp=Z,14nm,0.9s
TRQ Mont Tremblant 35.71 22 IAmb IAmb 09 07 19.1
comp=Z,28nm,1.5s
MACA Manacapuru-AM 36.07 116 P **P 09 07 25.3 +1.5**
MACA IAmb IAmb 09 07 36.0
comp=Z,36nm,1.0s
MACA Manacapuru-AM 36.07 116 *e*P **P 09 07 23.5 -0.2**
WVOR Wild Horse Val 36.16 327 IAmb IAmb 09 07 39.6
comp=Z,32nm,1.3s
ULM Lac du Bonnet 36.35 357 P **P 09 07 24.0 -1.7**
comp=Z,13nm,0.9s,baz=180,slow=9.2,SNR=18
ULM PcP **PcP 09 09 50.0 -0.2**
comp=Z,5.5nm,0.9s,baz=201,slow=4.0,SNR=4.4
ULM LR LR 09 26 05.0
comp=Z,150nm,18.2s,baz=168,slow=43
comp=Z,13nm,0.9s
ULM Lac du Bonnet 36.35 357 IAmb IAmb 09 07 25.3
comp=Z,15nm,1.0s
O03E Paynes Creek 36.56 321 IAmb IAmb 09 07 42.6
comp=Z,48nm,1.7s
J08A Circle Bar Ran 36.73 328 IAmb IAmb 09 07 40.1
comp=Z,28nm,0.9s
PLID Pearl Lake 36.81 332 IAmb IAmb 09 07 46.0
comp=Z,20nm,1.1s
BMO Blue Mountains 37.24 331 IAmb IAmb 09 08 17.3
comp=Z,30nm,1.8s
I07A Izee 37.77 328 IAmb IAmb 09 07 59.3
comp=Z,40nm,1.8s
YBH Yreka Blue Hor 37.99 323 LR LR 09 24 53.2
comp=Z,31nm,18.2s,baz=128,slow=39
F10A Beach Ranch, E 38.05 332 IAmb IAmb 09 07 50.2
comp=Z,23nm,0.9s
LPAZ La Paz 38.63 140 P P 09 07 46.1 0.0
comp=Z,2.1nm,0.7s,baz=330,slow=9.5,SNR=9.7
LPAZ LR LR 09 23 10.4
comp=Z,176nm,18.7s,baz=310,slow=36
comp=Z,2.1nm,0.7s
LPAZ La Paz 38.63 140 P P 09 07 46.0 -0.1
LPAZ La Paz 38.63 140 *e*P **P 09 07 45.5 -0.6**
LPAZ La Paz 38.63 140 P **P 09 07 45.6 -0.5**
PB16 IPOC Station P 39.39 144 P P 09 07 52.0 -0.4
H04A Detroit Lake 39.59 327 IAmb IAmb 09 08 03.4
comp=Z,29nm,1.0s
NEW Newport 39.77 335 LR LR 09 26 58.6
comp=Z,246nm,18.4s,baz=140,slow=40
C09A Chrisman Ranch 39.90 333 IAmb IAmb 09 08 13.1
comp=Z,28nm,1.2s
MDP Montagnes des 40.49 98 LR LR 09 27 23.1
comp=Z,277nm,18.6s,baz=309,slow=40
ITTB Itaituba 41.00 114 *e*P **P 09 08 03.8 -1.4**
FFC Flin Flon 41.38 352 P **P 09 08 07.4 -0.4**
VILB Vilhena 41.88 128 P **P 09 08 12.8 +0.4**
VILB IAmb IAmb 09 08 24.6
comp=Z,40nm,1.0s
VILB Vilhena 41.88 128 *e*P **P 09 08 12.0 -0.4**
LLLB Lillooet 43.58 333 P **P 09 08 26.3 +0.5**
LLLB IAmb IAmb 09 08 38.5
comp=Z,24nm,1.1s
RPN Rapa Nui 43.81 202 LR LR 09 21 48.4
comp=Z,212nm,19.5s,baz=30,slow=29
PDRB Porto dos Gac 43.82 124 *e*P **P 09 08 26.4 -1.8**
CLDB Colider 44.17 122 *e*P **P 09 08 31.0 0.0**
PTLB Pontes e Lacer 44.24 130 P **P 09 08 31.1 -0.4**
PTLB IAmb IAmb 09 08 42.2
comp=Z,20nm,1.1s
PTLB Pontes e Lacer 44.24 130 *e*P **P 09 08 30.3 -1.2**
FCC Fort Churchill 44.81 359 P **P 09 08 34.8 -0.6**
SCHQ Schefferville 45.60 21 P **P 09 08 38.9 -2.9**
comp=Z,20nm,0.8s,baz=203,slow=6.0,SNR=32
SCHQ PcP **PcP 09 10 20.1 0.0**
comp=Z,4.7nm,0.8s,baz=166,slow=2.9,SNR=4.1
SCHQ LR LR 09 28 37.4
comp=Z,741nm,20.4s,baz=210,slow=38
comp=Z,20nm,0.8s
SCHQ Schefferville 45.60 21 P **P 09 08 39.4 -2.5**
SCHQ IAmb IAmb 09 08 40.0
comp=Z,20nm,0.9s
AC02 Maricunga 46.55 150 P **P 09 08 49.5 -0.7**
AC02 IAmb IAmb 09 09 00.3
comp=Z,11nm,0.8s
SALV Santo Antonio 47.12 128 *e*P **P 09 08 54.5 +0.3**
BBB Bella Bella 47.49 331 LR LR 09 32 52.1
comp=Z,140nm,18.9s,baz=136,slow=41
KUQ Kuujjuuaa 47.81 17 P **P 09 08 56.3 -2.7**
KUQ IAmb IAmb 09 08 57.3
comp=Z,13nm,0.7s
SNDB Serra Nova Dou 48.50 120 *e*P **P 09 09 04.6 -0.4**
PP1B Ponte de Pedra 48.77 129 *e*P **P 09 09 06.8 -0.2**
CO03 El Pedregal 49.28 155 IAmb IAmb 09 09 22.1
comp=Z,17nm,1.0s
ARAG Araguaiana, MT 50.06 125 *e*P **P 09 09 15.2 -1.8**
U35K Hyder 50.78 334 P **P 09 09 23.1 +1.3**
baz=130
YKA Yellowknife Ar 50.97 347 P **P 09 09 23.4 +0.3**
comp=Z,32nm,0.9s,baz=153,slow=6.9,SNR=269
YKA PcP **PcP 09 10 39.3 +0.1**
comp=Z,2.1nm,0.9s,baz=150,slow=3.8,SNR=2.3
YKA LR LR 09 35 16.0
comp=Z,135nm,18.2s,baz=136,slow=41
comp=Z,32nm,0.9s
KOTAN Kotaneelee Air 51.54 341 P **P 09 09 29.2 +1.7**
baz=140,SNR=9.7
T35M Bob Quinn 51.57 335 P **P 09 09 29.6 +1.8**
baz=131
MT08 Bocatoma Ro 51.84 156 IAmb IAmb 09 09 42.5
comp=Z,24nm,1.1s
AMBA Amambai (Brazi 52.04 134 *e*P **P 09 09 32.2 +0.5**
WRAK Wrangell Islan 52.10 333 P **P 09 09 33.3 +1.6**
baz=128
U33K Whale Pass 52.25 333 P **P 09 09 34.6 +1.8**
baz=127
BO01 Tunca 52.26 157 IAmb IAmb 09 09 42.1
comp=Z,15nm,1.1s
DLBC Dease Lake 52.45 336 LR LR 09 35 04.1
comp=Z,204nm,18.3s,baz=108,slow=40
DLBC Dease Lake 52.45 336 P **P 09 09 36.0 +1.6**
baz=132
S34M Telegraph Cree 52.54 335 P **P 09 09 37.0 +2.0**
baz=130
CPUP Villa Florida 52.79 139 P **P 09 09 37.5 +0.3**
comp=Z,1.6nm,0.9s,baz=294,slow=11,SNR=3.4
CPUP LR LR 09 34 05.0
comp=Z,92nm,18.1s,baz=316,slow=38
comp=Z,1.6nm,0.9s
BDFB Brasilia 53.11 122 P **P 09 09 39.0 -0.9**
comp=Z,3.0nm,0.8s,baz=292,slow=6.7,SNR=5.9
comp=Z,3.0nm,0.8s
BDFB Brasilia 53.11 122 IAmb IAmb 09 09 51.7
comp=Z,14nm,1.0s
WTLY Watson Lake, Y 53.14 338 P **P 09 09 41.1 +1.6**
baz=134,SNR=14
R33M Jennings River 53.45 337 P **P 09 09 43.4 +1.5**
baz=132
S32K Killisnoo 53.71 333 P **P 09 09 45.6 +2.0**
baz=126
WRGLY Wrigley 53.78 343 P **P 09 09 45.0 +1.0**
baz=142,SNR=17
SIT Sitka 53.79 333 P **P 09 09 45.3 +1.1**
baz=125
NBPS Pedro II - PI 54.08 106 *e*P **P 09 09 46.7 -0.3**
R32K Eaglecrest 54.17 334 P **P 09 09 48.2 +1.3**
baz=127
SDBA SAO DESIDERIO 54.17 117 *e*P **P 09 09 47.1 -0.6**
BI02 San Fabin de 54.22 159 IAmb IAmb 09 09 59.0
comp=Z,31nm,1.6s
P32M Atlin 54.65 336 P **P 09 09 51.6 +1.1**
baz=129
P33M Teslin, Yukon 54.70 337 IAmb IAmb 09 09 53.0
comp=Z,19nm,1.3s
P33M Teslin, Yukon 54.70 337 P **P 09 09 52.4 +1.5**
baz=130
S31K Pelican 54.72 333 P **P 09 09 52.8 +1.9**
baz=125
SKAG Skagway 55.22 335 P **P 09 09 56.4 +1.9**
baz=127
N32M Quiet Lake 55.41 338 P **P 09 09 57.8 +1.9**
baz=130
WHY Whitehorse 55.77 336 P **P 09 10 00.2 +1.5**
baz=128
ILON Igloolik, Nuna 55.89 5 P **P 09 09 58.0 -1.1**
PSAL Palomas, Salto 56.05 143 *e*P **P 09 10 01.7 +0.8**
P30M Million Dollar 56.28 335 P **P 09 10 04.2 +2.0**
baz=125
O30N Mendenhall 56.31 336 IAmb IAmb 09 10 07.0
comp=Z,12nm,0.9s
O30N Mendenhall 56.31 336 P **P 09 10 04.1 +1.7**
baz=127,SNR=5.1
M31M Drury Creek, Y 56.56 338 IAmb IAmb 09 10 28.5
comp=Z,17nm,1.2s
M31M Drury Creek, Y 56.56 338 P **P 09 10 05.6 +1.5**
baz=129
N31M Braeburn, Yuko 56.63 337 IAmb IAmb 09 10 08.9
comp=Z,21nm,0.9s
N31M Braeburn, Yuko 56.63 337 P **P 09 10 06.1 +1.4**
baz=127
HYT Haines Junctio 56.91 336 IAmb IAmb 09 10 12.2
comp=Z,11nm,1.1s
HYT Haines Junctio 56.91 336 P **P 09 10 08.8 +2.0**
baz=125
O29M Mount Kennedy 57.05 335 P **P 09 10 09.6 +1.9**
baz=124
N30M Aishikik Lake 57.12 336 IAmb IAmb 09 10 12.9
comp=Z,14nm,0.9s
N30M Aishikik Lake 57.12 336 P **P 09 10 10.0 +1.9**
baz=126
YUK6 Outpost Mounta 57.32 336 P **P 09 10 11.4 +1.6**
baz=124
PINM Pinnacle 57.63 334 P **P 09 10 13.2 +1.4**
baz=122
YUK4 Talbot Arm 57.66 336 P **P 09 10 13.7 +1.5**
baz=124
M30M Minto, Yukon 57.67 338 IAmb IAmb 09 10 25.1
comp=Z,23nm,1.3s
M30M Minto, Yukon 57.67 338 P **P 09 10 13.4 +1.4**
baz=127,SNR=8.8
O28M Mount Upton 57.97 335 P **P 09 10 16.0 +1.6**
baz=122
MAYO Mayo, Yukon 57.98 339 P **P 09 10 15.8 +1.7**
baz=128,SNR=5.6
YUK8 Steele Glacier 58.08 335 P **P 09 10 16.4 +1.2**
baz=123
PLCA Paso Flores 58.12 160 P **P 09 10 16.7 +1.3**
comp=Z,2.4nm,1.0s,baz=314,slow=3.5,SNR=5.4
PLCA LR LR 09 30 26.8
comp=Z,166nm,18.4s,baz=326,slow=31
comp=Z,2.4nm,1.0s
M29M Somme Creek 58.22 337 P **P 09 10 17.3 +1.3**
baz=125
L29M L29M 58.48 338 IAmb IAmb 09 10 30.7
comp=Z,21nm,1.1s
L29M L29M 58.48 338 P **P 09 10 19.1 +1.4**
baz=126
CTG Chitna Glacier 58.55 335 P **P 09 10 19.4 +1.0**
baz=121
YUK3 Moose Creek 58.62 336 P **P 09 10 20.1 +1.2**
baz=123
K29M Barlow Dome 58.70 339 P **P 09 10 20.3 +1.0**
baz=127
J30M Hart River 58.74 340 P **P 09 10 20.6 +1.1**
baz=128
C36M Paulatuk 58.84 348 IAmb IAmb 09 10 21.4
comp=Z,15nm,1.3s
C36M Paulatuk 58.84 348 P **P 09 10 21.1 +1.0**
baz=144,SNR=5.4
H31M Peel River 58.88 341 P **P 09 10 21.2 +0.7**
baz=131
TGL Tana Glacier 59.07 334 IAmb IAmb 09 10 27.2
comp=Z,16nm,0.9s
BVCY Beaver Creek 59.13 336 P **P 09 10 23.0 +0.8**
baz=122
I30M Mount Dempster 59.16 340 IAmb IAmb 09 10 25.7
comp=Z,15nm,0.9s
I30M Mount Dempster 59.16 340 P **P 09 10 23.1 +0.6**
baz=129,SNR=14
CRQE Cirque 59.18 334 P **P 09 10 23.6 +0.9**
baz=119
J29N Klondike Camp 59.31 339 IAmb IAmb 09 10 38.0
comp=Z,22nm,1.3s
J29N Klondike Camp 59.31 339 P **P 09 10 24.8 +1.4**
baz=126
POIN Pond Inlet 59.45 5 P **P 09 10 25.2 +1.1**
POIN IAmb IAmb 09 10 46.7
comp=Z,12nm,1.5s
MCARA McCarthy VSAT 59.47 335 P **P 09 10 25.6 +1.1**
baz=120
DAWY Dawson 59.50 338 IAmb IAmb 09 10 27.7
comp=Z,7.4nm,0.8s
DAWY Dawson 59.50 338 P **P 09 10 25.8 +1.0**
baz=125,SNR=6.9
M27K Edge Creek, AK 59.50 336 P **P 09 10 25.8 +0.9**
baz=122
G31M Satah River 59.61 342 P **P 09 10 26.1 +0.8**
baz=132
RCBR Riachuelo 59.75 105 LR LR 09 38 09.7
comp=Z,89nm,19.1s,baz=265,slow=38
F31M Tsiigehtchic 59.80 343 P **P 09 10 27.2 +0.6**
baz=132,SNR=15
GLB Gilahina Butte 59.82 334 IAmb IAmb 09 10 32.5
comp=Z,11nm,0.9s
L27K Beaver Creek, 59.85 337 P **P 09 10 28.5 +1.3**
baz=122
SFJD Kangerlussuaq 59.86 18 LR LR 09 37 05.6
comp=Z,351nm,18.8s,baz=214,slow=37
I29M Ogilvie Camp, 59.88 340 P **P 09 10 28.5 +1.2**
baz=127
BMRM Bremner River 59.93 334 P **P 09 10 28.5 +0.7**
baz=118
M26K Nabesna, AK 59.97 336 IAmb IAmb 09 10 41.2
comp=Z,13nm,1.2s
M26K Nabesna, AK 59.97 336 P **P 09 10 29.0 +1.0**
baz=120
EPYK Eagle Plains 59.99 341 IAmb IAmb 09 10 31.1
comp=Z,13nm,1.1s
EPYK Eagle Plains 59.99 341 P **P 09 10 29.1 +1.0**
baz=129,SNR=5.3
Q23K Middleton Isla 60.02 332 P **P 09 10 29.6 +1.3**
baz=116
G30M tAoh Zraii Nji 60.23 342 P **P 09 10 30.7 +1.0**
baz=130
N25K Chitina, Valde 60.23 334 P **P 09 10 30.8 +0.9**
baz=118,SNR=5.5
EYAK Cordova Ski Ar 60.24 333 P **P 09 10 30.8 +1.0**
baz=117
INK Inuvik 60.34 344 P **P 09 10 31.1 +0.8**
baz=133,SNR=38
L26K Log Cabin Wild 60.43 336 P **P 09 10 32.3 +1.2**
baz=120
I28M Miner Creek 60.49 339 P **P 09 10 32.4 +0.8**
baz=125
F30M Barrier River 60.51 343 P **P 09 10 32.5 +1.0**
baz=130
G29M Pine Creek 60.74 341 P **P 09 10 34.2 +1.1**
baz=128
P23K Montague Islan 60.74 332 P **P 09 10 34.8 +1.5**
baz=115
KLU Klutina 60.74 334 P **P 09 10 34.4 +1.1**
baz=117
RES Resolute Bay 60.81 359 LR LR 09 38 31.0
comp=Z,139nm,19.4s,baz=198,slow=38
HARP HAARP 60.84 335 P **P 09 10 35.3 +1.4**
baz=118
GLI Glacier Island 60.98 333 P **P 09 10 36.5 +1.6**
baz=116
DOT Dot Lake 61.02 337 IAmb IAmb 09 10 45.5
comp=Z,25nm,1.2s
M24K Tolsona, Glenn 61.13 334 P **P 09 10 37.1 +1.1**
baz=117
I27K Kandik River 61.16 339 IAmb IAmb 09 10 40.0
comp=Z,15nm,0.9s
I27K Kandik River 61.16 339 P **P 09 10 37.3 +1.2**
baz=123
SCRK Sand Creek 61.16 337 P **P 09 10 37.3 +1.1**
SCRK IAmb IAmb 09 10 49.4
comp=Z,23nm,1.3s
SCRK Sand Creek 61.16 337 P **P 09 10 37.4 +1.3**
baz=120
A36M Sachs Harbour 61.22 349 IAmb IAmb 09 10 47.0
comp=Z,14nm,0.8s
A36M Sachs Harbour 61.22 349 P **P 09 10 36.4 +0.1**
baz=143,SNR=13
PAX Paxson 61.24 336 IAmb IAmb 09 10 40.8
comp=Z,15nm,0.8s
PAX Paxson 61.24 336 P **P 09 10 38.0 +1.3**
baz=118,SNR=7.5
RIDG Independent Ri 61.37 336 P **P 09 10 38.8 +1.2**
baz=119
H27K Steamboat Moun 61.47 340 IAmb IAmb 09 10 41.8
comp=Z,17nm,1.1s
H27K Steamboat Moun 61.47 340 P **P 09 10 39.1 +0.9**
baz=124,SNR=11
I26K Coal Creek Min 61.54 338 P **P 09 10 39.9 +1.3**
baz=122
E29M Blow River 61.62 343 P **P 09 10 40.3 +1.2**
baz=128
M23K Glacier View 61.65 334 P **P 09 10 40.4 +1.0**
baz=115
SEW Seward 61.72 332 P **P 09 10 41.0 +1.1**
baz=113
F28M Old Crow 61.73 341 P **P 09 10 41.0 +1.1**
baz=126,SNR=45
K24K Donnelly Dome 61.76 336 P **P 09 10 41.5 +1.3**
baz=118,SNR=5.2
KNK Knik Glacier 61.80 333 P **P 09 10 41.7 +1.2**
baz=114
SML Sawmill 61.91 334 P **P 09 10 42.2 +1.0**
baz=115
J25K Salcha River, 62.00 337 P **P 09 10 42.7 +1.0**
baz=119
O22K Cooper Landing 62.00 332 P **P 09 10 43.1 +1.4**
baz=113
WAT6 Susitna Watana 62.00 335 P **P 09 10 42.9 +1.0**
baz=116
DHY Denali Highway 62.06 335 P **P 09 10 43.5 +1.1**
baz=116
PMR Palmer 62.17 333 P **P 09 10 44.1 +1.2**
baz=114
BRSE Bradley Lake S 62.19 331 P **P 09 10 43.9 +0.8**
baz=111
E28M Babbage River 62.23 342 P **P 09 10 44.2 +1.0**
baz=127
RC01 Rabbit Creek A 62.24 333 P **P 09 10 44.4 +1.0**
baz=113
KDAK Kodiak Island 62.41 329 LR LR 09 36 58.8
comp=Z,74nm,19.6s,baz=111,slow=35
KDAK Kodiak Island 62.41 329 P **P 09 10 45.3 +0.7**
baz=109
D28M Stokes Point 62.44 343 P **P 09 10 45.9 +1.3**
baz=128
WAT1 Susitna Watana 62.44 335 P **P 09 10 45.9 +1.1**
baz=115
PRP Porcupine Dome 62.50 338 P **P 09 10 46.0 +0.8**
baz=119,SNR=11
HDA Harding Lake 62.50 337 IAmb IAmb 09 10 48.6
comp=Z,14nm,1.0s
HDA Harding Lake 62.50 337 P **P 09 10 45.8 +0.7**
baz=117,SNR=6.0
HOM Homer 62.59 331 P **P 09 10 46.3 +0.6**
baz=110
Q20K Shuyak Island 62.59 329 P **P 09 10 46.8 +1.1**
baz=109
OHAK Old Harbor 62.60 328 P **P 09 10 46.9 +1.1**
baz=108
G26K Porcupine Rive 62.62 340 IAmb IAmb 09 11 11.1
comp=Z,9.5nm,0.9s
G26K Porcupine Rive 62.62 340 P **P 09 10 46.8 +1.0**
baz=122,SNR=5.3
IL31 62.65 337 IAmb IAmb 09 10 55.9
comp=Z,19nm,1.1s
ILAR Eielson Array 62.65 337 P **P 09 10 46.5 +0.5**
comp=Z,10nm,0.8s,baz=113,slow=6.4,SNR=38
comp=Z,10nm,0.8s
ILAR Eielson Array 62.65 337 P **P 09 10 46.8 +0.8**
M22K Willow 62.67 333 P **P 09 10 47.4 +1.2**
baz=113
SUA Susitna One 62.84 333 P **P 09 10 48.6 +1.1**
baz=112
SII Sitkinak Islan 62.87 327 P **P 09 10 48.6 +0.9**
baz=106
CCB Clear Creek Bu 62.94 337 IAmb IAmb 09 11 00.2
comp=Z,14nm,1.2s
WRH Wood River Hil 62.97 336 IAmb IAmb 09 10 55.5
comp=Z,8.5nm,0.8s
MCK McKinley 62.98 335 P **P 09 10 49.4 +1.1**
MCK IAmb IAmb 09 10 59.0
comp=Z,14nm,1.0s
MCK McKinley 62.98 335 P **P 09 10 49.5 +1.1**
baz=115
CUT Chulitna 62.99 334 P **P 09 10 50.2 +1.8**
baz=113
POKR Poker Plat Res 63.01 337 P **P 09 10 50.3 +1.8**
baz=117
D27M Malcolm River 63.02 343 P **P 09 10 50.7 +2.1**
baz=126
COLA College 63.06 337 P **P 09 10 50.3 +1.6**
baz=117
F26K Sheenjek River 63.14 340 IAmb IAmb 09 10 53.1
comp=Z,9.2nm,0.9s
F26K Sheenjek River 63.14 340 P **P 09 10 50.5 +1.2**
baz=122,SNR=8.9
BMAR Burnt Mountain 63.14 340 P **P 09 10 50.2 +0.9**
Q19K Cape Douglas, 63.31 330 P **P 09 10 52.5 +1.9**
baz=108
P19K Oil Pt 63.34 330 P **P 09 10 52.6 +1.8**
baz=109
SKT Skwentna 63.38 333 IAmb IAmb 09 10 55.3
comp=Z,13nm,0.8s
SKT Skwentna 63.38 333 P **P 09 10 52.6 +1.7**
baz=112
SPCR Spurr Chakacha 63.39 332 P **P 09 10 52.5 +1.4**
baz=111
NEA2 Nenana 63.41 336 IAmb IAmb 09 11 18.9
comp=Z,16nm,1.2s
NEA2 Nenana 63.41 336 P **P 09 10 52.9 +1.8**
baz=115
TRF Thorofare Moun 63.42 335 P **P 09 10 52.4 +1.0**
baz=114,SNR=6.4
H24K Noodor Dome 63.51 338 IAmb IAmb 09 10 55.5
comp=Z,16nm,0.9s
H24K Noodor Dome 63.51 338 P **P 09 10 53.0 +1.2**
baz=117,SNR=14
F25K Christian Rive 63.58 340 IAmb IAmb 09 10 56.4
comp=Z,13nm,0.8s
F25K Christian Rive 63.58 340 P **P 09 10 53.4 +1.2**
baz=120
I23K Minto, Yukon-K 63.76 337 P **P 09 10 54.7 +1.3**
baz=115,SNR=15
G24K Hadweenzic Riv 63.77 339 P **P 09 10 55.3 +1.8**
baz=118
E25K Arctic Village 63.82 341 IAmb IAmb 09 10 57.3
comp=Z,15nm,1.1s

E25K	**Arctic Village**	63.82	341	P	P	09 10 55.4	+1.6
	baz=120,SNR=12						
Q18K	**Katmai Hardscr**	63.90	329	P	P	09 10 55.6	+1.0
	baz=107						
TULEG	**Thule**	63.92	6 *i*	P	P	09 10 54.6	+0.3
TULEG				IAmb	IAmb	09 10 56.2	
	comp=Z,9.9nm,1.2s						
BPAW	**Bear Paw Mtn.**	63.96	335	IAmb	IAmb	09 10 58.4	
	comp=Z,13nm,0.8s						
BPAW	**Bear Paw Mtn.**	63.96	335	P	P	09 10 55.6	+0.8
	baz=113,SNR=6.2						
PPLA	**Purkeypile**	64.00	334	IAmb	IAmb	09 11 10.3	
	comp=Z,15nm,1.0s						
PPLA	**Purkeypile**	64.00	334	P	P	09 10 56.4	+1.2
	baz=111						
O19K	**Port Alsworth**	64.03	331	IAmb	IAmb	09 10 59.9	
	comp=Z,14nm,0.8s						
O19K	**Port Alsworth**	64.03	331	P	P	09 10 56.1	+0.8
	baz=108						
C27K	**Jago River**	64.04	342	P	P	09 10 56.5	+1.3
	baz=123,SNR=19						
M20K	**Styx River**	64.05	333	IAmb	IAmb	09 11 07.9	
	comp=Z,10nm,0.8s						
M20K	**Styx River**	64.05	333	P	P	09 10 56.7	+1.2
	baz=110						
PPT	**Papeete**	64.15	242	LR	LR	09 33 59.4	
	comp=Z,117nm,18.3s,baz=68,slow=31						
P18K	**Big Mountain,**	64.23	330	P	P	09 10 57.5	+0.8
	baz=107						
Q17K	**Contact Creek**	64.24	328	P	P	09 10 57.7	+0.9
	baz=106						
MLY	**Manley**	64.24	336	P	P	09 10 57.3	+0.6
	baz=114,SNR=28						
N19K	**Bonanza Creek**	64.31	331	P	P	09 10 58.3	+1.1
	baz=108						
R17L	**Mt. Peulik Vol**	64.31	328	P	P	09 10 58.6	+1.4
	baz=105						
O18K	**Koktuh Hills**	64.36	330	P	P	09 10 58.2	+0.7
	baz=107						
CHUM	**Lake Minchumin**	64.42	335	P	P	09 10 58.8	+1.0
	baz=112						
C26K	**Camden Bay**	64.55	342	P	P	09 11 00.0	+1.5
	baz=122						
M19K	**Big River Lodg**	64.62	333	P	P	09 11 00.2	+1.1
	baz=109						
G23K	**Bananza Creek**	64.67	338	IAmb	IAmb	09 11 03.4	
	comp=Z,11nm,0.9s						
G23K	**Bananza Creek**	64.67	338	P	P	09 11 00.9	+1.4
	baz=115						
D25K	**Kavik River**	64.68	342	P	P	09 11 00.8	+1.3
	baz=120						
Q16K	**King Salmon**	64.74	329	P	P	09 11 01.1	+1.3
	baz=105						
E24K	**Your Creek**	64.75	340	P	P	09 11 01.4	+1.4
	baz=117						
P17K	**Kvichak River**	64.77	329	P	P	09 11 01.1	+1.0
	baz=106						
I21K	**Tanana**	64.78	336	P	P	09 11 01.2	+1.1
	baz=113						
H22K	**Ishtalitna Cre**	64.83	337	P	P	09 11 01.4	+1.0
	baz=114						
L19K	**White Mountain**	64.91	333	IAmb	IAmb	09 11 29.0	
	comp=Z,10nm,1.1s						
L19K	**White Mountain**	64.91	333	P	P	09 11 02.5	+1.4
	baz=108						
N18K	**Kilae Creek**	64.92	331	IAmb	IAmb	09 11 05.6	
	comp=Z,13nm,0.9s						
N18K	**Kilae Creek**	64.92	331	P	P	09 11 02.5	+1.3
	baz=107						
R16K	**Pilot Point**	64.92	327	P	P	09 11 02.4	+1.2
	baz=104						
COLD	**Coldfoot**	64.96	339	IAmb	IAmb	09 11 11.2	
	comp=Z,16nm,1.2s						
COLD	**Coldfoot**	64.96	339	P	P	09 11 02.2	+0.9
	baz=115,SNR=11						
K20K	**Telida**	64.96	334	IAmb	IAmb	09 11 05.0	
	comp=Z,16nm,0.9s						
K20K	**Telida**	64.96	334	P	P	09 11 02.2	+0.9
	baz=110						
E23K	**Chandalar**	65.12	340	P	P	09 11 03.1	+0.7
	baz=116						
M18K	**Stony River**	65.14	332	P	P	09 11 03.0	+0.5
	baz=107						
O17K	**Koliganek Bris**	65.25	330	P	P	09 11 03.6	+0.4
	baz=105						
H21K	**Melozitna Rive**	65.28	337	P	P	09 11 03.8	+0.4
	baz=112,SNR=6.7						
D24K	**Happy Valley**	65.36	341	P	P	09 11 05.2	+1.4
	baz=118						
TOLK	**Toolik Lake Re**	65.37	340	P	P	09 11 05.2	+1.3
	baz=116						
CHNA	**Chernabura Isl**	65.43	324	P	P	09 11 05.3	+0.9
	baz=101						
N17K	**Nushagak Hills**	65.50	331	P	P	09 11 05.5	+0.6
	baz=106						
P16K	**Nushagak River**	65.50	329	P	P	09 11 05.8	+1.0
	baz=104						
L18K	**Granite Mounta**	65.74	333	IAmb	IAmb	09 11 29.6	
	comp=Z,16nm,1.3s						
L18K	**Granite Mounta**	65.74	333	P	P	09 11 07.3	+0.9
	baz=107						
IMAR	**Indian Mountai**	65.77	337	P	P	09 11 06.3	-0.2
J19K	**Poorman**	65.83	335	P	P	09 11 07.2	+0.3
	baz=109,SNR=12						
M17K	**Holitna River**	65.85	332	IAmb	IAmb	09 11 11.8	
	comp=Z,14nm,0.8s						
M17K	**Holitna River**	65.85	332	P	P	09 11 08.0	+0.9
	baz=106						
G21K	**Allakaket**	65.87	337	P	P	09 11 07.9	+0.7
	baz=112,SNR=10						
D23K	**Nanushuk River**	65.88	340	P	P	09 11 08.3	+1.1
	baz=116,SNR=14						
E22K	**Anaktuvuk Pass**	65.90	339	P	P	09 11 08.3	+0.9
	baz=114,SNR=17						
H20K	**Anotleneega Mo**	66.03	336	P	P	09 11 09.4	+1.2
	baz=110						
J18K	**Innoko River**	66.12	334	IAmb	IAmb	09 11 22.9	
	comp=Z,14nm,1.2s						
J18K	**Innoko River**	66.12	334	P	P	09 11 10.2	+1.3
	baz=107						
F21K	**Alatna River**	66.13	338	P	P	09 11 09.8	+0.9
	baz=112						
C23K	**Itkillik River**	66.24	341	P	P	09 11 10.3	+0.9
	baz=116						
N16K	**Nishlik Lake**	66.24	330	P	P	09 11 10.3	+0.7
	baz=104,SNR=5.1						
L17K	**Donlin**	66.44	332	P	P	09 11 12.0	+1.1
	baz=105						
O15K	**Ungalikthiuk R**	66.45	329	P	P	09 11 11.8	+0.8
	baz=103						
M16K	**Timber Creek**	66.46	331	IAmb	IAmb	09 11 12.7	
	comp=Z,19nm,1.2s						
M16K	**Timber Creek**	66.46	331	P	P	09 11 12.1	+1.1
	baz=104						
D22K	**Ayikyak River**	66.50	340	P	P	09 11 12.2	+1.1
	baz=114,SNR=18						
SUMG	**Summit**	66.55	15 *i*	P	P	09 11 09.9	-2.0
SUMG				IAmb	IAmb	09 11 12.8	
	comp=Z,6.3nm,0.8s						
GCSA	**Galena City Sc**	66.58	335	P	P	09 11 13.1	+1.4
	baz=108						
K17K	**Iditarod**	66.60	333	P	P	09 11 12.8	+0.9
	baz=106,SNR=5.3						
E21K	**Killik River**	66.76	339	P	P	09 11 13.9	+1.0
	baz=112						
N15K	**Kwethluk River**	66.81	330	P	P	09 11 14.3	+1.0
	baz=103						
L16K	**Owhat River**	66.87	332	IAmb	IAmb	09 11 18.8	
	comp=Z,10.0nm,0.9s						
L16K	**Owhat River**	66.87	332	P	P	09 11 14.4	+0.7
	baz=104						
F20K	**Avaraart Lake**	66.88	338	P	P	09 11 14.4	+0.8
	baz=110,SNR=20						
NEEM	**North Greenlan**	66.97	9 *i*	P	P	09 11 12.4	-2.0
NEEM				IAmb	IAmb	09 11 15.8	
	comp=Z,13nm,1.0s						
G19K	**Purcell Mounta**	67.10	337	P	P	09 11 15.8	+0.8
	baz=108,SNR=20						
O14K	**Tigyukauivet M**	67.19	329	P	P	09 11 17.2	+1.5
	baz=101						
M15K	**Kasigluk River**	67.21	330	P	P	09 11 17.2	+1.4
	baz=102						
C21K	**Knifeblade Rid**	67.30	340	P	P	09 11 17.9	+1.6
	baz=112,SNR=12						
H18K	**Honhosa River**	67.31	335	P	P	09 11 17.7	+1.3
	baz=106						
B22K	**Teshekpuk Lake**	67.32	341	P	P	09 11 17.7	+1.4
	baz=113						
B21K	**Ikpikpuk River**	67.42	340	P	P	09 11 18.2	+1.2
	baz=112						
E20K	**Nigu River**	67.46	339	P	P	09 11 18.4	+1.0
	baz=110,SNR=20						
E19K	**Redstone River**	67.57	338	P	P	09 11 19.1	+1.1
	baz=108,SNR=6.3						
F19K	**Shaleruckik Mo**	67.58	337	P	P	09 11 19.0	+1.0
	baz=108						
G18K	**Tagagawik**	67.64	336	P	P	09 11 19.9	+1.5
	baz=106						
J16K	**Anvik River**	67.76	333	P	P	09 11 20.9	+1.6
	baz=104						
D20K	**Etivluk River**	67.77	339	P	P	09 11 20.7	+1.5
	baz=110						
L15K	**Ungalak Mounta**	67.80	331	P	P	09 11 20.8	+1.3
	baz=102						
M14K	**Bethel**	67.83	330	P	P	09 11 21.0	+1.3
	baz=104,SNR=8.4						
H17K	**Granite Mounta**	67.88	335	P	P	09 11 20.9	+0.9
	baz=105						
I17K	**Unalakleet**	67.95	334	P	P	09 11 21.4	+1.0
	baz=104						
K15K	**Wolf Creek Mou**	67.95	332	P	P	09 11 22.2	+1.7
	baz=102,SNR=8.1						
D19K	**Kuna River**	68.22	339	P	P	09 11 23.2	+1.1
	baz=108						
F18K	**Selawik**	68.22	337	P	P	09 11 23.3	+1.2
	baz=106						
L14K	**Kuka Creek**	68.29	331	P	P	09 11 23.8	+1.2
	baz=101						
G17K	**Kiwalik Mounta**	68.33	335	P	P	09 11 24.2	+1.4
	baz=104,SNR=6.9						
M13K	**Dall Lake**	68.44	330	P	P	09 11 25.2	+1.6
	baz=100						
A21K	**Barrow**	68.67	342	P	P	09 11 26.0	+1.2
	baz=110						
H16K	**Elim**	68.78	334	P	P	09 11 26.7	+1.1
	baz=103,SNR=8.5						
F17K	**Baldwin Pennin**	68.80	336	IAmb	IAmb	09 11 39.1	
	comp=Z,7.8nm,1.1s						
F17K	**Baldwin Pennin**	68.80	336	P	P	09 11 26.9	+1.2
	baz=104						
E18K	**Tukpahlearik C**	68.81	337	IAmb	IAmb	09 11 49.6	
	comp=Z,8.1nm,1.1s						
E18K	**Tukpahlearik C**	68.81	337	P	P	09 11 26.8	+1.0
	baz=105						
C19K	**Lookout Ridge**	68.91	339	P	P	09 11 28.2	+1.8
	baz=107						
J14K	**Nanvaranak Lak**	68.97	332	P	P	09 11 28.3	+1.5
	baz=101						
G16K	**Koyuk River**	68.99	335	P	P	09 11 28.1	+1.2
	baz=103						
E17K	**Hotham Inlet**	69.18	337	P	P	09 11 29.1	+1.1
	baz=104,SNR=36						
UNV	**Unalaska Valle**	69.30	323	P	P	09 11 30.0	+1.0
	baz=95						
K13K	**Kusilvak Mount**	69.33	331	P	P	09 11 30.1	+1.0
	baz=99						
C18K	**Utukok River**	69.34	339	P	P	09 11 30.1	+0.9
	baz=105,SNR=8.0						
G15K	**Niukluk**	69.60	335	P	P	09 11 31.9	+1.1
	baz=101						
BORG	**Borgarnes**	69.65	26	LR	LR	09 41 13.9	
	comp=Z,80nm,18.6s,baz=273,slow=35						
D17K	**Noatak River**	69.80	337	P	P	09 11 32.7	+0.8
	baz=103,SNR=5.5						
RDOG	**Red Dog Mine**	69.81	338	IAmb	IAmb	09 11 36.1	
	comp=Z,8.4nm,1.0s						
RDOG	**Red Dog Mine**	69.81	338	P	P	09 11 33.4	+1.5
	baz=103						
M11K	**Mekoryuk**	69.84	330	P	P	09 11 33.8	+1.6
	baz=97						
F15K	**North Star Dit**	69.99	335	IAmb	IAmb	09 11 38.4	
	comp=Z,17nm,0.9s						
F15K	**North Star Dit**	69.99	335	P	P	09 11 34.7	+1.6
	baz=101						
C17K	**DeLong Mountai**	70.01	338	P	P	09 11 34.6	+1.4
	baz=103						
ANM	**Nome**	70.09	334	P	P	09 11 35.1	+1.3
	baz=100,SNR=6.5						
F14K	**Arctic Creek**	70.64	335	P	P	09 11 38.4	+1.3
	baz=99,SNR=5.9						
C16K	**Lisburne Hills**	70.75	338	P	P	09 11 39.0	+1.4
	baz=101						
TNA	**Tin City**	71.31	335	IAmb	IAmb	09 11 59.2	
	comp=Z,18nm,1.4s						
TNA	**Tin City**	71.31	335	P	P	09 11 42.5	+1.4
	baz=98,SNR=6.7						
DBG	**Daneborg**	72.03	16 *i*	P	P	09 11 43.5	-1.8
DBG				IAmb	IAmb	09 11 44.7	
	comp=Z,3.2nm,0.7s						
GAMB	**Gambell**	72.75	333	P	P	09 11 51.1	+1.3
	baz=94						
DAG	**Danmarks Havn**	72.95	13 *i*	P	P	09 11 48.2	-2.6
DAG				IAmb	IAmb	09 11 49.8	
	comp=Z,8.2nm,0.9s						
NOR	**Nord**	74.33	9 *i*	P	P	09 11 58.9	+0.1
NOR				IAmb	IAmb	09 12 00.4	
	comp=Z,3.8nm,0.8s						
RAR	**Rarotonga**	74.42	243	LR	LR	09 37 13.4	
	comp=Z,22nm,19.9s,baz=86,slow=30						
JMIC	**Jan Mayen**	75.11	20	LR	LR	09 44 41.4	
	comp=Z,304nm,21.8s,baz=278,slow=36						
EKA	**Eskdalemuir Ar**	78.51	36	P	P	09 12 21.1	-1.9
	comp=Z,8.5nm,0.8s,baz=279,slow=6.2,SNR=13						
EKA				LR	LR	09 47 03.4	
	comp=Z,147nm,18.9s,baz=288,slow=36						
	comp=Z,8.5nm,0.8s						
SPITS	**Spitsbergen Ar**	80.36	11	P	P	09 12 31.6	-1.1
	comp=Z,4.9nm,0.9s,baz=318,slow=1.1,SNR=5.1						
SPITS				LR	LR	09 51 44.7	
	comp=Z,430nm,18.5s,baz=256,slow=38						
	comp=Z,4.9nm,0.9s						
ESDC	**Sonseca Array**	80.39	52	P	P	09 12 31.0	-2.6
	comp=Z,2.2nm,0.8s,baz=291,slow=6.0,SNR=15						
ESDC				LR	LR	09 41 33.5	
	comp=Z,81nm,19.1s,baz=282,slow=31						
	comp=Z,2.2nm,0.8s						
ESDC	**Sonseca Array**	80.39	52	P	P	09 12 32.0	-1.7
MDT	**Midelt**	81.11	58	LR	LR	09 45 34.2	
	comp=Z,57nm,19.8s,baz=310,slow=34						
BILL	**Bilibino**	81.28	338	P	P	09 12 38.3	+0.5
BILL				IAmb	IAmb	09 12 42.0	
	comp=Z,14nm,0.8s						
NB2	**NORSAR Subarra**	84.61	28	P	P	09 12 56.6	+1.4
	comp=Z,15nm,1.1s,baz=292,slow=4.8						
NB2	**NORSAR Subarra**	84.61	28	P	P	09 12 56.6	+1.4
NB2				AMP		09 12 56.6	
	comp=Z,15nm,1.1s						
NOA	**NORSAR Array B**	84.61	28	P	P	09 12 55.0	-0.2
	comp=Z,3.3nm,0.9s,baz=290,slow=4.8,SNR=6.4						
NOA				LR	LR	09 48 43.3	
	comp=Z,143nm,22.0s,baz=285,slow=34						
	comp=Z,3.3nm,0.9s						
HFS	**Hagfors**	86.08	29	LR	LR	09 49 26.0	
	comp=Z,125nm,21.7s,baz=273,slow=34						
DBIC	**Dimbolcyn**	86.43	84	LR	LR	09 50 20.8	
	comp=Z,65nm,19.5s,baz=292,slow=35						
ARCES	**ARCESS Array B**	86.49	18	P	P	09 13 03.2	-1.2
	comp=Z,3.8nm,0.7s,baz=316,slow=7.7,SNR=2.4						
ARCES				LR	LR	09 51 28.5	
	comp=Z,149nm,19.4s,baz=326,slow=36						
	comp=Z,3.8nm,0.7s						
DAVOX	**Davos/Dischmat**	88.47	42	LR	LR	09 46 31.6	
	comp=Z,116nm,21.2s,baz=258,slow=32						
CLL	**Collm**	88.87	37 *i*	P	P	09 13 17.5	+1.4
CLL				*i* x	x	09 13 20.6	
GERES	**GERESS Array B**	90.18	39	P	P	09 13 22.5	0.0
	comp=Z,1.1nm,0.8s,baz=258,slow=4.9,SNR=4.5						
GERES				LR	LR	09 52 08.7	
	comp=Z,118nm,20.1s,baz=290,slow=35						
	comp=Z,1.1nm,0.8s						
TIXI	**Tiksi**	90.21	348	LR	LR	09 59 26.2	
	comp=Z,97nm,20.2s,baz=25,slow=39						
TIXI	**Tiksi**	90.21	348	P	P	09 13 21.4	-0.5
TIXI				IAmb	IAmb	09 13 24.0	
	comp=Z,9.1nm,0.8s						
MA2	**Magadan**	90.85	333	LR	LR	09 56 30.4	
	comp=Z,47nm,18.3s,baz=54,slow=37						
MA2	**Magadan**	90.85	333	P	P	09 13 25.4	+0.2
MA2				IAmb	IAmb	09 13 34.7	
	comp=Z,10nm,1.0s						
MA2	**Magadan**	90.85	333	P	P	09 13 26.1	+0.9
FINES	**FINESS Array B**	90.93	25	P	P	09 13 25.1	-0.5
	comp=Z,7.6nm,0.9s,baz=262,slow=8.3,SNR=6.5						
FINES				LR	LR	09 52 56.1	
	comp=Z,103nm,20.6s,baz=252,slow=35						
	comp=Z,7.6nm,0.9s						
TORD	**Torodi Ar. Bea**	91.15	76	P	P	09 13 25.6	-1.9
	comp=Z,1.1nm,1.0s,baz=256,slow=8.5,SNR=3.9						
TORD				LR	LR	09 49 52.7	
	comp=Z,64nm,21.1s,baz=308,slow=33						
	comp=Z,1.1nm,1.0s						
VRAC	**Vranov**	91.76	38	LR	LR	09 56 36.8	
	comp=Z,116nm,18.0s,baz=314,slow=37						
YAK	**Yakutsk**	97.32	341	LR	LR	10 04 16.8	
	comp=Z,80nm,18.3s,baz=74,slow=40						
AKASG	**Malin Array Be**	98.25	33	LR	LR	09 59 35.6	
	comp=Z,106nm,19.6s,baz=254,slow=36						
OBN	**Obninsk**	99.13	27	LR	LR	09 57 14.0	
	comp=Z,115nm,21.8s,baz=224,slow=35						
ZALV	**Zalesovo Beam**	112.41	2	PP	PP	09 19 49.4	+6.9
	comp=Z,0.2nm,0.3s,baz=317,slow=6.3,SNR=3.6						
KURK	**Kurchatov**	115.24	6		PKiKP	09 19 03.4	+0.1
KURBB	**Kurchatov Arra**	115.32	6	PKP	PKiKP	09 19 03.4	-0.1
	comp=Z,0.8nm,0.8s,baz=354,slow=1.9,SNR=6.8						
KSRS	**Korea Array**	116.19	325	PKP	PKiKP	09 19 05.8	+0.2
	comp=Z,0.8nm,0.6s,baz=97,slow=0.4,SNR=2.3						
SONM	**Songino Array**	116.22	346	PKP	PKPdf	09 19 05.9	+0.3
	comp=Z,0.2nm,0.5s,baz=343,slow=1.5,SNR=2.7						
SONM				PP	PP	09 20 12.9	+3.2
	comp=Z,0.9nm,1.1s,baz=33,slow=5.5,SNR=5.4						
MKAR	**Makanchi Array**	119.44	4	PKP	PKPdf	09 19 10.8	-0.9
	comp=Z,0.5nm,0.8s,baz=349,slow=1.2,SNR=6.2						
BOSA	**Boshof**	121.00	115	PKhKP	PKPpre	09 19 07.8	
	comp=Z,2.8nm,0.8s,baz=158,slow=17,SNR=2.7						
BOSA				PKP	PKiKP	09 19 16.0	+0.6
	comp=Z,3.6nm,0.9s,baz=205,slow=3.1,SNR=2.7						
HHC	**Hu-ho-hao-te**	121.05	339	*e*P	PKPdf	09 19 11.9	-3.1
PMG	**Port Moresby**	121.23	267	PKP	PKiKP	09 19 18.2	+2.3
	comp=Z,3.6nm,0.3s,baz=104,slow=7.4,SNR=1.8						
WMQ	**Urumqi**	122.58	360	*e*PKP	PKiKP	09 19 18.9	+0.9
NJ2	**Nanjing**	125.18	327	*e*P	PKiKP	09 19 23.5	+0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA2	**Gaotai**	125.63	348	*e*PKP	PKPdf	09 19 24.0	+0.1
KSH2	**Kashi**	126.14	11	PKP	PKPdf	09 19 24.9	0.0
LZH	**Lanzhou**	127.87	343	*e*P	PKPdf	09 19 28.8	+0.5
LZH				pP	sPKPdf	09 19 37.0	+5.1
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
LZDM	**Lanzhou Array**	128.04	343	PKP	PKiKP	09 19 29.4	0.0
	comp=Z,0.5nm,0.3s,baz=314,slow=50,SNR=1.4						
XAN	**Xi'an**	128.05	337	P	PKPdf	09 19 28.6	0.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GOMU	**GeErMu**	129.68	352	PKP	PKPdf	09 19 31.9	-0.1
WRA	**Warramunga Arr**	134.62	256	PKP	PKPdf	09 19 42.2	+1.0
	comp=Z,2.9nm,1.1s,baz=84,slow=1.8,SNR=6.3						
ASAR	**Alice Springs**	134.90	250	PKP	PKPdf	09 19 42.5	+0.8
	comp=Z,0.8nm,0.7s,baz=88,slow=2.7,SNR=5.4						
PZH	**PanZhiHua**	137.44	341	PKP	PKPdf	09 19 45.6	-0.9
CMAR	**Chiang Mai Arr**	145.85	340	PKPbc	PKPab	09 20 02.6	+0.2
	comp=Z,15nm,0.8s,baz=342,slow=4.0,SNR=68						
CMAR	**Chiang Mai Arr**	145.85	340		PKPdf	09 20 02.0	+0.4

IDC ***24*** *09:05:15.8±3.2, 7°.37S×128°.33E, h135km±41km, mb3.4/3, mbtmp4.0/7, Error ellipse: s-maj=64.3km s-min=16.8km az=95.0*

ISC 24 09:05:15.9±0.9, 7°.59S±0°.06×128°.8E±0°.2, h151km, n7, σ2s93/11, mb3.5/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	7.13	21	P		Pn	09 06 58.2	+0.4
	12nm,0.3s,baz=198,slow=19,SNR=9.2							
SIJI				S		Sn	09 08 16.2	-1.6
	7.0nm,0.5s,baz=222,slow=23,SNR=1.7							
FITZ	**Fitzroy Crossi**	10.87	196	P		Pn	09 07 48.7	+1.3
	6.6nm,0.3s,baz=20,slow=12,SNR=41							
FITZ				S		Sn	09 09 44.0	-3.8
	2.6nm,0.4s,baz=312,slow=22,SNR=2.0							
WRA	**Warramunga Arr**	13.42	157	P		P	09 08 24.4	-0.2
	0.9nm,0.2s,baz=337,slow=15,SNR=23							
WRA				S		Sn	09 10 45.4	-3.7
	1.2nm,0.4s,baz=330,slow=21,SNR=5.4							
ASAR	**Alice Springs**	16.73	163	P		Pn	09 09 07.3	+5.8
	2.7nm,0.5s,baz=335,slow=9.8,SNR=71							
ASAR				S		S	09 12 06.7	-0.9
	0.7nm,0.8s,baz=344,slow=24,SNR=4.6							
MKAR	**Makanchi Array**	68.05	328	P		P	09 15 58.4	-0.6
	0.3nm,0.4s,baz=124,slow=5.8,SNR=9.9							
	0.3nm,0.4s							
ZALV	**Zalesovo Beam**	71.57	334	P		P	09 16 19.4	-1.0
	0.4nm,0.4s,baz=135,slow=7.2,SNR=2.9							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	72.37	329	P		P	09 16 24.6	-0.6
	0.5nm,0.6s,baz=121,slow=5.7,SNR=4.1							
	0.5nm,0.6s							

JMA ***24*** *09:36:37.9±0.2, 41°.6N±0°.5×142°.1E±0°.7, h65km±2km, MV3.3/36, E OFF AOMORI PREF*
JMA Felt I J1 at E OFF AOMORI PREF .
IDC ***24*** *09:36:38.7±0.9, 41°.51N×142°.14E, h70km±7km, mb3.5/12, mbtmp3.8/16, Error ellipse: s-maj=19.5km s-min=9.8km az=103.0*

ISC 24 09:36:38.7±0.7, 41°.53N±0°.04×142°.08E±0°.05, h67km±6km, n39, σ1s05/48, mb3.9/12, 14D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	0.62	245	⇓*i*P		Pn	09 36 52.0	-0.6
JAHD				⇓S		Sn	09 37 02.3	-0.3
JARK	**Aomorirokkasho**	0.75	226	⇓*i*P		Pn	09 36 53.1	-0.9
JARK				⇓S		Sn	09 37 04.2	-1.1
JOT	**Ohata**	0.79	260	⇓*i*P		Pn	09 36 53.5	-1.0
JKB	**Kayabe**	0.86	295	⇓*i*P		Pn	09 36 53.9	-1.4
JNBK	**Urakawa-nobuka**	0.90	33	P		Pn	09 36 54.2	-1.6
JEM	**Erimo**	0.94	58	*i* P		Pn	09 36 55.2	-1.1
JEM				*e*S		Sn	09 37 08.0	-1.3
JTM	**Tenmabayashi**	1.07	226	⇓*i*P		Pn	09 36 57.6	-0.3
JTM				⇓S		Sn	09 37 11.7	-0.5
JIAM	**Iburiatsuma**	1.10	354	⇓*i*P		Pn	09 36 58.1	-0.2
JIAM				⇓*e*S		Sn	09 37 11.8	-1.2
JNB	**Noboribetsu**	1.22	321	⇓*i*P		Pn	09 36 58.3	-1.5
JANG	**Nango**	1.23	201	*i* P		Pn	09 36 59.5

	1.7nm,1.0s								
KURBB	**Kurchatov Arra**	**43.77**	**304**	P	**P**	09 44 36.6	-0.7		
	1.3nm,0.3s,baz=87,slow=8.4,SNR=2.7								
	1.3nm,0.3s								
ILAR	**Eielson Array**	**45.46**	**35**	P	**P**	09 44 51.1	+0.4		
	0.6nm,0.8s,baz=287,slow=9.6,SNR=9.6								
	0.6nm,0.8s								
BVAR	**Borovoye Array**	**48.02**	**310**	P	**P**	09 45 11.2	+0.4		
	0.9nm,0.4s,baz=73,slow=7.9,SNR=7.8								
	0.9nm,0.4s								
RES	**Resolute Bay**	**58.13**	**15**	P	**P**	09 46 24.7	0.0		
	1.8nm,0.6s,baz=297,slow=7.0,SNR=13								
RES				pP	**pP**	09 46 43.5	+1.6		
	0.7nm,0.6s,baz=316,slow=7.3,SNR=2.5								
	1.8nm,0.6s								
YKA	**Yellowknife Ar**	**59.69**	**32**	P	**P**	09 46 34.7	-0.9		
	0.1nm,0.7s,baz=305,slow=7.2,SNR=1.8								
	0.1nm,0.7s								
WRA	**Warramunga Arr**	**61.58**	**188**	P	**P**	09 46 48.7	-0.3		
	0.4nm,0.6s,baz=7.5,slow=6.8,SNR=2.1								
	0.4nm,0.6s								
FINES	**FINESS Array B**	**65.10**	**332**	P	**P**	09 47 11.5	-0.3		
	3.0nm,0.9s,baz=104,slow=6.1,SNR=5.5								
FINES				pP	**pP**	09 47 29.6	+0.3		
	3.0nm,0.9s,baz=46,slow=6.6,SNR=1.8								
	3.0nm,0.9s								
ASAR	**Alice Springs**	**65.31**	**188**	P	**P**	09 47 12.2	-1.4		
	0.6nm,0.8s,baz=31,slow=10,SNR=11								
ASAR				pP	**pP**	09 47 30.8	-0.2		
	0.4nm,0.8s,baz=9.7,slow=8.1,SNR=2.1								
	0.6nm,0.8s								
HFS	**Hagfors**	**70.22**	**335**	P	**P**	09 47 43.6	-0.5		
	2.2nm,0.7s,baz=46,slow=6.2,SNR=1.5								
	2.2nm,0.7s								

*CATAC **24** 09:38:07.7±0.2, 12°N±1°×88.0W±0.9, h15km, M4.0/57, MLv4.0/57, Error ellipse: s-maj=3.1km s-min=1.4km az=26.1, confirmed*
*IDC **24** 09:38:08.6±1.6, 12°.26N×87°.31W, h0km, mb3.6/4, mbtmp3.6/6, ML2.8/3, MS2.1/1, Error ellipse: s-maj=56.9km s-min=20.3km az=40.0*
*SNET **24** 09:38:09.9±2.7, 11°.58N×87°.95W, h35km, ML3.8, Presumed earthquake*
ISC 24 09:38:09.5±0.8, 11°.54N±0°.04×87°.97W±0°.03, h30km, n86, σ0s81/155, mb3.5/4, 15C-16D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRIN	**San Cristobal**	**1.46**	**38**	⇑P		**Pn**	**09 38 34.2**	**+0.2**
CRIN				S		**Sb**	**09 38 53.3**	**-1.2**
CSGN	**Cosiguina Volc**	**1.48**	**16**	⇓P		**Pn**	**09 38 33.9**	**-0.3**
CSGN				S		**Sb**	**09 38 53.5**	**-1.6**
COPN	**Copaltepe**	**1.49**	**65**	⇓P		**Pn**	**09 38 33.5**	**-0.8**
TEL3	**Telica 3**	**1.51**	**47**	⇑P		**Pn**	**09 38 34.1**	**-0.4**
HERN	**Volcan Telica**	**1.54**	**46**	⇓P		**Pn**	**09 38 34.4**	**-0.7**
HERN				S		**Sn**	**09 38 54.8**	**+0.6**
CNGA	**Al SSO del Vol**	**1.56**	**53**	⇑P		**Pn**	**09 38 34.9**	**-0.4**
CNGA				S		**Sn**	**09 38 55.3**	**+0.7**
MACN	**El Madrono**	**1.57**	**54**	⇑P		**Pn**	**09 38 34.9**	**-0.5**
MACN				S		**Sn**	**09 38 55.0**	**+0.3**
CNGN	**Cerro Negro**	**1.57**	**52**	⇑P		**Pn**	**09 38 34.9**	**-0.5**
CNGN				S		**Sn**	**09 38 55.8**	**+1.0**
LEVN	**Ruinas Leon Vi**	**1.58**	**57**	⇓P		**Pn**	**09 38 34.9**	**-0.6**
LEVN				S		**Sb**	**09 38 56.1**	**-1.6**
POLN	**Al Sur del Vol**	**1.58**	**46**	⇑P		**Pn**	**09 38 35.0**	**-0.5**
POLN				S		**Sn**	**09 38 55.7**	**+0.6**
ILCN	**San Idelfonso**	**1.62**	**50**	⇑P		**Pn**	**09 38 35.5**	**-0.6**
ILCN				S		**Sn**	**09 38 56.6**	**+0.7**
MOMN	**Momotombo**	**1.65**	**58**	P		**Pn**	**09 38 35.9**	**-0.6**
MOMN				S		**Sn**	**09 38 57.3**	**+0.7**
SAPS	**Ciudad Sandino**	**1.66**	**68**	⇑P		**Pn**	**09 38 36.3**	**-0.3**
SAPS				S		**Sn**	**09 38 57.9**	**+1.0**
AMTN	**Mateare**	**1.66**	**65**	P		**Pn**	**09 38 36.9**	**+0.3**
AMTN				S		**Sn**	**09 38 57.7**	**+0.8**
MOM2	**El Cardon**	**1.71**	**58**	⇑P		**Pn**	**09 38 36.9**	**-0.4**
MOM2				S		**Sn**	**09 38 59.0**	**+0.9**
ABCN	**Banco Central**	**1.73**	**70**	P		**Pn**	**09 38 38.1**	**+0.5**
ABCN				S		**Sn**	**09 38 58.9**	**+0.3**
APQ3	**Volcan Apoyequ**	**1.73**	**65**	⇓P		**Pn**	**09 38 37.5**	**-0.1**
APQ3				S		**Sn**	**09 38 59.6**	**+1.0**
APYN	**Apoyeque**	**1.73**	**66**	⇑P		**Pn**	**09 38 38.0**	**+0.4**
APYN				S		**Sn**	**09 38 59.2**	**+0.5**
APQ2	**Apoyeque**	**1.74**	**68**	P		**Pn**	**09 38 37.1**	**-0.6**
APQ2	**Apoyeque**	**1.74**	**68**	⇓P		**Pn**	**09 38 37.7**	**0.0**
APQ2				S		**Sn**	**09 38 59.1**	**+0.2**
APQ2				S		**Sb**	**09 38 60.0**	**-2.3**
LCND	**La Caada**	**1.76**	**3**	⇓P		**Pn**	**09 38 37.9**	**-0.1**
LCND				S		**Sn**	**09 39 00.1**	**+0.7**
LCND	**La Caada**	**1.76**	**3**	*e*P		**Pn**	**09 38 37.8**	**-0.3**
LCND				*e*S		**Sb**	**09 39 01.6**	**-1.3**
UNAN	**Cigeo UNAN**	**1.76**	**71**	⇑P		**Pn**	**09 38 37.6**	**-0.4**
UNAN				S		**Sn**	**09 39 00.3**	**+0.8**
ALLN	**Telcor Managua**	**1.77**	**70**	P		**Pn**	**09 38 38.3**	**+0.1**
ALLN				S		**Sn**	**09 38 59.9**	**+0.2**
MGAN	**Managua**	**1.79**	**70**	⇑P		**Pn**	**09 38 38.1**	**-0.4**
MGAN				S		**Sn**	**09 39 00.8**	**+0.6**
SABN	**Sabanita**	**1.82**	**77**	P		**Pn**	**09 38 37.7**	**-1.1**
MAS3	**Al N del Volca**	**1.82**	**75**	⇓P		**Pn**	**09 38 38.3**	**-0.6**
MAS3				S		**Sn**	**09 39 01.8**	**+0.7**
MASN	**Masaya**	**1.84**	**76**	P		**Pn**	**09 38 39.0**	**-0.2**
MASN				S		**Sn**	**09 39 02.0**	**+0.6**
NANN	**Nandasmo**	**1.86**	**77**	⇑P		**Pn**	**09 38 39.9**	**+0.5**
NANN				S		**Sn**	**09 39 02.3**	**+0.5**
AERN	**Aeropuerto Man**	**1.87**	**71**	S		**Sn**	**09 39 02.5**	**+0.5**
NADN	**Granada**	**1.91**	**84**	⇓P		**Pn**	**09 38 39.7**	**-0.4**
NADN				S		**Sn**	**09 39 03.5**	**+0.4**
CNRM	**Centro Naciona**	**1.93**	**354**	P		**Pn**	**09 38 40.3**	**0.0**
CNRM				S		**Sn**	**09 39 04.8**	**+1.2**
PACA	**Pacayal**	**1.95**	**350**	⇓P		**Pn**	**09 38 40.7**	**0.0**
PACA				S		**Sn**	**09 39 04.4**	**+0.2**
TECA	**Tecapa**	**2.01**	**345**	*i*P		**Pn**	**09 38 41.4**	**-0.2**
TECO	**Alcaldia de Te**	**2.14**	**338**	P		**Pn**	**09 38 43.8**	**+0.6**
TECO				S		**Sn**	**09 39 08.7**	**0.0**
PQSS	**Presa 15 de Se**	**2.15**	**345**	⇓P		**Pn**	**09 38 43.7**	**+0.4**
PQSS	**Presa 15 de Se**	**2.15**	**345**	*e*P		**Pn**	**09 38 44.1**	**+0.8**
PQSS				*e*S		**Sn**	**09 39 09.2**	**+0.1**
LIMN	**Finca el Limon**	**2.18**	**46**	⇑P		**Pn**	**09 38 43.5**	**-0.4**
LIMN				S		**Sn**	**09 39 10.3**	**+0.4**
COEG	**Centro de Oper**	**2.25**	**337**	P		**Pn**	**09 38 44.7**	**-0.1**
COEG				S		**Sn**	**09 39 10.8**	**-0.8**
COEG	**Centro de Oper**	**2.25**	**337**	*e*P		**Pn**	**09 38 45.7**	**+0.9**
SCLA	**Alcaldia de Sa**	**2.27**	**341**	⇓P		**Pn**	**09 38 45.6**	**+0.5**
SCLA				S		**Sn**	**09 39 12.4**	**+0.3**
SCLA	**Alcaldia de Sa**	**2.27**	**341**	*i*P		**Pn**	**09 38 45.3**	**+0.2**
SCLA				*e*S		**Sn**	**09 39 11.6**	**-0.5**
MORN	**Al O del Volca**	**2.28**	**90**	P		**Pn**	**09 38 44.8**	**-0.3**
MORN				S		**Sn**	**09 39 12.6**	**+0.3**
LALI	**Alcalda de L**	**2.34**	**326**	P		**Pn**	**09 38 46.1**	**+0.1**
LALI				S		**Sn**	**09 39 12.5**	**-1.2**
PAVA	**Las Pavas**	**2.36**	**337**	P		**Pn**	**09 38 46.6**	**+0.3**
PAVA				S		**Sn**	**09 39 14.3**	**0.0**
PAVA	**Las Pavas**	**2.36**	**337**	*e*P		**Pn**	**09 38 46.3**	**0.0**
PAVA				*e*S		**Sn**	**09 39 13.7**	**-0.6**
LOMA	**Loma Larga**	**2.40**	**331**	*e*P		**Pn**	**09 38 46.9**	**0.0**
LOMA				*e*S		**Sn**	**09 39 14.2**	**-1.1**
CARN	**Rivas**	**2.43**	**98**	P		**Pn**	**09 38 47.7**	**+0.5**
CARN				S		**Sn**	**09 39 15.9**	**0.0**
MATN	**Matagalpa**	**2.43**	**55**	S		**Sn**	**09 39 16.5**	**+0.4**
UDBS	**Universidad Do**	**2.45**	**332**	P		**Pn**	**09 38 47.2**	**-0.4**
UDBS				S		**Sn**	**09 39 16.7**	**+0.1**
UTEC	**Universidad Te**	**2.46**	**331**	P		**Pn**	**09 38 47.1**	**-0.6**
UTEC				S		**Sn**	**09 39 16.4**	**-0.4**
SEMO	**Seminario San**	**2.47**	**331**	P		**Pn**	**09 38 47.7**	**-0.2**
SEMO				S		**Sn**	**09 39 16.7**	**-0.4**
UEES	**Universidad Ev**	**2.49**	**330**	P		**Pn**	**09 38 47.9**	**-0.2**
UEES				S		**Sn**	**09 39 17.3**	**-0.3**
PMON	**Piamonte**	**2.52**	**329**	P		**Pn**	**09 38 48.7**	**+0.1**
PMON				S		**Sn**	**09 39 18.0**	**-0.5**
BOQS	**Boqueron**	**2.53**	**330**	*e*P		**Pn**	**09 38 49.8**	**+1.0**
ELI1	**Hacienda Flor**	**2.54**	**110**	P		**Pn**	**09 38 48.3**	**-0.4**
ELI1				S		**Sn**	**09 39 18.4**	**-0.2**
OCON	**Estacion meteo**	**2.54**	**35**	P		**Pn**	**09 38 49.2**	**+0.4**
OCON				S		**Sn**	**09 39 19.9**	**+1.2**
JAYA	**Jayaque - finc**	**2.55**	**326**	P		**Pn**	**09 38 48.8**	**-0.2**
JAYA	**Jayaque - finc**	**2.55**	**326**	*e*P		**Pn**	**09 38 48.8**	**-0.2**
JAYA				*e*S		**Sn**	**09 39 17.4**	**-1.7**
P5NO	**Presa 5 de nov**	**2.55**	**343**	⇓P		**Pn**	**09 38 49.4**	**+0.5**
P5NO				S		**Sn**	**09 39 19.3**	**+0.4**
P5NO	**Presa 5 de nov**	**2.55**	**343**	*e*P		**Pn**	**09 38 49.6**	**+0.7**
TGUH	**Tegucigalpa,Un**	**2.59**	**15**	⇓P		**Pn**	**09 38 49.9**	**+0.4**
TGUH				S		**Sn**	**09 39 20.6**	**+0.5**
RCON	**San Juan de Ri**	**2.62**	**42**	⇓P		**Pn**	**09 38 49.3**	**-0.7**
YUSH	**Yuscaran**	**2.64**	**25**	⇓P		**Pn**	**09 38 50.4**	**+0.2**
YUSH				S		**Sn**	**09 39 20.9**	**-0.4**
CEDA	**San Andres**	**2.64**	**328**	P		**Pn**	**09 38 50.2**	**0.0**
CEDA				S		**Sn**	**09 39 20.7**	**-0.6**
LLGN	**La Laguna**	**2.77**	**340**	P		**Pn**	**09 38 51.5**	**-0.6**
LLGN				S		**Sn**	**09 39 25.0**	**+0.4**
ACON	**Acoyapa**	**2.77**	**81**	P		**Pn**	**09 38 51.9**	**0.0**
ACON				S		**Sn**	**09 39 24.6**	**+0.2**
CEVE	**Cerro Verde**	**2.79**	**325**	P		**Pn**	**09 38 52.6**	**+0.3**
CEVE				S		**Sn**	**09 39 25.3**	**+0.1**
SNJE	**San Jose**	**2.81**	**326**	*i*P		**Pn**	**09 38 52.8**	**+0.2**
SNJE				*e*S		**Sn**	**09 39 24.0**	**-1.6**
RTR	**El Retiro**	**2.85**	**325**	*e*P		**Pn**	**09 38 54.0**	**+0.8**
UNIC	**Universidad Ca**	**2.87**	**328**	P		**Pn**	**09 38 53.0**	**-0.4**
UNIC				S		**Sn**	**09 39 27.2**	**+0.2**
CMARA	**Lajas Hojancha**	**2.92**	**121**	P		**Pn**	**09 38 53.2**	**-0.9**
CMARA				S		**Sn**	**09 39 27.3**	**-1.0**
NUBE	**Las Nubes**	**2.94**	**323**	⇑P		**Pn**	**09 38 54.6**	**+0.3**
NUBE				S		**Sn**	**09 39 27.8**	**-0.9**
FAME	**Alcaldia de Sa**	**3.04**	**319**	P		**Pn**	**09 38 55.4**	**-0.2**
FAME				S		**Sn**	**09 39 30.3**	**-0.6**
SLOZ	**Alcaldia de Sa**	**3.04**	**325**	P		**Pn**	**09 38 55.2**	**-0.4**
SLOZ				S		**Sn**	**09 39 31.4**	**+0.3**
MTO3	**Montecristo**	**3.15**	**335**	P		**Pn**	**09 38 58.0**	**+0.7**
MTO3				S		**Sn**	**09 39 33.7**	**-0.2**
JTS	**Las Juntas de**	**3.22**	**112**	Pn		**Pn**	**09 38 58.4**	**+0.3**
	3.6nm,0.3s,baz=313,slow=17,SNR=14							
JTS				Sn		**Sn**	**09 39 35.8**	**+0.4**
	5.6nm,0.3s,baz=284,slow=19,SNR=6.1							
JTS				LR		LR	09 39 43.2	
	comp=Z,37nm,22.0s,baz=273,slow=31							
	7.7nm,0.3s							
JTS	**Las Juntas de**	**3.22**	**112**	P		**Pn**	**09 38 58.0**	**0.0**
JTS				S		**Sn**	**09 39 35.5**	**+0.1**
ESQI	**Esquipulas**	**3.28**	**336**	P		**Pn**	**09 39 00.3**	**+1.2**
ESQI				S		**Sn**	**09 39 37.5**	**+0.3**
APG	**El Apazote**	**4.21**	**325**	Pn		**Pn**	**09 39 14.1**	**+2.2**
	0.1nm,0.3s,baz=56,slow=3.6,SNR=1.9							
APG				Sn		**Sn**	**09 40 00.9**	**+0.6**
	0.1nm,0.3s,baz=228,slow=19,SNR=4.2							
CMIG	**Matias Romero**	**8.68**	**310**	Pn		**Pn**	**09 40 16.6**	**+3.5**
	0.4nm,0.3s,baz=95,slow=12,SNR=8.3							
CMIG				Sn		**Sn**	**09 41 49.2**	**-0.8**
	0.1nm,0.3s,baz=186,slow=15,SNR=1.9							
	1.1nm,0.3s							
TXAR	**Lajitas Array**	**22.97**	**323**	P		**P**	**09 43 13.0**	**+1.2**
	0.9nm,0.7s,baz=131,slow=7.8,SNR=9.9							
	0.9nm,0.7s							
NVAR	**Mina Array Bea**	**38.06**	**320**	P		**P**	**09 45 28.9**	**+3.2**
	1.2nm,1.0s,baz=122,slow=7.3,SNR=4.3							
	1.2nm,1.0s							
SCHQ	**Schefferville**	**46.29**	**17**	P		**P**	**09 46 29.8**	**-2.5**
	2.8nm,0.8s,baz=214,slow=9.2,SNR=6.3							
	2.8nm,0.8s							
YKA	**Yellowknife Ar**	**54.35**	**345**	P		**P**	**09 47 31.6**	**-1.5**
	0.2nm,0.6s,baz=138,slow=6.8,SNR=5.8							
YKA				PcP		**PcP**	**09 48 38.2**	**+1.4**
	0.3nm,0.8s,baz=142,slow=3.2,SNR=5.3							
	0.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**149.42**	**347**	PKPbc		**PKiKP**	**09 57 58.1**	**+0.3**
	0.5nm,0.3s,baz=358,slow=2.5,SNR=4.9							

*SDD **24** 09:38:44.7±0.8, 17°.88N×66°.98W, h10km±8km, MD3.5, ML2.8, MW3.5, Presumed earthquake*
*NEIC **24** 09:38:44.4±0.9, 17°.87N±0°.03×66°.95W±0°.01, h10km±1km, ML3.2/35, Md3.1/7(RSPR), Error ellipse: s-maj=4.8km s-min=2.6km az=16.0*
*RSPR **24** 09:38:44.9, 17°.93N×66°.95W, h2km, MD3.1/7*
ISC 24 09:38:44.4±1.2, 17°.88N±0°.06×66°.95W±0°.02, h9km±7km, n42, σ0s48/59, 18C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GBPR	**Guanica, Bosqu**	**0.11**	**33**			**Pg**	**09 38 46.9**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.11**	**33**	*i*P		**Pg**	**09 38 46.9**	**-0.2**
MLPR	**Magueyes Islan**	**0.13**	**314**			**Pg**	**09 38 47.2**	**-0.1**
MLPR					IAML		09 38 49.4	
	6μm,0.4s							
MLPR					IAML		09 38 49.4	
	12μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.20**	**309**			**Sg**	**09 38 51.8**	**+0.4**
CRPR	**Cabo Rojo, PR**	**0.20**	**309**	Pg		**Pg**	**09 38 48.5**	**-0.1**
CRPR					IAML		09 38 53.1	
	5μm,0.5s							
CRPR					IAML		09 38 53.7	
	3μm,0.9s							
CRPR	**Cabo Rojo, PR**	**0.20**	**309**	⇑*e*Pg		**Pg**	**09 38 48.5**	**-0.1**
CRPR				⇑*e*Sg		**Sg**	**09 38 50.5**	**-0.9**
CRPR					IAML		09 38 53.5	
	comp=N,4μm,1.2s							
CRPR	**Cabo Rojo, PR**	**0.20**	**309**	⇓*e*P		**Pg**	**09 38 48.8**	**+0.2**
CRPR				*e*S		**Sg**	**09 38 51.8**	**+0.4**
LSP	**Las Mesas**	**0.32**	**336**			**Pg**	**09 38 51.0**	**+0.1**
LSP						**Sg**	**09 38 55.6**	**+0.4**
LSP	**Las Mesas**	**0.32**	**336**	⇑*e*P		**Pg**	**09 38 51.0**	**+0.1**
LSP				*e*S		**Sg**	**09 38 55.6**	**+0.4**
OBIP	**Obispado Ponce**	**0.36**	**63**			**Pg**	**09 38 52.1**	**+0.5**
OBIP	**Obispado Ponce**	**0.36**	**63**			**Sg**	**09 38 56.9**	**+0.5**
OBIP					IAML		09 38 58.4	
	comp=N,377nm,0.5s							
OBIP	**Obispado Ponce**	**0.36**	**63**	⇑*e*P		**Pg**	**09 38 52.1**	**+0.5**
OBIP				*e*S		**Sb**	**09 38 58.3**	**-0.5**
PRSN	**Puerto Rico Se**	**0.39**	**331**			**Sg**	**09 38 58.1**	**+1.0**
PRSN	**Puerto Rico Se**	**0.39**	**331**	Pg		**Pg**	**09 38 52.0**	**-0.1**
PRSN					IAML		09 38 59.9	
	comp=N,4μm,0.3s							
PRSN					IAML		09 39 01.3	
	comp=N,4μm,0.3s							
PRSN	**Puerto Rico Se**	**0.39**	**331**	⇓*e*Pg		**Pg**	**09 38 52.2**	**+0.2**
PRSN				⇑*e*Sg		**Sg**	**09 38 57.3**	**+0.1**
PRSN					IAML		09 39 01.2	
	comp=N,3μm,0.3s							
PRSN	**Puerto Rico Se**	**0.39**	**331**	⇑*e*P		**Pg**	**09 38 52.2**	**+0.2**
PRSN				*e*S		**Sg**	**09 38 58.1**	**+1.0**
CELP	**Cerrillos**	**0.40**	**61**			**Pg**	**09 38 52.5**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.43**	**30**			**Pg**	**09 38 52.6**	**-0.2**
AGPR	**Aguadilla, PR**	**0.61**	**345**			**Pg**	**09 38 55.8**	**-0.4**
AGPR					IAML		09 39 04.8	
	comp=N,858nm,0.3s							
AGPR					IAML		09 39 05.8	
	comp=N,755nm,0.4s							
AGPR	**Aguadilla, PR**	**0.61**	**345**	⇓*e*Pg		**Pg**	**09 38 55.9**	**-0.2**
AGPR				⇑*e*Sg		**Sg**	**09 39 03.7**	**-0.5**
AGPR					IAML		09 39 04.7	
	comp=N,821nm,0.2s							
AGPR	**Aguadilla, PR**	**0.61**	**345**	⇓*e*P		**Pg**	**09 38 56.0**	**-0.2**
AGPR				*e*S		**Sg**	**09 39 04.5**	**+0.3**
ECPR	**Experimental S**	**0.71**	**52**			**Pg**	**09 38 57.7**	**-0.4**
ECPR					IAML		09 39 09.6	
	comp=N,2μm,0.3s							
ECPR					IAML		09 39 10.9	
	comp=N,2μm,0.2s							
ECPR	**Experimental S**	**0.71**	**52**	⇑*e*P		**Pg**	**09 38 57.9**	**-0.1**
ECPR				*e*S		**Sb**	**09 39 08.3**	**-0.4**
IDE	**Isla Desecheo**	**0.71**	**315**			**Pg**	**09 38 58.2**	**0.0**
IDE						**Sb**	**09 39 08.8**	**-0.1**
IDE	**Isla Desecheo**	**0.71**	**315**	⇑*e*P		**Pg**	**09 38 58.2**	**0.0**
IDE				*e*S		**Sb**	**09 39 08.8**	**-0.1**
SJG	**San Juan**	**0.79**	**73**			**Pg**	**09 38 59.8**	**+0.1**
SJG	**San Juan**	**0.79**	**73**	IAML			09 39 13.5	
	comp=N,472nm,0.4s							
SJG	**San Juan**	**0.79**	**73**	⇓*e*Pg		**Pg**	**09 38 59.5**	**-0.2**
SJG				⇑*e*Sg		**Sg**	**09 39 10.5**	**+0.4**
SJG	**San Juan**	**0.79**	**73**	⇑*e*P		**Pg**	**09 38 59.8**	**+0.1**
SJG				*e*S		**Sb**	**09 39 11.4**	**+0.2**
PDPR	**Patillas Dam,**	**0.89**	**81**			**Pg**	**09 39 01.4**	**-0.1**
GCPR	**Guaynabo City**	**0.92**	**62**			**Pg**	**09 39 01.5**	**-0.8**
GCPR						**Sg**	**09 39 14.4**	**+0.1**
GCPR	**Guaynabo City**	**0.92**	**62**	⇑*e*P		**Pg**	**09 39 01.5**	**-0.8**
GCPR				*e*S		**Sg**	**09 39 14.4**	**+0.1**
HUMP	**Col San Antoni**	**1.07**	**76**			**Pg**	**09 39 04.2**	**-0.9**
HUMP						**Sb**	**09 39 19.4**	**+0.1**
HUMP	**Col San Antoni**	**1.07**	**76**			**Pg**	**09 39 04.5**	**-0.6**
HUMP					IAML		09 39 24.5	
	comp=N,296nm,0.2s							
HUMP					IAML		09 39 25.5	
	comp=N,240nm,0.2s							
HUMP	**Col San Antoni**	**1.07**	**76**	⇑*e*P		**Pg**	**09 39 04.2**	**-0.9**
HUMP				*e*S		**Sb**	**09 39 19.4**	**+0.1**
PCDR	**Punta Cana, DR**	**1.50**	**295**	⇑*e*Pg		**Pn**	**09 39 11.9**	**+0.3**
PCDR					IAML		09 39 46.3	
	comp=N,203nm,1.9s							
CUPR	**Culebra, Puert**	**1.64**	**75**			**Pn**	**09 39 14.1**	**+0.7**
HIDR	**Higuey Centro**	**1.83**	**293**	⇑*e*Pg		**Pn**	**09 39 16.8**	**+0.8**
HIDR					IAML		09 39 49.1	
	comp=N,62nm,0.3s							
DR12	**Loma Pena Alta**	**2.48**	**292**	Pn		**Pn**	**09 39 25.1**	**0.0**
HATOM	**Hato Mayor del**	**2.48**	**292**	⇓*e*Pg		**Pb**	**09 39 28.4**	**-0.8**
HATOM					IAML		09 40 13.3	
	comp=N,32nm,1.6s							
SMRT	**St. Maarten**	**3.69**	**87**			**Pn**	**09 39 42.5**	**+0.8**
SDDR	**Presa de Saban**	**4.27**	**286**	Pn		**Pn**	**09 39 50.2**	**+0.6**

KRSC 24 09:50:37.2±0.8, 54°.71N×164°.56E, h44km±24km, MI3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BKI	**Bering**	**0.95**	**58**	*e*P		Pn	09 50 56.1	+2.0
BKI				*e*S		Sn	09 51 08.1	+1.5
MKZ	**Mys Kozlova**	**1.65**	**266**	*e*P		Pn	09 51 05.8	+2.2
KBTR	**Krutoberegovo**	**1.80**	**327**	*e*P		Pn	09 51 07.5	+1.8
KBTR				*e*S		Sn	09 51 28.2	+0.9
KBG	**Krutoberegovo**	**1.88**	**327**	*e*S		Sn	09 51 30.3	+1.1
BZGR	**Bezymyannyi-Gr**	**2.53**	**301**	*e*S		Sn	09 51 48.9	+3.5
SMKR	**Semkarok**	**2.57**	**318**	*e*P		Pn	09 51 20.8	+4.5
SMKR				*e*S		Sn	09 51 51.3	+5.0
BDR	**Baidarnaya**	**2.66**	**316**	*e*S		Sn	09 51 53.5	+4.9
KMNR	**Kamenistaya**	**2.69**	**295**	*e*P		Pn	09 51 20.8	+2.8
KMNR				*e*S		Sn	09 51 51.1	+1.8
KLY	**Klyuchi**	**2.74**	**307**	*e*P		Pn	09 51 20.8	+2.2
KLY				*e*S		Sn	09 51 52.5	+2.0
ESO	**Esso**	**3.56**	**292**	*e*P		Pn	09 51 32.9	+3.0
SDLR	**Sedlovina**	**3.64**	**249**	*e*P		Pn	09 51 35.0	+3.9
SMAR	**Somma**	**3.69**	**249**	*e*P		Pn	09 51 35.5	+3.6
KRER	**Koryakskii**	**3.71**	**250**	*e*P		Pn	09 51 36.1	+4.1
AVH	**Avacha**	**3.73**	**250**	*e*P		Pn	09 51 36.3	+4.1
KRX	**Arik**	**3.74**	**251**	*e*P		Pn	09 51 36.3	+3.9
KOK	**Koryaka**	**3.77**	**250**	*e*P		Pn	09 51 36.4	+3.5
GNL	**Ganaly**	**4.02**	**258**	*e*P		Pn	09 51 40.4	+4.2
KRMR	**Karymshinskiy**	**4.25**	**246**	*e*P		Pn	09 51 43.5	+4.2
MTVR	**Mutnovka**	**4.40**	**242**	*e*P		Pn	09 51 44.7	+3.2
GRL	**Gorelyy**	**4.42**	**243**	*e*P		Pn	09 51 46.7	+4.9
ASAK	**Asacha**	**4.60**	**242**	*e*P		Pn	09 51 48.2	+3.9
OSSR	**Ossora**	**4.63**	**350**	*e*P		Pn	09 51 48.1	+3.7

AFAD 24 09:53:01.7, 38°.38N×44°.54E, h7km±3km, ML1.9, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.51**	**304**	P		Pg	09

n321,σ1$25/207, mb4.8/29, MS4.0/21, 4D, South Island

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.34**	**85**	P	**Pb**	**10 14 30.1**	**-0.9**
MSZ				S	**Sg**	**10 14 34.2**	**-0.1**
GLNY	**Glenorchy**	**0.70**	**104**	P	**Pg**	**10 14 36.1**	**-0.3**
TAFS	**Te Anau Fire S**	**0.74**	**165**	P	**Pb**	**10 14 37.8**	**+0.1**
TAFS				S	**Sb**	**10 14 48.1**	**+0.2**
DCZ	**Deep Cove**	**0.79**	**195**		**Pg**	**10 14 37.4**	**-0.6**
DCZ	**Deep Cove**	**0.79**	**195**	P	**Pg**	**10 14 37.6**	**-0.4**
DCZ				S	**Sb**	**10 14 48.5**	**-0.7**
MLZ	**Mavora Lakes**	**0.82**	**144**		**Pg**	**10 14 38.0**	**-0.5**
MLZ	**Mavora Lakes**	**0.82**	**144**	P	**Pb**	**10 14 38.5**	**-0.6**
MLZ				S	**Sb**	**10 14 50.0**	**-0.1**
QTPS	**Queenstown Pol**	**0.93**	**111**	P	**Pb**	**10 14 40.3**	**-0.6**
MOSS	**Mossburn Schoo**	**1.11**	**150**	P	**Pb**	**10 14 44.0**	**-0.1**
MOSS				S	**Sb**	**10 14 58.9**	**+0.2**
NSBS	**Neils Beach**	**1.12**	**51**	P	**Pn**	**10 14 45.2**	**+0.7**
NSBS				S	**Sb**	**10 14 59.6**	**+0.7**
WKZ	**Wanaka**	**1.13**	**97**		**Pb**	**10 14 44.0**	**-0.3**
WKZ	**Wanaka**	**1.13**	**97**	P	**Pb**	**10 14 44.0**	**-0.3**
WKZ				S	**Sg**	**10 14 58.4**	**-0.7**
JCZ	**Jackson Bay**	**1.15**	**57**	P	**Pn**	**10 14 45.3**	**+0.3**
JCZ	**Jackson Bay**	**1.15**	**57**	S	**Sb**	**10 15 00.2**	**+0.5**
JCZ	**Jackson Bay**	**1.15**	**57**	P	**Pb**	**10 14 44.3**	**-0.4**
JCZ				S	**Sb**	**10 15 00.4**	**+0.7**
WNPS	**Wanaka Nationa**	**1.21**	**90**	P	**Pn**	**10 14 45.9**	**+0.1**
WHZ	**Wether Hill Ro**	**1.24**	**164**		**Pg**	**10 14 45.6**	**-1.0**
WHZ	**Wether Hill Ro**	**1.24**	**164**	P	**Pg**	**10 14 45.6**	**-1.0**
WHZ				S	**Sg**	**10 15 01.5**	**-1.2**
MECS	**Makarora Emerg**	**1.36**	**70**	P	**Pb**	**10 14 48.5**	**+0.1**
MECS				S	**Sn**	**10 15 08.5**	**+2.6**
HDWS	**Haast DOC Work**	**1.41**	**55**	P	**Pb**	**10 14 48.7**	**-0.4**
HDWS				S	**Sn**	**10 15 09.0**	**+1.9**
EAZ	**Earnscleugh**	**1.42**	**112**	P	**Pn**	**10 14 48.8**	**+0.2**
EAZ				S	**Sb**	**10 15 07.3**	**-0.3**
RRKS	**Rarakau**	**1.44**	**179**	P	**Pg**	**10 14 49.9**	**-0.6**
PYZ	**Puysegur Point**	**1.56**	**200**		**Pn**	**10 14 48.6**	**-2.0**
PYZ	**Puysegur Point**	**1.56**	**200**	P	**Pb**	**10 14 51.5**	**-0.2**
PYZ	**Puysegur Point**	**1.56**	**200**	P	**Pn**	**10 14 48.8**	**-1.7**
LBZ	**Lake Benmore**	**1.98**	**82**		**Pn**	**10 14 57.0**	**+0.7**
LBZ	**Lake Benmore**	**1.98**	**82**	P	**Pn**	**10 14 57.6**	**+1.2**
LBZ				S	**Sb**	**10 15 23.2**	**-0.5**
FOZ	**Fox Glacier**	**2.07**	**56**		**Pn**	**10 14 57.4**	**-0.1**
FOZ	**Fox Glacier**	**2.07**	**56**	P	**Pn**	**10 14 56.7**	**-0.9**
APZ	**The Paps**	**2.16**	**170**	P	**Pn**	**10 14 59.8**	**+1.0**
APZ				S	**Sb**	**10 15 27.7**	**-1.2**
SYZ	**Scrubby Hill**	**2.18**	**148**	P	**Pn**	**10 15 00.5**	**+1.4**
SYZ	**Scrubby Hill**	**2.18**	**148**	S	**Sn**	**10 15 27.6**	**+1.5**
SYZ	**Scrubby Hill**	**2.18**	**148**	P	**Pn**	**10 15 00.1**	**+1.1**
SYZ				S	**Sb**	**10 15 28.2**	**-1.2**
ODZ	**Otahua Downs**	**2.30**	**100**		**Pn**	**10 15 01.9**	**+1.2**
ODZ	**Otahua Downs**	**2.30**	**100**	S	**Sn**	**10 15 28.3**	**-0.7**
ODZ	**Otahua Downs**	**2.30**	**100**	P	**Pn**	**10 15 00.9**	**+0.2**
ODZ	**Otahua Downs**	**2.30**	**100**	P	**Pn**	**10 15 01.5**	**+0.8**
GCSZ	**Gaunt Creek Bo**	**2.50**	**57**	P	**Pn**	**10 15 02.3**	**-1.1**
HHSZ	**Highcliff Hill**	**2.52**	**119**	P	**Pn**	**10 15 05.1**	**+1.4**
TMZ	**Timaru**	**2.57**	**84**	P	**Pn**	**10 15 04.9**	**+0.5**
RPZ	**Rata Peaks**	**2.78**	**70**	Pn	**Pn**	**10 15 07.8**	**+0.5**
	374nm,0.3s,baz=11,slow=0.5,SNR=752						
RPZ				Sn	**Sn**	**10 15 37.7**	**-3.1**
	142nm,0.3s,baz=5.0,slow=23,SNR=4.3						
RPZ	**Rata Peaks**	**2.78**	**70**		**Pn**	**10 15 08.3**	**+1.0**
RPZ	**Rata Peaks**	**2.78**	**70**	P	**Pn**	**10 15 07.4**	**+0.1**
RPZ	**Rata Peaks**	**2.78**	**70**	P	**Pn**	**10 15 07.9**	**+0.7**
ARCZ	**Arundel**	**2.78**	**76**	P	**Pn**	**10 15 07.7**	**+0.3**
WVZ	**Waitaha Valley**	**2.88**	**57**	P	**Pn**	**10 15 07.4**	**-1.3**
MHCZ	**Mount Hutt**	**3.19**	**70**	P	**Pn**	**10 15 12.5**	**-0.5**
WACZ	**Wakanui South**	**3.24**	**78**	P	**Pn**	**10 15 14.0**	**+0.3**
INZ	**Inchbonnie**	**3.51**	**57**		**Pn**	**10 15 16.9**	**-0.4**
INZ	**Inchbonnie**	**3.51**	**57**	P	**Pn**	**10 15 16.2**	**-1.2**
RACZ	**Rakaia**	**3.51**	**75**	P	**Pn**	**10 15 17.5**	**+0.1**
OXZ	**Oxford**	**3.59**	**69**		**Pn**	**10 15 17.8**	**-0.6**
OXZ	**Oxford**	**3.59**	**69**	P	**Pn**	**10 15 17.5**	**-0.9**
MQZ	**McQueen's Vall**	**3.88**	**77**		**Pn**	**10 15 22.2**	**-0.1**
MQZ	**McQueen's Vall**	**3.88**	**77**	P	**Pn**	**10 15 22.2**	**-0.1**
LTZ	**Lake Taylor**	**3.99**	**63**		**Pn**	**10 15 23.6**	**-0.4**
LTZ	**Lake Taylor**	**3.99**	**63**	P	**Pn**	**10 15 23.0**	**-1.0**
AKCZ	**Akaroa Harbour**	**4.01**	**80**	P	**Pn**	**10 15 24.1**	**-0.1**
AMCZ	**Amberley**	**4.06**	**70**		**Pn**	**10 15 25.0**	**+0.1**
AMCZ	**Amberley**	**4.06**	**70**	P	**Pn**	**10 15 24.9**	**+0.1**
OKCZ	**Okains Bay**	**4.15**	**78**	P	**Pn**	**10 15 26.4**	**+0.2**
DSZ	**Denniston Nort**	**4.35**	**49**		**Pn**	**10 15 27.9**	**-1.0**
DSZ	**Denniston Nort**	**4.35**	**49**	P	**Pn**	**10 15 27.6**	**-1.3**
GVZ	**Greta Valley S**	**4.40**	**69**		**Pn**	**10 15 29.2**	**-0.4**
THZ	**Tophouse**	**4.96**	**55**		**Pn**	**10 15 37.1**	**-0.2**
KHZ	**Kahutara**	**4.98**	**65**		**Pn**	**10 15 37.4**	**-0.1**
KHZ	**Kahutara**	**4.98**	**65**	P	**Pn**	**10 15 37.9**	**+0.3**
MRNZ	**Matariki Terra**	**5.10**	**52**	mB			
QRZ	**Quartz Range**	**5.39**	**46**		**Pn**	**10 15 42.2**	**-0.9**
QRZ	**Quartz Range**	**5.39**	**46**	P	**Pn**	**10 15 42.4**	**-0.7**
QRZ	**Quartz Range**	**5.39**	**46**	mB			
TKNZ	**Takaka Hill**	**5.46**	**50**	mB			
BSWZ	**Blackbirch Sta**	**5.57**	**60**	mB			
NNZ	**Nelson**	**5.58**	**53**		**Pn**	**10 15 45.9**	**+0.2**
NNZ	**Nelson**	**5.58**	**53**	mB			
CMWZ	**Cape Campbell**	**5.76**	**61**		**Pn**	**10 15 50.2**	**+2.0**
CMWZ	**Cape Campbell**	**5.76**	**61**	mB			
HAVS	**Havelock**	**5.78**	**56**	P	**Pn**	**10 15 49.6**	**+1.2**
TCW	**Tory Channel**	**6.11**	**58**	mB			
DUWZ	**D'Urville Isla**	**6.11**	**58**	mB			
SNZO	**South Karori**	**6.31**	**60**		**Pn**	**10 15 56.1**	**+0.3**
SNZO	**South Karori**	**6.31**	**60**	P	**Pn**	**10 15 55.6**	**-0.2**
BHW	**Baring Head**	**6.36**	**61**	mB			
WEL	**Wellington**	**6.36**	**60**	mB			
PLWZ	**Palliser**	**6.51**	**64**		**Pn**	**10 15 59.2**	**+0.5**
PLWZ	**Palliser**	**6.51**	**64**	mB			
MSWZ	**Moikau Station**	**6.59**	**63**	mB			
CAW	**Cannon Point**	**6.65**	**60**	mB			
KIW	**Kapiti Island**	**6.70**	**58**	mB			
PAWZ	**Paruwai Farm**	**6.72**	**63**	mB			
TRWZ	**Traveller**	**6.88**	**64**	mB			
OGWZ	**Otaki Gorge**	**6.88**	**58**	mB			
MTW	**Mount Morrison**	**6.89**	**62**	mB			
HOWZ	**Holdsworth Sta**	**7.05**	**60**	mB			
NMEZ	**Namu Road**	**7.13**	**44**	mB			
TMWZ	**Te Maipa**	**7.17**	**63**	mB			
MRZ	**Mangatainoka R**	**7.23**	**54**	mB			
NBEZ	**Newall Road No**	**7.24**	**44**	mB			
KHEZ	**Kahui Hut**	**7.29**	**44**	P	**Pn**	**10 16 08.8**	**-0.5**
KHEZ	**Kahui Hut**	**7.29**	**44**	mB			
PREZ	**Palmer Road**	**7.33**	**45**	mB			
TIWZ	**Tintock**	**7.35**	**61**	mB			
OHWZ	**Ohakea**	**7.35**	**55**	mB			
LREZ	**Lake Rotokare**	**7.36**	**47**	mB			
DREZ	**Durham Road**	**7.46**	**45**	mB			
WAZ	**Wanganui**	**7.46**	**51**	mB			
CPWZ	**Castlepoint**	**7.47**	**63**	mB			
POWZ	**Post Office Ro**	**7.50**	**58**	mB			
PRWZ	**Pori Road**	**7.53**	**60**	mB			
MHEZ	**Mangahewa**	**7.61**	**45**	mB			
BFZ	**Birch Farm**	**7.63**	**61**	P	**Pn**	**10 16 12.5**	**-1.4**
VRZ	**Vera Road**	**7.80**	**47**	mB			
DVHZ	**Dannevirke**	**7.80**	**59**	mB			
TSZ	**Takapari Road**	**7.83**	**57**	mB			
ANWZ	**Angora Road**	**7.90**	**61**	mB			
PKVZ	**Pokaka**	**7.99**	**50**	mB			
MTVZ	**Mangateitei**	**7.99**	**51**	mB			
PNHZ	**Pukenui**	**8.06**	**57**	mB			
TRVZ	**Turoa**	**8.10**	**51**	mB			
WNVZ	**Wahianoa**	**8.10**	**51**	mB			
PRHZ	**Porangahau**	**8.11**	**60**	mB			
WPHZ	**Waipukurau**	**8.11**	**58**	mB			
MAVZ	**Matarangi**	**8.12**	**51**	mB			
FWVZ	**Far West T-bar**	**8.13**	**51**	mB			
WHVZ	**Whangaehu Hut**	**8.13**	**51**	mB			
MOVZ	**Moawhango**	**8.13**	**52**	mB			
COVZ	**Chateau Observ**	**8.16**	**50**	mB			
TUVZ	**Tukino**	**8.18**	**51**	mB			
TWVZ	**Taurewa**	**8.20**	**49**	mB			
NGZ	**Ngauruhoe**	**8.21**	**51**	mB			
SNVZ	**South Ngauruho**	**8.22**	**51**	mB			
WTVZ	**West Tongariro**	**8.25**	**50**	mB			
NNVZ	**North Ngauruho**	**8.25**	**50**	mB			
OTVZ	**Oturere**	**8.26**	**51**	mB			
KRVZ	**Karewarewa**	**8.29**	**50**	mB			
ETVZ	**East Tongariro**	**8.30**	**51**	mB			
NTVZ	**North Tongarir**	**8.31**	**50**	mB			
HIZ	**Hauiti**	**8.31**	**44**	P	**Pn**	**10 16 22.6**	**-0.6**
TMVZ	**Te Maari**	**8.31**	**51**	mB			
KRHZ	**Kereru**	**8.33**	**56**	mB			
KATZ	**Kakaramea**	**8.40**	**50**	mB			
RITZ	**Rihia Road**	**8.49**	**51**	mB			
KWHZ	**Kaweka Forest**	**8.51**	**55**	mB			
KAHZ	**Kahuranaki**	**8.54**	**58**	mB			
WATZ	**Wairara**	**8.62**	**49**	mB			
MCHZ	**McNeill Hill**	**8.65**	**56**	mB			
BKZ	**Black Stump Fm**	**8.72**	**54**	P	**Pn**	**10 16 27.9**	**-1.0**
BKZ	**Black Stump Fm**	**8.72**	**54**	mB			
WHTZ	**Whakaora**	**8.77**	**49**	mB			
TLZ	**Tolley Road**	**8.79**	**46**	mB			
KUTZ	**Kaahu Road**	**8.82**	**48**	mB			
NMHZ	**Naumai**	**8.95**	**54**	mB			
ARHZ	**Aropaoanui**	**8.95**	**56**	mB			
WPRZ	**Whakapapatarin**	**8.98**	**50**	mB			
ALRZ	**Allen Road**	**9.05**	**50**	mB			
PRRZ	**Plateau Road**	**9.13**	**50**	mB			
MTHZ	**Maungataniwha**	**9.13**	**53**	mB			
HRRZ	**Handcock Road**	**9.14**	**49**	mB			
HSRZ	**Hossack Road**	**9.18**	**49**	mB			
WHHZ	**Waihua**	**9.21**	**56**	mB			
RAHZ	**Arahi**	**9.23**	**55**	mB			
UTU	**Utuhina**	**9.25**	**48**	mB			
HLRZ	**Highlands Stat**	**9.28**	**49**	mB			
NGRZ	**Ngongotaha**	**9.30**	**48**	mB			
RRRZ	**Republican Roa**	**9.31**	**50**	mB			
MUGZ	**Murupara**	**9.35**	**52**	mB			
KMRZ	**Kaimai**	**9.37**	**46**	mB			
RTZ	**Ruatahuna**	**9.37**	**53**		**Pn**	**10 16 37.3**	**-0.6**
AWAZ	**Awhitu Peninsu**	**9.37**	**38**	mB			
TARZ	**Mount Tarawera**	**9.38**	**50**	mB			
KARZ	**Kaharoa**	**9.39**	**48**	mB			
OMRZ	**Omania**	**9.40**	**49**	mB			
WTAZ	**Waiatarua**	**9.45**	**37**	mB			
KBAZ	**Karaka Road Bo**	**9.46**	**39**	mB			
SNGZ	**Shannon Statio**	**9.47**	**55**	mB			
MHGZ	**Mahia Peninsul**	**9.56**	**58**	mB			
EPAZ	**Eden Park BICE**	**9.58**	**38**	mB			
HBAZ	**Herne Bay Bore**	**9.59**	**38**	mB			
ETAZ	**East Tamaki Re**	**9.59**	**39**	mB			
RVAZ	**Riverhead Bore**	**9.59**	**37**	mB			
EDRZ	**Edgecumbe**	**9.60**	**50**	mB			
TGRZ	**Tauranga**	**9.62**	**47**	mB			
MARZ	**Manawahe**	**9.65**	**49**	mB			
URZ	**Urewera**	**9.69**	**52**	Pn	**Pn**	**10 16 40.3**	**-1.9**
	3.1nm,0.3s,baz=230,slow=5.9,SNR=18						
URZ				Sn	Sn	10 18 21.4	-10
	3.4nm,0.3s,baz=82,slow=6.8,SNR=3.3 14nm,0.3s						
URZ	**Urewera**	**9.69**	**52**	P	**Pn**	**10 16 40.5**	**-1.7**
RAGZ	**Rawiri**	**9.70**	**54**	mB			
MBAZ	**Motutapu North**	**9.73**	**38**	mB			
RIGZ	**Rimuhau**	**9.76**	**56**	mB			
WIAZ	**Waiheke Island**	**9.82**	**39**	mB			
ABAZ	**Army Bay**	**9.85**	**37**	mB			
TWGZ	**Tauwhareparae**	**10.24**	**54**	mB			
PKGZ	**Pakihiroa**	**10.52**	**53**	mB			
OUZ	**Omahuta**	**10.58**	**29**	P	**Pn**	**10 16 54.4**	**+0.1**
MXZ	**Matakaoa Point**	**10.86**	**53**	P	**Pn**	**10 16 57.4**	**-0.7**
CTZ	**Chatham Island**	**11.48**	**91**		**Pn**	**10 17 06.6**	**0.0**
CTZ	**Chatham Island**	**11.48**	**91**	P	**Pn**	**10 17 06.4**	**-0.2**
TAU	**Tasmania Unive**	**14.64**	**270**	P	**Pn**	**10 17 49.5**	**-0.4**
GLAD	**Gladstone**	**14.73**	**278**	P	**Pn**	**10 17 50.9**	**-0.2**
MOO	**Moorlands**	**14.86**	**272**	P	**Pn**	**10 17 52.6**	**-0.2**
MOO	**Moorlands**	**14.86**	**272**	P	**Pn**	**10 17 52.5**	**-0.2**
MILA	**Mila**	**15.78**	**293**	P	**Pn**	**10 18 06.2**	**+1.1**
	comp=Z,18nm,1.4s						
CAN	**Canberra**	**16.93**	**297**	P	**P**	**10 18 21.5**	**-0.2**
	comp=Z,44nm,1.1s						
CAN	**Canberra**	**16.93**	**297**	P	**Pn**	**10 18 18.7**	**-0.9**
CAN	**Canberra**	**16.93**	**297**	P	**Pn**	**10 18 19.3**	**-0.4**
TOO	**Toolangi**	**17.98**	**286**	P	**P**	**10 18 36.3**	**+3.1**
	comp=Z,17nm,1.3s						
TOO	**Toangi**	**17.98**	**286**	P	**Pn**	**10 18 32.6**	**-0.1**
RAO	**Raoul Island**	**19.31**	**42**	LR	LR	10 25 58.5	
	comp=Z,803nm,21.5s,baz=192,slow=36						
ARPS	**Mount Arapiles**	**20.90**	**283**	P	Pn	10 19 08.6	+0.9
	comp=Z,20nm,1.7s						
CMSA	**Cobar Meteorol**	**21.50**	**300**	P	**P**	**10 19 11.8**	**+0.1**
	comp=Z,16nm,1.2s						
CMSA	**Cobar Meteorol**	**21.50**	**300**	P	**P**	**10 19 10.6**	**-1.0**
DZM	**Mont Dzumac**	**22.59**	**358**	*e*P	**P**	**10 19 21.6**	**-1.9**
	comp=Z,81nm,24.1s						
DZM				*e*S	**S**	**10 23 25.7**	**-5.3**
	comp=Z,158nm,23.4s						
DZM				*e*LR	LR	10 24 52.3	
	comp=Z,260nm,22.1s						
STKA	**Stephens Creek**	**23.88**	**294**	P	**P**	**10 19 39.8**	**+3.4**
	comp=Z,73nm,1.1s						
STKA	**Stephens Creek**	**23.88**	**294**	P	**P**	**10 19 38.9**	**+2.5**
	comp=Z,9.6nm,1.0s,baz=134,slow=13,SNR=8.8						
STKA				LR	LR	10 28 06.9	
	comp=Z,276nm,18.4s,baz=168,slow=34 comp=Z,9.6nm,1.0s						
STKA	**Stephens Creek**	**23.88**	**294**	P	**P**	**10 19 35.9**	**-0.5**
HTT	**Hallett**	**24.72**	**287**	P	**P**	**10 19 43.8**	**-0.4**
	comp=Z,5.9nm,1.3s						
QLP	**Quilpie**	**25.98**	**306**	P	**P**	**10 19 58.9**	**+3.3**
	comp=Z,19nm,1.0s						
CTA	**Charters Tower**	**30.20**	**318**	P	**P**	**10 20 35.3**	**+2.0**
	comp=Z,3.5nm,0.8s,baz=44,slow=4.6,SNR=1.8 comp=Z,3.5nm,0.8s						
VNDA	**Vanda**	**33.00**	**182**	LR	LR	10 31 47.6	
	comp=Z,318nm,20.4s,baz=346,slow=32						
AS31	**Alice Springs**	**34.43**	**296**	P	**P**	**10 21 10.0**	**-0.5**
ASAR	**Alice Springs**	**34.43**	**296**	P	**P**	**10 21 12.0**	**+1.6**
	comp=Z,2.4nm,0.6s,baz=133,slow=8.2,SNR=27						
ASAR				PcP	**PcP**	**10 23 45.6**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=129,slow=3.8,SNR=17						
ASAR				LR	LR	10 34 39.8	
	comp=Z,256nm,18.3s,baz=122,slow=35 comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**34.43**	**296**	P	**P**	**10 21 10.4**	**-0.1**
HNR	**Honiara**	**35.74**	**347**	LR	LR	10 35 15.5	
	comp=Z,13nm,18.1s,baz=269,slow=35						
RAR	**Rarotonga**	**35.75**	**60**	LR	LR	10 34 27.8	
	comp=Z,259nm,19.6s,baz=231,slow=34						
WR8	**Warramunga Arr**	**36.80**	**301**	P	**P**	**10 21 31.4**	**+0.6**
WR8				IAmb	IAmb	10 22 10.4	
	comp=Z,65nm,1.9s						
WRA	**Warramunga Arr**	**36.90**	**301**	P	**P**	**10 21 32.8**	**+1.2**
	comp=Z,4.9nm,1.1s,baz=137,slow=7.6,SNR=16						
WRA				PcP	**PcP**	**10 23 53.1**	**0.0**
	comp=Z,3.9nm,0.7s,baz=136,slow=2.9,SNR=18 comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**36.90**	**301**	P	**P**	**10 21 31.6**	**-0.1**
WB0	**Warramunga Arr**	**37.00**	**301**	P	**P**	**10 21 32.2**	**-0.3**
WB0				IAmb	IAmb	10 21 34.3	
	comp=Z,34nm,1.6s						
WRKA	**Warakurna**	**37.18**	**289**	P	**P**	**10 21 35.8**	**+1.7**
	comp=Z,5.1nm,1.0s						
PMG	**Port Moresby**	**39.30**	**327**	P	**P**	**10 21 52.8**	**+0.9**
	comp=Z,11nm,0.7s,baz=210,slow=2.8,SNR=7.5						
PMG				LR	LR	10 35 57.2	
	comp=Z,153nm,20.9s,baz=146,slow=33 comp=Z,11nm,0.7s						
TBI	**Tubuai**	**40.98**	**73**	*e*S	**S**	**10 28 17.5**	**-0.3**
	comp=Z,415nm,33.5s						
TBI				*e*SS	**SS**	**10 31 16.8**	**-2.9**
	comp=Z,2μm,36.5s						
TBI				*e*LR	LR	10 33 16.8	
	comp=Z,945nm,23.8s						
H01W1	**Cape Leeuwin H**	**41.44**	**265**	T	T	11 06 09.8	
	baz=120,slow=75,SNR=28						
H01W2	**Cape Leeuwin H**	**41.45**	**265**	T	T	11 06 12.4	
	baz=120,slow=75,SNR=48						
H01W3	**Cape Leeuwin H**	**41.46**	**265**	T	T	11 06 19.5	
	baz=120,slow=75,SNR=33						
KNRA	**Kununurra**	**43.58**	**299**	P	**P**	**10 22 27.1**	**+0.2**
KNRA				IAmb	IAmb	10 22 54.9	
	comp=Z,53nm,1.5s						
FITZ	**Fitzroy Crossi**	**43.78**	**294**	P	**P**	**10 22 29.8**	**+1.2**
	comp=Z,4.2nm,0.5s,baz=151,slow=8.4,SNR=12						
FITZ				LR	LR	10 41 00.5	
	comp=Z,123nm,18.3s,baz=147,slow=36 comp=Z,4.2nm,0.5s						
MTN	**Manton Dam**	**44.34**	**304**	P	**P**	**10 22 33.4**	**+0.3**
MTN				IAmb	IAmb	10 23 01.2	
	comp=Z,27nm,1.2s						
PPT2	**Papeete2**	**44.91**	**67**	*e*S	**S**	**10 29 20.1**	**+4.4**
	comp=Z,76nm,26.0s						
PPT2				*e*SS	**ScS**	**10 32 29.5**	**-5.9**
	comp=Z,323nm,28.5s						
PPT	**Papeete**	**44.93**	**67**	LR	LR	10 37 45.4	
	comp=Z,218nm,20.6s,baz=216,slow=31						
PSA00	**Pilbara Seismi**	**45.26**	**285**	P	**P**	**10 22 40.8**	**+0.3**
PSA00				IAmb	IAmb	10 22 48.1	
	comp=Z,12nm,1.2s						
QSPA	**South Pole Qui**	**45.42**	**180**	P	**P**	**10 22 42.4**	**+1.0**
	comp=Z,14nm,0.8s,baz=21,slow=2.8,SNR=14						
QSPA				LR	LR	10 39 08.4	
	comp=Z,342nm,20.2s,baz=32,slow=33 comp=Z,14nm,0.8s						
QSPA	**South Pole Qui**	**45.42**	**180**	P	**P**	**10 22 41.7**	**+0.4**
QSPA				IAmb	IAmb	10 22 45.6	
	comp=Z,19nm,0.8s						
MAW	**Mawson**	**54.64**	**207**	LR	LR	10 44 59.5	
	comp=Z,299nm,20.0s,baz=102,slow=34						
BELA	**Belgrano 2**	**56.94**	**175**	P	**P**	**10 24 07.9**	**+0.4**
BELA				IAmb	IAmb	10 24 15.6	
	comp=Z,13nm,0.9s						
KAPI	**Kappang**	**57.38**	**299**	LR	LR	10 51 22.1	
	comp=Z,85nm,18.1s,baz=174,slow=38						
TAOE	**Nuku Hiva Isla**	**57.51**	**68**	*e*S	**S**	**10 32 12.8**	**+2.8**
	comp=Z,57nm,25.1s						
TAOE				*e*SS	**SS**	**10 35 58.0**	**-1.9**
	comp=Z,141nm,30.1s						
TAOE				*e*LR	LR	10 40 52.4	
	comp=Z,306nm,24.0s						
TROLL	**Troll, Antarti**	**63.10**	**185**	P	**P**	**10 24 50.3**	**+0.3**
PMSA	**Palmer Station**	**63.69**	**158**	LR	LR	10 49 03.6	
	comp=Z,168nm,18.2s,baz=261,slow=33						
SNAA	**Sanae**	**63.73**	**183**	⇓P	**P**	**10 24 54.8**	**+0.7**
	comp=Z,126nm,0.8s						
SNAA	**Sanae**	**63.73**	**183**	P	**P**	**10 24 54.0**	**0.0**
	comp=Z,3.2nm,0.6s,baz=190,slow=4.4,SNR=5.6						
SNAA				LR	LR	10 51 02.2	
	comp=Z,391nm,20.1s,baz=310,slow=34 comp=Z,3.2nm,0.6s						
SNAA	**Sanae**	**63.73**	**183**	P	**P**	**10 24 54.0**	**0.0**
LEM	**Lemband**	**63.98**	**287**	LR	LR	10 53 06.5	
	comp=Z,155nm,19.3s,baz=176,slow=36						
VNA3	**Neumayer Olymp**	**64.34**	**181**	⇓P	**P**	**10 24 59.0**	**+1.0**
	comp=Z,10nm,0.8s						
VNA2	**Neumayer--Watz**	**64.62**	**182**	⇓P	**P**	**10 25 00.5**	**+0.7**
	comp=Z,7.8nm,0.6s,baz=164,slow=5.0						
VNA1	**Neumayer--Stat**	**64.92**	**182**	⇓P	**P**	**10 25 02.6**	**+0.9**
	comp=Z,36nm,1.0s						
RPN	**Rapa Nui**	**66.86**	**106**	LR	LR	10 50 41.6	
	comp=Z,100nm,18.1s,baz=220,slow=33						
LL02	**Futaleuf**	**77.77**	**140**	P	**P**	**10 26 21.3**	**+1.4**
PLCA	**Paso Flores**	**80.30**	**139**	P	**P**	**10 26 33.4**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=192,slow=3.2,SNR=4.6						
PLCA				LR	LR	10 54 35.8	
	comp=Z,124nm,19.1s,baz=218,slow=30 comp=Z,1.9nm,0.8s						
PLCA	**Paso Flores**	**80.30**	**139**	P	**P**	**10 26 34.1**	**+0.2**
PLCA				IAmb	IAmb	10 26 41.7	
	comp=Z,12nm,1.0s						
GO06	**Currarehue**	**80.77**	**138**	P	**P**	**10 26 37.3**	**+0.8**
GO06				IAmb	IAmb	10 26 56.0	
	comp=Z,18nm,1.4s						
BI02	**San Fabin de**	**83.16**	**136**	P	**P**	**10 26 48.8**	**-0.3**
BI02				IAmb	IAmb	10 26 57.2	
	comp=Z,13nm,1.2s						
BO02	**Sierra Bellavi**	**84.88**	**135**	P	**P**	**10 26 57.0**	**-0.8**
MJAR	**Matsushiro Arr**	**85.09**	**337**	P	**P**	**10 26 59.8**	**+1.4**
	comp=Z,2.8nm,0.9s,baz=179,slow=6.9,SNR=4.9 comp=Z,2.8nm,0.9s						
MJAR	**Matsushiro Arr**	**85.09**	**337**	IAmb	IAmb	10 27 04.8	
	comp=Z,9.8nm,1.4s						
H08S2	**Diego Garcia H**	**88.19**	**261**	T	T	12 04 30.1	
	baz=136,slow=76,SNR=662						
H08S1	**Diego Carcia H**	**88.20**	**261**	T	T	12 04 31.1	
	baz=136,slow=76,SNR=169						
H08S3	**Diego Garcia H**	**88.21**	**261**	T	T	12 04 36.5	
	baz=136,slow=76,SNR=6816						
CMAR	**Chiang Mai Arr**	**88.43**	**298**	P	**P**	**10 27 17.0**	**+1.9**

*OSPL **24** 10:20:18.0±0.4, 17°.88N×66°.82W, h11^{km}±8^{km}, ML2.1, Presumed earthquake*
*NEIC **24** 10:20:18.0±0.9, 17°.93N±0°.03×66°.819W±0°.009, h10^{km}±1^{km}, ML2.6/35, Md3.2/5(RSPR), Error ellipse: s-maj=5.5km s-min=2.0km az=172.0*
*RSPR **24** 10:20:18.0, 17°.93N×66°.81W, h11^{km}, MD3.2/5*
*SDD **24** 10:20:18.5±1.5, 17°.95N×66°.78W, h12^{km}±75^{km}, MD3.5, ML2.7, MW3.2, Presumed earthquake*

ISC 24 10:20:17.1±1.2, 17°.92N±0°.06×66°.80W±0°.02, h18^{km}±4^{km}, n40, σ0^{s}.42/60, 13C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**308**				**Pg**	**10 20 20.6**	**-0.1**
GBPR							**Sg**	**10 20 22.6**	**-0.7**
GBPR	**Guanica, Bosqu**	**0.09**	**308**	⇓	*i*P		**Pg**	**10 20 20.6**	**-0.1**
GBPR					*e*S		**Sg**	**10 20 22.6**	**-0.7**
OBIP	**Obispado Ponce**	**0.23**	**57**				**Pg**	**10 20 22.6**	**+0.1**
OBIP							**Sg**	**10 20 26.4**	**+0.2**
OBIP	**Obispado Ponce**	**0.23**	**57**		IAML			10 20 29.2	
	comp=N,92nm,0.3s								
OBIP	**Obispado Ponce**	**0.23**	**57**	⇑	*e*P		**Pg**	**10 20 22.6**	**+0.1**
OBIP					*e*S		**Sg**	**10 20 26.4**	**+0.2**
OBIP	**Obispado Ponce**	**0.23**	**57**		*i* P		**Pg**	**10 20 22.8**	**+0.3**
OBIP					*e*S		**Sg**	**10 20 26.7**	**+0.5**
OBIP					IAML			10 20 27.9	
	comp=Z,197nm,0.7s								
MLPR	**Magueyes Islan**	**0.23**	**282**				**Pg**	**10 20 22.7**	**+0.1**
MLPR					IAML			10 20 27.7	
	comp=Z,1μm,0.3s								
MLPR					IAML			10 20 28.3	
	comp=Z,981nm,0.2s								
CELP	**Cerrillos**	**0.26**	**54**				**Pg**	**10 20 23.5**	**+0.3**
CELP					IAML			10 20 28.5	
	comp=Z,601nm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.30**	**287**		Pg		**Pg**	**10 20 23.7**	**-0.1**
CRPR					IAML			10 20 29.2	
	comp=Z,573nm,0.2s								
CRPR					IAML			10 20 30.1	
	comp=Z,645nm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.30**	**287**				**Sg**	**10 20 28.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.30**	**287**	⇑	*e*Pg		**Pg**	**10 20 23.9**	**+0.1**
CRPR				⇑	*e*Sg		**Sg**	**10 20 28.1**	**-0.3**
CRPR					IAML			10 20 30.7	
	comp=N,556nm,0.4s								
CRPR	**Cabo Rojo, PR**	**0.30**	**287**	⇑	*i*P		**Pg**	**10 20 23.9**	**+0.1**
CRPR					*e*S		**Sg**	**10 20 28.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.30**	**287**		*i* P		**Pg**	**10 20 23.9**	**+0.1**
CRPR					*e*S		**Sg**	**10 20 28.0**	**-0.3**
CRPR					IAML			10 20 31.0	
	comp=Z,619nm,0.1s								
UUPR	**Utuado, UPR, P**	**0.34**	**13**				**Pg**	**10 20 24.5**	**+0.1**
LSP	**Las Mesas**	**0.37**	**314**				**Pg**	**10 20 25.1**	**+0.1**
LSP							**Sg**	**10 20 30.5**	**+0.2**
LSP	**Las Mesas**	**0.37**	**314**	⇓	*i*P		**Pg**	**10 20 25.1**	**+0.1**
LSP					*e*S		**Sg**	**10 20 30.5**	**+0.2**
PRSN	**Puerto Rico Se**	**0.44**	**312**		Pg		**Pg**	**10 20 26.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.44**	**312**				**Sg**	**10 20 32.9**	**+0.7**
PRSN	**Puerto Rico Se**	**0.44**	**312**	⇑	*e*Sg		**Sg**	**10 20 32.0**	**-0.2**
PRSN					IAML			10 20 36.6	
	comp=N,681nm,0.2s								
PRSN	**Puerto Rico Se**	**0.44**	**312**	⇓	*e*P		**Pg**	**10 20 26.0**	**-0.1**
PRSN					*e*S		**Sg**	**10 20 32.9**	**+0.7**
ECPR	**Experimental S**	**0.58**	**46**				**Pg**	**10 20 28.7**	**0.0**
ECPR							**Sg**	**10 20 36.0**	**-0.5**
ECPR					IAML			10 20 37.0	
	comp=N,574nm,0.2s								
ECPR	**Experimental S**	**0.58**	**46**	⇓	*i*P		**Pg**	**10 20 28.7**	**0.0**
ECPR					*e*S		**Sg**	**10 20 36.7**	**+0.2**
AGPR	**Aguadilla, PR**	**0.62**	**332**				**Pg**	**10 20 29.3**	**-0.2**
AGPR					IAML			10 20 40.8	
	comp=N,227nm,0.4s								
AGPR					IAML			10 20 44.5	
	comp=N,243nm,0.7s								
AGPR	**Aguadilla, PR**	**0.62**	**332**	⇑	*e*Pg		**Pg**	**10 20 29.2**	**-0.2**
AGPR				⇑	*e*Sg		**Sg**	**10 20 37.1**	**-0.6**
AGPR					IAML			10 20 43.2	
	comp=N,200nm,1.1s								
AGPR	**Aguadilla, PR**	**0.62**	**332**	⇑	*e*P		**Pg**	**10 20 29.3**	**-0.2**
AGPR					*e*S		**Sg**	**10 20 37.8**	**0.0**
SJG	**San Juan**	**0.65**	**73**				**Pg**	**10 20 29.9**	**-0.1**
SJG	**San Juan**	**0.65**	**73**	⇑	*e*Pg		**Pg**	**10 20 29.4**	**-0.6**
SJG	**San Juan**	**0.65**	**73**	⇑	*e*P		**Pg**	**10 20 30.1**	**+0.1**
SJG					*e*S		**Sg**	**10 20 39.5**	**+0.8**
SJG	**San Juan**	**0.65**	**73**		*i* P		**Pg**	**10 20 30.1**	**+0.1**
SJG					IAML			10 20 39.7	
	comp=Z,101nm,0.3s								
PDPR	**Patillas Dam,**	**0.75**	**82**				**Pg**	**10 20 31.7**	**-0.1**
GCPR	**Guaynabo City**	**0.79**	**60**				**Pg**	**10 20 32.1**	**-0.5**
GCPR							**Sg**	**10 20 42.6**	**-0.4**
GCPR	**Guaynabo City**	**0.79**	**60**	⇑	*e*P		**Pg**	**10 20 32.1**	**-0.5**
GCPR					*e*S		**Sg**	**10 20 42.6**	**-0.4**
IDE	**Isla Desecheo**	**0.79**	**306**				**Pg**	**10 20 32.2**	**-0.4**
IDE							**Sg**	**10 20 42.5**	**-0.7**
IDE	**Isla Desecheo**	**0.79**	**306**	⇑	*e*P		**Pg**	**10 20 32.2**	**-0.4**
IDE					*e*S		**Sg**	**10 20 42.5**	**-0.7**
HUMP	**Col San Antoni**	**0.93**	**76**				**Sg**	**10 20 47.3**	**-0.4**
HUMP	**Col San Antoni**	**0.93**	**76**		Pg		**Pb**	**10 20 34.7**	**0.0**
HUMP					IAML			10 20 51.1	
	comp=Z,117nm,0.2s								
HUMP					IAML			10 20 52.0	
	comp=Z,139nm,0.2s								
HUMP	**Col San Antoni**	**0.93**	**76**	⇑	*e*P		**Pb**	**10 20 34.8**	**0.0**
HUMP					*e*S		**Sg**	**10 20 47.3**	**-0.4**
PCDR	**Punta Cana, DR**	**1.61**	**292**		*e*Pg		**Pb**	**10 20 47.5**	**+1.2**
PCDR					IAML			10 21 51.0	
	comp=N,163nm,3.9s								
HIDR	**Higuey Centro**	**1.94**	**291**		*e*Pg		**Pb**	**10 20 52.8**	**+0.9**
HIDR					IAML			10 21 36.7	
	comp=N,88nm,0.1s								
HATOM	**Hato Mayor del**	**2.60**	**290**	⇑	*e*Pg		**Pb**	**10 21 02.4**	**-0.8**

*NEIC **24** 10:36:60.0±1.0, 52°.0N±0°.2×178°.7E±0°.1, h157^{km}±8^{km}, mb3.6/7, ML3.2/10, ML3.0(AEIC), Error ellipse: s-maj=25.8km s-min=8.6km az=187.0*
*IDC **24** 10:36:59.5±2.3, 52°.14N×178°.75E, h136^{km}±17^{km}, mb3.0/7, mbtmp3.5/9, Error ellipse: s-maj=38.6km s-min=17.2km az=176.0*
*AEIC **24** 10:37:00.7±1.4, 52°.0N±0°.2×178°.7E±0°.1, h159^{km}±6^{km}, Error ellipse: s-maj=30.4km s-min=8.4km az=188.0*

ISC 24 10:37:00.6±0.7, 52°.1N±0°.1×178°.70E±0°.04, h152^{km}±6^{km}, n44, σ0^{s}.83/55, mb3.3/7, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LSPA	**Little Sitkin**	**0.14**	**212**				**Pn**	**10 37 21.4**	**+0.3**
LSNW	**Little Sitkin**	**0.15**	**226**				**Pn**	**10 37 21.1**	**+0.1**
LSNW							**Sn**	**10 37 36.5**	**-0.2**
LSSE	**Little Sitkin**	**0.17**	**209**				**Pn**	**10 37 21.3**	**+0.2**
CETU	**Semis' Tuman**	**0.51**	**103**				**Pn**	**10 37 22.4**	**+0.2**
CETU							**Sn**	**10 37 38.8**	**+0.1**
CEAP	**Semis' Anvil P**	**0.55**	**98**				**Pn**	**10 37 22.6**	**+0.2**
CESW	**Semis' Southwe**	**0.56**	**108**				**Pn**	**10 37 22.3**	**-0.2**
AMKA	**Amchitka**	**0.80**	**152**				**Pn**	**10 37 23.8**	**-0.2**
AMKA							**Sn**	**10 37 40.5**	**-1.2**
AMKA	**Amchitka**	**0.80**	**152**		IAML			10 37 41.2	
	comp=E,372nm,0.5s								
AMKA					IAML			10 37 41.6	
	comp=N,435nm,0.5s								
GASW	**Gareloi Southw**	**1.54**	**100**				**Pn**	**10 37 30.6**	**-0.2**
GANO	**Gareloi North**	**1.57**	**98**				**Pn**	**10 37 30.8**	**-0.3**
GANO							**Sn**	**10 37 53.7**	**-0.6**
GANE	**Gareloi Northe**	**1.58**	**98**				**Pn**	**10 37 31.0**	**-0.2**
GANE							**Sn**	**10 37 54.1**	**-0.5**
GAKI	**Gareloi-Kavalg**	**1.63**	**108**				**Pn**	**10 37 31.2**	**-0.5**
GAKI							**Sn**	**10 37 54.4**	**-1.1**
TANO	**Tanaga North**	**1.97**	**93**				**Pn**	**10 37 35.7**	**+0.2**
TANO							**Sn**	**10 38 02.8**	**+0.4**
TASE	**Tanaga Southea**	**2.04**	**96**				**Pn**	**10 37 36.3**	**+0.1**
TASE							**Sn**	**10 38 03.6**	**-0.1**
TAFP	**Tanaga Falls P**	**2.06**	**94**				**Pn**	**10 37 36.3**	**-0.3**
TAFL	**Tanaga Flats**	**2.13**	**97**				**Pn**	**10 37 36.6**	**-0.7**
KIMD	**Kanaga Island**	**2.54**	**96**				**Pn**	**10 37 41.9**	**-0.4**
KIMD							**Sn**	**10 38 13.3**	**-1.0**
KICM	**Kanaga Island**	**2.54**	**92**				**Pn**	**10 37 42.0**	**-0.2**
KIKV	**Kanaga Island**	**2.56**	**93**				**Pn**	**10 37 42.3**	**-0.2**
KIWB	**Kanaga Island**	**2.58**	**93**		Pn		**Pn**	**10 37 41.8**	**-0.9**
KIWB					IAML			10 38 15.6	
	comp=N,54nm,0.6s								
ADK	**Adak**		**2.86**	**92**			**Sn**	**10 38 19.8**	**-1.7**
ADK	**Adak**		**2.86**	**92**		Pn	**Pn**	**10 37 43.7**	**-2.5**
ADK						IAML		10 38 20.9	
	comp=N,51nm,1.4s								
SHEM	**Shemya Is, Ala**		**2.89**	**285**		P	**Pn**	**10 37 46.4**	**-0.2**
	comp=N,58nm,0.7s,baz=93,slow=8.2,SNR=1.7								
SHEM						S	**Sn**	**10 38 20.4**	**-1.8**
	comp=N,39nm,0.4s,baz=322,slow=19,SNR=15								
SHEM	**Shemya Is, Ala**		**2.89**	**285**			**Pn**	**10 37 45.7**	**-0.9**
SHEM						IAML		10 38 21.8	
	comp=N,55nm,1.3s								
SHEM						IAML		10 39 10.3	
	comp=E,69nm,1.5s								
SMY	**Shemya**		**2.89**	**285**		Pn	**Pn**	**10 37 46.1**	**-0.5**
SMY							**Sn**	**10 38 21.0**	**-1.2**
ETKA	**Kagalaska Isla**		**3.04**	**92**			**Pn**	**10 37 48.2**	**-0.3**
AKUT	**Akutan**		**9.57**	**71**		Pn	**Pn**	**10 39 12.9**	**-1.7**
L16K	**Owhat River**		**15.26**	**42**		P	**P**	**10 40 29.2**	**0.0**
N17K	**Nushagak Hills**		**15.75**	**48**		P	**P**	**10 40 35.6**	**+1.0**
M17K	**Holitna River**		**15.98**	**45**		P	**P**	**10 40 38.0**	**+0.8**
M17K						IAmb	IAmb	10 40 43.0	
	comp=Z,5.3nm,1.1s								
K17K	**Iditarod**		**16.24**	**40**		P	**P**	**10 40 40.9**	**+0.9**
K17K						IAmb	IAmb	10 40 42.9	
	comp=Z,3.0nm,0.9s								
O18K	**Koktuh Hills**		**16.46**	**52**		P	**Pn**	**10 40 43.6**	**+1.0**
O18K						IAmb	IAmb	10 40 44.4	
	comp=Z,3.2nm,0.8s								
KDAK	**Kodiak Island**		**17.38**	**60**		P	**P**	**10 40 51.1**	**-1.4**
	comp=Z,6.9nm,0.9s,baz=259,slow=5.2,SNR=9.2								
L19K	**White Mountain**		**17.43**	**44**		P	**Pn**	**10 40 53.8**	**-0.3**
L19K						IAmb	IAmb	10 41 00.2	
	comp=Z,3.5nm,1.2s								
H18K	**Honhosa River**		**17.58**	**33**		P	**P**	**10 40 55.1**	**+0.4**
H18K						IAmb	IAmb	10 41 06.1	
	comp=Z,2.2nm,1.1s								
ILAR	**Eielson Array**		**21.70**	**41**		P	**P**	**10 41 37.8**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=242,slow=10,SNR=1.8								
	comp=Z,0.2nm,0.6s								
SONM	**Songino Array**		**44.94**	**295**		P	**P**	**10 45 00.9**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=56,slow=7.5,SNR=2.4								
SONM						PcP	**PcP**	**10 46 39.3**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=73,slow=1.3,SNR=2.4								
	comp=Z,0.4nm,0.6s								
KURBB	**Kurchatov Arra**		**57.51**	**312**		P	**P**	**10 46 33.7**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=40,slow=6.9,SNR=2.4								
	comp=Z,0.2nm,0.4s								
MKAR	**Makanchi Array**		**58.37**	**307**		P	**P**	**10 46 39.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=50,slow=7.1,SNR=6.2								
	comp=Z,0.2nm,0.3s								
MKAR	**Makanchi Array**		**58.37**	**307**		P	**P**	**10 46 38.8**	**-0.8**
BVAR	**Borovoye Array**		**59.34**	**318**		P	**P**	**10 46 46.9**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=37,slow=8.2,SNR=4.4								
	comp=Z,0.7nm,0.4s								
TXAR	**Lajitas Array**		**60.07**	**80**		P	**P**	**10 46 52.3**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=302,slow=4.7,SNR=5.6								
	comp=Z,0.1nm,0.4s								
ABKAR	**Akbulak array**		**66.43**	**321**		P	**P**	**10 47 32.6**	**-0.4**
ASAR	**Alice Springs**		**84.98**	**220**		P	**P**	**10 49 18.8**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=20,slow=5.9,SNR=2.6								
	comp=Z,0.4nm,0.7s								

*IDC **24** 10:49:53.3±3.3, 40°.24S×75°.19W, h0^{km}, mb3.5/2, mbtmp3.5/4, ML3.7/2, MS3.7/2, Error ellipse: s-maj=64.6km s-min=30.8km az=24.0*
*GUC **24** 10:49:58.7±0.5, 40°.22S×74°.84W, h22^{km}±2^{km}, ML3.5*

ISC 24 10:49:54.6±3.6, 40°.13S±0°.06×75°.10W±0°.07, h8^{km}±25^{km}, n23, σ1^{s}.19/30, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LR04	**Corral**	**1.31**	**80**			*e*P	**Pn**	**10 50 18.2**	**-1.0**
LR04						*i* S	**Sb**	**10 50 33.8**	**-2.7**
LR04					IAML			10 50 36.6	
	comp=N,1μm,0.3s								
LL05	**Los Muermos**	**1.78**	**136**			*e*P	**Pn**	**10 50 25.4**	**-0.3**
LL05						*i* S	**Sn**	**10 50 46.0**	**-2.4**
LC02	**Puerto Saavedr**	**1.88**	**45**			*e*P	**Pb**	**10 50 28.9**	**-0.3**
LC02						*i* S	**Sb**	**10 50 52.9**	**-0.1**
LC02					IAML			10 51 01.9	
	comp=E,1μm,0.4s								
BI04	**Isla Mocha**	**1.96**	**29**			*e*P	**Pn**	**10 50 27.7**	**-0.3**
BI04						*e*S	**Sn**	**10 50 50.2**	**-2.6**
LL06	**Loncomilla**	**2.36**	**152**			*e*P	**Pn**	**10 50 33.7**	**0.0**
LR05	**Currie**	**2.38**	**93**			*e*P	**Pn**	**10 50 34.7**	**+0.8**
LR05						*i* S	**Sn**	**10 51 02.4**	**-0.8**
LR05					IAML			10 51 05.2	
	comp=E,651nm,0.3s								
LC01	**Cunco**	**2.78**	**65**			*e*P	**Pn**	**10 50 40.4**	**+1.0**
LC01						*i* S	**Sn**	**10 51 13.9**	**+0.7**
LC01					IAML			10 51 17.7	
	comp=E,253nm,0.1s								
GO06	**Curarrehue**	**2.85**	**80**			*e*P	**Pn**	**10 50 41.7**	**+1.3**
GO06						*i* S	**Sn**	**10 51 14.8**	**-0.2**
LL07	**Hotel Espejo d**	**2.96**	**156**			*e*P	**Pn**	**10 50 41.9**	**0.0**
LL01	**San Ignacio de**	**3.03**	**139**			*e*P	**Pn**	**10 50 44.1**	**+1.3**
GO07	**Milladeo Hill,**	**3.17**	**161**			*e*P	**Pn**	**10 50 44.6**	**-0.2**
PLCA	**Paso Flores**	**3.53**	**101**		Pn		**Pn**	**10 50 50.5**	**+0.8**
	comp=E,2.1nm,0.3s,baz=272,slow=11,SNR=91								
PLCA						Sn	**Sn**	**10 51 33.4**	**+1.7**
	comp=E,2.0nm,0.3s,baz=287,slow=22,SNR=4.6								
	comp=E,4.4nm,0.3s								
BI02	**San Fabin de**	**4.58**	**42**			*e*P	**Pn**	**10 51 04.6**	**+0.3**
H03S1	**Juan Fernandez**	**6.97**	**333**		Pn		**Pn**	**10 51 36.9**	**+0.2**
	baz=242,slow=75								
H03S1					T		T	10 58 47.7	
	baz=157,slow=74,SNR=12								
H03S2	**Juan Fernandez**	**6.98**	**333**		Pn		**Pn**	**10 51 36.9**	**0.0**
	baz=242,slow=75								
H03S2					T		T	10 58 45.9	
	baz=157,slow=74,SNR=8.1								
H03S3	**Juan Fernandez**	**6.99**	**333**		Pn		**Pn**	**10 51 36.9**	**-0.1**
	baz=242,slow=75								
H03S3					T		T	10 58 45.7	
	baz=157,slow=74,SNR=11								
H03N3	**Juan Fernandez**	**7.33**	**334**		Pn		**Pn**	**10 51 42.8**	**+1.1**
	baz=147,slow=74								
H03N1	**Juan Fernandez**	**7.34**	**334**		Pn		**Pn**	**10 51 42.6**	**+0.8**
	baz=147,slow=74								
H03N2	**Juan Fernandez**	**7.35**	**334**		Pn		**Pn**	**10 51 42.4**	**+0.5**
	baz=147,slow=74								
CFA	**Coronel Fontan**	**10.16**	**35**		Pn		**Pn**	**10 52 20.7**	**-0.2**
	comp=E,0.3nm,0.3s,baz=218,slow=12,SNR=7.0								
	comp=E,0.7nm,0.3s								
LPAZ	**La Paz**	**24.52**	**16**		P		**P**	**10 55 17.4**	**+2.1**
	comp=E,1.0nm,0.9s,baz=190,slow=6.1,SNR=3.9								
LPAZ					LR		LR	11 05 40.6	
	comp=E,74nm,18.7s,baz=200,slow=38								
	comp=E,1.0nm,0.9s								
MDP	**Montagnes des**	**49.53**	**30**		LR		LR	11 23 09.9	
	comp=E,132nm,18.3s,baz=156,slow=40								
TXAR	**Lajitas Array**	**74.03**	**334**		P		**P**	**11 01 31.0**	**+0.1**
	comp=E,0.5nm,0.9s,baz=144,slow=8.4,SNR=3.6								
	comp=E,0.5nm,0.9s								

*IDC **24** 10:53:25.1±4.4, 43°.98N×128°.35W, h0^{km}, mb3.0/3, mbtmp3.2/7, ML3.3/4, MS3.0/3, Error ellipse: s-maj=60.1km s-min=24.3km az=75.0*
*NEIC **24** 10:53:32.2±1.8, 43°.74N±0°.09×127°.9W±0°.1, h10^{km}±2^{km}, mb4.1/6, ML3.6/62, Error ellipse: s-maj=16.7km s-min=13.6km az=238.0*

ISC 24 10:53:31.2±2.1, 43.74N±0°.08×128°.0W±0°.2, h10^{km}, n52, σ1^{s}.25/49, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
J01E	**Myrtle Point**	**3.01**	**100**			Pn	**Pn**	**10 54 17.3**	**-1.5**
J01E						Sn	**Sn**	**10 54 54.2**	**-0.7**
I02E	**Swisshome, OR**	**3.01**	**81**			Pn	**Pn**	**10 54 17.8**	**-1.2**
I02E					IAML			10 54 44.5	
	comp=N,118nm,2.9s								
I02E					IAML			10 56 06.3	
	comp=E,172nm,2.7s								
K02D	**Willamette Mer**	**3.32**	**107**			Pn	**Pn**	**10 54 22.1**	**-1.2**
K02D						Sn	**Sn**	**10 55 02.3**	**-0.6**
I03D	**Drain, OR**	**3.36**	**89**				**Pn**	**10 54 23.6**	**-0.1**
I03D					IAML			10 55 19.7	
	comp=E,79nm,3.7s								
G03D	**McMinnville, O**	**3.69**	**65**			Pn	**Pn**	**10 54 28.3**	**+0.1**
G03D					IAML			10 55 18.6	
	comp=N,117nm,2.1s								
G03D					IAML			10 56 43.8	
	comp=E,127nm,4.8s								
F03A	**Seaside**	**3.84**	**54**				**Pn**	**10 54 30.6**	**+0.3**
H04D	**Lebanon**	**3.86**	**76**		Pn		**Pn**	**10 54 31.1**	**+0.6**
H04D					IAML			10 56 39.5	
	comp=E,110nm,4.8s								
H04D					IAML			10 56 56.8	
	comp=N,96nm,2.6s								
BBOR	**Butler Butte**	**3.96**	**101**				**Pn**	**10 54 32.0**	**-0.2**
RADR	**Rader Ridge**	**4.00**	**46**		Pn		**Pn**	**10 54 32.1**	**-0.4**
I04A	**Tendick Farm,**	**4.04**	**87**				**Pn**	**10 54 33.5**	**+0.4**
G04A	**Mulino**	**4.21**	**68**				**Pn**	**10 54 36.1**	**+0.8**
G04A					IAML			10 55 46.9	
	comp=N,125nm,2.7s								
F04D	**Rainier, OR**	**4.24**	**55**				**Pn**	**10 54 36.0**	**+0.2**
H04A	**Detroit Lake**	**4.28**	**75**				**Pn**	**10 54 36.9**	**+0.6**
J04A	**Umpqua Nationa**	**4.30**	**95**				**Pn**	**10 54 38.2**	**+1.3**
J04A					IAML			10 55 39.6	
	comp=E,89nm,2.2s								
J04A					IAML			10 57 26.6	
	comp=N,116nm,2.2s								
YBH	**Yreka Blue Hor**	**4.37**	**115**		Pn		**Pn**	**10 54 38.1**	**+0.4**
	baz=342,slow=12,SNR=4.2								
YBH						Sn	**Sn**	**10 55 28.8**	**+0.1**
	baz=185,slow=23,SNR=1.1								
L04D	**Klamath Falls**	**4.43**	**108**		Pn		**Pn**	**10 54 39.7**	**+1.1**
L04D					IAML			10 55 12.9	
	comp=N,47nm,4.3s								
L04D						Sn	**Sn**	**10 55 33.4**	**+3.1**
L04D					IAML			10 55 38.8	
	comp=E,56nm,3.3s								
WIFE	**Three Sisters-**	**4.47**	**84**				**Pn**	**10 54 40.0**	**+0.8**
WIFE					IAML			10 56 51.9	
	comp=E,74nm,3.0s								
WIFE					IAML			10 57 03.2	
	comp=N,59nm,4.4s								
WISH	**Wishkah**	**4.50**	**40**		Pn		**Pn**	**10 54 40.2**	**+0.8**
NLWA	**Neilton Lookou**	**4.66**	**37**		Pn		**Pn**	**10 54 42.0**	**+0.3**
NLWA					IAML			10 55 45.0	
	comp=N,74nm,3.4s								
NLWA					IAML			10 56 57.3	
	comp=N,73nm,4.7s								
HOOD	**Mount Hood Mea**	**4.80**	**69**				**Pn**	**10 54 41.7**	**-1.9**
HOOD					IAML			10 55 37.2	
	comp=E,78nm,2.6s								
HOOD					IAML			10 56 04.3	
	comp=N,60nm,0.1s								
I05D	**Terrebonne, OR**	**4.83**	**81**		Pn		**Pn**	**10 54 43.2**	**-0.8**
I05D					IAML			10 55 56.7	
	comp=E,65nm,4.7s								
I05D					IAML			10 56 06.0	
	comp=N,80nm,5.0s								
J05D	**Fort Rock, OR**	**4.93**	**93**				**Pn**	**10 54 45.9**	**+0.5**
J05D					IAML			10 55 43.1	
	comp=E,47nm,4.9s								
J05D					IAML			10 57 40.9	
	comp=N,50nm,5.0s								
G05A	**Wamic**	**5.00**	**70**				**Pn**	**10 54 47.2**	**+0.8**
PINE	**Pine Mountain**	**5.10**	**87**				**Pn**	**10 54 48.0**	**+0.2**
PINE					IAML			10 55 57.3	
	comp=E,44nm,4.9s								
PINE					IAML			10 57 38.1	
	comp=N,51nm,5.0s								
LON	**Longmire**	**5.30**	**53**				**Pn**	**10 54 51.4**	**+1.0**
LON					IAML			10 55 34.7	
	comp=E,25nm,4.9s								
LON					IAML			10 57 21.9	
	comp=N,19nm,4.7s								
D05A	**Enumclaw**	**5.45**	**49**				**Pn**	**10 54 52.5**	**+0.1**
I07A	**Izee**	**6.14**	**84**		Pn		**Pn**	**10 55 02.6**	**+0.6**
LTY	**Liberty**	**6.23**	**53**		Pn		**Pn**	**10 55 04.2**	**+1.0**
ORV	**Oroville**	**6.41**	**129**				**Pn**	**10 55 06.6**	**+1.0**
PNTR	**Pine Nut**	**7.82**	**124**				**Pn**	**10 55 24.7**	**-0.5**
C09A	**Chrisman Ranch**	**7.91**	**56**				**Pn**	**10 55 25.2**	**-1.0**
NEW	**Newport**	**8.81**	**55**		Pn		**Pn**	**10 55 37.4**	**-1.2**
	comp=N,0.2nm,0.3s,baz=252,slow=14,SNR=3.8								
NEW					LR		LR	10 58 26.4	
	comp=N,94nm,18.4s

	7.9nm,0.5s								
AAK	**Ala-Archa**	**1.19**	**44**	⇓	P		**Pg**	**10 56 12.9**	**-0.2**
	1.4nm,0.6s								
AAK				⇓	S		**Sb**	**10 56 29.5**	**-0.3**
	1.7nm,0.5s								
KBK	**Karagaybulak**	**1.46**	**53**	⇑	P		**Pn**	**10 56 17.7**	**-0.3**
	4.4nm,0.1s								
USP	**Ospenovka**	**1.70**	**29**	⇓	P		**Pb**	**10 56 22.1**	**-0.3**
	6.4nm,0.2s,SNR=7.6								
USP				⇑	S		**Sb**	**10 56 44.5**	**+0.3**
	3.2nm,0.3s								
TKM2	**Tokmak 2**	**2.00**	**55**	⇑	P		**Pb**	**10 56 27.6**	**0.0**
	5.9nm,0.1s,SNR=28								
TKM2				⇑	S		**Sg**	**10 56 54.8**	**+0.3**
	17nm,0.6s								
ULHL	**Ulahol**	**2.19**	**77**	⇑	P		**Pb**	**10 56 30.6**	**-0.2**
	3.5nm,0.2s,SNR=12								
ULHL				⇓	S		**Sg**	**10 57 00.3**	**-0.3**
	3.8nm,0.4s								
KST	**Kastek**	**2.29**	**56**		Pg		**Pg**	**10 56 33.9**	**-0.3**
	6.0nm,0.2s								
KST					Lg		Lg	10 57 06.4	
	22nm,0.7s								
KST	**Kastek**	**2.29**	**56**		*e*P		**Pg**	**10 56 33.9**	**-0.3**
	6.0nm,0.2s								
KST					*e*S		**Sg**	**10 57 06.4**	**+2.5**
	22nm,0.7s								
DGS	**Degeres**	**2.29**	**50**		Pg		**Pb**	**10 56 33.2**	**+0.6**
	11nm,0.5s								
DGS					Lg		Lg	10 57 05.2	
	20nm,0.8s								
DGS	**Degeres**	**2.29**	**50**		*e*P		**Pb**	**10 56 33.2**	**+0.6**
	11nm,0.5s								
DGS					*e*S		**Sg**	**10 57 05.2**	**+1.2**
	20nm,0.8s								
KK31	**Karatay Array**	**2.49**	**303**	⇑	Pg		**Pb**	**10 56 36.7**	**+0.8**
	2.5nm,0.3s,baz=120,slow=16,SNR=39								
KK31				⇑	Lg		Lg	10 57 11.2	
	1.0nm,0.3s,baz=129,slow=28,SNR=4.9								
IUG	**Iuzhnay**	**2.52**	**279**		Pg		**Pb**	**10 56 36.6**	**+0.2**
	14nm,0.3s								
IUG					Lg		Lg	10 57 11.1	
	162nm,0.3s								
IUG	**Iuzhnay**	**2.52**	**279**		*e*P		**Pb**	**10 56 36.6**	**+0.2**
	14nm,0.3s								
IUG					*e*S		**Sg**	**10 57 11.1**	**-0.1**
	162nm,0.3s								
KRBS	**Karabastau**	**2.55**	**41**		*e*P		**Pb**	**10 56 37.5**	**+0.6**
	5.7nm,0.2s								
KRBS					*e*S		**Sg**	**10 57 12.4**	**+0.1**
	6.5nm,0.6s								
MTBS	**Maitube**	**2.63**	**58**		Pg		**Pb**	**10 56 39.0**	**+0.7**
	2.8nm,0.2s								
MTBS					Lg		Lg	10 57 15.0	
	5.8nm,0.3s								
MTBS	**Maitube**	**2.63**	**58**		*e*P		**Pb**	**10 56 39.0**	**+0.7**
	2.8nm,0.2s								
MTBS					*e*S		**Sg**	**10 57 15.1**	**+0.3**
	5.8nm,0.3s								
BRLS	**Boroldaу**	**2.90**	**297**		Pg		**Pg**	**10 56 45.5**	**-0.4**
	2.5nm,0.3s								
BRLS					Lg		Lg	10 57 25.9	
	0.7nm,0.5s								
BRLS	**Boroldaу**	**2.90**	**297**		*e*P		**Pg**	**10 56 45.5**	**-0.4**
	2.5nm,0.3s								
BRLS					*e*S		**Sg**	**10 57 25.9**	**+2.5**
	0.7nm,0.5s								
TNSS	**Tian-Shan**	**2.93**	**64**		*e*P		**Pg**	**10 56 45.3**	**-1.0**
	1.5nm,0.4s								
TNSS					*e*S		**Sg**	**10 57 26.2**	**+1.9**
	1.7nm,0.8s								
KTBS	**Karatobe**	**3.10**	**51**		Pg		**Pb**	**10 56 47.4**	**+1.0**
	2.8nm,0.3s								
KTBS					Lg		Lg	10 57 29.6	
KTBS	**Karatobe**	**3.10**	**51**		*e*P		**Pb**	**10 56 47.4**	**+1.0**
	2.8nm,0.3s								
KTBS					*e*S		**Sg**	**10 57 29.6**	**-0.5**

*IDC **24** 10:56:34.5±2.7,28˚.46N×141˚.75E, h0km, mb3.7/6, mbtmp3.7/7, ML2.6/1, Error ellipse: s-maj=124.9km s-min=15.9km az=69.0*

ISC 24 10:56:36.7±3.1, 28°.7N±0°.1×142°.5E±0°.7, h35km, n8, σ0s85/9, mb3.9/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**1.58**	**190**	Pn		**Pn**	**10 57 02.1**	**0.0**
	4.3nm,0.3s,baz=319,slow=19,SNR=2.3							
JCJ				Sn		**Sn**	**10 57 20.7**	**-0.6**
	32nm,0.3s,baz=89,slow=23,SNR=4.2							
MJAR	**Matsushiro Arr**	**8.65**	**337**	Pn		**Pn**	**10 58 38.1**	**-1.2**
	0.1nm,0.3s,baz=162,slow=12,SNR=4.2							
	1.0nm,0.3s							
SONM	**Songino Array**	**33.79**	**314**	P		**P**	**11 03 15.5**	**+0.1**
	0.3nm,0.6s,baz=106,slow=5.1,SNR=2.7							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**48.49**	**318**	P		**P**	**11 05 16.8**	**+0.9**
	0.4nm,0.4s,baz=101,slow=7.5,SNR=2.5							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**48.95**	**190**	P		**P**	**11 05 19.7**	**+0.1**
	1.1nm,0.6s,baz=10,slow=7.9,SNR=10							
	1.1nm,0.6s							
MKAR	**Makanchi Array**	**49.70**	**309**	P		**P**	**11 05 25.8**	**+0.6**
	0.4nm,0.7s,baz=102,slow=6.1,SNR=4.5							
	0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**52.15**	**314**	P		**P**	**11 05 44.4**	**+0.9**
	1.1nm,0.6s,baz=92,slow=8.5,SNR=13							
	1.1nm,0.6s							
BVAR	**Borovoye Array**	**57.08**	**317**	P		**P**	**11 06 19.9**	**+0.6**
	1.2nm,0.6s,baz=88,slow=7.2,SNR=6.2							
	1.2nm,0.6s							

IDC 24 11:00:28.3±2.1, 17°.88N×122°.52E, h0km, mb3.4/4, mbtmp3.5/4, MS3.2/1, Error ellipse: s-maj=78.2km s-min=25.5km az=53.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**11.15**	**164**	LR		LR	11 07 41.7	
	comp=Z,118nm,18.2s,baz=7.0,slow=39							
CMAR	**Chiang Mai Arr**	**22.41**	**275**	P		P	11 05 28.8	+0.1
	1.0nm,0.3s,baz=84,slow=10,SNR=2.5							
	1.0nm,0.3s							
WRA	**Warramunga Arr**	**39.33**	**162**	P		P	11 07 59.1	-0.4
	0.7nm,0.9s,baz=343,slow=8.5,SNR=2.1							
	0.7nm,0.9s							
H11S3	**WAKE ISLAND Hy 41.89**	**82**		T		T	11 53 29.9	
	baz=277,slow=75,SNR=84							
H11S1	**WAKE ISLAND Hy 41.90**	**82**		T		T	11 53 24.9	
	baz=277,slow=75,SNR=113							
H11S2	**WAKE ISLAND Hy 41.91**	**82**		T		T	11 53 26.1	
	baz=277,slow=75,SNR=113							
H11N1	**WAKE ISLAND Hy 41.96**	**80**		T		T	11 53 27.1	
	baz=276,slow=75,SNR=92							
H11N2	**WAKE ISLAND Hy 41.96**	**80**		T		T	11 53 27.9	
	baz=276,slow=75,SNR=93							
H11N3	**WAKE ISLAND Hy 41.98**	**80**		T		T	11 53 28.3	
	baz=276,slow=75,SNR=68							
ASAR	**Alice Springs**	**42.76**	**165**	P		P	11 08 27.8	0.0
	0.3nm,0.6s,baz=342,slow=6.7,SNR=5.6							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**43.84**	**320**	P		P	11 08 36.2	-0.1
	0.1nm,0.3s,baz=113,slow=9.0,SNR=5.1							
	0.1nm,0.3s							

*AFAD **24** 11:03:25.1,38˚.40N×44˚.53E, h7km±2km, ML2.1*
*AZER **24** 11:03:26.5,38˚.29N×44˚.61E, h44km, ml2.5*

ISC 24 11:03:25.3±1.6, 38°.39N±0°.03×44°.44E±0°.03, h4km±12km, n10, σ0s96/20, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**308**	P		**Pg**	**11 03 34.8**	**+0.9**
OZAP				S		**Sb**	**11 03 42.5**	**-0.4**
OZAP				IAML			11 03 44.0	
	comp=N,159nm,1.0s							
YOVA	**Hakkari_Yksek**	**0.81**	**189**	P		**Pg**	**11 03 41.3**	**+0.5**
YOVA				S		**Sb**	**11 03 53.6**	**+0.2**
YOVA				IAML			11 04 00.0	
	comp=N,58nm,0.4s							
TVAN	**Van**	**0.82**	**280**	P		**Pg**	**11 03 40.6**	**-0.5**
TVAN				S		**Sn**	**11 03 56.6**	**0.0**
VMUR	**Van-Muradiye**	**0.91**	**312**	P		**Pg**	**11 03 43.3**	**+0.6**
VMUR				S		**Sn**	**11 03 58.0**	**-0.6**
VMUR				IAML			11 04 02.0	
	comp=N,65nm,0.6s							
VMUR				IAML			11 04 04.0	
	comp=E,94nm,0.7s							
HAKT	**HAKKARI**	**1.01**	**215**	P		**Pg**	**11 03 44.4**	**-0.3**
HAKT				S		**Sb**	**11 04 00.5**	**+1.2**
HAKT				IAML			11 04 05.0	
	comp=N,53nm,0.5s							
HAKT				IAML			11 04 08.0	
	comp=E,58nm,0.6s							
HAKT	**HAKKARI**	**1.01**	**215**	P		**Pg**	**11 03 45.0**	**+0.3**
HAKT				S		**Sn**	**11 04 01.6**	**+0.4**
GEVA	**Gevas**	**1.09**	**266**	P		**Pg**	**11 03 45.7**	**-0.5**
GEVA				S		**Sn**	**11 04 03.8**	**+0.7**
NAX	**Nakhchivan**	**1.14**	**46**	P		**Pn**	**11 03 47.0**	**-1.1**
NAX				S		**Sn**	**11 04 03.8**	**-0.4**
ORD	**Ordubad**	**1.33**	**66**	P		**Pg**	**11 03 50.1**	**-0.7**
ORD				S		**Sn**	**11 04 09.0**	**+0.1**
SBZ	**Shahbuz**	**1.33**	**40**	P		**Pg**	**11 03 51.4**	**+0.6**
SBZ				S		**Sn**	**11 04 11.7**	**+2.8**

*BER **24** 11:05:48.3±3.4, 81˚.56N×3˚.69W, h10km, Mw3.2, ML2.9(NAO), Confirmed Earthquake*
*DNK **24** 11:05:48.4±2.4, 81˚.61N×2˚.99W, h25km±20km, ML1.9, Presumed earthquake*
*KOLA **24** 11:05:50.8, 81˚.79N×0˚.66W, h0km, ML2.3, Error ellipse: s-maj=113.7km s-min=26.7km az=40.0, Arctic Ocean,Knipovich ridge, north*
*FCIAR **24** 11:06:00.0, 81˚.41N×2˚.33E, h10km, station OMEGA has station magnitude of 3.70 station ZFI2 has station magnitude of 3.70*

ISC 24 11:05:32.7±1.0, 82°.43N±0°.07×0°.61W±0°.04, h10km, n31, σ2s37/42, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NOR	**Nord**	**2.39**	**258**	Pn		**Pg**	**11 06 20.8**	**+2.4**
NOR	**Nord**	**2.39**	**258**	*e*P		**Pg**	**11 06 20.5**	**+2.1**
NOR	**Nord**	**2.39**	**258**	*e*P		**Pg**	**11 06 20.5**	**+2.1**
NOR				*i* S		**Sn**	**11 06 42.9**	**+1.9**
NOR				IAML			11 06 46.9	
	comp=Z,16nm,0.5s							
KBS	**Kingsbay**	**4.05**	**144**	Pn		**Pb**	**11 06 44.5**	**+0.5**
KBS				Sn		**Sn**	**11 07 23.6**	**+1.6**
KBS	**Kingsbay**	**4.05**	**144**	*e*P		**Pb**	**11 06 43.9**	**-0.1**
KBS				*e*S		**Sn**	**11 07 23.1**	**+1.0**
KBS				IAML			11 07 28.7	
	comp=Z,7.5nm,0.5s							
KBS	**Kingsbay**	**4.05**	**144**	P		**Pb**	**11 06 43.9**	**-0.1**
KBS				S		**Sn**	**11 07 23.0**	**+1.0**
KBS	**Kingsbay**	**4.05**	**144**	*i* P		**Pb**	**11 06 43.7**	**-0.3**
KBS				*i* S		**Sn**	**11 07 23.9**	**+1.8**
BRBB	**Barentsburg B**	**5.00**	**142**	Pn		**Pb**	**11 06 58.6**	**-1.6**
BRBB	**Barentsburg B**	**5.00**	**142**	Pn		**Pb**	**11 06 58.6**	**-1.6**
BRBB	**Barentsburg B**	**5.00**	**142**	P		**Pb**	**11 06 56.9**	**-3.3**
BRBB				S		**Sn**	**11 07 47.0**	**+1.6**
BRBA	**Barentsburg A**	**5.04**	**143**	Pn		**Pb**	**11 06 59.3**	**-1.4**
BRBA	**Barentsburg A**	**5.04**	**143**	Pn		**Pb**	**11 06 59.3**	**-1.4**
SPA0	**Spitsbergen Ar**	**5.11**	**137**	Pn		**Pb**	**11 06 59.6**	**-2.4**
	baz=334,slow=9.3							
SPA0				Sn		**Sn**	**11 07 50.7**	**+2.6**
	baz=330,slow=16							
SPA0	**Spitsbergen Ar**	**5.11**	**137**	Pn		**Pb**	**11 06 59.6**	**-2.4**
SPA0				Sn		**Sn**	**11 07 50.7**	**+2.6**
SPA0	**Spitsbergen Ar**	**5.11**	**137**	*e*P		**Pb**	**11 06 59.5**	**-2.5**
SPA0				*e*S		**Sn**	**11 07 48.3**	**+0.2**
SPITS	**Spitsbergen Ar**	**5.11**	**137**	P		**Pb**	**11 06 59.8**	**-2.3**
SPITS				S		**Sn**	**11 07 52.4**	**+4.2**
HSPB	**Hornsund (broa**	**6.13**	**144**	*e*P		Pb	11 07 12.9	-6.4
HSPB	**Hornsund (broa**	**6.13**	**144**	*e*P		**Pb**	**11 07 15.9**	**-3.5**
HSPB				*e*S		**Sn**	**11 08 14.9**	**+1.8**
HSPB	**Hornsund (broa**	**6.13**	**144**	P		Pb	11 07 12.8	-6.6
DAG	**Danmarks Havn**	**6.50**	**219**	*e*P		**Pn**	**11 07 09.9**	**+1.7**
DAG				*e*S		Sn	11 08 08.5	-14
DAG	**Danmarks Havn**	**6.50**	**219**	*i* P		**Pn**	**11 07 09.0**	**+0.8**
DAG				*i* S		Sn	11 08 11.5	-11
DAG				IAML			11 08 13.9	
	comp=Z,7.4nm,0.4s							
ZFI2	**Zemlya Franca-**	**7.04**	**78**	*e*P		**Pb**	**11 07 36.2**	**+1.4**
	comp=Z,20nm,3.4s							
ZFI2				*e*S		**Sb**	**11 08 55.1**	**-3.5**
OMEGA	**Omega**	**7.06**	**78**	*e*P		**Pb**	**11 07 36.2**	**+1.0**
OMEGA				*e*S		**Sb**	**11 08 55.1**	**-4.2**
	comp=Z,23nm,3.3s							
HOPEN	**Hopen**	**7.46**	**129**	*e*P		Pb	11 07 33.3	-8.6
HOPEN				*e*S		**Sn**	**11 08 50.2**	**+4.5**
HOPEN				IAML			11 08 55.5	
	comp=Z,2.0nm,0.2s							
DBG	**Daneborg**	**8.97**	**216**	Pn		**Pn**	**11 07 42.9**	**+0.8**
DBG				Sn		Sn	11 09 07.8	-15
DBG	**Daneborg**	**8.97**	**216**	Pn		**Pn**	**11 07 42.9**	**+0.8**
DBG				Sn		Sn	11 09 07.8	-15
DBG	**Daneborg**	**8.97**	**216**	*i* P		**Pn**	**11 07 42.5**	**+0.4**
DBG				*i* S		Sn	11 09 05.4	-18
DBG				IAML			11 09 11.6	
	comp=Z,2.7nm,0.3s							
NEEM	**North Greenlan**	**9.73**	**267**	*i* P		Pn	11 07 59.1	+6.5
NEEM				*i* S		**Sn**	**11 09 37.3**	**-4.6**
NEEM	**North Greenlan**	**9.73**	**267**	*i* P		Pn	11 07 59.1	+6.5
NEEM				*i* S		**Sn**	**11 09 37.3**	**-4.6**
NEEM				IAML			11 09 40.0	
	comp=Z,2.1nm,0.5s							
SUMG	**Summit**	**12.40**	**239**	*i* P		**Pn**	**11 08 30.0**	**+0.7**
SUMG	**Summit**	**12.40**	**239**	*i* P		**Pn**	**11 08 30.0**	**+0.7**

*NNC **24** 11:24:53.1±3.1, 48˚.48N×77˚.87E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=33.6km s-min=11.3km az=66.0, Suspected Mining explosion.*
*IDC **24** 11:24:59.9±4.3, 48˚.61N×78˚.29E, h0km, mbtmp2.5/2, ML1.9/2, Error ellipse: s-maj=45.6km s-min=21.4km az=81.0*

ISC 24 11:24:52.3±3.2, 48°.4N±0°.1×77°.9E±0°.2, h0km, n7, σ1s39/9, 6C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.28**	**10**	⇓	Pn	**Pn**	**11 25 31.4**	**+0.2**
	2.9nm,0.3s,baz=193,slow=16							
KURBB				⇑	Sn	**Sn**	**11 25 59.4**	**-0.6**
	13nm,0.6s,baz=196,slow=26							
KURK	**Kurchatov**	**2.38**	**11**	⇑	Pn	**Pn**	**11 25 33.2**	**+0.6**
	1.1nm,0.4s							
KURK				⇑	Sn	**Sn**	**11 26 01.3**	**-1.3**
	2.3nm,0.5s							
MAKZ	**Makanchi**	**3.18**	**118**	⇑	Pg	**Pg**	**11 25 52.8**	**-0.5**
	0.8nm,0.7s							
MAKZ				⇑	Lg	Lg	11 26 37.7	
	2.6nm,0.6s							
MK31	**Makanchi Array**	**3.38**	**116**	⇓	Pg	**Pb**	**11 25 52.6**	**-0.4**
	0.4nm,0.5s,baz=284,slow=18,SNR=3.8							
MK31				⇑	Lg	Lg	11 26 42.6	
	1.3nm,0.5s,baz=314,slow=24,SNR=12							
MKAR	**Makanchi Array**	**3.38**	**116**		Pn	**Pb**	**11 25 53.0**	**0.0**
	0.1nm,0.3s,baz=301,slow=12,SNR=6.2							
MKAR					Lg	Lg	11 26 43.3	
	0.5nm,0.3s,baz=308,slow=28,SNR=12							
	0.5nm,0.6s							
I46RU	**ZALESOVO INFRA**	**7.07**	**35**		I	I	12 10 00.0	
	baz=218,slow=328,SNR=2.9							
ZALV	**Zalesovo Beam**	**7.07**	**35**		Pn	**Pn**	**11 26 39.6**	**+2.7**
	0.2nm,0.3s,baz=220,slow=14,SNR=1.6							
ZALV					Sn	**Sn**	**11 27 56.7**	**-1.3**
	0.1nm,0.3s,baz=231,slow=23,SNR=3.7							
ZALV					Lg	Lg	11 28 34.1	
	0.1nm,0.3s,baz=220,slow=29,SNR=2.0							
	0.5nm,0.4s							

*IDC **24** 11:39:38.7±1.7, 55˚.04N×164˚.35E, h0km, mb3.2/3, mbtmp3.2/4, ML2.1/1, Error ellipse: s-maj=120.1km s-min=24.7km az=152.0*
*KRSC **24** 11:39:38.9±1.2, 54˚.84N×164˚.45E, h51km±25km, Ml3.5*

ISC 24 11:39:39.3±1.9, 54°.87N±0°.05×164°.44E±0°.07, h10km±14km, n32, σ1s68/46, mb3.3/3, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BKI	**Bering**	**0.94**	**68**	*e*P		**Pg**	**11 39 57.0**	**-0.4**
BKI				*e*S		**Sg**	**11 40 09.0**	**-0.7**
MKZ	**Mys Kozlova**	**1.60**	**260**	*e*P		**Pn**	**11 40 06.6**	**-1.0**
MKZ				*e*S		**Sn**	**11 40 25.9**	**-2.5**

KBTR	**Krutoberegovo**	**1.63**	**326**	*e*P		**Pn**	**11 40 07.4**	**-0.7**
KBTR				*e*S		**Sn**	**11 40 27.0**	**-2.1**
KBG	**Krutoberegovo**	**1.71**	**325**	*e*S		**Sn**	**11 40 29.5**	**-1.4**
BZGR	**Bezymyannyi-Gr**	**2.39**	**298**	*e*P		**Pn**	**11 40 19.6**	**+1.0**
BZGR				*e*S		**Sn**	**11 40 47.2**	**-0.8**
KMNR	**Kamenistaya**	**2.56**	**292**	*e*P		**Pn**	**11 40 22.8**	**+1.8**
KMNR				*e*S		**Sn**	**11 40 52.8**	**+0.5**
KLY	**Klyuchi**	**2.59**	**306**	*e*P		**Pn**	**11 40 21.6**	**+0.3**
KLY				*e*S		**Sn**	**11 40 51.0**	**-1.8**
KOZ	**Kozyrevsk**	**2.86**	**297**	*e*P		**Pn**	**11 40 27.2**	**+2.2**
KII	**Karymskiy**	**3.03**	**256**	*e*P		**Pn**	**11 40 28.7**	**+1.3**
KII				*e*S		**Sn**	**11 41 02.5**	**-1.2**
SRDR	**Sredinnyy**	**3.05**	**300**	*e*P		**Pn**	**11 40 29.7**	**+2.1**
SPN	**Mys Shipunski**	**3.15**	**238**	*e*S		**Sn**	**11 41 04.1**	**-2.5**
ESO	**Esso**	**3.44**	**290**	*e*P		**Pn**	**11 40 34.3**	**+1.3**
SDLR	**Sedlovina**	**3.64**	**246**	*e*P		**Pn**	**11 40 36.7**	**+0.9**
SDLR				*e*S		**Sn**	**11 41 16.7**	**-2.1**
SMAR	**Somma**	**3.69**	**247**	*e*P		**Pn**	**11 40 37.7**	**+1.1**
SMAR				*e*S		**Sn**	**11 41 17.9**	**-2.2**
AVH	**Avacha**	**3.73**	**247**	*e*P		**Pn**	**11 40 37.8**	**+0.9**
AVH				*e*S		**Sn**	**11 41 18.5**	**-2.3**
KRX	**Arik**	**3.73**	**248**	*e*P		**Pn**	**11 40 38.4**	**+1.4**
KRX				*e*S		**Sn**	**11 41 19.3**	**-1.8**
KOK	**Koryaka**	**3.77**	**248**	*e*P		**Pn**	**11 40 38.4**	**+0.9**
DALK	**Dalny**	**3.83**	**244**	*e*P		**Pn**	**11 40 39.1**	**+0.8**
DALK				*e*S		**Sn**	**11 41 20.7**	**-2.5**
PET	**Petropavlovsk**	**3.89**	**244**	*e*P		**Pn**	**11 40 39.6**	**+0.6**
PET				*e*S		**Sn**	**11 41 22.1**	**-2.6**
GNL	**Ganaly**	**3.99**	**256**	*e*P		**Pn**	**11 40 42.4**	**+1.9**
KRMR	**Karymshinskiy**	**4.26**	**244**	*e*P		**Pn**	**11 40 46.0**	**+1.8**
KRMR				*e*S		**Sn**	**11 41 32.1**	**-1.7**
PETK	**Petropavlovsk-**	**4.35**	**249**	Pn		**Pn**	**11 40 46.9**	**+1.4**
	0.5nm,0.3s,baz=73,slow=18,SNR=18							
PETK				Sn		**Sn**	**11 41 37.4**	**+1.2**
	0.8nm,0.3s,baz=92,slow=22,SNR=6.1							
	1.1nm,0.4s							
MTVR	**Mutnovka**	**4.42**	**240**	*e*P		**Pn**	**11 40 48.4**	**+1.9**
MTVR				*e*S		**Sn**	**11 41 35.7**	**-2.4**
GRL	**Gorelyy**	**4.44**	**241**	*e*P		**Pn**	**11 40 48.9**	**+2.2**
OSSR	**Ossora**	**4.46**	**351**	*e*P		**Pn**	**11 40 47.8**	**+1.0**
OSSR				*e*S		**Sn**	**11 41 36.9**	**-1.8**
ASAK	**Asacha**	**4.62**	**240**	*e*P		**Pn**	**11 40 51.3**	**+2.1**
ILAR	**Eielson Array**	**25.73**	**48**	P		**P**	**11 45 09.4**	**-0.1**
	0.5nm,0.8s,baz=274,slow=9.5,SNR=6.3							
	0.5nm,0.8s							
H11N2	**WAKE ISLAND Hy 35.13**	**176**		T		T	12 25 02.6	
	baz=359,slow=76,SNR=11							
H11N3	**WAKE ISLAND Hy 35.14**	**176**		T		T	12 25 07.5	
	baz=359,slow=76,SNR=6.8							
H11N1	**WAKE ISLAND Hy 35.14**	**176**		T		T	12 25 08.8	
	baz=359,slow=76,SNR=9.5							
YKA	**Yellowknife Ar**	**40.10**	**45**	P		**P**	**11 47 15.3**	**+0.8**
	0.1nm,0.5s,baz=300,slow=9.0,SNR=2.1							
	0.1nm,0.5s							
TXAR	**Lajitas Array**	**67.60**	**71**	P		**P**	**11 50 36.9**	**+0.8**
	0.2nm,0.5s,baz=326,slow=6.5,SNR=6.7							
	0.2nm,0.5s							

*ISK **24** 11:46:52.3, 38˚.99N×27˚.83E, h10km, ML3.6/26*
*AFAD **24** 11:46:52.2, 39˚.00N×27˚.87E, h11km±2km, ML3.4*
*THE **24** 11:46:53.7, 39˚.N±5˚×2˚.8E±˚, h4km±19km, M3.2/12, MLh3.2/12*

ISC 24 11:46:52.5±0.8, 39°.00N±0°.01×27°.85E±0°.02, h12km±5km, n69, σ0s49/104, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKHS	**Akhisar**	**0.12**	**191**	P		**Pg**	**11 46 55.9**	**+0.2**
AKHS				IAML			11 46 58.0	
	comp=E,3μm,0.2s							
AKHS				S		**Sg**	**11 46 58.2**	**+0.1**
AKS	**Akhisar**	**0.12**	**191**	Pg		**Pg**	**11 46 55.4**	**-0.3**
AKS				Sg		**Sg**	**11 46 57.5**	**-0.6**
GORD	**Gordes-Manisa**	**0.28**	**109**	Pg		**Pg**	**11 46 58.5**	**+0.3**
GORD				Sg		**Sg**	**11 47 02.5**	**+0.4**
SOMA	**Soma-Manisa**	**0.29**	**303**	Pg		**Pg**	**11 46 58.6**	**+0.2**
GOMA	**Golmarmara-Man**	**0.30**	**169**	Pg		**Pg**	**11 46 58.6**	**0.0**
KTTT	**Salihli**	**0.37**	**148**	P		**Pg**	**11 47 00.1**	**+0.2**
KTTT				S		**Sg**	**11 47 04.8**	**0.0**
KTTT				IAML			11 47 06.0	
	comp=N,2μm,0.5s							
STEP	**BALIKESIR_Sava**	**0.39**	**345**	P		**Pg**	**11 47 00.4**	**+0.1**
STEP				S		**Sg**	**11 47 06.1**	**+0.6**
STEP				IAML			11 47 07.0	
	comp=E,2μm,0.4s							
CAMT	**Merkez**	**0.49**	**239**	P		**Pb**	**11 47 02.6**	**-0.3**
CAMT				S		**Sb**	**11 47 10.6**	**+0.6**
CAMT				IAML			11 47 11.0	
	comp=E,3μm,0.6s							
CAMT				IAML			11 47 11.0	
	comp=N,2μm,0.2s							
ZEDA	**zmir-Bergama**	**0.60**	**267**	P		**Pb**	**11 47 04.8**	**-0.1**
ZEDA				S		**Sb**	**11 47

	comp=N,2μm,0.4s						
FOCM	**Foa**	**0.92**	**252**	Pg	**Pb**	**11 47 10.1**	**-0.2**
AYVA	**Ayvalik**	**0.95**	**289**	P	**Pn**	**11 47 11.2**	**-0.4**
AYVA				S	**Sn**	**11 47 24.6**	**-0.4**
AYVA				IAML		11 47 27.0	
	comp=E,1μm,1.1s						
AYVA				IAML		11 47 27.0	
	comp=N,1μm,0.7s						
USAK	**Uak-Merkez**	**0.96**	**107**	P	**Pg**	**11 47 10.7**	**-0.3**
USAK				S	**Sg**	**11 47 22.5**	**-1.0**
SUSR	**Susurluk-Balik**	**0.98**	**11**	Pg	**Pg**	**11 47 10.9**	**-0.5**
CMHT	**Manyas**	**1.01**	**5**	P	**Pg**	**11 47 11.8**	**-0.2**
CMHT				S	**Sg**	**11 47 24.7**	**-0.6**
CMHT				IAML		11 47 29.0	
	comp=N,968nm,0.4s						
YENI	**Yenice-Canakka**	**1.04**	**334**	Pg	**Pn**	**11 47 12.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.05**	**353**	Pg	**Pn**	**11 47 13.1**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**178**	Pg	**Pg**	**11 47 12.5**	**-0.3**
SHAP	**Saphane-Kutahy**	**1.07**	**88**	Pn	**Pn**	**11 47 13.7**	**+0.3**
KRBN	**Karaburun**	**1.09**	**248**	Pg	**Pb**	**11 47 13.2**	**0.0**
NAZL	**Nazilli-Aydin**	**1.09**	**161**	Pn	**Pb**	**11 47 13.4**	**+0.1**
ATIT	**Gnen**	**1.10**	**349**	P	**Pn**	**11 47 13.9**	**+0.2**
ATIT				S	**Sn**	**11 47 28.5**	**-0.4**
ATIT				IAML		11 47 30.0	
	comp=E,2μm,0.3s						
ATIT				IAML		11 47 32.0	
	comp=N,1μm,0.4s						
KARB	**zmir-Karabur**	**1.17**	**254**	P	**Pb**	**11 47 14.0**	**-0.6**
KARB				S	**Sn**	**11 47 30.5**	**+0.1**
KARB				IAML		11 47 33.0	
	comp=N,752nm,0.8s						
KARB				IAML		11 47 34.0	
	comp=E,749nm,0.6s						
GMLD	**Gumuldur**	**1.18**	**219**	Pn	**Pg**	**11 47 15.3**	**+0.2**
CANM	**Can-anakkale**	**1.18**	**329**	Pn	**Pg**	**11 47 15.3**	**+0.1**
SULTU	**Buldan**	**1.19**	**142**	P	**Pb**	**11 47 14.2**	**-0.8**
SULTU				S	**Sb**	**11 47 30.2**	**-0.2**
SULTU				IAML		11 47 34.0	
	comp=N,501nm,0.5s						
EMET	**Ktahya-Emet**	**1.21**	**71**	P	**Pn**	**11 47 15.5**	**+0.3**
EMET				S	**Sb**	**11 47 31.1**	**+0.2**
EMET				IAML		11 47 35.0	
	comp=N,1μm,0.3s						
DGB	**zmir**	**1.21**	**219**	P	**Pb**	**11 47 14.8**	**-0.5**
DGB				S	**Sn**	**11 47 32.6**	**+1.2**
GEDZ	**Gediz**	**1.22**	**87**	Pn	**Pg**	**11 47 16.3**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**1.25**	**307**	P	**Pg**	**11 47 16.1**	**-0.4**
BAYC				S	**Sn**	**11 47 32.4**	**0.0**
BAYC				IAML		11 47 35.0	
	comp=E,551nm,0.5s						
BAYC				IAML		11 47 35.0	
	comp=N,985nm,0.4s						
PRK	**Paraskevi**	**1.25**	**282**	P	**Pg**	**11 47 16.3**	**-0.2**
PRK				S	**Sn**	**11 47 32.9**	**+0.5**
ESEN	**Aydn-Nazilli**	**1.26**	**162**	P	**Pn**	**11 47 14.8**	**-1.1**
ESEN				S	**Sb**	**11 47 31.5**	**-0.9**
GDZ	**Gediz**	**1.28**	**86**	P	**Pn**	**11 47 16.5**	**+0.3**
GDZ				S	**Sb**	**11 47 33.1**	**+0.1**
GDZ				IAML		11 47 36.0	
	comp=E,571nm,0.3s						
GDZ				IAML		11 47 37.0	
	comp=N,665nm,0.6s						
ORLT	**Orhaneli**	**1.32**	**38**	Pn	**Pg**	**11 47 17.6**	**-0.3**
TVSB	**Tavsanli**	**1.33**	**70**	Pn	**Pb**	**11 47 17.7**	**+0.2**
EZNE	**Ezine-Canakkal**	**1.37**	**304**	Pn	**Pb**	**11 47 17.9**	**-0.2**
GCAM	**G?zelcaml?**	**1.39**	**200**	Pn	**Pn**	**11 47 17.9**	**+0.3**
GCAM	**G?zelcaml?**	**1.39**	**200**	P	**Pn**	**11 47 16.5**	**-1.0**
GCAM				S	**Sg**	**11 47 37.6**	**+0.5**
GPNR	**Gulpinar-Canak**	**1.41**	**289**	Pn	**Pb**	**11 47 18.4**	**-0.2**
EZN	**Ezine**	**1.44**	**305**	P	**Pn**	**11 47 18.6**	**+0.3**
EZN				S	**Sg**	**11 47 38.1**	**-0.7**
SMG	**Samos**	**1.51**	**212**	P	**Pb**	**11 47 20.5**	**+0.1**
SMG				S	**Sg**	**11 47 41.9**	**+0.7**
SIGR	**SIGRI**	**1.56**	**278**	S	**Sg**	**11 47 41.9**	**-0.9**
GADA	**Gvkgeada**	**1.92**	**309**	P	**Pb**	**11 47 26.2**	**-1.1**
BODT	**Bodrum**	**1.98**	**192**	P	**Pn**	**11 47 26.2**	**+0.4**
ENEZ	**Enez**	**2.17**	**324**	P	**Pn**	**11 47 29.6**	**+1.3**
LIA	**Limnos Island**	**2.25**	**294**	P	**Pn**	**11 47 30.4**	**+1.0**
SMTH	**Samothraki Isl**	**2.31**	**310**	P	**Pn**	**11 47 31.3**	**+1.0**
ALN	**Alexandroupoli**	**2.34**	**324**	P	**Pn**	**11 47 31.7**	**+0.9**
RDO	**Rodhopi**	**2.78**	**321**	P	**Pn**	**11 47 38.0**	**+1.2**

*NEIC **24** 11:46:58.4±2.6, 14.70°S×0.07°×167.6°E±0.1, h143km±5km, mb4.5/38, Error ellipse: s-maj=15.6km s-min=8.9km az=113.0*
*NOU **24** 11:47:00.4, 14.75°S×167.38°E, h138km, mb4.4/31, Vanuatu Islands*
*IDC **24** 11:47:00.3±2.8, 14.72°S×167.36°E, h161km±22km, mb3.7/12, mbtmp4.2/14, MS3.1/1, Error ellipse: s-maj=23.4km s-min=13.9km az=69.0*

ISC 24 11:46:58.8±0.4, 14°70'S±0'06×167°52'E±0'06, h150km, n98, σ1§31/105, mb4.3/25, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.80**	**202**		**Pn**	**11 47 20.9**	**-1.1**
SANVU				Sn	**Sn**	**11 47 38.8**	**-1.0**
SANVU	**Saraoutou**	**0.80**	**202**	P	**Pn**	**11 47 21.6**	**-0.4**
SANVU	**Saraoutou**	**0.80**	**202**	S	**Sn**	**11 47 38.0**	**-1.7**
DVP	**Devils Point**	**3.07**	**168**	P	**Pn**	**11 47 47.8**	**+0.7**
DVP	**Devils Point**	**3.07**	**168**	S	**Sn**	**11 48 24.9**	**+0.4**
RTV	**Rentapao**	**3.19**	**164**	P	**Pn**	**11 47 49.9**	**+1.3**
KOUNC	**Koumac, New Ca**	**6.58**	**207**	P	**Pn**	**11 48 33.9**	**+0.6**
KOUNC	**Koumac, New Ca**	**6.58**	**207**	S	**Sn**	**11 49 46.1**	**-1.2**
MARNC	**Mare, Loyalty**	**6.76**	**176**	Pn	**Pn**	**11 48 33.4**	**-2.2**
MARNC	**Mare, Loyalty**	**6.76**	**176**	P	**Pn**	**11 48 34.7**	**-0.9**
HURO	**Huro Makira**	**6.91**	**307**	P	**Pn**	**11 48 37.2**	**-0.5**
DZM	**Mont Dzumac**	**7.40**	**188**	P	**Pn**	**11 48 45.6**	**+1.4**
	7.8nm,0.3s,baz=10,slow=19						
DZM				S	**Sn**	**11 50 06.9**	**-0.2**
	4.4nm,0.4s,baz=127,slow=22,SNR=1.0						
DZM	**Mont Dzumac**	**7.40**	**188**		**Pn**	**11 48 42.2**	**-2.1**
DZM	**Mont Dzumac**	**7.40**	**188**	P	**Pn**	**11 48 46.0**	**+1.7**
ONTNC	**Ouen Toro**	**7.63**	**187**	Pn	**Pn**	**11 48 45.3**	**-2.0**
ONTNC	**Ouen Toro**	**7.63**	**187**	P	**Pn**	**11 48 50.5**	**+3.2**
OUENC	**Ouen Island, N**	**7.70**	**185**	Pn	**Pn**	**11 48 43.8**	**-4.4**
OUENC	**Ouen Island, N**	**7.70**	**185**	P	**Pn**	**11 48 51.3**	**+3.1**
NGOA	**Tingoa Renbel**	**7.91**	**292**	P	**Pn**	**11 48 50.9**	**-0.1**
HNR	**Honiara**	**9.07**	**304**	P	**Pn**	**11 49 08.0**	**+1.5**
	2.9nm,0.4s,baz=62,slow=2.3,SNR=7.5						
HNR				S	**Sn**	**11 50 46.6**	**-0.6**
	2.3nm,0.7s,baz=144,slow=19,SNR=1.7						
HNR	**Honiara**	**9.07**	**304**	Pn	**Pn**	**11 49 05.7**	**-0.9**
HNR	**Honiara**	**9.07**	**304**	P	**Pn**	**11 49 08.2**	**+1.7**
SAVO	**Savo Central**	**9.34**	**305**	P	**Pn**	**11 49 13.3**	**+3.1**
TATA	**Tatamba Isabel**	**9.82**	**309**	P	**Pn**	**11 49 17.8**	**+1.3**
MSVF	**Nonsavu**	**10.55**	**108**	Pn	**Pn**	**11 49 23.7**	**-2.5**
EIDS	**Eidsvold**	**18.72**	**233**	P	**Pn**	**11 51 07.6**	**-0.5**
EIDS				IAmb	IAmb	11 51 08.1	
	comp=Z,12nm,0.8s						
EIDS	**Eidsvold**	**18.72**	**233**	P	**Pn**	**11 51 07.1**	**-1.0**
PMG	**Port Moresby**	**20.59**	**283**	P	**P**	**11 51 25.9**	**-0.3**
	comp=Z,9.1nm,0.9s,baz=92,slow=12,SNR=4.7 comp=Z,9.1nm,0.9s						
PMG	**Port Moresby**	**20.59**	**283**	P	**P**	**11 51 26.3**	**+0.1**
PMG				IAmb	IAmb	11 51 32.6	
	comp=Z,18nm,1.2s						
CTA	**Charters Tower**	**20.98**	**252**	P	**P**	**11 51 29.8**	**-0.6**
	comp=Z,5.8nm,0.8s,baz=72,slow=11,SNR=7.0 comp=Z,5.8nm,0.8s						
CTA	**Charters Tower**	**20.98**	**252**	P	**P**	**11 51 30.8**	**+0.4**
CTAO	**Charters Tower**	**20.98**	**252**	P	**P**	**11 51 30.8**	**+0.4**
CTAO				IAmb	IAmb	11 51 31.7	
	comp=Z,42nm,1.4s						
CTAO	**Charters Tower**	**20.98**	**252**	P	**P**	**11 51 30.8**	**+0.4**
COEN	**Coen**	**23.60**	**269**	P	**P**	**11 51 55.9**	**-0.3**
COEN				IAmb	IAmb	11 52 22.8	
	comp=Z,26nm,1.4s						
BKZ	**Black Stump Fm**	**25.62**	**164**	P	**P**	**11 52 15.1**	**+0.8**
BFZ	**Birch Farm**	**26.98**	**165**	P	**P**	**11 52 28.9**	**+2.5**
INKA	**Innaminka**	**28.05**	**238**	P	**P**	**11 52 37.0**	**+0.8**
STKA	**Stephens Creek**	**29.20**	**230**	P	**P**	**11 52 46.7**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=64,slow=8.8,SNR=8.4						
STKA				PcP	**PcP**	**11 55 50.4**	**+0.4**
	comp=Z,3.7nm,0.8s,baz=53,slow=5.3,SNR=6.2 comp=Z,2.1nm,0.4s						
STKA	**Stephens Creek**	**29.20**	**230**	P	**P**	**11 52 47.2**	**+0.9**
STKA					**PcP**	**11 55 50.8**	**+0.8**
STKA	**Stephens Creek**	**29.20**	**230**	P	**P**	**11 52 46.8**	**+0.5**
JCZ	**Jackson Bay**	**29.29**	**178**	P	**P**	**11 52 49.1**	**+2.0**
TOO	**Toolangi**	**30.02**	**217**	P	**P**	**11 52 54.3**	**+0.8**
WR8	**Warramunga Arr**	**31.92**	**256**	P	**P**	**11 53 08.6**	**-1.8**
WR8				IAmb	IAmb	11 53 13.3	
	comp=Z,19nm,1.4s						
WB0	**Warramunga Arr**	**32.01**	**256**	P	**P**	**11 53 09.6**	**-1.6**
WB0				IAmb	IAmb	11 53 39.2	
	comp=Z,15nm,1.3s						
WRAB	**Tennant Creek**	**32.06**	**256**	P	**P**	**11 53 11.8**	**+0.2**
WRAB				IAmb	IAmb	11 53 22.0	
	comp=Z,14nm,1.0s						
WRAB	**Tennant Creek**	**32.06**	**256**	P	**P**	**11 53 12.6**	**+1.0**
WRA	**Warramunga Arr**	**32.07**	**256**	P	**P**	**11 53 09.5**	**-2.3**
	comp=Z,0.9nm,0.5s,baz=81,slow=6.7,SNR=11 comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**32.07**	**256**	P	**P**	**11 53 09.8**	**-1.9**
AS31	**Alice Springs**	**32.91**	**249**	P	**P**	**11 53 17.6**	**-1.4**
ASAR	**Alice Springs**	**32.91**	**249**	P	**P**	**11 53 17.0**	**-2.1**
	comp=Z,1.0nm,0.4s,baz=78,slow=9.5,SNR=54						
ASAR				PcP	**PcP**	**11 56 00.0**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=77,slow=3.7,SNR=5.5 comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**32.91**	**249**	P	**P**	**11 53 18.0**	**-1.0**
ASAR					**PcP**	**11 56 00.0**	**-0.1**
TAU	**Tasmania Unive**	**33.04**	**208**	P	**P**	**11 53 19.1**	**-0.8**
MGBR	**Mount Gambier**	**33.11**	**221**	P	**P**	**11 53 19.9**	**-0.6**
BBOO	**Buckleboo**	**33.79**	**232**	P	**P**	**11 53 26.5**	**0.0**
BBOO				IAmb	IAmb	11 53 27.0	
	comp=Z,21nm,1.4s						
BBOO	**Buckleboo**	**33.79**	**232**	P	**P**	**11 53 27.3**	**+0.8**
KNRA	**Kununurra**	**37.38**	**263**	P	**P**	**11 53 56.2**	**-1.1**
SIJI	**Sorong**	**38.37**	**288**	LR	LR	12 10 49.3	
	comp=Z,26nm,20.9s,baz=126,slow=37						
MORW	**Morawa**	**49.50**	**244**	P	**P**	**11 55 33.4**	**-0.8**
MORW				IAmb	IAmb	11 55 50.0	
	comp=Z,24nm,1.4s						
JMZ	**Minamidaito 2**	**53.58**	**318**	P	**P**	**11 56 02.8**	**-1.7**
VNDA	**Vanda**	**62.90**	**181**	P	**P**	**11 57 09.1**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=358,slow=7.2,SNR=7.8 comp=Z,1.9nm,0.6s						
VNDA	**Vanda**	**62.90**	**181**	P	**P**	**11 57 09.0**	**+0.6**
VNDA				IAmb	IAmb	11 57 26.4	
	comp=Z,11nm,1.5s						
SBA	**Scott Base**	**63.16**	**180**	P	**P**	**11 57 11.5**	**+1.3**
CASY	**Casey**	**63.65**	**202**	P	**P**	**11 57 13.9**	**+0.4**
PEA0B	**Petropavlovsk-**	**68.06**	**354**	P	**P**	**11 57 42.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**75.16**	**294**	P	**P**	**11 58 26.4**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=131,slow=4.1,SNR=4.5 comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**75.16**	**294**	P	**P**	**11 58 25.7**	**+0.6**
QSPA	**South Pole Qui**	**75.33**	**180**	P	**P**	**11 58 25.8**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=51,slow=1.4,SNR=6.4 comp=Z,5.6nm,0.8s						
QSPA	**South Pole Qui**	**75.33**	**180**	P	**P**	**11 58 25.9**	**+0.5**
QSPA				IAmb	IAmb	11 58 26.7	
	comp=Z,7.8nm,0.9s						
M16K	**Timber Creek**	**80.06**	**16**	P	**P**	**11 58 53.3**	**+1.9**
M16K				IAmb	IAmb	11 58 56.6	
	comp=Z,14nm,1.5s						
SONM	**Songino Array**	**82.62**	**323**	P	**P**	**11 59 05.5**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=138,slow=5.5,SNR=4.3 comp=Z,0.8nm,0.9s						
SONM	**Songino Array**	**82.62**	**323**	P	**P**	**11 59 05.5**	**+0.1**
SUA	**Susitna One**	**82.79**	**19**	P	**P**	**11 59 05.8**	**0.0**
SUA				IAmb	IAmb	11 59 10.2	
	comp=Z,12nm,1.2s						
WRH	**Wood River Hil**	**85.85**	**18**	P	**P**	**11 59 21.0**	**-0.1**
WRH				IAmb	IAmb	11 59 45.8	
	comp=Z,5.3nm,1.4s						
G21K	**Allakaket**	**85.96**	**15**	P	**P**	**11 59 22.1**	**+0.5**
C18K	**Utukok River**	**86.09**	**11**	P	**P**	**11 59 24.1**	**+1.9**
U33K	**Whale Pass**	**86.14**	**29**	P	**P**	**11 59 24.4**	**+1.8**
M27K	**Edge Creek, AK**	**86.37**	**21**	P	**P**	**11 59 23.3**	**-0.5**
M27K				IAmb	IAmb	11 59 34.9	
	comp=Z,4.6nm,1.2s						
ILAR	**Eielson Array**	**86.42**	**18**	P	**P**	**11 59 23.3**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=235,slow=4.9,SNR=8.7 comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**86.42**	**18**	P	**P**	**11 59 24.6**	**+0.7**
F21K	**Alatna River**	**86.53**	**14**	P	**P**	**11 59 24.4**	**0.0**
F21K				IAmb	IAmb	11 59 39.9	
	comp=Z,5.5nm,1.4s						
D19K	**Kuna River**	**86.55**	**12**	P	**P**	**11 59 24.7**	**+0.2**
BELA	**Belgrano 2**	**86.73**	**175**	P	**P**	**11 59 25.3**	**-0.1**
BELA				IAmb	IAmb	11 59 31.8	
	comp=Z,5.2nm,1.2s						
N30M	**Aishikik Lake**	**87.55**	**23**	P	**P**	**11 59 30.3**	**+0.8**
N30M				IAmb	IAmb	11 59 49.6	
	comp=Z,10.0nm,1.5s						
D22K	**Ayikyak River**	**88.03**	**13**	P	**P**	**11 59 33.4**	**+1.9**
D22K				IAmb	IAmb	11 59 35.4	
	comp=Z,4.3nm,1.2s						
B21K	**Ikpikpuk River**	**88.20**	**12**	P	**P**	**11 59 33.4**	**+1.1**
B21K				IAmb	IAmb	11 59 43.0	
	comp=Z,4.7nm,1.4s						
CCUT	**Cedar City**	**90.45**	**51**	P	**P**	**11 59 41.7**	**-2.2**
MKAR	**Makanchi Array**	**97.35**	**316**	P	**P**	**12 00 13.1**	**-1.9**
	comp=Z,9.9nm,0.8s,baz=98,slow=6.2,SNR=6.9 comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**97.35**	**316**	P	**P**	**12 00 13.7**	**-1.4**
ZALV	**Zalesovo Beam**	**97.51**	**324**	P	**P**	**12 00 15.3**	**-0.3**
	comp=Z,6.0nm,0.6s,baz=103,slow=4.6,SNR=2.5 comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**97.51**	**324**	P	**P**	**12 00 14.8**	**-0.7**
ARCES	**ARCESS Array B**	**120.29**	**345**	PKP	**PKiKP**	**12 05 31.7**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=60,slow=2.9,SNR=7.9						
ARCES	**ARCESS Array B**	**120.29**	**345**	PKPdf	**PKiKP**	**12 05 32.2**	**+0.6**
FINES	**FINESS Array B**	**125.79**	**338**	PKP	**PKiKP**	**12 05 42.4**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=355,slow=2.1,SNR=4.9						
OSSC	**Osservatorio P**	**144.83**	**329**	PKPbc	**PKPdf**	**12 06 18.1**	**0.0**
CEL	**Celeste**	**145.67**	**318**	PKPdf	**PKPbc**	**12 06 20.2**	**-0.1**
VSL	**Villasalto**	**148.72**	**326**	PKPbc	**PKPbc**	**12 06 28.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**166.15**	**265**	PKPab	**PKPab**	**12 07 48.0**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=112,slow=5.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**166.15**	**265**	PKPdf	**PKPdf**	**12 06 48.0**	**+1.1**
TORD				PKPab	**PKPab**	**12 07 48.7**	**+0.2**

*TEH **24** 11:49:50.6, 38.44N×44.35E, h6km±96km, ML2.5, Presumed earthquake*
*AZER **24** 11:49:50.1, 38.38N×44.54E, h15km, ml2.6*

ISC 24 11:49:51.4±2.1, 38°39N±0°08×44°46E±0°08, h5km±12km, n10, σ1§42/16, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.92**	**96**	Pg	**Pg**	**11 50 08.2**	**-0.9**
MAKU	**Maku**	**0.98**	**10**	Pg	**Pg**	**11 50 08.3**	**-1.8**
MAKU				Sg	**Sb**	**11 50 22.3**	**-2.0**
IMRD	**Marand**	**1.03**	**71**	Pg	**Pg**	**11 50 11.0**	**-0.1**
NAX	**Nakhchivan**	**1.13**	**46**	P	**Pg**	**11 50 12.5**	**-0.5**
NAX				S	**Sn**	**11 50 29.3**	**-0.5**
ORD	**Ordubad**	**1.32**	**66**	P	**Pn**	**11 50 16.0**	**-0.5**
ORD				S	**Sg**	**11 50 35.0**	**+1.2**
SBZ	**Shahbuz**	**1.32**	**40**	P	**Pn**	**11 50 15.8**	**-0.8**
SBZ				S	**Sn**	**11 50 35.6**	**+1.0**
HYR	**Heyderabad**	**1.36**	**13**	P	**Pg**	**11 50 17.9**	**+0.4**
HYR				S	**Sn**	**11 50 38.2**	**+2.6**
IAZR	**Azarshahr**	**1.40**	**120**	Pg	**Pb**	**11 50 19.0**	**+0.9**
IGDI	**IGDIR**	**1.50**	**349**	P	**Pg**	**11 50 19.5**	**-0.7**
IGDI				S	**Sg**	**11 50 41.7**	**+2.0**
IHRS	**Heris**	**2.04**	**91**	Pn	**Pb**	**11 50 28.9**	**0.0**

WEL 24 12:07:20.6±1.3, 35°S±28°×177°E±4°0, h252km±32km, M3.6/7, ML3.6/13, MLv3.6/7, Error ellipse: s-maj=59.1km s-min=23.8km az=120.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**3.21**	**195**	P	Pn	12 08 15.2	-0.2
HAZ	**Te Kaha**	**3.32**	**204**	P	Pn	12 08 17.1	+0.4
HAZ				S	S	12 09 01.8	+0.7
PKGZ	**Pakihiroa**	**3.33**	**200**	P	Pn	12 08 16.5	-0.3
PUZ	**Puketiti**	**3.48**	**196**	P	Pn	12 08 17.9	-0.6
PUZ				S	S	12 09 04.0	-0.5
RUGZ	**Raukumara Rang**	**3.55**	**204**	P	Pn	12 08 19.4	+0.1
TWGZ	**Tauwhareparae**	**3.65**	**199**	P	Pn	12 08 21.4	+0.9
TWGZ				S	S	12 09 09.3	+1.3
CNGZ	**Carnagh Statio**	**3.89**	**195**	P	Pn	12 08 23.4	+0.3
MWZ	**Matawai**	**3.93**	**203**	P	Pn	12 08 23.5	-0.1
MWZ				S	S	12 09 13.6	-0.3
TKGZ	**Te Karaka**	**3.93**	**199**	P	Pn	12 08 23.4	-0.3
URZ	**Urewera**	**4.01**	**208**	P	Pn	12 08 24.5	0.0
RIGZ	**Rimuhau**	**4.21**	**199**	P	Pn	12 08 27.2	+0.3
RIGZ				S	S	12 09 20.0	+0.3
RTZ	**Ruatahuna**	**4.37**	**207**	P	Pn	12 08 27.9	-1.0
SNGZ	**Shannon Statio**	**4.40**	**202**	P	Pn	12 08 29.9	+0.7
SNGZ				S	S	12 09 24.3	+0.6
MTHZ	**Maungataniwha**	**4.63**	**207**	P	Pn	12 08 32.8	+0.8
BKZ	**Black Stump Fm**	**5.04**	**208**	P	Pn	12 08 36.5	-0.4
RITZ	**Rihia Road**	**5.15**	**213**	P	Pn	12 08 43.0	+4.8
KWHZ	**Kaweka Forest**	**5.29**	**207**	P	Pn	12 08 39.3	-0.7
KAHZ	**Kahuranaki**	**5.47**	**202**	P	Pn	12 08 42.2	0.0

*NIED **24** 12:10:32.9, 23.82N×121.62E, h6km, MW4.3, Moment Tensor Solution. s1 Moment tensor: Scale 10^15Nm; Mrr=0.38; Mθθ=0.03; Mφφ=0.41; Mrθ=3.35; Mθφ=-0.48; Mφr=1.45; Fault plane solution: Mo=3.66000×10^15 NP1: φs=151.00000°, δ=3.00000°, λ=-6.00000°. NP2:φs=247.00000°, δ=90.00000°, λ=-93.00000°.*
*JMA **24** 12:10:32.9±0.1, 23.8N±0.2×121.6E±0.7, h6km±2km, MV3.8/18, TAIWAN REGION*
*NEIC **24** 12:10:32.7±1.5, 23.81N±0.02×121.66E±0.03, h10km±1km, mb4.4/30, Error ellipse: s-maj=5.5km s-min=3.1km az=289.0*
*TAP **24** 12:10:33.4, 23.83N×121.55E, h8km, ML4.5, C*
*ASIES **24** 12:10:33.5, 23.83N×121.57E, h7km, Mw3.9, Fault plane solution: NP1:φs257.00000°, δ21.00000°, λ125.00000°. NP2:φs40.00000°, δ73.00000°, λ78.00000°.*
*IDC **24** 12:10:36.4±3.6, 23.81N×121.81E, h40km±33km, mb3.5/10, mbtmp3.7/13, ML3.8/3, MS3.4/9, Error ellipse: s-maj=22.3km s-min=16.2km az=61.0*

ISC 24 12:10:33.1±0.7, 23°80N±0°01×121°65E±0°01, h14km±4km, n268, σ1§14/392, mb4.2/27, MS3.3/7, 18C-45D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHUL	**Shoufeng**	**0.08**	**262**	⇑P	**Pg**	**12 10 35.6**	**-0.5**
SHUL				*i* S	**Sg**	**12 10 37.4**	**-0.7**
TEYL	**Yanliau Villag**	**0.09**	**324**	*i* P	**Pg**	**12 10 36.3**	**+0.2**
TEYL				*i* S	**Sg**	**12 10 38.7**	**+0.6**
TEGC	**Jichi Village**	**0.14**	**229**	*i* P	**Pg**	**12 10 36.9**	**+0.2**
TEGC				*i* S	**Sg**	**12 10 39.8**	**+0.7**
HWA	**Hwalien**	**0.18**	**346**	⇓*i*P	**Pg**	**12 10 37.5**	**+0.1**
HWA				S	**Sg**	**12 10 40.8**	**+0.5**
ESL	**Shilin**	**0.20**	**274**	⇓*i*P	**Pg**	**12 10 36.1**	**-1.6**
ESL				*i* S	**Sg**	**12 10 37.9**	**-2.9**
ETM	**Tongmen**	**0.22**	**318**	⇓*i*P	**Pg**	**12 10 36.9**	**-1.1**
ETM				*i* S	**Sg**	**12 10 39.3**	**-2.1**
EGFH	**Guangfu**	**0.24**	**238**	*e*P	**Pg**	**12 10 37.8**	**-0.6**
EGFH				S	**Sg**	**12 10 41.1**	**-0.8**
WARBT	**Fenglin Townsh**	**0.26**	**252**	⇓*i*P	**Pg**	**12 10 37.5**	**-1.2**
WARBT				S	**Sg**	**12 10 40.5**	**-1.9**
TWD	**Chiawan**	**0.28**	**349**	⇓*i*P	**Pg**	**12 10 38.8**	**-0.3**
TWD				S	**Sg**	**12 10 42.6**	**-0.6**
LXIB	**Xiulin Townshi**	**0.31**	**315**	⇓*i*P	**Pg**	**12 10 38.5**	**-1.2**
LXIB				S	**Sg**	**12 10 41.8**	**-2.3**
ETL	**Fush Village**	**0.36**	**356**	⇓*i*P	**Pg**	**12 10 40.1**	**-0.3**
ETL				*e*S	**Sg**	**12 10 45.3**	**-0.1**
HGSD	**Ruisui**	**0.37**	**215**	⇓*i*P	**Pg**	**12 10 41.4**	**-0.1**
NACB	**Ninganchiao**	**0.38**	**352**		**Pg**	**12 10 40.1**	**-0.6**
NACB				Sg	**Sg**	**12 10 45.0**	**-0.8**
NACB	**Ninganchiao**	**0.38**	**352**	P	**Pg**	**12 10 40.5**	**-0.3**
NACB	**Ninganchiao**	**0.38**	**352**	P	**Pn**	**12 10 45.2**	**+1.0**
NACB	**Ninganchiao**	**0.38**	**352**	⇓*i*P	**Pg**	**12 10 40.3**	**-0.5**
NACB				S	**Sg**	**12 10 45.1**	**-0.8**
EHYH	**Wanrong**	**0.41**	**223**	P	**Pg**	**12 10 41.2**	**-0.2**
EHYH				S	**Sg**	**12 10 47.2**	**+0.1**
EHY	**Hungye**	**0.42**	**226**	P	**Pg**	**12 10 41.1**	**-0.5**
EHY				S	**Sg**	**12 10

WNT1	Nantou City	0.90	277	eP		Pb	12 10 50.4	-0.1
YHNB	Yeheng	0.90	344			Pb	12 10 50.3	-0.4
YHNB					Sg	Sg	12 11 01.4	-1.1
YHNB	Yeheng	0.90	344	P		Pg	12 10 50.0	-0.7
YHNB	Yeheng	0.90	344	S		Sg	12 11 01.2	-1.3
YHNB	Yeheng	0.90	344	⇓iP		Pb	12 10 50.4	-0.3
YHNB				S		Sg	12 11 00.8	-1.7
WWF	Wufeng	0.91	286	eP		Pb	12 10 50.6	0.0
NSK	Sanguang	0.91	343	⇓iP		Pb	12 10 50.5	-0.4
NSK				eS		Sg	12 11 01.2	-1.7
CHN5	Tsauling	0.92	258	eP		Pb	12 10 50.8	0.0
CHN5				eS		Sb	12 11 03.4	+0.4
TWE	Neicheng	0.92	1	⇑iP		Pb	12 10 50.6	-0.2
TWE				eS		Sb	12 11 02.8	-0.1
FUSB	Fushanzhiwuyua	0.96	356	⇑iP		Pb	12 10 51.3	-0.3
FUSB				eS		Sb	12 11 04.0	-0.2
TCU	Taichung	0.96	291	eP		Pb	12 10 52.0	+0.5
TCU				eS		Sg	12 11 04.2	-0.1
NFF	Wufeng Townshi	0.96	330	⇓P		Pg	12 10 51.2	-0.6
NFF				eS		Sg	12 11 03.1	-1.3
ILA	Ilan	0.97	5	eP		Pn	12 10 52.1	-0.2
TWQ1	Liyutan	0.97	304	⇓P		Pg	12 10 51.5	-0.4
TWQ1				eS		Sg	12 11 03.5	-1.1
NWLT	Wulai	0.98	352	⇓eP		Pb	12 10 51.7	-0.3
NWLT				eS		Sg	12 11 03.9	-1.1
WYL	Yuanlin Townsh	1.00	280	eP		Pg	12 10 52.0	-0.4
WGK	Gukeng	1.01	264	⇑iP		Pb	12 10 52.6	+0.2
WGK				S		Sb	12 11 07.1	+1.6
LONT	Longtian	1.01	209	eP		Pg	12 10 51.8	-0.9
NSTT	Nanjuang	1.02	324	⇓iP		Pg	12 10 52.4	-0.5
NSTT				eS		Sg	12 11 04.9	-1.3
STYH	Taoyuan	1.02	232	eP		Pb	12 10 52.3	-0.2
STYH				eS		Sb	12 11 06.0	+0.2
NSY	Sanyi	1.02	307	eP		Pn	12 10 53.2	+0.1
NSY				eS		Sg	12 11 05.6	-0.6
LIOB	Emei	1.02	325	⇓iP		Pb	12 10 52.6	-0.1
LIOB				eS		Sg	12 11 05.2	-1.2
WCKO	Fanlu	1.03	250	⇑P		Pb	12 10 52.8	0.0
WCKO				eS		Sg	12 11 06.2	-0.2
WDLH	Douliu	1.03	264	eP		Pb	12 10 52.9	+0.2
WDLH				eS		Sb	12 11 07.3	+1.2
STYT	Tauyuan	1.04	233	⇑P		Pg	12 10 52.5	-0.7
STYT				S		Sg	12 11 06.2	-0.5
WCHH	Zhanghua	1.04	286	⇑iP		Pb	12 10 53.1	+0.2
WCHH				eS		Sg	12 11 06.8	0.0
WCH1	Changhua City	1.05	285	eP		Pb	12 10 53.3	+0.3
WCH1				eS		Sb	12 11 07.3	+0.6
TPUB	Ta-pu	1.06	242	Pg		Pg	12 10 53.2	-0.5
TPUB				Sg		Sg	12 11 07.4	-0.2
TPUB	Ta-pu	1.06	242	P		Pg	12 10 53.1	-0.5
TPUB	Ta-pu	1.06	242	S		Sg	12 11 06.5	-1.0
TPUB	Ta-pu	1.06	242	⇑iP		Pb	12 10 53.3	0.0
TPUB				eS		Sg	12 11 07.0	-0.5
NJD	Zhudong	1.07	331	eP		Pb	12 10 53.6	+0.3
KSHI	Guanxi Townshi	1.07	336	⇓P		Pn	12 10 54.0	+0.3
KSHI				eS		Sg	12 11 07.3	-0.4
CHN4	Tsaushan	1.07	246	⇑P		Pb	12 10 53.7	+0.2
CHN4				eS		Sb	12 11 07.8	+0.5
EGS		1.07	14	eP		Pn	12 10 54.1	+0.3
WDJ	Dajia District	1.07	301	eP		Pn	12 10 54.1	+0.3
WDJ				eS		Sg	12 11 08.0	0.0
NMLH	Miaoli	1.08	313	eP		Pn	12 10 54.2	+0.4
NMLH				eS		Sb	12 11 08.2	+0.7
WTP	Ta-pu	1.10	240	⇑iP		Pb	12 10 54.1	+0.1
WTP				eS		Sb	12 11 08.8	+0.5
TWGBT	Beinan	1.11	208	eP		Pg	12 10 52.4	-2.1
TWG	Pinlang	1.11	209			Pg	12 10 52.4	-2.1
TWG	Pinlang	1.11	209	eP		Pg	12 10 52.2	-2.3
CHN2	Minshiung	1.11	256	eP		Pb	12 10 54.5	+0.3
CHN2				eS		Sb	12 11 09.5	+1.0
LDUT	Ludao	1.13	189	eP		Pg	12 10 52.8	-2.1
LDUT				eS		Sb	12 11 09.0	-0.1
HSN1	Hsinchu	1.13	329	eP		Pn	12 10 54.9	+0.3
NJN	Zhunan	1.14	321	eP		Pg	12 10 54.5	-0.6
TTN	Taitung	1.14	204	eP		Pn	12 10 55.1	+0.5
SBCB	Hsinchu	1.16	328	P		Pn	12 10 55.9	+0.9
SBCB				S		Sb	12 11 10.8	+0.9
WTK	Tuku	1.16	265	eP		Pn	12 10 55.9	+0.9
WTK				eS		Sn	12 11 11.5	+0.8
NHDH	Xindian Distri	1.17	354	eP		Pn	12 10 55.6	+0.6
CHY	Chiayi	1.17	255	eP		Pn	12 10 55.4	+0.4
CHY				eS		Sb	12 11 11.2	+1.2
WRL	Guolierlin Hig	1.17	275	⇑iP		Pg	12 10 54.8	-0.9
WRL				eS		Sg	12 11 10.9	-0.2
HSN	Hsinchu	1.18	328	eP		Pn	12 10 56.3	+1.1
HSN				eS		Sb	12 11 11.7	+1.3
TIPB	Shuangxi	1.18	8	eP		Pn	12 10 55.8	+0.6
TWA	Mucha	1.18	357	P		Pn	12 10 55.4	+0.2
TWA				S		Sg	12 11 10.5	-0.7
TATO	Taipei	1.18	353			Pg	12 10 55.1	-0.8
TATO	Taipei	1.18	353	⇑iP		Pb	12 10 55.3	-0.1
TATO				S		Sg	12 11 10.1	-1.3
RLNB	Erlin	1.19	275	⇑P		Pg	12 10 55.4	-0.7
RLNB				eS		Sg	12 11 11.2	-0.4
TWK	Hsinying	1.19	244	⇓P		Pn	12 10 55.9	+0.4
TWK				eS		Sn	12 11 12.6	+1.1
CHN1	Nanshi	1.20	240	eP		Pn	12 10 55.8	+0.3
CHN1				eS		Sn	12 11 13.2	+1.5
SGST	Jiashian	1.22	234	eP		Pg	12 10 55.0	-1.6
SGST				eS		Sb	12 11 12.6	+1.1
SLGT	Liugui	1.22	229	eP		Pg	12 10 56.0	-0.8
SLGT				eS		Sb	12 11 12.8	+1.0
NTY	Taoyuan	1.24	345	eP		Pn	12 10 56.5	+0.5
NCUH	Zhongli	1.24	340	eP		Pn	12 10 57.1	+1.0
NCUH				eS		Sn	12 11 15.0	+2.4
NCU	National Centr	1.24	340	eP		Pg	12 10 55.2	-1.9
NCU				eS		Sg	12 11 12.4	-0.9
TAP	Taipei	1.24	354	eP		Pn	12 10 56.5	+0.4
TAP				eS		Sg	12 11 12.5	-0.7
TWB1	Santiao Chiao	1.24	14	eP		Pn	12 10 56.9	+0.8
WTCT	Ta-ch'eng	1.26	273	eP		Pn	12 10 56.3	0.0
WTCT				eS		Sb	12 11 13.8	+1.1
NWF	Wu-fen Shan	1.27	5	eP		Pn	12 10 57.9	+1.3
NWF				eS		Sn	12 11 15.4	+1.8
WFSB	Wu-fen Shan	1.27	5	eP		Pb	12 10 57.7	+0.8
WFSB				eS		Sn	12 11 15.1	+1.7
SXI1	Grass Mountain	1.30	9	eP		Pg	12 10 57.3	-1.0
TWS1	Kuangyinshan	1.31	351	eP		Pg	12 10 58.3	-0.2
TWS1				eS		Sn	12 11 16.0	+1.6
WSF	Szhu	1.32	263	eP		Pn	12 10 57.7	+0.5
WSF				eS		Sb	12 11 15.4	+0.8
ICHU	Yijhu	1.33	251	eP		Pg	12 10 58.3	-0.5
ICHU				eS		Sn	12 11 17.1	+2.2
WSL	Shuilin Townsh	1.34	258	eP		Pb	12 10 58.0	0.0
WSL				eS		Sb	12 11 15.1	+0.1
YM01	YM01	1.34	357	eP		Pb	12 10 58.0	-0.2
YM01				eS		Sn	12 11 16.5	+1.2
JYNG	Yonagunijimaku	1.35	61	P		Pg	12 10 58.4	-0.6
TNOU	National Taiwa	1.35	5	eP		Pg	12 10 58.9	-0.3
TNOU				eS		Sn	12 11 16.3	+1.0
ECL	Taimali	1.36	208	eP		Pn	12 10 56.7	-1.0
ZUZH	Zhuzihu	1.36	356	eP		Pn	12 10 57.6	-0.2
ZUZH				eS		Sn	12 11 17.6	+1.9
NTST	Danshui	1.37	352	eP		Pg	12 10 58.9	-0.6
NTST				eS		Sn	12 11 18.2	+2.4
YM08	YM08	1.38	358	eP		Pg	12 10 59.6	-0.2
CHN3	Shinhua	1.39	239	eP		Pg	12 10 59.1	-0.7
CHN3				eS		Sn	12 11 19.0	+2.8
ANP	Anpu	1.39	355	eP		Pg	12 10 59.0	-0.8
CHN8	Yiju	1.40	251	eP		Pn	12 10 58.7	+0.5
CHN8				eS		Sg	12 11 18.5	+0.3
SCST	Cishan	1.40	230	eP		Pg	12 10 59.9	-0.2
SCST				eS		Sg	12 11 21.4	+3.1
YOJ	Yonaguni jima	1.41	62			Pn	12 10 58.2	-0.1
YOJ	Yonaguni jima	1.41	62	P		Pg	12 10 59.4	-0.7
YOJ				eS		Sn	12 11 18.4	+1.7
SSD	Sandimen	1.41	222	eP		Pn	12 10 58.2	-0.2
SSD				eS		Sg	12 11 17.9	-0.6
SSHA	Shanhua	1.42	243	eS		Sg	12 11 20.1	+1.3
TSMG	Majia	1.43	221	eP		Pg	12 10 59.9	-0.7
TWY	Chenhua	1.47	358	eP		Pg	12 11 00.7	-0.8
SCLT	Jiali	1.48	245	eP		Pb	12 11 00.4	0.0
SCLT				eS		Sg	12 11 21.6	+0.8
TWM1	Shoushan	1.49	230	eP		Pg	12 11 02.8	+0.9
MASBT	Mashibuluo	1.51	219	eP		Pn	12 10 59.8	0.0
SGLT	Jiouru	1.51	225	eP		Pg	12 11 02.8	+0.6
SGLT				eS		Sg	12 11 24.8	+2.9
TSCK	Chigu Township	1.58	246	eP		Pn	12 11 01.4	+0.7
EAST	Anshuo	1.59	208	eP		Pn	12 10 59.7	-1.3

TAWH	Dawu Township	1.61	206	eP		Pn	12 11 00.5	-0.7
SSPT	Xinbi	1.65	218	eP		Pg	12 11 03.8	-1.0
SCZT	Fangliau	1.71	214	eP		Pn	12 11 03.3	+0.8
WSSB	Gushan	1.72	228	eP		Pb	12 11 04.9	+0.3
LAY	Lan-yu	1.75	183	eP		Pn	12 11 01.4	-1.8
SLIU	Shizi	1.76	207	eP		Pn	12 11 03.5	+0.3
LYUB	Lan-yu	1.79	182	eP		Pn	12 11 01.2	-2.4
LYUB					eS	Sn	12 11 23.4	-2.8
PCYT	Pengchaiyu	1.86	12	eP		Pb	12 11 06.5	-0.4
WDGT	Dungji	1.91	254	eP		Pn	12 11 05.3	0.0
WDGT					eS	Sn	12 11 29.8	+0.7
SMST	Manzhou Townsh	1.92	203	eP		Pn	12 11 05.7	+0.2
PNG	Penghu	1.94	264	eP		Pn	12 11 06.0	+0.4
PNG					eS	Sn	12 11 30.7	+0.9
IRIF	Iriomote-Funau	1.97	74	P		Pn	12 11 07.0	+0.9
IRIF					eS	Sb	12 11 32.8	-0.5
HEN	Hengchun	1.98	205	eP		Pb	12 11 09.4	+0.5
HATJ	Hateruma jima	1.98	82	eS		Sn	12 11 31.9	+0.9
TWK1	Hengchun	2.01	203	eS		Sb	12 11 35.0	+0.8
VCHM	Qimei	2.12	254	eP		Pn	12 11 08.2	0.0
JKRS	Kuro-shima	2.20	78	P		Pb	12 11 11.0	-1.6
JKRS				S		Sb	12 11 39.0	-0.7
VWUC	VWUC	2.33	301	⇑P		Pn	12 11 10.1	-1.0
VWUC					eS	Sn	12 11 37.6	-2.0
JIJ	Ishigaki jima	2.34	76	P		Pn	12 11 11.8	+0.5
JIJ					eS	Sn	12 11 41.2	+1.3
JISG	Ishigakijimahi	2.55	72	P		Pn	12 11 14.6	+0.5
JISG					eS	Sn	12 11 45.9	+0.9
PTMZ	Houxiangcun	2.62	299	⇑eP		Pn	12 11 14.2	-0.9
MATB	Ma-tsu	2.81	327	eP		Pn	12 11 17.1	-0.6
MATB					eS	Sn	12 11 50.5	-0.9
JTJ	Tarama	2.91	73	eS		Sn	12 11 55.2	+1.5
KNM	Kinmen	3.01	282	eP		Pn	12 11 21.8	+1.4
QZH2	Quanzhou	3.01	293	Pn		Pn	12 11 19.4	-1.0
QZH2				Sn		Sn	12 11 51.9	-4.4
QZH2				smax	smax			
	comp=N,970nm,1.0s							
QZH2				smax	smax			
	comp=E,660nm,1.0s							
KNMB	Chin-men Tao	3.06	283			Pn	12 11 20.5	-0.5
KNMB	Chin-men Tao	3.06	283	⇑P		Pn	12 11 20.5	-0.5
KNMB					eS	Sn	12 11 57.3	-0.1
LYJJ	Jianjiangzhen	3.23	328	eP		Pn	12 11 23.8	+0.3
LYJJ					eS	Sn	12 12 00.5	-1.3
MHZQ	Yeshan	3.31	314	eP		Pn	12 11 24.0	-0.5
MHZQ					eS	Sn	12 12 03.0	-0.3
XPSS	Dashiqiu	3.39	337	eP		Pn	12 11 25.4	-0.2
JIKM	Ikemajima	3.46	70	eS		Sn	12 12 09.1	+1.6
JMJ2	Miyako jima3	3.48	74	eS		Sn	12 12 10.6	+2.6
AXDP	Jialang	3.53	289	eP		Pn	12 11 27.5	-0.1
JOGS	Gusukube	3.56	74	eS		Sn	12 12 12.4	+2.7
ZPLA	Ao Xicun	3.58	273	eP		Pn	12 11 28.1	-0.1
ZPLA					eS	Sn	12 12 10.0	-0.3
DSXP	Dongshan	3.88	270	eP		Pn	12 11 32.5	+0.2
SXFK	Yanhouchang	4.46	306	eP		Pn	12 11 40.2	-0.2
JOW	Kunigami	6.71	62	Pn		Pn	12 12 10.2	-1.1
	3.2nm,0.3s,baz=185,slow=9.9,SNR=15							
JOW				Sn		Sn	12 13 24.9	-2.6
	1.0nm,0.3s,baz=110,slow=23,SNR=1.4 6.2nm,0.3s							
KSRS	Korea Array	14.63	20	Pn		Pn	12 14 00.2	+0.4
	0.2nm,0.3s,baz=204,slow=12,SNR=9.9							
KSRS				LR	LR		12 20 04.7	
	comp=Z,34nm,19.0s,baz=205,slow=39 0.4nm,0.5s							
XAN	Xi'an	15.10	315	P		P	12 14 17.6	+6.3
XAN				pmax	pmax			
	comp=Z,10.0nm,1.0s							
XAN				LR	LR			
	comp=N,480nm,7.2s							
XAN				LR	LR			
	comp=E,490nm,10.3s							
XAN				LR	LR			
	comp=Z,570nm,10.0s							
MJAR	Matsushiro Arr	19.10	45	LR	LR		12 22 30.4	
	comp=Z,45nm,19.8s,baz=182,slow=38							
LZDM	Lanzhou Array	19.69	312	P		Pn	12 15 03.8	0.0
	baz=143,slow=15 comp=Z,1.3nm,0.3s							
CMAR	Chiang Mai Arr	21.83	260	P		P	12 15 27.7	+2.4
	comp=Z,0.8nm,0.8s,baz=63,slow=8.4,SNR=6.8							
CMAR				LR	LR		12 24 03.0	
	comp=Z,31nm,19.2s,baz=160,slow=37 comp=Z,0.8nm,0.8s							
JKA	Kamikawa-asahi	26.56	35	P		P	12 16 09.5	-1.1
SONM	Songino Array	26.89	337	P		P	12 16 14.0	+0.3
	comp=Z,0.6nm,0.6s,baz=153,slow=9.1,SNR=10.0							
SONM				LR	LR		12 26 55.3	
	comp=Z,74nm,19.5s,baz=204,slow=36 comp=Z,0.6nm,0.6s							
SONM	Songino Array	26.89	337	P		P	12 16 13.2	-0.5
TLY	Talaya	31.09	338	LR	LR		12 30 30.6	
	comp=Z,67nm,18.6s,baz=136,slow=38							
JAY	Jayapura	32.06	142	LR	LR		12 30 18.2	
	comp=Z,21nm,18.4s,baz=32,slow=37							
MKAR	Makanchi Array	38.91	316	P		P	12 17 58.7	+0.3
	comp=Z,1.0nm,0.9s,baz=104,slow=10,SNR=8.3							
MKAR				PcP		PcP	12 20 08.1	-1.0
	comp=Z,0.5nm,0.8s,baz=129,slow=2.0,SNR=4.3 comp=Z,1.0nm,0.9s							
MKAR	Makanchi Array	38.91	316	P		P	12 17 58.1	-0.3
MKAR						PcP	12 20 08.0	-1.0
MAKZ	Makanchi	39.12	316	P		P	12 17 59.9	-0.2
ZAA0	Zalesovo Array	40.80	327	P		P	12 18 13.2	-0.7
ZALV	Zalesovo Beam	40.80	327	P		P	12 18 13.3	-0.6
	comp=Z,2.5nm,0.7s,baz=115,slow=8.2,SNR=9.5 comp=Z,2.5nm,0.7s							
ZALV	Zalesovo Beam	40.80	327	P		P	12 18 13.7	-0.3
MA2	Magadan	41.18	22	P		P	12 18 15.4	-1.6
PMG	Port Moresby	41.36	140	P		P	12 18 17.2	-1.7
PMG				IAmb	IAmb		12 18 22.7	
	comp=Z,7.5nm,1.0s							
KSH2	Kashi	41.73	303	P		P	12 18 26.6	+4.6
KSH2				pmax	pmax			
	comp=Z,1.0nm,0.7s							
H11N1	WAKE ISLAND Hy	42.08	86	T		T	13 03 36.1	
	baz=283,slow=75,SNR=16							
H11N2	WAKE ISLAND Hy	42.08	86	T		T	13 03 25.6	
	baz=283,slow=75,SNR=20							
H11N3	WAKE ISLAND Hy	42.10	86	T		T	13 03 28.3	
	baz=283,slow=75,SNR=21							
H11S3	WAKE ISLAND Hy	42.20	88	T		T	13 03 28.9	
	baz=284,slow=74,SNR=180							
H11S1	WAKE ISLAND Hy	42.21	88	T		T	13 03 30.6	
	baz=284,slow=74,SNR=123							
H11S2	WAKE ISLAND Hy	42.22	88	T		T	13 03 30.2	
	baz=284,slow=74,SNR=87							
KURK	Kurchatov	42.66	320	P		P	12 18 28.4	-0.9
KURBB	Kurchatov Arra	42.68	320	P		P	12 18 29.8	+0.5
	comp=Z,0.3nm,0.4s,baz=112,slow=8.9,SNR=5.5 comp=Z,0.3nm,0.4s							
WB0	Warramunga Arr	45.05	163	P		P	12 18 47.3	-1.4
PSA00	Pilbara Seismi	45.13	182	P		P	12 18 48.3	-1.1
PSA00				IAmb	IAmb		12 19 02.6	
	comp=Z,3.3nm,1.0s							
WRA	Warramunga Arr	45.20	163	P		P	12 18 49.0	-1.0
	comp=Z,1.3nm,0.7s,baz=344,slow=8.5,SNR=6.8 comp=Z,1.3nm,0.7s							
WRA	Warramunga Arr	45.20	163	P		P	12 18 49.1	-0.8
WR8	Warramunga Arr	45.26	163	P		P	12 18 49.1	-1.3
WR8				IAmb	IAmb		12 18 51.7	
	comp=Z,7.1nm,1.1s							
BVAR	Borovoye Array	48.24	321	P		P	12 19 13.0	-0.5
	comp=Z,0.6nm,0.5s,baz=107,slow=7.9,SNR=4.0							
BVAR				PcP		PcP	12 20 40.1	-0.3
	comp=Z,0.7nm,0.7s,baz=69,slow=4.8,SNR=2.5 comp=Z,0.6nm,0.5s							
AS31	Alice Springs	48.66	165	P		P	12 19 14.7	-2.3
ASAR	Alice Springs	48.66	165	P		P	12 19 16.2	-0.7
	comp=Z,1.0nm,0.8s,baz=343,slow=6.6,SNR=13 comp=Z,1.0nm,0.8s							
ASAR	Alice Springs	48.66	165	P		P	12 19 14.8	-2.1
AB31	Akbulak array	54.02	315	P		P	12 19 57.0	+0.2
AB31				IAmb	IAmb		12 20 08.8	
	comp=Z,1.4nm,0.8s							
ABKAR	Akbulak array	54.02	315	P		P	12 19 57.3	+0.4
AKTO	Aktyubinsk	55.35	316	LR	LR		12 44 04.8	
	comp=Z,76nm,20.1s,baz=268,slow=36							
ANM	Nome	61.46	28	P		P	12 20 49.0	0.0
ANM				IAmb	IAmb		12 20 57.0	
	comp=Z,4.2nm,1.1s							
DZM	Mont Dzumac	63.06	133	LR	LR		12 40 58.3	
	comp=Z,214nm,21.9s,baz=28,slow=29							
F17K	Baldwin Pennin	63.28	26	P		P	12 21 01.0	0.0
F17K				IAmb	IAmb		12 21 08.9	
	comp=Z,2.7nm,0.9s							
C18K	Utukok River	63.39	24	P		P	12 21 02.1	+0.2
C18K				IAmb	IAmb		12 21 06.5	
	comp=Z,1.4nm,1.2s							
E18K	Tukpahlearik C	63.56	25	P		P	12 21 04.4	+1.4
E18K				IAmb	IAmb		12 21 06.3	
	comp=Z,2.6nm,0.9s							
C19K	Lookout Ridge	63.98	23	P		P	12 21 06.7	+0.9
C19K				IAmb	IAmb		12 21 09.7	
	comp=Z,8.1nm,1.4s							
D19K	Kuna River	64.51	24	P		P	12 21 09.4	+0.1
D19K				IAmb	IAmb		12 21 12.4	
	comp=Z,3.4nm,0.9s							
K17K	Iditarod	64.59	30	P		P	12 21 09.4	-0.4
K17K				IAmb	IAmb		12 21 25.1	
	comp=Z,8.4nm,1.4s							
B21K	Ikpikpuk River	65.74	22	P		P	12 21 18.2	+1.1
B22K	Teshekpuk Lake	66.11	22	P		P	12 21 19.9	+0.4
B22K				IAmb	IAmb		12 21 27.6	
	comp=Z,4.2nm,0.9s							
IMAR	Indian Mountai	66.33	26	P		P	12 21 21.4	+0.4
I21K	Tanana	67.15	27	P		P	12 21 28.1	+1.8
I21K				IAmb	IAmb		12 21 38.9	
	comp=Z,5.3nm,1.2s							
PPLA	Purkeypile	67.37	30	P		P	12 21 28.5	+0.7
SLKM	Skilak Lake	68.68	32	P		P	12 21 34.9	-1.1
RC01	Rabbit Creek A	68.81	31	P		P	12 21 37.9	+1.2
GHO	Glory Hole Cre	69.06	31	P		P	12 21 37.2	-1.2
ILAR	Eielson Array	69.36	27	P		P	12 21 39.5	-0.6
	comp=Z,0.4nm,0.5s,baz=274,slow=5.2,SNR=12 comp=Z,0.4nm,0.5s							
ILAR	Eielson Array	69.36	27	P		P	12 21 40.0	-0.1
BMAR	Burnt Mountain	69.70	24	P		P	12 21 43.8	+1.5
I30M	Mount Dempster	73.51	25	P		P	12 22 05.6	+0.3
I30M				IAmb	IAmb		12 22 12.3	
	comp=Z,6.7nm,1.3s							
NOA	NORSAR Array B	78.76	332	LR	LR		13 01 05.5	
	comp=Z,68nm,18.9s,baz=5.0,slow=38							
YKAW3	Yellowknife Wh	83.11	23	P		P	12 22 58.8	+0.6
YKAW3				IAmb	IAmb		12 23 00.8	
	comp=Z,1.4nm,0.7s							
YKA	Yellowknife Ar	83.16	23	P		P	12 22 57.8	-0.7
	comp=Z,0.9nm,0.8s,baz=317,slow=5.7,SNR=20 comp=Z,0.9nm,0.8s							
YKA	Yellowknife Ar	83.16	23	P		P	12 22 59.3	+0.8
YKAW1	Yellowknife Wh	83.21	23	P		P	12 22 58.3	-0.5
YKAW1				IAmb	IAmb		12 23 02.9	
	comp=Z,2.6nm,1.3s							

JMA ***24*** *12:54:12.9±0.3, 43.8°N±0.9×14.5°E±, h166km±2km, MV2.5/31, SHIRETOKO PENINSULA REG*
SKHL ***24*** *12:54:13.7±0.3, 43.80°N×144.90°E, h140km±3km, mb4.5/2, msha4.4/2*

ISC 24 12:54:13.4±3.3, 43.77°N±0.08°×144.99°E±0.07', h161km±20km, n18, σ0.873/27, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNSB	Nemuroshibetsu	0.01	60	eP	Pn	12 54 35.2	+0.4
JNSB				eS	Sn	12 54 52.8	+1.6
JRA	Rausu	0.19	29	P	Pn	12 54 35.0	0.0
JNK	Nakash	0.27	227	P	Pn	12 54 35.3	+0.1
NMR	Nemuro--Hokkai	0.67	127	eP	Pn	12 54 36.7	-0.2
NMR				eS	Sn	12 54 53.9	-0.9
NEM2	Nemuro 2	0.68	126	P	Pn	12 54 36.7	-0.3
NEM2				eS	Sn	12 54 53.8	-1.2
YUK	Yuzh-Kuril'sk	0.68	67	eP	Pn	12 54 37.1	+0.2
YUK				AMB	AMB	12 54 37.7	
	80nm,0.3s						
YUK				eS	Sn	12 54 56.0	+1.0
YUK				A	A	12 54 58.3	
	50nm,0.5s						
YUK				A	A	12 54 58.3	
	70nm,0.5s						
JKHN	Kushirohamanak	0.70	170	P	Pn	12 54 37.3	+0.2
AKK	Akkeshi	0.76	188	eP	Pn	12 54 37.4	-0.1
AKK				eS	Sn	12 54 55.4	-0.5
JAK	Akkeshi	0.81	196	P	Pn	12 54 37.9	+0.2
JAK				eS	Sn	12 54 56.

INU Inuyama 8.71 342 P P 13 14 09.5 -0.3
JGF Kuroka 8.86 344 P P 13 14 11.1 -0.4
JGF Kuroka 8.86 344 S S 13 15 56.9 +2.7
JAG Ashikaga 9.35 356 P P 13 14 15.8 -0.8
JAG eS S 13 15 57.2 -6.4
JHO Hitachi 9.51 1 P P 13 14 18.7 +0.3
JHO eS S 13 16 03.1 -3.7
MJAR Matsushiro Arr 9.60 350 P P 13 14 18.7 -0.7
comp=E,8.3nm,0.5s,baz=171,slow=11,SNR=19
MJAR S S 13 16 07.2 -1.4
comp=E,8.3nm,0.6s,baz=208,slow=21,SNR=5.9
MAJO Matsushiro 9.60 350 P P 13 14 18.8 -0.7
MAJO Matsushiro 9.60 350 P P 13 14 20.7 +1.3
MJB9 Matsu-Tunnel 9.61 350 P P 13 14 19.0 -0.5
JSU Suzuyama 9.66 300 P P 13 14 21.9 +1.8
JSU Suzuyama 9.66 300 S S 13 16 11.1 +1.2
JAMN Amaminishikomi 9.93 279 eP P 13 14 25.7 +2.7
JAMN eS S 13 16 16.9 +1.6
JHS Saijyo 10.01 324 P P 13 14 25.4 +1.6
JNU Nakatsue 10.14 309 P P 13 14 26.3 +1.1
comp=E,262nm,1.1s,baz=128,slow=3.5,SNR=92
JFK Kawauchi 10.27 3 P P 13 14 27.5 +0.9
JFK S S 13 16 18.4 -3.5
JSJ Shimokoshiki 10.30 299 P P 13 14 27.9 +0.9
JOW Kunigami 10.73 271 P P 13 14 32.4 +0.7
comp=E,514nm,0.5s,baz=113,slow=8.9,SNR=209
JOW S S 13 16 31.1 0.0
comp=E,28nm,1.1s,baz=90,slow=20,SNR=2.6
JOW Kunigami 10.73 271 P P 13 14 33.1 +1.4
JOW Kunigami 10.73 271 S S 13 16 31.6 +0.5
JOW Kunigami 10.73 271 P P 13 14 33.1 +1.4
JMK Ichinoseki 11.87 3 P P 13 14 45.0 +1.4
JMK S S 13 16 51.5 -1.6
JKE Kume jima 2 12.11 270 P P 13 14 47.3 +0.8
TJN Taejon 14.38 313 P 13 15 09.2 -1.3
TJN Taejon 14.38 313 P P 13 15 12.3 +1.8
KSRS Korea Array 14.70 318 P P 13 15 13.0 -0.9
comp=E,6.0nm,0.6s,baz=132,slow=10,SNR=25
KSRS PcP PcP 13 19 52.3 +0.8
comp=E,2.5nm,0.7s,baz=155,slow=0.8,SNR=9.2
KSAR Wonju Array Be 14.72 318 P 13 15 12.2 -1.9
KS19 Wonju Array Si 14.77 318 P 13 15 12.1 -2.6
INCN Inchon 15.51 315 P P 13 15 20.5 -2.0
INCN Inchon 15.51 315 P P 13 15 25.5 +3.0
INCN Inchon 15.51 315 P P 13 15 25.9 +3.4
JKA Kamikawa-asahi 17.10 6 ScP 13 22 45.3 +0.9
JKA Kamikawa-asahi 17.10 6 P P 13 15 39.1 0.0
JKA IAmb IAmb 13 16 10.1
comp=Z,26nm,1.4s
ASAJ Asahikawa 17.10 6 P P 13 15 40.2 +1.2
comp=Z,6.2nm,0.5s,baz=227,slow=9.2,SNR=22
ASAJ ScP ScP 13 22 45.3 +0.9
comp=Z,9.3nm,0.8s,baz=226,slow=3.3,SNR=7.8
YHNB Yeheng 17.20 266 P 13 15 38.4 -2.0
YHNB IAmb IAmb 13 15 40.1
comp=Z,17nm,0.7s
YULB Yu-li 17.58 262 P 13 15 42.4 -1.8
YULB IAmb IAmb 13 15 43.9
comp=Z,31nm,1.1s
YULB Yu-li 17.58 262 P P 13 15 44.2 0.0
SSLB Suanglung 17.78 264 P 13 15 45.1 -1.0
SSLB Suanglung 17.78 264 P P 13 15 45.9 -0.2
TPUB Ta-pu 18.19 262 P P 13 15 48.2 -1.8
TPUB IAmb IAmb 13 15 57.8
comp=Z,45nm,1.3s
USRK Ussuriysk Ar. 18.35 341 P P 13 15 51.9 +0.6
comp=Z,76nm,0.9s,baz=167,slow=8.9,SNR=74
MDJ Mudanjiang 19.50 337 P 13 16 00.2 -1.6
MDJ Mudanjiang 19.50 337 P P 13 16 03.9 +2.1
MDJ Mudanjiang 19.50 337 P P 13 16 02.5 +0.7
MDJ pmax pmax
comp=Z,49nm,0.8s
DL2 Dalian 19.56 312 P P 13 16 01.4 -1.0
DL2 pmax pmax
comp=Z,68nm,0.7s
QZH2 Quanzhou 19.62 269 P P 13 16 03.3 +0.2
CN2 Changchun 20.56 328 eP P 13 16 12.8 +1.4
CN2 pmax pmax
comp=Z,20nm,1.0s
SZP Santa 20.64 247 P P 13 16 12.7 +0.3
BNX BinXian 21.27 334 ⇑P P 13 16 18.3 +0.5
WHN Wuhan 22.98 285 P P 13 16 33.3 -0.2
WHN pmax pmax
comp=Z,98nm,0.8s
KLR Kul'dur 23.09 346 P P 13 16 34.8 +0.7
comp=Z,7.5nm,0.4s,baz=173,slow=7.4,SNR=39
KLR PcP PcP 13 20 06.4 +0.2
comp=Z,2.4nm,0.8s,baz=147,slow=0.4,SNR=6.2
KLR ScP ScP 13 22 58.7 +0.1
comp=Z,3.5nm,0.6s,baz=180,slow=2.1,SNR=9.2
comp=Z,7.5nm,0.4s
BJI2 Beijing 23.81 309 P P 13 16 39.5 -1.2
BJI2 pmax pmax
comp=Z,9.0nm,0.6s
BJT Baijiatuau 23.81 309 P 13 16 39.1 -1.6
BJT IAmb IAmb 13 16 40.3
comp=Z,14nm,0.6s
BJT Baijiatuau 23.81 309 P P 13 16 39.3 -1.4
LYN LuoYang 24.98 294 P P 13 16 51.3 0.0
LYN pmax pmax
comp=Z,43nm,0.7s
HEH HeiHe 25.16 340 eP P 13 16 52.8 +0.2
HEH pmax pmax
comp=Z,130nm,0.8s
XLT XiLinHaoTe 25.75 317 eP P 13 16 57.3 -0.8
XLT pmax pmax
comp=Z,7.0nm,0.8s
XLT pmax pmax
comp=Z,150nm,4.7s
ENH Enshi 27.18 284 IAmb IAmb 13 17 10.5
comp=Z,23nm,0.7s
ENH Enshi 27.18 284 P P 13 17 09.8 -1.0
HIA Hailar 27.25 330 P 13 17 11.1 -0.1
HIA IAmb IAmb 13 17 11.9
comp=Z,25nm,0.6s
HIA Hailar 27.25 330 P P 13 17 11.2 0.0
HHC Hu-ho-hao-te 27.36 307 ⇑iP P 13 17 12.3 -0.1
HHC pmax pmax
comp=Z,33nm,1.2s
HHC pmax pmax
comp=Z,87nm,6.6s
HILR Hailar Array B 27.46 330 P P 13 17 13.0 0.0
comp=Z,19nm,0.4s,baz=132,slow=8.9,SNR=51
comp=Z,19nm,0.4s
XAN Xi'an 27.82 292 ⇓P P 13 17 15.9 -0.5
XAN pmax pmax
comp=Z,30nm,0.5s
BTO2 Baotou 28.53 306 eP P 13 17 22.4 -0.2
BTO2 pP pP 13 18 44.1 +0.9
BTO2 sP sP 13 19 39.9 +1.5
BTO2 pmax pmax
comp=Z,41nm,0.8s
BTO2 pmax pmax
comp=Z,280nm,6.2s
PETK Petropavlovsk- 29.05 22 P P 13 17 28.6 +1.8
comp=Z,2.4nm,0.7s,baz=202,slow=3.0,SNR=8.3
PETK PcP PcP 13 20 20.6 +0.3
comp=Z,3.0nm,1.0s,baz=203,slow=1.5,SNR=4.1
comp=Z,2.4nm,0.7s
PETK Petropavlovsk- 29.05 22 P P 13 17 28.2 +1.4
QIZ Qiongzhong 29.09 260 P P 13 17 28.0 +0.4
QIZ IAmb IAmb 13 17 54.0
comp=Z,30nm,1.3s
SIJI Sorong 29.11 199 P P 13 17 28.3 +0.4
comp=Z,13nm,0.8s,baz=31,slow=5.9,SNR=3.9
comp=Z,13nm,0.8s
SIJI Sorong 29.11 199 P P 13 17 27.6 -0.3
comp=Z,13nm,0.8s
GYA Guiyang 29.99 277 ⇓P P 13 17 35.3 -0.2
GYA pmax pmax
comp=Z,28nm,0.6s
MYLDM Lahad Datu 30.10 228 P P 13 17 37.2 +0.8
MYLDM IAmb IAmb 13 18 06.4
comp=Z,21nm,1.1s
SANI Sanana 32.08 208 P P 13 17 52.7 -0.8
SANI Sanana 32.08 208 P P 13 17 52.7 -0.8
comp=Z,32nm,0.6s
LZH Lanzhou 32.17 295 P P 13 17 54.3 0.0
LZH PcP PcP 13 20 30.3 +1.0
LZH pmax pmax
comp=Z,53nm,1.3s
LZDM Lanzhou Array 32.28 295 P P 13 17 55.0 -0.4
comp=Z,16nm,0.5s,baz=142,slow=7.5,SNR=34
LZDM PcP PcP 13 20 30.6 +0.8
comp=Z,5.7nm,0.4s,baz=132,slow=2.1,SNR=7.9
comp=Z,16nm,0.5s
KRAI Karang Ratu 32.33 203 P P 13 17 53.1 -2.5
comp=Z,21nm,1.3s
ULN Ulaanbaatar 33.19 318 P 13 18 02.4 -0.3
ULN IAmb IAmb 13 18 03.9
comp=Z,24nm,0.9s
ULN Ulaanbaatar 33.19 318 P P 13 18 02.9 +0.2
ULN Ulaanbaatar 33.19 318 P P 13 18 02.6 -0.1
comp=Z,128nm,1.2s
MA2 Magadan 33.28 10 P P 13 18 04.4 +1.2
comp=Z,4.9nm,0.9s,baz=174,slow=5.0,SNR=6.3
MA2 PcP PcP 13 20 32.0 +0.3
comp=Z,1.9nm,0.5s,baz=144,slow=21,SNR=4.7
comp=Z,4.9nm,0.9s
MA2 Magadan 33.28 10 P 13 18 03.3 +0.1
MA2 Magadan 33.28 10 P P 13 18 03.0 -0.1
comp=Z,6.7nm,0.8s
SONM Songino Array 33.57 317 P P 13 18 05.6 -0.4
comp=Z,8.3nm,0.5s,baz=126,slow=7.9,SNR=78
SONM PP PP 13 19 40.2 -1.9
comp=Z,2.3nm,0.7s,baz=111,slow=7.7,SNR=4.1
SONM PcP PcP 13 20 33.5 +0.5
comp=Z,2.2nm,0.4s,baz=128,slow=2.5,SNR=11
SONM ScP ScP 13 23 31.7 -0.2
comp=Z,2.1nm,0.8s,baz=140,slow=3.2,SNR=8.8
comp=Z,8.3nm,0.5s
SONM Songino Array 33.57 317 P 13 18 05.5 -0.5
SONM IAmb IAmb 13 18 06.4
comp=Z,10nm,0.6s
KMI2 Kunming 33.69 275 ⇑P P 13 18 08.0 +0.6
KMI2 pmax pmax
comp=Z,23nm,0.7s
PZH PanZhiHua 34.33 278 P P 13 18 12.5 -0.2
PZH pmax pmax
comp=Z,40nm,0.8s
YAK Yakutsk 35.66 351 P P 13 18 22.4 -0.7
comp=Z,23nm,0.3s,baz=163,slow=4.6,SNR=22
comp=Z,23nm,0.3s
YAK Yakutsk 35.66 351 P 13 18 22.5 -0.6
GTA2 Gaotai 35.79 301 P P 13 18 24.3 -0.4
GTA2 PcP PcP 13 20 40.4 +0.7
GTA2 S S 13 23 24.8 -2.6
GTA2 pmax pmax
comp=Z,40nm,0.9s
SEY Seymchan 36.73 9 P P 13 18 33.0 +1.1
comp=Z,4.7nm,0.6s,baz=191,slow=7.7,SNR=48
SEY PcP PcP 13 20 42.4 +0.5
comp=Z,1.2nm,0.5s,baz=185,slow=2.2,SNR=4.9
comp=Z,4.7nm,0.6s
PMG Port Moresby 36.87 169 P P 13 18 33.9 +0.1
comp=Z,3.3nm,0.6s,baz=337,slow=7.7,SNR=2.4
PMG PcP PcP 13 20 44.2 +1.1
comp=Z,4.9nm,0.6s,baz=22,slow=5.4,SNR=3.7
comp=Z,3.3nm,0.6s
TLY Talaya 36.90 322 P P 13 18 34.2 +0.6
BSSI Bau Bau, Buton 38.19 213 P P 13 18 43.4 -1.2
comp=Z,25nm,1.2s
CHTO Chiang Mai 38.82 267 P 13 18 49.6 -0.2
CHTO IAmb IAmb 13 18 50.6
comp=Z,14nm,0.8s
CHTO Chiang Mai 38.82 267 P P 13 18 49.6 -0.2
CHTO Chiang Mai 38.82 267 P P 13 18 49.8 0.0
CHTO Chiang Mai 38.82 267 P P 13 18 49.5 -0.3
comp=Z,20nm,0.9s
CM31 Chiang Mai Arr 38.95 266 P P 13 18 50.4 -0.4
CM31 IAmb IAmb 13 18 51.8
comp=Z,7.8nm,0.7s
CM31 Chiang Mai Arr 38.95 266 P P 13 18 50.9 +0.2
CMAR Chiang Mai Arr 38.95 266 P P 13 18 50.9 +0.1
comp=Z,4.5nm,0.7s,baz=58,slow=8.4,SNR=46
CMAR PcP PcP 13 20 50.1 +0.4
comp=Z,3.5nm,0.8s,baz=51,slow=2.0,SNR=15
CMAR ScP ScP 13 23 52.8 +0.5
comp=Z,1.2nm,0.9s,baz=54,slow=2.3,SNR=5.3
comp=Z,4.5nm,0.7s
CMAR Chiang Mai Arr 38.95 266 P 13 18 50.5 -0.3
CMAR PcP 13 20 50.1 +0.4
GOMU GeErMu 39.48 295 P P 13 18 54.0 -1.3
GOMU PcP PcP 13 20 52.1 +0.5
GOMU pmax pmax
comp=Z,69nm,1.0s
EDFI Ende, Flores 39.93 209 P P 13 18 58.6 -0.2
comp=Z,18nm,0.6s
BATI Baumata 40.43 206 P P 13 19 01.1 -1.6
comp=Z,27nm,0.5s
MTN Manton Dam 40.67 194 P P 13 19 04.6 0.0
MTN IAmb IAmb 13 19 29.7
comp=Z,15nm,0.9s
COEN Coen 40.89 176 P P 13 19 06.7 +0.4
COEN IAmb IAmb 13 19 31.2
comp=Z,47nm,1.5s
PLAI Plampang 41.84 215 P P 13 19 13.1 -0.9
comp=Z,27nm,1.3s
TWSI Taliwang, Sumb 42.23 216 P P 13 19 15.6 -1.5
comp=Z,16nm,1.2s
LSA Lhasa 43.06 285 IAmb IAmb 13 19 27.7
comp=Z,13nm,0.6s
LSA Lhasa 43.06 285 P P 13 19 21.6 -2.5
LSA pmax pmax
comp=Z,14nm,0.6s
SHL Shillong 43.21 279 P 13 19 24.6 -0.4
SHL IAmb IAmb 13 19 25.4
comp=Z,35nm,0.8s
SHL Shillong 43.21 279 P P 13 19 24.8 -0.1
SNR=8.3
IPM Ipoh 43.67 246 IAmb IAmb 13 19 29.3
comp=Z,11nm,0.7s
BILL Bilibino 43.86 14 P 13 19 29.1 0.0
BILL IAmb IAmb 13 19 31.3
comp=Z,11nm,0.9s
KNRA Kununurra 43.95 196 P P 13 19 29.9 -0.6
KNRA IAmb IAmb 13 19 52.8
comp=Z,15nm,1.0s
TIXI Tiksi 45.07 355 P P 13 19 38.3 -0.1
comp=Z,9.9nm,0.4s,baz=154,slow=4.1,SNR=26
TIXI PcP PcP 13 21 08.9 -0.3
comp=Z,2.5nm,0.5s,baz=117,slow=2.3,SNR=3.4
TIXI S S 13 25 39.6 -1.7
comp=Z,0.7nm,0.3s,baz=264,slow=22,SNR=11
comp=Z,9.9nm,0.4s
TIXI Tiksi 45.07 355 P 13 19 38.2 -0.2
TIXI IAmb IAmb 13 19 39.3
comp=Z,22nm,1.0s
WMQ Urumqi 45.22 306 eP P 13 19 41.0 +0.8
WMQ pP PcP 13 21 11.3 +0.8
WMQ pmax pmax
comp=Z,64nm,0.9s
WMQ pmax pmax
comp=Z,190nm,4.5s
PSI Prapat 46.35 246 P P 13 19 49.5 +0.3
PSI Prapat 46.35 246 P P 13 19 49.6 +0.3
comp=Z,26nm,0.8s
RPSI Rantau Prapat 46.41 246 P 13 19 49.5 0.0
RPSI IAmb IAmb 13 19 50.4
comp=Z,20nm,0.5s
KLSI 46.68 233 P P 13 19 51.1 -0.5
KCSI Kotacane, Aceh 46.88 248 P P 13 19 50.8 -2.4
WB0 Warramunga Arr 46.92 188 P P 13 19 53.4 +0.1
WB0 IAmb IAmb 13 19 54.1
comp=Z,18nm,0.5s
MDSI Maura Dua 46.93 234 P P 13 19 53.4 -0.1
comp=Z,445nmcomp=Z,42nm,0.9s
WRA Warramunga Arr 47.10 188 P P 13 19 54.3 -0.3
comp=Z,12nm,0.4s,baz=4.3,slow=7.5,SNR=146
WRA PcP PcP 13 21 16.5 -0.8
comp=Z,3.0nm,0.5s,baz=1.9,slow=3.8,SNR=8.5
WRA ScP ScP 13 24 24.8 -0.4
comp=Z,3.3nm,0.7s,baz=2.3,slow=4.8,SNR=11
WRA S S 13 26 07.6 -3.5
comp=Z,4.4nm,0.8s,baz=6.2,slow=14,SNR=9.1
comp=Z,12nm,0.4s
WRA Warramunga Arr 47.10 188 P P 13 19 53.6 -1.1
WRA Warramunga Arr 47.10 188 ScP 13 24 25.2 0.0
GSI Gunungsitoli 48.31 245 P P 13 20 04.2 +0.2
ZAA0 Zalesovo Array 48.40 319 P 13 20 03.4 -0.6
ZALV Zalesovo Beam 48.40 319 P P 13 20 03.5 -0.5
comp=Z,41nm,0.5s,baz=106,slow=7.8,SNR=248
ZALV PcP PcP 13 21 21.2 -0.3
comp=Z,11nm,0.4s,baz=113,slow=3.7,SNR=13
ZALV ScP ScP 13 24 29.1 -1.2
comp=Z,2.5nm,0.6s,baz=112,slow=4.9,SNR=5.6
comp=Z,41nm,0.5s
MKAR Makanchi Array 49.19 310 P P 13 20 10.2 +0.1
comp=Z,16nm,0.5s,baz=89,slow=10,SNR=540
MKAR PcP PcP 13 21 24.7 +0.1
comp=Z,9.2nm,0.7s,baz=90,slow=6.1,SNR=8.6
MKAR ScP ScP 13 24 33.4 -0.5
comp=Z,2.0nm,0.5s,baz=82,slow=4.5,SNR=11
MKAR P4KPbc 13 57 39.5
comp=Z,0.4nm,0.5s,baz=81,slow=5.6,SNR=9.8
comp=Z,16nm,0.5s
MKAR Makanchi Array 49.19 310 P 13 20 10.0 -0.1
MKAR Makanchi Array 49.19 310 ScP 13 24 33.3 -0.6
MAKZ Makanchi 49.41 310 P 13 20 11.7 0.0
MAKZ IAmb IAmb 13 20 12.9
comp=Z,71nm,1.4s
AS31 Alice Springs 50.82 188 IAmb IAmb 13 20 23.4
comp=Z,5.0nm,0.3s
ASAR Alice Springs 50.83 188 P P 13 20 22.4 0.0
comp=Z,3.6nm,0.5s,baz=0.2,slow=5.1,SNR=231
ASAR PcP PcP 13 21 30.9 -0.1
comp=Z,2.7nm,0.6s,baz=14,slow=3.9,SNR=9.5
ASAR ScP ScP 13 24 41.0 -0.1
comp=Z,1.7nm,0.9s,baz=6.4,slow=4.5,SNR=6.0
ASAR S S 13 26 60.0 -2.2
comp=Z,1.6nm,1.0s,baz=17,slow=19,SNR=5.3
ASAR P4KPbc 13 57 47.8
comp=Z,0.4nm,0.5s,baz=360,slow=4.8,SNR=11
comp=Z,3.6nm,0.5s
ASAR Alice Springs 50.83 188 P P 13 20 22.2 -0.2
WUS Wushi 51.50 302 IAmb IAmb 13 20 29.2
comp=Z,32nm,1.2s
KURK Kurchatov 51.80 315 PcP 13 21 34.0 -0.3
KURK Kurchatov 51.80 315 P 13 20 28.7 -0.4
KURK Kurchatov 51.80 315 P P 13 20 29.0 -0.1
KURBB Kurchatov Arra 51.85 314 P P 13 20 29.2 -0.2
comp=Z,78nm,0.7s,baz=92,slow=8.0,SNR=268
KURBB PcP PcP 13 21 34.0 -0.5
comp=Z,4.1nm,0.5s,baz=96,slow=4.0,SNR=4.8
KURBB S S 13 27 14.0 -1.4
comp=Z,0.2nm,0.3s,baz=96,slow=14,SNR=4.4
comp=Z,78nm,0.7s
MBWA Marble Bar 51.92 205 P P 13 20 30.5 +0.2
MBWA IAmb IAmb 13 21 12.4
comp=Z,29nm,1.4s
MBWA Marble Bar 51.92 205 P P 13 20 30.6 +0.3
KDJ Kajisay 52.95 304 IAmb IAmb 13 20 38.9
comp=Z,14nm,0.6s
K17K Iditarod 53.23 30 IAmb IAmb 13 21 02.7
comp=Z,25nm,1.4s
ULHL Ulahol 53.64 304 P P 13 20 43.5 +0.8
SNR=34
NRN Naryn 53.90 303 IAmb IAmb 13 20 47.0
comp=Z,20nm,1.2s
TKM2 Tokmak 2 54.05 305 P P 13 20 46.5 +0.8
SNR=48
KSH2 Kashi 54.51 300 P P 13 20 50.0 +1.1
KSH2 pmax pmax
comp=Z,52nm,0.6s
INKA Innaminka 54.51 180 P 13 20 48.2 -0.4
KBK Karagaybulak 54.55 305 P P 13 20 49.9 +0.8
SNR=42
CHMS Chumysh 54.66 305 P P 13 20 50.1 +0.4
SNR=8.9
USP Ospenovka 54.81 305 P P 13 20 51.1 +0.2
SNR=14
AAK Ala-Archa 54.88 305 P P 13 20 51.9 +0.5
SNR=7.6
AAK Ala-Archa 54.88 305 P 13 20 51.6 +0.1
AAK IAmb IAmb 13 20 52.3
comp=Z,17nm,0.5s
AAK Ala-Archa 54.88 305 *i* P P 13 20 51.9 +0.5
SNR=9.9
AAK Ala-Archa 54.88 305 P P 13 20 51.9 +0.5
UCH Uchtor 54.91 304 P P 13 20 53.2 +1.1
SNR=56
EKS2 Erkin-Say 55.41 305 P P 13 20 55.4 +0.3
SNR=22
ARSB Arslanbob 56.16 303 IAmb IAmb 13 21 02.0
comp=Z,62nm,1.2s
D22K Ayikyak River 56.76 24 IAmb IAmb 13 21 06.4
comp=Z,6.2nm,0.5s
BVAR Borovoye Array 56.92 317 P P 13 21 05.2 -0.1
comp=Z,63nm,0.4s,baz=86,slow=6.9,SNR=602
BVAR PcP PcP 13 21 54.0 0.0
comp=Z,12nm,0.6s,baz=93,slow=4.2,SNR=5.7
BVAR ScP ScP 13 25 06.6 -0.9
comp=Z,1.1nm,0.6s,baz=97,slow=4.5,SNR=3.8
comp=Z,63nm,0.4s
BORK Borovoye 56.96 317 P 13 21 05.6 +0.1
NIL Nilore 57.33 294 P 13 21 08.9 +0.4
NIL Nilore 57.33 294 P P 13 21 09.1 +0.7
DRK Karamyk 57.34 301 IAmb IAmb 13 21 10.3
comp=Z,28nm,0.8s
MCK McKinley 57.58 30 P 13 21 10.4 +0.8
KKAR Karatay Array 57.73 306 P 13 21 11.1 +0.1
BTK Batken 57.99 302 IAmb IAmb 13 21 14.0
comp=Z,44nm,1.3s
CMSA Cobar Meteorol 58.52 175 P P 13 21 17.5 +1.2
ILAR Eielson Array 58.53 29 P P 13 21 16.3 +0.3
comp=Z,1.0nm,0.5s,baz=250,slow=5.8,SNR=37
ILAR PcP PcP 13 21 59.6 -0.7
comp=Z,1.1nm,0.6s,baz=265,slow=3.8,SNR=5.7
STKA Stephens Creek 58.64 179 P P 13 21 17.1 -0.1
comp=Z,6.4nm,0.7s,baz=346,slow=10,SNR=10
comp=Z,6.4nm,0.7s
STKA Stephens Creek 58.64 179 P 13 21 17.3 +0.1
STKA IAmb IAmb 13 21 18.2
comp=Z,21nm,0.7s
E25K Arctic Village 59.26 25 IAmb IAmb 13 21 23.7
comp=Z,6.9nm,0.5s
CHGR Chuyangaron 59.51 301 P P 13 21 23.4 +0.2
PALK Pallekele 59.70 262 P P 13 21 24.9 +0.2
F26K Sheenjek River 59.77 25 IAmb IAmb 13 21 27.3
comp=Z,6.6nm,0.5s
SCRK Sand Creek 59.77 30 P 13 21 25.5 +0.9
L26K Log Cabin Wild 60.07 31 P P 13 21 28.2 +1.7
KBL Kabul 60.52 296 P 13 21 29.9 -0.3
KBL Kabul 60.52 296 P P 13 21 30.5 +0.3
SNR=19
SHAA Shahritus 60.54 300 IAmb IAmb 13 21 31.7
comp=Z,93nm,0.8s
BCAR Beaver Creek A 60.78 31 P P 13 21 32.5 +1.3
F28M Old Crow 61.41 25 P 13 21 37.0 +1.8
F28M IAmb IAmb 13 21 38.0
comp=Z,6.8nm,0.7s
EPYK Eagle Plains 62.72 27 IAmb IAmb 13 21 46.3
comp=Z,17nm,0.5s
G30M tAoh Zraii Nji 62.86 26 IAmb IAmb 13 21 46.9
comp=Z,23nm,1.4s
F30M Barrier River 62.97 25 IAmb IAmb 13 21 47.9
comp=Z,13nm,0.6s
ARTI Arti 63.51 322 P 13 21 48.6 -0.4
NWAO Narrogin (SRO) 63.58 202 P P 13 21 50.5 +0.8
G31M Satah River 63.63 26 IAmb IAmb 13 21 51.3
comp=Z,12nm,1.0s
INK Inuvik 63.74 24 P 13 21 50.8 +0.6
INK IAmb IAmb 13 22 24.4
comp=Z,12nm,1.5s
H31M Peel River 63.75 27 IAmb IAmb 13 21 52.7
comp=Z,7.7nm,0.6s
AB31 Akbulak array 63.90 314 P 13 21 51.4 -0.3
ABKAR Akbulak array 63.90 314 P 13 21 51.4 -0.3
A36M Sachs Harbour 65.87 20 IAmb IAmb 13 22 06.2
comp=Z,17nm,0.8s
C36M Paulatuk 66.90 23 IAmb IAmb 13 22 11.6
comp=Z,14nm,1.1s
NGCH Negor - Chabah 69.85 289 P P 13 22 30.0 +1.1
SPB2 Spitsbergen Ar 70.10 350 IAmb IAmb 13 22 30.9
comp=Z,19nm,0.6s
SPITS Spitsbergen Ar 70.10 350 P P 13 22 30.2 +0.8
comp=Z,11nm,0.5s,baz=96,slow=8.5,SNR=87
comp=Z,11nm,0.5s
KBS Kingsbay 70.29 351 *i* P P 13 22 31.7 +1.1
NOR Nord 70.90 357 *i* P P 13 22 34.5 +0.3
NOR IAmb IAmb 13 22 35.7
comp=Z,3.0nm,0.6s
HSPB Hornsund (broa 70.98 349 eP P 13 22 35.4 +0.7
JASK Jask - Hormozg 72.41 290 P P 13 22 45.5 +1.5
RES Resolute Bay 72.47 13 IAmb IAmb 13 22 45.1
comp=Z,7.6nm,0.8s
JLN Jalan Bani Buh 72.50 286 P P 13 22 44.6 0.0
WBK Wadi Bani Khal 72.70 287 P P 13 22 46.2 +0.4
SNR=5.3
HIZ Hauiti 72.83 152 P P 13 22 45.7 -0.3
YKAW3 Yellowknife Wh 72.92 28 IAmb IAmb 13 22 47.5
comp=Z,5.4nm,0.6s
YKA Yellowknife Ar 72.95 28 P P 13 22 47.1 +0.7
comp=Z,5.4nm,0.8s,baz=300,slow=6.4,SNR=67
comp=Z,5.4nm,0.8s
YKA Yellowknife Ar 72.95 28 P P 13 22 46.9 +0.5
ARCES ARCESS Array B 73.00 340 P P 13 22 47.0 +0.4
comp=Z,18nm,0.5s,baz=73,slow=8.5,SNR=128
comp=Z,18nm,0.5s

YKAW1	**Yellowknife Wh**	**73.00**	**28**	IAmb	IAmb	13 22 48.0	
	comp=Z,10nm,0.5s						
BIDO	**Bidbid**	**73.07**	**288**	P	**P**	**13 22 49.0**	**+1.1**
	SNR=5.9						
SMDO	**Samad**	**73.32**	**288**	P	**P**	**13 22 49.7**	**+0.3**
JMDO	**Jabal Madar**	**73.54**	**287**	P	**P**	**13 22 50.5**	**-0.1**
BANOM	**Banah**	**73.69**	**291**	*i* P	**P**	**13 22 52.1**	**+0.7**
	SNR=7.6						
BANOM	**Banah**	**73.69**	**291**	P	**P**	**13 22 52.1**	**+0.7**
HOQ	**Hoqain**	**73.74**	**288**	P	**P**	**13 22 52.0**	**+0.3**
	SNR=5.8						
SHME	**Shamm**	**73.78**	**291**	*i* P	**P**	**13 22 52.9**	**+1.0**
	SNR=15						
SHME	**Shamm**	**73.78**	**291**	P	**P**	**13 22 53.1**	**+1.2**
	SNR=5.1						
MDH	**Madha**	**73.93**	**290**	P	**P**	**13 22 52.9**	**+0.1**
MASF	**Masafi**	**74.02**	**291**	P	**P**	**13 22 53.9**	**+0.6**
MSFE	**Esma-Masafi**	**74.02**	**291**	*i* P	**P**	**13 22 53.8**	**+0.4**
	SNR=7.4						
UOSS	**Minazif**	**74.15**	**290**	P	**P**	**13 22 53.8**	**-0.2**
UOSS				IAmb	IAmb	13 22 55.2	
	comp=Z,12nm,0.8s						
UOSS	**Minazif**	**74.15**	**290**	P	**P**	**13 22 53.8**	**-0.2**
BSY	**Bisya**	**74.16**	**288**	P	**P**	**13 22 54.4**	**+0.2**
SOHO	**SOHO**	**74.18**	**289**	*i* P	**P**	**13 22 54.2**	**0.0**
	SNR=12						
SOHO	**SOHO**	**74.18**	**289**	P	**P**	**13 22 54.5**	**+0.3**
MHTO	**MHTO**	**74.19**	**286**	P	**P**	**13 22 54.1**	**-0.2**
	SNR=6.5						
HATD	**Hatta, Dubai**	**74.25**	**290**	*i* P	**P**	**13 22 55.0**	**+0.4**
	SNR=8.1						
HATD	**Hatta, Dubai**	**74.25**	**290**	P	**P**	**13 22 55.0**	**+0.4**
	SNR=5.7						
ASHO	**Ashiyiah**	**74.37**	**290**	*i* P	**P**	**13 22 55.5**	**+0.2**
	SNR=6.6						
ASHO	**Ashiyiah**	**74.37**	**290**	P	**P**	**13 22 55.6**	**+0.2**
NAZ	**Nazwa, Dubai**	**74.58**	**290**	P	**P**	**13 22 56.5**	**+0.1**
FAQ	**Al Faqa, Dubai**	**74.73**	**290**	P	**P**	**13 22 57.4**	**0.0**
ALNE	**Al Ain**	**74.87**	**289**	P	**P**	**13 22 58.6**	**+0.4**
	SNR=5.7						
ASUD	**Al Ashush, Dub**	**75.00**	**290**	P	**P**	**13 22 59.2**	**+0.4**
TULEG	**Thule**	**75.07**	**7**	IAmb	IAmb	13 22 59.7	
	comp=Z,29nm,0.8s						
TULEG	**Thule**	**75.07**	**7**	*i* P	**P**	**13 22 58.8**	**+0.6**
TULEG				IAmb	IAmb	13 22 59.5	
	comp=Z,27nm,0.7s						
AJN	**Ajban**	**75.31**	**290**	P	**P**	**13 23 00.4**	**-0.2**
NEEM	**North Greenlan**	**75.49**	**3**	*i* P	**P**	**13 23 02.0**	**+1.1**
NEEM				IAmb	IAmb	13 23 02.5	
	comp=Z,36nm,0.7s						
OBN	**Obninsk**	**75.58**	**325**	P	**P**	**13 23 01.0**	**-0.4**
	comp=Z,58nm,1.1s						
DAG	**Danmarks Havn**	**75.58**	**355**	*i* P	**P**	**13 23 01.0**	**-0.1**
DAG				IAmb	IAmb	13 23 02.3	
	comp=Z,5.6nm,0.7s						
UMZA	**Um Al Zommool**	**75.90**	**288**	P	**P**	**13 23 03.6**	**-0.3**
KBZ	**Khabaz**	**76.78**	**312**	P	**P**	**13 23 08.9**	**+0.6**
	comp=Z,50nm,0.8s,baz=111,slow=2.7,SNR=124						
KIV	**Kislovodsk**	**76.83**	**313**	P	**P**	**13 23 08.6**	**-0.1**
KIV	**Kislovodsk**	**76.83**	**313**	P	**P**	**13 23 09.4**	**+0.7**
KIV	**Kislovodsk**	**76.83**	**313**	P	**P**	**13 23 08.8**	**+0.1**
	comp=Z,30nm,0.9s						
JRN	**Qarnain Island**	**76.94**	**291**	P	**P**	**13 23 09.1**	**-0.5**
GNI	**Garni**	**77.02**	**308**	P	**P**	**13 23 10.8**	**+0.8**
MZR	**Muzera**	**77.20**	**289**	*i* P	**P**	**13 23 10.9**	**-0.1**
	SNR=14						
MZR	**Muzera**	**77.20**	**289**	P	**P**	**13 23 11.0**	**0.0**
FINES	**FINESS Array B**	**77.21**	**333**	P	**P**	**13 23 10.1**	**-0.2**
	comp=Z,79nm,0.4s,baz=67,slow=5.0,SNR=836						
FINES	**FINESS Array B**	**77.21**	**333**	P	**P**	**13 23 10.0**	**-0.4**
SHAO	**Shalim**	**77.41**	**284**	P	**P**	**13 23 12.1**	**-0.1**
SHAO	**Shalim**	**77.41**	**284**	P	**P**	**13 23 12.2**	**-0.1**
DBG	**Daneborg**	**78.06**	**355**	*i* P	**P**	**13 23 14.5**	**-0.2**
DBG				IAmb	IAmb	13 23 15.5	
	comp=Z,3.8nm,0.7s						
DMTO	**DMTO**	**78.12**	**284**	P	**P**	**13 23 15.9**	**-0.2**
SHMA	**Al-Shehemyia**	**78.13**	**293**	P	**P**	**13 23 15.5**	**-0.5**
DOK	**Doka**	**78.45**	**285**	P	**P**	**13 23 17.3**	**-0.6**
SMRA	**Abu-Samra**	**78.70**	**292**	P	**P**	**13 23 18.7**	**-0.4**
BLKN	**Baker Lake**	**78.93**	**22**	IAmb	IAmb	13 23 20.8	
	comp=Z,20nm,1.1s						
GEVA	**Gevas**	**78.98**	**307**	IAmb	IAmb	13 23 21.9	
	comp=Z,24nm,1.2s						
ILON	**Igloolik, Nuna**	**79.10**	**14**	IAmb	IAmb	13 23 21.6	
	comp=Z,13nm,0.8s						
GURO	**Guroymak-BITLI**	**79.60**	**308**	IAmb	IAmb	13 23 25.5	
	comp=Z,23nm,0.9s						
ABTO	**Aybut**	**79.70**	**284**	P	**P**	**13 23 24.3**	**-0.3**
UPNV	**Upernavik**	**79.77**	**5**	*i* P	**P**	**13 23 23.0**	**-0.9**
UPNV				IAmb	IAmb	13 23 25.5	
	comp=Z,19nm,1.0s						
KOPT	**Kop Dagi**	**80.01**	**310**	IAmb	IAmb	13 23 28.3	
	comp=Z,31nm,1.3s						
SUMG	**Summit**	**80.61**	**360**	IAmb	IAmb	13 23 33.5	
	comp=Z,9.0nm,0.5s						
SUMG	**Summit**	**80.61**	**360**	*i* P	**P**	**13 23 29.8**	**+1.1**
SUMG				IAmb	IAmb	13 23 30.4	
	comp=Z,17nm,0.4s						
PNTR	**Pine Nut**	**80.64**	**51**	P	**P**	**13 23 29.3**	**-0.1**
NUUG	**Nuugaatsiaq**	**81.20**	**4**	*i* P	**P**	**13 23 31.7**	**+0.3**
NUUG				IAmb	IAmb	13 23 32.5	
	comp=Z,9.4nm,0.9s						
AK03	**Malin Array Si**	**81.62**	**323**	P	**P**	**13 23 33.2**	**-0.7**
AKASG	**Malin Array Be**	**81.63**	**323**	P	**P**	**13 23 33.2**	**-0.7**
	comp=Z,22nm,0.4s,baz=53,slow=5.2,SNR=138						
	comp=Z,22nm,0.4s						
AKASG	**Malin Array Be**	**81.63**	**323**	P	**P**	**13 23 33.3**	**-0.6**
AKBB	**Malin Array Si**	**81.63**	**323**	P	**P**	**13 23 33.1**	**-0.9**
AK01	**Malin Array Si**	**81.64**	**323**	P	**P**	**13 23 33.3**	**-0.7**
KIEV	**Kiev**	**81.64**	**323**	P	**P**	**13 23 33.3**	**-0.7**
KIEV	**Kiev**	**81.64**	**323**	*i* P	**P**	**13 23 33.7**	**-0.4**
	SNR=24						
KIEV	**Kiev**	**81.64**	**323**	P	**P**	**13 23 32.9**	**-1.1**
	comp=Z,356nm,0.7s						
AK09	**Malin Array Si**	**81.64**	**323**	P	**P**	**13 23 33.1**	**-0.9**
AK04	**Malin Array Si**	**81.65**	**323**	P	**P**	**13 23 33.2**	**-0.9**
AK08	**Malin Array Si**	**81.65**	**323**	P	**P**	**13 23 33.2**	**-0.9**
AK23	**Malin Array Si**	**81.65**	**323**	P	**P**	**13 23 33.5**	**-0.6**
AK05	**Malin Array Si**	**81.69**	**323**	P	**P**	**13 23 33.6**	**-0.7**
NVAR	**Mina Array Bea**	**81.84**	**51**	P	**P**	**13 23 36.4**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=302,slow=5.8,SNR=20						
	comp=Z,1.8nm,0.5s						
SCO	**Scoresbysund**	**81.89**	**354**	*i* P	**P**	**13 23 36.0**	**+1.1**
SCO				IAmb	IAmb	13 23 37.2	
	comp=Z,14nm,0.7s						
MI28	**Mi28,Pidlybu**	**82.33**	**324**	P	**P**	**13 23 35.9**	**-1.6**
FFC	**Flin Flon**	**82.63**	**31**		**P**	**13 23 39.8**	**+0.8**
HFS	**Hagfors**	**82.77**	**336**	P	**P**	**13 23 38.4**	**-1.2**
	comp=Z,25nm,0.4s,baz=73,slow=4.8,SNR=260						
	comp=Z,25nm,0.4s						
LUBAR	**Lubar, Ukraine**	**82.84**	**323**	P	**P**	**13 23 39.7**	**-0.5**
RNPP9	**Sopachiv**	**82.98**	**325**	P	**P**	**13 23 39.9**	**-0.9**
NB2	**NORSAR Subarra**	**83.00**	**338**	P	**P**	**13 23 40.2**	**-0.6**
	comp=Z,19nm,0.5s,baz=48,slow=4.6						
NB2	**NORSAR Subarra**	**83.00**	**338**	P	**P**	**13 23 40.2**	**-0.6**
NB2				AMP		13 23 40.2	
	comp=Z,19nm,0.5s						
NOA	**NORSAR Array B**	**83.00**	**338**	P	**P**	**13 23 40.0**	**-0.8**
	comp=Z,24nm,0.4s,baz=45,slow=4.8,SNR=101						
NOA				PP	**PP**	**13 26 59.1**	**0.0**
	comp=Z,2.1nm,0.9s,baz=46,slow=8.2,SNR=4.0						
	comp=Z,24nm,0.4s						
RNPP8	**Varash**	**83.04**	**325**	P	**P**	**13 23 40.3**	**-0.8**
RNPP5	**Staryi Chortor**	**83.09**	**325**	P	**P**	**13 23 40.5**	**-0.9**
NC602	**NORSAR Array S**	**83.10**	**337**	IAmb	IAmb	13 23 40.8	
	comp=Z,28nm,1.1s						
YHL	**Hebgen Lake**	**83.29**	**43**	IAmb	IAmb	13 23 46.7	
	comp=Z,15nm,1.5s						
FCC	**Fort Churchill**	**83.35**	**25**	IAmb	IAmb	13 23 43.6	
	comp=Z,6.9nm,0.9s						
GDH	**Godhavn**	**83.42**	**5**	*i* P	**P**	**13 23 43.0**	**+0.3**
GDH				IAmb	IAmb	13 23 44.1	
	comp=Z,17nm,1.1s						
YMR	**Madison River**	**83.52**	**43**	IAmb	IAmb	13 23 47.3	
	comp=Z,8.3nm,0.8s						
RAYN	**Ar Rayn**	**83.61**	**293**	P	**P**	**13 23 44.6**	**-0.1**
RAYN	**Ar Rayn**	**83.61**	**293**	*i* P	**P**	**13 23 45.1**	**+0.5**
	SNR=41						
RAYN	**Ar Rayn**	**83.61**	**293**	P	**P**	**13 23 45.2**	**+0.5**
GAZ	**Gaziantep**	**83.62**	**308**	IAmb	IAmb	13 23 46.1	
	comp=Z,15nm,0.7s						
ILULI	**Ilulissat**	**83.63**	**4**	*i* P	**P**	**13 23 44.1**	**+0.4**
ILULI				IAmb	IAmb	13 23 44.9	
	comp=Z,12nm,0.4s						
BNN	**Bunyan**	**83.73**	**310**	IAmb	IAmb	13 23 45.6	
	comp=Z,8.9nm,0.7s						
H17A	**Grant Village**	**83.90**	**43**	IAmb	IAmb	13 23 50.5	
	comp=Z,16nm,1.4s						
KMPD	**K-Podol'skiy**	**84.31**	**322**	P	**P**	**13 23 45.9**	**-1.6**
KMPD				P	**P**	**13 23 46.2**	**-1.3**
STRU	**Stroemstad**	**84.45**	**336**	*i* P	**P**	**13 23 47.0**	**-0.9**
BLEU	**Blekinge**	**84.57**	**333**	*i* P	**P**	**13 23 46.6**	**-2.0**
BR131	**Keskin Array S**	**84.77**	**312**	IAmb	IAmb	13 23 52.5	
	comp=Z,9.7nm,0.9s						
BR131	**Keskin Array S**	**84.77**	**312**	P	**P**	**13 23 49.6**	**-0.6**
BRTR	**Keskin Array B**	**84.77**	**312**	P	**P**	**13 23 49.5**	**-0.7**
	comp=Z,7.0nm,0.6s,baz=82,slow=3.1,SNR=27						
	comp=Z,7.0nm,0.6s						
BRTR	**Keskin Array B**	**84.77**	**312**		**P**	**13 23 49.2**	**-0.9**
BORU	**Boraas**	**84.86**	**335**	*i* P	**P**	**13 23 49.6**	**-0.4**
TLCR		**84.88**	**319**	⇑P	**P**	**13 23 48.6**	**-1.8**
KIRS	**Kirsehir-Merke**	**84.89**	**311**	⇑P	**P**	**13 23 50.4**	**-0.3**
TJOU	**Tjoern**	**85.01**	**335**	*i* P	**P**	**13 23 49.6**	**-1.1**
DEL	**Delary**	**85.25**	**333**	*i* P	**P**	**13 23 50.7**	**-1.2**
BEL	**Belsk**	**85.26**	**327**	*e*P	**P**	**13 23 51.9**	**-0.2**
CFR	**Carcaliu**	**85.28**	**319**	⇑P	**P**	**13 23 51.4**	**-0.9**
TPGR	**Topolog**	**85.30**	**319**	⇑P	**P**	**13 23 50.7**	**-1.8**
FABU	**Falkenberg**	**85.33**	**334**	*i* P	**P**	**13 23 51.4**	**-0.9**
ONAU	**Onsala**	**85.36**	**335**	*i* P	**P**	**13 23 51.4**	**-1.0**
TESR	**Tescani**	**85.39**	**321**	⇓P	**P**	**13 23 52.1**	**-0.7**
PDAR	**Pinedale Array**	**85.40**	**44**	P	**P**	**13 23 53.5**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=286,slow=5.1,SNR=9.6						
	comp=Z,0.9nm,0.6s						
PMD	**Palm Desert**	**85.51**	**55**	IAmb	IAmb	13 23 55.9	
	comp=Z,5.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**85.54**	**322**	IAmb	IAmb	13 23 54.4	
	comp=Z,11nm,0.7s						
BURAR	**Bucovina Array**	**85.54**	**322**	⇑P	**P**	**13 23 53.5**	**-0.1**
BURAR	**Bucovina Array**	**85.54**	**322**	P	**P**	**13 23 53.6**	**-0.1**
BURAR				IAmb	IAmb	13 23 54.7	
	comp=Z,16nm,0.7s						
VRI	**Vrincioaia**	**85.71**	**320**	⇑P	**P**	**13 23 51.4**	**-3.1**
DANC	**Danby, Needles**	**85.74**	**53**	IAmb	IAmb	13 23 57.6	
	comp=Z,5.5nm,0.9s						
BSD	**Bornholm Skovb**	**85.76**	**332**	*i* P	**P**	**13 23 53.4**	**-1.0**
BSD				IAmb	IAmb	13 23 53.7	
	comp=Z,10nm,0.7s						
PLOR	**Plostina**	**85.77**	**320**	⇑P	**P**	**13 23 50.5**	**-4.3**
SFJD	**Kangerlussuaq**	**85.86**	**4**	P	**P**	**13 23 54.9**	**+0.3**
	comp=Z,18nm,0.6s,baz=349,slow=4.1,SNR=17						
	comp=Z,18nm,0.6s						
SFJD	**Kangerlussuaq**	**85.86**	**4**	P	**P**	**13 23 54.9**	**+0.3**
SFJD	**Kangerlussuaq**	**85.86**	**4**	*i* P	**P**	**13 23 55.0**	**+0.3**
SFJD				IAmb	IAmb	13 23 55.5	
	comp=Z,22nm,0.7s						
STHS	**Stebnicka Huta**	**86.55**	**325**	*e*P	**P**	**13 23 57.2**	**-1.2**
BERU	**Beregovo**	**86.56**	**324**	P	**P**	**13 23 58.0**	**-0.4**
FRB	**Frobisher Bay**	**86.66**	**12**	P	**P**	**13 23 58.4**	**-0.2**
	comp=Z,4.0nm,0.4s,baz=330,slow=5.0,SNR=21						
	comp=Z,4.0nm,0.4s						
VOIR	**Voir**	**86.92**	**320**	⇑P	**P**	**13 23 59.1**	**-1.2**
MMAI	**Mount Meron Ar**	**86.96**	**306**	P	**P**	**13 24 00.2**	**-0.5**
	comp=Z,5.5nm,0.6s,baz=34,slow=12,SNR=7.3						
	comp=Z,5.5nm,0.6s						
ARR	**Arges**	**87.20**	**320**	⇑P	**P**	**13 24 02.1**	**+0.5**
MARR	**Marisel-Cluj**	**87.25**	**322**	⇑P	**P**	**13 24 01.9**	**0.0**
DRGR		**87.41**	**322**	⇑P	**P**	**13 24 02.4**	**-0.1**
LANS	**Liptovska Anna**	**87.62**	**326**	*e*P	**P**	**13 24 04.1**	**+0.6**
LOT	**Lotru**	**87.64**	**321**	⇓P	**P**	**13 24 03.1**	**-0.6**
OKC	**Ostrava-Krasne**	**87.83**	**327**	*e*P	**P**	**13 24 04.3**	**-0.1**
STEB	**Steborice**	**87.95**	**327**	*e*P	**P**	**13 24 04.8**	**-0.1**
MORC	**Moravsky Berou**	**88.17**	**327**	⇑P	**P**	**13 24 05.2**	**-0.8**
MORC	**Moravsky Berou**	**88.17**	**327**	IAmb	IAmb	13 24 06.5	
	comp=Z,10nm,0.8s						
MORC	**Moravsky Berou**	**88.17**	**327**	*e*P	**P**	**13 24 05.8**	**-0.2**
PSZ	**Piszkesteto**	**88.19**	**325**	⇓P	**P**	**13 24 06.2**	**0.0**
PV19	**Morning Glory**	**88.20**	**47**	IAmb	IAmb	13 24 08.9	
	comp=Z,6.3nm,0.7s						
GZR	**Gura Zlata**	**88.22**	**321**	⇑P	**P**	**13 24 06.1**	**-0.3**
PV16	**Nyswonger Mesa**	**88.25**	**47**	P	**P**	**13 24 07.0**	**+0.1**
PV16				IAmb	IAmb	13 24 09.1	
	comp=Z,4.3nm,0.7s						
PV18	**Skein Mesa, Pa**	**88.28**	**47**	IAmb	IAmb	13 24 10.3	
	comp=Z,12nm,1.3s						
CHVC	**Chvalec**	**88.33**	**328**	*e*P	**P**	**13 24 06.7**	**0.0**
ULM	**Lac du Bonnet**	**88.37**	**32**	P	**P**	**13 24 07.4**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=278,slow=4.7,SNR=4.1						
	comp=Z,1.9nm,0.6s						
DPC	**Dobruska-Polom**	**88.37**	**328**	*e*P	**P**	**13 24 07.1**	**+0.2**
PV13	**Radium Mtn., P**	**88.39**	**47**	IAmb	IAmb	13 24 09.2	
	comp=Z,4.5nm,0.7s						
JAVC	**Velka Javorina**	**88.71**	**326**	*e*P	**P**	**13 24 09.4**	**+0.8**
BZS	**Buzias**	**88.73**	**322**	⇑P	**P**	**13 24 08.0**	**-0.6**
VRAC	**Vranov**	**88.94**	**327**	⇓P	**P**	**13 24 09.6**	**0.0**
VRAC	**Vranov**	**88.94**	**327**	*e*P	**P**	**13 24 09.6**	**0.0**
PVCC	**Pansia Ves**	**89.07**	**329**	*e*P	**P**	**13 24 10.1**	**0.0**
BRG	**Berggiesshubel**	**89.12**	**329**	*i* P	**P**	**13 24 10.0**	**-0.3**
BRG				Amp		13 24 10.8	
	comp=Z,10nm,0.9s						
MDVR	**Moldovita**	**89.19**	**321**	⇑P	**P**	**13 24 10.5**	**-0.4**
KRUC	**Moravsky**	**89.20**	**327**	*e*P	**P**	**13 24 10.6**	**-0.2**
MODS	**Modra-Piesok**	**89.23**	**326**	*e*P	**P**	**13 24 11.6**	**+0.7**
CLL	**Collm**	**89.23**	**330**	IAmb	IAmb	13 24 11.0	
	comp=Z,16nm,1.1s						
CLL	**Collm**	**89.23**	**330**	*i* P	**P**	**13 24 09.8**	**-1.1**
	comp=Z,16nm,1.2s						
PRU	**Pruhonice**	**89.45**	**328**	*e*P	**P**	**13 24 11.7**	**-0.2**
TREC	**Trest**	**89.48**	**327**	*e*P	**P**	**13 24 12.0**	**-0.1**
HSKC	**Hora Svate Kat**	**89.53**	**329**	*e*P	**P**	**13 24 11.9**	**-0.4**
MORH	**Mrgy, Hungar**	**89.95**	**324**	⇑P	**P**	**13 24 13.8**	**-0.5**
ZVC	**Zvikov**	**90.00**	**328**	*e*P	**P**	**13 24 14.4**	**-0.1**
RONA	**Rosalia, Austr**	**90.17**	**326**	*i* PcP	**P**	**13 24 15.2**	**-0.1**
	comp=Z,10nm,0.7s						
CONA	**Conrad Observa**	**90.23**	**326**	*i* PcP	**P**	**13 24 15.7**	**0.0**
	comp=Z,12nm,0.7s,SNR=6.5						
KHC	**Kasperske Hory**	**90.50**	**328**	*e*P	**P**	**13 24 16.6**	**-0.3**
GEC2	**GERESS Array S**	**90.64**	**328**	IAmb	IAmb	13 24 17.7	
	comp=Z,13nm,0.9s						
GERES	**GERESS Array B**	**90.64**	**328**	P	**P**	**13 24 16.6**	**-1.0**
	comp=Z,8.0nm,0.7s,baz=46,slow=5.8,SNR=36						
	comp=Z,8.0nm,0.7s						
SDCO	**Great Sand Dun**	**90.79**	**46**	IAmb	IAmb	13 24 21.2	
	comp=Z,5.1nm,1.1s						
ARSA	**Arzberg**	**90.86**	**326**	IAmb	IAmb	13 24 18.7	
	comp=Z,8.7nm,0.8s						
ARSA	**Arzberg**	**90.86**	**326**	*e*PcP	**P**	**13 24 18.2**	**-0.3**
	comp=Z,13nm,1.1s						
MOA	**Molln**	**91.07**	**327**	*i* PcP	**P**	**13 24 19.2**	**-0.3**
	comp=Z,7.8nm,0.6s						
BIOA	**Bad Ischl, Aus**	**91.48**	**327**	*i* PcP	**P**	**13 24 20.9**	**-0.5**
	comp=Z,15nm,1.0s						
PERS	**Pernice**	**91.48**	**326**	*i* P	**P**	**13 24 20.7**	**-0.8**
SOKA	**Soboth**	**91.50**	**326**	*i* PcP	**P**	**13 24 20.9**	**-0.6**
	comp=Z,16nm,0.9s,SNR=8.1						
ANMO	**Albuquerque**	**91.77**	**49**	IAmb	IAmb	13 24 25.9	
	comp=Z,3.2nm,0.7s						
OBKA	**Obir**	**91.85**	**326**	*i* P	**P**	**13 24 22.2**	**-1.0**
	comp=Z,6.7nm,0.5s						
CRES	**Cresnjevec Ost**	**91.86**	**325**	*i* P	**P**	**13 24 22.4**	**-0.7**
PDKS	**Podkum**	**91.94**	**325**	*i* P	**P**	**13 24 22.8**	**-0.8**
KBA	**Koelnbreinsper**	**92.05**	**327**	*i* P	**P**	**13 24 23.1**	**-1.2**
	comp=Z,10nm,0.6s						
LESA	**Schwarzleotal**	**92.13**	**327**	*i* PcP	**P**	**13 24 23.7**	**-0.7**
	comp=Z,13nm,0.5s,SNR=6.5						
EKA	**Eskdalemuir Ar**	**92.16**	**340**	P	**P**	**13 24 23.5**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=25,slow=4.9,SNR=10						
	comp=Z,1.1nm,0.4s						
MYKA	**Terra Mystica**	**92.22**	**326**	*i* P	**P**	**13 24 23.6**	**-1.3**
	comp=Z,9.6nm,0.5s						
JAVS	**Javornik**	**92.52**	**326**	*i* P	**P**	**13 24 24.9**	**-1.4**
ABTA	**Abfaltersbach**	**92.69**	**327**	*i* P	**P**	**13 24 25.4**	**-1.7**
	comp=Z,14nm,0.6s,SNR=6.2						
WTTA	**Wattenberg**	**92.74**	**328**	*i* P	**P**	**13 24 26.4**	**-1.0**
	comp=Z,6.5nm,0.6s						
MOTA	**Moosalm**	**92.94**	**328**	*e*PcP	**P**	**13 24 27.3**	**-0.9**
	comp=Z,5.7nm,0.6s						
SQTA	**Sankt Quirin**	**92.98**	**328**	*i* P	**P**	**13 24 27.4**	**-1.0**
	comp=Z,6.9nm,0.6s						
RETA	**Reutte**	**92.99**	**328**	*i* PcP	**P**	**13 24 27.7**	**-0.7**
	comp=Z,5.1nm,0.7s						
FETA	**Feichten**	**93.35**	**328**	*i* PcP	**P**	**13 24 29.3**	**-0.8**
	comp=Z,6.9nm,0.7s						
BFO	**Black Forest**	**93.48**	**330**		**P**	**13 24 29.5**	**-1.0**
DAVA	**Damuels**	**93.55**	**329**	*i* PcP	**P**	**13 24 30.3**	**-0.8**
	comp=Z,12nm,0.8s						
TUE	**Stuetta**	**94.40**	**328**	IAmb	IAmb	13 24 40.2	
	comp=Z,4.2nm,0.7s						
NRCA	**Norcia**	**95.14**	**324**	IAmb	IAmb	13 24 38.8	
	comp=Z,6.5nm,0.7s						
CAMP	**Campotosto**	**95.20**	**324**	IAmb	IAmb	13 24 38.9	
	comp=Z,7.6nm,0.8s						
TX31	**Lajitas Ar. Si**	**96.95**	**52**	IAmb	IAmb	13 24 52.3	
	comp=Z,2.3nm,1.4s						
TXAR	**Lajitas Array**	**96.95**	**52**	P	**P**	**13 24 48.3**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=313,slow=2.4,SNR=14						
	comp=Z,0.8nm,0.6s						
ESDC	**Sonseca Array**	**105.70**	**332**	PP	**PP**	**13 29 55.8**	**+2.2**
	comp=Z,1.4nm,0.9s,baz=22,slow=7.2,SNR=6.5						
QSPA	**South Pole Qui**	**116.85**	**180**	PKP	**PKiKP**	**13 29 55.8**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=262,slow=2.1,SNR=4.0						
KHWEE	**KHWEE**	**121.07**	**260**		**PKiKP**	**13 30 05.3**	**+0.1**
BOSA	**Boshof**	**123.20**	**252**	PKP	**PKiKP**	**13 30 09.3**	**0.0**
	comp=Z,2.1nm,0.6s,baz=28,slow=3.2,SNR=5.4						
TORD	**Torodi Ar. Bea**	**123.31**	**310**	PKP	**PKPdf**	**13 30 08.9**	**-0.6**
	comp=Z,4.7nm,0.7s,baz=40,slow=3.7,SNR=25						
SNAA	**Sanae**	**130.94**	**195**	PKP	**PKPdf**	**13 30 22.6**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=219,slow=0.8,SNR=4.1						
SNAA				SKPbc	**SKPbc**	**13 33 01.5**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=128,slow=5.0,SNR=7.5						
DBIC	**Dimbokro**	**132.43**	**310**	PKP	**PKPdf**	**13 30 27.4**	**+0.4**
	comp=Z,7.2nm,0.8s,baz=60,slow=2.7,SNR=8.6						
DBIC				SKPbc	**SKPbc**	**13 33 08.9**	**+0.1**
	comp=Z,5.8nm,0.9s,baz=53,slow=5.1,SNR=4.3						
SDV	**Santo Domingo**	**133.34**	**44**		**PKPdf**	**13 30 28.9**	**+0.1**
BOAV	**Boa Vista**	**144.48**	**38**		PKPbc	13 30 48.6	0.0
LL02	**Futaleuf**	**149.42**	**130**		**PKiKP**	**13 31 02.2**	**+0.1**
PLCA	**Paso Flores**	**151.16**	**126**	PKPbc	**PKiKP**	**13 31 06.3**	**+0.5**
	comp=Z,14nm,0.6s,baz=244,slow=3.1,SNR=63						
PLCA	**Paso Flores**	**151.16**	**126**		**PKiKP**	**13 31 06.9**	**+1.1**
LPAZ	**La Paz**	**151.55**	**74**	PKPbc	**PKiKP**	**13 31 08.8**	**+0.8**
	comp=Z,15nm,0.7s,baz=292,slow=2.1,SNR=5.1						
BI02	**San Fabin de**	**151.64**	**118**		**PKiKP**	**13 31 07.7**	**+0.7**
PB14	**IPOC Station P**	**152.29**	**92**		**PKiKP**	**13 31 09.9**	**+1.0**
BO02	**Sierra Bellavi**	**152.33**	**114**		**PKiKP**	**13 31 09.3**	**+0.9**
LCO	**Las Campanas**	**152.61**	**101**		**PKiKP**	**13 31 09.5**	**+0.1**
AC05	**El Transito**	**152.97**	**101**		**PKiKP**	**13 31 11.2**	**+1.2**
GO02	**Mina Guanaco**	**153.12**	**93**		**PKiKP**	**13 31 10.8**	**+0.2**
CPUP	**Villa Florida**	**164.23**	**91**	PKP	**PKPdf**	**13 31 16.4**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=304,slow=3.6,SNR=3.1						
CPUP				PKPab	**PKPab**	**13 32 11.2**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=14,slow=4.2,SNR=3.0						

DNK 24 13:29:43.1±0.5, 57.38N×15.08E, *h*0km, ML1.5(UPP), 2C, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKSU	**Eksjoe**	**0.23**	**32**	⇑P		Pg	13 29 47.1	-0.4
EKSU				S		Sg	13 29 50.2	-0.2
VXJU	**Vaexsjoe**	**0.47**	**189**	⇑P		Pg	13 29 51.7	-0.3
OSKU	**Oskarshamn**	**0.58**	**108**	P		Pg	13 29 53.7	-0.6
VSTU	**Vaestervik**	**0.83**	**70**	P		Pg	13 29 58.4	-0.7
VSTU			

ARA0				Sn	Sn	13 52 19.2	-9.5	

*IDC **24** 13:50:14.8±1.7, 13°.74S×167°.28E, h0km, mb3.8/3, mbtmp3.7/4, ML3.0/1, MS3.2/2, Error ellipse: s-maj=61.9km s-min=31.8km az=118.0*
*NEIC **24** 13:50:19.9±0.9, 13°.84S±0°.08×167°.3E±0°.2, h35km±2km, mb4.3/5, Error ellipse: s-maj=35.2km s-min=13.1km az=93.0*
ISC 24 13:50:20.0±0.7, **13°.89S**±0°.07×**167°.3E**±0°.1, **h35**km, **n15**, σ1§**28**/**17**, **mb3.9**/**4**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.55**	**183**		**Pn**	**13 50 45.9**	**+0.8**
SANVU				Sn	**Sn**	**13 51 05.1**	**+1.2**
DZM	**Mont Dzumac**	**8.17**	**185**	Pn	**Pn**	**13 52 16.3**	**+0.1**
	0.2nm,0.3s,baz=293,slow=18,SNR=13						
DZM				Sn	**Sn**	**13 53 47.4**	**0.0**
	0.1nm,0.3s,baz=131,slow=22,SNR=0.9						
DZM				LR	LR	13 55 15.1	
	comp=Z,172nm,19.6s,baz=59,slow=36 3.0nm,0.7s						
DZM	**Mont Dzumac**	**8.17**	**185**		**Pn**	**13 52 17.2**	**+1.0**
DZM					**Sn**	**13 53 46.9**	**-0.5**
FUNA	**Funafuti**	**12.85**	**67**	Pn	**Pn**	**13 53 21.4**	**+1.2**
RABL	**Rabaul**	**17.75**	**301**	P	**P**	**13 54 27.5**	**+2.4**
RABL				IAmb	IAmb	13 55 02.1	
	comp=Z,11nm,0.6s						
RAO	**Raoul Island**	**20.54**	**140**	P	**P**	**13 54 54.3**	**-1.1**
AS31	**Alice Springs**	**32.98**	**248**	P	**P**	**13 56 51.7**	**-0.2**
ASAR	**Alice Springs**	**32.98**	**248**	P	**P**	**13 56 53.0**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=77,slow=9.8,SNR=6.4 comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**32.98**	**248**	P	**P**	**13 56 51.2**	**-0.7**
ASAJ	**Asahikawa**	**61.96**	**340**	LR	LR	14 23 41.4	
	comp=Z,21nm,19.5s,baz=115,slow=32						
QSPA	**South Pole Qui**	**76.13**	**180**	P	**P**	**14 02 03.2**	**-0.9**
QSPA				IAmb	IAmb	14 02 10.7	
	comp=Z,6.5nm,1.5s						
YAK	**Yakutsk**	**81.24**	**343**	P	**P**	**14 02 31.6**	**-0.3**
ILAR	**Eielson Array**	**85.73**	**18**	P	**P**	**14 02 55.3**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=238,slow=4.8,SNR=19 comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**96.61**	**316**	P	**P**	**14 03 44.2**	**-2.1**
	comp=Z,0.3nm,0.8s,baz=101,slow=6.0,SNR=2.0 comp=Z,0.3nm,0.8s						
MKAR	**Makanchi Array**	**96.61**	**316**	P	**P**	**14 03 44.5**	**-1.9**

*MEX **24** 14:16:38.2±0.7, 13°.70N×92°.95W, h10km, MD4.3*
*GCG **24** 14:16:39.2±0.5, 13°.92N×92°.75W, h11km±32km, MD4.0, Presumed earthquake*
*IDC **24** 14:16:47.8±3.3, 15°.40N×92°.27W, h0km, mb3.6/2, mbtmp3.4/3, ML3.1/2, MS2.2/1, Error ellipse: s-maj=108.5km s-min=23.9km az=29.0*
ISC 24 14:16:37.5±2.9, **13°.84N**±0°.08×**92°.85W**±0°.04, **h5**km±16km, **n26**, σ2§**56**/**38**, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.21**	**28**	*eS*	**Sg**	**14 17 16.2**	**-0.1**
PATR	**El Naranjo**	**1.41**	**25**	*eP*	**Pn**	**14 17 02.3**	**-1.8**
PATR				*eS*	**Sg**	**14 17 22.7**	**-0.1**
CHUJ	**Union Juarez**	**1.44**	**30**	*eP*	**Pn**	**14 17 02.9**	**-1.6**
CHUJ				*eS*	**Sg**	**14 17 22.9**	**-1.0**
PAVE	**Pavencul**	**1.50**	**26**	*eP*	**Sn**	**14 17 04.3**	**-1.0**
PAVE				*eS*	**Sn**	**14 17 25.2**	**-0.2**
STG2	**El Palmar, Qui**	**1.55**	**67**	*i* P	**Sn**	**14 17 03.6**	**-2.3**
STG2				*i* S	**Sn**	**14 17 22.5**	**-4.1**
STG5	**El Palmar, Qui**	**1.56**	**69**	*i* P	**Pn**	**14 17 03.6**	**-2.4**
STG8	**El Palmar, Qui**	**1.58**	**67**	*i* P	**Pn**	**14 17 04.3**	**-2.1**
PCIG		**1.89**	**349**	*eP*	**Pn**	**14 17 09.3**	**-1.2**
PCIG				*eS*	**Sn**	**14 17 31.8**	**-3.0**
CCIG	**Comitan**	**2.53**	**16**	*eP*	**Pn**	**14 17 19.4**	**0.0**
CCIG				*eS*	**Sb**	**14 17 55.5**	**+0.5**
CCIG	**Comitan**	**2.53**	**16**	*i* P	**Pn**	**14 17 19.0**	**-0.4**
APG	**El Apazote**	**2.58**	**63**	Pn	**Pn**	**14 17 20.1**	**-0.1**
	0.2nm,0.3s,baz=201,slow=14,SNR=20						
APG	**El Apazote**	**2.58**	**63**	*i* P	**Pn**	**14 17 19.5**	**-0.7**
TGIG		**2.94**	**355**	*eP*	**Pn**	**14 17 24.4**	**-0.6**
TGIG				*eS*	**Sn**	**14 17 58.6**	**-2.1**
UXUV	**UXUV**	**3.68**	**340**	*eP*	**Pn**	**14 17 35.0**	**-0.1**
UXUV				*eS*	**Sn**	**14 18 18.9**	**-0.1**
HUIG	**Huatulco**	**3.69**	**302**	*eP*	**Pn**	**14 17 33.9**	**-1.4**
HUIG				*eS*	Sn	14 18 10.4	-8.9
CMIG	**Matias Romero**	**3.79**	**329**	Pn	**Pn**	**14 17 36.4**	**-0.2**
	0.8nm,0.3s,baz=145,slow=12,SNR=8.6						
CMIG				Sn	Sn	14 18 13.3	-8.3
	2.1nm,0.3s,baz=109,slow=15,SNR=5.6						
CMIG				LR	LR	14 18 36.2	
	comp=Z,39nm,18.6s,baz=166,slow=36						
CMIG	**Matias Romero**	**3.79**	**329**	*eP*	**Pn**	**14 17 36.4**	**-0.2**
CMIG				*eS*	**Sn**	**14 18 16.7**	**-4.9**
NEUV	**Arroyo Zacate**	**4.79**	**324**	*eP*	**Pn**	**14 17 50.3**	**-0.1**
NEUV				*eS*	**Sn**	**14 18 45.7**	**-0.7**
YOIG	**Yosondua**	**5.44**	**304**	*eP*	**Pn**	**14 17 59.2**	**-0.3**
PNIG	**Pinotepa**	**5.70**	**297**	*eP*	**Pn**	**14 18 02.3**	**-0.6**
PNIG				*eS*	**Sn**	**14 19 00.1**	**-8.7**
TXIG	**Tlaxiaco**	**5.83**	**306**	*eP*	**Pn**	**14 18 06.8**	**+1.8**
TOIG	**Toxpalan**	**5.86**	**317**	*eP*	**Pn**	**14 18 05.7**	**+0.4**
TOIG				*eS*	**Sn**	**14 19 07.4**	**-5.6**
TXAR	**Lajitas Array**	**18.39**	**329**	P	**P**	**14 20 54.2**	**+0.6**
	baz=143,slow=13,SNR=2.5 0.3nm,0.8s						
YKA	**Yellowknife Ar**	**51.00**	**347**	P	**P**	**14 25 40.5**	**+0.4**
	1.4nm,1.0s,baz=152,slow=7.1,SNR=12 1.4nm,1.0s						
ILAR	**Eielson Array**	**62.67**	**337**	P	**P**	**14 27 05.4**	**+2.4**
	0.5nm,0.9s,baz=109,slow=5.8,SNR=4.8 0.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**145.87**	**340**	PKP	**PKiKP**	**14 36 27.4**	**+4.9**
	0.5nm,0.7s,baz=16,slow=3.1,SNR=4.5						

*NEIC **24** 14:43:09.8±0.9, 55°.28N±0°.08×162°.0W±0°.1, h111km±3km, mb3.8/5, ML3.3/29, ML3.2(AEIC), Error ellipse: s-maj=11.6km s-min=7.8km az=156.0*
*AEIC **24** 14:43:10.8±1.8, 55°.22N±0°.06×162°.01W±0°.08, h109km±4km, Error ellipse: s-maj=8.7km s-min=6.9km az=189.0*
*IDC **24** 14:43:12.6±7.3, 55°.67N×161°.80W, h104km±50km, mb3.0/2, mbtmp3.4/5, MS2.9/1, Error ellipse: s-maj=55.7km s-min=43.2km az=63.0*
ISC 24 14:43:10.0±0.8, **55°.29N**±0°.07×**161°.99W**±0°.05, **h111**km±7km, **n79**, σ1§**08**/82, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAG	**Hague Volcano**	**0.06**	**64**		**Pn**	**14 43 25.6**	**+0.3**
PS4A	**Pavlof South-4**	**0.09**	**55**		**Pn**	**14 43 25.1**	**-0.2**
PS4A					**Sn**	**14 43 37.0**	**+0.2**
PN7A	**Pavlof North-7**	**0.14**	**358**		**Pn**	**14 43 25.3**	**-0.2**
PVV	**Pavlof Volcano**	**0.14**	**55**		**Pn**	**14 43 25.1**	**-0.2**
DOL	**Dolgoi Island**	**0.16**	**153**		**Pn**	**14 43 25.0**	**-0.5**
DOL					**Sn**	**14 43 36.5**	**-0.5**
PS1A	**Pavlof South-1**	**0.19**	**48**		**Pn**	**14 43 25.3**	**-0.2**
DTNA	**Dutton South F**	**0.21**	**226**		**Pn**	**14 43 25.2**	**-0.4**
DT1	**Dutton Round H**	**0.25**	**222**		**Pn**	**14 43 25.0**	**-0.7**
DT1					**Sn**	**14 43 37.8**	**+0.4**
SDPT	**Sand Point**	**0.87**	**86**		**Pn**	**14 43 30.0**	**+0.1**
SDPT				IAML		14 43 45.6	
	comp=E,885nm,1.0s						
SDPT				IAML		14 43 46.7	
	comp=N,735nm,0.3s						
SDPT	**Sand Point**	**0.87**	**86**		**Sn**	**14 43 45.4**	**+0.5**
FALS	**False Pass**	**0.93**	**243**	Pn	**Pn**	**14 43 29.5**	**-1.0**
ISNN	**Isanotski Nort**	**1.13**	**247**		**Pn**	**14 43 32.2**	**-0.4**
SSLN	**Shishaldin Nor**	**1.25**	**248**		**Pn**	**14 43 33.7**	**-0.3**
SSLN					**Sn**	**14 43 51.6**	**-0.5**
SSBA	**Shishaldin**	**1.33**	**248**		**Pn**	**14 43 34.1**	**-0.8**
CNBA	**Chernabura Isl**	**1.46**	**108**		**Pn**	**14 43 36.2**	**-0.2**
CNBA				IAML		14 44 00.5	
	comp=N,322nm,0.8s						
CNBA				IAML		14 44 00.9	
	comp=E,376nm,0.6s						
CNBA	**Chernabura Isl**	**1.46**	**108**		**Sn**	**14 43 57.0**	**+0.7**
VNSW	**Veniaminof 7**	**1.58**	**59**		**Pn**	**14 43 38.9**	**+1.0**
VNSS	**Veniaminof 8**	**1.71**	**56**		**Pn**	**14 43 40.7**	**+1.1**
VNHG	**Veniaminof 1**	**1.85**	**59**		**Pn**	**14 43 42.1**	**+0.9**
AHB	**Akutan Harbor**	**2.51**	**244**		**Pn**	**14 43 49.7**	**+0.1**
LVA	**Lava Point**	**2.60**	**246**	Pn	**Pn**	**14 43 50.7**	**-0.1**
LVA				IAML		14 45 00.5	
	comp=E,161nm,1.1s						
UNV	**Unalaska Valle**	**3.00**	**243**		**Sn**	**14 44 30.5**	**-0.9**
UNV	**Unalaska Valle**	**3.00**	**243**	Pn	**Pn**	**14 43 55.9**	**-0.1**
UNV				IAML		14 44 33.0	
	comp=E,92nm,0.5s						
UNV				IAML		14 44 40.6	
	comp=N,97nm,1.2s						
CHIR	**Chirikof Islan**	**3.66**	**79**	Pn	**Pn**	**14 44 04.8**	**+0.2**
PLK1	**Peulik 1**	**3.90**	**48**		**Pn**	**14 44 07.8**	**-0.1**
PLK4	**Peulik 4**	**3.91**	**51**	Pn	**Pn**	**14 44 07.0**	**-1.1**
PLK4				IAML		14 45 08.1	
	comp=N,72nm,0.6s						
PLK4				IAML		14 45 11.2	
	comp=E,92nm,0.7s						
O14K	**Tigyukauivet M**	**3.99**	**5**		**Pn**	**14 44 09.3**	**+0.2**
O15K	**Ungalikthiuk R**	**4.07**	**16**	Pn	**Pn**	**14 44 09.9**	**-0.2**
P16K	**Nushagak River**	**4.33**	**29**		**Pn**	**14 44 14.6**	**+0.9**
P16K	**Nushagak River**	**4.33**	**29**	IAML		14 45 58.3	
	comp=N,27nm,0.9s						
P16K				IAML		14 45 60.0	
	comp=E,23nm,0.8s						
CNTC	**Contact Creek**	**4.49**	**46**		**Pn**	**14 44 17.2**	**+1.3**
CNTC					**Sn**	**14 45 07.2**	**+0.1**
ANCK	**Angle Creek**	**4.61**	**48**		**Pn**	**14 44 18.1**	**+0.6**
N14K	**Kuskokwak Cree**	**4.65**	**2**		**Pn**	**14 44 18.3**	**+0.4**
N14K				IAML		14 45 29.1	
	comp=E,16nm,0.9s						
N14K				IAML		14 45 54.2	
	comp=N,17nm,1.2s						
KABU	**Katmai Buttres**	**4.75**	**48**		**Pn**	**14 44 20.3**	**+1.0**
O16K	**Kokwok River B**	**4.80**	**24**		**Pn**	**14 44 20.4**	**+0.4**
O16K	**Kokwok River B**	**4.80**	**24**	IAML		14 45 18.7	
	comp=E,9.3nm,1.1s						
N15K	**Kwethluk River**	**4.99**	**11**	Pn	**Pn**	**14 44 22.9**	**+0.2**
N15K				IAML		14 46 10.8	
	comp=E,14nm,1.1s						
M13K	**Dall Lake**	**5.19**	**353**	Pn	**Pn**	**14 44 25.9**	**+0.7**
O17K	**Koliganek Bris**	**5.21**	**28**		**Pn**	**14 44 26.1**	**+0.6**
OHAK	**Old Harbor**	**5.22**	**65**	Pn	**Pn**	**14 44 25.4**	**-0.3**
M14K	**Bethel**	**5.47**	**0**	Pn	**Pn**	**14 44 29.1**	**0.0**
KDAK	**Kodiak Island**	**5.77**	**61**	P	**Pn**	**14 44 32.1**	**-1.0**
	comp=E,8.4nm,0.3s,baz=207,slow=3.0,SNR=131						
KDAK				S	**Sn**	**14 45 34.7**	**-3.2**
	comp=E,4.6nm,0.2s,baz=20,slow=3.7,SNR=12						
KDAK	**Kodiak Island**	**5.77**	**61**		**Pn**	**14 44 32.7**	**-0.4**
N17K	**Nushagak Hills**	**5.84**	**24**	Pn	**Pn**	**14 44 34.1**	**0.0**
O18K	**Koktuh Hills**	**5.85**	**36**		**Pn**	**14 44 34.7**	**+0.5**
M16K	**Timber Creek**	**5.96**	**14**		**Pn**	**14 44 35.6**	**-0.2**
SYI	**Shuyak Island**	**6.21**	**54**		**Pn**	**14 44 40.0**	**+0.9**
L15K	**Ungalak Mounta**	**6.41**	**2**		**Pn**	**14 44 41.3**	**-0.4**
M17K	**Holitna River**	**6.58**	**19**		**Pn**	**14 44 44.7**	**+0.7**
K13K	**Kusilvak Mount**	**6.80**	**349**		**Pn**	**14 44 46.4**	**-0.7**
K15K	**Wolf Creek Mou**	**7.03**	**2**		**Pn**	**14 44 50.4**	**+0.3**
CNPM	**China Poot**	**7.19**	**49**		**Pn**	**14 44 52.4**	**0.0**
BRSE	**Bradley Lake S**	**7.52**	**49**		**Pn**	**14 44 56.7**	**-0.1**
SLKM	**Skilak Lake**	**8.16**	**45**		**Pn**	**14 45 05.3**	**-0.1**
STLK	**Strandline Lak**	**8.19**	**36**		**Pn**	**14 45 07.3**	**+1.4**
SEW	**Seward**	**8.26**	**49**		**Pn**	**14 45 05.5**	**-1.3**
O22K	**Cooper Landing**	**8.35**	**46**		**Pn**	**14 45 07.7**	**-0.2**
SUA	**Susitna One**	**8.54**	**39**		**Pn**	**14 45 11.1**	**+0.3**
SKT	**Skeetna**	**8.63**	**35**		**Pn**	**14 45 12.6**	**+0.7**
KNK	**Knik Glacier**	**9.38**	**44**	Pn	**Pn**	**14 45 21.7**	**-0.3**
HIN	**Hinchinbrook I**	**9.70**	**52**		**Pn**	**14 45 25.4**	**-1.0**
M23K	**Glacier View**	**9.88**	**43**		**Pn**	**14 45 27.8**	**-1.0**
MLY	**Manley**	**11.24**	**25**		**Pn**	**14 45 49.5**	**+2.4**
ILAR	**Eielson Array**	**12.10**	**32**	P	**Pn**	**14 45 54.9**	**-3.5**
	comp=E,0.4nm,0.8s,baz=226,slow=12,SNR=4.7						
ILAR				S	**Sn**	**14 48 06.8**	**-4.5**
	comp=E,0.1nm,0.5s,baz=216,slow=26,SNR=2.0						
M27K	**Edge Creek, AK**	**12.55**	**48**	Pn	**Pn**	**14 46 04.0**	**-0.6**
M29M	**Somme Creek**	**14.06**	**50**	Pn	**Pn**	**14 46 23.8**	**-0.2**
E24K	**Your Creek**	**14.28**	**21**	P	**P**	**14 46 31.2**	**+0.6**
D22K	**Ayikyak River**	**14.29**	**14**	P	**P**	**14 46 32.5**	**+1.8**
B21K	**Ikpikpuk River**	**14.76**	**10**	Pn	**Pn**	**14 46 33.2**	**+0.4**
K29M	**Barlow Dome**	**14.97**	**45**	Pn	**Pn**	**14 46 35.8**	**+0.1**
B22K	**Teshekpuk Lake**	**15.57**	**11**		**Pn**	**14 46 43.6**	**+0.6**
B22K				IAmb	IAmb	14 46 44.4	
	comp=Z,5.2nm,0.9s						
J30M	**Hart River**	**15.75**	**44**	IAmb	IAmb	14 47 20.1	
	comp=Z,8.5nm,1.5s						
H31M	**Peel River**	**17.02**	**41**		**Pn**	**14 47 00.8**	**-0.1**
H31M				IAmb	IAmb	14 47 04.4	
	comp=Z,9.5nm,1.5s						
INK	**Inuvik**	**18.48**	**34**	P	**P**	**14 47 15.2**	**-1.7**
	comp=Z,0.9nm,0.5s,baz=226,slow=9.6,SNR=9.9						
A36M	**Sachs Harbour**	**22.76**	**29**	P	**P**	**14 48 01.1**	**-1.2**
YKA	**Yellowknife Ar**	**25.00**	**54**	P	**P**	**14 48 23.6**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=277,slow=9.8,SNR=11 comp=Z,0.5nm,0.6s						
ELK	**Elko**	**33.79**	**96**	LR	LR	15 00 49.1	
	comp=Z,20nm,20.3s,baz=254,slow=31						
TXAR	**Lajitas Array**	**48.54**	**97**	P	**P**	**14 51 44.9**	**+3.0**
	comp=Z,0.2nm,0.5s,baz=296,slow=5.7,SNR=4.5 comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**48.54**	**97**	P	**P**	**14 51 42.1**	**+0.3**

*TIF **24** 15:05:36.9, 38°.38N×44°.43E, h10km±1km*
*AFAD **24** 15:05:37.2, 38°.41N×44°.53E, h4km±1km, MW4.4*
*NSSP **24** 15:05:37.7, 38°.47N×44°.52E, h10km, Ms4.1*
*TEH **24** 15:05:37.4, 38°.40N×44°.46E, h6km±41km, ML4.1, Presumed earthquake*
*IDC **24** 15:05:38.3±0.8, 38°.48N×44°.32E, h0km, mb3.7/15, mbtmp3.9/23, ML3.7/7, MS3.5/31, Error ellipse: s-maj=13.6km s-min=10.3km az=141.0*
*AZER **24** 15:05:38.2, 38°.43N×44°.51E, h10km, ml4.3*
*ISK **24** 15:05:38.2, 38°.33N×44°.42E, h8km, ML4.4/15*
*NEIC **24** 15:05:40.7±1.5, 38°.46N±0°.05×44°.31E±0°.05, h10km±1km, mb4.2/20, Error ellipse: s-maj=8.6km s-min=6.7km az=152.0*
ISC 24 15:05:38.7±1.1, **38°.38N**±0°.02×**44°.39E**±0°.02, **h1**km±7km, **n207**, σ1§**76**/256, **mb4.0**/30, **MS3.5**/25, **4C-5D**, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**312**	P	**Pg**	**15 05 46.3**	**-0.5**
OZAP				S	**Sb**	**15 05 53.0**	**-3.0**
OZAP	**Van, Ozalp-Mer**	**0.42**	**312**	Pg	**Pg**	**15 05 46.2**	**-0.5**
YOVA	**Hakkari_Yksek**	**0.80**	**186**	P	**Pg**	**15 05 53.0**	**-0.9**
YOVA				S	**Sg**	**15 06 04.5**	**+0.3**
YOVA	**Hakkari_Yksek**	**0.80**	**186**	Pg	**Pg**	**15 05 53.0**	**-0.9**
VMUR	**Van-Muradiye**	**0.88**	**314**	P	**Pg**	**15 05 55.0**	**-0.7**
VMUR				S	**Sn**	**15 06 09.7**	**-2.2**
VMUR	**Van-Muradiye**	**0.88**	**314**	Pg	**Pg**	**15 05 54.9**	**-0.7**
ISHB	**Shabestar**	**0.97**	**95**	Pg	**Pg**	**15 05 54.6**	**-2.7**
HAKT	**HAKKARI**	**0.98**	**213**	P	**Pg**	**15 05 56.7**	**-0.8**
HAKT				S	**Sn**	**15 06 15.7**	**+1.3**
MAKU	**Maku**	**1.00**	**13**	Pg	**Pg**	**15 05 56.1**	**-1.7**
ERCV	**ERCIS-VAN**	**1.04**	**308**	Pn	**Pb**	**15 05 59.4**	**-0.2**
ERCV				Sn	**Sn**	**15 06 15.5**	**-0.4**
GEVA	**Gevas**	**1.05**	**267**	Pg	**Pg**	**15 05 56.7**	**-2.0**
GEVA	**Gevas**	**1.05**	**267**	P	**Pg**	**15 05 57.1**	**-1.7**
GEVA				S	**Sb**	**15 06 14.0**	**0.0**
IMRD	**Marand**	**1.08**	**72**	Pg	Pg	15 05 57.1	-2.4
AKDM	**Akdamar-Van**	**1.11**	**268**	Pn	**Pg**	**15 05 59.3**	**-0.6**
AKDM	**Akdamar-Van**	**1.11**	**268**	Pg	**Pg**	**15 05 58.6**	**-1.3**
NAX	**Nakhchivan**	**1.17**	**47**	P	**Pb**	**15 05 59.8**	**-2.0**
NAX				S	**Sb**	**15 06 16.2**	**-1.4**
DYDN	**Diyadin**	**1.28**	**335**	P	**Pb**	**15 06 00.7**	**-3.1**
DYDN	**Diyadin**	**1.28**	**335**	Pg	**Pb**	**15 06 00.6**	**-3.1**
CUKT	**Cukurca**	**1.29**	**209**	Pn	**Pn**	**15 06 02.9**	**-1.0**
CUKT				Sn	**Sb**	**15 06 20.9**	**0.0**
CUKT	**Cukurca**	**1.29**	**209**	P	**Pn**	**15 06 02.3**	**-1.7**
CUKT				S	**Sb**	**15 06 20.4**	**-0.5**
CUKT	**Cukurca**	**1.29**	**209**	Pg	**Pn**	**15 06 02.2**	**-1.7**
SBZ	**Shahbuz**	**1.36**	**41**	P	**Pn**	**15 06 03.3**	**-1.6**
SBZ				S	**Sb**	**15 06 22.9**	**-0.1**
ORD	**Ordubad**	**1.37**	**66**	P	**Pn**	**15 06 02.8**	**-2.2**
ORD				S	**Sb**	**15 06 22.4**	**-0.8**
ADCV	**BITLIS_Adilcev**	**1.37**	**289**	P	**Pn**	**15 06 04.0**	**-1.1**
ADCV				S	**Sn**	**15 06 24.9**	**+0.9**
HYR	**Heyderabad**	**1.38**	**15**	P	**Pn**	**15 06 04.5**	**-0.7**
HYR				S	**Sg**	**15 06 25.8**	**+2.7**
ITBZ	**Tabriz**	**1.39**	**96**	Pg	Pn	15 06 02.2	-3.2
IAZR	**Azarshahr**	**1.44**	**119**	Pg	**Pn**	**15 06 04.4**	**-1.7**
IGDI	**IGDIR**	**1.50**	**351**	P	**Pn**	**15 06 05.8**	**-1.0**
IGDI				S	**Sg**	**15 06 27.7**	**+0.6**
IGDI	**IGDIR**	**1.50**	**351**	P	**Pb**	**15 06 07.3**	**-0.1**
IGDI				S	**Sg**	**15 06 29.5**	**+2.5**
PERV	**Siirt/Pervari-**	**1.52**	**254**	P	**Pn**	**15 06 07.1**	**0.0**
PERV				S	**Sg**	**15 06 30.4**	**+2.9**
VAYK	**Vayk**	**1.54**	**31**	⇓*eP*	**Pn**	**15 06 06.4**	**-1.0**
VAYK				⇓*eS*	**Sn**	**15 06 28.0**	**-0.1**
DORK	**Agr/Tutak/Do**	**1.61**	**309**	P	**Pn**	**15 06 07.7**	**-0.7**
DORK				S	**Sg**	**15 06 29.9**	**-0.5**
AGRB	**Hanur-Agry**	**1.61**	**318**	Pn	**Pn**	**15 06 08.3**	**-0.2**
AGRB	**Hanur-Agry**	**1.61**	**318**	Pg	**Pn**	**15 06 08.3**	**-0.2**
MLAZ	**Malazgirt-MUS**	**1.63**	**298**	Pn	**Pn**	**15 06 08.3**	**-0.3**
ALVK	**Alvank**	**1.63**	**69**	*eP*	**Pn**	**15 06 06.9**	**-1.7**
ALVK				*eS*	**Sn**	**15 06 28.4**	**-1.9**
KOTA	**Agri, Merkez-K**	**1.69**	**327**	P	**Pn**	**15 06 08.3**	**-1.2**
KOTA				S	**Sg**	**15 06 32.5**	**-0.6**
VNNZ	**Vanand**	**1.77**	**346**	*eP*	**Pb**	**15 06 11.4**	**-0.7**
VNNZ				*eS*	**Sg**	**15 06 36.0**	**+0.3**
METS	**Metsamor**	**1.78**	**352**	*eP*	**Pn**	**15 06 11.0**	**+0.3**
METS				*eS*	**Sg**	**15 06 35.5**	**-0.5**
BLIS	**Bitlis-Merkez**	**1.79**	**272**	P	**Pn**	**15 06 11.1**	**+0.3**
GNI	**Garni**	**1.79**	**9**	Pn	**Pn**	**15 06 10.0**	**-0.8**
	33nm,0.3s,baz=196,slow=4.7,SNR=16						
GNI				Lg	Lg	15 06 35.1	
	90nm,0.3s,baz=43,slow=17,SNR=5.9						
GNI	**Garni**	**1.79**	**9**	Pn	**Pn**	**15 06 09.6**	**-1.2**
GNI	**Garni**	**1.79**	**9**	Pn	**Pn**	**15 06 10.7**	**-0.1**
GNI	**Garni**	**1.79**	**9**	*eP*	**Pb**	**15 06 12.1**	**-0.2**
GNI				*eS*	**Sg**	**15 06 35.9**	**-0.2**
SIRN	**Sırnak**	**1.79**	**241**	P	**Pn**	**15 06 11.9**	**+1.1**
SIRN				S	**Sg**	**15 06 38.4**	**+2.1**
SIRN	**Sırnak**	**1.79**	**241**	Pn	**Pn**	**15 06 11.9**	**+1.1**
GURO	**Guroymak-BITLI**	**1.86**	**276**	Pn	**Pn**	**15 06 11.8**	**0.0**
GURO	**Guroymak-BITLI**	**1.86**	**276**	Pn	**Pn**	**15 06 11.1**	**-0.7**
EGVZ	**Egvard**	**1.88**	**63**	*eP*	**Pn**	**15 06 10.9**	**-1.2**
EGVZ				*eS*	**Sn**	**15 06 35.2**	**-1.3**
GRS	**Goris**	**1.88**	**53**	⇓*iP*	**Pn**	**15 06 10.0**	**-2.1**
GRS				⇑*iS*	**Sn**	**15 06 36.0**	**-0.6**
ARUZ	**Aruch**	**1.91**	**353**	*eP*	**Pn**	**15 06 13.0**	**+0.4**
ARUZ				*eS*	**Sg**	**15 06 38.7**	**-1.4**
MAHB	**Mahabad**	**1.92**	**147**	Pn	**Pn**	**15 06 12.8**	**+0.2**
KAPZ	**Kaputan**	**1.95**	**7**	*eP*	**Pn**	**15 06 13.1**	**0.0**
KAPZ				*eS*	**Sb**	**15 06 39.1**	**-1.0**
SRTM	**Siirt_Merkez**	**1.98**	**259**	P	**Pb**	**15 06 15.2**	**-0.4**
SRTM				S	**Sb**	**15 06 40.4**	**-0.4**
SRTM	**Siirt_Merkez**	**1.98**	**259**	Pn	**Pb**	**15 06 15.1**	**-0.4**
AMBZ	**Amberd**	**2.01**	**357**	*eP*	**Pn**	**15 06 14.5**	**+0.6**
AMBZ				*eS*	**Sb**	**15 06 41.5**	**-0.2**
AYRK	**Ayrk**	**2.04**	**32**	*eP*	**Pn**	**15 06 14.4**	**+0.6**
AYRK				*eS*	**Sb**	**15 06 42.4**	**-0.4**
IHRS	**Heris**	**2.09**	**91**	Pn	**Pn**	**15 06 14.5**	**-0.5**
DIGO	**Kars**	**2.18**	**339**	P	**Pb**	**15 06 18.0**	**-1.0**
MUSM	**Mu-Merkez**	**2.28**	**280**	P	**Pn**	**15 06 19.2**	**+1.6**
VRTB	**Varto-Mus**	**2.42**	**290**	Pn	**Pn**	**15 06 19.6**	**+0.1**
VRTB	**Varto-Mus**	**2.42**	**290**	P	**Pb**	**15 06 23.9**	**+0.8**
KARS	**Kars**	**2.46**	**336**		**Pn**	**15 06 20.4**	**+0.3**
KARS	**Kars**	**2.46**	**336**	Pn	**Pn**	**15 06 20.6**	**+0.5**
BOZK	**Kars-Merkez-Bo**	**2.46**	**334**	P	**Pb**	**15 06 22.8**	**-1.1**
BTMN	**Batman**	**2.51**	**260**	P	**Pn**	**15 06 21.7**	**+1.1**
IHSH	**Hashtrud**	**2.52**	**114**	Pn	**Pn**	**15 06 20.9**	**-0.1**
SVAN	**

0.7nm,0.3s,baz=48,slow=23,SNR=4.8
MMAI LR LR 15 11 37.8
comp=Z,494nm,18.9s,baz=56,slow=40
2.9nm,0.6s
EIL Elat 11.69 225 Pn **Pn 15 08 26.7 +0.1**
EIL 0.1nm,0.3s,baz=29,slow=10,SNR=1.7 Lg Lg 15 11 53.0
EIL 0.2nm,0.3s,baz=90,slow=20,SNR=1.6 LR LR 15 13 08.5
comp=Z,253nm,20.2s,baz=51,slow=38
1.3nm,0.4s
BELG Belogornoye 14.19 8 Pn **Pn 15 08 57.7 -3.0**
BELG 0.2nm,0.3s,baz=180,slow=1.0,SNR=7.2 LR LR 15 15 54.2
comp=Z,221nm,21.3s,baz=247,slow=44
25nm,1.1s
RAYN Ar Rayn 14.84 176 Pn 15 09 06.0 -3.7
HRA Herat 14.92 100 Pn **Pn 15 09 08.3 -2.6**
AKTO Aktyubinsk 15.46 34 Pn **Pn 15 09 16.1 -1.7**
0.2nm,0.3s,baz=242,slow=11,SNR=8.0
4.4nm,0.9s
AB31 Akbulak array 15.59 41 **Pn 15 09 18.3 -1.3**
ABKAR Akbulak array 15.59 41 Pn **Pn 15 09 18.1 -1.4**
VOIR 16.01 302 ⇑P **P 15 09 34.7 +6.0**
AKASG Malin Array Be 16.35 324 Pn **Pn 15 09 27.7 -1.6**
AKASG 0.4nm,0.3s,baz=134,slow=12,SNR=17 LR LR 15 17 10.4
comp=Z,196nm,18.0s,baz=192,slow=43
7.4nm,0.9s
KIEV Kiev 16.35 324 ⇓P **Pn 15 09 29.9 +0.6**
BURAR Bucovina Array 16.75 310 ⇑P **P 15 09 38.7 +1.8**
BURAR Bucovina Array 16.75 310 P **P 15 09 36.8 -0.2**
BUR08 Bucovina Ar. S 16.77 310 **P 15 09 37.4 +0.2**
BUR08 IAmb IAmb 15 09 45.8
comp=Z,13nm,1.0s
GZR Gura Zlata 17.52 300 ⇓P **P 15 09 51.8 +6.4**
OBN Obninsk 17.56 345 P **Pn 15 09 42.9 -1.6**
comp=Z,2.0nm,0.3s,baz=126,slow=19,SNR=3.3
comp=Z,12nm,0.5s
MARR Marisel-Cluj 17.70 305 ⇑P **P 15 09 52.6 +5.2**
MNK Minsk 19.65 330 *i* P **P 15 10 05.9 -2.7**
MNK comp=E,7.0nm,0.7s *i* P **P 15 10 05.9 -2.7**
comp=N,11nm,0.8s
MNK comp=Z,10.0nm,0.8s,baz=137 *i* P **P 15 10 05.9 -2.5**
MNK *i* PP **PnPn 15 10 20.9 -2.5**
MNK *i* S **Sn 15 13 48.0 -2.9**
MNK *i* SS **SnSn 15 14 04.7 -0.4**
MNK *i* LQ LQ 15 16 45.8
MNK *i* LR LR 15 17 31.1
MNK *i* LRM MLR 15 18 46.8
comp=N,672nm,14.7s
MNK *i* LRM MLR 15 18 47.8
comp=E,599nm,13.3s
MNK *i* LRM MLR 15 18 54.0
comp=Z,140nm,14.4s
ARTI Arti 20.28 23 P **P 15 10 14.7 -0.8**
comp=Z,7.7nm,0.9s,baz=219,slow=6.5,SNR=9.6
ARTI LR LR 15 20 46.7
comp=Z,166nm,19.8s,baz=196,slow=45
comp=Z,7.7nm,0.9s
ARTI Arti 20.28 23 **P 15 10 15.7 +0.2**
ARTI IAmb IAmb 15 10 23.2
comp=Z,32nm,1.3s
KK31 Karatay Array 20.31 68 **P 15 10 16.8 +0.8**
KK31 IAmb IAmb 15 10 23.9
comp=Z,7.3nm,0.9s
KKAR Karatay Array 20.31 68 **P 15 10 16.4 +0.4**
ARSB Arslanbob 22.11 73 P **P 15 10 36.6 +1.0**
ARSB IAmb IAmb 15 10 47.0
comp=Z,27nm,1.3s
RONA Rosalia, Austr 22.44 304 *ep*P **P 15 10 41.1 +2.2**
comp=Z,4.6nm,0.8s
CONA Conrad Observa 22.78 304 *ep*P **P 15 10 45.2 +2.6**
comp=Z,4.4nm,1.1s
SOKA Soboth 23.07 301 *ep*P **P 15 10 47.1 +1.5**
comp=Z,4.3nm,1.1s
BORK Borovoye 23.13 42 **P 15 10 46.9 +0.8**
BVAR Borovoye Array 23.15 42 P **P 15 10 45.6 -0.7**
comp=Z,1.1nm,0.6s,baz=243,slow=8.2,SNR=7.9
comp=Z,1.1nm,0.6s
AAK Ala-Archa 23.22 70 P **P 15 10 47.3 0.0**
comp=Z,0.8nm,0.8s,baz=253,slow=11,SNR=10.0
AAK LR LR 15 21 05.5
comp=Z,124nm,19.0s,baz=272,slow=40
comp=Z,0.8nm,0.8s
AAK Ala-Archa 23.22 70 **P 15 10 48.1 +0.9**
AAK IAmb IAmb 15 10 57.4
comp=Z,5.1nm,0.9s
VAE Valguarnera 23.62 277 LR LR 15 21 06.6
comp=Z,149nm,19.2s,baz=136,slow=39
BIOA Bad Ischl, Aus 24.19 303 *ep*P **P 15 10 58.9 +2.3**
comp=Z,5.1nm,0.9s
KSH2 Kashi 24.27 78 P **P 15 10 56.4 -1.1**
KSH2 pP P 15 11 02.6 +5.1
KSH2 pmax pmax
comp=Z,2.0nm,2.0s
KBA Koelnbreinsper 24.28 301 *ep*P **P 15 10 59.5 +2.0**
comp=Z,5.7nm,1.0s
GERES GERESS Array B 24.40 305 P **P 15 10 57.8 -0.8**
comp=Z,0.5nm,0.7s,baz=116,slow=6.1,SNR=5.9
GERES LR LR 15 21 31.0
comp=Z,65nm,18.6s,baz=84,slow=39
comp=Z,0.5nm,0.7s
LESA Schwarzleotal 24.78 302 *ep*P **P 15 11 03.8 +1.8**
comp=Z,2.7nm,0.6s
KDJ Kajisay 25.22 71 **P 15 11 07.1 +1.0**
KDJ IAmb IAmb 15 11 14.9
comp=Z,5.7nm,0.8s
WTTA Wattenberg 25.46 301 *ep*P **P 15 11 11.4 +3.2**
comp=Z,9.0nm,1.1s
CLL Collm 25.52 311 *i* P **P 15 11 05.5 -3.0**
comp=Z,3.0nm,0.8s
FINES FINESS Array B 25.74 340 P **P 15 11 08.9 -1.4**
comp=Z,2.7nm,0.7s,baz=128,slow=16,SNR=3.8
FINES LR LR 15 23 23.1
comp=Z,224nm,19.5s,baz=172,slow=42
comp=Z,2.7nm,0.7s
MOTA Moosalm 25.83 301 *ep*P **P 15 11 14.1 +2.5**
comp=Z,8.9nm,0.9s
KURBB Kurchatov Arra 27.00 52 P **P 15 11 21.0 -0.9**
comp=Z,1.0nm,0.6s,baz=260,slow=8.9,SNR=15
comp=Z,1.0nm,0.6s
KURK Kurchatov 27.08 52 **P 15 11 22.9 +0.3**
KURK IAmb IAmb 15 11 31.5
comp=Z,5.8nm,1.2s
MAKZ Makanchi 28.70 61 **P 15 11 38.1 +0.9**
MKAR Makanchi Array 28.91 61 P **P 15 11 38.3 -0.8**
comp=Z,0.5nm,0.5s,baz=262,slow=11,SNR=12
MKAR LR LR 15 25 25.1
comp=Z,69nm,18.8s,baz=246,slow=41
comp=Z,0.5nm,0.5s
MKAR Makanchi Array 28.91 61 **P 15 11 39.9 +0.7**
HFS Hagfors 29.13 328 P **P 15 11 39.8 -1.0**
comp=Z,2.4nm,0.9s,baz=102,slow=12,SNR=3.2
HFS LR LR 15 24 51.6
comp=Z,191nm,20.6s,baz=106,slow=40
comp=Z,2.4nm,0.9s
NOA NORSAR Array B 30.65 329 P **P 15 11 53.0 -1.3**
comp=Z,0.8nm,0.8s,baz=147,slow=10,SNR=1.5
NOA LR LR 15 24 11.1
comp=Z,74nm,18.0s,baz=0.0,slow=36
comp=Z,0.8nm,0.8s
ZALV Zalesovo Beam 31.53 47 P **P 15 12 01.6 -0.5**
comp=Z,0.6nm,0.4s,baz=260,slow=7.8,SNR=4.2
ZALV LR LR 15 26 01.7
comp=Z,59nm,18.6s,baz=258,slow=39
comp=Z,0.6nm,0.4s
WMQ Urumqi 32.80 66 *e*P **P 15 12 16.6 +3.2**
ARCES ARCESS Array B 32.82 348 LR LR 15 24 48.5
comp=Z,113nm,20.4s,baz=358,slow=35
EKA Eskdalemuir Ar 35.85 314 P **P 15 12 38.7 -1.0**
comp=Z,1.5nm,0.7s,baz=106,slow=11,SNR=4.1
comp=Z,1.5nm,0.7s
ESDC Sonseca Array 37.22 288 P **P 15 12 50.5 -1.1**
comp=Z,0.4nm,0.5s,baz=72,slow=8.5,SNR=4.9
comp=Z,0.4nm,0.5s
ESDC Sonseca Array 37.22 288 IAmb IAmb 15 12 59.2
comp=Z,3.0nm,1.5s
PALK Pallekele 45.09 124 LR LR 15 33 34.6
comp=Z,36nm,19.6s,baz=333,slow=37
SONM Songino Array 45.13 57 LR LR 15 35 02.0
comp=Z,97nm,18.2s,baz=305,slow=39
TORD Torodi Ar. Bea 45.38 248 P **P 15 13 58.4 -0.4**
comp=Z,0.3nm,0.7s,baz=21,slow=12,SNR=2.6
comp=Z,0.3nm,0.7s
TORD Torodi Ar. Bea 45.38 248 IAmb IAmb 15 14 05.0
comp=Z,12nm,0.8s
BORG Borgarnes 45.80 327 LR LR 15 35 45.8
comp=Z,54nm,18.5s,baz=102,slow=40
PZH PanZhiHua 49.13 86 P **P 15 14 28.3 +0.1**
HHC Hu-ho-hao-te 50.64 65 *e*P **P 15 14 40.3 +0.8**
HHC pmax pmax
comp=Z,4.0nm,0.5s
CHTO Chiang Mai 50.95 96 P **P 15 14 42.8 +0.8**
CHTO IAmb IAmb 15 14 44.6
comp=Z,2.3nm,0.7s
CMAR Chiang Mai Arr 51.16 97 P **P 15 14 44.3 +0.8**
comp=Z,1.5nm,0.7s,baz=298,slow=8.4,SNR=13
CMAR LR LR 15 42 10.7
comp=Z,14nm,19.0s,baz=265,slow=43
comp=Z,1.5nm,0.7s
DBIC Dimbokro 54.48 248 LR LR 15 40 07.1
comp=Z,37nm,18.9s,baz=108,slow=38
YAK Yakutsk 54.85 35 LR LR 15 41 11.6
comp=Z,62nm,19.5s,baz=275,slow=39
LSZ Lusaka 55.49 199 LR LR 15 42 33.0
comp=Z,30nm,19.7s,baz=151,slow=40
SFJD Kangerlussuaq 57.21 332 LR LR 15 39 19.2
comp=Z,51nm,19.2s,baz=64,slow=35
KLR Kul'dur 60.62 49 LR LR 15 43 09.4
comp=Z,35nm,19.0s,baz=322,slow=37
KSRS Korea Array 63.59 62 LR LR 15 46 24.0
comp=Z,22nm,19.0s,baz=95,slow=38
MA2 Magadan 65.20 33 LR LR 15 47 13.9
comp=Z,59nm,18.2s,baz=307,slow=38
JOW Kunigami 69.37 72 LR LR 15 50 57.3
comp=Z,67nm,19.0s,baz=314,slow=39
MJAR Matsushiro Arr 71.07 58 LR LR 15 52 05.3
comp=Z,28nm,18.1s,baz=338,slow=39
PET Petropavlovsk 72.68 35 P **P 15 17 09.2 +1.3**
SUR Sutherland 73.74 201 LR LR 15 52 34.3
comp=Z,57nm,19.0s,baz=172,slow=38
BMAR Burnt Mountain 74.29 4 P **P 15 17 18.8 +1.6**
IMAR Indian Mountai 75.02 8 P **P 15 17 21.5 +0.2**
I26K Coal Creek Min 76.48 3 P **P 15 17 30.0 +0.2**
I26K IAmb IAmb 15 17 36.1
comp=Z,2.1nm,0.9s
YKA Yellowknife Ar 78.06 350 P **P 15 17 39.6 +1.0**
comp=Z,0.2nm,0.7s,baz=14,slow=4.6,SNR=5.7
comp=Z,0.2nm,0.7s
K29M Barlow Dome 78.10 1 P **P 15 17 39.1 +0.1**
K29M IAmb IAmb 15 17 51.8
comp=Z,4.1nm,1.4s
BCAR Beaver Creek A 78.78 3 P **P 15 17 43.1 +0.5**
VRDI Verde Repeater 80.53 4 P **P 15 17 52.2 -0.2**
KAPI Kappang 81.71 103 LR LR 15 59 27.1
comp=Z,36nm,18.1s,baz=290,slow=40
O54A Avella 86.90 321 P **P 15 18 25.7 +0.5**

IDC 24 15:54:55.5±1.2, 1°57N×127°35E, h0km, mb3.3/4, mbtmp3.3/5, ML2.9/1, Error ellipse: s-maj=77.7km s-min=21.2km az=60.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.60**	**122**	Pn	Pn	15 56 06.5	0.0
	0.6nm,0.3s,baz=266,slow=23,SNR=9.2						
	2.8nm,0.3s						
WRA	**Warramunga Arr**	**22.45**	**163**	P	P	15 59 56.0	-0.4
	0.4nm,0.8s,baz=342,slow=16,SNR=1.6						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**25.88**	**166**	P	P	16 00 29.6	+0.3
	0.4nm,0.9s,baz=342,slow=11,SNR=2.5						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**59.67**	**326**	P	P	16 05 02.0	+0.2
	0.3nm,0.5s,baz=125,slow=8.0,SNR=8.7						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.88**	**328**	P	P	16 05 29.7	-0.3
	0.2nm,0.5s,baz=129,slow=5.6,SNR=5.8						
	0.2nm,0.5s						

*IDC **24** 15:56:13.4±0.8, 3°99N×126°27E, h0km, mb3.6/10, mbtmp3.7/11, ML4.1/1, Error ellipse: s-maj=56.4km s-min=15.3km az=70.0*
*DJA **24** 15:56:18.4±0.6, 4°N±4°×12°7E±°, h29km±3km, M4.2/14, mb4.4/5, MLv4.1/14*
*NEIC **24** 15:56:19.2±0.8, 4°11N±0°06×126°59E±0°09, h38km±3km, mb4.4/17, Error ellipse: s-maj=14.1km s-min=8.0km az=66.0*

ISC 24 15:56:19.4±0.5, 4°13N±0°05×126°65E±0°06, h45km, n42, σ0s91/46, mb3.8/16, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.20**	**249**	P	Pn	15 56 39.9	+0.1
SGSI				S	Sn	15 56 55.6	+0.6
DAV	**Davao City (W)**	**3.11**	**340**	Pn	Pn	15 57 04.7	-1.3
MNI	**Manado**	**3.22**	**214**	P	Pn	15 57 07.7	+0.1
MNI				S	Sn	15 57 47.2	+2.5
TNTI	**Ternate**	**3.41**	**168**	P	Pn	15 57 09.9	-0.3
TNTI	**Ternate**	**3.41**	**168**	P	Pn	15 57 10.5	+0.4
TNTI				S	Sn	15 57 50.7	+1.4
LBMI	**Labuha**	**4.81**	**170**	P	Pn	15 57 29.7	+0.3
GTOI	**Gorontalo**	**5.03**	**226**	P	Pn	15 57 33.3	+1.0
	23nm,0.9s						
MRSI	**Marisa**	**5.94**	**233**	P	Pn	15 57 44.6	-0.3
SANI	**Sanana**	**6.17**	**186**	P	Pn	15 57 47.5	-0.6
LUWI	**Luwuk**	**6.43**	**217**	Pn	Pn	15 57 50.5	-1.2
TOLI2	**Tolitoli**	**6.58**	**243**	Pn	Pn	15 57 53.5	-0.3
SIJI	**Sorong**	**6.78**	**137**	Pn	Pn	15 57 56.5	+0.1
	3.2nm,0.3s,baz=323,slow=20,SNR=14						
SIJI				Sn	Sn	15 59 12.3	0.0
	0.8nm,0.3s,baz=181,slow=23,SNR=1.7						
	7.2nm,0.3s						
MTN	**Manton Dam**	**17.44**	**165**	Pn	Pn	16 00 18.4	-1.1
MTN				IAmb	IAmb	16 00 59.9	
	comp=Z,29nm,1.1s						
TWG	**Pinlang**	**19.35**	**344**	P	P	16 00 40.6	-0.6
KNRA	**Kununurra**	**19.79**	**174**	P	P	16 00 45.5	-0.6
KNRA				IAmb	IAmb	16 01 26.2	
	comp=Z,29nm,1.2s						
YULB	**Yu-li**	**19.84**	**345**	P	P	16 00 46.0	-0.7
YULB				IAmb	IAmb	16 00 57.6	
	comp=Z,34nm,1.5s						
TPUB	**Ta-pu**	**19.93**	**344**	P	P	16 00 47.7	+0.1
TPUB				IAmb	IAmb	16 01 01.7	
	comp=Z,41nm,1.5s						
FITZ	**Fitzroy Crossi**	**22.11**	**183**	P	P	16 01 10.1	-1.0
	comp=Z,4.2nm,1.1s,baz=357,slow=13,SNR=1.4						
	comp=Z,4.2nm,1.1s						
COEN	**Coen**	**24.32**	**138**	P	P	16 01 33.4	+0.2
WB0	**Warramunga Arr**	**24.94**	**162**	P	P	16 01 38.3	-0.3
WB0				IAmb	IAmb	16 02 08.7	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**25.09**	**163**	P	P	16 01 39.8	-0.2
	comp=Z,1.2nm,0.7s,baz=342,slow=10,SNR=5.2						
	comp=Z,1.2nm,0.7s						
WRA	**Warramunga Arr**	**25.09**	**163**	P	P	16 01 38.4	-1.6
WR8	**Warramunga Arr**	**25.15**	**162**	P	P	16 01 39.9	-0.7
WR8				IAmb	IAmb	16 02 14.1	
	comp=Z,22nm,1.5s						
ASAR	**Alice Springs**	**28.52**	**166**	P	P	16 02 10.0	-0.9
	comp=Z,0.3nm,0.5s,baz=345,slow=7.1,SNR=8.6						
	comp=Z,0.3nm,0.5s						
CM31	**Chiang Mai Arr**	**30.61**	**300**	P	P	16 02 27.9	-1.6
KSRS	**Korea Array**	**33.19**	**2**	P	P	16 02 52.8	+0.9
	comp=Z,0.3nm,0.4s,baz=182,slow=9.1,SNR=2.1						
	comp=Z,0.3nm,0.4s						
INKA	**Innaminka**	**34.48**	**158**	P	P	16 03 03.3	+0.2
BBOO	**Buckleboo**	**37.80**	**167**	P	P	16 03 31.4	-0.2
GOMU	**GeErMu**	**43.33**	**322**	P	PKiKP	16 13 08.0	-0.9
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HILR	**Hailar Array B**	**45.64**	**354**	P	P	16 04 37.7	+2.2
	comp=Z,0.4nm,0.4s,baz=185,slow=8.0,SNR=2.6						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**46.90**	**341**	P	P	16 04 45.5	0.0
	comp=Z,0.3nm,0.6s,baz=164,slow=7.6,SNR=2.8						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	16 06 01.4	-0.6
	comp=Z,0.4nm,0.5s,baz=122,slow=8.1,SNR=13						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	16 06 01.6	-0.4
MAKZ	**Makanchi**	**57.37**	**325**	P	P	16 06 02.8	-0.4
MAKZ				IAmb	IAmb	16 06 17.0	
	comp=Z,3.5nm,1.5s						
ZALV	**Zalesovo Beam**	**60.20**	**333**	P	P	16 06 21.8	-0.9
	comp=Z,0.2nm,0.3s,baz=123,slow=7.4,SNR=2.1						
	comp=Z,0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**61.36**	**327**	P	P	16 06 29.8	-0.8
	comp=Z,1.4nm,0.9s,baz=123,slow=7.1,SNR=8.0						
	comp=Z,1.4nm,0.9s						
KURK	**Kurchatov**	**61.37**	**327**	P	P	16 06 30.4	-0.3
KURK				IAmb	IAmb	16 06 31.5	
	comp=Z,1.8nm,0.8s						
LBZ	**Lake Benmore**	**62.05**	**146**	P	P	16 06 35.2	-0.2
BVAR	**Borovoye Array**	**66.95**	**327**	P	P	16 07 08.3	+1.0
	comp=Z,0.2nm,0.4s,baz=108,slow=4.7,SNR=3.5						
	comp=Z,0.2nm,0.4s						
L22K	**Petersville**	**82.93**	**28**	P	P	16 08 40.3	+0.9
L22K				IAmb	IAmb	16 08 53.1	
	comp=Z,6.0nm,1.4s						
BMAR	**Burnt Mountain**	**85.74**	**23**	P	P	16 08 54.6	+1.0
BCAR	**Beaver Creek A**	**87.06**	**27**	P	P	16 09 00.6	+0.4

*AZER **24** 16:02:35.7, 38°45N×44°55E, h2km, ml3.5*
*AFAD **24** 16:02:38.4, 38°48N×44°57E, h7km±1km, ML3.3*
*ISK **24** 16:02:38.4, 38°33N×44°45E, h2km, ML3.4/11*
*NSSP **24** 16:02:38.3, 38°43N×44°58E, h10km, Ms3.3*
*TEH **24** 16:02:38.4, 38°46N×44°50E, h5km, ML3.2, Presumed earthquake*

ISC 24 16:02:38.0±1.1, 38°44N±0°02×44°56E±0°01, h0km±10km, n99, σ1s64/155, 1C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**297**	P	Pg	16 02 47.6	+0.1
OZAP				S	Sg	16 02 55.4	+1.4
OZAP	**Van, Ozalp-Mer**	**0.49**	**297**	Pg	Pg	16 02 47.6	+0.1
ISHB	**Shabestar**	**0.85**	**100**	Pg	Pg	16 02 54.8	+0.5
YOVA	**Hakkari_Yksek**	**0.88**	**194**	P	Pg	16 02 55.5	+0.7
YOVA				S	Sb	16 03 08.9	+0.4
YOVA				IAML		16 03 14.0	
	comp=N,1μm,0.6s						
YOVA	**Hakkari_Yksek**	**0.88**	**194**	Pg	Pg	16 02 55.5	+0.7
TVAN	**Van**	**0.91**	**276**	P	Pg	16 02 54.4	-1.0
TVAN				S	Sg	16 03 07.6	+0.4
TVAN				IAML		16 03 25.0	
	comp=E,1μm,0.6s						
TVAN	**Van**	**0.91**	**276**	Pg	Pg	16 02 54.4	-1.0
MAKU	**Maku**	**0.92**	**6**	Pg	Pb	16 02 55.8	-1.2
IMRD	**Marand**	**0.94**	**73**	Pg	Pb	16 02 57.1	-0.2
VMUR	**Van-Muradiye**	**0.94**	**306**	P	Pg	16 02 55.4	-0.8
VMUR				S	Sb	16 03 09.4	-1.2
VMUR	**Van-Muradiye**	**0.94**	**306**	Pg	Pg	16 02 55.4	-0.8
NAX	**Nakhchivan**	**1.04**	**45**	P	Pn	16 02 58.9	-1.0
NAX				S	Sn	16 03 14.8	-0.4
HAKT	**HAKKARI**	**1.11**	**218**	P	Pg	16 02 58.5	-0.7
HAKT				S	Sg	16 03 14.7	+1.1
HAKT	**HAKKARI**	**1.11**	**218**	Pg	Pg	16 02 58.5	-0.7
HAKT	**HAKKARI**	**1.11**	**218**	P	Pg	16 02 58.8	-0.4
HAKT				S	Sn	16 03 16.9	-0.1
ERCV	**ERCIS-VAN**	**1.11**	**302**	Pn	Pb	16 03 00.1	-0.2
GEVA	**Gevas**	**1.18**	**264**	P	Pg	16 02 58.7	-2.0
GEVA				S	Sg	16 03 15.7	-0.4
ORD	**Ordubad**	**1.23**	**66**	P	Pn	16 03 02.2	-0.3
ORD				S	Sn	16 03 20.5	+0.7
SBZ	**Shahbuz**	**1.23**	**39**	P	Pn	16 03 02.0	-0.6
SBZ				S	Sn	16 03 22.9	+2.9
AKDM	**Akdamar-Van**	**1.24**	**265**	Pn	Pg	16 03 01.7	-0.2
AKDM				Sn	Sg	16 03 18.3	+0.3
ITBZ	**Tabriz**	**1.27**	**99**	Pg	Pn	16 03 02.2	-0.9
DYDN	**Diyadin**	**1.29**	**329**	P	Pg	16 03 01.1	-1.8
DYDN				S	Sn	16 03 20.7	-1.0
DYDN				IAML		16 03 37.0	
	comp=E,495nm,0.9s						
DYDN	**Diyadin**	**1.29**	**329**	Pg	Pg	16 03 01.0	-1.8
HYR	**Heyderabad**	**1.30**	**10**	P	Pg	16 03 03.3	+0.4
HYR				S	Sn	16 03 23.8	+2.3
IAZR	**Azarshahr**	**1.36**	**124**	Pg	Pg	16 03 05.2	+1.2
CUKT	**Cukurca**	**1.41**	**213**	Pn	Pn	16 03 03.6	-1.4
CUKT	**Cukurca**	**1.41**	**213**	P	Pn	16 03 04.5	-0.5
CUKT				IAML		16 03 34.0	
	comp=E,713nm,0.5s						
CUKT	**Cukurca**	**1.41**	**213**	Pg	Pn	16 03 04.5	-0.5
VAYK	**Vayk**	**1.43**	**28**	*i* P	Pg	16 03 05.4	+0.1
VAYK				*i* S	Sg	16 03 25.8	+2.0
IGDI	**IGDIR**	**1.47**	**346**	P	Pb	16 03 05.6	-0.7
IGDI				S	Sg	16 03 27.3	+1.9
IGDI				IAML		16 03 32.0	
	comp=N,330nm,0.7s						
IGDI				IAML		16 03 32.0	
	comp=E,376nm,0.8s						
IGDI	**IGDIR**	**1.47**	**346**	Pg	Pb	16 03 05.6	-0.7
IGDI	**IGDIR**	**1.47**	**346**	P	Pg	16 03 06.4	+0.1
IGDI				S	Sg	16 03 29.2	+3.8
ADCV	**BITLIS_Adilcev**	**1.48**	**285**	P	Pn	16 03 05.6	-0.5
ADCV				S	Sg	16 03 26.2	+0.5
ALVK	**Alvank**	**1.49**	**70**	*e*P	Pg	16 03 06.4	-0.2
ALVK				*e*S	Sg	16 03 26.9	+1.0
PERV	**Siirt/Pervari-**	**1.66**	**253**	P	Pn	16 03 08.8	+0.2
PERV				S	Sg	16 03 34.0	+2.6
AGRB	**Hanur-Agry**	**1.66**	**313**	Pn	Pb	16 03 09.3	-0.4
DORK	**Agr/Tutak/Do**	**1.68**	**305**	P	Pn	16 03 08.6	-0.2
DORK				S	Sb	16 03 31.2	-0.4
GNI	**Garni**	**1.71**	**5**	Pg	Pg	16 03 12.1	+1.2
GNI				Sn	Sg	16 03 36.2	+3.1
GNI	**Garni**	**1.71**	**5**	*e*P	Pg	16 03 11.3	+0.4
GNI				*e*S	Sg	16 03 35.5	+2.3
MLAZ	**Malazgirt-MUS**	**1.72**	**295**	Pn	Pb	16 03 10.0	-0.5
KOTA	**Agri, Merkez-K**	**1.72**	**323**	P	Pn	16 03 08.7	-0.7
EGVZ	**Egvard**	**1.74**	**63**	*e*P	Pb	16 03 10.6	-0.3
EGVZ				*e*S	Sg	16 03 34.2	+0.2
GRS	**Goris**	**1.74**	**52**	⇓*i*P	Pg	16 03 11.0	-0.5
GRS				⇑*i*S	Sg	16 03 34.0	-0.1
KAPZ	**Kaputan**	**1.88**	**3**	*e*P	Pg	16 03 14.0	-0.1
KAPZ				*e*S	Sg	16 03 40.3	+1.7
MAHB	**Mahabad**	**1.90**	**151**	Pn	Pb	16 03 14.1	+0.4
BLIS	**Bitlis-Merkez**	**1.92**	**270**	P	Pb	16 03 13.9	0.0
AYRK	**Ayrk**	**1.93**	**29**	*e*P	Pg	16 03 14.3	-0.7
AYRK				*e*S	Sg	16 03 40.8	+0.8
SIRN	**Sırnak**	**1.94**	**242**	P	Pb	16 03 14.6	+0.3
SIRN				IAML		16 03 47.0	
	comp=N,345nm,0.7s						
SIRN				IAML		16 03 50.0	
	comp=E,379nm,0.9s						
IHRS	**Heris**	**1.96**	**93**	Pn	Pg	16 03 15.4	-0.2
AMBZ	**Amberd**	**1.96**	**353**	*e*P	Pg	16 03 14.9	-0.7
AMBZ				*e*S	Sg	16 03 41.6	+0.6
GURO	**Guroymak-BITLI**	**1.98**	**274**	Pn	Pn	16 03 13.0	0.0
SRTM	**Siirt_Merkez**	**2.12**	**259**	P	Pb	16 03 16.4	-1.0
SRTM				IAML		16 03 57.0	
	comp=E,299nm,0.6s						
SRTM	**Siirt_Merkez**	**2.12**	**259**	Pn	Pb	16 03 16.4	-1.0
EATA	**Eleskirt**	**2.14**	**312**	P	Pn	16 03 15.5	+0.1
DIGO	**Kars**	**2.17**	**335**	P	Pg	16 03 19.6	-0.1
DIGO				IAML		16 03 55.0	
	comp=N,192nm,1.1s						
DIGO				IAML		16 03 57.0	
	comp=E,294nm,0.7s						
QRD	**Qoradiz**	**2.38**	**64**	P	Pb	16 03 19.7	-2.1
QRD				S	Sg	16 03 52.5	-2.1
MUSM	**Mu-Merkez**	**2.40**	**278**	P	Pb	16 03 21.4	-0.8
IHSH	**Hashtrud**	**2.42**	**117**	Pn	Pb	16 03 21.6	-1.1
GDB	**GEDABAY**	**2.46**	**22**	P	Pn	16 03 20.4	+0.8
GDB				S	Sb	16 03 53.6	-0.5
KARS	**Kars**	**2.46**	**333**	Pn	Pb	16 03 21.6	-1.7
BOZK	**Kars-Merkez-Bo**	**2.47**	**331**	P	Pb	16 03 24.0	+0.6
LSVT	**Lusahovit**	**2.52**	**11**	*e*P	Pg	16 03 26.2	-0.2
LSVT				*e*S	Sg	16 04 01.4	+2.4
VRTB	**Varto-Mus**	**2.53**	**288**	Pn	Pb	16 03 21.5	+1.1
VRTB	**Varto-Mus**	**2.53**	**288**	P	Pb	16 03 24.8	+0.5
AGDM	**Agdam**	**2.59**	**49**	P	Pn	16 03 22.4	+1.2
AGDM				S	Sb	16 03 57.4	-0.3
GANJ	**Ganja**	**2.59**	**31**	P	Pb	16 03 23.4	-2.0
GANJ				S	Sg	16 03 59

LRK	**Lerik**	**2.97**	**85**	P	**Pn**	**16 03 28.1**	**+1.5**
LRK				S	**Sb**	**16 04 07.4**	**-1.5**
MNGR	**Mingechevir, A**	**3.04**	**39**	P	**Pn**	**16 03 28.4**	**+1.0**
MNGR				S	**Sb**	**16 04 07.5**	**-3.2**
DGRG	**David-gareji**	**3.07**	**12**	P	**Pg**	**16 03 37.0**	**+0.1**
AKH	**Akhalkalaki**	**3.08**	**345**	P	**Pg**	**16 03 35.5**	**-1.5**
AKH				S	**Sg**	**16 04 21.4**	**+4.4**
GLBA	**Clilabad**	**3.10**	**74**	P	**Pn**	**16 03 30.0**	**+1.8**
GLBA				S	**Sb**	**16 04 09.8**	**-2.6**
TRLG	**Trialeti**	**3.12**	**354**	P	**Pb**	**16 03 35.1**	**+0.7**
TRLG				S	**Sg**	**16 04 18.7**	**+0.6**
VSHL	**Vashlovani**	**3.13**	**26**	P	**Pg**	**16 03 39.6**	**+1.7**
DDFL	**Dedoflistskaro**	**3.23**	**21**	P	**Pg**	**16 03 42.2**	**+2.2**
DDFL				S	Sg	16 04 31.8	+10
LKRN	**Lenkeran, Azer**	**3.32**	**84**	P	**Pn**	**16 03 32.2**	**+1.0**
LKRN				S	**Sb**	**16 04 16.0**	**-2.7**
ASTR	**Astara**	**3.33**	**87**	P	**Pn**	**16 03 32.4**	**+1.1**
ASTR				S	**Sn**	**16 04 13.5**	**+2.1**
SEKA	**Sheki**	**3.43**	**36**	P	**Pn**	**16 03 34.8**	**+2.0**
SEKA				S	**Sb**	**16 04 20.1**	**-2.0**
QBL	**Gabala**	**3.56**	**44**	P	**Pn**	**16 03 36.2**	**+1.7**
QBL				S	**Sb**	**16 04 22.0**	**-3.6**
ZKTA	**Zakatala**	**3.57**	**26**	P	**Pn**	**16 03 35.9**	**+1.3**
ZKTA				S	**Sn**	**16 04 19.0**	**+1.5**
IML	**Ismayilli**	**3.66**	**49**	P	**Pn**	**16 03 37.4**	**+1.5**
IML				S	**Sb**	**16 04 23.4**	**-5.0**
ALIG	**Mtskhetisjvari**	**3.73**	**350**	P	**Pb**	**16 03 46.0**	**+1.2**
XNQ	**Khinaliq**	**3.88**	**44**	P	**Pn**	**16 03 40.7**	**+1.6**
XNQ				S	**Sb**	**16 04 29.6**	**-5.5**
CHRG	**Chargali**	**3.90**	**4**	P	**Pg**	**16 03 53.3**	**+0.6**
PQL	**Pirkuli**	**3.90**	**52**	P	**Pn**	**16 03 41.1**	**+1.7**
PQL				S	**Sn**	**16 04 27.8**	**+1.8**
GBS	**Qobustan**	**3.99**	**57**	P	**Pn**	**16 03 41.8**	**+1.3**
GBS				S	**Sn**	**16 04 29.6**	**+1.7**
QSAR	**Qusar**	**4.19**	**42**	P	**Pn**	**16 03 43.6**	**+0.4**
QSAR				S	**Sb**	**16 04 36.8**	**-6.9**
QUBA	**Quba, Azerbaij**	**4.20**	**45**	P	**Pn**	**16 03 44.6**	**+1.2**
QUBA				S	**Sn**	**16 04 35.6**	**+2.4**
SHTL	**Shatili**	**4.24**	**6**	P	**Pb**	**16 03 54.0**	**+0.5**
SHTL				S	**Sg**	**16 04 50.1**	**-4.0**
SIZA	**Siyzn**	**4.26**	**50**	P	**Pn**	**16 03 45.6**	**+1.4**
SIZA				S	**Sn**	**16 04 35.5**	**+0.9**
GALA	**Gala**	**4.76**	**64**	P	**Pn**	**16 03 52.5**	**+1.5**
GALA				S	**Sn**	**16 04 49.8**	**+2.9**

GII ***24*** *16:02:55.3±0.0,37°.850N±0°.003×15°.784E±0°.001,h0km, confirmed*

IDC ***24*** *16:02:57.2±0.5,39°.28N×16°.11E,h0km,mb4.4/31, mbtmp4.3/40,ML4.1/9,MS3.5/47,Error ellipse: s-maj=11.1km s-min=10.5km az=121.0*

MED_RC ***24*** *16:02:58.0±0.3,39°.31N×16°.22E,h12km±1km,MW4.5/37, Moment Tensor Solution.Mantle waves: s37,c50; Duration: 1ᵗ0 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.41±.56; $M_{\theta\theta}$-0.58±.28; $M_{\phi\phi}$5.99±.38; $M_{r\theta}$1.57±.82; $M_{\theta\phi}$1.16±.18; $M_{\phi r}$-0.23±.55; Best double couple: M_o6.05000×10^{15} NP1:ϕ_s353.00000°,δ47.00000°, λ-114.00000°. NP2:ϕ_s206.00000°,δ48.00000°, λ-66.00000°. Principal axes: T 6.1900, Plg0.0000°, Azm280.0000°; N -0.2900, Plg17.0000°, Azm10.0000°; P -5.9000, Plg73.0000°, Azm189.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

MOS ***24*** *16:02:58.2±0.9,39°.38N×16°.13E,h13km,mb4.9/29 Error ellipse: s-maj=6.4km s-min=3.3km az=67.8*

ROM ***24*** *16:02:58.4±0.0,39°.361N±0°.002×16°.241E±0°.004, h9km,ML4.4/285,Mw4.3,Error ellipse: s-maj=0.2km s-min=0.2km az=233.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.04; $M_{\theta\theta}$0.09; $M_{\phi\phi}$2.96; $M_{r\theta}$0.46; $M_{\theta\phi}$0.28; $M_{\phi r}$0.31; Fault plane solution: M_o3.06205×10^{15} NP1:ϕ_s193.00000°,δ49.00000°, λ-80.00000°. NP2:ϕ_s358.00000°,δ42.00000°, λ-101.00000°.*

MCSM ***24*** *16:02:58.6±0.4,39°N±3°×1°6E±°,h12km±2km,mb4.6, mB4.7,MLv4.8,Mw(mB)3.9*

PDG ***24*** *16:02:58.5±0.6,39°.35N×16°.16E,h12km,ML4.6/13,Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

GFZ ***24*** *16:02:59.4,39°.33N×16°.09E,h10km,MW4.4,Moment Tensor Solution. s65 Moment tensor: M_{rr}-5.30; $M_{\theta\theta}$0.74; $M_{\phi\phi}$4.56; $M_{r\theta}$0.30; $M_{\theta\phi}$0.38; $M_{\phi r}$2.01; Fault plane solution: NP1:ϕ_s187.00000°,δ56.00000°,λ-88.00000°. NP2:ϕ_s5.00000°,δ34.00000°,λ-90.00000°. Principal axes: T 4.9900, Plg11.0000°, Azm276.0000°; N 0.7100, Plg1.0000°, Azm6.0000°; P -5.7000, Plg79.0000°, Azm100.0000°;*

LDG ***24*** *16:02:59.5±0.2,39°.33N×16°.22E,h10km,Ml4.0/2 Error ellipse: s-maj=4.8km s-min=3.0km az=80.0*

NEIC ***24*** *16:03:00.1±1.3,39°.36N±0°.03×16°.18E±0°.05,h10km±1km, mb4.8/72,Error ellipse: s-maj=6.5km s-min=4.4km az=111.0*

NAO ***24*** *16:03:01.0,39°.44N×16°.77E,h10km,MB3.7*

ISC 24 16:02:59.6±0.6,39°.32N±0°.02×16°.23E±0°.02,h12km±3km, n491,σ2ᵍ15/513,mb4.8/89,MS3.6/37,50C-32D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAR1	**CAROLEI**	**0.07**	**194**	⇑P	**Pg**	**16 03 01.7**	**-0.4**
CAR1				S	**Sg**	**16 03 03.6**	**-0.4**
CAR1				AML	AML		
CAR1				AML	AML		
SPS2	**Spezzano della**	**0.09**	**110**	⇑P	**Pg**	**16 03 01.5**	**-0.8**
SPS2				S	**Sg**	**16 03 03.4**	**-0.9**
SPS2				AML	AML		
SPS2				AML	AML		
SPS2				AML	AML		
CELI	**Celico**	**0.23**	**69**	⇑P	**Pg**	**16 03 03.5**	**-1.0**
CELI				S	**Sg**	**16 03 06.9**	**-0.9**
CELI				AML	AML		
CELI				AML	AML		
CELI				AML	AML		
CELI				AML	AML		
CET2	**Cetraro**	**0.30**	**314**	⇑P	**Pg**	**16 03 04.7**	**-1.0**
CET2				S	**Sg**	**16 03 09.1**	**-0.7**
TDS	**Terranova Siba**	**0.34**	**13**	⇑P	**Pg**	**16 03 05.0**	**-1.5**
TDS				S	**Sg**	**16 03 10.2**	**-1.0**
TDS				AML	AML		
	comp=E,51950μm,0.8s						
TDS				AML	AML		
	comp=N,32500μm,1.0s						
TIP	**Timpagrande**	**0.43**	**109**	⇓S	**Sb**	**16 03 16.8**	**+1.2**
TIP	**Timpagrande**	**0.43**	**109**	P	**Pg**	**16 03 07.4**	**-0.7**
TIP	**Timpagrande**	**0.43**	**109**	⇑P	**Pg**	**16 03 07.5**	**-0.6**
TIP				S	**Sg**	**16 03 13.8**	**-0.1**
TIP				AML	AML		
	comp=N,37600μm,1.0s						
TIP				AML	AML		
	comp=E,45150μm,1.1s						
TIP				AML	AML		
	comp=N,38050μm,1.0s						
TIP				AML	AML		
	comp=E,45100μm,1.1s						
TIP				AML	AML		
	comp=E,44950μm,1.1s						
TIP				AML	AML		
	comp=N,38050μm,1.0s						
TIP				AML	AML		
	comp=N,37600μm,1.0s						
TIP				AML	AML		
	comp=E,44950μm,0.9s						
TIP				AML	AML		
	comp=E,45100μm,0.9s						
SERS	**Sersale**	**0.46**	**129**	⇑P	**Pg**	**16 03 07.9**	**-0.6**
SERS				S	**Sb**	**16 03 15.6**	**-0.8**
SERS				AML	AML		
	comp=N,31500μm,0.5s						
SERS				AML	AML		
	comp=E,30650μm,0.6s						
SERS				AML	AML		
	comp=N,48150μm,0.4s						
SERS				AML	AML		
	comp=E,46050μm,0.4s						
SERS				AML	AML		
	comp=N,31500μm,1.5s						
SERS				AML	AML		
	comp=E,30650μm,1.4s						
PIPA	**Pietrapaola**	**0.48**	**70**	⇑P	**Pg**	**16 03 07.9**	**-1.1**
PIPA				S	**Sg**	**16 03 15.5**	**+0.1**
PIPA				AML	AML		
PIPA				AML	AML		
	comp=N,88100μm,1.1s						
PIPA				AML	AML		
	comp=N,88050μm,1.1s						
PIPA				AML	AML		
	comp=N,88050μm,0.9s						
PIPA				AML	AML		
	comp=N,88100μm,0.9s						
PIPA				AML	AML		
GRIS	**Grisolia**	**0.51**	**325**	⇑P	**Pg**	**16 03 08.3**	**-1.3**
GRIS				S	**Sg**	**16 03 15.5**	**-0.9**
GRI	**Girifalco**	**0.52**	**164**	P	**Pg**	**16 03 09.3**	**-0.5**
GRI				S	**Sb**	**16 03 18.6**	**+0.4**
GRI				AML	AML		
	comp=N,52050μm,0.6s						
GRI				AML	AML		
	comp=E,42200μm,0.3s						
SALB	**San Lorenzo Be**	**0.56**	**9**	P	**Pg**	**16 03 08.7**	**-1.9**
SALB				S	**Sg**	**16 03 16.5**	**-1.5**
SALB				AML	AML		
	comp=N,19550μm,0.7s						
SALB				AML	AML		
	comp=E,29250μm,0.3s						
SALB				AML	AML		
	comp=N,19550μm,1.3s						
SALB				AML	AML		
	comp=E,29250μm,1.7s						
LADO	**San Nicola del**	**0.58**	**94**	⇑P	**Pg**	**16 03 09.8**	**-1.1**
LADO				S	**Sb**	**16 03 20.1**	**+0.2**
MMN	**Mormanno**	**0.60**	**342**	⇑P	**Pg**	**16 03 09.9**	**-1.4**
MMN				AML	AML		
MMN				AML	AML		
MMN				AML	AML		
CUC	**Castrocucco**	**0.74**	**334**		**Pg**	**16 03 12.2**	**-1.8**
CUC	**Castrocucco**	**0.74**	**334**	⇑P	**Pg**	**16 03 12.2**	**-1.8**
CUC				AML	AML		
	comp=N,62350μm,0.5s						
CUC				AML	AML		
	comp=N,63650μm,0.5s						
CUC				AML	AML		
CUC				AML	AML		
ORI	**Oriolo Calabro**	**0.76**	**13**	P	**Pg**	**16 03 12.6**	**-1.7**
ORI				AML	AML		
	comp=N,47700μm,0.5s						
ORI				AML	AML		
	comp=E,69300μm,0.5s						
ORI				AML	AML		
	comp=E,69300μm,1.5s						
JOPP	**Joppolo**	**0.77**	**201**	P	**Pg**	**16 03 13.9**	**-0.5**
JOPP				S	**Sb**	**16 03 25.5**	**+0.3**
JOPP				AML	AML		
	comp=N,47100μm,0.6s						
JOPP				AML	AML		
	comp=E,29900μm,0.6s						
JOPP				AML	AML		
	comp=N,47100μm,1.4s						
FERC	**Galatro**	**0.87**	**185**	P	**Pg**	**16 03 16.4**	**-0.1**
SCHR	**S. Chirico Rap**	**0.88**	**352**	⇑P	**Pg**	**16 03 15.1**	**-1.6**
SCHR				AML	AML		
	comp=N,17600μm,0.6s						
SCHR				AML	AML		
	comp=E,19900μm,0.5s						
PLAC	**Placanica**	**0.89**	**170**	P	**Pg**	**16 03 16.1**	**-0.6**
PLAC				AML	AML		
	comp=E,23900μm,0.5s						
PLAC				AML	AML		
	comp=N,23200μm,0.5s						
PLAC				AML	AML		
	comp=E,28000μm,0.6s						
PLAC				AML	AML		
	comp=N,29150μm,0.6s						
SIRI	**Monte Sirino -**	**0.90**	**342**	⇑P	**Pg**	**16 03 15.6**	**-1.5**
SIRI				AML	AML		
	comp=E,51550μm,0.3s						
SIRI				AML	AML		
	comp=N,47850μm,0.5s						
SIRI				AML	AML		
	comp=E,52850μm,0.3s						
SIRI				AML	AML		
	comp=N,48600μm,0.5s						
IST3	**Stromboli F**	**0.94**	**237**	⇑P	**Pg**	**16 03 16.8**	**-0.9**
IST3				AML	AML		
	comp=E,35100μm,0.5s						
IST3				AML	AML		
	comp=N,42950μm,0.5s						
IST3				AML	AML		
	comp=E,35100μm,1.5s						
MGR	**Morigerati**	**0.97**	**327**	⇑P	**Pg**	**16 03 16.0**	**-2.3**
MGR				AML	AML		
	comp=E,55300μm,0.3s						
MGR				AML	AML		
	comp=E,54100μm,0.3s						
MGR				AML	AML		
	comp=N,31550μm,0.6s						
MGR				AML	AML		
	comp=N,35050μm,0.5s						
ISTR	**Stromboli Gino**	**0.97**	**237**	P	**Pg**	**16 03 17.1**	**-1.2**
BULG	**Bulgheria - Ca**	**1.00**	**319**	⇑P	**Pg**	**16 03 17.0**	**-1.9**
BULG				AML	AML		
	comp=E,61250μm,0.4s						
BULG				AML	AML		
	comp=N,90800μm,0.5s						
BULG				AML	AML		
	comp=N,88900μm,0.5s						
BULG				AML	AML		
	comp=E,60200μm,0.4s						
VGG3	**Viggiano (Prot**	**1.04**	**346**	P	**Pb**	**16 03 18.9**	**-0.8**
CRAC	**Craco**	**1.05**	**8**	P	**Pg**	**16 03 19.9**	**+0.1**
CRAC				AML	AML		
	comp=E,65700μm,0.9s						
CRAC				AML	AML		
	comp=N,77050μm,0.8s						
CRAC				AML	AML		
	comp=E,65700μm,1.1s						
MCEL	**Monticello**	**1.05**	**342**	⇑P	**Pb**	**16 03 17.9**	**-1.9**
MCEL				AML	AML		
	comp=N,30050μm,0.8s						
MCEL				AML	AML		
	comp=E,23500μm,0.4s						
MCEL				AML	AML		
	comp=E,23800μm,0.4s						
MCEL				AML	AML		
	comp=N,29550μm,0.8s						
CEL	**Celeste**	**1.09**	**194**		**Pb**	**16 03 19.5**	**-1.0**
CEL	**Celeste**	**1.09**	**194**	P	**Pb**	**16 03 19.1**	**-1.4**
CEL				AML	AML		
	comp=E,24050μm,0.6s						
CEL				AML	AML		
	comp=E,23400μm,1.2s						
CEL				AML	AML		
	comp=N,36400μm,0.7s						
CEL				AML	AML		
	comp=E,24050μm,1.4s						
CEL				AML	AML		
	comp=N,35900μm,0.7s						
SICLA	**Scilla**	**1.14**	**201**	P	**Pb**	**16 03 20.2**	**-1.0**
SICLA				AML	AML		
	comp=E,37950μm,0.7s						
SICLA				AML	AML		
	comp=N,34700μm,0.8s						
SLCN	**Sala Consilina**	**1.16**	**337**	P	**Pb**	**16 03 19.4**	**-2.3**
SLCN				AML	AML		
	comp=E,55500μm,0.9s						
SLCN				AML	AML		
	comp=E,62350μm,0.9s						
SLCN				AML	AML		
	comp=E,55500μm,0.9s						
SLCN				AML	AML		
	comp=N,33850μm,0.7s						
SLCN				AML	AML		
	comp=E,62350μm,1.1s						
SLCN				AML	AML		
	comp=N,36400μm,0.7s						
SLCN				AML	AML		
	comp=E,55500μm,1.1s						
SLC1	**Sala Consilina**	**1.18**	**336**	P	**Pb**	**16 03 21.4**	**-0.5**
GMB	**Gambarie**	**1.20**	**196**	P	**Pn**	**16 03 20.9**	**-1.3**
GMB				AML	AML		
	comp=E,76850μm,0.4s						
GMB				AML	AML		
	comp=N,75750μm,0.5s						
MSRU	**Castanea**	**1.20**	**208**	P	**Pn**	**16 03 20.5**	**-1.7**
MSRU				AML	AML		
	comp=N,33900μm,0.8s						
MSRU				AML	AML		
	comp=N,33900μm,1.2s						
MSRU				AML	AML		
	comp=E,47450μm,0.4s						
PTRP	**Pietrapertosa**	**1.21**	**354**	P	**Pn**	**16 03 21.1**	**-1.3**
PTRP				AML	AML		
	comp=E,30500μm,0.5s						
PTRP				AML	AML		
	comp=N,27450μm,0.5s						
PTRP				AML	AML		
	comp=N,27450μm,1.5s						
CMPR	**Campora**	**1.23**	**324**	⇑P	**Pn**	**16 03 20.3**	**-2.3**
CMPR				AML	AML		
	comp=E,24600μm,1.5s						
CMPR				AML	AML		
	comp=N,22450μm,0.4s						
SOI	**Samo**	**1.26**	**186**	P	**Pn**	**16 03 21.9**	**-1.0**
SOI				AML	AML		
	comp=E,10830μm,0.5s						
SOI				AML	AML		
	comp=N,11000μm,0.5s						
SOI				AML	AML		
	comp=E,10825μm,0.5s						
STN3	**Satriano di Lu**	**1.29**	**340**	P	**Pn**	**16 03 22.1**	**-1.3**
STN3				AML	AML		
STN3				AML	AML		
STN3				AML	AML		
STN3				AML	AML		
STN3				AML	AML		
MIGL	**Miglionico**	**1.29**	**7**	P	**Pn**	**16 03 23.2**	**-0.2**
MIGL				AML	AML		
	comp=N,55500μm,1.6s						
MIGL				AML	AML		
	comp=N,55500μm,0.4s						
MIGL				AML	AML		
	comp=E,63950μm,1.5s						
PGN3	**Pignola, Italy**	**1.29**	**345**	P	**Pn**	**16 03 22.2**	**-1.4**
SRN3	**Sant'Arsenio**	**1.31**	**333**	P	**Pn**	**16 03 21.3**	**-2.5**
MATE	**Matera**	**1.37**	**15**	⇑P	**Pg**	**16 03 26.2**	**+0.2**
MATE				⇑S	**Sg**	**16 03 47.0**	**+3.2**
ACER	**Acerenza**	**1.48**	**351**		**Pn**	**16 03 25.8**	**-0.3**
SCTE	**Santa Cesarea**	**1.88**	**66**		**Pn**	**16 03 31.2**	**-0.3**
PAOL	**Paolisi**	**2.13**	**324**		**Pn**	**16 03 33.7**	**-1.3**
VAE	**Valguarnera**	**2.33**	**218**	Pn	**Pb**	**16 03 39.9**	**-1.6**
	comp=E,33nm,0.3s,baz=358,slow=14,SNR=16						
VAE				Sn	**Sb**	**16 04 11.8**	**+1.4**
	comp=E,78nm,0.3s,baz=148,slow=21,SNR=6.8						
SGRT	**San Giovanni R**	**2.46**	**351**		**Pn**	**16 03 38.5**	**-1.0**
RAFF	**Raffo Rosso**	**2.56**	**216**		**Pn**	**16 03 41.6**	**+0.7**
KEK	**Kerkira**	**2.78**	**81**		**Pn**	**16 03 43.8**	**-0.1**
KEK	**Kerkira**	**2.78**	**81**	AML	AML		
	comp=N,1530μm,0.4s						
KEK				AML	AML		
	comp=N,1530μm,1.6s						
KEK				AML	AML		
	comp=E,1820μm,1.4s						
CLTB	**Caltabellotta**	**2.94**	**235**	AML	AML		
	comp=N,13350μm,0.6s						
CLTB				AML	AML		
	comp=E,8040μm,0.6s						
INTR	**Introdacqua**	**3.22**	**327**		**Pn**	**16 03 48.9**	**-1.1**
ULC	**Ulcinj**	**3.49**	**40**	*e*Pn	**Pn**	**16 03 53.6**	**-0.1**
ULC				*i* Sn	**Sn**	**16 04 37.0**	**+2.0**
HCY	**Herceg Novi**	**3.56**	**28**	*e*Pn	**Pn**	**16 03 55.1**	**+0.5**
HCY				*i* Sn	**Sn**	**16 04 38.2**	**+1.6**
BUM	**Brajici-Budva**	**3.59**	**33**	*e*Pn	**Pn**	**16 03 55.1**	**-0.1**
BUM				*i* Sn	**Sn**	**16 04 39.0**	**+1.4**
DRME	**Dracevica, Mon**	**3.63**	**37**	*e*Pn	**Pn**	**16 03 55.1**	**-0.5**
DRME				*e*Sn	**Sn**	**16 04 39.8**	**+1.4**
AQU	**L'Aquila**	**3.71**	**326**	P	**Pn**	**16 03 58.5**	**+1.7**
STON	**Ston**	**3.71**	**17**	AML	AML		
	comp=E,516μm,1.6s						
STON				AML	AML		
	comp=N,824μm,0.9s						
STON				AML	AML		
	comp=E,516μm,0.4s						
WDD	**Wied Dalam**	**3.73**	**202**		**Pn**	**16 03 57.3**	**+0.3**
CEME	**Cevo**	**3.81**	**31**	*e*Pn	**Pn**	**16 03 57.9**	**-0.2**
CEME				*e*Sn	**Sn**	**16 04 44.2**	**+1.4**
PDG	**Podgorica**	**3.86**	**35**		**Pn**	**16 03 57.7**	**-1.0**
PDG	**Podgorica**	**3.86**	**35**	*e*Pn	**Pn**	**16 03 58.4**	**-0.3**
PDG				*i* Sn	**Sn**	**16 04 45.1**	**+1.2**
PDG	**Podgorica**	**3.86**	**35**	AML	AML		
	comp=N,452μm,1.2s						
PDG				AML	AML		
	comp=E,588μm,0.8s						
PDG				AML	AML		
	comp=N,452μm,0.8s						
PDG				AML	AML		
	comp=E,581μm,0.8s						
PDG				AML	AML		
	comp=E,588μm,1.2s						
PDG				AML	AML		
	comp=E,581μm,1.2s						
PDG				AML	AML		
	comp=N,453μm,1.6s						
OHR	**Ohrid**	**3.92**	**61**	*i* Pn	**Pn**	**16 04 02.2**	**+2.5**
BRY	**Bratogost**	**3.98**	**25**	*e*Pn	**Pn**	**16 04 00.1**	**-0.4**
BRY				*i* Sn	**Sn**	**16 04 47.8**	**+0.7**
NKME	**Niksic**	**4.01**	**30**	*e*Pn	**Pn**	**16 04 00.8**	**0.0**
NKME				*e*Sn	**Sn**	**16 04 48.9**	**+1.2**
CESX	**Cesi**	**4.29**	**321**		**Pn**	**16 04 03.7**	**-1.1**
KOME	**Kolasin**	**4.31**	**34**	*e*Pn	**Pn**	**16 04 05.3**	**+0.3**
KOME				*e*Sn	**Sn**	**16 04 56.3**	**+1.1**
PVY	**Plav**	**4.32**	**40**	*e*Pn	**Pn**	**16 04 05.9**	**+0.8**
PVY				*i* Sn	**Sn**	**16 04 56.7**	**+1.2**
GUMA	**Gualdo di Mace**	**4.33**	**331**		**Pn**	**16 04 04.5**	**-0.8**
UPM	**Unac-Piva**	**4.37**	**27**	*e*Pn	**Pn**	**16 04 06.1**	**+0.2**
UPM				*i* Sn	**Sn**	**16 04 57.5**	**+0.7**
IVA	**Berane**	**4.50**	**37**	*e*Pn	**Pn**	**16 04 08.3**	**+0.7**
IVA				*i* Sn	**Sn**	**16 05 00.9**	**+1.1**
PLE	**Pljevlja**	**4.66**	**30**	*e*Pn	**Pn**	**16 04 10.3**	**+0.5**
PLE				*i* Sn	**Sn**	**16 05 04.6**	**+0.8**
SKO	**Skopje**	**4.76**	**55**	*i* Pn	**Pn**	**16 04 12.5**	**+1.3**
LIT	**Litokhoron**	**4.89**	**79**		**Pn**	**16 04 14.0**	**+1.1**
LIT	**Litokhoron**	**4.89**	**79**	P	**Pn**	**16 04 14.0**	**+1.1**
ITM	**Ithomi**	**4.96**	**114**		**Pn**	**16 04 15.3**	**+1.4**
VAY	**Valandovo**	**5.24**	**66**	*i* Pn	**Pn**	**16 04 18.9**	**+1.2**
BLY	**Banja Luka**	**5.47**	**7**	⇑P	**Pn**	**16 04 22.3**	**+1.5**
PGF	**Pioggiola**	**6.36**	**303**	*e*Pn	**Pn**	**16 04 31.9**	**-1.2**
PGF				*e*Sn	**Sn**	**16 05 43.5**	**-2.2**
	comp=N,31nm,0.7s						
KEST	**Kesra**	**6.54**	**239**	Pn	**Pn**	**16 04 37.6**	**+1.9**
	comp=N,8.4nm,0.3s,baz=355,slow=4.6,SNR=59						
KEST				LR	LR	16 07 41.3	
	comp=N,407nm,18.7s,baz=49,slow=44						
GCIS	**Gornji Cirnik**	**6.56**	**356**	*e*Pn	**Pn**	**16 04 35.9**	**+0.1**
VISS	**Visnje**	**6.56**	**351**	*e*Pn	**Pn**	**16 04 35.6**	**-0.2**
TRI	**Trieste**	**6.64**	**345**		**Pn**	**16 04 36.3**	**-0.6**
TRI	**Trieste**	**6.64**	**345**	P	**Pn**	**16 04 36.3**	**-0.6**
MDVR	**Moldovita**	**6.81**	**35**	⇑P	**Pn**	**16 04 41.1**	**+1.8**
TEOL	**Teolo**	**6.92**	**332**		**Pn**	**16 04 40.6**	**-0.1**
SABO	**M.te Sabotino**	**6.93**	**345**		**Pn**	**16 04 40.6**	**-0.3**
PUNG	**Punghina**	**7.04**	**43**	⇓P	**Pn**	**16 04 43.7**	**+1.3**
DJES	**Djerdap**	**7.10**	**39**	⇓P	**Pn**	**16 04 45.2**	**+1.9**
BEHE	**Becsehely**	**7.16**	**3**		**Pn**	**16 04 43.7**	**-0.3**
HERR	**Herculane**	**7.21**	**38**	⇑P	**Pn**	**16 04 46.1**	**+1.4**
OBKA	**Obir**	**7.29**	**351**	*e*Pn	**Pn**	**16 04 45.4**	**-0.5**
	comp=N,24nm,0.6s,SNR=13						
OBKA				*i* Sn	**Sn**	**16 06 06.3**	**-2.3**
	comp=N,37nm,0.7s						
SOKA	**Soboth**	**7.40**	**354**	*e*Pn	**Pn**	**16 04 47.2**	**-0.3**
	comp=N,8.6nm,0.4s						
SOKA				*i* Sn	**Sn**	**16 06 11.2**	**-0.2**
	comp=N,12nm,0.5s						
PLVB	**Pleven**	**7.50**	**55**	⇓P	**Pn**	**16 04 50.5**	**+1.7**
MYKA	**Terra Mystica**	**7.55**	**346**	*i* Pn	**Pn**	**16 04 49.8**	**+0.4**
	comp=N,7.5nm,0.5s						
MYKA				*e*Sn	**Sn**	**16 06 14.8**	**-0.1**
	comp=N,9.1nm,0.4s						
GZR	**Gura Zlata**	**7.76**	**36**	⇓P	**Pn**	**16 04 54.1**	**+1.7**
GZR	**Gura Zlata**	**7.76**	**36**	P	**Pn**	**16 04 54.0**	**+1.7**
EZN	**Ezine**	**7.81**	**83**	P	**Pn**	**16 04 53.6**	**+0.6**
	comp=N,0.3nmcomp=N,93nm,0.8s						
ABTA	**Abaltersbach**	**7.90**	**341**	*e*Pn	**Pn**	**16 04 54.5**	**+0.2**
	comp=N,8.4nm,0.6s,SNR=8.0						
ABTA				*e*Sn	**Sn**	**16 06 22.9**	**-0.8**
	comp=N,38nm,0.7s						
ARSA	**Arzberg**	**7.94**	**356**	*e*Pn	**Pn**	**16 04 54.0**	**-0.8**
	comp=N,24nm,0.8s,SNR=8.4						
ARSA				*e*Sn	**Sn**	**16 06 23.4**	**-1.1**
	comp=N,2.5nm,0.3s						
IDI	**Anoyia**	**7.99**	**118**	Pn	**Pn**	**16 04 55.9**	**+0.5**

comp=N,4.7nm,0.3s,baz=352,slow=22,SNR=6.6
IDI LR LR 16 09 16.5

comp=N,324nm,19.8s,baz=306,slow=47
SBF Sospel 8.00 307 *e*Pn **Pn** **16 04 53.9 -1.8**
SBF *e*P **Pn** **16 04 58.0 +2.3**
SBF *e*Sn **Sn** **16 06 18.5 -7.6**
ELND Elena 8.12 61 ⇑P **Pn** **16 04 59.0 +1.8**
LOT Lotru 8.28 40 ⇓P **Pn** **16 05 01.0 +1.5**
HUMR Humele 8.34 49 ⇓P **Pn** **16 05 02.1 +1.9**
LMR La Mourre 8.34 302 *e*Pn **Pn** **16 04 57.3 -3.0**
LMR *e*P **Pn** **16 05 02.7 +2.4**
RONA Rosalia, Austr 8.37 0 *e*Pn **Pn** **16 05 00.9 +0.1**
comp=N,9.7nm,0.4s,SNR=5.6
RONA *i*Sn **Sn** **16 06 34.8 -0.4**

comp=N,9.0nm,0.7s
LESA Schwarzleotal 8.50 343 *e*Pn **Pn** **16 05 04.0 +1.5**
comp=N,5.9nm,0.4s
LESA *i*Sn **Sn** **16 06 38.1 -0.2**

comp=N,18nm,0.6s
BIOA Bad Ischl, Aus 8.57 348 *i*Pn **Pn** **16 05 06.0 +2.5**
comp=N,16nm,0.5s
BIOA *i*Sn **Sn** **16 06 39.1 -1.0**

comp=N,12nm,0.4s
CONA Conrad Observa 8.61 358 *e*Pn **Pn** **16 05 04.6 +0.6**
comp=N,16nm,0.5s,SNR=20
CONA *i*Sn **Sn** **16 06 38.0 -2.9**

comp=N,6.3nm,0.4s
WTTA Wattenberg 8.61 339 *i*Pn **Pn** **16 05 05.2 +1.0**
comp=N,2.2nm,0.3s
WTTA *i*Sn **Sn** **16 06 40.1 -1.2**

comp=N,33nm,0.7s
MOA Molln 8.64 351 *e*Pn **Pn** **16 05 06.2 +1.8**
comp=N,32nm,0.6s,SNR=13
MOA *i*Sn **Sn** **16 06 42.1 +0.3**

comp=N,25nm,0.8s
ARR Arges 8.67 43 ⇑P **Pn** **16 05 06.8 +2.0**
TNR Turnu Rosu 8.67 41 ⇑P **Pn** **16 05 06.8 +1.9**
TNR Turnu Rosu 8.67 41 P **Pn** **16 05 06.7 +1.9**
FETA Feichten 8.68 334 *i*Pn **Pn** **16 05 06.0 +1.0**
comp=N,3.2nm,0.4s,SNR=8.7
FETA *e*Sn **Sn** **16 06 44.4 +1.5**

comp=N,9.8nm,0.8s
WATA Walderalm 8.70 339 *i*Pn **Pn** **16 05 05.1 -0.1**
comp=N,6.6nm,0.4s
WATA *i*Sn **Sn** **16 06 42.0 -1.3**

comp=N,13nm,0.7s
SQTA Sankt Quirin 8.70 337 *i*Pn **Pn** **16 05 07.1 +1.8**
comp=N,9.3nm,0.4s
SQTA *e*Sn **Sn** **16 06 42.4 -1.0**

comp=N,21nm,0.6s
TUE Stuetta 8.75 327 P **Pn** **16 05 07.2 +1.2**
comp=N,78nm,0.6s
LOZB Loznitsa 8.78 59 ⇓P **Pn** **16 05 07.8 +1.6**
DAVOX Davos/Dischmat 8.78 330 Pn **Pn** **16 05 06.9 +0.4**
comp=N,1.4nm,0.3s,baz=155,slow=18,SNR=17
DAVOX Sn **Sn** **16 06 41.0 -4.5**
comp=N,0.3nm,0.3s,baz=117,slow=14,SNR=1.6
DAVOX LR LR 16 09 09.9
comp=N,318nm,18.8s,baz=94,slow=42
comp=N,18nm,0.8s
RAZG Razgrad 8.80 58 ⇓P **Pn** **16 05 09.0 +2.4**
DRGR 8.84 30 ⇓P **Pn** **16 05 09.7 +2.5**
DRGR 8.84 30 P **Pn** **16 05 09.6 +2.5**
MOTA Moosalm 8.85 337 *i*Pn **Pn** **16 05 09.0 +1.7**
comp=N,10nm,0.7s
MOTA *i*Sn **Sn** **16 06 48.2 +1.3**

comp=N,14nm,0.8s
MBDF Montbardon 8.87 311 *e*P **Pn** **16 05 11.0 +3.3**
MARR Marisel-Cluj 8.91 32 ⇑P **Pn** **16 05 09.6 +1.5**
VOIR 8.93 44 ⇓P **Pn** **16 05 10.2 +1.7**
VOIR 8.93 44 P **Pn** **16 05 10.4 +1.7**
VOIR 8.93 44 P **Pn** **16 05 10.8 +2.3**
comp=N,71nm,1.1s
PSZ Piszkesteto 8.99 16 ⇑P **Pn** **16 05 10.2 +0.9**
PSZ Piszkesteto 8.99 16 P **Pn** **16 05 10.1 +0.9**
MDB Medias 9.07 39 ⇑P **Pn** **16 05 12.6 +2.3**
MDB Medias 9.07 39 P **Pn** **16 05 12.6 +2.3**
MODS Modra-Piesok 9.08 4 *e*P **Pn** **16 05 10.9 +0.5**
MODS *e* 16 06 47.4
MODS Modra-Piesok 9.08 4 *e*PN **Pn** **16 05 10.9 +0.5**
MODS *e*SN **Sn** **16 06 47.4 -5.1**
CJR Cluj-Napoca 9.14 34 ⇓P **Pn** **16 05 13.3 +2.0**
CJR Cluj-Napoca 9.14 34 P **Pn** **16 05 13.3 +2.0**
BAND Balkesir-Ban 9.19 80 ⇓P **Pn** **16 05 13.1 +1.2**
DAVA Damuels 9.21 332 *e*Pn **Pn** **16 05 11.4 -0.8**
comp=N,5.0nm,0.4s
DAVA *e*Sn **Sn** **16 06 55.2 -0.6**

comp=N,11nm,0.5s
SMOL Smolenice 9.23 5 *e*P **Pn** **16 05 10.7 -1.7**
SMRF Simiane la Rot 9.23 304 *e*P **Pn** **16 05 16.0 +3.5**
LPL La Plagne 9.36 314 *e*P **Pn** **16 05 18.2 +3.8**
CTYL Yalikoy Yolu 9.45 73 P **Pn** **16 05 16.5 +1.1**
comp=N,104nm,0.9s
DOPR Dopca 9.46 42 ⇑P **Pn** **16 05 16.9 +1.3**
MLR Muntele Rosu 9.46 46 Pn **Pn** **16 05 17.6 +1.9**
comp=N,2.1nm,0.3s,baz=210,slow=22,SNR=4.5
MLR Sn **Sn** **16 07 00.1 -1.9**
comp=N,0.8nm,0.3s,baz=249,slow=15,SNR=1.4
comp=N,6.1nm,0.4s
MLR Muntele Rosu 9.46 46 ⇓P **Pn** **16 05 17.0 +1.3**
MLR Muntele Rosu 9.46 46 P **Pn** **16 05 19.5 +3.8**
comp=N,35nm,0.7s
KARP Karpathos 9.47 110 P **Pn** **16 05 15.3 -0.5**
comp=N,58nm,0.6s
ORIF Oris-en-Rattie 9.51 309 *e*P **Pn** **16 05 20.4 +4.1**
JAVC Velka Javorina 9.59 6 *e*PN **Pn** **16 05 19.4 +2.0**
CKRC Cesky Krumlov 9.60 352 *e*PN **Pn** **16 05 18.8 +1.3**
CKRC Cesky Krumlov 9.60 352 *e*P **Pn** **16 05 18.8 +1.3**
KECS Kecovo 9.66 17 *e*P **Pn** **16 05 20.8 +2.5**
KECS Kecovo 9.66 17 *e*PN **Pn** **16 05 20.8 +2.5**
GERES GERESS Array B 9.69 350 Pn **Pn** **16 05 17.5 -1.4**
comp=N,0.1nm,0.3s,baz=171,slow=12,SNR=16
GERES Sn **Sn** **16 07 02.9 -4.7**
comp=N,0.3nm,0.3s,baz=160,slow=22,SNR=7.7
GERES LR LR 16 09 21.0
comp=N,81nm,18.6s,baz=154,slow=40
comp=N,1.6nm,0.4s
KRUC Moravsky 9.74 1 *e*PN **Pn** **16 05 19.8 +0.4**
COVR Voineasa-Covas 9.82 45 ⇓P **Pn** **16 05 22.9 +2.3**
ICOR Ion Corvin 9.88 57 ⇑P **Pn** **16 05 23.3 +1.9**
VRAC Vranov 9.99 1 Pn **Pn** **16 05 23.4 +0.6**
comp=N,1.0nm,0.3s,baz=181,slow=15,SNR=4.4
VRAC LR LR 16 09 54.1
comp=N,123nm,18.4s,baz=198,slow=42
comp=N,2.9nm,0.4s
VRAC Vranov 9.99 1 *e*PN **Pn** **16 05 21.9 -0.9**
KHC Kasperske Hory 9.99 350 *e*PN **Pn** **16 05 22.2 -0.7**
KHC *e*SN **Sn** **16 07 11.8 -3.0**
KHC Kasperske Hory 9.99 350 *e*P **Pn** **16 05 22.2 -0.7**
KHC *e* 16 07 11.8
KHC Kasperske Hory 9.99 350 P **Pn** **16 05 24.7 +1.8**
comp=N,9.1nm,0.7s
BERU Beregovo 10.04 25 P **Pn** **16 05 25.9 +2.4**
PLOR Plostina 10.07 46 ⇓P **Pn** **16 05 25.8 +1.7**
PLOR Plostina 10.07 46 P **Pn** **16 05 25.7 +1.7**
MAUC Maruska 10.11 6 *e*PN **Pn** **16 05 25.6 +1.1**
MAUC *e*SN **Sn** **16 07 15.0 -2.7**
VRI Vrincioaia 10.12 46 ⇓P **Pn** **16 05 27.0 +2.3**
VRI Vrincioaia 10.12 46 P **Pn** **16 05 27.0 +2.3**
VRI Vrincioaia 10.12 46 P **Pn** **16 05 27.1 +2.3**
comp=N,55nm,1.0s
KORU Korolevo 10.14 27 P **Pn** **16 05 28.8 +3.9**
HOLU Holmets 10.21 24 P **Pn** **16 05 29.7 +3.9**
ZVC Zvikov 10.22 352 *e*PN **Pn** **16 05 27.9 +1.9**
MUKU Mukachevo 10.24 25 P **Pn** **16 05 30.4 +4.1**
ODBI Odobesti 10.25 48 ⇓P **Pn** **16 05 28.5 +2.1**
BRIU Brid 10.25 26 P **Pn** **16 05 28.4 +2.0**
LASF Ste Croix 10.40 301 *e*Pn **Pn** **16 05 27.2 -1.3**
CABF La Chapelle 10.40 318 *e*P **Pn** **16 05 31.1 +2.5**
TESR Tescani 10.48 43 ⇑P **Pn** **16 05 31.8 +2.2**
MORC Moravsky Berou 10.49 5 ⇑P **Pn** **16 05 31.1 +1.3**
MORC Moravsky Berou 10.49 5 P **Pn** **16 05 31.1 +1.3**
MORC Moravsky Berou 10.49 5 *e*PN **Pn** **16 05 30.4 +0.6**
NIE Niedzica 10.50 15 P **Pn** **16 05 33.9 +4.0**
comp=N,5.9nm,1.4s
BURAR Bucovina Array 10.54 35 ⇑P **Pn** **16 05 32.0 +1.5**
BURAR Bucovina Array 10.54 35 P **Pn** **16 05 32.0 +1.5**
MEZ Mezhgor'ye 10.58 27 P **Pn** **16 05 34.3 +3.4**
CFR Carcaliu 10.58 53 ⇑P **Pn** **16 05 32.8 +1.9**
CFR Carcaliu 10.58 53 P **Pn** **16 05 32.8 +1.9**
PRU Pruhonice 10.73 354 *e*PN **Pn** **16 05 34.3 +1.3**
PRU Pruhonice 10.73 354 *e*P **Pn** **16 05 34.3 +1.3**
KRLC Kraliky 10.76 2 *e*PN **Pn** **16 05 35.1 +1.7**
KRLC Kraliky 10.76 2 *e*P **Pn** **16 05 35.1 +1.7**

KSV Kosov 11.02 32 P **Pn** **16 05 40.5 +3.6**
DPC Dobruska-Polom 11.03 0 P **Pn** **16 05 41.2 +4.1**
comp=N,6.3nm,1.8s
STNU Starunia 11.11 30 P **Pn** **16 05 42.1 +4.0**
SHU Shidnytsya 11.13 25 P **Pn** **16 05 42.8 +4.3**
CDF Champ du Feu 11.14 328 *e*Pn **Pn** **16 05 37.0 -1.7**
OJC Ojcow 11.18 12 P **Pn** **16 05 43.3 +4.1**
comp=N,11nm,3.0s
OSTC Ostas 11.23 360 *e*PN **Pn** **16 05 41.2 +1.3**
OSTC Ostas 11.23 360 *e*P **Pn** **16 05 41.2 +1.3**
MTLF Montolieu 11.28 295 *e*Pn **Pn** **16 05 37.1 -3.4**
ISP Isparta 11.29 93⇓ *e*P **Pn** **16 05 43.0 +2.3**
KWP Kalwaria Pacla 11.29 22 P **Pn** **16 05 44.4 +3.8**
comp=N,47nm,1.4s
HSKC Hora Svate Kat 11.46 351 *e*PN **Pn** **16 05 43.7 +0.8**
KSP Ksiaz 11.52 0 P **Pn** **16 05 47.3 +3.5**
BRG Berggiesshubel 11.66 353 *e*P **Pn** **16 05 47.5 +1.8**
BRG Amp 16 05 56.9
comp=Z,3.6nm,0.8s
LOR Lormes 12.00 315 *e*P **Pn** **16 05 51.3 +0.9**
SSF Saint Saulge 12.08 314 *e*P **Pn** **16 05 51.9 +0.5**
CLL Collm 12.20 350 *i*P **Pn** **16 05 55.5 +2.5**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 12.20 350 P **Pn** **16 05 55.0 +2.0**
comp=Z,13nm,2.0s
CLL Collm 12.20 350 *i*Pn **Pn** **16 05 55.5 +2.5**
comp=Z,5.0nm,0.8s
CLL *e*Sg 16 09 31.0
LUBAR Lubar, Ukraine 13.38 34 P **Pn** **16 06 11.3 +2.1**
BR105 Keskin Array S 13.43 83 P **Pn** **16 06 11.8 +1.7**
comp=Z,78nmcomp=Z,6.5nm,0.7s
BR106 Keskin Array S 13.43 83 P **Pn** **16 06 11.0 +1.0**
comp=Z,7.7nm,0.9s
BR131 Keskin Array S 13.45 83 *ce*P **Pn** **16 06 12.4 +2.1**
BRTR Keskin Array B 13.45 83 Pn **Pn** **16 06 10.9 +0.7**
comp=Z,0.2nm,0.3s,baz=259,slow=11,SNR=8.1
BRTR LR LR 16 11 51.0
comp=Z,133nm,19.7s,baz=278,slow=39
comp=Z,2.5nm,0.8s
BRTR Keskin Array B 13.45 83 *ce*P **Pn** **16 06 12.3 +2.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BR104 Keskin Array S 13.45 83 P **Pn** **16 06 11.5 +1.2**
comp=Z,7.3nm,0.8s
MI28 Mi28,Pidlybu 14.12 31 P **Pn** **16 06 22.9 +3.7**
CSS Mathiatis 14.31 102 P **Pn** **16 06 21.9 -0.1**
comp=Z,23nm,1.1s
AK07 Malin Array Si 14.48 35 P **Pn** **16 06 26.8 +2.6**
AK06 Malin Array Si 14.50 35 P **Pn** **16 06 26.8 +2.3**
AK17 Malin Array Si 14.51 34 P **Pn** **16 06 26.7 +2.1**
AK19 Malin Array Si 14.52 34 P **Pn** **16 06 26.6 +1.9**
AK16 Malin Array Si 14.52 34 P **Pn** **16 06 27.5 +2.7**
AK12 Malin Array Si 14.53 35 P **Pn** **16 06 28.1 +3.3**
AK05 Malin Array Si 14.53 35 P **Pn** **16 06 27.5 +2.6**
AK20 Malin Array Si 14.53 34 P **P** **16 06 28.4 -3.1**
AK10 Malin Array Si 14.54 35 P **Pn** **16 06 27.2 +2.3**
AK18 Malin Array Si 14.54 34 P **Pn** **16 06 28.0 +2.9**
AK11 Malin Array Si 14.55 35 P **P** **16 06 28.9 -2.9**
AK02 Malin Array Si 14.56 35 P **P** **16 06 29.2 -2.6**
AK09 Malin Array Si 14.56 35 P **P** **16 06 28.7 -3.1**
AK08 Malin Array Si 14.56 35 P **P** **16 06 28.8 -3.0**
AK21 Malin Array Si 14.57 34 P **Pn** **16 06 28.6 +3.2**
AK22 Malin Array Si 14.57 34 P **Pn** **16 06 28.3 +2.8**
AK01 Malin Array Si 14.58 35 P **Pn** **16 06 28.7 +3.1**
AK04 Malin Array Si 14.59 34 P **P** **16 06 28.9 -3.2**
AKASG Malin Array Be 14.60 35 Pn **Pn** **16 06 25.8 0.0**
comp=Z,0.2nm,0.3s,baz=219,slow=12,SNR=4.1
AKASG LR LR 16 13 09.4
comp=Z,169nm,20.4s,baz=233,slow=42
AKBB Malin Array Si 14.60 35⇑ *e*P **Pn** **16 06 25.3 -0.5**
ESDC Sonseca Array 15.60 278 Pn **Pn** **16 06 38.2 -1.0**
comp=Z,0.3nm,0.3s,baz=77,slow=11,SNR=9.2
ESDC LR LR 16 11 50.9
comp=Z,322nm,21.1s,baz=67,slow=34
comp=Z,1.5nm,0.8s
ESDC Sonseca Array 15.60 278 IAmb IAmb 16 06 42.9
comp=Z,4.5nm,1.6s
PAB San Pablo 15.91 277 Pn **Pn** **16 06 43.7 +0.4**
PAB San Pablo 15.91 277 P **Pn** **16 06 43.7 +0.4**
PAB pmax pmax
comp=Z,16nm,1.6s
MMC7 Mount Meron ar 16.69 106 P **Pn** **16 06 49.2 -4.1**
MMA0B Mount Meron ar 16.70 106 P **Pn** **16 06 49.2 -4.2**
MMAI Mount Meron Ar 16.70 106 Pn **Pn** **16 06 49.9 -3.5**
comp=Z,1.4nm,0.3s,baz=306,slow=14,SNR=4.6
MMAI LR LR 16 15 01.2
comp=Z,84nm,19.6s,baz=286,slow=43
GEM Giv'at Ha'Em 16.80 105 P **Pn** **16 06 50.9 -3.7**
KSHT Keshet 17.02 106 P **Pn** **16 06 53.2 -4.2**
MNK Minsk 17.11 24 *i*P **Pn** **16 06 58.4 +0.1**
comp=E,16nm,0.8s
MNK *i*P **Pn** **16 06 58.4 +0.1**
comp=N,10.0nm,0.7s
MNK *i*P **Pn** **16 06 58.4 +0.1**
comp=Z,25nm,0.8s,baz=212
MNK *i*PP **PnPn** **16 07 09.2 +1.1**
MNK *i*S **S** **16 10 16.2 -1.6**
MNK *i*SS **SnSn** **16 10 34.3 +13**
MNK *i*LQ LQ 16 12 36.3
MNK *i*LR LR 16 13 27.9
MNK *i*LRM MLR 16 15 00.3
comp=Z,46nm,8.3s
MNK *i*LRM MLR 16 15 09.8
comp=E,109nm,10.0s
MNK *i*LRM MLR 16 15 13.6
comp=N,94nm,12.8s
MNK Minsk 17.11 24 *i*P **Pn** **16 06 58.4 +0.1**
MNK *i*S **S** **16 10 16.2 -1.6**
MNK pmax pmax
comp=Z,25nm,0.8s
MNK pmax pmax
comp=E,16nm,0.8s
MNK pmax pmax
comp=N,10.0nm,0.7s
MNK MLR MLR
comp=Z,46nm,8.0s
MNK MLR MLR
comp=E,109nm,10.0s
MNK MLR MLR
comp=N,94nm,13.0s
NACGM Naroch 17.13 21 *e*P **Pn** **16 06 58.1 -0.5**
HMDT Nahal Hemdat 17.15 108 P **Pn** **16 06 54.1 -5.0**
HMDT S **Sn** **16 10 04.5 -5.2**
YTIR Yattir 17.31 112 P **Pn** **16 06 55.3 -5.8**
YTIR S **Sn** **16 10 07.2 -6.5**
DSI Dead Sea 17.39 111 P **Pn** **16 06 56.4 -5.7**
DSI S **Sn** **16 10 08.8 -6.7**
MSBI Mazada 17.51 111 P **Pn** **16 06 57.8 -5.7**
MSBI S **Sn** **16 10 11.5 -6.8**
PBRG Braganca 17.62 285 *e*tx tx 16 07 13.3
PRNI Paran 17.79 114 P **Pn** **16 07 00.3 -6.8**
PRNI S **Sn** **16 10 14.9 -10**
MVO Moncorvo 17.85 283 *e*P **P** **16 07 12.8 +4.3**
MVO *i*IAmb IAmb 16 07 16.5
comp=N,29nm,1.0s
HRFI Mount Harif 18.00 115 P **Pn** **16 07 02.5 -7.1**
MDT Midelt 18.04 255 P **P** **16 07 11.7 +1.0**
comp=N,26nm,0.9s,baz=81,slow=13,SNR=13
MDT LR LR 16 13 22.4
comp=N,220nm,20.2s,baz=56,slow=35
SOC Sochi 18.09 69 *e*P **P** **16 07 12.5 +1.5**
SOC *e*S **S** **16 10 37.7 -0.4**
SOC pmax pmax
comp=Z,41nm,0.8s
SOC MLR MLR
comp=Z,49nm,12.0s
MD01 Midelt array s 18.13 256 **P** **16 07 11.9 +0.3**
EIL Elat 18.16 116 P **Pn** **16 07 09.6 -1.9**
comp=Z,1.0nm,0.3s,baz=318,slow=9.4,SNR=8.9
EIL S Sn 16 10 22.4 -12
comp=Z,10nm,0.8s,baz=152,slow=23,SNR=5.0
comp=Z,4.0nm,0.5s
EIL Elat 18.16 116 P **Pn** **16 07 04.6 -6.9**
EIL S **Sn** **16 10 23.8 -10**
PBAR Barrancos 18.18 274 *e*P **P** **16 07 14.3 +2.3**
ASF Jabal al Asfar 18.21 107 P **Pn** **16 07 10.8 -1.4**
comp=Z,0.4nm,0.3s,baz=180,slow=6.6,SNR=6.1
ASF LR LR 16 15 47.0
comp=Z,61nm,20.6s,baz=207,slow=42
comp=Z,4.2nm,0.7s
PMRV Marv??o 18.26 278 *e*P **P** **16 07 16.6 +3.7**
PMRV *i*IAmb IAmb 16 07 34.5
comp=Z,35nm,1.3s

MTE Manteigas 18.28 281 *e*P **Pn** **16 07 10.6 -2.5**
MTE *i*IAmb IAmb 16 07 23.5
comp=Z,34nm,1.3s
MTE Manteigas 18.28 281 *e*P **Pn** **16 07 11.5 -1.6**
PCBR Castelo Branco 18.28 279 *e*P **P** **16 07 15.8 +2.8**
POLO Lamas de Olo 18.42 284 *e*P **Pn** **16 07 17.2 +2.4**
PESTR Estremoz 18.49 276 *e*P **Pn** **16 07 21.6 +6.0**
PVIS Viseu 18.52 282 *e*P **Pn** **16 07 16.9 +0.8**
PSARD Sardoal 18.83 279 *e*P **Pn** **16 07 21.6 +1.9**
PSARD *i*IAmb IAmb 16 07 25.7
comp=Z,39nm,1.8s
PARRA Arraiolos 18.85 276 *e*P **Pn** **16 07 21.8 +1.9**
PARRA *i*IAmb IAmb 16 07 29.1
comp=Z,22nm,1.1s
PBEJ Beja 18.85 274 *e*P **Pn** **16 07 22.2 +2.2**
PVAQ Vaqueiros 18.87 272 P **Pn** **16 07 20.1 -0.1**
PVAQ Vaqueiros 18.87 272 *e*P **Pn** **16 07 21.1 +0.9**
EVO Evora 18.87 275 *e*P **Pn** **16 07 20.8 +0.5**
LABN Labinsk 18.93 66 *e*P **Pn** **16 07 21.2 +0.3**
LABN pmax pmax
comp=Z,33nm,0.6s
ERBR Yeremizino-Bor 18.94 62 *e*P **Pn** **16 07 23.7 +2.7**
ERBR pmax pmax
comp=Z,29nm,0.8s
PMTG Montargil 18.95 277 *e*P **Pn** **16 07 24.0 +2.9**
PMTG *i*IAmb IAmb 16 07 31.8
comp=Z,33nm,1.0s
PCAS Casmilo, Conde 19.04 280 *e*P **Pn** **16 07 26.5 +4.3**
PCVE Castro Verde 19.07 273 *e*P **Pn** **16 07 24.9 +2.3**
PBDV Barranco-do-Ve 19.07 271 *e*P **Pn** **16 07 27.4 +4.7**
MOE Montemor 19.14 275 *e*P **Pn** **16 07 27.8 +4.4**
MESJ Messejana 19.16 273 P **Pn** **16 07 23.5 -0.2**
MESJ IAmb IAmb 16 07 30.2
comp=Z,115nm,1.9s
MESJ Messejana 19.16 273 *e*P **Pn** **16 07 25.0 +1.3**
MESJ *i*IAmb IAmb 16 07 31.7
comp=Z,61nm,1.6s
MESJ Messejana 19.16 273 P **Pn** **16 07 23.5 -0.2**
MESJ pmax pmax
comp=Z,115nm,1.9s
MARD Mardin 19.35 88 Pn **Pn** **16 07 27.1 +0.9**
PTEO Sao Teotonio 19.62 273 *e*P **Pn** **16 07 32.0 +2.9**
PFVI Vila Bisbo 19.80 272 *e*tx tx 16 07 37.5
VSR Storozhevoye 19.95 46 *e*P **P** **16 07 31.4 +0.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s
GURO Guroymak-BITLI 20.07 84 P Pn 16 07 34.0 -0.6
VORR Voronezh 20.19 45 *e*P Pn 16 07 36.7 +0.9
VORR pmax pmax
comp=Z,43nm,0.4s
SHA1 Shidzhatmaz 20.23 69 *c*P Pn 16 07 37.0 +0.4
NEUR Neytrino 20.24 70⇓ *e*P **P** **16 07 35.2 +0.5**
NEUR pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 20.27 68 P **P** **16 07 35.9 +1.0**
KIV Kislovodsk 20.27 68 *e*P Pn 16 07 36.1 -0.8
KIV pmax pmax
comp=Z,20nm,1.0s
KIV MLR MLR
comp=Z,36nm,14.0s
KIV Kislovodsk 20.27 68 P Pn 16 07 36.2 -0.7
comp=Z,21nm,0.8s
VSU Vasula 20.31 16 *ce*P **P** **16 07 35.4 +0.2**
VSU pmax pmax
comp=Z,37nm,0.7s
VSU Vasula 20.31 16 *e*P **P** **16 07 34.3 -0.9**
KBZ Khabaz 20.41 69 P Pn 16 07 38.3 -0.1
comp=Z,23nm,0.7s,baz=271,slow=9.6,SNR=42
KBZ LR LR 16 16 18.9
comp=Z,64nm,19.8s,baz=306,slow=39
comp=Z,23nm,0.7s
LPSR Galich'ya Gora 20.51 42 *e*P **P** **16 07 37.1 -0.2**
LPSR pmax pmax
comp=Z,22nm,0.7s
KARS Kars 20.59 78 IAmb IAmb 16 07 49.3
comp=Z,40nm,1.1s
EKA Eskdalemuir Ar 20.61 327 P **P** **16 07 37.5 -0.9**
comp=Z,3.6nm,0.7s,baz=128,slow=11,SNR=5.7
comp=Z,3.6nm,0.7s
OBN Obninsk 20.86 34 P **P** **16 07 40.9 -0.2**
comp=Z,18nm,0.6s,baz=141,slow=20,SNR=3.7
comp=Z,18nm,0.6s
OBN Obninsk 20.86 34 IAmb IAmb 16 07 45.6
comp=Z,34nm,0.7s
OBN Obninsk 20.86 34 *e*P **P** **16 07 41.1 0.0**
OBN *i* 16 07 43.9
OBN *i* 16 07 59.9
OBN pmax pmax
comp=Z,18nm,1.0s
HFS Hagfors 20.89 356 P **P** **16 07 41.1 -0.3**
comp=Z,5.2nm,0.8s,baz=177,slow=8.8,SNR=14
comp=Z,5.2nm,0.8s
NCK Nalchik 20.90 70⇓ *e*P **P** **16 07 42.8 +1.1**
NCK pmax pmax
comp=Z,6.0nm,0.7s
VRH Novokhopyorsk 21.39 48 *e*P **P** **16 07 46.8 -0.1**
VRH pmax pmax
comp=Z,35nm,0.9s
MEF Metsahovi 21.54 11 *e*P **P** **16 07 47.6 -0.8**
NC602 NORSAR Array S 21.64 354 P **P** **16 07 49.5 0.0**
NC602 IAmb IAmb 16 07 59.8
comp=Z,76nm,1.9s
MOS Moscow 21.73 34 *e*P **P** **16 07 55.7 +5.3**
MOS pmax pmax
comp=Z,100nm,1.3s
GNI Garni 21.90 79 P **P** **16 07 53.7 +1.0**
comp=Z,44nm,0.9s,baz=280,slow=3.7,SNR=5.8
comp=Z,44nm,0.9s
GNI Garni 21.90 79 P **P** **16 07 53.6 +0.9**
GNI Garni 21.90 79 *de*P **P** **16 07 53.9 +1.2**
GNI pmax pmax
comp=Z,49nm,0.9s
GNI Garni 21.90 79 P **P** **16 07 53.9 +1.2**
comp=Z,72nm,0.9s
GNI pP **pP** **16 07 56.5 +0.3**
comp=Z,72nm,0.9s
NB2 NORSAR Subarra 21.96 353 P **P** **16 07 53.6 +0.6**
comp=Z,2.3nm,0.6s,baz=168,slow=11
NOA NORSAR Array B 21.96 353 P **P** **16 07 53.3 +0.3**
comp=Z,2.9nm,0.7s,baz=190,slow=9.6,SNR=12
NOA LR LR 16 17 03.3
comp=Z,77nm,19.8s,baz=10.0,slow=38
comp=Z,2.9nm,0.7s
NB201 NORSAR Array S 21.97 354 P **P** **16 07 53.2 +0.1**
NC405 NORSAR Array S 22.00 354 P **P** **16 07 53.5 +0.2**
NC405 IAmb IAmb 16 07 58.6
comp=Z,108nm,1.8s
NC303 NORSAR Array S 22.14 354 P **P** **16 07 55.3 +0.5**
PUL Pulkovo 22.32 19⇓ *e*P **P** **16 07 57.3 +0.5**
PUL pmax pmax
comp=Z,39nm,0.6s
FINES FINESS Array B 22.97 12 P **P** **16 08 03.5 -0.1**
comp=Z,28nm,0.8s,baz=184,slow=7.4,SNR=16
FINES PcP **PcP** **16 11 51.5 -1.7**
comp=Z,1.7nm,0.6s,baz=220,slow=3.6,SNR=3.6
comp=Z,28nm,0.8s
FINES FINESS Array B 22.97 12 P **P** **16 08 02.9 -0.7**
KEF Keuruu 23.48 10 *e*P **P** **16 08 07.8 -1.0**
AKT Akhty 24.02 75 *e*P **P** **16 08 16.0 +1.7**
AKT *e* 16 08 44.9
AKT *e*PPP PPP 16 08 53.4
AKT pmax pmax
comp=Z,28nm,1.0s
SUF Sumiainen 24.19 11 *e*P **P** **16 08 14.8 -0.7**
BELG Belogornoye 25.24 48 P **P** **16 08 26.1 +1.0**
comp=Z,136nm,1.1s,baz=76,slow=4.5,SNR=24
BELG Belogornoye 25.24 48 *de*P **P** **16 08 26.9 +1.7**
BELG pmax pmax
comp=Z,8.0nm,0.8s
JOF Joensuu 25.32 16 *e*P **P** **16 08 25.1 -0.7**
KLMR Klimovskoe 25.95 26 *e*P **P** **16 08 31.1 -0.5**
KLMR pmax pmax
comp=Z,43nm,1.1s
KIRV Kirov 28.64 37⇓ *e*P **P** **16 08 56.3 +0.6**
TORD Torodi Ar. Bea 29.07 210 P **P** **16 08 58.9 -1.0**
comp=Z,0.9nm,0.5s,baz=5.4,slow=7.6,SNR=6.2
TORD PcP **PcP** **16 12 05.8 -2.2**
comp=Z,0.3nm,0.4s,baz=48,slow=5.3,SNR=2.2
comp=Z,0.9nm,0.5s
APA Apatity 29.86 13⇓ *e*P **P** **16 09 02.5 -4.0**
APA *e* 16 09 57.3
APA pmax pmax
comp=Z,8.0nm,1.2s
APA MLR MLR
comp=Z,2μm,6.9s

ARCES ARCESS Array B 30.68 6 P **P** **16 09 12.5 -1.1**
comp=Z,4.1nm,0.8s,baz=182,slow=8.5,SNR=9.4
ARCES LR LR 16 23 23.7
comp=Z,146nm,19.9s,baz=241,slow=40
comp=Z,4.1nm,0.8s
ARCES ARCESS Array B 30.68 6 P **P** **16 09 13.5 -0.2**
ARCES ARCESS Array B 30.68 6 P **P** **16 09 13.5 -0.2**
ARCES pmax pmax
comp=Z,99nm,1.8s
AKTO Aktyubinsk 31.23 55 P **P** **16 09 18.5 -0.3**
comp=Z,6.5nm,0.8s,baz=272,slow=6.9,SNR=6.7
AKTO LR LR 16 23 08.4
comp=Z,99nm,18.7s,baz=262,slow=39
comp=Z,6.5nm,0.8s
ARTI Arti 32.40 44 P **P** **16 09 28.5 -0.4**
comp=Z,8.9nm,0.5s,baz=255,slow=5.1,SNR=16
ARTI LR LR 16 23 44.2
comp=Z,104nm,19.3s,baz=213,slow=38
comp=Z,8.9nm,0.5s
ARTI Arti 32.40 44 P **P** **16 09 29.5 +0.6**
ARTI Arti 32.40 44 P **P** **16 09 29.5 +0.6**
ARTI pmax pmax
comp=Z,25nm,0.6s
AB31 Akbulak array 32.42 58 IAmb IAmb 16 09 33.8
comp=Z,8.2nm,0.8s
ABKAR Akbulak array 32.42 58 P **P** **16 09 29.9 +0.7**
BORG Borgarnes 33.50 332 LR LR 16 22 42.5
comp=Z,54nm,19.5s,baz=129,slow=35
FURI Furi 36.35 140 LR LR 16 28 14.2
comp=Z,46nm,18.1s,baz=70,slow=42
DBIC Dimbokro 37.66 216 P **P** **16 10 12.9 -1.6**
comp=Z,3.4nm,0.7s,baz=48,slow=8.5,SNR=5.5
comp=Z,3.4nm,0.7s
DBIC Dimbokro 37.66 216 P **P** **16 10 13.0 -1.6**
BORK Borovoye 38.94 51 P **P** **16 10 26.3 +1.2**
BORK IAmb IAmb 16 10 30.9
comp=Z,17nm,0.8s
BORK Borovoye 38.94 51*de*P **P** **16 10 26.3 +1.2**
BORK pmax pmax
comp=Z,19nm,0.8s
SPITS Spitsbergen Ar 38.97 0 P **P** **16 10 24.6 -0.5**
comp=Z,4.6nm,0.9s,baz=153,slow=7.4,SNR=6.0
comp=Z,4.6nm,0.9s
BVAR Borovoye Array 38.98 51 P **P** **16 10 26.0 +0.5**
comp=Z,3.1nm,0.7s
BVAR LR LR 16 29 14.1
comp=Z,47nm,21.0s,baz=276,slow=40
comp=Z,3.1nm,0.7s
BVAR Borovoye Array 38.98 51 P **P** **16 10 26.0 +0.5**
KK31 Karatay Array 40.41 67 IAmb IAmb 16 10 44.2
comp=Z,19nm,0.7s
KKAR Karatay Array 40.41 67 P **P** **16 10 38.4 +0.9**
KKAR Karatay Array 40.41 67 P **P** **16 10 38.4 +0.9**
CHGR Chuyangaron 40.65 74*c i*P **P** **16 10 41.4 +1.8**
CHGR pmax pmax
comp=Z,41nm,0.8s
MBAR Mbarara 41.90 158 LR LR 16 28 32.8
comp=Z,58nm,19.7s,baz=224,slow=37
MBAR Mbarara 41.90 158⇑*e*P **P** **16 10 50.9 +0.8**
MBAR pmax pmax
comp=Z,5.0nm,1.3s
KBL Kabul 41.99 79 P **P** **16 10 51.7 +0.9**
KBL Kabul 41.99 79 P **P** **16 10 51.7 +0.9**
KBL pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 43.36 66 LR LR 16 33 27.1
comp=Z,34nm,18.5s,baz=264,slow=42
AAK Ala-Archa 43.36 66 P **P** **16 11 02.8 +0.9**
AAK Ala-Archa 43.36 66⇑*e*P **P** **16 11 03.7 +1.9**
AAK pmax pmax
comp=Z,24nm,1.7s
KURBB Kurchatov Arra 44.26 54 P **P** **16 11 09.2 +0.5**
comp=Z,6.4nm,0.9s,baz=294,slow=9.4,SNR=25
KURBB PcP PcP **16 12 54.5 +1.5**
comp=Z,3.5nm,1.1s,baz=275,slow=4.2,SNR=8.1
comp=Z,6.4nm,0.9s
KURK Kurchatov 44.30 54 P **P** **16 11 10.2 +1.2**
KURK IAmb IAmb 16 11 11.3
comp=Z,12nm,0.9s
KURK Kurchatov 44.30 54 P **P** **16 11 09.2 +0.2**
KURK 16 12 54.5
NRN Naryn 44.78 67 IAmb IAmb 16 11 20.0
comp=Z,11nm,1.0s
KSH2 Kashi 45.21 70 P **P** **16 11 18.4 +1.7**
KSH2 pmax pmax
comp=Z,10.0nm,1.2s
KDJ Kajisay 45.41 66 IAmb IAmb 16 11 24.0
comp=Z,9.7nm,1.0s
NIL Nilore 45.55 79 P **P** **16 11 20.3 +1.1**
NIL Nilore 45.55 79 P **P** **16 11 20.3 +1.1**
NIL pmax pmax
comp=Z,29nm,1.0s
SFJD Kangerlussuaq 45.56 330 LR LR 16 32 07.5
comp=Z,38nm,20.3s,baz=122,slow=38
WUS Wushi 47.16 66 IAmb IAmb 16 11 37.3
comp=Z,8.6nm,1.0s
MAKZ Makanchi 47.34 58 P **P** **16 11 33.9 +0.7**
MAKZ IAmb IAmb 16 11 35.4
comp=Z,9.0nm,0.8s
MAKZ Makanchi 47.34 58 P **P** **16 11 33.9 +0.7**
MAKZ pmax pmax
comp=Z,9.0nm,0.9s
ZAA0 Zalesovo Array 47.43 48 IAmb IAmb 16 11 35.9
comp=Z,8.9nm,0.8s
ZALV Zalesovo Beam 47.43 48 P **P** **16 11 34.4 +0.7**
comp=Z,7.0nm,0.6s,baz=282,slow=8.7,SNR=41
ZALV LR LR 16 34 04.3
comp=Z,41nm,19.7s,baz=315,slow=39
comp=Z,7.0nm,0.6s
MK31 Makanchi Array 47.56 58*d i*P **P** **16 11 35.5 +0.7**
MKAR Makanchi Array 47.56 58 P **P** **16 11 35.9 +1.0**
comp=Z,13nm,0.6s,baz=284,slow=6.4,SNR=166
MKAR LR LR 16 32 35.2
comp=Z,72nm,18.6s,baz=295,slow=37
comp=Z,13nm,0.6s
MKAR Makanchi Array 47.56 58 P **P** **16 11 35.6 +0.8**
DGZ Jazzator, Alta 50.03 53*de*P **P** **16 11 55.4 +1.4**
DGZ pmax pmax
comp=Z,6.0nm,0.7s
DRLN Deer Lake 51.75 307 P **P** **16 12 06.1 -0.5**
DRLN IAmb IAmb 16 12 07.9
comp=Z,11nm,0.8s
WMQ Urumqi 52.12 60*e*P **P** **16 12 11.8 +2.2**
WMQ pmax pmax
comp=Z,13nm,0.7s
FRB Frobisher Bay 53.37 327 LR LR 16 34 37.9
comp=Z,56nm,18.3s,baz=86,slow=36
SCHQ Schefferville 55.32 316 P **P** **16 12 32.5 -0.4**
comp=Z,2.7nm,0.5s,baz=80,slow=8.4,SNR=4.1
comp=Z,2.7nm,0.5s
SCHQ Schefferville 55.32 316 P **P** **16 12 32.5 -0.4**
LSZ Lusaka 55.45 166 LR LR 16 35 56.5
comp=Z,22nm,19.5s,baz=178,slow=36
KNGR Kungurtug, Tuv 55.85 50⇑*i*P **P** **16 12 38.4 +1.5**
KNGR pmax pmax
comp=Z,11nm,1.1s
MOY Mondy 57.46 47*e*P **P** **16 12 50.2 +2.0**
ZAK Zakamensk 59.31 48*e*P **P** **16 13 02.3 +1.1**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
TIXI Tiksi 59.73 20 LR LR 16 43 32.9
comp=Z,61nm,18.7s,baz=326,slow=41
TIXI Tiksi 59.73 20⇑*e*P **P** **16 13 04.0 +0.4**
TIXI pmax pmax
comp=Z,1.0nm,0.9s
GTA2 Gaotai 62.13 60*e*P **P** **16 13 21.5 +0.9**
GTA2 pmax pmax
comp=Z,11nm,1.1s
SONM Songino Array 62.30 50 P **P** **16 13 23.0 +1.4**
comp=Z,14nm,0.8s,baz=290,slow=8.0,SNR=105
comp=Z,14nm,0.8s
SONM Songino Array 62.30 50 P **P** **16 13 22.5 +0.9**
ULN Ulaanbaatar 62.67 49 P **P** **16 13 23.9 -0.2**
ULN IAmb IAmb 16 13 26.1
comp=Z,8.6nm,1.0s
ULN Ulaanbaatar 62.67 49*de*P **P** **16 13 24.9 +0.8**
ULN pmax pmax
comp=Z,11nm,1.3s
LONY Lake Ozonia 64.28 308 P **P** **16 13 35.0 +0.3**
LBTB Lobatse 64.60 171 LR LR 16 42 28.3
comp=Z,25nm,18.5s,baz=200,slow=37
LBTB Lobatse 64.60 171 P **P** **16 13 38.0 +1.1**
LBTB Lobatse 64.60 171 P **P** **16 13 38.0 +1.1**
LBTB pmax pmax
comp=Z,52nm,2.0s
BRDH Bariadhala 65.01 80 LR LR 16 49 08.4
comp=Z,51nm,19.9s,baz=198,slow=43

YAK Yakutsk 65.73 28 LR LR 16 45 11.2
comp=Z,53nm,19.1s,baz=280,slow=38
YAK Yakutsk 65.73 28 P **P** **16 13 44.0 +0.3**
YAK Yakutsk 65.73 28*de*P **P** **16 13 43.3 -0.4**
YAK pmax pmax
comp=Z,18nm,1.7s
LZDM Lanzhou Array 66.62 62 P **P** **16 13 51.1 +0.8**
comp=Z,1.3nm,0.4s,baz=290,slow=6.1,SNR=7.9
comp=Z,1.3nm,0.4s
LZH Lanzhou 66.65 62*e*P **P** **16 13 51.8 +1.5**
LZH pP sP 16 13 56.5 +0.5
LZH pmax pmax
comp=Z,19nm,1.0s
SADO Sadowa 66.97 310 LR LR 16 41 02.0
comp=Z,49nm,19.6s,baz=148,slow=34
BOSA Boshof 68.11 171 P **P** **16 13 59.4 0.0**
comp=Z,3.5nm,0.7s,baz=355,slow=6.6,SNR=7.0
BOSA LR LR 16 47 31.3
comp=Z,56nm,20.1s,baz=207,slow=39
comp=Z,3.5nm,0.7s
BOSA Boshof 68.11 171 P **P** **16 13 59.6 +0.3**
BOSA Boshof 68.11 171 P **P** **16 13 59.6 +0.3**
BOSA pmax pmax
comp=Z,37nm,1.9s
HILR Hailar Array B 68.84 43 P **P** **16 14 04.7 +0.9**
comp=Z,0.9nm,0.5s,baz=300,slow=2.9,SNR=7.4
comp=Z,0.9nm,0.5s
HHC Hu-ho-hao-te 69.11 54*e*P **P** **16 14 06.9 +1.2**
HHC pmax pmax
comp=Z,10.0nm,0.7s
B22K Teshekpuk Lake 70.39 356 P **P** **16 14 13.5 +0.7**
B22K IAmb IAmb 16 14 59.7
comp=Z,20nm,1.8s
PZH PanZhiHua 70.45 71 P **P** **16 14 14.3 +0.1**
PZH pmax pmax
comp=Z,10.0nm,1.2s
BILL Bilibino 70.61 11⇑*e*P **P** **16 14 14.2 0.0**
BILL pmax pmax
comp=Z,5.0nm,1.3s
YKAW3 Yellowknife Wh 71.07 338 IAmb IAmb 16 14 35.7
comp=Z,19nm,1.9s
YKA Yellowknife Ar 71.13 338 P **P** **16 14 17.4 0.0**
comp=Z,1.0nm,0.7s,baz=33,slow=5.6,SNR=17
comp=Z,1.0nm,0.7s
F31M Tsiigehtchic 71.15 348 P **P** **16 14 16.9 -0.6**
XAN Xi'an 71.25 61 P **P** **16 14 19.5 +0.7**
XAN pmax pmax
comp=Z,15nm,1.1s
D23K Nanushuk River 71.59 355 P **P** **16 14 20.6 +0.4**
D23K IAmb IAmb 16 14 39.4
comp=Z,10nm,1.4s
F28M Old Crow 71.86 351 P **P** **16 14 22.1 +0.3**
F28M IAmb IAmb 16 14 29.5
comp=Z,16nm,1.8s
KMI2 Kunming 71.97 72 P **P** **16 14 24.0 +0.5**
KMI2 pmax pmax
comp=Z,9.0nm,0.7s
E25K Arctic Village 72.00 353 P **P** **16 14 23.9 +1.2**
E25K IAmb IAmb 16 14 24.4
comp=Z,15nm,1.9s
EYMN Ely 72.04 318 P **P** **16 14 24.2 +1.0**
EPLO Experimental L 72.07 320 P **P** **16 14 24.6 +1.1**
SEY Seymchan 72.22 19 LR LR 16 49 24.1
comp=Z,74nm,18.4s,baz=328,slow=38
SEY Seymchan 72.22 19⇑*e*P **P** **16 14 24.1 +0.1**
SEY pmax pmax
comp=Z,5.0nm,1.3s
HEH HeiHe 72.30 39*e*P **P** **16 14 25.3 +0.6**
HEH pmax pmax
comp=Z,11nm,0.7s
BJI2 Beijing 72.45 52 P **P** **16 14 26.0 +0.1**
BJI2 pmax pmax
comp=Z,3.0nm,1.1s
F25K Christian Rive 72.52 353 P **P** **16 14 26.8 +0.9**
F25K IAmb IAmb 16 14 29.7
comp=Z,18nm,1.9s
C16K Lisburne Hills 72.72 1 P **P** **16 14 27.4 +0.5**
C16K IAmb IAmb 16 14 29.2
comp=Z,8.2nm,1.3s
ULM Lac du Bonnet 72.75 321 P **P** **16 14 27.1 -0.4**
comp=Z,4.8nm,0.9s,baz=51,slow=7.2,SNR=7.5
ULM LR LR 16 44 06.7
comp=Z,37nm,20.1s,baz=20,slow=34
comp=Z,4.8nm,0.9s
ULM Lac du Bonnet 72.75 321 P **P** **16 14 28.4 +0.9**
ULM IAmb IAmb 16 14 31.3
comp=Z,12nm,1.4s
ULM Lac du Bonnet 72.75 321 P **P** **16 14 28.4 +0.9**
ULM pmax pmax
comp=Z,12nm,1.4s
CHTO Chiang Mai 72.81 80 P **P** **16 14 28.6 +0.3**
CHTO IAmb IAmb 16 14 30.0
comp=Z,11nm,1.1s
CHTO Chiang Mai 72.81 80 P **P** **16 14 28.6 +0.3**
CHTO pmax pmax
comp=Z,11nm,1.1s
CMAR Chiang Mai Arr 73.02 80 P **P** **16 14 29.4 -0.2**
comp=Z,3.1nm,0.8s,baz=304,slow=7.4,SNR=33
CMAR LR LR 16 53 15.5
comp=Z,14nm,18.7s,baz=325,slow=41
comp=Z,3.1nm,0.8s
CMAR Chiang Mai Arr 73.02 80 P **P** **16 14 30.0 +0.5**
CMAR Chiang Mai Arr 73.02 80 P **P** **16 14 30.0 +0.5**
E18K Tukpahlearik C 73.55 359 P **P** **16 14 32.6 +0.7**
I28M Miner Creek 73.92 350 IAmb IAmb 16 16 33.5
comp=Z,22nm,1.9s
I27K Kandik River 74.00 351 P **P** **16 14 34.9 +0.3**
I27K IAmb IAmb 16 15 43.1
comp=Z,20nm,1.7s
MA2 Magadan 74.55 22 LR LR 16 49 57.4
comp=Z,48nm,19.1s,baz=298,slow=38
MA2 Magadan 74.55 22 P **P** **16 14 38.5 +0.7**
MA2 IAmb IAmb 16 14 39.4
comp=Z,8.7nm,0.9s
MA2 Magadan 74.55 22⇑*e*P **P** **16 14 39.0 +1.2**
MA2 pmax pmax
comp=Z,8.0nm,1.0s
MA2 Magadan 74.55 22 P **P** **16 14 37.6 -0.2**
comp=Z,13nm,0.8s
IMAR Indian Mountai 74.74 356 P **P** **16 14 40.1 +1.3**
KLR Kul'dur 75.07 38⇓*e*P **P** **16 14 41.4 +0.3**
KLR pmax pmax
comp=Z,1.0nm,1.3s
TKL Tuckaleechee C 75.14 304 LR LR 16 45 54.8
comp=Z,23nm,18.6s,baz=142,slow=34
BNX BinXian 75.27 42 ⇓P **P** **16 14 42.3 +0.1**
BNX pmax pmax
comp=Z,7.0nm,0.7s
ILAR Eielson Array 75.40 353 P **P** **16 14 43.0 +0.3**
comp=Z,0.5nm,0.7s,baz=358,slow=8.2,SNR=11
comp=Z,0.5nm,0.7s
CN2 Changchun 75.49 45*e*P **P** **16 14 43.4 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
H18K Honhosa River 75.77 358 P **P** **16 14 45.8 +1.0**
H18K IAmb IAmb 16 14 51.5
comp=Z,16nm,1.6s
BCAR Beaver Creek A 76.45 350 P **P** **16 14 49.4 +0.6**
ECSD EROS Data Cent 77.50 317 P **P** **16 14 55.4 +0.4**
ECSD IAmb IAmb 16 14 57.2
comp=Z,4.1nm,0.7s
P32M Atlin 78.36 345 P **P** **16 15 00.9 +1.5**
L18K Granite Mounta 78.64 357 P **P** **16 15 01.8 +0.9**
USRK Ussuriysk Ar. 78.69 41 P **P** **16 15 01.2 -0.3**
comp=Z,4.6nm,0.6s,baz=294,slow=7.0,SNR=14
comp=Z,4.6nm,0.6s
NJ2 Nanjing 79.08 58*e*P **P** **16 15 04.8 +0.9**
NJ2 pmax pmax
comp=Z,11nm,0.9s
S39A Bolivar 79.73 311 IAmb IAmb 16 15 14.5
comp=Z,13nm,0.9s
KSAR Wonju Array Be 81.12 48 P **P** **16 15 15.7 +0.9**
KSAR Wonju Array Be 81.12 48 P **P** **16 15 15.7 +0.9**
KSRS Korea Array 81.14 48 P **P** **16 15 14.8 -0.1**
comp=Z,2.9nm,0.7s,baz=311,slow=5.2,SNR=12
comp=Z,2.9nm,0.7s
YSS Yuzhno-Sakhali 81.75 34 P **P** **16 15 18.8 +0.9**
YSS Yuzhno-Sakhali 81.75 34*e*P **P** **16 15 18.1 +0.2**
YSS pmax pmax
comp=Z,20nm,0.6s
SDV Santo Domingo 82.03 275 LR LR 16 46 41.4
comp=Z,47nm,20.2s,baz=36,slow=32
ASAJ Asahikawa 83.88 36 LR LR 16 54 32.2
comp=Z,29nm,18.5s,baz=350,slow=37
PD31 Pinedale Array 84.67 323 IAmb IAmb 16 17 49.1
comp=Z,14nm,2.0s

PDAR Pinedale Array 84.67 323 P **P** **16 15 32.6 -0.8**
comp=Z,1.0nm,0.8s,baz=50,slow=4.6,SNR=8.3
PDAR LR LR 16 52 38.6
comp=Z,38nm,18.1s,baz=46,slow=35
comp=Z,1.0nm,0.8s
ROSC El Rosal 87.40 274 LR LR 16 49 40.8
comp=Z,54nm,18.3s,baz=113,slow=32
MJAR Matsushiro Arr 87.52 43 P **P** **16 15 46.8 -0.5**
comp=Z,1.8nm,0.8s,baz=306,slow=4.2,SNR=3.3
comp=Z,1.8nm,0.8s
ELK Elko 88.85 325 LR LR 16 55 20.0
comp=Z,30nm,18.4s,baz=278,slow=35
ANMO Albuquerque 89.10 316 LR LR 16 53 24.0
comp=Z,33nm,19.0s,baz=42,slow=34
YBH Yreka Blue Hor 91.10 331 LR LR 17 00 13.4
comp=Z,5.9nm,19.0s,baz=62,slow=38
TXAR Lajitas Array 91.72 311 P **P** **16 16 07.2 -0.2**
comp=Z,0.4nm,0.6s,baz=57,slow=4.6,SNR=5.2
comp=Z,0.4nm,0.6s
JTS Las Juntas de 92.07 285 LR LR 16 51 50.8
comp=Z,44nm,20.8s,baz=34,slow=32
NVAR Mina Array Bea 92.10 326 LR LR 16 56 55.0
comp=Z,37nm,18.9s,baz=133,slow=35
IRM Iron Mountain 94.16 321 IAmb IAmb 16 16 20.3
comp=Z,5.4nm,0.9s
CPUP Villa Florida 94.67 240 LR LR 16 58 25.5
comp=Z,40nm,19.0s,baz=74,slow=35
WRA Warramunga Arr 123.90 89 PKP **PKPdf** **16 21 55.5 -2.3**
comp=Z,1.0nm,0.9s,baz=311,slow=2.8,SNR=3.0
ASAR Alice Springs 125.60 93 PKP **PKPdf** **16 21 58.9 -2.2**
comp=Z,0.7nm,0.7s,baz=294,slow=1.4,SNR=11

THE 24 16:03:34.3,39˚N±4˚×1˚9E±˚, h32km±9km, M3.1/11, MLh3.1/11, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.67**	**46**	P	Pn	16 03 44.8	-2.8
KEK				S	Sb	16 03 56.6	-0.2
LFKM	**Lefkimmi**	**0.71**	**73**	P	Pn	16 03 48.2	+0.1
LFKM				S	Sb	16 03 57.6	-0.3
SRN	**Sarande**	**0.90**	**45**	P	Pn	16 03 47.1	-3.6
SRN				S	Sn	16 04 01.3	-1.3
IGT	**Igoumenitsa**	**0.94**	**72**	P	Pn	16 03 50.2	-1.1
IGT				S	Sn	16 04 04.0	+0.3
DRAG	**Dragano-Lefkad**	**1.23**	**117**	P	Pn	16 03 54.3	-0.9
TSLK	**Tsoukalades, L**	**1.23**	**110**	P	Pn	16 03 54.7	-0.6
TSLK				S	Sn	16 04 07.7	-3.0
LKD2	**Lefkada island**	**1.24**	**111**	P	Pn	16 03 55.0	-0.5
LKD2				S	Sn	16 04 10.9	-0.2
NYDR	**Nydri-Lefkada**	**1.30**	**114**	P	Pn	16 03 55.9	-0.3
EVGI	**Lefkada island**	**1.31**	**118**	P	Pn	16 03 55.9	-0.5
FSK	**Fiskardo**	**1.34**	**126**	P	Pn	16 03 54.9	-1.9
JAN	**Janina**	**1.36**	**72**	P	Pn	16 03 56.9	-0.2
JAN				S	Sn	16 04 14.0	0.0
DMLN	**Damoulianata-K**	**1.37**	**137**	P	Pn	16 03 53.8	-3.5
PRMD	**Pramanda**	**1.51**	**79**	P	Pn	16 03 59.2	-0.1

*AZER **24** 16:16:20.7,38˚.37N×44˚.52E, h2km, ml2.6*
*TEH **24** 16:16:21.7,38˚.39N×44˚.50E, h5km, ML2.6, Presumed earthquake*
*AFAD **24** 16:16:21.7,38˚.44N×44˚.55E, h7km±4km, ML2.3*
*ISK **24** 16:16:24.5,38˚.48N×44˚.19E, h5km, ML2.4/6*

ISC 24 16:16:23.9±1.1, 38˚.39N±0˚.02×44˚.41E±0˚.02, h10km±9km, n36, σ1ˢ57/60, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**310**	P	**Pg**	**16 16 31.9**	**-0.5**
OZAP				S	**Sb**	**16 16 39.2**	**-1.2**
TVAN	**Van**	**0.80**	**281**	P	**Pg**	**16 16 39.5**	**0.0**
TVAN				S	**Sn**	**16 16 52.8**	**-0.9**
TVAN				IAML		16 17 05.0	
	comp=N,100nm,0.6s						
TVAN				IAML		16 17 06.0	
	comp=E,111nm,0.7s						
YOVA	**Hakkari_Yksek**	**0.80**	**187**	P	**Pg**	**16 16 38.9**	**-0.5**
YOVA				S	**Sb**	**16 16 51.2**	**+0.1**
VANB	**Van**	**0.83**	**285**	Pg	**Pg**	**16 16 36.8**	**-3.1**
VANB				Sg	**Sg**	**16 16 47.1**	**-3.6**
VMUR	**Van-Muradiye**	**0.89**	**313**	P	**Pn**	**16 16 42.0**	**-0.8**
VMUR				S	**Sb**	**16 16 54.0**	**+0.4**
VMUR				IAML		16 17 02.0	
	comp=N,74nm,0.5s						
VMUR				IAML		16 17 03.0	
	comp=E,66nm,0.5s						
ISHB	**Shabestar**	**0.95**	**96**	Pg	**Pg**	**16 16 40.2**	**-2.2**
MAKU	**Maku**	**0.99**	**12**	Pg	**Pb**	**16 16 41.7**	**-1.7**
HAKT	**HAKKARI**	**1.00**	**214**	P	**Pn**	**16 16 43.8**	**-0.4**
HAKT				S	**Sn**	**16 17 00.2**	**+1.8**
GEVA	**Gevas**	**1.06**	**266**	P	**Pb**	**16 16 43.4**	**-1.2**
GEVA				S	**Sn**	**16 16 59.0**	**-1.2**
GEVA				IAML		16 17 03.0	
	comp=E,50nm,0.4s						
GEVA				IAML		16 17 09.0	
	comp=N,61nm,0.4s						
IMRD	**Marand**	**1.06**	**72**	Pg	**Pb**	**16 16 43.2**	**-1.5**
IMRD				Sg	**Sb**	**16 16 58.1**	**-0.6**
AKDM	**Akdamar-Van**	**1.12**	**268**	Pg	**Pb**	**16 16 44.0**	**-1.6**
AKDM				Sg	**Sb**	**16 16 58.5**	**-1.9**
NAX	**Nakhchivan**	**1.16**	**47**	P	**Pb**	**16 16 45.3**	**-0.8**
NAX				S	**Sg**	**16 17 01.7**	**+0.4**
DYDN	**Diyadin**	**1.28**	**334**	P	**Pb**	**16 16 48.2**	**-0.1**
DYDN				S	**Sb**	**16 17 03.7**	**-1.4**
DYDN				IAML		16 17 10.0	
	comp=E,60nm,0.7s						
DYDN				IAML		16 17 12.0	
	comp=N,52nm,0.8s						
CUKT	**Cukurca**	**1.30**	**209**	Pn	**Pg**	**16 16 50.7**	**+1.8**
CUKT				Sn	**Sg**	**16 17 09.8**	**+3.9**
CUKT	**Cukurca**	**1.30**	**209**	P	**Pg**	**16 16 50.0**	**+1.1**
CUKT				S	**Sg**	**16 17 05.8**	**0.0**
CUKT				IAML		16 17 13.0	
	comp=N,85nm,0.6s						
SBZ	**Shahbuz**	**1.35**	**41**	P	**Pn**	**16 16 48.8**	**-0.2**
SBZ				S	**Sg**	**16 17 09.4**	**+2.1**
ORD	**Ordubad**	**1.35**	**66**	P	**Pn**	**16 16 48.1**	**-0.9**
ORD				S	**Sg**	**16 17 07.5**	**0.0**
HYR	**Heyderabad**	**1.38**	**14**	P	**Pb**	**16 16 50.1**	**+0.3**
HYR				S	**Sg**	**16 17 12.4**	**+4.2**
ITBZ	**Tabriz**	**1.38**	**96**	Pg	**Pn**	**16 16 48.1**	**-1.3**
ADCV	**BITLIS_Adilcev**	**1.39**	**288**	P	**Pg**	**16 16 50.5**	**-0.1**
IAZR	**Azarshahr**	**1.43**	**119**	Pg	**Pb**	**16 16 50.4**	**-0.4**
IGDI	**IGDIR**	**1.50**	**350**	P	**Pb**	**16 16 52.2**	**+0.2**
IGDI				S	**Sb**	**16 17 11.3**	**+0.1**
IGDI				IAML		16 17 16.0	
	comp=N,34nm,0.9s						
IGDI				IAML		16 17 17.0	
	comp=E,50nm,0.6s						
IGDI	**IGDIR**	**1.50**	**350**	P	**Pg**	**16 16 53.0**	**+0.2**
IGDI				S	**Sg**	**16 17 16.7**	**+4.4**
PERV	**Siirt/Pervari-**	**1.54**	**254**	P	**Pg**	**16 16 53.3**	**-0.1**
PERV				S	**Sg**	**16 17 15.6**	**+2.2**
PERV				IAML		16 17 22.0	
	comp=E,53nm,0.5s						
DORK	**Agr/Tutak/Do**	**1.62**	**309**	P	**Pb**	**16 16 54.3**	**+0.3**
AGRB	**Hanur-Agry**	**1.62**	**318**	Pn	**Pn**	**16 16 52.7**	**-0.1**
AGRB				Sn	**Sn**	**16 17 13.3**	**-0.6**
KOTA	**Agri, Merkez-K**	**1.70**	**327**	P	**Pg**	**16 16 55.9**	**-0.6**
KOTA				S	**Sb**	**16 17 17.4**	**+0.5**
GNI	**Garni**	**1.78**	**8**	Pn	**Pb**	**16 16 56.9**	**+0.1**
GURO	**Guroymak-BITLI**	**1.87**	**276**	Pn	**Pn**	**16 16 56.5**	**+0.3**
SRTM	**Siirt_Merkez**	**2.00**	**259**	P	**Pb**	**16 17 00.8**	**+0.3**
SRTM				IAML		16 17 33.0	
	comp=E,22nm,0.7s						
SRTM				IAML		16 17 40.0	
	comp=N,42nm,0.7s						
IHRS	**Heris**	**2.07**	**91**	Pn	**Pb**	**16 17 00.6**	**-1.2**
MUSM	**Mu-Merkez**	**2.30**	**279**	P	Pn	16 16 56.4	-5.6
GDB	**GEDABAY**	**2.55**	**24**	P	**Pb**	**16 17 07.7**	**-2.3**
GDB				S	**Sb**	**16 17 41.7**	**+0.2**
GANJ	**Ganja**	**2.70**	**33**	P	**Pn**	**16 17 08.4**	**+1.0**
GANJ				S	**Sb**	**16 17 44.4**	**-1.1**
QZX	**Qazax, Azerbai**	**2.77**	**15**	P	**Pn**	**16 17 09.9**	**+1.5**
QZX				S	**Sb**	**16 17 47.8**	**+0.1**
YRD	**Yardimli**	**3.05**	**79**	P	**Pn**	**16 17 13.1**	**+0.7**
YRD				S	**Sn**	**16 17 51.1**	**+2.1**

*NOU **24** 16:19:37.3, 19˚.66S×174˚.45W, h202km, mb4.5/13, Tonga Islands*

*NEIC **24** 16:19:45.9±2.5, 20°25S±0°07×175°58W±0°09, h193km±9km, mb4.7/14, Error ellipse: s-maj=22.5km s-min=12.2km az=170.0*
*IDC **24** 16:19:55.7±4.4, 20°61S×175°80W, h289km±41km, mb3.6/7, mbtmp4.4/9, Error ellipse: s-maj=24.5km s-min=14.5km az=112.0*

ISC 24 16:19:46.1±0.5, 20°25S±0°07×175°58W±0°06, h204km, n79, σ2¹²/83, mb4.6/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**3.66**	**303**	P	**Pn**	**16 20 43.4**	**-0.5**
TAVE	**Taveuni**	**5.41**	**310**	P	**Pn**	**16 21 05.1**	**-0.8**
NIUE	**Niue**	**5.45**	**79**		**Pn**	**16 21 05.9**	**-0.5**
NIUE	**Niue**	**5.45**	**79**	P	**Pn**	**16 21 06.2**	**-0.2**
NIUE				S	**S**	**16 22 05.8**	**-3.6**
DGTI	**Dogotuki**	**5.94**	**311**	P	**Pn**	**16 21 11.5**	**-1.2**
MSVF	**Nonsavu**	**6.53**	**291**		**Pn**	**16 21 20.0**	**-0.5**
MSVF	**Nonsavu**	**6.53**	**291**	P	**Pn**	**16 21 21.0**	**+0.6**
RAR	**Rarotonga**	**14.82**	**96**	P	**P**	**16 23 07.7**	**+0.9**
MARNC	**Mare, Loyalty**	**15.38**	**263**		**P**	**16 23 13.3**	**+0.4**
OUENC	**Ouen Island, N**	**16.53**	**259**	P	**Pn**	**16 23 29.1**	**+2.5**
DZM	**Mont Dzumac**	**16.87**	**261**	P	**Pn**	**16 23 31.4**	**+0.5**
	49nm,0.6s,baz=75,slow=20,SNR=47						
DZM	**Mont Dzumac**	**16.87**	**261**		**Pn**	**16 23 31.2**	**+0.3**
DZM	**Mont Dzumac**	**16.87**	**261**	P	**Pn**	**16 23 33.2**	**+2.3**
ONTNC	**Ouen Toro**	**16.88**	**260**		**Pn**	**16 23 31.0**	**+0.2**
ONTNC	**Ouen Toro**	**16.88**	**260**	P	**Pn**	**16 23 32.0**	**+1.8**
HAZ	**Te Kaha**	**18.38**	**197**	P	**Pn**	**16 23 49.2**	**+0.9**
PUZ	**Puketiti**	**18.55**	**195**	P	**Pn**	**16 23 50.8**	**+0.4**
PUZ				S	**S**	**16 27 04.9**	**-3.4**
MWZ	**Matawai**	**18.99**	**197**	P	**P**	**16 23 53.4**	**+1.0**
MWZ				S	**S**	**16 27 15.6**	**-1.4**
URZ	**Urewera**	**19.04**	**198**	P	**P**	**16 23 53.6**	**+0.8**
	4.2nm,0.3s,baz=298,slow=1.8,SNR=15						
URZ				S	**S**	**16 27 08.8**	**-9.0**
	8.5nm,0.8s,baz=58,slow=21,SNR=7.2						
URZ	**Urewera**	**19.04**	**198**	P	**P**	**16 23 54.4**	**+1.6**
URZ				S	**S**	**16 27 13.5**	**-4.3**
RTZ	**Ruatahuna**	**19.41**	**198**	P	**Pn**	**16 23 59.4**	**-1.1**
HIZ	**Hauiti**	**20.00**	**202**	P	Pn	**16 24 05.9**	**-1.7**
BKZ	**Black Stump Fm**	**20.06**	**198**	P	**P**	**16 24 06.7**	**+1.8**
PXZ	**Pawanui**	**20.76**	**197**	P	**P**	**16 24 13.9**	**+2.7**
PXZ				S	**S**	**16 27 51.4**	**+0.3**
BFZ	**Birch Farm**	**21.53**	**197**	P	**P**	**16 24 20.9**	**+1.6**
BFZ				S	**S**	**16 28 04.8**	**+0.5**
MRZ	**Mangatainoka R**	**21.71**	**198**	P	**P**	**16 24 22.0**	**+1.0**
MRZ				S	**S**	**16 28 08.4**	**+1.3**
MSWZ	**Moikau Station**	**22.50**	**198**	P	**P**	**16 24 28.6**	**+0.1**
TCW	**Tory Channel**	**22.61**	**200**	P	**P**	**16 24 29.3**	**-0.2**
QRZ	**Quartz Range**	**22.89**	**204**	P	**P**	**16 24 34.1**	**+2.1**
QRZ	**Quartz Range**	**22.89**	**204**	P	**P**	**16 24 33.6**	**+1.6**
QRZ	**Quartz Range**	**22.89**	**204**	P	**P**	**16 24 34.1**	**+2.1**
THZ	**Tophouse**	**23.57**	**202**	P	**P**	**16 24 40.5**	**+2.2**
KHZ	**Kahutara**	**23.94**	**200**	P	**P**	**16 24 43.6**	**+2.1**
DSZ	**Denniston Nort**	**23.95**	**204**	P	**P**	**16 24 45.2**	**+3.4**
GVZ	**Greta Valley S**	**24.59**	**200**	P	**P**	**16 24 50.0**	**+2.5**
LTZ	**Lake Taylor**	**24.69**	**202**		**P**	**16 24 50.5**	**+2.1**
LTZ				IAmb	IAmb	16 24 57.5	
	comp=Z,39nm,1.4s						
LTZ	**Lake Taylor**	**24.69**	**202**	P	**P**	**16 24 51.6**	**+3.2**
INZ	**Inchbonnie**	**24.93**	**203**	P	**P**	**16 24 53.7**	**+3.1**
OXZ	**Oxford**	**25.25**	**202**	P	**P**	**16 24 54.1**	**+0.7**
MQZ	**McQueen's Vall**	**25.38**	**200**	P	**P**	**16 24 57.8**	**+3.2**
WVZ	**Waitaha Valley**	**25.50**	**204**	P	**P**	**16 24 58.0**	**+2.3**
MHCZ	**Mount Hutt**	**25.59**	**202**	P	**P**	**16 25 00.3**	**+3.7**
RPZ	**Rata Peaks**	**25.93**	**203**	P	**P**	**16 25 03.7**	**+4.1**
FOZ	**Fox Glacier**	**26.24**	**205**	P	**P**	**16 25 06.1**	**+3.7**
TMZ	**Timaru**	**26.53**	**202**	P	**P**	**16 25 08.7**	**+3.8**
JCZ	**Jackson Bay**	**27.10**	**205**	P	**P**	**16 25 11.1**	**+1.0**
WKZ	**Wanaka**	**27.64**	**204**	P	**P**	**16 25 16.4**	**+1.6**
WHZ	**Wether Hill Ro**	**28.95**	**204**	P	**P**	**16 25 30.5**	**+4.2**
EIDS	**Eidsvold**	**31.11**	**254**	P	**P**	**16 25 45.3**	**-0.4**
ARMA	**Armidale**	**31.23**	**244**	P	**P**	**16 25 46.9**	**+0.2**
ARMA				IAmb	IAmb	16 26 02.0	
	comp=Z,15nm,1.2s						
RABL	**Rabaul**	**35.23**	**293**	P	**P**	**16 26 18.9**	**-2.5**
RABL				IAmb	IAmb	16 26 40.1	
	comp=Z,21nm,1.2s						
CTAO	**Charters Tower**	**35.78**	**263**		**P**	**16 26 25.1**	**-1.0**
CTAO				IAmb	IAmb	16 26 26.0	
	comp=Z,39nm,1.3s						
PMG	**Port Moresby**	**37.52**	**281**	P	**P**	**16 26 39.1**	**-1.7**
PMG				IAmb	IAmb	16 26 40.0	
	comp=Z,16nm,0.9s						
PMG	**Port Moresby**	**37.52**	**281**	P	**P**	**16 26 40.0**	**-0.8**
TOO	**Toolangi**	**37.89**	**234**	P	**P**	**16 26 44.0**	**+0.3**
TAU	**Tasmania Unive**	**38.41**	**226**	P	**P**	**16 26 49.1**	**+1.2**
COEN	**Coen**	**39.84**	**272**	P	**P**	**16 26 58.7**	**-1.4**
COEN				IAmb	IAmb	16 26 59.7	
	comp=Z,22nm,0.8s						
STKA	**Stephens Creek**	**39.95**	**244**	P	**P**	**16 27 00.8**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=82,slow=11,SNR=8.2						
	comp=Z,1.9nm,0.5s						
STKA	**Stephens Creek**	**39.95**	**244**	P	**P**	**16 27 01.3**	**+0.5**
STKA				IAmb	IAmb	16 28 27.1	
	comp=Z,24nm,1.2s						
INKA	**Innaminka**	**40.43**	**251**	P	**P**	**16 27 04.7**	**-0.1**
MANU	**Manus Island**	**40.45**	**292**	P	**P**	**16 27 04.2**	**-0.9**
AS31	**Alice Springs**	**46.79**	**256**		**P**	**16 27 54.7**	**-0.9**
ASAR	**Alice Springs**	**46.79**	**256**	P	**P**	**16 27 54.7**	**-0.9**
	comp=Z,24nm,0.6s,baz=96,slow=8.6,SNR=462						
ASAR				PcP	**PcP**	**16 29 25.2**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=101,slow=4.1,SNR=1.6						
	comp=Z,24nm,0.6s						
ASAR	**Alice Springs**	**46.79**	**256**		**P**	**16 27 54.9**	**-0.7**
AUALC	**St Philip's Co**	**46.81**	**256**	P	**P**	**16 27 55.8**	**+0.1**
WRA	**Warramunga Arr**	**46.89**	**261**	P	**P**	**16 27 54.1**	**-2.2**
	comp=Z,4.2nm,0.5s,baz=96,slow=5.1,SNR=68						
	comp=Z,4.2nm,0.5s						
SOEI	**Soe**	**58.77**	**271**	P	**P**	**16 29 23.4**	**-0.1**
NVAR	**Mina Array Bea**	**79.29**	**42**	P	**P**	**16 31 30.8**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=253,slow=4.7,SNR=3.7						
	comp=Z,0.7nm,0.7s						
H03S2	**Juan Fernandez**	**84.25**	**124**	T	T	18 04 47.4	
	baz=248,slow=74,SNR=6.6						
H03S1	**Juan Fernandez**	**84.26**	**124**	T	T	18 04 47.9	
	baz=248,slow=74,SNR=6.5						
H03S3	**Juan Fernandez**	**84.27**	**124**	T	T	18 04 47.1	
	baz=248,slow=74,SNR=4.8						
TXAR	**Lajitas Array**	**85.01**	**56**	P	**P**	**16 32 01.8**	**+2.7**
	comp=Z,0.7nm,0.7s,baz=198,slow=7.9,SNR=5.8						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**85.01**	**56**	P	**P**	**16 32 00.1**	**+1.0**
ILAR	**Eielson Array**	**87.58**	**12**	P	**P**	**16 32 10.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=213,slow=4.5,SNR=7.6						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**87.58**	**12**	P	**P**	**16 32 09.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**92.18**	**289**	P	**P**	**16 32 33.4**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=109,slow=4.7,SNR=4.5						
	comp=Z,0.5nm,0.7s						
BVAR	**Borovoye Array**	**120.34**	**320**	PKhKP	PKPpre	16 38 12.6	
	comp=Z,0.4nm,0.4s,baz=122,slow=2.0,SNR=3.3						
BRTR	**Keskin Array B**	**148.32**	**314**	PKPbc	**PKPbc**	**16 39 08.5**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=127,slow=4.0,SNR=8.8						
MMAI	**Mount Meron Ar**	**149.65**	**301**	PKPbc	**PKiKP**	**16 39 13.2**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=122,slow=3.1,SNR=7.8						

*AZER **24** 16:32:51.8, 38°47N×44°38E, h5km, ml3.0*
*AFAD **24** 16:32:53.8, 38°44N×44°37E, h5km±1km, ML2.9*
*ISK **24** 16:32:54.6, 38°49N×44°24E, h5km, ML2.8/9*
*TEH **24** 16:32:54.4, 38°48N×44°47E, h6km±63km, ML2.8, Presumed earthquake*

ISC 24 16:32:54.1±1.1, 38°46N±0°02×44°41E±0°02, h1km±10km, n54, σ1¹55/91, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.38**	**302**	P	**Pg**	**16 33 01.6**	**+0.2**
OZAP				S	**Sb**	**16 33 08.8**	**-1.5**
OZAP				IAML		16 33 16.0	
	comp=N,2μm,0.8s						
TVAN	**Van**	**0.79**	**275**	P	**Pg**	**16 33 08.6**	**-0.7**
TVAN				S	**Sg**	**16 33 19.9**	**+0.4**
TVAN				IAML		16 33 34.0	
	comp=N,405nm,0.7s						
VMUR	**Van-Muradiye**	**0.84**	**309**	P	**Pg**	**16 33 09.9**	**-0.4**
VMUR				S	**Sb**	**16 33 23.7**	**+0.2**
YOVA	**Hakkari_Yksek**	**0.88**	**186**	P	**Pg**	**16 33 10.7**	**-0.1**
YOVA				S	**Sg**	**16 33 22.9**	**+0.6**
MAKU	**Maku**	**0.92**	**13**	Pg	**Pg**	**16 33 11.2**	**-0.5**
ISHB	**Shabestar**	**0.96**	**100**	Pg	**Pg**	**16 33 11.3**	**-1.3**
IMRD	**Marand**	**1.04**	**76**	Pg	**Pg**	**16 33 13.5**	**-0.6**
IMRD				Sg	**Sg**	**16 33 27.3**	**-0.3**
HAKT	**HAKKARI**	**1.06**	**212**	P	**Pg**	**16 33 13.8**	**-0.5**
HAKT				S	**Sg**	**16 33 28.6**	**+0.5**
HAKT				IAML		16 33 35.0	
	comp=E,235nm,0.4s						
HAKT	**HAKKARI**	**1.06**	**212**	P	**Pg**	**16 33 14.5**	**+0.2**
HAKT				S	**Sn**	**16 33 31.7**	**-0.1**
GEVA	**Gevas**	**1.07**	**262**	P	**Pg**	**16 33 13.3**	**-1.3**
GEVA				S	**Sb**	**16 33 29.3**	**-0.8**
NAX	**Nakhchivan**	**1.11**	**50**	P	**Pb**	**16 33 15.2**	**-0.8**
NAX				S	**Sn**	**16 33 33.2**	**+0.5**
AKDM	**Akdamar-Van**	**1.13**	**264**	Pg	**Pg**	**16 33 14.9**	**-0.9**
AKDM				Sg	**Sg**	**16 33 29.8**	**-0.6**
DYDN	**Diyadin**	**1.22**	**333**	P	**Pb**	**16 33 16.0**	**-2.0**
DYDN				S	**Sb**	**16 33 30.9**	**-3.4**
DYDN				IAML		16 33 40.0	
	comp=E,210nm,0.7s						
DYDN				IAML		16 33 47.0	
	comp=N,175nm,0.8s						
SBZ	**Shahbuz**	**1.29**	**43**	P	**Pn**	**16 33 18.5**	**-0.9**
SBZ				S	**Sn**	**16 33 39.5**	**+2.2**
HYR	**Heyderabad**	**1.30**	**15**	P	**Pn**	**16 33 18.7**	**-0.8**
HYR				S	**Sg**	**16 33 38.9**	**+3.0**
ORD	**Ordubad**	**1.32**	**69**	P	**Pn**	**16 33 18.7**	**-1.0**
ORD				S	**Sg**	**16 33 39.0**	**+2.3**
ADCV	**BITLIS_Adilcev**	**1.36**	**285**	P	**Pn**	**16 33 19.8**	**-0.6**
ADCV				S	**Sg**	**16 33 38.2**	**+0.3**
CUKT	**Cukurca**	**1.37**	**208**	Pn	**Pg**	**16 33 21.3**	**+1.0**
CUKT				Sn	**Sg**	**16 33 40.9**	**+2.9**
CUKT	**Cukurca**	**1.37**	**208**	P	**Pg**	**16 33 20.6**	**+0.4**
CUKT				IAML		16 33 43.0	
	comp=N,368nm,0.8s						
CUKT				IAML		16 33 51.0	
	comp=E,228nm,0.6s						
ITBZ	**Tabriz**	**1.39**	**99**	Pg	**Pn**	**16 33 19.2**	**-1.5**
IGDI	**IGDIR**	**1.43**	**350**	P	**Pb**	**16 33 21.0**	**-0.5**
IGDI				S	**Sg**	**16 33 41.2**	**+1.2**
IGDI				IAML		16 33 45.0	
	comp=E,221nm,0.9s						
IGDI	**IGDIR**	**1.43**	**350**	P	**Pb**	**16 33 21.5**	**0.0**
IGDI				S	**Sg**	**16 33 42.9**	**+2.9**
IAZR	**Azarshahr**	**1.47**	**122**	Pg	**Pb**	**16 33 21.8**	**-0.4**
PERV	**Siirt/Pervari-**	**1.56**	**251**	P	**Pb**	**16 33 23.7**	**0.0**
PERV				IAML		16 33 52.0	
	comp=N,235nm,0.6s						
PERV				IAML		16 34 02.0	
	comp=E,239nm,0.6s						
AGRB	**Hanur-Agry**	**1.57**	**316**	Pn	**Pn**	**16 33 22.8**	**-0.4**
AGRB				Sn	**Sb**	**16 33 43.8**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.57**	**307**	P	**Pn**	**16 33 22.8**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.60**	**296**	Pn	**Pn**	**16 33 23.4**	**-0.3**
MLAZ				Sn	**Sn**	**16 33 44.2**	**-0.9**
KOTA	**Agri, Merkez-K**	**1.63**	**325**	P	**Pn**	**16 33 23.0**	**-1.1**
KOTA				S	**Sg**	**16 33 48.2**	**+1.6**
GNI	**Garni**	**1.71**	**9**	Pn	**Pg**	**16 33 26.7**	**-0.1**
BLIS	**Bitlis-Merkez**	**1.80**	**269**	P	**Pg**	**16 33 28.4**	**-0.2**
SIRN	**Sirnak**	**1.85**	**239**	P	**Pg**	**16 33 29.3**	**-0.2**
SIRN				S	**Sg**	**16 33 54.7**	**+1.2**
SIRN				IAML		16 34 04.0	
	comp=E,129nm,0.6s						
SIRN				IAML		16 34 08.0	
	comp=N,143nm,0.7s						
GURO	**Guroymak-BITLI**	**1.87**	**274**	Pn	**Pn**	**16 33 27.2**	**-0.1**
MAHB	**Mahabad**	**1.98**	**148**	Pn	**Pg**	**16 33 32.0**	**0.0**
SRTM	**Siirt_Merkez**	**2.01**	**257**	P	**Pb**	**16 33 21.7**	**+0.2**
SRTM				S	**Sb**	**16 33 56.5**	**-0.6**
SRTM				IAML		16 34 11.0	
	comp=E,105nm,0.6s						
SRTM				IAML		16 34 12.0	
	comp=N,122nm,1.1s						
IHRS	**Heris**	**2.07**	**93**	Pn	**Pb**	**16 33 31.7**	**-0.9**
MUSM	**Mu-Merkez**	**2.29**	**278**	P	**Pg**	**16 33 37.1**	**-0.7**
VRTB	**Varto-Mus**	**2.41**	**288**	Pn	**Pn**	**16 33 34.7**	**-0.1**
QRD	**Qoradiz**	**2.48**	**65**	P	**Pn**	**16 33 36.2**	**+0.7**
QRD				S	**Sb**	**16 34 09.2**	**-1.2**
GDB	**GEDABAY**	**2.48**	**24**	P	**Pn**	**16 33 36.7**	**+0.9**
GDB				S	**Sb**	**16 34 10.0**	**-0.8**
SVAN	**Silvan-Diyarba**	**2.54**	**264**	Pn	**Pn**	**16 33 36.9**	**+0.4**
SENK	**Senkaya-Erzuru**	**2.63**	**323**	Pn	**Pn**	**16 33 38.4**	**+0.5**
GANJ	**Ganja**	**2.64**	**34**	P	**Pn**	**16 33 39.5**	**+1.7**
GANJ				S	**Sb**	**16 34 14.1**	**-0.9**
AGDM	**Agdam**	**2.66**	**51**	P	**Pn**	**16 33 39.8**	**+1.7**
AGDM				S	**Sb**	**16 34 14.5**	**-1.3**
QZX	**Qazax, Azerbai**	**2.70**	**16**	P	**Pn**	**16 33 39.7**	**+1.1**
QZX				S	**Sb**	**16 34 15.5**	**-1.2**
GRMI	**Germi**	**2.75**	**82**	Pn	**Pn**	**16 33 40.8**	**+1.4**
YRD	**Yardimli**	**3.03**	**80**	P	**Pn**	**16 33 44.0**	**+0.6**
YRD				S	**Sb**	**16 34 24.7**	**-1.8**
LRK	**Lerik**	**3.09**	**85**	P	**Pn**	**16 33 45.1**	**+1.0**
LRK				S	**Sb**	**16 34 26.0**	**-2.1**
GLBA	**Clilabad**	**3.21**	**75**	P	**Pn**	**16 33 47.3**	**+1.7**
GLBA				S	**Sb**	**16 34 27.9**	**-3.4**
LKRN	**Lenkeran, Azer**	**3.43**	**84**	P	**Pn**	**16 33 50.3**	**+1.6**
LKRN				S	**Sb**	**16 34 33.8**	**-4.1**
ASTR	**Astara**	**3.44**	**87**	P	**Pn**	**16 33 50.1**	**+1.4**
ASTR				S	**Sn**	**16 34 32.8**	**+2.8**
SEKA	**Sheki**	**3.48**	**37**	P	**Pn**	**16 33 50.9**	**+1.5**
SEKA				S	**Sb**	**16 34 34.9**	**-4.5**
ZKTA	**Zakatala**	**3.60**	**27**	P	**Pn**	**16 33 52.6**	**+1.6**
ZKTA				S	**Sn**	**16 34 36.9**	**+2.8**
QBL	**Gabala**	**3.63**	**46**	P	**Pn**	**16 33 52.1**	**+0.8**
QBL				S	**Sb**	**16 34 38.8**	**-4.6**
PQL	**Pirkuli**	**3.98**	**53**	P	**Pn**	**16 33 56.8**	**+0.4**
PQL				S	**Sn**	**16 34 46.0**	**+2.3**

*NEIC **24** 16:33:00.1±1.2, 60°5S±0°1×26°6W±0°3, h10km±1km, mb4.9/35, Error ellipse: s-maj=30.5km s-min=18.7km az=61.0*
*IDC **24** 16:33:00.0±1.0, 60°01S×26°82W, h0km, mb4.3/6, mbtmp4.2/6, MS3.5/1, Error ellipse: s-maj=39.1km s-min=27.3km az=18.0*

ISC 24 16:32:59.4±0.5, 60°45S±0°09×26°6W±0°1, h10km, n60, σ1¹21/57, mb4.9/23, 6D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**8.18**	**315**	Pn	**Pn**	**16 34 56.4**	**-1.6**
VNA1	**Neumayer--Stat**	**12.66**	**151**	⇓P	**Pn**	**16 35 56.8**	**-2.4**
	comp=Z,70nm,0.3s						
VNA3	**Neumayer Olymp**	**12.78**	**155**	⇓P	**Pn**	**16 35 58.2**	**-2.7**
	comp=Z,29nm,0.3s						
VNA2	**Neumayer--Watz**	**13.06**	**151**	⇓P	**Pn**	**16 36 01.7**	**-3.0**
	comp=Z,8.9nm,0.2s,baz=317,slow=13						
ESPZ	**Base Esperanza**	**14.56**	**245**	P	**P**	**16 36 31.7**	**0.0**
SNAA	**Sanae**	**14.66**	**150**	Pn	**Pn**	**16 36 26.0**	**-0.6**
TROLL	**Troll, Antarti**	**16.24**	**147**	P	**Pn**	**16 36 45.3**	**-2.1**
BELA	**Belgrano 2**	**17.71**	**186**	P	**P**	**16 37 08.1**	**+1.5**
ELIB	**Princess Elisa**	**22.37**	**141**	*d*P	**P**	**16 37 57.9**	**+0.5**
QSPA	**South Pole Qui**	**29.79**	**180**	P	**P**	**16 39 08.4**	**+2.3**
TRQA	**Tornquist**	**31.57**	**299**	P	**P**	**16 39 22.2**	**+0.4**
TRQA				IAmb	IAmb	16 39 23.5	
	comp=Z,12nm,0.7s						
PLCA	**Paso Flores**	**33.33**	**286**	P	**P**	**16 39 36.5**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=148,slow=6.7,SNR=4.5						
PLCA				LR	LR	16 51 01.3	
	comp=Z,90nm,20.1s,baz=159,slow=33						
	comp=Z,0.7nm,0.5s						
PLTB	**Pedras Altas**	**33.79**	**316**	P	**P**	**16 39 41.1**	**-0.3**
PLTB				IAmb	IAmb	16 39 45.8	
	comp=Z,19nm,1.4s						
BO02	**Sierra Bellavi**	**38.22**	**292**	P	**P**	**16 40 19.5**	**+0.3**
BO04	**La Punta**	**38.80**	**293**	P	**P**	**16 40 23.8**	**-0.4**
BO04				IAmb	IAmb	16 40 26.1	
	comp=Z,22nm,0.8s						
MT08	**Bocatoma Ro**	**38.99**	**294**	P	**P**	**16 40 25.5**	**-0.4**
MT08				IAmb	IAmb	16 40 28.7	
	comp=Z,20nm,0.7s						
MT09	**Talagante**	**39.16**	**293**	P	**P**	**16 40 27.4**	**+0.2**
MT09				IAmb	IAmb	16 40 28.7	
	comp=Z,31nm,0.8s						
MT01	**Popeta**	**39.20**	**292**	P	**P**	**16 40 27.1**	**-0.3**
MT01				IAmb	IAmb	16 40 28.3	
	comp=Z,17nm,0.6s						
VA05	**Santo Domingo**	**39.54**	**292**	P	**P**	**16 40 29.5**	**-0.8**
PEL	**Peldehue**	**39.55**	**293**		**P**	**16 40 30.9**	**+0.6**
MT02	**Curacav**	**39.66**	**293**	P	**P**	**16 40 31.7**	**+0.4**
MT02				IAmb	IAmb	16 40 32.5	
	comp=Z,19nm,0.6s						
VA03	**San Esteban**	**39.80**	**294**	P	**P**	**16 40 33.4**	**+0.8**
VA03				IAmb	IAmb	16 40 35.0	
CPUP	**Villa Florida**	**40.06**	**314**	P	**P**	**16 40 33.1**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=175,slow=8.7,SNR=6.1						
	comp=Z,2.2nm,0.7s						
CPUP	**Villa Florida**	**40.06**	**314**	P	**P**	**16 40 33.8**	**-0.8**
VA06	**Catapilco**	**40.31**	**293**	P	**P**	**16 40 37.7**	**+1.0**
VA06				IAmb	IAmb	16 40 39.1	
	comp=Z,28nm,0.6s						
CO04	**Los Peladeros**	**40.60**	**294**	P	**P**	**16 40 39.6**	**+0.2**
CO04				IAmb	IAmb	16 40 42.4	
	comp=Z,20nm,0.7s						
CO02	**Combarbal**	**41.32**	**295**	P	**P**	**16 40 45.5**	**+0.3**
CO02				IAmb	IAmb	16 40 50.9	
	comp=Z,16nm,0.7s						
CO06	**Fray Jorge**	**42.06**	**294**	P	**P**	**16 40 51.4**	**+0.3**
CO06				IAmb	IAmb	16 40 52.7	
	comp=Z,45nm,1.4s						
AC05	**El Transito**	**43.02**	**297**	P	**P**	**16 40 59.4**	**+0.4**
LCO	**Las Campanas**	**43.06**	**297**	P	**P**	**16 40 58.9**	**-0.6**
AC02	**Maricunga**	**44.26**	**300**	P	**P**	**16 41 10.1**	**+0.6**
AC02				IAmb	IAmb	16 41 11.5	
	comp=Z,12nm,0.6s						
AC01	**Pan de Azucar**	**45.50**	**299**	P	**P**	**16 41 18.9**	**+0.1**
AC01				IAmb	IAmb	16 41 22.1	
	comp=Z,20nm,1.4s						
GO02	**Mina Guanaco**	**45.92**	**301**	P	**P**	**16 41 22.5**	**0.0**
PB03	**IPOC Station P**	**48.74**	**302**	P	**P**	**16 41 43.8**	**-0.5**
PB03				IAmb	IAmb	16 41 45.4	
	comp=Z,11nm,0.6s						
PB09	**IPOC Station P**	**48.76**	**303**	P	**P**	**16 41 44.1**	**-0.3**
PB09				IAmb	IAmb	16 41 46.1	
	comp=Z,7.0nm,0.8s						
PB07	**IPOC Station P**	**49.09**	**302**	P	**P**	**16 41 47.3**	**+0.4**
PB02	**IPOC Station P**	**49.45**	**303**	P	**P**	**16 41 49.0**	**-0.7**
PB01	**IPOC Station P**	**49.53**	**303**	P	**P**	**16 41 50.5**	**+0.3**
PB01				IAmb	IAmb	16 41 52.0	
	comp=Z,16nm,0.7s						
CASY	**Casey**	**49.66**	**159**	P	**P**	**16 41 50.4**	**-0.2**
GO01	**Chusmiza**	**50.64**	**304**	P	**P**	**16 41 59.3**	**+0.2**
GO01				IAmb	IAmb	16 42 00.8	
	comp=Z,6.6nm,0.7s						
PTLB	**Pontes e Lacer**	**50.75**	**318**	P	**P**	**16 41 59.3**	**0.0**
LPAZ	**La Paz**	**53.26**	**307**	P	**P**	**16 42 19.2**	**+0.4**
	comp=Z,3.3nm,0.5s,baz=148,slow=4.4,SNR=20						
	comp=Z,3.3nm,0.5s						
LPAZ	**La Paz**	**53.26**	**307**		**P**	**16 42 19.3**	**+0.5**
DBIC	**Dimbokro**	**69.06**	**23**	P	**P**	**16 44 05.7**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=201,slow=8.6,SNR=1.6						
	comp=Z,1.6nm,0.6s						
DBIC	**Dimbokro**	**69.06**	**23**	IAmb	IAmb	16 44 19.6	
	comp=Z,13nm,1.3s						
TORD	**Torodi Ar. Bea**	**76.75**	**28**	P	**P**	**16 44 51.8**	**+1.0**
	comp=Z,7.8nm,0.7s,baz=189,slow=5.0,SNR=39						
	comp=Z,7.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.75**	**28**	IAmb	IAmb	16 44 52.6	
	comp=Z,4.6nm,0.8s						
ASAR	**Alice Springs**	**94.69**	**162**	P	P	16 46 26.8	+6.1
	comp=Z,0.5nm,0.9s,baz=196,slow=5.0,SNR=7.2						
	comp=Z,0.5nm,0.9s						
ASAR	**Alice Springs**	**94.69**	**162**	P	**P**	**16 46 21.2**	**+0.4**
BMRD	**Maredsous**	**113.25**	**21**	*d*PKiKP	**PKiKP**	**16 51 37.7**	**+1.8**
MEM	**Membach**	**113.78**	**22**	*d*PKP	**PKiKP**	**16 51 37.2**	**+0.3**
FINES	**FINESS Array B**	**128.10**	**29**	PKP	**PKPdf**	**16 52 04.2**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=177,slow=2.8,SNR=4.3						
PZH	**PanZhiHua**	**131.36**	**110**	PKP	**PKPdf**	**16 52 10.8**	**-0.8**
WMQ	**Urumqi**	**138.30**	**83**	*e*PKP	**PKPdf**	**16 52 24.5**	**+0.6**
YKA	**Yellowknife Ar**	**139.58**	**314**

GRL				S		Sb	16 40 08.0	-1.3
GRL	**Gorelyy**	**1.68**	**261**	*e*P		Pn	16 39 46.4	+0.6
GRL				*e*S		Sb	16 40 08.0	-1.3
MKZ	**Mys Kozlova**	**1.79**	**18**	PN		Pn	16 39 47.0	-0.3
MKZ				S		Sn	16 40 09.0	-0.1
MKZ	**Mys Kozlova**	**1.79**	**18**	*e*P		Pn	16 39 47.0	-0.3
MKZ				*e*S		Sn	16 40 09.0	-0.1
ASAK	**Asacha**	**1.82**	**256**	PN		Pn	16 39 48.5	+0.8
ASAK				S		Sb	16 40 12.5	-0.9
ASAK	**Asacha**	**1.82**	**256**	*e*P		Pn	16 39 48.6	+0.8
ASAK				*e*S		Sb	16 40 12.5	-0.9
PEA0B	**Petropavlovsk-**	**1.88**	**279**			Pn	16 39 49.2	+0.7
PEA0B	**Petropavlovsk-**	**1.88**	**279**	PN		Pn	16 39 49.5	+1.0
PEA0B				S		Sb	16 40 14.8	-0.3
PETK	**Petropavlovsk-**	**1.88**	**279**	Pn		Pn	16 39 49.5	+0.9
	comp=E,56nm,0.3s,baz=91,slow=17,SNR=313							
PETK				Sn		Sb	16 40 13.9	-1.1
	comp=E,59nm,0.3s,baz=108,slow=17,SNR=14							
PETK				LR		LR	16 40 54.5	
	comp=E,83nm,18.7s,baz=118,slow=52							
PETK	**Petropavlovsk-**	**1.88**	**279**			Pn	16 39 49.3	+0.8
GNL	**Ganaly**	**1.90**	**297**	PN		Pn	16 39 50.4	+1.5
GNL				S		Sb	16 40 14.8	-0.9
GNL	**Ganaly**	**1.90**	**297**	*e*P		Pn	16 39 50.4	+1.5
GNL				*e*S		Sb	16 40 14.8	-0.9
KDTR	**Khodutka, Kamc**	**1.96**	**239**	PN		Pn	16 39 50.2	+0.6
KDTR	**Khodutka, Kamc**	**1.96**	**239**	*e*P		Pn	16 39 50.2	+0.6
APC	**Apacha**	**2.20**	**273**	PN		Pn	16 39 54.6	+1.8
APC				S		Sb	16 40 23.2	-0.8
APC	**Apacha**	**2.20**	**273**	*e*P		Pn	16 39 54.7	+1.8
APC				*e*S		Sb	16 40 23.3	-0.8
TUMD	**Tumrok D**	**2.36**	**355**	PN		Pn	16 39 56.9	+1.8
TUMD				S		Sb	16 40 26.1	-2.8
TUMD	**Tumrok D**	**2.36**	**355**	*e*P		Pn	16 39 57.0	+1.8
TUMD				*e*S		Sb	16 40 26.2	-2.8
PAU	**Pauzhetka**	**2.81**	**242**	PN		Pn	16 40 03.4	+2.1
PAU	**Pauzhetka**	**2.81**	**242**	*e*P		Pn	16 40 03.4	+2.1
KMNR	**Kamenistaya**	**2.92**	**354**	PN		Pn	16 40 06.1	+3.2
KMNR				S		Sb	16 40 43.0	-2.1
KMNR	**Kamenistaya**	**2.92**	**354**	*e*P		Pn	16 40 06.1	+3.2
KMNR				*e*S		Sb	16 40 43.0	-2.1
BZGR	**Bezymyannyi-Gr**	**3.09**	**359**	PN		Pn	16 40 07.3	+2.1
BZGR	**Bezymyannyi-Gr**	**3.09**	**359**	*e*P		Pn	16 40 07.3	+2.1
KOZ	**Kozyrevsk**	**3.25**	**351**	PN		Pn	16 40 10.1	+2.8
KOZ	**Kozyrevsk**	**3.25**	**351**	*e*P		Pn	16 40 10.2	+2.8
ESO	**Esso**	**3.31**	**339**	PN		Pn	16 40 10.8	+2.7
ESO	**Esso**	**3.31**	**339**	*e*P		Pn	16 40 10.8	+2.7
KLY	**Klyuchi**	**3.46**	**359**	PN		Pn	16 40 11.7	+1.5
KLY	**Klyuchi**	**3.46**	**359**	*e*P		Pn	16 40 11.8	+1.5
KBTR	**Krutoberegovo**	**3.56**	**19**	PN		Pn	16 40 12.1	+0.5
KBTR	**Krutoberegovo**	**3.56**	**19**	*e*P		Pn	16 40 12.1	+0.5
SKR	**Severo-Kuril's**	**3.62**	**235**	*e*PN		Pn	16 40 13.0	+0.6
SKR				*e*S		Sn	16 40 53.7	-0.5
SKR				pmax		pmax		
	comp=Z,68nm,0.8s							
SKR				smax		smax		
	comp=N,243nm,0.8s							
SKR				smax		smax		
	comp=E,272nm,1.0s							
SMKR	**Semkarok**	**3.75**	**6**	PN		Pn	16 40 15.9	+1.6
SMKR	**Semkarok**	**3.75**	**6**	*e*P		Pn	16 40 15.9	+1.6
BKI	**Bering**	**3.86**	**50**	*e*S		Sn	16 40 54.9	-5.0
YUK	**Yuzh-Kuril'sk**	**13.24**	**234**	*e*PN		Pn	16 42 21.1	-3.1
KIWB	**Kanaga Island**	**13.52**	**85**	Pn		Pn	16 42 30.4	+2.4
JKA	**Kamikawa-asahi**	**14.86**	**241**			Pn	16 42 46.7	+0.4
ASAJ	**Asahikawa**	**14.86**	**241**	Pn		Pn	16 42 47.2	+0.9
	comp=E,0.2nm,0.3s,baz=94,slow=15,SNR=4.3							
	comp=E,2.3nm,0.8s							
BILL	**Bilibino**	**15.46**	**8**	*e*P		Pn	16 42 53.6	-0.4
BILL				pmax		pmax		
	comp=Z,5.0nm,1.8s							
JEW	**Eniwo**	**16.34**	**240**	P		P	16 43 08.7	+0.5
SPIA	**Saint Paul Isl**	**17.09**	**64**	P		P	16 43 17.9	+1.5
J14K	**Nanvaranak Lak**	**21.14**	**48**	P		P	16 44 02.2	+1.6
J14K				IAmb		IAmb	16 44 18.8	
	comp=Z,12nm,1.4s							
C16K	**Lisburne Hills**	**22.27**	**33**	P		P	16 44 13.7	+1.1
MJAR	**Matsushiro Arr**	**22.73**	**233**	P		P	16 44 21.1	+3.3
	comp=Z,1.3nm,0.7s,baz=16,slow=13,SNR=4.6							
	comp=Z,1.3nm,0.7s							
E18K	**Tukpahlearik C**	**23.59**	**37**	P		P	16 44 27.0	+0.8
C18K	**Utukok River**	**23.81**	**34**	P		P	16 44 28.9	+0.4
C18K				IAmb		IAmb	16 44 42.0	
	comp=Z,4.1nm,1.4s							
C19K	**Lookout Ridge**	**24.52**	**33**	P		P	16 44 35.5	+0.6
C19K				IAmb		IAmb	16 44 36.4	
	comp=Z,2.7nm,0.8s							
OHAK	**Old Harbor**	**26.28**	**62**	P		P	16 44 50.6	-0.2
OHAK				IAmb		IAmb	16 45 33.8	
	comp=Z,39nm,1.4s							
D25K	**Kavik River**	**29.14**	**36**	P		P	16 45 16.8	+0.4
D25K				IAmb		IAmb	16 45 17.4	
	comp=Z,2.2nm,0.8s							
BMAR	**Burnt Mountain**	**29.66**	**40**	P		P	16 45 22.1	+1.1
H11N2	**WAKE ISLAND Hy**	**33.40**	**169**	T		T	17 21 21.2	
	baz=353,slow=76,SNR=47							
H11N3	**WAKE ISLAND Hy**	**33.42**	**169**	T		T	17 21 18.1	
	baz=353,slow=76,SNR=32							
H11N1	**WAKE ISLAND Hy**	**33.42**	**170**	T		T	17 21 19.3	
	baz=353,slow=76,SNR=35							
SONM	**Songino Array**	**34.36**	**284**	P		P	16 46 03.0	+0.5
	comp=Z,0.2nm,0.5s,baz=87,slow=10,SNR=2.4							
	comp=Z,0.2nm,0.5s							
H11S1	**WAKE ISLAND Hy**	**34.59**	**170**	T		T	17 22 41.3	
	baz=352,slow=76,SNR=8.9							
H11S3	**WAKE ISLAND Hy**	**34.60**	**170**	T		T	17 22 43.8	
	baz=352,slow=76,SNR=12							
H11S2	**WAKE ISLAND Hy**	**34.61**	**170**	T		T	17 22 42.8	
	baz=352,slow=76,SNR=8.0							
SPITS	**Spitsbergen Ar**	**47.44**	**351**	P		P	16 47 49.7	+0.1
	comp=Z,2.0nm,0.7s,baz=52,slow=9.7,SNR=7.6							
	comp=Z,2.0nm,0.7s							
KURK	**Kurchatov**	**48.21**	**302**	P		P	16 47 54.8	-1.0
KURK				IAmb		IAmb	16 48 00.5	
	comp=Z,5.1nm,1.4s							
KURK	**Kurchatov**	**48.21**	**302**	P		P	16 47 55.1	-0.8
KURBB	**Kurchatov Arra**	**48.31**	**302**	P		P	16 47 55.1	-1.6
	comp=Z,0.6nm,0.3s,baz=57,slow=7.8,SNR=2.4							
	comp=Z,0.6nm,0.3s							
MKAR	**Makanchi Array**	**48.63**	**296**	P		P	16 47 57.5	-1.7
	comp=Z,0.2nm,0.5s,baz=57,slow=6.6,SNR=6.7							
	comp=Z,0.2nm,0.5s							
MKAR	**Makanchi Array**	**48.63**	**296**	P		P	16 47 57.8	-1.5
MKAR	**Makanchi Array**	**48.63**	**296**	*e*P		P	16 47 57.9	-1.4
BVAR	**Borovoye Array**	**50.86**	**309**	P		P	16 48 16.8	+0.7
	comp=Z,0.3nm,0.5s,baz=41,slow=9.6,SNR=1.9							
	comp=Z,0.3nm,0.5s							
ARTI	**Arti**	**53.95**	**318**	*e*P		P	16 48 35.7	-3.2
ARTI				pmax		pmax		
	comp=Z,3.0nm,1.1s							
SFJD	**Kangerlussuaq**	**58.15**	**14**	LR		LR	17 17 07.3	
	comp=Z,20nm,18.3s,baz=164,slow=39							
FINES	**FINESS Array B**	**60.50**	**337**	P		P	16 49 24.7	-0.3
	comp=Z,2.8nm,0.9s,baz=27,slow=7.6,SNR=5.6							
	comp=Z,2.8nm,0.9s							
FINES	**FINESS Array B**	**60.50**	**337**	P		P	16 49 25.5	+0.4
FINES	**FINESS Array B**	**60.50**	**337**	P		P	16 49 25.5	+0.4
NOA	**NORSAR Array B**	**63.88**	**344**	P		P	16 49 47.4	-0.4
	comp=Z,0.3nm,0.5s,baz=33,slow=7.4,SNR=1.6							
	comp=Z,0.3nm,0.5s							
HFS	**Hagfors**	**64.30**	**342**	P		P	16 49 50.0	-0.4
	comp=Z,0.8nm,0.6s,baz=64,slow=8.2,SNR=1.0							
	comp=Z,0.8nm,0.6s							
E46A	**Sault Ste Mari**	**66.62**	**43**	P		P	16 50 07.1	+1.4
AKASG	**Malin Array Be**	**69.03**	**329**	P		P	16 50 20.7	-0.1
	comp=Z,0.8nm,0.5s,baz=31,slow=7.2,SNR=2.9							
	comp=Z,0.8nm,0.5s							
AKASG	**Malin Array Be**	**69.03**	**329**	IAmb		IAmb	16 51 02.2	
	comp=Z,5.5nm,1.4s							
KIV	**Kislovodsk**	**69.89**	**317**	*e*P		P	16 50 24.5	-1.9
KIV				pmax		pmax		
	comp=Z,6.0nm,1.0s							
LONY	**Lake Ozonia**	**71.91**	**38**	P		P	16 50 39.1	+0.6
AS31	**Alice Springs**	**79.71**	**205**	P		P	16 51 24.1	+1.0
AS31				IAmb		IAmb	16 51 37.1	
	comp=Z,1.6nm,1.2s							
ASAR	**Alice Springs**	**79.72**	**205**	P		P	16 51 24.0	+0.9
	comp=Z,0.3nm,0.7s,baz=15,slow=5.4,SNR=8.8							
	comp=Z,0.3nm,0.7s							
URZ	**Urewera**	**91.85**	**167**	LR		LR	17 26 30.4	
	comp=Z,196nm,19.8s,baz=124,slow=31							

MEX 24 16:46:40.2±0.8, 17°23'N×94°96'W, h123km±7km, MD4.1,

Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.15**	**154**	*i* P		Pn	16 46 55.9	-1.3
CMIG				*e*S		Sn	16 47 08.1	-1.8
UXUV	**UXUV**	**0.78**	**83**	*i* P		Pn	16 46 59.5	-1.0
UXUV				*e*S		Sn	16 47 14.0	-1.8
NEUV	**Arroyo Zacate**	**0.94**	**301**	*e*P		Pn	16 47 00.1	-1.8
NEUV				*e*S		Sn	16 47 16.1	-2.3
VHO	**Vista Hermosa**	**1.71**	**265**	*e*P		Pn	16 47 09.7	-0.8
VHO				*e*S		Sn	16 47 32.8	-0.7
HUIG	**Huatulco**	**1.83**	**217**	*e*P		Pn	16 47 08.4	-3.3
HUIG				*e*S		Sn	16 47 32.7	-3.1
TOIG	**Toxpalan**	**2.19**	**293**	*e*P		Pn	16 47 15.2	-1.0
TOIG				*e*S		Sn	16 47 42.0	-1.9
PEIG	**Puerto Escondi**	**2.43**	**240**	*e*P		Pn	16 47 15.5	-3.8
YOIG	**Yosondua**	**2.51**	**262**	*e*P		Pn	16 47 18.7	-1.8
YOIG				*e*S		Sn	16 47 48.8	-2.5
TXIG	**Tlaxiaco**	**2.69**	**271**	*e*P		Pn	16 47 21.4	-1.4
HLIG	**Huajuapan de L**	**2.78**	**283**	*e*P		Pn	16 47 23.1	-0.9
FTIG	**Fresnillo de T**	**3.10**	**283**	*e*P		Pn	16 47 27.6	-0.5

*IDC **24** 16:56:55.9±1.0, 5°55'S×129°48'E, h0km, mb3.8/6, mbtmp4.0/9, ML4.4/3, MS3.2/6, Error ellipse: s-maj=40.7km s-min=17.7km az=66.0*
*NEIC **24** 16:57:00.1±1.1, 5°60'S±0°07'×129°51'E±0°07, h27km±8km, mb4.2/10, Error ellipse: s-maj=13.0km s-min=6.8km az=222.0*
*DJA **24** 16:57:00.6±0.7, 5°S±2°×13°0'E±°, h23km±7km, M4.5/31, mB5.1/6, mb4.7/18, MLv4.5/31, Mw(mB)4.5/6*
ISC 24 16:56:59.1±0.6, 5°58S±0°05×129°62E±0°06, h35km, n53, σ2ş46/56, mb3.9/7, MS3.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.08**	**15**	P		Pn	16 57 15.6	-2.2
BNDI				S		Sn	16 57 28.3	-3.3
MSAI	**Masohi**	**2.32**	**343**	P		Pn	16 57 34.9	+0.1
MSAI				S		Sn	16 57 58.9	-3.2
AAI	**Ambon**	**2.35**	**323**	P		Pn	16 57 34.3	-1.0
AAI				S		Sn	16 58 01.1	-1.9
KRAI	**Karang Ratu**	**2.55**	**331**	P		Pn	16 57 37.9	-0.1
KRAI				S		Sn	16 58 06.5	-1.4
SAUI	**Saumlaki**	**2.92**	**145**			Pn	16 57 44.7	+1.7
SAUI	**Saumlaki**	**2.92**	**145**	P		Pn	16 57 47.6	+4.6
NLAI	**Namlea**	**3.42**	**313**	P		Pn	16 57 50.6	+0.6
KMPI	**Kaimana, Papua**	**4.49**	**65**	P		Pn	16 58 07.1	+2.4
SIJI	**Sorong**	**4.96**	**19**	Pn		Pn	16 58 11.4	+0.3
	26nm,0.3s,baz=206,slow=11,SNR=136							
SIJI				Sn		Sn	16 59 02.6	-4.6
	4.9nm,0.3s,baz=294,slow=23,SNR=5.6							
SIJI				LR		LR	17 00 33.9	
	comp=Z,134nm,18.4s,baz=274,slow=44							
	57nm,0.3s							
SIJI	**Sorong**	**4.96**	**19**	P		Pn	16 58 11.6	+0.5
SWI	**Sorong**	**4.96**	**19**	P		Pn	16 58 11.7	+0.6
SANI	**Sanana**	**5.04**	**314**	P		Pn	16 58 14.2	+2.0
LBMI	**Labuha**	**5.34**	**337**	P		Pn	16 58 16.0	-0.4
SOEI	**Soe**	**6.74**	**232**	Pn		Pn	16 58 35.0	-0.7
SOEI	**Soe**	**6.74**	**232**	P		Pn	16 58 39.9	+4.2
	0.1nm31nm,1.3s							
MTN	**Manton Dam**	**7.38**	**168**	Pn		Pn	16 58 45.7	+1.4
BATI	**Baumata**	**7.48**	**232**	P		Pn	16 58 50.0	+4.2
	0.2nm41nm,0.7s							
SRPI	**Serui, Papua**	**7.56**	**61**	P		Pn	16 58 49.6	+2.7
BAKI	**Biak**	**7.80**	**56**	P		Pn	16 58 51.8	+1.6
	0.3nm73nm,2.1s							
KKSI	**Kolaka, Sulawe**	**8.06**	**280**	P		Pn	16 58 54.7	+0.9
LUWI	**Luwuk**	**8.19**	**303**	P		Pn	16 58 56.0	+0.5
	76nm,1.0s							
BSSI	**Bau Bau, Buton**	**9.10**	**266**	P		Pn	16 59 10.6	+2.6
APSI	**Ampana**	**9.21**	**300**	P		Pn	16 59 11.4	+1.9
	30nm,1.3s							
KAPI	**Kappang**	**9.84**	**273**	LR		LR	17 02 55.2	
	comp=Z,104nm,20.2s,baz=93,slow=37							
KNRA	**Kununurra**	**10.07**	**185**			Pn	16 59 22.2	+0.8
TOLI2	**Tolitoli**	**11.05**	**307**	Pn		Pn	16 59 35.6	+0.9
FITZ	**Fitzroy Crossi**	**13.04**	**197**	Pn		Pn	17 00 01.1	-0.9
	2.3nm,0.3s,baz=27,slow=12,SNR=51							
FITZ				Sn		Sn	17 02 18.9	-7.0
	0.1nm,0.3s,baz=346,slow=19,SNR=1.2							
	5.8nm,0.3s							
DAV	**Davao City (W)**	**13.19**	**342**	LR		LR	17 05 29.2	
	comp=Z,68nm,19.8s,baz=316,slow=39							
WB0	**Warramunga Arr**	**14.85**	**162**	Pn		Pn	17 00 24.8	-1.8
WRA	**Warramunga Arr**	**15.00**	**163**	Pn		Pn	17 00 26.4	-2.2
	0.5nm,0.3s,baz=352,slow=13,SNR=15							
WRA				Sn		Sn	17 03 08.8	-4.9
	0.7nm,0.3s,baz=332,slow=24,SNR=6.0							
WRA	**Warramunga Arr**	**15.00**	**163**			Pn	17 00 26.3	-2.4
WR8	**Warramunga Arr**	**15.06**	**162**	Pn		Pn	17 00 27.4	-2.1
WR8				IAmb		IAmb	17 00 49.8	
	comp=Z,21nm,1.4s							
COEN	**Coen**	**15.73**	**123**	Pn		Pn	17 00 37.4	-0.8
COEN				IAmb		IAmb	17 00 45.6	
	comp=Z,16nm,0.8s							
PMG	**Port Moresby**	**17.80**	**103**	P		P	17 01 06.7	+2.0
PMG				IAmb		IAmb	17 01 08.0	
	comp=Z,24nm,1.1s							
MBWA	**Marble Bar**	**18.22**	**211**	P		P	17 01 07.3	-2.0
MBWA				IAmb		IAmb	17 01 14.2	
	comp=Z,21nm,1.3s							
AS31	**Alice Springs**	**18.45**	**168**	P		P	17 01 12.1	+0.2
ASAR	**Alice Springs**	**18.45**	**168**	P		P	17 01 13.6	+1.6
	comp=Z,0.6nm,0.3s,baz=344,slow=9.6,SNR=42							
ASAR				S		Sn	17 04 32.3	-5.3
	comp=Z,1.1nm,0.7s,baz=355,slow=29,SNR=4.6							
	comp=Z,1.9nm,0.7s							
ASAR	**Alice Springs**	**18.45**	**168**	P		P	17 01 12.4	+0.4
PSA00	**Pilbara Seismi**	**18.51**	**210**	P		P	17 01 13.2	+0.7
CTA	**Charters Tower**	**21.67**	**133**	P		P	17 01 48.9	+2.0
	comp=Z,3.2nm,0.7s,baz=326,slow=10,SNR=7.5							
	comp=Z,3.2nm,0.7s							
CTAO	**Charters Tower**	**21.67**	**133**	P		P	17 01 49.2	+2.3
CTAO				IAmb		IAmb	17 02 14.7	
	comp=Z,9.7nm,1.1s							
LEM	**Lembang**	**21.91**	**266**	LR		LR	17 12 31.3	
	comp=Z,45nm,19.9s,baz=164,slow=43							
STKA	**Stephens Creek**	**28.47**	**158**	P		P	17 02 54.2	+3.2
	comp=Z,0.9nm,0.6s,baz=345,slow=12,SNR=3.5							
	comp=Z,0.9nm,0.6s							
STKA	**Stephens Creek**	**28.47**	**158**	P		P	17 02 52.6	+1.6
CMAR	**Chiang Mai Arr**	**38.54**	**309**	P		P	17 04 18.7	0.0
	comp=Z,0.2nm,0.3s,baz=124,slow=8.4,SNR=4.4							
	comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**66.83**	**327**	P		P	17 07 49.5	+2.0
	comp=Z,0.5nm,0.5s,baz=127,slow=8.0,SNR=10.0							
	comp=Z,0.5nm,0.5s							
MKAR	**Makanchi Array**	**66.83**	**327**	P		P	17 07 49.0	+1.5
MAKZ	**Makanchi**	**67.02**	**327**	P		P	17 07 50.1	+1.5
MAKZ				IAmb		IAmb	17 08 02.1	
	comp=Z,2.1nm,1.1s							
AAK	**Ala-Archa**	**69.22**	**320**	LR		LR	17 41 30.7	
	comp=Z,23nm,18.7s,baz=315,slow=39							
ZALV	**Zalesovo Beam**	**70.15**	**334**	P		P	17 08 09.6	+1.6
	comp=Z,0.5nm,0.6s,baz=123,slow=5.3,SNR=3.7							
	comp=Z,0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**71.11**	**328**	P		P	17 08 15.8	+1.9
	comp=Z,0.4nm,0.3s,baz=134,slow=5.6,SNR=4.4							
	comp=Z,0.4nm,0.3s							
KURK	**Kurchatov**	**71.11**	**329**	P		P	17 08 15.8	+1.9
INK	**Inuvik**	**97.69**	**22**	LR		LR	17 51 34.6	
	comp=Z,30nm,19.7s,baz=336,slow=34							

*IDC **24** 17:03:04.9±2.3, 1°41S×134°14E, h0km, mb3.3/2, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=60.3km s-min=26.8km az=67.0*
*DJA **24** 17:03:10.5±0.4, 2°S±3°×13°4E±°, h19km±3km, M3.6/10, MLv3.6/10*
ISC 24 17:03:10.5±1.0, 1°63S±0°09×133°79E±0°04, h24km, n10, σ0965/14, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.41**	**73**	P		Pb	17 03 19.4	+0.2
RKPI				S		Sb	17 03 25.7	+0.7
MWPI	**Manokwari, Pap**	**0.74**	**20**	P		Pb	17 03 24.6	-0.1
MWPI				S		Sn	17 03 36.0	+0.1
BAKI	**Biak**	**2.36**	**79**	P		Pn	17 03 47.6	-0.2
BAKI				S		Sn	17 04 17.1	+1.1
SRPI	**Serui, Papua**	**2.46**	**96**	P		Pn	17 03 49.3	+0.1
SIJI	**Sorong**	**2.63**	**287**	Pn		Pn	17 03 51.8	+0.3
	13nm,0.3s,baz=119,slow=19,SNR=147							
SIJI				Sn		Sn	17 04 23.2	+0.5
	12nm,0.3s,baz=146,slow=23,SNR=25							
	27nm,0.2s							
SIJI	**Sorong**	**2.63**	**287**	P		Pn	17 03 52.1	+0.6
SWI	**Sorong**	**2.64**	**287**	P		Pn	17 03 52.4	+0.8
WRA	**Warramunga Arr**	**18.21**	**178**	P		P	17 07 21.4	-0.6
	0.1nm,0.3s,baz=0.3,slow=11,SNR=2.4							
	0.8nm,0.8s							
ASAR	**Alice Springs**	**21.91**	**180**	P		P	17 08 02.1	-0.1
	0.3nm,0.3s,baz=359,slow=11,SNR=5.8							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**65.98**	**324**	P		P	17 13 53.9	-1.1
	0.4nm,0.5s,baz=107,slow=8.4,SNR=5.2							
	0.4nm,0.5s							

*AZER **24** 17:04:59.1, 38°42N×44°37E, h2km, ml3.9*
*AFAD **24** 17:05:00.8, 38°39N×44°45E, h6km±2km, MW3.7*
*NSSP **24** 17:05:00.8, 38°42N×44°45E, h12km, Ms3.6*
*TIF **24** 17:05:01.1, 38°41N×44°41E, h13km±1km*
*TEH **24** 17:05:01.5, 38°42N×44°44E, h6km, ML3.6, Presumed earthquake*
*ISK **24** 17:05:02.1, 38°36N×44°28E, h5km, ML3.7/15*
*IDC **24** 17:05:04.7±4.5, 38°13N×44°97E, h0km, mb3.6/4, mbtmp3.6/5, ML2.1/1, MS3.0/9, Error ellipse: s-maj=83.9km s-min=23.8km az=47.0*
ISC 24 17:05:01.1±1.1, 38°41N±0°02×44°42E±0°01, h2km±9km, n121, σ2ş15/170, mb3.5/4, MS3.2/5, 1C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**307**	P		Pb	17 05 10.1	-1.3
OZAP				S		Sb	17 05 16.6	-1.7
OZAP	**Van, Ozalp-Mer**	**0.42**	**307**	Pg		Pb	17 05 10.1	-1.3
TVAN	**Van**	**0.80**	**279**	P		Pg	17 05 16.7	+0.1
TVAN	**Van**	**0.80**	**279**	Pg		Pg	17 05 16.6	+0.1
VMUR	**Van-Muradiye**	**0.88**	**311**	P		Pb	17 05 18.6	-0.6
VMUR				S		Sn	17 05 31.8	-2.5
VMUR	**Van-Muradiye**	**0.88**	**311**	Pg		Pb	17 05 18.6	-0.6
ISHB	**Shabestar**	**0.95**	**97**	Pg		Pg	17 05 18.3	-1.0
MAKU	**Maku**	**0.97**	**12**	Pg		Pg	17 05 19.5	-0.2
HAKT	**HAKKARI**	**1.02**	**214**	P		Pg	17 05 20.5	-0.1
HAKT				S		Sn	17 05 35.5	-2.2
HAKT	**HAKKARI**	**1.02**	**214**	Pg		Pb	17 05 21.0	-0.6
HAKT	**HAKKARI**	**1.02**	**214**	P		Pb	17 05 21.0	-0.6
HAKT				S		Sn	17 05 37.6	-0.1
ERCV	**ERCIS-VAN**	**1.04**	**306**	Pg		Pn	17 05 22.2	-0.8
IMRD	**Marand**	**1.05**	**73**	Pg		Pg	17 05 21.4	+0.1
GEVA	**Gevas**	**1.07**	**265**	P		Pb	17 05 21.0	-1.6
GEVA				S		Sn	17 05 37.8	-1.2
AKDM	**Akdamar-Van**	**1.13**	**266**	Pg		Pb	17 05 22.7	-0.9
NAX	**Nakhchivan**	**1.14**	**47**	P		Pg	17 05 23.4	+0.5
NAX				S		Sn	17 05 40.5	+0.1
DYDN	**Diyadin**	**1.27**	**334**	P		Pn	17 05 24.4	-1.7
DYDN				S		Sg	17 05 42.2	+0.4
DYDN	**Diyadin**	**1.27**	**334**	Pg		Pn	17 05 24.4	-1.7
SBZ	**Shahbuz**	**1.32**	**42**	P		Pg	17 05 27.1	+0.6
SBZ				S		Sg	17 05 46.9	+3.2
CUKT	**Cukurca**	**1.33**	**209**	Pn		Pg	17 05 25.9	+0.4
CUKT				Sn		Sg	17 05 45.1	+1.4
CUKT	**Cukurca**	**1.33**	**209**	P		Pg	17 05 26.6	+0.1
CUKT				S		Sn	17 05 43.4	-1.7
CUKT	**Cukurca**	**1.33**	**209**	Pg		Pg	17 05 26.6	+0.1
ORD	**Ordubad**	**1.34**	**67**	P		Pg	17 05 26.9	+0.1
ORD				S		Sg	17 05 47.0	+3.0
HYR	**Heyderabad**	**1.35**	**14**	P		Pg	17 05 28.1	+1.1
HYR				S		Sg	17

MNGR	**Mingechevir, A**	**3.13**	**40**	P	**Pb**	17 05 53.6	-3.9
MNGR				S	**Sb**	**17 06 34.2**	**-2.0**
TRLG	**Trialeti**	**3.13**	**356**	P	**Pb**	17 05 58.7	+1.0
TRLG				S	**Sg**	**17 06 43.1**	**+1.3**
ZRD	**Zardab**	**3.15**	**53**	P	**Pb**	17 05 53.9	-3.8
ZRD				S	**Sb**	**17 06 34.0**	**-2.6**
YEDI	**Yedisu-Bingol**	**3.19**	**290**	Pn	**Pb**	17 05 54.6	-4.0
VSHL	**Vashlovani**	**3.20**	**28**	P	**Pb**	17 05 56.5	-2.2
VSHL				S	**Sg**	**17 06 45.7**	**+1.7**
GLBA	**Clilabad**	**3.21**	**74**	P	**Pb**	17 05 54.8	-4.1
GLBA				S	**Sb**	**17 06 36.4**	**-2.1**
DYBB	**Diyarbakir**	**3.40**	**264**	Pn	**Pn**	17 05 56.5	+1.2
LKRN	**Lenkeran, Azer**	**3.43**	**84**	P	**Pn**	17 05 57.7	+2.0
LKRN				S	**Sb**	**17 06 41.5**	**-3.3**
ASTR	**Astara**	**3.44**	**86**	P	**Pn**	17 05 57.8	+2.1
ASTR				S	**Sb**	**17 06 41.6**	**-3.3**
SEKA	**Sheki**	**3.52**	**37**	P	Pb	17 05 59.5	-4.7
ZKTA	**Zakatala**	**3.64**	**27**	P	**Pn**	**17 06 00.9**	**+2.3**
ZKTA				S	**Sb**	**17 06 44.9**	**-6.0**
QBL	**Gabala**	**3.66**	**45**	P	**Pn**	**17 06 00.8**	**+2.0**
LGD	**Lagodekhi**	**3.70**	**22**	P	**Pg**	**17 06 12.9**	**+1.0**
ALIG	**Mtskhetisjvari**	**3.74**	**351**	P	**Pg**	**17 06 10.2**	**-2.5**
IML	**Ismayilli**	**3.76**	**50**	P	**Pn**	**17 06 02.6**	**+2.4**
IML				S	**Sb**	**17 06 50.7**	**-3.5**
ALIB	**&Aumlli-Bayram**	**3.89**	**65**	P	**Pn**	**17 06 03.9**	**+2.0**
ALIB				S	**Sb**	**17 06 52.5**	**-5.4**
XNQ	**Khinaliq**	**3.98**	**45**	P	**Pn**	**17 06 05.3**	**+1.9**
XNQ				S	**Sb**	**17 06 55.2**	**-5.6**
PQL	**Pirkuli**	**4.01**	**52**	P	**Pn**	**17 06 05.8**	**+2.1**
PQL				S	**Sb**	**17 06 56.0**	**-5.5**
IDHR	**Dehrash**	**4.03**	**156**	Pn	**Pn**	**17 06 06.1**	**+2.1**
GBS	**Qobustan**	**4.09**	**57**	P	**Pn**	**17 06 07.0**	**+2.2**
GBS				S	**Sb**	**17 06 58.4**	**-5.5**
ATGJ	**Altiaghaj**	**4.26**	**54**	P	**Pn**	**17 06 09.4**	**+2.2**
ATGJ				S	**Sb**	**17 07 02.0**	**-6.9**
SHTL	**Shatili**	**4.28**	**7**	P	**Pg**	**17 06 19.8**	**-3.3**
QSAR	**Qusar**	**4.28**	**42**	P	**Pn**	**17 06 09.6**	**+2.2**
QSAR				S	**Sb**	**17 07 03.4**	**-5.9**
QUBA	**Quba, Azerbaij**	**4.30**	**46**	P	**Pn**	**17 06 09.6**	**+2.0**
QUBA				S	**Sn**	**17 07 02.1**	**+3.7**
SIZA	**Siyzn**	**4.36**	**51**	P	**Pn**	**17 06 10.5**	**+2.0**
SIZA				S	**Sn**	**17 07 04.1**	**+4.1**
KBZ	**Khabaz**	**5.44**	**348**	Pn	**Pb**	**17 06 35.0**	**-1.7**
	0.1nm,0.3s,baz=166,slow=12,SNR=4.7						
KBZ				LR	LR	17 09 09.0	
	comp=Z,82nm,18.2s,baz=206,slow=42						
	3.6nm,1.0s						
BRTR	**Keskin Array B**	**8.49**	**282**	LR	LR	17 10 47.6	
	comp=Z,59nm,19.3s,baz=106,slow=38						
MMAI	**Mount Meron Ar**	**9.09**	**236**	LR	LR	17 11 11.5	
	comp=Z,123nm,20.8s,baz=62,slow=39						
BVAR	**Borovoye Array**	**23.12**	**42**	P	**P**	**17 10 11.7**	**+3.4**
	1.4nm,0.9s,baz=232,slow=7.1,SNR=5.4						
	1.4nm,0.9s						
AAK	**Ala-Archa**	**23.19**	**70**	LR	LR	17 19 45.2	
	comp=Z,54nm,19.9s,baz=266,slow=38						
KURBB	**Kurchatov Array**	**26.97**	**52**	P	**P**	**17 10 46.3**	**+2.3**
	0.5nm,0.4s,baz=260,slow=8.9,SNR=4.1						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**28.88**	**61**	P	**P**	**17 11 02.3**	**+1.1**
	0.6nm,0.8s,baz=262,slow=7.8,SNR=5.1						
	0.6nm,0.8s						
HFS	**Hagfors**	**29.11**	**328**	LR	LR	17 24 05.6	
	comp=Z,111nm,19.8s,baz=92,slow=39						
FURI	**Furi**	**29.84**	**191**	LR	LR	17 22 35.5	
	comp=Z,48nm,18.2s,baz=84,slow=35						
NOA	**NORSAR Array B**	**30.64**	**328**	LR	LR	17 24 39.7	
	comp=Z,44nm,19.2s,baz=120,slow=38						
SONM	**Songino Array**	**45.10**	**57**	LR	LR	17 32 12.5	
	comp=Z,30nm,20.9s,baz=9.0,slow=36						
CMAR	**Chiang Mai Arr**	**51.14**	**97**	P	**P**	**17 14 06.0**	**+0.3**
	0.4nm,0.3s,baz=302,slow=8.5,SNR=7.7						
	0.4nm,0.3s						

*AFAD **24** 17:12:51.9,38°.53N×44°.73E, h7km±3km, ML2.6*
*AZER **24** 17:12:52.6,38°.52N×44°.58E, h5km, ml2.8*
*TEH **24** 17:12:53.0,38°.44N×44°.42E, h6km±272km, ML2.8, Presumed earthquake*
*ISK **24** 17:12:57.3,38°.51N×44°.18E, h8km, ML2.6/10*
ISC 24 17:12:54.3±1.1,**38°.48N**±0°.02×**44°.55E**±0°.02,**h6**km±10km,
n45,σ1§**60**/**77**,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**293**	P	**Pg**	**17 13 03.6**	**+0.1**
OZAP				S	**Sb**	**17 13 12.5**	**-0.2**
OZAP				IAML		17 13 18.0	
	comp=N,356nm,0.8s						
ISHB	**Shabestar**	**0.86**	**103**	Pg	**Pb**	**17 13 10.7**	**-1.1**
MAKU	**Maku**	**0.88**	**7**	Pg	**Pg**	**17 13 10.3**	**-1.0**
MAKU				Sg	**Sg**	**17 13 24.1**	**+1.4**
TVAN	**Van**	**0.90**	**273**	P	**Pg**	**17 13 11.2**	**-0.5**
TVAN				S	**Sn**	**17 13 27.5**	**+0.3**
TVAN				IAML		17 13 35.0	
	comp=N,177nm,0.5s						
TVAN				IAML		17 13 47.0	
	comp=E,139nm,1.2s						
VANB	**Van**	**0.92**	**278**	Pg	**Pg**	**17 13 09.0**	**-3.0**
VANB				Sg	**Sg**	**17 13 18.2**	**-5.8**
VMUR	**Van-Muradiye**	**0.92**	**304**	P	**Pg**	**17 13 11.7**	**-0.4**
VMUR				S	**Sb**	**17 13 26.9**	**+1.4**
VMUR				IAML		17 13 30.0	
	comp=N,278nm,0.4s						
VMUR				IAML		17 13 31.0	
	comp=E,158nm,0.5s						
IMRD	**Marand**	**0.93**	**75**	Pg	**Pn**	**17 13 12.9**	**-1.3**
NAX	**Nakhchivan**	**1.01**	**46**	P	**Pb**	**17 13 14.1**	**-0.2**
NAX				S	**Sn**	**17 13 29.5**	**-0.2**
HAKT	**HAKKARI**	**1.14**	**216**	P	**Pn**	**17 13 16.3**	**-0.7**
HAKT				S	**Sn**	**17 13 34.8**	**+1.7**
HAKT				IAML		17 13 39.0	
	comp=N,85nm,0.8s						
HAKT	**HAKKARI**	**1.14**	**216**	P	**Pn**	**17 13 16.6**	**-0.4**
HAKT				S	**Sn**	**17 13 36.7**	**+3.6**
GEVA	**Gevas**	**1.19**	**262**	P	**Pn**	**17 13 15.5**	**-2.2**
GEVA				S	**Sn**	**17 13 34.6**	**+0.4**
SBZ	**Shahbuz**	**1.20**	**40**	P	**Pb**	**17 13 17.4**	**-0.3**
SBZ				S	**Sn**	**17 13 35.5**	**+0.9**
ORD	**Ordubad**	**1.21**	**68**	P	**Pg**	**17 13 17.8**	**+0.2**
ORD				S	**Sn**	**17 13 35.6**	**+0.8**
AKDM	**Akdamar-Van**	**1.25**	**264**	Pg	**Pn**	**17 13 16.4**	**-2.1**
DYDN	**Diyadin**	**1.26**	**328**	P	**Pn**	**17 13 17.0**	**-1.7**
DYDN				S	**Sb**	**17 13 35.4**	**+0.2**
DYDN				IAML		17 13 42.0	
	comp=E,94nm,0.7s						
DYDN				IAML		17 13 46.0	
	comp=N,82nm,0.6s						
HYR	**Heyderabad**	**1.26**	**11**	P	**Pb**	**17 13 18.9**	**+0.3**
HYR				S	**Sg**	**17 13 36.8**	**+1.9**
ITBZ	**Tabriz**	**1.28**	**101**	Pg	**Pg**	**17 13 18.2**	**-0.6**
IAZR	**Azarshahr**	**1.38**	**125**	Pg	**Pg**	**17 13 20.9**	**+0.1**
IGDI	**IGDIR**	**1.44**	**345**	P	**Pn**	**17 13 21.2**	**+0.2**
IGDI				S	**Sn**	**17 13 39.0**	**-1.2**
IGDI	**IGDIR**	**1.44**	**345**	P	**Pb**	**17 13 21.5**	**0.0**
IGDI				S	**Sg**	**17 13 42.3**	**+1.8**
CUKT	**Cukurca**	**1.44**	**212**	Pn	**Pg**	**17 13 22.9**	**+1.0**
CUKT				Sn	**Sg**	**17 13 41.5**	**+0.9**
CUKT	**Cukurca**	**1.44**	**212**	P	**Pg**	**17 13 23.6**	**+1.6**
CUKT				S	**Sg**	**17 13 43.7**	**+3.1**
ADCV	**BITLIS_Adilcev**	**1.47**	**283**	P	**Pg**	**17 13 23.1**	**+0.6**
ADCV				S	**Sg**	**17 13 42.7**	**+1.1**
ADCV				IAML		17 13 47.0	
	comp=N,58nm,1.2s						
ADCV				IAML		17 13 47.0	
	comp=E,58nm,0.6s						
AGRB	**Hanur-Agry**	**1.64**	**312**	Pn	**Pn**	**17 13 23.9**	**0.0**
AGRB				Sn	**Sn**	**17 13 43.2**	**-2.2**
DORK	**Agr/Tutak/Do**	**1.65**	**304**	P	**Pb**	**17 13 25.2**	**-0.1**
DORK				S	**Sb**	**17 13 47.6**	**+1.1**
DORK				IAML		17 13 52.0	
	comp=E,62nm,0.8s						
DORK				IAML		17 13 55.0	
	comp=N,69nm,0.8s						
PERV	**Siirt/Pervari-**	**1.67**	**252**	P	**Pg**	**17 13 26.2**	**-0.2**
PERV				IAML		17 14 01.0	
	comp=N,78nm,0.5s						
PERV				IAML		17 14 09.0	
	comp=E,77nm,0.5s						
GNI	**Garni**	**1.67**	**5**	Pn	**Pg**	**17 13 27.5**	**+1.1**
KOTA	**Agri, Merkez-K**	**1.69**	**322**	P	**Pb**	**17 13 25.8**	**-0.1**
KOTA				S	**Sb**	**17 13 49.0**	**+1.6**
MLAZ	**Malazgirt-MUS**	**1.70**	**294**	Pn	**Pn**	**17 13 24.0**	**-0.7**
IHRS	**Heris**	**1.96**	**94**	Pn	**Pg**	**17 13 31.2**	**-0.8**
GURO	**Guroymak-BITLI**	**1.98**	**273**	Pn	**Pn**	**17 13 27.9**	**-0.6**
QRD	**Qoradiz**	**2.37**	**65**	P	**Pn**	**17 13 34.6**	**+0.9**
QRD				S	**Sb**	**17 14 05.9**	**-1.0**
GDB	**GEDABAY**	**2.42**	**22**	P	**Pn**	**17 13 35.5**	**+0.8**
GDB				S	**Sb**	**17 14 08.4**	**-0.2**
GANJ	**Ganja**	**2.56**	**32**	P	**Pn**	**17 13 37.3**	**+0.9**
GANJ				S	**Sb**	**17 14 12.1**	**-0.4**
AGDM	**Agdam**	**2.56**	**50**	P	**Pn**	**17 13 37.4**	**+0.9**
AGDM				S	**Sb**	**17 14 11.2**	**-1.3**
QZX	**Qazax, Azerbai**	**2.65**	**14**	P	**Pn**	**17 13 38.7**	**+1.0**
QZX				S	**Sb**	**17 14 13.8**	**-1.3**
SVAN	**Silvan-Diyarba**	**2.66**	**264**	Pn	**Pn**	**17 13 37.5**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.69**	**321**	Pn	**Pn**	**17 13 39.4**	**+1.1**
BRDA	**Brd**	**2.70**	**48**	P	**Pn**	**17 13 39.4**	**+1.1**
BRDA				S	**Sb**	**17 14 15.6**	**-0.9**
KARO	**Karliova-Bingo**	**2.86**	**288**	Pn	**Pn**	**17 13 40.3**	**-0.3**
YRD	**Yardimli**	**2.92**	**80**	P	**Pn**	**17 13 42.8**	**+1.3**
YRD				S	**Sb**	**17 14 20.9**	**-2.0**
LRK	**Lerik**	**2.97**	**86**	P	**Pn**	**17 13 43.5**	**+1.3**
LRK				S	**Sb**	**17 14 23.5**	**-0.9**
GLBA	**Clilabad**	**3.09**	**75**	P	**Pn**	**17 13 45.0**	**+1.3**
GLBA				S	**Sb**	**17 14 25.5**	**-2.2**
LKRN	**Lenkeran, Azer**	**3.32**	**85**	P	**Pn**	**17 13 48.2**	**+1.4**
LKRN				S	**Sb**	**17 14 28.8**	**-5.4**
ASTR	**Astara**	**3.33**	**87**	P	**Pn**	**17 13 48.6**	**+1.7**
ASTR				S	**Sb**	**17 14 31.3**	**-3.1**

*NOU **24** 17:24:43.0,39°.17S×178°.04E, h0km, MLv3.9/11, Off E. Coast of N. Island, N.Z.*
*WEL **24** 17:24:48.3±0.3,39°.5S±3°×17°.8E±°, h28km±2km, M3.9/31, ML3.8/31, MLv3.9/31, Error ellipse: s-maj=4.3km s-min=3.0km az=123.4*
ISC 24 17:24:45.3±1.3,**39°.05S**±0°.03×**177°.95E**±0°.04,**h14**km±10km,
n141,σ1§**16**/149,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	**Mahia Peninsul**	**0.11**	**199**	P	Pb	17 24 56.6	+7.2
PRGZ	**Paritu Road**	**0.13**	**336**	P	**Pb**	**17 24 54.4**	**+4.7**
KNZ	**Kokohu**	**0.22**	**276**	P	**Pb**	**17 24 54.8**	**+3.8**
KNZ				S	**Sb**	**17 25 00.1**	**+5.2**
GKBS	**Kaiti Beach**	**0.37**	**10**	P	**Pn**	**17 24 57.0**	**+0.8**
RIGZ	**Rimuhau**	**0.37**	**336**	P	**Pn**	**17 24 55.3**	**-1.0**
RIGZ				S	**Sn**	**17 25 01.4**	**-1.9**
GISS	**Gisborne 2ZG**	**0.38**	**8**	P	**Pn**	**17 24 57.1**	**+0.7**
GISS				S	**Sn**	**17 25 04.5**	**+1.0**
GWTS	**Gisborne Waipa**	**0.42**	**357**	P	**Pn**	**17 24 56.9**	**0.0**
SNGZ	**Shannon Statio**	**0.55**	**299**	P	**Pb**	**17 24 57.6**	**+0.9**
SNGZ				S	**Sb**	**17 25 04.8**	**+0.4**
WHHZ	**Waihua**	**0.56**	**267**	P	**Pn**	**17 24 59.4**	**+0.5**
WHHZ				S	**Sn**	**17 25 08.5**	**+0.5**
CNGZ	**Carnagh Statio**	**0.59**	**20**	P	**Pn**	**17 25 00.0**	**+0.7**
TKGZ	**Te Karaka**	**0.61**	**352**	P	**Pb**	**17 24 58.7**	**+1.0**
TKGZ				S	**Sb**	**17 25 07.4**	**+1.3**
RAHZ	**Arahi**	**0.69**	**281**	P	**Pn**	**17 25 00.4**	**-0.3**
RAHZ				S	**Sn**	**17 25 09.8**	**-1.4**
RAGZ	**Rawiri**	**0.69**	**322**	P	**Pb**	**17 24 59.3**	**+0.1**
RAGZ				S	**Sg**	**17 25 07.9**	**-0.1**
ARHZ	**Aropaoanui**	**0.78**	**253**	P	**Pn**	**17 25 02.8**	**+1.0**
MWZ	**Matawai**	**0.78**	**335**	P	**Pg**	**17 25 00.6**	**0.0**
MWZ				S	**Sg**	**17 25 10.0**	**-0.9**
TWGZ	**Tauwhareparae**	**0.87**	**1**	P	**Pn**	**17 25 02.9**	**-0.3**
RTZ	**Ruatahuna**	**0.87**	**299**	P	**Pg**	**17 25 02.1**	**-0.2**
MTHZ	**Maungataniwha**	**0.89**	**282**	P	**Pb**	**17 25 02.9**	**+0.3**
NMHZ	**Naumai**	**0.89**	**266**	P	**Pn**	**17 25 03.9**	**+0.4**
CKHZ	**Cape Kidnapper**	**0.91**	**228**	P	**Pn**	**17 25 05.3**	**+1.6**
PUZ	**Puketiti**	**1.00**	**14**	P	**Pb**	**17 25 04.5**	**0.0**
URZ	**Urewera**	**1.02**	**320**	P	**Pb**	**17 25 04.0**	**-0.8**
URZ	**Urewera**	**1.02**	**320**	P	**Pb**	**17 25 04.0**	**-0.8**
MCHZ	**McNeill Hill**	**1.05**	**247**	P	**Pn**	**17 25 06.8**	**+1.1**
MUGZ	**Murupara**	**1.08**	**301**	P	**Pb**	**17 25 05.2**	**-0.6**
RUGZ	**Raukumara Rang**	**1.10**	**349**	P	**Pb**	**17 25 05.0**	**-1.2**
KAHZ	**Kahuranaki**	**1.12**	**228**	P	**Pg**	**17 25 08.0**	**+1.0**
BKZ	**Black Stump Fm**	**1.14**	**263**	P	**Pg**	**17 25 07.2**	**-0.2**
BKZ	**Black Stump Fm**	**1.14**	**263**	S	**Sb**	**17 25 21.3**	**-0.3**
BKZ	**Black Stump Fm**	**1.14**	**263**	P	**Pg**	**17 25 07.3**	**-0.2**
MRHZ	**Matea Rd**	**1.22**	**280**	P	**Pn**	**17 25 07.9**	**0.0**
KWHZ	**Kaweka Forest**	**1.25**	**252**	P	**Pg**	**17 25 09.3**	**-0.1**
WMGZ	**Waiomatatini S**	**1.28**	**17**	P	**Pn**	**17 25 08.4**	**-0.3**
HAZ	**Te Kaha**	**1.29**	**354**	P	**Pn**	**17 25 08.1**	**-0.8**
PXZ	**Pawanui**	**1.30**	**220**	P	**Pb**	**17 25 09.9**	**+0.5**
RRRZ	**Republican Roa**	**1.33**	**302**	P	**Pn**	**17 25 08.8**	**-0.7**
EDRZ	**Edgecumbe**	**1.34**	**314**	P	**Pn**	**17 25 09.1**	**-0.5**
PRRZ	**Plateau Road**	**1.34**	**294**	P	**Pn**	**17 25 09.7**	**+0.1**
ALRZ	**Allen Road**	**1.35**	**290**	P	**Pn**	**17 25 09.3**	**-0.4**
KRHZ	**Kereru**	**1.36**	**244**	P	**Pb**	**17 25 10.7**	**0.0**
TARZ	**Mount Tarawera**	**1.39**	**305**	P	**Pn**	**17 25 09.7**	**-0.7**
WHRZ	**Whale Island**	**1.42**	**327**	P	**Pn**	**17 25 10.2**	**-0.5**
MARZ	**Manawahe**	**1.46**	**316**	P	**Pn**	**17 25 10.8**	**-0.4**
HATZ	**Hinemaiaia**	**1.46**	**275**	P	**Pg**	**17 25 13.1**	**-0.3**
HRRZ	**Handcock Road**	**1.46**	**296**	P	**Pb**	**17 25 11.8**	**-0.5**
MKRZ	**Makatiti**	**1.48**	**307**	P	**Pn**	**17 25 11.7**	**+0.1**
HLRZ	**Highlands Stat**	**1.48**	**302**	P	**Pb**	**17 25 12.2**	**-0.5**
WPRZ	**Whakapapatarin**	**1.50**	**290**	P	**Pn**	**17 25 11.5**	**-0.2**
MXZ	**Matakaoa Point**	**1.51**	**11**	P	**Pn**	**17 25 11.7**	**-0.2**
MXZ	**Matakaoa Point**	**1.51**	**11**	P	**Pn**	**17 25 11.6**	**-0.3**
HSRZ	**Hossack Road**	**1.52**	**298**	P	**Pn**	**17 25 11.5**	**-0.7**
WPHZ	**Waipukurau**	**1.55**	**228**	P	**Pb**	**17 25 13.4**	**-0.5**
OMRZ	**Omania**	**1.55**	**307**	P	**Pn**	**17 25 11.6**	**-1.0**
PRHZ	**Porangahau**	**1.59**	**219**	P	**Pn**	**17 25 13.7**	**+0.6**
WHTZ	**Whakaora**	**1.60**	**283**	P	**Pb**	**17 25 15.2**	**+0.5**
LIRZ	**Lichensteins R**	**1.61**	**310**	P	**Pn**	**17 25 12.3**	**-1.0**
PNHZ	**Pukenui**	**1.61**	**237**	P	**Pn**	**17 25 13.8**	**+0.4**
OPRZ	**Ohinepanea**	**1.63**	**317**	P	**Pn**	**17 25 11.9**	**-1.6**
UTU	**Utuhina**	**1.63**	**302**	P	**Pb**	**17 25 15.2**	**+0.1**
WIZ	**White Island**	**1.63**	**338**	P	**Pn**	**17 25 13.0**	**-0.6**
RITZ	**Rihia Road**	**1.63**	**272**	P	**Pn**	**17 25 14.1**	**+0.5**
NGRZ	**Ngongotaha**	**1.67**	**304**	P	**Pn**	**17 25 13.9**	**-0.4**
KARZ	**Kaharoa**	**1.69**	**307**	P	**Pn**	**17 25 13.5**	**-0.9**
RATZ	**Rangitukua**	**1.71**	**275**	P	**Pn**	**17 25 14.9**	**+0.2**
MOVZ	**Moawhango**	**1.75**	**257**	P	**Pb**	**17 25 16.3**	**-0.9**
ETVZ	**East Tongariro**	**1.75**	**266**	P	**Pn**	**17 25 15.8**	**+0.5**
TMVZ	**Te Maari**	**1.75**	**267**	P	**Pn**	**17 25 15.8**	**+0.4**
KUTZ	**Kaahu Road**	**1.75**	**288**	P	**Pn**	**17 25 15.7**	**+0.4**
KATZ	**Kakaramea**	**1.76**	**272**	P	**Pn**	**17 25 16.0**	**+0.4**
WATZ	**Wairara**	**1.77**	**280**	P	**Pn**	**17 25 15.1**	**-0.4**
NTVZ	**North Tongarir**	**1.77**	**268**	P	**Pn**	**17 25 16.1**	**+0.4**
OTUZ	**Oturere**	**1.78**	**265**	P	**Pn**	**17 25 16.3**	**+0.4**
KRVZ	**Karewarewa**	**1.80**	**268**	P	**Pn**	**17 25 16.2**	**+0.2**
TUVZ	**Tukino**	**1.80**	**262**	P	**Pb**	**17 25 17.3**	**-0.9**
SNVZ	**South Ngauruho**	**1.81**	**265**	P	**Pn**	**17 25 16.9**	**+0.7**
ANWZ	**Angora Road**	**1.81**	**218**	P	**Pn**	**17 25 16.5**	**+0.4**
NNVZ	**North Ngauruho**	**1.82**	**267**	P	**Pn**	**17 25 17.1**	**+0.7**
NGZ	**Ngauruhoe**	**1.83**	**265**	P	**Pn**	**17 25 17.1**	**+0.6**
WTVZ	**West Tongariro**	**1.84**	**267**	P	**Pn**	**17 25 17.1**	**+0.5**
TSZ	**Takapari Road**	**1.84**	**236**	P	**Pn**	**17 25 16.8**	**+0.3**
WNVZ	**Wahianoa**	**1.85**	**261**	P	**Pn**	**17 25 17.6**	**+0.8**
WHVZ	**Whangaehu Hut**	**1.85**	**262**	P	**Pb**	**17 25 18.2**	**-0.9**
DVHZ	**Dannevirke**	**1.86**	**227**	P	**Pn**	**17 25 17.1**	**+0.3**
MAVZ	**Matarangi**	**1.87**	**262**	P	**Pb**	**17 25 18.7**	**-0.8**
FWVZ	**Far West T-bar**	**1.88**	**263**	P	**Pn**	**17 25 17.8**	**+0.6**
COVZ	**Chateau Observ**	**1.88**	**265**	P	**Pn**	**17 25 17.7**	**+0.6**
TRVZ	**Turoa**	**1.89**	**262**	P	**Pn**	**17 25 18.2**	**+0.8**
MTVZ	**Mangateitei**	**1.96**	**259**	P	**Pn**	**17 25 19.0**	**+0.8**
TWVZ	**Taurewa**	**1.96**	**268**	P	**Pn**	**17 25 18.7**	**+0.4**
KMRZ	**Kaimai**	**1.98**	**307**	P	**Pn**	**17 25 17.1**	**-1.3**
TLZ	**Tolley Road**	**2.02**	**290**	P	**Pn**	**17 25 18.4**	**-0.7**
PKVZ	**Pokaka**	**2.04**	**262**	P	**Pn**	**17 25 20.2**	**+0.9**
BFZ	**Birch Farm**	**2.10**	**218**	P	**Pn**	**17 25 20.1**	**+0.1**
BFZ	**Birch Farm**	**2.10**	**218**	S	**Sn**	**17 25 43.8**	**-2.1**
BFZ	**Birch Farm**	**2.10**	**218**	P	**Pn**	**17 25 20.0**	**+0.1**
PRWZ	**Pori Road**	**2.15**	**225**	P	**Pn**	**17 25 21.2**	**+0.6**
POWZ	**Post Office Ro**	**2.16**	**231**	P	**Pn**	**17 25 21.5**	**+0.6**
MYRZ	**Mayor Island**	**2.22**	**322**	P	**Pn**	**17 25 20.2**	**-1.5**
CPWZ	**Castlepoint**	**2.30**	**215**	P	**Pn**	**17 25 22.9**	**+0.1**
TOZ	**Tahuroa Road**	**2.33**	**303**	P	**Pn**	**17 25 22.1**	**-1.1**
TIWZ	**Tintock**	**2.35**	**222**	P	**Pn**	**17 25 23.6**	**+0.1**
WAZ	**Wanganui**	**2.41**	**252**	P	**Pb**	**17 25 26.7**	**-1.7**
MRZ	**Mangatainoka R**	**2.44**	**228**	P	**Pn**	**17 25 24.4**	**-0.3**
HIZ	**Hauiti**	**2.48**	**281**	P	**Pn**	**17 25 26.3**	**+1.0**
HIZ	**Hauiti**	**2.48**	**281**	P	**Pn**	**17 25 25.4**	**+0.1**
VRZ	**Vera Road**	**2.49**	**267**	P	**Pn**	**17 25 26.1**	**+0.7**
TMWZ	**Te Maipa**	**2.60**	**217**	P	**Pn**	**17 25 26.4**	**-0.5**
HOWZ	**Holdsworth Sta**	**2.63**	**225**	P	**Pn**	**17 25 26.9**	**-0.5**
OGWZ	**Otaki Gorge**	**2.78**	**230**	P	**Pn**	**17 25 28.9**	**-0.5**
LREZ	**Lake Rotokare**	**2.79**	**260**	P	**Pn**	**17 25 31.2**	**+1.7**
MTW	**Mount Morrison**	**2.83**	**221**	P	**Pn**	**17 25 29.0**	**-1.0**
TRWZ	**Traveller**	**2.92**	**216**	P	**Pn**	**17 25 30.1**	**-1.3**
DREZ	**Durham Road**	**2.92**	**266**	P	**Pn**	**17 25 33.4**	**+2.1**
MKAZ	**Moumakai**	**2.93**	**310**	P	**Pn**	**17 25 30.4**	**-1.1**
KIW	**Kapiti Island**	**2.96**	**231**	P	**Pn**	**17 25 31.2**	**-0.6**
PREZ	**Palmer Road**	**2.96**	**263**	P	**Pn**	**17 25 33.8**	**+1.9**
CAW	**Cannon Point**	**3.02**	**226**	P	**Pn**	**17 25 32.0**	**-0.8**
PAWZ	**Paruwai Farm**	**3.03**	**219**	P	**Pn**	**17 25 31.8**	**-1.1**
KHEZ	**Kahui Hut**	**3.07**	**264**	P	**Pn**	**17 25 34.9**	**+1.4**
KHEZ	**Kahui Hut**	**3.07**	**264**	P	**Pn**	**17 25 35.5**	**+2.0**
MSWZ	**Moikau Station**	**3.15**	**220**	P	**Pn**	**17 25 32.9**	**-1.5**
WIAZ	**Waiheke Island**	**3.17**	**314**	P	**Pn**	**17 25 33.8**	**-0.9**
ETAZ	**East Tamaki Re**	**3.17**	**310**	P	**Pn**	**17 25 34.8**	**-0.1**
NBEZ	**Newall Road No**	**3.18**	**265**	P	**Pn**	**17 25 37.7**	**+2.8**
NMEZ	**Namu Road**	**3.19**	**262**	P	**Pn**	**17 25 36.8**	**+1.9**
AWAZ	**Awhitu Peninsu**	**3.28**	**306**	P	**Pn**	**17 25 35.6**	**-0.6**
MBAZ	**Motutapu North**	**3.32**	**312**	P	**Pn**	**17 25 36.2**	**-0.6**
BHW	**Baring Head**	**3.34**	**224**	P	**Pn**	**17 25 35.9**	**-1.1**
SNZO	**South Karori**	**3.36**	**227**	P	**Pn**	**17 25 36.4**	**-1.0**
TCW	**Tory Channel**	**3.55**	**231**	P	**Pn**	**17 25 38.4**	**-1.6**
DUWZ	**D'Urville Isla**	**3.56**	**239**	P	**Pn**	**17 25 39.2**	**-1.0**
NNZ	**Nelson**	**4.12**	**237**	P	**Pn**	**17 25 47.5**	**-0.3**
WCZ	**Waipu Caves**	**4.22**	**316**	P	**Pn**	**17 25 48.5**	**-0.7**
TKNZ	**Takaka Hill**	**4.32**	**241**	P	**Pn**	**17 25 49.4**	**-1.2**
QRZ	**Quartz Range**	**4.53**	**245**	P	**Pn**	**17 25 51.3**	**-2.2**
QRZ	**Quartz Range**	**4.53**	**245**	P	**Pn**	**17 25 51.7**	**-1.7**
MRNZ	**Matariki Terra**	**4.62**	**238**	P	**Pn**	**17 25 53.5**	**-1.2**
OUZ	**Omahuta**	**5.17**	**316**	P	**Pn**	**17 26 03.2**	**+1.0**
OUZ	**Omahuta**	**5.17**	**316**	P	**Pn**	**17 26 01.8**	**-0.4**
AKCZ	**Akaroa Harbour**	**6.13**	**217**	P	**Pn**	**17 26 14.2**	**-1.3**
CTZ	**Chatham Island**	**6.21**	**141**	P	**Pn**	**17 26 20.0**	**+3.5**

*MEX **24** 17:40:59.9±0.5, 13°.68N×93°.13W, h10km, MD4.1*
*GCG **24**

*AFAD **24** 18:04:05.9,35˚.24N×27˚.93E,h9km±2km,ML3.0*
*THE **24** 18:04:06.4,35˚N±7˚×2˚8E±˚,h5km±22km,M3.0/12, MLh3.0/12*
ISC 24 18:04:03.7±1.2,**35˚.18N**±0˚.03×**27˚.98E**±0˚.02,**h15**km±8km, **n97**,σ1s**71**/150,**mb3.6**/8,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.76**	**299**	Pg	**Pg**	**18 04 18.6**	**0.0**
KARP				Sg	**Sb**	**18 04 29.0**	**0.0**
KARP	**Karpathos**	**0.76**	**299**	P	**Pg**	**18 04 17.8**	**-0.8**
KARP				S	**Sn**	**18 04 31.3**	**0.0**
KARP	**Karpathos**	**0.76**	**299**	P	**Pg**	**18 04 17.3**	**-1.3**
KARP				S	**Sb**	**18 04 28.6**	**-0.3**
KARP				AML	AML	18 04 33.1	
	3.6nm,0.7s						
KARP				AML	AML	18 04 42.0	
	4.3nm,0.7s						
ARG	**Arkhangelos**	**1.04**	**7**	Pg	**Pn**	**18 04 24.5**	**+0.7**
ARG				Sg	**Sn**	**18 04 38.2**	**+0.1**
ARG	**Arkhangelos**	**1.04**	**7**	P	**Pn**	**18 04 24.7**	**+0.8**
ARG				S	**Sn**	**18 04 41.8**	**+3.8**
ARG	**Arkhangelos**	**1.04**	**7**	P	**Pg**	**18 04 23.8**	**0.0**
ARG				S	**Sn**	**18 04 38.7**	**+0.6**
ARG				AML	AML	18 04 44.7	
	1.2nm,1.1s						
ARG				AML	AML	18 04 50.1	
	2.1nm,0.6s						
ARG	**Arkhangelos**	**1.04**	**7**	P	**Pn**	**18 04 25.0**	**+1.2**
ARG				S	**Sn**	**18 04 41.9**	**+3.8**
ZKR	**Zakros**	**1.45**	**268**	Pn	**Pg**	**18 04 31.9**	**+0.4**
ZKR	**Zakros**	**1.45**	**268**	P	**Pg**	**18 04 31.9**	**+0.4**
ZKR	**Zakros**	**1.45**	**268**	P	**Pn**	**18 04 29.0**	**-0.4**
ZKR				AML	AML	18 05 09.4	
	0.5nm,1.0s						
ZKR				AML	AML	18 05 11.8	
	1.1nm,0.7s						
ZKR	**Zakros**	**1.45**	**268**	P	**Pb**	**18 04 31.4**	**+1.0**
ZKR				S	**Sg**	**18 04 54.1**	**+3.7**
YAZI	**Mula-Dat§a-**	**1.55**	**344**	P	**Pn**	**18 04 31.5**	**+0.5**
YAZI				S	**Sg**	**18 04 53.1**	**-0.8**
DAT	**Datca**	**1.58**	**348**	Pn	**Pb**	**18 04 32.9**	**+0.2**
DAT	**Datca**	**1.58**	**348**	P	**Pb**	**18 04 33.3**	**+0.6**
DAT	**Datca**	**1.58**	**348**	P	**Pb**	**18 04 33.1**	**+0.4**
DAT				S	**Sg**	**18 04 55.1**	**+0.6**
DAT				IAML		18 05 02.0	
	comp=E,196nm,0.5s						
DAT				IAML		18 05 07.0	
	comp=N,197nm,0.7s						
TURN	**Turunc**	**1.60**	**8**	Pn	**Pb**	**18 04 33.4**	**+0.3**
TURN	**Turunc**	**1.60**	**8**	P	**Pb**	**18 04 33.8**	**+0.8**
TURN				S	**Sg**	**18 04 57.7**	**+2.3**
TURN				IAML		18 05 10.0	
	comp=E,148nm,0.9s						
IZZE	**Mula-Seydike**	**1.61**	**39**	P	**Pn**	**18 04 31.1**	**-0.6**
IZZE				S	**Sn**	**18 04 50.1**	**-2.1**
AKAS	**Kas**	**1.69**	**51**	Pn	**Pb**	**18 04 35.2**	**+0.6**
AKAS	**Kas**	**1.69**	**51**	P	**Pn**	**18 04 34.8**	**+1.9**
AKAS				S	**Sn**	**18 04 54.8**	**+0.5**
AKAS				IAML		18 05 21.0	
	comp=N,198nm,0.6s						
AKAS				IAML		18 05 32.0	
	comp=E,145nm,0.9s						
DALY	**Dalyan (Mula)**	**1.72**	**18**	Pn	**Pb**	**18 04 35.3**	**+0.2**
SABU	**Mula-Dalaman**	**1.82**	**26**	P	**Pn**	**18 04 35.5**	**+0.8**
SABU				S	**Sb**	**18 05 00.8**	**+1.3**
BDRM	**Kayabasi**	**1.93**	**347**	P	**Pn**	**18 04 36.9**	**+0.9**
BDRM				S	**Sn**	**18 05 01.4**	**+1.3**
BDRM				IAML		18 05 17.0	
	comp=E,116nm,0.7s						
NPS	**Neapolis**	**1.94**	**273**	P	**Pb**	**18 04 39.2**	**+0.4**
NPS				S	**Sb**	**18 05 03.4**	**+0.6**
NPS	**Neapolis**	**1.94**	**273**	P	**Pb**	**18 04 39.2**	**+0.4**
NPS				S	**Sg**	**18 05 06.1**	**0.0**
BODT	**Bodrum**	**1.95**	**344**	Pn	**Pb**	**18 04 38.7**	**-0.3**
BODT	**Bodrum**	**1.95**	**344**	P	**Pb**	**18 04 39.4**	**+0.4**
BODT				S	**Sg**	**18 05 05.2**	**-1.4**
YER	**Yerkesik**	**1.96**	**7**	Pn	**Pb**	**18 04 38.9**	**-0.4**
YER	**Yerkesik**	**1.96**	**7**	P	**Pb**	**18 04 39.7**	**+0.4**
YER				S	**Sg**	**18 05 06.6**	**-0.3**
CAME	**Cameli-Denizli**	**2.06**	**31**	Pn	**Pn**	**18 04 40.1**	**+2.1**
MULA	**Mugla, Merkez-**	**2.09**	**8**	P	**Pb**	**18 04 42.9**	**+1.5**
MULA				S	**Sg**	**18 05 08.9**	**-2.0**
KNIK	**Mula-Seydike**	**2.10**	**37**	P	**Pn**	**18 04 40.9**	**+2.4**
KNIK				S	**Sn**	**18 05 05.0**	**+0.5**
MLSB	**Milas**	**2.11**	**356**	Pn	**Pn**	**18 04 40.6**	**+1.9**
ELL	**Elmali**	**2.21**	**45**	Pn	**Pn**	**18 04 42.7**	**+2.6**
CAEL	**Denizli, Camel**	**2.22**	**29**	P	**Pn**	**18 04 39.9**	**-0.3**
CAEL				S	**Sb**	**18 05 11.4**	**+0.4**
AKUM	**Antalya-Kumluc**	**2.23**	**59**	P	**Pn**	**18 04 42.3**	**+2.1**
AKUM				S	**Sn**	**18 05 06.2**	**-1.4**
DNZT	**Denizli-Tavas-**	**2.25**	**22**	P	**Pn**	**18 04 42.9**	**+2.2**
DNZT				S	**Sn**	**18 05 10.3**	**+2.0**
DDIM	**Aydin, Didim**	**2.35**	**346**	P	**Pn**	**18 04 43.9**	**+2.1**
DDIM				IAML		18 05 32.0	
	comp=E,118nm,1.0s						
DDIM				IAML		18 05 44.0	
	comp=N,139nm,1.5s						
THERA	**Ancient Thera,**	**2.35**	**301**	P	**Pn**	**18 04 44.4**	**+2.5**
THERA				S	**Sb**	**18 05 13.8**	**-1.0**
THERA	**Ancient Thera,**	**2.35**	**301**	P	**Pb**	**18 04 45.6**	**-0.3**
THERA				S	**Sg**	**18 05 17.9**	**-1.5**
THR8	**Santorini-Mono**	**2.37**	**302**	P	**Pb**	**18 04 45.4**	**-0.8**
IACM	**Heraklion**	**2.38**	**274**	P	**Pb**	**18 04 47.2**	**+0.8**
IACM				S	**Sb**	**18 05 14.8**	**-0.8**
TAVA	**DENIZLI_Tavas**	**2.40**	**18**	P	**Pn**	**18 04 43.5**	**+0.8**
TAVA				S	**Sb**	**18 05 15.1**	**-1.0**
GOLH	**Golhisar**	**2.42**	**32**	P	**Pn**	**18 04 45.6**	**+2.7**
GOLH				S	**Sn**	**18 05 15.0**	**+2.8**
GOLH				IAML		18 05 25.0	
	comp=E,86nm,1.1s						
THR3	**Thira Island,**	**2.43**	**301**	P	**Pb**	**18 04 46.2**	**-0.9**
SNT5	**Nea Kammeni, S**	**2.43**	**301**	P	**Pb**	**18 04 46.1**	**-1.1**
SNT5				S	**Sb**	**18 05 17.3**	**+0.4**
THR9	**Santorini-Faro**	**2.43**	**300**	P	**Pb**	**18 04 46.0**	**-1.2**
THR5	**Thira Island,**	**2.47**	**301**	P	**Pb**	**18 04 47.0**	**-0.8**
AYDN	**Tasoluk**	**2.47**	**358**	P	**Pn**	**18 04 44.2**	**+0.6**
AYDN				S	**Sn**	**18 05 14.4**	**+0.8**
APMY	**Acipayam-Deniz**	**2.52**	**25**	Pn	**Pn**	**18 04 46.6**	**+2.3**
IDI	**Anoyia**	**2.53**	**273**	Pn	**Pn**	**18 04 46.7**	**+2.3**
	4.0nm,0.3s,baz=99,slow=15,SNR=28						
IDI					Sn	**Sg**	**18 05 25.7**	**+0.6**
	4.9nm,0.3s,baz=324,slow=23,SNR=5.1						
IDI	**Anoyia**	**2.53**	**273**	P	**Pn**	**18 04 46.9**	**+2.4**
IDI				S	**Sb**	**18 05 20.2**	**+0.2**
IDI	**Anoyia**	**2.53**	**273**	P	**Pn**	**18 04 47.0**	**+2.6**
IDI				S	**Sb**	**18 05 20.4**	**+0.5**
DNIZ	**Denizli-Tavas-**	**2.58**	**19**	P	**Pn**	**18 04 47.0**	**+1.9**
DNIZ				S	**Sn**	**18 05 17.8**	**+1.4**
DNIZ				IAML		18 05 46.0	
	comp=E,122nm,0.9s						
DNIZ				IAML		18 05 48.0	
	comp=N,113nm,0.8s						
GCAM	**G?zelcaml?**	**2.58**	**347**	Pn	**Pn**	**18 04 46.9**	**+1.9**
GCAM	**G?zelcaml?**	**2.58**	**347**	P	**Pn**	**18 04 47.3**	**+2.3**
ESEN	**Aydn-Nazilli**	**2.63**	**6**	P	**Pn**	**18 04 47.8**	**+2.1**
ESEN				S	**Sn**	**18 05 18.7**	**+1.4**
KORT	**Korkueli**	**2.64**	**46**	Pn	**Pn**	**18 04 48.6**	**+2.6**
SMG	**Samos**	**2.68**	**340**	P	**Pb**	**18 04 49.9**	**-1.6**
SMG				S	**Sb**	**18 05 23.7**	**-0.6**
APE	**Apeiranthos**	**2.73**	**314**	P	**Pb**	**18 04 50.9**	**-1.5**
AYDB	**Zeytinkoy-Aydi**	**2.76**	**359**	Pn	**Pn**	**18 04 49.7**	**+2.1**
SULTU	**Buldan**	**2.93**	**12**	P	**Pn**	**18 04 53.2**	**+3.2**
IZMR	**zmir-demi**	**2.95**	**360**	P	**Pn**	**18 04 50.0**	**-0.1**
IZMR				S	**Sn**	**18 05 28.3**	**+3.1**
DGB	**zmir**	**3.00**	**343**	P	**Pn**	**18 04 51.5**	**+0.7**
KIRA	**zmir-Kiraz**	**3.03**	**6**	P	**Pn**	**18 04 53.4**	**+2.1**
VAM	**Vamos**	**3.10**	**275**	P	**Pn**	**18 04 55.1**	**+2.9**
OSC1	**CSNet OBS 1**	**3.20**	**121**	P	**Pn**	**18 04 53.1**	**-0.5**
OSC1				S	**Sn**	**18 05 33.1**	**+1.6**
OSC1				AML	AML	18 05 41.8	
	0.1nm,0.6s						
OSC1				AML	AML	18 05 51.4	
	0.1nm,1.1s						
GVD	**Gavdhos**	**3.21**	**265**	P	**Pn**	**18 04 56.3**	**+2.6**
GVD				S	**Sn**	**18 05 35.3**	**+3.6**
IMMV	**Iera Moni Meta**	**3.28**	**276**	P	**Pn**	**18 04 57.6**	**+2.9**
IMMV				S	**Sn**	**18 05 37.1**	**+3.6**
IMMV	**Iera Moni Meta**	**3.28**	**276**	P	**Pn**	**18 04 57.8**	**+3.1**
AKMS	**Akamas**	**3.58**	**91**	P	**Pn**	**18 04 59.1**	**+0.4**
AKMS				S	**Sn**	**18 05 42.5**	**+1.8**
AKMS				AML	AML	18 05 45.2	
	0.2nm,0.7s						
AKMS				AML	AML	18 05 51.0	
	0.2nm,0.6s						
ALFC	**Alefka**	**3.79**	**89**	P	**Pn**	**18 05 01.6**	**0.0**
ALFC				S	**Sn**	**18 05 47.3**	**+1.3**
ALFC				AML	AML	18 05 49.8	
	0.2nm,0.6s						
ALFC				AML	AML	18 05 55.5	
	0.1nm,0.5s						
NATA	**Nata**	**3.79**	**95**	P	**Pn**	**18 05 02.4**	**+0.7**
NATA				S	**Sn**	**18 05 48.4**	**+2.3**
NATA				AML	AML	18 05 51.9	
	0.5nm,0.4s						
NATA				AML	AML	18 05 58.1	
	0.3nm,0.8s						
TROD	**Troodos**	**4.01**	**92**	P	**Pn**	**18 05 05.0**	**0.0**
TROD				S	**Sn**	**18 05 53.7**	**+1.8**
TROD				AML	AML	18 06 00.9	
	0.1nm,0.4s						
TROD				AML	AML	18 06 03.6	
	0.1nm,0.7s						
OSC2	**CSNet OBS 4**	**4.13**	**119**	P	**Pn**	**18 05 06.9**	**+0.6**
OSC2				S	**Sn**	**18 05 55.6**	**+1.2**
OSC2				AML	AML	18 06 09.1	
	0.1nm,0.5s						
KTHA	**Kythira Island**	**4.14**	**286**	P	**Pn**	**18 05 08.8**	**+2.3**
XYLS	**Xyliatos**	**4.16**	**91**	P	**Pn**	**18 05 07.4**	**+0.5**
XYLS				S	**Sn**	**18 05 56.9**	**+1.7**
XYLS				AML	AML	18 06 01.1	
	0.1nm,0.4s						
XYLS				AML	AML	18 06 02.8	
	0.1nm,0.8s						
ASGA	**Asgata**	**4.34**	**94**	P	**Pn**	**18 05 10.0**	**+0.7**
ASGA				S	**Sn**	**18 06 01.1**	**+1.4**
ASGA				AML	AML	18 06 06.1	
	0.1nm,0.8s						
ASGA				AML	AML	18 06 07.1	
	0.3nm,0.6s						
SIGR	**SIGRI**	**4.36**	**338**	P	**Pn**	**18 05 12.4**	**+2.9**
VLI	**Veliai**	**4.37**	**292**	P	**Pn**	**18 05 10.7**	**+1.1**
CSS	**Mathiatis**	**4.39**	**91**	P	**Pn**	**18 05 10.5**	**+0.5**
CSS				S	**Sn**	**18 06 03.2**	**+2.2**
CSS				AML	AML	18 06 14.2	
	0.1nm,0.4s						
CSS				AML	AML	18 06 15.6	
	0.1nm,0.5s						
MVOU	**Mavrovouni**	**4.64**	**90**	P	**Pn**	**18 05 14.2**	**+0.9**
MVOU				S	**Sn**	**18 06 10.2**	**+3.3**
MVOU				AML	AML	18 06 16.9	
	0.1nm,0.6s						
MVOU				AML	AML	18 06 23.5	
	0.1nm,0.4s						
BRTR	**Keskin Array B**	**6.39**	**43**	Pn	**Pn**	**18 05 40.2**	**+2.7**
	0.2nm,0.3s,baz=220,slow=16,SNR=6.7						
BRTR					Sn	**Sn**	**18 06 52.1**	**+1.9**
	0.2nm,0.3s,baz=219,slow=26,SNR=5.0						
	0.9nm,0.4s						
MMAI	**Mount Meron Ar**	**6.53**	**107**	Pn	**Pn**	**18 05 39.7**	**+0.3**
	4.0nm,0.3s,baz=308,slow=14,SNR=17						
MMAI					Sn	**Sn**	**18 06 54.3**	**+0.7**
	3.3nm,0.3s,baz=306,slow=26,SNR=5.7						
ASF	**Jabal al Asfar**	**8.02**	**109**	Pn	**Pn**	**18 05 58.8**	**-1.0**
	0.5nm,0.3s,baz=321,slow=9.4,SNR=4.1						
ASF					Sn	**Sn**	**18 07 28.9**	**-1.3**
	0.2nm,0.3s,baz=230,slow=20,SNR=1.2						
EIL	**Elat**	**8.06**	**131**	Pn	**Pn**	**18 05 59.9**	**-0.4**
	0.7nm,0.3s,baz=319,slow=2.9,SNR=7.2						
EIL					Sn	**Sn**	**18 07 26.1**	**-5.1**
	1.1nm,0.3s,baz=360,slow=22,SNR=4.4						
EIL					LR	LR	18 11 01.8	
	comp=Z,53nm,18.5s,baz=198,slow=50						
KBZ	**Khabaz**	**14.32**	**49**	Pn	**P**	**18 07 32.5**	**-0.5**
	0.1nm,0.3s,baz=229,slow=9.3,SNR=4.2						
	1.7nm,0.9s						
DAVOX	**Davos/Dischmat**	**17.87**	**316**	LR	LR	18 17 22.0	
	comp=Z,79nm,18.5s,baz=82,slow=46						
ESDC	**Sonseca Array**	**25.68**	**290**	P	**P**	**18 09 31.4**	**-1.8**
	0.7nm,0.5s,baz=90,slow=9.0,SNR=8.5						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**26.31**	**358**	P	**P**	**18 09 37.0**	**-1.5**
	6.1nm,1.1s,baz=152,slow=13,SNR=3.7						
	6.1nm,1.1s						
HFS	**Hagfors**	**26.63**	**344**	P	**P**	**18 09 39.8**	**-1.7**
	1.9nm,0.9s,baz=187,slow=9.4,SNR=1.7						
	1.9nm,0.9s						
NOA	**NORSAR Array B**	**28.02**	**343**	P	**P**	**18 09 51.7**	**-2.4**
	0.3nm,0.7s,baz=156,slow=8.8,SNR=1.4						
	0.3nm,0.7s						
EKA	**Eskdalemuir Ar**	**29.38**	**323**	P	**P**	**18 10 02.9**	**-3.3**
	1.5nm,0.7s,baz=111,slow=8.9,SNR=2.0						
	1.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**32.32**	**234**	P	**P**	**18 10 32.1**	**-0.4**
	1.1nm,0.8s,baz=23,slow=5.3,SNR=5.3						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**39.31**	**51**	P	**P**	**18 11 32.2**	**+0.2**
	0.3nm,0.3s,baz=270,slow=9.4,SNR=1.7						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**41.83**	**57**	P	**P**	**18 11 55.1**	**+2.1**
	0.2nm,0.5s,baz=281,slow=6.7,SNR=6.1						
	0.2nm,0.5s						
SONM	**Songino Array**	**57.68**	**51**	P	**P**	**18 13 55.5**	**+1.8**
	0.4nm,0.6s,baz=288,slow=8.7,SNR=4.8						
	0.4nm,0.6s						

*AZER **24** 18:13:19.3,38˚.42N×44˚.50E,h7km,ml3.4*
*NSSP **24** 18:13:21.5,38˚.47N×44˚.05E,Ms0.0*
*AFAD **24** 18:13:22.4,38˚.43N×44˚.39E,h8km±3km,ML3.2*
*ISK **24** 18:13:24.2,38˚.42N×44˚.18E,h5km,ML3.1/9*
*TEH **24** 18:13:24.2,38˚.58N×44˚.77E,h5km±81km,ML2.9, Presumed earthquake*
ISC 24 18:13:22.1±1.1,**38˚.42N**±0˚.02×**44˚.45E**±0˚.02,**h4**km±10km, **n82**,σ1s**61**/139,**2D,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**304**	P	**Pg**	**18 13 30.4**	**-0.1**
OZAP				S	**Sb**	**18 13 37.9**	**-1.5**
OZAP				IAML		18 13 39.0	
	comp=N,3µm,0.6s						
TVAN	**Van**	**0.83**	**278**	P	**Pg**	**18 13 37.7**	**-0.3**
TVAN				S	**Sg**	**18 13 48.7**	**-0.1**
TVAN				IAML		18 13 56.0	
	comp=N,725nm,0.5s						
TVAN				IAML		18 14 06.0	
	comp=E,821nm,0.9s						
VMUR	**Van-Muradiye**	**0.89**	**310**	P	**Pg**	**18 13 38.4**	**-0.8**
VMUR				S	**Sb**	**18 13 52.0**	**-0.6**
ISHB	**Shabestar**	**0.93**	**98**	Pg	**Pg**	**18 13 38.2**	**-1.6**
MAKU	**Maku**	**0.95**	**11**	Pg	**Pg**	**18 13 39.0**	**-1.3**
MAKU				Sg	**Sg**	**18 13 50.1**	**-2.5**
IMRD	**Marand**	**1.02**	**73**	Pg	**Pg**	**18 13 40.9**	**-0.8**
HAKT	**HAKKARI**	**1.04**	**214**	P	**Pg**	**18 13 42.0**	**-0.1**
HAKT	**HAKKARI**	**1.04**	**214**	P	**Pb**	**18 13 42.6**	**-0.3**
HAKT				S	**Sn**	**18 13 58.3**	**-0.6**
GEVA	**Gevas**	**1.10**	**265**	P	**Pg**	**18 13 41.6**	**-1.6**
GEVA				S	**Sb**	**18 13 58.1**	**-0.5**
NAX	**Nakhchivan**	**1.11**	**47**	P	**Pb**	**18 13 42.5**	**-1.4**
NAX				S	**Sb**	**18 13 58.6**	**0.0**
AKDM	**Akdamar-Van**	**1.16**	**266**	Pg	**Pb**	**18 13 43.4**	**-1.4**
AKDM				Sg	**Sg**	**18 13 57.6**	**-1.8**
DYDN	**Diyadin**	**1.27**	**332**	P	**Pn**	**18 13 44.3**	**-2.5**
DYDN				IAML		18 14 08.0	
	comp=N,392nm,0.5s						
SBZ	**Shahbuz**	**1.30**	**41**	P	**Pn**	**18 13 46.0**	**-1.2**
SBZ				S	**Sg**	**18 14 04.4**	**+0.6**
ORD	**Ordubad**	**1.31**	**67**	P	**Pn**	**18 13 46.0**	**-1.3**
ORD				P	**Pn**	**18 13 46.0**	**-1.3**
ORD				S	**Sn**	**18 14 04.3**	**-0.9**
HYR	**Heyderabad**	**1.33**	**13**	P	**Pn**	**18 13 46.7**	**-0.8**
HYR				S	**Sg**	**18 14 06.0**	**+1.1**
ITBZ	**Tabriz**	**1.35**	**98**	Pg	**Pn**	**18 13 45.7**	**-2.2**
CUKT	**Cukurca**	**1.35**	**210**	Pn	**Pg**	**18 13 49.2**	**+1.2**
CUKT				Sn	**Sg**	**18 14 07.9**	**+2.4**
CUKT	**Cukurca**	**1.35**	**210**	P	**Pg**	**18 13 48.9**	**+0.9**
CUKT				S	**Sg**	**18 14 06.6**	**+1.1**
CUKT				IAML		18 14 14.0	
	comp=N,492nm,0.8s						
CUKT				IAML		18 14 17.0	
	comp=E,540nm,0.7s						
ADCV	**BITLIS_Adilcev**	**1.41**	**286**	P	**Pg**	**18 13 49.0**	**-0.1**
ADCV				S	**Sg**	**18 14 08.0**	**+0.7**
IAZR	**Azarshahr**	**1.42**	**121**	Pg	**Pn**	**18 13 48.6**	**-0.3**
IGDI	**IGDIR**	**1.47**	**349**	P	**Pn**	**18 13 49.0**	**-0.4**
IGDI				S	**Sn**	**18 14 08.2**	**-1.0**
IGDI	**IGDIR**	**1.47**	**349**	P	**Pn**	**18 13 49.0**	**-0.4**
IGDI				S	**Sg**	**18 14 11.3**	**+1.9**
VAYK	**Vayk**	**1.48**	**31**⇓	*eP*	**Pn**	**18 13 49.0**	**-0.6**
VAYK			⇓	*eS*	**Sb**	**18 14 09.2**	**-0.2**
PERV	**Siirt/Pervari-**	**1.58**	**253**	P	**Pb**	**18 13 51.6**	**-0.3**
PERV				IAML		18 14 22.0	
	comp=N,554nm,0.9s						
PERV				IAML		18 14 23.0	
	comp=E,513nm,0.6s						
AGRB	**Hanur-Agry**	**1.62**	**316**	Pn	**Pg**	**18 13 52.7**	**-0.4**
DORK	**Agr/Tutak/Do**	**1.62**	**307**	P	**Pb**	**18 13 51.6**	**-1.1**
DORK				S	**Sg**	**18 14 14.7**	**+0.5**
MLAZ	**Malazgirt-MUS**	**1.65**	**296**	Pn	**Pb**	**18 13 52.7**	**-0.5**
KOTA	**Agri, Merkez-K**	**1.68**	**325**	P	**Pn**	**18 13 50.8**	**-1.7**
GNI	**Garni**	**1.74**	**7**	*eP*	**Pb**	**18 13 54.3**	**-0.4**
GNI				*eS*	**Sg**	**18 14 18.0**	**0.0**
GNI				*eS*	**Sb**	**18 14 19.3**	**+2.3**
GNI	**Garni**	**1.74**	**7**	*eP*	**Pb**	**18 13 54.1**	**-0.6**
VNNZ	**Vanand**	**1.75**	**344**	*eP*	**Pb**	**18 13 54.8**	**0.0**
VNNZ				*eS*	**Sg**	**18 14 19.2**	**+0.9**
METS	**Metsamor**	**1.75**	**351**	*eP*	**Pb**	**18 13 54.8**	**0.0**
METS				*eS*	**Sg**	**18 14 18.8**	**+0.5**
BLIS	**Bitlis-Merkez**	**1.83**	**270**	P	**Pb**	**18 13 56.0**	**-0.4**
SIRN	**Sirnak**	**1.86**	**241**	P	**Pg**	**18 13 57.8**	**+0.1**
SIRN				S	**Sg**	**18 14 24.1**	**+2.3**
SIRN				IAML		18 14 30.0	
	comp=N,239nm,0.7s						
SIRN				IAML		18 14 35.0	
	comp=E,354nm,0.6s						
ARUZ	**Aruch**	**1.88**	**352**	*eP*	**Pb**	**18 13 57.0**	**-0.1**
ARUZ				*eS*	**Sg**	**18 14 22.9**	**+0.5**
GURO	**Guroymak-BITLI**	**1.90**	**275**	Pn	**Pb**	**18 13 56.2**	**-1.3**
KAPZ	**Kaputan**	**1.91**	**6**	*eP*	**Pb**	**18 13 56.5**	**-1.1**
KAPZ				*eS*	**Sb**	**18 14 21.9**	**+0.1**
MAHB	**Mahabad**	**1.93**	**149**	Pn	**Pg**	**18 14 00.4**	**+1.3**
AYRK	**Ayrk**	**1.98**	**31**	*eP*	**Pb**	**18 13 57.7**	**-1.1**
AYRK				*eS*	**Sb**	**18 14 24.0**	**0.0**
IHRS	**Heris**	**2.04**	**92**	Pg	**Pb**	**18 13 58.8**	**-1.0**
SRTM	**Siirt_Merkez**	**2.04**	**259**	P	**Pb**	**18 13 59.8**	**+0.1**
SRTM				S	**Sg**	**18 14 26.3**	**-1.3**
SRTM				IAML		18 14 38.0	
	comp=N,252nm,0.8s						
SRTM				IAML		18 14 38.0	
	comp=E,204nm,0.6s						
DIGO	**Kars**	**2.16**	**338**	P	**Pb**	**18 14 01.5**	**-0.4**
DIGO				S	**Sg**	**18 14 31.1**	**-0.3**
DIGO				IAML		18 14 40.0	
	comp=E,151nm,0.5s						
DIGO				IAML		18 14 50.0	
	comp=N,157nm,0.7s						
MUSM	**Mu-Merkez**	**2.32**	**278**	P	**Pb**	**18 14 04.5**	**-0.1**
VRTB	**Varto-Mus**	**2.45**	**288**	Pn	**Pn**	**18 14 04.0**	**+0.9**
VRTB	**Varto-Mus**	**2.45**	**288**	P	**Pn**	**18 14 07.4**	**+0.5**
QRD	**Qoradiz**	**2.47**	**64**	P	**Pn**	**18 14 02.0**	**-1.1**
QRD				S	**Sn**	**18 14 32.3**	**-1.4**
GDB	**GEDABAY**	**2.51**	**23**	P	**Pn**	**18 14 04.1**	**+0.3**
GDB				S	**Sb**	**18 14 36.7**	**-2.3**
SVAN	**Silvan-Diyarba**	**2.57**	**265**	Pn	**Pn**	**18 14 05.9**	**+1.3**
SVAN	**Silvan-Diyarba**	**2.57**	**265**	P	**Pb**	**18 14 07.5**	**-1.3**
ISRB	**Sarab**	**2.60**	**102**	Pn	**Pn**	**18 14 06.4**	**+1.2**
MIDY	**Mardin/Midyat-**	**2.62**	**248**	P	**Pb**	**18 14 07.1**	**-2.5**
GANJ	**Ganja**	**2.65**	**32**	P	**Pn**	**18 14 06.2**	**+0.5**
GANJ				S	**Sb**	**18 14 40.7**	**-2.3**
AGDM	**Agdam**	**2.66**	**50**	P	**Pn**	**18 14 05.3**	**-0.5**
AGDM				S	**Sn**	**18 14 40.0**	**+1.5**
SENK	**Senkaya-Erzuru**	**2.68**	**323**	Pn	**Pb**	**18 14 08.7**	**-2.1**
QZX	**Qazax, Azerbai**	**2.73**	**15**	P	**Pn**	**18 14 06.9**	**+0.2**
QZX				S	**Sb**	**18 14 43.4**	**-1.8**
BLQ	**Beylaqan**	**2.74**	**61**	P	**Pn**	**18 14 06.5**	**-0.4**
BLQ				S	**Sb**	**18 14 42.7**	**-3.0**
KARO	**Karliova-Bingo**	**2.80**	**289**	Pn	**Pn**	**18 14 09.3**	**+1.5**
BRDA	**Brd**	**2.80**	**48**	P	**Pn**	**18 14 07.5**	**-0.1**
BRDA				S	**Sb**	**18 14 45.1**	**-2.3**
YRD	**Yardimli**	**3.01**	**79**	P	**Pn**	**18 14 09.9**	**-0.8**
YRD				S	**Sn**	**18 14 48.3**	**+1.1**
LRK	**Lerik**	**3.06**	**85**	P	**Pn**	**18 14 10.7**	**-0.7**
LRK				S	**Sn**	**18 14 50.0**	**+1.5**
AKH	**Akhalkalaki**	**3.07**	**346**	P	**Pg**	**18 14 21.4**	**+0.4**
DGRG	**David-gareji**	**3.11**	**13**	P	**Pb**	**18 14 19.6**	**+1.6**
D

	3.9nm,0.2s							
KNDC				⇑S		Sg	18 23 03.4	-0.7
	11nm,0.5s							
KDJ	**Kajisay**	**0.85**	**220**	⇑*e*P		**Pg**	**18 22 53.6**	**-0.3**
KDJ				⇑*e*S		**Sg**	**18 23 04.8**	**-0.3**
KPKS	**Kokpek**	**0.89**	**39**	P		**Pg**	**18 22 55.5**	**+0.8**
	0.5nm,0.3s							
KPKS				S		**Sb**	**18 23 06.4**	**-0.2**
	15nm,0.2s							
KPKS	**Kokpek**	**0.89**	**39**	*e*P		**Pb**	**18 22 54.5**	**-0.3**
	1.2nm,0.1s							
KPKS				*e*S		**Sb**	**18 23 06.2**	**-0.3**
	8.5nm,0.1s							
UZB	**Uzynbulak**	**0.89**	**66**	P		**Pb**	**18 22 54.1**	**-0.8**
	6.9nm,0.2s							
UZB				S		**Sb**	**18 23 04.5**	**-2.3**
	13nm,0.2s							
UZB	**Uzynbulak**	**0.89**	**66**	*e*P		**Pb**	**18 22 54.1**	**-0.8**
	2.3nm,0.2s							
UZB				*e*S		**Sb**	**18 23 06.4**	**-0.4**
	8.1nm,0.1s							
MTBS	**Maitube**	**1.14**	**288**	P		**Pg**	**18 22 59.9**	**+0.4**
	1.2nm,0.1s							
MTBS				S		**Sn**	**18 23 14.4**	**-0.5**
	8.7nm,0.2s							
MTBS	**Maitube**	**1.14**	**288**	*e*P		**Pb**	**18 22 59.0**	**-0.1**
	1.2nm,0.1s							
MTBS				*e*S		**Sn**	**18 23 14.4**	**-0.5**
	8.7nm,0.2s							
SHLS	**Shalkode**	**1.20**	**71**	*e*P		Pg	18 23 06.0	+5.5
	6.1nm,0.2s							
SHLS				*e*S		Sg	18 23 26.4	+10
PDGK	**Podgornoye**	**1.28**	**64**	⇑P		**Pn**	**18 23 00.6**	**-0.6**
	1.6nm,0.4s							
PDGK				⇓S		**Sb**	**18 23 17.5**	**-0.4**
	4.5nm,1.1s							
KTBS	**Karatobe**	**1.29**	**316**	P		**Pb**	**18 23 01.8**	**0.0**
	1.7nm,0.1s							
KTBS				S		**Sb**	**18 23 17.7**	**-0.5**
	2.6nm,0.6s							
KTBS	**Karatobe**	**1.29**	**316**	*e*P		**Pb**	**18 23 01.7**	**0.0**
	1.7nm,0.1s							
KTBS				*e*S		**Sn**	**18 23 18.1**	**-0.4**
	2.6nm,0.6s							
ULHL	**Ulahol**	**1.35**	**247**	⇑*e*P		**Pn**	**18 23 02.3**	**+0.1**
ULHL				⇑*e*S		**Sn**	**18 23 20.0**	**-0.1**
ARXS	**Arharly**	**1.43**	**358**	P		**Pb**	**18 23 04.2**	**+0.1**
	3.2nm,0.1s							
ARXS				S		**Sn**	**18 23 21.8**	**-0.1**
	6.2nm,0.1s							
ARXS	**Arharly**	**1.43**	**358**	*e*P		**Pb**	**18 23 04.2**	**+0.1**
	3.2nm,0.1s							
ARXS				*e*S		**Sb**	**18 23 23.0**	**+0.8**
	6.2nm,0.1s							
KST	**Kastek**	**1.46**	**281**	P		**Pg**	**18 23 05.4**	**-0.1**
	1.3nm,0.2s							
KST				S		**Sg**	**18 23 24.0**	**-0.5**
	5.3nm,0.3s							
KST	**Kastek**	**1.46**	**281**	*e*P		**Pb**	**18 23 04.8**	**+0.3**
	1.3nm,0.2s							
KST				*e*S		**Sg**	**18 23 24.0**	**-0.5**
	5.3nm,0.3s							
DGS	**Degeres**	**1.64**	**287**	P		**Pg**	**18 23 08.5**	**-0.4**
	0.9nm,0.1s							
DGS				S		**Sg**	**18 23 29.7**	**-0.5**
	21nm,0.3s							
DGS	**Degeres**	**1.64**	**287**	*e*P		**Pg**	**18 23 08.5**	**-0.4**
	0.9nm,0.1s							
DGS				*e*S		**Sg**	**18 23 29.7**	**-0.5**
	21nm,0.3s							
TKM2	**Tokmak 2**	**1.71**	**275**	⇓*e*P		**Pb**	**18 23 08.6**	**-0.3**
TKM2				⇓*e*S		**Sb**	**18 23 30.9**	**+0.5**
KNOS	**Konyrlen**	**1.82**	**30**	P		**Pb**	**18 23 11.0**	**+0.2**
	0.9nm,0.1s							
KNOS				S		**Sb**	**18 23 33.4**	**-0.2**
	5.2nm,0.1s							
KRBS	**Karabastau**	**1.87**	**300**	P		**Pb**	**18 23 12.0**	**+0.4**
	4.8nm,0.3s							
KRBS				S		**Sb**	**18 23 35.3**	**+0.3**
	2.1nm,0.2s							
KRBS	**Karabastau**	**1.87**	**300**	*e*P		**Pb**	**18 23 11.7**	**+0.1**
	4.8nm,0.3s							
KRBS				*e*S		**Sg**	**18 23 36.3**	**-1.5**
	2.1nm,0.2s							
KBK	**Karagaybulak**	**2.19**	**268**	⇓*e*P		**Pb**	**18 23 15.5**	**-1.5**
KBK				⇓*e*S		**Sb**	**18 23 42.8**	**-1.3**
AAK	**Ala-Archa**	**2.52**	**268**	⇑*e*P		**Pn**	**18 23 20.2**	**+1.9**
AAK				⇑*e*S		**Sb**	**18 23 50.9**	**-2.9**
USP	**Ospenovka**	**2.55**	**282**	⇑*e*P		**Pn**	**18 23 20.5**	**+1.9**
USP				⇑*e*S		**Sn**	**18 23 51.3**	**+1.8**
UCH	**Uchtor**	**2.57**	**259**	⇓*e*P		**Pn**	**18 23 21.1**	**+1.8**
UCH				⇓*e*S		**Sn**	**18 23 52.5**	**+1.8**
MRKS	**Merke**	**3.45**	**271**	*e*P		**Pb**	**18 23 39.7**	**+1.2**
	0.5nm,0.4s							
MRKS				*e*S		**Sg**	**18 24 25.1**	**-3.2**
	3.3nm,0.3s							

IDC 24 18:27:49.5±3.7, 47°57N×92°46W, h0km, mbtmp2.6/2, ML1.7/2, Error ellipse: s-maj=73.2km s-min=25.8km az=50.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULM	**Lac du Bonnet**	**3.50**	**321**	Pn	Pn	18 28 44.2	-1.0
	0.2nm,0.3s,baz=135,slow=10.0,SNR=1.2						
ULM				Pg	Pb	18 28 52.7	+0.3
	0.1nm,0.3s,baz=137,slow=15,SNR=5.0						
ULM				Sn	Sn	18 29 23.6	-3.7
	0.3nm,0.3s,baz=52,slow=22,SNR=3.0						
ULM				Lg	Lg	18 29 37.7	
	1.5nm,0.3s,baz=220,slow=7.0,SNR=28						
	0.6nm,0.4s						
I10CA	**LAC DU BONNET**	**3.53**	**319**	I	I	18 50 40.0	
	baz=138,slow=336,SNR=0.9						
YKA	**Yellowknife Ar**	**19.45**	**328**	P	P	18 32 15.7	-1.7
	baz=132,slow=10,SNR=1.9						
	0.1nm,0.3s						

*IDC **24** 19:03:08.6±2.4, 43°.62N×105°.04W, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=58.5km s-min=11.7km az=154.0*
*NEIC **24** 19:03:12.1±2.5, 43°.50N±0°.05×105°.19W±0°.05, h0km±1km, ML2.4/22, Error ellipse: s-maj=11.2km s-min=2.8km az=145.0*

ISC 24 19:03:11.9±1.0, 43°44N±0°.05×105°16W±0°.04, h0km, n16, σ1§21/19, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.06**	**49**	**Pg**	**Pg**	**19 03 32.6**	**+0.3**
RSSD				Sg	**Sg**	**19 03 46.5**	**+0.4**
RSSD				IAML		19 03 51.0	
	66nm,0.5s						
K22A	**Casper**	**1.27**	**232**		**Pg**	**19 03 36.9**	**+0.6**
BW06	**Boulder Array**	**3.29**	**260**	Pn	**Pn**	**19 04 03.0**	**-2.0**
BW06					**Sb**	**19 04 53.7**	**+1.7**
BW06				IAML		19 04 56.5	
	7.7nm,2.9s						
PD31	**Pinedale Array**	**3.29**	**260**		**Pn**	**19 04 04.8**	**-0.1**
PD31					**Sb**	**19 04 52.4**	**+0.4**
PDAR	**Pinedale Array**	**3.29**	**260**	Pn	**Pn**	**19 04 07.2**	**+2.3**
	0.5nm,0.3s,baz=84,slow=16,SNR=11						
PDAR				Lg	Lg	19 04 53.6	
	1.5nm,0.3s,baz=79,slow=32,SNR=14						
	0.5nm,0.4s						
PDAR	**Pinedale Array**	**3.29**	**260**		**Pn**	**19 04 05.5**	**+0.6**
PDAR					**Sb**	**19 04 52.5**	**+0.5**
OGNE	**Ogallala**	**3.40**	**136**	Pn	**Pn**	**19 04 06.4**	**0.0**
OGNE				Pg	**Pg**	**19 04 18.2**	**+1.1**
ISCO	**Idaho Springs**	**3.65**	**186**	Pn	**Pn**	**19 04 09.5**	**-0.4**
ISCO				IAML		19 05 04.3	
	4.7nm,4.4s						
ISCO				IAML		19 06 18.3	
	5.1nm,4.8s						
YNE	**Yellowstone No**	**3.83**	**296**	Pn	**Pn**	**19 04 11.3**	**-1.0**
YNE				IAML		19 05 13.6	
	comp=E,7.5nm,1.0s						
YNE				IAML		19 05 22.2	
	comp=N,8.4nm,0.7s						
O20A	**White River Ci**	**4.02**	**216**	Pn	**Pb**	**19 04 21.8**	**-2.0**
O20A				IAML		19 05 58.6	
	comp=N,15nm,4.8s						
FLWY	**Flagg Ranch**	**4.07**	**281**		**Pn**	**19 04 16.4**	**+0.8**
FLWY				IAML		19 05 39.0	
	comp=N,10nm,2.5s						
MOOW	**Moose Ponds**	**4.07**	**276**		**Pn**	**19 04 14.5**	**-1.2**
MOOW				IAML		19 05 26.8	
	comp=N,3.4nm,4.1s						
MOOW				IAML		19 06 50.1	
	comp=N,3.3nm,3.9s						
FXWY	**Fox Creek**	**4.27**	**275**	Pn	**Pn**	**19 04 19.5**	**+1.1**
FXWY				IAML		19 05 05.3	
	comp=N,5.3nm,4.5s						
FXWY				IAML		19 05 42.4	
	comp=N,5.7nm,4.7s						
AHID	**Auburn Hatcher**	**4.40**	**263**	Pn	**Pn**	**19 04 20.8**	**+0.6**
I10CA	**LAC DU BONNET**	**9.21**	**40**	I	I	20 01 40.0	
	baz=222,slow=265,SNR=2.2						
ULM	**Lac du Bonnet**	**9.32**	**40**	Pn	Pn	19 05 18.2	-9.2
	comp=N,0.1nm,0.3s,baz=223,slow=5.9,SNR=2.1						
	comp=N,1.3nm,0.8s						

*AZER **24** 19:11:37.9, 38°.40N×44°.55E, h10km, ml2.5*
*ISK **24** 19:11:39.5, 38°.45N×44°.30E, h9km, ML2.5/6*
*AFAD **24** 19:11:39.9, 38°.44N×44°.36E, h23km±1km, ML2.2*

ISC 24 19:11:39.3±1.1, 38°44N±0°.02×44°40E±0°.03, h9km±10km, n25, σ1§13/46, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.38**	**305**	P	**Pb**	**19 11 48.2**	**-0.2**
OZAP				S	**Sb**	**19 11 54.1**	**-0.5**
OZAP				IAML		19 11 58.0	
	comp=N,224nm,0.5s						
TVAN	**Van**	**0.78**	**277**	P	**Pb**	**19 11 55.5**	**+0.3**
TVAN				S	**Sb**	**19 12 05.8**	**-0.1**
TVAN				IAML		19 12 23.0	
	comp=N,106nm,1.4s						
TVAN				IAML		19 12 25.0	
	comp=E,81nm,0.9s						
VANB	**Van**	**0.80**	**281**	Pg	**Pg**	**19 11 52.7**	**-2.1**
VANB				Sg	**Sg**	**19 12 03.8**	**-1.5**
VMUR	**Van-Muradiye**	**0.84**	**310**	P	**Pb**	**19 11 55.9**	**-0.4**
VMUR				S	**Sb**	**19 12 07.6**	**-0.1**
YOVA	**Hakkari_Yksek**	**0.86**	**186**	P	**Pb**	**19 11 56.5**	**0.0**
YOVA				S	**Sg**	**19 12 06.7**	**-0.3**
HAKT	**HAKKARI**	**1.04**	**212**	P	**Pg**	**19 11 59.2**	**0.0**
HAKT				S	**Sn**	**19 12 14.4**	**-0.6**
HAKT				IAML		19 12 27.0	
	comp=N,48nm,0.5s						
HAKT	**HAKKARI**	**1.04**	**212**	P	**Pb**	**19 11 59.6**	**0.0**
HAKT				S	**Sn**	**19 12 17.4**	**+2.4**
GEVA	**Gevas**	**1.06**	**263**	P	**Pn**	**19 11 59.8**	**-0.6**
GEVA				S	**Sn**	**19 12 15.8**	**+0.4**
AKDM	**Akdamar-Van**	**1.12**	**265**	Pg	**Pg**	**19 12 00.2**	**-0.6**
AKDM				Sg	**Sb**	**19 12 15.0**	**-0.6**
NAX	**Nakhchivan**	**1.13**	**49**	P	**Pb**	**19 11 59.8**	**-1.2**
NAX				S	**Sb**	**19 12 15.9**	**+0.2**
DYDN	**Diyadin**	**1.23**	**334**	P	**Pb**	**19 12 01.8**	**-1.0**
DYDN				IAML		19 12 27.0	
	comp=E,43nm,0.6s						
SBZ	**Shahbuz**	**1.31**	**43**	P	**Pn**	**19 12 03.0**	**-0.9**
SBZ				S	**Sb**	**19 12 21.9**	**+0.7**
HYR	**Heyderabad**	**1.32**	**15**	P	**Pg**	**19 12 05.0**	**+0.4**
HYR				S	**Sg**	**19 12 23.5**	**+1.7**
ORD	**Ordubad**	**1.34**	**68**	P	**Pn**	**19 12 02.8**	**-1.5**
ORD				S	**Sb**	**19 12 21.1**	**-0.8**
CUKT	**Cukurca**	**1.35**	**208**	Pn	**Pb**	**19 12 04.7**	**-0.1**
CUKT				Sn	**Sg**	**19 12 23.1**	**+0.5**
CUKT	**Cukurca**	**1.35**	**208**	P	**Pg**	**19 12 05.2**	**0.0**
CUKT				S	**Sg**	**19 12 23.9**	**+1.3**
CUKT				IAML		19 12 35.0	
	comp=E,65nm,0.9s						
CUKT				IAML		19 12 37.0	
	comp=N,59nm,0.9s						
IGDI	**IGDIR**	**1.44**	**350**	P	**Pn**	**19 12 05.5**	**-0.1**
IGDI				S	**Sg**	**19 12 25.6**	**-0.1**
IGDI				IAML		19 12 31.0	
	comp=E,29nm,0.9s						
IGDI	**IGDIR**	**1.44**	**350**	P	**Pg**	**19 12 07.8**	**+0.8**
IGDI				S	**Sg**	**19 12 29.4**	**+3.7**
PERV	**Siirt/Pervari-**	**1.54**	**252**	P	**Pg**	**19 12 10.5**	**+1.6**
PERV				S	**Sg**	**19 12 31.8**	**+2.9**
PERV				IAML		19 12 37.0	
	comp=E,60nm,0.6s						
PERV				IAML		19 12 43.0	
	comp=N,54nm,0.7s						
AGRB	**Hanur-Agry**	**1.57**	**316**	Pn	**Pn**	**19 12 07.3**	**-0.3**
AGRB				Sn	**Sb**	**19 12 28.0**	**-0.7**
DORK	**Agr/Tutak/Do**	**1.57**	**307**	P	**Pg**	**19 12 09.1**	**-0.3**
DORK				S	**Sg**	**19 12 30.0**	**+0.1**
MLAZ	**Malazgirt-MUS**	**1.60**	**296**	Pn	**Pn**	**19 12 08.0**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.64**	**326**	P	**Pb**	**19 12 09.9**	**0.0**
GNI	**Garni**	**1.73**	**9**	Pn	**Pb**	**19 12 10.8**	**-0.4**
SRTM	**Siirt_Merkez**	**2.00**	**258**	P	**Pg**	**19 12 17.3**	**-0.3**
SRTM				S	**Sg**	**19 12 42.7**	**-0.9**
SRTM				IAML		19 12 50.0	
	comp=E,19nm,0.8s						
SRTM				IAML		19 12 53.0	
	comp=N,23nm,0.9s						

*RSNC **24** 19:22:26.9±0.0, 7°N±1°, 73°W±°, h148km±2km, M3.1, mB4.6, ML2.9, Mw(mB)3.9*
*FUNV **24** 19:22:30.4, 7°.03N×73°.24W, h15km, MW3.5, Presumed earthquake*

ISC 24 19:22:26.3±1.3, 6°89N±0°.03×73°15W±0°.04, h145km±7km, n37, σ1§66/73, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**186**	P	**Pn**	**19 22 47.0**	**+0.4**
BARC				S	**Sn**	**19 23 02.1**	**+0.1**
BRJC	**Barrancabermej**	**0.59**	**278**	P	**Pn**	**19 22 48.6**	**+1.0**
BRJC				S	**Sn**	**19 23 05.7**	**+1.9**
PAMC	**Pamplona, Colo**	**0.64**	**45**	P	**Pn**	**19 22 49.8**	**+1.3**
PAMC				S	**Sn**	**19 23 07.2**	**+1.9**
RUSC	**La Rusia**	**0.99**	**176**	P	**Pn**	**19 22 50.9**	**-0.2**
RUSC				S	**Sn**	**19 23 09.6**	**-0.4**
RUSC	**La Rusia**	**0.99**	**176**	*e*P	**Pn**	**19 22 51.0**	**-0.1**
RUSC				*e*S	**Sn**	**19 23 05.9**	**-4.1**
CAPV	**Capacho**	**1.28**	**40**	*e*P	**Pn**	**19 22 54.2**	**+0.7**
CAPV				*e*S	**Sn**	**19 23 09.6**	**-4.6**
PTBC	**PUERTO BERRIO,**	**1.34**	**255**	P	**Pn**	**19 22 53.5**	**-0.4**
PTBC				S	**Sn**	**19 23 14.6**	**-0.3**
OCAC	**Ocana**	**1.35**	**353**	P	**Pn**	**19 22 53.8**	**-0.4**
OCAC				S	**Sn**	**19 23 17.1**	**+1.6**
SPBC	**San Pablo de B**	**1.53**	**217**	P	**Pn**	**19 22 55.9**	**-0.1**
SPBC				S	**Sn**	**19 23 18.2**	**-0.4**
NORC	**Norcasia**	**2.15**	**233**	P	**Pn**	**19 23 03.1**	**0.0**
NORC				S	**Sn**	**19 23 30.2**	**-1.1**
CHIC	**Chingaza**	**2.31**	**194**	P	**Pn**	**19 23 05.3**	**-0.1**
CHIC				S	**Sn**	**19 23 34.5**	**-0.9**
ROSC	**El Rosal**	**2.34**	**210**	P	**Pn**	**19 23 06.9**	**+1.2**
ROSC				S	**Sn**	**19 23 38.7**	**+2.8**
HELC	**Santa Helena**	**2.46**	**254**	P	**Pn**	**19 23 07.9**	**+0.8**
HELC				S	**Sn**	**19 23 38.1**	**-0.3**
HELC	**Santa Helena**	**2.46**	**254**	*e*P	**Pn**	**19 23 09.4**	**+2.3**
HELC				*e*S	**Sn**	**19 23 38.6**	**+0.3**
UREC	**San Jos de Ur**	**2.51**	**290**	P	**Pn**	**19 23 06.6**	**-0.8**
UREC				S	**Sn**	**19 23 37.6**	**-1.4**
CVER	**Cruz Verde, Cu**	**2.52**	**201**	P	**Pn**	**19 23 08.4**	**+0.4**
CVER				S	**Sn**	**19 23 40.5**	**+0.5**
SOCV	**Socops**	**2.67**	**58**	*e*P	**Pn**	**19 23 12.3**	**+3.0**
SOCV				*e*S	**Sn**	**19 23 42.8**	**+0.3**
GUY2C	**Guyana, Caldas**	**2.75**	**233**	P	**Pn**	**19 23 11.4**	**+0.6**
GUY2C				S	**Sn**	**19 23 47.8**	**+2.7**
VILC	**Villavicencio,**	**2.81**	**191**	P	**Pn**	**19 23 10.9**	**-0.3**
VILC				S	**Sn**	**19 23 45.3**	**-0.6**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P	**Pn**	**19 23 15.5**	**+1.6**
CBOC				S	**Sn**	**19 23 51.5**	**+0.9**
DBBC	**Dabeiba**	**3.04**	**273**	P	**Pn**	**19 23 14.6**	**+0.5**
DBBC				S	**Sn**	**19 23 51.1**	**+0.1**
ARGC	**Ariguani, Magd**	**3.15**	**340**	P	**Pn**	**19 23 16.6**	**+1.2**
ARGC				S	**Sn**	**19 23 55.7**	**+2.3**
SDV	**Santo Domingo**	**3.19**	**51**	P	**Pn**	**19 23 16.5**	**+0.3**
SDV				S	**Sn**	**19 23 54.3**	**-0.4**
SDV	**Santo Domingo**	**3.19**	**51**	*e*P	**Pn**	**19 23 19.1**	**+2.9**
SDV				*e*S	**Sn**	**19 23 55.2**	**+0.5**
MCQV	**Machiques**	**3.20**	**11**	*e*S	**Sn**	**19 23 53.4**	**-1.3**
ANIL	**Santa Ana**	**3.27**	**223**	P	**Pn**	**19 23 18.6**	**+1.3**
ANIL				S	**Sn**	**19 23 58.4**	**+1.8**
APAC	**Apartado, Choc**	**3.55**	**287**	P	**Pn**	**19 23 20.8**	**+0.2**
APAC				S	**Sn**	**19 24 03.6**	**+1.0**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**19 23 20.5**	**-0.7**
PRAC				S	**Sn**	**19 24 02.8**	**-1.0**
SJCC	**San Jacinto, C**	**3.60**	**326**	P	**Pn**	**19 23 20.6**	**-0.8**
SJCC				S	**Sn**	**19 24 02.1**	**-1.9**
SJCC	**San Jacinto, C**	**3.60**	**326**	*e*P	**Pn**	**19 23 21.2**	**-0.1**
SJCC				*e*S	**Sn**	**19 24 00.3**	**-3.7**
ORTC	**Ortega, Tolima**	**3.62**	**215**	P	**Pn**	**19 23 21.6**	**0.0**
ORTC				S	**Sn**	**19 24 04.9**	**+0.5**
URMC	**La Uribe, Meta**	**3.82**	**199**	P	**Pn**	**19 23 24.0**	**-0.2**
URMC				S	**Sn**	**19 24 07.8**	**-1.3**
CRJC	**Cerrejon, Guaj**	**4.12**	**4**	P	**Pn**	**19 23 27.3**	**-0.8**
CRJC				S	**Sn**	**19 24 13.1**	**-3.0**
SMRC	**Santa Marta, M**	**4.38**	**346**	P	**Pn**	**19 23 32.7**	**+1.2**
SMRC				S	**Sn**	**19 24 19.9**	**-2.3**
URIC	**Uribia, Colomb**	**4.92**	**13**	P	**Pn**	**19 23 37.5**	**-1.1**
URIC				S	**Sn**	**19 24 34.0**	**-1.0**
URIC	**Uribia, Colomb**	**4.92**	**13**	*e*P	**Pn**	**19 23 41.0**	**+2.3**
URIC				*e*S	**Sn**	**19 24 32.4**	**-2.7**
GARC	**Garzon, Huila**	**5.22**	**207**	P	**Pn**	**19 23 41.2**	**-1.7**
GARC				S	**Sn**	**19 24 38.4**	**-4.1**

*NSSP **24** 19:36:59.5, 38°.37N×44°.52E, h10km, Ms3.1*
*AFAD **24** 19:37:00.8, 38°.36N×44°.37E, h7km±3km, MW3.5*
*ISK **24** 19:37:01.6, 38°.32N×44°.30E, h5km, ML3.2/13*
*TEH **24** 19:37:01.8, 38°.41N×44°.56E, h6km±70km, ML2.9, Presumed earthquake*
*AZER **24** 19:37:01.1, 38°.35N×44°.44E, h41km, ml3.4*

ISC 24 19:37:01.1±1.1, 38°37N±0°.02×44°45E±0°.02, h7km±9km, n89, σ1§11/147, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**309**	P	**Pg**	**19 37 10.1**	**-0.1**
OZAP				S	**Sg**	**19 37 16.2**	**-0.1**
YOVA	**Hakkari_Yksek**	**0.79**	**189**	P	**Pg**	**19 37 16.0**	**-0.3**
TVAN	**Van**	**0.84**	**281**	P	**Pg**	**19 37 16.0**	**-1.1**
ISHB	**Shabestar**	**0.92**	**95**	Pg	**Pg**	**19 37 17.3**	**-1.4**
VMUR	**Van-Muradiye**	**0.93**	**312**	P	**Pg**	**19 37 17.9**	**-1.0**
VMUR				S	**Sg**	**19 37 30.2**	**-0.8**
HAKT	**HAKKARI**	**1.00**	**216**	P	**Pg**	**19 37 19.6**	**-0.7**
HAKT				S	**Sg**	**19 37 33.2**	**0.0**
HAKT	**HAKKARI**	**1.00**	**216**	P	**Pg**	**19 37 19.8**	**-0.5**
HAKT				S	**Sn**	**19 37 36.2**	**+0.1**
MAKU	**Maku**	**1.00**	**10**	Pg	**Pg**	**19 37 19.5**	**-0.9**
MAKU				Sg	**Sg**	**19 37 33.3**	**-0.1**
IMRD	**Marand**	**1.04**	**70**	Pg	**Pg**	**19 37 20.4**	**-0.6**
ERCV	**ERCIS-VAN**	**1.09**	**307**	Pg	**Pb**	**19 37 22.5**	**+0.2**
ERCV				Sg	**Sn**	**19 37 37.8**	**-0.4**
ERCV	**ERCIS-VAN**	**1.09**	**307**	P	**Pg**	**19 37 20.3**	**-1.6**
ERCV				S	**Sn**	**19 37 37.6**	**-0.6**
GEVA	**Gevas**	**1.10**	**268**	P	**Pg**	**19 37 20.4**	**-1.7**
GEVA				S	**Sg**	**19 37 35.5**	**-0.9**
NAX	**Nakhchivan**	**1.15**	**45**	P	**Pg**	**19 37 22.0**	**-1.1**
NAX				S	**Sn**	**19 37 39.5**	**0.0**
AKDM	**Akdamar-Van**	**1.16**	**269**	Pg	**Pg**	**19 37 21.8**	**-1.5**
AKDM				Sg	**Sg**	**19 37 38.2**	**-0.1**
CUKT	**Cukurca**	**1.30**	**211**	Pn	**Pb**	**19 37 25.9**	**0.0**
CUKT	**Cukurca**	**1.30**	**211**	P	**Pg**	**19 37 26.1**	**+0.1**
CUKT				S	**Sn**	**19 37 43.4**	**0.0**
DYDN	**Diyadin**	**1.32**	**333**	P	**Pn**	**19 37 24.8**	**-1.3**
ORD	**Ordubad**	**1.33**	**65**	P	**Pn**	**19 37 25.4**	**-0.7**
ORD				S	**Sn**	**19 37 44.9**	**+0.8**
ITBZ	**Tabriz**	**1.34**	**95**	Pg	**Pn**	**19 37 24.9**	**-1.4**
SBZ	**Shahbuz**	**1.34**	**40**	P	**Pn**	**19 37 26.0**	**-0.3**
SBZ				S	**Sn**	**19 37 46.0**	**+1.6**
HYR	**Heyderabad**	**1.39**	**13**	P	**Pn**	**19 37 27.0**	**+0.2**
HYR				S	**Sg**	**19 37 47.7**	**+2.1**
IAZR	**Azarshahr**	**1.39**	**119**	Pg	**Pb**	**19 37 27.4**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.42**	**289**	P	**Pn**	**19 37 25.9**	**+1.5**
ADCV				S	**Sn**	**19 37 46.6**	**+0.1**
IGDI	**IGDIR**	**1.53**	**349**	P	**Pn**	**19 37 29.0**	**+0.3**
IGDI				S	**Sg**	**19 37 50.8**	**+0.6**
IGDI	**IGDIR**	**1.53**	**349**	P	**Pn**	**19 37 28.3**	**-0.5**
IGDI				S	**Sn**	**19 37 48.3**	**-0.6**
VAYK	**Vayk**	**1.53**	**29**	⇓*e*P	**Pn**	**19 37 28.9**	**0.0**
VAYK				⇓*e*S	**Sn**	**19 37 48.9**	**-0.1**
PERV	**Siirt/Pervari-**	**1.56**	**255**	P	**Pb**	**19 37 30.3**	**-0.1**
PERV				S	**Sg**	**19 37 53.7**	**+2.4**
ALVK	**Alvank**	**1.59**	**68**	*e*P	**Pn**	**19 37 29.5**	**-0.2**
ALVK				*e*S	**Sb**	**19 37 51.4**	**+0.2**
DORK	**Agr/Tutak/Do**	**1.66**	**308**	P	**Pn**	**19 37 30.7**	**+0.1**
AGRB	**Hanur-Agry**	**1.66**	**317**	Pn	**Pb**	**19 37 31.9**	**-0.1**
MLAZ	**Malazgirt-MUS**	**1.68**	**298**	Pn	**Pb**	**19 37 32.1**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.73**	**326**	P	**Pn**	**19 37 32.3**	**+0.7**
GNI	**Garni**	**1.79**	**7**	Pn	**Pg**	**19 37 35.4**	**-0.1**
GNI	**Garni**	**1.79**	**7**	*e*P	**Pb**	**19 37 34.8**	**+0.5**
GNI				*e*S	**Sg**	**19 37 58.2**	**0.0**
SIRN	**Sırnak**	**1.83**	**242**	P	**Pg**	**19 37 35.9**	**-0.3**
BLIS	**Bitlis-Merkez**	**1.84**	**272**	P	**Pb**	**19 37 34.1**	**-0.9**
EGVZ	**Egvard**	**1.84**	**62**	*e*P	**Pn**	**19 37 33.5**	**+0.3**
EGVZ				*e*S	**Sb**	**19 37 58.5**	**0.0**
GRS	**Goris**	**1.85**	**52**	⇓*i*P	**Pb**	**19 37 35.0**	**-

ALIG	**Mtskhetisjvari**	**3.78**	**351**	P		**Pb**	**19 38 09.4**	**+1.2**
ALIB	**&Aumlli-Bayram**	**3.88**	**64**	P		**Pn**	**19 38 01.0**	**0.0**
ALIB				S		**Sn**	**19 38 46.3**	**-0.5**
CHRG	**Chargali**	**3.97**	**5**	P		**Pb**	**19 38 12.8**	**+1.4**
CHRG				S		**Sg**	**19 39 14.2**	**+5.5**
XNQ	**Khinaliq**	**3.99**	**44**	P		**Pn**	**19 38 03.1**	**+0.3**
XNQ				S		**Sn**	**19 38 49.1**	**-0.8**
PQL	**Pirkuli**	**4.01**	**52**	P		**Pn**	**19 38 03.1**	**+0.1**
PQL				S		**Sn**	**19 38 49.8**	**-0.5**
GBS	**Qobustan**	**4.09**	**57**	P		**Pn**	**19 38 04.4**	**+0.3**
GBS				S		**Sn**	**19 38 52.2**	**0.0**
ATGJ	**Altiaghaj**	**4.27**	**53**	P		**Pn**	**19 38 06.6**	**+0.1**
ATGJ				S		**Sn**	**19 38 55.7**	**-0.8**
QSAR	**Qusar**	**4.30**	**42**	P		**Pn**	**19 38 06.9**	**+0.1**
QSAR				S		**Sn**	**19 38 56.2**	**-1.0**
QUBA	**Quba, Azerbaij**	**4.31**	**45**	P		**Pn**	**19 38 07.3**	**+0.3**
QUBA				S		**Sn**	**19 38 56.8**	**-0.7**
SHTL	**Shatili**	**4.32**	**7**	P		**Pb**	**19 38 17.4**	**0.0**
SHTL				S		**Sg**	**19 39 20.3**	**+0.6**
SIZA	**Siyzn**	**4.37**	**50**	P		**Pn**	**19 38 07.1**	**-0.7**
SIZA				S		**Sn**	**19 38 58.2**	**-0.7**

KRSC 24 19:37:21.8±1.3, 52°.76N×160°.94E, h16km±14km, Ml3.8,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.65**	**302**	*eP*	Pb	19 37 34.7	0.0
SPN				*eS*	Sg	19 37 42.9	-0.3
NLC	**Nalytchevo**	**1.05**	**294**	*eP*	Pb	19 37 40.8	-0.7
NLC				*eS*	Sb	19 37 53.9	-1.0
SDLR	**Sedlovina**	**1.34**	**293**	*eP*	Pn	19 37 45.9	-0.2
SDLR				*eS*	Sg	19 38 05.4	+0.2
DALK	**Dalny**	**1.35**	**282**	*eP*	Pn	19 37 46.0	+0.1
DALK				*eS*	Sb	19 38 03.7	0.0
UGLR	**Uglovaya**	**1.35**	**290**	*eP*	Pn	19 37 46.3	+0.2
SMAR	**Somma**	**1.39**	**292**	*eP*	Pn	19 37 46.5	-0.2
PET	**Petropavlovsk**	**1.41**	**282**	*eP*	Pn	19 37 47.1	+0.4
PET				*eS*	Sn	19 38 04.9	-0.1
AVH	**Avacha**	**1.42**	**292**	*eP*	Pn	19 37 47.4	+0.3
KRER	**Koryakskii**	**1.43**	**293**	*eP*	Pn	19 37 47.5	+0.3
INSR	**Institute**	**1.45**	**283**	*eS*	Sb	19 38 06.9	+0.4
KOK	**Koryaka**	**1.49**	**292**	*eP*	Pn	19 37 48.3	+0.3
KRX	**Arik**	**1.51**	**294**	*eP*	Pn	19 37 48.2	0.0
RUS	**Russkaya**	**1.52**	**258**	*eP*	Pn	19 37 48.8	+0.6
RUS				*eS*	Sn	19 38 07.5	-0.1
KII	**Karymskiy**	**1.56**	**326**	*eP*	Pb	19 37 49.7	-0.6
MTVR	**Mutnovka**	**1.70**	**262**	*eP*	Pn	19 37 51.6	+0.6
KRMR	**Karymshinskiy**	**1.71**	**273**	*eP*	Pn	19 37 51.3	+0.4
KRMR				*eS*	Sn	19 38 12.5	+0.2
GRL	**Gorelyy**	**1.76**	**264**	*eP*	Pb	19 37 52.9	-0.8
GRL				*eS*	Sb	19 38 15.3	-0.3
MKZ	**Mys Kozlova**	**1.86**	**14**	*eP*	Pn	19 37 53.6	+0.6
ASAK	**Asacha**	**1.89**	**260**	*eP*	Pb	19 37 55.0	-1.0
ASAK				*eS*	Sb	19 38 19.4	+0.1
KDTR	**Khodutka, Kamc**	**2.00**	**243**	*eP*	Pb	19 37 57.7	-0.1
GNL	**Ganaly**	**2.03**	**299**	*eP*	Pb	19 37 57.1	-1.2
APC	**Apacha**	**2.30**	**276**	*eP*	Pb	19 38 01.6	-1.3
TUMD	**Tumrok D**	**2.47**	**353**	*eP*	Pb	19 38 03.6	-2.2
KMNR	**Kamenistaya**	**3.03**	**352**	*eP*	Pb	19 38 13.2	-2.2

*TEH **24** 19:52:25.6, 38°.31N×44°.10E, h24km±110km, ML2.9,*
Presumed earthquake
*AZER **24** 19:52:26.6, 38°.41N×44°.46E, h2km, ml3.0*
*AFAD **24** 19:52:29.7, 38°.48N×44°.53E, h6km±1km, ML2.8*
*ISK **24** 19:52:30.8, 38°.41N×44°.25E, h1km, ML2.7/7*

ISC 24 19:52:29.4±1.2, 38°.40N±0°.02×44°.47E±0°.02, h1km±10km,
n49, σ1ᵗ22/84, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**305**	P	**Pg**	**19 52 38.4**	**+0.3**
OZAP				S	**Sg**	**19 52 44.4**	**+0.3**
YOVA	**Hakkari_Yksek**	**0.82**	**190**	P	**Pb**	**19 52 46.4**	**-0.2**
YOVA				S	**Sn**	**19 52 59.8**	**-1.3**
YOVA				IAML		19 53 05.0	
	comp=N,182nm,0.5s						
TVAN	**Van**	**0.84**	**279**	P	**Pg**	**19 52 45.3**	**-0.3**
TVAN				S	**Sb**	**19 52 58.6**	**-0.2**
TVAN				IAML		19 53 12.0	
	comp=E,421nm,0.8s						
TVAN				IAML		19 53 14.0	
	comp=N,437nm,0.9s						
ISHB	**Shabestar**	**0.91**	**97**	Pg	**Pg**	**19 52 47.1**	**+0.2**
VMUR	**Van-Muradiye**	**0.92**	**310**	P	**Pg**	**19 52 47.2**	**+0.3**
VMUR				S	**Sg**	**19 52 58.1**	**-0.7**
MAKU	**Maku**	**0.97**	**10**	Pg	**Pg**	**19 52 47.5**	**+0.5**
MAKU				Sg	**Sb**	**19 53 02.2**	**-0.3**
IMRD	**Marand**	**1.02**	**72**	Pg	**Pb**	**19 52 49.9**	**0.0**
HAKT	**HAKKARI**	**1.03**	**216**	P	**Pb**	**19 52 50.0**	**-0.2**
HAKT				S	**Sn**	**19 53 05.9**	**-0.5**
HAKT				IAML		19 53 14.0	
	comp=E,170nm,0.4s						
HAKT	**HAKKARI**	**1.03**	**216**	P	**Pb**	**19 52 50.3**	**+0.1**
HAKT				S	**Sn**	**19 53 07.8**	**+1.4**
GEVA	**Gevas**	**1.11**	**266**	P	**Pg**	**19 52 49.7**	**-1.0**
GEVA				S	**Sb**	**19 53 06.8**	**+0.2**
GEVA				IAML		19 53 13.0	
	comp=N,185nm,0.4s						
NAX	**Nakhchivan**	**1.11**	**46**	P	**Pb**	**19 52 51.5**	**0.0**
NAX				S	**Sn**	**19 53 08.2**	**0.0**
AKDM	**Akdamar-Van**	**1.17**	**267**	Pg	**Pg**	**19 52 51.1**	**-0.7**
AKDM				Sg	**Sg**	**19 53 05.9**	**-1.1**
DYDN	**Diyadin**	**1.29**	**332**	P	**Pb**	**19 52 55.0**	**+0.4**
DYDN				S	**Sg**	**19 53 08.5**	**-2.5**
DYDN				IAML		19 53 17.0	
	comp=N,245nm,0.8s						
DYDN				IAML		19 53 18.0	
	comp=E,218nm,0.4s						
ORD	**Ordubad**	**1.31**	**66**	P	**Pg**	**19 52 55.0**	**+0.6**
ORD				S	**Sn**	**19 53 13.6**	**+0.7**
SBZ	**Shahbuz**	**1.31**	**40**	P	**Pg**	**19 52 55.0**	**+0.5**
SBZ				S	**Sn**	**19 53 13.8**	**+0.8**
ITBZ	**Tabriz**	**1.33**	**97**	Pg	**Pn**	**19 52 54.3**	**-0.9**
CUKT	**Cukurca**	**1.34**	**211**	Pn	**Pg**	**19 52 56.1**	**+1.1**
CUKT				Sn	**Sn**	**19 53 14.4**	**+0.7**
CUKT	**Cukurca**	**1.34**	**211**	P	**Pg**	**19 52 56.8**	**+1.9**
CUKT				S	**Sn**	**19 53 14.3**	**+0.6**
CUKT				IAML		19 53 26.0	
	comp=E,179nm,0.6s						
CUKT				IAML		19 53 30.0	
	comp=N,177nm,0.8s						
HYR	**Heyderabad**	**1.35**	**13**	P	**Pb**	**19 52 55.4**	**-0.2**
HYR				S	**Sn**	**19 53 16.0**	**+2.0**
ADCV	**BITLIS_Adilcev**	**1.43**	**287**	P	**Pn**	**19 52 56.3**	**-0.2**
ADCV				S	**Sn**	**19 53 16.2**	**+0.2**
IGDI	**IGDIR**	**1.50**	**348**	P	**Pb**	**19 52 57.5**	**-0.6**
IGDI				S	**Sg**	**19 53 18.3**	**+0.8**
IGDI				IAML		19 53 22.0	
	comp=N,123nm,0.6s						
IGDI				IAML		19 53 22.0	
	comp=E,110nm,0.7s						
IGDI	**IGDIR**	**1.50**	**348**	P	**Pg**	**19 52 58.0**	**-0.1**
IGDI				S	**Sg**	**19 53 20.9**	**+3.4**
PERV	**Siirt/Pervari-**	**1.58**	**254**	P	**Pg**	**19 53 00.2**	**+0.5**
AGRB	**Hanur-Agry**	**1.64**	**316**	Pn	**Pb**	**19 52 59.8**	**-0.8**
AGRB				Sn	**Sb**	**19 53 21.5**	**-0.4**
DORK	**Agr/Tutak/Do**	**1.65**	**307**	P	**Pb**	**19 52 60.0**	**-0.6**
DORK				IAML		19 53 28.0	
	comp=E,91nm,0.8s						
KOTA	**Agri, Merkez-K**	**1.71**	**325**	P	**Pb**	**19 53 01.5**	**-0.2**
KOTA				S	**Sn**	**19 53 21.8**	**-1.3**
GNI	**Garni**	**1.76**	**7**	Pn	**Pg**	**19 53 02.9**	**-0.2**
GNI				Sn	**Sg**	**19 53 27.8**	**+1.8**
BLIS	**Bitlis-Merkez**	**1.85**	**271**	P	**Pb**	**19 53 03.3**	**-0.7**
SIRN	**Sırnak**	**1.86**	**242**	P	**Pg**	**19 53 05.8**	**+0.9**
GURO	**Guroymak-BITLI**	**1.92**	**275**	Pn	**Pn**	**19 53 03.3**	**0.0**
SRTM	**Siirt_Merkez**	**2.05**	**259**	P	**Pb**	**19 53 07.7**	**+0.3**
SRTM				IAML		19 53 48.0	
	comp=E,83nm,0.6s						
MUSM	**Mu-Merkez**	**2.34**	**279**	P	**Pb**	**19 53 12.7**	**+0.3**
QRD	**Qoradiz**	**2.46**	**64**	P	**Pn**	**19 53 11.1**	**+0.5**
QRD				S	**Sb**	**19 53 43.8**	**-1.5**
KARS	**Kars**	**2.47**	**335**	Pn	Pn	19 53 05.2	-5.7
GDB	**GEDABAY**	**2.52**	**23**	P	**Pn**	**19 53 12.1**	**+0.5**
GDB				S	**Sb**	**19 53 46.8**	**-1.3**
SVAN	**Silvan-Diyarba**	**2.58**	**266**	Pn	**Pn**	**19 53 12.8**	**+0.4**
GANJ	**Ganja**	**2.66**	**32**	P	**Pn**	**19 53 13.9**	**+0.5**
GANJ				S	**Sb**	**19 53 50.4**	**-0.6**
AGDM	**Agdam**	**2.67**	**49**	P	**Pn**	**19 53 13.8**	**+0.3**
AGDM				S	**Sb**	**19 53 49.8**	**-1.4**
SENK	**Senkaya-Erzuru**	**2.71**	**323**	Pn	**Pn**	**19 53 15.5**	**+1.3**
BLQ	**Beylaqan**	**2.75**	**60**	P	**Pn**	**19 53 14.9**	**+0.4**
BLQ				S	**Sb**	**19 53 52.3**	**-1.1**
QZX	**Qazax, Azerbai**	**2.75**	**14**	P	**Pn**	**19 53 14.8**	**+0.3**
QZX				S	**Sb**	**19 53 52.2**	**-1.2**
BRDA	**Brd**	**2.81**	**48**	P	**Pn**	**19 53 15.7**	**+0.4**
BRDA				S	**Sb**	**19 53 53.6**	**-1.5**
YRD	**Yardimli**	**3.00**	**79**	P	**Pn**	**19 53 18.6**	**+0.5**
YRD				S	**Sb**	**19 53 57.7**	**-3.1**
LRK	**Lerik**	**3.05**	**84**	P	**Pn**	**19 53 19.3**	**+0.5**
LRK				S	**Sb**	**19 54 00.3**	**-1.9**
GLBA	**Clilabad**	**3.18**	**73**	P	**Pn**	**19 53 21.1**	**+0.6**
GLBA				S	**Sb**	**19 54 03.7**	**-2.1**
LKRN	**Lenkeran, Azer**	**3.39**	**83**	P	**Pn**	**19 53 23.4**	**0.0**
LKRN				S	**Sb**	**19 54 08.4**	**-3.5**
ASTR	**Astara**	**3.40**	**86**	P	**Pn**	**19 53 24.1**	**+0.7**
ASTR				S	**Sn**	**19 54 06.0**	**+1.7**
SEKA	**Sheki**	**3.51**	**36**	P	**Pn**	**19 53 26.0**	**+1.0**
SEKA				S	**Sb**	**19 54 11.7**	**-3.6**
QBL	**Gabala**	**3.64**	**45**	P	**Pn**	**19 53 26.9**	**+0.1**
QBL				S	**Sn**	**19 54 13.6**	**+3.2**

*IDC **24** 20:05:48.8±2.1, 6°.92S×129°.36E, h169km±28km, mb2.6/1,*
mbtmp3.6/6, Error ellipse: s-maj=36.4km s-min=20.2km
az=97.0

ISC 24 20:05:46.7±0.9, 6°.95S±0°.07×129°.3E±0°.1, h150km, n6,
σ3ᵗ49/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.34**	**18**	P	**Pn**	**20 07 19.8**	**+1.7**
	6.2nm,1.0s,baz=137,slow=16,SNR=9.1						
SIJI				S	**Sn**	**20 08 25.7**	**-3.9**
	2.6nm,0.2s,baz=89,slow=23,SNR=7.4						
BATI	**Baumata**	**6.48**	**240**	P	**Pn**	**20 07 22.4**	**+2.5**
	3.9nm,0.3s,baz=340,slow=18,SNR=1.4						
BATI				S	**Sn**	**20 08 30.2**	**-2.6**
	14nm,0.4s,baz=64,slow=19,SNR=12						
FITZ	**Fitzroy Crossi**	**11.65**	**198**	P	**Pn**	**20 08 31.8**	**+3.3**
	2.1nm,0.8s,baz=14,slow=11,SNR=1.8						
FITZ				S	**Sn**	**20 10 31.9**	**-5.4**
	2.7nm,0.7s,baz=115,slow=17,SNR=2.1						
WRA	**Warramunga Arr**	**13.79**	**160**	P	**Pn**	**20 08 56.5**	**+0.3**
	0.3nm,0.3s,baz=338,slow=13,SNR=7.5						
WRA				S	Sn	20 11 15.8	-13
	0.5nm,0.4s,baz=343,slow=20,SNR=5.9						
ASAR	**Alice Springs**	**17.19**	**166**	P	**P**	**20 09 38.5**	**+1.3**
	0.9nm,0.5s,baz=346,slow=10,SNR=19						
ASAR				S	S	20 12 38.7	-10
	0.5nm,0.8s,baz=314,slow=18,SNR=4.2						
MKAR	**Makanchi Array**	**67.83**	**327**	P	**P**	**20 16 28.6**	**-0.1**
	0.1nm,0.3s,baz=112,slow=9.2,SNR=1.9						
	0.1nm,0.3s						

KRSC 24 20:29:33.7±0.7, 49°.81N×157°.02E, h20km±17km, Ml3.7,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.05**	**327**	*eP*	Pb	20 29 52.6	-0.6
SKR				*eS*	Sb	20 30 06.3	-0.1
PAU	**Pauzhetka**	**1.67**	**356**	*eS*	Sb	20 30 24.6	+0.4
KDTR	**Khodutka, Kamc**	**2.11**	**18**	*eS*	Sb	20 30 35.9	-1.2
ASAK	**Asacha**	**2.64**	**12**	*eP*	Pn	20 30 17.7	+2.5
MTVR	**Mutnovka**	**2.78**	**15**	*eP*	Pn	20 30 19.5	+2.4
MTVR				*eS*	Sn	20 30 53.2	+3.0
GRL	**Gorelyy**	**2.83**	**13**	*eP*	Pn	20 30 20.2	+2.4
GRL				*eS*	Sb	20 30 55.0	-2.7

*ISK **24** 20:29:59.8, 38°.36N×44°.41E, h5km, ML2.4/7*
*AFAD **24** 20:29:59.9, 38°.33N×44°.43E, h6km±3km, ML2.3*
*TEH **24** 20:30:01.9, 38°.42N×44°.61E, h6km±112km, ML2.5,*
Presumed earthquake

ISC 24 20:29:59.8±1.1, 38°.36N±0°.03×44°.46E±0°.02, h5km±11km,
n29, σ0ᵗ87/42, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**309**	P	**Pg**	**20 30 09.5**	**+0.5**
OZAP				S	**Sb**	**20 30 16.7**	**-1.5**
OZAP				IAML		20 30 23.0	
	comp=N,226nm,0.6s						
YOVA	**Hakkari_Yksek**	**0.78**	**190**	P	**Pg**	**20 30 14.6**	**-0.2**
TVAN	**Van**	**0.85**	**282**	P	**Pb**	**20 30 16.4**	**-0.7**
TVAN				IAML		20 30 37.0	
	comp=N,107nm,0.4s						
TVAN				IAML		20 30 37.0	
	comp=E,121nm,0.7s						
ISHB	**Shabestar**	**0.91**	**94**	Pg	**Pg**	**20 30 16.8**	**-0.4**
ISHB				Sg	**Sg**	**20 30 28.6**	**-0.5**
VMUR	**Van-Muradiye**	**0.94**	**312**	P	**Pb**	**20 30 18.7**	**+0.1**
VMUR				S	**Sn**	**20 30 32.3**	**-1.4**
VMUR				IAML		20 30 35.0	
	comp=N,85nm,0.6s						
VMUR				IAML		20 30 36.0	
	comp=E,111nm,0.4s						
HAKT	**HAKKARI**	**1.00**	**217**	P	**Pg**	**20 30 18.6**	**-0.3**
HAKT				S	**Sb**	**20 30 32.3**	**-0.9**
MAKU	**Maku**	**1.01**	**10**	Pg	**Pg**	**20 30 19.3**	**+0.1**
IMRD	**Marand**	**1.03**	**70**	Pg	**Pg**	**20 30 20.0**	**+0.4**
GEVA	**Gevas**	**1.11**	**268**	P	**Pg**	**20 30 19.0**	**-2.0**
GEVA				S	**Sb**	**20 30 36.4**	**+0.1**
GEVA				IAML		20 30 39.0	
	comp=E,53nm,0.3s						
GEVA				IAML		20 30 44.0	
	comp=N,63nm,0.3s						
AKDM	**Akdamar-Van**	**1.17**	**269**	Pn	**Pg**	**20 30 21.5**	**-0.7**
AKDM				Sn	**Sn**	**20 30 39.3**	**0.0**
CUKT	**Cukurca**	**1.30**	**212**	Pn	**Pb**	**20 30 25.3**	**+0.6**
CUKT				Sn	**Sn**	**20 30 43.9**	**+1.4**
CUKT	**Cukurca**	**1.30**	**212**	P	**Pb**	**20 30 24.6**	**-0.1**
CUKT				IAML		20 30 51.0	
	comp=E,62nm,0.4s						
ITBZ	**Tabriz**	**1.33**	**95**	Pg	**Pn**	**20 30 24.7**	**-0.5**
IAZR	**Azarshahr**	**1.38**	**119**	Pg	**Pg**	**20 30 27.0**	**+0.8**
ADCV	**BITLIS_Adilcev**	**1.44**	**289**	P	**Pg**	**20 30 27.3**	**0.0**
ADCV				S	**Sn**	**20 30 47.1**	**+1.2**
ADCV				IAML		20 30 51.0	
	comp=N,40nm,1.3s						
IGDI	**IGDIR**	**1.54**	**349**	P	**Pg**	**20 30 29.4**	**+0.1**
IGDI				S	**Sg**	**20 30 50.8**	**+1.6**
IGDI				IAML		20 30 54.0	
	comp=E,41nm,1.0s						
PERV	**Siirt/Pervari-**	**1.57**	**255**	P	**Pg**	**20 30 29.4**	**-0.4**
PERV				S	**Sg**	**20 30 52.0**	**+1.8**
PERV				IAML		20 30 56.0	
	comp=E,72nm,0.6s						
PERV				IAML		20 31 01.0	
	comp=N,72nm,0.4s						
DORK	**Agr/Tutak/Do**	**1.67**	**309**	P	**Pb**	**20 30 30.4**	**-0.6**
DORK				S	**Sg**	**20 30 52.9**	**-0.5**
AGRB	**Hanur-Agry**	**1.67**	**317**	Pn	**Pb**	**20 30 31.1**	**0.0**
MLAZ	**Malazgirt-MUS**	**1.69**	**298**	Pn	**Pb**	**20 30 30.8**	**-0.6**
KOTA	**Agri, Merkez-K**	**1.74**	**326**	P	**Pb**	**20 30 32.3**	**0.0**
GNI	**Garni**	**1.80**	**7**	Pn	**Pb**	**20 30 33.4**	**+0.1**
SIRN	**Sırnak**	**1.84**	**243**	P	**Pb**	**20 30 33.7**	**-0.1**
SIRN				IAML		20 31 06.0	
	comp=N,30nm,0.6s						
BLIS	**Bitlis-Merkez**	**1.85**	**272**	P	**Pg**	**20 30 35.6**	**+0.5**
BLIS				S	**Sg**	**20 30 58.2**	**-0.9**
GURO	**Guroymak-BITLI**	**1.92**	**276**	Pn	**Pb**	**20 30 34.7**	**-0.6**
IHRS	**Heris**	**2.03**	**90**	Pn	**Pb**	**20 30 36.9**	**-0.3**
SRTM	**Siirt_Merkez**	**2.04**	**260**	P	**Pg**	**20 30 37.8**	**-1.0**
SRTM				S	**Sg**	**20 31 05.8**	**+0.6**
SRTM				IAML		20 31 12.0	
	comp=E,34nm,0.8s						
SRTM				IAML		20 31 16.0	
	comp=N,37nm,0.7s						
SVAN	**Silvan-Diyarba**	**2.58**	**266**	Pn	**Pn**	**20 30 43.6**	**+1.4**
GRMI	**Germi**	**2.73**	**79**	Pn	**Pb**	**20 30 47.9**	**-1.1**

*AFAD **24** 20:55:49.7, 38°.41N×44°.49E, h6km±2km, ML2.7*
*AZER **24** 20:55:49.1, 38°.38N×44°.52E, h13km, ml2.9*
*ISK **24** 20:55:50.3, 38°.35N×44°.39E, h5km, ML2.7/8*
*TEH **24** 20:55:51.2, 38°.44N×44°.52E, h6km±79km, ML2.8,*
Presumed earthquake

ISC 24 20:55:50.1±1.2, 38°.39N±0°.02×44°.49E±0°.02, h1km±10km,
n47, σ1ᵗ33/75, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**305**	P	**Pg**	**20 55 58.5**	**-0.7**
OZAP				S	**Sg**	**20 56 06.0**	**+0.6**
OZAP				IAML		20 56 08.0	
	comp=N,820nm,0.7s						
YOVA	**Hakkari_Yksek**	**0.81**	**191**	P	**Pg**	**20 56 06.2**	**+0.5**
TVAN	**Van**	**0.86**	**280**	P	**Pg**	**20 56 05.4**	**-1.2**
VANB	**Van**	**0.89**	**284**	Pg	**Pg**	**20 56 03.4**	**-3.7**
ISHB	**Shabestar**	**0.89**	**96**	Pg	**Pg**	**20 56 07.3**	**+0.1**
VMUR	**Van-Muradiye**	**0.94**	**310**	P	**Pg**	**20 56 07.7**	**-0.3**
VMUR				S	**Sb**	**20 56 21.5**	**-0.7**
MAKU	**Maku**	**0.98**	**9**	Pg	**Pg**	**20 56 08.5**	**-0.3**
MAKU				Sg	**Sb**	**20 56 21.8**	**-1.6**
IMRD	**Marand**	**1.01**	**71**	Pg	**Pb**	**20 56 10.1**	**-0.3**
HAKT	**HAKKARI**	**1.03**	**217**	P	**Pg**	**20 56 10.3**	**+0.4**
HAKT				S	**Sb**	**20 56 25.2**	**+0.2**
HAKT				IAML		20 56 29.0	
	comp=N,159nm,0.6s						
HAKT				IAML		20 56 29.0	
	comp=E,248nm,0.6s						
HAKT	**HAKKARI**	**1.03**	**217**	P	**Pg**	**20 56 10.7**	**+0.8**
HAKT				S	**Sn**	**20 56 27.4**	**+0.2**
ERCV	**ERCIS-VAN**	**1.10**	**305**	Pg	**Pg**	**20 56 11.6**	**+0.4**
ERCV				Sg	**Sb**	**20 56 27.3**	**+0.4**
ERCV	**ERCIS-VAN**	**1.10**	**305**	P	**Pg**	**20 56 10.9**	**-0.2**
ERCV				S	**Sg**	**20 56 25.4**	**0.0**
NAX	**Nakhchivan**	**1.11**	**45**	P	**Pb**	**20 56 12.3**	**-0.6**
NAX				S	**Sn**	**20 56 29.1**	**+0.3**
GEVA	**Gevas**	**1.13**	**267**	P	**Pg**	**20 56 09.6**	**-2.1**
GEVA				S	**Sg**	**20 56 27.6**	**+1.3**
AKDM	**Akdamar-Van**	**1.19**	**268**	Pn	**Pg**	**20 56 11.7**	**-1.1**
AKDM				Sn	**Sg**	**20 56 29.3**	**+1.1**
ORD	**Ordubad**	**1.30**	**65**	P	**Pn**	**20 56 15.6**	**+0.2**
ORD				S	**Sn**	**20 56 34.4**	**+0.9**
SBZ	**Shahbuz**	**1.31**	**39**	P	**Pb**	**20 56 15.8**	**+0.3**
SBZ				S	**Sn**	**20 56 35.5**	**+1.8**
DYDN	**Diyadin**	**1.31**	**332**	P	**Pn**	**20 56 15.3**	**-0.5**
DYDN				IAML		20 56 44.0	
	comp=N,122nm,0.7s						
ITBZ	**Tabriz**	**1.31**	**96**	Pg	**Pn**	**20 56 15.0**	**-0.7**
CUKT	**Cukurca**	**1.34**	**212**	Pn	**Pn**	**20 56 15.4**	**-0.6**
CUKT				Sn	**Sb**	**20 56 34.0**	**+0.4**
CUKT	**Cukurca**	**1.34**	**212**	P	**Pn**	**20 56 15.0**	**-1.0**
CUKT				S	**Sb**	**20 56 33.1**	**-0.5**
CUKT				IAML		20 56 36.0	
	comp=E,180nm,0.8s						
CUKT				IAML		20 56 37.0	
	comp=N,237nm,0.8s						
HYR	**Heyderabad**	**1.36**	**12**	P	**Pg**	**20 56 17.0**	**+0.8**
HYR				S	**Sn**	**20 56 38.9**	**+4.0**
IAZR	**Azarshahr**	**1.37**	**121**	Pg	**Pg**	**20 56 17.7**	**+1.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**287**	P	**Pn**	**20 56 17.2**	**-0.3**
ADCV				S	**Sg**	**20 56 37.6**	**+1.1**
IGDI	**IGDIR**	**1.51**	**348**	P	**Pg**	**20 56 19.0**	**-0.1**
IGDI				IAML		20 56 43.0	
	comp=E,85nm,1.0s						
IGDI	**IGDIR**	**1.51**	**348**	P	**Pg**	**20 56 19.3**	**+0.2**
IGDI				S	**Sg**	**20 56 41.0**	**+2.4**
PERV	**Siirt/Pervari-**	**1.60**	**255**	P	**Pn**	**20 56 19.6**	**+0.1**
PERV				IAML		20 56 49.0	
	comp=N,191nm,0.6s						
PERV				IAML		20 56 53.0	
	comp=E,116nm,0.5s						
AGRB	**Hanur-Agry**	**1.66**	**316**	Pn	**Pb**	**20 56 21.5**	**-0.1**
AGRB				Sn	**Sg**	**20 56 44.6**	**+1.1**
DORK	**Agr/Tutak/Do**	**1.67**	**307**	P	**Pn**	**20 56 20.2**	**-0.3**
DORK				S	**Sn**	**20 56 41.8**	**-0.9**
MLAZ	**Malazgirt-MUS**	**1.69**	**297**	Pn	**Pb**	**20 56 21.7**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.73**	**325**	Pn	**Pb**	**20 56 20.5**	**-0.6**
GNI	**Garni**	**1.77**	**6**	Pn	**Pb**	**20 56 23.8**	**-0.2**
BLIS	**Bitlis-Merkez**	**1.86**	**272**	P	**Pn**	**20 56 24.3**	**+1.0**
BLIS				S	**Sn**	**20 56 46.2**	**-1.4**
SIRN	**Sırnak**	**1.87**	**242**	P	**Pb**	**20 56 25.3**	**+0.3**
SIRN				S	**Sg**	**20 56 50.5**	**+0.5**
SIRN				IAML		20 56 57.0	
	comp=E,88nm,0.8s						
SIRN				IAML		20 57 03.0	
	comp=N,99nm,0.6s						
GURO	**Guroymak-BITLI**	**1.94**	**276**	Pn	**Pn**	**20 56 24.5**	**+0.3**
IHRS	**Heris**	**2.01**	**91**	Pn	**Pg**	**20 56 27.9**	**-0.6**
SRTM	**Siirt_Merkez**	**2.06**	**260**	P	**Pb**	**20 56 28.2**	**-0.2**
SRTM				S	**Sn**	**20 56 53.6**	**+1.3**
DIGO	**Kars**	**2.20**	**337**

MNAI	**Manna**	**3.84**	**129**			**Pn**	**21 00 22.4**	**+0.2**	
MNAI					Sn	**Sn**	**21 01 05.3**	**-0.8**	
MNAI	**Manna**	**3.84**	**129**		P	**Pn**	**21 00 22.6**	**+0.4**	
MNAI	**Manna**	**3.84**	**129**		P	**Pn**	**21 00 23.2**	**+1.0**	
GSI	**Gunungsitoli**	**4.01**	**324**			**Pn**	**21 00 23.1**	**-1.4**	
GSI	**Gunungsitoli**	**4.01**	**324**		P	**Pn**	**21 00 23.5**	**-1.0**	
GSI	**Gunungsitoli**	**4.01**	**324**		P	**Pn**	**21 00 24.0**	**-0.5**	
EGSI	**Enggano, Bengk**	**4.10**	**146**		P	**Pn**	**21 00 25.0**	**-0.8**	
RPSI	**Rantau Prapat**	**4.73**	**348**			**Pn**	**21 00 32.5**	**-1.9**	
PSI	**Prapat**	**4.83**	**348**		P	**Pn**	**21 00 34.2**	**-1.7**	
PSI	**Prapat**	**4.83**	**348**		P	**Pn**	**21 00 34.6**	**-1.3**	
MDSI	**Maura Dua**	**4.92**	**121**		P	**Pn**	**21 00 39.6**	**+2.6**	
LWLI	**Liwa**	**5.11**	**127**		P	**Pn**	**21 00 41.3**	**+1.6**	
MYKOM	**Kota Tinggi**	**5.39**	**46**			**Pn**	**21 00 43.7**	**+0.3**	
MYKOM	**Kota Tinggi** 2µm2µm238nm,0.8s	**5.39**	**46**		P	**Pn**	**21 00 45.3**	**+1.8**	
TPRI	**Tanjung Pinang**	**5.39**	**58**		P	**Pn**	**21 00 44.5**	**+1.0**	
KLSI		**5.50**	**120**		P	**Pn**	**21 00 47.3**	**+2.4**	
TSI	**Tuntungan**	**5.59**	**346**		P	**Pn**	**21 00 49.6**	**+3.4**	
KASI	**Kota Agung** 1.7nm2µm198nm,1.0s	**5.76**	**128**		P	**Pn**	**21 00 49.6**	**+1.0**	
KCSI	**Kotacane, Aceh** 1.6nm2µm130nm,0.9s	**5.86**	**338**		P	**Pn**	**21 00 52.9**	**+3.0**	
TPTI		**5.87**	**332**		P	**Pn**	**21 00 51.5**	**+1.4**	
IPM	**Ipoh**	**6.48**	**10**		Pn	**Pn**	**21 00 59.1**	**+0.7**	
IPM	**Ipoh**	**6.48**	**10**		P	**Pn**	**21 01 00.7**	**+2.3**	
IPM	**Ipoh** 0.6nm2µm166nm,0.9s	**6.48**	**10**		P	**Pn**	**21 01 00.8**	**+2.3**	
MLSI	**Meulaboh, Aceh** 1.9nm4µm302nm,1.0s	**7.12**	**330**		P	**Pn**	**21 01 07.9**	**+0.7**	
KULM	**Kulim**	**7.23**	**6**			**Pn**	**21 01 08.8**	**+0.1**	
KULM	**Kulim**	**7.23**	**6**		P	**Pn**	**21 01 09.0**	**+0.3**	
KULM	**Kulim** 0.6nm1µm171nm,0.8s	**7.23**	**6**		P	**Pn**	**21 01 09.4**	**+0.7**	
LEM	**Lembang** 28nm,0.6s,baz=208,slow=16,SNR=6.4	**9.05**	**123**		P	**Pn**	**21 01 35.5**	**+1.6**	
LEM					LR	LR	21 05 34.8		
	comp=Z,1µm,19.3s,baz=282,slow=41								
LEM	**Lembang** 96nm,1.0s	**9.05**	**123**		P	**Pn**	**21 01 35.3**	**+1.4**	
BBJI	**Bungbulang**	**9.43**	**126**		Pn	**Pn**	**21 01 36.8**	**-2.1**	
BBJI	**Bungbulang**	**9.43**	**126**		P	**Pn**	**21 01 37.6**	**-1.3**	
BBJI	**Bungbulang** 54nm,0.7s	**9.43**	**126**		P	**Pn**	**21 01 38.1**	**-0.8**	
XMI	**Christmas Isla**	**10.19**	**146**		P	**Pn**	**21 01 46.9**	**-2.4**	
KPJI	**Karang Pucung** 51nm,0.6s	**10.43**	**121**		P	**Pn**	**21 01 54.1**	**+1.5**	
UGM	**Wanagama**	**12.08**	**120**		Pn	**Pn**	**21 02 13.8**	**-1.4**	
UGM	**Wanagama**	**12.08**	**120**		P	**Pn**	**21 02 14.3**	**-1.0**	
UGM	**Wanagama** 56nm,1.4s	**12.08**	**120**		P	**Pn**	**21 02 15.6**	**+0.3**	
SBUM	**Sibu**	**13.03**	**70**			**Pn**	**21 02 27.6**	**-0.5**	
SBUM	**Sibu**	**13.03**	**70**		P	**P**	**21 02 33.0**	**-4.5**	
SJI	**Sawahan** 27nm,0.7s	**13.10**	**116**		P	**Pn**	**21 02 29.9**	**+0.7**	
SNJI	**Sawahan-Nganju** 39nm,0.6s	**13.11**	**117**		P	**Pn**	**21 02 30.1**	**+0.6**	
JAGI	**Jajag, Banyuwa**	**15.55**	**115**		Pn	**Pn**	**21 02 57.9**	**-4.0**	
JAGI	**Jajag, Banyuwa**	**15.55**	**115**		P	**Pn**	**21 03 00.1**	**-1.8**	
KHKI	**Kahang-Kahang** 48nm,0.8s	**16.84**	**113**		P	**Pn**	**21 03 18.8**	**+0.5**	
KKM	**Kota Kinabalu**	**18.08**	**64**		P	**Pn**	**21 03 34.4**	**+0.6**	
KKM	**Kota Kinabalu**	**18.08**	**64**		P	**Pn**	**21 03 34.8**	**+1.1**	
KKM	**Kota Kinabalu** 65nm,0.9s	**18.08**	**64**		P	**Pn**	**21 03 34.5**	**+0.8**	
MMSI	**Mamuju** 866nm69nm,0.9s	**18.96**	**93**		P	**Pn**	**21 03 45.2**	**+0.9**	
PMSI	**Majene** 1µm160nm,1.1s	**19.01**	**95**		P	**Pn**	**21 03 46.0**	**+1.1**	
PLAI	**Plampang**	**19.01**	**112**		P	**P**	**21 03 43.4**	**-0.4**	
PLAI	**Plampang** 40nm,0.6s	**19.01**	**112**		P	**P**	**21 03 43.5**	**-0.4**	
DBNI	**Kabupaten Domp**	**19.40**	**110**		P	**P**	**21 03 48.6**	**+0.5**	
MYLDM	**Lahad Datu**	**19.84**	**69**		P	**Pn**	**21 03 53.9**	**-0.9**	
MYLDM	**Lahad Datu**	**19.84**	**69**		P	**Pn**	**21 03 55.6**	**+0.8**	
TTSI	**Tana Toraja** 644nm78nm,0.9s	**19.88**	**94**		P	**Pn**	**21 03 54.9**	**-0.4**	
SPSI	**Sidrap Palu** 39nm,0.8s	**19.89**	**96**		P	**Pn**	**21 03 54.8**	**-0.6**	
PCI	**Palu** 2µm121nm,1.0s	**19.91**	**87**		P	**Pn**	**21 03 55.7**	**+0.1**	
KAPI	**Kappang** 60nm,1.0s,baz=257,slow=8.9,SNR=11	**20.00**	**99**		P	**P**	**21 03 54.3**	**-0.3**	
KAPI					LR	LR	21 12 25.9		
	comp=Z,508nm,19.1s,baz=266,slow=39								
KAPI	**Kappang**	**20.00**	**99**		P	**P**	**21 03 54.5**	**-0.1**	
KAPI	**Kappang**	**20.00**	**99**		P	**P**	**21 03 55.0**	**+0.4**	
KAPI	**Kappang**	**20.00**	**99**		P	**P**	**21 03 54.7**	**+0.1**	
KAPI	**Kappang** 44nm,1.0s	**20.00**	**99**		P	**P**	**21 03 55.2**	**+0.6**	
MPSI	**Mapaga** 1µm102nm,1.1s	**20.08**	**84**		P	**Pn**	**21 03 57.1**	**-0.5**	
CM31	**Chiang Mai Arr**	**20.30**	**357**		P	**P**	**21 03 56.4**	**-1.6**	
CM31	**Chiang Mai Arr** SNR=19	**20.30**	**357**		P	**P**	**21 03 57.0**	**-0.9**	
CMAR	**Chiang Mai Arr** 21nm,0.9s,baz=186,slow=9.4,SNR=121	**20.30**	**357**		P	**P**	**21 03 56.8**	**-1.1**	
CMAR					PcP	**PcP**	**21 08 12.1**	**+1.8**	
	1.9nm,0.8s,baz=214,slow=2.8,SNR=6.0								
CMAR					LR	LR	21 11 52.3		
	comp=Z,543nm,20.5s,baz=180,slow=37								
	21nm,0.9s								
CMAR	**Chiang Mai Arr**	**20.30**	**357**		P	**P**	**21 03 55.8**	**-2.1**	
CHTO	**Chiang Mai**	**20.66**	**357**		P	**P**	**21 04 00.4**	**-1.4**	
CHTO	**Chiang Mai**	**20.66**	**357**		P	**P**	**21 04 00.7**	**-1.0**	
CHTO	**Chiang Mai**	**20.66**	**357**		P	**P**	**21 04 00.3**	**-1.5**	
CHTO	**Chiang Mai**	**20.66**	**357**		P	**P**	**21 04 00.6**	**-1.1**	
WBSI	**Waikabubak, Su** 57nm,0.8s	**20.78**	**112**		P	**P**	**21 04 03.4**	**+0.2**	
BSSI	**Bau Bau, Buton** 68nm,1.0s	**20.91**	**102**		P	**P**	**21 04 05.5**	**+1.0**	
TOLI2	**Tolitoli**	**21.05**	**82**		P	**P**	**21 04 06.7**	**+0.7**	
PALK	**Pallekele**	**21.28**	**296**		LR	LR	21 11 23.1		
	comp=Z,574nm,20.4s,baz=110,slow=33								
PALK	**Pallekele**	**21.28**	**296**			P	21 04 02.1	-6.4	
PALK	**Pallekele**	**21.28**	**296**		P	P	21 04 20.6	+12	
PALK	**Pallekele**	**21.28**	**296**		P	**P**	**21 04 09.0**	**+0.5**	
WSI	**Waingapu** 101nm,0.9s	**21.63**	**112**		P	**P**	**21 04 13.5**	**+1.2**	
APSI	**Ampana** 1µm114nm,1.1s	**21.72**	**88**		P	**P**	**21 04 15.2**	**+2.0**	
KKSI	**Kolaka, Sulawe** 983nm78nm,1.3s	**21.78**	**96**		P	**P**	**21 04 16.1**	**+2.2**	
MRSI	**Marisa** 898nm106nm,1.0s	**22.12**	**84**		P	**P**	**21 04 19.2**	**+1.7**	
LUWI	**Luwuk**	**22.83**	**88**		P	**P**	**21 04 24.6**	**-0.5**	
LUWI					IAmb	IAmb	21 04 37.3		
	comp=Z,120nm,1.0s								
LUWI	**Luwuk**	**22.83**	**88**		P	**P**	**21 04 25.3**	**+0.2**	
	comp=Z,1µmcomp=Z,121nm,1.0s								
QIZ	**Qiongzhong**	**23.01**	**25**		P	**P**	**21 04 26.2**	**-0.7**	
QIZ					IAmb	IAmb	21 04 27.6		
	comp=Z,54nm,0.7s								
QIZ	**Qiongzhong**	**23.01**	**25**		P	**P**	**21 04 26.1**	**-0.7**	
QIZ	**Qiongzhong**	**23.01**	**25**		P	**P**	**21 04 26.1**	**-0.7**	
QIZ					S	**S**	**21 08 36.0**	**+1.7**	
QIZ					pmax	pmax			
	comp=Z,57nm,0.7s								
QIZ					pmax	pmax			
	comp=Z,200nm,2.6s								
QIZ					LR	LR			
	comp=Z,690nm,14.8s								
QIZ					LR	LR			
	comp=Z,410nm,11.0s								
QIZ					LR	LR			
	comp=Z,720nm,17.9s								
MMRI	**Maumere**	**23.16**	**107**		P	**P**	**21 04 26.3**	**-2.0**	
GTOI	**Gorontalo**	**23.20**	**84**		P	**P**	**21 04 30.0**	**+1.2**	
	comp=Z,728nmcomp=Z,76nm,0.8s								
BATI	**Baumata**	**24.95**	**110**		P	**P**	**21 04 47.9**	**+2.8**	
	comp=Z,37nm,0.8s								
MNI	**Manado**	**25.12**	**82**		P	**P**	**21 04 49.7**	**+3.1**	
SOEI	**Soe**	**25.39**	**109**		P	**P**	**21 04 45.4**	**-3.8**	
BRDH	**Bariadhala**	**25.79**	**342**		LR	LR	21 17 45.1		
	comp=Z,379nm,18.2s,baz=162,slow=43								
SANI	**Sanana**	**26.02**	**91**		P	**P**	**21 04 54.2**	**-0.6**	
	comp=Z,25nm,1.2s								
TGY	**Tagaytay City**	**26.21**	**52**		LR	LR	21 16 00.3		
	comp=Z,405nm,19.3s,baz=182,slow=38								
TNCH	**TengChong**	**26.86**	**357**		P	**P**	**21 05 04.5**	**+2.1**	
TNCH					S	**S**	**21 09 32.8**	**-3.3**	
TNCH					pmax	pmax			
	comp=Z,35nm,0.9s								
TNCH					pmax	pmax			
	comp=Z,180nm,5.0s								
TNCH					LR	LR			
	comp=Z,280nm,16.0s								
TNCH					LR	LR			
	comp=Z,430nm,14.2s								
TNCH					LR	LR			
	comp=Z,760nm,20.3s								
KMI2	**Kunming**	**27.08**	**6**		P	**P**	**21 05 04.5**	**+0.1**	
KMI2					S	**S**	**21 09 36.5**	**-3.1**	
KMI2					pmax	pmax			
	comp=Z,10.0nm,0.9s								
KMI2					LR	LR			
	comp=Z,430nm,19.5s								
KMI2					LR	LR			
	comp=Z,490nm,14.3s								
KMI2					LR	LR			
	comp=Z,550nm,18.6s								
DAV	**Davao City (W)**	**27.10**	**70**		LR	LR	21 17 18.9		
	comp=Z,332nm,20.1s,baz=270,slow=40								
H08S2	**Diego Garcia H**	**27.93**	**257**		T	T	21 33 54.2		
	baz=80,slow=76,SNR=111								
H08S3	**Diego Garcia H**	**27.93**	**257**		T	T	21 33 48.2		
	baz=80,slow=76,SNR=1449								
H08S1	**Diego Garcia H**	**27.94**	**257**		T	T	21 33 56.9		
	baz=80,slow=76,SNR=68								
KRAI	**Karang Ratu**	**28.45**	**93**		P	**P**	**21 05 15.6**	**-1.0**	
SHL	**Shillong**	**28.45**	**345**		P	**P**	**21 05 15.9**	**-0.7**	
SHL	**Shillong** SNR=11	**28.45**	**345**		P	**P**	**21 05 16.5**	**-0.1**	
GYA	**Guiyang**	**28.98**	**12**	⇑	P	**P**	**21 05 20.3**	**-1.0**	
GYA					pmax	pmax			
	comp=Z,16nm,0.8s								
FITZ	**Fitzroy Crossi**	**29.88**	**124**		P	**P**	**21 05 28.9**	**-0.4**	
	comp=Z,24nm,0.8s,baz=290,slow=8.7,SNR=16								
	comp=Z,24nm,0.8s								
SWI	**Sorong**	**31.32**	**88**		P	**P**	**21 05 41.5**	**-0.5**	
SIJI	**Sorong** comp=Z,98nm,18.1s,baz=198,slow=43	**31.33**	**88**		LR	LR	21 21 36.3		
SIJI	**Sorong**	**31.33**	**88**		P	**P**	**21 05 41.5**	**-0.6**	
KNRA	**Kununurra**	**31.50**	**117**		P	**P**	**21 05 41.9**	**-1.7**	
KNRA					IAmb	IAmb	21 06 53.4		
	comp=Z,83nm,1.6s								
TPUB	**Ta-pu**	**32.18**	**38**		P	**P**	**21 05 49.1**	**-0.3**	
QZH2	**Quanzhou**	**32.28**	**33**	*e*	P	**P**	**21 05 50.8**	**+0.5**	
QZH2					LR	LR			
	comp=Z,790nm,20.6s								
QZH2					LR	LR			
	comp=Z,930nm,16.5s								
LSA	**Lhasa** SNR=61	**32.58**	**346**	*i*	P	**P**	**21 05 54.1**	**+0.8**	
LSA	**Lhasa**	**32.58**	**346**		P	**P**	**21 05 54.2**	**+0.8**	
YULB	**Yu-li**	**32.66**	**38**		P	**P**	**21 05 53.6**	**0.0**	
YULB					IAmb	IAmb	21 05 56.1		
	comp=Z,26nm,0.9s								
YULB	**Yu-li**	**32.66**	**38**		P	**P**	**21 05 54.7**	**+1.0**	
SSLB	**Suanglung**	**32.74**	**37**		P	**P**	**21 05 54.1**	**-0.3**	
SSLB					IAmb	IAmb	21 05 56.1		
	comp=Z,28nm,1.0s								
SSLB	**Suanglung**	**32.74**	**37**		P	**P**	**21 05 54.9**	**+0.5**	
CD2	**Chengdu**	**32.88**	**6**		P	**P**	**21 05 53.3**	**-2.2**	
CD2					pP	pP	21 06 06.8	-0.1	
CD2					S	**S**	**21 11 13.8**	**+3.6**	
CD2					pmax	pmax			
	comp=Z,10.0nm,0.9s								
CD2					pmax	pmax			
	comp=Z,100nm,3.7s								
CD2					LR	LR			
	comp=Z,810nm,16.3s								
CD2					LR	LR			
	comp=Z,870nm,14.4s								
CD2					LR	LR			
	comp=Z,750nm,15.1s								
ENH	**Enshi**	**33.31**	**15**		P	**P**	**21 05 57.4**	**-1.8**	
ENH					IAmb	IAmb	21 05 58.8		
	comp=Z,34nm,1.0s								
ENH	**Enshi**	**33.31**	**15**		P	**P**	**21 05 57.9**	**-1.4**	
ENH	**Enshi**	**33.31**	**15**		P	**P**	**21 05 57.9**	**-1.4**	
ENH					sP	**pP**	**21 06 11.7**	**+1.0**	
ENH					PcP	**PcP**	**21 08 40.7**	**+0.1**	
NWAO	**Narrogin (SRO)**	**34.83**	**154**		LR	LR	21 18 39.0		
	comp=Z,390nm,21.6s,baz=301,slow=33								
WHN	**Wuhan**	**35.11**	**22**		P	**P**	**21 06 14.6**	**-0.2**	
WHN					pmax	pmax			
	comp=Z,30nm,0.8s								
WRKA	**Warakurna** comp=Z,7.6nm,1.7s	**35.70**	**132**		P	**P**	**21 06 21.2**	**+1.2**	
XAN	**Xi'an**	**36.78**	**12**	⇑	P	**P**	**21 06 27.8**	**-1.3**	
XAN					pP	pP	21 06 37.1	-3.5	
XAN					S	**S**	**21 12 07.8**	**-2.5**	
XAN					pmax	pmax			
	comp=Z,68nm,0.9s								
XAN					pmax	pmax			
	comp=Z,130nm,4.5s								
XAN					LR	LR			
	comp=Z,890nm,15.1s								
XAN					LR	LR			
	comp=Z,510nm,14.6s								
XAN					LR	LR			
	comp=Z,1µm,15.6s								
XAN	**Xi'an**	**36.78**	**12**		P	**P**	**21 06 27.7**	**-1.5**	
LZDM	**Lanzhou Array** comp=Z,1.9nm,0.5s,baz=193,slow=12,SNR=10	**37.88**	**5**		P	**P**	**21 06 37.6**	**-1.0**	
LZDM					PcP	**PcP**	**21 08 55.5**	**+1.1**	
	comp=Z,5.5nm,0.6s,baz=193,slow=5.8,SNR=12								
LZDM					LR	LR	21 23 37.3		
	comp=Z,332nm,20.8s,baz=70,slow=38								
	comp=Z,1.9nm,0.5s								
LZH	**Lanzhou**	**38.02**	**5**	*e*	P	**P**	**21 06 39.0**	**-0.7**	
LZH					pP	pP	21 06 54.8	+3.6	
LZH					PcP	**PcP**	**21 08 55.8**	**+1.2**	
LZH					pmax	pmax			
	comp=Z,12nm,1.0s								
LZH					LR	LR			
	comp=Z,420nm,18.6s								
LZH					LR	LR			
	comp=Z,310nm,19.3s								
LZH					LR	LR			
	comp=Z,680nm,17.5s								
WB0	**Warramunga Arr**	**38.04**	**120**		P	**P**	**21 06 39.4**	**-0.6**	
WB0					IAmb	IAmb	21 06 40.5		
	comp=Z,33nm,0.7s								
WRA	**Warramunga Arr** comp=Z,19nm,0.8s,baz=303,slow=8.9,SNR=117	**38.06**	**120**		P	**P**	**21 06 39.8**	**-0.4**	
WRA					S	**S**	**21 12 25.3**	**-4.8**	
	comp=Z,0.9nm,1.0s,baz=289,slow=16,SNR=4.6								
	comp=Z,19nm,0.8s								
WRA	**Warramunga Arr**	**38.06**	**120**		P	**P**	**21 06 39.2**	**-1.0**	
WRAB	**Tennant Creek**	**38.07**	**120**		P	**P**	**21 06 38.0**	**-2.2**	
WRAB					IAmb	IAmb	21 06 53.1		
	comp=Z,40nm,0.8s								
WRAB	**Tennant Creek**	**38.07**	**120**		P	**P**	**21 06 39.7**	**-0.5**	
LYN	**LuoYang**	**38.17**	**17**		P	**P**	**21 06 40.8**	**0.0**	
LYN					pmax	pmax			
	comp=Z,83nm,0.8s								
LYN					LR	LR			
	comp=Z,650nm,19.2s								
LYN					LR	LR			
	comp=Z,430nm,17.3s								
LYN					LR	LR			
	comp=Z,620nm,17.8s								
WR8	**Warramunga Arr**	**38.21**	**120**		P	**P**	**21 06 40.3**	**-1.1**	
WR8					IAmb	IAmb	21 06 54.3		
	comp=Z,43nm,0.8s								
GOMU	**GeErMu**	**38.26**	**353**		P	**P**	**21 06 41.4**	**-0.6**	
GOMU					pmax	pmax			
	comp=Z,9.0nm,1.1s								
GOMU					LR	LR			
	comp=Z,180nm,19.5s								
GOMU					LR	LR			
	comp=Z,210nm,21.3s								
NJ2	**Nanjing**	**38.28**	**26**	*e*	P	**P**	**21 06 44.5**	**+2.8**	
NJ2					pmax	pmax			
	comp=Z,3.0nm,0.7s								
NJ2					LR	LR			
	comp=Z,370nm,14.7s								
NJ2					LR	LR			
	comp=Z,440nm,15.2s								
NJ2					LR	LR			
	comp=Z,390nm,21.8s								
AS31	**Alice Springs**	**39.32**	**126**		P	**P**	**21 06 50.1**	**-0.7**	
ASAR	**Alice Springs** comp=Z,7.0nm,0.7s,baz=299,slow=7.2,SNR=58	**39.32**	**126**		P	**P**	**21 06 50.8**	**0.0**	
ASAR					PcP	**PcP**	**21 08 59.8**	**+0.9**	
	comp=Z,3.8nm,0.8s,baz=303,slow=3.1,SNR=7.2								
ASAR					S	**S**	**21 12 46.9**	**-2.1**	
	comp=Z,2.9nm,1.0s,baz=302,slow=14,SNR=12								
ASAR					LR	LR	21 25 04.0		
	comp=Z,236nm,20.7s,baz=296,slow=39								
	comp=Z,7.0nm,0.7s								
JOW	**Kunigami** comp=Z,106nm,19.7s,baz=279,slow=36	**39.56**	**42**		LR	LR	21 23 02.4		
JOW	**Kunigami**	**39.56**	**42**		P	**P**	**21 06 54.0**	**+1.4**	
TIA	**Tai'an**	**41.21**	**21**		P	**P**	**21 07 02.6**	**-3.5**	
TIA					pmax	pmax			
	comp=Z,7.0nm,1.6s								
TIA					LR	LR			
	comp=Z,1µm,19.4s								
TIA					LR	LR			
	comp=Z,420nm,13.5s								
TIA					LR	LR			
	comp=Z,1µm,17.1s								
GTA2	**Gaotai**	**41.24**	**360**	*e*	P	**P**	**21 07 05.9**	**-0.5**	
GTA2					PcP	**PcP**	**21 09 05.3**	**+0.5**	
GTA2					ScP	**ScP**	**21 12 52.0**	**+0.8**	
GTA2					pmax	pmax			
	comp=Z,7.0nm,1.1s								
GTA2					LR	LR			
	comp=Z,260nm,15.6s								
GTA2					LR	LR			
	comp=Z,200nm,17.4s								
GTA2					LR	LR			
	comp=Z,300nm,17.8s								
QIS	**Mount Isa** comp=Z,20nm,1.6s	**42.88**	**118**		P	**P**	**21 07 19.7**	**-0.3**	
QIS	**Mount Isa**	**42.88**	**118**		P	**P**	**21 07 19.5**	**-0.5**	
NIL	**Nilore**	**43.44**	**327**		P	**P**	**21 07 23.6**	**-0.7**	
NIL					IAmb	IAmb	21 07 38.4		
	comp=Z,29nm,0.8s								
BTO2	**Baotou**	**43.45**	**11**	*e*	P	**P**	**21 07 24.3**	**-0.1**	
BTO2					pP	**pP**	**21 07 36.5**	**+0.4**	
BTO2					sP	**sP**	**21 07 41.9**	**+0.8**	
BTO2					S	**S**	**21 13 54.9**	**+5.0**	
BTO2					pmax	pmax			
	comp=Z,20nm,1.5s								
BTO2					pmax	pmax			
	comp=Z,290nm,5.0s								
BTO2					LR	LR			
	comp=Z,1µm,19.0s								
BTO2					LR	LR			
	comp=Z,670nm,19.7s								
BTO2					LR	LR			
	comp=Z,2µm,18.4s								
HHC	**Hu-ho-hao-te**	**43.90**	**13**	*e*	P	**P**	**21 07 31.3**	**+3.3**	
HHC					S	**S**	**21 14 02.1**	**+5.7**	
HHC					pmax	pmax			
	comp=Z,6.0nm,0.7s								
HHC					pmax	pmax			
	comp=Z,63nm,8.4s								
HHC					LR	LR			
	comp=Z,450nm,14.8s								
HHC					LR	LR			
	comp=Z,130nm,13.3s								
HHC					LR	LR			
	comp=Z,400nm,16.9s								
JSU	**Suzuyama** comp=Z,57nm,1.0s	**44.12**	**39**		P	**P**	**21 07 29.5**	**-0.4**	
JSU					IAmb	IAmb	21 07 31.6		
BJT	**Baijiatuao**	**44.33**	**18**		P	**P**	**21 07 31.4**	**+0.1**	
BJT	**Baijiatuao**	**44.33**	**18**		P	**P**	**21 07 31.6**	**+0.3**	
BJI2	**Beijing**	**44.33**	**18**		P	**P**	**21 07 31.8**	**+0.5**	
BJI2					pmax	pmax			
	comp=Z,7.0nm,1.3s								
BJI2					LR	LR			
	comp=Z,190nm,15.2s								
BJI2					LR	LR			
	comp=Z,89nm,15.1s								
BJI2					LR	LR			
	comp=Z,200nm,17.7s								
JNU	**Nakatsue** comp=Z,234nm,18.1s,baz=222,slow=38	**45.49**	**37**		LR	LR	21 28 04.8		
BBOO	**Buckleboo**	**45.72**	**136**		P	**P**	**21 07 42.4**	**-0.1**	
BBOO	**Buckleboo**	**45.72**	**136**		P	**P**	**21 07 42.4**	**-0.1**	
JLN	**Jalan Bani Buh**	**46.25**	**303**		P	P	21 07 54.5	+7.6	
NGCH	**Negor - Chabah**	**46.35**	**308**		P	P	21 07 60.0	+12	
KSH2	**Kashi**	**46.64**	**334**		P	**P**	**21 07 48.6**	**-1.2**	
KSH2					pP	pP	21 07 59.3	-2.3	
KSH2					pmax	pmax			
	comp=Z,5.0nm,0.7s								
INKA	**Innaminka**	**46.66**	**127**		P	**P**	**21 07 49.7**	**-0.3**	
WBK	**Wadi Bani Khal**	**46.82**	**304**		P	P	21 08 01.8	+10	
WMQ	**Urumqi**	**46.88**	**348**	*e*	P	**P**	**21 07 52.8**	**+1.3**	
WMQ					pmax	pmax			
	comp=Z,140nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,190nm,4.1s								
WMQ	**Urumqi**	**46.88**	**348**		P	**P**	**21 07 52.9**	**+1.4**	
WMQ					x	x	21 08 05.9		
KSAR	**Wonju Array Be**	**46.98**	**31**		P	**P**	**21 07 52.0**	**-0.2**	
KSRS	**Korea Array**	**47.01**	**31**		P	**P**	**21 07 52.4**	**-0.1**	
	comp=Z,12nm,0.8s,baz=225,slow=8.4,SNR=32								
KSRS					LR	LR	21 27 08.7		
	comp=Z,179nm,21.8s,baz=220,slow=36								
	comp=Z,12nm,0.8s								
KS19	**Wonju Array Si**	**47.01**	**31**		P	**P**	**21 07 52.3**	**-0.3**	
KS19					IAmb	IAmb	21 09 37.1		
	comp=Z,65nm,1.7s								
GUMO	**Guam** comp=Z,89nm,21.6s,baz=91,slow=36	**47.14**	**70**		LR	LR	21 27 43.4		
WSAR	**Wadi Sarin** SNR=6.1	**47.38**	**304**		P	P	21 08 08.8	+13	
JMDO	**Jabal Madar**	**47.44**	**303**		P	P	21 08 02.4	+6.2	
PMG	**Port Moresby** comp=Z,74nm,18.8s,baz=310,slow=39	**47.52**	**101**		LR	LR	21 30 08.4		
JMN	**Monobe**	**47.75**	**39**		P	**P**	**21 07 58.4**	**0.0**	
JMN					IAmb	IAmb	21 08 01.3		
	comp=Z,40nm,1.2s								
JMN	**Monobe**	**47.75**	**39**		P	**P**	**21 07 59.6**	**+1.2**	
SMDO	**Samad** SNR=5.8	**47.78**	**304**		P	P	21 08 06.7	+7.8	
XLT	**XiLinHaoTe**	**47.88**	**16**	*e*	P	**P**	**21 07 59.4**	**+0.1**	
XLT					pP	pP	21 08 10.8	-0.4	
XLT					pmax	pmax			
	comp=Z,9.0nm,1.1s								
XLT					pmax	pmax			
	comp=Z,88nm,6.5s								
XLT					LR	LR			
	comp=Z,190nm,15.0s								
XLT					LR	LR			
	comp=Z,170nm,16.0s								
BIDO	**Bidbid** SNR=6.9	**47.91**	**304**		P	P	21 08 07.5	+

MDOK **Medeo** 49.41 338 *e*P P **21 08 12.4 +1.1**
DOK **Doka** 49.47 297 P P 21 08 20.1 +8.2
AAA **Alma-Ata** 49.50 338 *e*P P **21 08 12.1 +0.3**
comp=Z,13nm,0.7s
ARSB **Arslanbob** 49.56 333 P P **21 08 11.9 -0.4**
ARSB IAmb IAmb 21 08 14.2
comp=Z,32nm,0.9s
UCH **Uchtor** 49.63 335 P P **21 08 14.3 +1.0**
SNR=19
TKM2 **Tokmak 2** 49.77 337 P P **21 08 14.9 +1.0**
SNR=55
KBK **Karagaybulak** 49.81 336 P P **21 08 15.6 +1.3**
SNR=22
ABTO **Aybut** 49.82 295 P P 21 08 24.9 +10
JCJ **Chichijima** 49.88 52 LR LR 21 28 24.4
comp=Z,104nm,20.2s,baz=279,slow=35
SONM **Songino Array** 49.90 6 P P **21 08 15.2 +0.4**
comp=Z,25nm,0.7s,baz=187,slow=8.9,SNR=182
SONM PcP **PcP** **21 09 35.4 +0.7**
comp=Z,7.8nm,0.9s,baz=176,slow=3.4,SNR=4.6
SONM ScP **ScP** **21 13 25.7 -1.3**
comp=Z,0.6nm,0.7s,baz=208,slow=4.9,SNR=3.1
SONM LR LR 21 32 38.6
comp=Z,248nm,19.1s,baz=207,slow=40
comp=Z,25nm,0.7s
SONM **Songino Array** 49.90 6 P P **21 08 15.0 +0.2**
SONM IAmb IAmb 21 08 16.8
comp=Z,24nm,0.7s
AAK **Ala-Archa** 49.98 336 P P **21 08 16.6 +1.1**
SNR=12
AAK **Ala-Archa** 49.98 336 LR LR 21 31 58.2
comp=Z,124nm,20.6s,baz=150,slow=39
AAK **Ala-Archa** 49.98 336 P P **21 08 15.8 +0.2**
AAK **Ala-Archa** 49.98 336 *i* P P **21 08 16.9 +1.4**
SNR=16
AAK **Ala-Archa** 49.98 336 P P **21 08 16.9 +1.4**
AAK **Ala-Archa** 49.98 336 P P **21 08 16.7 +1.1**
ULN **Ulaanbaatar** 50.00 6 P P **21 08 15.7 +0.1**
ULN IAmb IAmb 21 08 17.5
comp=Z,17nm,0.7s
ULN **Ulaanbaatar** 50.00 6 P P **21 08 15.8 +0.2**
ULN **Ulaanbaatar** 50.00 6 P P **21 08 15.5 -0.1**
ULN **Ulaanbaatar** 50.00 6 P P **21 08 15.9 +0.3**
FRU1 **Bishkek** 50.07 336 IAmb IAmb 21 08 33.1
comp=Z,31nm,1.1s
ALNE **Al Ain** 50.11 304 P P 21 08 26.0 +9.4
SNR=10
UOSS **Minazif** 50.11 305 P P 21 08 27.7 +11
ASHO **Ashiyiah** 50.12 305 P P 21 08 26.6 +10
CHMS **Chumysh** 50.17 336 P P **21 08 17.5 +0.7**
SNR=17
EKS2 **Erkin-Say** 50.30 335 P P **21 08 19.2 +1.3**
SNR=53
MASF **Masafi** 50.34 306 P P 21 08 24.2 +5.8
SNR=6.1
USP **Ospenovka** 50.50 336 P P **21 08 20.1 +0.8**
SNR=43
FAQ **Al Faqa, Dubai** 50.53 305 P P 21 08 29.1 +9.2
SNR=6.6
TDK **Taldyorghan** 50.53 340⇑ *i*P P **21 08 20.0 +0.5**
comp=Z,18nm,0.7s
NAZ **Nazwa, Dubai** 50.58 305 P P 21 08 31.0 +11
SNR=5.4
ASUD **Al Ashush, Dub** 50.70 304 P P 21 08 30.3 +9.2
SNR=6.8
ZSN **Zaisan** 50.94 347⇑ *i*P P **21 08 23.8 +1.2**
comp=Z,18nm,0.9s
AJN **Ajban** 50.95 304 P P 21 08 35.3 +12
MKAR **Makanchi Array** 50.97 344 P P **21 08 23.3 +0.5**
comp=Z,44nm,0.6s,baz=148,slow=8.0,SNR=645
MKAR S **S** **21 15 36.5 0.0**
comp=Z,0.9nm,1.0s,baz=150,slow=15,SNR=4.4
MKAR LR LR 21 33 36.5
comp=Z,74nm,19.5s,baz=117,slow=40
comp=Z,44nm,0.6s
MKAR **Makanchi Array** 50.97 344 P P **21 08 23.1 +0.4**
MAKZ **Makanchi** 51.07 344 P P **21 08 23.7 +0.2**
MAKZ IAmb IAmb 21 08 24.9
comp=Z,24nm,0.8s
MAKZ **Makanchi** 51.07 344 P P **21 08 23.8 +0.3**
MAKZ pP **pP** **21 08 33.8 -1.6**
JGF **Kuroka** 51.15 39 P P **21 08 23.8 -0.5**
JGF **Kuroka** 51.15 39 P P **21 08 23.9 -0.4**
JHJ **Hachijo jima 2** 51.27 44 LR LR 21 28 53.8
comp=Z,60nm,19.6s,baz=108,slow=34
MZWR **Madinat Zayed** 51.55 303 P P 21 08 36.3 +8.8
IUG **Iuzhnay** 51.57 332 *e*P P **21 08 28.0 +0.5**
comp=Z,15nm,1.0s
MZR **Muzera** 51.60 302 P P 21 08 38.7 +11
SNR=5.9
CHM **Chimkent** 51.90 332 *e*P P **21 08 30.2 +0.4**
KKAR **Karatay Array** 52.09 333 P P **21 08 30.7 -0.5**
CMSA **Cobar Meteorol** 52.18 129 P P **21 08 32.7 +0.6**
MAJO **Matsushiro** 52.27 39 P P **21 08 32.4 -0.3**
MJB9 **Matsu-Tunnel** 52.27 39 P P **21 08 32.7 +0.1**
MJAR **Matsushiro Arr** 52.27 39 P P **21 08 32.3 -0.4**
comp=Z,9.9nm,0.7s,baz=219,slow=7.2,SNR=33
MJAR LR LR 21 32 27.5
comp=Z,158nm,18.6s,baz=224,slow=38
comp=Z,9.9nm,0.7s
MJAR **Matsushiro Arr** 52.27 39 P P **21 08 32.2 -0.5**
BNX **BinXian** 53.35 24 ⇑P P **21 08 40.1 -0.3**
BNX pmax pmax
comp=Z,29nm,0.6s
MDJ **Mudanjiang** 53.37 26 P P **21 08 40.1 -0.5**
MDJ pmax pmax
comp=Z,23nm,0.8s
HILR **Hailar Array B** 54.08 16 P P **21 08 45.3 -0.5**
comp=Z,4.2nm,0.6s,baz=195,slow=9.3,SNR=7.4
comp=Z,4.2nm,0.6s
USRK **Ussuriysk Ar.** 54.14 28 P P **21 08 46.4 +0.2**
comp=Z,50nm,0.7s,baz=223,slow=5.8,SNR=61
comp=Z,50nm,0.7s
EIDS **Eidsvold** 54.42 120 P P **21 08 48.7 0.0**
KURBB **Kurchatov Arra** 55.49 344 P P **21 08 56.2 +0.3**
comp=Z,29nm,0.8s,baz=163,slow=7.1,SNR=229
KURBB S **S** **21 16 36.3 -1.5**
comp=Z,0.6nm,0.9s,baz=153,slow=10,SNR=4.1
KURBB LR LR 21 36 09.8
comp=Z,104nm,20.4s,baz=179,slow=40
comp=Z,29nm,0.8s
KURK **Kurchatov** 55.55 344 P P **21 08 56.6 +0.3**
KURK **Kurchatov** 55.55 344 P P **21 08 58.9 +2.6**
KURK **Kurchatov** 55.55 344 P P **21 08 56.6 +0.3**
KURK x x 21 09 09.5
HEH **HeiHe** 57.09 21 *e*P P **21 09 07.1 -0.2**
HEH pmax pmax
comp=Z,11nm,1.1s
ZAA0 **Zalesovo Array** 57.11 349 P P **21 09 07.2 -0.1**
ZALV **Zalesovo Beam** 57.11 349 P P **21 09 07.4 +0.1**
comp=Z,53nm,0.8s,baz=164,slow=5.9,SNR=189
ZALV S **S** **21 16 58.1 -1.1**
comp=Z,2.7nm,0.9s,baz=153,slow=10.0,SNR=8.9
ZALV LR LR 21 35 19.2
comp=Z,122nm,19.4s,baz=154,slow=38
comp=Z,53nm,0.8s
ZALV **Zalesovo Beam** 57.11 349 P P **21 09 07.3 -0.1**
KLR **Kul'dur** 57.91 24 LR LR 21 36 26.1
comp=Z,386nm,18.5s,baz=219,slow=38
ATD **Arta Tunnel** 58.31 285 LR LR 21 30 20.9
comp=Z,6.5nm,20.1s,baz=95,slow=32
JEM **Erimo** 58.65 37 P P **21 09 18.8 +0.4**
RAYN **Ar Rayn** 58.67 299 P P **21 09 19.2 +0.2**
RAYN **Ar Rayn** 58.67 299 *i* P P 21 09 31.7 +13
SNR=8.3
RAYN **Ar Rayn** 58.67 299 P P 21 09 29.6 +11
ASAJ **Asahikawa** 59.60 34 LR LR 21 36 07.5
comp=Z,86nm,19.2s,baz=284,slow=37
JKA **Kamikawa-asahi** 59.60 34 P P **21 09 24.1 -0.9**
JKA IAmb IAmb 21 09 26.2
comp=Z,20nm,0.8s
BVAR **Borovoye Array** 60.12 340 P P **21 09 27.8 -0.6**
comp=Z,10nm,0.7s,baz=144,slow=8.8,SNR=78
BVAR LR LR 21 38 29.1
comp=Z,113nm,20.7s,baz=141,slow=39
comp=Z,10nm,0.7s
BORK **Borovoye** 60.16 340 P P **21 09 28.2 -0.4**
BORK IAmb IAmb 21 09 42.9
comp=Z,11nm,0.6s
BORK **Borovoye** 60.16 340 P P **21 09 28.2 -0.4**
BORK pP **pP** **21 09 38.8 -2.0**
BORK x x 21 09 40.8
H04N2 **CROZET ISLANDS** 60.80 216 T T 22 15 18.2
baz=58,slow=75,SNR=3724
H04N1 **CROZET ISLANDS** 60.81 216 T T 22 15 20.0
baz=58,slow=75,SNR=5483
H04N3 **CROZET ISLANDS** 60.82 216 T T 22 15 17.2
baz=58,slow=75,SNR=4209
H04S1 **CROZET ISLANDS** 61.09 216 T T 22 15 46.4
baz=57,slow=76,SNR=274
H04S3 **CROZET ISLANDS** 61.11 216 T T 22 15 41.5
baz=57,slow=76,SNR=290
H04S2 **CROZET ISLANDS** 61.11 216 T T 22 15 42.8
baz=57,slow=76,SNR=252
AB31 **Akbulak array** 61.57 331 P P **21 09 37.9 -0.4**
AB31 IAmb IAmb 21 09 38.8
comp=Z,24nm,0.8s
ABKAR **Akbulak array** 61.57 331 P P **21 09 37.7 -0.6**
KIBK **Kibwezi** 61.85 268 P P **21 09 40.1 -0.9**
FURI **Furi** 62.00 281 LR LR 21 34 35.3
comp=Z,96nm,18.2s,baz=124,slow=34
HURO **Huro Makira** 62.08 101 P P **21 09 42.4 +0.1**
GEVA **Gevas** 65.88 314 P P **21 10 06.0 -1.2**
GEVA IAmb IAmb 21 10 23.3
comp=Z,12nm,0.8s
GURO **Guroymak-BITLI** 66.72 314 P P **21 10 12.4 -0.1**
GURO IAmb IAmb 21 10 27.6
comp=Z,16nm,0.7s
MARD **Mardin** 67.17 312 P **21 10 14.7 -0.7**
ARTI **Arti** 67.18 336 LR LR 21 42 24.9
comp=Z,165nm,19.9s,baz=120,slow=38
ARTI **Arti** 67.18 336 P P **21 10 14.3 -0.5**
ARTI IAmb IAmb 21 10 20.9
comp=Z,19nm,0.6s
ARTI **Arti** 67.18 336 P P **21 10 14.5 -0.4**
ARTI pP **pP** **21 10 24.6 -2.6**
ARTI x x 21 10 27.3
DZM **Mont Dzumac** 67.52 113 *e*LR LR 21 30 41.4
comp=Z,149nm,23.4s
YAK **Yakutsk** 67.71 15 LR LR 21 43 52.3
comp=Z,322nm,18.0s,baz=234,slow=39
YAK **Yakutsk** 67.71 15 P P **21 10 17.3 -0.7**
YAK **Yakutsk** 67.71 15 P P **21 10 17.3 -0.7**
KBZ **Khabaz** 68.24 319 P P **21 10 22.1 +0.4**
comp=Z,8.2nm,0.8s,baz=115,slow=5.8,SNR=14
comp=Z,8.2nm,0.8s
KIV **Kislovodsk** 68.47 319 ⇓P P 21 10 32.5 +9.2
KIV **Kislovodsk** 68.47 319 P **21 10 22.4 -0.9**
KIV IAmb IAmb 21 10 38.6
comp=Z,35nm,1.0s
ASF **Jabal al Asfar** 68.52 306 LR LR 21 42 00.9
comp=Z,172nm,18.1s,baz=26,slow=37
MBAR **Mbarara** 69.20 270 LR LR 21 37 11.7
comp=Z,131nm,18.6s,baz=103,slow=33
EIL **Elat** 69.45 303 LR LR 21 41 15.4
comp=Z,271nm,18.2s,baz=59,slow=36
ARPR **Arapgir-MALATY** 69.60 313 P **21 10 30.6 0.0**
GAZ **Gaziantep** 69.80 311 P **21 10 31.8 +0.1**
GAZ IAmb IAmb 21 10 47.1
comp=Z,25nm,0.9s
MMAI **Mount Meron Ar** 69.97 306 LR LR 21 42 05.1
comp=Z,151nm,19.0s,baz=108,slow=36
MAW **Mawson** 70.32 194 LR LR 21 34 60.0
comp=Z,256nm,19.2s,baz=28,slow=30
BNN **Bunyan** 71.35 312 P **21 10 40.5 -0.8**
LSZ **Lusaka** 71.89 255 LR LR 21 36 48.1
comp=Z,135nm,21.3s,baz=130,slow=31
CSS **Mathiatis** 72.15 308 P **21 10 46.2 +0.2**
CSS IAmb IAmb 21 11 01.7
comp=Z,27nm,1.1s
KIRV **Kirov** 72.31 335 LR LR 21 46 09.7
comp=Z,41nm,20.2s,baz=158,slow=39
KIRS **Kirsehir-Merke** 72.87 312 ⇑P P 21 10 58.0 +7.8
PEA0B **Petropavlovsk-** 72.87 32 P P **21 10 49.8 0.0**
PETK **Petropavlovsk-** 72.87 32 P P **21 10 49.4 -0.4**
comp=Z,5.1nm,0.7s,baz=132,slow=2.2,SNR=4.1
PETK LR LR 21 43 09.8
comp=Z,59nm,20.0s,baz=231,slow=36
comp=Z,5.1nm,0.7s
PETK **Petropavlovsk-** 72.87 32 P P **21 10 49.8 0.0**
MA2 **Magadan** 73.01 24 LR LR 21 45 36.5
comp=Z,176nm,18.4s,baz=242,slow=38
MA2 **Magadan** 73.01 24 P P **21 10 50.9 +0.4**
MA2 IAmb IAmb 21 10 52.2
comp=Z,24nm,1.0s
MA2 **Magadan** 73.01 24 P P **21 10 50.4 -0.1**
comp=Z,29nm,1.6s
BRTR **Keskin Array B** 73.25 312 P P **21 10 51.8 -0.8**
comp=Z,1.6nm,0.8s,baz=123,slow=6.6,SNR=7.1
BRTR LR LR 21 45 56.5
comp=Z,48nm,18.6s,baz=97,slow=38
comp=Z,1.6nm,0.8s
BRTR **Keskin Array B** 73.25 312 P P **21 10 52.0 -0.6**
LBTB **Lobatse** 75.00 245 LR LR 21 39 39.0
comp=Z,304nm,18.6s,baz=104,slow=32
RPZ **Rata Peaks** 75.05 135 LR LR 21 44 10.1
comp=Z,170nm,21.2s,baz=106,slow=36
RPZ **Rata Peaks** 75.05 135 P P **21 11 03.2 +0.4**
MDUB **Mudurnu** 75.26 313 P **21 11 02.7 -1.5**
BOSA **Boshof** 75.63 241 P P **21 11 07.0 +0.4**
comp=Z,2.4nm,0.9s,baz=72,slow=9.6,SNR=2.1
BOSA LR LR 21 39 22.9
comp=Z,196nm,19.0s,baz=51,slow=32
comp=Z,2.4nm,0.9s
BOSA **Boshof** 75.63 241 IAmb IAmb 21 11 47.5
comp=Z,35nm,1.6s
TIXI **Tiksi** 75.82 9 LR LR 21 47 56.7
comp=Z,300nm,20.1s,baz=205,slow=38
OBN **Obninsk** 76.73 328 P **21 11 11.6 -0.4**
OBN **Obninsk** 76.73 328 P P **21 11 11.8 -0.2**
comp=Z,45nm,1.2s
KARP **Karpathos** 77.20 307 P **21 11 13.2 -2.0**
KARP **Karpathos** 77.20 307 P P **21 11 15.6 +0.4**
comp=Z,99nm,0.9s
BKZ **Black Stump Fm** 78.34 129 P P **21 11 21.2 -0.4**
BKZ IAmb IAmb 21 11 22.9
comp=Z,17nm,0.8s
BKZ **Black Stump Fm** 78.34 129 P P **21 11 22.0 +0.4**
ICOR **Ion Corvin** 78.63 316 ⇑P P 21 11 32.5 +10
URZ **Urewera** 78.72 128 LR LR 21 47 14.2
comp=Z,110nm,20.2s,baz=260,slow=36
SORM **Soroca** 79.27 320 ⇓P P 21 11 36.0 +10
SORM **Soroca** 79.27 320 P P **21 11 25.8 -0.5**
comp=Z,49nm,0.9s
LOZB **Loznitsa** 79.30 315 ⇓P P 21 11 33.1 +6.4
AK09 **Malin Array Si** 79.35 322 P P **21 11 26.4 -0.3**
AKASG **Malin Array Be** 79.42 322 P P **21 11 26.7 -0.4**
comp=Z,0.8nm,0.5s,baz=91,slow=4.6,SNR=5.3
comp=Z,0.8nm,0.5s
AKBB **Malin Array Si** 79.42 322 P P **21 11 29.1 +2.0**
KIEV **Kiev** 79.42 322 ⇓P P 21 11 34.0 +6.9
SUR **Sutherland** 79.78 238 LR LR 21 40 07.7
comp=Z,337nm,19.8s,baz=126,slow=30
VRI **Vrincioaia** 79.78 317 ⇑P P 21 11 36.1 +6.9
LUBAR **Lubar, Ukraine** 80.11 321 P P **21 11 29.6 -1.3**
COVR **Voineasa-Covas** 80.13 317 ⇓P P 21 11 40.6 +10
MI29 **MI29, Kamyanyy** 80.18 322 P P **21 11 32.9 +1.7**
comp=Z,120nm,1.1s
GIRR **Giv** 80.19 318 ⇓P P 21 11 40.5 +9.1
MLR **Muntele Rosu** 80.23 317 P **21 11 29.2 -2.6**
KMPD **K-Podol'skiy** 80.59 320 P P **21 11 33.1 -0.4**
DOPR **Dopca** 80.72 317 ⇑P P 21 11 42.6 +8.4
VOIR 80.83 316 ⇑P P 21 11 45.1 +10
BURAR **Bucovina Array** 81.19 319 P P **21 11 37.3 +0.5**
BURAR IAmb IAmb 21 11 52.6
comp=Z,22nm,0.7s
BUR08 **Bucovina Ar. S** 81.21 319 P P **21 11 36.6 -0.3**
BUR08 IAmb IAmb 21 11 52.8
comp=Z,24nm,0.8s
LIT **Litokhoron** 81.68 311 P **21 11 38.1 -1.4**
LIT IAmb IAmb 21 11 53.5
comp=Z,21nm,0.9s
TSUM **Tsumeb** 82.15 251 LR LR 21 44 51.6
comp=Z,238nm,18.9s,baz=127,slow=33
VNDA **Vanda** 82.22 169 LR LR 21 47 06.4
comp=Z,76nm,18.1s,baz=219,slow=35
DEV **Deva** 82.40 317 ⇓P P 21 11 53.2 +10
MARR **Marisel-Cluj** 82.40 317 ⇑P P 21 11 53.2 +10
HERR **Herculane** 82.55 316 ⇑P P 21 11 53.9 +10
LVZ **Lovozero** 82.72 340 P P **21 11 44.5 +0.1**
LVZ **Lovozero** 82.72 340 P P **21 11 44.6 +0.3**
LVZ pP **PcP** **21 11 55.8 +6.6**
LVZ x x 21 11 58.1
BZS **Buzias** 83.24 316 ⇑P P 21 11 57.5 +10
FINES **FINESS Array B** 84.05 332 P P **21 11 51.6 +0.4**
comp=Z,3.3nm,0.5s,baz=102,slow=5.2,SNR=34
comp=Z,3.3nm,0.5s
FINES **FINESS Array B** 84.05 332 P P **21 11 51.4 +0.2**
STHS **Stebnicka Huta** 84.13 320 *e*P P **21 11 52.6 +0.6**
STHS *e* 21 12 06.2
PDG **Podgorica** 84.44 313 IAmb IAmb 21 12 08.4
comp=Z,18nm,0.9s
PSZ **Piszkesteto** 84.77 318 P **21 11 55.4 +0.1**
PSZ IAmb IAmb 21 12 10.6
comp=Z,14nm,1.0s
JAVC **Velka Javorina** 86.37 319 *e*P P **21 12 03.4 +0.1**
ARCES **ARCESS Array B** 86.41 340 P P **21 12 03.5 +0.6**
comp=Z,7.9nm,0.7s,baz=85,slow=4.6,SNR=18
ARCES LR LR 21 54 03.0
comp=Z,102nm,21.3s,baz=114,slow=38
comp=Z,7.9nm,0.7s
STEB **Steborice** 86.44 320 *e*P P **21 12 04.4 +0.9**
STEB *e*pP **pP** **21 12 14.8 -1.4**
CEL **Celeste** 86.52 308 P **21 12 03.1 -1.1**
MORC **Moravsky Berou** 86.57 320 P **21 12 04.5 +0.4**
MORC IAmb IAmb 21 12 19.8
comp=Z,9.4nm,0.8s
MORC **Moravsky Berou** 86.57 320 *e*P P **21 12 04.3 +0.1**
MODS **Modra-Piesok** 86.57 319 *e*P P **21 12 04.3 +0.1**
MODS *e* 21 12 17.2
SGRT **San Giovanni R** 86.96 312 P P **21 12 04.3 -2.0**
SGRT IAmb IAmb 21 12 21.5
comp=Z,12nm,1.0s
KRLC **Kraliky** 87.09 320 *e*P P **21 12 07.6 +0.9**
KRLC *e*pP **pP** **21 12 18.7 -0.8**
VRAC **Vranov** 87.13 319 *e*P P **21 12 06.9 0.0**
DPC **Dobruska-Polom** 87.42 320 *e*P P **21 12 09.2 +0.9**
DPC *e*pP **pP** **21 12 19.4 -1.7**
CONA **Conrad Observa** 87.47 318 *i* pP pP 21 12 23.5 +2.1
comp=Z,3.8nm,0.8s
OSTC **Ostas** 87.50 321 *e*P P **21 12 08.4 -0.3**
OSTC *e*pP **pP** **21 12 23.6 +2.1**
ARSA **Arzberg** 87.63 317 *i* pP pP 21 12 24.8 +2.6
comp=Z,9.6nm,1.2s
SOKA **Soboth** 87.91 317 *i* pP pP 21 12 26.3 +2.7
comp=Z,12nm,1.0s
QSPA **South Pole Qui** 88.01 180 P P **21 12 12.8 +1.9**
comp=Z,1.4nm,0.5s,baz=326,slow=3.4,SNR=1.8
QSPA LR LR 21 46 27.3
comp=Z,139nm,18.6s,baz=228,slow=32
comp=Z,1.4nm,0.5s
QSPA **South Pole Qui** 88.01 180 IAmb IAmb 21 12 25.8
comp=Z,21nm,1.6s
OBKA **Obir** 88.23 316 *i* P P **21 12 11.6 -0.7**
comp=Z,1.6nm,0.7s
OBKA *i* pP **pP** **21 12 27.7 +2.6**
comp=Z,8.8nm,1.3s
PRU **Pruhonice** 88.52 320 *e*P P **21 12 14.3 +0.8**
PRU *e*pP **pP** **21 12 25.6 -0.7**
MOA **Molln** 88.53 318 *i* P P **21 12 13.7 +0.1**
comp=Z,0.3nm,0.2s
MOA *i* pP **pP** **21 12 28.5 +2.1**
comp=Z,13nm,1.6s
CKRC **Cesky Krumlov** 88.58 319 *e*P P **21 12 14.9 +1.1**
CAMP **Campotosto** 88.75 312 IAmb IAmb 21 12 30.3
comp=Z,13nm,1.0s
MYKA **Terra Mystica** 88.86 317 *i* pP pP 21 12 30.5 +2.4
comp=Z,2.6nm,0.5s
PRED **Cave del Predi** 88.90 316 P **21 12 14.0 -1.5**
PRED IAmb IAmb 21 12 30.8
comp=Z,9.2nm,0.9s
BIOA **Bad Ischl, Aus** 88.94 318 *i* pP pP 21 12 30.2 +1.8
comp=Z,7.3nm,1.2s
GEC2 **GERESS Array S** 88.98 319 P **21 12 15.3 -0.5**
GEC2 IAmb IAmb 21 12 31.4
comp=Z,15nm,1.2s
GERES **GERESS Array B** 88.98 319 P P **21 12 16.4 +0.6**
comp=Z,1.1nm,0.7s,baz=96,slow=5.4,SNR=5.4
comp=Z,1.1nm,0.7s
NRCA **Norcia** 88.99 313 IAmb IAmb 21 12 31.4
comp=Z,17nm,1.0s
FDMO **Fiordimonte** 89.02 313 P **21 12 14.7 -1.3**
FDMO IAmb IAmb 21 12 31.4
comp=Z,11nm,1.1s
KHC **Kasperske Hory** 89.08 319 P P **21 12 15.0 -1.2**
KHC IAmb IAmb 21 12 44.8
comp=Z,31nm,2.0s
KHC **Kasperske Hory** 89.08 319 *e*P P **21 12 16.7 +0.5**
KHC *e*pP **pP** **21 12 28.2 -0.8**
KBA **Koelnbreinsper** 89.10 317 *e*pP pP 21 12 31.0 +1.7
comp=Z,2.9nm,0.8s
STAL **STALIGIAL** 89.48 316 P P **21 12 17.3 -0.9**
STAL IAmb IAmb 21 12 34.1
comp=Z,18nm,1.2s
LESA **Schwarzleotal** 89.57 317 *i* P P **21 12 18.5 -0.1**
comp=Z,1.4nm,0.5s
LESA *i* pP **pP** **21 12 33.0 +1.6**
comp=Z,8.2nm,1.1s
CLL **Collm** 89.59 321 P P **21 12 17.2 -1.3**
CLL IAmb IAmb 21 12 34.0
comp=Z,11nm,0.9s
CLL **Collm** 89.59 321 *i* P pP 21 12 33.3 +2.0
comp=Z,13nm,1.0s
ABTA **Abfaltersbach** 89.64 317 *i* pP pP 21 12 33.6 +1.8
comp=Z,8.2nm,1.0s
HFS **Hagfors** 89.81 330 P P **21 12 19.9 +0.6**
comp=Z,2.9nm,0.7s,baz=171,slow=2.9,SNR=12
HFS LR LR 21 56 16.0
comp=Z,52nm,19.6s,baz=66,slow=38
comp=Z,2.9nm,0.7s
CTI **Castel Tesino** 90.21 316 P **21 12 22.6 +1.0**
WTTA **Wattenberg** 90.27 317 *i* P P **21 12 21.9 0.0**
comp=Z,2.3nm,0.6s
WTTA *i* pP **pP** **21 12 36.6 +1.8**
comp=Z,13nm,0.9s
WATA **Walderalm** 90.31 317 *i* pP pP 21 12 36.6 +1.6
comp=Z,7.8nm,0.8s
SQTA **Sankt Quirin** 90.56 317 *i* P P **21 12 23.4 +0.1**
comp=Z,2.1nm,0.4s
SQTA *i* pP **pP** **21 12 38.0 +1.9**
comp=Z,13nm,1.1s
SPB2 **Spitsbergen Ar** 90.57 348 P P **21 12 22.6 +0.1**
SPITS **Spitsbergen Ar** 90.58 348 P P **21 12 22.4 -0.1**
comp=Z,3.7nm,0.5s,baz=96,slow=5.3,SNR=20
SPITS LR LR 22 01 25.7
comp=Z,78nm,18.2s,baz=92,slow=41
comp=Z,3.7nm,0.5s
ZCCA **Zocca** 90.61 314 P **21 12 25.1 +1.6**
MOTA **Moosalm** 90.64 317 *i* PcP P **21 12 24.1 +0.5**
comp=Z,2.3nm,0.6s
MOTA *i* pP **pP** **21 12 38.4 +1.9**
comp=Z,16nm,1.0s
RETA **Reutte** 90.87 317 *i* P P **21 12 24.5 -0.1**
comp=Z,1.8nm,0.5s
RETA *i* pP **pP** **21 12 39.6 +2.1**
comp=Z,12nm,1.0s
FETA **Feichten** 90.88 317 *i* PcP P **21 12 25.2 +0.4**
comp=Z,0.9nm,0.5s
FETA *e*pP **pP** **21 12 40.2 +2.5**
comp=Z,9.6nm,1.0s,SNR=5.8
NB2 **NORSAR Subarra** 91.08 331 P P **21 12 25.0 -0.2**
comp=Z,2.5nm,0.9s,baz=94,slow=4.8
NOA **NORSAR Array B** 91.08 331 P P **21 12 25.5 +0.3**
comp=Z,0.7nm,0.7s,baz=94,slow=5.0,SNR=3.5
NOA LR LR 21 58 34.9
comp=Z,48nm,18.1s,baz=10.0,slow=39
comp=Z,0.7nm,0.7s
FUORN **Ofenpass-Fuorn** 91.19 316 P **21 12 26.4 0.0**
DAVA **Damuels** 91.47 317 *e*pP pP 21 12 42.1 +1.8
comp=Z,24nm,0.9s,SNR=5.2
KEST **Kesra** 91.62 306 P P **21 12 29.9 +1.5**
comp=Z,5.1nm,0.8s,baz=313,slow=6.7,SNR=5.0
comp=Z,5.1nm,0.8s
C19K **Lookout Ridge** 95.55 21 IAmb IAmb 21 13 01.7
comp=Z,14nm,1.4s
H17K **Granite Mounta** 96.06 25 IAmb IAmb 21 12 51.8
comp=Z,9.6nm,1.1s
B20K **Meade River** 96.23 20 IAmb IAmb 21 12 54.0
comp=Z,6.8nm,0.8s
F20K **Avaraart Lake** 97.36 23 IAmb IAmb 21 13 07.6
comp=Z,5.3nm,0.9s
J19K **Poorman** 98.06 26 IAmb IAmb 21 13 01.2
comp=Z,15nm,1.3s
F21K **Alatna River** 98.17 22 IAmb IAmb 21 13 02.5
comp=Z,6.7nm,1.2s
IMAR **Indian Mountai** 98.38 23 P Pdif 21 12 58.8 +0.3
TORD **Torodi Ar. Bea** 98.48 283 LR LR 21 55 10.5
comp=Z,67nm,19.9s,baz=150,slow=34
H21K **Melozitna Rive** 98.84 24 IAmb IAmb 21 13 03.5
comp=Z,7.2nm,1.2s
RAR **Rarotonga** 98.87 112 LR LR 21 59 47.1
comp=Z,29nm,19.5s,baz=242,slow=37
ILAR **Eielson Array** 101.48 24 PP PP **21 17 14.7 -7.6**
comp=Z,0.9nm,0.9s,baz=290,slow=8.1,SNR=5.8
POHA **Pohakuloa** 104.32 70 P **Pdif** **21 13 26.1 -0.1**
TBI **Tubuai** 108.04 115 *e*LR LR 21 49 32.6
comp=Z,345nm,26.8s

PPT2	Papeete2	108.86	109	*e*LR	LR		21 49 54.7	
	comp=Z,600nm,23.0s							
YKA	Yellowknife Ar	114.34	17	PKP	PKiKP	21 17 59.4		-0.7
	comp=Z,0.4nm,0.8s,baz=315,slow=2.6,SNR=6.3							
YKA				PP	PP		21 18 47.4	-8.4
	comp=Z,0.4nm,0.8s,baz=331,slow=8.1,SNR=4.0							
FFC	Flin Flon	124.43	15		PKPdf	21 18 18.8		-1.0
SCHQ	Schefferville	126.19	351	PKP	PKiKP	21 18 23.6		0.0
	comp=Z,1.7nm,0.6s,baz=281,slow=5.3,SNR=2.9							
PLID	Pearl Lake	126.66	31		PKiKP	21 18 25.4		+0.2
NVAR	Mina Array Bea	129.60	39	PKP	PKiKP	21 18 31.7		+0.5
	comp=Z,0.9nm,0.5s,baz=283,slow=1.1,SNR=6.5							
ULM	Lac du Bonnet	130.03	13	PKP	PKPdf	21 18 30.6		0.0
	comp=Z,3.5nm,0.8s,baz=342,slow=6.9,SNR=5.1							
PDAR	Pinedale Array	131.56	29	PKP	PKPdf	21 18 34.2		+0.1
	comp=Z,0.6nm,0.6s,baz=245,slow=0.9,SNR=5.5							
F33A	5 Mile Ranch,	134.03	16		PKPdf	21 18 38.4		+0.1
APMT	Aspermont	143.56	29		PKPab	21 18 52.5		-0.1
R50A	Paris	143.63	6		PKPab	21 18 52.2		-0.5
ALPN	Alpine	143.96	36		PKPdf	21 18 56.2		-0.9
R58B	Mineral	144.11	357	PKPdf	PKPab	21 18 54.4		-0.1
SGCY	Sterling City	144.18	32		PKPbc	21 18 55.6		+0.2
S54A	Dingess, Beckl	144.31	2	PKPdf	PKPab	21 18 55.5		+0.2
VA01	Torpederas	144.32	192		PKiKP	21 19 00.8		-0.2
CPUP	Villa Florida	144.33	216	PKP	PKPbc	21 18 56.9		+0.9
	comp=Z,1.7nm,0.3s,baz=123,slow=2.7,SNR=6.3							
CPUP	Villa Florida	144.33	216		PKPab	21 18 55.6		0.0
TXAR	Lajitas Array	144.70	37	PKP	PKPdf	21 18 58.1		-0.2
	comp=Z,17nm,0.6s,baz=285,slow=1.2,SNR=146							
TXAR	Lajitas Array	144.70	37		PKPdf	21 18 57.7		-0.6
WHAR	Wooly Hollow	144.93	18		PKPab	21 18 57.0		-0.6
T59A	Double "B" Far	145.08	357		PKPbc	21 18 57.8		-0.2
CO03	El Pedregal	146.19	195		PKPbc	21 19 02.2		+0.4
CPCT	Cooper Cave	146.41	7		PKPdf	21 19 01.4		+0.4
W57A	Gilead	146.97	360		PKPbc	21 19 03.8		0.0
LPAZ	La Paz	158.39	213	PKP	PKPdf	21 19 21.8		+1.9
	comp=Z,1.9nm,1.1s,baz=305,slow=2.5,SNR=2.4							

IDC 24 21:10:02.3±2.3, 7°.07S×127°.78E, h0km, mb3.8/1, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=107.0km s-min=29.8km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.16	191	Pn	Pn	21 12 44.7	+1.4
	0.2nm,0.3s,baz=349,slow=8.4,SNR=1.9						
FITZ				Sn	Sn	21 14 37.3	-12
	0.2nm,0.3s,baz=277,slow=18,SNR=3.1						
	2.7nm,0.8s						
WRA	Warramunga Arr	14.29	154	Pn	Pn	21 13 25.4	-0.8
	0.3nm,0.3s,baz=328,slow=13,SNR=8.7						
	1.0nm,0.7s						
ASAR	Alice Springs	17.52	161	P	Pn	21 14 07.3	-0.9
	0.2nm,0.3s,baz=333,slow=11,SNR=7.0						
	0.7nm,0.5s						
MKAR	Makanchi Array	67.10	328	P	P	21 20 57.8	+0.1
	1.3nm,1.3s,baz=118,slow=8.3,SNR=2.5						
	1.3nm,1.3s						

NEIC **24** *21:30:14.8±1.4, 17°.85N±0°.03×66°.82W±0°.01, h10km±1km, ML3.8/43, Md3.6/4(RSPR), Mwr3.5/11(SLM), Error ellipse: s-maj=5.1km s-min=2.8km az=8.0*

NEIC **24** *21:30:15, 17°.88N×66°.84W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.67; $M_{\theta\theta}$0.39; $M_{\phi\phi}$0.28; $M_{r\theta}$-0.34; $M_{\theta\phi}$1.64; $M_{\phi r}$1.10; Fault plane solution: $M_0$2.09000×10^{14} NP1:ϕ_s187.00000°, δ74.00000°, λ-143.00000°. NP2:ϕ_s85.00000°, δ55.00000°, λ-20.00000°. Principal axes: T 2.0868, Plg12.0000°, Azm312.0000°; N 0.0010, Plg50.0000°, Azm207.0000°; P -2.0878, Plg37.0000°, Azm51.0000°;*

RSPR **24** *21:30:15.6, 17°.88N×66°.84W, h14km, MD3.6/4*

OSPL **24** *21:30:15.5±0.3, 17°.83N×66°.84W, h12km±3km, ML3.6, Presumed earthquake*

PTWC **24** *21:30:15, 17°.80N×66°.90W, Ml3.9/10*

SDD **24** *21:30:16.0±1.0, 17°.92N×66°.84W, h23km±9km, MD3.7, ML3.5, MW3.8, Presumed earthquake*

ISC 24 21:30:14.8±1.0, 17°.87N±0°.05×66°.84W±0°.02, h18km±2km, n57, σ1°.50/91, 7C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.11	339		Pg	21 30 18.8	+0.2
GBPR					Sg	21 30 21.2	0.0
GBPR	Guanica, Bosqu	0.11	339	⇓*iP*	Pg	21 30 18.8	+0.2
GBPR				*eS*	Sg	21 30 21.2	0.0
MLPR	Magueyes Islan	0.22	297		Pg	21 30 20.2	+0.1
MLPR				Sg	Sg	21 30 23.9	+0.2
MLPR				IAML		21 30 24.5	
	17μm,0.5s						
OBIP	Obispado Ponce	0.28	51	Pg	Pb	21 30 21.1	-0.1
OBIP				Sg	Sb	21 30 25.2	-0.2
OBIP	Obispado Ponce	0.28	51	P	Pb	21 30 21.3	+0.1
OBIP	Obispado Ponce	0.28	51	⇓*iP*	Pb	21 30 21.3	+0.1
OBIP				*eS*	Sg	21 30 25.6	+0.4
OBIP	Obispado Ponce	0.28	51	*iP*	Pb	21 30 21.3	+0.1
OBIP				*eS*	Sg	21 30 25.6	+0.4
OBIP				IAML		21 30 25.8	
	comp=Z,3μm,0.7s						
CRPR	Cabo Rojo, PR	0.29	298	Pg	Pg	21 30 21.2	0.0
CRPR				Sg	Sg	21 30 25.7	0.0
CRPR				IAML		21 30 26.0	
	comp=Z,18μm,0.3s						
CRPR				IAML		21 30 27.1	
	comp=Z,13μm,0.3s						
CRPR	Cabo Rojo, PR	0.29	298	P	Pg	21 30 20.9	-0.4
CRPR				S	Sg	21 30 25.9	+0.2
CRPR	Cabo Rojo, PR	0.29	298	⇑*eP*g	Pg	21 30 21.4	+0.1
CRPR				⇑*eS*g	Sg	21 30 25.7	0.0
CRPR				IAML		21 30 25.9	
	comp=N,14μm,0.2s						
CRPR	Cabo Rojo, PR	0.29	298	⇑*iP*	Pg	21 30 21.4	+0.1
CRPR				*eS*	Sg	21 30 25.8	+0.1
CRPR	Cabo Rojo, PR	0.29	298	*iP*	Pg	21 30 21.4	+0.2
CRPR				*eS*	Sg	21 30 25.8	+0.1
CRPR				IAML		21 30 26.3	
	comp=Z,10μm,0.2s						
CELP	Cerrillos	0.32	50	Pg	Pg	21 30 21.8	+0.1
CELP				Sg	Sb	21 30 26.8	0.0
CELP				IAML		21 30 27.4	
	comp=Z,7μm,0.4s						
LSP	Las Mesas	0.39	322		Pg	21 30 23.1	+0.2
LSP	Las Mesas	0.39	322	⇓*iP*	Pg	21 30 23.1	+0.2
UUPR	Utuado, UPR, P	0.40	16	Pg	Pg	21 30 22.9	-0.2
UUPR				Sg	Sg	21 30 28.4	-0.3
PRSN	Puerto Rico Se	0.46	320	Pg	Pg	21 30 24.0	-0.1
PRSN				Sg	Sg	21 30 30.3	0.0
PRSN				IAML		21 30 32.4	
	comp=Z,12μm,0.2s						
PRSN	Puerto Rico Se	0.46	320	P	Pg	21 30 24.0	-0.1
PRSN				S	Sb	21 30 30.7	0.0
PRSN	Puerto Rico Se	0.46	320	⇑*eP*g	Pg	21 30 24.0	-0.1
PRSN				*eS*g	Sg	21 30 30.0	-0.4
PRSN				IAML		21 30 31.4	
	comp=N,11μm,0.2s						
PRSN	Puerto Rico Se	0.46	320	⇑*iP*	Pg	21 30 24.1	-0.1
PRSN				*eS*	Sg	21 30 30.5	+0.2
ECPR	Experimental S	0.64	45	Pg	Pb	21 30 26.9	-0.3
ECPR				Sg	Sg	21 30 36.1	+0.2
ECPR				IAML		21 30 37.0	
	comp=N,4μm,0.3s						
ECPR				IAML		21 30 39.6	
	comp=N,3μm,0.2s						
ECPR	Experimental S	0.64	45	⇓*iP*	Pb	21 30 27.0	-0.3
ECPR				*eS*	Sb	21 30 35.7	-0.1
AGPR	Aguadilla, PR	0.65	336		Pb	21 30 27.3	-0.2
AGPR				Sg	Sb	21 30 36.1	-0.1
AGPR				IAML		21 30 36.5	
	comp=N,3μm,0.5s						
AGPR	Aguadilla, PR	0.65	336	P	Pb	21 30 27.4	-0.2
AGPR	Aguadilla, PR	0.65	336	⇑*eP*g	Pb	21 30 27.3	-0.2
AGPR				⇑*eS*g	Sb	21 30 35.1	-1.2
AGPR				IAML		21 30 36.4	
	comp=N,2μm,0.2s						
AGPR	Aguadilla, PR	0.65	336	⇑*iP*	Pb	21 30 27.3	-0.2
AGPR				*eS*	Sb	21 30 36.1	-0.1
EMPR	Esperanza - Ma	0.67	26		Pg	21 30 28.1	+0.1
EMPR					Sb	21 30 36.4	-0.5
EMPR	Esperanza - Ma	0.67	26	P	Pg	21 30 28.2	+0.1
EMPR	Esperanza - Ma	0.67	26	⇓*iP*	Pg	21 30 28.1	+0.1
EMPR				*eS*	Sb	21 30 36.4	-0.5
SJG	San Juan	0.70	70	Pg	Pb	21 30 27.9	-0.4
SJG				Sg	Sb	21 30 37.3	-0.3
SJG	San Juan	0.70	70	IAML		21 30 41.2	
	comp=N,7μm,0.4s						
SJG				IAML		21 30 41.2	
	comp=N,4μm,0.4s						
SJG	San Juan	0.70	70	P	Pb	21 30 28.3	-0.1
SJG	San Juan	0.70	70	⇓*e*Pg	Pb	21 30 28.1	-0.1
SJG				⇓*e*Sg	Sb	21 30 37.2	-0.3
SJG	San Juan	0.70	70	*i*P	Pb	21 30 28.2	-0.1
SJG				*e*S	Sb	21 30 37.6	0.0
SJG				IAML		21 30 41.1	
	comp=Z,2μm,0.3s						
PDPR	Patillas Dam,	0.79	79	Pg	Pb	21 30 29.7	-0.3
PDPR				Sg	Sg	21 30 40.7	0.0
PDPR				IAML		21 30 44.4	
	comp=Z,2μm,0.5s						
IDE	Isla Desecheo	0.80	310		Pb	21 30 29.7	-0.4
IDE					Sb	21 30 40.1	-0.5
IDE	Isla Desecheo	0.80	310	⇓*iP*	Pb	21 30 29.7	-0.4
IDE				*eS*	Sb	21 30 40.1	-0.5
GCPR	Guaynabo City	0.84	58	Pg	Pb	21 30 30.5	-0.3
GCPR				Sg	Sb	21 30 40.8	-1.0
GCPR	Guaynabo City	0.84	58	P	Pb	21 30 30.5	-0.3
GCPR				S	Sb	21 30 41.7	0.0
GCPR	Guaynabo City	0.84	58	⇑*iP*	Pb	21 30 30.5	-0.3
GCPR				*eS*	Sb	21 30 40.8	-1.0
HUMP	Col San Antoni	0.98	74	Pg	Pb	21 30 32.7	-0.5
HUMP				Sg	Sb	21 30 45.8	+0.1
HUMP				IAML		21 30 49.2	
	comp=Z,4μm,0.3s						
HUMP				IAML		21 30 49.4	
	comp=Z,4μm,0.4s						
HUMP	Col San Antoni	0.98	74	P	Pb	21 30 32.7	-0.5
HUMP	Col San Antoni	0.98	74	⇓*eP*	Pb	21 30 32.8	-0.3
HUMP				*eS*	Sb	21 30 46.0	+0.2
CUPR	Culebra, Puert	1.54	73	Pb	Pb	21 30 42.4	-0.4
PCDR	Punta Cana, DR	1.60	294	⇑*eP*g	Pb	21 30 43.2	-0.7
PCDR				IAML		21 31 21.9	
	comp=N,501nm,0.7s						
DR12	Loma Pena Alta	2.58	291		Pn	21 30 57.0	+1.2
HATOM	Hato Mayor del	2.58	291	*e*Pg	Pn	21 30 57.4	+1.7
HATOM				IAML		21 31 43.4	
	comp=N,167nm,0.6s						
SDD	Santo Domingo	2.98	282	Pn	Pn	21 31 02.2	+1.0
BANI	BANI	3.39	279	Pn	Pn	21 31 07.1	+0.2
SABA	Saba	3.43	94	Pn	Pn	21 31 07.8	+0.5
SMRT	St. Maarten	3.58	87	Pn	Pn	21 31 09.8	+0.3
SC01	Santiago de lo	4.00	293		Pn	21 31 16.4	+1.2
SDDR	Presa de Saban	4.37	285	Pn	Pn	21 31 22.4	+2.1
GDHS	Morne Mazeau,	5.10	107	Pn	Pn	21 31 29.4	-1.0
CBE	Ff, Capester	5.31	109	Pn	Pn	21 31 33.5	+0.2
MAGL	Barre de l'ile	5.65	109	Pn	Pn	21 31 37.8	0.0
BIM	Bigot	6.46	120	Pn	Pn	21 31 47.9	-1.2

IDC **24** *21:44:37.1±1.7, 7°.08S×129°.24E, h173km±16km, mb3.7/10, mbtmp4.5/16, MS2.7/1, Error ellipse: s-maj=19.0km s-min=11.5km az=63.0*

NEIC **24** *21:44:37.9±2.2, 7°.13S±0°.07×129°.17E±0°.06, h175km±6km, mb4.4/34, Error ellipse: s-maj=10.8km s-min=8.9km az=191.0*

DJA **24** *21:44:38.6±0.2, 7°.S±3°×12°9E±°, h177km±6km, M4.8/16, mB5.2/9, mb4.9/14, MLv5.0/16, Mw(mB)4.6/9*

ISC 24 21:44:37.5±0.4, 7°.21S±0°.04×129°.14E±0°.04, h175km, n126, σ1°.63/128, mb4.3/24, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.28	110	Pn	Pn	21 45 18.0	+0.6
SAUI	Saumlaki	2.28	110	P	Pn	21 45 18.5	+1.1
SAUI	Saumlaki	2.28	110	S	Sn	21 45 49.4	+1.1
BNDI	Bandanaira	2.78	16	P	Pn	21 45 23.9	+0.6
BNDI				S	Sn	21 45 59.3	+0.4
SOEI	Soe	5.44	242	Pn	Pn	21 45 59.6	+2.4
SOEI	Soe	5.44	242	P	Pn	21 46 00.5	+3.2
SOEI	Soe	5.44	242	P	Pn	21 45 59.8	+2.5
	2.4nm4μm336nm,0.7s						
DRS	Darwin Rock St	5.47	162	P	Pn	21 45 59.3	+1.8
DRS	Darwin Rock St	5.47	162	S	Sn	21 46 59.0	-1.5
MTN	Manton Dam	5.93	161	Pn	Pn	21 46 04.2	+0.6
SANI	Sanana	6.01	328	P	Pn	21 46 07.8	+3.1
SANI	Sanana	6.01	328	P	Pn	21 46 07.2	+2.5
BATI	Baumata	6.17	241	P	Pn	21 46 09.6	+2.8
	256nm,0.4s,baz=106,slow=3.1,SNR=68						
BATI				S	Sn	21 47 12.7	-4.5
	219nm,0.4s,baz=103,slow=22,SNR=14						
BATI	Baumata	6.17	241	P	Pn	21 46 09.4	+2.6
	1.7nm4μm300nm,0.6s						
SIJI	Sorong	6.65	19	P	Pn	21 46 10.6	-2.4
	26nm,0.2s,baz=8.7,slow=3.5,SNR=90						
SIJI				S	Sn	21 47 16.1	-12
	79nm,0.4s,baz=61,slow=23,SNR=5.8						
SIJI	Sorong	6.65	19	P	Pn	21 46 09.7	-3.4
SWI	Sorong	6.65	19	P	Pn	21 46 11.1	-2.0
MMRI	Maumere	6.98	258	Pn	Pn	21 46 17.1	-0.3
MMRI	Maumere	6.98	258	P	Pn	21 46 20.3	+2.9
MMRI	Maumere	6.98	258	P	Pn	21 46 20.6	+3.2
	0.4nm2μm68nm,0.6s						
EDFI	Ende, Flores	7.53	258	P	Pn	21 46 28.4	+3.6
	0.4nm86nm,1.0s						
RKPI	Ransiki, Papua	7.57	42	P	Pn	21 46 23.4	-1.8
MWPI	Manokwari, Pap	7.93	38	P	Pn	21 46 29.3	-0.6
	241nm,0.7s						
KKSI	Kolaka, Sulawe	8.04	292	P	Pn	21 46 34.0	+2.6
TNTI	Ternate	8.12	347	Pn	Pn	21 46 32.7	+0.1
KNRA	Kununurra	8.42	182	Pn	Pn	21 46 36.9	+0.4
BASI	Baing, Sumba	8.97	250	P	Pn	21 46 44.5	+0.8
WSI	Waingapu	9.08	254	P	Pn	21 46 46.2	+1.1
BAKI	Biak	9.17	50	P	Pn	21 46 46.3	0.0
	305nm,1.0s						
KAPI	Kappang	9.58	283	P	Pn	21 46 52.2	+0.5
	12nm,0.7s,baz=169,slow=10,SNR=4.2						
KAPI	Kappang	9.58	283		Pn	21 46 54.9	+3.2
DBNI	Kabupaten Domp	10.80	262	P	Pn	21 47 08.6	+0.9
FITZ	Fitzroy Crossi	11.35	197	P	Pn	21 47 14.6	-0.1
	23nm,0.3s,baz=31,slow=11,SNR=118						
FITZ				S	Sn	21 49 16.4	-4.2
	16nm,0.3s,baz=258,slow=23,SNR=10.0						
PLAI	Plampang	11.36	261	P	Pn	21 47 16.5	+1.5
PLAI	Plampang	11.36	261	S	Sn	21 49 22.5	+1.3
TOLI2	Tolitoli	11.74	314	P	P	21 47 23.7	-2.2
WB0	Warramunga Arr	13.48	158	Pn	Pn	21 47 40.1	-1.9
WRAB	Tennant Creek	13.62	159	P	P	21 47 47.1	+0.2
WRAB	Tennant Creek	13.62	159	P	Pn	21 47 44.1	+0.3
WRA	Warramunga Arr	13.63	159	P	Pn	21 47 40.9	-2.9
	2.9nm,0.4s,baz=332,slow=12,SNR=32						
WRA				S	Sn	21 50 06.2	-9.2
	5.5nm,0.3s,baz=341,slow=21,SNR=8.4						
WRA	Warramunga Arr	13.63	159	Pn	Pn	21 47 40.6	-3.2
JAGI	Jajag, Banyuwa	14.90	264	Pn	Pn	21 47 58.6	-1.1
JAGI	Jajag, Banyuwa	14.90	264	P	Pn	21 48 00.7	+1.0
COEN	Coen	15.34	117		Pn	21 48 05.1	0.0
COEN				IAmb	IAmb	21 48 07.3	
	comp=Z,16nm,0.7s						
COEN	Coen	15.34	117	P	Pn	21 48 05.7	+0.6
MBWA	Marble Bar	16.58	212	P	Pn	21 48 21.6	+1.4
MBWA	Marble Bar	16.58	212	P	Pn	21 48 22.0	+1.8
QIS	Mount Isa	16.70	144	P	P	21 48 21.5	+0.6
PSA00	Pilbara Seismi	16.86	211	P	Pn	21 48 25.1	+1.6
PSA00	Pilbara Seismi	16.86	211	P	Pn	21 48 25.3	+1.8
PSA00				IAmb	IAmb	21 48 26.1	
	comp=Z,12nm,0.6s						
PSA00	Pilbara Seismi	16.86	211	P	Pn	21 48 25.3	+1.8
AS31	Alice Springs	16.99	165	P	Pn	21 48 25.9	+0.8
AS31				IAmb	IAmb	21 48 27.6	
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	16.99	165	P	Pn	21 48 25.9	+0.8
	comp=Z,27nm,0.6s,baz=346,slow=10,SNR=187						
ASAR				S	S	21 51 27.1	-5.2
	comp=Z,3.5nm,0.8s,baz=352,slow=26,SNR=6.0						
ASAR	Alice Springs	16.99	165	P	P	21 48 25.6	+1.5
PMG	Port Moresby	17.97	98	P	P	21 48 32.8	-2.0
	comp=Z,8.4nm,0.5s,baz=274,slow=7.5,SNR=9.9						
PMG	Port Moresby	17.97	98	P	P	21 48 33.1	-1.7
MTSU	Mount Surprise	18.35	128	P	P	21 48 39.8	+0.8
KKM	Kota Kinabalu	18.43	315	P	P	21 48 40.6	+0.7
KKM				IAmb	IAmb	21 48 42.6	
	comp=Z,16nm,0.8s						
UGM	Wanagama	18.46	267	P	P	21 48 41.6	+1.4
UGM	Wanagama	18.46	267	P	P	21 48 41.7	+1.4
SBUM	Sibu	19.42	299	P	Pn	21 48 54.2	+0.5
CTA	Charters Tower	20.96	129	P	P	21 49 07.8	+0.8
CTAO	Charters Tower	20.96	129	P	P	21 49 06.7	-0.3
CTAO				IAmb	IAmb	21 49 10.2	
	comp=Z,10nm,0.7s						
CTAO	Charters Tower	20.96	129	P	P	21 49 07.8	+0.8
BBJI	Bungbulang	21.31	268	P	P	21 49 10.7	-0.3
BBJI				IAmb	IAmb	21 49 15.1	
	comp=Z,13nm,0.7s						
BBJI	Bungbulang	21.31	268	P	P	21 49 11.3	+0.4
MEEK	Meekatharra	21.76	206	P	P	21 49 16.2	+0.8
INKA	Innaminka	23.20	153	P	P	21 49 29.7	+0.8
INKA				IAmb	IAmb	21 49 30.7	
	comp=Z,8.2nm,0.7s						
FORT	Forrest	23.47	182	P	P	21 49 32.9	+1.6
MORW	Morawa	25.00	208	P	P	21 49 46.3	+1.0
BBOO	Buckleboo	26.27	167	P	P	21 49 56.2	-0.5
BBOO	Buckleboo	26.27	167	P	P	21 49 57.2	+0.5
STKA	Stephens Creek	27.15	156	P	P	21 50 04.9	+0.3
	comp=Z,7.9nm,0.8s,baz=329,slow=9.1,SNR=18						
	comp=Z,7.9nm,0.8s						
STKA	Stephens Creek	27.15	156	P	P	21 50 04.6	0.0
STKA	Stephens Creek	27.15	156	P	P	21 50 04.9	+0.3
HTT	Hallett	27.62	162	P	P	21 50 09.4	+0.6
CMSA	Cobar Meteorol	28.72	150	P	P	21 50 19.2	+0.7
TATA	Tatamba Isabel	30.40	94	P	P	21 50 34.2	+0.6
ARMA	Armidale	31.27	140	P	P	21 50 41.8	+0.7
ARMA				IAmb	IAmb	21 50 44.9	
	comp=Z,6.7nm,1.0s						
HURO	Huro Makira	32.53	98	P	P	21 50 54.6	+2.4
GSI	Gunungsitoli	32.60	284	P	P	21 50 52.5	-0.4
GSI				IAmb	IAmb	21 51 20.9	
	comp=Z,10nm,1.0s						
CAN	Canberra	33.40	150	P	P	21 51 00.9	+1.4
CAN				IAmb	IAmb	21 51 02.2	
	comp=Z,6.3nm,0.7s						
TOO	Toolangi	33.68	156	P	P	21 51 02.8	+0.9
SANVU	Saraoutou	38.16	106	P	P	21 51 40.1	-0.2
DZM	Mont Dzumac	38.87	116	P	P	21 51 45.8	-0.4
	comp=Z,4.3nm,0.7s,baz=274,slow=13,SNR=1.8						
	comp=Z,4.3nm,0.7s						
DZM	Mont Dzumac	38.87	116	P	P	21 51 45.9	-0.3
DZM				IAmb	IAmb	21 52 12.0	
	comp=Z,7.9nm,1.0s						
CM31	Chiang Mai Arr	39.22	311	P	P	21 51 49.8	+0.8
CM31				IAmb	IAmb	21 51 51.3	
	comp=Z,5.0nm,0.4s						
CMAR	Chiang Mai Arr	39.22	311	P	P	21 51 49.3	+0.3
	comp=Z,2.5nm,0.7s,baz=126,slow=8.4,SNR=3.8						
CMAR				LR	LR	22 08 32.8	
	comp=Z,10nm,19.8s,baz=115,slow=37						
	comp=Z,2.5nm,0.7s						
CMAR	Chiang Mai Arr	39.22	311	P	P	21 51 48.3	-0.7
CHTO	Chiang Mai	39.43	311	P	P	21 51 50.4	-0.4
CHTO				IAmb	IAmb	21 51 51.8	
	comp=Z,6.1nm,0.7s						
PZH	PanZhiHua	42.77	323	P	P	21 52 19.8	+1.7
SHL	Shillong	48.72	313	P	P	21 53 03.2	-1.5
SHL				IAmb	IAmb	21 53 05.5	
	comp=Z,5.7nm,0.5s						
LZH	Lanzhou	49.19	333	*e*P	P	21 53 10.8	+2.6
HHC	Hu-ho-hao-te	50.48	343	*e*P	P	21 53 20.8	+3.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WHZ	Wether Hill Ro	51.01	146	P	P	21 53 21.6	+0.1
WHZ				IAmb	IAmb	21 53 22.4	
	comp=Z,9.9nm,0.6s						
LBZ	Lake Benmore	51.43	143	P	P	21 53 24.4	-0.4
RPZ	Rata Peaks	51.59	142	P	P	21 53 26.5	+0.5
TUWZ	Tuamarina	52.30	138	P	P	21 53 31.6	+0.4
TCW	Tory Channel	52.42	138	P	P	21 53 31.5	-0.5
GTA2	Gaotai	53.83	332	*e*P	P	21 53 42.1	-0.4
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	58.37	342	P	P	21 54 14.2	-0.3
	comp=Z,0.5nm,0.6s,baz=153,slow=4.4,SNR=2.8						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	58.37	342	P	P	21 54 14.2	-0.3
PETK	Petropavlovsk-	64.79	19	P	P	21 54 56.5	-0.8
	comp=Z,3.4nm,1.0s,baz=200,slow=7.4,SNR=1.2						
	comp=Z,3.4nm,1.0s						
KSH2	Kashi	67.68	317	P	P	21 55 18.9	+2.8
KSH2				pmax	pmax		
	comp=Z,1.0nm,1.4s						
MKAR	Makanchi Array	67.94	327	P	P	21 55 17.0	-0.4
	comp=Z,1.6nm,0.5s,baz=118,slow=7.8,SNR=70						
	comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	67.94	327	P	P	21 55 17.1	-0.3
MAKZ	Makanchi	68.11	327	P	P	21 55 17.9	-0.6
ZALV	Zalesovo Beam	71.39	334	P	P	21 55 36.9	-1.4
	comp=Z,0.8nm

SBZ				S	**Sn**	**21 49 50.0**	**+1.9**
CUKT	**Cukurca**	**1.32**	**213**	Pn	**Pb**	**21 49 29.9**	**0.0**
CUKT				Sn	**Sn**	**21 49 48.6**	**+0.3**
CUKT	**Cukurca**	**1.32**	**213**	P	**Pb**	**21 49 29.9**	**0.0**
CUKT				S	**Sn**	**21 49 47.8**	**-0.5**
CUKT				IAML		21 49 50.0	
	comp=E,90nm,0.8s						
CUKT				IAML		21 49 51.0	
	comp=N,98nm,0.7s						
IAZR	**Azarshahr**	**1.35**	**120**	Pg	**Pg**	**21 49 31.7**	**+1.5**
HYR	**Heyderabad**	**1.38**	**11**	P	**Pg**	**21 49 32.0**	**+1.2**
HYR				S	**Sn**	**21 49 53.7**	**+4.1**
ADCV	**BITLIS_Adilcev**	**1.46**	**288**	P	**Pn**	**21 49 31.6**	**-0.4**
ADCV				S	**Sn**	**21 49 51.7**	**-0.2**
IGDI	**IGDIR**	**1.54**	**348**	P	**Pb**	**21 49 33.5**	**-0.1**
IGDI				S	**Sg**	**21 49 54.2**	**+0.5**
IGDI	**IGDIR**	**1.54**	**348**	P	**Pg**	**21 49 34.4**	**+0.6**
IGDI				S	**Sg**	**21 49 58.2**	**+4.5**
PERV	**Siirt/Pervari-**	**1.60**	**256**	P	**Pb**	**21 49 34.4**	**-0.4**
PERV				S	**Sg**	**21 49 57.5**	**+1.7**
PERV				IAML		21 50 02.0	
	comp=N,85nm,0.5s						
PERV				IAML		21 50 09.0	
	comp=E,69nm,0.5s						
AGRB	**Hanur-Agry**	**1.69**	**316**	Pn	**Pb**	**21 49 35.8**	**-0.5**
DORK	**Agr/Tutak/Do**	**1.69**	**308**	P	**Pb**	**21 49 35.9**	**-0.3**
MLAZ	**Malazgirt-MUS**	**1.71**	**297**	Pn	**Pn**	**21 49 35.9**	**+0.5**
KOTA	**Agri, Merkez-K**	**1.76**	**325**	P	**Pn**	**21 49 35.8**	**-0.2**
KOTA				S	**Sn**	**21 49 55.9**	**-3.2**
GNI	**Garni**	**1.79**	**6**	Pn	**Pb**	**21 49 37.9**	**-0.1**
SIRN	**Sırnak**	**1.87**	**243**	P	**Pg**	**21 49 40.5**	**+0.5**
SIRN				IAML		21 50 16.0	
	comp=N,46nm,0.7s						
SIRN				IAML		21 50 19.0	
	comp=E,39nm,0.5s						
GURO	**Guroymak-BITLI**	**1.95**	**276**	Pn	**Pn**	**21 49 39.1**	**+0.5**
IHRS	**Heris**	**2.00**	**91**	Pn	**Pg**	**21 49 42.0**	**-0.5**
SRTM	**Siirt_Merkez**	**2.07**	**260**	P	**Pb**	**21 49 42.3**	**-0.4**
SRTM				IAML		21 50 19.0	
	comp=E,38nm,0.7s						
SRTM				IAML		21 50 21.0	
	comp=N,46nm,0.7s						
QRD	**Qoradiz**	**2.45**	**63**	P	**Pn**	**21 49 46.3**	**+0.9**
QRD				S	**Sb**	**21 50 19.4**	**-0.4**
GDB	**GEDABAY**	**2.54**	**22**	P	**Pb**	**21 49 49.6**	**-1.2**
GDB				S	**Sg**	**21 50 25.0**	**-1.0**
ISRB	**Sarab**	**2.55**	**101**	Pn	**Pb**	**21 49 49.4**	**-1.6**
GANJ	**Ganja**	**2.68**	**31**	P	**Pb**	**21 49 51.0**	**-2.0**
GANJ				S	**Sg**	**21 50 29.5**	**-0.8**
GRMI	**Germi**	**2.69**	**79**	Pn	**Pb**	**21 49 51.4**	**-1.9**

*NEIC **24** 21:54:47.8±2.0, 14°.9S±0°.1×166°.27E±0°.10, h10km±2km, mb4.3/7, Error ellipse: s-maj=24.8km s-min=15.8km az=355.0*
*NOU **24** 21:54:53.1, 15°.27S×167°.52E, h105km, MLv4.6/17, Vanuatu Islands*
*IDC **24** 21:54:54.7±12.0, 15°.61S×165°.38E, h0km, mb4.3/3, mbtmp4.3/4, ML4.5/1, Error ellipse: s-maj=221.8km s-min=35.1km az=53.0*
ISC 24 21:54:51.2±1.8, 15°.2S±0°.1×167°.6E±0°.2, h129km, n28, σ1§46/29, mb4.3/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SANVU	**Saraoutou**	**0.46**	**237**			**Pn**	**21 55 08.3**	**-1.6**
SANVU	**Saraoutou**	**0.46**	**237**	P		**Pn**	**21 55 08.6**	**-1.3**
SANVU	**Saraoutou**	**0.46**	**237**	S		**Sn**	**21 55 23.2**	**-0.9**
DVP	**Devils Point**	**2.58**	**168**	P		**Pn**	**21 55 33.7**	**+1.4**
DVP	**Devils Point**	**2.58**	**168**	S		**Sn**	**21 56 03.3**	**-0.7**
RTV	**Rentapao**	**2.70**	**163**	P		**Pn**	**21 55 34.6**	**+0.7**
RTV	**Rentapao**	**2.70**	**163**	S		**Sn**	**21 56 06.5**	**-0.3**
MARNC	**Mare, Loyalty**	**6.27**	**176**	Pn		**Pn**	**21 56 19.9**	**-1.4**
MARNC	**Mare, Loyalty**	**6.27**	**176**	P		**Pn**	**21 56 20.3**	**-1.0**
DZM	**Mont Dzumac**	**6.93**	**189**	Pn		**Pn**	**21 56 31.8**	**+1.5**
	11nm,0.3s,baz=330,slow=11,SNR=71							
DZM				Sn		**Sn**	**21 57 48.3**	**+0.5**
	11nm,0.3s,baz=120,slow=22,SNR=16							
	19nm,0.3s							
DZM	**Mont Dzumac**	**6.93**	**189**	Pn		**Pn**	**21 56 31.6**	**+1.3**
DZM	**Mont Dzumac**	**6.93**	**189**	P		**Pn**	**21 56 31.6**	**+1.3**
ONTNC	**Ouen Toro**	**7.16**	**189**	Pn		**Pn**	**21 56 34.8**	**+1.5**
OUENC	**Ouen Island, N**	**7.22**	**186**	P		**Pn**	**21 56 36.2**	**+2.0**
NGOA	**Tingoa Renbel**	**8.18**	**295**	P		**Pn**	**21 56 47.7**	**+0.6**
SAVO	**Savo Central**	**9.70**	**307**	P		**Pn**	**21 57 10.0**	**+2.4**
TATA	**Tatamba Isabel**	**10.20**	**311**	P		**Pn**	**21 57 16.6**	**+2.3**
EIDS	**Eidsvold**	**18.49**	**234**			**P**	**21 58 55.7**	**-1.7**
EIDS				IAmb		IAmb	21 59 03.2	
	comp=Z,20nm,1.4s							
ARMA	**Armidale**	**21.09**	**221**	P		**P**	**21 59 27.2**	**+1.7**
ARMA				IAmb		IAmb	21 59 38.7	
	comp=Z,9.5nm,1.1s							
STKA	**Stephens Creek**	**28.94**	**230**	P		**P**	**22 00 38.7**	**+0.3**
	comp=Z,2.2nm,0.3s,baz=68,slow=9.8,SNR=7.0							
	comp=Z,2.2nm,0.3s							
STKA	**Stephens Creek**	**28.94**	**230**	P		**P**	**22 00 38.6**	**+0.3**
WB0	**Warramunga Arr**	**31.97**	**257**	P		**P**	**22 01 03.2**	**-2.0**
WB0				IAmb		IAmb	22 01 03.9	
	comp=Z,8.8nm,1.1s							
WRA	**Warramunga Arr**	**32.03**	**257**	P		**P**	**22 01 03.9**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=88,slow=9.1,SNR=4.5							
	comp=Z,0.5nm,0.4s							
AS31	**Alice Springs**	**32.81**	**250**	P		**P**	**22 01 11.0**	**-1.6**
ASAR	**Alice Springs**	**32.81**	**250**	P		**P**	**22 01 11.4**	**-1.2**
	comp=Z,2.6nm,0.4s,baz=78,slow=9.1,SNR=47							
	comp=Z,2.6nm,0.4s							
ASAR	**Alice Springs**	**32.81**	**250**	P		**P**	**22 01 11.2**	**-1.4**
BBOO	**Buckleboo**	**33.55**	**233**	P		**P**	**22 01 18.3**	**-0.6**
BBOO				IAmb		IAmb	22 01 19.7	
	comp=Z,9.6nm,0.8s							
FORT	**Forrest**	**39.34**	**240**	P		**P**	**22 02 07.2**	**-0.9**
FORT				IAmb		IAmb	22 02 27.7	
	comp=Z,6.4nm,0.8s							

*IDC **24** 22:20:46.8±0.8, 24°.62N×91°.63E, h0km, mb3.6/10, mbtmp3.6/12, ML3.8/2, Error ellipse: s-maj=29.3km s-min=11.5km az=79.0*
ISC 24 22:20:51.7±0.8, 24°.7N±0°.1×91°.65E±0°.08, h35km, n24, σ1§67/33, mb3.6/9, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BRDH	**Bariadhala**	**1.96**	**180**	Pn		**Pn**	**22 21 22.9**	**+0.5**
	82nm,0.3s,baz=37,slow=5.1,SNR=12							
BRDH				Lg		Lg	22 21 48.2	
	175nm,0.3s,baz=352,slow=18,SNR=24							
RAMN	**Ramite**	**5.10**	**298**	Pn		**Pn**	**22 22 07.3**	**+1.5**
	baz=303,slow=0.0							
RAMN				Sn		**Sn**	**22 23 03.2**	**-0.3**
	474nm,1.0s,baz=303,slow=0.0							
GUN	**Gumba**	**6.11**	**303**	Pn		**Pn**	**22 22 21.4**	**+1.5**
	baz=308,slow=0.0							
GUN				Sn		**Sn**	**22 23 28.1**	**-0.7**
	84nm,0.4s,baz=308,slow=0.0							
PKI	**Pulchoki**	**6.32**	**299**	Pn		**Pn**	**22 22 23.9**	**+1.2**
	baz=303,slow=0.0							
PKI				Sn		**Sn**	**22 23 32.7**	**-1.1**
	34nm,0.3s,baz=303,slow=0.0							
PKIN	**Phulchoki**	**6.33**	**299**	Pn		**Pn**	**22 22 24.1**	**+1.3**
	baz=303,slow=0.0							
PKIN				Sn		**Sn**	**22 23 32.9**	**-1.1**
	32nm,0.2s,baz=303,slow=0.0							
DMN	**Daman**	**6.58**	**298**	Pn		**Pn**	**22 22 26.8**	**+0.6**
	baz=302,slow=0.0							
DMN				Sn		**Sn**	**22 23 38.5**	**-1.6**
	32nm,0.4s,baz=302,slow=0.0							
GKN	**Gorkha**	**7.12**	**299**	Pn		**Pn**	**22 22 34.6**	**+1.0**
	baz=303,slow=0.0							
GKN				Sn		**Sn**	**22 23 51.6**	**-1.8**
	100nm,0.3s,baz=303,slow=0.0							
KOLN	**Koldanda**	**7.87**	**295**	Pn		**Pn**	**22 22 44.2**	**+0.4**
	baz=298,slow=0.0							
KOLN				Sn		**Sn**	**22 24 08.6**	**-3.2**
	48nm,0.4s,baz=298,slow=0.0							
DANN	**Dangsing**	**7.97**	**299**	Pn		**Pn**	**22 22 45.6**	**+0.3**
	baz=303,slow=0.0							
DANN				Sn		**Sn**	**22 24 12.3**	**-2.1**
	35nm,0.3s,baz=303,slow=0.0							
PYUN	**Piuthan**	**8.49**	**296**	Pn		**Pn**	**22 22 52.6**	**+0.2**
	baz=299,slow=0.0							
PYUN				Sn		**Sn**	**22 24 23.1**	**-4.0**
	0.7nm,0.4s,baz=299,slow=0.0							
CMAR	**Chiang Mai Arr**	**9.16**	**131**	Pn		**Pn**	**22 23 00.9**	**-0.5**
	0.2nm,0.3s,baz=311,slow=13,SNR=7.0							
	0.8nm,0.3s							
GOMU	**GeErMu**	**11.83**	**13**	P		**Pn**	**22 23 36.0**	**-2.3**
GOMU				pmax		pmax		
	comp=Z,4.0nm,0.8s							
LZDM	**Lanzhou Array**	**15.32**	**40**	Pn		**Pn**	**22 24 23.4**	**-2.2**
	baz=231,slow=14							
	comp=Z,0.4nm,0.3s							
KSH2	**Kashi**	**19.84**	**321**	P		**Pn**	**22 25 25.5**	**+4.1**
KSH2				pP		pP	22 25 28.3	-0.6
KSH2				pmax		pmax		
	comp=Z,2.0nm,0.9s							
MKAR	**Makanchi Array**	**23.34**	**344**	P		**P**	**22 25 56.8**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=155,slow=12,SNR=3.7							
	comp=Z,0.5nm,0.5s							
SONM	**Songino Array**	**25.93**	**23**	P		**P**	**22 26 22.4**	**+1.7**
	comp=Z,0.6nm,1.0s,baz=210,slow=8.3,SNR=4.0							
	comp=Z,0.6nm,1.0s							
KURBB	**Kurchatov Arra**	**27.85**	**342**	P		**P**	**22 26 39.3**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=143,slow=9.3,SNR=1.3							
	comp=Z,0.1nm,0.3s							
ZALV	**Zalesovo Beam**	**29.71**	**352**	P		**P**	**22 26 54.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=178,slow=9.5,SNR=2.0							
	comp=Z,0.2nm,0.3s							
BVAR	**Borovoye Array**	**32.57**	**336**	P		**P**	**22 27 19.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=137,slow=8.5,SNR=4.3							
	comp=Z,0.4nm,0.5s							
ARCES	**ARCESS Array B**	**58.83**	**338**	P		**P**	**22 30 46.9**	**+0.6**
	comp=Z,3.5nm,0.9s,baz=110,slow=8.0,SNR=2.5							
	comp=Z,3.5nm,0.9s							
WRA	**Warramunga Arr**	**60.75**	**133**	P		**P**	**22 31 00.5**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=320,slow=7.3,SNR=6.8							
	comp=Z,1.3nm,0.8s							
ASAR	**Alice Springs**	**63.13**	**136**	P		**P**	**22 31 15.2**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=320,slow=6.7,SNR=3.4							
	comp=Z,0.5nm,0.9s							
GERES	**GERESS Array B**	**64.10**	**314**	P		**P**	**22 31 22.7**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=69,slow=8.3,SNR=2.5							
	comp=Z,0.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**84.58**	**282**	P		**P**	**22 33 21.5**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=79,slow=2.9,SNR=2.7							
	comp=Z,0.6nm,1.0s							

*IDC **24** 22:52:19.2±2.4, 52°.01N×177°.43W, h0km, mb3.3/6, mbtmp3.4/6, Error ellipse: s-maj=59.4km s-min=33.8km az=5.0*
*AEIC **24** 22:52:33.9±1.8, 51°.9N±0°.1×176°.87W±0°.08, h100km±3km, Error ellipse: s-maj=18.3km s-min=6.3km az=167.0*
*NEIC **24** 22:52:33.1±2.2, 52°.0N±0°.1×176°.96W±0°.08, h103km±3km, mb3.7/55, ML3.7/10, ML3.4(AEIC), Error ellipse: s-maj=18.6km s-min=6.4km az=167.0*
ISC 24 22:52:32.7±0.7, 52°.0N±0°.1×176°.94W±0°.04, h106km±5km, n119, σ1§30/125, mb3.6/16, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KIRH	**Kanaga Island**	**0.11**	**245**			**Pn**	**22 52 47.3**	**-0.1**
KIRH						**Sn**	**22 52 57.8**	**-0.6**
KINC	**Kanaga Island**	**0.12**	**263**			**Pn**	**22 52 47.2**	**-0.2**
KINC						**Sn**	**22 52 58.0**	**-0.5**
KIKV	**Kanaga Island**	**0.16**	**245**			**Pn**	**22 52 47.3**	**-0.2**
KIKV						**Sn**	**22 52 58.5**	**-0.2**
KIWB	**Kanaga Island**	**0.16**	**235**			**Pn**	**22 52 47.2**	**-0.3**
KIWB				Sn		**Sn**	**22 52 58.0**	**-0.6**
KIWB				IAML			22 52 59.1	
	comp=E,2μm,0.4s							
ADK	**Adak**	**0.17**	**112**	Pn		**Pn**	**22 52 46.8**	**-0.7**
ADK				Sn		**Sn**	**22 52 57.4**	**-1.2**
ADK				IAML			22 52 59.1	
	comp=E,4μm,0.4s							
ADK				IAML			22 53 00.9	
	comp=E,3μm,0.3s							
ADAG	**Mount Adagdak**	**0.21**	**81**			**Pn**	**22 52 47.5**	**-0.2**
KIMD	**Kanaga Island**	**0.26**	**225**			**Pn**	**22 52 47.7**	**-0.2**
KIMD						**Sn**	**22 52 58.8**	**-0.4**
ETKA	**Kagalaska Isla**	**0.34**	**104**			**Pn**	**22 52 47.7**	**-0.5**
ETKA						**Sn**	**22 52 58.9**	**-0.9**
GSCK	**Great Sitkin C**	**0.48**	**82**			**Pn**	**22 52 48.7**	**-0.4**
GSTD	**Great Sitkin T**	**0.50**	**77**			**Pn**	**22 52 48.5**	**-0.7**
GSTD						**Sn**	**22 53 00.6**	**-1.0**
GSMY	**Great Sitkin M**	**0.55**	**80**			**Sn**	**22 53 01.3**	**-0.9**
GSTR	**Great Sitkin T**	**0.56**	**74**	Pn		**Pn**	**22 52 49.2**	**-0.4**
GSTR				Sn		**Sn**	**22 53 01.4**	**-0.9**
GSTR				IAML			22 53 04.3	
	comp=E,4μm,0.5s							
GSIG	**Igitkin Island**	**0.63**	**86**			**Pn**	**22 52 49.7**	**-0.4**
GSIG						**Sn**	**22 53 02.4**	**-0.8**
TAFP	**Tanaga Falls P**	**0.65**	**266**			**Pn**	**22 52 50.3**	**0.0**
TANO	**Tanaga North**	**0.73**	**268**			**Pn**	**22 52 51.5**	**+0.5**
TANO						**Sn**	**22 53 05.2**	**+0.5**
GAEA	**Gareloi East**	**1.14**	**262**			**Pn**	**22 52 55.7**	**+0.7**
GANE	**Gareloi Northe**	**1.15**	**264**			**Sn**	**22 53 12.6**	**+0.4**
GALAA	**Gareloi Lava P**	**1.15**	**262**			**Pn**	**22 52 55.8**	**+0.6**
GANO	**Gareloi North**	**1.17**	**265**			**Pn**	**22 52 55.8**	**+0.4**
GANO						**Sn**	**22 53 12.6**	**+0.1**
GAKI	**Gareloi-Kavalg**	**1.23**	**252**			**Pn**	**22 52 56.4**	**+0.4**
KOWE	**Korovin West**	**1.71**	**75**			**Sn**	**22 53 22.8**	**-1.2**
ATKA	**Atka Island**	**1.71**	**80**	Pn		**Pn**	**22 53 01.4**	**-0.3**
ATKA				Sn		**Sn**	**22 53 23.0**	**-1.0**
ATKA				IAML			22 53 23.7	
	comp=N,312nm,0.7s							
ATKA				IAML			22 53 30.7	
	comp=E,275nm,0.6s							
KOKL	**Mount Kliuchef**	**1.73**	**76**			**Pn**	**22 53 02.0**	**-0.1**
KONW	**Korovin Northw**	**1.74**	**74**			**Pn**	**22 53 01.9**	**-0.3**
KOKV	**Korovin Volcan**	**1.76**	**75**			**Pn**	**22 53 02.4**	**-0.1**
KOFP	**Korovin Flat P**	**1.78**	**78**			**Pn**	**22 53 02.9**	**+0.1**
KOFP						**Sn**	**22 53 25.3**	**-0.4**
AMKA	**Amchitka**	**2.41**	**258**	Pn		**Pn**	**22 53 08.3**	**-2.4**
AMKA				Sn		**Sn**	**22 53 39.6**	**-0.4**
P08K	**Saint George I**	**6.36**	**40**			**Pn**	**22 54 01.3**	**-2.5**
SPIA	**Saint Paul Isl**	**6.52**	**34**	Pn		**Pn**	**22 54 07.7**	**+1.7**
M11K	**Mekoryuk**	**10.35**	**31**	Pn		**Pn**	**22 54 59.6**	**+1.8**
M13K	**Dall Lake**	**11.35**	**36**	Pn		**Pn**	**22 55 15.3**	**+4.0**
O14K	**Tigyukauivet M**	**11.47**	**44**	Pn		**Pn**	**22 55 15.8**	**+2.8**
N14K	**Kuskokwak Cree**	**11.68**	**41**	Pn		**Pn**	**22 55 19.4**	**+3.7**
O15K	**Ungalikthiuk R**	**12.07**	**46**	Pn		**Pn**	**22 55 24.5**	**+3.6**
N15K	**Kwethluk River**	**12.47**	**42**	Pn		**Pn**	**22 55 30.2**	**+4.0**
J14K	**Nanvaranak Lak**	**12.98**	**28**	Pn		**Pn**	**22 55 35.2**	**+2.4**
O16K	**Kokwok River B**	**13.05**	**47**	Pn		**P**	**22 55 37.6**	**-2.4**
L16K	**Owhat River**	**13.63**	**37**	Pn		**Pn**	**22 55 43.2**	**+1.9**
M17K	**Holitna River**	**14.24**	**41**			**Pn**	**22 55 51.5**	**+2.3**
J16K	**Anvik River**	**14.28**	**31**	Pn		**Pn**	**22 55 51.8**	**+2.1**
O18K	**Koktuh Hills**	**14.48**	**48**	P		**P**	**22 55 55.3**	**-0.6**
N18K	**Kilae Creek**	**14.53**	**45**			**P**	**22 55 57.2**	**+0.7**
K17K	**Iditarod**	**14.69**	**36**			**P**	**22 55 57.8**	**-0.4**
L18K	**Granite Mounta**	**14.99**	**39**	P		**P**	**22 56 01.7**	**+0.1**
N19K	**Bonanza Creek**	**15.21**	**46**	P		**P**	**22 56 05.1**	**+1.1**
N19K				IAmb		IAmb	22 56 07.3	
	comp=Z,5.2nm,0.8s							
H17K	**Granite Mounta**	**15.70**	**27**	P		**P**	**22 56 11.4**	**+2.0**
H18K	**Honhosa River**	**16.31**	**29**			**P**	**22 56 17.1**	**+1.0**
H18K				IAmb		IAmb	22 56 19.0	
	comp=Z,4.4nm,0.9s							
PPLA	**Purkeypile**	**17.13**	**41**	P		**P**	**22 56 27.5**	**+2.2**
PPLA				IAmb		IAmb	22 56 42.2	
	comp=Z,6.0nm,1.1s							
SUA	**Susitna One**	**17.13**	**46**	P		**P**	**22 56 27.5**	**+2.2**
C16K	**Lisburne Hills**	**17.31**	**15**	P		**Pn**	**22 56 28.0**	**+0.7**
L22K	**Petersville**	**17.54**	**43**	P		**P**	**22 56 30.2**	**+0.4**
F19K	**Shaleruckik Mo**	**17.70**	**25**	P		**Pn**	**22 56 33.0**	**+1.0**
KTH	**Kantishna Hill**	**17.94**	**40**	P		**Pn**	**22 56 35.4**	**+0.3**
KTH				IAmb		IAmb	22 56 36.3	
	comp=Z,3.8nm,0.7s							
KNK	**Knik Glacier**	**18.14**	**47**	P		**P**	**22 56 37.0**	**+0.7**
TRF	**Thorofare Moun**	**18.15**	**40**	P		**P**	**22 56 36.6**	**+0.1**
E19K	**Redstone River**	**18.31**	**24**	P		**P**	**22 56 38.6**	**+0.5**
I21K	**Tanana**	**18.40**	**34**	P		**Pn**	**22 56 40.3**	**-0.1**
I21K				IAmb		IAmb	22 56 42.3	
	comp=Z,4.5nm,0.8s							
G21K	**Allakaket**	**18.70**	**30**	P		**Pn**	**22 56 43.8**	**-0.2**
G21K				IAmb		IAmb	22 56 47.4	
	comp=Z,6.2nm,1.1s							
MLY	**Manley**	**18.76**	**36**	P		**P**	**22 56 44.0**	**+0.9**
H22K	**Ishtalitna Cre**	**19.01**	**33**	P		**P**	**22 56 47.0**	**+1.2**
H22K				IAmb		IAmb	22 56 48.5	
	comp=Z,4.0nm,1.0s							
NEA2	**Nenana**	**19.16**	**38**	P		**P**	**22 56 47.7**	**+0.3**
NEA2				IAmb		IAmb	22 56 52.2	
	comp=Z,3.2nm,1.0s							
F21K	**Alatna River**	**19.17**	**28**	P		**P**	**22 56 49.0**	**+1.5**
F21K				IAmb		IAmb	22 56 51.4	
	comp=Z,2.7nm,0.8s							
D20K	**Etivluk River**	**19.42**	**22**	P		**P**	**22 56 51.2**	**+1.0**
WRH	**Wood River Hil**	**19.48**	**39**	P		**P**	**22 56 50.6**	**-0.2**
WRH				IAmb		IAmb	22 56 59.7	
	comp=Z,2.8nm,1.1s							
CCB	**Clear Creek Bu**	**19.66**	**39**	P		**P**	**22 56 53.4**	**+0.6**
G23K	**Bananza Creek**	**19.93**	**32**	P		**P**	**22 56 57.2**	**+1.5**
G23K				IAmb		IAmb	22 56 58.3	
	comp=Z,2.7nm,0.8s							
N25K	**Chitina, Valde**	**19.97**	**48**	P		**P**	**22 56 58.2**	**+1.9**
N25K				IAmb		IAmb	22 57 01.2	
	comp=Z,3.6nm,0.8s							
PAX	**Paxson**	**19.97**	**44**	P		**P**	**22 56 57.5**	**+1.2**
PAX				IAmb		IAmb	22 57 03.5	
	comp=Z,4.0nm,1.2s							
IL31		**20.07**	**39**	P		**P**	**22 56 57.2**	**-0.1**
ILAR	**Eielson Array**	**20.07**	**39**	P		**P**	**22 56 57.2**	**0.0**
	comp=Z,0.3nm,0.5s,baz=233,slow=9.1,SNR=9.6							
	comp=Z,0.3nm,0.5s							
H24K	**Noodor Dome**	**20.20**	**35**	P		**P**	**22 56 59.0**	**+0.4**
H24K				IAmb		IAmb	22 57 25.8	
	comp=Z,3.6nm,1.1s							
E22K	**Anaktuvuk Pass**	**20.26**	**27**	P		**P**	**22 56 59.6**	**+0.4**
E22K				IAmb		IAmb	22 57 05.9	
	comp=Z,3.2nm,0.9s							
B20K	**Meade River**	**20.31**	**20**	P		**P**	**22 56 60.0**	**+0.2**
B20K				IAmb		IAmb	22 57 01.1	
	comp=Z,3.6nm,0.8s							
D22K	**Ayikyak River**	**20.52**	**25**	P		**P**	**22 57 02.5**	**+0.4**
B21K	**Ikpikpuk River**	**20.57**	**22**	P		**P**	**22 57 03.0**	**+0.4**
G24K	**Hadweenzic Riv**	**20.77**	**33**	P		**P**	**22 57 06.0**	**+1.2**
G24K				IAmb		IAmb	22 57 08.9	
	comp=Z,4.0nm,0.8s							
DOT	**Dot Lake**	**20.79**	**43**	P		**P**	**22 57 04.9**	**-0.2**
DOT				IAmb		IAmb	22 57 07.7	
	comp=Z,2.1nm,0.8s							
D23K	**Nanushuk River**	**21.11**	**26**	P		**P**	**22 57 08.6**	**+0.2**
E24K	**Your Creek**	**21.20**	**30**	P		**P**	**22 57 10.4**	**+1.0**
E24K				IAmb		IAmb	22 57 13.7	
	comp=Z,2.3nm,0.7s							
B22K	**Teshekpuk Lake**	**21.38**	**22**	P		**P**	**22 57 10.3**	**-0.9**
C23K	**Itkillik River**	**21.71**	**25**	P		**P**	**22 57 14.5**	**-0.2**
D24K	**Happy Valley**	**21.75**	**27**	P		**P**	**22 57 15.6**	**+0.4**
D24K				IAmb		IAmb	22 57 17.3	
	comp=Z,3.3nm,0.8s							
F25K	**Christian Rive**	**21.85**	**32**	P		**P**	**22 57 17.5**	**+1.2**
F25K				IAmb		IAmb	22 57 18.1	
	comp=Z,1.9nm,0.8s							
BMAR	**Burnt Mountain**	**22.12**	**33**	P		**P**	**22 57 18.7**	**-0.5**
C24K	**Franklin Bluff**	**22.14**	**26**	P		**P**	**22 57 18.8**	**-0.5**
C24K				IAmb		IAmb	22 57 19.9	
	comp=Z,3.2nm,0.8s							
G26K	**Porcupine Rive**	**22.18**	**35**	P		**P**	**22 57 19.7**	**+0.1**
G26K				IAmb		IAmb	22 57 21.2	
	comp=Z,4.3nm,0.8s							
F26K	**Sheenjek River**	**22.40**	**33**	P		**P**	**22 57 21.9**	**-0.1**
L29M	**L29M**	**23.24**	**46**	P		**P**	**22 57 29.1**	**-1.2**
L29M				IAmb		IAmb	22 57 36.5	
	comp=Z,2.8nm,1.1s							
C27K	**Jago River**	**23.51**	**29**	P		**P**	**22 57 31.9**	**-0.8**
F28M	**Old Crow**	**23.84**	**35**	P		**P**	**22 57 36.8**	**+1.2**
F28M				IAmb		IAmb	22 57 38.7	
	comp=Z,1.5nm,0.6s							
D27M	**Malcolm River**	**24.16**	**31**	P		**P**	**22 57 39.0**	**+0.4**
E28M	**Babbage River**	**24.35**	**33**	P		**P**	**22 57 42.2**	**+2.0**
E28M				IAmb		IAmb	22 57 43.0	
	comp=Z,4.0nm,0.9s							
E29M	**Blow River**	**24.82**	**34**	P		**P**	**22 57 46.4**	**+1.9**
E29M				IAmb		IAmb	22 57 48.0	
	comp=Z,2.1nm,0.6s							
H31M	**Peel River**	**25.39**	**41**	P		**P**	**22 57 49.0**	**-0.8**
G31M

BKZ	**Black Stump Fm**	**6.33 209**	P		**Pn**	**23 12 33.4**	**-1.3**
ASAR	**Alice Springs**	**41.68 271**	P		**P**	**23 18 37.9**	**+0.2**
	1.1nm,0.5s,baz=110,slow=7.8,SNR=12						
ASAR			PcP		**PcP**	**23 20 31.9**	**+0.3**
	0.2nm,0.4s,baz=106,slow=3.5,SNR=2.2						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**42.97 277**	P		**P**	**23 18 47.9**	**-0.2**
	0.8nm,0.5s,baz=117,slow=7.7,SNR=12						
	0.8nm,0.5s						
H03S2	**Juan Fernandez**	**79.81 124**	T		T	00 51 37.7	
	baz=237,slow=20,SNR=5.7						
H03S1	**Juan Fernandez**	**79.82 124**	T		T	00 51 40.3	
	baz=237						
H03S3	**Juan Fernandez**	**79.83 124**	T		T	00 51 36.6	
	baz=237						
H03N3	**Juan Fernandez**	**80.02 123**	T		T	00 51 49.2	
	baz=239,slow=15,SNR=7.8						
H03N2	**Juan Fernandez**	**80.02 123**	T		T	00 51 46.9	
	baz=239,slow=15,SNR=6.2						
H03N1	**Juan Fernandez**	**80.04 123**	T		T	00 51 47.5	
	baz=239,slow=15,SNR=6.2						
MKAR	**Makanchi Array**	**118.78 309**	PKP		**PKiKP**	**23 29 33.9**	**+0.1**
	0.2nm,0.4s,baz=114,slow=3.6,SNR=7.2						
BVAR	**Borovoye Array**	**127.73 314**	PKP		**PKiKP**	**23 29 50.8**	**-0.4**
	0.6nm,0.4s,baz=90,slow=1.4,SNR=6.6						
FINES	**FINESS Array B**	**147.67 337**	PKPbc		**PKPbc**	**23 30 29.9**	**+0.2**
	7.5nm,1.1s,baz=48,slow=2.8,SNR=7.1						
MMAI	**Mount Meron Ar**	**150.81 279**	PKPbc		**PKiKP**	**23 30 39.5**	**+0.5**
	0.4nm,0.3s,baz=76,slow=7.7,SNR=2.1						

*SJA **24** 23:11:30.3±0.7,21.7°78S×67.3°37W,h215km±5km,ML3.8, MW3.7*
*IDC **24** 23:11:31.6±2.2,21.7°73S×67.0°03W,h177km± 18km,mb3.2/4, mbtmp3.7/7,Error ellipse: s-maj=22.9km s-min=19.9km az=60.0*
*NEIC **24** 23:11:31.4±2.1,21.7°78S±0.0°03×67.6°W±0.2,h233km±17km, mb4.1/7,ML4.2(GUC),Error ellipse: s-maj=20.3km s-min=3.4km az=93.0*
*GUC **24** 23:11:33.1±0.8,21.7°77S×67.4°45W,h204km±6km,ML4.2*
*SCB **24** 23:11:33.0±1.4,21.8°84S×67.3°33W,h175km±10km,MB4.3, ML4.0/2,Error ellipse: s-maj=5.0km s-min=3.5km az=0.0*

ISC 24 23:11:31.7±0.6,21.82S±0.04×67.37W±0.04,h205km±6km, n111,σ1§64/156,mb3.1/3,8C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.35**	**213**			**Pn**	**23 12 06.0**	**+1.0**
AF01	**San Pedro de A**	**1.35**	**213**	*eP*		**Pn**	**23 12 06.2**	**+1.2**
AF01	**San Pedro de A**	**1.35**	**213**	*eS*		**S**	**23 12 30.9**	**+0.2**
MOCB	**Mochara**	**1.71**	**71**	Pg		**Pn**	**23 12 07.5**	**-0.8**
MOCB				Sg		**S**	**23 12 32.9**	**-3.3**
MOCB				IAML			23 12 35.5	
	745nm,0.6s							
PB09	**IPOC Station P**	**1.74**	**270**			**Pn**	**23 12 08.7**	**+0.5**
PB09				Sn		**S**	**23 12 37.0**	**+0.8**
PB09	**IPOC Station P**	**1.74**	**270**	↑*iP*		**Pn**	**23 12 08.8**	**+0.5**
PB09				*eS*		**S**	**23 12 35.6**	**-0.6**
PB09	**IPOC Station P**	**1.74**	**270**	*eP*		**Pn**	**23 12 08.2**	**-0.1**
PB09				*eS*		**S**	**23 12 37.5**	**+1.3**
PB09				IAML			23 12 42.2	
	comp=Z,244nm,0.1s							
PB09	**IPOC Station P**	**1.74**	**270**	Pg		**Pn**	**23 12 08.8**	**+0.5**
YJA	**Yavi**	**1.76**	**102**	*eP*		**Pn**	**23 12 08.6**	**-0.2**
YJA	**Yavi**	**1.76**	**102**	*eP*		**Pn**	**23 12 08.8**	**+0.1**
YJA				*eS*		**S**	**23 12 58.8**	**-2.3**
YJA	**Yavi**	**1.76**	**102**	Pg		**Pn**	**23 12 08.6**	**-0.2**
PB01	**IPOC Station P**	**2.12**	**291**			**Pn**	**23 12 11.9**	**-0.1**
PB01				Sn		**S**	**23 12 42.2**	**-0.5**
PB01	**IPOC Station P**	**2.12**	**291**	↑*iP*		**Pn**	**23 12 11.8**	**-0.2**
PB01				*eS*		**S**	**23 12 41.7**	**-1.0**
PB01				IAML			23 12 42.8	
	comp=N,2μm,0.2s							
PB01	**IPOC Station P**	**2.12**	**291**	*eP*		**Pn**	**23 12 11.4**	**-0.6**
PB01				*eS*		**S**	**23 12 42.3**	**-0.5**
PB01				IAML			23 12 43.6	
	comp=Z,740nm,0.2s							
PB01	**IPOC Station P**	**2.12**	**291**	Pg		**Pn**	**23 12 12.0**	**0.0**
PB01				Sg		**S**	**23 12 42.2**	**-0.5**
PB01				IAML			23 12 43.1	
	comp=Z,701nm,0.4s							
PB06	**IPOC Station P**	**2.22**	**246**			**Pn**	**23 12 13.0**	**-0.1**
PB06				Sn		**S**	**23 12 45.0**	**+0.1**
PB06	**IPOC Station P**	**2.22**	**246**	*eP*		**Pn**	**23 12 13.6**	**+0.5**
PB06				*eS*		**S**	**23 12 44.5**	**-0.3**
PB06				IAML			23 12 45.9	
	comp=E,555nm,0.2s							
PB06	**IPOC Station P**	**2.22**	**246**	*eP*		**Pn**	**23 12 13.5**	**+0.5**
PB06				*eS*		**S**	**23 12 45.7**	**+0.9**
PB06				IAML			23 12 51.2	
	comp=Z,254nm,0.3s							
PB06	**IPOC Station P**	**2.22**	**246**	Pg		**Pn**	**23 12 13.6**	**+0.5**
PB03	**IPOC Station P**	**2.23**	**264**			**Pn**	**23 12 13.0**	**-0.2**
PB03				Sn		**S**	**23 12 44.1**	**-0.7**
PB03	**IPOC Station P**	**2.23**	**264**	*eP*		**Pn**	**23 12 13.3**	**+0.1**
PB03				*eS*		**S**	**23 12 43.7**	**-1.1**
PB03				IAML			23 12 44.5	
	comp=N,1μm,0.2s							
PB03	**IPOC Station P**	**2.23**	**264**	*eP*		**Pn**	**23 12 12.9**	**-0.2**
PB03				*eS*		**S**	**23 12 44.0**	**-0.8**
PB03				IAML			23 12 45.2	
	comp=Z,935nm,0.2s							
HJA	**Humahuaca**	**2.28**	**128**	*eP*		**Pn**	**23 12 14.4**	**+0.4**
PB07	**IPOC Station P**	**2.34**	**272**	*eP*		**Pn**	**23 12 14.5**	**+0.1**
PB07				*eS*		**S**	**23 12 45.8**	**-1.3**
PB07				IAML			23 12 47.6	
	comp=N,1μm,0.2s							
PB07	**IPOC Station P**	**2.34**	**272**	*eP*		**Pn**	**23 12 14.1**	**-0.4**
PB07				*eS*		**S**	**23 12 46.3**	**-0.7**
PB07				IAML			23 12 47.2	
	comp=Z,858nm,0.2s							
PB08	**IPOC Station P**	**2.36**	**315**			**Pn**	**23 12 15.4**	**+0.5**
PB08	**IPOC Station P**	**2.36**	**315**	↑*iP*		**Pn**	**23 12 15.4**	**+0.5**
PB08				*eS*		**S**	**23 12 46.7**	**-1.2**
PB08				IAML			23 12 49.8	
	comp=E,269nm,0.2s							
PB08	**IPOC Station P**	**2.36**	**315**	*eP*		**Pn**	**23 12 14.7**	**-0.1**
PB08				*eS*		**S**	**23 12 47.7**	**-0.2**
PB08				IAML			23 12 48.9	
	comp=Z,104nm,0.3s							
PB08	**IPOC Station P**	**2.36**	**315**	Pg		**Pn**	**23 12 15.5**	**+0.6**
PB02	**IPOC Station P**	**2.40**	**281**			**Pn**	**23 12 15.2**	**+0.2**
PB02				Sn		**S**	**23 12 46.4**	**-1.8**
PB02	**IPOC Station P**	**2.40**	**281**	↑*iP*		**Pn**	**23 12 14.8**	**-0.2**
PB02				*eS*		**S**	**23 12 46.4**	**-1.8**
PB02	**IPOC Station P**	**2.40**	**281**	*eP*		**Pn**	**23 12 14.6**	**-0.4**
PB02				*eS*		**S**	**23 12 47.1**	**-1.0**
PB02	**IPOC Station P**	**2.40**	**281**	Pg		**Pn**	**23 12 15.2**	**+0.2**
PB02				Sg		**S**	**23 12 46.7**	**-1.5**
SALTA		**2.58**	**159**	↓*iP*		**Pn**	**23 12 18.6**	**+1.3**
SALTA		**2.58**	**159**	*eP*		**Pn**	**23 12 18.6**	**+1.3**
SALTA				*eP*			23 12 18.6	
SALTA				*eS*		**S**	**23 12 53.5**	**+1.2**
GO01	**Chusmiza**	**2.74**	**321**			**Pn**	**23 12 19.2**	**0.0**
GO01	**Chusmiza**	**2.74**	**321**	↑*iP*		**Pn**	**23 12 19.2**	**0.0**
GO01				*eS*		**S**	**23 12 54.5**	**-1.1**
GO01				IAML			23 13 00.1	
	comp=N,780nm,0.1s							
GO01	**Chusmiza**	**2.74**	**321**	*eP*		**Pn**	**23 12 19.9**	**+0.7**
GO01				*eS*		**S**	**23 12 57.6**	**+2.1**
GO01				IAML			23 12 58.8	
	comp=Z,162nm,0.5s							
GO01	**Chusmiza**	**2.74**	**321**	Pg		**Pn**	**23 12 19.6**	**+0.4**
HMBC	**Humberstone**	**2.81**	**303**			**Pn**	**23 12 19.1**	**-0.4**
HMBC				Sn		**S**	**23 12 54.3**	**-2.0**
HMBC	**Humberstone**	**2.81**	**303**	↑*iP*		**Pn**	**23 12 18.9**	**-0.7**
HMBC				*eS*		**S**	**23 12 54.0**	**-2.3**
PB11	**IPOC Station P**	**2.96**	**313**			**Pn**	**23 12 20.9**	**-0.5**
PB11				Sn		**S**	**23 12 57.4**	**-2.2**
PB11	**IPOC Station P**	**2.96**	**313**	↑*iP*		**Pn**	**23 12 20.9**	**-0.5**
PB11				*eS*		**S**	**23 12 57.3**	**-2.3**
PB11				IAML			23 12 58.5	
	comp=E,539nm,0.2s							
PB11	**IPOC Station P**	**2.96**	**313**	*eP*		**Pn**	**23 12 20.2**	**-1.2**
PB11				*eS*		**S**	**23 12 58.4**	**-1.2**
PB11				IAML			23 12 59.7	
	comp=Z,370nm,0.2s							
TA02	**Huaiquique**	**3.00**	**300**	*eP*		**Pn**	**23 12 21.0**	**-0.7**
TA02				*eS*		**S**	**23 12 57.5**	**-2.7**
TA02	**Huaiquique**	**3.00**	**300**	*eP*		**Pn**	**23 12 21.0**	**-0.7**
TA02				*eS*		**S**	**23 12 58.7**	**-1.5**
TA02				IAML			23 13 03.5	
	comp=Z,383nm,0.3s							
SOEO	**Opoqueri**	**3.27**	**351**	Pg		**Pn**	**23 12 26.7**	**+1.3**
SLA	**San Lorenzo**	**3.36**	**150**	↓*eP*		**Pn**	**23 12 27.3**	**+1.3**
SLA	**San Lorenzo**	**3.36**	**150**	*eP*		**Pn**	**23 12 27.4**	**+1.3**
SLA				*eS*		**S**	**23 13 09.8**	**+1.7**
PB10	**IPOC Station P**	**3.39**	**240**	Pn		**Pn**	**23 12 26.3**	**+0.1**
PB10						**S**	**23 13 06.4**	**-2.1**
PB10	**IPOC Station P**	**3.39**	**240**	*eP*		**Pn**	**23 12 26.5**	**+0.3**
PB10	**IPOC Station P**	**3.39**	**240**	*eP*		**Pn**	**23 12 26.5**	**+0.3**
PB10				*eS*		**S**	**23 13 06.5**	**-1.9**
PB10				IAML			23 13 08.4	
	comp=Z,85nm,0.4s							
GO02	**Mina Guanaco**	**3.90**	**211**			**Pn**	**23 12 33.7**	**+0.9**
GO02				Sn		**S**	**23 13 19.9**	**-0.5**
GO02	**Mina Guanaco**	**3.90**	**211**	↓*iP*		**Pn**	**23 12 33.5**	**+0.7**
GO02	**Mina Guanaco**	**3.90**	**211**	*eP*		**Pn**	**23 12 33.0**	**+0.2**
GO02				*eS*		**S**	**23 13 19.8**	**-0.5**
GO02				IAML			23 13 24.6	
	comp=Z,169nm,0.2s							
GO02	**Mina Guanaco**	**3.90**	**211**	Pg		**Pn**	**23 12 33.7**	**+0.9**
PB14	**IPOC Station P**	**3.95**	**224**			**Pn**	**23 12 33.2**	**-0.2**
PB14	**IPOC Station P**	**3.95**	**224**	*eP*		**Pn**	**23 12 33.7**	**+0.4**
PB14				*eS*		**S**	**23 13 20.0**	**-1.3**
PB14				IAML			23 13 23.2	
	comp=Z,91nm,0.2s							
PB14	**IPOC Station P**	**3.95**	**224**	Pg		**Pn**	**23 12 33.8**	**+0.4**
SOET	**ToroToro**	**3.96**	**22**	Pg		**Pn**	**23 12 33.5**	**-0.2**
PB16	**IPOC Station P**	**4.01**	**330**			**Pn**	**23 12 34.8**	**+0.4**
PB16				Sn		**S**	**23 13 21.7**	**-1.3**
PB16	**IPOC Station P**	**4.01**	**330**	↑*iP*		**Pn**	**23 12 35.0**	**+0.6**
PB16	**IPOC Station P**	**4.01**	**330**	*eP*		**Pn**	**23 12 34.5**	**+0.1**
PB16				IAML			23 13 27.1	
	comp=Z,67nm,0.4s							
PB16	**IPOC Station P**	**4.01**	**330**	Pg		**Pn**	**23 12 35.3**	**+0.9**
PB12	**IPOC Station P**	**4.23**	**318**			**Pn**	**23 12 35.0**	**-1.7**
PB12	**IPOC Station P**	**4.23**	**318**	*eP*		**Pn**	**23 12 34.7**	**-1.9**
PB12	**IPOC Station P**	**4.23**	**318**	*eP*		**Pn**	**23 12 34.8**	**-1.9**
PB12				*eS*		**S**	**23 13 23.9**	**-3.3**
PB12				IAML			23 13 27.2	
	comp=Z,106nm,0.4s							
AP01	**Chacalluta**	**4.42**	**320**	Pn		**Pn**	**23 12 38.1**	**-1.0**
PB18	**Visviri**	**4.65**	**334**			**Pn**	**23 12 40.3**	**-2.1**
PB18	**Visviri**	**4.65**	**334**	*eP*		**Pn**	**23 12 39.9**	**-2.5**
BBOJ	**La Paz, Jacaqu**	**4.88**	**351**	Pg		**Pn**	**23 12 47.1**	**+1.8**
SOEJ	**Jacaque**	**4.88**	**351**	Pg		**Pn**	**23 12 47.2**	**+1.9**
BBOE	**La Paz, Chanca**	**5.01**	**353**	Pg		**Pn**	**23 12 49.0**	**+1.9**
AC01	**Pan de Azucar**	**5.22**	**214**			**Pn**	**23 12 48.7**	**-0.4**
AC01	**Pan de Azucar**	**5.22**	**214**	*eP*		**Pn**	**23 12 48.7**	**-0.4**
AC01				*eS*		**S**	**23 13 47.2**	**-2.8**
AC01				IAML			23 13 50.5	
	comp=Z,30nm,0.1s							
AC02	**Maricunga**	**5.25**	**197**			**Pn**	**23 12 50.1**	**+0.3**
AC02	**Maricunga**	**5.25**	**197**	*eP*		**Pn**	**23 12 50.9**	**+1.0**
AC02				*eS*		**S**	**23 13 48.4**	**-2.8**
AC02				IAML			23 13 54.5	
	comp=Z,18nm,0.2s							
BBOD	**La Paz, Gloria**	**5.28**	**347**	Pg		**Pn**	**23 12 51.8**	**+1.3**
LPAZ	**La Paz**	**5.55**	**352**	P		**Pn**	**23 12 54.7**	**+0.8**
	comp=Z,3.3nm,0.3s,baz=158,slow=5.7,SNR=27							
LPAZ				S		**S**	**23 13 56.7**	**-1.8**
	comp=Z,3.4nm,0.5s,baz=317,slow=14,SNR=5.3							
LPAZ	**La Paz**	**5.55**	**352**			**Pn**	**23 12 53.5**	**-0.4**
LPAZ	**La Paz**	**5.55**	**352**	Pg		**Pn**	**23 12 54.7**	**+0.8**
BBOB	**La Paz, Bander**	**5.69**	**353**	Pg		**Pn**	**23 12 56.5**	**+0.8**
AC06	**Mina Casimiro**	**6.15**	**206**			**Pn**	**23 12 59.3**	**-1.7**
AC04	**Llanos de Chal**	**7.19**	**207**	Pn		**Pn**	**23 13 11.0**	**-0.3**
AC05	**El Transito**	**7.46**	**200**	Pn		**Pn**	**23 13 17.8**	**-0.3**
LCO	**Las Campanas**	**7.77**	**202**	Pn		**Pn**	**23 13 20.6**	**-1.7**
SIV	**San Ignacio**	**8.31**	**47**	P		**Pn**	**23 13 25.8**	**-3.4**
	comp=Z,12nm,0.4s,baz=248,slow=10,SNR=61							
SIV				S		S	23 14 52.9	-10
	comp=Z,3.5nm,0.4s,baz=144,slow=22,SNR=5.9							
CFA	**Coronel Fontan**	**9.78**	**184**	P		**Pn**	**23 13 48.9**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=41,slow=9.5,SNR=1.9							
CFA				S		**S**	**23 15 30.2**	**-7.4**
	comp=Z,0.8nm,0.3s,baz=132,slow=17,SNR=6.1							
PTLB	**Pontes e Lacer**	**10.05**	**52**			**Pn**	**23 13 49.5**	**-2.1**
VILB	**Vilhena**	**11.16**	**39**	Pn		**Pn**	**23 14 06.1**	**+0.2**
MT03	**Universidad Ad**	**11.96**	**193**	P		**P**	**23 14 22.8**	**+2.2**
MT13	**San Alfonso**	**12.16**	**192**	P		**P**	**23 14 27.0**	**+4.2**
MT09	**Talagante**	**12.33**	**194**	P		**P**	**23 14 28.0**	**+3.1**
BO04	**La Punta**	**12.46**	**193**	P		**P**	**23 14 28.8**	**+2.7**
MT01	**Popeta**	**12.48**	**195**	P		**P**	**23 14 29.4**	**+3.1**
BO01	**Tunca**	**12.95**	**194**	P		**P**	**23 14 32.5**	**+1.0**
BO02	**Sierra Bellavi**	**13.27**	**192**	P		**P**	**23 14 37.1**	**+1.9**
ITAB	**Concordia**	**14.88**	**114**			**P**	**23 14 53.5**	**+0.5**
ITAB				IAmb		IAmb	23 15 12.7	
	comp=Z,8.0nm,1.0s							
BI02	**San Fabin de**	**15.18**	**192**			**Pn**	**23 14 55.2**	**-0.7**
PLTB	**Pedras Altas**	**15.77**	**132**	P		**P**	**23 15 02.1**	**-0.7**
PLTB				IAmb		IAmb	23 15 22.6	
	comp=Z,7.1nm,1.0s							
TRQA	**Tornquist**	**16.84**	**165**	P		**P**	**23 15 14.5**	**0.0**
TRQA				IAmb		IAmb	23 15 17.4	
	comp=Z,3.6nm,0.6s							
GO06	**Curarrehue**	**18.05**	**190**	P		**P**	**23 15 28.8**	**+1.0**
GO06				IAmb		IAmb	23 15 36.4	
	comp=Z,6.8nm,1.0s							
VAO	**Valinhos**	**18.90**	**97**	P		**P**	**23 15 36.5**	**-0.7**
PLCA	**Paso Flores**	**19.05**	**187**	P		**P**	**23 15 36.7**	**-1.9**
PLCA				IAmb		IAmb	23 15 50.6	
	comp=Z,15nm,1.5s							
TXAR	**Lajitas Array**	**61.72**	**324**	P		**P**	**23 21 30.7**	**+2.1**
	comp=Z,0.2nm,0.8s,baz=115,slow=3.5,SNR=1.6							
	comp=Z,0.2nm,0.8s							
PDAR	**Pinedale Array**	**75.11**	**329**	P		**P**	**23 22 55.3**	**+3.8**
	comp=Z,0.2nm,0.5s,baz=143,slow=7.8,SNR=2.8							
	comp=Z,0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**76.12**	**70**	P		**P**	**23 22 58.9**	**+1.4**
	comp=Z,1.4nm,0.5s,baz=262,slow=4.5,SNR=38							
	comp=Z,1.4nm,0.5s							
YKA	**Yellowknife Ar**	**91.97**	**340**	P		**P**	**23 24 19.3**	**+2.7**
	comp=Z,0.4nm,0.9s,baz=136,slow=3.8,SNR=5.8							
	comp=Z,0.4nm,0.9s							
MKAR	**Makanchi Array**	**145.03**	**37**	PKP		**PKiKP**	**23 30 47.3**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=300,slow=3.2,SNR=2.1							
HHC	**Hu-ho-hao-te**	**161.01**	**2**	*eP*		**PKPdf**	**23 31 03.8**	**-3.9**
PZH	**PanZhiHua**	**169.02**	**63**	PKP		**PKPdf**	**23 31 08.8**	**-6.1**

*AZER **24** 23:26:33.5,38.°35N×44.°66E,h2km, ml2.8*
*ISK **24** 23:26:36.7,38.°37N×44.°45E,h5km,ML2.5/6*
*AFAD **24** 23:26:36.7,38.°44N×44.°50E,h15km±3km,ML2.6*
*TEH **24** 23:26:39.2,38.°48N×44.°69E,h5km,ML2.6,Presumed earthquake*

ISC 24 23:26:36.5±1.2,38.°41N±0.°02×44.°60E±0.°02,h3km±10km, n53,σ1§82/88,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.54**	**298**	P		**Pg**	**23 26 46.0**	**-0.8**
OZAP				S		**Sg**	**23 26 53.5**	**-0.3**
OZAP				IAML			23 26 56.0	
	comp=N,616nm,0.5s							
ISHB	**Shabestar**	**0.81**	**99**	Pg		**Pb**	**23 26 53.1**	**-0.2**
YOVA	**Hakkari_Yksek**	**0.85**	**197**	P		**Pg**	**23 26 53.8**	**+0.9**
YOVA				IAML			23 27 15.0	
	comp=N,154nm,0.8s							
IMRD	**Marand**	**0.92**	**70**	Pg		**Pn**	**23 26 55.5**	**-0.9**
TVAN	**Van**	**0.94**	**278**	P		**Pg**	**23 26 52.8**	**-1.7**
TVAN				IAML			23 27 23.0	
	comp=N,242nm,0.8s							
TVAN				IAML			23 27 23.0	
	comp=E,170nm,0.6s							
MAKU	**Maku**	**0.95**	**4**	Sg		**Sb**	**23 27 07.9**	**-0.8**
VMUR	**Van-Muradiye**	**0.99**	**306**	P		**Pg**	**23 26 54.1**	**-1.4**
VMUR				S		**Sg**	**23 27 07.9**	**-0.4**
NAX	**Nakhchivan**	**1.04**	**42**	P		**Pn**	**23 26 57.1**	**-0.9**
NAX				S		**Sn**	**23 27 13.6**	**+0.5**
HAKT	**HAKKARI**	**1.10**	**220**	P		**Pg**	**23 26 57.5**	**-0.1**
HAKT				S		**Sg**	**23 27 13.1**	**+1.2**
HAKT				IAML			23 27 23.0	
	comp=E,104nm,0.5s							
HAKT	**HAKKARI**	**1.10**	**220**	P		**Pg**	**23 26 57.5**	**-0.1**
HAKT				S		**Sn**	**23 27 16.4**	**+1.5**
ORD	**Ordubad**	**1.21**	**64**	P		**Pn**	**23 27 00.5**	**+0.1**
ORD				S		**Sn**	**23 27 18.1**	**+0.7**
GEVA	**Gevas**	**1.22**	**266**	P		**Pg**	**23 26 57.0**	**-2.7**
GEVA				S		**Sg**	**23 27 14.6**	**-0.9**
ITBZ	**Tabriz**	**1.23**	**98**	Pg		**Pn**	**23 27 00.8**	**+0.1**
SBZ	**Shahbuz**	**1.24**	**37**	P		**Pn**	**23 27 00.8**	**0.0**
SBZ				S		**Sn**	**23 27 20.3**	**+2.3**
AKDM	**Akdamar-Van**	**1.27**	**267**	Pn		**Pn**	**23 26 59.0**	**-2.4**
AKDM				Sn		**Sg**	**23 27 17.1**	**-0.3**
IAZR	**Azarshahr**	**1.31**	**123**	Pg		**Pn**	**23 27 03.5**	**+1.6**
HYR	**Heyderabad**	**1.32**	**8**	P		**Pb**	**23 27 03.6**	**+1.6**
HYR				S		**Sn**	**23 27 25.4**	**+5.2**
DYDN	**Diyadin**	**1.34**	**328**	P		**Pn**	**23 26 59.0**	**-3.3**
CUKT	**Cukurca**	**1.40**	**214**	Pn		**Pn**	**23 27 02.9**	**-0.1**
CUKT				Sn		**Sb**	**23 27 21.9**	**+0.3**
CUKT	**Cukurca**	**1.40**	**214**	P		**Pn**	**23 27 02.8**	**-0.3**
CUKT				IAML			23 27 26.0	
	comp=E,108nm,0.6s							
CUKT				IAML			23 27 30.0	
	comp=N,152nm,0.6s							
IGDI	**IGDIR**	**1.51**	**345**	P		**Pn**	**23 27 04.7**	**+0.1**
IGDI				IAML			23 27 30.0	
	comp=E,66nm,1.1s							
IGDI	**IGDIR**	**1.51**	**345**	P		**Pg**	**23 27 05.4**	**-0.1**
IGDI				S		**Sg**	**23 27 30.9**	**+5.8**
ADCV	**BITLIS_Adilcev**	**1.52**	**286**	P		**Pn**	**23 27 05.1**	**+0.3**
ADCV				S		**Sn**	**23 27 24.7**	**-0.5**
PERV	**Siirt/Pervari-**	**1.69**	**255**	P		**Pn**	**23 27 08.2**	**+1.2**
PERV				S		**Sn**	**23 27 30.0**	**+0.8**
PERV				IAML			23 27 39.0	
	comp=E,133nm,0.6s							
PERV				IAML			23 27 43.0	
	comp=N,111nm,0.5s							
AGRB	**Hanur-Agry**	**1.71**	**313**	Pn		**Pn**	**23 27 07.7**	**+0.3**
AGRB				Sn		**Sb**	**23 27 30.7**	**0.0**
DORK	**Agr/Tutak/Do**	**1.72**	**305**	P		**Pn**	**23 27 06.6**	**-1.0**
DORK				S		**Sn**	**23 27 27.4**	**-2.8**
GNI	**Garni**	**1.74**	**4**	Pn		**Pg**	**23 27 09.7**	**-0.2**
GNI				Sn		**Sg**	**23 27 34.6**	**+2.1**
MLAZ	**Malazgirt-MUS**	**1.76**	**295**	Pn		**Pn**	**23 27 08.5**	**+0.5**
MLAZ				Sn		**Sn**	**23 27 31.5**	**+0.4**
MAHB	**Mahabad**	**1.86**	**151**	Pn		**Pg**	**23 27 14.1**	**+2.0**
IHRS	**Heris**	**1.92**	**92**	Pn		**Pg**	**23 27 13.4**	**+0.1**
BLIS	**Bitlis-Merkez**	**1.95**	**271**	P		**Pn**	**23 27 12.3**	**+1.6**
BLIS				S		**Sn**	**23 27 36.4**	**+0.6**
SIRN	**Sırnak**	**1.95**	**243**	P		**Pn**	**23 27 11.3**	**+0.7**
SIRN				IAML			23 27 47.0	
	comp=E,56nm,1.4s							
SIRN				IAML			23 27 50.0	
	comp=N,54nm,1.1s							
GURO	**Guroymak-BITLI**	**2.02**	**275**	Pn		**Pn**	**23 27 11.8**	**+0.2**
SRTM	**Siirt_Merkez**	**2.15**	**260**	P		**Pn**	**23 27 14.5**	**+1.1**
SRTM				S		**Sn**	**23 27 42.1**	**+1.5**
SRTM				IAML			23 27 52.0	
	comp=N,74nm,0.9s							
SRTM				IAML			23 27 53.0	
	comp=E,58nm,0.7s							
DIGO	**Kars**	**2.22**	**335**	P		**Pb**	**23 27 17.9**	**+0.5**
DIGO				IAML			23 27 53.0	
	comp=N,37nm,0.7s							
DIGO				IAML			23 27 56.0	
	comp=E,52nm,0.7s							
QRD	**Qoradiz**	**2.37**	**63**	P		**Pb**	**23 27 17.8**	**-2.0**
QRD				S		**Sb**	**23 27 49.4**	**0.0**
MUSM	**Mu-Merkez**	**2.44**	**278**	P		**Pn**	**23 27 17.7**	**+0.4**
MUSM				S		**Sb**	**23 27 51.3**	**-0.3**
ISRB	**Sarab**	**2.49**	**103**	Pn		**Pg**	**23 27 22.6**	**-1.6**
AGDM	**Agdam**	**2.58**	**48**	P		**Pn**	**23 27 20.2**	**+1.0**
AGDM				S		**Sb**	**23 27 53.8**	**-1.8**
GANJ	**Ganja**	**2.60**	**30**	P		**Pn**	**23 27 20.4**	**+1.0**
GANJ				S		**Sb**	**23 27 56.3**	**+0.1**
GRMI	**Germi**	**2.61**	**80**	Pn		**Pb**	**23 27 24

comp=Z,0.7nm,0.4s
BORK Borovoye 65.78 326 P P 23 44 56.3 -0.9
BORK IAmb IAmb 23 44 58.1
comp=Z,2.2nm,0.8s
AKTO Aktyubinsk 72.25 321 P P 23 45 37.0 -0.3
comp=Z,2.5nm,0.7s,baz=96,slow=8.7,SNR=7.7
comp=Z,2.5nm,0.7s
ARTI Arti 73.41 327 P P 23 45 42.4 -1.7
comp=Z,1.3nm,0.5s,baz=66,slow=3.8,SNR=3.5
comp=Z,1.3nm,0.5s
BELG Belogornoye 78.96 322 P P 23 46 14.2 -1.5
comp=Z,5.2nm,0.9s,baz=39,slow=4.4,SNR=3.6
comp=Z,5.2nm,0.9s
FINES FINESS Array B 90.09 332 P P 23 47 11.6 -0.1
comp=Z,5.2nm,1.1s,baz=51,slow=6.4,SNR=4.2
comp=Z,5.2nm,1.1s
FINES FINESS Array B 90.09 332 P P 23 47 11.2 -0.5

TIF ***24*** *23:44:34.6,38˚.45N×44˚.44E,h3km±2km*
TEH ***24*** *23:44:35.7,38˚.45N×44˚.45E,h5km,ML4.1,Presumed earthquake*
AFAD ***24*** *23:44:35.4,38˚.45N×44˚.43E,h7km±3km,MW4.3*
ISK ***24*** *23:44:35.0,38˚.42N×44˚.42E,h5km,ML4.3/12*
IDC ***24*** *23:44:36.1±0.8,38˚.46N×44˚.46E,h0km,mb3.8/15, mbtmp3.9/25,ML4.0/6,MS3.4/23,Error ellipse: s-maj=13.8km s-min=10.2km az=143.0*
NSSP ***24*** *23:44:36.4,38˚.53N×44˚.52E,h10km,Ms4.0*
AZER ***24*** *23:44:36.4,38˚.58N×44˚.58E,h2km,ml4.4*
MCSM ***24*** *23:44:38.4±0.3,39˚N±5˚×4˚4E±˚,h8km,mb4.1,mB4.3, MLv4.2,Mw(mB)3.4*
NEIC ***24*** *23:44:38.3±2.0,38˚.52N±0˚.03×44˚.43E±0˚.07,h10km±2km, mb4.2/23,Error ellipse: s-maj=10.1km s-min=3.0km az=243.0*
GII ***24*** *23:44:41.6±0.0,38˚.46N×44˚.49E,h0km,confirmed*
ISC 24 23:44:37.0±0.7,38˚.44N±0˚.02×44˚.45E±0˚.01,h8km±5km, n308,σ1°79/363,mb4.1/31,MS3.3/18,15C-7D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**302**	P		**Pg**	**23 44 44.0**	**-1.3**
OZAP				S		**Sg**	**23 44 50.3**	**-0.6**
TVAN	**Van**	**0.83**	**277**	P		**Pg**	**23 44 51.2**	**-1.7**
YOVA	**Hakkari_Yksek**	**0.86**	**189**	P		**Pg**	**23 44 52.8**	**-0.8**
YOVA	**Hakkari_Yksek**	**0.86**	**189**	Pg		**Pg**	**23 44 52.3**	**-1.2**
VMUR	**Van-Muradiye**	**0.88**	**309**	P		**Pg**	**23 44 51.8**	**-2.1**
VMUR				S		**Sg**	**23 45 03.8**	**-1.7**
ISHB	**Shabestar**	**0.93**	**99**	Pg		**Pg**	**23 44 52.7**	**-2.2**
MAKU	**Maku**	**0.93**	**11**	Pg		**Pg**	**23 44 52.7**	**-2.3**
IMRD	**Marand**	**1.02**	**74**	Pg		**Pg**	**23 44 55.2**	**-1.3**
IMRD				Sg		**Sb**	**23 45 09.6**	**-0.9**
ERCV	**ERCIS-VAN**	**1.05**	**304**	Pg		**Pg**	**23 44 55.9**	**-1.2**
ERCV				Sg		**Sb**	**23 45 11.5**	**+0.1**
ERCV	**ERCIS-VAN**	**1.05**	**304**	P		**Pg**	**23 44 55.5**	**-1.6**
ERCV				S		**Sb**	**23 45 10.5**	**-0.9**
ERCV	**ERCIS-VAN**	**1.05**	**304**	Pg		**Pg**	**23 44 55.9**	**-1.2**
HAKT	**HAKKARI**	**1.06**	**214**	P		**Pg**	**23 44 55.5**	**-1.8**
HAKT				S		**Sg**	**23 45 10.7**	**-0.4**
HAKT	**HAKKARI**	**1.06**	**214**	P		**Pg**	**23 44 55.8**	**-1.6**
HAKT				S		**Sn**	**23 45 14.6**	**+1.2**
NAX	**Nakhchivan**	**1.09**	**48**	P		**Pg**	**23 44 56.8**	**-1.3**
NAX				S		**Sb**	**23 45 12.7**	**-0.1**
GEVA	**Gevas**	**1.10**	**264**	P		**Pg**	**23 44 55.2**	**-3.0**
GEVA				S		**Sg**	**23 45 12.2**	**-0.3**
AKDM	**Akdamar-Van**	**1.16**	**265**	Pn		**Pg**	**23 44 56.6**	**-2.7**
AKDM				Sn		**Sb**	**23 45 14.8**	**0.0**
DYDN	**Diyadin**	**1.25**	**332**	P		**Pg**	**23 44 58.3**	**-2.8**
DYDN	**Diyadin**	**1.25**	**332**	Pg		**Pg**	**23 44 59.1**	**-2.0**
SBZ	**Shahbuz**	**1.28**	**42**	P		**Pg**	**23 45 00.0**	**-1.6**
SBZ				S		**Sn**	**23 45 18.4**	**-0.5**
ORD	**Ordubad**	**1.30**	**67**	P		**Pg**	**23 45 00.6**	**-1.4**
ORD				S		**Sn**	**23 45 18.5**	**-0.6**
HYR	**Heyderabad**	**1.31**	**14**	P		**Pg**	**23 45 00.4**	**-1.8**
HYR				S		**Sn**	**23 45 20.4**	**+0.9**
CUKT	**Cukurca**	**1.37**	**210**	Pn		**Pn**	**23 45 01.4**	**-1.1**
CUKT				Sn		**Sg**	**23 45 21.1**	**+0.2**
CUKT	**Cukurca**	**1.37**	**210**	P		**Pn**	**23 45 00.7**	**-1.7**
CUKT	**Cukurca**	**1.37**	**210**	Pg		**Pn**	**23 45 01.4**	**-1.1**
ADCV	**BITLIS_Adilcev**	**1.40**	**286**	P		**Pn**	**23 45 01.9**	**-1.1**
ADCV				S		**Sn**	**23 45 22.9**	**+1.1**
ADCV	**BITLIS_Adilcev**	**1.40**	**286**	Pg		**Pn**	**23 45 01.4**	**-1.7**
IAZR	**Azarshahr**	**1.42**	**122**	Pg		**Pn**	**23 45 02.6**	**-0.8**
IGDI	**IGDIR**	**1.46**	**349**	P		**Pn**	**23 45 02.9**	**-0.8**
IGDI	**IGDIR**	**1.46**	**349**	Pg		**Pn**	**23 45 02.9**	**-0.8**
IGDI	**IGDIR**	**1.46**	**349**	P		**Pn**	**23 45 02.9**	**-0.8**
IGDI				S		**Sg**	**23 45 26.0**	**+2.2**
VAYK	**Vayk**	**1.47**	**31**	*i* P		**Pn**	**23 45 02.8**	**-1.0**
VAYK				*i* S		**Sg**	**23 45 23.0**	**-0.7**
ALVK	**Alvank**	**1.57**	**71**	*e*P		**Pn**	**23 45 04.3**	**-0.9**
ALVK				*e*S		**Sn**	**23 45 24.9**	**-0.8**
PERV	**Siirt/Pervari-**	**1.58**	**252**	P		**Pb**	**23 45 05.9**	**-0.7**
PERV				S		**Sg**	**23 45 29.4**	**+1.4**
AGRB	**Hanur-Agry**	**1.61**	**315**	Pn		**Pn**	**23 45 05.6**	**-0.3**
AGRB				Sn		**Sg**	**23 45 28.2**	**-0.5**
AGRB	**Hanur-Agry**	**1.61**	**315**	Pg		**Pn**	**23 45 04.9**	**-1.0**
DORK	**Agr/Tutak/Do**	**1.61**	**306**	P		**Pn**	**23 45 04.7**	**-1.2**
DORK				S		**Sb**	**23 45 27.4**	**-0.3**
MLAZ	**Malazgirt-MUS**	**1.65**	**296**	Pn		**Pn**	**23 45 06.4**	**0.0**
KOTA	**Agri, Merkez-K**	**1.67**	**325**	P		**Pn**	**23 45 05.5**	**-1.3**
KOTA				S		**Sn**	**23 45 27.9**	**-0.6**
GNI	**Garni**	**1.72**	**7**	Pn		**Pb**	**23 45 07.7**	**-1.3**
	176nm,0.3s,baz=274,slow=2.0,SNR=513							
GNI				Lg		Lg	23 45 31.9	
	103nm,0.3s,baz=298,slow=20,SNR=7.2							
GNI	**Garni**	**1.72**	**7**			**Pb**	**23 45 07.9**	**-1.1**
GNI	**Garni**	**1.72**	**7**	Pn		**Pn**	**23 45 07.5**	**+0.1**
GNI				Sn		**Sg**	**23 45 31.6**	**-0.8**
GNI	**Garni**	**1.72**	**7**	*e*P		**Pn**	**23 45 07.6**	**+0.1**
GNI				*e*S		**Sg**	**23 45 30.7**	**-1.7**
GNI	**Garni**	**1.72**	**7**	P		**Pb**	**23 45 08.1**	**-0.9**
GNI				S		**Sn**	**23 45 25.2**	**-4.5**
GNI	**Garni**	**1.72**	**7**	P		**Pb**	**23 45 07.7**	**-1.3**
GRS	**Goris**	**1.81**	**54**	⇓*i* P		**Pg**	**23 45 12.0**	**+0.3**
GRS				⇑*i* S		**Sg**	**23 45 35.0**	**-0.1**
EGVZ	**Egvard**	**1.81**	**64**	*e*P		**Pn**	**23 45 08.7**	**+0.1**
EGVZ				*e*S		**Sb**	**23 45 32.4**	**-0.9**
BLIS	**Bitlis-Merkez**	**1.84**	**270**	P		**Pn**	**23 45 07.6**	**-1.4**
BLIS				S		**Sn**	**23 45 32.5**	**-0.1**
ARUZ	**Aruch**	**1.86**	**351**	*e*P		**Pn**	**23 45 09.6**	**+0.3**
ARUZ				*e*S		**Sb**	**23 45 34.0**	**-0.8**
SIRN	**Sırnak**	**1.87**	**240**	P		**Pb**	**23 45 11.3**	**-0.1**
SIRN				S		**Sb**	**23 45 35.2**	**+0.3**
SIRN	**Sırnak**	**1.87**	**240**	Pn		**Pb**	**23 45 10.7**	**-0.7**
KAPZ	**Kaputan**	**1.89**	**6**	*e*P		**Pn**	**23 45 10.1**	**+0.3**
KAPZ				*e*S		**Sb**	**23 45 35.0**	**-0.7**
GURO	**Guroymak-BITLI**	**1.90**	**274**	Pn		**Pn**	**23 45 09.8**	**-0.1**
GURO	**Guroymak-BITLI**	**1.90**	**274**	Pn		**Pn**	**23 45 09.5**	**-0.4**
MAHB	**Mahabad**	**1.94**	**149**	Pn		**Pn**	**23 45 11.4**	**+1.0**
AMBZ	**Amberd**	**1.95**	**356**	*e*P		**Pb**	**23 45 11.5**	**-1.5**
AMBZ				*e*S		**Sb**	**23 45 37.3**	**-0.2**
AYRK	**Ayrk**	**1.97**	**31**	*e*P		**Pb**	**23 45 11.5**	**-1.7**
AYRK				*e*S		**Sb**	**23 45 37.3**	**-0.7**
IHRS	**Heris**	**2.04**	**93**	Pn		**Pn**	**23 45 12.7**	**+0.9**
SRTM	**Siirt_Merkez**	**2.04**	**258**	P		**Pb**	**23 45 13.6**	**-0.8**
SRTM				S		**Sb**	**23 45 39.2**	**-0.8**
SRTM	**Siirt_Merkez**	**2.04**	**258**	Pn		**Pn**	**23 45 12.8**	**+1.0**
MUSM	**Mu-Merkez**	**2.32**	**278**	P		**Pn**	**23 45 16.8**	**+1.2**
MUSM				S		**Sb**	**23 45 49.2**	**+1.1**
KARS	**Kars**	**2.43**	**334**			**Pn**	**23 45 18.4**	**+1.3**
KARS	**Kars**	**2.43**	**334**	Pn		**Pn**	**23 45 17.5**	**+0.4**
BOZK	**Kars-Merkez-Bo**	**2.43**	**332**	P		**Pg**	**23 45 21.7**	**-1.9**
BOZK				S		**Sb**	**23 45 50.1**	**-1.3**
VRTB	**Varto-Mus**	**2.45**	**288**	Pn		**Pn**	**23 45 17.7**	**+0.3**
VRTB	**Varto-Mus**	**2.45**	**288**	P		**Pb**	**23 45 19.9**	**-1.5**
QRD	**Qoradiz**	**2.46**	**65**	P		**Pb**	**23 45 19.0**	**-2.4**
QRD				S		**Sb**	**23 45 50.2**	**-1.6**
GDB	**GEDABAY**	**2.49**	**23**	P		**Pn**	**23 45 19.1**	**+1.1**
GDB				S		**Sb**	**23 45 52.8**	**-0.1**
IHSH	**Hashtrud**	**2.50**	**116**	Pn		**Pn**	**23 45 19.2**	**+1.0**
LSVT	**Lusahovit**	**2.54**	**13**	*e*P		**Pn**	**23 45 19.4**	**+0.8**
LSVT				*e*S		**Sn**	**23 45 51.0**	**+1.3**
BTMN	**Batman**	**2.57**	**259**	P		**Pn**	**23 45 19.7**	**+0.8**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn		**Pn**	**23 45 19.4**	**+0.3**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	P		**Pn**	**23 45 19.7**	**+0.7**
SVAN				S		**Sb**	**23 45 54.7**	**-0.7**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn		**Pn**	**23 45 19.8**	**+0.7**
ISRB	**Sarab**	**2.61**	**103**	Pn		**Pn**	**23 45 20.7**	**+1.1**
SRTK	**Saratovka**	**2.63**	**358**	*e*P		**Pn**	**23 45 20.8**	**+0.9**
SRTK				*e*S		**Sn**	**23 45 53.3**	**+1.3**
MIDY	**Mardin/Midyat-**	**2.63**	**248**	P		**Pn**	**23 45 21.1**	**+1.3**
MIDY				S		**Sn**	**23 45 53.3**	**+1.4**
GANJ	**Ganja**	**2.63**	**33**	P		**Pn**	**23 45 21.2**	**+1.4**
GANJ				S		**Sb**	**23 45 56.6**	**-0.4**
AGDM	**Agdam**	**2.65**	**50**	P		**Pn**	**23 45 21.6**	**+1.6**
AGDM				S		**Sb**	**23 45 59.5**	**-1.5**
SENK	**Senkaya-Erzuru**	**2.67**	**323**	Pn		**Pn**	**23 45 21.0**	**+0.5**
QZX	**Qazax, Azerbai**	**2.71**	**15**	P		**Pn**	**23 45 22.2**	**+1.3**
QZX				S		**Sb**	**23 45 55.9**	**-3.3**
GRMI	**Germi**	**2.72**	**81**	Pn		**Pn**	**23 45 22.5**	**+1.4**
SLHN	**Bingol, Solhan**	**2.73**	**282**	P		**Pn**	**23 45 22.3**	**+1.0**
BLQ	**Beylaqan**	**2.73**	**61**	P		**Pn**	**23 45 22.9**	**+1.7**
BLQ				S		**Sb**	**23 45 58.4**	**-1.4**
BRDA	**Brd**	**2.79**	**48**	P		**Pn**	**23 45 23.3**	**+1.4**
BRDA				S		**Sb**	**23 45 59.7**	**-1.6**
GOLE	**Ardahan-G¶le**	**2.79**	**330**	P		**Pb**	**23 45 25.4**	**-1.8**
KARO	**Karliova-Bingo**	**2.80**	**289**	Pn		**Pn**	**23 45 22.5**	**+0.3**
ERZM	**Erzurum**	**2.81**	**302**	P		**Pb**	**23 45 27.2**	**-0.4**
BGD	**Bogdanovka**	**2.90**	**347**	P		**Pg**	**23 45 31.3**	**-1.2**
BGD				S		**Sg**	**23 46 10.1**	**0.0**
KZRT	**Kazreti**	**2.94**	**359**	P		**Pb**	**23 45 26.9**	**-2.9**
KZRT				S		**Sg**	**23 46 07.8**	**-3.7**
ECAT	**Cat-ERZURUM**	**2.95**	**294**	P		**Pb**	**23 45 28.5**	**-1.5**
YRD	**Yardimli**	**3.00**	**80**	P		**Pn**	**23 45 27.0**	**+2.0**
YRD				S		**Sb**	**23 46 04.9**	**-2.8**
LRK	**Lerik**	**3.05**	**85**	P		**Pn**	**23 45 27.6**	**+1.9**
LRK				S		**Sb**	**23 46 07.6**	**-1.6**
AKH	**Akhalkalaki**	**3.06**	**346**	P		**Pb**	**23 45 32.8**	**+1.0**
AKH				S		**Sg**	**23 46 17.3**	**+2.1**
AHAN	**Ardahan-Merkez**	**3.06**	**333**	P		**Pb**	**23 45 32.9**	**+1.0**
DGRG	**David-gareji**	**3.09**	**13**	P		**Pb**	**23 45 31.9**	**+0.7**
DGRG				S		**Sg**	**23 46 15.8**	**-0.4**
MNGR	**Mingechevir, A**	**3.09**	**40**	P		**Pn**	**23 45 28.3**	**+2.2**
MNGR				S		**Sb**	**23 46 07.5**	**-2.6**
ZRD	**Zardab**	**3.11**	**53**	P		**Pn**	**23 45 28.1**	**+1.8**
ZRD				S		**Sn**	**23 46 06.0**	**+2.5**
TRLG	**Trialeti**	**3.11**	**355**	P		**Pb**	**23 45 31.3**	**-1.3**
TRLG				S		**Sg**	**23 46 16.1**	**-0.7**
EMRE	**Erzurum,Aziziy**	**3.13**	**302**	P		**Pb**	**23 45 32.9**	**-0.1**
EMRE				S		**Sn**	**23 46 05.0**	**+0.4**
VSHL	**Vashlovani**	**3.16**	**28**	P		**Pb**	**23 45 30.3**	**-3.2**
VSHL				S		**Sg**	**23 46 20.2**	**+1.6**
GLBA	**Clilabad**	**3.18**	**74**	P		**Pn**	**23 45 29.1**	**+1.9**
GLBA				S		**Sb**	**23 46 09.9**	**-2.7**
DDEM	**Demirkent**	**3.22**	**320**	P		**Pb**	**23 45 34.5**	**0.0**
MAYK		**3.22**	**277**	P		**Pn**	**23 45 30.6**	**+2.7**
DDFL	**Dedoflistskaro**	**3.26**	**23**	P		**Pg**	**23 45 37.5**	**-2.1**
DDFL				S		**Sg**	**23 46 29.4**	**+7.6**
SAAT	**Saatly**	**3.40**	**64**	P		**Pn**	**23 45 31.9**	**+1.7**
SAAT				S		**Sn**	**23 46 13.3**	**+2.6**
LKRN	**Lenkeran, Azer**	**3.40**	**84**	P		**Pn**	**23 45 32.6**	**+2.3**
LKRN				S		**Sb**	**23 46 14.8**	**-4.2**
ASTR	**Astara**	**3.41**	**87**	P		**Pn**	**23 45 32.6**	**+2.3**
ASTR				S		**Sb**	**23 46 15.0**	**-4.1**
DYBB	**Diyarbakir**	**3.43**	**263**	Pn		**Pn**	**23 45 31.5**	**+0.6**
KOPT	**Kop Dagi**	**3.45**	**298**			**Pn**	**23 45 33.4**	**+2.1**
SEKA	**Sheki**	**3.48**	**37**	P		**Pn**	**23 45 33.3**	**+1.8**
SEKA				S		**Sb**	**23 46 18.2**	**-3.2**
ZKTA	**Zakatala**	**3.60**	**27**	P		**Pn**	**23 45 34.9**	**+1.8**
ZKTA				S		**Sb**	**23 46 20.3**	**-4.5**
QBL	**Gabala**	**3.62**	**45**	P		**Pn**	**23 45 35.4**	**+2.1**
QBL				S		**Sn**	**23 46 19.6**	**+3.3**
LGD	**Lagodekhi**	**3.66**	**21**	P		**Pb**	**23 45 43.1**	**+1.2**
ALIG	**Mtskhetisjvari**	**3.71**	**351**	P		**Pb**	**23 45 43.5**	**+0.7**
ALIG				S		**Sg**	**23 46 37.2**	**+1.0**
IML	**Ismayilli**	**3.72**	**50**	P		**Pn**	**23 45 36.7**	**+2.0**
IML				S		**Sn**	**23 46 21.9**	**+3.2**
ALIB	**&Aumlli-Bayram**	**3.85**	**65**	P		**Pn**	**23 45 38.8**	**+2.4**
ALIB				S		**Sn**	**23 46 25.5**	**+3.7**
CHRG	**Chargali**	**3.90**	**5**	P		**Pb**	**23 45 46.5**	**+0.4**
CHRG				S		**Sg**	**23 46 44.5**	**+2.2**
XNQ	**Khinaliq**	**3.94**	**45**	P		**Pn**	**23 45 39.4**	**+1.5**
XNQ				S		**Sn**	**23 46 27.6**	**+3.2**
PQL	**Pirkuli**	**3.96**	**52**	P		**Pn**	**23 45 40.6**	**+2.4**
PQL				S		**Sn**	**23 46 28.2**	**+3.2**
GUDG	**Gudauri**	**4.02**	**0**	P		**Pg**	**23 45 50.2**	**-3.8**
GUDG				S		**Sg**	**23 46 51.4**	**+5.3**
GBS	**Qobustan**	**4.05**	**58**	P		**Pn**	**23 45 41.7**	**+2.3**
GBS				S		**Sn**	**23 46 28.4**	**+1.3**
ATGJ	**Altiaghaj**	**4.22**	**54**	P		**Pn**	**23 45 43.7**	**+1.9**
ATGJ				S		**Sn**	**23 46 33.0**	**+1.7**
QSAR	**Qusar**	**4.24**	**42**	P		**Pn**	**23 45 44.2**	**+2.3**
QSAR				S		**Sn**	**23 46 34.0**	**+2.4**
SHTL	**Shatili**	**4.25**	**7**	P		**Pg**	**23 45 54.9**	**-3.6**
SHTL				S		**Sg**	**23 46 57.3**	**+3.9**
QUBA	**Quba, Azerbaij**	**4.26**	**46**	P		**Pn**	**23 45 44.4**	**+2.2**
QUBA				S		**Sn**	**23 46 34.3**	**+2.2**
SIZA	**Siyzn**	**4.32**	**51**	P		**Pn**	**23 45 45.2**	**+2.2**
SIZA				S		**Sn**	**23 46 35.3**	**+1.6**
ARPR	**Arapgir-MALATY**	**4.83**	**280**			**Pn**	**23 45 51.8**	**+1.7**
KBZ	**Khabaz**	**5.41**	**348**	Pn		Pn	23 46 02.3	+4.3
	2.5nm,0.8s,baz=152,slow=10,SNR=5.8							
KBZ				Lg		Lg	23 47 26.9	
	baz=297,slow=15							
KBZ				LR		LR	23 48 41.9	
	comp=Z,71nm,19.7s,baz=151,slow=46							
KIV	**Kislovodsk**	**5.67**	**347**	Pn		**Pn**	**23 46 00.7**	**-0.9**
KIV	**Kislovodsk**	**5.67**	**347**	P		Pn	23 45 53.7	-7.9
GAZ	**Gaziantep**	**5.87**	**260**	Pn		**Pn**	**23 46 04.9**	**+0.5**
BNN	**Bunyan**	**6.75**	**276**	Pn		**Pn**	**23 46 20.2**	**+3.7**
BRTR	**Keskin Array B**	**8.51**	**282**	Pn		**Pn**	**23 46 43.8**	**+3.1**
	1.6nm,0.9s,baz=98,slow=14,SNR=5.6							
BRTR				LR		LR	23 50 37.1	
	comp=Z,249nm,20.1s,baz=94,slow=42							
BR106	**Keskin Array S**	**8.53**	**282**	P		**Pn**	**23 46 43.4**	**+2.5**
	4.2nm,0.9s							
ASF	**Jabal al Asfar**	**8.79**	**227**	Pn		**Pn**	**23 46 46.1**	**+1.7**
	0.7nm,0.3s,baz=18,slow=7.2,SNR=5.8							
ASF				Lg		Lg	23 49 07.2	
	0.3nm,0.3s,baz=191,slow=20,SNR=2.2							
	2.5nm,0.4s							
GEM	**Giv'at Ha'Em**	**8.84**	**236**	P		**Pn**	**23 46 49.7**	**+4.7**
KSHT	**Keshet**	**8.89**	**235**	P		Pn	23 46 50.7	+4.9
MMA0B	**Mount Meron ar**	**9.13**	**236**	P		**Pn**	**23 46 53.5**	**+4.4**
MMAI	**Mount Meron Ar**	**9.13**	**236**	Pn		**Pn**	**23 46 51.4**	**+2.3**
	1.0nm,0.3s,baz=68,slow=15,SNR=6.9							
MMAI				Lg		Lg	23 49 33.7	
	0.4nm,0.3s,baz=61,slow=30,SNR=2.0							
MMAI				LR		LR	23 51 01.9	
	comp=Z,185nm,21.5s,baz=56,slow=42							
	1.4nm,0.5s							
HNTI	**Hanita**	**9.24**	**237**	P		**Pn**	**23 46 55.3**	**+4.8**
BLGI	**Bet Lehem HaGe**	**9.45**	**236**	P		Pn	23 46 58.5	+5.2
MMLI	**Mount Malkishu**	**9.49**	**234**	P		Pn	23 46 59.5	+5.5
HMDT	**Nahal Hemdat**	**9.55**	**232**	P		Pn	23 47 00.3	+5.5
OFRI	**`Ofer**	**9.65**	**236**	P		Pn	23 47 01.3	+5.1
SLTI	**Sal'it**	**9.86**	**234**	P		Pn	23 47 04.1	+5.0
DSI	**Dead Sea**	**10.11**	**230**	P		Pn	23 47 07.3	+4.8
GHAJ	**Ghor Haditha**	**10.19**	**228**	P		Pn	23 47 08.8	+5.3
MSBI	**Mazada**	**10.31**	**229**	P		Pn	23 47 10.6	+5.4
YTIR	**Yattir**	**10.42**	**230**	P		Pn	23 47 12.1	+5.3
AMAZ	**Amatzia**	**10.42**	**231**	P		Pn	23 47 12.1	+5.3
ZFRI	**Zfri**	**10.97**	**227**	P		Pn	23 47 19.1	+4.9
EIL	**Elat**	**11.77**	**225**	Lg		Lg	23 50 56.0	
	0.2nm,0.3s,baz=221,slow=22,SNR=1.6							
EIL				LR		LR	23 52 23.6	
	comp=Z,249nm,19.7s,baz=48,slow=40							
EIL	**Elat**	**11.77**	**225**	P		Pn	23 47 30.6	+5.4
BELG	**Belogornoye**	**14.13**	**8**	Pn		**Pn**	**23 47 57.1**	**-0.2**
	0.4nm,0.3s,baz=294,slow=5.3,SNR=4.7							
	13nm,1.0s							
ODBI	**Odobesti**	**14.83**	**305**	⇓P		**P**	**23 48 13.5**	**+0.7**
HRA	**Herat**	**14.88**	**100**	Pn		**Pn**	**23 48 08.6**	**+0.7**
RAYN	**Ar Rayn**	**14.90**	**176**	Pn		**Pn**	**23 48 04.1**	**-3.9**
RAYN	**Ar Rayn**	**14.90**	**176**	P		**Pn**	**23 48 03.6**	**-4.3**
VRI	**Vrincioaia**	**15.08**	**305**	⇓P		**P**	**23 48 15.1**	**-0.5**
PLOR	**Plostina**	**15.12**	**305**	⇑P		**Pn**	**23 48 12.5**	**+1.6**
SORM	**Soroca**	**15.18**	**315**	⇑P		**Pn**	**23 48 13.5**	**+1.9**
SORM	**Soroca**	**15.18**	**315**	P		**Pn**	**23 48 11.2**	**-0.4**
	11nm,2.0s							
AKTO	**Aktyubinsk**	**15.38**	**34**	Pn		**Pn**	**23 48 13.2**	**-1.1**
	0.2nm,0.3s,baz=223,slow=9.7,SNR=6.8							
AKTO				LR		LR	23 56 44.7	
	comp=Z,76nm,18.2s,baz=198,slow=47							
	2.0nm,0.6s							
TESR	**Tescani**	**15.39**	**307**	⇑P		**P**	**23 48 20.9**	**+1.8**
TESR	**Tescani**	**15.39**	**307**	P		**Pn**	**23 48 14.3**	**-0.1**
	14nm,1.4s							
MLR	**Muntele Rosu**	**15.45**	**303**	Pn		**P**	**23 48 17.6**	**-2.3**
	0.2nm,0.3s,baz=126,slow=9.3,SNR=5.1							
	1.3nm,0.6s							
MLR	**Muntele Rosu**	**15.45**	**303**	⇓P		**P**	**23 48 25.1**	**+5.2**
MLR	**Muntele Rosu**	**15.45**	**303**			**Pn**	**23 48 17.2**	**+1.9**
MLR	**Muntele Rosu**	**15.45**	**303**	P		**Pn**	**23 48 16.5**	**+1.2**
AB31	**Akbulak array**	**15.52**	**41**			**Pn**	**23 48 14.7**	**-1.3**
ABKAR	**Akbulak array**	**15.52**	**41**			**Pn**	**23 48 15.7**	**-0.3**
TURR	**Turia**	**15.61**	**305**	⇑P		**P**	**23 48 24.1**	**+2.6**
GIRR	**Girov**	**15.68**	**309**	⇑P		**P**	**23 48 23.9**	**+1.7**
OZUR		**15.77**	**305**	⇑P		**P**	**23 48 27.2**	**+3.9**
IDI	**Anoyia**	**15.97**	**265**	Pn		**Pn**	**23 48 23.0**	**+1.0**
	3.1nm,0.8s,baz=40,slow=17,SNR=1.4							
IDI	**Anoyia**	**15.97**	**265**	Pn		**P**	**23 48 24.1**	**-1.5**
IDI				IAmb		IAmb	23 48 58.2	
	comp=Z,38nm,1.4s							
DOPR	**Dopca**	**15.98**	**304**	⇑P		**P**	**23 48 28.6**	**+2.9**
BANOM	**Banah**	**15.99**	**138**	P		**P**	**23 48 24.1**	**-1.8**
VOIR		**16.02**	**302**	⇑P		**P**	**23 48 29.3**	**+3.1**
AK07	**Malin Array Si**	**16.24**	**323**	P		**Pn**	**23 48 25.2**	**-0.1**
AK09	**Malin Array Si**	**16.24**	**323**	P		**Pn**	**23 48 25.5**	**+0.1**
AK10	**Malin Array Si**	**16.25**	**323**	P		**Pn**	**23 48 25.0**	**-0.4**
AK06	**Malin Array Si**	**16.27**	**323**	P		**Pn**	**23 48 25.3**	**-0.3**
AK08	**Malin Array Si**	**16.27**	**323**	P		**Pn**	**23 48 25.8**	**+0.1**
ARR	**Arges**	**16.28**	**301**	⇑P		**P**	**23 48 31.0**	**+2.0**
AK05	**Malin Array Si**	**16.29**	**323**	P		**Pn**	**23 48 25.8**	**-0.1**
AK02	**Malin Array Si**	**16.31**	**323**	P		**Pn**	**23 48 25.8**	**-0.4**
AK12	**Malin Array Si**	**16.32**	**323**	P		**Pn**	**23 48 25.7**	**-0.7**
AK01	**Malin Array Si**	**16.33**	**324**	P		**Pn**	**23 48 25.4**	**-1.1**
AKASG	**Malin Array Be**	**16.33**	**324**	Pn		**Pn**	**23 48 25.8**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=133,slow=12,SNR=7.7							
AKASG				LR		LR	23 56 52.5	
	comp=Z,85nm,19.0s,baz=126,slow=45							
AKBB	**Malin Array Si**	**16.33**	**324**	P		**Pn**	**23 48 26.2**	**-0.3**
KIEV	**Kiev**	**16.33**	**324**	⇓P		**P**	**23 48 29.1**	**-0.3**
MASF	**Masafi**	**16.37**	**139**	P		**P**	**23 48 29.7**	**

	comp=Z,4.9nm,1.1s							
KDJ	**Kajisay**	**25.15**	**71**	P		**P**	**23 50 03.1**	**+0.4**
TEOL	**Teolo**	**25.24**	**296**	P		**P**	**23 50 02.5**	**-0.8**
WTTA	**Wattenberg**	**25.47**	**301**	*e*P		**P**	**23 50 05.8**	**+0.2**
	comp=Z,7.0nm,1.1s							
CLL	**Collm**	**25.52**	**311**	*i* P		**P**	**23 50 06.5**	**+0.8**
	comp=Z,3.0nm,0.8s							
WATA	**Walderalm**	**25.52**	**301**	*i* P		**P**	**23 50 06.5**	**+0.4**
	comp=Z,3.1nm,0.8s							
FINES	**FINESS Array B**	**25.70**	**340**	P		**P**	**23 50 08.1**	**+0.8**
	comp=Z,5.1nm,0.9s,baz=146,slow=14,SNR=7.5							
	comp=Z,5.1nm,0.9s							
SQTA	**Sankt Quirin**	**25.75**	**301**	*e*P		**P**	**23 50 08.1**	**0.0**
	comp=Z,1.6nm,0.7s							
FETA	**Feichten**	**26.05**	**300**	*e*P		**P**	**23 50 11.0**	**+0.1**
	comp=Z,7.2nm,1.3s							
DAVOX	**Davos/Dischmat**	**26.60**	**299**	LR		LR	00 02 40.1	
	comp=Z,41nm,21.3s,baz=78,slow=41							
KURBB	**Kurchatov Arra**	**26.93**	**52**	P		**P**	**23 50 19.4**	**+0.9**
	comp=Z,3.6nm,0.8s,baz=262,slow=9.1,SNR=15							
	comp=Z,3.6nm,0.8s							
KURK	**Kurchatov**	**27.00**	**52**			**P**	**23 50 18.9**	**-0.3**
KURK				IAmb		IAmb	23 50 24.6	
	comp=Z,4.3nm,0.8s							
KURK	**Kurchatov**	**27.00**	**52**	P		**P**	**23 50 18.3**	**-0.9**
MAKZ	**Makanchi**	**28.63**	**61**			**P**	**23 50 34.5**	**+0.7**
MAKZ				IAmb		IAmb	23 50 41.2	
	comp=Z,2.2nm,0.7s							
MKAR	**Makanchi Array**	**28.84**	**61**	P		**P**	**23 50 36.8**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=262,slow=9.1,SNR=38							
MKAR				LR		LR	00 04 01.6	
	comp=Z,69nm,19.6s,baz=264,slow=40							
	comp=Z,2.5nm,0.7s							
MKAR	**Makanchi Array**	**28.84**	**61**			**P**	**23 50 37.3**	**+1.6**
HFS	**Hagfors**	**29.10**	**328**	P		**P**	**23 50 37.5**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=119,slow=8.6,SNR=5.3							
HFS				LR		LR	00 03 52.8	
	comp=Z,107nm,20.9s,baz=102,slow=40							
	comp=Z,1.5nm,0.6s							
FURI	**Furi**	**29.87**	**192**	LR		LR	00 01 51.6	
	comp=Z,63nm,18.0s,baz=188,slow=35							
NOA	**NORSAR Array B**	**30.63**	**328**	LR		LR	00 04 39.7	
	comp=Z,57nm,18.8s,baz=125,slow=39							
ZALV	**Zalesovo Beam**	**31.45**	**47**	P		**P**	**23 50 58.9**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=253,slow=9.8,SNR=6.1							
ZALV				LR		LR	00 04 30.5	
	comp=Z,40nm,19.6s,baz=308,slow=38							
	comp=Z,0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**31.45**	**47**	P		**P**	**23 50 58.6**	**-0.1**
WMQ	**Urumqi**	**32.73**	**67**	*e*P		**P**	**23 51 12.8**	**+2.7**
EKA	**Eskdalemuir Ar**	**35.85**	**314**	P		**P**	**23 51 35.1**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=100,slow=7.6,SNR=3.5							
	comp=Z,0.9nm,0.6s							
ESDC	**Sonseca Array**	**37.26**	**288**	P		**P**	**23 51 48.0**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=70,slow=8.9,SNR=5.8							
ESDC				LR		LR	00 06 51.3	
	comp=Z,27nm,21.1s,baz=73,slow=36							
	comp=Z,0.5nm,0.7s							
JMIC	**Jan Mayen**	**42.27**	**337**	LR		LR	00 09 03.5	
	comp=Z,264nm,21.4s,baz=145,slow=35							
SONM	**Songino Array**	**45.06**	**57**	P		**P**	**23 52 54.3**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=267,slow=5.4,SNR=2.6							
SONM				LR		LR	00 13 55.3	
	comp=Z,80nm,18.0s,baz=335,slow=39							
	comp=Z,0.3nm,0.6s							
PALK	**Pallekele**	**45.08**	**124**	LR		LR	00 12 45.7	
	comp=Z,61nm,18.4s,baz=296,slow=38							
TORD	**Torodi Ar. Bea**	**45.45**	**248**	P		**P**	**23 52 57.3**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=36,slow=9.7,SNR=3.7							
	comp=Z,0.4nm,0.6s							
ULN	**Ulaanbaatar**	**45.49**	**57**	P		**P**	**23 52 56.4**	**-0.4**
ULN				IAmb		IAmb	23 52 59.0	
	comp=Z,6.6nm,1.4s							
LZH	**Lanzhou**	**46.61**	**74**	*e*P		**P**	**23 53 05.3**	**-0.5**
LZH				pP		sP	23 53 10.9	+0.6
LZH				pmax		pmax		
	comp=Z,19nm,1.3s							
PZH	**PanZhiHua**	**49.07**	**86**	P		**P**	**23 53 26.0**	**+1.0**
HHC	**Hu-ho-hao-te**	**50.57**	**65**	*e*P		**P**	**23 53 36.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**51.11**	**97**	LR		LR	00 21 30.7	
	comp=Z,11nm,21.6s,baz=200,slow=43							
LSZ	**Lusaka**	**55.57**	**199**	LR		LR	00 20 27.4	
	comp=Z,44nm,18.4s,baz=176,slow=39							
KLR	**Kul'dur**	**60.54**	**49**	LR		LR	00 23 31.0	
	comp=Z,20nm,18.3s,baz=356,slow=39							
KSRS	**Korea Array**	**63.51**	**62**	P		**P**	**23 55 07.4**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=298,slow=7.0,SNR=2.8							
	comp=Z,1.3nm,0.7s							
ILAR	**Eielson Array**	**76.74**	**5**	P		**P**	**23 56 27.6**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=350,slow=10,SNR=3.6							
	comp=Z,0.4nm,0.9s							
YKA	**Yellowknife Ar**	**78.01**	**350**	P		**P**	**23 56 35.1**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=11,slow=5.8,SNR=8.0							
	comp=Z,0.3nm,0.7s							
NEW	**Newport**	**92.13**	**348**	LR		LR	00 41 22.7	
	comp=Z,291nm,18.5s,baz=140,slow=37							
MDP	**Montagnes des**	**92.40**	**278**	LR		LR	00 39 27.9	
	comp=Z,108nm,18.7s,baz=321,slow=36							

*IDC **24** 23:47:21.2±5.2,8°.17S×127°.20E,h146km±5.3km, mb3.2/4, mbtmp3.7/8, MS2.3/1, Error ellipse: s-maj=53.1km s-min=17.6km az=43.0*

ISC 24 23:47:21.1±1.2, 8°.15S±0°.09×127°.2E±0°.1, h150km, n9, σ1s43/12, mb3.3/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.04**	**239**	P	**Pn**	**23 48 20.1**	**-1.8**
	25nm,0.4s,baz=108,slow=3.9,SNR=4.8						
BATI				S	**Sn**	**23 49 10.2**	**+0.9**
	21nm,0.4s,baz=103,slow=8.4,SNR=2.0						
FITZ	**Fitzroy Crossi**	**10.00**	**189**	P	**Pn**	**23 49 40.2**	**-0.9**
	1.6nm,0.4s,baz=9.4,slow=11,SNR=15						
FITZ				S	**Sn**	**23 51 33.6**	**+1.7**
	7.8nm,0.4s,baz=19,slow=22,SNR=10						
WRA	**Warramunga Arr**	**13.61**	**150**	P	**Pn**	**23 50 26.4**	**-1.6**
	1.8nm,0.5s,baz=331,slow=12,SNR=13						
WRA				S	**Sn**	**23 52 58.2**	**-0.6**
	2.0nm,0.5s,baz=324,slow=24,SNR=11						
ASAR	**Alice Springs**	**16.71**	**158**	P	**Pn**	**23 51 08.3**	**+1.8**
	2.0nm,0.7s,baz=332,slow=10,SNR=20						
ASAR				S	**Sn**	**23 54 14.3**	**+1.0**
	1.0nm,0.6s,baz=324,slow=17,SNR=7.0						
KSRS	**Korea Array**	**45.37**	**1**	LR	LR	00 13 06.2	
	comp=Z,3.5nm,21.4s,baz=15,slow=34						
MKAR	**Makanchi Array**	**67.71**	**328**	P	**P**	**23 58 02.3**	**+0.1**
	0.3nm,0.8s,baz=135,slow=6.6,SNR=3.7						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**71.42**	**335**	P	**P**	**23 58 25.6**	**+0.8**
	0.9nm,0.8s,baz=128,slow=5.6,SNR=2.5						
	0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**72.07**	**330**	P	**P**	**23 58 30.0**	**+1.3**
	0.2nm,0.6s,baz=140,slow=4.6,SNR=4.1						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**77.58**	**329**	P	**P**	**23 59 01.5**	**+1.1**
	0.5nm,0.6s,baz=122,slow=5.2,SNR=3.7						
	0.5nm,0.6s						

*GCG **24** 23:58:35.0±1.6, 14°.16N×93°.48W, h6km±40km, MD4.2, ML3.6, Presumed earthquake*
*MEX **24** 23:58:39.9±1.1, 14°.43N×93°.50W, h10km±50km, MD4.1*

ISC 24 23:58:35.6±2.4, 14°.3N±0°.1×93°.46W±0°.07, h17km±12km, n15, σ1s13/23, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.29**	**64**	*e*P	**Pg**	**23 59 00.2**	**-0.4**
THIG				*e*S	**Sb**	**23 59 16.8**	**+1.0**
THIG		**1.29**	**64**	*i* S	**Sg**	**23 59 18.1**	**+0.7**
THIG				IAML		23 59 23.5	
	comp=N,1µm,0.5s						
PCIG		**1.38**	**10**	*e*P	**Pb**	**23 59 01.2**	**+0.3**
PCIG				*e*S	**Sn**	**23 59 15.8**	**-2.1**
PATR	**El Naranjo**	**1.42**	**57**	*e*P	**Pb**	**23 59 01.6**	**-0.2**
PATR				*e*S	**Sb**	**23 59 20.8**	**+1.2**
SMCA	**Catarina**	**1.44**	**69**	*i* P	**Pb**	**23 59 02.2**	**+0.2**
SMCA				IAML		23 59 27.5	
	comp=N,428nm,0.4s						
PAVE	**Pavencul**	**1.51**	**56**	*e*P	**Pb**	**23 59 03.1**	**-0.2**
PAVE				*e*S	**Sn**	**23 59 21.5**	**0.0**
CHUJ	**Union Juarez**	**1.51**	**60**	*e*P	**Pb**	**23 59 02.9**	**-0.5**
CHUJ				*e*S	**Sb**	**23 59 22.5**	**+0.1**
STG8	**El Palmar, Qui**	**2.05**	**87**	*e*P	**Pn**	**23 59 07.8**	**-1.8**
STG5	**El Palmar, Qui**	**2.05**	**88**	*e*P	**Pn**	**23 59 07.7**	**-1.8**
CCIG	**Comitan**	**2.31**	**33**	*e*P	**Pb**	**23 59 17.1**	**0.0**
CCIG				*e*S	**Sn**	**23 59 42.3**	**+0.9**
CCIG	**Comitan**	**2.31**	**33**	*e*P	**Pb**	**23 59 17.2**	**+0.1**
CCIG				IAML		23 59 52.1	
	comp=Z,558nm,0.6s						
TGIG		**2.44**	**8**	*e*P	**Pb**	**23 59 18.2**	**-1.0**
TGIG				*e*S	**Sb**	**23 59 49.3**	**+0.2**
TGIG		**2.44**	**8**	*i* P	**Pb**	**23 59 17.4**	**-1.8**
CMIG	**Matias Romero**	**3.06**	**334**	*e*P	**Pn**	**23 59 24.7**	**+1.4**
CMIG				*e*S	**Sn**	**23 59 59.3**	**-0.1**
NUBE	**Las Nubes**	**3.60**	**97**	*i* P	**Pn**	**23 59 32.5**	**+1.7**

*NSSP **25** 00:08:27.7, 38°.48N×44°.40E, h10km, Ms3.3*
*ISK **25** 00:08:27.4, 38°.37N×44°.40E, h5km, ML3.4/12*
*AFAD **25** 00:08:27.7, 38°.47N×44°.49E, h8km±2km, MW3.7*
*TIF **25** 00:08:29.0, 38°.45N×44°.35E, h17km±1km*
*AZER **25** 00:08:29.7, 38°.53N×44°.48E, h2km, ml3.7*
*TEH **25** 00:08:29.0, 38°.46N×44°.40E, h6km, ML3.4, Presumed earthquake*

ISC 25 00:08:28.2±1.0, 38°.47N±0°.02×44°.42E±0°.01, h15km±9km, n109, σ1s87/164, 3C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.39**	**300**	P	**Pb**	**00 08 36.5**	**-0.4**
OZAP				S	**Sb**	**00 08 43.1**	**+0.4**
OZAP	**Van, Ozalp-Mer**	**0.39**	**300**	Pg	**Pb**	**00 08 36.5**	**-0.4**
TVAN	**Van**	**0.80**	**275**	P	**Pb**	**00 08 43.6**	**-0.4**
TVAN				S	**Sg**	**00 08 54.0**	**-0.3**
TVAN	**Van**	**0.80**	**275**	Pg	**Pb**	**00 08 43.5**	**-0.4**
VMUR	**Van-Muradiye**	**0.84**	**308**	P	**Pb**	**00 08 44.8**	**+0.2**
VMUR				S	**Sn**	**00 08 57.5**	**-0.4**
VMUR	**Van-Muradiye**	**0.84**	**308**	Pg	**Pb**	**00 08 44.8**	**+0.2**
YOVA	**Hakkari_Yksek**	**0.89**	**187**	P	**Pb**	**00 08 45.4**	**+0.1**
YOVA				S	**Sn**	**00 08 59.3**	**+0.4**
YOVA	**Hakkari_Yksek**	**0.89**	**187**	Pg	**Pb**	**00 08 45.4**	**+0.1**
MAKU	**Maku**	**0.91**	**13**	Pg	**Pn**	**00 08 46.2**	**-0.4**
ISHB	**Shabestar**	**0.96**	**101**	Pg	**Pb**	**00 08 46.5**	**-0.1**
ERCV	**ERCIS-VAN**	**1.01**	**303**	Pg	**Pn**	**00 08 48.8**	**+0.8**
ERCV	**ERCIS-VAN**	**1.01**	**303**	P	**Pn**	**00 08 48.3**	**+0.4**
ERCV				S	**Sn**	**00 09 03.5**	**+1.5**
IMRD	**Marand**	**1.03**	**76**	Pg	**Pn**	**00 08 48.7**	**+0.5**
HAKT	**HAKKARI**	**1.07**	**212**	P	**Pn**	**00 08 48.7**	**-0.1**
HAKT				S	**Sb**	**00 09 02.6**	**+0.2**
HAKT	**HAKKARI**	**1.07**	**212**	Pg	**Pn**	**00 08 49.2**	**+0.4**
HAKT	**HAKKARI**	**1.07**	**212**	P	**Pn**	**00 08 49.2**	**+0.4**
HAKT				S	**Sn**	**00 09 06.6**	**+3.1**
GEVA	**Gevas**	**1.08**	**262**	P	**Pg**	**00 08 47.4**	**-1.7**
GEVA				S	**Sg**	**00 09 02.1**	**-1.2**
NAX	**Nakhchivan**	**1.09**	**50**	P	**Pn**	**00 08 50.2**	**+1.2**
NAX				S	**Sn**	**00 09 08.4**	**+4.7**
AKDM	**Akdamar-Van**	**1.14**	**263**	Pn	**Pb**	**00 08 49.5**	**-0.2**
AKDM				Sn	**Sn**	**00 09 06.2**	**+1.0**
AKDM	**Akdamar-Van**	**1.14**	**263**	Pg	**Pb**	**00 08 49.4**	**-0.2**
DYDN	**Diyadin**	**1.22**	**332**	P	**Pg**	**00 08 52.8**	**+1.1**
DYDN	**Diyadin**	**1.22**	**332**	Pg	**Pg**	**00 08 52.7**	**+1.1**
SBZ	**Shahbuz**	**1.28**	**43**	P	**Pg**	**00 08 53.4**	**+0.5**
SBZ				S	**Sn**	**00 09 14.8**	**+6.2**
HYR	**Heyderabad**	**1.29**	**15**	P	**Pg**	**00 08 53.9**	**+0.8**
HYR				S	**Sg**	**00 09 14.5**	**+4.5**
ORD	**Ordubad**	**1.31**	**69**	P	**Pg**	**00 08 53.8**	**+0.3**
ORD				S	**Sg**	**00 09 13.5**	**+2.9**
ADCV	**BITLIS_Adilcev**	**1.37**	**285**	P	**Pg**	**00 08 54.7**	**+0.1**
ADCV				S	**Sg**	**00 09 12.1**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.37**	**285**	Pg	**Pg**	**00 08 54.7**	**+0.1**
CUKT	**Cukurca**	**1.38**	**208**	Pn	**Pn**	**00 08 53.1**	**+0.1**
CUKT	**Cukurca**	**1.38**	**208**	P	**Pg**	**00 08 54.0**	**-0.7**
CUKT	**Cukurca**	**1.38**	**208**	Pg	**Pg**	**00 08 54.0**	**-0.7**
IGDI	**IGDIR**	**1.42**	**349**	P	**Pg**	**00 08 55.8**	**+0.1**
IGDI				S	**Sg**	**00 09 15.9**	**+1.7**
IGDI	**IGDIR**	**1.42**	**349**	Pg	**Pg**	**00 08 55.7**	**+0.1**
IGDI	**IGDIR**	**1.42**	**349**	P	**Pg**	**00 08 55.5**	**-0.1**
IGDI				S	**Sg**	**00 09 20.2**	**+6.0**
VAYK	**Vayk**	**1.45**	**32**	⇓*e*P	**Pg**	**00 08 56.3**	**+0.1**
VAYK				⇓*e*S	**Sg**	**00 09 17.2**	**+2.1**
IAZR	**Azarshahr**	**1.46**	**122**	Pg	**Pg**	**00 08 57.0**	**+0.7**
AGRB	**Hanur-Agry**	**1.57**	**315**	Pn	**Pg**	**00 08 58.2**	**-0.2**
PERV	**Siirt/Pervari-**	**1.57**	**251**	P	**Pb**	**00 08 56.9**	**-0.1**
PERV				S	**Sg**	**00 09 20.8**	**+2.0**
DORK	**Agr/Tutak/Do**	**1.58**	**306**	P	**Pb**	**00 08 57.3**	**+0.2**
DORK				S	**Sg**	**00 09 17.9**	**-1.1**
ALVK	**Alvank**	**1.58**	**72**	*e*P	**Pg**	**00 08 57.7**	**-0.9**
ALVK				*e*S	**Sg**	**00 09 20.0**	**+0.9**
MLAZ	**Malazgirt-MUS**	**1.61**	**295**	Pn	**Pg**	**00 08 59.1**	**0.0**
KOTA	**Agri, Merkez-K**	**1.64**	**325**	P	**Pb**	**00 08 57.8**	**-0.3**
GNI	**Garni**	**1.70**	**8**	Pn	**Pg**	**00 09 00.3**	**-0.5**
GNI	**Garni**	**1.70**	**8**	⇑*i*P	**Pg**	**00 09 24.6**	**+0.6**
GNI				⇑*i*S	**Sg**	**00 09 24.6**	**+1.7**
GRS	**Goris**	**1.81**	**55**	⇓*i*P	**Pg**	**00 09 05.0**	**+2.0**
GRS				⇑*i*S	**Sg**	**00 09 30.0**	**+3.5**
BLIS	**Bitlis-Merkez**	**1.81**	**269**	P	**Pg**	**00 09 02.7**	**-0.3**
BLIS				S	**Sb**	**00 09 23.6**	**-0.1**
EGVZ	**Egvard**	**1.82**	**65**	*e*P	**Pg**	**00 09 02.0**	**-1.1**
SIRN	**Sirnak**	**1.86**	**239**	P	**Pg**	**00 09 03.4**	**-0.5**
SIRN				S	**Sg**	**00 09 30.9**	**+2.8**
SIRN	**Sirnak**	**1.86**	**239**	Pn	**Pg**	**00 09 03.4**	**-0.5**
KAPZ	**Kaputan**	**1.86**	**7**	*e*P	**Pg**	**00 09 03.6**	**-0.4**
GURO	**Guroymak-BITLI**	**1.88**	**273**	Pn	**Pb**	**00 09 01.3**	**-0.9**
AMBZ	**Amberd**	**1.92**	**356**	*e*P	**Pg**	**00 09 04.5**	**-0.6**
AYRK	**Ayrk**	**1.96**	**32**	*e*P	**Pg**	**00 09 05.0**	**-0.8**
MAHB	**Mahabad**	**1.98**	**149**	Pn	**Pg**	**00 09 05.4**	**-0.8**
SRTM	**Siirt_Merkez**	**2.02**	**257**	P	**Pg**	**00 09 05.9**	**-1.1**
SRTM				S	**Sg**	**00 09 33.5**	**+0.1**
SRTM	**Siirt_Merkez**	**2.02**	**257**	Pn	**Pg**	**00 09 05.9**	**-1.1**
IHRS	**Heris**	**2.06**	**93**	Pn	**Pg**	**00 09 06.6**	**-1.2**
DIGO	**Kars**	**2.11**	**338**	P	**Pg**	**00 09 08.5**	**-0.1**
MUSM	**Mu-Merkez**	**2.29**	**277**	P	**Pb**	**00 09 09.9**	**+0.5**
KARS	**Kars**	**2.39**	**335**	Pn	**Pb**	**00 09 10.3**	**-0.7**
BOZK	**Kars-Merkez-Bo**	**2.40**	**333**	P	**Pg**	**00 09 12.6**	**-1.6**
VRTB	**Varto-Mus**	**2.42**	**288**	Pn	**Pb**	**00 09 10.1**	**-1.4**
VRTB	**Varto-Mus**	**2.42**	**288**	P	**Pg**	**00 09 12.9**	**-1.7**
QRD	**Qoradiz**	**2.47**	**65**	P	**Pg**	**00 09 13.2**	**-2.2**
QRD				S	**Sg**	**00 09 45.8**	**-1.7**
GDB	**GEDABAY**	**2.48**	**24**	P	**Pg**	**00 09 13.8**	**-1.8**
GDB				S	**Sg**	**00 09 47.4**	**-0.4**
LSVT	**Lusahovit**	**2.52**	**13**	*e*P	**Pb**	**00 09 12.7**	**-0.4**
IHSH	**Hashtrud**	**2.53**	**116**	Pn	**Pb**	**00 09 13.7**	**+0.2**
BTMN	**Batman**	**2.55**	**258**	P	**Pb**	**00 09 12.6**	**-1.1**
BTMN				S	**Sg**	**00 09 48.6**	**-1.5**
SVAN	**Silvan-Diyarba**	**2.56**	**264**	Pn	**Pn**	**00 09 11.2**	**+2.1**
SVAN	**Silvan-Diyarba**	**2.56**	**264**	P	**Pb**	**00 09 13.3**	**-0.5**
SVAN	**Silvan-Diyarba**	**2.56**	**264**	Pn	**Pb**	**00 09 12.1**	**-1.6**
SRTK	**Saratovka**	**2.60**	**358**	*e*P	**Pb**	**00 09 15.3**	**+0.9**
GANJ	**Ganja**	**2.62**	**33**	P	**Pb**	**00 09 15.0**	**+0.1**
GANJ				S	**Sg**	**00 09 50.5**	**-2.0**
SENK	**Senkaya-Erzuru**	**2.63**	**323**	Pn	**Pb**	**00 09 14.3**	**-0.9**
ISRB	**Sarab**	**2.64**	**103**	Pn	**Pb**	**00 09 14.4**	**-0.8**
AGDM	**Agdam**	**2.65**	**51**	P	**Pb**	**00 09 16.3**	**+0.9**
AGDM				S	**Sg**	**00 09 51.7**	**-1.6**
QZX	**Qazax, Azerbai**	**2.69**	**15**	P	**Pb**	**00 09 16.8**	**+0.8**
QZX				S	**Sg**	**00 09 52.9**	**-1.7**
SLHN	**Bingol, Solhan**	**2.70**	**281**	P	**Pg**	**00 09 18.7**	**-1.3**
GRMI	**Germi**	**2.74**	**82**	Pn	**Pb**	**00 09 15.7**	**-1.2**
BLQ	**Beylaqan**	**2.74**	**62**	P	**Pg**	**00 09 18.1**	**-2.6**
BLQ				S	**Sg**	**00 09 53.4**	**-2.9**
BRDA	**Brd**	**2.79**	**49**	P	**Pb**	**00 09 18.9**	**+1.2**
BRDA				S	**Sg**	**00 09 55.2**	**-2.6**
BNGB	**Bingl**	**2.97**	**281**	Pn	**Pb**	**00 09 17.9**	**-3.0**
YRD	**Yardimli**	**3.02**	**80**	P	**Pb**	**00 09 21.4**	**-0.4**
YRD				S	**Sb**	**00 10 01.1**	**+2.6**
AKH	**Akhalkalaki**	**3.02**	**347**	P	**Pb**	**00 09 21.8**	**0.0**
DGRG	**David-gareji**	**3.07**	**13**	P	**Pg**	**00 09 24.9**	**-2.0**
DGRG				S	**Sg**	**00 10 07.7**	**+1.0**
LRK	**Lerik**	**3.08**	**86**	P	**Pb**	**00 09 21.5**	**-1.2**
LRK				S	**Sb**	**00 10 02.6**	**+2.5**
MNGR	**Mingechevir, A**	**3.09**	**41**	P	**Pb**	**00 09 22.6**	**-0.2**
MNGR				S	**Sb**	**00 10 02.2**	**+2.0**
ZRD	**Zardab**	**3.11**	**53**	P	**Pb**	**00 09 23.1**	**0.0**
ZRD				S	**Sb**	**00 10 01.4**	**+0.6**
VSHL	**Vashlovani**	**3.15**	**28**	P	**Pb**	**00 09 22.9**	**-1.0**
VSHL				S	**Sg**	**00 10 11.2**	**+1.8**
GLBA	**Clilabad**	**3.19**	**75**	P	**Pb**	**00 09 23.9**	**-0.7**
GLBA				S	**Sb**	**00 10 05.2**	**+1.9**
DDFL	**Dedoflistskaro**	**3.25**	**23**	P	**Pb**	**00 09 26.3**	**+0.7**
TBLG	**Delisi**	**3.27**	**4**	P	**Pg**	**00 09 30.7**	**-0.1**
SAAT	**Saatly**	**3.41**	**65**	P	**Pb**	**00 09 26.8**	**-1.4**
SAAT				S	**Sb**	**00 10 10.5**	**+1.2**
LKRN	**Lenkeran, Azer**	**3.42**	**85**	P	**Pb**	**00 09 26.7**	**-1.8**
LKRN				S	**Sb**	**00 10 11.9**	**+2.0**
ASTR	**Astara**	**3.43**	**87**	P	**Pb**	**00 09 26.9**	**-1.6**
ASTR				S	**Sb**	**00 10 09.5**	**-0.5**
SEKA	**Sheki**	**3.47**	**37**	P	**Pb**	**00 09 27.9**	**-1.5**
SEKA				S	**Sb**	**00 10 12.4**	**+1.0**
ZKTA	**Zakatala**	**3.59**	**27**	P	**Pb**	**00 09 29.4**	**-1.9**
ZKTA				S	**Sb**	**00 10 13.6**	**-1.1**
QBL	**Gabala**	**3.61**	**46**	P	**Pb**	**00 09 29.2**	**-2.6**
QBL				S	**Sb**	**00 10 14.0**	**-1.4**
LGD	**Lagodekhi**	**3.64**	**22**	P	**Pg**	**00 09 35.6**	**-2.3**
LGD				S	**Sg**	**00 10 22.5**	**-2.6**
ALIG	**Mtskhetisjvari**	**3.68**	**351**	P	**Pb**	**00 09 30.3**	**-2.6**
IML	**Ismayilli**	**3.72**	**50**	P	**Pb**	**00 09 31.0**	**-2.6**
IML				S	**Sb**	**00 10 17.7**	**-0.7**
CHRG	**Chargali**	**3.88**	**6**	P	**Pg**	**00 09 40.6**	**-1.9**
XNQ	**Khinaliq**	**3.94**	**45**	P	**Pb**	**00 09 33.8**	**-3.6**
XNQ				S	**Sb**	**00 10 22.2**	**-2.6**
PQL	**Pirkuli**	**3.97**	**53**	P	**Pb**	**00 09 34.6**	**-3.3**
PQL				S	**Sb**	**00 10 24.2**	**-1.5**
GBS	**Qobustan**	**4.06**	**58**	P	**Pb**	**00 09 35.2**	**-4.2**
GBS				S	**Sb**	**00 10 24.5**	**-3.8**
SHTL	**Shatili**	**4.22**	**7**	P	**Pb**	**00 09 40.6**	**-1.6**
ATGJ	**Altiaghaj**	**4.23**	**54**	P	**Pb**	**00 09 38.2**	**-4.0**
ATGJ				S	**Sb**	**00 10 29.5**	**-3.6**
QSAR	**Qusar**	**4.24**	**43**	P	**Pb**	**00 09 38.1**	**-4.3**
QSAR				S	**Sb**	**00 10 28.8**	**-4.6**
QUBA	**Quba, Azerbaij**	**4.26**	**46**	P	**Pb**	**00 09 38.8**	**-4.0**
QUBA				S	**Sb**	**00 10 30.4**	**-3.5**
SIZA	**Siyzn**	**4.32**	**52**	P	**Pb**	**00 09 40.0**	**-3.9**
SIZA				S	**Sb**	**00 10 33.2**	**-2.7**

*NEIC **25** 00:12:01.3±0.9, 17°.7S±0°.1×178°.6W±0°.1, h620km±10km, mb4.4/21, Error ellipse: s-maj=19.6km s-min=16.8km az=166.0*
*IDC **25** 00:12:01.0±9.2, 17°.64S×178°.74W, h614km±115km, mb3.2/5, mbtmp4.2/5, Error ellipse: s-maj=114.1km s-min=40.4km az=154.0*

ISC 25 00:12:00.0±0.6, 17°.7S±0°.1×178°.72W±0°.08, h600km, n35, σ0s76/36, mb4.4/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.08**	**269**		**P**	**00 13 21.0**	**+1.2**
NIUE	**Niue**	**8.46**	**101**	P	**P**	**00 14 04.2**	**+0.4**
RAO	**Raoul Island**	**11.54**	**177**	P	**P**	**00 14 35.7**	**+1.7**
SANVU	**Saraoutou**	**13.68**	**277**	P	**P**	**00 14 57.1**	**+1.3**
DZM	**Mont Dzumac**	**14.62**	**250**	P	**P**	**00 15 05.4**	**+0.5**
ONTNC	**Ouen Toro**	**14.68**	**249**	P	**P**	**00 15 03.2**	**-2.0**
RAR	**Rarotonga**	**18.21**	**104**	P	**P**	**00 15 36.6**	**-0.9**
RAR				IAmb	IAmb	00 15 49.7	
	comp=Z,5.1nm,0.5s						
TCW	**Tory Channel**	**24.21**	**193**	P	**P**	**00 16 31.1**	**+0.1**
EIDS	**Eidsvold**	**29.07**	**249**	P	**P**	**00 17 13.1**	**-0.7**
EIDS				IAmb	IAmb	00 17 37.4	
	comp=Z,20nm,1.5s						
CTAO	**Charters Tower**	**33.19**	**260**	P	**P**	**00 17 49.2**	**+0.2**
CTAO				IAmb	IAmb	00 17 50.3	
	comp=Z,6.6nm,0.9s						
PMG	**Port Moresby**	**34.13**	**279**	P	**P**	**00 17 56.9**	**0.0**
PMG				IAmb	IAmb	00 18 00.1	
	comp=Z,8.4nm,0.7s						
COEN	**Coen**	**36.81**	**270**	P	**P**	**00 18 20.3**	**+1.3**
TOO	**

mbtmp4.5/22,MS4.2/41,Error ellipse: s-maj=24.1km s-min=10.4km az=54.0

ISC 25 00:13:32.6±0.9,**13°48N**±0'05,**91°61W**±0'05,**h58**km±7km, **n1169,σ1s37/**1159,**mb4.9**/340,**MS4.2**/43,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.95**	**15**	*i* P	**Pn**	**00 13 50.4**	**+0.3**
STG2	**El Palmar, Qui**	**0.98**	**13**	*i* P	**Pn**	**00 13 51.0**	**+0.6**
STG8	**El Palmar, Qui**	**1.00**	**15**	*i* P	**Pn**	**00 13 51.5**	**+0.7**
STG8				IAML		00 14 14.9	
	comp=N,8μm,0.4s						
RTAL	**Retalhuleu**	**1.04**	**355**		**Pn**	**00 13 49.0**	**-2.2**
RTAL	**Retalhuleu**	**1.04**	**355**	P	**Pn**	**00 13 48.9**	**-2.2**
RTAL				S	**Sn**	**00 14 04.2**	**-0.7**
ESSJ	**San Jos, E**	**1.08**	**86**	*i* P	**Pn**	**00 13 48.8**	**-2.9**
ESSG	**Sabana Grande**	**1.17**	**40**	*i* P	**Pn**	**00 13 51.0**	**-2.0**
FG8	**Yepocapa, Chim**	**1.28**	**53**	*i* P	**Pn**	**00 13 51.2**	**-3.2**
SOKI	**Kika Raxquin**	**1.35**	**9**	*i* P	**Pn**	**00 13 53.6**	**-2.0**
SOKI				IAML		00 14 32.7	
	comp=N,23μm,0.8s						
QUEO	**Labor Ovalle**	**1.39**	**4**	*i* P	**Pn**	**00 13 54.3**	**-1.8**
QUEO				IAML		00 15 09.9	
	comp=E,13μm,1.1s						
PCG5	**San Vicente Pa**	**1.40**	**58**	*i* P	**Pn**	**00 13 53.3**	**-2.9**
SMCA	**Catarina**	**1.44**	**342**	*i* P	**Pn**	**00 13 52.9**	**-3.7**
GCG4	**OSOP**	**1.52**	**43**	*i* P	**Pn**	**00 13 57.2**	**-0.6**
FAME	**Alcaldia de Sa**	**1.59**	**77**	P	**Pn**	**00 13 56.3**	**-2.2**
FAME				S	**Sn**	**00 14 17.3**	**-0.8**
NUBE	**Las Nubes**	**1.83**	**77**	P	**Pn**	**00 13 59.8**	**-2.1**
NUBE				S	**Sn**	**00 14 22.7**	**-1.4**
NUBE	**Las Nubes**	**1.83**	**77**	*e*P	**Pn**	**00 14 00.7**	**-1.2**
NUBE	**Las Nubes**	**1.83**	**77**	*i* P	**Pn**	**00 14 00.3**	**-1.6**
HUEH	**Huehuetenango**	**1.83**	**3**		**Pn**	**00 14 00.5**	**-1.5**
HUEH	**Huehuetenango**	**1.83**	**3**	P	**Pn**	**00 14 01.4**	**-0.6**
HUEH	**Huehuetenango**	**1.83**	**3**	*i* P	**Pn**	**00 14 01.2**	**-0.8**
HUEH				IAML		00 14 39.6	
	comp=N,11μm,0.8s						
LOAL	**Lomas de Alarc**	**1.85**	**74**	P	**Pn**	**00 14 00.9**	**-1.2**
LOAL				S	**Sn**	**00 14 26.5**	**+2.0**
SLOZ	**Alcaldia de Sa**	**1.85**	**73**	P	**Pn**	**00 14 01.3**	**-0.9**
APG	**El Apazote**	**1.88**	**36**	P	**Pn**	**00 14 03.1**	**+0.5**
	comp=N,200nm,1.0s,baz=203,slow=14,SNR=945						
APG	**El Apazote**	**1.88**	**36**	*i* P	**Pn**	**00 14 03.2**	**+0.5**
CEVE	**Cerro Verde**	**1.96**	**80**	P	**Pn**	**00 14 03.7**	**-0.1**
CEVE	**Cerro Verde**	**1.96**	**80**	*e*P	**Pn**	**00 14 04.3**	**+0.6**
CEVE				*e*S	**Sn**	**00 14 30.8**	**+3.3**
SBLS	**San Blas**	**1.96**	**79**	*e*P	**Pn**	**00 14 02.6**	**-1.2**
RBDL	**Robledal**	**1.97**	**71**	*e*P	**Pn**	**00 14 03.3**	**-0.5**
JAYA	**Jayaque - finc**	**2.11**	**85**	P	**Pn**	**00 14 04.2**	**-1.6**
JAYA				S	**Sn**	**00 14 31.8**	**+0.9**
JAYA	**Jayaque - finc**	**2.11**	**85**	*e*P	**Pn**	**00 14 04.5**	**-1.3**
JAYA				*e*S	**Sn**	**00 14 30.8**	**-0.1**
JAYA	**Jayaque - finc**	**2.11**	**85**	*i* P	**Pn**	**00 14 04.3**	**-1.4**
CEDA	**San Andres**	**2.18**	**81**	S	**Sn**	**00 14 32.1**	**-0.3**
PMON	**Piamonte**	**2.24**	**84**	P	**Pn**	**00 14 06.5**	**-1.0**
BOQS	**Boqueron**	**2.28**	**83**	*e*P	**Pn**	**00 14 07.6**	**-0.5**
AVCB	**Coban**	**2.30**	**30**	IAML		00 14 54.7	
	comp=N,25μm,0.7s						
UEES	**Universidad Ev**	**2.32**	**84**	P	**Pn**	**00 14 08.0**	**-0.5**
MTO3	**Montecristo**	**2.37**	**67**		**Pn**	**00 14 08.2**	**-1.1**
MTO3	**Montecristo**	**2.37**	**67**	P	**Pn**	**00 14 08.9**	**-0.4**
MTO3				S	**Sn**	**00 14 39.7**	**+2.4**
MTO3	**Montecristo**	**2.37**	**67**	*i* P	**Pn**	**00 14 09.0**	**-0.3**
ESQI	**Esquipulas**	**2.45**	**64**		**Pn**	**00 14 09.2**	**-1.2**
ESQI	**Esquipulas**	**2.45**	**64**	P	**Pn**	**00 14 10.4**	**0.0**
ZAFR2	**Estanzuela, Za**	**2.45**	**63**	*i* P	**Pn**	**00 14 09.9**	**-0.3**
LFRS	**El Faro**	**2.48**	**86**	*e*P	**Pn**	**00 14 11.1**	**+0.3**
PAVA	**Las Pavas**	**2.61**	**85**	P	**Pn**	**00 14 12.1**	**-0.5**
COEG	**Centro de Oper**	**2.66**	**87**	P	**Pn**	**00 14 13.0**	**-0.2**
COEG				S	**Sn**	**00 14 46.1**	**+1.8**
TECO	**Alcaldia de Te**	**2.75**	**89**	P	**Pn**	**00 14 14.0**	**-0.4**
TECO				S	**Sn**	**00 14 48.6**	**+2.1**
SCLA	**Alcaldia de Sa**	**2.81**	**85**	P	**Pn**	**00 14 14.7**	**-0.5**
P5NO	**Presa 5 de nov**	**2.82**	**79**	P	**Pn**	**00 14 14.3**	**-0.9**
P5NO				S	**Sn**	**00 14 50.7**	**+2.6**
CCIG	**Comitan**	**2.83**	**350**		**Pn**	**00 14 15.9**	**+0.2**
CCIG	**Comitan**	**2.83**	**350**	P	**Pn**	**00 14 15.5**	**-0.1**
CCIG				S	**Sn**	**00 14 51.1**	**+2.4**
CCIG	**Comitan**	**2.83**	**350**	*i* P	**Pn**	**00 14 15.6**	**-0.1**
SARH	**Santa Rosa de**	**3.05**	**65**	P	**Pn**	**00 14 18.9**	**+0.4**
PACA	**Pacayal**	**3.20**	**90**	P	**Pn**	**00 14 19.7**	**-0.9**
PACA				S	**Sn**	**00 14 59.3**	**+1.8**
RANC	**El Ranchito**	**3.23**	**90**	P	**Pn**	**00 14 20.6**	**-0.5**
RANC				S	**Sn**	**00 14 59.5**	**+1.0**
TGIG		**3.59**	**336**	*i* P	**Pn**	**00 14 24.3**	**-1.6**
LCND	**La Caada**	**3.62**	**92**	P	**Pn**	**00 14 25.4**	**-0.9**
PETF	**Flores**	**3.81**	**26**		**Pn**	**00 14 29.0**	**+0.1**
PETF	**Flores**	**3.81**	**26**	P	**Pn**	**00 14 30.0**	**+1.2**
PETF	**Flores**	**3.81**	**26**	*i* P	**Pn**	**00 14 28.9**	**+0.1**
CSGN	**Cosiguina Volc**	**3.98**	**97**	P	**Pn**	**00 14 30.3**	**-0.9**
CSGN				S	**Sn**	**00 15 15.9**	**-0.8**
TGUH	**Tegucigalpa,Un**	**4.25**	**82**		**Pn**	**00 14 34.0**	**-1.0**
TGUH	**Tegucigalpa,Un**	**4.25**	**82**	P	**Pn**	**00 14 34.6**	**-0.5**
TGUH	**Tegucigalpa,Un**	**4.25**	**82**	P	**Pn**	**00 14 34.5**	**-0.5**
CRIN	**San Cristobal**	**4.51**	**99**		**Pn**	**00 14 37.3**	**-1.2**
CRIN	**San Cristobal**	**4.51**	**99**	P	**Pn**	**00 14 34.6**	**-3.9**
YUSH	**Yuscaran**	**4.66**	**84**	P	**Pn**	**00 14 39.8**	**-0.8**
TEL3	**Telica 3**	**4.73**	**100**	P	**Pn**	**00 14 40.5**	**-1.0**
HERN	**Volcan Telica**	**4.74**	**100**		**Pn**	**00 14 39.7**	**-1.9**
CMIG	**Matias Romero**	**4.78**	**319**	P	**Pn**	**00 14 38.8**	**-3.4**
	comp=N,15nm,0.5s,baz=152,slow=12,SNR=26						
CMIG				S	**Sn**	**00 15 32.6**	**-3.7**
	comp=N,45nm,0.3s,baz=90,slow=15,SNR=4.3						
CMIG				LR	LR	00 16 54.5	
	comp=N,2μm,19.0s,baz=159,slow=40						
CNGN	**Cerro Negro**	**4.89**	**101**		**Pn**	**00 14 42.5**	**-1.1**
CNGN	**Cerro Negro**	**4.89**	**101**	P	**Pn**	**00 14 42.4**	**-1.3**
CNGN	**Cerro Negro**	**4.89**	**101**	P	**Pn**	**00 14 43.4**	**-0.3**
COPN	**Copaltepe**	**5.06**	**104**	P	**Pn**	**00 14 43.9**	**-2.2**
LIMN	**Finca el Limon**	**5.12**	**94**	P	**Pn**	**00 14 46.1**	**-0.8**
LIMN				S	**Sn**	**00 15 43.0**	**-1.8**
MGAN	**Managua**	**5.40**	**104**		**Pn**	**00 14 48.9**	**-1.8**
MGAN	**Managua**	**5.40**	**104**	P	**Pn**	**00 14 46.0**	**-4.6**
	comp=N,277nm,0.9s						
SCIG	**Sabancuy**	**5.47**	**4**	P	**Pn**	**00 14 50.5**	**-1.1**
MATN	**Matagalpa**	**5.56**	**95**	P	**Pn**	**00 14 51.1**	**-1.9**
NANN	**Nandasmo**	**5.57**	**105**	P	**Pn**	**00 14 52.5**	**-0.5**
SIUN	**Universidad Ur**	**6.65**	**87**		**Pn**	**00 15 06.6**	**-1.2**
JTS	**Las Juntas de**	**7.25**	**115**	P	**Pn**	**00 15 14.3**	**-1.6**
	comp=N,6.5nm,0.4s,baz=282,slow=9.6,SNR=12						
JTS				S	**Sn**	**00 16 31.7**	**-5.2**
	comp=N,20nm,0.7s,baz=245,slow=5.9,SNR=0.9						
JTS	**Las Juntas de**	**7.25**	**115**		**Pn**	**00 15 15.2**	**-0.8**
JTS	**Las Juntas de**	**7.25**	**115**	P	**Pn**	**00 15 15.2**	**-0.8**
JTS	**Las Juntas de**	**7.25**	**115**	P	**Pn**	**00 15 14.4**	**-1.6**
JTS				S	**Sn**	**00 16 37.6**	**+0.7**
JTS	**Las Juntas de**	**7.25**	**115**	P	**Pn**	**00 15 16.0**	**0.0**
	comp=N,790nmcomp=N,107nm,0.8s						
TEIG	**Tepich**	**7.43**	**25**		**Pn**	**00 15 16.7**	**-1.7**
TEIG	**Tepich**	**7.43**	**25**	P	**Pn**	**00 15 18.2**	**-0.2**
TEIG				S	**Sn**	**00 16 44.2**	**+3.0**
TEIG	**Tepich**	**7.43**	**25**	P	**Pn**	**00 15 19.6**	**+1.2**
	comp=N,6μmcomp=N,18μmcomp=N,1μm,0.8s						
TLIG	**Tlapa**	**7.84**	**302**		**Pn**	**00 15 23.2**	**-1.0**
TLIG	**Tlapa**	**7.84**	**302**	P	**Pn**	**00 15 22.8**	**-1.3**
TLIG				S	**Sn**	**00 16 51.8**	**+0.2**
RAFA	**San Farael, Vo**	**8.40**	**114**		**Pn**	**00 15 31.9**	**-0.2**
PIRO	**Carate, Puerto**	**9.56**	**121**		**Pn**	**00 15 49.0**	**+1.3**
BRU2	**Volcan**	**9.91**	**117**		**Pn**	**00 15 53.3**	**+0.7**
PRVC	**Isla de Provid**	**9.97**	**89**	P	**Pn**	**00 15 49.3**	**-4.0**
	comp=N,1μmcomp=N,86nm,1.0s						
MOIG	**Morelia**	**11.06**	**305**		**Pn**	**00 16 07.5**	**-0.8**
BCIP	**Isla Barro Col**	**12.31**	**109**	P	**Pn**	**00 16 22.6**	**-2.7**
	comp=N,53nm,1.2s						
SOR	**Soroa**	**12.35**	**40**		**Pn**	**00 16 25.6**	**-0.1**
SOR	**Soroa**	**12.35**	**40**	P	**Pn**	**00 16 25.6**	**-0.1**
MTDJ	**Mount Denham**	**14.34**	**69**		**Pn**	**00 16 52.6**	**-0.1**
MTDJ	**Mount Denham**	**14.34**	**69**	P	**P**	**00 16 58.4**	**+0.2**
HBVL	**Hebbronville**	**15.04**	**335**		**Pn**	**00 17 02.6**	**+0.8**
APAC	**Apartado, Choc**	**15.77**	**109**	P	**P**	**00 17 17.7**	**+3.6**
833A	**Chaparral WMA,**	**16.45**	**335**		**Pn**	**00 17 18.9**	**-0.8**
DBBC	**Dabeiba**	**16.45**	**111**	P	**P**	**00 17 21.9**	**+0.2**
SJCC	**San Jacinto, C**	**16.48**	**101**	P	**P**	**00 17 21.1**	**-0.9**
	comp=N,89nm,1.1s						
EF04	**Eagle Ford 04**	**16.67**	**341**		**Pn**	**00 17 22.2**	**-0.2**
HKT	**Hockley**	**16.85**	**347**	P	**Pn**	**00 17 25.0**	**+0.5**
HKT	**Hockley**	**16.85**	**347**	Pn	**Pn**	**00 17 24.6**	**0.0**
HKT				IAmb	IAmb	00 17 41.0	
	comp=Z,54nm,1.5s						
HKT	**Hockley**	**16.85**	**347**	P	**Pn**	**00 17 25.0**	**+0.5**
MLDN	**Muldoon**	**16.99**	**344**	P	**Pn**	**00 17 26.3**	**-0.1**
CBOC	**Ciudad Bolivar**	**17.13**	**115**	P	**P**	**00 17 29.9**	**+0.6**
	comp=Z,910nmcomp=Z,63nm,1.2s						
NMDO	**Nuevo Mundo**	**17.38**	**64**		**Pn**	**00 17 29.9**	**-1.3**
HELC	**Santa Helena**	**17.41**	**113**	P	**P**	**00 17 33.8**	**+1.1**
	comp=Z,2μmcomp=Z,828nmcomp=Z,54nm,0.9s						
HNDO	**Hondo**	**17.48**	**337**	P	**Pn**	**00 17 32.4**	**-0.1**
HNVL	**Huntsville, TX**	**17.56**	**349**	P	**Pn**	**00 17 32.1**	**-1.3**
YOTC	**Yotoco, Valle**	**17.78**	**121**	P	**P**	**00 17 38.1**	**+1.6**
	comp=Z,18nm,1.7s						
451A	**Vernon**	**17.89**	**17**		**P**	**00 17 37.0**	**-0.4**
451A				IAmb	IAmb	00 17 41.0	
	comp=Z,217nm,1.1s						
553A	**Crawfordville**	**17.90**	**21**		**P**	**00 17 35.8**	**-1.8**
553A				IAmb	IAmb	00 17 54.5	
	comp=Z,100nm,0.8s						
656A	**Willston**	**17.91**	**27**		**P**	**00 17 36.1**	**-1.5**
656A				IAmb	IAmb	00 17 57.5	
	comp=Z,133nm,1.1s						
DRIO	**Del Rio**	**17.93**	**334**		**P**	**00 17 37.6**	**-0.3**
346A	**Big Creek Wild**	**17.93**	**6**	P	**P**	**00 17 37.1**	**-0.8**
346A				IAmb	IAmb	00 17 44.6	
	comp=Z,66nm,1.0s						
JAMC	**Jamundi, Valle**	**17.94**	**123**	P	**Pn**	**00 17 40.2**	**+1.8**
	comp=Z,20nm,1.1s						
GUY2C	**Guyana, Caldas**	**18.00**	**116**	P	**Pn**	**00 17 41.1**	**+1.8**
	comp=Z,1μmcomp=Z,73nm,0.9s						
435B	**Jarrell**	**18.08**	**343**	P	**P**	**00 17 39.0**	**-0.5**
BBAC	**Balboa, Cauca**	**18.21**	**127**	P	**Pn**	**00 17 43.2**	**+1.5**
	comp=Z,988nmcomp=Z,37nm,1.0s						
PTBC	**PUERTO BERRIO,**	**18.24**	**111**	P	**Pn**	**00 17 42.7**	**+0.9**
	comp=Z,627nmcomp=Z,40nm,1.1s						
NORC	**Norcasia**	**18.28**	**114**	P	**Pn**	**00 17 44.9**	**+2.5**
	comp=Z,976nmcomp=Z,60nm,1.2s						
ANIL	**Santa Ana**	**18.32**	**118**	P	**Pn**	**00 17 46.5**	**+3.4**
POPC	**Popayan, Colom**	**18.34**	**125**	P	**Pn**	**00 17 45.5**	**+2.3**
	comp=Z,449nmcomp=Z,40nm,1.3s						
NATX	**Nacogdoches**	**18.41**	**352**		**P**	**00 17 42.0**	**-1.1**
OTAV	**Otavalo**	**18.52**	**134**		**Pn**	**00 17 45.7**	**0.0**
OTAV	**Otavalo**	**18.52**	**134**	P	**Pn**	**00 17 45.7**	**0.0**
OTAV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OTAV	**Otavalo**	**18.52**	**134**	*e*P	**P**	**00 17 44.2**	**-0.7**
OTAV	**Otavalo**	**18.52**	**134**	P	**Pn**	**00 17 46.0**	**+0.3**
	comp=Z,10nm,1.0s						
JCT	**Junction City**	**18.53**	**337**	P	**P**	**00 17 44.3**	**-0.2**
JCT				IAmb	IAmb	00 17 48.7	
	comp=Z,89nm,1.4s						
JCT	**Junction City**	**18.53**	**337**	P	**P**	**00 17 44.3**	**-0.2**
JCT				pmax	pmax		
	comp=Z,89nm,1.5s						
TULM	**Tulcn-Chalpat**	**18.66**	**132**	P	**Pn**	**00 17 51.0**	**+3.6**
	comp=Z,914nmcomp=Z,47nm,1.0s						
VBMS	**Vicksburg**	**18.68**	**3**	P	**P**	**00 17 45.9**	**-0.1**
VBMS				IAmb	IAmb	00 17 54.9	
	comp=Z,59nm,0.8s						
BRJC	**Barrancabermej**	**18.73**	**108**	P	**Pn**	**00 17 50.2**	**+2.5**
	comp=Z,49nm,0.9s						
ORTC	**Ortega, Tolima**	**18.75**	**119**	P	**Pn**	**00 17 49.8**	**+1.8**
	comp=Z,639nmcomp=Z,51nm,1.0s						
HPIG		**18.77**	**318**	P	**P**	**00 17 47.8**	**+0.4**
237A	**Washetta, Mont**	**18.83**	**349**	P	**P**	**00 17 45.4**	**-2.3**
SPBC	**San Pablo de B**	**18.95**	**113**	P	**Pn**	**00 17 51.9**	**+1.4**
	comp=Z,758nmcomp=Z,40nm,1.1s						
BRDY	**Brady**	**18.98**	**340**		**P**	**00 17 48.8**	**-0.7**
250A	**Grady**	**19.05**	**14**	P	**P**	**00 17 49.4**	**-0.7**
250A				IAmb	IAmb	00 18 04.4	
	comp=Z,77nm,1.1s						
SAND	**Sanderson**	**19.06**	**331**		**Pn**	**00 17 51.2**	**-0.4**
ROSC	**El Rosal**	**19.09**	**115**	P	**P**	**00 17 50.1**	**-1.1**
	comp=Z,5.2nm,0.3s,baz=254,slow=20,SNR=19						
ROSC	**El Rosal**	**19.09**	**115**		**Pn**	**00 17 52.8**	**+0.3**
ROSC				IAmb	IAmb	00 17 57.9	
	comp=Z,116nm,1.4s						
ROSC	**El Rosal**	**19.09**	**115**	P	**Pn**	**00 17 52.8**	**+0.3**
ROSC				pmax	pmax		
	comp=Z,116nm,1.4s						
ROSC	**El Rosal**	**19.09**	**115**	P	**Pn**	**00 17 55.8**	**+3.3**
	comp=Z,1μmcomp=Z,38nm,0.9s						
143A	**Socs Landing,**	**19.14**	**1**	P	**P**	**00 17 50.7**	**-0.3**
PRAC	**Prado**	**19.16**	**119**	P	**Pn**	**00 17 53.8**	**+0.9**
	comp=Z,43nm,0.9s						
WHTX	**Lake Whitney,**	**19.19**	**345**		**P**	**00 17 51.9**	**+0.2**
SLOR	**San Lorenzo -**	**19.19**	**136**	P	**Pn**	**00 17 55.1**	**+1.4**
146A	**Union**	**19.21**	**7**	P	**Pn**	**00 17 53.1**	**-0.3**
146A				IAmb	IAmb	00 18 01.0	
	comp=Z,96nm,1.1s						
URIC	**Uribia, Colomb**	**19.23**	**93**	P	**Pn**	**00 17 54.9**	**+1.2**
	comp=Z,19nm,0.9s						
TIGA	**Tifton**	**19.33**	**21**	P	**Pn**	**00 17 54.7**	**-0.1**
TIGA				IAmb	IAmb	00 18 07.4	
	comp=Z,123nm,1.2s						
TXAR	**Lajitas Array**	**19.34**	**327**	P	**Pn**	**00 17 55.6**	**+0.6**
	comp=Z,30nm,0.9s,baz=156,slow=9.8,SNR=110						
TXAR	**Lajitas Array**	**19.34**	**327**		**Pn**	**00 17 55.0**	**0.0**
TXAR	**Lajitas Array**	**19.34**	**327**	P	**Pn**	**00 17 55.0**	**0.0**
TX31	**Lajitas Ar. Si**	**19.34**	**327**		**Pn**	**00 17 54.9**	**-0.1**
CASC	**Dorado de Casc**	**19.38**	**132**	P	**Pn**	**00 17 57.5**	**+1.9**
	comp=Z,34nm,1.1s						
BARC	**Barichara**	**19.38**	**109**	P	**Pn**	**00 17 57.8**	**+2.0**
	comp=Z,60nm,1.0s						
OZNA	**Ozona**	**19.45**	**335**		**Pn**	**00 17 55.8**	**-0.4**
CVER	**Cruz Verde, Cu**	**19.46**	**116**	P	**Pn**	**00 17 57.4**	**+0.5**
	comp=Z,1μmcomp=Z,75nm,1.2s						
GARC	**Garzon, Huila**	**19.49**	**124**	P	**Pn**	**00 17 58.4**	**+1.3**
	comp=Z,25nm,1.0s						
FW13	**Cleburne**	**19.52**	**345**	P	**P**	**00 17 55.4**	**+0.1**
PAMC	**Pamplona, Colo**	**19.57**	**106**	P	**Pn**	**00 17 57.6**	**-0.6**
	comp=Z,255nmcomp=Z,35nm,0.9s						
CHIC	**Chingaza**	**19.71**	**115**	P	**Pn**	**00 18 02.4**	**+2.6**
	comp=Z,1μmcomp=Z,99nm,1.1s						
Z41A	**Richland Creek**	**19.72**	**357**	P	**P**	**00 17 57.5**	**+0.1**
Z41A				IAmb	IAmb	00 18 22.1	
	comp=Z,76nm,1.1s						
FLOC	**Florencia**	**19.73**	**125**	P	**Pn**	**00 18 00.6**	**+1.0**
	comp=Z,967nmcomp=Z,85nm,1.4s						
RUSC	**La Rusia**	**19.75**	**111**	P	**Pn**	**00 18 00.7**	**+0.4**
	comp=Z,933nmcomp=Z,78nm,1.1s						
URMC	**La Uribe, Meta**	**19.83**	**119**	P	**Pn**	**00 18 01.3**	**+0.4**
	comp=Z,529nmcomp=Z,32nm,0.9s						
Z47A	**Carrollton**	**19.89**	**9**		**P**	**00 17 59.6**	**+0.4**
Z47A				IAmb	IAmb	00 18 03.5	
	comp=Z,92nm,1.1s						
LRAL	**Lakeview Retre**	**19.91**	**11**	P	**P**	**00 18 00.5**	**+1.0**
Z38A	**Mt. Pleasant**	**19.93**	**352**	P	**P**	**00 17 59.1**	**-0.5**
Z38A				IAmb	IAmb	00 18 10.3	
	comp=Z,78nm,1.2s						
VILC	**Villavicencio,**	**19.99**	**116**	P	**Pn**	**00 18 06.5**	**+3.7**
	comp=Z,494nmcomp=Z,56nm,0.9s						
152A	**Waverly Hall**	**20.11**	**17**	P	**P**	**00 18 01.9**	**+0.2**
152A				IAmb	IAmb	00 18 08.3	
	comp=Z,58nm,1.0s						
FW06	**Azle**	**20.15**	**345**	P	**P**	**00 18 01.3**	**-0.8**
FW06				IAmb	IAmb	00 18 11.6	
	comp=Z,52nm,1.2s						
ALPN	**Alpine**	**20.15**	**328**		Pn	00 18 03.4	-1.2
ALPN				IAmb	IAmb	00 18 07.8	
	comp=Z,63nm,0.9s						
WLAR	**White Oak Lake**	**20.16**	**356**		**P**	**00 18 01.8**	**-0.4**
WLAR				IAmb	IAmb	00 18 11.9	
	comp=Z,54nm,1.0s						
PLPT	**Palo Pinto**	**20.20**	**343**		**P**	**00 18 02.7**	**+0.1**
PLPT				IAmb	IAmb	00 18 05.7	
	comp=Z,86nm,1.1s						
SGCY	**Sterling City**	**20.32**	**336**		**P**	**00 18 04.7**	**+0.7**
SGCY				IAmb	IAmb	00 18 06.3	
	comp=Z,105nm,0.9s						
CCAR	**Cane Creek**	**20.34**	**360**	P	**P**	**00 18 03.8**	**-0.4**
CCAR				IAmb	IAmb	00 18 20.6	
	comp=Z,69nm,0.8s						
Y45A	**Yeager Farm, C**	**20.38**	**5**		**P**	**00 18 05.6**	**+1.0**
Y45A				IAmb	IAmb	00 18 07.5	
	comp=Z,111nm,0.9s						
Z35A	**Perchaven, San**	**20.42**	**346**	P	**P**	**00 18 04.8**	**-0.2**
Z35A				IAmb	IAmb	00 18 13.8	
	comp=Z,72nm,1.2s						
ABTX	**Abilene, Hawle**	**20.42**	**340**	P	**P**	**00 18 05.5**	**+0.4**
ABTX				IAmb	IAmb	00 18 06.9	
	comp=Z,94nm,0.9s						
MNHN	**Monahans**	**20.52**	**332**	P	Pn	00 18 08.0	-0.9
MNHN				IAmb	IAmb	00 18 09.7	
	comp=Z,111nm,1.0s						
154A	**Montrose**	**20.57**	**21**	P	Pn	00 18 08.6	-0.8
LPIG	**La Paz**	**20.59**	**304**	LR	LR	00 26 03.0	
	comp=Z,371nm,20.4s,baz=127,slow=36						
Y49A	**Blount Mountai**	**20.83**	**12**		**P**	**00 18 08.0**	**-1.4**
MACC	**Macarena, Meta**	**20.87**	**121**	P	Pn	00 18 12.4	-0.7
	comp=Z,46nm,0.8s						
SC01	**Santiago de lo**	**20.87**	**71**	P	**P**	**00 18 09.8**	**-0.2**
X40A	**Kream Creek Fa**	**20.94**	**357**		**P**	**00 18 10.6**	**-0.1**
OXF	**Oxford**	**21.03**	**5**		**P**	**00 18 11.8**	**+0.2**
OXF	**Oxford**	**21.03**	**5**	P	**P**	**00 18 11.8**	**+0.2**
OXF				pmax	pmax		
	comp=Z,116nm,1.1s						
PECS	**Pecos**	**21.07**	**330**	P	**P**	**00 18 13.4**	**+1.2**
PECS				IAmb	IAmb	00 18 15.2	
	comp=Z,97nm,1.1s						
SDV	**Santo Domingo**	**21.07**	**100**	P	**P**	**00 18 11.8**	**-0.7**
	comp=Z,10nm,0.8s,baz=302,slow=8.3,SNR=15						
	comp=Z,10nm,0.8s						
SDV	**Santo Domingo**	**21.07**	**100**		**P**	**00 18 11.8**	**-0.7**
SDV	**Santo Domingo**	**21.07**	**100**	*e*P	**P**	**00 18 11.8**	**-0.7**
SDV	**Santo Domingo**	**21.07**	**100**	P	**P**	**00 18 11.6**	**-0.9**
	comp=Z,21nm,0.8s						
ODSA	**Odessa**	**21.09**	**333**	P	**P**	**00 18 12.7**	**+0.3**
WTFS	**Witchita Falls**	**21.14**	**344**		**P**	**00 18 12.6**	**-0.1**
WTFS				IAmb	IAmb	00 18 18.8	
	comp=Z,30nm,0.8s						
MCRA	**Macar, Loja**	**21.18**	**146**	P	**P**	**00 18 15.0**	**+1.6**
	comp=Z,15nm,1.8s						
VHRN	**Van Horn**	**21.18**	**327**		**P**	**00 18 14.2**	**+0.8**
VHRN				IAmb	IAmb	00 18 16.8	
	comp=Z,57nm,1.1s						
GOGA	**Godfrey**	**21.18**	**19**	P	**P**	**00 18 12.8**	**-0.5**
GOGA	**Godfrey**	**21.18**	**19**	P	**P**	**00 18 12.8**	**-0.5**
GOGA				pmax	pmax		
	comp=Z,35nm,1.1s						
UALR	**University of**	**21.21**	**358**		**P**	**00 18 12.9**	**-0.7**
UALR				IAmb	IAmb	00 18 40.1	
	comp=Z,54nm,1.1s						
APMT	**Aspermont**	**21.22**	**340**		**P**	**00 18 13.8**	**0.0**
APMT				IAmb	IAmb	00 18 15.0	
	comp=Z,74nm,0.9s						
PTLC	**Puerto Leguiza**	**21.27**	**127**	P	**P**	**00 18 19.6**	**+5.3**
	comp=Z,1μmcomp=Z,114nm,1.1s						
SN07	**Snyder 07**	**21.28**	**338**	P	**P**	**00 18 14.2**	**-0.1**
SN07				IAmb	IAmb	00 18 15.4	
	comp=Z,45nm,0.9s						
X48A	**Hartselle**	**21.28**	**10**		**P**	**00 18 14.9**	**+0.6**
X48A				IAmb	IAmb	00 18 16.8	
	comp=Z,41nm,0.9s						
Y52A	**Lilburn**	**21.42**	**17**	P	**P**	**00 18 15.9**	**+0.1**
Y52A				IAmb	IAmb	00 18 26.8	
	comp=Z,38nm,0.8s						
POST	**Post**	**21.48**	**337**		**P**	**00 18 16.5**	**-0.1**
FPAL	**

T42A IAmb IAmb 00 18 37.3
comp=Z,98nm,1.2s
V53A Saluda 23.47 18 P P 00 18 37.1 -0.1
V53A IAmb IAmb 00 18 47.8
comp=Z,47nm,1.0s
KMSC Kings Mountain 23.48 22 P P 00 18 36.9 -0.3
KMSC IAmb IAmb 00 19 05.3
comp=Z,38nm,0.9s
U49A Red Boiling Sp 23.52 12 P 00 18 36.6 -1.0
U49A IAmb IAmb 00 18 38.1
comp=Z,63nm,1.1s
ELIS Ellis County 23.56 344 P 00 18 37.1 -0.9
ELIS IAmb IAmb 00 18 39.3
comp=Z,32nm,1.0s
MGMO Mountain Grove 23.58 359 P 00 18 35.7 -2.4
MGMO IAmb IAmb 00 18 39.3
comp=Z,55nm,1.1s
T45A Paducah 23.59 6 P P 00 18 37.3 -0.8
CROK Carrier 23.63 347 P P 00 18 37.0 -1.6
SRIG Santa Rosalia 23.69 309 P P 00 18 39.2 +0.1
HSIG 23.69 314 P P 00 18 37.4 -1.8
BLOK Blackwell 23.72 349 P P 00 18 38.1 -1.3
PH02 Texas Public H 23.73 339 P P 00 18 38.9 -0.7
PH02 IAmb IAmb 00 18 40.5
comp=Z,42nm,1.0s
X58A Rowland 23.74 26 P P 00 18 39.1 -0.5
T35A Sooner Cattle 23.75 350 P P 00 18 38.5 -1.2
T47A Sharon Grove 23.75 9 P P 00 18 38.4 -1.2
T47A IAmb IAmb 00 18 41.0
comp=Z,63nm,0.9s
OK038 West end E0370 23.78 346 P P 00 18 39.2 -0.7
CGM3 Cape Girardeau 23.78 4 P P 00 18 38.7 -1.2
CGM3 IAmb IAmb 00 18 40.7
comp=Z,58nm,0.9s
121A Cookes Peak, D 24.05 325 P 00 18 44.5 +1.8
121A IAmb IAmb 00 18 54.5
comp=Z,77nm,1.4s
TZTN Tazewell 24.08 16 P P 00 18 42.0 -0.7
TZTN IAmb IAmb 00 19 14.1
comp=Z,55nm,1.1s
319A Douglas 24.10 321 P P 00 18 44.4 +1.3
319A IAmb IAmb 00 19 03.2
comp=Z,50nm,1.2s
V55A Taylorsville 24.16 21 P P 00 18 43.4 0.0
V55A IAmb IAmb 00 18 44.9
comp=Z,30nm,0.8s
S44A Carbondale 24.20 5 P P 00 18 42.9 -0.9
KAN01 Argonia South 24.21 348 P P 00 18 43.4 -0.4
KAN01 IAmb IAmb 00 19 25.7
comp=Z,32nm,1.1s
T50A Nancy 24.21 13 P 00 18 42.9 -1.0
SIUC Southern Illin 24.23 5 P P 00 18 43.1 -0.9
CAR Caracas 24.32 94 P P 00 18 49.4 +4.2
ATAH Atahualpa 24.33 147 P P 00 18 46.4 +0.8
comp=Z,3.5nm,0.9s,baz=48,slow=3.8,SNR=5.7
ATAH LR LR 00 27 00.2
comp=Z,218nm,19.1s,baz=335,slow=33
comp=Z,3.5nm,0.9s
FVM French Village 24.43 2 P 00 18 44.9 -0.9
FVM French Village 24.43 2 P P 00 18 44.9 -0.9
FVM pmax pmax
comp=Z,16nm,0.8s
U54A Nelsons Funny 24.57 19 P P 00 18 47.2 0.0
U54A IAmb IAmb 00 18 48.9
comp=Z,46nm,0.9s
CRNM Carthage 24.58 329 P P 00 18 49.4 +2.0
USIN University of 24.64 7 P 00 18 47.6 -0.1
USIN IAmb IAmb 00 18 49.2
comp=Z,61nm,0.9s
Y22A Socorro 24.68 328 P 00 18 49.2 +0.8
Y22A IAmb IAmb 00 18 56.8
comp=Z,43nm,1.1s
R40A Maddies Statio 24.72 359 P P 00 18 47.4 -1.0
R40A IAmb IAmb 00 19 12.6
comp=Z,40nm,1.2s
DUN6 Lazy B Ranch 24.82 323 P P 00 18 50.7 +1.2
SBM South Baldy 24.82 328 P P 00 18 52.3 +2.3
LENM Lemitar 24.87 329 P P 00 18 51.5 +1.4
U56A King 24.90 22 P P 00 18 50.2 0.0
U56A IAmb IAmb 00 18 52.0
comp=Z,36nm,1.1s
V58A Windy Hill, Pi 24.90 25 P P 00 18 49.9 -0.3
SJG San Juan 24.92 76 LR LR 00 29 39.5
comp=Z,1µm,19.3s,baz=263,slow=39
RTBA Rita Blanca 24.95 338 P 00 18 51.1 +0.4
RTBA IAmb IAmb 00 18 53.1
comp=Z,60nm,1.0s
SLM Saint Louis 25.08 3 P P 00 18 50.9 -0.9
SLM Saint Louis 25.08 3 P P 00 18 50.9 -0.9
SLM pmax pmax
comp=Z,127nm,0.9s
WCI Wyandotte Cave 25.10 10 P P 00 18 50.8 -1.1
WCI IAmb IAmb 00 18 52.2
comp=Z,46nm,0.8s
WCI Wyandotte Cave 25.10 10 P P 00 18 50.8 -1.1
WCI pmax pmax
comp=Z,46nm,0.9s
S51A Beattyville 25.10 15 P 00 18 51.0 -0.9
S51A IAmb IAmb 00 18 52.6
comp=Z,36nm,0.9s
ANMO Albuquerque 25.24 330 P P 00 18 53.9 +0.5
ANMO Albuquerque 25.24 330 P P 00 18 53.9 +0.5
ANMO pmax pmax
comp=Z,9.0nm,0.9s
OLIL Olney 25.34 6 P 00 18 53.2 -0.9
R49A Shelbyville 25.36 12 P 00 18 52.4 -1.9
R49A IAmb IAmb 00 18 54.9
comp=Z,41nm,1.1s
Q44A Meyer Farm, Va 25.43 5 P 00 18 53.4 -1.5
Q44A IAmb IAmb 00 18 56.8
comp=Z,52nm,1.0s
R50A Paris 25.53 13 P 00 18 55.1 -0.8
R50A IAmb IAmb 00 18 56.3
comp=Z,24nm,0.9s
R32A Long Quarter, 25.63 347 P P 00 18 56.0 -0.7
R32A IAmb IAmb 00 18 58.9
comp=Z,38nm,1.0s
BLA Blacksburg 25.66 21 P 00 18 57.0 -0.1
BLA IAmb IAmb 00 19 39.3
comp=Z,32nm,1.2s
BLA Blacksburg 25.66 21 P P 00 18 57.0 -0.1
BLA pmax pmax
comp=Z,33nm,1.2s
TUC Tucson 25.67 320 P 00 18 59.1 +1.8
TUC Tucson 25.67 320 P P 00 18 59.1 +1.8
TUC pmax pmax
comp=Z,13nm,1.1s
KSU1 Kansas State U 25.90 351 P 00 18 58.6 -0.6
S54A Dingess, Beckl 25.90 19 P P 00 18 58.9 -0.3
S54A IAmb IAmb 00 18 60.0
comp=Z,25nm,0.9s
P40A Paris 25.95 359 P 00 18 57.1 -2.5
P40A IAmb IAmb 00 19 01.8
comp=Z,23nm,0.8s
BLO Bloomington 25.98 9 P P 00 18 58.7 -1.2
BLO Bloomington 25.98 9 P P 00 18 58.7 -1.2
BLO pmax pmax
comp=Z,19nm,1.0s
P38A Dawn 26.10 357 P 00 18 59.8 -1.1
P43A Skaggs, Pawnee 26.12 4 P P 00 19 00.4 -0.7
P43A IAmb IAmb 00 19 37.4
comp=Z,19nm,0.8s
T25A Trinidad 26.19 336 P P 00 19 04.3 +2.2
T25A IAmb IAmb 00 19 07.2
comp=Z,28nm,1.0s
P46A Rosedale 26.32 8 P P 00 19 01.8 -1.2
P46A IAmb IAmb 00 19 04.1
comp=Z,35nm,0.9s
P48A Milroy 26.45 11 P 00 19 02.3 -1.8
P48A IAmb IAmb 00 19 03.9
comp=Z,34nm,0.9s
Q51A Peebles 26.47 15 P 00 19 03.6 -0.8
T59A Double "B" Far 26.56 26 P 00 19 03.3 -1.8
Q52A Bidwell 26.69 16 P P 00 19 05.7 -0.6
Q52A IAmb IAmb 00 19 07.1
comp=Z,42nm,0.8s
R55A Marlinton 26.73 20 P 00 19 06.0 -0.7
R55A IAmb IAmb 00 19 08.6
comp=Z,44nm,1.0s
X18A Snowflake 26.74 325 P P 00 19 08.2 +1.1
214A Organ Pipe Nat 26.75 317 P P 00 19 07.0 0.0
P51A Williamsport 26.98 15 P P 00 19 07.8 -1.1
P51A IAmb IAmb 00 19 44.9
comp=Z,28nm,0.9s

HDIL Hopedale 27.05 4 P P 00 19 07.2 -2.2
HDIL IAmb IAmb 00 19 09.4
comp=Z,23nm,0.7s
W18A Petrified Fore 27.05 326 P P 00 19 10.4 +0.5
W18A IAmb IAmb 00 19 16.1
comp=Z,49nm,1.4s
SFIN Lafayette 27.09 8 P 00 19 08.1 -1.7
N41A Harden Midland 27.13 1 P P 00 19 08.1 -2.2
Q54A Coxs Mills 27.13 19 P P 00 19 09.1 -1.2
Q54A IAmb IAmb 00 19 11.3
comp=Z,51nm,1.0s
SDCO Great Sand Dun 27.15 335 P 00 19 10.9 +0.1
KSCO Kaye Shedlock' 27.23 341 P P 00 19 11.1 -0.2
N38A Joes South For 27.25 357 P P 00 19 10.3 -1.0
N38A IAmb IAmb 00 19 45.9
comp=Z,18nm,0.8s
O48B Farmland 27.27 11 P P 00 19 09.7 -1.8
R58B Mineral 27.27 24 P P 00 19 11.2 -0.3
O49A Covington 27.36 12 P 00 19 10.8 -1.6
P53A Whipple 27.43 17 P 00 19 12.7 -0.2
P53A IAmb IAmb 00 19 14.0
comp=Z,38nm,1.0s
N35A Tabor 27.50 353 P P 00 19 13.9 +0.3
N35A IAmb IAmb 00 19 16.8
comp=Z,41nm,1.4s
X16A Lo Mia Camp, P 27.52 323 P 00 19 16.0 +1.9
CBN Corbin Frederi 27.68 25 P P 00 19 15.6 +0.4
CBN IAmb IAmb 00 19 17.7
comp=Z,27nm,1.1s
ACSO Alum Creek Sta 27.70 14 P P 00 19 14.4 -0.9
ACSO IAmb IAmb 00 19 15.9
comp=Z,44nm,0.9s
Q56A Snyder Ridge, 27.73 21 P 00 19 14.8 -0.9
Q56A IAmb IAmb 00 19 17.8
comp=Z,21nm,1.1s
N47A Urbana 27.78 10 P 00 19 13.7 -2.4
113A Mohawk Valley, 27.89 317 P P 00 19 17.9 +0.8
O52A Adamsville 27.89 16 P 00 19 16.5 -0.6
O52A IAmb IAmb 00 19 17.6
comp=Z,44nm,0.9s
SGC2 Sao Gabriel da 27.91 117 P P 00 19 18.1 +0.6
MVCO Mesa Verde 28.04 330 P 00 19 20.1 +1.4
MVCO IAmb IAmb 00 19 22.3
comp=Z,45nm,1.2s
MCWV Mont Chateau 28.06 20 P P 00 19 17.8 -0.8
N49A Columbus Grove 28.10 12 P P 00 19 17.4 -1.5
Y14A Wickenburg 28.14 320 P P 00 19 20.5 +1.0
O53A New Philadelph 28.19 17 P P 00 19 19.3 -0.4
O53A IAmb IAmb 00 19 20.3
comp=Z,30nm,0.9s
WUAZ Wupatki 28.26 324 P P 00 19 21.0 +0.4
O54A Avella 28.37 18 P P 00 19 19.3 -2.1
O54A IAmb IAmb 00 19 21.8
comp=Z,25nm,0.8s
L42A Oliver, Polo 28.47 3 P P 00 19 20.9 -1.2
L42A IAmb IAmb 00 19 23.2
comp=Z,26nm,1.0s
L40A Anamosa 28.48 1 P 00 19 21.0 -1.2
L40A IAmb IAmb 00 19 24.2
comp=Z,20nm,0.9s
N51A Ashland 28.50 15 P P 00 19 21.3 -1.2
N51A IAmb IAmb 00 19 22.6
comp=Z,26nm,0.9s
P57A Homestead Farm 28.54 22 P P 00 19 22.7 -0.2
P57A IAmb IAmb 00 19 25.0
comp=Z,31nm,1.1s
GLA Glamis 28.77 317 P P 00 19 25.5 +0.5
GLA Glamis 28.77 317 P P 00 19 25.5 +0.5
GLA pmax pmax
comp=Z,12nm,1.0s
M50A Fremont 28.80 13 P P 00 19 24.4 -0.8
M50A IAmb IAmb 00 19 25.0
comp=Z,14nm,0.8s
N53A Lisbon 28.81 17 P P 00 19 24.3 -0.9
N53A IAmb IAmb 00 19 25.7
comp=Z,39nm,0.9s
PV01 Paradox Valley 28.81 331 P P 00 19 26.0 +0.5
ESJX Sierra Juarez 28.93 314 P P 00 19 27.9 +1.3
SDMD Soldier's Deli 28.93 24 P P 00 19 25.7 -0.6
PV15 Paradox Valley 28.94 332 P P 00 19 28.5 +1.8
PV02 Paradox Valley 28.95 331 P P 00 19 27.2 +0.5
PV13 Radium Mtn., P 28.95 331 P P 00 19 27.5 +0.7
PV13 IAmb IAmb 00 19 30.5
comp=Z,43nm,1.1s
ISCO Idaho Springs 28.97 337 P 00 19 27.2 +0.2
ISCO Idaho Springs 28.97 337 P P 00 19 27.3 +0.2
ISCO pmax pmax
comp=Z,7.0nm,1.1s
BLYC Blythe 29.00 318 P P 00 19 26.8 -0.2
PV05 Paradox Valley 29.02 331 P P 00 19 27.3 -0.1
PV05 IAmb IAmb 00 19 30.8
comp=Z,37nm,1.2s
PV03 Paradox Valley 29.04 331 P P 00 19 28.3 +0.8
PV03 IAmb IAmb 00 19 31.2
comp=Z,35nm,1.2s
PV18 Skein Mesa, Pa 29.06 331 P 00 19 28.7 +0.9
PV12 Saucer Basin, 29.07 331 P P 00 19 28.6 +0.7
PV11 David Mesa, Pa 29.09 331 P P 00 19 28.6 +0.6
PV11 IAmb IAmb 00 19 31.6
comp=Z,57nm,1.4s
PV07 Paradox Valley 29.09 332 P P 00 19 28.8 +0.8
PV07 IAmb IAmb 00 19 31.7
comp=Z,23nm,1.1s
PV17 East Wray Mesa 29.11 331 P P 00 19 29.8 +1.6
PV17 IAmb IAmb 00 19 31.7
comp=Z,43nm,1.3s
PV16 Nyswonger Mesa 29.11 331 P P 00 19 28.4 +0.2
PV16 IAmb IAmb 00 19 31.8
comp=Z,40nm,1.2s
PV19 Morning Glory 29.14 331 P P 00 19 29.4 +0.9
PAMR Moraine State 29.15 18 P P 00 19 27.2 -1.1
PAMR IAmb IAmb 00 19 28.9
comp=Z,37nm,0.9s
PV20 West Nyswonger 29.16 331 P P 00 19 30.5 +1.9
PV20 IAmb IAmb 00 19 32.1
comp=Z,66nm,1.3s
PV04 Paradox Valley 29.18 331 P P 00 19 29.6 +0.9
PV04 IAmb IAmb 00 19 32.3
comp=Z,38nm,1.2s
PV14 Lion Creek, Pa 29.21 331 P P 00 19 30.1 +1.0
PV14 IAmb IAmb 00 19 40.0
comp=Z,19nm,1.0s
PV10 Paradox Valley 29.23 331 P P 00 19 30.1 +0.8
PV10 IAmb IAmb 00 19 32.1
comp=Z,61nm,1.2s
PV22 Blue Mesa, Par 29.23 332 P 00 19 30.0 +0.7
PV22 IAmb IAmb 00 19 32.7
comp=Z,20nm,1.1s
NNA Nana 29.24 149 LR LR 00 29 25.7
comp=Z,185nm,19.4s,baz=324,slow=33
PV23 Carpenter Ridg 29.27 331 P P 00 19 30.2 +0.5
PV23 IAmb IAmb 00 19 33.1
comp=Z,37nm,1.0s
YUH Yuha Desert 29.27 315 P P 00 19 30.4 +0.9
PV21 Cone Mtn., Par 29.34 331 P P 00 19 30.7 +0.4
M52A Chesterland 29.35 16 P P 00 19 28.9 -1.1
M52A IAmb IAmb 00 19 30.2
comp=Z,28nm,0.8s
JFWS Jewell Farm 29.35 2 P 00 19 28.7 -1.3
JFWS IAmb IAmb 00 19 31.7
comp=Z,14nm,0.8s
JFWS Jewell Farm 29.35 2 P P 00 19 28.7 -1.3
JFWS pmax pmax
comp=Z,14nm,0.8s
U15A North Rim 29.43 325 P P 00 19 31.6 +0.5
U15A IAmb IAmb 00 19 43.1
comp=Z,26nm,1.4s
W13A Hualapai Mount 29.46 321 P P 00 19 32.4 +1.1
AAM Ann Arbor 29.53 12 P P 00 19 29.8 -1.8
AAM IAmb IAmb 00 19 32.0
comp=Z,20nm,1.0s
AAM Ann Arbor 29.53 12 P P 00 19 29.8 -1.8
AAM pmax pmax
comp=Z,20nm,1.0s
BC3 Big Chuckawall 29.55 317 P 00 19 32.1 +0.1
SSPA Standing Stone 29.60 21 P 00 19 31.5 -0.8
SSPA IAmb IAmb 00 19 33.7
comp=Z,38nm,1.2s
MVL Millersville 29.63 24 P 00 19 31.8 -0.7
MVL IAmb IAmb 00 19 34.3
comp=Z,31nm,1.4s
IRM Iron Mountain 29.65 318 P P 00 19 33.4 +0.6
HMU Henry Mountain 29.71 328 P 00 19 34.4 +0.8
HMU IAmb IAmb 00 19 41.7

comp=Z,33nm,1.2s
PAOC Oil Creek Stat 29.80 18 P P 00 19 33.2 -0.9
BORC Borrego Spring 29.97 315 P P 00 19 36.2 +0.6
KNB Kanab 30.15 325 P 00 19 36.8 -0.5
KNB IAmb IAmb 00 19 41.4
comp=Z,15nm,0.9s
KNB Kanab 30.15 325 P P 00 19 36.8 -0.5
KNB pmax pmax
comp=Z,15nm,0.9s
PMD Palm Desert 30.16 316 P P 00 19 35.3 -2.0
PFO Pinyon Flats O 30.20 316 LR LR 00 31 59.9
comp=Z,339nm,21.3s,baz=127,slow=36
PFO Pinyon Flats O 30.20 316 P P 00 19 38.1 +0.3
PFO Pinyon Flats O 30.20 316 P P 00 19 38.1 +0.3
PFO pmax pmax
comp=Z,6.0nm,1.2s
K50A Casco 30.21 13 P P 00 19 36.3 -1.2
K50A IAmb IAmb 00 19 37.7
comp=Z,20nm,1.0s
N58A Sunbury 30.21 23 P P 00 19 36.6 -1.0
ERPA Erie 30.26 17 P P 00 19 37.0 -1.1
ERPA IAmb IAmb 00 19 38.4
comp=Z,24nm,0.8s
O20A White River Ci 30.31 334 P 00 19 38.9 +0.1
LCMT Little Creek M 30.38 324 P P 00 19 39.6 +0.3
I42A Draeger Farm, 30.39 4 P 00 19 38.1 -1.1
I42A IAmb IAmb 00 19 39.0
comp=Z,10nm,0.7s
ECSD EROS Data Cent 30.45 353 P 00 19 38.3 -1.4
V12A Nelson 30.46 321 P 00 19 41.5 +1.5
V12A IAmb IAmb 00 19 47.1
comp=Z,16nm,1.0s
I37A Lemond, Waseca 30.47 357 P 00 19 39.4 -0.5
I37A IAmb IAmb 00 19 41.5
comp=Z,26nm,1.3s
M57A Sunshine Farm, 30.49 22 P 00 19 39.4 -0.7
M57A IAmb IAmb 00 19 41.6
comp=Z,29nm,1.0s
SRU San Rafael Swe 30.51 330 P P 00 19 41.1 +0.6
SRU San Rafael Swe 30.51 330 P P 00 19 41.1 +0.6
SRU pmax pmax
comp=Z,15nm,1.2s
MTPU Mount Pierson 30.54 327 P 00 19 42.2 +1.2
MTPU IAmb IAmb 00 19 49.8
comp=Z,14nm,1.0s
Q16A Castle Valley 30.68 329 P P 00 19 43.0 +0.9
Q16A IAmb IAmb 00 19 46.0
comp=Z,33nm,1.5s
SZCU Shurtz Canyon 30.71 325 P P 00 19 43.2 +0.9
SZCU IAmb IAmb 00 19 46.5
comp=Z,15nm,1.0s
MTPC Mountain Pass 30.74 320 P P 00 19 43.6 +1.0
P18A Preston Nutter 30.79 331 P P 00 19 43.9 +0.8
CCUT Cedar City 30.83 325 P P 00 19 44.7 +1.3
CCUT IAmb IAmb 00 19 48.3
comp=Z,19nm,1.0s
ELS Elsinore Mount 30.88 315 P P 00 19 45.0 +1.3
P17A Butcher Ranch, 30.90 330 P P 00 19 44.3 +0.3
P17A IAmb IAmb 00 19 47.5
comp=Z,22nm,1.1s
L56A Greenwood 31.05 20 P 00 19 43.8 -1.3
L56A IAmb IAmb 00 19 45.6
comp=Z,25nm,1.0s
TCRU Three Creeks R 31.10 327 P P 00 19 46.5 +0.7
TCRU IAmb IAmb 00 19 50.8
comp=Z,14nm,0.9s
SHPR Sheep Range 31.16 322 P 00 19 46.8 +0.5
I49A Point Hope 31.28 12 P P 00 19 45.1 -1.9
MMNY Mt. Morris Dam 31.46 20 P P 00 19 47.9 -0.7
TEFE Tefe 31.65 120 eP P 00 19 51.0 +0.4
SPMN Marine on St. 31.65 358 P 00 19 48.3 -2.0
SPMN IAmb IAmb 00 19 50.1
comp=Z,17nm,0.8s
BINY Binghamton 31.66 22 P P 00 19 49.5 -1.0
MEDO Medina 31.68 18 P P 00 19 49.2 -1.3
MEDO IAmb IAmb 00 19 50.8
comp=Z,31nm,0.9s
PRN Pahroc Range 31.70 323 P P 00 19 52.6 +1.7
BSUT Blindstream Ca 31.75 332 P 00 19 52.0 +0.4
MPU Maple Canyon 31.75 330 P P 00 19 53.0 +1.5
MPU IAmb IAmb 00 19 58.4
comp=Z,27nm,1.5s
K22A Casper 31.80 339 P 00 19 52.4 +0.6
PSUT Pine Spring 31.80 326 P P 00 19 52.6 +0.6
PSUT IAmb IAmb 00 19 56.9
comp=Z,11nm,0.9s
GLMI Grayling 31.80 9 P P 00 19 50.5 -1.1
WSPT Westport, CT 31.87 27 P P 00 19 50.4 -1.8
WSPT IAmb IAmb 00 19 53.1
comp=Z,19nm,1.1s
GWY Greenwater Val 31.89 320 P 00 19 53.7 +1.0
CCCA Chr Cany lake 31.93 318 P P 00 19 51.7 -1.2
K57A Scipio Center 31.93 21 P 00 19 50.6 -2.2
J55A Hilton 31.97 19 P P 00 19 51.9 -1.2
J55A IAmb IAmb 00 19 53.3
comp=Z,28nm,1.0s
L59A Walton 32.01 24 P P 00 19 52.7 -0.8
L59A IAmb IAmb 00 19 55.0
comp=Z,27nm,1.1s
LRMC Laurel Mtn Rad 32.11 318 P P 00 19 54.0 -0.6
TPNV Topopah Spring 32.11 321 P P 00 19 55.6 +1.0
TPNV Topopah Spring 32.11 321 P P 00 19 55.6 +1.0
TPNV pmax pmax
comp=Z,12nm,1.2s
WCT Wildcat Mounta 32.24 320 P P 00 19 55.9 +0.2
CLC China Lake 32.26 318 P P 00 19 55.8 0.0
CLC China Lake 32.26 318 P P 00 19 55.8 0.0
CLC pmax pmax
comp=Z,11nm,1.4s
KSCT Kent School, K 32.26 26 P P 00 19 54.8 -0.8
KSCT IAmb IAmb 00 19 56.4
comp=Z,44nm,1.3s
S11A Rachel 32.27 323 P P 00 19 56.7 +0.7
S11A IAmb IAmb 00 20 03.9
comp=Z,18nm,0.9s
MPMC Manual Prospec 32.33 319 P P 00 19 56.4 -0.2
CTU Camp Tracy 32.34 331 P P 00 19 56.8 +0.2
CTU IAmb IAmb 00 20 00.2
comp=Z,16nm,1.0s
RSSD Black Hills 32.34 343 P 00 19 56.2 -0.4
RSSD Black Hills 32.34 343 P P 00 19 56.2 -0.4
RSSD pmax pmax
comp=Z,5.0nm,0.9s
DUG Dugway, Tooele 32.48 329 P 00 19 58.4 +0.7
DUG Dugway, Tooele 32.48 329 P P 00 19 58.4 +0.7
DUG pmax pmax
comp=Z,10.0nm,1.2s
TCUT Toone Canyon 32.51 332 P P 00 19 59.1 +1.0
M63A Gales Ferry 32.63 28 P P 00 19 58.9 +0.1
M63A IAmb IAmb 00 19 59.9
comp=Z,32nm,1.0s
BOAV Boa Vista 32.65 107 P 00 20 00.3 +0.9
BOAV Boa Vista 32.65 107 eP P 00 19 58.3 -1.1
BOAV Boa Vista 32.65 107 P P 00 19 59.6 +0.2
J57A Williamstown 32.71 21 P 00 19 57.7 -1.9
J57A IAmb IAmb 00 19 59.8
comp=Z,30nm,0.9s
ISA Isabella, Lake 32.74 317 P P 00 20 00.7 +0.6
ISA Isabella, Lake 32.74 317 P P 00 20 00.7 +0.6
ISA pmax pmax
comp=Z,6.0nm,1.1s
PECO Prince Edward 32.84 20 P P 00 19 59.3 -1.3
UCCT U. Connecticut 32.86 27 P P 00 20 00.0 -0.9
CWC Cottonwood Cre 32.94 319 P P 00 20 02.2 +0.3
SADO Sadowa 32.95 16 LR LR 00 34 28.4
comp=Z,936nm,19.2s,baz=223,slow=38
SADO Sadowa 32.95 16 P 00 20 00.0 -1.6
SADO IAmb IAmb 00 20 01.4
comp=Z,30nm,1.0s
HWUT Hardware Ranch 32.97 332 P P 00 20 03.0 +0.9
HWUT IAmb IAmb 00 20 05.9
comp=Z,20nm,0.9s
TRY Troy 33.02 25 P P 00 20 02.1 -0.1
E38A The Farm, Brul 33.02 0 P 00 20 00.7 -1.6
E38A IAmb IAmb 00 20 01.8
comp=Z,19nm,0.8s
BW06 Boulder Array 33.05 335 P P 00 20 03.4 +0.6
PD31 Pinedale Array 33.05 335 P P 00 20 02.9 +0.1
PDAR Pinedale Array 33.05 335 P P 00 20 03.6 +0.8
comp=Z,3.4nm,0.9s,baz=135,slow=8.5,SNR=14
PDAR PcP **PcP 00 22 45.6 +0.2**
comp=Z,1.8nm,0.9s,baz=152,slow=3.7,SNR=6.0
PDAR ScP **ScP 00 26 23.0 -1.8**
comp=Z,0.1nm,0.5s,baz=133,slow=4.4,SNR=2.1

comp=Z,3.4nm,0.9s
PDAR Pinedale Array 33.05 335 P P 00 20 03.2 +0.4
BGU Big Grassy Mou 33.14 330 P P 00 20 03.9 +0.4
BGU IAmb IAmb 00 20 10.7
comp=Z,14nm,1.0s
SPUT South Promonto 33.15 331 P P 00 20 03.3 -0.3
SPUT IAmb IAmb 00 20 06.8
comp=Z,19nm,1.1s
DELO Deloro Mine 33.16 18 P 00 20 01.9 -1.6
VES Vestal, Richgr 33.25 317 P P 00 20 05.6 +1.2
VES IAmb IAmb 00 20 08.5
comp=Z,24nm,0.9s
J59A Piesco 33.31 23 P 00 20 03.9 -0.9
J59A IAmb IAmb 00 20 06.5
comp=Z,15nm,1.0s
E46A Sault Ste Mari 33.35 9 P 00 20 04.3 -0.8
E46A IAmb IAmb 00 20 06.1
comp=Z,10nm,0.8s
DSP Deep Springs 33.44 320 P P 00 20 07.0 +1.0
BUKO Buck Lake 33.50 16 P P 00 20 05.0 -1.4
K62A Royalston 33.56 26 P P 00 20 05.7 -1.3
K62A IAmb IAmb 00 20 07.4
comp=Z,22nm,1.3s
L64A Middleborough 33.60 29 P P 00 20 06.3 -1.0
L64A IAmb IAmb 00 20 10.0
comp=Z,42nm,1.4s
HVU Hansel Valley 33.67 331 P P 00 20 09.3 +1.2
HVU IAmb IAmb 00 20 11.8
comp=Z,29nm,1.2s
HVU Hansel Valley 33.67 331 P P 00 20 09.3 +1.2
HVU pmax pmax
comp=Z,29nm,1.2s
AHID Auburn Hatcher 33.69 334 P P 00 20 09.0 +0.6
AHID IAmb IAmb 00 20 11.0
comp=Z,16nm,1.0s
HRV Adam Dziewonsk 33.73 27 P P 00 20 07.7 -0.7
HRV IAmb IAmb 00 20 09.5
comp=Z,14nm,0.9s
HRV Adam Dziewonsk 33.73 27 P P 00 20 07.7 -0.7
HRV pmax pmax
comp=Z,14nm,0.9s
WES Weston 33.74 28 P P 00 20 08.0 -0.5
WES IAmb IAmb 00 20 10.4
comp=Z,22nm,1.2s
WES Weston 33.74 28 P P 00 20 08.0 -0.5
WES pmax pmax
comp=Z,22nm,1.2s
BCX Boston College 33.77 28 P P 00 20 07.7 -1.1
BCX IAmb IAmb 00 20 10.0
comp=Z,41nm,1.3s
NCB Newcomb 33.84 23 P 00 20 07.8 -1.7
NCB IAmb IAmb 00 20 09.8
comp=Z,24nm,0.9s
E28A Huff 33.86 349 P P 00 20 09.5 -0.1
E28A IAmb IAmb 00 20 10.4
comp=Z,20nm,0.8s
Q09A Carvers 33.90 323 P P 00 20 09.3 -0.9
J61A Chester 33.98 25 P P 00 20 10.4 -0.2
J61A IAmb IAmb 00 20 16.3
comp=Z,27nm,1.5s
SNOW Snow King Moun 34.11 335 P P 00 20 13.3 +1.1
ELK Elko 34.13 327 LR LR 00 35 50.4
comp=Z,258nm,18.4s,baz=140,slow=39
ELK Elko 34.13 327 P 00 20 13.3 +1.0
ELK Elko 34.13 327 P P 00 20 13.3 +1.0
ELK pmax pmax
comp=Z,9.0nm,1.1s
LOHW Long Hollow 34.17 335 P 00 20 13.4 +0.8
LOHW IAmb IAmb 00 20 15.4
comp=Z,24nm,1.4s
LONY Lake Ozonia 34.27 22 P P 00 20 12.4 -0.7
MDPB Devils Postpil 34.30 319 P P 00 20 15.0 +1.2
MDPB IAmb IAmb 00 20 20.7
comp=Z,8.8nm,0.8s
NVAR Mina Array Bea 34.31 321 P P 00 20 16.9 +3.0
comp=Z,6.9nm,0.8s,baz=136,slow=8.3,SNR=23
PcP **PcP 00 22 49.6 +0.5**
NVAR comp=Z,4.2nm,0.9s,baz=148,slow=3.6,SNR=5.8
LR LR 00 36 29.2
comp=Z,407nm,18.4s,baz=117,slow=40
comp=Z,6.9nm,0.8s
LHV Little Huntoon 34.32 321 P P 00 20 15.1 +1.4
LHV IAmb IAmb 00 20 28.9
comp=Z,17nm,0.9s
MOOW Moose Ponds 34.34 335 P 00 20 14.5 +0.4
WBO Williamsburg 34.35 21 P 00 20 12.3 -1.5
EYMN Ely 34.36 0 P 00 20 12.2 -1.7
EYMN IAmb IAmb 00 20 13.2
comp=Z,7.3nm,0.7s
FXWY Fox Creek 34.37 335 P P 00 20 14.9 +0.6
FLWY Flagg Ranch 34.60 335 P P 00 20 16.2 -0.1
VT1 Waterbury 34.72 24 P P 00 20 16.5 -0.5
VT1 IAmb IAmb 00 20 19.1
comp=Z,12nm,1.0s
YPP Pitchstone Pla 34.80 336 P P 00 20 18.9 +0.8
H17A Grant Village 34.81 336 P P 00 20 18.2 +0.1
FRNY Flat Rock 34.82 23 P 00 20 16.8 -1.1
FRNY IAmb IAmb 00 20 18.3
comp=Z,26nm,1.1s
AGMN Agassiz Nation 34.89 355 P 00 20 17.1 -1.3
MDND Maddock 34.91 351 P 00 20 18.0 -0.6
MDND IAmb IAmb 00 20 19.1
comp=Z,28nm,0.9s
I62A Tamworth 34.92 26 P P 00 20 18.3 -0.5
YMP Mirror Lake Pl 34.94 337 P P 00 20 20.2 +1.0
YNE Yellowstone No 35.11 337 P P 00 20 21.4 +0.7
TBO Thunder Bay 35.11 3 P 00 20 19.1 -1.2
TBO IAmb IAmb 00 20 19.8
comp=Z,24nm,0.8s
YNR Norris Junctio 35.12 336 P P 00 20 21.7 +0.9
YMR Madison River 35.20 336 P P 00 20 22.5 +1.1
YMR IAmb IAmb 00 20 24.6
comp=Z,18nm,1.2s
YHH Holmes Hill 35.25 336 P P 00 20 22.6 +0.7
CMB Columbia Colle 35.37 319 P P 00 20 23.4 +0.6
CMB Columbia Colle 35.37 319 P P 00 20 23.4 +0.6
CMB pmax pmax
comp=Z,4.0nm,1.0s
MNTQ Montreal, Queb 35.37 22 P P 00 20 21.4 -1.2
I63A Otisfield 35.39 27 P P 00 20 22.6 -0.2
YHL Hebgen Lake 35.43 336 P P 00 20 24.5 +1.0
PNTR Pine Nut 35.51 321 P P 00 20 25.6 +1.4
PNTR IAmb IAmb 00 20 32.9
comp=Z,9.5nm,0.8s
QLMT Earthquake Lak 35.52 335 P P 00 20 25.6 +1.5
H62A Milan 35.57 25 P P 00 20 24.2 -0.1
H62A IAmb IAmb 00 20 25.8
comp=Z,15nm,1.1s
TRQ Mont Tremblant 35.67 20 P 00 20 24.3 -0.9
TRQ IAmb IAmb 00 20 25.8
comp=Z,32nm,1.2s
PAHR Pah Rah Range 35.77 322 P P 00 20 27.6 +1.2
HLID Hailey 35.81 331 P 00 20 27.7 +1.1
HLID IAmb IAmb 00 20 35.8
comp=Z,17nm,1.1s
MPK Martis Peak 35.90 321 P P 00 20 28.6 +0.9
MPK IAmb IAmb 00 20 38.3
comp=Z,18nm,1.1s
MCMT McKenzie Canyo 36.10 334 P P 00 20 31.3 +2.1
EPLO Experimental L 36.13 358 P 00 20 28.1 -1.0
EPLO IAmb IAmb 00 20 28.7
comp=Z,15nm,0.8s
BOZ Bozeman (W) 36.23 336 P P 00 20 31.2 +1.0
BOZ Bozeman (W) 36.23 336 P P 00 20 31.2 +1.0
BOZ pmax pmax
comp=Z,6.0nm,1.0s
G62A West of Eustis 36.35 25 P 00 20 30.2 -0.8
G62A IAmb IAmb 00 20 31.6
comp=Z,24nm,1.0s
MFID Camas Ranch 36.38 330 P 00 20 32.7 +1.3
MFID IAmb IAmb 00 20 40.3
comp=Z,33nm,1.1s
DLMT Dillon 36.43 335 P P 00 20 32.6 +0.7
DLMT IAmb IAmb 00 20 35.3
comp=Z,20nm,1.0s
BEKR Beckworth 36.45 321 P P 00 20 32.5 +0.3
VLDQ Val d'Or 36.48 16 P 00 20 30.6 -1.4
VLDQ IAmb IAmb 00 20 31.7
comp=Z,12nm,0.9s
LRM Limekiln Ridge 36.74 335 P P 00 20 35.5 +0.9
ULM Lac du Bonnet 36.83 355 P P 00 20 33.1 -1.9
comp=Z,7.3nm,0.7s,baz=169,slow=9.8,SNR=16
ULM PcP **PcP 00 22 55.7 -0.2**
comp=Z,5.6nm,0.9s,baz=170,slow=7.2,SNR=4.7
ULM LR LR 00 39 56.3
comp=Z,227nm,18.8s,baz=178,slow=43
comp=Z,7.3nm,0.7s
ULM Lac du Bonnet 36.83 355 P 00 20 33.8 -1.2
ULM Lac du Bonnet 36.83 355 P P 00 20 33.8 -1.2
ULM pmax pmax
comp=Z,7.0nm,0.7s
SUTB Sutter Butte 36.96 320 P P 00 20 36.8 +0.6
SUTB IAmb IAmb 00 20 40.0
comp=Z,12nm,0.8s
ORV Oroville 36.97 320 P 00 20 37.3 +1.0
ORV Oroville 36.97 320 P P 00 20 37.3 +1.0
ORV pmax pmax
comp=Z,8.0nm,1.2s
WVOR Wild Horse Val 37.13 326 P P 00 20 39.2 +1.4
WVOR IAmb IAmb 00 20 42.8
comp=Z,28nm,1.0s
WVOR Wild Horse Val 37.13 326 P P 00 20 39.3 +1.4
WVOR pmax pmax
comp=Z,28nm,1.0s
LPAZ La Paz 37.60 141 P P 00 20 42.8 +0.2
comp=Z,3.5nm,0.9s,baz=309,slow=8.4,SNR=6.6
comp=Z,3.5nm,0.9s
LPAZ La Paz 37.60 141 P P 00 20 42.5 0.0
LPAZ La Paz 37.60 141 P P 00 20 42.6 0.0
LPAZ pmax pmax
comp=Z,4.0nm,1.0s
LPAZ La Paz 37.60 141 eP P 00 20 42.5 0.0
LPAZ La Paz 37.60 141 P P 00 20 43.6 +1.0
EGMT Eagleton 37.60 340 P 00 20 42.4 +0.7
EGMT IAmb IAmb 00 20 52.5
comp=Z,22nm,1.4s
G65A Princeton 37.63 28 P P 00 20 41.2 -0.7
G65A IAmb IAmb 00 20 43.6
comp=Z,24nm,1.0s
J08A Circle Bar Ran 37.68 327 P 00 20 44.5 +2.0
PLID Pearl Lake 37.71 331 P 00 20 43.8 +1.0
PLID IAmb IAmb 00 20 45.7
comp=Z,31nm,1.1s
F64A Sherman 37.79 27 P P 00 20 41.5 -1.7
F64A IAmb IAmb 00 20 43.6
comp=Z,26nm,1.2s
E62A Clayton Lake 37.90 25 P P 00 20 43.2 -0.9
E62A IAmb IAmb 00 20 45.2
comp=Z,18nm,1.0s
BMO Blue Mountains 38.16 330 P 00 20 47.4 +1.0
BMO IAmb IAmb 00 20 49.0
comp=Z,18nm,1.1s
BMO Blue Mountains 38.16 330 P P 00 20 47.4 +1.0
BMO pmax pmax
comp=Z,18nm,1.2s
MSO Missoula 38.16 335 P 00 20 47.2 +0.7
MSO IAmb IAmb 00 20 49.0
comp=Z,15nm,1.2s
LDAQ Lac Daran 38.33 22 P P 00 20 46.2 -1.6
LDAQ IAmb IAmb 00 20 55.2
comp=Z,18nm,1.0s
LMQ La Malbaie 38.33 23 P P 00 20 46.4 -1.4
LMQ IAmb IAmb 00 20 48.0
comp=Z,34nm,0.9s
M03C McCloud 38.38 322 P P 00 20 48.1 -0.3
M03C IAmb IAmb 00 20 53.7
comp=Z,15nm,0.9s
PB16 IPOC Station P 38.40 145 P P 00 20 50.4 +1.1
D62A Allapoint, All 38.46 25 P P 00 20 47.9 -0.9
I07A Izee 38.72 327 P P 00 20 52.2 +1.0
I07A IAmb IAmb 00 20 55.3
comp=Z,16nm,1.0s
F10A Beach Ranch, E 38.94 331 P P 00 20 53.9 +0.8
YBH Yreka Blue Hor 39.01 322 LR LR 00 37 52.1
comp=Z,26nm,18.9s,baz=132,slow=37
J05D Fort Rock, OR 39.12 325 P P 00 20 55.3 +0.7
G08A Pilot Rock 39.28 329 P P 00 20 56.3 +0.4
PINE Pine Mountain 39.29 326 P P 00 20 56.5 +0.4
PINE IAmb IAmb 00 21 00.4
comp=Z,19nm,0.9s
LNOR Lincton Mounta 39.37 330 P P 00 20 56.4 -0.1
PB11 IPOC Station P 39.47 146 P P 00 20 58.3 +0.5
PB11 IAmb IAmb 00 21 03.4
comp=Z,17nm,1.0s
J04A Umpqua Nationa 39.59 324 P P 00 20 59.1 +0.6
GO01 Chusmiza 39.65 146 P P 00 21 01.4 +1.8
BBOR Butler Butte 39.69 324 P P 00 20 59.4 0.0
E09A Wood Farm, Sta 39.77 331 P P 00 21 00.3 +0.5
ITTB Itaituba 39.78 114 eP P 00 21 00.1 -0.2
BATG Bathurst New B 39.89 27 P P 00 20 58.4 -2.4
WIFE Three Sisters- 39.95 326 IAmb IAmb 00 21 31.2
comp=Z,21nm,1.2s
I04A Tendick Farm, 40.11 325 P P 00 21 03.6 +0.9
I04A IAmb IAmb 00 21 07.0
comp=Z,16nm,1.0s
G05A Wamic 40.46 327 P P 00 21 07.3 +1.8
G05A IAmb IAmb 00 21 16.1
comp=Z,50nm,1.1s
D08A Wollman Farm, 40.53 331 P P 00 21 06.1 0.0
D08A IAmb IAmb 00 21 08.9
comp=Z,18nm,1.1s
H04A Detroit Lake 40.55 326 P P 00 21 07.4 +1.0
I03D Drain, OR 40.58 324 P P 00 21 05.5 -1.0
I03D IAmb IAmb 00 21 09.5
comp=Z,50nm,1.2s
J01E Myrtle Point 40.59 323 P P 00 21 06.9 +0.3
E07A Sunnyside 40.62 330 P P 00 21 07.7 +0.8
E07A IAmb IAmb 00 21 09.9
comp=Z,19nm,1.1s
WAH2 Wahluke Slope 40.62 330 P P 00 21 06.5 -0.3
WAH2 IAmb IAmb 00 21 09.6
comp=Z,25nm,1.2s
NEW Newport 40.63 334 P P 00 21 07.2 +0.3
NEW Newport 40.63 334 P P 00 21 07.2 +0.3
NEW pmax pmax
comp=Z,8.0nm,0.9s
HOOD Mount Hood Mea 40.69 327 P P 00 21 07.9 +0.3
VILB Vilhena 40.73 129 P P 00 21 08.6 +0.5
VILB IAmb IAmb 00 21 24.5
comp=Z,30nm,1.0s
VILB Vilhena 40.73 129 eP P 00 21 08.8 +0.7
C09A Chrisman Ranch 40.78 332 P P 00 21 08.9 +0.8
C09A IAmb IAmb 00 21 11.1
comp=Z,26nm,0.9s
MXC Moxie City 40.85 330 P P 00 21 08.5 -0.3
MXC IAmb IAmb 00 21 12.6
comp=Z,31nm,1.4s
G04A Mulino 41.05 326 P P 00 21 11.5 +1.1
EPH Ephrata 41.07 331 P P 00 21 11.2 +0.7
EPH IAmb IAmb 00 21 13.7
comp=Z,21nm,1.0s
PB09 IPOC Station P 41.36 148 P P 00 21 13.5 +0.1
PB09 IAmb IAmb 00 21 40.3
comp=Z,38nm,1.5s
NPGB Novo Progresso 41.37 117 eP P 00 21 13.0 -0.4
LTY Liberty 41.51 330 P P 00 21 15.1 +0.9
B08A Colville Reser 41.67 332 P P 00 21 15.6 +0.1
LON Longmire 41.73 329 P P 00 21 16.8 +0.8
LON IAmb IAmb 00 21 19.8
comp=Z,20nm,0.9s
LON Longmire 41.73 329 P P 00 21 16.8 +0.8
LON pmax pmax
comp=Z,20nm,0.9s
FFC Flin Flon 41.95 351 P P 00 21 17.5 -0.1
FFC Flin Flon 41.95 351 P P 00 21 17.5 -0.1
FFC pmax pmax
comp=Z,8.0nm,1.4s
PDRB Porto dos Gac 42.64 124 eP P 00 21 22.9 -0.8
CLDB Colider 42.99 123 eP P 00 21 26.0 -0.6
PTLB Pontes e Lacer 43.11 131 P P 00 21 27.2 -0.2
PTLB Pontes e Lacer 43.11 131 eP P 00 21 28.0 +0.5
NLWA Neilton Lookou 43.20 328 P P 00 21 28.1 +0.2
NLWA IAmb IAmb 00 21 31.0
comp=Z,45nm,1.2s
EDM Edmonton 43.24 341 P P 00 21 28.4 +0.2
EDM IAmb IAmb 00 21 30.0
comp=Z,32nm,0.9s
EDM Edmonton 43.24 341 P P 00 21 28.4 +0.2
EDM pmax pmax
comp=Z,32nm,0.9s
A04D Lummi Island 43.51 330 P P 00 21 31.0 +0.7
PGC Sidney 43.83 330 P P 00 21 34.1 +1.3
RPN Rapa Nui 43.88 203 LR LR 00 35 07.7
comp=Z,140nm,18.4s,baz=46,slow=29
LLLB Lillooet 44.45 333 IAmb IAmb 00 21 41.1
comp=Z,26nm,1.1s
FCC Fort Churchill 45.23 358 P P 00 21 42.6 -1.2
FCC IAmb IAmb 00 21 44.4
comp=Z,24nm,0.9s
FCC Fort Churchill 45.23 358 P P 00 21 42.7 -1.2
FCC pmax pmax
comp=Z,24nm,0.9s
DRLN Deer Lake 45.35 31 P P 00 21 43.3 -1.7
DRLN IAmb IAmb 00 21 45.0
comp=Z,22nm,1.1s
SCHQ Schefferville 45.58 20 P P 00 21 45.2 -1.5
AC02 Maricunga 45.64 151 P P 00 21 49.9 +1.8
SALV Santo Antonio 45.97 128 eP P 00 21 51.2 +0.9
SNDB Serra Nova Dou 47.31 121 eP P 00 22 00.9 0.0
KUQ Kuujjuuaa 47.86 16 P P 00 22 03.1 -1.3
BDQN Bodoquena, MS 48.08 134 eP P 00 22 07.1 +0.4
BBB Bella Bella 48.40 331 LR LR 00 46 19.1
comp=Z,211nm,18.1s,baz=145,slow=40
AQDB Aquidauana 48.84 133 eP P 00 22 13.0 +0.5
ARAG Araguaiana, MT 48.89 125 eP P 00 22 13.3 +0.3
SMTB Santa Maria do 49.02 115 eP P 00 22 14.6 +0.5
BLKN Baker Lake 50.87 358 P P 00 22 24.6 -2.7
BLKN IAmb IAmb 00 22 31.4
comp=Z,19nm,1.5s
AMBA Amambai (Brazi 50.94 135 eP P 00 22 29.2 +0.7
YKAW1 Yellowknife Wh 51.58 347 P P 00 22 32.6 0.0
YKA Yellowknife Ar 51.62 347 P P 00 22 33.3 +0.4
comp=Z,17nm,0.9s,baz=151,slow=7.1,SNR=154
YKA PcP **PcP 00 23 46.6 +0.6**
comp=Z,3.1nm,0.9s,baz=153,slow=2.8,SNR=7.1
YKA ScP **ScP 00 27 34.5 -3.3**
comp=Z,0.1nm,0.8s,baz=151,slow=3.0,SNR=1.5
YKA LR LR 00 48 39.5
comp=Z,212nm,18.8s,baz=136,slow=41
comp=Z,17nm,0.9s
YKA Yellowknife Ar 51.62 347 P P 00 22 32.8 -0.2
YKA Yellowknife Ar 51.62 347 P P 00 22 32.8 -0.2
YKAW3 Yellowknife Wh 51.68 347 P P 00 22 33.5 +0.1
CPUP Villa Florida 51.74 140 P P 00 22 32.1 -2.3
comp=Z,4.6nm,0.9s,baz=326,slow=10,SNR=7.8
CPUP PcP **PcP 00 23 45.1 -2.0**
comp=Z,1.0nm,0.3s,baz=61,slow=7.0,SNR=2.9
CPUP LR LR 00 45 52.8
comp=Z,106nm,19.9s,baz=353,slow=38
comp=Z,4.6nm,0.9s
CPUP Villa Florida 51.74 140 P P 00 22 34.3 -0.1
CPUP Villa Florida 51.74 140 P P 00 22 34.3 -0.1
CPUP pmax pmax
comp=Z,6.0nm,1.1s
CPUP Villa Florida 51.74 140 eP P 00 22 34.1 -0.3
BDFB Brasilia 51.92 122 P P 00 22 34.0 -2.1
comp=Z,2.9nm,0.7s,baz=306,slow=6.5,SNR=5.3
comp=Z,2.9nm,0.7s
V35K Ketchikan 51.98 332 P P 00 22 37.4 +1.6
baz=128
KOTAN Kotaneelee Air 52.30 340 P P 00 22 39.7 +1.5
baz=139,SNR=10
T35M Bob Quinn 52.42 334 P P 00 22 39.2 +0.1
T35M IAmb IAmb 00 22 43.7
comp=Z,25nm,1.2s
T35M Bob Quinn 52.42 334 P P 00 22 40.4 +1.3
baz=130
CRAG Craig 52.76 332 P P 00 22 43.0 +1.5
baz=126
SDBA SAO DESIDERIO 52.97 117 eP P 00 22 43.7 -0.1
WRAK Wrangell Islan 52.97 333 P P 00 22 44.7 +1.6
baz=127
U33K Whale Pass 53.14 332 P P 00 22 45.6 +1.3
baz=126
DLBC Dease Lake 53.28 336 P P 00 22 48.3 +2.8
baz=131,SNR=15
S34M Telegraph Cree 53.38 335 P P 00 22 47.4 +1.3
S34M IAmb IAmb 00 22 50.4
comp=Z,17nm,1.1s
S34M Telegraph Cree 53.38 335 P P 00 22 48.8 +2.7
baz=130,SNR=5.1
BI02 San Fabin de 53.44 160 P P 00 22 49.6 +2.7
BI02 IAmb IAmb 00 22 57.8
comp=Z,25nm,1.4s
WTLY Watson Lake, Y 53.94 338 P P 00 22 51.3 +1.1
WTLY Watson Lake, Y 53.94 338 P P 00 22 52.2 +2.0
baz=133,SNR=14
R33M Jennings River 54.28 336 P P 00 22 53.6 +0.8
R33M Jennings River 54.28 336 P P 00 22 55.3 +2.5
baz=130,SNR=9.5
BB19B Bebedouro 54.49 128 eP P 00 22 54.9 +0.1
WRGLY Wrigley 54.50 343 P P 00 22 54.2 +0.1
WRGLY IAmb IAmb 00 22 56.3
comp=Z,13nm,0.9s
WRGLY Wrigley 54.50 343 P P 00 22 56.0 +1.9
baz=141,SNR=6.8
S32K Killisnoo 54.58 333 P P 00 22 56.5 +1.7
baz=126
PMNB Patos De Minas 54.73 124 eP P 00 22 56.9 +0.3
TGTN Hyland Airport 54.74 339 P P 00 22 58.2 +2.2
baz=135,SNR=15
PSAL Palomas, Salto 55.05 144 eP P 00 22 58.7 +0.2
FRTB Fartura 55.06 131 eP P 00 22 59.5 +0.7
P32M Atlin 55.49 336 P P 00 23 02.9 +1.4
P32M IAmb IAmb 00 23 05.6
comp=Z,15nm,1.1s
P32M Atlin 55.49 336 P P 00 23 03.9 +2.5
baz=128,SNR=5.0
P33M Teslin, Yukon 55.52 336 P P 00 23 02.1 +0.4
P33M IAmb IAmb 00 23 05.1
comp=Z,19nm,1.1s
P33M Teslin, Yukon 55.52 336 P P 00 23 03.9 +2.2
baz=129,SNR=7.9
S31K Pelican 55.59 333 P P 00 23 04.9 +2.8
baz=124
ITAB Concordia 55.73 137 P P 00 23 03.9 +0.4
ITAB IAmb IAmb 00 23 04.5
comp=Z,20nm,0.9s
ITAB Concordia 55.73 137 eP P 00 23 04.4 +0.8
SKAG Skagway 56.07 335 P P 00 23 08.0 +2.5
baz=126
ILON Igloolik, Nuna 56.20 4 P P 00 23 05.2 -1.1
N32M Quiet Lake 56.21 337 P P 00 23 08.0 +1.4
N32M Quiet Lake 56.21 337 P P 00 23 09.0 +2.4
baz=129,SNR=15
LR05 Currie 56.46 162 P P 00 23 10.7 +2.2
LR05 IAmb IAmb 00 23 20.9
comp=Z,29nm,1.4s
MMPY Sheldon Lake, 56.52 339 P P 00 23 10.8 +2.1
MMPY Sheldon Lake, 56.52 339 P P 00 23 11.3 +2.5
baz=132,SNR=17
WHY Whitehorse 56.60 336 P P 00 23 10.3 +0.9
WHY Whitehorse 56.60 336 P P 00 23 11.7 +2.2
baz=127,SNR=6.5
CPSB Cacapava Do Su 57.04 140 eP P 00 23 13.6 +0.8
P30M Million Dollar 57.12 335 P P 00 23 15.9 +2.8
baz=124
O30N Mendenhall 57.15 336 P P 00 23 14.3 +1.1
O30N IAmb IAmb 00 23 16.8
comp=Z,18nm,0.9s
O30N Mendenhall 57.15 336 P P 00 23 15.4 +2.2
baz=126,SNR=6.0
M31M Drury Creek, Y 57.36 338 P P 00 23 16.2 +1.5
M31M IAmb IAmb 00 23 18.0
comp=Z,16nm,1.1s
M31M Drury Creek, Y 57.36 338 P P 00 23 16.8 +2.1
baz=128,SNR=6.6
PLCA Paso Flores 57.36 161 LR LR 00 42 26.4
comp=Z,168nm,18.8s,baz=332,slow=30
N31M Braeburn, Yuko 57.45 337 P P 00 23 16.8 +1.5
N31M Braeburn, Yuko 57.45 337 P P 00 23 17.5 +2.2
baz=126,SNR=6.9
HYT Haines Junctio 57.75 335 P P 00 23 18.5 +1.0
HYT IAmb IAmb 00 23 25.0
comp=Z,16nm,1.2s
HYT Haines Junctio 57.75 335 P P 00 23 20.1 +2.6
baz=124
O29M Mount Kennedy 57.90 335 P P 00 23 20.6 +2.0
O29M IAmb IAmb 00 23 25.8
comp=Z,20nm,1.2s
O29M Mount Kennedy 57.90 335 P P 00 23 20.7 +2.0
baz=123
N30M Aishikik Lake 57.94 336 P P 00 23 20.9 +2.1
baz=125
YUK6 Outpost Mounta 58.16 335 P P 00 23 22.8 +2.2
baz=124
M30M Minto, Yukon 58.48 337 P P 00 23 23.6 +1.1
M30M IAmb IAmb 00 23 25.5
comp=Z,19nm,1.1s
M30M Minto, Yukon 58.48 337 P P 00 23 24.4 +1.9
baz=126,SNR=10
PINM Pinnacle 58.50 334 P P 00 23 25.4 +2.7
baz=121
YUK4 Talbot Arm 58.50 336 P P 00 23 25.2 +2.3

baz=124
MAYO Mayo, Yukon 58.76 339 P P 00 23 26.1 +1.7
MAYO Mayo, Yukon 58.76 339 P P 00 23 26.8 +2.3
baz=127
O28M Mount Upton 58.82 335 P P 00 23 27.4 +2.1
baz=122
NBIT Itapeh - BA 58.84 117 *e*P **P 00 23 26.4 +0.7**
YUK8 Steele Glacier 58.92 335 P **P 00 23 28.3 +2.5**
baz=122
CMC01 Camacan, BA 58.96 117 *e*P **P 00 23 26.5 -0.1**
M29M Somme Creek 59.04 337 P **P 00 23 27.8 +1.3**
M29M Somme Creek 59.04 337 P **P 00 23 29.0 +2.5**
baz=124,SNR=34
LOGN Logan Glacier 59.19 334 P **P 00 23 29.4 +1.8**
LOGN IAmb IAmb 00 23 31.6
comp=Z,20nm,1.2s
MESA MESA 59.27 333 P **P 00 23 30.4 +2.1**
baz=119
L29M L29M 59.29 337 P **P 00 23 28.8 +0.7**
L29M L29M 59.29 337 P **P 00 23 30.0 +1.8**
baz=125
CTGM Chitina Glacie 59.40 334 P **P 00 23 29.9 +0.8**
CTG Chitna Glacier 59.41 334 P **P 00 23 30.8 +1.7**
baz=120
BSFB Barra de Sao F 59.44 122 *e*P **P 00 23 31.1 +1.3**
YUK3 Moose Creek 59.46 335 P **P 00 23 31.2 +1.6**
baz=122,SNR=5.2
C36M Paulatuk 59.48 347 P **P 00 23 28.2 -1.0**
C36M Paulatuk 59.48 347 P **P 00 23 30.9 +1.7**
baz=143
K29M Barlow Dome 59.49 338 P **P 00 23 30.6 +1.0**
K29M IAmb IAmb 00 23 33.0
comp=Z,11nm,1.1s
K29M Barlow Dome 59.49 338 P **P 00 23 31.1 +1.5**
baz=126,SNR=6.8
J30M Hart River 59.51 339 P **P 00 23 31.0 +1.2**
J30M IAmb IAmb 00 23 46.0
comp=Z,8.7nm,1.1s
J30M Hart River 59.51 339 P **P 00 23 31.3 +1.6**
baz=127
BARN Barnard Glacie 59.59 334 P **P 00 23 30.6 +0.2**
BARN IAmb IAmb 00 23 44.9
comp=Z,26nm,1.4s
H31M Peel River 59.63 341 P **P 00 23 32.0 +1.6**
baz=130
POIN Pond Inlet 59.74 5 P **P 00 23 30.3 -0.8**
POIN IAmb IAmb 00 23 42.6
comp=Z,10.0nm,1.5s
SFJD Kangerlussuaq 59.89 17 LR LR 00 50 19.1
comp=Z,869nm,19.1s,baz=216,slow=37
I30M Mount Dempster 59.92 340 P **P 00 23 32.7 +0.1**
I30M IAmb IAmb 00 23 35.2
comp=Z,17nm,1.1s
I30M Mount Dempster 59.92 340 P **P 00 23 34.1 +1.6**
baz=128,SNR=14
BVCY Beaver Creek 59.96 336 P **P 00 23 34.5 +1.8**
baz=122,SNR=5.5
RIB01 Linhares ES 60.05 122 *e*P **P 00 23 34.1 +0.2**
CRQE Cirque 60.05 334 P **P 00 23 35.1 +1.6**
baz=118
J29N Klondike Camp 60.10 339 P **P 00 23 34.1 +0.4**
J29N IAmb IAmb 00 23 36.4
comp=Z,13nm,0.9s
J29N Klondike Camp 60.10 339 P **P 00 23 35.2 +1.5**
baz=125
DAWY Dawson 60.30 338 P **P 00 23 35.5 +0.4**
DAWY IAmb IAmb 00 23 37.1
comp=Z,9.1nm,0.9s
DAWY Dawson 60.30 338 P **P 00 23 36.3 +1.3**
baz=124,SNR=5.4
MCARA McCarthy VSAT 60.32 334 P **P 00 23 36.7 +1.5**
MCARA IAmb IAmb 00 23 41.1
comp=Z,22nm,1.1s
MCARA McCarthy VSAT 60.32 334 P **P 00 23 36.6 +1.4**
baz=119
M27K Edge Creek, AK 60.34 336 P **P 00 23 36.8 +1.3**
M27K IAmb IAmb 00 23 38.9
comp=Z,16nm,1.1s
M27K Edge Creek, AK 60.34 336 P **P 00 23 36.7 +1.3**
baz=120
G31M Satah River 60.34 342 P **P 00 23 35.0 -0.1**
G31M IAmb IAmb 00 23 45.4
comp=Z,12nm,1.0s
G31M Satah River 60.34 342 P **P 00 23 36.4 +1.2**
baz=131
VRDI Verde Repeater 60.43 334 P **P 00 23 36.9 +0.7**
F31M Tsiigehtchic 60.52 343 P **P 00 23 37.0 +0.6**
F31M IAmb IAmb 00 23 38.5
comp=Z,23nm,1.4s
F31M Tsiigehtchic 60.52 343 P **P 00 23 37.5 +1.1**
baz=131,SNR=5.6
I29M Ogilvie Camp, 60.66 340 P **P 00 23 38.2 +0.7**
I29M IAmb IAmb 00 23 39.7
comp=Z,13nm,0.9s
I29M Ogilvie Camp, 60.66 340 P **P 00 23 38.6 +1.2**
baz=126,SNR=14
BCAR Beaver Creek A 60.66 336 P **P 00 23 38.4 +0.8**
L27K Beaver Creek, 60.68 336 P **P 00 23 39.0 +1.3**
L27K Beaver Creek, 60.68 336 P **P 00 23 39.7 +2.0**
baz=121,SNR=19
GLB Gilahina Butte 60.68 334 P **P 00 23 38.3 +0.6**
GLB IAmb IAmb 00 23 44.9
comp=Z,21nm,1.2s
EPYK Eagle Plains 60.74 341 P **P 00 23 38.7 +0.7**
EPYK IAmb IAmb 00 23 40.5
comp=Z,15nm,1.2s
EPYK Eagle Plains 60.74 341 P **P 00 23 39.4 +1.3**
baz=128
BMRM Bremner River 60.80 333 P **P 00 23 40.5 +2.0**
BMRM Bremner River 60.80 333 P **P 00 23 40.5 +2.0**
baz=117
M26K Nabesna, AK 60.81 335 P **P 00 23 39.8 +1.2**
M26K IAmb IAmb 00 23 42.0
comp=Z,18nm,1.1s
M26K Nabesna, AK 60.81 335 P **P 00 23 40.6 +2.1**
baz=119,SNR=9.7
G30M tAoh Zraii Nji 60.97 342 P **P 00 23 41.4 +1.8**
baz=129
INK Inuvik 61.04 344 P **P 00 23 40.6 +0.7**
INK IAmb IAmb 00 23 42.0
comp=Z,14nm,0.8s
INK Inuvik 61.04 344 P **P 00 23 40.6 +0.7**
INK pmax pmax
comp=Z,14nm,0.8s
INK Inuvik 61.04 344 P **P 00 23 40.9 +0.9**
baz=132,SNR=15
N25K Chitina, Valde 61.09 334 P **P 00 23 41.8 +1.3**
N25K Chitina, Valde 61.09 334 P **P 00 23 41.9 +1.3**
baz=117
EYAK Cordova Ski Ar 61.12 333 P **P 00 23 41.7 +1.1**
baz=116
H29M Whitestone 61.18 340 P **P 00 23 41.8 +0.8**
H29M Whitestone 61.18 340 P **P 00 23 42.6 +1.6**
baz=126,SNR=5.9
RES Resolute Bay 61.22 359 LR LR 00 53 18.7
comp=Z,446nm,18.7s,baz=183,slow=39
RES Resolute Bay 61.22 359 P **P 00 23 39.9 -1.2**
RES IAmb IAmb 00 23 41.5
comp=Z,6.3nm,0.9s
RES Resolute Bay 61.22 359 P **P 00 23 39.9 -1.2**
RES pmax pmax
comp=Z,6.0nm,0.9s
F30M Barrier River 61.23 342 P **P 00 23 41.9 +0.6**
F30M IAmb IAmb 00 23 43.3
comp=Z,13nm,0.8s
F30M Barrier River 61.23 342 P **P 00 23 42.7 +1.4**
baz=129
L26K Log Cabin Wild 61.26 336 P **P 00 23 42.5 +0.9**
L26K IAmb IAmb 00 23 44.8
comp=Z,20nm,1.2s
L26K Log Cabin Wild 61.26 336 P **P 00 23 43.4 +1.8**
baz=119,SNR=8.0
I28M Miner Creek 61.27 339 P **P 00 23 42.1 +0.4**
I28M IAmb IAmb 00 23 52.2
comp=Z,16nm,1.2s
I28M Miner Creek 61.27 339 P **P 00 23 42.8 +1.1**
baz=124
MENT Mentasta 61.36 336 P **P 00 23 43.4 +1.1**
MENT IAmb IAmb 00 23 49.0
comp=Z,25nm,1.3s
DIV Divide 61.38 333 P **P 00 23 43.3 +0.8**
HIN Hinchinbrook I 61.39 332 P **P 00 23 43.2 +0.7**
G29M Pine Creek 61.48 341 P **P 00 23 43.6 +0.6**
G29M Pine Creek 61.48 341 P **P 00 23 44.5 +1.4**
baz=127,SNR=10
KLU Klutina 61.61 334 P **P 00 23 45.2 +1.2**
KLU Klutina 61.61 334 P **P 00 23 45.8 +1.8**
baz=116
P23K Montague Islan 61.63 332 P **P 00 23 46.4 +2.3**
baz=114
HARP HAARP 61.69 335 P **P 00 23 46.6 +2.1**
baz=117
NIAQ Niaqornat 61.80 13 *i*P **P 00 23 45.6 +0.6**
NIAQ IAmb IAmb 00 23 46.5
comp=Z,30nm,1.3s
A36M Sachs Harbour 61.83 349 P **P 00 23 44.7 -0.5**
A36M IAmb IAmb 00 24 28.0
comp=Z,9.9nm,0.8s
A36M Sachs Harbour 61.83 349 P **P 00 23 45.4 +0.2**
baz=142,SNR=8.7
DOT Dot Lake 61.84 336 P **P 00 23 46.9 +1.4**
GLI Glacier Island 61.86 333 P **P 00 23 47.4 +1.7**
baz=115
I27K Kandik River 61.94 339 P **P 00 23 47.3 +1.1**
I27K Kandik River 61.94 339 P **P 00 23 47.8 +1.6**
baz=122,SNR=17
SCRK Sand Creek 61.98 337 P **P 00 23 47.2 +0.7**
SCRK IAmb IAmb 00 23 49.9
comp=Z,20nm,1.2s
SCRK Sand Creek 61.98 337 P **P 00 23 48.6 +2.1**
baz=119,SNR=10
M24K Tolsona, Glenn 61.99 334 P **P 00 23 48.7 +2.2**
M24K Tolsona, Glenn 61.99 334 P **P 00 23 48.6 +2.0**
baz=116,SNR=5.7
PAX Paxson 62.08 335 P **P 00 23 48.3 +1.1**
PAX IAmb IAmb 00 23 53.6
comp=Z,23nm,1.2s
PAX Paxson 62.08 335 P **P 00 23 48.3 +1.1**
PAX pmax pmax
comp=Z,23nm,1.2s
PAX Paxson 62.08 335 P **P 00 23 48.7 +1.5**
baz=117,SNR=7.5
RIDG Independent Ri 62.20 336 P **P 00 23 49.1 +1.2**
RIDG Independent Ri 62.20 336 P **P 00 23 49.8 +1.9**
baz=118,SNR=11
H27K Steamboat Moun 62.25 339 P **P 00 23 49.4 +1.2**
H27K Steamboat Moun 62.25 339 P **P 00 23 50.2 +2.0**
baz=123
SAATT Saattut 62.28 14 *i*P **P 00 23 47.4 -0.9**
SAATT IAmb IAmb 00 23 48.2
comp=Z,14nm,0.8s
I26K Coal Creek Min 62.33 338 P **P 00 23 49.7 +1.0**
I26K Coal Creek Min 62.33 338 P **P 00 23 50.5 +1.8**
baz=121
E29M Blow River 62.34 342 P **P 00 23 49.5 +0.7**
E29M Blow River 62.34 342 P **P 00 23 50.6 +1.9**
baz=127
SCM Sheep Creek Mo 62.36 334 P **P 00 23 50.2 +1.1**
SCM Sheep Creek Mo 62.36 334 P **P 00 23 50.2 +1.1**
SCM pmax pmax
comp=Z,44nm,1.4s
SCM Sheep Creek Mo 62.36 334 P **P 00 23 50.7 +1.7**
baz=115
NUUG Nuugaatsiaq 62.46 13 *i*P **P 00 23 48.7 -0.7**
NUUG IAmb IAmb 00 23 53.6
comp=Z,14nm,1.0s
F28M Old Crow 62.48 341 P **P 00 23 50.8 +1.1**
F28M Old Crow 62.48 341 P **P 00 23 51.6 +1.9**
baz=125,SNR=46
M23K Glacier View 62.52 334 P **P 00 23 51.9 +1.8**
baz=114
K24K Donnelly Dome 62.59 336 P **P 00 23 52.0 +1.5**
K24K Donnelly Dome 62.59 336 P **P 00 23 52.2 +1.7**
baz=117,SNR=10
SEW Seward 62.62 331 P **P 00 23 51.8 +1.1**
baz=112
KNK Knik Glacier 62.68 333 P **P 00 23 52.8 +1.6**
baz=114
SML Sawmill 62.78 333 P **P 00 23 53.0 +1.1**
SML Sawmill 62.78 333 P **P 00 23 53.6 +1.8**
baz=114,SNR=5.4
AY03 Cochrane 62.81 166 P **P 00 23 54.0 +2.0**
J25K Salcha River, 62.81 337 P **P 00 23 53.2 +1.2**
J25K Salcha River, 62.81 337 P **P 00 23 53.8 +1.8**
baz=118,SNR=18
WAT6 Susitna Watana 62.85 334 P **P 00 23 54.1 +1.7**
baz=115,SNR=12
DHY Denali Highway 62.91 335 P **P 00 23 54.3 +1.5**
baz=115
E28M Babbage River 62.95 342 P **P 00 23 54.1 +1.3**
baz=126
E28M Babbage River 62.95 342 P **P 00 23 54.2 +1.3**
GHO Glory Hole Cre 63.03 333 P **P 00 23 54.8 +1.3**
PMR Palmer 63.05 333 P **P 00 23 55.1 +1.6**
PMR Palmer 63.05 333 P **P 00 23 55.1 +1.6**
PMR pmax pmax
comp=Z,25nm,1.3s
PMR Palmer 63.05 333 P **P 00 23 55.5 +2.0**
baz=113
BRSE Bradley Lake S 63.09 331 P **P 00 23 55.6 +1.7**
baz=110
RC01 Rabbit Creek A 63.12 332 P **P 00 23 53.8 -0.2**
RC01 IAmb IAmb 00 23 58.1
comp=Z,14nm,0.9s
RC01 Rabbit Creek A 63.12 332 P **P 00 23 55.8 +1.8**
baz=112,SNR=5.5
D28M Stokes Point 63.16 343 P **P 00 23 55.8 +1.7**
baz=127
BRLK Bradley Lake 63.17 331 P **P 00 23 55.7 +1.3**
WAT1 Susitna Watana 63.29 334 P **P 00 23 56.6 +1.4**
baz=114
PRP Porcupine Dome 63.30 338 P **P 00 23 56.7 +1.4**
PRP Porcupine Dome 63.30 338 P **P 00 23 56.8 +1.4**
baz=118,SNR=22
HDA Harding Lake 63.32 336 P **P 00 23 55.8 +0.4**
HDA Harding Lake 63.32 336 P **P 00 23 56.7 +1.4**
baz=116,SNR=16
KDAK Kodiak Island 63.35 328 LR LR 00 51 04.7
comp=Z,91nm,18.6s,baz=90,slow=36
KDAK Kodiak Island 63.35 328 P **P 00 23 57.3 +1.7**
baz=106
G26K Porcupine Rive 63.39 340 P **P 00 23 56.7 +1.0**
G26K Porcupine Rive 63.39 340 P **P 00 23 57.3 +1.5**
baz=121
IL31 63.46 337 P **P 00 23 57.1 +0.9**
ILAR Eielson Array 63.46 337 P **P 00 23 56.1 -0.1**
comp=Z,26nm,1.0s,baz=123,slow=4.4,SNR=116
comp=Z,26nm,1.0s
ILAR Eielson Array 63.46 337 P **P 00 23 57.1 +0.9**
ILAR Eielson Array 63.46 337 P **P 00 23 57.1 +0.9**
HOM Homer 63.49 331 P **P 00 23 58.1 +1.6**
baz=110
M22K Willow 63.55 333 P **P 00 23 57.4 +0.6**
M22K Willow 63.55 333 P **P 00 23 58.8 +2.0**
baz=112
RND Reindeer 63.66 335 P **P 00 23 59.1 +1.5**
RND Reindeer 63.66 335 P **P 00 23 59.1 +1.5**
RND pmax pmax
comp=Z,77nm,1.2s
FYU Fort Yukon 63.70 339 P **P 00 23 58.1 +0.3**
SUA Susitna One 63.72 333 P **P 00 23 59.6 +1.5**
SUA IAmb IAmb 00 24 06.6
comp=Z,17nm,1.0s
SUA Susitna One 63.72 333 P **P 00 23 60.0 +1.9**
baz=111
D27M Malcolm River 63.75 342 P **P 00 23 58.7 +0.5**
D27M IAmb IAmb 00 24 01.1
comp=Z,25nm,1.4s
D27M Malcolm River 63.75 342 P **P 00 23 59.8 +1.6**
baz=125
CCB Clear Creek Bu 63.76 336 P **P 00 23 58.2 0.0**
CCB IAmb IAmb 00 24 04.7
comp=Z,19nm,1.2s
WRH Wood River Hil 63.80 336 P **P 00 23 59.0 +0.6**
WRH IAmb IAmb 00 24 04.0
comp=Z,13nm,1.0s
MCK McKinley 63.82 335 P **P 00 23 59.3 +0.7**
MCK McKinley 63.82 335 P **P 00 23 59.3 +0.7**
MCK pmax pmax
comp=Z,30nm,1.2s
MCK McKinley 63.82 335 P **P 00 24 00.3 +1.6**
baz=114,SNR=9.3
POKR Poker Plat Res 63.83 337 P **P 00 24 00.0 +1.4**
baz=116,SNR=16
SII Sitkinak Islan 63.83 327 P **P 00 24 00.3 +1.5**
baz=106
CUT Chulitna 63.86 334 P **P 00 24 00.3 +1.5**
baz=112
COLA College 63.88 337 P **P 00 24 00.7 +1.8**
COLA College 63.88 337 P **P 00 24 00.7 +1.8**
COLA College 63.88 337 P **P 00 24 00.2 +1.3**
baz=116
F26K Sheenjek River 63.90 340 P **P 00 24 00.1 +1.0**
F26K IAmb IAmb 00 24 02.3
comp=Z,20nm,1.0s
F26K Sheenjek River 63.90 340 P **P 00 24 01.0 +1.9**
baz=121,SNR=20
BMAR Burnt Mountain 63.91 340 P **P 00 24 00.3 +1.1**
L22K Petersville 64.12 334 P **P 00 24 01.0 +0.4**
TULEG Thule 64.19 6 P **P 00 24 00.4 -0.4**
TULEG IAmb IAmb 00 24 05.0
comp=Z,12nm,1.1s
SPU Mount Spurr 64.21 332 P **P 00 24 02.4 +1.2**
SPU IAmb IAmb 00 24 08.5
comp=Z,18nm,1.0s
STLK Strandline Lak 64.22 332 P **P 00 24 02.5 +1.2**
STLK IAmb IAmb 00 24 08.7
comp=Z,8.1nm,1.0s
NEA2 Nenana 64.23 336 P **P 00 24 02.2 +0.9**
NEA2 IAmb IAmb 00 24 07.2
comp=Z,24nm,1.2s
NEA2 Nenana 64.23 336 P **P 00 24 03.0 +1.7**
baz=114,SNR=13
Q19K Cape Douglas, 64.24 329 P **P 00 24 03.7 +2.3**
baz=107
SKT Skwentna 64.25 333 P **P 00 24 02.4 +0.9**
SKT Skwentna 64.25 333 P **P 00 24 03.2 +1.7**
baz=111,SNR=10
TRF Thorofare Moun 64.27 335 P **P 00 24 02.7 +0.9**
TRF Thorofare Moun 64.27 335 P **P 00 24 03.4 +1.7**
baz=113,SNR=11
N20K Mount Spurr 64.28 332 P **P 00 24 03.1 +1.3**
baz=110
RED Redoubt Volcan 64.28 331 P **P 00 24 02.3 +0.5**
SPCR Spurr Chakacha 64.28 332 P **P 00 24 03.2 +1.4**
baz=110
H24K Noodor Dome 64.31 338 P **P 00 24 02.8 +1.0**
H24K Noodor Dome 64.31 338 P **P 00 24 03.5 +1.7**
baz=116
ILSW Iliamna Southw 64.32 331 P **P 00 24 03.0 +0.9**
ILSW IAmb IAmb 00 24 05.4
comp=Z,19nm,1.0s
F25K Christian Rive 64.34 340 P **P 00 24 03.6 +1.6**
F25K Christian Rive 64.34 340 P **P 00 24 04.2 +2.2**
baz=119
CHIR Chirikof Islan 64.42 326 P **P 00 24 04.5 +1.9**
baz=104
G24K Hadweenzic Riv 64.55 339 P **P 00 24 04.2 +0.9**
G24K Hadweenzic Riv 64.55 339 P **P 00 24 05.5 +2.1**
baz=117,SNR=16
KTH Kantishna Hill 64.57 335 P **P 00 24 03.8 +0.2**
KTH IAmb IAmb 00 24 10.2
comp=Z,21nm,1.0s
I23K Minto, Yukon-K 64.58 337 P **P 00 24 05.0 +1.5**
I23K Minto, Yukon-K 64.58 337 P **P 00 24 05.3 +1.8**
baz=114,SNR=18
E25K Arctic Village 64.58 340 P **P 00 24 05.1 +1.6**
E25K Arctic Village 64.58 340 P **P 00 24 05.9 +2.3**
baz=119,SNR=22
C27K Jago River 64.77 342 P **P 00 24 06.2 +1.5**
C27K IAmb IAmb 00 24 08.5
comp=Z,22nm,1.1s
C27K Jago River 64.77 342 P **P 00 24 06.7 +2.0**
baz=122
BPAW Bear Paw Mtn. 64.80 335 P **P 00 24 05.9 +0.8**
BPAW Bear Paw Mtn. 64.80 335 P **P 00 24 06.6 +1.6**
baz=112
Q18K Katmai Hardscr 64.84 329 P **P 00 24 07.0 +1.5**
baz=106
PPLA Purkeypile 64.86 334 P **P 00 24 06.3 +0.7**
PPLA Purkeypile 64.86 334 P **P 00 24 07.3 +1.7**
baz=111
M20K Styx River 64.93 333 P **P 00 24 08.0 +2.0**
baz=109
O19K Port Alsworth 64.94 331 P **P 00 24 07.9 +2.0**
baz=107
PPT Papeete 64.99 243 LR LR 00 44 11.8
comp=Z,167nm,19.2s,baz=12,slow=28
PPT2 Papeete2 65.00 243 *e*LR LR 00 43 28.9
comp=Z,204nm,25.5s
PPT2 *e*LR LR 00 43 35.3
comp=Z,136nm,27.8s
MLY Manley 65.06 336 P **P 00 24 07.8 +1.0**
MLY Manley 65.06 336 P **P 00 24 08.5 +1.7**
baz=113,SNR=37
P18K Big Mountain, 65.15 330 P **P 00 24 09.2 +1.7**
baz=106
Q17K Contact Creek 65.18 328 P **P 00 24 09.6 +1.9**
baz=105
N19K Bonanza Creek 65.21 331 P **P 00 24 08.4 +0.6**
N19K Bonanza Creek 65.21 331 P **P 00 24 09.8 +1.9**
baz=108
R17L Mt. Peulik Vol 65.26 328 P **P 00 24 10.0 +1.8**
baz=104
CHUM Lake Minchumin 65.27 335 P **P 00 24 10.3 +2.2**
baz=111
O18K Koktuh Hills 65.27 330 P **P 00 24 10.2 +2.0**
baz=106
C26K Camden Bay 65.28 342 P **P 00 24 10.3 +2.3**
baz=121,SNR=10
D25K Kavik River 65.42 341 P **P 00 24 10.5 +1.5**
D25K Kavik River 65.42 341 P **P 00 24 11.0 +2.0**
baz=119
G23K Bananza Creek 65.47 338 P **P 00 24 10.8 +1.4**
G23K Bananza Creek 65.47 338 P **P 00 24 11.3 +1.9**
baz=114
M19K Big River Lodg 65.50 332 P **P 00 24 11.3 +1.7**
baz=108
E24K Your Creek 65.52 340 P **P 00 24 10.4 +0.7**
E24K IAmb IAmb 00 24 15.6
comp=Z,22nm,1.3s
E24K Your Creek 65.52 340 P **P 00 24 11.8 +2.1**
baz=116,SNR=12
I21K Tanana 65.61 336 P **P 00 24 10.5 +0.3**
I21K Tanana 65.61 336 P **P 00 24 11.7 +1.5**
baz=112
H22K Ishtalitna Cre 65.64 337 P **P 00 24 10.9 +0.4**
H22K Ishtalitna Cre 65.64 337 P **P 00 24 11.8 +1.4**
baz=113
Q16K King Salmon 65.67 329 P **P 00 24 12.7 +2.0**
baz=104
P17K Kvichak River 65.70 329 P **P 00 24 13.7 +2.8**
baz=105
COLD Coldfoot 65.75 339 P **P 00 24 12.6 +1.5**
COLD Coldfoot 65.75 339 P **P 00 24 13.4 +2.3**
baz=114,SNR=23
L19K White Mountain 65.79 333 P **P 00 24 12.6 +1.1**
L19K IAmb IAmb 00 24 29.8
comp=Z,13nm,1.1s
L19K White Mountain 65.79 333 P **P 00 24 12.9 +1.4**
baz=108
K20K Telida 65.82 334 P **P 00 24 12.8 +1.1**
K20K Telida 65.82 334 P **P 00 24 12.7 +1.1**
baz=109
N18K Kilae Creek 65.83 331 P **P 00 24 12.4 +0.7**
N18K Kilae Creek 65.83 331 P **P 00 24 13.4 +1.6**
baz=106
E23K Chandalar 65.90 340 P **P 00 24 13.8 +1.7**
E23K Chandalar 65.90 340 P **P 00 24 14.7 +2.5**
baz=115,SNR=36
M18K Stony River 66.03 332 P **P 00 24 14.8 +1.8**
baz=106
H21K Melozitna Rive 66.10 337 P **P 00 24 13.7 +0.3**
H21K IAmb IAmb 00 24 15.6
comp=Z,13nm,1.0s
H21K Melozitna Rive 66.10 337 P **P 00 24 14.6 +1.2**
baz=111
D24K Happy Valley 66.12 341 P **P 00 24 14.5 +1.1**
D24K Happy Valley 66.12 341 P **P 00 24 15.7 +2.3**
baz=116
TOLK Toolik Lake Re 66.13 340 P **P 00 24 15.6 +1.9**
baz=116,SNR=26
O17K Koliganek Bris 66.17 330 P **P 00 24 15.7 +1.8**
baz=105
C24K Franklin Bluff 66.33 341 P **P 00 24 16.1 +1.3**
C24K Franklin Bluff 66.33 341 P **P 00 24 16.6 +1.8**
baz=117
N17K Nushagak Hills 66.41 331 P **P 00 24 16.3 +0.8**
N17K Nushagak Hills 66.41 331 P **P 00 24 17.1 +1.7**
baz=105
CHNA Chernabura Isl 66.42 324 P **P 00 24 17.1 +1.5**
baz=100
P16K Nushagak River 66.43 329 P **P 00 24 17.5 +1.9**
baz=104
IMAR Indian Mountai 66.58 337 P **P 00 24 16.5 0.0**
O16K Kokwok River B 66.62 329 P **P 00 24 18.7 +2.0**
baz=104
L18K Granite Mounta 66.63 332 P **P 00 24 18.0 +1.2**

L18K IAmb IAmb 00 24 23.7
comp=Z,21nm,1.2s
L18K Granite Mounta 66.63 332 P **P** **00 24 18.9 +2.1**
baz=106
SUMG Summit 66.63 15 P **P** **00 24 16.3 -0.9**
SUMG IAmb IAmb 00 24 21.2
comp=Z,28nm,1.3s
SUMG Summit 66.63 15 P **P** **00 24 16.3 -0.9**
SUMG pmax pmax
comp=Z,28nm,1.3s
SUMG Summit 66.63 15 *i* P **P** **00 24 16.6 -0.6**
SUMG IAmb IAmb 00 24 21.7
comp=Z,30nm,1.2s
D23K Nanushuk River 66.64 340 P **P** **00 24 18.7 +2.0**
D23K Nanushuk River 66.64 340 P **P** **00 24 19.2 +2.4**
baz=115
G21K Allakaket 66.68 337 P **P** **00 24 17.7 +0.6**
G21K Allakaket 66.68 337 P **P** **00 24 18.8 +1.7**
baz=111
E22K Anaktuvuk Pass 66.68 339 P **P** **00 24 18.6 +1.5**
E22K Anaktuvuk Pass 66.68 339 P **P** **00 24 19.1 +2.0**
baz=113
J19K Poorman 66.68 334 P **P** **00 24 17.4 +0.3**
J19K IAmb IAmb 00 24 23.5
comp=Z,19nm,1.0s
J19K Poorman 66.68 334 P **P** **00 24 19.1 +2.0**
baz=108
M17K Holitna River 66.75 331 P **P** **00 24 18.2 +0.6**
M17K Holitna River 66.75 331 P **P** **00 24 19.2 +1.6**
baz=105
H20K Anotleneega Mo 66.86 336 P **P** **00 24 19.6 +1.4**
baz=109,SNR=10
F21K Alatna River 66.92 338 P **P** **00 24 20.4 +1.8**
F21K Alatna River 66.92 338 P **P** **00 24 21.0 +2.4**
baz=111,SNR=87
C23K Itkillik River 66.98 341 P **P** **00 24 20.1 +1.1**
C23K Itkillik River 66.98 341 P **P** **00 24 21.1 +2.2**
baz=115
J18K Innoko River 66.99 334 P **P** **00 24 20.6 +1.4**
J18K IAmb IAmb 00 24 25.0
comp=Z,14nm,1.1s
J18K Innoko River 66.99 334 P **P** **00 24 20.8 +1.7**
baz=106
N16K Nishlik Lake 67.15 330 P **P** **00 24 22.1 +1.8**
baz=103
NEEM North Greenlan 67.19 9 *i* P **P** **00 24 20.1 -0.4**
NEEM IAmb IAmb 00 24 21.1
comp=Z,17nm,1.0s
D22K Ayikyak River 67.27 340 P **P** **00 24 21.6 +0.8**
D22K Ayikyak River 67.27 340 P **P** **00 24 23.0 +2.2**
baz=113
L17K Donlin 67.33 332 P **P** **00 24 22.7 +1.4**
baz=104
M16K Timber Creek 67.37 331 P **P** **00 24 23.4 +1.8**
baz=103
O15K Ungalikthiuk R 67.39 329 P **P** **00 24 23.4 +1.7**
baz=102
TBI Tubuai 67.39 237 *e*LR LR 00 44 38.4
comp=Z,675nm,27.2s
K17K Iditarod 67.48 333 P **P** **00 24 23.2 +1.0**
K17K IAmb IAmb 00 24 28.8
comp=Z,14nm,0.9s
K17K Iditarod 67.48 333 P **P** **00 24 24.4 +2.2**
baz=105
E21K Killik River 67.54 339 P **P** **00 24 23.6 +1.1**
E21K Killik River 67.54 339 P **P** **00 24 24.4 +1.9**
baz=111
F20K Avaraart Lake 67.69 338 P **P** **00 24 24.8 +1.4**
F20K Avaraart Lake 67.69 338 P **P** **00 24 25.3 +1.9**
baz=109,SNR=40
N15K Kwethluk River 67.73 330 P **P** **00 24 25.8 +1.9**
baz=102
L16K Owhat River 67.77 332 P **P** **00 24 25.2 +1.2**
L16K IAmb IAmb 00 24 31.6
comp=Z,21nm,1.1s
L16K Owhat River 67.77 332 P **P** **00 24 25.7 +1.7**
baz=103
G19K Purcell Mounta 67.92 336 P **P** **00 24 25.9 +0.9**
G19K Purcell Mounta 67.92 336 P **P** **00 24 26.6 +1.7**
baz=107,SNR=24
B22K Teshekpuk Lake 68.07 341 P **P** **00 24 27.4 +1.7**
B22K Teshekpuk Lake 68.07 341 P **P** **00 24 27.4 +1.7**
baz=112
C21K Knifeblade Rid 68.07 340 P **P** **00 24 27.9 +2.1**
baz=111
M15K Kasigluk River 68.12 330 P **P** **00 24 28.3 +2.0**
baz=102
O14K Tigyukauivet M 68.13 329 P **P** **00 24 28.1 +1.8**
baz=101
H18K Honhosa River 68.15 335 P **P** **00 24 27.0 +0.6**
H18K IAmb IAmb 00 24 29.6
comp=Z,23nm,1.3s
H18K Honhosa River 68.15 335 P **P** **00 24 28.7 +2.3**
baz=106
B21K Ikpikpuk River 68.18 340 P **P** **00 24 26.9 +0.5**
B21K Ikpikpuk River 68.18 340 P **P** **00 24 28.3 +1.8**
baz=111,SNR=15
E20K Nigu River 68.25 339 P **P** **00 24 29.4 +2.3**
baz=109
E19K Redstone River 68.37 338 P **P** **00 24 29.4 +1.6**
E19K IAmb IAmb 00 24 30.5
comp=Z,8.1nm,0.8s
E19K Redstone River 68.37 338 P **P** **00 24 29.4 +1.6**
baz=108
F19K Shaleruckik Mo 68.39 337 P **P** **00 24 28.8 +1.0**
F19K Shaleruckik Mo 68.39 337 P **P** **00 24 29.6 +1.8**
baz=107
N14K Kuskokwak Cree 68.46 329 P **P** **00 24 29.3 +0.9**
N14K IAmb IAmb 00 25 11.6
comp=Z,18nm,1.1s
N14K Kuskokwak Cree 68.46 329 P **P** **00 24 30.1 +1.7**
baz=100
G18K Tagagawik 68.47 336 P **P** **00 24 29.6 +1.2**
G18K Tagagawik 68.47 336 P **P** **00 24 30.7 +2.3**
baz=106
D20K Etivluk River 68.55 339 P **P** **00 24 30.2 +1.4**
D20K Etivluk River 68.55 339 P **P** **00 24 30.9 +2.1**
baz=109
FALS False Pass 68.62 324 P **P** **00 24 31.3 +1.8**
baz=97
J16K Anvik River 68.64 333 P **P** **00 24 30.8 +1.3**
J16K Anvik River 68.64 333 P **P** **00 24 31.9 +2.4**
baz=103,SNR=14
L15K Ungalak Mounta 68.70 331 P **P** **00 24 32.0 +2.2**
baz=101
H17K Granite Mounta 68.73 335 P **P** **00 24 31.1 +1.1**
H17K Granite Mounta 68.73 335 P **P** **00 24 32.2 +2.2**
baz=104
M14K Bethel 68.75 330 P **P** **00 24 31.2 +1.1**
M14K Bethel 68.75 330 P **P** **00 24 32.2 +2.0**
baz=100,SNR=10
I17K Unalakleet 68.81 334 P **P** **00 24 32.0 +1.5**
I17K IAmb IAmb 00 24 38.0
comp=Z,14nm,1.1s
I17K Unalakleet 68.81 334 P **P** **00 24 32.8 +2.3**
baz=103
K15K Wolf Creek Mou 68.84 332 P **P** **00 24 32.7 +1.9**
K15K Wolf Creek Mou 68.84 332 P **P** **00 24 33.1 +2.3**
baz=102
D19K Kuna River 69.00 339 P **P** **00 24 32.9 +1.2**
D19K IAmb IAmb 00 24 34.6
comp=Z,20nm,1.0s
D19K Kuna River 69.00 339 P **P** **00 24 33.4 +1.7**
baz=107
F18K Selawik 69.04 337 P **P** **00 24 33.9 +2.0**
baz=105,SNR=6.9
B20K Meade River 69.14 340 P **P** **00 24 33.6 +1.2**
B20K Meade River 69.14 340 P **P** **00 24 34.5 +2.0**
baz=109
G17K Kiwalik Mounta 69.17 335 P **P** **00 24 35.0 +2.3**
baz=104
L14K Kuka Creek 69.20 331 P **P** **00 24 35.2 +2.2**
L14K IAmb IAmb 00 25 01.7
comp=Z,17nm,1.4s
L14K Kuka Creek 69.20 331 P **P** **00 24 35.4 +2.4**
baz=100
M13K Dall Lake 69.37 330 P **P** **00 24 35.9 +2.0**
M13K Dall Lake 69.37 330 P **P** **00 24 36.3 +2.3**
baz=99
A21K Barrow 69.41 342 P **P** **00 24 35.7 +1.6**
baz=110
BORG Borgarnes 69.51 26 LR LR 00 54 57.2
comp=Z,221nm,18.5s,baz=271,slow=36
E18K Tukpahlearik C 69.61 337 P **P** **00 24 36.6 +1.1**
E18K IAmb IAmb 00 24 38.2
comp=Z,15nm,1.2s
E18K Tukpahlearik C 69.61 337 P **P** **00 24 37.2 +1.8**
baz=104
F17K Baldwin Pennin 69.63 336 P **P** **00 24 36.5 +1.0**
F17K IAmb IAmb 00 24 37.8
comp=Z,8.7nm,1.1s
F17K Baldwin Pennin 69.63 336 P **P** **00 24 37.6 +2.1**
baz=103
H16K Elim 69.63 334 P **P** **00 24 37.7 +2.1**
baz=102,SNR=13
C19K Lookout Ridge 69.69 339 P **P** **00 24 37.0 +1.1**
C19K Lookout Ridge 69.69 339 P **P** **00 24 38.4 +2.4**
baz=106
G16K Koyuk River 69.84 335 P **P** **00 24 38.4 +1.6**
G16K IAmb IAmb 00 24 43.9
comp=Z,10nm,1.1s
G16K Koyuk River 69.84 335 P **P** **00 24 39.1 +2.3**
baz=102
J14K Nanvaranak Lak 69.85 332 P **P** **00 24 38.6 +1.7**
J14K Nanvaranak Lak 69.85 332 P **P** **00 24 39.2 +2.3**
baz=100
E17K Hotham Inlet 70.00 337 P **P** **00 24 39.6 +1.8**
baz=103,SNR=42
C18K Utukok River 70.13 339 P **P** **00 24 39.9 +1.3**
C18K IAmb IAmb 00 24 41.4
comp=Z,20nm,1.1s
C18K Utukok River 70.13 339 P **P** **00 24 40.0 +1.3**
baz=104,SNR=15
K13K Kusilvak Mount 70.23 331 P **P** **00 24 40.9 +1.6**
UNV Unalaska Valle 70.32 323 P **P** **00 24 42.1 +2.1**
baz=94
G15K Niukluk 70.46 335 P **P** **00 24 42.9 +2.3**
baz=100
D17K Noatak River 70.60 337 P **P** **00 24 43.3 +1.9**
baz=102,SNR=10.0
RDOG Red Dog Mine 70.61 338 P **P** **00 24 42.9 +1.3**
RDOG IAmb IAmb 00 24 44.4
comp=Z,17nm,1.0s
RDOG Red Dog Mine 70.61 338 P **P** **00 24 43.3 +1.7**
baz=102
M11K Mekoryuk 70.77 330 P **P** **00 24 44.6 +2.1**
baz=97
C17K DeLong Mountai 70.80 338 P **P** **00 24 44.6 +1.9**
baz=102
F15K North Star Dit 70.83 335 P **P** **00 24 44.5 +1.6**
F15K North Star Dit 70.83 335 P **P** **00 24 45.0 +2.1**
baz=100,SNR=18
ANM Nome 70.95 334 P **P** **00 24 45.2 +1.6**
ANM Nome 70.95 334 P **P** **00 24 45.2 +1.6**
ANM pmax pmax
comp=Z,5.0nm,0.9s
ANM Nome 70.95 334 P **P** **00 24 45.5 +1.9**
baz=99
EFI East Falkland 71.12 159 P **P** **00 24 46.2 +1.5**
EFI East Falkland 71.12 159 P **P** **00 24 46.2 +1.5**
EFI pmax pmax
comp=Z,91nm,1.5s
F14K Arctic Creek 71.49 335 P **P** **00 24 49.1 +2.3**
baz=98
C16K Lisburne Hills 71.55 338 P **P** **00 24 47.4 +0.2**
C16K Lisburne Hills 71.55 338 P **P** **00 24 49.0 +1.8**
baz=100
TNA Tin City 72.16 335 P **P** **00 24 51.6 +0.8**
TNA IAmb IAmb 00 24 54.4
comp=Z,14nm,1.2s
TNA Tin City 72.16 335 P **P** **00 24 52.9 +2.0**
baz=97,SNR=6.1
DAG Danmarks Havn 73.08 13 *i* P **P** **00 24 55.0 -1.1**
DAG IAmb IAmb 00 24 56.0
comp=Z,7.5nm,0.8s
GAMB Gambell 73.63 333 P **P** **00 25 01.2 +1.6**
GAMB IAmb IAmb 00 25 07.6
comp=Z,10nm,1.1s
GAMB Gambell 73.63 333 P **P** **00 25 01.6 +2.0**
baz=93
NOR Nord 74.55 8 *i* P **P** **00 25 04.8 +0.1**
NOR IAmb IAmb 00 25 05.4
comp=Z,4.7nm,0.9s
JMIC Jan Mayen 75.10 20 LR LR 00 57 45.5
comp=Z,230nm,22.0s,baz=284,slow=35
RAR Rarotonga 75.27 244 LR LR 00 49 23.4
comp=Z,84nm,18.8s,baz=263,slow=28
EKA Eskdalemuir Ar 78.16 36 P **P** **00 25 23.2 -2.4**
comp=Z,5.8nm,0.7s,baz=276,slow=5.7,SNR=9.8
EKA LR LR 00 58 53.8
comp=Z,250nm,18.7s,baz=266,slow=35
comp=Z,5.8nm,0.7s
ESDC Sonseca Array 79.74 52 P **P** **00 25 32.6 -2.1**
comp=Z,2.2nm,0.9s,baz=286,slow=6.1,SNR=9.3
ESDC LR LR 00 55 37.5
comp=Z,106nm,20.3s,baz=260,slow=32
comp=Z,2.2nm,0.9s
ESDC Sonseca Array 79.74 52 P **P** **00 25 33.9 -0.8**
MDT Midelt 80.34 59 LR LR 00 57 59.4
comp=Z,135nm,19.4s,baz=278,slow=33
SPITS Spitsbergen Ar 80.52 11 P **P** **00 25 38.1 0.0**
comp=Z,9.2nm,1.1s,baz=346,slow=10,SNR=1.9
SPITS LR LR 01 03 15.1
comp=Z,515nm,19.9s,baz=252,slow=37
comp=Z,9.2nm,1.1s
SPB2 Spitsbergen Ar 80.52 11 P **P** **00 25 37.9 -0.2**
BILL Bilibino 82.08 338 P **P** **00 25 47.9 +1.4**
NB2 NORSAR Subarra 84.42 28 P **P** **00 25 58.9 +0.2**
comp=Z,7.2nm,1.1s,baz=289,slow=5.1
NOA NORSAR Array B 84.42 28 P **P** **00 25 58.5 -0.2**
comp=Z,1.3nm,0.8s,baz=290,slow=5.1,SNR=6.0
NOA LR LR 01 03 10.8
comp=Z,74nm,18.5s,baz=270,slow=35
comp=Z,1.3nm,0.8s
DBIC Dimbokro 85.33 84 P **P** **00 26 04.0 -0.2**
comp=Z,13nm,0.9s,baz=285,slow=4.3,SNR=8.4
DBIC LR LR 01 02 07.9
comp=Z,141nm,20.1s,baz=296,slow=34
comp=Z,13nm,0.9s
DBIC Dimbokro 85.33 84 P **P** **00 26 03.2 -0.9**
DBIC Dimbokro 85.33 84 P **P** **00 26 03.2 -0.9**
DBIC pmax pmax
comp=Z,18nm,1.0s
HFS Hagfors 85.87 29 P **P** **00 26 06.1 +0.2**
comp=Z,2.3nm,0.7s,baz=294,slow=3.4,SNR=2.6
HFS LR LR 01 03 14.7
comp=Z,79nm,20.1s,baz=258,slow=35
comp=Z,2.3nm,0.7s
ARCES ARCESS Array B 86.51 18 LR LR 01 05 33.3
comp=Z,275nm,18.7s,baz=302,slow=36
TUE Stuetta 87.73 43 P **P** **00 26 14.8 -0.8**
TUE IAmb IAmb 00 26 19.6
comp=Z,6.7nm,0.9s
DAVA Damuels 87.84 42 *i* P **P** **00 26 15.9 -0.1**
comp=Z,10nm,1.1s
DAVOX Davos/Dischmat 87.99 42 LR LR 01 05 04.7
comp=Z,71nm,18.2s,baz=262,slow=35
FUORN Ofenpass-Fuorn 88.29 42 P **P** **00 26 17.4 -0.9**
FUORN IAmb IAmb 00 26 22.9
comp=Z,6.7nm,1.0s
RETA Reutte 88.35 42 *i* P **P** **00 26 17.8 -0.5**
comp=Z,4.5nm,0.7s
FETA Feichten 88.47 42 *i* P **P** **00 26 18.2 -0.8**
comp=Z,3.5nm,1.0s
CLL Collm 88.49 37 *e*P **P** **00 26 21.0 +2.2**
CLL Collm 88.49 37 *e*P **P** **00 26 21.0 +2.2**
CLL L L 01 06 00.0
comp=Z,100nm,21.6s
MOTA Moosalm 88.61 42 *i* P **P** **00 26 20.2 +0.5**
comp=Z,5.2nm,0.9s
SEY Seymchan 89.38 336 *e*P **P** **00 26 21.8 -0.9**
SEY pmax pmax
comp=Z,8.0nm,1.1s
GERES GERESS Array B 89.76 40 P **P** **00 26 23.4 -1.5**
comp=Z,0.6nm,0.7s,baz=325,slow=6.7,SNR=4.5
GERES LR LR 01 02 20.4
comp=Z,122nm,20.6s,baz=256,slow=33
comp=Z,0.6nm,0.7s
TORD Torodi Ar. Bea 90.13 77 P **P** **00 26 25.5 -1.7**
comp=Z,1.4nm,0.9s,baz=258,slow=7.0,SNR=6.2
comp=Z,1.4nm,0.9s
FINES FINESS Array B 90.80 25 LR LR 01 07 41.7
comp=Z,200nm,19.0s,baz=253,slow=36
TIXI Tiksi 90.84 348 LR LR 01 13 07.3
comp=Z,72nm,18.1s,baz=20,slow=39
TIXI Tiksi 90.84 348 P **P** **00 26 29.8 +0.5**
TIXI Tiksi 90.84 348 P **P** **00 26 29.8 +0.5**
TIXI pmax pmax
comp=Z,17nm,1.1s
KEST Kesra 90.90 53 P **P** **00 26 29.1 -1.4**
comp=Z,4.0nm,0.8s,baz=241,slow=3.0,SNR=4.3
comp=Z,4.0nm,0.8s
KEST Kesra 90.90 53 P **P** **00 26 30.6 +0.1**
KEST IAmb IAmb 00 26 40.5
comp=Z,9.0nm,1.1s
VRAC Vranov 91.36 38 LR LR 01 08 41.9
comp=Z,97nm,18.1s,baz=307,slow=36
MA2 Magadan 91.73 333 LR LR 01 12 46.7
comp=Z,59nm,18.0s,baz=48,slow=39
AKASG Malin Array Be 97.95 33 LR LR 01 11 11.9
comp=Z,103nm,19.6s,baz=330,slow=35
YAK Yakutsk 98.07 342 LR LR 01 19 47.4
comp=Z,64nm,18.2s,baz=72,slow=40
MLR Muntele Rosu 98.74 39 LR LR 01 06 52.9
comp=Z,66nm,21.7s,baz=326,slow=32
OBN Obninsk 98.97 27 LR LR 01 12 50.8
comp=Z,155nm,18.9s,baz=210,slow=36
SONM Songino Array 116.88 346 PKP **PKiKP** **00 32 11.1 0.0**
comp=Z,1.1nm,0.8s,baz=65,slow=1.0,SNR=7.0
MKAR Makanchi Array 119.75 5 PKP **PKPdf** **00 32 15.8 -0.6**
comp=Z,0.8nm,0.8s,baz=339,slow=3.0,SNR=6.2
BOSA Boshof 119.79 115 PKP **PKPdf** **00 32 17.1 0.0**
comp=Z,2.6nm,0.8s,baz=283,slow=11,SNR=4.9
HHC Hu-ho-hao-te 121.84 339 *e*P **PKiKP** **00 32 21.4 +0.5**
NJ2 Nanjing 126.14 328 *e*P **PKiKP** **00 32 30.3 +0.8**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
GTA2 Gaotai 126.25 349 *e*PKP **PKiKP** **00 32 30.9 +1.2**
GTA2 LR LR
comp=N,130nm,13.8s
GTA2 LR LR
comp=E,180nm,13.5s
GTA2 LR LR
comp=Z,150nm,15.3s
STKA Stephens Creek 128.13 240 PKP **PKiKP** **00 32 33.4 0.0**
comp=Z,2.2nm,0.8s,baz=126,slow=3.5,SNR=5.1
LZDM Lanzhou Array 128.75 344 PKP **PKPdf** **00 32 34.0 -0.4**
comp=Z,0.7nm,0.4s,baz=66,slow=3.6,SNR=3.9
GOMU GeErMu 130.22 353 PKP **PKPdf** **00 32 36.8 -0.4**
WRA Warramunga Arr 135.63 255 PKP **PKiKP** **00 32 48.5 -0.4**
comp=Z,1.1nm,0.7s,baz=121,slow=1.2,SNR=4.8
ASAR Alice Springs 135.85 250 PKP **PKiKP** **00 32 49.0 -0.2**
comp=Z,1.0nm,0.8s,baz=126,slow=2.0,SNR=7.6
PZH PanZhiHua 138.19 342 PKP **PKPdf** **00 32 51.8 -0.3**

IDC ***25*** *00:18:17.6±1.6, 1°.32N×125°.88E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=179.4km s-min=21.1km az=65.0*
DJA ***25*** *00:18:28.5±0.4, 2°.N±2°×12°.7E±°, h103km±6km, M4.0/13, mB4.9/1, mb4.0/2, MLv4.0/13, Mw(mB)4.2/1*
ISC 25 00:18:28.4±1.0, 1°.76N±0°.06×127°.01E±0°.05, h100km±10km, n13, s091/16, mb3.7/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**0.79**	**84**	P	**Pn**	**00 18 47.5**	**+0.9**
GAMI				S	**Sn**	**00 19 01.4**	**+1.1**
TNTI	**Ternate**	**1.04**	**160**	P	**Pn**	**00 18 49.9**	**+0.6**
MNI	**Manado**	**2.19**	**262**	P	**Pn**	**00 19 04.6**	**+1.2**
MNI				S	**Sn**	**00 19 31.5**	**+1.3**
SGSI	**Sangihe**	**2.42**	**322**	P	**Pn**	**00 19 07.0**	**+0.5**
SGSI				S	**Sn**	**00 19 34.2**	**-1.5**
LBMI	**Labuha**	**2.43**	**168**	P	**Pn**	**00 19 06.4**	**-0.2**
SANI	**Sanana**	**3.91**	**195**	P	**Pn**	**00 19 26.6**	**+0.2**
NLAI	**Namlea**	**4.96**	**179**	P	**Pn**	**00 19 41.3**	**+0.7**
SIJI	**Sorong**	**4.99**	**121**	P	**Pn**	**00 19 41.2**	**+0.1**
	0.1nm16nm,0.7s						
LUWI	**Luwuk**	**5.06**	**237**	P	**Pn**	**00 19 42.0**	**0.0**
WRA	**Warramunga Arr**	**22.73**	**162**	P	**P**	**00 23 20.9**	**-1.3**
	1.2nm,0.5s,baz=337,slow=10,SNR=11						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**26.14**	**166**	P	**P**	**00 23 52.9**	**-0.5**
	0.3nm,0.4s,baz=341,slow=7.7,SNR=4.5						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**00 28 20.3**	**+0.4**
	0.5nm,0.4s,baz=120,slow=7.9,SNR=17						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.54**	**328**	P	**P**	**00 28 47.5**	**-0.6**
	0.6nm,0.3s,baz=126,slow=6.3,SNR=7.2						
	0.6nm,0.3s						

AZER ***25*** *00:22:19.2, 38°.39N×44°.52E, h4km, ml2.5*
ISK ***25*** *00:22:21.9, 38°.39N×44°.45E, h5km, ML2.4/6*
AFAD ***25*** *00:22:21.6, 38°.45N×44°.58E, h6km±1km, ML2.4*
ISC 25 00:22:22.4±1.2, 38°.40N±0°.02×44°.49E±0°.03, h6km±10km, n33, s1904/56, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**304**	P	**Pg**	**00 22 30.3**	**-1.1**
OZAP				S	**Sg**	**00 22 38.6**	**+1.0**
YOVA	**Hakkari_Yksek**	**0.82**	**191**	P	**Pb**	**00 22 38.8**	**-0.5**
YOVA				S	**Sb**	**00 22 50.6**	**-0.1**
YOVA				IAML		00 22 55.0	
	comp=E,91nm,0.3s						
TVAN	**Van**	**0.86**	**279**	P	**Pg**	**00 22 38.2**	**-0.7**
TVAN				S	**Sb**	**00 22 51.7**	**0.0**
TVAN				IAML		00 23 07.0	
	comp=N,107nm,1.1s						
VMUR	**Van-Muradiye**	**0.93**	**310**	P	**Pg**	**00 22 39.5**	**-0.7**
VMUR				S	**Sb**	**00 22 54.0**	**+0.3**
VMUR				IAML		00 22 58.0	
	comp=N,86nm,0.4s						
VMUR				IAML		00 22 59.0	
	comp=E,82nm,0.4s						
HAKT	**HAKKARI**	**1.04**	**217**	P	**Pb**	**00 22 42.1**	**-0.8**
HAKT				S	**Sb**	**00 22 57.5**	**+0.5**
HAKT				IAML		00 23 02.0	
	comp=N,96nm,0.4s						
HAKT				IAML		00 23 09.0	
	comp=E,82nm,0.9s						
HAKT	**HAKKARI**	**1.04**	**217**	P	**Pb**	**00 22 42.2**	**-0.8**
HAKT				S	**Sn**	**00 22 59.0**	**+0.2**
ERCV	**ERCIS-VAN**	**1.09**	**305**	P	**Pg**	**00 22 42.3**	**-1.0**
ERCV				IAML		00 23 11.0	
	comp=N,190nm,1.2s						
NAX	**Nakhchivan**	**1.10**	**45**	P	**Pb**	**00 22 42.9**	**-1.1**
NAX				S	**Sb**	**00 22 58.3**	**-0.4**
GEVA	**Gevas**	**1.13**	**266**	P	**Pg**	**00 22 42.2**	**-1.8**
GEVA				S	**Sb**	**00 22 59.2**	**-0.2**
GEVA				IAML		00 23 08.0	
	comp=N,66nm,0.7s						
AKDM	**Akdamar-Van**	**1.19**	**267**	Pn	**Pg**	**00 22 44.3**	**-0.9**
AKDM				Sn	**Sn**	**00 23 02.6**	**+0.3**
ORD	**Ordubad**	**1.29**	**65**	P	**Pn**	**00 22 46.3**	**-0.8**
ORD				S	**Sn**	**00 23 04.7**	**-0.1**
SBZ	**Shahbuz**	**1.30**	**40**	P	**Pg**	**00 22 46.2**	**-1.1**
SBZ				S	**Sn**	**00 23 06.7**	**+1.7**
DYDN	**Diyadin**	**1.30**	**332**	P	**Pb**	**00 22 48.5**	**+1.1**
DYDN				IAML		00 23 09.0	
	comp=E,63nm,0.7s						
DYDN				IAML		00 23 10.0	
	comp=N,77nm,0.4s						
CUKT	**Cukurca**	**1.34**	**211**	Pn	**Pg**	**00 22 48.4**	**+0.2**
CUKT				Sn	**Sn**	**00 23 07.7**	**+1.6**
CUKT	**Cukurca**	**1.34**	**211**	P	**Pn**	**00 22 47.4**	**-0.4**
CUKT				S	**Sn**	**00 23 05.9**	**-0.1**
CUKT				IAML		00 23 13.0	
	comp=E,99nm,0.5s						
CUKT				IAML		00 23 15.0	
	comp=N,74nm,1.0s						
HYR	**Heyderabad**	**1.35**	**12**	P	**Pg**	**00 22 48.6**	**+0.3**
HYR				S	**Sn**	**00 23 08.4**	**+2.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**287**	P	**Pg**	**00 22 49.7**	**-0.3**
ADCV				S	**Sg**	**00 23 11.2**	**+2.5**
IGDI	**IGDIR**	**1.50**	**348**	P	**Pg**	**00 22 50.7**	**-0.5**
IGDI				IAML		00 23 15.0	
	comp=E,58nm,1.1s						
IGDI	**IGDIR**	**1.50**	**348**	P	**Pg**	**00 22 50.9**	**-0.3**
IGDI				S	**Sg**	**00 23 12.3**	**+1.7**
PERV	**Siirt/Pervari-**	**1.60**	**254**	P	**Pg**	**00 22 52.4**	**-0.6**
PERV				S	**Sg**	**00 23 16.4**	**+2.6**
PERV				IAML		00 23 22.0	
	comp=N,75nm,0.5s						
PERV				IAML		00 23 22.0	
	comp=E,77nm,0.6s						
AGRB	**Hanur-Agry**	**1.66**	**316**	Pn	**Pb**	**00 22 53.2**	**-0.2**
AGRB				Sn	**Sg**	**00 23 15.9**	**+0.3**
DORK	**Agr/Tutak/Do**	**1.66**	**307**	P	**Pn**	**00 22 51.6**	**-0.6**
DORK				S	**Sn**	**00 23 11.5**	**-2.4**
MLAZ	**Malazgirt-MUS**	**1.69**	**297**	Pn	**Pb**	**00 22 53.6**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.72**	**325**	P	**Pg**	**00 22 54.8**	**-0.6**
KOTA				S	**Sn**	**00 23 15.0**	**-0.5**
GNI	**Garni**	**1.76**	**6**	Pn	**Pg**	**00 22 55.0**	**-1.1**
BLIS	**Bitlis-Merkez**	**1.86**	**271**	P	**Pb**	**00 22 56.9**	**-0.1**

SIRN	**Sirnak**	**1.87**	**242**	P	**Pg**	**00 22 58.6**	**+0.4**
SIRN				IAML		00 23 29.0	
	comp=E,32nm,0.6s						
SIRN				IAML		00 23 34.0	
	comp=N,43nm,0.5s						
GURO	**Guroymak-BITLI**	**1.93**	**275**	Pn	**Pb**	**00 22 56.9**	**-1.2**
SRTM	**Siirt_Merkez**	**2.06**	**259**	P	**Pb**	**00 23 00.2**	**-0.1**
SRTM				S	**Sg**	**00 23 27.7**	**-1.0**
SRTM				IAML		00 23 39.0	
	comp=N,46nm,0.9s						
SRTM				IAML		00 23 43.0	
	comp=E,30nm,0.6s						
DIGO	**Kars**	**2.19**	**337**	P	**Pg**	**00 23 03.9**	**-0.5**
DIGO				IAML		00 23 38.0	
	comp=N,23nm,0.5s						
DIGO				IAML		00 23 40.0	
	comp=E,29nm,0.5s						
MUSM	**Mu-Merkez**	**2.35**	**279**	P	**Pb**	**00 23 05.5**	**+0.2**
QRD	**Qoradiz**	**2.45**	**63**	P	**Pn**	**00 23 03.6**	**+0.7**
QRD				S	**Sb**	**00 23 36.6**	**-0.7**
AGDM	**Agdam**	**2.66**	**49**	P	**Pn**	**00 23 06.8**	**+1.0**
AGDM				S	**Sb**	**00 23 42.0**	**-1.2**

IDC 25 00:41:48.1±7.8, 6°.61S×148°.32E, h105km±46km, mb3.4/2, mbtmp3.7/4, Error ellipse: s-maj=78.1km s-min=61.2km az=101.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.01**	**202**	P	Pn	00 42 34.5	+0.3
	18nm,0.4s,baz=24,slow=9.4,SNR=17						
PMG				S	Sn	00 43 10.2	+0.6
	84nm,0.8s,baz=58,slow=6.5,SNR=15						
WRA	**Warramunga Arr**	**18.98**	**224**	P	P	00 46 00.7	-0.7
	1.5nm,0.6s,baz=49,slow=11,SNR=7.7						
ASAR	**Alice Springs**	**21.90**	**218**	P	P	00 46 33.5	+0.5
	1.4nm,0.7s,baz=57,slow=9.5,SNR=15						
	1.4nm,0.7s						
STKA	**Stephens Creek**	**25.91**	**193**	P	P	00 47 10.4	-0.1
	0.8nm,0.5s,baz=9.5,slow=18,SNR=2.9						
	0.8nm,0.5s						

RSPR 25 00:44:49.7, 17°.91N×66°.90W, h10km, MD3.3/6
NEIC 25 00:44:49.5±0.9, 17°.91N±0°.03×66°.891W±0°.006, h10km±1km, ML2.9/35, Md3.3/6(RSPR), Error ellipse: s-maj=4.4km s-min=2.5km az=352.0
OSPL 25 00:44:49.7±0.3, 17°.87N×66°.90W, h10km±4km, ML2.3, Presumed earthquake
SDD 25 00:44:49.7±1.6, 17°.89N×66°.91W, h16km±14km, MD3.5, ML2.8, MW3.0, Presumed earthquake

ISC 25 00:44:49.4±1.0, 17°.94N±0°.05×66°.88W±0°.02, h14km±5km, n40, σ0°.43/65, 8C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.04**	**1**		**Pg**	**00 44 52.0**	**0.0**
GBPR					**Sg**	**00 44 53.8**	**0.0**
GBPR	**Guanica, Bosqu**	**0.04**	**1**	↑*i* P	**Pg**	**00 44 52.0**	**0.0**
GBPR				*e*S	**Sg**	**00 44 53.8**	**0.0**
MLPR	**Magueyes Islan**	**0.16**	**282**		**Pg**	**00 44 53.2**	**-0.2**
MLPR				Sg	**Sg**	**00 44 55.5**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.23**	**287**	Pg	**Pg**	**00 44 54.4**	**-0.1**
CRPR				Sg	**Sg**	**00 44 57.5**	**-0.3**
CRPR				IAML		00 44 57.9	
	3μm,0.3s						
CRPR				IAML		00 44 58.1	
	3μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.23**	**287**	↑↑*e*Pg	**Pg**	**00 44 54.3**	**-0.1**
CRPR				↑↑*e*Sg	**Sg**	**00 44 57.4**	**-0.5**
CRPR				IAML		00 44 57.9	
	comp=N,3μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.23**	**287**	↑*i*P	**Pg**	**00 44 54.4**	**-0.1**
CRPR				*e*S	**Sg**	**00 44 57.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.23**	**287**	*i* P	**Pg**	**00 44 54.4**	**-0.1**
CRPR				*e*S	**Sg**	**00 44 57.7**	**-0.1**
CRPR				IAML		00 44 57.9	
	comp=Z,2μm,0.3s						
OBIP	**Obispado Ponce**	**0.28**	**68**		**Pg**	**00 44 55.6**	**+0.2**
OBIP					**Sg**	**00 44 59.9**	**+0.5**
OBIP	**Obispado Ponce**	**0.28**	**68**	↑*i*P	**Pb**	**00 44 55.9**	**-0.3**
OBIP				*e*S	**Sb**	**00 45 00.9**	**+0.1**
OBIP	**Obispado Ponce**	**0.28**	**68**	*i* P	**Pb**	**00 44 55.9**	**-0.3**
OBIP				IAML		00 45 00.8	
	comp=Z,318nm,0.8s						
LSP	**Las Mesas**	**0.31**	**320**		**Pg**	**00 44 56.0**	**+0.2**
LSP					**Sb**	**00 45 00.9**	**-0.7**
LSP	**Las Mesas**	**0.31**	**320**	↓*i*P	**Pg**	**00 44 56.0**	**+0.2**
LSP				*e*S	**Sb**	**00 45 00.9**	**-0.7**
CELP	**Cerrillos**	**0.32**	**64**		**Pb**	**00 44 56.4**	**-0.4**
CELP				Sg	**Sb**	**00 45 01.8**	**0.0**
CELP				IAML		00 45 02.4	
	comp=Z,928nm,0.3s						
UUPR	**Utuado, UPR, P**	**0.35**	**26**		**Pb**	**00 44 57.0**	**-0.4**
UUPR				Sg	**Sb**	**00 45 02.3**	**-0.5**
PRSN	**Puerto Rico Se**	**0.38**	**318**	Pg	**Pg**	**00 44 57.1**	**+0.1**
PRSN				IAML		00 45 05.4	
	comp=Z,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.38**	**318**		**Sb**	**00 45 03.0**	**-0.5**
PRSN	**Puerto Rico Se**	**0.38**	**318**	↑↑*e*Pg	**Pg**	**00 44 57.0**	**+0.1**
PRSN				*e*Sg	**Sb**	**00 45 03.2**	**-0.3**
PRSN				IAML		00 45 06.1	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.38**	**318**	↑*i*P	**Pg**	**00 44 57.1**	**+0.1**
PRSN				*e*S	**Sb**	**00 45 03.0**	**-0.5**
AGPR	**Aguadilla, PR**	**0.57**	**337**		**Pg**	**00 45 00.6**	**-0.1**
AGPR				IAML		00 45 09.0	
	comp=N,626nm,0.4s						
AGPR				IAML		00 45 09.0	
	comp=N,541nm,0.3s						
AGPR	**Aguadilla, PR**	**0.57**	**337**	↑↑*e*Pg	**Pg**	**00 45 00.6**	**-0.1**
AGPR				*e*Sg	**Sb**	**00 45 08.8**	**-0.3**
AGPR				IAML		00 45 09.6	
	comp=N,421nm,0.2s						
AGPR	**Aguadilla, PR**	**0.57**	**337**	↑*i*P	**Pg**	**00 45 00.7**	**0.0**
AGPR				*e*S	**Sb**	**00 45 08.9**	**-0.3**
ECPR	**Experimental S**	**0.62**	**52**		**Pg**	**00 45 01.6**	**0.0**
ECPR					**Sg**	**00 45 09.5**	**-0.3**
ECPR				IAML		00 45 15.0	
	comp=N,928nm,0.2s						
ECPR	**Experimental S**	**0.62**	**52**	↑*i*P	**Pb**	**00 45 01.7**	**-0.3**
ECPR				*e*S	**Sb**	**00 45 10.6**	**0.0**
SJG	**San Juan**	**0.72**	**76**	Pg	**Pg**	**00 45 03.1**	**-0.2**
SJG	**San Juan**	**0.72**	**76**	Pg	**Pg**	**00 45 03.0**	**-0.4**
SJG	**San Juan**	**0.72**	**76**	↑↑*e*Pg	**Pg**	**00 45 02.8**	**-0.5**
SJG				↑↑*e*Sg	**Sb**	**00 45 13.3**	**0.0**
SJG	**San Juan**	**0.72**	**76**	*i* P	**Pg**	**00 45 03.2**	**-0.2**
SJG				*e*S	**Sb**	**00 45 13.2**	**-0.1**
SJG				IAML		00 45 17.6	
	comp=Z,118nm,0.2s						
IDE	**Isla Desecheo**	**0.72**	**308**		**Pg**	**00 45 03.0**	**-0.4**
IDE					**Sg**	**00 45 12.8**	**-0.1**
IDE	**Isla Desecheo**	**0.72**	**308**	↑*i*P	**Pg**	**00 45 03.0**	**-0.4**
IDE				*e*S	**Sg**	**00 45 12.8**	**-0.1**
PDPR	**Patillas Dam,**	**0.82**	**84**		**Pg**	**00 45 05.0**	**-0.4**
GCPR	**Guaynabo City**	**0.84**	**64**		**Pg**	**00 45 05.3**	**-0.5**
GCPR	**Guaynabo City**	**0.84**	**64**		**Sb**	**00 45 17.2**	**+0.2**
GCPR	**Guaynabo City**	**0.84**	**64**	↓*i*P	**Pg**	**00 45 05.3**	**-0.5**
GCPR				*e*S	**Sb**	**00 45 17.2**	**+0.2**
HUMP	**Col San Antoni**	**1.00**	**78**	Pg	**Pb**	**00 45 07.9**	**-0.5**
HUMP				IAML		00 45 22.3	
	comp=Z,174nm,0.2s						
HUMP				IAML		00 45 25.4	
	comp=Z,239nm,0.3s						
HUMP	**Col San Antoni**	**1.00**	**78**		**Sb**	**00 45 21.0**	**-0.6**
HUMP	**Col San Antoni**	**1.00**	**78**	↑*i*P	**Pb**	**00 45 08.0**	**-0.5**
HUMP				*e*S	**Sb**	**00 45 21.0**	**-0.6**
PCDR	**Punta Cana, DR**	**1.54**	**292**	↑↑*e*Pg	**Pb**	**00 45 17.5**	**-0.1**
PCDR				IAML		00 45 49.9	
	comp=N,193nm,1.7s						
CUPR	**Culebra, Puert**	**1.56**	**76**	Pn	**Pn**	**00 45 17.3**	**+0.6**
DR12	**Loma Pena Alta**	**2.52**	**290**	Pn	**Pn**	**00 45 30.9**	**+1.0**
HATOM	**Hato Mayor del**	**2.52**	**290**	↑↑*e*Pn	**Pn**	**00 45 31.7**	**+1.7**
HATOM				IAML		00 46 14.4	
	comp=N,22nm,1.9s						

SJA 25 00:49:39.8±0.6, 23°.02S×69°.35W, h104km±5km, ML4.6, MW4.3
VAO 25 00:49:39.2±0.5, 23°.06S×69°.48W, h75km±3km, mb4.5, Presumed earthquake

NEIC 25 00:49:41.4±2.0, 23°.05S±0°.04×69°.40W±0°.08, h76km±4km, mb4.6/113, Mwr4.6/34, Mwr4.6(GUC), Error ellipse: s-maj=10.4km s-min=6.3km az=89.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_n5.34; $M_{θθ}$2.92; $M_{φφ}$-8.27; $M_{rθ}$-4.51; $M_{rφ}$1.93; $M_{θφ}$-4.43; Fault plane solution: $M_0$9.82000×10^{15} NP1:ϕ$_s$203.07000°, δ68.62000°, λ126.81000°. NP2:ϕ$_s$319.04000°, δ41.80000°, λ33.15000°. Principal axes: T 10.0113, Plg52.0000°, Azm156.0000°; N -0.4020, Plg34.0000°, Azm8.0000°; P -9.6093, Plg16.0000°, Azm267.0000°;
NEIC 25 00:49:42.1, 23°.02S×69°.45W, h82km
IDC 25 00:49:42.6±0.5, 23°.00S×69°.21W, h83km±3km, mb4.0/12, mbtmp4.4/17, MS3.1/1, Error ellipse: s-maj=16.7km s-min=12.3km az=70.0
GUC 25 00:49:43.4±0.7, 22°.96S×69°.44W, h85km±5km, ML4.6

ISC 25 00:49:41.5±0.4, 23°.03S±0°.03×69°.41W±0°.04, h83km±3km, h83km: pP-P, n266, σ1s57/303, mb4.6/55, 19C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.36**	**335**		**Pn**	**00 49 55.0**	**+0.3**
PB06				Sn	**Sn**	**00 50 04.8**	**+0.4**
PB06	**IPOC Station P**	**0.36**	**335**	↓*i*P	**Pn**	**00 49 56.1**	**+1.3**
PB06	**IPOC Station P**	**0.36**	**335**	*e*P	**Pn**	**00 49 56.0**	**+1.3**
PB06				*e*S	**Sn**	**00 50 05.5**	**+1.1**
PB06				IAML		00 50 06.7	
	comp=Z,54μm,0.3s						
PB03	**IPOC Station P**	**1.03**	**342**		**Pn**	**00 50 01.6**	**+0.3**
PB03				Sn	**Sn**	**00 50 16.4**	**+0.4**
PB03	**IPOC Station P**	**1.03**	**342**	↑*i*P	**Pn**	**00 50 02.4**	**+1.2**
PB03				*i* S	**Sn**	**00 50 16.8**	**+0.8**
PB03				IAML		00 50 18.2	
	comp=N,25μm,0.6s						
PB03	**IPOC Station P**	**1.03**	**342**	*e*P	**Pn**	**00 50 02.3**	**+1.1**
PB03				*e*S	**Sn**	**00 50 17.7**	**+1.8**
PB03				IAML		00 50 18.4	
	comp=Z,14μm,0.2s						
AF01	**San Pedro de A**	**1.14**	**86**		**Pn**	**00 50 04.8**	**+2.2**
AF01	**San Pedro de A**	**1.14**	**86**	↓*i*P	**Pn**	**00 50 05.0**	**+2.3**
AF01	**San Pedro de A**	**1.14**	**86**	*e*P	Pn	00 49 55.4	-7.3
AF01				IAML		00 50 39.2	
	comp=Z,20μm,0.7s						
PB10	**IPOC Station P**	**1.16**	**245**		**Pn**	**00 50 04.4**	**+1.8**
PB10	**IPOC Station P**	**1.16**	**245**	↑*i*P	**Pn**	**00 50 04.5**	**+1.8**
PB10				*i* S	**Sn**	**00 50 20.6**	**+2.1**
PB10	**IPOC Station P**	**1.16**	**245**	*e*P	**Pn**	**00 50 03.9**	**+1.2**
PB10				*e*S	**Sn**	**00 50 22.1**	**+3.5**
PB10				IAML		00 50 23.5	
	comp=Z,3μm,0.3s						
PB09	**IPOC Station P**	**1.24**	**7**		**Pn**	**00 50 04.7**	**+0.9**
PB09				Sn	**Sn**	**00 50 22.5**	**+1.9**
PB09	**IPOC Station P**	**1.24**	**7**	↑*i*P	**Pn**	**00 50 05.5**	**+1.6**
PB09				*i* S	**Sn**	**00 50 21.6**	**+1.0**
PB09				IAML		00 50 27.6	
	comp=E,12μm,0.6s						
PB09	**IPOC Station P**	**1.24**	**7**	*e*P	**Pn**	**00 50 05.4**	**+1.6**
PB09				*e*S	**Sn**	**00 50 23.9**	**+3.3**
PB09				IAML		00 50 28.3	
	comp=Z,9μm,0.7s						
PB07	**IPOC Station P**	**1.37**	**341**		**Pn**	**00 50 05.9**	**+0.4**
PB07				Sn	**Sn**	**00 50 24.3**	**+0.8**
PB07	**IPOC Station P**	**1.37**	**341**	↑*i*P	**Pn**	**00 50 06.6**	**+1.1**
PB07				*i* S	**Sn**	**00 50 24.3**	**+0.8**
PB07				IAML		00 50 28.4	
	comp=E,7μm,0.3s						
PB07	**IPOC Station P**	**1.37**	**341**	*e*P	**Pn**	**00 50 05.9**	**+0.4**
PB07				*e*S	**Sn**	**00 50 25.2**	**+1.7**
PB07				IAML		00 50 25.8	
	comp=Z,7μm,0.7s						
PB02	**IPOC Station P**	**1.76**	**345**		**Pn**	**00 50 11.5**	**+1.0**
PB02	**IPOC Station P**	**1.76**	**345**	↑*i*P	**Pn**	**00 50 11.6**	**+1.0**
PB02				*i* S	**Sn**	**00 50 32.1**	**-0.3**
PB02				IAML		00 50 35.5	
	comp=E,9μm,0.5s						
PB02	**IPOC Station P**	**1.76**	**345**	*e*P	**Pn**	**00 50 10.8**	**+0.3**
PB02				*e*S	**Sn**	**00 50 34.6**	**+2.2**
PB02				IAML		00 50 36.1	
	comp=Z,13μm,0.3s						
PB14	**IPOC Station P**	**1.83**	**210**		**Pn**	**00 50 12.8**	**+1.2**
PB14	**IPOC Station P**	**1.83**	**210**	↑*i*P	**Pn**	**00 50 13.0**	**+1.5**
PB14				*i* S	**Sn**	**00 50 32.9**	**-1.5**
PB14	**IPOC Station P**	**1.83**	**210**	*e*P	**Pn**	**00 50 12.5**	**+0.9**
PB14				*e*S	**Sn**	**00 50 36.1**	**+1.8**
PB14				IAML		00 50 37.8	
	comp=Z,3μm,0.5s						
PB01	**IPOC Station P**	**1.98**	**358**		**Pn**	**00 50 14.2**	**+0.9**
PB01	**IPOC Station P**	**1.98**	**358**	↑*i*P	**Pn**	**00 50 14.4**	**+1.0**
PB01				IAML		00 50 39.7	
	comp=E,7μm,0.2s						
PB01	**IPOC Station P**	**1.98**	**358**	*e*P	**Pn**	**00 50 13.7**	**+0.3**
PB01				*e*S	**Sn**	**00 50 39.8**	**+2.3**
PB01				IAML		00 50 40.8	
	comp=Z,4μm,0.1s						
GO02	**Mina Guanaco**	**2.13**	**184**		**Pn**	**00 50 17.6**	**+2.1**
GO02	**Mina Guanaco**	**2.13**	**184**	↑*i*P	**Pn**	**00 50 17.6**	**+2.1**
GO02	**Mina Guanaco**	**2.13**	**184**	*e*P	**Pn**	**00 50 17.0**	**+1.5**
GO02				*e*S	**Sn**	**00 50 48.0**	**+6.6**
GO02				IAML		00 50 50.0	
	comp=Z,2μm,0.6s						
HMBC	**Humberstone**	**2.77**	**351**		**Pn**	**00 50 23.6**	**-0.4**
HMBC	**Humberstone**	**2.77**	**351**	↑*i*P	**Pn**	**00 50 23.8**	**-0.2**
TA02	**Huaiquique**	**2.83**	**346**	*e*P	**Pn**	**00 50 23.9**	**-0.6**
TA02	**Huaiquique**	**2.83**	**346**	*e*P	**Pn**	**00 50 24.1**	**-0.5**
TA02				*e*S	**Sn**	**00 50 57.9**	**+0.2**
TA02				IAML		00 51 00.8	
	comp=Z,1μm,0.4s						
PB08	**IPOC Station P**	**2.88**	**5**		**Pn**	**00 50 26.2**	**+0.5**
PB08	**IPOC Station P**	**2.88**	**5**	↑*i*P	**Pn**	**00 50 26.4**	**+0.6**
PB08	**IPOC Station P**	**2.88**	**5**	*e*P	**Pn**	**00 50 25.8**	**+0.1**
PB08				*e*S	**Sn**	**00 50 50.8**	**-8.9**
PB08				IAML		00 50 52.4	
	comp=Z,1μm,0.6s						
SALTA		**3.06**	**113**	*e*P	**Pn**	**00 50 30.6**	**+2.5**
SALTA		**3.06**	**113**	*e*P	**Pn**	**00 50 27.7**	**-0.4**
SALTA				*e*P		00 50 31.9	
PB11	**IPOC Station P**	**3.26**	**356**		**Pn**	**00 50 30.2**	**-0.4**
PB11	**IPOC Station P**	**3.26**	**356**	↑*i*P	**Pn**	**00 50 29.9**	**-0.7**
PB11	**IPOC Station P**	**3.26**	**356**	*e*P	**Pn**	**00 50 30.0**	**-0.7**
PB11				IAML		00 51 27.7	
	comp=Z,1μm,1.1s						
AC01	**Pan de Azucar**	**3.29**	**199**		**Pn**	**00 50 31.1**	**+0.2**
AC01	**Pan de Azucar**	**3.29**	**199**	↑*i*P	**Pn**	**00 50 31.0**	**+0.2**
AC01	**Pan de Azucar**	**3.29**	**199**	*e*P	**Pn**	**00 50 31.0**	**+0.2**
AC01				*e*S	**Sn**	**00 51 09.0**	**+0.2**
AC01				IAML		00 51 36.6	
	comp=Z,878nm,0.4s						
GO01	**Chusmiza**	**3.35**	**3**		**Pn**	**00 50 32.2**	**0.0**
GO01	**Chusmiza**	**3.35**	**3**	↑*i*P	**Pn**	**00 50 32.4**	**+0.2**
GO01	**Chusmiza**	**3.35**	**3**	*e*P	**Pn**	**00 50 32.3**	**+0.2**
GO01				IAML		00 51 37.4	
	comp=Z,880nm,0.3s						
HJA	**Humahuaca**	**3.69**	**94**	*e*P	**Pn**	**00 50 40.8**	**+4.2**
YJA	**Yavi**	**3.70**	**77**	*e*P	Pn	00 50 41.7	+4.9
AC02	**Maricunga**	**3.80**	**176**		**Pn**	**00 50 40.8**	**+2.6**
AC02	**Maricunga**	**3.80**	**176**	↑*i*P	**Pn**	**00 50 40.8**	**+2.6**
AC02	**Maricunga**	**3.80**	**176**	*e*P	**Pn**	**00 50 39.9**	**+1.7**
AC02				*e*S	Sn	00 51 12.2	-10
AC02				IAML		00 51 57.0	
	comp=Z,573nm,0.5s						
SLA	**San Lorenzo**	**3.95**	**116**	*e*P	**Pn**	**00 50 43.9**	**+4.0**
SLA	**San Lorenzo**	**3.95**	**116**	*e*P	Pn	00 50 45.8	+5.8
AC06	**Mina Casimiro**	**4.39**	**191**		**Pn**	**00 50 44.6**	**-1.2**
PB12	**IPOC Station P**	**4.48**	**349**		**Pn**	**00 50 45.3**	**-1.8**
PB12	**IPOC Station P**	**4.48**	**349**	*e*P	**Pn**	**00 50 45.4**	**-1.7**
PB12				*e*S	**Sn**	**00 51 35.2**	**-2.8**
PB12				IAML		00 52 07.9	
	comp=Z,458nm,0.5s						
GO03	**Copiapo**	**4.61**	**189**		**Pn**	**00 50 48.5**	**-0.2**
GO03	**Copiapo**	**4.61**	**189**	*e*P	**Pn**	**00 50 48.9**	**+0.2**
GO03				*e*S	**Sn**	**00 51 36.6**	**-4.4**
GO03				IAML		00 52 11.1	
	comp=Z,334nm,0.3s						
PB16	**IPOC Station P**	**4.67**	**359**		**Pn**	**00 50 50.1**	**0.0**
PB16	**IPOC Station P**	**4.67**	**359**	*e*P	**Pn**	**00 50 49.9**	**-0.3**
PB16				IAML		00 52 12.0	
	comp=Z,319nm,0.7s						
AP01	**Chacalluta**	**4.72**	**349**	Pn	**Pn**	**00 50 50.0**	**-0.3**
AC04	**Llanos de Chal**	**5.37**	**196**		**Pn**	**00 50 57.0**	**-2.1**
AC04	**Llanos de Chal**	**5.37**	**196**	*e*S	Sn	00 52 12.5	+13
AC04				IAML		00 52 41.8	
	comp=Z,224nm,0.8s						
PB18	**Visviri**	**5.41**	**359**		**Pn**	**00 51 00.1**	**-0.2**
AC05	**El Transito**	**5.83**	**187**		**Pn**	**00 51 04.8**	**-0.8**
LCO	**Las Campanas**	**6.07**	**191**		**Pn**	**00 51 07.2**	**-1.7**
LPAZ	**La Paz**	**6.81**	**10**	P	**Pn**	**00 51 21.4**	**+2.0**
	comp=Z,20nm,0.5s,baz=202,slow=6.2,SNR=118						
LPAZ	**La Paz**	**6.81**	**10**		**Pn**	**00 51 18.4**	**-1.1**
CO01	**Juntas del Tor**	**6.95**	**185**		**Pn**	**00 51 19.7**	**-1.2**
CO05	**La Serena**	**7.05**	**193**		**Pn**	**00 51 19.9**	**-2.1**
GO04	**Tololo Observa**	**7.22**	**190**		**Pn**	**00 51 23.6**	**-1.0**
CO03	**El Pedregal**	**7.86**	**188**		**Pn**	**00 51 30.8**	**-2.4**
CO06	**Fray Jorge**	**7.87**	**194**	P	**Pn**	**00 51 29.9**	**-3.3**
CO02	**Combarbal**	**8.26**	**190**		**Pn**	**00 51 36.0**	**-2.7**
CFA	**Coronel Fontan**	**8.61**	**173**	P	**Pn**	**00 51 42.7**	**-0.6**
	comp=Z,19nm,0.4s,baz=351,slow=13,SNR=97						
CFA				S	**Sn**	**00 53 11.8**	**-6.9**
	comp=Z,7.0nm,0.5s,baz=31,slow=16,SNR=1.3						
CO04	**Los Peladeros**	**9.09**	**188**		**Pn**	**00 51 47.7**	**-2.4**
VA06	**Catapilco**	**9.64**	**190**	Pn	**Pn**	**00 51 54.9**	**-2.5**
VA03	**San Esteban**	**9.75**	**186**		**Pn**	**00 51 55.7**	**-3.3**
PEL	**Peldehue**	**10.14**	**186**	Pn	**Pn**	**00 52 02.5**	**-1.7**
MT02	**Curacav**	**10.30**	**188**		**Pn**	**00 52 03.2**	**-3.2**
MT08	**Bocatoma Ro**	**10.39**	**183**		**Pn**	**00 52 06.1**	**-1.7**
SIV	**San Ignacio**	**10.53**	**50**	P	**Pn**	**00 52 07.6**	**-2.0**
	comp=Z,7.2nm,0.6s,baz=250,slow=7.8,SNR=28						
MT13	**San Alfonso**	**10.70**	**184**		**Pn**	**00 52 10.6**	**-1.3**
MT09	**Talagante**	**10.80**	**187**	Pn	**Pn**	**00 52 10.2**	**-3.1**
MT01	**Popeta**	**10.91**	**188**		**Pn**	**00 52 10.3**	**-4.4**
BO04	**La Punta**	**10.97**	**185**		**Pn**	**00 52 12.5**	**-3.0**
BO01	**Tunca**	**11.41**	**187**		**Pn**	**00 52 20.4**	**-1.2**
CPUP	**Villa Florida**	**11.46**	**109**	P	**Pn**	**00 52 21.5**	**-0.7**
	comp=Z,7.9nm,1.0s,baz=290,slow=13,SNR=9.7						
CPUP	**Villa Florida**	**11.46**	**109**		**Pn**	**00 52 21.1**	**-1.1**
BO02	**Sierra Bellavi**	**11.78**	**186**		**Pn**	**00 52 26.1**	**-0.5**
GO05	**Hualane**	**12.14**	**190**	Pn	**Pn**	**00 52 31.2**	**-0.1**
PTLB	**Pontes e Lacer**	**12.28**	**54**		**Pn**	**00 52 33.0**	**-0.3**
PTLB	**Pontes e Lacer**	**12.28**	**54**	*e*P	**Pn**	**00 52 32.4**	**-1.0**
PTLB				*e*S	**Sn**	**00 52 48.8**	**+0.4**
ML02	**Panimavida**	**12.81**	**187**		**Pn**	**00 52 37.9**	**-2.5**
AQDB	**Aquidauana**	**12.99**	**81**	Pn	**Pn**	**00 52 41.7**	**-1.2**
NNA	**Nana**	**13.06**	**326**	S	**Sn**	**00 55 04.0**	**-3.6**
	comp=Z,5.3nm,0.4s,baz=217,slow=4.5,SNR=3.7						
PSAL	**Palomas, Salto**	**13.22**	**130**	*e*P	**Pn**	**00 52 44.9**	**-0.9**
PSAL				*e*S	**Sn**	**00 55 10.7**	**-0.3**
VILB	**Vilhena**	**13.30**	**43**		**Pn**	**00 52 46.2**	**-0.9**
VILB	**Vilhena**	**13.30**	**43**	*e*P	**Pn**	**00 52 46.5**	**-0.6**
BI02	**San Fabin de**	**13.68**	**186**		**Pn**	**00 52 52.0**	**0.0**
TRCB	**Terra Rica**	**15.46**	**92**	Pn	**Pn**	**00 53 13.5**	**-1.4**
PTGB	**Pitanga**	**15.96**	**100**	*e*P	**Pn**	**00 53 21.1**	**-0.2**
CPSB	**Cacapava Do Su**	**16.04**	**121**	*e*P	**Pn**	**00 53 20.7**	**-1.5**
CPSB				*e*S	**Sn**	**00 56 19.2**	**-0.2**
ITAB	**Concordia**	**16.20**	**109**	Pn	**Pn**	**00 53 23.3**	**-0.8**
TRQA	**Tornquist**	**16.28**	**159**		**Pn**	**00 53 24.8**	**-0.3**
TRQA				IAmb	IAmb	00 53 32.8	
	comp=Z,43nm,0.8s						
PLTB	**Pedras Altas**	**16.50**	**125**	Pn	**Pn**	**00 53 26.0**	**-1.9**
GO06	**Curarrehue**	**16.60**	**186**		**Pn**	**00 53 28.3**	**-0.8**
LDASE	**Londrina, Braz**	**16.82**	**95**	*e*P	**Pn**	**00 53 31.5**	**-0.4**
LDASE				*e*S	**Sn**	**00 56 38.2**	**-0.3**
LR05	**Currie**	**17.29**	**187**		**Pn**	**00 53 36.9**	**-0.6**
LR05				IAmb	IAmb	00 53 58.5	
	comp=Z,58nm,0.9s						
PLCA	**Paso Flores**	**17.68**	**183**	P	**Pn**	**00 53 43.5**	**+1.2**
	comp=Z,7.5nm,0.8s,baz=359,slow=13,SNR=12						
PLCA	**Paso Flores**	**17.68**	**183**		**P**	**00 53 41.3**	**-0.8**
CLDB	**Colider**	**17.75**	**49**	*e*P	**P**	**00 53 42.5**	**-0.5**
CLDB				*e*S	**Sn**	**00 57 00.8**	**-0.1**
CNLB	**Canela**	**17.79**	**115**	*e*P	**P**	**00 53 40.2**	**-3.1**
CNLB				*e*pP	**pP**	**00 53 55.3**	**-4.9**
CNLB				*e*S	**Sn**	**00 57 01.4**	**-0.2**
GO07	**Milladeo Hill,**	**20.34**	**189**	P	**P**	**00 54 12.1**	**+1.1**
SNDB	**Serra Nova Dou**	**20.45**	**61**	*e*P	**P**	**00 54 11.0**	**-1.5**
**I

MNTX **Cornudas Mount** 64.40 326 P **P** 01 00 08.7 -0.2
SMWD **Samnorwood** 64.79 332 P **P** 01 00 11.0 -0.5
SMWD IAmb IAmb 01 00 13.2
comp=Z,8.5nm,0.7s
121A **Cookes Peak, D** 66.30 325 P **P** 01 00 21.9 +0.4
121A IAmb IAmb 01 00 24.7
comp=Z,4.3nm,0.7s
QSPA **South Pole Qui** 67.17 180 P **P** 01 00 28.8 +2.3
comp=Z,2.6nm,0.7s,baz=155,slow=3.7,SNR=3.8
QSPA pP **pP** 01 00 49.1 +0.7
comp=Z,2.8nm,0.5s,baz=186,slow=3.1,SNR=2.1
comp=Z,2.6nm,0.7s
QSPA **South Pole Qui** 67.17 180 IAmb IAmb 01 01 01.3
comp=Z,5.3nm,0.8s
ANMO **Albuquerque** 67.53 328 **P** 01 00 30.5 +1.3
ANMO IAmb IAmb 01 00 32.3
comp=Z,5.5nm,0.7s
TUC **Tucson** 67.76 323 **P** 01 00 30.9 +0.3
L40A **Anamosa** 67.84 343 P **P** 01 00 29.5 -1.2
WBO **Williamsburg** 67.91 356 P **P** 01 00 31.1 0.0
WBO IAmb IAmb 01 00 33.0
comp=Z,6.1nm,0.9s
G62A **West of Eustis** 67.93 359 **P** 01 00 31.2 0.0
TRQ **Mont Tremblant** 69.08 356 P **P** 01 00 38.1 -0.3
TRQ IAmb IAmb 01 01 11.8
comp=Z,7.8nm,0.8s
H43A **Windswept, Lux** 69.24 346 P **P** 01 00 38.1 -1.3
SDCO **Great Sand Dun** 69.33 330 **P** 01 00 40.8 +0.3
SDCO IAmb IAmb 01 00 43.6
comp=Z,7.9nm,1.1s
W18A **Petrified Fore** 69.33 325 P **P** 01 00 40.2 -0.2
W18A IAmb IAmb 01 00 44.0
comp=Z,10nm,1.2s
BGNE **Belgrade** 69.43 337 P **P** 01 00 39.9 -0.8
DBIC **Dimbokro** 69.62 73 P **P** 01 00 42.9 +0.5
comp=Z,4.5nm,0.8s,baz=245,slow=7.2,SNR=5.2
DBIC pP **pP** 01 01 02.7 -2.0
comp=Z,11nm,0.8s,baz=268,slow=6.8,SNR=8.4
comp=Z,4.5nm,0.8s
DBIC **Dimbokro** 69.62 73 **PcP** 01 01 05.5 +0.6
X16A **Lo Mia Camp, P** 69.71 324 P **P** 01 00 43.1 +0.4
X16A IAmb IAmb 01 00 46.6
comp=Z,7.5nm,1.2s
Q24A **Divide** 70.16 331 P **P** 01 00 44.9 -0.7
Q24A IAmb IAmb 01 00 48.6
comp=Z,4.9nm,0.7s
MVCO **Mesa Verde** 70.33 328 **P** 01 00 47.1 +0.5
MVCO IAmb IAmb 01 00 49.8
comp=Z,7.1nm,0.8s
WUAZ **Wupatki** 70.50 325 **P** 01 00 47.7 +0.2
BLYC **Blythe** 70.94 321 **P** 01 00 50.5 +0.5
ISCO **Idaho Springs** 71.05 331 P **P** 01 00 49.7 -1.3
VLDQ **Val d'Or** 71.18 354 P **P** 01 00 52.3 +1.2
VLDQ IAmb IAmb 01 01 24.3
comp=Z,7.7nm,0.8s
PV02 **Paradox Valley** 71.23 328 P **P** 01 00 52.5 +0.5
PV13 **Radium Mtn., P** 71.23 328 P **P** 01 00 51.5 -0.5
PV13 IAmb IAmb 01 00 55.3
comp=Z,8.0nm,1.1s
BC3 **Big Chuckawall** 71.41 321 P **P** 01 00 53.1 +0.1
BC3 IAmb IAmb 01 00 56.8
comp=Z,5.9nm,1.0s
PV10 **Paradox Valley** 71.51 328 P **P** 01 00 53.2 -0.5
PV10 IAmb IAmb 01 00 56.0
comp=Z,6.9nm,1.0s
HMU **Henry Mountain** 72.01 327 **P** 01 00 57.7 +0.9
HMU IAmb IAmb 01 01 00.7
comp=Z,13nm,1.3s
DANC **Danby, Needles** 72.07 321 P **P** 01 00 57.4 +0.6
DANC IAmb IAmb 01 01 00.8
comp=Z,13nm,1.1s
KNB **Kanab** 72.39 325 **P** 01 00 58.0 -0.9
O20A **White River Ci** 72.52 330 **P** 01 01 00.0 +0.4
O20A IAmb IAmb 01 01 02.9
comp=Z,8.5nm,0.8s
V12A **Nelson** 72.55 323 P **P** 01 00 60.0 +0.2
GWY **Greenwater Val** 73.91 322 **P** 01 01 09.3 +1.4
GWY IAmb IAmb 01 01 11.3
comp=Z,4.5nm,0.7s
RSSD **Black Hills** 73.97 335 P **P** 01 01 08.7 +0.6
RSSD IAmb IAmb 01 01 10.8
comp=Z,4.6nm,0.8s
BSUT **Blindstream Ca** 74.03 328 P **P** 01 01 08.6 0.0
PSUT **Pine Spring** 74.07 325 P **P** 01 01 09.5 +0.7
TPNV **Topopah Spring** 74.22 323 P **P** 01 01 10.2 +0.6
MPMC **Manual Prospec** 74.29 321 P **P** 01 01 11.1 +1.0
WCT **Wildcat Mounta** 74.32 322 P **P** 01 01 11.4 +1.3
DUG **Dugway, Tooele** 74.78 327 P **P** 01 01 14.0 +1.2
AGMN **Agassiz Nation** 74.86 342 **P** 01 01 13.3 +0.4
PD31 **Pinedale Array** 75.20 331 P **P** 01 01 17.0 +1.7
PDAR **Pinedale Array** 75.20 331 P **P** 01 01 16.6 +1.4
comp=Z,0.4nm,0.5s,baz=138,slow=7.5,SNR=8.7
comp=Z,0.4nm,0.5s
PDAR **Pinedale Array** 75.20 331 P **P** 01 01 15.6 +0.3
MDND **Maddock** 75.59 340 **P** 01 01 17.9 +0.8
AHID **Auburn Hatcher** 75.91 330 P **P** 01 01 19.7 +0.4
AHID IAmb IAmb 01 01 22.1
comp=Z,6.6nm,0.8s
HVU **Hansel Valley** 75.95 328 P **P** 01 01 19.9 +0.4
LOHW **Long Hollow** 76.34 331 **P** 01 01 22.4 +0.6
NVAR **Mina Array Bea** 76.41 322 P **P** 01 01 24.4 +2.1
comp=Z,1.1nm,0.7s,baz=173,slow=7.6,SNR=6.3
comp=Z,1.1nm,0.7s
MOOW **Moose Ponds** 76.51 331 **P** 01 01 23.0 +0.3
ULM **Lac du Bonnet** 76.63 343 P **P** 01 01 23.4 +0.5
comp=Z,5.1nm,0.5s,baz=153,slow=6.2,SNR=11
comp=Z,5.1nm,0.5s
ULM **Lac du Bonnet** 76.63 343 P **P** 01 01 22.5 -0.4
ULM IAmb IAmb 01 01 23.7
comp=Z,5.2nm,0.5s
FLWY **Flagg Ranch** 76.75 331 P **P** 01 01 25.5 +1.4
FLWY IAmb IAmb 01 01 27.5
comp=Z,8.4nm,0.8s
RLMT **Red Lodge** 76.94 332 P **P** 01 01 25.3 +0.2
YNE **Yellowstone No** 77.17 332 P **P** 01 01 27.4 +1.0
YNE IAmb IAmb 01 01 29.5
comp=Z,8.7nm,1.0s
YHH **Holmes Hill** 77.37 331 **P** 01 01 28.8 +1.3
YHL **Hebgen Lake** 77.57 331 **P** 01 01 29.9 +1.3
YHL IAmb IAmb 01 01 32.0
comp=Z,3.4nm,0.5s
PNTR **Pine Nut** 77.60 322 **P** 01 01 29.9 +1.0
PNTR IAmb IAmb 01 01 32.7
comp=Z,8.3nm,0.8s
PAHR **Pah Rah Range** 77.91 323 **P** 01 01 31.4 +0.9
PAHR IAmb IAmb 01 01 34.2
comp=Z,11nm,0.8s
MPK **Martis Peak** 77.98 322 P **P** 01 01 30.4 -0.7
MPK IAmb IAmb 01 01 34.5
comp=Z,7.9nm,0.8s
HLID **Hailey** 78.09 328 **P** 01 01 33.2 +1.7
HLID IAmb IAmb 01 01 35.2
comp=Z,6.9nm,0.8s
MCMT **McKenzie Canyo** 78.31 330 P **P** 01 01 33.3 +0.6
TORD **Torodi Ar. Bea** 78.31 70 P **P** 01 01 33.3 +0.3
comp=Z,6.8nm,0.7s,baz=260,slow=4.5,SNR=75
TORD pP **pP** 01 01 55.9 +0.3
comp=Z,11nm,0.8s,baz=243,slow=7.5,SNR=22
comp=Z,6.8nm,0.7s
TORD **Torodi Ar. Bea** 78.31 70 IAmb IAmb 01 01 57.5
comp=Z,18nm,1.4s
ORV **Oroville** 79.00 322 **P** 01 01 37.4 +1.0
ORV IAmb IAmb 01 01 39.9
comp=Z,7.5nm,1.1s
PLID **Pearl Lake** 79.98 328 **P** 01 01 41.8 -0.1
PLID IAmb IAmb 01 01 44.9
comp=Z,7.2nm,0.8s
BMO **Blue Mountains** 80.45 328 **P** 01 01 44.1 0.0
PINE **Pine Mountain** 81.56 325 **P** 01 01 50.7 +0.5
PINE IAmb IAmb 01 01 53.8
comp=Z,14nm,1.1s
FFC **Flin Flon** 82.33 342 **P** 01 01 53.6 -0.1
MAW **Mawson** 83.00 163 P **P** 01 01 59.2 +2.0
comp=Z,19nm,0.9s,baz=101,slow=22,SNR=2.0
MAW pP **pP** 01 02 19.1 -0.9
comp=Z,29nm,0.9s,baz=258,slow=6.4,SNR=2.5
comp=Z,19nm,0.9s
C09A **Chrisman Ranch** 83.03 329 **P** 01 01 58.2 +0.6
BOSA **Boshof** 83.14 118 P **P** 01 01 59.5 +0.5
comp=Z,1.8nm,0.7s,baz=298,slow=4.1,SNR=3.8
BOSA pP **pP** 01 02 20.3 -1.5
comp=Z,3.0nm,0.8s,baz=278,slow=11,SNR=3.0
comp=Z,1.8nm,0.7s
BOSA **Boshof** 83.14 118 IAmb IAmb 01 02 15.6
comp=Z,11nm,1.4s

KSANE **Kasane** 87.23 108 P **P** 01 02 18.0 -1.5
YKAW1 **Yellowknife Wh** 92.42 341 **P** 01 02 43.3 +0.9
YKA **Yellowknife Ar** 92.47 341 P **P** 01 02 43.9 +1.2
comp=Z,2.0nm,0.7s,baz=141,slow=3.6,SNR=43
YKA pP **pP** 01 03 06.1 +0.5
comp=Z,0.3nm,0.7s,baz=137,slow=3.6,SNR=2.3
YKA sP **sP** 01 03 16.3 +1.6
comp=Z,0.8nm,0.8s,baz=141,slow=3.6,SNR=4.7
comp=Z,2.0nm,0.7s
YKAW3 **Yellowknife Wh** 92.52 341 **P** 01 02 42.8 -0.2
SLKM **Skilak Lake** 105.38 330 **Pdif** 01 03 41.8 +0.9
OJC **Ojcow** 106.85 42 **Pdif** 01 03 48.4 +0.8
H11S2 **WAKE ISLAND Hyl** 27.59 276 T T 03 28 40.1
baz=105,slow=75,SNR=86
H11S1 **WAKE ISLAND Hyl** 27.60 276 T T 03 28 46.2
baz=105,slow=75,SNR=41
H11S3 **WAKE ISLAND Hyl** 27.61 276 T T 03 28 41.3
baz=105,slow=75,SNR=46
H11N3 **WAKE ISLAND Hyl** 27.72 278 T T 03 28 54.3
baz=104,slow=75,SNR=61
H11N2 **WAKE ISLAND Hyl** 27.73 278 T T 03 28 53.7
baz=104,slow=75,SNR=59
H11N1 **WAKE ISLAND Hyl** 27.73 278 T T 03 28 58.7
baz=104,slow=75,SNR=45
ASAR **Alice Springs** 128.35 208 PKP **PKiKP** 01 08 40.2 +0.3
comp=Z,1.3nm,0.7s,baz=142,slow=2.3,SNR=12
WRA **Warramunga Arr** 131.41 210 PKP **PKiKP** 01 08 46.6 +0.5
comp=Z,0.8nm,0.6s,baz=156,slow=1.7,SNR=5.8
BVAR **Borovoye Array** 137.31 35 PKP **PKiKP** 01 08 56.6 -0.4
comp=Z,0.8nm,0.6s,baz=299,slow=2.9,SNR=3.0
KURK **Kurchatov** 142.85 34 **PKPdf** 01 09 03.6 -1.6
KURBB **Kurchatov Arra** 142.86 34 PKP **PKPdf** 01 09 03.6 -1.6
comp=Z,0.5nm,0.7s,baz=305,slow=3.0,SNR=5.5
ZAA0 **Zalesovo Array** 143.53 26 PKPdf **PKPdf** 01 09 06.3 +0.1
ZALV **Zalesovo Beam** 143.53 26 PKP **PKPdf** 01 09 05.6 -0.6
comp=Z,2.0nm,0.6s,baz=329,slow=3.2,SNR=8.1
ZALV pPKP **pPKPdf** 01 09 30.9 +0.7
comp=Z,1.7nm,0.6s,baz=282,slow=3.9,SNR=4.2
ZALV **Zalesovo Beam** 143.53 26 **PKPdf** 01 09 05.8 -0.5
AAK **Ala-Archa** 144.28 48 **PKPdf** 01 09 09.1 +0.9
NIL **Nilore** 145.64 64 **PKPab** 01 09 12.2 +0.7
KSH2 **Kashi** 146.22 53 PKPbc **PKPab** 01 09 14.3 +0.6
KSH2 pPKP pPKPab 01 09 38.3 +1.2
MAKZ **Makanchi** 146.95 37 **PKPbc** 01 09 13.9 -0.5
MKAR **Makanchi Array** 147.13 37 PKPbc **PKPbc** 01 09 14.5 -0.5
comp=Z,4.5nm,0.8s,baz=8.2,slow=1.7,SNR=32
MKAR pPKPbc **pPKPbc** 01 09 38.3 -0.4
comp=Z,2.9nm,0.6s,baz=313,slow=3.5,SNR=10
JCJ **Chichijima** 151.14 285 PKPbc **PKiKP** 01 09 27.6 +1.4
comp=Z,35nm,0.7s,baz=156,slow=2.8,SNR=2.1
WMQ **Urumqi** 151.97 37 ePKPbc **PKPdf** 01 09 21.1 +0.5
WMQ SKS **SKSdf** 01 16 17.0 -3.6
HILR **Hailar Array B** 152.56 347 PKPbc **PKiKP** 01 09 29.1 +0.6
comp=Z,3.0nm,0.6s,baz=48,slow=2.2,SNR=5.3
MJAR **Matsushiro Arr** 152.62 306 PKPbc **PKiKP** 01 09 30.0 +1.1
comp=Z,1.2nm,0.5s,baz=78,slow=1.1,SNR=2.7
MJAR PKPab **PKPab** 01 09 41.1 +1.5
comp=Z,0.4nm,0.3s,baz=145,slow=2.0,SNR=4.1
SONM **Songino Array** 155.02 7 PKP **PKPdf** 01 09 25.7 +0.8
comp=Z,0.4nm,0.7s,baz=318,slow=2.0,SNR=3.5
SONM PKPbc PKPbc 01 09 34.5
comp=Z,0.4nm,0.5s,baz=294,slow=1.2,SNR=3.6
SONM PKPab **PKPab** 01 09 49.5 0.0
comp=Z,0.7nm,1.0s,baz=337,slow=3.0,SNR=5.3
HHC **Hu-ho-hao-te** 162.21 358 *eP* **PKPdf** 01 09 30.5 -3.1
NJ2 **Nanjing** 168.41 323 *eP* **PKPdf** 01 09 40.3 +1.4
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
PZH **PanZhiHua** 171.25 65 PKP **PKPdf** 01 09 40.3 -0.6

IDC ***25*** *01:00:14.8±3.4,24.°55N×122.°28E,h89km±33km, mb3.6/12, mbtmp3.9/15,MS2.3/2, Error ellipse: s-maj=27.4km s-min=14.7km az=60.0*
NEIC ***25*** *01:00:14.1±1.0,24.°53N±0.°10×122.°25E±0.°08,h79km±6km, mb4.3/34, Error ellipse: s-maj=14.5km s-min=10.8km az=162.0*
JMA ***25*** *01:00:14.2±0.3,24.°N±1.°×122.°2E±0.°5,h76km±3km, MD3.9/18,MV4.0/18,TAIWAN REGION*
TAP ***25*** *01:00:14.9,24.°54N×122.°15E,h77km,ML4.8,C*
ISC 25 01:00:13.9±0.6,24.°52N±0.°02×122.°26E±0.°02,h79km±4km, n251,σ1911/413,mb4.2/30,14C-11D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EOS2	**EOS2**	**0.10**	**194**	*i* P		**Pn**	**01 00 26.0**	**+0.8**
EOS2				*i* S		**Sn**	**01 00 34.9**	**+1.5**
EOS3	**EOS3**	**0.24**	**167**	⇑*i* P		**Pn**	**01 00 26.5**	**+0.9**
EOS3				S		**Sn**	**01 00 35.2**	**+1.0**
ESAO	**Su ao**	**0.38**	**278**	P		**Pn**	**01 00 27.0**	**+0.4**
ESAO				S		**Sn**	**01 00 35.5**	**-0.5**
TWC	**Suao**	**0.38**	**283**	⇑*i* P		**Pn**	**01 00 26.5**	**-0.1**
TWC				*i* S		**Sn**	**01 00 34.8**	**-1.3**
EOS4	**EOS4**	**0.40**	**172**	P		**Pn**	**01 00 26.8**	**+0.4**
EOS4				*eS*		**Sn**	**01 00 35.7**	**+0.2**
EGS		**0.44**	**317**	⇓*i* P		**Pn**	**01 00 27.1**	**+0.1**
EGS				*i* S		**Sn**	**01 00 35.8**	**-1.0**
EWUT	**Wuta**	**0.44**	**260**	*i* P		**Pn**	**01 00 27.2**	**+0.1**
EWUT				*i* S		**Sn**	**01 00 36.8**	**-0.1**
ENA	**Nanau**	**0.48**	**259**	⇑*i* P		**Pn**	**01 00 27.9**	**+0.6**
ENA				*i* S		**Sn**	**01 00 37.8**	**+0.4**
NDS	**Dongshan**	**0.51**	**283**	*i* P		**Pn**	**01 00 28.4**	**+0.7**
NDS				S		**Sn**	**01 00 37.4**	**-0.4**
EAHA	**Aohua**	**0.51**	**248**	⇑*i* P		**Pn**	**01 00 27.8**	**+0.1**
EAHA				S		**Sn**	**01 00 38.0**	**+0.1**
NTC	**Toucheng**	**0.51**	**311**	*eP*		**Pn**	**01 00 27.9**	**+0.2**
NTC				*i* S		**Sn**	**01 00 37.5**	**-0.4**
EHP	**Heping Village**	**0.52**	**246**	P		**Pn**	**01 00 27.9**	**+0.2**
EHP				S		**Sn**	**01 00 38.3**	**+0.4**
ILA	**Ilan**	**0.53**	**298**	P		**Pn**	**01 00 28.2**	**+0.4**
ILA				S		**Sn**	**01 00 38.1**	**0.0**
TWB1	**Santiao Chiao**	**0.54**	**333**	⇓*i* P		**Pn**	**01 00 27.8**	**-0.1**
TWB1				S		**Sn**	**01 00 37.4**	**-0.9**
TWE	**Neicheng**	**0.57**	**290**	*i* P		**Pn**	**01 00 28.7**	**+0.4**
TWE				S		**Sn**	**01 00 38.8**	**-0.1**
TIPB	**Shuangxi**	**0.60**	**319**	⇓*i* P		**Pn**	**01 00 28.4**	**-0.1**
TIPB				S		**Sn**	**01 00 38.3**	**-1.0**
JYNG	**Yonagunijimaku**	**0.63**	**96**	*i* P		**Pn**	**01 00 29.3**	**+0.5**
JYNG				A		A	01 00 29.3	
	comp=N,13nm,1.0s,comp=E,11nm,0.4s							
JYNG				*eS*		**Sn**	**01 00 39.6**	**-0.2**
ENTT	**Nioudou**	**0.64**	**281**	⇑*i* P		**Pn**	**01 00 29.6**	**+0.6**
ENTT				S		**Sn**	**01 00 40.3**	**+0.2**
FUSB	**Fushanzhiwuyua**	**0.66**	**291**	⇓*i* P		**Pn**	**01 00 29.6**	**+0.5**
FUSB				*i* S		**Sn**	**01 00 40.0**	**-0.4**
LATG	**Datong**	**0.67**	**271**	⇑*i* P		**Pn**	**01 00 29.6**	**+0.3**
LATG				*i* S		**Sn**	**01 00 40.9**	**+0.1**
SXI1	**Grass Mountain**	**0.67**	**329**	⇓*i* P		**Pn**	**01 00 29.4**	**+0.1**
SXI1				*i* S		**Sn**	**01 00 40.0**	**-0.7**
ETL	**Fush Village**	**0.68**	**238**	P		**Pn**	**01 00 29.1**	**-0.3**
ETL				*i* S		**Sn**	**01 00 40.4**	**-0.4**
YOJ	**Yonaguni jima**	**0.69**	**95**			**Pn**	**01 00 29.8**	**+0.5**
YOJ					Sn	**Sn**	**01 00 40.7**	**-0.1**
YOJ	**Yonaguni jima**	**0.69**	**95**	P		**Pn**	**01 00 29.9**	**+0.5**
YOJ	**Yonaguni jima**	**0.69**	**95**	S		**Sn**	**01 00 40.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.69**	**95**	P		**Pn**	**01 00 29.8**	**+0.5**
YOJ				A		A	01 00 29.8	
	comp=N,8.0nm,1.5s,comp=E,8.0nm,0.5s							
YOJ				*eS*		**Sn**	**01 00 40.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.69**	**95**	*eP*		**Pn**	**01 00 29.9**	**+0.5**
YOJ				*eS*		**Sn**	**01 00 40.5**	**-0.3**
NACB	**Ninganchiao**	**0.70**	**240**			**Pn**	**01 00 28.9**	**-0.5**
NACB					Sn	**Sn**	**01 00 40.9**	**-0.1**
NACB	**Ninganchiao**	**0.70**	**240**	P		**Pn**	**01 00 29.2**	**-0.3**
NACB	**Ninganchiao**	**0.70**	**240**	⇑*i* P		**Pn**	**01 00 29.0**	**-0.5**
NACB				S		**Sn**	**01 00 40.7**	**-0.3**
NWF	**Wu-fen Shan**	**0.70**	**322**	⇓*i* P		**Pn**	**01 00 29.8**	**+0.2**
NWF				*i* S		**Sn**	**01 00 40.6**	**-0.6**
WFSB	**Wu-fen Shan**	**0.70**	**322**	⇓*i* P		**Pn**	**01 00 29.9**	**+0.4**
WFSB				*i* S		**Sn**	**01 00 40.6**	**-0.5**
NWLT	**Wulai**	**0.73**	**291**	*i* P		**Pn**	**01 00 30.5**	**+0.6**
NWLT				*i* S		**Sn**	**01 00 41.8**	**0.0**
TWD	**Chiawan**	**0.75**	**234**	*i* P		**Pn**	**01 00 29.7**	**-0.3**
TWD				*i* S		**Sn**	**01 00 41.4**	**-0.5**
TWA	**Mucha**	**0.77**	**307**	*i* P		**Pn**	**01 00 30.4**	**+0.2**
TWA				*i* S		**Sn**	**01 00 41.6**	**-0.7**
TNOU	**National Taiwa**	**0.77**	**325**	*i* P		**Pn**	**01 00 30.2**	**0.0**
TNOU				*i* S		**Sn**	**01 00 41.7**	**-0.6**
ETLH	**Xiulin Townshi**	**0.77**	**246**	⇑*i* P		**Pn**	**01 00 30.4**	**0.0**
ETLH				*i* S		**Sn**	**01 00 42.0**	**-0.7**
NHDH	**Xindian Distri**	**0.80**	**304**	*i* P		**Pn**	**01 00 30.9**	**+0.3**
NHDH				S		**Sn**	**01 00 42.3**	**-0.6**

NNSB **Datong** 0.80 264 ⇑*i* P **Pn** 01 00 30.9 +0.2
NNSB S **Sn** 01 00 43.2 -0.1
HWA **Hwalien** 0.81 228 *i* P **Pn** 01 00 30.8 +0.1
HWA *eS* **Sn** 01 00 43.2 +0.1
NNS **Nan Shan** 0.81 265 *i* P **Pn** 01 00 31.0 +0.2
NNS *eS* **Sn** 01 00 43.0 -0.5
NHY **Taipei** 0.81 310 P **Pn** 01 00 31.1 +0.4
NHY S **Sn** 01 00 42.9 -0.3
YHNB **Yeheng** 0.82 281 **Pn** 01 00 31.0 +0.1
YHNB Sn **Sn** 01 00 43.3 -0.2
YHNB **Yeheng** 0.82 281 P **Pn** 01 00 31.3 +0.4
YHNB **Yeheng** 0.82 281 P Pn 01 00 43.4 +13
YHNB **Yeheng** 0.82 281 ⇑*i* P **Pn** 01 00 31.5 +0.7
YHNB *i* S **Sn** 01 00 43.5 +0.1
NSK **Sanguang** 0.83 281 ⇑*i* P **Pn** 01 00 31.6 +0.6
NSK *i* S **Sn** 01 00 43.5 -0.4
TATO **Taipei** 0.83 303 **Pn** 01 00 31.1 +0.2
TATO Sn **Sn** 01 00 43.1 -0.5
TATO **Taipei** 0.83 303 P **Pn** 01 00 31.0 0.0
TATO **Taipei** 0.83 303 P Pn 01 00 43.3 +12
TAP **Taipei** 0.86 307 P **Pn** 01 00 31.3 +0.1
TAP *i* S **Sn** 01 00 43.7 -0.4
YM01 **YM08** 0.88 315 ⇓*i* P **Pn** 01 00 31.6 +0.1
YM01 S **Sn** 01 00 44.0 -0.8
TEYL **Yanliau Villag** 0.89 223 *i* P **Pn** 01 00 31.4 -0.1
TEYL S **Sn** 01 00 44.5 -0.2
ETM **Tongmen** 0.89 232 P **Pn** 01 00 31.5 -0.2
ETM *eS* **Sn** 01 00 44.1 -0.7
YM08 **YM08** 0.90 318 ⇓*i* P **Pn** 01 00 31.6 -0.2
YM08 *i* S **Sn** 01 00 43.7 -1.3
ZUZH **Zhuzihu** 0.91 315 *i* P **Pn** 01 00 31.9 0.0
ZUZH *i* S **Sn** 01 00 44.3 -1.0
LXIB **Xiulin Townshi** 0.92 237 ⇑*i* P **Pn** 01 00 31.8 -0.3
LXIB *i* S **Sn** 01 00 44.8 -0.8
ANP **Anpu** 0.94 315 P **Pn** 01 00 32.2 -0.1
ANP S **Sn** 01 00 44.9 -1.1
TWS1 **Kuangyinshan** 0.96 307 *i* P **Pn** 01 00 32.8 +0.5
TWS1 S **Sn** 01 00 46.1 -0.1
TWY **Chenhua** 0.96 322 P **Pn** 01 00 32.9 +0.4
TWY S **Sn** 01 00 46.1 -0.1
FUSS **Fushou** 0.96 254 *i* P **Pn** 01 00 33.3 +0.6
FUSS S **Sn** 01 00 46.8 0.0
SHUL **Shoufeng** 0.97 221 P **Pn** 01 00 32.5 0.0
SHUL S **Sn** 01 00 46.2 -0.2
NTST **Danshui** 0.98 311 *i* P **Pn** 01 00 33.0 +0.4
NTST *eS* **Sn** 01 00 46.6 0.0
WHF **Hehuan Shan** 0.98 248 *i* P **Pn** 01 00 33.3 +0.2
WHF *i* S **Sn** 01 00 47.1 -0.3
KSHI **Guanxi Townshi** 1.02 285 *eP* **Pn** 01 00 34.0 +0.9
KSHI *eS* **Sn** 01 00 48.3 +0.8
TWT **Tachien** 1.02 255 *i* P **Pn** 01 00 34.3 +1.0
TWT *i* S **Sn** 01 00 48.2 +0.3
ESL **Shilin** 1.03 227 *i* P **Pn** 01 00 32.9 -0.4
ESL S **Sn** 01 00 46.5 -1.3
TDCB **Techi** 1.04 255 *i* P **Pn** 01 00 34.3 +0.8
TDCB *i* S **Sn** 01 00 48.0 -0.1
TEGC **Jichi Village** 1.04 219 P **Pn** 01 00 33.4 0.0
TEGC S **Sn** 01 00 47.8 -0.1
NFF **Wufeng Townshi** 1.04 276 P **Pn** 01 00 34.3 +0.8
NFF *eS* **Sn** 01 00 48.8 +0.6
NCU **National Centr** 1.07 295 *eP* **Pn** 01 00 32.6 -1.2
NCU *eS* **Sn** 01 00 47.7 -0.9
NCUH **Zhongli** 1.07 295 *i* P **Pn** 01 00 34.7 +0.9
NCUH S **Sn** 01 00 49.3 +0.6
PCYT **Pengchaiyu** 1.12 351 ⇓*i* P **Pn** 01 00 35.1 +0.8
WARBT **Fenglin Townsh** 1.13 225 *i* P **Pn** 01 00 33.9 -0.6
WARBT S **Sn** 01 00 48.2 -1.7
EGFH **Guangfu** 1.14 222 P **Pn** 01 00 34.0 -0.6
EGFH S **Sn** 01 00 49.2 -0.8
LIOB **Emei** 1.14 277 *i* P **Pn** 01 00 35.4 +0.8
LIOB S **Sn** 01 00 50.2 0.0
OWD **Renai** 1.14 241 ⇑*i* P **Pn** 01 00 35.0 +0.2
OWD S **Sn** 01 00 49.5 -0.8
NSTT **Nanjuang** 1.15 276 *eP* **Pn** 01 00 35.6 +0.8
NSTT S **Sn** 01 00 50.9 +0.5
WUSB **Renai** 1.17 243 ⇑*i* P **Pn** 01 00 35.6 +0.6
WUSB *i* S **Sn** 01 00 51.1 +0.1
SBCB **Hsinchu** 1.19 283 P **Pn** 01 00 36.0 +0.7
SBCB *eS* **Sn** 01 00 51.7 +0.5
HSN **Hsinchu** 1.21 284 P **Pn** 01 00 35.5 +0.1
HSN *eS* **Sn** 01 00 51.2 -0.4
WHP **Taichung City** 1.22 259 *i* P **Pn** 01 00 37.4 +1.7
WHP *i* S **Sn** 01 00 53.2 +1.1
VWDT **VWDT** 1.27 233 *i* P **Pn** 01 00 36.9 +0.6
VWDT *i* S **Sn** 01 00 52.7 -0.4
HGSD **Ruisui** 1.28 217 P **Pn** 01 00 36.1 -0.2
HGSD S **Sn** 01 00 52.8 -0.4
WCS **Beigang Elemen** 1.31 250 *eP* **Pn** 01 00 38.1 +1.3
WCS *eS* **Sn** 01 00 55.0 +1.0
EHYH **Wanrong** 1.32 219 P **Pn** 01 00 36.3 -0.5
EHYH *i* S **Sn** 01 00 52.7 -1.5
EHY **Hungye** 1.32 220 *eP* **Pn** 01 00 36.3 -0.7
EHY S **Sn** 01 00 52.5 -1.8
NMLH **Miaoli** 1.34 271 *eP* **Pn** 01 00 38.1 +1.1
NMLH *eS* **Sn** 01 00 55.1 +0.6
IRIF **Iriomote-Funau** 1.35 98 P **Pn** 01 00 37.8 +0.5
IRIF A A 01 00 37.8
comp=N,4.0nm,1.2s,comp=E,6.0nm,0.5s
IRIF *eS* **Sn** 01 00 54.8 -0.1
TWQ1 **Liyutan** 1.36 263 P **Pn** 01 00 38.2 +0.8
TWQ1 *eS* **Sn** 01 00 56.0 +0.8
NSY **Sanyi** 1.37 266 P **Pn** 01 00 39.1 +1.6
NSY *eS* **Sn** 01 00 56.8 +1.5
SMLT **Sun Moon Lake** 1.39 243 *eP* **Pn** 01 00 39.0 +1.1
SSLB **Suanglung** 1.40 239 **Pn** 01 00 37.9 0.0
SSLB **Suanglung** 1.40 239 P **Pn** 01 00 38.2 +0.3
SSLB **Suanglung** 1.40 239 S **Sn** 01 00 57.3 +1.3
SSLB **Suanglung** 1.40 239 P **Pn** 01 00 38.4 +0.5
SSLB *eS* **Sn** 01 00 56.5 +0.6
ECBN **Changbin** 1.41 212 *i* P **Pn** 01 00 37.8 -0.2
ECBN S **Sn** 01 00 55.0 -1.1
TYC **Yuchr** 1.42 245 *i* P **Pn** 01 00 39.2 +1.0
YULB **Yu-li** 1.43 218 **Pn** 01 00 37.4 -0.9
YULB **Yu-li** 1.43 218 P **Pn** 01 00 37.3 -0.9
YULB **Yu-li** 1.43 218 P **Pn** 01 00 37.6 -0.7
YULB *eS* **Sn** 01 00 54.7 -1.9
EYUL **Yuli** 1.45 217 P **Pn** 01 00 38.5 0.0
EYUL *eS* **Sn** 01 00 56.2 -1.0
TWF1 **Yuli** 1.46 217 *i* P **Pn** 01 00 38.1 -0.6
TWF1 *eS* **Sn** 01 00 55.1 -2.3
HATJ **Hateruma jima** 1.48 108 *eP* **Pn** 01 00 40.1 +1.2
HATJ *eS* **Sn** 01 00 59.0 +1.1
WDJ **Dajia District** 1.48 264 *eP* **Pn** 01 00 40.2 +1.3
WDJ *eS* **Sn** 01 00 59.3 +1.3
TCU **Taichung** 1.49 256 P **Pn** 01 00 40.1 +1.1
TCU *eS* **Sn** 01 00 59.2 +1.1
WHYT **Xinyi Township** 1.52 238 P **Pn** 01 00 41.1 +1.5
WHYT S **Sn** 01 00 59.8 +0.9
CHKH **Chenggong** 1.54 211 *eP* **Pn** 01 00 39.7 0.0
CHKH *eS* **Sn** 01 00 57.4 -1.9
WNT **Mingjian** 1.57 246 *eP* **Pn** 01 00 41.7 +1.6
WNT S **Sn** 01 01 02.0 +2.0
FULB **Fuli** 1.58 214 P **Pn** 01 00 40.2 -0.1
FULB *eS* **Sn** 01 00 59.8 -0.5
WCHH **Zhanghua** 1.61 255 P **Pn** 01 00 41.4 +0.7
WCHH S **Sn** 01 01 00.9 +0.1
JKRS **Kuro-shima** 1.62 100 P **Pn** 01 00 41.8 +1.0
JKRS A A 01 00 41.8
comp=N,6.0nm,0.8s,comp=E,8.0nm,1.4s
JKRS *eS* **Sn** 01 01 01.7 +0.6
WCH1 **Changhua City** 1.62 254 P **Pn** 01 00 41.8 +1.0
WCH1 *eS

WDLH				eS		Sn	01 01 06.6	+1.9
WRL	**Guolierlin Hig**	**1.82**	**251**	*i* P		Pn	01 00 44.3	+0.8
WRL				eS		Sn	01 01 05.9	0.0
RLNB	**Erlin**	**1.84**	**251**	P		Pn	01 00 44.3	+0.7
RLNB				S		Sn	01 01 07.2	+0.8
WCKO	**Fanlu**	**1.86**	**235**	P		Pn	01 00 45.7	+1.8
WCKO				S		Sn	01 01 08.9	+2.2
JISG	**Ishigakijimahi**	**1.87**	**88**	eP		Pn	01 00 44.6	+0.6
JISG				eS		Sn	01 01 07.3	+0.4
WTK	**Tuku**	**1.90**	**245**	P		Pn	01 00 45.5	+1.1
WTK				eS		Sn	01 01 09.2	+1.6
CHN2	**Minshiung**	**1.91**	**239**	eP		Pn	01 00 47.0	+2.5
CHN2				eS		Sn	01 01 11.4	+3.6
STYH	**Taoyuan**	**1.91**	**226**	P		Pn	01 00 46.0	+1.4
STYH				eS		Sn	01 01 08.7	+0.8
LONT	**Longtian**	**1.91**	**213**	P		Pn	01 00 44.3	-0.3
LONT				eS		Sn	01 01 06.7	-1.3
WTCT	**Ta-ch'eng**	**1.92**	**251**	eP		Pn	01 00 45.1	+0.4
WTCT				eS		Sn	01 01 08.8	+0.6
TPUB	**Ta-pu**	**1.92**	**231**			Pn	01 00 45.2	+0.4
TPUB	**Ta-pu**	**1.92**	**231**	P		Pn	01 00 46.3	+1.5
TPUB	**Ta-pu**	**1.92**	**231**	P		Pn	01 00 46.2	+1.4
TPUB				S		Sn	01 01 09.5	+1.2
CHY	**Chiayi**	**1.96**	**239**	P		Pn	01 00 46.7	+1.4
CHY				S		Sn	01 01 11.1	+1.9
WTP	**Ta-pu**	**1.97**	**230**	eP		Pn	01 00 46.7	+1.3
WTP				eS		Sn	01 01 11.3	+1.9
LDUT	**Ludao**	**1.98**	**202**	P		Pn	01 00 44.8	-0.7
LDUT				S		Sn	01 01 07.2	-2.2
TWGBT	**Beinan**	**2.01**	**213**	P		Pn	01 00 45.6	-0.3
TWGBT	**Beinan**	**2.01**	**213**	P		Pn	01 00 45.0	-0.9
TWGBT				*i* S		Sn	01 01 08.2	-2.1
TWG	**Pinlang**	**2.01**	**213**			Pn	01 00 44.7	+0.6
TWG	**Pinlang**	**2.01**	**213**	eP		Pn	01 00 45.1	-0.9
TWG				eS		Sn	01 01 08.2	-2.2
TTN	**Taitung**	**2.03**	**210**	eP		Pn	01 00 46.9	+0.7
TTN				*i* S		Sn	01 01 10.8	0.0
TWK	**Hsinying**	**2.04**	**233**	*i* P		Pn	01 00 47.7	+1.3
TWK				S		Sn	01 01 12.9	+1.6
CHN1	**Nanshi**	**2.07**	**230**	eP		Pn	01 00 48.5	+1.7
CHN1				S		Sn	01 01 13.3	+1.5
SGST	**Jiashian**	**2.10**	**227**	*i* P		Pn	01 00 47.7	+0.6
SGST				S		Sn	01 01 14.2	+1.7
WSL	**Shuilin Townsh**	**2.11**	**242**	P		Pn	01 00 48.5	+1.3
WSL				S		Sn	01 01 14.1	+1.5
SLGT	**Liugui**	**2.12**	**225**	eP		Pn	01 00 49.5	+2.1
SLGT				eS		Sn	01 01 14.2	+1.3
ICHU	**Yijhu**	**2.15**	**238**	P		Pn	01 00 49.5	+1.7
CHN8	**Yiju**	**2.21**	**238**	eP		Pn	01 00 49.9	+1.4
CHN8				eS		Sn	01 01 17.6	+2.6
JTJ	**Tarama**	**2.23**	**86**	eP		Pn	01 00 48.6	-0.2
JTJ				eS		Sn	01 01 15.9	+0.5
CHN3	**Shinhua**	**2.25**	**231**	eP		Pn	01 00 51.8	+2.7
ECL	**Taimali**	**2.26**	**212**	eP		Pn	01 00 48.7	-0.5
ECL				eS		Sn	01 01 14.0	-2.2
SSHA	**Shanhua**	**2.27**	**233**	eP		Pn	01 00 51.8	+2.4
SSHA				eS		Sn	01 01 18.5	+2.0
SSD	**Sandimen**	**2.31**	**221**	eP		Pn	01 00 51.7	+1.8
SSD				S		Sn	01 01 19.3	+1.8
SCLT	**Jiali**	**2.32**	**235**	eP		Pn	01 00 50.4	+0.4
SCLT				eS		Sn	01 01 20.1	+2.5
TSMG	**Majia**	**2.34**	**220**	P		Pn	01 00 52.4	+2.1
TSMG				S		Sn	01 01 19.9	+1.8
TWM1	**Shoushan**	**2.38**	**225**	eP		Pn	01 00 54.3	+3.4
TWM1				eS		Sn	01 01 24.2	+4.9
SGLT	**Jiouru**	**2.41**	**223**	eP		Pn	01 00 52.5	+1.2
TSCK	**Chigu Township**	**2.41**	**236**	P		Pn	01 00 52.4	+1.1
TSCK				S		Sn	01 01 21.3	+1.3
MASBT	**Mashibuluo**	**2.42**	**218**	eP		Pn	01 00 52.6	+1.3
MASBT				S		Sn	01 01 20.4	+0.4
TAW	**Tawu**	**2.49**	**210**	P		Pn	01 00 52.2	-0.1
TAW				eS		Sn	01 01 19.9	-1.9
EAST	**Anshuo**	**2.49**	**212**	eP		Pn	01 00 52.4	0.0
EAST				S		Sn	01 01 20.4	-1.5
SSPT	**Xinbi**	**2.55**	**218**	eP		Pn	01 00 56.2	+3.1
SSPT				eS		Sn	01 01 27.2	+3.9
LAY	**Lan-yu**	**2.55**	**195**	eP		Pn	01 00 52.3	-0.9
LAY				eS		Sn	01 01 20.4	-3.0
LYUB	**Lan-yu**	**2.58**	**194**	eP		Pn	01 00 52.2	-1.3
LYUB				eS		Sn	01 01 20.0	-4.0
VWUC	**VWUC**	**2.60**	**281**	⇓eP		Pn	01 00 53.8	+0.1
VWUC				eS		Sn	01 01 22.0	-2.4
SCZT	**Fangliau**	**2.62**	**215**	eP		Pn	01 00 55.4	+1.4
SCZT				eS		Sn	01 01 26.0	+1.2
WSSB	**Gushan**	**2.62**	**225**	P		Pn	01 00 56.2	+2.1
WSSB				eS		Sn	01 01 28.5	+3.5
PNG	**Penghu**	**2.65**	**250**	eP		Pn	01 00 54.2	-0.2
PNG				S		Sn	01 01 23.6	-2.1
MATB	**Ma-tsu**	**2.65**	**308**	eP		Pn	01 00 54.4	-0.1
MATB				eS		Sn	01 01 24.6	-1.1
PHUB	**P'eng-hu**	**2.65**	**248**	eP		Pn	01 00 54.0	-0.5
PHUB				eS		Sn	01 01 24.2	-1.5
SLIU	**Shizi**	**2.66**	**211**	P		Pn	01 00 55.2	+0.5
SLIU				eS		Sn	01 01 24.7	-1.2
WDGT	**Dungji**	**2.69**	**243**	eP		Pn	01 00 54.6	-0.4
WDGT				S		Sn	01 01 26.0	-0.6
JIKM	**Ikemajima**	**2.75**	**81**	eS		Sn	01 01 28.8	+0.8
JMJ2	**Miyako jima3**	**2.80**	**85**	eP		Pn	01 00 57.8	+1.3
JMJ2				eS		Sn	01 01 30.1	+0.8
SMST	**Manzhou Townsh**	**2.81**	**208**	P		Pn	01 00 56.7	+0.1
SMST				S		Sn	01 01 28.4	-1.2
HEN	**Hengchun**	**2.87**	**209**	eP		Pn	01 00 59.2	+1.8
HEN				eS		Sn	01 01 30.8	-0.1
JOGS	**Gusukube**	**2.87**	**85**	eS		Sn	01 01 31.6	+0.5
TSEB	**Hengchuen, Pin**	**2.89**	**206**	eP		Pn	01 00 59.0	+1.2
TSEB				eS		Sn	01 01 31.7	+0.2
TWK1	**Hengchun**	**2.89**	**208**	P		Pn	01 00 58.7	+0.9
TWK1				eS		Sn	01 01 31.1	-0.5
TWKBT	**Hengchun**	**2.89**	**208**	P		Pn	01 00 58.3	+0.5
TWKBT				S		Sn	01 01 30.8	-0.7
PTMZ	**Houxiangcun**	**2.90**	**281**	eP		Pn	01 00 57.9	0.0
PTMZ				eS		Sn	01 01 29.3	-2.4
VCHM	**Qimei**	**2.90**	**244**	P		Pn	01 00 57.6	-0.3
VCHM				S		Sn	01 01 30.1	-1.7
LYJJ	**Jianjiangzhen**	**3.03**	**312**	eP		Pn	01 00 59.6	0.0
XPSS	**Dashiqiu**	**3.04**	**323**	eP		Pn	01 00 59.4	-0.4
MHZQ	**Yeshan**	**3.32**	**299**	eP		Pn	01 01 03.6	+0.1
KNM	**Kinmen**	**3.49**	**269**	eP		Pn	01 01 07.4	+1.6
KNMB	**Chin-men Tao**	**3.53**	**270**			Pn	01 01 05.6	-0.7
KNMB	**Chin-men Tao**	**3.53**	**270**	P		Pn	01 01 06.2	-0.2
AXDP	**Jialang**	**3.92**	**276**	eP		Pn	01 01 12.1	+0.4
ZPLA	**Ao Xicun**	**4.16**	**263**	eP		Pn	01 01 14.8	-0.1
DSXP	**Dongshan**	**4.49**	**261**	eP		Pn	01 01 19.5	0.0
DSXP				*i* S		Sn	01 02 07.5	-2.9
SXFK	**Yanhouchang**	**4.57**	**295**	eP		Pn	01 01 20.3	-0.3
JOW	**Kunigami**	**5.90**	**66**	P		Pn	01 01 38.1	-0.5
	comp=E,34nm,0.3s,baz=175,slow=11,SNR=57							
JOW				S		Sn	01 02 42.3	-2.6
	comp=E,6.3nm,0.4s,baz=141,slow=24,SNR=1.1							
KSRS	**Korea Array**	**13.77**	**19**	P		Pn	01 03 27.1	+1.6
	comp=E,2.4nm,0.8s,baz=195,slow=11,SNR=9.2							
KSRS				LR		LR	01 08 28.7	
	comp=E,14nm,19.9s,baz=50,slow=36							
LZDM	**Lanzhou Array**	**19.64**	**310**	P		P	01 04 36.4	-0.2
	comp=E,0.9nm,0.4s,baz=125,slow=9.0,SNR=4.5							
CMAR	**Chiang Mai Arr**	**22.50**	**259**	LR		LR	01 13 28.0	
	comp=E,8.8nm,21.2s,baz=35,slow=35							
HILR	**Hailar Array B**	**25.07**	**356**	P		P	01 05 30.8	0.0
	comp=E,1.0nm,0.5s,baz=162,slow=9.8,SNR=2.0							
	comp=E,1.0nm,0.5s							
ULN	**Ulaanbaatar**	**26.23**	**336**	P		P	01 05 42.1	+0.6
ULN				IAmb		IAmb	01 05 42.8	
	comp=Z,4.0nm,0.6s							
SONM	**Songino Array**	**26.45**	**336**	P		P	01 05 44.0	+0.5
	comp=Z,3.5nm,0.5s,baz=153,slow=10,SNR=34							
	comp=Z,3.5nm,0.5s							
SONM	**Songino Array**	**26.45**	**336**	P		P	01 05 43.6	+0.1
MKAR	**Makanchi Array**	**38.78**	**315**	P		P	01 07 31.4	+0.7
	comp=Z,0.7nm,0.3s,baz=100,slow=8.2,SNR=39							
	comp=Z,0.7nm,0.3s							
MKAR	**Makanchi Array**	**38.78**	**315**	P		P	01 07 30.8	0.0
MAKZ	**Makanchi**	**38.99**	**315**	P		P	01 07 33.2	+0.7
MAKZ				IAmb		IAmb	01 07 33.5	
	comp=Z,1.4nm,0.6s							
ZALV	**Zalesovo Beam**	**40.50**	**326**	P		P	01 07 44.3	-0.6
	comp=Z,1.5nm,0.5s,baz=117,slow=8.2,SNR=9.1							
	comp=Z,1.5nm,0.5s							
ZALV	**Zalesovo Beam**	**40.50**	**326**	P		P	01 07 44.4	-0.4
KDJ	**Kajisay**	**41.04**	**307**	P		P	01 07 48.6	-1.1
BOOM	**Boomskoye usch**	**42.01**	**307**	P		P	01 07 55.1	-2.5
KURK	**Kurchatov**	**42.47**	**319**	P		P	01 08 00.9	-0.1
KURBB	**Kurchatov Arra**	**42.49**	**319**	P		P	01 08 01.0	-0.1
	comp=Z,0.6nm,0.7s,baz=121,slow=7.7,SNR=8.1							
	comp=Z,0.6nm,0.7s							
WB0	**Warramunga Arr**	**45.58**	**164**	P		P	01 08 26.0	-0.1
WRA	**Warramunga Arr**	**45.73**	**164**	P		P	01 08 27.6	+0.3
	comp=Z,3.0nm,0.6s,baz=346,slow=8.5,SNR=11							
	comp=Z,3.0nm,0.6s							
WRA	**Warramunga Arr**	**45.73**	**164**	P		P	01 08 27.2	-0.2
WR8	**Warramunga Arr**	**45.79**	**164**	P		P	01 08 27.8	0.0
KKAR	**Karatay Array**	**46.05**	**307**	P		P	01 08 28.9	-0.9
BVAR	**Borovoye Array**	**48.04**	**320**	P		P	01 08 44.1	-1.0
	comp=Z,0.8nm,0.4s,baz=108,slow=9.3,SNR=5.9							
	comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**49.22**	**166**	P		P	01 08 54.4	+0.1
	comp=Z,0.4nm,0.6s,baz=344,slow=7.2,SNR=5.5							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**49.22**	**166**	P		P	01 08 53.5	-0.8
AB31	**Akbulak array**	**53.91**	**314**	P		P	01 09 29.4	+0.4
AB31				IAmb		IAmb	01 09 30.1	
	comp=Z,1.9nm,0.5s							
ABKAR	**Akbulak array**	**53.91**	**314**	P		P	01 09 29.0	-0.1
L14K	**Kuka Creek**	**61.65**	**32**	P		P	01 10 23.5	+0.4
K15K	**Wolf Creek Mou**	**62.20**	**31**	P		P	01 10 26.7	-0.1
C18K	**Utukok River**	**62.51**	**24**	P		P	01 10 28.6	-0.2
E18K	**Tukpahlearik C**	**62.68**	**25**	P		P	01 10 29.5	-0.4
E18K				IAmb		IAmb	01 10 39.0	
	comp=Z,4.2nm,1.4s							
N15K	**Kwethluk River**	**62.95**	**33**	P		P	01 10 32.2	+0.4
C19K	**Lookout Ridge**	**63.11**	**23**	P		P	01 10 32.9	+0.2
C19K				IAmb		IAmb	01 10 34.5	
	comp=Z,3.7nm,1.3s							
O15K	**Ungalikthiuk R**	**63.13**	**34**	P		P	01 10 33.4	+0.4
G18K	**Tagagawik**	**63.44**	**27**	P		P	01 10 34.9	-0.1
K17K	**Iditarod**	**63.69**	**30**	P		P	01 10 37.2	+0.5
K17K				IAmb		IAmb	01 11 09.4	
	comp=Z,9.6nm,1.4s							
B20K	**Meade River**	**63.97**	**22**	P		P	01 10 38.5	+0.2
B20K				IAmb		IAmb	01 10 42.9	
	comp=Z,5.8nm,1.3s							
B20K				PcP		PcP	01 11 13.4	+0.3
E19K	**Redstone River**	**63.98**	**25**	P		P	01 10 38.5	0.0
E19K				PcP		PcP	01 11 13.3	0.0
E19K				IAmb		IAmb	01 11 15.1	
	comp=Z,1.7nm,0.8s							
D20K	**Etivluk River**	**64.18**	**24**	P		P	01 10 40.1	+0.3
D20K				IAmb		IAmb	01 10 41.6	
	comp=Z,7.9nm,1.4s							
D20K				PcP		PcP	01 11 14.3	+0.1
J19K	**Poorman**	**64.82**	**29**	P		P	01 10 44.5	+0.5
J19K				IAmb		IAmb	01 10 45.1	
	comp=Z,5.3nm,1.4s							
B21K	**Ikpikpuk River**	**64.87**	**23**	P		P	01 10 44.4	+0.2
B21K				IAmb		IAmb	01 10 45.7	
	comp=Z,2.9nm,1.0s							
B22K	**Teshekpuk Lake**	**65.24**	**22**	P		P	01 10 46.7	+0.1
B22K				IAmb		IAmb	01 10 48.3	
	comp=Z,2.4nm,0.8s							
B22K				PcP		PcP	01 11 18.6	+0.2
F21K	**Alatna River**	**65.44**	**25**	P		P	01 10 49.1	+1.1
F21K				IAmb		IAmb	01 11 23.9	
	comp=Z,5.7nm,1.4s							
G21K	**Allakaket**	**65.49**	**26**	P		P	01 10 48.4	+0.1
G21K				IAmb		IAmb	01 11 20.6	
	comp=Z,5.4nm,1.4s							
D22K	**Ayikyak River**	**65.60**	**23**	P		P	01 10 49.3	+0.3
D22K				IAmb		IAmb	01 10 54.6	
	comp=Z,2.5nm,1.1s							
H21K	**Melozitna Rive**	**65.86**	**27**	P		P	01 10 51.2	+0.4
H21K				IAmb		IAmb	01 11 17.8	
	comp=Z,5.5nm,1.4s							
C23K	**Itkillik River**	**66.24**	**22**	P		P	01 10 54.0	+0.9
D23K	**Nanushuk River**	**66.31**	**23**	P		P	01 10 54.1	+0.6
D23K				IAmb		IAmb	01 11 21.1	
	comp=Z,8.3nm,1.5s							
H22K	**Ishtalitna Cre**	**66.42**	**27**	P		P	01 10 55.1	+0.8
H22K				IAmb		IAmb	01 10 56.0	
	comp=Z,7.8nm,1.4s							
PPLA	**Purkeypile**	**66.47**	**30**	P		P	01 10 54.5	-0.3
KARS	**Kars**	**66.56**	**305**	P		P	01 10 56.4	+0.5
ILAR	**Eielson Array**	**68.47**	**27**	P		P	01 11 07.4	+0.2
	comp=Z,0.2nm,0.5s,baz=290,slow=8.2,SNR=4.6							
	comp=Z,0.2nm,0.5s							
ILAR	**Eielson Array**	**68.47**	**27**	P		P	01 11 05.9	-1.3
FINES	**FINESS Array B**	**71.65**	**330**	P		P	01 11 25.1	-1.6
	comp=Z,3.1nm,1.0s,baz=64,slow=4.8,SNR=4.6							
	comp=Z,3.1nm,1.0s							
FINES	**FINESS Array B**	**71.65**	**330**	P		P	01 11 26.0	-0.7
HFS	**Hagfors**	**77.75**	**331**	P		P	01 12 01.7	-0.3
	comp=Z,2.0nm,1.0s,baz=72,slow=4.7,SNR=1.5							
	comp=Z,2.0nm,1.0s							
YKA	**Yellowknife Ar**	**82.28**	**23**	P		P	01 12 26.0	-0.4
	comp=Z,0.3nm,0.5s,baz=311,slow=5.5,SNR=7.6							
	comp=Z,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**82.28**	**23**	P		P	01 12 25.9	-0.4

*IDC **25** 01:14:21.0±6.7, 3°.26N×84°.39W, h0km, mb3.5/4, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=134.2km s-min=95.0km az=117.0*

*UCR **25** 01:15:29.0±0.3, 10°.82N×87°.05W, h14km±8km, MW4.2, Presumed earthquake*

*CATAC **25** 01:15:30.0±0.3, 11°.N±2°.×8°.7W±°, h12km, M3.8/30, MLv3.8/30, Error ellipse: s-maj=4.7km s-min=2.9km az=40.4, confirmed*

*NEIC **25** 01:15:31.7±1.4, 11°.06N±0°.06×86°.87W±0°.07, h10km±1km, mb4.4/29, Error ellipse: s-maj=12.0km s-min=8.1km az=237.0*

ISC 25 01:15:32.6±1.7, 10°.97N±0°.05×86°.91W±0°.05, h26km±11km, n94, σ0.94/118, mb4.3/18, 4C-15D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NADN	**Granada**	**1.16**	**48**	P	**Pn**	**01 15 52.7**	**-0.4**
NANN	**Nandasmo**	**1.23**	**39**	P	**Pb**	**01 15 55.6**	**+0.3**
NANN				S	**Sn**	**01 16 11.3**	**+1.3**
COPN	**Copaltepe**	**1.24**	**15**	⇑P	**Pn**	**01 15 54.0**	**-0.3**
COPN	**Copaltepe**	**1.24**	**15**	*e*P	**Pn**	**01 15 54.0**	**-0.3**
MASN	**Masaya**	**1.25**	**36**	P	**Pb**	**01 15 54.9**	**-0.7**
MASN				S	**Sb**	**01 16 13.2**	**+1.8**
MAS3	**Al N del Volca**	**1.27**	**34**	⇓P	**Pn**	**01 15 54.6**	**-0.1**
MAS3				S	**Sb**	**01 16 13.6**	**+1.7**
SAPS	**Ciudad Sandino**	**1.29**	**23**	⇑P	**Pn**	**01 15 55.0**	**+0.1**
SAPS				S	**Sb**	**01 16 14.5**	**+2.2**
UNAN	**Cigeo UNAN**	**1.29**	**29**	⇓P	**Pb**	**01 15 55.5**	**-0.9**
UNAN				S	**Sb**	**01 16 14.7**	**+2.1**
MGAN	**Managua**	**1.34**	**29**	P	**Pn**	**01 15 55.5**	**0.0**
MGAN				Sn	**Sn**	**01 16 11.8**	**-0.7**
MGAN	**Managua**	**1.34**	**29**	*e*P	**Pn**	**01 15 55.7**	**+0.1**
AMTN	**Mateare**	**1.34**	**20**	S	**Sb**	**01 16 14.6**	**+0.8**
APQ2	**Apoyeque**	**1.35**	**25**	⇓P	**Pn**	**01 15 55.1**	**-0.6**
APQ2				S	**Sb**	**01 16 14.6**	**+0.6**
MORN	**Al O del Volca**	**1.36**	**65**	P	**Pn**	**01 15 54.9**	**-1.1**
MORN				S	**Sb**	**01 16 13.9**	**-0.6**
CARN	**Rivas**	**1.38**	**81**	⇓P	**Pn**	**01 15 56.0**	**-0.2**
CARN				S	**Sn**	**01 16 13.8**	**+0.2**
CARN	**Rivas**	**1.38**	**81**	*e*P	**Pn**	**01 15 56.0**	**-0.2**
CONN	**Concepcion**	**1.39**	**65**	P	**Pn**	**01 15 54.5**	**-1.9**
APQ3	**Volcan Apoyequ**	**1.40**	**22**	P	**Pn**	**01 15 56.6**	**+0.2**
APQ3				S	**Sb**	**01 16 17.1**	**+1.6**
LEVN	**Ruinas Leon Vi**	**1.45**	**11**	⇓P	**Pn**	**01 15 57.3**	**+0.1**
LEVN				S	**Sb**	**01 16 18.8**	**+1.8**
LAPC	**Finca la Perla**	**1.47**	**98**	*e*P	**Pn**	**01 15 56.5**	**-0.9**
MOMN	**Momotombo**	**1.47**	**14**	P	**Pn**	**01 15 57.5**	**0.0**
MOMN				S	**Sb**	**01 16 18.3**	**+0.6**
MACN	**El Madrono**	**1.50**	**9**	⇑P	**Pn**	**01 15 57.9**	**0.0**
MACN				S	**Sb**	**01 16 19.4**	**+0.9**
MOM2	**El Cardon**	**1.51**	**16**	⇑P	**Pn**	**01 15 58.1**	**+0.1**
MOM2				S	**Sb**	**01 16 18.5**	**-0.3**
CNGA	**Al SSO del Vol**	**1.53**	**8**	⇓P	**Pn**	**01 15 58.4**	**+0.1**
CNGN	**Cerro Negro**	**1.53**	**8**	Pn	**Pn**	**01 15 58.4**	**0.0**
CNGN				Sn	**Sn**	**01 16 15.8**	**-1.6**
CNGN	**Cerro Negro**	**1.53**	**8**	⇓P	**Pn**	**01 15 58.2**	**-0.1**
CNGN				S	**Sb**	**01 16 20.4**	**+0.9**
CNGN	**Cerro Negro**	**1.53**	**8**	*e*P	**Pn**	**01 15 58.2**	**-0.1**
JUD3	**Juan Diaz 3**	**1.57**	**121**	*e*P	**Pn**	**01 15 56.9**	**-1.9**
TEL3	**Telica 3**	**1.59**	**2**	⇓P	**Pn**	**01 15 59.3**	**+0.1**
ILCN	**San Idelfonso**	**1.61**	**7**	P	**Pn**	**01 15 59.1**	**-0.2**
ILCN				S	**Sb**	**01 16 21.2**	**-0.4**
HERN	**Volcan Telica**	**1.63**	**3**	Pn	**Pn**	**01 15 59.5**	**-0.2**
HERN				Sn	**Sn**	**01 16 18.9**	**-0.9**
HERN	**Volcan Telica**	**1.63**	**3**	P	**Pn**	**01 15 59.7**	**0.0**
HERN				S	**Sb**	**01 16 21.6**	**-0.7**
POLN	**Al Sur del Vol**	**1.67**	**3**	P	**Pb**	**01 16 01.2**	**-1.5**
POLN				S	**Sb**	**01 16 24.3**	**+1.0**
PKGN	**Cerro Pekin**	**1.69**	**358**	P	**Pn**	**01 16 00.8**	**+0.3**
PKGN				S	**Sb**	**01 16 24.4**	**+0.6**
MESS	**Mesas**	**1.70**	**98**	*e*P	**Pn**	**01 16 00.1**	**-0.6**
CLARA	**Aguas Claras**	**1.71**	**96**	*e*P	**Pn**	**01 16 00.8**	**0.0**
HORNC	**Hornillas**	**1.72**	**98**	*e*P	**Pn**	**01 16 00.2**	**-0.8**
CRIN	**San Cristobal**	**1.72**	**355**	S	**Sb**	**01 16 24.2**	**-0.7**
VMAR	**Armenia, Volca**	**1.77**	**95**	*e*P	**Pn**	**01 16 01.8**	**+0.2**
TENO	**El Achiote**	**1.92**	**98**	*e*P	**Pn**	**01 16 02.3**	**-0.4**
JTS	**Las Juntas de**	**2.04**	**109**	Pn	**Pn**	**01 16 05.2**	**-0.1**
	2.5nm,0.3s,baz=309,slow=20,SNR=7.1						
	5.0nm,0.3s						
JTS	**Las Juntas de**	**2.04**	**109**		**Pn**	**01 16 05.3**	**-0.1**
JTS	**Las Juntas de**	**2.04**	**109**	P	**Pn**	**01 16 05.4**	**+0.1**
JTS				S	**Sn**	**01 16 30.3**	**+0.4**
CSGN	**Cosiguina Volc**	**2.09**	**342**	⇓P	**Pn**	**01 16 06.6**	**+0.5**
CSGN				S	**Sn**	**01 16 32.8**	**+1.6**
LIMN	**Finca el Limon**	**2.14**	**14**	⇓P	**Pn**	**01 16 06.9**	**+0.1**
MATN	**Matagalpa**	**2.17**	**26**	P	**Pn**	**01 16 06.2**	**-1.0**
CNCH	**Conchagua**	**2.46**	**339**	⇓P	**Pn**	**01 16 11.5**	**+0.3**
CNCH				S	**Sn**	**01 16 42.0**	**+1.5**
COVE	**Coope Vega, Sa**	**2.48**	**96**	P	**Pn**	**01 16 09.6**	**-1.7**
LCND	**La Caada**	**2.51**	**338**	⇓P	**Pn**	**01 16 12.1**	**+0.4**
RCON	**San Juan de Ri**	**2.60**	**16**	P	**Pn**	**01 16 13.6**	**+0.4**
RCPN	**Sur Rio San Ju**	**2.66**	**17**	⇓P	**Pn**	**01 16 14.8**	**+0.8**
PACA	**Pacayal**	**2.84**	**331**	⇓P	**Pn**	**01 16 16.5**	**+0.1**
PACA				S	**Sn**	**01 16 49.5**	**-0.4**
HDC	**Heredia**	**2.92**	**109**	Pn	**Pn**	**01 16 18.0**	**+0.6**
YUSH	**Yuscaran**	**2.96**	**1**	⇓P	**Pn**	**01 16 19.3**	**+1.2**
TGUH	**Tegucigalpa,Un**	**3.09**	**353**	Pn	**Pn**	**01 16 20.2**	**+0.4**
SIUN	**Universidad Ur**	**3.44**	**37**	Pn	**Pn**	**01 16 24.4**	**-0.1**
NUBE	**Las Nubes**	**4.04**	**316**	P	**Pn**	**01 16 33.0**	**+0.1**
MTO3	**Montecristo**	**4.16**	**325**	Pn	**Pn**	**01 16 34.8**	**+0.1**
PIRO	**Carate, Puerto**	**4.35**	**126**	Pn	**Pn**	**01 16 37.9**	**+0.9**
BRU2	**Volcan**	**4.69**	**117**	Pn	**Pn**	**01 16 43.3**	**+1.5**
GOGA	**Godfrey**	**22.56**	**8**	P	**P**	**01 20 30.9**	**+0.1**
GOGA				IAmb	IAmb	01 20 31.3	
	comp=Z,18nm,1.4s						
Y49A	**Blount Mountai**	**22.78**	**1**	P	**P**	**01 20 33.1**	**-0.2**
Z41A	**Richland Creek**	**22.83**	**347**	P	**P**	**01 20 34.0**	**+0.2**
Z41A				IAmb	IAmb	01 21 00.9	
	comp=Z,8.0nm,0.8s						
JSC	**Jenkinsville**	**23.77**	**12**	P	**P**	**01 20 43.2**	**+0.1**
JSC				IAmb	IAmb	01 20 58.9	
	comp=Z,15nm,1.5s						
TXAR	**Lajitas Array**	**24.05**	**322**	P	**P**	**01 20 46.8**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=140,slow=9.9,SNR=10						
	comp=Z,1.1nm,0.8s						
TXAR	**Lajitas Array**	**24.05**	**322**	P	**P**	**01 20 46.5**	**+0.7**
TX31	**Lajitas

MK31	**Makanchi Array**	**4.92**	**185**	⇑Pn		**Pn**	**01 41 05.7**	**+0.3**
	0.1nm,0.3s,baz=234,slow=23,SNR=9.4							
MK31				⇓Lg		Lg	01 42 19.8	
	0.4nm,0.5s,baz=351,slow=26,SNR=3.8							
MKAR	**Makanchi Array**	**4.92**	**185**	Pn		**Pn**	**01 41 05.9**	**+0.5**
	0.1nm,0.3s,baz=8.6,slow=12,SNR=6.5							
MKAR				Lg		Lg	01 42 20.6	
	0.2nm,0.3s,baz=357,slow=27,SNR=5.2							
	0.2nm,0.4s							

SKHL ***25*** *01:43:27.4±0.0, 45°.70N×152°.80E, h53km±7km, mb4.3/2*
IDC ***25*** *01:43:29.6±8.3, 47°.23N×151°.62E, h66km±54km, mb3.3/9, mbtmp3.6/10, ML2.4/1, Error ellipse: s-maj=89.1km s-min=26.2km az=179.0*

ISC 25 01:43:26.7±1.9, 46°.6N±0°.3×152°.2E±0°.2, h80km, n23, σ1§92/14, mb3.5/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.34**	**247**	*eP*		**Pn**	**01 44 19.1**	**+2.5**
KUR					AMB	AMB	01 44 24.1	
	50nm,0.7s							
KUR				*eS*		**Sn**	**01 44 57.8**	**+2.6**
KUR				A		A	01 45 07.0	
	60nm,0.4s							
KUR				A		A	01 45 07.0	
	90nm,0.4s							
NMR	**Nemuro--Hokkai**	**5.64**	**237**	*eP*		**Pn**	**01 44 48.4**	**+0.5**
NMR				*eS*		**Sn**	**01 45 48.1**	**-3.1**
AKK	**Akkeshi**	**6.37**	**238**	*eP*		**Pn**	**01 44 56.3**	**-1.5**
YSS	**Yuzhno-Sakhali**	**6.51**	**276**	*erx*		rx	01 45 05.1	
PETK	**Petropavlovsk-**	**7.39**	**27**	P		**Pn**	**01 45 10.0**	**-1.8**
	0.3nm,0.3s,baz=181,slow=10.0,SNR=5.8							
	5.4nm,1.0s							
H11N2	**WAKE ISLAND Hy**	**29.40**	**151**	T		T	02 20 42.4	
	baz=340,slow=76,SNR=69							
H11N1	**WAKE ISLAND Hy**	**29.41**	**151**	T		T	02 20 41.4	
	baz=340,slow=76,SNR=39							
H11N3	**WAKE ISLAND Hy**	**29.41**	**151**	T		T	02 20 47.6	
	baz=340,slow=76,SNR=32							
H11S1	**WAKE ISLAND Hy**	**30.47**	**152**	T		T	02 22 01.9	
	baz=341,slow=76,SNR=80							
H11S3	**WAKE ISLAND Hy**	**30.48**	**152**	T		T	02 22 00.2	
	baz=341,slow=76,SNR=73							
H11S2	**WAKE ISLAND Hy**	**30.49**	**152**	T		T	02 22 01.9	
	baz=341,slow=76,SNR=72							
MKAR	**Makanchi Array**	**46.45**	**297**	P		**P**	**01 51 44.0**	**-1.4**
	0.2nm,0.5s,baz=72,slow=9.3,SNR=2.8							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**47.02**	**303**	P		**P**	**01 51 49.0**	**-0.6**
	0.4nm,0.6s,baz=72,slow=8.5,SNR=4.2							
	0.4nm,0.6s							
BVAR	**Borovoye Array**	**50.47**	**309**	P		**P**	**01 52 15.2**	**-0.8**
	0.2nm,0.4s,baz=46,slow=8.3,SNR=2.0							
	0.2nm,0.4s							
YKA	**Yellowknife Ar**	**51.39**	**36**	P		**P**	**01 52 25.7**	**+3.0**
	0.1nm,0.4s,baz=301,slow=8.1,SNR=3.6							
	0.1nm,0.4s							
FINES	**FINESS Array B**	**63.89**	**334**	P		**P**	**01 53 50.1**	**-0.3**
	1.1nm,0.4s,baz=31,slow=7.4,SNR=12							
	1.1nm,0.4s							
NOA	**NORSAR Array B**	**68.15**	**341**	P		**P**	**01 54 17.6**	**-0.1**
	1.0nm,0.8s,baz=28,slow=6.6,SNR=4.1							
	1.0nm,0.8s							
HFS	**Hagfors**	**68.36**	**339**	P		**P**	**01 54 18.5**	**-0.5**
	1.0nm,0.4s,baz=72,slow=4.8,SNR=12							
	1.0nm,0.4s							
AKASG	**Malin Array Be**	**71.31**	**326**	P		**P**	**01 54 37.5**	**+0.2**
	0.7nm,0.4s,baz=38,slow=6.8,SNR=2.9							
	0.7nm,0.4s							
TXAR	**Lajitas Array**	**78.09**	**60**	P		P	01 55 21.6	+4.7
	0.1nm,0.4s,baz=301,slow=4.7,SNR=5.0							
	0.1nm,0.4s							
H03N2	**Juan Fernandez**	**139.36**	**90**	T		T	04 38 01.1	
	baz=308,slow=77,SNR=6.0							
H03N1	**Juan Fernandez**	**139.38**	**90**	T		T	04 38 03.9	
	baz=308,slow=77,SNR=5.9							
H03N3	**Juan Fernandez**	**139.38**	**90**	T		T	04 38 01.7	
	baz=308,slow=77,SNR=5.8							

BGR ***25*** *02:06:30.7, 17°.61S×177°.93W, h33km*
BJI ***25*** *02:07:26.7, 17°.25S×178°.28W, h536km, mB4.9/18, mb4.8/57*
IDC ***25*** *02:07:26.4±1.2, 17°.66S×178°.88W, h516km±12km, mb4.5/30, mbtmp5.3/32, Error ellipse: s-maj=10.3km s-min=9.2km az=158.0*
NEIC ***25*** *02:07:27.2±1.8, 17°.69S±0°.10×178°.85W±0°.10, h522km±5km, mb4.9/535, Error ellipse: s-maj=14.8km s-min=12.9km az=147.0*
NOU ***25*** *02:07:28.6, 17°.64S×178°.89W, h536km, mb5.2/92, Fiji Islands Region*

ISC 25 02:07:28.5±0.5, 17°.67S±0°.05×178°.91W±0°.04, h544km±4km, n1067, σ0§96/840, mb4.9/323, 46C-34D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.57**	**171**	P		**P**	**02 08 32.1**	**-1.2**
LKBA	**Tubou, Lakemba**	**0.57**	**171**	S		**S**	**02 09 26.4**	**+0.3**
TAVE	**Taveuni**	**1.35**	**315**	P		**P**	**02 08 35.1**	**-0.1**
TAVE	**Taveuni**	**1.35**	**315**	S		**S**	**02 09 29.7**	**+0.4**
DGTI	**Dogotuki**	**1.88**	**316**	P		**P**	**02 08 36.5**	**-0.7**
DGTI	**Dogotuki**	**1.88**	**316**	S		**S**	**02 09 32.4**	**-0.5**
MSVF	**Nonsavu**	**2.90**	**268**			**P**	**02 08 42.4**	**-0.2**
MSVF				S		**S**	**02 09 42.8**	**0.0**
AFI	**Afiamalu**	**7.81**	**62**	P		P	02 09 19.3	-5.1
NIUE	**Niue**	**8.64**	**101**	P		**P**	**02 09 30.6**	**-1.9**
	comp=Z,1μm,1.0s							
NIUE	**Niue**	**8.64**	**101**			**P**	**02 09 31.2**	**-1.3**
NIUE	**Niue**	**8.64**	**101**	P		**P**	**02 09 31.1**	**-1.4**
NIUE	**Niue**	**8.64**	**101**	P		**P**	**02 09 30.9**	**-1.7**
NIUE				S		**S**	**02 11 13.6**	**-0.7**
FUNA	**Funafuti**	**9.27**	**348**	P		**P**	**02 09 37.3**	**-1.7**
FUNA	**Funafuti**	**9.27**	**348**	P		**P**	**02 09 37.2**	**-1.8**
RTV	**Rentapao**	**12.07**	**267**	P		**P**	**02 10 08.9**	**+1.1**
DVP	**Devils Point**	**12.30**	**268**	P		**P**	**02 10 10.3**	**+0.1**
MARNC	**Mare, Loyalty**	**12.88**	**251**			**P**	**02 10 15.1**	**-1.1**
MARNC	**Mare, Loyalty**	**12.88**	**251**	P		**P**	**02 10 15.4**	**-0.8**
SANVU	**Saraoutou**	**13.50**	**277**	P		**P**	**02 10 21.5**	**-1.2**
SANVU	**Saraoutou**	**13.50**	**277**	P		**P**	**02 10 24.7**	**+2.0**
OUENC	**Ouen Island, N**	**14.20**	**248**	P		**P**	**02 10 30.0**	**+0.2**
DZM	**Mont Dzumac**	**14.46**	**250**	*eP*		**P**	**02 10 31.6**	**-1.0**
	comp=Z,244nm,0.9s							
DZM	**Mont Dzumac**	**14.46**	**250**	P		**P**	**02 10 30.9**	**-1.7**
	comp=Z,56nm,0.7s,baz=88,slow=18,SNR=36							
DZM	**Mont Dzumac**	**14.46**	**250**			**P**	**02 10 31.9**	**-0.8**
DZM	**Mont Dzumac**	**14.46**	**250**	P		**P**	**02 10 32.4**	**-0.2**
ONTNC	**Ouen Toro**	**14.51**	**249**			**P**	**02 10 32.0**	**-1.1**
ONTNC	**Ouen Toro**	**14.51**	**249**	P		**P**	**02 10 33.1**	**0.0**
KOUNC	**Koumac, New Ca**	**16.14**	**257**	P		**P**	**02 10 49.7**	**0.0**
RAR	**Rarotonga**	**18.39**	**104**	P		**P**	**02 11 09.5**	**-0.8**
	comp=Z,41nm,0.8s,baz=248,slow=6.9,SNR=10.0							
RAR	**Rarotonga**	**18.39**	**104**	P		**P**	**02 11 10.1**	**-0.2**
RAR	**Rarotonga**	**18.39**	**104**	P		**P**	**02 11 10.8**	**+0.5**
RAR	**Rarotonga**	**18.39**	**104**	P		**P**	**02 11 10.1**	**-0.2**
OUZ	**Omahuta**	**18.71**	**199**	P		**P**	**02 11 15.2**	**+2.2**
WCZ	**Waipu Caves**	**19.16**	**197**	P		**P**	**02 11 19.6**	**+2.5**
ABAZ	**Army Bay**	**19.66**	**195**	P		**P**	**02 11 23.8**	**+2.2**
WIAZ	**Waiheke Island**	**19.77**	**194**	P		**P**	**02 11 24.7**	**+2.1**
MBAZ	**Motutapu North**	**19.80**	**195**	P		**P**	**02 11 25.2**	**+2.3**
WTAZ	**Waiatarua**	**20.03**	**195**	P		**P**	**02 11 27.3**	**+2.2**
MKAZ	**Moumakai**	**20.06**	**194**	P		**P**	**02 11 26.9**	**+1.7**
AWAZ	**Awhitu Peninsu**	**20.14**	**195**	P		**P**	**02 11 28.0**	**+2.0**
HAZ	**Te Kaha**	**20.22**	**188**	P		**P**	**02 11 25.6**	**-1.1**
TOZ	**Tahuroa Road**	**20.58**	**193**	P		**P**	**02 11 30.9**	**+0.9**
URZ	**Urewera**	**20.81**	**189**	P		**P**	**02 11 29.4**	**-2.6**
	comp=Z,7.0nm,0.3s,baz=270,slow=2.7,SNR=21							
URZ				S		**S**	**02 14 45.3**	**-3.9**
	comp=Z,4.9nm,0.6s,baz=174,slow=20,SNR=1.7							
	comp=Z,7.0nm,0.3s							
URZ	**Urewera**	**20.81**	**189**	P		**P**	**02 11 30.6**	**-1.4**
MWZ	**Matawai**	**20.82**	**188**	P		**P**	**02 11 30.9**	**-1.3**
RTZ	**Ruatahuna**	**21.18**	**189**	P		**P**	**02 11 34.0**	**-1.5**
RTZ	**Ruatahuna**	**21.18**	**189**	P		**P**	**02 11 34.3**	**-1.2**
NGOA	**Tingoa Renbel**	**21.23**	**284**	P		**P**	**02 11 36.2**	**0.0**
BKZ	**Black Stump Fm**	**21.79**	**190**	P		**P**	**02 11 39.0**	**-2.0**
BKZ	**Black Stump Fm**	**21.79**	**190**	P		**P**	**02 11 39.1**	**-1.9**
VRZ	**Vera Road**	**22.08**	**193**	P		**P**	**02 11 45.1**	**+1.6**
HNR	**Honiara**	**22.11**	**289**	P		**P**	**02 11 44.1**	**0.0**
SAVO	**Savo Central**	**22.34**	**290**	P		**P**	**02 11 47.1**	**+0.9**
TATA	**Tatamba Isabel**	**22.68**	**291**	P		**P**	**02 11 49.5**	**+0.3**
BFZ	**Birch Farm**	**23.31**	**189**	P		**P**	**02 11 53.3**	**-1.2**
BFZ	**Birch Farm**	**23.31**	**189**	P		**P**	**02 11 54.1**	**-0.4**
MRZ	**Mangatainoka R**	**23.40**	**191**	P		**P**	**02 11 53.0**	**-2.3**
MRZ	**Mangatainoka R**	**23.40**	**191**	P		**P**	**02 11 54.2**	**-1.1**
TCW	**Tory Channel**	**24.18**	**193**	P		**P**	**02 12 01.8**	**-0.4**
SNZO	**South Karori**	**24.19**	**192**	P		**P**	**02 12 01.3**	**-0.9**
QRZ	**Quartz Range**	**24.23**	**196**	P		**P**	**02 12 02.8**	**+0.1**
QRZ	**Quartz Range**	**24.23**	**196**	P		**P**	**02 12 03.3**	**+0.7**
QRZ	**Quartz Range**	**24.23**	**196**	P		**P**	**02 12 03.0**	**+0.3**
BHW	**Baring Head**	**24.26**	**191**	P		**P**	**02 12 01.4**	**-1.4**
TKNZ	**Takaka Hill**	**24.32**	**195**	P		**P**	**02 12 02.6**	**-0.8**
PLWZ	**Palliser**	**24.34**	**191**	P		**P**	**02 12 03.0**	**-0.7**
NNZ	**Nelson**	**24.39**	**194**	P		**P**	**02 12 03.2**	**-0.8**
NNZ	**Nelson**	**24.39**	**194**	P		**P**	**02 12 03.3**	**-0.8**
TUWZ	**Tuamarina**	**24.46**	**193**	P		**P**	**02 12 04.0**	**-0.7**
MRNZ	**Matariki Terra**	**24.71**	**195**	P		**P**	**02 12 06.0**	**-0.9**
BSWZ	**Blackbirch Sta**	**24.75**	**193**	P		**P**	**02 12 06.0**	**-1.2**
THZ	**Tophouse**	**25.02**	**195**			**P**	**02 12 08.7**	**-1.0**
THZ	**Tophouse**	**25.02**	**195**	P		**P**	**02 12 08.9**	**-0.8**
DSZ	**Denniston Nort**	**25.28**	**196**	P		**P**	**02 12 11.5**	**-0.5**
DSZ	**Denniston Nort**	**25.28**	**196**	P		**P**	**02 12 11.8**	**-0.2**
KHZ	**Kahutara**	**25.50**	**193**			**P**	**02 12 12.3**	**-1.4**
KHZ	**Kahutara**	**25.50**	**193**	P		**P**	**02 12 11.9**	**-1.8**
LTZ	**Lake Taylor**	**26.14**	**195**			**P**	**02 12 18.1**	**-1.4**
LTZ	**Lake Taylor**	**26.14**	**195**	P		**P**	**02 12 18.0**	**-1.4**
INZ	**Inchbonnie**	**26.29**	**196**			**P**	**02 12 20.3**	**-0.5**
OXZ	**Oxford**	**26.70**	**195**	P		**P**	**02 12 23.2**	**-1.3**
FOZ	**Fox Glacier**	**27.49**	**198**	P		**P**	**02 12 30.5**	**-0.9**
FOZ	**Fox Glacier**	**27.49**	**198**	P		**P**	**02 12 30.4**	**-0.9**
PAE	**Paea**	**27.93**	**95**	*eP*		**P**	**02 12 35.6**	**+0.1**
	comp=Z,12nm,0.7s							
PPT2	**Papeete2**	**27.94**	**94**	*eS*		**S**	**02 16 46.5**	**+4.6**
	comp=Z,46nm,26.0s							
PPT2				*es*	S	sS	02 19 13.6	-15
	comp=Z,154nm,25.5s							
PPT	**Papeete**	**27.94**	**94**	P		**P**	**02 12 35.4**	**-0.3**
	comp=Z,60nm,0.6s,baz=67,slow=5.3,SNR=12							
	comp=Z,60nm,0.6s							
PPTF	**Pamatai, Papee**	**27.95**	**94**			**P**	**02 12 35.6**	**-0.2**
PPTF	**Pamatai, Papee**	**27.95**	**94**	P		**P**	**02 12 37.6**	**+1.8**
TMZ	**Tumaru**	**27.95**	**196**	P		**P**	**02 12 34.0**	**-1.4**
TBI	**Tubuai**	**28.12**	**107**	*eP*		**P**	**02 12 38.0**	**+0.9**
	comp=Z,82nm,0.7s							
TBI				*eS*		**S**	**02 16 45.0**	**+0.6**
	comp=Z,323nm,26.8s							
TBI				*es*	S	sS	02 19 15.6	-15
	comp=Z,551nm,29.0s							
TIAR	**Tiarei**	**28.16**	**94**	*eP*		**P**	**02 12 37.7**	**+0.1**
	comp=Z,103nm,0.8s							
LBZ	**Lake Benmore**	**28.17**	**197**	P		**P**	**02 12 35.8**	**-1.6**
LBZ	**Lake Benmore**	**28.17**	**197**	P		**P**	**02 12 35.6**	**-1.7**
TVO	**Taravao**	**28.24**	**95**	*eP*		**P**	**02 12 38.5**	**+0.2**
	comp=Z,28nm,0.8s							
JCZ	**Jackson Bay**	**28.30**	**199**	P		**P**	**02 12 38.6**	**+0.1**
JCZ	**Jackson Bay**	**28.30**	**199**	P		**P**	**02 12 38.1**	**-0.4**
TW1H	**Toowoomba 1 Ha**	**28.56**	**245**	P		**P**	**02 12 41.4**	**+0.4**
ODZ	**Otahua Downs**	**28.66**	**196**	P		**P**	**02 12 40.4**	**-1.1**
EIDS	**Eidsvold**	**28.91**	**249**	P		**P**	**02 12 43.2**	**-0.8**
	comp=Z,107nm,0.9s							
EIDS	**Eidsvold**	**28.91**	**249**			**P**	**02 12 43.9**	**-0.1**
EIDS	**Eidsvold**	**28.91**	**249**	P		**P**	**02 12 44.1**	**+0.1**
WKZ	**Wanaka**	**28.91**	**198**	P		**P**	**02 12 42.7**	**-1.0**
WKZ	**Wanaka**	**28.91**	**198**	P		**P**	**02 12 42.9**	**-0.8**
EAZ	**Earnscleugh**	**29.20**	**197**	P		**P**	**02 12 45.6**	**-0.6**
ARMA	**Armidale**	**29.65**	**239**	P		**P**	**02 12 51.5**	**+1.1**
	comp=Z,158nm,0.8s							
ARMA	**Armidale**	**29.65**	**239**			**P**	**02 12 51.6**	**+1.1**
ARMA	**Armidale**	**29.65**	**239**	P		**P**	**02 12 51.7**	**+1.2**
MLZ	**Mavora Lakes**	**29.67**	**199**			**P**	**02 12 50.5**	**+0.2**
MLZ	**Mavora Lakes**	**29.67**	**199**	P		**P**	**02 12 50.5**	**+0.2**
TUZ	**Tuapeka**	**29.77**	**196**	P		**P**	**02 12 51.0**	**-0.1**
PMOR	**Pomariorio Ree**	**29.86**	**89**	*eP*		**P**	**02 12 52.6**	**+0.3**
	comp=Z,110nm,1.2s							
WHZ	**Wether Hill Ro**	**30.20**	**198**	P		**P**	**02 12 54.4**	**-0.4**
WHZ	**Wether Hill Ro**	**30.20**	**198**	P		**P**	**02 12 55.0**	**+0.2**
AUKHS	**Kincumber High**	**30.93**	**234**	P		**P**	**02 13 03.5**	**+2.2**
APZ	**The Paps**	**31.03**	**198**	P		**P**	**02 13 02.2**	**+0.2**
MGCD	**Mangrove Creek**	**31.05**	**234**	P		**P**	**02 13 03.0**	**+0.7**
	comp=Z,215nm,0.7s							
MGCD	**Mangrove Creek**	**31.05**	**234**	P		**P**	**02 13 03.3**	**+1.0**
RMQ	**Roma**	**31.15**	**248**	P		**P**	**02 13 04.2**	**+0.8**
	comp=Z,74nm,0.7s							
RIV	**Riverview**	**31.25**	**233**	P		**P**	**02 13 05.1**	**+1.1**
	comp=Z,70nm,1.1s							
RIV	**Riverview**	**31.25**	**233**	P		**P**	**02 13 04.7**	**+0.7**
SYDH	**Sydney Hard Ro**	**31.54**	**234**	P		**P**	**02 13 07.4**	**+0.9**
WOLH	**Wollongong Har**	**31.70**	**232**	P		**P**	**02 13 08.6**	**+0.8**
AULRC	**Lightning Ridg**	**32.42**	**243**	P		**P**	**02 13 13.7**	**-0.4**
AUDCS	**Dubbo College**	**32.66**	**237**	P		**P**	**02 13 16.3**	**+0.2**
CTA	**Charters Tower**	**33.02**	**260**	P		**P**	**02 13 19.5**	**+0.3**
CTAO	**Charters Tower**	**33.02**	**260**			**P**	**02 13 18.9**	**-0.4**
CTAO	**Charters Tower**	**33.02**	**260**	P		**P**	**02 13 19.6**	**+0.3**
CTAO	**Charters Tower**	**33.02**	**260**	P		**P**	**02 13 19.4**	**+0.1**
CNB	**Canberra Magne**	**33.20**	**232**	P		**P**	**02 13 21.6**	**+0.9**
AUMHS	**Melrose High S**	**33.42**	**232**	P		**P**	**02 13 23.2**	**+0.7**
AUMTS	**Mt Stromlo**	**33.47**	**232**	P		**P**	**02 13 24.2**	**+1.2**
CAN	**Canberra**	**33.48**	**232**	P		**P**	**02 13 23.6**	**+0.7**
	comp=Z,76nm,0.9s							
CAN	**Canberra**	**33.48**	**232**			**P**	**02 13 23.3**	**+0.3**
CAN					IAmb	IAmb	02 13 24.7	
	comp=Z,59nm,1.0s							
CAN	**Canberra**	**33.48**	**232**	P		**P**	**02 13 24.1**	**+1.1**
CAN	**Canberra**	**33.48**	**232**	P		**P**	**02 13 21.8**	**-1.2**
YNG	**Young**	**33.55**	**234**	P		**P**	**02 13 24.5**	**+0.9**
	comp=Z,52nm,1.3s							
PMG	**Port Moresby**	**33.95**	**279**			**P**	**02 13 27.3**	**+0.1**
PMG					IAmb	IAmb	02 13 29.0	
	comp=Z,61nm,1.0s							
PMG	**Port Moresby**	**33.95**	**279**	P		**P**	**02 13 28.3**	**+1.1**
PMG	**Port Moresby**	**33.95**	**279**	P		**P**	**02 13 27.2**	**+0.1**
	comp=Z,70nm,1.0s							
MILA	**Mila**	**34.08**	**229**	P		**P**	**02 13 28.7**	**+0.6**
	comp=Z,16nm,1.0s							
CMSA	**Cobar Meteorol**	**34.86**	**240**	P		**P**	**02 13 35.1**	**+0.5**
MTSU	**Mount Surprise**	**34.96**	**263**	P		**P**	**02 13 35.9**	**+0.2**
QLP	**Quilpie**	**35.18**	**249**	P		**P**	**02 13 37.5**	**+0.2**
MANU	**Manus Island**	**36.57**	**291**	P		**P**	**02 13 49.5**	**+0.5**
COEN	**Coen**	**36.63**	**270**			**P**	**02 13 49.2**	**-0.3**
COEN	**Coen**	**36.63**	**270**	P		**P**	**02 13 50.1**	**+0.6**
GLAD	**Gladstone**	**36.69**	**224**	P		**P**	**02 13 50.4**	**+0.8**
TOO	**Toolangi**	**36.95**	**230**			**P**	**02 13 52.1**	**+0.2**
TOO					IAmb	IAmb	02 13 53.9	
	comp=Z,57nm,0.9s							
CORO	**Coronation Par**	**37.49**	**224**	P		**P**	**02 13 57.2**	**+1.1**
MOO	**Moorlands**	**37.95**	**222**	P		**P**	**02 14 01.0**	**+1.1**
BRAT	**Ballarat**	**38.10**	**231**	P		**P**	**02 14 02.3**	**+1.2**
TAU	**Tasmania Unive**	**38.10**	**221**	P		**P**	**02 14 01.5**	**+0.4**
TAU					IAmb	IAmb	02 14 02.6	
	comp=Z,29nm,0.7s							
STKA	**Stephens Creek**	**38.33**	**241**	P		**P**	**02 14 03.9**	**+0.7**
	comp=Z,72nm,0.5s,baz=92,slow=10,SNR=296							
	comp=Z,72nm,0.5s							
STKA	**Stephens Creek**	**38.33**	**241**			**P**	**02 14 04.1**	**+1.0**
STKA	**Stephens Creek**	**38.33**	**241**	P		**P**	**02 14 03.6**	**+0.5**
INKA	**Innaminka**	**38.40**	**248**			**P**	**02 14 04.5**	**+0.8**
INKA					IAmb	IAmb	02 14 05.8	
	comp=Z,53nm,0.9s							
QIS	**Mount Isa**	**39.23**	**259**	P		**P**	**02 14 11.5**	**+0.9**
HTT	**Hallett**	**40.86**	**239**	P		**P**	**02 14 24.0**	**+0.5**
AUMBR	**Murray Bridge**	**40.95**	**236**	P		**P**	**02 14 25.1**	**+1.0**
JAY	**Jayapura**	**42.38**	**286**	P		**P**	**02 14 35.3**	**-0.5**
	comp=Z,33nm,0.7s,baz=260,slow=0.9,SNR=5.4							
	comp=Z,33nm,0.7s							
JAY	**Jayapura**	**42.38**	**286**	P		**P**	**02 14 35.9**	**+0.1**
GENI	**Genyem**	**42.84**	**286**	P		**P**	**02 14 41.6**	**+2.3**
GENI	**Genyem**	**42.84**	**286**	P		**P**	**02 14 39.3**	**0.0**
	comp=Z,132nm,0.8s							
OVEH	**Oceanview Est**	**43.08**	**33**	P		**P**	**02 14 40.5**	**-0.7**
OVEH					IAmb	IAmb	02 14 42.2	
	comp=Z,213nm,0.9s							
BBOO	**Buckleboo**	**43.11**	**241**			**P**	**02 14 41.2**	**+0.1**
BBOO	**Buckleboo**	**43.11**	**241**	P		**P**	**02 14 41.0**	**-0.1**
DAH	**Dandelion**	**43.30**	**33**	P		**P**	**02 14 42.7**	**-0.5**
KHLU	**Kahalu`u**	**43.38**	**32**	P		**P**	**02 14 42.9**	**-0.5**
HUH	**Hualalai**	**43.49**	**32**	P		**P**	**02 14 44.5**	**0.0**
CPK	**Cone Peak**	**43.51**	**33**	P		**P**	**02 14 44.1**	**-0.4**
KNHH	**Kane Nui o Ham**	**43.58**	**33**	P		**P**	**02 14 44.6**	**-0.4**
HMH	**Humu'ula Sheep**	**43.60**	**33**			**P**	**02 14 44.6**	**-0.8**
STCH	**Steam Cracks**	**43.61**	**34**	P		**P**	**02 14 45.0**	**-0.2**
POHA	**Pohakuloa**	**43.70**	**33**	P		**P**	**02 14 46.1**	**0.0**
DHH	**Diamond Head**	**43.87**	**29**	P		**P**	**02 14 47.3**	**+0.2**
MHA	**Mahukona**	**43.88**	**32**	P		**P**	**02 14 47.5**	**+0.4**
HIL	**Hilo**	**43.90**	**33**	IAmb		IAmb	02 14 48.4	
	comp=Z,133nm,0.8s							
WB0	**Warramunga Arr**	**44.17**	**260**			**P**	**02 14 48.5**	**-1.1**
WB0					IAmb	IAmb	02 14 49.8	
	comp=Z,44nm,0.9s							
WRAB	**Tennant Creek**	**44.20**	**259**	P		**P**	**02 14 49.4**	**-0.4**
WRAB	**Tennant Creek**	**44.20**	**259**	P		**P**	**02 14 48.6**	**-1.2**
WRA	**Warramunga Arr**	**44.21**	**259**	P		**P**	**02 14 49.0**	**-0.9**
	comp=Z,25nm,0.6s,baz=96,slow=7.0,SNR=141							
WRA					PcP	**PcP**	**02 16 22.1**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=88,slow=5.0,SNR=1.5							
WRA					ScP	**ScP**	**02 19 25.4**	**+2.3**
	comp=Z,3.4nm,0.7s,baz=89,slow=3.9,SNR=6.9							
WRA					S	**S**	**02 20 40.1**	**-4.0**
	comp=Z,1.9nm,0.8s,baz=97,slow=14,SNR=4.2							
	comp=Z,25nm,0.6s							
WRA	**Warramunga Arr**	**44.21**	**259**			**P**	**02 14 47.6**	**-2.3**
WRA						**PcP**	**02 16 21.5**	**-1.2**
WRA						**ScP**	**02 19 25.6**	**+2.6**
KHLH	**Kahului Airpor**	**44.21**	**31**	P		**P**	**02 14 49.0**	**-0.7**
ASAR	**Alice Springs**	**44.40**	**254**	P		**P**	**02 14 51.4**	**+0.1**
	comp=Z,314nm,0.7s,baz=88,slow=8.2,SNR=3165							
ASAR					PcP	**PcP**	**02 16 23.3**	**-0.1**
	comp=Z,3.0nm,0.4s,baz=98,slow=4.0,SNR=1.8							
ASAR					ScP	**ScP**	**02 19 26.9**	**+3.1**
	comp=Z,5.7nm,0.7s,baz=95,slow=4.4,SNR=8.1							
ASAR					S	**S**	**02 20 42.8**	**-4.0**
	comp=Z,17nm,1.0s,baz=85,slow=16,SNR=33							
ASAR	**Alice Springs**	**44.40**	**254**			**P**	**02 14 50.9**	**-0.5**
ASAR						**PcP**	**02 16 22.6**	**-0.7**
ASAR						**ScP**	**02 19 27.0**	**+3.1**
AUALC	**St Philip's Co**	**44.42**	**254**	P		**P**	**02 14 52.4**	**+0.9**
SMPI	**Sarmi**	**44.42**	**286**	P		**P**	**02 14 51.5**	**0.0**
	comp=Z,34nm,0.6s							
GUMO	**Guam**	**47.35**	**309**	P		**P**	**02 15 13.4**	**-0.4**
	comp=Z,170nm,0.7s,baz=193,slow=21,SNR=4.6							
	comp=Z,170nm,0.7s							
MTN	**Manton Dam**	**48.33**	**268**			**P**	**02 15 20.3**	**-0.9**
MTN					IAmb	IAmb	02 15 21.5	
	comp=Z,46nm,0.8s							
FORT	**Forrest**	**49.68**	**244**			**P**	**02 15 30.9**	**-0.1**
KNRA	**Kununurra**	**50.04**	**264**			**P**	**02 15 32.7**	**-1.1**
SIJI	**Sorong**	**51.72**	**283**	P		**P**	**02 15 46.6**	**+0.6**
	comp=Z,79nm,0.7s,baz=149,slow=23,SNR=8.1							
	comp=Z,79nm,0.7s							
SIJI	**Sorong**

PETK Petropavlovsk- 73.33 346 P P 02 18 04.7 -0.1
KSRS Korea Array 74.21 319 P P 02 18 10.9 +0.9
comp=Z,5.4nm,0.7s,baz=126,slow=6.4,SNR=12
comp=Z,5.4nm,0.7s
KSAR Wonju Array Be 74.22 319 P P 02 18 10.7 +0.5
USRK Ussuriysk Ar. 76.15 326 P P 02 18 21.4 +0.7
comp=Z,12nm,0.8s,baz=127,slow=3.0,SNR=15
comp=Z,12nm,0.8s
SAO San Andreas Ge 76.58 44 P P 02 18 23.0 -0.3
SAO IAmb IAmb 02 18 25.2
comp=Z,35nm,0.8s
PKD Bear Valley Ra 76.73 45 IAmb IAmb 02 18 26.0
comp=Z,48nm,1.1s
MHC Mount Hamilton 76.78 44 IAmb IAmb 02 18 26.6
comp=Z,41nm,1.2s
SII Sitkinak Islan 76.80 14 P P 02 18 23.8 -0.3
baz=204
R16K Pilot Point 77.03 12 P P 02 18 24.9 -0.3
baz=201
R17L Mt. Peulik Vol 77.33 12 P P 02 18 26.6 -0.4
baz=202
PASC Pasadena Art C 77.41 48 IAmb IAmb 02 18 29.3
comp=Z,28nm,0.8s
NJ2 Nanjing 77.42 310 ⇑iP P 02 18 29.3 +1.3
NJ2 pmax pmax
comp=Z,22nm,0.8s
KHMM Horse Mountain 77.51 40 IAmb IAmb 02 18 30.7
comp=Z,40nm,1.0s
MWC Mount Wilson 77.53 48 IAmb IAmb 02 18 30.2
comp=Z,38nm,0.7s
CBX Cerro Bola 77.56 50 IAmb IAmb 02 18 30.7
comp=Z,26nm,0.7s
OHAK Old Harbor 77.61 14 P P 02 18 28.3 -0.1
baz=205
VES Vestal, Richgr 77.67 46 IAmb IAmb 02 18 30.6
comp=Z,51nm,0.8s
O02D Mt. Diablo Mer 77.68 41 IAmb IAmb 02 18 31.7
comp=Z,38nm,1.1s
DPP Dos Picos Cty 77.70 49 IAmb IAmb 02 18 31.1
comp=Z,32nm,0.8s
MDJ Mudanjiang 77.72 325 IAmb IAmb 02 18 31.6
comp=Z,49nm,0.8s
MDJ Mudanjiang 77.72 325 P P 02 18 30.7 +1.4
MDJ Mudanjiang 77.72 325 P P 02 18 30.4 +1.1
MDJ pmax pmax
comp=Z,77nm,0.8s
MDJ Mudanjiang 77.72 325 P P 02 18 30.3 +1.0
MDJ PcP PcP 02 18 39.4 +2.5
TPO Tropico Hills 77.75 47 IAmb IAmb 02 18 31.7
comp=Z,39nm,0.9s
ISA Isabella, Lake 77.99 46 IAmb IAmb 02 18 33.0
comp=Z,39nm,0.9s
O14K Tigyukauivet M 77.99 9 P P 02 18 29.8 -0.7
baz=197
Q17K Contact Creek 78.01 12 P P 02 18 30.1 -0.6
baz=202
O15K Ungalikthiuk R 78.15 10 P P 02 18 30.3 -1.0
baz=198
N02D Trinity Center 78.20 40 IAmb IAmb 02 18 35.2
comp=Z,90nm,1.8s
Q16K King Salmon 78.24 12 P P 02 18 31.3 -0.5
baz=202,SNR=7.3
KDAK Kodiak Island 78.28 14 P P 02 18 32.0 0.0
comp=Z,47nm,0.7s,baz=236,slow=1.8,SNR=21
comp=Z,47nm,0.7s
KDAK Kodiak Island 78.28 14 P P 02 18 32.2 +0.2
KDAK IAmb IAmb 02 18 33.7
comp=Z,81nm,0.9s
KDAK Kodiak Island 78.28 14 P P 02 18 32.0 0.0
baz=206
P16K Nushagak River 78.33 11 P P 02 18 31.7 -0.5
baz=200,SNR=11
L02F Cave Junction 78.35 39 IAmb IAmb 02 18 35.1
comp=Z,61nm,1.6s
PFO Pinyon Flats O 78.36 49 P P 02 18 33.3 +0.1
PFO Pinyon Flats O 78.36 49 P P 02 18 33.6 +0.4
M11K Mekoryuk 78.45 6 IAmb IAmb 02 18 34.6
comp=Z,80nm,0.9s
M11K Mekoryuk 78.45 6 P P 02 18 33.5 +0.6
baz=192,SNR=14
Q18K Katmai Hardscr 78.54 12 P P 02 18 33.1 -0.5
baz=203,SNR=10
N14K Kuskokwak Cree 78.58 9 P P 02 18 33.8 +0.3
baz=197
MDPB Devils Postpil 78.64 44 IAmb IAmb 02 18 36.5
comp=Z,36nm,0.8s
K02D Willamette Mer 78.64 38 IAmb IAmb 02 19 16.5
comp=Z,89nm,1.8s
CCCA Chr Cany lake 78.69 47 IAmb IAmb 02 18 38.5
comp=Z,30nm,0.8s
M03C McCloud 78.73 40 IAmb IAmb 02 18 36.7
comp=Z,63nm,0.9s
P17K Kvichak River 78.77 12 P P 02 18 34.1 -0.5
baz=202,SNR=9.9
M13K Dall Lake 78.82 8 IAmb IAmb 02 18 36.4
comp=Z,50nm,1.0s
M13K Dall Lake 78.82 8 P P 02 18 35.4 +0.6
baz=195
O16K Kokwok River B 78.84 11 P P 02 18 33.7 -1.2
baz=200
HATC Hat Creek Radi 78.87 41 IAmb IAmb 02 18 37.6
comp=Z,56nm,1.0s
MPK Martis Peak 78.92 43 IAmb IAmb 02 18 38.0
comp=Z,58nm,0.7s
N15K Kwethluk River 79.05 9 IAmb IAmb 02 18 37.4
comp=Z,37nm,0.7s
N15K Kwethluk River 79.05 9 P P 02 18 36.2 +0.1
baz=198
Q20K Shuyak Island 79.08 14 P P 02 18 36.1 -0.1
baz=206
Q19K Cape Douglas, 79.09 13 P P 02 18 35.9 -0.4
baz=204
L04D Klamath Falls 79.17 39 IAmb IAmb 02 18 39.0
comp=Z,43nm,0.8s
O17K Koliganek Bris 79.18 11 P P 02 18 36.0 -0.7
baz=201
P18K Big Mountain, 79.19 12 P P 02 18 36.1 -0.7
baz=203,SNR=19
DSP Deep Springs 79.24 45 IAmb IAmb 02 18 39.7
comp=Z,39nm,1.0s
M14K Bethel 79.33 8 IAmb IAmb 02 18 40.0
comp=Z,37nm,0.8s
M14K Bethel 79.33 8 P P 02 18 37.6 +0.1
baz=196,SNR=14
LHV Little Huntoon 79.35 44 IAmb IAmb 02 18 40.4
comp=Z,43nm,0.9s
M15K Kasigluk River 79.46 9 P P 02 18 38.3 +0.1
baz=198
CN2 Changchun 79.54 323 eP P 02 18 39.8 +0.7
CN2 pmax pmax
comp=Z,30nm,0.8s
N16K Nishlik Lake 79.55 10 P P 02 18 38.9 +0.1
baz=199,SNR=7.0
PAHR Pah Rah Range 79.57 43 IAmb IAmb 02 18 41.2
comp=Z,28nm,0.8s
NVAR Mina Array Bea 79.58 44 P P 02 18 40.5 +0.8
comp=Z,22nm,0.7s,baz=225,slow=8.9,SNR=148
comp=Z,22nm,0.7s
O18K Koktuh Hills 79.62 12 P P 02 18 38.7 -0.4
baz=203,SNR=47
BNX BinXian 79.63 325 ⇑P P 02 18 39.8 +0.3
BNX pmax pmax
comp=Z,64nm,0.7s
L14K Kuka Creek 79.80 8 IAmb IAmb 02 18 41.4
comp=Z,38nm,1.0s
L14K Kuka Creek 79.80 8 P P 02 18 40.4 +0.4
baz=196,SNR=13
P19K Oil Pt 79.84 13 P P 02 18 39.8 -0.5
baz=205
N17K Nushagak Hills 79.87 11 P P 02 18 40.0 -0.5
baz=201,SNR=7.3
I04A Tendick Farm, 80.03 38 IAmb IAmb 02 18 43.0
comp=Z,39nm,1.2s
M16K Timber Creek 80.04 10 P P 02 18 42.2 +0.9
baz=199
WHN Wuhan 80.08 306 P P 02 18 43.5 +1.3
WHN pmax pmax
comp=Z,28nm,1.1s
O19K Port Alsworth 80.11 12 P P 02 18 41.2 -0.4
baz=204
K13K Kusilvak Mount 80.14 7 IAmb IAmb 02 18 43.3
comp=Z,50nm,1.3s
K13K Kusilvak Mount 80.14 7 P P 02 18 42.2 +0.4
baz=194
CNPM China Poot 80.16 14 IAmb IAmb 02 18 42.7
comp=Z,62nm,0.9s
TPNV Topopah Spring 80.20 46 IAmb IAmb 02 18 44.7
comp=Z,72nm,1.8s

N18K Kilae Creek 80.25 11 P P 02 18 41.9 -0.5
baz=202
L15K Ungalak Mounta 80.29 8 P P 02 18 42.7 +0.2
baz=197
K05A Summer Lake 80.31 39 IAmb IAmb 02 18 45.4
comp=Z,57nm,1.0s
BRSE Bradley Lake S 80.47 14 P P 02 18 43.5 0.0
baz=207,SNR=15
WIFE Three Sisters- 80.54 38 IAmb IAmb 02 18 46.2
comp=Z,30nm,0.9s
Q09A Carvers 80.54 44 IAmb IAmb 02 18 46.3
comp=Z,52nm,0.8s
L16K Owhat River 80.61 9 IAmb IAmb 02 18 45.9
comp=Z,68nm,1.2s
L16K Owhat River 80.61 9 P P 02 18 44.9 +0.6
baz=199,SNR=20
N19K Bonanza Creek 80.64 12 IAmb IAmb 02 18 44.6
comp=Z,32nm,0.8s
N19K Bonanza Creek 80.64 12 P P 02 18 43.8 -0.8
baz=203,SNR=11
M17K Holitna River 80.65 10 P P 02 18 45.6 +1.1
baz=201
H04A Detroit Lake 80.69 37 IAmb IAmb 02 18 45.8
comp=Z,24nm,0.6s
G04A Mulino 80.83 37 IAmb IAmb 02 18 48.4
comp=Z,36nm,0.9s
MA2 Magadan 80.84 345 P P 02 18 45.0 -0.5
MA2 IAmb IAmb 02 18 45.3
comp=Z,25nm,0.8s
MA2 Magadan 80.84 345 P P 02 18 44.8 -0.7
MA2 Magadan 80.84 345 P P 02 18 44.1 -1.4
comp=Z,49nm,1.1s
MA2 Magadan 80.84 345 P P 02 18 44.7 -0.8
K15K Wolf Creek Mou 80.87 8 P P 02 18 46.6 +1.0
baz=197
PINE Pine Mountain 80.90 38 IAmb IAmb 02 18 48.4
comp=Z,49nm,0.9s
I05D Terrebonne, OR 80.98 38 IAmb IAmb 02 18 47.9
comp=Z,26nm,0.9s
M18K Stony River 81.02 11 P P 02 18 46.5 +0.2
baz=202,SNR=11
J14K Nanvaranak Lak 81.06 7 IAmb IAmb 02 18 47.8
comp=Z,48nm,1.4s
J14K Nanvaranak Lak 81.06 7 P P 02 18 46.7 +0.2
baz=195
SEW Seward 81.09 14 IAmb IAmb 02 18 47.0
comp=Z,38nm,0.8s
SEW Seward 81.09 14 P P 02 18 46.1 -0.6
baz=208
L17K Donlin 81.20 10 P P 02 18 48.3 +1.0
baz=200
Q23K Middleton Isla 81.29 16 P P 02 18 47.5 -0.2
baz=211
O22K Cooper Landing 81.36 14 P P 02 18 48.0 -0.1
baz=208,SNR=8.5
HOOD Mount Hood Mea 81.37 37 IAmb IAmb 02 18 50.1
comp=Z,52nm,1.2s
GAMB Gambell 81.37 3 IAmb IAmb 02 18 49.5
comp=Z,38nm,0.8s
GAMB Gambell 81.37 3 P P 02 18 48.6 +0.5
baz=187,SNR=25
NLWA Neilton Lookou 81.38 34 IAmb IAmb 02 18 50.4
comp=Z,44nm,1.1s
N20K Mount Spurr 81.46 13 P P 02 18 47.4 -1.3
baz=206
SPCR Spurr Chakacha 81.46 13 P P 02 18 47.4 -1.3
baz=206,SNR=12
SPU Mount Spurr 81.47 13 IAmb IAmb 02 18 49.8
comp=Z,25nm,0.8s
P23K Montague Islan 81.50 15 P P 02 18 49.2 +0.3
baz=210
G05A Wamic 81.52 37 IAmb IAmb 02 18 50.9
comp=Z,37nm,1.0s
WVOR Wild Horse Val 81.53 41 IAmb IAmb 02 18 51.5
comp=Z,50nm,1.0s
L18K Granite Mounta 81.54 10 P P 02 18 49.8 +0.8
baz=201
M19K Big River Lodg 81.66 11 IAmb IAmb 02 18 50.1
comp=Z,32nm,0.7s
M19K Big River Lodg 81.66 11 P P 02 18 49.2 -0.5
baz=204
K17K Iditarod 81.75 9 IAmb IAmb 02 18 51.8
comp=Z,72nm,1.3s
K17K Iditarod 81.75 9 P P 02 18 50.7 +0.6
baz=200
STLK Strandline Lak 81.81 13 IAmb IAmb 02 18 50.1
comp=Z,46nm,0.8s
L19K White Mountain 81.83 11 IAmb IAmb 02 18 51.8
comp=Z,41nm,1.0s
L19K White Mountain 81.83 11 P P 02 18 50.5 0.0
baz=203,SNR=12
M20K Styx River 81.89 12 IAmb IAmb 02 19 34.8
comp=Z,56nm,1.8s
M20K Styx River 81.89 12 P P 02 18 50.2 -0.7
baz=205
RC01 Rabbit Creek A 81.90 14 IAmb IAmb 02 18 51.4
comp=Z,59nm,1.0s
RC01 Rabbit Creek A 81.90 14 P P 02 18 50.4 -0.5
baz=208,SNR=13
I07A Izee 81.92 39 IAmb IAmb 02 18 53.4
comp=Z,37nm,0.8s
TUC Tucson 81.93 53 P P 02 18 52.3 +0.5
TUC IAmb IAmb 02 18 54.5
comp=Z,30nm,0.9s
TUC Tucson 81.93 53 P P 02 18 53.4 +1.5
J16K Anvik River 81.95 8 P P 02 18 51.9 +0.8
baz=198
SUA Susitna One 82.01 13 P P 02 18 50.7 -0.8
baz=207,SNR=31
GNW Green Mountain 82.05 35 IAmb IAmb 02 18 53.5
comp=Z,30nm,0.9s
CLRS Cowichan Lake 82.12 33 IAmb IAmb 02 18 53.7
comp=Z,24nm,0.8s
J08A Circle Bar Ran 82.14 40 IAmb IAmb 02 18 54.4
comp=Z,66nm,1.2s
KAIM Kayak Island 82.23 17 P P 02 18 52.7 +0.1
baz=213
CBB Campbell River 82.25 32 IAmb IAmb 02 18 54.5
comp=Z,53nm,1.1s
SKT Skwentna 82.30 13 P P 02 18 51.2 -1.7
baz=208,SNR=6.9
LCMT Little Creek M 82.32 47 IAmb IAmb 02 18 55.7
comp=Z,23nm,0.9s
BBB Bella Bella 82.34 29 P P 02 18 53.7 +0.4
comp=Z,30nm,0.9s,baz=274,slow=3.9,SNR=14
comp=Z,30nm,0.9s
BBB Bella Bella 82.34 29 IAmb IAmb 02 18 54.6
comp=Z,57nm,1.1s
GLI Glacier Island 82.34 15 P P 02 18 52.5 -0.6
baz=210,SNR=9.0
PGC Sidney 82.37 33 IAmb IAmb 02 18 54.9
comp=Z,26nm,0.9s
X16A Lo Mia Camp, P 82.39 50 IAmb IAmb 02 18 56.7
comp=Z,35nm,0.9s
EYAK Cordova Ski Ar 82.40 16 IAmb IAmb 02 18 53.9
comp=Z,43nm,0.9s
EYAK Cordova Ski Ar 82.40 16 P P 02 18 53.0 -0.3
baz=212
M22K Willow 82.40 13 P P 02 18 52.9 -0.5
baz=208,SNR=13
BELA Belgrano 2 82.46 173 P P 02 18 54.2 +0.6
HEH HeiHe 82.46 329 eP P 02 18 54.0 +0.1
HEH pmax pmax
comp=Z,22nm,0.6s
KNK Knik Glacier 82.48 14 IAmb IAmb 02 18 54.4
comp=Z,44nm,0.8s
KNK Knik Glacier 82.48 14 P P 02 18 53.3 -0.6
baz=209,SNR=13
PMR Palmer 82.48 14 IAmb IAmb 02 18 54.2
comp=Z,78nm,1.3s
PMR Palmer 82.48 14 P P 02 18 53.8 0.0
PMR Palmer 82.48 14 P P 02 18 53.2 -0.6
baz=208,SNR=14
CCUT Cedar City 82.49 47 IAmb IAmb 02 18 57.0
comp=Z,25nm,0.9s
I17K Unalakleet 82.51 8 IAmb IAmb 02 18 55.6
comp=Z,51nm,1.2s
I17K Unalakleet 82.51 8 P P 02 18 54.2 +0.3
baz=197
RAGM Ragged Mountai 82.55 16 IAmb IAmb 02 18 56.4
comp=Z,60nm,1.0s
KNB Kanab 82.62 48 IAmb IAmb 02 18 57.5
comp=Z,27nm,0.9s
PSUT Pine Spring 82.63 46 IAmb IAmb 02 18 57.0
comp=Z,26nm,0.7s
ANM Nome 82.63 6 IAmb IAmb 02 18 56.1
comp=Z,38nm,1.2s
ANM Nome 82.63 6 P P 02 18 54.9 +0.4
baz=193,SNR=18
319A Douglas 82.67 54 IAmb IAmb 02 18 58.4
comp=Z,41nm,0.9s
F07A Phinny Hill Vi 82.69 37 IAmb IAmb 02 18 56.7
comp=Z,26nm,0.8s
J18K Innoko River 82.70 10 P P 02 18 55.1 +0.2
baz=201,SNR=58
U15A North Rim 82.71 48 IAmb IAmb 02 18 58.3
comp=Z,51nm,0.9s
ELK Elko 82.81 43 IAmb IAmb 02 18 57.9
comp=Z,22nm,0.8s
SIT Sitka 82.84 22 P P 02 18 55.0 -0.6
baz=221
SML Sawmill 82.86 14 IAmb IAmb 02 19 09.5
comp=Z,26nm,0.9s
SML Sawmill 82.86 14 P P 02 18 55.1 -0.7
baz=209
MXC Moxie City 82.87 36 IAmb IAmb 02 18 57.7
comp=Z,30nm,1.2s
G08A Pilot Rock 82.91 38 IAmb IAmb 02 18 58.1
comp=Z,41nm,1.1s
WUAZ Wupatki 82.95 49 IAmb IAmb 02 18 59.3
comp=Z,35nm,1.0s
CUT Chulitna 82.95 13 P P 02 18 55.4 -0.7
baz=207,SNR=18
U33K Whale Pass 82.96 24 P P 02 18 57.0 +0.7
baz=223
M23K Glacier View 82.98 14 P P 02 18 55.6 -0.8
baz=210,SNR=10.0
V35K Ketchikan 82.99 25 IAmb IAmb 02 18 57.6
comp=Z,45nm,1.0s
V35K Ketchikan 82.99 25 P P 02 18 56.9 +0.5
baz=225
PPLA Purkeypile 83.00 12 P P 02 18 54.9 -1.7
baz=206
HNS HongShan 83.01 313 ⇓P P 02 18 58.5 +1.5
HNS pmax pmax
comp=Z,11nm,1.3s
H16K Elim 83.04 7 P P 02 18 56.8 +0.2
baz=196,SNR=57
BMRM Bremner River 83.06 16 P P 02 18 56.6 -0.2
baz=213,SNR=15
K20K Telida 83.06 11 P P 02 18 56.5 -0.2
baz=204
E07A Sunnyside 83.11 37 IAmb IAmb 02 18 59.0
comp=Z,43nm,1.0s
SCM Sheep Creek Mo 83.11 14 P P 02 18 56.7 -0.4
baz=210,SNR=28
MESA MESA 83.14 18 P P 02 18 57.8 +0.4
baz=215,SNR=12
KLU Klutina 83.17 15 IAmb IAmb 02 18 57.9
comp=Z,34nm,1.0s
KLU Klutina 83.17 15 P P 02 18 57.0 -0.4
baz=211,SNR=10
G15K Niukluk 83.19 6 P P 02 18 57.5 +0.3
baz=194
HAWA Hanford 83.20 37 IAmb IAmb 02 18 59.4
comp=Z,46nm,1.0s
S31K Pelican 83.20 21 P P 02 18 57.6 +0.2
baz=220
BJI2 Beijing 83.27 316 P P 02 18 59.3 +1.0
BJI2 pmax pmax
comp=Z,10.0nm,0.9s
BJT Baijiatuau 83.28 316 P P 02 19 00.1 +1.8
CRQE Cirque 83.29 17 P P 02 18 57.9 -0.1
baz=214,SNR=14
LYN LuoYang 83.31 309 P P 02 19 00.0 +1.4
LYN pmax pmax
comp=Z,36nm,0.9s
DUN6 Lazy B Ranch 83.32 53 IAmb IAmb 02 19 01.5
comp=Z,64nm,1.1s
YPT Yellepit 83.33 37 IAmb IAmb 02 18 59.2
comp=Z,15nm,0.5s
J19K Poorman 83.38 10 IAmb IAmb 02 18 59.0
comp=Z,23nm,0.7s
J19K Poorman 83.38 10 P P 02 18 58.6 +0.3
baz=202
WAH2 Wahluke Slope 83.38 37 IAmb IAmb 02 18 59.7
comp=Z,21nm,0.6s
TNA Tin City 83.39 5 P P 02 18 58.6 +0.4
baz=190,SNR=37
S32K Killisnoo 83.42 22 P P 02 18 58.7 +0.2
baz=222
F14K Arctic Creek 83.44 5 P P 02 18 58.8 +0.3
baz=192,SNR=43
WRAK Wrangell Islan 83.48 24 P P 02 18 59.4 +0.5
baz=224
E08A Dider Farm, El 83.52 37 IAmb IAmb 02 19 00.5
comp=Z,24nm,0.7s
MTPU Mount Pierson 83.55 47 IAmb IAmb 02 19 02.9
comp=Z,35nm,1.0s
PCA Pinnacle 83.57 18 IAmb IAmb 02 19 00.1
comp=Z,52nm,0.9s
PINM Pinnacle 83.57 18 P P 02 18 59.1 -0.2
baz=217
VRDI Verde Repeater 83.58 16 IAmb IAmb 02 19 00.2
comp=Z,55nm,1.0s
N25K Chitina, Valde 83.60 16 P P 02 18 59.5 -0.1
baz=213,SNR=33
H17K Granite Mounta 83.62 8 P P 02 18 59.2 -0.2
baz=198
M24K Tolsona, Glenn 83.63 15 P P 02 18 59.8 +0.2
baz=211,SNR=21
TCRU Three Creeks R 83.63 46 IAmb IAmb 02 19 02.9
comp=Z,24nm,1.0s
WAT6 Susitna Watana 83.67 14 P P 02 18 59.5 -0.4
baz=210,SNR=34
WAT1 Susitna Watana 83.70 13 P P 02 18 59.3 -0.6
baz=209
EPH Ephrata 83.70 36 IAmb IAmb 02 19 01.6
comp=Z,40nm,1.0s
ENH Enshi 83.74 304 IAmb IAmb 02 19 03.1
comp=Z,31nm,0.8s
ENH Enshi 83.74 304 P P 02 19 02.7 +1.8
ENH Enshi 83.74 304 P P 02 19 02.1 +1.2
G16K Koyuk River 83.76 7 IAmb IAmb 02 19 01.3
comp=Z,31nm,1.1s
G16K Koyuk River 83.76 7 P P 02 19 00.2 +0.2
baz=196,SNR=35
MFID Camas Ranch 83.80 41 IAmb IAmb 02 19 02.7
comp=Z,30nm,1.0s
F15K North Star Dit 83.82 6 IAmb IAmb 02 19 01.4
comp=Z,19nm,0.9s
F15K North Star Dit 83.82 6 P P 02 19 00.2 -0.2
baz=194
MCARA McCarthy VSAT 83.83 16 IAmb IAmb 02 19 02.0
comp=Z,49nm,1.0s
MCARA McCarthy VSAT 83.83 16 P P 02 19 00.4 -0.1
baz=214,SNR=9.5
CHUM Lake Minchumin 83.87 11 P P 02 18 59.6 -1.1
baz=205
GCSA Galena City Sc 83.88 9 P P 02 19 00.8 +0.2
baz=201,SNR=5.7
TRF Thorofare Moun 83.88 13 P P 02 18 59.9 -1.0
baz=207,SNR=68
D08A Wollman Farm, 83.92 37 IAmb IAmb 02 19 02.9
comp=Z,31nm,0.9s
CTG Chitna Glacier 83.95 17 P P 02 19 01.3 -0.1
baz=216,SNR=18
W18A Petrified Fore 83.96 50 IAmb IAmb 02 19 04.1
comp=Z,34nm,1.5s
R32K Eaglecrest 84.03 22 P P 02 19 02.0 +0.4
baz=222
H18K Honhosa River 84.04 9 P P 02 19 01.0 -0.5
baz=200
E09A Wood Farm, Sta 84.06 37 IAmb IAmb 02 19 03.3
comp=Z,56nm,1.7s
G17K Kiwalik Mounta 84.07 8 P P 02 19 01.5 -0.1
baz=197,SNR=18
HARP HAARP 84.13 15 P P 02 19 01.9 -0.1
baz=212,SNR=20
O28M Mount Upton 84.13 18 P P 02 19 02.5 +0.1
baz=217,SNR=26
BESE Bessie Mountai 84.14 21 IAmb IAmb 02 19 03.9
comp=Z,50nm,1.0s
DHY Denali Highway 84.18 14 P P 02 19 01.9 -0.6
baz=210,SNR=17
O29M Mount Kennedy 84.24 19 IAmb IAmb 02 19 03.5
comp=Z,16nm,0.8s
O29M Mount Kennedy 84.24 19 P P 02 19 03.0 +0.2
baz=218,SNR=6.4
F10A Beach Ranch, E 84.30 38 IAmb IAmb 02 19 04.5
comp=Z,50nm,1.0s
BPAW Bear Paw Mtn. 84.32 12 IAmb IAmb 02 19 04.2
comp=Z,15nm,0.8s
BPAW Bear Paw Mtn. 84.32 12 P P 02 19 01.3 -1.6
baz=207,SNR=11
LLLB Lillooet 84.37 32 IAmb IAmb 02 19 04.7

	comp=Z,26nm,1.1s							
MCK	**McKinley**	84.41	13	P		P	02 19 02.7	-0.7
	baz=208,SNR=32							
B08A	**Colville Reser**	84.42	35	IAmb		IAmb	02 19 04.6	
	comp=Z,23nm,0.8s							
PAX	**Paxson**	84.54	15	IAmb		IAmb	02 19 04.2	
	comp=Z,27nm,0.8s							
PAX	**Paxson**	84.54	15	P		P	02 19 03.2	-1.0
	baz=212,SNR=18							
P30M	**Million Dollar**	84.61	20	P		P	02 19 05.1	+0.6
	baz=220							
SKAG	**Skagway**	84.64	21	IAmb		IAmb	02 19 06.5	
	comp=Z,46nm,1.3s							
SKAG	**Skagway**	84.64	21	P		P	02 19 05.6	+1.1
SKAG	**Skagway**	84.64	21	P		P	02 19 05.5	+1.0
	baz=221							
YUK8	**Steele Glacier**	84.67	18	P		P	02 19 05.2	+0.3
	baz=217,SNR=24							
M26K	**Nabesna, AK**	84.68	16	P		P	02 19 04.6	-0.2
	baz=214							
C09A	**Chrisman Ranch**	84.70	36	IAmb		IAmb	02 19 05.9	
	comp=Z,18nm,0.6s							
T35M	**Bob Quinn**	84.70	24	IAmb		IAmb	02 19 06.9	
	comp=Z,24nm,1.0s							
T35M	**Bob Quinn**	84.70	24	P		P	02 19 05.5	+0.5
	baz=226,SNR=5.5							
G18K	**Tagagawik**	84.70	8	P		P	02 19 04.2	-0.5
	baz=199,SNR=10.0							
HLID	**Hailey**	84.76	41	IAmb		IAmb	02 19 07.8	
	comp=Z,22nm,0.8s							
YUK6	**Outpost Mounta**	84.81	19	P		P	02 19 05.7	0.0
	baz=218							
YUK3	**Moose Creek**	84.86	17	P		P	02 19 06.0	+0.2
	baz=216,SNR=38							
H20K	**Anotlenenega Mo**	84.89	10	P		P	02 19 05.8	+0.1
	baz=203,SNR=12							
F17K	**Baldwin Pennin**	84.90	7	P		P	02 19 05.5	-0.2
	baz=197							
M27K	**Edge Creek, AK**	84.94	16	P		P	02 19 06.4	+0.2
	baz=215,SNR=27							
MENT	**Mentasta**	84.94	15	IAmb		IAmb	02 19 06.9	
	comp=Z,42nm,1.0s							
MENT	**Mentasta**	84.94	15	P		P	02 19 06.3	+0.3
EPT	**El Paso**	84.98	55	IAmb		IAmb	02 19 09.2	
	comp=Z,25nm,1.1s							
HYT	**Haines Junctio**	84.98	19	IAmb		IAmb	02 19 07.6	
	comp=Z,25nm,0.9s							
HYT	**Haines Junctio**	84.98	19	P		P	02 19 06.4	0.0
	baz=219,SNR=9.6							
S34M	**Telegraph Cree**	85.01	23	P		P	02 19 07.2	+0.8
	baz=225							
YUK4	**Talbot Arm**	85.04	18	P		P	02 19 07.0	+0.2
	baz=218,SNR=9.3							
I21K	**Tanana**	85.10	11	IAmb		IAmb	02 19 07.4	
	comp=Z,30nm,0.9s							
I21K	**Tanana**	85.10	11	P		P	02 19 06.1	-0.5
	baz=206							
L26K	**Log Cabin Wild**	85.11	15	IAmb		IAmb	02 19 07.7	
	comp=Z,34nm,1.0s							
L26K	**Log Cabin Wild**	85.11	15	P		P	02 19 06.5	-0.3
	baz=214,SNR=12							
NEA2	**Nenana**	85.14	12	P		P	02 19 05.4	-1.5
	baz=208,SNR=10							
G19K	**Purcell Mounta**	85.16	9	P		P	02 19 06.6	-0.3
	baz=201							
K24K	**Donnelly Dome**	85.18	14	P		P	02 19 07.1	-0.1
	baz=211,SNR=38							
SRU	**San Rafael Swe**	85.20	47	IAmb		IAmb	02 19 09.6	
	comp=Z,18nm,0.9s							
MLY	**Manley**	85.20	12	IAmb		IAmb	02 19 07.2	
	comp=Z,16nm,0.8s							
MLY	**Manley**	85.20	12	P		P	02 19 06.0	-1.2
	baz=207,SNR=20							
F18K	**Selawik**	85.24	8	P		P	02 19 06.4	-0.9
	baz=198,SNR=8.9							
XLT	**XiLinHaoTe**	85.26	319	*e*P		P	02 19 08.5	+0.4
XLT				pmax		pmax		
	comp=Z,21nm,0.9s							
XLT				pmax		pmax		
	comp=Z,99nm,4.7s							
BVCY	**Beaver Creek**	85.26	17	P		P	02 19 07.6	+0.1
	baz=216,SNR=19							
P32M	**Atlin**	85.29	21	IAmb		IAmb	02 19 09.3	
	comp=Z,24nm,0.8s							
P32M	**Atlin**	85.29	21	P		P	02 19 08.3	+0.5
	baz=223,SNR=8.6							
RIDG	**Independent Ri**	85.34	14	P		P	02 19 07.6	-0.4
	baz=212,SNR=23							
O30N	**Mendenhall**	85.39	20	IAmb		IAmb	02 19 09.5	
	comp=Z,31nm,0.8s							
O30N	**Mendenhall**	85.39	20	P		P	02 19 08.4	+0.2
	baz=203,SNR=17							
H21K	**Melozitna Rive**	85.39	11	P		P	02 19 07.8	-0.3
	baz=205,SNR=11							
HDA	**Harding Lake**	85.43	13	P		P	02 19 07.5	-0.9
	baz=210,SNR=33							
E17K	**Hotham Inlet**	85.45	7	P		P	02 19 08.1	-0.2
	baz=196,SNR=31							
CCB	**Clear Creek Bu**	85.46	13	IAmb		IAmb	02 19 08.4	
	comp=Z,42nm,1.0s							
IMAR	**Indian Mountai**	85.53	10	P		P	02 19 08.4	-0.3
L27K	**Beaver Creek,**	85.53	16	P		P	02 19 08.7	-0.2
	baz=215,SNR=10							
BCAR	**Beaver Creek A**	85.55	16	P		P	02 19 09.0	+0.1
I23K	**Minto, Yukon-K**	85.58	12	IAmb		IAmb	02 19 09.9	
	comp=Z,51nm,1.5s							
I23K	**Minto, Yukon-K**	85.58	12	P		P	02 19 08.2	-0.7
	baz=208,SNR=15							
NEW	**Newport**	85.60	36	IAmb		IAmb	02 19 10.4	
	comp=Z,17nm,0.8s							
N30M	**Aishikik Lake**	85.60	19	P		P	02 19 09.1	-0.2
	baz=220							
COLA	**College**	85.64	13	P		P	02 19 08.4	-0.9
COLA	**College**	85.64	13	P		P	02 19 08.1	-1.1
	baz=209							
COLA	**College**	85.64	13	P		P	02 19 08.2	-1.1
WHY	**Whitehorse**	85.69	20	P		P	02 19 10.2	+0.4
	baz=222,SNR=11							
F19K	**Shaleruckih Mo**	85.71	8	P		P	02 19 09.1	-0.5
	baz=200,SNR=24							
PV05	**Paradox Valley**	85.73	48	IAmb		IAmb	02 19 12.7	
	comp=Z,33nm,1.5s							
XAN	**Xi'an**	85.74	308	⇑P		P	02 19 11.8	+1.2
XAN				pP		pP	02 21 09.1	+0.3
XAN	**Xi'an**	85.74	308	P		P	02 19 11.7	+1.1
SCRK	**Sand Creek**	85.75	15	IAmb		IAmb	02 19 11.9	
	comp=Z,24nm,0.8s							
SCRK	**Sand Creek**	85.75	15	P		P	02 19 09.8	-0.2
	baz=213,SNR=30							
IL31		85.76	13	IAmb		IAmb	02 19 09.9	
	comp=Z,23nm,0.6s							
ILAR	**Eielson Array**	85.76	13	P		P	02 19 09.1	-0.8
	comp=Z,18nm,0.7s,baz=226,slow=5.2,SNR=192							
	comp=Z,18nm,0.7s							
ILAR	**Eielson Array**	85.76	13	P		P	02 19 08.9	-1.0
VHRN	**Van Horn**	85.78	56	IAmb		IAmb	02 19 13.5	
	comp=Z,38nm,1.5s							
DLBC	**Dease Lake**	85.80	23	P		P	02 19 10.7	+0.4
	comp=Z,13nm,0.8s,baz=204,slow=6.7,SNR=27							
	comp=Z,13nm,0.8s							
DLBC	**Dease Lake**	85.80	23	P		P	02 19 10.9	+0.6
	baz=226,SNR=11							
MNTX	**Cornudas Mount**	85.83	55	IAmb		IAmb	02 19 13.1	
	comp=Z,20nm,1.2s							
H22K	**Ishtalitna Cre**	85.86	11	IAmb		IAmb	02 19 11.1	
	comp=Z,26nm,1.2s							
H22K	**Ishtalitna Cre**	85.86	11	P		P	02 19 09.9	-0.5
	baz=206,SNR=18							
PV10	**Paradox Valley**	85.90	48	IAmb		IAmb	02 19 14.5	
	comp=Z,19nm,0.8s							
D17K	**Noatak River**	85.91	6	P		P	02 19 10.6	+0.1
	baz=195,SNR=25							
E18K	**Tukpahlearik C**	85.91	7	IAmb		IAmb	02 19 12.1	
	comp=Z,28nm,1.1s							
E18K	**Tukpahlearik C**	85.91	7	P		P	02 19 10.3	-0.2
	baz=197							
PV19	**Morning Glory**	85.92	48	IAmb		IAmb	02 19 14.8	
	comp=Z,20nm,0.9s							
PV18	**Skein Mesa, Pa**	85.94	48	IAmb		IAmb	02 19 14.8	
	comp=Z,30nm,1.2s							
PV20	**West Nyswonger**	85.94	48	IAmb		IAmb	02 19 14.8	
	comp=Z,20nm,0.8s							
POKR	**Poker Plat Res**	85.94	13	P		P	02 19 09.6	-1.1
	baz=210,SNR=14							
PV23	**Carpenter Ridg**	85.96	48	IAmb		IAmb	02 19 13.4	
	comp=Z,20nm,0.8s							
J25K	**Salcha River,**	85.96	14	IAmb		IAmb	02 19 10.9	
	comp=Z,19nm,0.7s							
J25K	**Salcha River,**	85.96	14	P		P	02 19 10.4	-0.6
	baz=212,SNR=28							
M29M	**Somme Creek**	85.96	18	IAmb		IAmb	02 19 13.2	
	comp=Z,20nm,0.7s							
M29M	**Somme Creek**	85.96	18	P		P	02 19 11.1	0.0
	baz=218,SNR=21							
PV11	**David Mesa, Pa**	85.99	48	IAmb		IAmb	02 19 14.2	
	comp=Z,22nm,1.3s							
N31M	**Braeburn, Yuko**	86.03	19	IAmb		IAmb	02 19 12.6	
	comp=Z,36nm,0.9s							
N31M	**Braeburn, Yuko**	86.03	19	P		P	02 19 11.5	+0.2
	baz=221,SNR=8.2							
PV02	**Paradox Valley**	86.04	48	IAmb		IAmb	02 19 13.6	
	comp=Z,25nm,1.3s							
HILR	**Hailar Array B**	86.05	325	P		P	02 19 12.4	+0.7
	comp=Z,4.2nm,0.5s,baz=123,slow=5.5,SNR=7.8							
	comp=Z,4.2nm,0.5s							
P33M	**Teslin, Yukon**	86.05	21	IAmb		IAmb	02 19 12.7	
	comp=Z,16nm,0.9s							
P33M	**Teslin, Yukon**	86.05	21	P		P	02 19 11.6	+0.1
	baz=223,SNR=8.8							
G21K	**Allakaket**	86.06	10	IAmb		IAmb	02 19 11.8	
	comp=Z,24nm,0.8s							
G21K	**Allakaket**	86.06	10	P		P	02 19 11.1	-0.2
	baz=204							
R33M	**Jennings River**	86.12	22	IAmb		IAmb	02 19 13.6	
	comp=Z,43nm,1.1s							
R33M	**Jennings River**	86.12	22	P		P	02 19 12.5	+0.6
	baz=225							
BILL	**Bilibino**	86.15	354	P		P	02 19 11.8	+0.2
BILL	**Bilibino**	86.15	354	P		P	02 19 11.5	-0.2
F20K	**Avaraart Lake**	86.20	9	P		P	02 19 11.7	-0.2
	baz=202,SNR=17							
C16K	**Lisburne Hills**	86.27	5	IAmb		IAmb	02 19 14.2	
	comp=Z,29nm,1.6s							
C16K	**Lisburne Hills**	86.27	5	P		P	02 19 11.9	-0.3
	baz=193							
TX31	**Lajitas Ar. Si**	86.27	58	IAmb		IAmb	02 19 16.1	
	comp=Z,32nm,0.9s							
TXAR	**Lajitas Array**	86.27	58	P		P	02 19 15.0	+1.7
	comp=Z,18nm,0.8s,baz=218,slow=6.1,SNR=216							
TXAR				PKKPbc		**PKKPbc**	02 37 08.3	+0.2
	comp=Z,0.1nm,0.5s,baz=143,slow=4.5,SNR=3.9							
	comp=Z,18nm,0.8s							
TXAR	**Lajitas Array**	86.27	58	P		P	02 19 14.5	+1.3
RDOG	**Red Dog Mine**	86.27	6	P		P	02 19 12.2	0.0
	baz=195,SNR=7.5							
ANMO	**Albuquerque**	86.32	52	P		P	02 19 13.4	-0.1
ANMO	**Albuquerque**	86.32	52	P		P	02 19 14.0	+0.5
E19K	**Redstone River**	86.37	8	IAmb		IAmb	02 19 13.4	
	comp=Z,25nm,0.7s							
E19K	**Redstone River**	86.37	8	P		P	02 19 12.5	-0.2
	baz=201							
H24K	**Noodor Dome**	86.48	12	P		P	02 19 11.4	-1.9
	baz=209,SNR=5.3							
AHID	**Auburn Hatcher**	86.50	43	IAmb		IAmb	02 19 16.0	
	comp=Z,42nm,1.5s							
M30M	**Minto, Yukon**	86.55	18	P		P	02 19 13.7	0.0
	baz=220,SNR=27							
L29M	**L29M**	86.58	17	P		P	02 19 14.3	+0.4
	baz=218,SNR=27							
N32M	**Quiet Lake**	86.65	20	P		P	02 19 14.6	+0.4
	baz=223							
C17K	**DeLong Mountai**	86.66	6	P		P	02 19 13.6	-0.5
	baz=195							
ALPN	**Alpine**	86.69	57	IAmb		IAmb	02 19 18.3	
	comp=Z,16nm,0.8s							
PRP	**Porcupine Dome**	86.70	13	P		P	02 19 13.6	-0.9
	baz=212,SNR=12							
F21K	**Alatna River**	86.71	10	P		P	02 19 13.8	-0.5
	baz=204,SNR=18							
HHC	**Hu-ho-hao-te**	86.77	315	⇓*i*P		P	02 19 17.0	+1.7
HHC				pmax		pmax		
	comp=Z,18nm,1.0s							
HHC				pmax		pmax		
	comp=Z,170nm,5.8s							
DLMT	**Dillon**	86.78	40	IAmb		IAmb	02 19 17.1	
	comp=Z,31nm,0.9s							
TPB01	**Permian Basin**	86.79	56	IAmb		IAmb	02 19 17.8	
	comp=Z,50nm,1.7s							
G23K	**Bananza Creek**	86.84	11	P		P	02 19 14.7	-0.3
	baz=207,SNR=8.7							
FXWY	**Fox Creek**	86.95	42	IAmb		IAmb	02 19 19.2	
	comp=Z,15nm,0.8s							
DAWY	**Dawson**	86.99	16	IAmb		IAmb	02 19 16.8	
	comp=Z,16nm,0.9s							
DAWY	**Dawson**	86.99	16	P		P	02 19 15.8	0.0
	baz=217,SNR=15							
M31M	**Drury Creek, Y**	87.00	19	IAmb		IAmb	02 19 16.4	
	comp=Z,21nm,1.2s							
M31M	**Drury Creek, Y**	87.00	19	P		P	02 19 15.5	-0.3
	baz=222,SNR=9.5							
C18K	**Utukok River**	87.02	6	P		P	02 19 15.3	-0.6
	baz=197							
SNOW	**Snow King Moun**	87.04	43	IAmb		IAmb	02 19 18.8	
	comp=Z,40nm,1.0s							
I26K	**Coal Creek Min**	87.06	14	IAmb		IAmb	02 19 16.8	
	comp=Z,22nm,0.7s							
I26K	**Coal Creek Min**	87.06	14	P		P	02 19 15.9	-0.1
	baz=214							
TPB05	**Hovey Rd**	87.15	56	IAmb		IAmb	02 19 19.9	
	comp=Z,22nm,1.1s							
LOHW	**Long Hollow**	87.21	43	IAmb		IAmb	02 19 19.2	
	comp=Z,15nm,0.7s							
O20A	**White River Ci**	87.23	46	IAmb		IAmb	02 19 19.4	
	comp=Z,30nm,1.3s							
D19K	**Kuna River**	87.23	8	IAmb		IAmb	02 19 17.3	
	comp=Z,23nm,0.8s							
D19K	**Kuna River**	87.23	8	P		P	02 19 16.4	-0.4
	baz=200							
E20K	**Nigu River**	87.26	8	P		P	02 19 17.0	0.0
	baz=202							
COLD	**Coldfoot**	87.27	11	P		P	02 19 17.1	+0.2
	baz=207,SNR=17							
KMI2	**Kunming**	87.30	297	⇑P		P	02 19 20.1	+1.7
KMI2				pmax		pmax		
	comp=Z,17nm,0.7s							
G24K	**Hadweenzic Riv**	87.31	12	IAmb		IAmb	02 19 17.4	
	comp=Z,12nm,0.7s							
G24K	**Hadweenzic Riv**	87.31	12	P		P	02 19 16.6	-0.5
	baz=210,SNR=11							
K29M	**Barlow Dome**	87.33	17	IAmb		IAmb	02 19 18.7	
	comp=Z,55nm,1.6s							
K29M	**Barlow Dome**	87.33	17	P		P	02 19 17.7	+0.2
	baz=219,SNR=14							
FLWY	**Flagg Ranch**	87.37	42	IAmb		IAmb	02 19 20.5	
	comp=Z,36nm,0.9s							
WTLY	**Watson Lake, Y**	87.41	23	IAmb		IAmb	02 19 19.4	
	comp=Z,34nm,1.2s							
WTLY	**Watson Lake, Y**	87.41	23	P		P	02 19 18.4	+0.5
	baz=227,SNR=9.7							
YFT	**Old Faithful**	87.45	42	IAmb		IAmb	02 19 21.7	
	comp=Z,23nm,0.8s							
YMR	**Madison River**	87.47	41	IAmb		IAmb	02 19 21.2	
	comp=Z,25nm,0.8s							
BOZ	**Bozeman (W)**	87.49	40	IAmb		IAmb	02 19 20.6	
	comp=Z,24nm,1.2s							
BW06	**Boulder Array**	87.50	44	IAmb		IAmb	02 19 20.1	
	comp=Z,48nm,1.4s							
PD31	**Pinedale Array**	87.50	44	IAmb		IAmb	02 19 20.1	
	comp=Z,44nm,1.4s							
PDAR	**Pinedale Array**	87.50	44	P		P	02 19 19.2	+0.3
	comp=Z,14nm,0.7s,baz=212,slow=3.1,SNR=153							
PDAR				PP		**PP**	02 22 51.8	-2.4
	comp=Z,1.6nm,0.9s,baz=244,slow=6.4,SNR=5.5							
	comp=Z,14nm,0.7s							
H17A	**Grant Village**	87.59	42	IAmb		IAmb	02 19 22.3	
	comp=Z,25nm,0.8s							
MAYO	**Mayo, Yukon**	87.60	18	P		P	02 19 19.2	+0.6
	baz=220,SNR=13							
J29N	**Klondike Camp**	87.61	16	IAmb		IAmb	02 19 20.1	
	comp=Z,24nm,0.7s							
J29N	**Klondike Camp**	87.61	16	P		P	02 19 19.2	+0.5
	baz=218,SNR=16							
D20K	**Etivluk River**	87.63	8	IAmb		IAmb	02 19 19.0	
	comp=Z,21nm,0.7s							
D20K	**Etivluk River**	87.63	8	P		P	02 19 18.4	-0.2
	baz=201							
C19K	**Lookout Ridge**	87.64	7	IAmb		IAmb	02 19 19.6	
	comp=Z,20nm,0.8s							
C19K	**Lookout Ridge**	87.64	7	P		P	02 19 18.6	-0.1
	baz=198							
FYU	**Fort Yukon**	87.66	13	IAmb		IAmb	02 19 19.2	
	comp=Z,17nm,0.7s							
I27K	**Kandik River**	87.67	15	IAmb		IAmb	02 19 19.4	
	comp=Z,31nm,1.5s							
I27K	**Kandik River**	87.67	15	P		P	02 19 18.7	-0.2
	baz=215							
YNR	**Norris Junctio**	87.67	42	IAmb		IAmb	02 19 23.3	
	comp=Z,14nm,1.0s							
SAND	**Sanderson**	87.75	58	IAmb		IAmb	02 19 22.0	
	comp=Z,15nm,0.9s							
E21K	**Killik River**	87.75	9	P		P	02 19 18.7	-0.5
	baz=204							
E22K	**Anaktuvuk Pass**	87.81	10	IAmb		IAmb	02 19 20.2	
	comp=Z,26nm,0.8s							
E22K	**Anaktuvuk Pass**	87.81	10	P		P	02 19 19.4	-0.1
	baz=206							
BTO2	**Baotou**	87.87	314	*e*P		P	02 19 21.8	+1.2
BTO2				pmax		pmax		
	comp=Z,13nm,0.7s							
BTO2				pmax		pmax		
	comp=Z,330nm,8.5s							
I28M	**Miner Creek**	87.96	15	IAmb		IAmb	02 19 21.4	
	comp=Z,15nm,0.6s							
I28M	**Miner Creek**	87.96	15	P		P	02 19 20.0	-0.3
	baz=217							
YMP	**Mirror Lake Pl**	88.01	42	IAmb		IAmb	02 19 38.1	
	comp=Z,20nm,1.4s							
E23K	**Chandalar**	88.11	11	IAmb		IAmb	02 19 21.8	
	comp=Z,27nm,0.9s							
E23K	**Chandalar**	88.11	11	P		P	02 19 21.0	0.0
	baz=208							
H27K	**Steamboat Moun**	88.20	14	IAmb		IAmb	02 19 22.9	
	comp=Z,14nm,0.7s							
H27K	**Steamboat Moun**	88.20	14	P		P	02 19 21.3	-0.1
	baz=215							
ODSA	**Odessa**	88.21	56	IAmb		IAmb	02 19 24.0	
	comp=Z,18nm,0.9s							
J30M	**Hart River**	88.22	17	P		P	02 19 21.4	-0.2
	baz=220							
YNE	**Yellowstone No**	88.23	41	IAmb		IAmb	02 19 24.5	
	comp=Z,17nm,0.8s							
G26K	**Porcupine Rive**	88.29	13	P		P	02 19 21.9	+0.2
	baz=213							
C21K	**Knifeblade Rid**	88.29	8	P		P	02 19 22.0	+0.3
	baz=203							
I29M	**Ogilvie Camp,**	88.30	16	IAmb		IAmb	02 19 22.3	
	comp=Z,13nm,0.8s							
I29M	**Ogilvie Camp,**	88.30	16	P		P	02 19 21.3	-0.6
	baz=218,SNR=8.7							
E24K	**Your Creek**	88.33	11	IAmb		IAmb	02 19 22.7	
	comp=Z,12nm,0.7s							
E24K	**Your Creek**	88.33	11	P		P	02 19 21.8	-0.1
	baz=209							
D22K	**Ayikyak River**	88.35	9	P		P	02 19 22.2	+0.2
	baz=205							
CMAR	**Chiang Mai Arr**	88.36	290	P		P	02 19 23.8	+0.7
TMB01	**Midkiff**	88.41	56	IAmb		IAmb	02 19 24.9	
	comp=Z,11nm,1.2s							
128A	**Castleberry Fa**	88.45	55	IAmb		IAmb	02 19 25.0	
	comp=Z,14nm,1.0s							
F25K	**Christian Rive**	88.45	12	IAmb		IAmb	02 19 23.8	
	comp=Z,13nm,0.8s							
F25K	**Christian Rive**	88.45	12	P		P	02 19 22.9	+0.3
	baz=212,SNR=18							
CHTO	**Chiang Mai**	88.47	290	P		P	02 19 23.3	-0.4
CHTO	**Chiang Mai**	88.47	290	P		P	02 19 24.7	+1.0
CHTO	**Chiang Mai**	88.47	290	P		P	02 19 22.9	-0.8
	comp=Z,9.4nm,0.8s							
BMAR	**Burnt Mountain**	88.53	13	P		P	02 19 23.1	+0.2
TGTN	**Hyland Airport**	88.56	22	P		P	02 19 23.9	+0.7
	baz=227							
PZH	**PanZhiHua**	88.62	298	P		P	02 19 25.9	+1.5
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
TOLK	**Toolik Lake Re**	88.64	10	P		P	02 19 23.1	-0.3
	baz=208							
I30M	**Mount Dempster**	88.71	17	IAmb		IAmb	02 19 24.5	
	comp=Z,20nm,0.8s							
I30M	**Mount Dempster**	88.71	17	P		P	02 19 23.6	-0.3
	baz=220							
MSTX	**Muleshoe**	88.73	54	IAmb		IAmb	02 19 26.1	
	comp=Z,22nm,1.0s							
229A	**Bryant Ranch,**	88.74	56	IAmb		IAmb	02 19 26.4	
	comp=Z,9.8nm,0.8s							
D23K	**Nanushuk River**	88.74	10	P		P	02 19 24.1	+0.3
	baz=207							
B21K	**Ikpikpuk River**	88.75	8	IAmb		IAmb	02 19 24.1	
	comp=Z,12nm,0.8s							
B21K	**Ikpikpuk River**	88.75	8	P		P	02 19 23.5	-0.3
	baz=203							
RLMT	**Red Lodge**	88.75	42	IAmb		IAmb	02 19 26.7	
	comp=Z,17nm,0.9s							
B20K	**Meade River**	88.78	7	IAmb		IAmb	02 19 24.7	
	comp=Z,13nm,0.8s							
B20K	**Meade River**	88.78	7	P		P	02 19 23.8	-0.1
	baz=201							
F26K	**Sheenjek River**	88.84	13	IAmb		IAmb	02 19 25.7	
	comp=Z,17nm,1.0s							
F26K	**Sheenjek River**	88.84	13	P		P	02 19 24.7	+0.4
	baz=213							
Q24A	**Divide**	88.91	48	IAmb		IAmb	02 19 27.5	
	comp=Z,13nm,1.1s							
E25K	**Arctic Village**	88.92	12	IAmb		IAmb	02 19 25.8	
	comp=Z,14nm,0.8s							
E25K	**Arctic Village**	88.92	12	P		P	02 19 24.6	0.0
	baz=212							
129A	**Stewart Farms,**	88.94	55	IAmb		IAmb	02 19 27.2	
	comp=Z,17nm,1.1s							
D24K	**Happy Valley**	89.22	10	IAmb		IAmb	02 19 27.0	
	comp=Z,18nm,0.7s							
D24K	**Happy Valley**	89.22	10	P		P	02 19 26.0	+0.1
	baz=208							
KOTAN	**Kotaneelee Air**	89.22	24	P		P	02 19 26.5	+0.3
	baz=231							
ELIB	**Princess Elisa**	89.34	187	*d*P		P	02 19 27.2	+0.3
	comp=Z,4.3nm,1.1s							
833A	**Chaparral WMA,**	89.39	60	IAmb		IAmb	02 19 30.0	
	comp=Z,19nm,0.9s							
K22A	**Casper**	89.47	45	IAmb		IAmb	02 19 29.4	
	comp=Z,28nm,1.3s							
EPYK	**Eagle Plains**

	comp=Z,12nm,0.8s							
F30M	**Barrier River**	90.69	15	P	P	02 19 32.5	-0.3	
	baz=221							
BRDY	**Brady**	90.74	57	IAmb	IAmb	02 19 35.9		
	comp=Z,29nm,1.5s							
E29M	**Blow River**	90.78	14	IAmb	IAmb	02 19 34.4		
	comp=Z,13nm,1.1s							
E29M	**Blow River**	90.78	14	P	P	02 19 32.7	-0.5	
	baz=219							
D27M	**Malcolm River**	90.79	13	IAmb	IAmb	02 19 35.5		
	comp=Z,28nm,1.4s							
D27M	**Malcolm River**	90.79	13	P	P	02 19 33.4	0.0	
	baz=216							
F31M	**Tsiigehtchic**	91.08	16	P	P	02 19 34.3	-0.3	
	baz=222							
SMWD	**Samnorwood**	91.09	54	IAmb	IAmb	02 19 36.9		
	comp=Z,9.3nm,0.9s							
D28M	**Stokes Point**	91.33	13	P	P	02 19 35.3	-0.4	
	baz=218							
WRGLY	**Wrigley**	91.38	22	IAmb	IAmb	02 19 48.9		
	comp=Z,6.8nm,0.6s							
WRGLY	**Wrigley**	91.38	22	P	P	02 19 36.1	0.0	
	baz=232							
RSSD	**Black Hills**	91.72	44	P	P	02 19 38.0	-0.5	
RSSD				IAmb	IAmb	02 19 39.4		
	comp=Z,10nm,1.1s							
INK	**Inuvik**	91.78	15	P	P	02 19 37.1	-0.7	
	comp=Z,27nm,1.0s,baz=221,slow=4.8,SNR=55							
INK				PP	PP	02 23 30.5	+3.8	
	comp=Z,2.0nm,1.0s,baz=209,slow=11,SNR=3.3							
	comp=Z,27nm,1.0s							
INK	**Inuvik**	91.78	15	P	P	02 19 37.0	-0.7	
	baz=223							
WHTX	**Lake Whitney,**	92.21	57	IAmb	IAmb	02 19 42.0		
	comp=Z,7.8nm,0.8s							
ULN	**Ulaanbaatar**	92.67	320	P	P	02 19 42.1	-0.5	
ULN				IAmb	IAmb	02 19 43.8		
	comp=Z,7.4nm,0.8s							
ULN	**Ulaanbaatar**	92.67	320	P	P	02 19 42.2	-0.4	
X34A	**Smith Ranch, M**	92.78	55	IAmb	IAmb	02 19 45.2		
	comp=Z,16nm,1.1s							
SONM	**Songino Array**	93.06	319	P	P	02 19 44.2	-0.2	
	comp=Z,1.3nm,0.4s,baz=133,slow=4.1,SNR=17							
SONM				PP	PP	02 23 34.5	-2.8	
	comp=Z,0.7nm,0.9s,baz=115,slow=9.3,SNR=4.0							
	comp=Z,1.3nm,0.4s							
SONM	**Songino Array**	93.06	319	P	P	02 19 44.5	+0.1	
237A	**Washetta, Mont**	93.54	58	IAmb	IAmb	02 19 49.3		
	comp=Z,14nm,0.8s							
W35A	**Tecumseh**	93.70	54	IAmb	IAmb	02 19 49.0		
	comp=Z,17nm,1.2s							
MORE	**Moreh**	94.27	294	IAmb	IAmb	02 19 53.2		
	comp=Z,142nm,0.4s							
YKA	**Yellowknife Ar**	94.31	25	P	P	02 19 49.2	-0.3	
	comp=Z,7.6nm,0.9s,baz=255,slow=4.8,SNR=113							
YKA				PP	PP	02 23 43.3	-3.0	
	comp=Z,0.8nm,1.0s,baz=256,slow=8.4,SNR=3.9							
	comp=Z,7.6nm,0.9s							
YKA	**Yellowknife Ar**	94.31	25	P	P	02 19 49.1	-0.5	
YKAW3	**Yellowknife Wh**	94.35	25	IAmb	IAmb	02 19 50.4		
	comp=Z,12nm,0.8s							
YKAW1	**Yellowknife Wh**	94.36	25	IAmb	IAmb	02 19 50.5		
	comp=Z,9.7nm,0.8s							
T35A	**Sooner Cattle**	94.55	53	IAmb	IAmb	02 19 54.0		
	comp=Z,12nm,0.8s							
GTA2	**Gaotai**	94.58	310	*e*P	P	02 19 52.0	+0.5	
GTA2				pmax	pmax			
	comp=Z,9.0nm,0.8s							
C36M	**Paulatuk**	95.00	17	P	P	02 19 51.7	-0.8	
	baz=231							
TIXI	**Tiksi**	95.80	345	P	P	02 19 55.2	-0.9	
TIXI				IAmb	IAmb	02 19 56.0		
	comp=Z,7.6nm,0.8s							
A36M	**Sachs Harbour**	96.37	15	P	P	02 19 58.3	-0.3	
	baz=230							
ECSD	**EROS Data Cent**	96.61	46	IAmb	IAmb	02 20 00.6		
	comp=Z,4.3nm,0.8s							
S39A	**Bolivar**	97.20	53	IAmb	IAmb	02 20 05.5		
	comp=Z,8.8nm,1.3s							
GOMU	**GeErMu**	97.31	306	P	P	02 20 05.8	+1.6	
P38A	**Dawn**	97.60	51	IAmb	IAmb	02 20 06.1		
	comp=Z,5.6nm,0.7s							
ZALV	**Zalesovo Beam**	107.75	322	PKiKP	**PKiKP**	02 24 53.0	-0.8	
	comp=Z,2.4nm,0.6s,baz=97,slow=0.4,SNR=14							
MKAR	**Makanchi Array**	108.63	314	Pdiff	**Pdif**	02 20 53.9	+0.1	
	comp=Z,0.5nm,0.7s,baz=82,slow=4.2,SNR=5.6							
MKAR				PKiKP	**PKiKP**	02 24 54.9	-0.8	
	comp=Z,2.3nm,0.5s,baz=95,slow=1.5,SNR=58							
KURBB	**Kurchatov Arra**	111.39	318	PKiKP	**PKiKP**	02 24 59.9	-0.9	
	comp=Z,2.8nm,0.7s,baz=95,slow=1.6,SNR=32							
KURBB				PKKPbc	**PKKPbc**	02 35 57.2	-1.7	
	comp=Z,0.4nm,0.6s,baz=279,slow=3.9,SNR=5.2							
TULEG	**Thule**	111.71	14	*i* P	**PKiKP**	02 24 57.5	-3.2	
KSH2	**Kashi**	112.84	306	PKP	**PKiKP**	02 25 04.5	+0.3	
NEEM	**North Greenlan**	114.98	11	*i* P	PKPdf	02 25 06.8	-0.6	
KULLO	**Kullorsuaq**	115.13	15	*i* P	**PKPdf**	02 25 06.6	-0.7	
UPNV	**Upernavik**	116.21	16	*i* P	**PKPdf**	02 25 08.8	-0.6	
BVAR	**Borovoye Array**	116.36	321	PKP	**PKPdf**	02 25 09.8	-0.5	
	comp=Z,6.9nm,0.4s,baz=107,slow=2.4,SNR=57							
BORK	**Borovoye**	116.40	321		**PKPdf**	02 25 09.9	-0.4	
KKAR	**Karatay Array**	116.80	310		**PKPdf**	02 25 11.0	-0.5	
KBL	**Kabul**	117.76	300		**PKiKP**	02 25 14.0	+0.1	
SPITS	**Spitsbergen Ar**	119.00	356	PKP	**PKPdf**	02 25 14.3	-0.5	
	comp=Z,2.9nm,0.5s,baz=90,slow=5.0,SNR=16							
ILULI	**Ilulissat**	119.37	19	*i* P	**PKPdf**	02 25 14.9	-0.6	
DAG	**Danmarks Havn**	120.01	5	*i* P	**PKPdf**	02 25 15.3	-1.3	
SUMIG	**Summit**	120.61	13	*i* P	**PKPdf**	02 25 18.4	0.0	
SFJD	**Kangerlussuaq**	120.63	21	*i* P	**PKPdf**	02 25 17.6	-0.4	
DBG	**Daneborg**	122.14	7	*i* P	**PKPdf**	02 25 20.1	-0.8	
ARTI	**Arti**	122.49	326		**PKPdf**	02 25 21.9	0.0	
ABKAR	**Akbulak array**	123.44	318		**PKPdf**	02 25 24.0	0.0	
ANGG	**Ammassalik, Gr**	125.68	19	*i* P	**PKPdf**	02 25 26.8	-1.0	
ARCES	**ARCESS Array B**	126.00	350	PKP	**PKPdf**	02 25 28.1	-0.2	
	comp=Z,9.6nm,0.9s,baz=49,slow=0.8,SNR=19							
ARCES	**ARCESS Array B**	126.00	350		**PKPdf**	02 25 28.5	+0.2	
BOSA	**Boshof**	128.40	207	PKP	**PKPdf**	02 25 34.6	+0.2	
	comp=Z,1.5nm,0.7s,baz=129,slow=5.2,SNR=4.6							
BOSA				SKPbc	SKiKP	02 28 05.7	-14	
	comp=Z,1.4nm,0.6s,baz=164,slow=4.4,SNR=5.5							
BOSA	**Boshof**	128.40	207		**PKPdf**	02 25 34.4	+0.1	
UOSS	**Minazif**	128.43	288		**PKPdf**	02 25 33.9	-0.4	
FINES	**FINESS Array B**	132.83	344	PKhKP	PKPpre	02 25 25.9		
	comp=Z,3.0nm,1.0s,baz=22,slow=2.1,SNR=6.3							
FINES				SKPbc	**SKPab**	02 28 20.9	+0.3	
	comp=Z,3.9nm,0.5s,baz=40,slow=4.5,SNR=7.6							
NB2	**NORSAR Subarra**	136.08	353	PKP	PKPpre	02 25 36.9		
	comp=Z,2.8nm,0.9s,baz=11,slow=4.3							
NOA	**NORSAR Array B**	136.08	353	PKhKP	PKPpre	02 25 34.6		
	comp=Z,1.5nm,0.9s,baz=35,slow=2.1,SNR=4.0							
NOA				PKP	**PKPdf**	02 25 47.5	-0.1	
	comp=Z,1.9nm,0.7s,baz=13,slow=4.1,SNR=7.1							
NOA				SKPbc	**SKPbc**	02 28 30.6	+1.9	
	comp=Z,1.6nm,0.8s,baz=14,slow=3.1,SNR=4.7							
HFS	**Hagfors**	136.62	351	PKhKP	PKPpre	02 25 35.9		
	comp=Z,2.0nm,0.3s,baz=68,slow=3.6,SNR=15							
HFS				SKPbc	**SKPbc**	02 28 32.4	+2.1	
	comp=Z,4.7nm,1.0s,baz=129,slow=2.1,SNR=4.1							
NACGM	**Naroch**	137.94	338	*e*PKP	**PKPdf**	02 25 44.9	-6.2	
	comp=Z,7.0nm,0.8s,baz=38							
STRU	**Stroemstad**	138.03	352	*i* P	PKPpre	02 25 42.0		
SNART	**Snartemo**	139.14	355	*i* P	PKPpre	02 25 47.3		
BORU	**Boraas**	139.16	350	*i* P	PKPpre	02 25 42.8		
ONAU	**Onsala**	139.52	351	*i* P	PKPpre	02 25 45.6		
BLEU	**Blekinge**	139.85	347	*e*P	PKPpre	02 25 45.0		
DEL	**Delary**	140.08	349	*i* P	PKPpre	02 25 47.7		
AKASG	**Malin Array Be**	140.13	332	PKhKP	PKPpre	02 25 46.9		
	comp=Z,1.7nm,0.3s,baz=43,slow=3.9,SNR=13							
AKASG				PKP	**PKiKP**	02 25 56.9	-1.1	
	comp=Z,3.6nm,0.4s,baz=46,slow=3.0,SNR=11							
AKASG				SKPbc	**SKiKP**	02 28 42.4	-0.3	
	comp=Z,0.9nm,0.6s,baz=42,slow=2.3,SNR=5.2							
AKASG	**Malin Array Be**	140.13	332		**PKPdf**	02 25 55.6	+0.3	
BJUU	**Bjuv**	140.61	349	*i* P	PKPpre	02 25 49.9		
LUNU	**Lund**	140.95	349	*i* P	PKPpre	02 25 50.4		
BSD	**Bornholm Skovb**	141.15	347	*i* P	**PKPdf**	02 25 53.1	-3.8	
IDGL	**Inch Island, C**	142.09	8	PKPdf	**PKPdf**	02 25 54.9	-3.7	
EKA	**Eskdalemuir Ar**	142.26	4	PKhKP	PKPpre	02 25 54.8		
	comp=Z,4.1nm,0.6s,baz=339,slow=2.8,SNR=17							
SORM	**Soroca**	142.34	330	⇑P	**PKPdf**	02 25 55.7	-3.6	
PURM	**Purcari**	142.67	327	⇓P	**PKPdf**	02 25 58.0	-1.9	
EDMD	**Edmundbyers**	142.83	3	*e*P	**PKPdf**	02 25 56.2	-3.8	
BSEG	**Bad Segeberg**	143.10	351	*e*PKPbc	PKPab	02 25 58.3	+0.2	
	baz=16,slow=2.8							
ILTH	**Belurgan, Co L**	143.26	7	PKPdf	PKPab	02 25 58.3	-0.4	
ILTH	**Belurgan, Co L**	143.26	7	*e*P	PKPab	02 25 58.1	-0.6	
IGLA	**Glengowla, Co**	143.40	11	PKPdf	PKPab	02 25 59.1	-0.2	

LODK	**Lodwar**	143.55	251		**PKPdf**	02 26 02.6	0.0	
ILGA	**Ilgaz**	143.58	317		**PKPdf**	02 26 02.1	0.0	
VASR	**Vaslui**	143.66	329	⇑P	**PKPdf**	02 26 01.4	-0.3	
KWP	**Kalwaria Pacla**	143.66	336	*e*PKP	PKPbc	02 26 00.9	+0.3	
HPK	**Haverah Park**	143.72	3	*e*P	PKPab	02 26 00.2	-0.3	
RUE	**Ruedersdorf**	143.86	347	*e*PKPbc	PKPbc	02 26 00.9	0.0	
	baz=16,slow=2.9							
PRAR	**RASCA**	143.90	331	⇑P	PKPab	02 26 01.6	+0.1	
BIR	**Birlad**	144.00	328	⇑P	**PKPdf**	02 26 03.0	+0.7	
DSB	**Dublin**	144.02	8	PKPdf	PKPbc	02 26 00.7	-0.8	
VLDR	**Vladesti**	144.06	327	⇑P	**PKPdf**	02 26 02.9	+0.5	
TLCH		144.11	326	⇑P	**PKPdf**	02 26 02.8	+0.3	
VARL	**Varlezi**	144.14	328	⇓P	**PKPdf**	02 26 03.4	+0.8	
BURAR	**Bucovina Array**	144.18	332	⇓P	**PKPdf**	02 26 03.6	+0.9	
BURAR	**Bucovina Array**	144.18	332		**PKPdf**	02 26 03.2	+0.4	
WLF1	**Llynfaes**	144.19	6	*e*P	PKPbc	02 26 00.1	-1.9	
SCTR	**Scanteiesti**	144.22	327	⇑P	**PKPdf**	02 26 03.4	+0.7	
OJC	**Ojcow**	144.22	339	*e*PKP	**PKPab**	02 26 02.5	0.0	
TATR	**Tatarca**	144.24	327	⇑P	**PKPab**	02 26 03.5	+0.7	
GHRR		144.25	328	⇑P	**PKPab**	02 26 04.1	+1.3	
LBWR	**Ladybower, Pea**	144.27	3	*e*P	PKPbc	02 26 01.5	-0.8	
BRTR	**Keskin Array B**	144.28	315	PKP	**PKPdf**	02 26 03.1	-0.1	
	comp=Z,13nm,0.6s,baz=107,slow=2.9,SNR=104							
BRTR	**Keskin Array B**	144.28	315		**PKPab**	02 26 03.3	0.0	
TESR	**Tescani**	144.31	329	⇓P	**PKPab**	02 26 03.5	+0.4	
JURR	**Jurilovca**	144.35	325	⇓P	**PKPab**	02 26 03.6	+0.4	
KIRS	**Kirsehir-Merke**	144.37	314	⇑P	**PKPab**	02 26 03.7	+0.1	
NEGRR	**Negrea**	144.37	327	⇑P	**PKPab**	02 26 04.0	+0.8	
STHS	**Stebnicka Huta**	144.39	337	*e*PKP	PKPbc	02 26 02.8	0.0	
RETH	**Rethem/Aller,**	144.41	351	*e*PKPbc	**PKPdf**	02 26 02.9	+0.2	
	baz=16,slow=2.9							
SCHL	**Schela**	144.42	327	⇓P	**PKPab**	02 26 04.2	+0.7	
IZVR	**Izvoarele**	144.42	327	⇓P	**PKPab**	02 26 04.4	+1.0	
SCHLR	**Schela**	144.44	327	⇑P	**PKPab**	02 26 03.9	+0.4	
TUDR		144.44	327	⇑P	**PKPab**	02 26 03.6	+0.1	
CFR	**Carcaliu**	144.47	326	⇑P	**PKPab**	02 26 03.8	+0.2	
FLTG	**Flechtingen**	144.50	349	*e*PKPbc	**PKPdf**	02 26 02.9	0.0	
	baz=16,slow=2.9							
PANC	**Panciu**	144.51	328	⇑P	**PKPab**	02 26 04.6	+0.8	
TPGR	**Topolog**	144.54	326	⇑P	**PKPab**	02 26 04.3	+0.3	
STNC	**Stoke**	144.56	3	*e*P	PKPbc	02 26 03.4	+0.2	
ONER	**Baraj Valea Uz**	144.56	329	⇑P	**PKPab**	02 26 04.7	+0.7	
ODBI	**Odobesti**	144.63	328	⇑P	**PKPab**	02 26 05.3	+1.1	
VAL	**Valentia**	144.65	12	PKPdf	**PKPdf**	02 26 03.3	+0.1	
LLW	**Llanuwychllyn**	144.69	5	*e*P	**PKPdf**	02 26 03.0	-0.2	
JOSR	**Joseni**	144.71	330	⇓P	**PKPab**	02 26 05.2	+0.6	
NIE	**Niedzica**	144.73	338	*e*PKP	**PKPab**	02 26 04.9	+0.3	
VRI	**Vrincioaia**	144.73	328	⇓P	**PKPab**	02 26 04.7	+0.1	
KSP	**Ksiaz**	144.75	343	*e*PKP	**PKPab**	02 26 04.7	+0.1	
PLOR	**Plostina**	144.78	328	⇓P	**PKPab**	02 26 04.9	0.0	
HWQ	**Hawqa**	144.78	305	*e*P	**PKPab**	02 26 05.0	-0.3	
ASSE	**Asse, Remlinge**	144.79	350	*e*PKPbc	**PKPab**	02 26 04.3	-0.3	
	baz=16,slow=2.9							
TIRR	**Tirgusor**	144.80	325	⇓P	**PKPab**	02 26 04.9	0.0	
IWEX	**Carrickbyrne,**	144.82	8	PKPdf	PKPbc	02 26 03.8	-0.2	
IWEX	**Carrickbyrne,**	144.82	8	*e*P	PKPbc	02 26 03.8	-0.2	
STBN	**Sutton Boningt**	144.86	2	*e*P	PKPbc	02 26 03.9	-0.2	
BMR	**Baia Mare**	144.89	333	⇑P	**PKPab**	02 26 05.2	0.0	
GRER		144.94	328	⇓P	**PKPab**	02 26 05.8	+0.4	
TURR	**Turia**	144.94	329	⇓P	**PKPab**	02 26 06.0	+0.4	
COVR	**Voineasa-Covas**	145.00	329	⇑P	**PKPab**	02 26 05.2	+0.4	
WACR	**West Acre**	145.02	0	*e*P	**PKPdf**	02 26 03.3	-0.5	
OSTC	**Ostas**	145.03	343	*e*PKP	**PKPab**	02 26 05.6	0.0	
OZUR		145.03	330	⇑P	**PKPab**	02 26 06.0	+0.1	
CHVC	**Chvalec**	145.04	343	*e*PKP	**PKPab**	02 26 05.5	-0.2	
HLM1	**Long Mynd**	145.08	4	*e*P	**PKPdf**	02 26 04.1	+0.1	
OKC	**Ostrava-Krasne**	145.09	341	*e*PKP	**PKPab**	02 26 05.5	-0.4	
BOSR	**Bodos**	145.10	330	⇑P	**PKPab**	02 26 06.3	+0.2	
STEB	**Steborice**	145.12	341	*e*PKP	**PKPbc**	02 26 05.5	+0.5	
CLL	**Collm**	145.12	347	*i* PKPbc	**PKPbc**	02 26 05.1	+0.1	
	comp=Z,85nm,0.6s							
CLL				*i* PKPab	**PKPab**	02 26 06.4	+0.5	
	comp=Z,80nm,0.9s							
CLL				*i* pPKPbc	**pPKPdf**	02 28 19.5	+7.7	
CLL	**Collm**	145.12	347	*e*PKPbc	**PKPbc**	02 26 05.3	+0.3	
	baz=16,slow=2.9							
UPC	**Upice**	145.12	343	*e*PKP	**PKPab**	02 26 05.7	-0.3	
BHL	**Bhannes**	145.13	304	*e*P	**PKPbc**	02 26 06.2	+0.5	
DPC	**Dobruska-Polom**	145.18	343	*e*PKP	**PKPab**	02 26 06.1	-0.2	
LANS	**Liptovska Anna**	145.25	339	*e*PKP	**PKPab**	02 26 06.8	+0.2	
AMRR	**Amara**	145.28	326	⇑P	**PKPab**	02 26 06.3	-0.4	
KRLC	**Kraliky**	145.30	342	*e*PKP	**PKPbc**	02 26 06.0	+0.4	
DOPR	**Dopca**	145.31	330	⇑P	**PKPab**	02 26 06.8	-0.1	
BRG	**Berggiesshubel**	145.32	346	*e*PKPbc	**PKPbc**	02 26 06.0	+0.5	
	baz=16,slow=2.9							
BRG	**Berggiesshubel**	145.32	346	*e*PKP	**PKPbc**	02 26 05.5	-0.1	
BRG				Amp		02 26 06.7		
	comp=Z,38nm,0.9s							
BRG	**Berggiesshubel**	145.32	346	P	**PKiKP**	02 26 09.9	+1.3	
BRG				Amp		02 26 10.9		
	comp=Z,17nm,1.0s							
MORC	**Moravsky Berou**	145.33	341	⇑P	**PKPab**	02 26 06.5	-0.4	
MORC	**Moravsky Berou**	145.33	341	*e*PKP	**PKPbc**	02 26 06.2	+0.5	
ISR	**Istrita**	145.34	328	⇑P	**PKPbc**	02 26 05.6	-0.3	
ICOR	**Ion Corvin**	145.36	325	⇑P	**PKPab**	02 26 06.7	-0.4	
MLR	**Muntele Rosu**	145.38	329	⇑P	**PKPbc**	02 26 06.3	+0.2	
KECS	**Kecovo**	145.44	337	*e*PKP	**PKPab**	02 26 06.9	-0.4	
NEUB	**Neuenburg**	145.47	348	*e*PKPbc	**PKPbc**	02 26 06.3	+0.3	
	baz=16,slow=2.9							
GTTG	**Gottingen**	145.47	350	*e*PKPbc	**PKPbc**	02 26 06.5	+0.5	
	baz=16,slow=2.9							
PVCC	**Panska Ves**	145.49	345	*e*PKP	**PKPab**	02 26 06.8	-0.6	
MESR	**Meseseni**	145.53	333	⇓P	**PKPab**	02 26 07.4	-0.3	
CJR	**Cluj-Napoca**	145.58	332	⇑P	**PKPbc**	02 26 07.3	-0.7	
MCH1	**Michaelchurch**	145.59	4	*e*P	**PKPbc**	02 26 05.8	-0.5	
MAUC	**Maruska**	145.60	341	*e*PKP	**PKPab**	02 26 07.3	-0.7	
MMAI	**Mount Meron Ar**	145.61	303	PKPbc	**PKPab**	02 26 07.9	-0.7	
	comp=Z,22nm,0.6s,baz=50,slow=6.7,SNR=69							
LEHL	**Lehliu**	145.64	327	⇑P	**PKPab**	02 26 07.6	-0.6	
ELMS	**Elmsett, Ipswi**	145.65	0	*e*P	**PKPbc**	02 26 06.3	-0.2	
MDB	**Medias**	145.66	331	⇑P	**PKPbc**	02 26 07.9	-0.4	
HSKC	**Hora Svate Kat**	145.69	346	*e*PKP	**PKPbc**	02 26 06.9	+0.1	
MONM	**Monmouth**	145.76	4	*e*P	**PKPbc**	02 26 06.5	-0.2	
LTVH	**Ltavrtes, Hu**	145.78	335	⇓P	**PKPab**	02 26 08.1	-0.6	
SULR		145.79	327	⇑P	**PKPbc**	02 26 07.3	+0.2	
MARR	**Marisel-Cluj**	145.82	333	⇓P	**PKPbc**	02 26 07.8	+0.5	
VOIR		145.86	329	⇑P	**PKPbc**	02 26 06.8	-0.6	
DRGR		145.91	333	⇑P	**PKPbc**	02 26 08.0	+0.5	
PRU	**Pruhonice**	145.99	344	*e*PKP	**PKPbc**	02 26 08.0	+0.5	
VRAC	**Vranov**	146.03	342	⇑P	**PKPbc**	02 26 08.5	+0.8	
VRAC	**Vranov**	146.03	342	*e*PKP	**PKPbc**	02 26 08.2	+0.5	
KASTN	**Kahler Asten**	146.04	352	*e*PKPbc	**PKPbc**	02 26 07.9	+0.3	
	baz=16,slow=2.9							
MOX	**Moxa**	146.04	348	*e*PKPbc	**PKPbc**	02 26 07.9	+0.3	
	baz=16,slow=2.9							
BORR	**Borrs**	146.07	334	⇑P	**PKPab**	02 26 09.0	-0.8	
PLN	**Plauen**	146.08	347	*e*PKPbc	**PKPbc**	02 26 08.1	+0.3	
	baz=16,slow=2.9							
TANN	**Tannenbergstha**	146.08	347	*e*PKPbc	**PKPbc**	02 26 08.2	+0.4	
	baz=16,slow=2.9							
JAVC	**Velka Javorina**	146.10	340	*e*PKP	**PKPab**	02 26 09.5	-0.5	
ARR	**Arges**	146.11	330	⇑P	**PKPbc**	02 26 07.3	-0.8	
PSZ	**Piszkesteto**	146.13	337	⇓P	**PKPbc**	02 26 08.8	+0.8	
SWN1	**Swindon**	146.15	3	*e*P	**PKPbc**	02 26 07.9	0.0	
NKC	**Novy Kostel**	146.26	347	*e*PKP	**PKPbc**	02 26 08.8	+0.5	
KRUC	**Moravsky**	146.31	342	*e*PKP	**PKPbc**	02 26 08.9	+0.5	
TREC	**Trest**	146.37	343	*e*PKP	**PKPbc**	02 26 08.9	+0.3	
WOL	**Wolverton**	146.38	3	*e*P	**PKPbc**	02 26 07.8	-0.7	
LOT	**Lotru**	146.46	331	⇓P	**PKPbc**	02 26 08.9	-0.2	
BSZH	**Besenyszg**	146.50	336	⇑P	**PKPbc**	02 26 08.5	+0.6	
DEV	**Deva**	146.53	332	⇑P	**PKPbc**	02 26 09.2	+0.1	
CSS	**Mathiatis**	146.56	307		**PKPbc**	02 26 09.3	-0.2	
MANZ	**Manzenberg**	146.56	347	*e*PKPbc	**PKPbc**	02 26 09.7	+0.6	
	baz=16,slow=2.9							
ZVC	**Zvikov**	146.58	344	*e*PKP	**PKPbc**	02 26 09.6	+0.4	
MODS	**Modra-Piesok**	146.65	340	*e*PKP	**PKPdf**	02 26 07.9	+1.1	
MODS				*e*		02 26 10.3		
MODS				*e*		02 57 00.3		
BEBN	**Eben Emael**	146.75	355	*d*PKP	**PKPab**	02 26 12.3	-0.1	
ROTZ	**Rotzenmuhle**	146.75	347	*e*PKPbc	**PKPbc**	02 26 10.2	+0.5	
	baz=16,slow=2.9							
SRO	**Srobarova**	146.79	339	*e*PKP	**PKiKP**	02 26 10.8	-0.9	
UCC	**Uccle**	146.84	356	*d*PKP	**PKPbc**	02 26 09.7	-0.1	
SBD	**Saint Breward**	146.85	7	*e*P	**PKPbc**	02 26 09.7	-0.1	
ZST	**Bratislava**	146.86	340	*e*PKP	**PKiKP**	02 26 11.7	-0.2	
MEM	**Membach**	146.90	354	*d*PKP	**PKPbc**	02 26 10.0	+0.1	
BTNL	**Ternell**	146.91	354	*d*PKP	**PKPbc**	02 26 10.2	+0.1	
GZR	**Gura Zlata**	146.96	331	⇓P	**PKPbc**	02 26 09.6	-0.8	
BSTI	**Sart Tilman**	146.97	355	*d*PKP	**PKPbc**	02 26 10.6	+0.4	
TNS	**Taunus Mts**	146.99	351	*e*PKPbc	**PKPbc**	02 26 10.8	+0.5	
	baz=16,slow=2.9							

KHC	**Kasperske Hory**	147.02	345	*e*PKP	**PKPdf**	02 26 07.7	+0.3	
KHC				*ex*	x	02 26 10.9		
CKRC	**Cesky Krumlov**	147.12	344	*e*PKP	**PKPbc**	02 26 11.1	+0.4	
BCLA	**Clavier**	147.15	355	*d*PKP	**PKPab**	02 26 14.0	-0.1	
BHOU	**Houvegnez**	147.15	354	*d*PKP	**PKPbc**	02 26 11.1	+0.5	
WET	**Wettzell**	147.18	346	*e*PKPbc	**PKPbc**	02 26 11.4	+0.6	
	baz=16,slow=2.9							
BGES	**Gesves**	147.20	355	*d*PKP	**PKPab**	02 26 13.9	-0.3	
GEC2	**GERESS Array S**	147.26	345	*e*PKPbc	**PKPbc**	02 26 11.4	+0.3	
	baz=16,slow=2.9							
GERES	**GERESS Array B**	147.26	345	PKPbc	**PKPbc**	02 26 11.4	+0.3	
	comp=Z,22nm,

baz=257,slow=75,SNR=12
H11N3 WAKE ISLAND Hy 21.11 72 T T 02 42 52.6
baz=257,slow=75,SNR=19
JSU Suzuyama 22.20 324 **P** **02 20 22.0 -0.5**
JMN Monobe 22.24 333 P **P** **02 20 24.1 +1.1**
INU Inuyama 22.52 341 **P** **02 20 25.8 +0.1**
JGF Kuroka 22.65 342 **P** **02 20 26.9 -0.3**
JNU Nakatsue 23.19 327 P **P** **02 20 32.3 -0.2**
19nm,0.7s,baz=146,slow=2.9,SNR=9.2
19nm,0.7s
MJAR Matsushiro Arr 23.30 345 P **P** **02 20 32.9 -0.5**
5.6nm,0.6s,baz=173,slow=10,SNR=11
MJAR LR LR 02 28 59.1
comp=Z,22nm,19.3s,baz=202,slow=35
5.6nm,0.6s
MJAR Matsushiro Arr 23.30 345 **P** **02 20 32.6 -0.8**
PMG Port Moresby 23.42 176 P **P** **02 20 33.5 -1.2**
YULB Yu-li 24.77 295 P **P** **02 20 45.8 -1.2**
SSLB Suanglung 25.20 296 P **P** **02 20 48.8 -2.0**
SSLB IAmb IAmb 02 21 02.4
comp=Z,26nm,1.0s
KSRS Korea Array 28.08 329 P **P** **02 21 16.1 -0.3**
comp=Z,4.4nm,0.7s,baz=146,slow=9.1,SNR=12
comp=Z,4.4nm,0.7s
NJ2 Nanjing 30.28 311 *e*P **P** **02 21 36.8 +0.8**
NJ2 pmax pmax
comp=Z,9.0nm,0.7s
USRK Ussuriysk Ar. 32.16 341 P **P** **02 21 52.6 +0.1**
comp=Z,6.0nm,0.6s,baz=172,slow=9.2,SNR=10
comp=Z,6.0nm,0.6s
DL2 Dalian 32.52 324 P **P** **02 21 56.3 +0.6**
DL2 pmax pmax
comp=Z,57nm,0.7s
BNX BinXian 35.08 338 ⇓P **P** **02 22 17.5 -0.2**
BNX pmax pmax
comp=Z,24nm,0.9s
WRA Warramunga Arr 35.62 198 P **P** **02 22 22.6 0.0**
comp=Z,3.4nm,0.8s,baz=23,slow=9.7,SNR=8.3
WRA ScP **ScP** **02 28 23.7 -2.7**
comp=Z,0.7nm,0.8s,baz=16,slow=3.4,SNR=6.4
comp=Z,3.4nm,0.8s
HNS HongShan 35.95 316 ⇓P **P** **02 22 25.8 +0.5**
HNS pmax pmax
comp=Z,19nm,1.1s
LYN LuoYang 36.17 310 P **P** **02 22 27.8 +0.6**
LYN pmax pmax
comp=Z,32nm,0.9s
BJI2 Beijing 36.48 321 P **P** **02 22 29.9 +0.1**
BJI2 pmax pmax
comp=Z,9.0nm,0.7s
BJT Baijiatuan 36.48 321 **P** **02 22 28.7 -1.1**
BJT IAmb IAmb 02 22 30.6
comp=Z,14nm,0.9s
BJT Baijiatuan 36.48 321 P **P** **02 22 29.0 -0.9**
KLR Kul'dur 36.83 345 P **P** **02 22 31.9 -0.7**
comp=Z,3.3nm,0.5s,baz=163,slow=5.6,SNR=12
comp=Z,3.3nm,0.5s
ENH Enshi 36.92 302 **P** **02 22 33.1 -0.6**
ENH IAmb IAmb 02 22 34.9
comp=Z,11nm,0.9s
ENH Enshi 36.92 302 P **P** **02 22 34.0 +0.3**
XAN Xi'an 38.65 307 P **P** **02 22 48.1 -0.1**
XAN pmax pmax
comp=Z,17nm,0.6s
XAN Xi'an 38.65 307 P **P** **02 22 48.0 -0.3**
XAN PcP **PcP** **02 24 58.5 0.0**
XLT XiLinHaoTe 38.96 325 *e*P **P** **02 22 50.8 +0.1**
XLT ScP **ScP** **02 28 31.3 -7.4**
XLT pmax pmax
comp=Z,13nm,0.8s
XLT pmax pmax
comp=Z,160nm,5.0s
HEH HeiHe 38.97 341 *e*P **P** **02 22 49.8 -0.8**
HEH pmax pmax
comp=Z,20nm,0.6s
ASAR Alice Springs 39.26 197 P **P** **02 22 53.9 +0.5**
comp=Z,0.8nm,0.8s,baz=13,slow=13,SNR=5.8
ASAR ScP **ScP** **02 28 38.1 -1.9**
comp=Z,0.6nm,0.9s,baz=0.0,slow=3.4,SNR=3.2
comp=Z,0.8nm,0.8s
HHC Hu-ho-hao-te 39.85 318 *e*P **P** **02 22 58.5 +0.3**
HHC pmax pmax
comp=Z,11nm,0.9s
PETK Petropavlovsk- 40.07 11 P **P** **02 22 59.9 +0.2**
comp=Z,4.7nm,0.7s,baz=162,slow=5.6,SNR=5.1
comp=Z,4.7nm,0.7s
BTO2 Baotou 40.90 317 *e*P **P** **02 23 07.4 +0.5**
BTO2 pP **pwP** **02 23 33.0 +1.4**
BTO2 sP **sP** **02 23 43.4 +2.6**
BTO2 pmax pmax
comp=Z,36nm,0.9s
BTO2 pmax pmax
comp=Z,190nm,5.9s
HIA Hailar 40.98 334 P **P** **02 23 06.7 -0.6**
HIA IAmb IAmb 02 23 08.4
comp=Z,20nm,0.9s
HIA Hailar 40.98 334 P **P** **02 23 07.1 -0.2**
HILR Hailar Array B 41.20 334 P **P** **02 23 09.2 +0.1**
comp=Z,6.0nm,0.5s,baz=136,slow=8.9,SNR=11
comp=Z,6.0nm,0.5s
PZH PanZhiHua 42.75 294 P **P** **02 23 22.9 +0.7**
PZH pmax pmax
comp=Z,10.0nm,0.5s
LZH Lanzhou 43.27 308 *e*P **P** **02 23 27.3 +1.1**
LZH sP sP 02 24 03.5 +3.2
LZH pmax pmax
comp=Z,18nm,1.6s
LZDM Lanzhou Array 43.34 308 P **P** **02 23 26.5 -0.5**
comp=Z,2.2nm,0.4s,baz=116,slow=6.8,SNR=8.0
comp=Z,2.2nm,0.4s
SHEM Shemya Is, Ala 44.69 24 P **P** **02 23 38.8 +1.8**
comp=Z,74nm,0.7s,baz=294,slow=7.7,SNR=4.5
MA2 Magadan 45.54 4 P **P** **02 23 44.0 +0.2**
MA2 IAmb IAmb 02 23 44.4
comp=Z,22nm,0.9s
MA2 Magadan 45.54 4 P **P** **02 23 43.3 -0.5**
STKA Stephens Creek 45.89 185 P **P** **02 23 47.0 +0.1**
comp=Z,1.4nm,0.7s,baz=329,slow=8.3,SNR=2.9
comp=Z,1.4nm,0.7s
ULN Ulaanbaatar 46.37 325 P **P** **02 23 50.9 +0.2**
ULN Ulaanbaatar 46.37 325 P **P** **02 23 51.1 +0.4**
SONM Songino Array 46.73 324 P **P** **02 23 53.8 +0.4**
comp=Z,5.6nm,0.9s,baz=132,slow=6.3,SNR=21
comp=Z,5.6nm,0.9s
SONM Songino Array 46.73 324 P **P** **02 23 53.3 -0.1**
GTA2 Gaotai 47.44 311 *e*P **P** **02 23 59.8 +0.7**
GTA2 pmax pmax
comp=Z,5.0nm,0.7s
GOMU GeErMu 50.32 305 P **P** **02 24 20.1 -1.4**
GOMU pmax pmax
comp=Z,3.0nm,0.8s
BILL Bilibino 55.53 9 P **P** **02 24 58.3 -0.4**
RAO Raoul Island 55.66 141 LR LR 02 47 16.8
comp=Z,43nm,19.7s,baz=94,slow=34
WMQ Urumqi 57.31 313 *e*P **P** **02 25 14.0 +2.1**
WMQ pP sP 02 25 44.8 -2.0
WMQ LR LR
comp=Z,140nm,24.3s
GAMB Gambell 57.73 21 P **P** **02 25 14.8 +0.5**
baz=231
SDPT Sand Point 58.31 33 P **P** **02 25 18.1 -0.5**
baz=247
M13K Dall Lake 59.13 27 **P** **02 25 24.7 +0.5**
M13K Dall Lake 59.13 27 P **P** **02 25 25.7 +1.6**
baz=242,SNR=5.1
K13K Kusilvak Mount 59.33 25 P **P** **02 25 26.3 +0.8**
K13K Kusilvak Mount 59.33 25 P **P** **02 25 26.8 +1.2**
baz=239,SNR=11
O14K Tigyukauivet M 59.53 28 P **P** **02 25 28.0 +1.0**
baz=244
N14K Kuskokwak Cree 59.64 28 P **P** **02 25 28.8 +1.2**
baz=244
L14K Kuka Creek 59.86 26 P **P** **02 25 30.2 +1.1**
L14K Kuka Creek 59.86 26 P **P** **02 25 30.4 +1.3**
baz=242,SNR=7.0
M14K Bethel 59.89 27 P **P** **02 25 30.6 +1.2**
M14K Bethel 59.89 27 P **P** **02 25 30.6 +1.2**
baz=243
TNA Tin City 60.10 20 P **P** **02 25 31.2 +0.5**
baz=234
O15K Ungalikthiuk R 60.17 29 P **P** **02 25 32.4 +1.1**
O15K Ungalikthiuk R 60.17 29 P **P** **02 25 32.4 +1.1**
baz=246
J14K Nanvaranak Lak 60.18 24 P **P** **02 25 32.6 +1.2**
baz=240
M15K Kasigluk River 60.42 27 P **P** **02 25 33.8 +0.7**
baz=244
ANM Nome 60.44 22 **P** **02 25 33.4 +0.3**
ANM IAmb IAmb 02 25 34.7
comp=Z,12nm,1.1s
ANM Nome 60.44 22 P **P** **02 25 33.8 +0.8**
baz=237,SNR=7.7
N15K Kwethluk River 60.46 28 **P** **02 25 34.6 +1.2**
N15K Kwethluk River 60.46 28 P **P** **02 25 34.6 +1.2**
baz=245
L15K Ungalak Mounta 60.52 26 P **P** **02 25 34.4 +0.7**
baz=243
F14K Arctic Creek 60.60 21 P **P** **02 25 34.8 +0.7**
baz=236,SNR=14
K15K Wolf Creek Mou 60.79 25 **P** **02 25 36.3 +0.8**
K15K Wolf Creek Mou 60.79 25 P **P** **02 25 36.6 +1.1**
baz=242
P16K Nushagak River 60.98 30 P **P** **02 25 38.1 +1.3**
baz=248
G15K Niukluk 61.15 22 P **P** **02 25 38.9 +1.0**
baz=239
O16K Kokwok River B 61.15 29 P **P** **02 25 39.0 +1.0**
baz=247
N16K Nishlik Lake 61.19 28 P **P** **02 25 39.4 +1.1**
baz=246
F15K North Star Dit 61.31 21 **P** **02 25 39.3 +0.3**
F15K IAmb IAmb 02 25 41.2
comp=Z,5.6nm,0.6s
F15K North Star Dit 61.31 21 P **P** **02 25 39.5 +0.4**
baz=238
M16K Timber Creek 61.33 27 P **P** **02 25 40.0 +0.8**
baz=246
L16K Owhat River 61.40 26 P **P** **02 25 40.3 +0.7**
baz=245
MKAR Makanchi Array 61.62 316 P **P** **02 25 40.8 -0.7**
comp=Z,1.8nm,0.5s,baz=90,slow=8.4,SNR=20
comp=Z,1.8nm,0.5s
MKAR Manchi Array 61.62 316 P **P** **02 25 41.1 -0.4**
J16K Anvik River 61.62 24 **P** **02 25 42.1 +1.0**
J16K Anvik River 61.62 24 P **P** **02 25 42.2 +1.0**
baz=243
ZAA0 Zalesovo Array 61.62 324 **P** **02 25 40.9 -0.4**
ZAA0 IAmb IAmb 02 25 42.7
comp=Z,3.6nm,0.6s
ZALV Zalesovo Beam 61.62 324 P **P** **02 25 40.4 -0.9**
comp=Z,3.5nm,0.6s,baz=106,slow=7.5,SNR=12
comp=Z,3.5nm,0.6s
ZALV Zalesovo Beam 61.62 324 **P** **02 25 40.6 -0.7**
H16K Elim 61.63 23 P **P** **02 25 41.4 +0.2**
baz=241,SNR=5.4
O17K Koliganek Bris 61.69 29 P **P** **02 25 42.7 +1.1**
baz=248
I17K Unalakleet 61.87 24 P **P** **02 25 43.5 +0.8**
I17K IAmb IAmb 02 25 44.9
comp=Z,14nm,1.0s
I17K Unalakleet 61.87 24 P **P** **02 25 43.9 +1.2**
baz=242,SNR=5.9
N17K Nushagak Hills 61.93 28 P **P** **02 25 44.5 +1.3**
N17K Nushagak Hills 61.93 28 P **P** **02 25 44.8 +1.5**
baz=248
G16K Koyuk River 61.97 22 P **P** **02 25 44.4 +1.0**
baz=240
L17K Donlin 62.08 26 P **P** **02 25 45.5 +1.3**
baz=246,SNR=5.2
M17K Holitna River 62.16 27 P **P** **02 25 45.7 +1.0**
M17K Holitna River 62.16 27 P **P** **02 25 46.1 +1.3**
baz=247
K17K Iditarod 62.32 26 **P** **02 25 46.6 +0.8**
K17K Iditarod 62.32 26 P **P** **02 25 47.1 +1.3**
baz=245,SNR=12
P18K Big Mountain, 62.44 30 P **P** **02 25 47.6 +0.9**
baz=250
C16K Lisburne Hills 62.50 18 **P** **02 25 46.8 -0.1**
C16K IAmb IAmb 02 25 48.2
comp=Z,6.6nm,0.8s
C16K Lisburne Hills 62.50 18 P **P** **02 25 46.9 0.0**
baz=236,SNR=7.1
N18K Kilae Creek 62.58 28 P **P** **02 25 48.7 +1.1**
baz=249
O18K Koktuh Hills 62.60 29 P **P** **02 25 49.0 +1.2**
baz=250
G17K Kiwalik Mounta 62.64 22 P **P** **02 25 48.6 +0.7**
baz=242
H17K Granite Mounta 62.65 23 P **P** **02 25 49.0 +1.1**
H17K Granite Mounta 62.65 23 P **P** **02 25 48.8 +0.8**
baz=243
L18K Granite Mounta 62.80 26 P **P** **02 25 49.4 +0.3**
L18K Granite Mounta 62.80 26 P **P** **02 25 50.3 +1.3**
baz=247,SNR=5.1
F17K Baldwin Pennin 62.88 21 **P** **02 25 49.6 +0.2**
F17K IAmb IAmb 02 25 51.7
comp=Z,10nm,0.7s
F17K Baldwin Pennin 62.88 21 P **P** **02 25 49.9 +0.4**
baz=241,SNR=10
D17K Noatak River 62.90 20 P **P** **02 25 50.1 +0.5**
baz=238,SNR=14
M18K Stony River 62.91 27 P **P** **02 25 50.5 +0.8**
baz=248
E17K Hotham Inlet 63.00 20 P **P** **02 25 51.0 +0.7**
baz=240,SNR=9.5
RDOG Red Dog Mine 63.15 19 P **P** **02 25 51.7 +0.5**
RDOG IAmb IAmb 02 25 52.5
comp=Z,8.0nm,0.9s
RDOG Red Dog Mine 63.15 19 P **P** **02 25 51.9 +0.7**
baz=238
N19K Bonanza Creek 63.27 28 P **P** **02 25 53.3 +1.0**
N19K Bonanza Creek 63.27 28 P **P** **02 25 53.5 +1.2**
baz=250
J18K Innoko River 63.28 25 P **P** **02 25 52.6 +0.4**
baz=247
C17K DeLong Mountai 63.29 19 P **P** **02 25 52.4 +0.3**
baz=238,SNR=5.1
H18K Honhosa River 63.34 23 P **P** **02 25 52.7 +0.2**
H18K IAmb IAmb 02 26 09.1
comp=Z,25nm,1.9s
H18K Honhosa River 63.34 23 P **P** **02 25 52.7 +0.2**
baz=244
P19K Oil 63.48 30 P **P** **02 25 53.9 +0.2**
baz=252
F18K Selawik 63.52 21 P **P** **02 25 53.9 +0.3**
baz=242
G18K Tagagawik 63.56 22 **P** **02 25 54.2 +0.2**
G18K IAmb IAmb 02 25 55.3
comp=Z,9.0nm,0.9s
G18K Tagagawik 63.56 22 P **P** **02 25 54.4 +0.4**
baz=244,SNR=9.0
Q20K Shuyak Island 63.58 31 P **P** **02 25 54.9 +0.7**
baz=253
E18K Tukpahlearik C 63.58 20 **P** **02 25 54.5 +0.5**
E18K IAmb IAmb 02 25 55.6
comp=Z,8.1nm,0.9s
E18K Tukpahlearik C 63.58 20 P **P** **02 25 54.8 +0.7**
baz=241,SNR=14
L19K White Mountain 63.59 27 **P** **02 25 54.8 +0.6**
L19K IAmb IAmb 02 25 56.8
comp=Z,14nm,1.0s
L19K White Mountain 63.59 27 P **P** **02 25 55.3 +1.1**
baz=249,SNR=6.0
M19K Big River Lodg 63.69 27 P **P** **02 25 55.8 +0.9**
baz=250
J19K Poorman 63.94 25 P **P** **02 25 57.7 +1.2**
J19K IAmb IAmb 02 25 58.3
comp=Z,11nm,0.9s
J19K Poorman 63.94 25 P **P** **02 25 57.2 +0.8**
baz=248
C18K Utukok River 64.00 19 P **P** **02 25 56.8 0.0**
C18K Utukok River 64.00 19 P **P** **02 25 57.0 +0.1**
baz=240,SNR=6.4
G19K Purcell Mounta 64.24 22 P **P** **02 25 58.4 0.0**
G19K IAmb IAmb 02 26 00.3
comp=Z,13nm,0.8s
G19K Purcell Mounta 64.24 22 P **P** **02 25 58.8 +0.3**
baz=245
M20K Styx River 64.25 27 P **P** **02 26 00.0 +1.4**
baz=251
HOM Homer 64.25 30 P **P** **02 26 00.3 +1.7**
baz=253
F19K Shaleruckik Mo 64.29 22 P **P** **02 25 58.6 -0.1**
baz=244
K20K Telida 64.35 26 P **P** **02 26 00.3 +1.2**
baz=249,SNR=7.2
N20K Mount Spurr 64.45 28 P **P** **02 26 01.3 +1.3**
baz=252
SPCR Spurr Chakacha 64.45 28 P **P** **02 26 01.0 +1.0**
baz=252
BRLK Bradley Lake 64.65 30 **P** **02 26 01.4 +0.1**
KURK Kurchatov 64.65 320 **P** **02 26 00.8 -0.6**
KURK IAmb IAmb 02 26 04.0
comp=Z,6.8nm,0.8s
KURBB Kurchatov Arra 64.70 320 P **P** **02 26 00.9 -0.8**
comp=Z,8.0nm,0.8s,baz=99,slow=7.0,SNR=21
comp=Z,8.0nm,0.8s
BRSE Bradley Lake S 64.72 30 P **P** **02 26 01.6 0.0**
baz=254
C19K Lookout Ridge 64.73 19 **P** **02 26 01.7 0.0**
C19K IAmb IAmb 02 26 03.3
comp=Z,8.9nm,0.8s
C19K Lookout Ridge 64.73 19 P **P** **02 26 02.2 +0.6**
baz=241
E19K Redstone River 64.75 21 P **P** **02 26 02.5 +0.7**
baz=244
H20K Anotleneega Mo 64.81 23 P **P** **02 26 02.7 +0.6**
baz=248
D19K Kuna River 64.92 20 P **P** **02 26 03.1 +0.2**
baz=243
PPLA Purkeypile 64.99 27 P **P** **02 26 04.1 +0.5**
PPLA Purkeypile 64.99 27 P **P** **02 26 04.1 +0.5**
baz=251
SKT Skwentna 65.00 28 P **P** **02 26 03.3 -0.1**
SKT IAmb IAmb 02 26 04.3
comp=Z,18nm,1.1s
SKT Skwentna 65.00 28 P **P** **02 26 03.6 +0.2**
baz=252,SNR=6.5
F20K Avaraart Lake 65.11 22 **P** **02 26 04.5 +0.4**
F20K Avaraart Lake 65.11 22 P **P** **02 26 04.9 +0.9**
baz=246
SLKM Skilak Lake 65.18 29 P **P** **02 26 04.8 +0.2**
SUA Susitna One 65.20 28 P **P** **02 26 05.1 +0.2**
baz=253
CHUM Lake Minchumin 65.26 26 P **P** **02 26 06.1 +1.0**
baz=251
O22K Cooper Landing 65.41 29 P **P** **02 26 06.6 +0.5**
O22K Cooper Landing 65.41 29 P **P** **02 26 06.6 +0.5**
baz=255,SNR=5.1
SEW Seward 65.44 30 P **P** **02 26 06.7 +0.5**
baz=255
E20K Nigu River 65.46 20 P **P** **02 26 06.9 +0.5**
baz=245
L22K Petersville 65.50 27 P **P** **02 26 06.6 -0.2**
D20K Etivluk River 65.51 20 P **P** **02 26 07.3 +0.7**
D20K IAmb IAmb 02 26 08.4
comp=Z,9.6nm,0.8s
D20K Etivluk River 65.51 20 P **P** **02 26 06.9 +0.3**
baz=244
RC01 Rabbit Creek A 65.56 29 **P** **02 26 07.3 +0.2**
RC01 Rabbit Creek A 65.56 29 P **P** **02 26 07.3 +0.2**
baz=254,SNR=9.1
M22K Willow 65.57 28 P **P** **02 26 06.7 -0.3**
M22K Willow 65.57 28 P **P** **02 26 07.1 0.0**
baz=254
H21K Melozitna Rive 65.67 24 P **P** **02 26 08.2 +0.5**
H21K IAmb IAmb 02 26 09.5
comp=Z,7.2nm,0.8s
H21K Melozitna Rive 65.67 24 P **P** **02 26 08.5 +0.8**
baz=250
CUT Chulitna 65.69 27 P **P** **02 26 07.5 -0.4**
baz=253
G21K Allakaket 65.72 23 P **P** **02 26 08.1 +0.1**
G21K IAmb IAmb 02 26 09.6
comp=Z,13nm,1.2s
G21K Allakaket 65.72 23 P **P** **02 26 08.7 +0.7**
baz=248
KTH Kantishna Hill 65.75 26 P **P** **02 26 08.7 +0.4**
I21K Tanana 65.83 24 P **P** **02 26 09.6 +0.8**
baz=250
BPAW Bear Paw Mtn. 65.89 25 P **P** **02 26 09.3 +0.1**
BPAW IAmb IAmb 02 26 10.6
comp=Z,16nm,0.9s
BPAW Bear Paw Mtn. 65.89 25 P **P** **02 26 09.7 +0.6**
baz=252,SNR=10
B20K Meade River 65.91 18 P **P** **02 26 09.4 +0.2**
B20K Meade River 65.91 18 P **P** **02 26 09.5 +0.4**
baz=243
PMR Palmer 65.98 28 P **P** **02 26 09.9 +0.2**
PMR Palmer 65.98 28 P **P** **02 26 09.6 -0.1**
baz=255,SNR=5.9
TRF Thorofare Moun 65.99 26 P **P** **02 26 09.5 -0.5**
TRF IAmb IAmb 02 26 17.1
comp=Z,19nm,1.2s
TRF Thorofare Moun 65.99 26 P **P** **02 26 09.8 -0.2**
baz=253
F21K Alatna River 65.99 22 P **P** **02 26 10.3 +0.6**
baz=248
GHO Glory Hole Cre 66.12 28 P **P** **02 26 11.1 +0.3**
KNK Knik Glacier 66.25 29 P **P** **02 26 11.8 +0.4**
KNK Knik Glacier 66.25 29 P **P** **02 26 11.9 +0.4**
baz=256,SNR=6.3
MLY Manley 66.28 25 P **P** **02 26 11.9 +0.2**
MLY IAmb IAmb 02 26 13.2
comp=Z,11nm,0.8s
MLY Manley 66.28 25 P **P** **02 26 12.3 +0.6**
baz=252,SNR=11
C21K Knifeblade Rid 66.30 20 P **P** **02 26 12.2 +0.6**
baz=246,SNR=5.3
H22K Ishtalitna Cre 66.31 24 P **P** **02 26 12.4 +0.6**
baz=251
SML Sawmill 66.40 28 P **P** **02 26 12.9 +0.3**
SML Sawmill 66.40 28 P **P** **02 26 12.9 +0.3**
baz=255,SNR=11
P23K Montague Islan 66.41 30 P **P** **02 26 12.7 +0.2**
baz=257
B21K Ikpikpuk River 66.54 19 P **P** **02 26 13.5 +0.3**
baz=246,SNR=6.2
WAT1 Susitna Watana 66.57 27 P **P** **02 26 13.6 0.0**
baz=255
RND Reindeer 66.59 27 **P** **02 26 13.4 -0.4**
RND IAmb IAmb 02 26 14.9
comp=Z,12nm,0.9s
MCK McKinley 66.65 26 P **P** **02 26 14.1 0.0**
baz=254
M23K Glacier View 66.68 28 P **P** **02 26 14.6 +0.4**
baz=256,SNR=5.4
GLI Glacier Island 66.76 29 P **P** **02 26 15.3 +0.5**
baz=257
NEA2 Nenana 66.83 25 P **P** **02 26 15.3 +0.1**
NEA2 Nenana 66.83 25 P **P** **02 26 15.4 +0.3**
baz=254
WAT6 Susitna Watana 66.87 28 P **P** **02 26 15.7 +0.1**
baz=256,SNR=8.8
SCM Sheep Creek Mo 66.87 28 P **P** **02 26 16.4 +0.8**
SCM Sheep Creek Mo 66.87 28 P **P** **02 26 16.2 +0.7**
baz=256,SNR=7.1
I23K Minto, Yukon-K 66.87 25 P **P** **02 26 15.6 +0.2**
I23K IAmb IAmb 02 26 17.0
comp=Z,13nm,0.9s
I23K Minto, Yukon-K 66.87 25 P **P** **02 26 16.0 +0.6**
baz=253,SNR=8.3
D22K Ayikyak River 66.89 20 IAmb IAmb 02 26 17.2
comp=Z,16nm,1.2s
D22K Ayikyak River 66.89 20 P **P** **02 26 16.0 +0.6**
baz=248,SNR=8.4
E22K Anaktuvuk Pass 66.92 21 P **P** **02 26 16.1 +0.4**
baz=250
G23K Bananza Creek 67.09 23 P **P** **02 26 17.5 +0.7**
baz=252
DHY Denali Highway 67.15 27 P **P** **02 26 17.9 +0.5**
DHY IAmb IAmb 02 26 19.2
comp=Z,7.9nm,0.8s
DHY Denali Highway 67.15 27 P **P** **02 26 18.5 +1.1**
baz=256,SNR=6.4
COLD Coldfoot 67.19 22 P **P** **02 26 17.8 +0.5**
COLD IAmb IAmb 02 26 19.6
comp=Z,9.4nm,0.8s
COLD Coldfoot 67.19 22 P **P** **02 26 18.2 +0.8**
baz=251,SNR=10
WRH Wood River Hil 67.21 25 P **P** **02 26 17.2 -0.2**
WRH IAmb IAmb 02 26 18.4
comp=Z,14nm,0.8s
B22K Teshekpuk Lake 67.21 19 IAmb IAmb 02 26 18.4
comp=Z,12nm,0.8s
B22K Teshekpuk Lake 67.21 19 P **P** **02 26 18.2 +0.9**
baz=247
EYAK Cordova Ski Ar 67.33 30 P **P** **02 26 19.1 +0.7**
baz=258
CCB Clear Creek Bu 67.37 25 P **P** **02 26 18.0 -0.5**
CCB IAmb IAmb 02 26 18.9
comp=Z,13nm,1.4s
COLA College 67.41 25 P **P** **02 26 19.4 +0.6**
baz=255
DIV Divide 67.44 29 P **P** **02 26 19.6 +0.4**
DIV IAmb IAmb 02 26 21.0
comp=Z,14nm,0.8s
KLU Klutina 67.45 29 P **P** **02 26 19.9 +0.7**
KLU IAmb IAmb 02 26 21.1
comp=Z,17nm,1.1s

KLU	**Klutina**	**67.45**	**29**	P	**P**	**02 26 19.9 +0.7**
	baz=258					
M24K	**Tolsona, Glenn**	**67.47**	**28**	P	**P**	**02 26 20.0 +0.7**
	baz=257					
D23K	**Nanushuk River**	**67.59**	**20**	P	**P**	**02 26 20.8 +1.0**
D23K				IAmb	IAmb	02 26 22.1
	comp=Z,9.6nm,1.0s					
D23K	**Nanushuk River**	**67.59**	**20**	P	**P**	**02 26 20.9 +1.0**
	baz=250					
POKR	**Poker Plat Res**	**67.65**	**25**	P	**P**	**02 26 20.9 +0.6**
	baz=255					
H24K	**Noodor Dome**	**67.66**	**24**		**P**	**02 26 20.5 +0.1**
H24K				IAmb	IAmb	02 26 22.1
	comp=Z,9.1nm,1.0s					
H24K	**Noodor Dome**	**67.66**	**24**	P	**P**	**02 26 21.3 +0.9**
	baz=254					
E23K	**Chandalar**	**67.67**	**22**		**P**	**02 26 21.4 +0.9**
E23K				IAmb	IAmb	02 26 23.0
	comp=Z,18nm,0.9s					
E23K	**Chandalar**	**67.67**	**22**	P	**P**	**02 26 21.5 +1.0**
	baz=252,SNR=18					
HDA	**Harding Lake**	**67.67**	**26**	P	**P**	**02 26 20.6 +0.1**
HDA				IAmb	IAmb	02 26 21.0
	comp=Z,8.2nm,0.7s					
HDA	**Harding Lake**	**67.67**	**26**	P	**P**	**02 26 20.2 -0.2**
	baz=256,SNR=6.9					
IL31		**67.78**	**25**	P	**P**	**02 26 19.9 -1.1**
IL31				IAmb	IAmb	02 26 21.1
	comp=Z,9.2nm,0.7s					
ILAR	**Eielson Array**	**67.78**	**25**	P	**P**	**02 26 20.1 -1.1**
	comp=Z,6.9nm,0.7s,baz=249,slow=6.1,SNR=76					
	comp=Z,6.9nm,0.7s					
ILAR	**Eielson Array**	**67.78**	**25**		**P**	**02 26 20.0 -1.2**
TOLK	**Toolik Lake Re**	**67.87**	**21**	P	**P**	**02 26 22.1 +0.4**
	baz=252,SNR=6.8					
C23K	**Itkillik River**	**67.92**	**20**	P	**P**	**02 26 22.3 +0.4**
C23K				IAmb	IAmb	02 26 23.4
	comp=Z,16nm,1.0s					
C23K	**Itkillik River**	**67.92**	**20**	P	**P**	**02 26 22.4 +0.5**
	baz=250,SNR=9.0					
BMRM	**Bremner River**	**67.97**	**30**	P	**P**	**02 26 23.2 +0.8**
BMRM				IAmb	IAmb	02 26 25.0
	comp=Z,14nm,0.8s					
BMRM	**Bremner River**	**67.97**	**30**	P	**P**	**02 26 23.2 +0.8**
	baz=259					
PAX	**Paxson**	**67.97**	**27**	P	**P**	**02 26 22.7 +0.3**
PAX				IAmb	IAmb	02 26 23.8
	comp=Z,13nm,0.7s					
PAX	**Paxson**	**67.97**	**27**	P	**P**	**02 26 22.9 +0.4**
	baz=258,SNR=11					
HARP	**HAARP**	**67.99**	**28**	P	**P**	**02 26 23.3 +0.7**
	baz=258,SNR=10					
K24K	**Donnelly Dome**	**68.02**	**26**	P	**P**	**02 26 22.9 +0.2**
K24K	**Donnelly Dome**	**68.02**	**26**	P	**P**	**02 26 23.0 +0.3**
	baz=257,SNR=6.2					
G24K	**Hadweenzic Riv**	**68.06**	**23**	P	**P**	**02 26 23.0 +0.2**
G24K				IAmb	IAmb	02 26 24.6
	comp=Z,11nm,1.1s					
G24K	**Hadweenzic Riv**	**68.06**	**23**	P	**P**	**02 26 23.6 +0.7**
	baz=254					
E24K	**Your Creek**	**68.08**	**22**	P	**P**	**02 26 23.6 +0.6**
E24K				IAmb	IAmb	02 26 24.6
	comp=Z,12nm,1.3s					
E24K	**Your Creek**	**68.08**	**22**	P	**P**	**02 26 23.5 +0.5**
	baz=253,SNR=8.3					
N25K	**Chitina, Valde**	**68.09**	**29**	P	**P**	**02 26 23.9 +0.7**
N25K				IAmb	IAmb	02 26 24.8
	comp=Z,8.2nm,0.8s					
N25K	**Chitina, Valde**	**68.09**	**29**	P	**P**	**02 26 23.9 +0.7**
	baz=259					
D24K	**Happy Valley**	**68.29**	**21**	P	**P**	**02 26 25.2 +1.0**
	baz=252					
J25K	**Salcha River,**	**68.38**	**26**	IAmb	IAmb	02 26 26.3
	comp=Z,28nm,2.0s					
J25K	**Salcha River,**	**68.38**	**26**	P	**P**	**02 26 24.7 -0.3**
	baz=257					
RIDG	**Independent Ri**	**68.41**	**27**	P	**P**	**02 26 25.6 +0.4**
RIDG				IAmb	IAmb	02 26 27.0
	comp=Z,22nm,1.2s					
RIDG	**Independent Ri**	**68.41**	**27**	P	**P**	**02 26 25.4 +0.2**
	baz=258,SNR=5.3					
GLB	**Gilahina Butte**	**68.43**	**29**	IAmb	IAmb	02 26 27.7
	comp=Z,21nm,1.2s					
C24K	**Franklin Bluff**	**68.50**	**20**	P	**P**	**02 26 26.0 +0.5**
	baz=252					
CRQE	**Cirque**	**68.66**	**30**	P	**P**	**02 26 27.5 +0.7**
	baz=261					
MCARA	**McCarthy VSAT**	**68.80**	**29**	IAmb	IAmb	02 26 29.8
	comp=Z,19nm,0.9s					
MCARA	**McCarthy VSAT**	**68.80**	**29**	P	**P**	**02 26 28.5 +1.0**
	baz=260					
SCRK	**Sand Creek**	**68.83**	**26**	P	**P**	**02 26 28.1 +0.2**
	baz=259,SNR=7.9					
L26K	**Log Cabin Wild**	**68.93**	**28**	IAmb	IAmb	02 26 30.0
	comp=Z,10nm,0.8s					
L26K	**Log Cabin Wild**	**68.93**	**28**	P	**P**	**02 26 29.1 +0.7**
	baz=260,SNR=7.1					
F25K	**Christian Rive**	**68.98**	**23**	P	**P**	**02 26 29.6 +1.0**
	baz=256,SNR=10					
M26K	**Nabesna, AK**	**68.98**	**28**	P	**P**	**02 26 29.8 +1.0**
	baz=260					
MESA	**MESA**	**69.13**	**31**	P	**P**	**02 26 30.8 +0.9**
	baz=262					
E25K	**Arctic Village**	**69.14**	**22**	P	**P**	**02 26 30.3 +0.7**
	baz=256,SNR=6.2					
D25K	**Kavik River**	**69.17**	**21**	IAmb	IAmb	02 26 32.8
	comp=Z,9.0nm,0.7s					
D25K	**Kavik River**	**69.17**	**21**	P	**P**	**02 26 30.4 +0.7**
	baz=254,SNR=12					
BMAR	**Burnt Mountain**	**69.34**	**23**	P	**P**	**02 26 30.9 +0.1**
I26K	**Coal Creek Min**	**69.45**	**25**	P	**P**	**02 26 31.2 -0.2**
	baz=259					
M27K	**Edge Creek, AK**	**69.49**	**28**	IAmb	IAmb	02 26 33.7
	comp=Z,9.7nm,0.8s					
M27K	**Edge Creek, AK**	**69.49**	**28**	P	**P**	**02 26 32.8 +0.8**
	baz=261					
G26K	**Porcupine Rive**	**69.53**	**23**	P	**P**	**02 26 33.1 +1.2**
	baz=258,SNR=8.6					
CTG	**Chitna Glacier**	**69.54**	**30**	P	**P**	**02 26 33.4 +1.1**
	baz=262,SNR=5.3					
F26K	**Sheenjek River**	**69.56**	**23**	P	**P**	**02 26 33.2 +1.0**
	baz=257,SNR=9.7					
L27K	**Beaver Creek,**	**69.62**	**28**	IAmb	IAmb	02 26 34.3
	comp=Z,8.8nm,0.8s					
L27K	**Beaver Creek,**	**69.62**	**28**	P	**P**	**02 26 33.6 +0.9**
	baz=261					
BCAR	**Beaver Creek A**	**69.64**	**28**	P	**P**	**02 26 33.6 +0.9**
C26K	**Camden Bay**	**69.82**	**20**	P	**P**	**02 26 35.1 +1.4**
	baz=256					
PINM	**Pinnacle**	**69.96**	**31**	P	**P**	**02 26 35.9 +1.1**
	baz=263					
BVCY	**Beaver Creek**	**69.97**	**28**	P	**P**	**02 26 35.8 +1.0**
	baz=262,SNR=5.9					
BVAR	**Borovoye Array**	**69.97**	**322**	P	**P**	**02 26 33.8 -1.1**
	comp=Z,2.8nm,0.6s,baz=81,slow=9.2,SNR=4.6					
	comp=Z,2.8nm,0.6s					
BORK	**Borovoye**	**70.01**	**322**		**P**	**02 26 34.0 -1.2**
YUK3	**Moose Creek**	**70.07**	**29**	P	**P**	**02 26 36.5 +0.9**
	baz=263,SNR=7.6					
O28M	**Mount Upton**	**70.07**	**30**	P	**P**	**02 26 37.1 +1.4**
	baz=263					
I27K	**Kandik River**	**70.14**	**25**	P	**P**	**02 26 36.1 +0.4**
	baz=260					
C27K	**Jago River**	**70.16**	**21**	IAmb	IAmb	02 26 37.0
	comp=Z,5.8nm,0.6s					
C27K	**Jago River**	**70.16**	**21**	P	**P**	**02 26 36.5 +0.8**
	baz=257,SNR=7.5					
H27K	**Steamboat Moun**	**70.28**	**24**	IAmb	IAmb	02 26 38.4
	comp=Z,13nm,0.8s					
H27K	**Steamboat Moun**	**70.28**	**24**	P	**P**	**02 26 37.5 +0.9**
	baz=260,SNR=13					
YUK8	**Steele Glacier**	**70.34**	**30**	P	**P**	**02 26 38.6 +1.2**
	baz=264,SNR=7.4					
I28M	**Miner Creek**	**70.80**	**25**	P	**P**	**02 26 40.9 +1.0**
	baz=262					
O29M	**Mount Kennedy**	**70.82**	**31**	IAmb	IAmb	02 26 45.0
	comp=Z,16nm,1.1s					
O29M	**Mount Kennedy**	**70.82**	**31**	P	**P**	**02 26 41.8 +1.7**
	baz=265					
DAWY	**Dawson**	**70.85**	**27**	IAmb	IAmb	02 26 41.9
	comp=Z,8.4nm,0.9s					
DAWY	**Dawson**	**70.85**	**27**	P	**P**	**02 26 41.2 +1.1**
	baz=263,SNR=6.4					
YUK4	**Talbot Arm**	**70.88**	**30**	P	**P**	**02 26 42.5 +1.9**
	baz=264,SNR=9.6					
YUK6	**Outpost Mounta**	**70.98**	**30**	P	**P**	**02 26 42.6 +1.4**
	baz=265					
D27M	**Malcolm River**	**71.03**	**21**	P	**P**	**02 26 42.0 +0.8**
	baz=260,SNR=6.5					
M29M	**Somme Creek**	**71.08**	**28**	IAmb	IAmb	02 26 44.0
	comp=Z,14nm,0.8s					
M29M	**Somme Creek**	**71.08**	**28**	P	**P**	**02 26 42.7 +1.1**
	baz=264					
F28M	**Old Crow**	**71.15**	**23**	P	**P**	**02 26 42.6 +0.8**
	baz=261,SNR=9.1					
L29M	**L29M**	**71.30**	**28**	P	**P**	**02 26 44.4 +1.6**
	baz=264					
HYT	**Haines Junctio**	**71.39**	**30**	IAmb	IAmb	02 26 46.1
	comp=Z,16nm,0.7s					
HYT	**Haines Junctio**	**71.39**	**30**	P	**P**	**02 26 45.1 +1.6**
	baz=266,SNR=9.0					
J29N	**Klondike Camp**	**71.40**	**26**	IAmb	IAmb	02 26 45.6
	comp=Z,29nm,1.5s					
J29N	**Klondike Camp**	**71.40**	**26**	P	**P**	**02 26 44.7 +1.3**
	baz=264,SNR=5.2					
E28M	**Babbage River**	**71.43**	**22**	P	**P**	**02 26 44.5 +1.0**
	baz=261					
I29M	**Ogilvie Camp,**	**71.47**	**25**	P	**P**	**02 26 44.8 +1.0**
	baz=263					
P30M	**Million Dollar**	**71.61**	**31**	P	**P**	**02 26 46.0 +1.2**
	baz=266					
N30M	**Aishikik Lake**	**71.64**	**30**	P	**P**	**02 26 46.2 +1.3**
	baz=266					
K29M	**Barlow Dome**	**71.64**	**27**	IAmb	IAmb	02 26 47.2
	comp=Z,14nm,0.8s					
K29M	**Barlow Dome**	**71.64**	**27**	P	**P**	**02 26 46.1 +1.1**
	baz=265,SNR=9.9					
G29M	**Pine Creek**	**71.77**	**24**	P	**P**	**02 26 46.5 +1.0**
	baz=263					
D28M	**Stokes Point**	**71.82**	**21**	P	**P**	**02 26 46.5 +0.7**
	baz=262					
M30M	**Minto, Yukon**	**71.86**	**28**	P	**P**	**02 26 47.3 +1.1**
	baz=266,SNR=5.9					
E29M	**Blow River**	**72.00**	**22**	P	**P**	**02 26 48.1 +1.3**
	baz=263					
O30N	**Mendenhall**	**72.08**	**30**	P	**P**	**02 26 48.7 +1.1**
	baz=267					
EPYK	**Eagle Plains**	**72.22**	**24**	P	**P**	**02 26 48.7 +0.4**
	baz=264					
J30M	**Hart River**	**72.22**	**26**	P	**P**	**02 26 49.3 +0.9**
	baz=266,SNR=6.1					
I30M	**Mount Dempster**	**72.26**	**26**	P	**P**	**02 26 49.5 +0.9**
	baz=265,SNR=5.5					
N31M	**Braeburn, Yuko**	**72.27**	**30**	IAmb	IAmb	02 26 51.1
	comp=Z,14nm,1.0s					
N31M	**Braeburn, Yuko**	**72.27**	**30**	P	**P**	**02 26 49.9 +1.2**
	baz=267					
MAYO	**Mayo, Yukon**	**72.34**	**27**	P	**P**	**02 26 50.4 +1.3**
	baz=266					
G30M	**tAoh Zraii Nji**	**72.48**	**24**	P	**P**	**02 26 50.7 +0.8**
	baz=265,SNR=6.7					
WHY	**Whitehorse**	**72.67**	**30**	IAmb	IAmb	02 26 53.5
	comp=Z,20nm,0.9s					
WHY	**Whitehorse**	**72.67**	**30**	P	**P**	**02 26 52.2 +1.0**
	baz=268					
F30M	**Barrier River**	**72.70**	**23**	IAmb	IAmb	02 26 52.8
	comp=Z,21nm,1.1s					
F30M	**Barrier River**	**72.70**	**23**	P	**P**	**02 26 51.7 +0.6**
	baz=265,SNR=9.6					
S32K	**Killisnoo**	**72.74**	**34**	P	**P**	**02 26 52.4 +0.9**
	baz=269					
R32K	**Eaglecrest**	**72.79**	**33**	P	**P**	**02 26 52.6 +0.8**
	baz=269					
M31M	**Drury Creek, Y**	**72.96**	**29**	P	**P**	**02 26 53.5 +0.7**
	baz=268,SNR=5.1					
H31M	**Peel River**	**73.15**	**25**	IAmb	IAmb	02 26 55.9
	comp=Z,11nm,0.9s					
H31M	**Peel River**	**73.15**	**25**	P	**P**	**02 26 54.5 +0.7**
	baz=267					
P32M	**Atlin**	**73.22**	**32**	P	**P**	**02 26 54.8 +0.5**
	baz=269					
G31M	**Satah River**	**73.24**	**24**	IAmb	IAmb	02 26 56.0
	comp=Z,16nm,0.9s					
G31M	**Satah River**	**73.24**	**24**	P	**P**	**02 26 54.5 +0.3**
	baz=267,SNR=11					
F31M	**Tsiigehtchic**	**73.47**	**23**	P	**P**	**02 26 55.9 +0.3**
	baz=267,SNR=5.1					
N32M	**Quiet Lake**	**73.56**	**30**	P	**P**	**02 26 57.2 +0.9**
	baz=269					
INK	**Inuvik**	**73.61**	**22**	P	**P**	**02 26 56.3 0.0**
	comp=Z,5.3nm,0.8s,baz=271,slow=6.0,SNR=19					
	comp=Z,5.3nm,0.8s					
INK	**Inuvik**	**73.61**	**22**	P	**P**	**02 26 56.4 0.0**
	baz=267,SNR=6.3					
P33M	**Teslin, Yukon**	**73.68**	**31**	P	**P**	**02 26 57.8 +0.7**
	baz=270					
WRAK	**Wrangell Islan**	**73.97**	**35**	P	**P**	**02 26 59.9 +1.2**
	baz=271					
S34M	**Telegraph Cree**	**74.59**	**33**	IAmb	IAmb	02 27 05.0
	comp=Z,12nm,0.9s					
S34M	**Telegraph Cree**	**74.59**	**33**	P	**P**	**02 27 03.8 +1.6**
	baz=272					
R33M	**Jennings River**	**74.63**	**32**	IAmb	IAmb	02 27 05.2
	comp=Z,9.7nm,0.9s					
R33M	**Jennings River**	**74.63**	**32**	P	**P**	**02 27 04.2 +1.5**
	baz=272					
T35M	**Bob Quinn**	**75.10**	**34**	IAmb	IAmb	02 27 08.1
	comp=Z,12nm,0.9s					
T35M	**Bob Quinn**	**75.10**	**34**	P	**P**	**02 27 06.8 +1.5**
	baz=273					
DLBC	**Dease Lake**	**75.15**	**33**	P	**P**	**02 27 07.2 +1.6**
	comp=Z,10nm,0.9s,baz=227,slow=2.5,SNR=27					
	comp=Z,10nm,0.9s					
DLBC	**Dease Lake**	**75.15**	**33**	P	**P**	**02 27 07.2 +1.6**
	baz=273,SNR=6.5					
WTLY	**Watson Lake, Y**	**75.69**	**31**	IAmb	IAmb	02 27 11.0
	comp=Z,20nm,0.9s					
WTLY	**Watson Lake, Y**	**75.69**	**31**	P	**P**	**02 27 10.0 +1.3**
	baz=273,SNR=11					
TGTN	**Hyland Airport**	**75.86**	**30**	P	**P**	**02 27 10.9 +1.3**
	baz=274,SNR=12					
A36M	**Sachs Harbour**	**76.42**	**19**	IAmb	IAmb	02 27 13.1
	comp=Z,9.4nm,0.8s					
A36M	**Sachs Harbour**	**76.42**	**19**	P	**P**	**02 27 12.0 -0.4**
	baz=274,SNR=8.5					
ARTI	**Arti**	**76.85**	**325**	LR	LR	03 00 59.9
	comp=Z,20nm,18.2s,baz=326,slow=36					
C36M	**Paulatuk**	**77.02**	**21**	P	**P**	**02 27 15.4 -0.5**
	baz=275,SNR=9.3					
WRGLY	**Wrigley**	**77.94**	**28**	IAmb	IAmb	02 27 22.9
	comp=Z,12nm,0.7s					
WRGLY	**Wrigley**	**77.94**	**28**	P	**P**	**02 27 22.1 +1.0**
	baz=277,SNR=7.3					
KOTAN	**Kotaneelee Air**	**78.06**	**31**	P	**P**	**02 27 22.6 +0.7**
	baz=278,SNR=9.9					
YKA	**Yellowknife Ar**	**82.06**	**28**	P	**P**	**02 27 43.5 +0.1**
	comp=Z,3.7nm,0.7s,baz=293,slow=6.1,SNR=53					
	comp=Z,3.7nm,0.7s					
J05D	**Fort Rock, OR**	**82.72**	**47**		**P**	**02 27 49.2 +1.8**
J05D				IAmb	IAmb	02 27 50.2
	comp=Z,8.4nm,1.0s					
PINE	**Pine Mountain**	**82.82**	**47**	IAmb	IAmb	02 27 51.2
	comp=Z,10nm,1.0s					
B08A	**Ashville Resc**	**82.90**	**42**	IAmb	IAmb	02 27 50.2
	comp=Z,25nm,1.7s					
SPITS	**Spitsbergen Ar**	**83.65**	**351**	P	**P**	**02 27 51.6 +0.2**
	comp=Z,1.8nm,0.7s,baz=70,slow=7.3,SNR=4.2					
	comp=Z,1.8nm,0.7s					
RES	**Resolute Bay**	**83.87**	**13**	IAmb	IAmb	02 28 26.0
	comp=Z,17nm,1.9s					
EDM	**Edmonton**	**85.30**	**36**	IAmb	IAmb	02 28 01.9
	comp=Z,14nm,0.8s					
NVAR	**Mina Array Bea**	**86.03**	**52**	P	**P**	**02 28 06.0 +1.7**
	comp=Z,1.5nm,0.5s,baz=273,slow=5.7,SNR=9.9					
	comp=Z,1.5nm,0.5s					
MFID	**Camas Ranch**	**86.52**	**46**		**P**	**02 28 07.8 +1.3**
MFID				IAmb	IAmb	02 28 08.9
	comp=Z,7.9nm,0.9s					
ARCES	**ARCESS Array B**	**86.81**	**342**	P	**P**	**02 28 05.4 -1.8**
	comp=Z,3.8nm,0.7s,baz=78,slow=6.3,SNR=5.7					
	comp=Z,3.8nm,0.7s					
WCT	**Wildcat Mounta**	**87.74**	**53**	IAmb	IAmb	02 28 15.1
	comp=Z,15nm,1.8s					
YHL	**Hebgen Lake**	**89.27**	**44**	IAmb	IAmb	02 28 22.9
	comp=Z,8.0nm,1.1s					
YMP	**Mirror Lake Pl**	**90.00**	**44**	IAmb	IAmb	02 28 27.4
	comp=Z,9.2nm,1.1s					
KARS	**Kars**	**90.18**	**312**		**P**	**02 28 22.4 -1.5**
KNB	**Kanab**	**90.59**	**52**		**P**	**02 28 25.9 -0.1**
FFC	**Flin Flon**	**90.98**	**32**		**P**	**02 28 26.7 -0.4**
FFC				IAmb	IAmb	02 28 28.7
	comp=Z,3.9nm,0.9s					
FINES	**FINESS Array B**	**90.99**	**335**	P	**P**	**02 28 25.1 -2.0**
	comp=Z,3.9nm,0.5s,baz=42,slow=4.3,SNR=28					
	comp=Z,3.9nm,0.5s					
PDAR	**Pinedale Array**	**91.08**	**45**	P	**P**	**02 28 29.0 +0.8**
	comp=Z,0.7nm,0.6s,baz=239,slow=3.1,SNR=8.4					
	comp=Z,0.7nm,0.6s					
NACGM	**Naroch**	**94.15**	**330**	*e*P	P	02 28 36.7 -5.1
	comp=Z,11nm,0.9s,baz=59					
ULM	**Lac du Bonnet**	**96.40**	**35**	P	**P**	**02 28 51.8 -0.3**
	comp=Z,1.5nm,0.6s,baz=358,slow=8.6,SNR=3.5					
	comp=Z,1.5nm,0.6s					
HFS	**Hagfors**	**96.58**	**338**	P	**P**	**02 28 50.4 -2.4**
	comp=Z,1.3nm,0.6s,baz=48,slow=4.2,SNR=5.3					
	comp=Z,1.3nm,0.6s					
NOA	**NORSAR Array B**	**96.82**	**340**	LR	LR	03 12 58.9
	comp=Z,9.5nm,19.8s,baz=340,slow=36					
DBIC	**Dimbokro**	**144.15**	**303**	PKP	**PKPab**	**02 34 57.3 0.0**
	comp=Z,2.4nm,0.6s,baz=14,slow=2.4,SNR=4.7					

SSNC ***25*** *02:51:07.7±2.2,20.27N×70.33W,h25km±43km, MD3.3, ML3.0, Presumed earthquake*
SDD ***25*** *02:51:10.1±2.3,20.19N×70.58W,h15km±37km, MD3.4, ML2.9, MW3.2, Presumed earthquake*
OSPL ***25*** *02:51:12.6±2.5,20.08N×70.62W,h0km±12km, ML2.7, Presumed earthquake*

ISC 25 02:51:11.0±1.0, 20.08N±0.03×70.66W±0.03, h32km±9km, n28,σ1ᵍ45/51, 19C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUDR	**Luperon**	**0.33**	**236**	⇑*e*Pg	**Pb**	**02 51 18.0**	**-1.1**
LUDR				⇑*e*Sg	**Sb**	**02 51 24.9**	**+0.3**
LOPP1	**Punta Rusia, P**	**0.56**	**246**	*i* P	**Pn**	**02 51 22.9**	**+0.1**
LOPP1				*e*S	**Sn**	**02 51 32.5**	**+1.6**
LOPP1				IAML		02 51 36.5	
	comp=Z,105nm,0.4s						
SC01	**Santiago de lo**	**0.65**	**186**	⇑*e*Pg	**Pn**	**02 51 25.5**	**+1.4**
SC01				⇑*e*Sg	**Sn**	**02 51 34.4**	**+1.1**
SC01				IAML		02 51 46.7	
	comp=N,174nm,0.5s						
SC01	**Santiago de lo**	**0.65**	**186**	*i* P	**Pb**	**02 51 23.8**	**-0.3**
SC01				*e*S	**Sn**	**02 51 33.6**	**+0.3**
MCDR	**Montecristi**	**0.96**	**259**	⇑*e*Pg	**Pb**	**02 51 29.2**	**+0.1**
MCDR				⇑*e*Sg	**Sb**	**02 51 43.6**	**+2.1**
MCDR				IAML		02 51 48.2	
	comp=N,156nm,0.3s						
NADR	**Nagua**	**1.04**	**134**	⇑*e*Pg	**Pn**	**02 51 28.5**	**-0.9**
NADR				⇑*e*Sg	**Sn**	**02 51 41.8**	**-1.1**
NADR				IAML		02 51 49.2	
	comp=N,360nm,0.2s						
LODA1	**ITESIL, Dajabo**	**1.12**	**242**	*e*S	**Sb**	**02 51 47.5**	**+1.4**
SDDR	**Presa de Saban**	**1.24**	**209**	*e*P	**Pb**	**02 51 33.2**	**-0.8**
SDDR				*e*S	**Sb**	**02 51 49.9**	**+0.2**
SDDR	**Presa de Saban**	**1.24**	**209**	⇑*e*Pg	**Pb**	**02 51 33.3**	**-0.8**
SDDR				⇑*e*Sg	**Sb**	**02 51 50.3**	**+0.6**
SDDR				IAML		02 51 50.7	
	comp=N,81nm,0.8s						
SDDR	**Presa de Saban**	**1.24**	**209**	*i* P	**Pb**	**02 51 33.4**	**-0.6**
DR08	**Loma La Naviza**	**1.26**	**152**	⇑*e*Pg	**Pb**	**02 51 33.0**	**-1.3**
DR08				⇑*e*Sg	**Sb**	**02 51 50.6**	**+0.4**
DR08				IAML		02 51 55.1	
	comp=N,2μm,0.2s						
GRTK	**Grand Turk**	**1.49**	**343**	*e*P	**Pb**	**02 51 37.5**	**-0.6**
GRTK				*i* S	**Sb**	**02 51 59.4**	**+2.6**
GRTK	**Grand Turk**	**1.49**	**343**	*i* P	**Pb**	**02 51 37.9**	**-0.3**
GRTK				*e*S	**Sb**	**02 51 58.9**	**+2.1**
GRTK				IAML		02 52 04.3	
	comp=Z,102nm,1.1s						
LONE3	**El Aguacate, B**	**1.65**	**207**	*i* P	**Pb**	**02 51 40.2**	**-0.7**
LONE3				*e*S	**Sb**	**02 52 02.6**	**+1.2**
LONE3				IAML		02 52 04.1	
	comp=Z,44nm,0.6s						
BANI	**BANI**	**1.70**	**170**	⇑*e*Pg	**Pb**	**02 51 41.1**	**-0.7**
BANI				⇑*e*Sg	**Sb**	**02 52 04.2**	**+1.4**
BANI				IAML		02 52 07.8	
	comp=N,144nm,0.2s						
SDD	**Santo Domingo**	**1.76**	**156**	*e*S	**Sb**	**02 52 04.6**	**+0.2**
HATOM	**Hato Mayor del**	**1.76**	**137**	⇑*e*Pg	**Pb**	**02 51 40.9**	**-1.9**
HATOM				⇑*e*Sg	**Sb**	**02 52 04.9**	**+0.4**
HATOM				IAML		02 52 08.4	
	comp=N,41nm,0.2s						
LODU1	**El Espartillar**	**1.88**	**204**	*i* P	**Pb**	**02 51 45.0**	**+0.2**
LODU1				IAML		02 52 11.0	
	comp=Z,93nm,0.8s						
JIDR	**Jimani**	**1.94**	**216**	⇑*e*Pg	**Pb**	**02 51 44.6**	**-1.2**
JIDR				⇑*e*Sg	**Sb**	**02 52 11.8**	**+2.2**
JIDR				IAML		02 52 13.0	
	comp=N,60nm,0.5s						
PODR	**Polo**	**1.99**	**197**	*i* P	**Pb**	**02 51 46.2**	**-0.6**
HIDR	**Higuey Centro**	**2.35**	**129**	⇑*e*Pg	**Pn**	**02 51 49.4**	**+1.9**
HIDR				⇓*e*Sg	**Sb**	**02 52 21.5**	**0.0**
HIDR				IAML		02 52 23.8	
	comp=N,89nm,0.2s						
LOBH	**Bahia de las A**	**2.39**	**203**	*i* P	**Pb**	**02 51 52.5**	**-1.0**
LOBH				IAML		02 52 28.8	
	comp=Z,52nm,1.5s						
MASC	**Masc**	**3.36**	**272**	*e*P	**Pn**	**02 52 01.0**	**-0.3**
MASC				*e*S	**Sn**	**02 52 41.3**	**+1.2**
MASC				IAML		02 52 45.6	
	comp=E,15nm,0.7s						
MASC				IAML		02 52 45.9	
	comp=N,13nm,0.7s						
QMBU	**Quimbuelo**	**3.91**	**272**	*e*P	**Pn**	**02 52 08.6**	**-0.2**
QMBU				*e*S	**Sn**	**02 52 54.5**	**+0.8**
QMBU				*e*Sg	**Sb**	**02 52 59.7**	**-6.4**
QMBU				IAML		02 53 00.5	
	comp=N,9.7nm,0.5s						
QMBU				IAML		02 53 06.9	
	comp=E,11nm,0.6s						
NMDO	**Nuevo Mundo**	**4.09**	**277**	*e*P	**Pn**	**02 52 10.1**	**-1.3**
NMDO				*e*S	**Sn**	**02 52 58.5**	**+0.4**
GTBY	**Guantanamo Bay**	**4.19**	**269**	*e*P	**Pn**	**02 52 12.5**	**-0.2**
GTBY				*e*S	**Sn**	**02 53 00.2**	**-0.4**
GTBY				IAML		02 53 01.5	
	comp=E,29nm,1.0s						
GTBY				IAML		02 53 04.1	
	comp=E,13nm,0

0.6nm,1.0s,baz=214,slow=6.3,SNR=4.7
0.6nm,1.0s

*IDC **25** 03:04:41.2±1.2, 16°.18S×173°.07W, h0km, mb4.2/9, mbtmp4.2/9, MS3.7/26, Error ellipse: s-maj=66.9km s-min=18.7km az=146.0*
*NEIC **25** 03:04:42.9±1.2, 16°.07S±0°.06×172°.55W±0°.09, h10km±1km, mb4.8/38, Error ellipse: s-maj=14.6km s-min=10.1km az=109.0*

ISC 25 03:04:44.4±0.5, 16°.13S±0°.07×172°.69W±0°.08, h24km, n121, σ1s31/98, mb4.8/29, MS3.8/24, 3C-4D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.37**	**22**	Pn	**Pn**	**03 05 18.9**	**-3.0**
AFI				Sn	**Sn**	**03 05 48.8**	**-1.5**
NIUE	**Niue**	**3.94**	**139**	Pn	**Pn**	**03 05 40.8**	**-2.6**
LKBA	**Tubou, Lakemba**	**6.22**	**249**	P	**Pb**	**03 06 29.2**	**-2.9**
TAVE	**Taveuni**	**6.95**	**264**	P	Pn	03 06 31.6	+6.8
DGTI	**Dogotuki**	**7.28**	**268**	P	Pn	03 06 35.0	+5.6
MSVF	**Nonsavu**	**9.01**	**258**	Pn	**Pn**	**03 06 54.8**	**+1.6**
MSVF	**Nonsavu**	**9.01**	**258**	P	Pn	03 06 59.4	+6.3
	115nm,1.1s						
RAR	**Rarotonga**	**13.24**	**114**	LR	LR	03 11 50.2	
	comp=Z,302nm,20.9s,baz=252,slow=32						
RAO	**Raoul Island**	**13.92**	**199**	LR	LR	03 12 50.1	
	comp=Z,472nm,19.0s,baz=84,slow=36						
MARNC	**Mare, Loyalty**	**19.01**	**251**	P	**Pn**	**03 09 05.8**	**+0.4**
DZM	**Mont Dzumac**	**20.58**	**250**	P	**P**	**03 09 23.4**	**+1.6**
	36nm,0.8s,baz=92,slow=18,SNR=15						
DZM	**Mont Dzumac**	**20.58**	**250**		**P**	**03 09 23.4**	**+1.6**
DZM				IAmb	IAmb	03 09 31.1	
	comp=Z,34nm,0.8s						
PPT	**Papeete**	**22.16**	**97**	LR	LR	03 16 35.6	
	comp=Z,193nm,18.4s,baz=266,slow=32						
RTZ	**Ruatahuna**	**24.17**	**200**	P	**P**	**03 09 59.6**	**+0.7**
RTZ				IAmb	IAmb	03 10 10.0	
	comp=Z,20nm,1.0s						
BKZ	**Black Stump Fm**	**24.83**	**200**	P	**P**	**03 10 06.0**	**+1.1**
BKZ				IAmb	IAmb	03 10 23.7	
	comp=Z,43nm,1.7s						
TCW	**Tory Channel**	**27.42**	**202**	P	**P**	**03 10 29.4**	**+1.2**
HNR	**Honiara**	**27.48**	**281**	LR	LR	03 19 46.7	
	comp=Z,27nm,19.0s,baz=204,slow=33						
QRZ	**Quartz Range**	**27.75**	**205**	P	**P**	**03 10 32.5**	**+1.4**
LTZ	**Lake Taylor**	**29.52**	**203**	P	**P**	**03 10 47.5**	**+0.5**
LTZ				IAmb	IAmb	03 10 59.7	
	comp=Z,12nm,0.8s						
ARMA	**Armidale**	**35.57**	**240**	P	**P**	**03 11 39.3**	**-0.8**
CTA	**Charters Tower**	**39.16**	**258**	LR	LR	03 26 42.3	
	comp=Z,234nm,18.3s,baz=79,slow=34						
COEN	**Coen**	**42.62**	**267**	P	**P**	**03 12 39.0**	**-0.3**
STKA	**Stephens Creek**	**44.28**	**241**	P	**P**	**03 12 50.2**	**-2.1**
	comp=Z,7.0nm,0.9s,baz=71,slow=7.7,SNR=13						
STKA				LR	LR	03 28 35.9	
	comp=Z,97nm,20.1s,baz=185,slow=33						
	comp=Z,7.0nm,0.9s						
STKA	**Stephens Creek**	**44.28**	**241**		**P**	**03 12 51.8**	**-0.6**
INKA	**Innaminka**	**44.48**	**247**		**P**	**03 12 54.1**	**0.0**
WB0	**Warramunga Arr**	**50.31**	**258**	P	**P**	**03 13 39.5**	**-0.2**
WRA	**Warramunga Arr**	**50.35**	**257**	P	**P**	**03 13 36.8**	**-3.1**
	comp=Z,2.0nm,0.8s,baz=92,slow=8.3,SNR=7.6						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**50.35**	**257**	P	**P**	**03 13 40.8**	**+0.9**
AS31	**Alice Springs**	**50.54**	**252**		**P**	**03 13 39.8**	**-1.6**
ASAR	**Alice Springs**	**50.54**	**252**	P	**P**	**03 13 39.2**	**-2.1**
	comp=Z,12nm,0.7s,baz=87,slow=8.2,SNR=57						
ASAR				LR	LR	03 34 04.4	
	comp=Z,280nm,18.5s,baz=108,slow=35						
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**50.54**	**252**		**P**	**03 13 39.7**	**-1.6**
FORT	**Forrest**	**55.70**	**244**	P	**P**	**03 14 18.3**	**-0.9**
FORT				IAmb	IAmb	03 14 22.5	
	comp=Z,11nm,1.1s						
JCJ	**Chichijima**	**61.35**	**314**	LR	LR	03 36 36.0	
	comp=Z,56nm,19.6s,baz=114,slow=31						
SHEM	**Shemya Is, Ala**	**69.52**	**351**	LR	LR	03 39 58.3	
	comp=Z,135nm,21.7s,baz=332,slow=30						
MJAR	**Matsushiro Arr**	**69.93**	**320**	LR	LR	03 40 26.5	
	comp=Z,51nm,22.0s,baz=154,slow=31						
ASAJ	**Asahikawa**	**72.52**	**328**	LR	LR	03 43 31.1	
	comp=Z,16nm,20.9s,baz=122,slow=32						
LPIG	**La Paz**	**72.83**	**58**	LR	LR	03 40 57.1	
	comp=Z,77nm,18.9s,baz=226,slow=30						
PFO	**Pinyon Flats O**	**72.92**	**47**	LR	LR	03 40 36.7	
	comp=Z,87nm,19.8s,baz=249,slow=29						
PETK	**Petropavlovsk-**	**73.53**	**342**	P	**P**	**03 16 15.7**	**+0.7**
	comp=Z,5.8nm,0.8s,baz=152,slow=6,SNR=4.0						
PETK				LR	LR	03 44 07.5	
	comp=Z,32nm,21.7s,baz=123,slow=32						
	comp=Z,5.8nm,0.8s						
PETK	**Petropavlovsk-**	**73.53**	**342**	P	**P**	**03 16 15.6**	**+0.6**
NVAR	**Mina Array Bea**	**74.41**	**42**	P	**P**	**03 16 23.9**	**+3.1**
	comp=Z,1.1nm,0.8s,baz=228,slow=9.4,SNR=6.8						
	comp=Z,1.1nm,0.8s						
KDAK	**Kodiak Island**	**75.50**	**11**	LR	LR	03 41 41.0	
	comp=Z,189nm,20.1s,baz=212,slow=29						
X16A	**Lo Mia Camp, P**	**76.88**	**48**		**P**	**03 16 34.2**	**-0.9**
M14K	**Bethel**	**77.10**	**5**		**P**	**03 16 36.0**	**+0.7**
KSRS	**Korea Array**	**77.16**	**315**	LR	LR	03 45 15.3	
	comp=Z,33nm,21.9s,baz=135,slow=32						
U15A	**North Rim**	**77.31**	**46**		**P**	**03 16 36.4**	**-1.0**
MTPU	**Mount Pierson**	**78.21**	**45**		**P**	**03 16 41.6**	**-1.0**
J16K	**Anvik River**	**79.72**	**6**		**P**	**03 16 50.1**	**+0.3**
J16K				IAmb	IAmb	03 16 53.8	
	comp=Z,8.3nm,0.8s						
HLID	**Hailey**	**79.75**	**39**		**P**	**03 16 50.2**	**-0.5**
J18K	**Innoko River**	**80.31**	**7**		**P**	**03 16 53.6**	**+0.6**
J18K				IAmb	IAmb	03 17 24.3	
	comp=Z,26nm,1.8s						
TXAR	**Lajitas Array**	**80.45**	**56**	P	**P**	**03 16 56.6**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=204,slow=2.7,SNR=5.9						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**80.45**	**56**	P	**P**	**03 16 54.1**	**-0.5**
ANMO	**Albuquerque**	**80.74**	**50**	LR	LR	03 46 03.9	
	comp=Z,59nm,20.2s,baz=248,slow=31						
NEW	**Newport**	**80.92**	**34**	LR	LR	03 46 19.3	
	comp=Z,55nm,18.1s,baz=212,slow=31						
MA2	**Magadan**	**81.06**	**342**	LR	LR	03 48 04.7	
	comp=Z,26nm,20.5s,baz=124,slow=32						
MA2	**Magadan**	**81.06**	**342**	P	**P**	**03 16 56.9**	**-0.2**
	comp=Z,11nm,1.1s						
KLR	**Kul'dur**	**81.50**	**327**	LR	LR	03 45 23.5	
	comp=Z,33nm,21.2s,baz=280,slow=30						
MCK	**McKinley**	**81.71**	**10**		**P**	**03 17 00.2**	**-0.3**
MCK				IAmb	IAmb	03 17 03.0	
	comp=Z,10nm,0.9s						
LOHW	**Long Hollow**	**82.12**	**40**		**P**	**03 17 02.4**	**-0.9**
DLBC	**Dease Lake**	**82.13**	**21**	LR	LR	03 46 59.2	
	comp=Z,58nm,18.5s,baz=152,slow=31						
PDAR	**Pinedale Array**	**82.35**	**42**	P	**P**	**03 17 07.0**	**+2.4**
	comp=Z,1.8nm,0.8s,baz=208,slow=3.2,SNR=20						
PDAR				LR	LR	03 48 53.6	
	comp=Z,58nm,18.4s,baz=242,slow=32						
	comp=Z,1.8nm,0.8s						
PDAR	**Pinedale Array**	**82.35**	**42**		**P**	**03 17 03.7**	**-0.9**
YHL	**Hebgen Lake**	**82.41**	**39**		**P**	**03 17 04.6**	**-0.4**
YHL				IAmb	IAmb	03 17 09.3	
	comp=Z,7.6nm,0.9s						
WRH	**Wood River Hil**	**82.54**	**10**		**P**	**03 17 05.6**	**+0.9**
CCB	**Clear Creek Bu**	**82.75**	**11**		**P**	**03 17 05.9**	**+0.1**
CCB				IAmb	IAmb	03 17 08.2	
	comp=Z,9.3nm,0.9s						
F17K	**Baldwin Pennin**	**82.77**	**5**		**P**	**03 17 06.6**	**+0.7**
ILAR	**Eielson Array**	**83.02**	**11**	P	**P**	**03 17 08.2**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=228,slow=5.9,SNR=31						
	comp=Z,1.2nm,0.6s						
ILAR	**Eielson Array**	**83.02**	**11**	P	**P**	**03 17 07.9**	**+0.6**
E18K	**Tukpahlearik C**	**83.78**	**5**		**P**	**03 17 12.3**	**+1.2**
E18K				IAmb	IAmb	03 17 14.5	
	comp=Z,6.8nm,1.0s						
PRP	**Porcupine Dome**	**83.95**	**11**		**P**	**03 17 12.1**	**-0.1**
PRP				IAmb	IAmb	03 17 15.3	
	comp=Z,8.5nm,0.9s						
DAWY	**Dawson**	**83.95**	**14**		**P**	**03 17 12.6**	**+0.4**
DAWY				IAmb	IAmb	03 17 15.4	
	comp=Z,9.1nm,1.1s						
G23K	**Bananza Creek**	**84.30**	**9**		**P**	**03 17 14.5**	**+0.6**
G23K				IAmb	IAmb	03 17 21.4	
	comp=Z,8.8nm,1.4s						
J29N	**Klondike Camp**	**84.56**	**14**		**P**	**03 17 15.2**	**-0.1**
J29N				IAmb	IAmb	03 17 26.4	
	comp=Z,8.7nm,1.1s						
BILL	**Bilibino**	**85.32**	**352**		**P**	**03 17 18.9**	**+0.1**
BILL				IAmb	IAmb	03 17 21.6	
	comp=Z,6.2nm,1.0s						
I30M	**Mount Dempster**	**85.64**	**14**		**P**	**03 17 20.7**	**0.0**
I30M				IAmb	IAmb	03 17 23.8	
	comp=Z,10nm,1.2s						
D22K	**Ayikyak River**	**85.98**	**7**		**P**	**03 17 22.4**	**+0.2**
D22K				IAmb	IAmb	03 17 25.8	
	comp=Z,7.5nm,1.1s						
G30M	**tAoh Zraii Nji**	**87.12**	**14**		**P**	**03 17 28.1**	**+0.2**
G30M				IAmb	IAmb	03 17 30.7	
	comp=Z,11nm,1.2s						
F31M	**Tsiigehtchic**	**88.07**	**14**		**P**	**03 17 33.1**	**+0.8**
YAK	**Yakutsk**	**90.05**	**337**	LR	LR	03 50 15.1	
	comp=Z,32nm,21.7s,baz=101,slow=30						
YKA	**Yellowknife Ar**	**90.49**	**23**	P	**P**	**03 17 44.6**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=254,slow=4.9,SNR=5.7						
YKA				LR	LR	03 51 44.6	
	comp=Z,55nm,20.9s,baz=315,slow=31						
	comp=Z,0.3nm,0.8s						
A36M	**Sachs Harbour**	**93.44**	**13**		**P**	**03 17 58.0**	**+0.8**
A36M				IAmb	IAmb	03 18 00.6	
	comp=Z,4.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**93.49**	**288**	LR	LR	03 56 59.0	
	comp=Z,13nm,20.0s,baz=90,slow=34						
ULM	**Lac du Bonnet**	**94.06**	**39**	LR	LR	03 54 46.9	
	comp=Z,68nm,19.0s,baz=205,slow=32						
CLL	**Collm**	**144.61**	**354**	*i* P	**PKiKP**	**03 24 28.4**	**+5.8**
	comp=Z,6.0nm,1.0s						
OSTC	**Ostas**	**144.91**	**350**	*e*PKP	**PKPdf**	**03 24 21.4**	**+1.9**
STEB	**Steborice**	**145.23**	**348**	*e*PKP	**PKPdf**	**03 24 21.6**	**+1.6**
BURAR	**Bucovina Array**	**145.29**	**339**	⇑P	**PKPdf**	**03 24 22.2**	**+1.9**
MORC	**Moravsky Berou**	**145.43**	**348**	*e*PKP	**PKiKP**	**03 24 22.7**	**-1.7**
PRU	**Pruhonice**	**145.72**	**352**	*e*PKP	**PKPab**	**03 24 23.1**	**+1.5**
MAUC	**Maruska**	**145.76**	**348**	*e*PKP	**PKiKP**	**03 24 23.6**	**-1.5**
VRAC	**Vranov**	**146.05**	**349**	*e*PKP	**PKPab**	**03 24 23.1**	**+0.2**
JAVC	**Velka Javorina**	**146.27**	**348**	*e*PKP	**PKiKP**	**03 24 26.2**	**0.0**
TPGR	**Topolog**	**146.28**	**333**	⇑P	**PKiKP**	**03 24 25.6**	**-0.7**
BNN	**Bunyan**	**146.28**	**318**		**PKPdf**	**03 24 22.3**	**-0.1**
ZVC	**Zvikov**	**146.31**	**352**	*e*PKP	**PKiKP**	**03 24 25.5**	**-0.7**
KRUC	**Moravsky**	**146.32**	**349**	*e*PKP	**PKPab**	**03 24 24.8**	**+0.9**
KHC	**Kasperske Hory**	**146.69**	**353**	*e*PKP	**PKPab**	**03 24 26.1**	**+0.8**
MARR	**Marisel-Cluj**	**146.82**	**340**	⇑P	**PKiKP**	**03 24 26.9**	**-0.5**
GERES	**GERESS Array B**	**146.95**	**352**	PKPbc	**PKPbc**	**03 24 25.8**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=2.9,slow=5.3,SNR=6.2						
BRTR	**Keskin Array B**	**147.15**	**321**	PKPbc	**PKPbc**	**03 24 25.6**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=94,slow=1.8,SNR=14						
BRTR	**Keskin Array B**	**147.15**	**321**	PKPdf	**PKPdf**	**03 24 23.9**	**+0.1**
VOIR		**147.20**	**337**	⇓P	**PKPab**	**03 24 27.8**	**+0.3**
ARR	**Arges**	**147.42**	**337**	⇓P	**PKiKP**	**03 24 29.1**	**+0.5**
CONA	**Conrad Observa**	**147.51**	**349**	*i* PKP	**PKPab**	**03 24 28.7**	**0.0**
	comp=Z,5.6nm,0.9s						
RONA	**Rosalia, Austr**	**147.65**	**349**	*i* PKP	**PKPab**	**03 24 29.3**	**+0.1**
	comp=Z,7.0nm,1.2s						
MOA	**Molln**	**147.85**	**351**	*i* PKP	**PKPab**	**03 24 29.8**	**-0.1**
	comp=Z,10nm,2.0s						
BIOA	**Bad Ischl, Aus**	**148.09**	**352**	*i* PKiKP	**PKPab**	**03 24 31.7**	**+0.8**
	comp=Z,4.6nm,0.9s						
ARSA	**Arzberg**	**148.23**	**349**	*i* PKP	**PKiKP**	**03 24 30.6**	**+0.3**
	comp=Z,4.9nm,1.0s						
BZS	**Buzias**	**148.25**	**341**	⇓P	**PKiKP**	**03 24 30.2**	**0.0**
LESA	**Schwarzleotal**	**148.48**	**353**	*e*PKP	**PKPbc**	**03 24 29.4**	**+0.2**
	comp=Z,3.9nm,1.3s						
HERR	**Herculane**	**148.63**	**339**	⇓P	**PKiKP**	**03 24 31.1**	**+0.1**
WATA	**Walderalm**	**148.68**	**354**	*e*PKP	**PKPdf**	**03 24 27.9**	**+1.8**
	comp=Z,3.7nm,0.6s						
MOTA	**Moosalm**	**148.71**	**355**	*e*PKP	**PKiKP**	**03 24 31.4**	**0.0**
	comp=Z,6.1nm,1.4s						
KBA	**Koelnbreinsper**	**148.73**	**352**	*i* PKP	**PKPdf**	**03 24 28.0**	**+1.8**
	comp=Z,6.7nm,1.1s						
WTTA	**Wattenberg**	**148.75**	**354**	*e*PKP	**PKiKP**	**03 24 31.9**	**+0.4**
	comp=Z,8.5nm,1.3s						
SQTA	**Sankt Quirin**	**148.83**	**355**	*i* PKP	**PKiKP**	**03 24 32.3**	**+0.8**
	comp=Z,5.2nm,1.1s						
DAVA	**Damuels**	**148.86**	**357**	*i* PKP	**PKPbc**	**03 24 29.1**	**-1.3**
	comp=Z,12nm,1.3s						
SOKA	**Soboth**	**148.87**	**350**	*i* PKP	**PKiKP**	**03 24 31.6**	**0.0**
	comp=Z,4.7nm,1.0s						
FETA	**Feichten**	**149.06**	**355**	*e*PKP	**PKPbc**	**03 24 31.2**	**+0.3**
	comp=Z,7.4nm,1.3s						
MYKA	**Terra Mystica**	**149.13**	**351**	*e*PKP	**PKiKP**	**03 24 32.4**	**+0.2**
	comp=Z,2.2nm,0.5s						
ABTA	**Abfaltersbach**	**149.16**	**353**	*i* PKP	**PKiKP**	**03 24 32.3**	**0.0**
	comp=Z,8.0nm,1.1s						

*IDC **25** 03:14:29.6±2.5, 30°.14S×138°.89E, h0km, mbtmp3.5/4, ML3.4/4, Error ellipse: s-maj=93.0km s-min=15.2km az=44.0*
*AUST **25** 03:14:33.0±0.3, 30°.S±3°.×13°.9E±°, h10km, ML2.6/9, Error ellipse: s-maj=7.2km s-min=6.0km az=2.8*

ISC 25 03:14:30.5±0.5, 30°.10S±0°.05×138°.90E±0°.04, h10km, n17, σ2s14/25, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCRK	**Leigh Creek**	**0.69**	**239**	P	**Pb**	**03 14 45.1**	**+0.6**
LCRK				S	**Sg**	**03 14 53.7**	**+1.0**
YAPP	**Yappala Statio**	**1.83**	**196**	P	**Pb**	**03 15 03.8**	**-0.3**
YAPP				S	**Sb**	**03 15 26.6**	**-0.6**
INKA	**Innaminka**	**2.85**	**35**	P	**Pn**	**03 15 19.6**	**+3.6**
STKA	**Stephens Creek**	**2.92**	**128**	P	**Pn**	**03 15 17.9**	**+0.9**
STKA				S	**Sn**	**03 15 52.4**	**+0.3**
STKA	**Stephens Creek**	**2.92**	**128**	Pn	**Pn**	**03 15 18.0**	**+0.9**
	2.0nm,0.3s,baz=307,slow=13,SNR=38						
STKA				Pg	**Pb**	**03 15 22.6**	**-0.1**
	8.0nm,0.3s,baz=307,slow=15,SNR=25						
STKA				Sn	**Sn**	**03 15 52.1**	**0.0**
	5.4nm,0.3s,baz=315,slow=16,SNR=5.3						
STKA				Lg	Lg	03 16 01.1	
	12nm,0.3s,baz=23,slow=7.7,SNR=4.1						
	4.8nm,0.2s						
NAPP	**Napperby**	**3.14**	**192**	P	**Pn**	**03 15 21.8**	**+1.7**
HTT	**Hallett**	**3.32**	**180**	P	**Pn**	**03 15 24.1**	**+1.5**
OOD	**Oodnadatta**	**3.63**	**308**	P	**Pn**	**03 15 31.1**	**+4.3**
BBOO	**Buckleboo**	**3.63**	**221**	P	**Pn**	**03 15 27.9**	**+1.0**
MULG	**Mulgathing**	**4.19**	**266**	P	**Pn**	**03 15 36.6**	**+2.1**
SDAN	**Sedan**	**4.41**	**175**	P	**Pn**	**03 15 38.4**	**+0.8**
QLP	**Quilpie**	**5.86**	**55**	P	**Pn**	**03 16 01.4**	**+3.9**
	comp=Z,14nm,0.9s,comp=Z,0.1nm						
CMSA	**Cobar Meteorol**	**6.02**	**106**	P	**Pn**	**03 16 00.6**	**+0.9**
	comp=Z,2.6nm,1.1s,comp=Z,0.0nm						
ARPS	**Mount Arapiles**	**7.09**	**161**	P	**Pn**	**03 16 12.8**	**-1.6**
ASAR	**Alice Springs**	**7.80**	**324**	Pn	**Pn**	**03 16 25.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=146,slow=13,SNR=7.4						
ASAR				Sn	**Sn**	**03 17 49.2**	**-3.4**
	comp=Z,0.6nm,0.3s,baz=146,slow=23,SNR=5.8						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**10.92**	**337**	Pn	**Pn**	**03 17 08.0**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=158,slow=12,SNR=10						
WRA				Sn	**Sn**	**03 19 04.6**	**-4.7**
	comp=Z,0.3nm,0.3s,baz=107,slow=13,SNR=4.7						
	comp=Z,0.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**16.99**	**312**	Pn	**Pn**	**03 18 27.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=5.1						
FITZ				Sn	**Sn**	**03 21 36.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=72,slow=23,SNR=1.9						
	comp=Z,2.6nm,0.7s						

*SSNC **25** 03:30:38.7±1.4, 19°.84N×73°.56W, h7km±8km, MD3.2, ML2.1, MW2.1, Presumed earthquake*
*SDD **25** 03:30:38.7±1.6, 20°.24N×73°.69W, h29km±32km, MD3.2, ML2.7, MW2.9, Presumed earthquake*
*OSPL **25** 03:30:39.5±1.3, 20°.24N×73°.55W, h32km±12km, ML2.4, Presumed earthquake*

ISC 25 03:30:38.0±1.3, 19°.83N±0°.09×73°.66W±0°.04, h14km±10km, n38, σ1s20/50, 9C-1D, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASC	**Masc**	**0.64**	**303**	*e*P	**Pg**	**03 30 50.9**	**+0.3**
MASC				*e*S	**Sg**	**03 30 59.3**	**+0.2**
MASC				IAML		03 31 00.2	
	comp=E,55nm,0.1s						
MASC				IAML		03 31 00.8	
	comp=N,63nm,0.2s						
MASC	**Masc**	**0.64**	**303**	IAML		03 31 00.6	
	comp=N,65nm,0.2s						
MASC	**Masc**	**0.64**	**303**	*e*P	**Pg**	**03 30 50.9**	**+0.3**
MASC	**Masc**	**0.64**	**303**	IAML		03 31 00.6	
	comp=E,54nm,0.1s						
MASC	**Masc**	**0.64**	**303**	*i* P	**Pg**	**03 30 50.8**	**+0.3**
MASC				*e*S	**Sg**	**03 30 59.7**	**+0.5**
MASC				IAML		03 31 00.1	
	comp=Z,39nm,0.1s						
QMBU	**Quimbuelo**	**1.15**	**289**	*e*P	**Pb**	**03 30 59.1**	**-0.6**
QMBU				*e*S	**Sg**	**03 31 13.6**	**-1.6**
QMBU				IAML		03 31 16.5	
	comp=N,70nm,0.2s						
QMBU				IAML		03 31 17.5	
	comp=E,92nm,0.2s						
QMBU	**Quimbuelo**	**1.15**	**289**	IAML		03 31 15.0	
	comp=E,47nm,0.3s						
QMBU	**Quimbuelo**	**1.15**	**289**	*e*P	**Pb**	**03 30 59.2**	**-0.5**
QMBU	**Quimbuelo**	**1.15**	**289**	IAML		03 31 14.7	
	comp=N,61nm,0.3s						
GTBY	**Guantanamo Bay**	**1.37**	**274**	*e*P	**Pn**	**03 31 02.8**	**0.0**
GTBY				*e*S	**Sn**	**03 31 20.3**	**-0.4**
GTBY				IAML		03 31 22.8	
	comp=N,18nm,0.2s						
GTBY				IAML		03 31 23.2	
	comp=N,12nm,0.3s						
GTBY	**Guantanamo Bay**	**1.37**	**274**	*e*Sg	**Sn**	**03 31 23.0**	**+2.3**
GTBY	**Guantanamo Bay**	**1.37**	**274**	⇑*i*P	Pn	03 31 00.4	-2.3
GTBY				⇑*i*S	**Sn**	**03 31 16.7**	**-4.0**
GTBY				IAML		03 31 59.5	
	comp=N,42nm,2.8s						
GTBY	**Guantanamo Bay**	**1.37**	**274**	*e*P	**Pn**	**03 31 03.3**	**+0.5**
GTBY	**Guantanamo Bay**	**1.37**	**274**	*e*S	**Sn**	**03 31 20.2**	**-0.6**
GTBY	**Guantanamo Bay**	**1.37**	**274**	*i* P	**Pn**	**03 31 03.0**	**+0.3**
GTBY				*e*S	**Sn**	**03 31 20.4**	**-0.3**
GTBY				IAML		03 31 28.5	
	comp=Z,48nm,1.9s						
NMDO	**Nuevo Mundo**	**1.45**	**301**	*e*P	**Pn**	**03 31 03.6**	**-0.1**
NMDO				*e*S	**Sn**	**03 31 22.2**	**-0.3**
NMDO				IAML		03 31 24.6	
	comp=N,22nm,0.2s						
NMDO				IAML		03 31 24.7	
	comp=E,25nm,0.1s						
NMDO	**Nuevo Mundo**	**1.45**	**301**	*e*P	**Pn**	**03 31 04.3**	**+0.6**
MOAC	**Moa**	**1.48**	**304**	*e*P	**Pn**	**03 31 03.9**	**-0.3**
MOAC				*e*S	**Sn**	**03 31 23.0**	**-0.4**
MOAC				IAML		03 31 24.5	
	comp=N,36nm,0.1s						
MOAC				IAML		03 31 24.6	
	comp=E,14nm,0.3s						
MOAC	**Moa**	**1.48**	**304**	*e*P	**Pn**	**03 31 04.9**	**+0.7**
RCC	**Rio Carpintero**	**1.93**	**275**	*e*P	**Pn**	**03 31 10.3**	**-0.1**
RCC				*e*S	**Sn**	**03 31 34.3**	**-0.1**
RCC				*e*Sg	**Sb**	**03 31 36.4**	**-0.5**
RCC				IAML		03 31 37.9	
	comp=N,7.9nm,0.2s						
RCC				IAML		03 31 38.0	
	comp=E,8.4nm,0.2s						
RCC	**Rio Carpintero**	**1.93**	**275**	*e*P	**Pn**	**03 31 11.0**	**+0.6**
PINC	**Pinares de May**	**2.11**	**289**	*e*P	**Pn**	**03 31 13.1**	**+0.2**
PINC				*e*S	**Sn**	**03 31 39.8**	**+0.8**
PINC				IAML		03 31 42.5	
	comp=N,12nm,0.0s						
PINC				IAML		03 31 44.7	
	comp=E,13nm,0.1s						
PINC	**Pinares de May**	**2.11**	**289**	*e*P	**Pn**	**03 31 12.8**	**-0.2**
MARVS	**Santiago de Cu**	**2.12**	**275**	*e*P	**Pn**	**03 31 13.4**	**+0.4**
MARVS				*e*S	**Sn**	**03 31 39.5**	**+0.3**
MARVS				IAML		03 31 42.1	
	comp=N,10nm,0.3s						
MARVS				IAML		03 31 43.3	
	comp=E,6.9nm,0.2s						
MARVS	**Santiago de Cu**	**2.12**	**275**	*e*P	**Pn**	**03 31 14.7**	**+1.7**
JIDR	**Jimani**	**2.16**	**128**	⇑*i*P	**Pn**	**03 31 15.0**	**+1.4**
JIDR				⇑*i*S	**Sb**	**03 31 43.0**	**-0.6**
SDDR	**Presa de Saban**	**2.39**	**110**	⇑*i*P	**Pn**	**03 31 17.1**	**+0.3**
SDDR				⇑*i*S	**Sn**	**03 31 44.7**	**-1.1**
SDDR				IAML		03 31 59.2	
	comp=N,16nm,2.6s						
SDDR	**Presa de Saban**	**2.39**	**110**	*i* P	**Pn**	**03 31 16.4**	**-0.3**
SDDR				*e*S	**Sn**	**03 31 43.0**	**-2.9**
SDDR				IAML		03 31 48.0	
	comp=Z,23nm,3.9s						
LONE3	**El Aguacate, B**	**2.41**	**120**	*i* P	**Pn**	**03 31 18.6**	**+1.6**
LONE3				IAML		03 32 01.3	
	comp=Z,25nm,5.9s						
**HL

WB0	**Warramunga Arr**	**44.96**	**170**	P	**P**	**03 43 03.5**	**+1.2**
WB0				IAmb	IAmb	03 43 44.8	
	comp=Z,15nm,1.4s						
KURK	**Kurchatov**	**45.04**	**318**	P	**P**	**03 43 02.0**	**-0.6**
KURBB	**Kurchatov Arra**	**45.07**	**318**	P	**P**	**03 43 02.0**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=107,slow=9.2,SNR=11						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**45.13**	**170**	P	**P**	**03 43 04.4**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=354,slow=8.7,SNR=5.2						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**45.13**	**170**	P	**P**	**03 43 04.8**	**+1.2**
WR8	**Warramunga Arr**	**45.16**	**170**	P	**P**	**03 43 04.5**	**+0.6**
MBWA	**Marble Bar**	**46.30**	**189**	P	**P**	**03 43 14.2**	**+1.3**
ASAR	**Alice Springs**	**48.73**	**172**	P	**P**	**03 43 32.9**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=360,slow=13,SNR=5.4						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**48.73**	**172**	P	**P**	**03 43 31.9**	**+0.2**
BVAR	**Borovoye Array**	**50.54**	**319**	P	**P**	**03 43 44.5**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=92,slow=7.5,SNR=4.2						
	comp=Z,0.5nm,0.4s						
AB31	**Akbulak array**	**56.75**	**314**		**P**	**03 44 31.6**	**+0.7**
AB31				IAmb	IAmb	03 44 31.9	
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**56.75**	**314**	P	**P**	**03 44 31.6**	**+0.7**
ARTI	**Arti**	**57.85**	**322**	P	**P**	**03 44 38.9**	**+0.4**
ARTI				IAmb	IAmb	03 44 41.3	
	comp=Z,3.1nm,0.8s						
STKA	**Stephens Creek**	**58.14**	**165**	P	**P**	**03 44 42.0**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=343,slow=11,SNR=4.8						
	comp=Z,0.4nm,0.3s						
STKA	**Stephens Creek**	**58.14**	**165**	P	**P**	**03 44 40.8**	**0.0**
STKA				IAmb	IAmb	03 44 51.6	
	comp=Z,9.2nm,0.8s						
ILAR	**Eielson Array**	**66.15**	**28**	P	**P**	**03 45 33.2**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=266,slow=6.2,SNR=1.1						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**66.15**	**28**	P	**P**	**03 45 32.9**	**-1.2**
FINES	**FINESS Array B**	**73.48**	**331**	P	**P**	**03 46 19.7**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=49,slow=5.6,SNR=13						
	comp=Z,1.1nm,0.4s						
FINES	**FINESS Array B**	**73.48**	**331**	P	**P**	**03 46 19.3**	**0.0**
BRTR	**Keskin Array B**	**76.97**	**308**	P	**P**	**03 46 39.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=56,slow=5.5,SNR=2.0						
	comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	**76.97**	**308**	P	**P**	**03 46 39.6**	**-0.4**
HFS	**Hagfors**	**79.48**	**332**	P	**P**	**03 46 53.7**	**+0.3**
	comp=Z,4.2nm,1.0s,baz=61,slow=4.1,SNR=2.6						
	comp=Z,4.2nm,1.0s						
NOA	**NORSAR Array B**	**80.02**	**334**	P	**P**	**03 46 55.6**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=58,slow=5.8,SNR=3.5						
	comp=Z,0.7nm,0.7s						
NC204	**NORSAR Array S**	**80.06**	**334**	P	**P**	**03 46 56.3**	**-0.3**
NC204				IAmb	IAmb	03 47 34.4	
	comp=Z,7.3nm,1.0s						
YKA	**Yellowknife Ar**	**80.22**	**24**	P	**P**	**03 46 58.3**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=304,slow=6.5,SNR=2.9						
	comp=Z,0.2nm,0.6s						

*SOME **25** 03:40:00.5, 40°.78N × 77°.77E, h5km*
*KRNET **25** 03:40:01.9 ± 0.1, 40°.81N × 77°.60E, h18km, mb2.4*
*NNC **25** 03:40:02.0 ± 0.7, 40°.82N × 77°.77E, h0km, mb3.0, mpv2.6,*
Error ellipse: s-maj=4.6km s-min=3.6km az=2.0

ISC 25 03:40:01.2 ± 2.4, **40.79N** ± 0'.10 × **77.55E** ± 0'.06, **h10**km, **n19,**
σ 1§16/30, 12C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.39**	**345**	*e*P	**Pb**	**03 40 27.4**	**+0.1**
KDJ				⇓*e*S	**Sb**	**03 40 45.9**	**+0.8**
NRN	**Naryn**	**1.40**	**298**	*e*P	**Pb**	**03 40 27.8**	**+0.2**
NRN				⇑*e*S	**Sn**	**03 40 46.7**	**+0.9**
JNKS	**Jany-Kuch**	**1.56**	**280**	*e*P	**Pb**	**03 40 29.9**	**-0.3**
JNKS				⇑*e*S	**Sn**	**03 40 50.5**	**+1.0**
ULHL	**Ulahol**	**1.80**	**325**	*e*P	**Pb**	**03 40 34.5**	**+0.2**
ULHL				⇑*e*S	**Sb**	**03 40 58.5**	**+1.5**
BOOM	**Boomskoye usch**	**2.13**	**324**	⇓*e*P	**Pb**	**03 40 39.5**	**-0.4**
BOOM				⇓*e*S	**Sb**	**03 41 07.6**	**+1.1**
TNSS	**Tian-Shan**	**2.31**	**347**	Pg	**Pg**	**03 40 44.5**	**-1.0**
	1.3nm,0.4s						
TNSS				Lg	Lg	03 41 16.2	
	1.4nm,0.4s						
TNSS	**Tian-Shan**	**2.31**	**347**	*e*P	**Pg**	**03 40 44.5**	**-1.0**
	1.3nm,0.4s						
TNSS				*e*S	**Sg**	**03 41 16.2**	**+0.8**
	1.4nm,0.4s						
SATY	**Saty**	**2.34**	**14**	Pg	**Pb**	**03 40 43.9**	**+0.4**
	2.0nm,0.2s						
SATY				Lg	Lg	03 41 15.3	
	7.6nm,0.3s						
MDOK	**Medeo**	**2.42**	**350**	Pg	**Pb**	**03 40 45.8**	**+1.0**
	2.1nm,0.3s						
MDOK				Lg	Lg	03 41 18.4	
	13nm,0.5s						
KST	**Kastek**	**2.58**	**331**	Pg	**Pg**	**03 40 49.4**	**-1.2**
	2.7nm,0.5s						
KST				Lg	Lg	03 41 24.6	
	2.5nm,0.6s						
KST	**Kastek**	**2.58**	**331**	*e*P	**Pg**	**03 40 49.4**	**-1.2**
	2.7nm,0.5s						
KST				*e*S	**Sg**	**03 41 24.6**	**+0.5**
	2.5nm,0.6s						
TKM2	**Tokmak 2**	**2.62**	**325**	⇑*e*P	**Pb**	**03 40 46.9**	**-1.5**
TKM2				⇑*e*S	**Sb**	**03 41 19.8**	**-1.0**
ARLS	**Aral**	**2.72**	**294**	⇑*e*P	**Pb**	**03 40 51.6**	**+1.5**
ARLS				⇑*e*S	**Sg**	**03 41 27.9**	**-0.8**
KPKS	**Kokpek**	**2.78**	**16**	Pg	**Pb**	**03 40 51.3**	**+0.2**
	0.3nm,0.1s						
KPKS				Lg	Lg	03 41 27.9	
	3.0nm,0.6s						
KPKS	**Kokpek**	**2.78**	**16**	*e*P	**Pb**	**03 40 51.3**	**+0.2**
	0.3nm,0.1s						
KPKS				*e*S	**Sg**	**03 41 27.9**	**-2.7**
	3.0nm,0.6s						
PDGK	**Podgornoye**	**2.89**	**28**	⇑Pg	**Pb**	**03 40 53.5**	**+0.7**
	1.3nm,0.6s						
PDGK				⇑Lg	Lg	03 41 31.3	
	5.6nm,0.7s						
KTBS	**Karatobe**	**3.01**	**347**	Pg	**Pb**	**03 40 56.5**	**+1.6**
	1.1nm,0.4s						
KTBS				Lg	Lg	03 41 36.8	
	0.9nm,0.4s						
KTBS	**Karatobe**	**3.01**	**347**	*e*P	**Pb**	**03 40 56.5**	**+1.6**
	1.1nm,0.4s						
KTBS				*e*S	**Sg**	**03 41 36.8**	**-0.9**
	0.9nm,0.4s						
KNOS	**Konyrlen**	**3.74**	**17**	Pg	**Pb**	**03 41 09.1**	**+1.6**
	0.4nm,0.4s						
KNOS				Lg	Lg	03 41 58.3	
	1.0nm,0.3s						

*NEIC **25** 03:58:59.3 ± 1.9, 16°.15S × 172°.06W ± 0°.09, h10km ± 1km,*
mb4.8/28, Error ellipse: s-maj=16.7km s-min=8.2km
az=299.0
*IDC **25** 03:59:01.0 ± 1.2, 15°.96S × 173°.17W, h0km, mb4.1/10,*
mbtmp4.1/10, MS3.5/7, Error ellipse: s-maj=66.1km
s-min=17.6km az=146.0

ISC 25 03:59:02.1 ± 0.5, **16°.21S** ± 0'.07 × **172°.84W** ± 0'.09, **h26**km, **n65,**
σ 1§64/62, mb4.7/23, MS3.6/5, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.50**	**24**		**Pn**	**03 59 39.2**	**-2.0**
AFI				Sn	**Sn**	**04 00 09.2**	**-1.8**
NIUE	**Niue**	**3.98**	**136**	Pn	**Pn**	**04 00 00.9**	**-0.6**
RAR	**Rarotonga**	**13.35**	**114**	Pn	**Pn**	**04 02 08.3**	**-1.5**
	4.3nm,0.3s,baz=208,slow=9.9,SNR=8.1						
RAR				LR	LR	04 06 08.8	
	comp=Z,197nm,18.6s,baz=250,slow=31						
RAR	**Rarotonga**	**13.35**	**114**		**Pn**	**04 02 08.5**	**-1.4**
RAO	**Raoul Island**	**13.80**	**199**	LR	LR	04 06 31.0	
	comp=Z,94nm,21.1s,baz=140,slow=32						
DZM	**Mont Dzumac**	**20.41**	**250**	P	**P**	**04 03 35.9**	**-1.6**
	4.1nm,0.9s,baz=1.8,slow=22,SNR=1.5						
DZM				LR	LR	04 10 26.7	
	comp=Z,270nm,19.1s,baz=12,slow=34						
	4.1nm,0.9s						
DZM	**Mont Dzumac**	**20.41**	**250**	P	**P**	**04 03 36.2**	**-1.2**
PPT	**Papeete**	**22.30**	**97**	LR	LR	04 10 34.8	
	comp=Z,108nm,19.2s,baz=268,slow=31						
RTZ	**Ruatahuna**	**24.05**	**200**	P	**P**	**04 04 15.2**	**0.0**
RTZ				IAmb	IAmb	04 04 35.5	
	comp=Z,17nm,1.0s						
BKZ	**Black Stump Fm**	**24.71**	**200**	P	**P**	**04 04 20.5**	**-0.7**
BKZ				IAmb	IAmb	04 04 50.3	
	comp=Z,29nm,1.7s						
MRZ	**Mangatainoka R**	**26.36**	**200**	P	**P**	**04 04 33.8**	**-2.3**
HNR	**Honiara**	**27.35**	**281**	LR	LR	04 13 48.2	
	comp=Z,13nm,20.8s,baz=201,slow=33						
THZ	**Tophouse**	**28.27**	**203**	P	**P**	**04 04 52.0**	**-1.4**
THZ				IAmb	IAmb	04 05 19.5	
	comp=Z,25nm,1.4s						
LTZ	**Lake Taylor**	**29.39**	**203**	P	**P**	**04 05 01.4**	**-1.8**
LTZ				IAmb	IAmb	04 05 22.0	
	comp=Z,13nm,0.9s						
CTA	**Charters Tower**	**38.99**	**258**	LR	LR	04 21 02.9	
	comp=Z,83nm,18.3s,baz=190,slow=34						
STKA	**Stephens Creek**	**44.10**	**241**	P	**P**	**04 07 10.0**	**+1.6**
	comp=Z,4.8nm,0.8s,baz=84,slow=7.9,SNR=9.1						
	comp=Z,4.8nm,0.8s						
STKA	**Stephens Creek**	**44.10**	**241**		**P**	**04 07 08.0**	**-0.4**
INKA	**Innaminka**	**44.31**	**247**	P	**P**	**04 07 09.3**	**-0.8**
WB0	**Warramunga Arr**	**50.15**	**258**	P	**P**	**04 07 53.7**	**-2.1**
WRA	**Warramunga Arr**	**50.19**	**257**	P	**P**	**04 07 56.8**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=92,slow=6.7,SNR=9.3						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**50.19**	**257**	P	**P**	**04 07 54.7**	**-1.3**
AS31	**Alice Springs**	**50.37**	**253**		**P**	**04 07 56.3**	**-1.2**
ASAR	**Alice Springs**	**50.38**	**253**	P	**P**	**04 07 58.6**	**+1.2**
	comp=Z,8.2nm,0.7s,baz=87,slow=8.3,SNR=48						
ASAR				PcP	**PcP**	**04 09 19.1**	**+3.3**
	comp=Z,0.3nm,0.5s,baz=90,slow=4.9,SNR=0.7						
	comp=Z,8.2nm,0.7s						
LPIG	**La Paz**	**73.00**	**58**	LR	LR	04 37 26.2	
	comp=Z,210nm,19.1s,baz=55,slow=32						
PETK	**Petropavlovsk-**	**73.56**	**342**	P	**P**	**04 10 33.0**	**+0.5**
	comp=Z,6.6nm,0.9s,baz=122,slow=5.4,SNR=4.0						
	comp=Z,6.6nm,0.9s						
PETK	**Petropavlovsk-**	**73.56**	**342**	P	**P**	**04 10 30.9**	**-1.7**
NVAR	**Mina Array Bea**	**74.57**	**42**	P	**P**	**04 10 42.5**	**+3.4**
	comp=Z,0.6nm,0.7s,baz=225,slow=8.5,SNR=4.3						
	comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**80.62**	**56**	P	**P**	**04 11 15.8**	**+2.8**
	comp=Z,0.3nm,0.6s,baz=222,slow=8.7,SNR=5.1						
	comp=Z,0.3nm,0.6s						
MCK	**McKinley**	**81.81**	**10**		**P**	**04 11 17.6**	**-0.8**
MCK				IAmb	IAmb	04 11 22.6	
	comp=Z,6.5nm,0.8s						
S22A	**4UR Ranch, Cre**	**81.92**	**47**	P	**P**	**04 11 18.0**	**-2.0**
PDAR	**Pinedale Array**	**82.51**	**42**	P	**P**	**04 11 26.4**	**+3.6**
	comp=Z,1.2nm,0.8s,baz=213,slow=3.0,SNR=13						
	comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	**82.51**	**42**	P	**P**	**04 11 21.5**	**-1.3**
YHL	**Hebgen Lake**	**82.56**	**39**		**P**	**04 11 22.6**	**-0.6**
YHL				IAmb	IAmb	04 11 35.2	
	comp=Z,6.1nm,1.0s						
WRH	**Wood River Hil**	**82.64**	**11**		**P**	**04 11 21.8**	**-0.9**
CCB	**Clear Creek Bu**	**82.85**	**11**		**P**	**04 11 23.7**	**-0.1**
CCB				IAmb	IAmb	04 11 27.8	
	comp=Z,6.5nm,0.8s						
IL31		**83.13**	**11**	P	**P**	**04 11 25.7**	**+0.5**
ILAR	**Eielson Array**	**83.13**	**11**	P	**P**	**04 11 28.1**	**+2.9**
	comp=Z,1.3nm,0.6s,baz=228,slow=6.0,SNR=45						
	comp=Z,1.3nm,0.6s						
ILAR	**Eielson Array**	**83.13**	**11**	P	**P**	**04 11 26.8**	**+1.6**
J25K	**Salcha River,**	**83.27**	**12**	P	**P**	**04 11 25.9**	**-0.2**
J25K				IAmb	IAmb	04 11 29.9	
	comp=Z,7.3nm,1.2s						
YNE	**Yellowstone No**	**83.36**	**39**	P	**P**	**04 11 24.8**	**-2.4**
YNE				IAmb	IAmb	04 11 38.9	
	comp=Z,6.7nm,1.2s						
F19K	**Shaleruckik Mo**	**83.55**	**6**	P	**P**	**04 11 27.5**	**+0.2**
L29M	**L29M**	**83.56**	**15**	P	**P**	**04 11 27.2**	**-0.4**
L29M				IAmb	IAmb	04 11 39.6	
	comp=Z,8.5nm,1.1s						
E18K	**Tukpahlearik C**	**83.87**	**5**		**P**	**04 11 29.5**	**+0.5**
PRP	**Porcupine Dome**	**84.05**	**11**	P	**P**	**04 11 29.8**	**-0.3**
PRP				IAmb	IAmb	04 11 34.7	
	comp=Z,7.7nm,0.9s						
E19K	**Redstone River**	**84.21**	**6**	P	**P**	**04 11 30.2**	**-0.5**
E19K				IAmb	IAmb	04 11 35.3	
	comp=Z,4.7nm,0.8s						
G26K	**Porcupine Rive**	**85.66**	**11**	P	**P**	**04 11 38.4**	**+0.5**
G26K				IAmb	IAmb	04 11 49.0	
	comp=Z,9.6nm,1.1s						
F31M	**Tsiigehtchic**	**88.18**	**14**		**P**	**04 11 51.7**	**+1.5**
YKA	**Yellowknife Ar**	**90.62**	**23**	P	**P**	**04 12 03.2**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=240,slow=4.7,SNR=2.0						
	comp=Z,0.1nm,0.4s						
A36M	**Sachs Harbour**	**93.56**	**13**		**P**	**04 12 14.0**	**-1.2**
A36M				IAmb	IAmb	04 12 20.1	
	comp=Z,3.7nm,0.8s						
GERES	**GERESS Array B**	**147.01**	**352**	PKPbc	**PKiKP**	**04 18 44.7**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=7.6,slow=4.0,SNR=5.8						
BRTR	**Kesin Array B**	**147.12**	**321**	PKPbc	**PKiKP**	**04 18 45.5**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=104,slow=2.8,SNR=11						
BRTR	**Keskin Array B**	**147.12**	**321**	PKPdf	**PKPdf**	**04 18 40.3**	**-0.8**
CONA	**Conrad Observa**	**147.56**	**349**	*e*PKP	**PKPab**	**04 18 48.1**	**+1.9**
	comp=Z,4.7nm,1.0s						
RONA	**Rosalia, Austr**	**147.70**	**348**	*e*PKP	**PKPab**	**04 18 48.2**	**+1.5**
	comp=Z,2.5nm,0.7s						
MOA	**Molln**	**147.90**	**351**	*e*PKP	**PKiKP**	**04 18 46.7**	**-0.2**
	comp=Z,8.7nm,1.9s						
BIOA	**Bad Ischl, Aus**	**148.15**	**352**	*e*PKiKP	**PKPab**	**04 18 50.9**	**+2.4**
	comp=Z,2.3nm,0.5s						
ARSA	**Arzberg**	**148.28**	**349**	*e*PKiKP	**PKPab**	**04 18 50.6**	**+1.6**
	comp=Z,2.4nm,0.8s						
WATA	**Walderalm**	**148.74**	**354**	*e*PKiKP	**PKPab**	**04 18 53.0**	**+1.9**
	comp=Z,2.3nm,0.8s						
MOTA	**Moosalm**	**148.78**	**355**	*e*PKP	**PKPab**	**04 18 54.9**	**+3.7**
	comp=Z,8.5nm,1.4s						
KBA	**Koelnbreinsper**	**148.79**	**352**	*e*PKP	**PKPab**	**04 18 50.4**	**-0.9**
	comp=Z,3.4nm,1.2s						
WTTA	**Wattenberg**	**148.81**	**354**	*e*PKiKP	**PKPab**	**04 18 52.0**	**+0.6**
	comp=Z,2.3nm,0.6s						
DAVA	**Damuels**	**148.93**	**356**	*e*PKiKP	**PKPab**	**04 18 52.6**	**+0.8**
	comp=Z,9.0nm,1.4s						
FETA	**Feichten**	**149.13**	**355**	*e*PKiKP	**PKPab**	**04 18 52.9**	**+0.3**
	comp=Z,5.0nm,1.1s						
MYKA	**Terra Mystica**	**149.19**	**351**	*e*PKP	**PKPab**	**04 18 55.5**	**+2.7**
	comp=Z,3.2nm,1.0s						
ABTA	**Abfaltersbach**	**149.22**	**353**	*i* PKP	**PKPab**	**04 18 52.2**	**-0.7**
	comp=Z,4.8nm,0.9s						

*IDC **25** 04:14:56.1 ± 0.5, 8°.00S × 80°.13W, h0km, mb4.6/19,*
mbtmp4.6/24, ML4.2/4, MS4.5/50, Error ellipse:
s-maj=21.8km s-min=11.5km az=63.0
*MOS **25** 04:15:00.8 ± 1.4, 8°.05S × 80°.08W, h33km, mb5.3/15, Error*
ellipse: s-maj=15.8km s-min=7.2km az=110.3
*NEIC **25** 04:15:02.1, 8°.09S × 80°.01W, h30km*
*NEIC **25** 04:15:02.2 ± 2.2, 8°.09S ± 0°.05 × 80°.02W ± 0°.05, h28km ± 4km,*
mb5.2/275, Mww5.3/33, Error ellipse: s-maj=8.7km
s-min=5.3km az=139.0
*NEIC **25** 04:15:02.1, 8°.09S × 80°.01W, h30km, Moment Tensor*
Solution. Duration: 2s3 Moment tensor: Scale 10^17 Nm;
Mrr 0.80; Mθθ 0.37; Mφφ -1.16; Mrθ -0.50; Mθφ -0.13; Mφr 0.21;
Fault plane solution: M0 1.17000 × 10^17 NP1:
φs 214.15000°, δ 49.22000°, λ 136.31000°. NP2:
φs 336.12000°, δ 58.46000°, λ 50.03000°. Principal axes: T
1.1501, Plg56.0000°, Azm191.0000°; N 0.0419,
Plg33.0000°, Azm360.0000°; P -1.1920, Plg5.0000°,
Azm93.0000°;
*GCMT **25** 04:15:02.9 ± 0.1, 8°.05S ± 0°.01 × 80°.13W ± 0°.01, h34km,*
MW5.4/141, Moment Tensor Solution. s114,c171;
s141,c247; Duration: 1s2 Moment tensor: Scale 10^17
Nm; Mrr 0.55 ± .02; Mθθ 0.71 ± .02; Mφφ -1.26 ± .02;
Mrθ -0.60 ± .03; Mθφ -0.55 ± .02; Mφr 0.68 ± .03; Best double
couple: M0 1.52100 × 10^17 NP1: φs 233.00000°, δ 50.00000°,
λ 159.00000°. NP2: φs 337.00000°, δ 74.00000°, λ 42.00000°.
Principal axes: T 1.5010, Plg41.0000°, Azm203.0000°;
N 0.0400, Plg46.0000°, Azm354.0000°; P -1.5400,
Plg15.0000°, Azm100.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function

ISC 25 04:15:02.0 ± 0.3, **8°.10S** ± 0'.04 × **80°.03W** ± 0'.06, **h37**km, **n419,**
σ 1§53/264, mb5.2/154, MS4.6/57, 11C-4D, Off coast of
northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.89**	**59**	Pn	**Pn**	**04 15 34.3**	**+2.2**
	309nm,0.3s,baz=261,slow=4.9,SNR=1542						
ATAH				Sn	**Sn**	**04 15 59.0**	**+4.1**
	1µm,0.3s,baz=305,slow=20,SNR=6.7						
MCRA	**Macar, Loja**	**3.71**	**1**	P	**Pn**	**04 15 56.4**	**-0.5**
NNA	**Nana**	**4.97**	**141**	Pn	**Pn**	**04 16 15.0**	**+0.8**
	65nm,0.3s,baz=312,slow=6.7,SNR=111						
NNA				Sn	**Sn**	**04 17 09.7**	**-0.9**
	860nm,0.3s,baz=168,slow=17,SNR=19						
	345nm,0.3s						
NNA	**Nana**	**4.97**	**141**		**Pn**	**04 16 14.4**	**+0.1**
NNA				Sn	**Sn**	**04 17 10.2**	**-0.4**
PPLP	**Puerto Lpez**	**6.56**	**353**	P	**Pn**	**04 16 35.9**	**-0.1**
	4µm268nm,0.5s						
SLOR	**San Lorenzo -**	**7.48**	**12**		**Pn**	**04 16 50.1**	**+1.0**
PAC1	**Pacto, Paraso**	**8.41**	**9**	P	**Pn**	**04 17 01.8**	**+0.3**
OTAV	**Otavalo**	**8.44**	**11**		**Pn**	**04 17 02.1**	**0.0**
OTAV	**Otavalo**	**8.44**	**11**	*e*P	**Pn**	**04 17 02.1**	**0.0**
OTAV	**Otavalo**	**8.44**	**11**	*e*P	**Pn**	**04 17 02.2**	**+0.1**
OTAV	**Otavalo**	**8.44**	**11**	P	**Pn**	**04 17 02.8**	**+0.7**
	2µm2µm97nm,1.3s						
CUSE	**Cuicocha Este**	**8.51**	**11**	P	**Pn**	**04 17 05.5**	**+2.3**
BONI	**La Bonita**	**8.86**	**16**	P	**Pn**	**04 17 08.1**	**+0.3**
	2µm223nm,1.1s						
TULM	**Tulcn-Chalpat**	**9.04**	**14**	P	Pn	04 17 15.4	+4.9
	3µm354nm,0.9s						
CMBC	**Cumbal**	**9.25**	**14**	P	**Pn**	**04 17 15.1**	**+1.8**
PTLC	**Puerto Leguiza**	**9.74**	**33**	P	Pn	04 17 13.7	-5.9
CRUC	**La Cruz**	**10.09**	**18**	P	**Pn**	**04 17 25.4**	**+0.7**
BBAC	**Balboa, Cauca**	**10.44**	**16**	P	**Pn**	**04 17 31.0**	**+1.6**
	821nm48nm,0.8s						
POPC	**Popayan, Colom**	**11.09**	**18**	P	**Pn**	**04 17 40.9**	**+2.5**
	3µm802nm37nm,1.6s						
VILC	**Villavicencio,**	**13.68**	**28**	P	**P**	**04 18 20.6**	**-1.3**
AP01	**Chacalluta**	**13.89**	**138**	Pn	**Pn**	**04 18 19.9**	**+3.5**
PB18	**Visviri**	**13.95**	**134**	Pn	**Pn**	**04 18 19.4**	**+1.7**
ROSC	**El Rosal**	**14.06**	**24**	Pn	**Pn**	**04 18 17.9**	**-1.3**
	2.5nm,0.3s,baz=234,slow=24,SNR=1.7						
ROSC				LR	LR	04 25 06.8	
	comp=Z,5µm,19.7s,baz=206,slow=44						
ROSC	**El Rosal**	**14.06**	**24**	Pn	**Pn**	**04 18 21.4**	**+2.3**
ROSC	**El Rosal**	**14.06**	**24**	P	**Pn**	**04 18 21.4**	**+2.3**
PB12	**IPOC Station P**	**14.07**	**139**	Pn	**Pn**	**04 18 19.5**	**+0.5**
LPAZ	**La Paz**	**14.19**	**126**	Pn	**Pn**	**04 18 22.2**	**+1.2**
	0.6nm,0.3s,baz=310,slow=7.7,SNR=25						
LPAZ				LR	LR	04 24 53.0	
	comp=Z,4µm,21.3s,baz=296,slow=42						
	18nm,1.1s						
LPAZ	**La Paz**	**14.19**	**126**		**Pn**	**04 18 20.9**	**-0.1**
LPAZ	**La Paz**	**14.19**	**126**	*e*P	**Pn**	**04 18 21.7**	**+0.7**
PB16	**IPOC Station P**	**14.43**	**136**		**Pn**	**04 18 24.1**	**-0.2**
SGC2	**Sao Gabriel da**	**15.22**	**59**	P	**Pn**	**04 18 27.7**	**-6.7**
	2µm100nm,0.6s						
PTAC	**Punta Ardita,**	**15.31**	**8**	P	**P**	**04 18 41.8**	**+1.9**
PB11	**IPOC Station P**	**15.34**	**140**		**Pn**	**04 18 36.2**	**+0.2**
DBBC	**Dabeiba**	**15.50**	**14**	P	**Pn**	**04 18 39.8**	**+1.8**
RUSC	**La Rusia**	**15.54**	**27**	P	**P**	**04 18 42.9**	**0.0**
GO01	**Chusmiza**	**15.57**	**139**	Pn	**Pn**	**04 18 38.9**	**-0.4**
PB08	**IPOC Station P**	**15.94**	**140**		**Pn**	**04 18 44.5**	**+0.5**
PB08				IAmb	IAmb	04 18 51.1	
	comp=Z,216nm,1.0s						
TEFE	**Tefe**	**15.98**	**74**	*e*P	**Pn**	**04 18 38.3**	**-5.9**
APAC	**Apartado, Choc**	**16.27**	**12**	P	**P**	**04 18 50.2**	**-0.3**
	comp=Z,3µmcomp=Z,183nm,1.6s						
UREC	**San Jos de Ur**	**16.38**	**16**	P	**Pn**	**04 18 50.2**	**+1.0**
	comp=Z,901nmcomp=Z,58nm,1.3s						
PB02	**IPOC Station P**	**16.38**	**144**	P	**P**	**04 18 51.4**	**-0.4**
PB02				IAmb	IAmb	04 18 55.8	
	comp=Z,175nm,0.9s						
PB01	**IPOC Station P**	**16.41**	**143**	P	**P**	**04 18 51.0**	**-1.1**
PB01				IAmb	IAmb	04 18 56.5	
	comp=Z,199nm,1.0s						
PB07	**IPOC Station P**	**16.71**	**145**	P	**Pn**	**04 18 54.4**	**+0.9**
PIRO	**Carate, Puerto**	**16.73**	**349**		**P**	**04 18 57.0**	**+1.4**
BRU2	**Volcan**	**16.99**	**351**	P	**Pn**	**04 18 57.7**	**+0.5**
PAMC	**Pamplona, Colo**	**16.99**	**26**	P	**P**	**04 19 01.2**	**+2.2**
PB03	**IPOC Station P**	**17.04**	**146**	P	**P**	**04 18 58.9**	**-0.3**
PB09	**IPOC Station P**	**17.13**	**144**	Pn	**Pn**	**04 18 58.6**	**-0.2**
PB09				IAmb	IAmb	04 19 05.8	
	comp=Z,234nm,1.1s					

H03N3 **Juan Fernandez** 25.25 178 T T 04 46 48.5
baz=357,slow=76,SNR=60
CO04 **Los Peladeros** 25.27 162 IAmb IAmb 04 20 43.6
comp=Z,59nm,1.2s
BDQN **Bodoquena, MS** 25.64 121 *eP* **P** **04 20 28.4 +0.1**
VA06 **Catapilco** 25.65 163 IAmb IAmb 04 20 50.0
comp=Z,107nm,1.4s
CFA **Coronel Fontan** 25.84 156 LR LR 04 29 14.3
comp=Z,722nm,20.3s,baz=14,slow=33
VA03 **San Esteban** 26.07 162 IAmb IAmb 04 20 54.4
comp=Z,79nm,1.1s
PP1B **Ponte de Pedra** 26.24 114 *eP* **P** **04 20 34.1 +0.2**
PEL **Peldehue** 26.38 162 P **P** **04 20 37.1 +2.1**
PEL **Peldehue** 26.38 162 P **P** **04 20 37.1 +2.1**
PEL pmax pmax
comp=Z,49nm,1.1s
AQDB **Aquidauana** 26.55 120 IAmb IAmb 04 20 40.6
comp=Z,68nm,1.2s
AQDB **Aquidauana** 26.55 120 *eP* **P** **04 20 36.9 +0.3**
MT05 **Renca** 26.59 162 IAmb IAmb 04 21 15.6
comp=Z,160nm,1.6s
MT08 **Bocatoma Ro** 26.86 161 IAmb IAmb 04 20 43.7
comp=Z,74nm,1.2s
MT09 **Talagante** 26.88 163 IAmb IAmb 04 20 42.5
comp=Z,102nm,1.4s
MT13 **San Alfonso** 27.06 162 IAmb IAmb 04 20 44.7
comp=Z,98nm,1.4s
BO01 **Tunca** 27.43 164 P **P** **04 20 46.1 +1.8**
BO01 IAmb IAmb 04 20 47.8
comp=Z,66nm,1.4s
GO05 **Hualane** 27.79 166 IAmb IAmb 04 20 50.5
comp=Z,66nm,1.1s
BO02 **Sierra Bellavi** 27.89 164 IAmb IAmb 04 20 51.3
comp=Z,58nm,1.3s
CPUP **Villa Florida** 28.17 133 P **P** **04 20 51.8 +0.7**
comp=Z,9.2nm,1.0s,baz=318,slow=11,SNR=13
CPUP LR LR 04 34 46.0
comp=Z,1µm,19.1s,baz=318,slow=42
comp=Z,9.2nm,1.0s
AMBA **Amambai (Brazi** 28.20 124 *eP* **P** **04 20 52.3 +0.9**
C2SB **Chapadao do Su** 28.45 115 *eP* **P** **04 20 53.8 +0.1**
SNDB **Serra Nova Dou** 28.55 100 *eP* **P** **04 20 53.1 -1.5**
ARAG **Araguaiana, MT** 28.60 108 *eP* **P** **04 20 54.1 -1.0**
CMIG **Matias Romero** 29.02 330 LR LR 04 30 30.1
comp=Z,534nm,20.6s,baz=172,slow=32
PDPR **Patillas Dam,** 29.41 28 P **P** **04 21 03.5 +1.4**
PDPR IAmb IAmb 04 21 26.7
comp=Z,49nm,1.1s
SJG **San Juan** 29.43 28 LR LR 04 36 11.8
comp=Z,622nm,19.3s,baz=198,slow=43
BI02 **San Fabin de** 29.53 166 P **P** **04 21 04.5 +1.4**
BI02 IAmb IAmb 04 21 05.8
comp=Z,68nm,1.4s
MDP **Montagnes des** 30.31 65 LR LR 04 33 45.6
comp=Z,1µm,20.7s,baz=242,slow=37
ITRB **Iturama** 30.96 115 *eP* **P** **04 21 14.7 -1.3**
PSAL **Palomas, Salto** 31.00 141 *eP* **P** **04 21 17.8 +1.7**
PTGB **Pitanga** 31.40 125 *eP* **P** **04 21 19.8 0.0**
LDASE **Londrina, Braz** 31.61 122 *eP* **P** **04 21 21.4 -0.2**
SMTB **Santa Maria do** 32.09 94 *eP* **P** **04 21 24.1 -1.8**
BDFB **Brasilia** 32.18 106 P **P** **04 21 26.6 -0.3**
comp=Z,15nm,0.6s,baz=274,slow=9.9,SNR=32
BDFB LR LR 04 35 12.7
comp=Z,4µm,21.5s,baz=284,slow=38
comp=Z,15nm,0.6s
BDFB **Brasilia** 32.18 106 P **P** **04 21 26.8 0.0**
BDFB **Brasilia** 32.18 106 P **P** **04 21 26.8 0.0**
BDFB pmax pmax
comp=Z,106nm,1.6s
GO06 **Curarrehue** 32.27 168 IAmb IAmb 04 21 30.0
comp=Z,56nm,1.1s
IPMB **Ipameri, GO** 32.47 111 *eP* **P** **04 21 28.5 -0.8**
ITAB **Concordia** 32.55 129 IAmb IAmb 04 21 44.5
comp=Z,60nm,1.3s
ITAB **Concordia** 32.55 129 *eP* **P** **04 21 29.8 0.0**
BB19B **Bebedouro** 33.02 116 *eP* **P** **04 21 33.5 -0.5**
CPSB **Cacapava Do Su** 33.34 135 *eP* **P** **04 21 37.1 +0.5**
PLCA **Paso Flores** 33.57 167 P **P** **04 21 40.2 +1.5**
comp=Z,44nm,1.0s,baz=338,slow=9.7,SNR=37
PLCA LR LR 04 32 36.7
comp=Z,433nm,21.4s,baz=358,slow=32
comp=Z,44nm,1.0s
PLCA **Paso Flores** 33.57 167 *eP* **P** **04 21 40.1 +1.5**
PLCA **Paso Flores** 33.57 167 P **P** **04 21 40.3 +1.7**
PLCA PcP **PcP** **04 24 19.3 +0.7**
RPN **Rapa Nui** 33.59 232 LR LR 04 31 31.1
comp=Z,2µm,21.1s,baz=50,slow=30
TRQA **Tornquist** 33.99 154 P **P** **04 21 44.2 +2.0**
TRQA **Tornquist** 33.99 154 P **P** **04 21 44.2 +2.0**
TRQA pmax pmax
comp=Z,159nm,1.8s
PLTB **Pedras Altas** 34.04 137 IAmb IAmb 04 21 58.4
comp=Z,23nm,0.9s
PLTB **Pedras Altas** 34.04 137 *eP* **P** **04 21 43.6 +0.9**
RCLB **Rio Claro- Sao** 34.33 118 *eP* **P** **04 21 45.7 +0.2**
CNLB **Canela** 34.59 131 *eP* **P** **04 21 47.6 0.0**
SDBA **SAO DESIDERIO** 34.81 100 *eP* **P** **04 21 48.4 -1.3**
SPB **Sao Paulo** 34.82 120 *eP* **P** **04 21 49.2 -0.4**
SPB **Sao Paulo** 34.82 120 P **P** **04 21 50.0 +0.4**
VAO **Valinhos** 35.02 119 P **P** **04 21 51.8 +0.4**
VAO **Valinhos** 35.02 119 *eP* **P** **04 21 51.5 +0.1**
PET01 **Itanhaem-SP** 35.20 121 *eP* **P** **04 21 53.1 +0.2**
JANB **Januaria** 35.63 104 *eP* **P** **04 21 55.7 -1.0**
LL02 **Futaleuf** 35.68 170 IAmb IAmb 04 21 59.0
comp=Z,68nm,1.2s
PARB **Paraibuna** 36.29 119 *eP* **P** **04 22 02.2 -0.1**
BSCB **Bom Sucesso** 36.35 115 *eP* **P** **04 22 01.8 -1.1**
AY01 **Puyuhuapi** 36.74 171 IAmb IAmb 04 22 08.1
comp=Z,91nm,1.7s
DIAM **Diamantina, MG** 36.75 110 *eP* **P** **04 22 05.3 -1.1**
COYC **Coyhaique** 37.96 171 P **P** **04 22 17.8 +1.7**
COYC x x 04 22 33.2
COYC PcP **PcP** **04 24 32.5 +1.1**
NBPS **Pedro II - PI** 38.52 87 *eP* **P** **04 22 20.2 -1.1**
SJMB **Sao Joao De Ma** 39.14 110 *eP* **P** **04 22 25.4 -1.0**
AY03 **Cochrane** 39.52 172 IAmb IAmb 04 22 32.7
comp=Z,70nm,1.3s
RIB01 **Linhares ES** 39.99 110 *eP* **P** **04 22 32.3 -1.2**
GUA01 **Guaratinga, BA** 40.12 106 *eP* **P** **04 22 33.8 -0.8**
CMC01 **Camacan, BA** 40.26 104 *eP* **P** **04 22 34.6 -1.2**
NBIT **Itapeh - BA** 40.30 103 *eP* **P** **04 22 35.0 -1.1**
GO08 **Villa O'Higgin** 40.72 172 P **P** **04 22 42.6 +3.5**
GO08 IAmb IAmb 04 22 43.1
comp=Z,68nm,1.4s
HKT **Hockley** 40.77 339 P **P** **04 22 41.2 +1.6**
HKT IAmb IAmb 04 22 56.4
comp=Z,99nm,1.8s
HKT **Hockley** 40.77 339 P **P** **04 22 41.2 +1.6**
HKT pmax pmax
comp=Z,99nm,1.8s
VBMS **Vicksburg** 41.33 346 IAmb IAmb 04 22 47.7
comp=Z,55nm,1.1s
HNDO **Hondo** 41.75 334 IAmb IAmb 04 23 07.0
comp=Z,99nm,1.8s
Z41A **Richland Creek** 42.89 344 IAmb IAmb 04 23 13.4
comp=Z,127nm,1.9s
CCAR **Cane Creek** 43.25 346 IAmb IAmb 04 23 04.3
comp=Z,124nm,1.6s
WLAR **White Oak Lake** 43.38 344 IAmb IAmb 04 23 05.9
comp=Z,82nm,1.2s
Z38A **Mt. Pleasant** 43.52 342 IAmb IAmb 04 23 06.7
comp=Z,74nm,1.4s
TXAR **Lajitas Array** 43.63 330 P **P** **04 23 02.1 -1.0**
comp=Z,0.7nm,0.7s,baz=162,slow=6.7,SNR=8.4
comp=Z,0.7nm,0.7s
TXAR **Lajitas Array** 43.63 330 P **P** **04 23 03.1 -0.1**
TXAR **Lajitas Array** 43.63 330 P **P** **04 23 03.1 -0.1**
TKL **Tuckaleechee C** 43.67 356 LR LR 04 40 28.6
comp=Z,753nm,21.7s,baz=178,slow=35
RCBR **Riachuelo** 43.85 90 LR LR 04 42 22.0
comp=Z,798nm,19.2s,baz=272,slow=38
ALPN **Alpine** 44.47 330 IAmb IAmb 04 23 28.7
comp=Z,67nm,1.9s
WVT **Waverly** 44.60 351 P **P** **04 23 10.7 0.0**
WVT **Waverly** 44.60 351 P **P** **04 23 10.7 0.0**
WVT pmax pmax
comp=Z,43nm,1.8s
TPB05 **Hovey Rd** 44.77 331 IAmb IAmb 04 23 20.7
comp=Z,6.6nm,0.8s
LOOK **Love County** 44.91 340 IAmb IAmb 04 23 43.1
comp=Z,43nm,0.9s
TPB01 **Permian Basin** 45.01 331 IAmb IAmb 04 23 32.4
comp=Z,47nm,1.6s
WTFS **Witchita Falls** 45.17 338 IAmb IAmb 04 23 29.7
comp=Z,32nm,0.6s

FCAR **Ozark Folk Cen** 45.22 346 IAmb IAmb 04 23 35.8
comp=Z,48nm,1.2s
ODSA **Odessa** 45.41 333 IAmb IAmb 04 23 35.8
comp=Z,59nm,1.5s
SN07 **Snyder 07** 45.52 335 IAmb IAmb 04 23 35.7
comp=Z,59nm,1.8s
POST **Post** 45.76 335 IAmb IAmb 04 23 38.5
comp=Z,43nm,1.4s
128A **Castleberry Fa** 45.81 333 IAmb IAmb 04 23 38.3
comp=Z,24nm,1.6s
DKNS **Dickens** 46.04 336 IAmb IAmb 04 23 41.1
comp=Z,24nm,0.8s
HHAR **Hobbs** 46.05 344 IAmb IAmb 04 23 36.9
comp=Z,43nm,1.4s
CGM3 **Cape Girardeau** 46.05 349 IAmb IAmb 04 23 38.5
comp=Z,41nm,1.4s
WMOK **Wichita Mounta** 46.15 338 IAmb IAmb 04 23 36.1
comp=Z,58nm,1.9s
DEOK **Depew** 46.38 341 IAmb IAmb 04 25 14.2
comp=Z,64nm,1.6s
QUOK **Quay** 46.75 341 IAmb IAmb 04 23 45.7
comp=Z,55nm,1.7s
FVM **French Village** 46.86 349 IAmb IAmb 04 23 42.1
comp=Z,48nm,1.6s
OK048 **Pawnee Station** 47.05 341 IAmb IAmb 04 23 33.6
comp=Z,44nm,1.3s
CCM **Cathedral Cave** 47.10 348 P **P** **04 23 30.5 +0.1**
CCM x x 04 23 37.6
T35A **Sooner Cattle** 47.38 342 IAmb IAmb 04 23 36.4
comp=Z,41nm,1.1s
SFIN **Lafayette** 48.68 353 IAmb IAmb 04 23 54.6
comp=Z,54nm,1.7s
P40A **Paris** 48.68 348 IAmb IAmb 04 23 58.1
comp=Z,51nm,1.5s
P38A **Dawn** 49.11 346 IAmb IAmb 04 23 59.6
comp=Z,30nm,1.0s
HDIL **Hodale** 49.16 351 IAmb IAmb 04 24 01.0
comp=Z,22nm,0.8s
ANMO **Albuquerque** 49.57 331 LR LR 04 43 51.8
comp=Z,293nm,19.3s,baz=134,slow=35
ANMO **Albuquerque** 49.57 331 P **P** **04 23 50.2 +0.5**
ANMO **Albuquerque** 49.57 331 *ce*P **P** **04 23 50.3 +0.6**
ANMO pmax pmax
comp=Z,12nm,1.4s
ANMO **Albuquerque** 49.57 331 P **P** **04 23 50.2 +0.5**
ANMO x x 04 23 57.5
TUC **Tucson** 49.76 325 P **P** **04 23 51.3 +0.2**
TUC **Tucson** 49.76 325 P **P** **04 23 51.3 +0.2**
TUC pmax pmax
comp=Z,27nm,1.8s
K57A **Scipio Center** 50.69 3 P **P** **04 23 58.4 +0.6**
K57A IAmb IAmb 04 24 10.8
comp=Z,88nm,1.7s
X18A **Snowflake** 50.99 328 IAmb IAmb 04 24 16.1
comp=Z,39nm,1.8s
SDCO **Great Sand Dun** 51.45 334 IAmb IAmb 04 24 20.2
comp=Z,44nm,1.6s
WUAZ **Wupatki** 52.49 328 IAmb IAmb 04 24 27.2
comp=Z,64nm,1.8s
SADO **Sadowa** 52.63 1 P **P** **04 24 10.3 -2.0**
comp=Z,1.1nm,0.3s,baz=143,slow=6.6,SNR=1.7
SADO LR LR 04 48 14.5
comp=Z,219nm,18.9s,baz=198,slow=38
comp=Z,1.1nm,0.3s
PV13 **Radium Mtn., P** 53.28 332 IAmb IAmb 04 24 32.5
comp=Z,86nm,1.8s
BC3 **Big Chuckawall** 53.43 323 IAmb IAmb 04 24 34.0
comp=Z,62nm,1.9s
PV16 **Nyswonger Mesa** 53.45 332 IAmb IAmb 04 24 42.5
comp=Z,57nm,1.8s
PV10 **Paradox Valley** 53.56 332 IAmb IAmb 04 24 35.0
comp=Z,25nm,1.1s
IRM **Iron Mountain** 53.60 324 IAmb IAmb 04 24 35.3
comp=Z,36nm,1.8s
ECSD **EROS Data Cent** 53.74 345 IAmb IAmb 04 24 34.0
comp=Z,67nm,1.8s
G62A **West of Eustis** 53.76 8 P **P** **04 24 23.8 +3.1**
PFO **Pinyon Flats O** 54.01 322 LR LR 04 43 55.4
comp=Z,322nm,19.2s,baz=138,slow=32
LCMT **Little Creek M** 54.61 327 IAmb IAmb 04 24 42.8
comp=Z,49nm,1.9s
O20A **White River Ci** 54.62 334 IAmb IAmb 04 24 41.4
comp=Z,69nm,1.8s
SRU **San Rafael Swe** 54.84 331 IAmb IAmb 04 24 43.8
comp=Z,71nm,1.7s
SZCU **Shut Canyon** 54.96 328 IAmb IAmb 04 24 45.5
comp=Z,71nm,1.9s
CCUT **Cedar City** 55.07 328 IAmb IAmb 04 24 45.7
comp=Z,61nm,2.0s
P18A **Preston Nutter** 55.12 332 IAmb IAmb 04 24 45.1
comp=Z,66nm,1.9s
P17A **Butcher Ranch,** 55.23 331 IAmb IAmb 04 24 46.6
comp=Z,79nm,1.8s
SHPR **Sheep Range** 55.28 326 IAmb IAmb 04 24 47.7
comp=Z,57nm,1.9s
F33A **5 Mile Ranch,** 55.64 346 IAmb IAmb 04 24 47.6
comp=Z,66nm,1.5s
CCCA **Chr Cany lake** 55.86 323 IAmb IAmb 04 24 54.4
comp=Z,78nm,1.9s
K22A **Casper** 56.00 337 IAmb IAmb 04 24 51.5
comp=Z,60nm,1.7s
LRMC **Laurel Mtn Rad** 56.02 323 IAmb IAmb 04 25 09.8
comp=Z,33nm,1.8s
BSUT **Blindstream Ca** 56.08 332 IAmb IAmb 04 24 56.3
comp=Z,63nm,1.8s
CLC **China Lake** 56.20 323 IAmb IAmb 04 24 53.8
comp=Z,33nm,1.8s
WCT **Wildcat Mounta** 56.31 325 IAmb IAmb 04 24 54.1
comp=Z,46nm,1.9s
RSSD **Black Hills** 56.34 339 P **P** **04 24 39.2 -0.3**
RSSD IAmb IAmb 04 24 54.1
comp=Z,38nm,1.9s
RSSD **Black Hills** 56.34 339 P **P** **04 24 39.2 -0.3**
RSSD pmax pmax
comp=Z,38nm,2.0s
LDAQ **Lac Daran** 56.36 7 P **P** **04 24 40.1 +0.6**
TCUT **Toone Canyon** 56.84 332 IAmb IAmb 04 24 58.5
comp=Z,62nm,1.5s
BW06 **Boulder Array** 57.34 334 IAmb IAmb 04 24 60.0
comp=Z,31nm,1.6s
PD31 **Pinedale Array** 57.34 334 IAmb IAmb 04 24 60.0
comp=Z,33nm,1.7s
PDAR **Pinedale Array** 57.34 334 P **P** **04 24 46.1 -0.6**
comp=Z,1.6nm,0.7s,baz=122,slow=7.5,SNR=12
PDAR LR LR 04 49 23.3
comp=Z,206nm,18.8s,baz=132,slow=36
comp=Z,1.6nm,0.7s
PMSA **Palmer Station** 57.69 172 LR LR 04 46 53.3
comp=Z,155nm,18.2s,baz=332,slow=33
AGMN **Agassiz Nation** 57.87 348 IAmb IAmb 04 25 07.8
comp=Z,20nm,0.8s
HVU **Hansel Valley** 58.00 332 IAmb IAmb 04 25 09.0
comp=Z,64nm,2.0s
AHID **Auburn Hatcher** 58.01 333 IAmb IAmb 04 25 05.9
comp=Z,78nm,1.9s
NVAR **Mina Array Bea** 58.41 325 P **P** **04 24 54.1 -0.2**
comp=Z,1.4nm,0.6s,baz=129,slow=6.9,SNR=14
comp=Z,1.4nm,0.6s
LOHW **Long Hollow** 58.47 334 IAmb IAmb 04 25 12.2
comp=Z,47nm,1.9s
FXWY **Fox Creek** 58.67 334 IAmb IAmb 04 25 13.7
comp=Z,39nm,1.9s
YPP **Pitchstone Pla** 59.09 335 IAmb IAmb 04 25 29.4
comp=Z,32nm,2.0s
H17A **Grant Village** 59.09 335 IAmb IAmb 04 25 16.2
comp=Z,51nm,1.9s
YNE **Yellowstone No** 59.35 336 IAmb IAmb 04 25 14.2
comp=Z,46nm,1.9s
YHB **Horse Butte** 59.64 335 IAmb IAmb 04 25 21.8
comp=Z,74nm,1.9s
ULM **Lu Bonnet** 59.73 348 P **P** **04 25 01.5 -1.4**
comp=Z,3.0nm,0.6s,baz=150,slow=7.4,SNR=8.3
comp=Z,3.0nm,0.6s
HLID **Hailey** 60.14 332 P **P** **04 25 06.5 +0.4**
HLID IAmb IAmb 04 25 21.7
comp=Z,60nm,1.9s
AFDM **Forest Hills D** 60.29 324 P **P** **04 25 08.5 +1.5**
BOZ **Bozeman (W)** 60.50 335 IAmb IAmb 04 25 23.4
comp=Z,56nm,1.8s
DLMT **Dillon** 60.73 334 IAmb IAmb 04 25 24.9
comp=Z,44nm,1.6s
ORV **Oroville** 61.00 324 P **P** **04 25 12.6 +0.8**
ORV **Oroville** 61.00 324 P **P** **04 25 12.6 +0.8**
ORV pmax pmax
comp=Z,93nm,1.8s
WVOR **Wild Horse Val** 61.40 328 IAmb IAmb 04 25 32.7
comp=Z,34nm,1.6s
EGMT **Eagleton** 61.74 338 IAmb IAmb 04 25 31.1
comp=Z,45nm,1.6s
YBH **Yreka Blue Hor** 63.13 325 LR LR 04 52 21.8
comp=Z,10.0nm,18.4s,baz=112,slow=36
G08A **Pilot Rock** 63.61 330 IAmb IAmb 04 25 45.6
comp=Z,55nm,1.8s
SCHQ **Schefferville** 63.67 8 P **P** **04 25 27.0 -2.4**
comp=Z,1.2nm,0.8s,baz=205,slow=15,SNR=1.9
comp=Z,1.2nm,0.8s
SCHQ **Schefferville** 63.67 8 IAmb IAmb 04 25 42.8
comp=Z,50nm,1.8s
NEW **Newport** 64.94 334 LR LR 04 53 36.6
comp=Z,216nm,20.3s,baz=130,slow=36
NEW **Newport** 64.94 334 IAmb IAmb 04 25 55.8
comp=Z,29nm,1.6s
FFC **Flin Flon** 65.25 346 P **P** **04 25 38.7 -1.0**
FFC IAmb IAmb 04 25 53.7
comp=Z,38nm,1.8s
FFC **Flin Flon** 65.25 346 *eP* **P** **04 25 38.7 -1.0**
MBO **M'Bour** 66.43 70 P **P** **04 25 50.0 +2.0**
BBTS **Babate** 66.90 70 LR LR 04 54 13.0
comp=Z,860nm,20.4s,baz=258,slow=35
PPT **Papeete** 68.15 254 LR LR 04 47 53.9
comp=Z,730nm,18.3s,baz=91,slow=29
FRB **Frobisher Bay** 72.17 5 LR LR 05 00 52.2
comp=Z,271nm,19.1s,baz=188,slow=38
PMOZ **Porto Moniz, M** 72.24 52 *e*LR LR 04 55 18.6
PMOZ *i* IAMs_20 IAMs_20 04 56 17.8
comp=Z,405nm,20.0s
BBB **Bella Bella** 72.73 331 LR LR 04 56 21.7
comp=Z,85nm,21.9s,baz=108,slow=34
BLKN **Baker Lake** 73.22 353 IAmb IAmb 04 26 42.2
comp=Z,43nm,1.5s
YKA **Yellowknife Ar** 75.26 344 P **P** **04 26 39.1 -1.6**
comp=Z,2.1nm,1.0s,baz=143,slow=5.0,SNR=19
comp=Z,2.1nm,1.0s
VNA3 **Neumayer Olymp** 76.10 162 ⇑P **P** **04 26 46.4 +0.8**
comp=Z,18nm,1.1s
DBIC **Dimbokro** 76.38 81 P **P** **04 26 48.5 +0.2**
comp=Z,20nm,0.9s,baz=271,slow=5.9,SNR=18
DBIC LR LR 05 00 10.6
comp=Z,700nm,18.5s,baz=272,slow=36
comp=Z,20nm,0.9s
DBIC **Dimbokro** 76.38 81 P **P** **04 26 48.9 +0.7**
DBIC IAmb IAmb 04 26 49.9
comp=Z,27nm,0.9s
DBIC **Dimbokro** 76.38 81 P **P** **04 26 48.9 +0.7**
DBIC pmax pmax
comp=Z,27nm,1.0s
DBIC **Dimbokro** 76.38 81 P **P** **04 26 48.9 +0.7**
DBIC x x 04 27 01.2
VNA1 **Neumayer--Stat** 76.39 161 P **P** **04 26 46.7 -0.5**
comp=Z,22nm,1.0s
VNA2 **Neumayer--Watz** 76.74 161 ⇑P **P** **04 26 49.6 +0.5**
comp=Z,7.2nm,0.8s,baz=293,slow=5.2
DLBC **Dease Lake** 77.54 336 LR LR 05 00 56.0
comp=Z,178nm,21.9s,baz=98,slow=36
RAR **Rarotonga** 77.59 250 LR LR 04 53 12.8
comp=Z,314nm,18.9s,baz=64,slow=30
SFJD **Kangerlussuaq** 77.86 11 LR LR 05 01 03.7
comp=Z,119nm,21.9s,baz=198,slow=36
SNAA **Sanae** 78.33 162 ⇑P **P** **04 26 58.9 +0.8**
comp=Z,433nm,1.2s
SNAA **Sanae** 78.33 162 P **P** **04 26 58.1 -0.1**
comp=Z,39nm,1.2s,baz=274,slow=4.9,SNR=17
SNAA LR LR 04 56 27.2
comp=Z,171nm,21.4s,baz=298,slow=32
comp=Z,39nm,1.2s
SNAA **Sanae** 78.33 162 P **P** **04 26 58.7 +0.6**
SNAA **Sanae** 78.33 162 P **P** **04 26 58.7 +0.6**
SNAA pmax pmax
comp=Z,69nm,1.3s
TROLL **Troll, Antarti** 80.04 162 ⇑P **P** **04 27 08.6 +1.1**
MORF **Marmelete** 80.35 50 *eP* **P** **04 27 10.8 +1.1**
MORF IAmb IAmb 04 27 12.6
comp=Z,43nm,1.2s
MORF **Marmelete** 80.35 50 *eP* **P** **04 27 11.6 +1.9**
MORF *i* IAmb IAmb 04 27 12.6
comp=Z,75nm,1.5s
PCVE **Castro Verde** 80.92 50 *eP* **P** **04 27 14.4 +1.7**
PCVE *i* IAmb IAmb 04 27 40.6
comp=Z,41nm,2.0s
PSBE **So Bento** 80.93 48 *eP* **P** **04 27 13.8 +1.1**
PSBE *i* IAmb IAmb 04 27 17.8
comp=Z,56nm,2.1s
MOE **Montemor** 80.95 49 *eP* **P** **04 27 14.9 +2.0**
SAATT **Saattut** 81.03 9 *i* P P 04 27 04.0 -8.6
SAATT IAmb IAmb 04 27 05.1
comp=Z,8.6nm,0.7s
PVAQ **Vaqueiros** 81.09 50 *e*LR LR 04 56 16.3
PVAQ *i* IAMs_20 IAMs_20 05 00 25.2
comp=Z,489nm,20.0s
PMTG **Montargil** 81.21 48 *eP* **P** **04 27 15.4 +1.1**
PMTG *i* IAmb IAmb 04 27 32.8
comp=Z,38nm,1.6s
PSARD **Sardoal** 81.42 48 *eP* **P** **04 27 13.7 -1.6**
PSARD *i* IAmb IAmb 04 27 33.6
comp=Z,47nm,1.5s
PTO **Porto** 81.58 46 *eP* **P** **04 27 16.9 +0.8**
PTO *i* IAmb IAmb 04 27 26.3
comp=Z,54nm,1.9s
PESTR **Estremoz** 81.62 49 *eP* **P** **04 27 17.4 +0.9**
PESTR *i* IAmb IAmb 04 27 18.4
comp=Z,27nm,1.7s
PBAR **Barrancos** 81.83 50 *eP* **P** **04 27 19.5 +2.0**
PMRV **Marv??o** 81.94 48 *e*LR LR 04 58 02.5
PMRV *i* IAMs_20 IAMs_20 05 02 26.3
comp=Z,315nm,20.0s
QSPA **South Pole Qui** 82.00 180 P **P** **04 27 19.4 +1.3**
comp=Z,47nm,1.0s,baz=138,slow=3.2,SNR=34
QSPA LR LR 04 59 54.8
comp=Z,163nm,18.1s,baz=178,slow=33
comp=Z,47nm,1.0s
QSPA **South Pole Qui** 82.00 180 P **P** **04 27 19.4 +1.3**
QSPA **South Pole Qui** 82.00 180 P **P** **04 27 19.3 +1.3**
QSPA x x 04 27 27.2
PGAV **Gavieira, Arco** 82.08 46 *e*LR LR 04 57 24.9
PGAV *i* IAMs_20 IAMs_20 05 00 01.6
comp=Z,318nm,22.0s
MTE **Manteigas** 82.12 47 *e*LR LR 04 57 20.6
MTE *i* IAMs_20 IAMs_20 04 59 37.0
comp=Z,387nm,24.0s
UPNV **Upernavik** 82.19 7 *i* P P 04 27 13.4 -5.2
UPNV IAmb IAmb 04 27 15.6
comp=Z,9.7nm,1.2s
POLO **Lamas de Olo** 82.23 46 *eP* **P** **04 27 20.2 +0.5**
PVRL **Vila Real** 82.26 46 *eP* **P** **04 27 20.7 +0.9**
PVRL *i* IAmb IAmb 04 27 54.3
comp=Z,44nm,1.9s
MDT **Midelt** 82.28 55 LR LR 05 00 42.5
comp=Z,428nm,21.9s,baz=248,slow=33
MVO **Moncorvo** 82.72 47 *e*LR LR 04 58 18.3
MVO *i* IAMs_20 IAMs_20 05 00 31.1
comp=Z,261nm,22.0s
NVL **N'lazarevskaya** 83.02 161 *eP* **P** **04 27 23.9 +0.8**
NVL *e* 04 30 34.7
NVL *e*PPP PPP 04 32 26.4
NVL *e*S **S** **04 37 40.6 +1.1**
NVL *e*SS **SS** **04 43 05.8 +2.6**
NVL *e*SSS SSS 04 46 35.1
NVL pmax pmax
comp=Z,35nm,1.3s
NVL MLR MLR
comp=Z,355nm,18.0s
PBRG **Braganca** 83.12 46 *eP* **P** **04 27 25.1 +0.8**
PBRG *i* IAmb IAmb 04 27 43.2
comp=Z,54nm,1.6s
RES **Resolute Bay** 83.15 356 LR LR 05 05 50.4
comp=Z,216nm,18.8s,baz=160,slow=37
KULLO **Kullorsuaq** 83.73 6 *i* P P 04 27 20.1 -6.5
KULLO IAmb IAmb 04 27 20.9
comp=Z,12nm,1.0s
TORD **Torodi Ar. Bea** 83.85 76 P **P** **04 27 28.3 -0.2**
comp=Z,9.2nm,1.0s,baz=255,slow=6.6,SNR=29
TORD PP **PP** **04 30 41.4 -0.9**
comp=Z,1.6nm,1.0s,baz=244,slow=9.4,SNR=3.7
TORD LR LR 05 05 26.7
comp=Z,346nm,18.4s,baz=266,slow=36
comp=Z,9.2nm,1.0s
TORD **Torodi Ar. Bea** 83.85 76 P **P** **04 27 28.6 +0.1**
ESDC **Sonseca Array** 84.55 49 P **P** **04 27 32.9 +1.2**
comp=Z,8.3nm,1.0s,baz=267,slow=5.4,SNR=29
ESDC LR LR 05 03 30.8
comp=Z,361nm,18.9s,baz=242,slow=34
comp=Z,8.3nm,1.0s
ESDC **Sonseca Array** 84.55 49 P **P** **04 27 32.8 +1.2**
ESDC IAmb IAmb 04 27 50.0

	comp=Z,32nm,1.4s							
BORG	**Borgarnes**	**84.60**	**22**	LR	LR	05 02 57.8		
	comp=Z,108nm,21.8s,baz=236,slow=34							
SUMG	**Summit**	**84.86**	**12**	*i* P	**P**	**04 27 31.8**	**-1.1**	
SUMG				IAmb	IAmb	04 27 39.4		
	comp=Z,85nm,1.9s							
INK	**Inuvik**	**84.89**	**343**	LR	LR	05 07 22.3		
	comp=Z,267nm,19.8s,baz=76,slow=37							
ELIB	**Princess Elisa**	**86.47**	**162**	*d*P	**P**	**04 27 41.3**	**+0.6**	
NEEM	**North Greenlan**	**86.97**	**6**	*e*P	**P**	**04 27 39.3**	**-3.8**	
ILAR	**Eielson Array**	**87.69**	**337**	P	**P**	**04 27 45.4**	**-1.1**	
	comp=Z,1.7nm,0.9s,baz=159,slow=4.4,SNR=38							
ILAR				LR	LR	05 08 36.3		
	comp=Z,163nm,18.0s,baz=101,slow=37							
	comp=Z,1.7nm,0.9s							
VNDA	**Vanda**	**87.98**	**191**	P	**P**	**04 27 46.9**	**-0.8**	
	comp=Z,5.4nm,1.0s,baz=108,slow=3.5,SNR=4.2							
VNDA				LR	LR	04 58 36.8		
	comp=Z,356nm,21.1s,baz=132,slow=30							
	comp=Z,5.4nm,1.0s							
VNDA	**Vanda**	**87.98**	**191**	IAmb	IAmb	04 27 50.3		
	comp=Z,14nm,1.2s							
COLA	**College**	**88.11**	**337**⇑	*e*P	**P**	**04 27 49.8**	**+1.4**	
COLA				pmax	pmax			
	comp=Z,10.0nm,1.3s							
EKA	**Eskdalemuir Ar**	**89.22**	**34**	P	**P**	**04 27 54.4**	**+0.6**	
	comp=Z,1.2nm,0.7s,baz=249,slow=5.9,SNR=1.7							
EKA				LR	LR	05 04 00.1		
	comp=Z,216nm,21.8s,baz=234,slow=33							
	comp=Z,1.2nm,0.7s							
RAO	**Raoul Island**	**92.90**	**240**	LR	LR	04 59 20.8		
	comp=Z,220nm,21.8s,baz=139,slow=29							
KEST	**Kesra**	**94.17**	**55**	LR	LR	05 09 56.7		
	comp=Z,251nm,20.2s,baz=261,slow=35							
TSUM	**Tsumeb**	**94.49**	**110**	LR	LR	05 10 30.0		
	comp=Z,405nm,18.1s,baz=300,slow=35							
SUR	**Sutherland**	**94.76**	**123**	LR	LR	05 08 57.2		
	comp=Z,338nm,19.0s,baz=249,slow=34							
URZ	**Urewera**	**95.00**	**230**	LR	LR	05 01 43.1		
	comp=Z,728nm,20.9s,baz=126,slow=30							
DAVOX	**Davos/Dischmat**	**95.78**	**44**	LR	LR	05 09 36.1		
	comp=Z,272nm,19.9s,baz=255,slow=34							
DAVA	**Damuels**	**95.83**	**43**	*e*PcP	**PcP**	**04 28 26.5**	**+1.5**	
	comp=Z,12nm,1.6s							
FETA	**Feichten**	**96.38**	**44**	*i* P	**P**	**04 28 27.9**	**+0.5**	
	comp=Z,6.2nm,1.3s							
MOTA	**Moosalm**	**96.66**	**43**	*e*P	**P**	**04 28 29.0**	**+0.4**	
	comp=Z,10nm,1.8s							
WATA	**Walderalm**	**96.98**	**43**	*e*PcP		04 28 31.1		
	comp=Z,3.3nm,0.9s							
WTTA	**Wattenberg**	**97.02**	**43**	*e*PcP	Pdif	04 28 32.2	+1.8	
	comp=Z,9.9nm,2.0s							
ABTA	**Abfaltersbach**	**97.58**	**44**	*e*P	Pdif	04 28 33.6	+0.9	
	comp=Z,8.8nm,1.6s							
NOA	**NORSAR Array B**	**97.63**	**29**	LR	LR	05 12 19.6		
	comp=Z,183nm,19.1s,baz=265,slow=35							
LESA	**Schwarzleotal**	**97.73**	**43**	*i* pP	pP	04 28 47.2	+2.1	
	comp=Z,3.8nm,1.3s							
CLL	**Collm**	**98.16**	**39**	*e*SP	SP	04 41 25.0	+1.7	
CLL				*e*SSS	SSS	04 50 06.0		
KBA	**Koelnbreinsper**	**98.17**	**44**	*e*pP	pP	04 28 49.2	+2.1	
	comp=Z,6.0nm,1.6s							
VAE	**Valguarnera**	**98.39**	**53**	LR	LR	05 12 24.7		
	comp=Z,435nm,19.0s,baz=292,slow=35							
BIOA	**Bad Ischl, Aus**	**98.40**	**43**	*e*pP	pP	04 28 49.6	+1.6	
	comp=Z,7.9nm,1.2s							
GERES	**GERESS Array B**	**98.50**	**42**	LR	LR	05 10 34.5		
	comp=Z,196nm,21.6s,baz=255,slow=34							
HFS	**Hagfors**	**98.83**	**30**	LR	LR	05 10 09.2		
	comp=Z,338nm,21.0s,baz=259,slow=34							
MOA	**Molln**	**98.83**	**43**	*e*pPdiff	pP	04 28 50.6	+0.8	
	comp=Z,5.3nm,1.4s							
SPITS	**Spitsbergen Ar**	**99.19**	**12**	LR	LR	05 16 56.9		
	comp=Z,94nm,19.1s,baz=252,slow=38							
BOSA	**Boshof**	**99.37**	**121**	LR	LR	05 11 51.4		
	comp=Z,412nm,19.8s,baz=250,slow=34							
ARSA	**Arzberg**	**99.66**	**43**	*e*pPdiff	pP	04 28 51.5	-2.1	
	comp=Z,5.4nm,1.4s							
CONA	**Conrad Observa**	**99.91**	**43**	*e*pPdiff	pP	04 28 56.7	+1.9	
	comp=Z,5.7nm,1.5s							
RONA	**Rosalia, Austr**	**100.19**	**43**	*e*pPdiff	pP	04 28 58.1	+2.1	
	comp=Z,9.3nm,1.8s							
BRTR	**Keskin Array B**	**113.31**	**50**	PKiKP	**PKiKP**	**04 33 35.0**	**-1.4**	
	comp=Z,0.5nm,0.9s,baz=295,slow=4.1,SNR=3.7							
BRTR	**Keskin Array B**	**113.31**	**50**	*i* PKIKP	**PKiKP**	**04 33 37.4**	**+1.0**	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
H11N3	**WAKE ISLAND Hyl**	**114.35**	**288**	T	T	06 37 46.9		
	baz=91,slow=75,SNR=37							
H11N2	**WAKE ISLAND Hyl**	**114.36**	**288**	T	T	06 38 03.9		
	baz=91,slow=75,SNR=49							
H11N1	**WAKE ISLAND Hyl**	**114.37**	**288**	T	T	06 37 57.9		
	baz=91,slow=75,SNR=45							
H11S2	**WAKE ISLAND Hyl**	**114.54**	**287**	T	T	06 38 09.6		
	baz=95,slow=74,SNR=22							
H11S1	**WAKE ISLAND Hyl**	**114.54**	**287**	T	T	06 38 06.5		
	baz=95,slow=74,SNR=21							
H11S3	**WAKE ISLAND Hyl**	**114.55**	**287**	T	T	06 38 17.8		
	baz=95,slow=74,SNR=30							
KIV	**Kislovodsk**	**118.91**	**44**	*i* PKIKP	**PKPdf**	**04 33 46.7**	**-0.2**	
KIV				pmax	pmax			
	comp=Z,10.0nm,1.1s							
STKA	**Stephens Creek**	**123.78**	**223**	PP	**PP**	**04 35 35.9**	**-3.1**	
	comp=Z,1.1nm,0.7s,baz=150,slow=3.6,SNR=4.6							
BORK	**Borovoye**	**129.14**	**23**⇓	*i* PKIKP	**PKiKP**	**04 34 07.4**	**+0.6**	
BORK				pmax	pmax			
	comp=Z,4.0nm,1.3s							
BVAR	**Borovoye Array**	**129.18**	**23**	PKP	**PKPdf**	**04 34 05.5**	**-0.8**	
	comp=Z,0.8nm,0.7s,baz=315,slow=2.0,SNR=5.7							
KLR	**Kul'dur**	**131.11**	**333**⇓	*i* PKIKP	**PKPdf**	**04 34 08.9**	**-1.1**	
KLR				pmax	pmax			
	comp=Z,3.0nm,2.5s							
ZALV	**Zalesovo Beam**	**132.68**	**12**	PKP	**PKPdf**	**04 34 12.3**	**-0.5**	
	comp=Z,3.9nm,0.8s,baz=284,slow=2.2,SNR=20							
ZALV	**Zalesovo Beam**	**132.68**	**12**		**PKPdf**	**04 34 12.0**	**-0.8**	
KURK	**Kurchatov**	**133.98**	**19**		**PKiKP**	**04 34 16.1**	**-0.5**	
KURK	**Kurchatov**	**133.98**	**19**	PKIKP	**PKiKP**	**04 34 16.1**	**-0.5**	
KURBB	**Kurchatov Arra**	**134.03**	**19**	PKP	**PKPdf**	**04 34 14.9**	**-0.6**	
	comp=Z,0.9nm,0.2s,baz=316,slow=2.7,SNR=14							
ASAR	**Alice Springs**	**134.21**	**226**	PKP	**PKPdf**	**04 34 15.2**	**-1.5**	
	comp=Z,1.0nm,0.5s,baz=117,slow=2.2,SNR=9.9							
ASAR				PP	**PP**	**04 36 43.8**	**-3.6**	
	comp=Z,2.9nm,1.1s,baz=141,slow=5.3,SNR=6.2							
WRAB	**Tennant Creek**	**136.16**	**230**⇑	*i* PKIKP	**PKPdf**	**04 34 20.9**	**+0.5**	
WRA	**Warramunga Arr**	**136.17**	**230**	PKP	**PKPdf**	**04 34 19.9**	**-0.5**	
	comp=Z,1.5nm,0.4s,baz=119,slow=2.1,SNR=17							
WRA				PP	**PP**	**04 36 54.8**	**-5.2**	
	comp=Z,3.5nm,1.2s,baz=133,slow=5.8,SNR=6.9							
WRA	**Warramunga Arr**	**136.17**	**230**	PKIKP	**PKPdf**	**04 34 20.0**	**-0.5**	
MK31	**Makanchi Array**	**138.58**	**18**⇑	*i* PKIKP	**PKiKP**	**04 34 25.3**	**-0.9**	
MKAR	**Makanchi Array**	**138.58**	**18**	PKP	**PKPdf**	**04 34 23.9**	**-0.2**	
	comp=Z,3.6nm,1.2s,baz=355,slow=1.3,SNR=5.6							
MKAR	**Makanchi Array**	**138.58**	**18***c*	*i* PKIKP	**PKiKP**	**04 34 25.6**	**-0.6**	
MKAR				pmax	pmax			
	comp=Z,4.0nm,1.2s							
AAK	**Ala-Archa**	**138.95**	**29***c*	*i* PKIKP	**PKiKP**	**04 34 27.4**	**+0.1**	
AAK				pmax	pmax			
	comp=Z,6.0nm,1.3s							
ULN	**Ulaanbaatar**	**139.92**	**353***c*	*i* PKIKP	**PKiKP**	**04 34 30.2**	**+1.1**	
ULN				pmax	pmax			
	comp=Z,6.0nm,1.7s							
SONM	**Songino Array**	**140.03**	**353**	PKP	**PKPdf**	**04 34 26.1**	**-0.7**	
	comp=Z,2.1nm,1.0s,baz=139,slow=0.9,SNR=11							
XLT	**XiLinHaoTe**	**141.67**	**341**	*e*PKP	**PKPdf**	**04 34 30.0**	**+0.1**	
XLT				sPKP	sPKPdf	04 34 46.4	+0.5	
KSH2	**Kashi**	**142.11**	**32**	PKP	**PKPdf**	**04 34 31.6**	**+0.7**	
WMQ	**Urumqi**	**142.84**	**15**	*e*PKP	**PKPdf**	**04 34 33.3**	**+1.4**	
WMQ				LR	LR			
	comp=Z,660nm,24.0s							
PSAB3	**Pilbara Seismi**	**144.62**	**213**	P	**PKPab**	**04 34 34.0**	**-0.1**	
PSAC2	**Pilbara Seismi**	**144.62**	**213**	P	PKPbc	04 34 34.4	0.0	
PSA00	**Pilbara Seismi**	**144.64**	**213**	P	PKPbc	04 34 34.5	+0.1	
PSAC1	**Pilbara Seismi**	**144.69**	**213**	P	PKPbc	04 34 34.6	0.0	
MBWA	**Marble Bar**	**145.03**	**213**	P	**PKPbc**	**04 34 35.7**	**0.0**	
BJI2	**Beijing**	**145.07**	**338**	PKPbc	**PKPbc**	**04 34 35.1**	**-0.2**	
BJI2				LR	LR			
	comp=Z,140nm,14.3s							
BJI2				LR	LR			
	comp=Z,120nm,13.5s							
BJI2				LR	LR			
	comp=Z,110nm,15.1s							
HHC	**Hu-ho-hao-te**	**145.80**	**344**	*e*PKPbc	**PKPbc**	**04 34 37.6**	**-0.1**	
BTO2	**Baotou**	**146.32**	**346**	*e*PKPbc	**PKPdf**	**04 34 38.5**	**+0.4**	
BTO2				PP	**PP**	**04 38 06.1**	**+5.4**	
BTO2				SS	SS	04 56 55.9	+1.6	
BTO2				AMB	AMB			
	comp=Z,310nm,5.2s							
BTO2				LR	LR			
	comp=Z,330nm,9.8s							
BTO2				LR	LR			
	comp=Z,520nm,15.2s							
BTO2				LR	LR			
	comp=Z,370nm,18.7s							
HNS	**HongShan**	**147.92**	**338**	⇓PKPbc	**PKPbc**	**04 34 43.1**	**-0.6**	
GTA2	**Gaotai**	**148.75**	**0**	*e*PKPbc	**PKPdf**	**04 34 41.9**	**-0.3**	
GTA2				sPKP	sPKPbc	04 34 58.6	-3.5	
GTA2				LR	LR			
	comp=Z,220nm,15.3s							
GTA2				LR	LR			
	comp=Z,160nm,16.7s							
GTA2				LR	LR			
	comp=Z,200nm,16.4s							
NJ2	**Nanjing**	**150.40**	**326**	*e*PKPbc	**PKPbc**	**04 34 48.6**	**-1.5**	
LYN	**LuoYang**	**151.28**	**338**	PKPbc	**PKPbc**	**04 34 50.3**	**-1.8**	
LYN				LR	LR			
	comp=Z,200nm,10.7s							
LYN				LR	LR			
	comp=Z,160nm,14.8s							
LYN				LR	LR			
	comp=Z,280nm,24.3s							
GOMU	**GeErMu**	**151.64**	**9**	PKPbc	**PKPdf**	**04 34 46.9**	**-0.3**	
GOMU				LR	LR			
	comp=Z,160nm,21.6s							
GOMU				LR	LR			
	comp=Z,160nm,19.4s							
GOMU				LR	LR			
	comp=Z,290nm,16.1s							
LZH	**Lanzhou**	**151.92**	**353**	*e*PKPbc	**PKPbc**	**04 34 53.3**	**-0.5**	
LZH				pPKP	pPKPbc	04 35 05.8	+0.1	
LZH				LR	LR			
	comp=N,280nm,22.0s							
LZH				LR	LR			
	comp=E,190nm,22.7s							
LZH				LR	LR			
	comp=Z,270nm,23.0s							
LZDM	**Lanzhou Array**	**152.07**	**354**	PKPbc	**PKPbc**	**04 34 54.0**	**-0.4**	
	comp=Z,0.7nm,0.3s,baz=45,slow=4.3,SNR=5.6							
XAN	**Xi'an**	**152.90**	**344**	PKPbc	**PKPbc**	**04 34 55.0**	**-0.9**	
XAN				pPKP	pPKPbc	04 35 07.9	+0.1	
HYB	**Hyderabad**	**157.18**	**64**	*e*PKPdf	**PKPdf**	**04 34 54.4**	**-0.5**	
HYB				*ep*PKPdf	**pPKPdf**	**04 35 03.9**	**-3.0**	
PZH	**PanZhiHua**	**161.62**	**355**	PKP	**PKPdf**	**04 34 59.1**	**-0.9**	
KMI2	**Kunming**	**162.84**	**351**	PKP	**PKPdf**	**04 35 01.1**	**-0.3**	
KMI2				LR	LR			
	comp=Z,150nm,19.3s							
KMI2				LR	LR			
	comp=Z,260nm,11.0s							
KMI2				LR	LR			
	comp=Z,220nm,24.7s							
QIZ	**Qiongzhong**	**165.51**	**320**	PKP	**PKPdf**	**04 35 02.8**	**-0.8**	
QIZ				PP	**PP**	**04 39 48.3**	**+0.2**	
QIZ				SS	SS	05 00 23.3	+0.6	
QIZ				LR	LR			
	comp=Z,120nm,18.6s							
QIZ				LR	LR			
	comp=Z,150nm,18.6s							
QIZ				LR	LR			
	comp=Z,230nm,13.1s							

*RSNC **25** 04:26:51.9±0.0, 7°N±1°×7°3W±°, h146km±1km, M2.3, ML2.3*
*FUNV **25** 04:26:51.3, 6.89N×73.28W, h153km, MW2.9, Presumed earthquake*

ISC 25 04:26:49.6±1.4, 6°87N±0°03×73°14W±0°04, h159km±8km, n25, σ1°916/50, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**189**	P	**Pn**	**04 27 11.6**	**+0.1**
BARC				S	**Sn**	**04 27 26.8**	**-1.4**
BRJC	**Barrancabermej**	**0.61**	**280**	P	**Pn**	**04 27 13.1**	**+0.5**
BRJC				S	**Sn**	**04 27 30.0**	**0.0**
PAMC	**Pamplona, Colo**	**0.64**	**43**	P	**Pn**	**04 27 14.4**	**+1.1**
PAMC				S	**Sn**	**04 27 32.1**	**+0.7**
RUSC	**La Rusia**	**0.97**	**177**	P	**Pn**	**04 27 15.6**	**0.0**
RUSC				S	**Sn**	**04 27 34.1**	**-1.4**
RUSC	**La Rusia**	**0.97**	**177**	*e*P	**Pn**	**04 27 15.9**	**+0.3**
RUSC				*e*S	**Sn**	**04 27 34.3**	**-1.2**
CAPV	**Capacho**	**1.28**	**39**	*e*P	**Pn**	**04 27 19.5**	**+1.5**
CAPV				*e*S	**Sn**	**04 27 39.6**	**-0.2**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P	**Pn**	**04 27 18.1**	**-0.3**
PTBC				S	**Sn**	**04 27 39.3**	**-1.2**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**04 27 19.7**	**+0.9**
OCAC				S	**Sn**	**04 27 41.9**	**+0.6**
SPBC	**San Pablo de B**	**1.52**	**218**	P	**Pn**	**04 27 20.3**	**+0.1**
SPBC				S	**Sn**	**04 27 42.3**	**-1.5**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**04 27 29.8**	**+0.5**
CHIC				S	**Sn**	**04 27 58.7**	**-1.1**
ROSC	**El Rosal**	**2.33**	**210**	P	**Pn**	**04 27 31.6**	**+2.0**
ROSC				S	**Sn**	**04 28 01.5**	**+1.1**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**04 27 32.6**	**+0.8**
CVER				S	**Sn**	**04 28 03.9**	**-0.5**
UREC	**San Jos de Ur**	**2.53**	**290**	P	**Pn**	**04 27 32.3**	**+0.7**
UREC				S	**Sn**	**04 28 03.2**	**-0.9**
SOCV	**Socops**	**2.67**	**58**	*e*P	**Pn**	**04 27 34.6**	**+1.3**
SOCV				*e*S	**Sn**	**04 28 07.3**	**+0.3**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	**04 27 36.8**	**+2.0**
GUY2C				S	**Sn**	**04 28 10.0**	**+0.4**
VILC	**Villavicencio,**	**2.79**	**191**	P	**Pn**	**04 27 35.3**	**+0.3**
VILC				S	**Sn**	**04 28 09.0**	**-1.0**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P	**Pn**	**04 27 39.2**	**+1.3**
CBOC				S	**Sn**	**04 28 15.3**	**+0.1**
DBBC	**Dabeiba**	**3.05**	**273**	P	**Pn**	**04 27 38.6**	**+0.5**
DBBC				S	**Sn**	**04 28 14.5**	**-1.2**
ANIL	**Santa Ana**	**3.26**	**224**	P	**Pn**	**04 27 43.5**	**+2.5**
ANIL				S	**Sn**	**04 28 21.5**	**+0.7**
PRAC	**Prado**	**3.58**	**209**	P	**Pn**	**04 27 45.4**	**+0.5**
PRAC				S	**Sn**	**04 28 27.6**	**-0.2**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**04 27 46.0**	**+0.8**
ORTC				S	**Sn**	**04 28 28.9**	**+0.5**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	**Pn**	**04 27 45.0**	**-0.4**
SJCC				S	**Sn**	**04 28 27.6**	**-1.2**
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	**04 27 48.0**	**+0.3**
URMC				S	**Sn**	**04 28 32.4**	**-0.5**
CRJC	**Cerrejon, Guaj**	**4.13**	**3**	P	**Pn**	**04 27 51.2**	**-0.8**
CRJC				S	**Sn**	**04 28 38.8**	**-1.8**
MACC	**Macarena, Meta**	**4.74**	**189**	P	**Pn**	**04 28 00.3**	**+0.4**
MACC				S	**Sn**	**04 28 51.1**	**-3.7**

NNC 25 04:29:10.1±1.5, 38°01N×78°14E, h0km, mb4.0, mpv3.6, 4D, Error ellipse: s-maj=12.8km s-min=10.8km az=92.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**5.05**	**2**	Pg	Pb	04 30 41.2	+1.8
	8.2nm,0.8s						
SATY				Lg	Lg	04 31 50.5	
	14nm,0.7s						
TNSS	**Tian-Shan**	**5.10**	**350**	Pg	Pb	04 30 41.5	+1.0
	2.8nm,0.5s						
TNSS				Lg	Lg	04 31 51.1	
	4.0nm,1.0s						
UZB	**Uzynbulak**	**5.17**	**7**	Pg	Pb	04 30 44.5	+2.9
	4.1nm,0.2s						
UZB				Lg	Lg	04 31 56.2	
	7.2nm,0.8s						
MDOK	**Medeo**	**5.21**	**351**	Pg	Pb	04 30 44.9	+2.6
	10nm,0.5s						
MDOK				Lg	Lg	04 31 56.9	
	18nm,1.0s						
SHLS	**Shalkode**	**5.24**	**11**	Pg	Pg	04 30 46.8	-3.7
	10nm,0.4s						
SHLS				Lg	Lg	04 32 00.3	
	12nm,0.6s						
KOTS	**Kotyrbulak**	**5.28**	**352**	Pg	Pb	04 30 45.9	+2.6
	9.6nm,0.5s						
KOTS				Lg	Lg	04 31 58.8	
	14nm,0.8s						
MTBS	**Maitube**	**5.28**	**346**	Pg	Pb	04 30 45.3	+2.0
	3.3nm,0.3s						
MTBS				Lg	Lg	04 31 57.6	
	7.5nm,0.3s						
KST	**Kastek**	**5.29**	**342**	Pg	Pb	04 30 45.8	+2.2
	1.1nm,0.4s						
KST				Lg	Lg	04 31 58.5	
	4.1nm,0.7s						
AAK	**Ala-Archa**	**5.40**	**330**	⇓Pn	Pn	04 30 35.1	+3.0
	0.9nm,0.5s						
AAK				⇓Lg	Lg	04 32 02.0	
	10.0nm,0.8s						
PDGK	**Podgornoye**	**5.41**	**10**	⇓Pn	Pn	04 30 32.1	-0.1
	3.2nm,0.5s						
PDGK				⇓Lg	Lg	04 31 59.9	
	17nm,0.8s						
KURS	**Kuram**	**5.47**	**0**	Pg	Pb	04 30 49.8	+3.2
	6.4nm,0.7s						
KURS				Lg	Lg	04 32 05.3	
	8.3nm,0.8s						
KTMS	**Ketmen**	**5.68**	**16**	Pg	Pb	04 30 54.2	+4.0
	2.0nm,0.4s						
KTMS				Lg	Lg	04 32 12.9	
	7.1nm,0.3s						
KTBS	**Karatobe**	**5.80**	**349**	Pg	Pb	04 30 55.6	+3.4
	2.3nm,0.6s						
KTBS				Lg	Lg	04 32 15.3	
	0.4nm,0.5s						
MRKS	**Merke**	**6.04**	**323**	Pg	Pb	04 30 58.4	+2.1
	2.8nm,0.6s						
MRKS				Lg	Lg	04 32 20.1	
	8.6nm,0.8s						
ARXS	**Arharly**	**6.20**	**358**	Pg	Pb	04 31 02.9	+3.8
	4.7nm,0.5s						
ARXS				Lg	Lg	04 32 28.0	
	7.2nm,0.2s						
KNOS	**Konyrlen**	**6.39**	**7**	Pg	Pb	04 31 07.3	+5.0
	2.4nm,0.5s						
KNOS				Lg	Lg	04 32 35.4	
	4.6nm,0.4s						
DJR	**Jarkent**	**6.44**	**11**	Pg	Pb	04 31 08.2	+5.2
	1.9nm,0.2s						
DJR				Lg	Lg	04 32 37.1	
	2.6nm,0.3s						
MK31	**Makanchi Array**	**9.30**	**18**	Pn	Pn	04 31 24.3	-1.1
	0.2nm,0.3s,baz=203,slow=12,SNR=11						

IDC 25 04:30:07.3±1.8, 16°55S×178°22W, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=130.4km s-min=26.2km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.46**	**240**	P	P	04 37 40.4	+0.9
	0.8nm,0.5s,baz=73,slow=16,SNR=3.5						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**45.35**	**253**	P	P	04 38 26.8	-0.9
	0.7nm,0.5s,baz=89,slow=7.9,SNR=9.1						
	0.7nm,0.5s						
NVAR	**Mina Array Bea**	**78.32**	**44**	P	P	04 42 09.9	+0.1
	0.6nm,0.7s,baz=215,slow=5.3,SNR=2.9						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**84.53**	**13**	P	P	04 42 42.1	+0.4
	0.6nm,1.0s,baz=226,slow=4.9,SNR=2.4						
	0.6nm,1.0s						
TXAR	**Lajitas Array**	**85.11**	**58**	P	P	04 42 45.4	-0.4
	0.2nm,0.8s,baz=202,slow=5.7,SNR=3.5						
	0.2nm,0.8s						

*ISK **25** 04:36:52.9, 38°51N×44°45E, h5km, ML2.2/6*
*AZER **25** 04:36:53.1, 38°47N×44°51E, h2km, ml2.5*
*AFAD **25** 04:36:55.8, 38°42N×44°40E, h8km±4km, ML2.2*
*TEH **25** 04:36:58.5, 38°61N×44°74E, h10km±260km, ML2.5, Presumed earthquake*

ISC 25 04:36:55.8±1.1, 38°47N±0°02×44°45E±0°02, h7km±10km, n30, σ1°29/43, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.41**	**298**	P	**Pg**	**04 37 04.3**	**+0.5**
OZAP				S	**Sg**	**04 37 10.4**	**+1.3**
OZAP				IAML		04 37 18.0	
	comp=N,251nm,0.8s						
TVAN	**Van**	**0.82**	**274**	P	**Pg**	**04 37 12.2**	**+0.5**
TVAN				S	**Sg**	**04 37 22.4**	**0.0**
TVAN				IAML		04 37 35.0	
	comp=N,101nm,0.6s						
TVAN				IAML		04 37 38.0	
	comp=E,118nm,1.0s						
VANB	**Van**	**0.84**	**279**	Pg	**Pg**	**04 37 09.2**	**-2.8**
VMUR	**Van-Muradiye**	**0.86**	**307**	P	**Pg**	**04 37 12.2**	**-0.2**
VMUR				S	**Sb**	**04 37 25.8**	**+0.7**
YOVA	**Hakkari_Yksek**	**0.89**	**188**	P	**Pg**	**04 37 12.0**	**-1.0**
YOVA				IAML		04 37 32.0	
	comp=E,79nm,0.4s						
MAKU	**Maku**	**0.90**	**11**	Pg	**Pb**	**04 37 12.8**	**-1.1**
ISHB	**Shabestar**	**0.93**	**101**	Pg	**Pg**	**04 37 12.3**	**-1.4**
NAX	**Nakhchivan**	**1.07**	**49**	P	**Pn**	**04 37 16.5**	**-0.9**
NAX				S	**Sn**	**04 37 32.8**	**+0.2**
HAKT	**HAKKARI**	**1.09**	**213**	P	**Pg**	**04 37 15.4**	**-1.3**
HAKT				S	**Sg**	**04 37 30.9**	**+0.1**
HAKT				IAML		04 37 40.0	
	comp=E,56nm,0.3s						
HAKT	**HAKKARI**	**1.09**	**213**	P	**Pg**	**04 37 16.4**	**-0.3**
HAKT				S	**Sn**	**04 37 35.1**	**+2.0**
GEVA	**Gevas**	**1.11**	**262**	P	**Pg**	**04 37 16.4**	**-0.6**
GEVA				S	**Sg**	**04 37 31.2**	**-0.2**
GEVA				IAML		04 37 38.0	
	comp=N,54nm,0.3s						
AKDM	**Akdamar-Van**	**1.17**	**263**	Pn	**Pg**	**04 37 16.5**	**-1

VNA3	**Neumayer Olymp**	**85.35**	**175**	⇓P		P	05 10 06.6	-5.9
	comp=Z,4.6nm,1.0s							
VNA1	**Neumayer--Stat**	**86.03**	**176**	⇓P		P	05 10 12.1	-3.7
	comp=Z,21nm,1.0s							

VIE ***25*** *05:24:03.1±1.8,51°.35N×16°.32E,h0km,ml2.5/1,Error ellipse: s-maj=12.4km s-min=8.1km az=157.0 56 km WNW of Wroclaw Suspected Mining induced.*
PRU ***25*** *05:24:04.2,51°.38N×16°.23E,h0km*
ISC 25 05:24:01.1±0.8,51°.47N±0°.03×16°.24E±0°.03,h0km,n28, σ1**9**σ**04/53,Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.63**	**177**	*e*Pg	**Pg**	**05 24 14.0**	**+0.8**
KSP				*e*Sg	**Sg**	**05 24 21.7**	**+0.4**
CHVC	**Chvalec**	**0.89**	**188**	*e*PG	**Pb**	**05 24 19.1**	**-0.4**
CHVC				*e*SG	**Sg**	**05 24 30.4**	**+0.7**
OSTC	**Ostas**	**0.92**	**181**	*e*PG	**Pb**	**05 24 19.7**	**-0.2**
OSTC				*e*SG	**Sb**	**05 24 31.6**	**-1.0**
UPC	**Upice**	**0.98**	**189**	*e*PG	**Pb**	**05 24 20.5**	**-0.4**
UPC				*e*SG	**Sg**	**05 24 33.2**	**+0.8**
	comp=Z,53nm,0.4s						
DPC	**Dobruska-Polom**	**1.12**	**177**	*e*PG	**Pg**	**05 24 23.0**	**+0.4**
DPC				*e*SG	**Sb**	**05 24 37.9**	**-0.7**
	comp=Z,19nm,0.6s						
PVCC	**Panska Ves**	**1.42**	**229**	*e*PG	**Pb**	**05 24 29.2**	**+0.8**
PVCC				*e*SG	**Sn**	**05 24 47.8**	**+0.3**
	comp=Z,50nm,0.4s						
KRLC	**Kraliky**	**1.44**	**166**	*e*PG	**Pb**	**05 24 28.8**	**0.0**
KRLC				*e*SG	**Sg**	**05 24 45.8**	**-1.5**
	comp=Z,13nm,0.5s						
BRG	**Berggiesshubel**	**1.56**	**248**	Pg	**Pg**	**05 24 32.0**	**+0.9**
BRG				Sg	**Sg**	**05 24 52.8**	**+1.4**
BRG				Amp		05 24 54.0	
	comp=Z,13nm,0.3s						
STEB	**Steborice**	**1.82**	**147**	*e*PG	**Pb**	**05 24 35.5**	**+0.2**
STEB				*e*SG	**Sn**	**05 24 57.9**	**+0.4**
	comp=Z,19nm,0.6s						
PRU	**Pruhonice**	**1.84**	**217**	*e*SG	**Sg**	**05 24 59.5**	**-0.5**
	comp=Z,9.2nm,0.4s						
MORC	**Moravsky Berou**	**1.89**	**153**	*e*PN	**Pn**	**05 24 35.0**	**+0.3**
MORC				*e*SG	**Sn**	**05 24 59.7**	**+0.5**
HSKC	**Hora Svate Kat**	**1.97**	**245**	*e*PG	**Pb**	**05 24 38.1**	**+0.2**
HSKC				*e*SG	**Sg**	**05 25 04.2**	**-0.2**
	comp=Z,17nm,0.7s						
CLL	**Collm**	**2.03**	**267**	*i* Pg	**Pg**	**05 24 40.5**	**+0.4**
CLL				*ex*	x	05 24 56.0	
CLL				*i* Sg	**Sg**	**05 25 08.4**	**+2.0**
	comp=Z,6.0nm,0.3s						
VRAC	**Vranov**	**2.18**	**174**	*e*PN	**Pn**	**05 24 38.9**	**+0.3**
VRAC				*e*SG	**Sb**	**05 25 08.9**	**0.0**
TREC	**Trest**	**2.23**	**193**	*e*PG	**Pg**	**05 24 43.2**	**-0.7**
TREC				*e*SG	**Sg**	**05 25 12.1**	**-0.7**
	comp=Z,9.2nm,0.2s						
MAUC	**Maruska**	**2.34**	**154**	*e*SG	**Sg**	**05 25 16.9**	**+0.6**
KRUC	**Moravsky**	**2.42**	**178**	*e*PN	**Pn**	**05 24 42.3**	**+0.4**
KRUC				*e*SG	**Sb**	**05 25 16.2**	**+0.5**
ZVC	**Zvikov**	**2.42**	**214**	*e*PN	**Pn**	**05 24 42.7**	**+0.8**
ZVC				*e*PG	**Pg**	**05 24 47.4**	**-0.1**
ZVC				*e*SG	**Sg**	**05 25 18.1**	**-0.7**
OJC	**Ojcow**	**2.58**	**118**	*e*Pg	**Pg**	**05 24 51.9**	**+1.3**
OJC				*e*Sg	**Sg**	**05 25 25.8**	**+1.8**
NKC	**Novy Kostel**	**2.70**	**244**	*e*PG	**Pg**	**05 24 52.6**	**-0.3**
NKC				*e*SG	**Sg**	**05 25 28.1**	**+0.2**
KHC	**Kasperske Hory**	**2.90**	**217**	*e*PG	**Pb**	**05 24 54.0**	**+0.3**
KHC				*e*SN	**Sn**	**05 25 23.3**	**-0.8**
KHC				*e*SG	**Sg**	**05 25 33.0**	**-1.2**
LANS	**Liptovska Anna**	**3.11**	**137**	*e*SG	**Sg**	**05 25 39.4**	**-1.6**
MODS	**Modra-Piesok**	**3.17**	**167**	*e*SG	**Sg**	**05 25 40.3**	**-2.7**
CONA	**Conrad Observa**	**3.56**	**184**	*e*Pn	**Pn**	**05 24 57.3**	**-0.3**
	comp=Z,0.5nm,0.2s						
CONA				*e*Sn	**Sn**	**05 25 41.1**	**+0.7**
	comp=Z,1.5nm,0.2s						
BSD	**Bornholm Skovb**	**3.73**	**348**	*i* P	**Pn**	**05 25 00.4**	**+0.5**
BSD				*i* S	**Sn**	**05 25 41.6**	**-3.0**
BSD				IAML		05 26 15.0	
	comp=Z,23nm,1.0s						
LUNU	**Lund**	**4.49**	**339**	*i* P	**Pn**	**05 25 10.4**	**+0.1**
BLEU	**Blekinge**	**4.85**	**357**	*i* P	**Pn**	**05 25 16.4**	**+1.2**
BLEU				*i* S	**Sn**	**05 26 11.0**	**-1.0**
DEL	**Delary**	**5.20**	**345**	*i* P	**Pn**	**05 25 20.5**	**+0.4**
DEL				*i* S	**Sn**	**05 26 18.1**	**-2.6**

IDC ***25*** *05:24:27.0±1.2,29°.33N×130°.75E,h0km,mb3.6/7, mbtmp3.6/7,Error ellipse: s-maj=37.0km s-min=28.1km az=64.0*
JMA ***25*** *05:24:31.3±0.1,29°.2N±0°.3×130°.7E±0°.7,h64km±3km, MV3.3/25,NEAR AMAMI-OSHIMA ISLAND*
ISC 25 05:24:32.5±0.8,29°.17N±0°.06×130°.69E±0°.09,h40km,n20, σ0**68/22,mb3.5/8,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.97**	**313**	P	**Pn**	**05 24 49.6**	**-0.1**
JZK	**Kikaishima**	**1.06**	**217**	*e*P	**Pn**	**05 24 50.5**	**-0.4**
JYAK	**Yakushimahirau**	**1.07**	**352**	P	**Pn**	**05 24 50.9**	**-0.1**
JYAK				*e*S	**Sn**	**05 25 05.8**	**+1.1**
JAM	**Amami Oshima**	**1.22**	**232**	*e*P	**Pn**	**05 24 52.5**	**-0.5**
JMTN	**Minamitane**	**1.23**	**8**	P	**Pn**	**05 24 52.9**	**-0.4**
JTAJ	**Takarajima**	**1.30**	**269**	*e*P	**Pn**	**05 24 54.1**	**-0.1**
JTN	**Tanegashima 3**	**1.50**	**10**	P	**Pn**	**05 24 56.5**	**-0.4**
JAMN	**Amaminishikomi**	**1.62**	**236**	P	**Pn**	**05 24 58.5**	**-0.1**
JAMN				*e*S	**Sn**	**05 25 19.1**	**+0.8**
JTK	**Tokunoshima**	**2.06**	**228**	*e*S	**Sn**	**05 25 30.1**	**+0.9**
JSU	**Suzuyama**	**2.33**	**355**	*e*P	**Pn**	**05 25 08.6**	**+0.2**
JNAR	**Kushima--Naru**	**2.40**	**12**	P	**Pn**	**05 25 09.8**	**+0.5**
JNKG	**Nichinankitago**	**2.55**	**13**	P	**Pn**	**05 25 11.6**	**+0.3**
SONM	**Songino Array**	**26.44**	**321**	P	**P**	**05 30 05.0**	**-0.6**
	0.3nm,0.4s,baz=138,slow=12,SNR=2.2 0.3nm,0.4s						
MKAR	**Makanchi Array**	**41.30**	**309**	P	**P**	**05 32 14.1**	**+0.1**
	0.3nm,0.5s,baz=93,slow=11,SNR=7.6 0.3nm,0.5s						
ASAR	**Alice Springs**	**52.63**	**176**	P	**P**	**05 33 44.0**	**+1.4**
	0.4nm,0.7s,baz=11,slow=13,SNR=5.1 0.4nm,0.7s						
ILAR	**Eielson Array**	**60.82**	**29**	P	**P**	**05 34 39.9**	**-0.4**
	0.2nm,0.6s,baz=264,slow=5.3,SNR=4.1 0.2nm,0.6s						
KBZ	**Khabaz**	**68.99**	**309**	P	**P**	**05 35 34.4**	**+0.7**
	7.3nm,1.1s,baz=67,slow=5.4,SNR=4.2						
FINES	**FINESS Array B**	**71.38**	**331**	P	**P**	**05 35 47.7**	**-0.3**
	0.8nm,0.5s,baz=84,slow=7.9,SNR=5.6 0.8nm,0.5s						
AKASG	**Malin Array Be**	**74.71**	**320**	P	**P**	**05 36 06.7**	**-1.3**
	0.7nm,0.4s,baz=58,slow=6.3,SNR=4.2 0.7nm,0.4s						
YKA	**Yellowknife Ar**	**74.94**	**26**	P	**P**	**05 36 08.6**	**-0.5**
	0.3nm,0.7s,baz=304,slow=6.4,SNR=5.1 0.3nm,0.7s						

NEIC ***25*** *05:27:10.5±0.8,17°.78N±0°.02×66°.84W±0°.01,h10km±2km, ML3.8/41,Md3.6/6(RSPR),Error ellipse: s-maj=4.5km s-min=3.0km az=24.0*
SDD ***25*** *05:27:11.9±1.9,17°.84N×66°.77W,h0km±10km,MD3.3, ML3.7,MW3.5,Presumed earthquake*
RSPR ***25*** *05:27:12.2,17°.88N×66°.86W,h4km,MD3.6/6*
OSPL ***25*** *05:27:12.4±0.6,17°.82N×66°.84W,h2km±999km,ML3.0, Presumed earthquake*
ISC 25 05:27:10.7±1.1,17°.79N±0°.06×66°.85W±0°.02,h11km±8km, σ0**70/74,14C-3D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.19**	**351**		**Pg**	**05 27 14.8**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.19**	**351**	⇓*i*P	**Pg**	**05 27 14.8**	**-0.1**
MLPR	**Magueyes Islan**	**0.26**	**314**	Pg	**Pg**	**05 27 16.2**	**+0.1**
MLPR				Sg	**Sg**	**05 27 19.4**	**-0.2**
MLPR				IAML		05 27 20.4	
	11μm,0.5s						
MLPR				IAML		05 27 22.4	
	10μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.33**	**311**	Pg	**Pg**	**05 27 17.7**	**+0.3**
CRPR				Sg	**Sg**	**05 27 22.2**	**+0.4**
CRPR				IAML		05 27 23.2	
	10μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.33**	**311**	⇑*i*P	**Pg**	**05 27 17.7**	**+0.3**
CRPR				⇑*i*S	**Sg**	**05 27 22.5**	**+0.6**
CRPR				IAML		05 27 23.4	
	comp=N,17μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.33**	**311**	⇑*i*P	**Pg**	**05 27 17.7**	**+0.3**
CRPR				*e*S	**Sg**	**05 27 22.7**	**+0.8**
CRPR	**Cabo Rojo, PR**	**0.33**	**311**	*i* P	**Pg**	**05 27 17.6**	**+0.3**
CRPR				*e*S	**Sg**	**05 27 22.3**	**+0.5**
CRPR				IAML		05 27 22.8	
	comp=Z,14μm,0.6s						
OBIP	**Obispado Ponce**	**0.34**	**42**	Pg	**Pg**	**05 27 17.7**	**+0.1**
OBIP				Sg	**Sg**	**05 27 22.7**	**+0.5**
OBIP	**Obispado Ponce**	**0.34**	**42**	⇓*i*P	**Pg**	**05 27 18.1**	**+0.5**
OBIP				*e*S	**Sb**	**05 27 23.2**	**-1.1**
OBIP	**Obispado Ponce**	**0.34**	**42**	*i* P	**Pg**	**05 27 18.1**	**+0.5**
OBIP				*e*S	**Sg**	**05 27 22.1**	**-0.1**
OBIP				IAML		05 27 23.6	
	comp=Z,2μm,0.5s						
CELP	**Cerrillos**	**0.38**	**42**	Pg	**Pg**	**05 27 18.2**	**-0.1**
CELP				Sg	**Sg**	**05 27 23.4**	**-0.1**
CELP				IAML		05 27 25.9	
	comp=Z,3μm,0.5s						
LSP	**Las Mesas**	**0.45**	**330**		**Pg**	**05 27 19.5**	**0.0**
LSP	**Las Mesas**	**0.45**	**330**	⇓*i*P	**Pg**	**05 27 19.5**	**0.0**
UUPR	**Utuado, UPR, P**	**0.48**	**15**	Pg	**Pg**	**05 27 19.8**	**-0.3**
UUPR				Sg	**Sg**	**05 27 24.5**	**-2.0**
PRSN	**Puerto Rico Se**	**0.51**	**326**		**Sg**	**05 27 28.4**	**+0.9**
PRSN	**Puerto Rico Se**	**0.51**	**326**	Pg	**Pg**	**05 27 20.5**	**-0.3**
PRSN				IAML		05 27 31.0	
	comp=Z,15μm,0.3s						
PRSN				IAML		05 27 32.8	
	comp=Z,12μm,0.3s						
PRSN	**Puerto Rico Se**	**0.51**	**326**	⇑*i*P	**Pg**	**05 27 20.7**	**0.0**
PRSN				⇑*i*S	**Sg**	**05 27 26.7**	**-0.9**
PRSN				IAML		05 27 31.0	
	comp=N,9μm,0.3s						
PRSN	**Puerto Rico Se**	**0.51**	**326**	⇑*i*P	**Pg**	**05 27 20.7**	**0.0**
PRSN				*e*S	**Sg**	**05 27 28.4**	**+0.9**
ECPR	**Experimental S**	**0.70**	**41**	Pg	**Pg**	**05 27 23.8**	**-0.6**
ECPR				IAML		05 27 35.3	
	comp=N,3μm,0.4s						
ECPR				IAML		05 27 39.8	
	comp=N,4μm,0.2s						
ECPR	**Experimental S**	**0.70**	**41**	⇑*i*P	**Pg**	**05 27 24.3**	**0.0**
ECPR				*e*S	**Sg**	**05 27 33.9**	**+0.4**
AGPR	**Aguadilla, PR**	**0.72**	**340**	Pg	**Pg**	**05 27 24.2**	**-0.4**
AGPR				IAML		05 27 34.6	
	comp=N,5μm,0.5s						
AGPR				IAML		05 27 34.7	
	comp=N,3μm,0.5s						
AGPR	**Aguadilla, PR**	**0.72**	**340**	⇑*i*P	**Pg**	**05 27 24.3**	**-0.4**
AGPR				⇑*i*S	**Sg**	**05 27 33.9**	**-0.3**
AGPR				IAML		05 27 34.7	
	comp=N,4μm,0.6s						
AGPR	**Aguadilla, PR**	**0.72**	**340**	⇑*i*P	**Pg**	**05 27 24.3**	**-0.4**
AGPR				*e*S	**Sg**	**05 27 33.8**	**-0.3**
SJG	**San Juan**	**0.74**	**64**		**Pg**	**05 27 24.6**	**-0.5**
SJG	**San Juan**	**0.74**	**64**	*i* P	**Pb**	**05 27 25.5**	**-0.1**
SJG				IAML		05 27 41.6	
	comp=Z,472nm,0.3s						
PDPR	**Patillas Dam,**	**0.82**	**74**		**Pg**	**05 27 26.2**	**-0.4**
IDE	**Isla Desecheo**	**0.84**	**315**		**Pg**	**05 27 26.7**	**-0.3**
IDE					**Sg**	**05 27 37.5**	**-0.5**
IDE	**Isla Desecheo**	**0.84**	**315**	⇑*i*P	**Pg**	**05 27 28.7**	**-0.3**
IDE				*e*S	**Sg**	**05 27 37.5**	**-0.5**
GCPR	**Guaynabo City**	**0.89**	**54**	Pg	**Pg**	**05 27 27.5**	**-0.4**
GCPR	**Guaynabo City**	**0.89**	**54**		**Sb**	**05 27 40.9**	**+0.7**
GCPR	**Guaynabo City**	**0.89**	**54**	⇑*e*P	**Pb**	**05 27 28.1**	**-0.2**
GCPR				*e*S	**Sb**	**05 27 40.9**	**+0.7**
HUMP	**Col San Antoni**	**1.01**	**70**	Pg	**Pg**	**05 27 29.9**	**-0.4**
HUMP	**Col San Antoni**	**1.01**	**70**		**Sn**	**05 27 46.5**	**+1.4**
HUMP	**Col San Antoni**	**1.01**	**70**	⇑*i*P	**Pg**	**05 27 30.1**	**-0.1**
HUMP				*e*S	**Sn**	**05 27 46.5**	**+1.4**
CUPR	**Culebra, Puert**	**1.58**	**71**	Pn	**Pn**	**05 27 38.6**	**0.0**
PCDR	**Punta Cana, DR**	**1.63**	**297**	⇑*i*P	**Pn**	**05 27 39.2**	**-0.1**
PCDR				⇑*i*S	**Sn**	**05 28 00.1**	**-0.2**
PCDR				IAML		05 28 14.6	
	comp=N,828nm,0.7s						
HIDR	**Higuey Centro**	**1.95**	**294**	⇑*i*P	**Pb**	**05 27 45.1**	**-1.1**
HIDR				⇑*i*S	**Sb**	**05 28 10.2**	**-0.3**
HIDR				IAML		05 28 19.8	
	comp=N,501nm,0.7s						
HIDR	**Higuey Centro**	**1.95**	**294**	⇑*e*P	**Pb**	**05 27 45.7**	**-0.6**
DR12	**Loma Pena Alta**	**2.60**	**293**	Pn	**Pn**	**05 27 53.7**	**+0.9**
HATOM	**Hato Mayor del**	**2.60**	**293**	⇑*i*P	**Pn**	**05 27 54.9**	**+2.0**
HATOM				⇑*i*S	**Sn**	**05 28 25.2**	**+0.8**
HATOM				IAML		05 28 38.0	
	comp=N,209nm,0.6s						
SMDR	**Samana, DR**	**2.68**	**304**		**Pb**	**05 27 57.6**	**-1.1**
SMDR					**Sb**	**05 28 33.4**	**+1.9**
BANI	**BANI**	**3.39**	**281**	Pn	**Pn**	**05 28 03.8**	**+0.1**
SABA	**Saba**	**3.44**	**92**	Pn	**Pn**	**05 28 03.9**	**-0.4**
SABA				IAML		05 28 54.3	
	comp=N,132nm,1.1s						
SABA				IAML		05 28 56.6	
	comp=E,256nm,0.5s						
SMRT	**St. Maarten**	**3.60**	**85**	Pn	**Pn**	**05 28 07.4**	**+0.9**
SC01	**Santiago de lo**	**4.02**	**294**	Pn	**Pn**	**05 28 12.9**	**+0.5**
SDDR	**Presa de Saban**	**4.38**	**286**	Pn	**Pn**	**05 28 16.8**	**-0.5**
GDHS	**Morne Mazeau,**	**5.09**	**106**	Pn	**Pn**	**05 28 27.2**	**+0.1**
GDHS				IAML		05 29 27.5	
	comp=N,85nm,0.5s						
ABD	**La Joyeuse, An**	**5.29**	**104**	Pn	**Pn**	**05 28 29.4**	**-0.3**
CBE	**Ff, Capester**	**5.30**	**108**	Pn	**Pn**	**05 28 28.2**	**-1.7**
BIM	**Bigot**	**6.43**	**120**	Pn	**Pn**	**05 28 45.1**	**-0.4**
SDV	**Santo Domingo**	**9.59**	**203**	Pn	**Pn**	**05 29 28.8**	**-0.1**

IDC ***25*** *05:35:21.1±0.9,53°.89N×161°.58E,h0km,mb3.6/9, mbtmp3.6/10,ML3.2/1,Error ellipse: s-maj=29.4km s-min=19.4km az=152.0*
KRSC ***25*** *05:35:21.3±1.2,54°.18N×161°.23E,h17km±26km,Ml4.6, Felt [III-IV] at kordon Kronoki; [II] at HMS Semyachik.*
MOS ***25*** *05:35:22.6±0.8,54°.18N×161°.24E,h22km,mb4.4/4,Error ellipse: s-maj=8.4km s-min=3.9km az=73.6*
ISC 25 05:35:21.8±0.6,54°.20N±0°.03×161°.19E±0°.04,h10km,n108, σ1**9**σ**65/145,mb3.9/14,5C,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.48**	**41**	PN	**Pn**	**05 35 33.3**	**-1.4**
MKZ	**Mys Kozlova**	**0.48**	**41**	*e*P	**Pn**	**05 35 33.4**	**-1.4**
KII	**Karymskiy**	**1.03**	**262**	PN	**Pb**	**05 35 40.9**	**-0.9**
KII	**Karymskiy**	**1.03**	**262**	*e*P	**Pb**	**05 35 40.9**	**-0.9**
TUMD	**Tumrok D**	**1.11**	**336**	PN	**Pb**	**05 35 41.3**	**-1.7**
TUMD				S	**Sg**	**05 35 54.5**	**-2.9**
TUMD	**Tumrok D**	**1.11**	**336**	*e*P	**Pb**	**05 35 41.3**	**-1.7**
TUMD				*e*S	**Sg**	**05 35 54.6**	**-2.9**
SPN	**Mys Shipunski**	**1.30**	**213**	PN	**Pb**	**05 35 45.0**	**-1.2**
SPN				S	**Sb**	**05 36 00.9**	**-2.0**
SPN	**Mys Shipunski**	**1.30**	**213**	*e*P	**Pb**	**05 35 45.0**	**-1.2**
SPN				*e*S	**Sb**	**05 36 00.9**	**-2.0**
NLC	**Nalytchevo**	**1.50**	**228**	PN	**Pb**	**05 35 48.6**	**-1.1**
NLC				S	**Sb**	**05 36 07.6**	**-1.1**
NLC	**Nalytchevo**	**1.50**	**228**	*e*P	**Pb**	**05 35 48.6**	**-1.1**
NLC				*e*S	**Sb**	**05 36 07.7**	**-1.1**
SDLR	**Sedlovina**	**1.65**	**237**	PN	**Pb**	**05 35 51.1**	**-1.1**
SDLR				S	**Sb**	**05 36 12.2**	**-0.9**
SDLR	**Sedlovina**	**1.65**	**237**	*e*P	**Pb**	**05 35 51.2**	**-1.1**
SDLR				*e*S	**Sb**	**05 36 12.2**	**-0.9**
KMNR	**Kamenistaya**	**1.66**	**341**	PN	**Pg**	**05 35 52.1**	**-1.4**
KMNR	**Kamenistaya**	**1.66**	**341**	*e*P	**Pg**	**05 35 52.1**	**-1.4**
SMAR	**Somma**	**1.70**	**238**	PN	**Pb**	**05 35 52.0**	**-1.1**
SMAR				S	**Sb**	**05 36 13.3**	**-1.3**
SMAR	**Somma**	**1.70**	**238**	*e*P	**Pb**	**05 35 52.0**	**-1.1**
SMAR				*e*S	**Sb**	**05 36 13.3**	**-1.3**
KRER	**Koryakskii**	**1.70**	**239**	PN	**Pb**	**05 35 52.4**	**-0.8**
KRER				S	**Sb**	**05 36 13.0**	**-1.7**
KRER	**Koryakskii**	**1.70**	**239**	*e*P	**Pb**	**05 35 52.5**	**-0.8**
KRER				*e*S	**Sb**	**05 36 13.0**	**-1.7**
UGLR	**Uglovaya**	**1.72**	**236**	PN	**Pb**	**05 35 52.4**	**-1.0**
UGLR				S	**Sb**	**05 36 13.8**	**-1.2**
UGLR	**Uglovaya**	**1.72**	**236**	*e*P	**Pb**	**05 35 52.4**	**-1.0**
UGLR				*e*S	**Sb**	**05 36 13.9**	**-1.2**
KRX	**Arik**	**1.72**	**242**	PN	**Pb**	**05 35 52.3**	**-1.2**
KRX				S	**Sb**	**05 36 13.7**	**-1.6**
KRX	**Arik**	**1.72**	**242**	*e*P	**Pb**	**05 35 52.4**	**-1.2**
KRX				*e*S	**Sb**	**05 36 13.8**	**-1.6**
AVH	**Avacha**	**1.73**	**238**	PN	**Pb**	**05 35 52.8**	**-0.8**
AVH				S	**Sb**	**05 36 14.4**	**-0.9**
AVH	**Avacha**	**1.73**	**238**	*e*P	**Pb**	**05 35 52.8**	**-0.8**
AVH				*e*S	**Sb**	**05 36 14.5**	**-0.9**
BZP	**Bezymyannyi-Pe**	**1.76**	**348**	PN	**Pn**	**05 35 52.2**	**-0.2**
BZP	**Bezymyannyi-Pe**	**1.76**	**348**	*e*P	**Pn**	**05 35 52.3**	**-0.2**
KOK	**Koryaka**	**1.76**	**240**	PN	**Pb**	**05 35 52.9**	**-1.3**
KOK				S	**Sn**	**05 36 14.4**	**-0.5**
KOK	**Koryaka**	**1.76**	**240**	*e*P	**Pb**	**05 35 52.9**	**-1.3**
KOK				*e*S	**Sn**	**05 36 14.4**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**1.77**	**351**	PN	**Pb**	**05 35 52.4**	**-1.9**
BZGR	**Bezymyannyi-Gr**	**1.77**	**351**	*e*P	**Pb**	**05 35 52.5**	**-1.9**
BZWR	**Bezymyannyi-We**	**1.82**	**348**	PN	**Pb**	**05 35 53.8**	**-1.4**
BZWR	**Bezymyannyi-We**	**1.82**	**348**	*e*P	**Pb**	**05 35 53.8**	**-1.4**
KIRR	**Kirishev**	**1.83**	**345**	PN	**Pb**	**05 35 53.9**	**-1.4**
KIRR	**Kirishev**	**1.83**	**345**	*e*P	**Pb**	**05 35 54.0**	**-1.4**
ZLN	**Zelenaya**	**1.84**	**353**	PN	**Pb**	**05 35 53.9**	**-1.6**
ZLN				S	**Sb**	**05 36 18.3**	**-0.3**
ZLN	**Zelenaya**	**1.84**	**353**	*e*P	**Pb**	**05 35 53.9**	**-1.6**
ZLN				*e*S	**Sb**	**05 36 18.3**	**-0.3**
DALK	**Dalny**	**1.86**	**232**	PN	**Pb**	**05 35 54.1**	**-1.7**
DALK				S	**Sn**	**05 36 16.8**	**-0.3**
DALK	**Dalny**	**1.86**	**232**	*e*P	**Pb**	**05 35 54.2**	**-1.7**
DALK				*e*S	**Sn**	**05 36 16.9**	**-0.3**
KPT	**Kopyto**	**1.86**	**343**	PN	**Pb**	**05 35 53.8**	**-2.0**
KPT	**Kopyto**	**1.86**	**343**	*e*P	**Pb**	**05 35 53.9**	**-2.0**
INSR	**Institute**	**1.91**	**235**	PN	**Pb**	**05 35 55.1**	**-1.5**
INSR				S	**Sb**	**05 36 19.6**	**-0.8**
INSR	**Institute**	**1.91**	**235**	*e*P	**Pb**	**05 35 55.1**	**-1.5**
INSR				*e*S	**Sb**	**05 36 19.6**	**-0.8**
PET	**Petropavlovsk**	**1.91**	**233**	*e*PN	**Pb**	**05 35 55.1**	**-1.6**
PET				*e*S	**Sb**	**05 36 18.5**	**-2.0**
PET				pmax	pmax		
	comp=Z,462nm,0.5s						
PET				smax	smax		
	comp=N,2μm,0.4s						
PET				smax	smax		
	comp=E,2μm,0.6s						
PET	**Petropavlovsk**	**1.91**	**233**	*e*P	**Pb**	**05 35 54.9**	**-1.7**
PET				*e*S	**Sb**	**05 36 18.3**	**-2.3**
LGNR	**Loginova**	**1.91**	**352**	PN	**Pb**	**05 35 55.3**	**-1.6**
LGNR	**Loginova**	**1.91**	**352**	*e*P	**Pb**	**05 35 55.4**	**-1.6**
CIRR	**Tsirk**	**1.94**	**353**	PN	**Pg**	**05 35 58.5**	**-0.5**
CIRR	**Tsirk**	**1.94**	**353**	*e*P	**Pg**	**05 35 58.5**	**-0.5**
GNL	**Ganaly**	**1.98**	**257**	PN	**Pb**	**05 35 56.9**	**-1.0**
GNL	**Ganaly**	**1.98**	**257**	*e*P	**Pb**	**05 35 57.0**	**-1.0**
KOZ	**Kozyrevsk**	**2.01**	**339**	PN	**Pn**	**05 35 55.4**	**-0.4**
KOZ	**Kozyrevsk**	**2.01**	**339**	*e*P	**Pn**	**05 35 55.5**	**-0.4**
KBTR	**Krutoberegovo**	**2.22**	**24**	PN	**Pn**	**05 35 58.6**	**-0.1**
KBTR	**Krutoberegovo**	**2.22**	**24**	*e*P	**Pn**	**05 35 58.6**	**-0.1**
KBG	**Krutoberegovo**	**2.24**	**22**	PN	**Pn**	**05 35 58.5**	**-0.4**
KBG	**Krutoberegovo**	**2.24**	**22**	*e*P	**Pn**	**05 35 58.5**	**-0.4**
KRMR	**Karymshinskiy**	**2.28**	**234**	PN	**Pb**	**05 36 00.7**	**-2.2**
KRMR				S	**Sb**	**05 36 29.9**	**-1.2**
KRMR	**Karymshinskiy**	**2.28**	**234**	*e*P	**Pb**	**05 36 00.7**	**-2.2**
KRMR				*e*S	**Sb**	**05 36 30.0**	**-1.2**
SRDR	**Sredinnyy**	**2.29**	**339**	PN	**Pn**	**05 36 00.1**	**+0.5**
SRDR	**Sredinnyy**	**2.29**	**339**	*e*P	**Pn**	**05 36 00.1**	**+0.5**
PEA0B	**Petropavlovsk-**	**2.34**	**244**	PN	**Pn**	**05 36 00.7**	**+0.4**
PEA0B				S	**Sb**	**05 36 30.4**	**-2.6**
PETK	**Petropavlovsk-**	**2.34**	**244**	Pn	**Pn**	**05 36 00.9**	**+0.7**
	comp=E,28nm,0.3s,baz=78,slow=20,SNR=174						
PETK				Sn	**Sb**	**05 36 30.8**	**-2.2**
	comp=E,29nm,0.3s,baz=88,slow=21,SNR=5.4 comp=E,47nm,0.3s						
PETK	**Petropavlovsk-**	**2.34**	**244**	PN	**Pn**	**05 36 01.0**	**+0.7**
RUS	**Russkaya**	**2.38**	**223**	PN	**Pn**	**05 36 01.2**	**+0.4**
RUS				S	**Sn**	**05 36 29.0**	**-1.1**
RUS	**Russkaya**	**2.38**	**223**	*e*P	**Pn**	**05 36 01.2**	**+0

ASAR Alice Springs 81.03 205 P P 05 47 37.0 +0.5
comp=Z,1.2nm,0.7s,baz=22,slow=4.3,SNR=9.4
comp=Z,1.2nm,0.7s

SJA ***25*** *05:48:04.4±0.7,20.˝60S×68.˝96W,h119km±6km, ML3.5, MW3.5*
GUC ***25*** *05:48:06.9±0.6,20.˝61S×68.˝97W,h105km±3km, ML3.3*
ISC 25 05:48:06.8±1.6**,20°62S**±0.˝03×**69°00W**±0.˝09**,**
h102km±10km**,n27,**σ**0°78**/43**,2C-3D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.49**	**343**	⇓*i*	P		**Pn**	**05 48 23.2**	**0.0**
PB08				*i*	S		**Sn**	**05 48 34.6**	**-0.9**
PB08					IAML			05 48 36.4	
	comp=E,2μm,0.2s								
PB08	**IPOC Station P**	**0.49**	**343**	*e*	P		**Pn**	**05 48 23.0**	**-0.3**
PB08					IAML			05 48 38.3	
	comp=Z,756nm,0.1s								
PB01	**IPOC Station P**	**0.63**	**227**	*i*	P		**Pn**	**05 48 23.6**	**-0.3**
PB01				*i*	S		**Sn**	**05 48 36.8**	**0.0**
PB01					IAML			05 48 38.3	
	comp=N,2μm,0.1s								
PB01	**IPOC Station P**	**0.63**	**227**	*e*	P		**Pn**	**05 48 23.8**	**-0.1**
PB01					IAML			05 48 39.0	
	comp=Z,773nm,0.2s								
GO01	**Chusmiza**	**0.96**	**349**	⇓*i*	P		**Pn**	**05 48 27.3**	**-0.3**
GO01				*i*	S		**Sn**	**05 48 43.7**	**+0.7**
GO01	**Chusmiza**	**0.96**	**349**	*e*	P		**Pn**	**05 48 27.2**	**-0.3**
GO01				*e*	S		**Sn**	**05 48 44.2**	**+1.2**
GO01					IAML			05 48 45.8	
	comp=Z,1μm,0.3s								
PB11	**IPOC Station P**	**1.05**	**324**	*i*	P		**Pn**	**05 48 27.9**	**-0.3**
PB11				*i*	S		**Sn**	**05 48 44.2**	**0.0**
PB11	**IPOC Station P**	**1.05**	**324**	*e*	P		**Pn**	**05 48 27.3**	**-0.9**
PB11					IAML			05 48 45.0	
	comp=Z,974nm,0.1s								
PB02	**IPOC Station P**	**1.09**	**230**	⇑*i*	P		**Pn**	**05 48 28.6**	**0.0**
PB02				*i*	S		**Sn**	**05 48 45.5**	**+0.6**
PB02					IAML			05 48 47.7	
	comp=N,1μm,0.7s								
PB02	**IPOC Station P**	**1.09**	**230**	*e*	P		**Pn**	**05 48 28.3**	**-0.2**
PB02					IAML			05 48 49.3	
	comp=Z,1μm,0.2s								
TA02	**Huaiquique**	**1.12**	**288**	*i*	P		**Pn**	**05 48 28.4**	**-0.3**
TA02				*i*	S		**Sn**	**05 48 45.2**	**0.0**
TA02	**Huaiquique**	**1.12**	**288**	*e*	P		**Pn**	**05 48 28.1**	**-0.6**
TA02				*e*	S		**Sn**	**05 48 46.8**	**+1.6**
TA02					IAML			05 48 47.6	
	comp=Z,1μm,0.4s								
PB09	**IPOC Station P**	**1.20**	**191**	*i*	P		**Pn**	**05 48 30.2**	**+0.4**
PB09				*i*	S		**Sn**	**05 48 47.9**	**+0.8**
PB09					IAML			05 48 50.0	
	comp=N,486nm,0.5s								
PB09	**IPOC Station P**	**1.20**	**191**	*e*	P		**Pn**	**05 48 30.0**	**+0.2**
PB09					IAML			05 48 51.2	
	comp=Z,300nm,0.4s								
PB07	**IPOC Station P**	**1.38**	**217**	⇑*i*	P		**Pn**	**05 48 31.9**	**-0.1**
PB07				*i*	S		**Sn**	**05 48 51.0**	**+0.1**
PB07					IAML			05 48 53.0	
	comp=E,770nm,0.5s								
PB07	**IPOC Station P**	**1.38**	**217**	*e*	P		**Pn**	**05 48 31.9**	**-0.1**
PB07					IAML			05 48 54.8	
	comp=Z,309nm,0.4s								
PB03	**IPOC Station P**	**1.59**	**206**	*i*	P		**Pn**	**05 48 34.3**	**-0.1**
PB03				*i*	S		**Sn**	**05 48 54.9**	**-0.5**
PB03					IAML			05 48 57.6	
	comp=E,315nm,0.2s								
PB03	**IPOC Station P**	**1.59**	**206**	*e*	P		**Pn**	**05 48 34.5**	**0.0**
PB03					IAML			05 48 58.8	
	comp=Z,247nm,0.2s								
PB06	**IPOC Station P**	**2.15**	**194**	*i*	P		**Pn**	**05 48 41.7**	**+0.2**
PB06				*i*	S		**Sn**	**05 49 07.6**	**-0.5**
PB06					IAML			05 49 12.2	
	comp=E,204nm,0.2s								
PB06	**IPOC Station P**	**2.15**	**194**	*e*	P		**Pn**	**05 48 41.8**	**+0.2**
PB06					IAML			05 49 14.9	
	comp=Z,179nm,0.2s								
PB16	**IPOC Station P**	**2.32**	**348**	⇓*i*	P		**Pn**	**05 48 44.8**	**+0.6**
PB16				*i*	S		**Sn**	**05 49 13.2**	**+0.6**
PB16	**IPOC Station P**	**2.32**	**348**	*e*	P		**Pn**	**05 48 44.5**	**+0.3**
PB16				*e*	S		**Sn**	**05 49 10.4**	**-2.3**
PB12	**IPOC Station P**	**2.35**	**328**	*i*	P		**Pn**	**05 48 43.3**	**-0.9**
PB12				*i*	S		**Sn**	**05 49 11.6**	**-1.1**
PB12					IAML			05 49 16.7	
	comp=E,176nm,0.2s								
PB12	**IPOC Station P**	**2.35**	**328**	*e*	P		**Pn**	**05 48 43.5**	**-0.7**
PB12				*e*	S		**Sn**	**05 49 14.9**	**+2.1**
PB12					IAML			05 49 15.8	
	comp=Z,92nm,0.5s								
AP01	**Chacalluta**	**2.57**	**330**	*e*	P		**Pn**	**05 48 48.1**	**+1.3**
AP01					IAML			05 49 27.6	
	comp=Z,226nm,0.6s								
PB10	**IPOC Station P**	**3.23**	**206**	*e*	P		**Pn**	**05 48 55.2**	**-0.4**
GO02	**Mina Guanaco**	**4.56**	**187**	*e*	P		**Pn**	**05 49 13.3**	**-0.5**
GO02					IAML			05 50 10.3	
	comp=Z,22nm,0.1s								

IDC ***25*** *06:16:18.0±1.8,24.˝27N×90.˝09E,h0km, mb3.7/6, mbtmp3.7/8,ML4.1/2,MS4.0/1,Error ellipse: s-maj=60.1km s-min=20.5km az=64.0*
NEIC ***25*** *06:16:20.9±1.9,24.˝55N±0.˝05×90.˝18E±0.˝09,h10km±1km, mb4.0/17,Error ellipse: s-maj=15.1km s-min=5.6km az=61.0*
DMN ***25*** *06:16:24.3±0.5,23.˝97N×89.˝56E,h10km,Ml4.2/4,Error ellipse: s-maj=21.2km s-min=10.2km az=46.0*
NDI ***25*** *06:16:25.7±1.7,24.˝57N×90.˝20E,h12km±6km, ML4.0, MW4.0*
ISC 25 06:16:22.0±1.2**,24°55N**±0.˝03×**90°12E**±0.˝03**,h17**km±8km**,**
n64,σ**2°26**/84**,mb3.9**/12**,Bangladesh**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AGT	**Agartala**	**1.22**	**122**	*e*	P		**Pg**	**06 16 47.9**	**+2.3**
AGT					IAML			06 16 54.5	
	comp=E,2μm,0.3s								
AGT					IAML			06 16 56.1	
	comp=N,1μm,0.4s								
AGT					*e*S		**Sn**	**06 17 04.1**	**+3.7**
DHUB	**DHUBRI**	**1.47**	**356**	*e*	P		**Pg**	**06 16 52.3**	**+2.0**
DHUB					*e*S		**Sg**	**06 17 11.7**	**+2.2**
DHUB					IAML			06 17 22.9	
	comp=N,2μm,0.2s								
DHUB					IAML			06 17 23.2	
	comp=E,1μm,0.3s								
SHL	**Shillong**	**1.89**	**57**	Pn			**Pb**	**06 16 55.5**	**-0.7**
SHL	**Shillong**	**1.89**	**57**	*e*P			**Pg**	**06 16 58.1**	**-0.3**
SHL					IAML			06 17 21.5	
	comp=N,2μm,0.3s								
SHL					IAML			06 17 21.6	
	comp=E,1μm,0.4s								
SHL					*e*S		**Sg**	**06 17 21.8**	**-1.3**
BRDH	**Bariadhala**	**2.33**	**143**	Pn			**Pg**	**06 17 04.6**	**-2.1**
	comp=E,11nm,0.3s,baz=242,slow=23,SNR=1.4								
BRDH					Lg		Lg	06 17 41.7	
	comp=E,46nm,0.3s,baz=349,slow=24,SNR=3.8								
JPG	**JALPAIGURI**	**2.36**	**328**	*e*P			**Pg**	**06 17 05.5**	**-1.7**
JPG					*e*S		**Sb**	**06 17 33.6**	**+0.8**
JPG					IAML			06 17 46.9	
	comp=E,1μm,0.3s								
JPG					IAML			06 17 47.8	
	comp=N,1μm,0.3s								
CAL	**Calcutta**	**2.59**	**220**	*e*P			**Pb**	**06 17 08.3**	**+0.3**
CAL					*e*S		**Sb**	**06 17 40.7**	**+1.2**
CAL					IAML			06 17 49.2	
	comp=N,4μm,0.5s								
CAL					IAML			06 17 49.7	
	comp=E,4μm,1.1s								
GTK	**Tadong**	**3.08**	**334**	*e*P			**Pb**	**06 17 14.7**	**-1.7**
GTK					*e*S		**Sn**	**06 17 49.4**	**+2.9**
GTK					IAML			06 17 53.0	
	comp=N,1μm,0.3s								
TEZP	**TEZPUR**	**3.18**	**49**	*e*P			**Pb**	**06 17 14.0**	**-4.0**
TEZP					*e*S		**Sn**	**06 17 50.4**	**+1.7**
TEZP					IAML			06 17 54.0	
	comp=N,1μm,0.2s								
TEZP					IAML			06 17 54.7	
	comp=E,1μm,0.0s								
SAIH	**SAIHA**	**3.34**	**127**	*e*P			**Pb**	**06 17 17.5**	**-3.3**
SAIH					*e*S		**Sn**	**06 17 53.8**	**+1.0**
SAIH					IAML			06 18 15.3	
	comp=E,2μm,1.4s								
SAIH					IAML			06 18 17.2	
	comp=N,2μm,1.0s								
ODAN	**Odare**	**3.37**	**314**	Pn			**Pn**	**06 17 17.6**	**+3.5**
	baz=326,slow=0.0								
ODAN					Sn		**Sn**	**06 17 55.5**	**+1.7**
	baz=326,slow=0.0								
ODAN					Sn		**Sn**	**06 17 55.5**	**+1.7**
	comp=N,295nm,0.5s,baz=326,slow=0.0								
TAWA	**Tawang**	**3.42**	**27**	*e*P			**Pn**	**06 17 17.3**	**+2.5**
TAWA					*e*S		**Sn**	**06 17 56.9**	**+1.8**
TAWA					IAML			06 18 02.6	
	comp=N,1μm,0.6s								
TAWA					IAML			06 18 04.8	
	comp=E,1μm,0.6s								
IMP	**Imphal**	**3.49**	**85**	*e*P			**Pb**	**06 17 18.9**	**-4.5**
IMP					*e*S		**Sn**	**06 17 58.6**	**+2.0**
IMP					IAML			06 18 03.6	
	comp=N,1μm,0.4s								
IMP					IAML			06 18 03.9	
	comp=E,1μm,0.1s								
KOHI	**KOHIMA**	**3.80**	**71**	*e*P			**Pb**	**06 17 24.8**	**-3.8**
KOHI					*e*S		**Sn**	**06 18 05.3**	**+1.0**
KOHI					IAML			06 18 11.4	
	comp=E,2μm,0.4s								
KOHI					IAML			06 18 13.6	
	comp=N,1μm,0.3s								
MORE	**Moreh**	**3.83**	**94**	Pn			**Pn**	**06 17 19.8**	**-0.3**
RAMN	**Ramite**	**3.97**	**308**	Pn			**Pn**	**06 17 23.4**	**+1.0**
	baz=319,slow=0.0								
ITAN	**ITANAGAR**	**4.15**	**51**	*e*P			**Pn**	**06 17 27.8**	**+3.2**
ITAN					*e*S		**Sn**	**06 18 14.2**	**+1.5**
ITAN					IAML			06 18 17.8	
	comp=N,1μm,0.2s								
ITAN					IAML			06 18 18.6	
	comp=E,2μm,0.3s								
MOKO	**MOKOCHONG**	**4.35**	**65**	*e*P			**Pn**	**06 17 30.2**	**+2.8**
MOKO					*e*S		**Sn**	**06 18 18.2**	**+0.3**
MOKO					IAML			06 18 23.8	
	comp=E,556nm,0.5s								
MOKO					IAML			06 18 24.9	
	comp=N,633nm,0.4s								
ZIRO	**ZIRO**	**4.48**	**48**	*e*P			Pn	06 17 33.5	+4.3
ZIRO					*e*S		**Sn**	**06 18 21.6**	**+0.6**
ZIRO					IAML			06 18 26.9	
	comp=N,88nm,0.4s								
ZIRO					IAML			06 18 27.8	
	comp=E,75nm,0.8s								
GUN	**Gumba**	**5.07**	**312**	Pn			**Pn**	**06 17 40.6**	**+3.1**
	baz=321,slow=0.0								
PKI	**Pulchoki**	**5.20**	**306**	Pn			**Pn**	**06 17 39.7**	**+0.4**
	baz=315,slow=0.0								
PKIN	**Phulchoki**	**5.21**	**306**	Pn			**Pn**	**06 17 39.8**	**+0.4**
	baz=315,slow=0.0								
PKIN					Sn		**Sn**	**06 18 37.4**	**-1.8**
	comp=E,50nm,0.3s,baz=315,slow=0.0								
LSA	**Lhasa**	**5.21**	**10**	Pn			**Pn**	**06 17 41.4**	**+1.8**
LSA	**Lhasa**	**5.21**	**10**	Pn			**Pn**	**06 17 41.4**	**+1.8**
LSA					Sn		**Sn**	**06 18 42.4**	**+2.8**
LSA					smax		smax		
	comp=N,70nm,0.6s								
LSA					smax		smax		
	comp=E,110nm,0.7s								
KKN	**Kakani**	**5.42**	**308**	Pn			**Pn**	**06 17 43.7**	**+1.5**
	baz=316,slow=0.0								
KKN					Sn		**Sn**	**06 18 42.6**	**-1.6**
	baz=316,slow=0.0								
DMN	**Daman**	**5.44**	**305**	Pn			**Pn**	**06 17 43.7**	**+1.1**
	baz=313,slow=0.0								
BWNR	**Bhubaneshwar**	**5.84**	**224**	*e*P			**Pn**	**06 17 52.4**	**+4.6**
BWNR					*e*S		**Sn**	**06 18 57.2**	**+2.8**
BWNR					IAML			06 19 02.3	
	comp=N,45nm,0.3s								
BWNR					IAML			06 19 03.6	
	comp=E,39nm,0.4s								
GKN	**Gorkha**	**6.00**	**306**	Pn			**Pn**	**06 17 50.1**	**-0.1**
	baz=313,slow=0.0								
KOLN	**Koldanda**	**6.68**	**300**	Pn			**Pn**	**06 17 59.1**	**-0.4**
	baz=306,slow=0.0								
KOLN					Sn		**Sn**	**06 19 09.9**	**-5.5**
	comp=E,40nm,0.4s,baz=306,slow=0.0								
DANN	**Dangsing**	**6.84**	**305**	Pn			**Pn**	**06 18 01.6**	**-0.2**
	baz=311,slow=0.0								
DANN					Sn		**Sn**	**06 19 13.8**	**-5.7**
	comp=E,26nm,0.3s,baz=311,slow=0.0								
PYUN	**Piuthan**	**7.31**	**300**	Pn			**Pn**	**06 18 07.4**	**-0.8**
	baz=306,slow=0.0								
PYUN					Sn		**Sn**	**06 19 24.8**	**-6.1**
	baz=306,slow=0.0								
RAGD	**RAYAGADA**	**8.13**	**231**	*e*P			Pn	06 18 24.2	+4.9
RAGD					*e*S		**Sn**	**06 19 50.0**	**-0.9**
RAGD					IAML			06 20 36.2	
	comp=N,84nm,1.9s								
RAGD					IAML			06 20 39.2	
	comp=E,72nm,0.8s								
CMAR	**Chiang Mai Arr**	**10.21**	**125**	Pn			**Pn**	**06 18 45.0**	**-2.8**
	comp=E,0.3nm,0.3s,baz=305,slow=14,SNR=4.4								
CMAR					LR		LR	06 23 55.0	
	comp=E,26nm,18.4s,baz=150,slow=45								
	comp=E,0.7nm,0.4s								
GOMU	**GeErMu**	**12.29**	**18**	P			**Pn**	**06 19 18.6**	**+2.0**
GOMU					pmax		pmax		
	comp=Z,4.0nm,0.8s								
LZDM	**Lanzhou Array**	**16.32**	**43**	Pn			**P**	**06 20 11.6**	**-1.9**
	baz=202,slow=11								
	comp=Z,0.8nm,0.3s								
NIL	**Nilore**	**17.29**	**305**	Pn			**Pn**	**06 20 22.3**	**-0.4**
ENH	**Enshi**	**18.11**	**67**	Pn			**Pn**	**06 20 31.9**	**-0.9**
KSH2	**Kashi**	**19.06**	**323**	P			**Pn**	**06 20 45.8**	**+1.4**
KSH2				sP			sP	06 20 55.8	+5.2
KSH2				pmax			pmax		
	comp=Z,4.0nm,1.0s								
WMQ	**Urumqi**	**19.33**	**355**	*e*P			**Pn**	**06 20 51.1**	**+3.6**
KDJ	**Kajisay**	**20.55**	**332**	P			**P**	**06 21 00.5**	**+0.5**
KDJ				IAmb			IAmb	06 21 04.7	
	comp=Z,5.5nm,0.9s								
KBL	**Kabul**	**20.83**	**303**	P			**P**	**06 21 02.2**	**-0.8**
KBL				IAmb			IAmb	06 21 07.2	
	comp=Z,8.0nm,0.7s								
BOOM	**Boomskoye usch**	**21.39**	**330**	P			**P**	**06 21 06.2**	**-2.7**
DRK	**Karamyk**	**21.45**	**318**	P			**P**	**06 21 08.5**	**-1.3**
DRK				IAmb			IAmb	06 21 16.1	
	comp=Z,5.7nm,0.8s								
ARSB	**Arslanbob**	**21.99**	**324**	P			**P**	**06 21 14.5**	**-0.9**
ARSB				IAmb			IAmb	06 21 18.6	
	comp=Z,5.2nm,1.0s								
BTK	**Batken**	**22.41**	**318**	P			**P**	**06 21 19.9**	**+0.1**
BTK				IAmb			IAmb	06 21 38.1	
	comp=Z,4.9nm,0.8s								
CHGR	**Chuyangaron**	**22.66**	**313**	P			**P**	**06 21 21.4**	**-1.0**
MKAR	**Makanchi Array**	**23.07**	**346**	P			**P**	**06 21 28.5**	**+1.9**
	comp=Z,1.6nm,0.6s,baz=156,slow=10,SNR=22								
	comp=Z,1.6nm,0.6s								
MKAR	**Makanchi Array**	**23.07**	**346**	P			**P**	**06 21 27.5**	**+0.9**
MAKZ	**Makanchi**	**23.15**	**346**	P			**P**	**06 21 29.7**	**+2.3**
HHC	**Hu-ho-hao-te**	**24.19**	**43**	*e*P			**P**	**06 21 38.9**	**+1.2**
HHC				pmax			pmax		
	comp=Z,5.0nm,0.6s								
KKAR	**Karatay Array**	**24.55**	**324**	P			**P**	**06 21 40.7**	**-0.1**
SONM	**Songino Array**	**26.58**	**25**	P			**P**	**06 22 00.4**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=211,slow=11,SNR=4.0								
	comp=Z,0.4nm,0.5s								
SONM	**Songino Array**	**26.58**	**25**	P			**P**	**06 22 01.1**	**+1.8**
SONM				IAmb			IAmb	06 22 15.5	
	comp=Z,4.0nm,1.4s								
KURBB	**Kurchatov Arra**	**27.53**	**344**	P			**P**	**06 22 08.6**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=167,slow=8.9,SNR=8.4								
	comp=Z,1.1nm,0.6s								
KURK	**Kurchatov**	**27.60**	**344**	P			**P**	**06 22 08.0**	**-0.2**
KURK				IAmb			IAmb	06 22 10.6	
	comp=Z,3.4nm,1.2s								
AB31	**Akbulak array**	**34.11**	**324**	P			**P**	**06 23 05.0**	**-0.7**
AB31				IAmb			IAmb	06 23 06.8	
	comp=Z,2.2nm,0.8s								
ABKAR	**Akbulak array**	**34.11**	**324**	P			**P**	**06 23 05.7**	**0.0**
KARS	**Kars**	**42.24**	**304**	P			**P**	**06 24 13.5**	**-1.0**
JHJ	**Hachijo jima 2**	**44.00**	**67**	LR			LR	06 44 07.7	
	comp=Z,176nm,21.1s,baz=100,slow=38								
WRA	**Warramunga Arr**	**61.71**	**132**	P			**P**	**06 26 37.2**	**-2.4**
	comp=Z,0.4nm,0.6s,baz=322,slow=7.3,SNR=2.0								
	comp=Z,0.4nm,0.6s								
ASAR	**Alice Springs**	**64.03**	**135**	P			**P**	**06 26 52.6**	**-2.4**
	comp=Z,0.3nm,0.7s,baz=310,slow=5.9,SNR=4.2								
	comp=Z,0.3nm,0.7s								
INK	**Inuvik**	**82.04**	**15**	P			**P**	**06 28 40.6**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=341,slow=6.1,SNR=4.7								
	comp=Z,0.4nm,0.5s								
INK	**Inuvik**	**82.04**	**15**	IAmb			IAmb	06 28 51.9	
	comp=Z,2.4nm,1.2s								
SLKM	**Skilak Lake**	**82.18**	**26**	P			**P**	**06 28 41.6**	**-0.3**

AFAD ***25*** *06:32:17.1,38.˝40N×44.˝58E,h8km±5km,ML2.6*
AZER ***25*** *06:32:18.0,38.˝43N×44.˝47E,h2km, ml2.7*
TEH ***25*** *06:32:20.5,38.˝48N×44.˝43E,h6km±189km,ML2.5, Presumed earthquake*
ISK ***25*** *06:32:21.1,38.˝59N×44.˝11E,h9km,ML2.9/5*
ISC 25 06:32:22.0±1.2**,38°47N**±0.˝03×**44°36E**±0.˝02**,h22**km±4km**,**
n23,σ**2°69**/37**,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.34**	**303**		P		**Pb**	**06 32 27.5**	**-2.1**
OZAP					S		**Sb**	**06 32 34.9**	**+0.1**
OZAP					IAML			06 32 41.0	
	comp=N,1μm,0.8s								
TVAN	**Van**	**0.75**	**275**		P		**Pb**	**06 32 35.7**	**-0.8**
TVAN					S		**Sn**	**06 32 53.6**	**+5.3**
TVAN					IAML			06 33 01.0	
	comp=N,309nm,0.7s								
TVAN					IAML			06 33 03.0	
	comp=E,289nm,0.7s								
VANB	**Van**	**0.77**	**279**		Pg		**Pb**	**06 32 32.2**	**-4.6**
VMUR	**Van-Muradiye**	**0.80**	**310**		P		**Pb**	**06 32 35.7**	**-1.7**
VMUR					S		**Sn**	**06 32 52.8**	**+3.1**
VMUR					IAML			06 32 54.0	
	comp=E,179nm,0.5s								
VMUR					IAML			06 33 01.0	
	comp=N,142nm,0.4s								
MAKU	**Maku**	**0.92**	**16**		Pg		**Pb**	**06 32 37.3**	**-2.1**
ISHB	**Nahbestar**	**1.01**	**100**		Pg		**Pb**	**06 32 37.8**	**-3.1**
GEVA	**Gevas**	**1.03**	**262**		P		**Pb**	**06 32 39.0**	**-2.4**
GEVA					S		**Sn**	**06 32 56.9**	**+1.6**
GEVA					IAML			06 33 04.0	
	comp=E,84nm,0.7s								
GEVA					IAML			06 33 07.0	
	comp=N,104nm,0.5s								
HAKT	**HAKKARI**	**1.05**	**210**		P		**Pb**	**06 32 40.6**	**-1.0**
HAKT					S		**Sn**	**06 32 58.0**	**+2.2**
IMRD	**Marand**	**1.08**	**77**		Pg		**Pn**	**06 32 40.2**	**-1.9**
AKDM	**Akdamar-Van**	**1.09**	**263**		Pg		**Pn**	**06 32 39.4**	**-2.8**
NAX	**Nakhchivan**	**1.13**	**51**		P		**Pb**	**06 32 41.7**	**-1.3**
NAX					S		**Sn**	**06 32 59.0**	**+1.4**
DYDN	**Diyadin**	**1.19**	**334**		P		**Pn**	**06 32 39.0**	**-4.7**
DYDN					S		**Sn**	**06 33 00.2**	**+0.9**
DYDN					IAML			06 33 10.0	
	comp=E,86nm,0.5s								
DYDN					IAML			06 33 14.0	
	comp=N,66nm,0.6s								
HYR	**Heyderabad**	**1.30**	**17**		P		**Pb**	**06 32 45.5**	**-0.3**
HYR					S		**Sb**	**06 33 05.1**	**+2.9**
SBZ	**Shahbuz**	**1.31**	**45**		P		**Pb**	**06 32 44.9**	**-1.2**
SBZ					S		**Sb**	**06 33 04.4**	**+1.9**
ORD	**Ordubad**	**1.36**	**70**		P		**Pb**	**06 32 45.5**	**-1.3**
ORD					S		**Sb**	**06 33 03.8**	**+0.1**
CUKT	**Cukurca**	**1.36**	**206**		Pn		**Pb**	**06 32 47.5**	**+0.6**
CUKT					Sn		**Sb**	**06 33 06.7**	**+2.8**
IGDI	**IGDIR**	**1.41**	**351**		P		**Pb**	**06 32 47.9**	**+0.2**
IGDI					S		**Sb**	**06 33 11.3**	**+6.1**
IAZR	**Azarshahr**	**1.50**	**121**		Pg		**Pb**	**06 32 48.3**	**-1.2**
AGRB	**Hanur-Agry**	**1.53**	**316**		Pn		**Pn**	**06 32 46.3**	**-2.0**
GNI	**Garni**	**1.70**	**10**		Pn		**Pb**	**06 32 50.6**	**-2.1**
IHRS	**Heris**	**2.11**	**93**		Pn		**Pb**	**06 32 58.4**	**-1.4**
GDB	**GEDABAY**	**2.49**	**25**		P		**Pb**	**06 33 04.2**	**-2.0**
GDB					S		**Sb**	**06 33 40.2**	**+3.8**
YRD	**Yardimli**	**3.07**	**80**		P		**Pn**	**06 33 11.3**	**+1.9**
YRD					S		**Sb**	**06 33 49.6**	**-3.6**

BJI ***25*** *06:39:38.9,39.˝48N×143.˝84E,h10km,mB4.9/22,mb4.7/72, Ms4.4/43,Ms7 4.2/44*
IDC ***25*** *06:39:42.1±0.6,39.˝35N×143.˝40E,h0km,mb4.3/25, mbtmp4.3/33,ML3.9/6,MS3.8/35,Error ellipse: s-maj=15.4km s-min=13.5km az=136.0*
NIED ***25*** *06:39:44.8,39.˝44N×143.˝52E,h43km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.06; Mθθ-0.15; Mϕϕ-2.91; Mrθ1.00; Mθϕ-1.77; Mϕr2.18; Fault plane solution: Mw4.18000×10¹⁵ NP1: ϕs207.00000°, δ28.00000°, λ92.00000°. NP2:ϕs25.00000°, δ63.00000°, λ89.00000°.*
JMA ***25*** *06:39:44.8±0.3,39.˝4N±0.˝8×14.˝4E±.˚, h43km,MD4.7/36, MV4.8/36,FAR E OFF SANRIKU*
JMA Felt I J1 at FAR E OFF SANRIKU .
MOS ***25*** *06:39:45.4±1.0,39.˝52N×143.˝40E,h29km,mb4.8/24,Error ellipse: s-maj=7.8km s-min=4.8km az=100.6*
NEIC ***25*** *06:39:47.5±1.9,39.˝42N±0.˝04×143.˝3E±0.˝1, h28km±5km, mb4.7/75,Error ellipse: s-maj=13.7km s-min=2.5km az=115.0*
ISC 25 06:39:43.7±0.5**,39°38N**±0.˝05×**143°53E**±0.˝05**,h11**km**,n258,**
σ1°78/218**,mb4.7**/106**,MS3.9**/44**,16C-6D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.34**	**279**	*i*	P		**Pn**	**06 40 07.4**	**-0.9**
MIYJ					A		A	06 40 07.4	
	comp=N,12nm,1.0s,comp=E,18nm,1.1s								
JTH

GLVR eS Sn 06 41 41.7 -4.9
GLVR pmax pmax
comp=Z,74nm,0.1s
GLVR smax smax
comp=N,984nm,0.3s
GLVR smax smax
comp=E,1μm,0.3s
JKA Kamikawa-asahi 4.78 352 Pn 06 40 55.2 -0.4
JKA Kamikawa-asahi 4.78 352 Sn 06 41 53.3 +2.2
ASAJ Asahikawa 4.79 352 Pn Pn 06 40 56.4 +0.7
comp=E,5.6nm,0.3s,baz=216,slow=12,SNR=29
ASAJ Sn Sn 06 41 53.3 +2.2
comp=E,6.0nm,0.3s,baz=124,slow=18,SNR=4.7
comp=E,20nm,0.4s
RUSJ Misakicho 4.89 15 P Pn 06 40 57.0 -0.1
RUSJ eS Sn 06 41 50.8 -2.9
YUK Yuzh-Kuril'sk 4.97 20 eP Pn 06 40 56.5 -1.6
YUK i S Sn 06 41 49.5 -6.0
YUK pmax pmax
comp=N,50nm,0.2s
YUK pmax pmax
comp=E,229nm,0.2s
YUK pmax pmax
comp=E,27nm,0.1s
YUK smax smax
comp=N,843nm,0.3s
YUK smax smax
comp=E,1μm,0.5s
MJAR Matsushiro Arr 5.07 238 Pn Pn 06 41 00.9 +1.2
comp=E,2.0nm,0.3s,baz=39,slow=12,SNR=188
MJAR Matsushiro Arr 5.07 238 Pn 06 41 00.6 +1.0
MJAR Matsushiro Arr 5.07 238 P Pn 06 41 00.6 +1.0
MAJO Matsushiro 5.07 238 Pn 06 41 00.9 +1.3
MAJO Matsushiro 5.07 238 P Pn 06 41 00.9 +1.3
MJB9 Matsu-Tunnel 5.07 238 Pn 06 41 02.1 +2.5
JGF Kuroka 6.19 234 Pn 06 41 16.5 +1.5
INU Inuyama 6.56 234 Pn 06 41 20.0 -0.1
KUR Kuril'sk 6.67 27 eP Pn 06 41 24.1 +2.5
KUR eS Sn 06 42 31.6 -6.0
KUR pmax pmax
comp=Z,80nm,0.5s
KUR smax smax
comp=N,276nm,0.5s
JHJ2 Mitsune 6.94 207 Pn Pn 06 41 25.7 +0.5
JHJ Hachijo jima 2 6.94 207 Pn Pn 06 41 23.1 -2.2
comp=N,16nm,0.3s,baz=92,slow=17,SNR=4.7
JHJ Sn Sn 06 42 37.7 -6.6
comp=N,22nm,0.3s,baz=68,slow=19,SNR=7.6
comp=N,84nm,0.8s
YSS Yuzhno-Sakhali 7.59 356 eP Pn 06 41 34.7 +0.5
YSS eS Sn 06 42 57.3 -2.9
YSS pmax pmax
comp=Z,20nm,0.6s
YSS MLR MLR
comp=Z,600nm,14.0s
YSS MLR MLR
comp=N,700nm,16.0s
TEY Ternei 7.64 320⇑ eP Pn 06 41 35.7 +0.9
TEY pmax pmax
comp=N,20nm,0.8s
TEY pmax pmax
comp=E,10.0nm,0.8s
TEY pmax pmax
comp=Z,40nm,0.7s
VLA Vladivostok 9.53 297⇑ iP Pn 06 42 02.5 +1.7
VLA pmax pmax
comp=Z,12nm,1.0s
JMN Monobe 9.59 237 Pn Pn 06 42 00.7 -1.0
USRK Ussuriysk Ar. 9.87 303 Pn Pn 06 42 05.4 -0.1
comp=Z,2.0nm,0.3s,baz=100,slow=11,SNR=20
comp=Z,7.8nm,0.7s
PSTR Posyet 10.16 293⇓ iP Pn 06 42 12.5 +3.1
PSTR pmax pmax
comp=Z,3.0nm,1.0s
TYV Tymovskoe 11.50 357 eP Pn 06 42 27.9 +0.2
TYV eS Sn 06 44 36.0 -0.1
TYV pmax pmax
comp=Z,400nm,6.2s
TYV pmax pmax
comp=Z,6.0nm,0.8s
TYV smax smax
comp=N,700nm,8.9s
TYV smax smax
comp=E,600nm,8.9s
MDJ Mudanjiang 11.61 301 Pn 06 42 25.9 -3.3
MDJ Mudanjiang 11.61 301 P Pn 06 42 30.3 +1.0
MDJ pmax pmax
comp=E,9.0nm,1.0s
JNU Nakatsue 11.97 242 Pn Pn 06 42 34.0 -0.2
comp=E,0.5nm,0.3s,baz=83,slow=11,SNR=4.0
JNU LR LR 06 47 38.9
comp=E,651nm,18.2s,baz=49,slow=40
comp=E,8.3nm,0.7s
KSRS Korea Array 12.39 266 Pn Pn 06 42 39.9 -0.1
comp=E,0.4nm,0.3s,baz=83,slow=13,SNR=16
KSRS LR LR 06 47 06.5
comp=E,328nm,18.7s,baz=85,slow=36
comp=E,7.6nm,0.8s
KLR Kul'dur 12.95 323 Pn Pn 06 42 46.8 -0.7
comp=E,0.2nm,0.3s,baz=133,slow=14,SNR=11
KLR LR LR 06 47 53.8
comp=E,359nm,19.0s,baz=80,slow=38
comp=E,4.5nm,0.8s
BNX BinXian 13.47 303 ⇑P Pn 06 42 55.3 +0.7
BNX pmax pmax
comp=E,23nm,0.7s
OKH Okha 14.18 359 deP Pn 06 43 02.9 -1.4
OKH eS Sn 06 45 37.2 -4.3
OKH MLR MLR
comp=N,700nm,16.0s
OKH MLR MLR
comp=Z,500nm,14.0s
OKH MLR MLR
comp=E,400nm,15.0s
CN2 Changchun 14.23 294 eP P 06 43 10.0 -2.5
CN2 eS Sn 06 45 46.5 +3.6
CN2 pmax pmax
comp=E,10.0nm,1.0s
CN2 pmax pmax
comp=E,200nm,5.0s
CN2 LR LR
comp=E,400nm,12.0s
CN2 LR LR
comp=E,500nm,12.0s
CN2 LR LR
comp=E,500nm,13.0s
SNY Shenyang 15.35 286 ⇓P P 06 43 24.8 -0.1
SNY pmax pmax
comp=E,14nm,0.7s
PETK Petropavlovsk- 16.82 31 Pn P 06 43 40.5 -0.7
comp=E,4.9nm,1.0s,baz=238,slow=8.3,SNR=4.3
DL2 Dalian 17.00 275 eP P 06 43 41.8 -1.4
DL2 S Sn 06 46 51.5 +1.3
DL2 pmax pmax
comp=E,57nm,1.3s
DL2 LR LR
comp=E,860nm,13.5s
DL2 LR LR
comp=E,730nm,13.6s
DL2 LR LR
comp=E,820nm,17.3s
ZEA Zeya 18.14 328 eP Pn 06 43 52.7 -2.7
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.6s
ZEA MLR MLR
comp=Z,300nm,14.0s
HIA Hailar 19.61 308 P 06 44 09.4 -2.5
HIA Hailar 19.61 308 P P 06 44 09.4 -2.5
HIA pmax pmax
comp=Z,15nm,0.8s
HILR Hailar Array B 19.71 309 P P 06 44 10.8 -2.2
comp=Z,35nm,0.5s,baz=115,slow=12,SNR=63
MA2 Magadan 20.73 10 P P 06 44 23.8 -0.2
comp=Z,7.5nm,0.7s,baz=201,slow=7.7,SNR=9.6
comp=Z,7.5nm,0.7s
MA2 Magadan 20.73 10 P 06 44 24.6 +0.7
MA2 IAmb IAmb 06 44 36.0
comp=Z,19nm,0.7s
MA2 Magadan 20.73 10 ⇓iP Pn 06 44 24.9 -1.4
MA2 pmax pmax
comp=Z,10.0nm,0.9s
XLT XiLinHaoTe 20.96 291 eP P 06 44 24.0 -2.7
XLT pmax pmax
comp=Z,25nm,1.3s
XLT pmax pmax
comp=Z,220nm,4.7s
XLT LR LR
comp=Z,400nm,12.4s
XLT LR LR
comp=Z,360nm,16.6s
BJI2 Beijing 21.04 281 P P 06 44 25.0 -2.4
BJI2 pmax pmax
comp=Z,9.0nm,0.8s
BJI2 LR LR
comp=Z,120nm,16.8s
BJI2 LR LR
comp=Z,250nm,16.8s
BJI2 LR LR
comp=Z,260nm,14.3s
BJT Baijiatuan 21.04 281 P 06 44 24.4 -3.1
BJT Baijiatuan 21.04 281 P P 06 44 24.4 -3.1
BJT pmax pmax
comp=Z,13nm,0.8s
NJ2 Nanjing 21.29 258 eP P 06 44 31.0 +0.8
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
HNS HongShan 22.64 274 ⇑P P 06 44 41.5 -3.1
HNS pmax pmax
comp=Z,7.0nm,1.2s
HNS LR LR
comp=Z,590nm,12.1s
HNS LR LR
comp=Z,580nm,15.8s
SEY Seymchan 24.18 10⇑ iP P 06 45 00.9 +1.1
SEY pmax pmax
comp=Z,17nm,0.9s
YAK Yakutsk 24.21 344 LR LR 06 54 53.9
comp=Z,111nm,21.6s,baz=120,slow=38
YAK Yakutsk 24.21 344 P P 06 44 58.4 -1.6
YAK Yakutsk 24.21 344 eP P 06 44 58.8 -1.2
YAK e 06 45 27.9
YAK e 06 48 40.3
YAK eS **S 06 49 17.6 -0.3**
YAK eSS **SnSn 06 50 02.9 +3.1**
YAK e 06 56 05.3
YAK pmax pmax
comp=Z,28nm,1.0s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,40nm,1.1s
YAK pmax pmax
comp=N,20nm,1.5s
YAK smax smax
comp=N,110nm,3.8s
YAK smax smax
comp=E,49nm,4.2s
YAK MLR MLR
comp=Z,185nm,15.0s
YAK MLR MLR
comp=N,182nm,14.0s
HHC Hu-ho-hao-te 24.42 284 eP P 06 45 01.0 -1.3
HHC S **S 06 49 13.5 -8.6**
HHC pmax pmax
comp=N,12nm,1.0s
HHC pmax pmax
comp=N,140nm,10.4s
HHC LR LR
comp=N,110nm,13.3s
HHC LR LR
comp=N,440nm,16.0s
HHC LR LR
comp=N,560nm,15.9s
LYN LuoYang 25.21 269 P P 06 45 08.8 -0.6
LYN pmax pmax
comp=N,55nm,1.0s
LYN LR LR
comp=N,660nm,14.4s
LYN LR LR
comp=N,790nm,14.5s
LYN LR LR
comp=N,1μm,14.3s
WHN Wuhan 25.40 259 P P 06 45 10.8 -0.3
WHN pmax pmax
comp=N,160nm,0.9s
BTO2 Baotou 25.71 284 eP P 06 45 13.5 -0.5
BTO2 pP **sP 06 45 17.8 +0.2**
BTO2 sP **pwP 06 45 21.0 +1.0**
BTO2 PP **PnPn 06 45 53.5 +3.3**
BTO2 pmax pmax
comp=N,24nm,1.1s
BTO2 pmax pmax
comp=N,360nm,7.6s
BTO2 LR LR
comp=N,390nm,8.3s
BTO2 LR LR
comp=N,1μm,16.2s
BTO2 LR LR
comp=N,1μm,17.5s
ULN Ulaanbaatar 27.52 300 P 06 45 30.3 -0.1
ULN IAmb IAmb 06 45 31.6
comp=Z,18nm,1.1s
ULN Ulaanbaatar 27.52 300⇑ iP P 06 45 30.4 +0.1
ULN pmax pmax
comp=Z,16nm,1.1s
SONM Songino Array 27.96 300 P P 06 45 34.3 +0.1
comp=Z,6.9nm,0.7s,baz=97,slow=9.1,SNR=31
SONM LR LR 06 57 15.7
comp=Z,340nm,19.2s,baz=56,slow=38
comp=Z,6.9nm,0.7s
SONM Songino Array 27.96 300 P 06 45 34.3 +0.1
H11N2 WAKE ISLAND Hy 28.08 127 T T 07 16 26.8
baz=318,slow=75,SNR=198
H11N1 WAKE ISLAND Hy 28.09 128 T T 07 16 26.2
baz=318,slow=75,SNR=134
H11N3 WAKE ISLAND Hy 28.10 127 T T 07 16 26.8
baz=318,slow=75,SNR=110
XAN Xi'an 28.14 270 P P 06 45 36.3 +0.4
XAN pP pwP 06 45 45.5 +3.5
XAN pmax pmax
comp=Z,18nm,1.0s
XAN LR LR
comp=Z,300nm,12.9s
XAN LR LR
comp=Z,380nm,11.9s
XAN LR LR
comp=Z,430nm,11.0s
H11S1 WAKE ISLAND Hy 28.89 129 T T 07 17 21.2
baz=319,slow=75,SNR=9.3
H11S3 WAKE ISLAND Hy 28.90 129 T T 07 17 22.3
baz=319,slow=75,SNR=7.0
H11S2 WAKE ISLAND Hy 28.91 129 T T 07 17 20.6
baz=319,slow=75,SNR=8.8
ENH Enshi 29.25 262 P 06 45 45.3 -0.4
ENH IAmb IAmb 06 45 46.2
comp=Z,33nm,1.2s
TLY Talaya 30.14 307 LR LR 06 58 27.4
comp=Z,91nm,18.4s,baz=85,slow=37
TLY Talaya 30.14 307 P P 06 45 52.6 -0.9
TLY Talaya 30.14 307 ceP P 06 45 55.6 +2.2
TLY pmax pmax
comp=Z,10.0nm,1.3s
ZAK Zakamensk 30.21 305 eP P 06 45 52.6 -1.6
ZAK pmax pmax
comp=Z,10.0nm,1.7s
BILL Bilibino 31.31 16 P P 06 46 05.3 +1.8
BILL Bilibino 31.31 16⇓ iP P 06 46 03.6 +0.1
BILL pmax pmax
comp=Z,3.0nm,1.0s
LZH Lanzhou 31.39 277 eP P 06 46 04.8 +0.1
LZH sP pwP 06 46 17.5 +6.7
LZH pmax pmax
comp=Z,11nm,1.5s
LZH LR LR
comp=Z,230nm,8.6s
LZH LR LR
comp=Z,490nm,12.0s
LZH LR LR
comp=Z,490nm,10.7s
LZDM Lanzhou Array 31.54 277 P P 06 46 05.7 -0.6
comp=Z,1.8nm,0.3s,baz=86,slow=4.5,SNR=11
comp=Z,1.8nm,0.3s
TIXI Tiksi 33.19 352 LR LR 07 01 35.6
comp=Z,175nm,18.1s,baz=210,slow=40
TIXI Tiksi 33.19 352 eP P 06 46 20.0 +0.1
GTA2 Gaotai 33.56 284 eP P 06 46 23.8 +0.1
GTA2 sP pwP 06 46 33.0 +3.2
GTA2 pmax pmax
comp=Z,18nm,0.6s
GTA2 LR LR
comp=Z,200nm,15.3s
GTA2 LR LR
comp=Z,600nm,17.4s
GTA2 LR LR
comp=Z,760nm,16.4s
QIZ Qiongzhong 35.42 245 P P 06 46 40.0 +0.2
QIZ S **S 06 52 15.5 +0.9**
QIZ pmax pmax
comp=Z,15nm,1.6s
QIZ LR LR
comp=Z,210nm,11.9s
QIZ LR LR
comp=Z,220nm,15.0s
QIZ LR LR
comp=Z,270nm,17.2s
DAV Davao City (W) 36.00 211 LR LR 06 59 39.9
comp=Z,69nm,20.3s,baz=350,slow=33
KMI2 Kunming 36.97 260 P P 06 46 52.0 -1.3
KMI2 pmax pmax
comp=Z,16nm,0.3s
KMI2 LR LR
comp=Z,210nm,20.1s
KMI2 LR LR
comp=Z,170nm,19.4s
KMI2 LR LR
comp=Z,190nm,24.1s
GOMU GeErMu 38.26 281 P P 06 47 03.5 -0.8
GOMU pmax pmax
comp=Z,40nm,0.9s
ANM Nome 38.73 32 P P 06 47 10.3 +2.9
ANM Nome 38.73 32 P P 06 47 10.3 +2.9
ANM pmax pmax
comp=Z,9.0nm,1.3s
C16K Lisburne Hills 39.86 27 P P 06 47 18.1 +1.3
C16K IAmb IAmb 06 48 45.4
comp=Z,21nm,1.9s
DGZ Jazzator, Alta 40.42 304⇑ iP P 06 47 22.8 +0.8
DGZ pmax pmax
comp=Z,13nm,0.8s
O15K Ungalikthiuk R 40.44 42 P P 06 47 23.2 +1.5
O15K IAmb IAmb 06 48 05.0
comp=Z,33nm,1.4s
F17K Baldwin Pennin 40.86 30 P 06 47 28.1 +3.0
F17K IAmb IAmb 06 47 38.4
comp=Z,9.7nm,0.8s
WMQ Urumqi 41.32 295 eP P 06 47 30.8 +1.5
WMQ sP pwP 06 47 40.0 +4.6
WMQ pmax pmax
comp=Z,27nm,1.3s
E18K Tukpahlearik C 41.34 29 P 06 47 31.4 +2.3
ZAA0 Zalesovo Array 41.62 310 P 06 47 31.2 -0.3
ZAA0 IAmb IAmb 06 47 32.1
comp=Z,8.9nm,0.7s
ZALV Zalesovo Beam 41.62 310 P P 06 47 31.4 -0.1
comp=Z,8.5nm,0.5s,baz=92,slow=8.2,SNR=30
ZALV PcP **PcP 06 49 28.7 +0.4**
comp=Z,2.6nm,0.7s,baz=85,slow=3.3,SNR=3.7
ZALV LR LR 07 05 32.4
comp=Z,85nm,19.9s,baz=70,slow=37
comp=Z,8.5nm,0.5s
ZALV Zalesovo Beam 41.62 310 P 06 47 30.8 -0.7
H18K Honhosa River 41.78 33 IAmb IAmb 06 47 56.2
comp=Z,36nm,1.8s
D19K Kuna River 42.50 28 IAmb IAmb 06 47 51.5
comp=Z,14nm,0.8s
E19K Redstone River 42.62 29 IAmb IAmb 06 47 52.7
comp=Z,12nm,0.8s
D20K Etivluk River 43.08 28 IAmb IAmb 06 47 56.4
comp=Z,16nm,0.8s
B20K Meade River 43.16 26 IAmb IAmb 06 47 56.5
comp=Z,14nm,0.7s
CHTO Chiang Mai 43.50 255 P P 06 47 47.6 +0.4
CHTO Chiang Mai 43.50 255 P P 06 47 47.6 +0.4
CHTO pmax pmax
comp=Z,5.0nm,0.7s
LSA Lhasa 43.69 274 P P 06 47 49.9 +0.7
LSA Lhasa 43.69 274 P P 06 47 48.3 -0.9
LSA Lhasa 43.69 274 P P 06 47 49.9 +0.7
LSA pmax pmax
comp=Z,6.0nm,0.7s
CMAR Chiang Mai Arr 43.72 255 P P 06 47 48.0 -1.0
comp=Z,1.0nm,0.3s,baz=53,slow=6.4,SNR=5.1
CMAR LR LR 07 07 24.5
comp=Z,54nm,18.3s,baz=50,slow=38
comp=Z,1.0nm,0.3s
MK31 Makanchi Array 44.33 300 c **iP P 06 47 53.2 -0.4**
MKAR Makanchi Array 44.33 300 P P 06 47 53.5 -0.1
comp=Z,7.0nm,0.7s,baz=84,slow=9.5,SNR=61
MKAR LR LR 07 07 13.1
comp=Z,208nm,18.2s,baz=58,slow=37
comp=Z,7.0nm,0.7s
D22K Ayikyak River 44.52 28 IAmb IAmb 06 48 08.2
comp=Z,11nm,0.8s
MAKZ Makanchi 44.53 301 P 06 47 55.2 0.0
MAKZ IAmb IAmb 06 47 56.3
comp=Z,13nm,1.0s
MAKZ Makanchi 44.53 301 P P 06 47 55.3 0.0
MAKZ pmax pmax
comp=Z,13nm,1.0s
E23K Chandalar 45.57 29 IAmb IAmb 06 48 16.6
comp=Z,6.9nm,0.8s
KURK Kurchatov 45.84 307 P 06 48 05.3 -0.2
KURK Kurchatov 45.84 307 P P 06 48 05.3 -0.2
KURK pmax pmax
comp=Z,23nm,0.6s
KURBB Kurchatov Arra 45.91 307 P P 06 48 05.8 -0.3
comp=Z,21nm,0.8s,baz=81,slow=8.2,SNR=132
KURBB LR LR 07 08 33.9
comp=Z,86nm,18.2s,baz=180,slow=38
comp=Z,21nm,0.8s
IL31 46.62 34 IAmb IAmb 06 48 29.1
comp=Z,8.1nm,1.0s
ILAR Eielson Array 46.62 34 P P 06 48 12.6 +1.0
comp=Z,1.9nm,0.8s,baz=264,slow=6.5,SNR=19
comp=Z,1.9nm,0.8s
D25K Kavik River 46.81 27 IAmb IAmb 06 48 25.9
comp=Z,10.0nm,0.8s
PRP Porcupine Dome 47.17 32 P 06 48 18.6 +2.6
PRP IAmb IAmb 06 48 42.2
comp=Z,9.6nm,1.2s
C27K Jago River 47.75 27 IAmb IAmb 06 48 33.7
comp=Z,11nm,1.1s
G26K Porcupine Rive 47.80 30 P P 06 48 23.9 +3.3
SCRK Sand Creek 47.93 35 P 06 48 23.2 +1.4
SCRK IAmb IAmb 06 48 41.0
comp=Z,5.6nm,0.9s
VRDI Verde Repeater 48.51 38 P P 06 48 28.7 +2.3
BCAR Beaver Creek A 49.02 36 P P 06 48 32.7 +2.6
BARN Barnard Glacie 49.39 38 P P 06 48 34.9 +1.6
E29M Blow River 49.92 28 IAmb IAmb 06 48 50.8
comp=Z,8.9nm,0.9s
BOOM Boomskoye usch 49.92 297 IAmb IAmb 06 48 38.9
comp=Z,10nm,1.0s
BVAR Borovoye Array 50.26 311 P P 06 48 39.5 -0.1
comp=Z,9.6nm,0.8s,baz=74,slow=7.9,SNR=32
BVAR LR LR 07 11 41.5
comp=Z,109nm,19.1s,baz=66,slow=38
comp=Z,9.6nm,0.8s
BORK Borovoye 50.29 311 P 06 48 39.8 -0.1
BORK IAmb IAmb 06 48 40.9
comp=Z,8.7nm,0.8s
BORK Borovoye 50.29 311 c **iP P 06 48 39.8 -0.1**
BORK pmax pmax
comp=Z,10.0nm,0.9s
F30M Barrier River 50.82 29 P 06 48 47.1 +3.4
F30M IAmb IAmb 06 48 58.6
comp=Z,19nm,1.1s
AAK Ala-Archa 50.87 297 LR LR 07 11 27.7
comp=Z,137nm,19.4s,baz=76,slow=38
AAK Ala-Archa 50.87 297 P 06 48 44.0 -0.6
AAK Ala-Archa 50.87 297⇓ iP P 06 48 44.8 +0.1
AAK pmax pmax
comp=Z,3.0nm,1.0s
I30M Mount Dempster 51.01 32 IAmb IAmb 06 48 58.9
comp=Z,12nm,0.8s
KSH2 Kashi 51.43 293 P P 06 48 49.5 +0.6
KSH2 pP pwP 06 48 56.5 +1.4
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
KSH2 LR LR
comp=Z,200nm,14.4s
KSH2 LR LR
comp=Z,260nm,15.5s

KSH2				LR	LR			
	comp=Z,270nm,12.7s							
H31M	**Peel River**	**51.72**	**31**	IAmb	IAmb	06 49 03.8		
	comp=Z,11nm,0.7s							
ARSB	**Arslanbob**	**52.41**	**296**	IAmb	IAmb	06 48 57.8		
	comp=Z,13nm,1.0s							
KKAR	**Karatay Array**	**53.41**	**299**		**P**	**06 49 02.9**	**-0.5**	
KKAR	**Karatay Array**	**53.41**	**299**	P	**P**	**06 49 02.9**	**-0.5**	
A36M	**Sachs Harbour**	**53.46**	**23**	IAmb	IAmb	06 49 09.5		
	comp=Z,6.3nm,1.0s							
C36M	**Paulatuk**	**54.60**	**26**	IAmb	IAmb	06 49 24.1		
	comp=Z,3.8nm,0.7s							
GAR	**Garm**	**55.22**	**295**	IAmb	IAmb	06 49 52.8		
	comp=Z,8.7nm,0.7s							
NIL	**Nilore**	**55.48**	**288**	P	**P**	**06 49 19.2**	**+0.7**	
NIL	**Nilore**	**55.48**	**288**	P	**P**	**06 49 19.3**	**+0.7**	
NIL				pmax	pmax			
	comp=Z,18nm,0.9s							
ARTI	**Arti**	**55.83**	**318**	LR	LR	07 15 15.6		
	comp=Z,114nm,19.9s,baz=66,slow=38							
ARTI	**Arti**	**55.83**	**318**		**P**	**06 49 20.2**	**-0.5**	
ARTI	**Arti**	**55.83**	**318**	*c iP*	**P**	**06 49 21.0**	**+0.3**	
ARTI						06 50 21.2		
ARTI				S	**S**	**06 57 09.3**	**+1.8**	
ARTI				SS	**SS**	**07 00 52.6**	**0.0**	
ARTI				pmax	pmax			
	comp=Z,34nm,0.9s							
AB31	**Akbulak array**	**57.72**	**310**	IAmb	IAmb	06 49 48.7		
	comp=Z,7.9nm,0.7s							
ABKAR	**Akbulak array**	**57.72**	**310**		**P**	**06 49 34.0**	**-0.2**	
KBL	**Kabul**	**58.15**	**291**		**P**	**06 49 37.4**	**-0.3**	
KBL				IAmb	IAmb	06 49 38.0		
	comp=Z,9.2nm,0.8s							
KBL	**Kabul**	**58.15**	**291**	P	**P**	**06 49 37.4**	**-0.3**	
KBL				pmax	pmax			
	comp=Z,9.0nm,0.9s							
AKTO	**Aktyubinsk**	**58.36**	**312**	LR	LR	07 17 11.4		
	comp=Z,56nm,18.6s,baz=90,slow=39							
SPITS	**Spitsbergen Ar**	**58.55**	**349**	P	**P**	**06 49 40.1**	**+0.5**	
	comp=Z,5.1nm,1.1s,baz=29,slow=3.3,SNR=0.9							
SPITS				LR	LR	07 17 39.7		
	comp=Z,65nm,18.6s,baz=24,slow=39							
	comp=Z,5.1nm,1.1s							
KIRV	**Kirov**	**59.39**	**323**	⇑*iP*	**P**	**06 49 45.3**	**-0.4**	
WRA	**Warramunga Arr**	**59.63**	**190**	P	**P**	**06 49 47.0**	**-0.7**	
	comp=Z,1.3nm,0.7s,baz=8.1,slow=6.8,SNR=6.6							
	comp=Z,1.3nm,0.7s							
WRA	**Warramunga Arr**	**59.63**	**190**	*i* P	**P**	**06 49 50.2**	**+2.4**	
WRA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
RES	**Resolute Bay**	**59.91**	**15**	LR	LR	07 19 09.0		
	comp=Z,45nm,18.3s,baz=14,slow=40							
RES	**Resolute Bay**	**59.91**	**15**	IAmb	IAmb	06 50 01.0		
	comp=Z,7.1nm,0.9s							
YKA	**Yellowknife Ar**	**60.94**	**31**	P	**P**	**06 49 57.2**	**+0.9**	
	comp=Z,0.4nm,0.6s,baz=302,slow=7.4,SNR=6.5							
	comp=Z,0.4nm,0.6s							
YKA	**Yellowknife Ar**	**60.94**	**31**	*i* P	**P**	**06 49 57.7**	**+1.4**	
YKA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ARCES	**ARCESS Array B**	**62.39**	**339**	P	**P**	**06 50 05.3**	**-0.7**	
	comp=Z,3.2nm,1.0s,baz=55,slow=9.6,SNR=4.5							
ARCES				LR	LR	07 19 58.4		
	comp=Z,107nm,18.2s,baz=66,slow=39							
	comp=Z,3.2nm,1.0s							
TULEG	**Thule**	**62.55**	**8**	*i* P	**P**	**06 50 06.7**	**-0.3**	
TULEG				IAmb	IAmb	06 50 07.3		
	comp=Z,3.3nm,0.8s							
KLMR	**Klimovskoe**	**62.67**	**328**	*e*P	**P**	**06 50 06.6**	**-1.3**	
KLMR				*e*		06 52 24.2		
KLMR				pmax	pmax			
	comp=Z,19nm,1.4s							
NEEM	**North Greenlan**	**63.09**	**4**	*i* P	**P**	**06 50 11.2**	**+0.3**	
NEEM				IAmb	IAmb	06 50 11.9		
	comp=Z,7.2nm,1.1s							
ASAR	**Alice Springs**	**63.36**	**190**	P	**P**	**06 50 13.1**	**+0.2**	
	comp=Z,0.7nm,0.8s,baz=5.0,slow=4.8,SNR=6.6							
	comp=Z,0.7nm,0.8s							
DAG	**Danmarks Havn**	**63.58**	**355**	*i* P	**P**	**06 50 14.0**	**+0.3**	
DAG				IAmb	IAmb	06 50 15.1		
	comp=Z,5.8nm,1.1s							
ILON	**Igloolik, Nuna**	**66.55**	**16**		**P**	**06 50 33.1**	**0.0**	
ILON				IAmb	IAmb	06 50 44.6		
	comp=Z,6.6nm,0.9s							
OBN	**Obninsk**	**67.21**	**323**	⇑*eP*	**P**	**06 50 37.4**	**-0.2**	
OBN				*e*		06 50 47.8		
OBN				*i*		06 50 54.0		
OBN						06 51 04.0		
OBN						06 53 08.0		
OBN				S	**S**	**06 59 36.0**	**+4.1**	
OBN				*e*		07 00 35.7		
OBN				pmax	pmax			
	comp=Z,7.0nm,0.9s							
FINES	**FINESS Array B**	**67.51**	**333**	P	**P**	**06 50 39.4**	**0.0**	
	comp=Z,5.8nm,0.8s,baz=50,slow=8.0,SNR=14							
	comp=Z,5.8nm,0.8s							
PINE	**Pine Mountain**	**67.56**	**51**		**P**	**06 50 42.9**	**+2.6**	
SUMG	**Summit**	**68.33**	**1**	*i* P	**P**	**06 50 46.0**	**+1.1**	
KIV	**Kislovodsk**	**70.62**	**311**		**P**	**06 50 58.2**	**-0.9**	
KIV	**Kislovodsk**	**70.62**	**311**	*e*P	**P**	**06 50 58.7**	**-0.5**	
KIV				pmax	pmax			
	comp=Z,23nm,1.1s							
KBZ	**Khabaz**	**70.64**	**311**	P	**P**	**06 50 59.5**	**+0.5**	
	comp=Z,7.6nm,0.8s,baz=48,slow=3.8,SNR=7.6							
	comp=Z,7.6nm,0.8s							
KBZ	**Khabaz**	**70.64**	**311**	*c iP*	**P**	**06 51 00.5**	**+1.5**	
KBZ				pmax	pmax			
	comp=Z,9.0nm,0.9s							
GNI	**Garni**	**71.64**	**307**	LR	LR	07 25 32.7		
	comp=Z,46nm,18.4s,baz=18,slow=38							
NVAR	**Mina Array Bea**	**72.26**	**55**	P	**P**	**06 51 11.1**	**+1.8**	
	comp=Z,0.6nm,0.7s,baz=285,slow=6.1,SNR=5.6							
	comp=Z,0.6nm,0.7s							
HFS	**Hagfors**	**72.63**	**336**	P	**P**	**06 51 10.9**	**+0.1**	
	comp=Z,4.6nm,0.8s,baz=52,slow=9.5,SNR=8.3							
HFS				LR	LR	07 27 32.7		
	comp=Z,42nm,21.1s,baz=55,slow=40							
	comp=Z,4.6nm,0.8s							
NB2	**NORSAR Subarra**	**72.66**	**338**	P	**P**	**06 51 11.1**	**+0.1**	
	comp=Z,10.0nm,1.0s,baz=35,slow=6.2							
NOA	**NORSAR Array B**	**72.66**	**338**	P	**P**	**06 51 11.1**	**+0.1**	
	comp=Z,3.3nm,0.8s,baz=38,slow=6.0,SNR=11							
NOA				LR	LR	07 27 06.5		
	comp=Z,56nm,19.3s,baz=35,slow=39							
	comp=Z,3.3nm,0.8s							
SFJD	**Kangerlussuaq**	**73.40**	**6**	LR	LR	07 24 42.1		
	comp=Z,54nm,20.1s,baz=347,slow=37							
AKASG	**Malin Array Be**	**73.45**	**323**	P	**P**	**06 51 15.4**	**-0.5**	
	comp=Z,3.0nm,0.7s,baz=47,slow=5.9,SNR=10							
AKASG				LR	LR	07 27 32.0		
	comp=Z,55nm,19.9s,baz=22,slow=39							
	comp=Z,3.0nm,0.7s							
AKASG	**Malin Array Be**	**73.45**	**323**	*i* P	**P**	**06 51 15.8**	**0.0**	
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.6s							
AKBB	**Malin Array Si**	**73.45**	**323**	⇑*iP*	**P**	**06 51 15.4**	**-0.4**	
AKBB				pmax	pmax			
	comp=Z,5.0nm,0.9s							
FRB	**Frobisher Bay**	**74.10**	**14**	LR	LR	07 27 39.6		
	comp=Z,54nm,19.3s,baz=34,slow=39							
PDAR	**Pinedale Array**	**74.84**	**47**	P	**P**	**06 51 25.5**	**+1.1**	
	comp=Z,0.6nm,0.6s,baz=356,slow=0.6,SNR=10							
	comp=Z,0.6nm,0.6s							
MARD	**Mardin**	**75.82**	**307**		**P**	**06 51 30.5**	**+0.5**	
P18A	**Preston Nutter**	**76.46**	**50**	IAmb	IAmb	06 51 42.7		
	comp=Z,4.6nm,0.7s							
SRU	**San Rafael Swe**	**76.62**	**50**	IAmb	IAmb	06 51 48.4		
	comp=Z,4.5nm,0.6s							
HMU	**Henry Mountain**	**77.25**	**51**		**P**	**06 51 40.2**	**+2.0**	
HMU				IAmb	IAmb	06 51 54.9		
	comp=Z,5.7nm,0.9s							
BUR08	**Bucovina Ar. S**	**77.48**	**322**	P	**P**	**06 51 39.8**	**+0.6**	
BURAR	**Bucovina Array**	**77.49**	**322**	P	**P**	**06 51 39.5**	**+0.3**	
PV10	**Paradox Valley**	**77.98**	**50**	P	**P**	**06 51 44.4**	**+2.0**	
BR131	**Keskin Array S**	**78.53**	**312**	*eP*	**P**	**06 51 45.9**	**+0.7**	
BRTR	**Keskin Array B**	**78.53**	**312**	P	**P**	**06 51 44.3**	**-0.9**	
	comp=Z,1.7nm,0.9s,baz=37,slow=4.7,SNR=4.0							
BRTR				LR	LR	07 31 31.8		
	comp=Z,34nm,18.8s,baz=32,slow=40							
	comp=Z,1.7nm,0.9s							
BRTR	**Keskin Array B**	**78.53**	**312**	*i* P	**P**	**06 51 45.5**	**+0.3**	
BRTR				pmax	pmax			
	comp=Z,2.0nm,1.0s							
MLR	**Muntele Rosu**	**78.66**	**321**	LR	LR	07 30 01.5		
	comp=Z,74nm,19.5s,baz=28,slow=38							
LANS	**Liptovska Anna**	**78.95**	**326**	*eP*	**P**	**06 51 46.5**	**-0.7**	
LANS	**Liptovska Anna**	**78.95**	**326**	*eP*	**P**	**06 51 46.5**	**-0.7**	
MORC	**Moravsky Berou**	**79.29**	**328**	*eP*	**P**	**06 51 49.4**	**+0.3**	
JAVC	**Velka Javorina**	**79.94**	**327**	*eP*	**P**	**06 51 53.7**	**+1.1**	
VRAC	**Vranov**	**80.04**	**328**	LR	LR	07 30 38.0		
	comp=Z,91nm,19.8s,baz=23,slow=38							
VRAC	**Vranov**	**80.04**	**328**	*eP*	**P**	**06 51 53.7**	**+0.6**	
KRUC	**Moravsky**	**80.32**	**328**	*eP*	**P**	**06 51 55.0**	**+0.4**	
RAYN	**Ar Rayn**	**81.29**	**293**		**P**	**06 51 59.9**	**-0.4**	
RAYN				IAmb	IAmb	06 52 01.0		
	comp=Z,11nm,1.2s							
RAYN	**Ar Rayn**	**81.29**	**293**	P	**P**	**06 51 59.9**	**-0.4**	
RAYN				pmax	pmax			
	comp=Z,11nm,1.2s							
KHC	**Kasperske Hory**	**81.40**	**329**	*ce*P	**P**	**06 52 01.7**	**+1.3**	
KHC				pmax	pmax			
	comp=Z,6.0nm,1.3s							
RONA	**Rosalia, Austr**	**81.42**	**327**	*i* pP	**P**	**06 52 01.4**	**+0.8**	
	comp=Z,9.1nm,1.3s							
CONA	**Conrad Observa**	**81.42**	**327**	*e*pP	**P**	**06 52 01.4**	**+0.8**	
	comp=Z,5.2nm,1.1s							
EKA	**Eskdalemuir Ar**	**81.46**	**342**	P	**P**	**06 52 00.2**	**-0.3**	
	comp=Z,3.9nm,0.7s,baz=32,slow=5.1,SNR=1.4							
	comp=Z,1.3nm,0.7s							
GERES	**GERESS Array B**	**81.58**	**329**	P	**P**	**06 52 01.0**	**-0.5**	
	comp=Z,0.7nm,0.6s,baz=37,slow=7.2,SNR=4.1							
GERES				LR	LR	07 31 17.2		
	comp=Z,74nm,18.2s,baz=320,slow=38							
	comp=Z,0.7nm,0.6s							
GERES	**GERESS Array B**	**81.58**	**329**	P	**P**	**06 52 01.0**	**-0.5**	
MMAI	**Mount Meron Ar**	**81.95**	**306**	LR	LR	07 32 41.8		
	comp=Z,72nm,18.3s,baz=129,slow=39							
SOKA	**Soboth**	**82.76**	**327**	*i* pP	**P**	**06 52 08.3**	**+0.6**	
	comp=Z,10nm,1.0s							
LESA	**Schwarzleotal**	**83.13**	**329**	*e*pP	**P**	**06 52 10.9**	**+1.3**	
	comp=Z,4.0nm,0.8s							
KBA	**Koelnbreinsper**	**83.14**	**328**	*i* pP	**P**	**06 52 10.7**	**+1.0**	
	comp=Z,4.4nm,0.9s							
MOTA	**Moosalm**	**83.82**	**330**	*i* pP	**P**	**06 52 13.5**	**+0.3**	
	comp=Z,8.4nm,1.2s							
RETA	**Reutte**	**83.83**	**330**	*e*pP	**P**	**06 52 13.8**	**+0.6**	
	comp=Z,8.3nm,0.9s							
SQTA	**Sankt Quirin**	**83.88**	**330**	*e*pP	**P**	**06 52 13.8**	**+0.3**	
	comp=Z,8.9nm,1.4s							
FETA	**Feichten**	**84.23**	**330**	*i* pP	**P**	**06 52 15.8**	**+0.5**	
	comp=Z,4.8nm,0.9s							
PPT	**Papeete**	**84.23**	**118**	LR	LR	07 24 31.3		
	comp=Z,71nm,20.2s,baz=34,slow=32							
EIL	**Elat**	**84.47**	**304**	LR	LR	07 34 31.2		
	comp=Z,28nm,19.7s,baz=174,slow=39							
FUORN	**Ofenpass-Fuorn**	**84.74**	**330**		**P**	**06 52 18.3**	**+0.3**	
DAVOX	**Davos/Dischmat**	**84.76**	**330**	LR	LR	07 33 54.6		
	comp=Z,96nm,18.4s,baz=32,slow=38							
TXAR	**Lajitas Array**	**87.38**	**54**	P	**P**	**06 52 31.6**	**+0.4**	
	comp=Z,0.2nm,0.6s,baz=296,slow=3.7,SNR=4.4							
	comp=Z,0.2nm,0.6s							
FURI	**Furi**	**95.69**	**286**	LR	LR	07 41 39.0		
	comp=Z,24nm,19.6s,baz=228,slow=39							
ESDC	**Sonseca Array**	**95.89**	**335**	LR	LR	07 41 45.0		
	comp=Z,58nm,19.6s,baz=28,slow=39							

*NEIC **25** 06:42:21.9±2.3,22.2°S×174.7°W×0.0°,h10km±1km, mb4.7/15, Error ellipse: s-maj=27.4km s-min=5.6km az=157.0*
*IDC **25** 06:42:21.8±0.8,21.4°S×175.3°W,h0km, mb4.0/9, mbtmp4.1/10, ML4.6/1, MS3.0/2, Error ellipse: s-maj=44.0km s-min=17.9km az=152.0*
ISC 25 06:42:23.9±0.5, 22.0°S±0.1°×174.6°W±0.0°, h27km, n45, σ2°28/40, mb4.5/16, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.36**	**57**		**Pn**	**06 43 43.6**	**+1.4**
NIUE				Sn	**Sn**	**06 44 38.5**	**-4.7**
MSVF	**Nonsavu**	**8.07**	**301**		**Pn**	**06 44 20.8**	**+1.2**
RAR	**Rarotonga**	**13.90**	**89**	Pn	**P**	**06 45 44.3**	**-2.8**
	1.9nm,0.3s,baz=258,slow=7.3,SNR=6.3						
RAR				Sn	**Sn**	**06 48 10.4**	**-2.3**
	4.5nm,0.3s,baz=315,slow=20,SNR=6.6						
RAR	**Rarotonga**	**13.90**	**89**		**Pn**	**06 45 40.4**	**+1.1**
DZM	**Mont Dzumac**	**17.49**	**266**	Pn	**P**	**06 46 28.4**	**+1.3**
	0.7nm,0.3s,baz=69,slow=18,SNR=8.5						
DZM	**Mont Dzumac**	**17.49**	**266**		**Pn**	**06 46 24.8**	**-1.3**
URZ	**Urewera**	**17.61**	**202**	P	**P**	**06 46 33.1**	**+4.8**
	1.9nm,0.3s,baz=334,slow=18,SNR=13						
URZ				S	**Sn**	**06 49 41.0**	**-1.8**
	2.8nm,0.3s,baz=72,slow=20,SNR=6.8						
	4.9nm,0.3s						
OXZ	**Oxford**	**23.90**	**204**	P	**P**	**06 47 36.8**	**+1.4**
OXZ				IAmb	IAmb	06 47 45.9	
	comp=Z,12nm,0.6s						
PPT	**Papeete**	**24.04**	**84**	P	**P**	**06 47 43.5**	**+6.6**
	comp=Z,16nm,0.6s,baz=263,slow=19,SNR=3.8						
PPT				LR	LR	06 55 58.7	
	comp=Z,21nm,20.4s,baz=234,slow=33						
	comp=Z,16nm,0.6s						
PPTF	**Pamatai, Papee**	**24.04**	**84**	P	**P**	**06 47 36.1**	**-1.0**
PPTF				IAmb	IAmb	06 47 45.4	
	comp=Z,27nm,0.9s						
PMG	**Port Moresby**	**38.70**	**283**	P	**P**	**06 49 45.0**	**-0.9**
PMG				IAmb	IAmb	06 49 49.1	
	comp=Z,8.9nm,0.7s						
STKA	**Stephens Creek**	**39.94**	**246**	P	**P**	**06 49 55.4**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=88,slow=11,SNR=8.6						
	comp=Z,1.5nm,0.8s						
STKA	**Stephens Creek**	**39.94**	**246**	IAmb	IAmb	06 49 57.4	
	comp=Z,34nm,1.4s						
AS31	**Alice Springs**	**47.18**	**258**	P	**P**	**06 50 51.7**	**-2.9**
ASAR	**Alice Springs**	**47.18**	**258**	P	**P**	**06 50 52.6**	**-1.9**
	comp=Z,4.4nm,0.8s,baz=100,slow=8.1,SNR=32						
	comp=Z,4.4nm,0.8s						
ASAR	**Alice Springs**	**47.18**	**258**	P	**P**	**06 50 52.1**	**-2.5**
WRA	**Warramunga Arr**	**47.45**	**263**	P	**P**	**06 50 54.1**	**-2.6**
	comp=Z,1.5nm,0.8s,baz=96,slow=8.1,SNR=10						
	comp=Z,1.5nm,0.8s						
WRA	**Warramunga Arr**	**47.45**	**263**	P	**P**	**06 50 54.4**	**-2.3**
FORT	**Forrest**	**51.53**	**248**	P	**P**	**06 51 25.4**	**-2.3**
FORT				IAmb	IAmb	06 51 44.3	
	comp=Z,6.6nm,0.8s						
KNRA	**Kununurra**	**53.64**	**266**	P	**P**	**06 51 41.3**	**-2.2**
RPN	**Rapa Nui**	**59.06**	**109**	LR	LR	07 12 17.1	
	comp=Z,18nm,20.3s,baz=42,slow=30						
MBWA	**Marble Bar**	**60.53**	**257**	P	**P**	**06 52 32.1**	**-0.1**
MBWA				IAmb	IAmb	06 52 40.4	
	comp=Z,15nm,1.2s						
YOJ	**Yonaguni jima**	**76.16**	**304**	P	**P**	**06 54 10.3**	**+0.4**
NVAR	**Mina Array Bea**	**80.09**	**42**	P	**P**	**06 54 34.4**	**+2.8**
	comp=Z,1.4nm,0.6s,baz=223,slow=8.3,SNR=5.8						
	comp=Z,1.4nm,0.6s						
J04A	**Umpqua Nationa**	**80.97**	**36**	P	**P**	**06 54 35.2**	**-1.0**
H03S2	**Juan Fernandez**	**82.56**	**123**	T	T	08 26 35.7	
	baz=247,slow=74,SNR=398						
H03S1	**Juan Fernandez**	**82.58**	**123**	T	T	08 26 40.2	
	baz=247,slow=74,SNR=468						
H03S3	**Juan Fernandez**	**82.58**	**123**	T	T	08 26 35.5	
	baz=247,slow=74,SNR=450						
H03N2	**Juan Fernandez**	**82.70**	**123**	T	T	08 27 11.6	
	baz=242,slow=70,SNR=92						
H03N3	**Juan Fernandez**	**82.70**	**123**	T	T	08 27 09.5	
	baz=242,slow=70,SNR=70						
H03N1	**Juan Fernandez**	**82.72**	**123**	T	T	08 27 13.0	
	baz=242,slow=70,SNR=79						
U15A	**North Rim**	**82.77**	**46**	P	**P**	**06 54 47.9**	**+1.8**
U15A				IAmb	IAmb	06 54 50.0	
	comp=Z,4.4nm,1.1s						
SZCU	**Shurtz Canyon**	**82.91**	**45**	P	**P**	**06 54 48.5**	**+1.9**
SZCU				IAmb	IAmb	06 54 50.8	
	comp=Z,4.5nm,1.3s						
TXAR	**Lajitas Array**	**85.33**	**56**	P	**P**	**06 55 02.3**	**+3.3**
	comp=Z,0.8nm,0.8s,baz=218,slow=7.5,SNR=6.0						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**85.33**	**56**	P	**P**	**06 55 00.1**	**+1.1**
PDAR	**Pinedale Array**	**88.02**	**42**	P	**P**	**06 55 13.7**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=158,slow=1.0,SNR=2.2						
	comp=Z,0.2nm,0.7s						
PDAR	**Pinedale Array**	**88.02**	**42**	P	**P**	**06 55 12.7**	**+0.7**
ILAR	**Eielson Array**	**89.19**	**12**	P	**P**	**06 55 16.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=219,slow=5.2,SNR=6.6						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**96.66**	**24**	P	**P**	**06 55 51.2**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=252,slow=3.7,SNR=1.2						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**96.66**	**24**	P	**P**	**06 55 51.6**	**+0.5**
ARCES	**ARCESS Array B**	**130.98**	**351**	PKP	**PKiKP**	**07 01 33.3**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=15,slow=2.4,SNR=3.8						
AKASG	**Malin Array Be**	**145.84**	**333**	PKPbc	**PKPdf**	**07 01 58.8**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=39,slow=3.7,SNR=4.7						
EKA	**Eskdalemuir Ar**	**146.18**	**9**	PKPbc	**PKPab**	**07 02 02.8**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=344,slow=3.5,SNR=1.7						
BRTR	**Keskin Array B**	**150.17**	**313**	PKPbc	**PKPbc**	**07 02 11.9**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=105,slow=4.0,SNR=2.8						
MMAI	**Mount Meron Ar**	**151.27**	**299**	PKPbc	**PKiKP**	**07 02 15.9**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=52,slow=9.3,SNR=1.6						

*ATH **25** 06:51:54.7,34.85N×27.85E,h16km±5km, ML2.6/4, Manual Solution by I.Dede First location: 2020/02/25 06:53:38, This location: 2020/02/25 07:27:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 8 km; Longitude uncertainty: 13 km*
*ISK **25** 06:51:55.1,35.02N×27.87E,h8km, ML2.4/8*
*THE **25** 06:52:03.0,35°N±10°×2°8E±°, h1km±4km, M2.1/4, MLh2.1/4*
ISC 25 06:51:58.7±1.7, 35°28N±0.0°8×27°94E±0.0°05, h1km±13km, n20, σ1°923/25, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.69**	**293**	P	**Pg**	**06 52 11.8**	**-0.2**
KARP				S	**Sg**	**06 52 20.4**	**-0.6**
KARP	**Karpathos**	**0.69**	**293**	P	**Pg**	**06 52 12.1**	**+0.1**
KARP				S	**Sb**	**06 52 23.8**	**+0.2**
ARG	**Arkhangelos**	**0.95**	**9**	Pn	**Pn**	**06 52 18.7**	**-0.5**
ARG				Sn	**Sn**	**06 52 35.8**	**+2.5**
ARG	**Arkhangelos**	**0.95**	**9**	P	**Pn**	**06 52 18.4**	**-0.7**
ARG				S	**Sb**	**06 52 30.5**	**-0.5**
ARG	**Arkhangelos**	**0.95**	**9**	P	**Pb**	**06 52 17.4**	**-0.6**
ZKR	**Zakros**	**1.42**	**264**	P	**Pg**	**06 52 28.0**	**+2.1**
TURN	**Turunc**	**1.52**	**9**	Pn	**Pb**	**06 52 26.8**	**-0.8**
TURN				Sn	**Sg**	**06 52 49.9**	**+2.5**
KSL	**Kastellorizon**	**1.59**	**56**	P	**Pn**	**06 52 26.9**	**-1.1**
KSL	**Kastellorizon**	**1.59**	**56**	P	**Pn**	**06 52 26.9**	**-1.1**
KSL				S	**Sg**	**06 52 50.9**	**+0.9**
DALY	**Dalyan (Mula)**	**1.64**	**20**	Pn	**Pb**	**06 52 28.7**	**-1.0**
FETY	**Fethiye**	**1.64**	**34**	Pn	**Pn**	**06 52 28.1**	**-0.6**
AKAS	**Kas**	**1.66**	**54**	Pn	**Pn**	**06 52 27.9**	**-1.1**
BODT	**Bodrum**	**1.85**	**344**	P	**Pb**	**06 52 33.1**	**-0.2**
YER	**Yerkesik**	**1.88**	**8**	P	**Pg**	**06 52 34.3**	**-0.4**
NPS	**Neapolis**	**1.91**	**270**	P	**Pg**	**06 52 35.1**	**-0.2**
NPS	**Neapolis**	**1.91**	**270**	P	Pn	06 52 26.2	-6.1
CAME	**Cameli-Denizli**	**2.00**	**33**	Pn	**Pn**	**06 52 33.5**	**-0.2**
APMY	**Acipayam-Deniz**	**2.45**	**26**	Pn	**Pn**	**06 52 40.1**	**+0.2**
SMG	**Samos**	**2.59**	**340**	P	**Pb**	**06 52 43.3**	**-2.6**
KORT	**Korkueli**	**2.60**	**48**	Pn	**Pn**	**06 52 41.9**	**-0.1**

*ASRS **25** 07:10:59.0±1.8,53.75N×91.09E,h0km, M3.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC 25 07:11:10.5±2.5, 53.49N×90.50E, h17km±12km, mb3.8, mpv3.6,7C-3D, Error ellipse: s-maj=17.8km s-min=14.3km az=179.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.41**	**280**	⇑Pn	Pn	07 12 02.9	+0.1
	6.7nm,0.5s						
ZAA0				⇑Lg	Lg	07 12 59.5	
	90nm,1.0s						
KURK	**Kurchatov**	**7.82**	**254**	⇑Pn	Pn	07 13 02.6	-0.8
	1.6nm,0.9s						
KURK				⇓Sn	Sn	07 14 33.1	+1.5
	6.3nm,0.9s						
KURK				⇓Lg	Lg	07 15 18.7	
	17nm,1.1s						
KURBB	**Kurchatov Arra**	**7.91**	**254**	⇑Pn	Pn	07 13 04.2	-0.5
	4.6nm,0.7s						
KURBB				⇑Sn	Sn	07 14 34.5	+0.7
	56nm,0.8s						
KURBB				⇓Lg	Lg	07 15 21.5	
	41nm,0.8s						
MK31	**Makanchi Array**	**8.52**	**221**	⇑Pn	Pn	07 13 14.2	+1.1
	1.9nm,0.8s,baz=32,slow=13,SNR=26						
MK31				⇑Lg	Lg	07 15 39.2	
	15nm,0.9s,baz=42,slow=27,SNR=3.9	

baz=273,slow=74,SNR=11
H11S1 WAKE ISLAND Hy 18.58 86 T T 07 46 22.7
baz=273,slow=74,SNR=6.7
H11S2 WAKE ISLAND Hy 18.59 87 T T 07 46 27.0
baz=273,slow=74,SNR=5.6
H11N1 WAKE ISLAND Hy 18.75 83 T T 07 46 38.4
baz=267
H11N2 WAKE ISLAND Hy 18.75 83 T T 07 46 42.0
baz=267
H11N3 WAKE ISLAND Hy 18.76 83 T T 07 46 38.9
baz=267
MJAR Matsushiro Arr 19.73 338 P **Pn** **07 27 34.9 +2.4**
1.1nm,0.6s,baz=163,slow=8.7,SNR=4.1
HILR Hailar Array B 38.09 331 P **P** **07 30 20.0 +1.0**
0.6nm,0.4s,baz=144,slow=10.0,SNR=2.0
0.6nm,0.4s
WRA Warramunga Arr 40.09 199 P **P** **07 30 36.4 +0.5**
0.4nm,0.4s,baz=23,slow=8.2,SNR=3.2
0.4nm,0.4s
ASAR Alice Springs 43.73 198 P **P** **07 31 06.5 +0.8**
0.5nm,0.8s,baz=17,slow=9.4,SNR=4.7
0.5nm,0.8s
SONM Songino Array 44.24 321 P **P** **07 31 08.7 -1.0**
0.3nm,0.6s,baz=114,slow=7.2,SNR=2.2
0.3nm,0.6s
ZALV Zalesovo Beam 59.09 322 P **P** **07 32 58.4 -1.8**
0.7nm,0.5s,baz=115,slow=8.1,SNR=3.2
0.7nm,0.5s
KURBB Kurchatov Arra 62.46 318 P **P** **07 33 22.4 -0.8**
0.7nm,0.4s,baz=90,slow=7.4,SNR=1.9
0.7nm,0.4s
BVAR Borovoye Array 67.58 321 P **P** **07 33 55.9 -0.5**
1.4nm,0.5s,baz=101,slow=6.3,SNR=5.8
1.4nm,0.5s
FINES FINESS Array B 87.73 336 P **P** **07 35 47.3 -1.0**
1.3nm,0.8s,baz=57,slow=7.0,SNR=3.8
1.3nm,0.8s

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*IDC **25** 07:35:57.1±1.7,49.72N×81.52E,h0km,mbtmp2.5/1, ML2.6/1,Error ellipse: s-maj=27.3km s-min=10.5km az=48.0*
*NNC **25** 07:35:58.1±2.1,49.71N×81.65E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=33.8km s-min=6.4km az=50.0, Suspected Mining explosion.*
ISC 25 07:35:59.1±1.3,49.69N±0.09×81.46E±0.09,h0km,n8, σ0s46/9,3C-4D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.10**	**301**	⇓Pn		**Pn**	**07 36 34.9**	**-0.6**
	2.0nm,0.7s							
KURK				⇑Sn		**Sb**	**07 37 05.0**	**+0.3**
	9.8nm,0.9s							
KURBB	**Kurchatov Arra**	**2.11**	**298**	Pg		**Pn**	**07 36 35.7**	**+0.1**
	0.2nm,0.3s,baz=112,slow=19,SNR=19							
KURBB				Lg		Lg	07 37 03.5	
	0.5nm,0.3s,baz=114,slow=30,SNR=24							
KURBB	**Kurchatov Arra**	**2.11**	**298**	⇓Pn		**Pn**	**07 36 35.4**	**-0.3**
	7.2nm,0.7s							
KURBB				⇓Sn		**Sb**	**07 37 05.1**	**+0.2**
	32nm,0.9s							
MAKZ	**Makanchi**	**2.90**	**173**	⇑Pn		**Pn**	**07 36 47.0**	**+0.4**
	1.7nm,0.8s							
MAKZ				⇓Lg		Lg	07 37 28.8	
	4.1nm,0.8s							
MK31	**Makanchi Array**	**2.95**	**169**	Pn		**Pn**	**07 36 46.9**	**-0.4**
	0.7nm,0.3s,baz=356,slow=12,SNR=28							
MK31				⇑Lg		Lg	07 37 29.8	
	5.8nm,0.7s,baz=352,slow=31,SNR=12							
MKAR	**Makanchi Array**	**2.95**	**169**	Pn		**Pn**	**07 36 46.6**	**-0.6**
	0.8nm,0.3s,baz=354,slow=12,SNR=34							
MKAR				Lg		Lg	07 37 25.1	
	1.2nm,0.3s,baz=355,slow=27,SNR=14							
	1.5nm,0.4s							
ZALV	**Zalesovo Beam**	**4.75**	**25**	Pg		**Pb**	**07 37 23.4**	**+0.1**
	baz=212,slow=13,SNR=1.8							
ZALV				Lg		Lg	07 38 22.8	
	0.2nm,0.3s,baz=208,slow=26,SNR=6.3							
I46RU	**ZALESOVO INFRA**	**4.75**	**25**	I		I	08 05 00.0	
	baz=203,slow=333,SNR=3.8							

IDC 25 07:36:41.4±2.2,2.63N×127.82E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=167.6km s-min=26.9km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.32**	**164**	P		P	07 41 52.4	+1.0
	0.6nm,0.3s,baz=342,slow=10,SNR=7.7							
	0.6nm,0.3s							
ASAR	**Alice Springs**	**26.80**	**168**	P		P	07 42 23.5	0.0
	0.5nm,0.5s,baz=349,slow=7.1,SNR=15							
	0.5nm,0.5s							
STKA	**Stephens Creek**	**36.72**	**160**	P		P	07 43 49.1	-1.4
	0.5nm,0.3s,baz=350,slow=10,SNR=4.2							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**59.08**	**325**	P		P	07 46 43.9	+0.3
	0.3nm,0.6s,baz=114,slow=7.0,SNR=2.7							
	0.3nm,0.6s							

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*NNC **25** 07:39:10.6±1.7,49.70N×81.63E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=23.0km s-min=3.6km az=55.0, Suspected Mining explosion.*
*IDC **25** 07:39:14.2±1.6,49.76N×81.44E,h0km,mbtmp2.3/2, ML1.8/2,Error ellipse: s-maj=22.3km s-min=12.4km az=44.0*
ISC 25 07:39:12.2±1.2,49.58N±0.06×81.25E±0.07,h0km,n9, σ0s80/8,7C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.04**	**302**	Pg		**Pg**	**07 39 51.5**	**+0.2**
	0.1nm,0.3s,baz=111,slow=19,SNR=11							
KURBB				Lg		Lg	07 40 19.5	
	0.2nm,0.3s,baz=117,slow=30,SNR=4.3							
KURBB	**Kurchatov Arra**	**2.04**	**302**	⇑Pg		**Pb**	**07 39 50.9**	**+0.8**
	10nm,0.8s							
KURBB				⇓Lg		Lg	07 40 20.6	
	26nm,0.7s							
KURK	**Kurchatov**	**2.04**	**305**	⇑Pg		**Pb**	**07 39 49.9**	**-0.2**
	2.7nm,0.9s							
KURK				⇓Lg		Lg	07 40 20.0	
	9.6nm,0.8s							
MAKZ	**Makanchi**	**2.81**	**170**	⇓Pg		**Pb**	**07 40 04.0**	**+0.8**
	2.1nm,1.0s							
MAKZ				⇑Lg		Lg	07 40 43.0	
	7.1nm,0.9s							
MK31	**Makanchi Array**	**2.87**	**166**	⇑Pn		Pn	07 39 00.0	-59
	0.1nm,0.2s,baz=355,slow=15,SNR=5.3							
MK31				⇑Lg		Lg	07 39 41.1	
	0.3nm,0.3s,baz=356,slow=28,SNR=3.2							
MK31	**Makanchi Array**	**2.87**	**166**	⇑Pg		**Pb**	**07 40 04.3**	**+0.1**
	0.3nm,0.2s,baz=347,slow=14,SNR=3.9							
MK31				⇑Lg		Lg	07 40 43.0	
	4.7nm,0.6s,baz=359,slow=24,SNR=12							
MKAR	**Makanchi Array**	**2.87**	**166**	Pn		**Pb**	**07 40 04.5**	**+0.2**
	0.2nm,0.3s,baz=352,slow=15,SNR=4.2							
MKAR				Lg		Lg	07 40 40.5	
	0.6nm,0.3s,baz=350,slow=30,SNR=23							
	0.5nm,0.3s							
ZALV	**Zalesovo Beam**	**4.91**	**25**	Pn		**Pn**	**07 40 26.1**	**-1.0**
	0.1nm,0.3s,baz=212,slow=13,SNR=2.2							
ZALV				Pg		**Pb**	**07 40 39.8**	**+0.9**
	0.1nm,0.3s,baz=205,slow=13,SNR=2.7							
ZALV				Lg		Lg	07 41 37.9	
	0.2nm,0.3s,baz=202,slow=26,SNR=9.6							
	0.3nm,0.3s							
I46RU	**ZALESOVO INFRA**	**4.91**	**25**	I		I	08 08 20.0	
	baz=202,slow=334,SNR=8.5							

IDC 25 08:18:58.7±1.4,29.41N×104.91E,h0km,mb3.5/2, mbtmp3.6/4,ML3.9/2,Error ellipse: s-maj=82.5km s-min=22.6km az=67.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**6.61**	**351**	Pn		Pn	08 20 37.5	0.0
	baz=172,slow=14							
LZDM				Sn		Sn	08 21 49.2	-4.5
	baz=133,slow=14							
LZDM				Lg		Lg	08 22 23.6	
	baz=149,slow=23							
	4.8nm,0.4s							
SONM	**Songino Array**	**18.44**	**3**	P		Pn	08 23 15.5	-0.3
	0.1nm,0.3s,baz=178,slow=11,SNR=4.5							
	0.7nm,0.7s							
MKAR	**Makanchi Array**	**24.73**	**321**	P		P	08 24 21.8	0.0
	0.4nm,0.3s,baz=120,slow=10.0,SNR=4.4							
	0.4nm,0.3s							
WRA	**Warramunga Arr**	**56.68**	**146**	P		P	08 28 43.6	-0.5
	35nm,0.4s,baz=314,slow=6.3,SNR=1.2							
ASAR	**Alice Springs**	**59.68**	**149**	P		P	08 29 05.3	+0.2
	0.3nm,0.6s,baz=329,slow=6.9,SNR=5.2							
	0.3nm,0.6s							

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*IDC **25** 08:22:07.6±1.3,50.25N×75.84E,h0km,mbtmp3.5/2, ML3.1/2,Error ellipse: s-maj=16.1km s-min=10.3km az=26.0*
*NNC **25** 08:22:11.7±0.8,50.15N×76.19E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=9.4km s-min=5.6km az=17.0, Suspected Mining explosion.*
ISC 25 08:22:11.7±0.8,50.09N±0.06×76.26E±0.05,h0km,n16, σ2s03/22,13C-7D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.54**	**69**	Pn		**Pn**	**08 22 38.0**	**-2.5**
	3.6nm,0.3s,baz=256,slow=15,SNR=44							
KURBB				Pg		**Pg**	**08 22 40.6**	**-0.7**
	3.8nm,0.3s,baz=256,slow=15,SNR=32							
KURBB				Lg		Lg	08 23 03.0	
	2.3nm,0.3s,baz=256,slow=30,SNR=18							
KURK	**Kurchatov**	**1.63**	**67**	⇓Pn		**Pn**	**08 22 39.5**	**-2.1**
	3.4nm,0.3s							
KURK				⇑Sn		**Sg**	**08 23 05.7**	**+1.6**
	8.8nm,0.2s							
BVA0	**Borovoye Array**	**4.70**	**311**	⇑Pn		**Pn**	**08 23 25.0**	**+1.2**
	0.6nm,0.4s							
BVA0				⇓Pg		**Pb**	**08 23 36.2**	**+1.4**
	4.7nm,1.2s							
BVA0				⇑Sn		**Sn**	**08 24 18.7**	**-0.2**
	1.6nm,0.6s							
BVA0				⇓Lg		Lg	08 24 39.5	
	5.0nm,0.8s							
BVAR	**Borovoye Array**	**4.70**	**311**	Pg		**Pn**	**08 23 23.9**	**+0.2**
	0.2nm,0.3s,baz=125,slow=12,SNR=17							
BVAR				Lg		Lg	08 24 19.8	
	0.2nm,0.3s,baz=134,slow=20,SNR=6.1							
BRVK	**Borovoye**	**4.77**	**311**	⇓Pn		**Pn**	**08 23 24.3**	**-0.5**
	0.1nm,0.1s							
BRVK				⇑Sn		**Sn**	**08 24 19.7**	**-1.0**
BRVK				⇑Lg		Lg	08 24 39.2	
MAKZ	**Makanchi**	**5.03**	**129**	⇑Pn		**Pn**	**08 23 29.5**	**+1.1**
	0.8nm,0.3s							
MAKZ				⇑Pg		**Pg**	**08 23 45.2**	**-2.8**
	3.6nm,1.1s							
MAKZ				⇑Sn		**Sn**	**08 24 29.7**	**+2.6**
	1.6nm,0.3s							
MAKZ				⇑Lg		Lg	08 24 53.2	
	5.7nm,0.9s							
MK31	**Makanchi Array**	**5.19**	**127**	⇓Pn		**Pn**	**08 23 31.8**	**+1.2**
	0.1nm,0.1s,baz=354,slow=32,SNR=34							
MK31				⇑Pg		**Pg**	**08 23 48.1**	**-3.1**
	0.4nm,0.2s,baz=318,slow=13,SNR=7.8							
MK31				⇓Sn		**Sn**	**08 24 35.8**	**+4.5**
	0.2nm,0.1s,baz=190,slow=50,SNR=4.5							
MK31				⇑Lg		Lg	08 25 00.0	
	0.8nm,0.2s,baz=329,slow=27,SNR=4.0							
MKAR	**Makanchi Array**	**5.19**	**127**	Pn		**Pn**	**08 23 31.1**	**+0.4**
	0.5nm,0.3s,baz=307,slow=12,SNR=21							
MKAR				Sn		**Sn**	**08 24 33.0**	**+1.7**
	1.1nm,0.3s,baz=326,slow=18,SNR=7.3							
MKAR				Lg		Lg	08 24 54.3	
	1.3nm,0.3s,baz=326,slow=23,SNR=7.4							
	0.6nm,0.3s							
I46RU	**ZALESOVO INFRA**	**6.54**	**51**	I		I	09 01 00.0	
	baz=235,slow=323,SNR=2.2							
ZALV	**Zalesovo Beam**	**6.54**	**51**	Pn		**Pn**	**08 23 47.9**	**-1.1**
	2.3nm,0.3s,baz=245,slow=15,SNR=30							
ZALV				Sn		**Sn**	**08 25 02.3**	**-2.0**
	0.5nm,0.3s,baz=237,slow=24,SNR=3.9							
	3.5nm,0.3s							
PDGK	**Podgornoye**	**7.12**	**161**	⇓Lg		Lg	08 26 03.2	
	3.6nm,0.7s							
AAK	**Ala-Archa**	**7.56**	**190**	Lg		Lg	08 26 07.4	
	0.2nm,0.3s,baz=334,slow=20,SNR=3.7							
AAK	**Ala-Archa**	**7.56**	**190**	⇑Lg		Lg	08 26 16.8	
	1.8nm,0.7s							
KK31	**Karatay Array**	**8.03**	**212**	⇑Pn		**Pn**	**08 24 09.2**	**-0.5**
	0.5nm,0.3s,baz=73,slow=12,SNR=4.4							
KK31				Lg		Lg	08 26 30.1	
	1.1nm,0.4s,baz=30,slow=31,SNR=5.0							
AB31	**Akbulak array**	**10.62**	**272**	Pn		**Pn**	**08 24 42.9**	**-2.1**
	0.1nm,0.2s,baz=80,slow=8.2,SNR=23							
AKTO	**Aktyubinsk**	**11.69**	**279**	Pn		Pn	08 24 52.7	-6.9
	0.3nm,0.3s,baz=86,slow=14,SNR=4.0							

IDC 25 08:25:49.3±2.3,7.31S×127.15E,h0km,mb3.3/1, mbtmp3.8/2,ML4.6/2,Error ellipse: s-maj=231.9km s-min=33.2km az=63.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.36**	**152**	Pn		Pn	08 29 12.9	-1.2
	3.8nm,0.3s,baz=324,slow=13,SNR=1.9							
WRA				Sn		Sn	08 31 38.5	-16
	6.5nm,0.3s,baz=322,slow=25,SNR=0.7							
ASAR	**Alice Springs**	**17.50**	**159**	P		P	08 29 55.8	-0.5
	1.0nm,0.3s,baz=341,slow=12,SNR=46							
ASAR				S		Sn	08 32 56.4	-14
	0.3nm,0.4s,baz=323,slow=23,SNR=4.7							
	2.8nm,0.4s							
MKAR	**Makanchi Array**	**66.97**	**328**	P		P	08 36 44.0	0.0
	0.2nm,0.6s,baz=133,slow=5.1,SNR=2.4							
	0.2nm,0.6s							

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*IDC **25** 08:49:19.8±5.8,20.09S×177.76W,h531km±67km,mb3.2/7, mbtmp4.1/8,Error ellipse: s-maj=32.6km s-min=24.3km az=167.0*
*NEIC **25** 08:49:20.7±1.3,20.0S±0.2×177.8W±0.1,h539km±8km, mb4.4/15,Error ellipse: s-maj=24.7km s-min=11.9km az=148.0*
ISC 25 08:49:20.4±0.6,20.0S±0.1×177.73W±0.10,h550km,n35, σ1s57/36,mb4.2/14,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.58**	**299**	P		**P**	**08 50 45.4**	**-1.6**
NIUE	**Niue**	**7.41**	**84**	P		**P**	**08 51 13.1**	**+0.8**
AFI	**Afiamalu**	**8.30**	**44**	P		**P**	**08 51 20.9**	**-0.4**
AFI				S		**S**	**08 52 55.2**	**-5.1**
MARNC	**Mare, Loyalty**	**13.41**	**261**	P		**P**	**08 52 13.8**	**+0.3**
URZ	**Urewera**	**18.76**	**193**	P		**P**	**08 53 03.1**	**-1.9**
	4.9nm,0.7s,baz=245,slow=2.7,SNR=7.0							
BKZ	**Black Stump Fm**	**19.76**	**193**	P		**P**	**08 53 10.4**	**-3.8**
BKZ					IAmb	IAmb	08 53 10.8	
	comp=Z,29nm,1.5s							
NNZ	**Nelson**	**22.48**	**198**	P		**P**	**08 53 36.9**	**-1.7**
THZ	**Tophouse**	**23.12**	**198**	P		**P**	**08 53 43.6**	**-0.8**
THZ					IAmb	IAmb	08 54 16.1	
	comp=Z,17nm,1.2s							
STKA	**Stephens Creek**	**38.24**	**244**	P		**P**	**08 55 54.1**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=83,slow=10,SNR=3.7							
	comp=Z,1.6nm,0.8s							
STKA	**Stephens Creek**	**38.24**	**244**	P		**P**	**08 55 53.6**	**-0.3**
STKA					IAmb	IAmb	08 55 57.6	
	comp=Z,18nm,1.1s							
BBOO	**Buckleboo**	**43.01**	**243**	P		**P**	**08 56 32.2**	**+0.4**
BBOO					IAmb	IAmb	08 56 43.9	
	comp=Z,10nm,1.2s							
AS31	**Alice Springs**	**44.89**	**256**	P		**P**	**08 56 47.1**	**+0.5**
ASAR	**Alice Springs**	**44.89**	**256**	P		**P**	**08 56 47.2**	**+0.7**
	comp=Z,6.5nm,0.7s,baz=90,slow=7.9,SNR=82							
ASAR				PcP		**PcP**	**08 58 17.1**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=105,slow=4.0,SNR=7.2							
	comp=Z,6.5nm,0.7s							
ASAR	**Alice Springs**	**44.89**	**256**	P		**P**	**08 56 46.1**	**-0.5**
WB0	**Warramunga Arr**	**44.90**	**262**	P		**P**	**08 56 46.6**	**-0.1**
WB0					IAmb	IAmb	08 56 47.2	
	comp=Z,7.7nm,0.7s							
MTN	**Manton Dam**	**49.42**	**270**	P		**P**	**08 57 20.8**	**+0.2**
FORT	**Forrest**	**49.74**	**246**	P		**P**	**08 57 22.4**	**-0.4**
FORT					IAmb	IAmb	08 57 23.9	
	comp=Z,18nm,1.5s							
KNRA	**Kununurra**	**50.95**	**266**	P		**P**	**08 57 30.6**	**-1.2**
PSA00	**Pilbara Seismi**	**58.04**	**257**	P		**P**	**08 58 21.6**	**+0.2**
PSA00	**Pilbara Seismi**	**58.04**	**257**	P		**P**	**08 58 21.4**	**-0.1**
PSA00					IAmb	IAmb	08 58 59.8	
	comp=Z,21nm,1.2s							
MBWA	**Marble Bar**	**58.22**	**257**	P		**P**	**08 58 23.0**	**+0.3**
MBWA					IAmb	IAmb	08 59 02.7	
	comp=Z,16nm,1.2s							
MJAR	**Matsushiro Arr**	**69.95**	**323**	P		**P**	**08 59 37.8**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=160,slow=6.1,SNR=8.5							
	comp=Z,2.5nm,0.6s							
MJAR	**Matsushiro Arr**	**69.95**	**323**	P		**P**	**08 59 37.6**	**+0.8**
PETK	**Petropavlovsk-**	**75.84**	**345**	P		**P**	**09 00 11.0**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=159,slow=5.3,SNR=1.3							
	comp=Z,1.9nm,0.8s							
NVAR	**Mina Array Bea**	**80.47**	**43**	P		**P**	**09 00 36.7**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=219,slow=9.2,SNR=4.0							
	comp=Z,0.6nm,0.7s							
TXAR	**Lajitas Array**	**86.56**	**57**	P		**P**	**09 01 09.0**	**+3.1**
	comp=Z,0.9nm,0.9s,baz=219,slow=6.4,SNR=8.4							
	comp=Z,0.9nm,0.9s							
TXAR	**Lajitas Array**	**86.56**	**57**	P		**P**	**09 01 08.7**	**+2.8**
PDAR	**Pinedale Array**	**88.41**	**43**	P		**P**	**09 01 16.3**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=228,slow=3.7,SNR=4.3							
	comp=Z,0.4nm,0.6s							
WMOK	**Wichita Mounta**	**92.53**	**54**	P		**P**	**09 01 34.4**	**+1.0**
WMOK					IAmb	IAmb	09 01 45.7	
	comp=Z,6.5nm,1.1s							
FINES	**FINESS Array B**	**135.35**	**344**	PKP		**PKPdf**	**09 07 36.3**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=90,slow=1.9,SNR=4.3							
AKASG	**Malin Array Be**	**142.69**	**332**	PKhKP		PKPpre	09 07 47.9	
	comp=Z,0.9nm,0.3s,baz=44,slow=4.3,SNR=8.8							
BRTR	**Keskin Array B**	**146.68**	**313**	PKPbc		**PKPbc**	**09 08 01.8**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=140,slow=4.4,SNR=3.6							
BUR08	**Bucovina Ar. S**	**146.72**	**331**	PKPbc		**PKiKP**	**09 08 02.9**	**-0.1**
BURAR	**Bucovina Array**	**146.74**	**331**	PKPbc		**PKiKP**	**09 08 02.6**	**-0.4**
GERES	**GERESS Array B**	**149.77**	**345**	PKPbc		**PKiKP**	**09 08 09.3**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=26,slow=6.0,SNR=3.6							

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*SJA **25** 08:53:50.0±0.4,51.07S×72.86W,h27km±2km,ML3.9, MW4.0*
*IDC **25** 08:53:51.9±1.5,51.02S×72.01W,h0km,mb3.8/3, mbtmp3.8/5,ML3.3/2,Error ellipse: s-maj=59.7km s-min=17.9km az=72.0*
*NEIC **25** 08:53:52.8±1.6,51.02S±0.05×72.2W±0.2,h18km±5km, mb4.2/4,ML3.9(GUC),Error ellipse: s-maj=15.9km s-min=6.5km az=82.0*
*GUC **25** 08:53:52.0±0.8,51.00S×72.23W,h24km±9km,ML3.9*
ISC 25 08:53:52.6±1.4,51.02S±0.04×72.14W±0.08,h13km±10km, n36,σ0s99/43,mb4.0/4,2C-2D,Southern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GO09	**Cerro Castillo**	**0.28**	**206**			**Pg**	**08 53 58.5**	**0.0**
GO09	**Cerro Castillo**	**0.28**	**206**	⇓*i*P		**Pg**	**08 53 58.3**	**-0.2**
GO09						IAML	08 54 03.2	
	comp=N,18μm,0.3s							
GO09	**Cerro Castillo**	**0.28**	**206**	*e*P		**Pg**	**08 53 58.8**	**+0.3**
GO09				*e*S		**Sb**	**08 54 05.4**	**+1.2**
MG05	**Puerto Natales**	**0.70**	**199**			**Pb**	**08 54 06.5**	**-0.2**
MG05	**Puerto Natales**	**0.70**	**199**	⇓*i*P		**Pb**	**08 54 06.6**	**-0.1**
MG05				*i* S		**Sb**	**08 54 15.3**	**-0.9**
MG05						IAML	08 54 19.2	
	comp=N,8μm,0.4s							
MG04	**Isla Riesco**	**1.88**	**169**			**Pn**	**08 54 24.5**	**+0.2**
MG04	**Isla Riesco**	**1.88**	**169**	⇑*i*P		**Pn**	**08 54 24.6**	**+0.2**
MG04				*i* S		**Sn**	**08 54 48.6**	**+0.6**
MG04						IAML	08 55 04.1	
	comp=N,1μm,0.5s							
GO10	**Punta Arenas**	**2.25**	**163**			**Pn**	**08 54 29.4**	**-0.2**
GO10	**Punta Arenas**	**2.25**	**163**	*e*P		**Pn**	**08 54 29.2**	**-0.3**
GO10				*e*S		**Sb**	**08 55 00.6**	**-0.2**
GO10						IAML	08 55 22.4	
	comp=E,1μm,0.6s							
GO10	**Punta Arenas**	**2.25**	**163**	*e*P		**Pn**	**08 54 29.3**	**-0.2**
GO10				*e*S		**Sn**	**08 54 58.8**	**+1.7**
GO10						IAML	08 55 24.7	
	comp=Z,708nm,0.6s							
MG02	**Cerro Sombrero**	**2.53**	**135**			**Pn**	**08 54 33.5**	**+0.2**
MG02	**Cerro Sombrero**	**2.53**	**135**	*i* P		**Pn**	**08 54 33.5**	**+0.2**
MG02						IAML	08 55 29.4	
	comp=N,2μm,0.5s							
GO08	**Villa O'Higgin**	**2.57**	**354**			**Pn**	**08 54 33.2**	**-0.7**
GO08	**Villa O'Higgin**	**2.57**	**354**	⇑*i*P		**Pn**	**08 54 33.3**	**-0.6**
GO08				*i* S		**Sn**	**08 55 04.2**	**-0.8**
GO08						IAML	08 55 22.9	
	comp=E,406nm,0.6s							
GO08	**Villa O'Higgin**	**2.57**	**354**	*e*P		**Pn**	**08 54 33.3**	**-0.7**
GO08				*e*S		**Sn**	**08 55 04.7**	**-0.3**
GO08						IAML	08 55 20.7	
	comp=Z,382nm,0.8s							
MG03	**Isla Dawson**	**3.02**	**161**			**Pn**	**08 54 38.7**	**-1.3**
MG03	**Isla Dawson**	**3.02**	**161**	*e*P		**Pn**	**08 54 38.8**	**-1.3**
AY03	**Cochrane**	**3.78**	**355**			**Pn**	**08 54 49.9**	**-0.6**
AY03	**Cochrane**	**3.78**	**355**	*e*P		**Pn**	**08 54 49.3**	**-1.2**
USHA	**Ushuaia**	**4.43**	**151**	Pn		**Pn**	**08 54 58.5**	**-0.9**
	comp=Z,10nm,0.3s,baz=266,slow=0.2,SNR=34							
USHA				Sn		**Sn**	**08 55 48.7**	**-2.2**
	comp=Z,9.3nm,0.3s,baz=210,slow=19,SNR=6.6							
USHA				Lg		Lg	08 56 12.9	
	comp=Z,14nm,0.3s,baz=88,slow=13,SNR=2.2							
	comp=Z,23nm,0.4s							
MG01	**Puerto William**	**4.78**	**147**	Pn		**Pn**	**08 55 03.1**	**-1.1**
MG01	**Puerto William**	**4.78**	**147**	*e*P		**Pn**	**08 55 03.1**	**-1.1**
COYC	**Coyhaique**	**5.45**	**0**	Pn		**Pn**	**08 55 13.8**	**+0.3**
COYC	**Coyhaique**	**5.45**	**0**	*e*P		Pn	08 55 18.2	+4.8
EFI	**East Falkland**	**8.84**	**100**	Pn		**Pn**	**08 56 00.7**	**+0.7**
PLCA	**Paso Flores**	**10.35**	**7**	Pn		**Pn**	**08 56 21.4**	**+0.7**
	baz=207,slow=14,SNR=2.3							
PLCA				Lg		Lg	08 59 21.0	
	comp=Z,0.1nm,0.3s,baz=90,slow=20,SNR=2.3							
	comp=Z,2.8nm,1.1s							
PLCA	**Paso Flores**	**10.35**	**7**	Pn		**Pn**	**08 56 20.0**	**-0.7**
TRQA	**Tornquist**	**14.82**	**33**	Pn		**Pn**	**08 57 22.4**	**+0.5**
MT09	**Talagante**	**17.25**	**3**			**Pn

MUGZ	**Murupara**	**7.71 209**	P	Pn	08 56 16.7 -8.9
SNGZ	**Shannon Statio**	**7.75 205**	P	Sn	08 57 52.8 -1.2
MHGZ	**Mahia Peninsul**	**7.90 201**	P	Pn	08 56 21.5 -6.7
MHGZ			S	Sn	08 57 58.2 +0.6

IDC 25 09:00:06.3±1.6, 54.64N×83.71E, h0km, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=15.3km s-min=9.9km az=10.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**136**	I	I	09 06 00.0	
	baz=316,slow=335,SNR=6.1						
ZALV	**Zalesovo Beam**	**0.95**	**136**	Pg	Pg	09 00 23.9	-0.6
	3.2nm,0.3s,baz=318,slow=18,SNR=27						
ZALV				Lg	Lg	09 00 38.2	
	13nm,0.3s,baz=316,slow=29,SNR=59						
KURBB	**Kurchatov Arra**	**5.11**	**220**	Pn	Pn	09 01 24.4	+0.3
	0.1nm,0.3s,baz=42,slow=14,SNR=4.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.91**	**187**	Pn	Pn	09 02 02.9	+0.3
	0.2nm,0.3s,baz=12,slow=12,SNR=9.2						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**8.04**	**264**	Pn	Pn	09 02 03.3	-1.1
	0.1nm,0.3s,baz=68,slow=13,SNR=5.4						
	0.9nm,0.3s						

IDC 25 09:25:42.6±1.4, 0.46N×125.75E, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=176.8km s-min=18.4km az=64.0
NEIC 25 09:25:48.2±0.9, 0.66N±0.04×126.16E±0.07, h35km±1km, mb4.5/12, Error ellipse: s-maj=13.3km s-min=5.5km az=71.0

ISC 25 09:25:48.2±0.7, 0.6N±0.1×126.17E±0.09, h44km, n22, σ0s59/23, mb4.4/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**84**		**Pn**	**09 26 08.0**	**-0.7**
TNTI				Sn	Sn	09 26 23.9	+0.1
WB0	**Warramunga Arr**	**21.82**	**159**	P	**P**	**09 30 36.7**	**-0.2**
WRA	**Warramunga Arr**	**21.96**	**159**	P	**P**	**09 30 38.0**	**-0.5**
	86nm,0.8s,baz=336,slow=11,SNR=1.7						
WRA	**Warramunga Arr**	**21.96**	**159**	P	**P**	**09 30 39.0**	**+0.6**
WRA				IAmb	IAmb	09 31 12.2	
	comp=Z,29nm,0.8s						
WB2	**Warramunga Arr**	**21.97**	**159**	P	**P**	**09 30 38.4**	**-0.1**
WB2				IAmb	IAmb	09 30 49.8	
	comp=Z,19nm,1.2s						
AS31	**Alice Springs**	**25.30**	**163**	P	**P**	**09 31 11.4**	**+0.6**
ASAR	**Alice Springs**	**25.30**	**163**	P	**P**	**09 31 11.4**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=337,slow=8.9,SNR=30						
	comp=Z,0.6nm,0.3s						
ASAR	**Alice Springs**	**25.30**	**163**	P	**P**	**09 31 11.6**	**+0.7**
STKA	**Stephens Creek**	**35.48**	**157**	P	**P**	**09 32 40.4**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=335,slow=11,SNR=6.3						
	comp=Z,0.8nm,0.3s						
STKA	**Stephens Creek**	**35.48**	**157**	P	**P**	**09 32 40.8**	**0.0**
KAAM	**Kaadhehdhoo**	**53.17**	**270**	P	**P**	**09 35 02.1**	**-0.3**
MK31	**Makanchi Array**	**59.79**	**327**	P	**P**	**09 35 49.4**	**+0.5**
MK31				IAmb	IAmb	09 35 52.5	
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**59.79**	**327**	P	**P**	**09 35 49.0**	**0.0**
	comp=Z,1.5nm,0.4s,baz=121,slow=7.8,SNR=16						
	comp=Z,1.5nm,0.4s						
MKAR	**Makanchi Array**	**59.79**	**327**	P	**P**	**09 35 49.3**	**+0.3**
MAKZ	**Makanchi**	**59.97**	**326**	P	**P**	**09 35 50.3**	**+0.1**
MAKZ				IAmb	IAmb	09 35 53.8	
	comp=Z,1.6nm,0.6s						
BKZ	**Black Stump Fm**	**60.70**	**137**	P	**P**	**09 35 55.6**	**+0.2**
ARSB	**Arslanbob**	**62.71**	**317**	P	**P**	**09 36 07.8**	**-1.2**
KURBB	**Kurchatov Arra**	**64.05**	**328**	P	**P**	**09 36 17.9**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=129,slow=6.3,SNR=14						
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**64.05**	**329**	P	**P**	**09 36 18.0**	**+0.5**
KURK				IAmb	IAmb	09 36 21.3	
	comp=Z,3.0nm,0.6s						
AB31	**Akbulak array**	**74.19**	**321**	P	**P**	**09 37 19.8**	**-0.6**
ABKAR	**Akbulak array**	**74.19**	**321**	P	**P**	**09 37 19.7**	**-0.7**
C27K	**Jago River**	**89.45**	**21**	P	**P**	**09 38 41.4**	**+1.2**
C27K				IAmb	IAmb	09 38 56.1	
	comp=Z,4.3nm,1.3s						

MEX 25 09:31:59.3±0.9, 16.27N×94.71W, h4km±10km, MD4.2
CATAC 25 09:32:00.8±0.4, 16.N±3.×9.5W±.°, h77km±6km, M4.1/10, mb4.1/2, MLv4.1/10, Error ellipse: s-maj=7.6km s-min=4.4km az=19.2, confirmed

ISC 25 09:31:58.8±1.3, 16.28N±0.05×94.66W±0.03, h94km±14km, n25, σ2s53/43, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.84**	**345**	*i* P	**Pn**	**09 32 17.6**	**+0.6**
CMIG				*e*S	**Sn**	**09 32 29.8**	**-0.8**
UXUV	**UXUV**	**1.14**	**25**	*i* P	**Pn**	**09 32 21.6**	**+1.2**
UXUV				*e*S	**Sn**	**09 32 35.9**	**-0.8**
HUIG	**Huatulco**	**1.49**	**250**	*e*P	**Pn**	**09 32 24.6**	**+0.1**
HUIG				*e*S	**Sn**	**09 32 43.2**	**-0.9**
PCIG		**1.50**	**112**	*i* P	**Pn**	**09 32 26.6**	**+2.0**
PCIG				*e*S	**Sn**	**09 32 46.1**	**+1.8**
TGIG		**1.55**	**71**	*e*P	**Pn**	**09 32 26.6**	**+1.1**
TGIG				*e*S	**Sn**	**09 32 45.5**	**-0.2**
NEUV	**Arroyo Zacate**	**1.80**	**323**	*e*P	**Pn**	**09 32 29.0**	**+0.4**
NEUV				*e*S	**Sn**	**09 32 48.8**	**-2.4**
VHO	**Vista Hermosa**	**2.14**	**292**	*i* P	**Pn**	**09 32 35.9**	**+2.7**
VHO				*e*S	**Sn**	**09 32 57.0**	**-2.5**
PEIG	**Puerto Escondi**	**2.41**	**264**	*i* P	**Pn**	**09 32 36.7**	**+0.2**
PEIG				*e*S	**Sn**	**09 33 05.3**	**-0.3**
CCIG	**Comitan**	**2.42**	**90**	*e*P	**Pn**	**09 32 38.6**	**+1.7**
CCIG				*e*S	**Sn**	**09 33 01.3**	**-4.6**
CCIG	**Comitan**	**2.42**	**90**	P	**Pn**	**09 32 38.9**	**+2.1**
PATR	**El Naranjo**	**2.60**	**116**	*e*P	**Pn**	**09 32 42.0**	**+2.7**
PATR				*e*S	**Sn**	**09 33 06.5**	**-3.9**
PAVE	**Pavencul**	**2.62**	**114**	*e*P	**Pn**	**09 32 42.2**	**+2.7**
PAVE				*e*S	**Sn**	**09 33 06.2**	**-4.6**
THIG		**2.68**	**120**	*e*S	**Sn**	**09 33 09.5**	**-2.3**
CHUJ	**Union Juarez**	**2.72**	**115**	*e*P	**Pn**	**09 32 43.5**	**+2.5**
CHUJ				*e*S	**Sn**	**09 33 09.2**	**-4.1**
YOIG	**Yosondua**	**2.83**	**282**	*e*P	**Pn**	**09 32 44.4**	**+2.0**
YOIG				*e*S	**Sn**	**09 33 14.4**	**-1.5**
TOIG	**Toxpalan**	**2.93**	**308**	*e*P	**Pn**	**09 32 45.5**	**+2.0**
TOIG				*e*S	Sn	09 33 09.5	-8.5
TXIG	**Tlaxiaco**	**3.13**	**288**	*e*P	**Pn**	**09 32 49.2**	**+2.8**
TXIG				*e*S	**Sn**	**09 33 18.9**	**-4.3**
PNIG	**Pinotepa**	**3.33**	**272**	*e*P	**Pn**	**09 32 49.7**	**+0.8**
PNIG				*e*S	**Sn**	**09 33 25.0**	**-2.7**
FTIG	**Fresnillo de T**	**3.70**	**296**	*e*P	**Pn**	**09 32 57.2**	**+3.2**
TLIG	**Tlapa**	**3.96**	**289**	*e*P	**Pn**	**09 33 00.3**	**+3.0**
TLIG				*e*S	Sn	09 33 31.8	-11
TLIG	**Tlapa**	**3.96**	**289**	P	**Pn**	**09 33 00.4**	**+3.0**
TLIG				S	**Sn**	**09 33 41.3**	**-1.5**
SCIG	**Sabancuy**	**4.25**	**51**	P	**Pn**	**09 33 02.6**	**+1.3**
SCIG				S	**Sn**	**09 33 46.6**	**-3.3**
PETF	**Flores**	**4.63**	**81**	P	**Pn**	**09 33 08.1**	**+1.6**
PETF				S	**Sn**	**09 33 57.7**	**-1.5**
MTO3	**Montecristo**	**5.44**	**109**	P	**Pn**	**09 33 20.1**	**+2.4**
MYIG	**Merida**	**6.59**	**44**	P	**Pn**	**09 33 36.5**	**+3.5**

NEIC 25 09:32:56.3±0.4, 6.1S±0.1×147.4E±0.1, h68km±16km, mb4.3/9, Error ellipse: s-maj=21.6km s-min=12.1km az=119.0
IDC 25 09:32:57.3±3.2, 6.28S×147.49E, h78km±31km, mb3.8/3, mbtmp4.1/4, MS3.1/1, Error ellipse: s-maj=57.3km s-min=21.4km az=105.0

ISC 25 09:32:56.0±0.9, 6.13S±0.09×147.5E±0.1, h77km, n21, σ0s94/23, mb4.1/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.27**	**185**	P	**Pn**	**09 33 45.6**	**+0.5**
	9.5nm,0.3s,baz=24,slow=6.1,SNR=7.5						
PMG				S	**Sn**	**09 34 20.8**	**-2.1**
	56nm,0.3s,baz=197,slow=19,SNR=18						
PMG	**Port Moresby**	**3.27**	**185**		**Pn**	**09 33 45.8**	**+0.7**
PMG				Sn	**Sn**	**09 34 22.1**	**-0.8**
RABL	**Rabaul**	**5.08**	**68**	Pn	**Pn**	**09 34 10.0**	**+0.4**
COEN	**Coen**	**8.85**	**208**	Pn	**Pn**	**09 35 01.4**	**+0.2**
MTN	**Manton Dam**	**17.41**	**246**	P	**P**	**09 36 56.4**	**+2.0**
MTN				IAmb	IAmb	09 36 57.9	
	comp=Z,26nm,1.1s						
WB0	**Warramunga Arr**	**18.57**	**222**	P	**P**	**09 37 07.3**	**+0.2**
WB2	**Warramunga Arr**	**18.73**	**222**	P	**P**	**09 37 09.2**	**+0.4**
WB2				IAmb	IAmb	09 37 33.0	
	comp=Z,23nm,1.3s						
WRA	**Warramunga Arr**	**18.73**	**222**	P	**P**	**09 37 08.6**	**-0.3**
	comp=Z,77nm,0.7s,baz=46,slow=11,SNR=1.8						
WRA	**Warramunga Arr**	**18.73**	**222**	P	**P**	**09 37 09.3**	**+0.5**
WRA				IAmb	IAmb	09 37 23.3	
	comp=Z,19nm,0.8s						
KNRA	**Kununurra**	**20.64**	**241**	P	**P**	**09 37 29.9**	**+0.4**
AS31	**Alice Springs**	**21.77**	**215**	P	**P**	**09 37 42.3**	**+0.7**
ASAR	**Alice Springs**	**21.77**	**215**	P	**P**	**09 37 42.2**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=48,slow=9.1,SNR=53						
ASAR				S	**S**	**09 41 38.6**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=40,slow=21,SNR=3.0						
	comp=Z,2.3nm,0.7s						
ASAR	**Alice Springs**	**21.77**	**215**	P	**P**	**09 37 41.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**24.38**	**239**	P	**P**	**09 38 08.5**	**+1.3**
	comp=Z,13nm,0.5s,baz=54,slow=8.1,SNR=54						
	comp=Z,13nm,0.5s						
ARMA	**Armidale**	**24.48**	**171**	P	**P**	**09 38 09.2**	**+1.0**
ARMA				IAmb	IAmb	09 38 46.8	
	comp=Z,7.1nm,1.1s						
STKA	**Stephens Creek**	**26.20**	**191**	P	**P**	**09 38 24.4**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=15,slow=12,SNR=3.0						
	comp=Z,1.3nm,0.7s						
STKA	**Stephens Creek**	**26.20**	**191**	P	**P**	**09 38 24.5**	**+0.8**
STKA				IAmb	IAmb	09 39 02.6	
	comp=Z,27nm,1.4s						
JOW	**Kunigami**	**37.66**	**331**	LR	LR	09 52 10.7	
	comp=Z,27nm,20.8s,baz=338,slow=30						
CM31	**Chiang Mai Arr**	**53.70**	**298**	P	**P**	**09 42 09.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**53.70**	**298**	P	**P**	**09 42 09.4**	**-1.1**
TORD	**Torodi Ar. Bea**	**145.55**	**284**	PKPbc	**PKPdf**	**09 52 25.8**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=88,slow=3.8,SNR=1.7						

AFAD 25 09:40:31.0, 38.40N×44.52E, h7km±4km, MW3.5
ISK 25 09:40:32.9, 38.40N×44.31E, h5km, ML3.2/10
TEH 25 09:40:32.4, 38.39N×44.43E, h6km±48km, ML3.2, Presumed earthquake
AZER 25 09:40:34.5, 38.52N×44.63E, h10km, ml3.3

ISC 25 09:40:32.3±1.1, 38.38N±0.02×44.51E±0.02, h4km±10km, n58, σ1s33/87, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**305**	P	**Pg**	**09 40 41.6**	**-0.2**
OZAP				S	**Sg**	**09 40 47.8**	**-0.4**
OZAP	**Van, Ozalp-Mer**	**0.49**	**305**	Pg	**Pg**	**09 40 41.6**	**-0.2**
TVAN	**Van**	**0.88**	**280**	P	**Pg**	**09 40 47.7**	**-1.5**
TVAN				S	**Sg**	**09 41 01.7**	**+1.2**
TVAN	**Van**	**0.88**	**280**	Pg	**Pg**	**09 40 47.6**	**-1.5**
VMUR	**Van-Muradiye**	**0.95**	**310**	P	**Pg**	**09 40 49.4**	**-1.3**
VMUR				S	**Sg**	**09 41 03.6**	**+0.6**
VMUR	**Van-Muradiye**	**0.95**	**310**	Pg	**Pg**	**09 40 49.3**	**-1.3**
IMRD	**Marand**	**0.99**	**70**	Pg	**Pg**	**09 40 51.9**	**+0.6**
HAKT	**HAKKARI**	**1.03**	**218**	P	**Pg**	**09 40 51.4**	**-0.7**
HAKT				S	**Sg**	**09 41 06.2**	**+0.7**
HAKT	**HAKKARI**	**1.03**	**218**	Pg	**Pg**	**09 40 51.3**	**-0.7**
HAKT	**HAKKARI**	**1.03**	**218**	P	**Pg**	**09 40 51.5**	**-0.7**
HAKT				S	**Sb**	**09 41 08.0**	**+1.0**
NAX	**Nakhchivan**	**1.11**	**44**	P	**Pg**	**09 40 53.9**	**+0.3**
NAX				S	**Sn**	**09 41 09.5**	**-1.0**
GEVA	**Gevas**	**1.14**	**267**	P	**Pg**	**09 40 52.3**	**-1.9**
GEVA				S	**Sb**	**09 41 10.5**	**+0.5**
AKDM	**Akdamar-Van**	**1.20**	**268**	Pg	**Pg**	**09 40 53.3**	**-2.1**
AKDM	**Akdamar-Van**	**1.20**	**268**	Pg	**Pg**	**09 40 53.3**	**-2.1**
ORD	**Ordubad**	**1.29**	**64**	P	**Pn**	**09 40 57.0**	**-0.2**
ORD				S	**Sn**	**09 41 14.9**	**0.0**
ITBZ	**Tabriz**	**1.30**	**96**	Pg	**Pn**	**09 40 56.8**	**-0.6**
SBZ	**Shahbuz**	**1.30**	**38**	P	**Pn**	**09 40 57.2**	**-0.2**
SBZ				S	**Sb**	**09 41 14.5**	**-0.1**
DYDN	**Diyadin**	**1.33**	**331**	P	**Pn**	**09 40 56.3**	**-1.6**
DYDN				S	**Sg**	**09 41 14.6**	**-0.5**
DYDN	**Diyadin**	**1.33**	**331**	Pg	**Pn**	**09 40 56.3**	**-1.6**
CUKT	**Cukurca**	**1.33**	**213**	Pn	**Pn**	**09 40 58.3**	**+0.4**
CUKT				Sn	**Sn**	**09 41 16.9**	**+0.7**
CUKT	**Cukurca**	**1.33**	**213**	P	**Pn**	**09 40 57.9**	**0.0**
CUKT				S	**Sn**	**09 41 17.0**	**+0.9**
CUKT	**Cukurca**	**1.33**	**213**	Pg	**Pn**	**09 40 57.8**	**0.0**
IAZR	**Azarshahr**	**1.35**	**121**	Pg	**Pg**	**09 40 59.0**	**+0.8**
HYR	**Heyderabad**	**1.37**	**11**	P	**Pg**	**09 40 58.7**	**+0.2**
HYR				S	**Sn**	**09 41 18.8**	**+1.9**
ADCV	**BITLIS_Adilcev**	**1.46**	**288**	P	**Pn**	**09 40 59.4**	**-0.3**
ADCV				S	**Sg**	**09 41 19.8**	**+0.5**
IGDI	**IGDIR**	**1.53**	**347**	P	**Pb**	**09 41 01.0**	**-0.3**
IGDI				S	**Sg**	**09 41 22.1**	**+0.8**
IGDI	**IGDIR**	**1.53**	**347**	Pg	**Pb**	**09 41 00.9**	**-0.3**
IGDI	**IGDIR**	**1.53**	**347**	P	**Pg**	**09 41 01.7**	**+0.2**
IGDI				S	**Sg**	**09 41 22.8**	**+1.5**
PERV	**Siirt/Pervari-**	**1.61**	**255**	P	**Pn**	**09 41 02.2**	**+0.5**
PERV				S	**Sg**	**09 41 27.2**	**+3.2**
AGRB	**Hanur-Agry**	**1.68**	**316**	Pn	**Pn**	**09 41 02.8**	**+0.1**
AGRB				Sn	**Sn**	**09 41 25.1**	**+0.2**
DORK	**Agr/Tutak/Do**	**1.69**	**307**	P	**Pn**	**09 41 02.2**	**-0.6**
DORK				S	**Sb**	**09 41 25.8**	**+0.2**
MLAZ	**Malazgirt-MUS**	**1.71**	**297**	Pn	**Pn**	**09 41 02.9**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.75**	**325**	P	**Pn**	**09 41 03.4**	**-0.2**
KOTA				S	**Sn**	**09 41 26.3**	**-0.2**
GNI	**Garni**	**1.78**	**6**	Pn	**Pb**	**09 41 05.8**	**+0.2**
MAHB	**Mahabad**	**1.87**	**149**	Pn	**Pb**	**09 41 07.8**	**+0.7**
BLIS	**Bitlis-Merkez**	**1.88**	**272**	P	**Pn**	**09 41 06.2**	**+0.8**
BLIS				S	**Sg**	**09 41 33.9**	**+1.1**
GURO	**Guroymak-BITLI**	**1.95**	**276**	Pn	**Pn**	**09 41 06.3**	**-0.1**
IHRS	**Heris**	**1.99**	**91**	Pn	**Pb**	**09 41 09.5**	**+0.2**
KARS	**Kars**	**2.51**	**334**	Pn	**Pn**	**09 41 14.8**	**+0.8**
VRTB	**Varto-Mus**	**2.51**	**289**	Pn	**Pn**	**09 41 14.8**	**+0.7**
GDB	**GEDABAY**	**2.53**	**22**	P	**Pn**	**09 41 16.1**	**+1.7**
GDB				S	**Sb**	**09 41 51.2**	**+1.2**
ISRB	**Sarab**	**2.55**	**101**	Pn	**Pb**	**09 41 17.4**	**-1.4**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn	**Pn**	**09 41 16.1**	**+0.7**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn	**Pn**	**09 41 15.7**	**+0.3**
GANJ	**Ganja**	**2.67**	**31**	P	**Pb**	**09 41 18.9**	**-1.7**
GANJ				S	**Sb**	**09 41 53.5**	**-0.2**
GRMI	**Germi**	**2.69**	**80**	Pn	**Pb**	**09 41 19.7**	**-1.3**
SENK	**Senkaya-Erzuru**	**2.75**	**323**	Pn	**Pn**	**09 41 18.4**	**+1.0**
QZX	**Qazax, Azerbai**	**2.76**	**14**	P	**Pb**	**09 41 20.8**	**-1.4**
QZX				S	**Sb**	**09 41 54.3**	**-2.2**
YRD	**Yardimli**	**2.97**	**78**	P	**Pb**	**09 41 24.1**	**-1.8**
YRD				S	**Sb**	**09 42 01.8**	**-0.9**
LRK	**Lerik**	**3.02**	**84**	P	**Pb**	**09 41 24.3**	**-2.4**
LRK				S	**Sb**	**09 42 02.1**	**-1.8**
BNGB	**Bingl**	**3.06**	**283**	Pn	**Pn**	**09 41 22.6**	**+1.0**
AKH	**Akhalkalaki**	**3.13**	**346**	P	**Pg**	**09 41 32.5**	**+0.3**
VSHL	**Vashlovani**	**3.20**	**26**	P	**Pb**	**09 41 27.2**	**-2.5**
VSHL				S	**Sg**	**09 42 17.1**	**+2.0**
LKRN	**Lenkeran, Azer**	**3.36**	**83**	P	**Pn**	**09 41 29.0**	**+3.4**
LKRN				S	**Sb**	**09 42 10.6**	**-3.2**
ASTR	**Astara**	**3.37**	**86**	P	**Pb**	**09 41 29.4**	**-3.1**
ASTR				S	**Sb**	**09 42 10.4**	**-3.4**
LGD	**Lagodekhi**	**3.70**	**20**	P	**Pb**	**09 41 38.8**	**+0.5**
CHRG	**Chargali**	**3.96**	**4**	P	**Pb**	**09 41 42.8**	**+0.1**
SHTL	**Shatili**	**4.30**	**6**	P	**Pb**	**09 41 50.5**	**+1.9**

SFS 25 09:41:05.2, 35.38N×3.72W, h22km, ML2.7/6, ML2.4/8, MLv2.2/8
CNRM 25 09:41:05.5, 35.63N×3.71W, h12km, ML2.0
MDD 25 09:41:06.9±0.9, 35.41N×3.68W, h15km±10km, mb_Lg2.4/7, Error ellipse: s-maj=9.0km s-min=6.0km az=153.0

ISC 25 09:41:05.2±1.1, 35.46N±0.03×3.74W±0.03, h13km±10km, n24, σ1s54/43, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.29**	**215**	P	**Pn**	**09 41 14.4**	**-0.8**
PALE				S	**Sn**	**09 41 20.6**	**-0.8**
EMEL	**Melilla**	**0.66**	**103**	Pg	**Pb**	**09 41 18.6**	**0.0**
EMEL				Sg	**Sg**	**09 41 25.8**	**-0.9**
WMELI	**Melilla**	**0.66**	**102**	Pg	**Pb**	**09 41 18.0**	**-0.5**
WMELI				Sg	**Sg**	**09 41 24.5**	**-2.2**
EMLI	**Melilla**	**0.66**	**103**	Pg	**Pg**	**09 41 17.9**	**-0.2**
EMLI				Sg	**Sg**	**09 41 25.1**	**-1.8**
EALB	**Alboran**	**0.75**	**50**	Pg	**Pg**	**09 41 20.2**	**+0.4**
EALB				Sg	**Sg**	**09 41 29.4**	**-0.2**
EALB	**Alboran**	**0.75**	**50**	Pg	**Pg**	**09 41 20.2**	**+0.4**
EALB				Sg	**Sg**	**09 41 30.3**	**+0.7**
EALB				*i* lVmb_Lg		09 41 35.7	

AKLM	**AKL**	**0.95 186**	P	**Pn**	**09 41 25.8 +1.5**
AKLM			S	**Sn**	**09 41 40.0 +2.3**
TAF	**Taforalt**	**1.26 120**	P	**Pg**	**09 41 30.3 +0.8**
TAF			S	**Sg**	**09 41 48.3 +2.5**
SMIR	**Smir Dam**	**1.36 280**	P	**Pn**	**09 41 30.3 +0.4**
SMIR			S	**Sg**	**09 41 50.0 +1.0**
CEU	**Ceuta**	**1.40 289**	Sn	**Sn**	**09 41 45.4 -3.5**
ECEU	**Ceuta**	**1.41 289**	Sn	**Sn**	**09 41 46.7 -2.2**
ECEU	**Ceuta**	**1.41 289**	Pn	**Pn**	**09 41 31.3 +0.8**
ECEU			Sn	**Sn**	**09 41 48.7 -0.2**
ECEU			*i* lVmb_Lg		09 42 02.3
ELGU	**Los Guajares,**	**1.41 4**	Pn	**Pn**	**09 41 30.8 +0.1**
ELGU			Sn	**Sn**	**09 41 47.3 -1.9**
ELGU	**Los Guajares,**	**1.41 4**	Pn	**Pn**	**09 41 30.8 +0.1**
ELGU			Sn	**Sn**	**09 41 48.1 -1.1**
ELGU			*i* lVmb_Lg		09 41 51.4
EMAL	**Malaga-Limoner**	**1.42 337**	Pn	**Pn**	**09 41 29.8 -0.9**
EMAL			Sn	**Sn**	**09 41 47.1 -2.2**
EBER	**Berja**	**1.59 25**	Pn	**Pn**	**09 41 33.2 -0.1**
EBER			Sn	**Sn**	**09 41 52.9 -1.0**
EBER	**Berja**	**1.59 25**	Pn	**Pn**	**09 41 33.2 -0.1**
EBER			Sn	**Sn**	**09 41 51.9 -2.0**
EQES	**Quesada**	**2.40 13**	Pn	**Pn**	**09 41 46.9 +2.6**
EQES			Sn	**Sn**	**09 42 15.3 +1.6**
EQES			*i* lVmb_Lg		09 42 19.5
MD31	**MD31**	**2.72 198**	P	**Pb**	**09 41 51.5 -2.2**
MDT	**Midelt**	**2.73 196**	P	**Pb**	**09 41 52.9 -1.0**
ECAB	**El Cabril**	**2.94 333**	Pn	**Pn**	**09 41 53.2 +1.5**
ECAB			Sn	**Sn**	**09 42 28.7 +1.8**
ECAB			*i* lVmb_Lg		09 42 35.1
PVAQ	**Vaqueiros**	**3.75 302**	*e*P	**Pn**	**09 42 04.5 +1.7**
PVAQ			*e*S	**Sn**	**09 42 47.8 +1.0**
PVAQ			IAML		09 42 48.5
PVAQ			IAML		09 42 52.8
PVAQ			IAML		09 42 54.2
PBAR	**Barrancos**	**3.79 317**	*e*S	**Sn**	**09 42 47.2 -0.6**
PBAR			IAML		09 42 48.8
PBAR			IAML		09 42 53.5
PBAR			IAML		09 42 54.8
PARRA	**Arraiolos**	**4.80 316**	*e*P	**Pn**	**09 42 20.0 +2.8**
PARRA			*e*S	**Sn**	**09 43 12.0 -0.7**
PARRA			IAML		09 43 14.0
PARRA			IAML		09 43 20.1
PARRA			IAML		09 43 21.3

IDC 25 09:46:14.7±1.1, 39.55N×67.98E, h0km, mb3.9/10, mbtmp3.9/17, ML3.3/7, MS2.8/3, Error ellipse: s-maj=18.2km s-min=10.6km az=170.0
ISU 25 09:46:19, 39.80N×67.90E, h16km
SOME 25 09:46:23.7, 39.68N×69.73E, h15km
NNC 25 09:46:25.2±6.0, 39.64N×69.67E, h3km±31km, mb4.2, mpv4.0, Error ellipse: s-maj=40.9km s-min=24.8km az=32.0

ISC 25 09:46:16.2±1.4, 39.86N±0.05×68.06E±0.03, h6km±9km, n70, σ2s76/87, mb3.9/9, 4C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGL	**Agalyk**	**0.98**	**250**	P	**Pb**	**09 46 34.4**	**-1.2**
AGL				S	**Sb**	**09 46 46.7**	**-2.1**
NZBK	**Nazarbek**	**1.58**	**30**	P	**Pg**	**09 46 48.9**	**+2.4**
NZBK				S	**Sg**	**09 47 10.6**	**+3.7**
PKMR	**Pachkamar**	**1.85**	**225**	P	**Pn**	**09 46 50.3**	**+1.7**
PKMR				S	**Sn**	**09 47 12.1**	**-0.2**
TVKS	**Tavaksay**	**2.09**	**35**	P	**Pg**	**09 46 55.8**	**-0.5**
CHRV	**Charvak**	**2.28**	**38**	P	**Pb**	**09 46 58.3**	**+0.4**
CHRV				S	**Sg**	**09 47 26.6**	**-2.9**
MINT	**Mingtut**	**2.31**	**74**	P	**Pg**	**09 47 01.3**	**+0.8**
MINT				S	**Sg**	**09 47 29.8**	**-0.6**
CHM	**Chimkent**	**2.71**	**25**	*e*P	**Pg**	**09 47 12.1**	**+3.8**
	203nm,0.3s						
CHM				*e*S	**Sg**	**09 47 47.2**	**+3.8**
	390nm,0.3s						
IUG	**Iuzhnay**	**2.72**	**32**	Pg	**Pg**	**09 47 08.9**	**+0.5**
	340nm,0.8s						
IUG				Lg	Lg	09 47 41.3	
	101nm,0.5s						
IUG	**Iuzhnay**	**2.72**	**32**	*e*P	**Pg**	**09 47 08.9**	**+0.5**
IUG				*e*S	**Sg**	**09 47 41.3**	**-2.4**
FRG	**Fergana**	**2.90**	**79**	P	Pn	09 46 50.2	-13
FRG				S	Sn	09 47 24.7	-13
TMD

KUU	**Kurty**	**7.37**	**54**	*e*P		**Pb**	**09 48 24.9**	**+0.4**
	5.3nm,0.1s							
KUU				*e*S		**Sb**	**09 49 51.6**	**-1.0**
	8.0nm,0.0s							
TNSS	**Tian-Shan**	**7.39**	**62**	Pg		**Pb**	**09 48 22.5**	**-2.5**
	2.1nm,0.5s							
TNSS				Lg		Lg	09 49 47.7	
	1.9nm,0.6s							
TNSS	**Tian-Shan**	**7.39**	**62**	*e*P		**Pb**	**09 48 22.5**	**-2.5**
	2.1nm,0.5s							
TNSS				*e*S		**Sb**	**09 49 47.7**	**-5.8**
	1.9nm,0.6s							
KTBS	**Karatobe**	**7.50**	**56**	Pg		**Pb**	**09 48 26.2**	**-0.5**
	3.2nm,0.6s							
KTBS				Lg		Lg	09 49 54.2	
	0.5nm,0.4s							
KTBS	**Karatobe**	**7.50**	**56**	*e*P		**Pb**	**09 48 26.2**	**-0.5**
	3.2nm,0.6s							
KTBS				*e*S		**Sb**	**09 49 54.2**	**-2.1**
	0.5nm,0.4s							
MDOK	**Medeo**	**7.50**	**61**	Pg		**Pb**	**09 48 24.9**	**-2.0**
	8.1nm,0.6s							
MDOK				Lg		Lg	09 49 52.1	
	11nm,0.9s							
KOTS	**Kotyrbulak**	**7.58**	**61**	Pg		**Pb**	**09 48 26.1**	**-1.9**
	8.1nm,0.6s							
KOTS				Lg		Lg	09 49 54.2	
	16nm,1.0s							
KOTS	**Kotyrbulak**	**7.58**	**61**	*e*P		**Pb**	**09 48 26.1**	**-1.9**
	8.1nm,0.6s							
KOTS				*e*S		**Sb**	**09 49 54.2**	**-4.5**
	16nm,1.0s							
KURS	**Kuram**	**8.38**	**61**	Pg		**Pb**	**09 48 41.0**	**-0.8**
	3.7nm,0.5s							
KURS				Lg		Lg	09 50 19.8	
	8.0nm,1.2s							
SATY	**Saty**	**8.40**	**64**	Pg		**Pb**	**09 48 40.3**	**-1.8**
	6.9nm,0.9s							
SATY				Lg		Lg	09 50 18.5	
	6.9nm,0.3s							
ARXS	**Arharly**	**8.46**	**56**	Pg		**Pb**	**09 48 43.8**	**+0.6**
	6.4nm,0.7s							
ARXS				Lg		Lg	09 50 24.8	
	6.6nm,0.9s							
ARXS	**Arharly**	**8.46**	**56**	*e*P		**Pb**	**09 48 43.8**	**+0.6**
	6.4nm,0.7s							
ARXS				*e*S		Sb	09 50 24.8	+0.7
	6.6nm,0.9s							
KPKS	**Kokpek**	**8.72**	**62**	Pg		Pg	09 48 46.0	-17
	0.7nm,0.3s							
KPKS				Lg		Lg	09 50 28.6	
	2.9nm,0.5s							
KPKS	**Kokpek**	**8.72**	**62**	*e*P		Pg	09 48 46.0	-17
	0.7nm,0.3s							
KPKS				*e*S		Sg	09 50 28.6	-28
	2.9nm,0.5s							
SHLS	**Shalkode**	**9.16**	**65**	Pg		Pn	09 48 59.0	+30
	4.2nm,0.2s							
SHLS				Lg		Lg	09 50 50.6	
	8.2nm,0.8s							
SHLS	**Shalkode**	**9.16**	**65**	*e*P		Pn	09 48 59.0	+30
	4.2nm,0.2s							
SHLS				*e*S		Sn	09 50 50.6	+38
	8.2nm,0.8s							
AB31	**Akbulak array**	**11.03**	**331**	Pn		**Pn**	**09 48 54.8**	**+0.4**
	1.0nm,0.2s,baz=153,slow=14,SNR=112							
AB31						Sn	**09 50 55.1**	**-2.9**
	3.9nm,0.3s,baz=158,slow=23,SNR=5.8							
MK31	**Makanchi Array**	**12.45**	**52**	Pn		**Pn**	**09 49 15.4**	**+1.4**
	1.4nm,0.8s,baz=237,slow=14,SNR=9.6							
MKAR	**Makanchi Array**	**12.45**	**52**	Pn		**Pn**	**09 49 14.9**	**+1.0**
	0.1nm,0.3s,baz=236,slow=14,SNR=9.0							
MKAR				Lg		Lg	09 52 57.2	
	0.2nm,0.3s,baz=252,slow=27,SNR=4.0							
	1.5nm,0.9s							
AKTO	**Aktyubinsk**	**12.71**	**330**	Pn		**Pn**	**09 49 17.7**	**+0.2**
	0.5nm,0.3s,baz=143,slow=12,SNR=15							
AKTO						Sn	**09 51 37.0**	**-2.4**
	0.6nm,0.3s,baz=346,slow=22,SNR=9.2							
	4.0nm,0.6s							
AKTO	**Aktyubinsk**	**12.71**	**330**	⇓Pn		**Pn**	**09 49 17.6**	**+0.1**
	5.6nm,0.9s							
AKTO				⇑Sn		**Sn**	**09 51 35.9**	**-3.4**
	10nm,1.1s							
KURBB	**Kurchatov Arra**	**13.03**	**31**	Pn		**Pn**	**09 49 22.4**	**+0.6**
	baz=220,slow=13,SNR=6.9							
KURBB				Lg		Lg	09 53 13.7	
	0.1nm,0.3s,baz=218,slow=30,SNR=5.8							
	0.5nm,0.5s							
BVAR	**Borovoye Array**	**13.26**	**6**	Pn		**Pn**	**09 49 24.5**	**-0.4**
	0.1nm,0.3s,baz=184,slow=12,SNR=6.1							
BVAR					LR	LR	09 54 08.8	
	comp=Z,14nm,18.7s,baz=200,slow=35							
	1.0nm,0.5s							
ARTI	**Arti**	**17.72**	**342**	P		**P**	**09 50 24.6**	**+0.3**
	0.2nm,0.3s,baz=169,slow=10,SNR=5.4							
ARTI				S		**Sn**	**09 53 34.2**	**-6.8**
	2.3nm,0.9s,baz=102,slow=19,SNR=1.9							
	2.4nm,0.5s							
ZALV	**Zalesovo Beam**	**18.09**	**33**	P		**P**	**09 50 30.0**	**+1.6**
	0.2nm,0.3s,baz=224,slow=9.8,SNR=11							
	3.7nm,0.7s							
KBZ	**Khabaz**	**19.13**	**290**	LR		LR	09 59 20.5	
	comp=Z,44nm,18.1s,baz=218,slow=41							
BRTR	**Keskin Array B**	**26.36**	**281**	P		**P**	**09 51 53.3**	**0.0**
	0.8nm,0.6s,baz=83,slow=9.6,SNR=3.0							
	0.8nm,0.6s							
AKASG	**Malin Array Be**	**29.08**	**305**	P		**P**	**09 52 17.8**	**+0.5**
	0.3nm,0.3s,baz=82,slow=7.4,SNR=5.1							
	0.3nm,0.3s							
FINES	**FINESS Array B**	**33.41**	**324**	P		**P**	**09 52 56.7**	**+1.5**
	2.9nm,0.7s,baz=104,slow=8.0,SNR=6.5							
	2.9nm,0.7s							
HFS	**Hagfors**	**39.00**	**320**	P		**P**	**09 53 44.4**	**+1.2**
	2.8nm,0.6s,baz=78,slow=11,SNR=7.4							
	2.8nm,0.6s							
NOA	**NORSAR Array B**	**40.31**	**321**	P		**P**	**09 53 54.5**	**+0.5**
	1.0nm,0.6s,baz=95,slow=8.2,SNR=3.6							
	1.0nm,0.6s							
SPITS	**Spitsbergen Ar**	**43.69**	**346**	P		**P**	**09 54 23.1**	**+1.7**
	4.0nm,0.8s,baz=39,slow=0.9,SNR=6.0							
	4.0nm,0.8s							
KSRS	**Korea Array**	**46.04**	**73**	LR		LR	10 17 45.9	
	comp=Z,12nm,19.0s,baz=115,slow=41							
TORD	**Torodi Ar. Bea**	**63.59**	**265**	P		**P**	**09 56 46.9**	**-1.2**
	0.4nm,0.6s,baz=52,slow=4.5,SNR=4.3							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**72.16**	**15**	P		**P**	**09 57 42.4**	**+1.0**
	0.8nm,0.9s,baz=325,slow=6.2,SNR=8.7							
	0.8nm,0.9s							
YKA	**Yellowknife Ar**	**77.97**	**1**	P		**P**	**09 58 15.8**	**+1.0**
	0.6nm,0.6s,baz=352,slow=6.6,SNR=14							
	0.6nm,0.6s							
ASAR	**Alice Springs**	**88.05**	**123**	P		**P**	**09 59 06.2**	**-1.3**
	0.4nm,0.7s,baz=307,slow=4.4,SNR=5.1							
	0.4nm,0.7s							

*IDC **25** 10:04:00.1±2.1,51°.30N×82°.36E,h0km,mbtmp2.3/2, ML2.0/2,Error ellipse: s-maj=48.4km s-min=14.0km az=106.0*

*NNC **25** 10:04:02.5±1.3,51°.23N×81°.71E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=12.5km s-min=7.6km az=30.0, Suspected Mining explosion.*

ISC 25 10:03:59.3±1.8,51°.45N±0°.09×82°.0E±0°.1,h0km,n7, σ0s24/5,3C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.25**	**252**	⇑Pn		**Pn**	**Pn**	**10 04 37.5**	**-0.2**
	0.5nm,0.3s								
KURK				⇓Lg		Lg	Lg	10 05 06.9	
	2.7nm,0.6s								
KURBB	**Kurchatov Arra**	**2.34**	**251**	⇑Pn		**Pn**	**Pn**	**10 04 39.2**	**+0.2**
	3.6nm,0.3s,baz=73,slow=18								
KURBB				⇓Lg		Lg	Lg	10 05 09.0	
	5.2nm,0.5s								
ZALV	**Zalesovo Beam**	**3.03**	**33**	Pn		**Pn**	**Pn**	**10 04 48.5**	**0.0**
	0.4nm,0.3s,baz=214,slow=15,SNR=5.7								
ZALV				Lg		Lg	Lg	10 05 37.7	
	0.7nm,0.3s,baz=213,slow=28,SNR=5.0								
	0.6nm,0.3s								
I46RU	**ZALESOVO INFRA**	**3.03**	**33**	I		I	I	10 22 20.0	
	baz=212,slow=328,SNR=1.8								
MAKZ	**Makanchi**	**4.65**	**180**	⇓Lg		Lg	Lg	10 06 25.6	
	1.3nm,0.7s								
MK31	**Makanchi Array**	**4.67**	**178**	⇑Pn		**Pn**	**Pn**	**10 05 11.0**	**+0.1**
	baz=162,slow=14,SNR=14								
MK31				⇓Lg		Lg	Lg	10 06 22.8	
	0.3nm,0.3s,baz=2.0,slow=11,SNR=6.9								
MKAR	**Makanchi Array**	**4.67**	**178**	Pn		**Pn**	**Pn**	**10 05 10.9**	**-0.1**
	0.2nm,0.3s,baz=4.1,slow=11,SNR=12								
MKAR				Lg		Lg	Lg	10 06 21.2	
	0.4nm,0.3s,baz=4.9,slow=27,SNR=5.5								
	0.2nm,0.3s								

DNK 25 10:04:50.5±0.9,56°.52N×15°.19E,h0km,ML1.8, Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BLEU	**Blekinge**	**0.41**	**122**	*i* P		Pg		10 04 57.8	-0.5
BLEU				*i* S		Sg		10 05 03.2	-0.2
BLEU	**Blekinge**	**0.41**	**122**	P		Pg		10 04 57.8	-0.4
BLEU				S		Sg		10 05 03.4	-0.1
VXJU	**Vaexsjoe**	**0.43**	**341**	P		Pg		10 04 58.1	-0.6
VXJU				S		Sg		10 05 03.8	-0.5
DEL	**Delary**	**0.74**	**267**	*i* S		Sg		10 05 13.4	-0.7
DEL	**Delary**	**0.74**	**267**	P		Pg		10 05 04.0	-0.6
OSKU	**Oskarshamn**	**0.84**	**36**	P		Pg		10 05 05.6	-1.0
EKSU	**Eksjoe**	**1.06**	**3**	P		Pg		10 05 09.5	-1.2
GNOU	**Gnosjoe**	**1.11**	**315**	P		Pg		10 05 10.6	-1.1
BJUU	**Bjuv**	**1.29**	**251**	*i* P		Pg		10 05 14.0	-1.1
BJUU				*i* S		Sg		10 05 30.9	-1.0
BJUU	**Bjuv**	**1.29**	**251**	P		Pg		10 05 13.9	-1.3
LUNU	**Lund**	**1.32**	**229**	*i* P		Pg		10 05 15.2	-0.6
LUNU				*i* S		Sg		10 05 32.8	-0.1
LUNU	**Lund**	**1.32**	**229**	P		Pg		10 05 14.8	-1.0
VSTU	**Vaestervik**	**1.36**	**32**	P		Pg		10 05 14.9	-1.6
BSD	**Bornholm Skovb**	**1.42**	**187**	*i* P		Pn		10 05 16.0	-1.5
BSD				*i* S		Sg		10 05 35.4	-0.6
BSD				IAML				10 05 36.9	
	comp=Z,4.9nm,0.2s								
FABU	**Falkenberg**	**1.45**	**291**	*i* S		Sg		10 05 35.2	-1.7
BORU	**Boraas**	**1.73**	**311**	*i* P		Pn		10 05 21.7	-0.2
BORU				*i* S		Sn		10 05 44.6	0.0
ONAU	**Onsala**	**2.00**	**298**	*i* P		Pn		10 05 25.6	+0.1
ONAU				*i* S		Sn		10 05 51.7	+0.6

IDC 25 10:22:47.3±1.4,68°.41S×149°.73E,h0km,mb3.8/2, mbtmp4.1/3,ML4.6/1,Error ellipse: s-maj=133.9km s-min=23.9km az=71.0,Antarctica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**9.78**	**164**	Pn		Pn		10 25 09.9	+1.0
	4.9nm,0.3s,baz=334,slow=13,SNR=99								
VNDA				Sn		Sn		10 26 48.2	-11
	4.0nm,0.3s,baz=26,slow=8.8,SNR=5.8								
VNDA				Lg		Lg		10 27 56.5	
	2.9nm,0.3s,baz=246,slow=20,SNR=5.6								
	18nm,0.4s								
ASAR	**Alice Springs**	**45.79**	**340**	P		P		10 31 10.9	+0.4
	0.9nm,0.5s,baz=170,slow=8.0,SNR=8.7								
	0.9nm,0.5s								
WRA	**Warramunga Arr**	**49.41**	**341**	P		P		10 31 37.9	-0.7
	0.8nm,0.7s,baz=172,slow=7.3,SNR=5.3								
WRA				PcP		PcP		10 33 00.4	-0.5
	0.8nm,1.0s,baz=184,slow=3.3,SNR=2.3								
	0.8nm,0.7s								
YKA	**Yellowknife Ar**	**147.11**	**58**	PKPbc		PKPbc		10 42 29.5	-0.9
	0.1nm,0.6s,baz=234,slow=2.1,SNR=4.3								

*IDC **25** 10:27:29.8±0.8,55°.57N×163°.45E,h0km,mb3.7/11, mbtmp3.6/12,ML2.7/1,MS3.2/12,Error ellipse: s-maj=29.1km s-min=16.3km az=162.0*

*KRSC **25** 10:27:30.4±1.0,55°.12N×163°.69E,h41km±22km,Ml4.3*

*MOS **25** 10:27:32.1±0.7,55°.18N×163°.75E,h38km,mb3.9/1,Error ellipse: s-maj=7.7km s-min=6.0km az=52.6*

ISC 25 10:27:28.6±1.5,55°.20N±0°.04×163°.68E±0°.03,h1km±10km, n97,σ1s58/100,mb3.8/12,MS3.3/10,1C,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.12**	**335**	PN		**Pn**		**10 27 50.9**	**-0.6**
KBTR				S		**Sb**		**10 28 05.4**	**-0.5**
KBTR	**Krutoberegovo**	**1.12**	**335**	*e*P		**Pn**		**10 27 50.9**	**-0.6**
KBTR				*e*S		**Sb**		**10 28 05.4**	**-0.5**
KBG	**Krutoberegovo**	**1.19**	**333**	PN		**Pb**		**10 27 51.8**	**-0.2**
KBG				S		**Sb**		**10 28 07.3**	**-0.6**
KBG	**Krutoberegovo**	**1.19**	**333**	*e*P		**Pb**		**10 27 51.9**	**-0.2**
KBG				*e*S		**Sb**		**10 28 07.4**	**-0.6**
MKZ	**Mys Kozlova**	**1.30**	**241**	PN		**Pg**		**10 27 53.8**	**+0.3**
MKZ				S		**Sb**		**10 28 09.1**	**-1.8**
MKZ	**Mys Kozlova**	**1.30**	**241**	*e*P		**Pg**		**10 27 53.8**	**+0.3**
MKZ				*e*S		**Sb**		**10 28 09.1**	**-1.8**
BKI	**Bering**	**1.31**	**89**	PN		**Pg**		**10 27 53.9**	**+0.2**
BKI				S		**Sn**		**10 28 10.0**	**-2.2**
BKI	**Bering**	**1.31**	**89**	*e*P		**Pg**		**10 27 53.9**	**+0.2**
BKI				*e*S		**Sn**		**10 28 10.1**	**-2.2**
ZLN	**Zelenaya**	**1.83**	**298**	PN		**Pb**		**10 28 02.8**	**-0.1**
ZLN	**Zelenaya**	**1.83**	**298**	*e*P		**Pb**		**10 28 02.8**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**1.85**	**295**	PN		**Pb**		**10 28 02.7**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**1.85**	**295**	*e*P		**Pb**		**10 28 02.7**	**-0.6**
SMKR	**Semkarok**	**1.86**	**319**	PN		**Pb**		**10 28 03.0**	**-0.5**
SMKR	**Semkarok**	**1.86**	**319**	*e*P		**Pb**		**10 28 03.1**	**-0.5**
TUMD	**Tumrok D**	**1.88**	**271**	PN		**Pb**		**10 28 02.8**	**-0.9**
TUMD	**Tumrok D**	**1.88**	**271**	*e*P		**Pb**		**10 28 02.9**	**-0.9**
BZWR	**Bezymyannyi-We**	**1.96**	**294**	PN		**Pb**		**10 28 04.7**	**-0.5**
BZWR	**Bezymyannyi-We**	**1.96**	**294**	*e*P		**Pb**		**10 28 04.8**	**-0.5**
TUMR	**Tumrok**	**2.03**	**274**	PN		**Pb**		**10 28 05.3**	**-1.0**
TUMR	**Tumrok**	**2.03**	**274**	*e*P		**Pb**		**10 28 05.4**	**-1.0**
KMNR	**Kamenistaya**	**2.04**	**287**	PN		**Pb**		**10 28 05.8**	**-0.7**
KMNR	**Kamenistaya**	**2.04**	**287**	*e*P		**Pb**		**10 28 05.8**	**-0.7**
KIRR	**Kirishev**	**2.04**	**293**	PN		**Pb**		**10 28 06.3**	**-0.3**
KIRR	**Kirishev**	**2.04**	**293**	*e*P		**Pb**		**10 28 06.3**	**-0.3**
KLY	**Klyuchi**	**2.04**	**304**	PN		**Pn**		**10 28 03.6**	**-0.5**
KLY	**Klyuchi**	**2.04**	**304**	*e*P		**Pn**		**10 28 03.7**	**-0.5**
KPT	**Kopyto**	**2.11**	**293**	PN		**Pb**		**10 28 07.1**	**-0.6**
KPT	**Kopyto**	**2.11**	**293**	*e*P		**Pb**		**10 28 07.1**	**-0.6**
KOZ	**Kozyrevsk**	**2.33**	**293**	PN		**Pb**		**10 28 10.3**	**-1.0**
KOZ	**Kozyrevsk**	**2.33**	**293**	*e*P		**Pb**		**10 28 10.3**	**-1.0**
SRDR	**Sredinnyy**	**2.50**	**298**	PN		**Pb**		**10 28 12.3**	**-2.1**
SRDR	**Sredinnyy**	**2.50**	**298**	*e*P		**Pb**		**10 28 12.3**	**-2.1**
KII	**Karymskiy**	**2.72**	**246**	PN		**Pb**		**10 28 15.5**	**-2.6**
KII				S		**Sn**		**10 28 47.0**	**-0.1**
KII	**Karymskiy**	**2.72**	**246**	*e*P		**Pb**		**10 28 15.5**	**-2.6**
KII				*e*S		**Sn**		**10 28 47.0**	**-0.1**
ESO	**Esso**	**2.92**	**286**	PN		**Pn**		**10 28 17.5**	**+1.3**
ESO	**Esso**	**2.92**	**286**	*e*P		**Pn**		**10 28 17.6**	**+1.3**
SPN	**Mys Shipunski**	**3.01**	**227**	PN		**Pn**		**10 28 17.1**	**-0.3**
SPN	**Mys Shipunski**	**3.01**	**227**	*e*P		**Pn**		**10 28 17.2**	**-0.3**
SPN				*e*S		**Sn**		**10 28 49.6**	**-4.5**
NLC	**Nalytchevo**	**3.26**	**233**	PN		**Pn**		**10 28 22.5**	**+1.7**
NLC				S		**Sn**		**10 28 58.2**	**-2.0**
NLC	**Nalytchevo**	**3.26**	**233**	*e*P		**Pn**		**10 28 22.6**	**+1.7**
NLC				*e*S		**Sn**		**10 28 58.2**	**-2.0**
SDLR	**Sedlovina**	**3.41**	**238**	PN		**Pn**		**10 28 24.4**	**+1.4**
SDLR	**Sedlovina**	**3.41**	**238**	*e*P		**Pn**		**10 28 24.5**	**+1.4**
SMAR	**Somma**	**3.46**	**238**	PN		**Pn**		**10 28 25.1**	**+1.4**
SMAR	**Somma**	**3.46**	**238**	*e*P		**Pn**		**10 28 25.2**	**+1.4**
KRX	**Arik**	**3.48**	**240**	PN		**Pn**		**10 28 26.3**	**+2.3**
KRX	**Arik**	**3.48**	**240**	*e*P		**Pn**		**10 28 26.3**	**+2.3**
UGLR	**Uglovaya**	**3.48**	**237**	PN		**Pn**		**10 28 25.8**	**+1.9**
UGLR	**Uglovaya**	**3.48**	**237**	*e*P		**Pn**		**10 28 25.9**	**+1.9**
AVH	**Avacha**	**3.49**	**238**	PN		**Pn**		**10 28 26.0**	**+2.0**
AVH	**Avacha**	**3.49**	**238**	*e*P		**Pn**		**10 28 26.1**	**+2.0**
KOK	**Koryaka**	**3.52**	**239**	PN		**Pn**		**10 28 26.7**	**+2.2**
KOK	**Koryaka**	**3.52**	**239**	*e*P		**Pn**		**10 28 26.8**	**+2.2**
DALK	**Dalny**	**3.62**	**235**	PN		**Pn**		**10 28 26.8**	**+1.0**
DALK	**Dalny**	**3.62**	**235**	*e*P		**Pn**		**10 28 26.9**	**+1.0**
GNL	**Ganaly**	**3.67**	**248**	PN		**Pn**		**10 28 28.7**	**+2.1**
GNL	**Ganaly**	**3.67**	**248**	*e*P		**Pn**		**10 28 28.7**	**+2.1**
PET	**Petropavlovsk**	**3.67**	**236**	*e*PN		**Pn**		**10 28 27.5**	**+1.0**
PET				pmax		pmax			
	comp=Z,35nm,0.7s								
PET	**Petropavlovsk**	**3.67**	**236**	*e*P		**Pn**		**10 28 27.9**	**+1.4**
PET				*e*S		**Sn**		**10 29 08.1**	**-2.3**
KRMR	**Karymshinskiy**	**4.04**	**236**	PN		**Pn**		**10 28 33.1**	**+1.5**
KRMR	**Karymshinskiy**	**4.04**	**236**	*e*P		**Pn**		**10 28 33.1**	**+1.5**
PEA0B	**Petropavlovsk-**	**4.09**	**242**	⇑*i*PN		**Pn**		**10 28 34.2**	**+1.9**
PEA0B				*i* S		**Sn**		**10 29 21.3**	**+0.5**
PETK	**Petropavlovsk-**	**4.09**	**242**	Pn		**Pn**		**10 28 34.8**	**+2.4**
	comp=Z,2.4nm,0.3s,baz=77,slow=20,SNR=58								
PETK				Sn		**Sn**		**10 29 21.1**	**+0.2**
	comp=Z,5.7nm,0.3s,baz=265,slow=25,SNR=11								
	comp=Z,2.7nm,0.4s								
MTVR	**Mutnovka**	**4.24**	**232**	PN		**Pn**		**10 28 36.1**	**+1.6**
MTVR	**Mutnovka**	**4.24**	**232**	*e*P		**Pn**		**10 28 36.1**	**+1.6**
GRL	**Gorelyy**	**4.25**	**234**	PN		**Pn**		**10 28 36.5**	**+2.0**
GRL	**Gorelyy**	**4.25**	**234**	*e*P		**Pn**		**10 28 36.6**	**+2.0**
ASAK	**Asacha**	**4.44**	**233**	PN		**Pn**		**10 28 39.5**	**+2.4**
ASAK	**Asacha**	**4.44**	**233**	*e*P		**Pn**		**10 28 39.5**	**+2.4**
APC	**Apacha**	**4.47**	**242**	PN		**Pn**		**10 28 40.0**	**+2.6**
APC	**Apacha**	**4.47**	**242**	*e*P		**Pn**		**10 28 40.0**	**+2.6**
SKR	**Severo-Kuril's**	**6.43**	**228**	*e*PN		**Pn**		**10 29 04.3**	**0.0**
MA2	**Magadan**	**8.23**	**307**	LR		LR		10 32 47.9	
	comp=Z,60nm,20.9s,baz=99,slow=40								
BILL	**Bilibino**	**12.94**	**4**	*e*PN		Pn		10 30 46.1	+13
YAK	**Yakutsk**	**18.80**	**305**	LR		LR		10 37 56.5	
	comp=Z,21nm,21.9s,baz=106,slow=34								
YAK	**Yakutsk**	**18.80**	**305**	*e*P		Pn		10 31 59.3	+10
KLR	**Kul'dur**	**20.33**	**266**	LR		LR		10 41 23.3	
	comp=Z,46nm,19.5s,baz=92,slow=41								
TIXI	**Tiksi**	**22.14**	**331**	P		**P**		**10 32 25.0**	**-0.3**
	comp=Z,1.9nm,0.2s,baz=140,slow=7.7,SNR=5.7								
MJAR	**Matsushiro Arr**	**25.50**	**234**	P		**P**		**10 33 02.6**	**+4.2**
	comp=Z,1.5nm,0.5s,baz=30,slow=11,SNR=4.7								
	comp=Z,1.5nm,0.5s								
ILAR	**Eielson Array**	**25.83**	**48**	P		**P**		**10 33 01.1**	**0.0**
	comp=Z,0.9nm,0.8s,baz=243,slow=7.8,SNR=7.7								
	comp=Z,0.9nm,0.8s								
TLY	**Talaya**	**34.97**	**290**	LR		LR		10 50 33.0	
	comp=Z,60nm,20.5s,baz=42,slow=40								
SONM	**Songino Array**	**35.49**	**282**	P		**P**		**10 34 26.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=71,slow=8.0,SNR=2.3								
SONM				LR		LR		10 49 33.6	
	comp=Z,42nm,21.4s,baz=24,slow=38								
	comp=Z,0.3nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**35.49**	**175**	T		T		11 13 45.9	
	baz=358,slow=75,SNR=28								
H11N3	**WAKE ISLAND Hy**	**35.51**	**175**	T		T		11 13 43.4	
	baz=358,slow=75,SNR=18								
H11N1	**WAKE ISLAND Hy**	**35.51**	**175**	T		T		11 13 41.3	
	baz=358,slow=75,SNR=33								
YKA	**Yellowknife Ar**	**40.18**	**45**	P		**P**		**10 35 05.0**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=299,slow=8.7,SNR=1.7								
	comp=Z,0.1nm,0.4s								
ZALV	**Zalesovo Beam**	**43.42**	**302**	LR		LR		10 55 42.0	
	comp=Z,37nm,18.5s,baz=16,slow=39								
KURK	**Kurchatov**	**48.41**	**302**	P		**P**		**10 36 11.2**	**-0.7**
KURBB	**Kurchatov Arra**	**48.51**	**302**	P		**P**		**10 36 11.2**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=60,slow=7.7,SNR=6.2								
	comp=Z,1.0nm,0.5s								
MKAR	**Makanchi Array**	**49.13**	**296**	P		**P**		**10 36 14.7**	**-2.9**
	comp=Z,0.4nm,0.7s,baz=59,slow=7.4,SNR=5.7								
MKAR				LR		LR		10 58 35.3	
	comp=Z,45nm,18.7s,baz=27,slow=38								
	comp=Z,0.4nm,0.7s								
BVAR	**Borovoye Array**	**50.72**	**309**	P		**P**		**10 36 29.8**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=47,slow=11,SNR=3.8								
	comp=Z,0.4nm,0.4s								
NVAR	**Mina Array Bea**	**53.08**	**74**	P		**P**		**10 36 49.5**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=300,slow=6.7,SNR=3.7								
NVAR				LR		LR		10 56 52.7	
	comp=Z,34nm,19.0s,baz=218,slow=33								
	comp=Z,0.6nm,0.8s								
JAY	**Jayapura**	**60.55**	**207**	LR		LR		11 03 25.9	
	comp=Z,16nm,19.4s,baz=35,slow=35								
AKASG	**Mal

GEVA				S	Sg	10 58 38.9	+1.1
GEVA				IAML		10 58 46.0	
	comp=N,79nm,0.6s						
GEVA				IAML		10 58 46.0	
	comp=E,56nm,0.4s						
AKDM	**Akdamar-Van**	**1.20**	**265**	Pg	**Pn**	**10 58 22.0**	**-2.4**
AKDM				Sg	**Sb**	**10 58 38.4**	**-1.6**
SBZ	**Shahbuz**	**1.25**	**41**	P	**Pg**	**10 58 24.7**	**-0.4**
SBZ				S	**Sn**	**10 58 44.4**	**+2.2**
ORD	**Ordubad**	**1.26**	**67**	P	**Pg**	**10 58 24.6**	**-0.6**
ORD				S	**Sn**	**10 58 42.9**	**+0.6**
HYR	**Heyderabad**	**1.30**	**12**	P	**Pg**	**10 58 25.7**	**-0.3**
HYR				S	**Sn**	**10 58 45.9**	**+2.6**
ITBZ	**Tabriz**	**1.31**	**99**	Pg	**Pn**	**10 58 24.8**	**-1.1**
CUKT	**Cukurca**	**1.39**	**211**	Pn	**Pg**	**10 58 28.4**	**+0.7**
CUKT				Sn	**Sg**	**10 58 48.1**	**+2.3**
IAZR	**Azarshahr**	**1.40**	**123**	Pg	**Pg**	**10 58 27.7**	**-0.2**
IGDI	**IGDIR**	**1.46**	**347**	P	**Pg**	**10 58 28.5**	**-0.5**
IGDI				S	**Sg**	**10 58 52.2**	**+4.3**
PERV	**Siirt/Pervari-**	**1.62**	**253**	P	**Pg**	**10 58 32.8**	**+0.6**
PERV				S	**Sg**	**10 58 55.7**	**+2.4**
AGRB	**Hanur-Agry**	**1.63**	**314**	Pn	**Pn**	**10 58 30.4**	**+0.1**
DORK	**Agr/Tutak/Do**	**1.64**	**305**	P	**Pn**	**10 58 30.4**	**0.0**
DORK				S	**Sg**	**10 58 53.9**	**+0.1**
DORK				IAML		10 59 02.0	
	comp=E,26nm,0.8s						
DORK				IAML		10 59 11.0	
	comp=N,27nm,0.7s						
KOTA	**Agri, Merkez-K**	**1.69**	**324**	P	**Pb**	**10 58 32.1**	**-0.4**
KOTA				S	**Sg**	**10 58 55.9**	**+0.6**
GNI	**Garni**	**1.71**	**6**	Pn	**Pg**	**10 58 33.2**	**-0.6**
GURO	**Guroymak-BITLI**	**1.94**	**274**	Pn	**Pn**	**10 58 34.5**	**0.0**
IHRS	**Heris**	**2.00**	**93**	Pn	**Pb**	**10 58 36.8**	**-1.0**
SRTM	**Siirt_Merkez**	**2.08**	**258**	P	**Pb**	**10 58 38.8**	**-0.4**
SRTM				S	**Sb**	**10 59 07.4**	**+2.1**

*IDC **25** 10:59:28.9±6.8, 17.75S×178.78W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=299.0km s-min=35.8km az=143.0*

ISC 25 11:00:15.8±1.0, 20.8S±0.2×177.6W±0.1, h550km, n8, σ0§94/9, mb3.9/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.36**	**78**	P	**P**	**11 02 08.0**	**+0.8**
NIUE				S	**S**	**11 03 37.1**	**-1.5**
OUZ	**Omahuta**	**16.39**	**207**	P	**P**	**11 03 39.4**	**+0.6**
WCZ	**Waipu Caves**	**16.72**	**203**	P	**P**	**11 03 42.1**	**+0.3**
WIAZ	**Waiheke Island**	**17.21**	**200**	P	**P**	**11 03 46.7**	**+0.5**
HBAZ	**Herne Bay Bore**	**17.40**	**201**	P	**P**	**11 03 47.6**	**-0.3**
ASAR	**Alice Springs**	**44.87**	**257**	P	**P**	**11 07 41.3**	**-0.5**
	3.8nm,0.9s,baz=85,slow=8.4,SNR=31						
	3.8nm,0.9s						
WRA	**Warramunga Arr**	**44.99**	**262**	P	**P**	**11 07 41.7**	**-1.0**
	2.7nm,0.7s,baz=93,slow=6.7,SNR=25						
	2.7nm,0.7s						
ILAR	**Eielson Array**	**88.47**	**13**	P	**P**	**11 12 09.9**	**+0.7**
	0.1nm,0.3s,baz=204,slow=4.7,SNR=6.6						
	0.1nm,0.3s						

*NEIC **25** 11:03:35.4±1.3, 5.4N±0.1×123.7E±0.2, h567km±12km, mb4.1/21, Error ellipse: s-maj=26.3km s-min=15.5km az=64.0*

*IDC **25** 11:03:37.5±7.6, 5.47N×124.18E, h615km±129km, mb3.1/7, mbtmp4.2/7, Error ellipse: s-maj=120.7km s-min=22.7km az=70.0*

ISC 25 11:03:33.9±0.7, 5.43N±0.10×123.8E±0.1, h550km, n34, σ0§87/34, mb4.0/18, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**5.22**	**215**	P	**P**	**11 05 07.4**	**+1.8**
TNTI	**Ternate**	**5.86**	**142**	P	**P**	**11 05 13.3**	**+2.0**
KKM	**Kota Kinabalu**	**7.54**	**275**	P	**P**	**11 05 26.6**	**-0.7**
SBUM	**Sibu**	**11.89**	**256**	P	**P**	**11 06 12.8**	**+1.4**
TPUB	**Ta-pu**	**18.02**	**351**	P	**P**	**11 07 11.9**	**0.0**
MTN	**Manton Dam**	**19.57**	**158**	P	**P**	**11 07 25.3**	**-0.9**
KNRA	**Kununurra**	**21.55**	**167**	P	**P**	**11 07 43.4**	**-0.6**
MBWA	**Marble Bar**	**26.72**	**188**	P	**P**	**11 08 28.6**	**-1.2**
WB0	**Warramunga Arr**	**27.13**	**158**	P	**P**	**11 08 32.3**	**-1.2**
WB0				IAmb	IAmb	11 08 52.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**27.27**	**158**	P	**P**	**11 08 33.5**	**-1.3**
	comp=Z,2.7nm,0.5s,baz=340,slow=9.3,SNR=33						
	comp=Z,2.7nm,0.5s						
WRA	**Warramunga Arr**	**27.27**	**158**	P	**P**	**11 08 33.9**	**-0.9**
WR8	**Warramunga Arr**	**27.35**	**158**	P	**P**	**11 08 34.1**	**-1.3**
WR8				IAmb	IAmb	11 08 35.0	
	comp=Z,7.8nm,1.2s						
AS31	**Alice Springs**	**30.56**	**161**	P	**P**	**11 09 03.0**	**-0.3**
AS31				IAmb	IAmb	11 09 03.3	
	comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs**	**30.57**	**161**	P	**P**	**11 09 02.5**	**-0.9**
	comp=Z,2.2nm,0.4s,baz=338,slow=6.9,SNR=49						
	comp=Z,2.2nm,0.4s						
ASAR	**Alice Springs**	**30.57**	**161**	P	**P**	**11 09 02.9**	**-0.4**
CTAO	**Charters Tower**	**33.64**	**140**	P	**P**	**11 09 29.5**	**0.0**
CTAO				IAmb	IAmb	11 09 43.9	
	comp=Z,11nm,1.4s						
MORW	**Morawa**	**35.09**	**192**	P	**P**	**11 09 40.8**	**-0.6**
MORW				IAmb	IAmb	11 09 50.7	
	comp=Z,20nm,1.4s						
FORT	**Forrest**	**36.24**	**174**	P	**P**	**11 09 50.5**	**-0.4**
FORT				IAmb	IAmb	11 09 50.8	
	comp=Z,9.3nm,1.1s						
INKA	**Innaminka**	**36.83**	**154**	P	**P**	**11 09 56.9**	**+1.1**
INKA				IAmb	IAmb	11 09 57.2	
	comp=Z,1.6nm,0.5s						
BBOO	**Buckleboo**	**39.78**	**164**	P	**P**	**11 10 19.9**	**+0.2**
BBOO				IAmb	IAmb	11 11 03.2	
	comp=Z,12nm,1.4s						
STKA	**Stephens Creek**	**40.81**	**157**	P	**P**	**11 10 27.2**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=350,slow=9.3,SNR=7.2						
	comp=Z,2.2nm,0.5s						
STKA	**Stephens Creek**	**40.81**	**157**	P	**P**	**11 10 28.2**	**+0.3**
SONM	**Songino Array**	**44.80**	**343**	P	**P**	**11 10 59.2**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=163,slow=9.0,SNR=4.8						
	comp=Z,0.7nm,0.8s						
SONM	**Songino Array**	**44.80**	**343**	P	**P**	**11 10 59.4**	**+0.4**
MK31	**Makanchi Array**	**54.49**	**326**	P	**P**	**11 12 10.4**	**+0.2**
MKAR	**Makanchi Array**	**54.49**	**326**	P	**P**	**11 12 10.4**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=120,slow=8.6,SNR=26						
	comp=Z,1.7nm,0.6s						
MAKZ	**Makanchi**	**54.68**	**326**	P	**P**	**11 12 11.6**	**+0.2**
KDJ	**Kajisay**	**55.12**	**319**	P	**P**	**11 12 15.6**	**+0.8**
KDJ				IAmb	IAmb	11 12 57.5	
	comp=Z,5.1nm,1.3s						
GAR	**Garm**	**58.61**	**313**	P	**P**	**11 12 39.1**	**+0.5**
GAR				IAmb	IAmb	11 12 40.8	
	comp=Z,3.1nm,0.9s						
KURBB	**Kurchatov Arra**	**58.73**	**328**	P	**P**	**11 12 39.0**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=130,slow=6.2,SNR=26						
	comp=Z,1.7nm,0.5s						
KURK	**Kurchatov**	**58.74**	**328**	P	**P**	**11 12 39.0**	**-0.1**
KURK				IAmb	IAmb	11 12 39.8	
	comp=Z,5.0nm,0.9s						
AB31	**Akbulak array**	**68.97**	**321**	P	**P**	**11 13 44.0**	**-0.3**
ABKAR	**Akbulak array**	**68.97**	**321**	P	**P**	**11 13 43.9**	**-0.4**
AKTO	**Aktyubinsk**	**70.50**	**322**	P	**P**	**11 13 52.4**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=96,slow=10,SNR=3.5						
	comp=Z,0.7nm,0.4s						

*NIED **25** 11:14:02.8, 24.39N×121.38E, h7km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr=1.67; Mθθ=0.32; Mφφ=1.35; Mrθ=0.67; Mθφ=-0.51; Mφr=0.62; Fault plane solution: M₀1.85000×10¹⁶ NP1: φs167.00000°, δ32.00000°, λ-72.00000°. NP2: φs327.00000°, δ60.00000°, λ-101.00000°.*

*BJI **25** 11:14:02.9, 24.42N×121.45E, h15km, mB5.0/39, mb4.4/68, ML5.2/12, Ms4.8/74, Ms7 4.6/69*

*ASIES **25** 11:14:02.5, 24.39N×121.42E, h10km, Mw4.6, Fault plane solution: NP1:φs135.00000°, δ39.00000°, λ-131.00000°. NP2:φs3.00000°, δ62.00000°, λ-62.00000°.*

*JMA **25** 11:14:02.8±0.1, 24.4N±0.3×121.4E±1.0, h7km±2km, MD5.1/17, MV4.8/17, TAIWAN REGION*

*TAP **25** 11:14:02.1, 24.39N×121.41E, h5km, ML5.3, C*

*NEIC **25** 11:14:03.9±1.8, 24.37N±0.03×121.45E±0.05, h10km±1km, mb5.1/222, Mwr4.8/22, Mww5.0/17, Error ellipse: s-maj=8.1km s-min=3.8km az=107.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=1.99; Mθθ=0.34; Mφφ=1.65; Mrθ=-0.06; Mθφ=-0.76; Mφr=0.15; Fault plane solution: M₀2.00000×10¹⁶ NP1:φs335.11000°, δ42.66000°, λ-90.33000°. NP2:φs155.55000°, δ47.34000°, λ-89.70000°. Principal axes: T 2.0063, Plg2.0000°, Azm245.0000°; N -0.0139, Plg0.0000°, Azm335.0000°; P -1.9924, Plg88.0000°, Azm71.0000°;*

*NEIC **25** 11:14:03.9, 24.37N×121.45E, h10km*

*NEIC **25** 11:14:03.9, 24.37N×121.45E, h12km*

*NEIC **25** 11:14:03.9, 23.77N×121.56E, h12km, Moment Tensor Solution. Duration: 1§2 Moment tensor: Scale 10¹⁶Nm; Mrr=1.40; Mθθ=0.02; Mφφ=1.38; Mrθ=-1.59; Mθφ=0.33; Mφr=3.20; Fault plane solution: M₀3.84000×10¹⁶ NP1: φs359.07000°, δ11.67000°, λ-65.93000°. NP2: φs154.55000°, δ79.36000°, λ-94.81000°. Principal axes: T 3.8370, Plg34.0000°, Azm249.0000°; N 0.0138, Plg5.0000°, Azm155.0000°; P -3.8508, Plg55.0000°, Azm59.0000°;*

*GCMT **25** 11:14:04.0±0.2, 24.35N±0.02×121.53E±0.02, h14km±1km, MW4.9/98, Moment Tensor Solution. s18,c19; s98,c132; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.22±.14; Mθθ=0.43±.07; Mφφ=1.79±.09; Mrθ=0.12±.15; Mθφ=-1.03±.04; Mφr=1.40±.18; Best double couple: M₀2.68200×10¹⁶ NP1:φs140.00000°, δ31.00000°, λ-111.00000°. NP2: φs344.00000°, δ61.00000°, λ-78.00000°. Principal axes: T 2.6910, Plg15.0000°, Azm65.0000°; N -0.0180, Plg11.0000°, Azm158.0000°; P -2.6730, Plg71.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **25** 11:14:06.2±5.1, 24.29N×121.46E, h33km±39km, mb4.5/25, mbtmp4.7/30, ML4.0/5, MS3.9/53 Error ellipse: s-maj=20.1km s-min=11.6km az=58.0*

ISC 25 11:14:03.8±0.5, 24.38N±0.010×121.42E±0.01, h11km±3km, n687, σ1§31/723, mb5.1/215, MS4.0/56, 104C-24D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNS	**Nan Shan**	**0.07**	**320**	⇓*i*P	**Pg**	**11 14 04.0**	**-2.3**
NNS				S	**Sg**	**11 14 05.0**	**-3.2**
LATG	**Datong**	**0.18**	**32**	⇑*i*P	**Pg**	**11 14 06.1**	**-1.7**
LATG				*i* S	**Sg**	**11 14 09.1**	**-1.5**
ETLH	**Xiulin Townshi**	**0.19**	**163**	⇑*i*P	**Pg**	**11 14 07.1**	**-0.8**
ETLH				S	**Sg**	**11 14 10.0**	**-0.8**
FUSS	**Fushou**	**0.21**	**230**	⇑*i*P	**Pg**	**11 14 07.0**	**-1.5**
FUSS				S	**Sg**	**11 14 10.1**	**-1.6**
NDT	**Datong Townshi**	**0.23**	**21**	⇑*i*P	**Pg**	**11 14 07.2**	**-1.5**
NDT				*eS*	**Sg**	**11 14 11.0**	**-1.0**
TWT	**Tachien**	**0.26**	**240**	⇑*i*P	**Pg**	**11 14 07.9**	**-1.4**
TWT				*eS*	**Sg**	**11 14 12.0**	**-0.9**
NACB	**Ninganchiao**	**0.26**	**143**		**Pg**	**11 14 08.6**	**-0.6**
NACB				Sg	**Sg**	**11 14 12.6**	**-0.3**
NACB	**Ninganchiao**	**0.26**	**143**	P	**Pg**	**11 14 08.7**	**-0.6**
NACB	**Ninganchiao**	**0.26**	**143**	S	**Sg**	**11 14 12.0**	**-0.9**
NACB	**Ninganchiao**	**0.26**	**143**	⇑*i*P	**Pg**	**11 14 08.6**	**-0.6**
NACB				S	**Sg**	**11 14 12.4**	**-0.4**
TDCB	**Techi**	**0.27**	**241**	⇑*i*P	**Pg**	**11 14 07.9**	**-1.6**
TDCB				S	**Sg**	**11 14 11.1**	**-2.2**
WHF	**Hehuan Shan**	**0.28**	**211**	*i* P	**Pg**	**11 14 08.4**	**-1.3**
WHF				*eS*	**Sg**	**11 14 12.4**	**-1.2**
ENTT	**Nioudou**	**0.28**	**27**	⇑*i*P	**Pg**	**11 14 08.3**	**-1.4**
YHNB	**Yeheng**	**0.29**	**351**	Pg	**Pg**	**11 14 08.3**	**-1.4**
YHNB				Sg	**Sg**	**11 14 11.8**	**-1.9**
YHNB	**Yeheng**	**0.29**	**351**	P	**Pg**	**11 14 08.5**	**-1.2**
YHNB	**Yeheng**	**0.29**	**351**	S	**Sg**	**11 14 12.4**	**-1.3**
YHNB	**Yeheng**	**0.29**	**351**	⇑*i*P	**Pg**	**11 14 08.4**	**-1.4**
YHNB				*i* S	**Sg**	**11 14 11.7**	**-1.9**
ETL	**Fush Village**	**0.29**	**141**	⇑*i*P	**Pg**	**11 14 09.0**	**-0.7**
EAHA	**Aohua**	**0.29**	**101**	⇑*i*P	**Pg**	**11 14 08.9**	**-0.9**
EAHA				S	**Sg**	**11 14 12.5**	**-1.4**
NSK	**Sanguang**	**0.29**	**349**	⇑*i*P	**Pg**	**11 14 08.5**	**-1.4**
NSK				S	**Sg**	**11 14 12.0**	**-1.9**
EHP	**Heping Village**	**0.30**	**104**	P	**Pg**	**11 14 09.3**	**-0.6**
EHP				S	**Sg**	**11 14 13.8**	**-0.2**
EWUT	**Wuta**	**0.33**	**79**	⇑*i*P	**Pg**	**11 14 09.2**	**-1.3**
EWUT				S	**Sg**	**11 14 14.0**	**-0.9**
TWD	**Chiawan**	**0.34**	**152**	⇑*i*P	**Pg**	**11 14 10.2**	**-0.5**
TWD				S	**Sg**	**11 14 15.0**	**-0.3**
LXIB	**Xiulin Townshi**	**0.36**	**181**	⇑*i*P	**Pg**	**11 14 10.2**	**-0.9**
LXIB				S	**Sg**	**11 14 15.3**	**-0.7**
NDS	**Dongshan**	**0.36**	**47**	⇑*i*P	**Pg**	**11 14 09.7**	**-1.4**
NDS				S	**Sg**	**11 14 15.6**	**-0.4**
NFF	**Wufeng Townshi**	**0.37**	**312**	⇑*i*P	**Pg**	**11 14 10.1**	**-1.2**
NFF				S	**Sg**	**11 14 14.9**	**-1.3**
NWLT	**Wulai**	**0.40**	**11**	⇑*i*P	**Pg**	**11 14 10.4**	**-1.4**
NWLT				S	**Sg**	**11 14 15.1**	**-1.9**
FUSB	**Fushanzhiwuyua**	**0.40**	**22**	⇑*i*P	**Pg**	**11 14 10.5**	**-1.4**
FUSB				S	**Sg**	**11 14 15.4**	**-1.8**
TWE	**Neicheng**	**0.40**	**34**	⇑*i*P	**Pg**	**11 14 10.7**	**-1.1**
TWE				*i* S	**Sg**	**11 14 17.7**	**+0.5**
ETM	**Tongmen**	**0.42**	**171**	P	**Pg**	**11 14 11.4**	**-0.8**
ETM				S	**Sg**	**11 14 17.0**	**-0.8**
HWA	**Hwalien**	**0.44**	**158**	⇑P	**Pg**	**11 14 12.4**	**-0.1**
HWA				*eS*	**Sb**	**11 14 19.2**	**-1.0**
TWC	**Suao**	**0.45**	**60**	⇑*i*P	**Pg**	**11 14 11.2**	**-1.4**
TWC				S	**Sg**	**11 14 18.1**	**-0.5**
WHP	**Taichung City**	**0.45**	**256**	⇑*i*P	**Pg**	**11 14 11.6**	**-1.1**
WHP				S	**Sg**	**11 14 17.4**	**-1.2**
KSHI	**Guanxi Townshi**	**0.45**	**330**	⇓*i*P	**Pg**	**11 14 12.3**	**-0.4**
KSHI				S	**Sg**	**11 14 18.4**	**-0.3**
LIOB	**Emei**	**0.45**	**305**	⇑*i*P	**Pg**	**11 14 12.0**	**-0.8**
LIOB				S	**Sg**	**11 14 18.1**	**-0.6**
NSTT	**Nanjuang**	**0.46**	**303**	⇑*i*P	**Pg**	**11 14 11.8**	**-1.0**
NSTT				S	**Sg**	**11 14 17.8**	**-1.0**
WUSB	**Renai**	**0.48**	**215**	⇑*i*P	**Pg**	**11 14 11.7**	**-1.6**
WUSB				S	**Sg**	**11 14 17.8**	**-1.9**
ILA	**Ilan**	**0.48**	**38**	P	**Pg**	**11 14 12.1**	**-1.1**
ILA				*eS*	**Sb**	**11 14 21.7**	**+0.3**
OWD	**Renai**	**0.48**	**208**	⇑*i*P	**Pg**	**11 14 11.5**	**-1.8**
OWD				S	**Sg**	**11 14 19.5**	**-0.3**
TEYL	**Yanliau Villag**	**0.54**	**163**	⇓*i*P	**Pg**	**11 14 13.5**	**-0.8**
TEYL				*eS*	**Sg**	**11 14 20.6**	**-0.9**
SBCB	**Hsinchu**	**0.57**	**316**	⇑P	**Pg**	**11 14 14.9**	**0.0**
ESL	**Shilin**	**0.57**	**179**	⇑*i*P	**Pg**	**11 14 13.9**	**-1.1**
ESL				*eS*	**Sg**	**11 14 21.1**	**-1.3**
WCS	**Beigang Elemen**	**0.57**	**235**	⇑*i*P	**Pg**	**11 14 13.6**	**-1.4**
WCS				S	**Sg**	**11 14 20.5**	**-2.0**
HSN	**Hsinchu**	**0.58**	**315**	⇓*i*P	**Pg**	**11 14 15.2**	**0.0**
HSN				*eS*	**Sg**	**11 14 23.3**	**+0.4**
TATO	**Taipei**	**0.59**	**6**	Pg	**Pg**	**11 14 14.5**	**-0.9**
TATO	**Taipei**	**0.59**	**6**	P	**Pg**	**11 14 14.9**	**-0.5**
TATO	**Taipei**	**0.59**	**6**	S	**Sg**	**11 14 22.7**	**-0.5**
TATO	**Taipei**	**0.59**	**6**	P	**Pg**	**11 14 14.8**	**-0.6**
TATO				S	**Sg**	**11 14 21.9**	**-1.3**
TWQ1	**Liyutan**	**0.59**	**267**	⇑*i*P	**Pg**	**11 14 14.9**	**-0.5**
TWQ1				*eS*	**Sg**	**11 14 22.7**	**-0.5**
NMLH	**Miaoli**	**0.59**	**285**	⇑*i*P	**Pg**	**11 14 15.4**	**0.0**
NMLH				*eS*	**Sg**	**11 14 23.3**	**0.0**
NTC	**Toucheng**	**0.60**	**38**	*eP*	**Pg**	**11 14 13.9**	**-1.5**
NTC				*eS*	**Sg**	**11 14 22.7**	**-0.7**
NSY	**Sanyi**	**0.60**	**273**	⇑*i*P	**Pg**	**11 14 15.7**	**+0.1**
NSY				S	**Sg**	**11 14 23.8**	**+0.3**
SHUL	**Shoufeng**	**0.61**	**168**	P	**Pg**	**11 14 15.4**	**-0.2**
SHUL				S	**Sg**	**11 14 23.7**	**0.0**
TWA	**Mucha**	**0.61**	**14**	⇑P	**Pg**	**11 14 14.8**	**-0.9**
TWA				S	**Sg**	**11 14 22.4**	**-1.4**
NCUH	**Zhongli**	**0.62**	**340**	*eP*	**Pg**	**11 14 16.0**	**+0.1**
NCUH				*eS*	**Sb**	**11 14 25.4**	**0.0**
NCU	**National Centr**	**0.62**	**340**	⇓P	**Pg**	**11 14 14.0**	**-1.9**
NCU				*eS*	**Sg**	**11 14 23.1**	**-1.0**
EGS		**0.65**	**45**	⇑*i*P	**Pg**	**11 14 15.3**	**-1.2**
NHY	**Taipei**	**0.67**	**12**	P	**Pg**	**11 14 16.2**	**-0.6**
NHY				S	**Sg**	**11 14 24.7**	**-0.8**
WARBT	**Fenglin Townsh**	**0.67**	**183**	⇑*i*P	**Pg**	**11 14 15.4**	**-1.3**
WARBT				S	**Sg**	**11 14 24.4**	**-1.1**
VWDT	**VWDT**	**0.68**	**202**	⇑*i*P	**Pg**	**11 14 15.1**	**-1.9**
VWDT				*eS*	**Sg**	**11 14 24.6**	**-1.3**
TEGC	**Jichi Village**	**0.68**	**171**	*eP*	**Pg**	**11 14 17.0**	**-0.1**
TIPB	**Shuangxi**	**0.69**	**32**	⇑*i*P	**Pg**	**11 14 15.8**	**-1.4**
TIPB				*eS*	**Sg**	**11 14 24.3**	**-2.0**
SMLT	**Sun Moon Lake**	**0.69**	**224**	⇑*i*P	**Pg**	**11 14 15.8**	**-1.5**
SMLT				*eS*	**Sg**	**11 14 24.4**	**-2.0**
TYC	**Yuchr**	**0.70**	**227**	⇑*i*P	**Pg**	**11 14 15.9**	**-1.6**
TYC				S	**Sg**	**11 14 24.4**	**-2.3**
TWS1	**Kuangyinshan**	**0.71**	**360**	⇑*i*P	**Pb**	**11 14 17.8**	**-0.5**
TWS1				*eS*	**Sg**	**11 14 27.2**	**+0.2**
EGFH	**Guangfu**	**0.71**	**180**	*i* P	**Pg**	**11 14 16.5**	**-1.2**
EGFH				*eS*	**Sg**	**11 14 25.9**	**-1.2**
WDJ	**Dajia District**	**0.71**	**267**	⇑*i*P	**Pb**	**11 14 18.0**	**-0.3**
WDJ				*eS*	**Sb**	**11 14 27.9**	**-0.3**
TCU	**Taichung**	**0.72**	**251**	⇑*i*P	**Pg**	**11 14 17.9**	**+0.1**
TCU				S	**Sb**	**11 14 28.2**	**-0.1**
SSLB	**Suanglung**	**0.73**	**216**	Pg	**Pg**	**11 14 15.9**	**-2.1**
SSLB				Sg	**Sg**	**11 14 24.8**	**-2.9**
SSLB	**Suanglung**	**0.73**	**216**	P	**Pg**	**11 14 16.1**	**-1.9**
SSLB	**Suanglung**	**0.73**	**216**	⇑*i*P	**Pg**	**11 14 15.9**	**-2.1**
EOS2	**EOS2**	**0.74**	**87**	⇑*i*P	**Pg**	**11 14 17.9**	**-0.2**
EOS2				*eS*	**Sb**	**11 14 29.4**	**+0.7**
NWF	**Wu-fen Shan**	**0.76**	**25**	⇑*i*P	**Pg**	**11 14 17.5**	**-1.0**
NWF				*eS*	**Sb**	**11 14 29.3**	**-0.2**
WFSB	**Wu-fen Shan**	**0.76**	**25**	⇑*i*P	**Pg**	**11 14 17.4**	**-1.0**
WFSB				*eS*	**Sb**	**11 14 28.8**	**-0.5**
YM01	**YM01**	**0.77**	**10**	⇑*i*P	**Pg**	**11 14 18.3**	**-0.5**
YM01				S	**Sg**	**11 14 27.7**	**-1.1**
NTST	**Danshui**	**0.78**	**2**	⇑*i*P	**Pb**	**11 14 18.9**	**-0.4**
NTST				S	**Sb**	**11 14 29.4**	**-0.6**
ZUZH	**Zhuzihu**	**0.78**	**8**	⇑*i*P	**Pg**	**11 14 18.4**	**-0.5**
ZUZH				S	**Sb**	**11 14 30.7**	**+0.6**
ANP	**Anpu**	**0.80**	**6**	⇑*i*P	**Pg**	**11 14 18.8**	**-0.6**
TWB1	**Santiao Chiao**	**0.81**	**40**	⇑*i*P	**Pg**	**11 14 17.7**	**-1.8**
YM08	**YM08**	**0.81**	**11**	⇑*i*P	**Pg**	**11 14 18.7**	**-0.9**
YM08				S	**Sg**	**11 14 29.1**	**-1.1**
SXI1	**Grass Mountain**	**0.82**	**30**	⇑*i*P	**Pg**	**11 14 18.5**	**-1.2**
EOS3	**EOS3**	**0.82**	**97**	⇑*i*P	**Pb**	**11 14 19.7**	**-0.3**
EOS3				*eS*	**Sb**	**11 14 31.7**	**+0.6**
TNOU	**National Taiwa**	**0.82**	**23**	⇑*i*P	**Pg**	**11 14 18.7**	**-1.1**
TNOU				*eS*	**Sb**	**11 14 31.4**	**+0.1**
WNT	**Mingjian**	**0.84**	**233**	⇑*i*P	**Pg**	**11 14 19.6**	**-0.5**
WNT				S	**Sb**	**11 14 32.4**	**+0.5**
WCHH	**Zhanghua**	**0.84**	**249**	⇑*i*P	**Pb**	**11 14 20.2**	**-0.3**
WCHH				*eS*	**Sb**	**11 14 32.1**	**+0.2**
WJS	**Zhushan**	**0.85**	**229**	⇑*i*P	**Pg**	**11 14 19.4**	**-0.8**
WJS				S	**Sb**	**11 14 31.6**	**-0.3**
WCH1	**Changhua City**	**0.86**	**249**	⇑*i*P	**Pb**	**11 14 20.7**	**0.0**
WCH1				*eS*	**Sb**	**11 14 32.9**	**+0.6**
EOS4	**EOS4**	**0.86**	**108**	⇑P	**Pg**	**11 14 20.0**	**-0.3**
WHYT	**Xinyi Township**	**0.86**	**217**	⇑*i*P	**Pg**	**11 14 18.5**	**-2.0**
EHY	**Hungye**	**0.88**	**186**	⇑P	**Pg**	**11 14 19.2**	**-1.7**
EHY				*eS*	**Sg**	**11 14 30.7**	**-1.6**
HGSD	**Ruisui**	**0.89**	**180**	P	**Pg**	**11 14 20.2**	**-0.8**
EHYH	**Wanrong**	**0.89**	**185**	*eP*	**Pg**	**11 14 19.6**	**-1.5**
EHYH				*eS*	**Sg**	**11 14 31.7**	**-1.0**
TWY	**Chenhua**	**0.90**	**10**	⇑*i*P	**Pg**	**11 14 20.6**	**-0.6**
YUS	**Yu-Shan**	**0.99**	**206**	⇑*i*P	**Pg**	**11 14 20.6**	**-2.4**
YULB	**Yu-li**	**0.99**	**187**	Pg	**Pg**	**11 14 21.2**	**-1.8**
YULB				Sg	**Sg**	**11 14 34.6**	**-1.4**
YULB	**Yu-li**	**0.99**	**187**	P	**Pg**	**11 14 21.7**	**-1.3**
YULB	**Yu-li**	**0.99**	**187**	⇑*i*P	**Pg**	**11 14 21.3**	**-1.8**
YULB				S	**Sg**	**11 14 34.8**	**-1.2**
TWF1	**Yuli**	**1.03**	**186**	⇑*i*P	**Pg**	**11 14 22.0**	**-1.8**
TWF1				*eS*	**Sg**	**11 14 36.0**	**-1.2**
ALS	**Alishan**	**1.04**	**213**	⇑*i*P	**Pg**	**11 14 22.1**	**-1.8**
ALS				*eS*	**Sb**	**11 14 37.8**	**0.0**
EYUL	**Yuli**	**1.04**	**185**	*eP*	**Pg**	**11 14 22.7**	**-1.1**
EYUL				*eS*	**Sg**	**11 14 36.8**	**-0.5**
CHN5	**Tsauling**	**1.04**	**221**	⇑P	**Pg**	**11 14 22.9**	**-1.0**
CHN5				*eS*	**Sb**	**11 14 38.0**	**+0.4**
WDL	**Douliou City**	**1.05**	**231**	*eP*	**Pb**	**11 14

WDGT eS Sn 11 15 02.6 +0.9
WSSB Gushan 2.04 212 eP Pb 11 14 39.7 -1.2
WSSB eS Sb 11 15 07.0 +0.8
SSPT Xinbi 2.05 203⇓eP Pb 11 14 40.4 -0.7
SSPT eS Sg 11 15 09.2 -0.5
EAST Anshuo 2.06 195 eP Pn 11 14 39.1 +0.7
TAW Tawu 2.08 194 eP Pb 11 14 41.1 -0.4
IRIF Iriomote-Funau 2.10 91 *i*P Pn 11 14 38.6 -0.4
IRIF A A 11 14 38.6
comp=N,23nm,1.8s,comp=E,15nm,3.0s
IRIF eS Sb 11 15 06.7 -1.5
SCZT Fangliau 2.13 200⇈eP Pb 11 14 41.0 -1.5
SCZT eS Sb 11 15 10.5 +1.5
VCHM Qimei 2.17 238 eP Pn 11 14 40.0 +0.1
VCHM eS Sn 11 15 08.1 +1.3
PTMZ Houxiangcun 2.19 288 eP Pn 11 14 38.1 -2.1
HATJ Hateruma jima 2.20 98 eP Pn 11 14 41.5 +1.2
HATJ A A 11 14 41.5
comp=N,50nm,3.0s,comp=E,49nm,2.7s
MATB Ma-tsu 2.21 323 eP Pn 11 14 38.1 -2.3
MATB eS Sn 11 15 07.2 -0.6
SLIU Shizi 2.23 195 eP Pb 11 14 42.9 -1.3
WLCH Liuqiu 2.24 206 eP Pb 11 14 43.2 -1.1
TWP Hsiaoliuchiu 2.25 206 eP Pb 11 14 43.2 -1.4
LAY Lan-yu 2.34 177 eP Pn 11 14 40.9 -1.4
JKRS Kuro-shima 2.37 93 P Pn 11 14 43.0 +0.4
JKRS A A 11 14 43.0
comp=N,46nm,5.4s,comp=E,38nm,5.6s
LYUB Lan-yu 2.38 176 eP Pn 11 14 40.7 -2.0
SMST Manzhou Townsh 2.42 193 eP Pb 11 14 45.6 -1.7
HEN Hengchun 2.45 195 eP Pb 11 14 45.9 -2.1
JIJ Ishigaki jima 2.48 90 P Pn 11 14 43.6 -0.6
JIJ A A 11 14 43.6
comp=N,10.0nm,5.1s,comp=E,6.0nm,7.2s
TWK1 Hengchun 2.50 193 eP Pn 11 14 46.3 +1.9
TWKBT Hengchun 2.50 193 eP Pn 11 14 46.4 +1.9
LYJJ Jianjiangzhen 2.63 325⇓eP Pn 11 14 43.8 -2.4
QZH2 Quanzhou 2.63 283 Pn Pn 11 14 44.8 -1.4
QZH2 Sn Sn 11 15 17.0 -1.1
QZH2 smax smax
comp=E,13μm,0.8s
QZH2 smax smax
comp=E,8μm,0.9s
JISG Ishigakijimahi 2.64 85 P Pn 11 14 45.9 -0.5
KNM Kinmen 2.73 271 eP Pn 11 14 47.6 +0.1
MHZQ Yeshan 2.76 309 eP Pn 11 14 45.9 -2.1
KNMB Chin-men Tao 2.77 272 Pn 11 14 46.4 -1.8
KNMB Chin-men Tao 2.77 272 eP Pn 11 14 46.3 -1.8
XPSS Dashiqiu 2.77 337 eP Pn 11 14 46.1 -2.0
JTJ Tarama 3.00 84 P Pn 11 14 51.4 +0.1
JTJ A A 11 14 51.4
comp=N,15nm,7.0s,comp=E,13nm,1.7s
AXDP Jialang 3.18 280 eP Pn 11 14 52.8 -1.1
AXDP eS Sn 11 15 31.7 -0.1
ZPLA Ao Xicun 3.38 263 eP Pn 11 14 55.1 -1.5
JIKM Ikemajima 3.52 80 P Pn 11 14 59.7 +1.2
JMJ2 Miyako jima3 3.57 84 P Pn 11 15 00.5 +1.3
JOGS Gusukube 3.65 83 P Pn 11 15 01.8 +1.6
JOGS A A 11 15 01.8
comp=N,15nm,4.0s,comp=E,21nm,4.4s
DSXP Dongshan 3.71 260 eP Pn 11 14 59.9 -1.2
SXFK Yanhouchang 3.96 301 eP Pn 11 15 03.3 -1.2
JOW Kunigami 6.65 67 Pn Pn 11 15 41.9 +0.4
comp=E,6.3nm,0.3s,baz=155,slow=14,SNR=14
comp=E,34nm,0.5s
JOW Kunigami 6.65 67 Pn 11 15 42.3 +0.8
SSE Sheshan 6.69 358 P Pn 11 15 41.8 -0.2
SSE S Sn 11 16 59.3 +1.1
SSE smax smax
comp=E,170nm,1.4s
SSE smax smax
comp=E,280nm,1.2s
SSE LR LR
comp=E,1μm,10.3s
SSE LR LR
comp=E,2μm,10.2s
HKPS Hong Kong Po S 7.01 254 Pn 11 15 46.0 -0.5
GZH2 Guangzhou 7.14 266 P Pn 11 15 47.8 -0.4
GZH2 S Sn 11 17 08.3 -1.1
GZH2 smax smax
comp=E,3μm,1.0s
GZH2 smax smax
comp=E,1μm,1.1s
NJ2 Nanjing 7.97 344⇓*i*P Pn 11 15 57.0 -2.6
NJ2 S Sn 11 17 24.0 -5.7
NJ2 pmax pmax
comp=E,94nm,0.7s
NJ2 smax smax
comp=E,1μm,1.0s
NJ2 smax smax
comp=E,570nm,1.1s
NJ2 LR LR
comp=E,3μm,11.4s
NJ2 LR LR
comp=E,2μm,10.0s
NJ2 LR LR
comp=E,4μm,9.2s
CNSH ChangSha 8.51 298 P Pn 11 16 06.0 -1.0
CNSH S Sn 11 17 41.8 -1.2
CNSH smax smax
comp=E,1μm,1.1s
CNSH smax smax
comp=E,2μm,1.1s
CNSH LR LR
comp=E,6μm,9.6s
CNSH LR LR
comp=E,6μm,6.9s
CNSH LR LR
comp=E,5μm,9.6s
WHN Wuhan 8.78 316 P Pn 11 16 08.3 -2.4
WHN S Sn 11 17 45.3 -4.3
WHN LR LR
comp=E,10μm,5.6s
WHN LR LR
comp=E,9μm,6.7s
WHN LR LR
comp=E,15μm,8.2s
GULI GuiLin 10.08 277 Pn Pn 11 16 28.8 +0.2
GULI Sn Sn 11 18 20.5 -1.3
GULI smax smax
comp=N,490nm,1.8s
GULI smax smax
comp=E,410nm,1.1s
TGY Tagaytay City 10.24 183 LR LR 11 21 03.4
comp=E,629nm,19.9s,baz=208,slow=41
QIZ Qiongzhong 12.01 246 P Pn 11 16 55.5 +0.5
QIZ S Sn 11 19 09.3 +0.3
QIZ pmax pmax
comp=E,230nm,5.1s
QIZ LR LR
comp=E,2μm,8.3s
QIZ LR LR
comp=E,960nm,8.2s
QIZ LR LR
comp=E,1μm,9.8s
JNU Nakatsue 12.02 41 Pn Pn 11 16 59.8 +4.6
comp=E,0.3nm,0.3s,baz=230,slow=8.5,SNR=11
JNU LR LR 11 21 56.2
comp=E,513nm,20.7s,baz=226,slow=39
ENH Enshi 12.12 302 Pn 11 16 56.9 +0.4
LYN LuoYang 12.78 324 P Pn 11 17 10.0 +4.5
LYN S Sn 11 19 36.0 +8.3
LYN pmax pmax
comp=E,12nm,0.6s
LYN LR LR
comp=E,6μm,6.5s
LYN LR LR
comp=E,4μm,6.9s
LYN LR LR
comp=E,8μm,9.3s
KSAR Wonju Array Be 14.14 22 Pn 11 17 24.8 +0.7
KSRS Korea Array 14.16 22 Pn Pn 11 17 25.6 +1.2
comp=E,0.8nm,0.3s,baz=208,slow=13,SNR=10.0
KSRS LR LR 11 23 18.4
comp=E,306nm,19.4s,baz=200,slow=39
comp=E,3.8nm,0.5s
HNS HongShan 14.19 338⇈P P 11 17 30.3 -1.9
HNS pmax pmax
comp=E,24nm,1.3s
HNS LR LR
comp=E,2μm,10.8s
HNS LR LR
comp=E,2μm,11.4s
HNS LR LR
comp=E,2μm,11.5s

KS19 Wonju Array Si 14.19 21 Pn 11 17 25.1 +0.3
JMN Monobe 14.32 47 Pn Pn 11 17 26.3 -0.2
DL2 Dalian 14.48 1 P P 11 17 39.5 +4.1
DL2 eS S 11 20 26.5 -2.4
DL2 pmax pmax
comp=Z,68nm,1.2s
DL2 LR LR
comp=N,2μm,13.2s
DL2 LR LR
comp=E,1μm,14.2s
DL2 LR LR
comp=Z,2μm,13.2s
XAN Xi'an 14.54 314 P Pn 11 17 29.8 +0.2
XAN S Sn 11 20 13.0 +2.2
XAN pmax pmax
comp=Z,15nm,1.0s
XAN pmax pmax
comp=Z,130nm,4.3s
XAN LR LR
comp=Z,3μm,7.0s
XAN LR LR
comp=Z,3μm,9.3s
XAN LR LR
comp=Z,4μm,9.6s
BJI2 Beijing 16.20 345 P P 11 17 56.5 +1.9
BJI2 pmax pmax
comp=Z,4.0nm,1.0s
BJI2 LR LR
comp=Z,570nm,10.9s
BJI2 LR LR
comp=Z,260nm,12.2s
BJI2 LR LR
comp=Z,580nm,11.8s
BJT Baijiatuan 16.20 345 P P 11 17 58.3 +3.7
CD2 Chengdu 16.94 296 P P 11 18 03.0 +0.1
CD2 pP pP 11 18 05.8 -0.6
CD2 sP sP 11 18 06.8 -1.6
CD2 S Sn 11 21 04.8 -4.4
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 pmax pmax
comp=Z,160nm,6.6s
CD2 LR LR
comp=Z,4μm,9.1s
CD2 LR LR
comp=Z,3μm,6.6s
CD2 LR LR
comp=Z,4μm,10.4s
KMI2 Kunming 16.98 276 P P 11 18 06.3 +2.7
KMI2 pmax pmax
comp=Z,12nm,1.3s
KMI2 LR LR
comp=Z,2μm,6.2s
KMI2 LR LR
comp=Z,4μm,7.5s
KMI2 LR LR
comp=Z,3μm,9.3s
SNY Shenyang 17.49 5⇓P P 11 18 15.8 +7.0
SNY pmax pmax
comp=Z,16nm,1.2s
DAV Davao City (W) 17.67 166 P P 11 18 10.8 -0.2
PZH PanZhiHua 17.90 281 P P 11 18 15.8 +2.2
PZH S Sn 11 21 29.0 -3.7
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,280nm,7.5s
PZH LR LR
comp=Z,1μm,6.9s
PZH LR LR
comp=Z,2μm,10.6s
PZH LR LR
comp=Z,2μm,14.1s
JHJ Hachijo jima 2 18.28 57 P P 11 18 18.4 +0.7
comp=Z,6.9nm,0.3s,baz=234,slow=3.5,SNR=8.8
JHJ LR LR 11 25 10.6
comp=Z,393nm,21.1s,baz=298,slow=36
comp=Z,236nm,0.8s
JHJ2 Mitsune 18.30 57 P 11 18 21.6 +3.8
HHC Hu-ho-hao-te 18.38 336⇈*i*P P 11 18 22.0 +3.3
HHC PP PnPn 11 18 34.8 +4.5
HHC S Sn 11 21 45.0 +1.0
HHC pmax pmax
comp=Z,19nm,1.3s
HHC pmax pmax
comp=Z,430nm,8.1s
HHC LR LR
comp=Z,1μm,11.0s
HHC LR LR
comp=Z,330nm,15.2s
HHC LR LR
comp=Z,1μm,10.8s
MAJO Matsushiro 18.84 46 P P 11 18 21.5 -2.3
MJB9 Matsu-Tunnel 18.84 46 P P 11 18 22.0 -1.7
MJAR Matsushiro Arr 18.84 46 P P 11 18 22.8 -1.0
comp=Z,0.1nm,0.3s,baz=241,slow=9.7,SNR=9.7
MJAR LR LR 11 26 32.5
comp=Z,388nm,18.2s,baz=235,slow=40
comp=Z,3.5nm,0.8s
MJAR Matsushiro Arr 18.84 46 P Pn 11 18 25.0 +0.7
KKM Kota Kinabalu 18.91 196 P P 11 18 24.5 -0.3
KKM IAmb IAmb 11 18 34.6
comp=Z,137nm,1.4s
KKM Kota Kinabalu 18.91 196 P Pn 11 18 26.6 +1.2
comp=Z,2μmcomp=Z,77nm,1.7s
BTO2 Baotou 18.96 332 eP Pn 11 18 27.5 +1.6
BTO2 pP sP 11 18 31.0 +0.4
BTO2 sP pP 11 18 34.5 +5.6
BTO2 PP PnPn 11 18 44.3 +5.9
BTO2 S Sn 11 21 57.8 -0.4
BTO2 sS S 11 22 02.5 +1.9
BTO2 pmax pmax
comp=Z,33nm,1.5s
BTO2 pmax pmax
comp=Z,820nm,5.6s
BTO2 LR LR
comp=Z,4μm,10.3s
BTO2 LR LR
comp=Z,2μm,9.7s
BTO2 LR LR
comp=Z,5μm,11.0s
LZH Lanzhou 19.11 312 eP Pn 11 18 29.5 +1.7
LZH sP sP 11 18 38.3 +6.0
LZH sS sS 11 22 12.3 +2.5
LZH pmax pmax
comp=Z,24nm,1.4s
LZH pmax pmax
comp=Z,510nm,7.9s
LZH LR LR
comp=Z,2μm,11.0s
LZH LR LR
comp=Z,2μm,9.3s
LZH LR LR
comp=Z,3μm,10.0s
LZDM Lanzhou Array 19.15 311 P Pn 11 18 29.6 +1.2
baz=124,slow=14
LZDM LR LR 11 26 24.6
comp=Z,382nm,19.9s,baz=65,slow=38
comp=Z,1.7nm,0.3s
MYLDM Lahad Datu 19.30 189 Pn 11 18 33.7 +3.7
MYLDM IAmb IAmb 11 18 42.4
comp=Z,115nm,1.5s
MYLDM Lahad Datu 19.30 189 P P 11 18 28.9 0.0
comp=Z,62nm,1.2s
CN2 Changchun 19.65 9 eP Pn 11 18 33.8 -0.1
CN2 epP sP 11 18 37.3 -0.5
CN2 esP pP 11 18 41.0 +4.8
CN2 eS S 11 22 12.8 -1.3
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,800nm,15.0s
CN2 LR LR
comp=Z,2μm,15.0s
CN2 LR LR
comp=Z,1μm,11.1s
XLT XiLinHaoTe 19.95 349 eP Pn 11 18 37.5 -0.2
XLT pmax pmax
comp=Z,24nm,1.2s
XLT pmax pmax
comp=Z,390nm,4.7s
XLT LR LR
comp=Z,61nm,8.4s
XLT LR LR
comp=Z,480nm,9.2s
XLT LR LR
comp=Z,580nm,9.2s
TNCH TengChong 20.82 277⇓P P 11 18 43.5 -2.1
TNCH PP PnPn 11 19 04.0 +0.2
TNCH pmax pmax
comp=Z,47nm,0.9s
TNCH pmax pmax
comp=Z,860nm,4.6s
TNCH LR LR
comp=Z,5μm,10.8s
TNCH LR LR
comp=Z,1μm,6.8s
TNCH LR LR
comp=Z,2μm,12.6s
MDJ Mudanjiang 21.25 16 P P 11 18 49.2 -0.7
MDJ Mudanjiang 21.25 16 P P 11 18 50.8 +0.8
MDJ pmax pmax
comp=Z,6.0nm,1.3s
MDJ pmax pmax
comp=Z,380nm,5.3s
MDJ LR LR
comp=Z,700nm,16.9s
MDJ LR LR
comp=Z,740nm,15.4s
MDJ LR LR
comp=Z,980nm,15.4s
USRK Usuriysk Ar. 21.57 21 P P 11 18 54.5 +1.2
comp=Z,4.9nm,0.9s,baz=189,slow=7.9,SNR=8.8
comp=Z,4.9nm,0.9s
CHTO Chiang Mai 21.61 260 P 11 18 56.7 +2.6
CHTO Chiang Mai 21.61 260 P P 11 18 57.6 +3.6
CHTO S Sn 11 23 00.5 -1.6
CHTO Chiang Mai 21.61 260 P P 11 18 55.7 +1.6
CM31 Chiang Mai Arr 21.73 259 P P 11 18 58.6 +3.3
CMAR Chiang Mai Arr 21.73 259 LR LR 11 26 58.7
comp=Z,576nm,20.3s,baz=75,slow=36
CMAR Chiang Mai Arr 21.73 259 P P 11 18 58.0 +2.7
BNX BinXian 21.85 11⇓P P 11 18 56.0 -0.3
BNX S S 11 22 59.0 +1.4
BNX pmax pmax
comp=Z,5.0nm,1.0s
BNX pmax pmax
comp=Z,280nm,6.0s
BNX LR LR
comp=Z,640nm,11.5s
BNX LR LR
comp=Z,620nm,10.7s
BNX LR LR
comp=Z,860nm,12.1s
SBUM Sibu 23.55 204 P 11 19 13.8 -0.6
SBUM IAmb IAmb 11 19 16.0
comp=Z,55nm,1.0s
SBUM Sibu 23.55 204 P P 11 19 14.2 -0.2
comp=Z,57nm,1.0s
GTOI Gorontalo 23.66 176 P P 11 19 13.8 -1.6
comp=Z,55nm,1.0s
GTA2 Gaotai 23.68 315 eP P 11 19 15.5 -0.1
GTA2 PP PnPn 11 19 47.3 +4.4
GTA2 pmax pmax
comp=Z,5.0nm,1.0s
GTA2 pmax pmax
comp=Z,420nm,6.5s
GTA2 LR LR
comp=Z,810nm,15.3s
GTA2 LR LR
comp=Z,660nm,15.6s
GTA2 LR LR
comp=Z,610nm,14.9s
MRSI Marisa 23.77 179 P P 11 19 17.3 +0.8
comp=Z,34nm,0.7s
GUMO Guam 24.59 112 LR LR 11 27 05.7
comp=Z,186nm,22.0s,baz=311,slow=32
APSI Ampana 25.15 179 P P 11 19 28.7 -0.4
comp=Z,817nmcomp=Z,86nm,1.1s
HILR Hailar Array B 25.16 357 P P 11 19 30.0 +0.9
comp=Z,6.3nm,0.8s,baz=172,slow=12,SNR=5.8
comp=Z,6.3nm,0.8s
LUWI Luwuk 25.31 177 P P 11 19 32.3 +1.7
comp=Z,2μmcomp=Z,138nm,1.1s
GOMU GeErMu 25.73 303 P P 11 19 34.8 0.0
GOMU PcP PcP 11 23 05.5 +0.6
GOMU S S 11 24 03.0 -0.9
GOMU pmax pmax
comp=Z,18nm,1.0s
GOMU LR LR
comp=Z,2μm,14.3s
GOMU LR LR
comp=Z,850nm,13.8s
GOMU LR LR
comp=Z,930nm,14.7s
ULN Ulaanbaatar 26.06 338 P P 11 19 37.7 +0.3
ULN IAmb IAmb 11 19 43.2
comp=Z,25nm,0.9s
ULN Ulaanbaatar 26.06 338 P P 11 19 38.0 +0.6
ULN Ulaanbaatar 26.06 338 P P 11 19 36.7 -0.7
comp=Z,120nm,1.0s
KLR Kul'dur 26.09 15 LR LR 11 30 44.0
comp=Z,288nm,18.6s,baz=201,slow=38
ASAJ Asahikawa 26.20 36 LR LR 11 30 42.1
comp=Z,315nm,19.4s,baz=236,slow=38
HEH HeiHe 26.24 9 eP P 11 19 39.8 +1.0
HEH pP pP 11 19 42.5 -0.2
HEH pmax pmax
comp=Z,13nm,1.1s
HEH pmax pmax
comp=Z,360nm,4.7s
HEH LR LR
comp=Z,580nm,16.1s
HEH LR LR
comp=Z,600nm,13.0s
HEH LR LR
comp=Z,960nm,10.9s
SONM Songino Array 26.27 337 P P 11 19 39.4 +0.2
comp=Z,19nm,1.2s,baz=158,slow=9.1,SNR=68
SONM LR LR 11 30 17.1
comp=Z,122nm,20.1s,baz=150,slow=37
comp=Z,19nm,1.2s
SONM Songino Array 26.27 337 P 11 19 39.4 +0.2
SONM IAmb IAmb 11 19 45.5
comp=Z,34nm,1.1s
SANI Sanana 26.65 170 P P 11 19 42.0 -0.8
comp=Z,17nm,0.9s
SHL Shillong 26.78 279 P P 11 19 44.4 +0.3
SHL IAmb IAmb 11 20 03.4
comp=Z,36nm,1.0s
SHL Shillong 26.78 279 P P 11 19 45.7 +1.5
SNR=14
BRDH Bariadhala 27.33 273 LR LR 11 31 14.1
comp=Z,439nm,21.1s,baz=50,slow=38
LSA Lhasa 27.43 288 P P 11 19 47.8 -2.5
LSA LR LR
comp=Z,1μm,14.4s
LSA LR LR
comp=Z,440nm,17.4s
IPM Ipoh 27.88 228 P P 11 19 53.4 -0.5
NLAI Namlea 28.01 168 P P 11 19 54.3 -0.7
comp=Z,75nm,0.7s
YSS Yuzhno-Sakhali 28.24 32 P P 11 19 58.9 +2.1
YSS IAmb IAmb 11 20 15.6
comp=Z,24nm,1.0s
KRAI Karang Ratu 28.36 165 P P 11 19 57.1 -1.0
BBKI Banjar Baru 28.41 194 P P 11 19 58.2 -0.4
KAPI Kappang 29.27 183 P P 11 20 05.9 -0.3
KAPI IAmb IAmb 11 20 06.7
comp=Z,27nm,1.3s
TLY Talaya 30.47 338 LR LR 11 34 00.9
comp=Z,165nm,20.8s,baz=142,slow=39
TLY Talaya 30.47 338 P P 11 20 17.0 +0.4
TLY Talaya 30.47 338 P P 11 20 16.4 -0.2
PSI Prapat 30.53 229 P P 11 20 19.5 +1.9
comp=Z,15nm,0.9s
RPSI Rantau Prapat 30.61 229 P P 11 20 17.9 -0.2
BKNI Bangkinang 31.01 223 P P 11 20 21.5 -0.2
EVN Everest 31.20 284 P P 11 20 23.1 -0.8
MNSI Mandailing Nat 31.58 225 P P 11 20 26.5 -0.1
PPI Padang Panjang 32.02 223 P P 11 20 30.9 +0.4
comp=Z,1μmcomp=Z,40nm,1.6s
JAY Jayapura 32.65 142 LR LR 11 31 05.0
comp=Z,274nm,21.8s,baz=9.0,slow=31
MMRI Maumere 32.83 179 P P 11 20 36.4 -1.2
BLJI Banyuglugur 32.84 194 P P 11 20 37.6 0.0
comp=Z,2μmcomp=Z,59nm,0.6s
EDFI Ende, Flores 32.93 180 P P 11 20 36.9 -1.7
comp=Z,511nmcomp=Z,46nm,1.1s
NGJI Ngawi 33.02 198 P P 11 20 40.3 +1.0

KHKI **Kahang-Kahang** 33.04 191 P P 11 20 40.6 +1.2
comp=Z,56nm,1.3s
KLSI **Kalsi** 33.16 212 P P 11 20 41.2 +0.7
TWSI **Taliwang, Sumb** 33.22 188 P P 11 20 39.5 -1.5
comp=Z,47nm,1.1s
MDSI **Maura Dua** 33.25 213 P P 11 20 41.4 +0.1
comp=Z,29nm,1.1s
SJI **Sawahan** 33.29 198 P P 11 20 41.2 -0.5
comp=Z,2µmcomp=Z,75nm,1.1s
SNJI **Sawahan-Nganju** 33.33 198 P P 11 20 42.5 +0.3
CTJI **Waduk Cacaban** 33.41 202 P P 11 20 43.4 +0.8
WMQ **Urumqi** 33.67 314 eP P 11 20 47.5 +2.6
WMQ pmax pmax
comp=Z,16nm,1.3s
WMQ LR LR
comp=Z,510nm,6.9s
WMQ LR LR
comp=Z,540nm,7.5s
WMQ LR LR
comp=Z,230nm,9.5s
KPJI **Karang Pucung** 33.80 203 P P 11 20 47.0 +1.0
comp=Z,1µmcomp=Z,76nm,1.4s
LEM **Lembang** 33.82 205 LR LR 11 36 04.8
comp=Z,82nm,19.1s,baz=26,slow=39
DBJI **Dramaga** 33.92 207 P P 11 20 48.3 +1.2
BATI **Baumata** 34.45 176 LR LR 11 37 38.4
comp=Z,146nm,18.5s,baz=326,slow=41
BATI **Baumata** 34.45 176 P P 11 20 50.2 -1.5
comp=Z,48nm,0.9s
YAK **Yakutsk** 38.05 6 LR LR 11 38 45.1
comp=Z,278nm,20.6s,baz=182,slow=39
YAK **Yakutsk** 38.05 6 P P 11 21 21.0 -1.0
YAK IAmb IAmb 11 21 31.5
comp=Z,18nm,0.7s
MTN **Manton Dam** 38.20 165 P P 11 21 22.3 -1.4
MTN IAmb IAmb 11 21 35.2
comp=Z,38nm,1.1s
MK31 **Makanchi Array** 38.35 316 P P 11 21 25.0 +0.2
MKAR **Makanchi Array** 38.35 316 P P 11 21 25.1 +0.3
comp=Z,16nm,0.7s,baz=107,slow=9.8,SNR=105
MKAR PcP PcP 11 23 37.0 -1.4
comp=Z,2.7nm,0.8s,baz=102,slow=5.0,SNR=4.0
MKAR LR LR 11 38 24.8
comp=Z,164nm,19.1s,baz=111,slow=38
comp=Z,16nm,0.7s
MKAR **Makanchi Array** 38.35 316 P 11 21 25.0 +0.3
MKAR PcP PcP 11 23 37.5 -1.0
KDU **Kakadu** 38.39 162 P P 11 21 25.3 -0.1
comp=Z,16nm,1.2s
MAKZ **Makanchi** 38.55 316 P 11 21 27.0 +0.5
SHLS **Shalkode** 39.10 309 eP P 11 21 29.5 -1.8
UZB **Uzynbulak** 39.41 309 eP P 11 21 34.6 +0.7
PETK **Petropavlovsk-** 39.58 34 LR LR 11 37 34.6
comp=Z,154nm,21.3s,baz=230,slow=36
SATY **Saty** 39.83 309 eP P 11 21 38.1 +0.7
ZAA0 **Zalesovo Array** 40.20 327 P P 11 21 39.3 -0.8
ZALV **Zalesovo Beam** 40.20 327 P P 11 21 39.5 -0.5
comp=Z,15nm,0.7s,baz=111,slow=6.5,SNR=27
ZALV LR LR 11 38 13.8
comp=Z,106nm,20.1s,baz=120,slow=36
comp=Z,15nm,0.7s
ZALV **Zalesovo Beam** 40.20 327 P 11 21 39.3 -0.8
TDK **Taldyqorghan** 40.33 312 eP P 11 21 42.1 +0.7
comp=Z,10nm,0.6s
KDJ **Kajisay** 40.51 307 P P 11 21 43.4 +0.3
MA2 **Magadan** 40.72 22 LR LR 11 38 33.7
comp=Z,77nm,18.1s,baz=226,slow=36
MA2 **Magadan** 40.72 22 P P 11 21 44.3 0.0
comp=Z,6.7nm,0.5s
MDOK **Medeo** 40.82 308 eP P 11 21 46.3 +0.7
TNSS **Tian-Shan** 40.87 308 eP P 11 21 46.7 +0.4
AAA **Alma-Ata** 40.93 309 eP P 11 21 47.1 +0.7
comp=Z,11nm,0.5s
KSH2 **Kashi** 41.24 302 P P 11 21 51.0 +1.9
KSH2 pmax pmax
comp=Z,10.0nm,1.0s
KSH2 LR LR
comp=Z,760nm,15.5s
KSH2 LR LR
comp=Z,310nm,14.8s
KSH2 LR LR
comp=Z,450nm,15.1s
KUU **Kurty** 41.49 309 eP P 11 21 51.7 +0.8
PMG **Port Moresby** 41.94 140 P 11 21 54.9 0.0
PMG IAmb IAmb 11 21 57.6
comp=Z,51nm,1.2s
PMG **Port Moresby** 41.94 140 P P 11 21 54.6 -0.3
comp=Z,28nm,1.0s
KURK **Kurchatov** 42.08 320 P 11 21 55.9 +0.3
KURK **Kurchatov** 42.08 320 P P 11 21 55.9 +0.3
KURBB **Kurchatov Arra** 42.10 320 P P 11 21 56.0 +0.2
comp=Z,6.8nm,1.0s,baz=116,slow=7.4,SNR=39
KURBB LR LR 11 39 05.1
comp=Z,90nm,20.4s,baz=181,slow=36
comp=Z,6.8nm,1.0s
PALK **Pallekele** 42.50 253 LR LR 11 39 50.0
comp=Z,282nm,21.1s,baz=58,slow=36
AAK **Ala-Archa** 42.56 307 LR LR 11 41 28.2
comp=Z,231nm,20.4s,baz=90,slow=38
AAK **Ala-Archa** 42.56 307 P P 11 22 01.2 +1.3
NIL **Nilore** 42.80 294 P P 11 22 02.0 +0.2
COEN **Coen** 43.63 149 P P 11 22 09.9 +1.4
comp=Z,34nm,1.0s
GAR **Garm** 45.30 301 IAmb IAmb 11 22 54.4
comp=Z,30nm,1.2s
MBWA **Marble Bar** 45.30 182 P P 11 22 20.8 -1.0
comp=Z,43nm,1.4s
MBWA **Marble Bar** 45.30 182 P 11 22 20.5 -1.3
MBWA **Marble Bar** 45.30 182 P P 11 22 19.8 -2.0
KK31 **Karatay Array** 45.52 307 P 11 22 25.4 +1.9
KKAR **Karatay Array** 45.52 307 P 11 22 23.9 +0.4
WB0 **Warramunga Arr** 45.67 163 IAmb IAmb 11 22 26.6
comp=Z,28nm,1.1s
PSAC1 **Pilbara Seismi** 45.67 182 P P 11 22 23.2 -1.5
comp=Z,51nm,1.2s
WB9 **Warramunga Ar** 45.69 163 P P 11 22 21.8 -3.1
PSAC2 **Pilbara Seismi** 45.70 182 P P 11 22 23.5 -1.5
comp=Z,48nm,1.0s
PSA00 **Pilbara Seismi** 45.71 182 P P 11 22 23.6 -1.4
comp=Z,64nm,1.3s
PSA00 **Pilbara Seismi** 45.71 182 P P 11 22 23.3 -1.7
PSA00 **Pilbara Seismi** 45.71 182 P 11 22 22.7 -2.3
PSA00 IAmb IAmb 11 22 26.0
comp=Z,35nm,0.9s
PSAB3 **Pilbara Seismi** 45.73 182 P P 11 22 23.6 -1.6
comp=Z,62nm,1.3s
IUG **Iuzhnay** 45.76 306 eP P 11 22 26.2 +0.7
comp=Z,17nm,1.1s
WR1 **Warramunga Ar** 45.82 163 P P 11 22 25.1 -0.8
WRA **Warramunga Arr** 45.82 163 P P 11 22 24.4 -1.6
comp=Z,21nm,1.1s,baz=344,slow=8.4,SNR=31
WRA PcP PcP 11 24 01.4 -2.0
comp=Z,1.5nm,0.6s,baz=342,slow=3.3,SNR=5.1
comp=Z,21nm,1.1s
WB2 **Warramunga Arr** 45.83 163 P P 11 22 25.3 -0.7
WR0 **Warramunga Ar** 45.89 163 P P 11 22 25.2 -1.3
BRLS **Borolday** 46.01 307 eP P 11 22 28.7 +1.4
CHM **Chimkent** 46.10 306 eP P 11 22 28.8 +0.7
comp=Z,5.2nm,0.4s
CHGR **Chuyangaron** 46.18 301 IAmb IAmb 11 22 44.0
comp=Z,14nm,0.8s
KBL **Kabul** 46.27 295 P 11 22 31.0 +1.2
KBL IAmb IAmb 11 22 36.1
comp=Z,22nm,0.9s
KBL **Kabul** 46.27 295 P P 11 22 31.3 +1.5
SNR=12
SHAA **Shahritus** 46.98 299 IAmb IAmb 11 22 37.4
comp=Z,50nm,1.1s
GIRL **Giralia** 47.27 189 P P 11 22 37.8 +0.6
comp=Z,86nm,1.4s
TIXI **Tiksi** 47.48 3 LR LR 11 44 19.7
comp=Z,305nm,19.2s,baz=202,slow=38
TIXI **Tiksi** 47.48 3 P P 11 22 37.2 -1.2
TIXI IAmb IAmb 11 22 51.1
comp=Z,25nm,1.4s
BVAR **Borovoye Array** 47.66 321 P P 11 22 38.9 -1.2
comp=Z,7.1nm,0.6s,baz=111,slow=8.1,SNR=14
BVAR LR LR 11 42 31.6
comp=Z,90nm,18.7s,baz=96,slow=36
comp=Z,7.1nm,0.6s
BORK **Borovoye** 47.70 321 P 11 22 40.7 +0.3
BORK IAmb IAmb 11 22 46.5
comp=Z,18nm,0.9s
MTSU **Mount Surprise** 47.80 150 P P 11 22 42.3 +0.9
comp=Z,11nm,0.9s
QIS **Mount Isa** 48.05 157 P P 11 22 42.8 -0.6
comp=Z,20nm,0.9s
SHEM **Shemya Is, Ala** 48.54 40 LR LR 11 44 29.7
comp=Z,82nm,20.5s,baz=46,slow=38
ASAR **Alice Springs** 49.28 165 P P 11 22 51.5 -1.3
comp=Z,9.9nm,1.0s,baz=341,slow=6.3,SNR=53
ASAR PcP PcP 11 24 13.8 -1.9
comp=Z,1.5nm,0.6s,baz=342,slow=3.1,SNR=6.1
comp=Z,9.9nm,1.0s
ASAR **Alice Springs** 49.28 165 P P 11 22 52.1 -0.7
WRKA **Warakurna** 49.58 172 P P 11 22 54.6 -0.5
comp=Z,12nm,1.0s
CTA **Charters Tower** 50.39 149 LR LR 11 45 35.1
comp=Z,25nm,19.9s,baz=322,slow=38
CTAO **Charters Tower** 50.39 149 P P 11 23 00.7 -0.7
CTAO IAmb IAmb 11 23 19.5
comp=Z,32nm,1.6s
MEEK **Meekatharra** 50.80 183 P P 11 23 02.8 -1.5
comp=Z,36nm,1.1s
BILL **Bilibino** 51.42 20 P 11 23 08.3 -0.3
MORW **Morawa** 53.40 186 P P 11 23 22.5 -1.1
comp=Z,32nm,1.2s
MORW **Morawa** 53.40 186 IAmb IAmb 11 23 23.0
comp=Z,29nm,1.0s
AB31 **Akbulak array** 53.46 314 IAmb IAmb 11 23 25.8
comp=Z,18nm,1.0s
ABKAR **Akbulak array** 53.46 314 P 11 23 24.3 +0.4
AKTO **Aktyubinsk** 54.78 316 LR LR 11 46 47.6
comp=Z,150nm,21.9s,baz=107,slow=36
INKA **Innaminka** 55.07 159 P 11 23 34.9 -0.9
ARTI **Arti** 55.17 323 P P 11 23 35.0 -1.3
comp=Z,12nm,0.8s,baz=122,slow=2.7,SNR=11
ARTI LR LR 11 48 13.2
comp=Z,121nm,18.3s,baz=122,slow=37
comp=Z,12nm,0.8s
ARTI **Arti** 55.17 323 P P 11 23 36.3 0.0
ARTI IAmb IAmb 11 23 36.8
comp=Z,15nm,0.7s
FORT **Forrest** 55.22 173 P P 11 23 36.7 -0.1
comp=Z,28nm,0.9s
FORT **Forrest** 55.22 173 IAmb IAmb 11 23 38.7
comp=Z,22nm,0.9s
QLP **Quilpie** 55.26 155 P P 11 23 38.8 +1.6
comp=Z,20nm,1.1s
KMBL **Kambalda** 55.44 180 P P 11 23 37.7 -0.7
comp=Z,13nm,1.3s
KLBR **Kellerberrin** 55.77 184 P P 11 23 39.0 -1.8
comp=Z,52nm,1.0s
JLN **Jalan Bani Buh** 56.59 281 P P 11 23 48.2 +1.2
WBK **Wadi Bani Khal** 56.86 282 P P 11 23 50.7 +1.7
WSAR **Wadi Sarin** 57.01 283 P P 11 23 51.6 +1.7
SNR=5.0
NWAO **Narrogin (SRO)** 57.13 184 P P 11 23 50.0 -0.5
comp=Z,72nm,1.3s
NWAO **Narrogin (SRO)** 57.13 184 P 11 23 50.2 -0.3
NWAO **Narrogin (SRO)** 57.13 184 P P 11 23 49.9 -0.5
SMDO **Samad** 57.57 283 P P 11 23 56.0 +1.9
SNR=5.4
JMDO **Jalal Madar** 57.70 282 P P 11 23 55.3 +0.4
HOQ **Hoqain** 58.09 284 P P 11 23 59.0 +1.4
SNR=5.6
BANOM **Banah** 58.40 286 P P 11 24 01.5 +1.7
BSY **Bisya** 58.41 283 P P 11 24 01.0 +1.1
BBOO **Buckleboo** 58.56 166 P P 11 23 59.0 -1.6
comp=Z,14nm,1.9s
BBOO **Buckleboo** 58.56 166 IAmb IAmb 11 24 09.9
comp=Z,46nm,1.7s
ASHO **Ashiyiah** 58.92 285 P P 11 24 06.0 +2.6
SNR=5.2
STKA **Stephens Creek** 59.18 160 P P 11 24 03.8 -1.0
comp=Z,42nm,0.9s
STKA **Stephens Creek** 59.18 160 P P 11 24 02.7 -2.1
comp=Z,6.7nm,0.8s,baz=329,slow=7.5,SNR=11
STKA LR LR 11 52 33.1
comp=Z,35nm,20.6s,baz=202,slow=39
comp=Z,6.7nm,0.8s
STKA **Stephens Creek** 59.18 160 P P 11 24 03.9 -0.9
ALNE **Al Ain** 59.35 284 P P 11 24 08.1 +1.7
SNR=6.6
KIRV **Kirov** 60.18 325 LR LR 11 51 46.3
comp=Z,95nm,18.2s,baz=95,slow=38
CMSA **Cobar Meteorol** 60.26 156 P P 11 24 10.0 -2.3
comp=Z,8.9nm,1.6s
ANM **Nome** 61.05 28 P 11 24 18.4 +1.1
ANM IAmb IAmb 11 24 20.9
comp=Z,11nm,1.1s
SHAO **Shalim** 61.19 278 P P 11 24 20.0 +1.0
F15K **North Star Dit** 61.43 27 IAmb IAmb 11 24 23.3
comp=Z,13nm,1.3s
DOK **Doka** 62.35 279 P P 11 24 28.1 +1.2
WHFO **Wadi Hawf** 62.89 278 P P 11 24 30.3 -0.3
C18K **Utukok River** 62.94 24 IAmb IAmb 11 24 50.9
comp=Z,21nm,1.9s
E18K **Tukpahlearik C** 63.12 25 IAmb IAmb 11 24 34.7
comp=Z,21nm,1.7s
H17K **Granite Mounta** 63.40 28 IAmb IAmb 11 24 54.2
comp=Z,15nm,1.4s
ABTO **Aybut** 63.50 278 P P 11 24 35.0 +0.4
G18K **Tagagawik** 63.90 27 IAmb IAmb 11 24 39.5
comp=Z,22nm,1.7s
D19K **Kuna River** 64.06 24 IAmb IAmb 11 24 53.3
comp=Z,9.2nm,0.8s
E19K **Redstone River** 64.42 25 IAmb IAmb 11 24 42.7
comp=Z,42nm,1.9s
D20K **Etivluk River** 64.61 24 IAmb IAmb 11 24 56.8
comp=Z,12nm,1.1s
F20K **Avaraart Lake** 65.03 25 IAmb IAmb 11 24 47.7
comp=Z,15nm,1.6s
B21K **Ikpikpuk River** 65.28 23 IAmb IAmb 11 24 52.0
comp=Z,16nm,0.9s
J19K **Poorman** 65.30 29 IAmb IAmb 11 24 48.8
comp=Z,17nm,1.3s
KBZ **Khabaz** 65.52 309 P P 11 24 46.2 -1.1
comp=Z,12nm,0.8s,baz=102,slow=2.5,SNR=13
KBZ LR LR 11 56 20.3
comp=Z,115nm,18.8s,baz=118,slow=39
comp=Z,12nm,0.8s
B22K **Teshekpuk Lake** 65.64 22 IAmb IAmb 11 24 54.1
comp=Z,10nm,0.8s
TOO **Toolangi** 65.66 159 P P 11 24 48.0 -0.1
F21K **Alatna River** 65.89 25 IAmb IAmb 11 25 40.2
comp=Z,19nm,1.8s
D22K **Ayikyak River** 66.03 23 IAmb IAmb 11 24 56.5
comp=Z,15nm,1.0s
E22K **Anaktuvuk Pass** 66.42 24 IAmb IAmb 11 25 02.8
comp=Z,12nm,0.9s
C23K **Itkillik River** 66.65 22 IAmb IAmb 11 25 13.7
comp=Z,18nm,1.3s
D23K **Nanushuk River** 66.74 23 IAmb IAmb 11 24 58.6
comp=Z,14nm,1.0s
H22K **Ishtalitna Cre** 66.88 26 IAmb IAmb 11 25 06.1
comp=Z,25nm,1.5s
E23K **Chandalar** 67.25 24 IAmb IAmb 11 25 17.8
comp=Z,9.0nm,1.0s
MLY **Manley** 67.27 27 IAmb IAmb 11 25 18.3
comp=Z,16nm,1.3s
C24K **Franklin Bluff** 67.33 22 IAmb IAmb 11 25 15.4
comp=Z,22nm,1.3s
D24K **Happy Valley** 67.37 23 IAmb IAmb 11 25 02.7
comp=Z,9.5nm,0.8s
OBN **Obninsk** 67.48 322 P P 11 24 59.0 -0.6
comp=Z,33nm,0.4s
KDAK **Kodiak Island** 67.62 35 LR LR 11 57 08.9
comp=Z,76nm,18.3s,baz=266,slow=38
I23K **Minto, Yukon-K** 67.83 27 IAmb IAmb 11 25 08.7
comp=Z,16nm,1.5s
NEA2 **Nenana** 68.05 28 IAmb IAmb 11 25 09.9
comp=Z,19nm,1.2s
G24K **Hadweenzic Riv** 68.30 25 IAmb IAmb 11 25 17.3
comp=Z,16nm,1.2s
RAYN **Ar Rayn** 68.50 287 P 11 25 07.4 +0.7
RAYN IAmb IAmb 11 25 08.8
comp=Z,19nm,1.1s
RAYN **Ar Rayn** 68.50 287 P P 11 25 07.1 +0.5
E25K **Arctic Village** 68.73 24 IAmb IAmb 11 25 19.4
comp=Z,13nm,1.4s
F25K **Christian Rive** 68.82 24 IAmb IAmb 11 25 21.4
comp=Z,7.1nm,0.8s
ILAR **Eielson Array** 68.94 27 P P 11 25 07.3 -1.3
comp=Z,0.6nm,0.5s,baz=293,slow=7.1,SNR=14
ILAR LR LR 11 58 19.8
comp=Z,35nm,18.9s,baz=234,slow=38
comp=Z,0.6nm,0.5s
C27K **Jago River** 69.05 22 IAmb IAmb 11 25 22.0
comp=Z,11nm,0.9s
BMAR **Burnt Mountain** 69.25 24 P 11 25 11.1 +0.4
MSVF **Nonsavu** 69.28 122 P 11 25 10.7 -0.9
MSVF IAmb IAmb 11 25 16.7
comp=Z,21nm,1.1s
SPITS **Spitsbergen Ar** 69.33 348 P P 11 25 10.7 -0.3
comp=Z,7.3nm,0.8s,baz=81,slow=5.2,SNR=4.0
SPITS LR LR 11 58 25.3
comp=Z,45nm,18.7s,baz=48,slow=38
comp=Z,7.3nm,0.8s
F26K **Sheenjek River** 69.36 24 IAmb IAmb 11 25 22.9
comp=Z,33nm,1.9s
ARCES **ARCESS Array B** 69.43 338 P P 11 25 11.4 -0.3
comp=Z,5.9nm,0.9s,baz=59,slow=5.4,SNR=7.2
comp=Z,5.9nm,0.9s
K24K **Donnelly Dome** 69.63 28 IAmb IAmb 11 25 19.1
comp=Z,18nm,0.8s
I27K **Kandik River** 70.88 26 IAmb IAmb 11 25 42.7
comp=Z,10nm,1.0s
M26K **Nabesna, AK** 71.21 29 IAmb IAmb 11 25 28.5
comp=Z,10nm,0.8s
FIA1 **FINESS Array S** 71.38 330 P 11 25 23.8 +0.1
FINES **FINESS Array B** 71.38 330 P P 11 25 23.5 -0.1
comp=Z,25nm,0.8s,baz=76,slow=8.0,SNR=54
comp=Z,25nm,0.8s
FINES **FINESS Array B** 71.38 330 P P 11 25 23.8 +0.1
BCAR **Beaver Creek A** 71.55 28 P P 11 25 24.5 -0.2
I28M **Miner Creek** 71.59 26 IAmb IAmb 11 25 40.3
comp=Z,13nm,1.1s
G29M **Pine Creek** 71.86 24 IAmb IAmb 11 25 40.5
comp=Z,14nm,0.9s
F30M **Barrier River** 72.43 23 IAmb IAmb 11 25 43.1
comp=Z,16nm,1.0s
G30M **tAoh Zraii Nji** 72.50 24 IAmb IAmb 11 25 41.0
comp=Z,24nm,1.3s
EPYK **Eagle Plains** 72.53 24 IAmb IAmb 11 25 44.1
comp=Z,12nm,0.9s
J29N **Klondike Camp** 72.61 27 IAmb IAmb 11 25 45.3
comp=Z,16nm,1.2s
AK09 **Malin Array Si** 72.85 318 P P 11 25 32.1 -0.6
AK03 **Malin Array Si** 72.86 318 P P 11 25 31.6 -1.1
AKASG **Malin Array Be** 72.86 318 P P 11 25 32.4 -0.4
comp=Z,4.8nm,0.7s,baz=61,slow=5.4,SNR=33
comp=Z,4.8nm,0.7s
AKASG **Malin Array Be** 72.86 318 P P 11 25 32.2 -0.6
AKASG IAmb IAmb 11 25 33.7
comp=Z,33nm,1.4s
AKBB **Malin Array Si** 72.86 318 P P 11 25 31.0 -1.7
AK08 **Malin Array Si** 72.87 318 P P 11 25 32.2 -0.5
AK01 **Malin Array Si** 72.88 318 P P 11 25 32.0 -0.8
KIEV **Kiev** 72.88 318 P 11 25 31.8 -1.0
KIEV **Kiev** 72.88 318 P P 11 25 31.0 -1.8
comp=Z,77nm,1.3s
AK10 **Malin Array Si** 72.88 318 P P 11 25 31.9 -0.9
AK02 **Malin Array Si** 72.89 318 P P 11 25 31.9 -1.0
AK04 **Malin Array Si** 72.89 318 P P 11 25 32.0 -0.9
AK05 **Malin Array Si** 72.90 318 P P 11 25 32.0 -1.0
AK11 **Malin Array Si** 72.91 318 P P 11 25 32.0 -1.0
AK23 **Malin Array Si** 72.91 318 P P 11 25 32.0 -1.0
AK06 **Malin Array Si** 72.92 318 P P 11 25 32.1 -0.9
AK07 **Malin Array Si** 72.92 318 P P 11 25 32.1 -1.0
AK12 **Malin Array Si** 72.92 318 P P 11 25 32.1 -1.0
AK15 **Malin Array Si** 72.93 318 P P 11 25 32.2 -0.9
AK22 **Malin Array Si** 72.94 318 P P 11 25 32.2 -1.0
AK16 **Malin Array Si** 72.95 318 P P 11 25 32.3 -0.9
AK18 **Malin Array Si** 72.95 318 P P 11 25 32.3 -1.0
AK21 **Malin Array Si** 72.95 318 P P 11 25 32.3 -1.0
INK **Inuvik** 72.96 22 LR LR 12 03 18.0
comp=Z,110nm,19.0s,baz=12,slow=40
AK14 **Malin Array Si** 72.96 318 P P 11 25 32.3 -1.0
AK17 **Malin Array Si** 72.97 318 P P 11 25 32.4 -1.0
AK20 **Malin Array Si** 72.98 318 P P 11 25 32.5 -0.9
AK19 **Malin Array Si** 72.99 318 P P 11 25 32.5 -1.0
AK13 **Malin Array Si** 72.99 318 P P 11 25 32.5 -1.0
ASF **Jabal al Asfar** 73.06 298 LR LR 12 02 25.5
comp=Z,73nm,18.1s,baz=24,slow=40
I30M **Mount Dempster** 73.08 26 IAmb IAmb 11 25 45.3
comp=Z,15nm,1.3s
K29M **Barlow Dome** 73.11 27 IAmb IAmb 11 25 58.6
comp=Z,24nm,1.6s
L29M **L29M** 73.11 28 IAmb IAmb 11 25 39.8
comp=Z,16nm,1.1s
KIRS **Kirsehir-Merke** 73.20 306 ⇓P P 11 25 35.7 +0.6
F31M **Tsiigehtchic** 73.22 23 IAmb IAmb 11 25 34.7
comp=Z,46nm,1.9s
BR131 **Keskin Array S** 73.23 306 IAmb IAmb 11 25 40.1
comp=Z,20nm,1.0s
BR131 **Keskin Array S** 73.23 306 P P 11 25 36.3 +1.0
SNR=9.7
BRTR **Keskin Array B** 73.23 306 P P 11 25 35.8 +0.5
comp=Z,7.2nm,0.8s,baz=102,slow=4.9,SNR=23
BRTR LR LR 12 00 33.6
comp=Z,98nm,19.9s,baz=107,slow=38
comp=Z,7.2nm,0.8s
BRTR **Keskin Array B** 73.23 306 P 11 25 35.3 0.0
BR104 **Keskin Array S** 73.23 306 P P 11 25 35.3 0.0
comp=Z,129nmcomp=Z,14nm,1.1s
G31M **Satah River** 73.23 24 IAmb IAmb 11 25 44.6
comp=Z,46nm,1.9s
BR106 **Keskin Array S** 73.24 306 P P 11 25 35.4 0.0
comp=Z,141nmcomp=Z,16nm,1.1s
BR105 **Keskin Array S** 73.25 306 P P 11 25 35.4 0.0
comp=Z,145nmcomp=Z,17nm,1.1s
MI28 **Mi28,Pidlybu** 73.73 319 P P 11 25 36.3 -1.6
MAYO **Mayo, Yukon** 73.88 27 IAmb IAmb 11 25 46.6
comp=Z,23nm,0.8s
M30M **Minto, Yukon** 73.88 28 IAmb IAmb 11 25 52.8
comp=Z,26nm,1.6s
MMAI **Mount Meron Ar** 73.99 299 LR LR 12 02 52.0
comp=Z,96nm,21.5s,baz=80,slow=40
LUBAR **Lubar, Ukraine** 74.00 318 P P 11 25 38.6 -0.9
SORM **Soroca** 74.21 316 ⇓P P 11 25 40.7 0.0
SORM **Soroca** 74.21 316 P P 11 25 40.0 -0.7
PABE **Paberze** 74.31 324 P 11 25 40.8 -0.4
RNPP9 **Sopachiv** 74.63 320 P P 11 25 42.7 -0.4
RNPP8 **Varash** 74.68 320 P P 11 25 43.2 -0.2
RNPP5 **Staryi Chortor** 74.70 320 P P 11 25 43.3 -0.2
CSS **Mathiatis** 74.98 302 IAmb IAmb 11 25 50.0
comp=Z,31nm,1.0s
CSS **Mathiatis** 74.98 302 P P 11 25 45.4 -0.1
comp=Z,31nm,1.1s
HORU **Horodok** 75.05 317 P P 11 25 45.2 -0.4
TPGR **Topolog** 75.25 313 ⇑P P 11 25 47.2 +0.3
KMPD **K-Podol'skiy** 75.26 317 P P 11 25 45.8 -0.9
KMPD P P 11 25 46.0 -0.8
SUW **Suwalki** 75.27 323 eP P 11 25 46.5 -0.2
SUW **Suwalki** 75.27 323 P 11 25 46.6 -0.2
TIRR **Tirgusor** 75.39 312 P P 11 25 45.9 -1.7
comp=Z,25nm,1.8s
BORA **Eskisehir** 75.50 307 IAmb IAmb 11 25 52.7
comp=Z,27nm,1.1s
TESR **Tescani** 75.85 315 ⇑P P 11 25 50.7 +0.4
TESR **Tescani** 75.85 315 P P 11 25 50.0 -0.2
comp=Z,26nm,1.1s
VRI **Vrincioaia** 76.02 314 ⇓P P 11 25 52.0 +0.8
VRI **Vrincioaia** 76.02 314 P P 11 25 51.5 +0.3
comp=Z,43nm,1.3s
YLV **Yalova** 76.05 308 P P 11 25 51.3 -0.3
comp=Z,39nm,1.2s
KSV **Kosov** 76.21 317 P P 11 25 51.0 -1.3
BUR08 **Bucovina Ar. S** 76.37 316 IAmb IAmb 11 25 54.8
comp=Z,17nm,1.1s
BURAR **Bucovina Array** 76.37 316 ⇑P P 11 25 53.7 +0.4
BURAR **Bucovina Array** 76.37 316 P P 11 25 53.2 -0.1
BURAR IAmb IAmb 11 25 55.0
comp=Z,11nm,1.0s
ISR **Istrita** 76.41 313 P P 11 25 53.7 +0.2
comp=Z,40nm,0.7s
STNU **Starunia** 76.42 317 P P 11 25 53.5 +0.1
TURR **Turia** 76.42 315 ⇓P P 11 25 54.5 +0.9
MORS **Morshin** 76.64 318 P P 11 25 54.9 +0.3
MLR **Muntele Rosu** 76.67 314 ⇑P P 11 25 55.8 +0.7
MLR **Muntele Rosu** 76.67 314 IAmb IAmb 11 25 56.6
comp=Z,16nm,0.9s
MLR **Muntele Rosu** 76.67 314 P P 11 25 55.2 +0.1
comp=Z,20nm,1.5s
DOPR **Dopca** 76.86 315 ⇑P P 11 25 56.6 +0.7
SHIU **Shidnytsya** 76.93 318 P P 11 25 56.7 +0.4
LOZB **Loznitsa** 77.00 312 ⇑P P 11 25 57.6 +0.8
BAND **Balkesir-Ban** 77.03 308 ⇑P P 11 25 57.7 +0.6
MEZ **Mezhgor'ye** 77.10 317 P P 11 25 57.4 +0.1
KWP **Kalwaria Pacla** 77.17 319 eP P 11 25 58.0 +0.3
KWP **Kalwaria Pacla** 77.17 319 P P 11 25 57.6 -0.1
comp=Z,81nm,1.3s
BEL **Belsk** 77.43 321 eP P 11 25 59.7 +0.7
BRIU **Brid** 77.47 317 P P 11 26 00.3 +1.0
HFS **Hagfors** 77.50 331 P P 11 25 58.9 -0.4
comp=Z,19nm,0.8s,baz=87,slow=6.1,SNR=20
HFS LR LR 12 03 44.2

comp=Z,118nm,19.6s,baz=74,slow=38
comp=Z,19nm,0.8s

ARR	Arges	77.57	314	⇑P	P	11 26 00.9 +0.9
ELND	Elena	77.65	312	⇑P	P	11 26 01.1 +0.6
TNR	Turnu Rosu	77.70	315	⇑P	P	11 26 01.5 +0.8
BERU	Beregovo	77.74	317	P	P	11 26 01.3 +0.5
HOLU	Holmets	77.79	318	P	P	11 26 01.5 +0.4
MARR	Marisel-Cluj	78.05	316	⇑P	P	11 26 03.7 +0.9
LOT	Lotru	78.10	315	⇑P	P	11 26 03.3 +0.2
NB2	NORSAR Subarra	78.15	332	P	P	11 26 02.2 -0.7

comp=Z,9.7nm,0.8s,baz=61,slow=5.6

NOA	NORSAR Array B	78.15	332	P	P	11 26 02.6 -0.3

comp=Z,19nm,0.9s,baz=59,slow=5.6,SNR=34
comp=Z,19nm,0.9s

NC204	NORSAR Array S	78.22	333	IAmb	IAmb	11 26 08.2

comp=Z,24nm,1.0s

DRGR		78.26	316	⇑P	P	11 26 04.2 +0.3
EZN	Ezine	78.49	308	P	P	11 26 05.5 +0.3

comp=Z,24nm,1.3s

RDO	Rodnopi	78.55	310	IAmb	IAmb	11 26 06.6

comp=Z,29nm,1.2s

OJC	Ojcow	78.66	320	*e*P	P	11 26 06.5 +0.6
OJC	Ojcow	78.66	320	P	P	11 26 06.2 +0.3

comp=Z,76nm,1.0s

DLBC	Dease Lake	78.66	31	LR	LR	12 04 07.7

comp=Z,63nm,18.2s,baz=296,slow=38

JMIC	Jan Mayen	78.69	345	LR	LR	12 02 53.5

comp=Z,103nm,21.2s,baz=264,slow=37

NIE	Niedzica	78.69	319	*e*P	P	11 26 07.1 +1.0
NIE	Niedzica	78.69	319	P	P	11 26 06.3 +0.1

comp=Z,12nm,1.2s

GZR	Gura Zlata	78.77	315	⇑P	P	11 26 07.2 +0.5
KECS	Kecovo	78.97	318	*e*P	P	11 26 08.9 +1.3
HERR	Herculane	79.21	314	⇑P	P	11 26 09.6 +0.6
LANS	Liptovska Anna	79.30	319	*e*P	P	11 26 10.9 +1.4
KARP	Karpathos	79.49	304	P	P	11 26 10.4 -0.4

comp=Z,1μmcomp=Z,105nm,1.5s

PSZ	Piszkesteto	79.56	318	⇓P	P	11 26 11.9 +0.9
PSZ	Piszkesteto	79.56	318	IAmb	IAmb	11 26 12.6

comp=Z,30nm,1.2s

MDVR	Moldovita	79.70	314	⇓P	P	11 26 12.2 +0.4
STEB	Steborice	79.96	320	*e*P	P	11 26 13.7 +0.6
MORC	Moravsky Berou	80.17	320	⇓P	P	11 26 14.8 +0.6
MORC	Moravsky Berou	80.17	320	IAmb	IAmb	11 26 15.8

comp=Z,23nm,1.1s

MORC	Moravsky Berou	80.17	320	*e*P	P	11 26 14.5 +0.3
KSP	Ksiaz	80.41	322	*e*P	P	11 26 15.9 +0.5
KSP	Ksiaz	80.41	322	P	P	11 26 15.8 +0.4

comp=Z,49nm,1.0s

JAVC	Velka Javorina	80.49	319	*e*P	P	11 26 17.7 +1.7
DPC	Dobruska-Polom	80.61	321	*e*P	P	11 26 17.1 +0.5
DPC	Dobruska-Polom	80.61	321	P	P	11 26 17.1 +0.5

comp=Z,25nm,1.5s

UPC	Upice	80.72	321	*e*P	P	11 26 17.5 +0.4
MODS	Modra-Piesok	80.94	319	*e*P	P	11 26 19.7 +1.3
MORH	Mrgy, Hungar	81.06	317	⇑P	P	11 26 19.5 +0.5
MORH	Mrgy, Hungar	81.06	317	P	P	11 26 19.2 +0.2

comp=Z,23nm,1.1s

LIT	Litokhoron	81.09	310	IAmb	IAmb	11 26 19.0

comp=Z,23nm,1.0s

KRUC	Moravsky	81.16	320	*e*P	P	11 26 19.9 +0.4
MPLH	Magyarpolny	81.32	318	P	P	11 26 20.6 +0.2

comp=Z,103nm,1.2s

BRG	Berggiesshubel	81.71	322	⇑*i*P	P	11 26 22.9 +0.5
BRG				Amp		11 26 23.6

comp=Z,11nm,0.9s

PRU	Pruhonice	81.80	321	*e*P	P	11 26 23.3 +0.5
RONA	Rosalia, Austr	81.83	319	*i* P	P	11 26 23.9 +0.7

comp=Z,15nm,1.2s

CONA	Conrad Observa	81.99	319	*i* P	P	11 26 24.9 +0.9

comp=Z,17nm,1.1s,SNR=7.4

CLL	Collm	82.02	323	P	P	11 26 23.5 -0.5
CLL	Collm	82.02	323	*i* P	P	11 26 24.0 0.0

comp=Z,28nm,0.9s

CLL				L	L	12 08 00.0

comp=Z,100nm,18.6s

HSKC	Hora Svate Kat	82.13	322	*e*P	P	11 26 24.8 +0.2
ZVC	Zvikov	82.26	321	*e*P	P	11 26 25.7 +0.4
CKRC	Cesky Krumlov	82.48	320	*e*P	P	11 26 27.1 +0.6
ARSA	Arzberg	82.51	319	*i* P	P	11 26 27.2 +0.5

comp=Z,9.0nm,1.2s

BBB	Bella Bella	82.69	36	LR	LR	12 04 51.4

comp=Z,25nm,18.0s,baz=346,slow=37

YKA	Yellowknife Ar	82.70	23	P	P	11 26 26.4 -0.9

comp=Z,2.6nm,0.8s,baz=318,slow=5.6,SNR=52

YKA				PKKPbc	PKKPbc	11 44 48.7 -4.2

comp=Z,0.1nm,0.4s,baz=122,slow=1.7,SNR=4.0

YKA				LR	LR	12 07 57.8

comp=Z,95nm,18.1s,baz=284,slow=39
comp=Z,2.6nm,0.8s

YKA	Yellowknife Ar	82.70	23	P	P	11 26 26.2 -1.0
KHC	Kasperske Hory	82.76	321	IAmb	IAmb	11 26 29.4

comp=Z,29nm,1.3s

KHC	Kasperske Hory	82.76	321	*e*P	P	11 26 27.6 -0.4
GERES	GERESS Array B	82.83	321	P	P	11 26 28.8 +0.4

comp=Z,11nm,0.9s,baz=66,slow=3.3,SNR=39
comp=Z,11nm,0.9s

MOA	Molln	82.97	320	*i* P	P	11 26 29.8 +0.7

comp=Z,18nm,1.1s,SNR=8.2

PERS	Pernice	83.04	318	*i* P	P	11 26 29.4 -0.2
SOKA	Soboth	83.07	318	*i* P	P	11 26 29.9 +0.2

comp=Z,18nm,1.0s,SNR=8.3

BIOA	Bad Ischl, Aus	83.42	320	*i* P	P	11 26 31.7 +0.3

comp=Z,19nm,1.1s,SNR=5.6

OBKA	Obir	83.45	318	*i* P	P	11 26 32.0 +0.4

comp=Z,24nm,1.3s,SNR=6.9

BOJS	Bojanci	83.49	317	*i* P	P	11 26 32.1 +0.3
CEY	Cerknica	83.89	318	*i* P	P	11 26 33.9 0.0
KBA	Koelnbreinsper	83.90	319	*i* P	P	11 26 34.0 -0.1

comp=Z,17nm,1.0s,SNR=6.7

MYKA	Terra Mystica	83.94	319	*e*P	P	11 26 33.3 -0.8

comp=Z,12nm,1.0s

PRED	Cave del Predi	84.07	319	IAmb	IAmb	11 26 36.5

comp=Z,12nm,1.1s

LESA	Schwarzleotal	84.12	320	*i* P	P	11 26 35.4 +0.4

comp=Z,34nm,1.0s,SNR=14

ABPO	Ambohimpanom	84.15	246		P	11 26 34.9 -0.8
ABPO				IAmb	IAmb	11 26 39.9

comp=Z,14nm,0.9s

ABTA	Abfaltersbach	84.56	319	*i* P	P	11 26 36.4 -0.9

comp=Z,34nm,1.1s,SNR=13

WATA	Walderalm	84.81	320	*i* P	P	11 26 38.4 -0.2

comp=Z,29nm,1.0s,SNR=7.1

WTTA	Wattenberg	84.81	320	*i* P	P	11 26 38.8 +0.1

comp=Z,27nm,0.8s,SNR=13

KIBK	Kibwezi	84.93	265		P	11 26 39.6 -0.1
KIBK	Kibwezi	84.93	265	P	P	11 26 40.7 +1.0

SNR=5.2

MOTA	Moosalm	85.08	320	*i* P	P	11 26 39.8 -0.3

comp=Z,13nm,0.9s,SNR=7.1

SQTA	Sankt Quirin	85.09	320	*i* P	P	11 26 40.0 0.0

comp=Z,31nm,1.0s,SNR=9.0

RETA	Reutte	85.21	320	*i* P	P	11 26 40.4 -0.1

comp=Z,12nm,1.1s

CTI	Castel Tesino	85.42	319	IAmb	IAmb	11 26 41.9

comp=Z,16nm,1.1s

FETA	Feichten	85.47	320	*i* P	P	11 26 41.8 -0.1

comp=Z,26nm,1.0s,SNR=8.6

CUC	Castrocucco	85.73	312	IAmb	IAmb	11 26 48.4

comp=Z,14nm,1.1s

DAVA	Damuels	85.83	321	*i* P	P	11 26 43.8 +0.1

comp=Z,17nm,1.0s

INTR	Introdacqua	86.03	315	IAmb	IAmb	11 26 47.0

comp=Z,22nm,1.1s

MEM	Membach	86.15	325	*d*P	P	11 26 45.0 -0.1

comp=Z,12nm,1.2s

TUE	Stuetta	86.57	320	IAmb	IAmb	11 26 48.4

comp=Z,21nm,1.1s

WLF	Walferdange	86.61	324	*d*P	P	11 26 48.1 +0.8

comp=Z,41nm,1.0s

RCHB	Rochefort	86.82	325	*d*P	P	11 26 48.4 +0.1

comp=Z,19nm,1.0s

UCC	Uccle	86.90	326	*d*P	P	11 26 48.6 -0.1
BMRD	Maredsous	86.98	325	*d*P	P	11 26 49.0 -0.1

comp=Z,15nm,0.9s

DOU	Dourbes	87.19	325	*d*P	P	11 26 50.3 +0.2

comp=Z,17nm,1.0s

EKA	Eskdalemuir Ar	87.64	332	P	P	11 26 51.7 -0.5

comp=Z,2.3nm,0.8s,baz=50,slow=3.8,SNR=4.2
comp=Z,2.3nm,0.8s

SENIN	Lac Senin/Sane	87.81	321	IAmb	IAmb	11 26 55.0

comp=Z,7.6nm,0.8s

SFJD	Kangerlussuaq	88.70	357	LR	LR	12 09 20.5

comp=Z,73nm,18.4s,baz=352,slow=37

BNI	Bardonecchia	88.91	320	IAmb	IAmb	11 27 04.6

comp=Z,12nm,0.9s

EDM	Edmonton	89.32	29	IAmb	IAmb	11 27 07.1

comp=Z,6.4nm,0.8s

B08A	Colville Reser	89.50	36	IAmb	IAmb	11 27 03.9

comp=Z,7.5nm,0.9s

MXC	Moxie City	90.05	37	IAmb	IAmb	11 27 16.4

comp=Z,22nm,1.3s

E07A	Sunnyside	90.30	37	IAmb	IAmb	11 27 29.2

comp=Z,17nm,1.2s

WAH2	Wahluke Slope	90.34	37	IAmb	IAmb	11 27 12.3

comp=Z,10nm,1.0s

C09A	Chrisman Ranch	90.40	36	IAmb	IAmb	11 27 34.8

comp=Z,20nm,1.6s

HAWA	Hanford	90.58	37	IAmb	IAmb	11 27 18.2

comp=Z,9.3nm,1.1s

NEW	Newport	90.71	35	IAmb	IAmb	11 27 14.0

comp=Z,7.3nm,1.0s

MBAR	Mbarara	90.87	270	LR	LR	12 09 13.0

comp=Z,56nm,19.8s,baz=94,slow=36

MBAR	Mbarara	90.87	270	P	P	11 27 09.2 +0.9
YPT	Yellepit	91.10	37	IAmb	IAmb	11 27 20.9

comp=Z,7.4nm,1.0s

PINE	Pine Mountain	91.33	40	IAmb	IAmb	11 27 22.3

comp=Z,15nm,1.2s

L04D	Klamath Falls	91.43	42		P	11 27 12.3 +1.9
FRB	Frobisher Bay	91.81	4	LR	LR	12 12 21.4

comp=Z,78nm,18.0s,baz=320,slow=38

K05A	Summer Lake	91.98	41	P	P	11 27 12.9 -0.2
M03C	McCloud	92.08	42	P	P	11 27 15.1 +1.6
F10A	Beach Ranch, E	92.10	37	IAmb	IAmb	11 29 08.1

comp=Z,25nm,2.0s

KEST	Kesra	92.30	311	P	P	11 27 13.8 -0.8

comp=Z,8.1nm,0.9s,baz=35,slow=3.5,SNR=5.9
comp=Z,8.1nm,0.9s

KEST	Kesra	92.30	311	P	P	11 27 14.5 0.0
BMO	Blue Mountains	92.76	37	IAmb	IAmb	11 27 19.0

comp=Z,14nm,1.9s

FFC	Flin Flon	92.86	24	IAmb	IAmb	11 27 15.7

comp=Z,10nm,1.4s

FFC					P	11 27 16.1 -0.5
J08A	Circle Bar Ran	93.02	39	IAmb	IAmb	11 27 25.6

comp=Z,5.3nm,1.0s

ORV	Oroville	93.47	44	P	P	11 27 18.7 -1.0
EGMT	Eagleton	94.56	32	IAmb	IAmb	11 27 33.7

comp=Z,7.2nm,1.1s

CMB	Columbia Colle	95.06	44		P	11 27 27.7 +0.5
CMB				IAmb	IAmb	11 27 37.1

comp=Z,12nm,1.8s

NVAR	Mina Array Bea	96.14	43	P	P	11 27 32.9 +0.6

comp=Z,1.4nm,0.8s,baz=293,slow=4.6,SNR=10

NVAR				LR	LR	12 12 18.5

comp=Z,30nm,21.0s,baz=262,slow=36
comp=Z,1.4nm,0.8s

PPT	Papeete	96.20	106	LR	LR	12 01 13.9

comp=Z,62nm,20.9s,baz=287,slow=29

PDAR	Pinedale Array	98.34	35	LR	LR	12 15 28.3

comp=Z,18nm,18.1s,baz=336,slow=37

ULM	Lac du Bonnet	98.68	23	LR	LR	12 18 01.7

comp=Z,47nm,18.6s,baz=8.5,slow=39

LSZ	Lusaka	99.04	257	LR	LR	12 10 06.5

comp=Z,96nm,20.0s,baz=149,slow=34

SDV	Santo Domingo	144.90	21	PKPdf	PKPab	11 33 40.7 -0.5
HOPE	Hope Point	145.89	203	PKPdf	PKPdf	11 33 41.8 -0.6
OTAV	Otavalo	148.85	41		PKiKP	11 33 54.3 -0.2

*NNC **25** 11:15:45.1±3.2,39°.89N×67°.75E,h0km,mb3.5,mpv3.0,*
Error ellipse: s-maj=31.3km s-min=16.0km az=7.0
*ISU **25** 11:15:47,39°.83N×67°.94E,h5km*
ISC 25 11:15:47.2±1.1,**39°.83N**±0°.08×**67°.81E**±0°.06,**h10**km,**n10,**
σ1s59/17,4C,Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGL	Agalyk	0.78	247	P	Pg	11 16 02.6	+0.3
AGL				S	Sb	11 16 15.0	+1.4
NZBK	Nazarbek	1.71	35	P	Pn	11 16 18.3	+1.2
NZBK				S	Sn	11 16 41.7	+2.6
TVKS	Tavaksay	2.24	38	P	Pn	11 16 24.9	+0.5
TVKS				S	Sn	11 16 52.7	+0.6
CHRV	Charvak	2.44	41	P	Pn	11 16 28.9	+1.8
CHRV				S	Sn	11 16 58.1	+1.1
MINT	Mingtut	2.51	74	S	Sn	11 17 00.0	+1.2
FRG	Fergana	3.10	79	S	Sn	11 17 12.6	-0.7
TSTA	Tashata	3.65	77	S	Sn	11 17 25.3	-1.7
KK31	Sakhary Array	3.85	31	⇑Pn	Pn	11 16 45.5	-1.0

0.4nm,0.3s,baz=25,slow=6.4,SNR=7.1

KK31				⇑Pg	Pb	11 16 56.2	+1.0

3.1nm,0.4s,baz=209,slow=17,SNR=10

KK31				Lg	Lg	11 17 46.6

4.9nm,0.3s,baz=211,slow=28,SNR=7.9

AAK	Ala-Archa	5.77	59	⇑Pn	Pn	11 17 11.5	-1.6

4.3nm,1.2s

AAK				⇑Sn	Sn	11 18 19.8	+0.5

2.1nm,0.6s

AB31	Akbulak array	10.96	332	P	Pn	11 18 22.9	-1.1

0.5nm,0.4s,baz=172,slow=12,SNR=24

AB31				S	Sn	11 20 23.6	-3.1

1.2nm,0.6s,baz=164,slow=22,SNR=6.4

*TAP **25** 11:28:47.6,24°.39N×121°.41E,h6km,ML3.5,B*
ISC 25 11:28:47.7±0.8,**24°.40N**±0°.01×**121°.42E**±0°.01,**h6**km±5km,
n122,σ0s78/194,18C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNSB	Datong	0.04	313	⇓*i*P	Pg	11 28 49.5	+0.3
NNSB				*i* S	Sg	11 28 50.3	+0.1
NNSH	Datong	0.04	313	P	Pg	11 28 49.4	+0.2
NNSH				S	Sg	11 28 50.3	+0.1
NNS	Nan Shan	0.06	315	*i* P	Pg	11 28 49.6	+0.2
NNS				*i* S	Sg	11 28 50.7	+0.2
LATG	Datong	0.17	36	⇑*i*P	Pg	11 28 51.5	+0.4
LATG				*i* S	Sg	11 28 54.3	+0.8
ETLH	Xiulin Townshi	0.20	163	P	Pg	11 28 52.6	+0.8
ETLH				S	Sg	11 28 55.4	+1.1
FUSS	Fushou	0.22	226	⇑*i*P	Pg	11 28 54.4	+0.3
FUSS				S	Sg	11 28 55.4	+0.3
NDT	Datong Townshi	0.22	23	⇑*i*P	Pg	11 28 52.7	+0.6
NDT				S	Sg	11 28 56.4	+1.3
TWT	Tachien	0.26	237	*i* P	Pg	11 28 53.3	+0.4
TWT				S	Sg	11 28 56.8	+0.3
YHNB	Yeheng	0.27	352	P	Pg	11 28 53.7	+0.6
YHNB	Yeheng	0.27	352	⇓*i*P	Pg	11 28 53.9	+0.8
YHNB				S	Sg	11 28 57.2	+0.5
ENTT	Nioudou	0.28	29	⇑*i*P	Pg	11 28 53.7	+0.6
ENTT				*i* S	Sg	11 28 57.4	+0.6
NACB	Ninganchiao	0.28	144	P	Pg	11 28 53.8	+0.7
NACB	Ninganchiao	0.28	144	P	Pg	11 28 53.8	+0.7
NACB				S	Sg	11 28 57.6	+0.8
TDCB	Techi	0.28	238	⇑*i*P	Pg	11 28 53.4	+0.2
TDCB				S	Sg	11 28 56.4	-0.5
NSK	Sanguang	0.28	349	⇓*i*P	Pg	11 28 54.0	+0.7
NSK				*i* S	Sg	11 28 57.4	+0.4
WHF	Hehuan Shan	0.29	209	P	Pg	11 28 53.7	+0.2
WHF				*e*S	Sb	11 28 59.1	-1.7
EAHA	Aohua	0.30	103	P	Pg	11 28 54.2	+0.6
EAHA				S	Sg	11 28 58.0	+0.4
ETL	Fush Village	0.30	142	P	Pb	11 28 54.4	-1.2
ETL				S	Sg	11 28 58.8	+1.1
EWUT	Wuta	0.33	82	*e*P	Pg	11 28 54.6	+0.4
TWD	Chiawan	0.36	153	P	Pb	11 28 55.6	-0.9
TWD				S	Sg	11 29 00.5	+1.1
NDS	Dongshan	0.36	49	P	Pg	11 28 55.0	+0.3
NDS				*e*S	Sb	11 29 01.3	-1.1
NFF	Wufeng Townshi	0.36	310	P	Pb	11 28 55.5	-1.0
NFF				S	Sg	11 29 00.2	+0.8
LXIB	Xiulin Townshi	0.38	181	P	Pg	11 28 55.5	+0.5
LXIB				S	Sg	11 29 00.3	+0.2
NWLT	Wulai	0.38	12	⇑*i*P	Pg	11 28 55.9	+0.7
NWLT				S	Sg	11 29 00.3	+0.1
FUSB	Fushanzhiwuyua	0.39	23	⇑*i*P	Pg	11 28 55.9	+0.6
FUSB				*i* S	Sg	11 29 00.8	+0.3
TWE	Neicheng	0.39	35	⇑*i*P	Pg	11 28 56.0	+0.7
TWE				S	Sg	11 29 01.9	+1.3
ESAO	Su ao	0.43	66	*e*P	Pb	11 28 56.8	-0.9
KSHI	Guanxi Townshi	0.44	330	P	Pb	11 28 57.7	-0.1
KSHI				S	Sb	11 29 04.0	-0.7
ETM	Tongmen	0.44	171	*e*P	Pg	11 28 56.7	+0.5
ETM				*e*S	Sg	11 29 01.8	-0.1
LIOB	Emei	0.44	304	⇑*i*P	Pb	11 28 57.5	-0.4
LIOB				S	Sb	11 29 03.5	-1.4
NSTT	Nanjuang	0.44	301	⇑*i*P	Pb	11 28 57.4	-0.6
NSTT				*i* S	Sg	11 29 03.2	+1.1
TWC	Suao	0.45	62	⇑*i*P	Pg	11 28 56.6	+0.2
TWC				S	Sg	11 29 02.6	+0.5
WHP	Taichung City	0.45	254	⇑*i*P	Pb	11 28 57.1	-1.0
WHP				*e*S	Sg	11 29 02.7	+0.4
NJD	Zhudong	0.45	318	*e*P	Pb	11 28 57.5	-0.6
NJD				*e*S	Sb	11 29 04.8	-0.3
HWA	Hwalien	0.45	158	*e*P	Pb	11 28 58.3	+0.1
HWA				*e*S	Sb	11 29 04.3	-0.8
ILA	Ilan	0.47	39	*e*P	Pb	11 28 58.5	0.0
ILA				*e*S	Sb	11 29 04.6	-1.1
WUSB	Renai	0.49	214	⇑*i*P	Pg	11 28 57.1	-0.1
WUSB				*e*S	Sg	11 29 02.8	-0.8
OWD	Renai	0.49	207	⇑*i*P	Pg	11 28 56.9	-0.4
OWD				*e*S	Sb	11 29 06.2	-0.3
TEYL	Yanliau Villag	0.55	163	*e*P	Pg	11 28 58.9	+0.5
SBCB	Hsinchu	0.56	315	*e*P	Pb	11 29 00.2	+0.3
HSN	Hsinchu	0.57	315	*e*P	Pb	11 29 01.0	+0.8
HSN				*e*S	Sb	11 29 08.9	+0.3
WCS	Beigang Elemen	0.57	234	*e*P	Pg	11 28 59.0	+0.2
WCS				*e*S	Sg	11 29 06.8	+0.6
TATO	Taipei	0.58	6	P	Pb	11 29 00.0	-0.3
ESL	Shilin	0.58	179	P	Pb	11 28 59.4	-0.9
ESL				*e*S	Sg	11 29 06.9	+0.4
NMLH	Miaoli	0.59	284	P	Pb	11 29 00.7	+0.3
NMLH				S	Sb	11 29 08.9	-0.2
TWQ1	Liyutan	0.59	265	⇑P	Pb	11 29 00.4	-0.1
TWQ1				*e*S	Sb	11 29 07.9	-1.2
TWA	Mucha	0.60	15	P	Pb	11 29 00.3	-0.4
TWA				S	Sg	11 29 07.6	+0.6
NSY	Sanyi	0.60	272	⇑*i*P	Pb	11 29 01.3	+0.6
NSY				*e*S	Sb	11 29 09.6	+0.2
NCUH	Zhongli	0.60	340	*e*P	Pb	11 29 01.7	+0.9
NCU	National Centr	0.61	340	*e*P	Pg	11 28 59.6	+0.2
SHUL	Shoufeng	0.62	168	*e*P	Pb	11 29 01.1	+0.1
SHUL				*e*S	Sb	11 29 09.2	-0.9
EGS		0.65	46	P	Pb	11 29 01.3	-0.1
EGS				S	Sb	11 29 11.4	+0.7
WARBT	Fenglin Townsh	0.68	182	*e*P	Pg	11 29 00.7	-0.1
WARBT				*e*S	Sg	11 29 10.0	+0.4
TIPB	Shuangxi	0.68	33	*e*P	Pg	11 29 01.1	+0.3
TIPB				*e*S	Sg	11 29 09.5	-0.2
VWDT	VWDT	0.69	202	P	Pg	11 29 00.5	-0.5
VWDT				S	Sb	11 29 11.5	-0.5
SMLT	Sun Moon Lake	0.70	223	⇑*i*P	Pg	11 29 01.2	0.0
SMLT				S	Sb	11 29 12.8	+0.5
TYC	Yuchr	0.71	226	⇑*i*P	Pg	11 29 01.3	0.0
WDJ	Dajia District	0.71	266	P	Pn	11 29 03.5	-0.8
WDJ				S	Sb	11 29 13.3	+0.7
TCU	Taichung	0.72	250	P	Pb	11 29 03.1	+0.4
TCU				S	Sb	11 29 13.6	+0.7
EGFH	Guangfu	0.73	179	*e*P	Pb	11 29 02.1	-0.7
EGFH				*e*S	Sg	11 29 11.5	+0.3
SSLB	Suanglung	0.74	215	P	Pg	11 29 01.3	-0.7
SSLB	Suanglung	0.74	215	P	Pg	11 29 01.2

*DSN **25** 11:42:06.8±1.5,26°.99N×55°.88E,h10km,ML3.7/15,Error ellipse: s-maj=21.8km s-min=6.3km az=53.0*
*IDC **25** 11:42:06.3±0.9,26°.83N×55°.75E,h0km,mb4.1/20, mbtmp4.1/23,ML4.3/3,MS3.5/7,Error ellipse: s-maj=21.2km s-min=14.5km az=148.0*
*TEH **25** 11:42:06.6,26°.76N×55°.80E,h13km±21km,ML4.2, Presumed earthquake*
*OMAN **25** 11:42:08.9±0.6,26°.82N×55°.77E,h8km±4km,mb4.2/10, ml3.8/22,Error ellipse: s-maj=4.3km s-min=2.6km az=31.0*
*NEIC **25** 11:42:09.0±1.0,26°.89N±0°.07×55°.66E±0°.09,h10km±1km, mb4.4/30,Error ellipse: s-maj=17.4km s-min=3.9km az=46.0*

ISC 25 11:42:08.1±1.4,26°.85N±0°.03×55°.76E±0°.03,h10km±9km, n188,σ1§36/196,mb4.3/47,MS3.6/7,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.66**	**33**	Pg	**Pg**	**11 42 21.2**	**+0.3**
SHME	**Shamm**	**0.86**	**157**	*e*P	**Pg**	**11 42 23.4**	**-1.3**
	SNR=72						
SHME				S	**Sn**	**11 42 39.2**	**+0.2**
SHME	**Shamm**	**0.86**	**157**	P	**Pg**	**11 42 23.4**	**-1.3**
	SNR=31						
IBND	**Bandar-abas**	**0.92**	**49**	Pg	**Pb**	**11 42 26.1**	**0.0**
BANOM	**Banah**	**1.04**	**152**	*e*P	**Pb**	**11 42 27.1**	**-1.0**
	SNR=58						
BANOM				S	**Sn**	**11 42 44.2**	**+0.9**
BANOM	**Banah**	**1.04**	**152**	P	**Pb**	**11 42 28.3**	**+0.1**
BANOM				S	**Sn**	**11 42 44.4**	**+1.1**
UMQ	**Umm Al-Quwin**	**1.32**	**184**	*e*P	**Pg**	**11 42 34.7**	**+1.3**
	SNR=13						
UMQ	**Umm Al-Quwin**	**1.32**	**184**	P	**Pb**	**11 42 33.6**	**+0.7**
	SNR=13						
LAR1	**LAR**	**1.48**	**304**	Pg	**Pb**	**11 42 36.9**	**+1.0**
MASF	**Masafi**	**1.51**	**166**	P	**Pn**	**11 42 36.1**	**+0.8**
	SNR=60						
MSFE	**Esma-Masafi**	**1.52**	**166**	*e*P	**Pn**	**11 42 36.4**	**+1.0**
	SNR=243						
MDH	**Madha**	**1.61**	**163**	*e*P	**Pn**	**11 42 37.2**	**+0.6**
	SNR=157						
MDH	**Madha**	**1.61**	**163**	P	**Pn**	**11 42 37.5**	**+0.9**
	SNR=22						
MDH				S	**Sb**	**11 42 59.1**	**+0.7**
NAZ	**Nazwa, Dubai**	**1.85**	**183**	*e*P	**Pb**	**11 42 41.8**	**-0.3**
	SNR=20						
NAZ	**Nazwa, Dubai**	**1.85**	**183**	P	**Pb**	**11 42 42.1**	**0.0**
UOSS	**Minazif**	**1.93**	**168**		**Pn**	**11 42 42.2**	**+1.1**
UOSS	**Minazif**	**1.93**	**168**	*e*P	**Pn**	**11 42 42.1**	**+0.9**
	SNR=45						
UOSS	**Minazif**	**1.93**	**168**	P	**Pn**	**11 42 42.0**	**+0.9**
UOSS	**Minazif**	**1.93**	**168**	Pn	**Pn**	**11 42 40.1**	**-1.0**
HATD	**Hatta, Dubai**	**2.04**	**171**	*e*P	**Pn**	**11 42 43.5**	**+1.0**
	SNR=93						
HATD	**Hatta, Dubai**	**2.04**	**171**	P	**Pn**	**11 42 43.4**	**+0.8**
KHNJ	**Kahnooj**	**2.05**	**57**	Pn	**Pn**	**11 42 43.2**	**+0.5**
FAQ	**Al Faqa, Dubai**	**2.10**	**184**	*e*P	**Pn**	**11 42 45.0**	**+1.6**
	SNR=15						
FAQ	**Al Faqa, Dubai**	**2.10**	**184**	P	**Pn**	**11 42 44.2**	**+0.9**
	SNR=8.6						
FAQ				S	**Sn**	**11 43 10.5**	**+1.0**
JASK	**Jask - Hormozg**	**2.12**	**117**	P	**Pn**	**11 42 44.3**	**+0.6**
JASK	**Jask - Hormozg**	**2.12**	**117**	Pn	**Pn**	**11 42 44.0**	**+0.3**
ASHO	**Ashiyiah**	**2.17**	**173**	*e*P	**Pn**	**11 42 46.0**	**+1.6**
	SNR=95						
ASHO	**Ashiyiah**	**2.17**	**173**	P	**Pn**	**11 42 45.2**	**+0.9**
	SNR=50						
ASUD	**Al Ashush, Dub**	**2.25**	**190**	*e*P	**Pn**	**11 42 47.3**	**+2.0**
	SNR=28						
ASUD	**Al Ashush, Dub**	**2.25**	**190**	P	**Pn**	**11 42 47.4**	**+2.0**
	SNR=32						
KHL1	**Khalili_Fars**	**2.33**	**290**	Pn	**Pn**	**11 42 48.5**	**+2.0**
LMD1	**Lamerd**	**2.37**	**283**	Pn	**Pn**	**11 42 48.9**	**+1.8**
AJN	**Ajban**	**2.38**	**197**	P	**Pn**	**11 42 48.9**	**+1.7**
AJN				S	**Sn**	**11 43 18.5**	**+2.1**
JHRM	**Jahrom**	**2.55**	**311**	Pn	**Pn**	**11 42 51.4**	**+1.8**
ALNE	**Al Ain**	**2.78**	**180**	*e*P	**Pn**	**11 42 54.0**	**+1.3**
	SNR=9.7						
SOHO	**SOHO**	**2.79**	**165**	P	**Pn**	**11 42 53.3**	**+0.5**
NGRK	**Negar Kerman**	**2.92**	**17**	Pn	**Pn**	**11 42 57.0**	**+2.1**
JRN	**Qarnain Island**	**3.24**	**235**	P	**Pn**	**11 43 00.3**	**+1.3**
JRN				S	**Sn**	**11 43 39.8**	**+2.2**
MZWR	**Madinat Zayed**	**3.51**	**209**	P	**Pn**	**11 43 04.6**	**+1.8**
HOQ	**Hoqain**	**3.54**	**156**	P	**Pn**	**11 43 03.7**	**+0.5**
HOQ	**Hoqain**	**3.54**	**156**	Pn	**Pn**	**11 43 02.5**	**-0.7**
GHWR	**Ruwais**	**3.88**	**223**	P	**Pn**	**11 43 08.9**	**+1.0**
GHWR				S	**Sn**	**11 43 54.8**	**+1.3**
BIDO	**Bidbid**	**3.94**	**147**	P	**Pn**	**11 43 09.0**	**+0.3**
UMZA	**Um Al Zommool**	**4.15**	**188**	P	**Pn**	**11 43 12.8**	**+1.3**
DSBU	**Dashti - Bushe**	**4.27**	**292**	Pn	**Pn**	**11 43 15.1**	**+1.8**
BSY	**Bisya**	**4.29**	**162**	P	**Pn**	**11 43 14.4**	**+1.0**
	SNR=16						
SMDO	**Samad**	**4.30**	**151**	P	**Pn**	**11 43 14.6**	**+0.8**
	SNR=12						
SMDO				S	**Sn**	**11 44 06.7**	**+2.6**
CHBR	**Chabahar**	**4.42**	**105**	Pn	**Pn**	**11 43 15.6**	**+0.4**
SHMA	**Al-Shehemyia**	**4.42**	**258**	P	**Pn**	**11 43 17.1**	**+1.9**
	SNR=25						
SHMA				S	**Sn**	**11 44 09.2**	**+2.5**
WSAR	**Wadi Sarin**	**4.43**	**143**	P	**Pn**	**11 43 16.3**	**+0.8**
	SNR=7.8						
TRNA	**Turayna**	**4.61**	**244**	P	**Pn**	**11 43 19.0**	**+1.2**
	SNR=37						
TRNA				S	**Sn**	**11 44 12.9**	**+1.4**
IBAF	**Bafgh**	**4.73**	**358**	Pn	**Pn**	**11 43 21.8**	**+2.1**
SAKB	**Bahrain**	**4.77**	**261**	P	**Pn**	**11 43 21.3**	**+1.3**
SAKB				S	**Sn**	**11 44 17.9**	**+2.5**
SMRA	**Abu-Samra**	**4.92**	**246**	P	**Pn**	**11 43 23.3**	**+1.1**
SMRA				S	**Sn**	**11 44 21.1**	**+2.0**
JMDO	**Jabal Madar**	**4.94**	**154**	P	**Pn**	**11 43 23.6**	**+1.2**
	SNR=5.8						
JMDO				S	**Sn**	**11 44 21.6**	**+1.9**
NGCH	**Negor - Chabah**	**5.05**	**106**	P	**Pn**	**11 43 25.1**	**+1.2**
TAFT	**Taft - Yazd**	**5.05**	**344**	Pn	**Pn**	**11 43 26.1**	**+1.9**
WBK	**Wadi Bani Khal**	**5.13**	**145**	Pn	**Pn**	**11 43 25.1**	**0.0**
DOBD	**Dorbid, Yazd**	**5.24**	**348**	Pn	**Pn**	**11 43 28.8**	**+2.1**
ICHK	**Chekchek**	**5.51**	**348**	Pn	**Pn**	**11 43 32.5**	**+2.1**
JLN	**Jalan Bani Buh**	**5.73**	**144**	P	**Pn**	**11 43 33.2**	**-0.1**
	SNR=9.2						
SRVN	**Saravan**	**5.94**	**83**	Pn	**Pn**	**11 43 37.4**	**+1.1**
MHTO	**MHTO**	**6.17**	**160**	P	**Pn**	**11 43 40.3**	**+0.9**
DQM	**DQM**	**7.08**	**166**	P	**Pn**	**11 43 52.6**	**+0.8**
DOK	**Doka**	**8.33**	**191**	P	**Pn**	**11 44 08.8**	**-0.2**
SHAO	**Shalim**	**8.78**	**181**	*i* P	**Pn**	**11 44 14.4**	**-0.8**
	SNR=15						
SHAO	**Shalim**	**8.78**	**181**	P	**Pn**	**11 44 14.7**	**-0.5**
	SNR=35						
WHFO	**Wadi Hawf**	**9.07**	**192**	P	**Pn**	**11 44 18.3**	**-0.9**
	SNR=26						
DMTO	**DMTO**	**9.12**	**185**	P	**Pn**	**11 44 18.6**	**-1.2**
RBK	**Rabkut**	**9.41**	**189**	P	**Pn**	**11 44 25.2**	**+1.4**
ABTO	**Aybut**	**9.72**	**194**	P	**Pn**	**11 44 27.3**	**-0.8**
	SNR=13						
RAYN	**Ar Rayn**	**9.86**	**253**		**Pn**	**11 44 29.1**	**-1.0**
RAYN	**Ar Rayn**	**9.86**	**253**	*i* P	**Pn**	**11 44 28.5**	**-1.6**
	SNR=10						
RAYN	**Ar Rayn**	**9.86**	**253**	P	**Pn**	**11 44 28.7**	**-1.4**
GEVA	**Gevas**	**15.65**	**320**	Pn	**Pn**	**11 45 47.7**	**-1.2**
GEVA				IAmb	IAmb	11 45 53.0	
	comp=Z,14nm,0.6s						
GNI	**Garni**	**16.12**	**328**	Pn	**P**	**11 45 58.1**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=163,slow=17,SNR=3.8						
	comp=Z,7.4nm,0.4s						
GURO	**Guroymak-BITLI**	**16.40**	**319**		**Pn**	**11 45 57.3**	**-1.3**
GURO				IAmb	IAmb	11 45 59.2	
	comp=Z,8.0nm,0.6s						
MARD	**Mardin**	**16.42**	**313**	Pn	**Pn**	**11 45 55.4**	**-3.4**
GAR	**Garm**	**17.18**	**42**	P	**Pn**	**11 46 07.5**	**-0.9**
GAR				IAmb	IAmb	11 46 08.6	
	comp=Z,14nm,0.9s						
ASF	**Jabal al Asfar**	**17.25**	**292**	P	**Pn**	**11 46 07.9**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=88,slow=20,SNR=5.4						
ASF				S	**Sn**	**11 49 11.0**	**-10**
	comp=Z,2.6nm,0.6s,baz=189,slow=18,SNR=1.6						
	comp=Z,2.5nm,0.4s						
MMAI	**Mount Meron Ar**	**18.68**	**294**	P	**P**	**11 46 26.8**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=90,slow=15,SNR=2.8						
	comp=Z,2.0nm,0.5s						
KBZ	**Khabaz**	**19.81**	**332**	P	**Pn**	**11 46 41.5**	**+1.2**
	comp=Z,9.4nm,0.7s,baz=164,slow=7.2,SNR=12						
KIV	**Kislovodsk**	**20.08**	**332**		**P**	**11 46 41.4**	**-0.5**
KIV	**Kislovodsk**	**20.08**	**332**	P	Pn	11 46 44.5	+0.9
KK31	**Karatay Array**	**20.18**	**33**	P	**P**	**11 46 41.7**	**-1.1**
KKAR	**Karatay Array**	**20.18**	**33**	P	**P**	**11 46 41.7**	**-1.1**
KSH2	**Kashi**	**20.59**	**48**	P	**P**	**11 46 47.3**	**-0.2**
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**21.95**	**39**	P	**P**	**11 47 01.9**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=181,slow=5.9,SNR=4.5						
AAK				LR	LR	11 56 03.7	
	comp=Z,62nm,19.2s,baz=214,slow=38						
	comp=Z,1.0nm,0.6s						
AAK	**Ala-Archa**	**21.95**	**39**		**P**	**11 47 02.6**	**+0.5**
NRN	**Naryn**	**22.11**	**44**		**P**	**11 47 04.3**	**+0.3**
NRN				IAmb	IAmb	11 47 18.9	
	comp=Z,8.1nm,0.7s						
BR131	**Keskin Array S**	**22.45**	**310**		**P**	**11 47 05.8**	**-1.6**
BR131				IAmb	IAmb	11 47 15.3	
	comp=Z,7.0nm,0.6s						
BR131	**Keskin Array S**	**22.45**	**310**	P	**P**	**11 47 08.8**	**+1.4**
BRTR	**Keskin Array B**	**22.45**	**310**	P	**P**	**11 47 08.6**	**+1.2**
	comp=Z,2.1nm,0.5s,baz=128,slow=13,SNR=10						
	comp=Z,2.1nm,0.5s						
BRTR	**Keskin Array B**	**22.45**	**310**	P	**P**	**11 47 07.0**	**-0.4**
BR105	**Keskin Array S**	**22.46**	**310**	P	**P**	**11 47 07.6**	**0.0**
	comp=Z,7.1nm,0.7s						
BR106	**Keskin Array S**	**22.46**	**310**	P	**P**	**11 47 07.6**	**0.0**
	comp=Z,7.3nm,0.8s						
AB31	**Akbulak array**	**22.61**	**7**		**P**	**11 47 08.5**	**-0.4**
ABKAR	**Akbulak array**	**22.61**	**7**		**P**	**11 47 08.6**	**-0.2**
BOOM	**Boomskoye usch**	**22.69**	**41**	P	**P**	**11 47 11.0**	**+0.9**
KDJ	**Kajisay**	**23.23**	**44**		**P**	**11 47 16.5**	**+0.8**
KDJ				IAmb	IAmb	11 47 21.4	
	comp=Z,6.3nm,0.9s						
BORK	**Borovoye**	**28.34**	**19**	P	**P**	**11 48 00.3**	**-1.7**
BORK				IAmb	IAmb	11 48 03.6	
	comp=Z,6.9nm,1.2s						
BVAR	**Borovoye Array**	**28.34**	**19**	P	**P**	**11 48 01.4**	**-0.7**
	comp=Z,2.9nm,0.6s,baz=208,slow=8.4,SNR=15						
	comp=Z,2.9nm,0.6s						
MK31	**Makanchi Array**	**28.88**	**39**	P	**P**	**11 48 07.1**	**+0.1**
MKAR	**Makanchi Array**	**28.88**	**39**	P	**P**	**11 48 07.3**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=229,slow=7.4,SNR=10						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**28.88**	**39**	P	**P**	**11 48 07.7**	**+0.7**
KURBB	**Kurchatov Arra**	**29.42**	**30**	P	**P**	**11 48 11.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=229,slow=8.9,SNR=11						
	comp=Z,0.7nm,0.6s						
WMQ	**Urumqi**	**30.82**	**48**	*e*P	**P**	**11 48 27.0**	**+2.7**
AK09	**Malin Array Si**	**31.16**	**327**	P	**P**	**11 48 26.1**	**-1.0**
AK10	**Malin Array Si**	**31.17**	**327**	P	**P**	**11 48 26.1**	**-1.0**
AK06	**Malin Array Si**	**31.19**	**327**	P	**P**	**11 48 26.3**	**-1.0**
AK08	**Malin Array Si**	**31.19**	**327**	P	**P**	**11 48 26.3**	**-1.0**
AK05	**Malin Array Si**	**31.20**	**327**	P	**P**	**11 48 26.5**	**-1.0**
AK02	**Malin Array Si**	**31.23**	**327**	P	**P**	**11 48 26.7**	**-1.0**
AK12	**Malin Array Si**	**31.25**	**327**	P	**P**	**11 48 26.8**	**-1.0**
AK01	**Malin Array Si**	**31.25**	**327**	P	**P**	**11 48 26.8**	**-1.0**
AKASG	**Malin Array Be**	**31.25**	**327**	P	**P**	**11 48 27.0**	**-0.8**
	comp=Z,2.7nm,0.5s,baz=136,slow=8.4,SNR=20						
AKASG				LR	LR	12 03 23.5	
	comp=Z,138nm,18.9s,baz=74,slow=41						
	comp=Z,2.7nm,0.5s						
AKBB	**Malin Array Si**	**31.25**	**327**		**P**	**11 48 27.4**	**-0.4**
AKBB				IAmb	IAmb	11 48 28.1	
	comp=Z,7.0nm,0.8s						
AKBB	**Malin Array Si**	**31.25**	**327**	P	**P**	**11 48 26.8**	**-1.0**
KIEV	**Kiev**	**31.25**	**327**		**P**	**11 48 27.3**	**-0.5**
KIEV				IAmb	IAmb	11 48 28.1	
	comp=Z,6.2nm,0.8s						
KIEV	**Kiev**	**31.25**	**327**	P	**P**	**11 48 26.8**	**-1.0**
	comp=Z,35nm,2.6s						
AK14	**Malin Array Si**	**31.26**	**327**	P	**P**	**11 48 26.9**	**-1.0**
AK11	**Malin Array Si**	**31.26**	**327**	P	**P**	**11 48 26.9**	**-1.0**
AK03	**Malin Array Si**	**31.27**	**327**	P	**P**	**11 48 27.0**	**-1.0**
AK13	**Malin Array Si**	**31.27**	**327**	P	**P**	**11 48 27.0**	**-1.0**
AK04	**Malin Array Si**	**31.29**	**327**	P	**P**	**11 48 27.2**	**-1.0**
AK17	**Malin Array Si**	**31.32**	**327**	P	**P**	**11 48 27.5**	**-0.9**
AK23	**Malin Array Si**	**31.34**	**327**	P	**P**	**11 48 27.6**	**-1.0**
AK18	**Malin Array Si**	**31.34**	**327**	P	**P**	**11 48 27.6**	**-1.0**
AK22	**Malin Array Si**	**31.36**	**327**	P	**P**	**11 48 27.8**	**-1.0**
AK19	**Malin Array Si**	**31.36**	**327**	P	**P**	**11 48 27.9**	**-1.0**
AK20	**Malin Array Si**	**31.38**	**327**	P	**P**	**11 48 28.0**	**-1.0**
AK21	**Malin Array Si**	**31.39**	**327**	P	**P**	**11 48 28.0**	**-1.0**
LUBAR	**Lubar, Ukraine**	**31.50**	**324**	P	**P**	**11 48 29.1**	**-1.0**
BURAR	**Bucovina Array**	**31.64**	**319**	P	**P**	**11 48 31.2**	**-0.3**
BUR08	**Bucovina Ar. S**	**31.67**	**319**	P	**P**	**11 48 31.4**	**-0.3**
MI30	**MI30,Zelenitsa**	**31.79**	**326**	P	**P**	**11 48 31.3**	**-1.3**
	comp=Z,20nm,1.0s						
ZAA0	**Zalesovo Array**	**34.52**	**30**	IAmb	IAmb	11 48 57.6	
	comp=Z,4.9nm,0.8s						
ZALV	**Zalesovo Beam**	**34.52**	**30**	P	**P**	**11 48 55.9**	**-0.5**
	comp=Z,3.9nm,0.5s,baz=242,slow=9.0,SNR=21						
	comp=Z,3.9nm,0.5s						
CUC	**Castrocucco**	**35.54**	**302**	P	**P**	**11 49 05.0**	**-0.4**
CUC				IAmb	IAmb	11 49 08.1	
	comp=Z,7.8nm,0.6s						
LANS	**Liptovska Anna**	**35.75**	**318**	*e*P	**P**	**11 49 08.5**	**+1.4**
OJC	**Ojcow**	**36.02**	**320**	P	**P**	**11 49 09.7**	**+0.2**
OJC	**Ojcow**	**36.02**	**320**	P	**P**	**11 49 09.1**	**-0.3**
	comp=Z,14nm,0.8s						
VRAC	**Vranov**	**37.54**	**317**	LR	LR	12 08 31.3	
	comp=Z,125nm,18.1s,baz=78,slow=42						
GTA2	**Gaotai**	**38.57**	**60**	*e*P	**P**	**11 49 33.5**	**+2.2**
GTA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BIOA	**Bad Ischl, Aus**	**38.84**	**314**	*e*P	**P**	**11 49 33.6**	**+0.2**
	comp=Z,1.7nm,0.4s						
GERES	**GERESS Array B**	**39.16**	**316**	P	**P**	**11 49 34.8**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=95,slow=8.2,SNR=4.4						
	comp=Z,0.6nm,0.5s						
ABTA	**Abfaltersbach**	**39.32**	**312**	*i* P	**P**	**11 49 36.6**	**-0.8**
	comp=Z,8.0nm,1.5s						
KHC	**Kasperske Hory**	**39.33**	**316**	P	**P**	**11 49 37.3**	**-0.2**
KHC				IAmb	IAmb	11 49 38.1	
	comp=Z,3.3nm,0.6s						
LESA	**Schwarzleotal**	**39.39**	**313**	*e*P	**P**	**11 49 37.7**	**-0.3**
	comp=Z,1.5nm,0.4s						
FIA1	**FINESS Array S**	**39.93**	**338**	P	**P**	**11 49 42.5**	**+0.4**
FINES	**FINESS Array B**	**39.93**	**338**	P	**P**	**11 49 41.9**	**-0.3**
	comp=Z,3.7nm,0.6s,baz=142,slow=10,SNR=25						
	comp=Z,3.7nm,0.6s						
FINES	**FINESS Array B**	**39.93**	**338**	P	**P**	**11 49 42.2**	**0.0**
WTTA	**Wattenberg**	**40.03**	**313**	*i* P	**P**	**11 49 43.1**	**-0.5**
	comp=Z,5.1nm,0.5s						
WATA	**Walderalm**	**40.09**	**313**	*e*P	**P**	**11 49 43.5**	**-0.5**
	comp=Z,6.1nm,0.6s						
SQTA	**Sankt Quirin**	**40.30**	**312**	*i* P	**P**	**11 49 44.8**	**-0.9**
	comp=Z,11nm,0.5s						
MOTA	**Moosalm**	**40.41**	**312**	*i* P	**P**	**11 49 45.6**	**-1.0**
	comp=Z,4.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**40.56**	**93**	LR	LR	12 12 19.6	
	comp=Z,14nm,18.5s,baz=260,slow=45						
FETA	**Feichten**	**40.57**	**312**	*i* P	**P**	**11 49 47.5**	**-0.5**
	comp=Z,4.1nm,0.5s						
RETA	**Reutte**	**40.66**	**313**	*e*P	**P**	**11 49 47.6**	**-1.0**
	comp=Z,1.7nm,0.4s						
PZH	**PanZhiHua**	**40.91**	**80**	P	**P**	**11 49 53.0**	**+2.0**
DAVOX	**Davos/Dischmat**	**41.09**	**311**	LR	LR	12 08 35.5	
	comp=Z,113nm,19.1s,baz=77,slow=39						
DAVA	**Damuels**		**41.20**	**312**	*i* P	**P**	**11 49 52.6**	**-0.5**
	comp=Z,23nm,0.5s						
HFS	**Hanns**		**43.88**	**331**	P	**P**	**11 50 13.9**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=129,slow=12,SNR=7.1						
	comp=Z,2.7nm,0.6s						
SONM	**Songino Array**	**44.46**	**48**	P	**P**	**11 50 20.2**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=266,slow=6.2,SNR=6.2						
	comp=Z,0.7nm,0.8s						
NC405	**NORSAR Array S**	**45.21**	**332**	P	**P**	**11 50 25.4**	**+0.2**
NB201	**NORSAR Array S**	**45.36**	**331**	P	**P**	**11 50 26.3**	**-0.1**
NB2	**NORSAR Subarra**	**45.39**	**331**	P	**P**	**11 50 25.8**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=116,slow=7.9						
NOA	**NORSAR Array B**	**45.39**	**331**	P	**P**	**11 50 25.2**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=118,slow=8.0,SNR=7.0						
	comp=Z,2.2nm,0.8s						
ARCES	**ARCESS Array B**	**46.22**	**346**	P	**P**	**11 50 33.0**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=145,slow=8.6,SNR=6.8						
	comp=Z,0.9nm,0.5s						
HHC	**Hu-ho-hao-te**	**47.65**	**58**	*e*P	**P**	**11 50 45.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ESDC	**Sonseca Array**	**50.71**	**301**	P	**P**	**11 51 08.5**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=78,slow=7.2						
	comp=Z,1.1nm,0.5s						
EKA	**Eskdalemuir Ar**	**50.79**	**321**	P	**P**	**11 51 08.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=100,slow=9.2,SNR=1.6						
	comp=Z,0.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**52.25**	**266**	P	**P**	**11 51 19.5**	**-0.4**
	comp=Z,3.5nm,0.4s,baz=62,slow=9.3,SNR=26						
	comp=Z,3.5nm,0.4s						
SPITS	**Spitsbergen Ar**	**54.42**	**351**	P	**P**	**11 51 34.3**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=123,slow=9.1,SNR=5.6						
	comp=Z,3.7nm,0.7s						
TIXI	**Tiksi**	**59.45**	**21**	LR	LR	12 22 29.3	
	comp=Z,37nm,18.1s,baz=220,slow=41						
DBIC	**Dimbokro**	**60.84**	**262**	P	**P**	**11 52 20.8**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=70,slow=10,SNR=3.6						
	comp=Z,2.6nm,0.7s						
DBIC	**Dimbokro**	**60.84**	**262**	P	**P**	**11 52 21.1**	**0.0**
BOSA	**Boshof**	**62.43**	**210**	P	**P**	**11 52 31.2**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=31,slow=6.1,SNR=15						
	comp=Z,2.6nm,0.5s						
BOSA	**Boshof**	**62.43**	**210**	P	**P**	**11 52 31.6**	**0.0**
E18K	**Tukpahlearik C**	**82.15**	**13**	P	**P**	**11 54 29.5**	**+0.6**
E18K				IAmb	IAmb	11 54 32.2	
	comp=Z,4.9nm,1.2s						
D22K	**Ayikyak River**	**82.30**	**10**	P	**P**	**11 54 30.6**	**+1.0**
D22K				IAmb	IAmb	11 54 33.0	
	comp=Z,7.7nm,1.3s						
F15K	**North Star Dit**	**82.67**	**16**	P	**P**	**11 54 32.7**	**+1.1**
F15K				IAmb	IAmb	11 54 35.4	
	comp=Z,8.5nm,1.5s						
E19K	**Redstone River**	**82.79**	**12**	P	**P**	**11 54 32.8**	**+0.7**
E19K				IAmb	IAmb	11 54 39.8	
	comp=Z,3.9nm,1.3s						
IMAR	**Indian Mountai**	**84.74**	**12**	P	**P**	**11 54 42.1**	**0.0**
BMAR	**Burnt Mountain**	**84.78**	**8**	P	**P**	**11 54 43.4**	**+1.0**
ILAR	**Eielson Array**	**86.99**	**10**	P	**P**	**11 54 52.5**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=320,slow=4.5,SNR=10						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**86.99**	**10**	P	**P**	**11 54 53.2**	**-0.1**
DLBC	**Dease Lake**	**94.91**	**3**	LR	LR	12 44 55.2	
	comp=Z,24nm,18.2s,baz=295,slow=40						

IDC 25 11:43:53.6±2.4,2°.90N×126°.27E,h0km,mb3.4/3, mbtmp3.5/3,MS3.1/1,Error ellipse: s-maj=203.9km s-min=28.1km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.04**	**161**	P	P	**11 49 10.7**	**+0.1**
	1.2nm,0.7s,baz=340,slow=10,SNR=7.5						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**27.43**	**165**	P	P	**11 49 41.5**	**+0.2**
	0.2nm,0.5s,baz=351,slow=8.3,SNR=7.4						
	0.2nm,0.5s						
ASAJ	**Asahikawa**	**43.52**	**17**	LR	LR	12 09 11.6	
	comp=Z,27nm,21.1s,baz=176,slow=35						
MKAR	**Makanchi Array**	**57.98**	**326**	P	P	**11 53 47.7**	**-0.4**
	0.3nm,0.5s,baz=127,slow=6.8,SNR=2.9						
	0.3nm,0.5s						

*NORS **25** 11:48:05.0,42°.46N×43°.54E,h8km,MPVA3.7*
*DRS **25** 11:48:10.9,42°.19N×43°.45E,h17km*

MOS 25 11:48:07.6,42°.54N×43°.50E,h3km,MPVA3.7,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIGR	**Digorskoe uzhe**	**0.36**	**9**	*i* Pg	**Pg**	**11 48 13.7**	**-0.9**
DIGR				*e*Sg	Sg	11 48 19.9	+0.5
LACR	**Lac**	**0.65**	**64**	*i* Pg	**Pg**	**11 48 17.7**	**-2.4**
LACR				*i* Sg	Sg	11 48 26.8	-1.9
KORR	**Kora**	**0.69**	**37**	*e*Pg	**Pg**	**11 48 19.6**	**-1.1**
KORR				*e*Sg	Sg	11 48 30.5	+0.

4.7nm,0.2s
MTBS S Sg 11 50 12.3 +0.1
34nm,0.2s
MTBS Maitube 1.48 345 *e*P Pg 11 49 52.8 -0.1
4.7nm,0.2s
MTBS *e*S Sg 11 50 12.3 +0.1
34nm,0.2s
KNDC Almaty 1.52 360 ⇓P Pg 11 49 53.3 -0.2
50nm,0.3s
KNDC ⇑S Sg 11 50 14.3 +1.2
127nm,0.3s
KST Kastek 1.54 331 P Pg 11 49 53.8 -0.1
8.8nm,0.2s
KST S Sg 11 50 14.1 +0.3
49nm,0.3s
KST Kastek 1.54 331 *e*P Pg 11 49 53.8 -0.1
8.8nm,0.2s
KST *e*S Sg 11 50 14.1 +0.3
49nm,0.3s
KOTS Kotyrbulak 1.54 4 P Pg 11 49 53.5 -0.4
46nm,0.1s
KOTS S Sg 11 50 13.6 -0.3
105nm,0.2s
KOTS Kotyrbulak 1.54 4 *e*P Pg 11 49 53.5 -0.4
46nm,0.1s
KOTS *e*S Sg 11 50 13.6 -0.3
105nm,0.2s
TKM2 Tokmak 2 1.59 321 ⇑P Pb 11 49 54.5 +0.1
8.9nm,0.2s,SNR=75
TKM2 ⇑S Sg 11 50 16.4 +0.9
43nm,0.1s
TKM2 Tokmak 2 1.59 321⇑*e*P Pn 11 49 53.5 0.0
TKM2 ⇑*e*S Sb 11 50 14.9 -0.1
SATY Saty 1.73 38 P Pb 11 49 56.2 -0.5
22nm,0.2s
SATY S Sb 11 50 18.2 -0.6
78nm,0.1s
KBK Karagaybulak 1.78 303 ⇓P Pb 11 49 58.2 +0.5
7.8nm,0.1s,SNR=12
KBK ⇓S Sg 11 50 22.0 +0.4
24nm,0.2s
KBK Karagaybulak 1.78 303⇑*e*P Pn 11 49 56.4 +0.3
KBK ⇑*e*S Sb 11 50 20.1 -0.3
UCH Uchtor 1.91 287 ⇓P Pb 11 50 00.3 +0.3
8.9nm,0.3s,SNR=14
UCH ⇑S Sg 11 50 26.2 +0.5
18nm,0.3s
UCH Uchtor 1.91 287⇑*e*P Pn 11 49 58.3 +0.2
UCH ⇑*e*S Sn 11 50 23.3 +0.6
ARLS Aral 1.98 276⇑*e*P Pn 11 49 59.0 +0.1
ARLS ⇑*e*S Sn 11 50 24.6 +0.3
KURS Kuram 2.00 26 P Pb 11 50 01.2 -0.1
28nm,0.2s
KURS S Sb 11 50 26.7 +0.2
6.9nm,0.1s
KTBS Karatobe 2.02 354 Pg Pb 11 50 02.0 +0.2
12nm,0.3s
KTBS Lg Lg 11 50 28.1
0.2nm,0.1s
KTBS Karatobe 2.02 354 *e*P Pb 11 50 02.0 +0.2
12nm,0.3s
KTBS *e*S Sg 11 50 28.5 -0.9
0.5nm,0.4s
AAK Ala-Archa 2.06 298 ⇓P Pb 11 50 03.0 +0.5
18nm,0.2s,SNR=19
AAK ⇑S Sg 11 50 30.8 +0.1
12nm,0.2s
AAK Ala-Archa 2.06 298 ⇑Pn Pb 11 50 03.0 +0.5
1.4nm,0.3s
AAK ⇓Sn Sg 11 50 30.4 -0.4
4.0nm,0.5s
AAK Ala-Archa 2.06 298⇓*e*P Pn 11 50 00.3 +0.3
AAK ⇓*e*S Sn 11 50 26.8 +0.6
CHMS Chumysh 2.10 309 ⇑P Pb 11 50 02.8 -0.1
12nm,0.3s,SNR=13
CHMS ⇑S Sb 11 50 30.4 +1.1
16nm,0.2s
CHMS Chumysh 2.10 309⇓*e*P Pn 11 50 00.7 +0.4
CHMS ⇓*e*S Sn 11 50 27.4 +0.6
UZB Uzunbulak 2.10 46 Pg Pb 11 50 02.4 -0.7
19nm,0.3s
UZB Lg Lg 11 50 28.9
13nm,0.2s
UZB Uzunbulak 2.10 46 *e*P Pb 11 50 02.4 -0.7
19nm,0.3s
UZB *e*S Sb 11 50 28.9 -0.7
13nm,0.2s
KPKS Kokpek 2.17 35 Pg Pb 11 50 03.8 -0.6
0.2nm,0.1s
KPKS Lg Lg 11 50 31.2
61nm,0.2s
KPKS Kokpek 2.17 35 *e*P Pb 11 50 03.8 -0.6
0.2nm,0.1s
KPKS *e*S Sb 11 50 31.1 -0.5
61nm,0.2s
KUU Kurty 2.24 348 Pg Pg 11 50 06.5 -0.9
3.1nm,0.1s
KUU Lg Lg 11 50 35.9
17nm,0.1s
KUU Kurty 2.24 348 *e*P Pb 11 50 06.2 +0.8
3.1nm,0.1s
KUU *e*S Sg 11 50 35.9 -0.5
17nm,0.1s
SHLS Shalkode 2.35 51 Pg Pg 11 50 11.2 +1.7
20nm,0.3s
SHLS Lg Lg 11 50 43.9
38nm,0.5s
SHLS Shalkode 2.35 51 *e*P Pg 11 50 12.1 +2.6
20nm,0.3s
SHLS *e*S Sg 11 50 46.0 +6.0
38nm,0.5s
USP Ospenovka 2.41 311 ⇓P Pb 11 50 07.8 -0.5
11nm,0.2s,SNR=19
USP ⇑S Sb 11 50 39.1 +0.8
22nm,0.3s
USP Ospenovka 2.41 311⇓*e*P Pn 11 50 05.0 +0.4
USP ⇓*e*S Sn 11 50 34.9 +0.4
SGDS Sogindy 2.46 316 Pg Pb 11 50 09.8 +0.6
6.8nm,0.2s
SGDS Lg Lg 11 50 41.6
20nm,0.2s
PDGK Podgornoye 2.48 48 ⇑Pn Pb 11 50 08.3 -1.2
5.6nm,0.3s
PDGK ⇑Sn Sb 11 50 41.1 +0.7
44nm,0.6s
SALK Salom-Alik 2.51 252⇑*e*P Pn 11 50 06.3 +0.2
SALK ⇑*e*S Sn 11 50 37.0 -0.2
EKS2 Erkin-Say 2.56 293 ⇑P Pb 11 50 10.3 -0.6
7.3nm,0.2s,SNR=14
EKS2 Erkin-Say 2.56 293⇑*e*P Pn 11 50 07.2 +0.5
EKS2 ⇑*e*S Sn 11 50 38.6 +0.2
ARXS Arharly 2.59 14 Pg Pb 11 50 11.1 -0.4
7.0nm,0.3s
ARXS Lg Lg 11 50 43.7
47nm,0.5s
ARXS Arharly 2.59 14 *e*P Pb 11 50 11.8 +0.4
7.0nm,0.3s
ARXS *e*S Sg 11 50 45.4 -2.2
47nm,0.5s
MRKS Merke 2.97 292 Pg Pb 11 50 19.0 +1.1
16nm,0.4s
MRKS Lg Lg 11 50 57.3
15nm,0.5s
MRKS Merke 2.97 292 *e*P Pb 11 50 19.0 +1.1
16nm,0.4s
MRKS *e*S Sg 11 50 58.1 -1.7
15nm,0.5s
ARSB Arslanbob 3.02 264⇑*e*P Pn 11 50 13.6 +0.5
ARSB ⇑*e*S Sn 11 50 49.5 -0.2
KTMS Ketmen 3.05 54 Pg Pb 11 50 19.5 +0.2
2.6nm,0.2s
KTMS Lg Lg 11 50 58.1
7.2nm,0.2s
KTMS Ketmen 3.05 54 *e*P Pb 11 50 19.0 -0.3
2.6nm,0.2s
KTMS *e*S Sb 11 50 58.1 +1.2
7.2nm,0.2s
KNOS Konyrlen 3.11 31 Pg Pb 11 50 20.4 0.0
2.6nm,0.2s
KNOS Lg Lg 11 50 59.7
6.8nm,0.2s
KK31 Karatay Array 4.98 289 ⇓Pg Pg 11 50 56.5 -3.3
0.8nm,0.5s,baz=107,slow=15,SNR=9.6
KK31 ⇓Lg Lg 11 52 04.1
2.0nm,0.6s,baz=105,slow=27,SNR=7.7
MK31 Makanchi Array 6.37 35 ⇓Pg Pg 11 51 22.2 -4.1
0.4nm,0.5s,baz=219,slow=17,SNR=2.7
MK31 ⇑Lg Lg 11 52 46.9
0.9nm,0.7s,baz=212,slow=29,SNR=3.7

EST 25 11:57:18.7±0.1, 59°21N×27°84E, h0km, ML1.4(HEL), Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
EE04	**Vaivara Sinima**	**0.16**	**7**	*e*P	Pg	11 57 21.6	-0.3
EE04				*e*S	Sg	11 57 23.9	0.0
EE03	**Tooma soojaam,**	**0.88**	**248**	*e*P	Pg	11 57 34.0	-1.5
EE03				*e*S	Sg	11 57 45.6	-1.2
VSU	**Vasula**	**0.94**	**218**	*e*P	Pg	11 57 34.7	-2.1
VJF	**Virojoki**	**1.34**	**354**	*e*P	Pg	11 57 42.5	-1.9
VJF				*e*S	Sg	11 58 00.6	-1.1
VJF				smax	smax	11 58 05.6	
	comp=Z,3.0nm,0.1s						
EE07	**Piusa Caves, O**	**1.39**	**188**	*e*PG	Pg	11 57 43.9	-1.4
EE07				*e*SB	Sg	11 58 01.5	-1.7
EE08	**Sarghaua, Vand**	**1.46**	**249**	*e*P	Pn	11 57 44.3	-1.9
EE08				*e*S	Sg	11 58 03.4	-2.0
EE02	**Kiisa, Saku**	**1.61**	**271**	*e*P	Pn	11 57 47.2	-1.2
EE02				*e*SG	Sn	11 58 08.5	-1.4
PVF	**Pernaja**	**1.67**	**324**	*e*P	Pn	11 57 48.5	-0.6
PVF				*e*S	Sn	11 58 09.3	-1.8
PVF				smax	smax	11 58 12.1	
	comp=Z,1.5nm,0.1s						
MEF	**Metsahovi**	**2.01**	**302**	*e*PG	Pn	11 57 54.5	+0.6
NUR	**Nurmijarvi**	**2.07**	**310**	*e*PG	Pn	11 57 55.6	+1.0
MTSE	**Matsula**	**2.14**	**258**	*e*PB	Pn	11 57 56.1	+0.5
EE01	**Perakula, Nova**	**2.17**	**272**	*e*P	Pn	11 57 56.3	+0.3
EE01				*e*PB	Pb	11 57 56.8	-2.0
RUF	**Ruokolahti**	**2.29**	**14**	*e*P	Pn	11 57 57.4	-0.3
RUF				*e*PB	Pb	11 57 58.2	-2.6
RUF				*e*SG	Sb	11 58 29.3	-0.3
RUF				smax	smax	11 58 30.8	
	comp=Z,1.9nm,0.1s						
FIA0	**FINESS Array S**	**2.40**	**339**	*e*PB	Pn	11 58 00.3	+1.0
FIA0				smax	smax	11 58 32.2	
	comp=Z,1.2nm,0.1s						
FIA1	**FINESS Array S**	**2.40**	**339**	*e*P	Pn	11 57 59.4	+0.1
FIA1				*e*PB	Pb	11 58 00.4	-2.4
FIA1				*e*S	Sn	11 58 30.1	+0.7
FIA1				smax	smax	11 58 31.8	
	comp=Z,1.2nm,0.1s						
TVF	**Tvarminne**	**2.42**	**287**	*e*PB	Pn	11 58 00.8	+1.4
KPF	**Kankaanpaa**	**3.88**	**315**	*e*P	Pn	11 58 20.4	+0.9
JOF	**Joensuu**	**4.08**	**23**	*e*P	Pn	11 58 22.6	+0.2

HEL 25 11:58:00.4±0.1, 60°14N×23°93E, h0km, ML1.4, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
MEF	**Metsahovi**	**0.24**	**72**		PG Pg	11 58 04.6	-0.4
MEF					SG Sg	11 58 07.3	-0.8
HEL5	**Espoo, Suvisaa**	**0.40**	**93**		PG Pg	11 58 07.6	-0.5
HEL5					SG Sg	11 58 13.2	-0.1
TVF	**Tvarminne**	**0.46**	**229**		PG Pg	11 58 08.4	-0.7
TVF					SG Sg	11 58 14.2	-0.8
TVF					smax smax	11 58 15.5	
	comp=Z,2.9nm,0.2s						
HEL1	**Helsinki**	**0.48**	**85**		PG Pg	11 58 09.6	+0.1
HEL1					smax smax	11 58 16.0	
	comp=Z,5.1nm,0.2s						
NUR	**Nurmijarvi** baz=227	**0.51**	**44**		PG Pg	11 58 09.5	-0.7
NUR					SG Sg	11 58 16.3	-0.5
NUR					smax smax	11 58 17.0	
	comp=Z,4.4nm,0.2s						
ARBE	**Arbavere**	**1.26**	**123**		SN Sn	11 58 44.7	+1.9
RAF	**Rauma**	**1.39**	**310**		PG Pg	11 58 23.9	-3.1
RAF					smax smax	11 58 42.1	
	comp=Z,2.6nm,0.2s						
RAF					SG Sg	11 58 42.4	-2.5
MTSE	**Matsula**	**1.44**	**182**		PG Pn	11 58 24.6	-3.0
FIA0	**FINESS Array S**	**1.68**	**38**		PG Pn	11 58 30.2	-0.7
FIA0					smax smax	11 58 50.4	
	comp=Z,3.3nm,0.2s						
FIA0					SN Sb	11 58 53.6	-0.1
KPF	**Kankaanpaa** baz=153	**1.92**	**333**		PG Pn	11 58 35.0	+0.6
KPF					smax smax	11 58 57.7	
	comp=Z,4.5nm,0.2s						
KPF					SG Sb	11 59 00.6	-0.2
AAL	**Aland**	**1.97**	**273**		PG Pb	11 58 36.0	-1.0
AAL					SG Sb	11 59 01.9	-0.2
SLIT	**Slitere, Latvi**	**2.66**	**199**		SG Sn	11 59 19.6	+2.2
VAF	**Ylistaro**	**2.97**	**349**		smax smax	11 59 28.0	
	comp=Z,1.9nm,0.2s						
OBF8	**Ulkokalla**	**4.21**	**357**		PG Pb	11 59 16.6	+1.4
OBF0	**Syolatti, Pyha**	**4.37**	**2**		PN Pn	11 59 07.4	-0.6
JOF	**Joensuu**	**4.50**	**49**		PN Pn	11 59 07.5	-2.1

HEL 25 11:58:12.2±0.1, 63°95N×28°09E, h0km, ML1.5, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
NIF	**Nilsia**	**0.58**	**192**		PG Pg	11 58 22.4	-0.8
NIF					SG Sg	11 58 29.9	-0.8
NIF					smax smax	11 58 30.6	
	comp=Z,7.4nm,0.2s						
RMF	**Romuvaara**	**0.85**	**71**		PG Pg	11 58 28.1	-0.4
RMF					smax smax	11 58 38.6	
	comp=Z,5.0nm,0.2s						
RMF					SG Sg	11 58 39.0	-0.6
OUL	**Oulu** baz=135	**1.48**	**321**		PN Pn	11 58 39.2	-0.9
OUL					SN Sn	11 59 01.7	+1.6
SUF	**Sumiainen**	**1.51**	**216**		PN Pn	11 58 39.9	-0.6
SUF					smax smax	11 58 57.6	
	comp=Z,1.9nm,0.2s						
SUF					SN Sg	11 59 00.3	-0.4
OUF	**Merijarvi**	**1.53**	**287**		PG Pn	11 58 39.6	-1.1
OUF					smax smax	11 58 58.1	
	comp=Z,2.9nm,0.2s						
OUF					SN Sg	11 58 59.7	-1.5
OBF4	**Vikkela, Lumij**	**1.56**	**305**		PG Pn	11 58 40.3	-0.8
OBF4					smax smax	11 58 58.9	
	comp=Z,3.5nm,0.2s						
OBF4					SN Sg	11 59 04.1	+1.9
KU1	**Kurvinen**	**1.74**	**21**		PG Pn	11 58 43.5	-0.1
KU1					SG Sn	11 59 06.6	+0.1
KU2	**Taivalkoski**	**1.77**	**2**		PG Pn	11 58 43.8	-0.2
OBF0	**Syolatti, Pyha**	**1.77**	**290**		PG Pn	11 58 44.1	+0.1
OBF0					smax smax	11 59 05.1	
	comp=Z,5.0nm,0.2s						
JOF	**Joensuu** baz=308	**1.78**	**124**		PG Pn	11 58 44.0	-0.2
OBF8	**Ulkokalla**	**2.07**	**283**		PG Pb	11 58 50.2	-0.4
OBF8					smax smax	11 59 13.6	
	comp=Z,1.6nm,0.2s						
RANF	**Ranua**	**2.15**	**346**		PG Pb	11 58 50.5	-1.3
RANF					SG Sn	11 59 17.4	+0.9
KU6	**Riekki**	**2.22**	**19**		PG Pn	11 58 51.5	+1.3
KU6					smax smax	11 59 18.0	
	comp=Z,1.1nm,0.2s						
KU6					SG Sn	11 59 19.1	+0.8
KEF	**Keuruu**	**2.31**	**221**		PG Pb	11 58 53.9	-0.8
KEF					smax smax	11 59 20.6	
	comp=Z,3.7nm,0.2s						
KEF					SG Sb	11 59 23.0	-0.8
VAF	**Ylistaro** baz=70	**2.59**	**252**		PG Pb	11 58 58.1	-1.4
VAF					smax smax	11 59 28.6	
	comp=Z,1.9nm,0.2s						
VAF					SG Sb	11 59 30.4	-1.5
TOF	**Tornio**	**2.67**	**325**		SB Sn	11 59 28.9	-0.4
TOF					smax smax	11 59 30.7	
	comp=Z,0.6nm,0.2s						
FIA0	**FINESS Array S** comp=Z,1.5nm,0.2s	**2.68**	**201**		smax smax	11 59 31.2	
FIA0					SG Sb	11 59 32.9	-1.5
RNF	**Rovaniemi**	**2.81**	**343**		PB Pn	11 59 00.6	+2.3
RNF					SG Sb	11 59 36.9	-1.1
VJF	**Virojoki**	**3.43**	**184**		SN Sn	11 59 43.7	-4.5
ERTU	**Ertsjaerv**	**3.60**	**319**		PB Pn	11 59 11.1	+1.9
KLF	**Kolari**	**3.71**	**334**		PN Pn	11 59 12.2	+1.5
KLF					SN Sn	11 59 54.5	-0.6
PAJU	**Pajala**	**3.72**	**328**		SN Sn	11 59 54.3	-1.0

NIED ***25*** *11:59:17.5, 31°.22N×140°.13E, h32km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr0.33; Mθθ-1.10; Mφφ0.77; Mrθ-0.28; Mθφ-0.79; Mφr-2.64; Fault plane solution: M₀2.87000×10¹⁵ NP1: φs102.00000°, δ24.00000°, λ176.00000°. NP2: φs196.00000°, δ88.00000°, λ66.00000°.*

IDC ***25*** *11:59:17.6±1.0, 31°.53N×140°.40E, h0km, mb3.6/7, mbtmp3.6/8, ML3.1/1, MS3.3/12 Error ellipse: s-maj=32.0km s-min=17.3km az=83.0*

JMA ***25*** *11:59:17.5±0.4, 31°.N±2°×14°.0E±°, h32km, MV3.6/31, NEAR TORISHIMA IS*

ISC 25 11:59:22.9±1.0, 31°.47N±0°.09×140°.4E±0°.1, h35km, n34, σ1ᵎ72/20, mb3.6/7, MS3.4/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.12**	**332**	*e*P	Pn	**11 59 40.1**	**-2.0**
JAOM				*e*S	Sn	**11 59 56.5**	**+0.1**
JHCJ	**Hachijojimakas**	**1.68**	**343**	*e*P	Pn	**11 59 48.9**	**-0.8**
JHJ2	**Mitsune**	**1.71**	**344**	*e*P	Pn	**11 59 48.8**	**-1.3**
JHJ	**Hachijo jima 2** 14nm,0.3s,baz=83,slow=22,SNR=20	**1.72**	**343**	Pn	Pn	**11 59 48.4**	**-2.0**
JHJ					LR LR	12 00 06.6	
	comp=Z,130nm,19.9s,baz=234,slow=30						
JHJ	30nm,0.3s,baz=335,slow=23,SNR=5.8				Sn **Sn**	**12 00 10.0**	**-1.1**
BSO1	**Boso 1**	**3.22**	**9**	*e*P	**Pn**	**12 00 09.7**	**-0.7**
BSO3	**Boso 3**	**3.33**	**2**	*e*P	**Pn**	**12 00 12.5**	**+0.3**
BSO4	**Boso 4**	**3.51**	**359**	*e*S	**Sn**	**12 00 56.3**	**+1.1**
JOD2	**Odawara 2**	**3.94**	**344**	P	**Pn**	**12 00 24.5**	**+3.7**
JCJ	**Chichijima** comp=Z,138nm,21.1s,baz=303,slow=38	**4.63**	**160**	LR	LR	12 02 14.9	
JRY	**Ryogami san**	**4.70**	**345**	*e*P	**Pn**	**12 00 33.9**	**+2.5**
MJAR	**Matsushiro Arr** 0.3nm,0.3s,baz=160,slow=11,SNR=21	**5.37**	**341**	Pn	**Pn**	**12 00 43.5**	**+2.9**
MJAR					LR LR	12 02 53.4	
	comp=Z,447nm,19.3s,baz=178,slow=40						
KSRS	**Korea Array** comp=Z,50nm,19.2s,baz=170,slow=37	**11.89**	**304**	LR	LR	12 06 40.9	
ASAJ	**Asahikawa** 0.2nm,0.3s,baz=215,slow=16,SNR=4.1 3.1nm,1.0s	**12.75**	**7**	Pn	**Pn**	**12 02 19.8**	**-1.7**
GUMO	**Guam** comp=Z,66nm,18.2s,baz=18,slow=36	**18.27**	**166**	LR	LR	12 10 21.3	
KLR	**Kul'dur** comp=Z,91nm,21.9s,baz=177,slow=35	**18.90**	**342**	LR	LR	12 10 14.7	
H11N2	**WAKE ISLAND Hy 26.54** baz=302,slow=75,SNR=150	**110**		T	T	12 32 58.6	
H11N1	**WAKE ISLAND Hy 26.55** baz=302,slow=75,SNR=63	**110**		T	T	12 33 01.5	
H11N3	**WAKE ISLAND Hy 26.56** baz=302,slow=75,SNR=139	**110**		T	T	12 33 01.1	
H11S3	**WAKE ISLAND Hy 27.04** baz=304,slow=75,SNR=1950	**112**		T	T	12 33 33.7	
H11S1	**WAKE ISLAND Hy 27.04** baz=304,slow=75,SNR=2484	**112**		T	T	12 33 37.7	
H11S2	**WAKE ISLAND Hy 27.05** baz=304,slow=75,SNR=1180	**112**		T	T	12 33 39.8	
SONM	**Songino Array** 0.5nm,0.9s,baz=104,slow=6.1,SNR=2.9	**30.55**	**312**	P	**P**	**12 05 34.6**	**+1.5**
SONM					LR LR	12 16 43.2	
	comp=Z,49nm,18.3s,baz=230,slow=34 0.5nm,0.9s						
YAK	**Yakutsk** comp=Z,70nm,18.1s,baz=40,slow=36	**31.36**	**350**	LR	LR	12 18 17.1	
TLY	**Talaya** comp=Z,43nm,18.1s,baz=134,slow=38	**33.61**	**318**	LR	LR	12 20 17.3	
ZALV	**Zalesovo Beam** comp=Z,39nm,18.4s,baz=65,slow=34	**45.20**	**317**	LR	LR	12 24 57.3	
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=90,slow=10,SNR=7.2 0.6nm,0.7s	**46.55**	**307**	P	**P**	**12 07 46.1**	**-0.9**
KURBB	**Kurchatov Arra** 1.0nm,0.8s,baz=88,slow=7.9,SNR=8.8 1.0nm,0.8s	**48.91**	**312**	P	**P**	**12 08 04.2**	**-1.0**
WRA	**Warramunga Arr** 1.1nm,0.9s,baz=5.3,slow=8.1,SNR=4.8 1.1nm,0.9s	**51.44**	**187**	P	**P**	**12 08 24.6**	**-0.1**
BVAR	**Borovoye Array** comp=Z,35nm,21.4s,baz=37,slow=35	**53.80**	**315**	LR	LR	12 30 46.8	
ILAR	**Eielson Array** 1.4nm,1.1s,baz=267,slow=6.5,SNR=6.5 1.4nm,1.1s	**54.69**	**30**	P	**P**	**12 08 48.1**	**0.0**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=1.6,slow=10,SNR=3.3 0.3nm,0.6s	**55.17**	**187**	P	**P**	**12 08 52.9**	**+0.9**
YKA	**Yellowknife Ar** 0.3nm,0.8s,baz=298,slow=6.3,SNR=4.4 0.3nm,0.8s	**69.07**	**29**	P	**P**	**12 10 24.0**	**-0.8**
HFS	**Hagfors** comp=Z,38nm,18.2s,baz=140,slow=39	**78.80**	**336**	LR	LR	12 51 01.2	
NOA	**NORSAR Array B** comp=Z,28nm,18.6s,baz=35,slow=38	**78.98**	**337**	LR	LR	12 49 44.4	

IDC ***25*** *12:27:02.7±0.9, 24°.26N×121°.36E, h0km, mb3.6/8, mbtmp3.6/9, ML3.0/1, MS3.0/7, Error ellipse: s-maj=44.4km s-min=16.9km az=62.0*

NIED ***25*** *12:27:03.0, 24°.39N×121°.36E, h4km, MW4.1, Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁵Nm; Mrr-1.36; Mθθ0.62; Mφφ0.75; Mrθ0.74; Mθφ-0.29; Mφr-0.47; Fault plane solution: M₀1.46000×10¹⁵ NP1: φs144.00000°, δ27.00000°, λ-78.00000°. NP2: φs311.00000°, δ63.00000°, λ-96.00000°.*

ASIES ***25*** *12:27:03.5, 24°.38N×121°.41E, h4km, Mw3.9, Fault plane solution: NP1:φs147.00000°, δ21.00000°, λ-108.00000°. NP2:φs346.00000°, δ70.00000°, λ-84.00000°.*

JMA ***25*** *12:27:03.0±0.1, 24°.4N±0°.3×121°.4E±0°.8, h4km, MV3.5/11, TAIWAN REGION*

TAP ***25*** *12:27:03.2, 24°.39N×121°.41E, h5km, ML4.2, C*

ISC 25 12:27:03.6±0.8, 24°.39N±0°.01×121°.41E±0°.01, h5km±5km, n192, σ0ᵎ82/297, mb3.5/8, MS3.1/5, 8C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
NNSH	**Datong**	**0.05**	**329**	⇓*i*P	**Pg**	**12 27 05.0**	**-0.1**
NNS	**Nan Shan**	**0.06**	**328**	*i* P	**Pg**	**12 27 05.2**	**-0.1**
NNS				*e*S	**Sg**	**12 27 06.3**	**-0.1**
LATG	**Datong**	**0.18**	**36**	*i* P	**Pg**	**12 27 07.2**	**-0.1**
ETLH	**Xiulin Townshi**	**0.19**	**160**	P	**Pg**	**12 27 08.1**	**+0.7**
FUSS	**Fushou**	**0.21**	**227**	⇑*i*P	**Pg**	**12 27 08.0**	**+0.2**
FUSS				*i* S	**Sg**	**12 27 11.2**	**+0.7**
NDT	**Datong Townshi**	**0.23**	**24**	*i* P	**Pg**	**12 27 08.3**	**+0.1**
NDT				S	**Sg**	**12 27 12.1**	**+0.7**
TWT	**Tachien**	**0.25**	**238**	⇑*i*P	**Pg**	**12 27 08.9**	**+0.3**
TWT				*i* S	**Sg**	**12 27 12.9**	**+1.0**
TDCB	**Techi**	**0.27**	**239**	⇑*i*P	**Pg**	**12 27 08.9**	**+0.1**
TDCB				*i* S	**Sg**	**12 27 12.4**	**0.0**
NACB	**Ninganchiao**	**0.27**	**142**	P	**Pg**	**12 27 09.4**	**+0.5**
NACB	**Ninganchiao**	**0.27**	**142**	S	**Sg**	**12 27 13.4**	**+0.8**
NACB	**Ninganchiao**	**0.27**	**142**	⇑*i*P	**Pg**	**12 27 09.4**	**+0.5**
NACB				S	**Sg**	**12 27 13.1**	**+0.6**
WHF	**Hehuan Shan**	**0.28**	**208**	*i* P	**Pg**	**12 27 09.3**	**+0.2**
WHF				S	**Sg**	**12 27 13.7**	**+0.8**
YHNB	**Yeheng**	**0.28**	**354**	P	**Pg**	**12 27 09.1**	**0.0**
YHNB	**Yeheng**	**0.28**	**354**	S	**Sg**	**12 27 12.8**	**-0.1**
YHNB	**Yeheng**	**0.28**	**354**	*i* P	**Pg**	**12 27 09.5**	**+0.3**
YHNB				S	**Sg**	**12 27 12.9**	**-0.1**
ENTT	**Nioudou**	**0.29**	**30**	*i* P	**Pg**	**12 27 09.4**	**+0.1**
ENTT				S	**Sg**	**12 27 13.7**	**+0.6**
NSK	**Sanguang**	**0.29**	**351**	*i* P	**Pg**	**12 27 09.6**	**+0.3**
NSK				S	**Sg**	**12 27 13.2**	**+0.1**
ETL	**Fush Village**	**0.30**	**139**	P	**Pg**	**12 27 10.0**	**+0.5**
ETL				S	**Sb**	**12 27 14.7**	**-2.0**
EAHA	**Aohua**	**0.31**	**101**	*e*P	**Pg**	**12 27 09.9**	**+0.3**
EAHA				*e*S	**Sg**	**12 27 13.8**	**+0.1**
EHP	**Heping Village**	**0.31**	**104**	*e*P	**Pg**	**12 27 09.5**	**-0.2**
EWUT	**Wuta**	**0.34**	**80**	P	**Pg**	**12 27 10.2**	**0.0**
EWUT				S	**Sb**	**12 27 16.2**	**-1.7**
TWD	**Chiawan**	**0.35**	**151**	*e*P	**Pb**	**12 27 11.1**	**-1.3**
TWD				*e*S	**Sg**	**12 27 15.8**	**+0.7**
NFF	**Wufeng Townshi**	**0.36**	**312**	*i* P	**Pb**	**12 27 11.2**	**-1.3**
NFF				S	**Sg**	**12 27 16.2**	**+0.9**
LXIB	**Xiulin Townshi**	**0.37**	**179**	P	**Pb**	**12 27 11.3**	**-1.3**
LXIB				S	**Sg**	**12 27 15.9**	**+0.3**
NDS	**Dongshan**	**0.37**	**49**	*i* P	**Pg**	**12 27 10.7**	**-0.1**
NDS				S	**Sg**	**12 27 16.3**	**+0.6**
NWLT	**Wulai**	**0.40**	**12**	*i* P	**Pg**	**12 27 11.5**	**+0.2**
NWLT				S	**Sg**	**12 27 16.5**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.40**	**24**	⇑*i*P	**Pg**	**12 27 11.5**	**0.0**
FUSB				S	**Sb**	**12 27 18.1**	**-1.6**

TWE	**Neicheng**	0.41	35	*i* P	Pg	12 27 11.7	+0.2	STYH			eS	Sn	12 27 47.7	+0.5
TWE				eS	Sg	12 27 17.6	+0.8	**WTP**	**Ta-pu**	1.35	213	*e*P	Pg	12 27 29.9	+0.4
ETM	**Tongmen**	0.43	170	*i* P	Pb	12 27 12.3	-1.3	WTP				eS	Sn	12 27 48.5	+1.1
ETM				S	Sg	12 27 18.4	+0.9	**PCYT**	**Pengchaiyu**	1.37	26	*i* P	Pn	12 27 29.2	-0.2
WHP	**Taichung City**	0.44	255⇑	*i*P	Pb	12 27 12.6	-1.2	PCYT				eS	Sb	12 27 46.7	-0.9
WHP				*i* S	Sg	12 27 18.2	+0.5	**WSL**	**Shuilin Townsh**	1.38	232	*e*P	Pg	12 27 29.6	-0.5
KSHI	**Guanxi Townshi**	0.44	331	P	Pb	12 27 13.4	-0.4	WSL				S	Sn	12 27 49.4	+1.2
KSHI				S	Sb	12 27 19.8	-1.0	**TWK**	**Hsinying**	1.40	217	P	Pg	12 27 30.6	+0.2
LIOB	**Emei**	0.44	306	*i* P	Pb	12 27 13.1	-0.7	TWK				eS	Sn	12 27 50.1	+1.4
LIOB				eS	Sb	12 27 19.3	-1.4	**JYNG**	**Yonagunijimaku**	1.40	87	P	Pb	12 27 30.0	-0.3
NSTT	**Nanjuang**	0.44	303	*i* P	Pb	12 27 13.0	-0.9	**CHN1**	**Nanshi**	1.45	214	*e*P	Pg	12 27 31.3	0.0
NSTT				*i* S	Sb	12 27 19.1	-1.7	CHN1				S	Sg	12 27 51.0	+1.0
HWA	**Hwalien**	0.45	156	P	Pb	12 27 13.4	-0.5	**ICHU**	**Yijhu**	1.46	226	*e*P	Pg	12 27 31.4	-0.1
HWA				S	Sb	12 27 19.9	-1.0	**YOJ**	**Yonaguni jima**	1.46	87	P	Pb	12 27 31.0	-0.3
TWC	**Suao**	0.46	61	*i* P	Pg	12 27 12.2	-0.2	**YOJ**	**Yonaguni jima**	1.46	87	S	Sg	12 27 53.2	+2.6
TWC				S	Sg	12 27 18.8	+0.4	**YOJ**	**Yonaguni jima**	1.46	87	P	Pb	12 27 31.0	-0.3
WUSB	**Renai**	0.48	214⇑	*e*P	Sg	12 27 12.6	-0.2	**YOJ**	**Yonaguni jima**	1.46	87	P	Pb	12 27 30.7	-0.5
WUSB				eS	Sg	12 27 18.7	-0.4	YOJ					Sb	12 27 49.6	-0.5
ILA	**Ilan**	0.49	39	P	Pg	12 27 13.1	+0.1	**LONT**	**Longtian**	1.50	190	*e*P	Pb	12 27 31.3	-0.6
ILA				S	Sb	12 27 20.9	-1.2	**SGST**	**Jiashian**	1.50	210	P	Pg	12 27 32.0	-0.5
TEYL	**Yanliau Villag**	0.55	161	P	Pb	12 27 14.5	-1.2	SGST				eS	Sg	12 27 53.6	+1.6
TEYL				S	Sg	12 27 21.8	+0.5	**CHN8**	**Yiju**	1.51	227	*e*P	Pn	12 27 30.7	-0.6
SBCB	**Hsinchu**	0.56	316	P	Pb	12 27 15.9	+0.1	CHN8				eS	Sg	12 27 54.3	+2.2
WCS	**Beigang Elemen**	0.56	234	P	Pb	12 27 14.7	-1.2	**SLGT**	**Liugui**	1.56	207	*e*P	Pg	12 27 33.4	0.0
WCS				eS	Sg	12 27 22.2	+0.5	SLGT				eS	Sg	12 27 56.0	+2.4
ESL	**Shilin**	0.57	178	P	Pb	12 27 14.9	-1.2	**TWG**	**Pinlang**	1.59	191	P	Pb	12 27 33.2	-0.3
ESL				S	Sg	12 27 22.3	+0.2	**TWGBT**	**Beinan**	1.59	191	P	Pg	12 27 33.9	-0.3
HSN	**Hsinchu**	0.57	316	P	Pb	12 27 16.4	+0.3	**TWGBT**	**Beinan**	1.59	191	*e*P	Pb	12 27 33.0	-0.5
HSN				S	Sb	12 27 24.6	+0.1	**SSHA**	**Shanhua**	1.61	220	*e*P	Pb	12 27 33.0	-0.9
NHDH	**Xindian Distri**	0.58	10	P	Pb	12 27 15.3	-0.9	SSHA				eS	Sg	12 27 58.5	+3.0
NHDH				S	Sg	12 27 22.5	+0.1	**CHN3**	**Shinhua**	1.62	216	*e*P	Pg	12 27 35.7	+1.0
TWQ1	**Liyutan**	0.58	266	*i* P	Pb	12 27 15.9	-0.3	CHN3				eS	Sg	12 27 58.7	+3.1
TWQ1				S	Sb	12 27 23.6	-1.1	**SCLT**	**Jiali**	1.64	223	*e*P	Pb	12 27 33.5	-0.8
NMLH	**Miaoli**	0.58	285	*i* P	Pb	12 27 16.5	+0.2	SCLT				eS	Sg	12 27 57.9	+1.4
NMLH				eS	Sb	12 27 24.9	+0.1	**SHHT**	**Tainan City**	1.67	216	*e*P	Pg	12 27 36.7	+1.0
TATO	**Taipei**	0.59	7	P	Pb	12 27 15.5	-0.9	**LDUT**	**Ludao**	1.71	178	*e*P	Pb	12 27 35.0	-0.5
TATO	**Taipei**	0.59	7	S	Sg	12 27 23.2	+0.6	**SCST**	**Cishan**	1.72	209	*e*P	Pg	12 27 37.6	+1.1
NSY	**Sanyi**	0.59	273	*i* P	Pb	12 27 16.8	+0.4	SCST				S	Sg	12 28 01.5	+2.8
NSY				S	Sb	12 27 25.1	0.0	**TSCK**	**Chigu Township**	1.73	225	*e*P	Pb	12 27 35.5	-0.3
NTC	**Toucheng**	0.60	40	*e*P	Pb	12 27 15.8	-0.8	TSCK				eS	Sg	12 27 59.6	+0.4
TWA	**Mucha**	0.61	15	*i* P	Pb	12 27 15.9	-0.8	**SSD**	**Sandimen**	1.78	204	*e*P	Pg	12 27 37.2	-0.6
TWA				S	Sg	12 27 23.4	+0.1	**TWM1**	**Shoushan**	1.80	210	*e*P	Pg	12 27 38.5	+0.4
NCUH	**Zhongli**	0.61	341	P	Pb	12 27 17.4	+0.6	**TSMG**	**Majia**	1.82	203	*e*P	Pg	12 27 37.5	-1.0
NCUH				S	Sb	12 27 26.4	+0.8	**ECL**	**Taimali**	1.83	193	*e*P	Pg	12 27 37.9	-0.8
NCU	**National Centr**	0.61	341	*e*P	Pg	12 27 15.5	+0.1	**VWUC**	**VWUC**	1.88	289	*e*P	Pn	12 27 35.1	-1.3
NCU				eS	Sg	12 27 24.1	+0.7	**PNG**	**Penghu**	1.88	245	*e*P	Pb	12 27 37.3	-1.1
SHUL	**Shoufeng**	0.61	167	*i* P	Pb	12 27 16.4	-0.4	PNG				S	Sb	12 28 02.1	-0.1
SHUL				S	Sb	12 27 24.6	-1.1	**MASBT**	**Mashibuluo**	1.91	202	P	Pg	12 27 39.1	-1.1
TAP	**Taipei**	0.65	8	P	Pb	12 27 17.0	-0.5	MASBT				eS	Sg	12 28 05.1	+0.2
TAP				S	Sb	12 27 25.6	-1.3	**WDGT**	**Dungji**	1.96	235	*e*P	Pb	12 27 38.7	-0.9
EGS		0.66	46	*e*P	Pg	12 27 16.4	+0.2	**WSSB**	**Gushan**	2.03	211	*e*P	Pb	12 27 40.2	-0.9
EGS				eS	Sb	12 27 27.4	+0.4	**SSPT**	**Xinbi**	2.05	202	*e*P	Pb	12 27 41.3	0.0
NHY	**Taipei**	0.66	13	*e*P	Pb	12 27 17.2	-0.5	**EAST**	**Anshuo**	2.06	195	*e*P	Pg	12 27 41.9	-1.3
NHY				S	Sb	12 27 26.1	-1.1	**TAW**	**Tawu**	2.08	193	*e*P	Pn	12 27 37.6	-1.4
WARBT	**Fenglin Townsh**	0.67	182	*e*P	Pg	12 27 16.5	+0.1	**IRIF**	**Iriomote-Funau**	2.12	91	P	Pn	12 27 40.0	+0.3
WARBT				S	Sg	12 27 25.6	+0.4	**SCZT**	**Fangliau**	2.13	200	P	Pb	12 27 42.5	-0.3
VWDT	**VWDT**	0.68	201	*i* P	Pg	12 27 16.1	-0.5	**VCHM**	**Qimei**	2.16	237	*e*P	Pb	12 27 41.4	-1.8
VWDT				S	Sg	12 27 25.9	+0.4	**PTMZ**	**Houxiangcun**	2.18	288	*e*P	Pn	12 27 40.4	-0.1
SMLT	**Sun Moon Lake**	0.69	223	*i* P	Pg	12 27 16.8	0.0	**MATB**	**Ma-tsu**	2.20	323	*e*P	Pn	12 27 41.1	+0.3
SMLT				S	Sg	12 27 25.6	-0.1	MATB				eS	Sb	12 28 10.1	-1.3
TEGC	**Jichi Village**	0.69	170	*e*P	Pb	12 27 17.9	-0.1	**SLIU**	**Shizi**	2.23	195	*e*P	Pb	12 27 43.4	-1.0
TEGC				eS	Sb	12 27 27.7	-0.1	**LAY**	**Lan-yu**	2.34	177	*e*P	Pn	12 27 42.6	-0.2
TIPB	**Shuangxi**	0.69	33	*e*P	Pg	12 27 16.8	-0.1	**JKRS**	**Kuro-shima**	2.38	93	*e*P	Pn	12 27 44.0	+0.8
WDJ	**Dajia District**	0.70	267	P	Pn	12 27 18.9	-1.2	**LYUB**	**Lan-yu**	2.38	176	*e*P	Pn	12 27 43.4	+0.2
WDJ				eS	Sb	12 27 29.4	+1.1	**SMST**	**Manzhou Townsh**	2.42	193	*e*P	Pb	12 27 46.5	-1.0
TWS1	**Kuangyinshan**	0.71	1	*i* P	Pb	12 27 18.9	+0.4	**HEN**	**Hengchun**	2.45	195	*e*P	Pb	12 27 47.5	-0.6
TWS1				S	Sb	12 27 28.4	0.0	**JIJ**	**Ishigaki jima**	2.49	90	P	Pn	12 27 45.0	+0.4
TCU	**Taichung**	0.71	250	P	Pb	12 27 18.9	-0.5	**TWK1**	**Hengchun**	2.50	193	*e*P	Pb	12 27 47.4	+1.5
TCU				eS	Sb	12 27 28.8	+0.3	**TWKBT**	**Hengchun**	2.50	193	*e*P	Pb	12 27 47.5	-1.4
EGFH	**Guangfu**	0.72	179	*e*P	Pb	12 27 17.6	-1.0	**TSEB**	**Hengchuen, Pin**	2.52	191	*e*P	Pb	12 27 49.0	-0.4
EGFH				eS	Sb	12 27 28.0	-0.7	**LYJJ**	**Jianjiangzhen**	2.62	326	*e*P	Pn	12 27 46.8	+0.3
SSLB	**Suanglung**	0.73	215	P	Pg	12 27 16.6	-1.0	**JISG**	**Ishigakijimahi**	2.65	85	*e*P	Pn	12 27 47.1	+0.1
SSLB	**Suanglung**	0.73	215	*e*P	Pg	12 27 16.9	-0.7	**KNM**	**Kinmen**	2.71	271	*e*P	Pn	12 27 49.0	+1.2
EOS2	**EOS2**	0.75	88	*e*P	Pb	12 27 18.9	-0.2	**MHZQ**	**Yeshan**	2.75	309	*e*P	Pn	12 27 48.7	+0.5
NWF	**Wu-fen Shan**	0.76	26	*i* P	Pb	12 27 18.5	-0.8	**KNMB**	**Chin-men Tao**	2.75	272	*e*P	Pn	12 27 47.3	-1.1
NWF				S	Sg	12 27 28.3	+0.2	**AXDP**	**Jialang**	3.17	280	*e*P	Pn	12 27 53.9	-0.2
WFSB	**Wu-fen Shan**	0.76	26	*i* P	Pb	12 27 18.5	-0.8	AXDP				eS	Sn	12 28 30.6	-1.7
WFSB				eS	Sb	12 27 30.4	+0.5	**ZPLA**	**Ao Xicun**	3.37	263	*e*P	Pn	12 27 56.1	-0.8
YM01	**YM01**	0.77	11⇑	*i*P	Pb	12 27 19.3	-0.2	ZPLA				eS	Sn	12 28 35.7	-1.5
YM01				*i* S	Sg	12 27 28.7	+0.4	**DSXP**	**Dongshan**	3.70	260	*e*P	Pn	12 28 00.8	-0.7
NTST	**Danshui**	0.77	3	*i* P	Pn	12 27 20.1	-1.1	**SXFK**	**Yanhouchang**	3.95	301	*e*P	Pn	12 28 04.2	-0.7
NTST				S	Sb	12 27 30.9	+0.6	**JOW**	**Kunigami**	6.66	67	Pn	Pn	12 28 43.0	+0.9
ZUZH	**Zhuzihu**	0.78	9	*i* P	Pb	12 27 19.5	-0.2		0.7nm,0.3s,baz=259,slow=5.2,SNR=1.9 9.2nm,0.8s						
ZUZH				eS	Sb	12 27 31.1	+0.5	**JNU**	**Nakatsue**	12.02	42	LR	LR	12 35 25.2	
ANP	**Anpu**	0.80	7	*i* P	Pb	12 27 19.9	-0.1		comp=Z,46nm,21.8s,baz=10,slow=41						
ANP				S	Sb	12 27 30.4	-0.8	**KSRS**	**Korea Array**	14.17	22	Pn	P	12 30 33.9	+1.4
TWB1	**Santiao Chiao**	0.81	40	*e*P	Pg	12 27 18.6	-0.6		0.3nm,0.3s,baz=200,slow=12,SNR=7.8						
TWB1				eS	Sg	12 27 29.8	+0.1	**JCJ**	**Chichijima**	18.91	77	LR	LR	12 38 20.8	
YM08	**YM08**	0.81	12	*e*P	Pb	12 27 19.9	-0.4		comp=Z,14nm,19.9s,baz=202,slow=36						
YM08				eS	Sb	12 27 31.8	+0.4	**CMAR**	**Chiang Mai Arr**	21.72	259	LR	LR	12 40 33.1	
SXI1	**Grass Mountain**	0.82	31	P	Pg	12 27 19.4	0.0		comp=Z,39nm,21.3s,baz=65,slow=37						
SXI1				eS	Sb	12 27 32.0	+0.2	**KLR**	**Kul'dur**	26.09	16	LR	LR	12 44 09.9	
TNOU	**National Taiwa**	0.83	24	*e*P	Pb	12 27 19.8	-0.6		comp=Z,45nm,18.4s,baz=188,slow=39						
TNOU				eS	Sb	12 27 31.9	0.0	**SONM**	**Songino Array**	26.26	337	P	P	12 32 42.1	+2.3
EOS3	**EOS3**	0.83	97	*e*P	Pb	12 27 20.7	+0.2		0.4nm,0.7s,baz=148,slow=12,SNR=6.6						
WCHH	**Zhanghua**	0.83	249	*e*P	Pn	12 27 21.2	-0.7	SONM				LR	LR	12 44 24.7	
WCHH				S	Sn	12 27 33.5	-1.1		comp=Z,54nm,19.4s,baz=94,slow=40 0.4nm,0.7s						
WNT	**Mingjian**	0.83	233	P	Pb	12 27 20.8	+0.2	**MKAR**	**Makanchi Array**	38.33	316	P	P	12 34 27.0	+1.7
WNT				eS	Sn	12 27 33.2	-1.4		0.6nm,0.7s,baz=110,slow=9.7,SNR=5.2 0.6nm,0.7s						
WJS	**Zhushan**	0.84	228	P	Pb	12 27 20.5	-0.2	**ZALV**	**Zalesovo Beam**	40.19	327	P	P	12 34 39.4	-1.2
WJS				S	Sb	12 27 33.0	+0.7		0.3nm,0.3s,baz=105,slow=11,SNR=4.2 0.3nm,0.3s						
WCH1	**Changhua City**	0.85	248	*e*P	Pn	12 27 21.6	-0.5	**KURBB**	**Kurchatov Arra**	42.08	320	P	P	12 34 54.8	-1.5
WHYT	**Xinyi Township**	0.86	216	*e*P	Pg	12 27 21.9	-0.6		0.4nm,0.8s,baz=103,slow=6.7,SNR=2.8 0.4nm,0.8s						
EOS4	**EOS4**	0.87	108	*e*P	Pb	12 27 21.1	+0.1	**PALK**	**Pallekele**	42.49	253	LR	LR	12 51 31.6	
EHY	**Hungye**	0.88	185	P	Pb	12 27 20.6	-0.8		comp=Z,27nm,21.9s,baz=193,slow=35						
EHY				S	Sg	12 27 31.4	-0.7	**WRA**	**Warramunga Arr**	45.83	163	P	P	12 35 25.7	-1.0
EHYH	**Wanrong**	0.89	184	*i* P	Pb	12 27 20.8	-0.7		0.7nm,0.5s,baz=343,slow=8.5,SNR=7.4 0.7nm,0.5s						
EHYH				eS	Sg	12 27 32.5	+0.2	**BVAR**	**Borovoye Array**	47.65	321	P	P	12 35 42.2	+1.6
HGSD	**Ruisui**	0.89	179	*e*P	Pb	12 27 21.3	-0.3		0.6nm,0.6s,baz=188,slow=3.0,SNR=4.0 0.6nm,0.6s						
HGSD				eS	Sb	12 27 33.8	+0.1	**ASAR**	**Alice Springs**	49.28	165	P	P	12 35 53.0	-0.6
TWY	**Chenhua**	0.90	11	P	Pb	12 27 21.8	+0.1		0.4nm,0.5s,baz=341,slow=6.6,SNR=11						
TWY				S	Sb	12 27 34.1	+0.1	ASAR				PcP	PcP	12 37 14.9	-1.5
YULB	**Yu-li**	1.00	186	P	Pg	12 27 22.3	-0.5		0.2nm,0.5s,baz=348,slow=2.8,SNR=4.7 0.4nm,0.5s						
YULB	**Yu-li**	1.00	186	S	Sb	12 27 36.4	-0.4	**ARTI**	**Arti**	55.16	323	LR	LR	13 01 06.0	
CHN5	**Tsauling**	1.03	220	*i* P	Pn	12 27 24.2	-0.6		comp=Z,42nm,18.4s,baz=223,slow=37						
CHN5				eS	Sn	12 27 38.6	-1.0	**FINES**	**FINESS Array B**	71.37	330	P	P	12 38 24.5	+0.2
ALS	**Alishan**	1.03	212	*e*P	Pg	12 27 23.0	-0.5		1.8nm,0.8s,baz=54,slow=3.3,SNR=4.2 1.8nm,0.8s						
ALS				eS	Sg	12 27 36.5	-0.4								
TWF1	**Yuli**	1.04	186	*i* P	Pg	12 27 23.3	-0.3								
TWF1				eS	Sb	12 27 37.0	-0.9								
EYUL	**Yuli**	1.04	185	*e*P	Pn	12 27 24.3	-0.5								
EYUL				eS	Sb	12 27 38.3	+0.3								
WDL	**Douliou City**	1.04	230	*e*P	Pb	12 27 24.0	-0.1								
WGK	**Gukeng**	1.04	228	P	Pn	12 27 24.9	0.0								
WGK				eS	Sn	12 27 39.5	-0.2								
WDLH	**Douliu**	1.06	229	*e*P	Pn	12 27 24.8	-0.2								
WDLH				eS	Sn	12 27 40.1	0.0								
WRL	**Guolierlin Hig**	1.06	243	*e*P	Pn	12 27 24.6	-0.5								
WRL				S	Sn	12 27 39.3	-0.8								
ECBN	**Changbin**	1.07	178	*e*P	Pg	12 27 23.4	-0.7								
ECBN				eS	Sn	12 27 40.0	-0.4								
RLNB	**Erlin**	1.08	243	P	Pn	12 27 25.1	-0.2								
RLNB				S	Sn	12 27 40.3	-0.3								
WTCT	**Ta-ch'eng**	1.16	243	*e*P	Pn	12 27 26.3	-0.1								
WTCT				S	Sn	12 27 42.1	-0.4								
WTK	**Tuku**	1.17	233	*e*P	Pn	12 27 26.4	-0.1								
WTK				eS	Sn	12 27 43.2	+0.5								
FULB	**Fuli**	1.19	185	P	Pn	12 27 27.2	+0.3								
FULB				eS	Sn	12 27 43.4	0.0								
CHKH	**Chenggong**	1.19	181	*e*P	Pn	12 27 26.6	-0.2								
CHKH				eS	Sn	12 27 42.9	-0.5								
WCKO	**Fanlu**	1.20	218	P	Pn	12 27 27.2	+0.2								
WCKO				S	Sn	12 27 44.0	+0.4								
CHN2	**Minshiung**	1.21	225	P	Pn	12 27 27.2	+0.2								
CHN2				S	Sn	12 27 44.5	+0.7								
ELDTW	**Lidau**	1.25	197	*e*P	Pn	12 27 27.7	0.0								
ELDTW				S	Sb	12 27 43.8	-0.3								
CHY	**Chiayi**	1.26	226	*e*P	Pn	12 27 28.2	+0.3								
CHY				eS	Sn	12 27 46.1	+0.9								
CHKT	**Chengkung**	1.28	182	*e*P	Pb	12 27 28.0	-0.2								
CHKT				eS	Sn	12 27 45.0	-0.7								
TPUB	**Ta-pu**	1.30	214	P	Pb	12 27 28.7	+0.2								
TPUB	**Ta-pu**	1.30	214	*i* P	Pb	12 27 28.5	0.0								
TPUB				eS	Sn	12 27 47.0	+0.9								
ECS	**Chishang**	1.30	188	*e*P	Pb	12 27 28.9	+0.5								
ECS				eS	Sn	12 27 46.6	+0.5								
WSF	**Szhu**	1.32	236	P	Pb	12 27 29.0	+0.2								
WSF				S	Sn	12 27 46.5	0.0								
STYH	**Taoyuan**	1.34	206	*e*P	Pg	12 27 29.3	-0.1								

*NNC **25** 12:27:58.7±2.4,48°.77N×78°.10E,h0km,mb2.9,mpv2.5, Error ellipse: s-maj=37.1km s-min=9.2km az=71.0, Suspected Mining explosion.*
*IDC **25** 12:28:00.3±4.1,48°.63N×78°.40E,h0km,mbtmp2.5/2, ML1.8/2,Error ellipse: s-maj=44.2km s-min=20.8km az=83.0*

ISC 25 12:27:54.9±3.3,48°.6N±0'.1×77°.8E±0'.3,h0km,n7,σ2s35/7, 6C-2D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.06**	**13**	⇓Pn		**Pn**	**Pn**	**12 28 31.5**	**+0.8**
	11nm,0.7s								
KURBB				⇑Lg		Lg	Lg	12 28 59.5	
	26nm,0.9s								
KURK	**Kurchatov**	**2.17**	**14**	⇑Pn		**Pn**	**Pn**	**12 28 32.8**	**+0.6**
	2.9nm,0.6s								
KURK				⇑Lg		Lg	Lg	12 29 01.7	
	3.3nm,0.6s								
MAKZ	**Makanchi**	**3.35**	**121**	⇑Pn		**Pb**	**Pb**	**12 28 52.8**	**-2.4**
	1.1nm,0.8s								
MAKZ				⇓Lg		Lg	Lg	12 29 40.5	
	3.9nm,0.7s								
MK31	**Makanchi Array**	**3.54**	**119**	⇑Pn		**Pn**	**Pn**	**12 28 53.8**	**+2.6**
	0.2nm,0.3s,baz=135,slow=11,SNR=11								
MK31				⇑Lg		Lg	Lg	12 29 46.1	
	2.7nm,0.6s,baz=309,slow=25,SNR=18								
MKAR	**Makanchi Array**	**3.54**	**119**	Pn		**Pn**	**Pn**	**12 28 52.5**	**+1.4**
	0.2nm,0.3s,baz=306,slow=11,SNR=8.4								
MKAR				Lg		Lg	Lg	12 29 42.6	
	0.5nm,0.3s,baz=311,slow=26,SNR=17								
	0.6nm,0.7s								
I46RU	**ZALESOVO INFRA**	**6.92**	**37**	I		I	I	13 09 19.9	
	baz=219,slow=329,SNR=2.1								
ZALV	**Zalesovo Beam**	**6.92**	**37**	Pn		**Pn**	**Pn**	**12 29 39.9**	**+2.5**
	0.1nm,0.3s,baz=225,slow=14,SNR=2.7								
ZALV						Sn	Sn	12 30 56.1	-0.7
	0.1nm,0.3s,baz=225,slow=22,SNR=7.9								
ZALV						Lg	Lg	12 31 33.5	
	0.1nm,0.3s,baz=214,slow=28,SNR=1.5 0.4nm,0.4s								

*NSSP **25** 12:30:29.7,38°.43N×44°.50E,h10km,Ms3.4*
*AFAD **25** 12:30:29.2,38°.47N×44°.62E,h7km±2km,ML3.3*
*ISK **25** 12:30:29.7,38°.34N×44°.83E,h2km,ML3.5/10*
*TEH **25** 12:30:31.1,38°.48N×44°.51E,h6km±32km,ML3.3, Presumed earthquake*
*AZER **25** 12:30:31.5,38°.61N×44°.60E,h2km,ml3.6*

ISC 25 12:30:31.0±1.1,38°.47N±0'.02×44°.56E±0'.01,h8km±9km, n73,σ1s60/114,3C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**294**	P		**Pg**	**Pg**	**12 30 39.9**	**-0.6**
OZAP				S		**Sg**	**Sg**	**12 30 47.5**	**+0.6**
OZAP				IAML				12 30 50.0	
	comp=N,6μm,0.5s								
OZAP	**Van, Ozalp-Mer**	**0.49**	**294**	Pg		**Pg**	**Pg**	**12 30 39.9**	**-0.6**
ISHB	**Shabestar**	**0.85**	**102**	Pg		**Pb**	**Pb**	**12 30 47.5**	**-0.7**
MAKU	**Maku**	**0.89**	**6**	Pg		**Pg**	**Pg**	**12 30 47.5**	**-0.7**
YOVA	**Hakkari_Yksek**	**0.90**	**194**	P		**Pb**	**Pb**	**12 30 48.7**	**-0.4**
YOVA				S		**Sn**	**Sn**	**12 31 03.5**	**-0.1**
YOVA				IAML				12 31 08.0	
	comp=E,921nm,0.7s								
YOVA				IAML				12 31 10.0	
	comp=N,886nm,0.5s								
YOVA	**Hakkari_Yksek**	**0.90**	**194**	Pg		**Pb**	**Pb**	**12 30 48.7**	**-0.4**
TVAN	**Van**	**0.91**	**274**	P		**Pg**	**Pg**	**12 30 46.9**	**-1.6**
TVAN				S		**Sb**	**Sb**	**12 31 01.3**	**-0.3**
TVAN	**Van**	**0.91**	**274**	Pg		**Pg**	**Pg**	**12 30 46.9**	**-1.6**
IMRD	**Marand**	**0.93**	**74**	Pg		**Pn**	**Pn**	**12 30 49.8**	**-0.8**
VMUR	**Van-Muradiye**	**0.93**	**304**	P		**Pg**	**Pg**	**12 30 47.8**	**-1.2**
VMUR				S		**Sb**	**Sb**	**12 31 02.0**	**-0.2**
VMUR				IAML				12 31 06.0	
	comp=N,759nm,0.4s								
VMUR				IAML				12 31 20.0	
	comp=E,718nm,0.8s								
VMUR	**Van-Muradiye**	**0.93**	**304**	Pg		**Pg**	**Pg**	**12 30 47.8**	**-1.2**
NAX	**Nakhchivan**	**1.02**	**46**	P		**Pn**	**Pn**	**12 30 51.2**	**-0.5**
NAX				S		**Sn**	**Sn**	**12 31 05.8**	**-0.5**
HAKT	**HAKKARI**	**1.13**	**217**	P		**Pg**	**Pg**	**12 30 51.3**	**-1.4**
HAKT				S		**Sn**	**Sn**	**12 31 08.5**	**-0.7**
HAKT				IAML				12 31 12.0	
	comp=N,869nm,0.7s								
HAKT				IAML				12 31 12.0	
	comp=E,769nm,0.7s								
HAKT	**HAKKARI**	**1.13**	**217**	Pg		**Pg**	**Pg**	**12 30 51.3**	**-1.4**
HAKT	**HAKKARI**	**1.13**	**217**	P		**Pg**	**Pg**	**12 30 52.1**	**-0.6**
HAKT				S		**Sn**	**Sn**	**12 31 10.9**	**+1.7**
GEVA	**Gevas**	**1.19**	**263**	P		**Pb**	**Pb**	**12 30 51.5**	**-2.5**
GEVA				S		**Sb**	**Sb**	**12 31 08.9**	**-0.8**
SBZ	**Shahbuz**	**1.21**	**39**	P		**Pg**	**Pg**	**

LGD	Lagodekhi	3.60	20	P		Pg	12 31 41.5	+1.5
ALIG	Mtskhetisjvari	3.70	349	P		Pb	12 31 39.1	+2.4
XNQ	Khinaliq	3.86	44	P		Pb	12 31 34.9	-4.6
XNQ				S		Sb	12 32 22.6	-3.9
IDHR	Dehrash	4.04	158	Pn		Pn	12 31 36.5	+3.2
SHTL	Shatili	4.21	6	P		Pb	12 31 46.6	+1.2

*TEH **25** 12:39:48.7, 38˚.40N×44˚.50E, h10km±554km, ML2.8, Presumed earthquake*
*AFAD **25** 12:39:50.0, 38˚.39N×44˚.49E, h8km±4km, ML2.4*
*ISK **25** 12:39:53.5, 38˚.42N×44˚.23E, h9km, ML2.7/5*

ISC 25 12:39:50.0±1.1, 38˚.41N±0˚.03×44˚.51E±0˚.03, h15km±10km, n18, σ1§19/27, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.48	302	P	Pg	12 39 58.8	-0.8
OZAP				S	Sg	12 40 06.5	+0.4
OZAP				IAML		12 40 15.0	
	comp=N,511nm,0.6s						
YOVA	Hakkari_Yksek	0.84	192	P	Pn	12 40 06.8	-0.7
YOVA				S	Sb	12 40 17.4	-0.1
YOVA				IAML		12 40 22.0	
	comp=N,174nm,0.3s						
YOVA				IAML		12 40 22.0	
	comp=E,163nm,0.5s						
TVAN	Van	0.87	278	P	Pg	12 40 04.9	-2.1
TVAN				S	Sn	12 40 19.8	-0.7
TVAN				IAML		12 40 26.0	
	comp=E,159nm,0.4s						
TVAN				IAML		12 40 28.0	
	comp=N,146nm,0.8s						
ISHB	Shabestar	0.88	98	Pg	Pg	12 40 05.5	-1.7
VMUR	Van-Muradiye	0.93	309	P	Pb	12 40 08.5	+0.4
VMUR				S	Sn	12 40 22.5	+0.5
VMUR				IAML		12 40 26.0	
	comp=N,138nm,0.8s						
VMUR				IAML		12 40 28.0	
	comp=E,146nm,0.6s						
MAKU	Maku	0.95	8	Pg	Pb	12 40 07.4	-1.0
IMRD	Marand	0.99	72	Pg	Pb	12 40 08.7	-0.2
GEVA	Gevas	1.14	266	P	Pb	12 40 09.3	-2.2
GEVA				S	Sn	12 40 27.7	+0.6
GEVA				IAML		12 40 30.0	
	comp=N,93nm,0.3s						
GEVA				IAML		12 40 36.0	
	comp=E,94nm,0.8s						
AKDM	Akdamar-Van	1.20	267	Pg	Pg	12 40 12.7	-0.5
ITBZ	Tabriz	1.30	97	Pg	Pn	12 40 13.5	-0.3
CUKT	Cukurca	1.36	212	Pn	Pg	12 40 17.9	+1.7
CUKT				Sn	Sg	12 40 35.8	+1.8
IAZR	Azarshahr	1.37	122	Pg	Pb	12 40 15.6	0.0
PERV	Siirt/Pervari-	1.62	254	P	Pg	12 40 20.5	-0.6
PERV				S	Sg	12 40 44.1	+2.0
AGRB	Hanur-Agry	1.66	315	Pn	Pg	12 40 21.4	-0.5
DORK	Agr/Tutak/Do	1.66	307	P	Pn	12 40 19.3	+0.5
DORK				S	Sg	12 40 45.2	+1.5
DORK				IAML		12 40 51.0	
	comp=E,34nm,0.9s						
DORK				IAML		12 40 55.0	
	comp=N,36nm,1.1s						
KOTA	Agri, Merkez-K	1.72	324	P	Pb	12 40 21.8	+0.4
KOTA				S	Sg	12 40 45.3	-0.2
GNI	Garni	1.75	6	Pn	Pg	12 40 25.1	+1.5
GURO	Guroymak-BITLI	1.95	275	Pn	Pb	12 40 24.5	-0.8

IDC 25 12:53:12.0±2.8, 5˚.34N×126˚.32E, h0km, mb3.4/3, mbtmp3.4/3, MS3.3/2, Error ellipse: s-maj=234.3km s-min=29.2km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.34	163	P	P	12 58 50.0	+0.1
	0.9nm,0.6s,baz=342,slow=9.7,SNR=7.6						
	0.9nm,0.6s						
ASAR	Alice Springs	29.77	166	P	P	12 59 20.4	-0.1
	0.3nm,0.6s,baz=357,slow=6.7,SNR=6.5						
	0.3nm,0.6s						
CTA	Charters Tower	31.98	143	LR	LR	13 14 59.6	
	comp=Z,55nm,20.4s,baz=214,slow=41						
MKAR	Makanchi Array	56.01	325	P	P	13 02 52.4	-0.1
	0.4nm,1.1s,baz=127,slow=9.1,SNR=1.6						
	0.4nm,1.1s						
AAK	Ala-Archa	58.90	317	LR	LR	13 31 28.7	
	comp=Z,23nm,18.3s,baz=222,slow=39						

*DJA **25** 13:13:09.7±0.2, 6˚N±3˚×12˚4E±˚, h526km±4km, M4.4/42, mb4.5/42, mB4.9/17, MLv5.0/14, Mw(mB)4.2/17*
*NEIC **25** 13:13:10.4±1.3, 6˚.05N±0˚.08×124˚.0E±0˚.1, h545km±7km, mb4.4/54, Error ellipse: s-maj=14.8km s-min=11.1km az=103.0*
*IDC **25** 13:13:11.3±1.1, 5˚.96N×123˚.96E, h564km±14km, mb3.5/16, mbtmp4.5/19, Error ellipse: s-maj=22.0km s-min=7.0km az=69.0*

ISC 25 13:13:10.1±0.4, 5˚.99N±0˚.05×124˚.02E±0˚.08, h550km, n128, σ1§03/137, mb4.3/51, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	4.59	170	P	P	13 14 34.9	-1.8
GTOI	Gorontalo	5.41	191	P	P	13 14 42.5	-1.1
MYLDM	Lahad Datu	5.55	262		P	13 14 45.1	+0.3
MYLDM	Lahad Datu	5.55	262	P	P	13 14 45.0	+0.3
	49nm,1.2s						
TOLI2	Tolitoli	5.83	214	P	P	13 14 46.7	-0.6
TNTI	Ternate	6.17	147		P	13 14 49.4	-0.9
TNTI	Ternate	6.17	147	P	P	13 14 49.6	-0.8
	0.6nm2µm137nm,0.6s						
MPSI	Mapaga	6.96	216	P	P	13 14 57.5	-0.3
	0.1nm23nm,0.6s						
LUWI	Luwuk	7.10	190	P	P	13 14 57.7	-1.4
LUWI	Luwuk	7.10	190	P	P	13 14 59.5	+0.4
	0.9nm5µm70nm,0.8s						
APSI	Ampana	7.25	199	P	P	13 15 00.4	-0.2
	0.5nm51nm,0.7s						
KKM	Kota Kinabalu	7.76	271		P	13 15 04.5	-1.2
KKM	Kota Kinabalu	7.76	271	P	P	13 15 04.1	-1.6
	0.4nm91nm,0.7s						
PCI	Palu	8.02	211	P	P	13 15 07.1	-1.1
	82nm,0.8s						
SANI	Sanana	8.23	166	P	P	13 15 07.6	-2.6
	2µm119nm,0.7s						
NLAI	Namlea	9.67	161	P	P	13 15 26.7	+1.9
	1µm108nm,0.7s						
TTSI	Tana Toraja	9.91	205	P	P	13 15 29.5	+2.3
	64nm,0.7s						
SIJI	Sorong	9.94	133	P	P	13 15 28.8	+1.2
	14nm,0.4s,baz=321,slow=15,SNR=14						
SIJI	Sorong	9.94	133	P	P	13 15 28.5	+0.9
MMSI	Mamuju	10.02	211	P	P	13 15 29.0	+0.6
	55nm,1.0s						
KRAI	Karang Ratu	10.23	155	P	P	13 15 32.6	+2.1
	39nm,0.7s						
AAI	Ambon	10.48	156	P	P	13 15 34.4	+1.3
	81nm,0.6s						
MSAI	Masohi	10.49	152	P	P	13 15 35.3	+2.1
	1µm99nm,0.9s						
SPSI	Sidrap Palu	10.76	203	P	P	13 15 36.5	+0.5
	102nm,0.7s						
KAPI	Kappang	11.73	201	P	P	13 15 47.3	+1.3
	9.6nm,0.5s,baz=339,slow=6.8,SNR=5.4						
SBUM	Sibu	12.28	254		P	13 15 51.2	-0.5
SBUM	Sibu	12.28	254	P	P	13 15 52.3	+0.6
EDFI	Ende, Flores	14.83	189	P	P	13 16 19.0	+1.0
	31nm,0.7s						
LBFI	Labuhan Bajo,	14.95	196	P	P	13 16 21.5	+2.3
DBNI	Kabupaten Domp	15.48	202	P	P	13 16 25.8	+1.1
SOEI	Soe	15.64	179	P	P	13 16 26.6	+0.2
SOEI				IAmb	IAmb	13 16 32.9	
	comp=Z,12nm,0.8s						
PLAI	Plampang	15.98	203	P	P	13 16 30.0	+0.4
	comp=Z,889nmcomp=Z,64nm,0.8s						
BATI	Baumata	16.09	181	P	P	13 16 30.4	-0.3
	comp=Z,50nm,0.4s,baz=342,slow=0.5,SNR=12						
BATI	Baumata	16.09	181	P	P	13 16 30.4	-0.3
	comp=Z,88nm,0.8s						
TWSI	Taliwang, Sumb	16.27	206	P	P	13 16 32.1	-0.2
	comp=Z,55nm,1.1s						
KHKI	Kahang-Kahang	16.54	211	P	P	13 16 37.4	+2.6
	comp=Z,66nm,0.7s						
JAGI	Jajag, Banyuwa	17.41	215		P	13 16 42.9	+0.1
JAGI	Jajag, Banyuwa	17.41	215	P	P	13 16 43.7	+1.0
	comp=Z,47nm,0.6s						
YULB	Yu-li	17.50	352	P	P	13 16 42.0	-1.5
YULB				IAmb	IAmb	13 16 45.1	
	comp=Z,16nm,1.2s						
TPUB	Ta-pu	17.52	350		P	13 16 42.5	-1.1
SSLB	Suanglung	17.94	351		P	13 16 46.7	-0.8
YHNB	Yeheng	18.75	353	P	P	13 16 55.0	+0.1
QIZ	Qiongzhong	18.94	314	P	P	13 16 56.5	-0.1
QIZ				IAmb	IAmb	13 16 58.0	
	comp=Z,9.1nm,0.8s						
MTN	Manton Dam	20.00	159	P	P	13 17 06.9	+0.5
BBJI	Bungbulang	21.10	231	P	P	13 17 16.2	-0.2
BBJI				IAmb	IAmb	13 17 48.5	
	comp=Z,11nm,1.1s						
KNRA	Kununurra	22.04	168	P	P	13 17 25.1	+0.4
KNRA				IAmb	IAmb	13 18 07.1	
	comp=Z,13nm,1.2s						
MNAI	Manna	23.41	244	P	P	13 17 37.3	+0.3
FITZ	Fitzroy Crossi	23.99	176	P	P	13 17 42.2	+0.2
	comp=Z,3.7nm,0.5s,baz=0.7,slow=6.7,SNR=18						
	comp=Z,3.7nm,0.5s						
WHN	Wuhan	26.06	341	P	P	13 18 01.8	+1.6
WHN				pmax	pmax		
	comp=Z,30nm,0.6s						
LHMI	Lhok Sumawe	26.95	270	P	P	13 18 08.4	+0.1
MBWA	Marble Bar	27.31	189	P	P	13 18 11.1	-0.2
MBWA				IAmb	IAmb	13 18 44.2	
	comp=Z,25nm,1.4s						
CMAR	Chiang Mai Arr	27.41	299	P	P	13 18 12.8	+0.5
	comp=Z,3.8nm,0.8s,baz=114,slow=7.2,SNR=28						
	comp=Z,3.8nm,0.8s						
CHTO	Chiang Mai	27.55	300		P	13 18 13.4	-0.1
CHTO				IAmb	IAmb	13 18 14.7	
	comp=Z,7.3nm,0.6s						
CHTO	Chiang Mai	27.55	300	P	P	13 18 14.0	+0.5
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	27.56	158	P	P	13 18 13.6	+0.1
WB0				IAmb	IAmb	13 18 20.6	
	comp=Z,25nm,1.5s						
PSA00	Pilbara Seismi	27.70	188	P	P	13 18 14.4	-0.2
WRA	Warramunga Arr	27.70	159	P	P	13 18 14.9	+0.2
	comp=Z,2.8nm,0.3s,baz=341,slow=9.1,SNR=70						
WRA				S	S	13 22 16.8	-2.1
	comp=Z,0.5nm,0.8s,baz=334,slow=19,SNR=2.1						
WRA				ScP	ScP	13 24 02.5	-0.2
	comp=Z,0.9nm,0.7s,baz=340,slow=3.1,SNR=10						
	comp=Z,2.8nm,0.3s						
WRA	Warramunga Arr	27.70	159	P	P	13 18 13.7	-1.1
ENH	Enshi	27.76	332		P	13 18 15.0	-0.2
PZH	PanZhiHua	29.45	316	P	P	13 18 30.5	+0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LYN	LuoYang	30.36	341	P	P	13 18 38.5	+0.9
LYN				pmax	pmax		
	comp=Z,22nm,0.5s						
AS31	Alice Springs	31.02	162		P	13 18 44.1	+0.6
ASAR	Alice Springs	31.02	162	P	P	13 18 44.4	+0.9
	comp=Z,4.1nm,0.5s,baz=340,slow=7.0,SNR=190						
ASAR				S	S	13 23 09.7	-0.4
	comp=Z,1.7nm,0.8s,baz=332,slow=13,SNR=14						
ASAR				ScP	ScP	13 24 13.6	+0.1
	comp=Z,0.8nm,0.5s,baz=344,slow=3.4,SNR=12						
	comp=Z,4.1nm,0.5s						
ASAR	Alice Springs	31.02	162	P	P	13 18 44.3	+0.8
XAN	Xi'an	31.22	335	P	P	13 18 45.0	-0.1
XAN				pmax	pmax		
	comp=Z,29nm,0.7s						
HNS	HongShan	32.40	346	⇑P	P	13 18 55.5	+0.6
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
BJT	Baijiatuau	34.61	349		P	13 19 13.1	-0.4
BJT				IAmb	IAmb	13 19 14.5	
	comp=Z,7.8nm,0.6s						
BJI2	Beijing	34.61	349	P	P	13 19 13.8	+0.3
BJI2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LZH	Lanzhou	35.21	331	eP	P	13 19 20.3	+1.4
LZH				pmax	pmax		
	comp=Z,13nm,1.4s						
MORW	Morawa	35.69	192	P	P	13 19 22.9	+0.2
SHL	Shillong	36.37	306		P	13 19 28.4	-0.2
HHC	Hu-ho-hao-te	36.46	344	eP	P	13 19 30.5	+1.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FORT	Forrest	36.77	174	P	P	13 19 32.4	+0.9
FORT				IAmb	IAmb	13 19 33.4	
	comp=Z,7.7nm,0.7s						
INKA	Innaminka	37.23	155	P	P	13 19 37.2	+1.9
XLT	XiLinHaoTe	38.40	351	eP	P	13 19 45.0	+0.2
XLT				pP	pP	13 21 18.0	-2.2
XLT				pmax	pmax		
	comp=Z,14nm,0.7s						
XLT				pmax	pmax		
	comp=Z,160nm,5.8s						
LSA	Lhasa	38.93	311		P	13 19 50.0	+0.3
LSA				IAmb	IAmb	13 19 51.8	
	comp=Z,5.5nm,0.6s						
LSA	Lhasa	38.93	311	P	P	13 19 47.5	-2.3
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NWAO	Narrogin (SRO)	39.24	189	P	P	13 19 52.2	+0.6
GTA2	Gaotai	39.88	330	eP	P	13 19 57.5	+0.6
GTA2				PcP	PcP	13 21 49.5	+0.6
GTA2				pmax	pmax		
	comp=Z,18nm,0.6s						
BBOO	Buckleboo	40.25	164	P	P	13 20 00.7	+0.9
BBOO				IAmb	IAmb	13 20 01.5	
	comp=Z,8.7nm,0.9s						
GOMU	GeErMu	40.25	322	P	P	13 20 00.3	+0.1
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
STKA	Stephens Creek	41.22	157	P	P	13 20 08.6	+1.2
	comp=Z,2.3nm,0.5s,baz=335,slow=9.1,SNR=5.8						
	comp=Z,2.3nm,0.5s						
STKA	Stephens Creek	41.22	157	P	P	13 20 08.4	+0.9
STKA				IAmb	IAmb	13 20 36.1	
	comp=Z,23nm,1.3s						
EVN	Everest	41.48	306		P	13 20 09.9	-0.6
EVN				IAmb	IAmb	13 20 11.7	
	comp=Z,11nm,0.6s						
HILR	Hailar Array B	43.56	356	P	P	13 20 26.6	+1.0
	comp=Z,1.0nm,0.3s,baz=191,slow=11,SNR=3.7						
	comp=Z,1.0nm,0.3s						
ULN	Ulaanbaatar	44.17	344		P	13 20 30.2	-0.4
ULN				IAmb	IAmb	13 20 32.4	
	comp=Z,4.6nm,0.7s						
ULN	Ulaanbaatar	44.17	344	P	P	13 20 30.9	+0.4
	comp=Z,29nm,1.0s						
SONM	Songino Array	44.33	343	P	P	13 20 32.2	+0.5
	comp=Z,3.0nm,0.7s,baz=161,slow=8.6,SNR=22						
SONM				PcP	PcP	13 22 03.9	+0.1
	comp=Z,0.6nm,0.5s,baz=171,slow=2.7,SNR=3.8						
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	44.33	343	P	P	13 20 31.9	+0.2
SONM				IAmb	IAmb	13 20 33.0	
	comp=Z,5.3nm,1.2s						
TLY	Talaya	48.58	343		P	13 21 04.1	+0.5
TLY				IAmb	IAmb	13 21 05.2	
	comp=Z,4.2nm,0.5s						
WMQ	Urumqi	49.34	326	eP	P	13 21 11.5	+2.0
WMQ				S	S	13 27 39.3	+3.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,110nm,24.3s						
MKAR	Makanchi Array	54.17	326	P	P	13 21 44.8	+0.6
	comp=Z,7.8nm,0.4s,baz=120,slow=7.8,SNR=291						
MKAR				PcP	PcP	13 22 39.9	-0.2
	comp=Z,1.2nm,0.4s,baz=120,slow=4.0,SNR=6.2						
MKAR				ScP	ScP	13 25 44.7	-1.1
	comp=Z,0.9nm,0.7s,baz=114,slow=4.3,SNR=8.0						
	comp=Z,7.8nm,0.4s						
MKAR	Makanchi Array	54.17	326		P	13 21 44.5	+0.3
MAKZ	Makanchi	54.36	326		P	13 21 45.6	+0.1
MAKZ				IAmb	IAmb	13 21 46.1	
	comp=Z,8.8nm,0.5s						
PETK	Petropavlovsk-	54.43	24	P	P	13 21 47.0	+1.2
	comp=Z,3.5nm,0.9s,baz=190,slow=4.7,SNR=6.4						
	comp=Z,3.5nm,0.9s						
KSH2	Kashi	54.68	314	P	P	13 21 48.8	+0.8
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KDJ	Kajisay	54.87	318		P	13 21 49.0	-0.3
KDJ				IAmb	IAmb	13 21 50.5	
	comp=Z,9.5nm,0.5s						
NRN	Naryn	55.35	317	P	P	13 21 52.4	-0.5
ARSB	Arslanbob	57.37	316	P	P	13 22 06.3	-0.2
ZAA0	Zalesovo Array	57.37	334	P	P	13 22 05.1	-0.9
ZALV	Zalesovo Beam	57.37	334	P	P	13 22 05.5	-0.6
	comp=Z,2.4nm,0.4s,baz=118,slow=6.0,SNR=12						
	comp=Z,2.4nm,0.4s						
ZALV	Zalesovo Beam	57.37	334		P	13 22 05.2	-0.8
KURBB	Kurchatov Arra	58.39	328	P	P	13 22 13.1	0.0
	comp=Z,10nm,0.6s,baz=129,slow=6.3,SNR=101						
	comp=Z,10nm,0.6s						
KURK	Kurchatov	58.40	328		P	13 22 13.1	0.0
KURK				IAmb	IAmb	13 22 13.8	
	comp=Z,19nm,0.6s						
GAR	Garm	58.41	313	P	P	13 22 13.4	-0.2
GAR				IAmb	IAmb	13 22 14.6	
	comp=Z,18nm,1.0s						
KKAR	Karatay Array	59.75	317	P	P	13 22 22.0	-0.4
BVAR	Borovoye Array	63.97	327	P	P	13 22 48.5	-1.1
	comp=Z,1.8nm,0.4s,baz=141,slow=9.6,SNR=12						
	comp=Z,1.8nm,0.4s						
BORK	Borovoye	64.01	327		P	13 22 49.6	-0.2
BORK				IAmb	IAmb	13 22 50.5	
	comp=Z,7.2nm,0.9s						
TIXI	Tiksi	65.65	2	P	P	13 22 58.9	-0.9
TIXI				IAmb	IAmb	13 22 59.9	
	comp=Z,5.3nm,0.6s						
BILL	Bilibino	68.10	16	P	P	13 23 14.7	-0.3
AB31	Akbulak array	68.70	321		P	13 23 18.7	-0.3
AB31				IAmb	IAmb	13 23 19.5	
	comp=Z,4.4nm,0.8s						
ABKAR	Akbulak array	68.70	321		P	13 23 18.6	-0.3
NIUE	Niue	69.63	113	P	P	13 23 23.1	-1.9
ARTI	Arti	71.68	328	P	P	13 23 35.3	-1.1
ARTI				IAmb	IAmb	13 23 36.1	
	comp=Z,7.8nm,0.5s						
ANM	Nome	76.34	25	P	P	13 24 03.0	+0.3
F15K	North Star Dit	76.93	24	P	P	13 24 06.5	+0.7
RAYN	Ar Rayn	77.12	293	P	P	13 24 07.3	-0.6
G16K	Koyuk River	77.79	24	P	P	13 24 11.2	+0.8
L16K	Owhat River	78.36	28	P	P	13 24 13.7	0.0
L16K				IAmb	IAmb	13 24 26.6	
	comp=Z,8.7nm,1.3s						
M16K	Timber Creek	78.50	29	P	P	13 24 15.3	+0.9
M16K				IAmb	IAmb	13 24 40.4	
	comp=Z,22nm,1.4s						
C18K	Utukok River	78.93	21	P	P	13 24 17.7	+1.0
H18K	Honhosa River	79.39	25	P	P	13 24 19.9	+0.8
IMAR	Indian Mountai	81.39	24	P	P	13 24 30.3	+0.9
D22K	Ayikyak River	82.03	21	P	P	13 24 34.0	+1.3
ILAR	Eielson Array	84.24	26	P	P	13 24 42.5	-1.2
	comp=Z,0.3nm,0.5s,baz=247,slow=5.5,SNR=8.7						
	comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	86.51	309	P	P	13 24 54.0	-1.4
	comp=Z,1.1nm,0.7s,baz=116,slow=5.0,SNR=5.8						
	comp=Z,1.1nm,0.7s						
SPITS	Spitsbergen Ar	87.75	349	P	P	13 24 59.8	-0.5
	comp=Z,1.5nm,0.4s,baz=77,slow=7.6,SNR=10						
	comp=Z,1.5nm,0.4s						
FINES	FINESS Array B	88.57	332	P	P	13 25 03.3	-1.1
	comp=Z,1.8nm,0.7s,baz=36,slow=3.5,SNR=6.3						
	comp=Z,1.8nm,0.7s						

*IDC **25** 13:39:38.1±0.9, 2˚.37S×120˚.92E, h0km, mb3.8/7, mbtmp3.8/8, ML3.2/1, MS2.9/5, Error ellipse: s-maj=39.4km s-min=16.0km az=66.0*
*NEIC **25** 13:39:40.9±1.8, 2˚.37S±0˚.06×121˚.01E±0˚.04, h10km±1km, mb4.2/8, Error ellipse: s-maj=11.8km s-min=5.2km az=154.0*
*DJA **25** 13:39:40.5±0.2, 2˚S±2˚×12˚1E±˚, h10km, M3.9/24, mb3.9/2, MLv4.0/24*

ISC 25 13:39:44.5±0.7, 2˚.38S±0˚.04×121˚.02E±0˚.05, h53km, n39, σ1§40/38, mb3.9/13, MS3.0/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.37	241	P	Pn	13 40 05.2	-2.2
APSI	Ampana	1.59	23	P	Pn	13 40 09.2	-1.1
PCI	Palu	1.88	321	P	Pn	13 40 12.9	-1.4
KKSI	Kolaka, Sulawe	1.89	161	P	Pn	13 40 14.0	-0.4
SPSI	Sidrap Palu	2.01	218	P	Pn	13 40 13.3	-2.8
MMSI	Mamuju	2.13	262	P	Pn	13 40 16.8	-1.0
LUWI	Luwuk	2.19	53		Pn	13 40 18.1	-0.5
LUWI	Luwuk	2.19	53	P	Pn	13 40 17.4	-1.2
PMSI	Majene	2.38	242	P	Pn	13 40 21.6	+0.4
KAPI	Kappang	2.91	206	Pn	Pn	13 40 24.7	-3.7
	3.9nm,0.3s,baz=16,slow=9.6,SNR=5.1						
KAPI				Sn	Sn	13 41 02.7	+0.5
	5.4nm,0.3s,baz=176,slow=23,SNR=13						
KAPI				LR	LR	13 41 30.3	
	comp=Z,62nm,20.5s,baz=12,slow=39						
	9.6nm,0.5s						
KAPI	Kappang	2.91	206		Pn	13 40 27.7	-0.7
KAPI	Kappang	2.91	206	P	Pn	13 40 27.3	-1.1
MPSI	Mapaga	2.92	337	P	Pn	13 40 27.4	-1.2
MRSI	Marisa	2.98	18	P	Pn	13 40 26.6	-2.7
TOLI2	Tolitoli	3.48	356		Pn	13 40 35.7	-0.5
GTOI	Gorontalo	3.59	34	P	Pn	13 40 37.2	-0.5
BSSI	Bau Bau, Buton	3.78	188	P	Pn	13 40 39.4	-0.9
SANI	Sanana	4.97	86	P	Pn	13 40 53.5	-3.1
	0.1nm8.6nm,0.8s						
BATI	Baumata	8.21	161	LR	LR	13 45 36.6	
	comp=Z,144nm,18.6s,baz=238,slow=43						
WB0	Warramunga Arr	21.67	144	P	P	13 44 31.3	+0.4
WB0				IAmb	IAmb	13 44 34.4	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	21.77	144	P	P	13 44 32.0	0.0
	comp=Z,1.6nm,0.7s,baz=324,slow=11,SNR=11						
	comp=Z,1.6nm,0.7s						
WRA	Warramunga Arr	21.77	144	P	P	13 44 31.7	-0.3
WR8	Warramunga Arr	21.88	144	P	P	13 44 33.6	+0.5
WR8				IAmb	IAmb	13 44 44.0	
	comp=Z,11nm,1.2s						
AS31	Alice Springs	24.56	151	P	P	13 45 00.0	+0.4
AS31				IAmb	IAmb	13 45 03.0	
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	24.56	151	P	P	13 45 00.6	+1.0
	comp=Z,2.1nm,0.9s,baz=329,slow=8.7,SNR=16						
ASAR				PcP	PcP	13 48 38.1	+1.3
	comp=Z,0.2nm,0.5s,baz=352,slow=2.1,SNR=12						
ASAR				LR	LR	13 54 31.9	
	comp=Z,49nm,19.2s,baz=257,slow=36						
	comp=Z,2.1nm,0.9s						
COCO	West Island	25.87	247	P	P	13 45 10.8	-0.8
CMAR	Chiang Mai Arr	30.02	315	P	P	13 45 47.9	-0.7
	comp=Z,0.3nm,0.4s,baz=145,slow=6.9,SNR=4.1						
	comp=Z,0.3nm,0.4

MV3.6/33,N PHILIPPINE BASIN
ISC 25 13:39:49.4±1.9,**27.65N**±0.03×**130.77E**±0.04,**h17**km±12km,
n54,σ1§32/66,mb4.0/11,**MS3.9**/5,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.97**	**313**	P	**Pg**	**13 40 07.8**	**-0.4**
JZK				S	**Sn**	**13 40 22.2**	**+0.5**
JAM	**Amami Oshima**	**1.28**	**307**	*i* P	**Pn**	**13 40 12.1**	**-0.4**
JAM				*e*S	**Sb**	**13 40 28.6**	**-0.7**
JAMN	**Amaminishikomi**	**1.53**	**293**	P	**Pn**	**13 40 15.6**	**-0.4**
JAMN				*e*S	**Sn**	**13 40 34.9**	**-0.7**
JTK	**Tokunoshima**	**1.62**	**275**	P	**Pn**	**13 40 17.0**	**-0.2**
JTK				*e*S	**Sn**	**13 40 36.3**	**-1.5**
JKDJ	**Kitadaitoujima**	**1.76**	**164**	P	**Pn**	**13 40 18.1**	**-1.0**
JKDJ				S	**Sn**	**13 40 38.2**	**-2.8**
JMZ	**Minamidaito 2**	**1.87**	**167**		**Pn**	**13 40 20.6**	**0.0**
JMZ	**Minamidaito 2**	**1.87**	**167**	*e*P	**Pn**	**13 40 19.5**	**-1.1**
JMZ				*e*S	**Sn**	**13 40 41.2**	**-2.6**
JOKE	**Okinoerabujima**	**1.98**	**262**	P	**Pn**	**13 40 21.8**	**-0.4**
JOKE				*e*S	**Sn**	**13 40 45.1**	**-1.4**
JTAJ	**Takarajima**	**2.04**	**318**	*e*P	**Pn**	**13 40 22.0**	**-1.0**
JTAJ				*e*S	**Sn**	**13 40 45.9**	**-2.1**
JYRO	**Yoronjima**	**2.16**	**254**	*i* P	**Pn**	**13 40 24.2**	**-0.4**
JYRO				*e*S	**Sn**	**13 40 49.2**	**-1.8**
JNN	**Nakanoshima**	**2.32**	**340**	P	**Pn**	**13 40 26.3**	**-0.6**
JOW	**Kunigami**	**2.37**	**250**		**Pn**	**13 40 26.8**	**-0.7**
JOW	**Kunigami**	**2.37**	**250**	*i* P	**Pn**	**13 40 27.0**	**-0.5**
JOW				*e*S	**Sn**	**13 40 55.3**	**-0.9**
JIH	**Iheya**	**2.57**	**257**	*e*P	**Pn**	**13 40 29.9**	**-0.4**
JIH				*e*S	**Sn**	**13 40 58.8**	**-2.3**
JYAK	**Yakushimahirau**	**2.59**	**355**	P	**Pn**	**13 40 29.8**	**-0.8**
JYAK				S	**Sn**	**13 40 58.4**	**-3.3**
JNTH	**Nagotoyohara**	**2.70**	**246**	*e*P	**Pn**	**13 40 31.6**	**-0.4**
JNTH				S	**Sn**	**13 41 01.8**	**-2.5**
JMTN	**Minamitane**	**2.74**	**2**	*e*P	**Pn**	**13 40 31.6**	**-1.0**
JMTN				*e*S	**Sn**	**13 41 02.5**	**-2.9**
JTN	**Tanegashima 3**	**3.00**	**3**	P	**Pn**	**13 40 35.3**	**-0.9**
JTN				*e*S	**Sn**	**13 41 09.5**	**-2.3**
JJT3	**Tamagusuku3**	**3.06**	**241**	P	**Pn**	**13 40 37.0**	**0.0**
JJT3				*e*S	**Sn**	**13 41 11.9**	**-1.4**
JAGN	**Aguni-jima**	**3.32**	**252**	*e*P	**Pn**	**13 40 40.1**	**-0.4**
JAGN				*e*S	**Sn**	**13 41 17.6**	**-2.1**
JSU	**Suzuyama**	**3.85**	**356**		**Pn**	**13 40 46.7**	**-1.3**
JMN	**Monobe**	**6.62**	**23**	Pn	**Pn**	**13 41 25.5**	**-0.5**
INU	**Inuyama**	**9.34**	**33**	Pn	**Pn**	**13 42 03.3**	**0.0**
JHJ	**Hachijo jima 2**	**9.50**	**53**	Pn	**Pn**	**13 42 06.2**	**+0.8**
	7.6nm,0.3s,baz=87,slow=18,SNR=1.4						
	35nm,0.5s						
JHJ2	**Mitsune**	**9.52**	**53**	Pn	**Pn**	**13 42 06.3**	**+0.7**
JGF	**Kuroka**	**9.71**	**34**	Pn	**Pn**	**13 42 08.3**	**0.0**
MJAR	**Matsushiro Arr**	**10.87**	**34**	Pn	**Pn**	**13 42 26.2**	**+1.9**
	0.1nm,0.3s,baz=204,slow=16,SNR=5.1						
	0.9nm,0.4s						
MJAR	**Matsushiro Arr**	**10.87**	**34**		**Pn**	**13 42 25.2**	**+0.9**
JKA	**Kamikawa-asahi**	**18.99**	**27**		**P**	**13 44 11.2**	**+1.2**
JKA				IAmb	IAmb	13 44 41.6	
	comp=Z,12nm,1.3s						
PETK	**Petropavlovsk-**	**32.31**	**31**	LR	LR	13 58 30.0	
	comp=Z,27nm,21.9s,baz=103,slow=35						
MKAR	**Makanchi Array**	**42.32**	**310**	P	**P**	**13 47 43.7**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=93,slow=11,SNR=5.7						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**42.32**	**310**	P	**P**	**13 47 40.5**	**-1.8**
MAKZ	**Makanchi**	**42.53**	**310**	P	**P**	**13 47 42.4**	**-1.7**
KNRA	**Kununurra**	**43.11**	**183**	P	**P**	**13 47 49.0**	**+0.1**
KURBB	**Kurchatov Arra**	**45.43**	**315**	LR	LR	14 08 13.0	
	comp=Z,45nm,18.4s,baz=177,slow=38						
WB0	**Warramunga Arr**	**47.27**	**175**	P	**P**	**13 48 22.5**	**+0.6**
WB0				IAmb	IAmb	13 48 27.3	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**47.44**	**175**	P	**P**	**13 48 23.6**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=354,slow=7.9,SNR=6.8						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**47.44**	**175**	P	**P**	**13 48 22.9**	**-0.4**
WR8	**Warramunga Arr**	**47.46**	**175**	P	**P**	**13 48 23.9**	**+0.5**
WR8				IAmb	IAmb	13 48 43.9	
	comp=Z,7.9nm,1.3s						
PSA00	**Pilbara Seismi**	**50.06**	**193**	P	**P**	**13 48 44.2**	**+0.8**
PSA00				IAmb	IAmb	13 48 53.4	
	comp=Z,5.9nm,1.2s						
BVAR	**Borovoye Array**	**50.75**	**317**	P	**P**	**13 48 49.5**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=123,slow=10,SNR=5.4						
	comp=Z,1.2nm,0.7s						
AS31	**Alice Springs**	**51.10**	**176**	P	**P**	**13 48 52.5**	**+1.2**
ASAR	**Alice Springs**	**51.11**	**176**	P	**P**	**13 48 52.1**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=9.0,slow=13,SNR=20						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**51.11**	**176**	P	**P**	**13 48 52.3**	**+1.0**
F15K	**North Star Dit**	**54.70**	**27**	P	**P**	**13 49 18.5**	**+1.1**
F15K				IAmb	IAmb	13 49 19.0	
	comp=Z,1.1nm,0.8s						
D22K	**Ayikyak River**	**59.67**	**24**	P	**P**	**13 49 53.3**	**+0.8**
D22K				IAmb	IAmb	13 50 32.6	
	comp=Z,4.4nm,1.5s						
H22K	**Ishtalitna Cre**	**60.16**	**28**	P	**P**	**13 49 57.4**	**+1.5**
H22K				IAmb	IAmb	13 50 36.6	
	comp=Z,4.0nm,1.4s						
BMAR	**Burnt Mountain**	**62.76**	**26**	P	**P**	**13 50 14.4**	**+1.0**
M27K	**Edge Creek, AK**	**64.69**	**31**	P	**P**	**13 50 26.8**	**+0.4**
U35K	**Hyder**	**72.44**	**36**	P	**P**	**13 51 15.0**	**+0.3**
FINES	**FINESS Array B**	**72.74**	**331**	P	**P**	**13 51 16.0**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=66,slow=4.6,SNR=4.9						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**76.28**	**26**	LR	LR	14 27 18.7	
	comp=Z,51nm,18.2s,baz=354,slow=37						
MLR	**Muntele Rosu**	**80.31**	**316**	LR	LR	14 28 40.2	
	comp=Z,171nm,18.1s,baz=106,slow=36						
FURI	**Furi**	**87.77**	**279**	LR	LR	14 31 18.0	
	comp=Z,159nm,19.0s,baz=1.0,slow=35						

*ISK **25** 13:42:29.9,38°.34N×44°.52E,h5km,ML3.4/9*
*NSSP **25** 13:42:29.9,38°.40N×44°.45E,h10km,Ms3.5*
*AZER **25** 13:42:29.8,38°.34N×44°.50E,h10km,ml3.7*
*TEH **25** 13:42:31.4,38°.42N×44°.53E,h6km±67km,ML3.5,*
Presumed earthquake
*NEIC **25** 13:42:32.3±1.0,38°.29N±0°.06×44°.21E±0°.07,h10km±1km,*
mb4.1/11,Error ellipse: s-maj=13.2km s-min=3.1km
az=139.0
*IDC **25** 13:42:33.0±22.0,38°.22N×44°.68E,h0km,mb3.8/5,*
mbtmp3.8/5,MS2.9/3,Error ellipse: s-maj=431.7km
s-min=54.2km az=85.0
*TIF **25** 13:42:33.1,38°.78N×45°.00E,h13km±1km*
ISC 25 13:42:31.7±0.5,**38.32N**±0.02×**44.45E**±0.02,**h10**km,**n84,**
σ1§83/116,mb3.9/12,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.92**	**92**	Pg	**Pg**	**13 42 47.3**	**-2.0**
HAKT	**HAKKARI**	**0.96**	**218**	P	**Pg**	**13 42 49.5**	**-0.7**
HAKT				S	**Sn**	**13 43 05.9**	**+0.6**
MAKU	**Maku**	**1.05**	**10**	Pg	**Pg**	**13 42 49.2**	**-2.8**
IMRD	**Marand**	**1.06**	**68**	Pg	**Pg**	**13 42 50.3**	**-1.8**
GEVA	**Gevas**	**1.10**	**270**		**Pg**	**13 42 49.8**	**-2.9**
NAX	**Nakhchivan**	**1.18**	**43**	P	**Pb**	**13 42 52.5**	**-1.7**
NAX				S	**Sn**	**13 43 09.4**	**-1.2**
CUKT	**Cukurca**	**1.26**	**212**	Pn	**Pg**	**13 42 56.1**	**+0.2**
CUKT				Sn	**Sn**	**13 43 15.2**	**+2.7**
ITBZ	**Tabriz**	**1.34**	**93**	Pg	**Pn**	**13 42 54.9**	**-1.6**
ORD	**Ordubad**	**1.35**	**63**	P	**Pn**	**13 42 55.4**	**-1.3**
ORD				S	**Sg**	**13 43 15.2**	**0.0**
IAZR	**Azarshahr**	**1.36**	**117**	Pg	**Pg**	**13 42 57.4**	**-0.5**
SBZ	**Shahbuz**	**1.38**	**38**	P	**Pn**	**13 42 55.7**	**-1.4**
SBZ				S	**Sg**	**13 43 15.6**	**-0.5**
HYR	**Heyderabad**	**1.43**	**12**	P	**Pb**	**13 42 57.7**	**-0.8**
HYR				S	**Sg**	**13 43 20.7**	**+2.8**
VAYK	**Vayk**	**1.57**	**29**	⇓*e*P	**Pn**	**13 42 58.9**	**-0.8**
VAYK				⇓*e*S	**Sn**	**13 43 18.9**	**-1.3**
IGDI	**IGDIR**	**1.58**	**349**	P	**Pb**	**13 43 00.2**	**-0.8**
IGDI				S	**Sg**	**13 43 23.8**	**+1.5**
ALVK	**Alvank**	**1.61**	**67**	*e*P	**Pn**	**13 42 59.5**	**-0.7**
ALVK				*e*S	**Sb**	**13 43 21.6**	**-0.3**
AGRB	**Hanur-Agry**	**1.70**	**318**	Pn	**Pb**	**13 43 01.9**	**-1.2**
MLAZ	**Malazgirt-MUS**	**1.70**	**300**	Pn	**Pb**	**13 43 02.3**	**-0.8**
MAHB	**Mahabad**	**1.84**	**147**	Pn	**Pg**	**13 43 06.2**	**-0.8**
GNI	**Garni**	**1.84**	**7**	LR	LR	13 44 00.3	
	comp=Z,202nm,20.8s,baz=170,slow=45						
GNI	**Garni**	**1.84**	**7**	Pn	**Pb**	**13 43 04.6**	**-1.0**
GNI	**Garni**	**1.84**	**7**	Pn	**Pn**	**13 43 03.6**	**+0.1**
GNI	**Garni**	**1.84**	**7**	*e*P	**Pb**	**13 43 05.3**	**-0.3**
GNI				*e*S	**Sg**	**13 43 29.6**	**-1.4**
EGVZ	**Egvard**	**1.87**	**60**	*e*P	**Pn**	**13 43 03.9**	**0.0**
EGVZ				*e*S	**Sb**	**13 43 29.1**	**-0.4**
GRS	**Goris**	**1.88**	**51**	⇓*i*P	**Pn**	**13 43 03.0**	**-1.0**
GRS				⇓*i*S	**Sb**	**13 43 29.0**	**-0.9**
GURO	**Guroymak-BITLI**	**1.92**	**278**	Pn	**Pn**	**13 43 02.5**	**-2.0**
GURO	**Guroymak-BITLI**	**1.92**	**278**	Pn	**Pb**	**13 43 05.6**	**-1.2**
GURO				Sn	**Sg**	**13 43 32.7**	**-0.5**
KAPZ	**Kaputan**	**2.01**	**5**	*e*P	**Pb**	**13 43 07.3**	**-1.1**
KAPZ				*e*S	**Sg**	**13 43 34.9**	**-1.5**
AMBZ	**Amberd**	**2.07**	**356**	*e*P	**Pb**	**13 43 07.4**	**-2.1**
AMBZ				*e*S	**Sb**	**13 43 35.1**	**-0.4**
AYRK	**Ayrk**	**2.07**	**30**	*e*P	**Pb**	**13 43 08.0**	**-1.6**
AYRK				*e*S	**Sg**	**13 43 36.1**	**-2.2**
IHSH	**Hashtrud**	**2.44**	**114**	Pn	**Pb**	**13 43 13.8**	**-2.0**
VRTB	**Varto-Mus**	**2.49**	**291**	Pn	**Pn**	**13 43 13.6**	**+1.2**
QRD	**Qoradiz**	**2.51**	**62**	P	**Pn**	**13 43 13.1**	**+0.5**
QRD				S	**Sb**	**13 43 47.3**	**-0.6**
SVAN	**Silvan-Diyarba**	**2.57**	**267**	Pn	**Pn**	**13 43 15.0**	**+1.6**
ISRB	**Sarab**	**2.58**	**100**	Pn	**Pb**	**13 43 15.7**	**-2.5**
LSVT	**Lusahovit**	**2.66**	**12**	*e*P	**Pn**	**13 43 16.2**	**+1.5**
LSVT				*e*S	**Sb**	**13 43 50.1**	**-2.0**
GANJ	**Ganja**	**2.74**	**31**	P	**Pn**	**13 43 17.4**	**+1.7**
GANJ				S	**Sb**	**13 43 54.1**	**-0.3**
SRTK	**Saratovka**	**2.75**	**358**	*e*P	**Pb**	**13 43 18.6**	**-2.4**
SRTK				*e*S	**Sb**	**13 43 54.4**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.77**	**325**	Pn	**Pn**	**13 43 17.2**	**+0.9**
BLQ	**Beylaqan**	**2.80**	**59**	P	**Pn**	**13 43 17.6**	**+1.2**
BLQ				S	**Sb**	**13 43 54.7**	**-1.3**
QZX	**Qazax, Azerbai**	**2.83**	**14**	P	**Pn**	**13 43 18.7**	**+1.8**
QZX				S	**Sb**	**13 43 56.8**	**-0.2**
YRD	**Yardimli**	**3.03**	**77**	P	**Pn**	**13 43 21.4**	**+1.6**
YRD				S	**Sb**	**13 44 00.8**	**-2.1**
BNGB	**Bingl**	**3.03**	**284**	Pn	**Pn**	**13 43 21.2**	**+1.4**
LRK	**Lerik**	**3.07**	**83**	P	**Pn**	**13 43 22.1**	**+1.8**
LRK				S	**Sb**	**13 44 02.0**	**-2.0**
MARD	**Mardin**	**3.08**	**252**	Pn	**Pn**	**13 43 18.1**	**-2.4**
AKH	**Akhalkalaki**	**3.18**	**347**	P	**Pg**	**13 43 30.7**	**-1.8**
AKH				S	**Sg**	**13 44 11.9**	**-1.8**
DGRG	**David-gareji**	**3.21**	**12**	P	**Pg**	**13 43 31.1**	**-2.1**
DGRG				S	**Sg**	**13 44 13.8**	**-0.9**
GLBA	**Clilabad**	**3.21**	**72**	P	**Pn**	**13 43 24.2**	**+2.0**
GLBA				S	**Sb**	**13 44 05.0**	**-3.1**
VSHL	**Vashlovani**	**3.27**	**27**	P	**Pn**	**13 43 25.5**	**+2.5**
VSHL				S	**Sg**	**13 44 19.4**	**+2.6**
DDFL	**Dedoflistskaro**	**3.38**	**22**	P	**Pg**	**13 43 35.7**	**-0.7**
ASTR	**Astara**	**3.42**	**85**	P	**Pn**	**13 43 25.7**	**+0.7**
ASTR				S	**Sn**	**13 44 08.4**	**+2.9**
LKRN	**Lenkeran, Azer**	**3.42**	**82**	P	**Pn**	**13 43 25.4**	**+0.5**
LKRN				S	**Sb**	**13 44 09.1**	**-4.7**
SEKA	**Sheki**	**3.58**	**35**	P	**Pn**	**13 43 28.7**	**+1.4**
SEKA				S	**Sb**	**13 44 14.8**	**-3.8**
QBL	**Gabala**	**3.70**	**44**	P	**Pn**	**13 43 30.9**	**+1.9**
QBL				S	**Sb**	**13 44 18.3**	**-3.9**
CHRG	**Chargali**	**4.02**	**5**	P	**Pb**	**13 43 43.1**	**+0.4**
XNQ	**Khinaliq**	**4.03**	**44**	P	**Pn**	**13 43 34.6**	**+1.0**
XNQ				S	**Sn**	**13 44 24.9**	**+4.1**
PQL	**Pirkuli**	**4.04**	**51**	P	**Pn**	**13 43 35.7**	**+2.0**
PQL				S	**Sn**	**13 44 25.0**	**+3.9**
ATGJ	**Altiaghaj**	**4.30**	**52**	P	**Pn**	**13 43 38.1**	**+1.0**
ATGJ				S	**Sn**	**13 44 31.1**	**+3.7**
SHTL	**Shatili**	**4.37**	**7**	P	**Pb**	**13 43 48.7**	**+0.2**
SHTL				S	**Sg**	**13 44 54.2**	**+2.4**
SIZA	**Siyzn**	**4.40**	**50**	P	**Pn**	**13 43 41.1**	**+2.5**
SIZA				S	**Sn**	**13 44 32.5**	**+2.6**
KBZ	**Khabaz**	**5.53**	**348**	LR	LR	13 46 26.7	
	comp=Z,114nm,21.0s,baz=144,slow=41						
BRTR	**Keskin Array B**	**8.54**	**283**	LR	LR	13 48 06.2	
	comp=Z,45nm,20.9s,baz=106,slow=38						
MMAI	**Mount Meron Ar**	**9.06**	**237**	LR	LR	13 48 39.4	
	comp=Z,113nm,21.5s,baz=104,slow=40						
AB31	**Akbulak array**	**15.61**	**41**		**P**	**13 46 13.8**	**-2.0**
ABKAR	**Akbulak array**	**15.61**	**41**	Pn	**P**	**13 46 13.7**	**-2.1**
BURAR	**Bucovina Array**	**16.83**	**310**	Pn	**Pn**	**13 46 26.4**	**-1.0**
KKAR	**Karatay Array**	**20.29**	**68**	P	Pn	13 47 10.3	+0.8
BVAR	**Borovoye Array**	**23.17**	**42**	P	**P**	**13 47 40.8**	**+2.6**
	1.6nm,0.8s,baz=224,slow=10.0,SNR=5.5						
	1.6nm,0.8s						
FINES	**FINESS Array B**	**25.82**	**340**	P	**P**	**13 48 02.3**	**-0.4**
KURBB	**Kurchatov Arra**	**27.00**	**52**	P	**P**	**13 48 15.7**	**+2.1**
	1.0nm,0.2s,baz=264,slow=9.0,SNR=8.7						
	1.0nm,0.2s						
KURK	**Kurchatov**	**27.08**	**52**	P	**P**	**13 48 16.3**	**+2.0**
KURK				IAmb	IAmb	13 48 18.6	
	comp=Z,1.9nm,0.8s						
MAKZ	**Makanchi**	**28.69**	**61**	P	**P**	**13 48 31.2**	**+2.5**
MAKZ				IAmb	IAmb	13 48 41.6	
	comp=Z,3.2nm,1.3s						
MKAR	**Makanchi Array**	**28.90**	**61**	P	**P**	**13 48 32.5**	**+1.9**
	comp=Z,1.0nm,0.9s,baz=264,slow=8.3,SNR=6.3						
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**28.90**	**61**	P	**P**	**13 48 32.9**	**+2.3**
ZALV	**Zalesovo Beam**	**31.54**	**47**	P	**P**	**13 48 55.8**	**+2.0**
	comp=Z,0.4nm,0.4s,baz=267,slow=8.7,SNR=2.1						
	comp=Z,0.4nm,0.4s						
CART	**Cartagena**	**35.57**	**283**	P	**P**	**13 49 27.7**	**-1.4**
CMAR	**Chiang Mai Arr**	**51.10**	**97**	P	**P**	**13 51 36.0**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=300,slow=8.6,SNR=7.7						
	comp=Z,1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**51.10**	**97**	P	**P**	**13 51 35.4**	**+0.8**
SFJD	**Kangerlussuaq**	**57.29**	**332**	P	**P**	**13 52 19.0**	**-0.1**
A36M	**Sachs Harbour**	**69.76**	**357**	P	**P**	**13 53 42.2**	**+0.8**
A36M				IAmb	IAmb	13 53 43.5	
	comp=Z,5.5nm,1.4s						
E19K	**Redstone River**	**73.27**	**9**	P	**P**	**13 54 04.1**	**+1.5**
E19K				IAmb	IAmb	13 54 44.7	
	comp=Z,3.6nm,1.4s						
G19K	**Purcell Mounta**	**74.55**	**9**	P	**P**	**13 54 11.4**	**+1.3**
G19K				IAmb	IAmb	13 54 18.7	
	comp=Z,1.0nm,1.4s						
G31M	**Satah River**	**75.08**	**359**	P	**P**	**13 54 14.9**	**+1.7**
G31M				IAmb	IAmb	13 54 32.6	
	comp=Z,6.6nm,1.4s						
BCAR	**Beaver Creek A**	**78.84**	**3**	P	**P**	**13 54 33.8**	**-0.7**
L27K	**Beaver Creek,**	**78.84**	**3**	P	**P**	**13 54 33.8**	**-0.7**
L27K				IAmb	IAmb	13 54 36.9	
	comp=Z,2.6nm,1.1s						

*TEH **25** 13:46:39.0,38°.42N×44°.41E,h10km±990km,ML2.8,*
Presumed earthquake
*AZER **25** 13:46:39.2,38°.42N×44°.52E,h10km,ml2.9*
*ISK **25** 13:46:40.2,38°.39N×44°.43E,h2km,ML2.8/6*
ISC 25 13:46:40.2±1.2,**38.42N**±0.03×**44.47E**±0.03,**h11**km±11km,
n17,σ1§32/25,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.91**	**98**	Pg	**Pg**	**13 46 56.6**	**-1.3**
MAKU	**Maku**	**0.95**	**10**	Pg	**Pg**	**13 46 57.1**	**-1.6**
IMRD	**Marand**	**1.01**	**73**	Pg	**Pb**	**13 46 59.6**	**-0.3**
HAKT	**HAKKARI**	**1.05**	**215**	P	**Pn**	**13 47 00.4**	**-0.7**
HAKT				S	**Sn**	**13 47 17.9**	**+2.1**
NAX	**Nakhchivan**	**1.10**	**46**	P	**Pn**	**13 47 01.1**	**-0.6**
NAX				S	**Sn**	**13 47 19.9**	**-0.1**
AKDM	**Akdamar-Van**	**1.17**	**266**	Pn	**Pn**	**13 47 02.6**	**-0.2**
AKDM				Sn	**Sn**	**13 47 19.3**	**+0.5**
SBZ	**Shahbuz**	**1.29**	**40**	P	**Pg**	**13 47 04.5**	**-0.7**
SBZ				S	**Sg**	**13 47 22.8**	**+0.8**
ORD	**Ordubad**	**1.30**	**66**	P	**Pg**	**13 47 04.8**	**-0.4**
ORD				S	**Sg**	**13 47 23.1**	**+1.0**
ITBZ	**Tabriz**	**1.33**	**97**	Pg	**Pn**	**13 47 04.5**	**-0.4**
HYR	**Heyderabad**	**1.34**	**13**	P	**Pg**	**13 47 05.3**	**-0.6**
HYR				S	**Sg**	**13 47 26.7**	**+3.4**
CUKT	**Cukurca**	**1.35**	**211**	Pn	**Pg**	**13 47 06.1**	**-0.1**
IAZR	**Azarshahr**	**1.40**	**121**	Pg	**Pg**	**13 47 06.5**	**-0.7**
IGDI	**IGDIR**	**1.48**	**348**	P	**Pg**	**13 47 08.4**	**-0.3**
IGDI				S	**Sg**	**13 47 30.6**	**+2.6**
AGRB	**Hanur-Agry**	**1.63**	**316**	Pn	**Pg**	**13 47 10.1**	**-1.5**
AGRB				Sn	**Sg**	**13 47 33.2**	**+0.4**
MLAZ	**Malazgirt-MUS**	**1.67**	**296**	Pn	**Pg**	**13 47 11.1**	**-1.1**
GNI	**Garni**	**1.75**	**7**	Pn	**Pg**	**13 47 13.0**	**-0.7**
GURO	**Guroymak-BITLI**	**1.92**	**275**	Pn	**Pb**	**13 47 14.5**	**-0.8**

*AZER **25** 14:14:00.3,38°.48N×44°.47E,h2km,ml4.5*
*NSSP **25** 14:14:01.5,38°.42N×44°.52E,h10km,Ms4.2*
*TIF **25** 14:14:02.3,38°.45N×44°.51E,h11km±1km*
*AFAD **25** 14:14:02.3,38°.47N×44°.47E,h5km±3km,MW4.5*
*IDC **25** 14:14:03.9±0.8,38°.49N×44°.41E,h0km,mb4.0/15,*
mbtmp4.0/22,ML3.4/7,MS3.8/46,Error ellipse:
s-maj=13.5km s-min=10.4km az=150.0
*TEH **25** 14:14:03.0,38°.47N×44°.46E,h6km,ML4.2,Presumed*
earthquake
*MOS **25** 14:14:03.8±1.5,38°.39N×44°.50E,h11km,mb4.6/19,Error*
ellipse: s-maj=6.7km s-min=4.0km az=93.5
*ISK **25** 14:14:03.2,38°.41N×44°.47E,h5km,ML4.4/17*
*GII **25** 14:14:04.3±0.0,38°.44N×44°.53E,h0km,confirmed*
*NEIC **25** 14:14:05.0±1.3,38°.41N±0°.03×44°.34E±0.06,h10km±1km,*
mb4.5/42,Error ellipse: s-maj=8.7km s-min=4.8km
az=101.0
*GCMT **25** 14:14:08.1±0.4,38°.43N±0°.03×44°.40E±0°.02,h30km±1km,*
MW4.8/79,Moment Tensor Solution. s12,c13; s79,c99;
Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.30±.15;
Mθθ-1.25±.10; Mφφ1.55±.11; Mrθ-0.14±.12; Mrφ-1.52±.08;
Mθφ0.01±.12; Best double couple: M₀2.07200×10¹⁶
NP1:φs21.00000°,δ86.00000°,λ-2.00000°. NP2:
φs111.00000°,δ88.00000°,λ-176.00000°. Principal axes:
T 2.2180, Plg2.0000°, Azm246.0000°; N -0.2930,
Plg85.0000°, Azm137.0000°; P -1.9260, Plg4.0000°,
Azm336.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
*MCSM **25** 14:14:15.6±1.5,39°N±11°×4°4E±°,h9km±4km,mb3.8,*
MLv4.4
ISC 25 14:14:04.8±0.3,**38.44N**±0.02×**44.45E**±0.01,**h10**km,**n419,**
σ1§83/450,mb4.4/56,MS3.8/43,21C-7D,Turkey-Iran
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**302**	P	**Pg**	**14 14 11.7**	**-1.4**
OZAP				S	**Sb**	**14 14 19.6**	**-1.4**
OZAP				IAML		14 14 29.0	
	comp=N,5μm,1.4s						
OZAP	**Van, Ozalp-Mer**	**0.42**	**302**	Pg	**Pg**	**14 14 11.7**	**-1.4**
TVAN	**Van**	**0.83**	**276**	P	**Pg**	**14 14 18.2**	**-2.5**
TVAN				S	**Sb**	**14 14 31.2**	**-1.4**
TVAN				IAML		14 14 44.0	
	comp=N,1μm,1.0s						
TVAN	**Van**	**0.83**	**276**	Pg	**Pg**	**14 14 18.2**	**-2.5**
YOVA	**Hakkari_Yksek**	**0.86**	**189**	P	**Pg**	**14 14 19.6**	**-1.8**
YOVA				S	**Sb**	**14 14 32.7**	**-1.0**
YOVA	**Hakkari_Yksek**	**0.86**	**189**	Pg	**Pg**	**14 14 19.6**	**-1.8**
VMUR	**Van-Muradiye**	**0.88**	**309**	P	**Pg**	**14 14 19.9**	**-2.2**
VMUR				S	**Sg**	**14 14 31.5**	**-1.8**
VMUR				IAML		14 14 44.0	
	comp=N,5μm,1.0s						
VMUR				IAML		14 14 54.0	
	comp=E,7μm,1.1s						
VMUR	**Van-Muradiye**	**0.88**	**309**	Pg	**Pg**	**14 14 19.5**	**-2.2**
ISHB	**Shabestar**	**0.93**	**99**	Pg	**Pg**	**14 14 19.8**	**-2.9**
MAKU	**Maku**	**0.93**	**11**	Pg	**Pg**	**14 14 20.1**	**-2.6**
IMRD	**Marand**	**1.02**	**74**	Pg	**Pg**	**14 14 22.5**	**-1.9**
ERCV	**ERCIS-VAN**	**1.05**	**304**	Pg	**Pn**	**14 14 24.2**	**-1.5**
ERCV				Sg	**Sn**	**14 14 40.9**	**+0.5**
HAKT	**HAKKARI**	**1.06**	**214**	Pg	**Pg**	**14 14 24.0**	**-1.2**
HAKT	**HAKKARI**	**1.06**	**214**	P	**Pg**	**14 14 23.9**	**-1.3**
HAKT				S	**Sn**	**14 14 42.0**	**+1.7**
NAX	**Nakhchivan**	**1.09**	**48**	P	**Pg**	**14 14 24.0**	**-1.9**
NAX				S	**Sn**	**14 14 40.0**	**-1.5**
GEVA	**Gevas**	**1.10**	**264**	Pn	**Pg**	**14 14 22.4**	**-3.6**
GEVA	**Gevas**	**1.10**	**264**	P	**Pg**	**14

GURO IAML 14 15 12.0
comp=N,1μm,1.1s
MAHB Mahabad 1.94 149 Pn **Pb** 14 14 38.2 -2.2
AMBZ Amberd 1.95 356 *e*P **Pb** 14 14 38.1 -2.4
AMBZ *e*S **Sg** 14 15 05.1 -2.4
AYRK Ayrk 1.97 31 *e*P **Pb** 14 14 39.0 -1.8
AYRK *e*S **Sg** 14 15 06.5 -1.6
IHRS Heris 2.04 93 Pn **Pb** 14 14 40.0 -2.1
EATA Eleskirt 2.08 314 P **Pb** 14 14 41.9 -0.9
EATA S **Sg** 14 15 13.6 +1.8
EATA IAML 14 15 28.0
comp=N,789nm,1.4s
DIGO Kars 2.14 337 P **Pb** 14 14 43.3 -0.5
DIGO S **Sg** 14 15 12.7 -0.9
DIGO IAML 14 15 20.0
comp=N,2μm,1.1s
KARS Kars 2.43 334 **Pn** 14 14 44.3 -0.3
KARS Kars 2.43 334 Pn **Pb** 14 14 45.9 -2.7
KARS Kars 2.43 334 PN **Pn** 14 14 44.3 -0.3
VRTB Varto-Mus 2.45 288 Pn **Pb** 14 14 46.0 -3.0
QRD Qoradiz 2.46 65 P **Pb** 14 14 45.7 -3.3
QRD S **Sb** 14 15 17.7 -1.6
GDB GEDABAY 2.49 23 P **Pb** 14 14 46.2 -3.4
GDB S **Sb** 14 15 19.3 -1.2
IHSH Hashtrud 2.50 116 Pn **Pn** 14 14 46.5 +0.7
LSVT Lusahovit 2.54 13 *e*P **Pb** 14 14 47.0 -3.4
LSVT *e*S **Sb** 14 15 20.7 -1.1
SVAN Silvan-Diyarba 2.58 265 Pn **Pb** 14 14 47.8 -3.4
SVAN Sn **Sb** 14 15 19.9 -2.9
SVAN Silvan-Diyarba 2.58 265 Pn **Pb** 14 14 47.7 -3.4
ISRB Sarab 2.61 103 Pn **Pb** 14 14 48.3 -3.5
SRTK Saratovka 2.62 358 *e*P **Pb** 14 14 48.9 -3.0
SRTK *e*S **Sb** 14 15 24.1 -0.2
GANJ Ganja 2.63 33 P **Pb** 14 14 48.5 -3.6
GANJ S **Sb** 14 15 22.0 -2.5
AGDM Agdam 2.65 50 P **Pn** 14 14 48.0 +0.4
AGDM S **Sb** 14 15 23.1 -1.8
SENK Senkaya-Erzuru 2.67 323 Pn **Pb** 14 14 49.7 -3.1
QZX Qazax, Azerbai 2.71 15 P **Pn** 14 14 48.8 +0.4
QZX S **Sb** 14 15 24.5 -2.1
GRMI Germi 2.72 81 Pn **Pn** 14 14 49.3 +0.6
BLQ Beylaqan 2.73 61 P **Pn** 14 14 49.6 +0.8
BLQ S **Sb** 14 15 25.0 -2.4
BRDA Brd 2.79 48 P **Pn** 14 14 50.5 +1.1
BRDA S **Sb** 14 15 28.1 -0.8
KARO Karliova-Bingo 2.79 289 Pn **Pb** 14 14 51.4 -3.5
BGD Bogdanovka 2.90 347 P **Pb** 14 14 54.4 -2.3
BNGB Bingl 3.00 282 Pn **Pn** 14 14 54.2 +1.7
YRD Yardimli 3.00 80 P **Pn** 14 14 53.6 +1.0
YRD S **Sb** 14 15 33.6 -1.7
LRK Lerik 3.06 85 P **Pn** 14 14 54.4 +1.1
LRK S **Sb** 14 15 35.7 -1.0
AKH Akhalkalaki 3.06 346 P **Pb** 14 14 59.2 -0.1
AKH Akhalkalaki 3.06 346 PN **Pb** 14 14 59.2 -0.1
DGRG David-gareji 3.09 13 P **Pb** 14 14 55.7 -4.1
DGRG David-gareji 3.09 13 PN **Pb** 14 14 55.7 -4.1
MNGR Mingechevir, A 3.09 40 P **Pn** 14 14 54.7 +1.0
MNGR S **Sb** 14 15 36.3 -1.3
TRLG Trialeti 3.11 355 P **Pb** 14 14 59.1 -1.1
TRLG Trialeti 3.11 355 PN **Pb** 14 14 59.1 -1.1
MARD Mardin 3.12 250 **Pn** 14 14 54.2 +0.1
VSHL Vashlovani 3.16 28 P **Pb** 14 14 57.0 -4.1
VSHL S **Sg** 14 15 46.7 +0.4
GLBA Clilabad 3.18 74 P **Pn** 14 14 56.0 +1.1
GLBA S **Sb** 14 15 38.7 -1.4
YEDI Yedisu-Bingol 3.21 289 Pn **Pn** 14 14 57.3 +1.9
LKRN Lenkeran, Azer 3.40 84 P **Pn** 14 14 58.8 +1.0
LKRN S **Sb** 14 15 42.9 -3.7
ASTR Astara 3.41 87 P **Pn** 14 14 59.4 +1.5
ASTR S **Sb** 14 15 44.7 -2.0
DYBB Diyarbakir 3.43 263 Pn **Pn** 14 14 58.9 +0.5
GAS1 Astara - Iran 3.45 90 Pn **Pn** 14 14 59.5 +1.0
SEKA Sheki 3.48 37 P **Pn** 14 15 00.4 +1.4
SEKA S **Sb** 14 15 47.4 -1.4
ZKTA Zakatala 3.60 27 P **Pn** 14 15 02.0 +1.3
ZKTA S **Sb** 14 15 48.8 -3.5
QBL Gabala 3.62 45 P **Pn** 14 15 02.4 +1.5
QBL S **Sb** 14 15 49.9 -2.8
ALIG Mtskhetisjvari 3.71 351 P **Pn** 14 15 04.1 +1.9
ALIG S **Sg** 14 16 08.8 +4.9
ALIG Mtskhetisjvari 3.71 351 PN **Pn** 14 15 04.1 +1.9
ALIG S **Sg** 14 16 08.8 +4.9
IML Ismayilli 3.72 50 P **Pn** 14 15 03.2 +1.0
IML S **Sb** 14 15 52.0 -3.6
ERZN Erzincan 3.86 289 Pn **Pn** 14 15 06.8 +2.5
BAYT Aydıntepe-Bayb 3.87 302 Pn **Pn** 14 15 06.6 +2.1
CHRG Chargali 3.90 5 P **Pn** 14 15 07.1 +2.3
XNQ Khinaliq 3.94 45 P **Pn** 14 15 05.4 -0.1
XNQ S **Sn** 14 15 55.4 +3.6
AKT Akhty 3.94 39 *e*PN **Pn** 14 15 07.5 +2.0
AKT *e* 14 15 15.1
AKT *e*S **Sn** 14 15 49.8 -2.0
AKT *e* 14 16 09.7
AKT pmax pmax
comp=Z,58nm,0.6s
AKT smax smax
comp=N,95nm,0.7s
AKT smax smax
comp=E,213nm,1.0s
AKT MLR MLR
comp=Z,2μm,12.0s
PQL Pirkuli 3.96 52 P **Pn** 14 15 06.1 +0.3
PQL S **Sn** 14 15 55.9 +3.5
SVRC Sivrice-ELAZID 4.04 271 Pn **Pn** 14 15 08.5 +1.6
GBS Qobustan 4.05 58 P **Pn** 14 15 07.8 +0.9
GBS S **Sn** 14 15 57.6 +3.1
ATGJ Altiaghaj 4.22 54 P **Pn** 14 15 09.5 +0.2
ATGJ S **Sn** 14 16 02.1 +3.4
QSAR Qusar 4.24 42 P **Pn** 14 15 09.9 +0.4
QSAR S **Sn** 14 16 02.7 +3.6
SHTL Shatili 4.24 7 P **Pn** 14 15 12.0 +2.4
SHTL S **Sg** 14 16 19.9 -1.2
SHTL Shatili 4.24 7 PN **Pn** 14 15 12.0 +2.4
SHTL S **Sg** 14 16 19.8 -1.2
QUBA Quba, Azerbaij 4.26 46 P **Pn** 14 15 10.6 +0.9
QUBA S **Sn** 14 16 03.6 +4.2
SIZA Siyzn 4.32 51 P **Pn** 14 15 11.7 +1.1
SIZA S **Sb** 14 16 05.6 -7.5
NEUR Neytrino 5.00 345 *i* PN **Pn** 14 15 22.6 +2.6
MAK Makhachkala 5.08 26 *e*PN **Pn** 14 15 18.6 -2.3
MAK pmax pmax
comp=Z,130nm,1.1s
MAK MLR MLR
comp=Z,2μm,8.0s
KBZ Khabaz 5.41 348 Pn Pn 14 15 29.8 +4.3
comp=Z,0.2nm,0.3s,baz=177,slow=7.8,SNR=5.3
KBZ LR LR 14 17 52.4
comp=Z,1μm,18.1s,baz=157,slow=43
comp=Z,1.6nm,0.6s
SHA1 Shidzhatmaz 5.46 346 *i* P **Pn** 14 15 28.1 +1.7
KIV Kislovodsk 5.67 347 *e*P **Pn** 14 15 29.2 +0.1
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,231nm,10.0s
GAZ Gaziantep 5.87 260 **Pn** 14 15 31.9 -0.1
SOC Sochi 6.26 327 *e*P **Pn** 14 15 37.4 +0.2
SOC *e* 14 16 48.4
SOC pmax pmax
comp=Z,54nm,1.0s
SOC MLR MLR
comp=Z,994nm,14.0s
BEIL Beino 7.71 242 *e*P **Pn** 14 15 59.9 +2.8
HWQ Hawqa 8.02 241 *e*P **Pn** 14 16 03.0 +1.6
BR104 Keskin Array S 8.50 282 P Pn 14 16 12.3 +4.2
comp=Z,3.5nm,1.0s
BR131 Keskin Array S 8.51 282 *i* P Pn 14 16 12.2 +4.0
BRTR Keskin Array B 8.51 282 Pn **Pn** 14 16 11.2 +3.1
comp=Z,0.1nm,0.3s,baz=101,slow=13,SNR=7.7
BRTR LR LR 14 20 03.2
comp=Z,468nm,20.4s,baz=97,slow=42
comp=Z,1.8nm,0.9s
BR105 Keskin Array S 8.52 282 P Pn 14 16 13.7 +5.3
comp=Z,4.0nm,1.1s
BR106 Keskin Array S 8.53 282 P Pn 14 16 13.8 +5.4
comp=Z,4.2nm,1.0s
RCY Rachaya 8.55 237 *e*P **Pn** 14 16 08.8 +0.1
QRWL Qaraoun 8.62 238 *e*P **Pn** 14 16 08.3 -1.3
NATI Neve Ativ 8.76 236 P **Pn** 14 16 13.2 +1.8
ASF Jabal al Asfar 8.79 227 Pn **Pn** 14 16 13.8 +1.8
comp=Z,0.5nm,0.3s,baz=293,slow=13,SNR=2.2
ASF LR LR 14 20 20.9
comp=Z,462nm,18.1s,baz=34,slow=43
comp=Z,2.2nm,0.5s
GEM Giv'at Ha'Em 8.84 236 P **Pn** 14 16 14.4 +1.8
KSHT Keshet 8.89 235 P **Pn** 14 16 14.9 +1.6
MMA0B Mount Meron ar 9.13 236 P **Pn** 14 16 18.3 +1.6
MMAI Mount Meron Ar 9.13 236 Pn **Pn** 14 16 18.8 +2.1
comp=Z,1.1nm,0.3s,baz=76,slow=14,SNR=4.4
MMAI LR LR 14 20 04.9
comp=Z,1μm,19.7s,baz=52,slow=40
comp=Z,1.9nm,0.4s
HNTI Hanita 9.24 237 P **Pn** 14 16 19.7 +1.6
BLGI Bet Lehem HaGe 9.45 236 P **Pn** 14 16 22.9 +1.9
MMLI Mount Malkishu 9.49 234 P **Pn** 14 16 23.1 +1.5
HMDT Nahal Hemdat 9.55 232 P **Pn** 14 16 23.8 +1.4
OFRI `Ofer 9.65 236 P **Pn** 14 16 25.2 +1.5
SLTI Sal'it 9.86 234 P **Pn** 14 16 28.0 +1.4
DSI Dead Sea 10.11 230 P **Pn** 14 16 31.1 +1.1
GHAJ Ghor Haditha 10.19 228 P **Pn** 14 16 32.6 +1.5
MSBI Mazada 10.31 229 P **Pn** 14 16 34.2 +1.5
YTIR Yattir 10.42 230 P **Pn** 14 16 35.8 +1.5
AMAZ Amatzia 10.42 231 P **Pn** 14 16 36.1 +1.8
ZFRI Zfri 10.97 227 P **Pn** 14 16 42.8 +1.1
KZIT Kziot 11.18 231 P **Pn** 14 16 46.0 +1.5
PRNI Paran 11.22 227 P **Pn** 14 16 46.5 +1.3
HRFI Mount Harif 11.44 226 P **Pn** 14 16 49.1 +0.9
KRMI Paran Flat 11.55 227 P **Pn** 14 16 51.7 +1.9
EIL Elat 11.77 225 LR LR 14 21 57.9
comp=Z,973nm,18.1s,baz=48,slow=40
EIL Elat 11.77 225 P **Pn** 14 16 54.3 +1.6
VRH Novokhopyorsk 12.90 352 *e*P **Pn** 14 17 03.5 -4.6
VRH pmax pmax
comp=Z,10.0nm,0.4s
VORD Divnogorie 13.04 345 *e*P **Pn** 14 17 10.2 +0.2
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 13.31 345 *e*P **Pn** 14 17 15.9 +2.3
VSR pmax pmax
comp=Z,10.0nm,1.4s
VORR Voronezh 13.73 346 *e*P **Pn** 14 17 18.1 -1.3
VORR pmax pmax
comp=Z,90nm,0.4s
BELG Belogornoye 14.13 8 Pn **Pn** 14 17 24.2 -0.5
comp=Z,0.5nm,0.3s,baz=85,slow=18,SNR=4.5
comp=Z,18nm,0.9s
LPSR Galich'ya Gora 14.67 347 *e*P **P** 14 17 38.2 -0.3
LPSR pmax pmax
comp=Z,30nm,0.7s
RAYN Ar Rayn 14.90 176 **Pn** 14 17 32.9 -2.6
RAYN Ar Rayn 14.90 176 P **Pn** 14 17 32.9 -2.6
RAYN Ar Rayn 14.90 176 P **Pn** 14 17 33.0 -2.6
PLOR Plostina 15.12 305 ⇑P **P** 14 17 45.3 +1.7
PLOR Plostina 15.12 305 ⇑P **P** 14 17 45.3 +1.7
SORM Soroca 15.18 315 ⇑P **Pn** 14 17 39.4 +0.3
SORM Soroca 15.18 315 ⇑P **Pn** 14 17 39.4 +0.3
AKTO Aktyubinsk 15.38 34 Pn **Pn** 14 17 41.6 -0.2
comp=Z,0.4nm,0.3s,baz=235,slow=10.0,SNR=16
comp=Z,5.8nm,0.5s
AB31 Akbulak array 15.52 41 **Pn** 14 17 40.8 -2.7
ABKAR Akbulak array 15.52 41 Pn **Pn** 14 17 41.1 -2.4
OZUR 15.77 305 ⇓P **Pn** 14 17 47.1 +0.2
IDI Anoyia 15.97 265 Pn **Pn** 14 17 49.4 -0.1
DOPR Dopca 15.98 304 ⇑P **P** 14 17 55.9 +2.7
BANOM Banah 15.99 138 *i* P **P** 14 17 51.8 -1.6
SNR=5.7
BANOM Banah 15.99 138 P **P** 14 17 51.9 -1.5
VOIR 16.02 302 ⇑P **P** 14 17 56.7 +3.1
VOIR 16.02 302 ⇑P **P** 14 17 56.7 +3.1
AK07 Malin Array Si 16.24 323 P **P** 14 17 53.5 -2.4
AK09 Malin Array Si 16.24 323 P **P** 14 17 53.6 -2.4
AK10 Malin Array Si 16.25 323 P **P** 14 17 53.6 -2.4
AK06 Malin Array Si 16.26 323 P **P** 14 17 53.8 -2.4
AK08 Malin Array Si 16.27 323 P **P** 14 17 53.9 -2.4
AK05 Malin Array Si 16.28 323 P **P** 14 17 54.1 -2.3
AK02 Malin Array Si 16.31 323 P **P** 14 17 54.4 -2.3
AK12 Malin Array Si 16.32 323 P **P** 14 17 54.6 -2.3
AK01 Malin Array Si 16.33 324 P **P** 14 17 54.6 -2.3
AKASG Malin Array Be 16.33 324 Pn **Pn** 14 17 53.9 -0.1
comp=Z,0.6nm,0.3s,baz=135,slow=12,SNR=16
comp=Z,2.4nm,0.7s
AKASG Malin Array Be 16.33 324 *i* P **P** 14 17 54.5 -2.4
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 16.33 324 **Pn** 14 17 53.5 -0.5
AKBB IAmb IAmb 14 17 57.4
comp=Z,35nm,1.4s
AKBB Malin Array Si 16.33 324 *ce*P **P** 14 17 55.4 -1.5
AKBB Malin Array Si 16.33 324 P **P** 14 17 54.7 -2.2
KIEV Kiev 16.33 324 ⇑P **Pn** 14 17 48.8 -5.2
KIEV Kiev 16.33 324 **Pn** 14 17 53.6 -0.4
KIEV IAmb IAmb 14 17 57.4
comp=Z,31nm,1.4s
KIEV Kiev 16.33 324 P **Pn** 14 17 53.6 -0.4
KIEV pmax pmax
comp=Z,31nm,1.5s
KIEV Kiev 16.33 324 P **P** 14 17 54.7 -2.2
comp=Z,41nm,1.0s
AK14 Malin Array Si 16.34 323 P **P** 14 17 54.7 -2.3
AK11 Malin Array Si 16.34 323 P **P** 14 17 54.8 -2.2
AK13 Malin Array Si 16.34 323 P **P** 14 17 54.9 -2.2
AK03 Malin Array Si 16.35 324 P **P** 14 17 54.9 -2.2
AK16 Malin Array Si 16.36 323 P **P** 14 17 55.1 -2.2
MASF Masafi 16.37 139 P **P** 14 17 56.9 -0.7
SNR=12
MASF P **P** 14 17 56.9 -0.7
SNR=12
AK04 Malin Array Si 16.37 324 P **P** 14 17 55.2 -2.2
AK15 Malin Array Si 16.37 323 P **P** 14 17 55.2 -2.2
MSFE Esma-Masafi 16.38 139 *i* P **P** 14 17 56.9 -0.8
SNR=7.4
AK17 Malin Array Si 16.40 323 P **P** 14 17 55.5 -2.2
AK18 Malin Array Si 16.42 323 P **P** 14 17 55.8 -2.1
AK23 Malin Array Si 16.42 324 P **P** 14 17 55.8 -2.1
NAZ Nazwa, Dubai 16.44 141 *i* P **P** 14 17 58.2 -0.1
SNR=5.7
NAZ Nazwa, Dubai 16.44 141 P **P** 14 17 59.0 +0.7
SNR=8.5
AK22 Malin Array Si 16.44 323 P **Pn** 14 17 54.9 -0.5
AK19 Malin Array Si 16.44 323 P **Pn** 14 17 55.5 +0.1
AK21 Malin Array Si 16.46 323 P **P** 14 17 56.5 -1.9
AJN Ajban 16.48 144 P **P** 14 17 58.6 -0.1
MDH Madha 16.50 139 P **P** 14 17 59.4 +0.5
MDH Madha 16.50 139 P **P** 14 18 00.0 +1.0
SNR=5.6
MDH P **P** 14 18 00.0 +1.0
SNR=5.6
LUBAR Lubar, Ukraine 16.54 319 P **P** 14 17 59.0 -0.3
ASUD Al Ashush, Dub 16.58 143 P **P** 14 18 00.1 +0.2
ASUD Al Ashush, Dub 16.58 143 P **P** 14 18 01.5 +1.6
UOSS Minazif 16.74 140 **P** 14 18 00.9 -0.8
UOSS Minazif 16.74 140 P **P** 14 18 02.3 +0.6
UOSS Minazif 16.74 140 P **P** 14 18 03.7 +2.0
UOSS P **P** 14 18 03.7 +2.0
BURAR Bucovina Array 16.75 309 ⇓P **P** 14 18 02.1 +0.3
BURAR Bucovina Array 16.75 309 Pn **Pn** 14 17 58.9 -0.6
BURAR Bucovina Array 16.75 309 ⇓P **P** 14 18 02.1 +0.3
BUR08 Bucovina Ar. S 16.77 309 **P** 14 18 01.8 -0.3
HATD Hatta, Dubai 16.81 140 *i* P **P** 14 18 03.2 +0.8
SNR=7.1
HATD Hatta, Dubai 16.81 140 P **P** 14 18 04.4 +2.0
SNR=13
HATD P **P** 14 18 04.4 +2.0
SNR=13
MI30 MI30,Zelenitsa 16.85 322 P **Pn** 14 17 59.8 -0.8
MI30 pP **P** 14 18 03.2 +0.5
ASHO Ashiyiah 16.89 141 *i* P **P** 14 18 03.0 -0.4
SNR=7.7
ASHO Ashiyiah 16.89 141 P **P** 14 18 04.5 +1.2
SNR=10.0
ASHO P **P** 14 18 04.5 +1.2
SNR=10.0
JASK Jask - Hormozg 16.89 134 P **P** 14 18 06.1 +2.8
SNR=5.3
MZR Muzera 17.22 151 *i* Pn **P** 14 18 05.5 -1.4
SNR=6.0
MZR Muzera 17.22 151 P **P** 14 18 05.7 -1.3
SNR=6.6
MZR P **P** 14 18 05.7 -1.3
SNR=6.6
ALNE Al Ain 17.27 143 P **P** 14 18 09.2 +1.7
OBN Obninsk 17.51 345 ⇑*i*P **Pn** 14 18 07.7 -1.1
OBN S **Sn** 14 21 25.0 +1.4
OBN pmax pmax
comp=Z,98nm,2.5s
OBN MLR MLR
comp=Z,315nm,16.0s
GZR Gura Zlata 17.54 300 ⇑P **P** 14 18 12.5 +2.1
GZR Gura Zlata 17.54 300 ⇑P **P** 14 18 12.5 +2.1
SOHO SOHO 17.58 141 *i* P **P** 14 18 10.1 -0.9
SNR=6.4
SOHO SOHO 17.58 141 P **P** 14 18 12.9 +1.9
HERR Herculane 17.65 298 ⇑P **P** 14 18 12.0 +0.3
MARR Marisel-Cluj 17.70 305 ⇓P **Pn** 14 18 05.1 -6.3
MOS Moscow 17.90 347 *e*P **Pn** 14 18 10.7 -3.0
MOS pmax pmax
comp=Z,50nm,0.9s
HOQ Hoqain 18.43 140 P **Pn** 14 18 22.8 +2.4
SNR=5.7
HOQ P **Pn** 14 18 22.8 +2.4
SNR=5.7
BIDO Bidbid 18.90 138 P **Pn** 14 18 27.2 +1.1
SNR=6.0
BSY Bisya 19.08 141 P **Pn** 14 18 29.3 +1.0
SNR=9.5
BSY P **Pn** 14 18 29.3 +1.0
SNR=9.5
SMDO Samad 19.24 139 P **Pn** 14 18 31.6 +1.3
SNR=11
SMDO P **Pn** 14 18 31.6 +1.3
SNR=11
CHGR Chuyangaron 19.32 82 *i* P **Pn** 14 18 31.0 -0.1
CHGR pmax pmax
comp=Z,24nm,1.2s
WSAR Wadi Sarin 19.40 137 P **Pn** 14 18 33.6 +1.5
MNK Minsk 19.62 330 *i* P **P** 14 18 32.5 -0.7
comp=E,11nm,0.8s
MNK *i* P **P** 14 18 32.5 -0.7
comp=N,17nm,1.0s
MNK *i* P **P** 14 18 32.5 -0.7
comp=Z,13nm,0.9s,baz=138
MNK *i* PP **PnPn** 14 18 47.3 -0.7
MNK *i* PPP PPP 14 18 55.2
MNK *i* S **Sn** 14 22 13.5 -1.2
MNK *i* SS **SnSn** 14 22 29.9 +1.1
MNK *i* LR LR 14 25 34.9
MNK *i* LRM MLR 14 26 55.5
comp=N,216nm,19.8s
MNK *i* LRM MLR 14 26 59.8
comp=E,201nm,15.2s
MNK *i* LRM MLR 14 27 21.8
comp=Z,228nm,18.4s
MNK Minsk 19.62 330 *i* P **P** 14 18 32.5 -0.7
MNK *i* S **Sn** 14 22 13.5 -1.2
MNK pmax pmax
comp=E,11nm,0.8s
MNK pmax pmax
comp=Z,13nm,0.9s
MNK pmax pmax
comp=N,17nm,1.0s
MNK MLR MLR
comp=N,216nm,20.0s
MNK MLR MLR
comp=E,201nm,15.0s
MNK MLR MLR
comp=Z,228nm,18.0s
JMDO Jabal Madar 19.84 140 P **Pn** 14 18 37.7 +0.3
WBK Wadi Bani Khal 20.09 138 P Pn 14 18 40.7 +0.3
SNR=6.7
WBK P Pn 14 18 40.7 +0.3
SNR=6.7
KBL Kabul 20.13 94 P Pn 14 18 43.5 +2.5
SNR=8.6
KBL P Pn 14 18 43.5 +2.5
SNR=8.6
GAR Garm 20.17 80 P Pn 14 18 41.1 -0.2
GAR IAmb IAmb 14 18 58.1
comp=Z,15nm,1.0s
ARTI Arti 20.21 23 P Pn 14 18 40.2 -1.3
comp=Z,7.4nm,0.6s,baz=213,slow=10,SNR=13
comp=Z,7.4nm,0.6s
ARTI Arti 20.21 23 Pn 14 18 39.2 -2.3
ARTI IAmb IAmb 14 18 43.2
comp=Z,32nm,1.2s
ARTI Arti 20.21 23*c* *i*P Pn 14 18 39.7 -1.8
ARTI 14 18 55.4
ARTI S Sn 14 22 27.5 -1.3
ARTI pmax pmax
comp=Z,27nm,1.1s
KK31 Karatay Array 20.24 68 Pn 14 18 40.8 -1.3
KK31 IAmb IAmb 14 18 49.2
comp=Z,20nm,0.8s
KK31 Karatay Array 20.24 68 P Pn 14 18 40.8 -1.3
KK31 pmax pmax
comp=Z,20nm,0.8s
KKAR Karatay Array 20.24 68 **P** 14 18 39.6 -0.5
KKAR Karatay Array 20.24 68 P **P** 14 18 39.6 -0.5
KIRV Kirov 20.41 7*ce*P Pn 14 18 42.0 -1.8
MORH Mrgy, Hungar 20.54 300 ⇑P **P** 14 18 43.1 -0.2
JLN Jalan Bani Buh 20.70 137 P Pn 14 18 47.3 -0.2
SNR=14
MHTO MHTO 20.94 142 P Pn 14 18 49.4 -0.9
SNR=8.3
SVE Sverdlovsk 21.29 25 *e*P **P** 14 18 52.9 +1.7
SVE pmax pmax
comp=N,22nm,0.9s
DOK Doka 21.48 154 P **P** 14 18 53.5 -0.1
JAVC Velka Javorina 21.89 307 *e*P **P** 14 18 58.4 +0.5
MODS Modra-Piesok 21.99 306 *e*P **P** 14 19 03.1 +4.2
MODS Modra-Piesok 21.99 306 *e*P **P** 14 19 03.1 +4.2
WHFO Wadi Hawf 22.01 156 P **P** 14 18 58.9 -0.4
SNR=8.8
ARSB Arslanbob 22.04 73 P **P** 14 19 00.8 +1.1
ARSB Arslanbob 22.04 73 P **P** 14 19 00.8 +1.1
ARSB pmax pmax
comp=Z,24nm,0.8s
ZST Bratislava 22.05 305 *e*P **P** 14 19 03.4 +3.8
ZST Bratislava 22.05 305 *e*P **P** 14 19 03.3 +3.7
MORC Moravsky Berou 22.27 309 *e*P **P** 14 19 01.1 -0.9
CEL Celeste 22.36 278 P **P** 14 19 03.1 +0.1
ABTO Aybut 22.39 157 P **P** 14 19 02.7 -0.8
SNR=7.1
RONA Rosalia, Austr 22.45 303 *e*P **P** 14 19 04.9 +1.1
comp=Z,7.3nm,1.4s
RBK Rabkut 22.54 155 P **P** 14 19 04.8 -0.2
SNR=7.1
SHAO Shalim 22.56 151 P **P** 14 19 06.6 +1.4
DMTO DMTO 22.60 153 P **P** 14 19 05.6 0.0
VRAC Vranov 22.70 308 *e*P **P** 14 19 06.0 -0.5
KRUC Moravsky 22.75 307 *e*P **P** 14 19 07.0 0.0
CONA Conrad Observa 22.79 304 *e*pP pP 14 19 09.4 -1.6
comp=Z,5.6nm,1.2s
ARSA Arzberg 22.86 302 *e*pP pP 14 19 11.0 -0.7
comp=Z,4.2nm,0.9s
BORK Borovoye 23.05 42 P **P** 14 19 10.4 +0.4
BORK IAmb IAmb 14 19 15.9
comp=Z,9.5nm,0.8s
BORK Borovoye 23.05 42 P **P** 14 19 10.4 +0.4
BORK pmax pmax
comp=Z,10.0nm,0.8s
BVAR Borovoye Array 23.07 42 P **P** 14 19 10.2 -0.1
comp=Z,1.3nm,0.6s,baz=238,slow=8.5,SNR=14
BVAR LR LR 14 30 28.1
comp=Z,139nm,18.4s,baz=239,slow=43
comp=Z,1.3nm,0.6s
AAK Ala-Archa 23.15 70 LR LR 14 30 16.9
comp=Z,167nm,18.0s,baz=280,slow=42
AAK Ala-Archa 23.15 70 **P** 14 19 12.2 +0.8
AAK IAmb IAmb 14 19 45.3
comp=Z,11nm,1.1s
AAK Ala-Archa 23.15 70 P **P** 14 19 11.9 +0.5
AAK Ala-Archa 23.15 70 P **P** 14 19 12.2 +0.8
AAK pmax pmax
comp=Z,11nm,1.1s
AAK Ala-Archa 23.15 70 P **P** 14 19 13.3 +1.9
OSTC Ostas 23.35 310 *e*P P 14 19 25.9 +13
VAE Valguarnera 23.66 277 LR LR 14 29 02.9
comp=Z,223nm,19.0s,baz=150,slow=38
BIOA Bad Ischl, Aus 24.20 302 *e*P **P** 14 19 20.8 -0.6
comp=Z,9.0nm,1.3s
KSH2 Kashi 24.21 79 P **P** 14 19 25.0 +3.3
KSH2 sP sP 14 19 31.3 +4.3
KSH2 pmax pmax
comp=Z,8.0nm,1.7s
BOOM Boomskoye usch 24.22 70 P **P** 14 19 23.0 +1.2
BOOM IAmb IAmb 14 19 26.9
comp=Z,13nm,0.8s
BOOM Boomskoye usch 24.22 70 P **P** 14 19 23.0 +1.2
BOOM pmax pmax
comp=Z,13nm,0.8s

ZVC	Zvikov	24.25	307	*e*P		P		14 19 23.9 +2.1
KBA	Koelnbreinsper	24.29	301	*e*pP		pP		14 19 25.1 -1.0
	comp=Z,6.2nm,1.1s							
GEC2	GERESS Array S	24.41	305	P		P		14 19 22.8 -0.6
GERES	GERESS Array B	24.41	305	P		P		14 19 22.6 -0.7
	comp=Z,0.7nm,0.6s,baz=95,slow=7.8,SNR=2.4							
	comp=Z,0.7nm,0.6s							
KHC	Kasperske Hory	24.55	306	*e*P		P		14 19 33.3 +8.7
KHC	Kasperske Hory	24.55	306	*i* P		P		14 19 24.4 -0.2
KHC				pmax		pmax		
	comp=Z,18nm,2.2s							
LESA	Schwarzleotal	24.79	301	*e*pP		pP		14 19 28.7 -1.9
	comp=Z,2.3nm,0.5s							
ABTA	Abfaltersbach	24.80	300	pP		pP		14 19 28.8 -1.9
	comp=Z,4.6nm,0.9s							
KDJ	Kajisay	25.15	71	P		P		14 19 31.2 +0.9
KDJ	Kajisay	25.15	71	P		P		14 19 31.2 +0.9
KDJ				pmax		pmax		
	comp=Z,17nm,0.8s							
WTTA	Wattenberg	25.47	301	*e*P		P		14 19 34.0 +0.9
	comp=Z,12nm,1.1s							
FINES	FINESS Array B	25.70	340	P		P		14 19 34.1 -0.7
	comp=Z,5.0nm,1.0s,baz=133,slow=13,SNR=6.2							
FINES				LR		LR		14 30 22.9
	comp=Z,193nm,18.4s,baz=150,slow=38							
	comp=Z,5.0nm,1.0s							
FINES	FINESS Array B	25.70	340	P		P		14 19 34.2 -0.6
FINES	FINESS Array B	25.70	340	P		P		14 19 34.2 -0.6
MOTA	Moosalm	25.84	301	*e*P		P		14 19 37.7 +1.3
	comp=Z,8.0nm,1.0s							
FETA	Feichten	26.05	300	*e*pP		pP		14 19 42.4 +0.4
	comp=Z,7.7nm,1.2s							
ATD	Arta Tunnel	26.84	183	LR		LR		14 29 42.0
	comp=Z,7.2nm,20.1s,baz=24,slow=35							
KURBB	Kurchatov Arra	26.93	52	P		P		14 19 47.4 +1.4
	comp=Z,3.7nm,0.7s,baz=262,slow=9.0,SNR=34							
KURBB				LR		LR		14 32 13.7
	comp=Z,147nm,19.4s,baz=188,slow=40							
	comp=Z,3.7nm,0.7s							
KURK	Kurchatov	27.00	52			P		14 19 47.9 +1.2
KURK				IAmb		IAmb		14 19 52.5
	comp=Z,15nm,1.3s							
KURK	Kurchatov	27.00	52	*ce*P		P		14 19 48.5 +1.8
KURK				pmax		pmax		
	comp=Z,19nm,1.7s							
KURK	Kurchatov	27.00	52	P		P		14 19 47.8 +1.1
KEST	Kesra	28.04	275	LR		LR		14 32 54.7
	comp=Z,217nm,19.8s,baz=50,slow=40							
MAKZ	Makanchi	28.63	61			P		14 20 02.5 +1.2
MAKZ				IAmb		IAmb		14 20 10.6
	comp=Z,5.1nm,0.8s							
MAKZ	Makanchi	28.63	61	P		P		14 20 02.5 +1.2
MAKZ				pmax		pmax		
	comp=Z,5.0nm,0.8s							
MK31	Makanchi Array	28.84	61	*ce*P		P		14 20 05.2 +2.0
MKAR	Makanchi Array	28.84	61	P		P		14 20 05.0 +1.8
	comp=Z,4.7nm,0.7s,baz=264,slow=7.1,SNR=44							
MKAR				LR		LR		14 33 41.0
	comp=Z,240nm,18.0s,baz=254,slow=41							
	comp=Z,4.7nm,0.7s							
MKAR	Makanchi Array	28.84	61			P		14 20 04.5 +1.2
HFS	Hagfors	29.10	328	LR		LR		14 33 05.4
	comp=Z,228nm,19.7s,baz=127,slow=39							
NOA	NORSAR Array B	30.62	328	P		P		14 20 21.5 +2.6
	comp=Z,0.8nm,0.8s,baz=312,slow=23,SNR=2.0							
NOA				LR		LR		14 34 02.4
	comp=Z,180nm,18.9s,baz=125,slow=39							
ZAA0	Zalesovo Array	31.45	47			P		14 20 27.5 +1.3
ZAA0				IAmb		IAmb		14 20 28.2
	comp=Z,7.3nm,1.4s							
ZALV	Zalesovo Beam	31.45	47	P		P		14 20 27.4 +1.2
	comp=Z,1.7nm,0.5s,baz=259,slow=9.7,SNR=9.1							
ZALV				LR		LR		14 34 57.0
	comp=Z,100nm,20.0s,baz=253,slow=40							
	comp=Z,1.7nm,0.5s							
ZALV	Zalesovo Beam	31.45	47			P		14 20 26.9 +0.7
ZALV	Zalesovo Beam	31.45	47	*i* P		P		14 20 29.0 +2.8
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.5s							
DGZ	Jazzator, Alta	32.45	56	*i* P		P		14 20 35.8 +0.7
DGZ				pmax		pmax		
	comp=Z,16nm,1.8s							
WMQ	Urumqi	32.73	67	*e*P		P		14 20 40.5 +2.9
WMQ				LR		LR		
	comp=Z,180nm,24.0s							
EKA	Eskdalemuir Ar	35.84	314	P		P		14 21 04.1 -0.2
	comp=Z,2.5nm,0.7s,baz=105,slow=7.7,SNR=6.8							
EKA				LR		LR		14 38 04.4
	comp=Z,119nm,18.6s,baz=84,slow=40							
	comp=Z,2.5nm,0.7s							
EVN	Everest	36.68	94	P		P		14 21 13.2 +0.7
EVN				IAmb		IAmb		14 21 18.1
	comp=Z,12nm,1.3s							
ESDC	Sonseca Array	37.25	288	P		P		14 21 16.0 -0.6
	comp=Z,1.6nm,0.9s,baz=75,slow=8.5,SNR=3.6							
ESDC				LR		LR		14 37 49.9
	comp=Z,68nm,18.4s,slow=38							
	comp=Z,1.6nm,0.9s							
LSA	Lhasa	39.30	88	P		P		14 21 33.8 -0.7
GOMU	GeErMu	39.71	77	P		P		14 21 39.3 +1.6
GOMU				pmax		pmax		
	comp=Z,3.0nm,0.9s							
ZAK	Zakamensk	42.62	54	*e*P		P		14 22 02.8 +1.6
ZAK				pmax		pmax		
	comp=Z,6.0nm,1.9s							
BRDH	Bariadhala	43.09	97	LR		LR		14 43 52.9
	comp=Z,78nm,19.1s,baz=324,slow=42							
SONM	Songino Array	45.06	57	P		P		14 22 21.4 +0.6
	comp=Z,0.3nm,0.5s,baz=267,slow=12,SNR=4.2							
SONM				LR		LR		14 43 26.6
	comp=Z,198nm,20.0s,baz=276,slow=39							
	comp=Z,0.3nm,0.5s							
PALK	Pallekele	45.08	124	LR		LR		14 43 03.3
	comp=Z,64nm,18.8s,baz=314,slow=38							
TORD	Torodi Ar. Bea	45.45	248	P		P		14 22 23.6 -0.5
	comp=Z,0.7nm,0.8s,baz=27,slow=5.6,SNR=4.8							
	comp=Z,0.7nm,0.8s							
TORD	Torodi Ar. Bea	45.45	248	IAmb		IAmb		14 22 28.6
	comp=Z,2.8nm,1.1s							
ULN	Ulaanbaatar	45.49	57	P		P		14 22 24.9 +0.7
ULN				IAmb		IAmb		14 22 29.9
	comp=Z,5.1nm,1.1s							
ULN	Ulaanbaatar	45.49	57	*i* P		P		14 22 25.3 +1.0
ULN				pmax		pmax		
	comp=Z,16nm,1.9s							
ULN	Ulaanbaatar	45.49	57	P		P		14 22 23.3 -1.0
ULN				P		P		14 22 23.3 -1.0
BORG	Borgarnes	45.77	327	LR		LR		14 43 32.6
	comp=Z,42nm,18.2s,baz=100,slow=39							
PZH	PanZhiHua	49.08	86	P		P		14 22 55.0 +2.5
HHC	Hu-ho-hao-te	50.57	65	*e*P		P		14 23 05.3 +1.6
HHC				pmax		pmax		
	comp=Z,6.0nm,0.6s							
CHTO	Chiang Mai	50.91	97	P		P		14 23 05.9 -0.5
CHTO				IAmb		IAmb		14 23 08.9
	comp=Z,9.3nm,1.4s							
CHTO	Chiang Mai	50.91	97	P		P		14 23 05.9 -0.5
CHTO				pmax		pmax		
	comp=Z,9.0nm,1.5s							
CHTO	Chiang Mai	50.91	97	P		P		14 23 06.9 +0.6
CMAR	Chiang Mai Arr	51.11	97	P		P		14 23 08.1 +0.2
	comp=Z,1.8nm,0.6s,baz=299,slow=8.0,SNR=13							
	comp=Z,1.8nm,0.6s							
XAN	Xi'an	51.24	74	P		P		14 23 13.0 +4.3
XAN				pmax		pmax		
	comp=Z,6.0nm,1.0s							
TIXI	Tiksi	52.30	23	LR		LR		14 50 02.8
	comp=Z,139nm,19.0s,baz=304,slow=41							
TIXI	Tiksi	52.30	23	*i* P		P		14 23 16.7 +0.7
TIXI				pmax		pmax		
	comp=Z,8.0nm,1.6s							
SFJD	Kangerlussuaq	57.18	332	LR		LR		14 48 27.4
	comp=Z,83nm,19.7s,baz=38,slow=36							
NJ2	Nanjing	59.58	72	*e*P		P		14 24 08.3 -0.4
NJ2				pmax		pmax		
	comp=Z,11nm,0.8s							
KLR	Kul'dur	60.54	49	LR		LR		14 55 51.9
	comp=Z,67nm,18.4s,baz=302,slow=41							
KLR	Kul'dur	60.54	49	*i* P		P		14 24 15.6 +0.6
KLR				pmax		pmax		
	comp=Z,6.0nm,1.8s							
KSRS	Korea Array	63.51	62	P		P		14 24 36.0 +0.8
	comp=Z,1.9nm,0.7s,baz=289,slow=6.6,SNR=5.4							
KSRS				LR		LR		14 55 30.1
	comp=Z,42nm,18.8s,baz=275,slow=39							
	comp=Z,1.9nm,0.7s							
KSRS	Korea Array	63.51	62	P		P		14 24 36.0 +0.8

SEY	Seymchan	63.90	29	LR		LR		14 57 20.4
	comp=Z,178nm,18.6s,baz=326,slow=41							
SEY	Seymchan	63.90	29	*i* P		P		14 24 38.1 +0.8
SEY				pmax		pmax		
	comp=Z,8.0nm,1.6s							
RES	Resolute Bay	63.99	349	LR		LR		14 53 43.7
	comp=Z,42nm,19.5s,baz=15,slow=37							
MA2	Magadan	65.12	33	LR		LR		14 57 08.7
	comp=Z,86nm,18.6s,baz=312,slow=40							
MA2	Magadan	65.12	33	P		P		14 24 47.0 +1.6
MA2				pmax		pmax		
	comp=Z,10.0nm,1.6s							
FRB	Frobisher Bay	65.29	333	LR		LR		14 52 00.5
	comp=Z,71nm,19.6s,baz=34,slow=35							
ILON	Igloolik, Nuna	65.53	342	P		P		14 24 47.9 +0.1
ILON				IAmb		IAmb		14 24 52.9
	comp=Z,3.7nm,0.9s							
LBTB	Lobatse	65.55	199	LR		LR		14 54 00.0
	comp=Z,58nm,20.5s,baz=208,slow=36							
JNU	Nakatsue	67.80	65	LR		LR		14 56 15.1
	comp=Z,68nm,19.4s,baz=195,slow=37							
BOSA	Boshof	69.08	198	LR		LR		14 55 15.1
	comp=Z,99nm,19.8s,baz=198,slow=36							
JOW	Kunigami	69.30	72	LR		LR		14 58 45.6
	comp=Z,128nm,18.5s,baz=306,slow=39							
ASAJ	Asahikawa	69.55	50	LR		LR		15 01 35.5
	comp=Z,83nm,21.1s,baz=308,slow=41							
A36M	Sachs Harbour	69.63	357	P		P		14 25 13.9 +0.2
A36M				IAmb		IAmb		14 25 17.8
	comp=Z,4.6nm,0.8s							
SCHQ	Schefferville	70.12	325	P		P		14 25 16.9 -0.1
	comp=Z,1.1nm,0.5s,baz=38,slow=7.2,SNR=3.6							
	comp=Z,1.1nm,0.5s							
SCHQ	Schefferville	70.12	325	P		P		14 25 16.8 -0.3
MJAR	Matsushiro Arr	71.00	58	LR		LR		14 59 20.6
	comp=Z,80nm,20.6s,baz=312,slow=38							
PETK	Petropavlovsk-	72.11	36	LR		LR		15 01 53.9
	comp=Z,80nm,20.4s,baz=286,slow=40							
C36M	Paulatuk	72.19	356	P		P		14 25 28.8 -0.5
C36M				IAmb		IAmb		14 25 32.3
	comp=Z,4.5nm,1.1s							
E18K	Tukpahlearik C	72.76	10	P		P		14 25 33.1 +0.4
E18K				IAmb		IAmb		14 25 43.6
	comp=Z,8.2nm,1.5s							
E22K	Anaktuvuk Pass	73.04	6	P		P		14 25 34.8 +0.3
E22K				IAmb		IAmb		14 26 02.1
	comp=Z,7.6nm,1.5s							
INK	Inuvik	73.56	359	P		P		14 25 37.1 -0.4
INK				IAmb		IAmb		14 25 41.7
	comp=Z,5.3nm,1.4s							
INK	Inuvik	73.56	359	P		P		14 25 37.1 -0.4
INK				pmax		pmax		
	comp=Z,5.0nm,1.4s							
LEM	Lembang	73.81	113	LR		LR		15 00 04.7
	comp=Z,48nm,20.2s,baz=250,slow=37							
SUR	Sutherland	73.82	201	LR		LR		14 57 57.9
	comp=Z,90nm,19.8s,baz=174,slow=36							
F28M	Old Crow	74.22	2	P		P		14 25 41.9 +0.5
BMAR	Burnt Mountain	74.23	4	P		P		14 25 42.1 +0.6
IMAR	Indian Mountai	74.95	8	P		P		14 25 45.8 +0.1
G31M	Satah River	74.96	359	P		P		14 25 45.5 -0.1
G31M				IAmb		IAmb		14 25 50.1
	comp=Z,7.9nm,1.2s							
KTH	Kantishna Hill	77.61	7	P		P		14 26 01.4 +0.5
K24K	Donnelly Dome	77.77	5	P		P		14 26 01.8 +0.1
YKA	Yellowknife Ar	78.00	350	P		P		14 26 02.5 -0.5
	comp=Z,0.3nm,0.6s,baz=9.3,slow=6.4,SNR=8.1							
	comp=Z,0.3nm,0.6s							
YKA	Yellowknife Ar	78.00	350	*i* P		P		14 26 04.5 +1.6
BCAR	Beaver Creek A	78.71	3	P		P		14 26 07.3 +0.4
SKT	Skwentna	79.09	8	P		P		14 26 08.5 -0.5
SHEM	Shemya Is, Ala	79.23	28	LR		LR		15 05 09.9
	comp=Z,151nm,18.4s,baz=308,slow=39							
JCJ	Chichijima	79.26	64	LR		LR		15 02 02.9
	comp=Z,83nm,22.0s,baz=100,slow=36							
M24K	Tolsona, Glenn	79.43	5	P		P		14 26 11.0 +0.1
SML	Sawmill	79.56	6	P		P		14 26 11.7 +0.1
SCM	Sheep Creek Mo	79.62	6	P		P		14 26 13.1 +1.1
SCM	Sheep Creek Mo	79.62	6	P		P		14 26 13.1 +1.1
SCM				pmax		pmax		
	comp=Z,27nm,1.2s							
KLU	Klutina	80.06	5	P		P		14 26 14.8 +0.5
HYT	Haines Junctio	81.07	1	P		P		14 26 20.7 +0.8
HYT				IAmb		IAmb		14 26 36.6
	comp=Z,9.4nm,1.3s							
SADO	Sadowa	82.82	323	LR		LR		15 05 25.6
	comp=Z,28nm,18.7s,baz=148,slow=37							
ULM	Lac du Bonnet	85.03	336	LR		LR		15 04 17.5
	comp=Z,60nm,20.5s,baz=12,slow=36							
TKL	Tuckaleechee C	92.08	320	LR		LR		15 13 31.5
	comp=Z,33nm,18.1s,baz=75,slow=39							
NEW	Newport	92.13	349	LR		LR		15 09 54.2
	comp=Z,37nm,19.2s,baz=16,slow=36							
PDAR	Pinedale Array	95.79	341	LR		LR		15 12 58.2
	comp=Z,38nm,18.1s,baz=12,slow=37							
NVL	N'lazarevskaya	111.41	191	*i* PKIKP		PKiKP		14 32 38.1 +0.2
NVL				*e*				14 33 18.4
NVL				*e*PPP		PPP		14 35 39.1
NVL				*e*				14 39 51.2
NVL				*e*SS		SS		14 48 54.9 +2.1
NVL				*e*SSS		SSS		14 53 04.0
NVL				pmax		pmax		
	comp=Z,13nm,1.2s							
NVL				MLR		MLR		
	comp=Z,811nm,20.0s							

IDC 25 14:39:36.7±2.1,8°93S×122°68E,h0km,mb3.4/1,
mbtmp3.3/3,ML3.3/2,Error ellipse: s-maj=229.8km
s-min=30.6km az=55.0,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.71	135	Pn	Pn	14 43 17.6	-2.0
	0.1nm,0.3s,baz=308,slow=14,SNR=1.8						
WRA				Sn	Sn	14 45 59.3	-15
	0.1nm,0.3s,baz=315,slow=25,SNR=1.5						
	0.3nm,0.8s						
ASAR	Alice Springs	18.16	145	P	P	14 43 52.0	+1.1
	0.2nm,0.3s,baz=319,slow=12,SNR=16						
ASAR				S	Sn	14 47 06.7	-7.4
	0.3nm,0.6s,baz=315,slow=22,SNR=4.2						
	0.5nm,0.4s						
MKAR	Makanchi Array	66.11	331	P	P	14 50 25.6	-0.1
	0.2nm,0.5s,baz=142,slow=6.2,SNR=5.9						
	0.2nm,0.5s						

*AZER **25** 14:40:35.7,38°33N×44°58E,h4km,ml2.6*
*TEH **25** 14:40:37.1,38°44N×44°41E,h10km±336km,ML2.8,*
Presumed earthquake
*AFAD **25** 14:40:38.0,38°43N×44°42E,h7km±4km,ML2.4*
*ISK **25** 14:40:39.9,38°41N×44°42E,h9km,ML2.6/5*
ISC 25 14:40:38.5±1.1,38°43N±0°02×44°43E±0°02,h10km±9km,
n26,σ1°73/44,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.42	305	P	Pg	14 40 46.7	0.0
OZAP				S	Sg	14 40 52.0	-0.3
OZAP				IAML		14 40 56.0	
	comp=N,452nm,0.9s						
TVAN	Van	0.81	278	P	Pb	14 40 54.0	-0.8
TVAN				S	Sb	14 41 06.0	+0.1
TVAN				IAML		14 41 22.0	
	comp=N,346nm,1.1s						
YOVA	Hakkari_Yksek	0.84	188	P	Pb	14 40 55.2	-0.2
YOVA				S	Sb	14 41 06.1	-0.7
YOVA				IAML		14 41 11.0	
	comp=E,136nm,0.5s						
YOVA				IAML		14 41 15.0	
	comp=N,131nm,0.9s						
VMUR	Van-Muradiye	0.88	310	P	Pg	14 40 54.6	-0.8
VMUR				S	Sn	14 41 09.3	-0.6
VMUR				IAML		14 41 14.0	
	comp=N,107nm,0.4s						
ISHB	Shabestar	0.94	98	Pg	Pg	14 40 54.9	-1.7
MAKU	Maku	0.95	12	Pg	Pg	14 40 55.3	-1.4
IMRD	Marand	1.04	74	Pg	Pg	14 40 57.6	-0.8
HAKT	HAKKARI	1.04	214	P	Pb	14 40 58.1	-0.5
HAKT				S	Sb	14 41 12.5	+0.1
HAKT				IAML		14 41 23.0	
	comp=N,87nm,0.5s						
HAKT	HAKKARI	1.04	214	P	Pg	14 40 57.8	-0.6
HAKT				S	Sn	14 41 14.3	+0.4
GEVA	Gevas	1.08	264	P	Pg	14 40 58.4	-0.9
GEVA				S	Sn	14 41 14.4	-0.7
GEVA				IAML		14 41 19.0	
	comp=N,97nm,0.6s						
GEVA				IAML		14 41 21.0	
	comp=E,112nm,0.7s						
NAX	Nakhchivan	1.12	48	P	Pg	14 40 58.6	-1.3
NAX				S	Sn	14 41 15.4	-0.4
AKDM	Akdamar-Van	1.15	266	Pn	Pn	14 41 01.9	+1.2
AKDM				Sn	Sn	14 41 18.4	+1.9
DYDN	Diyadin	1.26	333	P	Pn	14 41 00.9	-1.4
DYDN				S	Sn	14 41 21.2	+1.8
DYDN				IAML		14 41 25.0	
	comp=E,130nm,1.0s						
SBZ	Shahbuz	1.31	42	P	Pn	14 41 02.8	-0.1
SBZ				S	Sn	14 41 24.0	+3.5
ORD	Ordubad	1.32	67	P	Pn	14 41 02.5	-0.6
ORD				S	Sg	14 41 21.1	+0.1
HYR	Heyderabad	1.33	14	P	Pg	14 41 04.5	+0.4
HYR				S	Sg	14 41 26.4	+5.1
CUKT	Cukurca	1.34	209	Pn	Pg	14 41 05.1	+0.8
CUKT				Sn	Sg	14 41 23.7	+2.0
ITBZ	Tabriz	1.36	98	Pg	Pg	14 41 04.2	-0.4
IAZR	Azarshahr	1.43	121	Pg	Pb	14 41 05.2	-0.2
IGDI	IGDIR	1.47	349	P	Pn	14 41 01.0	-4.1
IGDI				S	Sg	14 41 25.0	-0.7
IGDI				IAML		14 41 30.0	
	comp=E,88nm,1.1s						
IGDI	IGDIR	1.47	349	P	Pg	14 41 07.3	+0.7
IGDI				S	Sg	14 41 31.5	+5.9
AGRB	Hanur-Agry	1.60	316	Pn	Pg	14 41 09.2	-0.1
DORK	Agr/Tutak/Do	1.61	307	P	Pb	14 41 07.6	-0.7
DORK				S	Sg	14 41 29.8	-0.3
DORK				IAML		14 41 41.0	
	comp=N,34nm,0.8s						
KOTA	Agri, Merkez-K	1.67	326	P	Pg	14 41 09.7	-0.9
KOTA				S	Sg	14 41 32.2	0.0
KOTA				IAML		14 41 47.0	
	comp=E,18nm,1.5s						
GNI	Garni	1.74	8	Pn	Pg	14 41 11.6	-0.2
GURO	Guroymak-BITLI	1.89	275	Pn	Pb	14 41 12.9	-0.2

IDC 25 14:46:13.0±2.8,2°57N×128°44E,h0km,mb3.1/3,
mbtmp3.2/3,MS3.5/1,Error ellipse: s-maj=214.7km
s-min=26.7km az=68.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.10	166	P	P	14 51 20.6	-0.1
	0.5nm,0.4s,baz=343,slow=9.4,SNR=6.6						
	0.5nm,0.4s						
ASAR	Alice Springs	26.61	169	P	P	14 51 52.0	-1.3
	0.1nm,0.7s,baz=345,slow=11,SNR=4.1						
	0.1nm,0.7s						
HILR	Hailar Array B	47.40	352	LR	LR	15 14 54.9	
	comp=Z,61nm,22.0s,baz=20,slow=36						
MKAR	Makanchi Array	59.48	325	P	P	14 56 19.2	+1.3
	0.1nm,0.3s,baz=108,slow=7.6,SNR=4.0						
	0.1nm,0.3s						

*NOU **25** 14:51:17.1,38°31S×178°44E,h0km,MLv3.9/10,Off E.*
Coast of N. Island, N.Z.
*WEL **25** 14:51:17.4±0.6,38°S±3°×17°8E±°,h15km±2km,M3.5/32,*
ML3.4/32,MLv3.5/32,Error ellipse: s-maj=6.0km
s-min=3.3km az=105.0
ISC 25 14:51:18.0±1.1,38°22S±0°03×178°45E±0°05,h17km±7km,
n59,σ0°93/69,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBAS	Tolaga Bay Are	0.19	218	P	Pg	14 51 24.0	+1.4
PUZ	Puketiti	0.21	315	P	Pg	14 51 22.1	-0.9
PUZ				S	Sg	14 51 25.8	-0.7
CNGZ	Carnagh Statio	0.32	216	P	Pn	14 51 26.8	-1.2
CNGZ				S	Sb	14 51 33.0	+2.7
TWGZ	Tauwhareparae	0.37	277	P	Pg	14 51 25.5	-0.2
TWGZ				S	Sb	14 51 32.1	+0.4
WMGZ	Waiomatatini S	0.41	356	P	Pb	14 51 26.8	+0.1
WMGZ				S	Sg	14 51 32.2	+0.3
PKGZ	Pakihiroa	0.46	321	P	Pg	14 51 26.6	-0.7
PKGZ				S	Sg	14 51 32.8	-0.8
TKGZ	Te Karaka	0.52	245	P	Pb	14 51 28.9	+0.3
TKGZ				S	Sn	14 51 38.6	-0.5
RUGZ	Raukumara Rang	0.66	293	P	Pg	14 51 30.2	-0.8
MXZ	Matakaoa Point	0.67	350	P	Pb	14 51 31.4	+0.2
MXZ	Matakaoa Point	0.67	350	P	Pb	14 51 31.5	+0.3
HAZ	Te Kaha	0.70	311	P	Pg	14 51 30.9	-0.8
RIGZ	Rimuhau	0.72	228	P	Pb	14 51 32.8	+0.6
RIGZ				S	Sn	14 51 45.3	+1.1
MWZ	Matawai	0.73	261	P	Pb	14 51 32.0	-0.4
MWZ				S	Sb	14 51 43.4	+1.4
RAGZ	Rawiri	0.85	251	P	Pb	14 51 34.4	0.0
RAGZ				S	Sn	14 51 47.8	+0.2
KNZ	Kokohu	1.00	217	P	Pg	14 51 36.0	-1.4
MHGZ	Mahia Peninsul	1.02	204	P	Pb	14 51 36.9	-0.3
SNGZ	Shannon Statio	1.03	237	P	Pg	14 51 36.9	-1.1
URZ	Urewera	1.05	268	P	Pg	14 51 37.1	-1.3
URZ	Urewera	1.05	268	P	Pg	14 51 37.4	-1.0
URZ				S	Sn	14 51 53.3	+1.1
WIZ	White Island	1.22	305	P	Pn	14 51 39.7	-0.5
RTZ	Ruatahuna	1.22	251	P	Pb	14 51 40.0	-0.6
WHRZ	Whale Island	1.22	287	P	Pb	14 51 40.2	-0.4
RAHZ	Arahi	1.27	237	P	Pn	14 51 40.8	-0.2
WHHZ	Waihua	1.27	228	P	Pn	14 51 40.4	-0.7
MURZ	Murupara	1.34	259	P	Pn	14 51 42.3	+0.3
EDRZ	Edgecumbe	1.35	274	P	Pg	14 51 43.2	-0.8
MTHZ	Maungataniwha	1.41	243	P	Pn	14 51 42.2	-0.7
MARZ	Manawahe	1.42	279	P	Pn	14 51 43.2	+0.1
RRRZ	Republican Roa	1.52	265	P	Pn	14 51 43.5	-1.0
TARZ	Mount Tarawera	1.53	269	P	Pn	14 51 44.5	-0.2
ARHZ	Aropaoanui	1.54	227	P	Pn	14 51 44.5	-0.1
OPRZ

CO03	**El Pedregal**	**0.89**	**59**	⇓*iP*	**Pb**	**14 51 58.5**	**+0.1**
CO03				*eS*	**Sb**	**14 52 10.0**	**0.0**
CO03				IAML		14 52 10.5	
	comp=E,5µm,0.3s						
CO03	**El Pedregal**	**0.89**	**59**	*eP*	**Pb**	**14 51 58.4**	**+0.1**
CO03				*eS*	**Sg**	**14 52 10.2**	**0.0**
CO03				IAML		14 52 10.7	
	comp=Z,2µm,0.6s						
CO04	**Los Peladeros**	**0.90**	**146**	⇑*iP*	**Pb**	**14 51 59.1**	**+0.4**
CO04				*eS*	**Sg**	**14 52 11.1**	**+0.3**
CO04				IAML		14 52 11.9	
	comp=N,6µm,0.2s						
VA06	**Catapilco**	**1.28**	**169**	⇓*iP*	**Pn**	**14 52 04.5**	**0.0**
VA06				*eS*	**Sb**	**14 52 20.8**	**-0.4**
VA06				IAML		14 52 23.0	
	comp=E,2µm,0.3s						
GO04	**Tololo Observa**	**1.31**	**31**	⇓*iP*	**Pn**	**14 52 04.5**	**-0.5**
GO04				*eS*	**Sb**	**14 52 21.0**	**-1.2**
GO04				IAML		14 52 23.9	
	comp=E,4µm,0.4s						
GO04	**Tololo Observa**	**1.31**	**31**	*eP*	**Pn**	**14 52 04.0**	**-1.0**
GO04				IAML		14 52 23.7	
	comp=Z,2µm,0.3s						
CO05	**La Serena**	**1.41**	**12**	*eP*	**Pn**	**14 52 06.6**	**+0.4**
CO05				*eS*	**Sn**	**14 52 23.7**	**-0.6**
VA03	**San Esteban**	**1.70**	**149**	*eP*	**Pn**	**14 52 10.3**	**0.0**
VA03				*eS*	**Sn**	**14 52 30.9**	**-0.8**
VA03				IAML		14 52 36.7	
	comp=E,974nm,0.1s						
VA03	**San Esteban**	**1.70**	**149**	*eP*	**Pn**	**14 52 10.4**	**+0.1**
VA03				*eS*	**Sb**	**14 52 34.8**	**+1.5**
VA03				IAML		14 52 41.7	
	comp=Z,276nm,0.2s						
VA01	**Torpederas**	**1.72**	**182**	*eP*	**Pn**	**14 52 10.4**	**0.0**
VA01				*eS*	**Sn**	**14 52 32.1**	**+0.1**
VA01				IAML		14 52 37.8	
	comp=N,348nm,0.3s						
VA01	**Torpederas**	**1.72**	**182**	*eP*	**Pn**	**14 52 09.2**	**-1.3**
VA01				IAML		14 52 37.3	
	comp=Z,168nm,0.8s						
ROCH	**El Roble**	**1.74**	**164**	*eP*	**Pn**	**14 52 11.0**	**+0.1**
ROCH				*eS*	**Sn**	**14 52 32.8**	**0.0**
ROCH				IAML		14 52 37.6	
	comp=N,1µm,0.4s						
CO01	**Juntas del Tor**	**1.83**	**44**	*eP*	**Pn**	**14 52 12.6**	**+0.3**
CO01				*eS*	**Sn**	**14 52 34.5**	**-0.7**
CO01				IAML		14 52 36.2	
	comp=E,1µm,0.3s						
CO01	**Juntas del Tor**	**1.83**	**44**	*eP*	**Pn**	**14 52 10.8**	**-1.5**
CO01				*eS*	**Sn**	**14 52 34.9**	**-0.3**
CO01				IAML		14 52 35.6	
	comp=Z,604nm,0.2s						
PEL	**Peldehue**	**1.99**	**158**	*eP*	**Pn**	**14 52 14.8**	**+0.6**
PEL				*eS*	**Sb**	**14 52 41.2**	**-0.3**
PEL				IAML		14 52 42.0	
	comp=Z,265nm,0.3s						
MT02	**Curacav**	**1.99**	**169**	*eP*	**Pn**	**14 52 13.9**	**-0.2**
MT02				IAML		14 52 42.6	
	comp=N,281nm,0.3s						
MT02	**Curacav**	**1.99**	**169**	*eP*	**Pn**	**14 52 13.4**	**-0.8**
MT02				*eS*	**Sn**	**14 52 40.5**	**+1.7**
MT02				IAML		14 52 41.8	
	comp=Z,238nm,0.3s						
RTLS	**Leoncito**	**2.01**	**105**	*eP*	**Pn**	**14 52 16.0**	**+1.2**
RTLS				*eS*	**Sb**	**14 52 41.6**	**-0.8**
RTLS				IAML		14 52 47.0	
	comp=Z,650nm,0.9s						
AROD	**Rodeo**	**2.13**	**59**	*eP*	**Pn**	**14 52 18.2**	**+1.8**
AROD				*eS*	**Sb**	**14 52 45.6**	**-0.4**
MT10	**Hacienda Santa**	**2.16**	**156**	*eP*	**Pn**	**14 52 17.1**	**+0.5**
MT10				IAML		14 52 47.0	
	comp=E,789nm,0.4s						
MT05	**Renca**	**2.20**	**161**	*eP*	**Pn**	**14 52 17.4**	**+0.2**
MT05				IAML		14 52 50.9	
	comp=E,680nm,0.3s						
MT05	**Renca**	**2.20**	**161**	*eP*	**Pn**	**14 52 18.0**	**+0.8**
MT05				*eS*	**Sb**	**14 52 48.7**	**+0.9**
MT05				IAML		14 52 55.8	
	comp=Z,161nm,0.6s						
MT14	**Cerro Cal¡n**	**2.27**	**157**	*eP*	**Pb**	**14 52 20.7**	**-1.1**
ACCO	**Cerro Coronel**	**2.27**	**72**	*eP*	**Pn**	**14 52 19.8**	**+1.5**
ACCO				*eS*	**Sn**	**14 52 44.5**	**-1.6**
MT03	**Universidad Ad**	**2.37**	**158**	*eP*	**Pn**	**14 52 20.9**	**+1.4**
MT03				*eS*	**Sb**	**14 52 51.0**	**-1.6**
MT03				IAML		14 53 01.6	
	comp=Z,313nm,0.2s						
ACDV	**Cuesta del Vie**	**2.40**	**63**	*eP*	Pn	14 52 02.7	-17
ACDV				IAML		14 52 22.9	
	comp=Z,71nm,0.2s						
LCO	**Las Campanas**	**2.40**	**19**	*eP*	**Pn**	**14 52 20.2**	**+0.1**
LCO				*eS*	**Sn**	**14 52 49.4**	**+0.1**
LCO				IAML		14 52 54.0	
	comp=Z,383nm,0.5s						
MT04	**Ro Olivares**	**2.43**	**150**	*eP*	**Pn**	**14 52 22.0**	**+1.6**
MT04				*eS*	**Sb**	**14 52 52.6**	**-1.8**
MT04				IAML		14 53 00.6	
	comp=Z,95nm,0.4s						
MT08	**Bocatoma Ro**	**2.51**	**149**	*eP*	**Pn**	**14 52 24.2**	**+2.6**
MT08				*eS*	**Sn**	**14 52 53.5**	**+1.4**
MT08				IAML		14 53 00.5	
	comp=Z,106nm,0.3s						
SJA	**San Juan**	**2.59**	**96**	*eS*	**Sb**	**14 52 56.5**	**-2.4**
SJA				IAML		14 53 03.2	
	comp=Z,106nm,0.4s						
RTLL	**Cerro Villicun**	**2.65**	**91**	*eP*	**Pn**	**14 52 24.4**	**+1.0**
RTLL				*eS*	**Sn**	**14 52 56.2**	**+1.0**
RTLL				IAML		14 53 17.8	
	comp=Z,130nm,0.5s						
ASAL	**Salagasta**	**2.66**	**120**	*eP*	**Pn**	**14 52 26.1**	**+2.6**
ASAL				*eS*	**Sn**	**14 52 53.2**	**-2.3**
MT13	**San Alfonso**	**2.67**	**156**	*eP*	**Pn**	**14 52 24.8**	**+1.2**
MT13				*eS*	**Sb**	**14 52 59.9**	**-1.4**
MT13				IAML		14 53 03.5	
	comp=Z,126nm,0.6s						
AC05	**El Transito**	**2.70**	**25**	*eP*	**Pn**	**14 52 24.8**	**+0.7**
AC05				*eS*	**Sn**	**14 52 56.4**	**-0.1**
AC05				IAML		14 53 04.9	
	comp=Z,111nm,0.6s						
LMEL	**Las Melosas**	**2.79**	**156**	*eP*	**Pn**	**14 52 26.5**	**+1.1**
LMEL				IAML		14 53 06.4	
	comp=N,207nm,0.2s						
CFA	**Coronel Fontan**	**2.87**	**97**	*eP*	**Pn**	**14 52 27.4**	**+1.1**
CFA				IAML		14 53 05.7	
	comp=Z,70nm,0.5s						
AVFE	**Valle Fertil**	**3.59**	**81**	IAML		14 53 24.6	
	comp=Z,78nm,0.5s						
VCA	**Vinchina**	**3.88**	**50**	IAML		14 53 33.1	
	comp=Z,108nm,0.4s						
ACLC	**CERRO LA CRUZ**	**4.41**	**66**	IAML		14 53 43.1	
	comp=Z,63nm,0.5s						
TINO	**Tinogasta**	**4.75**	**48**	*eP*	**Pn**	**14 52 53.5**	**+1.2**
TINO				*eS*	**Sn**	**14 53 49.6**	**+2.6**
AC02	**Maricunga**	**4.94**	**26**	IAML		14 54 12.3	
	comp=Z,39nm,1.0s						
MRA	**San Martin**	**5.11**	**104**	*eP*	**Pn**	**14 52 57.1**	**-0.1**
MRA				*eP*	**Pn**	**14 52 57.1**	**-0.1**
MRA				*eP*	**Pn**	**14 52 57.1**	**-0.1**

*IPEC **25** 14:57:21.9±0.2,51˚.50N×16˚.23E,h1km,ML2.2/6,Error ellipse: s-maj=1.7km s-min=1.3km az=61.0*
*VIE **25** 14:57:23.1±2.0,51˚.35N×15˚.94E,h0km,mb2.5/6,ml2.5/5, Error ellipse: s-maj=13.3km s-min=8.7km az=129.0 79 km WNW of Wroclaw Suspected Mining induced.*
*DNK **25** 14:57:23.5±1.6,51˚.52N×16˚.33E,h30km,ML3.0, Presumed earthquake*
*PRU **25** 14:57:24.1,51˚.44N×16˚.12E,h0km*
ISC 25 14:57:20.5±0.8,**51˚.55N**±0˚.03×**16˚.10E**±0˚.03,**h0**km,**n35,** σ1**s20**/65,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	**Pg**	**14 57 34.9**	**+0.6**
KSP				*e*Sg	**Sg**	**14 57 43.8**	**+0.2**
CHVC	**Chvalec**	**0.97**	**182**	*e*PG	**Pb**	**14 57 39.6**	**-0.5**
CHVC				*e*SG	**Sg**	**14 57 51.7**	**+0.2**
	comp=Z,37nm,0.6s						
OSTC	**Ostas**	**1.00**	**176**	*e*PG	**Pb**	**14 57 40.6**	**-0.1**
OSTC				*e*SG	**Sg**	**14 57 52.6**	**+0.1**
	comp=Z,24nm,0.4s						
UPC	**Upice**	**1.05**	**183**	*e*PG	**Pg**	**14 57 40.3**	**-0.2**
UPC				*e*SG	**Sg**	**14 57 53.4**	**-0.7**
	comp=Z,59nm,0.3s						
DPC	**Dobruska-Polom**	**1.21**	**173**	*e*PG	**Pg**	**14 57 43.7**	**0.0**
DPC				*e*SG	**Sg**	**14 57 59.0**	**-0.4**
	comp=Z,24nm,0.9s						
PIVO	**Bartosovice**	**1.40**	**168**	*e*Pg	**Pg**	**14 57 47.2**	**0.0**
	baz=351						
PIVO				*e*Sg	**Sg**	**14 58 03.7**	**-1.6**
	37nm,0.5s,baz=351						
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	**Pb**	**14 57 48.1**	**+0.5**
PVCC				*e*SG	**Sn**	**14 58 06.6**	**0.0**
	comp=Z,50nm,0.2s						
BRG	**Berggiesshubel**	**1.52**	**244**	Pg	**Pg**	**14 57 50.5**	**+0.9**
BRG				Sg	**Sn**	**14 58 10.4**	**+1.1**
BRG				Amp		14 58 11.6	
	comp=Z,40nm,0.4s						
KRLC	**Kraliky**	**1.54**	**163**	*e*PG	**Pb**	**14 57 49.6**	**-0.3**
RYBC	**Ceska Rybna**	**1.75**	**181**	*e*Pn	**Pn**	**14 57 52.4**	**+0.4**
	baz=3.5						
RYBC				*e*Sg	**Sn**	**14 58 15.0**	**0.0**
	comp=Z,22nm,0.3s,baz=3.5						
PRU	**Pruhonice**	**1.85**	**213**	*e*PG	**Pb**	**14 57 55.3**	**+0.1**
PRU				*e*SG	**Sg**	**14 58 19.6**	**-0.4**
	comp=Z,19nm,0.4s						
HSKC	**Hora Svate Kat**	**1.93**	**242**	*e*PG	**Pg**	**14 57 57.5**	**0.0**
STEB	**Steborice**	**1.94**	**146**	*e*PG	**Pb**	**14 57 57.0**	**+0.4**
	comp=Z,39nm,0.5s						
STEB				*e*SG	**Sb**	**14 58 21.9**	**+0.6**
CLL	**Collm**	**1.96**	**264**	*i* Pg	**Pg**	**14 57 57.6**	**-0.3**
CLL				*ex*	x	14 58 02.0	
CLL				*i* Sg	**Sg**	**14 58 24.5**	**+1.3**
	comp=Z,17nm,0.4s						
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**14 57 55.4**	**-0.1**
	baz=335						
MORC				*e*Sg	**Sn**	**14 58 21.8**	**+0.5**
	comp=Z,11nm,0.3s,baz=335						
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*PG	**Pb**	**14 58 00.0**	**-0.3**
OKC				*e*SG	**Sb**	**14 58 28.3**	**+0.7**
	comp=Z,16nm,0.5s						
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**14 57 59.5**	**+0.3**
	baz=354						
VRAC				*e*Sg	**Sb**	**14 58 30.9**	**0.0**
	comp=Z,15nm,0.5s,baz=354						
TREC	**Trest**	**2.29**	**190**	*e*SG	**Sg**	**14 58 32.8**	**-1.3**
ZVC	**Zvikov**	**2.44**	**211**	*e*PG	**Pg**	**14 58 06.4**	**-0.8**
ZVC				*e*SG	**Sg**	**14 58 38.5**	**-0.4**
	comp=Z,16nm,0.7s						
MAUC	**Maruska**	**2.45**	**153**	*e*PG	**Pg**	**14 58 06.8**	**-0.6**
MAUC				*e*SG	**Sg**	**14 58 38.9**	**-0.3**
	comp=Z,29nm,0.7s						
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn	**Pn**	**14 58 02.8**	**+0.4**
	baz=358						
KRUC				*e*Sg	**Sb**	**14 58 38.2**	**+0.7**
	comp=Z,12nm,0.7s,baz=358						
NKC	**Novy Kostel**	**2.66**	**242**	*e*PG	**Pg**	**14 58 11.7**	**+0.2**
NKC				*e*SG	**Sg**	**14 58 46.5**	**+0.5**
	comp=Z,37nm,0.3s						
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**14 58 12.9**	**+0.8**
OJC				*e*Sg	**Sg**	**14 58 48.0**	**+1.0**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**14 58 08.0**	**-0.1**
KHC				*e*PG	**Pb**	**14 58 14.4**	**+1.1**
KHC				*e*SN	**Sn**	**14 58 43.0**	**-0.8**
KHC				*e*SG	**Sg**	**14 58 54.4**	**+0.4**
	comp=Z,7.6nm,0.4s						
CKRC	**Cesky Krumlov**	**2.97**	**204**	*e*PG	**Pb**	**14 58 14.7**	**+0.5**
CKRC				*e*SG	**Sg**	**14 58 54.5**	**-1.3**
	comp=Z,8.3nm,0.4s						
LANS	**Liptovska Anna**	**3.23**	**137**	*e*SG	**Sg**	**14 59 05.5**	**+1.3**
MODS	**Modra-Piesok**	**3.27**	**166**	*e*PN	**Pb**	**14 58 16.5**	**-2.9**
MODS				*e*PG	**Pg**	**14 58 27.2**	**+4.1**
MODS				*e*SG	**Sg**	**14 59 05.0**	**-0.5**
CONA	**Conrad Observa**	**3.63**	**183**	*e*Pg	**Pg**	**14 58 28.8**	**-1.3**
	comp=Z,1.5nm,0.3s						
CONA				*e*Sg	**Sg**	**14 59 15.0**	**-2.1**
	comp=Z,5.7nm,0.4s						
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P	**Pn**	**14 58 18.9**	**+0.9**
BSD				*i* S	**Sn**	**14 59 01.1**	**-0.4**
BSD				IAML		14 59 27.2	
	comp=Z,20nm,0.9s						
RONA	**Rosalia, Austr**	**3.86**	**178**	*e*Sg	**Sg**	**14 59 24.3**	**-0.1**
	comp=Z,3.0nm,0.3s						
MOA	**Molln**	**3.89**	**199**	*e*Sg	**Sg**	**14 59 25.4**	**-0.1**
	comp=Z,5.3nm,0.4s						
ARSA	**Arzberg**	**4.32**	**185**	*e*Sg	**Sg**	**14 59 37.5**	**-1.8**
	comp=Z,4.2nm,0.5s						
LUNU	**Lund**	**4.38**	**340**	*i* S	**Sn**	**14 59 17.8**	**-2.0**
BLEU	**Blekinge**	**4.76**	**358**	*i* P	**Pn**	**14 58 35.5**	**+2.1**
BLEU				*e*S	**Sn**	**14 59 25.3**	**-4.0**
DEL	**Delary**	**5.10**	**346**	*i* P	**Pn**	**14 58 38.6**	**+0.6**
DEL				*i* S	**Sn**	**14 59 34.7**	**-2.8**

*IDC **25** 15:00:05.1±0.6,25˚.44N×143˚.62E,h0km,mb4.0/17, mbtmp4.0/19,ML3.4/2,Error ellipse: s-maj=22.9km s-min=14.3km az=72.0*
*NEIC **25** 15:00:07.3±1.0,25˚.47N±0˚.09×143˚.7E±0˚.1,h10km±1km, mb4.5/25,Error ellipse: s-maj=20.8km s-min=12.0km az=55.0*
*JMA **25** 15:00:09.1±0.2,25˚.7N±0˚.4×14˚3E±˚,h186km,MV4.1/10, IOTO ISLANDS REGION*
ISC 25 15:00:10.3±0.5,**25˚.44N**±0˚.07×**143˚.71E**±0˚.10,**h35**km,**n65,** σ1**s00**/64,**mb4.3**/29,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.82**	**311**	P	**Pn**	**15 00 40.4**	**+1.2**
JHH2				S	**Sn**	**15 01 04.5**	**+3.4**
CBIJ	**Chichi jima**	**2.15**	**321**	P	**Pn**	**15 00 43.7**	**0.0**
CBIJ				*e*S	**Sn**	**15 01 10.2**	**+1.2**
JCJ	**Chichijima**	**2.15**	**321**	Pn	**Pn**	**15 00 43.0**	**-0.6**
	35nm,0.3s,baz=279,slow=22,SNR=53						
JCJ				Sn	**Sn**	**15 01 10.6**	**+1.5**
	38nm,0.3s,baz=314,slow=22,SNR=5.1 108nm,0.3s						
JCJ	**Chichijima**	**2.15**	**321**		**Pn**	**15 00 42.6**	**-1.0**
JCJ					**Sn**	**15 01 09.7**	**+0.7**
MJAR	**Matsushiro Arr**	**12.03**	**338**	Pn	**Pn**	**15 02 55.8**	**-3.4**
	0.1nm,0.3s,baz=164,slow=11,SNR=5.1 0.8nm,0.4s						
MJAR	**Matsushiro Arr**	**12.03**	**338**		**Pn**	**15 02 57.7**	**-1.5**
MAJO	**Matsushiro**	**12.03**	**338**	Pn	**Pn**	**15 02 57.9**	**-1.4**
H11N1	**WAKE ISLAND Hy**	**22.13**	**100**	T	T	15 27 49.5	
	baz=290,slow=75,SNR=39						
H11N2	**WAKE ISLAND Hy**	**22.13**	**100**	T	T	15 27 48.8	
	baz=290,slow=75,SNR=53						
H11N3	**WAKE ISLAND Hy**	**22.15**	**100**	T	T	15 27 49.9	
	baz=290,slow=75,SNR=40						
H11S3	**WAKE ISLAND Hy**	**22.38**	**103**	T	T	15 28 06.3	
	baz=292,slow=75,SNR=110						
H11S1	**WAKE ISLAND Hy**	**22.39**	**103**	T	T	15 28 06.7	
	baz=292,slow=75,SNR=81						
H11S2	**WAKE ISLAND Hy**	**22.40**	**103**	T	T	15 28 07.6	
	baz=292,slow=75,SNR=60						
PATS	**Pohnpei**	**23.17**	**141**	P	**P**	**15 05 14.5**	**+0.6**
LZDM	**Lanzhou Array**	**35.75**	**297**	P	**P**	**15 07 04.5**	**-1.8**
	0.5nm,0.3s,baz=172,slow=5.7,SNR=3.8 0.5nm,0.3s						
SONM	**Songino Array**	**36.85**	**317**	P	**P**	**15 07 16.2**	**+0.9**
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.2 0.3nm,0.5s						
BKB	**Balikpapan**	**37.12**	**228**	P	**P**	**15 07 18.1**	**+0.3**
COEN	**Coen**	**39.16**	**181**	P	**P**	**15 07 35.7**	**+0.8**
COEN				IAmb	IAmb	15 08 14.4	
	comp=Z,17nm,1.4s						
MTN	**Manton Dam**	**39.98**	**199**	P	**P**	**15 07 42.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**41.95**	**270**	P	**P**	**15 07 57.9**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=58,slow=8.7,SNR=5.6 comp=Z,0.4nm,0.3s						
GOMU	**GeErMu**	**42.95**	**297**	P	**P**	**15 08 06.5**	**+0.1**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL	**Bilibino**	**44.77**	**12**	P	**P**	**15 08 21.6**	**+1.5**
BILL				IAmb	IAmb	15 08 54.4	
	comp=Z,7.4nm,1.5s						
CTAO	**Charters Tower**	**45.32**	**177**	P	**P**	**15 08 24.9**	**-0.1**
CTAO				IAmb	IAmb	15 08 45.9	
	comp=Z,6.1nm,1.1s						
WB0	**Warramunga Arr**	**45.84**	**192**	P	**P**	**15 08 29.1**	**0.0**
WR8	**Warramunga Arr**	**46.01**	**192**	P	**P**	**15 08 30.4**	**-0.1**
WR8				IAmb	IAmb	15 08 31.7	
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**46.02**	**192**	P	**P**	**15 08 30.6**	**0.0**
	comp=Z,8.4nm,0.7s,baz=13,slow=8.6,SNR=46 comp=Z,8.4nm,0.7s						
WRA	**Warramunga Arr**	**46.02**	**192**	P	**P**	**15 08 29.5**	**-1.1**
AS31	**Alice Springs**	**49.73**	**192**	P	**P**	**15 08 59.0**	**-0.4**
ASAR	**Alice Springs**	**49.73**	**192**	P	**P**	**15 08 59.0**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=17,slow=13,SNR=45 comp=Z,1.7nm,0.7s						
EVN	**Everest**	**50.50**	**286**	P	**P**	**15 09 05.4**	**-0.6**
ZALV	**Zalesovo Beam**	**51.63**	**320**	P	**P**	**15 09 11.8**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=98,slow=9.3,SNR=4.3						
ZALV				PcP	**PcP**	**15 10 26.6**	**0.0**
	comp=Z,1.5nm,0.6s,baz=74,slow=2.9,SNR=7.5 comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**51.63**	**320**	P	**P**	**15 09 12.7**	**-0.6**
MKAR	**Makanchi Array**	**52.59**	**311**	P	**P**	**15 09 19.4**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=85,slow=10,SNR=5.7						
MKAR				PcP	**PcP**	**15 10 30.2**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=88,slow=6.2,SNR=5.5 comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**52.59**	**311**	P	**P**	**15 09 20.1**	**-0.4**
E19K	**Redstone River**	**55.01**	**24**	P	**P**	**15 09 38.9**	**+1.0**
E19K				IAmb	IAmb	15 09 42.6	
	comp=Z,5.1nm,1.4s						
KURK	**Kurchatov**	**55.12**	**315**	P	**P**	**15 09 38.9**	**-0.1**
KURK				IAmb	IAmb	15 09 40.5	
	comp=Z,4.6nm,1.4s						
KURBB	**Kurchatov Arra**	**55.18**	**315**	P	**P**	**15 09 39.0**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=92,slow=8.5,SNR=15 comp=Z,1.6nm,0.6s						
H22K	**Ishtalitna Cre**	**56.84**	**26**	P	**P**	**15 09 51.5**	**+0.5**
STKA	**Stephens Creek**	**57.03**	**182**	P	**P**	**15 09 51.4**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=348,slow=9.4,SNR=4.0 comp=Z,1.3nm,0.6s						
STKA	**Stephens Creek**	**57.03**	**182**	P	**P**	**15 09 52.0**	**-0.8**
FORT	**Forrest**	**57.88**	**196**	P	**P**	**15 09 58.9**	**+0.2**
FORT				IAmb	IAmb	15 09 59.9	
	comp=Z,7.1nm,0.8s						
IL31		**58.51**	**28**	P	**P**	**15 10 02.6**	**-0.1**
ILAR	**Eielson Array**	**58.51**	**28**	P	**P**	**15 10 03.0**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=251,slow=5.8,SNR=14 comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**58.51**	**28**	P	**P**	**15 10 02.6**	**-0.2**
SUCK	**Suckling Hills**	**59.61**	**34**	P	**P**	**15 10 11.2**	**+0.7**
BVAR	**Borovoye Array**	**60.19**	**318**	P	**P**	**15 10 14.8**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=101,slow=7.7,SNR=12 comp=Z,2.9nm,0.7s						
BORK	**Borovoye**	**60.23**	**318**	P	**P**	**15 10 15.1**	**+0.3**
BORK				IAmb	IAmb	15 10 15.8	
	comp=Z,2.0nm,0.7s						
C27K	**Jago River**	**60.33**	**23**	P	**P**	**15 10 16.0**	**+0.7**
C27K				IAmb	IAmb	15 10 38.0	
	comp=Z,2.8nm,1.1s						
KKAR	**Karatay Array**	**61.17**	**307**	P	**P**	**15 10 21.7**	**+0.3**
G31M	**Satah River**	**63.76**	**26**	P	**P**	**15 10 39.4**	**+1.1**
G31M				IAmb	IAmb	15 10 59.2	
	comp=Z,6.7nm,1.2s						
INK	**Inuvik**	**63.96**	**24**	P	**P**	**15 10 40.3**	**+0.7**
AB31	**Akbulak array**	**67.23**	**315**	P	**P**	**15 11 00.9**	**-0.2**
AB31				IAmb	IAmb	15 11 01.5	
	comp=Z,1.6nm,0.7s						
ABKAR	**Akbulak array**	**67.23**	**315**	P	**P**	**15 11 00.9**	**-0.2**
YKA	**Yellowknife Ar**	**72.94**	**28**	P	**P**	**15 11 36.5**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=296,slow=6.4,SNR=6.7 comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**72.94**	**28**	P	**P**	**15 11 36.1**	**+0.3**
FIA1	**FINESS Array S**	**80.03**	**334**	P	**P**	**15 12 16.1**	**+0.1**
FINES	**FINESS Array B**	**80.03**	**334**	P	**P**	**15 12 16.2**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=72,slow=4.7,SNR=18 comp=Z,1.9nm,0.5s						
KBZ	**Khabaz**	**80.14**	**314**	P	**P**	**15 12 17.6**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=100,slow=3.9,SNR=6.3 comp=Z,4.6nm,0.8s						
AKASG	**Malin Array Be**	**84.76**	**324**	P	**P**	**15 12 39.5**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=51,slow=4.8,SNR=4.7 comp=Z,0.9nm,0.5s						
AKASG	**Malin Array Be**	**84.76**	**324**	IAmb	IAmb	15 12 56.9	
	comp=Z,3.6nm,1.3s						
HFS	**Hagfors**	**85.48**	**337**	P	**P**	**15 12 43.3**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=114,slow=6.5,SNR=5.4 comp=Z,1.5nm,0.6s						
NB2	**NORSAR Subarra**	**85.64**	**339**	P	**P**	**15 12 44.8**	**-0.4**
	comp=Z,8.0nm,1.1s,baz=44,slow=5.1						
NOA	**NORSAR Array B**	**85.64**	**339**	P	**P**	**15 12 44.9**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=46,slow=4.7,SNR=4.3 comp=Z,1.3nm,0.7s						
PLCA	**Paso Flores**	**147.73**	**127**	PKPbc	**PKPbc**	**15 19 52.8**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=165,slow=3.0,SNR=8.5						
LPAZ	**La Paz**	**148.95**	**79**	PKPbc	**PKiKP**	**15 19 57.4**	**0.0**
	comp=Z,0.5nm,0.3s,baz=252,slow=4.1,SNR=2.6						

*AZER **25** 15:09:10.9,38˚.32N×44˚.66E,h10km,ml2.5*
*AFAD **25** 15:09:11.4,38˚.46N×44˚.47E,h7km±2km,ML2.4*
*TEH **25** 15:09:11.9,38˚.43N×44˚.50E,h6km±133km,ML2.7, Presumed earthquake*
*ISK **25** 15:09:12.6,38˚.49N×44˚.30E,h6km,ML2.6/5*
ISC 25 15:09:11.5±1.2,**38˚.44N**±0˚.02×**44˚.48E**±0˚.02,**h2**km±11km, **n33,** σ1**s64**/49,**Turkey-Iran border region**

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPD2	**Meteti**	**1.14**	**44**	*eP*	**Pn**	**15 12 46.7**	**+1.0**
UPD2				AMP		15 12 48.0	
	comp=Z,5μm,0.1s						
UPD2				*eS*	**Sn**	**15 13 02.4**	**+0.8**
PTAC	**Punta Ardita,**	**1.16**	**120**	P	**Pn**	**15 12 46.1**	**+0.2**
PTAC				S	**Sg**	**15 13 00.3**	**-0.2**
PTAC	**Punta Ardita,**	**1.16**	**120**	*eP*	**Pn**	**15 12 46.4**	**+0.5**
PTAC				*eP*	**Pg**	**15 12 46.6**	**+1.1**
PTAC				*eS*	**Sg**	**15 13 00.3**	**-0.2**
TABO3	**Taboga, Panama**	**1.28**	**326**	*eP*	**Pg**	**15 12 48.2**	**+0.4**
TABO3				*eS*	**Sn**	**15 13 04.0**	**-0.5**
TOTI	**Torti**	**1.30**	**23**	*eP*	**Pn**	**15 12 46.7**	**-1.1**
TOTI				*eS*	**Sg**	**15 13 07.2**	**+2.2**
ACHO3	**Achotines, Los**	**1.38**	**257**	*eP*	**Pg**	**15 12 49.6**	**0.0**
ACHO3				*eS*	**Sg**	**15 13 07.4**	**0.0**
FLAM	**Flamenco Islan**	**1.38**	**329**	*eP*	**Pg**	**15 12 49.2**	**-0.4**
FLAM				*eS*	**Sn**	**15 13 06.7**	**-0.7**
AZU	**Azuero**	**1.44**	**273**	*eP*	**Pg**	**15 12 50.7**	**-0.1**
AZU				*eS*	**Sn**	**15 13 08.3**	**-0.6**
CHPO	**Chepo, Panama**	**1.46**	**349**	*eP*	**Pg**	**15 12 51.2**	**-0.1**
CHPO				*eS*	**Sg**	**15 13 09.6**	**-0.6**
CHOR3	**La Chorrera**	**1.49**	**321**	*eP*	**Pg**	**15 12 52.7**	**+0.9**
CHOR3				*eS*	**Sg**	**15 13 11.8**	**+0.6**
CHIT3	**Chitre**	**1.60**	**278**	*eP*	**Pb**	**15 12 53.1**	**0.0**
CHIT3				*eS*	**Sn**	**15 13 12.7**	**-0.1**
ZANG	**Zanguenga, Cho**	**1.60**	**320**	*eP*	**Pg**	**15 12 54.0**	**+0.1**
ZANG				*eS*	**Sn**	**15 13 12.5**	**-0.4**
GAMB1	**Gamboa**	**1.64**	**328**	*eP*	**Pb**	**15 12 53.7**	**0.0**
GAMB1				*i S*	**Sb**	**15 13 14.0**	**-0.7**
PNME	**Penonome**	**1.67**	**297**	*eP*	**Pb**	**15 12 54.5**	**+0.2**
CAPC	**Capurgana**	**1.71**	**58**	P	**Pg**	**15 12 55.2**	**-0.8**
CAPC				S	**Sg**	**15 13 17.2**	**-1.1**
FRIJ	**El Hiral**	**1.73**	**329**	*eP*	**Pg**	**15 12 55.9**	**-0.6**
FRIJ				*eS*	**Sb**	**15 13 17.7**	**+0.3**
BCIP	**Isla Barro Col**	**1.75**	**325**	*eP*	**Pb**	**15 12 55.8**	**+0.1**
BCIP				*eS*	**Sb**	**15 13 17.6**	**-0.2**
MLIR	**Monte Lirio**	**1.82**	**326**	*eP*	**Pb**	**15 12 56.9**	**+0.1**
MLIR				*eS*	**Sb**	**15 13 19.9**	**+0.1**
CACAO	**El Cacao, Vera**	**2.06**	**260**	*eP*	**Pb**	**15 12 59.6**	**-1.3**
APAC	**Apartado, Choc**	**2.23**	**85**	P	**Pb**	**15 13 03.1**	**-0.7**
GMAL	**Guarumal, Vera**	**2.39**	**271**	*eP*	**Pb**	**15 13 05.8**	**-0.8**
DBBC	**Dabeiba**	**2.69**	**105**	P	**Pb**	**15 13 09.3**	**-2.4**
DBBC				S	**Sn**	**15 13 41.0**	**+1.2**
CBOC	**Ciudad Bolivar**	**3.35**	**123**	P	**Pn**	**15 13 17.3**	**+1.1**
CBOC				S	**Sn**	**15 13 55.7**	**-0.6**
PTBC	**PUERTO BERRIO,**	**4.49**	**105**	P	**Pn**	**15 13 34.0**	**+2.3**

GCG ***25*** *15:16:26.7±0.7, 13°.75N×89°.50W, h147km±10km, MD3.9, Presumed earthquake*
CATAC ***25*** *15:16:27.9±0.5, 14°.N±4°×8°.9W±°, h134km±3km, M2.6/14, MLv2.6/14, Error ellipse: s-maj=8.7km s-min=5.3km az=26.0, confirmed*
ISC 25 15:16:28.0±2.3, 13°.77N±0°.08×89°.41W±0°.06, h142km±13km, n28, σ0°57/43, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMON	**Piamonte**	**0.10**	**121**	P	**Pn**	**15 16 47.2**	**-0.1**
PMON				S	**Sn**	**15 17 02.7**	**+0.8**
JAYA	**Jayaque - finc**	**0.12**	**200**	P	**Pn**	**15 16 46.8**	**-0.6**
JAYA				S	**Sn**	**15 17 02.4**	**+0.3**
JAYA	**Jayaque - finc**	**0.12**	**200**	*i* P	**Pn**	**15 16 46.9**	**-0.8**
JAYA				*i* S	**Sn**	**15 17 01.8**	**+1.3**
CEVE	**Cerro Verde**	**0.22**	**286**	P	**Pn**	**15 16 47.8**	**+0.1**
CEVE				S	**Sn**	**15 17 03.8**	**+1.3**
PANCS	**Alcalda de**	**0.27**	**125**	S	**Sn**	**15 17 02.8**	**+0.5**
LALI	**Alcalda de L**	**0.29**	**163**	P	**Pn**	**15 16 47.0**	**-0.5**
LALI				S	**Sn**	**15 17 02.5**	**+0.1**
LALI	**Alcalda de L**	**0.29**	**163**	*i* P	**Pn**	**15 16 46.8**	**-0.8**
NUBE	**Las Nubes**	**0.39**	**290**	P	**Pn**	**15 16 47.9**	**-0.2**
NUBE				S	**Sn**	**15 17 04.0**	**+0.7**
NUBE	**Las Nubes**	**0.39**	**290**	*i* P	**Pn**	**15 16 47.7**	**-0.4**
LOAL	**Lomas de Alarc**	**0.43**	**302**	P	**Pn**	**15 16 48.3**	**+0.1**
SLOZ	**Alcaldia de Sa**	**0.45**	**305**	P	**Pn**	**15 16 47.2**	**-1.1**
SLOZ				S	**Sn**	**15 17 04.3**	**+0.7**
PAVA	**Las Pavas**	**0.46**	**97**	P	**Pn**	**15 16 48.2**	**-0.2**
PAVA				S	**Sn**	**15 17 04.3**	**+0.5**
COEG	**Centro de Oper**	**0.53**	**106**	S	**Sn**	**15 17 04.2**	**-0.2**
FAME	**Alcaldia de Sa**	**0.60**	**277**	P	**Pn**	**15 16 48.5**	**-0.4**
FAME				S	**Sn**	**15 17 05.4**	**+0.5**
LLGN	**La Laguna**	**0.60**	**49**	P	**Pn**	**15 16 48.4**	**-0.7**
LLGN				S	**Sn**	**15 17 04.8**	**-0.4**
MTO3	**Montecristo**	**0.63**	**4**	P	**Pn**	**15 16 49.2**	**-0.3**
MTO3				S	**Sn**	**15 17 05.5**	**-0.4**
MTO3	**Montecristo**	**0.63**	**4**	*i* P	**Pn**	**15 16 49.2**	**-0.3**
TECO	**Alcaldia de Te**	**0.65**	**110**	S	**Sn**	**15 17 06.3**	**+0.8**
SCLA	**Alcaldia de Sa**	**0.66**	**95**	P	**Pn**	**15 16 49.3**	**-0.1**
SCLA				S	**Sn**	**15 17 06.3**	**+0.6**
P5NO	**Presa 5 de nov**	**0.67**	**71**	P	**Pn**	**15 16 48.8**	**-0.6**
P5NO				S	**Sn**	**15 17 05.1**	**-0.6**
ESQI	**Esquipulas**	**0.79**	**5**	P	**Pn**	**15 16 50.5**	**+0.1**
ESQI				S	**Sn**	**15 17 08.1**	**+0.5**
PQSS	**Presa 15 de Se**	**0.83**	**100**	P	**Pn**	**15 16 50.2**	**-0.4**
PACA	**Pacayal**	**1.09**	**106**	P	**Pn**	**15 16 52.7**	**-0.3**
SARH	**Santa Rosa de**	**1.18**	**32**	P	**Pn**	**15 16 54.1**	**+0.4**
APG	**El Apazote**	**1.60**	**320**	*i* P	**Pn**	**15 16 57.7**	**-0.6**
CNCH	**Conchagua**	**1.60**	**107**	P	**Pn**	**15 16 57.7**	**-0.5**
CNCH				S	**Sn**	**15 17 21.1**	**-0.2**
CSGN	**Cosiguina Volc**	**1.96**	**113**	S	**Sn**	**15 17 29.5**	**+1.0**
COPN	**Copaltepe**	**3.16**	**120**	P	**Pn**	**15 17 17.2**	**+0.1**

AZER ***25*** *15:19:10.4, 38°.39N×44°.53E, h2km, ml2.7*
AFAD ***25*** *15:19:11.4, 38°.47N×44°.56E, h10km±4km, ML2.5*
ISK 25 15:19:12.9, 38°.49N×44°.31E, h5km, ML2.6/6
TEH ***25*** *15:19:12.6, 38°.47N×44°.43E, h6km±206km, ML2.6, Presumed earthquake*
ISC 25 15:19:12.7±1.1, 38°.45N±0°.02×44°.47E±0°.02, h7km±10km, n33, σ1°49/47, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**300**	P	**Pg**	**15 19 21.4**	**+0.4**
TVAN	**Van**	**0.84**	**276**	P	**Pg**	**15 19 28.1**	**-0.7**
YOVA	**Hakkari_Yksek**	**0.87**	**189**	P	**Pg**	**15 19 29.2**	**-0.3**
VMUR	**Van-Muradiye**	**0.88**	**308**	P	**Pg**	**15 19 29.5**	**-0.2**
VMUR				S	**Sb**	**15 19 42.8**	**+0.2**
VMUR				IAML		15 19 49.0	
	comp=N,119nm,0.5s						
ISHB	**Shabestar**	**0.92**	**100**	Pg	**Pg**	**15 19 30.0**	**-0.4**
MAKU	**Maku**	**0.92**	**11**	Pg	**Pg**	**15 19 29.7**	**-0.7**
IMRD	**Marand**	**1.00**	**74**	Pg	**Pn**	**15 19 32.4**	**-0.9**
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pg**	**15 19 32.5**	**-0.8**
HAKT				S	**Sn**	**15 19 49.4**	**-0.2**
HAKT				IAML		15 19 52.0	
	comp=N,98nm,0.4s						
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pg**	**15 19 33.2**	**-0.1**
HAKT				S	**Sn**	**15 19 49.7**	**+0.1**
NAX	**Nakhchivan**	**1.08**	**48**	P	**Pn**	**15 19 33.0**	**-0.7**
NAX				S	**Sn**	**15 19 50.9**	**+1.3**
GEVA	**Gevas**	**1.11**	**263**	P	Pg	15 19 25.5	-8.6
GEVA				S	**Sg**	**15 19 45.7**	**-2.9**
GEVA				IAML		15 19 57.0	
	comp=N,95nm,0.7s						
AKDM	**Akdamar-Van**	**1.17**	**265**	Pg	**Pb**	**15 19 34.3**	**-1.1**
DYDN	**Diyadin**	**1.25**	**331**	P	**Pn**	**15 19 35.4**	**-1.4**
DYDN				S	**Sb**	**15 19 52.3**	**-0.8**
DYDN				IAML		15 19 58.0	
	comp=N,102nm,0.8s						
SBZ	**Shahbuz**	**1.27**	**41**	P	**Pg**	**15 19 37.1**	**0.0**
SBZ				S	**Sn**	**15 19 57.1**	**+2.8**
ORD	**Ordubad**	**1.29**	**68**	P	**Pg**	**15 19 36.8**	**-0.6**
ORD				S	**Sn**	**15 19 56.6**	**+2.0**
HYR	**Heyderabad**	**1.30**	**13**	P	**Pg**	**15 19 38.5**	**+0.7**
HYR				S	**Sg**	**15 19 59.2**	**+4.5**
CUKT	**Cukurca**	**1.38**	**210**	Pn	**Pg**	**15 19 39.9**	**+0.8**
CUKT				Sn	**Sg**	**15 19 59.9**	**+2.9**
IAZR	**Azarshahr**	**1.42**	**122**	Pg	**Pg**	**15 19 40.2**	**+0.2**
IGDI	**IGDIR**	**1.45**	**348**	P	**Pn**	**15 19 38.0**	**-1.4**
IGDI				S	**Sg**	**15 19 58.9**	**-0.4**
IGDI				IAML		15 20 04.0	
	comp=N,76nm,0.5s						
IGDI	**IGDIR**	**1.45**	**348**	P	**Pg**	**15 19 40.6**	**+0.1**
IGDI				S	**Sg**	**15 20 03.5**	**+4.2**
PERV	**Siirt/Pervari-**	**1.60**	**252**	P	**Pg**	**15 19 43.9**	**+0.5**
AGRB	**Hanur-Agry**	**1.61**	**315**	Pn	**Pb**	**15 19 41.9**	**-0.9**
DORK	**Agr/Tutak/Do**	**1.61**	**306**	P	**Pn**	**15 19 40.5**	**-1.2**
MLAZ	**Malazgirt-MUS**	**1.65**	**295**	Pn	**Pn**	**15 19 42.3**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.67**	**324**	P	**Pn**	**15 19 42.4**	**-0.1**
GNI	**Garni**	**1.71**	**7**	Pn	**Pg**	**15 19 44.8**	**-0.7**
GURO	**Guroymak-BITLI**	**1.91**	**274**	Pn	**Pn**	**15 19 46.1**	**+0.3**
IHRS	**Heris**	**2.03**	**93**	Pn	**Pg**	**15 19 50.6**	**-1.0**
SRTM	**Siirt_Merkez**	**2.06**	**258**	P	**Pn**	**15 19 48.6**	**+0.9**
MUSM	**Mu-Merkez**	**2.33**	**278**	P	**Pb**	**15 19 54.9**	**-0.2**
GDB	**GEDABAY**	**2.48**	**23**	P	**Pb**	**15 19 57.2**	**-0.4**
GDB				S	**Sg**	**15 20 32.1**	**-0.2**
GANJ	**Ganja**	**2.62**	**33**	P	**Pb**	**15 19 57.4**	**-2.6**
GANJ				S	**Sg**	**15 20 36.2**	**-0.7**
YRD	**Yardimli**	**2.99**	**80**	P	**Pn**	**15 20 02.2**	**+1.5**
YRD				S	**Sb**	**15 20 42.0**	**-1.2**

IDC 25 15:19:37.9±3.4, 49°.99S×122°.26E, h0km, mb3.6/2, mbtmp3.6/2, MS3.4/2, Error ellipse: s-maj=87.8km s-min=78.2km az=152.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**27.81**	**23**	P	P	15 25 28.6	-0.1
ASAR	0.7nm,0.8s,baz=207,slow=8.3,SNR=4.7			LR	LR	15 35 26.1	
	comp=Z,85nm,19.2s,baz=174,slow=34 0.7nm,0.8s						
CTA	**Charters Tower**	**35.41**	**41**	LR	LR	15 41 41.5	
	comp=Z,49nm,18.5s,baz=184,slow=37						
CMAR	**Chiang Mai Arr**	**71.20**	**337**	P	P	15 30 58.8	+0.3
	0.2nm,0.3s,baz=192,slow=5.7,SNR=4.3 0.2nm,0.3s						
YKA	**Yellowknife Ar**	**147.17**	**46**	PKPbc	PKPbc	15 39 20.6	-1.0
	0.2nm,0.4s,baz=270,slow=3.0,SNR=5.2						

IDC ***25*** *15:36:03.1±0.9, 0°.39S×125°.08E, h0km, mb3.7/8, mbtmp3.7/8, MS3.1/2, Error ellipse: s-maj=50.4km s-min=18.4km az=71.0*
DJA ***25*** *15:36:09.7±0.9, 0°.S±2°×12°.5E±°, h18km±8km, M4.2/24, mB5.0/3, mb4.3/7, MLv4.0/24, Mw(mB)4.3/3*
ISC 25 15:36:10.8±0.8, 0°.37S±0°.06×125°.30E±0°.06, h57km, n21, σ1°71/20, mb3.7/8, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**1.80**	**158**	P	**Pn**	**15 36 37.0**	**-2.6**
MNI	**Manado**	**1.86**	**346**	P	**Pn**	**15 36 40.0**	**-0.4**
TNTI	**Ternate**	**2.35**	**61**	P	**Pn**	**15 36 46.7**	**-0.4**
LUWI	**Luwuk**	**2.62**	**255**	P	Pn	15 36 56.4	+5.7
NLAI	**Namlea**	**3.37**	**148**	P	**Pn**	**15 37 02.5**	**+1.5**
MRSI	**Marisa**	**3.47**	**284**	P	**Pn**	**15 36 59.8**	**-2.5**
APSI	**Ampana**	**3.69**	**262**	P	**Pn**	**15 37 06.2**	**+0.8**
KRAI	**Karang Ratu**	**4.26**	**134**	P	**Pn**	**15 37 13.5**	**+0.3**
MSAI	**Masohi**	**4.68**	**129**	P	**Pn**	**15 37 21.1**	**+2.1**
MPSI	**Mapaga**	**5.45**	**277**	P	**Pn**	**15 37 31.7**	**+2.2**
	0.1nm15nm,0.6s						
PCI	**Palu**	**5.49**	**264**	P	**Pn**	**15 37 33.2**	**+3.1**
	0.3nm38nm,0.7s						
SPSI	**Sidrap Palu**	**6.58**	**237**	P	**Pn**	**15 37 46.0**	**+0.9**
	0.1nm14nm,0.5s						
LEM	**Lembang**	**18.77**	**250**	LR	LR	15 48 56.2	
	comp=Z,54nm,21.4s,baz=166,slow=42						
WRA	**Warramunga Arr**	**21.37**	**156**	P	**P**	**15 40 52.6**	**-1.1**
	0.5nm,0.5s,baz=334,slow=11,SNR=6.3 0.5nm,0.5s						
ASAR	**Alice Springs**	**24.62**	**161**	P	**P**	**15 41 26.1**	**0.0**
	0.3nm,0.5s,baz=343,slow=9.7,SNR=13			PcP	**PcP**		
ASAR						**15 45 03.9**	**+1.1**
	0.3nm,0.5s,baz=350,slow=2.3,SNR=8.3 0.3nm,0.5s						
MJAR	**Matsushiro Arr**	**38.63**	**17**	P	**P**	**15 43 27.4**	**-1.4**
	1.3nm,0.6s,baz=197,slow=9.6,SNR=2.2 1.3nm,0.6s						
SONM	**Songino Array**	**50.75**	**344**	P	**P**	**15 45 06.4**	**+1.2**
	0.7nm,0.8s,baz=159,slow=8.0,SNR=5.7						
SONM				LR	LR	16 08 26.4	
	comp=Z,22nm,18.6s,baz=0.5,slow=38 0.7nm,0.8s						
PETK	**Petropavlovsk-**	**59.74**	**22**	P	**P**	**15 46 11.1**	**+1.4**
	4.6nm,0.9s,baz=213,slow=7.3,SNR=5.2 4.6nm,0.9s						
MKAR	**Makanchi Array**	**60.15**	**327**	P	**P**	**15 46 12.2**	**-0.4**
	0.7nm,0.4s,baz=122,slow=8.0,SNR=19 0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**64.45**	**329**	P	**P**	**15 46 40.5**	**-0.8**
	0.3nm,0.3s,baz=134,slow=6.5,SNR=7.9 0.3nm,0.3s						
BVAR	**Borovoye Array**	**70.00**	**328**	P	**P**	**15 47 14.1**	**-2.3**
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.4 0.3nm,0.4s						

JMA ***25*** *15:39:36.0±0.1, 24°.4N±0°.3×121°.4E±0°.9, h4km, MV3.6/13, TAIWAN REGION*
TAP ***25*** *15:39:35.8, 24°.40N×121°.40E, h5km, ML3.9, B*
ISC 25 15:39:36.1±0.8, 24°.41N±0°.01×121°.39E±0°.01, h4km±4km, n185, σ0°73/281, 14C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.02**	**353**	*i* P	**Pg**	**15 39 37.5**	**+0.2**
NNSB				S	**Sg**	**15 39 38.1**	**+0.1**
NNSH	**Datong**	**0.02**	**354**	*i* P	**Pg**	**15 39 37.4**	**+0.2**
NNSH				*i* S	**Sg**	**15 39 38.0**	**0.0**
NNS	**Nan Shan**	**0.04**	**342**	*i* P	**Pg**	**15 39 37.5**	**+0.1**
LATG	**Datong**	**0.18**	**45**	*i* P	**Pg**	**15 39 39.8**	**0.0**
LATG				S	**Sg**	**15 39 43.2**	**+0.9**
FUSS	**Fushou**	**0.20**	**220**	*i* P	**Pg**	**15 39 40.7**	**+0.5**
FUSS				S	**Sg**	**15 39 41.9**	**+1.0**
ETLH	**Xiulin Townshi**	**0.22**	**156**	*i* P	**Pg**	**15 39 41.0**	**+0.6**
ETLH				*i* S	**Sg**	**15 39 44.1**	**+0.9**
NDT	**Datong Townshi**	**0.23**	**30**	*i* P	**Pg**	**15 39 40.9**	**+0.2**
NDT				S	**Sg**	**15 39 44.7**	**+1.0**
TWT	**Tachien**	**0.24**	**232**	*i* P	**Pg**	**15 39 41.5**	**+0.6**
TWT				*i* S	**Sg**	**15 39 45.4**	**+1.2**
TDCB	**Techi**	**0.26**	**234**	*i* P	**Pg**	**15 39 41.5**	**+0.3**
YHNB	**Yeheng**	**0.26**	**358**	P	**Pg**	**15 39 41.6**	**+0.3**
YHNB	**Yeheng**	**0.26**	**358**	*i* P	**Pg**	**15 39 41.9**	**+0.6**
YHNB				*i* S	**Sg**	**15 39 45.4**	**+0.5**
NSK	**Sanguang**	**0.27**	**355**	*i* P	**Pg**	**15 39 42.0**	**+0.5**
NSK				*i* S	**Sg**	**15 39 45.5**	**+0.4**
WHF	**Hehuan Shan**	**0.28**	**203**	*i* P	**Pg**	**15 39 42.2**	**+0.5**
WHF				S	**Sg**	**15 39 46.5**	**+1.0**
ENTT	**Nioudou**	**0.29**	**35**	*i* P	**Pg**	**15 39 42.0**	**+0.2**
ENTT				*i* S	**Sg**	**15 39 45.8**	**+0.3**
NACB	**Ninganchiao**	**0.30**	**140**	P	**Pg**	**15 39 42.2**	**+0.3**
NACB	**Ninganchiao**	**0.30**	**140**	S	**Sg**	**15 39 46.5**	**+0.6**
NACB	**Ninganchiao**	**0.30**	**140**	*i* P	**Pg**	**15 39 42.4**	**+0.5**
NACB				S	**Sg**	**15 39 46.4**	**+0.5**
ENA	**Nanau**	**0.33**	**86**	*i* P	**Pg**	**15 39 42.9**	**+0.5**
ENA				*i* S	**Sg**	**15 39 47.1**	**+0.4**
ETL	**Fush Village**	**0.33**	**138**	P	**Pg**	**15 39 42.8**	**+0.3**
ETL				S	**Sg**	**15 39 47.9**	**+1.1**
EAHA	**Aohua**	**0.33**	**103**	*i* P	**Pg**	**15 39 42.7**	**+0.1**
EAHA				*eS*	**Sg**	**15 39 47.0**	**+0.1**
NFF	**Wufeng Townshi**	**0.33**	**313**	*i* P	**Pb**	**15 39 43.6**	**-1.0**
NFF				S	**Sg**	**15 39 48.3**	**+1.3**
EHP	**Heping Village**	**0.34**	**106**	*eP*	**Pg**	**15 39 43.2**	**+0.5**
TWD	**Chiawan**	**0.38**	**149**	*i* P	**Pg**	**15 39 43.9**	**+0.5**
TWD				S	**Sg**	**15 39 48.7**	**+0.4**
NDS	**Dongshan**	**0.38**	**53**	*i* P	**Pg**	**15 39 43.4**	**-0.1**
NDS				S	**Sg**	**15 39 48.6**	**+0.2**
LXIB	**Xiulin Townshi**	**0.38**	**176**	*i* P	**Pg**	**15 39 44.0**	**+0.4**
LXIB				*eS*	**Sg**	**15 39 49.1**	**+0.5**
NWLT	**Wulai**	**0.39**	**16**	P	**Pg**	**15 39 43.9**	**+0.3**
NWLT				S	**Sg**	**15 39 48.4**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.40**	**27**	*i* P	**Pg**	**15 39 44.1**	**+0.2**
FUSB				S	**Sg**	**15 39 48.7**	**-0.4**
TWE	**Neicheng**	**0.41**	**39**	*i* P	**Pg**	**15 39 44.4**	**+0.4**
TWE				S	**Sg**	**15 39 49.6**	**+0.3**
LIOB	**Emei**	**0.41**	**305**	*i* P	**Pb**	**15 39 45.5**	**-0.5**
LIOB				S	**Sb**	**15 39 51.5**	**-1.1**
KSHI	**Guanxi Townshi**	**0.42**	**333**	*i* P	**Pb**	**15 39 45.9**	**-0.1**
KSHI				*i* S	**Sb**	**15 39 52.1**	**-0.7**
NSTT	**Nanjuang**	**0.42**	**303**	*i* P	**Pb**	**15 39 45.5**	**-0.6**
NSTT				*i* S	**Sb**	**15 39 51.2**	**-1.5**
WHP	**Taichung City**	**0.42**	**253**	*i* P	**Pb**	**15 39 45.2**	**-0.9**
WHP				S	**Sb**	**15 39 51.0**	**-2.0**
NJD	**Zhudong**	**0.43**	**321**	*i* P	**Pb**	**15 39 46.2**	**0.0**
NJD				*i* S	**Sb**	**15 39 52.8**	**-0.3**
ETM	**Tongmen**	**0.45**	**167**	*i* P	**Pg**	**15 39 45.1**	**+0.4**
ETM				*eS*	**Sb**	**15 39 51.6**	**-2.0**
ESAO	**Su ao**	**0.45**	**68**	*i* P	**Pg**	**15 39 44.4**	**-0.4**
ESAO				S	**Sg**	**15 39 51.2**	**+0.4**
TWC	**Suao**	**0.47**	**64**	*i* P	**Pg**	**15 39 45.0**	**-0.2**
TWC				S	**Sg**	**15 39 51.1**	**-0.2**
HWA	**Hwalien**	**0.47**	**155**	*eP*	**Pb**	**15 39 46.2**	**-0.8**
HWA				*eS*	**Sb**	**15 39 53.2**	**-1.0**
WUSB	**Renai**	**0.48**	**211**	*i* P	**Pg**	**15 39 45.4**	**0.0**
WUSB				*eS*	**Sg**	**15 39 51.6**	**0.0**
ILA	**Ilan**	**0.49**	**42**	*i* P	**Pg**	**15 39 45.8**	**+0.3**
OWD	**Renai**	**0.49**	**203**	*i* P	**Pg**	**15 39 45.3**	**-0.3**
OWD				*eS*	**Sb**	**15 39 54.4**	**-0.4**
HSN1	**Hsinchu**	**0.50**	**318**	*eP*	**Pb**	**15 39 47.7**	**+0.2**
HSN1				*eS*	**Sb**	**15 39 55.4**	**+0.3**
SBCB	**Hsinchu**	**0.53**	**317**	*i* P	**Pb**	**15 39 48.4**	**+0.4**
SBCB				*i* S	**Sb**	**15 39 56.6**	**+0.6**
NJN	**Zhunan**	**0.55**	**301**	P	**Pb**	**15 39 48.8**	**+0.5**
NJN				*eS*	**Sb**	**15 39 56.9**	**+0.4**
HSN	**Hsinchu**	**0.55**	**316**	P	**Pb**	**15 39 48.5**	**+0.2**
HSN				S	**Sb**	**15 39 56.7**	**+0.2**
WPL	**Puli Township**	**0.55**	**225**	*i* P	**Pg**	**15 39 47.0**	**+0.2**
WPL				*eS*	**Sg**	**15 39 54.0**	**0.0**
NMLH	**Miaoli**	**0.56**	**284**	*i* P	**Pb**	**15 39 49.0**	**+0.6**
NMLH				S	**Sb**	**15 39 57.2**	**+0.4**
DPDB	**Guoxing**	**0.56**	**229**	*i* P	**Pb**	**15 39 47.3**	**-1.2**
TWQ1	**Liyutan**	**0.56**	**264**	*i* P	**Pb**	**15 39 48.5**	**-0.1**
TWQ1				S	**Sb**	**15 39 56.6**	**-0.3**
TEYL	**Yanliau Villag**	**0.57**	**160**	P	**Pg**	**15 39 47.3**	**+0.3**
TEYL				*i* S	**Sg**	**15 39 54.6**	**+0.2**
NHDH	**Xindian Distri**	**0.57**	**13**	P	**Sg**	**15 39 48.2**	**-0.5**
NHDH				S	**Sg**	**15 39 55.4**	**+0.8**
NSY	**Sanyi**	**0.57**	**271**	*i* P	**Pb**	**15 39 49.3**	**+0.6**
NSY				*i* S	**Sb**	**15 39 57.5**	**+0.3**
TATO	**Taipei**	**0.58**	**9**	P	**Pb**	**15 39 48.1**	**-0.7**
TATO	**Taipei**	**0.58**	**9**	S	**Sg**	**15 39 55.7**	**+1.0**
ESL	**Shilin**	**0.59**	**176**	P	**Pg**	**15 39 47.7**	**+0.2**
NCUH	**Zhongli**	**0.59**	**342**	*eP*	**Pb**	**15 39 49.5**	**+0.5**
NCUH				*eS*	**Sb**	**15 39 58.1**	**+0.4**
NCU	**National Centr**	**0.59**	**342**	*eP*	**Pg**	**15 39 47.6**	**+0.1**
NCU				*eS*	**Sg**	**15 39 56.2**	**+0.9**
BACT	**New Taipei Cit**	**0.59**	**5**	*eP*	**Pb**	**15 39 49.5**	**+0.4**
BACT				S	**Sb**	**15 39 57.5**	**+0.3**
TWA	**Mucha**	**0.60**	**17**	*i* P	**Pb**	**15 39 48.5**	**-0.7**
TWA				S	**Sg**	**15 39 55.8**	**+0.2**
NTC	**Toucheng**	**0.60**	**42**	*eP*	**Pg**	**15 39 47.8**	**+0.1**
SHUL	**Shoufeng**	**0.64**	**165**	*eP*	**Pb**	**15 39 49.4**	**-0.3**
SHUL				*eS*	**Sb**	**15 39 58.9**	**-0.1**
TAP	**Taipei**	**0.64**	**10**	*eP*	**Pb**	**15 39 49.9**	**0.0**
TAP				*i* S	**Sb**	**15 39 58.2**	**-1.0**
NHY	**Taipei**	**0.65**	**15**	P	**Pb**	**15 39 49.6**	**-0.2**
NHY				*eS*	**Sg**	**15 39 58.3**	**+1.1**
EGS		**0.66**	**48**	*eP*	**Pg**	**15 39 49.1**	**+0.2**
EGS				S	**Sb**	**15 39 59.4**	**-0.3**
WDJ	**Dajia District**	**0.68**	**265**	*eP*	**Pn**	**15 39 51.6**	**-0.9**
WDJ				*eS*	**Sb**	**15 40 01.1**	**+0.8**
SMLT	**Sun Moon Lake**	**0.68**	**221**	*eP*	**Pg**	**15 39 49.5**	**+0.2**
WARBT	**Fenglin Townsh**	**0.68**	**180**	*eP*	**Pg**	**15 39 49.4**	**+0.1**
VWDT	**VWDT**	**0.69**	**199**	*eP*	**Pg**	**15 39 49.0**	**-0.4**
TIPB	**Shuangxi**	**0.69**	**35**	*i* P	**Pg**	**15 39 49.5**	**+0.1**
TIPB				*i* S	**Sg**	**15 39 57.8**	**-0.6**
TWS1	**Kuangyinshan**	**0.69**	**2

CHN8	**Yiju**	**1.51 226**	P		**Pg**	**15 40 04.8**	**-0.2**
CHN8			*eS*		**Sg**	**15 40 26.0**	**+1.4**
SGST	**Jiashian**	**1.51 209**	P		**Pb**	**15 40 04.2**	**-0.5**
SGST			*eS*		**Sg**	**15 40 25.9**	**+1.2**
LONT	**Longtian**	**1.51 189**	*eP*		**Pg**	**15 40 05.3**	**+0.2**
SLGT	**Liugui**	**1.56 206**	*eP*		**Pg**	**15 40 07.1**	**+1.1**
TWG	**Pinlang**	**1.60 190**	*eP*		**Pg**	**15 40 06.6**	**-0.3**
TWGBT	**Beinan**	**1.60 190**	P		**Pg**	**15 40 06.3**	**-0.6**
TWGBT	**Beinan**	**1.60 190**	*eP*		**Pg**	**15 40 06.7**	**-0.2**
CHN3	**Shinhua**	**1.62 215**	*eP*		**Pg**	**15 40 06.7**	**-0.5**
CHN3			*eS*		**Sg**	**15 40 32.3**	**+4.1**
SCLT	**Jiali**	**1.64 222**	*eP*		**Pb**	**15 40 06.5**	**-0.4**
SCLT			*eS*		**Sg**	**15 40 31.4**	**+2.5**
SCST	**Cishan**	**1.72 209**	*eP*		**Pg**	**15 40 09.0**	**-0.1**
LDUT	**Ludao**	**1.73 177**	*eP*		**Pn**	**15 40 07.1**	**+0.2**
TSCK	**Chigu Township**	**1.73 224**	*eP*		**Pg**	**15 40 08.5**	**-0.8**
TSCK			*eS*		**Sg**	**15 40 31.6**	**-0.1**
SSD	**Sandimen**	**1.79 203**	*i P*		**Pg**	**15 40 10.0**	**-0.5**
SSD			*eS*		**Sg**	**15 40 35.0**	**+1.2**
TWM1	**Shoushan**	**1.81 209**	*eP*		**Pg**	**15 40 10.8**	**+0.1**
TWM1			*eS*		**Sg**	**15 40 36.8**	**+2.6**
TSMG	**Majia**	**1.82 202**	*eP*		**Pb**	**15 40 09.9**	**-0.2**
ECL	**Taimali**	**1.84 193**	*eP*		**Pg**	**15 40 10.9**	**-0.6**
VWUC	**VWUC**	**1.86 289**	*eP*		**Pn**	**15 40 07.4**	**-1.3**
SGLT	**Jiouru**	**1.86 206**	*eP*		**Pg**	**15 40 11.9**	**0.0**
PNG	**Penghu**	**1.87 244**	*eP*		**Pb**	**15 40 10.6**	**-0.3**
PNG			S		**Sb**	**15 40 34.6**	**+0.1**
MASBT	**Mashibuluo**	**1.91 201**	*eP*		**Pb**	**15 40 11.6**	**0.0**
WDGT	**Dungji**	**1.95 235**	*eP*		**Pb**	**15 40 11.0**	**-1.2**
SSPT	**Xinbi**	**2.06 202**	*eP*		**Pb**	**15 40 13.5**	**-0.5**
EAST	**Anshuo**	**2.07 194**	*eP*		**Pb**	**15 40 14.5**	**+0.1**
TAW	**Tawu**	**2.09 193**	*eP*		**Pb**	**15 40 14.8**	**+0.2**
IRIF	**Iriomote-Funau**	**2.14 91**	P		**Pn**	**15 40 12.7**	**+0.1**
IRIF			*eS*		**Sn**	**15 40 40.0**	**+0.5**
SCZT	**Fangliau**	**2.14 199**	*eP*		**Pb**	**15 40 15.0**	**-0.5**
SCZT			*eS*		**Sg**	**15 40 44.3**	**-0.7**
VCHM	**Qimei**	**2.15 237**	*eP*		**Pb**	**15 40 14.1**	**-1.5**
PTMZ	**Houxiangcun**	**2.15 288**	*eP*		**Pn**	**15 40 12.4**	**-0.4**
MATB	**Ma-tsu**	**2.17 323**	*eP*		**Pn**	**15 40 12.1**	**-1.0**
SLIU	**Shizi**	**2.24 194**	*eP*		**Pb**	**15 40 16.5**	**-0.8**
TWP	**Hsiaoliuchiu**	**2.25 205**	*eP*		**Pb**	**15 40 15.7**	**-1.7**
LAY	**Lan-yu**	**2.36 176**	*eP*		**Pn**	**15 40 16.4**	**+0.7**
JKRS	**Kuro-shima**	**2.40 93**	P		**Pn**	**15 40 16.7**	**+0.6**
LYUB	**Lan-yu**	**2.40 176**	*eP*		**Pn**	**15 40 16.4**	**+0.2**
SMST	**Manzhou Townsh**	**2.43 192**	*eP*		**Pb**	**15 40 18.5**	**-1.8**
HEN	**Hengchun**	**2.46 194**	*eP*		**Pn**	**15 40 18.4**	**+1.4**
TWK1	**Hengchun**	**2.51 192**	*eP*		**Pb**	**15 40 20.4**	**-1.3**
TWKBT	**Hengchun**	**2.51 192**	*eP*		**Pn**	**15 40 17.0**	**-0.6**
JU	**Ishigaki jima**	**2.51 90**	P		**Pn**	**15 40 18.1**	**+0.4**
LYJJ	**Jianjiangzhen**	**2.59 326**	*eP*		**Pn**	**15 40 16.3**	**-0.6**
JISG	**Ishigakijimahi**	**2.67 86**	*eP*		**Pn**	**15 40 19.9**	**0.0**
KNM	**Kinmen**	**2.69 271**	*eP*		**Pn**	**15 40 21.1**	**+0.9**
MHZQ	**Yeshan**	**2.72 309**	*eP*		**Pn**	**15 40 20.5**	**0.0**
KNMB	**Chin-men Tao**	**2.73 272**	*eP*		**Pn**	**15 40 21.4**	**+0.6**
XPSS	**Dashiqiu**	**2.74 337**	*eP*		**Pn**	**15 40 19.8**	**-1.0**
JTJ	**Tarama**	**3.03 85**	*eP*		**Pn**	**15 40 26.2**	**+1.4**
AXDP	**Jialang**	**3.15 280**	*eP*		**Pn**	**15 40 26.3**	**-0.2**
ZPLA	**Ao Xicun**	**3.35 263**	*eP*		**Pn**	**15 40 29.0**	**-0.2**
DSXP	**Dongshan**	**3.69 260**	*eP*		**Pn**	**15 40 33.2**	**-0.7**
SXFK	**Yanhouchang**	**3.92 301**	*eP*		**Pn**	**15 40 36.7**	**-0.5**

TEH ***25*** *15:43:51.1, 38°.40N×44°.34E, h10km±114km, ML2.8, Presumed earthquake*
AFAD ***25*** *15:43:53.8, 38°.45N×44°.39E, h7km±4km, ML2.4*
AZER ***25*** *15:43:53.3, 38°.42N×44°.51E, h9km, ml2.7*
ISK ***25*** *15:43:55.6, 38°.61N×44°.25E, h5km, ML2.5/6*

ISC 25 15:43:54.0±1.2,**38°.45N**±0°.03×**44°.44E**±0°.02,**h6**km±10km, **n34**,σ1§**38**/46,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.41**	**301**	P	**Pg**	**15 44 02.4**	**+0.4**
TVAN	**Van**	**0.82**	**276**	P	**Pg**	**15 44 09.2**	**-0.5**
VMUR	**Van-Muradiye**	**0.87**	**309**	P	**Pg**	**15 44 10.4**	**-0.3**
VMUR				S	**Sn**	**15 44 24.8**	**-1.2**
VMUR				IAML		15 44 31.0	
	comp=N,133nm,0.6s						
YOVA	**Hakkari_Yksek**	**0.87**	**188**	S	**Sg**	**15 44 21.8**	**-0.2**
MAKU	**Maku**	**0.92**	**12**	Pg	**Pg**	**15 44 10.3**	**-1.5**
ISHB	**Shabestar**	**0.94**	**100**	Pg	**Pg**	**15 44 11.0**	**-1.0**
IMRD	**Marand**	**1.02**	**75**	Pg	**Pg**	**15 44 12.4**	**-1.2**
HAKT	**HAKKARI**	**1.06**	**213**	P	**Pg**	**15 44 14.4**	**0.0**
HAKT	**HAKKARI**	**1.06**	**213**	P	**Pg**	**15 44 14.3**	**-0.2**
HAKT				S	**Sn**	**15 44 31.0**	**+0.1**
NAX	**Nakhchivan**	**1.09**	**48**	P	**Pg**	**15 44 15.1**	**+0.1**
NAX				S	**Sn**	**15 44 31.7**	**+0.2**
GEVA	**Gevas**	**1.10**	**263**	P	**Pg**	**15 44 13.4**	**-1.6**
GEVA				S	**Sb**	**15 44 29.8**	**-0.3**
GEVA				IAML		15 44 36.0	
	comp=E,93nm,0.5s						
AKDM	**Akdamar-Van**	**1.16**	**264**	Pg	**Pg**	**15 44 15.6**	**-0.6**
AKDM				Sg	**Sn**	**15 44 32.1**	**-1.0**
DYDN	**Diyadin**	**1.24**	**332**	P	**Pg**	**15 44 16.0**	**-1.8**
SBZ	**Shahbuz**	**1.28**	**42**	P	**Pn**	**15 44 18.5**	**-0.1**
SBZ				S	**Sn**	**15 44 37.6**	**+1.5**
ORD	**Ordubad**	**1.30**	**68**	P	**Pn**	**15 44 18.8**	**-0.1**
ORD				S	**Sn**	**15 44 37.4**	**+0.7**
HYR	**Heyderabad**	**1.31**	**14**	P	**Pg**	**15 44 20.0**	**+0.9**
HYR				S	**Sn**	**15 44 38.9**	**+2.2**
CUKT	**Cukurca**	**1.37**	**209**	Pn	**Pg**	**15 44 23.9**	**+3.6**
ADCV	**BITLIS_Adilcev**	**1.39**	**285**	P	**Pn**	**15 44 18.8**	**-1.4**
IAZR	**Azarshahr**	**1.44**	**122**	Pg	**Pn**	**15 44 19.0**	**-1.8**
IGDI	**IGDIR**	**1.44**	**349**	P	**Pg**	**15 44 21.6**	**-0.1**
IGDI	**IGDIR**	**1.44**	**349**	P	**Pg**	**15 44 22.4**	**+0.7**
IGDI				S	**Sg**	**15 44 44.5**	**+4.1**
PERV	**Siirt/Pervari-**	**1.58**	**252**	P	**Pg**	**15 44 25.4**	**+1.1**
AGRB	**Hanur-Agry**	**1.59**	**315**	Pn	**Pn**	**15 44 22.8**	**-0.2**
DORK	**Agr/Tutak/Do**	**1.60**	**306**	P	**Pn**	**15 44 23.0**	**0.0**
MLAZ	**Malazgirt-MUS**	**1.63**	**296**	Pn	**Pn**	**15 44 23.7**	**+0.2**
KOTA	**Agri, Merkez-K**	**1.66**	**325**	P	**Pb**	**15 44 24.6**	**-0.5**
GNI	**Garni**	**1.71**	**8**	Pn	**Pb**	**15 44 25.7**	**-0.3**
SIRN	**Sırnak**	**1.86**	**240**	P	**Pb**	**15 44 28.2**	**-0.3**
GURO	**Guroymak-BITLI**	**1.89**	**274**	Pn	**Pb**	**15 44 28.1**	**-1.0**
IHRS	**Heris**	**2.05**	**93**	Pn	**Pn**	**15 44 29.5**	**+0.3**
GDB	**GEDABAY**	**2.48**	**24**	P	**Pb**	**15 44 38.0**	**-1.2**
GDB				S	**Sg**	**15 45 12.8**	**-1.0**
GANJ	**Ganja**	**2.63**	**33**	P	**Pb**	**15 44 40.3**	**-1.2**
GANJ				S	**Sb**	**15 45 15.9**	**+1.7**
QZX	**Qazax, Azerbai**	**2.70**	**15**	P	**Pb**	**15 44 40.5**	**-2.3**
YRD	**Yardimli**	**3.01**	**80**	P	**Pn**	**15 44 45.0**	**+2.5**
YRD				S	**Sb**	**15 45 24.4**	**-0.8**

IDC ***25*** *15:44:37.0±1.0,2°.49S×120°.72E, h0km, mb3.6/5, mbtmp3.5/6, ML3.0/1, Error ellipse: s-maj=55.2km s-min=19.7km az=65.0*
DJA ***25*** *15:44:39.3±0.2,2°.5±2°×12°.1E±°, h10km, M3.7/25, MLv3.7/25*

ISC 25 15:44:43.5±0.9,**2°.37S**±0°.05×**121°.00E**±0°.06,**h53**km,**n18**, σ1§**41**/**17**,**mb3.7**/**5**,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.35**	**240**	P	**Pn**	**15 45 08.8**	**-1.3**
APSI	**Ampana**	**1.59**	**24**	P	**Pn**	**15 45 07.7**	**-1.6**
PCI	**Palu**	**1.86**	**321**	P	**Pn**	**15 45 12.1**	**-1.0**
KKSI	**Kolaka, Sulawe**	**1.90**	**160**	P	**Pn**	**15 45 11.9**	**-1.7**
SPSI	**Sidrap Palu**	**2.00**	**218**	P	**Pn**	**15 45 12.3**	**-2.7**
MMSI	**Mamuju**	**2.11**	**261**	P	**Pn**	**15 45 15.3**	**-1.1**
LUWI	**Luwuk**	**2.21**	**53**	P	**Pn**	**15 45 17.3**	**-0.5**
PMSI	**Majene**	**2.36**	**242**	P	**Pn**	**15 45 20.1**	**+0.2**
KAPI	**Kappang**	**2.91**	**205**	Pn	Pn	15 45 21.4	-5.9
	2.6nm,0.3s,baz=305,slow=8.1,SNR=4.8						
KAPI					**Sn**	**15 46 00.9**	**-0.2**
	3.1nm,0.3s,baz=171,slow=23,SNR=10						
	2.9nm,0.3s						
KAPI	**Kappang**	**2.91**	**205**	P	Pn	15 45 22.3	-5.0
MPSI	**Mapaga**	**2.91**	**338**	P	**Pn**	**15 45 25.3**	**-2.0**
GTOI	**Gorontalo**	**3.60**	**34**	P	**Pn**	**15 45 35.1**	**-1.8**
SANI	**Sanana**	**5.00**	**86**	P	Pn	15 45 51.7	-4.3
WRA	**Warramunga Arr**	**21.79**	**144**	P	**P**	**15 49 32.3**	**+1.1**
	1.0nm,0.8s,baz=324,slow=11,SNR=5.9						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**24.58**	**151**	P	**P**	**15 49 58.6**	**-0.2**
	0.8nm,0.8s,baz=334,slow=9.8,SNR=9.3						
ASAR				PcP	**PcP**	**15 53 37.0**	**+1.1**
	0.2nm,0.5s,baz=348,slow=2.1,SNR=10						
	0.8nm,0.8s						
STKA	**Stephens Creek**	**35.18**	**149**	P	**P**	**15 51 33.2**	**+0.6**
	1.6nm,0.6s,baz=307,slow=10,SNR=4.0						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**59.61**	**330**	P	**P**	**15 54 42.6**	**+0.5**
	0.3nm,0.5s,baz=126,slow=8.2,SNR=8.8						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**63.67**	**337**	P	**P**	**15 55 09.8**	**+0.6**
	0.4nm,0.5s,baz=153,slow=4.8,SNR=2.3						
	0.4nm,0.5s						

IDC ***25*** *15:58:14.7±2.5, 17°.86S×178°.34W, h592km±31km, mb3.3/10, mbtmp4.2/10, Error ellipse: s-maj=24.1km s-min=16.6km az=144.0*
NEIC ***25*** *15:58:17.5±1.8, 17°.9S±0°.2×178°.3W±0°.2, h626km±9km, mb4.3/34, Error ellipse: s-maj=27.0km s-min=17.0km az=133.0*

ISC 25 15:58:14.1±0.5,**17°.8S**±0°.1×**178°.4W**±0°.1,**h579**km,**n101**, σ1§**19**/101,**mb4.2**/**26**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.43**	**270**	P		15 59 41.7	+7.4
NIUE	**Niue**	**8.10**	**101**	P	**P**	**16 00 14.2**	**+0.5**
DZM	**Mont Dzumac**	**14.93**	**251**	P	**P**	**16 01 25.4**	**+3.0**
	4.3nm,0.8s,baz=54,slow=19,SNR=1.5						
OUZ	**Omahuta**	**18.81**	**201**	P	**P**	**16 02 00.7**	**+2.8**
WCZ	**Waipu Caves**	**19.24**	**198**	P	**P**	**16 02 04.5**	**+2.8**
MKAZ	**Moumakai**	**20.11**	**195**	P	**P**	**16 02 11.4**	**+1.8**
HAZ	**Te Kaha**	**20.21**	**189**	P	**P**	**16 02 10.6**	**0.0**
PKGZ	**Pakihiroa**	**20.28**	**188**	P	**P**	**16 02 11.8**	**+0.6**
RUGZ	**Raukumara Rang**	**20.43**	**189**	P	**P**	**16 02 12.7**	**0.0**
PUZ	**Puketiti**	**20.46**	**188**	P	**P**	**16 02 12.9**	**+0.1**
TWGZ	**Tauwhareparae**	**20.60**	**188**	P	**P**	**16 02 15.3**	**+1.2**
URZ	**Urewera**	**20.81**	**190**	P	**P**	**16 02 13.6**	**-2.3**
	4.0nm,0.3s,baz=282,slow=2.6,SNR=13						
	4.0nm,0.3s						
URZ	**Urewera**	**20.81**	**190**	P	**P**	**16 02 14.2**	**-1.7**
MWZ	**Matawai**	**20.82**	**189**	P	**P**	**16 02 14.4**	**-1.7**
CNGZ	**Carnagh Statio**	**20.87**	**188**	P	**P**	**16 02 17.5**	**+1.0**
RAGZ	**Rawiri**	**20.99**	**189**	P	**P**	**16 02 16.7**	**-1.0**
RTZ	**Ruatahuna**	**21.18**	**190**	P	**P**	**16 02 18.5**	**-0.8**
TLZ	**Tolley Road**	**21.18**	**193**	P	**P**	**16 02 21.0**	**+1.6**
SNGZ	**Shannon Statio**	**21.29**	**189**	P	**P**	**16 02 18.8**	**-1.5**
RAHZ	**Arahi**	**21.46**	**190**	P	**P**	**16 02 21.4**	**-0.4**
KNZ	**Kokohu**	**21.47**	**188**	P	**P**	**16 02 22.7**	**+0.8**
HIZ	**Hauiti**	**21.52**	**195**	P	**P**	**16 02 23.8**	**+1.5**
BKZ	**Black Stump Fm**	**21.80**	**191**	P	**P**	**16 02 23.1**	**-1.8**
BKZ				IAmb	IAmb	16 02 27.7	
	comp=Z,8.6nm,1.0s						
BKZ	**Black Stump Fm**	**21.80**	**191**	P	**P**	**16 02 22.4**	**-2.5**
VRZ	**Vera Road**	**22.12**	**194**	P	**P**	**16 02 29.5**	**+1.8**
PXZ	**Pawanui**	**22.58**	**190**	P	**P**	**16 02 30.5**	**-1.2**
TSZ	**Takapari Road**	**22.77**	**191**	P	**P**	**16 02 32.4**	**-1.1**
BFZ	**Birch Farm**	**23.32**	**190**	P	**P**	**16 02 36.5**	**-1.8**
MRZ	**Mangatainoka R**	**23.42**	**192**	P	**P**	**16 02 36.9**	**-2.3**
MRZ				IAmb	IAmb	16 03 05.8	
	comp=Z,9.3nm,1.1s						
MRZ	**Mangatainoka R**	**23.42**	**192**	P	**P**	**16 02 36.4**	**-2.9**
QRZ	**Quartz Range**	**24.30**	**197**	P	**P**	**16 02 47.5**	**+0.5**
NNZ	**Nelson**	**24.44**	**195**	P	**P**	**16 02 48.8**	**+0.6**
THZ	**Tophouse**	**25.07**	**196**	P	**P**	**16 02 54.0**	**+0.2**
DSZ	**Denniston Nort**	**25.35**	**197**	P	**P**	**16 02 56.2**	**-0.2**
KHZ	**Kahutara**	**25.54**	**194**	P	**P**	**16 02 56.9**	**-0.9**
GVZ	**Greta Valley S**	**26.18**	**194**	P	**P**	**16 03 02.4**	**-1.2**
LTZ	**Lake Taylor**	**26.19**	**196**	P	**P**	**16 03 02.8**	**-1.0**
INZ	**Inchbonnie**	**26.36**	**197**	P	**P**	**16 03 04.7**	**-0.4**
INZ	**Inchbonnie**	**26.36**	**197**	P	**P**	**16 03 04.6**	**-0.6**
OXZ	**Oxford**	**26.76**	**196**	P	**P**	**16 03 08.3**	**-0.3**
OXZ	**Oxford**	**26.76**	**196**	P	**P**	**16 03 08.2**	**-0.5**
WVZ	**Waitaha Valley**	**26.89**	**198**	P	**P**	**16 03 09.4**	**-0.3**
MQZ	**McQueen's Vall**	**26.96**	**194**	P	**P**	**16 03 09.7**	**-0.7**
FOZ	**Fox Glacier**	**27.58**	**199**	P	**P**	**16 03 14.9**	**-0.8**
TMZ	**Timaru**	**28.02**	**196**	P	**P**	**16 03 17.9**	**-1.7**
LBZ	**Lake Benmore**	**28.25**	**198**	P	**P**	**16 03 20.2**	**-1.4**
JCZ	**Jackson Bay**	**28.39**	**200**	P	**P**	**16 03 22.7**	**-0.3**
ODZ	**Otahua Downs**	**28.73**	**196**	P	**P**	**16 03 25.0**	**-0.8**
WKZ	**Wanaka**	**29.00**	**199**	P	**P**	**16 03 27.2**	**-0.9**
MSZ	**Milford Sound**	**29.20**	**200**	P	**P**	**16 03 30.8**	**+1.0**
EIDS	**Eidsvold**	**29.37**	**250**	P	**P**	**16 03 31.9**	**+0.2**
EIDS				IAmb	IAmb	16 03 55.6	
	comp=Z,12nm,1.3s						
MLZ	**Mavora Lakes**	**29.76**	**199**	P	**P**	**16 03 35.3**	**+0.6**
MLZ	**Mavora Lakes**	**29.76**	**199**	P	**P**	**16 03 35.4**	**+0.6**
TUZ	**Tuapeka**	**29.84**	**197**	P	**P**	**16 03 35.7**	**+0.3**
ARMA	**Armidale**	**30.07**	**240**	P	**P**	**16 03 38.8**	**+1.1**
ARMA				IAmb	IAmb	16 03 40.2	
	comp=Z,18nm,1.4s						
DCZ	**Deep Cove**	**30.16**	**201**	P	**P**	**16 03 38.2**	**+0.1**
WHZ	**Wether Hill Ro**	**30.28**	**199**	P	**P**	**16 03 39.7**	**+0.5**
APZ	**The Paps**	**31.11**	**198**	P	**P**	**16 03 47.0**	**+0.7**
CTAO	**Charters Tower**	**33.53**	**260**	P	**P**	**16 04 07.3**	**+0.2**
CAN	**Canberra**	**33.84**	**232**	P	**P**	**16 04 10.3**	**+0.7**
TOO	**Toolangi**	**37.31**	**231**	P	**P**	**16 04 38.7**	**+0.5**
TOO				IAmb	IAmb	16 04 56.2	
	comp=Z,8.0nm,1.4s						
STKA	**Stephens Creek**	**38.75**	**241**	P	**P**	**16 04 50.9**	**+0.9**
	comp=Z,2.8nm,0.6s,baz=96,slow=11,SNR=11						
	comp=Z,2.8nm,0.6s						
STKA	**Stephens Creek**	**38.75**	**241**	P	**P**	**16 04 50.9**	**+0.9**
INKA	**Innaminka**	**38.86**	**248**	P	**P**	**16 04 51.9**	**+1.1**
DAH	**Dandelion**	**43.09**	**32**	P	**P**	**16 05 26.2**	**+1.4**
BBOO	**Buckleboo**	**43.53**	**241**	P	**P**	**16 05 27.6**	**-0.1**
BBOO				IAmb	IAmb	16 06 00.3	
	comp=Z,14nm,1.3s						
WR8	**Warramunga Arr**	**44.56**	**259**	P	**P**	**16 05 35.8**	**-0.1**
WR8				IAmb	IAmb	16 06 18.7	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**44.68**	**260**	P	**P**	**16 05 36.5**	**-0.3**
WB0				IAmb	IAmb	16 06 01.2	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**44.72**	**259**	P	**P**	**16 05 36.1**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=96,slow=7.7,SNR=14						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**44.72**	**259**	P	**P**	**16 05 36.6**	**-0.4**
AS31	**Alice Springs**	**44.89**	**254**	P	**P**	**16 05 38.1**	**-0.2**
ASAR	**Alice Springs**	**44.89**	**254**	P	**P**	**16 05 38.2**	**-0.1**
	comp=Z,4.3nm,0.5s,baz=91,slow=7.7,SNR=141						
ASAR				ScP	**ScP**	**16 10 02.8**	**-2.3**
	comp=Z,0.2nm,0.9s,baz=100,slow=3.5,SNR=4.7						
	comp=Z,4.3nm,0.5s						
ASAR	**Alice Springs**	**44.89**	**254**	P	**P**	**16 05 37.7**	**-0.6**
FORT	**Forrest**	**50.12**	**244**	P	**P**	**16 06 16.4**	**-0.9**
FORT				IAmb	IAmb	16 06 37.1	
	comp=Z,8.2nm,1.1s						
MJAR	**Matsushiro Arr**	**67.82**	**323**	P	**P**	**16 08 14.7**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=142,slow=11,SNR=2.2						
	comp=Z,0.9nm,0.5s						
MAJO	**Matsushiro**	**67.82**	**323**	P	**P**	**16 08 14.8**	**-0.5**
MAJO				IAmb	IAmb	16 08 46.4	
	comp=Z,19nm,1.5s						
PEA0B	**Petropavlovsk-**	**73.55**	**345**	P	**P**	**16 08 48.2**	**-0.4**
PETK	**Petropavlovsk-**	**73.55**	**345**	P	**P**	**16 08 48.2**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=97,slow=9.0,SNR=8.4						
	comp=Z,3.3nm,0.8s						
PETK	**Petropavlovsk-**	**73.55**	**345**	P	**P**	**16 08 48.0**	**-0.6**
N14K	**Kuskokwak Cree**	**78.58**	**8**	P	**P**	**16 09 16.0**	**0.0**
N14K				IAmb	IAmb	16 09 16.6	
	comp=Z,11nm,0.8s						
L04D	**Klamath Falls**	**78.90**	**39**	P	**P**	**16 09 18.7**	**+0.3**
L04D				IAmb	IAmb	16 09 40.6	
	comp=Z,12nm,1.5s						
NVAR	**Mina Array Bea**	**79.28**	**44**	P	**P**	**16 09 21.4**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=230,slow=9.0,SNR=5.2						
	comp=Z,0.9nm,0.7s						
M16K	**Timber Creek**	**80.04**	**9**	P	**P**	**16 09 24.3**	**+0.5**
M16K				IAmb	IAmb	16 09 48.9	
	comp=Z,16nm,1.3s						
K15K	**Wolf Creek Mou**	**80.89**	**8**	P	**P**	**16 09 28.8**	**+0.6**
K15K				IAmb	IAmb	16 10 11.0	
	comp=Z,19nm,1.4s						
WVOR	**Wild Horse Val**	**81.25**	**40**	P	**P**	**16 09 30.7**	**0.0**
SCM	**Sheep Creek Mo**	**83.07**	**14**	P	**P**	**16 09 38.6**	**-0.7**
S34M	**Telegraph Cree**	**84.88**	**23**	P	**P**	**16 09 49.0**	**+0.8**
S34M				IAmb	IAmb	16 09 49.4	
	comp=Z,12nm,1.1s						
H21K	**Melozitna Rive**	**85.38**	**10**	P	**P**	**16 09 51.0**	**+0.5**
IL31		**85.73**	**13**	P	**P**	**16 09 50.6**	**-1.4**
IL31				IAmb	IAmb	16 10 34.0	
	comp=Z,5.6nm,1.4s						
ILAR	**Eielson Array**	**85.73**	**13**	P	**P**	**16 09 50.8**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=224,slow=5.1,SNR=42						
	comp=Z,0.7nm,0.4s						
TXAR	**Lajitas Array**	**85.87**	**58**	P	**P**	**16 09 55.3**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=217,slow=6.3,SNR=9.8						
	comp=Z,1.1nm,0.7s						
J25K	**Salcha River,**	**85.92**	**14**	P	**P**	**16 09 52.4**	**-0.8**
L29M	**L29M**	**86.51**	**17**	P	**P**	**16 09 56.1**	**+0.2**
L29M				IAmb	IAmb	16 10 23.0	
	comp=Z,14nm,1.5s						
PD31	**Pinedale Array**	**87.20**	**43**	P	**P**	**16 09 59.8**	**-0.1**
PDAR	**Pinedale Array**	**87.20**	**43**	P	**P**	**16 09 60.0**	**0.0**
	comp=Z,0.9nm,0.5s,baz=211,slow=2.6,SNR=5.1						
	comp=Z,0.9nm,0.5s						
H27K	**Steamboat Moun**	**88.16**	**14**	P	**P**	**16 10 03.9**	**+0.3**
BMAR	**Burnt Mountain**	**88.50**	**12**	P	**P**	**16 10 05.1**	**-0.1**
MKAR	**Makanchi Array**	**109.07**	**314**	PKiKP	**PKiKP**	**16 15 36.0**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=78,slow=1.0,SNR=5.0						
BVAR	**Borovoye Array**	**116.76**	**321**	PKP	**PKPdf**	**16 15 51.1**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=62,slow=1.6,SNR=4.4						
BRTR	**Keskin Array B**	**144.72**	**315**	PKP	**PKPdf**	**16 16 45.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=98,slow=2.3,SNR=6.0						
GERES	**GERESS Array B**	**147.48**	**345**	PKPbc	**PKPbc**	**16 16 52.9**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=46,slow=6.4,SNR=4.1						

AZER ***25*** *15:58:18.2, 38°.46N×44°.48E, h2km, ml3.8*
ISK ***25*** *15:58:20.8, 38°.42N×44°.53E, h5km, ML3.4/11*
AFAD ***25*** *15:58:20.8, 38°.51N×44°.49E, h8km±1km, MW3.8*
IDC ***25*** *15:58:21.4±3.9, 38°.29N×44°.45E, h0km, mb3.6/4, mbtmp3.6/5, ML3.8/1, MS2.8/3, Error ellipse: s-maj=88.7km s-min=25.7km az=30.0*
TEH ***25*** *15:58:21.0, 38°.49N×44°.50E, h6km±35km, ML3.6, Presumed earthquake*
TIF ***25*** *15:58:21.4, 38°.48N×44°.43E, h12km±1km*
NSSP ***25*** *15:58:21.9, 38°.48N×44°.60E, h10km, Ms3.4*

ISC 25 15:58:22.1±0.6,**38°.49N**±0°.02×**44°.51E**±0°.02,**h10**km,**n100**, σ1§**53**/137,**mb3.5**/**4,3C-3D**,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**293**	P	**Pg**	**15 58 29.4**	**-1.4**
OZAP	**Van, Ozalp-Mer**	**0.44**	**293**	Pg	**Pg**	**15 58 29.4**	**-1.4**
TVAN	**Van**	**0.87**	**273**	P	**Pg**	**15 58 37.0**	**-1.9**
TVAN	**Van**	**0.87**	**273**	Pg	**Pg**	**15 58 37.0**	**-1.9**
MAKU	**Maku**	**0.87**	**9**	Pg	**Pg**	**15 58 37.7**	**-1.3**
VMUR	**Van-Muradiye**	**0.89**	**304**	P	**Pg**	**15 58 38.0**	**-1.2**
VMUR	**Van-Muradiye**

VSHL				S	Sb	15 59 56.0	+0.8		
GLBA	**Clilabad**	**3.12**	**75**	P	Pn	15 59 12.6	+1.3		
GLBA				S	Sb	15 59 56.1	+0.3		
LKRN	**Lenkeran, Azer**	**3.35**	**85**	P	Pn	15 59 15.5	+1.0		
LKRN				S	Sb	16 00 01.1	-1.2		
ASTR	**Astara**	**3.36**	**87**	P	Pn	15 59 16.3	+1.7		
ASTR				S	Sb	16 00 02.2	-0.4		
SEKA	**Sheki**	**3.41**	**36**	P	Pb	15 59 18.4	-4.3		
DYBB	**Diyarbakir**	**3.49**	**263**	Pn	Pn	15 59 18.4	+2.0		
ZKTA	**Zakatala**	**3.54**	**27**	P	Pn	15 59 18.7	+1.6		
LGD	**Lagodekhi**	**3.59**	**21**	P	Pb	15 59 26.4	+0.6		
CHRG	**Chargali**	**3.85**	**5**	P	Pb	15 59 30.0	-0.1		
XNQ	**Khinaliq**	**3.87**	**45**	P	Pn	15 59 23.3	+1.4		
XNQ				S	Sb	16 00 14.3	-3.2		
PQL	**Pirkuli**	**3.90**	**53**	P	Pn	15 59 23.6	+1.4		
PQL				S	Sb	16 00 16.1	-2.2		
SHTL	**Shatili**	**4.19**	**6**	P	Pb	15 59 34.1	-1.9		
SHTL				S	Sg	16 00 36.3	-0.3		
ASF	**Jabal al Asfar**	**8.85**	**227**	LR	LR	16 04 34.6			
	comp=Z,51nm,18.2s,baz=185,slow=43								
MMAI	**Mount Meron Ar**	**9.20**	**236**	LR	LR	16 04 49.2			
	comp=Z,76nm,18.2s,baz=37,slow=43								
EIL	**Elat**	**11.83**	**225**	LR	LR	16 06 28.0			
	comp=Z,43nm,20.2s,baz=22,slow=42								
AKASG	**Malin Array Be**	**16.32**	**323**	Pn	**P**	**16 02 12.0**	**-2.2**		
	0.3nm,0.3s,baz=133,slow=12,SNR=4.4								
	0.4nm,0.4s								
FINES	**FINESS Array B**	**25.67**	**339**	P	**P**	**16 03 54.6**	**+2.8**		
	2.1nm,0.9s,baz=116,slow=8.3,SNR=2.4								
	2.1nm,0.9s								
KURBB	**Kurchatov Arra**	**26.86**	**52**	P	**P**	**16 04 04.8**	**+2.1**		
	0.4nm,0.5s,baz=261,slow=9.1,SNR=4.7								
	0.4nm,0.5s								
MKAR	**Makanchi Array**	**28.78**	**61**	P	**P**	**16 04 22.1**	**+2.1**		
	0.3nm,0.6s,baz=262,slow=5.8,SNR=4.6								
	0.3nm,0.6s								
CMAR	**Chiang Mai Arr**	**51.07**	**97**	P	**P**	**16 07 25.9**	**+1.0**		
	0.6nm,0.7s,baz=294,slow=8.8,SNR=4.2								
	0.6nm,0.7s								

*IDC **25** 16:02:08.2±14.0, 23°.43S×27°.26E, h0km, Error ellipse: s-maj=109.4km s-min=85.0km az=107.0*
*BGSI **25** 16:02:19.2±2.0, 22°.21S×24°.54E, h31km±84km, ML1.6*
ISC 25 16:02:14.1±3.8, **22°.2S**±0°.2×**24°.6E**±0°.3, **h10**km, **n6,** σ3.9**04**/5, **Botswana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDWAN	**Kaudwane**	**1.16**	**175**	*i* P	**Pb**	**16 02 36.6**	**+0.2**
KDWAN				IAML		16 03 51.5	
	comp=E,12nm,0.6s						
LPHEP	**Lephephe**	**1.66**	**134**	*i* P	**Pn**	**16 02 45.3**	**+1.9**
LPHEP				IAML		16 03 10.3	
	comp=N,18nm,0.4s						
BROLN	**Tlhalogang**	**2.81**	**67**	*i* P	**Pn**	**16 03 01.0**	**+1.8**
BROLN				*i* S	**Sn**	**16 03 29.9**	**-3.4**
BROLN				IAML		16 03 39.1	
	comp=E,5.7nm,0.2s						
BOSA	**Boshof**	**6.40**	**174**	Pg	**Pn**	**16 03 48.1**	**-0.5**
	comp=E,0.1nm,0.3s,baz=21,slow=14,SNR=2.0						
BOSA				Sn	Sn	16 04 35.7	-26
	comp=E,0.2nm,0.3s,baz=282,slow=19,SNR=1.9						
BOSA				Lg	Lg	16 05 02.2	
	comp=E,0.8nm,0.3s,baz=291,slow=21,SNR=6.6						
I47ZA	**BOSHOF INFRASO**	**6.41**	**175**	I	I	16 36 40.0	
	baz=19,slow=314,SNR=3.0						
I35NA	**TSUMEB INFRASO**	**7.19**	**293**	I	I	17 03 30.0	
	baz=117,slow=316,SNR=1.2						

*RSPR **25** 16:06:32.3, 17°.81N×66°.87W, h9km, MD3.2/6*
*NEIC **25** 16:06:32.6±1.3, 17°.86N±0°.02×66°.835W±0°.009, h10km±1km, ML2.8/33, Md3.2/6(RSPR), Error ellipse: s-maj=4.0km s-min=2.6km az=352.0*
*OSPL **25** 16:06:32.2±0.4, 17°.77N×66°.88W, h11km±7km, ML2.5, Presumed earthquake*
*SDD **25** 16:06:32.9±2.3, 17°.82N×66°.91W, h20km±20km, MD3.5, ML2.8, MW3.3, Presumed earthquake*
ISC 25 16:06:32.1±1.2, **17.84N**±0°.06×**66.86W**±0°.02, **h16**km±7km, **n39,** σ0.**949**/58, **10C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.14**	**350**		**Pb**	**16 06 36.2**	**-0.2**
GBPR					**Sb**	**16 06 39.1**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.14**	**350**	⇓*i*P	**Pb**	**16 06 36.2**	**-0.2**
GBPR				*e*S	**Sb**	**16 06 39.1**	**-0.1**
MLPR	**Magueyes Islan**	**0.22**	**306**		**Pg**	**16 06 37.1**	**-0.1**
MLPR				IAML		16 06 40.9	
	2μm,0.5s						
MLPR				IAML		16 06 41.8	
	1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**305**		**Pg**	**16 06 38.2**	**-0.1**
CRPR				IAML		16 06 42.7	
	1μm,0.3s						
CRPR				IAML		16 06 42.8	
	1μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.29**	**305**	⇑*e*Pg	**Pg**	**16 06 38.3**	**-0.1**
CRPR				⇑*e*Sg	**Sg**	**16 06 42.5**	**-0.1**
CRPR				IAML		16 06 43.1	
	comp=N,2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**305**	⇑*i*P	**Pg**	**16 06 38.3**	**-0.1**
CRPR				*e*S	**Sg**	**16 06 42.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**305**	*i* P	**Pg**	**16 06 38.3**	**-0.1**
CRPR				*e*S	**Sg**	**16 06 42.5**	**-0.1**
CRPR				IAML		16 06 43.2	
	comp=Z,2μm,0.4s						
OBIP	**Obispado Ponce**	**0.31**	**49**		**Pg**	**16 06 38.9**	**+0.2**
OBIP	**Obispado Ponce**	**0.31**	**49**		**Sb**	**16 06 44.3**	**+0.1**
OBIP	**Obispado Ponce**	**0.31**	**49**	⇓*i*P	**Pg**	**16 06 39.0**	**+0.4**
OBIP				*e*S	**Sb**	**16 06 44.3**	**+0.1**
OBIP	**Obispado Ponce**	**0.31**	**49**	*i* P	**Pb**	**16 06 39.1**	**-0.2**
OBIP				*e*S	**Sb**	**16 06 44.4**	**+0.2**
OBIP				IAML		16 06 46.6	
	comp=Z,176nm,0.5s						
CELP	**Cerrillos**	**0.35**	**48**		**Pg**	**16 06 39.7**	**+0.3**
LSP	**Las Mesas**	**0.40**	**327**		**Pg**	**16 06 40.4**	**+0.1**
LSP					**Sg**	**16 06 45.9**	**+0.1**
LSP	**Las Mesas**	**0.40**	**327**	⇑*i*P	**Pg**	**16 06 40.4**	**+0.1**
LSP				*e*S	**Sg**	**16 06 45.9**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.43**	**17**		**Pg**	**16 06 40.7**	**-0.1**
UUPR					**Sg**	**16 06 45.7**	**-1.1**
PRSN	**Puerto Rico Se**	**0.47**	**324**		**Pg**	**16 06 41.2**	**-0.2**
PRSN				IAML		16 06 51.0	
	comp=Z,1μm,0.2s						
ECPR	**Experimental S**	**0.67**	**44**		**Pg**	**16 06 44.7**	**-0.5**
ECPR				IAML		16 06 58.2	
	comp=Z,498nm,0.2s						
ECPR				IAML		16 07 01.5	
	comp=Z,493nm,0.2s						
ECPR	**Experimental S**	**0.67**	**44**	⇓*e*P	**Pg**	**16 06 44.9**	**-0.3**
ECPR				*e*S	**Sb**	**16 06 55.6**	**+1.1**
AGPR	**Aguadilla, PR**	**0.67**	**339**		**Pg**	**16 06 44.7**	**-0.6**
AGPR				IAML		16 06 59.5	
	comp=Z,327nm,0.4s						
AGPR	**Aguadilla, PR**	**0.67**	**339**	⇑*e*Pg	**Pg**	**16 06 44.8**	**-0.4**
AGPR				⇑*e*Sg	**Sg**	**16 06 53.8**	**-0.4**
AGPR				IAML		16 06 59.4	
	comp=N,320nm,0.4s						
AGPR	**Aguadilla, PR**	**0.67**	**339**	⇑*i*P	**Pg**	**16 06 44.8**	**-0.4**
AGPR				*e*S	**Sb**	**16 06 54.8**	**+0.2**
EMPR	**Esperanza - Ma**	**0.71**	**26**		**Pb**	**16 06 46.1**	**0.0**
EMPR					**Sb**	**16 06 56.2**	**+0.7**
EMPR	**Esperanza - Ma**	**0.71**	**26**	⇑*e*P	**Pb**	**16 06 46.1**	**0.0**
EMPR				*e*S	**Sb**	**16 06 56.2**	**+0.7**
SJG	**San Juan**	**0.72**	**68**		**Pg**	**16 06 45.8**	**-0.4**
SJG	**San Juan**	**0.72**	**68**	IAML		16 06 59.6	
	comp=N,282nm,0.5s						
SJG				IAML		16 06 59.7	
	comp=N,442nm,0.4s						
SJG	**San Juan**	**0.72**	**68**	⇓*e*Pg	**Pg**	**16 06 45.9**	**-0.4**
SJG				⇑*e*Sg	**Sn**	**16 06 57.6**	**-0.8**
SJG	**San Juan**	**0.72**	**68**	*i* P	**Pg**	**16 06 46.0**	**-0.2**
SJG				IAML		16 07 00.1	
	comp=Z,196nm,0.3s						
IDE	**Isla Desecheo**	**0.80**	**313**		**Pb**	**16 06 46.9**	**-0.8**
IDE					**Sb**	**16 06 57.6**	**-0.7**
IDE	**Isla Desecheo**	**0.80**	**313**	⇑*i*P	**Pb**	**16 06 46.9**	**-0.8**
IDE				*e*S	**Sb**	**16 06 57.6**	**-0.7**
GCPR	**Guaynabo City**	**0.87**	**57**		**Pb**	**16 06 48.3**	**-0.6**
GCPR	**Guaynabo City**	**0.87**	**57**		**Sb**	**16 06 59.7**	**-0.6**
GCPR	**Guaynabo City**	**0.87**	**57**	⇑*e*P	**Pb**	**16 06 48.4**	**-0.4**
GCPR				*e*S	**Sb**	**16 06 59.7**	**-0.6**
HUMP	**Col San Antoni**	**1.00**	**72**		**Pb**	**16 06 50.6**	**-0.4**
HUMP				IAML		16 07 06.9	
	comp=Z,182nm,0.4s						
HUMP				IAML		16 07 07.3	
	comp=Z,254nm,0.2s						
HUMP	**Col San Antoni**	**1.00**	**72**		**Sn**	**16 07 05.8**	**+0.4**
HUMP	**Col San Antoni**	**1.00**	**72**	⇑*e*P	**Pb**	**16 06 50.7**	**-0.4**
HUMP				*e*S	**Sn**	**16 07 05.8**	**+0.4**
CUDR	**Culebra, Puert**	**1.57**	**72**	Pn	**Pb**	**16 07 00.1**	**-0.6**
PCDR	**Punta Cana, DR**	**1.60**	**295**	⇑*e*Pg	**Pb**	**16 07 01.3**	**0.0**
PCDR				IAML		16 07 34.3	
	comp=N,154nm,3.0s						
DR12	**Loma Pena Alta**	**2.58**	**292**	Pn	**Pn**	**16 07 14.5**	**+1.2**
HATOM	**Hato Mayor del**	**2.58**	**292**	⇑*e*Pg	**Pn**	**16 07 14.0**	**+0.7**
HATOM				IAML		16 08 01.9	
	comp=N,25nm,2.8s						

*BGSI **25** 16:08:00.7±0.6, 23°.87S×27°.64E, h55km±126km, ML1.9*
*IDC **25** 16:08:02.5±8.6, 23°.83S×27°.11E, h0km, mbtmp2.6/1, ML2.4/1, Error ellipse: s-maj=99.3km s-min=59.8km az=109.0*
ISC 25 16:08:00.3±1.5, **23°.69S**±0°.05×**27°.5E**±0°.1, **h10**km, **n7,** σ2.**936**/9, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPHEP	**Lephephe**	**1.52**	**282**	*i* P	**Pn**	**16 08 27.0**	**-0.6**
LPHEP				*i* S	**Sn**	**16 08 47.1**	**-0.3**
LPHEP				IAML		16 08 51.9	
	comp=N,30nm,0.5s						
KHWEE	**KHWEE**	**2.55**	**312**	*i* P	**Pn**	**16 08 41.9**	**+0.1**
BROLN	**Tlhalogang**	**2.58**	**357**	*i* P	**Pn**	**16 08 41.9**	**-0.3**
BROLN				*i* S	**Sn**	**16 09 11.6**	**-2.1**
BROLN				IAML		16 09 19.6	
	comp=E,7.6nm,0.5s						
KDWAN	**Kaudwane**	**2.60**	**276**	*i* P	**Pn**	**16 08 41.5**	**-1.0**
KDWAN				IAML		16 09 31.9	
	comp=E,12nm,0.7s						
BOSA	**Boshof**	**5.30**	**202**	Pn	**Pn**	**16 09 19.0**	**-0.6**
	comp=E,0.1nm,0.3s,baz=22,slow=17,SNR=1.1						
BOSA				Pg	**Pb**	**16 09 36.2**	**+3.1**
	comp=E,0.1nm,0.3s,baz=21,slow=17,SNR=2.1						
BOSA				Sn	**Sn**	**16 10 16.6**	**-4.2**
	comp=E,0.2nm,0.3s,baz=353,slow=20,SNR=1.4						
BOSA				Lg	Lg	16 10 41.7	
	comp=E,0.7nm,0.3s,baz=103,slow=19,SNR=7.7						
	comp=E,0.5nm,0.5s						
I47ZA	**BOSHOF INFRASO**	**5.31**	**202**	I	I	16 41 00.0	
	baz=19,slow=316,SNR=4.1						
I35NA	**TSUMEB INFRASO**	**10.24**	**294**	I	I	17 09 00.0	
	baz=117,slow=314,SNR=2.6						

IDC 25 16:13:52.5±1.8, **5°.24N**×**125°.12E, h0**km, **mb3.4**/5, **mbtmp3.4/5, Error ellipse: s-maj=216.1km s-min=21.9km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.61**	**160**	P	P	16 19 34.0	+1.1
	0.7nm,0.9s,baz=340,slow=9.6,SNR=2.0						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**29.98**	**164**	P	P	16 20 02.0	-0.9
	0.3nm,0.6s,baz=339,slow=8.7,SNR=6.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**55.41**	**325**	P	P	16 23 29.1	+0.4
	0.3nm,0.6s,baz=124,slow=7.5,SNR=4.9						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**58.53**	**333**	P	P	16 23 50.1	-0.5
	0.2nm,0.4s,baz=134,slow=4.2,SNR=1.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**59.61**	**328**	P	P	16 23 58.1	-0.1
	0.4nm,0.7s,baz=123,slow=7.0,SNR=3.3						
	0.4nm,0.7s						

*GUC **25** 16:35:32.4±0.8, 20°.62S×69°.29W, h90km±4km, ML3.6*
*SJA **25** 16:35:32.2±0.6, 20°.64S×69°.23W, h86km±3km, ML3.7, MW3.6*
ISC 25 16:35:35.0±1.3, **20°.62S**±0°.03×**69°.33W**±0°.05, **h76**km±9km, **n27,** σ1.**924**/49, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.45**	**199**	*e*P	**Pn**	**16 35 47.2**	**-0.9**
PB01				*i* S	**Sn**	**16 35 58.1**	**+0.5**
PB01				IAML		16 35 59.3	
	comp=E,7μm,0.2s						
PB01	**IPOC Station P**	**0.45**	**199**	*e*P	**Pn**	**16 35 47.0**	**-1.0**
PB01				*e*S	**Sn**	**16 35 57.9**	**+0.3**
PB01				IAML		16 35 59.5	
	comp=Z,4μm,0.1s						
PB08	**IPOC Station P**	**0.50**	**20**	*e*P	**Pn**	**16 35 47.9**	**-0.9**
PB08				*i* S	**Sn**	**16 35 59.1**	**+0.2**
PB08				IAML		16 36 00.3	
	comp=N,2μm,0.2s						
PB08	**IPOC Station P**	**0.50**	**20**	*e*P	**Pn**	**16 35 47.8**	**-1.0**
PB08				*e*S	**Sn**	**16 35 59.1**	**+0.2**
PB08				IAML		16 36 00.2	
	comp=Z,1μm,0.2s						
HMBC	**Humberstone**	**0.62**	**303**	*e*P	**Pn**	**16 35 49.1**	**-0.5**
HMBC				*i* S	**Sn**	**16 36 01.6**	**+1.2**
HMBC				IAML		16 36 03.2	
	comp=E,4μm,0.7s						
TA02	**Huaiquique**	**0.82**	**294**	*e*P	**Pn**	**16 35 51.4**	**-0.3**
TA02				*i* S	**Sn**	**16 36 05.0**	**+0.9**
TA02	**Huaiquique**	**0.82**	**294**	*e*P	**Pn**	**16 35 51.4**	**-0.3**
TA02				*e*S	**Sn**	**16 36 06.0**	**+1.9**
TA02				IAML		16 36 08.6	
	comp=Z,2μm,0.1s						
PB02	**IPOC Station P**	**0.88**	**217**	*e*P	**Pn**	**16 35 51.8**	**-0.6**
PB02				*i* S	**Sn**	**16 36 06.2**	**+0.8**
PB02				IAML		16 36 07.8	
	comp=E,4μm,0.2s						
PB02	**IPOC Station P**	**0.88**	**217**	*e*P	**Pn**	**16 35 51.8**	**-0.6**
PB02				*e*S	**Sn**	**16 36 06.6**	**+1.2**
PB02				IAML		16 36 12.2	
	comp=Z,3μm,0.3s						
PB11	**IPOC Station P**	**0.90**	**340**	*e*P	**Pn**	**16 35 52.0**	**-0.8**
PB11				*i* S	**Sn**	**16 36 06.8**	**+0.8**
PB11	**IPOC Station P**	**0.90**	**340**	*e*P	**Pn**	**16 35 52.2**	**-0.6**
PB11				*e*S	**Sn**	**16 36 07.1**	**+1.1**
PB11				IAML		16 36 08.2	
	comp=Z,1μm,0.4s						
GO01	**Chusmiza**	**0.95**	**8**	*e*P	**Pn**	**16 35 52.8**	**-0.9**
GO01				*i* S	**Sn**	**16 36 07.8**	**+0.3**
GO01	**Chusmiza**	**0.95**	**8**	*e*P	**Pn**	**16 35 52.8**	**-0.9**
GO01				*e*S	**Pn**	**16 35 52.8**	**-0.9**
GO01				*e*S	**Sn**	**16 36 08.4**	**+0.8**
GO01				IAML		16 36 09.0	
	comp=Z,1μm,0.1s						
PB09	**IPOC Station P**	**1.18**	**176**	*e*P	**Pn**	**16 35 55.3**	**-0.9**
PB09				*i* S	**Sn**	**16 36 12.4**	**+0.3**
PB09				IAML		16 36 13.9	
	comp=E,1μm,0.3s						
PB09	**IPOC Station P**	**1.18**	**176**	*e*P	**Pn**	**16 35 54.8**	**-1.4**
PB07	**IPOC Station P**	**1.22**	**205**	*e*P	**Pn**	**16 35 55.6**	**-1.1**
PB07				*i* S	**Sn**	**16 36 12.8**	**-0.2**
PB07				IAML		16 36 14.0	
	comp=E,1μm,0.2s						
PB07	**IPOC Station P**	**1.22**	**205**	*e*P	**Pn**	**16 35 55.7**	**-1.1**
PB07				*e*S	**Sn**	**16 36 13.3**	**+0.3**
PB07				IAML		16 36 14.8	
	comp=Z,809nm,0.2s						
PB03	**IPOC Station P**	**1.48**	**195**	*e*P	**Pn**	**16 35 58.8**	**-1.2**
PB03				*i* S	**Sn**	**16 36 18.6**	**-0.4**
PB03				IAML		16 36 24.2	
	comp=E,724nm,0.2s						
PB03	**IPOC Station P**	**1.48**	**195**	*e*P	**Pn**	**16 35 59.0**	**-1.1**
PB03				*e*S	**Sn**	**16 36 18.5**	**-0.4**
PB03				IAML		16 36 25.5	
	comp=Z,723nm,0.3s						
PB06	**IPOC Station P**	**2.09**	**186**	*e*P	**Pn**	**16 36 06.8**	**-1.4**
PB06				*i* S	**Sn**	**16 36 31.6**	**-1.9**
PB06				IAML		16 36 37.3	
	comp=E,643nm,0.4s						
PB12	**IPOC Station P**	**2.20**	**335**	*e*P	**Pn**	**16 36 08.2**	**-1.3**
PB12				*i* S	**Sn**	**16 36 36.0**	**0.0**
PB12				IAML		16 36 44.7	
	comp=E,588nm,0.2s						
PB12	**IPOC Station P**	**2.20**	**335**	*e*P	**Pn**	**16 36 06.5**	**-3.1**
PB16	**IPOC Station P**	**2.27**	**356**	*e*P	**Pn**	**16 36 11.1**	**+0.1**
PB16				*e*S	**Sn**	**16 36 35.3**	**-3.1**
PB16				IAML		16 36 43.4	
	comp=Z,178nm,0.6s						
AP01	**Chacalluta**	**2.43**	**337**	*e*P	**Pn**	**16 36 11.5**	**-1.0**
PB14	**IPOC Station P**	**4.11**	**194**	*e*P	**Pn**	**16 36 38.6**	**+2.9**
LPAZ	**La Paz**	**4.45**	**15**	*e*P	**Pn**	**16 36 42.7**	**+2.1**
HJA	**Humahuaca**	**4.46**	**126**	*e*P	**Pn**	**16 36 41.5**	**+0.9**

*NEIC **25** 16:39:48.7±0.9, 17°.73N±0°.02×66°.87W±0°.01, h10km±2km, ML3.0/33, Md2.9/6(RSPR), Error ellipse: s-maj=4.0km s-min=2.8km az=3.0*
*SDD **25** 16:39:48.4±1.1, 17°.67N×66°.97W, h19km±19km, MD3.5, ML3.1, MW3.5, Presumed earthquake*
*RSPR **25** 16:39:50.5, 17°.83N×66°.87W, h12km, MD2.9/6*
ISC 25 16:39:46.6±1.7, **17.68N**±0°.08×**66°.90W**±0°.03, **h16**km±8km, **n36,** σ0.**966**/57, **12C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.30**	**4**		**Pb**	**16 39 54.1**	**+0.5**
GBPR					**Sg**	**16 39 57.0**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.30**	**4**	⇓*i*P	**Pb**	**16 39 54.1**	**+0.5**
GBPR				*e*S	**Sg**	**16 39 57.0**	**-0.4**
MLPR	**Magueyes Islan**	**0.32**	**335**		**Pb**	**16 39 54.9**	**+0.9**
MLPR				IAML		16 39 58.8	
	3μm,0.5s						
MLPR				IAML		16 39 59.3	
	2μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.38**	**329**		**Sb**	**16 40 00.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.38**	**329**	Pg	**Pb**	**16 39 56.1**	**+1.0**
CRPR				IAML		16 40 00.7	
	2μm,0.3s						
CRPR				IAML		16 40 01.0	
	2μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.38**	**329**	⇑*e*Pg	**Pb**	**16 39 56.1**	**+1.0**
CRPR				⇑*e*Sg	**Sb**	**16 40 00.4**	**-0.3**
CRPR				IAML		16 40 01.0	
	comp=N,2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.38**	**329**	⇑*i*P	**Pb**	**16 39 56.2**	**+1.1**
CRPR				*e*S	**Sb**	**16 40 00.5**	**-0.3**
OBIP	**Obispado Ponce**	**0.46**	**38**		**Pb**	**16 39 56.8**	**+0.4**
OBIP					**Sg**	**16 40 02.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.46**	**38**	⇓*i*P	**Pb**	**16 39 57.0**	**+0.6**
OBIP				*e*S	**Sg**	**16 40 02.3**	**+0.1**
CELP	**Cerrillos**	**0.50**	**38**		**Pb**	**16 39 57.5**	**+0.4**
CELP					**Sg**	**16 40 03.1**	**-0.3**
CELP				IAML		16 40 04.1	
	comp=N,822nm,0.8s						
LSP	**Las Mesas**	**0.53**	**341**		**Pb**	**16 39 58.2**	**+0.6**
LSP					**Sb**	**16 40 04.5**	**-0.5**
LSP	**Las Mesas**	**0.53**	**341**	⇓*e*P	**Pb**	**16 39 58.2**	**+0.6**
LSP				*e*S	**Sb**	**16 40 04.5**	**-0.5**
PRSN	**Puerto Rico Se**	**0.59**	**337**		**Sb**	**16 40 06.6**	**0.0**
PRSN	**Puerto Rico Se**	**0.59**	**337**	Pg	**Pb**	**16 39 59.1**	**+0.6**
PRSN				IAML		16 40 07.6	
	comp=N,1μm,0.3s						
PRSN				IAML		16 40 08.9	
	comp=N,2μm,0.3s						
PRSN	**Puerto Rico Se**	**0.59**	**337**	⇑*e*Pg	**Pb**	**16 39 58.6**	**+0.1**
PRSN				*e*Sg	**Sg**	**16 40 06.1**	**0.0**
PRSN				IAML		16 40 12.7	
	comp=N,838nm,0.2s						
PRSN	**Puerto Rico Se**	**0.59**	**337**	⇑*i*P	**Pb**	**16 39 59.2**	**+0.7**
PRSN				*e*S	**Sb**	**16 40 06.6**	**0.0**
UUPR	**Utuado, UPR, P**	**0.60**	**17**		**Pg**	**16 39 58.6**	**+0.1**
UUPR					**Sg**	**16 40 04.9**	**-1.6**
AGPR	**Aguadilla, PR**	**0.81**	**346**		**Pg**	**16 40 02.7**	**+0.2**
AGPR	**Aguadilla, PR**	**0.81**	**346**	⇑*e*Pg	**Pb**	**16 40 02.5**	**+0.1**
AGPR				⇑*e*Sg	**Sg**	**16 40 13.4**	**+0.3**
AGPR				IAML		16 40 17.3	
	comp=N,324nm,0.5s						
AGPR	**Aguadilla, PR**	**0.81**	**346**	⇑*i*P	**Pg**	**16 40 02.7**	**+0.2**
AGPR				*e*S	**Sg**	**16 40 13.5**	**+0.3**
ECPR	**Experimental S**	**0.82**	**39**		**Pb**	**16 40 02.6**	**+0.1**
ECPR				IAML		16 40 14.4	
	comp=N,552nm,0.2s						
ECPR				IAML		16 40 15.2	
	comp=N,718nm,0.2s						
ECPR	**Experimental S**	**0.82**	**39**	⇓*i*P	**Pb**	**16 40 02.8**	**+0.3**
ECPR				*e*S	**Sb**	**16 40 12.1**	**-1.2**
SJG	**San Juan**	**0.84**	**59**		**Pg**	**16 40 03.4**	**+0.5**
SJG	**San Juan**	**0.84**	**59**	IAML		16 40 17.1	
	comp=N,371nm,0.6s						
SJG				IAML		16 40 17.6	
	comp=N,437nm,0.4s						
SJG	**San Juan**	**0.84**	**59**	⇑*e*Pg	**Pn**	**16 40 03.9**	**+0.2**
SJG				⇑*e*Sg	**Sn**	**16 40 16.1**	**+0.4**
EMPR	**Esperanza - Ma**	**0.87**	**24**		**Pg**	**16 40 04.0**	**+0.3**
EMPR					**Sb**	**16 40 13.1**	**-1.7**
EMPR	**Esperanza - Ma**	**0.87**	**24**	⇑*e*P	**Pg**	**16 40 04.0**	**+0.3**
EMPR				*e*S	**Sb**	**16 40 13.1**	**-1.7**
IDE	**Isla Desecheo**	**0.89**	**322**		**Pn**	**16 40 04.8**	**+0.3**
IDE					**Sg**	**16 40 15.5**	**-0.3**
IDE	**Isla Desecheo**	**0.89**	**322**	⇑*i*P	**Pn**	**16 40 04.8**	**+0.3**
IDE				*e*S	**Sg**	**16 40 15.5**	**-0.3**
GCPR	**Guaynabo City**	**1.00**	**51**		**Pb**	**16

σ1ˢ25/47, **mb4.3**/12, **MS3.7**/19, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**9.17**	**40**	Pn	**Pn**	**16 56 45.0**	**+0.6**
	baz=248,slow=9.4						
H03S2				T	T	17 06 47.8	
	baz=214,slow=73,SNR=758						
H03S1	**Juan Fernandez**	**9.17**	**40**	Pn	**Pn**	**16 56 45.2**	**+0.8**
	baz=248,slow=9.4						
H03S1				T	T	17 06 46.1	
	baz=214,slow=73,SNR=713						
H03S3	**Juan Fernandez**	**9.19**	**40**	Pn	**Pn**	**16 56 45.1**	**+0.5**
	baz=248,slow=9.4						
H03S3				T	T	17 06 44.4	
	baz=214,slow=73,SNR=2984						
VA04	**Juan Fernndez**	**9.37**	**40**		**Pn**	**16 56 48.6**	**+1.2**
H03N3	**Juan Fernandez**	**9.48**	**39**	Pn	**Pn**	**16 56 49.0**	**+0.3**
	baz=184,slow=23						
H03N3				T	T	17 07 07.1	
	baz=211,slow=17,SNR=218						
H03N2	**Juan Fernandez**	**9.49**	**39**	Pn	**Pn**	**16 56 48.8**	**0.0**
	baz=184,slow=23						
H03N2				T	T	17 07 09.1	
	baz=211,slow=17,SNR=232						
H03N1	**Juan Fernandez**	**9.50**	**39**	Pn	**Pn**	**16 56 48.8**	**-0.1**
	baz=184,slow=23						
H03N1				T	T	17 07 08.5	
	baz=211,slow=17,SNR=139						
BI05	**Punta Hualpn**	**10.90**	**71**	Pn	**Pn**	**16 57 07.0**	**-1.3**
GO06	**Curarrehue**	**11.22**	**87**		**Pn**	**16 57 13.3**	**+0.4**
PLCA	**Paso Flores**	**11.73**	**93**	Pn	**Pn**	**16 57 21.1**	**+1.3**
	0.1nm,0.3s,baz=262,slow=14,SNR=6.6						
PLCA				LR	LR	17 00 56.3	
	comp=Z,146nm,20.6s,baz=262,slow=33 1.4nm,1.0s						
BI02	**San Fabin de**	**12.32**	**74**		**Pn**	**16 57 27.7**	**-0.1**
ML02	**Panimavida**	**12.63**	**70**	Pn	**Pn**	**16 57 31.9**	**-0.1**
GO05	**Hualane**	**12.66**	**66**		**Pn**	**16 57 31.4**	**-1.0**
BO02	**Sierra Bellavi**	**13.57**	**67**		**Pn**	**16 57 45.1**	**+0.2**
BO01	**Tunca**	**13.58**	**65**		**Pn**	**16 57 44.2**	**-0.7**
MT01	**Popeta**	**13.76**	**63**	Pn	**Pn**	**16 57 46.6**	**-0.9**
MT09	**Talagante**	**13.99**	**63**		**Pn**	**16 57 50.0**	**-0.8**
BO04	**La Punta**	**14.13**	**65**		**Pn**	**16 57 52.4**	**-0.1**
MT13	**San Alfonso**	**14.49**	**65**		**Pn**	**16 57 57.9**	**+0.3**
PEL	**Peldehue**	**14.57**	**62**		**Pn**	**16 58 00.3**	**+1.7**
MT08	**Bocatoma Ro**	**14.84**	**64**		**Pn**	**16 58 02.3**	**-0.2**
VA03	**San Esteban**	**14.89**	**61**		**Pn**	**16 58 03.2**	**+0.2**
CO04	**Los Peladeros**	**15.07**	**58**	Pn	**Pn**	**16 58 05.7**	**0.0**
CO04				IAmb	IAmb	16 58 15.8	
	comp=Z,38nm,1.2s						
CO02	**Combarbal**	**15.62**	**56**		**Pn**	**16 58 12.9**	**+0.3**
CO02				IAmb	IAmb	16 58 17.9	
	comp=Z,66nm,1.4s						
ZON	**Zonda**	**16.89**	**61**		**P**	**16 58 30.3**	**-0.6**
CFA	**Coronel Fontan**	**17.15**	**62**	P	**P**	**16 58 34.5**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=234,slow=16,SNR=8.5 comp=Z,1.7nm,0.4s						
USHA	**Ushuaia**	**18.06**	**146**	LR	LR	17 03 46.3	
	comp=Z,310nm,18.9s,baz=280,slow=31						
TRQA	**Tornquist**	**18.78**	**89**		**Pn**	**16 58 52.1**	**0.0**
RPN	**Rapa Nui**	**23.69**	**299**	LR	LR	17 06 19.9	
	comp=Z,314nm,20.0s,baz=126,slow=30						
PMSA	**Palmer Station**	**26.91**	**159**	LR	LR	17 07 38.8	
	comp=Z,165nm,20.5s,baz=110,slow=30						
CPUP	**Villa Florida**	**27.89**	**67**	P	**P**	**17 00 23.4**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=232,slow=8.0,SNR=4.5						
CPUP				LR	LR	17 10 55.5	
	comp=Z,187nm,19.8s,baz=238,slow=35 comp=Z,1.4nm,0.5s						
CPUP	**Villa Florida**	**27.89**	**67**	IAmb	IAmb	17 00 24.6	
	comp=Z,10.0nm,1.4s						
LPAZ	**La Paz**	**29.15**	**37**	P	**P**	**17 00 36.0**	**+1.7**
	comp=Z,3.6nm,0.8s,baz=192,slow=15,SNR=15						
LPAZ				LR	LR	17 10 17.3	
	comp=Z,98nm,18.7s,baz=189,slow=32 comp=Z,3.6nm,0.8s						
NNA	**Nana**	**30.08**	**18**	LR	LR	17 09 54.1	
	comp=Z,140nm,21.5s,baz=197,slow=30						
AQDB	**Aquidauana**	**32.92**	**61**	P	**P**	**17 01 07.0**	**0.0**
ATAH	**Atahualpa**	**34.47**	**13**	LR	LR	17 12 05.3	
	comp=Z,157nm,21.8s,baz=212,slow=30						
PTLB	**Pontes e Lacer**	**34.57**	**50**		**P**	**17 01 20.9**	**-0.3**
PTLB				IAmb	IAmb	17 01 23.6	
	comp=Z,5.9nm,0.9s						
BDFB	**Brasilia**	**41.48**	**64**	P	**P**	**17 02 18.9**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=225,slow=7.1,SNR=7.2						
BDFB				LR	LR	17 19 12.9	
	comp=Z,153nm,21.5s,baz=198,slow=36 comp=Z,2.8nm,0.6s						
BDFB	**Brasilia**	**41.48**	**64**	P	**P**	**17 02 19.2**	**-0.5**
ROSC	**El Rosal**	**46.93**	**16**	LR	LR	17 20 20.5	
	comp=Z,213nm,21.2s,baz=114,slow=33						
BOAV	**Boa Vista**	**49.11**	**35**	P	**P**	**17 03 20.3**	**+0.2**
BOAV				IAmb	IAmb	17 03 30.4	
	comp=Z,7.4nm,1.1s						
JTS	**Las Juntas de**	**51.11**	**1**	LR	LR	17 21 03.4	
	comp=Z,44nm,18.4s,baz=147,slow=31						
SDV	**Santo Domingo**	**51.69**	**20**	LR	LR	17 23 35.7	
	comp=Z,17nm,19.3s,baz=240,slow=34						
VNDA	**Vanda**	**54.77**	**194**	LR	LR	17 25 03.8	
	comp=Z,78nm,18.9s,baz=181,slow=34						
MDP	**Montagnes des**	**55.18**	**42**	LR	LR	17 26 55.0	
	comp=Z,72nm,20.3s,baz=167,slow=35						
RCBR	**Riachuelo**	**56.76**	**66**	LR	LR	17 28 43.2	
	comp=Z,37nm,18.4s,baz=246,slow=36						
URZ	**Urewera**	**70.57**	**236**	LR	LR	17 28 31.9	
	comp=Z,89nm,19.1s,baz=176,slow=29						
RPZ	**Rata Peaks**	**70.84**	**228**	LR	LR	17 27 48.4	
	comp=Z,152nm,21.1s,baz=258,slow=28						
TXAR	**Lajitas Array**	**71.93**	**344**	P	**P**	**17 05 55.6**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=160,slow=4.1,SNR=7.4 comp=Z,1.3nm,0.9s						
TKL	**Tuckaleechee C**	**76.38**	**2**	LR	LR	17 35 30.2	
	comp=Z,23nm,20.9s,baz=133,slow=32						
ANMO	**Albuquerque**	**77.94**	**343**	P	**P**	**17 06 30.5**	**0.0**
ANMO				IAmb	IAmb	17 06 34.1	
	comp=Z,3.1nm,0.9s						
CCM	**Cathedral Cave**	**78.89**	**356**	P	**P**	**17 06 35.4**	**-0.1**
CCM				IAmb	IAmb	17 06 37.7	
	comp=Z,8.4nm,1.0s						
PRN	**Pahroc Range**	**82.49**	**337**	IAmb	IAmb	17 07 18.2	
	comp=Z,3.6nm,1.0s						
NVAR	**Mina Array Bea**	**84.43**	**335**	P	**P**	**17 07 04.9**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=160,slow=5.1,SNR=2.2 comp=Z,0.6nm,0.7s						
BOSA	**Boshof**	**85.97**	**125**	LR	LR	17 41 12.6	
	comp=Z,57nm,19.2s,baz=198,slow=33						
PDAR	**Pinedale Array**	**86.11**	**343**	P	**P**	**17 07 12.8**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=169,slow=2.0,SNR=7.4 comp=Z,1.2nm,0.9s						
DBIC	**Dimbokro**	**87.73**	**79**	P	**P**	**17 07 22.2**	**+0.6**
	comp=Z,4.5nm,1.0s,baz=230,slow=6.6,SNR=2.7 comp=Z,4.5nm,1.0s						
DBIC	**Dimbokro**	**87.73**	**79**	P	**P**	**17 07 20.6**	**-1.1**
LBTB	**Lobatse**	**88.72**	**122**	LR	LR	17 39 53.1	
	comp=Z,76nm,19.1s,baz=179,slow=31						
ULM	**Lac du Bonnet**	**91.35**	**354**	LR	LR	17 46 45.7	
	comp=Z,18nm,21.4s,baz=203,slow=34						
TORD	**Torodi Ar. Bea**	**96.82**	**79**	P	**P**	**17 08 02.6**	**-1.1**
	comp=Z,0.7nm,1.0s,baz=232,slow=1.7,SNR=1.8 comp=Z,0.7nm,1.0s						
MJAR	**Matsushiro Arr**	**145.50**	**277**	PKPbc	**PKPdf**	**17 14 06.6**	**-3.9**
	comp=Z,2.9nm,1.0s,baz=134,slow=1.8,SNR=4.0						
NJ2	**Nanjing**	**158.13**	**254**	*eP*	**PKPdf**	**17 14 33.0**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	**PanZhiHua**	**164.11**	**206**	PKP	**PKPdf**	**17 14 39.3**	**+3.1**
HHC	**Hu-ho-hao-te**	**166.69**	**275**	*eP*	**PKPdf**	**17 14 38.0**	**+0.1**
MKAR	**Makanchi Array**	**169.83**	**52**	PKPab	**PKPab**	**17 15 51.1**	**-3.1**
	comp=Z,0.4nm,0.9s,baz=297,slow=1.0,SNR=2.8						

*IDC **25** 17:16:18.4±1.6, 1°55N×126°15E, h0km, **mb3.4**/3, **mbtmp3.6**/4, **ML3.1**/1, **MS3.1**/2, **Error ellipse: s-maj=117.6km s-min=23.9km az=68.0, Northern Molucca Sea***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.53**	**181**	P	P	17 20 47.7	+0.1
	baz=0.0,slow=13,SNR=1.5						
FITZ				LR	LR	17 28 36.8	
	comp=Z,46nm,20.3s,baz=204,slow=38 6.7nm,1.2s						
WRA	**Warramunga Arr**	**22.82**	**160**	P	P	17 21 21.8	-1.4
	0.6nm,0.3s,baz=338,slow=10,SNR=14 0.6nm,0.3s						
ASAR	**Alice Springs**	**26.18**	**164**	P	P	17 21 55.5	+0.7
	0.4nm,0.5s,baz=349,slow=9.4,SNR=14						
ASAR				PcP	PcP	17 25 22.1	-0.1
	0.2nm,0.9s,baz=356,slow=2.7,SNR=1.6 0.4nm,0.5s						
TLY	**Talaya**	**53.41**	**343**	LR	LR	17 51 03.7	
	comp=Z,21nm,18.3s,baz=50,slow=39						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	17 26 20.1	0.0
	0.1nm,0.3s,baz=124,slow=7.1,SNR=6.1 0.1nm,0.3s						

*TEH **25** 17:18:49.0, 38°.70N×44°.37E, h10km, ML2.8, Presumed earthquake*
*AFAD **25** 17:18:50.5, 38°.83N×44°.66E, h5km±3km, ML2.5*
*AZER **25** 17:18:50.4, 38°.77N×44°.67E, h2km, ml2.7*
*ISK **25** 17:18:52.4, 38°.91N×44°.51E, h5km, ML2.6/6*
ISC 25 17:18:51.3±1.1, 38°.83N±0°.02×44°.68E±0°.02, h4km±11km, n38, σ1ˢ58/55, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKU	**Maku**	**0.52**	**1**	Pg	**Pb**	**17 19 02.2**	**-1.0**
OZAP	**Van, Ozalp-Mer**	**0.56**	**253**	P	**Pg**	**17 19 01.4**	**-0.7**
NAX	**Nakhchivan**	**0.72**	**61**	P	**Pn**	**17 19 08.0**	**-0.4**
NAX				S	**Sn**	**17 19 20.3**	**+0.2**
IMRD	**Marand**	**0.81**	**98**	Pg	**Pn**	**17 19 09.5**	**-0.2**
VMUR	**Van-Muradiye**	**0.88**	**281**	P	**Pg**	**17 19 06.8**	**-1.3**
VMUR				S	**Sb**	**17 19 20.5**	**-0.9**
VMUR				IAML		17 19 24.0	
	comp=N,142nm,0.4s						
SBZ	**Shahbuz**	**0.89**	**50**	P	**Pn**	**17 19 10.6**	**-0.1**
SBZ				S	**Sn**	**17 19 24.8**	**+0.7**
HYR	**Heyderabad**	**0.90**	**9**	P	**Pn**	**17 19 09.9**	**-1.0**
HYR				S	**Sn**	**17 19 26.0**	**+1.7**
ISHB	**Shabestar**	**0.92**	**126**	Pg	**Pb**	**17 19 09.6**	**-0.4**
ORD	**Ordubad**	**1.03**	**84**	P	**Pn**	**17 19 13.4**	**+0.7**
ORD				S	**Sn**	**17 19 28.5**	**+0.8**
TVAN	**Van**	**1.04**	**254**	P	**Pb**	**17 19 10.7**	**-1.3**
DYDN	**Diyadin**	**1.05**	**313**	P	**Pg**	**17 19 10.4**	**-1.0**
DYDN				S	**Sb**	**17 19 24.7**	**-1.6**
DYDN				IAML		17 19 34.0	
	comp=N,118nm,0.4s						
IGDI	**IGDIR**	**1.14**	**336**	P	**Pn**	**17 19 12.8**	**-1.3**
IGDI	**IGDIR**	**1.14**	**336**	P	**Pn**	**17 19 14.8**	**+0.6**
IGDI				S	**Sn**	**17 19 34.6**	**+4.4**
YOVA	**Hakkari_Yksek**	**1.28**	**194**	P	**Pn**	**17 19 17.7**	**+1.5**
GNI	**Garni**	**1.32**	**2**	Pn	**Pb**	**17 19 17.4**	**+0.6**
GNI	**Garni**	**1.32**	**2**	Pg	**Pb**	**17 19 17.7**	**+1.0**
GEVA	**Gevas**	**1.37**	**248**	P	**Pn**	**17 19 15.4**	**-2.0**
GEVA				S	**Sn**	**17 19 36.3**	**+0.2**
GEVA				IAML		17 19 39.0	
	comp=E,86nm,0.6s						
AKDM	**Akdamar-Van**	**1.42**	**250**	Pn	**Pg**	**17 19 18.7**	**+0.2**
HAKT	**HAKKARI**	**1.48**	**211**	P	**Pg**	**17 19 19.7**	**-0.1**
HAKT	**HAKKARI**	**1.48**	**211**	P	**Pg**	**17 19 19.3**	**-0.4**
HAKT				S	**Sg**	**17 19 42.4**	**+3.5**
KOTA	**Agri, Merkez-K**	**1.50**	**311**	P	**Pg**	**17 19 19.5**	**-0.5**
AGRB	**Hanur-Agry**	**1.51**	**300**	Pn	**Pg**	**17 19 19.7**	**-0.5**
ADCV	**BITLIS_Adilcev**	**1.52**	**270**	P	**Pg**	**17 19 19.7**	**-0.9**
DORK	**Agr/Tutak/Do**	**1.58**	**291**	P	**Pb**	**17 19 19.7**	**-1.5**
MLAZ	**Malazgirt-MUS**	**1.69**	**281**	Pn	**Pg**	**17 19 22.3**	**-1.3**
CUKT	**Cukurca**	**1.79**	**208**	Pn	**Pg**	**17 19 25.9**	**+0.3**
CUKT	**Cukurca**	**1.79**	**208**	P	**Pg**	**17 19 27.5**	**+1.8**
PERV	**Siirt/Pervari-**	**1.90**	**243**	P	**Pg**	**17 19 27.3**	**-0.3**
PERV				S	**Sg**	**17 19 53.2**	**+1.0**
PERV				IAML		17 19 57.0	
	comp=N,96nm,0.7s						
EATA	**Eleskirt**	**1.98**	**302**	P	**Pb**	**17 19 27.0**	**-1.2**
GDB	**GEDABAY**	**2.06**	**23**	P	**Pg**	**17 19 31.4**	**+0.6**
GDB				S	**Sg**	**17 20 00.4**	**+2.8**
GURO	**Guroymak-BITLI**	**2.09**	**263**	Pn	**Pb**	**17 19 28.3**	**-1.6**
QRD	**Qoradiz**	**2.15**	**72**	P	**Pg**	**17 19 31.5**	**-1.0**
QRD				S	**Sg**	**17 20 03.2**	**+2.8**
GANJ	**Ganja**	**2.21**	**34**	P	**Pg**	**17 19 32.1**	**-1.6**
GANJ				S	**Sg**	**17 20 05.3**	**+2.9**
SIRN	**Sırnak**	**2.23**	**234**	P	**Pg**	**17 19 33.0**	**-1.0**
AGDM	**Agdam**	**2.27**	**55**	P	**Pg**	**17 19 33.6**	**-1.3**
AGDM				S	**Sg**	**17 20 05.5**	**+1.1**
QZX	**Qazax, Azerbai**	**2.29**	**13**	P	**Pg**	**17 19 34.3**	**-0.9**
QZX				S	**Sg**	**17 20 08.1**	**+3.3**
BLQ	**Beylaqan**	**2.41**	**67**	P	**Pg**	**17 19 35.7**	**-1.7**
BLQ				S	**Sg**	**17 20 09.2**	**+0.5**
YRD	**Yardimli**	**2.78**	**87**	P	**Pb**	**17 19 39.7**	**-2.1**
YRD				S	**Sg**	**17 20 18.4**	**-2.3**

*IDC **25** 17:52:53.4±4.8, 8°.01S×157°.45E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=139.1km s-min=30.6km az=116.0*
ISC 25 17:52:59.0±5.4, 8°.0S±0°.5×157°.4E±1°.0, h35km, n14, σ0ˢ70/8, mb3.6/8, **Guadalcanal-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.25**	**240**	P	**P**	**17 58 22.4**	**+0.2**
	0.9nm,0.6s,baz=62,slow=9.9,SNR=11 0.9nm,0.6s						
ASAR	**Alice Springs**	**27.34**	**233**	P	**P**	**17 58 41.2**	**+0.2**
	0.2nm,0.8s,baz=55,slow=9.2,SNR=1.7 0.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.92**	**19**	T	T	18 27 17.3	
	baz=202,slow=76,SNR=48						
H11S2	**WAKE ISLAND Hy**	**27.93**	**19**	T	T	18 27 13.3	
	baz=202,slow=76,SNR=30						
H11S1	**WAKE ISLAND Hy**	**27.94**	**19**	T	T	18 27 09.3	
	baz=202,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy**	**29.13**	**19**	T	T	18 28 40.6	
	baz=203,slow=74,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**29.14**	**19**	T	T	18 28 42.6	
	baz=203,slow=74,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**29.15**	**19**	T	T	18 28 42.8	
	baz=203						
CMAR	**Chiang Mai Arr**	**63.37**	**295**	P	**P**	**18 03 25.0**	**-0.4**
	0.1nm,0.8s,baz=111,slow=7.2,SNR=9.6 0.1nm,0.3s						
SONM	**Songino Array**	**71.50**	**326**	P	**P**	**18 04 17.5**	**+1.0**
	0.3nm,0.5s,baz=132,slow=6.8,SNR=7.1 0.3nm,0.5s						
MKAR	**Makanchi Array**	**85.75**	**318**	P	**P**	**18 05 34.5**	**-0.2**
	0.8nm,0.6s,baz=100,slow=5.9,SNR=9.3 0.8nm,0.6s						
ZALV	**Zasovo Beam**	**86.37**	**326**	P	**P**	**18 05 37.2**	**-0.4**
	0.5nm,0.5s,baz=111,slow=6.3,SNR=3.5 0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**89.15**	**321**	P	**P**	**18 05 50.0**	**-0.9**
	0.5nm,0.3s,baz=98,slow=4.8,SNR=1.2 0.5nm,0.3s						
BVAR	**Borovoye Array**	**94.56**	**323**	P	**P**	**18 06 15.8**	**-0.1**
	0.1nm,0.4s,baz=86,slow=1.9,SNR=1.5 0.1nm,0.4s						

*SOME **25** 17:54:20.7, 43°.35N×85°.07E, h10km*
*NNC **25** 17:54:28.1±3.0, 43°.44N×84°.39E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=25.6km s-min=13.2km az=126.0*
ISC 25 17:54:24.9±2.7, 43°.4N±0°.1×85°.3E±0°.1, h10km, n15, σ2ˢ61/23, 4C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.62**	**273**	*eP*	**Pn**	**17 55 23.8**	**+2.6**
	1.4nm,0.3s						
KTMS				*eS*	**Sb**	**17 56 09.8**	**-3.4**
	13nm,0.3s						
MK31	**Makanchi Array**	**4.05**	**329**	⇑Pn	**Pn**	**17 55 26.5**	**-0.4**
	0.2nm,0.3s,baz=145,slow=13,SNR=38						
MK31				Pg	**Pb**	**17 55 34.8**	**-1.5**
	1.0nm,0.3s,baz=144,slow=17,SNR=34						
MK31				Lg	Lg	17 56 23.5	
	5.3nm,0.5s,baz=150,slow=28,SNR=6.5						
ZSN	**Zaisan**	**4.10**	**356**	*eP*	**Pb**	**17 55 34.8**	**-2.3**
	0.7nm,0.2s						
ZSN				*eS*	**Sb**	**17 56 28.7**	**+2.0**
	6.3nm,0.2s						
DJR	**Jarkent**	**4.12**	**285**	*eP*	Pn	17 55 33.0	+5.1
	1.0nm,0.2s						
DJR				*eS*	**Sb**	**17 56 25.5**	**-1.8**
	11nm,0.6s						
DJR	**Jarkent**	**4.12**	**285**	*eP*	**Sn**	**17 56 18.8**	**+2.6**
	1.8nm,0.3s						
DJR	**Jarkent**	**4.12**	**285**	*eS*	**Sb**	**17 56 25.6**	**-1.8**
	11nm,0.6s						
MAKZ	**Makanchi**	**4.18**	**327**	⇑Pg	**Pb**	**17 55 37.4**	**-1.1**
	1.9nm,0.5s						
MAKZ				⇑Lg	Lg	17 56 28.6	
	4.7nm,0.6s						
PDGK	**Podgornoye**	**4.25**	**272**	⇑Pg	**Pn**	**17 55 32.7**	**+2.8**
	1.6nm,0.5s						
PDGK				⇓Lg	Lg	17 56 22.5	
	6.3nm,0.5s						
SHLS	**Shalkode**	**4.29**	**269**	*eP*	**Pn**	**17 55 30.6**	**+0.3**
	4.1nm,0.4s						
SHLS				*eS*	**Sn**	**17 56 21.4**	**+1.0**
	25nm,0.4s						
UZB	**Uzynbulak**	**4.61**	**269**	*eP*	**Pb**	**17 55 41.7**	**-4.2**
	1.6nm,0.2s						
UZB				*eS*	**Sb**	**17 56 40.5**	**-1.0**
	3.4nm,0.3s						
KPKS	**Kokpek**	**4.84**	**273**	*eP*	Pb	17 55 45.2	-4.6
	0.2nm,0.1s						
KPKS				*eS*	**Sb**	**17 56 46.4**	**-1.6**
	6.6nm,0.4s						
TDK	**Taldyqorghan**	**5.24**	**291**	*eP*	Pb	17 55 51.8	-4.7
	11nm,0.5s						
TDK				*eS*	**Sb**	**17 56 57.8**	**-1.7**
	40nm,0.7s						
ARXS	**Arharly**	**5.49**	**281**	*eP*	**Pb**	**17 55 57.7**	**-3.2**
	0.8nm,0.3s						
ARXS				*eS*	**Sb**	**17 57 07.8**	**+0.9**
	8.8nm,0.4s						
KOTS	**Kotyrbulak**	**5.99**	**272**	*eP*	**Pb**	**17 56 08.2**	**-1.3**
	1.3nm,0.2s						
KOTS				*eS*	**Sb**	**17 57 25.8**	**+4.4**
	8.4nm,0.6s						
KTBS	**Karatobe**	**6.29**	**276**	*eP*	**Pb**	**17 56 13.4**	**-1.1**
	0.5nm,0.2s						
KTBS				*eS*	**Sb**	**17 57 34.8**	**+5.0**
	0.3nm,0.2s						

*IDC **25** 17:58:52.6±0.9, 37°.48N×142°.05E, h0km, mb3.8/11, mbtmp3.8/15, ML3.3/4, Error ellipse: s-maj=22.2km s-min=16.2km az=106.0*
*NIED **25** 17:58:57.6, 37°.47N×141°.94E, h35km, MW3.9, Moment Tension Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.44; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$0.62; $M_{r\theta}$6.66; $M_{\theta\phi}$-2.49; $M_{\phi r}$-1.84; Fault plane solution: $M_0$7.38000×10^{14} NP1: ϕ_s195.00000°, δ21.00000°, λ3.00000°. NP2:ϕ_s102.00000°, δ89.00000°, λ111.00000°.*
*JMA **25** 17:58:57.6±0.2, 37°.5N±0°.4×141°.9E±0°.8, h35km±2km, MD4.0/40, MV4.0/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*NEIC **25** 17:58:58.8±1.3, 37°.46N±0°.06×141°.94E±0°.08, h44km±8km, mb4.2/12, Error ellipse: s-maj=12.3km s-min=3.6km az=136.0*
ISC 25 17:58:58.3±0.9, 37°.46N±0°.05×141°.96E±0°.09, h38km±3km, n64, σ1ˢ03/63, mb4.0/18, **11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.87**	**264**	*i* P	**Pn**	**17 59 13.4**	**-0.7**
JFK				A	A	17 59 13.4	
	comp=N,4.0nm,1.0s,comp=E,5.0nm,0.6s						
JFK				S	**Sn**	**17 59 24.3**	**-1.3**
JMST	**Minamisoumatoc**	**0.89**	**287**	⇓P	**Pn**	**17 59 13.6**	**-0.7**
JMST				A	A	17 59 13.6	
	comp=N,5.0nm,0.2s,comp=E,7.0nm,0.3s						
JMST				⇓*e*S	**Sn**	**17 59 24.9**	**-1.0**
JIKH	**Ishinomakikobu**	**0.93**	**335**	⇓*i*P	**Pn**	**17 59 14.3**	**-0.6**
JIKH				⇓*e*S	**Sn**	**17 59 25.9**	**-1.2**
ONAJ	**Iwakimizuishiy**	**0.99**	**249**	P	**Pn**	**17 59 14.9**	**-0.8**
ONAJ				A	A	17 59 14.9	
	comp=N,11nm,0.3s,comp=E,18nm,0.3s						
ONAJ				S	**Sn**	**17 59 27.2**	**-1.4**
JMM	**Marumori**	**1.01**	**294**	⇓*i*P	**Pn**	**17 59 15.6**	**-0.3**
JMM				⇓S	**Sn**	**17 59 28.2**	**-0.6**
JIO	**Ouri**	**1.10**	**334**	⇓*i*P	**Pn**	**17 59 16.9**	**-0.3**
JIO				⇓S	**Sn**	**17 59 30.3**	**-0.8**
JOTO	**OTAMA OYAMA**	**1.30**	**275**	*i* P	**Pn**	**17 59 20.4**	**+0.5**
JOTO				*e*S	**Sn**	**17 59 36.4**	**+0.4**
JOU	**Okura**	**1.36**	**312**	⇓*i*P	**Pn**	**17 59 21.2**	**+0.3**
JOU				A	A	17 59 21.2	
	comp=N,3.0nm,2.1s,comp=E,3.0nm,0.7s						
JOU				⇓*e*S	**Sn**	**17 59 38.2**	**+0.6**
JOFO	**Osakifurukawao**	**1.41**	**324**	A	A	17 59 21.4	
	comp=N,7.0nm,2.4s,comp=E,6.0nm,1.6s						
JYAR	**Yonezawaarcadi**	**1.51**	**288**	A	A	17 59 22.9	
	comp=N,8.0nm,1.3s,comp=E,5.0nm,1.0s						
JMK	**Ichinoseki**	**1.60**	**339**	⇓P	**Pn**	**17 59 24.3**	**+0.3**
JYS	**Shirataka**	**1.68**	**297**	*e*P	**Pn**	**17 59 26.2**	**+1.1**
JYS				S	**Sn**	**17 59 47.8**	**+2.4**
JFY	**Yanaizu**	**1.79**	**269**	*e*P	**Pn**	**17 59 27.5**	**+0.8**
JYK	**Kaneyama**	**1.92**	**320**	P	**Pn**	**17 59 29.1**	**+0.6**
MJAR	**Matsushiro Arr**	**3.14**	**254**	Pn	**Pn**	**17 59 46.0**	**+0.8**
	comp=E,0.5nm,0.3s,baz=84,slow=15,SNR=19						
MJAR				Sn	**Sn**	**18 00 25.5**	**+4.1**
	comp=E,1.1nm,0.3s,baz=89,slow=26,SNR=5.4 comp=E,5.4nm,0.4s						
MJAR	**Matsushiro Arr**	**3.14**	**254**

	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**50.61**	**312**	P	**P**	**18 07 52.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=79,slow=7.6,SNR=2.3						
	comp=Z,0.3nm,0.6s						
I30M	**Mount Dempster**	**53.28**	**31**	P	**P**	**18 08 14.2**	**+1.1**
ARTI	**Arti**	**56.44**	**318**	P	**P**	**18 08 35.7**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=96,slow=18,SNR=6.2						
	comp=Z,2.3nm,0.6s						
ARTI	**Arti**	**56.44**	**318**	IAmb	IAmb	18 08 36.4	
	comp=Z,3.8nm,0.6s						
WR8	**Warramunga Arr**	**57.54**	**188**	P	**P**	**18 08 43.5**	**-0.5**
WRA	**Warramunga Arr**	**57.55**	**189**	P	**P**	**18 08 43.6**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=8.2,slow=7.2,SNR=3.2						
	comp=Z,0.8nm,0.9s						
AB31	**Akbulak array**	**58.00**	**310**	P	**P**	**18 08 46.4**	**-0.6**
AB31				IAmb	IAmb	18 09 07.4	
	comp=Z,2.3nm,1.1s						
ABKAR	**Akbulak array**	**58.00**	**310**	P	**P**	**18 08 46.1**	**-0.8**
ASAR	**Alice Springs**	**61.27**	**188**	P	**P**	**18 09 09.3**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=6.9,slow=7.4,SNR=5.7						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**61.27**	**188**	P	**P**	**18 09 08.4**	**-1.3**
FINES	**FINESS Array B**	**68.64**	**332**	P	**P**	**18 09 56.9**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=61,slow=9.7,SNR=2.6						
	comp=Z,2.2nm,0.9s						
G06A	**Carlson Farm,**	**69.14**	**49**	P	**P**	**18 10 01.3**	**+0.6**
G06A				IAmb	IAmb	18 10 04.6	
	comp=Z,4.8nm,1.4s						
PDAR	**Pinedale Array**	**77.06**	**46**	P	**P**	**18 10 48.4**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=283,slow=5.3,SNR=2.7						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**77.06**	**46**	P	**P**	**18 10 47.9**	**+0.1**
H03N2	**Juan Fernandez**	**146.63**	**96**	T	T	21 02 42.3	
	baz=291,slow=76,SNR=3.5						
H03N3	**Juan Fernandez**	**146.65**	**96**	T	T	21 02 43.9	
	baz=291,slow=76,SNR=4.1						
H03N1	**Juan Fernandez**	**146.65**	**96**	T	T	21 02 43.4	
	baz=291,slow=76,SNR=3.9						

*UPP **25** 18:00:23.3±0.1, 67.06N×20.97E, h1km, ML2.1, Suspected explosion*
*IDC **25** 18:00:24.3±0.8, 67.04N×21.26E, h0km, mbtmp3.3/5, ML2.0/5, Error ellipse: s-maj=15.2km s-min=6.5km az=111.0*
ISC 25 18:00:22.9±0.9,**67.06N**±0.03×**20.96E**±0.04,**h0**km,**n18**, σ0**s70**/22,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.17**	**293**	P	**Pg**	**18 00 26.7**	**+0.7**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**18 00 34.1**	**+0.3**
ERTU	**Ertsjaerv**	**0.70**	**135**	P	**Pg**	**18 00 36.4**	**+0.1**
PAJU	**Pajala**	**0.85**	**91**	P	**Pg**	**18 00 38.9**	**-0.1**
HARU	**Harads**	**0.90**	**180**	P	**Pg**	**18 00 40.1**	**+0.1**
KUA	**Kurravaara**	**0.93**	**345**	P	**Pg**	**18 00 40.3**	**-0.4**
RATU	**Laukkuluspa**	**0.93**	**326**	P	**Pg**	**18 00 40.5**	**-0.3**
SALU	**Saltoluokta**	**1.01**	**290**	eP	**Pg**	**18 00 42.2**	**+0.1**
SALU	**Saltoluokta**	**1.01**	**290**	P	**Pg**	**18 00 42.1**	**-0.1**
LANU	**Lannavaara**	**1.07**	**21**	P	**Pg**	**18 00 42.8**	**-0.5**
KALU	**Kalix**	**1.54**	**140**	P	**Pn**	**18 00 51.4**	**-0.1**
SJUU	**Sjulsmark**	**1.58**	**170**	P	**Pn**	**18 00 52.1**	**+0.1**
HEF	**Hetta**	**1.70**	**36**	eP	**Pn**	**18 00 54.1**	**+0.3**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**18 01 12.3**	**+0.6**
	0.1nm,0.3s,baz=214,slow=14,SNR=9.7						
ARCES				Sn	**Sn**	**18 01 47.8**	**-0.7**
	0.3nm,0.3s,baz=213,slow=21,SNR=8.1						
ARCES				Lg	Lg	18 01 58.0	
	0.5nm,0.3s,baz=216,slow=29,SNR=6.1						
	0.5nm,0.2s						
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**18 01 55.0**	**+1.4**
	0.1nm,0.3s,baz=346,slow=14,SNR=1.6						
FINES				Sn	**Sn**	**18 03 03.5**	**0.0**
	0.1nm,0.3s,baz=341,slow=25,SNR=2.8						
FINES				Lg	Lg	18 03 32.4	
	0.1nm,0.3s,baz=341,slow=25,SNR=1.0						
	3.3nm,1.2s						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**18 02 12.4**	**+0.5**
	baz=36,slow=19,SNR=1.6						
NOA				Sn	**Sn**	**18 03 35.3**	**-1.1**
	baz=28,slow=20,SNR=1.5						
	0.6nm,0.9s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**18 02 14.8**	**-0.8**
	0.1nm,0.3s,baz=27,slow=13,SNR=1.7						
HFS				Sn	**Sn**	**18 03 41.3**	**-1.6**
	0.2nm,0.3s,baz=27,slow=26,SNR=1.4						
	3.7nm,1.0s						
SPITS	**Spitsbergen Ar**	**11.26**	**355**	Pn	**Pn**	**18 03 05.4**	**+0.7**
	baz=161,slow=15						
	5.6nm,1.0s						

KRSC 25 18:22:39.1±0.6,**54.16N**×**160.09E**,**h99**km±8km,**MI3.7**,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.40**	**252**	eP	Pn	18 22 55.7	+1.6
MKZ	**Mys Kozlova**	**1.04**	**67**	eP	Pn	18 23 01.1	+1.3
MKZ				eS	Sn	18 23 16.8	+1.4
SPN	**Mys Shipunski**	**1.07**	**182**	eP	Pn	18 23 01.2	+1.0
SPN				eS	Sn	18 23 17.0	+0.9
NLC	**Nalytchevo**	**1.09**	**204**	eP	Pn	18 23 01.8	+1.5
NLC				eS	Sn	18 23 18.2	+1.8
SDLR	**Sedlovina**	**1.14**	**219**	eP	Pn	18 23 02.3	+1.2
KRER	**Koryakskii**	**1.17**	**223**	eP	Pn	18 23 03.0	+1.5
KRX	**Arik**	**1.17**	**227**	eP	Pn	18 23 03.0	+1.5
SMAR	**Somma**	**1.18**	**221**	eP	Pn	18 23 02.9	+1.2
AVH	**Avacha**	**1.21**	**222**	eP	Pn	18 23 03.5	+1.7
UGLR	**Uglovaya**	**1.22**	**219**	eP	Pn	18 23 03.3	+1.4
KOK	**Koryaka**	**1.23**	**225**	eP	Pn	18 23 03.6	+1.6
GNL	**Ganaly**	**1.35**	**251**	eP	Pn	18 23 04.7	+1.1
DALK	**Dalny**	**1.39**	**216**	eP	Pn	18 23 04.9	+1.0
DALK				eS	Sn	18 23 23.4	+0.8
KRMR	**Karymshinskiy**	**1.77**	**222**	eP	Pn	18 23 09.7	+1.0
ESO	**Esso**	**1.94**	**336**	eP	Pn	18 23 11.8	+1.0
GRL	**Gorelyy**	**2.02**	**218**	eP	Pn	18 23 13.3	+1.4
MTVR	**Mutnovka**	**2.03**	**215**	eP	Pn	18 23 14.1	+1.9
ASAK	**Asacha**	**2.21**	**217**	eP	Pn	18 23 15.7	+1.3
KBTR	**Krutoberegovo**	**2.58**	**36**	eP	Pn	18 23 21.8	+2.7

*IDC **25** 18:28:19.9±57.0, 22.87S×175.58W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=1070.0km s-min=178.7km az=87.0*
*NEIC **25** 18:28:26.5±1.6, 22.25S±0.2×176.28W±0.05, h10km±2km, mb4.4/10, Error ellipse: s-maj=31.2km s-min=7.9km az=3.0*
ISC 25 18:28:30.9±1.0,**22.4S**±0.2×**176.0W**±0.1,**h71**km,**n22**, σ1**s23**/15,**mb4.2/6**,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.52**	**61**	Pn	**Pn**	**18 30 04.1**	**-0.1**
MSVF	**Nonsavu**	**7.28**	**308**		Pn	18 30 07.6	-7.0
MRZ	**Mangatainoka R**	**19.60**	**200**	P	**Pn**	**18 32 53.8**	**-1.5**
MRZ				IAmb	IAmb	18 33 13.2	
	comp=Z,17nm,1.3s						
GVZ	**Greta Valley S**	**22.50**	**201**	P	**P**	**18 33 27.0**	**+2.5**
CTAO	**Charters Tower**	**35.24**	**267**	P	**P**	**18 35 20.2**	**+1.4**
CTAO				IAmb	IAmb	18 35 26.5	
	comp=Z,8.6nm,1.1s						
STKA	**Stephens Creek**	**38.75**	**247**	P	**P**	**18 35 47.0**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=95,slow=11,SNR=1.4						
	comp=Z,0.8nm,0.6s						
STKA	**Stephens Creek**	**38.75**	**247**	P	**P**	**18 35 47.0**	**-1.4**
BBOO	**Buckleboo**	**43.47**	**245**	P	**P**	**18 36 25.6**	**-1.6**
BBOO				IAmb	IAmb	18 36 39.0	
	comp=Z,9.9nm,1.2s						
AS31	**Alice Springs**	**45.98**	**258**	P	**P**	**18 36 47.2**	**-0.1**
ASAR	**Alice Springs**	**45.98**	**258**	P	**P**	**18 36 47.1**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=99,slow=7.7,SNR=25						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**45.98**	**258**	P	**P**	**18 36 46.4**	**-0.9**
WR8	**Warramunga Arr**	**46.10**	**263**	P	**P**	**18 36 47.7**	**-0.6**
WR8				IAmb	IAmb	18 37 05.2	
	comp=Z,10.0nm,1.3s						
WRA	**Warramunga Arr**	**46.26**	**263**	P	**P**	**18 36 49.3**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=103,slow=8.2,SNR=39						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**46.26**	**263**	P	**P**	**18 36 49.6**	**+0.1**
KNRA	**Kununurra**	**52.45**	**267**	P	**P**	**18 37 36.9**	**+0.2**
MBWA	**Marble Bar**	**59.32**	**258**	P	**P**	**18 38 26.3**	**+0.5**
H03S2	**Juan Fernandez**	**83.37**	**124**	T	T	20 12 26.6	
	baz=246,slow=74,SNR=30						
H03S1	**Juan Fernandez**	**83.39**	**124**	T	T	20 12 40.3	
	baz=246,slow=74,SNR=31						
H03S3	**Juan Fernandez**	**83.39**	**124**	T	T	20 12 31.8	
	baz=246,slow=74,SNR=28						
H03N2	**Juan Fernandez**	**83.52**	**123**	T	T	20 12 26.3	
	baz=251,slow=72,SNR=12						
H03N3	**Juan Fernandez**	**83.52**	**123**	T	T	20 12 31.9	
	baz=251,slow=72,SNR=11						
H03N1	**Juan Fernandez**	**83.53**	**123**	T	T	20 12 36.0	
	baz=251,slow=72,SNR=14						

*AFAD **25** 18:29:40.1, 38.39N×44.49E, h6km±5km, ML2.4*
*AZER **25** 18:29:40.1, 38.43N×44.52E, h10km, ml2.7*
*ISK **25** 18:29:41.9, 38.42N×44.30E, h2km, ML2.6/7*
*TEH **25** 18:29:49.2, 38.38N×45.17E, h15km±13km, ML2.5, Presumed earthquake*
ISC 25 18:29:41.2±1.2,**38.40N**±0.02×**44.52E**±0.02,**h6**km±11km,
n40, σ1**s26**/57,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**303**	P	**Pg**	**18 29 50.1**	**-0.6**
YOVA	**Hakkari_Yksek**	**0.83**	**193**	P	**Pg**	**18 29 56.4**	**-0.7**
ISHB	**Shabestar**	**0.87**	**97**	Pg	**Pg**	**18 29 56.7**	**-1.3**
TVAN	**Van**	**0.88**	**279**	P	**Pg**	**18 29 56.1**	**-2.1**
VMUR	**Van-Muradiye**	**0.95**	**309**	P	**Pb**	**18 30 00.6**	**+0.4**
VMUR				S	**Sb**	**18 30 12.6**	**-0.5**
IMRD	**Marand**	**0.98**	**71**	Pg	**Pg**	**18 29 59.8**	**-0.3**
HAKT	**HAKKARI**	**1.05**	**218**	P	**Pg**	**18 30 01.9**	**+0.5**
HAKT				S	**Sb**	**18 30 17.1**	**+1.0**
NAX	**Nakhchivan**	**1.09**	**44**	P	**Pg**	**18 30 01.9**	**-0.2**
NAX				S	**Sb**	**18 30 16.9**	**-0.2**
GEVA	**Gevas**	**1.15**	**266**	P	**Pb**	**18 30 00.9**	**-2.7**
GEVA				S	**Sg**	**18 30 18.2**	**+0.1**
GEVA				IAML		18 30 22.0	
	comp=N,156nm,0.5s						
GEVA				IAML		18 30 24.0	
	comp=E,129nm,0.4s						
AKDM	**Akdamar-Van**	**1.21**	**267**	Pg	**Pb**	**18 30 02.8**	**-1.8**
ORD	**Ordubad**	**1.27**	**65**	P	**Pn**	**18 30 05.5**	**-0.2**
ORD				S	**Sn**	**18 30 24.1**	**+1.0**
SBZ	**Shahbuz**	**1.28**	**39**	P	**Pn**	**18 30 05.5**	**-0.4**
SBZ				S	**Sn**	**18 30 23.9**	**+0.5**
ITBZ	**Tabriz**	**1.29**	**97**	Pg	**Pn**	**18 30 04.3**	**-1.7**
DYDN	**Diyadin**	**1.31**	**331**	P	**Pb**	**18 30 06.6**	**+0.1**
HYR	**Heyderabad**	**1.35**	**11**	P	**Pg**	**18 30 07.2**	**+0.2**
HYR				S	**Sg**	**18 30 25.9**	**+1.4**
CUKT	**Cukurca**	**1.35**	**212**	Pn	**Pb**	**18 30 07.6**	**+0.5**
CUKT				Sn	**Sg**	**18 30 26.2**	**+1.5**
CUKT	**Cukurca**	**1.35**	**212**	P	**Pn**	**18 30 06.6**	**-0.2**
IAZR	**Azarshahr**	**1.36**	**121**	Pg	**Pn**	**18 30 07.5**	**+0.5**
ADCV	**BITLIS_Adilcev**	**1.46**	**287**	P	**Pn**	**18 30 07.4**	**-0.9**
ADCV				S	**Sb**	**18 30 28.2**	**+0.3**
ADCV				IAML		18 30 31.0	
	comp=N,50nm,0.6s						
IGDI	**IGDIR**	**1.51**	**347**	P	**Pb**	**18 30 09.6**	**-0.1**
IGDI				S	**Sg**	**18 30 32.2**	**+2.5**
IGDI				IAML		18 30 35.0	
	comp=N,41nm,0.6s						
IGDI	**IGDIR**	**1.51**	**347**	P	**Pb**	**18 30 09.8**	**+0.2**
IGDI				S	**Sg**	**18 30 31.5**	**+1.8**
PERV	**Siirt/Pervari-**	**1.62**	**255**	P	**Pn**	**18 30 11.1**	**+0.6**
AGRB	**Hanur-Agry**	**1.67**	**315**	Pn	**Pn**	**18 30 11.4**	**+0.2**
DORK	**Agr/Tutak/Do**	**1.68**	**307**	P	**Pn**	**18 30 09.8**	**-1.5**
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pn	**Pn**	**18 30 11.3**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.74**	**324**	P	**Pn**	**18 30 10.3**	**-1.8**
GNI	**Garni**	**1.76**	**6**	Pn	**Pb**	**18 30 14.4**	**+0.4**
SIRN	**Sirnak**	**1.89**	**242**	P	**Pb**	**18 30 16.6**	**+0.4**
GURO	**Guroymak-BITLI**	**1.96**	**275**	Pn	**Pn**	**18 30 14.9**	**-0.2**
IHRS	**Heris**	**1.99**	**91**	Pg	**Pn**	**18 30 16.4**	**+0.8**
SRTM	**Siirt_Merkez**	**2.08**	**260**	P	**Pb**	**18 30 19.4**	**-0.1**
MUSM	**Mu-Merkez**	**2.38**	**279**	P	**Pb**	**18 30 24.2**	**-0.3**
IHSH	**Hashtrud**	**2.43**	**116**	Pn	**Pb**	**18 30 24.3**	**-1.3**
QRD	**Qoradiz**	**2.43**	**63**	P	**Pb**	**18 30 23.8**	**-1.6**
QRD				S	**Sb**	**18 30 55.0**	**-0.5**
GDB	**GEDABAY**	**2.51**	**22**	P	**Pb**	**18 30 25.0**	**-1.8**
GDB				S	**Sb**	**18 30 58.2**	**+0.2**
SVAN	**Silvan-Diyarba**	**2.62**	**266**	Pn	**Pn**	**18 30 24.6**	**+0.4**
AGDM	**Agdam**	**2.64**	**49**	P	**Pn**	**18 30 26.2**	**+1.8**
AGDM				S	**Sb**	**18 31 00.8**	**-0.9**
GANJ	**Ganja**	**2.65**	**31**	P	**Pb**	**18 30 26.9**	**-2.1**
GANJ				S	**Sb**	**18 31 02.2**	**+0.4**
QZX	**Qazax, Azerbai**	**2.74**	**14**	P	**Pn**	**18 30 27.7**	**+2.0**
QZX				S	**Sb**	**18 31 01.6**	**-2.9**
YRD	**Yardimli**	**2.96**	**79**	P	**Pn**	**18 30 31.5**	**+2.5**
YRD				S	**Sb**	**18 31 09.2**	**-1.8**

*IDC **25** 18:34:00.5±2.4, 47.50N×92.88W, h0km, mbtmp2.9/4, ML2.3/2, Error ellipse: s-maj=26.6km s-min=13.1km az=92.0*
*NEIC **25** 18:34:01.4±1.2, 47.45N±0.05×93.04W±0.05, h0km±2km, mb_Lg3.1/30, Error ellipse: s-maj=8.3km s-min=5.1km az=174.0*
ISC 25 18:33:59.8±0.8,**47.45N**±0.05×**93.09W**±0.05,**h0**km,**n40**, σ0**s85**/34,**Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**1.19**	**65**		**Pg**	**18 34 21.9**	**-0.6**
EYMN	**Ely**	**1.19**	**65**		**Sg**	**18 34 38.1**	**+0.2**
E38A	**The Farm, Brul**	**1.35**	**128**		**Pg**	**18 34 25.4**	**-0.2**
AGMN	**Agassiz Nation**	**2.05**	**295**		**Pn**	**18 34 36.6**	**+1.0**
AGMN				IAmb_Lg		18 35 08.5	
	comp=Z,61nm,0.7s						
SPMN	**Marine on St.**	**2.23**	**175**		**Pn**	**18 34 39.1**	**+1.1**
EPLO	**Experimental L**	**2.27**	**349**		**Pn**	**18 34 39.9**	**+1.4**
F33A	**5 Mile Ranch,**	**2.73**	**235**		**Pn**	**18 34 46.6**	**+1.7**
TBO	**Thunder Bay**	**2.74**	**63**		**Pn**	**18 34 45.4**	**+0.3**
G40A	**Rib Lake**	**2.96**	**136**		**Pn**	**18 34 49.1**	**+1.0**
ULM	**Lac du Bonnet**	**3.35**	**328**	Pn	**Pn**	**18 34 55.0**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=149,slow=16,SNR=7.6						
ULM				Pg	**Pb**	**18 35 00.2**	**+0.1**
	comp=Z,2.0nm,0.3s,baz=147,slow=16,SNR=17						
ULM				Lg	Lg	18 35 44.4	
	comp=Z,3.2nm,0.3s,baz=49,slow=20,SNR=6.0						
	comp=Z,1.3nm,0.3s						
ULM	**Lac du Bonnet**	**3.35**	**328**		**Pn**	**18 34 54.1**	**+0.7**
ULM				IAmb_Lg		18 35 54.8	
	comp=Z,40nm,1.0s						
I10CA	**LAC DU BONNET**	**3.37**	**326**	I	I	18 55 39.8	
	comp=Z,0.1nm,0.7s,baz=141,slow=332,SNR=0.2						
I37A	**Lemond, Waseca**	**3.44**	**184**		**Pn**	**18 34 55.9**	**+1.2**
F42A	**Maple Grove Fa**	**3.81**	**115**		**Pn**	**18 35 00.5**	**+0.8**
F42A				IAmb_Lg		18 36 06.2	
	comp=Z,53nm,1.0s						
I40A	**Norwalk**	**3.96**	**153**		**Pn**	**18 35 02.7**	**+0.9**
MDND	**Maddock**	**4.42**	**278**	Pn	**Pn**	**18 35 09.5**	**+1.4**
ECSD	**EROS Data Cent**	**4.46**	**215**		**Pn**	**18 35 09.5**	**+0.8**
ECSD				IAmb_Lg		18 36 24.4	
	comp=Z,28nm,0.7s						
I42A	**Draeger Farm,**	**4.61**	**139**	Pn	**Pn**	**18 35 10.4**	**-0.2**
I42A				IAmb_Lg		18 36 26.3	
	comp=Z,35nm,0.8s						
H43A	**Windswept, Lux**	**4.76**	**127**	Pn	**Pn**	**18 35 12.7**	**0.0**
H43A				IAmb_Lg		18 36 31.0	
	comp=Z,52nm,0.7s						
JFWS	**Jewell Farm**	**4.96**	**155**		**Pn**	**18 35 15.3**	**-0.2**
JFWS				IAmb_Lg		18 36 34.5	
	comp=Z,29nm,0.8s						
SUSD	**Miller**	**5.08**	**236**	IAmb_Lg		18 36 39.7	
	comp=Z,47nm,0.9s						
E28A	**Huff**	**5.28**	**263**		**Pn**	**18 35 21.2**	**+1.4**
E28A				IAmb_Lg		18 36 48.2	
	comp=Z,42nm,0.8s						
L40A	**Anamosa**	**5.55**	**165**		**Pn**	**18 35 23.2**	**-0.4**
L40A				IAmb_Lg		18 37 01.5	
	comp=Z,39nm,1.0s						
K43A	**Burlington**	**5.82**	**143**	Pn	**Pn**	**18 35 26.9**	**-0.4**
L34A	**Svendsen Farm,**	**5.96**	**204**	Pn	**Pn**	**18 35 28.9**	**-0.4**
L42A	**Oliver, Polo**	**5.96**	**155**		**Pn**	**18 35 29.9**	**+0.6**
L42A				IAmb_Lg		18 37 06.1	
	comp=Z,42nm,0.7s						
E46A	**Sault Ste Mari**	**6.11**	**97**	Pn	**Pn**	**18 35 31.2**	**-0.2**
GLMI	**Grayling**	**6.45**	**111**	Pn	**Pn**	**18 35 36.5**	**+0.6**
N38A	**Joes South For**	**6.66**	**181**	IAmb_Lg		18 37 47.9	
	comp=Z,25nm,0.8s						
N35A	**Tabor**	**6.84**	**196**	IAmb_Lg		18 37 45.0	
	comp=Z,24nm,0.7s						
J47A	**Sunmer**	**7.19**	**123**	IAmb_Lg		18 37 46.7	
	comp=Z,29nm,0.9s						
HDIL	**Hopedale**	**7.41**	**157**	IAmb_Lg		18 37 55.5	
	comp=Z,34nm,0.9s						
P40A	**Paris**	**7.95**	**174**	Pn	**Pn**	**18 35 56.9**	**+0.3**
RSSD	**Black Hills**	**8.34**	**250**	Pn	**Pn**	**18 36 02.0**	**-0.2**
N47A	**Urbana**	**8.45**	**138**	Pn	**Pn**	**18 36 03.8**	**+0.4**
KSU1	**Kansas State U**	**8.73**	**198**	IAmb_Lg		18 38 33.4	
	comp=Z,21nm,1.2s						
PDAR	**Pinedale Array**	**12.54**	**254**	Pn	**Pn**	**18 36 59.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=70,slow=12,SNR=6.0						
PDAR				Sn	**Sn**	**18 39 18.9**	**-1.1**
	baz=56,slow=20,SNR=2.7						
PDAR				Lg	Lg	18 40 31.9	
	comp=Z,0.2nm,0.3s,baz=60,slow=28,SNR=6.8						
SCHQ	**Schefferville**	**17.98**	**56**	Lg	Lg	18 43 11.3	
	comp=Z,0.2nm,0.3s,baz=239,slow=18,SNR=4.9						
YKA	**Yellowknife Ar**	**19.33**	**329**	P	**P**	**18 38 26.4**	**0.0**
	comp=Z,0.1nm,0.3s,baz=138,slow=12,SNR=4.7						
	comp=Z,0.1nm,0.3s						
TXAR	**Lajitas Array**	**19.86**	**208**	P	**P**	**18 38 33.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=34,slow=11,SNR=2.5						

DJA 25 18:48:00.2±1.1,**5.7N**±0.9×**94.4E**±1,**h10**km,**M3.9**/13,**mb3.7**/3,
MLv3.9/13,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	**2.75**	**112**	P	Pn	18 48 42.9	-1.5
MLSI				S	Sn	18 49 19.7	+2.0
KCSI	**Kotacane, Aceh**	**4.29**	**114**	P	Pn	18 49 05.9	+0.2
KCSI				S	Sn	18 49 55.6	-0.3
KULM	**Kulim**	**6.77**	**90**	P	Pn	18 49 39.6	-0.1
	0.1nm11nm,1.8s						
PBSI	**Pulau Batu**	**6.93**	**140**	P	Pn	18 49 38.1	-3.7
IPM	**Ipoh**	**7.20**	**96**	P	Pn	18 49 45.1	-0.5
	0.1nm14nm,1.9s						

*SJA **25** 18:48:39.8±0.6, 19.16S×67.58W, h276km±6km, ML3.6, MW3.4*
*SCB **25** 18:48:42.4±1.4, 19.24S×67.40W, h225km±17km, MB3.8, ML3.6/3, Error ellipse: s-maj=7.9km s-min=3.3km az=1.0*
ISC 25 18:48:40.9±2.0,**19.21S**±0.04×**67.45W**±0.07,
h245km±17km,**n30**, σ1**s16**/44,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEO	**Opoqueri**	**0.76**	**327**	Pg	**Pn**	**18 49 14.9**	**+0.1**
GO01	**Chusmiza**	**1.71**	**254**	Pg	Pn	**18 49 21.7**	**+0.8**
PB08	**IPOC Station P**	**1.85**	**240**	eP	**Pn**	**18 49 23.4**	**+1.3**
PB08				eS	**S**	**18 49 55.9**	**+1.5**
PB08	**IPOC Station P**	**1.85**	**240**	Pg	**Pn**	**18 49 23.1**	**+1.1**
SOET	**ToroToro**	**1.90**	**55**	Pg	**Pn**	**18 49 21.7**	**-0.8**
PB16	**IPOC Station P**	**2.13**	**294**	eP	**Pn**	**18 49 25.7**	**+0.8**
PB16	**IPOC Station P**	**2.13**	**294**	Pg	**Pn**	**18 49 26.2**	**+1.4**
PB11	**IPOC Station P**	**2.15**	**255**	eP	**Pn**	**18 49 25.1**	**+0.6**
PB11				eS	**S**	**18 49 58.8**	**0.0**
PB11				IAML		18 49 59.9	
	comp=Z,90nm,0.2s						
PB11	**IPOC Station P**	**2.15**	**255**	Pg	**Pn**	**18 49 25.1**	**+0.6**
PB11				Sg	**S**	**18 49 57.5**	**-1.3**
PB11				IAML		18 49 59.4	
	comp=Z,245nm,0.2s						
BBOJ	**La Paz, Jacaqu**	**2.33**	**342**	Pg	**Pn**	**18 49 28.3**	**+1.6**
SOEJ	**Jacaque**	**2.33**	**342**	Pg	**Pn**	**18 49 28.3**	**+1.6**
BBOE	**La Paz, Chanca**	**2.43**	**348**	Pg	**Pn**	**18 49 28.8**	**+1.0**
PB01	**IPOC Station P**	**2.64**	**226**	eP	**Pn**	**18 49 30.0**	**+0.6**
PB01				eS	**S**	**18 50 07.4**	**-0.2**
PB01				IAML		18 50 12.9	
	comp=Z,71nm,0.1s						
PB01	**IPOC Station P**	**2.64**	**226**	Pg	**Pn**	**18 49 29.9**	**+0.6**
PB01				Sg	**S**	**18 50 06.0**	**-1.6**
PB01				IAML		18 50 06.7	
	comp=Z,99nm,0.3s						
MOCB	**Mochara**	**2.65**	**140**	Pg	**Pn**	**18 49 30.6**	**+0.8**
BBOD	**La Paz, Gloria**	**2.78**	**337**	Pg	**Pn**	**18 49 32.8**	**+1.5**
PB12	**IPOC Station P**	**2.78**	**282**	eP	**Pn**	**18 49 30.8**	**-0.1**
PB12				eS	**S**	**18 50 08.6**	**-1.6**
PB12				IAML		18 50 09.9	
	comp=Z,124nm,0.5s						
AP01	**Chacalluta**	**2.86**	**286**	eP	**Pn**	**18 49 31.6**

RTZ	Ruatahuna	4.18 225	P		Pn	19 13 36.4 +0.3
MTHZ	Maungataniwha	4.42 223	P		Pn	19 13 39.5 +0.2
MTHZ			S		Sn	19 14 30.3 +0.5
BKZ	Black Stump Fm	4.83 223	P		Pn	19 13 44.9 0.0
BKZ			S		Sn	19 14 39.6 -0.2
TMVZ	Te Maari	5.26 228	P		Pn	19 13 50.4 -0.3
OTVZ	Oturere	5.31 228	P		Pn	19 13 51.3 -0.1
MRZ	Mangatainoka R	6.41 218	P		Pn	19 14 05.7 -0.4
CTZ	Chatham Island	8.30 167	P		Pn	19 14 31.7 0.0

*DJA **25** 19:15:36.8±1.0,2˚S±2˚×12˚8E±˚, h19km±9km, M4.2/25, mB5.0/6, mb4.4/15, MLv4.0/25, Mw(mB)4.3/6*
*IDC **25** 19:15:40.4±2.3,2.06S×128.61E, h75km±26km, mb3.4/4, mbtmp3.7/6, MS3.3/1, Error ellipse: s-maj=23.6km s-min=17.0km az=124.0*
ISC 25 19:15:36.6±0.8,**1.99S**±0.06×**128.40E**±0.06,**h34**km,**n27**, σ1s**66**/27,**mb3.8**/4,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRAI	Karang Ratu	1.32 180		P	Pb	19 16 00.5	-0.5
MSAI	Masohi	1.45 159		P	Pb	19 16 02.5	-0.6
MSAI				S	Sb	19 16 21.3	0.0
AAI	Ambon	1.70 187		P	Pb	19 16 06.4	-1.0
NLAI	Namlea	1.80 226		P	Pn	19 16 06.3	+1.0
SANI	Sanana	2.41 268		P	Pn	19 16 12.6	-1.1
TNTI	Ternate	2.93 339		P	Pn	19 16 22.5	+1.7
BNDI	Bandanaira	2.93 149		P	Pn	19 16 22.9	+2.0
SWI	Sorong	3.07 69		P	Pn	19 16 23.8	+1.1
SWI				S	Sn	19 17 00.0	+1.7
SIJI	Sorong	3.07 69		P	Pn	19 16 23.8	+0.9
	80nm,0.3s,baz=239,slow=18,SNR=128						
SIJI				S	Sn	19 16 58.9	+0.5
	41nm,0.3s,baz=348,slow=23,SNR=12						
SIJI	Sorong	3.07 69		P	Pn	19 16 23.4	+0.6
MNI	Manado	4.93 314		P	Pn	19 16 52.4	+4.0
LUWI	Luwuk	5.71 279		P	Pn	19 16 57.9	-1.1
	0.3nm84nm,1.0s						
MWPI	Manokwari, Pap	5.73 80		P	Pn	19 17 00.5	+1.1
	79nm,1.7s						
RKPI	Ransiki, Papua	5.79 85		P	Pn	19 16 59.7	-0.5
	0.2nm56nm,0.7s						
APSI	Ampana	6.83 279		P	Pn	19 17 15.8	+1.2
MRSI	Marisa	6.91 291		P	Pn	19 17 16.8	+1.2
	0.1nm10nm,0.9s						
SPSI	Sidrap Palu	8.84 257		P	Pn	19 17 45.9	+3.8
	17nm,0.6s						
BSSI	Bau Bau, Buton	8.90 242		P	Pn	19 17 46.0	+3.0
	19nm,1.4s						
KAPI	Kappang	9.14 251		P	Pn	19 17 52.1	+5.9
	19nm,0.4s,baz=57,slow=14,SNR=15						
KAPI	Kappang	9.14 251		P	Pn	19 17 52.2	+6.0
EDFI	Ende, Flores	9.47 225		P	Pn	19 17 52.6	+1.7
WRA	Warramunga Arr	18.77 162		P	P	19 19 52.1	-0.9
	0.3nm,0.5s,baz=341,slow=13,SNR=6.7						
ASAR	Alice Springs	22.20 167		P	P	19 20 29.6	-0.6
	1.0nm,0.7s,baz=346,slow=11,SNR=9.6						
	1.0nm,0.7s						
STKA	Stephens Creek	32.23 159		LR	LR	19 37 41.0	
	comp=Z,52nm,20.2s,baz=205,slow=41						
MKAR	Makanchi Array	63.19 326		P	P	19 26 02.1	+0.6
	0.4nm,0.4s,baz=130,slow=7.8,SNR=11						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	67.43 328		P	P	19 26 28.9	+0.1
	1.0nm,0.7s,baz=132,slow=5.8,SNR=10.0						
	1.0nm,0.7s						
BVAR	Borovoye Array	73.00 328		P	P	19 27 02.9	0.0
	0.3nm,0.5s,baz=104,slow=6.1,SNR=3.6						
	0.3nm,0.5s						

*DNK **25** 19:24:57.4±3.0,81.00N×2.90W, h30km±23km, ML2.1, Presumed earthquake*
*FCIAR **25** 19:24:57.0,81.54N×3.24E, h10km, station OMEGA has station magnitude of 3.40 station ZFI2 has station magnitude of 3.30*
*BER **25** 19:24:57.4±3.7,81.11N×3.77W, h18km±37km, Mw3.7, ML2.1(DNK), Confirmed Earthquake*
ISC 25 19:24:52.4±1.0,**80.97N**±0.06×**3.82W**±0.05,**h10**km,**n21**, σ2s**76**/36,**1C**,**North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	Nord	2.06 294		eP	Pn	19 25 29.5	+2.6
NOR	Nord	2.06 294		i P	Pn	19 25 29.5	+2.6
NOR				i S	Sn	19 25 56.1	+3.6
NOR				IAML		19 26 08.0	
	comp=Z,38nm,0.5s						
KBS	Kingsbay	3.43 119		eP	Pn	19 25 47.7	+1.9
KBS				e		19 26 23.4	
KBS				IAML		19 26 30.1	
	comp=Z,7.9nm,0.6s						
KBS	Kingsbay	3.43 119	⇑	iP	Pn	19 25 47.6	+1.9
KBS				i S	Sn	19 26 23.1	-3.4
BRBB	Barentsburg B	4.35 122		eP	Pn	19 26 01.8	+3.3
BRBB				eS	Sn	19 26 49.8	+0.6
BRBA	Barentsburg A	4.38 122		eP	Pn	19 26 02.5	+3.6
BRBA				eS	Sn	19 26 49.2	-0.7
SPA0	Spitsbergen Ar	4.59 117		eP	Pn	19 26 04.1	+2.4
SPA0				IAML		19 26 05.9	
	comp=Z,33nm,0.3s						
SPA0				eS	Sn	19 26 54.0	-1.0
SPA0	Spitsbergen Ar	4.59 117		eP	Pn	19 26 03.6	+1.8
SPA0				eS	Sn	19 26 52.6	-2.3
DAG	Danmarks Havn	5.08 222		eP	Pn	19 26 12.7	+4.3
DAG				eS	Sn	19 27 06.6	-0.4
DAG	Danmarks Havn	5.08 222		i P	Pn	19 26 12.3	+3.9
DAG				i S	Sn	19 27 06.0	-1.0
DAG				IAML		19 27 12.7	
	comp=Z,9.3nm,0.2s						
HSPB	Hornsund (broa	5.41 127		eP	Pn	19 26 16.1	+3.2
HSPB				IAML		19 26 16.9	
	comp=Z,30nm,0.5s						
HSPB				eS	Sn	19 27 15.7	+0.6
HSPB	Hornsund (broa	5.41 127		eP	Pn	19 26 13.9	+1.0
HSPB				eS	Sn	19 27 14.0	-1.0
HOPEN	Hopen	7.10 114		eP	Pn	19 26 37.7	+1.6
HOPEN				eS	Sn	19 27 53.6	-3.1
HOPEN				IAML		19 28 00.3	
	comp=Z,1.8nm,0.5s						
DBG	Daneborg	7.51 216		eP	Pn	19 26 45.5	+3.7
DBG				eS	Sn	19 28 03.0	-3.8
DBG	Daneborg	7.51 216		i P	Pn	19 26 45.2	+3.4
DBG				i S	Sn	19 28 02.3	-4.5
DBG				IAML		19 30 00.4	
	comp=Z,2.8nm,0.4s						
ZFI2	Zemlya Franca-	7.94 66		eP	Pn	19 26 48.0	+0.4
ZFI2				eS	Sn	19 28 05.2	-12
	comp=Z,8.6nm,3.2s						
OMEGA	Omega	7.96 66		eP	Pn	19 26 48.0	+0.1
OMEGA				eS	Sn	19 28 05.2	-13
	comp=Z,11nm,2.3s						
NEEM	North Greenlan	9.25 273		eP	Pn	19 27 07.0	+1.1
NEEM				i S	Sn	19 28 45.6	-4.4
NEEM	North Greenlan	9.25 273		eP	Pn	19 27 07.0	+1.1
NEEM				i S	Sn	19 28 45.6	-4.4
NEEM				IAML		19 28 54.9	
	comp=Z,3.3nm,0.3s						
SUMG	Summit	11.27 241		eP	Pn	19 27 35.3	+1.7
SUMG				i S	Sn	19 29 31.8	-7.7
SUMG	Summit	11.27 241		eP	Pn	19 27 35.3	+1.7
SUMG				i S	Sn	19 29 31.8	-7.7

*IDC **25** 19:34:06.8±1.3,2.89S×129.79E, h0km, mb3.4/3, mbtmp3.5/6, ML3.4/3, MS2.4/1, Error ellipse: s-maj=39.0km s-min=21.1km az=96.0*
*DJA **25** 19:34:10.2±0.2,3˚S±2˚×13˚0E±˚, h10km, M3.7/18, mb4.3/2, MLv3.4/18*
ISC 25 19:34:07.9±1.6,**2.70S**±0.06×**129.92E**±0.05,**h8**km±13km, **n17**, σ1s**74**/21,**mb3.5**/3,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.19 237		P	Pg	19 34 31.7	+1.0
KRAI	Karang Ratu	1.65 248		P	Pb	19 34 39.4	+0.8
BNDI	Bandanaira	1.81 181		P	Pn	19 34 40.5	+0.9
BNDI				S	Sn	19 35 04.8	+2.0
AAI	Ambon	1.99 240		P	Pb	19 34 44.3	-0.1
SIJI	Sorong	2.26 37		Pn	Pb	19 34 49.4	+0.4
	8.9nm,0.3s,baz=221,slow=20,SNR=47						
SIJI				Sn	Sg	19 35 19.4	-1.2
	5.6nm,0.3s,baz=73,slow=19,SNR=8.8						
	21nm,0.2s						
SIJI	Sorong	2.26 37		P	Pb	19 34 48.4	-0.6
SIJI				S	Sb	19 35 18.1	+1.0
SWI	Sorong	2.26 36		P	Pb	19 34 48.3	-0.7
SWI				S	Sb	19 35 16.7	-0.4
NLAI	Namlea	2.87 259		P	Pn	19 34 56.1	+2.0
NLAI				S	Sb	19 35 32.0	-2.8
SANI	Sanana	3.98 279		P	Pn	19 35 09.6	+0.2
MWPI	Manokwari, Pap	4.47 67		P	Pn	19 35 18.8	+2.7
SOEI	Soe	9.99 218		P	Pn	19 36 19.2	+0.9
KAPI	Kappang	10.41 257		LR	LR	19 40 37.9	
	comp=Z,18nm,18.5s,baz=266,slow=38						
FITZ	Fitzroy Crossi	15.87 195		Pn	Pn	19 37 48.6	-3.3
	0.1nm,0.3s,baz=22,slow=11,SNR=2.2						
	4.8nm,1.0s						
WRA	Warramunga Arr	17.68 166		P	Pn	19 38 13.2	-1.5
	0.1nm,0.3s,baz=349,slow=11,SNR=5.4						
	0.4nm,0.7s						
ASAR	Alice Springs	21.20 170		P	P	19 38 51.8	-2.4
	1.4nm,0.6s,baz=350,slow=11,SNR=12						
	1.4nm,0.6s						
MKAR	Makanchi Array	64.62 326		P	P	19 44 46.1	-0.1
	0.2nm,0.7s,baz=131,slow=6.5,SNR=2.4						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	68.84 328		P	P	19 45 14.5	+1.5
	0.2nm,0.5s,baz=126,slow=7.0,SNR=2.3						
	0.2nm,0.5s						

*IDC **25** 19:43:42.0±2.3,20.44S×177.99W, h503km±25km, mb3.4/9, mbtmp4.3/11, Error ellipse: s-maj=31.3km s-min=14.6km az=151.0*
*NEIC **25** 19:43:43.7±1.7,20.4S±0.1×178.0W±0.1, h520km±7km, mb4.3/27, Error ellipse: s-maj=19.2km s-min=15.6km az=139.0*
ISC 25 19:43:44.6±0.5,**20.4S**±0.1×**178.00W**±0.10,**h534**km,**n58**, σ0s**85**/56,**mb4.2**/21,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.58 305		P	P	19 45 11.0	+0.9
NIUE	Niue	7.71 82		P	P	19 45 38.4	-0.6
AFI	Afiamalu	8.77 44		P	P	19 45 47.2	-2.6
	17nm,0.4s,baz=57,slow=7.3,SNR=4.5						
AFI				S	S	19 47 23.1	-10
	18nm,0.5s,baz=156,slow=19,SNR=5.3						
MXZ	Matakaoa Point	17.40 190		P	P	19 47 16.9	-0.7
URZ	Urewera	18.30 192		P	P	19 47 24.3	-1.5
	6.0nm,0.5s,baz=249,slow=1.7,SNR=5.8						
TCW	Tory Channel	21.76 196		P	P	19 47 55.5	-1.6
QRZ	Quartz Range	21.91 200		P	P	19 47 57.8	-0.7
WHZ	Wether Hill Ro	27.93 201		P	P	19 48 52.4	+0.6
WHZ				IAmb	IAmb	19 49 02.9	
	comp=Z,14nm,1.2s						
CTAO	Charters Tower	33.50 264		P	P	19 49 40.0	-0.1
CTAO				IAmb	IAmb	19 49 40.7	
	comp=Z,6.9nm,1.1s						
PMG	Port Moresby	35.32 283		P	P	19 49 55.1	-0.2
	comp=Z,4.5nm,0.6s,baz=73,slow=7.8,SNR=3.6						
	comp=Z,4.5nm,0.6s						
PMG	Port Moresby	35.32 283		P	P	19 49 54.8	-0.5
PMG				IAmb	IAmb	19 49 55.8	
	comp=Z,5.0nm,0.7s						
COEN	Coen	37.58 274		P	P	19 50 13.7	-0.2
COEN				IAmb	IAmb	19 50 40.6	
	comp=Z,12nm,1.4s						
AS31	Alice Springs	44.54 257		P	P	19 51 08.2	-1.0
ASAR	Alice Springs	44.55 257		P	P	19 51 08.9	-0.3
	comp=Z,5.1nm,0.7s,baz=95,slow=7.6,SNR=72						
ASAR				PcP	PcP	19 52 41.0	+0.2
	comp=Z,0.8nm,0.6s,baz=102,slow=4.1,SNR=5.4						
	comp=Z,5.1nm,0.7s						
ASAR	Alice Springs	44.55 257		P	P	19 51 08.8	-0.4
WB0	Warramunga Arr	44.60 262		P	P	19 51 09.0	-0.5
WB0				IAmb	IAmb	19 51 09.4	
	comp=Z,5.2nm,0.5s						
WRA	Warramunga Arr	44.62 262		P	P	19 51 08.8	-1.0
	comp=Z,2.0nm,0.4s,baz=97,slow=7.9,SNR=40						
WRA				PcP	PcP	19 52 41.2	+0.1
	comp=Z,0.3nm,0.6s,baz=87,slow=3.4,SNR=1.7						
	comp=Z,2.0nm,0.4s						
WRA	Warramunga Arr	44.62 262		IAmb	IAmb	19 51 09.6	
	comp=Z,1.0nm,1.5s						
MTN	Manton Dam	49.16 270		P	P	19 51 43.5	-0.6
KNRA	Kununurra	50.67 266		P	P	19 51 54.6	-0.5
KIWB	Kanaga Island	71.94 1		P	P	19 54 13.3	-0.3
ADK	Adak	71.98 1		P	P	19 54 12.9	-0.9
TPUB	Ta-pu	73.92 303		P	P	19 54 25.1	-0.6
TPUB				IAmb	IAmb	19 54 29.1	
	comp=Z,23nm,1.3s						
UNV	Unalaska Valle	74.60 7		P	P	19 54 28.0	-0.7
PETK	Petropavlovsk-	76.17 345		P	P	19 54 37.8	+0.2
O02D	Mt. Diablo Mre	79.20 40		P	P	19 54 56.0	+1.7
O02D				IAmb	IAmb	19 55 16.2	
	comp=Z,16nm,1.5s						
BELA	Belgrano 2	79.66 173		P	P	19 54 56.4	+0.3
KDAK	Kodiak Island	80.72 13		P	P	19 55 01.2	-0.5
L04D	Klamath Falls	80.75 38		P	P	19 55 03.4	+1.0
L04D				IAmb	IAmb	19 55 42.4	
	comp=Z,11nm,1.4s						
NVAR	Mina Array Bea	80.95 43		P	P	19 55 04.3	+0.6
	comp=Z,1.0nm,0.7s,baz=268,slow=4.2,SNR=5.2						
	comp=Z,1.0nm,0.7s						
N14K	Kuskokwak Cree	81.14 8		P	P	19 55 04.4	+0.6
N15K	Kwethluk River	81.59 9		P	P	19 55 06.8	+0.6
N15K				IAmb	IAmb	19 55 27.4	
	comp=Z,17nm,1.4s						
K05A	Summer Lake	81.88 39		P	P	19 55 09.8	+1.5
J05D	Fort Rock, OR	82.03 38		P	P	19 55 10.6	+1.6
J05D				IAmb	IAmb	19 55 11.7	
	comp=Z,5.8nm,0.7s						
M16K	Timber Creek	82.58 9		P	P	19 55 11.9	+0.7
M16K				IAmb	IAmb	19 55 14.1	
	comp=Z,20nm,1.4s						
GAMB	Gambell	84.04 3		P	P	19 55 19.2	+0.9
J16K	Anvik River	84.52 8		P	P	19 55 21.4	+0.7
J16K				IAmb	IAmb	19 55 23.4	
	comp=Z,11nm,1.4s						
GSI	Gunungsitoli	85.23 273			P	19 55 26.3	+0.9
GSI				IAmb	IAmb	19 55 26.9	
	comp=Z,4.4nm,0.8s						
SEY	Seymchan	86.28 347		P	P	19 55 29.3	0.0
	comp=Z,2.1nm,0.6s,baz=137,slow=7.5,SNR=7.4						
	comp=Z,2.1nm,0.6s						
TXAR	Lajitas Array	87.00 57		P	P	19 55 34.1	+0.6
	comp=Z,0.6nm,0.8s,baz=217,slow=7.4,SNR=6.0						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	87.00 57		P	P	19 55 34.8	+1.2
ILAR	Eielson Array	88.22 13		P	P	19 55 37.9	-0.4
	comp=Z,0.8nm,0.5s,baz=219,slow=5.2,SNR=14						
	comp=Z,0.8nm,0.5s						
PDAR	Pinedale Array	88.89 43		P	P	19 55 43.1	+0.8
	comp=Z,0.7nm,0.6s,baz=208,slow=3.9,SNR=7.7						
	comp=Z,0.7nm,0.6s						
PDAR	Pinedale Array	88.89 43		P	P	19 55 42.1	-0.2
CMAR	Chiang Mai Arr	90.08 290		P	P	19 55 49.5	+1.4
	comp=Z,0.7nm,0.6s,baz=120,slow=3.0,SNR=7.0						
	comp=Z,0.7nm,0.6s						
BVAR	Borovoye Array	119.00 320		PKP	PKPdf	20 01 31.9	-0.5
	comp=Z,0.8nm,0.3s,baz=119,slow=2.7,SNR=7.1						
HFS	Hagfors	139.44 351		PKhKP	PKPpre	20 02 04.8	
	comp=Z,6.5nm,1.1s,baz=10,slow=3.2,SNR=1.6						
AKASG	Malin Array Be	142.93 331		PKhKP	PKPpre	20 02 14.2	
	comp=Z,3.3nm,0.5s,baz=42,slow=4.4,SNR=15						
EKA	Eskdalemuir Ar	144.90 5		PKP	PKPbc	20 02 21.4	+0.2
	comp=Z,0.9nm,0.5s,baz=0.2,slow=2.9,SNR=2.8						
BR131	Keskin Array S	146.78 312			PKPbc	20 02 26.5	-0.6
BRTR	Keskin Array B	146.78 312		PKPbc	PKPbc	20 02 27.0	-0.2
	comp=Z,1.2nm,0.6s,baz=143,slow=4.1,SNR=8.5						
BRTR	Keskin Array B	146.78 312			PKPbc	20 02 26.5	-0.6
MMAI	Mount Meron Ar	147.77 300		PKPbc	PKiKP	20 02 30.8	-0.5
	comp=Z,1.7nm,0.5s,baz=76,slow=6.1,SNR=5.5						
CONA	Conrad Observa	150.34 341		ePKP	PKiKP	20 02 36.3	+0.2
	comp=Z,1.5nm,0.6s						
RONA	Rosalia, Austr	150.41 340		ePKP	PKiKP	20 02 36.0	-0.2
	comp=Z,2.5nm,0.4s						
LESA	Schwarzleotal	151.68 345		i PKP	PKPbc	20 02 38.8	+0.1
	comp=Z,0.9nm,0.3s						
WTTA	Wattenberg	152.08 346		i PKP	PKPbc	20 02 39.6	-0.1
	comp=Z,1.0nm,0.3s						
ABTA	Abfaltersbach	152.35 344		i PKP	PKPbc	20 02 39.7	-0.6
	comp=Z,2.0nm,0.5s						

*IDC **25** 19:48:01.1±1.5,9.89N×127.84E, h0km, mb3.5/5, mbtmp3.6/6, ML4.9/1, Error ellipse: s-maj=62.8km s-min=21.0km az=74.0*
ISC 25 19:48:08.0±1.4,**9.5N**±0.1×**127.1E**±0.2,**h41**km,**n6**,σ0s**50**/6, **mb3.6**/5,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	2.88 211		Pn	Pn	19 48 58.8	+7.5
	97nm,0.3s,baz=229,slow=20,SNR=6.1						
DAV				Sn	Sn	19 49 24.7	0.0
	58nm,0.3s,baz=59,slow=21,SNR=4.2						
	252nm,0.4s						
WRA	Warramunga Arr	30.16 166		P	P	19 54 14.0	-0.3
	0.4nm,0.7s,baz=344,slow=8.7,SNR=1.8						
	0.4nm,0.7s						
ASAR	Alice Springs	33.67 169		P	P	19 54 45.6	+0.4
	0.3nm,0.6s,baz=349,slow=7.6,SNR=5.6						
	0.3nm,0.6s						
MKAR	Makanchi Array	53.09 323		P	P	19 57 21.5	+0.2
	0.5nm,0.6s,baz=126,slow=7.9,SNR=7.5						
	0.5nm,0.6s						
ZALV	Zalesovo Beam	55.64 331		P	P	19 57 40.1	+0.3
	0.2nm,0.3s,baz=115,slow=6.5,SNR=1.8						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	57.12 325		P	P	19 57 49.8	-0.6
	0.4nm,0.5s,baz=121,slow=7.9,SNR=5.3						
	0.4nm,0.5s						

*MOS **25** 19:51:05.1±1.5,47.52N×152.14E, h136km, mb4.4/6, Error ellipse: s-maj=9.7km s-min=6.7km az=61.8*
*SKHL **25** 19:51:05.8±0.2,47.30N×152.40E, h134km±6km, mb5.2/7, mbv5.3/3, msh5.2/3, msha5.6/7*
*NEIC **25** 19:51:06.8±2.2,47.6N±0.1×152.1E±0.2, h135km±7km, mb4.3/57, Error ellipse: s-maj=19.3km s-min=10.8km az=140.0*
*JMA **25** 19:51:06.9±1.1,46˚N±7˚×15˚3E±˚, h198km, MV3.7/14, KURILE ISLANDS REGION*
*IDC **25** 19:51:09.1±1.9,47.66N×151.95E, h155km±17km, mb3.5/27, mbtmp3.9/33, MS3.3/1, Error ellipse: s-maj=15.8km s-min=9.8km az=148.0*
ISC 25 19:51:04.7±0.4,**47.32N**±0.05×**152.32E**±0.05,**h128**km, **n194**, σ1s**81**/202,**mb4.2**/62,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	3.72 238		eP	Pn	19 52 03.4	+2.7
KUR				i S	Sn	19 52 48.5	+4.5
KUR				pmax	pmax		
	comp=Z,52nm,0.6s						
KUR				smax	smax		
	comp=N,132nm,0.5s						
KUR	Kuril'sk	3.72 238		eP	Pn	19 52 03.3	+2.6
KUR				AMB	AMB	19 52 04.1	
	comp=N,730nm,2.0s						
KUR				AMB	AMB	19 52 04.8	
	comp=N,50nm,0.4s						
KUR				eS	Sn	19 52 46.4	+2.4
KUR				A	A	19 52 46.7	
	comp=N,1μm,2.0s						
KUR				A	A	19 52 46.7	
	comp=N,700nm,2.0s						
KUR				A	A	19 52 51.8	
	comp=N,100nm,0.5s						
KUR				A	A	19 52 51.8	
	comp=N,90nm,0.5s						
SKR	Severo-Kuril's	4.20 35		ePN	Pn	19 52 07.7	+0.8
SKR				eS	Sn	19 52 53.8	-1.4
SKR				pmax	pmax		
	comp=Z,51nm,0.4s						
SKR				smax	smax		
	comp=E,84nm,0.4s						
SKR				smax	smax		
	comp=N,61nm,0.4s						
SKR	Severo-Kuril's	4.20 35		eP	Pn	19 52 07.5	+0.6
SKR				AMB	AMB	19 52 08.8	
	comp=N,40nm,0.3s						
SKR				AMB	AMB	19 52 09.4	
	comp=N,1μm,3.0s						
SKR				eS	Sn	19 52 53.8	-1.4
SKR				A	A	19 52 56.3	
	comp=N,100nm,0.2s						
SKR				A	A	19 52 56.3	
	comp=N,80nm,0.2s						
SKR				A	A	19 53 00.7	
	comp=N,2μm,3.0s						
SKR				A	A	19 53 00.7	
	comp=N,1μm,3.0s						
PAU	Pauzhetka	5.09 34		eP	Pn	19 52 19.3	+0.5
PAU				AMB	AMB	19 52 22.6	
	comp=N,40nm,0.3s						
PAU				eS	Sn	19 53 14.3	-2.2
PAU				A	A	19 53 15.9	
	comp=N,70nm,0.4s						
PAU				A	A	19 53 15.9	
	comp=N,140nm,0.4s						
SHO	Shikotan	5.17 230		eP	Pn	19 52 28.5	+8.6
SHO				eS	Sn	19 53 23.1	+4.6
SHO				A	A	19 53 28.8	
	comp=N,50nm,0.4s						
SHO				A	A	19 53 28.8	
	comp=N,60nm,0.4s						
YUK	Yuzh-Kuril'sk	5.59 236		PN	Pn	19 52 26.1	+0.5
YUK				i S	Sn	19 53 28.2	-0.4
YUK				pmax	pmax		
	comp=N,33nm,0.3s						
YUK				pmax	pmax		
	comp=Z,186nm,0.3s						
YUK				pmax	pmax		
	comp=E,31nm,0.1s						
YUK				smax	smax		
	comp=N,61nm,0.3s						
YUK				smax	smax		
	comp=E,120nm,0.6s						
YUK	Yuzh-Kuril'sk	5.59 236		eP	Pn	19 52 26.2	+0.6
YUK				AMB	AMB	19 52 27.2	
	comp=E,190nm,0.3s						
YUK				i S	Sn	19 53 30.0	+1.4
YUK				A	A	19 53 41.4	
	comp=E,60nm,0.4s						
YUK				A	A	19 53 41.4	
	comp=E,120nm,0.4s						
RUSJ	Misakicho	5.90 240		ePN	Pn	19 52 32.5	+2.7
RUSJ				i S	Sn	19 53 39.9	+3.8
GLVR	Golovnino	5.96 236		PN	Pn	19 52 29.9	-0.7
GLVR				i S	Sn	19 53 35.1	-2.6
GLVR				pmax	pmax		
	comp=Z,22nm,0.1s						
GLVR				smax	smax		
	comp=N,139nm,0.3s						
GLVR				smax	smax		
	comp=E,71nm,0.2s						
GLVR	Golovnino	5.96 236		eP	Pn	19 52 29.9	-0.7
GLVR				AMB	AMB	19 52 31.7	
	comp=E,220nm,0.3s						
GLVR				i S	Sn	19 53 35.1	-2.6
GLVR				A	A	19 53 40.5	
	comp=E,140nm,0.3s						
GLVR				A	A	19 53 40.5	
	comp=E,70nm,0.3s						
JRA	Rausu	6.07 239		eP	Pn	19 52 33.7	+1.6
NEM2	Nemuro 2	6.09 232		eP	Pn	19 52 30.3	-1.9
NEM2				eS	Sn	19 53 34.6	-6.1
NMR	Nemuro--Hokkai	6.09 232		ePN	Pn	19 52 30.5	-1.9
NMR	Nemuro--Hokkai	6.09 232		eP	Pn	19 52 30.5

PET	**Petropavlovsk**	**7.01**	**33**	Pn		**Pn**	**19 52 43.5**	**-1.1**
PET				Sn		**Sn**	**19 53 59.3**	**-3.6**
PET	**Petropavlovsk**	**7.01**	**33**	*e*P		**Pn**	**19 52 46.3**	**+1.6**
PET				*e*S		**Sn**	**19 54 00.6**	**-2.3**
UGL	**Uglegorsk**	**7.08**	**288**	*e*P		**Pn**	**19 52 49.8**	**+4.3**
UGL				AMB	AMB		19 52 56.0	
comp=E,50nm,0.4s								
JAR	**Ashorobuto**	**7.24**	**239**	*e*P		**Pn**	**19 52 48.3**	**+0.4**
JAR				*e*S		**Sn**	**19 54 08.1**	**-0.5**
TYV	**Tymovskoe**	**7.27**	**303**	*e*PN		**Pn**	**19 52 50.7**	**+2.6**
TYV				*e*S		**Sn**	**19 54 09.8**	**+0.7**
TYV				pmax	pmax			
comp=Z,14nm,0.9s								
TYV				pmax	pmax			
comp=Z,200nm,3.6s								
TYV				smax	smax			
comp=N,6.0nm,1.2s								
TYV				smax	smax			
comp=E,5.0nm,1.2s								
TYV				smax	smax			
comp=N,600nm,8.4s								
TYV				smax	smax			
comp=E,1μm,8.4s								
TYV	**Tymovskoe**	**7.27**	**303**	*e*P		**Pn**	**19 52 50.7**	**+2.6**
TYV				AMB	AMB		19 52 55.5	
comp=E,200nm,3.7s								
TYV				*e*S		**Sn**	**19 54 10.5**	**+1.4**
TYV				A	A		19 54 16.8	
comp=E,600nm,8.5s								
TYV				A	A		19 54 16.8	
comp=E,1μm,8.5s								
JOB	**Onbets**	**7.45**	**237**	*e*P		**Pn**	**19 52 49.3**	**-1.2**
JOB				*e*S		**Sn**	**19 54 09.8**	**-3.7**
JWK2	**Keihoku**	**7.49**	**258**	*e*P		**Pn**	**19 52 55.5**	**+4.3**
JKA	**Kamikawa-asahi**	**7.51**	**248**			**Pn**	**19 52 53.7**	**+2.1**
JKA	**Kamikawa-asahi**	**7.51**	**248**	*e*P		**Pn**	**19 52 54.3**	**+2.8**
ASAJ	**Asahikawa**	**7.52**	**248**	P		**Pn**	**19 52 54.3**	**+2.7**
comp=E,19nm,0.7s,baz=79,slow=16,SNR=47								
JKK2	**Kamakawa 2**	**7.54**	**246**	*e*P		**Pn**	**19 52 53.5**	**+1.6**
JCH	**Churui**	**7.90**	**237**	*e*P		**Pn**	**19 52 55.0**	**-1.7**
JCH				*e*S		**Sn**	**19 54 17.4**	**-7.0**
JNBK	**Urakawa-nobuka**	**8.46**	**237**	*e*P		**Pn**	**19 53 01.8**	**-2.5**
NKL	**Nikolayevsk**	**9.47**	**312**	*e*P		**Pn**	**19 53 17.8**	**+0.1**
JANG	**Nango**	**10.43**	**232**	*e*P		Pn	19 53 25.5	-5.3
JANG				*e*S		Sn	19 55 13.5	-12
KBG	**Krutoberegovo**	**11.01**	**32**	*e*P		**Pn**	**19 53 36.9**	**-1.4**
KLR	**Kul'dur**	**13.83**	**286**	P		**Pn**	**19 54 15.2**	**+0.1**
comp=E,1.2nm,0.8s,baz=107,slow=14,SNR=10								
USRK	**Ussuriysk Ar.**	**14.52**	**265**	P		**P**	**19 54 25.6**	**-1.4**
comp=E,3.4nm,0.6s,baz=66,slow=13,SNR=6.7								
MJB9	**Matsu-Tunnel**	**15.01**	**229**	P		**Pn**	**19 54 31.4**	**+1.1**
MJB9				IAmb	IAmb		19 55 08.4	
comp=Z,13nm,1.2s								
MAJO	**Matsushiro**	**15.01**	**229**			**Pn**	**19 54 30.7**	**+0.5**
MAJO				IAmb	IAmb		19 54 48.8	
comp=Z,12nm,1.1s								
MAJO	**Matsushiro**	**15.01**	**229**	P		**Pn**	**19 54 30.7**	**+0.5**
MAJO				pmax	pmax			
comp=Z,12nm,1.2s								
MJAR	**Matsushiro Arr**	**15.01**	**229**	P		**P**	**19 54 33.9**	**+1.4**
comp=Z,1.1nm,0.7s,baz=19,slow=10,SNR=5.0								
MJAR	**Matsushiro Arr**	**15.01**	**229**	P		**Pn**	**19 54 31.2**	**+1.0**
SEY	**Seymchan**	**15.65**	**0**	P		**Pn**	**19 54 37.9**	**0.0**
comp=Z,1.8nm,0.5s,baz=178,slow=9.8,SNR=15								
MDJ	**Mudanjiang**	**16.02**	**269**			**Pn**	**19 54 41.0**	**-1.6**
HEH	**HeiHe**	**16.65**	**289**	*e*P		**P**	**19 54 51.0**	**+0.5**
HEH				pmax	pmax			
comp=Z,10.0nm,1.1s								
ZEA	**Zeya**	**17.13**	**301**	*e*P		**Pn**	**19 54 56.3**	**+0.2**
ZEA	**Zeya**	**17.13**	**301**	*e*P		**Pn**	**19 54 56.3**	**+0.2**
JMN	**Monobe**	**19.45**	**232**	P		**P**	**19 55 22.6**	**+1.4**
KIWB	**Kanaga Island**	**20.23**	**66**	P		**P**	**19 55 29.7**	**+0.3**
KSRS	**Korea Array**	**20.46**	**250**	P		**P**	**19 55 33.9**	**+1.8**
comp=Z,2.1nm,0.6s,baz=54,slow=10,SNR=8.6								
comp=Z,2.1nm,0.6s								
ADK	**Adak**	**20.52**	**66**	P		**P**	**19 55 32.5**	**+0.1**
ADK	**Adak**	**20.52**	**66**	P		**P**	**19 55 32.6**	**+0.1**
ADK				pmax	pmax			
comp=Z,51nm,1.1s								
HILR	**Hailar Array B**	**21.63**	**288**	P		**P**	**19 55 42.5**	**-2.0**
comp=Z,1.1nm,0.3s,baz=74,slow=11,SNR=4.4								
comp=Z,1.1nm,0.3s								
C16K	**Lisburne Hills**	**29.84**	**30**	P		**P**	**19 57 00.1**	**+0.8**
C16K				IAmb	IAmb		19 57 01.4	
comp=Z,5.3nm,0.9s								
H11N2	**WAKE ISLAND Hy**	**29.97**	**152**	T		T	20 28 42.8	
baz=340,slow=76,SNR=191								
H11N1	**WAKE ISLAND Hy**	**29.99**	**152**	T		T	20 28 36.7	
baz=340,slow=76,SNR=132								
H11N3	**WAKE ISLAND Hy**	**29.99**	**152**	T		T	20 28 33.3	
baz=340,slow=76,SNR=109								
ULN	**Ulaanbaatar**	**30.20**	**288**	P		**P**	**19 57 01.9**	**-1.1**
ULN	**Ulaanbaatar**	**30.20**	**288**	P		**P**	**19 57 01.9**	**-1.1**
ULN				pmax	pmax			
comp=Z,3.0nm,1.2s								
ULN	**Ulaanbaatar**	**30.20**	**288**	*e*P		**P**	**19 57 01.9**	**-1.1**
O15K	**Ungalikthiuk R**	**30.31**	**49**	P		**P**	**19 57 05.6**	**+2.0**
SONM	**Songino Array**	**30.64**	**288**	P		**P**	**19 57 05.2**	**-1.5**
comp=Z,0.2nm,0.4s,baz=68,slow=7.2,SNR=2.0								
comp=Z,0.2nm,0.4s								
SONM	**Songino Array**	**30.64**	**288**	P		**P**	**19 57 04.7**	**-2.0**
F17K	**Baldwin Pennin**	**30.74**	**35**			**P**	**19 57 08.5**	**+1.3**
F17K				IAmb	IAmb		19 57 09.7	
comp=Z,5.0nm,0.8s								
H11S1	**WAKE ISLAND Hy**	**31.06**	**153**	T		T	20 30 01.1	
baz=341,slow=76								
H11S3	**WAKE ISLAND Hy**	**31.07**	**153**	T		T	20 30 03.4	
baz=341,slow=76								
H11S2	**WAKE ISLAND Hy**	**31.08**	**153**	T		T	20 30 07.2	
baz=341,slow=76								
C18K	**Utukok River**	**31.41**	**31**			**P**	**19 57 13.8**	**+0.6**
G18K	**Tagagawik**	**31.64**	**36**	P		**P**	**19 57 16.4**	**+1.3**
C19K	**Lookout Ridge**	**32.10**	**30**			**P**	**19 57 20.4**	**+1.2**
C19K				IAmb	IAmb		19 57 21.3	
comp=Z,5.1nm,0.7s								
D19K	**Kuna River**	**32.45**	**32**	P		**P**	**19 57 23.4**	**+1.2**
D19K				IAmb	IAmb		19 57 24.2	
comp=Z,7.3nm,0.7s								
E19K	**Redstone River**	**32.52**	**34**	P		**P**	**19 57 24.4**	**+1.5**
E19K				IAmb	IAmb		19 57 26.3	
comp=Z,2.2nm,0.5s								
D22K	**Ayikyak River**	**34.47**	**32**	IAmb	IAmb		19 57 42.1	
comp=Z,2.8nm,0.7s								
E22K	**Anaktuvuk Pass**	**34.67**	**33**	IAmb	IAmb		19 57 44.1	
comp=Z,4.4nm,0.5s								
E24K	**Your Creek**	**35.90**	**33**	IAmb	IAmb		19 58 00.5	
comp=Z,1.8nm,0.6s								
ILAR	**Eielson Array**	**36.45**	**39**	P		**P**	**19 57 57.1**	**+0.4**
comp=Z,0.4nm,0.5s,baz=256,slow=7.4,SNR=7.6								
comp=Z,0.4nm,0.5s								
D25K	**Kavik River**	**36.77**	**31**	IAmb	IAmb		19 58 01.5	
comp=Z,5.1nm,0.6s								
C27K	**Jago River**	**37.72**	**31**	IAmb	IAmb		19 58 09.5	
comp=Z,3.2nm,0.5s								
D27M	**Malcolm River**	**38.69**	**32**	IAmb	IAmb		19 58 18.2	
comp=Z,5.4nm,1.0s								
INK	**Inuvik**	**41.47**	**33**	P		**P**	**19 58 40.1**	**+1.8**
comp=Z,1.8nm,0.3s,baz=296,slow=6.2,SNR=29								
comp=Z,1.8nm,0.3s								
INK	**Inuvik**	**41.47**	**33**	P		**P**	**19 58 39.9**	**+1.6**
INK				IAmb	IAmb		19 58 41.1	
comp=Z,4.5nm,1.1s								
ZALV	**Zalesovo Beam**	**41.84**	**305**	P		**P**	**19 58 39.5**	**-2.1**
comp=Z,0.3nm,0.3s,baz=53,slow=5.6,SNR=2.0								
ZALV				PcP		**PcP**	**20 00 34.2**	**-0.7**
comp=Z,0.5nm,0.5s,baz=61,slow=7.0,SNR=4.5								
comp=Z,0.3nm,0.3s								
C36M	**Paulatuk**	**44.60**	**30**	IAmb	IAmb		19 59 06.0	
comp=Z,5.0nm,0.6s								
MK31	**Makanchi Array**	**46.20**	**297**	P		**P**	**19 59 14.7**	**-1.8**
MK31	**Makanchi Array**	**46.20**	**297**	P		**P**	**19 59 14.7**	**-1.8**
MK31				pmax	pmax			
comp=Z,1.0nm,1.1s								
MKAR	**Makanchi Array**	**46.20**	**297**	P		**P**	**19 59 15.3**	**-1.2**
comp=Z,0.4nm,0.6s,baz=60,slow=6.7,SNR=8.4								
MKAR				PcP		**PcP**	**20 00 49.5**	**-0.6**
comp=Z,0.5nm,0.7s,baz=35,slow=1.2,SNR=3.9								
comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**46.20**	**297**	P		**P**	**19 59 14.8**	**-1.6**
KURK	**Kurchatov**	**46.60**	**303**	P		**P**	**19 59 17.9**	**-1.6**
KURK	**Kurchatov**	**46.60**	**303**	P		**P**	**19 59 18.5**	**-1.0**
KURK							20 00 51.4	
KURK	**Kurchatov**	**46.60**	**303**	*e*P		**P**	**19 59 18.5**	**-1.0**
KURBB	**Kurchatov Arra**	**46.69**	**303**	P		**P**	**19 59 18.5**	**-1.7**
comp=Z,0.9nm,0.7s,baz=71,slow=8.4,SNR=5.2								
KURBB				PcP		**PcP**	**20 00 51.4**	**-0.2**
comp=Z,0.4nm,0.7s,baz=61,slow=2.7,SNR=3.0								
comp=Z,0.9nm,0.7s								
LSA	**Lhasa**	**49.70**	**272**			**P**	**19 59 45.2**	**+1.0**
LSA				IAmb	IAmb		19 59 46.8	
comp=Z,2.0nm,0.6s								
LSA	**Lhasa**	**49.70**	**272**	P		**P**	**19 59 45.2**	**+1.0**
LSA				pmax	pmax			
comp=Z,2.0nm,0.6s								
BVAR	**Borovoye Array**	**50.08**	**309**	P		**P**	**19 59 44.8**	**-1.4**
comp=Z,0.6nm,0.3s,baz=53,slow=7.9,SNR=14								
BVAR				PcP		**PcP**	**20 01 04.3**	**+0.4**
comp=Z,0.6nm,0.5s,baz=29,slow=3.4,SNR=4.3								
comp=Z,0.6nm,0.3s								
BORK	**Borovoye**	**50.11**	**309**	P		**P**	**19 59 45.5**	**-0.8**
BORK	**Borovoye**	**50.11**	**309**	P		**P**	**19 59 45.5**	**-0.8**
BORK				pmax	pmax			
comp=Z,3.0nm,1.4s								
RES	**Resolute Bay**	**50.47**	**19**			**P**	**19 59 49.4**	**+0.6**
RES				IAmb	IAmb		19 59 50.3	
comp=Z,7.3nm,1.4s								
RES	**Resolute Bay**	**50.47**	**19**	P		**P**	**19 59 49.4**	**+0.6**
RES				pmax	pmax			
comp=Z,7.0nm,1.5s								
YKAW3	**Yellowknife Wh**	**50.76**	**37**	P		**P**	**19 59 52.1**	**+1.0**
YKAW3				IAmb	IAmb		20 00 28.1	
comp=Z,4.6nm,1.4s								
YKA	**Yellowknife Ar**	**50.80**	**37**	P		**P**	**19 59 52.6**	**+1.2**
comp=Z,0.6nm,0.6s,baz=304,slow=7.9,SNR=7.3								
YKA				PcP		**PcP**	**20 01 07.2**	**+0.9**
comp=Z,0.1nm,0.4s,baz=309,slow=4.5,SNR=2.2								
comp=Z,0.6nm,0.6s								
SIJI	**Sorong**	**51.40**	**207**	LR	LR		20 18 20.0	
comp=Z,29nm,21.4s,baz=110,slow=32								
CHTO	**Chiang Mai**	**51.73**	**256**			**P**	**19 59 59.1**	**+0.2**
CHTO				IAmb	IAmb		20 00 01.1	
comp=Z,5.0nm,0.7s								
CHTO	**Chiang Mai**	**51.73**	**256**	P		**P**	**19 59 59.1**	**+0.2**
CHTO				pmax	pmax			
comp=Z,5.0nm,0.7s								
SHL	**Shillong**	**51.85**	**267**	P		**P**	**19 59 59.6**	**-0.3**
SHL				IAmb	IAmb		20 00 00.8	
comp=Z,4.7nm,0.8s								
SHL	**Shillong**	**51.85**	**267**	P		**P**	**19 59 59.6**	**-0.3**
SHL				pmax	pmax			
comp=Z,5.0nm,0.8s								
SPITS	**Spitsbergen Ar**	**51.96**	**350**	P		**P**	**19 59 56.9**	**-3.0**
comp=Z,5.3nm,1.0s,baz=59,slow=8.9,SNR=6.0								
comp=Z,5.3nm,1.0s								
CMAR	**Chiang Mai Arr**	**51.98**	**255**	P		**P**	**20 00 02.3**	**+1.5**
comp=Z,2.1nm,0.7s,baz=38,slow=7.3,SNR=20								
comp=Z,2.1nm,0.7s								
CMAR	**Chiang Mai Arr**	**51.98**	**255**	P		**P**	**20 00 01.3**	**+0.5**
BOOM	**Boomskoye usch**	**52.29**	**295**	P		**P**	**20 00 02.1**	**-0.9**
BOOM	**Boomskoye usch**	**52.29**	**295**	P		**P**	**20 00 02.1**	**-0.9**
BOOM				pmax	pmax			
comp=Z,1.0nm,0.6s								
TULEG	**Thule**	**53.67**	**11**	P		**P**	**20 00 12.2**	**-0.3**
TULEG	**Thule**	**53.67**	**11**	*i*P		**P**	**20 00 12.1**	**-0.3**
TULEG				IAmb	IAmb		20 00 12.8	
comp=Z,5.9nm,0.8s								
EVN	**Everest**	**53.75**	**273**			**P**	**20 00 14.8**	**+0.4**
EVN				IAmb	IAmb		20 00 27.4	
comp=Z,5.1nm,1.4s								
NEEM	**North Greenlan**	**54.66**	**6**	*i*P		**P**	**20 00 19.3**	**-0.6**
NEEM				IAmb	IAmb		20 00 20.2	
comp=Z,2.8nm,0.3s								
KULLO	**Kullorsuaq**	**56.79**	**9**	*i*P		**P**	**20 00 34.4**	**-0.3**
KULLO				IAmb	IAmb		20 00 35.1	
comp=Z,10nm,0.6s								
ILON	**Igloolik, Nuna**	**57.04**	**20**	P		**P**	**20 00 36.6**	**0.0**
AB31	**Akbulak array**	**57.65**	**309**			**P**	**20 00 39.6**	**-1.5**
ABKAR	**Akbulak array**	**57.65**	**309**	P		**P**	**20 00 39.9**	**-1.3**
GAR	**Garm**	**57.79**	**294**	P		**P**	**20 00 42.4**	**-0.1**
GAR				IAmb	IAmb		20 00 44.7	
comp=Z,3.2nm,0.7s								
UPNV	**Upernavik**	**58.57**	**10**	*i*P		**P**	**20 00 46.6**	**-0.6**
UPNV				IAmb	IAmb		20 00 47.5	
comp=Z,12nm,0.7s								
HATC	**Hat Creek Radi**	**59.26**	**62**	P		**P**	**20 00 52.7**	**+0.1**
SUMG	**Summit**	**60.17**	**4**	P		**P**	**20 00 57.8**	**-0.9**
SUMG	**Summit**	**60.17**	**4**	P		**P**	**20 00 57.8**	**-0.9**
SUMG	**Summit**	**60.17**	**4**	*i*P		**P**	**20 00 59.5**	**+0.7**
SUMG				IAmb	IAmb		20 00 60.0	
comp=Z,6.8nm,0.7s								
SAATT	**Saattut**	**60.92**	**9**	*i*P		**P**	**20 01 03.2**	**-0.1**
SAATT				IAmb	IAmb		20 01 04.2	
comp=Z,13nm,0.6s								
NVAR	**Mina Array Bea**	**62.65**	**62**	P		**P**	**20 01 17.5**	**+1.7**
comp=Z,0.4nm,0.6s,baz=317,slow=7.9,SNR=2.5								
comp=Z,0.4nm,0.6s								
FIA1	**FINESS Array S**	**63.29**	**334**	P		**P**	**20 01 17.9**	**-1.4**
FINES	**FINESS Array B**	**63.30**	**334**	P		**P**	**20 01 18.1**	**-1.1**
comp=Z,1.6nm,0.4s,baz=32,slow=7.5,SNR=26								
comp=Z,1.6nm,0.4s								
FINES	**FINESS Array B**	**63.30**	**334**	P		**P**	**20 01 18.0**	**-1.3**
PDAR	**Pinedale Array**	**64.85**	**54**	P		**P**	**20 01 31.0**	**+0.9**
comp=Z,0.3nm,0.7s,baz=93,slow=3.0,SNR=4.0								
comp=Z,0.3nm,0.7s								
PDAR	**Pinedale Array**	**64.85**	**54**	P		**P**	**20 01 30.5**	**+0.4**
GSI	**Gunungsitoli**	**65.84**	**243**	P		**P**	**20 01 39.3**	**+2.8**
GSI				IAmb	IAmb		20 01 44.8	
comp=Z,6.9nm,1.2s								
NC303	**NORSAR Array S**	**67.31**	**341**	P		**P**	**20 01 44.3**	**-1.0**
NB201	**NORSAR Array S**	**67.49**	**341**	P		**P**	**20 01 45.7**	**-0.6**
NB2	**NORSAR Subarra**	**67.52**	**341**	P		**P**	**20 01 46.2**	**-0.3**
comp=Z,0.6nm,0.5s,baz=28,slow=6.2								
NOA	**NORSAR Array B**	**67.52**	**341**	P		**P**	**20 01 45.9**	**-0.6**
comp=Z,0.8nm,0.5s,baz=29,slow=6.6,SNR=8.6								
comp=Z,0.8nm,0.5s								
HFS	**Hagfors**	**67.73**	**339**	P		**P**	**20 01 44.8**	**-3.0**
comp=Z,1.3nm,0.3s,baz=52,slow=5.7,SNR=16								
comp=Z,1.3nm,0.3s								
WRA	**Warramunga Arr**	**68.88**	**198**	P		**P**	**20 01 57.1**	**+1.7**
comp=Z,0.6nm,0.8s,baz=336,slow=7.5,SNR=2.0								
comp=Z,0.6nm,0.8s								
AKASG	**Malin Array Be**	**70.77**	**326**	P		**P**	**20 02 05.4**	**-1.3**
comp=Z,1.1nm,0.4s,baz=37,slow=6.3,SNR=5.2								
comp=Z,1.1nm,0.4s								
AKASG	**Malin Array Be**	**70.77**	**326**	P		**P**	**20 02 06.1**	**-0.6**
AKASG				IAmb	IAmb		20 02 16.3	
comp=Z,3.1nm,1.1s								
AKASG	**Malin Array Be**	**70.77**	**326**	P		**P**	**20 02 06.1**	**-0.6**
AKASG				pmax	pmax			
comp=Z,3.0nm,1.1s								
AK01	**Malin Array Si**	**70.78**	**326**	P		**P**	**20 02 06.3**	**-0.5**
AK11	**Malin Array Si**	**70.81**	**326**	P		**P**	**20 02 04.2**	**-2.7**
AK02	**Malin Array Si**	**70.81**	**326**	P		**P**	**20 02 04.7**	**-2.3**
AK08	**Malin Array Si**	**70.81**	**326**	P		**P**	**20 02 05.2**	**-1.8**
AK09	**Malin Array Si**	**70.82**	**326**	P		**P**	**20 02 05.7**	**-1.3**
AK19	**Malin Array Si**	**70.84**	**326**	P		**P**	**20 02 05.1**	**-2.0**
AK10	**Malin Array Si**	**70.84**	**326**	P		**P**	**20 02 05.5**	**-1.6**
AK16	**Malin Array Si**	**70.84**	**326**	P		**P**	**20 02 05.2**	**-1.9**
AK05	**Malin Array Si**	**70.84**	**326**	P		**P**	**20 02 05.4**	**-1.7**
AK12	**Malin Array Si**	**70.84**	**326**	P		**P**	**20 02 05.0**	**-2.1**
AK17	**Malin Array Si**	**70.85**	**326**	P		**P**	**20 02 05.7**	**-1.5**
AK14	**Malin Array Si**	**70.87**	**326**	P		**P**	**20 02 05.7**	**-1.6**
AK06	**Malin Array Si**	**70.87**	**326**	P		**P**	**20 02 05.8**	**-1.5**
AK07	**Malin Array Si**	**70.90**	**326**	P		**P**	**20 02 06.0**	**-1.5**
AK13	**Malin Array Si**	**70.91**	**326**	P		**P**	**20 02 05.9**	**-1.6**
RNPP8	**Varash**	**71.52**	**328**	P		**P**	**20 02 09.7**	**-1.5**
LUBAR	**Lubar, Ukraine**	**71.96**	**326**	P		**P**	**20 02 13.2**	**-0.7**
ASAR	**Alice Springs**	**72.58**	**198**	P		**P**	**20 02 20.6**	**+2.9**
comp=Z,0.3nm,0.4s,baz=9.7,slow=6.0,SNR=7.2								
comp=Z,0.3nm,0.4s								
ASAR	**Alice Springs**	**72.58**	**198**	P		**P**	**20 02 20.4**	**+2.7**
SCHQ	**Schefferville**	**73.00**	**22**	P		**P**	**20 02 20.1**	**+0.1**
comp=Z,1.0nm,0.4s,baz=334,slow=5.5,SNR=8.9								
comp=Z,1.0nm,0.4s								
SCHQ	**Schefferville**	**73.00**	**22**	P		**P**	**20 02 20.5**	**+0.5**
SCHQ				IAmb	IAmb		20 02 23.4	
comp=Z,7.5nm,1.2s								
SORM	**Soroca**	**73.17**	**325**	P		**P**	**20 02 20.6**	**-0.5**
comp=Z,10nm,0.8s								
KMPD	**K-Podol'skiy**	**73.56**	**326**	P		**P**	**20 02 22.5**	**-0.8**
KMPD				P		**P**	**20 02 22.5**	**-0.8**
MORS	**Morshin**	**74.05**	**328**	P		**P**	**20 02 25.7**	**-0.5**
SHIU	**Shidnytsya**	**74.16**	**328**	P		**P**	**20 02 26.8**	**-0.1**
STNU	**Staruniia**	**74.17**	**327**	P		**P**	**20 02 27.3**	**+0.4**
BUR08	**Bucovina Ar. S**	**74.80**	**326**			**P**	**20 02 28.2**	**-2.5**
BUR08				IAmb	IAmb		20 02 31.7	
comp=Z,3.0nm,0.6s								
BURAR	**Bucovina Array**	**74.81**	**326**	P		**P**	**20 02 27.8**	**-3.0**
BRIU	**Brid**	**75.03**	**328**	P		**P**	**20 02 29.0**	**-2.8**
KSP	**Ksiaz**	**75.15**	**333**	P		**P**	**20 02 28.7**	**-3.8**
comp=Z,7.3nm,2.4s								
EKA	**Eskdalemuir Ar**	**75.66**	**346**	P		**P**	**20 02 34.9**	**-0.4**
comp=Z,1.0nm,0.3s,baz=20,slow=5.3,SNR=17								
comp=Z,1.0nm,0.3s								
EKB	**Eskdalemuir**	**75.66**	**346**	P		**P**	**20 02 35.3**	**-0.1**
ESK	**Eskdalemuir**	**75.68**	**346**	P		**P**	**20 02 35.4**	**-0.1**
ESK	**Eskdalemuir**	**75.68**	**346**	P		**P**	**20 02 35.4**	**-0.1**
ESK				pmax	pmax			
comp=Z,67nm,1.5s								
WMOK	**Wichita Mounta**	**76.46**	**53**	P		**P**	**20 02 41.7**	**+1.4**
WMOK	**Wichita Mounta**	**76.46**	**53**	P		**P**	**20 02 41.7**	**+1.4**
WMOK				pmax	pmax			
comp=Z,16nm,0.9s								
BRTR	**Keskin Array B**	**77.60**	**316**	P		**P**	**20 02 45.9**	**-0.9**
comp=Z,0.4nm,0.8s,baz=35,slow=8.0,SNR=1.6								
comp=Z,0.4nm,0.8s								
TXAR	**Lajitas Array**	**77.69**	**60**	P		**P**	**20 02 48.6**	**+1.3**
comp=Z,0.3nm,0.6s,baz=308,slow=4.3,SNR=5.4								
comp=Z,0.3nm,0.6s								
GERES	**GERESS Array B**	**77.71**	**333**	P		**P**	**20 02 45.6**	**-1.5**
comp=Z,0.6nm,0.5s,baz=30,slow=7.1,SNR=2.3								
comp=Z,0.6nm,0.5s								
WLF	**Walferdange**	**79.06**	**338**	P		**P**	**20 02 53.5**	**-0.9**
WLF	**Walferdange**	**79.06**	**338**	P		**P**	**20 02 53.5**	**-0.9**
WLF				pmax	pmax			
comp=Z,14nm,1.0s								
MMAI	**Mount Meron Ar**	**82.03**	**311**	P		**P**	**20 03 11.3**	**+0.7**
comp=Z,1.7nm,0.5s,baz=28,slow=12,SNR=5.8								
comp=Z,1.7nm,0.5s								
KEST	**Kesra**	**90.91**	**331**	P		**P**	**20 03 53.9**	**-0.1**
comp=Z,2.1nm,0.7s,baz=9.8,slow=7.4,SNR=5.6								
comp=Z,2.1nm,0.7s								
H03N2	**Juan Fernandez**	**139.29**	**89**	T		T	22 45 43.9	
baz=308,slow=77,SNR=3.8								
H03N1	**Juan Fernandez**	**139.31**	**89**	T		T	22 45 20.4	
baz=308,slow=77,SNR=7.1								
H03N3	**Juan Fernandez**	**139.31**	**89**	T		T	22 45 36.6	
baz=308,slow=77,SNR=3.9								

NNC ***25*** *19:54:17.5±0.6,43.00N×78.33E,h2km,s4km,mb2.2, mpv2.7,Error ellipse: s-maj=6.1km s-min=2.4km az=175.0*
KRNET ***25*** *19:54:18.7±0.1,43.04N×78.28E,h22km,mb2.3*
SOME ***25*** *19:54:18.6,43.03N×78.28E,h10km*

ISC 25 19:54:19.1±0.7,43.04N±0.02×78.27E±0.02,h10km,n42, σ1§41/81,19C-11D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.10**	**79**	P		**Pg**	**19 54 20.7**		**-1.2**
50nm,0.1s									
SATY				S		**Sg**	**19 54 22.4**		**-1.5**
788nm,0.1s									
KURS	**Kuram**	**0.45**	**351**	P		**Pg**	**19 54 27.8**		**-0.2**
1.8nm,0.1s									
KURS				S		**Sg**	**19 54 34.4**		**+0.4**
6.0nm,0.2s									
ANVS	**Anan'yevo**	**0.51**	**240**	⇑*i*P		**Pg**	**19 54 28.5**		**-0.6**
ANVS				⇑*i*S		**Sg**	**19 54 35.5**		**-0.3**
KPKS	**Kokpek**	**0.53**	**35**	P		**Pg**	**19 54 28.5**		**-0.8**
0.4nm,0.1s									
KPKS				S		**Sg**	**19 54 35.8**		**-0.5**
13nm,0.2s									
KPKS	**Kokpek**	**0.53**	**35**	*e*P		**Pg**	**19 54 28.5**		**-0.8**
0.4nm,0.

KRBS				*e*S	**Sg**	**19 55 21.4**	**-1.9**
	1.8nm,0.3s						
NRN	**Naryn**	**2.33**	**227**	⇑*e*P	**Pn**	**19 54 59.0**	**+1.3**
NRN				⇑*e*S	**Sb**	**19 55 28.3**	**-1.9**
KBK	**Karagaybulak**	**2.47**	**262**	⇓*i*P	**Pn**	**19 55 00.5**	**+0.9**
KBK				⇓*e*S	**Sn**	**19 55 31.1**	**+1.2**
CHMS	**Chumysh**	**2.58**	**270**	⇑*e*P	**Pn**	**19 55 02.1**	**+1.2**
CHMS				⇑*e*S	**Sn**	**19 55 33.4**	**+1.0**
USP	**Ospenovka**	**2.77**	**276**	⇓*i*P	**Pn**	**19 55 04.7**	**+1.2**
USP				⇓*e*S	**Sn**	**19 55 37.9**	**+0.9**
AAK	**Ala-Archa**	**2.80**	**263**	⇓Pg	**Pb**	**19 55 10.2**	**+0.9**
	1.2nm,1.1s						
AAK				⇑Lg	Lg	19 55 48.2	
	0.7nm,0.6s						
AAK	**Ala-Archa**	**2.80**	**263**	⇑*i*P	**Pn**	**19 55 05.2**	**+1.0**
AAK				⇑*e*S	**Sn**	**19 55 39.1**	**+1.0**
UCH	**Uchtor**	**2.88**	**255**	⇓*e*P	**Pn**	**19 55 06.6**	**+1.0**
UCH				⇓*e*S	**Sn**	**19 55 41.5**	**+1.0**
EKS2	**Erkin-Say**	**3.32**	**265**	⇑*e*P	**Pn**	**19 55 12.4**	**+1.1**
EKS2				⇑*e*S	**Sn**	**19 55 51.4**	**+0.5**

JMA ***25*** *20:02:55.1±0.3,23˚N±2˚×122˚.5E±0˚.9, h50km, MV2.4/11, FAR S OFF ISHIGAKIJIMA*
TAP ***25*** *20:02:55.6, 22˚.72N×122˚.47E, h49km±1km, ML2.9, D*
ISC 25 20:02:53.3±1.3, 22°67N±0˚.04×122°51E±0˚.03, h26km±14km, n61, σ1ᵖ04/105, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.96**	**270**	*e*P	**Pn**	**20 03 12.7**	**+1.6**
LDUT				S	**Sn**	**20 03 23.7**	**-0.1**
LYUB	**Lan-yu**	**1.08**	**232**	*i*P	**Pb**	**20 03 14.1**	**+0.8**
LYUB				*e*S	**Sn**	**20 03 26.2**	**-0.7**
LAY	**Lan-yu**	**1.09**	**235**	*e*P	**Pb**	**20 03 13.9**	**+0.5**
LAY				*e*S	**Sb**	**20 03 25.6**	**-1.6**
CHKT	**Chengkung**	**1.14**	**292**	*i*P	**Pn**	**20 03 14.0**	**+0.5**
CHKT				S	**Sn**	**20 03 26.8**	**-1.4**
CHKH	**Chenggong**	**1.15**	**297**	*i*P	**Pn**	**20 03 14.1**	**+0.4**
CHKH				S	**Sn**	**20 03 27.0**	**-1.5**
ECBN	**Changbin**	**1.17**	**304**	*i*P	**Pn**	**20 03 14.4**	**+0.5**
ECBN				S	**Sn**	**20 03 28.2**	**-0.8**
FULB	**Fuli**	**1.24**	**295**	*i*P	**Pn**	**20 03 15.3**	**+0.4**
FULB				S	**Sn**	**20 03 29.5**	**-1.2**
ECS	**Chishang**	**1.26**	**290**	*i*P	**Pb**	**20 03 16.6**	**+0.1**
ECS				S	**Sb**	**20 03 31.6**	**-0.6**
EYUL	**Yuli**	**1.29**	**302**	P	**Pn**	**20 03 16.5**	**+1.0**
HGSD	**Ruisui**	**1.29**	**310**	*i*P	**Pn**	**20 03 15.8**	**+0.2**
HGSD				*e*S	**Sn**	**20 03 29.6**	**-2.5**
TWF1	**Yuli**	**1.31**	**302**	*i*P	**Pn**	**20 03 16.6**	**+0.7**
TWGBT	**Beinan**	**1.33**	**277**	*i*P	**Pb**	**20 03 18.0**	**+0.5**
TWGBT				S	**Sb**	**20 03 33.6**	**-0.5**
YULB	**Yu-li**	**1.33**	**303**	*i*P	**Pn**	**20 03 16.9**	**+0.8**
YULB				S	**Sb**	**20 03 33.6**	**-0.5**
TWG	**Pinlang**	**1.33**	**277**	*i*P	**Pb**	**20 03 18.1**	**+0.4**
TWG				S	**Sb**	**20 03 33.7**	**-0.7**
EHYH	**Wanrong**	**1.35**	**308**	P	**Pn**	**20 03 17.0**	**+0.5**
EHYH				*e*S	**Sb**	**20 03 34.4**	**-0.3**
TEGC	**Jichi Village**	**1.37**	**319**	*e*S	**Sb**	**20 03 33.6**	**-0.3**
EHY	**Hungye**	**1.37**	**308**	P	**Pn**	**20 03 17.4**	**+0.7**
EGFH	**Guangfu**	**1.41**	**315**	P	**Pn**	**20 03 18.2**	**+1.0**
EGFH				*e*S	**Sn**	**20 03 33.7**	**-1.3**
SHUL	**Shoufeng**	**1.41**	**322**	*i*P	**Pn**	**20 03 18.0**	**+0.7**
SHUL				*e*S	**Sn**	**20 03 34.5**	**-0.6**
ECL	**Taimali**	**1.44**	**267**	*i*P	**Pb**	**20 03 19.1**	**-0.2**
ECL				S	**Sb**	**20 03 35.7**	**-1.5**
EOS4	**EOS4**	**1.46**	**353**	*e*P	**Pn**	**20 03 19.3**	**+1.8**
EOS4				S	**Sn**	**20 03 35.0**	**-0.6**
WARBT	**Fenglin Townsh**	**1.47**	**316**	*i*P	**Pn**	**20 03 18.7**	**+0.6**
WARBT				*e*S	**Sn**	**20 03 34.8**	**-1.7**
ELDTW	**Lidau**	**1.47**	**291**	P	**Pn**	**20 03 19.2**	**+1.1**
ELDTW				*e*S	**Sn**	**20 03 35.7**	**-0.9**
ESL	**Shilin**	**1.51**	**319**	*i*P	**Pn**	**20 03 18.9**	**+0.2**
ESL				*e*S	**Sn**	**20 03 36.0**	**-1.5**
EAST	**Anshuo**	**1.56**	**260**	P	**Pb**	**20 03 21.6**	**+0.1**
EAST				S	**Sb**	**20 03 39.3**	**-1.6**
ETM	**Tongmen**	**1.59**	**324**	*i*P	**Pn**	**20 03 20.1**	**+0.4**
EOS3	**EOS3**	**1.62**	**354**	*e*P	**Pn**	**20 03 20.9**	**+1.0**
EOS3				S	**Sn**	**20 03 40.0**	**0.0**
SLIU	**Shizi**	**1.65**	**254**	*e*P	**Pb**	**20 03 23.1**	**+0.2**
VWDT	**VWDT**	**1.66**	**311**	*i*P	**Pn**	**20 03 22.3**	**+1.6**
VWDT				*e*S	**Sn**	**20 03 41.2**	**+0.1**
STYH	**Taoyuan**	**1.67**	**288**	*e*P	**Pb**	**20 03 22.9**	**-0.5**
STYH				*e*S	**Sb**	**20 03 42.2**	**-1.8**
TSEB	**Hengchuen, Pin**	**1.68**	**243**	*e*S	**Sb**	**20 03 45.6**	**+1.5**
SMST	**Manzhou Townsh**	**1.68**	**248**	P	**Pb**	**20 03 23.4**	**-0.1**
SMST				S	**Sb**	**20 03 42.7**	**-1.4**
LXIB	**Xiulin Townshi**	**1.68**	**323**	P	**Pn**	**20 03 21.8**	**+0.7**
LXIB				S	**Sn**	**20 03 41.0**	**-0.9**
NACB	**Ninganchiao**	**1.72**	**331**	*i*P	**Pn**	**20 03 22.0**	**+0.6**
NACB				S	**Sn**	**20 03 40.3**	**-2.3**
TWKBT	**Hengchun**	**1.73**	**246**	*e*S	**Sb**	**20 03 44.5**	**-1.1**
MASBT	**Mashibuluo**	**1.73**	**268**	P	**Pb**	**20 03 24.0**	**-0.4**
SSD	**Sandimen**	**1.73**	**273**	*e*P	**Pb**	**20 03 24.2**	**-0.3**
TWK1	**Hengchun**	**1.73**	**246**	*e*S	**Sb**	**20 03 44.8**	**-1.0**
HEN	**Hengchun**	**1.77**	**248**	*e*S	**Sb**	**20 03 45.7**	**-1.0**
OWD	**Renai**	**1.77**	**317**	*i*P	**Pn**	**20 03 23.5**	**+1.1**
OWD				*e*S	**Sn**	**20 03 43.4**	**-0.7**
ALS	**Alishan**	**1.78**	**298**	P	**Pb**	**20 03 24.9**	**-0.5**
ALS				*e*S	**Sb**	**20 03 47.2**	**-0.2**
SSLB	**Suanglung**	**1.81**	**308**	*i*P	**Pn**	**20 03 24.5**	**+1.7**
JYNG	**Yonagunijimaku**	**1.82**	**13**	*e*P	**Pn**	**20 03 24.2**	**+1.4**
JYNG				*e*S	**Sn**	**20 03 44.8**	**-0.3**
SGST	**Jiashian**	**1.82**	**283**	*i*P	**Pb**	**20 03 25.6**	**-0.4**
SGST				S	**Sb**	**20 03 48.4**	**0.0**
WHYT	**Xinyi Township**	**1.83**	**304**	P	**Pb**	**20 03 25.6**	**-0.5**
WHYT				*e*S	**Sn**	**20 03 45.7**	**+0.2**
WUSB	**Renai**	**1.84**	**316**	*i*P	**Pn**	**20 03 24.8**	**+1.6**
WUSB				*e*S	**Sn**	**20 03 44.9**	**-0.8**
WTP	**Ta-pu**	**1.84**	**289**	*e*P	**Pb**	**20 03 26.6**	**+0.3**
TPUB	**Ta-pu**	**1.84**	**290**	P	**Pb**	**20 03 25.6**	**+0.2**
TPUB				S	**Sb**	**20 03 49.5**	**+0.5**
YOJ	**Yonaguni jima**	**1.84**	**14**	*i*P	**Pn**	**20 03 24.6**	**+1.4**
YOJ				S	**Sn**	**20 03 45.9**	**+0.2**
WHF	**Hehuan Shan**	**1.86**	**322**	*i*P	**Pn**	**20 03 24.8**	**+1.0**
WHF				*e*S	**Sn**	**20 03 46.2**	**-0.6**
SMLT	**Sun Moon Lake**	**1.91**	**310**	*e*P	**Pn**	**20 03 26.5**	**+2.2**
WCKO	**Fanlu**	**1.91**	**294**	*e*P	**Pb**	**20 03 27.9**	**+0.4**
WCKO				*e*S	**Sb**	**20 03 51.7**	**+0.7**
CHN5	**Tsauling**	**1.92**	**299**	*e*P	**Pb**	**20 03 27.9**	**+0.2**
CHN5				*e*S	**Sb**	**20 03 51.8**	**+0.5**
TWM1	**Shoushan**	**1.93**	**275**	*e*P	**Pb**	**20 03 30.8**	**+3.0**
TWK	**Hsinying**	**1.96**	**288**	*e*P	**Pb**	**20 03 28.9**	**+0.6**
TWK				*i*S	**Sb**	**20 03 53.8**	**+1.5**
IRIF	**Iriomote-Funau**	**2.00**	**34**	P	**Pn**	**20 03 26.2**	**+0.9**
IRIF				S	**Sn**	**20 03 48.9**	**-0.6**
JKRS	**Kuro-shima**	**2.08**	**41**	P	**Pn**	**20 03 27.5**	**+1.1**
JKRS				*e*S	**Sn**	**20 03 50.8**	**-0.8**
WHP	**Taichung City**	**2.15**	**318**	*e*P	**Pb**	**20 03 30.9**	**-0.7**
WHP				*e*S	**Sn**	**20 03 54.9**	**+1.5**
JJ	**Ishigaki jima**	**2.26**	**41**	P	**Pn**	**20 03 29.3**	**+0.4**
JJ				S	**Sn**	**20 03 54.2**	**-1.7**
JISG	**Ishigakijimahi**	**2.52**	**41**	P	**Pn**	**20 03 32.9**	**+0.4**
JISG				*e*S	**Sn**	**20 04 01.1**	**-1.3**
JTJ	**Tarama**	**2.81**	**45**	P	**Pn**	**20 03 37.4**	**+0.9**

CATAC ***25*** *20:09:21.8±0.4,14˚N±3˚×9˚2W±˚, h35km±5km, M4.1/17, mB5.0/1, mb4.5/2, MLv3.9/17, Mw(mB)4.3/1, Error ellipse: s-maj=6.6km s-min=2.7km az=35.9, confirmed*
SNET ***25*** *20:09:23.0±1.1, 14˚.20N×91˚.75W, h78km±728km, ML3.9, Presumed earthquake*
GCG ***25*** *20:09:23.3±1.4, 14˚.25N×91˚.72W, h60km±8km, MD3.9, ML4.0, Presumed earthquake*
ISC 25 20:09:23.6±1.7, 14°17N±0˚.08×91°75W±0˚.07, h58km±10km, n47, σ1ˢ72/61, 3C-6D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.35**	**8**	⇓P	**Pn**	**20 09 33.9**	**-0.2**
RTAL				S	**Sn**	**20 09 43.2**	**+1.7**
STG2	**El Palmar, Qui**	**0.45**	**54**	*i*P	**Pn**	**20 09 35.5**	**+0.4**
STG5	**El Palmar, Qui**	**0.45**	**59**	*i*P	**Pn**	**20 09 35.1**	**0.0**
STG5				*e*S	**Sn**	**20 09 43.9**	**+0.6**
STG8	**El Palmar, Qui**	**0.47**	**54**	*i*P	**Pn**	**20 09 35.9**	**+0.5**
STG8				*i*S	**Sn**	**20 09 45.8**	**+1.7**
STG8				IAML		20 09 47.7	
	comp=E,19μm,0.1s						
SOKI	**Kika Raxquin**	**0.73**	**27**	*i*P	**Pn**	**20 09 37.9**	**-0.6**
SOKI				IAML		20 09 52.1	
	comp=E,2μm,0.3s						
QUEO	**Labor Ovalle**	**0.73**	**18**	*i*P	**Pn**	**20 09 37.7**	**-0.8**
QUEO				*i*S	**Sn**	**20 09 49.6**	**+0.3**
SMCA	**Catarina**	**0.75**	**335**	*i*P	**Pn**	**20 09 37.2**	**-1.2**
SMCA				*e*S	**Sn**	**20 09 47.9**	**-1.4**
SMCA				IAML		20 09 49.5	
	comp=N,2μm,0.2s						
THIG		**0.89**	**326**	*i*P	**Pn**	**20 09 38.4**	**-1.7**
FG8	**Yepocapa, Chim**	**1.16**	**85**	*i*P	**Pn**	20 09 39.1	-4.6
FG8				*i*S	**Sn**	**20 09 51.5**	**-7.2**
HUEH	**Huehuetenango**	**1.17**	**12**	⇑P	**Pn**	**20 09 44.3**	**+0.3**
HUEH				S	**Sn**	**20 10 01.1**	**+2.0**
HUEH	**Huehuetenango**	**1.17**	**12**	*i*P	**Pn**	**20 09 43.7**	**-0.3**
FG16	**Alotenango, Sa**	**1.21**	**85**	*i*P	**Pn**	**20 09 40.2**	**-4.3**
FG16				*i*S	**Sn**	**20 09 54.0**	**-6.0**
FG16				IAML		20 09 55.8	
	comp=N,18μm,0.2s						
QUIS	**Sacapulas**	**1.28**	**30**	*i*P	**Pn**	**20 09 45.3**	**-0.2**
QUIS				IAML		20 10 06.9	
	comp=N,885nm,0.4s						
ESSJ	**San Jos, E**	**1.35**	**116**	*i*P	Pn	20 09 41.2	-5.1
APG	**El Apazote**	**1.49**	**56**	*i*P	**Pn**	**20 09 48.2**	**-0.2**
FAME	**Alcaldia de Sa**	**1.71**	**101**	⇓P	**Pn**	**20 09 50.5**	**-0.7**
FAME				S	**Sn**	**20 10 12.6**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.91**	**94**	⇓P	**Pn**	**20 09 54.3**	**+0.4**
SLOZ				S	**Sn**	**20 10 19.3**	**+2.4**
SLOZ	**Alcaldia de Sa**	**1.91**	**94**	*e*P	**Pn**	**20 09 54.1**	**+0.3**
LOAL	**Lomas de Alarc**	**1.92**	**95**	⇑P	**Pn**	**20 09 54.4**	**+0.4**
LOAL				S	**Sn**	**20 10 19.5**	**+2.4**
LOAL	**Lomas de Alarc**	**1.92**	**95**	*e*P	**Pn**	**20 09 54.4**	**+0.4**
NUBE	**Las Nubes**	**1.93**	**98**	P	**Pn**	**20 09 54.0**	**-0.2**
NUBE				S	**Sn**	**20 10 18.3**	**+0.8**
NUBE	**Las Nubes**	**1.93**	**98**	*e*P	**Pn**	**20 09 54.0**	**-0.2**
NUBE				*e*S	**Sn**	**20 10 18.0**	**+0.5**
NUBE	**Las Nubes**	**1.93**	**98**	*i*P	**Pn**	**20 09 54.0**	**-0.2**
RBDL	**Robledal**	**2.00**	**91**	*e*P	**Pn**	**20 09 55.1**	**-0.1**
RTR	**El Retiro**	**2.06**	**97**	*e*P	**Pn**	**20 09 56.7**	**+0.7**
SBLS	**San Blas**	**2.09**	**99**	*e*P	**Pn**	**20 09 57.0**	**+0.5**
CEVE	**Cerro Verde**	**2.09**	**99**	⇓P	**Pn**	**20 09 57.1**	**+0.6**
CEVE				S	**Sn**	**20 10 23.4**	**+1.8**
CEVE	**Cerro Verde**	**2.09**	**99**	*e*P	**Pn**	**20 09 57.1**	**+0.6**
SNJE	**San Jose**	**2.10**	**98**	*e*P	**Pn**	**20 09 57.0**	**+0.4**
CCIG	**Comitan**	**2.13**	**350**	P	**Pn**	**20 09 57.7**	**+0.7**
CCIG	**Comitan**	**2.13**	**350**	*i*P	**Pn**	**20 09 57.3**	**+0.3**
JAYA	**Jayaque - finc**	**2.29**	**103**	P	**Pn**	**20 09 58.9**	**-0.3**
JAYA				S	**Sn**	**20 10 27.1**	**+0.7**
JAYA	**Jayaque - finc**	**2.29**	**103**	*e*P	**Pn**	**20 09 59.1**	**0.0**
JAYA	**Jayaque - finc**	**2.29**	**103**	*i*P	**Pn**	**20 09 59.0**	**-0.3**
JAYA				*i*S	**Sn**	**20 10 25.6**	**-0.7**
MTO3	**Montecristo**	**2.33**	**84**	*e*P	**Pn**	**20 09 59.1**	**-0.6**
MTO3	**Montecristo**	**2.33**	**84**	*i*P	**Pn**	**20 09 59.0**	**-0.6**
PMON	**Piamonte**	**2.41**	**101**	⇑P	**Pn**	**20 10 01.5**	**+0.8**
PMON				S	**Sn**	**20 10 31.4**	**+2.3**
PMON	**Piamonte**	**2.41**	**101**	*e*P	**Pn**	**20 10 01.2**	**+0.5**
BOQS	**Boqueron**	**2.44**	**100**	*e*P	**Pn**	**20 10 01.9**	**+0.7**
UEES	**Universidad Ev**	**2.48**	**100**	S	**Sn**	**20 10 33.3**	**+2.5**
LOMA	**Loma Larga**	**2.56**	**102**	*e*P	**Pn**	**20 10 03.7**	**+0.9**
LFRS	**El Faro**	**2.67**	**101**	*e*P	**Pn**	**20 10 04.9**	**+0.7**
CSGN	**Cosiguina Volc**	**4.24**	**106**	⇓P	**Pn**	**20 10 23.0**	**-2.8**
CSGN				S	**Sn**	**20 11 14.5**	**+0.7**
HOVN	**Al Sur del Vol**	**5.04**	**107**	P	**Pn**	**20 10 37.4**	**+0.7**
COPN	**Copaltepe**	**5.40**	**111**	⇓P	**Pn**	**20 10 42.0**	**+0.4**
CARN	**Rivas**	**6.76**	**115**	P	Pn	20 11 07.1	+6.9
ACON	**Acoyapa**	**6.77**	**108**	P	Pn	20 10 54.8	-5.6

IDC 25 20:15:59.6±239.0, 38°14N×118°15W, h0km, Error ellipse: s-maj=104.5km s-min=97.9km az=10.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**0.32**	**338**	I	I	20 17 07.5	
	baz=216,slow=10,SNR=32						
I57US	**PINON FLAT INF**	**4.72**	**163**	I	I	20 45 30.0	
	baz=346,slow=319,SNR=1.5						
I56US	**NEWPORT INFRAS**	**10.15**	**4**	I	I	21 20 30.0	
	baz=188,slow=329,SNR=2.5						

UCR ***25*** *20:21:21.5±0.7, 11˚.22N×85˚.62W, h189km±3km, MW3.8, Presumed earthquake*
CATAC ***25*** *20:21:22.3±0.4, 11˚N±3˚×8˚6W±˚, h180km±3km, M3.3/24, MLv3.3/24, Error ellipse: s-maj=10.2km s-min=3.3km az=50.8, confirmed*
ISC 25 20:21:22.0±1.6, 11°24N±0˚.06×85°59W±0˚.07, h187km±9km, n74, σ0ᵖ50/92, 27C-12D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARN	**Rivas**	**0.08**	**132**	⇑P	**Pn**	**20 21 46.6**	**0.0**
CARN				S	**Sn**	**20 22 05.7**	**+0.2**
CARN	**Rivas**	**0.08**	**132**	*e*P	**Pn**	**20 21 46.6**	**0.0**
LCRUZ	**La Cruz**	**0.17**	**195**	⇑*e*P	**Pn**	**20 21 46.5**	**-0.3**
LCRUZ				*e*S	**Sn**	**20 22 05.9**	**0.0**
OMEN	**Al SSO del Vol**	**0.27**	**351**	⇑P	**Pn**	**20 21 45.4**	**-1.5**
JAPN	**Al SSO del Vol**	**0.29**	**342**	⇓P	**Pn**	**20 21 47.5**	**+0.5**
JAPN	**Al SSO del Vol**	**0.29**	**342**	*e*P	**Pn**	**20 21 47.5**	**+0.5**
MORN	**Al O del Volca**	**0.31**	**348**	⇑P	**Pn**	**20 21 47.0**	**0.0**
PEJA	**Penjamo Buenos**	**0.44**	**142**	⇑*e*P	**Pn**	**20 21 47.6**	**+0.1**
BUAI	**Buenos Aires**	**0.44**	**146**	⇑*e*P	**Pn**	**20 21 47.6**	**+0.1**
LAPC	**Finca la Perla**	**0.50**	**162**	⇑*e*P	**Pn**	**20 21 47.1**	**-0.6**
LAPC				*e*S	**Sn**	**20 22 07.3**	**-0.2**
VRLE	**La Escondida,**	**0.50**	**154**	⇑*e*P	**Pn**	**20 21 47.6**	**-0.2**
GPS2	**Hotel Rincn d**	**0.54**	**155**	*e*P	**Pn**	**20 21 47.7**	**-0.2**
ELI1	**Hacienda Flor**	**0.59**	**177**	P	**Pn**	**20 21 48.1**	**0.0**
ELI1	**Hacienda Flor**	**0.59**	**177**	*e*P	**Pn**	**20 21 47.9**	**-0.1**
ELI1				*e*S	**Sn**	**20 22 08.9**	**+0.7**
MESS	**Mesas**	**0.63**	**142**	⇑*e*P	**Pn**	**20 21 48.3**	**0.0**
VMAR	**Armenia, Volca**	**0.63**	**133**	⇑*e*P	**Pn**	**20 21 48.2**	**-0.1**
HORNC	**Hornillas**	**0.66**	**143**	⇑*e*P	**Pn**	**20 21 48.8**	**+0.3**
NADN	**Granada**	**0.67**	**319**	P	**Pn**	**20 21 48.8**	**+0.4**
DELF	**Filadelfia**	**0.79**	**178**	*e*P	**Pn**	**20 21 49.2**	**+0.1**
TENO	**El Achiote**	**0.80**	**132**	*e*P	**Pn**	**20 21 49.7**	**+0.4**
ACON	**Acoyapa**	**0.82**	**29**	P	**Pn**	**20 21 48.9**	**-0.4**
ACON				S	**Sn**	**20 22 10.1**	**-0.3**
TIMP	**Tierras Morena**	**0.86**	**140**	⇑*e*P	**Pn**	**20 21 49.1**	**-0.1**
NANN	**Nandasmo**	**0.87**	**323**	⇓P	**Pn**	**20 21 50.9**	**+1.3**
NANN				S	**Sn**	**20 22 11.3**	**+0.3**
SABN	**Sabanita**	**0.91**	**321**	P	**Pn**	**20 21 50.0**	**+0.2**
QUEB	**Quebradon, Cot**	**0.92**	**132**	⇑*e*P	**Pn**	**20 21 49.9**	**0.0**
INVE	**Universidad In**	**0.92**	**146**	⇑*e*P	**Pn**	**20 21 49.9**	**-0.1**
PLVR	**Palo Verde**	**0.92**	**166**	⇑*e*P	**Pn**	**20 21 49.9**	**-0.2**
CHIK	**Chiripa**	**1.04**	**140**	*e*P	**Pn**	**20 21 51.1**	**+0.2**
JUD3	**Juan Diaz 3**	**1.07**	**178**	⇑*e*P	**Pn**	**20 21 51.0**	**-0.1**
TABAC	**Tabacon**	**1.09**	**133**	⇑*e*P	**Pn**	**20 21 51.6**	**+0.3**
NICO	**Nicoya**	**1.11**	**173**	⇑*e*P	**Pn**	**20 21 51.2**	**-0.1**
REZ	**Monterrey de S**	**1.12**	**129**	*e*P	**Pn**	**20 21 51.8**	**+0.4**
JTS	**Las Juntas de**	**1.13**	**147**	⇑P	**Pn**	**20 21 51.3**	**-0.2**
JTS	**Las Juntas de**	**1.13**	**147**	⇑*e*P	**Pn**	**20 21 51.3**	**-0.2**
JUNT	**Juntas**	**1.14**	**147**	*e*P	**Pn**	**20 21 51.3**	**-0.2**
CEDE	**Laguna Cedeo**	**1.15**	**131**	⇑*e*P	**Pn**	**20 21 52.1**	**+0.4**
ARE1	**Arenal 1**	**1.15**	**132**	⇑*e*P	**Pn**	**20 21 52.2**	**+0.5**
VARE2	**V. Arenal**	**1.15**	**132**	⇑*e*P	**Pn**	**20 21 52.1**	**+0.4**
VACR	**Volcan Arenal**	**1.18**	**131**	⇑*e*P	**Pn**	**20 21 52.3**	**+0.5**
FORC	**Fortuna**	**1.19**	**131**	*e*P	**Pn**	**20 21 52.4**	**+0.5**
APQ2	**Apoyeque**	**1.19**	**323**	⇓P	**Pn**	**20 21 52.5**	**+0.6**
BOAB	**BOACO BROADBAN**	**1.20**	**356**	P	**Pn**	**20 21 51.9**	**-0.1**
BOAB				S	**Sn**	**20 22 14.5**	**-0.9**
SAPS	**Ciudad Sandino**	**1.22**	**319**	⇓P	**Pn**	**20 21 53.0**	**+0.9**
SAPS				S	**Sn**	**20 22 16.8**	**+1.3**
CMARA	**Lajas Hojancha**	**1.23**	**173**	⇓P	**Pn**	**20 21 52.2**	**-0.2**
CMARA				S	**Sn**	**20 22 14.8**	**-1.0**
CMARA	**Lajas Hojancha**	**1.23**	**173**	*e*P	**Pn**	**20 21 52.1**	**-0.2**
COVE	**Coope Vega, Sa**	**1.27**	**114**	⇑P	**Pn**	**20 21 52.5**	**-0.1**
COVE				S	**Sn**	**20 22 15.6**	**-0.6**
NYURE	**Nandayure**	**1.28**	**165**	⇑*e*P	**Pn**	**20 21 52.6**	**-0.1**
COPN	**Copaltepe**	**1.36**	**313**	P	**Pn**	**20 21 53.4**	**+0.1**
COPN	**Copaltepe**	**1.36**	**313**	*e*P	**Pn**	**20 21 53.2**	**-0.1**
INDI	**Punta indio, G**	**1.37**	**177**	⇑P	**Pn**	**20 21 53.2**	**-0.3**
JCR1	**Jicaral**	**1.46**	**161**	*e*P	**Pn**	**20 21 54.4**	**0.0**
MOM2	**El Cardon**	**1.48**	**324**	P	**Pn**	**20 21 54.2**	**-0.1**
MOM2				S	**Sn**	**20 22 19.5**	**0.0**
LEVN	**Ruinas Leon Vi**	**1.53**	**319**	P	**Pn**	**20 21 55.1**	**+0.2**
LEVN				S	**Sn**	**20 22 20.2**	**-0.2**
MACN	**El Madrono**	**1.62**	**319**	⇓P	**Pn**	**20 21 55.9**	**+0.2**
MACN				S	**Sn**	**20 22 22.5**	**+0.5**
CNGA	**Al SSO del Vol**	**1.66**	**319**	P	**Pn**	**20 21 56.4**	**+0.3**
CNGN	**Cerro Negro**	**1.66**	**319**	P	**Pn**	**20 21 56.1**	**0.0**
CNGN				S	**Sn**	**20 22 22.6**	**-0.1**
ROCN	**Rota Cerro Neg**	**1.70**	**318**	⇓P	**Pn**	**20 21 56.5**	**-0.1**
ILCN	**San Idelfonso**	**1.72**	**321**	⇓P	**Pn**	**20 21 56.5**	**-0.2**
TEL3	**Telica 3**	**1.81**	**317**	⇓P	**Pn**	**20 21 57.7**	**+0.1**
HERN	**Volcan Telica**	**1.82**	**318**	P	**Pn**	**20 21 57.6**	**-0.3**
HERN				S	**Sn**	**20 22 26.0**	**+0.3**
PKGN	**Cerro Pekin**	**1.97**	**316**	⇓P	**Pn**	**20 21 59.1**	**-0.1**
PKGN				S	**Sn**	**20 22 28.6**	**+0.4**
CRIN	**San Cristobal**	**2.04**	**315**	*e*P	**Pn**	**20 21 59.9**	**-0.1**
PICV	**PH. Pirrs**	**2.11**	**139**	*e*P	**Pn**	**20 22 01.4**	**+0.5**
PIEC	**Cerro El Cedra**	**2.27**	**135**	*e*P	**Pn**	**20 22 03.6**	**+0.7**
BUS1	**Rivas**	**2.47**	**133**	⇑*e*P	**Pn**	**20 22 05.8**	**+0.5**
CSGN	**Cosiguina Volc**	**2.59**	**312**	⇓P	**Pn**	**20 22 06.0**	**-0.3**
CSGN				S	**Sn**	**20 22 39.5**	**-1.2**
CSGN	**Cosiguina Volc**	**2.59**	**312**	*e*P	**Pn**	**20 22 05.9**	**-0.3**
SAJE	**San Jernim**	**2.78**	**133**	*e*P	**Pn**	**20 22 08.8**	**+0.2**
DRK0	**Durika**	**3.03**	**130**	P	**Pn**	**20 22 10.0**	**-1.6**
DRK0	**Durika**	**3.03**	**130**	*e*P	**Pn**	**20 22 10.4**	**-1.1**
ALCO	**Alturas Coton,**	**3.54**	**130**	*e*P	**Pn**	**20 22 18.2**	**+0.3**
PIRO	**Carate, Puerto**	**3.59**	**142**	P	**Pn**	**20 22 18.9**	**+0.6**
PIRO				S	**Sn**	**20 23 02.1**	**-0.1**
CLLRA	**Cordillera,**	**3.84**	**130**	*e*P	**Pn**	**20 22 22.3**	**+0.8**
JEFFS	**S de V. Baru**	**3.95**	**130**	*e*P	**Pn**	**20 22 23.5**	**+0.7**

SJA ***25*** *20:22:52.6±0.7, 31˚.29S×72˚.01W, h40km±999km, ML3.3, MW3.7*
GUC ***25*** *20:22:53.9±0.8, 31˚.30S×71˚.68W, h24km±12km, ML3.1*
ISC 25 20:22:51.0±1.7, 31°33S±0˚.03×71°82W±0˚.07, h8km±15km, n20, σ1ᵖ54/36, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.67**	**14**	⇓*i*P	**Pb**	**20 23 05.6**	**+0.5**
CO06				*e*S	**Sb**	**20 23 14.2**	**-0.4**
CO06				IAML		20 23 15.3	
	comp=E,1μm,0.1s						
CO02	**

PRSN				eS		Sg	20 31 30.7	+0.2	
AOPR	**Arecibo Observ**	**0.46**	**8**	Pg		Pg	**20 31 24.5**	**-0.2**	
AOPR				Sg		Sg	**20 31 30.8**	**-0.2**	
AOPR				IAML			20 31 31.3		
	comp=N,8μm,0.3s								
ECPR	**Experimental S**	**0.61**	**45**			Pg	**20 31 27.2**	**-0.3**	
ECPR				IAML			20 31 37.5		
	comp=N,3μm,0.3s								
ECPR				IAML			20 31 39.7		
	comp=N,2μm,0.2s								
ECPR	**Experimental S**	**0.61**	**45**	⇓*i*	P	Pg	**20 31 27.2**	**-0.3**	
ECPR				eS		Sb	**20 31 36.0**	**+0.1**	
AGPR	**Aguadilla, PR**	**0.64**	**335**			Pg	**20 31 27.4**	**-0.5**	
AGPR				Sg		Sg	**20 31 36.0**	**-0.4**	
AGPR				IAML			20 31 36.8		
	comp=N,2μm,0.7s								
AGPR	**Aguadilla, PR**	**0.64**	**335**	⇑*e*	Pg	Pg	**20 31 27.4**	**-0.5**	
AGPR				⇑*e*	Sg	Sg	**20 31 36.2**	**-0.2**	
AGPR				IAML			20 31 36.7		
	comp=N,1μm,0.3s								
AGPR	**Aguadilla, PR**	**0.64**	**335**	⇑*i*	P	Pg	**20 31 27.5**	**-0.5**	
AGPR				eS		Sg	**20 31 36.2**	**-0.2**	
EMPR	**Esperanza - Ma**	**0.65**	**25**			Pb	**20 31 28.3**	**0.0**	
EMPR						Sb	**20 31 37.4**	**+0.4**	
EMPR	**Esperanza - Ma**	**0.65**	**25**	⇓*e*	P	Pb	**20 31 28.3**	**0.0**	
EMPR				eS		Sb	**20 31 37.4**	**+0.4**	
SJG	**San Juan**	**0.68**	**71**	Pg		Pb	**20 31 28.4**	**-0.2**	
SJG				Sg		Sg	**20 31 37.5**	**-0.2**	
SJG	**San Juan**	**0.68**	**71**	⇓*e*	Pg	Pb	**20 31 28.5**	**-0.2**	
SJG				⇑*e*	Sg	Sb	**20 31 38.4**	**+0.5**	
SJG	**San Juan**	**0.68**	**71**	*i*	P	Pb	**20 31 28.6**	**-0.1**	
SJG				IAML			20 31 38.4		
	comp=Z,470nm,0.8s								
PDPR	**Patillas Dam,**	**0.77**	**80**			Pb	**20 31 30.1**	**-0.2**	
IDE	**Isla Desecheo**	**0.80**	**309**			Pb	**20 31 29.9**	**-0.8**	
IDE						Sb	**20 31 40.6**	**-0.5**	
IDE	**Isla Desecheo**	**0.80**	**309**	⇓*e*	P	Pb	**20 31 29.9**	**-0.8**	
IDE				eS		Sb	**20 31 40.6**	**-0.5**	
GCPR	**Guaynabo City**	**0.82**	**59**			Pb	**20 31 30.7**	**-0.4**	
GCPR						Sb	**20 31 41.5**	**-0.4**	
GCPR	**Guaynabo City**	**0.82**	**59**	⇑*i*	P	Pb	**20 31 30.7**	**-0.4**	
GCPR				eS		Sb	**20 31 41.5**	**-0.4**	
HUMP	**Col San Antoni**	**0.96**	**74**			Pb	**20 31 33.0**	**-0.5**	
HUMP				Sg		Sb	**20 31 45.6**	**-0.3**	
HUMP				IAML			20 31 52.8		
	comp=Z,729nm,0.4s								
HUMP	**Col San Antoni**	**0.96**	**74**	⇓*i*	P	Pb	**20 31 33.1**	**-0.4**	
HUMP				eS		Sb	**20 31 45.1**	**-0.9**	
CUPR	**Culebra, Puert**	**1.52**	**74**			Pb	**20 31 42.7**	**-0.4**	
CUPR				Sn		Sb	**20 32 02.6**	**+0.4**	
PCDR	**Punta Cana, DR**	**1.61**	**293**	⇑*e*	Pg	Pb	**20 31 43.7**	**-0.8**	
PCDR				IAML			20 32 14.1		
	comp=N,467nm,0.8s								
DR12	**Loma Pena Alta**	**2.59**	**291**			Pn	**20 31 58.0**	**+1.5**	
DR12				Sn		Sn	**20 32 27.5**	**-0.1**	
HATOM	**Hato Mayor del**	**2.59**	**291**	⇑*e*	Pg	Pn	**20 31 58.3**	**+1.8**	
HATOM				IAML			20 32 41.1		
	comp=N,120nm,0.7s								
SDD	**Santo Domingo**	**2.99**	**281**	Pn		Pn	**20 32 03.2**	**+1.2**	
SDD				IAML			20 32 54.2		
	comp=E,178nm,1.6s								
SDD				IAML			20 33 01.2		
	comp=N,203nm,1.0s								
BANI	**BANI**	**3.40**	**279**	Pn		Pn	**20 32 08.8**	**+1.1**	
SABA	**Saba**	**3.42**	**94**	Pn		Pn	**20 32 07.9**	**0.0**	
SMRT	**St. Maarten**	**3.57**	**87**			Pn	**20 32 10.4**	**+0.4**	
SDDR	**Presa de Saban**	**4.38**	**285**	Pn		Pn	**20 32 22.8**	**+1.7**	
DSLB	**Salisbury**	**5.72**	**114**	*e*	P	Pb	**20 32 54.0**	**-0.7**	
DSLB				eS		Sn	20 32 57.6	-47	

*WEL **25** 20:44:28.5±0.4,44°S±3″×17°0E±°, h5km,M3.1/9,ML3.1/5, MLv3.1/9,Error ellipse: s-maj=3.9km s-min=2.8km az=159.7*
*NOU **25** 20:44:29.9,44°00S×169°52E,h3km,MLv3.6/11,South Island, New Zealand*
ISC 25 20:44:29.0±1.1,**44°01S**±0°03×**169°57E**±0°02,**h2**km±12km, **n29,** σ0**°72**/36,**South Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MECS	**Makarora Emerg**	**0.33**	**227**	P		**Pg**	**20 44 35.4**	**0.0**
MECS				S		**Sg**	**20 44 39.9**	**+0.2**
HDWS	**Haast DOC Work**	**0.40**	**288**	P		**Pg**	**20 44 37.3**	**+0.6**
TWAS	**Twizel Area Sc**	**0.45**	**123**	P		**Pg**	**20 44 38.3**	**+0.6**
TWAS				S		**Sg**	**20 44 44.5**	**+0.8**
MCNS	**Mount Cook Ann**	**0.47**	**55**	P		**Pg**	**20 44 38.1**	**+0.1**
MCNS				S		**Sg**	**20 44 43.8**	**-0.3**
FOZ	**Fox Glacier**	**0.51**	**21**	P		**Pg**	**20 44 38.8**	**+0.1**
FOZ				S		**Sg**	**20 44 45.7**	**+0.4**
JCZ	**Jackson Bay**	**0.57**	**263**	P		**Pb**	**20 44 40.7**	**-1.1**
JCZ	**Jackson Bay**	**0.57**	**263**	S		**Sg**	**20 44 47.4**	**+0.1**
JCZ	**Jackson Bay**	**0.57**	**263**	P		**Pg**	**20 44 40.4**	**+0.4**
JCZ				S		**Sg**	**20 44 47.4**	**+0.1**
LBZ	**Lake Benmore**	**0.58**	**131**	P		**Pg**	**20 44 40.7**	**+0.5**
LBZ				S		**Sg**	**20 44 48.3**	**+0.6**
FGPS	**Fox Glacier Pa**	**0.64**	**31**	P		**Pg**	**20 44 41.3**	**+0.1**
NSBS	**Neils Beach**	**0.66**	**271**	P		**Pg**	**20 44 42.0**	**+0.4**
NSBS				S		**Sg**	**20 44 50.5**	**+0.4**
WNPS	**Wanaka Nationa**	**0.75**	**204**	P		**Pg**	**20 44 42.0**	**-0.4**
GCSZ	**Gaunt Creek Bo**	**0.88**	**39**	P		**Pg**	**20 44 45.3**	**-0.7**
WKZ	**Wanaka**	**0.91**	**206**	P		**Pg**	**20 44 45.7**	**-0.8**
TMZ	**Timaru**	**1.10**	**110**	P		**Pg**	**20 44 50.3**	**+0.2**
RPZ	**Rata Peaks**	**1.11**	**75**	P		**Pn**	**20 44 52.4**	**+0.7**
RPZ	**Rata Peaks**	**1.11**	**75**	S		**Sn**	**20 45 08.0**	**+0.4**
ARCZ	**Arundel**	**1.16**	**88**	P		**Pg**	**20 44 51.3**	**0.0**
EAZ	**Earnscleugh**	**1.24**	**189**	P		**Pg**	**20 44 51.5**	**-1.3**
WVZ	**Waitaha Valley**	**1.26**	**43**	P		**Pg**	**20 44 52.3**	**-0.9**
ODZ	**Otahua Downs**	**1.29**	**144**	P		**Pn**	**20 44 54.0**	**-0.1**
ODZ	**Otahua Downs**	**1.29**	**144**	S		**Sg**	**20 45 10.6**	**+0.1**
ODZ	**Otahua Downs**	**1.29**	**144**	P		**Pn**	**20 44 52.9**	**-1.2**
WACZ	**Wakanui South**	**1.64**	**88**	P		**Pn**	**20 44 59.2**	**+0.3**
SYZ	**Scrubby Hill**	**2.55**	**187**	P		**Pn**	**20 45 13.2**	**+1.9**
PYZ	**Puysegur Point**	**2.97**	**222**	P		**Pn**	**20 45 18.0**	**+0.8**
KHZ	**Kahutara**	**3.31**	**63**	P		**Pn**	**20 45 23.2**	**+1.4**
QRZ	**Quartz Range**	**3.86**	**36**	P		**Pn**	**20 45 28.8**	**-0.6**
KHEZ	**Kahui Hut**	**5.77**	**37**	P		**Pn**	**20 45 55.8**	**+0.1**

*DJA **25** 20:50:49.7±1.3,5°N±4°×12°5E±°, h31km±20km,M4.7/19, mB5.2/10,mb4.8/17,MLv5.0/19,Mw(mB)4.5/10*
*IDC **25** 20:50:50.9±1.2,5°22N×125°36E,h79km±11km,mb4.0/18, mbtmp4.3/21,MS3.1/12,Error ellipse: s-maj=21.4km s-min=8.5km az=84.0*
*NEIC **25** 20:50:50.8±1.8,5°23N±0°05×125°44E±0°08,h72km±8km, mb4.5/54,Error ellipse: s-maj=12.4km s-min=7.5km az=82.0*
ISC 25 20:50:50.2±0.4,**5°16N**±0°04×**125°41E**±0°07,**h72**km,**n127,** σ1**°30**/118,**mb4.5**/45,**1D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SGSI	**Sangihe**	**1.47**	**175**	P		**Pn**	**20 51 13.7**	**-1.2**
SGSI				S		**Sn**	**20 51 33.5**	**0.0**
DAV	**Davao City (W)**	**1.90**	**5**	P		**Pn**	**20 51 20.7**	**+0.1**
	238nm,0.3s,baz=146,slow=2.8,SNR=9.5							
DAV				S		**Sn**	**20 51 44.0**	**+0.3**
	2μm,0.6s,baz=102,slow=22,SNR=11							
DAV	**Davao City (W)**	**1.90**	**5**	Pn		**Pn**	**20 51 20.3**	**-0.3**
DAV						**Sn**	**20 51 41.7**	**-2.0**
DAV	**Davao City (W)**	**1.90**	**5**	P		**Pn**	**20 51 19.9**	**-0.7**
MNI	**Manado**	**3.74**	**189**	P		**Pn**	**20 51 44.2**	**-1.4**
TNTI	**Ternate**	**4.78**	**156**	Pn		**Pn**	**20 51 58.8**	**-1.0**
TNTI	**Ternate**	**4.78**	**156**	P		**Pn**	**20 52 00.0**	**+0.2**
GTOI	**Gorontalo**	**5.10**	**208**	P		**Pn**	**20 52 02.8**	**-1.3**
MRSI	**Marisa**	**5.80**	**217**	P		**Pn**	**20 52 13.7**	**-0.1**
	2μm133nm,0.5s							
TOLI2	**Tolitoli**	**6.13**	**229**			**Pn**	**20 52 16.1**	**-2.1**
LUWI	**Luwuk**	**6.70**	**203**			**Pn**	**20 52 28.1**	**+2.0**
LUWI	**Luwuk**	**6.70**	**203**	P		**Pn**	**20 52 27.4**	**+1.3**
MYLDM	**Lahad Datu**	**6.88**	**270**			**Pn**	**20 52 29.4**	**+0.9**
MYLDM	**Lahad Datu**	**6.88**	**270**	P		**Pn**	**20 52 29.7**	**+1.2**
	0.4nm54nm,1.0s							
APSI	**Ampana**	**7.11**	**212**	P		**Pn**	**20 52 32.5**	**+0.9**
	1.1nm1μm58nm,0.7s							
SANI	**Sanana**	**7.19**	**175**	P		**Pn**	**20 52 32.3**	**-0.4**
MPSI	**Mapaga**	**7.30**	**229**	P		**Pn**	**20 52 32.2**	**-2.0**
PCI	**Palu**	**8.21**	**223**	P		**Pn**	**20 52 47.1**	**+0.4**
	18nm,0.5s							
SIJI	**Sorong**	**8.38**	**136**	P		**Pn**	**20 52 49.6**	**+0.6**
	6.1nm,0.4s,baz=357,slow=14,SNR=5.9							
SIJI				S		**Sn**	**20 54 21.5**	**-0.5**
	9.0nm,0.5s,baz=246,slow=22,SNR=2.5							
SIJI	**Sorong**	**8.38**	**136**	P		**Pn**	**20 52 49.6**	**+0.6**
NLAI	**Namlea**	**8.52**	**169**	P		**Pn**	**20 52 50.2**	**-0.7**
	1μm43nm,1.0s							
KRAI	**Karang Ratu**	**8.94**	**160**	P		**Pn**	**20 52 57.5**	**+0.8**
	1μm25nm,0.7s							
KKM	**Kota Kinabalu**	**9.19**	**276**	Pn		**Pn**	**20 53 00.2**	**0.0**
KKM	**Kota Kinabalu**	**9.19**	**276**	P		**Pn**	**20 52 59.8**	**-0.4**
	20nm,0.6s							
KKSI	**Kolaka, Sulawe**	**10.01**	**202**	P		**Pn**	**20 53 11.2**	**0.0**
	34nm,0.7s							
KAPI	**Kappang**	**11.58**	**209**	P		**Pn**	**20 53 34.7**	**+1.9**
	3.7nm,0.3s,baz=44,slow=14,SNR=4.0							
KAPI				S		**Sn**	**20 55 36.7**	**-3.7**
	3.0nm,0.5s,baz=244,slow=18,SNR=1.6							
KAPI				LR		LR	20 58 17.0	
	comp=Z,89nm,21.1s,baz=29,slow=38							
KAPI	**Kappang**	**11.58**	**209**	Pn		**Pn**	**20 53 35.2**	**+2.4**
SBUM	**Sibu**	**13.43**	**259**	P		**Pn**	**20 54 02.1**	**+4.3**
SOEI	**Soe**	**14.86**	**184**	Pn		**Pn**	**20 54 17.8**	**+1.1**
BATI	**Baumata**	**15.37**	**186**	P		**Pn**	**20 54 24.3**	**+1.3**
	90nm,1.1s,baz=57,slow=1.6,SNR=21							
BATI				LR		LR	21 00 45.0	
	comp=Z,76nm,20.4s,baz=287,slow=38							
BATI	**Baumata**	**15.37**	**186**	P		**Pn**	**20 54 24.3**	**+1.3**
TWG	**Pinlang**	**18.05**	**347**	P		**P**	**20 54 54.4**	**-1.4**
TWG				IAmb		IAmb	20 54 55.9	
	comp=Z,12nm,0.5s							
YULB	**Yu-li**	**18.55**	**348**	P		**P**	**20 54 59.2**	**-2.1**
TPUB	**Ta-pu**	**18.61**	**346**	P		**P**	**20 55 00.6**	**-1.4**
TPUB				IAmb		IAmb	20 55 04.4	
	comp=Z,20nm,0.6s							
MTN	**Manton Dam**	**18.77**	**162**	P		**P**	**20 55 03.3**	**-0.5**
MTN				IAmb		IAmb	20 55 18.1	
	comp=Z,37nm,1.2s							
SSLB	**Suanglung**	**19.01**	**347**	P		**P**	**20 55 04.4**	**-2.0**
GUMO	**Guam**	**20.93**	**65**	LR		LR	21 02 30.3	
	comp=Z,43nm,20.6s,baz=41,slow=33							
KNRA	**Kununurra**	**20.97**	**171**	P		**P**	**20 55 28.1**	**+0.5**
KNRA				IAmb		IAmb	20 55 48.4	
	comp=Z,26nm,0.9s							
LEM	**Lembang**	**21.38**	**236**	LR		LR	21 04 26.2	
	comp=Z,72nm,21.1s,baz=81,slow=38							
JOW	**Kunigami**	**21.72**	**7**	P		**P**	**20 55 34.3**	**-1.3**
	comp=Z,16nm,0.6s,baz=179,slow=8.6,SNR=6.8							
JOW				LR		LR	21 04 00.6	
	comp=Z,47nm,21.7s,baz=30,slow=36							
	comp=Z,16nm,0.6s							
JOW	**Kunigami**	**21.72**	**7**	P		**P**	**20 55 34.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**23.12**	**179**	P		**P**	**20 55 50.3**	**0.0**
	comp=Z,8.3nm,0.4s,baz=7.2,slow=9.6,SNR=38							
	comp=Z,8.3nm,0.4s							
KULM	**Kulim**	**24.66**	**271**	P		**P**	**20 56 05.2**	**+0.7**
KULM				IAmb		IAmb	20 56 10.4	
	comp=Z,26nm,1.3s							
COEN	**Coen**	**25.92**	**137**	P		**P**	**20 56 14.6**	**-1.3**
WB0	**Warramunga Arr**	**26.30**	**161**	P		**P**	**20 56 19.4**	**+0.1**
WB0				IAmb		IAmb	20 56 48.9	
	comp=Z,12nm,0.7s							
WRA	**Warramunga Arr**	**26.45**	**161**	P		**P**	**20 56 21.1**	**+0.4**
	comp=Z,3.7nm,0.6s,baz=330,slow=11,SNR=32							
	comp=Z,3.7nm,0.6s							
WRA	**Warramunga Arr**	**26.45**	**161**	P		**P**	**20 56 20.0**	**-0.6**
JSU	**Suzuyama**	**26.63**	**10**	P		**P**	**20 56 20.0**	**-2.2**
MBWA	**Marble Bar**	**26.75**	**192**	P		**P**	**20 56 21.5**	**-1.8**
PSA00	**Pilbara Seismi**	**27.12**	**191**	P		**P**	**20 56 27.1**	**+0.4**
PSA00				IAmb		IAmb	20 56 40.2	
	comp=Z,14nm,1.4s							
PSA00	**Pilbara Seismi**	**27.12**	**191**	P		**P**	**20 56 25.9**	**-0.8**
PSA00				IAmb		IAmb	20 56 40.3	
	comp=Z,41nm,1.4s							
WHN	**Wuhan**	**27.31**	**339**	P		**P**	**20 56 33.8**	**+5.6**
NJ2	**Nanjing**	**27.45**	**348**	*e*P		**P**	**20 56 30.0**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,2.0nm,0.5s							
GSI	**Gunungsitoli**	**28.05**	**263**	P		**P**	**20 56 34.0**	**-1.1**
GSI				IAmb		IAmb	20 56 48.7	
	comp=Z,7.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**29.02**	**299**	P		**P**	**20 56 43.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=121,slow=7.7,SNR=7.2							
CMAR				LR		LR	21 08 54.1	
	comp=Z,14nm,21.2s,baz=90,slow=37							
	comp=Z,0.8nm,0.7s							
ENH	**Enshi**	**29.14**	**331**	P		**P**	**20 56 43.4**	**-1.2**
CHTO	**Chiang Mai**	**29.16**	**300**	P		**P**	**20 56 44.2**	**-0.7**
JMN	**Monobe**	**29.49**	**14**	P		**P**	**20 56 47.0**	**-0.7**
AS31	**Alice Springs**	**29.83**	**164**			**P**	**20 56 51.5**	**+0.7**
AS31				IAmb		IAmb	20 56 53.4	
	comp=Z,3.7nm,0.3s							
ASAR	**Alice Springs**	**29.83**	**164**	P		**P**	**20 56 51.6**	**+0.9**
	comp=Z,2.9nm,0.4s,baz=346,slow=8.0,SNR=52							
ASAR				ScP		**ScP**	**21 03 29.1**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=347,slow=3.2,SNR=7.4							
	comp=Z,2.9nm,0.4s							
ASAR	**Alice Springs**	**29.83**	**164**	P		**P**	**20 56 51.1**	**+0.4**
PZH	**PanZhiHua**	**31.00**	**316**	P		**P**	**20 57 04.0**	**+2.7**
INU	**Inuyama**	**31.89**	**18**			**P**	**20 57 08.2**	**-0.6**
KSRS	**Korea Array**	**32.22**	**4**	P		**P**	**20 57 11.3**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=186,slow=9.7,SNR=8.1							
KSRS				LR		LR	21 12 19.1	
	comp=Z,23nm,19.3s,baz=190,slow=40							
	comp=Z,2.7nm,0.7s							
JGF	**Kuroka**	**32.23**	**18**	P		**P**	**20 57 11.8**	**0.0**
XAN	**Xi'an**	**32.55**	**334**	P		**P**	**20 57 14.5**	**-0.2**
XAN				pmax		pmax		
	comp=Z,6.0nm,0.9s							
MAJO	**Matsushiro**	**33.37**	**19**	P		**P**	**20 57 21.0**	**-0.6**
MJAR	**Matsushiro Arr**	**33.37**	**19**	P		**P**	**20 57 20.3**	**-1.4**
	comp=Z,6.0nm,0.8s,baz=198,slow=9.3,SNR=17							
MJAR				LR		LR	21 10 02.6	
	comp=Z,22nm,21.7s,baz=174,slow=35							
	comp=Z,6.0nm,0.8s							
MJAR	**Matsushiro Arr**	**33.37**	**19**	P		**P**	**20 57 20.4**	**-1.3**
MJB9	**Matsu-Tunnel**	**33.37**	**19**	P		**P**	**20 57 22.2**	**+0.5**
FORT	**Forrest**	**35.83**	**176**	P		**P**	**20 57 43.8**	**+0.8**
FORT				IAmb		IAmb	20 58 13.5	
	comp=Z,7.9nm,0.9s							
HHC	**Hu-ho-hao-te**	**37.64**	**343**	*e*P		**P**	**20 58 00.8**	**+2.4**
HHC				pmax		pmax		
	comp=Z,3.0nm,0.9s							
SHL	**Shillong**	**37.97**	**306**			**P**	**20 58 02.0**	**+0.5**
BBOO	**Buckleboo**	**39.10**	**166**	P		**P**	**20 58 11.8**	**+1.3**
USRK	**Ussuriysk Ar.**	**39.31**	**7**	P		**P**	**20 58 12.3**	**+0.2**
	comp=Z,9.9nm,0.7s,baz=194,slow=7.7,SNR=20							
	comp=Z,9.9nm,0.7s							
XLT	**XiLinHaoTe**	**39.45**	**349**	*e*P		P	20 58 19.0	+5.6
XLT				pmax		pmax		
	comp=Z,7.0nm,0.7s							
XLT				pmax		pmax		
	comp=Z,120nm,4.2s							
STKA	**Stephens Creek**	**39.93**	**158**	P		**P**	**20 58 19.1**	**+1.5**
	comp=Z,1.6nm,0.3s,baz=340,slow=8.1,SNR=9.4							
	comp=Z,1.6nm,0.3s							
STKA	**Stephens Creek**	**39.93**	**158**	P		**P**	**20 58 18.6**	**+1.1**
BNX	**BinXian**	**40.45**	**2**	⇓P		**P**	**20 58 22.3**	**+0.6**
BNX				pmax		pmax		
	comp=Z,5.0nm,0.6s							
LSA	**Lhasa**	**40.51**	**311**			**P**	**20 58 22.7**	**-0.3**
LSA	**Lhasa**	**40.51**	**311**	P		**P**	**20 58 21.8**	**-1.2**
GTA2	**Gaotai**	**41.28**	**329**	*e*P		**P**	**20 58 29.0**	**+0.2**
ASAJ	**Asahikawa**	**41.64**	**19**	LR		LR	21 17 42.4	
	comp=Z,21nm,18.2s,baz=180,slow=39							
JKA	**Kamikawa-asahi**	**41.64**	**19**	P		**P**	**20 58 32.2**	**+0.8**
JKA				IAmb		IAmb	20 58 35.0	
	comp=Z,11nm,1.0s							
H11S3	**WAKE ISLAND Hy**	**42.39**	**68**	T		T	21 43 43.5	
	baz=257,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hy**	**42.41**	**68**	T		T	21 43 45.5	
	baz=257,slow=75,SNR=19							
H11S2	**WAKE ISLAND Hy**	**42.41**	**68**	T		T	21 43 46.4	
	baz=257,slow=75,SNR=18							
H11N1	**WAKE ISLAND Hy**	**42.87**	**67**	T		T	21 44 31.5	
	baz=255,slow=75,SNR=4.4							
H11N2	**WAKE ISLAND Hy**	**42.88**	**67**	T		T	21 44 31.8	
	baz=255,slow=75,SNR=4.5							
H11N3	**WAKE ISLAND Hy**	**42.88**	**67**	T		T	21 44 31.6	
	baz=255,slow=75,SNR=4.2							
EVN	**Everest**	**43.09**	**306**	P		**P**	**20 58 43.6**	**-0.6**
EVN				IAmb		IAmb	20 58 57.6	
	comp=Z,4.2nm,0.5s							
SONM	**Songino Array**	**45.53**	**342**	P		**P**	**20 59 02.7**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=163,slow=7.7,SNR=3.9							
SONM				LR		LR	21 18 26.0	
	comp=Z,35nm,19.4s,baz=178,slow=36							
	comp=Z,0.4nm,0.5s							
WMQ	**Urumqi**	**50.80**	**325**	*e*P		**P**	**20 59 46.0**	**+2.5**
WMQ				LR		LR		
	comp=Z,140nm,24.1s							
PETK	**Petropavlovsk-**	**54.62**	**23**	P		**P**	**21 00 12.2**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=177,slow=2.9,SNR=8.0							
	comp=Z,3.0nm,0.6s							
MKAR	**Makanchi Array**	**55.63**	**325**	P		**P**	**21 00 18.8**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=122,slow=7.5,SNR=26							
MKAR				LR		LR	21 24 44.9	
	comp=Z,42nm,18.4s,baz=26,slow=37							
	comp=Z,1.2nm,0.5s							
MKAR	**Makanchi Array**	**55.63**	**325**			**P**	**21 00 18.9**	**+0.1**
MAKZ	**Makanchi**	**55.82**	**325**			**P**	**21 00 20.5**	**+0.3**
KSH2	**Kashi**	**56.24**	**314**	P		**P**	**21 00 24.5**	**+1.0**
KSH2				pmax		pmax		
	comp=Z,2.0nm,1.0s							
KDJ	**Kajisay**	**56.41**	**318**	P		**P**	**21 00 24.9**	**+0.3**
KDJ				IAmb		IAmb	21 00 41.3	
	comp=Z,2.9nm,0.7s							
YAK	**Yakutsk**	**56.83**	**2**	LR		LR	21 26 52.3	
	comp=Z,21nm,18.9s,baz=128,slow=38							
YAK	**Yakutsk**	**56.83**	**2**			**P**	**21 00 26.4**	**-0.6**
MA2	**Magadan**	**57.66**	**15**	P		**P**	**21 00 33.1**	**+0.3**
ZALV	**Zalesovo Beam**	**58.72**	**333**	P		**P**	**21 00 39.1**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=128,slow=7.8,SNR=2.6							
	comp=Z,0.3nm,0.3s							
ZALV	**Zalesovo Beam**	**58.72**	**333**	P		**P**	**21 00 39.4**	**-1.0**
KURBB	**Kurchatov Arra**	**59.83**	**327**	P		**P**	**21 00 47.2**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=126,slow=6.3,SNR=20							
	comp=Z,1.7nm,0.6s							
KURK	**Kurchatov**	**59.83**	**328**			**P**	**21 00 47.4**	**-0.7**
KURK				IAmb		IAmb	21 00 48.8	
	comp=Z,3.4nm,0.8s							
KKAR	**Karatay Array**	**61.29**	**317**	P		**P**	**21 00 57.7**	**-0.6**
BVAR	**Borovoye Array**	**65.41**	**327**	P		**P**	**21 01 24.2**	**-1.1**
	comp=Z,1.1nm,0.9s,baz=120,slow=5.8,SNR=5.4							
	comp=Z,1.1nm,0.9s							
TIXI	**Tiksi**	**66.44**	**1**			**P**	**21 01 30.2**	**-1.3**
TIXI				IAmb		IAmb	21 01 31.1	
	comp=Z,8.2nm,0.9s							
AB31	**Akbulak array**	**70.21**	**321**	P		**P**	**21 01 55.0**	**-0.5**
ABKAR	**Akbulak array**	**70.21**	**321**	P		**P**	**21 01 54.4**	**-1.1**
C19K	**Lookout Ridge**	**79.87**	**21**	IAmb		IAmb	21 02 52.5	
	comp=Z,4.1nm,0.6s							
B21K	**Ikpikpuk River**	**81.69**	**20**	IAmb		IAmb	21 03 02.4	
	comp=Z,5.9nm,0.7s							
I23K	**Minto, Yukon-K**	**83.34**	**25**	P		**P**	**21 03 10.0**	**+0.9**
E23K	**Chandalar**	**83.36**	**22**	IAmb		IAmb	21 03 14.1	
	comp=Z,1.1nm,1.4s							
MCK	**McKinley**	**83.47**	**27**	P		**P**	**21 03 09.5**	**-0.4**
MCK				IAmb		IAmb	21 03 10.8	
	comp=Z,6.4nm,0.9s							
RND	**Reindeer**	**83.50**	**27**	P		**P**	**21 03 09.9**	**-0.2**
E24K	**Your Creek**	**83.78**	**22**	P		**P**	**21 03 11.9**	**+0.5**
E24K				IAmb		IAmb	21 03 42.0	
	comp=Z,6.8nm,1.3s							
H24K	**Noodor Dome**	**83.97**	**24**	P		**P**	**21 03 13.1**	**+0.7**
H24K				IAmb		IAmb	21 03 15.4	
	comp=Z,5.1nm,1.0s							
G24K	**Hadweenzic Riv**	**84.15**	**24**	P		**P**	**21 03 14.6**	**+1.4**
G24K				IAmb		IAmb	21 03 15.1	
	comp=Z,4.2nm,0.8s							
HDA

comp=E,32nm,1.2s
YHL IAML 21 12 15.5
comp=N,30nm,1.0s
BOZ Bozeman (W) 5.10 296 Pn **Pn** **21 10 45.1 +1.0**
BOZ IAML 21 12 04.8
comp=N,18nm,3.8s
BOZ IAML 21 13 49.0
comp=N,15nm,5.0s
EGMT Eagleton 5.56 326 Pn **Pn** **21 10 50.8 +0.5**
PV22 Blue Mesa, Par 5.70 210 Pn **Pn** **21 10 49.5 -2.9**
MCMT McKenzie Canyo 5.72 286 Pn **Pn** **21 10 52.1 -0.6**
SDCO Great Sand Dun 5.77 183 Pn **Pn** **21 10 50.5 -3.0**
MDND Maddock 5.80 40 Pn **Pn** **21 10 51.7 -1.9**
SRU San Rafael Swe 6.00 225 Pn **Pn** **21 10 55.1 -1.4**
ECSD EROS Data Cent 6.17 85 Pn **Pn** **21 10 60.0 +1.3**
HMU Henry Mountain 7.02 219 Pn **Pn** **21 11 11.8 +1.2**
I10CA LAC DU BONNET 9.13 40 I I 22 07 40.0
baz=221,slow=271,SNR=1.5
ULM Lac du Bonnet 9.23 40 Pn **Pn** **21 11 40.7 0.0**
comp=N,0.5nm,0.3s,baz=232,slow=13,SNR=4.5
ULM Lg Lg 21 14 19.4
comp=N,0.3nm,0.3s,baz=122,slow=22,SNR=5.8
comp=N,1.4nm,0.4s
I56US NEWPORT INFRAS 9.63 304 I I 22 09 10.0
baz=117,slow=331,SNR=2.2

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*NEIC **25** 21:17:33.5, 9.92S×161.02E, h30km, Moment Tensor Solution. Duration: 1ŝ3 Moment tensor: Scale 10^16^Nm; Mrr1.77; Mθθ-0.27; Mφφ-1.50; Mrθ-1.03; Mθφ0.66; Mφr-0.63; Fault plane solution: M0 2.15000×10^16^ NP1: φs313.43000°, δ47.74000°, λ52.65000°. NP2: φs182.04000°, δ53.96000°, λ123.73000°. Principal axes: T 2.3838, Plg63.0000°, Azm152.0000°; N -0.5849, Plg27.0000°, Azm341.0000°; P -1.7989, Plg3.0000°, Azm249.0000°;*

*NEIC **25** 21:17:33.5±1.4, 10.02S±0.09×161.03E±0.07, h10km±1km, mb5.2/197, Mww4.8/10 Error ellipse: s-maj=17.8km s-min=8.7km az=214.0*

*NEIC **25** 21:17:33.5, 10.02S×161.02E, h30km*

*GCMT **25** 21:17:36.5±0.3, 10.18S±0.03×160.87E±0.02, h33km, MW5.0/66, Moment Tensor Solution. s43,c58; s66,c83; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr3.26±.16; Mθθ-0.13±.11; Mφφ-3.13±.10; Mrθ-0.42±.14; Mθφ0.22±.09; Mφr-0.97±.11; Best double couple: M0 3.37100×10^16^ NP1: φs348.00000°, δ37.00000°, λ78.00000°. NP2: φs184.00000°, δ54.00000°, λ99.00000°. Principal axes: T 3.4600, Plg79.0000°, Azm130.0000°; N -0.1770, Plg7.0000°, Azm358.0000°; P -3.2820, Plg8.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **25** 21:17:37.9±2.0, 10.08S×160.98E, h48km±16km, mb4.5/27, mbtmp4.8/30, ML3.5/2, MS4.0/51 Error ellipse: s-maj=18.4km s-min=11.8km az=88.0*

*NOU **25** 21:17:38.0, 10.10S×160.99E, h37km, mb5.1/41, Solomon Islands*

ISC 25 21:17:38.2±0.3, 10.11S±0.04×161.00E±0.04, h50km, n538, σ1ŝ01/441, mb5.1/157, MS4.1/52, 2C,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
HURO	**Huro Makira**	**0.96**	**112**	P		**21 17 53.0**	**-2.4**
HURO	**Huro Makira**	**0.96**	**112**	P		**Sn**	**21 18 06.6 -1.4**
HNR	**Honiara**	**1.24**	**303**	P		**Pn**	**21 17 57.4 -1.8**
	796nm,0.6s,baz=256,slow=3.3,SNR=278						
HNR				S		**Sn**	**21 18 13.5 -1.3**
	3μm,0.7s,baz=288,slow=22,SNR=22						
HNR	**Honiara**	**1.24**	**303**			**Pn**	**21 17 56.7 -2.5**
HNR				Sn		**Sn**	**21 18 13.8 -1.0**
HNR	**Honiara**	**1.24**	**303**	P		**Pn**	**21 17 57.8 -1.4**
HNR	**Honiara**	**1.24**	**303**	S		**Sn**	**21 18 15.4 +0.6**
ALEG	**Aligegeo Malai**	**1.38**	**347**	P		**Pn**	**21 17 59.9 -1.3**
ALEG	**Aligegeo Malai**	**1.38**	**347**	S		**Sn**	**21 18 18.3 0.0**
SAVO	**Savo Central**	**1.51**	**309**	P		**Pn**	**21 18 01.9 -1.0**
SAVO	**Savo Central**	**1.51**	**309**	S		**Sn**	**21 18 22.7 +1.2**
NGOA	**Tingoa Renbel**	**1.70**	**213**	P		**Pn**	**21 18 03.9 -1.6**
NGOA	**Tingoa Renbel**	**1.70**	**213**	S		**Sn**	**21 18 24.4 -1.7**
TATA	**Tatamba Isabel**	**2.08**	**325**	P		**Pn**	**21 18 10.4 -0.3**
SANVU	**Saraoutou**	**8.04**	**132**			**Pn**	**21 19 31.7 -0.8**
DVP	**Devils Point**	**10.29**	**138**	P		**Pn**	**21 20 04.1 +0.8**
DVP	**Devils Point**	**10.29**	**138**	S		**Sn**	**21 21 59.3 +2.0**
RTV	**Rentapao**	**10.50**	**137**	P		**Pn**	**21 20 07.0 +0.9**
RABL	**Rabaul**	**10.55**	**303**	Pn		**Pn**	**21 20 05.8 -1.2**
KOUNC	**Koumac, New Ca**	**10.85**	**163**	P		**Pn**	**21 20 11.3 +0.4**
DZM	**Mont Dzumac**	**12.99**	**157**	*e*P		**Pn**	**21 20 39.0 -1.2**
	112nm,1.2s						
DZM				*e*LR		LR	21 23 36.3
	2μm,24.7s						
DZM	**Mont Dzumac**	**12.99**	**157**	P		**Pn**	**21 20 41.9 +1.6**
	18nm,0.4s,baz=323,slow=14,SNR=37						
DZM				S		**Sn**	**21 23 00.0 -3.3**
	8.2nm,0.9s,baz=358,slow=16,SNR=1.9						
DZM				LR		LR	21 25 11.9
	comp=Z,1μm,20.1s,baz=4.5,slow=35						
DZM	**Mont Dzumac**	**12.99**	**157**	Pn		**Pn**	**21 20 41.2 +1.0**
DZM	**Mont Dzumac**	**12.99**	**157**	P		**Pn**	**21 20 40.9 +0.7**
MARNC	**Mare, Loyalty**	**13.17**	**150**	Pn		**Pn**	**21 20 43.4 +0.8**
MARNC	**Mare, Loyalty**	**13.17**	**150**	P		**Pn**	**21 20 43.9 +1.3**
ONTNC	**Ouen Toro**	**13.21**	**157**			**Pn**	**21 20 42.4 -0.7**
ONTNC	**Ouen Toro**	**13.21**	**157**	P		**Pn**	**21 20 43.6 +0.5**
OUENC	**Ouen Island, N**	**13.46**	**156**	P		**Pn**	**21 20 48.4 +1.9**
PMG	**Port Moresby**	**13.66**	**272**	P		**Pn**	**21 20 49.9 +0.5**
	1.1nm,0.3s,baz=97,slow=12,SNR=11						
PMG				LR		LR	21 25 49.4
	comp=Z,1μm,20.1s,baz=141,slow=36						
	4.4nm,0.2s						
PMG	**Port Moresby**	**13.66**	**272**	P		**Pn**	**21 20 52.0 +2.6**
	621nm62nm,1.3s						
PATS	**Pohnpei**	**17.05**	**351**	P		**P**	**21 21 33.7 -0.7**
CTA	**Charters Tower**	**17.34**	**233**	P		**P**	**21 21 38.2 +0.7**
	1.0nm,0.3s,baz=57,slow=12,SNR=22						
CTA				LR		LR	21 27 55.0
	comp=Z,1μm,18.4s,baz=56,slow=36						
	30nm,0.8s						
CTA	**Charters Tower**	**17.34**	**233**	P		**P**	**21 21 38.4 +0.8**
CTAO	**Charters Tower**	**17.34**	**233**			**P**	**21 21 37.9 +0.3**
CTAO	**Charters Tower**	**17.34**	**233**	P		**P**	**21 21 38.3 +0.7**
COEN	**Coen**	**17.84**	**256**			**P**	**21 21 43.6 +0.4**
COEN	**Coen**	**17.84**	**256**	P		**P**	**21 21 44.2 +0.9**
EIDS	**Eidsvold**	**17.86**	**211**			**P**	**21 21 44.7 +1.4**
JAY	**Jayapura**	**21.52**	**289**	P		**P**	**21 22 22.4 -0.9**
	13nm,0.8s,baz=127,slow=15,SNR=5.0						
	13nm,0.8s						
JAY	**Jayapura**	**21.52**	**289**	P		**P**	**21 22 26.2 +2.8**
ARMA	**Armidale**	**22.01**	**202**	P		**P**	**21 22 28.1 -0.3**
QIS	**Mount Isa**	**23.07**	**241**	P		**P**	**21 22 40.8 +1.1**
INKA	**Innaminka**	**25.90**	**225**			**P**	**21 23 07.0 +1.4**
AFI	**Afiamalu**	**26.89**	**101**	LR		LR	21 31 37.4
	comp=Z,718nm,21.7s,baz=300,slow=31						
WR8	**Warramunga Arr**	**27.36**	**246**	P		**P**	**21 23 18.4 -0.6**
WR8				IAmb		IAmb	21 23 30.5
	comp=Z,33nm,0.9s						
CAN	**Canberra**	**27.37**	**202**	P		**P**	**21 23 20.3 +1.4**
WB0	**Warramunga Arr**	**27.40**	**246**	P		**P**	**21 23 19.4 +0.1**
WB0				IAmb		IAmb	21 23 30.8
	comp=Z,78nm,1.2s						
RAO	**Raoul Island**	**27.42**	**137**	LR		LR	21 33 39.0
	comp=Z,188nm,18.1s,baz=146,slow=35						
WRAB	**Tennant Creek**	**27.49**	**246**	P		**P**	**21 23 20.2 +0.1**
WB2	**Warramunga Arr**	**27.49**	**246**	P		**P**	**21 23 20.3 +0.1**
WB2				IAmb		IAmb	21 23 31.7
	comp=Z,44nm,1.1s						
WRA	**Warramunga Arr**	**27.50**	**246**	P		**P**	**21 23 20.3 0.0**
	comp=Z,8.5nm,0.6s,baz=75,slow=9.2,SNR=36						
	comp=Z,8.5nm,0.6s						
WRA	**Warramunga Arr**	**27.50**	**246**	P		**P**	**21 23 20.4 +0.2**
STKA	**Stephens Creek**	**28.14**	**217**	P		**P**	**21 23 26.2 +0.4**
	comp=Z,3.4nm,0.6s,baz=44,slow=16,SNR=7.3						
STKA				LR		LR	21 34 38.5
	comp=Z,166nm,18.3s,baz=39,slow=36						
	comp=Z,3.4nm,0.6s						
STKA	**Stephens Creek**	**28.14**	**217**	P		**P**	**21 23 25.7 0.0**
STKA				IAmb		IAmb	21 23 36.7
	comp=Z,32nm,0.8s						
GUMO	**Guam**	**28.47**	**325**	LR		LR	21 34 04.0
	comp=Z,523nm,21.4s,baz=145,slow=35						
H11S2	**WAKE ISLAND Hy**	**28.98**	**11**	T		T	21 52 21.9
	baz=193,slow=76						
H11S3	**WAKE ISLAND Hy**	**28.98**	**11**	T		T	21 52 21.6
	baz=193,slow=76						
H11S1	**WAKE ISLAND Hy**	**28.99**	**11**	T		T	21 52 21.3
	baz=193,slow=76						
AS31	**Alice Springs**	**29.14**	**239**			**P**	**21 23 34.4 -0.4**
ASAR	**Alice Springs**	**29.15**	**239**	P		**P**	**21 23 34.3 -0.6**
	comp=Z,2.9nm,0.8s,baz=61,slow=10,SNR=18						
ASAR				LR		LR	21 35 11.1
	comp=Z,901nm,18.1s,baz=70,slow=36						
	comp=Z,2.9nm,0.8s						
ASAR	**Alice Springs**	**29.15**	**239**	P		**P**	**21 23 34.0 -0.9**
MTN	**Manton Dam**	**29.39**	**262**	P		**P**	**21 23 37.1 +0.1**
MTN				IAmb		IAmb	21 24 23.2
	comp=Z,37nm,1.2s						
NIUE	**Niue**	**29.47**	**111**	P		**P**	**21 23 39.0 +1.3**
H11N1	**WAKE ISLAND Hy**	**30.20**	**11**	T		T	21 54 22.1
	baz=193,slow=76,SNR=78						
H11N3	**WAKE ISLAND Hy**	**30.21**	**11**	T		T	21 54 13.0
	baz=193,slow=76,SNR=64						
H11N2	**WAKE ISLAND Hy**	**30.22**	**11**	T		T	21 54 30.5
	baz=193,slow=76,SNR=88						
TOO	**Toolangi**	**30.70**	**205**	P		**P**	**21 23 50.0 +1.5**
HTT	**Hallett**	**30.83**	**218**	P		**P**	**21 23 51.2 +1.6**
HIZ	**Hauiti**	**30.89**	**159**	P		**P**	**21 23 51.6 +1.6**
SIJI	**Sorong**	**30.96**	**285**	LR		LR	21 38 01.1
	comp=Z,367nm,20.0s,baz=132,slow=40						
URZ	**Urewera**	**31.54**	**155**	LR		LR	21 34 08.8
	comp=Z,225nm,21.1s,baz=336,slow=31						
KNRA	**Kununurra**	**31.88**	**257**	P		**P**	**21 23 59.2 +0.1**
BBOO	**Buckleboo**	**32.22**	**222**	P		**P**	**21 24 01.7 -0.2**
BBOO				IAmb		IAmb	21 24 03.2
	comp=Z,26nm,0.8s						
BBOO	**Buckleboo**	**32.22**	**222**	P		**P**	**21 24 01.8 -0.1**
KRAI	**Karang Ratu**	**33.05**	**280**	P		P	21 24 13.6 +4.2
	comp=Z,2μmcomp=Z,7.5nm,0.8s						
THZ	**Tophouse**	**33.22**	**164**	P		**P**	**21 24 10.8 +0.2**
THZ				IAmb		IAmb	21 24 11.7
	comp=Z,23nm,0.9s						
RPZ	**Rata Peaks**	**34.60**	**167**	LR		LR	21 36 47.2
	comp=Z,164nm,21.1s,baz=58,slow=33						
BATI	**Baumata**	**36.74**	**266**	LR		LR	21 41 12.9
	comp=Z,412nm,19.1s,baz=118,slow=38						
BATI	**Baumata**	**36.74**	**266**	P		**P**	**21 24 41.6 +0.5**
MMRI	**Maumere**	**38.26**	**269**	P		**P**	**21 24 54.0 0.0**
EDFI	**Ende, Flores**	**38.78**	**269**	P		**P**	**21 24 58.8 +0.2**
	comp=Z,25nm,1.0s						
LUWI	**Luwuk**	**39.05**	**281**	P		**P**	**21 25 00.8 +0.1**
	comp=Z,6μmcomp=Z,59nm,1.2s						
DAV	**Davao City (W)**	**39.19**	**294**	LR		LR	21 42 03.3
	comp=Z,133nm,18.0s,baz=322,slow=37						
RAR	**Rarotonga**	**39.24**	**111**	LR		LR	21 38 15.5
	comp=Z,356nm,19.3s,baz=274,slow=32						
KKSI	**Kolaka, Sulawe**	**39.46**	**276**	P		**P**	**21 25 03.1 -1.0**
	comp=Z,45nm,1.3s						
WBSI	**Waikabubak, Su**	**40.97**	**267**	P		**P**	**21 25 20.4 +3.7**
	comp=Z,55nm,1.1s						
PSA00	**Pilbara Seismi**	**41.07**	**249**	P		**P**	**21 25 17.0 -0.3**
PSA00	**Pilbara Seismi**	**41.07**	**249**	P		**P**	**21 25 17.3 0.0**
MBWA	**Marble Bar**	**41.11**	**249**	P		**P**	**21 25 17.4 -0.2**
MBWA	**Marble Bar**	**41.11**	**249**	P		**P**	**21 25 17.4 -0.2**
KAPI	**Kappang**	**41.18**	**274**	LR		LR	21 43 05.3
	comp=Z,88nm,20.1s,baz=78,slow=37						
KAPI	**Kappang**	**41.18**	**274**	P		**P**	**21 25 17.8 -0.4**
KAPI	**Kappang**	**41.18**	**274**	P		**P**	**21 25 22.5 +4.2**
	comp=Z,205nmcomp=Z,14nm,1.3s						
JCJ	**Chichijima**	**41.25**	**334**	LR		LR	21 40 49.2
	comp=Z,282nm,21.9s,baz=103,slow=34						
SPSI	**Sidrap Palu**	**41.34**	**275**	P		P	21 25 24.3 +4.7
	comp=Z,23nm,1.2s						
PCI	**Palu**	**41.93**	**280**	P		**P**	**21 25 26.7 +2.2**
	comp=Z,45nm,1.1s						
DBNI	**Kabupaten Domp**	**42.13**	**268**	P		**P**	**21 25 24.7 -1.4**
	comp=Z,18nm,1.0s						
PLAI	**Plampang**	**42.63**	**268**	P		**P**	**21 25 31.8 +1.6**
PLAI	**Plampang**	**42.63**	**268**	P		**P**	**21 25 28.0 -2.2**
	comp=Z,46nm,1.2s						
MEEK	**Meekatharra**	**43.22**	**242**	P		**P**	**21 25 36.6 +1.8**
BLDU	**Ballidu**	**45.89**	**237**	P		**P**	**21 25 57.3 +1.3**
MORW	**Morawa**	**46.03**	**239**	P		**P**	**21 25 58.1 +0.9**
NWAO	**Narrogin (SRO)**	**46.18**	**234**	LR		LR	21 45 35.5
	comp=Z,584nm,18.9s,baz=94,slow=36						
PPT	**Papeete**	**48.45**	**104**	LR		LR	21 42 17.4
	comp=Z,259nm,20.8s,baz=234,slow=30						
PPT2	**Papeete2**	**48.45**	**105**	*e*S		**S**	**21 33 14.9 +0.9**
	comp=Z,142nm,28.2s						
PPT2				*e*LR		LR	21 39 51.5
	comp=Z,378nm,23.2s						
PPT2				*e*LR		LR	21 39 59.9
	comp=Z,486nm,23.0s						
SNJI	**Sawahan-Nganju**	**48.66**	**269**	P		**P**	**21 26 16.9 -1.1**
	comp=Z,58nm,1.4s						
TBI	**Tubual**	**49.00**	**112**	*e*S		**S**	**21 33 24.5 +3.0**
	comp=Z,386nm,28.5s						
TBI				*e*SS		**SS**	**21 36 54.6 +1.6**
	comp=Z,896nm,36.0s						
TBI				*e*LQ		LQ	21 38 14.2
	comp=Z,2μm,28.2s						
TBI				*e*LR		LR	21 40 15.7
	comp=Z,2μm,27.8s						
YOJ	**Yonaguni jima**	**50.55**	**313**	P		**P**	**21 26 32.5 +0.5**
JMN	**Monobe**	**50.66**	**331**	P		**P**	**21 26 32.4 -0.2**
JMN	**Monobe**	**50.66**	**331**	P		**P**	**21 26 32.8 +0.1**
MJAR	**Matsushiro Arr**	**51.12**	**336**	P		**P**	**21 26 34.6 -1.5**
	comp=Z,2.8nm,0.8s,baz=166,slow=9.2,SNR=7.5						
MJAR				LR		LR	21 48 16.4
	comp=Z,57nm,20.0s,baz=156,slow=36						
	comp=Z,2.8nm,0.8s						
MJAR	**Matsushiro Arr**	**51.12**	**336**	P		**P**	**21 26 36.3 +0.2**
YULB	**Yu-li**	**51.16**	**311**	P		**P**	**21 26 36.1 -0.5**
YULB	**Yu-li**	**51.16**	**311**	P		**P**	**21 26 36.7 +0.1**
TPUB	**Ta-pu**	**51.60**	**311**	P		**P**	**21 26 39.4 -0.6**
SSLB	**Suanglung**	**51.64**	**311**	P		**P**	**21 26 39.1 -1.1**
JNU	**Nakatsue**	**51.69**	**328**	P		**P**	**21 26 39.9 -0.5**
	comp=Z,24nm,1.0s,baz=197,slow=1.4,SNR=7.1						
JNU				LR		LR	21 49 12.4
	comp=Z,35nm,18.1s,baz=168,slow=37						
	comp=Z,24nm,1.0s						
DAH	**Dandelion**	**51.78**	**56**	P		**P**	**21 26 41.0 -0.7**
TRH	**Trail**	**51.90**	**56**	P		**P**	**21 26 43.2 +0.5**
LEM	**Lembang**	**52.85**	**269**	LR		LR	21 52 26.9
	comp=Z,105nm,18.4s,baz=136,slow=40						
QZH2	**Quanzhou**	**54.06**	**311**	P		**P**	**21 26 59.3 +1.3**
JKA	**Kamikawa-asahi**	**56.50**	**344**	P		**P**	**21 27 15.6 +0.4**
JKA				IAmb		IAmb	21 27 24.1
	comp=Z,19nm,0.9s						
ASAJ	**Asahikawa**	**56.50**	**344**	P		**P**	**21 27 16.2 +1.0**
	comp=Z,11nm,0.5s,baz=214,slow=8.5,SNR=36						
ASAJ				LR		LR	21 48 56.0
	comp=Z,258nm,21.9s,baz=174,slow=33						
	comp=Z,11nm,0.5s						
KSRS	**Korea Array**	**56.57**	**329**	P		**P**	**21 27 16.3 +0.5**
	comp=Z,7.4nm,1.0s,baz=150,slow=6.7,SNR=10						
KSRS				LR		LR	21 49 33.9
	comp=Z,108nm,20.8s,baz=140,slow=34						
	comp=Z,7.4nm,1.0s						
TAOE	**Nuku Hiva Isla**	**57.99**	**94**	*e*LR		LR	21 44 25.1
	comp=Z,361nm,25.7s						
NJ2	**Nanjing**	**58.14**	**318**	*e*P		**P**	**21 27 27.5 +0.5**
NJ2				pmax		pmax	
	comp=Z,11nm,0.9s						
QIZ	**Qiongzhong**	**58.15**	**300**	P		**P**	**21 27 25.8 -1.6**
QIZ				S		**S**	**21 35 27.5 +2.0**
QIZ				pmax		pmax	
	comp=Z,9.0nm,1.1s						
QIZ				LR		LR	
	comp=Z,150nm,18.3s						
QIZ				LR		LR	
	comp=Z,170nm,20.2s						
QIZ				LR		LR	
	comp=Z,280nm,19.2s						
USRK	**Ussuriysk Ar.**	**60.12**	**336**	P		**P**	**21 27 39.9 -0.7**
	comp=Z,18nm,0.9s,baz=146,slow=6.7,SNR=19						
	comp=Z,18nm,0.9s						
WHN	**Wuhan**	**60.33**	**314**	P		**P**	**21 27 42.5 +0.3**
WHN				pmax		pmax	
	comp=Z,30nm,0.8s						
DL2	**Dalian**	**61.00**	**326**	P		**P**	**21 27 44.5 -2.1**
DL2				pmax		pmax	
	comp=Z,44nm,0.9s						
MDJ	**Mudanjiang**	**61.44**	**335**	P		**P**	**21 27 49.0 -0.5**
MDJ				pmax		pmax	
	comp=Z,20nm,1.2s						
CN2	**Changchun**	**62.63**	**332**	*e*P		**P**	**21 27 56.3 -1.2**
CN2				*es*P		pP	21 28 04.8 -6.5
CN2				pmax		pmax	
	comp=Z,10.0nm,0.8s						
PEA0B	**Petropavlovsk-**	**63.03**	**358**	P		**P**	**21 27 59.5 -0.5**
PETK	**Petropavlovsk-**	**63.03**	**358**	P		**P**	**21 28 00.1 +0.1**
	comp=Z,13nm,0.9s,baz=146,slow=6.3,SNR=7.8						
PETK				LR		LR	21 51 40.3
	comp=Z,114nm,21.2s,baz=151,slow=32						
	comp=Z,13nm,0.9s						
BNX	**BinXian**	**63.26**	**334**	⇑P		**P**	**21 28 00.8 -0.8**
BNX				pmax		pmax	
	comp=Z,22nm,1.1s						
SHEM	**Shemya Is, Ala**	**63.59**	**9**	P		**P**	**21 28 03.5 -0.2**
	comp=Z,152nm,1.0s,baz=319,slow=7.6,SNR=5.6						
SHEM				LR		LR	21 50 30.2
	comp=Z,82nm,20.3s,baz=121,slow=31						
LYN	**LuoYang**	**63.91**	**316**	P		**P**	**21 28 06.5 +0.3**
LYN				pmax		pmax	
	comp=Z,20nm,0.6s						
GSI	**Gunungsitoli**	**64.12**	**276**	P		**P**	**21 28 06.4 -1.6**
GSI				IAmb		IAmb	21 28 15.9
	comp=Z,21nm,1.0s						
HNS	**HongShan**	**64.13**	**320**	⇑P		**P**	**21 28 08.3 +0.8**
HNS				pmax		pmax	
	comp=Z,29nm,1.1s						
KLR	**Kul'dur**	**64.44**	**339**	P		**P**	**21 28 09.2 -0.1**
	comp=Z,10.0nm,0.9s,baz=146,slow=3.4,SNR=32						
KLR				LR		LR	21 53 30.5
	comp=Z,113nm,21.9s,baz=148,slow=33						
	comp=Z,10.0nm,0.9s						
XAN	**Xi'an**	**66.09**	**314**	P		**P**	**21 28 19.8 -0.6**
XAN				pP		pP	21 28 26.0 -8.3
XAN				pmax		pmax	
	comp=Z,32nm,0.7s						
KMI2	**Kunming**	**66.68**	**303**	P		**P**	**21 28 26.0 +1.4**
KMI2				pmax		pmax	
	comp=Z,8.0nm,1.1s						
KMI2				LR		LR	
	comp=Z,180nm,17.9s						
HEH	**HeiHe**	**66.87**	**337**	*e*P		**P**	**21 28 24.3 -0.7**
HEH				pmax		pmax	
	comp=Z,17nm,1.1s						
VNDA	**Vanda**	**67.39**	**180**	LR		LR	21 52 51.7
	comp=Z,125nm,20.8s,baz=283,slow=31						
XLT	**XiLinHaoTe**	**67.45**	**326**	*e*P		**P**	**21 28 29.8 +0.9**
XLT				sP		pP	21 28 37.0 -5.9
XLT				pmax		pmax	
	comp=Z,27nm,1.0s						
XLT				pmax		pmax	
	comp=Z,120nm,4.3s						
CMAR	**Chiang Mai Arr**	**67.47**	**295**	P		**P**	**21 28 29.8 +0.3**
	comp=Z,1.3nm,0.4s,baz=116,slow=4.6,SNR=12						
CMAR				LR		LR	21 56 50.9
	comp=Z,36nm,21.5s,baz=95,slow=35						
	comp=Z,1.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**67.47**	**295**	P		**P**	**21 28 29.1 -0.4**
CHTO	**Chiang Mai**	**67.59**	**295**	P		**P**	**21 28 29.8 -0.4**
CHTO	**Chiang Mai**	**67.59**	**295**	P		**P**	**21 28 31.3 +1.1**
	comp=Z,9.2nm,1.3s						
PZH	**PanZhiHua**	**68.06**	**304**	P		**P**	**21 28 36.5 +3.3**
PZH				pmax		pmax	
	comp=Z,10.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**68.16**	**322**	*e*P		**P**	**21 28 34.0 +0.6**
HHC				sP		pP	21 28 41.3 -6.1
HHC				pmax		pmax	
	comp=Z,3.0nm,1.0s						
HHC				pmax		pmax	
	comp=Z,110nm,6.6s						
CD2	**Chengdu**	**68.36**	**309**	P		**P**	**21 28 34.5 -0.4**
CD2				pP		pP	21 28 38.3 -11
CD2				pmax		pmax	
	comp=Z,30nm,0.5s						
CD2				pmax		pmax	
	comp=Z,210nm,5.9s						
BTO2	**Baotou**	**69.14**	**321**	*e*P		P	21 28 47.0 +7.4
BTO2				pP		pP	21 28 51.5 -2.1
BTO2				sP		sP	21 28 54.0 -5.2
BTO2				pmax		pmax	
	comp=Z,23nm,0.9s						
BTO2				pmax		pmax	
	comp=Z,340nm,5.3s						
HIA	**Hailar**	**69.32**	**333**	P		**P**	**21 28 40.2 -0.2**
UNV	**Unalaska Valle**	**69.42**	**20**	P		**P**	**21 28 40.8 0.0**
UNV	**Unalaska Valle**	**69.42**	**20**	P		**P**	**21 28 41.3 +0.4**
	baz=214						
HILR	**Hailar Array B**	**69.53**	**333**	P		**P**	**21 28 41.7 0.0**
	comp=Z,4.4nm,0.4s,baz=126,slow=6.1,SNR=11						
	comp=Z,4.4nm,0.4s						
MA2	**Magadan**	**69.94**	**354**	P		**P**	**21 28 43.1 -0.8**
	comp=Z,9.3nm,0.7s,baz=135,slow=4.3,SNR=9.2						
MA2				LR		LR	21 55 34.4
	comp=Z,109nm,21.9s,baz=172,slow=33						
	comp=Z,9.3nm,0.7s						
MA2	**Magadan**	**69.94**	**354**	P		**P**	**21 28 42.7 -1.3**
TNCH	**TengChong**	**70.16**	**301**	*e*P		**P**	**21 28 48.0 +1.7**
TNCH				pP		pP	21 28 50.8 -9.3
TNCH				sP		sP	21 28 53.0 -13
TNCH				pmax		pmax	
	comp=Z,4.0nm,0.5s						
LZH	**Lanzhou**	**70.71**	**314**	*e*P		**P**	**21 28 50.5 +1.1**
LZH				sP		pP	21 28 56.0 -7.5
LZH				pmax		pmax	
	comp=Z,7.0nm,1.5s						
LZDM	**Lanzhou Array**	**70.76**	**314**	P		**P**	**21 28 50.2 +0.3**
	comp=Z,3.1nm,0.5s,baz=152,slow=6.7,SNR=10						
	comp=Z,3.1nm,0.5s						
CHNA	**Chernabura Isl**	**72.67**	**23**	P		**P**	**21 29 00.7 +0.2**
	baz=221						
SDPT	**Sand Point**	**72.74**	**22**	P		**P**	**21 29 01.0 +0.1**
	baz=220						
SEY	**Seymchan**	**73.13**	**356**	P		**P**	**21 29 02.8 -0.3**
	comp=Z,5.1nm,0.9s,baz=156,slow=6.6,SNR=14						
	comp=Z,5.1nm,0.9s						
ULN	**Ulaanbaatar**	**74.86**	**326**	P		**

K13K **Kusilvak Mount** 76.66 16 P P 21 29 24.3 +0.9
baz=215
L14K **Kuka Creek** 76.73 17 IAmb IAmb 21 29 25.6
comp=Z,15nm,0.9s
L14K **Kuka Creek** 76.73 17 P P 21 29 24.8 +0.9
baz=217
O16K **Kokwok River B** 76.80 20 P P 21 29 25.0 +0.7
baz=221
M15K **Kasigluk River** 76.81 18 P P 21 29 25.0 +0.7
baz=219
OHAK **Old Harbor** 76.84 24 P P 21 29 25.3 +0.7
baz=226
P17K **Kvichak River** 77.08 21 P P 21 29 26.0 +0.2
baz=223
Q18K **Katmai Hardscr** 77.19 22 P P 21 29 26.9 +0.2
baz=224
N16K **Nishlik Lake** 77.24 19 P P 21 29 27.4 +0.6
baz=221
O17K **Koliganek Bris** 77.27 20 P P 21 29 27.2 +0.2
baz=222
L15K **Ungalak Mounta** 77.34 17 P P 21 29 28.0 +0.7
baz=218
GOMU **GeErMu** 77.35 311 P P 21 29 28.8 +0.4
GOMU pmax pmax
comp=Z,4.0nm,0.9s
KDAK **Kodiak Island** 77.51 23 LR LR 22 00 31.1
comp=Z,218nm,19.8s,baz=211,slow=33
KDAK **Kodiak Island** 77.51 23 P P 21 29 28.7 +0.4
baz=227
M16K **Timber Creek** 77.60 19 P P 21 29 29.7 +0.9
baz=220
J14K **Nanvaranak Lak** 77.62 16 P P 21 29 29.1 +0.3
J14K IAmb IAmb 21 29 30.9
comp=Z,24nm,1.0s
J14K **Nanvaranak Lak** 77.62 16 P P 21 29 29.7 +0.8
baz=216
P18K **Big Mountain,** 77.65 21 P P 21 29 29.3 +0.1
baz=224
N17K **Nushagak Hills** 77.80 20 P P 21 29 30.7 +0.8
baz=222
K15K **Wolf Creek Mou** 77.82 17 P P 21 29 31.0 +1.0
baz=218
Q19K **Cape Douglas,** 77.89 22 P P 21 29 31.1 +0.5
baz=226
LSA **Lhasa** 77.93 303 P P 21 29 37.0 +5.1
L16K **Owhat River** 77.97 18 P P 21 29 31.8 +0.9
baz=220
O18K **Koktuh Hills** 77.99 21 P P 21 29 31.2 +0.2
baz=224
BILL **Bilibino** 78.04 2 P P 21 29 31.0 -0.2
Q20K **Shuyak Island** 78.15 23 P P 21 29 32.2 +0.3
baz=227
N18K **Kilae Creek** 78.35 20 P P 21 29 33.5 +0.5
baz=223
M17K **Holitna River** 78.37 19 P P 21 29 33.8 +0.8
baz=222
O19K **Port Alsworth** 78.54 21 P P 21 29 34.6 +0.6
baz=225
P19K **Oil Pt** 78.55 22 P P 21 29 34.6 +0.5
baz=226
L17K **Donlin** 78.65 18 P P 21 29 35.6 +0.9
baz=221
ANM **Nome** 78.66 14 P P 21 29 35.5 +0.9
baz=214,SNR=8.8
TLY **Talaya** 78.80 328 LR LR 22 04 41.0
comp=Z,45nm,19.4s,baz=115,slow=36
TLY **Talaya** 78.80 328 P P 21 29 35.2 -0.5
J16K **Anvik River** 78.86 17 IAmb IAmb 21 29 38.0
comp=Z,21nm,1.0s
J16K **Anvik River** 78.86 17 P P 21 29 36.7 +1.0
baz=218
TNA **Tin City** 78.92 13 IAmb IAmb 21 29 37.7
comp=Z,17nm,1.0s
TNA **Tin City** 78.92 13 P P 21 29 36.4 +0.4
baz=211,SNR=16
N19K **Bonanza Creek** 78.93 20 IAmb IAmb 21 29 37.2
comp=Z,17nm,0.9s
N19K **Bonanza Creek** 78.93 20 P P 21 29 37.0 +0.8
baz=225
M18K **Stony River** 78.96 20 P P 21 29 37.2 +0.9
baz=223
K17K **Iditarod** 79.09 18 IAmb IAmb 21 29 39.1
comp=Z,18nm,1.0s
K17K **Iditarod** 79.09 18 P P 21 29 37.9 +0.9
baz=221
F14K **Arctic Creek** 79.20 13 P P 21 29 38.0 +0.5
baz=213
L18K **Granite Mounta** 79.22 19 IAmb IAmb 21 29 40.1
comp=Z,30nm,1.0s
L18K **Granite Mounta** 79.22 19 P P 21 29 38.5 +0.8
baz=222
RED **Redoubt Volcan** 79.25 21 IAmb IAmb 21 29 38.4
comp=Z,23nm,0.8s
I17K **Unalakleet** 79.31 16 P P 21 29 38.8 +0.6
I17K **Unalakleet** 79.31 16 P P 21 29 39.1 +0.9
baz=218
G15K **Niukluk** 79.33 14 P P 21 29 39.0 +0.8
baz=215
H16K **Elim** 79.50 15 P P 21 29 39.8 +0.6
baz=217
BRSE **Bradley Lake S** 79.54 23 P P 21 29 40.1 +0.6
baz=226
F15K **North Star Dit** 79.78 14 P P 21 29 41.5 +0.8
baz=214,SNR=8.3
L19K **White Mountain** 79.78 19 IAmb IAmb 21 29 42.9
comp=Z,29nm,0.8s
L19K **White Mountain** 79.78 19 P P 21 29 41.7 +0.9
baz=224
QSPA **South Pole Qui** 79.88 180 P P 21 29 40.9 -0.7
comp=Z,25nm,0.8s,baz=18,slow=1.2,SNR=31
comp=Z,25nm,0.8s
QSPA **South Pole Qui** 79.88 180 P P 21 29 41.4 -0.1
QSPA IAmb IAmb 21 29 42.8
comp=Z,28nm,0.8s
SPCR **Spurr Chakacha** 79.99 21 P P 21 29 42.6 +0.5
baz=227
CAPN **Captain Cook N** 80.08 22 P P 21 29 43.2 +0.9
baz=228
G16K **Koyuk River** 80.08 15 P P 21 29 43.0 +0.7
baz=217
J18K **Innoko River** 80.14 18 P P 21 29 43.4 +0.7
baz=222
M20K **Styx River** 80.14 20 P P 21 29 43.6 +0.7
baz=226
SLKM **Skilak Lake** 80.24 22 P P 21 29 43.2 -0.2
SLKM IAmb IAmb 21 29 44.5
comp=Z,27nm,0.7s
SEW **Seward** 80.27 23 P P 21 29 44.0 +0.6
baz=229
STLK **Strandline Lak** 80.33 21 IAmb IAmb 21 30 14.3
comp=Z,47nm,1.9s
H17K **Granite Mounta** 80.35 16 P P 21 29 44.5 +0.7
baz=219,SNR=6.9
G17K **Kiwalik Mounta** 80.59 15 P P 21 29 45.9 +0.8
baz=218,SNR=6.5
SUA **Susitna One** 80.69 21 IAmb IAmb 21 29 46.6
comp=Z,29nm,0.9s
SUA **Susitna One** 80.69 21 P P 21 29 46.2 +0.4
baz=228
SKT **Skwentna** 80.76 21 P P 21 29 46.3 +0.3
baz=227
RC01 **Rabbit Creek A** 80.81 22 P P 21 29 47.0 +0.7
baz=229
J19K **Poorman** 80.86 18 P P 21 29 47.2 +0.7
baz=223
K20K **Telida** 80.88 19 P P 21 29 46.8 +0.2
K20K **Telida** 80.88 19 P P 21 29 47.3 +0.6
baz=225
H18K **Honhosa River** 80.93 16 P P 21 29 47.4 +0.5
baz=220
P23K **Montague Islan** 80.99 24 P P 21 29 47.6 +0.2
baz=231
GCSA **Galena City Sc** 81.04 17 P P 21 29 48.2 +0.8
baz=222
Q23K **Middleton Isla** 81.06 24 P P 21 29 48.3 +0.6
baz=232
M22K **Willow** 81.11 21 P P 21 29 48.2 +0.3
baz=229
PPLA **Purkeypile** 81.17 20 P P 21 29 48.6 +0.2
baz=227
F17K **Baldwin Pennin** 81.19 14 IAmb IAmb 21 29 49.9
comp=Z,16nm,0.9s
F17K **Baldwin Pennin** 81.19 14 P P 21 29 49.0 +0.8
baz=218
PMR **Palmer** 81.36 22 P P 21 29 49.0 -0.2
PMR IAmb IAmb 21 29 50.3
comp=Z,33nm,1.0s
PMR **Palmer** 81.36 22 P P 21 29 49.8 +0.6
baz=230
G18K **Tagagawik** 81.42 16 P P 21 29 49.7 +0.2
baz=220
CUT **Chulitna** 81.49 21 P P 21 29 49.7 -0.1
baz=228
E17K **Hotham Inlet** 81.56 14 P P 21 29 50.8 +0.6
baz=217,SNR=19
F18K **Selawik** 81.71 15 P P 21 29 51.2 +0.3
baz=219,SNR=12
C16K **Lisburne Hills** 81.77 12 P P 21 29 50.7 -0.5
C16K **Lisburne Hills** 81.77 12 P P 21 29 51.7 +0.5
baz=213
D17K **Noatak River** 81.77 13 P P 21 29 51.7 +0.4
baz=216,SNR=9.6
SML **Sawmill** 81.79 22 P P 21 29 52.0 +0.4
baz=230
PALK **Pallekele** 81.80 279 LR LR 22 08 13.1
comp=Z,56nm,21.2s,baz=124,slow=37
EYAK **Cordova Ski Ar** 81.98 24 P P 21 29 52.8 +0.3
baz=233
M23K **Glacier View** 82.00 22 P P 21 29 53.2 +0.6
baz=231
KTH **Kantishna Hill** 82.03 20 IAmb IAmb 21 29 53.7
comp=Z,27nm,0.9s
RDOG **Red Dog Mine** 82.10 13 IAmb IAmb 21 29 54.6
comp=Z,14nm,0.8s
RDOG **Red Dog Mine** 82.10 13 P P 21 29 53.6 +0.6
baz=216
E18K **Tukpahlearik C** 82.12 14 P P 21 29 53.2 +0.1
E18K **Tukpahlearik C** 82.12 14 P P 21 29 53.9 +0.7
baz=218
KAIM **Kayak Island** 82.14 24 P P 21 29 53.7 +0.3
baz=234
H20K **Anotleneega Mo** 82.17 17 P P 21 29 53.8 +0.3
baz=224
SCM **Sheep Creek Mo** 82.17 22 P P 21 29 54.2 +0.6
baz=231
TRF **Thorofare Moun** 82.18 20 IAmb IAmb 21 29 54.0
comp=Z,26nm,1.0s
TRF **Thorofare Moun** 82.18 20 P P 21 29 53.6 -0.1
baz=228
WAT1 **Susitna Watana** 82.37 21 P P 21 29 54.8 +0.3
baz=230
F19K **Shaleruckik Mo** 82.37 15 P P 21 29 54.6 +0.2
F19K IAmb IAmb 21 29 55.8
comp=Z,16nm,1.0s
F19K **Shaleruckik Mo** 82.37 15 P P 21 29 54.8 +0.4
baz=221
BPAW **Bear Paw Mtn.** 82.38 19 IAmb IAmb 21 29 55.0
comp=Z,20nm,1.2s
BPAW **Bear Paw Mtn.** 82.38 19 P P 21 29 54.7 +0.1
baz=228,SNR=5.3
C17K **DeLong Mountai** 82.39 13 P P 21 29 55.0 +0.4
baz=216
KLU **Klutina** 82.49 23 P P 21 29 55.8 +0.5
baz=232
WAT6 **Susitna Watana** 82.50 21 P P 21 29 55.7 +0.3
baz=231
RND **Reindeer** 82.64 20 IAmb IAmb 21 29 56.9
comp=Z,26nm,1.0s
BMRM **Bremner River** 82.69 24 P P 21 29 56.9 +0.6
baz=234
M24K **Tolsona, Glenn** 82.77 22 P P 21 29 57.7 +1.0
baz=232
I21K **Tanana** 82.81 18 P P 21 29 57.1 +0.4
I21K IAmb IAmb 21 29 58.5
comp=Z,24nm,1.0s
I21K **Tanana** 82.81 18 P P 21 29 57.6 +0.9
baz=226
MCK **McKinley** 82.82 20 P P 21 29 56.8 -0.1
baz=230,SNR=16
IMAR **Indian Mountai** 82.85 17 P P 21 29 57.1 +0.1
H21K **Melozitna Rive** 82.89 18 P P 21 29 58.0 +0.8
baz=226,SNR=6.1
DHY **Denali Highway** 82.94 21 P P 21 29 58.0 +0.3
baz=231
C18K **Utukok River** 82.96 13 P P 21 29 58.0 +0.5
baz=217
E19K **Redstone River** 82.98 15 P P 21 29 58.4 +0.7
baz=221
N25K **Chitina, Valde** 83.07 23 P P 21 29 58.9 +0.6
baz=234
F20K **Avaraart Lake** 83.07 16 P P 21 29 58.8 +0.8
baz=223
MLY **Manley** 83.09 19 P P 21 29 58.7 +0.4
baz=228,SNR=8.3
CRQE **Cirque** 83.16 24 P P 21 29 59.6 +0.7
baz=235
GLB **Gilahina Butte** 83.28 23 IAmb IAmb 21 30 00.8
comp=Z,20nm,0.8s
G21K **Allakaket** 83.29 17 P P 21 30 00.1 +0.8
baz=225
HARP **HARP** 83.33 22 P P 21 30 00.3 +0.8
baz=233
NEA2 **Nenana** 83.34 19 P P 21 29 59.1 -0.4
baz=229,SNR=13
H22K **Ishtalitna Cre** 83.48 18 IAmb IAmb 21 30 02.0
comp=Z,15nm,1.0s
H22K **Ishtalitna Cre** 83.48 18 P P 21 30 01.0 +0.8
baz=227
D19K **Kuna River** 83.55 14 P P 21 30 01.3 +0.7
baz=220
MCARA **McCarthy VSAT** 83.55 24 P P 21 30 00.8 +0.1
baz=235
PAX **Paxson** 83.56 22 P P 21 30 01.1 +0.3
baz=233
WRH **Wood River Hil** 83.58 20 IAmb IAmb 21 30 01.2
comp=Z,17nm,0.9s
I23K **Minto, Yukon-K** 83.61 19 P P 21 30 01.3 +0.5
baz=229
C19K **Lookout Ridge** 83.68 13 P P 21 30 01.4 +0.2
C19K **Lookout Ridge** 83.68 13 P P 21 30 02.1 +0.8
baz=219
CCB **Clear Creek Bu** 83.79 20 IAmb IAmb 21 30 02.1
comp=Z,10nm,0.8s
F21K **Alatna River** 83.80 16 P P 21 30 02.4 +0.6
baz=225
MAW **Mawson** 83.81 202 LR LR 22 02 07.1
comp=Z,156nm,20.7s,baz=77,slow=32
E20K **Nigu River** 83.84 15 P P 21 30 02.8 +0.7
baz=222
COLA **College** 83.92 20 P P 21 30 01.6 -0.8
COLA **College** 83.92 20 P P 21 30 02.9 +0.4
baz=230
HDA **Harding Lake** 83.92 20 P P 21 30 02.8 +0.3
baz=231,SNR=9.9
K24K **Donnelly Dome** 83.95 21 P P 21 30 03.0 +0.3
K24K **Donnelly Dome** 83.95 21 P P 21 30 03.2 +0.4
baz=232
PINM **Pinnacle** 83.97 26 P P 21 30 04.0 +1.1
baz=238
CTG **Chitna Glacier** 83.99 24 P P 21 30 03.9 +0.8
baz=237
D20K **Etivluk River** 84.08 14 P P 21 30 03.9 +0.6
baz=222
M26K **Nabesna, AK** 84.14 23 P P 21 30 04.3 +0.6
baz=235
IL31 84.17 20 IAmb IAmb 21 30 10.2
comp=Z,26nm,1.4s
ILAR **Eielson Array** 84.17 20 P P 21 30 03.1 -0.6
comp=Z,5.8nm,1.0s,baz=266,slow=3.6,SNR=32
ILAR LR LR 22 01 39.2
comp=Z,143nm,20.9s,baz=248,slow=31
comp=Z,5.8nm,1.0s
ILAR **Eielson Array** 84.17 20 P P 21 30 02.9 -0.9
POKR **Poker Plat Res** 84.21 19 P P 21 30 03.8 -0.2
baz=231
RIDG **Independent Ri** 84.25 21 IAmb IAmb 21 30 05.3
comp=Z,22nm,1.1s
RIDG **Independent Ri** 84.25 21 P P 21 30 04.8 +0.5
baz=233
TIXI **Tiksi** 84.34 350 P P 21 30 03.4 -1.1
comp=Z,2.6nm,0.6s,baz=156,slow=5.2,SNR=8.0
TIXI LR LR 22 08 47.4
comp=Z,42nm,19.4s,baz=161,slow=36
comp=Z,2.6nm,0.6s
TIXI **Tiksi** 84.34 350 P P 21 30 03.4 -1.1
TIXI IAmb IAmb 21 30 05.4
comp=Z,15nm,1.2s
O28M **Mount Upton** 84.36 25 P P 21 30 05.9 +0.7
baz=238
L26K **Log Cabin Wild** 84.37 22 P P 21 30 04.5 -0.4
L26K IAmb IAmb 21 30 12.6
comp=Z,18nm,1.1s
L26K **Log Cabin Wild** 84.37 22 P P 21 30 06.1 +1.2
baz=235
G23K **Bananza Creek** 84.44 18 IAmb IAmb 21 30 06.8
comp=Z,15nm,1.1s
G23K **Bananza Creek** 84.44 18 P P 21 30 06.1 +0.9
baz=228
H24K **Noodor Dome** 84.53 19 P P 21 30 06.2 +0.6
baz=230
E21K **Killik River** 84.54 15 P P 21 30 06.3 +0.7
baz=224
M27K **Edge Creek, AK** 84.55 23 P P 21 30 06.8 +0.9
baz=236,SNR=5.9
J25K **Salcha River,** 84.59 20 IAmb IAmb 21 30 07.3
comp=Z,19nm,1.0s
J25K **Salcha River,** 84.59 20 P P 21 30 06.9 +0.9
baz=233,SNR=7.8
SCRK **Sand Creek** 84.69 21 IAmb IAmb 21 30 08.2
comp=Z,18nm,0.9s
SCRK **Sand Creek** 84.69 21 P P 21 30 07.6 +1.0
baz=234,SNR=8.3
COLD **Coldfoot** 84.73 17 P P 21 30 06.5 0.0
COLD IAmb IAmb 21 30 16.6
comp=Z,35nm,2.0s
COLD **Coldfoot** 84.73 17 P P 21 30 07.2 +0.7
baz=228
YUK3 **Moose Creek** 84.79 24 P P 21 30 08.0 +0.8
baz=238
O29M **Mount Kennedy** 84.80 26 P P 21 30 08.1 +0.9
baz=239
YUK8 **Steele Glacier** 84.81 25 P P 21 30 08.4 +1.0
baz=238,SNR=6.9
C21K **Knifeblade Rid** 84.86 15 P P 21 30 08.8 +1.6
baz=224
E22K **Anaktuvuk Pass** 84.90 16 P P 21 30 08.3 +0.9
baz=226
L27K **Beaver Creek,** 84.96 23 P P 21 30 08.9 +1.0
baz=236
BVCY **Beaver Creek** 84.98 23 P P 21 30 09.0 +1.0
baz=237
BCAR **Beaver Creek A** 84.98 23 P P 21 30 08.2 +0.3
CRAG **Craig** 85.08 31 P P 21 30 09.7 +1.2
baz=244
PRP **Porcupine Dome** 85.09 20 P P 21 30 09.8 +1.2
baz=232
WMQ **Urumqi** 85.16 316 eP P 21 30 10.5 +1.2
WMQ sP pP 21 30 18.5 -5.1
WMQ LR LR
comp=Z,660nm,23.8s
WMQ LR LR
comp=Z,120nm,24.0s
D22K **Ayikyak River** 85.19 15 IAmb IAmb 21 30 10.9
comp=Z,17nm,0.8s
D22K **Ayikyak River** 85.19 15 P P 21 30 09.9 +1.0
baz=226
G24K **Hadweenzic Riv** 85.20 18 IAmb IAmb 21 30 09.9
comp=Z,23nm,1.3s
G24K **Hadweenzic Riv** 85.20 18 P P 21 30 09.5 +0.5
baz=231
YUK6 **Outpost Mounta** 85.21 25 P P 21 30 10.0 +0.5
baz=239
B21K **Ikpikpuk River** 85.23 14 IAmb IAmb 21 30 10.7
comp=Z,19nm,0.9s
B21K **Ikpikpuk River** 85.23 14 P P 21 30 09.6 +0.7
baz=224
S32K **Killisnoo** 85.25 29 P P 21 30 10.0 +0.7
baz=243
YUK4 **Talbot Arm** 85.30 25 P P 21 30 11.4 +1.6
baz=239,SNR=9.7
P30M **Million Dollar** 85.41 26 P P 21 30 10.9 +0.7
baz=241
E23K **Chandalar** 85.46 17 IAmb IAmb 21 30 12.2
comp=Z,22nm,1.6s
E23K **Chandalar** 85.46 17 P P 21 30 11.2 +0.9
baz=228
HYT **Haines Junctio** 85.52 26 P P 21 30 11.5 +0.8
baz=240
R32K **Eaglecrest** 85.64 29 P P 21 30 12.1 +0.9
baz=243
I26K **Coal Creek Min** 85.76 20 P P 21 30 13.0 +1.3
baz=235
D23K **Nanushuk River** 85.77 16 P P 21 30 11.6 -0.1
D23K IAmb IAmb 21 30 14.1
comp=Z,14nm,1.0s
D23K **Nanushuk River** 85.77 16 P P 21 30 13.0 +1.3
baz=228
E24K **Your Creek** 85.79 17 P P 21 30 12.8 +0.9
baz=230
V35K **Ketchikan** 85.80 32 P P 21 30 12.9 +0.8
baz=246
SKAG **Skagway** 85.81 27 P P 21 30 13.0 +0.9
baz=242
TOLK **Toolik Lake Re** 85.86 16 P P 21 30 13.0 +0.8
baz=228
WRAK **Wrangell Islan** 85.88 31 P P 21 30 13.7 +1.2
baz=245
M29M **Somme Creek** 85.94 24 IAmb IAmb 21 30 14.9
comp=Z,29nm,1.2s
M29M **Somme Creek** 85.94 24 P P 21 30 14.1 +1.3
baz=239
KHBM **Hayfork Bally** 85.94 48 P P 21 30 12.3 -1.1
KHBM IAmb IAmb 21 30 15.7
comp=Z,21nm,1.3s
N30M **Aishikik Lake** 86.01 25 P P 21 30 14.3 +1.2
baz=240
A21K **Barrow** 86.03 13 P P 21 30 13.9 +1.0
baz=222
B22K **Teshekpuk Lake** 86.04 14 IAmb IAmb 21 30 14.4
comp=Z,16nm,0.9s
B22K **Teshekpuk Lake** 86.04 14 P P 21 30 14.0 +1.0
baz=225
O30N **Mendenhall** 86.10 26 P P 21 30 14.3 +0.7
baz=241
F25K **Christian Rive** 86.32 18 P P 21 30 15.7 +1.1
baz=232
C23K **Itkillik River** 86.38 15 IAmb IAmb 21 30 32.9
comp=Z,26nm,1.3s
C23K **Itkillik River** 86.38 15 P P 21 30 15.8 +1.1
baz=228
L29M **L29M** 86.41 23 P P 21 30 15.6 +0.5
L29M **L29M** 86.41 23 P P 21 30 16.2 +1.1
baz=240
DAWY **Dawson** 86.42 22 P P 21 30 16.3 +1.2
baz=238,SNR=8.8
I27K **Kandik River** 86.46 21 IAmb IAmb 21 30 17.4
comp=Z,18nm,1.1s
I27K **Kandik River** 86.46 21 P P 21 30 16.2 +1.0
baz=236
BBB **Bella Bella** 86.50 36 LR LR 22 01 10.2
comp=Z,70nm,19.8s,baz=316,slow=30
G26K **Porcupine Rive** 86.51 19 IAmb IAmb 21 30 17.8
comp=Z,23nm,1.1s
G26K **Porcupine Rive** 86.51 19 P P 21 30 16.9 +1.6
baz=234
BMAR **Burnt Mountain** 86.55 18 P P 21 30 16.0 +0.4
N31M **Braeburn, Yuko** 86.57 25 P P 21 30 17.1 +1.2
baz=242
YBH **Yreka Blue Hor** 86.62 47 LR LR 22 04 22.9
comp=Z,5.0nm,18.2s,baz=271,slow=32
E25K **Arctic Village** 86.67 18 P P 21 30 15.8 -0.4
E25K IAmb IAmb 21 30 35.4
comp=Z,24nm,1.8s
E25K **Arctic Village** 86.67 18 P P 21 30 17.2 +1.0
baz=232
M30M **Minto, Yukon** 86.68 24 IAmb IAmb 21 30 19.0
comp=Z,22nm,1.2s
M30M **Minto, Yukon** 86.68 24 P P 21 30 17.1 +0.8
baz=241
I03D **Drain, OR** 86.74 45 IAmb IAmb 21 30 19.1
comp=Z,12nm,1.0s
F26K **Sheenjek River** 86.84 18 P P 21 30 18.0 +1.0
baz=234
H27K **Steamboat Moun** 86.84 20 IAmb IAmb 21 30 19.4
comp=Z,21nm,1.2s
H27K **Steamboat Moun** 86.84 20 P P 21 30 18.1 +1.0
baz=236
O03E **Paynes Creek** 86.88 48 P P 21 30 17.5 -0.4
O03E IAmb IAmb 21 30 19.7
comp=Z,21nm,1.1s
I28M **Miner Creek** 86.96 21 IAmb IAmb 21 30 51.5
comp=Z,24nm,1.6s
I28M **Miner Creek** 86.96 21 P P 21 30 18.5 +0.8
baz=238
K29M **Barlow Dome** 87.02 23 IAmb IAmb 21 30 20.3
comp=Z,24nm,1.1s
K29M **Barlow Dome** 87.02 23 P P 21 30 19.3 +1.1
baz=240
L04D **Klamath Falls** 87.05 46 P P 21 30 16.8 -2.0
L04D IAmb IAmb 21 30 21.2
comp=Z,16nm,1.1s
S34M **Telegraph Cree** 87.11 30 P P 21 30 19.3 +0.8
baz=246
G27K **Doyon Strip** 87.12 20 P P 21 30 19.5 +1.1

baz=236
T35M Bob Quinn 87.17 31 P P 21 30 20.4 +1.5
baz=247
D25K Kavik River 87.18 16 IAmb IAmb 21 30 20.1
comp=Z,12nm,0.9s
D25K Kavik River 87.18 16 P P 21 30 19.8 +1.2
baz=232
I04A Tendick Farm, 87.42 45 P P 21 30 20.0 -0.4
M31M Drury Creek, Y 87.49 25 P P 21 30 21.0 +0.8
baz=243
I29M Ogilvie Camp, 87.50 21 IAmb IAmb 21 30 21.9
comp=Z,16nm,0.9s
I29M Ogilvie Camp, 87.50 21 P P 21 30 21.1 +0.9
baz=239
R33M Jennings River 87.79 28 P P 21 30 22.8 +0.9
baz=246
J30M Hart River 87.83 23 P P 21 30 23.2 +1.1
baz=241
DLBC Dease Lake 87.85 29 LR LR 22 02 24.6
comp=Z,102nm,19.7s,baz=270,slow=31
E27K Coleen River 87.91 18 P P 21 30 23.4 +1.2
baz=236
FARO Faro, Yukon 87.94 25 P P 21 30 23.6 +1.1
baz=244
C26K Camden Bay 87.95 16 P P 21 30 23.8 +1.5
baz=233
J05D Fort Rock, OR 88.10 46 P P 21 30 24.6 +0.7
J05D IAmb IAmb 21 30 26.2
comp=Z,15nm,1.0s
C27K Jago River 88.11 17 IAmb IAmb 21 30 25.3
comp=Z,12nm,0.9s
C27K Jago River 88.11 17 P P 21 30 24.2 +1.1
baz=234
I30M Mount Dempster 88.13 22 IAmb IAmb 21 30 25.1
comp=Z,19nm,1.2s
I30M Mount Dempster 88.13 22 P P 21 30 24.2 +0.8
baz=241
F28M Old Crow 88.14 19 P P 21 30 24.3 +1.0
baz=238
ZSN Zaisan 88.16 319 eP P 21 30 22.6 -1.2
K05A Summer Lake 88.19 46 P P 21 30 25.1 +0.8
K05A IAmb IAmb 21 30 26.7
comp=Z,18nm,1.0s
MDPB Devils Postpil 88.24 51 P P 21 30 25.3 +0.5
G29M Pine Creek 88.39 20 P P 21 30 25.5 +1.0
baz=239
PAHR Pah Rah Range 88.52 49 IAmb IAmb 21 30 28.0
comp=Z,11nm,1.2s
EPYK Eagle Plains 88.57 21 P P 21 30 26.6 +1.3
baz=241
D27M Malcolm River 88.69 18 P P 21 30 27.1 +1.2
baz=237
E28M Babbage River 88.78 18 P P 21 30 27.3 +1.1
baz=238
LRMC Laurel Mtn Rad 88.83 54 IAmb IAmb 21 30 29.7
comp=Z,16nm,1.0s
LHV Little Huntoon 88.83 51 IAmb IAmb 21 30 29.7
comp=Z,24nm,1.5s
CLC China Lake 88.97 53 P P 21 30 27.6 -0.4
CLC IAmb IAmb 21 30 30.1
comp=Z,19nm,1.0s
MMPY Sheldon Lake, 88.98 25 P P 21 30 28.1 +0.7
baz=246
NVAR Mina Array Bea 89.03 51 P P 21 30 29.6 +1.2
comp=Z,5.9nm,0.8s,baz=238,slow=6.7,SNR=22
NVAR LR LR 22 03 35.0
comp=Z,140nm,20.1s,baz=262,slow=31
comp=Z,5.9nm,0.8s
G30M tAoh Zraii Nji 89.04 20 IAmb IAmb 21 30 34.0
comp=Z,15nm,1.3s
G30M tAoh Zraii Nji 89.04 20 P P 21 30 27.9 +0.4
baz=241
WTLY Watson Lake, Y 89.08 28 P P 21 30 28.1 +0.2
baz=248
MPMC Manual Prospec 89.11 53 IAmb IAmb 21 30 31.0
comp=Z,11nm,1.0s
H31M Peel River 89.16 22 P P 21 30 28.4 +0.3
baz=243
E29M Blow River 89.19 19 P P 21 30 28.6 +0.5
baz=240
BORC Borrego Spring 89.36 56 IAmb IAmb 21 30 31.9
comp=Z,13nm,1.0s
PFO Pinyon Flats O 89.40 56 LR LR 22 02 32.7
comp=Z,222nm,20.5s,baz=269,slow=30
PFO Pinyon Flats O 89.40 56 P P 21 30 29.8 -0.3
D28M Stokes Point 89.41 18 P P 21 30 29.5 +0.4
baz=239
GSC Goldstone, Bar 89.48 54 IAmb IAmb 21 30 32.4
comp=Z,13nm,1.2s
F30M Barrier River 89.49 20 P P 21 30 29.9 +0.3
baz=242
I07A Izee 89.52 45 P P 21 30 31.1 +0.7
MKAR Makanchi Array 89.67 318 P P 21 30 30.4 -0.5
comp=Z,4.1nm,0.9s,baz=109,slow=4.9,SNR=31
MKAR LR LR 22 10 17.7
comp=Z,63nm,20.7s,baz=107,slow=35
comp=Z,4.1nm,0.9s
MKAR Makanchi Array 89.67 318 P P 21 30 30.0 -0.9
G31M Satah River 89.69 21 P P 21 30 30.8 +0.3
baz=243
GWY Greenwater Val 89.79 53 IAmb IAmb 21 30 33.7
comp=Z,15nm,1.2s
TGTN Hyland Airport 89.85 27 P P 21 30 31.5 +0.1
baz=248
MAKZ Makanchi 89.89 318 P P 21 30 31.8 -0.1
WCT Wildcat Mounta 89.95 53 IAmb IAmb 21 30 34.7
comp=Z,18nm,1.1s
J08A Circle Bar Ran 90.07 46 IAmb IAmb 21 30 36.3
comp=Z,8.3nm,0.7s
ZALV Zalesovo Beam 90.10 325 P P 21 30 31.1 -1.6
comp=Z,1.4nm,0.4s,baz=114,slow=5.7,SNR=7.8
ZALV LR LR 22 11 11.7
comp=Z,34nm,20.1s,baz=93,slow=36
comp=Z,1.4nm,0.4s
ZALV Zalesovo Beam 90.10 325 P P 21 30 30.2 -2.4
F31M Tsiigehtchic 90.11 21 P P 21 30 32.9 +0.5
baz=243
BC3 Big Chuckawall 90.23 56 P P 21 30 34.2 +0.2
EPH Ephrata 90.28 42 IAmb IAmb 21 30 35.3
comp=Z,24nm,1.3s
TPNV Topopah Spring 90.28 53 IAmb IAmb 21 30 36.2
comp=Z,13nm,0.9s
E08A Dider Farm, El 90.42 43 IAmb IAmb 21 30 35.9
comp=Z,14nm,1.2s
INK Inuvik 90.57 20 P P 21 30 35.0 +0.5
baz=244
B08A Colville Reser 90.70 41 P P 21 30 34.9 -0.8
SHLS Shalkode 90.74 314 eP P 21 30 33.2 -2.9
E09A Wood Farm, Sta 91.04 43 IAmb IAmb 21 30 39.1
comp=Z,17nm,1.1s
UZB Uzynbulak 91.05 314 eP P 21 30 36.0 -1.7
comp=Z,6.5nm,0.9s
BMO Blue Mountains 91.23 45 IAmb IAmb 21 30 40.2
comp=Z,12nm,1.2s
C09A Chrisman Ranch 91.25 42 IAmb IAmb 21 30 39.6
comp=Z,11nm,1.1s
PRZ Przheval'sk 91.35 313 P P 21 30 39.4 +0.3
PRZ IAmb IAmb 21 30 48.1
comp=Z,13nm,0.9s
SATY Saty 91.47 313 eP P 21 30 37.1 -2.5
ELK Elko 91.84 49 IAmb IAmb 21 30 43.6
comp=Z,11nm,1.1s
TDK Taldyqorghan 91.89 315 eP P 21 30 40.0 -1.3
comp=Z,5.9nm,0.6s
MFID Camas Ranch 91.96 46 P P 21 30 41.6 -0.2
NEW Newport 92.11 41 LR LR 22 06 45.0
comp=Z,91nm,19.2s,baz=260,slow=32
NEW Newport 92.11 41 P P 21 30 41.9 -0.4
NEW IAmb IAmb 21 30 44.1
comp=Z,11nm,1.1s
KDJ Kajisay 92.16 312 P P 21 30 42.5 -0.4
KDJ IAmb IAmb 21 30 51.5
comp=Z,8.4nm,0.9s
PLID Pearl Lake 92.19 45 P P 21 30 42.9 -0.1
PLID IAmb IAmb 21 30 44.3
comp=Z,7.6nm,0.9s
MDOK Medeo 92.46 313 eP P 21 30 42.4 -1.8
TNSS Tian-Shan 92.51 313 eP P 21 30 42.7 -2.0
AAA Alma-Ata 92.57 313 eP P 21 30 43.1 -1.4
KSH2 Kashi 92.79 309 P P 21 30 49.3 +3.5
KSH2 pmax pmax
comp=Z,2.0nm,1.4s
LPIG La Paz 92.89 66 LR LR 22 04 00.7
comp=Z,123nm,21.5s,baz=228,slow=30
KURK Kurchatov 92.96 321 P P 21 30 44.7 -1.4
HLID Hailey 93.00 46 P P 21 30 47.6 +0.9
HLID IAmb IAmb 21 30 49.1
comp=Z,11nm,1.1s
KURBB Kurchatov Arra 93.00 321 P P 21 30 45.0 -1.3
comp=Z,1.4nm,0.5s,baz=104,slow=3.7,SNR=16
comp=Z,1.4nm,0.5s
C36M Paulatuk 94.15 20 P P 21 30 51.3 +0.2
baz=252
MCMT McKenzie Canyo 94.33 45 P P 21 30 53.2 +0.4
A36M Sachs Harbour 94.59 17 IAmb IAmb 21 31 13.0
comp=Z,7.3nm,0.8s
A36M Sachs Harbour 94.59 17 P P 21 30 53.9 +0.8
baz=252
YKA Yellowknife Ar 96.31 28 P P 21 31 00.2 -0.9
comp=Z,1.7nm,0.9s,baz=266,slow=5.2,SNR=21
YKA LR LR 22 06 45.0
comp=Z,117nm,21.6s,baz=340,slow=31
comp=Z,1.7nm,0.9s
YKA Yellowknife Ar 96.31 28 P P 21 30 59.6 -1.5
PDAR Pinedale Array 96.37 48 LR LR 22 15 24.8
comp=Z,28nm,18.0s,baz=270,slow=36
IUG Iuzhnay 97.41 311 eP P 21 31 05.2 -1.6
comp=Z,10nm,1.4s
BRLS Boroldav 97.66 312 eP P 21 31 06.3 -1.4
SNAA Sanae 97.69 185 LR LR 22 10 16.1
comp=Z,270nm,21.0s,baz=42,slow=32
CHM Chimkent 97.75 312 eP P 21 31 06.5 -1.6
ANMO Albuquerque 97.78 56 LR LR 22 09 54.8
comp=Z,98nm,18.9s,baz=274,slow=32
BVAR Bovoye Array 98.36 322 P P 21 31 09.3 -1.3
comp=Z,1.5nm,0.7s,baz=104,slow=5.5,SNR=8.3
BVAR LR LR 22 14 49.0
comp=Z,81nm,21.8s,baz=82,slow=35
comp=Z,1.5nm,0.7s
CPUP Villa Florida 128.04 135 PKP PKPdf 21 36 38.1 -1.4
comp=Z,0.7nm,0.5s,baz=203,slow=12,SNR=3.1
GERES GERESS Array B 132.71 331 PKP PKPdf 21 36 46.1 -1.7
comp=Z,0.3nm,0.3s,baz=49,slow=1.9,SNR=1.9
KEST Kesra 143.75 319 PKP PKiKP 21 37 09.9 -1.9
comp=Z,3.6nm,0.9s,baz=309,slow=6.6,SNR=4.6
ESDC Sonseca Array 147.66 338 PKPbc PKPbc 21 37 16.2 -1.5
comp=Z,1.6nm,1.0s,baz=30,slow=3.1,SNR=4.3
TORD Torodi Ar. Bea 159.51 280 PKP PKPdf 21 37 31.7 -0.7
comp=Z,0.3nm,0.7s,baz=225,slow=4.0,SNR=3.9
TORD PKPab PKPab 21 38 10.2 -0.4
comp=Z,2.2nm,1.1s,baz=101,slow=1.3,SNR=6.6

*CATAC **25** 21:17:40.0±0.8, 14°N±6°×9°1W±°, h21km±7km, M3.2/8, MLv3.2/8, Error ellipse: s-maj=14.1km s-min=5.0km az=14.0, confirmed*
*GCG **25** 21:17:42.3±1.9, 13°.69N×90°.81W, h46km±65km, MD3.7, ML3.6, Presumed earthquake*
*SNET **25** 21:17:43.0±1.1, 13°.77N×90°.75W, h29km±6km, ML3.2, Presumed earthquake*

ISC 25 21:17:40.4±2.2, 13°.4N±0°.1×90°.81W±0°.05, h26km±14km, n28, σ1s24/39, 2C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FG8	**Yepocapa, Chim**	**0.86**	**16**	*i* P	**Pn**	**21 17 57.6**	**+0.7**
FAME	**Alcaldia de Sa**	**0.88**	**62**	P	**Pb**	**21 17 56.7**	**-0.3**
NUBE	**Las Nubes**	**1.11**	**65**	P	**Pn**	**21 18 00.2**	**-0.2**
NUBE	**Las Nubes**	**1.11**	**65**	*e*P	**Pn**	**21 18 00.8**	**+0.5**
NUBE				*e*S	**Sb**	**21 18 14.1**	**-0.9**
NUBE	**Las Nubes**	**1.11**	**65**	*e*S	**Sb**	**21 18 13.7**	**-1.3**
STG8	**El Palmar, Qui**	**1.14**	**333**	*e*P	**Pb**	**21 18 04.3**	**+2.7**
STG8				*e*S	**Sn**	**21 18 20.3**	**+4.5**
STG8				IAML		21 18 23.9	
	comp=E,1μm,0.2s						
LOAL	**Lomas de Alarc**	**1.15**	**60**	P	**Pn**	**21 18 00.9**	**+0.1**
LOAL				S	**Sn**	**21 18 16.0**	**+0.2**
LOAL	**Lomas de Alarc**	**1.15**	**60**	*e*P	**Pn**	**21 18 01.0**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.16**	**59**	*e*P	**Pn**	**21 18 01.1**	**+0.1**
SLOZ				*e*S	**Sn**	**21 18 15.9**	**-0.1**
CEVE	**Cerro Verde**	**1.22**	**71**	P	**Pn**	**21 18 02.4**	**+0.4**
CEVE	**Cerro Verde**	**1.22**	**71**	*e*P	**Pn**	**21 18 02.4**	**+0.4**
RTR	**El Retiro**	**1.22**	**68**	*e*P	**Pn**	**21 18 02.5**	**+0.6**
SBLS	**San Blas**	**1.22**	**70**	*e*P	**Pn**	**21 18 02.2**	**+0.2**
SNJE	**San Jose**	**1.25**	**70**	*e*P	**Pn**	**21 18 02.6**	**+0.2**
RBDL	**Robledal**	**1.29**	**58**	*i*P	**Pn**	**21 18 03.2**	**+0.3**
JAYA	**Jayaque - finc**	**1.34**	**80**	P	**Pn**	**21 18 04.2**	**+0.6**
JAYA				S	**Sn**	**21 18 21.0**	**+0.3**
JAYA	**Jayaque - finc**	**1.34**	**80**	*e*P	**Pn**	**21 18 04.2**	**+0.6**
RTAL	**Retalhuleu**	**1.39**	**322**	P	**Pn**	**21 18 02.4**	**-1.6**
RTAL				S	**Sn**	**21 18 18.8**	**-2.7**
PMON	**Piamonte**	**1.48**	**79**	P	**Pn**	**21 18 04.9**	**-0.6**
PMON				S	**Sn**	**21 18 25.0**	**+0.9**
PMON	**Piamonte**	**1.48**	**79**	*e*P	**Pb**	**21 18 07.1**	**-0.2**
SOKI	**Kika Raxquin**	**1.50**	**337**	*i* P	**Pn**	**21 18 05.0**	**-0.9**
SOKI				*e*S	**Sn**	**21 18 22.2**	**-2.6**
BOQS	**Boqueron**	**1.52**	**78**	*e*P	**Pn**	**21 18 07.0**	**+0.9**
APG	**El Apazote**	**1.60**	**12**	*i* P	**Pn**	**21 18 06.5**	**-0.8**
MTO3	**Montecristo**	**1.71**	**55**	P	**Pn**	**21 18 08.3**	**-0.3**
MTO3				S	**Sn**	**21 18 29.9**	**+0.2**
MTO3	**Montecristo**	**1.71**	**55**	*e*P	**Pn**	**21 18 08.3**	**-0.3**
MTO3	**Montecristo**	**1.71**	**55**	*i* P	**Pn**	**21 18 08.3**	**-0.3**
ESQI	**Esquipulas**	**1.81**	**52**	P	**Pn**	**21 18 09.9**	**-0.2**
ESQI				S	**Sn**	**21 18 32.6**	**+0.3**
P5NO	**Presa 5 de nov**	**2.07**	**74**	P	**Pn**	**21 18 13.0**	**-0.4**
P5NO				S	**Sn**	**21 18 38.9**	**+0.5**

*BJI **25** 21:48:40.3, 37°.34N×72°.04E, h131km, mB4.5/4, mb4.0/22*
*IDC **25** 21:48:42.7±2.9, 37°.27N×72°.13E, h151km±26km, mb3.7/20, mbtmp4.1/24, Error ellipse: s-maj=19.0km s-min=12.4km az=9.0*
*NEIC **25** 21:48:42.5±1.6, 37°.39N±0°.05×72°.01E±0°.08, h140km±7km, mb4.3/36, Error ellipse: s-maj=9.9km s-min=6.6km az=110.0*
*NNC **25** 21:48:46.6±2.3, 37°.78N×71°.94E, h196km±25km, mb3.5, mpv4.5, Error ellipse: s-maj=24.2km s-min=10.5km az=25.0*

ISC 25 21:48:41.1±0.3, 37°.23N±0°.04×72°.13E±0°.04, h142km, n183, σ2s16/201, mb4.1/37, 6C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**2.27**	**353**	Pn	**Pn**	**21 49 19.5**	**+0.2**
GAR	**Garm**	**2.28**	**322**		**Pn**	**21 49 18.1**	**-1.1**
CHGR	**Chuyangaron**	**2.75**	**302**	Pn	**Pn**	**21 49 23.5**	**-1.6**
BTK	**Batken**	**3.01**	**340**	Pn	**Pn**	**21 49 28.4**	**0.0**
SHAA	**Shahritus**	**3.21**	**277**	Pn	**Pn**	**21 49 29.5**	**-1.4**
KSH2	**Kashi**	**3.31**	**54**	P	**Pn**	**21 49 35.5**	**+3.1**
KSH2				S	**Sn**	**21 50 14.5**	**+2.5**
KSH2				smax	smax		
	comp=N,1μm,0.6s						
KSH2				smax	smax		
	comp=E,2μm,0.6s						
KBL	**Kabul**	**3.67**	**224**	Pn	**Pn**	**21 49 39.2**	**+2.1**
KBL	**Kabul**	**3.67**	**224**	P	**Pn**	**21 49 39.2**	**+2.1**
	SNR=15						
KBL				S	**Sn**	**21 50 22.4**	**+2.0**
NIL	**Nilore**	**3.68**	**165**	Pn	**Pn**	**21 49 40.5**	**+3.4**
NIL	**Nilore**	**3.68**	**165**	P	**Pn**	**21 49 40.8**	**+3.7**
ARSB	**Arslanbob**	**4.14**	**9**	Pn	**Pn**	**21 49 42.1**	**-1.1**
JMU	**Jammu**	**4.96**	**153**	*e*P	**Pn**	**21 49 51.5**	**-2.4**
JMU				*e*S	**Sn**	**21 50 46.5**	**-4.0**
JMU				IAML		21 50 55.6	
	comp=E,436nm,0.6s						
JMU				IAML		21 50 55.9	
	comp=N,310nm,0.6s						
ALCI	**Alchi Leh**	**5.09**	**125**	*e*P	**Pn**	**21 49 52.0**	**-4.0**
ALCI				*e*S	**Sn**	**21 50 48.6**	**-5.6**
ALCI				IAML		21 50 58.2	
	comp=E,314nm,1.0s						
ALCI				IAML		21 50 58.2	
	comp=N,423nm,0.6s						
NRN	**Naryn**	**5.16**	**34**	Pn	**Pn**	**21 49 55.8**	**-1.0**
UCH	**Uchtor**	**5.32**	**19**	P	**Pn**	**21 49 59.2**	**+0.2**
	SNR=435						
TSSA	**Tissa**	**5.48**	**142**	*e*P	**Pn**	**21 49 58.7**	**-2.3**
TSSA				*e*S	**Sn**	**21 50 59.9**	**-3.4**
TSSA				IAML		21 51 07.0	
	comp=N,395nm,0.2s						
TSSA				IAML		21 51 07.0	
	comp=E,401nm,0.2s						
EKS2	**Erkin-Say**	**5.57**	**13**	P	**Pn**	**21 50 02.3**	**+0.2**
	SNR=158						
THN	**Thein Dam**	**5.63**	**147**	*e*P	**Pn**	**21 49 58.7**	**-4.2**
THN				*e*S	**Sn**	**21 51 03.0**	**-3.5**
THN				IAML		21 51 12.4	
	comp=N,318nm,0.5s						
THN				IAML		21 51 12.7	
	comp=E,230nm,0.3s						
AAK	**Ala-Archa**	**5.70**	**18**	P	**Pn**	**21 50 04.4**	**+0.6**
	SNR=124						
AAK	**Ala-Archa**	**5.70**	**18**	P	**Pn**	**21 50 04.4**	**+0.6**
	comp=E,165nm,0.5s,baz=188,slow=6.2,SNR=1061						
AAK				S	**Sn**	**21 51 06.8**	**-1.6**
	comp=E,120nm,0.5s,baz=339,slow=21,SNR=21						
AAK	**Ala-Archa**	**5.70**	**18**	Pn	**Pn**	**21 50 04.2**	**+0.4**
AAK	**Ala-Archa**	**5.70**	**18**	⇑P	**Pn**	**21 50 04.4**	**+0.6**
	comp=E,51nm,0.5s						
AAK				⇑S	**Sn**	**21 51 06.3**	**-2.1**
	comp=E,123nm,0.6s						
AAK	**Ala-Archa**	**5.70**	**18**	P	**Pn**	**21 50 04.5**	**+0.6**
AAK				S	**Sn**	**21 51 06.5**	**-2.0**
KBK	**Karagaybulak**	**5.84**	**21**	P	**Pn**	**21 50 06.3**	**+0.6**
	SNR=78						
FRU1	**Bishkek**	**5.90**	**18**	Pn	**Pn**	**21 50 07.1**	**+0.7**
ULHL	**Ulahol**	**5.93**	**31**	P	**Pn**	**21 50 08.2**	**+1.2**
	SNR=16						
KK31	**Karatay Array**	**6.00**	**349**	Pn	**Pn**	**21 50 06.7**	**-1.0**
KK31	**Karatay Array**	**6.00**	**349**	⇑P	**Pn**	**21 50 06.8**	**-0.9**
	comp=E,236nm,0.5s,baz=177,slow=13,SNR=1873						
KK31				⇓S	**Sn**	**21 51 09.0**	**-6.4**
	comp=E,87nm,0.4s,baz=169,slow=23,SNR=13						
KKAR	**Karatay Array**	**6.00**	**349**	Pn	**Pn**	**21 50 06.2**	**-1.5**
BOOM	**Boomskoye usch**	**6.02**	**28**	Pn	**Pn**	**21 50 07.8**	**-0.3**
DHRM	**DHARAMŚHALA**	**6.03**	**144**	*e*P	**Pn**	**21 50 06.1**	**-2.3**
DHRM				*e*S	**Sn**	**21 51 11.2**	**-5.4**
DHRM				IAML		21 51 20.4	
	comp=E,411nm,0.6s						
DHRM				IAML		21 51 20.7	
	comp=N,325nm,0.2s						
CHMS	**Chumysh**	**6.11**	**18**	P	**Pn**	**21 50 09.4**	**+0.3**
	SNR=175						
KDJ	**Kajisay**	**6.25**	**37**	Pn	**Pn**	**21 50 11.4**	**+0.1**
TKM2	**Tokmak 2**	**6.28**	**24**	P	**Pn**	**21 50 11.8**	**+0.2**
	SNR=34						
TARG	**Taragay, Kyrgy**	**6.28**	**43**	Pn	**Pn**	**21 50 12.0**	**+0.2**
USP	**Ospenovka**	**6.30**	**16**	P	**Pn**	**21 50 11.6**	**-0.1**
	SNR=34						
KST	**Kastek**	**6.51**	**26**	Lg	Lg	21 51 22.2	
	comp=N,90nm,1.0s						
DGS	**Degeres**	**6.62**	**24**	P	**Pn**	**21 50 16.1**	**0.0**
	comp=N,23nm,0.5s						
MTBS	**Maitube**	**6.75**	**28**	P	**Pn**	**21 50 18.5**	**+0.7**
	comp=N,47nm,0.6s						
WUS	**Wushi**	**6.78**	**52**	Pn	**Pn**	**21 50 18.9**	**+0.7**
TNSS	**Tian-Shan**	**6.88**	**31**	P	**Pn**	**21 50 20.1**	**+0.3**
	comp=N,3.0nm,0.5s						
KRBS	**Karabastau**	**7.00**	**22**	P	**Pn**	**21 50 20.9**	**-0.2**
	comp=N,31nm,0.6s						
KOTS	**Kotyrbulak**	**7.11**	**31**	P	**Pn**	**21 50 23.5**	**+0.8**
	comp=N,25nm,0.6s						
PRZ	**Przheval'sk**	**7.13**	**41**	Pn	**Pn**	**21 50 24.1**	**+1.1**
KTBS	**Karatobe**	**7.35**	**27**	P	**Pn**	**21 50 24.9**	**-0.8**
	comp=N,6.1nm,0.5s						
SMLA	**Simla**	**7.37**	**144**	*e*P	**Pn**	**21 50 23.8**	**-2.3**
SMLA				*e*S	**Sn**	**21 51 42.6**	**-5.9**
SMLA				IAML		21 51 49.0	
	comp=E,377nm,0.1s						
SMLA				IAML		21 51 50.0	
	comp=N,291nm,0.8s						
KLP	**Kalpa**	**7.60**	**137**	*e*P	**Pn**	**21 50 25.3**	**-4.3**
KLP				*e*S	**Sn**	**21 51 47.0**	**-7.5**
KLP				IAML		21 51 57.7	
	comp=N,257nm,1.2s						
KLP				IAML		21 52 01.2	
	comp=E,144nm,0.4s						
KURS	**Kuram**	**7.77**	**34**	P	**Pn**	**21 50 32.2**	**+0.8**
	comp=E,17nm,0.7s						
DDI	**Dehra Dun**	**8.47**	**143**	*e*P	**Pn**	**21 50 38.0**	**-2.9**
DDI				*e*S	**Sn**	**21 52 08.1**	**-6.8**
DDI				IAML		21 52 19.3	
	comp=N,182nm,0.1s						
DDI				IAML		21 52 20.0	
	comp=E,204nm,0.3s						
HRA	**Herat**	**8.52**	**254**	Pn	**Pn**	**21 50 41.8**	**+0.1**
JOSI	**Joshimath**	**9.07**	**135**	*e*P	**Pn**	**21 50 45.3**	**-3.8**
JOSI				IAML		21 50 54.8	
	comp=N,94nm,0.2s						
JOSI				IAML		21 50 54.9	
	comp=E,95nm,0.5s						
JOSI				*e*S	Sn	21 52 20.9	-8.9
KUDL	**Kundal**	**9.77**	**157**	*e*P	**Pn**	**21 50 54.8**	**-3.4**
KUDL				*e*S	**Sn**	**21 52 39.0**	**-7.3**
KUDL				IAML		21 52 42.9	
	comp=E,85nm,0.2s						
KUDL				IAML		21 52 43.1	
	comp=N,25nm,0.2s						
PTH	**Pithoragarh**	**10.17**	**136**	*e*P	**Pn**	**21 50 60.0**	**-3.8**
PTH				*e*S	Sn	21 52 46.5	-10
PTH				IAML		21 53 00.8	
	comp=E,47nm,0.4s						
PTH				IAML		21 53 02.7	
	comp=N,39nm,0.6s						
LGTI	**Lohaghat**	**10.25**	**137**	*e*P	**Pn**	**21 51 02.0**	**-2.8**
LGTI				*e*S	Sn	21 52 49.4	-8.9
LGTI				IAML		21 52 56.5	
	comp=N,87nm,0.4s						
LGTI				IAML		21 53 01.7	
	comp=E,48nm,0.4s						
MAKZ	**Makanchi**	**12.04**	**34**	⇓P	**Pn**	**21 51 25.1**	**-3.0**
	comp=E,3.2nm,0.7s						
MKAR	**Makanchi Array**	**12.17**	**35**	P	**Pn**	**21 51 29.8**	**0.0**
	comp=E,1.4nm,0.8s,baz=215,slow=14,SNR=6.5						
MKAR	**Makanchi Array**	**12.17**	**35**	Pn	**Pn**	**21 51 29.6**	**-0.2**
WMQ	**Urumqi**	**13.54**	**56**	*e*P	**Pn**	**21 51 49.0**	**+1.6**
WMQ				S	**Sn**	**21 54 15.3**	**-1.8**
KURBB	**Kurchatov Arra**	**14.15**	**17**	P	**Pn**	**21 51 51.6**	**-3.5**
	comp=E,1.2nm,0.6s,baz=212,slow=12,SNR=10						
KURK	**Kurchatov**	**14.26**	**17**	P	**Pn**	**21 51 58.1**	**+1.7**
KURK	**Kurchatov**	**14.26**	**17**	P	**Pn**	**21 51 57.5**	**+1.1**
AB31	**Akbulak array**	**14.92**	**328**	Pn	**Pn**	**21 52 02.8**	**-1.9**
AB31	**Akbulak array**	**14.92**	**328**	P	**Pn**	**21 52 02.5**	**-2.3**
	comp=E,4.6nm,0.3s,baz=141,slow=11,SNR=332						
AB31				S	Sn	21 54 40.9	-9.3
	comp=E,14nm,0.6s,baz=122,slow=26,SNR=10						
ABKAR	**Akbulak array**	**14.92**	**328**	Pn	**Pn**	**21 52 02.6**	**-2.2**
NGCH	**Negor - Chabah**	**15.09**	**222**	P	**Pn**	**21 52 07.9**	**+0.8**
EVN	**Everest**	**15.43**	**123**	Pn	**Pn**	**21 52 11.8**	**-0.1**
BVA0	**Borovoye Array**	**15.85**	**356**	⇑P	**Pn**	**21 52 13.4**	**-2.7**
	comp=E,4.9nm,0.7s						
BVAR	**Borovoye Array**	**15.85**	**356**	P	**Pn**	**21 52 14.4**	**-1.8**
	comp=E,5.3nm,0.5s,baz=158,slow=12,SNR=33						
BVAR				S	**Sn**	**21 55 03.4**	**-8.9**
	comp=E,6.0nm,0.6s,baz=165,slow=22,SNR=9.5						
BORK	**Borovoye**	**15.87**	**356**	Pn	**Pn**	**21 52 13.9**	**-2.6**
BORK				IAmb	IAmb	21 52 18.0	
	comp=Z,22nm,1.1s						
BRVK	**Borovoye**	**15.88**	**356**	⇑P	**Pn**	**21 52 13.5**	**-3.2**
	comp=Z,4.9nm,0.8s						
JASK	**Jask - Hormozg**	**16.59**	**231**	P	**P**	**21 52 25.6**	**0.0**
AKTO	**Aktyubinsk**	**16.64**	**327**	P	**P**	**21 52 25.2**	**-0.6**
	comp=Z,22nm,0.7s,baz=133,slow=13,SNR=68						
AKTO				S	S	21 55 17.4	-14
	comp=Z,14nm,0.6s,baz=81,slow=23,SNR=10						
AKTO	**Aktyubinsk**	**16.64**	**327**	⇑P	**P**	**21 52 21.9**	**-3.8**
	comp=Z,20nm,0.8s						
LSA	**Lhasa**	**17.54**	**110**	P	**Pn**	**21 52 39.7**	**+2.3**
LSA				IAmb	IAmb	21 52 43.3	
	comp=Z,9.7nm,0.8s						
LSA	**Lhasa**	**17.54**	**110**	P	**P**	**21 52 36.5**	**+0.1**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LSA	**Lhasa**	**17.54**	**110**	P	**Pn**	**21 52 40.0**	**+2.6**
BANOM	**Banah**	**17.55**	**235**	*i* P	**Pn**	**21 52 37.0**	**-0.1**
	SNR=9.2						
BANOM	**Banah**	**17.55**	**235**	P	**P**	**21 52 36.5**	**+0.4**
BANOM				S	**S**	**21 55 48.1**	**-3.4**
SHME	**Shamm**	**17.57**	**235**	P	**P**	**21 52 36.5**	**+0.3**
SHME	**Shamm**	**17.57**	**235**	P	**P**	**21 52 35.3**	**-0.9**
MDH	**Madha**	**17.99**	**233**	P	**Pn**	**21 52 42.2**	**0.0**
MASF	**Masafi**	**18.02**	**234**	P	**Pn**	**21 52 43.5**	**+0.8**
	SNR=7.5						
MSFE	**Esma-Masafi**	**18.03**	**234**	*i* P	**P**	**21 52 41.5**	**+0.1**
	SNR=7.4						
WSAR	**Wadi Sarin**	**18.15**	**224**	P	**P**	**21 52 41.8**	**-0.8**

HATD	Hatta, Dubai	18.43	232	P		Pn	21 52 47.0	-0.5
HATD	Hatta, Dubai	18.43	232	P		Pn	21 52 47.0	-0.5
WBK	Wadi Bani Khal	18.47	222	P		P	21 52 43.2	-3.0
ASHO	Ashiyiah	18.58	232	*i* P		Pn	21 52 48.9	-0.4
	SNR=19							
ASHO	Ashiyiah	18.58	232	P		Pn	21 52 48.7	-0.5
	SNR=19							
NAZ	Nazwa, Dubai	18.61	234	P		Pn	21 52 48.9	-0.7
NAZ	Nazwa, Dubai	18.61	234	P		Pn	21 52 49.1	-0.5
SMDO	Samad	18.61	225	P		P	21 52 46.2	-1.6
JLN	Jalan Bani Buh	18.62	220	P		P	21 52 43.7	-4.0
SOHO	SOHO	18.68	230	P		P	21 52 49.2	+0.8
ZAA0	Zalesovo Array	18.88	24	P		P	21 52 49.9	-0.4
ZALV	Zalesovo Beam	18.88	24	P		P	21 52 50.7	+0.4
	comp=Z,3.6nm,0.5s,baz=208,slow=12,SNR=18							
ZALV	Zalesovo Beam	18.88	24	P		P	21 52 49.8	-0.5
ASUD	Al Ashush, Dub	19.08	234	P		Pn	21 52 54.1	-1.0
JMDO	Jabal Madar	19.13	223	P		P	21 52 53.3	-0.1
ALNE	Al Ain	19.22	232	*i* P		P	21 52 55.1	+0.8
	SNR=9.4							
ALNE	Al Ain	19.22	232	P		P	21 52 55.3	+1.0
	SNR=6.8							
BSY	Bisya	19.34	226	P		P	21 52 54.1	-1.5
AJN	Ajban	19.35	234	P		P	21 52 56.3	+0.7
MHTO	MHTO	20.33	221	P		P	21 53 05.3	-0.9
SHL	Shillong	20.43	119	P		P	21 53 08.7	+1.2
SHL	Shillong	20.43	119	P		P	21 53 09.0	+1.5
	SNR=8.2							
JRN	Qarnain Island	20.51	239	P		P	21 53 08.0	-0.1
UMZA	Um Al Zommool	20.58	230	P		P	21 53 09.3	+0.5
MZWR	Madinat Zayed	20.63	235	P		P	21 53 10.3	+0.9
ARTI	Arti	21.28	339	P		P	21 53 16.3	+0.2
	comp=Z,3.2nm,0.6s,baz=138,slow=5.7,SNR=5.8							
	comp=Z,3.2nm,0.6s							
ARTI	Arti	21.28	339	P		P	21 53 15.4	-0.6
ARTI				IAmb		IAmb	21 53 28.9	
	comp=Z,11nm,0.6s							
MZR	Muzera	21.42	234	P		P	21 53 17.5	-0.4
MZR	Muzera	21.42	234	P		P	21 53 17.4	-0.6
GNI	Garni	21.55	286	P		P	21 53 20.3	+0.9
	comp=Z,10nm,0.9s,baz=99,slow=7.9,SNR=6.6							
	comp=Z,10nm,0.9s							
GNI	Garni	21.55	286	P		P	21 53 20.4	+1.1
GNI				IAmb		IAmb	21 53 24.2	
	comp=Z,14nm,0.8s							
GTA2	Gaotai	21.75	76	*e*P		P	21 53 25.0	+3.5
GTA2				pP		pP	21 53 53.8	+5.5
GTA2				pmax		pmax		
	comp=Z,8.0nm,1.0s							
KBZ	Khabaz	23.09	295	P		P	21 53 35.3	+1.1
	comp=Z,3.8nm,0.8s,baz=103,slow=9.8,SNR=5.8							
	comp=Z,3.8nm,0.8s							
DOK	Doka	24.35	225	P		P	21 53 47.0	+1.1
	SNR=6.6							
DMTO	DMTO	24.63	223	P		P	21 53 49.9	+1.5
WHFO	Wadi Hawf	25.11	225	P		P	21 53 54.0	+1.1
	SNR=8.9							
RBK	Rabkut	25.20	224	P		P	21 53 55.0	+1.2
LZH	Lanzhou	25.41	83	*e*P		P	21 53 59.0	+3.4
LZH				pP		pP	21 54 31.3	+4.5
LZH				pmax		pmax		
	comp=Z,6.0nm,1.4s							
TNCH	TengChong	25.56	111	P		P	21 54 00.5	+3.4
TNCH				pP		pP	21 54 29.3	+0.9
TNCH				PP		sP	21 54 48.8	+3.8
TNCH				pmax		pmax		
	comp=Z,7.0nm,0.7s							
ABTO	Aybut	25.83	225	P		P	21 54 00.2	+0.8
RAYN	Ar Rayn	26.62	247	P		P	21 54 07.1	+0.7
RAYN				IAmb		IAmb	21 54 13.7	
	comp=Z,3.8nm,0.5s							
SONM	Songino Array	27.18	56	P		P	21 54 11.9	+0.6
	comp=Z,0.5nm,0.6s,baz=256,slow=9.8,SNR=2.7							
	comp=Z,0.5nm,0.6s							
CMAR	Chiang Mai Arr	30.03	121	P		P	21 54 38.8	+2.1
	comp=Z,0.6nm,0.4s,baz=300,slow=9.8,SNR=5.5							
	comp=Z,0.6nm,0.4s							
BR131	Keskin Array S	30.09	287	P		P	21 54 38.2	+0.9
BR131				IAmb		IAmb	21 54 39.2	
	comp=Z,3.2nm,0.7s							
BRTR	Keskin Array B	30.09	287	P		P	21 54 38.9	+1.6
	comp=Z,1.7nm,0.5s,baz=108,slow=8.2,SNR=13							
	comp=Z,1.7nm,0.5s							
BRTR	Keskin Array B	30.09	287	P		P	21 54 38.1	+0.9
HHC	Hu-ho-hao-te	30.66	71	*e*P		P	21 54 44.8	+2.6
HHC				pmax		pmax		
	comp=Z,5.0nm,0.6s							
AKASG	Malin Array Be	33.21	308	P		P	21 55 05.5	+1.3
	comp=Z,2.1nm,0.6s,baz=110,slow=8.5,SNR=7.4							
	comp=Z,2.1nm,0.6s							
AKASG	Malin Array Be	33.21	308	P		P	21 55 04.3	+0.1
MLR	Muntele Rosu	35.23	298	P		P	21 55 23.1	+1.2
MLR				IAmb		IAmb	21 55 29.3	
	comp=Z,8.2nm,1.1s							
FINES	FINESS Array B	37.40	325	P		P	21 55 40.2	+0.4
	comp=Z,1.3nm,0.4s,baz=120,slow=9.9,SNR=16							
	comp=Z,1.3nm,0.4s							
FINES	FINESS Array B	37.40	325	P		P	21 55 39.7	-0.2
ARCES	ARCESS Array B	40.83	337	P		P	21 56 08.6	+0.3
	comp=Z,1.9nm,0.7s,baz=108,slow=7.8,SNR=7.9							
	comp=Z,1.9nm,0.7s							
ARCES	ARCESS Array B	40.83	337	P		P	21 56 08.7	+0.4
HEH	HeiHe	41.09	53	*e*P		P	21 56 12.8	+2.2
HEH				pmax		pmax		
	comp=Z,4.0nm,0.7s							
RONA	Rosalia, Austr	41.67	303	*i* P		P	21 56 16.9	+1.4
	comp=Z,2.8nm,0.4s							
CONA	Conrad Observa	41.94	303	*i* P		P	21 56 19.4	+1.6
	comp=Z,2.2nm,0.8s							
SOKA	Soboth	42.66	301	*e*P		P	21 56 25.2	+1.5
	comp=Z,2.3nm,0.8s							
GSI	Gunungsitoli	42.76	141			P	21 56 27.4	+2.8
OBKA	Obir	43.02	301	*e*P		P	21 56 27.9	+1.4
	comp=Z,12nm,1.3s							
HFS	Hagfors	43.06	321	P		P	21 56 26.8	+0.3
	comp=Z,4.0nm,0.6s,baz=96,slow=11,SNR=15							
	comp=Z,4.0nm,0.6s							
CUC	Castrocucco	43.47	292	P		P	21 56 31.9	+1.7
CUC				IAmb		IAmb	21 56 32.8	
	comp=Z,7.0nm,0.7s							
NB2	NORSAR Subarra	44.35	323	P		P	21 56 36.4	-0.5
	comp=Z,3.2nm,0.8s,baz=98,slow=7.9							
NOA	NORSAR Array B	44.35	323	P		P	21 56 36.9	0.0
	comp=Z,1.9nm,0.7s,baz=95,slow=7.6,SNR=8.3							
	comp=Z,1.9nm,0.7s							
NC204	NORSAR Array S	44.59	323	P		P	21 56 38.4	-0.4
NC204				IAmb		IAmb	21 57 16.0	
	comp=Z,8.1nm,1.2s							
FDMO	Fiordimonte	44.71	297	P		P	21 56 40.7	+0.7
FDMO				IAmb		IAmb	21 56 49.0	
	comp=Z,13nm,1.2s							
KONO	Kongsberg	45.10	320	P		P	21 56 42.1	-0.6
SPITS	Spitsbergen Ar	47.00	347	P		P	21 56 58.7	+1.3
	comp=Z,4.6nm,0.9s,baz=135,slow=12,SNR=5.0							
	comp=Z,4.6nm,0.9s							
LODK	Lodwar	47.62	234	P		P	21 57 04.7	+1.6
KEST	Kesra	49.67	288	P		P	21 57 20.0	+1.5
	comp=Z,2.6nm,0.6s,baz=51,slow=6.5,SNR=7.1							
	comp=Z,2.6nm,0.6s							
KEST	Kesra	49.67	288	P		P	21 57 19.6	+1.1
KEST				IAmb		IAmb	21 57 39.0	
	comp=Z,7.3nm,1.2s							
KIBK	Kibwezi	50.50	227	P		P	21 57 27.5	+2.5
KIBK				IAmb		IAmb	21 57 27.8	
	comp=Z,3.0nm,0.6s							
EKA	Eskdalemuir Ar	52.40	316	P		P	21 57 38.7	+0.2
	comp=Z,2.8nm,0.8s,baz=84,slow=7.6,SNR=4.6							
	comp=Z,2.8nm,0.8s							
ESDC	Sonseca Array	57.92	298	P		P	21 58 19.1	+0.6
	comp=Z,1.9nm,0.8s,baz=53,slow=7.2,SNR=18							
	comp=Z,1.9nm,0.8s							
TORD	Torodi Ar. Bea	66.64	269	P		P	21 59 15.8	-0.9
	comp=Z,1.2nm,0.6s,baz=51,slow=3.0,SNR=12							
	comp=Z,1.2nm,0.6s							
C19K	Lookout Ridge	67.36	18	P		P	21 59 21.4	+0.9
B21K	Ikpikpuk River	68.12	16	P		P	21 59 25.6	+0.5
D22K	Ayikyak River	69.13	16	P		P	21 59 32.8	+1.3
C27K	Jago River	70.27	13	P		P	21 59 39.7	+1.3
J14K	Nanvaranak Lak	70.88	24	P		P	21 59 44.0	+1.9
BMAR	Burnt Mountain	72.02	14	P		P	21 59 50.0	+0.9
INK	Inuvik	73.04	10	P		P	21 59 56.3	+1.4
ILAR	Eielson Array	73.83	16	P		P	21 59 59.1	-0.5
	comp=Z,0.5nm,0.8s,baz=328,slow=5.9,SNR=6.5							
	comp=Z,0.5nm,0.8s							
ILAR	Eielson Array	73.83	16	P		P	21 59 59.8	+0.1
G30M	tAoh Zraii Nji	73.88	11	P		P	22 00 01.3	+1.2
RND	Reindeer	74.53	18	P		P	22 00 04.0	+0.1
RND				IAmb		IAmb	22 00 40.2	
	comp=Z,12nm,1.4s							
DHY	Denali Highway	75.17	17	P		P	22 00 08.1	+0.5
H31M	Peel River	75.26	11	P		P	22 00 08.7	+0.7
H31M				IAmb		IAmb	22 00 32.0	
	comp=Z,8.0nm,1.4s							
DBIC	Dimbokro	75.64	267	P		P	22 00 09.6	-1.3
	comp=Z,3.0nm,0.9s,baz=45,slow=7.1,SNR=2.4							
	comp=Z,3.0nm,0.9s							
O18K	Koktuh Hills	75.70	23	P		P	22 00 12.3	+1.8
K29M	Barlow Dome	76.55	13	P		P	22 00 15.9	+0.5
K29M				IAmb		IAmb	22 00 49.1	
	comp=Z,7.3nm,1.4s							
YKA	Yellowknife Ar	80.47	3	P		P	22 00 37.5	+0.8
	comp=Z,0.8nm,0.6s,baz=347,slow=6.0,SNR=10							
	comp=Z,0.8nm,0.6s							
YKA	Yellowknife Ar	80.47	3	P		P	22 00 36.7	0.0
WRA	Warramunga Arr	81.61	123	P		P	22 00 44.2	+0.8
	comp=Z,0.5nm,0.6s,baz=325,slow=5.1,SNR=5.4							
	comp=Z,0.5nm,0.6s							
WRA	Warramunga Arr	81.61	123	P		P	22 00 44.2	+0.8

IDC ***25*** *21:57:20.4±1.0, 29.°83N×69.°90E, h0km, mb3.7/11, mbtmp3.6/13, ML3.4/2, Error ellipse: s-maj=27.1km s-min=20.7km az=72.0*

ISC 25 21:57:23.2±1.0, 30.°0N±0.°1×70.°0E±0.°2, h12km, n13, σ2s05/14, mb3.7/10, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	Ala-Archa	13.08	15	Pn		Pn	22 00 29.6	+0.7
	0.2nm,0.3s,baz=188,slow=12,SNR=5.2							
AAK				Sn		Sn	22 02 49.6	-4.8
	0.1nm,0.3s,baz=187,slow=15,SNR=1.2							
	0.8nm,0.4s							
MKAR	Makanchi Array	19.25	26	P		P	22 01 49.0	+1.5
	0.1nm,0.3s,baz=203,slow=12,SNR=4.5							
	0.4nm,0.6s							
KURBB	Kurchatov Arra	21.53	15	P		P	22 02 12.8	+0.7
	1.9nm,1.0s,baz=208,slow=9.5,SNR=7.6							
	1.9nm,1.0s							
BVAR	Borovoye Array	22.97	1	P		P	22 02 28.4	+1.0
	2.1nm,0.8s,baz=169,slow=11,SNR=8.0							
	2.1nm,0.8s							
ZALV	Zalesovo Beam	26.19	20	P		P	22 02 57.7	+0.1
	0.6nm,0.4s,baz=206,slow=9.5,SNR=4.4							
	0.6nm,0.4s							
CMAR	Chiang Mai Arr	28.70	107	P		P	22 03 19.3	-1.1
	0.4nm,0.3s,baz=296,slow=8.9,SNR=4.6							
	0.4nm,0.3s							
SONM	Songino Array	33.03	47	P		P	22 04 00.7	+2.3
	0.3nm,0.5s,baz=253,slow=9.9,SNR=1.8							
	0.3nm,0.5s							
ARCES	ARCESS Array B	46.86	340	P		P	22 05 54.0	+1.2
	0.9nm,0.7s,baz=120,slow=8.2,SNR=3.6							
	0.9nm,0.7s							
TORD	Torodi Ar. Bea	64.87	271	P		P	22 08 00.6	-2.1
	0.7nm,0.8s,baz=53,slow=5.3,SNR=5.2							
	0.7nm,0.8s							
WRA	Warramunga Arr	79.36	120	P		P	22 09 28.6	-0.7
	0.7nm,0.8s,baz=330,slow=5.3,SNR=4.6							
	0.7nm,0.8s							
ILAR	Eielson Array	81.21	15	P		P	22 09 38.0	-0.6
	0.2nm,0.5s,baz=323,slow=5.4,SNR=1.9							
	0.2nm,0.5s							
ASAR	Alice Springs	81.31	124	P		P	22 09 38.6	-1.1
	0.4nm,0.6s,baz=301,slow=5.7,SNR=4.8							
	0.4nm,0.6s							
YKA	Yellowknife Ar	87.72	2	P		P	22 10 13.5	+1.9
	0.4nm,0.7s,baz=344,slow=5.6,SNR=8.4							
	0.4nm,0.7s							

DJA 25 22:27:37.6±0.4, 9.°S±3.°×11.°0E±.°, h10km, M3.8/24, mb4.1/3, MLv3.7/24, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOGI	Yogyakarta	1.70	23	P		Pn	22 28 06.8	-0.6
UGM	Wanagama	1.72	32	P		Pn	22 28 06.9	-0.8
PCJI	Pacitan	1.95	53	P		Pn	22 28 09.9	-0.9
KPJI	Karang Pucung	2.15	342	P		Pn	22 28 14.5	+0.9
CTJI	Waduk Cacaban	2.41	350	P		Pn	22 28 17.7	+0.6
SMRI	Semarang	2.47	20	P		Pn	22 28 18.7	+0.8
SNJI	Sawahan-Nganju	2.66	53	P		Pn	22 28 21.9	+1.2
SJI	Sawahan	2.69	53	P		Pn	22 28 21.9	+0.8
NGJI	Ngawi	2.72	42	P		Pn	22 28 23.8	+2.4
BBJI	Bungbulang	2.73	314	P		Pn	22 28 20.2	-1.3
JAGI	Jajag, Banyuwa	4.58	79	P		Pn	22 28 46.1	-0.9
PLAI	Plampang	8.08	87	P		Pn	22 29 34.5	-0.7
	16nm,1.5s							
DBNI	Kabupaten Domp	8.64	85	P		Pn	22 29 42.7	-0.1

DSN ***25*** *22:28:08.9±1.4, 38.°40N×43.°19E, h10km, mb4.2/12, Ms3.3/5, Error ellipse: s-maj=24.3km s-min=6.6km az=94.0*
NSSP ***25*** *22:28:11.1, 38.°48N×44.°45E, h10km, Ms4.1*
AZER ***25*** *22:28:12.5, 38.°44N×44.°42E, h10km, ml4.3*
ISK ***25*** *22:28:12.9, 38.°46N×44.°32E, h5km, ML4.1/9*
AFAD ***25*** *22:28:12.0, 38.°47N×44.°37E, h8km±7km, MW4.2*
TEH ***25*** *22:28:13.0, 38.°46N×44.°45E, h5km±50km, ML4.1, Presumed earthquake*
IDC ***25*** *22:28:14.6±0.7, 38.°52N×44.°33E, h0km, mb3.9/18, mbtmp3.9/28, ML3.5/8, MS3.5/26, Error ellipse: s-maj=12.1km s-min=9.2km az=139.0*
NEIC ***25*** *22:28:15.7±1.9, 38.°51N±0.°05×44.°25E±0.°06, h10km±1km, mb4.3/37, Error ellipse: s-maj=8.2km s-min=6.7km az=142.0*
MCSM ***25*** *22:28:15.7±0.4, 38.°N±4.°×4.°4E±.°, h9km±3km, mb4.2, mB4.9, Mw(mB)4.2*
TIF ***25*** *22:28:19.4, 38.°62N×43.°96E, h8km±1km*

ISC 25 22:28:13.5±0.6, 38.°46N±0.°01×44.°46E±0.°01, h3km±4km, n317, σ1s94/344, mb4.1/38, MS3.5/18, 17C-4D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.42	299	P		Pg	22 28 21.6	-0.1
OZAP	Van, Ozalp-Mer	0.42	299	Pg		Pg	22 28 21.5	-0.1
TVAN	Van	0.83	275	P		Pg	22 28 28.2	-1.4
TVAN	Van	0.83	275	Pg		Pg	22 28 28.1	-1.4
VMUR	Van-Muradiye	0.88	307	P		Pg	22 28 29.3	-1.1
VMUR	Van-Muradiye	0.88	307	Pg		Pg	22 28 29.2	-1.1
YOVA	Hakkari_Yksek	0.88	189	P		Pg	22 28 29.8	-0.7
YOVA				S		Sn	22 28 43.9	-2.6
YOVA				IAML			22 28 48.0	
	comp=N,2μm,0.7s							
ISHB	Shabestar	0.92	101	Pg		Pg	22 28 30.4	-0.9
IMRD	Marand	1.00	75	Pg		Pb	22 28 33.0	-0.7
ERCV	ERCIS-VAN	1.04	303	Pg		Pg	22 28 32.5	-1.0
ERCV	ERCIS-VAN	1.04	303	P		Pg	22 28 32.6	-1.0
NAX	Nakhchivan	1.07	48	P		Pn	22 28 34.3	-1.3
NAX				S		Sn	22 28 51.2	+0.1
HAKT	HAKKARI	1.08	214	P		Pg	22 28 32.8	-1.4
HAKT				S		Sn	22 28 50.2	-1.2
HAKT				IAML			22 28 54.0	
	comp=E,4μm,0.6s							
HAKT	HAKKARI	1.08	214	P		Pg	22 28 33.6	-0.7
HAKT				S		Sn	22 28 49.2	-2.3
GEVA	Gevas	1.11	263	Pg		Pg	22 28 32.1	-2.9
GEVA	Gevas	1.11	263	P		Pg	22 28 32.0	-2.9
GEVA				S		Sg	22 28 48.3	-1.1
GEVA				IAML			22 28 56.0	
	comp=E,3μm,0.6s							
AKDM	Akdamar-Van	1.17	264	Pg		Pb	22 28 33.9	-2.7
DYDN	Diyadin	1.24	331	P		Pn	22 28 34.8	-3.2
SBZ	Shahbuz	1.26	42	P		Pg	22 28 37.4	-0.3
SBZ				S		Sn	22 28 58.2	+2.4
ORD	Ordubad	1.28	68	P		Pg	22 28 37.9	-0.3
ORD				S		Sg	22 28 56.9	+2.1
HYR	Heyderabad	1.29	13	P		Pg	22 28 38.1	-0.2
HYR				S		Sg	22 28 58.7	+3.6
ITBZ	Tabriz	1.34	99	Pg		Pn	22 28 37.8	-1.6
CUKT	Cukurca	1.39	209	Pn		Pg	22 28 39.3	-0.8
CUKT				Sn		Sg	22 28 59.5	+1.4
CUKT	Cukurca	1.39	209	P		Pg	22 28 39.5	-0.7
CUKT	Cukurca	1.39	209	Pg		Pb	22 28 38.8	-1.4
ADCV	BITLIS_Adilcev	1.41	285	P		Pb	22 28 39.2	-1.4
ADCV				S		Sg	22 28 58.7	0.0
ADCV				IAML			22 29 05.0	
	comp=E,1μm,0.6s							
ADCV	BITLIS_Adilcev	1.41	285	Pg		Pb	22 28 39.1	-1.4
IAZR	Azarshahr	1.43	123	Pg		Pb	22 28 40.1	-0.9
IGDI	IGDIR	1.44	348	P		Pb	22 28 39.7	-1.3
IGDI				S		Sg	22 29 01.2	+1.5
IGDI				IAML			22 29 06.0	
	comp=E,4μm,0.6s							
IGDI	IGDIR	1.44	348	Pg		Pb	22 28 39.7	-1.3
IGDI	IGDIR	1.44	348	P		Pg	22 28 41.0	-0.1
IGDI				S		Sg	22 29 03.9	+4.1
VAYK	Vayk	1.44	31	⇓*e*P		Pb	22 28 40.3	-0.8
VAYK				⇓*e*S		Sg	22 29 01.0	+1.1
ALVK	Alvank	1.55	71	*e*P		Pb	22 28 41.5	-1.4
ALVK				*e*S		Sg	22 29 04.0	+0.6
AGRB	Hanur-Agry	1.60	315	Pn		Pn	22 28 42.0	-0.9
PERV	Siirt/Pervari-	1.60	252	P		Pg	22 28 43.9	-0.3
DORK	Agr/Tutak/Do	1.61	306	P		Pb	22 28 42.2	-1.8
MLAZ	Malazgirt-MUS	1.64	295	Pn		Pb	22 28 43.1	-1.5
KOTA	Agri, Merkez-K	1.66	324	P		Pn	22 28 41.9	-1.8
GNI	Garni	1.70	7	Pg		Pg	22 28 46.0	-0.1
	79nm,0.3s,baz=268,slow=2.4,SNR=211							
GNI				LR		LR	22 29 07.7	
	comp=Z,110nm,18.8s,baz=187,slow=32							
GNI				Lg		Lg	22 29 10.0	
	103nm,0.3s,baz=30,slow=22,SNR=10.0							
GNI	Garni	1.70	7	Pn		Pb	22 28 44.6	-0.9
GNI	Garni	1.70	7	Pn		Pg	22 28 45.2	-0.9
GNI	Garni	1.70	7	⇑*i*P		Pb	22 28 44.8	-0.8
GNI				⇑*i*S		Sg	22 29 07.4	-0.8
GNI	Garni	1.70	7	P		Pb	22 28 45.0	-0.6
GNI	Garni	1.70	7	P		Pb	22 28 44.8	-0.8
GNI				S		Sg	22 29 11.1	+2.9
GNI	Garni	1.70	7	Pg		Pb	22 28 44.7	-0.8
GRS	Goris	1.79	54	⇓*i*P		Pg	22 28 47.0	-0.8
GRS				⇑*i*S		Sg	22 29 12.0	+1.0
EGVZ	Egvard	1.79	64	*e*P		Pb	22 28 46.1	-1.0
EGVZ				*e*S		Sg	22 29 11.9	+0.7
BLIS	Bitlis-Merkez	1.84	269	P		Pb	22 28 47.5	-0.6
KAPZ	Kaputan	1.87	6	*e*P		Pb	22 28 47.4	-1.0
KAPZ				*e*S		Sg	22 29 14.0	+0.4
SIRN	Sırnak	1.89	240	P		Pb	22 28 48.0	-0.6
SIRN				S		Sg	22 29 14.2	+0.1
SIRN				IAML			22 29 18.0	
	comp=N,3μm,0.8s							
SIRN	Sırnak	1.89	240	Pn		Pb	22 28 48.0	-0.6
GURO	Guroymak-BITLI	1.91	273	Pn		Pn	22 28 45.5	-1.6
GURO	Guroymak-BITLI	1.91	273	Pn		Pn	22 28 46.3	-0.8
AMBZ	Amberd	1.93	355	*e*P		Pb	22 28 48.6	-1.0
AMBZ				*e*S		Sg	22 29 16.2	+0.6
AYRK	Ayrk	1.95	31	*e*P		Pb	22 28 49.0	-0.8
AYRK				*e*S		Sg	22 29 16.8	+0.7
MAHB	Mahabad	1.96	149	Pn		Pb	22 28 48.7	-1.3
IHRS	Heris	2.03	93	Pn		Pb	22 28 49.9	-1.3
SRTM	Siirt_Merkez	2.06	258	P		Pg	22 28 51.6	-1.4
SRTM				S		Sg	22 29 18.6	-1.0
EATA	Eleskirt	2.08	313	P		Pb	22 28 49.9	-2.1
DIGO	Kars	2.13	337	P		Pb	22 28 52.7	-0.2
MUSM	Mu-Merkez	2.33	277	P		Pb	22 28 56.0	-0.3
KARS	Kars	2.41	334	Pn		Pn	22 28 54.0	-0.1
KARS	Kars	2.41	334	Pn		Pn	22 28 54.4	-0.3
BOZK	Kars-Merkez-Bo	2.42	332	P		Pb	22 28 55.4	-2.4
QRD	Qoradiz	2.44	65	P		Pb	22 28 55.8	-2.3
QRD				S		Sb	22 29 28.1	-0.5
VRTB	Varto-Mus	2.45	287	P		Pg	22 29 00.9	+0.4
GDB	GEDABAY	2.47	23	P		Pb	22 28 57.0	-1.7
GDB				S		Sb	22 29 29.7	+0.2
IHSH	Hashtrud	2.50	117	Pn		Pb	22 28 56.6	-2.6
HOMI	Horasan	2.54	309	P		Pb	22 28 57.4	-2.5
BTMN	Batman	2.58	258	P		Pb	22 28 57.1	-3.4
SVAN	Silvan-Diyarba	2.59	264	Pn		Pn	22 28 56.2	-0.2
SVAN	Silvan-Diyarba	2.59	264	P		Pn	22 28 56.8	+0.5
SRTK	Saratovka	2.60	358	*e*P		Pb	22 28 58.1	-2.9
SRTK				*e*S		Sb	22 29 32.4	-1.0
GANJ	Ganja	2.61	33	P		Pb	22 28 58.8	-2.3
GANJ				S		Sg	22 29 35.2	-2.3
AGDM	Agdam	2.63	50	P		Pb	22 28 58.9	-2.5
AGDM				S		Sb	22 29 34.0	0.0
MIDV	Mardin/Midyat-	2.64	247	P		Pb	22 28 58.5	-3.1
SENK	Senkaya-Erzuru	2.66	323	Pn		Pn	22 28 57.9	+0.4
QZX	Qazax, Azerbai	2.69	15	P		Pb	22 28 59.9	-2.4
QZX				S		Sb	22 29 35.9	+0.2
BLQ	Beylaqan	2.72	61	P		Pb	22 28 59.5	-3.3
BLQ				S		Sb	22

ASF Jabal al Asfar 8.81 227 Pn **Pn** **22 30 24.6 +2.7**
0.2nm,0.3s,baz=56,slow=11,SNR=4.6
ASF Lg Lg 22 33 01.0
0.3nm,0.3s,baz=58,slow=23,SNR=8.4
ASF LR LR 22 33 51.1
comp=Z,209nm,21.8s,baz=33,slow=38
1.1nm,0.3s
MMAI Mount Meron Ar 9.15 236 Pn **Pn** **22 30 29.0 +2.4**
0.5nm,0.3s,baz=53,slow=17,SNR=1.7
MMAI LR LR 22 34 14.2
comp=Z,393nm,20.9s,baz=51,slow=40
4.0nm,0.8s
EIL Elat 11.79 225 Pn **Pn** **22 31 05.8 +3.2**
baz=31,slow=12,SNR=2.9
EIL Lg Lg 22 34 36.3
0.1nm,0.3s,baz=138,slow=23,SNR=1.8
EIL LR LR 22 36 06.7
comp=Z,384nm,18.6s,baz=46,slow=40
4.5nm,1.0s
NE56 Odesa 12.92 314 P **Pn** **22 31 19.8 +1.8**
BELG Belogornoye 14.11 8 Pn **Pn** **22 31 35.0 +0.9**
0.3nm,0.3s,baz=135,slow=8.3,SNR=3.9
6.3nm,0.7s
HRA Herat 14.88 100 Pn **P** **22 31 47.4 -3.5**
ISR Istrita 14.92 302 P **Pn** **22 31 46.3 +1.0**
20nm,1.7s
RAYN Ar Rayn 14.92 176 Pn **Pn** **22 31 43.1 -2.3**
RAYN Ar Rayn 14.92 176 P **Pn** **22 31 41.2 -4.2**
RAYN Ar Rayn 14.92 176 P **Pn** **22 31 42.0 -3.4**
VRI Vrincioaia 15.07 305 P **P** **22 31 49.0 -3.8**
8.2nm,1.4s
PLOR Plostina 15.12 305 ⇑P **P** **22 31 50.6 -2.8**
SORM Soroca 15.17 315 ⇑P **Pn** **22 31 48.3 -0.3**
SORM Soroca 15.17 315 P **Pn** **22 31 49.2 +0.5**
7.3nm,1.4s
AKTO Aktyubinsk 15.36 34 Pn **Pn** **22 31 51.0 -0.2**
0.2nm,0.3s,baz=221,slow=9.5,SNR=4.9
AKTO LR LR 22 39 04.7
comp=Z,91nm,18.3s,baz=47,slow=42
1.6nm,0.6s
TESR Tescani 15.39 307 ⇑P **P** **22 31 54.6 -1.7**
TESR Tescani 15.39 307 P **P** **22 31 53.1 -3.2**
12nm,1.3s
MLR Muntele Rosu 15.44 303 Pn **Pn** **22 31 52.6 +0.2**
2.6nm,0.8s,baz=128,slow=18
MLR Muntele Rosu 15.44 303 ⇑P **P** **22 31 55.7 -1.3**
MLR Muntele Rosu 15.44 303 Pn **Pn** **22 31 52.2 -0.2**
MLR IAmb IAmb 22 32 28.4
comp=Z,11nm,1.2s
MLR Muntele Rosu 15.44 303 P **P** **22 31 53.7 -3.4**
comp=Z,9.1nm,2.5s
ONER Baraj Valea Uz 15.47 306 ⇑P **P** **22 31 58.0 +0.7**
AB31 Akbulak array 15.49 41 Pn **Pn** **22 31 53.1 +0.2**
ABKAR Akbulak array 15.49 41 Pn **Pn** **22 31 53.2 +0.4**
TURR Turia 15.60 305 ⇑P **P** **22 31 58.3 -0.4**
GIRR Girov 15.67 309 ⇑P **P** **22 32 00.8 +1.4**
DOPR Dopca 15.98 304 ⇑P **P** **22 32 05.4 +2.6**
IDI Anoyia 15.98 265 P **P** **22 32 02.2 -0.8**
IDI IAmb IAmb 22 32 33.8
comp=Z,25nm,1.4s
BANOM Banah 16.00 138 P **P** **22 32 00.3 -3.0**
VOIR 16.02 302 ⇑P **P** **22 32 07.3 +3.9**
VOIR 16.02 302 P **P** **22 32 01.2 -2.2**
comp=Z,16nm,1.2s
GHWR Ruwais 16.13 151 P **P** **22 32 02.7 -2.0**
AK07 Malin Array Si 16.23 323 P **P** **22 32 03.5 -2.0**
AK09 Malin Array Si 16.23 323 P **P** **22 32 04.8 -0.8**
AK10 Malin Array Si 16.24 323 P **P** **22 32 03.6 -2.1**
ARR Arges 16.27 301 ⇓P **P** **22 32 09.5 +3.3**
AKASG Malin Array Be 16.32 323 Pn **Pn** **22 32 02.4 -1.1**
comp=Z,0.6nm,0.3s,baz=133,slow=12,SNR=12
AKASG LR LR 22 39 08.2
comp=Z,192nm,18.9s,baz=140,slow=40
comp=Z,1.5nm,0.7s
AKBB Malin Array Si 16.32 323 **P** **22 32 04.8 -1.7**
AKBB Malin Array Si 16.32 323 P **P** **22 32 05.0 -1.6**
KIEV Kiev 16.32 323 ⇑P **P** **22 32 04.6 -2.0**
KIEV Kiev 16.32 323 **P** **22 32 04.2 -2.3**
KIEV Kiev 16.32 323 P **P** **22 32 05.9 -0.7**
comp=Z,26nm,0.9s
AK14 Malin Array Si 16.32 323 P **P** **22 32 04.8 -1.8**
AK11 Malin Array Si 16.33 323 P **P** **22 32 04.8 -1.9**
MASF Masafi 16.38 139 P **Pn** **22 32 04.5 0.0**
MASF P **Pn** **22 32 04.5 0.0**
MSFE Esma-Masafi 16.39 139 P **P** **22 32 08.7 +1.1**
NAZ Nazwa, Dubai 16.45 142 *i* P **P** **22 32 07.0 -1.1**
SNR=5.8
NAZ Nazwa, Dubai 16.45 142 P **P** **22 32 07.9 -0.3**
KMPD K-Podol'skiy 16.47 314 P **Pn** **22 32 06.9 +1.4**
KMPD P **P** **22 32 06.3 -2.0**
MDH Madha 16.51 139 *i* P **P** **22 32 08.8 0.0**
SNR=8.2
MDH Madha 16.51 139 P **P** **22 32 10.2 +1.4**
LUBAR Lubar, Ukraine 16.53 319 P **P** **22 32 06.7 -2.3**
ASUD Al Ashush, Dub 16.59 143 P **P** **22 32 08.3 -1.4**
ASUD Al Ashush, Dub 16.59 143 P **P** **22 32 08.6 -1.2**
BURAR Bucovina Array 16.75 309 ⇑P **P** **22 32 13.6 +2.1**
BURAR Bucovina Array 16.75 309 **P** **22 32 11.7 +0.2**
UOSS Minazif 16.75 140 Pn **P** **22 32 11.3 -0.2**
UOSS IAmb IAmb 22 32 15.4
comp=Z,16nm,0.9s
UOSS Minazif 16.75 140 *i* P **P** **22 32 12.3 +0.7**
SNR=7.1
BUR08 Bucovina Ar. S 16.77 309 **P** **22 32 10.9 -0.8**
HATD Hatta, Dubai 16.82 141 *i* P **P** **22 32 13.1 +0.9**
SNR=7.2
HATD Hatta, Dubai 16.82 141 P **P** **22 32 12.8 +0.5**
SNR=5.4
HORU Horodok 16.83 315 P **P** **22 32 12.0 -0.3**
MI30 MI30,Zelenitsa 16.84 322 P **P** **22 32 13.0 +0.7**
comp=Z,17nm,0.8s
ASHO Ashiyiah 16.90 141 *i* P **P** **22 32 12.4 -0.8**
SNR=14
ASHO Ashiyiah 16.90 141 P **P** **22 32 12.1 -1.1**
SNR=5.8
ASHO P **P** **22 32 12.1 -1.1**
SNR=5.8
JASK Jask - Hormozg 16.90 134 P **P** **22 32 12.8 -0.4**
KSV Kosov 17.15 311 P **P** **22 32 16.6 +0.7**
MZR Muzera 17.23 151 *i* P **P** **22 32 15.5 -1.4**
SNR=6.4
MZR Muzera 17.23 151 P **P** **22 32 15.8 -1.1**
MZR P **P** **22 32 15.8 -1.1**
ALNE Al Ain 17.28 143 P **P** **22 32 16.0 -1.4**
OBN Obninsk 17.49 345 P **P** **22 32 17.9 -1.6**
comp=Z,2.1nm,0.3s,baz=162,slow=19,SNR=4.0
OBN LR LR 22 39 55.2
comp=Z,158nm,18.2s,baz=181,slow=40
comp=Z,10.0nm,0.4s
OBN Obninsk 17.49 345 **Pn** **22 32 17.1 -1.2**
RAKU Rahkiv 17.56 309 P **P** **22 32 22.0 +1.6**
SOHO SOHO 17.59 141 *i* P **P** **22 32 21.5 +0.7**
SNR=5.8
SOHO SOHO 17.59 141 P **P** **22 32 19.1 -1.8**
STNU Starunia 17.67 312 P **P** **22 32 22.8 +1.2**
MARR Marisel-Cluj 17.70 304 ⇑P **P** **22 32 24.5 +2.5**
DRGR 18.00 305 ⇑P **P** **22 32 27.4 +2.1**
MEZ Mezhgor'ye 18.17 310 P **P** **22 32 27.7 +0.6**
UMZA Um Al Zommool 18.17 147 P **P** **22 32 27.0 -0.3**
MORS Morshin 18.22 312 P **P** **22 32 29.1 +1.4**
KORU Korolevo 18.25 309 P **P** **22 32 28.9 +1.0**
TRSU Trosnyk 18.33 309 P **P** **22 32 31.7 +2.9**
RNPP8 Varash 18.36 321 P **P** **22 32 30.7 +1.6**
RNPP9 Sopachiv 18.39 321 P **P** **22 32 31.1 +1.7**
BRIU Brid 18.39 309 P **P** **22 32 30.6 +1.1**
RNPP1 Kostyukhnivka 18.41 320 P **Pn** **22 32 31.2 +1.6**
HOQ Hoqain 18.44 140 P **Pn** **22 32 34.2 +3.9**
HOQ P **Pn** **22 32 34.2 +3.9**
BERU Beregovo 18.57 309 P **Pn** **22 32 32.7 +1.0**
SHIU Shidnytsya 18.57 312 P **Pn** **22 32 33.2 +1.5**
MUKU Mukachevo 18.64 309 P **Pn** **22 32 33.7 +1.2**
SHAA Shahritus 18.66 85 **Pn** **22 32 35.0 +2.1**
SHAA IAmb IAmb 22 32 38.3
comp=Z,19nm,0.9s
HOLU Holmets 18.85 309 P **Pn** **22 32 36.4 +1.3**
BIDO Bidbid 18.91 138 P **Pn** **22 32 39.0 +3.0**
SNR=8.3
BSY Bisya 19.09 142 P **Pn** **22 32 38.8 +0.7**
KWP Kalwaria Pacla 19.14 313 P **Pn** **22 32 38.9 +0.3**
comp=Z,16nm,1.8s
SMDO Samad 19.25 139 P **Pn** **22 32 41.7 +1.6**
SNR=12
SMDO P **Pn** **22 32 41.7 +1.6**
SNR=12
CHGR Chuyangaron 19.30 82 P **Pn** **22 32 41.3 +0.6**
CHGR IAmb IAmb 22 32 49.1
comp=Z,13nm,0.9s
WSAR Wadi Sarin 19.41 137 P **Pn** **22 32 43.4 +1.5**
MNK Minsk 19.61 330 *i* P **Pn** **22 32 43.2 -0.9**
comp=E,15nm,1.2s
MNK *i* P **Pn** **22 32 43.2 -0.9**
comp=N,19nm,1.1s
MNK *i* P **Pn** **22 32 43.2 -0.9**
comp=Z,22nm,1.2s,baz=137
MNK *i* PP **PnPn** **22 32 57.6 +0.2**
MNK *i* PPP PPP 22 33 05.2
MNK *i* S **S** **22 36 22.4 -2.2**
MNK *i* SS **SnSn** **22 36 43.6 +4.9**
MNK *i* LR LR 22 39 32.5
MNK *i* LRM MLR 22 41 31.0
comp=Z,98nm,15.0s
MNK *i* LRM MLR 22 42 08.0
comp=N,95nm,15.1s
MNK *i* LRM MLR 22 42 14.6
comp=E,155nm,20.8s
JMDO Jabal Madar 19.85 140 P **P** **22 32 44.5 -1.1**
WBK Wadi Bani Khal 20.10 138 P Pn 22 32 49.0 -1.2
KBL Kabul 20.12 94 P Pn 22 32 51.6 +0.9
KBL Kabul 20.12 94 P Pn 22 32 54.2 +3.6
SNR=6.1
GAR Garm 20.16 80 P Pn 22 32 51.3 +0.3
PSZ Piszkesteto 20.18 306 P Pn 22 32 48.9 -2.2
PSZ IAmb IAmb 22 33 04.7
comp=Z,14nm,1.3s
ARTI Arti 20.19 23 P Pn 22 32 49.5 -1.4
comp=Z,4.7nm,0.7s,baz=222,slow=7.5,SNR=9.6
ARTI LR LR 22 42 19.5
comp=Z,82nm,19.5s,baz=210,slow=42
comp=Z,4.7nm,0.7s
ARTI Arti 20.19 23 P Pn 22 32 49.8 -1.2
ARTI IAmb IAmb 22 32 56.9
comp=Z,10nm,0.6s
KK31 Karatay Array 20.23 68 P Pn 22 32 50.7 -0.9
KKAR Karatay Array 20.23 68 P Pn 22 32 50.9 -0.7
NACGM Naroch 20.34 330 *e*P Pn 22 32 51.9 -0.8
KIRV Kirov 20.39 7 P Pn 22 32 52.9 -0.4
comp=Z,9.6nm,0.7s,baz=184,slow=3.9,SNR=6.0
KIRV LR LR 22 41 47.0
comp=Z,98nm,18.6s,baz=199,slow=40
comp=Z,9.6nm,0.7s
BTK Batken 20.45 77 P Pn 22 32 54.1 -0.1
BTK IAmb IAmb 22 32 57.1
comp=Z,16nm,1.0s
NIE Niedzica 20.47 310 P Pn 22 32 54.3 -0.1
comp=Z,6.1nm,1.1s
MORH Mrgy, Hungar 20.54 300 P **P** **22 32 52.4 -0.6**
comp=Z,5.0nm,1.1s
JLN Jalan Bani Buh 20.71 137 P Pn 22 32 55.8 -1.5
SNR=5.2
MHTO MHTO 20.95 142 P Pn 22 32 58.7 -1.4
MHTO P Pn 22 32 58.7 -1.4
OJC Ojcow 21.09 312 P **P** **22 33 00.2 +1.2**
comp=Z,5.1nm,1.4s
DRK Karamyk 21.25 79 P **P** **22 33 02.4 +1.3**
DRK IAmb IAmb 22 33 09.0
comp=Z,16nm,1.0s
DOK Doka 21.49 154 P **P** **22 33 03.3 -0.2**
DOK P **P** **22 33 03.3 -0.2**
MPLH Magyarpolny 21.50 303 P **P** **22 33 04.2 +0.8**
comp=Z,2μmcomp=Z,24nm,1.1s
TIP Timpagrande 21.57 281 P **P** **22 33 03.9 -0.4**
comp=Z,12nm,1.9s
WHFO Wadi Hawf 22.02 156 P **P** **22 33 09.2 0.0**
SNR=6.8
WHFO P **P** **22 33 09.2 0.0**
SNR=6.8
ARSB Arslanbob 22.03 74 P **P** **22 33 11.1 +1.8**
ABTO Aybut 22.41 157 P **P** **22 33 13.5 +0.2**
RONA Rosalia, Austr 22.45 303 *e*pP pP 22 33 18.8 +3.7
comp=Z,1.2nm,0.5s
SHAO Shalim 22.58 151 P **P** **22 33 16.4 +1.3**
EKS2 Erkin-Say 22.61 70 P **P** **22 33 18.1 +2.6**
SNR=8.8
DMTO DMTO 22.61 153 P **P** **22 33 14.8 -0.7**
CONA Conrad Observa 22.79 304 *e*pP pP 22 33 21.3 +2.5
comp=Z,0.9nm,0.5s
BORK Borovoye 23.03 42 P **P** **22 33 22.1 +2.5**
BORK IAmb IAmb 22 33 36.6
comp=Z,5.9nm,0.8s
BVAR Borovoye Array 23.05 42 P **P** **22 33 21.2 +1.4**
comp=Z,1.9nm,0.8s,baz=236,slow=10.0,SNR=15
BVAR LR LR 22 43 13.6
comp=Z,50nm,19.9s,baz=240,slow=39
comp=Z,1.9nm,0.8s
AAK Ala-Archa 23.14 70 P **P** **22 33 25.1 +4.1**
SNR=10.0
AAK Ala-Archa 23.14 70 LR LR 22 43 52.2
comp=Z,78nm,20.6s,baz=272,slow=40
AAK Ala-Archa 23.14 70 P **P** **22 33 21.9 +0.9**
AAK IAmb IAmb 22 33 31.0
comp=Z,15nm,1.1s
AAK Ala-Archa 23.14 70 *i* P **P** **22 33 23.3 +2.3**
SNR=18
AAK Ala-Archa 23.14 70 P **P** **22 33 23.5 +2.4**
FRU1 Bishkek 23.24 70 P **P** **22 33 23.6 +1.6**
CHMS Chumysh 23.33 69 P **P** **22 33 21.8 -1.0**
SNR=8.3
KBK Karagaybulak 23.47 70 P **P** **22 33 29.1 +4.7**
SNR=9.3
NIL Nilore 23.71 93 P **P** **22 33 30.2 +3.5**
TKM2 Tokmak 2 23.95 69 P **P** **22 33 31.4 +2.3**
SNR=6.1
KSH2 Kashi 24.19 79 P **P** **22 33 34.3 +2.9**
KSH2 pP sP 22 33 37.0 +3.3
KSH2 sP pP 22 33 41.8 +8.8
KSH2 pmax pmax
comp=Z,2.0nm,1.0s
BOOM Boomskoye usch 24.20 70 P **P** **22 33 33.5 +2.0**
BOOM IAmb IAmb 22 33 46.0
comp=Z,7.3nm,0.8s
KBA Koelnbreinsper 24.29 301 *i* pP pP 22 33 35.6 +1.8
comp=Z,2.7nm,0.9s
NRN Naryn 24.29 73 P **P** **22 33 35.3 +2.8**
NRN IAmb IAmb 22 33 40.6
comp=Z,9.5nm,0.8s
GERES GERESS Array B 24.40 305 P **P** **22 33 35.0 +1.8**
comp=Z,1.2nm,0.9s,baz=90,slow=12,SNR=4.3
comp=Z,1.2nm,0.9s
ULHL Ulahol 24.43 71 P **P** **22 33 36.9 +3.3**
SNR=9.8
KDJ Kajisay 25.14 71 P **P** **22 33 42.5 +2.6**
WTTA Wattenberg 25.46 301 *e*P **P** **22 33 42.3 -0.6**
comp=Z,1.7nm,0.5s
CLL Collm 25.51 310 *i* P **P** **22 33 47.5 +4.5**
comp=Z,5.0nm,0.8s
TARG Taragay, Kyrgy 25.62 72 P **P** **22 33 46.9 +2.3**
TARG IAmb IAmb 22 34 21.1
comp=Z,5.1nm,1.1s
FINES FINESS Array B 25.68 340 P **P** **22 33 45.1 +0.6**
comp=Z,4.1nm,0.8s,baz=146,slow=12,SNR=6.3
FINES LR LR 22 44 20.8
comp=Z,101nm,21.6s,baz=154,slow=38
comp=Z,4.1nm,0.8s
FINES FINESS Array B 25.68 340 P **P** **22 33 44.6 +0.1**
SQTA Sankt Quirin 25.75 301 *e*pP pP 22 33 48.5 +1.5
comp=Z,0.7nm,0.3s
MOTA Moosalm 25.84 301 *e*pP pP 22 33 51.5 +3.6
comp=Z,3.3nm,0.7s
WUS Wushi 26.73 73 P **P** **22 33 56.4 +2.1**
KURBB Kurchatov Arra 26.91 52 P **P** **22 33 57.7 +2.0**
comp=Z,2.5nm,0.6s,baz=262,slow=9.0,SNR=18
comp=Z,2.5nm,0.6s
KURK Kurchatov 26.98 52 P **P** **22 33 57.8 +1.4**
KURK IAmb IAmb 22 34 01.9
comp=Z,3.7nm,0.8s
KURK Kurchatov 26.98 52 P **P** **22 33 58.5 +2.2**
KEST Kesra 28.04 275 LR LR 22 47 14.4
comp=Z,63nm,18.7s,baz=13,slow=41
MAKZ Makanchi 28.61 61 P **P** **22 34 12.6 +1.6**
MAKZ IAmb IAmb 22 34 14.7
comp=Z,4.5nm,1.1s
MKAR Makanchi Array 28.82 61 P **P** **22 34 15.6 +2.7**
comp=Z,3.9nm,0.8s,baz=266,slow=6.6,SNR=52
MKAR LR LR 22 47 43.6
comp=Z,73nm,19.5s,baz=256,slow=40
comp=Z,3.9nm,0.8s
MKAR Makanchi Array 28.82 61 P **P** **22 34 14.9 +2.0**
HFS Hagfors 29.09 328 P **P** **22 34 17.0 +2.0**
comp=Z,6.9nm,1.0s,baz=118,slow=7.9,SNR=2.7
HFS LR LR 22 47 22.1
comp=Z,145nm,19.0s,baz=142,slow=40
comp=Z,6.9nm,1.0s
NOA NORSAR Array B 30.61 328 P **P** **22 34 30.5 +2.0**
comp=Z,0.5nm,0.7s,baz=116,slow=9.4,SNR=1.4
NOA LR LR 22 48 18.6
comp=Z,99nm,18.1s,baz=240,slow=40
comp=Z,0.5nm,0.7s
ZAA0 Zalesovo Array 31.43 47 P **P** **22 34 36.9 +1.1**
ZAA0 IAmb IAmb 22 34 41.5
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 31.43 47 P **P** **22 34 37.4 +1.5**
comp=Z,1.2nm,0.5s,baz=255,slow=8.9,SNR=6.9
ZALV LR LR 22 49 23.9
comp=Z,51nm,18.8s,baz=265,slow=40
comp=Z,1.2nm,0.5s
WMQ Urumqi 32.71 67 *e*P **P** **22 34 50.5 +3.2**
ARCES ARCESS Array B 32.76 348 LR LR 22 48 38.0
comp=Z,129nm,18.6s,baz=107,slow=37
EKA Eskdalemuir Ar 35.84 314 P **P** **22 35 14.1 0.0**
comp=Z,3.2nm,0.7s,baz=99,slow=9.4,SNR=7.0
comp=Z,3.2nm,0.7s
EVN Everest 36.67 94 P **P** **22 35 24.5 +2.2**
EVN IAmb IAmb 22 35 43.0
comp=Z,5.5nm,0.8s
ESDC Sonseca Array 37.26 287 P **P** **22 35 27.2 +0.6**
comp=Z,1.0nm,0.8s,baz=64,slow=10,SNR=4.9
comp=Z,1.0nm,0.8s
MBAR Mbarara 40.88 201 LR LR 22 54 55.6
comp=Z,72nm,19.2s,baz=174,slow=39
BRDH Bariadhala 43.09 97 LR LR 22 57 53.4
comp=Z,89nm,18.1s,baz=160,slow=41
SONM Songino Array 45.04 57 P **P** **22 36 32.7 +2.1**
comp=Z,0.5nm,0.6s,baz=276,slow=5.7,SNR=3.8
SONM LR LR 22 57 36.8
comp=Z,111nm,18.8s,baz=222,slow=39
comp=Z,0.5nm,0.6s
SONM Songino Array 45.04 57 P **P** **22 36 31.8 +1.2**
TORD Torodi Ar. Bea 45.46 248 P **P** **22 36 34.4 +0.3**
comp=Z,1.1nm,1.1s,baz=54,slow=7.4,SNR=3.4
comp=Z,1.1nm,1.1s
ULN Ulaanbaatar 45.47 57 P **P** **22 36 36.1 +2.1**
BORG Borgarnes 45.76 327 LR LR 22 58 47.1
comp=Z,46nm,18.0s,baz=86,slow=40
PZH PanZhiHua 49.06 86 P P 22 37 06.0 +3.7
HHC Hu-ho-hao-te 50.56 65 *e*P **P** **22 37 15.5 +2.1**
HHC pmax pmax
comp=Z,6.0nm,0.7s
CHTO Chiang Mai 50.91 97 P **P** **22 37 17.2 +1.0**
CHTO IAmb IAmb 22 37 21.8
comp=Z,5.6nm,1.2s
CM31 Chiang Mai Arr 51.11 97 P **P** **22 37 19.4 +1.7**
CMAR Chiang Mai Arr 51.11 97 P **P** **22 37 18.6 +0.9**
comp=Z,2.2nm,0.8s,baz=302,slow=7.5,SNR=12
comp=Z,2.2nm,0.8s
CMAR Chiang Mai Arr 51.11 97 P **P** **22 37 19.2 +1.5**
SFJD Kangerlussuaq 57.16 332 LR LR 23 02 45.9
comp=Z,62nm,18.2s,baz=18,slow=36
KLR Kul'dur 60.52 49 LR LR 23 06 11.7
comp=Z,43nm,18.1s,baz=304,slow=38
KSRS Korea Array 63.50 62 P **P** **22 38 47.8 +2.8**
comp=Z,1.8nm,0.7s,baz=284,slow=6.3,SNR=4.8
comp=Z,1.8nm,0.7s
MA2 Magadan 65.10 33 LR LR 23 09 59.5
comp=Z,62nm,18.0s,baz=234,slow=38
ILAR Eielson Array 76.72 5 P **P** **22 40 06.2 +0.5**
comp=Z,0.3nm,0.9s,baz=335,slow=4.0,SNR=2.7
comp=Z,0.3nm,0.9s
ILAR Eielson Array 76.72 5 P **P** **22 40 06.3 +0.7**
YKA Yellowknife Ar 77.99 350 P **P** **22 40 13.8 +1.0**
comp=Z,0.2nm,0.6s,baz=5.8,slow=7.0,SNR=5.8
comp=Z,0.2nm,0.6s
YKA Yellowknife Ar 77.99 350 P **P** **22 40 12.4 -0.3**

IDC ***25*** *22:43:51.1±5.3,35.°04S×179.°01W, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=248.2km s-min=58.6km az=165.0*
WEL ***25*** *22:44:02.9±1.0,36.°S±11.°×18.°0W±1.°3, h195km±17km, M3.6/7, ML3.4/6, MLv3.6/7, Error ellipse: s-maj=18.6km s-min=12.1km az=119.2*

ISC 25 22:43:58.9±1.9,35.°60S±0.°10×179.°3W±0.°2, h41km, n19, σ0s84/24, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.77**	**224**	P	**Pn**	**22 44 39.9**	**-0.7**
MXZ				S	**Sn**	**22 45 12.3**	**-0.6**
WMGZ	**Waiomatatini S**	**2.90**	**219**	P	**Pn**	**22 44 42.0**	**-0.5**
WMGZ				S	**Sn**	**22 45 17.3**	**+1.3**
HAZ	**Te Kaha**	**3.20**	**227**	P	**Pn**	**22 44 46.3**	**-0.4**
HAZ				S	**Sn**	**22 45 25.6**	**+2.0**
TWGZ	**Tauwhareparae**	**3.39**	**220**	P	**Pn**	**22 44 48.6**	**-0.7**
TWGZ				S	**Sn**	**22 45 29.0**	**+0.7**
RUGZ	**Raukumara Rang**	**3.41**	**225**	P	**Pn**	**22 44 49.5**	**-0.1**
CNGZ	**Carnagh Statio**	**3.52**	**214**	P	**Pn**	**22 44 51.2**	**+0.2**
MWZ	**Matawai**	**3.75**	**222**	P	**Pn**	**22 44 53.6**	**-0.7**
MWZ				S	**Sn**	**22 45 37.0**	**-0.1**
RAGZ	**Rawiri**	**3.92**	**222**	P	**Pn**	**22 44 56.4**	**-0.3**
MYRZ	**Mayor Island**	**3.99**	**244**	P	**Pn**	**22 44 57.4**	**-0.2**
SNGZ	**Shannon Statio**	**4.17**	**220**	P	**Pn**	**22 44 59.5**	**-0.6**
SNGZ				S	**Sn**	**22 45 47.7**	**0.0**
MHGZ	**Mahia Peninsul**	**4.20**	**212**	P	**Pn**	**22 45 00.3**	**-0.2**
TOZ	**Tahuroa Road**	**4.71**	**242**	P	**Pn**	**22 45 07.4**	**-0.1**
MKAZ	**Moumakai**	**4.74**	**250**	P	**Pn**	**22 45 08.1**	**+0.2**
NGZ	**Ngauruhoe**	**5.43**	**227**	P	**Pn**	**22 45 16.2**	**-1.2**
OUZ	**Omahuta**	**5.84**	**272**	P	**Pn**	**22 45 22.7**	**-0.3**
GLKZ	**Green Lake**	**6.42**	**11**	P	Pn	22 45 45.7	+15
ASAR	**Alice Springs**	**42.05**	**273**	P	**P**	**22 51 45.7**	**-1.1**
	0.5nm,0.6s,baz=115,slow=7.9,SNR=4.5						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**43.51**	**278**	P	**P**	**22 51 57.9**	**-0.7**
	1.9nm,0.5s,baz=120,slow=7.7,SNR=19						
	1.9nm,0.5s						
FINES	**FINESS Array B**	**149.56**	**336**	PKPbc	**PKPdf**	**23 03 40.0**	**+1.7**
	2.6nm,0.9s,baz=357,slow=2.8,SNR=5.8						

BJI ***25*** *23:03:33.2,37.°70N×38.°58E, h10km, mB5.4/30, mb4.7/71, Ms4.9/48, Ms7 4.8/47*
ISK ***25*** *23:03:35.6,38.°27N×38.°78E, h5km, ML5.1/37*
TIF ***25*** *23:03:35.1,38.°32N×38.°79E, h10km±1km*
MOS ***25*** *23:03:36.1±1.1,38.°21N×38.°79E, h11km, mb5.1/46, MS4.3/14, Error ellipse: s-maj=3.9km s-min=3.0km az=98.8*
NAO ***25*** *23:03:36.5,38.°33N×38.°77E, h10km, MB4.8*
IDC ***25*** *23:03:36.1±0.4,38.°33N×38.°70E, h0km, mb4.6/32, mbtmp4.5/46, ML4.2/13, MS4.3/81, Error ellipse: s-maj=9.2km s-min=6.6km az=161.0*
AFAD ***25*** *23:03:36.2,38.°33N×38.°77E, h14km±3km, MW4.9*
CFUSG ***25*** *23:03:37.7,38.°99N×40.°97E, h10km, MD3.7/6, MSH3.4/6*
GII ***25*** *23:03:37.2±0.0,38.°397N±0.°002×38.°746E±0.°001, h0km, Mws5.1, confirmed*
NEIC ***25*** *23:03:37.8,38.°35N×38.°80E, h10km*
NEIC ***25*** *23:03:37.8±1.7,38.°35N±0.°04×38.°80E±0.°05, h10km±1km, mb5.0/140, Mwr4.9/22, Mww5.0/11, Error ellipse: s-maj=7.6km s-min=5.6km az=53.0, Moment Tensor Solution. Moment tensor: Scale 1016Nm; Mrr=1.02; Mθθ=0.57; Mφφ 1.59; Mrθ=0.63; Mθφ 1.07; Mφr=2.69; Fault plane solution: Mo3.27000×1016 NP1:φ238.60000°, δ26.99000°, λ=-23.65000°. NP2:φ349.92000°, δ79.51000°, λ=-115.01000°. Principal axes: T 3.3608, Plg30.0000°, Azm100.0000°; N -0.1847, Plg25.0000°, Azm355.0000°; P -3.1762, Plg49.0000°, Azm233.0000°;*
GCMT ***25*** *23:03:38.8±0.2,38.°28N±0.°01×38.°71E±0.°01, h20km, MW5.0/116, Moment Tensor Solution. s42,c51; s116,c185; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=1.94±.12; Mθθ=0.61±.08; Mφφ 2.55±.08; Mrθ 1.98±.19; Mθφ 1.55±.05; Mφr=2.33±.16; Best double couple: Mo4.07200×1016 NP1:φ232.00000°, δ40.00000°, λ=-29.00000°. NP2:φ345.00000°, δ72.00000°, λ=-127.00000°. Principal axes: T 3.6660, Plg19.0000°, Azm101.0000°; N 0.8070, Plg35.0000°, Azm358.0000°; P -4.4780, Plg49.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
GFZ ***25*** *23:03:38.8,38.°27N×38.°84E, h10km, MW4.9, Moment Tensor Solution. s29 Moment tensor: Mrr=1.47; Mθθ=0.35; Mφφ 1.82; Mrθ=1.39; Mθφ 1.01; Mφr=1.63; Fault plane solution: NP1:φ230.00000°, δ39.00000°,*

λ-30.00000°. NP2:φ₀345.00000°,δ71.00000°,
λ-124.00000°. Principal axes: T 2.5600, Plg19.0000°, Azm100.0000°; N 0.5900, Plg33.0000°, Azm358.0000°; P -3.1500, Plg51.0000°, Azm215.0000°;
DSN **25** 23:03:38.7±1.3,38˚.18N×38˚.84E,h10km,mb5.0/21 Error ellipse: s-maj=21.7km s-min=5.8km az=94.0
MED_RC **25** 23:03:38.0±0.5,38˚.27N×38˚.89E,h20km,MW5.0/56, Moment Tensor Solution.Mantle waves: s56,c66; Duration: 1s3 Moment tensor: Scale 10¹⁶Nm; Mrr-1.78±.17; Mθθ-0.75±.14; Mφφ2.53±.14; Mrθ1.05±.18; Mθφ1.90±.09; Mφr-2.56±.17; Best double couple: M₀4.04000×10¹⁶ NP1:φ₀239.00000°,δ40.00000°, λ-27.00000°. NP2:φ₀351.00000°,δ73.00000°, λ-127.00000°. Principal axes: T 4.0900, Plg20.0000°, Azm107.0000°; N -0.1100, Plg35.0000°, Azm3.0000°; P -3.9900, Plg48.0000°, Azm221.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
MCSM **25** 23:03:38.2±0.5,38˚.N×3˚.3˚E±˚,h12km±3km,mb4.8, mB5.2,MLv5.0,Mw(mB)4.6
BGR **25** 23:03:42.0,38˚.56N×39˚.11E,h33km,mb5.0,Ms4.0
ISC 25 23:03:38.1±0.5,**38˚.31N**±0˚.02×**38˚.78E**±0˚.02,**h10**km±3km, **n931**,σ1**s48**/947,**mb4.9**/183,**MS4.3**/97,**84C-15D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MDYL	**Doganyol-Malat**	**0.20**	**88**	Pg	**Pg**		**23 03 40.7**	**-1.7**
MDYL				Sg	**Sg**		**23 03 43.9**	**-1.4**
ELZG	**Elazig**	**0.25**	**40**	P	**Pg**		**23 03 41.6**	**-1.7**
ELZG				S	**Sg**		**23 03 45.0**	**-1.8**
ESGZ	**Sivrice-Elazig**	**0.25**	**61**	Pg	**Pg**		**23 03 41.6**	**-1.7**
ESGZ				Sg	**Sg**		**23 03 45.5**	**-1.4**
MAYA	**Malatya/Merkez**	**0.28**	**274**	P	**Pg**		**23 03 42.0**	**-1.8**
MAYA				S	**Sg**		**23 03 46.5**	**-1.1**
CNGT	**ngs**	**0.42**	**103**	P	**Pg**		**23 03 44.7**	**-1.7**
CNGT				S	**Sg**		**23 03 50.5**	**-1.4**
CNGT				IAML			23 03 54.0	
	comp=N,7μm,0.4s							
SVRC	**Sivrice-ELAZID**	**0.42**	**80**	Pg	**Pg**		**23 03 44.2**	**-2.2**
SVRC				Sg	**Sg**		**23 03 50.9**	**-1.1**
NARI	**Adyaman-Kaht**	**0.42**	**182**	P	**Pg**		**23 03 45.8**	**-0.7**
ESIJ	**Sivrice-Elazig**	**0.44**	**71**	Pg	**Pg**		**23 03 44.9**	**-1.9**
ESIJ				Sg	**Sg**		**23 03 51.8**	**-0.8**
ELZ	**Elazig**	**0.51**	**41**	P	**Pg**		**23 03 46.2**	**-1.8**
ELZ				S	**Sg**		**23 03 53.6**	**-1.2**
ELZ				IAML			23 03 54.0	
	comp=E,17μm,0.5s							
ELZ				IAML			23 03 54.0	
	comp=N,17μm,0.5s							
KAHTU	**Kahta**	**0.52**	**195**	P	**Pg**		**23 03 48.4**	**+0.2**
AZEY	**Adyaman-Merk**	**0.65**	**220**	P	**Pg**		**23 03 50.1**	**-0.6**
AZEY				S	**Sg**		**23 03 59.2**	**0.0**
AZEY				IAML			23 04 01.0	
	comp=N,5μm,0.4s							
AKCD	**Akcadag**	**0.68**	**269**	P	**Pg**		**23 03 49.1**	**-2.1**
AKCD				S	**Sg**		**23 03 58.7**	**-1.3**
AKCD				IAML			23 04 02.0	
	comp=N,17μm,0.4s							
MDNT	**Maden**	**0.71**	**83**	P	**Pg**		**23 03 50.3**	**-1.7**
MDNT				S	**Sg**		**23 04 00.3**	**-1.0**
MDNT				IAML			23 04 01.0	
	comp=N,5μm,0.6s							
HANM	**anlurfa/Hi**	**0.73**	**174**	P	**Pg**		**23 03 51.0**	**-1.2**
HANM				S	**Sg**		**23 04 01.6**	**-0.2**
HANM				IAML			23 04 02.0	
	comp=N,2μm,1.0s							
MCKZ	**Bingol**	**0.82**	**11**	P	**Pg**		**23 03 51.3**	**-2.8**
MCKZ				S	**Sg**		**23 04 02.7**	**-2.1**
MCKZ				IAML			23 04 04.0	
	comp=N,5μm,0.3s							
MCKZ				IAML			23 04 04.0	
	comp=E,6μm,0.3s							
ARPR	**Arapgir-MALATY**	**0.86**	**336**	Pg	**Pg**		**23 03 52.1**	**-2.6**
ARPR				Sg	**Sg**		**23 04 04.2**	**-1.6**
ARPR	**Arapgir-MALATY**	**0.86**	**336**	Pg	**Pg**		**23 03 52.4**	**-2.3**
ARPR				Sg	**Sg**		**23 04 06.1**	**+0.2**
HEKM	**Malatya_Hekimh**	**0.86**	**312**	P	**Pg**		**23 03 52.6**	**-2.1**
URFA	**Urfa**	**0.87**	**178**	Pg	**Pg**		**23 03 50.2**	**-4.6**
URFA				Sg	**Sg**		**23 04 03.6**	**-2.5**
KOVA	**Elazig, Kovanc**	**0.90**	**64**	P	**Pg**		**23 03 53.0**	**-2.5**
ATAB	**Bozova**	**0.92**	**205**	P	**Pb**		**23 03 55.9**	**-0.3**
TNCL	**Tunceli-Merkez**	**1.00**	**36**	P	**Pg**		**23 03 55.0**	**-2.5**
TNCL				S	**Sg**		**23 04 08.9**	**-1.6**
TNCL				IAML			23 04 12.0	
	comp=N,8μm,0.6s							
AKCA	**Adyaman/G¶ll**	**1.00**	**240**	P	**Pg**		**23 03 56.4**	**-1.0**
DIYA	**Diyarbakir**	**1.12**	**110**	P	**Pb**		**23 03 58.5**	**-1.2**
DIYA				S	**Sg**		**23 04 13.7**	**-0.7**
DIYA				IAML			23 04 16.0	
	comp=N,1μm,0.3s							
DYBB	**Diyarbakir**	**1.13**	**108**	Pn	**Pb**		**23 03 57.8**	**-2.0**
SANL	**SANLIURFA_Merk**	**1.15**	**172**	P	**Pb**		**23 03 59.1**	**-1.0**
SANL				S	**Sg**		**23 04 14.7**	**-0.4**
SANL				IAML			23 04 17.0	
	comp=N,9μm,0.6s							
ILIC	**ilic-Erzincan**	**1.15**	**352**	Pn	**Pb**		**23 03 57.9**	**-2.4**
MDIV		**1.16**	**331**	P	**Pb**		**23 03 59.5**	**-1.0**
MDIV				S	**Sb**		**23 04 14.3**	**-1.3**
MDIV				IAML			23 04 16.0	
	comp=N,1μm,0.8s							
MIMR	**Divri**	**1.16**	**331**	P	Pn		23 04 07.3	+6.7
ELBS	**KAHRAMANMARAS**	**1.30**	**271**	P	**Pn**		**23 04 00.8**	**-1.6**
MAYK		**1.31**	**71**	P	**Pn**		**23 04 00.7**	**-1.9**
GZT	**Gaziantep**	**1.35**	**226**	P	**Pn**		**23 04 01.9**	**-1.3**
GZT				S	**Sg**		**23 04 22.0**	**+0.3**
GZT				IAML			23 04 24.0	
	comp=N,6μm,0.7s							
SURC	**SANLIURFA_SURC**	**1.43**	**185**	P	**Pb**		**23 04 04.5**	**-0.4**
ERZN	**Erzincan**	**1.47**	**30**	Pn	**Pn**		**23 04 03.8**	**-1.1**
NZIP	**Nizip/Gaziante**	**1.54**	**215**	P	**Pn**		**23 04 04.7**	**-1.0**
EUZM	**Uzumlu**	**1.57**	**27**	P	**Pn**		**23 04 05.6**	**-0.6**
KHMN	**Narli-Kahraman**	**1.58**	**235**	Pn	**Pn**		**23 04 04.3**	**-1.9**
KHMN	**Narli-Kahraman**	**1.58**	**235**	P	**Pn**		**23 04 05.1**	**-1.1**
KHMN				P	**Pn**		**23 04 05.1**	**-1.1**
KAHM	**Kahramanmaras,**	**1.62**	**241**	P	**Pn**		**23 04 05.6**	**-1.2**
BNGB	**Bingl**	**1.64**	**65**	Pn	**Pn**		**23 04 05.8**	**-1.3**
GAZ	**Gaziantep**	**1.68**	**228**		**Pn**		**23 04 05.6**	**-2.1**
GAZ	**Gaziantep**	**1.68**	**228**	Pn	**Pn**		**23 04 06.1**	**-1.6**
KMRS	**Kahramanmaras**	**1.69**	**242**	Pn	**Pn**		**23 04 06.1**	**-1.6**
MBDZ		**1.75**	**357**	P	**Pn**		**23 04 09.2**	**+0.5**
KHMR	**Kahramanmara**	**1.77**	**238**	P	**Pn**		**23 04 07.3**	**-1.5**
KHMR				P	**Pn**		**23 04 07.4**	**-1.5**
YEDI	**Yedisu-Bingol**	**1.78**	**50**	Pn	**Pn**		**23 04 08.2**	**-0.9**
CUAYA	**Sivas-Altinyay**	**1.85**	**302**	P	**Pn**		**23 04 09.9**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.86**	**274**	Pn	**Pn**		**23 04 09.2**	**-1.0**
MARD	**Mardin**	**1.87**	**121**	Pn	**Pn**		**23 04 08.9**	**-1.4**
MARD	**Mardin**	**1.87**	**121**	P	**Pn**		**23 04 09.3**	**-1.0**
SLHN	**Bingol, Solhan**	**1.87**	**69**	P	**Pn**		**23 04 10.3**	**-0.1**
KELT	**Kelkit**	**1.88**	**11**	P	**Pn**		**23 04 10.6**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.91**	**94**	Pn	**Pn**		**23 04 09.9**	**-0.9**
SVAN	**Silvan-Diyarba**	**1.91**	**94**	P	**Pn**		**23 04 09.4**	**-1.4**
SUSE	**Susehri**	**1.95**	**347**	P	**Pb**		**23 04 12.9**	**-1.0**
BTMN	**Batman**	**2.01**	**101**	P	**Pn**		**23 04 11.2**	**-0.9**
SCER	**sogukcermik**	**2.01**	**321**	P	**Pn**		**23 04 13.3**	**+1.0**
KAMA	**Osmaniye**	**2.02**	**237**	P	**Pn**		**23 04 11.1**	**-1.2**
ALUC	**Giresun/Alucra**	**2.03**	**360**	P	**Pn**		**23 04 13.4**	**+0.8**
KARO	**Karliova-Bingo**	**2.04**	**60**	Pn	**Pn**		**23 04 11.9**	**-0.9**
KUZU	**Kuzuini**	**2.05**	**222**	P	**Pn**		**23 04 11.9**	**-0.7**
ANDN	**Andirin**	**2.06**	**250**	P	**Pn**		**23 04 12.3**	**-0.6**
SVSK	**Karacayir**	**2.12**	**320**	Pn	**Pn**		**23 04 13.4**	**-0.2**
ECAT	**Cat-ERZURUM**	**2.15**	**52**	P	**Pn**		**23 04 14.1**	**-0.1**
SAIM	**ADANA**	**2.15**	**262**	P	**Pn**		**23 04 13.7**	**-0.5**
KOPT	**Kop Dagi**	**2.17**	**37**	Pn	**Pn**		**23 04 13.5**	**-1.0**
KOPT	**Kop Dagi**	**2.17**	**37**	P	**Pn**		**23 04 14.4**	**-0.1**
MUSM	**Mu-Merkez**	**2.18**	**78**	P	**Pn**		**23 04 14.2**	**-0.4**
MIDY	**Mardin/Midyat-**	**2.26**	**113**	P	**Pn**		**23 04 16.4**	**+0.8**
VRTB	**Varto-Mus**	**2.26**	**67**	Pn	**Pn**		**23 04 15.2**	**-0.5**
VRTB	**Varto-Mus**	**2.26**	**67**	P	**Pg**		**23 04 21.8**	**+0.4**
BAYT	**Aydıntepe-Bayb**	**2.33**	**26**	Pn	**Pn**		**23 04 16.6**	**-0.2**
BNN	**Bunyan**	**2.36**	**284**	Pn	**Pn**		**23 04 16.3**	**-0.9**
BNN	**Bunyan**	**2.36**	**284**	Pn	**Pn**		**23 04 16.2**	**-0.9**
RSDY	**Resadiye-TOKAT**	**2.37**	**332**	P	**Pn**		**23 04 17.0**	**-0.1**
HASA	**Hatay-Hassa-Ha**	**2.40**	**230**	P	**Pn**		**23 04 16.5**	**-1.0**
EMRE	**Erzurum,Aziziy**	**2.42**	**44**	P	**Pn**		**23 04 18.4**	**+0.3**
KOZT	**Kozan**	**2.48**	**251**	Pn	**Pn**		**23 04 17.5**	**-1.1**
SRTM	**Siirt_Merkez**	**2.50**	**96**	P	**Pn**		**23 04 18.0**	**-1.0**
EDAM	**Erzurum-Paland**	**2.50**	**50**	Pn	**Pn**		**23 04 18.4**	**-0.7**
GUNE	**Kayseri**	**2.54**	**284**	P	**Pn**		**23 04 20.2**	**+0.6**
GURO	**Guroymak-BITLI**	**2.56**	**84**	Pn	**Pn**		**23 04 18.4**	**-1.5**
GURO	**Guroymak-BITLI**	**2.56**	**84**	Pn	**Pn**		**23 04 18.6**	**-1.3**
ERZM	**Erzurum**	**2.57**	**51**	P	**Pn**		**23 04 20.4**	**+0.4**
KRIK	**Erzurum-spir**	**2.62**	**39**	P	**Pn**		**23 04 20.9**	**+0.1**
BLIS	**Bitlis-Merkez**	**2.62**	**87**	P	**Pn**		**23 04 19.0**	**-1.7**
TOKT	**Tokat**	**2.65**	**320**	Pn	**Pn**		**23 04 20.6**	**-0.4**
RHAN	**Hatay/Reyhanl**	**2.68**	**221**	P	**Pn**		**23 04 22.5**	**+1.1**
TOKA	**Tokat**	**2.69**	**319**	Pn	**Pn**		**23 04 21.1**	**-0.4**
TOKA	**Tokat**	**2.69**	**319**	P	**Pn**		**23 04 21.7**	**+0.2**
TOKA				S	**Sb**		**23 04 57.2**	**-2.3**
TOKA				IAML			23 05 11.0	
	comp=N,3μm,0.5s							
AKDA	**Akdag**	**2.69**	**47**	P	**Pn**		**23 04 21.7**	**0.0**
YAHY	**KAYSERI_Yahyal**	**2.70**	**267**	P	**Pn**		**23 04 22.5**	**+0.7**
CEYT	**Ceyhan**	**2.73**	**243**	Pn	**Pn**		**23 04 21.2**	**-0.9**
MACK	**Trabzon**	**2.74**	**16**	P	**Pn**		23 04 03.0	-19
HACI	**Hacifakili, Ak**	**2.75**	**301**	P	**Pn**		**23 04 23.6**	**+1.1**
ORDU	**Ordu-Boztepe**	**2.77**	**345**	P	**Pn**		**23 04 23.4**	**+0.7**
TAHT	**Tahtakopru-Hat**	**2.83**	**228**	Pn	**Pn**		**23 04 21.8**	**-1.6**
IZDR	**Rize**	**2.83**	**29**	P	**Pn**		**23 04 24.0**	**+0.5**
ERBA	**Erbaa**	**2.84**	**327**	P	**Pn**		**23 04 23.6**	**0.0**
HOMI	**Horasan**	**2.98**	**53**	P	**Pn**		**23 04 25.2**	**-0.5**
SIRN	**Sırnak**	**2.99**	**105**	P	**Pn**		**23 04 24.1**	**-1.5**
SIRN				S	**Sn**		**23 05 04.4**	**+2.8**
PERV	**Siirt/Pervari-**	**2.99**	**96**	P	**Pn**		**23 04 25.8**	**+0.1**
PERV				S	**Sb**		**23 05 08.8**	**+0.6**
PERV				IAML			23 05 30.0	
	comp=N,1μm,1.1s							
YOZ	**Yozgat**	**3.01**	**297**	Pn	**Pn**		**23 04 25.3**	**-0.7**
CMRD	**Camardi-Nigde**	**3.06**	**259**	Pn	**Pn**		**23 04 26.3**	**-0.4**
MLAZ	**Malazgirt-MUS**	**3.06**	**73**	Pn	**Pn**		**23 04 26.3**	**-0.5**
KARA	**Karaisali**	**3.13**	**252**	Pn	**Pn**		**23 04 26.8**	**-0.8**
CHOM	**Cayeli-Rize**	**3.18**	**28**	Pn	**Pn**		**23 04 28.4**	**+0.2**
KOZK	**Kozakli-Nevseh**	**3.19**	**288**	Pn	**Pn**		**23 04 27.9**	**-0.5**
GEVA	**Gevas**	**3.37**	**89**	Pn	**Pn**		**23 04 30.1**	**-0.9**
KIZO	**Buyukkizoglu-L**	**3.40**	**321**	Pn	**Pn**		**23 04 31.5**	**+0.2**
YARM	**Yarimca-Ladik(**	**3.47**	**320**	Pn	**Pn**		**23 04 32.7**	**+0.5**
SENK	**Senkaya-Erzuru**	**3.56**	**50**	Pn	**Pn**		**23 04 33.5**	**-0.2**
GULA	**Gulagac**	**3.57**	**272**	Pn	**Pn**		**23 04 33.1**	**-0.6**
CORM	**Corum**	**3.72**	**301**	Pn	**Pn**		**23 04 36.1**	**+0.3**
KARS	**Kars**	**4.05**	**54**	Pn	**Pn**		**23 04 39.7**	**-0.6**
KARS	**Kars**	**4.05**	**54**	P	**Pn**		**23 04 39.7**	**-0.6**
KAMT	**Kaman**	**4.10**	**287**	Pn	**Pn**		**23 04 40.8**	**-0.1**
BR104	**Keskin Array S**	**4.24**	**291**	P	**Pn**		**23 04 43.1**	**+0.2**
BR131	**Keskin Array S**	**4.25**	**291**	Pn	**Pn**		**23 04 43.2**	**+0.2**
BR131	**Keskin Array S**	**4.25**	**291**	P	**Pn**		**23 04 43.2**	**+0.2**
BR131	**Keskin Array S**	**4.25**	**291**	P	**Pn**		**23 04 43.4**	**+0.4**
	SNR=204							
BRTR	**Keskin Array B**	**4.25**	**291**	Pn	**Pn**		**23 04 42.6**	**-0.4**
	41nm,0.3s,baz=129,slow=11,SNR=940							
BRTR				Lg	Lg		23 05 47.0	
	baz=123,slow=24							
BRTR				LR	LR		23 06 45.9	
	comp=Z,7μm,21.8s,baz=110,slow=45 168nm,0.6s							
BRTR	**Keskin Array B**	**4.25**	**291**	Pn	**Pn**		**23 04 42.9**	**-0.2**
BRTR	**Keskin Array B**	**4.25**	**291**	P	**Pn**		**23 04 42.9**	**-0.2**
BR105	**Keskin Array S**	**4.26**	**291**	P	**Pn**		**23 04 43.4**	**+0.2**
BR106	**Keskin Array S**	**4.26**	**291**	P	**Pn**		**23 04 43.5**	**+0.2**
BEIL	**Beino**	**4.30**	**210**	*eP*	**Pn**		**23 04 42.7**	**-1.0**
SNOP	**Sinop**	**4.61**	**325**	Pn	**Pn**		**23 04 48.2**	**+0.4**
HWQ	**Hawqa**	**4.63**	**210**	*eP*	**Pn**		**23 04 46.8**	**-1.4**
BGD	**Bogdanovka**	**4.74**	**50**	P	**Pn**		**23 04 49.8**	**-0.1**
BGD				S	**Sg**		**23 06 11.9**	**+1.5**
AKH	**Akhalkalaki**	**4.77**	**48**	P	**Pn**		**23 04 50.5**	**+0.2**
AKH				S	**Sg**		**23 06 13.2**	**+2.0**
AKH	**Akhalkalaki**	**4.77**	**48**	P	**Pn**		**23 04 50.4**	**+0.2**
ILGA	**Ilgaz**	**4.77**	**307**	Pn	**Pn**		**23 04 50.4**	**+0.1**
GNI	**Garni**	**4.98**	**66**	Pn	**Pn**		**23 04 54.2**	**+1.1**
	5.8nm,0.3s,baz=300,slow=4.6,SNR=21							
GNI				Pg	**Pb**		**23 05 08.8**	**+3.3**
	5.7nm,0.3s,baz=299,slow=2.9,SNR=10.0							
GNI				Lg	Lg		23 06 18.0	
	baz=100,slow=22							
GNI				LR	LR		23 07 17.2	
	comp=Z,8μm,19.8s,baz=259,slow=44 21nm,0.5s							
GNI	**Garni**	**4.98**	**66**	Pn	**Pn**		**23 04 52.6**	**-0.6**
GNI	**Garni**	**4.98**	**66**	P	**Pn**		**23 04 53.7**	**+0.6**
GNI	**Garni**	**4.98**	**66**	P	**Pn**		**23 04 53.5**	**+0.4**
GNI				S	**Sn**		**23 05 53.1**	**+2.3**
GNI	**Garni**	**4.98**	**66**	P	**Pn**		**23 04 53.9**	**+0.8**
ZAHL	**Zahle**	**5.02**	**209**	*eP*	**Pn**		**23 04 52.9**	**-0.8**
BHL	**Bhannes**	**5.07**	**211**	*eP*	**Pn**		**23 04 53.5**	**-0.8**
BZK	**Bozkurt**	**5.17**	**316**	Pn	**Pn**		**23 04 55.8**	**+0.3**
BZK	**Bozkurt**	**5.17**	**316**	P	**Pn**		**23 04 56.5**	**+1.0**
	2.7nm6μm400nm,0.7s							
TRLG	**Trialeti**	**5.21**	**50**	P	**Pn**		**23 04 56.5**	**+0.2**
TRLG	**Trialeti**	**5.21**	**50**	P	**Pn**		**23 04 56.4**	**+0.2**
VSLR	**Vesyoloye**	**5.23**	**10**	*i* P	**Pn**		**23 04 56.5**	**0.0**
DQRL	**Deir Qamar**	**5.28**	**210**	*eP*	**Pn**		**23 04 57.2**	**0.0**
KZRT	**Kazreti**	**5.30**	**53**	P	**Pn**		**23 04 54.7**	**-2.8**
KZRT	**Kazreti**	**5.30**	**53**	P	**Pn**		**23 04 54.6**	**-2.8**
ALIG	**Mtskhetisjvari**	**5.32**	**43**	P	**Pn**		**23 04 57.8**	**+0.1**
ALIG	**Mtskhetisjvari**	**5.32**	**43**	P	**Pn**		**23 04 57.7**	**+0.1**
SOC	**Sochi**	**5.32**	**7**	*eP*	Pn		23 05 03.9	+6.3
SOC				*e*			23 06 09.6	
SOC				pmax	pmax			
	comp=Z,78nm,0.8s							
SOC				MLR	MLR			
	comp=Z,2μm,13.0s							
RCY	**Rachaya**	**5.36**	**207**	*eP*	**Pn**		**23 04 57.8**	**-0.6**
QRWL	**Qaraoun**	**5.37**	**209**	*eP*	**Pn**		**23 04 58.0**	**-0.5**
CSS	**Mathiatis**	**5.51**	**234**	Pn	**Pn**		**23 04 56.9**	**-3.4**
NATI	**Neve Ativ**	**5.61**	**207**	P	**Pn**		**23 05 02.0**	**+0.4**
NATI				S	**Sn**		**23 06 07.2**	**+1.1**
GEM	**Giv'at Ha'Em**	**5.68**	**207**	P	**Pn**		**23 05 03.1**	**+0.5**
GEM				S	**Sn**		**23 06 08.6**	**+0.6**
TBLG	**Delisi**	**5.71**	**51**	P	**Pn**		**23 05 03.4**	**+0.4**
NEUR	**Neytrino**	**5.78**	**30**	*i* P	**Pn**		**23 05 03.4**	**-0.6**
KSHT	**Keshet**	**5.84**	**205**	P	**Pn**		**23 05 05.2**	**+0.3**
KSHT				S	**Sn**		**23 06 16.3**	**+1.4**
MMA0B	**Mount Meron ar**	**5.95**	**209**	P	**Pn**		**23 05 06.1**	**-0.4**
MMA0B				S	**Sn**		**23 06 16.1**	**+1.3**
MMAI	**Mount Meron Ar**	**5.95**	**209**	Pn	**Pn**		**23 05 06.7**	**+0.3**
	comp=Z,39nm,0.3s,baz=17,slow=17,SNR=121							
MMAI				Lg	Lg		23 06 45.3	
	comp=Z,93nm,0.3s,baz=24,slow=30,SNR=5.9 comp=Z,127nm,0.7s							
DGRG	**David-gareji**	**5.96**	**56**	P	**Pn**		**23 05 07.7**	**+1.1**
DGRG	**David-gareji**	**5.96**	**56**	P	**Pn**		**23 05 07.6**	**+1.1**
HNTI	**Hanita**	**5.98**	**210**	P	**Pn**		**23 05 06.5**	**-0.3**
HNTI				S	**Sn**		**23 06 16.3**	**+0.9**
GUDG	**Gudauri**	**6.01**	**45**	P	**Pn**		**23 05 07.5**	**+0.2**
GUDG	**Gudauri**	**6.01**	**45**	P	**Pn**		**23 05 07.5**	**+0.2**
SHA1	**Shidzhatmaz**	**6.17**	**27**	*i* P	**Pn**		**23 05 10.8**	**+1.4**
CHRG	**Chargali**	**6.18**	**48**	P	**Pn**		**23 05 10.0**	**+0.4**
KBZ	**Khabaz**	**6.25**	**29**	Pn	**Pn**		**23 05 12.2**	**+2.0**
	comp=Z,0.6nm,0.3s,baz=206,slow=13,SNR=14							
KBZ				Pg	**Pb**		**23 05 24.0**	**-2.9**
	comp=Z,1.2nm,0.3s,baz=235,slow=16,SNR=12 comp=Z,5.1nm,0.6s							
MDUB	**Mudurnu**	**6.26**	**293**	Pn	**Pn**		**23 05 09.4**	**-1.2**
BLGI	**Bet Lehem HaGe**	**6.29**	**209**	P	**Pn**		**23 05 11.4**	**+0.5**
BLGI				S	**Sn**		**23 06 23.5**	**+0.8**
ASF	**Jabal al Asfar**	**6.31**	**195**	Pn	**Pn**		**23 05 10.8**	**-0.5**
	comp=Z,7.5nm,0.3s,baz=30,slow=6.0,SNR=145							
ASF				Pg	Pb		23 05 33.2	+5.0
	comp=Z,17nm,0.3s,baz=353,slow=18,SNR=7.4							
ASF				Lg	Lg		23 06 54.5	
	comp=Z,20nm,0.3s,baz=318,slow=3.7,SNR=3.9							
ASF				LR	LR		23 07 57.7	
	comp=Z,4μm,19.0s,baz=359,slow=41 comp=Z,163nm,0.8s							
KIV	**Kislovodsk**	**6.37**	**26**	⇑P	**Pn**		**23 05 14.0**	**+1.9**
KIV	**Kislovodsk**	**6.37**	**26**	Pn	**Pn**		**23 05 12.2**	**+0.2**
KIV	**Kislovodsk**	**6.37**	**26**	*i* P	**Pn**		**23 05 13.3**	**+1.3**
	SNR=8.1							
KIV	**Kislovodsk**	**6.37**	**26**	*eP*	**Pn**		**23 05 12.9**	**+0.8**
KIV				*eS*	**Sn**		**23 06 27.0**	**+2.2**
KIV				pmax	pmax			
	comp=Z,15nm,1.1s							
KIV				MLR	MLR			
	comp=Z,1μm,10.0s							
KIV	**Kislovodsk**	**6.37**	**26**	P	**Pn**		**23 05 13.0**	**+1.0**
KIV				S	**Sn**		**23 06 27.6**	**+2.8**
KVAR	**Kislovodsk Arr**	**6.37**	**26**	Pn	**Pn**		**23 05 12.2**	**+0.1**
	baz=259,slow=19							
KVAR				LR	LR		23 08 21.1	
	comp=Z,824nm,18.3s,baz=122,slow=45 comp=Z,3.3nm,0.4s							
OFRI	**`Ofer**	**6.46**	**210**	P	**Pn**		**23 05 13.5**	**+0.1**
OFRI				S	**Sn**		**23 06 28.2**	**+0.9**
MMLI	**Mount Malkishu**	**6.47**	**206**	P	**Pn**		**23 05 14.2**	**+0.8**
MMLI				S	**Sn**		**23 06 28.7**	**+1.3**
LABN	**Labinsk**	**6.49**	**12**	*eP*	**Pn**		**23 05 18.0**	**+4.3**
LABN				*eS*	**Sb**		**23 06 41.3**	**-7.5**
LABN				pmax	pmax			
	comp=Z,95nm,0.8s							
LABN				MLR	MLR			
	comp=Z,4μm,12.0s							
SHTL	**Shatili**	**6.51**	**46**	P	**Pn**		**23 05 14.1**	**-0.1**
SHTL	**Shatili**	**6.51**	**46**	P	**Pn**		**23 05 14.1**	**-0.1**
ISP	**Isparta**	**6.53**	**268**	Pn	**Pn**		**23 05 15.1**	**+0.7**
ISP	**Isparta**	**6.53**	**268**	*eP*	**Pn**		**23 05 16.9**	**+2.5**
ISP				pmax	pmax			
	comp=Z,47nm,1.3s							
VSHL	**Vashlovani**	**6.55**	**61**	P	**Pn**		**23 05 16.8**	**+2.2**
ANN	**Anapa**	**6.56**	**352**	*eP*	Pn		23 05 20.1	+5.4
ANN				pmax	pmax			
	comp=Z,87nm,0.9s							
ANN				MLR	MLR			
	comp=Z,1μm,9.0s							
HMDT	**Nahal Hemdat**	**6.60**	**205**	P	**Pn**		**23 05 15.8**	**+0.5**
HMDT				S	**Sn**		**23 06 31.5**	**+0.9**
BORA	**Eskisehir**	**6.67**	**286**	Pn	**Pn**		**23 05 15.4**	**-0.7**
LGD	**Lagodekhi**	**6.72**	**56**	P	**Pn**		**23 05 17.6**	**+0.7**
LGD	**Lagodekhi**	**6.72**	**56**	P	**Pn**		**23 05 17.6**	**+0.7**
SLTI	**Sal'it**	**6.78**	**208**	P	**Pn**		**23 05 18.4**	**+0.7**
SLTI				S	**Sn**		**23 06 35.9**	**+0.9**
YAL	**Yalta**	**7.08**	**332**	*eP*	Pn		23 05 26.8	+5.0
YAL				*eS*	Sn		23 06 52.7	+10
YAL				pmax	pmax			
	comp=Z,15nm,0.5s							
YAL	**Yalta**	**7.08**	**332**	*eP*	Pn		23 05 26.8	+5.0
YAL				pmax	pmax		23 05 30.8	
	comp=Z,15nm,0.5s							
YAL				*ex*	x		23 06 52.7	
YAL				smax	smax		23 07 03.5	
	comp=N,10.0nm,0.9s							
YAL				smax	smax		23 07 03.5	
	comp=E,16nm,0.7s							
SUDU	**Sudak**	**7.16**	**338**	*eP*	**Pn**		**23 05 24.8**	**+1.9**
SUDU				*i* S	**Sn**		**23 06 49.6**	**+5.4**
SUDU				pmax	pmax			
	comp=Z,15nm,0.5s							
SUDU	**Sudak**	**7.16**	**338**	*eP*	**Pn**		**23 05 24.8**	**+1.9**
SUDU				pmax	pmax

ALN Alexandroupoli 10.16 289 Pn **Pn 23 06 03.9 -0.2**
ALN Alexandroupoli 10.16 289 P **Pn 23 06 03.9 -0.2**
NE56 Odesa 10.18 328 P **Pn 23 06 04.9 +0.6**
CFR Carcaliu 10.50 314 ⇑P **Pn 23 06 08.4 -0.2**
CFR Carcaliu 10.50 314 ⇑P **Pn 23 06 08.4 -0.2**
PURM Purcari 10.52 324 ⇑P **Pn 23 06 09.3 +0.4**
PURM Purcari 10.52 324 P **Pn 23 06 10.0 +1.1**
comp=E,79nm,0.8s
RDO Rodhopi 10.59 290 Pn **Pn 23 06 10.1 +0.2**
CICN Ciocanesti 10.62 307 ⇑P **Pn 23 06 11.9 +1.6**
RAZG Razgrad 10.66 303 ⇑P **Pn 23 06 13.3 +2.4**
ELND Elena 10.84 299 ⇑P **Pn 23 06 15.4 +2.1**
VLDD Vladesti 10.94 317 ⇑P **Pn 23 06 14.9 +0.2**
ISR Istrita 11.39 311 ⇑P **Pn 23 06 23.0 +2.1**
ISR Istrita 11.39 311 ⇑P **Pn 23 06 23.0 +2.1**
ISR Istrita 11.39 311 P **Pn 23 06 21.8 +0.9**
comp=E,83nm,1.0s
GHRR 11.44 316 ⇑P **Pn 23 06 22.8 +1.2**
GHRR 11.44 316 P **Pn 23 06 22.5 +0.9**
ODBI Odobesti 11.46 314 ⇑P **Pn 23 06 23.4 +1.6**
PANC Panciu 11.47 315 ⇑P **Pn 23 06 23.5 +1.5**
IDI Anoyia 11.54 259 P **Pn 23 06 22.0 -0.9**
IDI Anoyia 11.54 259 Pn **Pn 23 06 21.5 -1.5**
VRI Vrincioaia 11.70 314 ⇑P **Pn 23 06 25.6 +0.5**
VRI Vrincioaia 11.70 314 ⇑P **Pn 23 06 25.6 +0.5**
NEHR Nehoiu 11.71 311 ⇑P **Pn 23 06 26.8 +1.6**
BAL3X Bal3x, Balta 11.72 328 P **Pn 23 06 26.5 +1.2**
PLOR Plostina 11.74 314 ⇑P **Pn 23 06 27.0 +1.3**
PLOR Plostina 11.74 314 ⇑P **Pn 23 06 27.0 +1.3**
PLVB Pleven 11.86 300 ⇑P **Pn 23 06 29.1 +1.8**
MLR Muntele Rosu 11.95 311 Pn **Pn 23 06 28.2 -0.4**
comp=E,0.5nm,0.3s,baz=198,slow=6.6,SNR=11
MLR LR LR 23 11 42.4
comp=E,1μm,19.6s,baz=132,slow=41
comp=E,1.8nm,0.8s
MLR Muntele Rosu 11.95 311 ⇑P **Pn 23 06 30.8 +2.2**
MLR Muntele Rosu 11.95 311 Pn **Pn 23 06 26.5 -2.1**
MLR Muntele Rosu 11.95 311 ⇑P **Pn 23 06 30.8 +2.2**
MLR Muntele Rosu 11.95 311 P **Pn 23 06 29.0 +0.4**
comp=E,22nm,0.9s
COVR Voineasa-Covas 11.99 313 ⇑P **Pn 23 06 29.8 +0.7**
HUMR Humele 12.07 305 ⇑P **Pn 23 06 32.3 +2.1**
TESR Tescani 12.14 316 ⇑P **Pn 23 06 31.0 -0.1**
TESR Tescani 12.14 316 P **Pn 23 06 30.9 -0.1**
comp=E,38nm,1.4s
ONER Baraj Valea Uz 12.17 315 ⇑P **Pn 23 06 32.0 +0.5**
TURR Turia 12.22 313 ⇑P **Pn 23 06 32.9 +0.7**
OZUR 12.37 313 ⇑P **Pn 23 06 34.8 +0.4**
SORM Soroca 12.41 326 ⇑P **Pn 23 06 36.7 +1.9**
SORM Soroca 12.41 326 ⇑P **Pn 23 06 36.7 +1.9**
VOIR 12.46 309 ⇑P **Pn 23 06 37.9 +2.4**
VOIR 12.46 309 ⇑P **Pn 23 06 37.9 +2.4**
VOIR 12.46 309 P **Pn 23 06 35.5 0.0**
comp=E,648nmcomp=E,31nm,1.0s
GIRR Girov 12.49 318 ⇑P **Pn 23 06 35.2 -0.7**
DOPR Dopca 12.53 312 ⇑P **Pn 23 06 36.8 +0.3**
VORD Divnogorie 12.66 1 *e*P Pn 23 06 43.7 +5.5
VORD pmax pmax
comp=Z,10.0nm,0.6s
ARR Arges 12.68 308 ⇑P **Pn 23 06 40.5 +2.0**
PRAR RASCA 12.90 319 ⇑P **Pn 23 06 41.1 -0.4**
VSR Storozhevoye 12.91 1 *e*P Pn 23 06 48.7 +7.1
VSR pmax pmax
comp=Z,9.0nm,0.5s
VRH Novokhopyorsk 13.06 8 *e*P **P 23 06 52.0 -2.0**
VRH pmax pmax
comp=Z,10.0nm,0.6s
MDB Medias 13.22 311 ⇑P **Pn 23 06 46.5 +0.6**
MDB Medias 13.22 311 ⇑P **Pn 23 06 46.5 +0.6**
LOT Lotru 13.26 307 ⇑P **Pn 23 06 48.9 +2.5**
VORR Voronezh 13.37 1 *e*P **Pn 23 06 51.1 +3.3**
VORR pmax pmax
comp=Z,7.0nm,0.6s
BURAR Bucovina Array 13.59 318 ⇑P **Pn 23 06 50.6 -0.4**
BURAR Bucovina Array 13.59 318 Pn **Pn 23 06 51.0 0.0**
BURAR Bucovina Array 13.59 318 ⇑P **Pn 23 06 50.6 -0.4**
KMPD K-Podol'skiy 13.59 323 P **Pn 23 06 49.7 -1.1**
SKO Skopje 13.76 291 *i* P 23 07 07.3 +5.4
GZR Gura Zlata 13.86 306 ⇓P **Pn 23 06 56.4 +1.8**
GZR Gura Zlata 13.86 306 ⇓P **Pn 23 06 56.4 +1.8**
HERR Herculane 13.88 303 ⇑P **Pn 23 06 56.2 +1.3**
CJR Cluj-Napoca 13.98 312 ⇑P **Pn 23 06 58.1 +1.8**
CJR Cluj-Napoca 13.98 312 ⇑P **Pn 23 06 58.1 +1.8**
DEV Deva 13.99 308 ⇑P **Pn 23 06 58.4 +2.0**
DEV Deva 13.99 308 ⇑P **Pn 23 06 58.4 +2.0**
AK07 Malin Array Si 14.01 334 P **Pn 23 06 56.0 -0.5**
AK10 Malin Array Si 14.03 334 P **Pn 23 06 57.0 +0.1**
AK09 Malin Array Si 14.03 334 P **Pn 23 06 56.4 -0.5**
LUBAR Lubar, Ukraine 14.03 329 P **Pn 23 06 56.8 -0.1**
AK06 Malin Array Si 14.04 334 P **Pn 23 06 56.4 -0.6**
AK08 Malin Array Si 14.06 334 P **Pn 23 06 57.2 0.0**
AK05 Malin Array Si 14.06 334 P **Pn 23 06 57.5 +0.2**
AK02 Malin Array Si 14.10 334 P **Pn 23 06 57.9 +0.2**
AK12 Malin Array Si 14.10 334 P **Pn 23 06 58.0 +0.2**
AK14 Malin Array Si 14.11 334 P **Pn 23 06 57.2 -0.7**
AK13 Malin Array Si 14.11 334 P **Pn 23 06 57.2 -0.7**
KSV Kosov 14.11 320 P **Pn 23 07 08.1 +0.1**
OHR Ohrid 14.12 287 *i* P **P 23 07 08.0 +2.0**
KIEV Kiev 14.12 334 ⇑P **Pn 23 06 59.1 +0.9**
KIEV Kiev 14.12 334 Pn **Pn 23 06 57.9 -0.3**
KIEV Kiev 14.12 334 ⇑P **Pn 23 06 59.1 +0.9**
AKASG Malin Array Be 14.13 334 Pn **Pn 23 06 55.9 -2.2**
comp=Z,1.0nm,0.3s,baz=148,slow=14,SNR=9.6
AKASG LR LR 23 13 29.7
comp=Z,379nm,21.8s,baz=148,slow=42
comp=Z,3.7nm,0.7s
AKASG Malin Array Be 14.13 334 Pn **Pn 23 06 56.5 -1.6**
AKASG Malin Array Be 14.13 334 *i* P **Pn 23 06 58.7 +0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 14.13 334 Pn **Pn 23 06 58.0 -0.2**
AKBB Malin Array Si 14.13 334*ce*P **Pn 23 06 59.2 +1.0**
AKBB Malin Array Si 14.13 334 P **Pn 23 06 58.7 +0.5**
AK16 Malin Array Si 14.14 334 P **Pn 23 06 58.3 -0.1**
MARR Marisel-Cluj 14.24 311 ⇑P **Pn 23 07 01.2 +1.2**
LPSR Galich'ya Gora 14.29 0 *e*P **P 23 07 08.1 +0.4**
LPSR pmax pmax
comp=Z,57nm,0.8s
MDVR Moldovita 14.31 302 ⇑P **Pn 23 07 01.6 +0.7**
RAKU Rahkiv 14.40 317 P **Pn 23 07 03.2 +1.2**
MI30 MI30,Zelenitsa 14.53 332 P **Pn 23 07 01.7 -2.0**
comp=Z,23nm,1.0s
DRGR 14.54 311 ⇑P **Pn 23 07 05.2 +1.2**
DRGR 14.54 311 ⇑P **Pn 23 07 05.2 +1.2**
BMR Baia Mare 14.56 315 ⇑P **Pn 23 07 06.0 +1.9**
BMR Baia Mare 14.56 315 ⇑P **Pn 23 07 06.0 +1.9**
MESR Meseseni 14.59 312 ⇓P **P 23 07 13.2 +2.2**
BZS Buzias 14.69 305 ⇑P **Pn 23 07 06.7 +0.7**
BZS Buzias 14.69 305 ⇑P **Pn 23 07 06.7 +0.7**
MI28 Mi28,Pidlybu 14.87 332 P **Pn 23 07 08.2 -0.1**
KORU Korolevo 15.04 316 P **Pn 23 07 09.8 -0.8**
MEZ Mezhgor'ye 15.04 318 P **Pn 23 07 11.5 +0.8**
BRIU Brid 15.20 316 P **Pn 23 07 13.8 +1.0**
BELG Belogornoye 15.38 21 Pn **Pn 23 07 14.3 -0.8**
comp=Z,1.0nm,0.3s,baz=57,slow=5.6,SNR=5.2
BELG LR LR 23 13 48.8
comp=Z,736nm,19.5s,baz=230,slow=40
comp=Z,9.6nm,0.8s
HOLU Holmets 15.66 316 P **Pn 23 07 19.3 +0.5**
RNPP5 Staryi Chortor 15.80 329 P **Pn 23 07 22.3 +1.7**
RAYN Ar Rayn 15.82 157 P **Pn 23 07 21.4 +0.3**
RNPP8 Varash 15.90 329 P **Pn 23 07 23.5 +1.7**
RNPP9 Sopachiv 15.94 329 P **Pn 23 07 22.3 -0.1**
KWP Kalwaria Pacla 16.15 320 *e*P **P 23 07 30.4 +2.1**
KWP Kalwaria Pacla 16.15 320 P **Pn 23 07 25.6 +0.5**
comp=Z,2μmcomp=Z,97nm,0.9s
BSZH Besenyszg 16.26 309 ⇑P **P 23 07 29.4 -0.1**
KECS Kecovo 16.70 313 *e*P **P 23 07 37.0 +2.6**
KECS pmax pmax
comp=Z,25nm,1.0s
KECS Kecovo 16.70 313 *e*P **P 23 07 37.0 +2.6**
PSZ Piszkesteto 16.77 311 ⇑P **P 23 07 35.2 -0.1**
PSZ Piszkesteto 16.77 311 ⇑P **P 23 07 35.2 -0.1**
STHS Stebnicka Huta 16.79 317 *e*P **P 23 07 36.0 +0.6**
STHS pmax pmax
comp=Z,17nm,1.0s
STHS Stebnicka Huta 16.79 317 *e*P **P 23 07 36.0 +0.6**
MORH Mrgy, Hungar 16.84 304 ⇑P **P 23 07 36.0 0.0**
MORH Mrgy, Hungar 16.84 304 P **Pn 23 07 34.9 +1.0**
comp=Z,818nmcomp=Z,27nm,1.4s
OBN Obninsk 16.88 356 Pn **Pn 23 07 33.2 -1.1**
comp=Z,1.9nm,0.3s,baz=183,slow=17,SNR=3.1

OBN LR LR 23 15 51.2
comp=Z,447nm,19.8s,baz=176,slow=44
comp=Z,5.7nm,0.4s
OBN Obninsk 16.88 356 *e*P **P 23 07 32.4 -1.9**
OBN Obninsk 16.88 356⇓ *e*P **P 23 07 36.5 +0.2**
OBN *i* S **Sn 23 10 46.5 +4.8**
OBN pmax pmax
comp=Z,29nm,1.7s
OBN MLR MLR
comp=Z,1.0nm,15.0s
TRNA Turayna 17.16 138 P **Pn 23 07 37.2 -0.9**
MATE Matera 17.20 285 ⇑P **P 23 07 40.9 +1.0**
TIP Timpagrande 17.20 280 **Pn 23 07 38.3 -0.3**
TIP IAmb IAmb 23 07 45.6
comp=Z,213nm,1.1s
TIP Timpagrande 17.20 280 P **P 23 07 39.5 -0.7**
comp=Z,2μmcomp=Z,153nm,1.4s
NIE Niedzica 17.30 316 P **P 23 07 40.5 -0.6**
comp=Z,10nm,1.4s
BLY Banja Luka 17.38 299 ⇓P **P 23 07 43.2 +1.2**
MOS Moscow 17.45 358 *e*P **P 23 07 45.5 +2.8**
LANS Liptovska Anna 17.62 314 *e*P **P 23 07 47.3 +2.6**
LANS pmax pmax
comp=Z,10.0nm,1.0s
LANS Liptovska Anna 17.62 314 *e*P **P 23 07 47.2 +2.6**
SRO Srobarova 17.67 309 *e*P **P 23 07 49.7 +4.5**
SRO pmax pmax
comp=Z,54nm,1.5s
SRO Srobarova 17.67 309 *e*P **P 23 07 49.7 +4.5**
MNK Minsk 17.82 339 *i* P **P 23 07 47.2 +0.5**
comp=E,40nm,1.0s
MNK *i* P **P 23 07 47.2 +0.5**
comp=N,35nm,0.9s
MNK *i* P **P 23 07 47.2 +0.5**
comp=Z,50nm,0.9s,baz=151
MNK *i* PP **PnPn 23 07 59.1 +2.5**
MNK *i* PPP PPP 23 08 07.2
MNK *i* S **Sn 23 11 07.0 +2.4**
MNK *i* SS **SnSn 23 11 25.3 +7.3**
MNK *i* LR LR 23 14 27.0
MNK Minsk 17.82 339 *i* P **P 23 07 47.2 +0.5**
MNK *i* S **Sn 23 11 06.9 +2.4**
MNK pmax pmax
comp=Z,50nm,0.9s
MNK pmax pmax
comp=E,40nm,1.0s
MNK pmax pmax
comp=N,35nm,0.9s
MNK MLR MLR
comp=E,589nm,15.0s
MNK MLR MLR
comp=N,326nm,13.0s
MNK MLR MLR
comp=Z,834nm,16.0s
JRN Qarnain Island 17.89 134 P **P 23 07 47.7 -0.1**
MPLH Magyarpolny 17.90 306 P **P 23 07 48.1 +0.4**
comp=Z,2μmcomp=Z,58nm,1.2s
CEL Celeste 17.96 277 Pn **Pn 23 07 45.8 -2.3**
CEL Celeste 17.96 277 P **Pn 23 07 47.5 -0.5**
comp=Z,974nmcomp=Z,88nm,1.0s
OJC Ojcow 18.01 317 *e*P **P 23 07 48.9 0.0**
OJC Ojcow 18.01 317 P **P 23 07 48.8 -0.1**
comp=Z,1μmcomp=Z,37nm,1.1s
AKTO Aktyubinsk 18.27 42 P **Pn 23 07 49.8 -1.8**
comp=Z,0.6nm,0.3s,baz=227,slow=11,SNR=33
AKTO LR LR 23 16 50.6
comp=Z,3μm,18.1s,baz=270,slow=43
comp=Z,14nm,0.7s
KOGS Kog 18.48 303 *e*P **Pn 23 07 55.3 +1.1**
BEL Belsk 18.49 323 *e*P **Pn 23 07 54.6 +0.3**
NACGM Naroch 18.49 338 *e*P **Pn 23 07 54.5 +0.3**
SMOL Smolenice 18.51 310 *e*P **Pn 23 07 55.7 +1.2**
SMOL pmax pmax
comp=Z,16nm,1.4s
JAVC Velka Javorina 18.52 311 *e*P **Pn 23 07 56.4 +1.7**
MODS Modra-Piesok 18.54 310 *e*P **Pn 23 07 56.1 +1.2**
MODS pmax pmax
comp=Z,59nm,1.3s
MODS Modra-Piesok 18.54 310 *e*P **Pn 23 07 56.1 +1.2**
ZST Bratislava 18.57 309 *e*P **Pn 23 07 56.6 +1.3**
ZST Bratislava 18.57 309 *e*P **Pn 23 07 56.6 +1.3**
R9F13 Warsaw-Wawer 18.57 324 *e*P **Pn 23 07 55.5 +0.2**
R9F13 *e*S Sn 23 10 42.2 -41
MAUC Maruska 18.66 313 *e*P **Pn 23 07 57.4 +1.0**
MAUC AMS AMS 23 16 50.0
comp=Z,2μm,9.8s
GHWR Ruwais 18.68 136 P **P 23 07 55.2 -1.1**
AB31 Akbulak array 18.73 47 P **P 23 07 54.9 -2.0**
ABKAR Akbulak array 18.73 47 P **P 23 07 54.6 -2.2**
GCIS Gornji Cirnik 18.73 301 *e*P **Pn 23 07 58.2 +0.9**
RONA Rosalia, Austr 18.88 307 *i* Pn **Pn 23 07 59.3 +0.2**
comp=Z,13nm,1.0s,SNR=11
STEB Steborice 18.97 315 *e*P **Pn 23 08 00.4 +0.3**
SUW Suwalki 18.99 331 *e*P **Pn 23 08 00.8 +0.4**
MORC Moravsky Berou 19.02 314 ⇑P **Pn 23 08 01.3 +0.5**
MORC Moravsky Berou 19.02 314 ⇑P **Pn 23 08 01.3 +0.5**
MORC Moravsky Berou 19.02 314 *e*P **Pn 23 08 01.1 +0.3**
SHME Shamm 19.07 125 *i* P **P 23 07 59.8 -0.9**
SNR=12
SHME Shamm 19.07 125 P **P 23 07 59.6 -1.2**
SNR=14
SHME P **P 23 07 59.6 -1.2**
SNR=14
ARSA Arzberg 19.21 305 *e*P **Pn 23 08 07.4 +4.3**
comp=Z,4.8nm,0.6s
CONA Conrad Observa 19.23 307 *e*pP **Pn 23 08 03.7 +0.2**
comp=Z,5.6nm,0.8s
VAE Valguarnera 19.24 275 P **P 23 08 02.0 -0.6**
comp=Z,2.5nm,0.4s,baz=90,slow=4.3,SNR=7.5
VAE LR LR 23 16 48.2
comp=Z,939nm,18.4s,baz=114,slow=41
BANOM Banah 19.27 125 *i* P **P 23 08 03.2 +0.3**
SNR=19
BANOM Banah 19.27 125 P **P 23 08 01.6 -1.3**
HRA Herat 19.29 95 P **P 23 08 02.3 -1.0**
HRA IAmb IAmb 23 08 07.4
comp=Z,182nm,1.9s
RAFF Raffo Rosso 19.33 274 P **P 23 08 02.5 -1.0**
RAFF IAmb IAmb 23 08 11.9
comp=Z,124nm,1.0s
INTR Introdacqua 19.35 289 IAmb IAmb 23 08 16.2
comp=Z,91nm,1.0s
VRAC Vranov 19.35 312 P **P 23 08 03.8 +0.1**
comp=Z,0.3nm,0.3s,baz=122,slow=8.4,SNR=8.1
VRAC LR LR 23 16 38.8
comp=Z,596nm,20.3s,baz=112,slow=41
comp=Z,6.4nm,0.8s
VRAC Vranov 19.35 312 ⇑P **Pn 23 08 04.4 -0.3**
VRAC Vranov 19.35 312 ⇑P **Pn 23 08 04.4 -0.3**
VRAC Vranov 19.35 312 *e*P **Pn 23 08 04.9 +0.2**
SOKA Soboth 19.35 303 *e*P **Pn 23 08 07.0 +2.1**
comp=Z,1.6nm,0.6s
KRUC Moravsky 19.36 311 *e*P **P 23 08 04.0 +0.2**
MZWR Madinat Zayed 19.39 134 P **P 23 08 03.3 -0.9**
VNDS Vrh nad Dolski 19.41 301 *i* P **Pn 23 08 06.3 +0.8**
AJN Ajban 19.43 130 *i* P **P 23 08 04.0 -0.7**
SNR=6.9
AJN Ajban 19.43 130 P **P 23 08 02.6 -2.0**
SNR=10
NAZ Nazwa, Dubai 19.52 128 *i* P **P 23 08 04.4 -1.3**
SNR=16
NAZ Nazwa, Dubai 19.52 128 P **P 23 08 05.3 -0.4**
SNR=12
MASF Masafi 19.56 126 P **P 23 08 05.1 -1.1**
SNR=16
MSFE Esma-Masafi 19.57 126 *i* P **P 23 08 05.0 -1.3**
SNR=11
ASUD Al Ashush, Dub 19.59 129 *i* P **P 23 08 05.9 -0.5**
SNR=7.7
ASUD Al Ashush, Dub 19.59 129 P **P 23 08 06.2 -0.2**
SNR=14
ASUD P **P 23 08 06.2 -0.2**
SNR=14
KRLC Kraliky 19.59 314 *e*P **Pn 23 08 07.5 -0.2**
KRLC AMS AMS 23 17 00.0
comp=Z,900nm,11.6s
KRLC Kraliky 19.59 314 *e*P **Pn 23 08 07.5 -0.2**
KRLC MLR MLR
comp=Z,900nm,11.6s
OBKA Obir 19.62 302 *i* P **Pn 23 08 09.8 +1.7**
comp=Z,16nm,1.2s
FAQ Al Faqa, Dubai 19.66 129 *i* P **P 23 08 07.3 +0.1**
SNR=8.5
FAQ Al Faqa, Dubai 19.66 129 P **P 23 08 07.5 +0.3**
SNR=11

MDH Madha 19.70 126 *i* P **P 23 08 07.0 -0.7**
SNR=22
MDH Madha 19.70 126 P **P 23 08 07.0 -0.7**
SNR=19
AQU L'Aquila 19.74 290 P **P 23 08 08.1 0.0**
AQU L'Aquila 19.74 290 P **Pn 23 08 09.0 -0.5**
comp=Z,2μmcomp=Z,219nm,1.0s
CAMP Campotosto 19.75 290 IAmb IAmb 23 08 16.9
comp=Z,147nm,1.0s
MZR Muzera 19.77 136 *i* P **P 23 08 07.8 -0.7**
SNR=7.6
GUMA Gualdo di Mace 19.84 292 IAmb IAmb 23 08 15.0
comp=Z,89nm,1.0s
PABE Paberze 19.88 335 P **P 23 08 08.5 -0.9**
PABE IAmb IAmb 23 08 14.4
comp=Z,219nm,2.0s
UOSS Minazif 19.89 127 P **P 23 08 08.6 -1.2**
UOSS Minazif 19.89 127 *i* P **P 23 08 08.8 -0.9**
SNR=7.2
UOSS Minazif 19.89 127 P **P 23 08 09.3 -0.5**
HATD Hatta, Dubai 19.94 127 *i* P **P 23 08 09.4 -0.8**
SNR=19
HATD Hatta, Dubai 19.94 127 P **P 23 08 09.7 -0.5**
SNR=11
NRCA Norcia 19.98 291 IAmb IAmb 23 08 18.2
comp=Z,68nm,0.9s
DPC Dobruska-Polom 19.98 314 *e*P **Pn 23 08 11.7 -0.6**
DPC AMS AMS 23 17 30.0
comp=Z,1μm,13.5s
DPC Dobruska-Polom 19.98 314 *e*P **Pn 23 08 11.7 -0.6**
DPC MLR MLR
comp=Z,1μm,13.5s
DPC Dobruska-Polom 19.98 314 P **P 23 08 10.5 -0.1**
comp=Z,43nm,1.1s
ASHO Ashiyiah 19.99 128 *i* P **P 23 08 09.9 -1.0**
SNR=21
ASHO Ashiyiah 19.99 128 P **P 23 08 10.3 -0.6**
SNR=24
TREC Trest 20.00 311 *e*P **P 23 08 11.4 +0.6**
TREC Trest 20.00 311 *e*P **P 23 08 11.4 +0.6**
FDMO Fiordimonte 20.02 292 P **P 23 08 09.5 -1.5**
FDMO IAmb IAmb 23 08 17.3
comp=Z,107nm,0.9s
SABO M.te Sabotino 20.13 300 IAmb IAmb 23 08 18.3
comp=Z,106nm,1.3s
MOA Molln 20.21 306 *i* Pn **P 23 08 13.9 +0.8**
comp=Z,43nm,0.8s,SNR=24
KSP Ksiaz 20.24 316 *e*P **P 23 08 13.9 +0.6**
KSP Ksiaz 20.24 316 P **P 23 08 12.8 -0.6**
comp=Z,55nm,1.4s
CHVC Chvalec 20.25 315 *e*P Pn 23 08 14.6 -0.8
CHVC AMS AMS 23 17 40.0
comp=Z,1μm,12.1s
CHVC Chvalec 20.25 315 *e*P Pn 23 08 14.6 -0.8
CHVC MLR MLR
comp=Z,1μm,12.1s
MYKA Terra Mystica 20.26 302 *i* P Pn 23 08 16.6 +0.9
comp=Z,20nm,0.7s
ALNE Al Ain 20.27 130 *i* P **P 23 08 13.2 -0.6**
SNR=23
ALNE Al Ain 20.27 130 P **P 23 08 13.3 -0.6**
SNR=22
JASK Jask - Hormozg 20.33 122 P **P 23 08 15.4 +0.8**
SNR=17
CESX Cesi 20.36 290 P **P 23 08 14.8 0.0**
MURB Monte Urbino 20.45 292 IAmb IAmb 23 08 26.6
comp=Z,146nm,1.1s
CKRC Cesky Krumlov 20.52 309 *e*P **P 23 08 16.7 +0.2**
CKRC *e*S Sn 23 12 16.2 +6.2
CKRC AMS AMS 23 18 10.0
comp=Z,1μm,15.3s
CKRC Cesky Krumlov 20.52 309 *e*P **P 23 08 16.7 +0.2**
CKRC MLR MLR
comp=Z,1μm,15.3s
BIOA Bad Ischl, Aus 20.56 305 *e*Pn **P 23 08 18.0 +1.1**
comp=Z,31nm,1.0s,SNR=19
KBA Koelnbreinsper 20.58 303 *e*Pn **P 23 08 18.0 +0.8**
comp=Z,43nm,1.1s,SNR=13
SOHO SOHO 20.69 128 *i* P **P 23 08 17.5 -0.9**
SNR=14
SOHO SOHO 20.69 128 P **P 23 08 17.5 -0.9**
SOHO P **P 23 08 17.5 -0.9**
STAL STALIGIAL 20.79 301 P **P 23 08 19.1 -0.3**
ZVC Zvikov 20.83 310 *e*P **P 23 08 19.9 +0.1**
ZVC *e*S Sn 23 12 24.3 +7.0
ZVC AMS AMS 23 18 20.0
comp=Z,1μm,13.0s
PRU Pruhonice 20.85 312 *e*P **P 23 08 20.6 +0.7**
PRU AMS AMS 23 18 40.0
comp=Z,900nm,13.9s
PRU Pruhonice 20.85 312 *e*P **P 23 08 20.6 +0.7**
PRU MLR MLR
comp=Z,900nm,13.9s
GEC2 GERESS Array S 20.91 308 *e*P **P 23 08 21.2 +0.4**
comp=Z,46nm,1.2s,baz=109,slow=10
GERES GERESS Array B 20.91 308 P **P 23 08 20.6 -0.1**
comp=Z,21nm,0.8s,baz=119,slow=11,SNR=23
GERES LR LR 23 18 36.0
comp=Z,578nm,18.8s,baz=108,slow=43
comp=Z,21nm,0.8s
UMZA Um Al Zommool 20.94 133 P **P 23 08 20.6 -0.6**
ABTA Abfaltersbach 21.04 302 *i* Pn **P 23 08 23.8 +1.7**
comp=Z,14nm,0.8s
PVCC Panska Ves 21.06 313 *e*P **P 23 08 22.6 +0.3**
PVCC Panska Ves 21.06 313 *e*P **P 23 08 22.6 +0.3**
GKP Gorka Klasztor 21.08 322 *e*P **P 23 08 22.5 +0.1**
KHC Kasperske Hory 21.09 309 *e*P **P 23 08 22.5 -0.1**
KHC *e*S Sn 23 12 26.0 +2.5
KHC AMS AMS 23 18 30.0
comp=Z,1μm,13.6s
KHC Kasperske Hory 21.09 309 *e*P **P 23 08 22.5 -0.1**
KHC *e*S Sn 23 12 26.0 +2.5
KHC MLR MLR
comp=Z,1μm,13.6s
KHC Kasperske Hory 21.09 309 P **P 23 08 21.6 -1.0**
comp=Z,47nm,0.9s
LESA Schwarzleotal 21.11 304 *e*Pn **P 23 08 23.5 +0.6**
comp=Z,22nm,0.7s,SNR=17
OSSC Osservatorio P 21.40 293 P **P 23 08 26.8 +0.8**
KIRV Kirov 21.43 15 P **P 23 08 26.6 +0.5**
comp=Z,17nm,0.7s,baz=193,slow=7.9,SNR=8.8
KIRV LR LR 23 17 48.2
comp=Z,665nm,18.2s,baz=205,slow=40
comp=Z,17nm,0.7s
CTI Castel Tesino 21.47 300 IAmb IAmb 23 08 32.6
comp=Z,93nm,1.1s
WET Wettzell 21.52 309 *e*P **P 23 08 27.2 0.0**
comp=Z,26nm,1.1s,baz=109,slow=10
BRG Berggiesshubel 21.57 314 *e*P **P 23 08 28.5 +0.8**
BRG Amp 23 08 34.3
comp=Z,34nm,1.3s
BRG PP **PnPn 23 08 47.4 -0.7**
BRG Amp 23 08 47.8
comp=Z,11nm,0.9s
BRG Berggiesshubel 21.57 314 S Sn 23 12 33.0 -2.1
HOQ Hoqain 21.57 128 P **P 23 08 27.5 -0.4**
SNR=27
HOQ P **P 23 08 27.5 -0.4**
SNR=27
VSU Vasula 21.63 343*ce*P **P 23 08 28.6 +0.4**
VSU pmax pmax
comp=Z,87nm,1.7s
WTTA Wattenberg 21.75 303 *i* P **P 23 08 31.3 +1.4**
comp=Z,15nm,0.7s,SNR=10.0
HSKC Hora Svate Kat 21.75 313 *e*P **P 23 08 31.1 +1.4**
WATA Walderalm 21.81 303 *i* P **P 23 08 31.5 +1.1**
comp=Z,21nm,1.0s,SNR=14
SQTA Sankt Quirin 22.02 303 *i* P **P 23 08 33.6 +0.9**
comp=Z,43nm,1.1s,SNR=15
VLC Villacollemand 22.08 294 P **P 23 08 35.5 +2.2**
MOTA Moosalm 22.12 303 *i* P **P 23 08 33.6 -0.3**
comp=Z,51nm,0.8s,SNR=20
BSY Bisya 22.12 129 P **P 23 08 33.2 -0.7**
SNR=24
BIDO Bidbid 22.13 126 P **P 23 08 33.6 -0.3**
SNR=11
PUL Pulkovo 22.15 349*ce*P **P 23 08 35.3 +1.5**
PUL pmax pmax
comp=Z,114nm,0.8s
ROTZ Rotzenmuhle 22.15 310 *e*P **P 23 08 35.2 +1.2**
comp=Z,30nm,1.1s,baz=109,slow=10
SALO Salr 22.17 298 IAmb IAmb 23 08 41.4
comp=Z,55nm,0.9s
NKC Novy Kostel 22.18 311 *e*P **P 23 08 35.8 +1.5**
NKC Novy Kostel 22.18 311 *e*P **P 23 08 35.8 +1.5**
PRMA PARMA 22.19 296 P **P 23 08 34.7 +0.3**

FUR Furstenfeldbru 22.22 305 *e*P P **23 08 36.4 +1.6**
comp=Z,63nm,1.1s,baz=109,slow=10
MANZ Manzenberg 22.29 310 *e*P P **23 08 37.4 +1.9**
comp=Z,11nm,1.0s,baz=109,slow=10
FETA Feichten 22.30 302 *i* pP pP 23 08 38.0 -0.7
comp=Z,16nm,0.7s,SNR=10
CLL Collm 22.30 314 *i* P P **23 08 35.8 +0.3**
CLL *e*S S **23 12 39.0 -1.6**
CLL pmax pmax
comp=Z,141nm,2.0s
CLL MLR MLR
comp=Z,1μm,14.1s
CLL Collm 22.30 314 P P **23 08 35.2 -0.3**
comp=Z,31nm,1.8s
CLL Collm 22.30 314 *i* P P **23 08 35.8 +0.3**
comp=Z,141nm,2.0s
CLL *e*S S **23 12 39.0 -1.6**
comp=N,600nm,16.5s
CLL *e*S S **23 12 39.0 -1.6**
comp=E,400nm,10.1s
CLL *e*S S **23 12 39.0 -1.6**
CLL Collm 22.30 314 *e*P P **23 08 35.7 +0.2**
comp=E,131nm,2.1s,baz=109,slow=10
ARTI Arti 22.30 29 LR LR 23 18 26.0
comp=E,483nm,21.0s,baz=220,slow=40
ARTI Arti 22.30 29 P P **23 08 34.5 -1.0**
ARTI Arti 22.30 29*d* *i*P P **23 08 35.0 -0.5**
ARTI 23 08 57.1
ARTI PPP PPP 23 09 08.2
ARTI S S **23 12 42.2 +1.6**
ARTI pmax pmax
comp=Z,24nm,1.0s
ARTI MLR MLR
comp=Z,640nm,15.0s
RETA Reutte 22.38 303 *i* P P **23 08 36.1 -0.5**
comp=Z,15nm,0.6s,SNR=6.6
SMDO Samad 22.42 127 P P **23 08 36.1 -1.0**
SNR=29
SMDO P P **23 08 36.1 -1.0**
SNR=29
SMDO P P **23 08 36.1 -1.0**
SNR=29
FUORN Ofenpass-Fuorn 22.52 301 IAmb IAmb 23 08 47.4
comp=Z,44nm,1.1s
WSAR Wadi Sarin 22.66 126 P P **23 08 39.2 -0.3**
SNR=12
GRF Grafenberg Arr 22.73 309 *e*P P **23 08 41.5 +1.4**
comp=Z,120nm,1.2s,baz=109,slow=10
GRF *e*L L 23 20 54.3
comp=Z,623nm,18.3s
DAVOX Davos/Dischmat 22.81 301 P P **23 08 41.3 0.0**
comp=Z,18nm,1.1s,baz=93,slow=5.3,SNR=12
DAVOX LR LR 23 18 54.1
comp=Z,669nm,18.3s,baz=98,slow=40
comp=Z,18nm,1.1s
MOX Moxa 22.83 311 *e*L L 23 18 44.9
comp=Z,400nm,20.4s
UBR Ueberruh 22.86 303 *e*P P **23 08 41.4 -0.2**
comp=Z,2μm,7.1s,baz=109,slow=10
VSL Villasalto 22.87 282 IAmb IAmb 23 08 49.7
comp=Z,62nm,1.1s
NGCH Negor - Chabah 22.89 118 P P **23 08 41.7 -0.3**
SNR=15
DAVA Damuels 22.92 302 *i* P P **23 08 41.6 -0.8**
comp=Z,35nm,0.8s,SNR=12
JMDO Jabal Madar 22.96 128 P P **23 08 43.0 +0.2**
SNR=13
SHAA Shahritus 23.12 83 P P **23 08 43.1 -1.3**
SHAA IAmb IAmb 23 09 07.6
comp=Z,103nm,1.1s
TUE Stuetta 23.12 300 IAmb IAmb 23 08 49.8
comp=Z,101nm,1.4s
TUE Stuetta 23.12 300 P P **23 08 43.3 -1.1**
comp=Z,234nm,1.3s
WBK Wadi Bani Khal 23.32 126 P P **23 08 47.0 +0.5**
SNR=12
WBK P P **23 08 47.0 +0.5**
SNR=12
SVE Sverdlovsk 23.50 31 *e*P P **23 08 47.4 -0.5**
SVE pmax pmax
comp=E,23nm,0.9s
KEST Kesra 23.60 273 P P **23 08 49.6 +0.4**
comp=E,108nm,1.0s,baz=46,slow=2.2,SNR=71
KEST LR LR 23 19 00.4
comp=E,585nm,21.8s,baz=52,slow=39
comp=E,108nm,1.0s
KEST Kesra 23.60 273 P P **23 08 49.6 +0.4**
KEST Kesra 23.60 273 P P **23 08 49.6 +0.4**
SNR=31
KEST P P **23 08 49.6 +0.4**
SNR=31
STU Stuttgart 23.72 306 IAmb IAmb 23 08 55.4
comp=Z,109nm,1.4s
CHGR Chuyangaron 23.73 80 *i* P P **23 08 47.7 -2.8**
CHGR pmax pmax
comp=Z,134nm,2.2s
DOK Doka 23.75 141 P P **23 08 49.4 -1.3**
MHTO MHTO 23.92 131 P P **23 08 52.2 -0.1**
SNR=12
JLN Jalan Bani Buh 23.94 126 P P **23 08 52.4 -0.1**
SNR=8.0
JLN P P **23 08 52.4 -0.1**
SNR=8.0
CLZ Clausthal 24.01 314 *e*P P **23 08 53.2 +0.2**
comp=Z,57nm,1.0s,baz=109,slow=10
CBOGS Bougous 24.09 276 P P **23 08 55.4 +1.6**
IUG luzhnay 24.09 71 *e*P P **23 08 53.8 -0.1**
IUG luzhnay 24.09 71 *e*P P **23 08 53.8 -0.1**
BFO Black Forest 24.17 304 P P **23 08 52.9 -1.6**
BFO IAmb IAmb 23 09 04.9
comp=Z,41nm,1.1s
BFO Black Forest 24.17 304 P P **23 08 52.9 -1.6**
BFO pmax pmax
comp=Z,41nm,1.1s
WHFO Wadi Hawf 24.17 143 P P **23 08 54.5 -0.2**
WHFO P P **23 08 54.6 -0.2**
KKAR Karatay Array 24.44 69 P P **23 08 56.9 -0.1**
KKAR Karatay Array 24.44 69 P P **23 08 56.9 -0.1**
ABTO Aybut 24.44 145 P P **23 08 58.3 +1.0**
SNR=11
FINES FINESS Array B 24.47 345 P P **23 08 56.8 -0.3**
comp=Z,13nm,0.8s,baz=146,slow=8.8,SNR=26
FINES LR LR 23 20 58.8
comp=Z,542nm,18.6s,baz=160,slow=43
comp=Z,13nm,0.8s
FINES FINESS Array B 24.47 345 P P **23 08 55.3 -1.8**
FIA1 FINESS Array S 24.47 345 P P **23 08 55.5 -1.6**
FIA1 IAmb IAmb 23 09 22.0
comp=Z,80nm,1.2s
DQM DQM 24.49 133 P P **23 08 57.8 +0.2**
SENIN Lac Senin/Sane 24.50 299 IAmb IAmb 23 09 02.2
comp=Z,28nm,0.8s
KBL Kabul 24.59 89 P P **23 08 58.8 +0.2**
KBL Kabul 24.59 89 P P **23 08 58.8 +0.2**
KBL pmax pmax
comp=Z,19nm,1.2s
KBL Kabul 24.59 89 P P **23 08 59.7 +1.1**
SNR=12
KBL P P **23 08 59.7 +1.1**
SNR=12
RBK Rabkut 24.74 143 P P **23 08 59.6 -0.3**
SNR=5.6
BTK Batken 24.83 76 IAmb IAmb 23 09 06.0
comp=Z,69nm,1.7s
CMAH Djebel Manchou 24.89 276 P P **23 09 02.8 +1.6**
DMTO DMTO 24.92 141 P P **23 09 01.1 -0.3**
SNR=7.6
KASTN Kahler Asten 24.92 311 *e*P P **23 09 02.2 +0.9**
comp=Z,86nm,1.2s,baz=109,slow=10
CRHA Rehia 24.93 274 P P **23 09 02.8 +1.3**
SHAO Shalim 25.00 139 P P **23 09 02.9 +0.7**
SHAO Shalim 25.00 139 P P **23 09 04.6 +2.4**
DZA Taraz 25.04 69 *e*P P **23 09 03.0 +0.6**
DZA pmax pmax
comp=Z,68nm,1.4s
DZA Taraz 25.04 69 *e*P P **23 09 03.1 +0.6**
comp=Z,68nm,1.4s
CBST Bordj Sabath 25.19 276 P P **23 09 04.6 +0.7**
CBBAR Babar 25.45 273 P P **23 09 07.1 +0.7**
CKFL Kef-Lekhel 25.49 276 P P **23 09 06.8 +0.1**
CSGS Sigus 25.56 275 P P **23 09 09.3 +2.0**
DRK Karamyk 25.65 77 IAmb IAmb 23 09 18.7
comp=Z,29nm,1.2s
CASM Ain Smara 25.71 275 P P **23 09 08.9 +0.3**
CBOS Bilal Ibnou Ra 25.71 277 P P **23 09 10.0 +1.4**
CBHR Beni Haroun da 25.80 276 P P **23 09 11.4 +2.0**

CTEI Djebel Teioual 25.82 275 P P **23 09 10.0 +0.3**
CTGD Timgad 25.86 274 P P **23 09 10.3 +0.3**
WLF Walferdange 25.87 307 P P **23 09 09.2 -0.6**
WLF Walferdange 25.87 307 *d*P P **23 09 11.5 +1.6**
COAT Oued Athmania 25.87 276 P P **23 09 10.3 +0.2**
DFRA Djebel Bou Aff 26.12 276 P P **23 09 14.3 +1.9**
MEM Membach 26.20 309 *d*P P **23 09 15.7 +2.8**
comp=Z,14nm,1.1s
CJSR Ain Djasser 26.23 275 P P **23 09 14.6 +1.2**
BORK Borovoye 26.24 46 P P **23 09 12.1 -1.1**
BORK Borovoye 26.24 46*ce*P P **23 09 14.0 +0.8**
BORK pmax pmax
comp=Z,17nm,1.3s
BVAR Borovoye Array 26.27 46 P P **23 09 14.2 +0.7**
comp=Z,6.4nm,1.0s,baz=235,slow=5.2,SNR=29
BVAR LR LR 23 21 24.9
comp=Z,1μm,20.6s,baz=253,slow=41
comp=Z,6.4nm,1.0s
SSB Saint Sauveur 26.32 296 P P **23 09 13.0 -1.0**
SSB Saint Sauveur 26.32 296 P P **23 09 13.0 -1.0**
SSB pmax pmax
comp=Z,14nm,0.9s
ARSB Arslanbob 26.34 73 IAmb IAmb 23 09 26.8
comp=Z,68nm,1.1s
MAHO Mahon 26.74 284 P P **23 09 17.5 -0.3**
BRZS Berezniki 26.75 53 *e*P P **23 09 18.6 +0.8**
BRZS Berezniki 26.75 53 *e*P P **23 09 18.6 +0.8**
CAZD Ain Tagrout 26.77 276 P P **23 09 18.5 +0.3**
EKS2 Erkin-Say 26.85 70 P P **23 09 19.6 +0.6**
SNR=35
BMRD Maredsous 26.89 308 *d*P P **23 09 19.4 +0.3**
ATD Arta Tunnel 26.91 171 LR LR 23 19 57.1
comp=Z,12nm,21.3s,baz=355,slow=36
HFS Hagfors 27.00 332 P P **23 09 18.6 -1.3**
comp=Z,4.3nm,0.7s,baz=126,slow=11,SNR=8.4
HFS LR LR 23 22 27.0
comp=Z,352nm,18.1s,baz=151,slow=42
comp=Z,4.3nm,0.7s
CTCHA Tamokra 27.10 277 P P **23 09 21.4 +0.3**
USP Ospenovka 27.36 68 P P **23 09 23.5 +0.1**
SNR=11
AAK Ala-Archa 27.38 69 P P **23 09 24.6 +0.9**
SNR=21
AAK Ala-Archa 27.38 69 LR LR 23 22 03.5
comp=Z,919nm,19.2s,baz=288,slow=40
AAK Ala-Archa 27.38 69 P P **23 09 23.1 -0.7**
AAK IAmb IAmb 23 09 30.5
comp=Z,81nm,1.9s
AAK Ala-Archa 27.38 69 *i* P P **23 09 24.6 +0.9**
SNR=26
AAK Ala-Archa 27.38 69*ce*P P **23 09 25.0 +1.2**
AAK pmax pmax
comp=Z,43nm,1.7s
AAK Ala-Archa 27.38 69 P P **23 09 24.7 +0.9**
UCH Uchtor 27.42 70 P P **23 09 25.5 +1.1**
SNR=10.0
CHMS Chumysh 27.55 69 P P **23 09 25.8 +0.7**
SNR=22
KBK Karagaybulak 27.71 69 P P **23 09 27.9 +1.1**
SNR=16
ABSD Ouled Sidi Bra 27.72 275 P P **23 09 25.3 -1.4**
AKET Djebel Ketaf 27.80 276 P P **23 09 27.1 -0.5**
ETOS Mallorca 27.86 284 P P **23 09 28.0 +0.1**
TKM2 Tokmak 2 28.17 69 P P **23 09 32.5 +1.6**
SNR=5.6
NIL Nilore 28.18 89 P **23 09 30.8 0.0**
NIL IAmb IAmb 23 09 32.6
comp=Z,38nm,1.7s
NIL Nilore 28.18 89 P P **23 09 30.8 0.0**
NIL pmax pmax
comp=Z,38nm,1.7s
ABRIN Birine 28.51 276 P P **23 09 32.4 -1.4**
NB2 NORSAR Subarra 28.51 332 P P **23 09 31.8 -1.7**
comp=Z,12nm,1.1s,baz=130,slow=9.3
NOA NORSAR Array B 28.51 332 P P **23 09 31.8 -1.7**
comp=Z,2.9nm,0.8s,baz=125,slow=9.3,SNR=7.3
NOA LR LR 23 22 23.5
comp=Z,255nm,18.5s,baz=140,slow=40
comp=Z,2.9nm,0.8s
KSH2 Kashi 28.59 77 P P **23 09 35.0 +0.4**
KSH2 sP sP 23 09 44.5 +5.2
KSH2 pmax pmax
comp=Z,9.0nm,1.4s
KSH2 LR LR
comp=Z,500nm,13.7s
KSH2 LR LR
comp=Z,680nm,16.8s
KSH2 LR LR
comp=Z,730nm,16.8s
KUU Kurty 28.67 67 *e*P P **23 09 35.7 +0.6**
KUU Kurty 28.67 67 *e*P P **23 09 35.8 +0.6**
ULHL Ulahol 28.70 70 P P **23 09 36.9 +1.3**
SNR=31
AFDJ Sidi Ladjel 29.00 276 P P **23 09 37.4 -0.8**
EDDR Deurdeur 29.12 277 P P **23 09 38.5 -0.7**
AAA Alma-Ata 29.12 68 *e*P P **23 09 39.7 +0.6**
AAA pmax pmax
comp=Z,25nm,0.7s
AAA Alma-Ata 29.12 68 *e*P P **23 09 39.8 +0.6**
comp=Z,25nm,0.7s
TNSS Tian-Shan 29.16 68 *e*P P **23 09 40.1 +0.2**
TNSS Tian-Shan 29.16 68 *e*P P **23 09 40.1 +0.2**
MDOK Medeo 29.22 68 *e*P P **23 09 40.7 +0.5**
MDOK *e*S S **23 14 34.3 +1.5**
MDOK Medeo 29.22 68 *e*P P **23 09 40.7 +0.5**
MDOK *e*S S **23 14 34.4 +1.5**
FURI Furi 29.28 180 LR LR 23 20 32.8
comp=Z,554nm,18.9s,baz=7.5,slow=35
EZEK Zmalet El Emir 29.37 275 P P **23 09 40.3 -1.1**
APA Apatity 29.47 356lj *e*P P **23 09 40.6 -1.2**
APA pmax pmax
comp=Z,8.0nm,1.1s
APA MLR MLR
comp=Z,645nm,5.0s
TARG Taragay, Kyrgy 29.91 71 IAmb IAmb 23 09 53.9
comp=Z,23nm,1.0s
EADEB Ain Deheb 29.95 275 P P **23 09 47.4 +0.7**
TDK Taldyqorghan 30.12 64 *e*P P **23 09 48.6 +0.7**
TDK pmax pmax
comp=Z,29nm,1.1s
TDK Taldyqorghan 30.12 64 *e*P P **23 09 48.7 +0.7**
comp=Z,29nm,1.1s
EASA Ain Sidi Ali 30.19 274 P P **23 09 48.5 -0.3**
SATY Saty 30.22 68 *e*P P **23 09 49.6 +0.6**
SATY *e*S S **23 14 49.9 +1.4**
SATY pmax pmax
comp=Z,22nm,1.6s
SATY Saty 30.22 68 *e*P P **23 09 49.6 +0.6**
comp=Z,22nm,1.6s
SATY *e*S S **23 14 49.9 +1.4**
KURBB Kurchatov Arra 30.55 53 P P **23 09 52.0 +0.4**
comp=Z,7.6nm,0.8s,baz=269,slow=9.2,SNR=41
KURBB PcP **PcP** **23 12 50.6 +0.5**
comp=Z,4.3nm,0.9s,baz=263,slow=3.4,SNR=5.3
KURBB ScP **ScP** **23 16 32.5 -0.2**
comp=Z,1.3nm,1.0s,baz=258,slow=4.4,SNR=4.6
KURBB LR LR 23 24 16.7
comp=Z,4μm,18.3s,baz=256,slow=40
comp=Z,7.6nm,0.8s
KURK Kurchatov 30.62 53 P P **23 09 51.2 -1.0**
KURK IAmb IAmb 23 09 59.4
comp=Z,18nm,1.1s
KURK Kurchatov 30.62 53*ce*P P **23 09 53.1 +0.8**
KURK pmax pmax
comp=Z,33nm,1.7s
KURK Kurchatov 30.62 53 P P **23 09 52.7 +0.4**
UZB Uzynbulak 30.66 68 *e*P P **23 09 53.4 +0.5**
UZB Uzynbulak 30.66 68 *e*P P **23 09 53.4 +0.5**
ECHE Chera 30.77 285 P P **23 09 54.1 +0.3**
SHLS Shalkode 30.98 68 *e*P P **23 09 58.9 +3.2**
SHLS pmax pmax
comp=Z,7.0nm,0.7s
SHLS Shalkode 30.98 68 *e*P P **23 09 58.9 +3.2**
comp=Z,7.0nm,0.7s
EMUR La Murta 31.34 282 P P **23 09 57.6 -1.1**
ETOB Tobarra 31.40 283 P P **23 09 59.5 +0.2**
ARCES ARCESS Array B 32.09 351 P P **23 10 04.5 -0.5**
comp=Z,5.4nm,0.8s,baz=165,slow=10.0,SNR=6.9
ARCES LR LR 23 24 03.5
comp=Z,260nm,21.0s,baz=152,slow=38
comp=Z,5.4nm,0.8s
ARCES ARCESS Array B 32.09 351 P P **23 10 04.3 -0.7**
ENIJ Nijar 32.30 281 P P **23 10 05.5 -1.8**
TAM Tamanrasset 32.34 251 P P **23 10 07.7 -0.2**
TAM Tamanrasset 32.34 251 P P **23 10 07.7 -0.2**

TAM pmax pmax
comp=Z,55nm,0.9s
UCM Universidad Co 32.36 287 P P **23 10 05.3 -2.4**
MAKZ Makanchi 32.59 61 P P **23 10 09.4 -0.2**
MAKZ IAmb IAmb 23 10 15.1
comp=Z,26nm,1.1s
MAKZ Makanchi 32.59 61 P P **23 10 09.4 -0.2**
MAKZ pmax pmax
comp=Z,26nm,1.1s
EKA Eskdalemuir Ar 32.75 315 P P **23 10 09.4 -1.6**
comp=Z,6.3nm,0.7s,baz=112,slow=8.9,SNR=13
EKA LR LR 23 25 53.6
comp=Z,436nm,19.3s,baz=114,slow=41
comp=Z,6.3nm,0.7s
MK31 Makanchi Array 32.80 61*ce*P P **23 10 11.9 +0.4**
MKAR Makanchi Array 32.80 61 P P **23 10 12.0 +0.5**
comp=Z,18nm,0.8s,baz=274,slow=6.4,SNR=147
MKAR LR LR 23 25 55.7
comp=Z,614nm,18.6s,baz=267,slow=41
comp=Z,18nm,0.8s
MKAR Makanchi Array 32.80 61 P P **23 10 11.2 -0.3**
EBER Berja 32.85 281 P P **23 10 11.6 -0.6**
ESBB Sonseca Array 33.02 286 IAmb IAmb 23 10 13.7
comp=Z,28nm,1.1s
ESDC Sonseca Array 33.02 286 P P **23 10 12.3 -1.3**
comp=Z,14nm,0.8s,baz=68,slow=9.0,SNR=34
ESDC LR LR 23 25 01.8
comp=Z,456nm,18.9s,baz=80,slow=39
comp=Z,14nm,0.8s
EQTA Presa de Quent 33.19 281 P P **23 10 13.8 -1.3**
PAB San Pablo 33.34 286 P P **23 10 14.8 -1.6**
PAB IAmb IAmb 23 10 21.1
comp=Z,20nm,1.1s
PAB San Pablo 33.34 286 P P **23 10 14.8 -1.6**
PAB pmax pmax
comp=Z,20nm,1.1s
ELGU Los Guajares, 33.42 281 P P **23 10 16.1 -1.0**
EGOR Sierra Gorda, 33.73 282 P P **23 10 18.1 -1.8**
EADA Adamuz 33.82 284 P P **23 10 19.1 -1.5**
EMAL Malaga-Limoner 34.07 281 P P **23 10 21.1 -1.6**
DSB Dublin 34.23 311 P P **23 10 28.2 +4.4**
ILTH Belurgan, Co L 34.31 312 P P **23 10 24.8 +0.3**
IWEX Carrickbyrne, 34.37 309 P P **23 10 25.7 +0.7**
ECAB El Cabril 34.49 284 P P **23 10 24.2 -2.1**
ZSN Zaisan 34.54 60 *e*P P **23 10 27.3 +0.7**
ZSN Zaisan 34.54 60 *e*P P **23 10 27.4 +0.7**
ZALV Zalesovo Beam 34.84 48 P P **23 10 29.0 -0.1**
comp=Z,1.8nm,0.5s,baz=260,slow=8.9,SNR=11
ZALV LR LR 23 26 48.1
comp=Z,756nm,19.1s,baz=254,slow=40
comp=Z,1.8nm,0.5s
ZALV Zalesovo Beam 34.84 48 P P **23 10 28.4 -0.8**
LODK Lodwar 34.86 186 P P **23 10 29.4 -0.3**
LODK Lodwar 34.86 186 P P **23 10 30.5 +0.8**
SNR=5.7
MVO Moncorvo 35.03 289 *e*P P **23 10 30.3 -0.8**
MVO *e*LR LR 23 26 15.1
MVO *i* IAMs_20 IAMs_20 23 26 58.1
comp=Z,306nm,16.0s
IDGL Inch Island, C 35.15 314 P P **23 10 36.0 +4.3**
CNIL Conil 35.44 281 P P **23 10 30.6 -3.8**
MDT Midelt 35.47 275 LR LR 23 26 39.0
comp=Z,256nm,20.7s,baz=79,slow=39
PVRL Vila Real 35.52 290 *e*P P **23 10 33.7 -1.5**
POLO Lamas de Olo 35.56 290 *e*P P **23 10 34.7 -0.9**
MTE Manteigas 35.57 288 *e*P P **23 10 34.5 -1.1**
MTE *i* IAmb IAmb 23 10 35.9
comp=Z,52nm,1.0s
MTE *e*LR LR 23 26 09.3
MTE *i* IAMs_20 IAMs_20 23 27 47.9
comp=Z,399nm,18.0s
MD01 Midelt array s 35.57 275 P P **23 10 34.7 -1.2**
MD31 MD31 35.57 275 P P **23 10 34.9 -0.9**
MD31 IAmb IAmb 23 10 42.5
comp=Z,50nm,1.8s
IFR Ifrane 35.63 276 P P **23 10 35.9 -0.5**
PCBR Castelo Branco 35.64 287 *e*P P **23 10 35.2 -0.9**
PCBR *i* IAmb IAmb 23 10 36.8
comp=Z,50nm,1.3s
PMRV Marv??o 35.66 287 *e*P P **23 10 35.5 -0.9**
PMRV *i* IAmb IAmb 23 10 37.6
comp=Z,42nm,1.1s
PMRV *e*LR LR 23 26 22.6
PMRV *i* IAMs_20 IAMs_20 23 27 55.8
comp=Z,310nm,18.0s
PCAB Cabril 35.67 291 *e*P P **23 10 35.0 -1.5**
PBAR Barrancos 35.70 284 *e*P P **23 10 35.2 -1.5**
PBAR *i* IAmb IAmb 23 10 36.8
comp=Z,41nm,1.0s
PVIS Viseu 35.76 289 *e*P P **23 10 36.0 -1.3**
PGAV Gavieira, Arco 35.80 291 *e*P P **23 10 37.1 -0.6**
PESTR Estremoz 35.95 286 *e*P P **23 10 37.7 -1.2**
PESTR *i* IAmb IAmb 23 10 44.0
comp=Z,41nm,1.2s
IGLA Glengowla, Co 36.03 311 P P **23 10 39.4 0.0**
DGZ Jazzator, Alta 36.20 56 *i* P P **23 10 40.2 -0.9**
DGZ pmax pmax
comp=Z,32nm,1.2s
PSARD Sardoal 36.20 287 *e*P P **23 10 40.6 -0.5**
PSARD *i* IAmb IAmb 23 10 48.7
comp=Z,46nm,1.6s
PARRA Arraiolos 36.30 286 *e*P P **23 10 40.0 -1.8**
PARRA *i* IAmb IAmb 23 10 54.5
comp=Z,26nm,1.5s
EVO Evora 36.35 285 P P **23 10 38.7 -3.5**
EVO Evora 36.35 285 *e*P P **23 10 40.7 -1.6**
EVO *i* IAmb IAmb 23 10 48.5
comp=Z,30nm,2.4s
PCAS Casmilo, Conde 36.35 288 *e*P P **23 10 42.0 -0.3**
PCAS *i* IAmb IAmb 23 10 48.8
comp=Z,59nm,2.2s
PBEJ Beja 36.37 284 *e*P P **23 10 41.3 -1.1**
PBEJ *i* IAmb IAmb 23 10 43.3
comp=Z,49nm,1.7s
PMTG Montargil 36.38 286 *e*P P **23 10 41.2 -1.3**
PMTG *i* IAmb IAmb 23 10 56.1
comp=Z,45nm,1.9s
PCVE Castro Verde 36.61 284 *e*P P **23 10 43.2 -1.3**
PCVE *i* IAmb IAmb 23 10 44.7
comp=Z,79nm,1.0s
MOE Montemor 36.61 285 *e*P P **23 10 44.6 +0.1**
MOE *i* IAmb IAmb 23 10 47.1
comp=Z,38nm,1.5s
PBDV Barranco-do-Ve 36.63 283 *e*P P **23 10 43.8 -0.9**
PBDV *i* IAmb IAmb 23 10 45.7
comp=Z,104nm,1.2s
MESJ Messejana 36.69 284 *e*P P **23 10 44.5 -0.7**
MESJ IAmb IAmb 23 10 47.9
comp=Z,48nm,1.5s
MESJ Messejana 36.69 284 *e*P P **23 10 46.6 +1.4**
MESJ *i* IAmb IAmb 23 11 10.1
comp=Z,46nm,1.7s
PSBE So Bento 36.70 287 *e*P P **23 10 44.7 -0.6**
PSBE *i* IAmb IAmb 23 10 57.5
comp=Z,84nm,1.7s
WMQ Urumqi 36.85 65 *e*P P **23 10 48.5 +1.9**
WMQ pP sP 23 10 52.0 +0.6
WMQ PP **PP** **23 12 16.5 +6.1**
WMQ pmax pmax
comp=Z,31nm,1.1s
WMQ LR LR
comp=Z,2μm,13.3s
WMQ LR LR
comp=Z,1μm,13.3s
WMQ LR LR
comp=Z,550nm,12.3s
PTEO Sao Teotonio 37.15 284 *e*P P **23 10 49.2 +0.1**
PTEO *i* IAmb IAmb 23 10 57.5
comp=Z,81nm,1.7s
LIS Lisbon 37.16 286 *e*P P **23 10 49.9 +0.7**
MORF Marmelete 37.17 284 *e*P P **23 10 48.5 -0.8**
MORF IAmb IAmb 23 10 49.8
comp=Z,31nm,1.0s
MORF Marmelete 37.17 284 *e*P P **23 10 49.1 -0.2**
MORF *i* IAmb IAmb 23 10 50.1
comp=Z,57nm,1.6s
MORF Marmelete 37.17 284 *e*P P **23 10 48.5 -0.8**
PFVI Vila Bisbo 37.35 283 *e*P P **23 10 49.8 -1.0**
AVE Averroes 37.49 277 P P **23 10 48.6 -3.5**
AVE Averroes 37.49 277 P P **23 10 51.4 -0.7**
TIO Tiouine 38.28 273 P P **23 10 56.6 -2.4**
MBAR Mbarara 39.42 193 LR LR 23 27 54.3
comp=Z,443nm,19.4s,baz=10.0,slow=37
MBAR Mbarara 39.42 193 P P **23 11 08.2 -0.4**
MBAR Mbarara 39.42 193 P P **23 11 08.2 -0.4**

MBAR pmax pmax
comp=Z,9.0nm,1.1s
MBAR Mbarara 39.42 193 P P 23 11 08.5 -0.1
JMIC Jan Mayen 40.70 338 LR LR 23 28 36.0
comp=Z,114nm,21.2s,baz=76,slow=37
SPITS Spitsbergen Ar 41.06 353 P P 23 11 20.6 -0.7
comp=Z,11nm,0.8s,baz=133,slow=28,SNR=6.0
SPITS LR LR 23 30 13.7
comp=Z,151nm,19.7s,baz=151,slow=39
comp=Z,11nm,0.8s
SPITS Spitsbergen Ar 41.06 353 P **P 23 11 20.8 -0.5**
SPITS pmax pmax
comp=Z,40nm,1.3s
EVN Everest 41.13 90 P P 23 11 21.8 -1.4
EVN IAmb IAmb 23 11 24.5
comp=Z,19nm,0.8s
TORD Torodi Ar. Bea 41.33 243 P P 23 11 22.8 -1.5
comp=Z,27nm,0.9s,baz=39,slow=3.2,SNR=62
TORD LR LR 23 32 33.2
comp=Z,317nm,18.9s,baz=22,slow=42
comp=Z,27nm,0.9s
KNGR Kungurtug, Tuv 42.61 54 *i* P **P 23 11 35.8 +1.3**
KNGR pmax pmax
comp=Z,38nm,1.6s
EDA Edea 43.16 224 P **P 23 11 38.2 -0.9**
LSA Lhasa 43.76 85 P **P 23 11 43.6 -0.8**
LSA Lhasa 43.76 85 P **P 23 11 40.5 -4.0**
LSA pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 43.76 85 P **P 23 11 44.0 -0.5**
LSA Lhasa 43.76 85 P **P 23 11 43.6 -0.8**
LSA pmax pmax
comp=Z,12nm,0.8s
GOMU GeErMu 44.07 75 P **P 23 11 46.8 +0.1**
GOMU pmax pmax
comp=Z,17nm,0.8s
GOMU LR LR
comp=Z,290nm,16.6s
GOMU LR LR
comp=Z,380nm,16.6s
GOMU LR LR
comp=Z,690nm,14.4s
MOY Mondy 44.65 52 *e*P **P 23 11 52.2 +1.3**
MOY pmax pmax
comp=Z,45nm,2.7s
DBG Daneborg 45.23 341 *i* P **P 23 11 55.6 +0.6**
DBG IAmb IAmb 23 11 57.4
comp=Z,10nm,1.1s
DAG Danmarks Havn 45.71 344 *i* P **P 23 11 58.0 -0.8**
DAG IAmb IAmb 23 12 00.3
comp=Z,9.6nm,0.9s
SHL Shillong 46.25 90 P **P 23 12 01.7 -2.2**
SHL Shillong 46.25 90 P **P 23 12 01.7 -2.2**
SHL pmax pmax
comp=Z,75nm,2.0s
TLY Talaya 46.28 51 LR LR 23 33 34.8
comp=Z,678nm,19.0s,baz=281,slow=39
ZAK Zakamensk 46.29 53 *e*P **P 23 12 04.0 +0.1**
ZAK *e* 23 13 41.0
ZAK pmax pmax
comp=Z,13nm,2.2s
ZAK pmax pmax
comp=Z,12nm,1.8s
IRK Irkutsk 46.57 50 *e*P **P 23 12 04.3 -1.6**
IRK pmax pmax
comp=Z,60nm,2.2s
GTA2 Gaotai 46.66 69 *e*P **P 23 12 06.8 -0.2**
GTA2 PP **PP 23 13 56.5 0.0**
GTA2 pmax pmax
comp=Z,7.0nm,1.3s
GTA2 LR LR
comp=Z,600nm,16.0s
GTA2 LR LR
comp=Z,360nm,17.1s
GTA2 LR LR
comp=Z,610nm,16.7s
NOR Nord 47.45 351 *i* P **P 23 12 11.8 -0.6**
NOR IAmb IAmb 23 12 13.2
comp=Z,8.3nm,0.9s
BRDH Bariadhala 47.52 93 LR LR 23 35 15.5
comp=Z,334nm,21.0s,baz=349,slow=40
ACRG Accra 48.02 237 P **P 23 12 18.1 +0.4**
PALK Pallekele 48.83 118 LR LR 23 35 03.5
comp=Z,255nm,18.5s,baz=316,slow=39
PALK Pallekele 48.83 118 P **P 23 12 23.4 -0.5**
comp=Z,9.3nm,1.2s
SONM Songino Array 48.85 56 P **P 23 12 24.2 +0.3**
comp=Z,1.5nm,0.7s,baz=280,slow=7.5,SNR=11
SONM PcP **PcP 23 13 50.4 +2.0**
comp=Z,3.4nm,0.8s,baz=277,slow=4.1,SNR=9.4
SONM LR LR 23 35 26.9
comp=Z,5µm,18.6s,baz=292,slow=39
comp=Z,1.5nm,0.7s
SONM Songino Array 48.85 56 P **P 23 12 22.6 -1.3**
ULN Ulaanbaatar 49.27 56 P **P 23 12 26.6 -0.4**
ULN IAmb IAmb 23 12 32.3
comp=Z,26nm,1.1s
ULN Ulaanbaatar 49.27 56*ce*P **P 23 12 28.5 +1.4**
ULN pmax pmax
comp=Z,45nm,1.7s
ULN Ulaanbaatar 49.27 56 P **P 23 12 27.8 +0.7**
ULN Ulaanbaatar 49.27 56 P **P 23 12 26.7 -0.4**
SUMG Summit 50.13 337 P **P 23 12 31.7 -1.9**
SUMG Summit 50.13 337 P **P 23 12 33.6 0.0**
SUMG Summit 50.13 337 P **P 23 12 33.6 0.0**
SUMG pmax pmax
comp=Z,13nm,1.3s
SUMG Summit 50.13 337 *i* P **P 23 12 34.1 +0.6**
SUMG IAmb IAmb 23 12 39.2
comp=Z,9.7nm,1.1s
DBIC Dimbokro 50.45 243 P **P 23 12 34.6 -1.6**
comp=Z,21nm,1.0s,baz=71,slow=8.5,SNR=14
DBIC LR LR 23 37 54.9
comp=Z,206nm,18.6s,baz=36,slow=41
comp=Z,21nm,1.0s
DBIC Dimbokro 50.45 243 P **P 23 12 34.2 -2.0**
DBIC IAmb IAmb 23 12 40.6
comp=Z,29nm,0.8s
LZDM Lanzhou Array 50.84 71 P **P 23 12 39.6 +0.3**
comp=Z,4.1nm,0.8s,baz=270,slow=8.9,SNR=5.0
LZDM LR LR 23 38 16.5
comp=Z,627nm,18.9s,baz=270,slow=41
comp=Z,4.1nm,0.8s
LZH Lanzhou 50.90 71 *e*P **P 23 12 39.5 -0.1**
LZH pP sP 23 12 44.0 -0.6
LZH pmax pmax
comp=Z,17nm,1.4s
LZH pmax pmax
comp=Z,250nm,5.8s
LZH LR LR
comp=Z,760nm,14.4s
LZH LR LR
comp=Z,410nm,14.8s
LZH LR LR
comp=Z,1µm,15.1s
TNCH TengChong 51.73 86 P **P 23 12 46.3 +0.3**
TNCH sP sP 23 12 50.8 -0.1
TNCH pmax pmax
comp=Z,23nm,1.0s
TNCH pmax pmax
comp=Z,290nm,3.7s
NEEM North Greenlan 52.93 344 *i* P **P 23 12 54.1 -0.2**
NEEM IAmb IAmb 23 12 59.6
comp=Z,11nm,0.9s
CD2 Chengdu 53.02 77 P **P 23 12 53.8 -1.6**
CD2 S **S 23 20 22.8 -2.5**
CD2 pmax pmax
comp=Z,20nm,1.5s
CD2 LR LR
comp=Z,470nm,16.4s
CD2 LR LR
comp=Z,450nm,14.7s
CD2 LR LR
comp=Z,510nm,14.4s
BTO2 Baotou 53.49 63 *e*P **P 23 12 59.8 +1.0**
BTO2 pP **sP 23 13 04.5 +0.8**
BTO2 sP **pP 23 13 07.0 +4.7**
BTO2 pmax pmax
comp=Z,27nm,0.9s
BTO2 pmax pmax
comp=Z,330nm,7.4s
BTO2 LR LR
comp=Z,930nm,20.2s
BTO2 LR LR
comp=Z,900nm,20.5s
BTO2 LR LR
comp=Z,2µm,16.8s
PZH PanZhiHua 53.52 83 P **P 23 12 59.0 -0.2**
PZH S **S 23 20 32.5 +0.1**
PZH pmax pmax
comp=Z,20nm,2.4s
PZH LR LR
comp=Z,150nm,15.7s
PZH LR LR
comp=Z,180nm,17.8s
PZH LR LR
comp=Z,250nm,15.6s
TIXI Tiksi 54.19 23 LR LR 23 39 50.9
comp=Z,160nm,18.1s,baz=268,slow=40
TIXI Tiksi 54.19 23 P **P 23 13 02.7 -0.6**
TIXI Tiksi 54.19 23*ce*P **P 23 13 04.3 +1.1**
TIXI pmax pmax
comp=Z,24nm,2.5s
LSZ Lusaka 54.22 193 LR LR 23 36 43.5
comp=Z,501nm,21.7s,baz=352,slow=37
LSZ Lusaka 54.22 193 P **P 23 13 04.3 +0.1**
LSZ IAmb IAmb 23 13 11.7
comp=Z,13nm,1.0s
LSZ Lusaka 54.22 193 P **P 23 13 04.3 +0.1**
LSZ pmax pmax
comp=Z,13nm,1.0s
LSZ Lusaka 54.22 193 P **P 23 13 04.1 -0.1**
HHC Hu-ho-hao-te 54.63 63 ⇓*i*P **P 23 13 08.5 +1.4**
HHC pP sP 23 13 11.5 -0.5
HHC S **S 23 20 48.5 +1.5**
HHC pmax pmax
comp=Z,13nm,1.0s
HHC pmax pmax
comp=Z,130nm,7.6s
HHC LR LR
comp=Z,320nm,17.9s
HHC LR LR
comp=Z,760nm,15.7s
HHC LR LR
comp=Z,1µm,16.3s
KMI2 Kunming 54.98 84 ⇓P **P 23 13 08.5 -1.5**
KMI2 S **S 23 20 48.5 -3.8**
KMI2 pmax pmax
comp=Z,12nm,1.1s
KMI2 LR LR
comp=Z,130nm,16.1s
KMI2 LR LR
comp=Z,230nm,17.1s
KMI2 LR LR
comp=Z,240nm,19.7s
SFJD Kangerlussuaq 55.19 331 LR LR 23 39 05.2
comp=Z,12nm,19.3s,baz=67,slow=39
CHTO Chiang Mai 55.34 93 P **P 23 13 10.9 -1.5**
CHTO Chiang Mai 55.34 93 P **P 23 13 11.6 -0.8**
CHTO Chiang Mai 55.34 93 P **P 23 13 10.9 -1.5**
CHTO pmax pmax
comp=Z,9.0nm,1.2s
CHTO Chiang Mai 55.34 93 P **P 23 13 09.0 -3.4**
comp=Z,11nm,1.1s
XAN Xi'an 55.54 71 P **P 23 13 13.5 -0.2**
XAN pP pP 23 13 17.3 +0.1
XAN S **S 23 20 59.8 +0.6**
XAN pmax pmax
comp=Z,11nm,1.2s
XAN pmax pmax
comp=Z,250nm,3.8s
XAN LR LR
comp=Z,740nm,15.5s
XAN LR LR
comp=Z,710nm,19.4s
XAN LR LR
comp=Z,1µm,16.0s
CM31 Chiang Mai Arr 55.54 93 P **P 23 13 11.7 -2.2**
CMAR Chiang Mai Arr 55.54 93 P **P 23 13 12.8 -1.1**
comp=Z,2.5nm,0.3s,baz=298,slow=8.1,SNR=20
CMAR LR LR 23 43 00.9
comp=Z,108nm,19.2s,baz=300,slow=42
comp=Z,2.5nm,0.3s
CMAR Chiang Mai Arr 55.54 93 P **P 23 13 12.5 -1.3**
GDH Godhavn 55.56 334 *i* P **P 23 13 11.5 -1.8**
GDH IAmb IAmb 23 13 13.9
comp=Z,11nm,0.8s
XLT XiLinHaoTe 56.52 58 *e*P **P 23 13 20.3 -0.3**
XLT pP pP 23 13 24.3 +0.1
XLT PcP **PcP 23 14 20.8 +3.5**
XLT PP **PP 23 15 30.0 +3.8**
XLT pmax pmax
comp=Z,5.0nm,1.9s
XLT pmax pmax
comp=Z,280nm,4.6s
XLT LR LR
comp=Z,2µm,18.0s
HILR Hailar Array B 56.71 50 P **P 23 13 21.2 -0.6**
comp=Z,4.1nm,0.7s,baz=264,slow=5.7,SNR=4.7
comp=Z,4.1nm,0.7s
TULEG Thule 57.02 345 *i* P **P 23 13 22.2 -1.3**
TULEG IAmb IAmb 23 13 24.2
comp=Z,30nm,1.8s
KSANE Kasane 57.26 195 P **P 23 13 26.4 +0.4**
GYA Guiyang 57.38 80 ⇑P **P 23 13 26.3 -0.7**
GYA pmax pmax
comp=Z,8.0nm,1.0s
YAK Yakutsk 57.41 34 LR LR 23 42 34.9
comp=Z,555nm,18.1s,baz=284,slow=41
YAK Yakutsk 57.41 34 *e*P **P 23 13 28.6 +2.1**
YAK *e**PP **sP 23 13 34.0 +2.8**
YAK *e* 23 14 21.7
YAK *e*S **S 23 21 26.5 +3.4**
YAK *e* 23 23 20.5
YAK *e*SS **SS 23 25 20.5 +8.5**
YAK pmax pmax
comp=Z,18nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.4s
YAK pmax pmax
comp=Z,145nm,4.6s
YAK pmax pmax
comp=E,45nm,3.5s
YAK pmax pmax
comp=N,90nm,3.7s
YAK smax smax
comp=N,84nm,4.0s
YAK smax smax
comp=E,79nm,3.5s
YAK MLR MLR
comp=E,542nm,27.0s
YAK MLR MLR
comp=Z,445nm,14.0s
ENH Enshi 57.69 75 IAmb IAmb 23 13 35.2
comp=Z,12nm,0.9s
ENH Enshi 57.69 75 P **P 23 13 28.6 -0.4**
LYN LuoYang 57.93 69 P **P 23 13 35.0 +4.4**
LYN pmax pmax
comp=Z,17nm,1.1s
BJI2 Beijing 58.18 62 P **P 23 13 36.3 +4.1**
BJI2 pmax pmax
comp=Z,5.0nm,2.0s
HNS HongShan 58.28 65 ⇓P **P 23 13 33.5 +0.5**
HNS S **S 23 21 38.5 +3.3**
HNS pmax pmax
comp=Z,12nm,1.8s
HNS LR LR
comp=Z,430nm,16.7s
HNS LR LR
comp=Z,470nm,16.3s
HNS LR LR
comp=Z,710nm,16.3s
ZEA Zeya 59.40 44 *e*P **P 23 13 42.4 +1.9**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA MLR MLR
comp=E,300nm,17.0s
ZEA MLR MLR
comp=Z,400nm,19.0s
TSUM Tsumeb 60.57 203 LR LR 23 41 11.5
comp=Z,783nm,18.1s,baz=334,slow=37
TSUM Tsumeb 60.57 203 P **P 23 13 48.0 -1.0**
TSUM IAmb IAmb 23 13 50.2
comp=Z,32nm,1.9s
HEH HeiHe 60.96 47 *e*P **P 23 13 51.5 +0.2**
HEH pmax pmax
comp=Z,7.0nm,0.9s
HEH pmax pmax
comp=Z,360nm,3.8s
HEH LR LR
comp=Z,400nm,14.7s
HEH LR LR
comp=Z,370nm,13.5s
HEH LR LR
comp=Z,610nm,14.4s
POIN Pond Inlet 61.11 342 P **P 23 13 52.0 +0.1**
POIN IAmb IAmb 23 13 57.7
comp=Z,10nm,1.0s
GRTLG Ghanzi 61.60 199 P **P 23 13 56.0 0.0**
GRTLG IAmb IAmb 23 14 38.1
comp=Z,10nm,1.1s
CN2 Changchun 62.68 54 *e*P **P 23 14 05.0 +2.0**
CN2 *e*S **S 23 22 29.8 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,600nm,15.0s
CN2 LR LR
comp=Z,800nm,15.0s
CN2 LR LR
comp=Z,900nm,15.6s
BNX BinXian 63.01 52 ⇓P **P 23 14 05.3 +0.2**
BNX pmax pmax
comp=Z,5.0nm,0.7s
RES Resolute Bay 63.21 348 LR LR 23 43 13.7
comp=Z,151nm,18.5s,baz=18,slow=38
KCSI Kotacane, Aceh 63.76 107 P **P 23 14 10.6 +0.1**
comp=Z,9.1nm,0.9s
QIZ Qiongzhong 63.79 86 P **P 23 14 07.3 -3.4**
QIZ S **S 23 22 43.5 -2.4**
QIZ pmax pmax
comp=Z,9.0nm,1.1s
QIZ LR LR
comp=Z,160nm,15.1s
QIZ LR LR
comp=Z,170nm,11.0s
QIZ LR LR
comp=Z,200nm,12.4s
NJ2 Nanjing 63.82 69 *e*P **P 23 14 09.3 -1.4**
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
WIN Windhoek 63.88 202 P **P 23 14 10.7 -0.5**
WIN IAmb IAmb 23 14 17.9
comp=Z,11nm,0.8s
WIN Windhoek 63.88 202 P **P 23 14 10.7 -0.5**
WIN pmax pmax
comp=Z,11nm,0.8s
KLR Kul'dur 63.93 47 LR LR 23 45 25.4
comp=Z,390nm,19.6s,baz=303,slow=39
KLR Kul'dur 63.93 47*ce*P **P 23 14 12.4 +1.2**
KLR pmax pmax
comp=Z,19nm,1.5s
LBTB Lobatse 64.19 193 LR LR 23 44 18.9
comp=Z,204nm,18.2s,baz=19,slow=38
ILON Igloolik, Nuna 64.19 340 P **P 23 14 11.6 -0.9**
ILON IAmb IAmb 23 14 18.0
comp=Z,15nm,1.0s
GSI Gunungsitoli 65.07 109 P **P 23 14 17.5 -1.6**
GSI IAmb IAmb 23 14 25.0
comp=Z,18nm,1.1s
GSI Gunungsitoli 65.07 109 P **P 23 14 23.1 +4.0**
GSI Gunungsitoli 65.07 109 P **P 23 14 18.0 -1.1**
comp=Z,15nm,1.0s
PSI Prapat 65.09 107 P **P 23 14 18.9 -0.5**
PSI Prapat 65.09 107 P **P 23 14 17.8 -1.6**
PSI pmax pmax
comp=Z,30nm,1.5s
PSI Prapat 65.09 107 P **P 23 14 17.3 -2.1**
comp=Z,13nm,1.0s
RPSI Rantau Prapat 65.16 107 P **P 23 14 17.8 -1.9**
RPSI IAmb IAmb 23 14 23.0
comp=Z,30nm,1.5s
SEY Seymchan 66.12 27 *i* P **P 23 14 25.6 +0.5**
SEY pmax pmax
comp=Z,33nm,1.1s
BILL Bilibino 66.93 19 *i* P **P 23 14 30.7 +0.4**
BILL pmax pmax
comp=Z,16nm,0.9s
KSAR Wonju Array Be 67.45 60 P **P 23 14 32.4 -1.7**
KSAR Wonju Array Be 67.45 60 P **P 23 14 32.4 -1.7**
KSRS Korea Array 67.47 59 P **P 23 14 34.1 -0.1**
comp=Z,23nm,1.0s,baz=295,slow=5.5,SNR=15
KSRS LR LR 23 47 43.9
comp=Z,1µm,18.6s,baz=305,slow=39
comp=Z,23nm,1.0s
MA2 Magadan 67.57 31 LR LR 23 49 45.6
comp=Z,265nm,18.2s,baz=233,slow=41
MA2 Magadan 67.57 31 P **P 23 14 38.4 +3.9**
MA2 Magadan 67.57 31 *i* P **P 23 14 34.7 +0.2**
MA2 pmax pmax
comp=Z,29nm,1.1s
SCHQ Schefferville 67.60 323 P **P 23 14 33.1 -1.7**
comp=Z,9.4nm,0.8s,baz=65,slow=5.5,SNR=23
SCHQ LR LR 23 46 03.5
comp=Z,62nm,18.5s,baz=68,slow=38
comp=Z,9.4nm,0.8s
SCHQ Schefferville 67.60 323 P **P 23 14 33.0 -1.7**
SCHQ IAmb IAmb 23 14 35.1
comp=Z,10nm,0.8s
BOSA Boshof 67.77 193 P **P 23 14 34.8 -1.3**
comp=Z,4.5nm,1.1s,baz=339,slow=7.4,SNR=4.8
BOSA LR LR 23 44 23.9
comp=Z,194nm,19.3s,baz=24,slow=36
comp=Z,4.5nm,1.1s
PDSI Padang 68.69 109 P **P 23 14 40.4 -1.8**
comp=Z,2µmcomp=Z,27nm,1.0s
TYV Tymovskoe 69.02 41 *e*P **P 23 14 47.9 +4.2**
TYV *e* 23 23 57.2
TYV pmax pmax
comp=Z,9.0nm,1.0s
TYV pmax pmax
comp=Z,100nm,4.8s
TYV MLR MLR
comp=Z,1µm,16.0s
A36M Sachs Harbour 69.43 355 IAmb IAmb 23 14 52.2
comp=Z,9.4nm,0.8s
B22K Teshekpuk Lake 71.30 4 IAmb IAmb 23 15 03.6
comp=Z,9.9nm,0.9s
YSS Yuzhno-Sakhali 71.36 45 *e*P **P 23 14 58.8 +0.7**
B20K Meade River 71.37 6 IAmb IAmb 23 15 04.4
comp=Z,8.7nm,0.9s
MASI Maura Aman, Be 71.49 110 P **P 23 15 00.4 +1.0**
BATG Bathurst New B 71.64 316 P **P 23 14 59.3 -0.6**
BATG IAmb IAmb 23 15 00.7
comp=Z,10nm,1.1s
BLKN Baker Lake 71.69 341 IAmb IAmb 23 15 05.2
comp=Z,13nm,1.1s
LMN Caledonia Moun 71.80 314 IAmb IAmb 23 15 01.3
comp=Z,11nm,1.0s
JNU Nakatsue 71.85 62 P **P 23 15 00.6 -0.8**
comp=Z,13nm,0.9s,baz=342,slow=6.4,SNR=4.2
JNU LR LR 23 50 45.5
comp=Z,651nm,18.3s,baz=332,slow=39
comp=Z,13nm,0.9s
SUR Sutherland 72.29 196 LR LR 23 47 23.9
comp=Z,275nm,18.2s,baz=16,slow=36
ASAJ Asahikawa 72.97 47 LR LR 23 52 30.0
comp=Z,252nm,18.8s,baz=330,slow=40
INK Inuvik 73.55 357 LR LR 23 53 47.4
comp=Z,73nm,18.2s,baz=347,slow=41
G65A Princeton 73.74 315 P **P 23 15 12.3 0.0**
G65A IAmb IAmb 23 15 19.4
comp=Z,24nm,1.5s
F64A Sherman 73.76 316 P **P 23 15 11.6 -0.8**
F64A IAmb IAmb 23 15 13.4
comp=Z,15nm,1.0s
E25K Arctic Village 73.84 2 P **P 23 15 12.8 +0.3**
E62A Clayton Lake 73.92 317 P **P 23 15 12.1 -1.3**
E62A IAmb IAmb 23 15 14.1
comp=Z,17nm,1.0s
F28M Old Crow 74.40 359 P **P 23 15 15.2 -0.6**
F31M Tsiigehtchic 74.42 357 P **P 23 15 15.2 -0.7**
BMAR Burnt Mountain 74.56 1 P **P 23 15 17.6 +0.8**
PETK Petropavlovsk- 74.74 33 LR LR 23 53 11.9
comp=Z,378nm,18.1s,baz=308,slow=40
MJAR Matsushiro Arr 74.80 55 P **P 23 15 18.8 +0.1**
comp=Z,6.1nm,1.0s,baz=316,slow=5.5,SNR=9.0
MJAR LR LR 23 51 28.5
comp=Z,856nm,18.8s,baz=317,slow=38
comp=Z,6.1nm,1.0s
IMAR Indian Mountai 75.58 5 P **P 23 15 22.5 -0.2**
LBNH Lisbon 76.75 316 P **P 23 15 29.4 -0.3**
LBNH IAmb IAmb 23 15 30.7
comp=Z,10.0nm,0.9s
LBNH Lisbon 76.75 316 P **P 23 15 29.4 -0.3**
LBNH pmax pmax
comp=Z,10.0nm,1.0s

VLDQ	Val d'Or	76.99	322		P	P	23 15 30.9	0.0
VLDQ					IAmb	IAmb	23 15 32.1	
	comp=Z,10nm,0.9s							
COLA	College	77.02	3		P	P	23 15 37.7	+6.9
COLA	College	77.02	3	*i*	P	P	23 15 30.4	-0.4
ILAR	Eielson Array	77.16	2		P	P	23 15 31.8	+0.2
	comp=Z,0.8nm,1.0s,baz=334,slow=3.3,SNR=4.5							
ILAR					LR	LR	23 54 12.1	
	comp=Z,47nm,20.1s,baz=342,slow=39							
	comp=Z,0.8nm,1.0s							
ILAR	Eielson Array	77.16	2		P	P	23 15 31.2	-0.4
YKA	Yellowknife Ar	77.28	348		P	P	23 15 32.2	-0.1
	comp=Z,1.6nm,0.7s,baz=13,slow=6.4,SNR=24							
YKA					LR	LR	23 51 47.7	
	comp=Z,64nm,19.1s,baz=41,slow=37							
	comp=Z,1.6nm,0.7s							
YKA	Yellowknife Ar	77.28	348		P	P	23 15 31.8	-0.5
HDA	Harding Lake	77.52	3		P	P	23 15 31.9	-1.7
JHJ	Hachijo jima 2	77.89	57		LR	LR	23 53 18.0	
	comp=Z,590nm,18.4s,baz=310,slow=38							
LONY	Lake Ozonia	77.92	318		IAmb	IAmb	23 15 37.0	
	comp=Z,9.5nm,0.8s							
LEM	Lembang	77.93	109		LR	LR	23 54 21.6	
	comp=Z,66nm,18.2s,baz=329,slow=39							
J59A	Piesco	78.65	317		P	P	23 15 39.2	-1.1
J59A					IAmb	IAmb	23 15 41.4	
	comp=Z,11nm,0.9s							
DELO	Deloro Mine	79.56	319		P	P	23 15 44.1	-1.2
DELO					IAmb	IAmb	23 15 46.1	
	comp=Z,11nm,0.9s							
L59A	Walton	79.81	316		IAmb	IAmb	23 15 47.8	
	comp=Z,19nm,0.9s							
SADO	Sadowa	80.16	320		LR	LR	23 53 13.8	
	comp=Z,212nm,18.7s,baz=141,slow=37							
L56A	Greenwood	81.20	318		P	P	23 15 53.5	-0.6
L56A					IAmb	IAmb	23 15 54.7	
	comp=Z,15nm,1.0s							
SHEM	Shemya Is, Ala	81.38	26		LR	LR	23 57 17.8	
	comp=Z,132nm,18.3s,baz=60,slow=40							
FFC	Flin Flon	81.41	338		P	P	23 15 54.2	-0.8
FFC	Flin Flon	81.41	338		P	P	23 15 54.2	-0.8
FFC					pmax	pmax		
	comp=Z,10.0nm,1.4s							
RCBR	Riachuelo	81.69	256		LR	LR	23 54 31.7	
	comp=Z,92nm,18.6s,baz=60,slow=37							
TBO	Thunder Bay	81.98	328		IAmb	IAmb	23 15 59.4	
	comp=Z,20nm,0.9s							
DLBC	Dease Lake	83.16	354		LR	LR	23 57 36.8	
	comp=Z,80nm,18.6s,baz=301,slow=39							
DAV	Davao City (W)	83.16	86		LR	LR	23 57 54.0	
	comp=Z,158nm,19.9s,baz=1.0,slow=39							
ULM	Lac du Bonnet	83.20	333		P	P	23 16 03.2	-1.2
	comp=Z,7.7nm,0.8s,baz=45,slow=4.9,SNR=14							
ULM					LR	LR	23 56 05.8	
	comp=Z,218nm,18.3s,baz=12,slow=38							
	comp=Z,7.7nm,0.8s							
ULM	Lac du Bonnet	83.20	333		IAmb	IAmb	23 16 05.0	
	comp=Z,1.1nm,0.9s							
JCJ	Chichijima	83.28	61		LR	LR	23 56 23.1	
	comp=Z,546nm,20.1s,baz=78,slow=38							
KDAK	Kodiak Island	83.79	6		LR	LR	23 57 12.5	
	comp=Z,80nm,18.8s,baz=12,slow=38							
KAPI	Kappang	86.02	100		LR	LR	23 59 40.0	
	comp=Z,38nm,19.3s,baz=278,slow=39							
MDP	Montagnes des	87.99	275		LR	LR	23 54 24.4	
	comp=Z,70nm,20.8s,baz=84,slow=35							
ECSD	EROS Data Cent	88.90	329		P	P	23 16 31.8	-0.9
ECSD					IAmb	IAmb	23 19 09.2	
	comp=Z,26nm,1.9s							
BBB	Bella Bella	89.16	352		LR	LR	00 01 31.8	
	comp=Z,82nm,19.3s,baz=112,slow=39							
TKL	Tuckaleechee C	89.22	317		LR	LR	23 56 09.0	
	comp=Z,135nm,21.7s,baz=44,slow=35							
LAO	LASA Array	89.76	337		P	P	23 16 37.0	+0.3
LAO					IAmb	IAmb	23 16 38.8	
	comp=Z,17nm,0.9s							
SJG	San Juan	90.12	293		LR	LR	23 54 09.4	
	comp=Z,33nm,21.8s,baz=91,slow=34							
CGM3	Cape Girardeau	91.00	321		P	P	23 16 41.9	-0.7
NEW	Newport	91.18	344		P	P	23 16 43.3	0.0
	comp=Z,9.9nm,0.9s,baz=31,slow=5.4,SNR=12							
NEW					LR	LR	23 58 49.9	
	comp=Z,92nm,19.5s,baz=16,slow=36							
	comp=Z,9.9nm,0.9s							
NEW	Newport	91.18	344		P	P	23 16 43.8	+0.5
NEW	Newport	91.18	344		P	P	23 16 43.8	+0.5
NEW					pmax	pmax		
	comp=Z,18nm,1.2s							
RLMT	Red Lodge	92.10	338		P	P	23 16 48.5	+0.6
RLMT					IAmb	IAmb	23 16 50.0	
	comp=Z,12nm,1.5s							
BATI	Baumata	92.27	101		LR	LR	00 03 22.7	
	comp=Z,76nm,19.4s,baz=306,slow=39							
GUMO	Guam	93.89	69		LR	LR	00 03 29.2	
	comp=Z,118nm,19.5s,baz=74,slow=38							
PDAR	Pinedale Array	94.33	337		P	P	23 16 57.0	-1.2
	comp=Z,0.3nm,0.7s,baz=5.7,slow=3.0,SNR=4.0							
PDAR					LR	LR	00 02 07.5	
	comp=Z,82nm,18.1s,baz=16,slow=37							
	comp=Z,0.3nm,0.7s							
MFID	Camas Ranch	95.46	342		P	P	23 17 02.3	-0.9
MFID					IAmb	IAmb	23 17 04.7	
	comp=Z,6.5nm,1.2s							
BDFB	Brasilia	97.07	256		LR	LR	00 02 30.3	
	comp=Z,253nm,20.0s,baz=45,slow=36							
ELK	Elko	97.81	340		P	Pdif	23 17 14.4	+0.3
	comp=Z,0.9nm,0.8s,baz=46,slow=7.1,SNR=4.5							
	comp=Z,0.9nm,0.8s							
YBH	Yreka Blue Hor	98.57	346		LR	LR	00 03 04.8	
	comp=Z,6.8nm,20.8s,baz=26,slow=36							
SDV	Santo Domingo	99.42	289		LR	LR	23 57 40.9	
	comp=Z,79nm,20.8s,baz=151,slow=33							
NVL	N'lazarevskaya	110.49	189	*i*	PKIKP	PKiKP	23 22 11.9	+2.4
NVL				*e*			23 22 47.6	
NVL				*e*	PPP	PPP	23 25 07.1	
NVL				*e*			23 29 24.1	
NVL				*e*	SS	SS	23 38 17.6	+3.6
NVL					pmax	pmax		
	comp=Z,13nm,1.5s							
NVL					MLR	MLR		
	comp=Z,672nm,18.0s							
DZM	Mont Dzumac	132.57	86	*e*	LR	LR	00 04 49.3	
	comp=Z,147nm,23.6s							
QRZ	Quartz Range	144.57	109		PKPdf	PKPab	23 23 12.1	-1.1
LTZ	Lake Taylor	144.72	112		PKPdf	PKPab	23 23 12.6	-1.1
THZ	Tophouse	145.03	110			PKPbc	23 23 12.6	-2.3
RTZ	Ruatahuna	147.47	104			PKPdf	23 23 20.0	+0.3
PPT2	Papeete2	158.10	22	*e*	SS	SS	23 47 49.6	+2.7
	comp=Z,55nm,23.5s							
PPT2				*e*	LR	LR	00 16 52.6	
	comp=Z,131nm,25.5s							
TBI	Tubuai	163.51	28	*e*	LR	LR	00 19 20.2	
	comp=Z,583nm,26.5s							

*NEIC **25** 23:16:09.9±1.0, 18°.99N±0°.06×66°.97W±0°.03, h18km±10km, ML3.1/39, Md3.4/3(RSPR), Error ellipse: s-maj=9.0km s-min=4.6km az=171.0*

*RSPR **25** 23:16:11.6, 19°.04N×67°.06W, h24km±20km, MD3.4/3*

*OSPL **25** 23:16:11.5±0.6, 18°.96N×66°.97W, h0km±12km, ML3.0, Presumed earthquake*

*SDD **25** 23:16:11.2±2.4, 18°.93N×66°.93W, h0km±27km, MD3.3, ML3.0, MW3.3, Presumed earthquake*

ISC 25 23:16:10.4±1.4, 18°.96N±0°.05×66°.97W±0°.03, h15km±9km, n41, σ0s66/71, 10C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.50	195	Pg	Pg	23 16 20.8	+0.4
AGPR				Sg	Sb	23 16 29.1	+0.9
AGPR				IAML		23 16 29.9	
	987nm,0.5s						
AGPR				IAML		23 16 32.2	
	863nm,0.4s						
AGPR	Aguadilla, PR	0.50	195	⇑*i*P	Pg	23 16 20.6	+0.3
AGPR				*i* S	Sg	23 16 26.1	-1.1
AGPR				IAML		23 16 32.2	
	comp=N,810nm,0.2s						
AGPR	Aguadilla, PR	0.50	195	⇓*i*P	Pb	23 16 21.3	+0.3
AGPR				*e*S	Sb	23 16 29.4	+1.3
IDE	Isla Desecheo	0.74	220		Pg	23 16 24.5	-0.3
IDE					Sg	23 16 33.6	-1.0
IDE	Isla Desecheo	0.74	220	⇑*i*P	Pg	23 16 24.5	-0.3
IDE				*e*S	Sg	23 16 33.6	-1.0
UUPR	Utuado, UPR, P	0.74	161	Pg	Pg	23 16 25.1	+0.3
UUPR				Sg	Sg	23 16 35.2	+0.6
PRSN	Puerto Rico Se	0.75	192	Pg	Pg	23 16 24.8	-0.3
PRSN				Sg	Sg	23 16 34.9	-0.1
PRSN	Puerto Rico Se	0.75	192	⇑*i*P	Pg	23 16 25.2	+0.1
PRSN				⇑*i*S	Sb	23 16 35.5	+0.2
PRSN				IAML		23 16 43.6	
	comp=N,1μm,0.2s						
PRSN	Puerto Rico Se	0.75	192	⇑*i*P	Pg	23 16 25.2	+0.1
PRSN				*e*S	Sg	23 16 35.3	+0.3
LSP	Las Mesas	0.79	188		Pb	23 16 25.8	0.0
LSP					Sn	23 16 37.6	-0.9
LSP	Las Mesas	0.79	188	⇓*i*P	Pb	23 16 25.8	0.0
LSP				*e*S	Sn	23 16 37.6	-0.9
ECPR	Experimental S	0.86	138	Pg	Pb	23 16 27.2	+0.2
ECPR				Sg	Sg	23 16 39.1	+0.7
ECPR	Experimental S	0.86	138	⇓*i*P	Pg	23 16 27.4	+0.4
ECPR				*e*S	Sg	23 16 39.1	+0.7
CELP	Cerrillos	0.95	157		Pb	23 16 28.5	-0.2
CELP				Sg	Sb	23 16 40.8	-0.3
CELP				IAML		23 16 42.8	
	comp=N,348nm,0.4s						
CELP				IAML		23 16 46.0	
	comp=N,336nm,0.3s						
CRPR	Cabo Rojo, PR	0.95	188	Pg	Pb	23 16 27.8	-0.9
CRPR					Sb	23 16 41.5	+0.5
CRPR				IAML		23 16 41.8	
	comp=N,699nm,0.4s						
CRPR				IAML		23 16 41.9	
	comp=N,393nm,0.5s						
CRPR	Cabo Rojo, PR	0.95	188	⇑*i*P	Pb	23 16 28.4	-0.3
CRPR				⇑*i*S	Sb	23 16 40.1	-1.0
CRPR				IAML		23 16 43.2	
	comp=N,368nm,0.5s						
CRPR	Cabo Rojo, PR	0.95	188	⇑*i*P	Pb	23 16 28.3	-0.3
CRPR				*e*S	Sb	23 16 41.6	+0.5
CRPR	Cabo Rojo, PR	0.95	188	*i* P	Pb	23 16 28.2	-0.4
CRPR				*e*S	Sb	23 16 41.3	+0.2
CRPR				IAML		23 16 41.8	
	comp=Z,352nm,0.5s						
OBIP	Obispado Ponce	0.97	159		Pb	23 16 28.8	-0.2
OBIP					Sg	23 16 42.4	+0.4
OBIP	Obispado Ponce	0.97	159	⇑*i*P	Pb	23 16 29.0	0.0
OBIP				*e*S	Sn	23 16 43.1	0.0
OBIP	Obispado Ponce	0.97	159	*i* P	Pb	23 16 29.1	+0.1
OBIP				*e*S	Sb	23 16 42.0	+0.3
OBIP				IAML		23 16 46.6	
	comp=Z,194nm,0.3s						
GBPR	Guanica, Bosqu	0.98	175		Pn	23 16 30.1	+0.4
GBPR					Sn	23 16 44.2	+0.9
GBPR	Guanica, Bosqu	0.98	175	⇓*i*P	Pn	23 16 30.1	+0.4
GBPR				*e*S	Sn	23 16 44.2	+0.9
MLPR	Magueyes Islan	0.98	184	Pg	Pb	23 16 27.4	-1.7
MLPR				Sg	Sb	23 16 41.4	-0.6
MLPR				IAML		23 16 52.3	
	comp=Z,269nm,0.4s						
GCPR	Guaynabo City	1.06	127		Pb	23 16 29.9	-0.6
GCPR				Sg	Sb	23 16 44.4	+0.2
GCPR	Guaynabo City	1.06	127	⇑*i*P	Pb	23 16 30.5	0.0
GCPR				*e*S	Sb	23 16 44.2	0.0
SJG	San Juan	1.15	137	Pn	Pn	23 16 31.6	-0.3
SJG	San Juan	1.15	137	⇑*i*P	Pn	23 16 31.5	-0.5
SJG				⇑*i*S	Sb	23 16 45.2	-1.4
SJG	San Juan	1.15	137	*i* P	Pn	23 16 31.8	-0.1
SJG				IAML		23 16 54.8	
	comp=Z,87nm,0.3s						
PDPR	Patillas Dam,	1.30	136	Pn	Pn	23 16 33.3	-0.7
PDPR				IAML		23 16 58.0	
	comp=Z,202nm,0.2s						
PDPR				IAML		23 16 59.1	
	comp=Z,183nm,0.2s						
HUMP	Col San Antoni	1.34	127	Pn	Pn	23 16 34.0	-0.5
HUMP				IAML		23 16 57.8	
	comp=Z,254nm,0.2s						
HUMP	Col San Antoni	1.34	127	⇑*i*P	Pn	23 16 34.0	-0.5
HUMP				*e*S	Sg	23 16 53.9	+0.2
CUPR	Culebra, Puert	1.73	112	Pn	Pn	23 16 39.4	-0.5
SMDR	Samana, DR	2.12	279	⇑*i*P	Pn	23 16 45.9	+0.6
SMDR				⇑*i*S	Sn	23 17 11.2	-0.3
SMDR				IAML		23 17 22.6	
	comp=N,187nm,0.7s						
DR12	Loma Pena Alta	2.29	266	Pn	Pn	23 16 47.2	-0.4
HATOM	Hato Mayor del	2.29	266	⇑*i*P	Pn	23 16 48.8	+1.1
HATOM				*i* S	Sb	23 17 18.7	-0.8
HATOM				IAML		23 17 21.8	
	comp=N,117nm,0.5s						
BANI	BANI	3.26	261	Pn	Pn	23 17 02.2	+1.1
SDDR	Presa de Saban	4.08	271	Pn	Pn	23 17 12.1	-0.3
SDDR	Presa de Saban	4.08	271	*i* P	Pn	23 17 13.7	+1.3
SDDR				IAML		23 18 20.2	
	comp=Z,38nm,0.5s						
LONE3	El Aguacate, B	4.26	266	*i* P	Pn	23 17 15.7	+0.8
LONE3				IAML		23 18 27.0	
	comp=Z,23nm,3.8s						
LOBH	Bahia de las A	4.56	257	*i* P	Pn	23 17 19.9	+1.0
LOBH				IAML		23 18 28.6	
	comp=Z,41nm,1.9s						

*IDC **25** 23:58:33.8±2.0, 14°.74N×146°.05E, h98km±19km, mb3.7/15, mbtmp4.0/15, Error ellipse: s-maj=26.3km s-min=18.7km az=93.0*

*NEIC **25** 23:58:34.7±1.3, 14°.8N±0°.1×146°.1E±0°.1, h97km±8km, mb4.2/33, Error ellipse: s-maj=18.7km s-min=14.0km az=136.0*

ISC 25 23:58:34.2±0.6, 14°.74N±0°.07×146°.0E±0°.1, h100km, n62, σ0s70/58, mb4.2/32, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.61	225	P	Pn	23 59 02.8	+1.0
	126nm,0.3s,baz=77,slow=4.1,SNR=7.7						
GUMO				S	Sn	23 59 22.3	-0.5
	833nm,0.4s,baz=201,slow=20,SNR=17						
GUMO	Guam	1.61	225		Pn	23 59 02.5	+0.7
GUMO					Sn	23 59 21.9	-1.0
PATS	Pohnpei	14.38	122	Pn	Pn	00 01 52.7	-0.5
H11S3	WAKE ISLAND Hy	20.14	76	T	T	00 24 30.1	
	baz=263,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	20.15	76	T	T	00 24 31.5	
	baz=263,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	20.15	76	T	T	00 24 37.4	
	baz=263,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	20.52	73	T	T	00 24 40.5	
	baz=261,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	20.53	73	T	T	00 24 40.9	
	baz=261,slow=75,SNR=7.9						
H11N3	WAKE ISLAND Hy	20.54	73	T	T	00 24 41.8	
	baz=261,slow=75,SNR=12						
KSRS	Korea Array	27.76	328	P	P	00 04 13.8	+0.3
	2.8nm,0.7s,baz=144,slow=9.3,SNR=6.4						
	2.8nm,0.7s						
COEN	Coen	28.65	186		P	00 04 21.8	+0.1
COEN				IAmb	IAmb	00 04 42.7	
	comp=Z,8.9nm,1.2s						
WB0	Warramunga Arr	36.15	199	P	P	00 05 28.0	+0.9
WR8	Warramunga Arr	36.30	199	P	P	00 05 28.8	+0.4
WRA	Warramunga Arr	36.33	199	P	P	00 05 28.9	+0.2
	comp=Z,0.4nm,0.4s,baz=19,slow=8.4,SNR=2.6						
	comp=Z,0.4nm,0.4s						
KLR	Kul'dur	36.34	344	P	P	00 05 27.6	-0.8
	comp=Z,1.0nm,0.5s,baz=140,slow=9.6,SNR=6.2						
	comp=Z,1.0nm,0.5s						
PEA0B	Petropavlovsk-	39.38	11	P	P	00 05 54.5	+0.6
PETK	Petropavlovsk-	39.38	11	P	P	00 05 54.3	+0.4
	comp=Z,1.3nm,0.5s,baz=190,slow=8.4,SNR=1.5						
	comp=Z,1.3nm,0.5s						
PETK	Petropavlovsk-	39.38	11	P	P	00 05 54.6	+0.7
ASAR	Alice Springs	39.97	197	P	P	00 05 59.1	-0.1
	comp=Z,0.1nm,0.4s,baz=24,slow=7.1,SNR=1.7						
	comp=Z,0.1nm,0.4s						
HILR	Hailar Array B	40.82	334	P	P	00 06 05.6	-0.3
	comp=Z,1.0nm,0.5s,baz=145,slow=7.9,SNR=1.6						
	comp=Z,1.0nm,0.5s						
LZDM	Lanzhou Array	43.28	307	P	P	00 06 27.3	+0.8
	comp=Z,0.5nm,0.3s,baz=172,slow=11,SNR=4.3						
	comp=Z,0.5nm,0.3s						
ULN	Ulaanbaatar	46.11	324	P	P	00 06 48.5	-0.1
SONM	Songino Array	46.47	324	P	P	00 06 51.5	+0.1
	comp=Z,0.8nm,0.6s,baz=112,slow=6.4,SNR=3.1						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	46.47	324	P	P	00 06 51.2	-0.1
O15K	Ungalikthiuk R	59.43	29	P	P	00 08 27.3	+1.0
F15K	North Star Dit	60.59	21	P	P	00 08 34.9	+0.8
F15K				IAmb	IAmb	00 08 36.7	
	comp=Z,3.2nm,1.2s						
ZAA0	Zalesovo Array	61.36	324	P	P	00 08 38.9	-0.6
ZAA0				IAmb	IAmb	00 09 00.6	
	comp=Z,3.1nm,1.2s						
ZALV	Zalesovo Beam	61.36	324	P	P	00 08 38.8	-0.7
	comp=Z,1.2nm,0.4s,baz=109,slow=8.0,SNR=8.4						
	comp=Z,1.2nm,0.4s						
MKAR	Makanchi Array	61.46	315	P	P	00 08 40.6	+0.2
	comp=Z,0.7nm,0.3s,baz=91,slow=8.7,SNR=34						
	comp=Z,0.7nm,0.3s						
MKAR	Makanchi Array	61.46	315	P	P	00 08 40.2	-0.2
K17K	Iditarod	61.58	26	P	P	00 08 42.4	+1.6
MAKZ	Makanchi	61.68	315	P	P	00 08 41.8	0.0
MAKZ				IAmb	IAmb	00 08 51.6	
	comp=Z,2.3nm,1.1s						
C16K	Lisburne Hills	61.79	18	P	P	00 08 41.9	-0.2
C16K				IAmb	IAmb	00 08 43.4	
	comp=Z,2.7nm,0.8s						
RDOG	Red Dog Mine	62.43	19	P	P	00 08 45.8	-0.6
H18K	Honhosa River	62.61	23	P	P	00 08 48.0	+0.4
J19K	Poorman	63.21	25	P	P	00 08 52.4	+0.8
J19K				IAmb	IAmb	00 09 05.6	
	comp=Z,2.9nm,1.2s						
C18K	Utukok River	63.28	19	P	P	00 08 51.3	-0.8
F19K	Shaleruckik Mo	63.56	22	P	P	00 08 54.0	+0.1
F19K				IAmb	IAmb	00 09 32.5	
	comp=Z,4.1nm,1.4s						
E19K	Redstone River	64.03	21	P	P	00 08 57.8	+0.8
E19K				IAmb	IAmb	00 08 57.8	
	comp=Z,3.4nm,1.2s						
KURK	Kurchatov	64.45	319	P	P	00 08 59.8	-0.1
KURK				IAmb	IAmb	00 09 00.3	
	comp=Z,2.3nm,0.6s						
KURBB	Kurchatov Arra	64.49	319	P	P	00 09 00.2	-0.1
	comp=Z,2.4nm,0.5s,baz=98,slow=6.9,SNR=24						
	comp=Z,2.4nm,0.5s						
H21K	Melozitna Rive	64.94	24	P	P	00 09 03.6	+0.6
KNK	Knik Glacier	65.51	29	P	P	00 09 06.5	-0.2
B21K	Ikpikpuk River	65.82	19	P	P	00 09 09.2	+0.7
B21K				IAmb	IAmb	00 09 33.9	
	comp=Z,5.3nm,1.4s						
B22K	Teshekpuk Lake	66.49	19	P	P	00 09 13.1	+0.3
H24K	Noodor Dome	66.93	24	P	P	00 09 16.2	+0.4
H24K				IAmb	IAmb	00 09 22.1	
	comp=Z,4.3nm,1.3s						
ILAR	Eielson Array	67.05	25	P	P	00 09 15.7	-0.8
	comp=Z,1.4nm,0.5s,baz=252,slow=5.9,SNR=38						
	comp=Z,1.4nm,0.5s						
ILAR	Eielson Array	67.05	25	P	P	00 09 15.5	-1.0
E24K	Your Creek	67.35	22	P	P	00 09 19.1	+0.7
E24K				IAmb	IAmb	00 09 20.6	
	comp=Z,2.4nm,0.6s						
F25K	Christian Rive	68.25	23	P	P	00 09 25.4	+1.3
C27K	Jago River	69.43	21	P	P	00 09 32.1	+0.8
BVAR	Borovoye Array	69.74	321	P	P	00 09 33.1	-0.4
	comp=Z,0.7nm,0.3s,baz=103,slow=8.4,SNR=17						
	comp=Z,0.7nm,0.3s						
D27M	Malcolm River	70.30	21	P	P	00 09 38.0	+1.3
D27M				IAmb	IAmb	00 09 54.4	
	comp=Z,3.5nm,1.2s						
E29M	Blow River	71.27	22	P	P	00 09 43.0	+0.5
E29M				IAmb	IAmb	00 09 48.5	
	comp=Z,6.8nm,1.4s						
G31M	Satah River	72.51	24	P	P	00 09 50.4	+0.5
G31M				IAmb	IAmb	00 10 04.7	
	comp=Z,6.2nm,1.4s						
C36M	Paulatuk	76.29	21	P	P	00 10 11.4	-0.3
C36M				IAmb	IAmb	00 10 12.0	
	comp=Z,3.3nm,0.6s						
YKAW3	Yellowknife Wh	81.30	28	P	P	00 10 39.4	+0.1
YKAW3				IAmb	IAmb	00 10 57.6	
	comp=Z,4.7nm,1.5s						
YKA	Yellowknife Ar	81.32	28	P	P	00 10 39.6	+0.2
	comp=Z,0.3nm,0.5s,baz=289,slow=5.5,SNR=7.4						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	81.32	28	P	P	00 10 39.2	-0.2
RES	Resolute Bay	83.18	14	P	P	00 10 49.0	+0.2
FINES	FINESS Array B	90.60	335	P	P	00 11 22.9	-2.2
	comp=Z,5.0nm,1.1s,baz=230,slow=1.5,SNR=6.1						
	comp=Z,5.0nm,1.1s						
DBIC	Dimbokro	144.15	304	PKPdf	PKPab	00 17 57.2	0.0

*TRN **26** 00:00:53.7, 19°.19N×63°.39W, h8km, MD3.7, Far North of Anguilla.*

*RSPR **26** 00:00:54.2, 19°.32N×63°.81W, h57km±17km, MD3.4/5*

*NEIC **26** 00:00:54.2±0.8, 19°.30N±0°.09×63°.84W±0°.07, h35km±2km, ML3.1/37, Md3.4/5(RSPR), Error ellipse: s-maj=18.6km s-min=6.0km az=213.0*

ISC 26 00:00:35.1±3.2, 20°.1N±0°.2×63°.53W±0°.07, h16km±13km, n38, σ1s11/50, 7C-3D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	2.12	168		Pg	00 01 17.4	+1.5
SMRT					Sn	00 01 34.9	-1.2
SMRT				IAML		00 01 41.1	
	comp=E,372nm,0.2s						
SMRT	St. Maarten	2.12	168	*e*P	Pg	00 01 18.1	+2.2
SMRT				*e*S	Sn	00 01 35.3	-0.7
SMRT	St. Maarten	2.12	168	⇑*e*P	Pg	00 01 17.7	+1.8
SMRT				*e*S	Sn	00 01 35.0	-1.1
CUPR	Culebra, Puert	2.46	223	Pn	Pg	00 01 21.0	-1.4
SABA	Saba	2.52	174	Pn	Pb	00 01 21.1	+1.1
SABA				IAML		00 02 03.8	
	comp=N,200nm,0.6s						
SABA	Saba	2.52	174	*e*P	Pg	00 01 23.6	+0.1
SKI	Saint Kitts	2.89	165	*e*P	Pg	00 01 28.8	-1.8
SKI				*e*S	Sn	00 01 54.5	-0.6
HUMP	Col San Antoni	2.96	228	Pn	Pb	00 01 28.2	+0.7
HUMP				IAML		00 02 06.5	
	comp=N,65nm,0.2s						
HUMP	Col San Antoni	2.96

CBE				*e*S		**Sn**	**00 02 34.1 +0.8**
MMLZ	**Guadeloupe Bro**	**4.44**	**156**	x		x	00 01 47.9
DR12	**Loma Pena Alta**	**5.68**	**257**	Pn		Pb	00 02 08.7 -5.3
SDDR	**Presa de Saban**	**7.41**	**262**	Pn		Pb	00 02 34.7 -8.6
NMDO	**Nuevo Mundo**	**10.75**	**274**	Pn		Pn	00 03 22.3 +14

*SJA **26** 00:03:05.0±0.8,20.°81S×68.°79W,h113km±6km,ML2.9, MW3.6*
*GUC **26** 00:03:08.4±0.6,20.°80S×68.°88W,h103km±6km,ML2.8*
ISC 26 00:03:07.9±2.9,20.°82S±0.°05×68.°9W±0.°1,h104km±20km, n17,σ0966/24,1C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.62**	**249**	*e*P	**Pn**	**00 03 24.7**	**-0.4**
PB01				IAML		00 03 39.7	
	comp=E,405nm,0.1s						
PB01	**IPOC Station P**	**0.62**	**249**	*i* P	**Pn**	**00 03 24.1**	**-1.1**
PB01				*i* S	**Sn**	**00 03 38.4**	**+0.3**
PB01				IAML		00 03 39.9	
	comp=Z,241nm,0.1s						
PB08	**IPOC Station P**	**0.73**	**338**	*e*P	**Pn**	**00 03 26.7**	**+0.3**
PB08				*e*S	**Sn**	**00 03 40.2**	**0.0**
PB08				IAML		00 03 41.6	
	comp=E,196nm,0.2s						
PB08	**IPOC Station P**	**0.73**	**338**	*i* P	**Pn**	**00 03 25.7**	**-0.7**
PB08				*i* S	**Sn**	**00 03 40.5**	**+0.3**
PB08				IAML		00 03 41.4	
	comp=Z,117nm,0.1s						
PB09	**IPOC Station P**	**1.03**	**200**	*e*P	**Pn**	**00 03 29.6**	**+0.5**
PB09	**IPOC Station P**	**1.03**	**200**	*i* P	**Pn**	**00 03 28.5**	**-0.7**
PB09				*i* S	**Sn**	**00 03 45.2**	**+0.1**
PB09				IAML		00 03 48.9	
	comp=Z,122nm,0.6s						
PB02	**IPOC Station P**	**1.08**	**243⇑**	*e*P	**Pn**	**00 03 29.4**	**-0.2**
PB02				IAML		00 03 48.3	
	comp=E,332nm,0.1s						
PB02	**IPOC Station P**	**1.08**	**243**	*i* P	**Pn**	**00 03 28.6**	**-1.0**
PB02				*i* S	**Sn**	**00 03 47.0**	**+1.0**
PB02				IAML		00 03 50.4	
	comp=Z,312nm,0.1s						
HMBC	**Humberstone**	**1.10**	**299**	*e*P	**Pn**	**00 03 29.7**	**-0.1**
GO01	**Chusmiza**	**1.19**	**345**	*e*P	**Pn**	**00 03 31.6**	**+0.4**
GO01				IAML		00 03 52.2	
	comp=E,319nm,0.2s						
PB11	**IPOC Station P**	**1.29**	**325**	*e*P	**Pn**	**00 03 32.0**	**0.0**
PB11				IAML		00 03 51.2	
	comp=N,158nm,0.2s						
PB11	**IPOC Station P**	**1.29**	**325**	*i* P	**Pn**	**00 03 30.9**	**-1.2**
PB11				*i* S	**Sn**	**00 03 50.4**	**+0.1**
PB11				IAML		00 03 51.1	
	comp=Z,86nm,0.1s						
TA02	**Huaiquique**	**1.31**	**295**	*e*P	**Pn**	**00 03 31.9**	**-0.1**
PB07	**IPOC Station P**	**1.31**	**227**	*e*P	**Pn**	**00 03 32.4**	**+0.1**
PB07				*e*S	**Sn**	**00 03 51.4**	**+0.7**
PB07				IAML		00 03 52.7	
	comp=E,565nm,0.1s						
PB07	**IPOC Station P**	**1.31**	**227**	*i* P	**Pn**	**00 03 31.6**	**-0.7**
PB07				*i* S	**Sn**	**00 03 51.7**	**+1.0**
PB07				IAML		00 03 52.6	
	comp=Z,242nm,0.2s						
PB03	**IPOC Station P**	**1.48**	**214**	*i* P	**Pn**	**00 03 33.4**	**-0.8**
PB12	**IPOC Station P**	**2.59**	**328**	IAML		00 04 29.4	
	comp=E,44nm,0.3s						

*IDC **26** 00:03:11.9±1.5,28.°28S×72.°37W,h0km,mb3.7/3, mbtmp3.7/4,ML3.6/1,Error ellipse: s-maj=47.6km s-min=43.8km az=57.0*
*GUC **26** 00:03:14.4±0.5,28.°23S×72.°10W,h18km±6km,ML3.4*
ISC 26 00:03:12.4±2.3,28.°30S±0.°04×72.°23W±0.°08,h7km±12km, n26,σ1970/31,7D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC04	**Llanos de Chal**	**1.03**	**85⇓**	*i*P	**Pg**	**00 03 32.2**	**0.0**
AC04				*i* S	**Sg**	**00 03 44.5**	**-1.0**
LCO	**Las Campanas**	**1.52**	**118**	*i* P	**Pn**	**00 03 40.3**	**0.0**
LCO				*i* S	**Sn**	**00 03 58.9**	**-1.6**
AC05	**El Transito**	**1.81**	**108⇓**	*i*P	**Pn**	**00 03 45.2**	**+1.1**
AC05				*i* S	**Sn**	**00 04 06.5**	**-0.9**
AC05				IAML		00 04 09.1	
	comp=E,500nm,0.3s						
CO05	**La Serena**	**1.84**	**152**	*i* P	**Pn**	**00 03 44.0**	**-0.3**
CO05				*i* S	**Sn**	**00 04 05.5**	**-2.4**
CO05				IAML		00 04 09.4	
	comp=E,546nm,0.4s						
GO03	**Copiapo**	**1.90**	**69**	*i* P	**Pn**	**00 03 45.4**	**+0.1**
GO03				*i* S	**Sn**	**00 04 07.7**	**-1.9**
GO03				IAML		00 04 11.7	
	comp=E,300nm,0.1s						
AC06	**Mina Casimiro**	**1.91**	**61**	*i* P	**Pn**	**00 03 44.9**	**-0.5**
AC06				*i* S	**Sn**	**00 04 07.4**	**-2.3**
GO04	**Tololo Observa**	**2.25**	**147**	*i* P	**Pn**	**00 03 51.0**	**+0.7**
GO04				*i* S	**Sn**	**00 04 16.5**	**-2.0**
CO06	**Fray Jorge**	**2.43**	**168⇓**	*i*P	Pn	00 03 51.7	-0.8
CO06				IAML		00 04 22.4	
	comp=E,210nm,0.2s						
CO01	**Juntas del Tor**	**2.51**	**132⇓**	*i*P	**Pn**	**00 03 55.6**	**+1.7**
CO01				*i* S	**Sn**	**00 04 25.3**	**+0.4**
CO01				IAML		00 04 27.7	
	comp=N,291nm,0.3s						
AC01	**Pan de Azucar**	**2.59**	**35**	*i* P	Pn	00 03 53.5	-1.3
AC01				*i* S	**Sn**	**00 04 22.5**	**-3.9**
AC01				IAML		00 04 25.6	
	comp=N,134nm,0.1s						
CO03	**El Pedregal**	**2.87**	**152⇓**	*i*P	**Pn**	**00 03 59.2**	**+0.5**
CO03				*i* S	**Sn**	**00 04 30.9**	**-2.6**
CO03				IAML		00 04 33.5	
	comp=N,306nm,0.2s						
CO02	**Combarbal**	**3.09**	**160⇓**	*i*P	**Pn**	**00 04 02.3**	**+0.5**
CO02				*i* S	**Sn**	**00 04 35.1**	**-3.9**
AC02	**Maricunga**	**3.12**	**63⇓**	*i*P	**Pn**	**00 04 04.2**	**+1.8**
AC02				*i* S	**Sn**	**00 04 40.3**	**+0.2**
AC02				IAML		00 04 43.0	
	comp=N,195nm,0.3s						
GO02	**Mina Guanaco**	**3.91**	**38**	*i* P	**Pn**	**00 04 13.1**	**-0.2**
GO02				*i* S	**Sn**	**00 04 57.9**	**-1.7**
H03N1	**Juan Fernandez**	**7.70**	**227**	Pn	Pn	00 05 02.5	-2.1
	baz=108,slow=17						
H03N1				T	T	00 14 17.2	
	baz=50,slow=70						
H03N2	**Juan Fernandez**	**7.71**	**227**	Pn	Pn	00 05 02.2	-2.6
	baz=108,slow=17						
H03N2				T	T	00 14 15.5	
	baz=50,slow=70						
H03N3	**Juan Fernandez**	**7.71**	**227**	Pn	Pn	00 05 02.2	-2.7
	baz=108,slow=17						
H03N3				T	T	00 14 12.5	
	baz=50,slow=70						
H03S3	**Juan Fernandez**	**7.95**	**224**	Pn	Pn	00 05 04.9	-3.2
	baz=257,slow=30						
H03S1	**Juan Fernandez**	**7.96**	**224**	Pn	Pn	00 05 04.6	-3.6
	baz=257,slow=30						
H03S2	**Juan Fernandez**	**7.96**	**224**	Pn	Pn	00 05 04.6	-3.8
	baz=257,slow=30						
PLCA	**Paso Flores**	**12.48**	**174**	Pn	**Pn**	**00 06 10.6**	**0.0**
	comp=N,0.1nm,0.3s,baz=337,slow=15,SNR=1.9						
	comp=N,1.5nm,1.1s						
BDFB	**Brasilia**	**25.69**	**66**	P	**P**	**00 08 44.2**	**+0.9**
	comp=N,1.3nm,0.6s,baz=247,slow=15,SNR=1.9						
	comp=N,1.3nm,0.6s						
PDAR	**Pinedale Array**	**78.62**	**333**	P	**P**	**00 15 14.5**	**-0.5**
	comp=N,0.2nm,0.5s,baz=153,slow=3.0,SNR=1.6						
	comp=N,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**82.46**	**71**	P	**P**	**00 15 37.5**	**+1.5**
	comp=N,1.0nm,0.7s,baz=250,slow=7.0,SNR=8.7						
	comp=N,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**149.36**	**27**	PKPbc	**PKPbc**	**00 23 03.0**	**+1.4**
	comp=N,1.3nm,0.5s,baz=302,slow=3.8,SNR=10						
MKAR	**Makanchi Array**	**152.82**	**40**	PKPbc	**PKPbc**	**00 23 10.9**	**+0.8**
	comp=N,0.1nm,0.5s,baz=331,slow=3.6,SNR=3.1						

*IDC **26** 00:22:29.2±1.1,31.°18N×130.°36E,h162km±8km,mb3.7/24, mbtmp4.2/30,Error ellipse: s-maj=13.9km s-min=12.7km az=69.0*
*NEIC **26** 00:22:29.9±1.5,31.°14N±0.°07×130.°34E±0.°09, h164km±4km,mb4.3/73,Error ellipse: s-maj=12.3km s-min=8.0km az=130.0*
*NIED **26** 00:22:30.4,31.°18N×130.°33E,h154km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm;*

Mrr1.12; Mθθ-0.22; Mφφ-0.90; Mrθ0.64; Mrφ-0.30; Mθφ0.80;
Fault plane solution: M0 1.47000×10¹⁵ NP1: φs192.00000°,δ24.00000°,λ71.00000°. NP2:φs32.00000°, δ67.00000°,λ98.00000°.
*JMA **26** 00:22:30.4±0.1,31.°2N±0.°4×130.°3E±0.°7,h154km±1km, MV4.0/37,SATSUMA PENINSULA REGION*
JMA Felt I J1 at SATSUMA PENINSULA REGION.
ISC 26 00:22:29.4±0.6,31.°14N±0.°04×130.°31E±0.°05,h164km±5km, n157,σ0988/168,mb4.2/69,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSU	**Suzuyama**	**0.39**	**18**		**Pn**	**00 22 51.9**	**-0.1**
JSU	**Suzuyama**	**0.39**	**18**	*i* P	**Pn**	**00 22 51.8**	**-0.1**
JTSR	**Tashiro 2**	**0.52**	**87**	P	**Pn**	**00 22 52.3**	**-0.2**
JTSR				S	**Sn**	**00 23 08.6**	**-1.5**
JSJ	**Shimokoshiki**	**0.74**	**317**	*i* P	**Pn**	**00 22 53.1**	**-0.6**
JSJ				S	**Sn**	**00 23 10.7**	**-1.7**
JTN	**Tanegashima 3**	**0.75**	**130**	*i* P	**Pn**	**00 22 53.9**	**+0.2**
JTN				S	**Sn**	**00 23 11.9**	**-0.5**
JMTN	**Minamitane**	**0.89**	**145**	P	**Pn**	**00 22 54.9**	**+0.1**
JMTN				S	**Sn**	**00 23 13.8**	**-0.3**
JYAK	**Yakushimahirau**	**0.91**	**169**	P	**Pn**	**00 22 55.1**	**+0.3**
JYAK				S	**Sn**	**00 23 13.7**	**-0.7**
JTZ	**Takazaki**	**1.01**	**41**	P	**Pn**	**00 22 55.5**	**-0.1**
JTZ				S	**Sn**	**00 23 14.9**	**-0.9**
JNN	**Nakanoshima**	**1.34**	**196**	P	**Pn**	**00 22 59.2**	**+0.6**
JNN				S	**Sn**	**00 23 21.6**	**+0.6**
JIU3	**Izumi3**	**1.47**	**17**	*i* P	**Pn**	**00 22 59.9**	**+0.2**
JIU3				S	**Sn**	**00 23 21.9**	**-1.4**
JNU	**Nakatsue**	**2.04**	**13**	P	**Pn**	**00 23 05.9**	**0.0**
	128nm,0.5s,baz=204,slow=5.0,SNR=15						
JNU				S	**Sn**	**00 23 32.3**	**-1.8**
	54nm,0.3s,baz=37,slow=18,SNR=3.9						
JTAJ	**Takarajima**	**2.20**	**206**	P	**Pn**	**00 23 08.8**	**+1.1**
JMN	**Monobe**	**3.97**	**48**		**Pn**	**00 23 28.9**	**-0.8**
JOW	**Kunigami**	**4.64**	**203**	P	**Pn**	**00 23 38.1**	**-0.4**
	25nm,0.3s,baz=127,slow=18,SNR=6.6						
JOW				S	**Sn**	**00 24 27.6**	**-4.9**
	48nm,0.3s,baz=86,slow=22,SNR=6.4						
JOW	**Kunigami**	**4.64**	**203**		**Pn**	**00 23 37.6**	**-0.9**
JMZ	**Minamidaito 2**	**5.36**	**171**	Pn	**Pn**	**00 23 48.0**	**+0.1**
TJN	**Taejon**	**5.78**	**336**	Pn	**Pn**	**00 23 53.9**	**+0.7**
KSRS	**Korea Array**	**6.60**	**343**	P	**Pn**	**00 24 03.9**	**-0.3**
	11nm,0.7s,baz=171,slow=14,SNR=26						
KS19	**Wonju Array Si**	**6.66**	**343**	Pn	**Pn**	**00 24 05.3**	**+0.3**
INU	**Inuyama**	**7.01**	**51**	Pn	**Pn**	**00 24 10.7**	**+1.1**
JGF	**Kuroka**	**7.38**	**51**	Pn	**Pn**	**00 24 15.6**	**+0.9**
MJAR	**Matsushiro Arr**	**8.50**	**48**	P	**Pn**	**00 24 28.6**	**-0.7**
	0.9nm,0.3s,baz=322,slow=4.6,SNR=5.2						
MJAR	**Matsushiro Arr**	**8.50**	**48**	Pn	**Pn**	**00 24 29.8**	**+0.5**
JCJ	**Chichijima**	**11.13**	**108**	P	**Pn**	**00 25 05.0**	**+0.9**
	50nm,0.6s,baz=266,slow=24,SNR=2.5						
ASAJ	**Asahikawa**	**16.18**	**33**	P	**Pn**	**00 26 06.7**	**-0.8**
	5.7nm,0.3s,baz=145,slow=13,SNR=4.4						
JKA	**Kamikawa-asahi**	**16.18**	**33**		**Pn**	**00 26 07.0**	**-0.5**
JKA				IAmb	IAmb	00 26 08.3	
	comp=Z,14nm,1.2s						
ENH	**Enshi**	**17.93**	**273**		**P**	**00 26 28.3**	**+1.3**
HHC	**Hu-ho-hao-te**	**17.97**	**308**	*e*P	**Pn**	**00 26 30.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
KLR	**Kul'dur**	**18.11**	**3**	P	**P**	**00 26 28.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=188,slow=9.3,SNR=4.1						
XAN	**Xi'an**	**18.25**	**285**	P	**Pn**	**00 26 32.3**	**-0.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HILR	**Hailar Array B**	**20.05**	**340**	P	**P**	**00 26 49.1**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=156,slow=15,SNR=4.0						
	comp=Z,1.5nm,0.6s						
LZDM	**Lanzhou Array**	**22.67**	**289**	P	**P**	**00 27 17.2**	**0.0**
	comp=Z,11nm,0.8s,baz=139,slow=7.0,SNR=15						
	comp=Z,11nm,0.8s						
ULN	**Ulaanbaatar**	**24.38**	**320**	P	**P**	**00 27 32.4**	**0.0**
SONM	**Songino Array**	**24.72**	**319**	P	**P**	**00 27 35.2**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=133,slow=8.7,SNR=4.0						
	comp=Z,1.2nm,0.6s						
SONM	**Songino Array**	**24.72**	**319**	P	**P**	**00 27 34.4**	**-1.2**
PZH	**PanZhiHua**	**25.42**	**267**	P	**P**	**00 27 43.0**	**+0.9**
H11N2	**WAKE ISLAND Hy**	**34.79**	**100**	T	T	01 05 27.7	
	baz=296						
H11N1	**WAKE ISLAND Hy**	**34.79**	**100**	T	T	01 05 32.1	
	baz=296						
H11N3	**WAKE ISLAND Hy**	**34.80**	**100**	T	T	01 05 33.0	
	baz=296						
WMQ	**Urumqi**	**35.73**	**303**	*e*P	**P**	**00 29 15.3**	**+2.9**
EVN	**Everest**	**37.80**	**277**	P	**P**	**00 29 30.7**	**0.0**
EVN				IAmb	IAmb	00 30 04.9	
	comp=Z,12nm,1.2s						
ZALV	**Zalesovo Beam**	**39.62**	**319**	P	**P**	**00 29 44.5**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=105,slow=11,SNR=1.9						
ZALV				PcP	**PcP**	**00 31 48.0**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=90,slow=4.9,SNR=4.5						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**39.62**	**319**	P	**P**	**00 29 44.3**	**-0.5**
MKAR	**Makanchi Array**	**39.83**	**307**	P	**P**	**00 29 46.6**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=88,slow=11,SNR=10						
MKAR				PP	**PP**	**00 31 23.5**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=116,slow=9.9,SNR=3.8						
MKAR				ScP	**ScP**	**00 35 22.5**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=123,slow=4.0,SNR=2.6						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**39.83**	**307**	P	**P**	**00 29 46.2**	**-0.5**
KURK	**Kurchatov**	**42.69**	**313**	P	**P**	**00 30 09.4**	**-0.4**
KURBB	**Kurchatov Arra**	**42.73**	**312**	P	**P**	**00 30 10.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=96,slow=8.5,SNR=9.4						
KURBB				PcP	**PcP**	**00 31 58.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=108,slow=3.3,SNR=4.1						
	comp=Z,0.6nm,0.5s						
GSI	**Gunungsitoli**	**42.88**	**233**	P	**P**	**00 30 12.6**	**+0.7**
GSI				IAmb	IAmb	00 30 13.3	
	comp=Z,13nm,0.8s						
NRN	**Naryn**	**44.33**	**299**	P	**P**	**00 30 23.6**	**+0.1**
AAK	**Ala-Archa**	**45.35**	**301**	P	**P**	**00 30 32.1**	**+0.7**
BVAR	**Borovoye Array**	**47.96**	**315**	P	**P**	**00 30 51.7**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=92,slow=9.3,SNR=18						
BVAR				PcP	**PcP**	**00 32 16.8**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=114,slow=3.5,SNR=10						
	comp=Z,1.6nm,0.3s						
BORK	**Borovoye**	**48.01**	**315**	P	**P**	**00 30 52.0**	**+0.4**
BORK				IAmb	IAmb	00 30 52.5	
	comp=Z,4.8nm,0.3s						
KK31	**Karatay Array**	**48.22**	**302**	P	**P**	**00 30 54.4**	**+0.8**
KKAR	**Karatay Array**	**48.22**	**302**	P	**P**	**00 30 54.0**	**+0.5**
GAR	**Garm**	**48.96**	**297**	P	**P**	**00 30 59.2**	**-0.1**
GAR				IAmb	IAmb	00 31 02.9	
	comp=Z,3.2nm,0.5s						
F15K	**North Star Dit**	**51.82**	**28**	P	**P**	**00 31 21.3**	**+1.1**
C16K	**Lisburne Hills**	**51.99**	**25**	P	**P**	**00 31 21.7**	**+0.3**
C16K				IAmb	IAmb	00 32 02.0	
	comp=Z,6.2nm,1.4s						
F17K	**Baldwin Pennin**	**53.29**	**28**	P	**P**	**00 31 31.7**	**+0.8**
F17K				IAmb	IAmb	00 31 32.8	
	comp=Z,2.3nm,0.7s						
C18K	**Utukok River**	**53.56**	**25**	P	**P**	**00 31 33.0**	**-0.1**
O15K	**Ungalikthiuk R**	**53.62**	**37**	P	**P**	**00 31 34.1**	**+0.6**
C19K	**Lookout Ridge**	**54.20**	**25**	P	**P**	**00 31 38.3**	**+0.7**
C19K				IAmb	IAmb	00 32 10.9	
	comp=Z,6.0nm,1.4s						
G18K	**Tagagawik**	**54.30**	**29**	P	**P**	**00 31 39.2**	**+0.9**
AB31	**Akbulak array**	**54.73**	**311**	P	**P**	**00 31 41.9**	**+0.3**
AB31				IAmb	IAmb	00 31 44.2	
	comp=Z,3.3nm,1.2s						
ABKAR	**Akbulak array**	**54.73**	**311**	P	**P**	**00 31 42.9**	**+1.2**
ARTI	**Akbulak**	**54.86**	**320**	P	**P**	**00 31 42.3**	**-0.2**
J19K	**Poorman**	**55.56**	**31**	P	**P**	**00 31 48.1**	**+0.8**
B21K	**Ikpikpuk River**	**55.99**	**24**	P	**P**	**00 31 51.0**	**+0.7**
B21K				IAmb	IAmb	00 31 54.6	
	comp=Z,3.2nm,1.2s						
ACHA	**Angle Creek He**	**56.02**	**38**	P	**P**	**00 31 50.6**	**-0.3**
B22K	**Teshekpuk Lake**	**56.42**	**23**	P	**P**	**00 31 53.5**	**+0.1**
D22K	**Ayikyak River**	**56.67**	**25**	P	**P**	**00 31 56.0**	**+0.8**
D22K				IAmb	IAmb	00 31 56.5	
	comp=Z,3.2nm,0.8s						
PPLA	**Purkeypile**	**57.15**	**32**	P	**P**	**00 31 59.6**	**+0.7**
D23K	**Nanushuk River**	**57.39**	**25**	P	**P**	**00 32 00.2**	**-0.1**
L22K	**Petersville**	**57.84**	**33**	P	**P**	**00 32 04.1**	**+0.6**
E24K	**Your Creek**	**58.26**	**26**	P	**P**	**00 32 07.0**	**+0.7**
E24K				IAmb	IAmb	00 32 36.9	
	comp=Z,3.3nm,1.4s						
RND	**Reindeer**	**58.60**	**31**	P	**P**	**00 32 08.5**	**-0.3**
RND				IAmb	IAmb	00 32 10.2	
	comp=Z,11nm,1.3s						
G24K	**Hadweenzic Riv**	**58.78**	**27**	P	**P**	**00 32 10.9**	**+0.9**
D25K	**Kavik River**	**58.91**	**24**	P	**P**	**00 32 11.4**	**+0.5**
D25K				IAmb	IAmb	00 32 24.2	
	comp=Z,2.9nm,1.2s						
ILAR	**Eielson Array**	**59.27**	**30**	P	**P**	**00 32 12.5**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=287,slow=8.3,SNR=6.4						
	comp=Z,0.6nm,0.9s						
ILAR	**Eielson Array**	**59.27**	**30**	P	**P**	**00 32 12.3**	**-1.1**
F25K	**Christian Rive**	**59.38**	**26**	P	**P**	**00 32 15.4**	**+1.2**
F25K				IAmb	IAmb	00 32 25.4	
	comp=Z,2.7nm,1.2s						
F26K	**Sheenjek River**	**59.93**	**26**	P	**P**	**00 32 19.1**	**+1.3**
F26K				IAmb	IAmb	00 32 19.8	
	comp=Z,2.2nm,0.6s						
H27K	**Steamboat Moun**	**61.22**	**28**	P	**P**	**00 32 27.4**	**+0.8**
H27K				IAmb	IAmb	00 32 29.7	
	comp=Z,4.7nm,1.4s						
M26K	**Nabesna, AK**	**61.42**	**32**	P	**P**	**00 32 29.2**	**+1.2**
F28M	**Old Crow**	**61.55**	**26**	P	**P**	**00 32 30.3**	**+1.5**
M27K	**Edge Creek, AK**	**61.94**	**32**	P	**P**	**00 32 31.7**	**+0.1**
M27K				IAmb	IAmb	00 33 03.9	
	comp=Z,5.7nm,1.3s						
G29M	**Pine Creek**	**62.42**	**26**	P	**P**	**00 32 35.7**	**+1.1**
G29M				IAmb	IAmb	00 32 36.3	
	comp=Z,6.5nm,1.4s						
F30M	**Barrier River**	**63.07**	**25**	P	**P**	**00 32 39.9**	**+1.1**
F30M				IAmb	IAmb	00 32 49.5	
	comp=Z,6.6nm,1.4s						
I30M	**Mount Dempster**	**63.53**	**28**	P	**P**	**00 32 42.7**	**+0.7**
I30M				IAmb	IAmb	00 33 22.7	
	comp=Z,4.3nm,1.3s						
STKA	**Stephens Creek**	**63.58**	**169**	P	**P**	**00 32 42.3**	**-0.3**
STKA	**Stephens Creek**	**63.58**	**169**	P	**P**	**00 32 42.3**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=333,slow=8.0,SNR=9.9						
	comp=Z,4.7nm,0.7s						
STKA	**Stephens Creek**	**63.58**	**169**	P	**P**	**00 32 42.1**	**-0.4**
INK	**Inuvik**	**63.68**	**24**	P	**P**	**00 32 42.9**	**+0.2**
INK				IAmb	IAmb	00 32 55.5	
	comp=Z,3.4nm,1.4s						
J30M	**Hart River**	**63.74**	**29**	P	**P**	**00 32 44.4**	**+1.0**
J30M				IAmb	IAmb	00 33 28.0	
	comp=Z,3.8nm,1.2s						
H31M	**Peel River**	**64.16**	**27**	P	**P**	**00 32 46.4**	**+0.4**
H31M				IAmb	IAmb	00 32 53.3	
	comp=Z,12nm,1.4s						
SPITS	**Spitsbergen Ar**	**64.42**	**348**	P	**P**	**00 32 47.1**	**-0.5**
	comp=Z,10nm,1.0s,baz=85,slow=9.3,SNR=12						
	comp=Z,10nm,1.0s						
A36M	**Sachs Harbour**	**65.01**	**19**	P	**P**	**00 32 51.7**	**+0.4**
A36M				IAmb	IAmb	00 32 52.5	
	comp=Z,3.5nm,0.8s						
ARCES	**ARCESS Array B**	**66.13**	**338**	P	**P**	**00 32 58.2**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=63,slow=8.3,SNR=9.9						
	comp=Z,1.3nm,0.4s						
ARCES	**ARCESS Array B**	**66.13**	**338**	P	**P**	**00 32 57.9**	**-0.8**
C36M	**Paulatuk**	**66.47**	**22**	P	**P**	**00 33 00.9**	**+0.1**
C36M				IAmb	IAmb	00 33 01.6	
	comp=Z,3.5nm,0.7s						
KBZ	**Khabaz**	**67.51**	**308**	P	**P**	**00 33 08.7**	**+0.9**
	comp=Z,4.2nm,0.8s,baz=133,slow=3.2,SNR=8.1						
	comp=Z,4.2nm,0.8s						
FIA1	**FINESS Array S**	**69.52**	**330**	P	**P**	**00 33 19.3**	**-0.5**
FINES	**FINESS Array B**	**69.52**	**330**	P	**P**	**00 33 19.5**	**-0.4**
	comp=Z,6.7nm,0.5s,baz=67,slow=5.7,SNR=74						
	comp=Z,6.7nm,0.5s						
FINES	**FINESS Array B**	**69.52**	**330**	P	**P**	**00 33 19.4**	**-0.5**
RES	**Resolute Bay**	**70.40**	**12**	P	**P**	**00 33 24.8**	**-0.2**
AKASG	**Malin Array Be**	**73.01**	**319**	P	**P**	**00 33 40.6**	**-0.5**
	comp=Z,1.8nm,0.3s,baz=58,slow=6.2,SNR=9.6						
	comp=Z,1.8nm,0.3s						
AKASG	**Malin Array Be**	**73.01**	**319**	P	**P**	**00 33 40.6**	**-0.5**
AKBB	**Malin Array Si**	**73.01**	**319**	P	**P**	**00 33 40.4**	**-0.6**
AKBB				IAmb	IAmb	00 33 41.2	
	comp=Z,5.8nm,0.9s						
KIEV	**Kiev**	**73.02**	**319**	P	**P**	**00 33 40.7**	**-0.5**
KIEV				IAmb	IAmb	00 33 41.2	
	comp=Z,5.2nm,0.9s						
YKAW3	**Yellowknife Wh**	**73.28**	**26**	P	**P**	**00 33 43.1**	**+0.6**
YKA	**Yellowknife Ar**	**73.33**	**26**	P	**P**	**00 33 43.1**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=308,slow=6.2,SNR=9.7						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**73.33**	**26**	P	**P**	**00 33 43.4**	**+0.7**
RAYN	**Ar Rayn**	**74.01**	**288**	P	**P**	**00

FUORN					IAmb	IAmb	00 35 27.3	
	comp=Z,8.2nm,1.2s							
NVAR	**Mina Array Bea**	**85.82**	**47**	P	**P**		**00 34 49.5**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=315,slow=6.3,SNR=2.4							
	comp=Z,0.4nm,0.6s							
FDMO	**Fiordimonte**	**86.43**	**319**	P	**P**		**00 34 54.4**	**+0.9**
CEL	**Celeste**	**87.81**	**314**	P	**P**		**00 35 00.3**	**0.0**
ULM	**Lac du Bonnet**	**89.23**	**28**	P	**P**		**00 35 06.2**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=194,slow=8.8,SNR=3.3							
	comp=Z,2.0nm,0.7s							
RAFF	**Raffo Rosso**	**89.40**	**314**	P	**P**		**00 35 08.7**	**+1.0**

SJA ***26*** *00:22:33.0±1.1,37°.32S×74°.84W,h40km±999km,ML3.1, MW3.6*

GUC ***26*** *00:22:40.1±0.7,37°.44S×73°.98W,h35km±5km,ML3.3*

ISC 26 00:22:37.6±1.7,**37°.43S**±0°.04×**74°.08W**±0°.09,**h17**km±11km, **n13,σ1ᵎ36/20, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**0.99**	**46**	*eP*		**Pg**	**00 22 55.8**	**-1.0**
BI05				*eS*		**Sg**	**00 23 09.1**	**-0.7**
BI04	**Isla Mocha**	**0.99**	**171**	*eP*		**Pb**	**00 22 57.0**	**+0.7**
BI04				*eS*		**Sg**	**00 23 09.7**	**-0.1**
BI04				IAML			00 23 18.1	
	comp=E,1μm,0.3s							
LC02	**Puerto Saavedr**	**1.46**	**158**	*eP*		**Pg**	**00 23 06.2**	**+0.4**
LC02				IAML			00 23 37.1	
	comp=N,2μm,0.5s							
LC01	**Cunco**	**2.27**	**131**	*eP*		**Pn**	**00 23 15.3**	**+0.9**
BI02	**San Fabin de**	**2.38**	**72**	*eP*		**Pn**	**00 23 16.5**	**+0.6**
BI02				*eS*		**Sn**	**00 23 44.1**	**-0.6**
BI02				IAML			00 23 58.9	
	comp=N,123nm,0.6s							
BI02	**San Fabin de**	**2.38**	**72**	*eP*		**Pb**	**00 23 18.9**	**-1.1**
BI02				*eS*		**Sg**	**00 23 53.6**	**-0.4**
BI02				IAML			00 24 03.6	
	comp=Z,124nm,0.6s							
CANA	**Caviahue**	**2.44**	**102**	*eP*		**Pb**	**00 23 22.0**	**+0.8**
CANA				*eS*		**Sg**	**00 23 56.7**	**+0.6**
CANA				IAML			00 24 21.8	
	comp=Z,31nm,0.9s							
LR04	**Corral**	**2.50**	**168**	*eP*		**Pn**	**00 23 17.4**	**-0.1**
LR04				*eS*		**Sn**	**00 23 44.3**	**-3.2**
LR04				IAML			00 23 47.6	
	comp=E,312nm,0.2s							
LR04	**Corral**	**2.50**	**168**	*eP*		**Pn**	**00 23 17.0**	**-0.5**
LR04				IAML			00 24 21.7	
	comp=Z,47nm,1.2s							
GO06	**Curarrehue**	**2.97**	**137**	*i* P		**Pn**	**00 23 25.2**	**+1.2**
GO06				*i* S		**Sn**	**00 23 59.0**	**-0.3**
GO05	**Hualane**	**2.98**	**36**	*eP*		**Pn**	**00 23 26.9**	**+2.7**
LR05	**Currie**	**3.23**	**150**	*eP*		**Pn**	**00 23 29.1**	**+1.5**
BO02	**Sierra Bellavi**	**3.75**	**46**	*i* P		**Pn**	**00 23 36.1**	**+1.2**

IDC ***26*** *00:23:30.6±0.4,15°.85N×119°.18E,h0km,mb4.6/30, mbtmp4.5/31,ML4.3/1,MS3.6/36,Error ellipse: s-maj=16.9km s-min=10.7km az=74.0*

BJI ***26*** *00:23:30.6,15°.83N×119°.28E,h10km,mB4.9/22,mb4.4/65, Ms4.5/41,Ms7 4.1/41*

MOS ***26*** *00:23:30.8±0.9,15°.89N×119°.18E,h10km,mb5.1/49,Error ellipse: s-maj=7.9km s-min=4.0km az=120.6*

NEIC ***26*** *00:23:32.8±1.5,15°.87N±0°.03×119°.22E±0°.03,h10km±1km, mb5.0/183,Error ellipse: s-maj=5.5km s-min=4.5km az=334.0*

GCMT ***26*** *00:23:33.8±0.4,15°.94N±0°.04×119°.03E±0°.02,h19km±1km, MW4.8/79,Moment Tensor Solution. s14,c14; s79,c106; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.93±.14; Mθθ=0.25±.07; Mφφ=1.68±.10; Mrθ=-0.09±.20; Mφθ=-0.25±.05; Mrφ=0.42±.16; Best double couple: M₀=1.87600×10¹⁶ NP1:ϕs=351.00000°,δ38.00000°,λ=-89.00000°. NP2: ϕs=170.00000°,δ52.00000°,λ=-90.00000°. Principal axes: T 1.7720, Plg7.0000°, Azm260.0000°; N 0.2110, Plg0.0000°, Azm170.0000°; P -1.9800, Plg83.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***26*** *00:23:40.0±0.6,16°.N±3°×11°.9E±°,h75km±6km,M5.0/67, mb5.0/67,mB5.6/19,MLv4.7/1,Mw(mB)5.1/19, MwMwp5.3/1,Mwp5.5/1*

ISC 26 00:23:32.9±0.7,**15°.86N**±0°.04×**119°.24E**±0°.05,**h14**km±3km, **n741,σ1ᵎ21/682,mb5.0**/223,**MS3.8**/49,**57C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**2.40**	**137**		Pn	**Pb**	**00 24 15.2**	**-0.8**
	241nm,0.3s,baz=275,slow=4.5,SNR=24							
TGY					Sn	**Sb**	**00 24 45.5**	**0.0**
	452nm,0.3s,baz=104,slow=15,SNR=8.8							
TGY					LR	LR	00 25 15.1	
	comp=Z,1μm,20.6s,baz=124,slow=43							
TWG	**Pinlang**	**7.13**	**14**	Pn		**Pn**	**00 25 16.6**	**-0.3**
TPUB	**Ta-pu**	**7.51**	**10**			**Pn**	**00 25 22.2**	**+0.1**
YULB	**Yu-li**	**7.74**	**14**			**Pn**	**00 25 25.3**	**+0.1**
SSLB	**Suanglung**	**8.05**	**11**			**Pn**	**00 25 29.3**	**-0.2**
NACB	**Ninganchiao**	**8.56**	**15**			**Pn**	**00 25 36.6**	**+0.1**
QZH2	**Quanzhou**	**9.06**	**356**	P		**Pn**	**00 25 41.5**	**-1.8**
QZH2				LR		LR		
	comp=N,450nm,11.3s							
QZH2				LR		LR		
	comp=E,470nm,11.7s							
QZH2				LR		LR		
	comp=Z,590nm,9.6s							
YOJ	**Yonaguni jima**	**9.26**	**22**	Pn		**Pn**	**00 25 46.6**	**+0.5**
YOJ	**Yonaguni jima**	**9.26**	**22**	P		**Pn**	**00 25 46.6**	**+0.5**
QIZ	**Qiongzhong**	**9.50**	**291**	P		**Pn**	**00 25 48.5**	**-0.9**
QIZ				S		**Sn**	**00 27 36.5**	**+0.4**
QIZ				LR		LR		
	comp=N,560nm,7.7s							
QIZ				LR		LR		
	comp=E,280nm,6.3s							
QIZ				LR		LR		
	comp=Z,610nm,12.0s							
KKM	**Kota Kinabalu**	**10.20**	**197**			**Pn**	**00 25 58.7**	**-0.3**
KKM	**Kota Kinabalu**	**10.20**	**197**	P		**Pn**	**00 25 58.7**	**-0.3**
	51nm,0.5s							
TOLI2	**Tolitoli**	**14.74**	**174**			**Pn**	**00 27 02.4**	**+1.3**
SBUM	**Sibu**	**15.01**	**208**	Pn		**Pn**	**00 27 05.6**	**+0.8**
WHN	**Wuhan**	**15.28**	**344**	P		**Pn**	**00 27 08.0**	**-0.3**
WHN				pmax		pmax		
	comp=Z,200nm,2.1s							
MNI	**Manado**	**15.36**	**158**	P		**P**	**00 27 16.3**	**+2.3**
	136nm,0.8s							
MPSI	**Mapaga**	**15.44**	**178**	P		**P**	**00 27 17.2**	**+2.3**
	22nm,0.8s							
MRSI	**Marisa**	**15.52**	**170**	P		P	00 27 31.4	+16
NJ2	**Nanjing**	**16.12**	**359**	*eP*		**P**	**00 27 21.3**	**-1.1**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.8s							
APSI	**Ampana**	**16.84**	**172**	P		**Pn**	**00 27 28.9**	**+0.6**
LUWI	**Luwuk**	**17.16**	**168**			**P**	**00 27 34.6**	**+0.6**
LUWI	**Luwuk**	**17.16**	**168**	P		**P**	**00 27 38.2**	**+4.2**
	2μm122nm,1.1s							
KMI2	**Kunming**	**17.98**	**304**	P		**P**	**00 27 44.8**	**+1.5**
KMI2				S		**Sn**	**00 31 03.0**	**-0.4**
KMI2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
KMI2				pmax		pmax		
	comp=Z,220nm,7.3s							
KMI2				LR		LR		
	comp=N,380nm,9.3s							
KMI2				LR		LR		
	comp=E,130nm,11.0s							
KMI2				LR		LR		
	comp=Z,450nm,8.1s							
TTSI	**Tana Toraja**	**18.80**	**178**	P		**Pn**	**00 27 56.0**	**+3.5**
SANI	**Sanana**	**19.01**	**159**	P		**P**	**00 27 52.9**	**-1.5**
PMSI	**Majene**	**19.24**	**181**	P		**Pn**	**00 28 01.7**	**+3.7**
	77nm,0.8s							
CMAR	**Chiang Mai Arr**	**19.56**	**281**	P		**P**	**00 28 00.5**	**0.0**
	0.3nm,0.3s,baz=98,slow=10.0,SNR=20							
CMAR					PcP	**PcP**	**00 32 21.9**	**+1.2**
	2.1nm,0.6s,baz=121,slow=2.2,SNR=7.8							
CMAR					LR	LR	00 35 34.0	
	comp=Z,340nm,19.7s,baz=100,slow=37							
	0.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**19.56**	**281**			**Pn**	**00 28 01.6**	**-0.2**
LYN	**LuoYang**	**19.58**	**343**	P		**Pn**	**00 28 02.5**	**+0.6**
LYN				pmax		pmax		
	comp=Z,31nm,0.7s							
LYN				pmax		pmax		
	comp=Z,320nm,6.5s							
LYN				LR		LR		
	comp=N,430nm,9.3s							
LYN				LR		LR		
	comp=E,710nm,10.3s							
LYN				LR		LR		
	comp=Z,640nm,11.0s							
CHTO	**Chiang Mai**	**19.59**	**282**			**P**	**00 28 01.1**	**+0.3**
CHTO	**Chiang Mai**	**19.59**	**282**	P		**P**	**00 28 01.1**	**+0.3**
CHTO				pmax		pmax		
	comp=Z,16nm,1.5s							
CHTO	**Chiang Mai**	**19.59**	**282**	P		**Pn**	**00 28 02.4**	**+0.2**
SPSI	**Sidrap Palu**	**19.71**	**178**	P		**Pn**	**00 28 04.4**	**+0.9**
	comp=Z,75nm,1.0s							
JNU	**Nakatsue**	**20.16**	**29**	P		**P**	**00 28 07.0**	**+0.1**
	comp=Z,34nm,1.0s,baz=194,slow=5.5,SNR=6.6							
JNU				LR		LR	00 35 57.2	
	comp=E,58nm,20.6s,baz=206,slow=37							
	comp=Z,34nm,1.0s							
XAN	**Xi'an**	**20.35**	**335**	P		**P**	**00 28 09.5**	**+0.5**
XAN				S		Sn	00 32 00.5	+0.4
XAN				pmax		pmax		
	comp=Z,14nm,1.6s							
XAN				LR		LR		
	comp=Z,750nm,10.3s							
XAN				LR		LR		
	comp=Z,1μm,12.2s							
XAN				LR		LR		
	comp=Z,640nm,13.1s							
TIA	**Tai'an**	**20.35**	**355**	P		Pn	00 28 10.5	-0.5
TIA				pmax		pmax		
	comp=Z,16nm,1.1s							
TIA				pmax		pmax		
	comp=Z,340nm,6.1s							
TIA				LR		LR		
	comp=Z,540nm,9.0s							
TIA				LR		LR		
	comp=Z,310nm,7.9s							
TIA				LR		LR		
	comp=Z,610nm,9.3s							
NLAI	**Namlea**	**20.51**	**157**	P		Pn	00 28 13.0	0.0
	comp=Z,88nm,0.9s							
CD2	**Chengdu**	**20.61**	**319**	P		**P**	**00 28 12.3**	**+0.5**
CD2				pP		pP	00 28 15.0	+0.4
CD2				S		**S**	**00 32 03.5**	**+1.5**
CD2				pmax		pmax		
	comp=Z,80nm,0.7s							
CD2				pmax		pmax		
	comp=Z,280nm,6.3s							
CD2				LR		LR		
	comp=Z,420nm,7.8s							
CD2				LR		LR		
	comp=Z,660nm,8.2s							
CD2				LR		LR		
	comp=Z,750nm,7.9s							
KAPI	**Kappang**	**20.75**	**179**	P		**P**	**00 28 13.8**	**+0.4**
	comp=Z,4.6nm,0.3s,baz=24,slow=23,SNR=6.6							
KAPI				LR		LR	00 36 51.1	
	comp=Z,119nm,18.1s,baz=13,slow=39							
	comp=Z,4.6nm,0.3s							
KAPI	**Kappang**	**20.75**	**179**			**P**	**00 28 13.9**	**+0.6**
KAPI				IAmb		IAmb	00 28 20.3	
	comp=Z,145nm,2.0s							
KAPI	**Kappang**	**20.75**	**179**	*i* P		**P**	**00 28 14.2**	**+0.8**
KAPI	**Kappang**	**20.75**	**179**	P		Pn	00 28 15.6	-0.2
MKS	**Makassar**	**20.95**	**179**	P		Pn	00 28 18.2	+0.1
KULM	**Kulim**	**21.05**	**242**	P		**P**	**00 28 17.1**	**+0.4**
KULM	**Kulim**	**21.05**	**242**	P		P	00 28 25.0	+8.3
KRAI	**Karang Ratu**	**21.10**	**154**	P		**P**	**00 28 19.3**	**+2.1**
	comp=Z,43nm,0.7s							
MSAI	**Masohi**	**21.36**	**153**	P		**P**	**00 28 23.8**	**+3.8**
	comp=Z,78nm,0.5s							
TNCH	**TengChong**	**21.42**	**299**	P		**P**	**00 28 22.5**	**+1.7**
TNCH				pP		pP	00 28 24.3	+0.3
TNCH				PP		**PnPn**	**00 28 46.0**	**+5.0**
TNCH				S		**S**	**00 32 11.5**	**-7.0**
TNCH				pmax		pmax		
	comp=Z,70nm,1.0s							
TNCH				LR		LR		
	comp=Z,280nm,7.1s							
TNCH				LR		LR		
	comp=Z,270nm,7.5s							
TNCH				LR		LR		
	comp=Z,270nm,9.5s							
TJN	**Taejon**	**21.68**	**18**			**P**	**00 28 23.3**	**+0.1**
TJN	**Taejon**	**21.68**	**18**	P		**P**	**00 28 23.3**	**+0.1**
TJN				pmax		pmax		
	comp=Z,171nm,1.0s							
HNS	**HongShan**	**21.82**	**350**	⇑P		**P**	**00 28 26.0**	**+1.2**
HNS				pmax		pmax		
	comp=Z,19nm,1.2s							
HNS				LR		LR		
	comp=Z,340nm,10.8s							
HNS				LR		LR		
	comp=Z,690nm,10.2s							
HNS				LR		LR		
	comp=Z,680nm,9.2s							
KSAR	**Wonju Array Be**	**22.82**	**18**			**P**	**00 28 35.5**	**+0.1**
KSAR	**Wonju Array Be**	**22.82**	**18**	P		**P**	**00 28 35.5**	**+0.1**
KSRS	**Korea Array**	**22.84**	**18**	P		**P**	**00 28 35.9**	**+0.2**
	comp=Z,19nm,0.9s,baz=200,slow=10,SNR=29							
KSRS				LR		LR	00 37 59.6	
	comp=Z,64nm,19.4s,baz=215,slow=38							
	comp=Z,19nm,0.9s							
KS19	**Wonju Array Si**	**22.87**	**18**			**P**	**00 28 35.3**	**-0.7**
KS19				IAmb		IAmb	00 28 45.0	
	comp=Z,70nm,1.4s							
DL2	**Dalian**	**23.05**	**5**	*eP*		**P**	**00 28 37.8**	**0.0**
DL2				pmax		pmax		
	comp=Z,51nm,1.3s							
PSI	**Prapat**	**23.84**	**239**	P		**P**	**00 28 46.0**	**0.0**
PSI				pmax		pmax		
	comp=Z,17nm,1.1s							
PSI	**Prapat**	**23.84**	**239**	P		**P**	**00 28 46.7**	**+0.7**
RPSI	**Rantau Prapat**	**23.90**	**239**	P		**P**	**00 28 46.0**	**-0.5**
ABJI	**Asem Bagus**	**24.02**	**192**	P		**P**	**00 28 49.1**	**+1.6**
	comp=Z,65nm,1.5s							
BLJI	**Banyuglugur**	**24.11**	**194**	P		**P**	**00 28 47.7**	**-0.7**
	comp=Z,4μmcomp=Z,115nm,0.8s							
BJI2	**Beijing**	**24.22**	**354**	P		**P**	**00 28 50.3**	**+1.1**
BJI2				pmax		pmax		
	comp=Z,14nm,1.3s							
BJT	**Baijiatuau**	**24.22**	**354**			**P**	**00 28 49.7**	**+0.5**
BJT				IAmb		IAmb	00 28 51.5	
	comp=Z,64nm,1.4s							
BJT	**Baijiatuau**	**24.22**	**354**	P		**P**	**00 28 49.7**	**+0.5**
BJT				pmax		pmax		
	comp=Z,64nm,1.4s							
DBNI	**Kabupaten Somp**	**24.23**	**182**	P		**P**	**00 28 50.2**	**+0.8**
	comp=Z,607nmcomp=Z,55nm,1.3s							
NGJI	**Ngawi**	**24.33**	**199**	P		**P**	**00 28 52.6**	**+2.2**
	comp=Z,50nm,1.1s							
KHKI	**Kahang-Kahang**	**24.34**	**189**	P		**P**	**00 28 53.3**	**+2.8**
	comp=Z,43nm,1.1s							
LZDM	**Lanzhou Array**	**24.35**	**328**	P		**P**	**00 28 51.4**	**+0.6**
	comp=Z,1.5nm,0.4s,baz=172,slow=11,SNR=11							
LZDM				PcP		**PcP**	**00 32 31.3**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=162,slow=1.4,SNR=4.5							
	comp=Z,1.5nm,0.4s							
LZH	**Lanzhou**	**24.37**	**329**	P		**P**	**00 28 52.0**	**+1.1**
LZH				pP		pwP	00 28 58.3	-1.1
LZH				S		**S**	**00 33 16.3**	**+6.2**
LZH				pmax		pmax		
	comp=Z,30nm,1.5s							
LZH				pmax		pmax		
	comp=Z,150nm,4.8s							
LZH				LR		LR		
	comp=Z,660nm,10.7s							
LZH				LR		LR		
	comp=Z,560nm,11.7s							
LZH				LR		LR		
	comp=Z,210nm,11.3s							
MMRI	**Maumere**	**24.52**	**173**	P		**P**	**00 28 51.8**	**-0.4**
MMRI				IAmb		IAmb	00 29 03.0	
	comp=Z,44nm,0.9s							
MMRI	**Maumere**	**24.52**	**173**	P		**P**	**00 28 52.8**	**+0.7**
	comp=Z,44nm,0.8s							
TWSI	**Taliwang, Sumb**	**24.55**	**186**	P		**P**	**00 28 53.7**	**+1.3**
	comp=Z,26nm,0.9s							
PLAI	**Plampang**	**24.57**	**183**	P		**P**	**00 28 53.4**	**+0.8**
EDFI	**Ende, Flores**	**24.57**	**174**	P		**P**	**00 28 53.9**	**+1.2**
	comp=Z,1μmcomp=Z,91nm,0.7s							
SNJI	**Sawahan-Nganju**	**24.63**	**198**	P		**P**	**00 28 56.0**	**+2.7**
	comp=Z,46nm,1.3s							
JAGI	**Jajag, Banyuwa**	**24.70**	**192**			**P**	**00 28 52.8**	**-0.9**
JAGI	**Jajag, Banyuwa**	**24.70**	**192**	P		**P**	**00 28 55.4**	**+1.7**
	comp=Z,94nm,1.1s							
GUMO	**Guam**	**24.89**	**92**	LR		LR	00 38 12.0	
	comp=Z,161nm,19.4s,baz=234,slow=35							
KLSI		**24.96**	**216**	P		**P**	**00 28 57.6**	**+1.4**
MDSI	**Maura Dua**	**25.12**	**218**	P		**P**	**00 28 57.3**	**-0.2**
KPJI	**Karang Pucung**	**25.20**	**205**	P		**P**	**00 28 59.8**	**+1.5**
	comp=Z,40nm,1.0s							
MASI	**Maura Aman, Be**	**25.28**	**223**	P		**P**	**00 29 01.3**	**+2.2**
LEM	**Lembang**	**25.31**	**208**	P		**P**	**00 29 00.2**	**+0.8**
	comp=Z,32nm,0.7s,baz=309,slow=16,SNR=5.1							
	comp=Z,32nm,0.7s							
JHJ	**Hachijo jima 2**	**25.31**	**44**	LR		LR	00 36 56.3	
	comp=Z,78nm,21.4s,baz=330,slow=32							
WBSI	**Waikabubak, Su**	**25.34**	**180**	P		**P**	**00 28 59.9**	**+0.3**
	comp=Z,76nm,0.8s							
HHC	**Hu-ho-hao-te**	**25.77**	**347**	⇑*i*P		**P**	**00 29 05.0**	**+1.6**
HHC				sP		pwP	00 29 12.3	+0.4
HHC				pmax		pmax		
	comp=Z,180nm,6.2s							
HHC				LR		LR		
	comp=Z,220nm,12.0s							
HHC				LR		LR		
	comp=Z,170nm,11.2s							
HHC				LR		LR		
	comp=Z,100nm,16.8s							
KASI	**Kota Agung**	**25.78**	**216**	P		**P**	**00 29 02.8**	**-0.7**
	comp=Z,31nm,1.0s							
BBJI	**Bungbulang**	**25.86**	**207**			**P**	**00 29 02.5**	**-1.8**
BBJI	**Bungbulang**	**25.86**	**207**	P		**P**	**00 29 02.9**	**-1.5**
	comp=Z,23nm,0.8s							
SOEI	**Soe**	**25.94**	**169**			**P**	**00 29 05.0**	**-0.2**
SOEI	**Soe**	**25.94**	**169**	P		**P**	**00 29 06.6**	**+1.5**
BTO2	**Baotou**	**26.09**	**344**	*eP*		**P**	**00 29 06.5**	**+0.2**
BTO2				pP		**sP**	**00 29 10.8**	**+0.2**
BTO2				sP		**pwP**	**00 29 13.5**	**-1.3**
BTO2				pmax		pmax		
	comp=Z,19nm,0.9s							
BTO2				pmax		pmax		
	comp=Z,450nm,7.2s							
BTO2				LR		LR		
	comp=Z,400nm,13.9s							
BTO2				LR		LR		
	comp=Z,710nm,11.9s							
BTO2				LR		LR		
	comp=Z,500nm,13.3s							
BATI	**Baumata**	**26.27**	**170**	P		**P**	**00 29 07.6**	**-0.4**
MJAR	**Matsushiro Arr**	**26.62**	**36**	P		**P**	**00 29 12.1**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=205,slow=7.9,SNR=1.7							
MJAR					PcP	**PcP**	**00 32 36.0**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=204,slow=2.7,SNR=4.2							
MJAR					LR	LR	00 41 05.2	
	comp=Z,48nm,18.3s,baz=197,slow=40							
	comp=Z,1.0nm,0.5s							
BRDH	**Bariadhala**	**26.89**	**289**	LR		LR	00 41 16.1	
	comp=Z,265nm,18.0s,baz=164,slow=40							
SHL	**Shillong**	**27.30**	**295**			**P**	**00 29 16.8**	**-0.7**
SHL	**Shillong**	**27.30**	**295**	P		**P**	**00 29 16.8**	**-0.7**
SHL				pmax		pmax		
	comp=Z,15nm,0.8s							
JAY	**Jayapura**	**28.00**	**129**	LR		LR	00 39 52.7	
	comp=Z,157nm,21.0s,baz=336,slow=35							
XLT	**XiLinHaoTe**	**28.07**	**355**	*eP*		**P**	**00 29 25.0**	**+0.9**
XLT				pP		sP	00 29 30.0	+1.7
XLT				sP		pwP	00 29 31.5	-1.1
XLT				pmax		pmax		
	comp=Z,11nm,1.6s							
XLT				pmax		pmax		
	comp=Z,150nm,4.2s							
GTA2	**Gaotai**	**29.05**	**328**	P		**P**	**00 29 34.0**	**+1.1**
GTA2				sP		pwP	00 29 41.0	-0.6
GTA2				PcP		**PcP**	**00 32 42.0**	**+0.9**
GTA2				pmax		pmax		
	comp=Z,17nm,1.1s							
GTA2				LR		LR		
	comp=Z,370nm,19.1s							
GTA2				LR		LR		
	comp=Z,350nm,20.3s							
GTA2				LR		LR		
	comp=Z,380nm,15.5s							
LSA	**Lhasa**	**29.23**	**303**			**P**	**00 29 35.7**	**+0.6**
LSA	**Lhasa**	**29.23**	**303**	P		**P**	**00 29 32.3**	**-2.7**
LSA				pmax		pmax		
	comp=Z,8.0nm,1.3s							
LSA	**Lhasa**	**29.23**	**303**	P		**P**	**00 29 35.7**	**+0.6**
LSA				pmax		pmax		
	comp=Z,11nm,1.2s							
GOMU	**GeErMu**	**29.71**	**318**	P		**P**	**00 29 38.0**	**-1.1**
GOMU				S		**S**	**00 34 38.0**	**+3.0**
GOMU				pmax		pmax		
	comp=Z,7.0nm,1.2s							
USRK	**Ussuriysk Ar.**	**30.25**	**18**	P		**P**	**00 29 44.2**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=145,slow=5.3,SNR=3.5							
	comp=Z,2.4nm,0.8s							
BNX	**BinXian**	**30.57**	**11**	⇓P		**P**	**00 29 46.3**	**+0.2**
BNX				pmax		pmax		
	comp=Z,5.0nm,1.4s							
EVN	**Everest**	**32.29**	**297**			**P**	**00 30 01.7**	**-0.6**
ULN	**Ulaanbaatar**	**33.46**	**345**			**P**	**00 30 11.9**	**+0.2**
ULN	**Ulaanbaatar**	**33.46**	**345**	*ce*P		**P**	**00 30 12.5**	**+0.8**
ULN				pmax		pmax		
	comp=Z,13nm,1.3s							
ULN	**Ulaanbaatar**	**33.46**	**345**	P		**P**	**00 30 12.3**	**+0.6**
	comp=Z,41nm,1.1s							
SONM	**Songino Array**	**33.60**	**344**	P		**P**	**00 30 13.6**	**+0.7**
	comp=Z,12nm,0.9s,baz=164,slow=9.4,SNR=28							
SONM					PcP	**PcP**	**00 32 53.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=142,slow=4.9,SNR=2.6							
	comp=Z,12nm,0.9s							
SONM	**Songino Array**	**33.60**	**344**			**P**	**00 30 13.2**	**+0.4**
HILR	**Hailar Array B**	**33.61**	**1**	P		**P**	**00 30 12.7**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=153,slow=9.7,SNR=2.0							
HILR					PcP	**PcP**	**00 32 53.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=108,slow=4.8,SNR=5.9							
	comp=Z,0.6nm,0.4s							
ASAJ	**Asahikawa**	**34.43**	**30**	LR		LR	00 43 44.8	
	comp=Z,81nm,21.9s,baz=256,slow=35							
KLR	**Kul'dur**	**34.81**	**14**	P		**P**	**00 30 23.7**	**+0.5**
	comp=Z,10nm,0.8s,baz=241,slow=6.4,SNR=31							
KLR					PcP	**PcP**	**00 32 56.1**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=265,slow=5.2,SNR=3.8							
KLR				LR		LR	00 44 52.8	
	comp=Z,38nm,19.5s,baz=208,slow=37							
	comp=Z,10nm,0.8s							
YSS	**Yuzhno-Sakhali**	**36.64**	**27**	*eP*		**P**	**00 30 37.8**	**-1.1**
YSS				*eS*		**S**	**00 36 16.4**	**-5.1**
YSS				pmax		pmax		
	comp=Z,10.0nm,0.6s							
YSS				MLR		M

WMQ LR LR
comp=Z,700nm,13.9s
WMQ LR LR
comp=Z,510nm,12.9s
WMQ LR LR
comp=Z,150nm,15.9s
PALK Pallekele 38.65 262 LR LR 00 44 52.0
comp=Z,115nm,21.3s,baz=75,slow=33
HYB Hyderabad 38.96 278 *e*P **P** **00 30 59.7 +0.7**
AS31 Alice Springs 41.82 160 **P** **00 31 21.6 -0.9**
ASAR Alice Springs 41.82 160 P **P** **00 31 22.1 -0.4**
comp=Z,13nm,0.6s,baz=338,slow=7.2,SNR=110
ASAR PcP **PcP** **00 33 18.9 +0.4**
comp=Z,4.3nm,0.8s,baz=339,slow=2.5,SNR=9.1
ASAR S **S** **00 37 36.6 -3.3**
comp=Z,0.5nm,0.7s,baz=351,slow=17,SNR=4.2
comp=Z,13nm,0.6s
ASAR Alice Springs 41.82 160 **P** **00 31 21.7 -0.7**
ZSN Zaisan 42.38 325 *e*P **P** **00 31 27.7 +0.9**
ZSN *e*S **S** **00 37 49.7 +1.9**
ZSN Zaisan 42.38 325 *e*P **P** **00 31 27.8 +0.9**
ZSN *e*S **S** **00 37 49.7 +1.9**
DGZ Jazzator, Alta 42.47 330 *i* P **P** **00 31 26.4 -1.3**
DGZ pmax pmax
comp=Z,11nm,0.9s
SHLS Shalkode 43.41 317 *e*P **P** **00 31 33.7 -1.7**
SHLS Shalkode 43.41 317 *e*P **P** **00 31 33.8 -1.7**
MK31 Makanchi Array 43.46 323 *ce*P **P** **00 31 36.3 +0.7**
MKAR Makanchi Array 43.46 323 P **P** **00 31 36.2 +0.6**
comp=Z,6.5nm,0.8s,baz=131,slow=9.3,SNR=52
MKAR PcP **PcP** **00 33 23.7 0.0**
comp=Z,2.8nm,0.9s,baz=143,slow=3.0,SNR=4.0
comp=Z,6.5nm,0.8s
MKAR Makanchi Array 43.46 323 **P** **00 31 35.8 +0.2**
MAKZ Makanchi 43.65 323 **P** **00 31 37.2 0.0**
MAKZ Makanchi 43.65 323 P **P** **00 31 37.5 +0.4**
UZB Uzynbulak 43.70 317 *e*P **P** **00 31 38.3 +0.6**
UZB Uzynbulak 43.70 317 *e*P **P** **00 31 38.4 +0.6**
PRZ Przheval'sk 43.83 316 P **P** **00 31 38.8 0.0**
PRZ Przheval'sk 43.83 316 P **P** **00 31 38.8 0.0**
PRZ pmax pmax
comp=Z,10.0nm,0.8s
KPKS Kokpek 44.06 317 *e*P **P** **00 31 41.1 +0.5**
KPKS Kokpek 44.06 317 *e*P **P** **00 31 41.2 +0.6**
SATY Saty 44.07 316 *e*P **P** **00 31 41.3 +0.6**
SATY Saty 44.07 316 *e*P **P** **00 31 41.3 +0.6**
CTAO Charters Tower 44.51 142 **P** **00 31 44.2 -0.1**
CTAO IAmb IAmb 00 31 45.9
comp=Z,14nm,0.8s
CTAO Charters Tower 44.51 142 P **P** **00 31 44.2 -0.1**
CTAO pmax pmax
comp=Z,14nm,0.9s
KDJ Kajisay 44.51 315 P **P** **00 31 44.3 0.0**
KDJ Kajisay 44.51 315 P **P** **00 31 44.3 0.0**
KDJ pmax pmax
comp=Z,9.0nm,1.0s
KSH2 Kashi 44.59 310 P **P** **00 31 45.3 +0.3**
KSH2 sP pwP 00 31 53.0 -0.7
KSH2 pmax pmax
comp=Z,7.0nm,1.0s
KSH2 LR LR
comp=Z,270nm,12.4s
KSH2 LR LR
comp=Z,150nm,7.6s
KSH2 LR LR
comp=Z,150nm,11.0s
MORW Morawa 44.77 184 **P** **00 31 45.6 -0.6**
MORW IAmb IAmb 00 31 46.8
comp=Z,32nm,1.0s
TDK Taldyqorghan 44.92 319 *e*P **P** **00 31 48.0 +0.7**
TDK pmax pmax
comp=Z,16nm,0.9s
TDK Taldyqorghan 44.92 319 *e*P **P** **00 31 48.0 +0.7**
comp=Z,16nm,0.9s
NIL Nilore 44.96 302 P **P** **00 31 46.8 -1.0**
NIL IAmb IAmb 00 31 48.1
comp=Z,25nm,0.8s
NIL Nilore 44.96 302 P **P** **00 31 46.8 -1.0**
NIL pmax pmax
comp=Z,25nm,0.8s
MDOK Medeo 45.02 316 *e*P **P** **00 31 49.0 +0.7**
MDOK Medeo 45.02 316 *e*P **P** **00 31 49.0 +0.7**
TNSS Tian-Shan 45.03 316 *e*P **P** **00 31 49.1 +0.4**
TNSS Tian-Shan 45.03 316 *e*P **P** **00 31 49.1 +0.4**
NRN Naryn 45.07 313 P **P** **00 31 48.8 -0.1**
NRN Naryn 45.07 313 P **P** **00 31 48.8 -0.1**
NRN pmax pmax
comp=Z,12nm,1.0s
AAA Alma-Ata 45.12 316 *e*P **P** **00 31 49.7 +0.7**
AAA pmax pmax
comp=Z,7.0nm,0.5s
AAA Alma-Ata 45.12 316 *e*P **P** **00 31 49.8 +0.7**
comp=Z,7.1nm,0.5s
ULHL Ulahol 45.20 314 P **P** **00 31 51.2 +1.4**
SNR=7.9
BOOM Boomskoye usch 45.50 315 P **P** **00 31 51.9 -0.2**
BOOM Boomskoye usch 45.50 315 P **P** **00 31 51.9 -0.2**
BOOM pmax pmax
comp=Z,6.0nm,1.1s
KBK Karagaybulak 46.24 315 P **P** **00 31 59.2 +1.2**
SNR=6.7
UCH Uchtor 46.39 314 P **P** **00 32 01.1 +1.6**
SNR=15
ZAA0 Zalesovo Array 46.50 333 **P** **00 31 58.8 -0.8**
ZALV Zalesovo Beam 46.50 333 P **P** **00 31 58.7 -0.9**
comp=Z,4.4nm,0.8s,baz=127,slow=6.9,SNR=22
ZALV PcP **PcP** **00 33 32.7 -1.2**
comp=Z,1.2nm,0.7s,baz=105,slow=3.2,SNR=2.9
comp=Z,4.4nm,0.8s
CHMS Chumysh 46.50 315 P **P** **00 32 00.7 +0.8**
SNR=5.6
AAK Ala-Archa 46.55 314 P **P** **00 31 59.4 -1.0**
SNR=5.2
AAK Ala-Archa 46.55 314 LR LR 00 52 49.4
comp=Z,158nm,18.8s,baz=99,slow=38
AAK Ala-Archa 46.55 314 **P** **00 31 59.8 -0.6**
AAK Ala-Archa 46.55 314 *ce*P **P** **00 32 02.1 +1.7**
AAK pmax pmax
comp=Z,8.0nm,1.7s
SEM Semipalatinsk 46.58 326 *e*P **P** **00 32 01.3 +0.8**
SEM Semipalatinsk 46.58 326 *e*P **P** **00 32 01.3 +0.8**
YAK Yakutsk 46.70 7 LR LR 00 53 36.6
comp=Z,20nm,18.8s,baz=96,slow=39
YAK Yakutsk 46.70 7 P **P** **00 32 00.3 -0.8**
YAK IAmb IAmb 00 32 01.6
comp=Z,22nm,1.0s
YAK Yakutsk 46.70 7 *e*P **P** **00 32 01.0 -0.1**
YAK *e* 00 33 34.7
YAK *e* 00 33 51.7
YAK *e*PPP PPP 00 34 34.5
YAK *e*S **S** **00 38 45.7 -4.4**
YAK *e**SS sS 00 39 07.8 +12
YAK *e* 00 41 48.9
YAK *e*SSS SSS 00 43 16.3
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=Z,71nm,2.5s
YAK pmax pmax
comp=N,67nm,4.7s
YAK pmax pmax
comp=E,49nm,3.2s
YAK smax smax
comp=N,129nm,7.1s
YAK smax smax
comp=E,115nm,6.0s
SGDS Sogindy 46.75 315 *e*P **P** **00 32 02.7 +0.8**
USP Ospenovka 46.77 315 P **P** **00 32 02.5 +0.5**
SNR=6.4
EKS2 Erkin-Say 47.05 314 P **P** **00 32 05.4 +1.1**
SNR=6.6
FORT Forrest 47.14 170 **P** **00 32 04.3 -0.5**
ARSB Arslanbob 47.16 312 P **P** **00 32 05.0 -0.2**
ARSB IAmb IAmb 00 32 06.6
comp=Z,7.0nm,0.7s
ARSB Arslanbob 47.16 312 P **P** **00 32 05.0 -0.2**
ARSB pmax pmax
comp=Z,7.0nm,0.7s
HNR Honiara 47.50 119 LR LR 00 49 32.4
comp=Z,5.4nm,21.8s,baz=10.0,slow=33
KURBB Kurchatov Arra 47.62 326 P **P** **00 32 08.8 +0.5**
comp=Z,13nm,0.8s,baz=122,slow=8.2,SNR=60
KURBB LR LR 00 50 45.9
comp=Z,52nm,19.0s,baz=172,slow=34
comp=Z,13nm,0.8s
KURK Kurchatov 47.62 326 **P** **00 32 08.2 -0.1**
KURK Kurchatov 47.62 326 *ce*P **P** **00 32 09.0 +0.6**
KURK pmax pmax
comp=Z,33nm,0.8s
PETK Petropavlovsk- 47.85 30 P **P** **00 32 11.4 +1.2**
comp=Z,14nm,0.8s,baz=185,slow=5.2,SNR=11
PETK LR LR 00 51 38.3
comp=Z,38nm,21.4s,baz=230,slow=35
comp=Z,14nm,0.8s
PETK Petropavlovsk- 47.85 30 P **P** **00 32 10.6 +0.4**
PET Petropavlovsk 48.27 31 P **P** **00 32 13.3 -0.1**
comp=Z,43nm,1.6s
BTK Batken 48.37 310 P **P** **00 32 14.3 -0.2**
BTK Batken 48.37 310 P **P** **00 32 14.3 -0.2**
BTK pmax pmax
comp=Z,6.0nm,0.8s
GAR Garm 48.47 308 P **P** **00 32 14.9 -0.5**
KBL Kabul 48.55 302 **P** **00 32 15.7 -0.5**
KBL Kabul 48.55 302 P **P** **00 32 15.7 -0.5**
KBL pmax pmax
comp=Z,8.0nm,0.9s
CHGR Chuyangaron 49.27 308 *i* P **P** **00 32 19.5 -2.0**
CHGR pmax pmax
comp=Z,21nm,0.7s
MA2 Magadan 49.36 21 **P** **00 32 22.1 +0.5**
MA2 IAmb IAmb 00 32 23.6
comp=Z,19nm,0.9s
MA2 Magadan 49.36 21 *ce*P **P** **00 32 23.0 +1.3**
MA2 pmax pmax
comp=Z,41nm,1.7s
MA2 Magadan 49.36 21 P **P** **00 32 22.2 +0.5**
comp=Z,26nm,1.1s
KKAR Karatay Array 49.46 314 P **P** **00 32 22.4 -0.4**
KKAR Karatay Array 49.46 314 P **P** **00 32 22.4 -0.4**
IUG luzhnay 49.52 312 *e*P **P** **00 32 23.7 +0.4**
IUG pmax pmax
comp=Z,13nm,1.0s
IUG luzhnay 49.52 312 *e*P **P** **00 32 23.7 +0.4**
comp=Z,13nm,1.0s
SHAA Shahritus 49.83 306 IAmb IAmb 00 34 15.5
comp=Z,13nm,1.1s
CHM Chimkent 49.87 312 *e*P **P** **00 32 26.6 +0.7**
CHM Chimkent 49.87 312 *e*P **P** **00 32 26.7 +0.7**
BRLS Borolday 49.91 313 *e*P **P** **00 32 26.4 +0.2**
BRLS Borolday 49.91 313 *e*P **P** **00 32 26.4 +0.2**
BBOO Buckleboo 51.00 162 P **P** **00 32 33.8 -0.7**
EIDS Eidsvold 51.40 142 IAmb IAmb 00 32 38.2
comp=Z,16nm,1.1s
STKA Stephens Creek 52.09 156 LR LR 00 58 03.9
comp=Z,71nm,18.2s,baz=208,slow=40
SEY Seymchan 52.40 18 *ce*P **P** **00 32 46.1 +1.6**
SEY pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 53.20 325 P **P** **00 32 49.9 -0.7**
comp=Z,2.6nm,0.7s,baz=116,slow=10,SNR=13
BVAR PcP **PcP** **00 33 58.0 -0.4**
comp=Z,2.4nm,0.7s,baz=108,slow=4.8,SNR=6.4
comp=Z,2.6nm,0.7s
BORK Borovoye 53.25 325 P **P** **00 32 50.7 -0.3**
BORK Borovoye 53.25 325 *ce*P **P** **00 32 51.4 +0.5**
BORK pmax pmax
comp=Z,23nm,1.7s
TIXI Tiksi 56.07 4 P **P** **00 33 10.4 -0.7**
TIXI IAmb IAmb 00 33 11.4
comp=Z,19nm,0.9s
TIXI Tiksi 56.07 4 P **P** **00 33 11.0 -0.1**
AB31 Akbulak array 58.18 318 IAmb IAmb 00 33 27.6
comp=Z,13nm,1.0s
ABKAR Akbulak array 58.18 318 P **P** **00 33 26.0 -0.5**
AKTO Aktyubinsk 59.66 320 LR LR 01 00 22.9
comp=Z,80nm,19.5s,baz=233,slow=37
DZM Mont Dzumac 59.67 128 *e*LR LR 00 51 10.5
comp=Z,78nm,23.2s
DZM Mont Dzumac 59.67 128 P **P** **00 33 37.5 +0.2**
comp=Z,3.4nm,0.6s,baz=151,slow=19,SNR=1.6
comp=Z,3.4nm,0.6s
SVE Sverdlovsk 59.83 327 *e*P **P** **00 33 38.3 +0.6**
BILL Bilibino 60.10 19 P **P** **00 33 39.5 0.0**
BILL Bilibino 60.10 19 P **P** **00 33 40.3 +0.8**
ARTI Arti 60.89 326 **P** **00 33 43.9 -1.1**
ARTI IAmb IAmb 00 33 45.3
comp=Z,12nm,0.8s
ARTI Arti 60.89 326 *c i*P **P** **00 33 44.7 -0.3**
ARTI 00 34 27.5
ARTI 00 35 58.0
ARTI S **S** **00 42 02.4 0.0**
ARTI pmax pmax
comp=Z,15nm,1.0s
AKT Akhty 65.88 309 *e*P **P** **00 34 17.7 -0.8**
AKT pmax pmax
comp=Z,17nm,0.9s
KIRV Kirov 66.09 327 P **P** **00 34 19.0 -0.3**
comp=Z,20nm,0.8s,baz=77,slow=3.4,SNR=2.4
comp=Z,20nm,0.8s
KIRV Kirov 66.09 327 *ce*P **P** **00 34 19.1 -0.2**
BELG Belogornoye 66.38 321 *i* P **P** **00 34 20.2 -1.1**
BELG pmax pmax
comp=Z,9.0nm,0.9s
GAMB Gambell 66.66 27 P **P** **00 34 24.7 +1.8**
baz=258,SNR=8.8
UNV Unalaska Valle 68.07 38 P **P** **00 34 34.0 +2.1**
baz=267
GNI Garni 68.18 307 LR LR 01 06 32.0
comp=Z,26nm,20.3s,baz=143,slow=38
GNI Garni 68.18 307 P **P** **00 34 32.7 -0.5**
GNI Garni 68.18 307 *ce*P **P** **00 34 35.1 +1.9**
GNI pmax pmax
comp=Z,24nm,1.7s
TNA Tin City 68.58 25 P **P** **00 34 36.6 +1.6**
baz=261
M11K Mekoryuk 68.72 31 P **P** **00 34 38.3 +2.4**
baz=265
RAYN Ar Rayn 69.19 290 P **P** **00 34 38.8 -0.9**
RAYN IAmb IAmb 00 34 40.7
comp=Z,15nm,0.8s
RAYN Ar Rayn 69.19 290 P **P** **00 34 40.2 +0.5**
F14K Arctic Creek 69.23 25 P **P** **00 34 41.3 +2.2**
baz=263,SNR=15
KBZ Khabaz 69.40 311 P **P** **00 34 40.5 +0.1**
comp=Z,14nm,0.9s,baz=163,slow=7.1,SNR=14
comp=Z,14nm,0.9s
KBZ Khabaz 69.40 311 *ce*P **P** **00 34 41.4 +0.9**
KBZ pmax pmax
comp=Z,20nm,1.0s
ANM Nome 69.52 26 IAmb IAmb 00 34 43.3
comp=Z,7.5nm,0.9s
ANM Nome 69.52 26 P **P** **00 34 42.9 +2.0**
baz=264,SNR=6.4
KIV Kislovodsk 69.54 311 P **P** **00 34 41.3 -0.3**
KIV Kislovodsk 69.54 311 *e*P **P** **00 34 41.7 +0.2**
KIV pmax pmax
comp=Z,38nm,1.0s
KIV MLR MLR
comp=Z,35nm,17.0s
KIV Kislovodsk 69.54 311 P **P** **00 34 41.4 -0.1**
comp=Z,44nm,0.9s
KIV pP **pP** **00 34 43.7 -1.0**
comp=Z,44nm,0.9s
SHA1 Shidzhatmaz 69.57 311 *ce*P **P** **00 34 39.9 -2.0**
K13K Kusilvak Mount 69.60 29 P **P** **00 34 43.4 +2.0**
baz=265
F15K North Star Dit 69.95 25 IAmb IAmb 00 34 45.9
comp=Z,11nm,0.9s
F15K North Star Dit 69.95 25 P **P** **00 34 45.2 +1.7**
baz=264,SNR=9.5
C16K Lisburne Hills 69.98 23 P **P** **00 34 45.2 +1.6**
baz=262,SNR=22
VRH Novokhopyorsk 70.00 319 *e*P **P** **00 34 43.2 -0.8**
VRH pmax pmax
comp=Z,40nm,0.8s
M13K Dall Lake 70.13 31 P **P** **00 34 46.6 +1.9**
baz=267
G15K Niukluk 70.14 26 P **P** **00 34 46.2 +1.6**
baz=265,SNR=8.6
J14K Nanvaranak Lak 70.17 29 P **P** **00 34 46.4 +1.6**
J14K IAmb IAmb 00 34 47.7
comp=Z,26nm,1.4s
J14K Nanvaranak Lak 70.17 29 P **P** **00 34 46.6 +1.7**
baz=266
L14K Kuka Creek 70.50 30 P **P** **00 34 48.9 +2.0**
baz=267
D17K Noatak River 70.77 23 P **P** **00 34 50.4 +2.0**
baz=265,SNR=33
C17K DeLong Mountai 70.80 22 P **P** **00 34 50.3 +1.6**
baz=264
M14K Bethel 70.83 31 P **P** **00 34 50.0 +1.1**
M14K IAmb IAmb 00 34 51.6
comp=Z,16nm,0.8s
M14K Bethel 70.83 31 P **P** **00 34 50.7 +1.8**
baz=268
RDOG Red Dog Mine 70.86 23 P **P** **00 34 50.7 +1.6**
baz=267
G16K Koyuk River 70.87 26 IAmb IAmb 00 34 51.9
comp=Z,14nm,1.1s
G16K Koyuk River 70.87 26 P **P** **00 34 50.8 +1.7**
baz=266,SNR=12
H16K Elim 70.88 27 P **P** **00 34 50.7 +1.6**
baz=267,SNR=10
N14K Kuskokwak Cree 70.94 32 P **P** **00 34 51.4 +1.7**
baz=269
K15K Wolf Creek Mou 71.08 29 IAmb IAmb 00 34 53.0
comp=Z,15nm,1.1s
K15K Wolf Creek Mou 71.08 29 P **P** **00 34 52.5 +2.0**
baz=268
L15K Ungalak Mounta 71.09 30 P **P** **00 34 52.3 +1.9**
baz=268
O14K Tigyukauivet M 71.15 32 P **P** **00 34 52.6 +1.7**
baz=269
E17K Hotham Inlet 71.20 24 P **P** **00 34 52.9 +1.8**
baz=266,SNR=12
F17K Baldwin Pennin 71.39 25 IAmb IAmb 00 34 55.0
comp=Z,13nm,0.8s
F17K Baldwin Pennin 71.39 25 P **P** **00 34 54.0 +1.8**
baz=267
M15K Kasigluk River 71.45 31 P **P** **00 34 54.1 +1.4**
baz=269
MARD Mardin 71.49 305 P **P** **00 34 53.6 0.0**
I17K Unalakleet 71.52 27 IAmb IAmb 00 34 56.1
comp=Z,17nm,0.9s
I17K Unalakleet 71.52 27 P **P** **00 34 55.1 +2.1**
baz=268,SNR=8.3
VORD Divnogorie 71.54 319 *e*P **P** **00 34 52.3 -1.1**
VORD pmax pmax
comp=Z,10.0nm,1.1s
J16K Anvik River 71.54 28 P **P** **00 34 55.0 +1.7**
baz=269
C18K Utukok River 71.54 22 IAmb IAmb 00 34 55.5
comp=Z,12nm,0.9s
C18K Utukok River 71.54 22 P **P** **00 34 54.7 +1.4**
baz=266
VORR Voronezh 71.56 320 *e*P **P** **00 34 52.6 -0.9**
VORR pmax pmax
comp=Z,20nm,0.9s
G17K Kiwalik Mounta 71.59 26 P **P** **00 34 55.2 +1.8**
baz=268,SNR=19
VSR Storozhevoye 71.61 319 *e*P **P** **00 34 52.7 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.9s
E18K Tukpahlearik C 71.69 24 IAmb IAmb 00 34 56.8
comp=Z,31nm,1.6s
E18K Tukpahlearik C 71.69 24 P **P** **00 34 55.8 +1.7**
baz=267
LPSR Galich'ya Gora 71.69 321 *e*P **P** **00 34 53.5 -0.8**
LPSR pmax pmax
comp=Z,38nm,0.9s
N15K Kwethluk River 71.75 31 P **P** **00 34 56.3 +1.7**
baz=270
H17K Granite Mounta 71.88 26 P **P** **00 34 56.6 +1.3**
H17K IAmb IAmb 00 34 58.1
comp=Z,15nm,0.8s
H17K Granite Mounta 71.88 26 P **P** **00 34 57.3 +2.0**
baz=269
O15K Ungalikthiuk R 71.89 32 P **P** **00 34 56.8 +1.4**
baz=271
F18K Selawik 72.04 25 P **P** **00 34 57.8 +1.7**
baz=268,SNR=27
L16K Owhat River 72.05 30 P **P** **00 34 57.8 +1.5**
baz=270
CHNA Chernabura Isl 72.12 37 P **P** **00 34 58.2 +1.4**
baz=272
C19K Lookout Ridge 72.15 22 P **P** **00 34 58.7 +1.8**
baz=268
M16K Timber Creek 72.30 30 P **P** **00 34 59.5 +1.7**
baz=271
MOS Moscow 72.34 324 *e*P **P** **00 34 55.8 -2.3**
MOS *e* 00 35 13.2
MOS pmax pmax
comp=Z,22nm,0.7s
N16K Nishlik Lake 72.40 31 P **P** **00 35 00.2 +1.7**
baz=271
G18K Tagagawik 72.43 25 IAmb IAmb 00 35 00.6
comp=Z,14nm,0.9s
G18K Tagagawik 72.43 25 P **P** **00 34 59.8 +1.2**
baz=270,SNR=12
H18K Honhosa River 72.54 26 P **P** **00 35 00.8 +1.6**
baz=270
K17K Iditarod 72.59 29 P **P** **00 35 01.2 +1.7**
baz=271
L17K Donlin 72.60 29 P **P** **00 35 01.6 +2.0**
baz=271
D19K Kuna River 72.67 23 P **P** **00 35 01.3 +1.4**
baz=269
O16K Kokwok River B 72.76 32 P **P** **00 35 01.9 +1.3**
baz=272
F19K Shaleruckik Mo 72.79 24 P **P** **00 35 02.0 +1.4**
baz=270
OBN Obninsk 72.97 323 ⇑ *e*P **P** **00 35 01.6 -0.3**
OBN *e* 00 35 19.5
OBN *e* 00 37 44.1
OBN *e*PPP PPP 00 39 25.0
OBN pmax pmax
comp=Z,39nm,1.7s
OBN MLR MLR
comp=Z,80nm,15.0s
OBN Obninsk 72.97 323 P **P** **00 35 01.3 -0.6**
comp=Z,22nm,1.3s
E19K Redstone River 73.00 24 IAmb IAmb 00 35 04.3
comp=Z,15nm,0.9s
E19K Redstone River 73.00 24 P **P** **00 35 03.4 +1.6**
baz=270
B20K Meade River 73.03 21 P **P** **00 35 03.8 +1.8**
baz=270
M17K Holitna River 73.03 30 P **P** **00 35 04.1 +2.0**
baz=272
G19K Purcell Mounta 73.07 25 IAmb IAmb 00 35 04.7
comp=Z,16nm,0.8s
G19K Purcell Mounta 73.07 25 P **P** **00 35 03.8 +1.5**
baz=271,SNR=15
GCSA Galena City Sc 73.18 26 P **P** **00 35 04.6 +1.6**
baz=272
N17K Nushagak Hills 73.18 31 P **P** **00 35 04.8 +1.7**
baz=272
ARPR Arapgir-MALATY 73.20 307 IAmb IAmb 00 35 05.9
comp=Z,16nm,1.1s
D20K Etivluk River 73.22 22 P **P** **00 35 04.7 +1.5**
baz=270
O17K Koliganek Bris 73.26 32 P **P** **00 35 05.2 +1.7**
baz=273
J18K Innoko River 73.29 28 P **P** **00 35 05.3 +1.6**
baz=272
L18K Granite Mounta 73.35 29 P **P** **00 35 05.0 +1.0**
L18K IAmb IAmb 00 35 06.7
comp=Z,10nm,0.8s
L18K Granite Mounta 73.35 29 P **P** **00 35 05.4 +1.4**
baz=272
E20K Nigu River 73.38 23 P **P** **00 35 05.6 +1.4**
baz=271
Q16K King Salmon 73.55 33 P **P** **00 35 06.7 +1.5**
baz=274
F20K Avaraart Lake 73.59 24 IAmb IAmb 00 35 07.8
comp=Z,16nm,0.9s
F20K Avaraart Lake 73.59 24 P **P** **00 35 06.7 +1.4**
baz=272,SNR=20
P17K Kvichak River 73.63 32 P **P** **00 35 07.3 +1.6**
baz=274,SNR=6.6
J19K Poorman 73.75 27 P **P** **00 35 07.8 +1.4**
baz=273
R17L Mt. Peulik Vol 73.77 34 P **P** **00 35 08.2 +1.6**
baz=274
M18K Stony River 73.80 30 P **P** **00 35 08.5 +1.8**
baz=273
N18K Kilae Creek 73.81 31 P **P** **00 35 08.1 +1.3**
baz=274
C21K Knifeblade Rid 73.87 22 P **P** **00 35 08.6 +1.6**
baz=272
APA Apatity 73.88 337 ⇓ *e*P **P** **00 35 05.5 -1.5**
APA *e* 00 37 51.2
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,605nm,3.8s
B21K Ikpikpuk River 73.92 21 IAmb IAmb 00 35 09.7

comp=Z,16nm,0.9s
B21K **Ikpikpuk River** 73.92 21 P P 00 35 08.8 +1.6
baz=272,SNR=14
Q17K **Contact Creek** 73.98 33 P P 00 35 09.0 +1.0
baz=274
H20K **Anotleneega Mo** 74.00 26 P P 00 35 09.1 +1.3
baz=273,SNR=14
E21K **Killik River** 74.20 23 IAmb IAmb 00 35 11.1
comp=Z,15nm,0.9s
E21K **Killik River** 74.20 23 P P 00 35 10.2 +1.2
baz=273
O18K **Koktuh Hills** 74.21 32 P P 00 35 10.9 +1.8
baz=274,SNR=6.6
L19K **White Mountain** 74.21 29 P P 00 35 10.5 +1.4
baz=274
P18K **Big Mountain,** 74.23 32 P P 00 35 10.4 +1.1
baz=274
B22K **Teshekpuk Lake** 74.29 21 IAmb IAmb 00 35 11.6
comp=Z,22nm,1.1s
B22K **Teshekpuk Lake** 74.29 21 P P 00 35 10.8 +1.4
baz=273
CHIR **Chirikof Islan** 74.32 36 P P 00 35 11.1 +1.2
baz=275
AFI **Afiamalu** 74.32 110 LR LR 01 02 02.1
comp=Z,79nm,19.3s,baz=48,slow=31
GAZ **Gaziantep** 74.33 305 IAmb IAmb 00 35 12.1
comp=Z,20nm,0.9s
Q18K **Katmai Hardscr** 74.41 33 P P 00 35 11.5 +1.0
baz=275
IMAR **Indian Mountai** 74.43 25 P P 00 35 10.9 +0.6
F21K **Alatna River** 74.46 24 P P 00 35 11.8 +1.3
baz=274
TOKA **Tokat** 74.46 308 IAmb IAmb 00 35 12.8
comp=Z,13nm,1.0s
K20K **Telida** 74.48 28 IAmb IAmb 00 35 13.5
comp=Z,20nm,1.2s
K20K **Telida** 74.48 28 P P 00 35 12.2 +1.5
baz=274
N19K **Bonanza Creek** 74.49 31 P P 00 35 12.3 +1.4
baz=275
G21K **Allakaket** 74.50 25 IAmb IAmb 00 35 13.2
comp=Z,20nm,0.8s
G21K **Allakaket** 74.50 25 P P 00 35 12.2 +1.5
baz=274
O19K **Port Alsworth** 74.62 31 P P 00 35 12.8 +1.3
baz=275
D22K **Ayikyak River** 74.64 22 IAmb IAmb 00 35 13.6
comp=Z,13nm,0.9s
D22K **Ayikyak River** 74.64 22 P P 00 35 13.2 +1.7
baz=274
H21K **Melozitna Rive** 74.85 25 P P 00 35 14.6 +1.8
baz=275,SNR=15
E22K **Anaktuvuk Pass** 75.02 23 P P 00 35 15.1 +1.4
baz=275,SNR=8.0
M20K **Styx River** 75.05 29 IAmb IAmb 00 35 16.9
comp=Z,16nm,0.8s
M20K **Styx River** 75.05 29 P P 00 35 15.8 +1.7
baz=276
SII **Sitkinak Islan** 75.05 35 P P 00 35 15.9 +1.8
baz=276
Q19K **Cape Douglas,** 75.09 32 P P 00 35 15.7 +1.4
baz=276
C23K **Itkillik River** 75.29 21 IAmb IAmb 00 35 17.4
comp=Z,25nm,1.1s
C23K **Itkillik River** 75.29 21 P P 00 35 16.9 +1.7
baz=276
D23K **Nanushuk River** 75.36 22 P P 00 35 17.1 +1.5
baz=276
ASF **Jabal al Asfar** 75.36 300 LR LR 01 14 02.9
comp=Z,38nm,18.3s,baz=200,slow=40
PPLA **Purkeypile** 75.38 28 P P 00 35 17.3 +1.2
baz=276
H22K **Ishtalitna Cre** 75.41 25 IAmb IAmb 00 35 19.0
comp=Z,32nm,1.3s
H22K **Ishtalitna Cre** 75.41 25 P P 00 35 17.7 +1.7
baz=276,SNR=9.6
OHAK **Old Harbor** 75.46 34 P P 00 35 17.7 +1.3
baz=277
SPCR **Spurr Chakacha** 75.56 30 P P 00 35 18.2 +1.2
baz=277
COLD **Coldfoot** 75.73 24 IAmb IAmb 00 36 22.2
comp=Z,34nm,2.0s
COLD **Coldfoot** 75.73 24 P P 00 35 19.1 +1.4
baz=277
MLY **Manley** 75.77 26 P P 00 35 19.1 +1.0
MLY IAmb IAmb 00 35 20.5
comp=Z,17nm,0.8s
MLY **Manley** 75.77 26 P P 00 35 19.6 +1.4
baz=277,SNR=10
KDAK **Kodiak Island** 75.77 34 P P 00 35 19.6 +1.4
baz=277
BPAW **Bear Paw Mtn.** 75.78 27 P P 00 35 19.5 +1.4
baz=277,SNR=5.2
SKT **Skwentna** 75.79 29 P P 00 35 19.3 +1.0
baz=277
TOLK **Toolik Lake Re** 75.79 22 P P 00 35 19.4 +1.2
baz=277,SNR=11
E23K **Chandalar** 75.85 23 IAmb IAmb 00 35 20.5
comp=Z,11nm,0.8s
E23K **Chandalar** 75.85 23 P P 00 35 20.0 +1.4
baz=277,SNR=11
G23K **Bananza Creek** 75.86 24 IAmb IAmb 00 35 21.9
comp=Z,11nm,1.1s
G23K **Bananza Creek** 75.86 24 P P 00 35 20.2 +1.6
baz=277
HOM **Homer** 76.02 32 P P 00 35 20.9 +1.4
baz=277
CAPN **Captain Cook N** 76.12 30 P P 00 35 20.6 +0.6
baz=278
TRF **Thorofare Moun** 76.17 28 P P 00 35 21.3 +0.8
baz=278
SUA **Susitna One** 76.22 30 P P 00 35 21.9 +1.0
baz=278,SNR=5.3
E24K **Your Creek** 76.27 23 IAmb IAmb 00 35 23.2
comp=Z,13nm,0.8s
E24K **Your Creek** 76.27 23 P P 00 35 22.2 +1.3
baz=278,SNR=16
CUT **Chulitna** 76.32 29 P P 00 35 22.3 +1.1
baz=278
I23K **Minto, Yukon-K** 76.34 26 P P 00 35 22.5 +1.2
baz=278,SNR=5.7
BRSE **Bradley Lake S** 76.47 31 P P 00 35 23.4 +1.2
baz=278
BKZ **Black Stump Fm** 76.48 138 P P 00 35 23.0 +0.4
BKZ IAmb IAmb 00 35 27.0
comp=Z,10nm,0.8s
M22K **Willow** 76.48 29 P P 00 35 22.9 +0.8
baz=278
RTZ **Ruatahuna** 76.49 137 P P 00 35 22.8 +0.1
RTZ IAmb IAmb 00 37 50.4
comp=Z,26nm,1.4s
NEA2 **Nenana** 76.54 26 IAmb IAmb 00 35 24.8
comp=Z,13nm,0.7s
NEA2 **Nenana** 76.54 26 P P 00 35 23.6 +1.2
baz=278,SNR=11
ARCES **ARCESS Array B** 76.57 339 P P 00 35 22.2 -0.3
comp=Z,3.7nm,0.6s,baz=72,slow=7.8,SNR=5.7
ARCES LR LR 01 11 41.7
comp=Z,48nm,18.1s,baz=157,slow=38
comp=Z,3.7nm,0.6s
ARCES **ARCESS Array B** 76.57 339 P P 00 35 22.0 -0.5
GHAJ **Ghor Haditha** 76.63 299 P P 00 35 23.2 -0.4
BRTR **Keskin Array B** 76.71 308 P P 00 35 23.6 -0.5
comp=Z,2.2nm,0.8s,baz=129,slow=5.3,SNR=14
BRTR LR LR 01 13 27.7
comp=Z,36nm,21.1s,baz=112,slow=39
comp=Z,2.2nm,0.8s
BRTR **Keskin Array B** 76.71 308 P P 00 35 23.0 -1.1
BR104 **Keskin Array S** 76.71 308 P P 00 35 23.2 -0.9
comp=Z,2.9nm,0.8s
BR106 **Keskin Array S** 76.72 308 P P 00 35 23.6 -0.6
comp=Z,3.1nm,0.9s
BR105 **Keskin Array S** 76.73 308 P P 00 35 23.6 -0.6
comp=Z,4.4nm,0.9s
MCK **McKinley** 76.73 27 P P 00 35 24.3 +0.7
baz=279,SNR=6.1
RC01 **Rabbit Creek A** 76.76 30 P P 00 35 24.4 +0.7
baz=279
D25K **Kavik River** 76.83 21 P P 00 35 25.3 +1.2
baz=280,SNR=28
H24K **Noodor Dome** 76.84 25 IAmb IAmb 00 35 26.8
comp=Z,12nm,1.0s
H24K **Noodor Dome** 76.84 25 P P 00 35 25.8 +1.6
baz=279
O22K **Cooper Landing** 76.86 31 P P 00 35 25.1 +0.8
baz=279
G24K **Hadweenzic Riv** 76.86 24 IAmb IAmb 00 35 26.7
comp=Z,15nm,1.1s
G24K **Hadweenzic Riv** 76.86 24 P P 00 35 25.9 +1.6
baz=279,SNR=7.1
PMR **Palmer** 76.97 29 P P 00 35 25.6 +0.7
baz=279
WAT1 **Susitna Watana** 77.04 28 P P 00 35 26.1 +0.8
baz=279
POKR **Poker Plat Res** 77.15 26 P P 00 35 27.5 +1.6
baz=280
SPITS **Spitsbergen Ar** 77.20 348 P P 00 35 25.5 -0.4
comp=Z,13nm,0.6s,baz=92,slow=9.2,SNR=29
SPITS LR LR 01 13 48.8
comp=Z,84nm,18.7s,baz=48,slow=39
comp=Z,13nm,0.6s
C26K **Camden Bay** 77.23 21 P P 00 35 27.7 +1.5
baz=281
KNK **Knik Glacier** 77.32 30 P P 00 35 28.2 +1.3
baz=280
E25K **Arctic Village** 77.34 22 IAmb IAmb 00 35 29.4
comp=Z,11nm,1.1s
E25K **Arctic Village** 77.34 22 P P 00 35 28.2 +1.3
baz=281,SNR=5.1
F25K **Christian Rive** 77.41 23 IAmb IAmb 00 35 30.0
comp=Z,13nm,0.8s
F25K **Christian Rive** 77.41 23 P P 00 35 28.8 +1.4
baz=281,SNR=15
ILAR **Eielson Array** 77.44 26 P P 00 35 26.8 -0.7
comp=Z,1.9nm,0.8s,baz=266,slow=6.1,SNR=18
comp=Z,1.9nm,0.8s
ILAR **Eielson Array** 77.44 26 P P 00 35 27.3 -0.2
ILAR **Eielson Array** 77.44 26 P P 00 35 27.3 -0.2
WAT6 **Susitna Watana** 77.45 28 P P 00 35 28.6 +0.8
baz=280
EIL **Elat** 77.46 297 LR LR 01 13 03.2
comp=Z,34nm,18.5s,baz=173,slow=38
HDA **Harding Lake** 77.47 26 P P 00 35 28.4 +0.6
baz=280
DHY **Denali Highway** 77.53 28 P P 00 35 28.9 +0.7
baz=280
M23K **Glacier View** 77.60 29 P P 00 35 29.1 +0.6
baz=280
C27K **Jago River** 77.70 21 IAmb IAmb 00 35 31.4
comp=Z,20nm,0.9s
C27K **Jago River** 77.70 21 P P 00 35 30.1 +1.3
baz=282
FIA1 **FINESS Array S** 77.72 331 P P 00 35 28.4 -0.7
FINES **FINESS Array B** 77.72 331 P P 00 35 28.8 -0.3
comp=Z,8.2nm,0.7s,baz=50,slow=6.4,SNR=22
comp=Z,8.2nm,0.7s
FINES **FINESS Array B** 77.72 331 P P 00 35 27.8 -1.2
SCM **Sheep Creek Mo** 77.78 29 P P 00 35 30.4 +0.9
SCM **Sheep Creek Mo** 77.78 29 P P 00 35 30.4 +0.9
SCM pmax pmax
comp=Z,136nm,1.7s
SCM **Sheep Creek Mo** 77.78 29 P P 00 35 30.4 +0.9
baz=281
CSS **Mathiatis** 77.80 303 P P 00 35 30.2 +0.1
CSS **Mathiatis** 77.80 303 P P 00 35 29.8 -0.3
comp=Z,47nm,0.9s
BMAR **Burnt Mountain** 77.84 23 P P 00 35 31.5 +1.7
PRP **Porcupine Dome** 77.86 25 P P 00 35 31.1 +1.1
baz=281
AK09 **Malin Array Si** 77.88 319 P P 00 35 29.4 -0.8
AK08 **Malin Array Si** 77.90 319 P P 00 35 29.5 -0.8
AK03 **Malin Array Si** 77.90 319 P P 00 35 29.5 -0.8
AKASG **Malin Array Be** 77.91 319 P P 00 35 29.4 -1.0
comp=Z,5.1nm,0.7s,baz=66,slow=5.4,SNR=16
AKASG LR LR 01 09 55.6
comp=Z,42nn,19.2s,baz=84,slow=36
comp=Z,5.1nm,0.7s
AKASG **Malin Array Be** 77.91 319 P P 00 35 29.2 -1.1
AKBB **Malin Array Si** 77.91 319 IAmb IAmb 00 35 29.9
comp=Z,13nm,0.9s
AKBB **Malin Array Si** 77.91 319 *ce*P P 00 35 29.7 -0.7
AKBB pmax pmax
comp=Z,15nm,0.9s
AKBB **Malin Array Si** 77.91 319 P P 00 35 28.8 -1.6
KIEV **Kiev** 77.92 319 P P 00 35 29.3 -1.1
KIEV IAmb IAmb 00 35 29.9
comp=Z,11nm,0.8s
KIEV **Kiev** 77.92 319 P P 00 35 29.3 -1.1
KIEV pmax pmax
comp=Z,11nm,0.9s
KIEV **Kiev** 77.92 319 P P 00 35 29.1 -1.3
comp=Z,63nm,1.1s
F26K **Sheenjek River** 77.95 23 IAmb IAmb 00 35 33.0
comp=Z,11nm,1.0s
F26K **Sheenjek River** 77.95 23 P P 00 35 31.8 +1.5
baz=282,SNR=10
AK16 **Malin Array Si** 77.99 319 P P 00 35 29.9 -0.9
AK14 **Malin Array Si** 77.99 319 P P 00 35 29.9 -0.9
MNK **Minsk** 78.03 323 *i* P P 00 35 29.7 -1.3
comp=E,11nm,1.0s
MNK *i* P P 00 35 29.7 -1.3
comp=N,14nm,1.0s
MNK *i* P P 00 35 29.7 -1.3
comp=Z,26nm,0.9s,baz=80
MNK *i* PP PP 00 38 24.9 -2.0
MNK *i* PPP PPP 00 40 12.8
MNK *i* S S 00 45 24.2 -0.1
MNK *i* SS SS 00 50 27.2 +2.0
MNK *i* SSS SSS 00 53 51.9
MNK *i* LQ LQ 01 04 50.4
MNK *i* LR LR 01 10 42.4
MNK *i* LRM MLR 01 12 01.5
comp=Z,74nm,14.3s
MNK *i* LRM MLR 01 12 09.2
comp=E,73nm,17.5s
MNK *i* LRM MLR 01 12 17.8
comp=N,201nm,38.4s
MNK **Minsk** 78.03 323 *i* P P 00 35 29.6 -1.3
MNK *i* 00 38 24.9
MNK *i* PPP PPP 00 40 12.8
MNK *i* S S 00 45 24.2 -0.1
MNK *i* SS SS 00 50 27.2 +2.0
MNK *i* SSS SSS 00 53 51.8
MNK pmax pmax
comp=E,11nm,1.0s
MNK pmax pmax
comp=Z,26nm,0.9s
MNK pmax pmax
comp=N,14nm,1.0s
MNK MLR MLR
comp=Z,74nm,14.0s
MNK MLR MLR
comp=E,73nm,18.0s
MNK MLR MLR
comp=N,201nm,38.0s
GLI **Glacier Island** 78.06 30 P P 00 35 31.6 +0.5
baz=281
K24K **Donnelly Dome** 78.09 27 P P 00 35 31.8 +0.5
baz=282,SNR=5.3
J25K **Salcha River,** 78.11 26 P P 00 35 31.3 -0.1
baz=282
G26K **Porcupine Rive** 78.25 24 IAmb IAmb 00 35 34.5
comp=Z,12nm,0.8s
G26K **Porcupine Rive** 78.25 24 P P 00 35 33.3 +1.3
baz=283,SNR=9.1
M24K **Tolsona, Glenn** 78.26 29 P P 00 35 33.3 +1.1
baz=282
PAX **Paxson** 78.40 28 P P 00 35 33.9 +0.9
baz=282
MDUB **Mudurnu** 78.42 309 P P 00 35 33.1 -0.5
MDUB IAmb IAmb 00 35 34.1
comp=Z,17nm,0.8s
KLU **Klutina** 78.50 29 P P 00 35 34.5 +1.0
baz=282
RIDG **Independent Ri** 78.51 27 P P 00 35 33.9 +0.4
baz=282
HARP **HAARP** 78.66 28 P P 00 35 35.5 +1.2
baz=282
Q23K **Middleton Isla** 78.72 31 P P 00 35 35.8 +1.2
baz=282
D27M **Malcolm River** 78.73 21 IAmb IAmb 00 35 37.1
comp=Z,20nm,1.1s
D27M **Malcolm River** 78.73 21 P P 00 35 35.9 +1.2
baz=285
EYAK **Cordova Ski Ar** 78.78 30 P P 00 35 36.0 +1.0
baz=282
SCRK **Sand Creek** 78.83 27 P P 00 35 36.4 +1.0
baz=283
I26K **Coal Creek Min** 78.87 25 IAmb IAmb 00 35 37.1
comp=Z,16nm,0.8s
I26K **Coal Creek Min** 78.87 25 P P 00 35 36.5 +1.0
baz=284
SORM **Soroca** 78.95 317 ⇑P P 00 35 35.6 -0.5
SORM **Soroca** 78.95 317 P P 00 35 35.6 -0.5
SORM **Soroca** 78.95 317 P P 00 35 34.6 -1.6
comp=Z,23nm,0.9s
LUBAR **Lubar, Ukraine** 78.98 319 P P 00 35 34.9 -1.4
N25K **Chitina, Valde** 79.09 29 P P 00 35 37.7 +0.8
baz=283
TLCR 79.22 314 ⇑P P 00 35 37.6 -0.2
TLCR 79.22 314 P P 00 35 37.5 -0.2
BMRM **Bremner River** 79.24 30 P P 00 35 38.4 +0.8
baz=283
JURR **Jurilovca** 79.26 314 ⇑P P 00 35 37.7 -0.3
H27K **Steamboat Moun** 79.30 24 IAmb IAmb 00 35 40.5
comp=Z,29nm,1.5s
H27K **Steamboat Moun** 79.30 24 P P 00 35 38.9 +1.1
baz=285,SNR=9.2
L26K **Log Cabin Wild** 79.33 27 P P 00 35 39.2 +1.1
baz=284
E28M **Babbage River** 79.40 21 P P 00 35 39.3 +1.0
baz=286
I27K **Kandik River** 79.42 25 IAmb IAmb 00 35 41.1
comp=Z,15nm,1.1s
I27K **Kandik River** 79.42 25 P P 00 35 39.7 +1.2
baz=285
D28M **Stokes Point** 79.47 21 P P 00 35 39.9 +1.3
baz=287
F28M **Old Crow** 79.56 22 P P 00 35 40.4 +1.2
baz=286,SNR=12
KAIM **Kayak Island** 79.57 31 P P 00 35 40.6 +1.2
baz=284
VLDR **Vladesti** 79.59 315 ⇑P P 00 35 40.2 +0.5
M26K **Nabesna, AK** 79.64 28 IAmb IAmb 00 35 42.0
comp=Z,17nm,0.8s
M26K **Nabesna, AK** 79.64 28 P P 00 35 41.0 +1.3
baz=284
TIRR **Tirgusor** 79.65 313 ⇑P P 00 35 40.3 +0.2
TIRR **Tirgusor** 79.65 313 P P 00 35 40.2 +0.2
CFR **Carcaliu** 79.69 314 ⇓P P 00 35 40.1 -0.2
CFR **Carcaliu** 79.69 314 P P 00 35 40.1 -0.2
YLV **Yalova** 79.76 309 P P 00 35 40.3 -0.6
comp=Z,686nmcomp=Z,18nm,1.0s
RNPP9 **Sopachiv** 79.83 321 P P 00 35 40.4 -0.5
RNPP8 **Varash** 79.87 320 P P 00 35 40.4 -0.7
RNPP5 **Stanyi Chortor** 79.87 320 P P 00 35 40.4 -0.7
MCARA **McCarthy VSAT** 79.88 29 P P 00 35 42.5 +1.5
baz=284
L27K **Beaver Creek,** 80.00 27 IAmb IAmb 00 35 44.5
comp=Z,15nm,0.8s
L27K **Beaver Creek,** 80.00 27 P P 00 35 43.3 +1.6
baz=285
CRQE **Cirque** 80.01 30 P P 00 35 42.8 +0.9
baz=284
BCAR **Beaver Creek A** 80.01 27 P P 00 35 43.3 +1.6
E29M **Blow River** 80.04 22 P P 00 35 43.0 +1.2
baz=288,SNR=9.9
KMPD **K-Podol'skiy** 80.09 318 P P 00 35 41.7 -0.7
KMPD P P 00 35 41.7 -0.7
I28M **Miner Creek** 80.14 25 IAmb IAmb 00 35 45.0
comp=Z,21nm,1.2s
I28M **Miner Creek** 80.14 25 P P 00 35 44.0 +1.5
baz=286,SNR=6.6
ICOR **Ion Corvin** 80.15 313 ⇑P P 00 35 43.3 +0.5
M27K **Edge Creek, AK** 80.16 28 P P 00 35 44.0 +1.4
baz=285
ELL **Elmali** 80.16 305 P P 00 35 42.6 -0.6
ELL IAmb IAmb 00 35 50.7
comp=Z,18nm,1.0s
ELL **Elmali** 80.16 305 P P 00 35 42.6 -0.6
ELL pmax pmax
comp=Z,18nm,1.0s
PANC **Panciu** 80.22 315 ⇑P P 00 35 43.5 +0.4
ODBI **Odobesti** 80.31 315 ⇑P P 00 35 44.3 +0.7
NOR **Nord** 80.39 354 *i* P P 00 35 43.3 -0.1
NOR IAmb IAmb 00 35 44.0
comp=Z,7.1nm,0.8s
TESR **Tescani** 80.42 316 ⇑P P 00 35 43.8 -0.5
TESR **Tescani** 80.42 316 P P 00 35 43.5 -0.7
comp=Z,34nm,0.9s
GIRR **Girov** 80.42 316 ⇑P P 00 35 44.3 +0.1
G29M **Pine Creek** 80.45 23 IAmb IAmb 00 35 46.0
comp=Z,20nm,0.8s
G29M **Pine Creek** 80.45 23 P P 00 35 45.1 +1.1
baz=288
PRAR **RASCA** 80.51 317 ⇑P P 00 35 44.6 -0.1
VRI **Vrincioaia** 80.51 315 ⇑P P 00 35 45.5 +0.8
VRI **Vrincioaia** 80.51 315 P P 00 35 45.5 +0.8
VRI **Vrincioaia** 80.51 315 P P 00 35 44.9 +0.1
comp=Z,37nm,0.9s
PLOR **Plostina** 80.57 315 ⇓P P 00 35 45.5 +0.4
PLOR **Plostina** 80.57 315 P P 00 35 45.5 +0.4
BVCY **Beaver Creek** 80.60 28 P P 00 35 46.4 +1.4
baz=286
ONER **Baraj Valea Uz** 80.63 315 ⇑P P 00 35 46.1 +0.8
MESA **MESA** 80.70 30 P P 00 35 46.7 +1.0
baz=286
DAWY **Dawson** 80.76 26 P P 00 35 47.1 +1.4
baz=287
CTG **Chitna Glacier** 80.78 29 P P 00 35 47.3 +1.2
baz=286
I29M **Ogilvie Camp,** 80.82 24 IAmb IAmb 00 35 48.1
comp=Z,28nm,1.6s
COVR **Voineasa-Covas** 80.87 315 ⇑P P 00 35 46.5 -0.2
NEHR **Nehoiu** 80.90 315 ⇑P P 00 35 47.8 +0.9
TURR **Turia** 80.95 315 ⇑P P 00 35 48.0 +0.9
YUK3 **Moose Creek** 80.96 28 P P 00 35 48.0 +0.9
baz=287
F30M **Barrier River** 81.05 22 IAmb IAmb 00 35 49.1
comp=Z,18nm,0.9s
F30M **Barrier River** 81.05 22 P P 00 35 48.1 +0.9
baz=290,SNR=8.2
OZUR 81.10 315 ⇑P P 00 35 48.2 +0.3
G30M **tAoh Zraii Nji** 81.10 23 IAmb IAmb 00 35 48.8
comp=Z,17nm,1.1s
G30M **tAoh Zraii Nji** 81.10 23 P P 00 35 47.7 +0.2
baz=290,SNR=11
EPYK **Eagle Plains** 81.11 23 P P 00 35 48.1 +0.5
baz=289
BURAR **Bucovina Array** 81.12 317 ⇑P P 00 35 48.3 +0.2
BURAR **Bucovina Array** 81.12 317 P P 00 35 47.9 -0.2
BURAR **Bucovina Array** 81.12 317 P P 00 35 48.3 +0.2
BUR08 **Bucovina Ar. S** 81.12 317 IAmb IAmb 00 35 49.1
comp=Z,12nm,0.7s
MLR **Muntele Rosu** 81.13 315 ⇓P P 00 35 48.9 +0.6
MLR **Muntele Rosu** 81.13 315 IAmb IAmb 00 35 49.3
comp=Z,13nm,0.8s
MLR **Muntele Rosu** 81.13 315 P P 00 35 48.8 +0.6
MLR **Muntele Rosu** 81.13 315 P P 00 35 48.2 0.0
comp=Z,17nm,0.8s
J29N **Klondike Camp** 81.14 25 P P 00 35 48.8 +1.0
baz=286
LOZB **Loznitsa** 81.17 313 ⇑P P 00 35 48.6 +0.3
RAZG **Razgrad** 81.19 313 ⇑P P 00 35 48.1 -0.3
O28M **Mount Upton** 81.37 29 P P 00 35 49.4 0.0
baz=287
DOPR **Dopca** 81.40 315 ⇑P P 00 35 50.0 +0.5
YUK8 **Steele Glacier** 81.42 29 P P 00 35 49.4 -0.3
baz=287
PINM **Pinnacle** 81.54 30 P P 00 35 50.2 +0.2
baz=287
L29M **L29M** 81.59 27 IAmb IAmb 00 35 53.2
comp=Z,18nm,1.0s
L29M **L29M** 81.59 27 P P 00 35 51.4 +1.2
baz=288
INK **Inuvik** 81.60 21 P P 00 35 50.2 +0.2
INK IAmb IAmb 00 35 51.5
comp=Z,14nm,1.2s
INK **Inuvik** 81.60 21 P P 00 35 50.2 +0.2
INK pmax pmax
comp=Z,14nm,1.3s
INK **Inuvik** 81.60 21 P P 00 35 51.2 +1.2
baz=292,SNR=8.7
K29M **Barlow Dome** 81.62 26 P P 00 35 51.6 +1.2
baz=289
I30M **Mount Dempster** 81.63 24 IAmb IAmb 00 35 52.3
comp=Z,9.5nm,0.8s
I30M **Mount Dempster** 81.63 24 P P 00 35 51.5 +1.0
baz=290
M29M **Somme Creek** 81.66 27 IAmb IAmb 00 35 53.6
comp=Z,15nm,0.8s
M29M **Somme Creek** 81.66 27 P P 00 35 51.9 +1.2
baz=288
VOIR 81.75 315 ⇑P P 00 35 51.1 -0.4
VOIR 81.75 315 P P 00 35 51.1 -0.4
G31M **Satah River** 81.84 22 P P 00 35 51.8 +0.4
baz=291
F31M **Tsiigehtchic** 81.84 22 IAmb IAmb 00 35 52.6
comp=Z,18nm,1.1s
F31M **Tsiigehtchic** 81.84 22 P P 00 35 51.7 +0.4
baz=292,SNR=12

J30M	**Hart River**	**81.87**	**25**	P		**P**	**00 35 52.4**	**+0.7**
	baz=290									
YUK4	**Talbot Arm**	**81.92**	**28**	P		**P**	**00 35 53.0**	**+0.9**
	baz=288									
SHIU	**Shidnytsya**	**81.92**	**319**	P		**P**	**00 35 52.3**	**+0.1**
MEZ	**Mezhgor'ye**	**82.00**	**318**	P		**P**	**00 35 52.9**	**+0.3**
HUMR	**Humele**	**82.03**	**314**	⇑P		**P**	**00 35 52.2**	**-0.6**
ARR	**Arges**	**82.06**	**315**	⇑P		**P**	**00 35 53.2**	**+0.2**
KIBK	**Kibwezi**	**82.17**	**265**	P		**P**	**00 35 55.0**	**+0.8**
YUK6	**Outpost Mounta**	**82.17**	**29**	P		**P**	**00 35 54.1**	**+0.6**
	baz=288									
H31M	**Peel River**	**82.22**	**24**	IAmb		IAmb	00 35 55.5			
	comp=Z,31nm,1.5s									
H31M	**Peel River**	**82.22**	**24**	P		**P**	**00 35 54.2**	**+0.8**
	baz=291,SNR=6.9									
KWP	**Kalwaria Pacla**	**82.23**	**319**	P		**P**	**00 35 53.5**	**-0.3**
	comp=Z,34nm,0.9s									
KORU	**Korolevo**	**82.34**	**318**	P		**P**	**00 35 54.1**	**-0.3**
M30M	**Minto, Yukon**	**82.35**	**27**	P		**P**	**00 35 55.2**	**+1.0**
	baz=290,SNR=8.6									
BRIU	**Brid**	**82.37**	**318**	P		**P**	**00 35 54.6**	**+0.1**
CJR	**Cluj-Napoca**	**82.41**	**316**	⇑P		**P**	**00 35 55.7**	**+0.9**
CJR	**Cluj-Napoca**	**82.41**	**316**	P		**P**	**00 35 55.7**	**+0.9**
MUKU	**Mukachevo**	**82.55**	**318**	P		**P**	**00 35 55.5**	**+0.1**
VLAD	**Vladila**	**82.56**	**314**	⇑P		**P**	**00 35 55.3**	**-0.3**
PLVB	**Pleven**	**82.56**	**313**	⇑P		**P**	**00 35 55.8**	**+0.2**
A36M	**Sachs Harbour**	**82.58**	**16**	P		**P**	**00 35 55.5**	**+0.4**
A36M					IAmb	IAmb	00 35 56.3			
	comp=Z,15nm,0.9s									
A36M	**Sachs Harbour**	**82.58**	**16**	P		**P**	**00 35 55.5**	**+0.4**
	baz=299,SNR=11									
KARP	**Karpathos**	**82.60**	**305**	P		**P**	**00 35 55.7**	**-0.4**
HYT	**Haines Junctio**	**82.61**	**29**	P		**P**	**00 35 56.5**	**+0.8**
	baz=289									
LOT	**Lotru**	**82.62**	**315**	⇑P		**P**	**00 35 56.2**	**+0.2**
HOLU	**Holmets**	**82.73**	**318**	P		**P**	**00 35 56.2**	**-0.2**
MARR	**Marisel-Cluj**	**82.74**	**316**	⇑P		**P**	**00 35 57.4**	**+0.7**
DRGR		**82.98**	**317**	⇑P		**P**	**00 35 58.3**	**+0.4**
DRGR		**82.98**	**317**	P		**P**	**00 35 58.2**	**+0.4**
DEV	**Deva**	**83.09**	**316**	⇑P		**P**	**00 35 59.2**	**+0.8**
DEV	**Deva**	**83.09**	**316**	P		**P**	**00 35 59.1**	**+0.8**
N31M	**Braeburn, Yuko**	**83.17**	**28**	P		**P**	**00 35 59.3**	**+0.9**
	baz=291									
LODK	**Lodwar**	**83.19**	**272**	P		**P**	**00 35 59.0**	**-0.5**
O30N	**Mendenhall**	**83.28**	**29**	P		**P**	**00 35 59.9**	**+0.8**
	baz=290									
GZR	**Gura Zlata**	**83.31**	**315**	⇑P		**P**	**00 35 59.7**	**+0.1**
GZR	**Gura Zlata**	**83.31**	**315**	P		**P**	**00 35 59.7**	**+0.1**
M31M	**Drury Creek, Y**	**83.53**	**27**	IAmb		IAmb	00 36 02.4			
	comp=Z,8.5nm,0.8s									
M31M	**Drury Creek, Y**	**83.53**	**27**	P		**P**	**00 36 01.0**	**+0.7**
	baz=292									
HERR	**Herculane**	**83.70**	**315**	⇑P		**P**	**00 36 01.6**	**+0.1**
NIE	**Niedzica**	**83.80**	**320**	P		**P**	**00 36 02.1**	**+0.2**
	comp=Z,7.6nm,1.1s									
OJC	**Ojcow**	**83.87**	**320**	P		**P**	**00 36 01.4**	**-0.9**
OJC	**Ojcow**	**83.87**	**320**	P		**P**	**00 36 01.4**	**-0.9**
OJC	**Ojcow**	**83.87**	**320**	P		**P**	**00 36 02.0**	**-0.3**
	comp=Z,20nm,0.9s									
WHY	**Whitehorse**	**83.88**	**28**	P		**P**	**00 36 04.2**	**+1.9**
	baz=292									
HFS	**Hagfors**	**83.91**	**331**	P		**P**	**00 36 01.0**	**-1.2**
	comp=Z,4.3nm,0.7s,baz=78,slow=7.9,SNR=5.4									
	comp=Z,4.3nm,0.7s									
FARO	**Faro, Yukon**	**83.97**	**27**	IAmb		IAmb	00 36 04.4			
	comp=Z,16nm,1.1s									
FARO	**Faro, Yukon**	**83.97**	**27**	P		**P**	**00 36 04.0**	**+1.5**
	baz=293									
BZS	**Buzias**	**84.03**	**316**	⇑P		**P**	**00 36 03.0**	**-0.2**
BZS	**Buzias**	**84.03**	**316**	P		**P**	**00 36 03.0**	**-0.2**
MDVR	**Moldovita**	**84.21**	**315**	⇑P		**P**	**00 36 04.3**	**+0.2**
C36M	**Paulatuk**	**84.23**	**19**	P		**P**	**00 36 03.7**	**+0.1**
	baz=300,SNR=8.8									
DAG	**Danmarks Havn**	**84.27**	**351**	*i* P		**P**	**00 36 02.9**	**-0.9**
DAG					IAmb	IAmb	00 36 03.8			
	comp=Z,13nm,0.7s									
LANS	**Liptovska Anna**	**84.39**	**319**	*e*P		**P**	**00 36 05.7**	**+0.7**
LANS					pmax	pmax				
	comp=Z,7.0nm,1.4s									
LANS	**Liptovska Anna**	**84.39**	**319**	*e*P		**P**	**00 36 05.7**	**+0.7**
IDI	**Anoyia**	**84.46**	**305**	IAmb		IAmb	00 36 16.8			
	comp=Z,14nm,1.2s									
PSZ	**Piszkesteto**	**84.50**	**318**	⇑P		**P**	**00 36 04.9**	**-0.7**
PSZ	**Piszkesteto**	**84.50**	**318**	IAmb		IAmb	00 36 06.5			
	comp=Z,7.7nm,1.0s									
PSZ	**Piszkesteto**	**84.50**	**318**	P		**P**	**00 36 04.8**	**-0.7**
N32M	**Quiet Lake**	**84.50**	**28**	P		**P**	**00 36 06.7**	**+1.4**
	baz=293									
NB2	**NORSAR Subarra**	**84.70**	**332**	P		**P**	**00 36 05.3**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=68,slow=5.1									
NOA	**NORSAR Array B**	**84.70**	**332**	P		**P**	**00 36 05.0**	**-1.2**
	comp=Z,2.7nm,0.8s,baz=67,slow=5.1,SNR=13									
NOA					LR	LR	01 18 37.1			
	comp=Z,53nm,18.3s,baz=55,slow=39									
	comp=Z,2.7nm,0.8s									
MMPY	**Sheldon Lake,**	**84.70**	**26**	P		**P**	**00 36 08.2**	**+1.9**
	baz=294									
P32M	**Atlin**	**84.82**	**29**	P		**P**	**00 36 08.2**	**+1.2**
	baz=293									
R32K	**Eaglecrest**	**84.93**	**31**	P		**P**	**00 36 08.8**	**+1.3**
	baz=292									
SIT	**Sitka**	**84.98**	**32**	P		**P**	**00 36 08.9**	**+1.2**
	baz=291									
P33M	**Teslin, Yukon**	**84.99**	**28**	P		**P**	**00 36 09.0**	**+1.2**
	baz=293									
STEB	**Steborice**	**85.20**	**321**	*e*P		**P**	**00 36 09.1**	**+0.1**
S32K	**Killisnoo**	**85.20**	**31**	P		**P**	**00 36 10.6**	**+1.9**
	baz=292									
MORC	**Moravsky Berou**	**85.39**	**320**	IAmb		IAmb	00 36 11.1			
	comp=Z,18nm,1.4s									
MORC	**Moravsky Berou**	**85.39**	**320**	*e*P		**P**	**00 36 10.3**	**+0.3**
SRO	**Srobarova**	**85.54**	**318**	*e*P		**P**	**00 36 11.2**	**+0.5**
SRO					pmax	pmax				
	comp=Z,10.0nm,0.8s									
SRO	**Srobarova**	**85.54**	**318**	*e*P		**P**	**00 36 11.2**	**+0.5**
JAVC	**Velka Javorina**	**85.61**	**320**	*e*P		**P**	**00 36 12.8**	**+1.7**
KRLC	**Kraliky**	**85.76**	**321**	*e*P		**P**	**00 36 11.8**	**0.0**
KRLC	**Kraliky**	**85.76**	**321**	*e*P		**P**	**00 36 11.8**	**0.0**
KSP	**Ksiaz**	**85.79**	**322**	P		**P**	**00 36 11.7**	**-0.2**
	comp=Z,19nm,1.1s									
MORH	**Mrgy, Hungar**	**85.83**	**317**	⇑P		**P**	**00 36 12.3**	**+0.1**
MORH	**Mrgy, Hungar**	**85.83**	**317**	P		**P**	**00 36 12.1**	**-0.1**
	comp=Z,7.2nm,1.1s									
DPC	**Dobruska-Polom**	**85.94**	**321**	*e*P		**P**	**00 36 12.9**	**+0.2**
DPC	**Dobruska-Polom**	**85.94**	**321**	*e*P		**P**	**00 36 12.9**	**+0.2**
DPC	**Dobruska-Polom**	**85.94**	**321**	P		**P**	**00 36 12.7**	**0.0**
	comp=Z,9.3nm,0.9s									
KONO	**Kongsberg**	**86.00**	**331**	*c*e*P*		**P**	**00 36 13.2**	**+0.5**
KONO					pmax	pmax				
	comp=Z,50nm,1.7s									
MODS	**Modra-Piesok**	**86.02**	**319**	*e*P		**P**	**00 36 13.6**	**+0.5**
MODS	**Modra-Piesok**	**86.02**	**319**	*e*P		**P**	**00 36 13.6**	**+0.5**
VRAC	**Vranov**	**86.13**	**320**	LR		LR	01 14 48.6			
	comp=Z,54nm,18.7s,baz=95,slow=36									
VRAC	**Vranov**	**86.13**	**320**	⇑P		**P**	**00 36 14.3**	**+0.7**
VRAC	**Vranov**	**86.13**	**320**	P		**P**	**00 36 14.3**	**+0.7**
VRAC	**Vranov**	**86.13**	**320**	*e*P		**P**	**00 36 14.3**	**+0.7**
R33M	**Jennings River**	**86.18**	**29**	P		**P**	**00 36 15.7**	**+1.8**
	baz=295									
MPLH	**Magyarpolny**	**86.25**	**318**	P		**P**	**00 36 13.7**	**-0.5**
	comp=Z,45nm,1.1s									
KRUC	**Moravsky**	**86.33**	**320**	*e*P		**P**	**00 36 15.1**	**+0.5**
TGTN	**Hyland Airport**	**86.45**	**26**	P		**P**	**00 36 16.9**	**+1.9**
	baz=297,SNR=5.1									
NEEM	**North Greenlan**	**86.70**	**358**	*i* P		**P**	**00 36 16.7**	**+0.4**
NEEM					IAmb	IAmb	00 36 17.5			
	comp=Z,23nm,0.9s									
S34M	**Telegraph Cree**	**86.73**	**30**	P		**P**	**00 36 18.4**	**+2.0**
	baz=295									
WRAK	**Wrangell Islan**	**86.74**	**32**	P		**P**	**00 36 19.0**	**+2.6**
	baz=294									
RONA	**Rosalia, Austr**	**86.86**	**319**	*e*P		**P**	**00 36 17.2**	**-0.1**
	comp=Z,5.7nm,1.1s									
DLBC	**Dease Lake**	**87.03**	**30**	P		**P**	**00 36 19.4**	**+1.5**
	baz=296									
CONA	**Conrad Observa**	**87.06**	**319**	*e*P		**P**	**00 36 18.6**	**+0.3**
	comp=Z,7.1nm,1.1s									
RES	**Resolute Bay**	**87.12**	**9**	IAmb		IAmb	00 36 19.1			
	comp=Z,7.6nm,0.8s									
BRG	**Berggiesshubel**	**87.17**	**322**	*e*P		**P**	**00 36 17.8**	**-0.9**
BRG					Amp		00 36 19.9			
	comp=Z,8.6nm,1.0s									
ARSA	**Arzberg**	**87.51**	**319**	*e*P		**P**	**00 36 20.4**	**-0.1**
	comp=Z,0.1nm,0.3s									
RAR	**Rarotonga**	**87.54**	**113**	LR		LR	01 09 08.6			
	comp=Z,46nm,20.1s,baz=217,slow=31									
ZVC	**Zvikov**	**87.55**	**321**	*e*P		**P**	**00 36 19.6**	**-1.0**
T35M	**Bob Quinn**	**87.56**	**31**	P		**P**	**00 36 22.5**	**+2.0**
	baz=296									
WRGLY	**Wrigley**	**87.58**	**24**	P		**P**	**00 36 22.2**	**+1.8**
	baz=301									
TULEG	**Thule**	**87.66**	**2**	*i* P		**P**	**00 36 20.2**	**-0.3**
TULEG					IAmb	IAmb	00 36 21.5			
	comp=Z,4.8nm,0.9s									
CKRC	**Cesky Krumlov**	**87.71**	**320**	*e*P		**P**	**00 36 21.6**	**+0.2**
CKRC	**Cesky Krumlov**	**87.71**	**320**	*e*P		**P**	**00 36 21.6**	**+0.2**
SOKA	**Soboth**	**88.03**	**318**	*e*P		**P**	**00 36 22.4**	**-0.6**
	comp=Z,3.4nm,1.1s									
KHC	**Kasperske Hory**	**88.04**	**321**	*e*P		**P**	**00 36 22.8**	**-0.2**
KHC	**Kasperske Hory**	**88.04**	**321**	*e*P		**P**	**00 36 22.8**	**-0.2**
GERES	**GERESS Array B**	**88.07**	**320**	P		**P**	**00 36 22.7**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=94,slow=5.4,SNR=4.5									
	comp=Z,0.5nm,0.5s									
MOA	**Molln**	**88.09**	**319**	*e*P		**P**	**00 36 23.5**	**+0.3**
	comp=Z,5.8nm,0.8s									
BIOA	**Bad Ischl, Aus**	**88.54**	**319**	*e*P		**P**	**00 36 25.3**	**0.0**
	comp=Z,5.9nm,1.2s									
MBAR	**Mbarara**	**88.72**	**269**	LR		LR	01 15 39.5			
	comp=Z,38nm,19.9s,baz=154,slow=35									
MBAR	**Mbarara**	**88.72**	**269**	P		**P**	**00 36 27.5**	**+0.5**
MBAR	**Mbarara**	**88.72**	**269**	P		**P**	**00 36 27.5**	**+0.5**
KOTAN	**Kotaneelee Air**	**88.93**	**27**	P		**P**	**00 36 28.2**	**+1.3**
	baz=301									
MYKA	**Terra Mystica**	**88.94**	**318**	*e*P		**P**	**00 36 26.2**	**-1.1**
	comp=Z,1.0nm,0.4s									
KBA	**Koelnbreinsper**	**88.96**	**319**	*e*P		**P**	**00 36 26.4**	**-1.1**
	comp=Z,11nm,1.7s									
ABTA	**Abfaltersbach**	**89.61**	**319**	*e*P		**P**	**00 36 29.1**	**-1.3**
	comp=Z,2.1nm,0.6s									
SCO	**Scoresbysund**	**89.78**	**348**	*i* P		**P**	**00 36 27.2**	**-3.4**
SCO					IAmb	IAmb	00 36 28.1			
	comp=Z,17nm,1.0s									
WTTA	**Wattenberg**	**89.96**	**320**	*i* P		**P**	**00 36 31.5**	**-0.7**
	comp=Z,8.8nm,0.6s,SNR=6.2									
WATA	**Walderalm**	**89.97**	**320**	*e*P		**P**	**00 36 31.3**	**-0.9**
	comp=Z,7.6nm,1.1s									
SQTA	**Sankt Quirin**	**90.24**	**320**	*i* P		**P**	**00 36 32.7**	**-0.8**
	comp=Z,3.4nm,0.6s,SNR=5.8									
MOTA	**Moosalm**	**90.26**	**320**	*e*P		**P**	**00 36 32.8**	**-0.8**
	comp=Z,8.9nm,0.9s									
RETA	**Reutte**	**90.41**	**320**	*e*P		**P**	**00 36 33.6**	**-0.6**
	comp=Z,16nm,2.1s									
FETA	**Feichten**	**90.62**	**320**	*i* P		**P**	**00 36 34.7**	**-0.6**
	comp=Z,2.9nm,0.7s,SNR=9.6									
POIN	**Pond Inlet**	**90.91**	**5**	IAmb		IAmb	00 36 37.2			
	comp=Z,13nm,1.5s									
DAVA	**Damuels**	**91.04**	**320**	*e*P		**P**	**00 36 37.0**	**-0.2**
	comp=Z,2.0nm,1.4s									
YKAW3	**Yellowknife Wh**	**91.28**	**22**	IAmb		IAmb	00 36 39.5			
	comp=Z,7.9nm,1.1s									
YKA	**Yellowknife Ar**	**91.32**	**22**	P		**P**	**00 36 38.0**	**0.0**
	comp=Z,2.1nm,0.8s,baz=316,slow=5.4,SNR=33									
	comp=Z,2.1nm,0.9s									
YKA	**Yellowknife Ar**	**91.32**	**22**	P		**P**	**00 36 37.4**	**-0.6**
YKA	**Yellowknife Ar**	**91.32**	**22**	*i* P		**P**	**00 36 38.7**	**+0.7**
YKA					pmax	pmax				
	comp=Z,2.0nm,0.9s									
ILON	**Igloolik, Nuna**	**93.69**	**7**	IAmb		IAmb	00 36 49.5			
	comp=Z,7.3nm,1.2s									
LSZ	**Lusaka**	**95.06**	**256**	LR		LR	01 17 19.7			
	comp=Z,92nm,18.6s,baz=156,slow=34									
PPT	**Papeete**	**95.77**	**107**	LR		LR	01 18 47.0			
	comp=Z,35nm,18.4s,baz=291,slow=35									
PPT2	**Papeete2**	**95.77**	**107**	*e*LR		LR	01 07 55.4			
	comp=Z,104nm,29.0s									
PPT2					*e*LR	LR	01 08 03.2			
	comp=Z,98nm,27.8s									
SFJD	**Kangerlussuaq**	**97.04**	**356**	LR		LR	01 22 13.3			
	comp=Z,46nm,18.9s,baz=341,slow=36									
TBI	**Tubuai**	**97.31**	**112**	*e*LR		LR	01 08 39.8			
	comp=Z,2μm,38.8s									
LBTB	**Lobatse**	**99.77**	**247**	LR		LR	01 20 39.0			
	comp=Z,47nm,19.1s,baz=149,slow=34									
NVL	**N'lazarevskaya**	**110.59**	**200**	*i* PKIKP		**PKiKP**	**00 42 06.2**	**+1.8**
NVL				*e*			00 42 42.2			
NVL				*e*PPP		PPP	00 45 01.8			
NVL				*e*			00 49 18.4			
NVL				*e*SS		SS	00 58 12.6	+3.8		
NVL				*e*SSS		SSS	01 02 20.1			
NVL					pmax	pmax				
	comp=Z,57nm,1.2s									
NVL					MLR	MLR				
	comp=Z,483nm,16.0s									
WVT	**Waverly**	**122.30**	**26**	PKPdf		**PKPdf**	**00 42 27.8**	**-0.2**
WVT	**Waverly**	**122.30**	**26**	PKIKP		**PKPdf**	**00 42 27.8**	**-0.2**
COYC	**Coyhaique**	**148.89**	**165**	PKPdf		**PKPdf**	**00 43 17.4**	**+1.0**
PLCA	**Paso Flores**	**153.80**	**163**	PKPbc		**PKiKP**	**00 43 32.4**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=252,slow=3.6,SNR=6.7									
PLCA					PKPab	**PKPab**	**00 43 44.0**	**-0.9**
	comp=Z,3.4nm,0.9s,baz=193,slow=1.8,SNR=5.3									
LPAZ	**La Paz**	**172.91**	**94**	PKP		**PKPdf**	**00 43 42.7**	**-0.7**
	comp=Z,2.1nm,1.0s,baz=349,slow=8.2,SNR=4.5									
LPAZ					PKPab	**PKPab**	**00 45 09.1**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=11,slow=4.5,SNR=3.7									

*DJA **26** 00:23:34.6±1.1,6˚N±4˚×9˚5E±˚, h13km±4km, M4.1/13, mb3.9/2, MLv4.2/13*
*IDC **26** 00:23:35.2±13.0,5˚.58N×95˚.17E, h0km, mb4.3/2, mbtmp4.1/3, ML4.2/1, Error ellipse: s-maj=353.2km s-min=45.4km az=82.0*

ISC 26 00:23:33.7±3.3,**6˚.1N**±0˚.2×**95˚.2E**±0˚.3,**h10**km,**n11**,σ1§**02**/8,
Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LHMI	**Lhok Sumawe**	**1.98**	**116**	P		**Pn**	**00 24 06.6**	**-0.7**
MLSI	**Meulaboh, Aceh**	**2.21**	**146**	P		**Pn**	**00 24 08.9**	**-1.5**
MLSI				S		**Sn**	**00 24 38.0**	**+0.2**
KCSI	**Kotacane, Aceh**	**3.65**	**134**	P		**Pn**	**00 24 31.6**	**+1.2**
PSI	**Prapat**	**4.98**	**131**	P		**Pn**	**00 24 48.3**	**-0.5**
IPM	**Ipoh**	**6.06**	**105**	P		**Pn**	**00 25 02.9**	**-0.6**
	0.1nm17nm,1.7s									
CMAR	**Chiang Mai Arr**	**12.82**	**16**	Pn		Pn	00 26 45.4	+9.2
	0.4nm,0.3s,baz=202,slow=12,SNR=6.0									
	0.6nm,0.3s									
WRA	**Warramunga Arr**	**46.42**	**125**	P		**P**	**00 32 01.5**	**+0.5**
	3.0nm,0.6s,baz=302,slow=7.6,SNR=12									
	3.0nm,0.6s									
ASAR	**Alice Springs**	**48.01**	**129**	P		**P**	**00 32 13.8**	**+0.4**
	3.0nm,0.8s,baz=296,slow=7.4,SNR=4.2									
	3.0nm,0.8s									
H04N2	**CROZET ISLANDS**	**64.75**	**212**	T		T	01 44 16.3			
	baz=49,slow=75,SNR=6.6									
H04N1	**CROZET ISLANDS**	**64.76**	**212**	T		T	01 44 18.1			
	baz=49,slow=75,SNR=5.6									
H04N3	**CROZET ISLANDS**	**64.77**	**212**	T		T	01 44 15.1			
	baz=49,slow=75,SNR=7.0									

*IDC **26** 00:33:55.4±0.9,2˚.86N×127˚.14E, h0km, mb3.9/9, mbtmp4.0/9, Error ellipse: s-maj=65.3km s-min=15.3km az=72.0*
*NEIC **26** 00:34:00.7±1.6,2˚.87N±0˚.08×127˚.2E±0˚.1, h37km±9km, mb4.3/11, Error ellipse: s-maj=20.8km s-min=10.3km az=69.0*
*DJA **26** 00:34:00.4±0.3,3˚N±3˚×12˚7E±˚, h10km, M4.0/14, mb4.3/2, MLv3.9/14*

ISC 26 00:34:00.9±0.7,**2˚.89N**±0˚.07×**127˚.17E**±0˚.09,**h44**km,**n35**,
σ1§**11**/33,**mb4.1**/13,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GAMI	**Galela, Maluku**	**1.21**	**150**	P		**Pn**	**00 34 21.7**	**+0.3**
GAMI				S		**Sn**	**00 34 40.0**	**+3.3**
SGSI	**Sangihe**	**1.82**	**296**	P		**Pn**	**00 34 30.0**	**+0.2**
TNTI	**Ternate**	**2.12**	**175**	Pn		**Pn**	**00 34 32.9**	**-0.9**
TNTI	**Ternate**	**2.12**	**175**	P		**Pn**	**00 34 33.0**	**-0.8**
MNI	**Manado**	**2.74**	**238**	P		**Pn**	**00 34 41.6**	**-0.8**
GTOI	**Gorontalo**	**4.73**	**242**	P		**Pn**	**00 35 11.2**	**+1.5**
SANI	**Sanana**	**5.05**	**194**	P		**Pn**	**00 35 13.5**	**-0.6**
MRSI	**Marisa**	**5.75**	**245**	P		**Pn**	**00 35 24.1**	**+0.3**
TOLI2	**Tolitoli**	**6.63**	**255**	Pn		**Pn**	**00 35 35.4**	**-0.4**
MTN	**Manton Dam**	**16.12**	**166**	P		**P**	**00 37 45.9**	**-1.3**
MTN					IAmb	IAmb	00 38 00.7			
	comp=Z,58nm,1.4s									
KNRA	**Kununurra**	**18.52**	**175**	P		**Pn**	**00 38 13.6**	**-0.6**
KNRA					IAmb	IAmb	00 38 34.8			
	comp=Z,20nm,1.1s									
FITZ	**Fitzroy Crossi**	**20.91**	**184**	P		**P**	**00 38 39.7**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=10,slow=10.0,SNR=7.3									
	comp=Z,2.3nm,0.5s									
WB0	**Warramunga Arr**	**23.61**	**163**	P		**P**	**00 39 07.2**	**-0.8**
WB0					IAmb	IAmb	00 39 25.3			
	comp=Z,14nm,1.2s									
WRA	**Warramunga Arr**	**23.76**	**163**	P		**P**	**00 39 08.9**	**-0.5**
	comp=Z,3.9nm,0.5s,baz=342,slow=10,SNR=38									
	comp=Z,3.9nm,0.5s									
WRA	**Warramunga Arr**	**23.76**	**163**	P		**P**	**00 39 07.1**	**-2.4**
WR8	**Warramunga Arr**	**23.82**	**163**	P		**P**	**00 39 09.4**	**-0.6**
WR8					IAmb	IAmb	00 39 10.3			
	comp=Z,6.8nm,0.5s									
JOW	**Kunigami**	**23.83**	**2**	P		**P**	**00 39 08.0**	**-2.0**
AS31	**Alice Springs**	**27.20**	**166**	P		**P**	**00 39 40.7**	**0.0**
ASAR	**Alice Springs**	**27.20**	**166**	P		**P**	**00 39 41.1**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=347,slow=7.5,SNR=9.0									
	comp=Z,0.5nm,0.3s									
FORT	**Forrest**	**33.49**	**179**	P		**P**	**00 40 35.8**	**-0.3**
FORT					IAmb	IAmb	00 40 38.9			
	comp=Z,7.2nm,0.9s									
STKA	**Stephens Creek**	**37.20**	**159**	P		**P**	**00 41 08.2**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=343,slow=12,SNR=5.3									
	comp=Z,1.4nm,0.3s									
STKA	**Stephens Creek**	**37.20**	**159**	P		**P**	**00 41 08.6**	**+0.6**
H11S3	**WAKE ISLAND Hy**	**41.67**	**65**	T		T	01 26 31.4			
	baz=252									
H11S2	**WAKE ISLAND Hy**	**41.68**	**65**	T		T	01 26 29.7			
	baz=252									
H11S1	**WAKE ISLAND Hy**	**41.69**	**65**	T		T	01 26 30.4			
	baz=252									
KLR	**Kul'dur**	**46.33**	**4**	P		**P**	**00 42 23.4**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=188,slow=7.0,SNR=4.5									
	comp=Z,1.0nm,0.8s									
MKAR	**Makanchi Array**	**58.49**	**325**	P		**P**	**00 43 53.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=116,slow=7.6,SNR=9.6									
	comp=Z,0.4nm,0.5s									
MKAR	**Makanchi Array**	**58.49**	**325**	P		**P**	**00 43 52.2**	**-0.5**
KURBB	**Kurchatov Arra**	**62.68**	**327**	P		**P**	**00 44 22.2**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=130,slow=6.6,SNR=6.7									
	comp=Z,0.6nm,0.4s									
KURK	**Kurchatov**	**62.68**	**328**	P		**P**	**00 44 21.8**	**+0.7**
KURK					IAmb	IAmb	00 44 47.1			
	comp=Z,1.3nm,0.6s									
KKAR	**Karatay Array**	**64.14**	**317**	P		**P**	**00 44 30.2**	**-0.8**
BVAR	**Borovoye Array**	**68.26**	**327**	P		**P**	**00 44 58.4**	**+1.2**
	comp=Z,3.0nm,0.2s,baz=134,slow=7.3,SNR=3.1									
	comp=Z,3.0nm,0.2s									
AB31	**Akbulak array**	**73.07**	**321**	P		**P**	**00 45 25.8**	**-0.7**
AB31					IAmb	IAmb	00 45 31.5			
	comp=Z,0.7nm,0.8s									
ABKAR	**Akbulak array**	**73.07**	**321**	P		**P**	**00 45 26.4**	**-0.1**
AKTO	**Aktyubinsk**	**74.59**	**322**	P		**P**	**00 45 36.6**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=75,slow=6.0,SNR=5.1									
	comp=Z,1.9nm,

n29,σ1°41/49, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.41**	**303**	P	**Pg**	**00 35 56.8**	**+0.4**
OZAP				S	**Sg**	**00 36 02.6**	**+0.9**
OZAP				IAML		00 36 10.0	
	comp=N,1μm,0.7s						
TVAN	**Van**	**0.81**	**277**	P	**Pg**	**00 36 03.5**	**-0.5**
TVAN				S	**Sg**	**00 36 13.9**	**-0.5**
TVAN				IAML		00 36 32.0	
	comp=N,268nm,0.8s						
VMUR	**Van-Muradiye**	**0.87**	**310**	P	**Pg**	**00 36 05.3**	**+0.2**
ERCV	**ERCIS-VAN**	**1.03**	**304**	Pg	**Pg**	**00 36 08.6**	**-0.5**
HAKT	**HAKKARI**	**1.05**	**213**	P	**Pg**	**00 36 09.0**	**+0.4**
HAKT				S	**Sn**	**00 36 25.6**	**-0.1**
GEVA	**Gevas**	**1.08**	**264**	P	**Pg**	**00 36 08.3**	**-1.0**
GEVA				S	**Sn**	**00 36 26.4**	**-0.1**
NAX	**Nakhchivan**	**1.11**	**48**	P	**Pb**	**00 36 09.9**	**-0.5**
NAX				S	**Sn**	**00 36 26.4**	**-0.6**
AKDM	**Akdamar-Van**	**1.15**	**265**	Pn	**Pg**	**00 36 09.5**	**-0.9**
DYDN	**Diyadin**	**1.24**	**333**	P	**Pg**	**00 36 10.5**	**-1.8**
DYDN				S	**Sg**	**00 36 28.2**	**-0.3**
DYDN				IAML		00 36 32.0	
	comp=N,112nm,0.4s						
SBZ	**Shahbuz**	**1.30**	**42**	P	**Pb**	**00 36 13.2**	**-0.5**
SBZ				S	**Sn**	**00 36 32.8**	**+1.1**
HYR	**Heyderabad**	**1.32**	**14**	P	**Pg**	**00 36 14.4**	**+0.7**
HYR				S	**Sn**	**00 36 34.1**	**+2.0**
ORD	**Ordubad**	**1.32**	**68**	P	**Pn**	**00 36 13.3**	**-0.7**
ORD				S	**Sn**	**00 36 32.5**	**+0.4**
CUKT	**Cukurca**	**1.36**	**209**	Pn	**Pg**	**00 36 15.2**	**+0.7**
CUKT				Sn	**Sn**	**00 36 34.7**	**+1.6**
ADCV	**BITLIS_Adilcev**	**1.39**	**286**	P	**Pb**	**00 36 14.8**	**-0.3**
ADCV				S	**Sg**	**00 36 35.2**	**+2.2**
IGDI	**IGDIR**	**1.45**	**349**	P	**Pn**	**00 36 15.1**	**-0.7**
IGDI				S	**Sb**	**00 36 34.5**	**-0.7**
IGDI	**IGDIR**	**1.45**	**349**	P	**Pg**	**00 36 17.1**	**+0.8**
IGDI				S	**Sg**	**00 36 39.4**	**+4.2**
PERV	**Siirt/Pervari-**	**1.57**	**252**	P	**Pg**	**00 36 18.9**	**+0.4**
AGRB	**Hanur-Agry**	**1.59**	**316**	Pn	**Pb**	**00 36 18.2**	**-0.5**
AGRB				Sn	**Sg**	**00 36 40.2**	**+0.5**
DORK	**Agr/Tutak/Do**	**1.60**	**307**	P	**Pn**	**00 36 17.5**	**-0.3**
MLAZ	**Malazgirt-MUS**	**1.63**	**296**	Pn	**Pb**	**00 36 18.7**	**-0.6**
KOTA	**Agri, Merkez-K**	**1.66**	**325**	P	**Pg**	**00 36 20.0**	**-0.3**
GNI	**Garni**	**1.72**	**8**	Pn	**Pb**	**00 36 20.8**	**-0.1**
GURO	**Guroymak-BITLI**	**1.88**	**274**	Pn	**Pb**	**00 36 22.4**	**-1.3**
QRD	**Qoradiz**	**2.47**	**65**	P	**Pb**	**00 36 31.6**	**-2.0**
QRD				S	**Sb**	**00 37 05.4**	**+0.9**
GDB	**GEDABAY**	**2.50**	**24**	P	**Pb**	**00 36 32.1**	**-2.0**
GDB				S	**Sg**	**00 37 08.0**	**-0.8**
GANJ	**Ganja**	**2.64**	**33**	P	**Pb**	**00 36 34.3**	**-2.3**
GANJ				S	**Sb**	**00 37 09.2**	**-0.2**
QZX	**Qazax, Azerbai**	**2.71**	**15**	P	**Pb**	**00 36 35.2**	**-2.5**
QZX				S	**Sb**	**00 37 12.4**	**+1.0**
YRD	**Yardimli**	**3.02**	**80**	P	**Pn**	**00 36 39.2**	**+1.8**
YRD				S	**Sn**	**00 37 16.1**	**+1.9**
LRK	**Lerik**	**3.07**	**85**	P	**Pn**	**00 36 39.5**	**+1.4**
LRK				S	**Sb**	**00 37 18.1**	**-3.8**

*IPEC **26** 00:41:32.5±0.2,51°.56N×16°.17E,h1km,ML2.6/6,Error ellipse: s-maj=1.7km s-min=1.3km az=63.0*
*MCSM **26** 00:41:33.9±1.7,51°.N±8°×1°.6E±°,h11km±11km,MLv2.8*
*DNK **26** 00:41:33.6±1.8,51°.57N×15°.86E,h14km±57km,ML3.1, Presumed earthquake*
*IDC **26** 00:41:34.6±0.9,51°.48N×15°.99E,h0km,mbtmp3.3/5, ML2.4/5,Error ellipse: s-maj=19.8km s-min=8.5km az=118.0*
*VIE **26** 00:41:34.2±0.7,51°.44N×16°.06E,h0km,mb2.6/10, ml2.9/10,Error ellipse: s-maj=7.0km s-min=3.6km az=52.0 77 km WNW of Wroclaw Suspected Mining induced.*
*UPP **26** 00:41:35.6±2.9,51°.75N×15°.83E,h0km,ML2.3,Presumed earthquake*
*PRU **26** 00:41:35.3,51°.46N×16°.11E,h0km*

ISC 26 00:41:31.6±0.7, 51°.62N±0°.02×16°.08E±0°.02, h0km, n59, σ1°24/121, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.79**	**170**	*e*Pg	**Pg**	**00 41 46.4**	**-0.2**
KSP				*e*Sg	**Sg**	**00 41 55.5**	**-1.2**
KSP	**Ksiaz**	**0.79**	**170**	Pg	**Pg**	**00 41 46.4**	**-0.2**
KSP				Sg	**Sg**	**00 41 55.8**	**-1.0**
CHVC	**Chvalec**	**1.03**	**181**	*e*PG	**Pg**	**00 41 51.4**	**+0.1**
CHVC				*e*SG	**Sg**	**00 42 03.6**	**-1.0**
OSTC	**Ostas**	**1.06**	**175**	*e*PG	**Pg**	**00 41 52.1**	**+0.1**
OSTC				*e*SG	**Sg**	**00 42 04.8**	**-0.9**
UPC	**Upice**	**1.11**	**182**	*e*PG	**Pg**	**00 41 52.7**	**-0.1**
UPC				*e*SG	**Sg**	**00 42 06.4**	**-0.8**
	comp=Z,107nm,0.2s						
DPC	**Dobruska-Polom**	**1.28**	**173**	*e*PG	**Pg**	**00 41 55.5**	**-0.5**
DPC				*e*SG	**Sg**	**00 42 10.7**	**-1.8**
	comp=Z,45nm,0.3s						
DPC	**Dobruska-Polom**	**1.28**	**173**	Pg	**Pg**	**00 41 55.2**	**-0.8**
DPC				Sg	**Sg**	**00 42 10.5**	**-2.0**
PVCC	**Panska Ves**	**1.45**	**222**	*e*PG	**Pb**	**00 41 59.5**	**+0.1**
PVCC				*e*SG	**Sn**	**00 42 18.7**	**0.0**
	comp=Z,202nm,0.2s						
PIVO	**Bartosovice** baz=350	**1.46**	**168**	*e*Pg	**Pn**	**00 41 58.6**	**-0.6**
PIVO				*e*Sg	**Sg**	**00 42 16.1**	**-2.4**
	71nm,0.3s,baz=350						
BRG	**Berggiesshubel**	**1.54**	**242**	Pn	**Pg**	**00 42 01.1**	**+0.1**
BRG				Pg	**Pb**	**00 42 01.7**	**+0.8**
BRG				Sg	**Sb**	**00 42 22.1**	**+1.2**
BRG				Amp		00 42 23.5	
	comp=Z,77nm,0.4s						
KRLC	**Kraliky**	**1.60**	**164**	*e*PG	**Pn**	**00 42 01.2**	**0.0**
KRLC				*e*SG	**Sn**	**00 42 21.3**	**-1.4**
	comp=Z,53nm,0.2s						
RYBC	**Ceska Rybna** baz=2.2	**1.81**	**180**	*e*Pn	**Pn**	**00 42 04.0**	**0.0**
RYBC				*e*Sg	**Sn**	**00 42 27.4**	**-0.3**
	comp=Z,58nm,0.2s,baz=2.2						
PRU	**Pruhonice**	**1.90**	**212**	*e*PN	**Pn**	**00 42 04.3**	**-0.9**
PRU				*e*PG	**Pb**	**00 42 07.1**	**0.0**
PRU				*e*SG	**Sb**	**00 42 31.1**	**-0.3**
	comp=Z,78nm,0.3s						
CLL	**Collm**	**1.95**	**262**	P	**Pn**	**00 42 06.7**	**+0.8**
CLL	**Collm**	**1.95**	**262**	*i* Pn	**Pn**	**00 42 06.3**	**+0.4**
CLL	comp=Z,4.0nm,0.5s			*i* Pg	**Pg**	**00 42 09.7**	**+0.7**
CLL				*i* x	x	00 42 13.7	
CLL				*i* Sg	**Sg**	**00 42 35.8**	**+1.6**
	comp=Z,45nm,0.4s						
STEB	**Steborice**	**2.00**	**147**	*e*PN	**Pn**	**00 42 05.6**	**-1.0**
STEB				*e*PG	**Pb**	**00 42 08.4**	**-0.4**
STEB				*e*SG	**Sb**	**00 42 33.6**	**-0.5**
MORC	**Moravsky Berou** baz=334	**2.06**	**153**	*e*Pn	**Pn**	**00 42 07.0**	**-0.5**
MORC				*e*Sg	**Sn**	**00 42 34.8**	**+0.9**
	comp=Z,48nm,0.4s,baz=334						
OKC	**Ostrava-Krasne**	**2.21**	**143**	*e*PG	**Pb**	**00 42 12.9**	**+0.5**
OKC				*e*SG	**Sb**	**00 42 39.8**	**-0.5**
VRAC	**Vranov** baz=353	**2.33**	**172**	*e*Pn	**Pn**	**00 42 11.0**	**-0.2**
VRAC				*e*Sg	**Sb**	**00 42 43.2**	**-0.6**
	comp=Z,30nm,0.4s,baz=353						
TREC	**Trest**	**2.35**	**190**	*e*SG	**Sb**	**00 42 45.1**	**+0.6**
ZVC	**Zvikov**	**2.49**	**210**	*e*SG	**Sg**	**00 42 50.6**	**-1.0**
KRUC	**Moravsky** baz=357	**2.56**	**175**	*e*Pn	**Pn**	**00 42 14.4**	**0.0**
KRUC				*e*Pg	**Pb**	**00 42 18.1**	**-0.3**
	baz=357						
KRUC				*e*Sg	**Sb**	**00 42 50.7**	**+0.2**
	comp=Z,20nm,0.4s,baz=357						
NKC	**Novy Kostel**	**2.68**	**240**	*e*PN	**Pn**	**00 42 17.2**	**+1.2**
NKC				*e*PG	**Pg**	**00 42 22.8**	**-0.2**
NKC				*e*SG	**Sg**	**00 42 57.1**	**-0.7**
	comp=Z,98nm,0.3s						
OJC	**Ojcow**	**2.74**	**119**	*e*Pg	**Pg**	**00 42 23.4**	**-0.6**
OJC				*e*Sg	**Sg**	**00 42 58.8**	**-0.7**
JAVC	**Velka Javorina** baz=341	**2.94**	**159**	*e*Pn	**Pn**	**00 42 19.2**	**-0.4**
JAVC	**Velka Javorina**	**2.94**	**159**	*e*PN	**Pn**	**00 42 19.3**	**-0.4**
KHC	**Kasperske Hory**	**2.96**	**214**	*e*PN	**Pn**	**00 42 19.4**	**-0.4**
KHC				*e*PG	**Pb**	**00 42 25.5**	**+0.3**
KHC				*e*SN	**Sn**	**00 42 56.0**	**-0.1**
KHC				*e*SG	**Sg**	**00 43 05.6**	**-1.0**
	comp=Z,20nm,0.5s						
KHC	**Kasperske Hory**	**2.96**	**214**	P	**Pn**	**00 42 19.4**	**-0.4**
CKRC	**Cesky Krumlov**	**3.02**	**203**	*e*PN	**Pn**	**00 42 21.2**	**+0.5**
CKRC				*e*PG	**Pb**	**00 42 27.2**	**+1.0**
CKRC				*e*SG	**Sb**	**00 43 05.8**	**+2.1**
	comp=Z,23nm,0.6s						
GERES	**GERESS Array B** comp=Z,0.1nm,0.3s,baz=33,slow=14,SNR=12	**3.17**	**210**	Pn	**Pn**	**00 42 23.8**	**+1.0**
GERES				Pg	**Pb**	**00 42 29.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=33,slow=16,SNR=15						
GERES				Sn	**Sn**	**00 43 00.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=32,slow=26,SNR=4.6						
GERES				Lg	Lg	00 43 09.9	
	comp=Z,0.9nm,0.3s,baz=33,slow=27,SNR=11 comp=Z,1.2nm,0.3s						
LANS	**Liptovska Anna**	**3.28**	**137**	*e*PN	**Pn**	**00 42 24.7**	**+0.4**
LANS				*e*PG	**Pg**	**00 42 34.2**	**-0.3**
LANS				*e*SG	**Sb**	**00 43 13.5**	**+2.3**
MODS	**Modra-Piesok**	**3.34**	**166**	*e*PN	**Pn**	**00 42 26.1**	**+1.1**
MODS				*e*PG	**Pg**	**00 42 34.5**	**-1.0**
MODS				*e*SG	**Sg**	**00 43 18.1**	**-0.6**
NIE	**Niedzica**	**3.48**	**128**	*e*Pg	**Pg**	**00 42 38.4**	**+0.2**
NIE				*e*Sg	**Sg**	**00 43 23.5**	**+0.3**
ZST	**Bratislava**	**3.49**	**169**	*e*SG	**Sg**	**00 43 21.9**	**-1.6**
BSD	**Bornholm Skovb**	**3.57**	**349**	*i* P	**Pn**	**00 42 29.4**	**+1.1**
BSD				*i* S	**Sn**	**00 43 08.8**	**-2.3**
BSD				IAML		00 43 16.4	
	comp=Z,23nm,0.9s						
CONA	**Conrad Observa** comp=Z,0.5nm,0.2s,SNR=5.9	**3.69**	**182**	Pn	**Pn**	**00 42 30.4**	**+0.5**
CONA				*i* Sg	**Sg**	**00 43 27.6**	**-2.6**
	comp=Z,0.1nm,0.2s						
RONA	**Rosalia, Austr** comp=Z,0.1nm,0.4s	**3.92**	**178**	*i* Pn	**Pn**	**00 42 32.9**	**-0.2**
RONA				*i* Sn	**Sn**	**00 43 23.0**	**+3.2**
	comp=Z,4.6nm,0.6s						
MOA	**Molln** comp=Z,0.4nm,0.4s,SNR=8.0	**3.95**	**198**	*i* Pn	**Pn**	**00 42 33.9**	**+0.4**
MOA				*i* Sn	**Sn**	**00 43 23.3**	**+2.9**
	comp=Z,0.3nm,0.1s						
STHS	**Stebnicka Huta**	**3.96**	**122**	*e*PN	**Pn**	**00 42 33.4**	**-0.2**
STHS				*e*PG	**Pg**	**00 42 48.6**	**+1.1**
STHS				*e*SG	**Sg**	**00 43 41.8**	**+3.0**
KECS	**Kecovo**	**4.23**	**136**	*e*PN	**Pn**	**00 42 38.0**	**+0.8**
KECS				*e*SG	**Sb**	**00 43 42.3**	**+3.9**
BIOA	**Bad Ischl, Aus** comp=Z,0.4nm,0.1s	**4.24**	**203**	*i* Pn	**Pn**	**00 42 37.8**	**+0.4**
BIOA				*i* Sn	**Sn**	**00 43 28.0**	**+0.5**
	comp=Z,4.2nm,0.6s						
LUNU	**Lund**	**4.32**	**340**	P	**Pn**	**00 42 39.7**	**+1.2**
LUNU				S	**Sn**	**00 43 29.0**	**-0.4**
LUNU	**Lund**	**4.32**	**340**	*i* P	**Pn**	**00 42 39.5**	**+1.1**
LUNU				P	**Pn**	**00 42 39.7**	**+1.2**
LUNU				*e*S	**Sn**	**00 43 26.6**	**-2.9**
LUNU				S	**Sn**	**00 43 29.0**	**-0.4**
ARSA	**Arzberg** comp=Z,0.5nm,0.5s	**4.38**	**185**	*i* Pn	**Pn**	**00 42 39.8**	**+0.4**
ARSA				*i* Sn	**Sn**	**00 43 29.7**	**-1.4**
	comp=Z,0.3nm,0.2s						
BLEU	**Blekinge**	**4.70**	**358**	P	**Pn**	**00 42 44.1**	**+0.4**
BLEU				S	**Sn**	**00 43 38.1**	**-0.7**
BLEU	**Blekinge**	**4.70**	**358**	P	**Pn**	**00 42 44.1**	**+0.4**
BLEU				*i* P	**Pn**	**00 42 45.0**	**+1.4**
BLEU				*i* S	**Sn**	**00 43 37.7**	**-1.2**
BLEU				S	**Sn**	**00 43 38.1**	**-0.7**
LESA	**Schwarzleotal** comp=Z,0.5nm,0.6s	**4.75**	**209**	*i* Pn	**Pn**	**00 42 44.2**	**-0.2**
KBA	**Koelnbreinsper** comp=Z,0.3nm,0.5s	**4.88**	**203**	*i* Pn	**Pn**	**00 42 47.1**	**+0.8**
KBA				*i* Sn	**Sn**	**00 43 45.2**	**+1.6**
	comp=Z,0.5nm,0.4s						
DEL	**Delary**	**5.04**	**346**	P	**Pn**	**00 42 49.2**	**+0.9**
DEL				S	**Sn**	**00 43 44.4**	**-2.7**
DEL	**Delary**	**5.04**	**346**	P	**Pn**	**00 42 49.2**	**+0.9**
DEL				*i* P	**Pn**	**00 42 49.3**	**+0.9**
DEL				S	**Sn**	**00 43 44.4**	**-2.7**
DEL				*e*S	**Sn**	**00 43 44.6**	**-2.5**
SQTA	**Sankt Quirin** comp=Z,0.7nm,0.2s,SNR=5.3	**5.43**	**218**	*i* Pn	**Pn**	**00 42 55.4**	**+1.5**
SQTA				*i* Sn	**Sn**	**00 43 57.2**	**+0.2**
	comp=Z,2.2nm,0.7s						
BRIU	**Brid**	**5.55**	**124**	P	**Pn**	**00 42 55.0**	**-0.4**
BYXU	**Byxelkrok**	**5.71**	**5**	P	**Pn**	**00 42 59.8**	**+2.2**
BYXU	**Byxelkrok**	**5.71**	**5**	P	**Pn**	**00 42 59.8**	**+2.2**
AKASG	**Malin Array Be** comp=Z,0.4nm,0.3s,baz=288,slow=12,SNR=2.5 comp=Z,0.2nm,0.3s	**8.31**	**91**	Pn	**Pn**	**00 43 34.4**	**+1.1**
HFS	**Hagfors** comp=Z,0.1nm,0.3s,baz=168,slow=15,SNR=1.9 comp=Z,4.1nm,1.1s	**8.64**	**352**	Pn	**Pn**	**00 43 39.4**	**+1.6**
FINES	**FINESS Array B** comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=1.2 comp=Z,1.4nm,0.7s	**11.28**	**25**	Pn	**Pn**	**00 44 13.3**	**-0.5**
EKA	**Eskdalemuir Ar** baz=105,slow=13	**12.04**	**296**	Pn	**Pn**	**00 44 22.5**	**-1.8**
ARCES	**ARCESS Array B** comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=1.4 comp=Z,0.9nm,0.7s	**18.52**	**10**	Pn	**Pn**	**00 45 50.2**	**+0.9**

IDC 26 00:48:30.3±2.8, 15°.74N×119°.40E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=369.3km s-min=22.5km az=62.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.9nm,0.7s,baz=335,slow=8.6,SNR=12 0.9nm,0.7s	**38.38**	**157**	P	P	00 55 53.3	-0.3
ASAR	**Alice Springs** 0.9nm,0.5s,baz=338,slow=7.1,SNR=18 0.9nm,0.5s	**41.66**	**160**	P	P	00 56 20.8	0.0
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=131,slow=6.5,SNR=1.2 0.1nm,0.4s	**43.65**	**323**	P	P	00 56 36.0	-0.8
KURBB	**Kurchatov Arra** 0.3nm,0.7s,baz=122,slow=8.4,SNR=1.9 0.3nm,0.7s	**47.80**	**326**	P	P	00 57 10.0	+0.6

*IDC **26** 00:52:45.0±0.8,15°.76N×119°.18E,h0km,mb3.9/8, mbtmp3.9/9,ML4.4/1,MS3.2/5,Error ellipse: s-maj=42.4km s-min=15.7km az=63.0*

ISC 26 00:52:51.6±0.7, 15°.8N±0°.1×119°.1E±0°.2, h47km, n12, σ1°04/14, mb4.0/8, MS2.9/3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City** 109nm,0.3s,baz=3.6,slow=2.5,SNR=3.3	**2.46**	**133**	Pn	**Pn**	**00 53 28.6**	**-0.7**
TGY				Sn	**Sn**	**00 54 00.6**	**+2.4**
	84nm,0.3s,baz=327,slow=3.8,SNR=3.8						
TGY				LR	LR	00 54 28.7	
	comp=Z,383nm,18.5s,baz=44,slow=44						
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=96,slow=11,SNR=7.6	**19.43**	**281**	P	**P**	**00 57 15.2**	**+1.0**
CMAR				LR	LR	01 04 48.3	
	comp=Z,67nm,19.1s,baz=100,slow=37 0.6nm,0.3s						
JNU	**Nakatsue** comp=Z,53nm,20.4s,baz=216,slow=34	**20.30**	**30**	LR	LR	01 04 12.2	
KSRS	**Korea Array** 1.8nm,0.8s,baz=218,slow=9.3,SNR=2.9	**22.96**	**18**	P	**P**	**00 57 51.7**	**-0.3**
KSRS				LR	LR	01 07 37.2	
	comp=Z,17nm,19.1s,baz=185,slow=39 1.8nm,0.8s						
WRA	**Warramunga Arr** 3.2nm,0.7s,baz=337,slow=9.3,SNR=35	**38.55**	**157**	P	**P**	**01 00 08.2**	**-1.7**
WRA				PcP	**PcP**	**01 02 22.5**	**+0.5**
	0.8nm,0.7s,baz=340,slow=2.9,SNR=3.5 3.2nm,0.7s						
ASAR	**Alice Springs** 3.5nm,0.5s,baz=338,slow=7.1,SNR=52	**41.80**	**159**	P	**P**	**01 00 36.2**	**-0.7**
ASAR				PcP	**PcP**	**01 02 33.1**	**+0.6**
	0.8nm,0.7s,baz=345,slow=3.0,SNR=5.0 3.5nm,0.5s						
MKAR	**Makanchi Array** 0.9nm,0.9s,baz=132,slow=10,SNR=8.3	**43.43**	**323**	P	**P**	**01 00 50.3**	**+0.4**
MKAR				PcP	**PcP**	**01 02 37.5**	**0.0**
	0.4nm,0.8s,baz=150,slow=3.2,SNR=2.6 0.9nm,0.9s						
ZALV	**Zalesovo Beam** 0.4nm,0.5s,baz=106,slow=4.7,SNR=2.4 0.4nm,0.5s	**46.49**	**333**	P	**P**	**01 01 14.0**	**-0.1**
KURBB	**Kurchatov Arra** 1.0nm,0.6s,baz=120,slow=8.5,SNR=6.2 1.0nm,0.6s	**47.59**	**326**	P	**P**	**01 01 22.9**	**+0.2**
STKA	**Stephens Creek** 1.7nm,0.7s,baz=341,slow=8.4,SNR=2.2	**52.08**	**156**	P	**P**	**01 01 56.6**	**-0.4**
	1.7nm,0.7s						
AFI	**Afiamalu** comp=Z,41nm,18.0s,baz=43,slow=35	**74.44**	**110**	LR	LR	01 35 50.2	
FINES	**FINESS Array B** 1.5nm,0.8s,baz=128,slow=5.8,SNR=5.0 1.5nm,0.8s	**77.71**	**331**	P	**P**	**01 04 43.3**	**+0.1**

*NNC **26** 01:01:19.6±0.6,42°.97N×75°.50E,h0km,mb2.8,mpv2.2, Error ellipse: s-maj=7.0km s-min=3.5km az=156.0*
*SOME **26** 01:01:20.2,42°.97N×75°.52E,h15km*

ISC 26 01:01:18.8±1.6, 42°.88N±0°.08×75°.58E±0°.04, h5km±18km, n12, σ0°52/23, 2C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KST	**Kastek** 1.0nm,0.1s	**0.33**	**60**	P	**Pb**	**01 01 27.6**	**+0.3**
KST				S	**Sb**	**01 01 32.4**	**-0.4**
	48nm,0.2s						
KST	**Kastek** 1.0nm,0.1s	**0.33**	**60**	*e*P	**Pb**	**01 01 27.5**	**+0.3**
KST				*e*S	**Sb**	**01 01 32.4**	**-0.4**
	48nm,0.2s						
MTBS	**Maitube** 0.9nm,0.2s	**0.67**	**68**	P	**Pb**	**01 01 32.8**	**-0.2**
MTBS				S	**Sb**	**01 01 42.3**	**-0.5**
	5.2nm,0.2s						
MTBS	**Maitube** 0.9nm,0.2s	**0.67**	**68**	*e*P	**Pb**	**01 01 32.9**	**-0.2**
MTBS				*e*S	**Sb**	**01 01 42.2**	**-0.5**
	5.2nm,0.2s						
KRBS	**Karabastau** 2.2nm,0.1s	**0.82**	**5**	P	**Pg**	**01 01 34.6**	**+0.1**
KRBS				S	**Sg**	**01 01 44.7**	**-0.5**
	9.1nm,0.1s						
KRBS	**Karabastau** 2.2nm,0.1s	**0.82**	**5**	*e*P	**Pg**	**01 01 34.6**	**+0.1**
KRBS				*e*S	**Sg**	**01 01 44.7**	**-0.5**
	9.1nm,0.1s						
AAK	**Ala-Archa** 0.1nm,0.3s	**0.83**	**253**	⇑P	**Pg**	**01 01 35.2**	**+0.3**
AAK				⇑S	**Sb**	**01 01 46.7**	**-0.8**
	0.4nm,0.5s						
KTBS	**Karatobe** 0.7nm,0.2s	**1.16**	**44**	P	**Pg**	**01 01 41.1**	**+0.1**
KTBS				S	**Sg**	**01 01 56.0**	**0.0**
	0.4nm,0.2s						
KTBS	**Karatobe** 0.7nm,0.2s	**1.16**	**44**	*e*P	**Pg**	**01 01 41.1**	**+0.1**
KTBS				*e*S	**Sg**	**01 01 56.0**	**0.0**
	0.4nm,0.2s						
MRKS	**Merke** 0.9nm,0.6s	**1.74**	**266**	*e*P	**Pb**	**01 01 51.7**	**+0.5**
MRKS				*e*S	**Sg**	**01 02 14.3**	**-0.3**
	2.6nm,0.5s						
ARXS	**Arharly** 0.8nm,0.3s	**2.11**	**50**	Pg	**Pb**	**01 01 57.3**	**-0.3**
ARXS				Lg	Lg	01 02 24.4	
	1.9nm,0.2s						
ARXS	**Arharly** 0.9nm,0.6s	**2.11**	**50**	*e*P	**Pb**	**01 01 58.0**	**+0.5**
ARXS				*e*S	**Sb**	**01 02 25.6**	**+1.5**
	1.9nm,0.2s						

*IDC **26** 01:10:16.1±3.8,28°.54S×67°.49W,h119km±38km,mb3.1/2, mbtmp3.3/4,Error ellipse: s-maj=53.1km s-min=25.7km az=137.0*

ISC 26 01:10:16.5±1.1, 28°.6S±0°.1×67°.5W±0°.2, h130km, n6, σ0°56/7, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan** 1.7nm,0.3s,baz=36,slow=14,SNR=49	**3.10**	**192**	P	**Pn**	**01 11 04.8**	**+0.4**
CFA				S	**Sn**	**01 11 41.0**	**-0.5**
	14nm,0.4s,baz=251,slow=18,SNR=26						
CPUP	**Villa Florida** 0.9nm,0.6s,baz=254,slow=16,SNR=1.8	**9.29**	**78**	P	**Pn**	**01 12 27.1**	**-0.2**
TORD	**Torodi Ar. Bea** 0.4nm,1.0s,baz=235,slow=4.6,SNR=1.6 0.4nm,1.0s	**78.63**	**68**	P	**P**	**01 22 04.7**	**+0.3**
PDAR	**Pinedale Array** 0.2nm,0.5s,baz=115,slow=6.2,SNR=4.0 0.2nm,0.5s	**80.86**	**330**	P	**P**	**01 22 15.9**	**-0.1**
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=282,slow=2.9,SNR=4.4	**147.57**	**31**	PKPbc	**PKiKP**	**01 29 46.2**	**-0.8**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=294,slow=2.5,SNR=3.3	**150.20**	**44**	PKPbc	**PKiKP**	**01 29 53.0**	**+0.3**

*UPA **26** 01:19:22.7±1.3,8°.53N×82°.96W,h32km±7km,ML2.8, MW3.4,Presumed earthquake*
*UCR **26** 01:19:22.5±0.7,8°.52N×82°.98W,h36km±2km,MW3.6, Presumed earthquake*

ISC 26 01:19:22.4±1.0, 8°.53N±0°.03×82°.97W±0°.02, h34km±2km, n50, σ0°80/66, 7C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NELY	**Ciudad Neily**	**0.12**	**13**	*e*P	**Pb**	**01 19 28.7**	**+0.3**
NELY				*e*S	**Sb**	**01 19 33.8**	**+1.2**
FITO	**Golfito**	**0.20**	**298⇑**	*e*P	**Pn**	**01 19 28.6**	**+0.4**
LESP3	**La Esperanza,**	**0.22**	**124**	*e*P	**Pn**	**01 19 27.9**	**-0.7**
EDAD	**Golfito**	**0.23**	**302⇑**	*e*P	**Pn**	**01 19 29.0**	**+0.1**
EDAD				*e*S	**Sb**	**01 19 34.2**	**0.0**
MLIR3	**Monte Lirio, C**	**0.30**	**30**	*e*P	**Pn**	**01 19 30.8**	**+0.3**
MLIR3				*e*S	**Sb**	**01 19 37.4**	**+1.7**
PTJ1	**Puerto Jimnez**	**0.33**	**271**	*e*P	**Pb**	**01 19 30.5**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.33**	**271**	*e*P	**Pb**	**01 19 30.5**	**-0.1**
PTPM	**Petroterminale**	**0.34**	**164**	*e*P	**Pb**	**01 19 30.9**	**+0.1**
PTPM				*e*S	**Sb**	**01 19 37.0**	**+0.7**
PTPA	**Petro Terminal**	**0.34**	**163⇓**	*e*P	**Pb**	**01 19 30.8**	**0.0**
PTPA				*e*S	**Sb**	**01 19 38.3**	**+1.7**
SCLRA	**Santa Clara, W**	**0.35**	**32**	*i* P	**Pb**	**01 19 31.2**	**+0.1**
SCLRA	**Santa Clara, W**	**0.35**	**

LAES	**El Progreso Va**	**1.23 357**	*e*P	**Pn**	**01 19 44.4**	**+1.1**
NANC3	**Nancito, Chiri**	**1.26 103**	*e*P	**Pn**	**01 19 43.3**	**-0.4**
PIEC	**Cerro El Cedra**	**1.46 318**	*e*P	**Pn**	**01 19 47.1**	**+0.5**
JTS	**Las Juntas de**	**2.62 312**	*e*P	**Pb**	**01 20 06.2**	**-2.5**
JTS			*e*S	**Sn**	**01 20 34.5**	**+1.3**

*IDC **26** 01:23:35.8±1.3,36˚.25N×6˚.83E,h0km,mb3.4/6, mbtmp3.4/9,ML2.9/3,Error ellipse: s-maj=22.8km s-min=15.3km az=13.0*
*CRAAG **26** 01:23:35.3,36˚.56N×6˚.80E,Ml3.4,Algrie 06km SE Ain-Bouziane*
*LDG **26** 01:23:38.6±0.5,36˚.51N×6˚.96E,h10km,Ml3.5/16,Error ellipse: s-maj=8.4km s-min=6.5km az=153.0*

ISC 26 01:23:37.0±0.7,**36˚59N**±0˚.04×**6˚84E**±0˚.03,**h12**km,**n44**, σ2$38/56,**mb3.4/5,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBST	**Bordj Sabath**	**0.28**	**131**	P	**Pg**	**01 23 42.4**	**-0.3**
CASM	**Ain Smara**	**0.43**	**221**	P	**Pg**	**01 23 43.8**	**-1.8**
CBHR	**Beni Haroun da**	**0.46**	**267**	P	**Pg**	**01 23 45.0**	**-1.0**
CSGS	**Sigus**	**0.47**	**193**	P	**Pg**	**01 23 45.0**	**-1.2**
CBOS	**Bilal Ibnou Ra**	**0.47**	**296**	P	**Pg**	**01 23 45.6**	**-0.6**
CMAH	**Djebel Manchou**	**0.47**	**85**	P	**Pg**	**01 23 42.4**	**-3.9**
COAT	**Oued Athmania**	**0.57**	**232**	P	**Pg**	**01 23 47.0**	**-1.2**
CTEI	**Djebel Teioual**	**0.63**	**214**	P	**Pb**	**01 23 49.1**	**-0.9**
DFRA	**Djebel Bou Aff**	**0.78**	**267**	P	**Pg**	**01 23 51.1**	**-1.0**
CJSR	**Ain Djasser**	**1.02**	**225**	P	**Pn**	**01 23 56.5**	**-0.7**
CRHA	**Rehia**	**1.05**	**141**	P	**Pn**	**01 23 57.1**	**-0.5**
CTGD	**Timgad**	**1.08**	**193**	P	**Pn**	**01 23 58.1**	**0.0**
SET	**Setif**	**1.22**	**252**	P	**Pn**	**01 23 58.0**	**-2.0**
CBOGS	**Bougous**	**1.27**	**84**	P	**Pn**	**01 24 00.0**	**-0.6**
CAZD	**Ain Tagrout**	**1.42**	**254**	P	**Pn**	**01 24 02.0**	**-0.7**
CBBAR	**Babar**	**1.47**	**169**	P	**Pg**	**01 24 03.6**	**-1.6**
CTCHA	**Tamokra**	**1.77**	**266**	P	**Pn**	**01 24 06.7**	**-0.8**
ATKB	**Taksebt**	**2.19**	**273**	P	**Pn**	**01 24 09.3**	**-3.9**
KEST	**Kesra**	**2.20**	**112**	Pg	**Pn**	**01 24 13.6**	**+0.2**
	4.6nm,0.3s,baz=246,slow=2.4,SNR=69						
KEST				Lg	Lg	01 24 42.9	
	3.1nm,0.3s,baz=137,slow=11,SNR=5.8						
ABSD	**Ouled Sidi Bra**	**2.43**	**243**	P	**Pn**	**01 24 16.5**	**-0.1**
AKET	**Djebel Ketaf**	**2.45**	**258**	P	**Pn**	**01 24 16.2**	**-0.7**
ABRIN	**Birine**	**3.16**	**253**	P	**Pn**	**01 24 26.6**	**0.0**
EZEK	**Zmalet El Emir**	**4.07**	**246**	P	**Pn**	**01 24 38.5**	**-0.6**
PGF	**Pioggiola**	**6.18**	**15**	*e*Pn	**Pn**	**01 25 08.3**	**+0.1**
PGF				*e*Sn	**Sn**	**01 26 17.8**	**-1.1**
	5.4nm,0.3s						
LMR	**La Mourre**	**6.74**	**358**	*e*Pn	**Pn**	**01 25 14.6**	**-1.2**
LMR				*e*Sn	**Sn**	**01 26 27.0**	**-5.5**
	12nm,0.3s						
SBF	**Sospel**	**7.28**	**3**	*e*Pn	**Pn**	**01 25 23.7**	**+0.4**
SBF				*e*Sn	**Sn**	**01 26 43.3**	**-2.6**
	16nm,0.4s						
SMRF	**Simiane la Rot**	**7.44**	**353**	*e*Pn	**Pn**	**01 25 24.8**	**-0.6**
SMRF				*e*Sn	**Sn**	**01 26 45.8**	**-4.0**
	1.3nm,0.3s						
MTLF	**Montolieu**	**7.62**	**334**	*e*Pn	**Pn**	**01 25 27.8**	**0.0**
MTLF				*e*Sn	**Sn**	**01 26 50.9**	**-3.2**
	5.8nm,0.4s						
LASF	**Ste Croix**	**7.82**	**344**	*e*Pn	**Pn**	**01 25 30.8**	**+0.2**
LASF				*e*Sn	**Sn**	**01 26 54.7**	**-4.3**
	3.3nm,0.4s						
MBDF	**Montbardon**	**8.13**	**360**	*e*Pn	**Pn**	**01 25 36.4**	**+1.4**
MBDF				*e*Sn	**Sn**	**01 27 04.3**	**-2.6**
	1.8nm,0.3s						
EPF	**Esparros**	**8.15**	**324**	*e*Pn	**Pn**	**01 25 37.2**	**+2.1**
EPF				*e*Sn	**Sn**	**01 27 04.5**	**-2.7**
	8.9nm,0.4s						
ORIF	**Oris-en-Rattie**	**8.36**	**355**	*e*Pn	**Pn**	**01 25 38.7**	**+0.7**
ORIF				*e*Sn	**Sn**	**01 27 06.5**	**-5.8**
	2.9nm,0.6s						
VIVF	**Saint-Julien-l**	**8.42**	**349**	*e*Pn	**Pn**	**01 25 38.1**	**-0.8**
VIVF				*e*Sn	**Sn**	**01 27 08.5**	**-5.4**
	4.3nm,0.4s						
ETSF	**Etsaut**	**8.49**	**320**	*e*Pn	**Pn**	**01 25 41.2**	**+1.3**
ETSF				*e*Sn	**Sn**	**01 27 13.2**	**-2.5**
	2.4nm,0.4s						
SJPF	**Ste Jean**	**8.99**	**319**	*e*Pn	**Pn**	**01 25 48.6**	**+1.9**
SJPF				*e*Sn	**Sn**	**01 27 24.5**	**-3.4**
	11nm,0.6s						
ESDC	**Sonseca Array**	**9.05**	**293**	Pn	**Pn**	**01 25 48.8**	**+1.2**
	0.1nm,0.3s,baz=108,slow=14,SNR=2.1						
MDT	**Midelt**	**10.15**	**252**	Pn	**Pn**	**01 26 01.2**	**-1.4**
	1.0nm,0.8s 0.1nm,0.3s,baz=217,slow=13,SNR=1.5						
	1.0nm,0.7s						
GERES	**GERESS Array B**	**13.24**	**20**	Pn	**Pn**	**01 26 49.1**	**+4.3**
	baz=210,slow=9.0,SNR=1.5						
	0.1nm,0.4s						
BRTR	**Keskin Array B**	**21.28**	**73**	P	**P**	**01 28 25.3**	**+1.8**
	0.6nm,0.8s,baz=261,slow=9.5,SNR=2.8						
	0.6nm,0.8s						
AKASG	**Malin Array Be**	**21.37**	**42**	P	**P**	**01 28 25.8**	**+1.7**
	0.3nm,0.2s,baz=243,slow=10,SNR=1.8						
	0.3nm,0.2s						
TORD	**Torodi Ar. Bea**	**23.79**	**193**	P	**P**	**01 28 47.2**	**-2.4**
	0.4nm,0.6s,baz=13,slow=10,SNR=3.8						
	0.4nm,0.6s						
HFS	**Hagfors**	**23.97**	**8**	P	**P**	**01 28 54.6**	**+3.6**
	4.3nm,1.0s,baz=190,slow=16,SNR=1.7						
	4.3nm,1.0s						
KURBB	**Kurchatov Arra**	**51.79**	**50**	P	**P**	**01 32 46.8**	**+2.4**
	0.5nm,0.2s,baz=283,slow=8.5,SNR=1.9						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**55.24**	**54**	P	**P**	**01 33 12.3**	**+2.4**
	0.3nm,0.7s,baz=277,slow=5.5,SNR=2.4						
	0.3nm,0.7s						

*SJA **26** 01:23:38.9±0.5,21˚.39S×67˚.29W,h198km±5km,ML3.6, MW3.6*
*NEIC **26** 01:23:39.6±1.4,21˚.39S±0˚.06×67˚.22W±0˚.09,h192km±8km, mb4.3/18,Mwr4.4(GUC),Error ellipse: s-maj=12.4km s-min=9.3km az=82.0*
*IDC **26** 01:23:39.7±1.4,21˚.35S×67˚.06W,h186km±13km,mb3.6/6, mbtmp4.0/13,Error ellipse: s-maj=20.3km s-min=12.7km az=68.0*
*GUC **26** 01:23:40.6±0.7,21˚.40S×67˚.61W,h215km±18km,ML3.8*
*SCB **26** 01:23:40.0±1.2,21˚.40S×67˚.24W,h177km±10km,MB4.6, ML4.1/3,Error ellipse: s-maj=4.3km s-min=2.5km az=0.0*

ISC 26 01:23:39.4±0.6,**21˚41S**±0˚.04×**67˚.25W**±0˚.04,**h195**km±6km, **n121,**σ1$**25/144,mb4.1/10,1C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.51**	**84**	Pg	**Pn**	**01 24 13.0**	**-0.3**
MOCB				Sg	**Sn**	**01 24 37.2**	**-2.3**
MOCB				IAML		01 24 41.5	
	1μm,0.3s						
AF01	**San Pedro de A**	**1.76**	**209**		**Pn**	**01 24 16.8**	**+1.3**
AF01				Sn	**Sn**	**01 24 45.8**	**+2.3**
AF01	**San Pedro de A**	**1.76**	**209**	*e*P	Pn	01 24 05.3	-10
YJA	**Yavi**	**1.79**	**116**	*e*P	**Pn**	**01 24 16.9**	**+1.1**
YJA				*e*S	**Sn**	**01 24 44.1**	**0.0**
YJA	**Yavi**	**1.79**	**116**	Pg	**Pn**	**01 24 16.3**	**+0.5**
PB09	**IPOC Station P**	**1.89**	**258**		**Pn**	**01 24 17.4**	**+0.8**
PB09				Sn	**Sn**	**01 24 46.0**	**+0.5**
PB09	**IPOC Station P**	**1.89**	**258**	*e*P	**Pn**	**01 24 17.4**	**+0.8**
PB09	**IPOC Station P**	**1.89**	**258**	*e*P	**Pn**	**01 24 17.0**	**+0.4**
PB09				*e*S	**Sn**	**01 24 47.4**	**+1.9**
PB09				IAML		01 24 48.9	
	comp=Z,116nm,0.5s						
PB09	**IPOC Station P**	**1.89**	**258**	Pg	**Pn**	**01 24 17.0**	**+0.4**
PB01	**IPOC Station P**	**2.12**	**279**		**Pn**	**01 24 18.9**	**+0.1**
PB01	**IPOC Station P**	**2.12**	**279**	*e*P	**Pn**	**01 24 19.1**	**+0.2**
PB01				*e*S	**Sn**	**01 24 48.5**	**-1.0**
PB01				IAML		01 24 49.8	
	comp=N,294nm,0.2s						
PB01	**IPOC Station P**	**2.12**	**279**	*e*P	**Pn**	**01 24 18.6**	**-0.3**
PB01				IAML		01 24 51.2	
	comp=Z,118nm,0.2s						
PB01	**IPOC Station P**	**2.12**	**279**	Pg	**Pn**	**01 24 19.6**	**+0.7**
PB08	**IPOC Station P**	**2.18**	**305**		**Pn**	**01 24 20.4**	**+0.5**
PB08	**IPOC Station P**	**2.18**	**305**	*e*P	**Pn**	**01 24 20.5**	**+0.7**
PB08	**IPOC Station P**	**2.18**	**305**	*e*P	**Pn**	**01 24 19.9**	**+0.1**
PB08	**IPOC Station P**	**2.18**	**305**	Pg	**Pn**	**01 24 20.1**	**+0.2**
AOVT	**TarijaAcel**	**2.38**	**94**	Pg	**Pn**	**01 24 21.7**	**-0.1**
PB03	**IPOC Station P**	**2.41**	**254**		**Pn**	**01 24 22.0**	**-0.1**
PB03	**IPOC Station P**	**2.41**	**254**	*e*P	**Pn**	**01 24 22.3**	**+0.2**
PB03				*e*S	**Sn**	**01 24 53.7**	**-1.7**
PB03				IAML		01 24 54.5	
	comp=E,274nm,0.2s						
PB03	**IPOC Station P**	**2.41**	**254**	*e*P	**Pn**	**01 24 22.1**	**-0.1**
PB03				*e*S	**Sn**	**01 24 54.0**	**-1.4**
PB03				IAML		01 24 56.5	
	comp=Z,314nm,0.3s						
PB02	**IPOC Station P**	**2.47**	**272**		**Pn**	**01 24 22.9**	**+0.2**
PB02	**IPOC Station P**	**2.47**	**272**	*e*P	**Pn**	**01 24 22.4**	**-0.3**
PB02				IAML		01 25 01.1	
	comp=Z,801nm,0.3s						
PB02	**IPOC Station P**	**2.47**	**272**	Pg	**Pn**	**01 24 23.2**	**+0.5**
PB02				Sg	**Sn**	**01 24 54.6**	**-1.8**
PB02				IAML		01 24 55.5	
	comp=Z,1μm,0.4s						
PB07	**IPOC Station P**	**2.47**	**262**		**Pn**	**01 24 22.6**	**-0.2**
PB07	**IPOC Station P**	**2.47**	**262**	*e*P	**Pn**	**01 24 23.1**	**+0.2**
PB07				*e*S	**Sn**	**01 24 55.0**	**-1.6**
PB07				IAML		01 24 56.4	
	comp=E,390nm,0.3s						
PB07	**IPOC Station P**	**2.47**	**262**	*e*P	**Pn**	**01 24 22.9**	**0.0**
PB07				*e*S	**Sn**	**01 24 55.3**	**-1.4**
PB07				IAML		01 24 57.2	
	comp=Z,323nm,0.3s						
HJA	**Humahuaca**	**2.47**	**137**	*e*P	**Pn**	**01 24 24.2**	**+1.2**
HJA				*e*S	**Sn**	**01 24 57.9**	**+0.7**
HJA				IAML		01 24 58.5	
	comp=Z,159nm,0.6s						
PB06	**IPOC Station P**	**2.51**	**239**		**Pn**	**01 24 23.5**	**+0.2**
PB06	**IPOC Station P**	**2.51**	**239**	*e*P	**Pn**	**01 24 23.4**	**+0.2**
PB06				IAML		01 24 59.6	
	comp=E,208nm,0.2s						
PB06	**IPOC Station P**	**2.51**	**239**	*e*P	**Pn**	**01 24 23.0**	**-0.2**
PB06				*e*S	**Sn**	**01 24 57.9**	**+0.4**
PB06				IAML		01 25 02.4	
	comp=Z,98nm,0.2s						
PB06	**IPOC Station P**	**2.51**	**239**	Pg	**Pn**	**01 24 23.6**	**+0.4**
GO01	**Chusmiza**	**2.51**	**313**		**Pn**	**01 24 23.7**	**+0.1**
GO01	**Chusmiza**	**2.51**	**313**	*e*P	**Pn**	**01 24 24.2**	**+0.6**
GO01				IAML		01 25 04.4	
	comp=N,224nm,0.1s						
GO01	**Chusmiza**	**2.51**	**313**	*e*P	**Pn**	**01 24 23.5**	**-0.2**
GO01	**Chusmiza**	**2.51**	**313**	Pg	**Pn**	**01 24 24.5**	**+0.9**
HMBC	**Humberstone**	**2.71**	**294**		**Pn**	**01 24 24.6**	**-0.9**
HMBC	**Humberstone**	**2.71**	**294**	*e*P	**Pn**	**01 24 25.0**	**-0.5**
HMBC				IAML		01 25 01.6	
	comp=N,207nm,0.2s						
PB11	**IPOC Station P**	**2.79**	**306**		**Pn**	**01 24 26.0**	**-0.4**
PB11	**IPOC Station P**	**2.79**	**306**	*e*P	**Pn**	**01 24 26.1**	**-0.3**
PB11	**IPOC Station P**	**2.79**	**306**	*e*P	**Pn**	**01 24 26.1**	**-0.3**
PB11				*e*S	**Sn**	**01 25 01.3**	**-1.8**
PB11				IAML		01 25 04.7	
	comp=Z,143nm,0.2s						
PB11	**IPOC Station P**	**2.79**	**306**	Pg	**Pn**	**01 24 26.2**	**-0.3**
PB11				Sg	**Sn**	**01 25 02.0**	**-1.1**
PB11				IAML		01 25 04.5	
	comp=Z,250nm,0.4s						
SOEO	**Opoqueri**	**2.89**	**348**	Pg	**Pn**	**01 24 28.0**	**0.0**
TA02	**Huaiquique**	**2.92**	**292**	*e*P	**Pn**	**01 24 27.4**	**-0.5**
TA02				*e*S	**Sn**	**01 25 03.5**	**-2.2**
TA02				IAML		01 25 05.3	
	comp=Z,197nm,0.1s						
SALTA		**2.93**	**163**	*e*P	**Pn**	**01 24 27.2**	**-1.2**
SOET	**ToroToro**	**3.54**	**23**	Pg	**Pn**	**01 24 35.5**	**-0.2**
PB10	**IPOC Station P**	**3.70**	**235**	Pn	**Pn**	**01 24 37.5**	**+0.2**
PB10	**IPOC Station P**	**3.70**	**235**	*e*P	**Pn**	**01 24 37.4**	**+0.2**
PB10	**IPOC Station P**	**3.70**	**235**	*e*P	**Pn**	**01 24 37.3**	**0.0**
PB10				*e*S	**Sn**	**01 25 20.8**	**-2.0**
PB10				IAML		01 25 21.9	
	comp=Z,49nm,0.3s						
PB16	**IPOC Station P**	**3.72**	**325**		**Pn**	**01 24 38.8**	**+0.6**
PB16	**IPOC Station P**	**3.72**	**325**	*e*P	**Pn**	**01 24 38.9**	**+0.8**
PB16	**IPOC Station P**	**3.72**	**325**	*e*P	**Pn**	**01 24 38.4**	**+0.3**
PB16				*e*S	**Sn**	**01 25 20.6**	**-3.5**
PB16				IAML		01 25 26.1	
	comp=Z,82nm,0.6s						
PB16	**IPOC Station P**	**3.72**	**325**	Pg	**Pn**	**01 24 39.0**	**+0.8**
AOEA	**Aiguile**	**3.73**	**31**	Pg	**Pn**	**01 24 37.5**	**-0.5**
PB12	**IPOC Station P**	**4.01**	**313**		**Pn**	**01 24 39.4**	**-1.8**
PB12	**IPOC Station P**	**4.01**	**313**	*e*P	**Pn**	**01 24 39.6**	**-1.7**
PB12				*e*S	**Sn**	**01 25 26.3**	**-3.5**
PB12				IAML		01 25 28.6	
	comp=Z,92nm,0.2s						
GO02	**Mina Guanaco**	**4.31**	**209**		**Pn**	**01 24 45.5**	**+0.3**
GO02	**Mina Guanaco**	**4.31**	**209**	*e*P	**Pn**	**01 24 45.5**	**+0.3**
GO02	**Mina Guanaco**	**4.31**	**209**	*e*P	**Pn**	**01 24 45.5**	**+0.3**
GO02				*e*S	**Sn**	**01 25 36.0**	**-1.0**
GO02				IAML		01 25 37.9	
	comp=Z,89nm,0.3s						
PB14	**IPOC Station P**	**4.32**	**222**		**Pn**	**01 24 45.4**	**+0.1**
PB14	**IPOC Station P**	**4.32**	**222**	*e*P	**Pn**	**01 24 45.6**	**+0.2**
PB14				*e*S	**Sn**	**01 25 34.4**	**-2.8**
PB14				IAML		01 25 38.0	
	comp=Z,38nm,0.6s						
PB14	**IPOC Station P**	**4.32**	**222**	Pg	**Pn**	**01 24 45.8**	**+0.5**
PB18	**Visviri**	**4.34**	**331**		**Pn**	**01 24 47.3**	**+1.4**
PB18	**Visviri**	**4.34**	**331**	*e*P	**Pn**	**01 24 47.7**	**+1.8**
BBOJ	**La Paz, Jacaqu**	**4.50**	**348**	Pg	**Pn**	**01 24 49.0**	**+1.2**
SOEJ	**Jacaque**	**4.50**	**348**	Pg	**Pn**	**01 24 48.2**	**+0.4**
BBOE	**La Paz, Chanca**	**4.62**	**351**	Pg	**Pn**	**01 24 49.9**	**+0.5**
BBOD	**La Paz, Gloria**	**4.91**	**345**	Pg	**Pn**	**01 24 53.6**	**+0.5**
LPAZ	**La Paz**	**5.16**	**351**	P	**Pn**	**01 24 57.1**	**+0.8**
	comp=Z,14nm,0.4s,baz=143,slow=5.7,SNR=114						
LPAZ				S	**Sn**	**01 25 56.6**	**-0.3**
	comp=Z,18nm,0.7s,baz=337,slow=15,SNR=13						
LPAZ	**La Paz**	**5.16**	**351**		**Pn**	**01 24 56.7**	**+0.3**
LPAZ	**La Paz**	**5.16**	**351**	*e*P	**Pn**	**01 24 57.1**	**+0.8**
LPAZ				*e*S	**Sn**	**01 25 58.0**	**+1.0**
LPAZ				IAML		01 25 58.1	
	comp=Z,12nm,0.7s						
BBOB	**La Paz, Bander**	**5.30**	**351**	Pg	**Pn**	**01 24 58.6**	**+0.5**
AC01	**Pan de Azucar**	**5.63**	**212**		**Pn**	**01 25 00.9**	**-0.8**
AC02	**Maricunga**	**5.67**	**197**		**Pn**	**01 25 03.3**	**+0.6**
AC06	**Mina Casimiro**	**6.56**	**205**		**Pn**	**01 25 12.0**	**-1.9**
GO03	**Copiapo**	**6.73**	**203**		**Pn**	**01 25 14.0**	**-2.1**
SIV	**San Ignacio**	**7.96**	**48**	P	**Pn**	**01 25 29.2**	**-2.9**
	comp=Z,25nm,0.3s,baz=240,slow=12,SNR=80						
SIV				S	Sn	01 26 52.4	-9.5
	comp=Z,5.2nm,0.4s,baz=233,slow=16,SNR=6.4						
PTLB	**Pontes e Lacer**	**9.72**	**54**		**Pn**	**01 25 53.3**	**-1.7**
CFA	**Coronel Fontan**	**10.20**	**185**	P	**Pn**	**01 26 01.4**	**+0.2**
	comp=Z,1.9nm,0.3s,baz=343,slow=14,SNR=19						
CFA				S	**Sn**	**01 27 48.6**	**-6.3**
	comp=Z,1.0nm,0.4s,baz=228,slow=16,SNR=4.6						
CPUP	**Villa Florida**	**10.32**	**120**	P	**Pn**	**01 26 02.9**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=294,slow=12,SNR=8.5						
CPUP	**Villa Florida**	**10.32**	**120**	Pn	**Pn**	**01 26 03.2**	**+0.5**
VILB	**Vilhena**	**10.77**	**40**		**Pn**	**01 26 07.8**	**-0.9**
VA03	**San Esteban**	**11.69**	**194**		**Pn**	**01 26 21.3**	**+0.9**
MT02	**Curacav**	**12.30**	**195**	Pn	**Pn**	**01 26 28.2**	**+0.1**
MT09	**Talagante**	**12.76**	**194**	Pn	**Pn**	**01 26 33.5**	**-0.6**
BO04	**La Punta**	**12.88**	**193**	Pn	**Pn**	**01 26 35.9**	**+0.4**
MT01	**Popeta**	**12.90**	**195**	Pn	**Pn**	**01 26 35.1**	**-0.6**
NNA	**Nana**	**13.11**	**314**	P	**Pn**	**01 26 40.4**	**+1.9**
	comp=Z,8.1nm,0.6s,baz=180,slow=8.6,SNR=4.3						
BO02	**Sierra Bellavi**	**13.69**	**192**		**Pn**	**01 26 45.8**	**+0.1**
BI02	**San Fabin de**	**15.60**	**192**		**Pn**	**01 27 08.5**	**-0.6**
TRQA	**Tornquist**	**17.21**	**166**		**P**	**01 27 27.3**	**+0.6**
TRQA				IAmb	IAmb	01 27 31.9	
	comp=Z,12nm,1.4s						
GO06	**Curarrehue**	**18.47**	**190**	P	**P**	**01 27 41.3**	**+0.6**
GO06				IAmb	IAmb	01 27 46.6	
	comp=Z,19nm,1.2s						
BDFB	**Brasilia**	**19.11**	**76**	P	**P**	**01 27 47.0**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=23,slow=26,SNR=1.8						
BDFB	**Brasilia**	**19.11**	**76**	P	**P**	**01 27 47.5**	**-0.4**
LR05	**Currie**	**19.20**	**191**	P	**P**	**01 27 48.0**	**-0.3**
LR05				IAmb	IAmb	01 27 51.4	
	comp=Z,12nm,0.6s						
MACA	**Manacapuru-AM**	**19.23**	**20**	P	**P**	**01 27 47.0**	**-1.9**
PLCA	**Paso Flores**	**19.47**	**188**	P	**P**	**01 27 53.1**	**+1.7**
	comp=Z,1.5nm,1.0s,baz=21,slow=11,SNR=4.0						
PLCA	**Paso Flores**	**19.47**	**188**	P	**P**	**01 27 51.6**	**+0.3**
PLCA				IAmb	IAmb	01 27 57.4	
	comp=Z,12nm,1.5s						
BOAV	**Boa Vista**	**24.56**	**16**	P	**P**	**01 28 40.8**	**-0.6**
BOAV				IAmb	IAmb	01 28 50.5	
	comp=Z,9.2nm,1.4s						
ROSC	**El Rosal**	**26.99**	**344**	P	**P**	**01 29 04.6**	**+0.9**
	comp=Z,4.4nm,0.4s,baz=194,slow=23,SNR=2.2						
	comp=Z,4.4nm,0.4s						
352A	**Blakely**	**55.25**	**342**	P	**P**	**01 32 51.6**	**-0.7**
V55A	**Taylorsville**	**58.46**	**347**	P	**P**	**01 33 14.5**	**-0.3**
SWET	**Sewanee**	**59.04**	**342**	P	**P**	**01 33 18.9**	**+0.1**
SWET				IAmb	IAmb	01 33 45.3	
	comp=Z,12nm,1.5s						
WVT	**Waverly**	**60.45**	**341**	P	**P**	**01 33 28.6**	**+0.2**
WVT				IAmb	IAmb	01 33 29.1	
	comp=Z,7.0nm,0.6s						
MIAR	**Mount Ida**	**61.02**	**335**	P	**P**	**01 33 32.9**	**+0.7**
MIAR				IAmb	IAmb	01 33 43.7	
	comp=Z,12nm,1.5s						
PDAR	**Pinedale Array**	**74.81**	**329**	P	**P**	**01 35 00.2**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=122,slow=8.4,SNR=6.7						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**74.81**	**329**	P	**P**	**01 34 59.0**	**+0.6**
ULM	**Lac du Bonnet**	**75.71**	**341**	P	**P**	**01 35 03.9**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=151,slow=7.0,SNR=6.2						
	comp=Z,1.8nm,0.5s						
ULM	**Lac du Bonnet**	**75.71**	**341**	P	**P**	**01 35 03.7**	**+0.7**
ULM				IAmb	IAmb	01 35 04.6	
	comp=Z,2.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**75.87**	**70**	P	**P**	**01 35 04.8**	**0.0**
	comp=Z,0.5nm,0.5s,baz=256,slow=5.0,SNR=7.6						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**75.87**	**70**	P	**P**	**01 35 04.8**	**0.0**
NVAR	**Mina Array Bea**	**76.38**	**321**	P	**P**	**01 35 09.1**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=127,slow=4.3,SNR=2.4						
	comp=Z,0.5nm,0.7s						
RLMT	**Red Lodge**	**76.47**	**331**	P	**P**	**01 35 09.0**	**+1.3**
YNE	**Yellowstone No**	**76.73**	**330**	P	**P**	**01 35 10.9**	**+1.7**
YNE				IAmb	IAmb	01 35 12.5	
	comp=Z,2.3nm,0.7s						
YKA	**Yellowknife Ar**	**91.62**	**340**	P	**P**	**01 36 25.4**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=130,slow=3.8,SNR=12						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**133.80**	**209**	PKP	**PKiKP**	**01 42 35.7**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=144,slow=2.1,SNR=1.9						
ZALV	**Zalesovo Beam**	**141.20**	**26**	PKP	**PKPdf**	**01 42 47.4**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=336,slow=3.2,SNR=1.6						
MKAR	**Makanchi Array**	**144.64**	**37**	PKP	**PKPdf**	**01 42 53.8**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=317,slow=3.7,SNR=27						
HHC	**Hu-ho-hao-te**	**160.59**	**3**	*e*P	**PKPdf**	**01 43 12.5**	**-3.5**
NJ2	**Nanjing**	**168.08**	**334**	*e*P	**PKPdf**	**01 43 22.5**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH	**PanZhiHua**	**168.73**	**61**	PKP	**PKPdf**	**01 43 21.3**	**-2.3**

*KRNET **26** 01:43:04.2±0.1,40˚.22N×71˚.43E,h17km,mb3.5*
*NNC **26** 01:43:05.6±10.0,40˚.13N×71˚.39E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=98.3km s-min=47.7km az=3.0*
*SOME **26** 01:43:07.8,40˚.43N×71˚.42E,h5km*
*ISU **26** 01:43:09,40˚.27N×71˚.41E,h14km*

ISC 26 01:43:03.7±1.0,**40˚23N**±0˚.02×**71˚44E**±0˚.02,**h9**km±9km, **n33,**σ1$**90/65,25C-16D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**0.30**	**61**	P	**Pb**	**01 43 12.5**	**+1.3**
FRG				S	**Sb**	**01 43 17.3**	**+1.0**
MINT	**Mingtut**	**0.43**	**303**	P	**Pg**	**01 43 12.7**	**+0.6**
MINT				S	**Sg**	**01 43 18.7**	**+0.9**
BTK	**Batken**	**0.51**	**250**	↑*e*P	**Pg**	**01 43 13.8**	**+0.2**
BTK				↑*e*S	**Sg**	**01 43 20.7**	**+0.3**
DRK	**Karamyk**	**0.80**	**160**	↑*e*P	**Pb**	**01 43 19.4**	**-0.5**
DRK				↑*e*S	**Sg**	**01 43 30.5**	**+0.9**
TSTA	**Tashata**	**0.86**	**66**	P	**Pn**	**01 43 21

TGIG				*e*S	**Sn**	**01 46 01.1**	**+2.7**
TGIG		**3.13**	**9**	*i* P	Pb	01 45 34.8	+5.4
TGIG				*i* S	**Sb**	**01 46 03.1**	**-4.1**
APG	**El Apazote**	**3.36**	**66**	*i* P	**Pb**	**01 45 34.8**	**+1.4**
CMIG	**Matias Romero**	**3.61**	**341**	*e*P	**Pb**	**01 45 41.9**	**+4.5**
CMIG				*e*S	**Sb**	**01 46 17.8**	**-2.9**
UXUV	**UXUV**	**3.66**	**353**	*e*P	**Pb**	**01 45 41.5**	**+3.2**
UXUV				*e*S	**Sb**	**01 46 16.2**	**-6.1**
NEUV	**Arroyo Zacate**	**4.52**	**333**	*e*P	**Pb**	**01 45 53.6**	**+0.6**
NEUV				*e*S	**Sb**	**01 46 42.7**	**-4.4**

*IDC **26** 02:10:21.1±5.1, 4°.47S×152°.71E, h79km±43km, mb3.7/6, mbtmp4.0/7, ML2.2/1, Error ellipse: s-maj=54.4km s-min=25.3km az=124.0*
*NEIC **26** 02:10:22.4±1.6, 4°.5S±0°.1×152°.8E±0°.1, h84km±6km, mb4.5/10, Error ellipse: s-maj=16.2km s-min=14.6km az=198.0*

ISC 26 02:10:23.5±0.8, **4°.44S**±0°.09×**152°.6E**±0°.1, **h100**km, **n29, σ0s97/31, mb4.2/11, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.53**	**298**		**Pn**	**02 10 37.8**	**-1.7**
RABL				Sn	**Sn**	**02 10 49.7**	**-1.9**
MANU	**Manus Island**	**5.77**	**294**		**Pn**	**02 11 46.9**	**+0.2**
PMG	**Port Moresby**	**7.34**	**227**	P	**Pn**	**02 12 07.5**	**-0.5**
	2.2nm,0.3s,baz=221,slow=17,SNR=2.6						
PMG				S	**Sn**	**02 13 28.8**	**-0.9**
	62nm,0.6s,baz=117,slow=24,SNR=7.6						
	5.8nm,0.3s						
PMG	**Port Moresby**	**7.34**	**227**		**Pn**	**02 12 08.1**	**+0.1**
PATS	**Pohnpei**	**12.56**	**27**	Pn	**Pn**	**02 13 18.1**	**-0.5**
COEN	**Coen**	**13.28**	**224**	Pn	**Pn**	**02 13 29.1**	**+1.0**
WB0	**Warramunga Arr**	**23.41**	**228**	P	**P**	**02 15 22.9**	**-0.9**
WB0				IAmb	IAmb	02 15 44.0	
	comp=Z,7.9nm,0.8s						
WRA	**Warramunga Arr**	**23.56**	**228**	P	**P**	**02 15 24.6**	**-0.5**
	comp=Z,4.8nm,0.4s,baz=51,slow=9.8,SNR=58						
WRA				PcP	**PcP**	**02 19 08.6**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=50,slow=2.1,SNR=1.3						
	comp=Z,4.8nm,0.4s						
WRA	**Warramunga Arr**	**23.56**	**228**	P	**P**	**02 15 23.4**	**-1.7**
KNRA	**Kununurra**	**25.98**	**243**	P	**P**	**02 15 48.1**	**+1.0**
AS31	**Alice Springs**	**26.30**	**222**	P	**P**	**02 15 50.0**	**0.0**
ASAR	**Alice Springs**	**26.30**	**222**	P	**P**	**02 15 49.4**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=52,slow=9.0,SNR=10						
ASAR				PcP	**PcP**	**02 19 14.3**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=31,slow=3.1,SNR=1.9						
	comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**26.30**	**222**	P	**P**	**02 15 50.3**	**+0.3**
SOEI	**Soe**	**28.63**	**258**	P	**P**	**02 16 12.4**	**+1.4**
SOEI				IAmb	IAmb	02 16 22.8	
	comp=Z,39nm,1.4s						
MBWA	**Marble Bar**	**36.01**	**240**	P	**P**	**02 17 14.1**	**-1.1**
E19K	**Redstone River**	**79.90**	**17**	P	**P**	**02 22 21.7**	**+0.7**
E19K				IAmb	IAmb	02 22 23.1	
	comp=Z,7.0nm,1.3s						
MKAR	**Makanchi Array**	**79.95**	**319**	P	**P**	**02 22 23.1**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=94,slow=6.8,SNR=4.9						
	comp=Z,0.2nm,0.4s						
IMAR	**Indian Mountain**	**80.11**	**20**	P	**P**	**02 22 22.4**	**+0.3**
ILAR	**Eielson Array**	**81.89**	**22**	P	**P**	**02 22 30.4**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=244,slow=5.5,SNR=26						
	comp=Z,1.4nm,0.6s						
ILAR	**Eielson Array**	**81.89**	**22**	P	**P**	**02 22 30.7**	**-0.9**
J25K	**Salcha River,**	**82.39**	**23**	P	**P**	**02 22 34.0**	**-0.3**
J25K				IAmb	IAmb	02 22 34.9	
	comp=Z,3.8nm,0.6s						
D27M	**Malcolm River**	**85.96**	**19**	P	**P**	**02 22 53.4**	**+1.1**
D27M				IAmb	IAmb	02 22 54.2	
	comp=Z,3.3nm,0.8s						
EPYK	**Eagle Plains**	**86.40**	**22**	P	**P**	**02 22 54.9**	**+0.4**
EPYK				IAmb	IAmb	02 22 55.9	
	comp=Z,8.5nm,0.9s						
YKA	**Yellowknife Ar**	**95.19**	**28**	P	**P**	**02 23 36.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=278,slow=5.4,SNR=7.6						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**98.73**	**48**	P	Pdif	02 23 52.4	+0.1
	comp=Z,0.3nm,0.6s,baz=264,slow=1.5,SNR=3.5						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**98.73**	**48**	P	Pdif	02 23 51.8	-0.5
GERES	**GERESS Array B**	**123.67**	**329**	PKP	**PKiKP**	**02 29 09.2**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=86,slow=1.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**150.04**	**289**	PKPbc	**PKPbc**	**02 30 03.1**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=57,slow=3.1,SNR=11						
BDFB	**Brasilia**	**151.43**	**135**	PKPbc	**PKiKP**	**02 30 07.3**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=161,slow=4.9,SNR=3.1						

*IDC **26** 02:14:53.0±0.9, 15°.00S×173°.74W, h0km, mb4.1/9, mbtmp4.1/10, ML4.6/1, MS3.5/23, Error ellipse: s-maj=41.4km s-min=18.0km az=146.0*
*NEIC **26** 02:14:54.3±1.5, 15°.1S±0°.2×173°.6W±0°.1, h10km±1km, mb4.3/7, Error ellipse: s-maj=39.4km s-min=9.1km az=150.0*

ISC 26 02:14:57.2±0.6, **15°.09S**±0°.10×**173°.6W**±0°.1, **h30**km, **n50, σ1s12/26, mb4.2/14, MS3.6/21, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.11**	**56**	Pn	**Pn**	**02 15 28.7**	**-1.8**
	172nm,0.3s,baz=180,slow=0.9,SNR=65						
AFI				Sn	Sn	02 15 48.6	-7.2
	634nm,0.3s,baz=183,slow=2.7,SNR=28						
AFI				LR	LR	02 16 11.3	
	comp=Z,516nm,21.1s,baz=222,slow=36						
	637nm,0.3s						
NIUE	**Niue**	**5.28**	**139**		**Pn**	**02 16 13.0**	**-1.1**
RAR	**Rarotonga**	**14.46**	**117**	LR	LR	02 23 02.9	
	comp=Z,60nm,20.2s,baz=282,slow=34						
DZM	**Mont Dzumac**	**20.15**	**247**	LR	LR	02 26 13.2	
	comp=Z,124nm,19.5s,baz=354,slow=34						
BKZ	**Black Stump Fm**	**25.52**	**198**	P	**P**	**02 20 23.8**	**+0.6**
BKZ				IAmb	IAmb	02 20 31.1	
	comp=Z,11nm,1.4s						
QRZ	**Quartz Range**	**28.34**	**203**	P	**P**	**02 20 47.8**	**-0.7**
H11S2	**WAKE ISLAND Hy**	**38.61**	**329**	T	T	03 03 00.9	
	baz=146,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**38.62**	**329**	T	T	03 03 07.7	
	baz=146,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**38.63**	**329**	T	T	03 03 02.1	
	baz=146,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**39.56**	**330**	T	T	03 04 13.9	
	baz=146,slow=75						
H11N1	**WAKE ISLAND Hy**	**39.56**	**330**	T	T	03 04 52.7	
	baz=146						
H11N2	**WAKE ISLAND Hy**	**39.58**	**330**	T	T	03 04 17.4	
	baz=146,slow=75						
STKA	**Stephens Creek**	**44.04**	**240**	LR	LR	02 40 22.5	
	comp=Z,48nm,18.5s,baz=202,slow=35						
WB0	**Warramunga Arr**	**49.70**	**257**	P	**P**	**02 23 46.1**	**-0.8**
WB0				IAmb	IAmb	02 24 11.2	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**49.74**	**257**	P	**P**	**02 23 46.0**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=89,slow=6.9,SNR=16						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**49.74**	**257**	P	**P**	**02 23 45.9**	**-1.4**
WRA				IAmb	IAmb	02 23 46.8	
	comp=Z,0.5nm,1.4s						
AS31	**Alice Springs**	**50.04**	**252**	P	**P**	**02 23 48.0**	**-1.5**
AS31				IAmb	IAmb	02 23 49.2	
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**50.04**	**252**	P	**P**	**02 23 48.1**	**-1.3**
	comp=Z,6.4nm,0.6s,baz=86,slow=8.0,SNR=70						
	comp=Z,6.4nm,0.6s						
ASAR	**Alice Springs**	**50.04**	**252**	P	**P**	**02 23 47.2**	**-2.3**
SHEM	**Shemya Is, Ala**	**68.38**	**352**	LR	LR	02 52 53.7	
	comp=Z,37nm,19.9s,baz=107,slow=33						
MJAR	**Matsushiro Arr**	**68.59**	**320**	LR	LR	02 50 39.7	
	comp=Z,40nm,21.9s,baz=136,slow=31						
JNU	**Nakatsue**	**71.46**	**313**	LR	LR	02 50 02.2	
	comp=Z,36nm,21.8s,baz=121,slow=30						
PETK	**Petropavlovsk-**	**72.29**	**342**	P	**P**	**02 26 19.8**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=171,slow=6.0,SNR=2.8						
	comp=Z,2.7nm,0.5s						
PFO	**Pinyon Flats O**	**72.84**	**47**	LR	LR	02 50 36.0	
	comp=Z,87nm,20.4s,baz=242,slow=29						
YBH	**Yreka Blue Hor**	**73.46**	**37**	P	**P**	**02 26 28.1**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=264,slow=1.5,SNR=6.1						
YBH				LR	LR	02 50 15.2	
	comp=Z,5.6nm,20.4s,baz=265,slow=29						
NVAR	**Mina Array Bea**	**74.22**	**42**	P	**P**	**02 26 32.5**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=228,slow=9.9,SNR=10						
NVAR				LR	LR	02 53 00.0	
	comp=Z,48nm,19.3s,baz=260,slow=31						
	comp=Z,1.8nm,0.8s						
KDAK	**Kodiak Island**	**74.66**	**11**	LR	LR	02 51 47.5	
	comp=Z,111nm,20.1s,baz=187,slow=30						
QSPA	**South Pole Qui**	**74.95**	**180**	P	**P**	**02 26 37.2**	**+1.9**
	comp=Z,4.1nm,0.8s,baz=11,slow=2.3,SNR=3.6						
	comp=Z,4.1nm,0.8s						
KSRS	**Korea Array**	**75.82**	**316**	LR	LR	02 55 45.5	
	comp=Z,13nm,20.6s,baz=120,slow=32						
ELK	**Elko**	**77.47**	**41**	P	**P**	**02 26 51.1**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=223,slow=3.1,SNR=3.8						
ELK				LR	LR	02 52 17.4	
	comp=Z,48nm,19.9s,baz=278,slow=29						
	comp=Z,0.7nm,0.7s						
MA2	**Magadan**	**79.82**	**342**	LR	LR	02 55 25.8	
	comp=Z,19nm,20.9s,baz=74,slow=30						
KLR	**Kul'dur**	**80.17**	**327**	LR	LR	02 57 37.6	
	comp=Z,39nm,21.3s,baz=336,slow=32						
ANMO	**Albuquerque**	**80.74**	**50**	LR	LR	02 53 17.6	
	comp=Z,55nm,20.7s,baz=229,slow=28						
DLBC	**Dease Lake**	**81.48**	**21**	LR	LR	02 59 50.2	
	comp=Z,59nm,18.3s,baz=118,slow=33						
G18K	**Tagagawik**	**81.53**	**6**	P	**P**	**02 27 11.9**	**+0.5**
BCAR	**Beaver Creek A**	**81.75**	**14**	P	**P**	**02 27 13.0**	**+0.3**
F17K	**Baldwin Pennin**	**81.82**	**5**	P	**P**	**02 27 14.3**	**+1.5**
F17K				IAmb	IAmb	02 27 15.2	
	comp=Z,4.7nm,1.2s						
PDAR	**Pinedale Array**	**82.16**	**42**	P	**P**	**02 27 16.4**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=222,slow=2.0,SNR=5.5						
PDAR				LR	LR	02 58 08.3	
	comp=Z,24nm,19.4s,baz=285,slow=32						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	**82.16**	**42**	P	**P**	**02 27 14.9**	**-0.6**
ILAR	**Eielson Array**	**82.18**	**11**	P	**P**	**02 27 15.2**	**+0.3**
	comp=Z,8.9nm,0.7s,baz=230,slow=6.5,SNR=12						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**82.18**	**11**	P	**P**	**02 27 14.4**	**-0.4**
YAK	**Yakutsk**	**88.76**	**337**	LR	LR	03 00 07.6	
	comp=Z,28nm,21.8s,baz=96,slow=31						
YKA	**Yellowknife Ar**	**89.89**	**23**	P	**P**	**02 27 53.1**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=244,slow=5.1,SNR=4.0						
	comp=Z,0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**92.35**	**288**	LR	LR	03 07 41.0	
	comp=Z,6.7nm,19.4s,baz=185,slow=34						
ULM	**Lac du Bonnet**	**93.81**	**39**	LR	LR	03 04 18.1	
	comp=Z,57nm,18.6s,baz=298,slow=32						
TIXI	**Tiksi**	**94.66**	**344**	LR	LR	03 07 41.7	
	comp=Z,29nm,19.6s,baz=10,slow=34						
TLY	**Talaya**	**97.29**	**321**	LR	LR	03 06 28.0	
	comp=Z,23nm,21.2s,baz=98,slow=32						
BRTR	**Keskin Array B**	**145.81**	**321**	PKPbc	**PKPdf**	**02 34 33.8**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=118,slow=2.3,SNR=7.2						
BRTR	**Keskin Array B**	**145.81**	**321**		**PKPab**	**02 34 34.4**	**0.0**
GERES	**GERESS Array B**	**145.81**	**351**	PKPbc	**PKPbc**	**02 34 33.6**	**0.0**
	comp=Z,0.5nm,0.7s,baz=45,slow=3.3,SNR=2.7						

*NEIC **26** 02:29:05.2±0.9, 19°.02N±0°.04×67°.06W±0°.01, h10km±2km, ML2.7/41, Md3.5/5(RSPR), Error ellipse: s-maj=6.8km s-min=3.0km az=195.0*
*SDD **26** 02:29:05.8±1.1, 19°.07N×67°.11W, h23km±46km, MD3.4, ML2.7, MW3.1, Presumed earthquake*
*RSPR **26** 02:29:06.1, 19°.13N×67°.22W, h21km±18km, MD3.5/5*
*OSPL **26** 02:29:06.4±0.9, 19°.02N×67°.06W, h0km±11km, ML2.3, Presumed earthquake*

ISC 26 02:29:05.4±1.5, **19°.02N**±0°.06×**67°.07W**±0°.03, **h15**km±9km, **n41, σ0s55/65, 8C-11D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.55**	**185**		**Pb**	**02 29 17.0**	**+0.2**
AGPR				Sg	**Sb**	**02 29 25.1**	**+0.6**
AGPR				IAML		02 29 25.9	
	555nm,0.4s						
AGPR				IAML		02 29 26.3	
	450nm,0.5s						
AGPR	**Aguadilla, PR**	**0.55**	**185**	⇓*e*Pg	**Pb**	**02 29 17.2**	**+0.4**
AGPR				⇑*e*Sg	**Sb**	**02 29 24.9**	**+0.4**
AGPR				IAML		02 29 25.7	
	comp=N,543nm,0.5s						
AGPR	**Aguadilla, PR**	**0.55**	**185**	⇓*i*P	**Pb**	**02 29 17.2**	**+0.4**
AGPR				*e*S	**Sb**	**02 29 25.8**	**+1.3**
AOPR	**Arecibo Observ**	**0.73**	**156**	Pg	**Pb**	**02 29 20.2**	**+0.3**
AOPR				IAML		02 29 41.2	
	comp=N,319nm,0.3s						
IDE	**Isla Desecheo**	**0.74**	**212**		**Pg**	**02 29 19.4**	**-0.4**
IDE					**Sg**	**02 29 29.7**	**+0.1**
IDE	**Isla Desecheo**	**0.74**	**212**	⇓*i*P	**Pg**	**02 29 19.4**	**-0.4**
IDE				*e*S	**Sg**	**02 29 29.7**	**+0.1**
PRSN	**Puerto Rico Se**	**0.80**	**185**		**Pb**	**02 29 20.8**	**-0.3**
PRSN					**Sg**	**02 29 31.7**	**+0.2**
PRSN	**Puerto Rico Se**	**0.80**	**185**	⇑*e*Pg	**Pb**	**02 29 20.9**	**-0.2**
PRSN				⇓*e*Sg	**Sb**	**02 29 32.4**	**+0.7**
PRSN				IAML		02 29 35.2	
	comp=N,593nm,0.2s						
PRSN	**Puerto Rico Se**	**0.80**	**185**	⇓*i*P	**Pb**	**02 29 20.9**	**-0.2**
PRSN				*e*S	**Sb**	**02 29 32.2**	**+0.5**
UUPR	**Utuado, UPR, P**	**0.83**	**157**		**Pg**	**02 29 21.3**	**-0.2**
UUPR					**Sg**	**02 29 32.5**	**0.0**
LSP	**Las Mesas**	**0.84**	**181**		**Pg**	**02 29 21.8**	**0.0**
LSP					**Sn**	**02 29 34.3**	**-0.6**
LSP	**Las Mesas**	**0.84**	**181**	⇑*i*P	**Pg**	**02 29 21.8**	**0.0**
LSP				*e*S	**Sn**	**02 29 34.3**	**-0.6**
ECPR	**Experimental S**	**0.96**	**136**		**Pn**	**02 29 24.0**	**-0.5**
ECPR	**Experimental S**	**0.96**	**136**	⇓*i*P	**Pn**	**02 29 24.4**	**-0.1**
ECPR				*e*S	**Sn**	**02 29 38.8**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.01**	**182**		**Pb**	**02 29 24.1**	**-0.5**
CRPR					**Sb**	**02 29 37.0**	**-0.7**
CRPR				IAML		02 29 40.9	
	comp=N,162nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.01**	**182**	⇑*e*Pg	**Pb**	**02 29 24.1**	**-0.5**
CRPR				⇓*e*Sg	**Sb**	**02 29 37.9**	**+0.3**
CRPR				IAML		02 29 40.0	
	comp=N,139nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.01**	**182**	⇓*i*P	**Pb**	**02 29 24.1**	**-0.5**
CRPR				*e*S	**Sb**	**02 29 38.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.01**	**182**	*i* P	**Pb**	**02 29 24.1**	**-0.5**
CRPR				IAML		02 29 41.0	
	comp=Z,118nm,0.2s						
MLPR	**Magueyes Islan**	**1.04**	**179**		**Pb**	**02 29 24.8**	**-0.5**
CELP	**Cerrillos**	**1.04**	**154**		**Pn**	**02 29 25.2**	**-0.4**
CELP				IAML		02 29 41.8	
	comp=Z,152nm,0.2s						
CELP				IAML		02 29 43.2	
	comp=Z,151nm,0.3s						
GBPR	**Guanica, Bosqu**	**1.05**	**170**		**Pg**	**02 29 25.9**	**+0.1**
GBPR					**Sg**	**02 29 39.9**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.05**	**170**	⇓*e*P	**Pg**	**02 29 25.9**	**+0.1**
GBPR				*e*S	**Sg**	**02 29 39.9**	**+0.4**
OBIP	**Obispado Ponce**	**1.06**	**156**		**Pb**	**02 29 25.3**	**-0.2**
OBIP					**Sb**	**02 29 39.4**	**+0.1**
OBIP	**Obispado Ponce**	**1.06**	**156**	⇓*i*P	**Pn**	**02 29 25.5**	**-0.3**
OBIP				*e*S	**Sn**	**02 29 40.6**	**+0.2**
OBIP	**Obispado Ponce**	**1.06**	**156**	*i* P	**Pn**	**02 29 25.5**	**-0.3**
OBIP				*e*S	**Sg**	**02 29 40.0**	**+0.1**
OBIP				IAML		02 29 41.5	
	comp=Z,72nm,0.3s						
GCPR	**Guaynabo City**	**1.17**	**127**		**Pb**	**02 29 27.1**	**-0.2**
GCPR	**Guaynabo City**	**1.17**	**127**	⇓*e*P	**Pg**	**02 29 28.6**	**+0.6**
GCPR				*e*S	**Sg**	**02 29 43.4**	**+0.2**
SJG	**San Juan**	**1.25**	**136**	Pn	**Pb**	**02 29 28.5**	**-0.3**
SJG	**San Juan**	**1.25**	**136**	IAML		02 29 54.9	
	comp=Z,110nm,0.2s						
SJG	**San Juan**	**1.25**	**136**	*i* P	**Pg**	**02 29 28.9**	**-0.7**
SJG				*e*S	**Sg**	**02 29 45.4**	**-0.5**
SJG				IAML		02 29 51.1	
	comp=Z,54nm,0.2s						
PDPR	**Patillas Dam,**	**1.40**	**135**	Pn	**Pb**	**02 29 30.8**	**-0.5**
PDPR				IAML		02 29 56.8	
	comp=Z,120nm,0.2s						
PDPR				IAML		02 29 57.6	
	comp=Z,99nm,0.1s						
HUMP	**Col San Antoni**	**1.44**	**127**		**Sg**	**02 29 52.4**	**+0.3**
HUMP	**Col San Antoni**	**1.44**	**127**	Pn	**Pb**	**02 29 31.1**	**-0.9**
HUMP				IAML		02 29 57.8	
	comp=Z,90nm,0.2s						
HUMP				IAML		02 30 01.8	
	comp=Z,105nm,0.2s						
HUMP	**Col San Antoni**	**1.44**	**127**	⇓*e*P	**Pb**	**02 29 31.4**	**-0.7**
HUMP				*e*S	**Sg**	**02 29 52.4**	**+0.3**
HIDR	**Higuey Centro**	**1.62**	**255**	⇑*e*Pg	**Pn**	**02 29 33.1**	**-0.5**
HIDR				⇑*e*Sg	**Sn**	**02 29 52.4**	**-1.8**
HIDR				IAML		02 30 00.5	
	comp=N,111nm,0.2s						
CUPR	**Culebra, Puert**	**1.83**	**112**	Pn	**Pn**	**02 29 36.8**	**+0.3**
DR12	**Loma Pena Alta**	**2.21**	**264**	Pn	**Pn**	**02 29 41.1**	**-0.5**
HATOM	**Hato Mayor del**	**2.21**	**264**	⇑*e*Pg	**Pn**	**02 29 41.4**	**-0.2**
HATOM				⇑*e*Sg	**Sn**	**02 30 09.6**	**+1.0**
HATOM				IAML		02 30 16.0	
	comp=N,29nm,0.3s						
SDDR	**Presa de Saban**	**4.00**	**270**	Pn	**Pn**	**02 30 06.3**	**0.0**
SDDR	**Presa de Saban**	**4.00**	**270**	*i* P	**Pn**	**02 30 06.9**	**+0.6**
LODU1	**El Espartillar**	**4.23**	**262**	*i* P	**Pn**	**02 30 10.9**	**+1.4**

*SJA **26** 02:32:07.1±0.7, 31°.80S×69°.71W, h122km±2km, ML3.3, MW3.5*
*GUC **26** 02:32:08.6±0.6, 31°.80S×70°.03W, h134km±4km, ML3.6*

ISC 26 02:32:07.5±1.3, **31°.79S**±0°.02×**69°.75W**±0°.03, **h126**km±8km, **n66, σ1s22/101, 3C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.38**	**91**	*e*P	**Pn**	**02 32 25.2**	**-0.6**
RTLS				*e*S	**Sn**	**02 32 37.9**	**-1.8**
ZON	**Zonda**	**0.94**	**75**	*e*P	**Pn**	**02 32 29.5**	**0.0**
ZON				*e*S	**Sn**	**02 32 45.2**	**-1.0**
ZON				IAML		02 32 47.1	
	comp=Z,342nm,0.5s						
SJA	**San Juan**	**1.04**	**76**	*e*P	Pn	02 32 21.3	-9.2
SJA				*e*S	**Sn**	**02 32 49.8**	**+1.9**
SJA				IAML		02 32 49.8	
	comp=Z,520nm,0.4s						
CO04	**Los Peladeros**	**1.07**	**256**	⇑*e*P	**Pn**	**02 32 30.3**	**-0.7**
CO04				*e*S	**Sn**	**02 32 47.7**	**-1.1**
CO04				IAML		02 32 48.9	
	comp=N,2μm,0.1s						
ASAL	**Salagasta**	**1.11**	**136**	*e*P	**Pn**	**02 32 31.6**	**+0.4**
ASAL				*e*S	**Sn**	**02 32 50.3**	**+1.2**
RTLL	**Cerro Villicun**	**1.18**	**67**	*e*P	**Pn**	**02 32 31.7**	**-0.1**
RTLL				*e*S	**Sn**	**02 32 49.8**	**-0.5**
RTLL				IAML		02 32 50.6	
	comp=Z,1μm,0.3s						
VA03	**San Esteban**	**1.18**	**215**	*e*P	**Pn**	**02 32 32.2**	**+0.3**
VA03				*e*S	**Sn**	**02 32 50.2**	**-0.3**
VA03	**San Esteban**	**1.18**	**215**	*e*P	**Pn**	**02 32 31.6**	**-0.4**
VA03				*e*S	**Sn**	**02 32 50.9**	**+0.4**
VA03				IAML		02 32 53.4	
	comp=Z,781nm,0.5s						
CO02	**Combarbal**	**1.22**	**298**	⇑*e*P	**Pn**	**02 32 32.1**	**-0.2**
CO02	**Combarbal**	**1.22**	**298**	*e*P	**Pn**	**02 32 31.4**	**-0.9**
CO02				*e*S	**Sn**	**02 32 51.5**	**+0.3**
CO02				IAML		02 32 52.4	
	comp=Z,947nm,0.3s						
CO03	**El Pedregal**	**1.25**	**319**	*e*P	**Pn**	**02 32 32.9**	**+0.3**
CO03				*e*S	**Sn**	**02 32 51.2**	**-0.4**
CO03				IAML		02 32 52.6	
	comp=E,2μm,0.2s						
CO03	**El Pedregal**	**1.25**	**319**	*e*P	**Pn**	**02 32 32.9**	**+0.3**
CO03				IAML		02 32 52.2	
	comp=Z,599nm,0.6s						
CO03				*e*S	**Sn**	**02 32 52.2**	**+0.6**
CFA	**Coronel Fontan**	**1.30**	**82**	*e*P	**Pn**	**02 32 33.1**	**0.0**
CFA				*e*S	**Sn**	**02 32 51.9**	**-0.6**
CFA				IAML		02 32 52.4	
	comp=Z,375nm,0.4s						
ACCO	**Cerro Coronel**	**1.34**	**26**	*e*P	**Pn**	**02 32 34.2**	**+0.3**
ACCO				*e*S	**Sn**	**02 32 54.6**	**+0.9**
VA06	**Catapilco**	**1.52**	**239**	*e*P	**Pn**	**02 32 34.8**	**-0.7**
PEL	**Peldehue**	**1.56**	**210**	*e*P	**Pn**	**02 32 36.2**	**+0.1**
PEL				IAML		02 32 58.7	
	comp=N,426nm,0.1s						
PEL	**Peldehue**	**1.56**	**210**	*e*P	**Pn**	**02 32 36.3**	**+0.3**
PEL				*e*S	**Sn**	**02 32 58.3**	**+0.5**
PEL				IAML		02 32 59.0	
	comp=Z,267nm,0.2s						
ROCH	**El Roble**	**1.59**	**222**	*e*P	**Pn**	**02 32 36.3**	**-0.2**
MT10	**Hacienda Santa**	**1.62**	**204**	*e*P	**Pn**	**02 32 37.6**	**+0.8**
MT10				IAML		02 33 02.7	
	comp=E,699nm,0.2s						
AROD	**Rodeo**	**1.64**	**8**	*e*P	**Pn**	**02 32 38.3**	**+1.0**
AROD				*e*S	**Sn**	**02 33 01.4**	**+1.5**
MT04	**Ro Olivares**	**1.64**	**191**	*e*P	**Pn**	**02 32 38.7**	**+1.6**
MT04	**Ro Olivares**	**1.64**	**191**	*e*P	**Pn**	**02 32 39.0**	**+1.9**
MT04				*e*S	Sn	02 33 09.

MT01				*e*S		**Sn**	**02 33 16.2**	**-0.2**
MT01				IAML			02 33 19.2	
	comp=Z,97nm,0.1s							
ACHE	**Chepes**	**2.71**	**77**	*e*P		**Pn**	**02 32 50.6**	**+0.3**
ACHE				*e*S		**Sn**	**02 33 22.5**	**-0.8**
BO01	**Tunca**	**2.82**	**203**	*e*P		**Pn**	**02 32 50.9**	**-0.7**
BO01				*e*S		**Sn**	**02 33 24.7**	**-1.0**
BO01				IAML			02 33 27.1	
	comp=Z,57nm,0.2s							
LCO	**Las Campanas**	**2.89**	**343**	*e*P		**Pn**	**02 32 52.8**	**-0.1**
LCO				*e*S		**Sn**	**02 33 27.1**	**-0.6**
AC05	**El Transito**	**2.98**	**351**	IAML			02 33 31.9	
	comp=E,166nm,0.3s							
AC05	**El Transito**	**2.98**	**351**	*e*P		**Pn**	**02 32 54.9**	**+1.0**
AC05				*e*S		**Sn**	**02 33 29.8**	**+0.1**
AC05				IAML			02 33 31.5	
	comp=Z,85nm,0.2s							
BO02	**Sierra Bellavi**	**3.11**	**196**	*e*P		**Pn**	**02 32 55.9**	**+0.4**
BO02				*e*S		**Sn**	**02 33 33.8**	**+1.3**
BO02				IAML			02 33 40.4	
	comp=Z,120nm,0.1s							
RFA	**San Rafael**	**3.16**	**160**	*e*P		**Pn**	**02 32 56.3**	**+0.3**
RFA				*e*S		**Sn**	**02 33 33.1**	**-0.5**
VCA	**Vinchina**	**3.33**	**24**	*e*P		**Pn**	**02 32 59.3**	**+0.9**
VCA				*e*S		**Sn**	**02 33 35.8**	**-1.9**
VCA				IAML			02 33 42.9	
	comp=Z,90nm,0.5s							
ACLC	**CERRO LA CRUZ**	**3.37**	**46**	*e*P		**Pn**	**02 32 59.4**	**+0.4**
ACLC				*e*S		**Sn**	**02 33 40.8**	**+2.0**
ACLC				IAML			02 33 58.9	
	comp=Z,30nm,0.4s							
MRA	**San Martin**	**3.48**	**101**	*e*P		**Pn**	**02 33 00.5**	**+0.3**
MRA				*e*S		**Sn**	**02 33 40.7**	**-0.3**
MRA				IAML			02 34 03.4	
	comp=Z,46nm,0.5s							
AC04	**Llanos de Chal**	**3.76**	**342**	*e*P		**Pn**	**02 33 03.9**	**-0.1**
AC04				*e*S		**Sn**	**02 33 47.2**	**-0.5**
AC04				IAML			02 33 53.8	
	comp=Z,63nm,1.0s							
TINO	**Tinogasta**	**4.17**	**27**	*e*S		Sn	02 33 46.4	-11
GO03	**Copiapo**	**4.21**	**354**	*e*S		**Sn**	**02 33 57.0**	**-1.5**
GO03				IAML			02 34 02.2	
	comp=Z,48nm,0.4s							
TCA	**Tanti**	**4.42**	**85**	*e*P		**Pn**	**02 33 13.1**	**+0.3**
TCA				*e*S		**Sn**	**02 34 02.0**	**-1.5**
TCA				IAML			02 34 18.7	
	comp=Z,24nm,0.8s							
AC02	**Maricunga**	**4.97**	**6**	*e*P		**Pn**	**02 33 21.6**	**+1.0**
BI02	**San Fabin de**	**5.02**	**194**	*e*P		**Pn**	**02 33 19.7**	**-1.1**
BI02				IAML			02 34 20.3	
	comp=Z,11nm,0.7s							

*IDC **26** 02:34:06.0±1.9, 7.°61S×127.°79E, h169km±19km, mb3.3/4, mbtmp4.1/9, Error ellipse: s-maj=21.8km s-min=18.4km az=99.0*

ISC 26 02:34:04.6±0.8, 7.°74S±0.°07×128.°0E±0.°1, h150km, n10, σ2ˢ52/13, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.90**	**240**	P		**Pn**	**02 35 18.1**	**+1.3**
	136nm,0.5s,baz=125,slow=1.7,SNR=17							
BATI				S		**Sn**	**02 36 14.3**	**+1.2**
	56nm,0.4s,baz=155,slow=23,SNR=6.3							
SIJI	**Sorong**	**7.58**	**26**	P		**Pn**	**02 35 53.5**	**+1.1**
	18nm,0.3s,baz=230,slow=23,SNR=7.3							
FITZ	**Fitzroy Crossi**	**10.54**	**192**	P		**Pn**	**02 36 32.2**	**+0.4**
	5.1nm,0.3s,baz=31,slow=11,SNR=40							
FITZ				S		**Sn**	**02 38 24.9**	**-3.6**
	9.5nm,0.4s,baz=335,slow=23,SNR=8.7							
WRA	**Warramunga Arr**	**13.62**	**154**	P		**Pn**	**02 37 14.2**	**+2.5**
	2.4nm,0.6s,baz=326,slow=14,SNR=16							
WRA				S		Sn	02 39 35.6	-6.9
	5.5nm,0.5s,baz=331,slow=22,SNR=14							
ASAR	**Alice Springs**	**16.83**	**161**	P		**P**	**02 37 54.4**	**+3.3**
	1.9nm,0.5s,baz=336,slow=12,SNR=26							
ASAR				S		**S**	**02 40 55.1**	**-3.7**
	1.6nm,0.7s,baz=325,slow=19,SNR=7.1							
SONM	**Songino Array**	**58.53**	**343**	P		**P**	**02 43 44.0**	**-1.3**
	0.2nm,0.3s,baz=143,slow=5.0,SNR=1.7							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**67.75**	**328**	P		**P**	**02 44 44.3**	**-1.8**
	0.3nm,0.4s,baz=119,slow=7.9,SNR=12							
	0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**71.36**	**335**	P		**P**	**02 45 05.6**	**-2.3**
	0.6nm,0.5s,baz=123,slow=5.3,SNR=2.5							
	0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**72.09**	**329**	P		**P**	**02 45 10.2**	**-2.2**
	1.0nm,0.7s,baz=134,slow=5.1,SNR=11							
	1.0nm,0.7s							
LPAZ	**La Paz**	**151.30**	**146**	PKPbc		**PKPbc**	**02 53 42.3**	**+0.1**
	0.4nm,0.4s,baz=160,slow=14,SNR=2.0							

*IDC **26** 03:07:07.0±0.9, 24.°31N×125.°19E, h0km, mb3.8/9, mbtmp3.8/10, ML2.8/1, MS3.0/3, Error ellipse: s-maj=31.1km s-min=16.4km az=65.0*
*JMA **26** 03:07:11.6±0.2, 24.°3N±0.°9×125.°2E±0.°5, h29km±3km, MV3.4/11, NEAR MIYAKOJIMA ISLAND*
*NEIC **26** 03:07:12.7±1.1, 24.°34N±0.°09×125.°21E±0.°06, h35km±2km, mb4.4/11, Error ellipse: s-maj=15.4km s-min=9.9km az=354.0*

ISC 26 03:07:11.4±1.4, 24.°29N±0.°06×125.°22E±0.°04, h29km±10km, n43, σ0ˢ72/51, mb4.0/16, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.46**	**12**	P		**Pn**	**03 07 21.6**	**-0.4**
JMJ2				*e*S		**Sb**	**03 07 28.2**	**+0.4**
JOGS	**Gusukube**	**0.49**	**20**	P		**Pn**	**03 07 22.2**	**-0.3**
JOGS				*e*S		**Sn**	**03 07 30.0**	**-0.1**
JTJ	**Tarama**	**0.59**	**306**	P		**Pn**	**03 07 23.5**	**-0.3**
JTJ				*e*S		**Sn**	**03 07 32.1**	**-0.3**
JIKM	**Ikemajima**	**0.63**	**2**	*e*P		**Pn**	**03 07 24.2**	**-0.1**
JIKM				*e*S		**Sn**	**03 07 33.7**	**+0.3**
JISG	**Ishigakijimahi**	**0.88**	**290**	*e*P		**Pn**	**03 07 27.8**	**0.0**
JISG				*e*S		**Sn**	**03 07 40.2**	**+0.5**
JIJ	**Ishigaki jima**	**0.99**	**274**	*e*P		**Pn**	**03 07 29.5**	**+0.2**
JIJ				*e*S		**Sb**	**03 07 42.5**	**-0.1**
JKRS	**Kuro-shima**	**1.11**	**267**	*e*P		**Pb**	**03 07 31.9**	**-0.1**
JKRS				*e*S		**Sb**	**03 07 46.2**	**+0.2**
HATJ	**Hateruma jima**	**1.32**	**260**	*e*S		**Sn**	**03 07 51.1**	**+0.7**
IRIF	**Iriomote-Funau**	**1.36**	**272**	*e*P		**Pn**	**03 07 35.1**	**+0.7**
YOJ	**Yonaguni jima**	**2.02**	**275**	Pn		**Pn**	**03 07 43.2**	**-0.4**
YOJ						Sn	**03 08 07.8**	**-0.1**
JYNG	**Yonagunijimaku**	**2.08**	**275**	*e*P		**Pn**	**03 07 45.7**	**+1.3**
JYNG				*e*S		**Sn**	**03 08 10.8**	**+1.5**
YULB	**Yu-li**	**3.71**	**257**			**Pn**	**03 08 06.0**	**-0.7**
YULB						**Sn**	**03 08 46.5**	**-2.9**
JOW	**Kunigami**	**3.74**	**47**	Pn		**Pn**	**03 08 06.7**	**-0.4**
	1.6nm,0.3s,baz=100,slow=25,SNR=7.3							
JOW				Sn		**Sn**	**03 08 51.7**	**+1.5**
	2.7nm,0.3s,baz=305,slow=27,SNR=1.4							
	11nm,0.6s							
JOW	**Kunigami**	**3.74**	**47**			**Pn**	**03 08 06.6**	**-0.6**
SSLB	**Suanglung**	**3.94**	**264**	Pn		**Pn**	**03 08 10.2**	**+0.3**
TPUB	**Ta-pu**	**4.32**	**258**			**Pn**	**03 08 14.8**	**-0.4**
KSRS	**Korea Array**	**13.32**	**9**	LR		LR	03 15 47.8	
	comp=Z,28nm,18.7s,baz=195,slow=39							
LZDM	**Lanzhou Array**	**21.90**	**307**	P		**P**	**03 12 02.1**	**-0.4**
	0.5nm,0.3s,baz=116,slow=9.8,SNR=1.8							
	0.5nm,0.3s							
ULN	**Ulaanbaatar**	**27.59**	**333**	P		**P**	**03 12 55.9**	**-0.3**
TLY	**Talaya**	**31.96**	**334**	LR		LR	03 28 17.7	
	comp=Z,36nm,20.9s,baz=82,slow=40							
BBJI	**Bungbulang**	**35.92**	**211**	P		**P**	**03 14 09.8**	**+0.4**
BBJI				IAmb		IAmb	03 14 50.6	
	comp=Z,9.1nm,1.2s							
RABL	**Rabaul**	**38.59**	**134**	P		**P**	**03 14 31.8**	**-0.3**
MK31	**Makanchi Array**	**40.86**	**314**	P		**P**	**03 14 50.7**	**0.0**
MK31				IAmb		IAmb	03 15 03.9	
	comp=Z,1.7nm,1.2s							
MKAR	**Makanchi Array**	**40.86**	**314**	P		**P**	**03 14 50.5**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=107,slow=9.1,SNR=18							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**42.21**	**325**	P		**P**	**03 15 00.3**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=109,slow=8.7,SNR=3.5							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**42.21**	**325**	P		**P**	**03 15 00.1**	**-1.5**
KURK	**Kurchatov**	**44.41**	**319**	P		**P**	**03 15 19.1**	**-0.3**
KURK				IAmb		IAmb	03 15 20.6	
	comp=Z,2.3nm,1.2s							
KURBB	**Kurchatov Arra**	**44.44**	**319**	P		**P**	**03 15 18.9**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=111,slow=8.8,SNR=4.5							
	comp=Z,0.5nm,0.6s							
WB0	**Warramunga Arr**	**44.70**	**168**	P		**P**	**03 15 21.6**	**-0.3**
WB0				IAmb		IAmb	03 15 34.1	
	comp=Z,16nm,1.4s							
WRA	**Warramunga Arr**	**44.86**	**168**	P		**P**	**03 15 23.0**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=348,slow=8.7,SNR=9.2							
	comp=Z,1.3nm,0.6s							
WRA	**Warramunga Arr**	**44.86**	**168**	P		**P**	**03 15 23.2**	**0.0**
WR8	**Warramunga Arr**	**44.90**	**168**	P		**P**	**03 15 23.4**	**-0.2**
WR8				IAmb		IAmb	03 15 23.7	
	comp=Z,14nm,1.4s							
PSA00	**Pilbara Seismi**	**45.89**	**187**	P		**P**	**03 15 31.6**	**+0.3**
PSA00				IAmb		IAmb	03 15 56.8	
	comp=Z,29nm,1.4s							
ASAR	**Alice Springs**	**48.41**	**169**	P		**P**	**03 15 51.5**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=357,slow=12,SNR=11							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**48.41**	**169**	P		**P**	**03 15 52.0**	**+0.9**
BVAR	**Borovoye Array**	**49.95**	**320**	P		**P**	**03 16 02.5**	**0.0**
	comp=Z,0.7nm,0.6s,baz=120,slow=8.5,SNR=2.3							
	comp=Z,0.7nm,0.6s							
AB31	**Akbulak array**	**56.01**	**314**	P		**P**	**03 16 47.4**	**+0.2**
AB31				IAmb		IAmb	03 16 48.2	
	comp=Z,2.3nm,0.6s							
ABKAR	**Akbulak array**	**56.01**	**314**	P		**P**	**03 16 47.7**	**+0.4**
NWAO	**Narrogin (SRO)**	**57.41**	**188**	LR		LR	03 44 03.1	
	comp=Z,25nm,19.5s,baz=140,slow=39							
STKA	**Stephens Creek**	**58.01**	**164**	P		**P**	**03 17 01.5**	**0.0**
	comp=Z,1.6nm,0.8s,baz=338,slow=4.5,SNR=1.8							
	comp=Z,1.6nm,0.8s							
STKA	**Stephens Creek**	**58.01**	**164**	P		**P**	**03 17 01.8**	**+0.3**
FINES	**FINESS Array B**	**73.20**	**330**	P		**P**	**03 18 39.3**	**+0.1**
	comp=Z,2.6nm,1.0s,baz=68,slow=5.9,SNR=5.3							
	comp=Z,2.6nm,1.0s							
FINES	**FINESS Array B**	**73.20**	**330**	P		**P**	**03 18 39.5**	**+0.3**

*IDC **26** 03:10:18.2±4.7, 28.°37N×142.°15E, h0km, mb3.5/4, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=181.2km s-min=17.7km az=76.0*

ISC 26 03:10:21.2±2.8, 28.°46N±0.°09×142.°6E±0.°6, h35km, n6, σ1ˢ75/7, mb3.7/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.41**	**196**	P		**Pn**	**03 10 41.9**	**-2.6**
	4.7nm,0.3s,baz=295,slow=22,SNR=1.7							
JCJ				S		**Sn**	**03 11 03.4**	**+1.6**
	28nm,0.3s,baz=90,slow=24,SNR=9.3							
MJAR	**Matsushiro Arr**	**8.88**	**336**	Pn		**Pn**	**03 12 26.4**	**-0.6**
	0.1nm,0.3s,baz=165,slow=11,SNR=2.1							
	0.6nm,0.3s							
WRA	**Warramunga Arr**	**48.78**	**190**	P		**P**	**03 19 04.2**	**+1.4**
	0.4nm,0.4s,baz=11,slow=7.8,SNR=2.5							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**49.92**	**309**	P		**P**	**03 19 12.1**	**+0.7**
	0.1nm,0.5s,baz=80,slow=7.9,SNR=2.1							
	0.1nm,0.5s							
KURBB	**Kurchatov Arra**	**52.37**	**314**	P		**P**	**03 19 30.3**	**+0.6**
	0.3nm,0.4s,baz=89,slow=6.2,SNR=4.6							
	0.3nm,0.4s							
BVAR	**Borovoye Array**	**57.31**	**317**	P		**P**	**03 20 05.6**	**+0.2**
	0.5nm,0.5s,baz=111,slow=6.5,SNR=3.0							
	0.5nm,0.5s							

IDC 26 03:22:33.9±5.7, 3.°42S×138.°85E, h0km, mb3.2/2, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=229.4km s-min=33.9km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.00**	**195**	P		Pn	03 26 34.0	+0.8
	0.2nm,0.3s,baz=16,slow=12,SNR=3.2							
	0.4nm,0.3s							
ASAR	**Alice Springs**	**20.69**	**193**	P		P	03 27 15.3	-0.4
	0.6nm,0.7s,baz=18,slow=11,SNR=8.8							
	0.6nm,0.7s							
MKAR	**Makanchi Array**	**70.43**	**323**	P		P	03 33 50.2	+0.1
	0.1nm,0.3s,baz=128,slow=6.3,SNR=2.3							
	0.1nm,0.3s							

*IDC **26** 03:25:41.6±2.1, 38.°43N×43.°49E, h0km, mb3.6/4, mbtmp3.6/6, ML3.6/2, MS2.9/5, Error ellipse: s-maj=33.2km s-min=21.0km az=122.0*
*NSSP **26** 03:25:43.9, 38.°37N×44.°55E, h10km, Ms3.5*
*AZER **26** 03:25:44.4, 38.°48N×44.°48E, h10km, ml3.6*
*TEH **26** 03:25:50.2, 38.°41N×44.°85E, h6km±18km, ML3.3, Presumed earthquake*

ISC 26 03:25:45.3±1.2, 38.°46N±0.°03×44.°52E±0.°03, h2km±10km, n62, σ2ˢ25/90, mb3.5/3, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.88**	**101**	P		**Pg**	**03 26 02.1**	**-0.1**
IMRD	**Marand**	**0.96**	**74**	Pg		**Pn**	**03 26 04.4**	**-1.7**
NAX	**Nakhchivan**	**1.05**	**47**	P		**Pn**	**03 26 05.9**	**-1.2**
NAX				S		**Sn**	**03 26 22.3**	**0.0**
HAKT	**HAKKARI**	**1.10**	**216**	P		**Pb**	**03 26 05.8**	**-1.4**
HAKT				S		**Sn**	**03 26 24.0**	**+0.1**
SBZ	**Shahbuz**	**1.24**	**40**	P		**Pg**	**03 26 09.4**	**+0.4**
SBZ				S		**Sn**	**03 26 28.2**	**+1.1**
ORD	**Ordubad**	**1.25**	**67**	P		**Pg**	**03 26 09.5**	**+0.3**
ORD				S		**Sn**	**03 26 28.6**	**+1.3**
HYR	**Heyderabad**	**1.28**	**12**	P		**Pg**	**03 26 10.2**	**+0.3**
HYR				S		**Sn**	**03 26 28.0**	**-0.2**
ITBZ	**Tabriz**	**1.30**	**99**	Pg		**Pb**	**03 26 09.5**	**-1.1**
IAZR	**Azarshahr**	**1.39**	**124**	Pg		**Pg**	**03 26 12.2**	**+0.2**
VAYK	**Vayk**	**1.42**	**30**	⇓*e*P		**Pg**	**03 26 12.1**	**-0.4**
VAYK				⇓*e*S		**Sg**	**03 26 33.2**	**+2.1**
IGDI	**IGDIR**	**1.45**	**347**	P		**Pg**	**03 26 12.6**	**-0.4**
IGDI				S		**Sg**	**03 26 34.2**	**+2.4**
ALVK	**Alvank**	**1.51**	**71**	*e*P		**Pb**	**03 26 13.3**	**-0.8**
ALVK				*e*S		**Sg**	**03 26 34.8**	**+0.9**
GNI	**Garni**	**1.70**	**6**	Pg		**Pg**	**03 26 18.6**	**+0.8**
	19nm,0.3s,baz=252,slow=4.6,SNR=118							
GNI				Lg		Lg	03 26 46.1	
	21nm,0.3s,baz=132,slow=16,SNR=9.3							
GNI				LR		LR	03 27 11.2	
	comp=Z,134nm,19.0s,baz=213,slow=45							
GNI	**Garni**	**1.70**	**6**	*e*P		**Pg**	**03 26 17.7**	**-0.1**
GNI				*e*S		**Sg**	**03 26 40.1**	**+0.2**
METS	**Metsamor**	**1.72**	**349**	*e*P		**Pg**	**03 26 17.5**	**-0.8**
METS				*e*S		**Sg**	**03 26 42.9**	**+2.3**
GRS	**Goris**	**1.76**	**53**	⇓*i*P		**Pg**	**03 26 21.0**	**+2.0**
GRS				⇓*i*S		**Sg**	**03 26 46.0**	**+4.2**
EGVZ	**Egvard**	**1.76**	**64**	*e*P		**Pb**	**03 26 17.5**	**-0.8**
EGVZ				*e*S		**Sg**	**03 26 42.1**	**+0.3**
AYRK	**Ayrk**	**1.93**	**30**	*e*P		**Pg**	**03 26 21.3**	**-1.0**
AYRK				*e*S		**Sg**	**03 26 49.1**	**+1.9**
MAHB	**Mahabad**	**1.94**	**150**	Pg		**Pg**	**03 26 22.8**	**+0.4**
IHRS	**Heris**	**1.99**	**93**	Pg		**Pg**	**03 26 22.3**	**-1.1**
QRD	**Qoradiz**	**2.41**	**65**	P		**Pb**	**03 26 27.4**	**-1.9**
QRD				S		**Sb**	**03 26 59.6**	**+0.3**
GDB	**GEDABAY**	**2.45**	**23**	P		**Pb**	**03 26 28.2**	**-2.1**
GDB				S		**Sb**	**03 27 00.0**	**-1.0**
IHSH	**Hashtrud**	**2.46**	**117**	Pn		**Pb**	**03 26 29.6**	**-0.8**
LSVT	**Lusahovit**	**2.51**	**12**	*e*P		**Pb**	**03 26 29.7**	**-1.5**
LSVT				*e*S		**Sg**	**03 27 03.8**	**-2.1**
ISRB	**Sarab**	**2.56**	**103**	Pn		**Pb**	**03 26 30.7**	**-1.4**
GANJ	**Ganja**	**2.59**	**32**	P		**Pb**	**03 26 30.2**	**-2.3**
GANJ				S		**Sb**	**03 27 03.0**	**-1.8**
AGDM	**Agdam**	**2.60**	**50**	P		**Pb**	**03 26 29.4**	**-3.2**
AGDM				S		**Sb**	**03 27 04.9**	**-0.1**
GRMI	**Germi**	**2.67**	**81**	Pn		**Pb**	**03 26 32.3**	**-1.6**
QZX	**Qazax, Azerbai**	**2.68**	**14**	P		**Pb**	**03 26 30.7**	**-3.3**
QZX				S		**Sb**	**03 27 06.3**	**-1.0**
BLQ	**Beylaqan**	**2.68**	**61**	P		**Pb**	**03 26 31.4**	**-2.6**
BLQ				S		**Sb**	**03 27 06.3**	**-1.1**
BRDA	**Brd**	**2.74**	**48**	P		**Pb**	**03 26 34.0**	**-0.9**
BRDA				S		**Sb**	**03 27 09.8**	**+0.8**
BGD	**Bogdanovka**	**2.89**	**346**	P		**Pb**	**03 26 37.1**	**-0.6**
BGD				S		**Sg**	**03 27 21.9**	**+3.8**
YRD	**Yardimli**	**2.95**	**80**	P		**Pb**	**03 26 36.7**	**-2.0**
YRD				S		**Sb**	**03 27 15.0**	**-0.3**
LRK	**Lerik**	**3.00**	**85**	P		**Pb**	**03 26 35.6**	**-4.0**
LRK				S		**Sb**	**03 27 16.4**	**-0.4**
AKH	**Akhalkalaki**	**3.05**	**345**	P		**Pg**	**03 26 41.1**	**-2.7**
AKH				S		**Sg**	**03 27 27.4**	**+4.0**
DGRG	**David-gareji**	**3.06**	**12**	P		**Pg**	**03 26 42.9**	**-1.1**
TRLG	**Trialeti**	**3.09**	**354**	P		**Pb**	**03 26 41.1**	**0.0**
VSHL	**Vashlovani**	**3.12**	**27**	P		**Pb**	**03 26 39.4**	**-2.2**
VSHL				S		**Sg**	**03 27 28.3**	**+2.6**
GLBA	**Clilabad**	**3.13**	**74**	P		**Pb**	**03 26 37.6**	**-3.9**
GLBA				S		**Sb**	**03 27 18.9**	**-1.2**
DDFL	**Dedoflistskaro**	**3.23**	**22**	P		**Pg**	**03 26 48.6**	**+1.4**
LKRN	**Lenkeran, Azer**	**3.35**	**84**	P		**Pb**	**03 26 40.9**	**-4.5**
LKRN				S		**Sb**	**03 27 24.0**	**-2.6**
ASTR	**Astara**	**3.36**	**87**	P		**Pn**	**03 26 40.3**	**+1.6**
ASTR				S		**Sb**	**03 27 23.1**	**-3.6**
SEKA	**Sheki**	**3.44**	**36**	P		Pb	03 26 41.8	-5.1
SEKA				S		**Sb**	**03 27 27.6**	**-1.5**
ZKTA	**Zakatala**	**3.56**	**26**	S		**Sb**	**03 27 28.4**	**-4.3**
QBL	**Gabala**	**3.57**	**45**	P		**Pn**	**03 26 43.6**	**+1.9**
QBL				S		**Sb**	**03 27 30.0**	**-2.9**
ALIG	**Mtskhetisjvari**	**3.70**	**350**	P		**Pg**	**03 26 52.6**	**-3.6**
CHRG	**Chargali**	**3.88**	**5**	P		**Pb**	**03 26 55.0**	**+0.6**
XNQ	**Khinaliq**	**3.89**	**45**	P		**Pn**	**03 26 48.0**	**+1.8**
PQL	**Pirkuli**	**3.92**	**52**	P		**Pn**	**03 26 47.8**	**+1.3**
PQL				S		**Sb**	**03 27 37.8**	**-5.2**
ATGJ	**Altiaghaj**	**4.17**	**54**	P		**Pn**	**03 26 51.6**	**+1.5**
ATGJ				S		**Sn**	**03 27 42.8**	**+3.4**
QUBA	**Quba, Azerbaij**	**4.21**	**45**	P		**Pn**	**03 26 52.9**	**+2.4**
QUBA				S		**Sb**	**03 27 44.6**	**-6.8**
SHTL	**Shatili**	**4.22**	**6**	P		**Pb**	**03 27 00.0**	**-0.3**
SIZA	**Siyzn**	**4.27**	**51**	P		**Pn**	**03 26 53.3**	**+1.9**
SIZA				S		**Sn**	**03 27 45.2**	**+3.3**
ASF	**Jabal al Asfar**	**8.83**	**227**	LR		LR	03 30 23.7	
	comp=Z,25nm,21.4s,baz=31,slow=34							
MMAI	**Mount Meron Ar**	**9.18**	**236**	LR		LR	03 31 50.1	
	comp=Z,64nm,20.5s,baz=34,slow=43							
AKTO	**Aktyubinsk**	**15.34**	**34**	Pn		**P**	**03 29 24.4**	**-3.3**
	0.2nm,0.3s,baz=218,slow=8.0,SNR=8.1							
	2.8nm,0.8s							
AKASG	**Malin Array Be**	**16.34**	**323**	Pn		Pn	03 29 25.8	-10
	0.3nm,0.3s,baz=136,slow=12,SNR=1.6							
AKASG				LR		LR	03 36 18.7	
	comp=Z,64nm,18.1s,baz=100,slow=40							
	0.2nm,0.3s							
ARTI	**Arti**	**20.17**	**23**	P		Pn	03 30 21.2	-1.4
	2.5nm,0.7s,baz=218,slow=12,SNR=4.0							
	2.5nm,0.7s							
BVAR	**Borovoye Array**	**23.03**	**42**	LR		LR	03 41 30.8	
	comp=Z,41nm,19.9s,baz=235,slow=40							
KURBB	**Kurchatov Arra**	**26.88**	**52**	P		**P**	**03 31 29.8**	**+2.5**
	0.8nm,0.7s,baz=266,slow=9.2,SNR=5.5							
	0.8nm,0.7s							
MKAR	**Makanchi Array**	**28.79**	**61**	P		P	03 31 47.5	+3.0
	0.3nm,0.6s,baz=269,slow=7.2,SNR=2.2							
MKAR				LR		LR	03 44 00.8	
	comp=Z,34nm,18.8s,baz=290,slow=37							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**31.41**	**47**	P		**P**	**03 32 10.0**	**+2.6**
	0.3nm,0.3s,baz=256,slow=10,SNR=1.4							
	0.3nm,0.3s							

*IDC **26** 03:27:05.7±4.3, 36.°29N×69.°99E, h233km±39km, mb3.1/8, mbtmp3.8/12, Error ellipse: s-maj=31.6km s-min=22.2km az=21.0*
*NNC **26** 03:27:15.8±11.0, 37.°30N×69.°55E, h265km±104km, mb2.4, mpv3.2, Error ellipse: s-maj=129.6km s-min=81.3km az=167.0*

ISC 26 03:27:07.6±1.1, 36.°4N±0.°1×70.°1E±0.°1, h250km, n17, σ1ˢ92/20, mb3.2/6, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.66**	**2**	⇑P		**Pn**	**03 28 43.6**	**-0.3**
	0.5nm,0.2s,baz=173,slow=13,SNR=21							
KK31				⇓S		S	03 29 47.8	-13
	1.0nm,0.3s,baz=185,slow=21,SNR=5.0							
AAK	**Ala-Archa**	**7.05**	**27**	P		**Pn**	**03 28 50.2**	**+1.3**
	6.3nm,0.3s,baz=152,slow=3.9,SNR=14							
AAK				S		**S**	**03 30 10.3**	**+0.1**
	2.5nm,0.4s,baz=338,slow=23,SNR=1.5							
AAK	**Ala-Archa**	**7.05**	**27**	⇑P		**Pn**	**03 28 49.8**	**+0.8**
	0

BO04	**La Punta**	**39.00**	**293**	P	**P**	**03 46 28.5**	**-0.6**
MT09	**Talagante**	**39.35**	**293**	P	**P**	**03 46 32.3**	**+0.1**
MT09				IAmb	IAmb	03 46 33.2	
	comp=Z,17nm,0.9s						
MT01	**Popeta**	**39.39**	**293**	P	**P**	**03 46 32.5**	**+0.2**
MT01				IAmb	IAmb	03 46 33.2	
	comp=Z,10.0nm,0.7s						
MT16	**CCHEN**	**39.43**	**294**	P	**P**	**03 46 33.0**	**+0.3**
MT16				IAmb	IAmb	03 46 35.0	
	comp=Z,21nm,0.8s						
PEL	**Peldehue**	**39.74**	**294**	P	**P**	**03 46 35.8**	**+0.5**
CFA	**Coronel Fontan**	**39.97**	**298**	P	**P**	**03 46 36.5**	**-0.8**
	comp=Z,3.7nm,0.6s,baz=165,slow=7.9,SNR=13						
	comp=Z,3.7nm,0.6s						
VA03	**San Esteban**	**40.00**	**294**	P	**P**	**03 46 38.6**	**+1.1**
VA03				IAmb	IAmb	03 46 39.6	
	comp=Z,12nm,0.9s						
ZON	**Zonda**	**40.21**	**297**	P	**P**	**03 46 38.9**	**-0.3**
CPUP	**Villa Florida**	**40.36**	**315**	P	**P**	**03 46 39.0**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=174,slow=11,SNR=3.3						
	comp=Z,0.6nm,0.5s						
CPUP	**Villa Florida**	**40.36**	**315**	P	**P**	**03 46 39.6**	**-0.8**
VA06	**Catapilco**	**40.51**	**294**	P	**P**	**03 46 42.1**	**+0.6**
VA06				IAmb	IAmb	03 47 03.4	
	comp=Z,33nm,1.1s						
CO04	**Los Peladeros**	**40.80**	**294**	P	**P**	**03 46 44.7**	**+0.3**
CO04				IAmb	IAmb	03 47 05.8	
	comp=Z,38nm,1.4s						
AC05	**El Transito**	**43.24**	**298**	P	**P**	**03 47 04.9**	**+0.7**
AC05				IAmb	IAmb	03 47 05.4	
	comp=Z,12nm,0.8s						
LCO	**Las Campanas**	**43.28**	**297**	P	**P**	**03 47 04.8**	**+0.2**
LCO				IAmb	IAmb	03 47 41.8	
	comp=Z,25nm,1.5s						
AC04	**Llanos de Chal**	**44.14**	**297**	P	**P**	**03 47 11.7**	**+0.5**
AC04				IAmb	IAmb	03 47 45.6	
	comp=Z,24nm,1.3s						
GO02	**Mina Guanaco**	**46.16**	**301**	P	**P**	**03 47 27.9**	**+0.2**
PB14	**IPOC Station P**	**46.98**	**300**	P	**P**	**03 47 33.5**	**-0.6**
SIV	**San Ignacio**	**51.21**	**316**	P	**P**	**03 48 04.5**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=173,slow=12,SNR=3.0						
	comp=Z,0.8nm,0.4s						
H10S2	**ASCENSION HYDR**	**52.52**	**15**	T	T	04 44 49.0	
	baz=186						
H10S3	**ASCENSION HYDR**	**52.52**	**15**	T	T	04 44 46.7	
	baz=34						
LPAZ	**La Paz**	**53.53**	**307**	P	**P**	**03 48 23.8**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=156,slow=10.0,SNR=5.7						
	comp=Z,0.8nm,0.5s						
LPAZ	**La Paz**	**53.53**	**307**	P	**P**	**03 48 23.7**	**-0.3**
H10N1	**ASCENSION HYDR**	**53.63**	**15**	T	T	04 46 10.2	
	baz=186						
H10N3	**ASCENSION HYDR**	**53.63**	**15**	T	T	04 46 11.6	
	baz=186						
H10N2	**ASCENSION HYDR**	**53.65**	**15**	T	T	04 46 18.0	
	baz=186						
DBIC	**Dimbokro**	**69.40**	**23**	P	**P**	**03 50 10.5**	**-0.1**
DBIC				IAmb	IAmb	03 50 45.5	
	comp=Z,10nm,1.4s						
TORD	**Torodi Ar. Bea**	**77.08**	**28**	P	**P**	**03 50 56.6**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=196,slow=5.7,SNR=26						
	comp=Z,3.1nm,0.6s						
ILAR	**Eielson Array**	**153.38**	**304**	PKPbc	**PKiKP**	**03 59 00.7**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=153,slow=3.4,SNR=9.7						

*SJA **26** 03:40:34.8±1.2, 18°.90S×69°.27W, h119^{km}±6^{km}, ML3.9, MW3.8*

*IDC **26** 03:40:36.5±1.8, 18°.85S×68°.92W, h130^{km}±14^{km}, mb3.8/6, mbtmp4.2/9, Error ellipse: s-maj=22.9km s-min=15.5km az=80.0*

*GUC **26** 03:40:36.5±0.8, 18°.89S×69°.26W, h118^{km}±3^{km}, ML4.1*

*NEIC **26** 03:40:36.0±2.0, 18°.90S±0°.04×69°.33W±0°.07, h119^{km}±5^{km}, mb4.4/11, ML4.1(GUC), Error ellipse: s-maj=9.1km s-min=5.4km az=76.0*

*VAO **26** 03:40:36.7±0.8, 18°.80S×68°.91W, h132^{km}±7^{km}, mb4.2, Presumed earthquake*

ISC 26 03:40:34.7±0.5, 18°91S±0°03×69°20W±0°05, h125^{km}±4^{km}, n119, σ1°52/145, mb4.2/4, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	**0.64**	**333**	Pn	**Pn**	**03 40 54.9**	**+0.1**
PB16				Sn	Sn	03 41 09.1	-0.8
PB16	**IPOC Station P**	**0.64**	**333**	*i* P	**Pn**	**03 40 55.1**	**+0.3**
PB16				*i* S	**Sn**	**03 41 09.1**	**-0.8**
PB16				IAML		03 41 11.3	
	comp=E,5μm,0.4s						
PB16	**IPOC Station P**	**0.64**	**333**	*i* S	**Sn**	**03 41 09.5**	**-0.4**
PB16				IAML		03 41 11.0	
	comp=Z,3μm,0.3s						
GO01	**Chusmiza**	**0.76**	**179**	Pn	**Pn**	**03 40 56.6**	**+1.0**
GO01				Sn	**Sn**	**03 41 12.7**	**+1.2**
GO01	**Chusmiza**	**0.76**	**179**	*i* P	**Pn**	**03 40 56.5**	**+0.8**
GO01				*i* S	**Sn**	**03 41 12.1**	**+0.7**
GO01	**Chusmiza**	**0.76**	**179**	*i* P	**Pn**	**03 40 55.9**	**+0.3**
GO01				*i* S	**Sn**	**03 41 11.0**	**-0.4**
GO01				IAML		03 41 14.8	
	comp=Z,2μm,0.2s						
PB11	**IPOC Station P**	**0.95**	**207**		**Pn**	**03 40 57.2**	**+0.3**
PB11				Sn	**Sn**	**03 41 13.9**	**+0.1**
PB11	**IPOC Station P**	**0.95**	**207**	⇑*i* P	**Pn**	**03 40 57.6**	**+0.6**
PB11				*i* S	**Sn**	**03 41 14.0**	**+0.2**
PB11				IAML		03 41 15.0	
	comp=E,6μm,0.2s						
PB11	**IPOC Station P**	**0.95**	**207**	*i* S	**Sn**	**03 41 14.0**	**+0.2**
PB11				IAML		03 41 15.2	
	comp=Z,2μm,0.1s						
PB12	**IPOC Station P**	**1.11**	**285**		**Pn**	**03 40 57.7**	**-0.6**
PB12				Sn	**Sn**	**03 41 14.9**	**-1.2**
PB12	**IPOC Station P**	**1.11**	**285**	⇑*i* P	**Pn**	**03 40 58.1**	**-0.2**
PB12				*i* S	**Sn**	**03 41 15.0**	**-1.2**
PB12				IAML		03 41 16.1	
	comp=E,8μm,0.3s						
PB12	**IPOC Station P**	**1.11**	**285**	*i* P	**Pn**	**03 40 57.5**	**-0.8**
PB12				*i* S	**Sn**	**03 41 14.7**	**-1.5**
PB12				IAML		03 41 16.9	
	comp=Z,3μm,0.4s						
AP01	**Chacalluta**	**1.21**	**296**		**Pn**	**03 40 58.8**	**-0.4**
AP01				Sn	**Sn**	**03 41 17.1**	**-0.7**
AP01	**Chacalluta**	**1.21**	**296**	⇑*i* P	**Pn**	**03 40 59.3**	**+0.1**
AP01				*i* S	**Sn**	**03 41 17.1**	**-0.7**
AP01	**Chacalluta**	**1.21**	**296**	*i* P	**Pn**	**03 40 58.7**	**-0.4**
AP01				*i* S	**Sn**	**03 41 17.7**	**-0.1**
AP01				IAML		03 41 20.5	
	comp=Z,4μm,0.1s						
PB08	**IPOC Station P**	**1.23**	**178**	Pn	**Pn**	**03 41 01.4**	**+1.5**
PB08				Sn	**Sn**	**03 41 20.5**	**+1.4**
PB08	**IPOC Station P**	**1.23**	**178**	⇑*i* P	**Pn**	**03 41 01.4**	**+1.5**
PB08				*i* S	**Sn**	**03 41 20.4**	**+1.4**
PB08	**IPOC Station P**	**1.23**	**178**	*i* P	**Pn**	**03 41 00.8**	**+0.8**
PB08				*i* S	**Sn**	**03 41 21.1**	**+2.0**
PB08				IAML		03 41 22.1	
	comp=Z,1μm,0.1s						
PB18	**Visviri**	**1.33**	**349**	Pn	**Pn**	**03 41 02.4**	**+1.2**
PB18	**Visviri**	**1.33**	**349**	⇓*i* P	**Pn**	**03 41 02.8**	**+1.6**
TA02	**Huaiquique**	**1.62**	**213**	*i* P	**Pn**	**03 41 03.9**	**+0.1**
TA02	**Huaiquique**	**1.62**	**213**	*i* P	**Pn**	**03 41 03.7**	**-0.1**
TA02				*i* S	**Sn**	**03 41 26.3**	**+0.3**
TA02				IAML		03 41 31.6	
	comp=Z,1μm,0.1s						
PB01	**IPOC Station P**	**2.15**	**187**		**Pn**	**03 41 11.1**	**+0.8**
PB01	**IPOC Station P**	**2.15**	**187**	⇓*i* P	**Pn**	**03 41 11.2**	**+0.8**
PB01				*i* S	**Sn**	**03 41 36.6**	**-1.0**
PB01				IAML		03 41 44.3	
	comp=E,1μm,0.3s						
PB01	**IPOC Station P**	**2.15**	**187**	*i* P	**Pn**	**03 41 11.0**	**+0.7**
PB01				IAML		03 41 40.2	
	comp=Z,798nm,0.1s						
PB02	**IPOC Station P**	**2.49**	**195**	Pn	**Pn**	**03 41 14.9**	**+0.3**
PB02	**IPOC Station P**	**2.49**	**195**	*e*P	**Pn**	**03 41 15.6**	**+0.9**
PB02				*e*S	**Sn**	**03 41 44.6**	**-0.8**
PB02				IAML		03 41 56.0	
	comp=N,889nm,0.3s						
PB02	**IPOC Station P**	**2.49**	**195**	*i* P	**Pn**	**03 41 15.6**	**+0.9**
PB02				IAML		03 41 53.4	
	comp=Z,906nm,0.2s						
LPAZ	**La Paz**	**2.80**	**22**	P	**Pn**	**03 41 20.9**	**+1.8**
	comp=Z,27nm,0.3s,baz=182,slow=2.6,SNR=214						
LPAZ				S	**Sn**	**03 41 52.2**	**-1.0**
	comp=Z,41nm,0.7s,baz=65,slow=22,SNR=6.7						
LPAZ	**La Paz**	**2.80**	**22**	*i* P	**Pn**	**03 41 21.1**	**+2.0**
LPAZ				IAML		03 42 04.5	
	comp=Z,32nm,0.8s						
LPAZ	**La Paz**	**2.80**	**22**	*e*P	**Pn**	**03 41 19.4**	**+0.3**
PB09	**IPOC Station P**	**2.88**	**181**		**Pn**	**03 41 20.9**	**+1.2**
PB09	**IPOC Station P**	**2.88**	**181**	*i* P	**Pn**	**03 41 21.1**	**+1.4**
PB09				*e*S	**Sn**	**03 41 50.4**	**-4.1**
PB09	**IPOC Station P**	**2.88**	**181**	*i* P	**Pn**	**03 41 20.9**	**+1.2**
PB09				IAML		03 42 03.4	
	comp=Z,284nm,0.6s						
PB07	**IPOC Station P**	**2.88**	**193**		**Pn**	**03 41 20.7**	**+0.9**
PB07	**IPOC Station P**	**2.88**	**193**	*e*P	**Pn**	**03 41 20.8**	**+1.0**
PB07				*e*S	**Sn**	**03 41 49.5**	**-5.0**
PB07				IAML		03 42 06.6	
	comp=E,412nm,0.3s						
PB07	**IPOC Station P**	**2.88**	**193**	*i* P	**Pn**	**03 41 20.9**	**+1.1**
PB07				IAML		03 42 00.7	
	comp=Z,314nm,0.3s						
PB03	**IPOC Station P**	**3.17**	**189**	Pn	**Pn**	**03 41 24.4**	**+0.9**
PB03	**IPOC Station P**	**3.17**	**189**	*i* P	**Pn**	**03 41 24.5**	**+0.9**
PB03				*i* S	**Sn**	**03 41 54.6**	**-6.6**
PB03				IAML		03 42 02.1	
	comp=E,274nm,0.1s						
PB03	**IPOC Station P**	**3.17**	**189**	*i* P	**Pn**	**03 41 24.4**	**+0.9**
PB03				IAML		03 42 09.7	
	comp=Z,231nm,0.2s						
PB06	**IPOC Station P**	**3.80**	**185**	Pn	**Pn**	**03 41 32.1**	**+0.3**
PB06	**IPOC Station P**	**3.80**	**185**	*i* P	**Pn**	**03 41 32.4**	**+0.5**
PB06				*e*S	**Sn**	**03 42 13.4**	**-2.7**
PB06	**IPOC Station P**	**3.80**	**185**	*i* P	**Pn**	**03 41 32.2**	**+0.3**
PB06				IAML		03 42 37.7	
	comp=Z,143nm,0.3s						
PB10	**IPOC Station P**	**4.76**	**195**	Pn	**Pn**	**03 41 43.8**	**-0.7**
PB10	**IPOC Station P**	**4.76**	**195**	*i* P	**Pn**	**03 41 43.5**	**-1.0**
PB10				IAML		03 42 38.1	
	comp=Z,39nm,0.5s						
PB14	**IPOC Station P**	**5.80**	**191**		**Pn**	**03 41 57.2**	**-1.6**
GO02	**Mina Guanaco**	**6.24**	**183**		**Pn**	**03 42 04.5**	**-0.2**
AC01	**Pan de Azucar**	**7.32**	**190**	Pn	**Pn**	**03 42 16.8**	**-2.3**
AC02	**Maricunga**	**7.89**	**180**		**Pn**	**03 42 26.9**	**-0.3**
SIV	**San Ignacio**	**8.28**	**71**	P	**Pn**	**03 42 30.1**	**-1.9**
	comp=Z,42nm,0.5s,baz=257,slow=12,SNR=225						
AC06	**Mina Casimiro**	**8.48**	**187**	Pn	**Pn**	**03 42 33.3**	**-1.4**
AC05	**El Transito**	**9.94**	**185**	Pn	**Pn**	**03 42 51.9**	**-2.5**
NNA	**Nana**	**10.07**	**312**	P	**Pn**	**03 42 54.3**	**-1.9**
	comp=Z,4.3nm,0.3s,baz=133,slow=10,SNR=2.2						
NNA				S	**Sn**	**03 44 44.3**	**-3.3**
	comp=Z,4.4nm,0.3s,baz=29,slow=23,SNR=1.6						
NNA	**Nana**	**10.07**	**312**		**Pn**	**03 42 55.4**	**-0.8**
LCO	**Las Campanas**	**10.15**	**187**	Pn	**Pn**	**03 42 53.7**	**-3.7**
PTLB	**Pontes e Lacer**	**10.21**	**72**		**Pn**	**03 42 56.5**	**-1.6**
PTLB	**Pontes e Lacer**	**10.21**	**72**	*e*P	**Pn**	**03 42 55.8**	**-2.2**
VILB	**Vilhena**	**10.48**	**57**		**Pn**	**03 43 00.3**	**-1.5**
VILB	**Vilhena**	**10.48**	**57**	*e*P	**Pn**	**03 42 58.4**	**-3.3**
CO03	**El Pedregal**	**11.96**	**186**	Pn	**Pn**	**03 43 21.7**	**+0.4**
CO02	**Combarbal**	**12.35**	**187**	Pn	**Pn**	**03 43 28.0**	**+1.6**
CFA	**Coronel Fontan**	**12.68**	**176**	P	**Pn**	**03 43 27.8**	**-2.8**
	comp=Z,0.8nm,0.4s,baz=350,slow=9.0,SNR=6.2						
CPUP	**Villa Florida**	**13.22**	**126**	P	**Pn**	**03 43 37.6**	**0.0**
	comp=Z,1.0nm,0.5s,baz=296,slow=12,SNR=6.8						
CPUP	**Villa Florida**	**13.22**	**126**	Pn	**Pn**	**03 43 38.1**	**+0.5**
SALV	**Santo Antonio**	**13.23**	**79**	*e*P	**Pn**	**03 43 35.9**	**-2.0**
VA03	**San Esteban**	**13.86**	**185**	Pn	**Pn**	**03 43 46.9**	**+1.0**
AMBA	**Amanabai (Brazi**	**13.87**	**109**	*e*P	**Pn**	**03 43 45.2**	**-0.9**
PDRB	**Porto dos Gac**	**14.04**	**61**	*e*P	**Pn**	**03 43 45.6**	**-2.8**
MT02	**Curacav**	**14.40**	**187**	Pn	**Pn**	**03 43 53.4**	**+0.7**
MT08	**Bocatoma Ro**	**14.50**	**183**	P	**Pn**	**03 43 54.4**	**+0.2**
MT03	**Universidad Ad**	**14.58**	**184**	P	**Pn**	**03 43 55.8**	**+0.8**
MT09	**Talagante**	**14.90**	**186**	Pn	**Pn**	**03 43 59.8**	**+0.7**
MT01	**Popeta**	**15.01**	**187**	Pn	**Pn**	**03 44 01.6**	**+1.1**
MT01				IAmb	IAmb	03 44 07.2	
	comp=Z,28nm,0.9s						
BO04	**La Punta**	**15.08**	**185**	Pn	**Pn**	**03 44 01.7**	**+0.4**
CLDB	**Colider**	**15.21**	**60**	*e*P	**Pn**	**03 43 59.6**	**-3.5**
BO01	**Tunca**	**15.52**	**186**	Pn	**Pn**	**03 44 07.7**	**+1.0**
BO01				IAmb	IAmb	03 44 12.1	
	comp=Z,9.1nm,0.6s						
BO02	**Sierra Bellavi**	**15.89**	**185**	P	**P**	**03 44 12.9**	**+0.4**
BO02				IAmb	IAmb	03 44 17.3	
	comp=Z,11nm,0.7s						
TRCB	**Terra Rica**	**15.96**	**107**	P	**P**	**03 44 14.4**	**+1.0**
LDASE	**Londrina, Braz**	**17.45**	**108**	*e*P	**P**	**03 44 28.9**	**-1.0**
NPGB	**Novo Progresso**	**17.90**	**51**	*e*P	**P**	**03 44 34.1**	**-0.7**
SNDB	**Serra Nova Dou**	**18.58**	**71**	*e*P	**P**	**03 44 41.3**	**-0.9**
FRTB	**Fartura**	**18.84**	**107**	*e*P	**P**	**03 44 44.3**	**-0.8**
ITTB	**Itaituba**	**19.54**	**44**	*e*P	**P**	**03 44 51.1**	**-1.6**
BB19B	**Bebedouro**	**19.55**	**100**	*e*P	**P**	**03 44 52.1**	**-0.7**
IPMB	**Ipameri, GO**	**19.93**	**91**	*e*P	**P**	**03 44 56.1**	**-0.9**
TRQA	**Tornquist**	**20.10**	**163**	P	**P**	**03 44 59.9**	**+1.4**
BDFB	**Brasilia**	**20.49**	**84**	P	**P**	**03 45 02.3**	**-0.7**
	comp=Z,7.1nm,0.4s,baz=261,slow=8.9,SNR=29						
	comp=Z,7.1nm,0.4s						
BDFB	**Brasilia**	**20.49**	**84**	P	Pn	03 45 05.6	-0.8
BDFB				IAmb	IAmb	03 45 06.2	
	comp=Z,7.9nm,0.5s						
GO06	**Curarrehue**	**20.70**	**185**	P	**P**	**03 45 07.1**	**+2.0**
GO06				IAmb	IAmb	03 45 12.9	
	comp=Z,23nm,1.3s						
PLCA	**Paso Flores**	**21.79**	**183**	P	**P**	**03 45 18.4**	**+1.7**
	comp=Z,11nm,1.0s,baz=355,slow=11,SNR=17						
	comp=Z,11nm,1.0s						
PLCA	**Paso Flores**	**21.79**	**183**	P	**P**	**03 45 18.6**	**+1.9**
PLCA	**Paso Flores**	**21.79**	**183**	*e*P	**P**	**03 45 19.2**	**+2.5**
SMTB	**Santa Maria do**	**23.21**	**67**	*e*P	**P**	**03 45 30.4**	**-0.5**
JANB	**Januaria**	**24.10**	**85**	*e*P	**P**	**03 45 37.4**	**-1.6**
SDBA	**SAO DESIDERIO**	**24.26**	**78**	*e*P	**P**	**03 45 39.6**	**-0.8**
SNAA	**Sanae**	**64.81**	**161**	P	**P**	**03 51 00.8**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=0.7,slow=18,SNR=3.6						
	comp=Z,3.0nm,0.7s						
SNAA	**Sanae**	**64.81**	**161**	P	**P**	**03 51 01.7**	**+1.9**
SNAA				IAmb	IAmb	03 51 43.4	
	comp=Z,6.6nm,1.1s						
DBIC	**Dimbokro**	**68.28**	**75**	P	**P**	**03 51 22.2**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=269,slow=4.7,SNR=13						
	comp=Z,2.0nm,0.6s						
DBIC	**Dimbokro**	**68.28**	**75**	P	**P**	**03 51 22.7**	**0.0**
DBIC				IAmb	IAmb	03 52 03.0	
	comp=Z,6.5nm,1.2s						
TORD	**Torodi Ar. Bea**	**76.76**	**71**	P	**P**	**03 52 12.2**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=253,slow=4.6,SNR=15						
	comp=Z,0.4nm,0.3s						
YKA	**Yellowknife Ar**	**88.66**	**341**	P	**P**	**03 53 14.6**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=138,slow=3.9,SNR=17						
YKA				pP	**pP**	**03 53 46.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=136,slow=4.1,SNR=5.4						
YKA				sP	**sP**	**03 54 00.4**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=136,slow=4.0,SNR=2.3						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**88.66**	**341**	P	**P**	**03 53 15.0**	**+1.6**
ASAR	**Alice Springs**	**132.06**	**209**	PKP	**PKiKP**	**03 59 35.7**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=112,slow=1.9,SNR=2.5						
ASAR	**Alice Springs**	**132.06**	**209**		**PKiKP**	**03 59 35.3**	**-0.2**
WRA	**Warramunga Arr**	**135.02**	**212**	PKP	**PKiKP**	**03 59 41.4**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=148,slow=1.8,SNR=2.4						
WRA	**Warramunga Arr**	**135.02**	**212**		**PKiKP**	**03 59 41.1**	**-0.4**
KURK	**Kurchatov**	**139.29**	**31**		**PKiKP**	**03 59 48.4**	**-0.8**
KURBB	**Kurchatov Arra**	**139.30**	**31**	PKP	**PKiKP**	**03 59 47.8**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=309,slow=3.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**139.71**	**24**	PKP	**PKPdf**	**03 59 47.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=343,slow=3.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**139.71**	**24**		**PKiKP**	**03 59 48.7**	**-1.2**
MKAR	**Makanchi Array**	**143.67**	**34**	PKP	**PKPdf**	**03 59 55.8**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=298,slow=3.1,SNR=1.7						
MKAR	**Makanchi Array**	**143.67**	**34**		**PKPdf**	**03 59 55.9**	**+1.0**
KLR	**Kul'dur**	**145.36**	**336**	PKPbc	**PKPab**	**03 59 58.7**	**+0.6**
	comp=Z,0.5nm,0.2s,baz=102,slow=2.7,SNR=3.2						
HILR	**Hailar Array B**	**148.59**	**349**	PKPbc	**PKiKP**	**04 00 08.3**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=5.8,slow=3.3,SNR=3.3						
MJAR	**Matsushiro Arr**	**150.20**	**312**	PKPbc	**PKiKP**	**04 00 12.1**	**0.0**
	comp=Z,0.5nm,0.3s,baz=106,slow=1.9,SNR=5.0						
MJAR	**Matsushiro Arr**	**150.20**	**312**		**PKiKP**	**04 00 12.8**	**+0.7**
SONM	**Songino Array**	**150.92**	**6**	PKPbc	**PKiKP**	**04 00 14.5**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=319,slow=1.9,SNR=6.7						
HHC	**Hu-ho-hao-te**	**158.12**	**358**	*e*P	**PKPdf**	**04 00 21.5**	**+4.3**
PZH	**PanZhiHua**	**168.73**	**46**	PKP	**PKPdf**	**04 00 28.3**	**+0.7**

IDC 26 03:49:31.1±2.5, 4°.17N×123°.70E, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=324.1km s-min=27.6km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.14**	**157**	P	P	03 55 07.4	+0.2
	0.3nm,0.5s,baz=335,slow=9.8,SNR=5.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**29.40**	**161**	P	P	03 55 36.1	-0.2
	0.3nm,0.3s,baz=338,slow=6.9,SNR=6.8						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**55.50**	**327**	P	P	03 59 07.8	-0.1
	0.4nm,0.6s,baz=143,slow=8.8,SNR=4.4						
	0.4nm,0.6s						

IDC 26 04:08:42.0±1.7, 47°.28N×130°.28E, h0^{km}, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=19.3km s-min=12.8km az=90.0, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLR	**Kul'dur**	**2.18**	**26**	Pg	Pb	04 09 22.8	+0.5
	15nm,0.3s,baz=206,slow=15,SNR=137						
KLR				Lg	Lg	04 09 50.7	
	16nm,0.3s,baz=133,slow=20,SNR=18						
USRK	**Ussuriysk Ar.**	**3.31**	**158**	Pn	Pn	04 09 35.6	+0.7
	1.5nm,0.3s,baz=341,slow=14,SNR=17						
USRK				Pg	Pb	04 09 41.7	+0.3
	7.4nm,0.3s,baz=340,slow=18,SNR=43						
USRK				Lg	Lg	04 10 26.1	
	8.7nm,0.3s,baz=342,slow=30,SNR=9.4						
	2.9nm,0.4s						
HILR	**Hailar Array B**	**7.37**	**292**	Pn	Pn	04 10 30.4	-0.3
	baz=101,slow=14						
HILR				Lg	Lg	04 12 32.6	
	baz=102,slow=28						
	0.7nm,0.3s						
SONM	**Songino Array**	**16.12**	**281**	Pn	P	04 12 31.7	-1.7
	0.1nm,0.3s,baz=79,slow=7.5,SNR=4.9						
	0.7nm,0.4s						

NOU 26 04:17:20.4, 15°.19S×167°.43E, h90^{km}, MLv4.2/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.34**	**221**	P	Pn	04 17 34.3	+0.3
SANVU	**Saraoutou**	**0.34**	**221**	S	Sn	04 17 47.3	+3.1
DVP	**Devils Point**	**2.62**	**164**	P	Pn	04 18 00.7	-0.2
DVP	**Devils Point**	**2.62**	**164**	S	Sn	04 18 32.1	+0.1
DZM	**Mont Dzumac**	**6.91**	**188**	P	Pn	04 18 59.1	0.0
OUENC	**Ouen Island, N**	**7.21**	**184**	P	Pn	04 19 04.5	+1.3

*NSSP **26** 04:26:49.8, 38°.40N×44°.47E, h10^{km}, Ms3.6*

*TIF **26** 04:26:49.9, 38°.40N×44°.49E, h2^{km}, 6^{km}*

*ISK **26** 04:26:50.1, 38°.31N×44°.65E, h5^{km}, ML3.5/10*

*AZER **26** 04:26:51.7, 38°.46N×44°.50E, h10^{km}, ml3.6*

*TEH **26** 04:26:51.4, 38°.42N×44°.49E, h5^{km}, ML3.5, Presumed earthquake*

*AFAD **26** 04:26:52.0, 38°.40N×44°.35E, h4^{km}±3^{km}, ML3.5*

*IDC **26** 04:26:56.1±1.6, 38°.93N×44°.42E, h0^{km}, mb3.4/3, mbtmp3.4/6, ML3.3/3, MS2.9/6, Error ellipse: s-maj=22.8km s-min=18.1km az=172.0*

ISC 26 04:26:51.2±1.1, 38°42N±0°02×44°49E±0°02, h0^{km}±10^{km}, n107, σ2°14/145, mb3.4/3, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**302**	P	**Pg**	**04 27 00.1**	**+0.1**
OZAP	**Van, Ozalp-Mer**	**0.46**	**302**	Pg	**Pg**	**04 27 00.1**	**+0.1**
YOVA	**Hakkari_Yksek**	**0.85**	**191**	P	**Pg**	**04 27 07.8**	**+0.4**
YOVA				S	**Sg**	**04 27 17.8**	**-0.6**
YOVA				IAML		04 27 26.0	
	comp=N,2μm,0.7s						
YOVA	**Hakkari_Yksek**	**0.85**	**191**	Pg	**Pg**	**04 27 07.8**	**+0.4**
TVAN	**Van**	**0.86**	**278**	P	**Pg**	**04 27 06

SENK	**Senkaya-Erzuru**	**2.71**	**323**	Pn		**Pb**	**04 27 38.7**	**-1.9**
BLQ	**Beylaqan**	**2.72**	**60**	P		**Pb**	**04 27 38.8**	**-1.9**
BLQ				S		**Sb**	**04 28 14.6**	**0.0**
QZX	**Qazax, Azerbai**	**2.72**	**14**	P		**Pb**	**04 27 38.0**	**-2.8**
QZX				S		**Sb**	**04 28 13.7**	**-1.0**
SLHN	**Bingol, Solhan**	**2.77**	**282**	P		**Pg**	**04 27 43.2**	**-1.0**
BRDA	**Brd**	**2.78**	**48**	P		**Pb**	**04 27 39.7**	**-2.0**
BRDA				S		**Sb**	**04 28 13.9**	**-2.4**
GOLE	**Ardahan-G¶le**	**2.82**	**329**	P		**Pg**	**04 27 44.4**	**-0.9**
KARO	**Karliova-Bingo**	**2.83**	**289**	Pn		**Pb**	**04 27 40.5**	**-2.2**
ERZM	**Erzurum**	**2.85**	**302**	P		**Pg**	**04 27 45.2**	**-0.6**
YRD	**Yardimli**	**2.98**	**79**	P		**Pb**	**04 27 42.7**	**-2.5**
YRD				S		**Sb**	**04 28 20.8**	**-1.4**
LRK	**Lerik**	**3.03**	**85**	P		**Pb**	**04 27 43.4**	**-2.7**
LRK				S		**Sb**	**04 28 22.3**	**-1.3**
BNGB	**Bingl**	**3.04**	**282**	Pn		**Pb**	**04 27 43.3**	**-2.9**
AKH	**Akhalkalaki**	**3.08**	**346**	P		**Pg**	**04 27 48.2**	**-2.1**
AKH				S		Sg	04 28 39.6	+9.3
DGRG	**David-gareji**	**3.10**	**12**	P		**Pb**	**04 27 46.0**	**-1.3**
DGRG				S		**Sg**	**04 28 33.9**	**+3.0**
TRLG	**Trialeti**	**3.13**	**355**	P		**Pb**	**04 27 48.2**	**+0.4**
GLBA	**Clilabad**	**3.16**	**74**	P		**Pb**	**04 27 44.7**	**-3.5**
GLBA				S		**Sb**	**04 28 27.1**	**-0.1**
VSHL	**Vashlovani**	**3.17**	**27**	P		**Pb**	**04 27 46.5**	**-1.9**
VSHL				S		**Sg**	**04 28 35.9**	**+2.9**
DDFL	**Dedoflistskaro**	**3.27**	**22**	P		**Pb**	**04 27 50.0**	**-0.2**
ASTR	**Astara**	**3.38**	**86**	P		**Pb**	**04 27 48.5**	**-3.5**
ASTR				S		**Sb**	**04 28 31.1**	**-2.4**
SEKA	**Sheki**	**3.48**	**36**	P		**Pb**	**04 27 49.7**	**-4.0**
SEKA				S		**Sb**	**04 28 34.2**	**-2.3**
ZKTA	**Zakatala**	**3.61**	**26**	P		**Pb**	**04 27 51.3**	**-4.6**
ZKTA				S		**Sb**	**04 28 37.9**	**-2.3**
QBL	**Gabala**	**3.61**	**45**	P		**Pn**	**04 27 50.9**	**+2.5**
QBL				S		**Sb**	**04 28 36.4**	**-3.9**
LGD	**Lagodekhi**	**3.67**	**21**	P		**Pg**	**04 27 58.6**	**-2.9**
ALIG	**Mtskhetisjvari**	**3.74**	**350**	P		**Pb**	**04 27 59.6**	**+1.5**
CHRG	**Chargali**	**3.92**	**5**	P		**Pg**	**04 28 03.6**	**-2.7**
XNQ	**Khinaliq**	**3.93**	**44**	P		**Pn**	**04 27 55.2**	**+2.2**
XNQ				S		**Sb**	**04 28 44.3**	**-5.4**
PQL	**Pirkuli**	**3.96**	**52**	P		**Pn**	**04 27 55.3**	**+2.1**
PQL				S		**Sb**	**04 28 46.0**	**-4.3**
ATGJ	**Altiaghaj**	**4.21**	**53**	P		**Pn**	**04 27 58.9**	**+2.1**
ATGJ				S		**Sb**	**04 28 51.9**	**-5.7**
QSAR	**Qusar**	**4.24**	**42**	P		**Pn**	**04 27 59.7**	**+2.7**
QSAR				S		**Sb**	**04 28 52.2**	**-6.1**
QUBA	**Quba, Azerbaij**	**4.25**	**45**	P		**Pn**	**04 28 00.1**	**+2.9**
QUBA				S		**Sb**	**04 28 51.6**	**-7.1**
SHTL	**Shatili**	**4.26**	**7**	P		**Pb**	**04 28 07.3**	**+0.2**
SIZA	**Siyzn**	**4.31**	**51**	P		**Pn**	**04 28 01.0**	**+2.9**
SIZA				S		**Sb**	**04 28 55.0**	**-5.5**
KBZ	**Khabaz**	**5.44**	**348**	Pg		**Pb**	**04 28 23.3**	**-3.7**
	0.1nm,0.3s,baz=205,slow=8.3,SNR=2.6							
KBZ				Lg		Lg	04 29 32.8	
	0.1nm,0.3s,baz=120,slow=20,SNR=1.3							
BRTR	**Keskin Array B**	**8.54**	**282**	Pn		Pn	04 29 00.7	+4.4
	0.1nm,0.3s,baz=100,slow=14,SNR=1.8							
BRTR				LR		LR	04 32 43.6	
	comp=Z,37nm,20.8s,baz=256,slow=41							
	0.3nm,0.6s							
MMAI	**Mount Meron Ar**	**9.14**	**237**	Pn		Pn	04 29 14.7	+10
	1.4nm,0.3s,baz=54,slow=16,SNR=2.1							
MMAI				LR		LR	04 33 22.0	
	comp=Z,79nm,18.3s,baz=32,slow=41							
	1.8nm,0.5s							
EIL	**Elat**	**11.77**	**225**	LR		LR	04 34 33.7	
	comp=Z,57nm,20.5s,baz=151,slow=38							
AKASG	**Malin Array Be**	**16.36**	**324**	Pn		**Pn**	**04 30 42.1**	**0.0**
	0.2nm,0.3s,baz=132,slow=12,SNR=1.9							
AKASG				LR		LR	04 38 45.1	
	comp=Z,50nm,21.3s,baz=28,slow=44							
	0.2nm,0.4s							
BVAR	**Borovoye Array**	**23.07**	**42**	P		**P**	**04 32 00.1**	**+2.0**
	0.6nm,0.5s,baz=246,slow=11,SNR=3.9							
	0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**26.92**	**52**	P		**P**	**04 32 36.2**	**+2.4**
	0.7nm,0.7s,baz=263,slow=8.9,SNR=5.2							
	0.7nm,0.7s							
MKAR	**Makanchi Array**	**28.82**	**61**	P		**P**	**04 32 53.5**	**+2.5**
	0.2nm,0.5s,baz=270,slow=8.4,SNR=4.2							
MKAR				LR		LR	04 46 30.4	
	comp=Z,39nm,18.6s,baz=254,slow=41							
	0.2nm,0.5s							
NOA	**NORSAR Array B**	**30.66**	**328**	LR		LR	04 47 47.7	
	comp=Z,13nm,18.8s,baz=50,slow=42							

DJA 26 04:39:04.8±0.6, 3°S±3°×13°0E±°, h15km±5km, M3.9/16, mb4.2/2, MLv3.7/16, Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSAI	**Masohi**	**1.21**	**238**	P		Pn	04 39 27.0	-0.3
KRAI	**Karang Ratu**	**1.68**	**249**	P		Pn	04 39 34.2	+0.5
BNDI	**Bandanaira**	**1.81**	**182**	P		Pn	04 39 35.5	0.0
AAI	**Ambon**	**2.02**	**241**	P		Pn	04 39 38.6	+0.3
SIJI	**Sorong**	**2.24**	**36**	P		Pn	04 39 38.9	-2.5
SWI	**Sorong**	**2.24**	**35**	P		Pn	04 39 41.7	+0.3
NLAI	**Namlea**	**2.91**	**259**	P		Pn	04 39 51.8	+1.3
SANI	**Sanana**	**4.02**	**279**	P		Pn	04 40 05.4	-0.5
RKPI	**Ransiki, Papua**	**4.38**	**74**	P		Pn	04 40 10.1	-0.7
GAMI	**Galela, Maluku**	**5.00**	**334**	P		Pn	04 40 19.7	+0.3
	57nm,1.3s							

*NEIC **26** 05:13:41.4±1.2,5.°53N±0.°08×126.°5E±0.°1, h75km±8km, mb4.5/9, Error ellipse: s-maj=19.3km s-min=11.1km az=72.0*
*IDC **26** 05:13:42.0±2.1,5.°44N×126.°42E, h87km±15km, mb3.8/10, mbtmp4.1/10, MS3.0/2, Error ellipse: s-maj=132.0km s-min=12.8km az=67.0*
ISC 26 05:13:39.7±0.7, 5°49N±0.°08×126°7E±0.°2, h66km, n30, σ0s92/24, mb4.3/15, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**1.91**	**326**	P		**Pn**	**05 14 10.1**	**+0.1**
	325nm,0.4s,baz=90,slow=8.3,SNR=3.7							
DAV				S		**Sn**	**05 14 35.3**	**+2.3**
	355nm,0.6s,baz=145,slow=16,SNR=5.2							
LUWI	**Luwuk**	**7.56**	**211**	Pn		**Pn**	**05 15 27.9**	**+0.6**
KAPI	**Kappang**	**12.51**	**214**	LR		LR	05 21 27.9	
	comp=Z,17nm,20.4s,baz=141,slow=38							
KNRA	**Kununurra**	**21.13**	**174**	P		**P**	**05 18 19.2**	**-0.1**
KNRA				IAmb		IAmb	05 18 20.1	
	comp=Z,14nm,0.8s							
WB0	**Warramunga Arr**	**26.22**	**163**	P		**P**	**05 19 09.9**	**+1.3**
WB0				IAmb		IAmb	05 19 19.2	
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**26.37**	**164**	P		**P**	**05 19 11.3**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=344,slow=10,SNR=13							
WRA				PcP		**PcP**	**05 22 34.1**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=1.1,slow=1.8,SNR=1.5							
	comp=Z,0.8nm,0.4s							
WRA	**Warramunga Arr**	**26.37**	**164**	IAmb		IAmb	05 19 15.8	
	comp=Z,0.3nm,1.2s							
WR8	**Warramunga Arr**	**26.43**	**163**	P		**P**	**05 19 11.6**	**+1.1**
ASAR	**Alice Springs**	**29.82**	**167**	P		**P**	**05 19 40.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=350,slow=7.0,SNR=5.6							
ASAR				PcP		**PcP**	**05 22 42.8**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=335,slow=2.3,SNR=4.3							
	comp=Z,0.3nm,0.5s							
BBOO	**Buckleboo**	**39.12**	**167**	P		**P**	**05 21 01.4**	**+0.7**
BBOO				IAmb		IAmb	05 21 25.4	
	comp=Z,28nm,1.4s							
STKA	**Stephens Creek**	**39.79**	**160**	P		**P**	**05 21 06.8**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=345,slow=7.9,SNR=3.8							
	comp=Z,1.6nm,0.6s							
H11S3	**WAKE ISLAND Hy**	**41.11**	**68**	T		T	06 05 11.4	
	baz=257							
H11S1	**WAKE ISLAND Hy**	**41.13**	**68**	T		T	06 05 18.9	
	baz=257							
H11S2	**WAKE ISLAND Hy**	**41.13**	**68**	T		T	06 05 16.5	
	baz=257							
H11N1	**WAKE ISLAND Hy**	**41.59**	**66**	T		T	06 05 47.7	
	baz=260							
H11N2	**WAKE ISLAND Hy**	**41.60**	**66**	T		T	06 05 56.2	
	baz=260							
H11N3	**WAKE ISLAND Hy**	**41.61**	**66**	T		T	06 05 51.4	
	baz=260							
EVN	**Everest**	**43.92**	**305**			**P**	**05 21 40.0**	**-0.9**
EVN				IAmb		IAmb	05 21 40.8	
	comp=Z,3.0nm,0.5s							
PETK	**Petropavlovsk-**	**53.84**	**23**	P		**P**	**05 22 56.6**	**+0.9**
MKAR	**Makanchi Array**	**56.09**	**325**	P		**P**	**05 23 11.2**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=120,slow=8.1,SNR=18							
MKAR				PcP		**PcP**	**05 24 09.2**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=111,slow=3.4,SNR=6.4							
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**59.01**	**333**	P		**P**	**05 23 31.7**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=158,slow=5.8,SNR=3.0							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**60.24**	**327**	P		**P**	**05 23 40.0**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=127,slow=6.4,SNR=11							
	comp=Z,0.9nm,0.6s							
KURK	**Kurchatov**	**60.24**	**327**	P		**P**	**05 23 40.0**	**-1.0**
KURK	**Kurchatov**	**60.24**	**327**	IAmb		IAmb	05 23 40.5	
	comp=Z,2.8nm,0.7s							
BVAR	**Borovoye Array**	**65.82**	**327**	P		**P**	**05 24 18.1**	**0.0**
	comp=Z,0.8nm,0.5s,baz=70,slow=8.8,SNR=2.0							
	comp=Z,0.8nm,0.5s							
ASF	**Jabal al Asfar**	**86.92**	**302**	LR		LR	06 09 13.8	
	comp=Z,33nm,20.3s,baz=202,slow=38							
SPITS	**Spitsbergen Ar**	**88.75**	**349**	P		**P**	**05 26 26.0**	**+0.3**
	comp=Z,10nm,1.1s,baz=115,slow=9.7,SNR=4.1							
	comp=Z,10nm,1.1s							
ARCES	**ARCESS Array B**	**88.79**	**340**	P		**P**	**05 26 25.1**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=61,slow=5.9,SNR=5.1							
	comp=Z,2.9nm,0.9s							
FINES	**FINESS Array B**	**90.26**	**332**	P		**P**	**05 26 32.3**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=65,slow=4.7,SNR=4.3							
	comp=Z,3.5nm,1.0s							
TORD	**Torodi Ar. Bea**	**122.30**	**289**	PKP		**PKPdf**	**05 32 28.4**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=62,slow=3.6,SNR=2.7							

IDC 26 05:24:20.2±9.7, 6°28S×147°23E, h0km, mb3.1/2, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=306.7km s-min=39.1km az=104.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.47**	**221**	P		Pn	05 28 38.1	+0.2
	0.2nm,0.3s,baz=46,slow=12,SNR=5.3							
	0.3nm,0.3s							
ASAR	**Alice Springs**	**21.52**	**215**	P		P	05 29 10.8	-0.3
	0.2nm,0.4s,baz=39,slow=10,SNR=1.8							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**77.86**	**320**	P		P	05 36 19.9	0.0
	0.2nm,0.7s,baz=115,slow=6.5,SNR=2.8							
	0.2nm,0.7s							

KRSC 26 05:28:17.8±1.0, 54°90N×164°67E, h40km±24km, MI3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BKI	**Bering**	**0.81**	**67**	*eP*		Pn	05 28 33.7	+1.0
BKI				*eS*		Sn	05 28 44.0	+0.5
KBTR	**Krutoberegovo**	**1.69**	**322**	*eP*		Pn	05 28 45.3	+0.5
MKZ	**Mys Kozlova**	**1.74**	**260**	*eP*		Pn	05 28 48.5	+3.0
MKZ				*eS*		Sn	05 29 09.4	+3.0
KBG	**Krutoberegovo**	**1.76**	**321**	*eP*		Pn	05 28 46.6	+0.8
KMNR	**Kamenistaya**	**2.68**	**291**	*eP*		Pn	05 29 02.8	+4.4
KPT	**Kopyto**	**2.75**	**295**	*eP*		Pn	05 29 03.8	+4.2
KOZ	**Kozyrevsk**	**2.97**	**295**	*eP*		Pn	05 29 07.4	+4.9
SRDR	**Sredinnyy**	**3.15**	**299**	*eP*		Pn	05 29 09.4	+4.4
KII	**Karymskiy**	**3.17**	**256**	*eP*		Pn	05 29 09.8	+4.6
SPN	**Mys Shipunski**	**3.28**	**239**	*eS*		Sn	05 29 47.0	+2.6
ESO	**Esso**	**3.56**	**289**	*eP*		Pn	05 29 14.4	+3.9
NLC	**Nalytchevo**	**3.59**	**243**	*eS*		Sn	05 29 54.8	+2.9
SDLR	**Sedlovina**	**3.77**	**247**	*eP*		Pn	05 29 17.8	+4.2
SDLR				*eS*		Sn	05 30 00.3	+3.6
SMAR	**Somma**	**3.83**	**247**	*eP*		Pn	05 29 18.8	+4.4
KRER	**Koryakskii**	**3.83**	**248**	*eP*		Pn	05 29 19.5	+5.1
UGLR	**Uglovaya**	**3.84**	**246**	*eP*		Pn	05 29 19.6	+5.1
AVH	**Avacha**	**3.86**	**247**	*eP*		Pn	05 29 19.7	+5.0
KRX	**Arik**	**3.86**	**249**	*eP*		Pn	05 29 19.2	+4.4
KOK	**Koryaka**	**3.90**	**248**	*eP*		Pn	05 29 20.2	+4.9
PET	**Petropavlovsk**	**4.02**	**245**	*eS*		Sn	05 30 06.5	+3.9
GNL	**Ganaly**	**4.12**	**256**	*eP*		Pn	05 29 22.5	+4.2
KRMR	**Karymshinskiy**	**4.39**	**245**	*eP*		Pn	05 29 26.7	+4.8
KRMR				*eS*		Sn	05 30 15.1	+3.3
MTVR	**Mutnovka**	**4.55**	**241**	*eP*		Pn	05 29 28.6	+4.4
MTVR				*eS*		Sn	05 30 18.6	+2.7
GRL	**Gorelyy**	**4.57**	**242**	*eP*		Pn	05 29 29.3	+4.9

*IDC **26** 05:27:14.1±9.6, 17.°10S×175.°68E, h0km, mb4.3/3, mbtmp4.4/4, ML4.2/1, Error ellipse: s-maj=185.7km s-min=101.1km az=108.0*
*NEIC **26** 05:28:32.1±2.0, 18.°95S±0.°09×169.°5E±0.°1, h243km±10km, mb4.5/22, Error ellipse: s-maj=19.6km s-min=12.2km az=101.0*
*NOU **26** 05:28:33.2, 19.°07S×169.°56E, h248km, MLv4.1/8, Vanuatu Islands*
ISC 26 05:28:32.2±0.8, 19°02S±0.°06×169°4E±0.°1, h246km, n40, σ1s21/41, mb4.5/14, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
INH	**Isangel**	**0.55**	**196**	P		**Pn**	**05 29 07.0**	**+2.2**
DVP	**Devils Point**	**1.75**	**317**	P		**Pn**	**05 29 14.7**	**+2.5**
MARNC	**Mare, Loyalty**	**2.79**	**208**	P		**Pn**	**05 29 22.9**	**+0.7**
MARNC	**Mare, Loyalty**	**2.79**	**208**			**Pn**	**05 29 22.9**	**+0.7**
MARNC				Sn		**S**	**05 30 01.1**	**-0.5**
DZM	**Mont Dzumac**	**4.14**	**222**	Pn		**Pn**	**05 29 39.3**	**+1.7**
	1.9nm,0.3s,baz=65,slow=19,SNR=18							
	14nm,0.6s							
DZM	**Mont Dzumac**	**4.14**	**222**			**Pn**	**05 29 39.5**	**+1.9**
SANVU	**Saraoutou**	**4.14**	**329**	P		**Pn**	**05 29 39.8**	**+2.2**
SANVU	**Saraoutou**	**4.14**	**329**			**Pn**	**05 29 37.1**	**-0.5**
OUENC	**Ouen Island, N**	**4.17**	**215**	P		**Pn**	**05 29 39.5**	**+1.7**
OUENC	**Ouen Island, N**	**4.17**	**215**	Pn		**Pn**	**05 29 39.1**	**+1.3**
ONTNC	**Ouen Toro**	**4.30**	**220**	P		**Pn**	**05 29 41.3**	**+1.8**
ONTNC	**Ouen Toro**	**4.30**	**220**			**Pn**	**05 29 40.6**	**+1.1**
ARMA	**Armidale**	**19.73**	**231**	P		**P**	**05 32 45.2**	**+1.4**
ARMA				IAmb		IAmb	05 32 59.7	
	comp=Z,20nm,1.4s							
BKZ	**Black Stump Fm**	**20.99**	**165**	P		**P**	**05 32 56.8**	**-0.2**
QRZ	**Quartz Range**	**21.90**	**174**	P		**P**	**05 33 06.3**	**+0.8**
BHW	**Baring Head**	**22.80**	**169**	P		**P**	**05 33 12.8**	**-0.9**
THZ	**Tophouse**	**22.87**	**173**	P		**P**	**05 33 14.5**	**+0.1**
THZ				IAmb		IAmb	05 33 35.1	
	comp=Z,20nm,1.3s							
MSWZ	**Moikau Station**	**22.87**	**169**	P		**P**	**05 33 13.6**	**-0.9**
PLWZ	**Palliser**	**23.02**	**169**	P		**P**	**05 33 14.4**	**-1.4**
FOZ	**Fox Glacier**	**24.45**	**179**	P		**P**	**05 33 29.1**	**+0.5**
STKA	**Stephens Creek**	**28.12**	**237**	P		**P**	**05 34 02.3**	**+0.6**
	comp=Z,3.1nm,0.6s,baz=57,slow=9.5,SNR=6.9							
	comp=Z,3.1nm,0.6s							
STKA	**Stephens Creek**	**28.12**	**237**	P		**P**	**05 34 01.1**	**-0.6**
WR8	**Warramunga Arr**	**32.91**	**262**	P		**P**	**05 34 42.4**	**-1.5**
WR8				IAmb		IAmb	05 35 06.0	
	comp=Z,16nm,1.5s							
WB0	**Warramunga Arr**	**33.03**	**263**	P		**P**	**05 34 43.5**	**-1.4**
WB0				IAmb		IAmb	05 34 44.8	
	comp=Z,11nm,1.2s							
WRA	**Warramunga Arr**	**33.07**	**262**	P		**P**	**05 34 43.9**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=98,slow=8.2,SNR=8.7							
	comp=Z,0.5nm,0.4s							
WRA	**Warramunga Arr**	**33.07**	**262**	P		**P**	**05 34 44.1**	**-1.1**
AS31	**Alice Springs**	**33.36**	**256**	P		**P**	**05 34 47.1**	**-0.7**
ASAR	**Alice Springs**	**33.36**	**256**	P		**P**	**05 34 47.1**	**-0.6**
	comp=Z,6.9nm,0.5s,baz=83,slow=9.0,SNR=104							
	comp=Z,6.9nm,0.5s							
ASAR	**Alice Springs**	**33.36**	**256**	P		**P**	**05 34 46.2**	**-1.6**
MBWA	**Marble Bar**	**46.58**	**259**	P		**P**	**05 36 35.7**	**-0.3**
MBWA				IAmb		IAmb	05 37 12.7	
	comp=Z,35nm,1.4s							
O14K	**Tigyukauivet M**	**81.60**	**15**	P		**P**	**05 40 22.3**	**0.0**
O14K				IAmb		IAmb	05 40 23.0	
	comp=Z,7.3nm,0.9s							
M16K	**Timber Creek**	**83.71**	**15**	P		**P**	**05 40 33.5**	**+0.3**
M16K				IAmb		IAmb	05 41 01.5	
	comp=Z,13nm,1.4s							
L16K	**Owhat River**	**84.19**	**14**	P		**P**	**05 40 34.5**	**-1.0**
L16K				IAmb		IAmb	05 40 55.1	
	comp=Z,13nm,1.5s							
K15K	**Wolf Creek Mou**	**84.24**	**13**	P		**P**	**05 40 35.8**	**0.0**
K15K				IAmb		IAmb	05 40 54.2	
	comp=Z,14nm,1.4s							
MCCM	**Marconi Confer**	**85.18**	**47**	P		**P**	**05 40 39.5**	**-1.4**
J16K	**Anvik River**	**85.32**	**13**	P		**P**	**05 40 41.0**	**-0.2**
J16K				IAmb		IAmb	05 40 46.6	
	comp=Z,12nm,1.5s							
ANM	**Nome**	**85.55**	**11**	P		**P**	**05 40 42.4**	**+0.1**
O02D	**Mt. Diablo Mer**	**86.21**	**45**	P		**P**	**05 40 46.9**	**+0.7**
O02D				IAmb		IAmb	05 40 47.9	
	comp=Z,6.2nm,1.1s							
F15K	**North Star Dit**	**86.72**	**10**	P		**P**	**05 40 47.8**	**-0.1**
M02C	**Callahan**	**86.75**	**44**	P		**P**	**05 40 49.3**	**+0.6**
M02C				IAmb		IAmb	05 41 12.6	
	comp=Z,8.3nm,1.4s							

*NEIC **26** 05:34:13.1±2.1,23.°80N±0.°02×121.°68E±0.°03, h10km±1km, mb4.8/63, Error ellipse: s-maj=5.3km s-min=3.1km az=310.0*
*NIED **26** 05:34:14.4,23.°86N×121.°64E, h25km, MW4.1, Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁵Nm; Mrr=0.85; Mθθ-0.01; Mϕϕ0.86; Mrθ0.69; Mϕθ-0.30; Mϕr1.09; Fault plane solution: Mo1.55000×10¹⁵ NP1: ϕs323.00000°, δ26.00000°, λ-143.00000°. NP2: ϕs199.00000°, δ74.00000°, λ-69.00000°.*
*JMA **26** 05:34:14.4±0.2,23.°9N±0.°5×12.°2E±°, h25km, MV4.0/14, TAIWAN REGION*
*BJI **26** 05:34:14.7,23.°86N×121.°62E, h23km, mB4.6/10, mb4.1/35, ML4.5/10, Ms4.1/19, Ms7.3/9/18*
*TAP **26** 05:34:15.1,23.°88N×121.°62E, h27km, ML4.9, C*
*IDC **26** 05:34:15.9±4.9,23.°83N×121.°66E, h33km±38km, mb4.0/21, mbtmp4.2/24, ML3.8/3, MS3.6/17, Error ellipse: s-maj=17.1km s-min=12.0km az=72.0*
*ASIES **26** 05:34:15.5,23.°88N×121.°62E, h25km, Mw4.2, Fault plane solution: NP1:ϕs272.00000°, δ41.00000°, λ.140.00000°. NP2:ϕs35.00000°, δ65.00000°, λ.57.00000°.*
ISC 26 05:34:15.4±0.6, 23°87N±0.°01×121°64E±0.°02, h27km±3km, n293, σ1s06/390, mb4.7/57, MS3.6/16, 36C-39D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.04**	**269**	*iP*		**Pb**	**05 34 20.1**	**+0.1**
TEYL				S		**Sb**	**05 34 23.7**	**+0.6**
SHUL	**Shoufeng**	**0.11**	**222**	*iP*		**Pb**	**05 34 20.4**	**+0.1**
SHUL				S		**Sb**	**05 34 24.5**	**+0.8**
HWA	**Hwalien**	**0.11**	**343**	*iP*		**Pb**	**05 34 20.6**	**+0.1**
HWA				S		**Sb**	**05 34 24.6**	**+0.8**
ETM	**Tongmen**	**0.17**	**305**	*iP*		**Pb**	**05 34 20.6**	**-0.3**
ETM				S		**Sb**	**05 34 24.2**	**-0.5**
TEGC	**Jichi Village**	**0.18**	**210**	*iP*		**Pb**	**05 34 21.1**	**0.0**
TEGC				S		**Sb**	**05 34 25.8**	**+0.9**
ESL	**Shilin**	**0.20**	**254**	*iP*		**Pb**	**05 34 20.8**	**-0.5**
ESL				S		**Sb**	**05 34 24.8**	**-0.5**
TWD	**Chiawan**	**0.21**	**349**	*iP*		**Pb**	**05 34 21.1**	**-0.3**
TWD				S		**Sb**	**05 34 25.7**	**+0.1**
LXIB	**Xiulin Townshi**	**0.26**	**306**	*iP*		**Pb**	**05 34 21.6**	**-0.6**
LXIB				S		**Sb**	**05 34 25.7**	**-1.1**
WARBT	**Fenglin Townsh**	**0.28**	**237**	*iP*		**Pb**	**05 34 21.7**	**-0.6**
WARBT				S		**Sb**	**05 34 26.0**	**-1.0**
EGFH	**Guangfu**	**0.28**	**225**	*eP*		**Pb**	**05 34 22.0**	**-0.3**
EGFH				*eS*		**Sb**	**05 34 26.8**	**-0.2**
ETL	**Fush Village**	**0.29**	**357**	*iP*		**Pb**	**05 34 22.1**	**-0.4**
ETL				S		**Sb**	**05 34 27.2**	**-0.1**
NACB	**Ninganchiao**	**0.31**	**352**	P		**Pb**	**05 34 22.3**	**-0.4**
NACB	**Ninganchiao**	**0.31**	**352**			**Pb**	**05 34 22.3**	**-0.4**
NACB				Sg		**Sb**	**05 34 27.2**	**-0.5**
NACB	**Ninganchiao**	**0.31**	**352**	*iP*		**Pb**	**05 34 22.3**	**-0.4**
NACB				S		**Sb**	**05 34 27.4**	**-0.3**
ETLH	**Xiulin Townshi**	**0.37**	**337**	*iP*		**Pb**	**05 34 23.2**	**-0.5**
ETLH				S		**Sb**	**05 34 28.4**	**-0.9**
HGSD	**Ruisui**	**0.42**	**208**	*iP*		**Pb**	**05 34 24.7**	**+0.2**
HGSD				*eS*		**Sn**	**05 34 33.1**	**+0.4**
OWD	**Renai**	**0.43**	**281**	*iP*		**Pb**	**05 34 24.1**	**-0.6**
OWD				S		**Sb**	**05 34 30.0**	**-1.1**
WHF	**Hehuan Shan**	**0.44**	**309**	*iP*		**Pb**	**05 34 24.3**	**-0.7**
WHF				S		**Sb**	**05 34 30.3**	**-1.3**

NSTT eS **Sb** 05 34 45.4 -0.4
LIOB Emei 0.96 324 ⇓P **Pb** 05 34 33.5 +0.1
LIOB eS **Sn** 05 34 46.0 0.0
NSY Sanyi 0.97 304 ⇓*i*P **Pb** 05 34 34.6 +0.9
NSY eS **Sn** 05 34 47.0 +0.8
KSHI Guanxi Townshi 1.00 335 *e*P **Pb** 05 34 34.4 +0.3
KSHI eS **Sb** 05 34 46.5 -0.3
WGK Gukeng 1.01 260 *e*P **Pb** 05 34 34.3 +0.1
WGK eS **Sn** 05 34 48.1 +1.0
EGS 1.01 15 *e*P **Pb** 05 34 34.2 0.0
WCHH Zhanghua 1.01 282 P **Pb** 05 34 34.2 -0.1
WCHH eS **Sn** 05 34 48.4 +1.2
WCH1 Changhua City 1.02 282 *e*P **Pb** 05 34 35.1 +0.6
WCH1 eS **Sn** 05 34 49.2 +1.8
WDL Douliou City 1.02 262 eS **Sn** 05 34 48.3 +0.9
NMLH Miaoli 1.02 311 *e*P **Pb** 05 34 35.0 +0.5
NMLH eS **Sn** 05 34 48.4 +0.9
WDLH Douliu 1.03 260 P **Pb** 05 34 34.6 0.0
WDLH eS **Sn** 05 34 48.2 +0.7
WDJ Dajia District 1.03 298 *e*P **Pb** 05 34 35.0 +0.4
WDJ eS **Sn** 05 34 49.6 +1.9
WCKO Fanlu 1.04 246 *e*P **Pb** 05 34 34.9 +0.1
WCKO eS **Sn** 05 34 49.5 +1.5
STYH Taoyuan 1.06 229 P **Pn** 05 34 34.5 0.0
STYH eS **Sb** 05 34 47.6 -0.8
LONT Longtian 1.07 206 *e*P **Pn** 05 34 33.2 -1.4
TPUB Ta-pu 1.09 239 P **Pb** 05 34 35.6 0.0
TPUB Ta-pu 1.09 239 **Pn** 05 34 34.8 -0.2
TPUB **Sn** 05 34 50.0 +0.9
TPUB Ta-pu 1.09 239 ⇑*i*P **Pb** 05 34 35.4 -0.2
TPUB S **Sn** 05 34 50.0 +0.9
SBCB Hsinchu 1.10 327 ⇓P **Pb** 05 34 36.4 +0.7
SBCB eS **Sb** 05 34 51.8 +2.2
TWA Mucha 1.11 357 ⇓P **Pn** 05 34 35.3 +0.1
TWA eS **Sn** 05 34 49.6 0.0
TATO Taipei 1.11 353 P **Pb** 05 34 36.0 0.0
TATO Taipei 1.11 353 **Pn** 05 34 35.1 -0.1
TATO Sn **Sn** 05 34 49.2 -0.4
TIPB Shuangxi 1.11 9 P **Pn** 05 34 35.2 -0.1
HSN Hsinchu 1.11 327 P **Pb** 05 34 36.8 +0.8
HSN S **Sb** 05 34 52.5 +2.4
CHN2 Minshiung 1.12 253 *e*P **Pb** 05 34 36.4 +0.2
CHN2 eS **Sb** 05 34 53.3 +3.0
WTP Ta-pu 1.13 237 ⇑P **Pb** 05 34 36.0 -0.3
WTP eS **Sb** 05 34 51.2 +0.6
WRL Guolierlin Hig 1.16 272 *e*P **Pb** 05 34 36.4 -0.4
WRL eS **Sb** 05 34 51.7 +0.3
WTK Tuku 1.16 261 *e*P **Pb** 05 34 37.1 +0.3
WTK eS **Sb** 05 34 53.1 +1.6
TWGBT Beinan 1.17 206 P **Pn** 05 34 34.7 -1.3
TWGBT Beinan 1.17 206 *e*P **Pn** 05 34 34.2 -1.8
TWG Pinlang 1.17 207 **Pn** 05 34 33.8 -2.2
TWG Pinlang 1.17 207 ⇑P **Pn** 05 34 34.2 -1.8
NCUH Zhongli 1.17 339 *e*P **Pb** 05 34 37.2 +0.2
NCUH eS **Sb** 05 34 53.2 +1.4
NCU National Centr 1.17 339 *e*P **Pn** 05 34 34.9 -1.2
NCU eS **Sn** 05 34 51.3 +0.1
TAP Taipei 1.17 354 *e*P **Pb** 05 34 36.6 -0.5
TAP eS **Sb** 05 34 51.9 +0.1
RLNB Erlin 1.17 271 *e*P **Pb** 05 34 36.7 -0.3
RLNB eS **Sb** 05 34 52.6 +0.7
CHY Chiayi 1.18 252 *e*P **Pb** 05 34 37.2 +0.1
CHY eS **Sb** 05 34 53.0 +1.1
TWB1 Santiao Chiao 1.18 15 *e*P **Pb** 05 34 36.7 -0.4
TWB1 eS **Sb** 05 34 53.9 +2.0
TTN Taitung 1.20 202 *e*P **Pn** 05 34 35.7 -0.7
LDUT Ludao 1.20 188 *e*P **Pn** 05 34 34.7 -1.7
LDUT eS **Sn** 05 34 51.5 -0.4
NWF Wu-fen Shan 1.20 6 *e*P **Pb** 05 34 37.1 -0.6
NWF eS **Sb** 05 34 53.1 +0.2
WFSB Wu-fen Shan 1.20 6 *e*P **Pb** 05 34 37.0 -0.5
WFSB eS **Sn** 05 34 51.7 -0.2
TWK Hsinying 1.22 241 ⇑P **Pb** 05 34 37.2 -0.6
TWK eS **Sb** 05 34 53.4 +0.2
CHN1 Nanshi 1.23 237 *e*P **Pb** 05 34 37.5 -0.5
CHN1 eS **Sb** 05 34 55.2 +1.8
SXI1 Grass Mountain 1.24 10 *e*P **Pn** 05 34 37.4 +0.3
SXI1 eS **Sb** 05 34 55.1 +1.3
TWS1 Kuangyinshan 1.24 351 *e*P **Pn** 05 34 37.5 +0.5
TWS1 eS **Sb** 05 34 54.8 +0.9
WTCT Ta-ch'eng 1.25 270 *e*P **Pb** 05 34 37.9 -0.4
WTCT eS **Sb** 05 34 54.7 +0.8
SGST Jiashian 1.25 231 ⇑*i*P **Pn** 05 34 37.0 -0.2
SGST eS **Sb** 05 34 53.7 -0.3
SLGT Liugui 1.26 227 *e*P **Pb** 05 34 38.3 -0.3
SLGT eS **Sn** 05 34 53.0 -0.4
YM01 YM01 1.27 357 *e*P **Pn** 05 34 37.3 -0.2
TNOU National Taiwa 1.28 5 *e*P **Pn** 05 34 37.7 +0.1
ZUZH Zhuzihu 1.29 356 *e*P **Pn** 05 34 37.6 -0.2
ZUZH eS **Sn** 05 34 53.9 -0.3
NTST Danshui 1.30 352 *e*P **Pb** 05 34 38.6 -0.6
NTST eS **Sb** 05 34 56.4 +0.8
YM08 YM08 1.31 358 ⇓P **Pn** 05 34 37.6 -0.5
ANP Anpu 1.32 355 *e*P **Pb** 05 34 38.9 -0.6
WSF Szhu 1.32 260 *e*P **Pb** 05 34 39.1 -0.4
WSF eS **Sb** 05 34 57.2 +1.1
JYNG Yonagunijimaku 1.32 64 P **Pn** 05 34 38.4 +0.3
JYNG eS **Sn** 05 34 54.7 -0.2
WSL Shuilin Townsh 1.34 255 *e*P **Pb** 05 34 39.4 -0.5
WSL eS **Sb** 05 34 57.8 +1.1
ICHU Yijhu 1.35 248 *e*P **Pb** 05 34 39.6 -0.4
YOJ Yonaguni jima 1.38 64 P **Pb** 05 34 39.8 -0.8
YOJ Yonaguni jima 1.38 64 **Pn** 05 34 39.2 +0.2
YOJ Sn **Sn** 05 34 56.1 -1.2
YOJ Yonaguni jima 1.38 64 P **Pn** 05 34 39.4 +0.4
YOJ Yonaguni jima 1.38 64 ⇓P **Pn** 05 34 39.2 +0.2
TWY Chenhua 1.40 358 *e*P **Pn** 05 34 39.4 +0.2
CHN8 Yiju 1.41 249 *e*P **Pb** 05 34 40.3 -0.8
CHN8 eS **Sb** 05 34 59.1 +0.5
CHN3 Shinhua 1.41 236 *e*P **Pb** 05 34 41.6 +0.5
CHN3 eS **Sb** 05 35 01.4 +2.7
ECL Taimali 1.42 207 *e*P **Pn** 05 34 37.8 -1.7
SCST Cishan 1.44 227 *e*P **Pb** 05 34 42.1 +0.6
SCST eS **Sb** 05 35 02.1 +2.6
SSHA Shanhua 1.44 240 *e*P **Pb** 05 34 41.4 -0.2
SSHA eS **Sb** 05 35 00.9 +1.4
SSD Sandimen 1.45 220 *e*P **Pn** 05 34 40.1 +0.2
SSD eS **Sb** 05 34 59.4 -0.5
SHHT Tainan City 1.46 235 *e*P **Pb** 05 34 42.4 +0.5
TSMG Majia 1.48 219 *e*P **Pb** 05 34 42.0 -0.3
SCLT Jiali 1.50 243 *e*P **Pb** 05 34 41.3 -1.2
SCLT eS **Sb** 05 35 01.9 +0.7
TWM1 Shoushan 1.53 227 *e*P **Pb** 05 34 44.0 +0.9
TWM1 eS **Sb** 05 35 03.3 +1.2
SGLT Jiouru 1.55 223 *e*P **Pb** 05 34 44.1 +0.5
SGLT eS **Sb** 05 35 05.8 +3.0
MASBT Mashibuluo 1.56 217 *e*P **Pn** 05 34 41.2 -0.2
MASBT eS **Sb** 05 35 03.0 +0.1
TSCK Chigu Township 1.60 244 *e*P **Pn** 05 34 42.8 +0.8
TSCK eS **Sn** 05 35 02.5 +0.8
EAST Anshuo 1.65 206 ⇓*e*P **Pn** 05 34 41.5 -1.2
TAW Tawu 1.65 205 *e*P **Pn** 05 34 43.4 +0.8
SSPT Xinbi 1.70 216 *e*P **Pb** 05 34 44.7 -1.2
SCZT Fangliau 1.76 212 *e*P **Pn** 05 34 44.8 +0.6
SCZT eS **Sb** 05 35 07.8 -1.0
WSSB Gushan 1.76 226 *e*P **Pb** 05 34 46.1 -1.0
WSSB eS **Sb** 05 35 09.4 +0.7
PCYT Pengchaiyu 1.80 12 *e*P **Pn** 05 34 45.0 +0.4
SLIU Shizi 1.82 205 *e*P **Pn** 05 34 45.7 +0.7
LAY Lan-yu 1.82 183 ⇓*i*P **Pn** 05 34 43.1 -1.9
LYUB Lan-yu 1.86 182 *e*P **Pn** 05 34 42.8 -2.7
LYUB eS **Sn** 05 35 06.8 -1.3
WDGT Dungji 1.92 252 *e*P **Pn** 05 34 46.5 +0.3
TWP Hsiaoliuchiu 1.92 218 *e*P **Pb** 05 34 48.7 -1.1
PNG Penghu 1.94 261 ⇑*e*P **Pn** 05 34 47.0 +0.4
PNG eS **Sn** 05 35 10.6 +0.6
IRIF Iriomote-Funau 1.96 76 P **Pn** 05 34 47.5 +0.6
SMST Manzhou Townsh 1.98 202 *e*P **Pn** 05 34 47.3 +0.1
HATJ Hateruma jima 1.99 84 *e*P **Pn** 05 34 47.6 +0.3
HATJ eS **Sn** 05 35 11.8 +0.6
TWK1 Hengchun 2.07 202 *e*P **Pn** 05 34 49.0 +0.6
TWKBT Hengchun 2.07 202 *e*P **Pn** 05 34 48.2 -0.2
TSEB Hengchuen, Pin 2.08 199 *e*P **Pn** 05 34 49.6 +1.1
VCHM Qimei 2.13 253 ⇓*e*P **Pn** 05 34 49.5 +0.2
VCHM eS **Sn** 05 35 14.8 -0.2
VWUC VWUC 2.29 300 ⇑*e*P **Pn** 05 34 50.9 -0.6
VWUC eS **Sn** 05 35 17.2 -1.6
JJJ Ishigaki jima 2.34 77 P **Pn** 05 34 52.1 0.0
JISG Ishigakijimahi 2.54 73 P **Pn** 05 34 55.0 +0.2

JISG eS **Sn** 05 35 24.1 -0.8
PTMZ Houxiangcun 2.58 297 ⇑*e*P **Pn** 05 34 54.9 -0.5
PTMZ eS **Sn** 05 35 23.6 -2.2
MATB Ma-tsu 2.75 326 *e*P **Pn** 05 34 57.1 -0.6
MATB eS **Sn** 05 35 28.3 -1.7
JTJ Tarama 2.90 74 P **Pn** 05 35 00.2 +0.4
JTJ eS **Sn** 05 35 34.6 +0.9
QZH2 Quanzhou 2.98 292 ⇓*i*Pn **Pn** 05 35 00.3 -0.6
QZH2 Sn **Sn** 05 35 33.5 -2.2
QZH2 smax smax
comp=N,960nm,1.0s
QZH2 smax smax
comp=E,930nm,0.6s
KNM Kinmen 2.98 281 ⇑*e*P **Pn** 05 35 02.4 +1.5
KNM eS **Sn** 05 35 37.3 +1.5
KNMB Chin-men Tao 3.03 282 **Pn** 05 35 01.0 -0.7
KNMB Chin-men Tao 3.03 282 ⇑*e*P **Pn** 05 35 01.3 -0.4
KNMB eS **Sn** 05 35 34.5 -2.5
LYJJ Jianjiangzhen 3.17 328 *e*P **Pn** 05 35 03.0 -0.5
LYJJ eS **Sn** 05 35 39.2 -1.2
MHZQ Yeshan 3.25 314 *e*P **Pn** 05 35 04.2 -0.5
MHZQ eS **Sn** 05 35 41.1 -1.3
XPSS Dashiqiu 3.32 337 *e*P **Pn** 05 35 05.3 -0.2
JMJ2 Miyako jima3 3.47 75 eS **Sn** 05 35 48.9 +0.9
AXDP Jialang 3.50 288 *e*P **Pn** 05 35 07.8 -0.3
AXDP eS **Sn** 05 35 46.8 -1.9
ZPLA Ao Xicun 3.56 272 ⇑*e*P **Pn** 05 35 08.8 -0.2
ZPLA eS **Sn** 05 35 49.1 -1.1
DSXP Dongshan 3.87 268 *e*P **Pn** 05 35 13.3 +0.2
DSXP eS **Sn** 05 35 56.6 -1.1
SXFK Yanhouchang 4.41 306 *e*P **Pn** 05 35 20.1 -0.6
SXFK eS **Sn** 05 36 08.5 -2.7
JOW Kunigami 6.69 62 Pn **Pn** 05 35 51.0 -0.9
5.0nm,0.3s,baz=148,slow=16,SNR=8.6
JOW Sn **Sn** 05 37 04.7 -2.6
baz=97,slow=24
13nm,0.3s
JOW Kunigami 6.69 62 Pn **Pn** 05 35 51.2 -0.7
GZH2 Guangzhou 7.32 270 Pn **Pn** 05 36 01.3 +0.7
GZH2 Sn **Sn** 05 37 22.3 -0.6
GZH2 smax smax
comp=N,310nm,0.9s
GZH2 smax smax
comp=E,200nm,0.8s
NJ2 Nanjing 8.52 344 *e*P **Pn** 05 36 16.3 -0.7
NJ2 S **Sn** 05 37 51.0 -1.2
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 smax smax
comp=N,120nm,0.8s
NJ2 smax smax
comp=E,91nm,1.0s
NJ2 LR LR
comp=N,190nm,4.0s
NJ2 LR LR
comp=E,220nm,4.3s
NJ2 LR LR
comp=Z,440nm,8.5s
CNSH ChangSha 8.93 301 P **Pn** 05 36 20.5 -2.2
CNSH smax smax
comp=N,210nm,0.7s
CNSH smax smax
comp=E,230nm,0.9s
WHN Wuhan 9.29 317 P Pn 05 36 22.3 -5.3
WHN S **Sn** 05 38 06.8 -4.4
WHN LR LR
comp=N,820nm,3.7s
WHN LR LR
comp=E,1μm,3.3s
WHN LR LR
comp=Z,2μm,12.7s
QIZ Qiongzhong 11.99 249 P **Pn** 05 37 04.8 +0.1
QIZ S **Sn** 05 39 19.0 +1.3
QIZ LR LR
comp=Z,170nm,14.3s
QIZ LR LR
comp=Z,110nm,12.5s
QIZ LR LR
comp=Z,210nm,17.4s
JNU Nakatsue 12.28 39 LR LR 05 42 38.8
comp=Z,151nm,18.2s,baz=218,slow=41
LYN LuoYang 13.31 325 P **Pn** 05 37 24.5 +1.9
LYN pmax pmax
comp=Z,7.0nm,0.7s
LYN LR LR
comp=Z,760nm,15.1s
LYN LR LR
comp=Z,380nm,10.6s
LYN LR LR
comp=Z,940nm,12.4s
GYA Guiyang 13.81 284 ⇓P **Pn** 05 37 31.0 +1.4
GYA pmax pmax
comp=Z,7.0nm,1.0s
KSRS Korea Array 14.57 20 Pn **Pn** 05 37 40.1 +0.3
comp=Z,1.2nm,0.3s,baz=203,slow=11,SNR=29
comp=Z,1.9nm,0.7s
HNS HongShan 14.74 338 ⇑P **P** 05 37 46.5 -1.4
HNS pmax pmax
comp=Z,6.0nm,1.3s
HNS LR LR
comp=Z,400nm,12.4s
HNS LR LR
comp=Z,350nm,13.0s
HNS LR LR
comp=Z,500nm,13.5s
XAN Xi'an 15.04 315 *e*P **P** 05 37 49.8 -1.5
XAN S **Sn** 05 40 40.5 +8.5
XAN LR LR
comp=Z,430nm,4.0s
XAN LR LR
comp=Z,160nm,4.0s
XAN LR LR
comp=Z,480nm,8.4s
PZH PanZhiHua 18.20 282 P **P** 05 38 27.8 +1.3
HHC Hu-ho-hao-te 18.93 336 *e*P **Pn** 05 38 36.8 +1.7
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,130nm,5.2s
HHC LR LR
comp=Z,200nm,9.4s
HHC LR LR
comp=Z,190nm,10.6s
HHC LR LR
comp=Z,210nm,15.3s
MJAR Matsushiro Arr 19.06 45 P **Pn** 05 38 37.7 +1.1
comp=Z,0.1nm,0.3s,baz=238,slow=8.5,SNR=5.9
MJAR LR LR 05 46 29.8
comp=Z,104nm,20.9s,baz=204,slow=38
comp=Z,2.2nm,0.7s
MJAR Matsushiro Arr 19.06 45 IAmb IAmb 05 38 42.0
comp=Z,2.3nm,1.0s
LZH Lanzhou 19.61 312 *e*P **Pn** 05 38 45.5 +2.2
LZH pP pP 05 38 49.5 -0.1
LZH pmax pmax
comp=Z,12nm,1.5s
LZH LR LR
comp=Z,240nm,11.7s
LZH LR LR
comp=Z,280nm,11.3s
LZH LR LR
comp=Z,370nm,12.0s
CHTO Chiang Mai 21.72 261 **P** 05 39 04.2 -0.5
CMAR Chiang Mai Arr 21.83 260 P **P** 05 39 07.1 +1.2
comp=Z,1.4nm,0.3s,baz=78,slow=9.1,SNR=17
CMAR LR LR 05 48 05.8
comp=Z,78nm,19.9s,baz=80,slow=38
comp=Z,1.4nm,0.3s
CMAR Chiang Mai Arr 21.83 260 P **P** 05 39 06.7 +0.8
USRK Ussuriysk Ar. 21.98 20 P **P** 05 39 07.0 -0.3
comp=Z,2.1nm,0.5s,baz=132,slow=7.1,SNR=4.3
comp=Z,2.1nm,0.5s
BNX BinXian 22.31 11 ⇑P **P** 05 39 11.3 +0.5
BNX pmax pmax
comp=Z,5.0nm,1.1s
GTA2 Gaotai 24.18 315 *e*P **P** 05 39 30.3 +0.6
GTA2 sP sP 05 39 39.3 -2.0
GTA2 pmax pmax
comp=Z,3.0nm,1.3s
GTA2 LR LR
comp=Z,150nm,13.5s
GTA2 LR LR
comp=Z,250nm,13.5s
GTA2 LR LR
comp=Z,320nm,16.3s
HILR Hailar Array B 25.68 357 P **P** 05 39 44.2 +1.0
comp=Z,1.6nm,0.5s,baz=178,slow=9.4,SNR=2.2
HILR LR LR 05 51 24.1
comp=Z,58nm,18.4s,baz=270,slow=40
comp=Z,1.6nm,0.5s
KLR Kul'dur 26.53 15 LR LR 05 51 32.1
comp=Z,69nm,19.2s,baz=283,slow=39
ULN Ulaanbaatar 26.61 338 **P** 05 39 51.1 -0.6
SONM Songino Array 26.82 337 P **P** 05 39 51.9 -1.7
comp=Z,1.1nm,0.5s,baz=164,slow=11,SNR=6.6
SONM LR LR 05 51 30.6
comp=Z,156nm,19.5s,baz=176,slow=38
comp=Z,1.1nm,0.5s
TLY Talaya 31.02 338 LR LR 05 54 06.6
comp=Z,87nm,18.8s,baz=125,slow=38
LEM Lembang 33.44 206 LR LR 05 53 46.6
comp=Z,97nm,19.7s,baz=126,slow=35
WMQ Urumqi 34.17 314 *e*P **P** 05 41 00.8 +2.3
YAK Yakutsk 38.54 6 LR LR 05 59 16.6
comp=Z,68nm,19.9s,baz=128,slow=39
MKAR Makanchi Array 38.85 316 P **P** 05 41 38.9 +0.6
comp=Z,3.9nm,0.8s,baz=107,slow=10,SNR=35
MKAR PcP **PcP** 05 43 47.9 -1.2
comp=Z,0.7nm,0.7s,baz=107,slow=5.0,SNR=3.2
MKAR LR LR 05 59 19.2
comp=Z,92nm,20.4s,baz=86,slow=39
comp=Z,3.9nm,0.8s
MKAR Makanchi Array 38.85 316 **P** 05 41 38.4 +0.1
MAKZ Makanchi 39.06 316 P **P** 05 41 40.6 +0.6
KNRA Kununurra 39.91 169 P **P** 05 41 44.3 -3.0
KNRA IAmb IAmb 05 42 07.5
comp=Z,24nm,1.3s
ZAA0 Zalesovo Array 40.73 327 **P** 05 41 53.4 -0.5
ZALV Zalesovo Beam 40.73 327 P **P** 05 41 53.1 -0.7
comp=Z,3.9nm,0.5s,baz=114,slow=8.4,SNR=19
ZALV PcP **PcP** 05 43 52.7 -2.1
comp=Z,0.4nm,0.4s,baz=108,slow=4.7,SNR=1.8
ZALV LR LR 06 00 02.1
comp=Z,84nm,18.7s,baz=73,slow=38
comp=Z,3.9nm,0.5s
ZALV Zalesovo Beam 40.73 327 **P** 05 41 53.2 -0.6
MA2 Magadan 41.12 22 LR LR 06 00 27.6
comp=Z,59nm,18.1s,baz=236,slow=38
FITZ Fitzroy Crossi 41.89 174 P **P** 05 42 02.5 -1.2
comp=Z,2.9nm,1.0s,baz=249,slow=17,SNR=1.6
comp=Z,2.9nm,1.0s
H11N1 WAKE ISLAND Hy 42.09 87 T T 06 27 09.4
baz=283,slow=75,SNR=60
H11N2 WAKE ISLAND Hy 42.09 87 T T 06 27 13.7
baz=283,slow=75,SNR=67
H11N3 WAKE ISLAND Hy 42.10 87 T T 06 27 18.0
baz=283,slow=75,SNR=55
H11S3 WAKE ISLAND Hy 42.21 88 T T 06 27 13.4
baz=284,slow=74,SNR=223
H11S1 WAKE ISLAND Hy 42.22 88 T T 06 27 20.7
baz=284,slow=74,SNR=114
H11S2 WAKE ISLAND Hy 42.23 88 T T 06 27 14.6
baz=284,slow=74,SNR=98
KURK Kurchatov 42.60 320 **PcP** 05 44 00.2 -0.8
KURK Kurchatov 42.60 320 P **P** 05 42 09.3 +0.2
KURK Kurchatov 42.60 320 IAmb IAmb 05 42 10.1
comp=Z,1.7nm,0.6s
KURBB Kurchatov Arra 42.62 320 P **P** 05 42 09.3 +0.1
comp=Z,0.8nm,0.5s,baz=113,slow=9.0,SNR=7.7
KURBB PcP **PcP** 05 44 00.2 -0.9
comp=Z,0.4nm,0.5s,baz=123,slow=3.4,SNR=1.9
comp=Z,0.8nm,0.5s
COEN Coen 43.09 149 P **P** 05 42 14.6 +1.2
comp=Z,17nm,1.0s
COEN Coen 43.09 149 **P** 05 42 13.3 -0.1
COEN IAmb IAmb 05 42 15.6
comp=Z,13nm,0.9s
WRA Warramunga Arr 45.27 163 P **P** 05 42 29.5 -1.4
comp=Z,2.5nm,0.6s,baz=344,slow=8.6,SNR=17
WRA PcP **PcP** 05 44 08.9 -1.6
comp=Z,0.2nm,0.5s,baz=356,slow=3.8,SNR=1.8
comp=Z,2.5nm,0.6s
MTSU Mount Surprise 47.25 150 P **P** 05 42 47.7 +1.2
comp=Z,6.0nm,0.8s
TIXI Tiksi 47.98 3 **P** 05 42 50.5 -1.0
TIXI IAmb IAmb 05 42 50.8
comp=Z,6.6nm,0.9s
BVAR Borovoye Array 48.18 321 P **P** 05 42 53.4 0.0
comp=Z,1.1nm,0.4s,baz=102,slow=9.4,SNR=8.6
comp=Z,1.1nm,0.4s
ASAR Alice Springs 48.73 165 P **P** 05 42 57.4 -0.5
comp=Z,2.9nm,0.9s,baz=342,slow=7.0,SNR=20
ASAR PcP **PcP** 05 44 21.4 -1.4
comp=Z,0.6nm,0.6s,baz=347,slow=3.5,SNR=2.3
comp=Z,2.9nm,0.9s
AB31 Akbulak array 53.96 314 **P** 05 43 36.2 -0.6
ABKAR Akbulak array 53.96 314 **P** 05 43 36.8 0.0
AKTO Aktyubinsk 55.29 316 LR LR 06 08 41.5
comp=Z,62nm,18.6s,baz=261,slow=37
ARTI Arti 55.70 323 **P** 05 43 48.5 -0.8
ARTI IAmb IAmb 05 43 49.1
comp=Z,4.6nm,0.7s
STKA Stephens Creek 58.62 160 P **P** 05 44 09.8 -0.4
comp=Z,3.9nm,0.6s,baz=328,slow=6.6,SNR=9.8
comp=Z,3.9nm,0.6s
STKA Stephens Creek 58.62 160 P **P** 05 44 09.6 -0.6
E18K Tukpahlearik C 63.50 25 IAmb IAmb 05 44 45.4
comp=Z,4.8nm,0.8s
C19K Lookout Ridge 63.92 23 IAmb IAmb 05 44 47.3
comp=Z,3.5nm,0.8s
B20K Meade River 64.78 22 IAmb IAmb 05 44 53.1
comp=Z,4.7nm,0.8s
E19K Redstone River 64.80 25 IAmb IAmb 05 44 53.1
comp=Z,5.7nm,0.8s
D20K Etivluk River 65.00 23 IAmb IAmb 05 44 55.1
comp=Z,7.4nm,0.8s
KBZ Khabaz 66.00 309 P **P** 05 45 00.2 +0.6
comp=Z,2.0nm,0.8s,baz=74,slow=6.1,SNR=4.0
comp=Z,2.0nm,0.8s
B22K Teshekpuk Lake 66.05 22 IAmb IAmb 05 45 02.5
comp=Z,6.7nm,0.9s
G21K Allakaket 66.32 26 IAmb IAmb 05 45 03.0
comp=Z,4.4nm,0.8s
D22K Ayikyak River 66.42 23 IAmb IAmb 05 45 04.1
comp=Z,10.0nm,1.1s
E22K Anaktuvuk Pass 66.81 24 IAmb IAmb 05 45 08.3
comp=Z,9.7nm,1.3s
C24K Franklin Bluff 67.73 22 IAmb IAmb 05 45 11.3
comp=Z,13nm,1.2s
D24K Happy Valley 67.77 23 IAmb IAmb 05 45 14.4
comp=Z,11nm,1.2s
SUA Susitna One 68.21 31 P **P** 05 45 13.9 +0.5
D25K Kavik River 68.60 22 **P** 05 45 16.0 +0.4
D25K IAmb IAmb 05 45 17.4
comp=Z,4.7nm,0.9s
RND Reindeer 68.72 29 **P** 05 45 16.3 -0.2
ILAR Eielson Array 69.30 27 P **P** 05 45 19.3 -0.8
comp=Z,1.3nm,0.8s,baz=288,slow=8.1,SNR=15
comp=Z,1.3nm,0.8s
C27K Jago River 69.46 22 P **P** 05 45 21.6 +0.7
C27K IAmb IAmb 05 45 22.7
comp=Z,11nm,1.3s
F26K Sheenjek River 69.74 24 P **P** 05 45 23.5 +0.8
F26K IAmb IAmb 05 45 25.3
comp=Z,14nm,1.3s
G26K Porcupine Rive 70.06 25 IAmb IAmb 05 45 26.7
comp=Z,9.2nm,0.9s
E28M Babbage River 71.17 23 IAmb IAmb 05 45 32.9
comp=Z,9.2nm,1.3s
F28M Old Crow 71.34 24 IAmb IAmb 05 45 34.6
comp=Z,15nm,1.2s
L27K Beaver Creek, 71.89 28 IAmb IAmb 05 45 38.5
comp=Z,9.4nm,0.9s
BCAR Beaver Creek A 71.91 28 **P** 05 45 37.2 +1.2
FINES FINESS Array B 71.93 330 P **P** 05 45 35.1 -1.0
comp=Z,3.1nm,0.9s,baz=29,slow=4.4,SNR=4.7
FINES LR LR 06 19 00.5
comp=Z,104nm,19.0s,baz=38,slow=37
comp=Z,3.1nm,0.9s
I28M Miner Creek 71.97 26 IAmb IAmb 05 45 38.6
comp=Z,5.5nm,1.0s
G29M Pine Creek 72.24 24 IAmb IAmb 05 46 03.6
comp=Z,13nm,1.4s
DAWY Dawson 72.62 27 **P** 05 45 41.0 +0.7
DAWY IAmb IAmb 05 45 42.0
comp=Z,9.7nm,1.0s
F30M Barrier River 72.82 23 IAmb IAmb 05 45 42.5
comp=Z,13nm,1.1s
INK Inuvik 73.36 22 P **P** 05 45 43.9 -0.5
comp=Z,5.5nm,1.0s,baz=291,slow=5.8,SNR=9.5
comp=Z,5.5nm,1.0s
I30M Mount Dempster 73.45 25 IAmb IAmb 05 45 46.4
comp=Z,7.9nm,0.8s
K29M Barlow Dome 73.48 27 IAmb IAmb 05 45 48.1

	comp=Z,17nm,1.3s								
BRTR	**Keskin Array B**	**73.70**	**307**	P		**P**	05 45 46.4	**-0.8**	
	comp=Z,0.5nm,0.5s,baz=113,slow=2.3,SNR=4.2								
	comp=Z,0.5nm,0.5s								
H31M	**Peel River**	**74.02**	**25**	IAmb		IAmb	05 45 49.1		
	comp=Z,15nm,1.2s								
A36M	**Sachs Harbour**	**74.30**	**17**			**P**	**05 45 50.2**	**+0.3**	
M31M	**Drury Creek, Y**	**75.41**	**28**	IAmb		IAmb	05 45 58.3		
	comp=Z,6.8nm,0.9s								
HFS	**Hagfors**	**78.04**	**331**	LR		LR	06 24 14.6		
	comp=Z,128nm,19.9s,baz=69,slow=38								
NOA	**NORSAR Array B**	**78.70**	**332**	LR		LR	06 24 19.4		
	comp=Z,68nm,19.1s,baz=265,slow=38								
DLBC	**Dease Lake**	**79.00**	**31**	P		**P**	**05 46 18.4**	**+1.6**	
	comp=Z,3.3nm,0.7s,baz=259,slow=5.0,SNR=8.8								
	comp=Z,3.3nm,0.7s								
WRGLY	**Wrigley**	**79.39**	**25**	IAmb		IAmb	05 46 20.2		
	comp=Z,7.8nm,0.9s								
VRAC	**Vranov**	**81.45**	**320**	LR		LR	06 26 11.5		
	comp=Z,77nm,18.0s,baz=103,slow=38								
YKAW3	**Yellowknife Wh**	**83.05**	**23**	IAmb		IAmb	05 46 39.3		
	comp=Z,7.8nm,0.8s								
YKA	**Yellowknife Ar**	**83.10**	**23**	P		**P**	**05 46 37.4**	**-1.1**	
	comp=Z,4.8nm,0.8s,baz=315,slow=5.4,SNR=8.2								
	comp=Z,4.8nm,0.8s								
YKA	**Yellowknife Ar**	**83.10**	**23**	P		**P**	**05 46 38.1**	**-0.3**	
GERES	**GERESS Array B**	**83.35**	**321**	P		**P**	**05 46 40.7**	**+0.5**	
	comp=Z,0.5nm,0.4s,baz=280,slow=9.3,SNR=5.5								
	comp=Z,0.5nm,0.4s								
ILON	**Igloolik, Nuna**	**85.49**	**8**	P		**P**	**05 46 49.8**	**-0.6**	
ILON				IAmb		IAmb	05 46 50.9		
	comp=Z,4.2nm,0.9s								
NVAR	**Mina Array Bea**	**96.38**	**43**	P		**P**	**05 47 43.5**	**+1.0**	
	comp=Z,0.3nm,0.6s,baz=14,slow=33,SNR=2.8								
	comp=Z,0.3nm,0.6s								

*IDC **26** 05:39:44.5±0.8, 15°.79N×119°.25E, h0km, mb4.0/8, mbtmp4.0/10, ML4.2/2, Error ellipse: s-maj=41.9km s-min=12.2km az=54.0*
*NEIC **26** 05:39:46.7±1.2, 15°.8N±0°.1×119°.2E±0°.2, h10km±1km, mb4.5/20, Error ellipse: s-maj=35.6km s-min=15.2km az=238.0*
ISC 26 05:39:49.9±0.6, **15°.8N**±0°.1×**119°.2E**±0°.2, **h35**km, **n35**, σ0**s72**/35, **mb4.4**/18, **Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**2.33**	**135**	Pn		**Pn**	**05 40 26.1**	**+0.3**
	110nm,0.3s,baz=78,slow=20,SNR=3.5							
TGY				Lg		Lg	05 40 58.7	
	91nm,0.3s,baz=311,slow=20,SNR=4.0							
	250nm,0.3s							
CMAR	**Chiang Mai Arr**	**19.58**	**281**	P		**P**	**05 44 16.1**	**+1.0**
	0.2nm,0.3s,baz=87,slow=7.9,SNR=9.2							
	0.9nm,0.3s							
KNRA	**Kununurra**	**32.63**	**163**	P		**P**	**05 46 18.6**	**0.0**
FITZ	**Fitzroy Crossi**	**34.24**	**169**	P		**P**	**05 46 32.0**	**-0.5**
	4.9nm,0.8s,baz=344,slow=7.4,SNR=5.2							
	4.9nm,0.8s							
MBWA	**Marble Bar**	**36.70**	**179**	P		**P**	**05 46 54.4**	**+0.8**
PSA00	**Pilbara Seismi**	**37.11**	**179**	P		**P**	**05 46 58.3**	**+1.1**
PSA00				IAmb		IAmb	05 47 29.0	
	comp=Z,8.5nm,1.4s							
COEN	**Coen**	**37.84**	**140**	P		**P**	**05 47 02.4**	**-1.1**
COEN				IAmb		IAmb	05 47 03.6	
	comp=Z,9.3nm,0.7s							
WB0	**Warramunga Arr**	**38.33**	**157**	P		**P**	**05 47 06.3**	**-1.2**
WB0				IAmb		IAmb	05 47 07.8	
	comp=Z,9.5nm,1.0s							
WRA	**Warramunga Arr**	**38.47**	**157**	P		**P**	**05 47 07.5**	**-1.1**
	comp=Z,3.2nm,0.7s,baz=337,slow=9.3,SNR=32							
WRA				PcP		**PcP**	**05 49 22.2**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=337,slow=3.2,SNR=2.6							
	comp=Z,3.2nm,0.7s							
WRA	**Warramunga Arr**	**38.47**	**157**	IAmb		IAmb	05 47 08.7	
	comp=Z,0.2nm,0.8s							
WR8	**Warramunga Arr**	**38.54**	**157**	P		**P**	**05 47 08.2**	**-1.1**
WR8				IAmb		IAmb	05 47 51.0	
	comp=Z,10nm,1.4s							
AS31	**Alice Springs**	**41.73**	**160**	P		**P**	**05 47 35.2**	**-0.5**
ASAR	**Alice Springs**	**41.73**	**160**	P		**P**	**05 47 35.4**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=340,slow=7.0,SNR=38							
ASAR				PcP		**PcP**	**05 49 33.0**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=338,slow=4.0,SNR=2.6							
	comp=Z,3.7nm,0.5s							
MKAR	**Makanchi Array**	**43.54**	**323**	P		**P**	**05 47 49.0**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=132,slow=11,SNR=14							
	comp=Z,0.4nm,0.7s							
CTAO	**Charters Tower**	**44.43**	**142**	P		**P**	**05 47 58.0**	**+0.4**
CTAO				IAmb		IAmb	05 47 58.9	
	comp=Z,4.5nm,0.8s							
ZALV	**Zalesovo Beam**	**46.58**	**333**	P		**P**	**05 48 14.0**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=128,slow=8.5,SNR=1.8							
	comp=Z,0.3nm,0.4s							
FORT	**Forrest**	**47.05**	**170**	P		**P**	**05 48 17.6**	**-0.5**
KURBB	**Kurchatov Array**	**47.70**	**326**	P		**P**	**05 48 22.2**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=122,slow=8.8,SNR=4.7							
	comp=Z,0.6nm,0.3s							
KURK	**Kurchatov**	**47.70**	**326**	P		**P**	**05 48 22.2**	**-0.7**
KURK	**Kurchatov**	**47.70**	**326**	IAmb		IAmb	05 48 32.0	
	comp=Z,8.0nm,1.4s							
BBOO	**Buckleboo**	**50.91**	**162**	P		**P**	**05 48 47.4**	**-0.3**
ABKAR	**Akbulak array**	**58.26**	**319**	P		**P**	**05 49 40.3**	**-0.6**
C16K	**Lisburne Hills**	**70.07**	**23**	P		**P**	**05 50 58.3**	**+0.3**
F17K	**Baldwin Pennin**	**71.47**	**25**	P		**P**	**05 51 07.2**	**+0.6**
D19K	**Kuna River**	**72.75**	**23**	P		**P**	**05 51 14.9**	**+0.6**
D19K				IAmb		IAmb	05 51 15.1	
	comp=Z,2.3nm,0.8s							
B20K	**Meade River**	**73.11**	**21**	P		**P**	**05 51 16.6**	**+0.3**
B20K				IAmb		IAmb	05 51 50.4	
	comp=Z,7.7nm,1.4s							
D20K	**Etivluk River**	**73.31**	**22**	P		**P**	**05 51 18.2**	**+0.7**
D20K				IAmb		IAmb	05 51 31.3	
	comp=Z,5.5nm,1.4s							
IMAR	**Indian Mountai**	**74.52**	**25**	P		**P**	**05 51 25.0**	**+0.4**
D25K	**Kavik River**	**76.92**	**21**	P		**P**	**05 51 38.4**	**0.0**
KNK	**Knik Glacier**	**77.40**	**30**	P		**P**	**05 51 40.8**	**-0.4**
FINES	**FINESS Array B**	**77.80**	**331**	P		**P**	**05 51 43.1**	**-0.3**
	comp=Z,3.8nm,1.2s,baz=71,slow=6.4,SNR=5.1							
	comp=Z,3.8nm,1.2s							
BMAR	**Burnt Mountain**	**77.93**	**23**	P		**P**	**05 51 44.8**	**+0.7**
BCAR	**Beaver Creek A**	**80.09**	**27**	P		**P**	**05 51 55.6**	**-0.4**
G29M	**Pine Creek**	**80.54**	**23**	P		**P**	**05 51 58.4**	**+0.1**
G29M				IAmb		IAmb	05 52 15.8	
	comp=Z,7.4nm,1.5s							
YKA	**Yellowknife Ar**	**91.41**	**22**	P		**P**	**05 52 53.0**	**+0.9**
	comp=Z,0.2nm,0.9s,baz=311,slow=6.1,SNR=4.2							
	comp=Z,0.2nm,0.9s							

*KRNET **26** 05:50:32.1±0.1, 39°.41N×72°.37E, h22km, mb3.3*
*SOME **26** 05:50:46.7, 40°.20N×72°.05E, h10km*
NNC 26 05:50:34.0±5.0, **39°.48N**×**72°.15E**, **h0**km, **mb3.4**, **mpv3.1**, **31C-16D**, **Error ellipse: s-maj=46.7km s-min=25.2km az=162.0**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRK	**Karamyk**	**0.27**	**271**	↑	*iP*	Pb	05 50 40.9	-1.1
DRK				↑	*iS*	Sb	05 50 47.3	0.0
SFK	**Sufi-Kurgan**	**1.17**	**62**	↓	*iP*	Pg	05 50 51.8	-4.7
SFK				↓	*iS*	Sg	05 51 06.0	-5.7
BTK	**Batken**	**1.18**	**300**	↑	*iP*	Pb	05 50 57.2	-0.2
BTK				↑	*iS*	Sn	05 51 15.2	+0.4
GAR	**Garm**	**1.50**	**252**	↓	*iP*	Pn	05 51 02.1	-0.3
GAR				↓	*iS*	Sn	05 51 24.0	+1.3
SALK	**Salom-Alik**	**1.90**	**42**	↓	*iP*	Pn	05 51 05.4	-2.5
SALK				↓	*iS*	Sn	05 51 29.6	-3.0
ARSB	**Arslanbob**	**1.95**	**19**	↑	*iP*	Pn	05 51 06.9	-1.7
ARSB				↑	*iS*	Sn	05 51 32.3	-1.6
TRKS	**Terek-Say**	**2.19**	**340**	↑	*iP*	Pn	05 51 10.8	-1.1
TRKS				↑	*iS*	Sn	05 51 39.1	-0.7
ARK	**Arkit**	**2.33**	**357**	↑	*iP*	Pn	05 51 13.0	-0.7
ARK				↑	*iS*	Sn	05 51 43.0	0.0
CHGR	**Chuyangaron**	**2.47**	**252**	↑	*iP*	Pn	05 51 15.9	+0.3
CHGR				↑	*iS*	Sn	05 51 47.8	+1.3
ARLS	**Aral**	**2.90**	**34**	↑	*iP*	Pn	05 51 19.4	-2.2
ARLS				↑	*iS*	Sn	05 51 53.8	-3.5
MNAS	**Manas**	**3.02**	**5**	↓	*iP*	Pn	05 51 22.5	-0.8
MNAS				↓	*iS*	Sn	05 51 59.2	-1.0
IUG	**luzhnay**	**3.12**	**330**	*eP*		Pg	05 51 32.9	-0.8
IUG				*eS*		Sb	05 52 06.5	-2.5
UCH	**Uchtor**	**3.28**	**32**	↑	*iP*	Pn	05 51 25.1	-2.0
UCH				↑	*iS*	Sn	05 52 03.7	-3.4
MRKS	**Merke**	**3.37**	**14**	*eP*		Pb	05 51 35.3	+0.6
	23nm,0.7s							
MRKS				*eS*		Sn	05 52 10.3	+1.6
	18nm,0.2s							
EKS2	**Erkin-Say**	**3.41**	**21**	↑	*iP*	Pn	05 51 27.1	-1.5
EKS2				↑	*iS*	Sn	05 52 07.3	-2.6
NRN	**Naryn**	**3.53**	**55**	↑	*iP*	Pn	05 51 27.0	-3.4
NRN				↑	*iS*	Sn	05 52 07.0	-6.0
AAK	**Ala-Archa**	**3.62**	**29**	↑	Pn	Pn	05 51 31.5	0.0
	3.8nm,0.6s							
AAK				↑	Sn	Sn	05 52 16.0	+0.9
	5.0nm,0.6s							
AAK	**Ala-Archa**	**3.62**	**29**	↓	*iP*	Pn	05 51 29.7	-1.8
AAK				↓	*iS*	Sn	05 52 11.8	-3.3
KBK	**Karagaybulak**	**3.82**	**33**	↓	*iP*	Pn	05 51 32.3	-1.9
KBK				↓	*iS*	Sn	05 52 16.2	-3.7
KK31	**Karatay Array**	**3.83**	**342**	↓	Pn	Pn	05 51 35.2	+1.0
	0.8nm,0.2s,baz=155,slow=12,SNR=37							
KK31				↓	Sn	Sn	05 52 21.0	+1.0
	5.9nm,0.4s,baz=164,slow=20,SNR=7.7							
BRLS	**Boroldoy**	**3.96**	**335**	*eP*		Pb	05 51 44.3	-0.4
	1.9nm,0.2s							
BRLS				*eS*		Sn	05 52 26.0	+2.8
	3.1nm,0.3s							
CHMS	**Chumysh**	**4.03**	**28**	↑	*iP*	Pn	05 51 35.2	-1.8
CHMS				↑	*iS*	Sn	05 52 21.4	-3.5
ULHL	**Ulahol**	**4.16**	**47**	↑	*iP*	Pn	05 51 36.5	-2.4
ULHL				↑	*iS*	Sn	05 52 23.2	-5.1
BOOM	**Boomskoye usch**	**4.16**	**42**	↑	*iP*	Pn	05 51 36.6	-2.3
BOOM				↑	*iS*	Sn	05 52 23.6	-4.7
USP	**Ospenovka**	**4.18**	**24**	↓	*iP*	Pn	05 51 37.5	-1.6
USP				↓	*iS*	Sn	05 52 25.2	-3.5
KST	**Kastek**	**4.58**	**38**	*eP*		Pg	05 51 59.7	-2.0
	2.3nm,0.3s							
KST				*eS*		Sb	05 52 52.4	+1.4
	6.1nm,0.8s							
KDJ	**Kajisay**	**4.65**	**54**	↑	*iP*	Pn	05 51 42.9	-2.7
KDJ				↑	*iS*	Sn	05 52 34.7	-5.7
KRBS	**Karabastau**	**4.98**	**31**	*eP*		Pg	05 52 08.4	-1.0
	1.9nm,0.3s							
KRBS				*eS*		Sb	05 53 07.0	+4.5
	4.6nm,0.9s							
TNSS	**Tian-Shan**	**5.07**	**44**	*eP*		Pg	05 52 10.3	-0.9
	1.1nm,0.8s							
TNSS				*eS*		Sb	05 53 10.3	+4.8
	1.4nm,0.7s							
KOTS	**Kotyrbulak**	**5.29**	**43**	*eP*		Pg	05 52 14.0	-1.5
	4.4nm,0.6s							
KOTS				*eS*		Sb	05 53 16.8	+5.1
	12nm,0.6s							
KTBS	**Karatobe**	**5.43**	**37**	*eP*		Pg	05 52 16.6	-1.5
	1.8nm,0.2s							
KTBS				*eS*		Sb	05 53 20.9	+5.5
	3.4nm,0.6s							
AB31	**Akbulak array**	**13.09**	**322**	↑	P	Pn	05 53 37.9	-3.2
	0.2nm,0.4s,baz=132,slow=12,SNR=13							

DJA 26 05:53:53.7±0.2, **8°.5**±4°×**117°.7E**±°, **h10**km, **M4.0**/17, **mb4.4**/2, **MLv3.8**/17, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TWSI	**Taliwang, Sumb**	**0.48**	**144**	P		Pg	05 54 03.1	+0.1
KLNI	**Mataram**	**0.51**	**262**	P		Pg	05 54 03.2	-0.4
KHKI	**Kahang-Kahang**	**0.98**	**269**	P		Pb	05 54 12.9	+0.1
KHKI				S		Sb	05 54 26.6	+0.8
PLAI	**Plampang**	**1.26**	**112**	P		Pn	05 54 16.8	-0.5
DNP	**Denpasar**	**1.41**	**257**	P		Pn	05 54 19.1	-0.4
IGBI	**Denpasar**	**1.51**	**252**	P		Pn	05 54 20.7	-0.1
RTBI	**Rangdo, Negare**	**1.64**	**266**	P		Pn	05 54 22.7	0.0
DBNI	**Kabupaten Domp**	**1.70**	**95**	P		Pn	05 54 23.8	+0.3
JAGI	**Jajag, Banyuwa**	**2.42**	**267**	P		Pn	05 54 32.5	-0.9
KMMI	**Kalianget**	**2.91**	**296**	P		Pn	05 54 41.6	+1.5
WBSI	**Waikabubak, Su**	**3.04**	**115**	P		Pn	05 54 41.9	-0.1
GMJI	**Gumukmas**	**3.12**	**271**	P		Pn	05 54 43.1	+0.1
BSSI	**Bau Bau, Buton**	**4.44**	**61**	P		Pn	05 55 00.9	-0.3
KAPI	**Kappang**	**4.56**	**44**	P		Pn	05 55 02.1	-0.7
SNJI	**Sawahan-Nganju**	**4.83**	**276**	P		Pn	05 55 06.5	-0.1
EDFI	**Ende, Flores**	**5.05**	**95**	P		Pn	05 55 10.6	+0.9
	0.1nm30nm,0.9s							
PCJI	**Pacitan**	**5.37**	**271**	P		Pn	05 55 14.4	+0.5

*IDC **26** 06:12:45.1±1.0, 5°.96S×122°.50E, h0km, mb3.8/4, mbtmp3.9/7, ML3.7/3, MS3.1/1, Error ellipse: s-maj=47.4km s-min=18.1km az=52.0*
*DJA **26** 06:12:47.9±0.3, 6°.5±2°×12°.2E±°, h10km, M4.1/22, mb4.2/6, MLv4.1/22*
ISC 26 06:12:50.2±0.9, **6°.06S**±0°.06×**122°.47E**±0°.06, **h35**km, **n23**, σ1**s18**/25, **mb3.9**/3, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BSSI	**Bau Bau, Buton**	**1.97**	**267**	P		**Pn**	**06 13 19.8**	**-1.3**
KKSI	**Kolaka, Sulawe**	**2.04**	**336**	P		**Pn**	**06 13 20.0**	**-2.1**
KDI	**Kendari**	**2.09**	**4**	P		**Pn**	**06 13 21.9**	**-0.8**
BKSI	**Bulukumba**	**2.45**	**287**	P		**Pn**	**06 13 26.1**	**-1.6**
EDFI	**Ende, Flores**	**2.79**	**196**	P		**Pn**	**06 13 32.2**	**-0.2**
KAPI	**Kappang**	**2.90**	**291**	Pn		**Pn**	**06 13 32.8**	**-1.1**
	13nm,0.3s,baz=116,slow=9.8,SNR=27							
KAPI				Sn		**Sn**	**06 14 08.1**	**+0.5**
	19nm,0.3s,baz=90,slow=20,SNR=6.8							
	41nm,0.4s							
KAPI	**Kappang**	**2.90**	**291**	P		**Pn**	**06 13 32.6**	**-1.3**
MKS	**Makassar**	**3.10**	**285**	P		**Pn**	**06 13 36.5**	**-0.2**
SPSI	**Sidrap Palu**	**3.40**	**308**	P		**Pn**	**06 13 40.3**	**-0.5**
SOEI	**Soe**	**4.08**	**154**	P		**Pn**	**06 13 52.5**	**+2.2**
BATI	**Baumata**	**4.29**	**164**	Pn		**Pn**	**06 13 52.7**	**-0.4**
	7.8nm,0.3s,baz=270,slow=15,SNR=6.7							
BATI				LR		LR	06 15 52.9	
	comp=Z,222nm,21.6s,baz=338,slow=43							
	58nm,0.9s							
BASI	**Baing, Sumba**	**4.54**	**204**	P		**Pn**	**06 13 56.9**	**+0.4**
WBSI	**Waikabubak, Su**	**4.69**	**220**	P		**Pn**	**06 13 58.4**	**-0.2**
DBNI	**Kabupaten Domp**	**4.79**	**359**	P		**Pn**	**06 14 00.0**	**+0.1**
APSI	**Ampana**	**5.18**	**351**	P		**Pn**	**06 14 04.2**	**-1.0**
PLAI	**Plampang**	**5.41**	**239**	P		**Pn**	**06 14 09.1**	**+0.7**
	0.2nm25nm,1.1s							
TWSI	**Taliwang, Sumb**	**6.15**	**244**	P		**Pn**	**06 14 19.7**	**+1.1**
	0.1nm33nm,1.2s							
GTOI	**Gorontalo**	**6.67**	**5**	P		**Pn**	**06 14 27.6**	**+1.9**
WRA	**Warramunga Arr**	**17.99**	**141**	P		**Pn**	**06 16 55.8**	**-1.8**
	0.2nm,0.3s,baz=315,slow=13,SNR=14							
	2.2nm,0.8s							
ASAR	**Alice Springs**	**20.68**	**149**	P		**P**	**06 17 28.9**	**+1.6**
	2.2nm,0.8s,baz=327,slow=12,SNR=18							
ASAR				PcP		**PcP**	**06 21 37.2**	**+0.4**
	0.3nm,0.6s,baz=347,slow=2.4,SNR=2.3							
	2.2nm,0.8s							
MKAR	**Makanchi Array**	**63.52**	**330**	P		**P**	**06 23 17.4**	**+0.4**
	0.6nm,0.6s,baz=134,slow=8.1,SNR=8.2							
	0.6nm,0.6s							
ZALV	**Zalesovo Beam**	**67.61**	**337**	P		**P**	**06 23 42.6**	**-0.7**
	1.0nm,0.5s,baz=127,slow=4.5,SNR=6.3							
	1.0nm,0.5s							
BVAR	**Borovoye Array**	**73.40**	**330**	P		**P**	**06 24 18.7**	**0.0**
	0.7nm,0.5s,baz=130,slow=6.2,SNR=4.1							
	0.7nm,0.5s							

*NEIC **26** 06:17:42.2±2.7, 35°.73S±0°.08×179°.4W±0°.1, h10km±1km, mb4.8/15, Error ellipse: s-maj=17.2km s-min=11.8km az=120.0*
*WEL **26** 06:17:44.2±0.9, 36°.5±6°×17°.9W±°, h33km, mB5.2/1, ML4.6/17, MLv4.7/16, Mw(mB)4.6/1, Error ellipse: s-maj=10.6km s-min=6.2km az=118.8*
*IDC **26** 06:17:46.0±4.4, 35°.57S×179°.68W, h30km±28km, mb4.7/5, mbtmp4.8/8, ML4.4/3, MS3.7/11, Error ellipse: s-maj=29.2km s-min=23.0km az=128.0*
ISC 26 06:17:47.0±0.5, **35°.83S**±0°.06×**179°.32W**±0°.07, **h49**km, **n169**, σ1**s58**/179, **mb4.8**/17, **MS3.8**/11, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MXZ	**Matakaoa Point**	**2.57**	**227**			**Pn**	**06 18 25.0**	**-1.1**
MXZ	**Matakaoa Point**	**2.57**	**227**	P		**Pn**	**06 18 25.3**	**-0.8**
MXZ				S		**Sn**	**06 18 57.1**	**+0.9**
WMGZ	**Waiomatatini S**	**2.69**	**222**	P		**Pn**	**06 18 27.4**	**-0.3**
WMGZ				S		**Sn**	**06 19 02.4**	**+3.4**
PKGZ	**Pakihiroa**	**2.91**	**225**	P		**Pn**	**06 18 30.8**	**0.0**
PKGZ				S		**Sn**	**06 19 06.3**	**+1.8**
PUZ	**Puketiti**	**2.96**	**220**	P		**Pn**	**06 18 30.6**	**-0.8**
PUZ				S		**Sn**	**06 19 07.5**	**+1.7**
HAZ	**Te Kaha**	**3.02**	**230**	P		**Pn**	**06 18 31.4**	**-0.8**
TWGZ	**Tauwhareparae**	**3.19**	**222**	P		**Pn**	**06 18 34.1**	**-0.5**
TWGZ				S		**Sn**	**06 19 14.1**	**+2.8**
RUGZ	**Raukumara Rang**	**3.21**	**228**	P		**Pn**	**06 18 34.9**	**-0.1**
RUGZ				S		**Sn**	**06 19 13.7**	**+1.6**
CNGZ	**Carnagh Statio**	**3.30**	**216**	P		**Pn**	**06 18 36.0**	**-0.2**
CNGZ				S		**Sn**	**06 19 15.7**	**+1.6**
TKGZ	**Te Karaka**	**3.45**	**220**	P		**Pn**	**06 18 38.0**	**-0.2**
TKGZ				S		**Sn**	**06 19 19.6**	**+1.9**
MWZ	**Matawai**	**3.55**	**224**	P		**Pn**	**06 18 38.7**	**-0.8**
MWZ				S		**Sn**	**06 19 21.8**	**+1.6**
WHRZ	**Whale Island**	**3.59**	**235**	P		**Pn**	**06 18 39.4**	**-0.8**
WHRZ				S		**Sn**	**06 19 23.1**	**+1.7**
RIGZ	**Rimuhau**	**3.69**	**218**	P		**Pn**	**06 18 40.6**	**-1.0**
RIGZ				S		**Sn**	**06 19 25.4**	**+1.5**
RAGZ	**Rawiri**	**3.72**	**223**	P		**Pn**	**06 18 41.3**	**-0.7**
RAGZ				S		**Sn**	**06 19 26.0**	**+1.4**
URZ	**Urewera**	**3.74**	**229**	Pn		**Pn**	**06 18 41.2**	**-0.9**
	26nm,0.3s,baz=39,slow=4.8,SNR=83							
URZ				Sn		**Sn**	**06 19 26.1**	**+1.1**
	70nm,0.3s,baz=290,slow=5.8,SNR=8.4							
	86nm,0.3s							
URZ	**Urewera**	**3.74**	**229**	P		**Pn**	**06 18 41.2**	**-0.9**
URZ				S		**Sn**	**06 19 26.2**	**+1.2**
PRUZ	**Paritu Road**	**3.81**	**215**	P		**Pn**	**06 18 42.1**	**-1.0**
PRGZ				S		**Sn**	**06 19 27.8**	**+1.3**
MYRZ	**Mayor Island**	**3.85**	**247**	P		**Pn**	**06 18 42.9**	**-0.9**
EDRZ	**Edgecumbe**	**3.89**	**233**	P		**Pn**	**06 18 43.4**	**-0.8**
EDRZ				S		**Sn**	**06 19 30.2**	**+1.6**
SNGZ	**Shannon Statio**	**3.97**	**221**	P		**Pn**	**06 18 44.5**	**-0.8**
SNGZ				S		**Sn**	**06 19 31.0**	**+0.5**
MHGZ	**Mahia Peninsul**	**3.98**	**213**	P		**Pn**	**06 18 44.5**	**-1.0**
MHGZ				S		**Sn**	**06 19 31.8**	**+1.0**
KNZ	**Kokohu**	**3.98**	**216**	P		**Pn**	**06 18 43.7**	**-1.7**
TGRZ	**Tauranga**	**4.02**	**241**	P		**Pn**	**06 18 45.1**	**-0.9**
RTZ	**Ruatahuna**	**4.05**	**226**			**Pn**	**06 18 44.6**	**-1.9**
RTZ	**Ruatahuna**	**4.05**	**226**	P		**Pn**	**06 18 45.5**	**-1.0**
MKRZ	**Makatiti**	**4.08**	**234**	P		**Pn**	**06 18 47.6**	**+0.6**
TARZ	**Mount Tarawera**	**4.11**	**233**	P		**Pn**	**06 18 47.2**	**-0.1**
OMRZ	**Omania**	**4.13**	**235**	P		**Pn**	**06 18 46.9**	**-0.6**
RRRZ	**Republican Roa**	**4.17**	**232**	P		**Pn**	**06 18 47.6**	**-0.4**
KARZ	**Kaharoa**	**4.17**	**237**	P		**Pn**	**06 18 47.5**	**-0.6**
RAHZ	**Arahi**	**4.20**	**222**	P		**Pn**	**06 18 48.2**	**-0.3**
HLRZ	**Highlands Stat**	**4.22**	**234**	P		**Pn**	**06 18 48.7**	**-0.1**
WHHZ	**Waihua**	**4.24**	**219**	P		**Pn**	**06 18 48.7**	**-0.3**
GRZ	**Great Barrier**	**4.25**	**263**	P		**Pn**	**06 18 48.8**	**-0.3**
MTHZ	**Maungataniwha**	**4.29**	**224**	P		**Pn**	**06 18 49.0**	**-0.8**
KMRZ	**Kaimai**	**4.30**	**241**	P		**Pn**	**06 18 48.5**	**-1.4**
PRRZ	**Plateau Road**	**4.34**	**231**	P		**Pn**	**06 18 49.8**	**-0.5**
HRRZ	**Handcock Road**	**4.34**	**233**	P		**Pn**	**06 18 51.1**	**+0.7**
ALRZ	**Allen Road**	**4.41**	**230**	P		**Pn**	**06 18 50.8**	**-0.5**
NMHZ	**Naumai**	**4.48**	**222**	P		**Pn**	**06 18 52.3**	**-0.1**
WPRZ	**Whakapapataran**	**4.50**	**232**	P		**Pn**	**06 18 52.8**	**+0.3**
ARHZ	**Aropaoanui**	**4.50**	**219**	P		**Pn**	**06 18 51.6**	**-1.0**
MRHZ	**Matea Rd**	**4.53**	**227**	P		**Pn**	**06 18 52.8**	**-0.3**
TOZ	**Tahuroa Road**	**4.57**	**244**			**Pn**	**06 18 52.0**	**-1.5**
**T

	comp=Z,26nm,1.1s							
INKA	**Innaminka**	**34.70**	**272**	P	**P**	**06 24 29.5**	**-2.6**
INKA				IAmb	IAmb	06 24 44.8	
	comp=Z,9.7nm,1.4s							
BBOO	**Buckleboo**	**36.74**	**261**	P	**P**	**06 24 48.0**	**-1.6**
BBOO				IAmb	IAmb	06 25 14.2	
	comp=Z,30nm,1.4s							
COEN	**Coen**	**40.04**	**293**	P	**P**	**06 25 16.5**	**-1.0**
COEN				IAmb	IAmb	06 25 18.1	
	comp=Z,12nm,0.8s							
AS31	**Alice Springs**	**42.02**	**274**	P	**P**	**06 25 31.6**	**-2.2**
ASAR	**Alice Springs**	**42.02**	**274**	P	**P**	**06 25 32.8**	**-1.0**
	comp=Z,7.0nm,0.9s,baz=117,slow=7.4,SNR=50							
ASAR				ScP	**ScP**	**06 31 16.3**	**+1.9**
	comp=Z,1.2nm,0.9s,baz=110,slow=3.3,SNR=6.0							
ASAR				LR	LR	06 43 24.8		
	comp=Z,296nm,18.2s,baz=114,slow=37 comp=Z,7.0nm,0.9s							
ASAR	**Alice Springs**	**42.02**	**274**	P	**P**	**06 25 32.4**	**-1.4**
WRA	**Warramunga Arr**	**43.50**	**279**	P	**P**	**06 25 44.2**	**-1.5**
	comp=Z,9.0nm,0.5s,baz=120,slow=7.7,SNR=112 comp=Z,9.0nm,0.5s							
WRA	**Warramunga Arr**	**43.50**	**279**	P	**P**	**06 25 44.0**	**-1.7**
WB0	**Warramunga Arr**	**43.55**	**279**	P	**P**	**06 25 44.6**	**-1.5**
WB0				IAmb	IAmb	06 25 57.4	
	comp=Z,12nm,0.7s							
FORT	**Forrest**	**43.83**	**261**	P	**P**	**06 25 47.0**	**-1.3**
FORT				IAmb	IAmb	06 26 01.9	
	comp=Z,9.6nm,1.1s							
TAOE	**Nuku Hiva Isla**	**44.63**	**63**	*e*LR	LR	06 38 05.6		
	comp=Z,75nm,23.2s							
MTN	**Manton Dam**	**49.99**	**284**	P	**P**	**06 26 35.0**	**-1.4**
KNRA	**Kununurra**	**50.26**	**280**	P	**P**	**06 26 38.0**	**-0.5**
FITZ	**Fitzroy Crossi**	**51.48**	**275**	LR	LR	06 48 41.3	
	comp=Z,236nm,18.6s,baz=172,slow=36							
NWAO	**Narrogin (SRO)**	**51.62**	**254**	P	**P**	**06 26 46.5**	**-2.1**
NWAO				IAmb	IAmb	06 27 08.8	
	comp=Z,17nm,1.1s							
PSA00	**Pilbara Seismi**	**54.43**	**268**	P	**P**	**06 27 08.0**	**-1.5**
PSA00				IAmb	IAmb	06 27 08.4	
	comp=Z,9.2nm,1.1s							
MBWA	**Marble Bar**	**54.73**	**268**	P	**P**	**06 27 09.9**	**-1.7**
MBWA				IAmb	IAmb	06 27 12.7	
	comp=Z,17nm,1.1s							
SIJI	**Sorong**	**57.49**	**296**	LR	LR	06 52 22.1		
	comp=Z,98nm,18.3s,baz=203,slow=36							
RPN	**Rapa Nui**	**59.19**	**103**	LR	LR	06 49 55.9		
	comp=Z,45nm,18.1s,baz=172,slow=32							
KAPI	**Kappang**	**63.64**	**284**	LR	LR	06 57 51.0		
	comp=Z,41nm,18.3s,baz=171,slow=38							
ASAJ	**Asahikawa**	**86.77**	**334**	LR	LR	07 01 47.3		
	comp=Z,44nm,21.4s,baz=304,slow=31							
NJ2	**Nanjing**	**88.97**	**312**	*e*P	**P**	**06 30 35.8**	**-0.5**
NJ2				pmax	pmax			
	comp=Z,6.0nm,0.8s							
WHN	**Wuhan**	**90.76**	**308**	P	**P**	**06 30 46.0**	**+1.3**
PETK	**Petropavlovsk-**	**90.80**	**346**	P	**P**	**06 30 45.1**	**+0.8**
	comp=Z,23nm,0.8s,baz=128,slow=5.5,SNR=17 comp=Z,23nm,0.8s							
CMAR	**Chiang Mai Arr**	**94.16**	**290**	P	**P**	**06 31 00.6**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=116,slow=5.3,SNR=4.2 comp=Z,1.3nm,0.3s							
ATAH	**Atahualpa**	**94.64**	**102**	LR	LR	07 08 31.6		
	comp=Z,34nm,18.2s,baz=337,slow=32							
PZH	**PanZhiHua**	**96.83**	**298**	P	**P**	**06 31 13.8**	**+0.9**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
HHC	**Hu-ho-hao-te**	**99.20**	**314**	*e*P	**Pdif**	**06 31 23.3**	**+0.1**
HHC				pmax	pmax			
	comp=Z,6.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,60nm,4.6s							
MKAR	**Makanchi Array**	**120.33**	**308**	PKP	**PKPdf**	**06 36 32.3**	**0.0**
	comp=Z,1.0nm,0.7s,baz=73,slow=2.2,SNR=9.6							
KURK	**Kurchatov**	**123.90**	**311**	PKPdf	**PKPdf**	**06 36 38.7**	**-0.3**
KURBB	**Kurchatov Arra**	**123.93**	**311**	PKP	**PKPdf**	**06 36 39.0**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=107,slow=1.8,SNR=15							
BVAR	**Borovoye Array**	**129.40**	**313**	PKP	**PKPdf**	**06 36 50.4**	**+1.0**
	comp=Z,1.8nm,0.5s,baz=86,slow=2.2,SNR=11							
ARTI	**Arti**	**136.54**	**317**	PKP	**PKPdf**	**06 37 03.1**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=180,slow=1.0,SNR=3.1							
AKTO	**Aktyubinsk**	**136.76**	**308**	PKP	**PKPdf**	**06 37 04.3**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=138,slow=3.3,SNR=4.3							
ARCES	**ARCESS Array B**	**143.61**	**346**	PKP	**PKPdf**	**06 37 15.9**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=11,slow=2.6,SNR=5.2							
FINES	**FINESS Array B**	**149.75**	**336**	PKPbc	**PKPbc**	**06 37 31.1**	**+0.6**
	comp=Z,10nm,0.8s,baz=45,slow=3.0,SNR=18							
DBIC	**Dimbokro**	**150.54**	**169**	PKPbc	**PKiKP**	**06 37 36.6**	**+2.0**
	comp=Z,0.9nm,0.4s,baz=193,slow=1.7,SNR=3.4							
MMAI	**Mount Meron Ar**	**151.31**	**275**	PKPbc	**PKPbc**	**06 37 35.5**	**+0.3**
	comp=Z,2.1nm,0.5s,baz=28,slow=3.8,SNR=3.9							
BRTR	**Keskin Array B**	**153.74**	**288**	PKPbc	**PKPbc**	**06 37 40.8**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=152,slow=4.0,SNR=8.4							
BRTR				PKPab	**sPKPdf**	**06 37 51.5**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=171,slow=3.6,SNR=5.0							
BRTR	**Keskin Array B**	**153.74**	**288**	PKPdf	**PKPdf**	**06 37 32.3**	**-0.4**
BRTR					**PKPbc**	**06 37 40.5**	**-0.1**
NB2	**NORSAR Subarra**	**153.89**	**348**	PKP	**PKiKP**	**06 37 46.8**	**+6.7**
	comp=Z,13nm,1.2s,baz=24,slow=4.3							
NOA	**NORSAR Array B**	**153.89**	**348**	PKPbc	**PKPbc**	**06 37 41.5**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=31,slow=2.1,SNR=4.1							
NOA				PKPab	**sPKPdf**	**06 37 52.4**	**+2.7**
	comp=Z,4.0nm,1.0s,baz=26,slow=3.1,SNR=6.5							
AKASG	**Malin Array Be**	**154.65**	**315**	PKPbc	**PKPbc**	**06 37 41.8**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=64,slow=2.3,SNR=6.0							
TORD	**Torodi Ar. Bea**	**157.40**	**183**	PKP	**PKPdf**	**06 37 39.4**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=194,slow=1.1,SNR=3.5							
TORD				PKPab	**PKPab**	**06 38 11.8**	**+2.4**
	comp=Z,1.2nm,1.0s,baz=200,slow=6.4,SNR=5.3							
EKA	**Eskdalemuir Ar**	**160.32**	**7**	PKPab	**PKPab**	**06 38 20.8**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=2.9,slow=1.7,SNR=3.8							

*ISK **26** 06:21:26.5, 36˚.38N×28˚.29E, h67km±1km, ML2.5/13*
*ATH **26** 06:21:26.8±0.6, 36˚.31N×28˚.35E, h47km±6km, ML2.6/3, Manual Solution by M.Kolligri First location: 2020/02/26 06:23:08, This location: 2020/02/26 06:32:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 9 km; Longitude uncertainty: 3 km*
*THE **26** 06:21:27.7, 36˚N±2˚×2˚8E±˚, h54km±4km, M2.3/7, MLh2.3/7*
*AFAD **26** 06:21:27.0, 36˚.21N×28˚.40E, h7km±6km, MW3.3*

ISC 26 06:21:27.0±1.3, 36˚.31N±0˚.03×28˚.34E±0˚.03, h61km±7km, n40, σ0s71/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ARG	**Arkhangelos**	**0.20**	**242**	P		**Pn**	**06 21 36.7**	**+0.1**
ARG				S		Sn	06 21 43.5	-0.1
ARG	**Arkhangelos**	**0.20**	**242**	P		**Pn**	**06 21 36.5**	**0.0**
ARG				S		Sn	06 21 43.4	-0.1
TURN	**Turunc**	**0.47**	**350**	Pg		**Pn**	**06 21 38.6**	**-0.2**
TURN				Sg		Sn	06 21 47.4	+0.1
TURN	**Turunc**	**0.47**	**350**	P		**Pn**	**06 21 38.8**	**0.0**
TURN				S		Sn	06 21 47.3	+0.1
TURN				IAML			06 21 50.0	
	comp=E,148nm,0.3s							
DALY	**Dalyan (Mula)**	**0.56**	**26**	Pg		**Pn**	**06 21 39.9**	**+0.1**
DALY				Sg		Sn	06 21 49.2	+0.2
FETY	**Fethiye**	**0.68**	**61**	P		**Pn**	**06 21 40.1**	**-1.1**
FETY				S		Sn	06 21 50.6	-0.8
FETY	**Fethiye**	**0.68**	**61**	P		**Pn**	**06 21 41.0**	**-0.1**
FETY				S		Sn	06 21 53.2	+1.7
SABU	**Mula-Dalaman**	**0.72**	**44**	P		**Pn**	**06 21 41.7**	**+0.1**
SABU				S		Sn	06 21 52.4	+0.1
SABU				IAML			06 21 53.0	
	comp=E,79nm,0.2s							
SABU				IAML			06 21 55.0	
	comp=N,80nm,0.3s							
IZZE	**Mula-Seydike**	**0.72**	**80**	P		**Pn**	**06 21 41.3**	**-0.3**
IZZE				S		Sn	06 21 52.2	-0.1
IZZE				IAML			06 21 53.0	
	comp=N,126nm,0.5s							
DAT	**Datca**	**0.74**	**304**	Pg		**Pn**	**06 21 41.5**	**-0.5**
DAT				Sg		Sn	06 21 52.3	-0.7
YER	**Yerkesik**	**0.82**	**357**	Pg		**Pn**	**06 21 43.6**	**+0.7**
YER				Sg		Sn	06 21 54.5	-0.1
YER	**Yerkesik**	**0.82**	**357**	P		**Pn**	**06 21 43.4**	**+0.5**
YER				S		Sn	06 21 55.2	+0.6
MULA	**Mugla, Merkez-**	**0.94**	**359**	P		**Pn**	**06 21 45.4**	**+0.9**
MULA				IAML			06 21 58.0	
	comp=N,43nm,0.7s							
MULA				S		Sn	**06 21 58.8**	**+1.5**
MULA				IAML			06 21 59.0	
	comp=E,52nm,0.4s							
KSL	**Kastellorizon**	**1.02**	**99**	P		**Pn**	**06 21 45.4**	**+0.1**
KSL				S		Sn	06 21 57.4	-1.4
KSL	**Kastellorizon**	**1.02**	**99**	P		**Pn**	**06 21 44.6**	**-0.6**
KSL				S		Sn	06 21 58.2	-0.6
AKAS	**Kas**	**1.02**	**94**	P		**Pn**	**06 21 45.5**	**-0.1**
AKAS				S		Sn	06 21 59.2	**0.0**
AKAS				IAML			06 22 09.0	
	comp=N,45nm,0.9s							
MLSB	**Milas**	**1.08**	**335**	Pg		**Pn**	**06 21 43.9**	**-2.3**
DNZT	**Denizli-Tavas-**	**1.11**	**29**	P		**Pn**	**06 21 46.9**	**+0.2**
DNZT				S		Sn	**06 22 00.4**	**-0.8**
DNZT				IAML			06 22 03.0	
	comp=N,42nm,0.6s							
BODT	**Bodrum**	**1.12**	**312**	Pg		**Pn**	**06 21 46.1**	**-0.6**
BODT	**Bodrum**	**1.12**	**312**	P		**Pn**	**06 21 47.8**	**+1.1**
BODT				S		Sn	**06 22 01.9**	**+0.6**
KNIK	**Mula-Seydike**	**1.13**	**61**	P		**Pn**	**06 21 47.4**	**+0.6**
KNIK				S		Sn	**06 22 02.8**	**+1.2**
KNIK				IAML			06 22 03.0	
	comp=N,45nm,0.7s							
KNIK				IAML			06 22 03.0	
	comp=E,70nm,0.3s							
YKAV	**Yalikavak-Bodr**	**1.18**	**314**	Pn		**Pn**	**06 21 46.8**	**-0.6**
KARP	**Karpathos**	**1.22**	**232**	P		**Pn**	**06 21 48.3**	**+0.2**
KARP				S		Sn	**06 22 04.7**	**+0.9**
KARP	**Karpathos**	**1.22**	**232**	P		**Pn**	**06 21 47.9**	**-0.1**
KARP				S		Sn	**06 22 03.3**	**-0.5**
TAVA	**DENIZLI_Tavas**	**1.24**	**21**	P		**Pn**	**06 21 48.6**	**+0.2**
TAVA				S		Sn	**06 22 04.7**	**+0.3**
GOLH	**Golhisar**	**1.35**	**46**	P		**Pn**	**06 21 50.8**	**+1.1**
GOLH				S		Sn	**06 22 08.2**	**+1.3**
GOLH				IAML			06 22 09.0	
	comp=N,67nm,0.6s							
GOLH				IAML			06 22 09.0	
	comp=E,45nm,0.5s							
APMY	**Acipayam-Deniz**	**1.39**	**33**	Pn		**Pn**	**06 21 50.4**	**0.0**
DNIZ	**Denizli-Tavas-**	**1.43**	**23**	P		**Pn**	**06 21 50.1**	**-0.7**
DNIZ				S		Sn	**06 22 08.7**	**0.0**
AKUM	**Antalya-Kumluc**	**1.62**	**89**	P		**Pn**	**06 21 53.5**	**+0.2**
AKUM				S		Sn	**06 22 12.4**	**-0.6**
GCAM	**G?zelcaml?**	**1.65**	**328**	Pn		**Pn**	**06 21 53.3**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.67**	**348**	Pn		**Pn**	**06 21 53.9**	**-0.3**
INCE	**Denizli-Bozkur**	**1.71**	**35**	P		**Pn**	**06 21 53.9**	**-0.8**
INCE				S		Sn	**06 22 15.9**	**+0.3**
ODEM	**Odemis-Izmir**	**1.98**	**354**	Pn		**Pn**	**06 21 57.5**	**-0.7**
ZKR	**Zakros**	**2.10**	**236**	P		**Pn**	**06 22 01.1**	**+1.2**
ZKR	**Zakros**	**2.10**	**236**	P		**Pn**	**06 22 00.0**	**+0.1**
KULA	**Kula-Manisa**	**2.22**	**6**	Pn		**Pn**	**06 22 00.8**	**-0.7**
THERA	**Ancient Thera,**	**2.32**	**272**	P		**Pn**	**06 22 02.7**	**0.0**
THERA	**Ancient Thera,**	**2.32**	**272**	P		**Pn**	**06 22 03.2**	**-0.5**
BLCB	**Balcova**	**2.32**	**334**	Pn		**Pn**	**06 22 02.4**	**-0.4**
NPS	**Neapolis**	**2.45**	**246**	P		**Pn**	**06 22 04.5**	**-0.1**

*MEX **26** 06:21:55.4±0.4, 14˚.13N×92˚.33W, h14km±59km, MD4.0*
*GCG **26** 06:21:56.3±0.9, 14˚.17N×92˚.10W, h26km±7km, MD3.6, Presumed earthquake*

ISC 26 06:21:53.1±2.6, 14˚.1N±0˚.1×92˚.23W±0˚.07, h34km±4km, n17, σ1s55/27, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SMCA	**Catarina**	**0.76**	**11**	*i* P		**Pb**	**06 22 08.5**	**+0.5**
STG2	**El Palmar, Qui**	**0.89**	**68**	*i* P		**Pb**	**06 22 10.4**	**+0.2**
STG5	**El Palmar, Qui**	**0.90**	**71**	*i* P		**Pb**	**06 22 10.3**	**0.0**
STG8	**El Palmar, Qui**	**0.91**	**68**	*i* P		**Pb**	**06 22 11.0**	**+0.3**
STG8				*i* S		**Sb**	**06 22 23.0**	**+0.3**
CHUJ	**Union Juarez**	**0.99**	**7**	*e*P		**Pb**	**06 22 11.2**	**-0.8**
CHUJ				*e*S		**Sb**	**06 22 23.4**	**-1.4**
PATR	**El Naranjo**	**1.00**	**360**	*e*P		**Pb**	**06 22 10.8**	**-1.3**
PATR				*e*S		**Sb**	**06 22 23.6**	**-1.6**
QUEO	**Labor Ovalle**	**1.02**	**42**	*i* P		**Pb**	**06 22 13.8**	**+1.2**
QUEO				*i* S		**Sb**	**06 22 27.7**	**+1.8**
SOKI	**Kika Raxquin**	**1.07**	**48**	*i* P		**Pn**	**06 22 14.3**	**+2.3**
SOKI				*i* S		**Sb**	**06 22 28.8**	**+1.6**
PAVE	**Pavencul**	**1.08**	**3**	*e*P		**Pn**	**06 22 12.4**	**+0.3**
PAVE				*e*S		**Sb**	**06 22 25.7**	**-1.7**
FG8	**Yepocapa, Chim**	**1.62**	**84**	*i* P		**Pn**	**06 22 17.4**	**-2.0**
FG16	**Alotenango, Sa**	**1.67**	**84**	*i* P		**Pn**	**06 22 18.7**	**-1.5**
PCIG		**1.85**	**329**	*e*P		**Pn**	**06 22 22.8**	**+0.3**
PCIG				*e*S		**Sn**	**06 22 43.4**	**-1.4**
CCIG	**Comitan**	**2.16**	**2**	*e*P		**Pn**	**06 22 28.6**	**+1.7**
CCIG				*e*S		**Sb**	**06 22 57.1**	**-1.1**
CCIG	**Comitan**	**2.16**	**2**	*i* P		**Pn**	**06 22 30.8**	**-1.0**
TGIG		**2.79**	**342**	*e*S		**Sn**	**06 23 06.6**	**-1.5**
UXUV	**UXUV**	**3.69**	**330**	*e*P		**Pn**	**06 22 49.8**	**+2.1**
UXUV				*e*S		**Sn**	**06 23 30.2**	**+0.2**
CMIG	**Matias Romero**	**3.92**	**320**	*e*P		**Pn**	**06 22 54.4**	**+3.5**
CMIG				*e*S		**Sn**	**06 23 35.4**	**-0.4**

DJA 26 06:44:10.1±0.9, 5˚S±6˚, 99˚E±˚, h10km, M4.5/23, mB5.3/6, mb4.5/7, MLv4.5/23, Mw(mB)4.7/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PPSI	**Pulau Pagai**	**2.33**	**26**	P		Pn	06 44 49.6	+1.1
PPSI				S		Sn	06 45 16.2	-1.1
EGSI	**Enggano, Bengk**	**3.30**	**98**	P		Pn	06 45 01.4	-0.4
EGSI				S		Sn	06 45 36.2	-4.9
SISI	**Saibi**	**3.53**	**1**	P		Pn	06 45 05.1	+0.1
MASI	**Maura Aman, Be**	**3.66**	**62**	P		Pn	06 45 07.0	+0.1
KRJI	**Kerinci**	**3.70**	**42**	S		Sn	06 45 48.9	-2.4
KSI	**Kapahiang**	**3.79**	**71**	P		Pn	06 45 08.2	-0.4
MNAI	**Manna**	**3.98**	**83**	P		Pn	06 45 11.2	0.0
PDSI	**Padang**	**4.20**	**20**	P		Pn	06 45 14.2	-0.1
PBSI	**Pulau Batu**	**4.85**	**351**	P		Pn	06 45 23.0	-0.2
LWLI	**Liwa**	**5.04**	**92**	P		Pn	06 45 26.6	+0.6
MDSI	**Maura Dua**	**5.18**	**86**	P		Pn	06 45 28.0	+0.3
	0.2nm39nm,0.9s							
KASI	**Kota Agung**	**5.51**	**97**	P		Pn	06 45 32.0	-0.3
KLSI		**5.71**	**88**	P		Pn	06 45 36.4	+1.3

*NNC **26** 06:53:18.9±1.0, 51˚.75N×74˚.24E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=47.2km s-min=6.2km az=27.0, Suspected Mining explosion.*
*IDC **26** 06:53:21.2±1.0, 51˚.80N×74˚.26E, h0km, mbtmp2.5/4, ML1.7/4, Error ellipse: s-maj=25.8km s-min=9.3km az=28.0*

ISC 26 06:53:20.0±1.1, 51˚.78N±0˚.09×74˚.25E±0˚.06, h0km, n10, σ1s45/10, 2C-6D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BVA0	**Borovoye Array**	**2.68**	**299**	⇓Pg		**Pb**	**06 54 08.2**	**-0.6**
	2.1nm,0.7s							
BVA0				⇑Lg		Lg	06 54 42.7	
	22nm,0.9s							
BVAR	**Borovoye Array**	**2.68**	**299**	Pn		**Pn**	**06 54 05.8**	**+1.4**
	0.1nm,0.3s,baz=109,slow=17,SNR=16							
BVAR				Lg		Lg	06 54 43.3	
	0.4nm,0.3s,baz=115,slow=27,SNR=15 2.6nm,0.6s							
KURBB	**Kurchatov Arra**	**2.93**	**112**	Pn		**Pn**	**06 54 10.2**	**+2.4**
	0.1nm,0.3s,baz=299,slow=15,SNR=4.5							
KURBB				Lg		Lg	06 54 50.2	
	0.2nm,0.3s,baz=301,slow=30,SNR=12 0.7nm,0.7s							
KURBB	**Kurchatov Arra**	**2.93**	**112**	⇓Pg		**Pb**	**06 54 13.1**	**+0.1**
	1.3nm,0.5s							
KURBB				⇑Lg		Lg	06 54 51.8	
	24nm,0.7s							
KURK	**Kurchatov**	**2.94**	**109**	⇓Pg		**Pb**	**06 54 12.9**	**-0.4**
	0.8nm,0.8s							
KURK				⇓Lg		Lg	06 54 50.6	
	8.7nm,0.7s							
ZALV	**Zalesovo Beam**	**6.76**	**67**	Pn		**Pn**	**06 55 00.4**	**0.0**
	0.1nm,0.3s,baz=255,slow=14,SNR=4.7							
ZALV				Sn		**Sn**	**06 56 17.7**	**-0.3**
	baz=256,slow=22,SNR=1.4							
ZALV				Lg		Lg	06 56 55.3	
	0.1nm,0.3s,baz=266,slow=39,SNR=2.5 0.7nm,0.6s							
I46RU	**ZALESOVO INFRA**	**6.76**	**67**	I		I	07 31 45.0	
	baz=256,slow=319,SNR=3.3							
MK31	**Makanchi Array**	**7.24**	**130**	⇓Sn		**Sn**	**06 56 29.5**	**-0.6**
	0.8nm,0.7s							
MK31				⇓Lg		Lg	06 57 07.8	
	1.6nm,0.6s,baz=325,slow=24,SNR=4.7							
MKAR	**Makanchi Array**	**7.24**	**130**	Pn		**Pn**	**06 55 07.3**	**+0.2**
	baz=343,slow=4.5,SNR=1.0							
MKAR				Sn		**Sn**	**06 56 27.6**	**-2.4**
	baz=290,slow=17,SNR=2.6							
MKAR				Lg		Lg	06 57 08.2	
	0.1nm,0.3s,baz=313,slow=23,SNR=7.6 0.1nm,0.2s							
AAK	**Ala-Archa**	**9.15**	**179**	Lg		Lg	06 58 10.5	
	0.1nm,0.3s,baz=188,slow=23,SNR=8.4							

IDC 26 07:00:56.2±2.6, 5˚.64S×129˚.54E, h0km, mb3.2/1, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=169.7km s-min=33.1km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**14.96**	**162**	Pn		Pn	07 04 28.4	-0.8
	0.1nm,0.3s,baz=344,slow=13,SNR=1.5							
WRA				Sn		Sn	07 07 02.0	-14
	0.3nm,0.3s,baz=330,slow=20,SNR=8.6 0.5nm,0.8s							
ASAR	**Alice Springs**	**18.41**	**167**	P		P	07 05 13.1	0.0
	0.1nm,0.3s,baz=346,slow=10,SNR=7.0							
ASAR				S		Sn	07 08 27.4	-12
	0.3nm,0.7s,baz=356,slow=22,SNR=1.9 0.3nm,0.4s							
MKAR	**Makanchi Array**	**66.85**	**327**	P		P	07 11 50.0	0.0
	0.2nm,0.6s,baz=127,slow=4.5,SNR=2.2 0.2nm,0.6s							

*GFZ **26** 07:33:06.8, 7˚.58S×131˚.18E, h63km, MW6.0, Moment Tensor Solution. s152 Moment tensor: Mrr=0.05; Mθθ=1.00; Mφφ 1.05; Mrθ=0.01; Mθφ 0.27; Mφr=0.42; Fault plane solution: NP1:φs321.00000°, δ79.00000°, λ165.00000°. NP2:φs54.00000°, δ75.00000°, λ11.00000°. Principal axes: T 1.2200, Plg18.0000°, Azm277.0000°; N -0.1900, Plg71.0000°, Azm106.0000°; P -1.0400, Plg3.0000°, Azm8.0000°;*
*BJI **26** 07:33:07.6, 7˚.70S×131˚.19E, h40km, mB5.8/65, mb5.8/95, Ms5.4/93, Ms7 5.2/89*
*MOS **26** 07:33:11.3±0.9, 7˚.45S×131˚.11E, h56km, mb6.2/58, Error ellipse: s-maj=8.3km s-min=4.8km az=110.6*
*PTWC **26** 07:33:11, 7˚.70S×131˚.30E, h78km, Mwp6.0/7, KEPULAUAN TANIMBAR REGION, INDONESIA*
*DJA **26** 07:33:12.5±0.1, 8˚S±1˚×13˚1E±˚, h71km±1km, M6.0/220, mB6.4/192, mb6.2/220, MLv6.8/28, Mw6.0/194, Mw(mB)6.2/192, MwMwp5.7/180, Mwp5.8/180*
*NEIC **26** 07:33:13.0±2.1, 7˚.49S±0˚.05×131˚.12E±0˚.06, h54km±1km, mb6.0/346, Mwb6.0/52, Mww6.0/30, Error ellipse: s-maj=10.9km s-min=8.6km az=82.0, Moment Tensor Solution. Moment tensor: Scale 1018Nm; Mrr=0.18; Mθθ-1.04; Mφφ 0.86; Mrθ-0.14; Mθφ 0.47; Mφr 0.56; Fault plane solution: Mo2.22000×1018 NP1:φs325.62000°, δ79.93000°, λ152.14000°. NP2:φs60.89000°, δ62.61000°, λ11.35000°. Principal axes: T 1.2289, Plg27.0000°, Azm280.0000°; N -0.0207, Plg61.0000°, Azm127.0000°; P -1.2082, Plg12.0000°, Azm16.0000°;*
*IDC **26** 07:33:12.2±1.2, 7˚.50S×131˚.18E, h52km±9km, mb5.6/35, mbtmp5.9/41, MS5.1/47 Error ellipse: s-maj=12.9km s-min=8.3km az=80.0*
*ISC-PP **26** 07:33:12, 7˚.49S×131˚.12E, h56km±4km, Mwppsm6.2, Moment Tensor Solution. s50 Moment tensor: Scale 1018Nm; Mrr=0.44±.19; Mθθ-0.31±.20; Mφφ-0.20±.18; Mrθ-0.39±.16; Mθφ 0.01±.21; Mφr 0.43±.15; Fault plane solution: Mo2.09000×1018 NP1:φs158.70000°, δ37.90000°, λ135.10000°. NP2:φs286.90000°, δ64.30000°, λ61.10000°.*
*NEIC **26** 07:33:13, 7˚.49S×131˚.12E, h50km*
*NEIC **26** 07:33:13, 7˚.69S×131˚.12E, h50km, Moment Tensor Solution. Duration: 488 Moment tensor: Scale 1018Nm; Mrr-0.36; Mθθ-1.01; Mφφ 1.37; Mrθ 0.24; Mθφ 0.21; Mφr 0.50; Fault plane solution: Mo1.36000×1018 NP1: φs318.99000°, δ66.55000°, λ-178.71000°. NP2: φs228.48000°, δ88.81000°, λ-23.46000°. Principal axes: T 1.5316, Plg15.0000°, Azm276.0000°; N -0.4462, Plg67.0000°, Azm46.0000°; P -1.0854, Plg17.0000°, Azm181.0000°;*
*NEIC **26** 07:33:13, 7˚.49S×131˚.12E, h54km*
*GCMT **26** 07:33:13.9±0.1, 7˚.55S×131˚.12E, h69km, MW6.0/168, Moment Tensor Solution. s164, c363; s168, c572; Duration: 296 Moment tensor: Scale 1018Nm; Mrr0.08±.01; Mθθ-1.38±.01; Mφφ 1.30±.01; Mrθ 0.02±.01; Mθφ 0.30±.01; Mφr 0.58±.01; Best double couple: Mo1.48600×1018 NP1:φs53.00000°, δ74.00000°, λ14.00000°. NP2:φs319.00000°, δ76.00000°, λ163.00000°. Principal axes: T 1.5180, Plg21.0000°, Azm276.0000°; N -0.1410, Plg69.0000°, Azm101.0000°; P -1.4140, Plg2.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2

comp=Z,7.8nmcomp=Z,30µmcomp=Z,22µmcomp=Z,2µm,0.7s
SRPI Serui, Papua 7.59 43 P **Pn 07 34 59.8 +0.2**
comp=Z,49nmcomp=Z,26µmcomp=Z,2µm,0.5s
BATI Baumata 7.83 250 P **Pn 07 35 03.9 +0.9**
comp=Z,5µm,0.6s,baz=65,slow=4.3,SNR=226
BATI S **Sn 07 36 30.0 -0.4**
comp=Z,10µm,0.6s,baz=56,slow=23,SNR=10
BATI Baumata 7.83 250 P **Pn 07 35 04.1 +1.1**
BAKI Biak 8.02 39 P **Pn 07 35 07.2 +1.7**
WAMI Wamena 8.37 65 P **Pn 07 35 12.2 +1.8**
KNRA Kununurra 8.43 196 P **Pn 07 35 09.3 -1.8**
comp=Z,8µm,1.1s,comp=Z,0.0nm
KNRA Kununurra 8.43 196 Pn 07 35 09.3 -1.8
KNRA Kununurra 8.43 196 P **Pn 07 35 09.4 -1.7**
MMRI Maumere 8.86 262 P **Pn 07 35 18.9 +1.8**
comp=Z,8µm,0.5s
MMRI Maumere 8.86 262 S **Sn 07 36 57.3 +1.7**
comp=Z,8µm,0.5s
MMRI Maumere 8.86 262 Pn 07 35 18.4 +1.4
MMRI Maumere 8.86 262 P **Pn 07 35 18.5 +1.4**
MMRI Maumere 8.86 262 ⇑P **Pn 07 35 18.1 +1.0**
MMRI Maumere 8.86 262 P **Pn 07 35 18.3 +1.2**
TNTI Ternate 9.05 335 P **Pn 07 35 20.5 +0.9**
comp=Z,723nm,0.9s
TNTI Ternate 9.05 335 S **Sn 07 37 02.8 +2.6**
comp=Z,723nm,0.9s
TNTI Ternate 9.05 335 Pn 07 35 21.0 +1.4
TNTI Ternate 9.05 335 P **Pn 07 35 21.2 +1.6**
TNTI Ternate 9.05 335 ⇓P **Pn 07 35 20.7 +1.0**
TNTI Ternate 9.05 335 P **Pn 07 35 21.0 +1.4**
comp=Z,720nm,0.9s
KDI Kendari 9.17 292 P **Pn 07 35 23.7 +2.4**
MMPI Merauke 9.22 96 P **Pn 07 35 20.3 -1.7**
EDFI Ende, Flores 9.41 262 P **Pn 07 35 25.4 +0.7**
KKSI Kolaka, Sulawe 9.99 289 P **Pn 07 35 36.7 +4.2**
comp=Z,35µmcomp=Z,12µmcomp=Z,508nm,0.6s
GENI Genyem 10.26 62 P **Pn 07 35 35.7 -0.4**
comp=Z,4µm,0.8s
GENI Genyem 10.26 62 P **Pn 07 35 36.2 +0.1**
GENI Genyem 10.26 62 ⇑P **Pn 07 35 35.3 -0.9**
GENI Genyem 10.26 62 P **Pn 07 35 35.9 -0.2**
LUWI Luwuk 10.52 307 P **Pn 07 35 44.5 +4.7**
LUWI Luwuk 10.52 307 P **Pn 07 35 43.7 +4.0**
comp=Z,2µm,1.1s
LUWI Luwuk 10.52 307 Pn 07 35 42.4 +2.7
LUWI Luwuk 10.52 307 ⇑P Pn 07 35 44.7 +5.0
LUWI Luwuk 10.52 307 P **Pn 07 35 43.8 +4.0**
comp=Z,27µmcomp=Z,17µmcomp=Z,2µm,1.0s
BSSI Bau Bau, Buton 10.64 277 P **Pn 07 35 44.2 +2.7**
comp=Z,41µmcomp=Z,42µmcomp=Z,2µm,1.0s
BASI Baing, Sumba 10.76 255 P **Pn 07 35 42.8 -0.2**
JAY Jayapura 10.76 63 P **Pn 07 35 41.7 -1.4**
comp=Z,533nm,0.7s,baz=202,slow=9.0,SNR=44
JAY S Sn 07 37 33.0 -9.2
comp=Z,1µm,0.6s,baz=208,slow=16,SNR=3.5
JAY LR LR 07 40 58.3
comp=Z,14µm,21.2s,baz=254,slow=44
JAY Jayapura 10.76 63 P **Pn 07 35 41.1 -2.0**
JAY Jayapura 10.76 63 P **Pn 07 35 42.0 -1.1**
comp=Z,35µmcomp=Z,10µmcomp=Z,1µm,0.8s
MNI Manado 10.89 325 P **Pn 07 35 47.0 +2.2**
comp=Z,16µmcomp=Z,16µmcomp=Z,2µm,0.7s
WSI Waingapu 10.91 258 P **Pn 07 35 44.7 -0.4**
BKSI Bulukumba 11.14 281 P **Pn 07 35 52.3 +4.0**
comp=Z,25µmcomp=Z,2µm,1.2s
GTOI Gorontalo 11.45 315 P Pn 07 35 59.7 +7.2
comp=Z,16µmcomp=Z,12µmcomp=Z,555nm,0.9s
APSI Ampana 11.50 304 P Pn 07 35 58.4 +5.2
comp=Z,26µmcomp=Z,2µm,1.0s
KAPI Kappang 11.57 282 P **Pn 07 35 56.2 +2.1**
comp=Z,525nm,0.8s,baz=108,slow=11,SNR=108
KAPI LR LR 07 41 14.0
comp=Z,16µm,21.1s,baz=96,slow=42
KAPI Kappang 11.57 282 P **Pn 07 35 57.6 +3.5**
comp=Z,648nm,1.1s
KAPI Kappang 11.57 282 Pn 07 35 57.0 +2.9
KAPI Kappang 11.57 282 *c i*P **Pn 07 35 57.0 +2.9**
KAPI Kappang 11.57 282 P **Pn 07 35 57.4 +3.3**
KAPI Kappang 11.57 282 P **Pn 07 35 57.1 +2.9**
KAPI Kappang 11.57 282 ⇑P **Pn 07 35 56.9 +2.7**
KAPI Kappang 11.57 282 P **Pn 07 35 56.8 +2.7**
comp=Z,19µmcomp=Z,10µmcomp=Z,648nm,1.1s
WBSI Waikabubak, Su 11.79 259 P **Pn 07 35 54.7 -2.4**
FITZ Fitzroy Crossi 11.79 206 P **Pn 07 35 53.8 -3.3**
comp=Z,2µm,0.8s,baz=25,slow=9.5,SNR=552
FITZ S Sn 07 37 53.7 -13
comp=Z,10µm,0.7s,baz=299,slow=19,SNR=18
FITZ LR LR 07 40 55.9
comp=Z,15µm,20.8s,baz=33,slow=39
MKS Makassar 11.80 281 P **Pn 07 36 00.8 +3.5**
comp=Z,33µmcomp=Z,22µmcomp=Z,790nm,0.8s
SPSI Sidrap Palu 11.83 287 P **Pn 07 36 00.2 +2.5**
comp=Z,32µmcomp=Z,18µmcomp=Z,1µm,1.6s
TTSI Tana Toraja 12.10 291 P **Pn 07 36 05.5 +4.2**
comp=Z,31µmcomp=Z,14µmcomp=Z,584nm,1.0s
MRSI Marisa 12.12 311 P **Pn 07 36 05.3 +3.6**
comp=Z,18µmcomp=Z,13µmcomp=Z,2µm,1.0s
SGSI Sangihe 12.45 333 P Pn 07 36 11.2 +5.0
WB0 Warramunga Arr 12.58 166 Pn 07 36 02.0 -5.9
WB9 Warramunga Arr 12.60 166 P Pn 07 36 02.0 -6.2
DBNI Kabupaten Domp 12.72 265 P **Pn 07 36 08.3 -1.5**
I07AU WARRAMUNGA INI 12.73 166 S Sn 07 38 16.0 -14
baz=336,slow=22,SNR=1.6
WRAB Tennant Creek 12.73 166 P Pn 07 36 03.7 -6.2
comp=Z,4µm,0.8s
WRAB Tennant Creek 12.73 166 Pn 07 36 04.4 -5.6
WRAB Tennant Creek 12.73 166 P Pn 07 36 04.4 -5.5
WR1 Warramunga Arr 12.74 166 P Pn 07 36 03.8 -6.3
WRA Warramunga Arr 12.74 166 P Pn 07 36 04.9 -5.1
comp=Z,366nm,0.9s,baz=343,slow=13,SNR=865
WRA S Sn 07 38 11.9 -18
comp=Z,3µm,0.6s,baz=344,slow=19,SNR=8.3
WRA P3KPbc 08 12 21.9
comp=Z,2.2nm,1.0s,baz=163,slow=4.1,SNR=7.5
WRA Warramunga Arr 12.74 166 Pn 07 36 04.7 -5.3
WRA Warramunga Arr 12.74 166 P Pn 07 36 04.7 -5.3
WB2 Warramunga Arr 12.74 166 P Pn 07 36 03.9 -6.2
WB1 Warramunga Ar. 12.75 166 P Pn 07 36 03.9 -6.4
PMSI Majene 12.79 288 P **Pn 07 36 13.9 +3.1**
comp=Z,30µmcomp=Z,15µmcomp=Z,1µm,0.9s
WR0 Warramunga Arr 12.80 165 P Pn 07 36 04.5 -6.5
PCI Palu 13.03 300 P **Pn 07 36 18.4 +4.4**
comp=Z,36µmcomp=Z,30µmcomp=Z,2µm,1.1s
MMSI Mamuju 13.07 291 P **Pn 07 36 18.7 +4.0**
comp=Z,19µmcomp=Z,2µm,0.7s
PLAI Plampang 13.27 263 P **Pn 07 36 16.4 -1.0**
comp=Z,7µm,0.7s
PLAI Plampang 13.27 263 P **Pn 07 36 16.8 -0.6**
TOLI2 Tolitoli 13.41 309 P **Pn 07 36 19.5 +0.2**
comp=Z,277nm,1.0s
TOLI2 Tolitoli 13.41 309 S **Sn 07 38 49.7 +2.8**
comp=Z,277nm,1.0s
TOLI2 Tolitoli 13.41 309 Pn 07 36 21.8 +2.5
TOLI2 Tolitoli 13.41 309 P **Pn 07 36 22.0 +2.7**
COEN Coen 13.46 119 P Pn 07 36 14.8 -5.1
COEN Coen 13.46 119 P Pn 07 36 14.3 -5.6
comp=Z,2µm,0.7s
COEN Coen 13.46 119 Pn 07 36 14.7 -5.2
COEN Coen 13.46 119 P Pn 07 36 14.1 -5.8
TWSI Taliwang, Sumb 14.15 264 P **Pn 07 36 26.1 -3.1**
comp=Z,24µmcomp=Z,20µmcomp=Z,2µm,0.8s
KLNI Mataram 14.91 266 P **Pn 07 36 38.2 -1.0**
comp=Z,21µmcomp=Z,11µmcomp=Z,567nm,0.6s
QIS Mount Isa 15.34 148 P **Pn 07 36 39.1 -5.7**
QIS Mount Isa 15.34 148 P **Pn 07 36 39.5 -5.3**
comp=Z,1µm,0.7s
KHKI Kahang-Kahang 15.39 266 P **Pn 07 36 44.4 -0.9**
comp=Z,22µmcomp=Z,544nm,0.7s
BKB Balikpapan 15.48 293 P **P 07 36 50.8 +0.8**
comp=Z,1µm,1.0s
BKB Balikpapan 15.48 293 P **P 07 36 50.1 +0.1**
BKB Balikpapan 15.48 293 ⇑P **P 07 36 51.7 +1.7**
BKB Balikpapan 15.48 293 P **P 07 36 49.7 -0.3**
comp=Z,42µmcomp=Z,1µm,1.0s
DAV Davao City (W) 15.51 339 P **Pn 07 36 46.6 -0.4**
comp=Z,247nm,0.3s,baz=76,slow=3.0,SNR=5.7
DAV S **Sn 07 39 44.4 +6.4**
comp=Z,232nm,0.4s,baz=127,slow=10,SNR=1.0
DAV LR LR 07 43 33.3
comp=Z,12µm,21.2s,baz=132,slow=40
DAV Davao City (W) 15.51 339 P **Pn 07 36 47.5 +0.5**
comp=Z,3µm,1.4s
DAV Davao City (W) 15.51 339 P 07 36 49.6 -0.8
DAV Davao City (W) 15.51 339 P **Pn 07 36 49.0 +2.0**
DAV S **Sn 07 39 44.3 +6.4**

DAV Davao City (W) 15.51 339 P **P 07 36 49.5 -0.9**
comp=Z,28µmcomp=Z,26µmcomp=Z,3µm,1.4s
DNP Denpasar 15.79 265 P **Pn 07 36 50.3 -0.3**
comp=Z,17µmcomp=Z,34µmcomp=Z,1µm,0.6s
IGBI Denpasar 15.87 264 P **Pn 07 36 50.8 -0.7**
comp=Z,25µmcomp=Z,2µm,0.7s
PMG Port Moresby 15.97 98 P **Pn 07 36 51.0 -1.8**
comp=Z,835nm,0.4s,baz=279,slow=7.5,SNR=220
PMG S Sn 07 39 34.0 -15
comp=Z,476nm,0.6s,baz=322,slow=19,SNR=9.2
PMG LR LR 07 44 47.5
comp=Z,16µm,18.5s,baz=290,slow=44
PMG Port Moresby 15.97 98 P **Pn 07 36 51.1 -1.8**
comp=Z,5µm,1.0s
PMG Port Moresby 15.97 98 P **Pn 07 36 51.0 -1.8**
comp=Z,5µm,1.0s
PMG Port Moresby 15.97 98 Pn **Pn 07 36 51.3 -1.6**
PMG Port Moresby 15.97 98 P **Pn 07 36 51.3 -1.6**
PMG pmax pmax
comp=Z,2µm,0.9s
PMG Port Moresby 15.97 98 P **Pn 07 36 50.1 -2.8**
PMG Port Moresby 15.97 98 ⇑P **Pn 07 36 50.3 -2.6**
PMG Port Moresby 15.97 98 P **Pn 07 36 50.3 -2.6**
RTBI Rangdo, Negare 16.05 266 P **P 07 36 56.6 +0.2**
comp=Z,20µmcomp=Z,762nm,0.7s
AS31 Alice Springs 16.27 171 Pn **Pn 07 36 51.5 -5.2**
AS31 IAmb IAmb 07 37 00.3
comp=Z,980nm,0.7s
ASAR Alice Springs 16.27 171 P **Pn 07 36 51.1 -5.6**
comp=Z,1µm,0.8s,baz=344,slow=13,SNR=792
ASAR S Sn 07 39 39.8 -17
comp=Z,3µm,0.9s,baz=357,slow=27,SNR=18
ASAR P3KPbc 08 12 11.4
comp=Z,0.7nm,0.8s,baz=170,slow=3.4,SNR=6.1
ASAR Alice Springs 16.27 171 Pn **Pn 07 36 52.1 -4.6**
ASAR Alice Springs 16.27 171 P **Pn 07 36 52.1 -4.6**
AUALC St Philip's Co 16.29 171 P **Pn 07 36 50.9 -6.0**
comp=Z,7µm,1.0s
MTSU Mount Surprise 16.62 131 P **Pn 07 36 56.6 -4.5**
MTSU Mount Surprise 16.62 131 P **Pn 07 36 56.8 -4.3**
comp=Z,994nm,0.7s
BBKI Banjar Baru 16.70 283 P **P 07 37 04.4 +0.9**
ABJI Asem Bagus 16.74 268 P **Pn 07 37 01.9 -0.6**
comp=Z,25µmcomp=Z,10µmcomp=Z,667nm,0.7s
JAGI Jajag, Banyuwa 16.83 266 P **Pn 07 37 02.2 -1.4**
comp=Z,546nm,0.6s
JAGI Jajag, Banyuwa 16.83 266 Pn **Pn 07 37 00.8 -2.8**
JAGI IAmb IAmb 07 37 06.3
comp=Z,422nm,0.5s
JAGI Jajag, Banyuwa 16.83 266 P **Pn 07 37 01.7 -1.9**
comp=Z,17µmcomp=Z,11µmcomp=Z,552nm,0.6s
KMMI Kalianget 17.02 270 P **Pn 07 37 06.5 +0.5**
comp=Z,21µmcomp=Z,1µm,0.9s
MANU Manus Island 17.07 72 Pn **Pn 07 37 06.9 +0.3**
MANU IAmb IAmb 07 37 12.1
comp=Z,2µm,1.4s
MANU Manus Island 17.07 72 ⇑P **Pn 07 37 06.2 -0.5**
BLJI Banyuglugur 17.37 268 P **Pn 07 37 09.1 -1.2**
comp=Z,25µmcomp=Z,16µmcomp=Z,1µm,0.5s
MTKI Muara Teweh, K 17.44 291 P **P 07 37 13.0 +1.2**
comp=Z,33µmcomp=Z,906nm,0.8s
MBWA Marble Bar 17.46 218 P **Pn 07 37 08.0 -3.3**
MBWA Marble Bar 17.46 218 P **Pn 07 37 08.1 -3.3**
comp=Z,373nm,0.8s
MBWA Marble Bar 17.46 218 Pn **Pn 07 37 08.3 -3.1**
MBWA Marble Bar 17.46 218 P **Pn 07 37 08.5 -2.9**
GMJI Gumukmas 17.52 266 P **Pn 07 37 11.9 -0.3**
WRKA Warakurna 17.62 188 P **Pn 07 37 08.1 -5.4**
PSAC2 Pilbara Seismi 17.67 217 P **Pn 07 37 10.2 -3.7**
PSAC1 Pilbara Seismi 17.70 217 P **Pn 07 37 10.9 -3.5**
PSA00 Pilbara Seismi 17.71 217 P **Pn 07 37 11.1 -3.3**
PSA00 Pilbara Seismi 17.71 217 P **Pn 07 37 11.1 -3.3**
comp=Z,2µm,0.8s
PSA00 Pilbara Seismi 17.71 217 P **Pn 07 37 10.4 -4.0**
PSA00 IAmb IAmb 07 37 19.6
comp=Z,582nm,0.8s
PSA00 Pilbara Seismi 17.71 217 P **Pn 07 37 10.7 -3.8**
PSA00 IAmb IAmb 07 37 19.5
comp=Z,609nm,0.8s
PSAB3 Pilbara Seismi 17.72 217 P **Pn 07 37 10.9 -3.6**
MYLDM Lahad Datu 17.83 315 P **Pn 07 37 18.2 +2.3**
comp=Z,493nm,0.9s
MYLDM Lahad Datu 17.83 315 P **Pn 07 37 16.8 +0.9**
MYLDM Lahad Datu 17.83 315 ⇑P **Pn 07 37 17.9 +2.0**
MYLDM Lahad Datu 17.83 315 P **Pn 07 37 19.1 +3.2**
comp=Z,26µmcomp=Z,20µmcomp=Z,492nm,0.9s
PKKI Palangkaraya 17.87 286 P **Pn 07 37 18.2 +1.8**
TBJI Tambak Boyo 19.13 271 P **Pn 07 37 35.9 +4.2**
SJI Sawahan 19.18 268 P **P 07 37 30.3 -0.7**
comp=Z,19µmcomp=Z,13µmcomp=Z,812nm,0.6s
SNJI Sawahan-Nganju 19.19 268 P **P 07 37 30.4 -0.8**
comp=Z,14µmcomp=Z,1µm,0.9s
CTA Charters Tower 19.27 132 P **P 07 37 31.6 -0.2**
comp=Z,214nm,0.8s,baz=304,slow=12,SNR=331
CTA S S 07 40 52.8 -14
comp=Z,300nm,0.8s,baz=32,slow=22,SNR=5.5
CTA LR LR 07 45 58.6
comp=Z,14µm,18.7s,baz=306,slow=40
CTAO Charters Tower 19.27 132 P **P 07 37 32.1 +0.3**
comp=Z,330nm,1.0s
CTAO Charters Tower 19.27 132 P **P 07 37 32.0 +0.2**
CTAO IAmb IAmb 07 37 46.4
comp=Z,724nm,1.1s
CTAO Charters Tower 19.27 132 P **P 07 37 32.0 +0.2**
CTAO pmax pmax
comp=Z,724nm,1.2s
CTAO Charters Tower 19.27 132 ⇓P **P 07 37 32.3 +0.5**
NGJI Ngawi 19.49 269 P **Pn 07 37 36.0 0.0**
comp=Z,11µmcomp=Z,547nm,0.8s
PCJI Pacitan 19.77 267 P **P 07 37 33.5 -3.8**
comp=Z,17µmcomp=Z,14µmcomp=Z,1µm,0.8s
AUAYR Ayr State High 19.84 129 P **P 07 37 39.1 +1.1**
comp=Z,1µm,1.8s
KKM Kota Kinabalu 20.07 312 P **P 07 37 41.3 +0.6**
comp=Z,422nm,1.0s
KKM Kota Kinabalu 20.07 312 P **P 07 37 40.7 0.0**
KKM Kota Kinabalu 20.07 312 ⇑P **P 07 37 40.8 +0.2**
KKM Kota Kinabalu 20.07 312 P **P 07 37 40.3 -0.4**
UGM Wanagama 20.41 268 P **P 07 37 43.3 -1.1**
comp=Z,796nm,0.9s
UGM Wanagama 20.41 268 P **P 07 37 42.7 -1.7**
UGM IAmb IAmb 07 37 54.2
comp=Z,524nm,0.8s
UGM Wanagama 20.41 268 P **P 07 37 44.9 +0.5**
comp=Z,16µmcomp=Z,9µmcomp=Z,802nm,0.8s
SMRI Semarang 20.52 270 P Pn 07 37 47.4 -0.7
comp=Z,563nm,0.9s
SMRI Semarang 20.52 270 P **P 07 37 43.9 -1.6**
SMRI Semarang 20.52 270 ⇑P Pn 07 37 49.3 +1.2
SMRI Semarang 20.52 270 P Pn 07 37 47.3 -0.8
comp=Z,19µmcomp=Z,9µmcomp=Z,443nm,0.9s
YOGI Yogyakarta 20.64 268 P **P 07 37 45.1 -1.7**
comp=Z,19µmcomp=Z,11µmcomp=Z,1µm,0.9s
RABL Rabaul 21.19 82 P **P 07 37 52.8 0.0**
SBUM Sibu 21.30 297 P **P 07 37 55.5 +1.6**
comp=Z,186nm,0.9s
SBUM Sibu 21.30 297 P **P 07 37 55.2 +1.3**
SBUM Sibu 21.30 297 ⇑P **P 07 37 54.1 +0.2**
SBUM Sibu 21.30 297 P **P 07 37 54.2 +0.3**
CTJI Waduk Cacaban 21.77 270 P **P 07 37 57.2 -1.7**
KPJI Karang Pucung 22.00 269 P **P 07 37 59.1 -2.3**
comp=Z,16µmcomp=Z,8µmcomp=Z,568nm,0.7s
INKA Innaminka 22.08 157 P **P 07 38 02.4 +0.3**
GIRL Giralia 22.14 225 P **P 07 38 06.0 +3.3**
GIRL Giralia 22.14 225 P **P 07 38 04.1 +1.3**
MEEK Meekatharra 22.42 211 P **P 07 38 05.7 -0.2**
comp=Z,751nm,1.3s,comp=Z,0.0nm
MEEK Meekatharra 22.42 211 P **P 07 38 06.3 +0.4**
comp=Z,751nm,1.3s
QLP Quilpie 22.69 148 P **P 07 38 08.7 +0.1**
comp=Z,6µm,1.1s,comp=Z,0.0nm
QLP Quilpie 22.69 148 P **P 07 38 08.4 -0.3**
comp=Z,6µm,1.1s
JCJI Jatiwangi 22.70 271 P **P 07 38 05.7 -3.2**
comp=Z,14µmcomp=Z,12µmcomp=Z,372nm,0.6s
BBJI Bungbulang 23.27 269 P **P 07 38 11.1 -3.6**
comp=Z,447nm,0.7s
BBJI Bungbulang 23.27 269 P **P 07 38 10.9 -3.8**
BBJI IAmb IAmb 07 38 17.7
comp=Z,334nm,0.6s
BBJI Bungbulang 23.27 269 P **P 07 38 10.8 -3.9**
comp=Z,450nm,0.7s
FORT Forrest 23.32 187 P **P 07 38 14.2 -0.7**
comp=Z,5µm,0.9s,comp=Z,0.0nm
FORT Forrest 23.32 187 P **P 07 38 14.2 -0.7**
LEM Lembang 23.33 270 LR LR 07 48 15.2

comp=Z,7µm,21.0s,baz=88,slow=39
LEM Lembang 23.33 270 P **P 07 38 11.9 -3.5**
comp=Z,11µmcomp=Z,7µmcomp=Z,413nm,0.8s
TPI Tanjungpandan 23.84 280 P **P 07 38 20.3 +0.4**
DBJI Dramaga 24.20 271 P **P 07 38 19.5 -3.8**
comp=Z,11µmcomp=Z,8µmcomp=Z,286nm,0.6s
SKJI Sukabumi 24.37 270 P **P 07 38 21.6 -3.2**
AUNRC North Rockhamp 24.39 132 P **P 07 38 25.2 +0.3**
comp=Z,1µm,1.6s
SBJI Serang 24.85 272 P **P 07 38 27.6 -1.6**
comp=Z,12µmcomp=Z,317nm,0.9s
GUMO Guam 25.03 33 P **P 07 38 30.7 0.0**
comp=Z,365nm,0.6s,baz=178,slow=10,SNR=16
GUMO LR LR 07 50 35.3
comp=Z,673nm,18.6s,baz=202,slow=42
comp=Z,365nm,0.6s
GUMO Guam 25.03 33 P **P 07 38 32.0 +1.3**
comp=Z,627nm,1.2s
GUMO Guam 25.03 33 P **P 07 38 31.2 +0.5**
GUMO Guam 25.03 33 P **P 07 38 31.2 +0.5**
GUMO pmax pmax
comp=Z,3µm,1.5s
GUMO Guam 25.03 33 ⇓P **P 07 38 31.2 +0.5**
GD1S Gladstone Soft 25.16 132 P **P 07 38 32.4 +0.6**
comp=Z,981nm,0.7s
RMQ Roma 25.24 140 P **P 07 38 33.3 +0.7**
comp=Z,384nm,0.9s
RMQ Roma 25.24 140 P **P 07 38 32.7 +0.1**
comp=Z,384nm,0.9s
KMBL Kambalda 25.24 199 P **P 07 38 32.4 -0.2**
comp=Z,648nm,0.9s,comp=Z,0.0nm
XMI Christmas Isla 25.28 261 P **P 07 38 31.4 -1.7**
comp=Z,431nm,0.7s
XMI Christmas Isla 25.28 261 ⇑P **P 07 38 30.0 -3.1**
PPBI Pangkal Pinang 25.45 281 P **P 07 38 37.4 +2.8**
BBOO Buckleboo 25.58 170 P **P 07 38 34.8 -0.8**
comp=Z,1µm,0.9s,comp=Z,0.0nm
BBOO Buckleboo 25.58 170 P **P 07 38 33.6 -2.0**
comp=Z,1µm,0.9s
BBOO Buckleboo 25.58 170 P **P 07 38 34.7 -0.8**
MORW Morawa 25.71 212 P **P 07 38 37.1 +0.3**
comp=Z,562nm,0.9s,comp=Z,0.0nm
MORW Morawa 25.71 212 P **P 07 38 36.5 -0.4**
comp=Z,562nm,0.9s
MORW Morawa 25.71 212 P **P 07 38 36.9 +0.1**
MORW Morawa 25.71 212 ⇑P **P 07 38 37.4 +0.5**
BLSI Bandar Lampung 25.80 273 P **P 07 38 34.1 -3.7**
EIDS Eidsvold 26.04 135 P **P 07 38 38.9 -0.9**
comp=Z,280nm,0.9s,comp=Z,0.0nm
EIDS Eidsvold 26.04 135 P **P 07 38 38.6 -1.2**
comp=Z,280nm,0.9s
EIDS Eidsvold 26.04 135 P **P 07 38 39.0 -0.8**
EIDS IAmb IAmb 07 39 19.0
comp=Z,350nm,0.9s
EIDS Eidsvold 26.04 135 ⇓P **P 07 38 39.0 -0.8**
STKA Stephens Creek 26.13 159 P **P 07 38 40.0 -0.6**
comp=Z,4µm,0.8s,comp=Z,0.0nm
STKA Stephens Creek 26.13 159 P **P 07 38 39.6 -0.9**
comp=Z,882nm,1.0s,baz=332,slow=8.9,SNR=602
STKA S **S 07 43 13.1 +4.8**
comp=Z,102nm,0.6s,baz=328,slow=14,SNR=1.3
STKA LR LR 07 48 52.1
comp=Z,8µm,18.0s,baz=330,slow=36
comp=Z,882nm,1.0s
STKA Stephens Creek 26.13 159 P **P 07 38 40.2 -0.3**
comp=Z,185nm,0.8s
STKA Stephens Creek 26.13 159 P **P 07 38 40.0 -0.6**
STKA Stephens Creek 26.13 159 *d iP* **P 07 38 40.1 -0.4**
KLI Kotabumi 26.24 274 P **P 07 38 38.2 -3.6**
comp=Z,9µmcomp=Z,9µmcomp=Z,171nm,0.7s
PTPS Port Pirie 26.31 167 P **P 07 38 42.9 +0.8**
comp=Z,3µm,0.8s
KLSI 26.39 275 P **P 07 38 42.6 -0.5**
KASI Kota Agung 26.52 273 P **P 07 38 41.5 -2.8**
PMBI Palembang 26.62 278 P **P 07 38 48.3 +3.1**
comp=Z,479nm,0.6s
PMBI Palembang 26.62 278 P **P 07 38 46.8 +1.5**
PMBI IAmb IAmb 07 38 52.8
comp=Z,422nm,0.8s
BLDU Ballidu 26.65 209 P **P 07 38 45.6 +0.4**
comp=Z,743nm,1.3s,comp=Z,0.0nm
BLDU Ballidu 26.65 209 P **P 07 38 46.7 +1.4**
comp=Z,744nm,1.3s
HTT Hallett 26.77 165 P **P 07 38 45.9 -0.6**
comp=Z,542nm,0.9s
HTT Hallett 26.77 165 P **P 07 38 46.5 +0.1**
comp=Z,1µm,0.9s
HTT Hallett 26.77 165 ⇓P **P 07 38 45.0 -1.4**
AULRC Lightning Ridg 26.96 146 P **P 07 38 47.7 -0.3**
comp=Z,1µm,1.1s
MDSI Maura Dua 26.96 275 P **P 07 38 47.5 -0.7**
KLBR Kellerberrin 27.00 206 P **P 07 38 48.9 +0.5**
comp=Z,1µm,0.9s
KLBR Kellerberrin 27.00 206 P **P 07 38 49.6 +1.2**
comp=Z,2µm,0.8s
LWLI Liwa 27.01 274 P **P 07 38 46.1 -2.7**
comp=Z,10µmcomp=Z,173nm,0.7s
DSRI Dabo 27.37 284 P **P 07 38 50.8 -1.1**
CMSA Cobar Meteorol 27.49 152 P **P 07 38 52.5 -0.3**
comp=Z,1µm,1.0s
CMSA Cobar Meteorol 27.49 152 P **P 07 38 52.8 0.0**
comp=Z,1µm,1.0s
AUKUL Kulin High Sch 27.77 204 P **P 07 38 56.4 +1.1**
comp=Z,624nm,1.0s
TPRI Tanjung Pinang 27.82 286 P **P 07 38 55.6 -0.3**
comp=Z,8µmcomp=Z,6µmcomp=Z,130nm,0.7s
JMBI JAMBI 28.00 281 P **P 07 39 00.7 +3.2**
comp=Z,13µmcomp=Z,8µmcomp=Z,490nm,1.3s
MUN Mundaring 28.02 208 P **P 07 38 58.5 +1.0**
comp=Z,474nm,1.0s,comp=Z,0.0nm
MUN Mundaring 28.02 208 P **P 07 38 57.8 +0.3**
comp=Z,474nm,1.0s
TW1H Toowoomba 1 Ha 28.05 138 P **P 07 38 58.3 +0.4**
comp=Z,545nm,0.9s
AUMAR Marden Senior 28.10 167 P **P 07 38 58.2 0.0**
comp=Z,600nm,0.9s
GHSS Government Hou 28.12 167 P **P 07 38 59.5 +1.1**
comp=Z,737nm,0.8s
AUBSH Beerwah State 28.28 135 P **P 07 38 59.0 -0.9**
comp=Z,221nm,1.4s
NWAO Narrogin (SRO) 28.37 205 P **P 07 39 01.0 +0.3**
comp=Z,420nm,1.3s,comp=Z,0.0nm
NWAO Narrogin (SRO) 28.37 205 P **P 07 39 00.9 +0.3**
comp=Z,218nm,1.0s,baz=30,slow=7.8,SNR=50
NWAO LR LR 07 51 24.0
comp=Z,13µm,18.9s,baz=20,slow=38
comp=Z,218nm,1.0s
NWAO Narrogin (SRO) 28.37 205 P **P 07 39 01.6 +0.9**
comp=Z,233nm,1.3s
NWAO Narrogin (SRO) 28.37 205 P **P 07 39 01.0 +0.3**
NWAO IAmb IAmb 07 39 45.0
comp=Z,359nm,0.9s
NWAO Narrogin (SRO) 28.37 205 P **P 07 39 01.0 +0.3**
NWAO Narrogin (SRO) 28.37 205 P **P 07 39 01.3 +0.6**
NWAO S **S 07 43 44.0 +0.3**
TATA Tatamba Isabel 28.42 94 P **P 07 39 00.1 -1.2**
comp=Z,882nm,0.8s
SAVO Savo Central 28.43 95 P **P 07 39 00.1 -1.4**
comp=Z,283nm,0.9s
AUMBR Murray Bridge 28.49 166 P **P 07 39 01.8 +0.2**
comp=Z,809nm,1.2s
HNR Honiara 28.57 96 LR LR 07 52 20.7
comp=Z,232nm,18.2s,baz=354,slow=40
HNR Honiara 28.57 96 P **P 07 39 02.9 +0.2**
comp=Z,1µm,1.5s
HNR Honiara 28.57 96 P **P 07 39 01.3 -1.4**
HNR Honiara 28.57 96 P **P 07 39 01.3 -1.4**
HNR pmax pmax
comp=Z,2µm,1.1s
HNR Honiara 28.57 96 ⇑P **P 07 39 01.6 -1.1**
KSI Kapahiang 28.64 276 P **P 07 39 04.7 +1.3**
MYKOM Kota Tinggi 28.73 288 P **P 07 39 05.6 +1.5**
comp=Z,123nm,0.9s
MYKOM Kota Tinggi 28.73 288 P **P 07 39 03.8 -0.3**
MYKOM Kota Tinggi 28.73 288 ⇑P **P 07 39 03.9 -0.3**
MYKOM Kota Tinggi 28.73 288 P **P 07 39 05.2 +1.1**
EGSI Enggano, Bengk 28.74 273 P **P 07 39 03.1 -1.0**
comp=Z,7µmcomp=Z,3µmcomp=Z,117nm,0.8s
NGOA Tingoa Renbel 28.81 100 P **P 07 39 04.8 0.0**
comp=Z,2µm,1.2s
MASI Maura Aman, Be 29.07 277 P **P 07 39 08.9 +1.7**
comp=Z,13µmcomp=Z,7µmcomp=Z,252nm,1.1s
GC1S Gold Coast 1 S 29.48 137 P **P 07 39 12.1 +1.5**
comp=Z,68nm,0.6s
AUDCS Dubbo College 29.49 149 P **P 07 39 10.3 -0.3**
comp=Z,441nm,1.1s
ARMA Armidale 29.80 142 P **P 07 39 13.9 +0.3**

comp=Z,97nm,0.7s
ARMA Armidale 29.80 142 P **P** **07 39 13.7 +0.2**
comp=Z,97nm,0.7s
ARMA Armidale 29.80 142 P **P** **07 39 13.6 0.0**
ARMA IAmb IAmb 07 40 20.0
comp=Z,194nm,0.9s
ARMA Armidale 29.80 142 ⇓P **P** **07 39 13.7 +0.2**
AUPHS Peel High Scho 29.86 144 P **P** **07 39 14.0 +0.1**
comp=Z,238nm,1.3s
AUALB St Joseph's Co 29.93 202 P **P** **07 39 16.2 +1.8**
comp=Z,351nm,1.0s
RKGY Rocky Gully 29.94 204 P **P** **07 39 15.9 +1.4**
comp=Z,641nm,0.8s,comp=Z,0.0nm
KRJI Kerinci 30.03 279 P **P** **07 39 17.6 +1.9**
comp=Z,11µcomp=Z,529nm,1.3s
HURO Huro Makira 30.54 98 P **P** **07 39 20.9 +0.8**
comp=Z,311nm,0.9s
PATS Pohnpei 30.64 63 P **P** **07 39 22.1 +1.1**
ARPS Mount Arapiles 30.71 163 P **P** **07 39 21.4 +0.1**
comp=Z,917nm,0.9s
BKNI Bangkinang 30.99 283 P **P** **07 39 22.3 -1.8**
BKNI Bangkinang 30.99 283 P **P** **07 39 26.9 +2.8**
comp=Z,220nm,0.7s
BKNI Bangkinang 30.99 283 P **P** **07 39 22.3 -1.8**
BKNI IAmb IAmb 07 39 31.1
comp=Z,153nm,0.7s
BKNI Bangkinang 30.99 283 P **P** **07 39 24.6 +0.5**
comp=Z,8µcomp=Z,4µcomp=Z,217nm,0.8s
YNG Young 31.05 152 P **P** **07 39 24.9 +0.5**
comp=Z,915nm,1.0s
PDSI Padang 31.25 281 P **P** **07 39 25.4 -1.0**
MGBR Mount Gambier 31.27 165 P **P** **07 39 27.3 +1.1**
H01W1 Cape Leeuwin H 31.39 207 P **P** **07 39 28.2 +1.1**
baz=40,slow=12,SNR=9.4
H01W3 Cape Leeuwin H 31.39 207 P **P** **07 39 28.2 +1.1**
baz=40,slow=12,SNR=11
H01W2 Cape Leeuwin H 31.41 207 P **P** **07 39 28.3 +1.1**
baz=40,slow=12,SNR=16
PPI Padang Panjang 31.42 282 P **P** **07 39 26.3 -1.6**
comp=Z,8µcomp=Z,167nm,0.7s
MGCD Mangrove Creek 31.57 147 P **P** **07 39 30.5 +1.6**
comp=Z,303nm,1.0s
MGCD Mangrove Creek 31.57 147 P **P** **07 39 30.7 +1.8**
comp=Z,311nm,1.0s
TWGBT Beinan 31.71 342 P **P** **07 39 29.4 -0.9**
comp=Z,79nm,0.5s
TWG Pinlang 31.72 342 P **P** **07 39 28.2 -2.1**
SYDH Sydney Hard Ro 31.79 148 P **P** **07 39 32.1 +1.2**
comp=Z,149nm,0.9s
AUKHS Kincumber High 31.90 147 P **P** **07 39 33.2 +1.4**
comp=Z,523nm,1.4s
RIV Riverview 32.06 148 P **P** **07 39 34.6 +1.3**
comp=Z,282nm,1.1s
RIV Riverview 32.06 148 P **P** **07 39 34.6 +1.3**
comp=Z,282nm,1.1s
RIV Riverview 32.06 148 ⇑P **P** **07 39 34.4 +1.2**
BRAT Ballarat 32.08 161 P **P** **07 39 34.5 +1.2**
comp=Z,555nm,0.8s
AUHPC Hawkesdale P12 32.09 163 P **P** **07 39 36.0 +2.5**
comp=Z,2µm,1.0s
AUMTC Mt Clear Colle 32.11 161 P **P** **07 39 34.7 +1.1**
comp=Z,412nm,1.4s
AUMTS Mt Stromlo 32.17 152 P **P** **07 39 35.0 +0.8**
comp=Z,1µm,1.0s
CAN Canberra 32.17 152 P **P** **07 39 35.1 +0.8**
comp=Z,918nm,1.4s
CAN Canberra 32.17 152 P **P** **07 39 35.1 +0.8**
comp=Z,1µm,1.4s
CAN Canberra 32.17 152 P **P** **07 39 34.9 +0.6**
CAN Canberra 32.17 152 P **P** **07 39 34.9 +0.6**
CAN pmax pmax
comp=Z,857nm,1.0s
CAN Canberra 32.17 152 ⇓P **P** **07 39 34.7 +0.5**
CAN Canberra 32.17 152 P **P** **07 39 34.9 +0.6**
CAN x x 07 39 50.8
AUDAR Daramalan Coll 32.17 152 P **P** **07 39 35.0 +0.7**
comp=Z,440nm,1.6s
YULB Yu-li 32.19 343 P **P** **07 39 32.9 -1.6**
comp=Z,65nm,0.6s
YULB Yu-li 32.19 343 P **P** **07 39 32.3 -2.2**
AUMHS Melrose High S 32.24 152 P **P** **07 39 35.7 +0.8**
comp=Z,955nm,1.0s
TPUB Ta-pu 32.31 342 P **P** **07 39 35.2 -0.3**
comp=Z,157nm,0.5s
IPM Ipoh 32.31 291 P **P** **07 39 36.4 +0.7**
comp=Z,86nm,0.7s
IPM Ipoh 32.31 291 ⇑P **P** **07 39 34.6 -1.1**
IPM Ipoh 32.31 291 P **P** **07 39 36.3 +0.6**
comp=Z,3µcomp=Z,86nm,0.7s
CNB Canberra Magne 32.33 151 P **P** **07 39 36.5 +0.8**
comp=Z,390nm,1.3s
SISI Saibi 32.51 279 P **P** **07 39 36.3 -1.1**
comp=Z,8µcomp=Z,81nm,0.7s
MNSI Mandailing Nat 32.52 283 P **P** **07 39 36.0 -1.6**
comp=Z,12µcomp=Z,279nm,0.8s
TOO Toolangi 32.63 159 P **P** **07 39 38.9 +0.6**
comp=Z,397nm,0.9s
TOO Toolangi 32.63 159 IAmb IAmb 07 39 40.9
comp=Z,263nm,0.8s
TOO Toolangi 32.63 159 ⇓P **P** **07 39 39.4 +1.1**
SSLB Suanglung 32.66 343 P **P** **07 39 37.7 -0.9**
comp=Z,192nm,1.1s
SSLB Suanglung 32.66 343 P **P** **07 39 37.4 -1.2**
SSLB IAmb IAmb 07 39 40.0
comp=Z,152nm,1.0s
YOJ Yonaguni jima 32.76 346 P **P** **07 39 40.1 +0.7**
comp=Z,335nm,1.0s
YOJ Yonaguni jima 32.76 346 IAmb IAmb 07 39 41.0
comp=Z,293nm,1.0s
YOJ Yonaguni jima 32.76 346 ⇓P **P** **07 39 40.0 +0.7**
NACB Ninganchiao 32.85 344 P **P** **07 39 39.3 -0.9**
comp=Z,65nm,1.2s
AUUHS Ulladulla High 32.91 150 P **P** **07 39 41.6 +1.0**
comp=Z,167nm,0.9s
KULM Kulim 32.96 292 P **P** **07 39 41.0 -0.3**
comp=Z,125nm,0.9s
KULM Kulim 32.96 292 P **P** **07 39 39.7 -1.6**
KULM Kulim 32.96 292 ⇑P **P** **07 39 40.0 -1.3**
KULM Kulim 32.96 292 P **P** **07 39 41.5 +0.2**
comp=Z,3µcomp=Z,125nm,0.9s
YHNB Yeheng 33.38 344 P **P** **07 39 44.5 -0.4**
comp=Z,143nm,0.5s
YHNB Yeheng 33.38 344 P **P** **07 39 44.0 -0.9**
YHNB IAmb IAmb 07 39 53.2
comp=Z,300nm,1.4s
PBSI Pulau Batu 33.57 281 P **P** **07 39 43.6 -3.1**
comp=Z,10µcomp=Z,152nm,0.6s
MILA Mila 33.67 153 P **P** **07 39 48.6 +1.2**
comp=Z,135nm,1.1s
MILA Mila 33.67 153 ⇑P **P** **07 39 48.3 +1.0**
MILA Mila 33.67 153 P **P** **07 39 48.1 +0.8**
RPSI Rantau Prapat 33.69 286 P **P** **07 39 46.0 -1.8**
RPSI IAmb IAmb 07 39 51.6
comp=Z,160nm,0.8s
QIZ Qiongzhong 33.70 322 P **P** **07 39 47.8 0.0**
comp=Z,140nm,1.0s
QIZ Qiongzhong 33.70 322 **P** **07 39 47.4 -0.3**
QIZ Qiongzhong 33.70 322 P **P** **07 39 47.8 0.0**
QIZ pP **pP** **07 39 58.3 -3.3**
QIZ sP **pwP** **07 40 04.8 +3.2**
QIZ S **S** **07 45 01.5 -5.8**
QIZ sS **sS** **07 45 28.0 -3.1**
QIZ PcS **PcS** **07 46 09.8 -3.0**
QIZ pmax pmax
comp=Z,83nm,1.2s
QIZ pmax pmax
comp=Z,1µm,5.3s
QIZ LR LR
comp=Z,4µm,17.4s
QIZ LR LR
comp=Z,4µm,15.8s
QIZ LR LR
comp=Z,3µm,22.1s
PSI Prapat 33.72 287 P **P** **07 39 45.7 -2.4**
comp=Z,224nm,0.9s
PSI Prapat 33.72 287 P **P** **07 39 46.0 -2.2**
PSI pmax pmax
comp=Z,160nm,0.8s
PSI Prapat 33.72 287 P **P** **07 39 45.8 -2.4**
comp=Z,11µcomp=Z,3µcomp=Z,208nm,0.9s
HKPS Hong Kong Po S 33.97 331 P **P** **07 39 50.9 +0.9**
comp=Z,113nm,1.2s
HKPS Hong Kong Po S 33.97 331 P **P** **07 39 50.4 +0.4**
HKC Hong Kong Obse 33.97 331 ⇑P **P** **07 39 51.0 +1.0**
COCO West Island 34.08 259 P **P** **07 39 54.5 +3.4**
comp=Z,221nm,1.6s
COCO West Island 34.08 259 P **P** **07 39 51.2 +0.1**
COCO West Island 34.08 259 P **P** **07 39 51.2 +0.1**
COCO pmax pmax
comp=Z,511nm,1.2s
COCO West Island 34.08 259 P **P** **07 39 51.2 +0.1**
COCO West Island 34.08 259 ⇑P **P** **07 39 53.1 +2.1**
COCO West Island 34.08 259 P **P** **07 39 51.7 +0.6**
comp=Z,3µcomp=Z,222nm,1.6s
KNMB Chin-men Tao 34.13 339 IAmb IAmb 07 39 53.5
comp=Z,226nm,1.1s
JOW Kunigami 34.26 355 P **P** **07 39 52.9 +0.4**
comp=Z,530nm,0.8s,baz=186,slow=8.0,SNR=89
JOW S **S** **07 45 10.2 -5.5**
comp=Z,12nm,1.0s,baz=231,slow=10,SNR=1.5
comp=Z,530nm,0.8s
JOW Kunigami 34.26 355 P **P** **07 39 54.5 +2.0**
comp=Z,901nm,0.9s
JOW Kunigami 34.26 355 ⇓P **P** **07 39 54.0 +1.5**
TSI Tuntungan 34.28 288 P **P** **07 39 50.6 -2.3**
comp=Z,10µcomp=Z,8µcomp=Z,119nm,0.5s
QZH2 Quanzhou 34.50 340 *i*P **P** **07 39 55.5 +0.9**
QZH2 S **S** **07 45 15.5 -3.9**
QZH2 SS **SnSn** **07 47 34.0 -1.2**
QZH2 pmax pmax
comp=Z,170nm,1.0s
QZH2 LR LR
comp=Z,3µm,24.0s
QZH2 LR LR
comp=Z,2µm,12.7s
QZH2 LR LR
comp=Z,4µm,19.9s
GSI Gunungsitoli 34.59 283 P **P** **07 39 53.7 -1.9**
comp=Z,167nm,1.1s
GSI Gunungsitoli 34.59 283 IAmb IAmb 07 40 19.8
comp=Z,136nm,0.8s
GSI Gunungsitoli 34.59 283 ⇑P **P** **07 39 53.2 -2.4**
GSI Gunungsitoli 34.59 283 P **P** **07 39 52.2 -3.4**
comp=Z,13µcomp=Z,4µcomp=Z,164nm,0.7s
KCSI Kotacane, Aceh 35.04 287 P **P** **07 39 57.7 -1.7**
GZH2 Guangzhou 35.37 332 P **P** **07 40 02.3 +0.2**
GZH2 S **S** **07 45 36.8 +3.9**
GZH2 pmax pmax
comp=Z,120nm,0.9s
GZH2 LR LR
comp=Z,3µm,14.6s
GZH2 LR LR
comp=Z,4µm,12.5s
GZH2 LR LR
comp=Z,4µm,23.1s
AUBRN Burnie High Sc 35.87 161 P **P** **07 40 07.5 +1.3**
comp=Z,341nm,1.2s
JCJ Chichijima 36.04 17 P **P** **07 40 06.5 -1.3**
comp=Z,210nm,0.5s,baz=265,slow=10,SNR=13
JCJ S S 07 45 31.7 -11
comp=Z,72nm,0.8s,baz=226,slow=22,SNR=1.0
JCJ LR LR 07 56 21.0
comp=Z,1µm,18.6s,baz=168,slow=39
comp=Z,210nm,0.5s
JCJ Chichijima 36.04 17 P **P** **07 40 09.1 +1.3**
comp=Z,625nm,0.8s
JCJ Chichijima 36.04 17 P **P** **07 40 06.8 -1.0**
JCJ Chichijima 36.04 17 ⇑P **P** **07 40 07.5 -0.3**
SANVU Saraoutou 36.18 106 P **P** **07 40 10.1 +0.9**
comp=Z,2µm,0.9s
SANVU Saraoutou 36.18 106 P **P** **07 40 09.0 -0.2**
SANVU Saraoutou 36.18 106 ⇑P **P** **07 40 09.3 +0.2**
LHMI Lhok Sumawe 36.37 289 P **P** **07 40 12.8 +2.0**
comp=Z,641nm,0.9s
LHMI Lhok Sumawe 36.37 289 P **P** **07 40 10.1 -0.7**
LHMI Lhok Sumawe 36.37 289 P **P** **07 40 10.4 -0.4**
comp=Z,13µcomp=Z,10µcomp=Z,651nm,0.9s
GLAD Gladstone 36.56 158 P **P** **07 40 12.8 +0.7**
comp=Z,376nm,0.9s
MLSI Meulaboh, Aceh 36.57 288 P **P** **07 40 11.0 -1.5**
comp=Z,9µcomp=Z,8µcomp=Z,611nm,0.8s
CORO Coronation Par 36.67 160 P **P** **07 40 14.1 +1.1**
comp=Z,368nm,0.9s
DZM Mont Dzumac 36.97 117 *e*P **P** **07 40 15.9 0.0**
comp=Z,473nm,1.6s
DZM *e*S **S** **07 46 01.0 +3.3**
comp=Z,5µm,31.4s
DZM *e*SS **SS** **07 48 46.8 +5.8**
comp=Z,6µm,30.1s
DZM Mont Dzumac 36.97 117 LR LR 07 57 34.3
comp=Z,3µm,18.4s,baz=297,slow=40
DZM Mont Dzumac 36.97 117 P **P** **07 40 16.0 0.0**
comp=Z,167nm,1.7s
DZM Mont Dzumac 36.97 117 IAmb IAmb 07 40 41.2
comp=Z,130nm,0.9s
DZM Mont Dzumac 36.97 117 ⇓P **P** **07 40 16.1 +0.1**
ONTNC Ouen Toro 37.05 117 P **P** **07 40 17.0 +0.5**
comp=Z,202nm,1.0s
ONTNC Ouen Toro 37.05 117 IAmb IAmb 07 40 49.2
comp=Z,256nm,1.0s
ONTNC Ouen Toro 37.05 117 ⇑P **P** **07 40 16.7 +0.2**
OUENC Ouen Island, N 37.42 117 P **P** **07 40 20.0 +0.3**
comp=Z,138nm,0.8s
MOO Moorlands 37.56 160 P **P** **07 40 22.9 +2.3**
comp=Z,817nm,0.9s
MOO Moorlands 37.56 160 P **P** **07 40 21.9 +1.3**
comp=Z,817nm,0.9s
MOO Moorlands 37.56 160 P **P** **07 40 21.8 +1.3**
BSI Banda Aceh 38.01 289 P **P** **07 40 24.0 -0.8**
comp=Z,4µcomp=Z,210nm,1.3s
TAU Tasmania Unive 38.02 161 P **P** **07 40 25.8 +1.4**
comp=Z,420nm,1.3s
TAU Tasmania Unive 38.02 161 P **P** **07 40 25.5 +1.1**
TAU Tasmania Unive 38.02 161 P **P** **07 40 25.5 +1.1**
TAU pmax pmax
comp=Z,301nm,0.9s
TAU Tasmania Unive 38.02 161 ⇓P **P** **07 40 25.3 +0.9**
TAU Tasmania Unive 38.02 161 P **P** **07 40 25.8 +1.4**
TAU pP **pP** **07 40 39.0 +0.4**
AUTAR Taroona High S 38.06 161 P **P** **07 40 26.2 +1.4**
comp=Z,478nm,1.0s
MARNC Mare, Loyalty 38.21 115 P **P** **07 40 26.7 +0.3**
comp=Z,356nm,1.0s
MARNC Mare, Loyalty 38.21 115 ⇑P **P** **07 40 27.1 +0.7**
GULI GuiLin 38.37 329 P **P** **07 40 28.5 +1.0**
GULI S **S** **07 46 12.3 -6.2**
GULI pmax pmax
comp=Z,45nm,1.0s
GULI LR LR
comp=Z,3µm,21.4s
GULI LR LR
comp=Z,1µm,19.2s
GULI LR LR
comp=Z,4µm,23.5s
JSU Suzuyama 38.81 359 P **P** **07 40 32.3 +1.0**
comp=Z,132nm,1.3s
JSU Suzuyama 38.81 359 IAmb IAmb 07 40 33.8
comp=Z,196nm,1.2s
JSU Suzuyama 38.81 359 ⇑P **P** **07 40 32.2 +1.0**
SSE Sheshan 39.56 347 P **P** **07 40 38.5 +1.1**
SSE pP **pP** **07 40 49.0 -2.1**
SSE S **S** **07 46 33.3 -2.9**
SSE sS **sS** **07 46 58.8 -1.5**
SSE pmax pmax
comp=Z,120nm,1.2s
SSE pmax pmax
comp=Z,340nm,4.6s
CNSH ChangSha 39.61 334 P **P** **07 40 38.0 +0.1**
CNSH S **S** **07 46 37.8 +0.8**
CNSH pmax pmax
comp=Z,66nm,0.8s
CNSH LR LR
comp=Z,4µm,14.6s
CNSH LR LR
comp=Z,5µm,17.0s
CNSH LR LR
comp=Z,3µm,33.5s
JNU Nakatsue 40.42 360 P **P** **07 40 44.3 -0.3**
comp=Z,200nm,1.0s,baz=184,slow=4.5,SNR=33
JNU LR LR 07 55 40.9
comp=Z,1µm,21.8s,baz=176,slow=33
comp=Z,200nm,1.0s
CM31 Chiang Mai Arr 40.92 309 IAmb IAmb 07 40 51.0
comp=Z,230nm,1.1s
CMAR Chiang Mai Arr 40.92 309 P **P** **07 40 49.5 +0.7**
comp=Z,122nm,0.8s,baz=141,slow=7.5,SNR=343
CMAR PcP **PcP** **07 42 51.1 +2.5**
comp=Z,27nm,0.7s,baz=128,slow=3.9,SNR=5.1
CMAR ScP **ScP** **07 46 34.8 +0.9**
comp=Z,14nm,0.8s,baz=133,slow=4.4,SNR=6.5
CMAR S **S** **07 46 54.6 -2.3**
comp=Z,0.8nm,0.3s,baz=128,slow=16,SNR=1.4
CMAR LR LR 08 01 02.2
comp=Z,2µm,18.5s,baz=125,slow=41
comp=Z,122nm,0.8s
CMAR Chiang Mai Arr 40.92 309 P **P** **07 40 49.4 +0.5**
NJ2 Nanjing 41.06 344 ⇓*i*P **P** **07 40 51.5 +1.7**
NJ2 ScP **ScP** **07 46 33.5 -0.6**
NJ2 S **S** **07 46 57.5 -1.1**
NJ2 sS **sS** **07 47 25.5 +2.8**
NJ2 SS **SS** **07 50 04.5 +1.6**
NJ2 ScS **ScS** **07 50 49.3 -0.2**
NJ2 pmax pmax
comp=Z,160nm,0.9s
NJ2 pmax pmax
comp=Z,430nm,3.6s
NJ2 LR LR
comp=Z,1µm,12.3s
NJ2 LR LR
comp=Z,1µm,15.6s
NJ2 LR LR
comp=Z,2µm,18.9s
JMN Monobe 41.11 3 P **P** **07 40 51.8 +1.6**
comp=Z,269nm,1.3s
JMN Monobe 41.11 3 IAmb IAmb 07 40 53.1
comp=Z,256nm,1.0s
JMN Monobe 41.11 3 ⇑P **P** **07 40 51.6 +1.4**
WHN Wuhan 41.13 338 P **P** **07 40 51.5 +1.1**
WHN pP **pP** **07 41 02.0 -2.2**
WHN sP **pwP** **07 41 07.3 +0.9**
WHN ScP **ScP** **07 46 33.5 -0.9**
WHN S **S** **07 46 58.0 -1.6**
WHN SS **SS** **07 50 06.0 +1.7**
WHN pmax pmax
comp=Z,2µm,1.3s
WHN LR LR
comp=Z,12µm,25.6s
CHTO Chiang Mai 41.13 310 P **P** **07 40 50.8 +0.2**
comp=Z,166nm,0.8s
CHTO Chiang Mai 41.13 310 P **P** **07 40 51.0 +0.4**
CHTO IAmb IAmb 07 40 53.5
comp=Z,209nm,0.8s
CHTO Chiang Mai 41.13 310 P **P** **07 40 51.0 +0.4**
CHTO pmax pmax
comp=Z,209nm,0.8s
CHTO Chiang Mai 41.13 310 P **P** **07 40 51.4 +0.8**
CHTO S **S** **07 46 55.9 -4.2**
CHTO Chiang Mai 41.13 310 ⇑P **P** **07 40 50.9 +0.4**
CHTO Chiang Mai 41.13 310 P **P** **07 40 51.2 +0.6**
comp=Z,5µcomp=Z,4µcomp=Z,278nm,0.8s
CHTO Chiang Mai 41.13 310 P **P** **07 40 51.2 +0.6**
CHTO pP **pP** **07 41 04.8 +0.3**
CHTO ScP **ScP** **07 46 35.1 +0.4**
JHJ Hachijo jima 2 41.25 11 P **P** **07 40 50.4 -0.9**
comp=Z,286nm,0.7s,baz=233,slow=20,SNR=3.0
JHJ LR LR 07 57 58.0
comp=Z,2µm,18.7s,baz=210,slow=36
comp=Z,286nm,0.7s
GYA Guiyang 41.28 326 ⇑P **P** **07 40 52.3 +0.4**
GYA pmax pmax
comp=Z,27nm,1.0s
JTU Tsushima 41.85 358 P **P** **07 40 58.3 +2.1**
comp=Z,213nm,1.3s
KMI2 Kunming 42.63 321 ⇑P **P** **07 41 04.5 +1.4**
KMI2 S **S** **07 47 19.8 -2.8**
KMI2 pmax pmax
comp=Z,150nm,0.9s
KMI2 pmax pmax
comp=Z,1µm,7.6s
KMI2 LR LR
comp=Z,2µm,25.2s
KMI2 LR LR
comp=Z,3µm,20.6s
KMI2 LR LR
comp=Z,3µm,23.6s
PBA Port Blair 42.66 296 P **P** **07 41 01.0 -2.2**
ENH Enshi 42.94 332 P **P** **07 41 05.9 +0.7**
comp=Z,264nm,0.8s
ENH Enshi 42.94 332 IAmb IAmb 07 41 07.2
comp=Z,168nm,0.7s
ENH Enshi 42.94 332 P **P** **07 41 05.6 +0.4**
ENH pP **pP** **07 41 19.2 -0.2**
ENH x x 07 42 53.0
ENH ScP **ScP** **07 46 41.8 +0.1**
INU Inuyama 43.00 7 P **P** **07 41 06.7 +1.1**
comp=Z,97nm,1.0s
INU Inuyama 43.00 7 ⇓P **P** **07 41 06.5 +0.9**
JGF Kuroka 43.29 7 P **P** **07 41 08.7 +0.7**
comp=Z,167nm,1.6s
JGF Kuroka 43.29 7 IAmb IAmb 07 41 09.9
comp=Z,400nm,1.6s
JGF Kuroka 43.29 7 ⇓P **P** **07 41 08.6 +0.6**
TJN Taejon 43.81 356 P **P** **07 41 13.5 +1.4**
comp=Z,776nm,1.1s
TJN Taejon 43.81 356 P **P** **07 41 12.9 +0.9**
TJN Taejon 43.81 356 P **P** **07 41 12.9 +0.9**
TJN pmax pmax
comp=Z,650nm,0.9s
PZH PanZhiHua 44.23 321 P **P** **07 41 16.0 +0.2**
PZH S **S** **07 47 41.3 -4.4**
PZH SS **SS** **07 50 58.5 -7.2**
PZH ScS **ScS** **07 51 08.0 -1.8**
PZH pmax pmax
comp=Z,250nm,0.8s
PZH pmax pmax
comp=Z,950nm,7.7s
PZH LR LR
comp=Z,860nm,18.2s
PZH LR LR
comp=Z,2µm,21.2s
PZH LR LR
comp=Z,2µm,24.7s
MJAR Matsushiro Arr 44.33 8 P **P** **07 41 15.8 -0.5**
comp=Z,142nm,0.9s,baz=184,slow=9.1,SNR=204
MJAR ScP **ScP** **07 46 46.4 -0.8**
comp=Z,13nm,1.1s,baz=189,slow=2.8,SNR=4.7
MJAR S **S** **07 47 43.1 -3.6**
comp=Z,2.7nm,0.8s,baz=165,slow=6.2,SNR=1.5
MJAR LR LR 07 56 52.0
comp=Z,4µm,21.8s,baz=186,slow=32
comp=Z,142nm,0.9s
MJAR Matsushiro Arr 44.33 8 P **P** **07 41 15.4 -0.9**
MJAR IAmb IAmb 07 41 17.3
comp=Z,144nm,0.9s
MAJO Matsushiro 44.33 8 P **P** **07 41 16.1 -0.2**
comp=Z,332nm,0.9s
MAJO Matsushiro 44.33 8 P **P** **07 41 15.3 -1.0**
MAJO IAmb IAmb 07 41 17.3
comp=Z,253nm,0.8s
MAJO Matsushiro 44.33 8*d i*P **P** **07 41 16.1 -0.2**
MAJO pmax pmax
comp=Z,259nm,0.8s
MAJO MLR MLR
comp=Z,2µm,16.0s
MAJO Matsushiro 44.33 8 ⇑P **P** **07 41 16.3 -0.1**
MJB9 Matsu-Tunnel 44.34 8 IAmb IAmb 07 41 18.3
comp=Z,239nm,0.8s
H11N1 WAKE ISLAND Hy 44.41 52 P **P** **07 41 19.5 +2.5**
SNR=3.0
H11N2 WAKE ISLAND Hy 44.43 52 P **P** **07 41 19.6 +2.5**
H11N3 WAKE ISLAND Hy 44.43 52 P **P** **07 41 19.6 +2.5**
KSAR Wonju Array Be 44.83 356 P **P** **07 41 21.4 +1.2**
KSAR Wonju Array Be 44.83 356 P **P** **07 41 21.4 +1.2**
KSRS Korea Array 44.84 356 P **P** **07 41 21.8 +1.5**
comp=Z,36nm,0.6s,baz=175,slow=10,SNR=72
KSRS ScP **ScP** **07 46 48.0 -1.2**
comp=Z,7.1nm,0.9s,baz=172,slow=5.8,SNR=3.5
KSRS S **S** **07 47 49.8 -4.1**
comp=Z,1.7nm,0.7s,baz=181,slow=8.5,SNR=1.5
KSRS LR LR 07 57 53.8
comp=Z,1µm,21.8s,baz=180,slow=33
comp=Z,36nm,0.6s
KS19 Wonju Array Si 44.89 356 P **P** **07 41 21.6 +0.9**
INCN Inchon 44.97 355 P **P** **07 41 23.4 +2.0**
comp=Z,128nm,0.7s
INCN Inchon 44.97 355 P **P** **07 41 23.1 +1.8**
INCN Inchon 44.97 355 P **P** **07 41 23.1 +1.8**
INCN pmax pmax
comp=Z,86nm,0.7s
INCN Inchon 44.97 355 P **P** **07 41 23.4 +2.0**
TNCH TengChong 45.33 317 ⇑P **P** **07 41 25.0 +0.4**
TNCH pP pP 07 41 33.5 -5.3
TNCH sP sP 07 41 41.5 -3.5
TNCH PP **PP** **07 43 12.3 +0.7**
TNCH S **S** **07 47 59.0 -2.8**
TNCH sS sS 07 48 22.5 -3.7
TNCH SS **ScS** **07 51 18.8 +1.8**
TNCH pmax pmax

comp=Z,180nm,0.8s
TNCH pmax pmax
comp=Z,2µm,4.2s
TNCH LR LR
comp=Z,1µm,13.9s
TNCH LR LR
comp=Z,1µm,13.6s
TNCH LR LR
comp=Z,3µm,23.9s
LYN LuoYang 45.41 338 P P 07 41 26.3 +1.4
LYN sP sP 07 41 44.5 -1.1
LYN PP **PP 07 43 13.8 +1.6**
LYN S **S 07 48 00.0 -2.3**
LYN SS **ScS 07 51 19.5 +2.8**
LYN pmax pmax
comp=Z,170nm,1.1s
LYN pmax pmax
comp=Z,830nm,7.8s
LYN LR LR
comp=Z,2µm,25.4s
LYN LR LR
comp=Z,3µm,25.8s
LYN LR LR
comp=Z,4µm,25.8s
TIA Tai'an 45.45 344 P P 07 41 26.0 +0.8
TIA PcP **PcP 07 43 06.0 +2.5**
TIA S **S 07 47 58.0 -4.8**
TIA ScS **ScS 07 51 16.5 -0.4**
TIA pmax pmax
comp=Z,110nm,1.1s
TIA pmax pmax
comp=Z,310nm,3.8s
TIA LR LR
comp=Z,2µm,19.6s
TIA LR LR
comp=Z,2µm,18.2s
TIA LR LR
comp=Z,4µm,30.0s
CD2 Chengdu 46.34 327 P P 07 41 32.3 -0.1
CD2 pP pP 07 41 47.5 +0.9
CD2 PP **PP 07 43 24.8 +2.7**
CD2 S **S 07 48 08.3 -7.6**
CD2 sS sS 07 48 37.5 -2.9
CD2 pmax pmax
comp=Z,120nm,0.6s
CD2 pmax pmax
comp=Z,1µm,5.4s
CD2 LR LR
comp=Z,2µm,16.7s
CD2 LR LR
comp=Z,2µm,16.7s
CD2 LR LR
comp=Z,3µm,17.6s
XAN Xi'an 46.38 334 ⇑P P 07 41 33.0 +0.4
XAN pP pP 07 41 48.8 +1.9
XAN PcP **PcP 07 43 04.8 -2.1**
XAN PP **PP 07 43 21.0 -1.5**
XAN S **S 07 48 12.5 -3.9**
XAN ScS **ScS 07 51 22.0 -1.1**
XAN pmax pmax
comp=Z,250nm,0.9s
XAN pmax pmax
comp=Z,860nm,4.8s
XAN LR LR
comp=Z,2µm,22.0s
XAN LR LR
comp=Z,2µm,23.4s
XAN LR LR
comp=Z,3µm,22.7s
XAN Xi'an 46.38 334 P P 07 41 32.7 +0.1
XAN sP **sP 07 41 52.4 -0.8**
XAN ScP **ScP 07 46 56.6 +0.8**
MSVF Nonsavu 46.79 107 P P 07 41 37.1 +0.9
comp=Z,157nm,0.8s
MSVF Nonsavu 46.79 107 P P 07 41 37.1 +0.9
MSVF IAmb IAmb 07 42 00.3
comp=Z,147nm,0.9s
MSVF Nonsavu 46.79 107 P P 07 41 37.1 +0.9
MSVF pmax pmax
comp=Z,147nm,1.0s
MSVF Nonsavu 46.79 107 ⇓P P 07 41 37.1 +0.9
DL2 Dalian 47.03 350 P P 07 41 36.5 -1.0
DL2 S **S 07 48 23.3 -2.0**
DL2 pmax pmax
comp=Z,150nm,1.0s
DL2 pmax pmax
comp=Z,670nm,4.1s
DL2 LR LR
comp=Z,3µm,19.2s
DL2 LR LR
comp=Z,8µm,17.8s
DL2 LR LR
comp=Z,4µm,19.8s
HNS HongShan 47.25 342 ⇑P P 07 41 40.3 +1.0
HNS ScP **ScP 07 46 59.5 +0.2**
HNS sS **sS 07 48 52.3 -0.8**
HNS ScS **ScS 07 51 28.0 -0.5**
HNS pmax pmax
comp=Z,280nm,1.0s
HNS LR LR
comp=Z,2µm,16.9s
HNS LR LR
comp=Z,1µm,14.9s
HNS LR LR
comp=Z,2µm,20.6s
OUZ Omahuta 47.67 132 ⇑P P 07 41 44.0 +1.4
OUZ Omahuta 47.67 132 P P 07 41 43.9 +1.2
SAIH SAIHA 47.79 310 *eP* **P 07 41 43.0 -0.9**
SAIH IAmb IAmb 07 41 48.8
comp=Z,52nm,0.5s
SAIH *eS* **S 07 48 34.8 -2.1**
MORE Moreh 47.82 312 IAmb IAmb 07 41 45.7
comp=Z,218nm,1.0s
DGTI Dogotuki 48.26 105 P P 07 41 47.6 +0.1
comp=Z,279nm,1.0s
TIY Taiyuan 48.27 340 P P 07 41 49.0 +1.7
TIY PcP **PcP 07 43 17.0 +3.4**
TIY S **S 07 48 39.3 -3.8**
TIY ScS **ScS 07 51 34.8 -0.7**
TIY pmax pmax
comp=Z,94nm,0.7s
TIY pmax pmax
comp=Z,440nm,12.0s
IMP Imphal 48.43 313 *eP* **P 07 41 47.7 -1.0**
IMP IAmb IAmb 07 41 49.9
comp=Z,93nm,1.3s
IMP *eS* **S 07 48 44.8 -1.0**
WCZ Waipu Caves 48.52 132 P P 07 41 50.6 +1.3
TAVE Taveuni 48.64 106 P P 07 41 53.4 +3.0
comp=Z,187nm,1.3s
LKP Lekhapani 48.65 317 IAmb IAmb 07 41 24.4
comp=Z,128nm,0.6s
LKP *eP* **P 07 41 49.1 -1.1**
LKP *eS* **S 07 48 46.0 -2.6**
KOHI KOHIMA 48.85 314 *eP* **P 07 41 51.0 -1.1**
KOHI IAmb IAmb 07 41 53.3
comp=Z,66nm,0.7s
KOHI *eS* **S 07 48 50.3 -1.6**
MSZ Milford Sound 48.89 145 P P 07 41 52.8 +0.9
MOKO MOKOCHONG 48.93 315 *eP* **P 07 41 49.1 -3.6**
MOKO IAmb IAmb 07 41 55.2
comp=Z,79nm,0.6s
MOKO *i* S **S 07 48 52.2 -0.8**
MOKO *eS* **S 07 48 52.2 -0.8**
BRDH Bariadhala 48.93 309 S S 07 48 46.2 -6.5
comp=Z,65nm,0.3s,baz=218,slow=19,SNR=1.3
BRDH LR LR 08 05 15.4
comp=Z,2µm,21.1s,baz=120,slow=39
DCZ Deep Cove 48.95 147 IAmb IAmb 07 41 54.0
comp=Z,200nm,0.9s
DCZ Deep Cove 48.95 147 P P 07 41 52.4 0.0
JCZ Jackson Bay 49.02 144 P P 07 41 53.9 +0.9
comp=Z,842nm,1.0s
JCZ Jackson Bay 49.02 144 P P 07 41 54.0 +1.0
PYZ Puysegur Point 49.15 148 P P 07 41 54.3 +0.4
comp=Z,375nm,1.0s
PYZ Puysegur Point 49.15 148 P P 07 41 53.3 -0.6
SILR SILCHAR 49.24 312 *eP* **P 07 41 52.4 -2.4**
SILR IAmb IAmb 07 41 57.4
comp=Z,84nm,1.0s
SILR *eS* **S 07 48 55.3 -1.7**
BJI2 Beijing 49.28 345 P P 07 41 56.3 +1.4
BJI2 S **S 07 48 54.5 -2.6**
BJI2 pmax pmax
comp=Z,100nm,0.9s
BJI2 pmax pmax
comp=Z,220nm,3.5s
BJI2 LR LR
comp=Z,630nm,24.6s
BJI2 LR LR
comp=Z,570nm,24.4s
BJI2 LR LR
comp=Z,1µm,35.3s
BJT Baijiatuau 49.28 345 P P 07 41 56.4 +1.5
comp=Z,249nm,1.3s
FOZ Fox Glacier 49.30 143 P P 07 41 55.2 +0.2
JORH JORHAT 49.37 315 *eP* **P 07 41 54.7 -1.1**
JORH IAmb IAmb 07 41 57.4
comp=Z,42nm,0.8s
JORH *eS* **S 07 48 55.9 -2.9**
MLZ Mavora Lakes 49.42 146 IAmb IAmb 07 41 57.3
comp=Z,130nm,0.8s
MLZ Mavora Lakes 49.42 146 P P 07 41 55.8 -0.3
GRZ Great Barrier 49.47 132 P P 07 41 57.6 +1.1
QRZ Quartz Range 49.53 139 P P 07 41 57.3 +0.4
comp=Z,405nm,1.2s
QRZ Quartz Range 49.53 139 P P 07 41 57.7 +0.8
DSZ Denniston Nort 49.54 140 P P 07 41 57.6 +0.6
SNY Shenyang 49.59 353 ⇓P **P 07 41 58.5 +1.3**
SNY S **S 07 48 59.8 -1.6**
SNY pmax pmax
comp=Z,170nm,1.0s
SNY pmax pmax
comp=Z,400nm,3.5s
SNY LR LR
comp=Z,810nm,24.2s
SNY LR LR
comp=Z,2µm,24.1s
SNY LR LR
comp=Z,4µm,24.9s
WVZ Waitaha Valley 49.60 142 P P 07 41 57.3 0.0
WKZ Wanaka 49.60 145 IAmb IAmb 07 41 58.8
comp=Z,166nm,0.8s
WKZ Wanaka 49.60 145 P P 07 41 57.5 +0.1
KHEZ Kahui Hut 49.78 136 P P 07 42 00.5 +1.6
comp=Z,528nm,1.3s
LKBA Tubou, Lakemba 49.81 107 P P 07 41 58.8 -0.5
comp=Z,8.8nm,0.9s
INZ Inchbonnie 49.84 141 P P 07 41 58.7 -0.5
AGT Agartala 49.90 310 *eP* **P 07 41 59.3 -0.5**
AGT IAmb IAmb 07 42 02.8
comp=Z,86nm,0.3s
AGT *eS* **S 07 49 04.9 -1.3**
PSTR Posyet 49.93 360 *d i* P **P 07 42 01.3 +1.5**
ITAN ITANAGAR 49.99 315 *eP* **P 07 41 59.0 -1.6**
ITAN IAmb IAmb 07 42 02.8
comp=Z,55nm,0.7s
ITAN *eS* **S 07 49 06.1 -1.4**
EAZ Earnscleugh 50.01 145 P P 07 41 60.0 -0.4
HIZ Hauiti 50.01 135 P P 07 42 01.8 +1.2
LBZ Lake Benmore 50.01 144 P P 07 42 00.5 0.0
TOZ Tahuroa Road 50.13 134 P P 07 42 02.8 +1.3
ZIRO ZIRO 50.14 316 *eP* **P 07 41 59.1 -2.8**
ZIRO ⇓*eS* **S 07 49 07.9 -2.1**
RPZ Rata Peaks 50.15 143 LR LR 08 01 16.6
comp=Z,5µm,21.7s,baz=74,slow=34
RPZ Rata Peaks 50.15 143 P P 07 42 02.0 +0.5
comp=Z,730nm,0.9s
RPZ Rata Peaks 50.15 143 P P 07 42 01.6 +0.1
VRZ Vera Road 50.22 136 P P 07 42 03.1 +1.0
THZ Tophouse 50.25 140 P P 07 42 02.5 +0.1
NNZ Nelson 50.29 139 P P 07 42 03.1 +0.5
TEZP TEZPUR 50.33 314 *eP* **P 07 42 01.3 -1.8**
TEZP IAmb IAmb 07 42 05.1
comp=Z,78nm,0.6s
TEZP *eS* **S 07 49 11.3 -0.8**
LZDM Lanzhou Array 50.36 331 P P 07 42 04.3 +0.8
comp=Z,55nm,0.5s,baz=172,slow=12,SNR=116
LZDM ScP **ScP 07 47 12.9 -0.1**
comp=Z,28nm,0.8s,baz=172,slow=5.5,SNR=6.7
LZDM S **S 07 49 07.3 -5.7**
comp=Z,0.9nm,0.3s,baz=167,slow=20,SNR=1.3
LZDM LR LR 08 04 23.1
comp=Z,824nm,21.5s,baz=125,slow=37
comp=Z,55nm,0.5s
SHL Shillong 50.37 312 IAmb IAmb 07 42 22.7
comp=Z,144nm,0.8s
SHL Shillong 50.37 312 *eP* **P 07 42 02.4 -1.3**
SHL IAmb IAmb 07 42 05.2
comp=Z,82nm,0.9s
SHL *eS* **S 07 49 10.8 -2.5**
SHL Shillong 50.37 312 P P 07 42 03.5 -0.2
SNR=50
LTZ Lake Taylor 50.38 141 IAmb IAmb 07 42 10.9
comp=Z,125nm,0.9s
LTZ Lake Taylor 50.38 141 P P 07 42 03.4 +0.1
LZH Lanzhou 50.39 331 P P 07 42 04.8 +1.2
LZH ScP **ScP 07 47 14.0 +1.1**
LZH S **S 07 49 10.8 -2.3**
LZH sS sS 07 49 39.5 +1.6
LZH pmax pmax
comp=Z,98nm,1.5s
LZH pmax pmax
comp=Z,320nm,5.2s
LZH LR LR
comp=Z,2µm,14.8s
LZH LR LR
comp=Z,940nm,14.8s
LZH LR LR
comp=Z,1µm,14.1s
VLA Vladivostok 50.41 1 *c i P* **P 07 42 05.2 +1.9**
VLA pmax pmax
comp=Z,286nm,1.1s
VLA MLR MLR
comp=Z,2µm,18.0s
TLZ Tolley Road 50.41 134 P P 07 42 04.8 +1.1
KMRZ Kaimai 50.49 134 P P 07 42 05.2 +0.9
TMZ Timaru 50.49 143 P P 07 42 04.0 -0.1
OXZ Oxford 50.53 142 P P 07 42 03.7 -0.8
ODZ Otahua Downs 50.66 144 IAmb IAmb 07 42 06.4
comp=Z,166nm,1.0s
ODZ Otahua Downs 50.66 144 ⇑P **P 07 42 05.1 -0.3**
ODZ Otahua Downs 50.66 144 P P 07 42 04.4 -1.0
WAZ Wanganui 50.66 136 P P 07 42 06.0 +0.5
TGRZ Tauranga 50.67 133 P P 07 42 06.5 +0.9
PKVZ Pokaka 50.70 136 P P 07 42 06.3 +0.5
SYZ Scrubby Hill 50.71 147 P P 07 42 05.5 -0.1
comp=Z,141nm,0.9s
WATZ Wairara 50.71 135 P P 07 42 07.3 +1.4
KATZ Kakaramea 50.80 135 P P 07 42 07.9 +1.2
NGZ Ngauruhoe 50.83 135 P P 07 42 07.5 +0.6
FWVZ Far West T-bar 50.83 135 P P 07 42 07.4 +0.4
OTVZ Oturere 50.87 135 P P 07 42 07.9 +0.7
GUWA GUWAHATI 50.88 313 *eP* **P 07 42 06.2 -1.0**
GUWA IAmb IAmb 07 42 08.8
comp=Z,66nm,1.1s
GUWA *eS* **S 07 49 18.9 -0.9**
ETVZ East Tongariro 50.88 135 P P 07 42 07.9 +0.6
WNVZ Wahianoa 50.89 136 P P 07 42 08.4 +1.0
GVZ Greta Valley S 50.96 141 P P 07 42 07.9 +0.2
KHZ Kahutara 50.99 140 P P 07 42 07.7 -0.2
comp=Z,478nm,0.9s
KHZ Kahutara 50.99 140 ⇑P **P 07 42 07.5 -0.4**
KHZ Kahutara 50.99 140 P P 07 42 07.5 -0.4
MQZ McQueen's Vall 51.11 142 P P 07 42 08.4 -0.3
HHSZ Highcliff Hill 51.12 145 P P 07 42 09.5 +0.7
SNZO South Karori 51.20 138 P P 07 42 08.3 -1.2
comp=Z,305nm,1.0s
SNZO South Karori 51.20 138 P P 07 42 08.6 -0.8
SNZO South Karori 51.20 138 ⇓P **P 07 42 08.7 -0.8**
SNZO South Karori 51.20 138 P P 07 42 08.5 -0.9
MRHZ Matea Rd 51.25 135 P P 07 42 10.1 +0.1
WIZ White Island 51.26 133 P P 07 42 10.8 +0.8
CN2 Changchun 51.34 355 P P 07 42 11.0 +0.6
CN2 sP pP 07 42 28.8 +3.7
CN2 ScP **ScP 07 47 16.0 -0.6**
CN2 S **S 07 49 27.3 +1.7**
CN2 sS sS 07 49 48.5 -1.9
CN2 pmax pmax
comp=Z,90nm,0.7s
CN2 pmax pmax
comp=Z,520nm,5.5s
CN2 LR LR
comp=Z,1µm,24.0s
CN2 LR LR
comp=Z,1µm,24.0s
CN2 LR LR
comp=Z,5µm,30.0s
BHW Baring Head 51.36 138 P P 07 42 09.6 -1.1
HHC Hu-ho-hao-te 51.39 341 ⇑*i* P **P 07 42 13.5 +2.5**
HHC S **S 07 49 26.5 -0.2**
HHC sS sS 07 49 54.0 +2.5
HHC ScS **ScS 07 51 54.3 -2.3**
HHC pmax pmax
comp=Z,120nm,1.2s
HHC pmax pmax
comp=Z,870nm,5.0s
HHC LR LR
comp=Z,740nm,19.0s
HHC LR LR
comp=Z,570nm,15.2s
HHC LR LR
comp=Z,1µm,20.8s
BKZ Black Stump Fm 51.44 135 P P 07 42 10.8 -0.6
comp=Z,645nm,0.9s
BKZ Black Stump Fm 51.44 135 P P 07 42 11.1 -0.3
TSZ Takapari Road 51.47 136 P P 07 42 11.0 -0.5
MRZ Mangatainoka R 51.48 137 P P 07 42 10.6 -1.0
USRK Ussuriysk Ar. 51.49 1 P P 07 42 12.3 +0.8
comp=Z,75nm,0.6s,baz=178,slow=7.4,SNR=110
comp=Z,75nm,0.6s
URZ Urewera 51.50 134 LR LR 08 03 56.3
comp=Z,4µm,19.6s,baz=307,slow=36
URZ Urewera 51.50 134 P P 07 42 11.9 +0.1
comp=Z,183nm,0.7s
URZ Urewera 51.50 134 ⇓P **P 07 42 11.3 -0.5**
URZ Urewera 51.50 134 P P 07 42 11.3 -0.5
RTZ Ruatahuna 51.56 134 P P 07 42 12.1 -0.2
TAWA Tawang 51.57 314 *eP* **P 07 42 12.4 -0.5**
TAWA IAmb IAmb 07 42 16.4
comp=Z,67nm,0.3s
TAWA *eS* **S 07 49 28.5 -1.7**
PLWZ Palliser 51.69 138 P P 07 42 11.9 -1.3
HAZ Te Kaha 51.78 133 P P 07 42 13.6 -0.2
MWZ Matawai 51.83 134 P P 07 42 13.5 -0.8
BTO2 Baotou 51.86 340 *eP* **P 07 42 16.3 +1.8**
BTO2 pP **pP 07 42 28.5 -0.6**
BTO2 sP **sP 07 42 34.0 -1.3**
BTO2 S **S 07 49 31.3 -1.9**
BTO2 sS **sS 07 49 57.5 -0.5**
BTO2 pmax pmax
comp=Z,100nm,1.2s
BTO2 pmax pmax
comp=Z,1µm,7.3s
BTO2 LR LR
comp=Z,3µm,18.3s
BTO2 LR LR
comp=Z,4µm,15.7s
BTO2 LR LR
comp=Z,3µm,23.5s
MDJ Mudanjiang 51.91 359 P P 07 42 16.0 +1.3
comp=Z,194nm,0.9s
MDJ Mudanjiang 51.91 359 IAmb IAmb 07 42 17.3
comp=Z,111nm,0.7s
MDJ Mudanjiang 51.91 359 P P 07 42 16.0 +1.3
MDJ S **S 07 49 29.8 -3.7**
MDJ sS sS 07 49 58.5 +0.1
MDJ ScS **ScS 07 52 00.8 +1.0**
MDJ pmax pmax
comp=Z,180nm,0.9s
MDJ LR LR
comp=Z,2µm,23.8s
MDJ LR LR
comp=Z,2µm,24.0s
MDJ LR LR
comp=Z,2µm,23.0s
BFZ Birch Farm 51.94 137 P P 07 42 14.2 -0.9
comp=Z,223nm,0.8s
BFZ Birch Farm 51.94 137 IAmb IAmb 07 42 15.4
comp=Z,178nm,0.9s
BFZ Birch Farm 51.94 137 P P 07 42 14.0 -1.1
DHUB DHUBRI 52.03 311 *eP* **P 07 42 15.3 -0.5**
DHUB *eS* **S 07 49 34.8 -0.8**
PXZ Pawanui 52.08 136 P P 07 42 15.6 -0.5
MXZ Matakaoa Point 52.09 132 P P 07 42 16.2 0.0
comp=Z,310nm,1.1s
MXZ Matakaoa Point 52.09 132 P P 07 42 16.0 -0.2
HALK Hakmana 52.10 284 ⇑P **P 07 42 15.8 -0.8**
KNZ Kokohu 52.22 134 P P 07 42 16.3 -0.8
PUZ Puketiti 52.25 133 P P 07 42 17.0 -0.4
PALK Pallekele 52.38 285 LR LR 08 06 59.3
comp=Z,3µm,19.0s,baz=112,slow=39
PALK Pallekele 52.38 285 P P 07 42 17.7 -1.0
PALK IAmb IAmb 07 42 20.9
comp=Z,104nm,1.1s
PALK Pallekele 52.38 285 *i* P **P 07 42 17.8 -1.0**
SNR=19
PALK Pallekele 52.38 285 *c i* P **P 07 42 18.0 -0.8**
PALK pmax pmax
comp=Z,174nm,1.3s
PALK MLR MLR
comp=Z,5µm,20.0s
PALK Pallekele 52.38 285 P P 07 42 17.4 -1.4
PALK S **S 07 49 37.5 -3.5**
PALK Pallekele 52.38 285 P P 07 42 19.4 +0.6
BWNR Bhubaneshwar 52.40 303 *eP* **P 07 42 17.5 -1.2**
BWNR IAmb IAmb 07 42 22.1
comp=Z,65nm,0.6s
BWNR *eS* **S 07 49 40.4 -0.6**
ASAJ Asahikawa 52.44 10 P P 07 42 20.1 +1.5
comp=Z,115nm,0.7s,baz=227,slow=11,SNR=93
ASAJ LR LR 08 02 07.3
comp=Z,2µm,21.7s,baz=202,slow=33
comp=Z,115nm,0.7s
JKA Kamikawa-asahi 52.44 10 IAmb IAmb 07 42 21.9
comp=Z,144nm,0.9s
RAO Raoul Island 52.49 121 LR LR 08 02 12.3
comp=Z,3µm,21.4s,baz=288,slow=33
TEY Ternei 52.55 5⇓ *eP* **P 07 42 20.7 +1.4**
TEY pmax pmax
comp=N,70nm,0.8s
TEY pmax pmax
comp=E,10.0nm,0.8s
TEY pmax pmax
comp=Z,110nm,0.8s
MALK Mahakanadarawa 52.83 286 P P 07 42 21.4 -0.7
MALK Mahakanadarawa 52.83 286 ⇑P **P 07 42 21.7 -0.3**
XLT XiLinHaoTe 52.96 346 *eP* **P 07 42 24.0 +1.4**
XLT S **S 07 49 46.0 -2.1**
XLT sS sS 07 50 11.3 +1.5
XLT pmax pmax
comp=Z,140nm,1.2s
XLT LR LR
comp=Z,1µm,22.1s
XLT LR LR
comp=Z,2µm,22.6s
YUK Yuzh-Kuril'sk 53.02 13 *c i* P **P 07 42 24.1 +1.3**
BNX BinXian 53.12 357 ⇑P **P 07 42 24.5 +0.9**
BNX sP **sP 07 42 44.0 -0.6**
BNX S **S 07 49 46.5 -3.5**
BNX pmax pmax
comp=Z,110nm,1.4s
BNX pmax pmax
comp=Z,640nm,5.2s
BNX LR LR
comp=Z,2µm,22.6s
BNX LR LR
comp=Z,980nm,19.4s
BNX LR LR
comp=Z,4µm,26.5s
JPG JALPAIGURI 53.27 311 *eP* **P 07 42 24.1 -0.9**
JPG IAmb IAmb 07 42 27.0
comp=Z,74nm,0.3s
JPG *eS* **S 07 49 52.4 -0.3**
LSA Lhasa 53.34 316 P P 07 42 24.0 -2.1
LSA S **S 07 49 48.0 -6.5**
LSA pmax pmax
comp=Z,120nm,1.0s
LSA LR LR
comp=Z,1µm,19.4s
LSA LR LR
comp=Z,620nm,21.6s
LSA LR LR
comp=Z,2µm,23.4s
SHBG Sahibganj 53.39 309 *eP* **P 07 42 25.2 -0.7**
SHBG IAmb IAmb 07 42 28.7
comp=Z,63nm,0.8s
SHBG *eS* **S 07 49 53.4 -0.9**
VIS Vishakhapatnam 53.45 298 *eP* **P 07 42 25.7 -0.7**
VIS IAmb IAmb 07 42 29.3
comp=Z,55nm,0.6s
VIS *eS* **S 07 49 54.6 -0.7**
GTK Tadong 53.78 312 *eP* **P 07 42 27.6 -1.4**
GTK IAML 07 42 31.3

	comp=Z,63nm,1.0s									
GTK					*e*S		**S**		**07 49 59.1**	**-0.8**
RAGD	**RAYAGADA**	**53.96**	**300**		*e*P		**P**		**07 42 29.6**	**-0.6**
RAGD					IAmb		IAmb		07 42 33.9	
	comp=Z,74nm,0.8s									
RAGD					*e*S		**S**		**07 50 03.0**	**+0.7**
BOK	**Bokaro**	**54.03**	**307**		*e*P		**P**		**07 42 29.8**	**-0.8**
BOK					IAmb		IAmb		07 42 31.9	
	comp=Z,89nm,1.7s									
BOK					*e*S		**S**		**07 50 02.4**	**-0.7**
MDRS	**Chennai**	**54.52**	**292**		*e*P		**P**		**07 42 33.9**	**-0.5**
MDRS					IAmb		IAmb		07 42 36.7	
	comp=Z,83nm,0.8s									
MDRS					*e*S		**S**		**07 50 09.2**	**-0.6**
KUR	**Kuril'sk**	**54.63**	**14**		*e*P		**P**		**07 42 34.5**	**-0.1**
KUR					*e*PPP		PPP		07 45 50.1	
KUR					*e*S		**S**		**07 50 09.1**	**-1.2**
KUR					pmax		pmax			
	comp=Z,347nm,1.1s									
KUR					MLR		MLR			
	comp=Z,2µm,23.0s									
JHSG	**JHARSUGUGA**	**54.79**	**303**		*e*P		**P**		**07 42 35.9**	**-0.4**
JHSG					IAmb		IAmb		07 42 44.8	
	comp=Z,82nm,0.9s									
JHSG					*e*S		**S**		**07 50 13.0**	**-0.4**
GTA2	**Gaotai**	**55.05**	**331**		P		**P**		**07 42 39.5**	**+1.5**
GTA2					ScP		**ScP**		**07 47 34.0**	**+0.9**
GTA2					S		**S**		**07 50 13.5**	**-3.1**
GTA2					sS		sS		07 50 43.0	+4.7
GTA2					ScS		**ScS**		**07 52 21.3**	**-1.3**
GTA2					pmax		pmax			
	comp=Z,180nm,1.0s									
GTA2					pmax		pmax			
	comp=Z,1µm,7.2s									
GTA2					LR		LR			
	comp=Z,1µm,23.1s									
GTA2					LR		LR			
	comp=Z,2µm,21.1s									
GTA2					LR		LR			
	comp=Z,3µm,23.5s									
YSS	**Yuzhno-Sakhali**	**55.21**	**10**		P		**P**		**07 42 40.0**	**+1.2**
	comp=Z,298nm,0.8s									
YSS	**Yuzhno-Sakhali**	**55.21**	**10**		P		**P**		**07 42 38.7**	**0.0**
YSS	**Yuzhno-Sakhali**	**55.21**	**10**	*de*	P		**P**		**07 42 39.3**	**+0.5**
YSS					*e**PP		**pP**		**07 42 50.3**	**-3.2**
YSS					*e**SP		**sP**		**07 42 58.5**	**-1.2**
YSS					*e*				07 44 39.2	
YSS					*e*S		**S**		**07 50 14.7**	**-3.4**
YSS					*e**SS		**pS**		**07 50 35.3**	**+2.7**
YSS					*e*SS		**SS**		**07 53 56.5**	**-6.7**
YSS					pmax		pmax			
	comp=N,400nm,4.5s									
YSS					pmax		pmax			
	comp=Z,600nm,4.5s									
YSS					pmax		pmax			
	comp=E,400nm,4.2s									
YSS					pmax		pmax			
	comp=N,130nm,0.6s									
YSS					pmax		pmax			
	comp=Z,220nm,0.6s									
YSS					pmax		pmax			
	comp=E,70nm,0.7s									
YSS					smax		smax			
	comp=N,1µm,7.9s									
YSS					smax		smax			
	comp=E,900nm,7.8s									
YSS	**Yuzhno-Sakhali**	**55.21**	**10**	⇑	P		**P**		**07 42 39.5**	**+0.7**
YSS	**Yuzhno-Sakhali**	**55.21**	**10**		P		**P**		**07 42 40.0**	**+1.2**
GOMU	**GeErMu**	**55.26**	**324**		P		**P**		**07 42 40.5**	**+0.7**
GOMU					S		**S**		**07 50 22.0**	**+2.1**
GOMU					pmax		pmax			
	comp=E,40nm,0.9s									
GOMU					LR		LR			
	comp=E,1µm,22.7s									
GOMU					LR		LR			
	comp=E,2µm,21.9s									
VJD	**Vijayawada**	**55.35**	**296**		*e*P		**P**		**07 42 38.6**	**-1.7**
VJD					IAmb		IAmb		07 42 48.7	
	comp=Z,85nm,0.8s									
VJD					*e*S		**S**		**07 50 20.7**	**-0.2**
EVN	**Everest**	**55.45**	**311**	⇑	P		**P**		**07 42 41.0**	**-0.6**
SALM	**Salem**	**56.02**	**289**		*e*P		**P**		**07 42 46.3**	**+1.1**
SALM					IAmb		IAmb		07 42 47.8	
	comp=Z,87nm,0.8s									
SALM					*e*S		**S**		**07 50 30.8**	**+0.8**
KOD	**Kodaikanal**	**56.26**	**288**		*e*P		**P**		**07 42 47.5**	**+0.3**
KOD					IAmb		IAmb		07 42 50.2	
	comp=Z,110nm,0.5s									
KOD					*e*S		**S**		**07 50 33.7**	**0.0**
BLSP	**Bilaspur**	**56.27**	**303**		*e*P		**P**		**07 42 46.0**	**-0.8**
BLSP					IAmb		IAmb		07 42 48.9	
	comp=Z,88nm,0.5s									
BLSP					*e*S		**S**		**07 50 32.4**	**-0.7**
AFI	**Afiamalu**	**56.36**	**102**		LR		LR		08 06 52.1	
	comp=Z,2µm,19.8s,baz=278,slow=36									
AFI	**Afiamalu**	**56.36**	**102**		P		**P**		**07 42 47.6**	**-0.1**
AFI					IAmb		IAmb		07 43 12.7	
	comp=Z,303nm,1.4s									
AFI	**Afiamalu**	**56.36**	**102**		P		**P**		**07 42 47.6**	**-0.1**
AFI					pmax		pmax			
	comp=Z,303nm,1.5s									
KLR	**Kul'dur**	**56.52**	**0**		P		**P**		**07 42 49.4**	**+1.3**
	comp=Z,58nm,0.7s,baz=211,slow=3.7,SNR=111									
KLR					S		**S**		**07 50 32.3**	**-3.0**
	comp=Z,2.2nm,0.9s,baz=54,slow=19,SNR=1.5									
KLR					LR		LR		08 03 34.2	
	comp=Z,1µm,21.8s,baz=180,slow=32									
	comp=Z,58nm,0.7s									
UGL	**Uglegorsk**	**57.17**	**9**	⇓	*i*P		**P**		**07 42 54.7**	**+2.0**
UGL					*e*S		**S**		**07 50 39.6**	**-4.4**
UGL					pmax		pmax			
	comp=Z,600nm,0.9s									
UGL					pmax		pmax			
	comp=Z,1µm,1.2s									
UGL					smax		smax			
	comp=E,2µm,10.0s									
UGL					smax		smax			
	comp=N,3µm,8.5s									
UGL					MLR		MLR			
	comp=E,900nm,15.0s									
UGL					MLR		MLR			
	comp=N,2µm,17.0s									
UGL					MLR		MLR			
	comp=Z,2µm,17.0s									
HIA	**Hailar**	**57.42**	**351**		P		**P**		**07 42 56.0**	**+1.5**
	comp=Z,61nm,1.3s									
HYB	**Hyderabad**	**57.54**	**296**		*e*P		**P**		**07 42 55.5**	**-0.4**
HYB					IVmB_BB				07 42 56.5	
	comp=Z,3µm,2.8s									
HYB					*es*P		**sP**		**07 43 17.9**	**+1.0**
HYB					*e*PcP		**PcP**		**07 43 49.5**	**+0.5**
HYB					*e*PP		**PP**		**07 45 05.2**	**+1.0**
HYB					*e*S		**S**		**07 50 50.9**	**+0.8**
HYB					IVMs_BB		IVMs_BB		08 03 17.3	
	comp=Z,993nm,33.1s									
HEH	**HeiHe**	**57.63**	**357**		*e*P		**P**		**07 42 56.5**	**+0.6**
HEH					pP		**pP**		**07 43 08.3**	**-2.5**
HEH					S		**S**		**07 50 47.0**	**-3.0**
HEH					ScS		**ScS**		**07 52 36.0**	**-4.4**
HEH					pmax		pmax			
	comp=Z,160nm,1.4s									
HEH					pmax		pmax			
	comp=Z,850nm,4.6s									
HEH					LR		LR			
	comp=Z,1µm,19.0s									
HEH					LR		LR			
	comp=Z,1µm,20.6s									
HEH					LR		LR			
	comp=Z,2µm,23.8s									
HILR	**Hailar Array B**	**57.70**	**351**		P		**P**		**07 42 57.5**	**+1.0**
	comp=Z,37nm,0.5s,baz=159,slow=9.1,SNR=46									
HILR					LR		LR		08 09 23.3	
	comp=Z,917nm,21.2s,baz=125,slow=38									
HILR					PKP2bc				08 12 50.8	
	comp=Z,5.2nm,0.7s,baz=48,slow=2.1,SNR=7.2									
	comp=Z,37nm,0.5s									
ALBI	**Allahabad**	**58.01**	**306**		*e*P		**P**		**07 42 58.9**	**-0.2**
ALBI					IAmb		IAmb		07 43 00.7	
	comp=Z,72nm,0.3s									
ALBI					*e*S		**S**		**07 50 55.4**	**-0.5**
CTZ	**Chatham Island**	**58.03**	**137**		P		**P**		**07 42 59.6**	**+0.7**
	comp=Z,165nm,1.3s									
H08S2	**Diego Garcia H**	**58.07**	**266**		P		**P**		**07 43 01.6**	**+2.2**
	baz=53,slow=8.8,SNR=25									
H08S3	**Diego Garcia H**	**58.08**	**266**		P		**P**		**07 43 00.9**	**+1.4**
	baz=53,slow=8.8,SNR=144									
H08S1	**Diego Garcia H**	**58.09**	**266**		P		**P**		**07 43 00.1**	**+0.5**
	baz=53,slow=8.8,SNR=13									
DGAR	**Diego Garcia**	**58.13**	**266**		P		**P**		**07 43 02.5**	**+2.4**
DGAR	**Diego Garcia**	**58.13**	**266**		P		**P**		**07 43 02.5**	**+2.4**
DGAR					pmax		pmax			
	comp=Z,1µm,0.7s									
DGAR	**Diego Garcia**	**58.13**	**266**		P		**P**		**07 43 03.3**	**+3.2**
DGAR	**Diego Garcia**	**58.13**	**266**		P		**P**		**07 43 03.4**	**+3.2**
DGAR					x		x		07 43 19.4	
DGAR					x		x		07 43 24.7	
GRNR	**Gornyy**	**58.23**	**4**	⇓	*i*P		**P**		**07 43 01.9**	**+1.7**
GRNR					pmax		pmax			
	comp=N,20nm,1.2s									
GRNR					pmax		pmax			
	comp=Z,50nm,1.1s									
KAAM	**Kaadhehdhoo**	**58.50**	**275**		P		**P**		**07 43 04.6**	**+1.8**
NGP	**Nagpur**	**58.52**	**300**		*e*P		**P**		**07 43 02.0**	**-0.8**
NGP					IAmb		IAmb		07 43 04.4	
	comp=Z,89nm,1.0s									
NGP					*e*S		**S**		**07 51 02.6**	**-0.2**
TYV	**Tymovskoe**	**59.00**	**9**		*e*P		**P**		**07 43 07.4**	**+2.0**
TYV					*e*S		**S**		**07 51 09.8**	**+2.0**
TYV					pmax		pmax			
	comp=Z,93nm,1.1s									
TYV					pmax		pmax			
	comp=Z,800nm,4.9s									
TYV					smax		smax			
	comp=E,19nm,1.5s									
TYV					smax		smax			
	comp=N,2µm,5.7s									
TYV					smax		smax			
	comp=E,800nm,5.7s									
ULN	**Ulaanbaatar**	**59.11**	**341**		P		**P**		**07 43 08.4**	**+2.0**
ULN	**Ulaanbaatar**	**59.11**	**341**		P		**P**		**07 43 08.5**	**+2.0**
ULN					pmax		pmax			
	comp=Z,216nm,0.7s									
ULN	**Ulaanbaatar**	**59.11**	**341**		P		**P**		**07 43 09.2**	**+2.7**
ULN					S		**S**		**07 51 10.9**	**+1.2**
ULN	**Ulaanbaatar**	**59.11**	**341**	⇑	P		**P**		**07 43 08.5**	**+2.0**
ULN	**Ulaanbaatar**	**59.11**	**341**		P		**P**		**07 43 08.2**	**+1.7**
BRCI	**Bahraich**	**59.23**	**308**	‖	*e*P		**P**		**07 43 04.6**	**-2.9**
BRCI					IAmb		IAmb		07 43 10.8	
	comp=Z,90nm,0.6s									
BRCI					*e*S		**S**		**07 51 10.8**	**-0.9**
SONM	**Songino Array**	**59.29**	**341**		P		**P**		**07 43 09.6**	**+1.8**
	comp=Z,84nm,0.7s,baz=155,slow=6.8,SNR=179									
SONM					S		**S**		**07 51 04.9**	**-7.2**
	comp=Z,0.9nm,0.4s,baz=171,slow=9.9,SNR=1.3									
SONM					PKPPKP		**P'P'df**		**08 12 39.9**	**+2.7**
	comp=Z,2.2nm,0.9s,baz=325,slow=1.8,SNR=6.4									
SONM					PKP2bc		**P'P'bc**		**08 12 47.0**	**-0.7**
	comp=Z,5.6nm,0.9s,baz=343,slow=1.5,SNR=5.1									
	comp=Z,84nm,0.7s									
SONM	**Songino Array**	**59.29**	**341**		P		**P**		**07 43 09.4**	**+1.6**
SONM					IAmb		IAmb		07 43 12.6	
	comp=Z,69nm,0.6s									
HMDM	**Hanimaadhoo**	**59.50**	**282**		P		**P**		**07 43 11.6**	**+2.0**
HMDM	**Hanimaadhoo**	**59.50**	**282**		P		**P**		**07 43 12.1**	**+2.4**
HMDM	**Hanimaadhoo**	**59.50**	**282**	⇑	P		**P**		**07 43 11.3**	**+1.6**
HMDM	**Hanimaadhoo**	**59.50**	**282**		P		**P**		**07 43 12.4**	**+2.7**
	comp=Z,8µmcomp=Z,493nm,1.8s									
AKL	**Akola**	**60.10**	**299**		*e*P		**P**		**07 43 12.6**	**-1.0**
AKL					IAmb		IAmb		07 43 15.2	
	comp=Z,92nm,1.2s									
AKL					*e*S		**S**		**07 51 22.7**	**-0.4**
CASY	**Casey**	**60.37**	**189**		P		**P**		**07 43 15.5**	**+0.8**
CASY	**Casey**	**60.37**	**189**	⇑	P		**P**		**07 43 15.4**	**+0.7**
CASY	**Casey**	**60.37**	**189**		P		**P**		**07 43 15.6**	**+0.8**
CASY					pP		**pP**		**07 43 30.6**	**+0.9**
BHPL	**Bhopal**	**60.73**	**302**		*e*P		**P**		**07 43 17.7**	**-0.3**
BHPL					IAmb		IAmb		07 43 19.5	
	comp=Z,80nm,0.6s									
BHPL					*e*S		**S**		**07 51 28.9**	**-2.2**
NKL	**Nikolayevsk**	**60.98**	**7**		*e*P		**P**		**07 43 20.1**	**+1.1**
NKL					*e*S		**S**		**07 51 33.2**	**0.0**
NKL					pmax		pmax			
	comp=N,323nm,0.9s									
NKL					pmax		pmax			
	comp=E,233nm,1.0s									
NKL					pmax		pmax			
	comp=Z,1µm,1.0s									
NKL					smax		smax			
	comp=E,681nm,9.2s									
NKL					smax		smax			
	comp=N,358nm,9.5s									
ZEA	**Zeya**	**61.11**	**357**		*e*P		**P**		**07 43 21.5**	**+1.6**
ZEA					*e**PP		**sP**		**07 43 40.5**	**-0.6**
ZEA					*e*S		**S**		**07 51 30.9**	**-4.0**
ZEA					*e*				07 53 05.4	
ZEA					pmax		pmax			
	comp=N,100nm,1.4s									
ZEA					pmax		pmax			
	comp=Z,300nm,1.6s									
ZEA					pmax		pmax			
	comp=E,30nm,0.5s									
ZEA					pmax		pmax			
	comp=N,60nm,1.0s									
ZEA					pmax		pmax			
	comp=Z,180nm,0.8s									
ZEA					smax		smax			
	comp=N,600nm,8.1s									
ZEA					smax		smax			
	comp=E,900nm,7.6s									
ZEA					MLR		MLR			
	comp=N,400nm,18.0s									
ZEA					MLR		MLR			
	comp=Z,700nm,18.0s									
CIT	**Chita**	**61.19**	**348**		*e*P		**P**		**07 43 22.0**	**+1.5**
CIT					*e*				07 43 39.8	
CIT					*e*				07 44 02.0	
CIT					*e*				07 45 35.4	
CIT					pmax		pmax			
	comp=Z,128nm,1.4s									
SKR	**Severo-Kuril's**	**61.88**	**18**		*e*P		**P**		**07 43 25.7**	**+0.6**
SKR					*e*S		**S**		**07 51 48.5**	**+3.9**
SKR					pmax		pmax			
	comp=Z,600nm,4.0s									
SKR					MLR		MLR			
	comp=Z,1µm,22.0s									
AGRA	**Agra**	**61.97**	**306**		*e*P		**P**		**07 43 28.2**	**+2.0**
AGRA					*e*S		**S**		**07 51 42.2**	**-4.4**
POO	**Poona**	**62.12**	**295**		*e*P		**P**		**07 43 26.4**	**-1.1**
POO					IAmb		IAmb		07 43 29.1	
	comp=Z,95nm,0.9s									
POO					*e*S		**S**		**07 51 49.0**	**-0.1**
JOSI	**Joshimath**	**62.23**	**310**		*e*P		**P**		**07 43 28.4**	**+0.2**
JOSI					IAmb		IAmb		07 43 34.1	
	comp=Z,264nm,0.8s									
JOSI					*e*S		**S**		**07 51 48.9**	**-1.4**
ZAK	**Zakamensk**	**62.52**	**340**		*e*P		**P**		**07 43 30.7**	**+1.1**
ZAK					*e*				07 51 53.2	
ZAK					pmax		pmax			
	comp=Z,117nm,1.7s									
AYAN	**Aya Nagar**	**63.16**	**307**		*e*P		**P**		**07 43 34.1**	**-0.1**
AYAN					IAmb		IAmb		07 43 35.1	
	comp=Z,133nm,0.6s									
AYAN					*e*S		**S**		**07 51 59.4**	**-2.4**
DDI	**Dehra Dun**	**63.27**	**309**		*e*P		**P**		**07 43 33.1**	**-1.8**
DDI					IAmb		IAmb		07 43 38.4	
	comp=Z,228nm,0.7s									
DDI					*e*S		**S**		**07 52 01.1**	**-1.9**
TLY	**Talaya**	**63.52**	**341**		S		**S**		**07 52 03.9**	**-1.3**
	baz=202,slow=19									
TLY	**Talaya**	**63.52**	**341**		P		**P**		**07 43 36.9**	**+0.9**
TLY	**Talaya**	**63.52**	**341**	*c*	*i*P		**P**		**07 43 38.0**	**+1.9**
TLY					pmax		pmax			
	comp=Z,138nm,1.8s									
TLY					MLR		MLR			
	comp=Z,864nm,17.0s									
TLY	**Talaya**	**63.52**	**341**		P		**P**		**07 43 38.5**	**+2.5**
TLY					S		**S**		**07 52 07.5**	**+2.2**
TLY	**Talaya**	**63.52**	**341**		P		**P**		**07 43 38.3**	**+2.3**
KUDL	**Kundal**	**63.52**	**306**		*e*P		**P**		**07 43 34.8**	**-1.7**
KUDL					IAmb		IAmb		07 43 37.9	
	comp=Z,272nm,0.5s									
KUDL					*e*S		**S**		**07 52 06.2**	**0.0**
KLP	**Kalpa**	**63.68**	**311**		IAmb		IAmb		07 43 18.5	
	comp=Z,239nm,0.3s									
KLP					*e*P		**P**		**07 43 38.2**	**+0.2**
KLP					*e*S		**S**		**07 52 06.8**	**-1.9**
IRK	**Irkutsk**	**63.81**	**342**		*e*P		**P**		**07 43 38.9**	**+1.0**
IRK					*e*S		**S**		**07 52 11.1**	**+2.3**
IRK					pmax		pmax			
	comp=Z,108nm,2.1s									
SMLA	**Simla**	**64.31**	**310**		*e*P		**P**		**07 43 42.6**	**+0.9**
SMLA					IAmb		IAmb		07 43 46.8	
	comp=Z,274nm,0.5s									
SMLA					*e*S		**S**		**07 52 14.8**	**-1.0**
AJM	**Ajmer**	**64.32**	**304**		*e*P		**P**		**07 43 39.2**	**-2.6**
AJM					IAmb		IAmb		07 43 44.4	
	comp=Z,129nm,0.5s									
AJM					*e*S		**S**		**07 52 15.4**	**-0.8**
MOY	**Mondy**	**64.38**	**340**		*e*P		**P**		**07 43 43.7**	**+1.8**
MOY					pmax		pmax			
	comp=Z,198nm,1.8s									
WMQ	**Urumqi**	**64.44**	**327**	⇑	P		**P**		**07 43 44.0**	**+1.7**
WMQ					S		**S**		**07 52 16.8**	**-0.3**
WMQ					ScS		**SKSac**		**07 53 30.0**	**-1.9**
WMQ					pmax		pmax			
	comp=Z,220nm,1.1s									
WMQ					pmax		pmax			
	comp=Z,1µm,3.7s									
WMQ					LR		LR			
	comp=Z,2µm,20.1s									
WMQ					LR		LR			
	comp=Z,1µm,14.3s									
WMQ					LR		LR			
	comp=Z,2µm,21.9s									
PEA0B	**Petropavlovsk-**	**64.48**	**17**	*d*	*i*P		**P**		**07 43 44.1**	**+1.8**
PETK	**Petropavlovsk-**	**64.48**	**17**		P		**P**		**07 43 43.8**	**+1.5**
	comp=Z,212nm,0.7s,baz=165,slow=5.3,SNR=204									
PETK					PKP2bc		**P'P'bc**		**08 12 36.5**	**+2.1**
	comp=Z,5.8nm,1.0s,baz=159,slow=6.0,SNR=3.5									
	comp=Z,212nm,0.7s									
PETK	**Petropavlovsk-**	**64.48**	**17**		P		**P**		**07 43 43.6**	**+1.3**
PET	**Petropavlovsk**	**64.69**	**18**		P		**P**		**07 43 45.1**	**+1.4**
	comp=Z,629nm,1.0s									
PET	**Petropavlovsk**	**64.69**	**18**		P		**P**		**07 43 45.2**	**+1.6**
PET					IAmb		IAmb		07 43 46.5	
	comp=Z,238nm,1.1s									
PET	**Petropavlovsk**	**64.69**	**18**		*e*P		**P**		**07 43 45.2**	**+1.6**
PET					*e**PP		**sP**		**07 44 03.7**	**-1.3**
PET					*e*S		**S**		**07 52 22.0**	**+2.3**
PET					*e**SS		sS		07 52 55.1	+11
PET					pmax		pmax			
	comp=Z,228nm,1.1s									
PET	**Petropavlovsk**	**64.69**	**18**		P		**P**		**07 43 44.7**	**+1.0**
	comp=Z,156nm,1.0s									
KNGR	**Kungurtug, Tuv**	**64.79**	**337**	⇓	*e*P		**P**		**07 43 46.1**	**+1.6**
KNGR					pmax		pmax			
	comp=Z,58nm,0.7s									
BHK	**Bhakra**	**65.03**	**310**		*e*P		**P**		**07 43 43.4**	**-3.0**
BHK					IAmb		IAmb		07 43 49.4	
	comp=Z,104nm,0.5s									
BHK					*e*S		**S**		**07 52 18.9**	**-5.9**
DHRM	**DHARAMSHALA**	**65.48**	**310**		*e*P		**P**		**07 43 49.4**	**-0.2**
DHRM					IAmb		IAmb		07 43 53.9	
	comp=Z,194nm,0.6s									
DHRM					*e*S		**S**		**07 52 28.5**	**-2.1**
ALCI	**Alchi Leh**	**65.74**	**313**		*e*P		**P**		**07 43 50.6**	**-0.8**
ALCI					IAmb		IAmb		07 43 56.0	
	comp=Z,103nm,0.3s									
ALCI					*e*S		**S**		**07 52 33.1**	**-0.9**
TSSA	**Tissa**	**65.86**	**311**		*e*P		**P**		**07 43 50.8**	**-1.1**
THN	**Thein Dam**	**65.98**	**310**		*e*P		**P**		**07 43 53.0**	**+0.5**
THN					IAmb		IAmb		07 43 55.9	
	comp=Z,232nm,1.1s									
THN					*e*S		**S**		**07 52 35.0**	**-1.3**
BKNR	**BIKANER**	**66.06**	**305**		*e*P		**P**		**07 43 50.9**	**-2.1**
BKNR					IAmb		IAmb		07 43 54.0	
	comp=Z,167nm,0.9s									
BKNR					*e*S		**S**		**07 52 37.5**	**+0.1**
JMU	**Jammu**	**66.83**	**310**		*e*P		**P**		**07 43 58.4**	**+0.5**
JMU					IAmb		IAmb		07 44 01.6	
	comp=Z,582nm,0.6s									
BHUJ	**Bhuj**	**67.38**	**299**		*e*P		**P**		**07 44 00.8**	**-0.8**
BHUJ					IAmb		IAmb		07 44 03.2	
	comp=Z,135nm,1.0s									
BHUJ					*e*S		**S**		**07 52 53.0**	**-0.5**
WUS	**Wushi**	**67.89**	**320**		IAmb		IAmb		07 44 09.5	
	comp=Z,174nm,1.1s									
ZSN	**Zaisan**	**68.30**	**328**		*e*P		**P**		**07 44 08.7**	**+1.8**
ZSN	**Zaisan**	**68.30**	**328**		*e*P		**P**		**07 44 08.7**	**+1.8**
NIL	**Nilore**	**68.40**	**311**		P		**P**		**07 44 08.9**	**+1.1**
NIL	**Nilore**	**68.40**	**311**		P		**P**		**07 44 08.9**	**+1.1**
NIL					pmax		pmax			
	comp=Z,1µm,2.0s									
DGZ	**Jazzator, Alta**	**68.49**	**331**	*c*	*i*P		**P**		**07 44 09.7**	**+1.5**
DGZ					pmax		pmax			
	comp=Z,133nm,0.8s									
MA2	**Magadan**	**68.70**	**11**		LR		LR		08 14 24.6	
	comp=Z,664nm,19.3s,baz=206,slow=36									
MA2	**Magadan**	**68.70**	**11**		P		**P**		**07 44 10.5**	**+1.4**
	comp=Z,158nm,1.9s									
MA2	**Magadan**	**68.70**	**11**		P		**P**		**07 44 10.5**	**+1.4**
MA2					IAmb		IAmb		07 44 12.1	
	comp=Z,122nm,1.0s									
MA2	**Magadan**	**68.70**	**11**	*d*	*i*P		**P**		**07 44 10.6**	**+1.4**
MA2					pmax		pmax			
	comp=Z,148nm,1.1s									
MA2					MLR		MLR			
	comp=Z,519nm,15.0s									
MA2	**Magadan**	**68.70**	**11**		P		**P**		**07 44 10.3**	**+1.2**
	comp=Z,3µmcomp=Z,154nm,1.9s									
MA2	**Magadan**	**68.70**	**11**		P		**P**		**07 44 10.7**	**+1.6**
MA2					x		x		07 44 30.0	
SHLS	**Shalkode**	**68.81**	**322**	*c*	*i*P		**P**		**07 44 10.3**	**0.0**
SHLS					pmax		pmax			
	comp=Z,119nm,0.7s									
SHLS	**Shalkode**	**68.81**	**322**	⇑	*i*P		**P**		**07 44 10.3**	**0.0**
	comp=Z,119nm,0.7s									
PDGK	**Podgornoye**	**68.89**	**322**		P		**P**		**07 44 12.2**	**+1.4**
UZB	**Uzynbulak**	**69.07**	**322**	*c*	*i*P		**P**		**07 44 13.5**	**+1.6**
UZB		

	comp=N,247nm,3.8s							
YAK					pmax	pmax		
	comp=E,232nm,4.9s							
YAK					smax	smax		
	comp=N,435nm,2.2s							
YAK					smax	smax		
	comp=E,261nm,1.6s							
SATY	**Saty**	**69.40**	**321**	*c*	*i*P	**P**	**07 44 15.7**	**+1.7**
SATY					pmax	pmax		
	comp=Z,95nm,0.8s							
SATY	**Saty**	**69.40**	**321**	⇑	*i*P	**P**	**07 44 15.7**	**+1.7**
	comp=Z,95nm,0.8s							
KDJ	**Kajisay**	**69.68**	**320**		IAmb	IAmb	07 44 19.6	
	comp=Z,141nm,0.6s							
SHEM	**Shemya Is, Ala**	**70.25**	**26**		LR	LR	08 12 35.0	
	comp=Z,446nm,20.1s,baz=226,slow=34							
SMY	**Shemya**	**70.25**	**26**		P	**P**	**07 44 20.7**	**+1.9**
	comp=Z,361nm,0.7s							
TNSS	**Tian-Shan**	**70.30**	**321**		*e*P	**P**	**07 44 21.1**	**+1.3**
TNSS	**Tian-Shan**	**70.30**	**321**		*e*P	**P**	**07 44 21.2**	**+1.3**
MDOK	**Medeo**	**70.30**	**321**		*e*P	**P**	**07 44 21.2**	**+1.7**
MDOK					*e*S	**S**	**07 53 29.9**	**+2.2**
MDOK	**Medeo**	**70.30**	**321**		*e*P	**P**	**07 44 21.2**	**+1.7**
MDOK					*e*S	**S**	**07 53 29.9**	**+2.2**
ULHL	**Ulahol**	**70.34**	**320**		P	**P**	**07 44 21.7**	**+1.8**
	SNR=80							
ARXS	**Arharly**	**70.38**	**322**		*e*P	**P**	**07 44 21.3**	**+1.4**
AAA	**Alma-Ata**	**70.41**	**321**		*e*P	**P**	**07 44 21.8**	**+1.7**
AAA					pmax	pmax		
	comp=Z,71nm,0.5s							
AAA	**Alma-Ata**	**70.41**	**321**		*e*P	**P**	**07 44 21.9**	**+1.7**
	comp=Z,71nm,0.5s							
TDK	**Taldyqorghan**	**70.46**	**323**	*c*	*i*P	**P**	**07 44 22.1**	**+1.8**
TDK					*e*S	**S**	**07 53 31.7**	**+2.5**
TDK					pmax	pmax		
	comp=Z,167nm,1.1s							
TDK	**Taldyqorghan**	**70.46**	**323**	⇑	*i*P	**P**	**07 44 22.2**	**+1.8**
	comp=Z,167nm,1.1s							
TDK					*e*S	**S**	**07 53 31.8**	**+2.5**
BOOM	**Boomskoye usch**	**70.66**	**320**		IAmb	IAmb	07 44 26.7	
	comp=Z,198nm,0.8s							
TKM2	**Tokmak 2**	**71.09**	**320**		P	**P**	**07 44 26.3**	**+1.8**
	SNR=112							
KUU	**Kurty**	**71.12**	**321**		*e*P	**P**	**07 44 26.1**	**+1.8**
KUU					pmax	pmax		
	comp=Z,82nm,0.6s							
KUU	**Kurty**	**71.12**	**321**		*e*P	**P**	**07 44 26.2**	**+1.8**
	comp=Z,82nm,0.6s							
KBK	**Karagaybulak**	**71.37**	**320**		P	**P**	**07 44 28.3**	**+2.2**
	SNR=51							
UCH	**Uchtor**	**71.44**	**319**		P	**P**	**07 44 29.1**	**+2.3**
	SNR=125							
AAK	**Ala-Archa**	**71.66**	**320**		P	**P**	**07 44 29.9**	**+2.1**
	SNR=99							
AAK	**Ala-Archa**	**71.66**	**320**		P	**P**	**07 44 29.9**	**+2.1**
	comp=Z,56nm,0.4s,baz=140,slow=5.0,SNR=100							
AAK					S	**S**	**07 53 42.0**	**-1.4**
	comp=Z,2.2nm,0.7s,baz=107,slow=17,SNR=7.9							
	comp=Z,56nm,0.4s							
AAK	**Ala-Archa**	**71.66**	**320**		P	**P**	**07 44 29.7**	**+1.9**
AAK	**Ala-Archa**	**71.66**	**320**	*i*	P	**P**	**07 44 29.8**	**+2.0**
	SNR=120							
AAK	**Ala-Archa**	**71.66**	**320**		P	**P**	**07 44 29.9**	**+2.1**
AAK					S	**S**	**07 53 45.7**	**+2.2**
CHMS	**Chumysh**	**71.67**	**320**		P	**P**	**07 44 29.2**	**+1.5**
	SNR=35							
AMKA	**Amchitka**	**71.76**	**29**		IAmb	IAmb	07 44 30.7	
	comp=Z,147nm,0.7s							
VNDA	**Vanda**	**71.80**	**173**		P	**P**	**07 44 28.1**	**+0.3**
	comp=Z,80nm,0.8s,baz=317,slow=6.4,SNR=42							
VNDA					LR	LR	08 14 43.6	
	comp=Z,2µm,20.5s,baz=342,slow=35							
	comp=Z,80nm,0.8s							
VNDA	**Vanda**	**71.80**	**173**		P	**P**	**07 44 28.8**	**+1.0**
VNDA					IAmb	IAmb	07 44 29.7	
	comp=Z,148nm,1.1s							
VNDA	**Vanda**	**71.80**	**173**		P	**P**	**07 44 28.8**	**+1.0**
VNDA					pmax	pmax		
	comp=Z,148nm,1.1s							
KBL	**Kabul**	**71.95**	**310**		P	**P**	**07 44 31.1**	**+1.3**
KBL					IAmb	IAmb	07 44 33.5	
	comp=Z,177nm,0.7s							
KBL	**Kabul**	**71.95**	**310**		P	**P**	**07 44 31.1**	**+1.3**
KBL					pmax	pmax		
	comp=Z,177nm,0.7s							
KBL	**Kabul**	**71.95**	**310**		P	**P**	**07 44 31.6**	**+1.8**
KBL					S	**S**	**07 53 45.7**	**-1.6**
USP	**Ospenovka**	**71.96**	**320**		P	**P**	**07 44 31.2**	**+1.8**
	SNR=135							
SGDS	**Sogindy**	**71.97**	**320**		*e*P	**P**	**07 44 31.2**	**+1.7**
SGDS					*e*S	**S**	**07 53 49.2**	**+2.4**
DRK	**Karamyk**	**71.99**	**316**		IAmb	IAmb	07 44 51.8	
	comp=Z,164nm,0.7s							
SEY	**Seymchan**	**72.12**	**10**		LR	LR	08 16 24.0	
	comp=Z,1µm,20.4s,baz=206,slow=36							
SEY	**Seymchan**	**72.12**	**10**	*d*	*i*P	**P**	**07 44 31.9**	**+2.0**
SEY					pmax	pmax		
	comp=Z,219nm,0.9s							
SEY					MLR	MLR		
	comp=Z,812nm,21.0s							
EKS2	**Erkin-Say**	**72.13**	**319**		P	**P**	**07 44 32.8**	**+2.2**
	SNR=70							
ZALV	**Zalesovo Beam**	**72.54**	**333**		P	**P**	**07 44 33.5**	**+0.9**
	comp=Z,195nm,0.9s,baz=108,slow=4.8,SNR=23							
ZALV					S	**S**	**07 53 49.1**	**-3.7**
	comp=Z,4.6nm,0.8s,baz=127,slow=17,SNR=7.3							
ZALV					PKPPKP	**P'P'df**	**08 12 15.2**	**-0.2**
	comp=Z,4.0nm,0.8s,baz=338,slow=2.3,SNR=3.8							
ZALV					LR	LR	08 19 51.1	
	comp=Z,564nm,20.0s,baz=144,slow=39							
	comp=Z,195nm,0.9s							
BTK	**Batken**	**72.92**	**316**		IAmb	IAmb	07 44 41.4	
	comp=Z,118nm,0.8s							
CHGR	**Chuyangaron**	**73.50**	**314**	*c*	*i*P	**P**	**07 44 39.9**	**+1.2**
CHGR					pmax	pmax		
	comp=Z,230nm,0.7s							
CHGR					MLR	MLR		
	comp=Z,2µm,18.0s							
KURBB	**Kurchatov Arra**	**73.53**	**328**		P	**P**	**07 44 40.2**	**+1.7**
	comp=Z,98nm,0.6s,baz=128,slow=4.5,SNR=76							
KURBB					S	**SKiKP**	**07 53 58.2**	**-6.0**
	comp=Z,10nm,1.2s,baz=114,slow=14,SNR=9.3							
KURBB					PKPPKP	**P'P'df**	**08 12 14.8**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=298,slow=2.0,SNR=4.5							
	comp=Z,98nm,0.6s							
KURK	**Kurchatov**	**73.54**	**328**		P	**P**	**07 44 40.2**	**+1.7**
KURK	**Kurchatov**	**73.54**	**328**		IAmb	IAmb	07 44 41.7	
	comp=Z,202nm,1.0s							
KURK	**Kurchatov**	**73.54**	**328**		P	**P**	**07 44 40.2**	**+1.7**
RER	**Riviere de l'E**	**73.72**	**250**		P	**P**	**07 44 43.1**	**+2.7**
SHAA	**Shahritus**	**73.81**	**313**		P	**P**	**07 44 40.6**	**+0.1**
SHAA					IAmb	IAmb	07 45 39.8	
	comp=Z,145nm,0.8s							
DZA	**Taraz**	**73.83**	**319**		*e*P	**P**	**07 44 42.2**	**+1.7**
DZA	**Taraz**	**73.83**	**319**		*e*P	**P**	**07 44 42.3**	**+1.7**
ADK	**Adak**	**74.06**	**31**		P	**P**	**07 44 43.1**	**+1.5**
	comp=Z,121nm,0.8s							
ADK	**Adak**	**74.06**	**31**		P	**P**	**07 44 43.0**	**+1.5**
ADK					IAmb	IAmb	07 44 49.4	
	comp=Z,150nm,0.7s							
ADK	**Adak**	**74.06**	**31**		P	**P**	**07 44 43.0**	**+1.5**
ADK					pmax	pmax		
	comp=Z,150nm,0.7s							
IUG	**Iuzhnay**	**74.36**	**317**	*c*	*i*P	**P**	**07 44 45.4**	**+1.7**
IUG					*e*S	**S**	**07 54 16.3**	**+2.2**
IUG					pmax	pmax		
	comp=Z,136nm,0.9s							
IUG	**Iuzhnay**	**74.36**	**317**	⇑	*i*P	**P**	**07 44 45.4**	**+1.7**
	comp=Z,136nm,0.9s							
IUG					*e*S	**S**	**07 54 16.3**	**+2.2**
KK31	**Karatay Array**	**74.46**	**319**		P	**P**	**07 44 45.4**	**+1.2**
KK31					IAmb	IAmb	07 44 47.8	
	comp=Z,119nm,0.9s							
KK31	**Karatay Array**	**74.46**	**319**	*i*	P	**P**	**07 44 45.4**	**+1.2**
KKAR	**Karatay Array**	**74.46**	**319**		P	**P**	**07 44 45.5**	**+1.3**
KKAR	**Karatay Array**	**74.46**	**319**		P	**P**	**07 44 45.5**	**+1.3**
CHM	**Chimkent**	**74.72**	**317**		*e*P	**P**	**07 44 47.5**	**+1.8**
CHM	**Chimkent**	**74.72**	**317**		*e*P	**P**	**07 44 47.5**	**+1.8**
MAW	**Mawson**	**74.88**	**202**		P	**P**	**07 44 48.3**	**+2.3**
	comp=Z,31nm,1.0s							
MAW	**Mawson**	**74.88**	**202**		P	**P**	**07 44 47.4**	**+1.4**
	comp=Z,72nm,0.7s,baz=90,slow=5.7,SNR=23							
MAW					LR	LR	08 15 27.0	
	comp=Z,2µm,21.2s,baz=68,slow=34							
	comp=Z,72nm,0.7s							
BRLS	**Boroldaу**	**74.88**	**318**		*e*P	**P**	**07 44 48.1**	**+1.5**
BRLS					pmax	pmax		
	comp=Z,83nm,0.8s							
BRLS	**Boroldaу**	**74.88**	**318**		*e*P	**P**	**07 44 48.2**	**+1.6**
	comp=Z,83nm,0.8s							
MSEY	**Mahe Island**	**75.19**	**267**		P	**P**	**07 44 49.6**	**+0.6**
MSEY	**Mahe Island**	**75.19**	**267**	*i*	P	**P**	**07 44 50.4**	**+1.3**
	SNR=13							
MSEY	**Mahe Island**	**75.19**	**267**		P	**P**	**07 44 49.6**	**+0.6**
MSEY					pmax	pmax		
	comp=Z,90nm,0.9s							
MSEY	**Mahe Island**	**75.19**	**267**		P	**P**	**07 44 51.0**	**+2.0**
MSEY					S	**S**	**07 54 24.9**	**+0.6**
KIP	**Kipapa**	**75.19**	**66**	⇓	*e*P	**P**	**07 44 49.7**	**+0.9**
KIP					pmax	pmax		
	comp=Z,304nm,1.6s							
NGCH	**Negor - Chabah**	**75.42**	**299**		P	**P**	**07 44 52.6**	**+2.5**
	SNR=49							
NGCH					S	**S**	**07 54 25.5**	**-0.8**
JLN	**Jalan Bani Buh**	**76.13**	**295**		P	**P**	**07 44 56.0**	**+1.8**
	SNR=39							
JLN					S	**S**	**07 54 33.1**	**-1.1**
WBK	**Wadi Bani Khal**	**76.64**	**295**		P	**P**	**07 44 58.9**	**+1.8**
	SNR=45							
WBK					S	**S**	**07 54 39.3**	**-0.6**
POHA	**Pohakuloa**	**77.06**	**68**		P	**P**	**07 44 59.0**	**-0.7**
HMH	**Humu'ula Sheep**	**77.07**	**68**		P	**P**	**07 45 00.5**	**+0.6**
MHTO	**MHTO**	**77.16**	**293**		P	**P**	**07 45 01.2**	**+1.2**
	SNR=68							
MHTO					S	**S**	**07 54 43.5**	**-2.0**
H04S1	**CROZET ISLANDS**	**77.17**	**224**		P	**P**	**07 45 01.9**	**+2.5**
	baz=74,slow=6.2,SNR=3.0							
H04S2	**CROZET ISLANDS**	**77.19**	**224**		P	**P**	**07 45 01.9**	**+2.4**
	baz=74,slow=6.2,SNR=3.4							
H04S3	**CROZET ISLANDS**	**77.19**	**224**		P	**P**	**07 45 01.8**	**+2.3**
	baz=74,slow=6.2,SNR=3.3							
H04N2	**CROZET ISLANDS**	**77.22**	**224**		P	**P**	**07 45 03.9**	**+4.4**
H04N3	**CROZET ISLANDS**	**77.23**	**224**		P	**P**	**07 45 03.9**	**+4.2**
H04N1	**CROZET ISLANDS**	**77.23**	**224**		P	**P**	**07 45 03.9**	**+4.3**
DQM	**DQM**	**77.31**	**292**		P	**P**	**07 45 02.6**	**+1.7**
	SNR=21							
DQM					S	**S**	**07 54 45.3**	**-1.9**
JMDO	**Jabal Madar**	**77.36**	**295**		P	**P**	**07 45 03.0**	**+1.9**
	SNR=23							
JMDO					S	**S**	**07 54 45.1**	**-2.5**
TBI	**Tubuai**	**77.38**	**112**	*e*	P	**P**	**07 45 01.8**	**+0.6**
	comp=Z,326nm,1.0s							
TBI	**Tubuai**	**77.38**	**112**	*e*	P	**P**	**07 45 02.1**	**+0.9**
	comp=Z,2µm,30.5s							
TBI				*e*	PP	**PP**	**07 47 58.6**	**+2.4**
	comp=Z,992nm,29.8s							
TBI				*e*	S	**S**	**07 54 56.1**	**+8.3**
	comp=Z,9µm,27.2s							
TBI				*e*	SS	**SS**	**07 59 47.0**	**-0.4**
	comp=Z,6µm,27.8s							
TBI				*e*	LQ	LQ	08 05 40.9	
	comp=Z,20µm,39.0s							
TBI				*e*	LR	LR	08 08 52.1	
	comp=Z,30µm,30.0s							
TBI				*e*	LR	LR	08 08 56.2	
	comp=Z,6µm,30.0s							
SMDO	**Samad**	**77.57**	**296**		P	**P**	**07 45 04.0**	**+1.6**
	SNR=33							
SMDO					S	**S**	**07 54 48.2**	**-1.9**
PAE	**Paea**	**77.60**	**106**	*e*	PKIKP	**P**	**07 45 03.7**	**+1.2**
	comp=Z,64nm,1.1s							
BIDO	**Bidbid**	**77.61**	**296**		P	**P**	**07 45 04.3**	**+1.8**
	SNR=108							
BIDO					S	**S**	**07 54 50.3**	**0.0**
PPT2	**Papeete2**	**77.61**	**106**	*e*	PKIKP	**P**	**07 45 00.6**	**-2.1**
	comp=Z,662nm,28.0s							
PPT2				*e*	P	PcP	07 45 04.1	-8.6
	comp=Z,123nm,1.0s							
PPT2				*e*	PP	**PP**	**07 47 57.6**	**-0.7**
	comp=Z,192nm,25.2s							
PPT2				*e*	S	S	07 55 00.2	+10
	comp=Z,619nm,23.8s							
PPT2				*e*	SS	**SS**	**07 59 53.0**	**+1.7**
	comp=Z,2µm,28.0s							
PPT2				*e*	LQ	LQ	08 05 48.2	
	comp=Z,5µm,29.2s							
PPT2				*e*	LR	LR	08 09 02.7	
	comp=Z,5µm,29.8s							
PPT2				*e*	LR	LR	08 09 06.0	
	comp=Z,8µm,29.2s							
PPT	**Papeete**	**77.61**	**106**		P	**P**	**07 45 04.3**	**+1.7**
	comp=Z,90nm,0.9s,baz=319,slow=4.5,SNR=12							
PPT					LR	LR	08 15 50.4	
	comp=Z,537nm,21.4s,baz=262,slow=33							
	comp=Z,90nm,0.9s							
PPTF	**Pamatai, Papee**	**77.62**	**106**		P	**P**	**07 45 04.8**	**+2.1**
	comp=Z,146nm,0.9s							
PPTF	**Pamatai, Papee**	**77.62**	**106**		P	**P**	**07 45 03.6**	**+0.9**
PPTF					IAmb	IAmb	07 45 17.9	
	comp=Z,167nm,1.0s							
TIAR	**Tiarei**	**77.83**	**106**	*e*	PKIKP	**P**	**07 45 05.2**	**+1.4**
	comp=Z,215nm,1.0s							
TVO	**Taravao**	**77.90**	**107**	*e*	PKIKP	**P**	**07 45 05.7**	**+1.4**
	comp=Z,41nm,0.8s							
BSY	**Bisya**	**78.26**	**295**		P	**P**	**07 45 07.6**	**+1.5**
	SNR=18							
BSY					S	**S**	**07 54 54.8**	**-2.6**
HOQ	**Hoqain**	**78.35**	**296**		S	**S**	**07 54 57.6**	**-0.7**
JASK	**Jask - Hormozg**	**78.41**	**298**		S	**S**	**07 54 59.9**	**+1.0**
SHAO	**Shalim**	**78.68**	**290**	*i*	P	**P**	**07 45 09.6**	**+1.1**
	SNR=82							
SHAO	**Shalim**	**78.68**	**290**		P	**P**	**07 45 10.0**	**+1.5**
	SNR=38							
SHAO					S	**S**	**07 54 58.8**	**-3.2**
TIXI	**Tiksi**	**79.02**	**359**		LR	LR	08 19 53.4	
	comp=Z,1µm,21.9s,baz=185,slow=36							
TIXI	**Tiksi**	**79.02**	**359**		P	**P**	**07 45 09.8**	**+0.6**
TIXI					IAmb	IAmb	07 45 29.2	
	comp=Z,101nm,0.7s							
TIXI	**Tiksi**	**79.02**	**359**		P	**P**	**07 45 09.8**	**+0.6**
TIXI					pmax	pmax		
	comp=Z,101nm,0.7s							
BVA0	**Borovoye Array**	**79.09**	**328**		P	**P**	**07 45 10.7**	**+0.7**
BVAR	**Borovoye Array**	**79.09**	**328**		P	**P**	**07 45 11.0**	**+1.0**
	comp=Z,99nm,0.8s,baz=129,slow=6.6,SNR=152							
BVAR					S	**S**	**07 55 01.8**	**-3.3**
	comp=Z,1.5nm,0.7s,baz=90,slow=19,SNR=2.3							
BVAR					PKKPbc	**PKKPbc**	**08 04 03.3**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=328,slow=2.0,SNR=4.6							
	comp=Z,99nm,0.8s							
BORK	**Borovoye**	**79.14**	**328**		P	**P**	**07 45 11.3**	**+1.0**
BORK					IAmb	IAmb	07 45 13.4	
	comp=Z,153nm,0.9s							
BORK	**Borovoye**	**79.14**	**328**		P	**P**	**07 45 11.3**	**+1.0**
BORK					pmax	pmax		
	comp=Z,153nm,0.9s							
BORK	**Borovoye**	**79.14**	**328**		P	**P**	**07 45 11.3**	**+1.0**
BORK					PcP	**PcP**	**07 45 19.0**	**+0.5**
BORK					pP	**pP**	**07 45 26.2**	**+0.3**
SOHO	**SOHO**	**79.17**	**296**	*i*	P	**P**	**07 45 12.0**	**+1.0**
	SNR=21							
SOHO	**SOHO**	**79.17**	**296**		P	**P**	**07 45 13.0**	**+1.9**
SOHO					S	**S**	**07 55 04.9**	**-2.1**
DMTO	**DMTO**	**79.25**	**290**		P	**P**	**07 45 13.0**	**+1.4**
	SNR=23							
DMTO					S	**S**	**07 55 05.2**	**-2.9**
BILL	**Bilibino**	**79.37**	**13**		P	**P**	**07 45 11.7**	**+0.5**
BILL	**Bilibino**	**79.37**	**13**	*d*	*e*P	**P**	**07 45 12.0**	**+0.8**
BILL					pmax	pmax		
	comp=Z,14nm,0.6s							
BILL					MLR	MLR		
	comp=Z,833nm,21.0s							
PMOR	**Pomariorio Ree**	**79.42**	**104**		*e*P	**P**	**07 45 13.7**	**+1.1**
	comp=Z,300nm,1.4s							
MDH	**Madha**	**79.65**	**297**	*i*	P	**P**	**07 45 13.6**	**0.0**
	SNR=9.2							
MDH	**Madha**	**79.65**	**297**		P	**P**	**07 45 14.1**	**+0.5**
MDH					S	**S**	**07 55 09.8**	**-2.2**
UOSS	**Minazif**	**79.65**	**297**		P	**P**	**07 45 14.3**	**+0.6**
UOSS	**Minazif**	**79.65**	**297**		P	**P**	**07 45 14.1**	**+0.4**
UOSS	**Minazif**	**79.65**	**297**		P	**P**	**07 45 15.1**	**+1.4**
UOSS					S	**S**	**07 55 09.4**	**-2.7**
HATD	**Hatta, Dubai**	**79.68**	**297**	*i*	P	**P**	**07 45 14.8**	**+0.9**
	SNR=17							
HATD	**Hatta, Dubai**	**79.68**	**297**		P	**P**	**07 45 16.0**	**+2.1**
	SNR=13							
HATD					S	**S**	**07 55 11.4**	**-1.1**
ASHO	**Ashiyiah**	**79.72**	**297**	*i*	P	**P**	**07 45 16.0**	**+1.9**
	SNR=8.2							
ASHO	**Ashiyiah**	**79.72**	**297**		S	**S**	**07 55 10.7**	**-2.2**
SBV	**Sambava**	**79.77**	**258**		P	**P**	**07 45 16.2**	**+1.7**
	SNR=7.6							
MSFE	**Esma-Masafi**	**79.78**	**297**	*i*	P	**P**	**07 45 16.2**	**+1.8**
	SNR=16							
MASF	**Masafi**	**79.78**	**297**		P	**P**	**07 45 16.5**	**+2.0**
	SNR=19							
MASF					S	**S**	**07 55 12.9**	**-0.7**
BANOM	**Banah**	**79.79**	**298**	*i*	P	**P**	**07 45 15.9**	**+1.5**
	SNR=12							
BANOM	**Banah**	**79.79**	**298**		P	**P**	**07 45 16.8**	**+2.3**
BANOM					S	**S**	**07 55 12.9**	**-0.7**
ALNE	**Al Ain**	**79.85**	**296**	*i*	P	**P**	**07 45 16.0**	**+1.2**
	SNR=26							
ALNE	**Al Ain**	**79.85**	**296**		P	**P**	**07 45 16.3**	**+1.6**
	SNR=13							
ALNE					S	**S**	**07 55 12.3**	**-2.0**
RBK	**Rabkut**	**79.90**	**289**		P	**P**	**07 45 16.7**	**+1.5**
	SNR=43							
RBK					S	**S**	**07 55 11.9**	**-3.2**
SHME	**Shamm**	**79.96**	**298**	*i*	P	**P**	**07 45 16.9**	**+1.6**
	SNR=27							
SHME	**Shamm**	**79.96**	**298**		P	**P**	**07 45 17.3**	**+2.0**
	SNR=8.9							
SHME					S	**S**	**07 55 13.9**	**-1.4**
UMZA	**Um Al Zommool**	**80.08**	**295**		P	**P**	**07 45 17.4**	**+1.3**
UMZA					S	**S**	**07 55 14.4**	**-2.3**
SPIA	**Saint Paul Isl**	**80.09**	**28**		P	**P**	**07 45 17.3**	**+2.0**
	baz=239							
NAZ	**Nazwa, Dubai**	**80.14**	**297**	*i*	P	**P**	**07 45 17.3**	**+1.0**
	SNR=10							
NAZ	**Nazwa, Dubai**	**80.14**	**297**		P	**P**	**07 45 18.3**	**+1.9**
NAZ					S	**S**	**07 55 16.2**	**-1.1**
FAQ	**Al Faqa, Dubai**	**80.14**	**297**	*i*	P	**P**	**07 45 17.3**	**+1.0**
	SNR=19							
FAQ	**Al Faqa, Dubai**	**80.14**	**297**		P	**P**	**07 45 17.7**	**+1.4**
	SNR=7.8							
FAQ					S	**S**	**07 55 15.7**	**-1.6**
DOK	**Doka**	**80.19**	**290**		P	**P**	**07 45 17.4**	**+0.8**
	SNR=50							
DOK					P	**P**	**07 45 17.7**	**+1.0**
DOK					S	**S**	**07 55 13.5**	**-4.5**
UMQ	**Umm Al-Quwin**	**80.26**	**297**		P	**P**	**07 45 18.7**	**+1.8**
UMQ					S	**S**	**07 55 20.5**	**+2.1**
UNV	**Unalaska Valle**	**80.35**	**32**		IAmb	IAmb	07 45 45.8	
	comp=Z,148nm,1.0s							
UNV	**Unalaska Valle**	**80.35**	**32**		P	**P**	**07 45 18.4**	**+1.6**
	baz=243,SNR=10							
ASUD	**Al Ashush, Dub**	**80.35**	**297**	*i*	P	**P**	**07 45 19.0**	**+1.5**
	SNR=12							
ASUD	**Al Ashush, Dub**	**80.35**	**297**		P	**P**	**07 45 19.4**	**+1.9**
WHFO	**Wadi Hawf**	**80.39**	**290**		P	**P**	**07 45 18.6**	**+0.8**
	SNR=84							
WHFO					S	**S**	**07 55 15.9**	**-4.3**
AJN	**Ajban**	**80.64**	**296**	*i*	P	**P**	**07 45 19.8**	**+0.8**
	SNR=8.3							
AJN	**Ajban**	**80.64**	**296**		P	**P**	**07 45 20.4**	**+1.4**
AJN					S	**S**	**07 55 19.7**	**-2.8**
ABTO	**Aybut**	**80.72**	**289**		P	**P**	**07 45 21.2**	**+1.6**
	SNR=64							
ABTO					S	**S**	**07 55 19.6**	**-4.2**
LVA	**Lava Point**	**80.74**	**32**		IAmb	IAmb	07 45 21.5	
	comp=Z,140nm,0.8s							
AKUT	**Akutan**	**80.86**	**32**		P	**P**	**07 45 21.7**	**+2.2**
	comp=Z,254nm,1.7s							
MZWR	**Madinat Zayed**	**81.46**	**295**		P	**P**	**07 45 25.3**	**+2.0**
MZWR					S	**S**	**07 55 27.8**	**-3.2**
FOMA	**Nahampoana Res**	**81.58**	**246**		P	**P**	**07 45 25.7**	**+1.1**
MZR	**Muzera**	**81.66**	**295**	*i*	P	**P**	**07 45 25.7**	**+1.2**
	SNR=38							
MZR	**Muzera**	**81.66**	**295**		P	**P**	**07 45 26.3**	**+1.8**
	SNR=6.9							
MZR					S	**S**	**07 55 31.2**	**-2.1**
ABPO	**Ambohimpanom**	**81.84**	**252**		P	**P**	**07 45 27.0**	**+1.3**
ABPO	**Ambohimpanom**	**81.84**	**252**		P	**P**	**07 45 27.0**	**+1.3**
ABPO					pmax	pmax		
	comp=Z,49nm,1.0s							
VOI	**Vohitsoka**	**81.99**	**249**		P	**P**	**07 45 27.8**	**+1.4**
VOI					IAmb	IAmb	07 45 29.0	
	comp=Z,115nm,0.8s							
GHWR	**Ruwais**	**82.40**	**295**		P	**P**	**07 45 30.0**	**+1.7**
GHWR					S	**S**	**07 55 38.3**	**-2.4**
FALS	**False Pass**	**82.42**	**32**		P	**P**	**07 45 28.9**	**+1.2**
	comp=Z,327nm,0.9s							
FALS	**False Pass**	**82.42**	**32**		IAmb	IAmb	07 45 55.4	
	comp=Z,193nm,0.9s							
FALS	**False Pass**	**82.42**	**32**		P	**P**	**07 45 29.1**	**+1.5**
	baz=245,SNR=17							
QSPA	**South Pole Qui**	**82.46**	**180**		P	**P**	**07 45 28.2**	**+0.2**
	comp=Z,106nm,1.0s,baz=327,slow=1.7,SNR=74							
QSPA					S	**S**	**07 55 37.6**	**-2.5**
	comp=Z,3.3nm,0.9s,baz=342,slow=20,SNR=6.1							
QSPA					LR	LR	08 22 10.2	
	comp=Z,1µm,20.5s,baz=359,slow=36							
	comp=Z,106nm,1.0s							
QSPA	**South Pole Qui**	**82.46**	**180**		P	**P**	**07 45 28.5**	**+0.5**
QSPA					IAmb	IAmb	07 45 29.5	
	comp=Z,119nm,0.9s							
JRN	**Qarnain Island**	**82.62**	**296**		P	**P**	**07 45 30.7**	**+1.3**
JR

comp=Z,138nm,1.3s
O15K Ungalikthiuk R 85.93 29 P **P** 07 45 47.1 +1.7
baz=248
M15K Kasigluk River 86.10 27 P **P** 07 45 47.8 +1.5
baz=247
L15K Ungalak Mounta 86.13 26 P **P** 07 45 47.9 +1.5
baz=246
N15K Kwethluk River 86.17 28 IAmb IAmb 07 46 18.7
comp=Z,138nm,1.1s
N15K Kwethluk River 86.17 28 P **P** 07 45 48.7 +2.0
baz=248
K15K Wolf Creek Mou 86.36 26 P **P** 07 45 49.8 +2.3
baz=246
R16K Pilot Point 86.46 31 P **P** 07 45 49.2 +1.1
baz=250
G15K Niukluk 86.48 23 P **P** 07 45 49.2 +1.1
baz=244
F15K North Star Dit 86.56 22 P **P** 07 45 49.8 +1.4
baz=243
P16K Nushagak River 86.76 29 P **P** 07 45 51.2 +1.7
baz=250,SNR=20
ARTI Arti 86.81 328 P **P** 07 45 49.5 -0.4
comp=Z,56nm,0.7s,baz=117,slow=2.2,SNR=43
ARTI S **SKSac** 07 56 16.2 +4.2
comp=Z,7.4nm,0.6s,baz=195,slow=20,SNR=6.0
ARTI PKKPbc **PKKPbc** 08 03 45.4 -1.0
comp=Z,2.2nm,0.5s,baz=0.0,slow=4.0,SNR=3.2
comp=Z,56nm,0.7s
ARTI Arti 86.81 328 P **P** 07 45 49.5 -0.4
ARTI IAmb IAmb 07 45 52.6
comp=Z,69nm,0.8s
ARTI Arti 86.81 328*c i*P **P** 07 45 49.4 -0.4
ARTI *PP **pP** 07 46 07.5 +1.9
ARTI 07 49 11.0
ARTI PPP PPP 07 51 08.6
ARTI S **SKSac** 07 56 10.3 -1.7
ARTI SSS SSS 08 05 34.5
ARTI pmax pmax
comp=Z,101nm,1.0s
ARTI MLR MLR
comp=Z,1µm,24.0s
ARTI Arti 86.81 328 P **P** 07 45 49.6 -0.4
N16K Nishlik Lake 86.90 28 P **P** 07 45 52.6 +2.4
baz=249,SNR=21
O16K Kokwok River B 86.91 29 IAmb IAmb 07 46 20.0
comp=Z,95nm,1.1s
O16K Kokwok River B 86.91 29 P **P** 07 45 52.0 +1.8
baz=250
CHIR Chirikof Islan 86.91 33 P **P** 07 45 51.8 +1.4
baz=252
M16K Timber Creek 87.01 27 P **P** 07 45 52.5 +1.8
baz=249
H16K Elim 87.02 23 P **P** 07 45 51.8 +1.1
baz=246,SNR=36
L16K Owhat River 87.03 27 IAmb IAmb 07 46 20.2
comp=Z,125nm,1.1s
L16K Owhat River 87.03 27 P **P** 07 45 52.6 +1.8
baz=248,SNR=28
R17L Mt. Peulik Vol 87.10 31 P **P** 07 45 52.2 +0.9
baz=251
J16K Anvik River 87.14 25 IAmb IAmb 07 46 17.2
comp=Z,95nm,0.9s
J16K Anvik River 87.14 25 P **P** 07 45 53.6 +2.2
baz=247,SNR=48
G16K Koyuk River 87.29 23 P **P** 07 45 53.3 +1.3
baz=246
I17K Unalakleet 87.34 24 IAmb IAmb 07 46 18.2
comp=Z,80nm,0.9s
I17K Unalakleet 87.34 24 P **P** 07 45 54.1 +1.9
baz=247,SNR=29
O17K Koliganek Bris 87.44 29 P **P** 07 45 54.4 +1.6
baz=250,SNR=28
C16K Lisburne Hills 87.49 19 IAmb IAmb 07 45 54.9
comp=Z,60nm,0.9s
C16K Lisburne Hills 87.49 19 P **P** 07 45 53.8 +1.0
baz=243,SNR=46
Q17K Contact Creek 87.54 30 P **P** 07 45 54.0 +0.5
baz=252,SNR=16
P17K Kvichak River 87.57 29 P **P** 07 45 55.2 +1.8
baz=251
TAOE Nuku Hiva Isla 87.62 99 *e*P **P** 07 45 53.7 -1.1
comp=Z,463nm,26.5s
TAOE *e*PP **PP** 07 49 19.6 -1.1
comp=Z,290nm,32.5s
N17K Nushagak Hills 87.65 28 IAmb IAmb 07 46 23.7
comp=Z,89nm,1.1s
N17K Nushagak Hills 87.65 28 P **P** 07 45 56.0 +2.2
baz=250
L17K Donlin 87.70 26 P **P** 07 45 56.2 +2.2
baz=249,SNR=17
ACHA Angle Creek He 87.81 31 IAmb IAmb 07 46 22.8
comp=Z,120nm,1.0s
M17K Holitna River 87.83 27 IAmb IAmb 07 46 20.6
comp=Z,80nm,0.9s
M17K Holitna River 87.83 27 P **P** 07 45 57.1 +2.4
baz=250,SNR=6.0
SII Sitkinak Islan 87.90 32 P **P** 07 45 57.6 +2.5
comp=Z,358nm,1.2s
SII Sitkinak Islan 87.90 32 P **P** 07 45 56.6 +1.5
baz=253,SNR=6.1
K17K Iditarod 87.91 26 IAmb IAmb 07 46 17.9
comp=Z,145nm,1.1s
K17K Iditarod 87.91 26 P **P** 07 45 56.9 +1.9
baz=249
G17K Kiwalik Mounta 87.99 23 P **P** 07 45 56.5 +1.2
baz=247,SNR=76
D17K Noatak River 88.00 20 P **P** 07 45 56.7 +1.4
baz=245,SNR=174
H17K Granite Mounta 88.06 23 IAmb IAmb 07 45 59.9
comp=Z,57nm,0.7s
H17K Granite Mounta 88.06 23 P **P** 07 45 57.2 +1.5
baz=248
Q18K Katmai Hardscr 88.10 30 P **P** 07 45 56.6 +0.4
baz=252,SNR=15
F17K Baldwin Pennin 88.13 22 P **P** 07 45 57.1 +1.2
baz=246
E17K Hotham Inlet 88.18 21 P **P** 07 45 57.5 +1.3
baz=246,SNR=45
RDOG Red Dog Mine 88.21 20 IAmb IAmb 07 45 59.9
comp=Z,49nm,0.7s
RDOG Red Dog Mine 88.21 20 P **P** 07 45 57.5 +1.2
baz=245,SNR=16
P18K Big Mountain, 88.22 29 IAmb IAmb 07 46 24.5
comp=Z,88nm,1.2s
P18K Big Mountain, 88.22 29 P **P** 07 45 57.2 +0.6
baz=252,SNR=6.8
C17K DeLong Mountai 88.30 20 P **P** 07 45 57.9 +1.1
baz=245,SNR=51
N18K Kilae Creek 88.31 28 IAmb IAmb 07 46 28.6
comp=Z,114nm,1.3s
N18K Kilae Creek 88.31 28 P **P** 07 45 58.4 +1.4
baz=252
ELIB Princess Elisa 88.33 197 *d*P **P** 07 45 58.9 +1.8
comp=Z,63nm,0.9s
O18K Koktuh Hills 88.37 29 IAmb IAmb 07 46 27.2
comp=Z,225nm,1.7s
O18K Koktuh Hills 88.37 29 P **P** 07 45 58.7 +1.4
baz=252,SNR=6.0
L18K Granite Mounta 88.44 27 IAmb IAmb 07 46 23.3
comp=Z,70nm,1.0s
L18K Granite Mounta 88.44 27 P **P** 07 45 59.8 +2.3
baz=251
OHAK Old Harbor 88.56 32 P **P** 07 45 59.8 +1.6
comp=Z,117nm,0.9s
OHAK Old Harbor 88.56 32 IAmb IAmb 07 46 27.6
comp=Z,104nm,1.0s
OHAK Old Harbor 88.56 32 P **P** 07 45 59.9 +1.6
baz=254,SNR=6.2
M18K Stony River 88.59 27 P **P** 07 46 00.3 +2.1
baz=252,SNR=13
H18K Honhosa River 88.75 23 P **P** 07 45 59.9 +0.9
baz=249,SNR=24
E18K Tukpahlearik C 88.75 21 IAmb IAmb 07 46 02.5
comp=Z,36nm,0.7s
E18K Tukpahlearik C 88.75 21 P **P** 07 45 60.0 +1.1
baz=247
F18K Selawik 88.78 22 P **P** 07 45 59.8 +0.8
baz=248,SNR=20
J18K Innoko River 88.84 25 IAmb IAmb 07 46 29.5
comp=Z,52nm,1.1s
J18K Innoko River 88.84 25 P **P** 07 46 00.7 +1.3
baz=251
Q19K Cape Douglas, 88.86 30 P **P** 07 46 00.3 +0.6
baz=254
O19K Port Alsworth 88.90 29 P **P** 07 46 00.8 +1.1
baz=253
G18K Tagagawik 88.90 23 P **P** 07 46 00.4 +0.8
baz=249,SNR=25

RAYN Ar Rayn 88.97 294 P **P** 07 46 02.1 +1.2
RAYN Ar Rayn 88.97 294 *i* P **P** 07 46 01.9 +0.9
SNR=108
RAYN Ar Rayn 88.97 294 ⇑P **P** 07 46 03.3 +2.3
RAYN Ar Rayn 88.97 294 P **P** 07 46 02.6 +1.6
RAYN Ar Rayn 88.97 294 P **P** 07 46 02.2 +1.2
N19K Bonanza Creek 89.00 28 IAmb IAmb 07 46 03.9
comp=Z,77nm,1.0s
N19K Bonanza Creek 89.00 28 P **P** 07 46 01.7 +1.3
baz=253
C18K Utukok River 89.03 20 P **P** 07 46 01.0 +0.7
baz=246
KDAK Kodiak Island 89.08 31 LR LR 08 23 09.0
comp=Z,518nm,19.9s,baz=240,slow=34
KDAK Kodiak Island 89.08 31 P **P** 07 46 01.9 +1.3
KDAK Kodiak Island 89.08 31 P **P** 07 46 01.9 +1.3
KDAK pmax pmax
comp=Z,100nm,0.8s
KDAK Kodiak Island 89.08 31 P **P** 07 46 01.6 +1.0
baz=254
GCSA Galena City Sc 89.20 24 P **P** 07 46 02.1 +1.1
baz=250,SNR=15
L19K White Mountain 89.25 27 IAmb IAmb 07 46 31.7
comp=Z,70nm,0.9s
L19K White Mountain 89.25 27 P **P** 07 46 03.0 +1.7
baz=252
P19K Oil Pt 89.27 29 P **P** 07 46 02.3 +0.8
baz=254
Q20K Shuyak Island 89.40 31 P **P** 07 46 03.6 +1.5
baz=255
J19K Poorman 89.47 25 P **P** 07 46 03.9 +1.6
baz=252
F19K Shaleruckik Mo 89.56 22 P **P** 07 46 03.5 +0.8
baz=250,SNR=13
G19K Purcell Mounta 89.59 23 IAmb IAmb 07 46 24.1
comp=Z,42nm,0.8s
G19K Purcell Mounta 89.59 23 P **P** 07 46 03.9 +1.1
baz=250,SNR=46
C19K Lookout Ridge 89.75 20 IAmb IAmb 07 46 07.5
comp=Z,60nm,0.8s
C19K Lookout Ridge 89.75 20 P **P** 07 46 05.0 +1.4
baz=248,SNR=72
ATD Arta Tunnel 89.80 282 LR LR 08 24 30.3
comp=Z,18nm,21.4s,baz=87,slow=34
ATD Arta Tunnel 89.80 282 IAmb IAmb 07 46 09.1
comp=Z,95nm,0.9s
M20K Styx River 89.94 27 IAmb IAmb 07 46 34.3
comp=Z,48nm,0.9s
M20K Styx River 89.94 27 P **P** 07 46 05.7 +1.0
baz=254
K20K Telida 89.94 26 IAmb IAmb 07 46 51.1
comp=Z,71nm,1.2s
K20K Telida 89.94 26 P **P** 07 46 05.6 +1.0
baz=253
E19K Redstone River 89.98 21 IAmb IAmb 07 46 08.3
comp=Z,42nm,0.7s
E19K Redstone River 89.98 21 P **P** 07 46 05.9 +1.2
baz=250
AKT Akhty 90.00 312 *e*P **P** 07 46 06.5 +1.0
AKT *e**PP **sP** 07 46 26.0 -1.5
AKT *e* 07 49 43.2
AKT *e*S **SKSac** 07 56 30.9 -1.1
AKT *e*SP **SP** 07 58 08.0 +7.8
AKT pmax pmax
comp=Z,32nm,0.7s
D19K Kuna River 90.03 20 IAmb IAmb 07 46 08.2
comp=Z,63nm,0.6s
D19K Kuna River 90.03 20 P **P** 07 46 05.8 +0.9
baz=249,SNR=87
HOM Homer 90.05 30 P **P** 07 46 05.5 +0.4
baz=255
N20K Mount Spurr 90.18 28 P **P** 07 46 06.7 +0.9
baz=255
H20K Anotleneega Mo 90.24 24 P **P** 07 46 07.0 +1.1
baz=252,SNR=9.1
F20K Avaraart Lake 90.40 22 P **P** 07 46 07.9 +1.3
baz=252,SNR=34
MAK Makhachkala 90.42 313 *e*P **P** 07 46 05.7 -1.5
MAK *e**PP **pP** 07 46 23.8 +0.7
MAK *e**SP **sP** 07 46 30.9 +1.7
MAK *e* 07 49 42.0
MAK *e*PPP PPP 07 51 43.6
MAK *e* 07 56 30.9
MAK *e**SS **S** 07 57 03.3 +5.4
MAK *e*SS **SS** 08 03 02.7 +3.2
MAK *e*SSS SSS 08 06 40.5
MAK pmax pmax
comp=Z,50nm,0.3s
MAK MLR MLR
comp=Z,882nm,20.0s
BRSE Bradley Lake S 90.51 30 P **P** 07 46 08.2 +0.9
baz=255
E20K Nigu River 90.62 21 P **P** 07 46 08.6 +0.9
baz=251
D20K Etivluk River 90.62 20 IAmb IAmb 07 46 10.9
comp=Z,44nm,0.6s
D20K Etivluk River 90.62 20 P **P** 07 46 08.6 +1.0
baz=251
PPLA Purkeypile 90.63 26 P **P** 07 46 08.8 +0.8
baz=255
SKT Skwentna 90.69 27 P **P** 07 46 10.0 +1.9
baz=255,SNR=5.3
SUA Susitna One 90.93 28 IAmb IAmb 07 46 41.8
comp=Z,59nm,1.0s
SUA Susitna One 90.93 28 P **P** 07 46 10.2 +0.9
baz=256
SLKM Skilak Lake 90.95 29 IAmb IAmb 07 46 46.1
comp=Z,92nm,1.0s
G21K Allakaket 91.08 23 P **P** 07 46 10.6 +0.8
baz=254
H21K Melozitna Rive 91.11 24 P **P** 07 46 10.9 +0.9
baz=254
L22K Petersville 91.17 27 IAmb IAmb 07 46 33.5
comp=Z,43nm,1.1s
O22K Cooper Landing 91.18 29 P **P** 07 46 11.2 +0.8
baz=257
SEW Seward 91.23 30 P **P** 07 46 11.5 +1.0
baz=257
F21K Alaska River 91.29 22 P **P** 07 46 11.5 +0.8
baz=254
RC01 Rabbit Creek A 91.31 29 IAmb IAmb 07 46 42.8
comp=Z,70nm,0.8s
RC01 Rabbit Creek A 91.31 29 P **P** 07 46 11.6 +0.6
baz=257
KTH Kantishna Hill 91.36 26 P **P** 07 46 11.7 +0.5
C21K Knifeblade Rid 91.39 20 P **P** 07 46 12.1 +0.9
baz=252
E21K Killik River 91.46 21 IAmb IAmb 07 46 32.4
comp=Z,34nm,0.9s
E21K Killik River 91.46 21 P **P** 07 46 12.5 +0.9
baz=253
BPAW Bear Paw Mtn. 91.46 25 P **P** 07 46 13.5 +1.8
BPAW Bear Paw Mtn. 91.46 25 P **P** 07 46 12.5 +0.8
baz=256
A21K Barrow 91.48 18 P **P** 07 46 12.6 +1.0
baz=251,SNR=15
B21K Ikpikpuk River 91.58 20 IAmb IAmb 07 46 15.5
comp=Z,39nm,0.8s
B21K Ikpikpuk River 91.58 20 P **P** 07 46 12.9 +0.8
baz=253
TRF Thorofare Moun 91.61 26 P **P** 07 46 13.0 +0.5
baz=256
PMR Palmer 91.71 28 P **P** 07 46 13.6 +0.8
comp=Z,58nm,1.1s
PMR Palmer 91.71 28 IAmb IAmb 07 46 43.7
comp=Z,59nm,1.1s
PMR Palmer 91.71 28 P **P** 07 46 14.1 +1.3
baz=257,SNR=7.7
H22K Ishtalitna Cre 91.75 24 P **P** 07 46 13.9 +1.0
baz=256
MLY Manley 91.79 25 P **P** 07 46 13.9 +0.7
baz=256,SNR=29
BELG Belogornoye 91.94 322 P **P** 07 46 13.8 -0.2
comp=Z,53nm,0.7s,baz=103,slow=19,SNR=31
comp=Z,53nm,0.7s
KNK Knik Glacier 91.99 28 IAmb IAmb 07 46 43.6
comp=Z,61nm,0.9s
KNK Knik Glacier 91.99 28 P **P** 07 46 15.2 +1.1
baz=258,SNR=8.0
D22K Ayikyak River 92.03 21 P **P** 07 46 15.5 +1.3
baz=254
GNI Garni 92.03 310 P **P** 07 46 16.7 +1.7
comp=Z,22nm,0.8s,baz=110,slow=6.9,SNR=6.7
GNI LR LR 08 36 05.3
comp=Z,208nm,18.6s,baz=103,slow=41
comp=Z,22nm,0.8s
GNI Garni 92.03 310 P **P** 07 46 16.1 +1.1

GNI IAmb IAmb 07 46 46.5
comp=Z,40nm,0.8s
GNI Garni 92.03 310 P **P** 07 46 16.4 +1.4
GNI Garni 92.03 310 P **P** 07 46 15.6 +0.5
GNI Garni 92.03 310 P **P** 07 46 15.8 +0.8
comp=Z,704nmcomp=Z,39nm,0.7s
KIRV Kirov 92.05 329 P **P** 07 46 14.2 -0.2
comp=Z,19nm,0.5s,baz=170,slow=1.8,SNR=12
KIRV PKiKP **PKiKP** 07 51 07.5 +3.2
comp=Z,10nm,0.5s,baz=25,slow=0.7,SNR=4.7
comp=Z,19nm,0.5s
SML Sawmill 92.13 28 P **P** 07 46 15.5 +0.7
baz=258,SNR=7.5
E22K Anaktuvuk Pass 92.15 21 IAmb IAmb 07 46 36.0
comp=Z,117nm,1.6s
E22K Anaktuvuk Pass 92.15 21 P **P** 07 46 15.7 +0.9
baz=255,SNR=41
NVL N'lazarevskaya 92.18 197 *e*P P 07 46 19.7 +4.8
NVL *e* 07 50 00.0
NVL *e*PPP PPP 07 51 59.2
NVL *e*S **SKSac** 07 56 49.1 +6.0
NVL *e*SS **SS** 08 03 30.9 +8.0
NVL *e*SSS SSS 08 07 10.1
NVL pmax pmax
comp=Z,44nm,2.1s
NVL MLR MLR
comp=Z,579nm,18.0s
B22K Teshekpuk Lake 92.19 19 IAmb IAmb 07 46 16.7
comp=Z,38nm,0.9s
B22K Teshekpuk Lake 92.19 19 P **P** 07 46 15.5 +0.7
baz=254
RND Reindeer 92.23 26 IAmb IAmb 07 46 17.6
comp=Z,57nm,0.8s
WAT1 Susitna Watana 92.24 27 P **P** 07 46 15.6 +0.3
baz=258
MCK McKinley 92.26 26 P **P** 07 46 15.5 +0.1
baz=258,SNR=16
I23K Minto, Yukon-K 92.39 25 P **P** 07 46 16.7 +0.9
baz=257,SNR=42
NEA2 Nenana 92.39 25 P **P** 07 46 16.9 +1.0
baz=258,SNR=8.6
M23K Glacier View 92.41 28 P **P** 07 46 16.7 +0.6
baz=259
G23K Bananza Creek 92.47 23 IAmb IAmb 07 46 37.6
comp=Z,66nm,1.4s
G23K Bananza Creek 92.47 23 P **P** 07 46 17.5 +1.2
baz=257
COLD Coldfoot 92.52 22 P **P** 07 46 17.5 +1.1
baz=257,SNR=33
GLI Glacier Island 92.53 29 P **P** 07 46 17.9 +1.3
baz=259
WAT6 Susitna Watana 92.56 27 P **P** 07 46 18.2 +1.3
baz=259,SNR=7.4
SCM Sheep Creek Mo 92.60 28 IAmb IAmb 07 46 47.2
comp=Z,77nm,1.0s
SCM Sheep Creek Mo 92.60 28 P **P** 07 46 18.2 +1.1
baz=259
KIBK Kibwezi 92.74 267 P **P** 07 46 19.5 +0.7
D23K Nanushuk River 92.75 21 IAmb IAmb 07 46 39.1
comp=Z,59nm,1.1s
D23K Nanushuk River 92.75 21 P **P** 07 46 18.9 +1.4
baz=256,SNR=29
WRH Wood River Hil 92.78 25 IAmb IAmb 07 46 19.5
comp=Z,63nm,1.2s
DHY Denali Highway 92.81 27 IAmb IAmb 07 46 21.4
comp=Z,37nm,0.8s
DHY Denali Highway 92.81 27 P **P** 07 46 19.7 +1.6
baz=259,SNR=14
E23K Chandalar 92.93 22 P **P** 07 46 19.6 +1.1
baz=257,SNR=101
CCB Clear Creek Bu 92.93 25 IAmb IAmb 07 46 19.9
comp=Z,89nm,1.3s
COLA College 92.96 25 P **P** 07 46 18.7 +0.2
comp=Z,17nm,0.8s
COLA College 92.96 25 P **P** 07 46 19.0 +0.5
COLA College 92.96 25 ⇑P **P** 07 46 19.7 +1.2
COLA College 92.96 25 P **P** 07 46 19.6 +1.1
baz=259
C23K Itkillik River 92.98 20 IAmb IAmb 07 46 21.9
comp=Z,36nm,0.7s
C23K Itkillik River 92.98 20 P **P** 07 46 19.7 +1.1
baz=256
TOLK Toolik Lake Re 93.07 21 P **P** 07 46 20.2 +1.2
baz=257
GEVA Gevas 93.09 308 IAmb IAmb 07 46 23.1
comp=Z,65nm,0.8s
EYAK Cordova Ski Ar 93.12 29 P **P** 07 46 20.5 +1.2
baz=260
H24K Noodor Dome 93.14 24 IAmb IAmb 07 46 23.0
comp=Z,79nm,1.2s
H24K Noodor Dome 93.14 24 P **P** 07 46 20.2 +0.9
baz=259
POKR Poker Plat Res 93.18 25 P **P** 07 46 20.7 +1.1
baz=259
M24K Tolsona, Glenn 93.19 28 P **P** 07 46 20.6 +0.9
baz=260
KLU Klutina 93.20 28 P **P** 07 46 20.5 +0.7
baz=260
DIV Divide 93.21 29 IAmb IAmb 07 46 48.1
comp=Z,64nm,0.9s
HDA Harding Lake 93.25 26 P **P** 07 46 19.8 -0.1
baz=260,SNR=16
NCK Nalchik 93.33 313⇑ *e*P **P** 07 46 20.9 +0.2
NCK pmax pmax
comp=Z,67nm,0.7s
ILAR Eielson Array 93.34 25 P **P** 07 46 19.3 -1.0
comp=Z,6.2nm,0.5s,baz=268,slow=4.3,SNR=99
ILAR PKKPbc **PKKPdf** 08 03 28.3 -0.3
comp=Z,1.7nm,0.8s,baz=359,slow=0.9,SNR=8.5
ILAR LR LR 08 25 06.2
comp=Z,476nm,20.8s,baz=248,slow=33
comp=Z,6.2nm,0.5s
ILAR Eielson Array 93.34 25 P **P** 07 46 19.1 -1.2
E24K Your Creek 93.35 22 P **P** 07 46 21.2 +0.9
baz=258,SNR=31
KARS Kars 93.36 310 IAmb IAmb 07 47 10.4
comp=Z,54nm,1.2s
D24K Happy Valley 93.45 21 IAmb IAmb 07 46 24.5
comp=Z,36nm,0.8s
D24K Happy Valley 93.45 21 P **P** 07 46 22.0 +1.3
baz=258
G24K Hadweenzic Riv 93.46 23 IAmb IAmb 07 46 24.1
comp=Z,127nm,1.6s
G24K Hadweenzic Riv 93.46 23 P **P** 07 46 22.2 +1.3
baz=259,SNR=21
FURI Furi 93.54 278 LR LR 08 28 01.4
comp=Z,732nm,20.6s,baz=99,slow=35
C24K Franklin Bluff 93.61 20 IAmb IAmb 07 46 24.1
comp=Z,87nm,1.4s
C24K Franklin Bluff 93.61 20 P **P** 07 46 22.4 +1.1
baz=258
K24K Donnelly Dome 93.65 26 IAmb IAmb 07 47 04.2
comp=Z,42nm,1.0s
K24K Donnelly Dome 93.65 26 P **P** 07 46 22.6 +0.8
baz=260,SNR=8.4
PAX Paxson 93.65 27 IAmb IAmb 07 46 27.5
comp=Z,71nm,1.5s
PAX Paxson 93.65 27 P **P** 07 46 22.7 +0.9
baz=261,SNR=12
KMBO Kilima Mbogo 93.69 268 LR LR 08 27 33.3
comp=Z,723nm,19.3s,baz=115,slow=35
BMRM Bremner River 93.74 29 IAmb IAmb 07 46 53.3
comp=Z,99nm,1.3s
BMRM Bremner River 93.74 29 P **P** 07 46 23.3 +1.0
baz=261
N25K Chitina, Valde 93.84 28 P **P** 07 46 24.0 +1.2
baz=261
KBZ Khabaz 93.86 313 P **P** 07 46 23.6 +0.5
comp=Z,5.5nm,0.7s,baz=9.2,slow=0.8,SNR=12
KBZ LR LR 08 36 06.9
comp=Z,274nm,18.6s,baz=73,slow=40
comp=Z,5.5nm,0.7s
GURO Guroymak-BITLI 93.92 308 IAmb IAmb 07 46 27.3
comp=Z,57nm,0.8s
NEUR Neytrino 93.95 313 *i*P **P** 07 46 25.9 +2.1
NEUR pmax pmax
comp=Z,19nm,1.8s
J25K Salcha River, 93.96 25 P **P** 07 46 23.3 +0.1
baz=261
SHA1 Shidzhatmaz 94.03 313 *e*P **P** 07 46 24.8 +0.5
KIV Kislovodsk 94.03 314 P **P** 07 46 24.3 +0.2
KIV Kislovodsk 94.03 314 *e*P **P** 07 46 24.2 +0.2
KIV *e* 07 50 09.5
KIV *e* 07 56 53.3
KIV *e*SS SS 08 03 53.7 +2.1
KIV pmax pmax
comp=Z,10.0nm,1.1s

KIV MLR MLR
comp=Z,198nm,20.0s
PRP Porcupine Dome 94.04 25 P **P** **07 46 24.1 +0.4**
baz=261
RIDG Independent Ri 94.05 26 P **P** **07 46 24.4 +0.8**
baz=261,SNR=11
GLB Gilahina Butte 94.19 29 IAmb IAmb 07 46 54.8
comp=Z,49nm,1.0s
F25K Christian Rive 94.32 22 P **P** **07 46 26.5 +1.7**
baz=261,SNR=23
D25K Kavik River 94.34 21 P **P** **07 46 25.5 +0.6**
baz=260
BELA Belgrano 2 94.36 183 P **P** **07 46 25.1 +0.2**
BELA IAmb IAmb 07 46 27.4
comp=Z,44nm,0.6s
DOT Dot Lake 94.38 26 P **P** **07 46 25.5 +0.4**
CRQM Cirque 94.42 29 IAmb IAmb 07 47 03.4
comp=Z,75nm,1.1s
E25K Arctic Village 94.43 22 IAmb IAmb 07 46 46.8
comp=Z,40nm,1.0s
E25K Arctic Village 94.43 22 P **P** **07 46 26.6 +1.3**
baz=261,SNR=35
MENT Mentasta 94.44 27 P **P** **07 46 27.3 +1.9**
comp=Z,27nm,1.5s
CRQE Cirque 94.45 29 P **P** **07 46 26.3 +0.7**
baz=263
SCRK Sand Creek 94.46 26 P **P** **07 46 26.3 +0.7**
baz=262,SNR=5.7
MCARA McCarthy VSAT 94.56 29 P **P** **07 46 27.1 +1.1**
baz=263
TGL Tana Glacier 94.57 29 IAmb IAmb 07 47 15.3
comp=Z,96nm,1.2s
L26K Log Cabin Wild 94.62 27 P **P** **07 46 27.4 +1.1**
baz=263
M26K Nabesna, AK 94.70 28 IAmb IAmb 07 50 15.7
comp=Z,63nm,1.6s
M26K Nabesna, AK 94.70 28 P **P** **07 46 27.6 +0.9**
baz=263
BMAR Burnt Mountain 94.70 23 P **P** **07 46 27.8 +1.2**
MARD Mardin 94.77 307 IAmb IAmb 07 46 30.1
comp=Z,32nm,0.8s
F26K Sheenjek River 94.90 22 IAmb IAmb 07 46 30.2
comp=Z,49nm,1.3s
F26K Sheenjek River 94.90 22 P **P** **07 46 28.9 +1.4**
baz=262,SNR=33
C26K Camden Bay 94.94 20 P **P** **07 46 29.1 +1.6**
baz=262,SNR=20
MESA MESA 94.94 30 P **P** **07 46 29.3 +1.3**
baz=264
G26K Porcupine Rive 94.94 23 P **P** **07 46 28.9 +1.3**
baz=262,SNR=37
I26K Coal Creek Min 94.99 25 P **P** **07 46 29.0 +1.1**
baz=263
GRNC Granite Creek 95.10 30 IAmb IAmb 07 47 02.2
comp=Z,73nm,1.2s
BARN Barnard Glacie 95.18 29 IAmb IAmb 07 46 34.9
comp=Z,57nm,1.3s
M27K Edge Creek, AK 95.21 28 P **P** **07 46 30.3 +1.1**
baz=264
KOPT Kop Dagi 95.25 310 IAmb IAmb 07 46 36.9
comp=Z,37nm,0.8s
C27K Jago River 95.31 21 P **P** **07 46 30.5 +1.3**
baz=263,SNR=18
L27K Beaver Creek, 95.31 27 P **P** **07 46 30.8 +1.4**
baz=264,SNR=14
CTG Chitna Glacier 95.32 29 P **P** **07 46 31.1 +1.4**
baz=264,SNR=6.9
CTGM Chitina Glacie 95.33 29 IAmb IAmb 07 46 37.6
comp=Z,48nm,0.9s
BCAR Beaver Creek A 95.33 27 P **P** **07 46 30.4 +0.9**
SNAA Sanae 95.42 193 ⇓P **P** **07 46 31.4 +1.5**
comp=Z,818nm,1.0s
SNAA Sanae 95.42 193 P **P** **07 46 31.0 +1.2**
comp=Z,24nm,0.7s,baz=118,slow=1.7,SNR=8.9
SNAA LR LR 08 29 08.2
comp=Z,2µm,20.5s,baz=110,slow=35
comp=Z,24nm,0.7s
SNAA Sanae 95.42 193 P **P** **07 46 31.3 +1.5**
SNAA IAmb IAmb 07 46 32.6
comp=Z,36nm,0.9s
SNAA Sanae 95.42 193*c i*P **P** **07 46 31.4 +1.5**
SNAA pmax pmax
comp=Z,42nm,1.0s
SNAA MLR MLR
comp=Z,2µm,16.0s
VRH Novokhopyorsk 95.42 321 *e*P **P** **07 46 29.6 -0.5**
VRH pmax pmax
comp=Z,50nm,0.6s
LOGN Logan Glacier 95.47 29 IAmb IAmb 07 47 05.5
comp=Z,143nm,1.9s
I27K Kandik River 95.66 25 P **P** **07 46 32.3 +1.3**
baz=264,SNR=45
BVCY Beaver Creek 95.69 28 P **P** **07 46 32.6 +1.4**
baz=265
H27K Steamboat Moun 95.76 24 IAmb IAmb 07 46 53.8
comp=Z,64nm,1.1s
H27K Steamboat Moun 95.76 24 P **P** **07 46 32.8 +1.4**
baz=264,SNR=40
PINM Pinnacle 95.78 30 P **P** **07 46 32.5 +0.8**
baz=265
YUK3 Moose Creek 95.82 29 P **P** **07 46 33.0 +1.0**
baz=265
O28M Mount Upton 95.86 30 P **P** **07 46 33.1 +0.8**
baz=265
YUK8 Steele Glacier 96.11 29 P **P** **07 46 34.0 +0.6**
baz=266
SOC Sochi 96.14 313 *e*P **P** **07 46 33.5 -0.1**
SOC *e*PPP PPP 07 52 31.6
SOC *e*S **SKSac** **07 57 03.9 -1.6**
SOC MLR MLR
comp=Z,784nm,22.0s
LODK Lodwar 96.14 273 P **P** **07 46 36.3 +2.0**
SNR=8.1
D27M Malcolm River 96.24 21 P **P** **07 46 34.6 +1.1**
baz=265,SNR=11
I28M Miner Creek 96.34 25 IAmb IAmb 07 46 56.1
comp=Z,64nm,0.9s
I28M Miner Creek 96.34 25 P **P** **07 46 35.5 +1.4**
baz=266,SNR=34
DAWY Dawson 96.48 26 P **P** **07 46 35.7 +0.9**
DAWY IAmb IAmb 07 46 37.1
comp=Z,28nm,1.0s
DAWY Dawson 96.48 26 P **P** **07 46 36.0 +1.3**
baz=266,SNR=20
F28M Old Crow 96.52 23 P **P** **07 46 35.9 +1.0**
baz=266,SNR=24
O29M Mount Kennedy 96.63 30 P **P** **07 46 36.8 +1.3**
baz=266
YUK4 Talbot Arm 96.66 29 P **P** **07 46 37.1 +1.3**
baz=267
E28M Babbage River 96.71 22 IAmb IAmb 07 46 38.6
comp=Z,76nm,1.4s
E28M Babbage River 96.71 22 P **P** **07 46 36.6 +1.0**
baz=267
YUK6 Outpost Mounta 96.77 29 P **P** **07 46 37.4 +1.0**
baz=267
M29M Somme Creek 96.81 28 P **P** **07 46 37.4 +1.0**
baz=267
VORD Divnogorie 96.93 320 *e*P **P** **07 46 35.9 -1.1**
VORD pmax pmax
comp=Z,40nm,0.7s
VNA2 Neumayer–Watz 96.97 193 ⇓P **P** **07 46 37.9 +1.1**
comp=Z,17nm,0.7s,baz=134,slow=4.0
L29M L29M 96.99 27 IAmb IAmb 07 46 42.5
comp=Z,37nm,1.2s
L29M L29M 96.99 27 P **P** **07 46 38.4 +1.3**
baz=267
J29N Klondike Camp 97.02 26 IAmb IAmb 07 46 58.9
comp=Z,108nm,1.9s
J29N Klondike Camp 97.02 26 P Pdif 07 46 38.5 +1.2
baz=267,SNR=6.6
I29M Ogilvie Camp, 97.02 25 IAmb IAmb 07 46 58.8
comp=Z,46nm,1.1s
I29M Ogilvie Camp, 97.02 25 P Pdif 07 46 38.2 +1.0
baz=267,SNR=29
VORR Voronezh 97.03 321 *e*P **P** **07 46 36.8 -0.6**
VORR pmax pmax
comp=Z,37nm,0.6s
VSR Storozhevoye 97.03 321 *e*P **P** **07 46 36.8 -0.6**
VSR pmax pmax
comp=Z,20nm,1.0s
D28M Stokes Point 97.03 21 P Pdif 07 46 38.1 +1.0
baz=267
HYT Haines Junctio 97.18 30 P Pdif 07 46 38.9 +0.7
baz=268
G29M Pine Creek 97.20 23 IAmb IAmb 07 46 39.9
comp=Z,43nm,0.9s
G29M Pine Creek 97.20 23 P Pdif 07 46 39.1 +1.1
baz=268
VNA3 Neumayer Olymp 97.21 192 ⇓P Pdif 07 46 38.7 +0.7
comp=Z,14nm,0.7s
LPSR Galich'ya Gora 97.25 322 *e*P **P** **07 46 38.0 -0.4**
LPSR pmax pmax
comp=Z,30nm,0.8s
K29M Barlow Dome 97.30 27 IAmb IAmb 07 46 41.8
comp=Z,65nm,1.6s
K29M Barlow Dome 97.30 27 P Pdif 07 46 39.4 +0.9
baz=268,SNR=14
E29M Blow River 97.30 22 IAmb IAmb 07 46 58.7
comp=Z,90nm,1.9s
E29M Blow River 97.30 22 P Pdif 07 46 39.5 +1.2
baz=268
P30M Million Dollar 97.42 30 P Pdif 07 46 40.1 +0.9
baz=268
ASF Jabal al Asfar 97.52 301 LR LR 08 35 04.3
comp=Z,757nm,21.8s,baz=85,slow=38
M30M Minto, Yukon 97.58 28 P Pdif 07 46 40.5 +0.7
baz=268
EPYK Eagle Plains 97.71 24 IAmb IAmb 07 47 01.6
comp=Z,61nm,1.2s
EPYK Eagle Plains 97.71 24 P Pdif 07 46 40.9 +0.6
baz=269,SNR=14
S31K Pelican 97.73 33 P Pdif 07 46 41.1 +0.7
baz=268
I30M Mount Dempster 97.83 25 P Pdif 07 46 41.6 +0.7
baz=269,SNR=12
J30M Hart River 97.84 26 IAmb IAmb 07 47 09.9
comp=Z,37nm,1.2s
J30M Hart River 97.84 26 P Pdif 07 46 41.7 +0.7
baz=269,SNR=15
O30N Mendenhall 97.87 30 P Pdif 07 46 41.9 +0.8
baz=269
G30M tAoh Zraii Nji 97.91 23 IAmb IAmb 07 47 02.0
comp=Z,43nm,1.1s
G30M tAoh Zraii Nji 97.91 23 P Pdif 07 46 41.5 +0.3
baz=270,SNR=21
ADZR Andozero 97.95 334 *e*P **P** **07 46 40.4 -0.8**
ADZR pmax pmax
comp=Z,32nm,0.9s
MAYO Mayo, Yukon 98.02 27 P Pdif 07 46 42.3 +0.7
baz=269
N31M Braeburn, Yuko 98.04 29 IAmb IAmb 07 47 13.7
comp=Z,34nm,1.1s
N31M Braeburn, Yuko 98.04 29 P Pdif 07 46 42.3 +0.5
baz=269
F30M Barrier River 98.08 23 IAmb IAmb 07 47 10.9
comp=Z,77nm,1.4s
F30M Barrier River 98.08 23 P Pdif 07 46 42.8 +1.0
baz=270
MOS Moscow 98.13 325 *e*P **P** **07 46 40.3 -2.0**
MOS *e**PP **pP** **07 46 57.4 -0.7**
MOS *e* 07 50 41.0
MOS *e*S **SKSac** **07 57 12.4 -2.8**
MOS *e*PS PS 07 59 33.3 -2.9
MOS *e*SS **SS** **08 04 47.1 -1.5**
MOS pmax pmax
comp=Z,43nm,0.6s
MOS pmax pmax
comp=E,42nm,0.6s
SIT Sitka 98.19 33 Pdiff Pdif 07 46 42.9 +0.4
baz=269
SKAG Skagway 98.23 31 Pdiff Pdif 07 46 43.2 +0.5
baz=269
WHY Whitehorse 98.47 30 Pdiff Pdif 07 46 44.3 +0.5
baz=270
S32K Killisnoo 98.61 33 Pdiff Pdif 07 46 45.1 +0.8
baz=270
R32K Eaglecrest 98.64 32 Pdiff Pdif 07 46 45.8 +1.2
baz=270
H31M Peel River 98.67 25 Pdiff Pdif 07 46 45.7 +1.2
baz=271
M31M Drury Creek, Y 98.70 28 Pdiff Pdif 07 46 45.6 +0.8
baz=270
OBN Obninsk 98.72 325 LR LR 08 31 27.9
comp=E,90µm,21.1s,baz=316,slow=35
OBN Obninsk 98.72 325 ⇑P **P** **07 46 43.4 -1.4**
OBN Obninsk 98.72 325 P Pdif 07 46 45.4 +0.5
OBN Obninsk 98.72 325*d i*P **P** **07 46 44.7 -0.2**
OBN *e**PP **pP** **07 47 02.0 +1.3**
OBN *e**SP **sP** **07 47 06.2 -0.6**
OBN *e* 07 50 46.8
OBN *e*PPP PPP 07 52 53.6
OBN *e*S **SKSac** **07 57 18.5 +0.3**
OBN *e*SS **SS** **08 05 00.3 +3.4**
OBN *e*SSS SSS 08 08 48.8
OBN pmax pmax
comp=Z,27nm,0.5s
OBN MLR MLR
comp=Z,2µm,27.0s
OBN Obninsk 98.72 325 P **P** **07 46 44.5 -0.4**
comp=Z,60nm,0.6s
MMAI Mount Meron Ar 98.83 302 P Pdif 07 46 47.8 +1.7
comp=Z,12nm,0.8s,baz=78,slow=7.8,SNR=8.9
comp=Z,12nm,0.8s
KHAM Kharkiv 98.84 319 P Pdif 07 46 46.3 +0.6
F31M Tsiigehtchic 98.87 23 IAmb IAmb 07 46 47.4
comp=Z,53nm,1.4s
F31M Tsiigehtchic 98.87 23 Pdiff Pdif 07 46 46.5 +1.2
baz=272
INK Inuvik 98.92 22 LR LR 08 29 22.4
comp=Z,418nm,20.9s,baz=240,slow=34
INK Inuvik 98.92 22 IAmb IAmb 07 46 47.6
comp=Z,55nm,1.5s
INK Inuvik 98.92 22 Pdiff Pdif 07 46 46.6 +1.0
baz=272
EIL Elat 99.02 299 LR LR 08 35 28.0
comp=Z,572nm,21.7s,baz=94,slow=38
P32M Atlin 99.06 31 Pdiff **Pdif** **07 46 47.0 +0.6**
baz=271
N32M Quiet Lake 99.34 29 IAmb IAmb 07 47 17.4
comp=Z,30nm,0.9s
N32M Quiet Lake 99.34 29 Pdiff **Pdif** **07 46 48.5 +0.8**
baz=271
U33K Whale Pass 99.41 34 Pdiff **Pdif** **07 46 48.8 +0.8**
baz=270
CRAG Craig 99.41 35 Pdiff **Pdif** **07 46 48.8 +0.8**
baz=270
P33M Teslin, Yukon 99.50 30 Pdiff **Pdif** **07 46 49.2 +0.8**
baz=272
WRAK Wrangell Islan 99.83 34 Pdiff **Pdif** **07 46 50.5 +0.6**
baz=271
APA Apatity 99.86 337 ⇓*i*P **Pdif** **07 46 48.8 -0.9**
APA *i* 07 50 55.0
APA *i*S **S** **07 58 13.9 -5.2**
APA *i*PS PS 07 59 54.7 +0.4
APA pmax pmax
comp=Z,14nm,1.0s
BOSA Boshof 100.16 239 P **Pdif** **07 46 52.7 +0.5**
comp=Z,7.7nm,0.7s,baz=97,slow=2.6,SNR=14
MBAR Mbarara 100.21 268 P **Pdif** **07 46 54.4 +1.7**
SIM Simferopol' 100.22 314 P **Pdif** **07 46 53.0 +1.1**
SIM 07 50 58.0
SIM S **SKSac** **07 57 29.0 +2.8**
SIM SP SP 07 59 53.0 +1.2
SIM SS **SS** **08 05 18.0 -0.5**
SIM pmax pmax
comp=Z,29nm,0.9s
SIM pmax pmax
comp=Z,210nm,9.4s
SIM smax smax
comp=E,270nm,10.4s
SIM pmax pmax
comp=Z,200nm,9.5s
SIM pmax pmax
comp=N,700nm,12.0s
V35K Ketchikan 100.28 35 Pdiff **Pdif** **07 46 52.5 +0.7**
baz=272
KIRS Kirsehir-Merke 100.28 308 ⇑P **Pdif** **07 46 53.0 +0.6**
LSZ Lusaka 100.38 253 P **Pdif** **07 46 54.5 +1.1**
S34M Telegraph Cree 100.45 33 Pdiff **Pdif** **07 46 53.3 +0.7**
baz=272
R33M Jennings River 100.46 31 Pdiff **Pdif** **07 46 53.4 +0.6**
baz=273
BR104 Keskin Array S 100.50 309 P **Pdif** **07 46 53.1 -0.4**
comp=N,66nmcomp=N,8.4nm,0.7s
BR131 Keskin Array S 100.51 309*ce*P **Pdif** **07 46 53.9 +0.4**
BRTR Keskin Array B 100.51 309 P **Pdif** **07 46 53.6 +0.1**
comp=N,5.6nm,0.9s,baz=136,slow=5.0,SNR=18
BRTR PP **PP** **07 50 57.2 -3.7**
comp=N,3.0nm,0.7s,baz=128,slow=7.9,SNR=3.6
BRTR PKKPbc **PKKPbc** **08 03 10.8 +0.9**
comp=N,1.5nm,0.9s,baz=175,slow=3.6,SNR=4.4
BRTR Keskin Array B 100.51 309 *i* P **Pdif** **07 46 53.7 +0.2**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BR105 Keskin Array S 100.52 309 P **Pdif** **07 46 53.6 +0.1**
comp=Z,66nmcomp=Z,8.7nm,0.8s
BR106 Keskin Array S 100.52 309 P **Pdif** **07 46 53.3 -0.2**
comp=Z,60nmcomp=Z,5.9nm,0.8s
T35M Bob Quinn 100.97 33 Pdiff **Pdif** **07 46 55.6 +0.6**
baz=273
DLBC Dease Lake 101.00 32 Pdiff **Pdif** **07 46 55.7 +0.6**
baz=274
A36M Sachs Harbour 101.32 18 Pdiff **Pdif** **07 46 57.5 +1.4**
baz=281
WTLY Watson Lake, Y 101.51 30 Pdiff **Pdif** **07 46 58.2 +0.9**
baz=275
C36M Paulatuk 102.21 21 Pdiff **Pdif** **07 47 00.8 +0.6**
baz=281
SPITS Spitsbergen Ar 102.29 349 P **Pdif** **07 47 01.6 +1.2**
comp=Z,8.6nm,0.7s,baz=99,slow=5.2,SNR=15
ARCES ARCESS Array B 102.45 340 P **Pdif** **07 47 01.7 +0.4**
comp=Z,3.5nm,0.4s,baz=78,slow=4.9,SNR=31
ARCES PP **PP** **07 51 15.9 +1.6**
comp=Z,3.5nm,0.8s,baz=74,slow=6.2,SNR=1.4
ARCES PKiKP **PKiKP** **07 51 22.6 +0.1**
comp=Z,5.2nm,0.9s,baz=56,slow=1.7,SNR=6.5
ARCES PKKPbc **PKKPbc** **08 03 02.6 -2.4**
comp=Z,3.1nm,0.7s,baz=251,slow=2.8,SNR=7.4
AK09 Malin Array Si 103.28 320 P **Pdif** **07 47 05.3 0.0**
AK08 Malin Array Si 103.30 320 P **Pdif** **07 47 05.1 -0.3**
AK10 Malin Array Si 103.31 320 P **Pdif** **07 47 05.4 0.0**
AKASG Malin Array Be 103.32 320 Pdiff **Pdif** **07 47 04.9 -0.6**
comp=Z,2.1nm,0.6s,baz=75,slow=4.0,SNR=7.7
AKASG PP **PP** **07 51 17.3 -4.1**
comp=Z,4.8nm,0.9s,baz=64,slow=8.1,SNR=4.2
AKBB Malin Array Si 103.32 320 P **Pdif** **07 47 05.5 0.0**
AK01 Malin Array Si 103.32 320 P **Pdif** **07 47 05.4 -0.1**
KIEV Kiev 103.33 320 P **Pdif** **07 47 05.3 -0.2**
AK02 Malin Array Si 103.33 320 P **Pdif** **07 47 05.2 -0.4**
AK05 Malin Array Si 103.34 320 P **Pdif** **07 47 05.6 0.0**
AK07 Malin Array Si 103.34 320 P **Pdif** **07 47 05.8 +0.2**
AK06 Malin Array Si 103.34 320 P **Pdif** **07 47 05.5 -0.1**
AK12 Malin Array Si 103.36 320 P **Pdif** **07 47 05.8 +0.1**
AK16 Malin Array Si 103.39 320 P **Pdif** **07 47 05.7 -0.1**
AK14 Malin Array Si 103.40 320 P **Pdif** **07 47 05.6 -0.2**
AK18 Malin Array Si 103.41 320 P **Pdif** **07 47 05.6 -0.3**
WRGLY Wrigley 103.61 27 Pdiff **Pdif** **07 47 07.3 +0.8**
baz=280
FINES FINESS Array B 103.75 331 Pdiff **Pdif** **07 47 06.8 -0.4**
comp=Z,5.6nm,0.7s,baz=76,slow=5.8,SNR=19
FINES PKiKP **PKiKP** **07 51 25.4 +0.4**
comp=Z,4.8nm,0.5s,baz=104,slow=4.4,SNR=7.9
MNK Minsk 103.77 324 *i* P **Pdif** **07 47 07.9 +0.4**
MNK *i* P **Pdif** **07 47 07.9 +0.4**
MNK *i* P **Pdif** **07 47 07.9 +0.4**
comp=Z,38nm,0.8s,baz=84
MNK *i* pP **pPdif** **07 47 24.2 +0.9**
MNK *i* PP **PP** **07 51 25.4 +0.7**
MNK *i* PPP PPP 07 53 38.5
MNK *i* S **SKSac** **07 57 42.3 -0.3**
MNK *i* SS **SS** **08 06 10.2 +3.2**
MNK *i* SSS SSS 08 10 06.6
MNK *i* SKKS **SKKSdf** **08 10 10.7 -6.2**
MNK *i* LQ LQ 08 27 28.0
MNK *i* LRM MLR 08 36 07.8
comp=E,611nm,23.3s
MNK *i* LRM MLR 08 36 08.8
comp=N,956nm,27.4s
MNK Minsk 103.77 324 *i* P **Pdif** **07 47 07.8 +0.4**
MNK *i* 07 51 25.3
MNK *i* PPP PPP 07 53 38.5
MNK *i* S **SKSac** **07 57 42.3 -0.3**
MNK *i* SS **SS** **08 06 10.2 +3.2**
MNK *i* SSS SSS 08 10 06.6
MNK pmax pmax
comp=Z,38nm,0.8s
MNK MLR MLR
comp=E,611nm,23.0s
MNK MLR MLR
comp=N,956nm,27.0s
KOTAN Kotaneelee Air 103.86 30 Pdiff **Pdif** **07 47 08.5 +0.8**
baz=279
TLCR 103.97 315 ⇑P **Pdif** **07 47 08.9 +0.4**
TLCR 103.97 315 ⇑P **Pdif** **07 47 08.9 +0.4**
SORM Soroca 104.08 318 ⇑P **Pdif** **07 47 08.0 -0.9**
SORM Soroca 104.08 318 ⇑P **Pdif** **07 47 08.0 -0.9**
MI28 Mi28,Pidlybu 104.28 321 P **Pdif** **07 47 08.4 -1.4**
LUBAR Lubar, Ukraine 104.32 320 P **Pdif** **07 47 10.0 0.0**
CFR Carcaliu 104.45 315 ⇑P **Pdif** **07 47 10.2 -0.4**
CFR Carcaliu 104.45 315 ⇑P **Pdif** **07 47 10.2 -0.4**
NOR Nord 104.60 355 *i* P **Pdif** **07 47 06.3 -4.3**
NOR IAmb IAmb 07 47 09.6
comp=Z,106nm,2.2s
KMPD K-Podol'skiy 105.30 318 P **Pdif** **07 47 14.3 -0.1**
KMPD P **Pdif** **07 47 14.9 +0.5**
RNPP9 Sopachiv 105.34 321 P **Pdif** **07 47 14.6 +0.1**
TESR Tescani 105.38 316 ⇑P **Pdif** **07 47 14.3 -0.5**
TESR Tescani 105.38 316 P **Pdif** **07 47 15.2 +0.4**
VRI Vrincioaia 105.38 315 ⇓P **Pdif** **07 47 14.6 -0.3**
VRI Vrincioaia 105.38 315 ⇓P **Pdif** **07 47 14.6 -0.3**
PLOR Plostina 105.44 315 ⇑P **Pdif** **07 47 15.0 -0.1**
PLOR Plostina 105.44 315 ⇑P **Pdif** **07 47 15.0 -0.1**
ONER Baraj Valea Uz 105.57 316 ⇑P **Pdif** **07 47 16.0 +0.3**
MLR Muntele Rosu 105.96 315 ⇑P **Pdif** **07 47 17.2 -0.4**
MLR Muntele Rosu 105.96 315 ⇑P **Pdif** **07 47 17.2 -0.4**
MLR Muntele Rosu 105.96 315 P **Pdif** **07 47 17.8 +0.2**
BURAR Bucovina Array 106.23 317 ⇑P **Pdif** **07 47 18.9 +0.2**
BURAR Bucovina Array 106.23 317 ⇑P **Pdif** **07 47 18.9 +0.2**
KSV Kosov 106.25 318 P **Pdif** **07 47 19.2 +0.6**
STNU Starunia 106.57 319 P **Pdif** **07 47 20.5 +0.4**
ARR Arges 106.89 315 ⇑P **Pdif** **07 47 21.2 -0.4**
MORS Morshin 106.91 319 P **Pdif** **07 47 21.9 +0.4**
SHIU Shidnytsya 107.25 319 P **Pdif** **07 47 23.5 +0.4**
YKA Yellowknife Ar 107.72 26 Pdiff **Pdif** **07 47 25.4 +0.6**
comp=Z,0.8nm,0.6s,baz=295,slow=5.6,SNR=13
YKA PKiKP **PKiKP** **07 51 33.2 +0.9**
comp=Z,2.9nm,0.8s,baz=301,slow=2.9,SNR=17
YKA PKKPbc **PKKPbc** **08 02 46.2 -2.5**
comp=Z,2.6nm,0.8s,baz=99,slow=2.6,SNR=30
MARR Marisel-Cluj 107.78 317 ⇑P **Pdif** **07 47 25.6 0.0**
GZR Gura Zlata 108.19 315 ⇑P **Pdif** **07 47 27.3 -0.1**
GZR Gura Zlata 108.19 315 ⇑P **Pdif** **07 47 27.3 -0.1**
HERR Herculane 108.51 315 ⇑P **Pdif** **07 47 28.2 -0.5**
STHS Stebnicka Huta 108.58 320 *i* P **Pdif** **07 47 33.0 +4.0**
STHS Stebnicka Huta 108.58 320 *e*PDIFF **Pdif** **07 47 33.0 +4.0**
DAG Danmarks Havn 108.90 353 *i* P **Pdif** **07 47 31.0 +1.2**
DAG IAmb IAmb 07 47 35.1
comp=Z,7.6nm,1.2s
DAG Danmarks Havn 108.90 353 *e*P **PKiKP** **07 51 31.9 -2.2**
MDVR Moldovita 109.02 315 ⇑P **Pdif** **07 47 31.5 +0.4**
HFS Hagfors 109.95 332 Pdiff **Pdif** **07 47 34.7 -0.1**
comp=Z,3.6nm,0.5s,baz=90,slow=4.4,SNR=16
HFS PKiKP **PKiKP** **07 51 37.1 +0.6**
comp=Z,3.4nm,0.8s,baz=70,slow=1.7,SNR=2.7
HFS PKKPbc **PKKPbc** **08 02 39.6 -2.0**
comp=Z,6.2nm,0.7s,baz=243,slow=1.3,SNR=5.4
NEEM North Greenlan 110.10 1 *i* P **Pdif** **07 47 36.7 +1.2**
NEEM IAmb IAmb 07 47 39.1
comp=Z,4.7nm,0.7s
NEEM North Greenlan 110.10 1 *i* P **PKiKP** **07 51 37.8 +1.0**
TULEG Thule 110.17 5 *i* P **Pdif** **07 47 41.2 +5.8**
TULEG IAmb IAmb 07 47 44.4
comp=Z,5.5nm,1.2s
TULEG Thule 110.17 5 *e*P **PKiKP** **07 51 37.7 +1.1**
NB2 NORSAR Subarra 110.74 333 P **Pdif** **07 47 38.7 +0.3**
comp=Z,7.9nm,0.9s,baz=68,slow=4.6
NB2 PKKP **PKKPbc** **08 02 38.3 -0.8**
comp=Z,2.0nm,0.6s,baz=236,slow=2.9
NB2 NORSAR Subarra 110.74 333 P **Pdif** **07 47 38.7 +0.3**
NB2 AMP 07 47 38.7
comp=Z,7.9nm,0.9s
NOA NORSAR Array B 110.74 333 Pdiff **Pdif** **07 47 38.8 +0.3**
comp=Z,3.7nm,0.8s,baz=69,slow=4.5,SNR=9.0
NOA PKiKP **PKiKP** **07 51 38.5 +0.4**
comp=Z,2.0nm,0.8s,baz=72,slow=5.5,SNR=5.0
NOA PKKPbc **PKKPbc** **08 02 35.7 -3.4**
comp=Z,4.6nm,0.8s,baz=252,slow=4.4,SNR=10
NVAR Mina Array Bea 110.74 52 Pdiff **Pdif** **07 47 39.6 +0.4**
comp=Z,1.3nm,0.7s,baz=283,slow=5.3,SNR=8.8
NVAR PKiKP **PKiKP** **07 51 39.9 +0.9**
comp=Z,1.9nm,0.8s,baz=299,slow=3.0,SNR=5.0
NVAR PKKPbc **PKKPbc** **08 02 39.0 +0.5**
comp=Z,1.1nm,0.7s,baz=68,slow=3.9,SNR=6.2
MORC Moravsky Berou 110.86 321 *e*PKiKP **PKiKP** **07 51 40.1 +1.5**
JAVC Velka Javorina 110.99 320 *e*PKiKP **PKiKP** **07 51 39.8 +0.9**
DBG Daneborg 111.22 352 *i* P **Pdif** **07 47 42.6 +2.4**
DBG IAmb IAmb 07 47 43.7
comp=Z,13nm,1.3s

DBG	Daneborg	111.22	352	*i* P		PKiKP	07 51 42.5	+4.0	
MODS	Modra-Piesok	111.36	319	*i* P		Pdif	07 47 44.1	+2.7	
MODS				*e*			07 51 37.3		
MODS	Modra-Piesok	111.36	319	*e*PDIFF		Pdif	07 47 44.1	+2.7	
MODS	Modra-Piesok	111.36	319	*e*PKP		PKiKP	07 51 37.3	-2.3	
VRAC	Vranov	111.57	320	*e*PKiKP		PKiKP	07 51 40.9	+0.9	
CHVC	Chvalec	111.59	322	*e*PKP		PKiKP	07 51 45.8	+5.8	
CHVC	Chvalec	111.59	322	*e*PKiKP		PKiKP	07 51 45.8	+5.8	
KRUC	Moravsky	111.76	320	*e*PKiKP		PKiKP	07 51 41.3	+1.0	
RONA	Rosalia, Austr	112.15	319	*e*PP		PP	07 52 26.6	+0.5	
	comp=Z,7.4nm,1.0s								
CONA	Conrad Observa	112.38	319	*e*PP		PP	07 52 28.1	+0.4	
	comp=Z,23nm,1.9s								
CONA				*e*PKKP		PKKPab	08 02 40.2	0.0	
	comp=Z,8.8nm,1.3s								
ARSA	Arzberg	112.77	318	*i* PKiKP		PKiKP	07 51 42.0	-0.3	
	comp=Z,0.1nm,0.2s								
ARSA				*e*PP		PP	07 52 28.2	-2.2	
	comp=Z,4.9nm,0.8s								
ARSA				*e*PKKP		PKKPbc	08 02 27.7	-4.2	
	comp=Z,1.1nm,0.5s								
BRG	Berggiesshubel	112.80	322	ǁ *e*Pif			07 47 49.3		
BRG				Amp			07 47 52.8		
	comp=Z,5.4nm,1.0s								
BRG	Berggiesshubel	112.80	322	P		PKiKP	07 51 45.4	+3.2	
BRG				Amp			07 51 52.8		
	comp=Z,4.2nm,0.9s								
BRG				PP		PP	07 52 34.4	+3.9	
BRG				Amp			07 52 38.3		
	comp=Z,11nm,0.9s								
BRG	Berggiesshubel	112.80	322	PS		PS	08 02 08.0	+1.9	
KULLO	Kullorsuaq	112.82	2	*i* P		PKiKP	07 51 42.9	+1.4	
CKRC	Cesky Krumlov	113.15	320	*e*PKP		PKiKP	07 51 42.4	-0.6	
CKRC	Cesky Krumlov	113.15	320	*e*PKiKP		PKiKP	07 51 42.4	-0.6	
SOKA	Soboth	113.23	318	*e*PKKP			08 02 27.1		
	comp=Z,1.6nm,0.8s								
MOA	Molln	113.44	319	*e*PP		PP	07 52 34.2	-1.0	
	comp=Z,6.4nm,1.0s								
KHC	Kasperske Hory	113.53	321	*e*PKP		PKiKP	07 51 43.7	0.0	
KHC	Kasperske Hory	113.53	321	*e*PKiKP		PKiKP	07 51 43.7	0.0	
GERES	GERESS Array B	113.53	320	Pdiff		Pdif	07 47 54.2	+3.1	
	comp=Z,0.9nm,0.7s,baz=68,slow=13,SNR=1.7								
GERES				PKiKP		PKiKP	07 51 44.7	+0.9	
	comp=Z,2.8nm,0.5s,baz=96,slow=2.0,SNR=7.0								
OBKA	Obir	113.60	318	*e*PKKP			08 02 19.0		
	comp=Z,11nm,1.6s								
MYKA	Terra Mystica	114.17	318	*e*PKP		PKiKP	07 51 45.5	+0.5	
	comp=Z,2.2nm,0.7s								
MYKA				*e*PP		PP	07 52 41.0	+0.5	
	comp=Z,2.1nm,0.6s								
MYKA				*e*PKKP		PKKPbc	08 02 23.8	-3.4	
	comp=Z,2.1nm,0.7s								
LESA	Schwarzleotal	114.59	319	*e*PKP		PKPdf	07 51 46.2	+0.3	
	comp=Z,3.2nm,0.6s								
LESA				*e*PP		PP	07 52 45.6	+2.2	
	comp=Z,4.5nm,0.8s								
LESA				*e*SKP		SKPdf	07 55 15.7	-1.2	
	comp=Z,7.0nm,1.3s								
LESA				*e*PKKP		PKKPbc	08 02 25.1	-0.8	
	comp=Z,0.1nm,0.2s								
UPNV	Upernavik	114.65	2	*i* P		PKiKP	07 51 43.4	-1.8	
SUMG	Summit	114.69	357	PKP		PKPdf	07 51 46.1	+0.3	
SUMG	Summit	114.69	357	*i* P		Pdif	07 48 06.5	+10	
SUMG	Summit	114.69	357	*i* P		PKPdf	07 51 47.5	+1.7	
SCO	Scoresbysund	114.81	350	*i* P		PKPdf	07 51 47.5	+2.0	
ABTA	Abfaltersbach	114.89	318	*e*PKP		PKPdf	07 51 46.8	+0.3	
	comp=Z,6.0nm,0.6s								
ABTA				*e*SKP		SKPdf	07 55 15.6	-1.9	
	comp=Z,2.0nm,0.5s								
WTTA	Wattenberg	115.31	319	*e*PKiKP		PKPdf	07 51 47.9	+0.5	
	comp=Z,2.7nm,0.3s								
WTTA				*e*SKP		SKPdf	07 55 17.3	-1.1	
	comp=Z,12nm,0.8s								
WTTA				*e*PKKP		PKKPbc	08 02 21.7	-1.8	
	comp=Z,0.3nm,0.6s								
WATA	Walderalm	115.33	319	*e*PKP		PKPdf	07 51 47.5	+0.2	
	comp=Z,9.3nm,0.5s								
WATA				*e*SKP		SKPdf	07 55 17.3	-1.0	
	comp=Z,0.2nm,0.2s								
MOTA	Moosalm	115.64	319	*e*PKiKP		PKPdf	07 51 48.7	+0.7	
	comp=Z,9.3nm,0.6s								
MOTA				*e*SKP		SKPdf	07 55 18.2	-0.8	
	comp=Z,13nm,1.1s								
RETA	Reutte	115.81	319	*e*PKiKP		PKPdf	07 51 48.9	+0.6	
	comp=Z,0.8nm,0.3s								
RETA				*e*PKKP		PKKPbc	08 02 17.5	-4.1	
	comp=Z,0.1nm,0.2s								
FETA	Feichten	115.98	319	*e*PKP		PKiKP	07 51 49.0	+0.3	
	comp=Z,2.4nm,0.5s								
FETA				*e*SKP		SKPdf	07 55 17.2	-2.4	
	comp=Z,8.1nm,1.0s								
FETA				*e*PKKP		PKKPbc	08 02 18.2	-2.9	
	comp=Z,11nm,2.3s								
NUUG	Nuugaatsiaq	115.99	2	*i* P		PKPdf	07 51 48.6	+0.9	
DAVA	Damuels	116.44	319	*e*PKP		PKiKP	07 51 49.8	+0.2	
	comp=Z,5.6nm,0.4s								
DAVA				*e*PKKP		PKKPbc	08 02 12.4	-7.1	
	comp=Z,2.3nm,0.7s								
PDAR	Pinedale Array	116.46	46	PKP		PKiKP	07 51 50.6	+0.8	
	comp=Z,5.3nm,0.8s,baz=202,slow=1.2,SNR=23								
PDAR				PKKPbc		PKKPbc	08 02 19.0	-0.4	
	comp=Z,3.2nm,0.8s,baz=96,slow=3.1,SNR=15								
DAVOX	Davos/Dischmat	116.61	319	PKKPbc	PKKPbc		08 02 18.9	0.0	
	comp=Z,4.5nm,0.7s,baz=298,slow=2.2,SNR=4.1								
NIAQ	Niaqornat	116.73	2	*i* P		PKiKP	07 51 50.5	+1.3	
SAATT	Saattut	116.76	1	*i* P		PKiKP	07 51 49.6	+0.4	
FFC	Flin Flon	116.83	31			PKiKP	07 51 50.6	+0.8	
FFC	Flin Flon	116.83	31	PKIKP		PKiKP	07 51 50.6	+0.8	
TUE	Stuetta	117.05	319			PKiKP	07 51 51.6	+0.8	
SAQQ	Saqqaq	117.56	1	*i* P		PKPdf	07 51 49.4	-1.4	
GDH	Godhavn	118.27	2	*i* P		PKiKP	07 51 52.6	+0.4	
ILULI	Ilulissat	118.37	1	*i* P		PKiKP	07 51 53.5	+1.1	
EDMD	Edmundbyers	119.86	331	*e*P		PKiKP	07 51 56.5	+0.7	
RSSD	Black Hills	119.88	43			PKiKP	07 51 56.9	+0.5	
RSSD	Black Hills	119.88	43	PKIKP		PKiKP	07 51 56.9	+0.5	
KEST	Kesra	120.03	307	PKP		PKiKP	07 51 58.2	+1.5	
	comp=Z,12nm,1.0s,baz=25,slow=4.4,SNR=4.4								
KEST				PP		PP	07 53 19.7	-2.0	
	comp=Z,30nm,0.9s,baz=84,slow=4.1,SNR=6.5								
KPL	Plockton	120.07	335	*e*P		PKiKP	07 51 57.2	+1.2	
EKA	Eskdalemuir Ar	120.15	332	PKP		PKiKP	07 51 56.8	+0.5	
	comp=Z,3.5nm,0.4s,baz=28,slow=3.2,SNR=23								
EKA				PKKPbc		PKKPab	08 02 05.3	-0.4	
	comp=Z,6.9nm,0.8s,baz=244,slow=3.8,SNR=7.5								
HPK	Haverah Park	120.17	330	*e*P		PKiKP	07 51 57.7	+1.4	
SFJD	Kangerlussuaq	120.60	1			PKiKP	07 51 57.0	+0.2	
SFJD	Kangerlussuaq	120.60	1	PKIKP		PKiKP	07 51 57.0	+0.2	
SFJD	Kangerlussuaq	120.60	1	*i* P		PKiKP	07 51 56.9	+0.2	
ANMO	Albuquerque	120.72	54			PKiKP	07 51 59.0	+0.7	
ANMO	Albuquerque	120.72	54	PKIKP		PKiKP	07 51 59.0	+0.7	
GAL1	Galloway	121.15	332	*e*P		PKPdf	07 51 57.9	-0.2	
ANGG	Ammassalik, Gr	121.47	355	*i* P		PKPdf	07 51 58.4	0.0	
HLM1	Long Mynd	121.59	329	*e*P		PKiKP	07 51 59.9	+0.7	
ULM	Lac du Bonnet	122.27	34	PKP		PKiKP	07 52 00.6	0.0	
	comp=Z,17nm,0.8s,baz=314,slow=2.3,SNR=30								
ULM				PKKPab		PKKPab	08 01 56.6	0.0	
	comp=Z,5.9nm,0.8s,baz=108,slow=5.6,SNR=8.3								
IDGL	Inch Island, C	122.30	333	PKPdf		PKiKP	07 52 01.2	+0.7	
ILTH	Belurgan, Co L	122.41	332	PKPdf		PKiKP	07 52 00.7	0.0	
DSB	Dublin	122.90	331	PKPdf		PKiKP	07 52 02.9	+1.1	
NUUK	Nuuk	123.41	1	*i* P		PKiKP	07 52 04.3	+2.0	
IGLA	Glengowla, Co	124.20	333	PKPdf		PKiKP	07 52 04.6	+0.3	
TXAR	Lajitas Array	124.24	60	PKP		PKiKP	07 52 05.9	+0.7	
	comp=Z,4.6nm,0.8s,baz=207,slow=2.2,SNR=12								
TXAR				PKKPab		PKKPbc	08 01 50.6	+0.8	
	comp=Z,1.2nm,0.7s,baz=128,slow=8.1,SNR=3.9								
ECSD	EROS Data Cent	124.96	41			PKiKP	07 52 06.5	+0.3	
NRS	Narsarsuaq	126.41	358			PKiKP	07 52 08.3	-0.1	
NRS	Narsarsuaq	126.41	358	PKIKP		PKiKP	07 52 08.3	-0.1	
NRS	Narsarsuaq	126.41	358	*i* P		PKiKP	07 52 09.1	+0.6	
IVI	Ivigtut	126.43	360			PKiKP	07 52 08.8	+0.3	
IVI	Ivigtut	126.43	360	*i* P		PKiKP	07 52 08.8	+0.3	
PLCA	Paso Flores	128.00	159	PKP		PKiKP	07 52 12.7	+0.2	
	comp=Z,31nm,0.8s,baz=204,slow=2.9,SNR=58								
PLCA	Paso Flores	128.00	159			PKiKP	07 52 13.0	+0.5	
PLCA	Paso Flores	128.00	159	PKIKP		PKiKP	07 52 13.0	+0.5	
PLCA	Paso Flores	128.00	159	*e*P		PKPdf	07 52 07.9	-4.0	
ESDC	Sonseca Array	128.65	316	PKP		PKiKP	07 52 14.2	+0.5	
	comp=Z,5.9nm,1.1s,baz=37,slow=2.0,SNR=6.3								
ESDC				PP		PP	07 54 20.5	+1.3	
	comp=Z,12nm,0.9s,baz=70,slow=6.3,SNR=16								
ESDC				SKPbc		SKiKP	07 55 29.2	-16	
	comp=Z,3.5nm,0.7s,baz=40,slow=3.9,SNR=4.5								
TORD	Torodi Ar. Bea	130.00	281	PKP		PKiKP	07 52 17.2	+0.2	
	comp=Z,12nm,0.7s,baz=28,slow=3.5,SNR=30								
TORD				PP		PP	07 54 32.6	+3.6	
	comp=Z,18nm,1.1s,baz=83,slow=5.3,SNR=5.7								
TORD				SKPbc		SKPab	07 55 33.8	-0.3	
	comp=Z,56nm,0.9s,baz=145,slow=1.9,SNR=21								
MVO	Moncorvo	130.01	319	*e*PP		PP	07 54 34.2	+6.3	
MVO				*e*SS		SS	08 11 57.3	+8.3	
MVO				*e*LQ		LQ	08 27 24.7		
MVO				*e*LR		LR	08 36 24.1		
MVO				*i* IAMs_20		IAMs_20	08 54 50.6		
	comp=Z,572nm,20.0s								
EMAL	Malaga-Limoner	130.23	313	PKP		PKPdf	07 52 16.1	+0.1	
PCAB	Cabril	130.37	320	*e*PKPdf		PKiKP	07 52 18.7	+1.6	
PGAV	Gavieira, Arco	130.39	320	*e*PKPdf		PKiKP	07 52 19.0	+1.8	
PGAV				*e*PP		PP	07 54 38.2	+7.9	
PGAV				*e*SS		SS	08 12 01.5	+7.8	
PGAV				*e*LQ		LQ	08 31 21.6		
PGAV				*e*LR		LR	08 39 13.9		
PGAV				*i* IAMs_20		IAMs_20	08 52 31.8		
	comp=Z,458nm,24.0s								
POLO	Lamas de Olo	130.40	319	*e*PKPdf		PKiKP	07 52 19.3	+2.0	
PVRL	Vila Real	130.40	319	*e*PKPdf		PKiKP	07 52 18.5	+1.4	
SCHQ	Schefferville	130.68	14	PKP		PKPdf	07 52 16.8	+0.4	
	comp=Z,9.3nm,0.8s,baz=286,slow=1.7,SNR=21								
SCHQ				SKPbc		SKPbc	07 55 35.1	-0.6	
	comp=Z,14nm,0.7s,baz=343,slow=3.5,SNR=7.1								
MTE	Manteigas	130.73	318	*e*PKPdf		PKiKP	07 52 19.5	+1.6	
MTE				*e*PP		PP	07 54 35.9	+3.3	
MTE				*e*SS		SS	08 12 03.0	+5.1	
MTE				*e*LQ		LQ	08 28 33.5		
MTE				*e*LR		LR	08 34 42.1		
MTE				*i* IAMs_20		IAMs_20	08 58 35.9		
	comp=Z,517nm,22.0s								
PCBR	Castelo Branco	130.97	318	*e*PKPdf		PKiKP	07 52 20.1	+1.8	
PMRV	Marv??o	131.11	317	*e*PKPdf		PKiKP	07 52 20.9	+2.2	
PMRV				*e*PP		PP	07 54 38.5	+3.4	
PMRV				*e*SS		SS	08 12 12.4	+10	
PMRV				*e*LR		LR	08 34 41.3		
PMRV				*i* IAMs_20		IAMs_20	08 56 30.1		
	comp=Z,453nm,22.0s								
CCM	Cathedral Cave	131.16	45			PKPdf	07 52 17.1	-0.7	
CCM	Cathedral Cave	131.16	45	PKIKP		PKPdf	07 52 17.1	-0.7	
PBAR	Barrancos	131.47	315	*e*PKPdf		PKiKP	07 52 22.8	+3.4	
PCAS	Casmilo, Conde	131.53	318	*e*PKPdf		PKiKP	07 52 20.0	+0.6	
CNIL	Conil	131.58	313	PKP		PKiKP	07 52 19.2	-0.4	
PARRA	Arraiolos	131.85	317	*e*PKPdf		PKPdf	07 52 19.3	+0.2	
EVO	Evora	131.97	316	PKP		PKPdf	07 52 17.2	-2.2	
EVO	Evora	131.97	316	*e*PKPdf		PKiKP	07 52 24.5	+4.2	
MD01	Midelt array s	132.01	308			PKiKP	07 52 21.2	+0.4	
IFR	Ifrane	132.05	309	PKP		PKPdf	07 52 18.2	-1.7	
PBEJ	Beja	132.11	316	*e*PKPdf		PKiKP	07 52 21.3	+0.7	
MOE	Montemor	132.21	317	*e*PKPdf		PKiKP	07 52 21.2	+0.4	
PVAQ	Vaqueiros	132.31	315	*e*PP		PP	07 54 47.0	+4.2	
PVAQ				*e*SS		SS	08 12 20.7	+3.5	
PVAQ				*e*LQ		LQ	08 27 58.2		
PVAQ				*e*LR		LR	08 38 03.0		
PVAQ				*i* IAMs_20		IAMs_20	08 54 45.0		
	comp=Z,355nm,20.0s								
PCVE	Castro Verde	132.42	315	*e*PKPdf		PKPdf	07 52 19.7	-0.5	
MESJ	Messejana	132.45	316	*e*PP		PP	07 54 45.1	+1.5	
MESJ	Messejana	132.45	316	*e*PKPdf		PKiKP	07 52 22.0	+0.7	
LIS	Lisbon	132.65	317	*e*PP		PP	07 54 46.5	+1.7	
MORF	Marmelete	133.01	315	*e*PP		PP	07 54 48.7	+1.3	
TRQA	Tornquist	133.04	166			PKiKP	07 52 22.4	-0.3	
TRQA	Tornquist	133.04	166	PKIKP		PKiKP	07 52 22.4	-0.3	
DBIC	Dimbokro	136.32	272	PKhKP	PKPpre		07 52 17.7		
	comp=Z,17nm,0.7s,baz=86,slow=3.1,SNR=15								
DBIC				SKPbc		SKPbc	07 55 54.9	-1.0	
	comp=Z,38nm,0.9s,baz=127,slow=2.9,SNR=8.1								
APG	El Apazote	138.60	76	PKP		PKPdf	07 52 32.7	+0.1	
	comp=Z,0.6nm,0.8s,baz=202,slow=5.4,SNR=4.5								
PMPST	Porto Santo, M	140.57	315	*e*PKPdf		PKPdf	07 52 35.1	-0.4	
PLTB	Pedras Altas	140.68	174	*e*P		PKPdf	07 52 31.4	-4.4	
PSAL	Palomas, Salto	140.72	168	*e*P		PKPdf	07 52 30.8	-5.0	
M65A	Busby, Falmout	140.99	26	Pdiff		PKPdf	07 52 35.7	-0.2	
	baz=324								
PMOZ	Porto Moniz, M	141.31	315	*e*PP		PP	07 55 43.1	+3.8	
PMOZ				*e*SS		SS	08 14 23.8	+19	
PMOZ				*i* IAMs_20		IAMs_20	09 04 09.1		
	comp=Z,431nm,20.0s								
PB14	IPOC Station P	141.77	147	PKP		PKPdf	07 52 33.5	-4.8	
CPSB	Cacapava Do Su	142.04	174	*e*P		PKPdf	07 52 34.9	-3.3	
PB10	IPOC Station P	142.58	146			PKPdf	07 52 37.5	-1.8	
DWPF	Disney Wildern	143.06	52			PKPbc	07 52 38.2	+1.3	
PSMN	Pico do Norte,	143.52	327	*e*PKPdf		PKPdf	07 52 41.3	+0.7	
ROSA	Rosais	143.79	332	*e*PKPdf		PKPdf	07 52 41.8	+0.8	
SOR	Soroa	143.85	61	*i* P		PKPdf	07 52 41.0	-0.6	
SOR				IVmB_BB			07 53 07.1		
	comp=Z,1μm,1.0s								
SOR				IAmb		IAmb	07 53 10.5		
	comp=Z,40nm,0.9s								
PID	Ribeirinha	143.96	332	*e*PKPdf		PKPdf	07 52 41.8	+0.5	
PICO	Pico	144.05	332	*e*PKPdf		PKPdf	07 52 42.0	+0.4	
PCAN	Candelaria	144.11	332	*e*PKPdf		PKiKP	07 52 44.1	-1.0	
CALA	Caldeira	144.11	333	*e*PKPdf		PKiKP	07 52 43.6	-1.6	
HOR	Horta	144.12	332	*e*PKPdf		PKiKP	07 52 43.5	-1.6	
JTS	Las Juntas de	144.27	83	PKP		PKPbc	07 52 41.7	+0.8	
	comp=Z,73nm,0.7s,baz=336,slow=1.6,SNR=69								
061Z	Ochoppi	144.47	55	*i* P		PKPdf	07 52 42.4	-0.1	
HDC	Heredia	145.10	83	*e*P		PKPbc	07 52 39.3	-4.3	
CAMR	Camaricoa	145.18	60	*i* P		PKPdf	07 52 45.5	+1.7	
CAMR				IAmb		IAmb	07 52 46.5		
	comp=Z,310nm,0.9s								
CAMR				IVmB_BB			07 53 11.9		
	comp=Z,6μm,1.0s								
ITAB	Concordia	145.31	175	*e*P		PKPbc	07 52 39.9	-3.8	
CPUP	Villa Florida	145.36	167	PKPbc		PKPab	07 52 45.4	+1.3	
	comp=Z,106nm,0.8s,baz=196,slow=3.1,SNR=235								
CPUP				SKP		SKPdf	07 56 17.9	+4.0	
	comp=Z,25nm,1.0s,baz=243,slow=2.3,SNR=3.8								
CPUP	Villa Florida	145.36	167			PKPab	07 52 44.5	+0.4	
PB08	IPOC Station P	146.04	144	PKP		PKPbc	07 52 46.9	+0.2	
NNA	Nana	146.11	125	PKPbc		PKPab	07 52 47.9	+0.6	
	comp=Z,166nm,0.9s,baz=268,slow=5.7,SNR=68								
MGV	Manicaragua	146.72	61	*i* P		PKPab	07 52 50.1	+0.7	
MGV				IAmb		IAmb	07 53 17.0		
	comp=Z,270nm,0.8s								
MGV				IVmB_BB			07 53 17.2		
	comp=Z,4μm,1.0s								
ATAH	Atahualpa	147.16	116	PKPbc		PKPbc	07 52 50.7	+0.5	
	comp=Z,183nm,0.8s,baz=172,slow=2.4,SNR=55								
LCCY	Blossom Villag	147.43	65	*i* P		PKPab	07 52 51.7	-0.6	
LCCY				IVmB_BB			07 53 18.8		
	comp=Z,18μm,1.0s								
LCCY				IAmb		IAmb	07 53 19.3		
	comp=Z,1μm,1.2s								
CBCY	The Bluff, Cay	147.70	65	*i* P		PKPbc	07 52 52.0	+1.0	
CBCY				IVmB_BB			07 53 19.0		
	comp=Z,10μm,1.0s								
CBCY				IAmb		IAmb	07 53 19.0		
	comp=Z,650nm,1.1s								
PTGB	Pitanga	147.81	175	*e*P		PKPdf	07 52 45.5	-2.9	
MBO	M'Bour	147.95	285			PKPab	07 52 55.9	+1.4	
PET01	Itanhaem-SP	148.34	183	*e*P		PKPdf	07 52 43.7	-5.5	
CCCC	Cccc	148.97	61	*i* P		PKiKP	07 52 56.5	+0.9	
CCCC				IVmB_BB			07 53 24.0		
	comp=Z,2μm,1.0s								
CCCC				IAmb		IAmb	07 53 26.7		
	comp=Z,90nm,1.4s								
SPB	Sao Paulo	149.04	183	*e*P		PKPdf	07 52 47.6	-2.7	
AMBA	Amambai (Brazi	149.15	169	*e*P		PKPdf	07 52 45.2	-5.3	
PARB	Paraibuna	149.16	186	*e*P		PKPdf	07 52 47.4	-3.2	
LDASE	Londrina, Braz	149.20	176	*e*P		PKPdf	07 52 44.2	-6.4	
FRTB	Fartura	149.32	179	*e*P		PKPdf	07 52 48.3	-2.5	
LPAZ	La Paz	149.62	141	PKP		PKPdf	07 52 53.9	+1.7	
	comp=Z,28nm,0.9s,baz=159,slow=1.3,SNR=65								
LPAZ				PKPbc		PKiKP	07 52 57.9	0.0	
	comp=Z,127nm,1.0s,baz=157,slow=1.2,SNR=72								
LPAZ	La Paz	149.62	141	*e*P		PKPdf	07 52 49.0	-3.2	
DUB01	Friburgo-RJ	149.90	192	*e*P		PKPdf	07 52 49.3	-2.5	
CAM01	Campos-RJ	149.99	194	*e*P		PKPdf	07 52 48.9	-2.9	
LMGC	Las Mercedes	150.04	63	*i* P		PKiKP	07 52 57.5	-0.3	
LMGC				IAmb		IAmb	07 52 58.7		
	comp=Z,87nm,0.9s								
LMGC				IVmB_BB			07 53 36.0		
	comp=Z,1μm,1.0s								
MTDJ	Mount Denham	150.16	66	*i* P		PKiKP	07 52 58.9	+0.7	
MTDJ				IAmb		IAmb	07 52 59.1		
	comp=Z,150nm,1.0s								
MTDJ				IVmB_BB			07 53 54.4		
	comp=Z,2μm,1.0s								
RCLB	Rio Claro- Sao	150.22	183	*e*P		PKPdf	07 52 49.6	-2.7	
YAR	Yar	150.49	62	*i* P		PKiKP	07 53 00.1	+1.3	
YAR				IAmb		IAmb	07 53 25.9		
	comp=Z,80nm,1.1s								
YAR				IVmB_BB			07 53 44.1		
	comp=Z,840nm,1.0s								
HLGC	Holguin	150.56	60	*i* P		PKiKP	07 52 59.3	+0.4	
HLGC				IAmb		IAmb	07 53 18.5		
	comp=Z,120nm,1.2s								
HLGC				IVmB_BB			07 53 25.9		
	comp=Z,1μm,1.0s								
CHIV	Chivirico	150.59	62	*i* P		PKiKP	07 52 59.2	+0.3	
CHIV				IAmb		IAmb	07 53 18.2		
	comp=Z,82nm,1.0s								
CHIV				IVmB_BB			07 53 40.1		
	comp=Z,2μm,1.0s								
STH	Stony Hill	150.86	66	*i* P		PKiKP	07 53 00.3	+0.7	
ALF01	Guarapari-ES	150.91	196	*e*P		PKPdf	07 52 51.0	-2.3	
PINC	Pinares de May	150.94	61	*i* P		PKiKP	07 52 59.6	-0.1	
PINC				IAmb		IAmb	07 53 26.7		
	comp=Z,78nm,1.1s								
PINC				IVmB_BB			07 53 39.5		
	comp=Z,990nm,1.0s								
MARVS	Santiago de Cu	151.03	62	*i* P		PKiKP	07 52 59.9	0.0	
MARVS				IAmb		IAmb	07 53 19.4		
	comp=Z,84nm,0.9s								
MARVS				IVmB_BB			07 53 27.1		
	comp=Z,3μm,1.0s								
BDQN	Bodoquena, MS	151.15	165	*e*P		PKPdf	07 52 51.2	-2.5	
RCC	Rio Carpintero	151.21	62	*i* P		PKiKP	07 53 00.3	+0.1	
RCC				IAmb		IAmb	07 53 01.1		
	comp=Z,53nm,0.9s								
RCC				IVmB_BB			07 53 27.4		
	comp=Z,1μm,1.0s								
BBSR	BB Station	151.23	29	PKPbc		PKiKP	07 53 00.3	+0.4	
BSCB	Bom Sucesso	151.37	188	*e*P		PKPdf	07 52 51.7	-2.5	
BB19B	Bebedouro	151.59	181	*e*P		PKPdf	07 52 52.4	-2.0	
MOAC	Moa	151.59	60	*i* P		PKiKP	07 53 01.6	+0.6	
MOAC				IAmb		IAmb	07 53 21.1		
	comp=Z,90nm,0.9s								
MOAC				IVmB_BB			07 53 34.1		
	comp=Z,2μm,1.0s								
NMDO	Nuevo Mundo	151.61	60	*i* P		PKiKP	07 53 02.0	+0.9	
NMDO				IAmb		IAmb	07 53 14.1		
	comp=Z,120nm,

GALA S Sn 07 51 57.2 +1.9
GOBA Gobu 1.27 229 P Pn 07 51 47.5 +3.6
GOBA S Sn 07 52 01.7 +1.3
SIZA Siyzn 1.59 265 Pn Pn 07 51 49.8 +1.7
SIZA Sg Sn 07 52 16.7 +8.7
ATGJ Altiaghaj 1.60 257 Pg Pn 07 51 53.1 +4.9
ATGJ Sg Sn 07 52 15.5 +7.2
GBS Qobustan 1.71 246 Pn Pn 07 51 52.7 +3.1
GBS Sg Sn 07 52 18.0 +7.2
PQL Pirkuli 1.87 257 Pn Pn 07 51 53.8 +1.9
PQL Sn Sn 07 52 19.1 +4.3
QUBA Quba, Azerbaij 1.89 274 Pn Pn 07 51 53.9 +1.8
QUBA Sn Sn 07 52 21.0 +6.0
ALIB &Aumlli-Bayram 1.98 230 Pn Pn 07 51 56.7 +3.4
ALIB Sn Sn 07 52 18.7 +1.5
QSAR Qusar 2.07 279 Pn Pn 07 51 56.3 +1.7
QSAR Sn Sn 07 52 22.4 +3.0
DRN Derbent 2.15 292 *e*Pg Pn 07 51 56.9 +1.5
1µm,0.5s
DRN *e*Sg Sn 07 52 24.2 +3.0
11µm,0.3s
DRN Derbent 2.15 292 *e*P Pn 07 51 56.9 +1.5
DRN *e*S Sn 07 52 24.1 +3.0
DRN pmax pmax
comp=Z,1µm,0.5s
XNQ Khinaliq 2.15 269 Pn Pn 07 51 56.9 +1.1
XNQ Sn Sn 07 52 23.1 +1.5
IML Ismayilli 2.17 259 Pn Pn 07 51 57.1 +1.2
IML Sn Sn 07 52 23.8 +1.8
KSMR Kasumkent 2.18 281 *e*Pn Pn 07 51 58.1 +2.0
comp=Z,1µm,0.5s
KSMR *e*Sn Sn 07 52 25.7 +3.4
comp=Z,32µm,0.3s
KSMR Kasumkent 2.18 281 *e*P Pn 07 51 58.1 +2.0
KSMR *e*S Sn 07 52 25.6 +3.4
KSMR pmax pmax
comp=Z,1µm,0.5s
KDMR Kurdemir 2.30 249 Pn Pn 07 51 58.8 +1.3
KDMR Sn Sn 07 52 27.4 +2.5
SAAT Saatly 2.39 236 Pn Pn 07 52 01.4 +2.7
SAAT Sn Sn 07 52 31.4 +4.3
QBL Gabala 2.40 264 Pn Pn 07 51 59.8 +0.8
QBL Sn Sn 07 52 27.7 +0.3
AKT Akhty 2.47 277 *e*Pn Pn 07 52 01.6 +1.6
comp=Z,1µm,0.5s
AKT *e*Sn Sn 07 52 32.9 +3.8
comp=Z,7µm,0.4s
AKT Akhty 2.47 277 *e*P Pn 07 52 01.5 +1.6
AKT *e*S Sn 07 52 32.9 +3.8
AKT pmax pmax
comp=Z,1µm,0.5s
URKR Urkarakh 2.68 291 *e*Pn Pn 07 52 04.9 +2.0
comp=Z,703nm,0.4s
URKR *e*Sn Sn 07 52 38.5 +4.2
comp=Z,7µm,0.3s
URKR Urkarakh 2.68 291 *e*P Pn 07 52 04.8 +2.0
URKR *e*S Sn 07 52 38.4 +4.2
URKR pmax pmax
comp=Z,703nm,0.4s
SGKR Sergokala 2.77 297 *e*P Pn 07 52 05.0 +1.0
SGKR *e*S Sn 07 52 39.2 +2.8
SGKR pmax pmax
comp=Z,688nm,0.6s
GLBA Clilabad 2.82 226 Pn Pn 07 52 05.9 +1.3
GLBA Sn Sn 07 52 37.7 +0.3
SEKA Sheki 2.86 271 Pn Pn 07 52 06.2 +0.9
SEKA Sn Sn 07 52 39.9 +1.3
MNGR Mingechevir, A 2.99 262 Pn Pn 07 52 07.9 +1.0
MNGR Sn Sn 07 52 42.9 +1.2
BLQ Beylaqan 3.02 241 Pn Pn 07 52 07.8 +0.4
BLQ Sn Sn 07 52 42.4 -0.1
LKRN Lenkeran, Azer 3.04 215 Pn Pn 07 52 09.2 +1.6
LKRN Sn Sn 07 52 42.5 -0.4
KMKR Kumukh 3.05 288 *e*P Pn 07 52 10.6 +2.7
KMKR *e*S Sn 07 52 48.5 +5.1
KMKR pmax pmax
comp=Z,1µm,0.4s
BRDA Brd 3.06 253 Pn Pn 07 52 09.5 +1.7
BRDA Sn Sn 07 52 45.3 +2.1
MAK Makhachkala 3.11 305 *e*Pn Pn 07 52 10.4 +1.9
comp=Z,410nm,0.8s
MAK *e*Sn Sn 07 52 48.2 +3.6
comp=Z,6µm,0.4s
MAK Makhachkala 3.11 305⇓ *i*P Pn 07 52 09.4 +0.8
MAK *e*S Sn 07 52 47.7 +3.1
MAK pmax pmax
comp=Z,402nm,0.7s
MAK smax smax
comp=N,6µm,0.4s
MAK smax smax
comp=N,5µm,0.4s
MAK MLR MLR
comp=Z,440nm,2.0s
YRD Yardimli 3.14 223 Pn Pn 07 52 09.4 +0.3
YRD Sn Sn 07 52 43.8 -1.7
AGDM Agdam 3.16 250 Pn Pn 07 52 10.0 +0.7
AGDM Sn Sn 07 52 46.2 +0.4
ASTR Astara 3.17 213 Pn Pn 07 52 09.9 +0.6
ASTR Sn Sn 07 52 44.8 -1.2
GNBR Gunib 3.22 292 *e*Pn Pn 07 52 12.0 +1.9
comp=Z,531nm,0.4s
GNBR *e*Sn Sn 07 52 51.3 +3.8
comp=Z,6µm,0.4s
GNBR Gunib 3.22 292 *e*P Pn 07 52 12.0 +1.9
GNBR *e*S Sn 07 52 51.2 +3.8
GNBR pmax pmax
comp=Z,531nm,0.4s
KANR Karaman 3.25 308 *e*Pn Pn 07 52 12.0 +1.5
comp=Z,710nm,0.4s
KANR *e*Sn Sn 07 52 51.7 +3.7
comp=Z,4µm,0.5s
KANR Karaman 3.25 308 *e*P Pn 07 52 12.0 +1.5
KANR *e*S Sn 07 52 51.7 +3.7
KANR pmax pmax
comp=Z,710nm,0.4s
ARKR Arakani 3.28 296 *e*Pn Pn 07 52 12.8 +1.8
comp=Z,218nm,0.4s
ARKR *e*Sn Sn 07 52 52.8 +4.0
comp=Z,2µm,0.4s
ARKR Arakani 3.28 296 *e*P Pn 07 52 12.7 +1.8
ARKR *e*S Sn 07 52 52.8 +4.0
ARKR pmax pmax
comp=Z,218nm,0.4s
LRK Lerik 3.30 219 Pn Pn 07 52 12.2 +1.0
LRK Sn Sn 07 52 49.4 -0.1
BUJR Buynaksk 3.30 300 *e*Pn Pn 07 52 13.8 +2.6
comp=Z,459nm,0.5s
BUJR *e*Sn Sn 07 52 54.0 +4.7
comp=Z,4µm,0.4s
BUJR Buynaksk 3.30 300 *e*P Pn 07 52 13.7 +2.6
BUJR *e*S Sn 07 52 53.9 +4.7
BUJR pmax pmax
comp=Z,459nm,0.5s
ZKTA Zakatala 3.31 278 Pn Pn 07 52 12.7 +1.5
ZKTA Sn Sn 07 52 50.8 +1.3
QRD Qoradiz 3.32 239 Pn Pn 07 52 11.6 +0.2
QRD Sn Sn 07 52 49.3 -0.4
KRNR Karanay 3.43 299 *e*Pn Pn 07 52 14.8 +1.7
comp=Z,320nm,0.4s
KRNR *e*Sn Sn 07 52 56.7 +4.1
comp=Z,1µm,0.4s
KRNR Karanay 3.43 299 *e*P Pn 07 52 14.7 +1.7
KRNR *e*S Sn 07 52 56.7 +4.1
KRNR pmax pmax
comp=Z,320nm,0.4s
HNZR Khunzah 3.45 294 *e*P Pn 07 52 15.9 +2.5
HNZR *e*S Sn 07 52 58.1 +4.9
HNZR pmax pmax
comp=Z,594nm,0.4s
XNZR Khunzakh 3.45 294 *e*Pn Pn 07 52 15.9 +2.5
comp=Z,594nm,0.4s
XNZR *e*Sn Sn 07 52 58.2 +5.0
comp=Z,2µm,0.6s
UNCR Uncukul 3.46 297 *e*Pn Pn 07 52 15.7 +2.3
comp=Z,491nm,0.5s
UNCR *e*Sn Sn 07 52 57.7 +4.6
comp=Z,3µm,0.6s
UNCR Uncukul 3.46 297 *e*P Pn 07 52 15.6 +2.3
UNCR *e*S Sn 07 52 57.7 +4.6
UNCR pmax pmax
comp=Z,491nm,0.5s
VSHL Vashlovani 3.46 271 P Pn 07 52 14.7 +1.3
DBC Dubki 3.57 301 *i* Pn Pn 07 52 15.8 +0.9
comp=Z,2µm,0.3s
DBC *e*Sn Sn 07 52 58.1 +2.1
comp=Z,2µm,0.3s
DBC Dubki 3.57 301 *i* P Pn 07 52 15.7 +0.9
DBC *e*S Sn 07 52 58.0 +2.1
DBC pmax pmax
comp=Z,2µm,0.3s
TLTR Tlyarata 3.58 286 *e*Pn Pn 07 52 16.8 +1.7
comp=Z,239nm,0.5s
TLTR *e*Sn Sn 07 52 59.9 +3.6
comp=Z,2µm,0.5s
TLTR Tlyarata 3.58 286 *e*P Pn 07 52 16.7 +1.7
TLTR *e*S Sn 07 52 59.8 +3.6
TLTR pmax pmax
comp=Z,239nm,0.5s
GANJ Ganja 3.59 262 Pn Pn 07 52 14.7 -0.4
GANJ Sn Sn 07 52 53.7 -2.6
LGD Lagodekhi 3.61 281 P Pn 07 52 16.3 +0.8
LGD Lagodekhi 3.61 281 P Pn 07 52 16.2 +0.8
DDFL Dedoflistskaro 3.67 275 P Pn 07 52 18.9 +2.5
DDFL Dedoflistskaro 3.67 275 P Pn 07 52 18.8 +2.5
DLMR Dylym 3.72 301 *e*Pn Pn 07 52 18.7 +1.7
comp=Z,483nm,0.4s
DLMR *e*Sn Sn 07 53 02.7 +3.2
comp=Z,6µm,0.4s
DLMR Dylym 3.72 301 *e*P Pn 07 52 18.6 +1.7
DLMR *e*S Sn 07 53 02.7 +3.2
DLMR pmax pmax
comp=Z,483nm,0.4s
BTLR Botlikh 3.83 293 *e*Pn Pn 07 52 20.6 +2.1
comp=Z,284nm,0.6s
BTLR *e*Sn Sn 07 53 06.5 +4.2
comp=Z,2µm,0.5s
BTLR Botlikh 3.83 293 *e*P Pn 07 52 20.5 +2.1
BTLR *e*S Sn 07 53 06.5 +4.2
BTLR pmax pmax
comp=Z,284nm,0.6s
GDB GEDABAY 4.00 264 Pn Pn 07 52 20.3 -0.6
GDB Sn Sn 07 53 03.4 -3.1
DGRG David-gareji 4.23 275 P Pn 07 52 24.4 +0.5
DGRG S Sn 07 53 07.5 -4.6
DGRG David-gareji 4.23 275 P Pn 07 52 24.4 +0.5
DGRG S Sn 07 53 07.5 -4.6
QZX Qazax, Azerbai 4.25 269 Pn Pn 07 52 23.8 -0.2
QZX Sn Sn 07 53 09.8 -2.6
GROC Groznyy 4.33 299⇑ *i*P Pn 07 52 26.7 +1.6
GROC *e*S Sn 07 53 17.2 +2.9
GROC pmax pmax
comp=Z,274nm,0.5s
ORD Ordubad 4.47 241 Pn Pn 07 52 28.2 +0.9
ORD Sn Sn 07 53 18.1 +0.1
SBZ Shahbuz 4.55 248 Pn Pn 07 52 30.0 +1.7
SBZ Sn Sn 07 53 21.3 +1.5
SHTL Shatili 4.58 290 P Pn 07 52 29.2 +0.5
SHTL Shatili 4.58 290 P Pn 07 52 29.2 +0.5
CHRG Chargali 4.66 286 P Pn 07 52 30.0 +0.2
NAX Nakhchivan 4.69 246 Pn Pn 07 52 31.8 +1.7
NAX Sn Sn 07 53 23.5 +0.3
GNI Garni 4.87 259 Pn Pn 07 52 32.0 -0.7
comp=Z,4.3nm,0.3s,baz=23,slow=4.7,SNR=10
GNI *e*Sn Sn 07 53 26.6 -1.4
comp=Z,13nm,0.3s,baz=343,slow=14,SNR=4.3
comp=Z,21nm,0.7s
GNI Garni 4.87 259 Pn Pn 07 52 31.2 -1.6
GNI Garni 4.87 259*c* *i*P Pn 07 52 34.2 +1.4
GNI *i* S Sn 07 53 31.0 +3.1
GNI pmax pmax
comp=Z,61nm,0.6s
HYR Heyderabad 4.92 254 Pn Pn 07 52 35.2 +1.8
HYR Sn Sn 07 53 29.6 +0.6
KZRT Kazreti 4.97 274 P Pn 07 52 30.3 -3.6
GUDG Gudauri 5.02 286 P Pn 07 52 35.5 +0.8
GUDG Gudauri 5.02 286 P Pn 07 52 35.5 +0.8
TRLG Trialeti 5.19 276 P Pn 07 52 36.2 -0.9
TRLG S Sn 07 53 31.3 -4.4
TRLG Trialeti 5.19 276 P Pn 07 52 36.1 -0.9
TRLG S Sn 07 53 31.3 -4.4
ALIG Mtskhetisjvari 5.57 281 P Pn 07 52 42.0 -0.1
ALIG Mtskhetisjvari 5.57 281 P Pn 07 52 42.0 -0.1
NCK Nalchik 5.92 295⇓ *i*P Pn 07 52 50.0 +3.1
NCK *i* S Sn 07 53 54.0 +0.6
NCK pmax pmax
comp=Z,198nm,0.2s
KARS Kars 6.02 267 Pn Pn 07 52 48.6 +0.2
KARS Kars 6.02 267 P Pn 07 52 48.6 +0.2
PYA1 Pyatigorsk 6.47 298⇓ *i*P Pn 07 52 53.2 -1.2
PYA1 pmax pmax
comp=Z,1.0nm,0.4s
NEUR Neytrino 6.47 291 *e*P Pn 07 52 56.1 +1.5
NEUR pmax pmax
comp=Z,12nm,0.9s
KBZ Khabaz 6.48 295 Pn Pn 07 52 52.6 -1.9
comp=Z,3.8nm,0.3s,baz=130,slow=4.7,SNR=63
KBZ Sn Sn 07 54 01.4 -5.5
comp=Z,15nm,0.3s,baz=136,slow=14,SNR=5.9
comp=Z,31nm,0.6s
KBZ Khabaz 6.48 295*c* *i*P Pn 07 52 53.2 -1.3
SHA1 Shidzhatmaz 6.65 295*c* *i*P Pn 07 52 55.7 -1.3
KVAR Kislovodsk Arr 6.70 297 Pn Pn 07 52 56.0 -1.6
baz=180,slow=19
KVAR Sn Sn 07 54 04.8 -7.7
baz=0.0,slow=19
KIV Kislovodsk 6.70 297 Pn Pn 07 52 55.5 -2.1
KIV Kislovodsk 6.70 297 *e*P Pn 07 52 56.6 -1.0
KIV *e*S Sn 07 54 13.7 +1.1
KIV pmax pmax
comp=Z,104nm,0.9s
GEVA Gevas 6.77 247 Pn Pn 07 52 58.4 -0.3
GOF Gofitskoye 6.95 306*ce* P Pn 07 53 00.9 -0.1
GOF *e*S Sn 07 54 15.3 -3.2
DOMR Dombai 7.25 290⇓ *i*P Pn 07 53 06.2 +1.1
DOMR pmax pmax
comp=Z,19nm,0.9s
GURO Guroymak-BITLI 7.39 252 Pn Pn 07 53 08.1 +1.0
ARXR Arkhyz 7.56 291⇓ *i*P Pn 07 53 08.3 -1.1
ARXR pmax pmax
comp=Z,41nm,0.9s
RPOR Krasnaya Polya 8.30 291⇑ *i*P Pn 07 53 22.2 +2.8
VSLR Vesyoloye 8.41 289⇓ *i*P Pn 07 53 24.4 +3.5
VSLR pmax pmax
comp=Z,32nm,0.9s
GUZR Guzeripl' 8.48 293⇓ *i*P Pn 07 53 24.1 +2.2
GUZR pmax pmax
comp=Z,368nm,1.2s
MARD Mardin 8.84 247 Pn 07 53 27.4 +0.5
ARPR Arapgir-MALATY 9.92 262 Pn Pn 07 53 40.7 -1.0
AB31 Akbulak array 10.20 35 Pn 07 53 42.1 -3.1
AB31 Akbulak array 10.20 35 Pn Pn 07 53 42.5 -2.7
comp=Z,8.4nm,0.4s,baz=208,slow=13,SNR=166
AB31 ⇓Sn Sn 07 55 29.1 -8.7
comp=Z,18nm,0.5s,baz=216,slow=22,SNR=4.9
AB31 Akbulak array 10.20 35 *e*P Pn 07 53 42.5 -2.7
AB31 07 55 29.0
ABKAR Akbulak array 10.20 35 Pn 07 53 42.0 -3.2
AKTO Aktyubinsk 10.42 26 Pn Pn 07 53 45.7 -2.5
comp=Z,17nm,0.3s,baz=204,slow=8.7,SNR=122
AKTO Sn Sn 07 55 31.8 -11
comp=Z,12nm,0.3s,baz=223,slow=19,SNR=12
AKTO LR LR 07 59 12.4
comp=Z,236nm,18.2s,baz=312,slow=46
AKTO Aktyubinsk 10.42 26 ⇓Pn Pn 07 53 45.4 -2.9
comp=Z,28nm,0.6s
AKTO ⇑Sn Sn 07 55 35.2 -7.9
comp=Z,78nm,0.6s
AKTO Aktyubinsk 10.42 26 P Pn 07 53 45.3 -2.9
AKTO 07 55 35.1
HRA Herat 11.22 124 Pn 07 54 00.4 +1.0
BELG Belogornoye 11.39 350 Pn Pn 07 53 58.5 -3.0
comp=Z,5.3nm,0.3s,baz=138,slow=16,SNR=20
BELG Sn Sn 07 55 53.6 -13
comp=Z,20nm,0.3s,baz=258,slow=23,SNR=12
comp=Z,26nm,0.6s
VRH Novokhopyorsk 11.84 330 *e*P Pn 07 54 14.7 +7.1
VRH *e*S Sn 07 56 06.4 -11
VRH pmax pmax
comp=Z,20nm,0.5s
VORD Divnogorie 12.65 324 *e*P Pn 07 54 15.5 -3.2
VORD pmax pmax
comp=Z,10.0nm,0.5s
VSR Storozhevoye 12.89 325 *e*P Pn 07 54 18.2 -3.6
VSR *e*S Sn 07 56 32.5 -11
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 13.20 326 *e*P Pn 07 54 21.0 -5.1
VORR pmax pmax
comp=Z,70nm,0.4s
BR131 Keskin Array S 13.30 269 Pn Pn 07 54 26.4 -1.2
BR131 Keskin Array S 13.30 269⇓ *i*P Pn 07 54 28.3 +0.7
BRTR Keskin Array B 13.30 269 Pn Pn 07 54 26.2 -1.3
comp=Z,2.9nm,0.9s,baz=84,slow=12,SNR=4.2
SHAA Shahritus 13.75 100 Pn 07 54 31.7 -1.7
LPSR Galich'ya Gora 14.02 328 *e*P Pn 07 54 34.7 -2.1
LPSR pmax pmax
comp=Z,42nm,0.6s
CHGR Chuyangaron 14.18 95 Pn 07 54 37.3 -1.8
CHGR Chuyangaron 14.18 95 P Pn 07 54 37.3 -1.8
ASF Jabal al Asfar 14.46 236 Pn Pn 07 54 40.8 -2.1
comp=Z,0.5nm,0.3s,baz=42,slow=15,SNR=4.3
comp=Z,5.3nm,0.7s
KK31 Karatay Array 14.60 76 Pn 07 54 42.3 -2.1
KK31 Karatay Array 14.60 76 Pn Pn 07 54 42.5 -1.9
comp=Z,14nm,0.6s,baz=262,slow=16,SNR=43
KK31 Sn Sn 07 57 16.0 -9.0
comp=Z,33nm,0.7s,baz=277,slow=22,SNR=13
KK31 Karatay Array 14.60 76 *i* P Pn 07 54 42.5 -1.9
KK31 07 57 15.9
KKAR Karatay Array 14.60 76 Pn 07 54 42.5 -1.9
KKAR Karatay Array 14.60 76 P Pn 07 54 42.6 -1.9
MMAI Mount Meron Ar 14.88 242 Pn Pn 07 54 45.7 -2.6
comp=Z,1.6nm,0.3s,baz=31,slow=14,SNR=4.1
MMAI LR LR 08 01 35.0
comp=Z,531nm,20.1s,baz=294,slow=42
comp=Z,0.9nm,0.4s
GAR Garm 14.96 92 Pn 07 54 50.3 +1.1
BTK Batken 15.10 88 Pn Pn 07 54 50.5 -0.4
BTK Batken 15.10 88 P Pn 07 54 50.6 -0.4
BTK pmax pmax
comp=Z,67nm,0.6s
CSS Mathiatis 15.24 251 Pn 07 54 51.5 -1.3
BORA Eskisehir 15.67 272 Pn 07 54 55.4 -2.8
ARTI Arti 15.91 15 Pn Pn 07 54 56.5 -4.5
comp=Z,4.7nm,0.3s,baz=206,slow=7.9,SNR=20
ARTI Sn Sn 07 57 40.0 -16
comp=Z,5.9nm,0.3s,baz=289,slow=21,SNR=6.1
ARTI Arti 15.91 15 Pn 07 54 56.8 -4.2
ARTI Arti 15.91 15 P Pn 07 54 56.6 -4.5
ARTI S Sn 07 57 47.6 -8.9
DRK Karamyk 15.96 89 P Pn 07 55 04.3 +2.1
DRK IAmb IAmb 07 55 06.0
comp=Z,35nm,0.6s
DRK Karamyk 15.96 89 P Pn 07 55 04.3 +2.1
DRK pmax pmax
comp=Z,35nm,0.6s
ARSB Arslanbob 16.53 82 Pn 07 55 09.6 +0.5
ARSB IAmb IAmb 07 55 10.5
comp=Z,35nm,0.8s
ARSB Arslanbob 16.53 82 P Pn 07 55 09.6 +0.5
ARSB pmax pmax
comp=Z,35nm,0.8s
TLCR 16.63 291⇑ P Pn 07 55 07.9 -2.2
TLCR 16.63 291⇑ P Pn 07 55 07.9 -2.2
UOSS Minazif 16.82 163 Pn 07 55 12.4 -0.3
UOSS IAmb IAmb 07 55 13.5
comp=Z,48nm,1.2s
OBN Obninsk 16.84 330 Pn Pn 07 55 10.3 -2.3
OBN Obninsk 16.84 330 *e*P P 07 55 14.1 +0.5
OBN *e*S Sn 07 58 21.9 +3.0
OBN pmax pmax
comp=Z,11nm,0.4s
OBN MLR MLR
comp=Z,122nm,6.0s
TIRR Tirgusor 16.86 289 P Pn 07 55 10.5 -2.4
TIRR Tirgusor 16.86 289 P Pn 07 55 10.5 -2.4
TIRR pmax pmax
comp=Z,18nm,0.9s
ELL Elmali 16.98 262 P Pn 07 55 15.6 +0.9
ELL IAmb IAmb 07 55 18.8
comp=Z,27nm,0.6s
ELL Elmali 16.98 262 P Pn 07 55 15.6 +0.9
ELL pmax pmax
comp=Z,27nm,0.6s
EKS2 Erkin-Say 17.00 78 P P 07 55 17.5 +1.7
SNR=6.8
CFR Carcaliu 17.11 291⇑ P Pn 07 55 14.6 -1.4
CFR Carcaliu 17.11 291⇑ P Pn 07 55 14.6 -1.4
KIRV Kirov 17.39 357 P Pn 07 55 17.1 -2.3
comp=Z,3.8nm,0.3s,baz=172,slow=2.7,SNR=11
KIRV S Sn 07 58 14.8 -17
comp=Z,18nm,0.7s,baz=90,slow=20,SNR=2.5
comp=Z,43nm,0.7s
EIL Elat 17.40 234 P Pn 07 55 19.6 -0.2
comp=Z,0.4nm,0.3s,baz=48,slow=12,SNR=3.8
comp=Z,5.8nm,0.7s
AKAS Kas 17.41 260 P Pn 07 55 20.6 +0.7
AKAS IAmb IAmb 07 55 50.8
comp=Z,28nm,1.1s
SORM Soroca 17.48 301⇑ P Pn 07 55 19.8 -0.7
SORM Soroca 17.48 301⇑ P Pn 07 55 19.8 -0.7
USP Ospenovka 17.51 76 P Pn 07 55 23.7 +2.6
SNR=10
AAK Ala-Archa 17.54 78 P Pn 07 55 23.6 +2.1
SNR=9.9
AAK Ala-Archa 17.54 78 P P 07 55 21.8 +0.2
comp=Z,1.0nm,0.3s,baz=247,slow=7.2,SNR=14
AAK S Sn 07 58 31.3 -4.9
comp=Z,5.2nm,0.8s,baz=270,slow=20,SNR=2.7
comp=Z,16nm,0.8s
AAK Ala-Archa 17.54 78 P P 07 55 23.2 +1.6
AAK Ala-Archa 17.54 78 P P 07 55 23.2 +1.6
AAK pmax pmax
comp=Z,16nm,0.7s
UCH Uchtor 17.58 79 P P 07 55 23.6 +1.2
SNR=5.5
BORK Borovoye 17.61 41 P 07 55 21.3 -0.8
BORK IAmb IAmb 07 55 33.4
comp=Z,42nm,0.8s
BORK Borovoye 17.61 41 P P 07 55 21.3 -0.8
BORK pmax pmax
comp=Z,42nm,0.9s
BVA0 Borovoye Array 17.63 41⇑ P P 07 55 20.0 -2.4
comp=Z,24nm,0.9s
BVAR Borovoye Array 17.63 41 P P 07 55 20.6 -1.8
comp=Z,0.5nm,0.3s,baz=233,slow=10.0,SNR=29
BVAR S Sn 07 58 24.4 -14
comp=Z,6.4nm,0.8s,baz=247,slow=21,SNR=4.4
comp=Z,20nm,0.7s
CHMS Chumysh 17.71 76 P P 07 55 25.1 +1.7
SNR=6.1
AKASG Malin Array Be 17.79 309 P P 07 55 22.2 -1.9
comp=Z,4.5nm,0.3s,baz=114,slow=12,SNR=14
AKASG S Sn 07 58 32.5 -9.4
comp=Z,6.6nm,0.8s,baz=118,slow=24,SNR=4.9
comp=Z,5.7nm,0.5s
AKASG Malin Array Be 17.79 309 P P 07 55 23.4 -0.7
AKASG IAmb IAmb 07 55 40.1
comp=Z,31nm,0.9s
AKASG Malin Array Be 17.79 309 P P 07 55 23.4 -0.7
AKASG pmax pmax
comp=Z,31nm,0.9s
AKBB Malin Array Si 17.79 309 IAmb IAmb 07 55 40.1
comp=Z,52nm,0.8s
KIEV Kiev 17.79 309⇓ P P 07 55 23.1 -1.1
KIEV Kiev 17.79 309 P P 07 55 23.3 -0.9
KIEV IAmb IAmb 07 55 40.1
comp=Z,49nm,0.9s
KIEV Kiev 17.79 309 P P 07 55 23.3 -0.9
KIEV pmax pmax
comp=Z,49nm,0.9s
VRI Vrincioaia 18.16 293⇑ P P 07 55 27.6 -0.7
VRI Vrincioaia 18.16 293⇑ P P 07 55 27.6 -0.7
PLOR Plostina 18.21 293⇑ P P 07 55 28.5 -0.4
PLOR Plostina 18.21 293⇑ P P 07 55 28.5 -0.4
RAYN Ar Rayn 18.26 196 P P 07 55 31.3 +1.8
RAYN Ar Rayn 18.26 196 P P 07 55 31.3 +1.8
RAYN pmax pmax
comp=Z,10.0nm,0.8s
TESR Tescani 18.29 295⇓ P P 07 55 28.7 -1.0
ONER Baraj Valea Uz 18.44 294⇑ P P 07 55 30.6 -0.8
COVR Voineasa-Covas 18.52 293⇓ P P 07 55 31.9 -0.4
MLR Muntele Rosu 18.67 292 P P 07 55 34.1 +0.1
comp=Z,0.4nm,0.3s,baz=142,slow=17,SNR=4.0
comp=Z,3.3nm,0.7s
MLR Muntele Rosu 18.67 292⇓ P P 07 55 34.4 +0.3
MLR Muntele Rosu 18.67 292⇓ P P 07 55 33.7 -0.4
MLR Muntele Rosu 18.67 292⇓ P P 07 55 34.4 +0.3
TURR Turia 18.67 293⇑ P P 07 55 34.3 +0.4
ULHL Ulahol 18.86 79 P Pn 07 55 41.1 +3.7
SNR=10.0
DOPR Dopca 19.10 293⇓ P P 07 55 38.1 -0.5
VOIR 19.30 291⇑ P P 07 55 40.8 0.0

VOIR		19.30	291	⇑P		P		07 55 40.8	0.0
BURAR	Bucovina Array	19.43	298	⇑P		P		07 55 42.3	0.0
BURAR	Bucovina Array	19.43	298	P		P		07 55 41.1	-1.1
BURAR	Bucovina Array	19.43	298	⇑P		P		07 55 42.3	0.0
BUR08	Bucovina Ar. S	19.45	298	P		P		07 55 40.8	-1.7
KARP	Karpathos	19.50	261	P		P		07 55 42.1	-1.0
KDJ	Kajisay	19.56	79	P		P		07 55 43.6	-0.2
KDJ	Kajisay	19.56	79	P		P		07 55 43.6	-0.2
KDJ				pmax	pmax				
	comp=Z,11nm,0.6s								
ARR	Arges	19.59	291	⇑P		P		07 55 42.9	-1.1
TARG	Taragay, Kyrgy	20.07	80	P		P		07 55 50.6	+1.0
TARG	Taragay, Kyrgy	20.07	80	P		P		07 55 50.6	+1.0
TARG				pmax	pmax				
	comp=Z,9.0nm,0.8s								
LOT	Lotru	20.20	291	⇑P		P		07 55 49.5	-1.1
CJR	Cluj-Napoca	20.40	295	⇑P		P		07 55 51.8	-1.0
CJR	Cluj-Napoca	20.40	295	⇑P		P		07 55 51.8	-1.0
MARR	Marisel-Cluj	20.73	295	⇓P		P		07 55 55.2	-1.2
GZR	Gura Zlata	20.89	291	⇑P		P		07 55 58.4	+0.3
GZR	Gura Zlata	20.89	291	⇑P		P		07 55 58.4	+0.3
DRGR		21.02	295	⇑P		P		07 55 59.7	+0.3
DRGR		21.02	295	⇑P		P		07 55 59.7	+0.3
NACGM	Naroch	21.04	319	*e*P				07 56 04.5	
	comp=Z,11nm,0.9s,baz=120								
HERR	Herculane	21.14	289	⇓P		P		07 55 59.6	-1.1
KURBB	Kurchatov Area	21.22	54	P		P		07 56 03.1	+1.6
	comp=Z,29nm,0.6s,baz=256,slow=11,SNR=81								
	comp=Z,29nm,0.6s								
IDI	Anoyia	21.30	262	P		P		07 56 01.9	-0.6
IDI				IAmb	IAmb			07 56 08.2	
	comp=Z,47nm,1.4s								
KURK	Kurchatov	21.30	54	P		P		07 56 03.9	+1.6
KURK	Kurchatov	21.30	54	P		P		07 56 03.9	+1.6
KURK				pmax	pmax				
	comp=Z,36nm,0.7s								
LIT	Litokhoron	21.61	276	P		P		07 56 04.5	-1.3
LIT	Litokhoron	21.61	276	P		P		07 56 04.5	-1.3
LIT				pmax	pmax				
	comp=Z,12nm,1.0s								
MDVR	Moldovita	21.65	289	⇑P		P		07 56 06.1	-0.1
STHS	Stebnicka Huta	22.34	302	*e*P		P		07 56 15.2	+1.7
STHS	Stebnicka Huta	22.34	302	*e*P		P		07 56 15.2	+1.7
ITM	Ithomi	22.83	269	P		P		07 56 17.9	-0.9
ITM				IAmb	IAmb			07 56 20.4	
	comp=Z,22nm,0.6s								
MAKZ	Makanchi	22.88	65	P		P		07 56 20.1	+0.9
MAKZ	Makanchi	22.88	65	⇑P		P		07 56 20.4	+1.2
PSZ	Piszkesteto	23.03	297	⇓P		P		07 56 20.3	-0.5
PSZ	Piszkesteto	23.03	297	⇓P		P		07 56 20.3	-0.5
MK31	Makanchi Array	23.09	66	*i*P		P		07 56 22.5	+1.2
MKAR	Makanchi Array	23.09	66	P		P		07 56 23.1	+1.8
	comp=Z,8.8nm,0.8s,baz=267,slow=8.3,SNR=32								
MKAR				S		S		08 00 33.2	+6.6
	comp=Z,2.3nm,0.6s,baz=257,slow=23,SNR=7.6								
	comp=Z,8.8nm,0.8s								
MKAR	Makanchi Array	23.09	66	P		P		07 56 22.3	+1.0
KEK	Kerkira	23.72	277	P		P		07 56 26.9	-0.2
ARBE	Arbavere	23.97	328	*e*P		P		07 56 31.5	+2.3
MTSE	Matsula	24.45	325	*e*P		P		07 56 34.3	+0.8
JAVC	Velka Javorina	24.59	299	*e*P		P		07 56 35.7	+0.7
JOF	Joensuu	24.65	338	*e*P		P		07 56 36.5	+1.2
STEB	Steborice	24.65	302	*e*P		P		07 56 36.9	+1.5
STEB				*e*pP		pP		07 56 50.5	-1.8
MORC	Moravsky Berou	24.78	302	⇑P		P		07 56 34.9	-1.8
MORC	Moravsky Berou	24.78	302	P		P		07 56 37.0	+0.3
MORC	Moravsky Berou	24.78	302	P		P		07 56 37.0	+0.3
MORC				pmax	pmax				
	comp=Z,10.0nm,1.0s								
MORC	Moravsky Berou	24.78	302	*e*P		P		07 56 38.5	+1.8
MORC				*e*				07 56 54.0	
MODS	Modra-Piesok	24.81	298	*e*P		P		07 56 39.1	+2.1
MODS				*e*				07 56 56.2	
MODS	Modra-Piesok	24.81	298	*e*P		P		07 56 39.1	+2.1
MODS				*e*				07 56 56.2	
FIA1	FINESS Array S	25.23	332	P		P		07 56 39.7	-0.8
FINES	FINESS Array B	25.23	332	P		P		07 56 40.4	-0.2
	comp=Z,6.4nm,0.5s,baz=134,slow=10,SNR=23								
FINES				S		S		08 01 04.3	+3.7
	comp=Z,4.7nm,0.9s,baz=143,slow=19,SNR=2.3								
	comp=Z,6.4nm,0.5s								
FINES	FINESS Array B	25.23	332	P		P		07 56 39.5	-1.1
VRAC	Vranov	25.34	300	*e*P		P		07 56 42.4	+0.7
KRUC	Moravsky	25.45	300	*e*P		P		07 56 43.9	+1.2
DPC	Dobruska-Polom	25.63	303	*e*P		P		07 56 46.0	+1.6
DPC				*e*pP		pP		07 56 58.4	-2.9
DPC	Dobruska-Polom	25.63	303	*e*P		P		07 56 46.0	+1.6
ZAA0	Zalesovo Array	25.84	49	P		P		07 56 45.7	-0.5
ZALV	Zalesovo Beam	25.84	49	P		P		07 56 48.0	+1.8
	comp=Z,2.6nm,0.5s,baz=256,slow=9.7,SNR=7.0								
	comp=Z,2.6nm,0.5s								
ZALV	Zalesovo Beam	25.84	49	P		P		07 56 46.1	-0.1
ARSA	Arzberg	25.95	295	P		P		07 56 45.6	-1.7
ARSA				IAmb	IAmb			07 57 08.0	
	comp=Z,12nm,1.0s								
SUF	Sumiainen	26.08	334	*e*P		P		07 56 49.1	+0.9
TIP	Timpagrande	26.13	277	P		P		07 56 48.8	-0.3
KEF	Keuruu	26.14	332	*e*P		P		07 56 49.1	+0.3
RAF	Rauma	26.61	328	*e*P		P		07 56 54.3	+1.3
CUC	Castrocucco	26.62	279	P		P		07 56 53.2	-0.3
CUC				IAmb	IAmb			07 57 13.9	
	comp=Z,20nm,1.0s								
PRU	Pruhonice	26.73	302	*e*pP		pP		07 57 14.0	+2.8
CEL	Celeste	27.04	275	P		P		07 56 56.4	-0.8
CEL				IAmb	IAmb			07 57 10.9	
	comp=Z,16nm,1.0s								
GERES	GERESS Array B	27.21	299	P		P		07 56 58.8	+0.1
	comp=Z,1.1nm,0.7s,baz=100,slow=4.6,SNR=1.8								
	comp=Z,1.1nm,0.7s								
VAF	Ylistaro	27.49	332	*e*P		P		07 57 01.1	+0.2
HSKC	Hora Svate Kat	27.50	303	*e*P		P		07 57 02.9	+1.8
HSKC				*e*pP		pP		07 57 19.6	+1.5
NRCA	Norcia	28.02	286	P		P		07 57 04.8	-1.3
NRCA				IAmb	IAmb			07 57 27.4	
	comp=Z,32nm,1.5s								
LVZ	Lovozero	28.15	347	P		P		07 57 05.5	-1.3
LVZ	Lovozero	28.15	347	P		P		07 57 05.5	-1.3
LVZ				pmax	pmax				
	comp=Z,26nm,1.0s								
HFS	Hagfors	29.68	322	P		P		07 57 19.9	-0.4
	comp=Z,1.6nm,0.4s,baz=99,slow=9.1,SNR=12								
	comp=Z,1.6nm,0.4s								
NC405	NORSAR Array S	30.96	323	P		P		07 57 30.8	-0.9
NC405				IAmb	IAmb			07 57 49.9	
	comp=Z,24nm,1.4s								
NC303	NORSAR Array S	31.15	323	P		P		07 57 32.7	-0.7
NB2	NORSAR Subarra	31.16	323	P		P		07 57 33.2	-0.3
	comp=Z,6.3nm,1.0s,baz=113,slow=8.6								
NOA	NORSAR Array B	31.16	323	P		P		07 57 32.9	-0.6
	comp=Z,0.9nm,0.8s,baz=111,slow=9.6,SNR=1.2								
	comp=Z,0.9nm,0.8s								
ARCES	ARCESS Array B	31.33	343	P		P		07 57 36.0	+1.1
	comp=Z,2.7nm,0.8s,baz=139,slow=7.8,SNR=2.6								
	comp=Z,2.7nm,0.8s								
ARCES	ARCESS Array B	31.33	343	P		P		07 57 35.1	+0.2
ARCES				IAmb	IAmb			07 58 07.6	
	comp=Z,19nm,1.4s								
ARCES	ARCESS Array B	31.33	343	P		P		07 57 36.0	+1.1
SENIN	Lac Senin/Sane	31.64	294	P		P		07 57 38.0	-0.1
SENIN				IAmb	IAmb			07 58 18.3	
	comp=Z,15nm,1.3s								
EVN	Everest	32.10	103	P		P		07 57 44.2	+1.5
BNI	Bardonecchia	32.25	292	P		P		07 57 44.0	+0.6
BNI				IAmb	IAmb			07 58 16.0	
	comp=Z,12nm,1.1s								
BNI	Bardonecchia	32.25	292	P		P		07 57 44.0	+0.6
BNI				pmax	pmax				
	comp=Z,12nm,1.2s								
CEST	Esterri de Car	36.61	289	P		P		07 58 20.7	-0.3
EKA	Eskdalemuir Ar	37.69	311	P		P		07 58 30.1	+0.2
	comp=Z,0.6nm,0.4s,baz=92,slow=7.9,SNR=4.4								
	comp=Z,0.6nm,0.4s								
SONM	Songino Array	39.31	61	P		P		07 58 44.7	+1.0
	comp=Z,1.3nm,0.7s,baz=274,slow=9.0,SNR=5.4								
	comp=Z,1.3nm,0.7s								
SONM	Songino Array	39.31	61	IAmb	IAmb			07 58 45.9	
	comp=Z,1.1nm,0.8s								
SPB2	Spitsbergen Ar	39.59	349	P		P		07 58 46.0	+0.5
SPITS	Spitsbergen Ar	39.60	349	P		P		07 58 46.4	+0.8
	comp=Z,3.7nm,0.6s,baz=137,slow=10.0,SNR=16								
	comp=Z,3.7nm,0.6s								
ULN	Ulaanbaatar	39.73	61	P		P		07 58 48.7	+1.5
ULN				IAmb	IAmb			07 59 07.3	
	comp=Z,3.5nm,0.6s								
ULN	Ulaanbaatar	39.73	61	P		P		07 58 48.7	+1.5
ULN				pmax	pmax				
	comp=Z,3.0nm,0.6s								
ESDC	Sonseca Array	41.25	287	P		P		07 58 59.6	-0.2
	comp=Z,2.0nm,0.7s,baz=62,slow=8.3,SNR=5.4								
	comp=Z,2.0nm,0.7s								
PAB	San Pablo	41.58	287	P		P		07 59 02.1	-0.3
PAB				IAmb	IAmb			07 59 10.6	
	comp=Z,16nm,1.3s								
PAB	San Pablo	41.58	287	P		P		07 59 02.1	-0.3
PAB				pmax	pmax				
	comp=Z,16nm,1.3s								
PESTR	Estremoz	44.17	287	P		P		07 59 23.1	-0.2
PESTR				IAmb	IAmb			07 59 40.7	
	comp=Z,12nm,1.0s								
CMAR	Chiang Mai Arr	46.68	104	P		P		07 59 44.9	+1.6
	comp=Z,1.5nm,0.4s,baz=307,slow=8.0,SNR=10								
	comp=Z,1.5nm,0.4s								
TORD	Torodi Ar. Bea	51.13	252	P		P		08 00 17.7	+0.3
	comp=Z,0.7nm,0.4s,baz=41,slow=3.3,SNR=5.8								
	comp=Z,0.7nm,0.4s								
BNX	BinXian	53.64	58	⇓P		P		08 00 34.0	-1.6
BNX				pmax	pmax				
	comp=Z,5.0nm,2.1s								
PSI	Prapat	57.55	119	P		P		08 01 03.9	-0.2
PSI				pmax	pmax				
	comp=Z,12nm,0.7s								
RPSI	Rantau Prapat	57.63	119	P		P		08 01 03.9	-0.6
KSRS	Korea Array	57.77	66	P		P		08 01 06.1	+0.8
	comp=Z,1.2nm,0.6s,baz=286,slow=6.1,SNR=2.9								
	comp=Z,1.2nm,0.6s								
LSZ	Lusaka	60.06	206	LR		LR		08 30 27.4	
	comp=Z,578nm,20.8s,baz=108,slow=39								
DBIC	Dimbokro	60.24	251	P		P		08 01 21.9	-0.8
DBIC	Dimbokro	60.24	251	P		P		08 01 21.9	-0.8
DBIC				pmax	pmax				
	comp=Z,18nm,1.2s								
A36M	Sachs Harbour	67.05	359	P		P		08 02 07.4	+0.8
A36M				IAmb	IAmb			08 02 09.9	
	comp=Z,4.6nm,0.8s								
B22K	Teshekpuk Lake	67.33	9	P		P		08 02 09.8	+1.4
B22K				IAmb	IAmb			08 02 10.8	
	comp=Z,4.9nm,0.7s								
C16K	Lisburne Hills	67.46	14	P		P		08 02 10.5	+1.2
C16K				IAmb	IAmb			08 02 28.4	
	comp=Z,6.4nm,1.3s								
TSUM	Tsumeb	67.65	214	LR		LR		08 35 38.8	
	comp=Z,436nm,19.2s,baz=132,slow=39								
C18K	Utukok River	67.83	12	P		P		08 02 13.3	+1.5
C18K				IAmb	IAmb			08 02 14.2	
	comp=Z,4.8nm,0.6s								
B21K	Ikpikpuk River	67.86	9	P		P		08 02 13.5	+1.7
B21K				IAmb	IAmb			08 02 14.1	
	comp=Z,4.7nm,0.8s								
D19K	Kuna River	68.44	11	P		P		08 02 16.7	+1.2
D19K				IAmb	IAmb			08 02 17.8	
	comp=Z,3.2nm,0.8s								
E18K	Tukpahlearik C	69.04	13	P		P		08 02 20.4	+1.2
E18K				IAmb	IAmb			08 02 22.1	
	comp=Z,5.0nm,0.8s								
E19K	Redstone River	69.53	11	P		P		08 02 23.2	+1.0
E19K				IAmb	IAmb			08 02 24.9	
	comp=Z,5.4nm,0.7s								
E29M	Blow River	70.49	3	P		P		08 02 29.0	+0.9
E29M				IAmb	IAmb			08 02 30.7	
	comp=Z,3.3nm,0.7s								
F30M	Barrier River	71.36	3	P		P		08 02 34.4	+1.1
F30M				IAmb	IAmb			08 02 39.0	
	comp=Z,11nm,1.4s								
H31M	Peel River	73.21	2	P		P		08 02 44.9	+0.5
H31M				IAmb	IAmb			08 03 21.0	
	comp=Z,11nm,1.3s								
ILAR	Eielson Array	73.40	8	P		P		08 02 46.8	+1.3
	comp=Z,0.5nm,0.6s,baz=332,slow=4.6,SNR=6.0								
	comp=Z,0.5nm,0.6s								
L14K	Kuka Creek	74.17	16	P		P		08 02 51.8	+1.8
L14K				IAmb	IAmb			08 02 56.2	
	comp=Z,4.8nm,1.1s								
L27K	Beaver Creek,	75.54	6	P		P		08 02 59.3	+1.3
TKL	Tuckaleechee C	92.94	325	LR		LR		08 47 07.7	
	comp=Z,1um,20.6s,baz=314,slow=36								
WRA	Warramunga Arr	98.08	109	P		P		08 04 50.6	+0.2
	comp=Z,0.9nm,0.6s,baz=312,slow=4.9,SNR=6.6								
	comp=Z,0.9nm,0.6s								
NVL	N'lazarevskaya	115.20	193	*i* PKIKP		PKiKP		08 09 56.2	+2.8
NVL				*e*				08 10 56.9	
NVL				*e*PPP		PPP		08 13 23.0	
NVL				*e*				08 17 03.6	
NVL				*e*SS		SS		08 26 51.6	+4.8
NVL				*e*SSS		SSS		08 31 08.4	
NVL				pmax	pmax				
	comp=Z,697nm,1.4s								
NVL				MLR	MLR				
	comp=Z,748nm,19.0s								

RSNC 26 08:06:29.0±0.0, 5°N±1°, 7°6W±°, h-2$^{km}_{\pm 2^{km}}$, M2.4, ML2.3, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAN1	Manizales, Cal	0.09	164	P	Pg	08 06 32.1	+1.3
CMAN1				S	Sg	08 06 34.0	+2.0
NIZA	Niza - Manizal	0.13	142	P	Pg	08 06 32.7	+1.2
NIZA				S	Sg	08 06 35.0	+1.8
GUY2C	Guyana, Caldas	0.20	71	P	Pg	08 06 33.4	+0.6
GUY2C	Guyana, Caldas	0.20	71	P	Pg	08 06 33.3	+0.5
GUY2C				S	Sg	08 06 36.3	+1.0
GUY2C	Guyana, Caldas	0.20	71	P	Pg	08 06 33.3	+0.5
GUY2C	Guyana, Caldas	0.20	71	P	Pg	08 06 33.3	+0.5
RECRC	Villamaria, Ca	0.28	135	P	Pg	08 06 35.4	+1.0
RECRC				S	Sg	08 06 39.8	+1.8
ANIL	Santa Ana	0.68	168	P	Pg	08 06 42.6	+0.5
ANIL				S	Sg	08 06 52.1	+1.2
CBOC	Ciudad Bolivar	0.84	327	P	Pg	08 06 44.2	-0.9
CBOC	Ciudad Bolivar	0.84	327	P	Pg	08 06 43.3	-1.8
CBOC				S	Sg	08 06 53.8	-2.2
CBOC	Ciudad Bolivar	0.84	327	P	Pg	08 06 43.5	-1.6
CBOC	Ciudad Bolivar	0.84	327	P	Pg	08 06 43.5	-1.6
ROSC	El Rosal	1.27	104	P	Pn	08 06 54.5	+0.2
ROSC				S	Sn	08 07 12.0	-0.2
YOTC	Yotoco, Valle	1.41	214	S	Sg	08 07 14.1	-0.3
YOTC	Yotoco, Valle	1.41	214	P	Pn	08 06 53.6	-2.5
YOTC				S	Sg	08 07 13.7	-0.7
YOTC	Yotoco, Valle	1.41	214	P	Pn	08 06 53.8	-2.3
YOTC	Yotoco, Valle	1.41	214	P	Pn	08 06 53.8	-2.3
YOTC	Yotoco, Valle	1.41	214	P	Pn	08 06 53.8	-2.3
SPBC	San Pablo de B	1.55	72	P	Pb	08 06 58.5	-0.2
SPBC	San Pablo de B	1.55	72	P	Pn	08 06 58.1	+0.1
SPBC				S	Sb	08 07 19.2	+0.3
PRAC	Prado	1.58	155	P	Pg	08 06 59.9	+0.5
PRAC				S	Sg	08 07 21.7	+1.8
CVER	Cruz Verde, Cu	1.60	113	P	Pb	08 07 01.5	+1.7
CVER				S	Sb	08 07 22.2	+1.4
PTBC	PUERTO BERRIO,	1.75	38	S	Sn	08 07 22.2	-1.5
PTBC	PUERTO BERRIO,	1.75	38	P	Pn	08 06 59.9	-0.8
PTBC				S	Sn	08 07 22.0	-1.7
PTBC	PUERTO BERRIO,	1.75	38	P	Pn	08 07 00.5	-0.2
CHIC	Chingaza	1.89	106	S	Sg	08 07 33.4	+3.7
CHIC	Chingaza	1.89	106	P	Pg	08 07 06.2	+1.0
CHIC				S	Sg	08 07 31.2	+1.5
CHIC	Chingaza	1.89	106	P	Pg	08 07 06.7	+1.5
CHIC	Chingaza	1.89	106	P	Pg	08 07 06.8	+1.6
DBBC	Dabeiba	1.96	340	P	Pn	08 07 04.6	+1.0
DBBC				S	Sb	08 07 30.3	-0.4
VILC	Villavicencio,	2.12	119	P	Pg	08 07 10.3	+0.5
VILC	Villavicencio,	2.12	119	P	Pg	08 07 09.4	-0.4
VILC				S	Sg	08 07 38.0	+0.7
VILC	Villavicencio,	2.12	119	P	Pg	08 07 09.7	-0.1
VILC	Villavicencio,	2.12	119	P	Pg	08 07 10.2	+0.4
URMC	La Uribe, Meta	2.23	148	P	Pb	08 07 09.7	-0.6
URMC				S	Sb	08 07 39.6	+1.1
JAMC	Jamundi, Valle	2.23	210	P	Pn	08 07 08.1	+0.6
JAMC				S	Sb	08 07 37.7	-1.0
BRJC	Barrancabermej	2.54	45	P	Pn	08 07 13.2	+1.6
BRJC				S	Sb	08 07 45.8	-1.6
RUSC	La Rusia	2.56	73	S	Sg	08 07 50.0	-1.4
RUSC	La Rusia	2.56	73	P	Pb	08 07 14.8	-1.3
RUSC				S	Sb	08 07 46.6	-1.8
RUSC	La Rusia	2.56	73	P	Pb	08 07 15.2	-0.9
RUSC	La Rusia	2.56	73	P	Pb	08 07 15.5	-0.6
RUSC	La Rusia	2.56	73	P	Pb	08 07 15.7	-0.4
UREC	San Jos de Ur	2.58	0	P	Pb	08 07 15.2	-0.9
UREC	San Jos de Ur	2.58	0	P	Pn	08 07 13.6	+1.6
UREC				S	Sn	08 07 46.2	+2.1
UREC	San Jos de Ur	2.58	0	P	Pb	08 07 14.3	-1.8
UREC	San Jos de Ur	2.58	0	P	Pb	08 07 14.7	-1.4
BARC	Barichara	2.75	59	P	Pb	08 07 17.2	-2.1
BARC	Barichara	2.75	59	P	Pn	08 07 16.1	+1.5
GARC	Garzon, Huila	2.95	179	P	Pn	08 07 19.9	+2.5
BBAC	Balboa, Cauca	3.55	209	P	Pn	08 07 29.1	+3.5
BBAC				S	Sn	08 08 11.8	+3.4
PAMC	Pamplona, Colo	3.57	52	P	Pn	08 07 28.9	+2.8
PAMC	Pamplona, Colo	3.57	52	P	Pn	08 07 28.2	+2.1
PAMC				S	Sn	08 08 12.8	+3.6
OCAC	Ocana	3.78	36	P	Pn	08 07 31.6	+2.9
SJCC	San Jacinto, C	4.72	4	P	Pn	08 07 43.6	+2.0

*NEIC **26** 08:09:25.7±1.3, 2°.7N±0°.1×126°.1E±0°.1, h101$^{km}_{\pm 9^{km}}$, mb4.3/12, Error ellipse: s-maj=19.6km s-min=13.3km az=221.0*

*IDC **26** 08:09:26.0±7.9, 2°.64N×126°.03E, h113$^{km}_{\pm 76^{km}}$, mb3.4/8, mbtmp3.8/8, Error ellipse: s-maj=54.0km s-min=16.2km az=73.0*

*DJA **26** 08:09:29.7±0.5, 3°N±3°×12°6E±°, h107$^{km}_{\pm 7^{km}}$, M4.2/14, mb4.5/3, MLv4.1/14*

ISC 26 08:09:25.9±0.6, 2°.61N±0°.08×126°.09E±0°.08, h105^{km}, n30, σ1$ 68/29, mb4.0/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.20	332	P	Pn	08 09 53.2	+4.3
SGSI				S	Sn	08 10 11.8	+5.5
MNI	Manado	1.70	227	P	Pn	08 09 56.9	+1.9
GAMI	Galela, Maluku	1.87	114	P	Pn	08 10 02.6	+5.6
TNTI	Ternate	2.23	145	Pn	Pn	08 10 02.1	+0.4
TNTI	Ternate	2.23	145	P	Pn	08 10 05.9	+4.2
GTOI	Gorontalo	3.65	237	P	Pn	08 10 21.8	+1.4
MRSI	Marisa	4.66	243	P	Pn	08 10 35.5	+1.5
TOLI2	Tolitoli	5.51	254		Pn	08 10 45.7	+0.1
APSI	Ampana	5.65	232	P	Pn	08 10 49.4	+1.9
	73nm,1.1s						
KNRA	Kununurra	18.36	172	P	P	08 13 32.5	0.0
KNRA				IAmb	IAmb	08 14 05.5	
	comp=Z,35nm,1.4s						
FITZ	Fitzroy Crossi	20.59	181	P	P	08 13 56.4	-0.3
	comp=Z,2.9nm,0.9s,baz=20,slow=12,SNR=1.4						
	comp=Z,2.9nm,0.9s						
WB0	Warramunga Arr	23.69	160	P	P	08 14 28.6	+0.3
WB0				IAmb	IAmb	08 14 30.7	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	23.84	160	P	P	08 14 29.7	+0.2
	comp=Z,3.0nm,0.7s,baz=339,slow=10,SNR=38						
	comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	23.84	160	P	P	08 14 28.8	-0.8
WB2	Warramunga Arr	23.84	160	P	P	08 14 30.1	+0.5
WB2				IAmb	IAmb	08 14 38.0	
	comp=Z,15nm,1.1s						
WR8	Warramunga Arr	23.90	160	P	P	08 14 30.6	+0.5
ASAR	Alice Springs	27.21	164	P	P	08 15 00.1	0.0
	comp=Z,0.5nm,0.5s,baz=341,slow=7.3,SNR=9.8						
ASAR				PcP	PcP	08 18 17.1	-0.8
	comp=Z,0.5nm,0.5s,baz=346,slow=2.6,SNR=5.6						
	comp=Z,0.5nm,0.5s						
FORT	Forrest	33.26	177	P	P	08 15 53.3	0.0
MJAR	Matsushiro Arr	35.57	17	P	P	08 16 11.9	-1.3
	comp=Z,0.7nm,0.4s,baz=194,slow=8.9,SNR=1.6						
	comp=Z,0.7nm,0.4s						
MJAR	Matsushiro Arr	35.57	17	IAmb	IAmb	08 16 20.2	
	comp=Z,4.7nm,1.4s						
STKA	Stephens Creek	37.33	158	P	P	08 16 27.0	-1.2
	comp=Z,2.2nm,0.8s,baz=343,slow=7.7,SNR=4.0						
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	48.15	342	P	P	08 17 55.8	+0.3
	comp=Z,0.4nm,0.5s,baz=150,slow=6.0,SNR=2.1						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	58.11	326	P	P	08 19 06.9	-1.5
	comp=Z,0.6nm,0.5s,baz=118,slow=7.9,SNR=12						
MKAR				PcP	PcP	08 19 57.4	-1.6
	comp=Z,0.2nm,0.6s,baz=139,slow=5.2,SNR=2.6						
	comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Area	62.33	328	P	P	08 19 35.9	-1.2
	comp=Z,0.7nm,0.6s,ba

TGBT					Sn	08 24 55.7	-0.5	AOVM				eS	Sn	08 26 07.1	-3.8	YOIG					Sn	08 34 32.7	-1.4
TGBT	**Tuxtla Gutierr**	**2.15**	**68**	*eP*	**Pn**	**08 24 27.9**	**-0.9**	**MHVM**	**Bosque de Chap**	**5.16**	**312**		**Sn**	**08 26 06.6**	**-4.1**	**YOIG**	**Yosondua**	**2.40**	**290** *eP*	**Pn**	**08 34 05.2**	**+0.8**
TGBT				eS	Sn	08 24 55.7	-0.5	**MHVM**	**Bosque de Chap**	**5.16**	**312** *eP*		Pn	08 25 03.9	-6.5	YOIG				eS	Sn	08 34 32.7	-1.4
TUIG	**Tuzandepetl**	**2.18**	**19**		**Pn**	**08 24 29.6**	**+0.4**	MHVM				eS	Sn	**08 26 06.6**	**-4.1**	**PMUV**	**Sontecomapan**	**2.47**	**1**		**Pn**	**08 34 02.7**	**-2.4**
TUIG					Sn	08 24 55.2	-1.7	**PETF**	**Flores**	**5.17**	**79**		**Pn**	**08 25 12.9**	**+2.4**	**PMUV**	**Sontecomapan**	**2.47**	**1** *eP*	**Pn**	**08 34 02.7**	**-2.4**
TUIG	**Tuzandepetl**	**2.18**	**19** *eP*		**Pn**	**08 24 29.6**	**+0.4**	PETF					Sn	**08 26 11.6**	**+0.7**	PMUV				eS	Sn	08 34 29.3	-6.1
TUIG				eS	Sn	08 24 55.2	-1.7	**PETF**	**Flores**	**5.17**	**79** *eP*		**Pn**	**08 25 12.9**	**+2.4**	**TOIG**	**Toxpalan**	**2.71**	**319**		**Pn**	**08 34 11.1**	**+2.6**
YOIG	**Yosondua**	**2.45**	**292**		**Pn**	**08 24 33.5**	**+0.3**	PETF				eS	Sn	**08 26 11.6**	**+0.7**	TOIG					Sn	08 34 39.2	-2.1
YOIG					Sn	08 24 59.9	-4.1	**PETF**	**Flores**	**5.17**	**79** P		**Pn**	**08 25 12.8**	**+2.4**	**TOIG**	**Toxpalan**	**2.71**	**319** *eP*	**Pn**	**08 34 11.1**	**+2.6**
YOIG	**Yosondua**	**2.45**	**292** *eP*		**Pn**	**08 24 33.5**	**+0.3**	PETF				S	Sn	**08 26 10.7**	**-0.1**	TOIG				eS	Sn	08 34 39.2	-2.1
YOIG				eS	Sn	08 24 59.9	-4.1	**INVM**	**La Marquesa**	**5.21**	**310**		Sn	**08 26 06.7**	**-5.5**	**TXIG**	**Tlaxiaco**	**2.75**	**296**		**Pn**	**08 34 07.6**	**-1.5**
PMUV	**Sontecomapan**	**2.57**	**1**		**Pn**	**08 24 32.1**	**-2.5**	**INVM**	**La Marquesa**	**5.21**	**310** *eP*		Pn	08 25 02.3	-8.9	TXIG					Sn	08 34 39.2	-3.3
PMUV					Sn	08 25 05.9	-0.7	INVM				eS	Sn	**08 26 06.7**	**-5.5**	**TXIG**	**Tlaxiaco**	**2.75**	**296** *eP*	**Pn**	**08 34 07.6**	**-1.5**
PMUV	**Sontecomapan**	**2.57**	**1** *eP*		**Pn**	**08 24 32.1**	**-2.5**	**APVM**	**Azcapotzalco**	**5.21**	**313**		Sn	**08 26 10.7**	**-1.4**	TXIG				eS	Sn	08 34 39.2	-3.3
PMUV				eS	Sn	08 25 05.9	-0.7	**APVM**	**Azcapotzalco**	**5.21**	**313** *eS*		Sn	**08 26 10.7**	**-1.4**	**PNIG**	**Pinotepa**	**2.85**	**277**		**Pn**	**08 34 09.4**	**-0.9**
TOIG	**Toxpalan**	**2.79**	**320**		**Pn**	**08 24 39.5**	**+1.7**	**PTVM**	**Pico Tres Padr**	**5.21**	**314**		**Pn**	**08 25 09.7**	**-1.5**	PNIG					Sn	08 34 41.8	-2.9
TOIG					Sn	08 25 10.4	-1.7	**PTVM**	**Pico Tres Padr**	**5.21**	**314** *eP*		Sn	**08 25 09.7**	**-1.5**	**PNIG**	**Pinotepa**	**2.85**	**277** *eP*	**Pn**	**08 34 09.4**	**-0.9**
TOIG	**Toxpalan**	**2.79**	**320** *eP*		**Pn**	**08 24 39.5**	**+1.7**	PTVM				eS	Sn	**08 26 05.8**	**-6.4**	PNIG				eS	Sn	08 34 41.8	-2.9
TOIG				eS	Sn	08 25 10.4	-1.7	**AZVM**	**Cuida Lopez Ma**	**5.32**	**313**		Sn	**08 25 14.2**	**+1.4**	**CCIG**	**Comitan**	**2.94**	**85**		**Pn**	**08 34 12.3**	**+0.8**
TXIG	**Tlaxiaco**	**2.80**	**298**		**Pn**	**08 24 39.2**	**+1.1**	**AZVM**	**Cuida Lopez Ma**	**5.32**	**313** *eP*		Pn	**08 25 14.2**	**+1.4**	CCIG					Sn	08 34 47.0	-0.1
TXIG					Sn	08 25 11.2	-1.5	AZVM				eS	Sn	**08 26 20.4**	**+5.5**	**CCIG**	**Comitan**	**2.94**	**85** *eP*	**Pn**	**08 34 12.3**	**+0.8**
TXIG	**Tlaxiaco**	**2.80**	**298** *eP*		**Pn**	**08 24 39.2**	**+1.1**	**ZUVM**	**ZUMPANGO**	**5.35**	**316** *eP*		Pn	08 25 18.9	+5.8	CCIG				eS	Sn	08 34 47.0	-0.1
TXIG				eS	Sn	08 25 11.2	-1.5	ZUVM				eS	Sn	**08 26 19.2**	**+3.6**	**PATR**	**El Naranjo**	**2.99**	**108**		**Pn**	**08 34 12.4**	**-0.1**
PNIG	**Pinotepa**	**2.88**	**279**		**Pn**	**08 24 37.8**	**-1.0**	**FAME**	**Alcaldia de Sa**	**5.41**	**112** P		**Pn**	**08 25 15.7**	**+2.1**	PATR					Sn	08 34 47.6	-1.0
PNIG					Sn	08 25 12.6	-1.6	**TOVM**	**TOLUCA**	**5.42**	**308**		**Pn**	**08 25 15.1**	**+1.0**	**PATR**	**El Naranjo**	**2.99**	**108** *eP*	**Pn**	**08 34 12.4**	**-0.1**
PNIG	**Pinotepa**	**2.88**	**279** *eP*		**Pn**	**08 24 37.8**	**-1.0**	TOVM					Sn	**08 26 16.7**	**-0.7**	PATR				eS	Sn	08 34 47.6	-1.0
PNIG				eS	Sn	08 25 12.6	-1.6	**TOVM**	**TOLUCA**	**5.42**	**308** *eP*		**Pn**	**08 25 15.1**	**+1.0**	**PAVE**	**Pavencul**	**3.02**	**106**		**Pn**	**08 34 13.3**	**+0.4**
CCIG	**Comitan**	**2.93**	**83**		**Pn**	**08 24 40.8**	**+1.0**	TOVM				eS	Sn	**08 26 16.7**	**-0.7**	PAVE					Sn	08 34 49.1	-0.2
CCIG					Sn	08 25 14.6	-1.1	**ARIG**	**Puente Sto Nin**	**5.46**	**296**		**Pn**	**08 25 12.0**	**-2.4**	**PAVE**	**Pavencul**	**3.02**	**106** *eP*	**Pn**	**08 34 13.3**	**+0.4**
CCIG	**Comitan**	**2.93**	**83** *eP*		**Pn**	**08 24 40.8**	**+1.0**	ARIG					Sn	**08 26 19.1**	**+1.2**	PAVE				eS	Sn	08 34 49.1	-0.2
CCIG				eS	Sn	08 25 14.6	-1.1	**ARIG**	**Puente Sto Nin**	**5.46**	**296** *eP*		**Pn**	**08 25 12.0**	**-2.4**	**THIG**		**3.04**	**112**		**Pn**	**08 34 13.1**	**+0.2**
CCIG	**Comitan**	**2.93**	**83** P		**Pn**	**08 24 41.3**	**+1.7**	ARIG				eS	Sn	**08 26 19.1**	**+1.2**	THIG					Sn	08 34 48.5	-0.8
CCIG				S	Sn	08 25 15.3	-0.4	**SLOZ**	**Alcaldia de Sa**	**5.55**	**110** P		**Pn**	**08 25 19.2**	**+3.6**	**THIG**		**3.04**	**112** *eP*	**Pn**	**08 34 13.1**	**+0.2**
PATR	**El Naranjo**	**2.95**	**106**		**Pn**	**08 24 41.0**	**+1.0**	**NUBE**	**Las Nubes**	**5.60**	**111** P		**Pn**	**08 25 19.8**	**+3.4**	THIG				eS	Sn	08 34 48.5	-0.8
PATR					Sn	08 25 16.0	-0.3	**DEIG**	**Demacu**	**5.67**	**320** *eP*		Pn	08 25 24.7	+7.2	**HLIG**	**Huajuapan de L**	**3.06**	**305**		**Pn**	**08 34 17.0**	**+3.6**
PATR	**El Naranjo**	**2.95**	**106** *eP*		**Pn**	**08 24 41.0**	**+1.0**	DEIG				eS	Sn	**08 26 26.3**	**+2.9**	HLIG					Sn	08 34 48.5	-1.8
PATR				eS	Sn	08 25 16.0	-0.3	**ESQI**	**Esquipulas**	**5.79**	**103** Pn		**Pn**	**08 25 21.3**	**+2.3**	**HLIG**	**Huajuapan de L**	**3.06**	**305** *eP*	**Pn**	**08 34 17.0**	**+3.6**
PAVE	**Pavencul**	**2.98**	**104**		**Pn**	**08 24 41.7**	**+1.2**	**MTO3**	**Montecristo**	**5.82**	**105**		**Pn**	**08 25 21.4**	**+1.9**	HLIG				eS	Sn	08 34 48.5	-1.8
PAVE					Sn	08 25 15.7	-1.4	**MTO3**	**Montecristo**	**5.82**	**105** P		**Pn**	**08 25 22.2**	**+2.7**	**CHUJ**	**Union Juarez**	**3.12**	**108** *eP*	**Pn**	**08 34 13.6**	**-0.5**
PAVE	**Pavencul**	**2.98**	**104** *eP*		**Pn**	**08 24 41.7**	**+1.2**	MTO3				S	Sn	**08 26 27.4**	**+0.4**	CHUJ				eS	Sn	08 34 50.5	-1.1
PAVE				eS	Sn	08 25 15.7	-1.4	**JAYA**	**Jayaque - finc**	**5.99**	**112** P		**Pn**	**08 25 24.1**	**+2.4**	**TPIG**	**Tehuac#an**	**3.13**	**319**		**Pn**	**08 34 16.4**	**+2.1**
THIG		**2.99**	**110**		**Pn**	**08 24 40.5**	**+0.2**	JAYA				S	Sn	**08 26 32.3**	**+1.1**	TPIG					Sn	08 34 52.0	0.0
THIG					Sn	08 25 15.7	-1.1	**ACIG**	**Acambay**	**6.01**	**312**		Sn	**08 26 32.3**	**+0.7**	**TPIG**	**Tehuac#an**	**3.13**	**319** *eP*	**Pn**	**08 34 16.4**	**+2.1**
THIG		**2.99**	**110** *eP*		**Pn**	**08 24 40.5**	**+0.2**	**ACIG**	**Acambay**	**6.01**	**312** *eP*		Pn	08 25 28.1	+6.1	TPIG				eS	Sn	08 34 52.0	0.0
THIG				eS	Sn	08 25 15.7	-1.1	ACIG				eS	Sn	**08 26 32.3**	**+0.7**	**FTIG**	**Fresnillo de T**	**3.37**	**303**		**Pn**	**08 34 57.7**	**+0.1**
CHUJ	**Union Juarez**	**3.07**	**106** *eP*		**Pn**	**08 24 42.8**	**+1.1**	**CTUV**	**Llano Grande**	**6.26**	**332**		**Pn**	**08 25 27.4**	**+2.1**	**FTIG**	**Fresnillo de T**	**3.37**	**303** *eP*	**Pn**	**08 34 20.5**	**+3.0**
CHUJ				eS	Sn	08 25 18.4	-0.9	CTUV					Sn	**08 26 38.2**	**+0.7**	FTIG				eS	Sn	08 34 57.7	+0.1
HLIG	**Huajuapan de L**	**3.13**	**307**		**Pn**	**08 24 43.7**	**+1.2**	**CTUV**	**Llano Grande**	**6.26**	**332** *eP*		**Pn**	**08 25 27.4**	**+2.1**	**MGIG**	**Malinaltepec**	**3.51**	**290**		**Pn**	**08 34 20.9**	**+1.4**
HLIG					Sn	08 25 16.8	-3.9	CTUV				eS	Sn	**08 26 38.2**	**+0.7**	MGIG					Sn	08 35 00.9	-0.3
HLIG	**Huajuapan de L**	**3.13**	**307** *eP*		**Pn**	**08 24 43.7**	**+1.2**	**COEG**	**Centro de Oper**	**6.51**	**110** P		**Pn**	**08 25 33.2**	**+4.3**	**MGIG**	**Malinaltepec**	**3.51**	**290** *eP*	**Pn**	**08 34 20.9**	**+1.4**
HLIG				eS	Sn	08 25 16.8	-3.9	COEG				S	Sn	**08 26 44.4**	**+0.5**	MGIG				eS	Sn	08 35 00.9	-0.3
TPIG	**Tehuac#an**	**3.22**	**320**		**Pn**	**08 24 45.2**	**+1.5**	**MOIG**	**Morelia**	**6.82**	**304** *eP*		**Pn**	**08 25 31.2**	**-2.1**	**TLIG**	**Tlapa**	**3.57**	**295**		**Pn**	**08 34 22.8**	**+2.5**
TPIG					Sn	08 25 23.6	+0.8	MOIG				eS	Sb	**08 27 20.3**	**+6.8**	**TLIG**	**Tlapa**	**3.57**	**295**		**Pn**	**08 35 03.4**	**+0.7**
TPIG	**Tehuac#an**	**3.22**	**320** *eP*		**Pn**	**08 24 45.2**	**+1.5**	**RPIG**	**Rio Verde**	**7.45**	**323**		**Pn**	**08 25 43.1**	**+1.3**	**TLIG**	**Tlapa**	**3.57**	**295** *eP*	**Pn**	**08 34 22.6**	**+2.4**
TPIG				eS	Sn	08 25 23.6	+0.8	**RPIG**	**Rio Verde**	**7.45**	**323** *eP*		**Pn**	**08 25 43.1**	**+1.3**	TLIG				eS	Sn	08 35 03.4	+0.7
FTIG	**Fresnillo de T**	**3.44**	**305**		**Pn**	**08 24 48.7**	**+2.1**	RPIG				eS	Sn	**08 27 09.4**	**+2.4**	**HUEH**	**Huehuetenango**	**3.62**	**101**		**Pn**	**08 34 22.2**	**+1.2**
FTIG					Sn	08 25 25.7	-2.3	**TEIG**	**Tepich**	**7.81**	**56**		**Pn**	**08 25 47.4**	**+0.9**	HUEH					Sn	08 35 02.2	-1.9
FTIG	**Fresnillo de T**	**3.44**	**305** *eP*		**Pn**	**08 24 48.7**	**+2.1**	**TGUH**	**Tegucigalpa,Un**	**7.86**	**103** Pn		**Pn**	**08 25 49.4**	**+2.0**	**HUEH**	**Huehuetenango**	**3.62**	**101** *eP*	**Pn**	**08 34 22.2**	**+1.2**
FTIG				eS	Sn	08 25 25.7	-2.3	**MMIG**	**Aquila**	**8.15**	**288** *eP*		**Pb**	**08 26 15.7**	**+1.8**	HUEH				eS	Sn	08 35 02.2	-1.9
MGIG	**Malinaltepec**	**3.56**	**291**		**Pn**	**08 24 48.8**	**+0.5**	MMIG				eS	Sb	08 27 52.4	+0.9	**HUEH**	**Huehuetenango**	**3.62**	**101** P	**Pb**	**08 34 29.6**	**+0.6**
MGIG					Sn	08 25 29.1	-2.1	**BOAB**	**BOACO BROADBAN**	**8.85**	**110** Pn		**Pn**	**08 26 16.8**	**+2.1**	**JAUV**	**Jalcomulco**	**3.63**	**335**		**Pn**	**08 34 19.1**	**-2.0**
MGIG	**Malinaltepec**	**3.56**	**291** *eP*		**Pn**	**08 24 48.8**	**+0.5**	**JTS**	**Las Juntas de**	**11.43**	**118** Pn		**Pn**	**08 26 37.1**	**+0.8**	JAUV					Sn	08 35 01.4	-2.6
MGIG				eS	Sn	08 25 29.1	-2.1		0.2nm,0.3s,baz=15,slow=20,SNR=1.8							**JAUV**	**Jalcomulco**	**3.63**	**335** *eP*	**Pn**	**08 34 19.1**	**-2.0**
HUEH	**Huehuetenango**	**3.59**	**100**		**Pn**	**08 24 52.7**	**+3.9**		2.2nm,0.9s							JAUV				eS	Sn	08 35 01.4	-2.6
HUEH					Sb	08 25 37.0	-3.4	**TXAR**	**Lajitas Array**	**15.44**	**331** Pn		**P**	**08 27 36.3**	**+0.6**	**RTAL**	**Retalhuleu**	**3.70**	**114** *eP*	**Pn**	**08 34 23.2**	**+1.3**
HUEH	**Huehuetenango**	**3.59**	**100** *eP*		**Pn**	**08 24 52.7**	**+3.9**		0.1nm,0.3s,baz=155,slow=9.6,SNR=3.0							RTAL				eS	Sn	08 35 06.3	+0.6
HUEH				eS	Sb	08 25 37.0	-3.4		0.8nm,0.7s							**LVIG**	**Laguna Verde**	**3.83**	**342**		**Pn**	**08 34 23.1**	**+1.5**
HUEH	**Huehuetenango**	**3.59**	**100** P		**Pn**	**08 24 52.6**	**+3.8**	**PLPT**	**Palo Pinto**	**17.02**	**351**		**Pn**	**08 27 51.2**	**0.0**	LVIG					Sn	08 35 05.3	-3.5
HUEH				S	Sn	08 25 33.2	+1.1	**Z41A**	**Richland Creek**	**17.35**	**7** Pn		**Pn**	**08 27 53.1**	**-2.2**	**LVIG**	**Laguna Verde**	**3.83**	**342** *eP*	**Pn**	**08 34 25.1**	**+1.5**
TLIG	**Tlapa**	**3.62**	**297**		**Pn**	**08 24 49.5**	**+0.3**	Z41A				IAmb	IAmb	08 27 58.9		LVIG				eS	Sn	08 35 05.3	-3.5
TLIG					Sn	08 25 31.8	-1.0		comp=Z,23nm,1.1s							**DAIG**	**Los Arroyos**	**4.39**	**283**		**Pn**	**08 34 30.7**	**-0.8**
TLIG	**Tlapa**	**3.62**	**297** *eP*		**Pn**	**08 24 49.5**	**+0.3**	**OK052**	**Battle Ridge R**	**20.00**	**356** P		**P**	**08 28 25.0**	**-0.9**	DAIG					Sn	08 35 19.0	-3.7
TLIG				eS	Sn	08 25 31.8	-1.0	**FCAR**	**Ozark Folk Cen**	**20.03**	**7** P		**P**	**08 28 26.1**	**-0.2**	**DAIG**	**Los Arroyos**	**4.39**	**283** *eP*	**Pn**	**08 34 30.7**	**-0.8**
TLIG	**Tlapa**	**3.62**	**297** P		**Pb**	**08 24 55.6**	**-1.2**	FCAR				IAmb	IAmb	08 28 30.3		DAIG				eS	Sn	08 35 19.0	-3.7
TLIG				S	Sb	08 25 42.4	+1.1		comp=Z,20nm,1.4s							**PPM**	**Popocatepetl**	**4.44**	**313** *eP*	Pn	08 34 37.3	+4.7
RTAL	**Retalhuleu**	**3.64**	**113**		**Pn**	**08 24 51.7**	**+2.4**	**T35A**	**Sooner Cattle**	**20.91**	**357**		**P**	**08 28 36.4**	**+0.7**	PPM				eS	Sn	08 35 26.9	+2.2
RTAL	**Retalhuleu**	**3.64**	**113** *eP*		**Pn**	**08 24 49.0**	**-0.4**	**ANMO**	**Albuquerque**	**21.45**	**334** P		**P**	**08 28 43.1**	**+1.3**	**PPIG**	**Popocatepetl**	**4.44**	**313**		**Pn**	**08 35 26.9**	**+2.2**
RTAL				eS	Sn	08 25 32.0	-1.1		comp=Z,0.6nm,0.6s,baz=158,slow=18,SNR=5.1							**MEIG**	**Mezcala**	**4.63**	**294**		**Pn**	**08 34 37.4**	**+2.5**
RTAL	**Retalhuleu**	**3.64**	**113** P		**Pn**	**08 24 51.8**	**+2.4**		comp=Z,0.6nm,0.6s							**MEIG**	**Mezcala**	**4.63**	**294** *eP*	**Pn**	**08 34 37.4**	**+2.5**
RTAL				S	Sn	08 25 33.1	0.0	**ANMO**	**Albuquerque**	**21.45**	**334**		**P**	**08 28 41.5**	**-0.3**	MEIG				eS	Sn	08 35 23.6	-5.2
JAUV	**Jalcomulco**	**3.73**	**336**		**Pn**	**08 24 47.0**	**-3.6**	**S39A**	**Bolivar**	**21.71**	**4** P		**P**	**08 28 43.7**	**-0.6**	**YAIG**	**Yautepec**	**4.64**	**307**		**Pn**	**08 34 29.5**	**+0.4**
JAUV					Sn	08 25 29.4	-5.8	S39A				IAmb	IAmb	08 28 46.1		**YAIG**	**Yautepec**	**4.64**	**307** *eP*	**Pn**	**08 34 38.1**	**+3.2**
JAUV	**Jalcomulco**	**3.73**	**336** *eP*		**Pn**	**08 24 47.0**	**-3.6**		comp=Z,11nm,1.3s							YAIG				eS	Sn	08 35 29.5	+0.4
JAUV				eS	Sn	08 25 29.4	-5.8	**R40A**	**Maddies Statio**	**22.39**	**6** P		**P**	**08 28 52.3**	**+0.7**	**APG**	**El Apazote**	**4.67**	**102** Pn		**Pn**	**08 34 34.2**	**-1.3**
LVIG	**Laguna Verde**	**3.93**	**343**		**Pn**	**08 24 52.3**	**-0.9**	**PDAR**	**Pinedale Array**	**29.42**	**338** P		**P**	**08 29 57.9**	**+0.7**		baz=303,slow=17,SNR=1.8						
LVIG					Sn	08 25 36.6	-3.4		comp=Z,0.2nm,0.8s,baz=146,slow=7.7,SNR=1.7							APG				Sn	**08 35 29.2**	**-0.7**
LVIG	**Laguna Verde**	**3.93**	**343** *eP*		**Pn**	**08 24 52.3**	**-0.9**		comp=Z,0.2nm,0.8s								0.8nm,0.3s,baz=233,slow=20,SNR=4.2						
LVIG				eS	Sn	08 25 36.6	-3.4	**NVAR**	**Mina Array Bea**	**30.24**	**322** P		**P**	**08 30 07.0**	**+2.5**	APG				Lg	Lg	08 35 49.1	
DAIG	**Los Arroyos**	**4.43**	**284**		**Pn**	**08 24 59.8**	**-0.3**		comp=Z,2.7nm,0.8s,baz=134,slow=9.0,SNR=18								0.5nm,0.3s,baz=238,slow=23,SNR=6.4						
DAIG	**Los Arroyos**	**4.43**	**284** *eP*		**Pn**	**08 24 59.8**	**-0.3**		comp=Z,2.7nm,0.8s							**CXUV**	**Coxquihui**	**4.69**	**331**		**Pn**	**08 34 38.1**	**+2.6**
DAIG				eS	Sn	08 25 46.4	-6.1	**YKA**	**Yellowknife Ar**	**48.45**	**348** P		**P**	**08 32 35.1**	**-0.5**	CXUV					Sn	08 35 30.3	+0.2
PPM	**Popocatepetl**	**4.52**	**314** *eP*		Pn	08 25 06.9	+5.1		comp=Z,0.3nm,0.6s,baz=154,slow=7.1,SNR=7.0							**CXUV**	**Coxquihui**	**4.69**	**331** *eP*	**Pn**	**08 34 38.1**	**+2.6**
PPM				eS	Sn	08 25 55.9	+0.5		comp=Z,0.3nm,0.6s							CXUV				eS	Sn	08 35 30.3	+0.2
PPIG	**Popocatepetl**	**4.52**	**314**		**Sn**	**08 25 55.9**	**+0.5**	**ILAR**	**Eielson Array**	**59.85**	**337** P		**P**	**08 33 59.2**	**+0.4**	**PLIG**	**Platanillo**	**4.73**	**300**		**Pn**	**08 34 35.1**	**-1.2**
APG	**El Apazote**	**4.63**	**101** Pn		**Pn**	**08 25 04.8**	**+1.5**		comp=Z,0.7nm,0.8s,baz=118,slow=6.0,SNR=5.6							PLIG					Sn	08 35 30.4	-1.0
	0.3nm,0.3s,baz=244,slow=22,SNR=13								comp=Z,0.7nm,0.8s							**PLIG**	**Platanillo**	**4.73**	**300** *eP*	**Pn**	**08 34 35.1**	**-1.2**
APG				Sn	**Sn**	**08 25 57.9**	**0.0**									PLIG				eS	Sn	08 35 30.4	-1.0
	0.8nm,0.3s,baz=223,slow=18,SNR=3.5															**SCIG**	**Sabancuy**	**4.79**	**52**		**Pn**	**08 34 36.0**	**-0.8**
APG				Lg	Lg	08 26 18.9										**SCIG**	**Sabancuy**	**4.79**	**52** *eP*	**Pn**	**08 34 36.0**	**-0.8**
	0.8nm,0.3s,baz=238,slow=23,SNR=7.4															SCIG				eS	Sn	08 35 29.8	-2.7
AMVM	**AMECAMECA**	**4.67**	**313**		**Sn**	**08 25 59.6**	**+0.7**									**MPVM**	**San Francisco**	**4.80**	**311** *eP*	**Pn**	**08 34 40.9**	**+3.6**
AMVM	**AMECAMECA**	**4.67**	**313** *eS*		**Sn**	**08 25 59.6**	**+0.7**									MPVM				eS	Sn	08 35 38.7	+5.5
MEIG	**Mezcala**	**4.69**	**295**		Pn	08 24 59.5	-4.3									**THVM**	**De Xico**	**4.85**	**312**		**Pn**	**08 34 40.1**	**+2.2**
MEIG					**Sn**	**08 25 57.5**	**-1.4**									THVM					Sn	08 34 34.2	-0.2
MEIG	**Mezcala**	**4.69**	**295** *eP*		Pn	08 24 59.5	-4.3									**THVM**	**De Xico**	**4.85**	**312** *eP*	**Pn**	**08 34 40.1**	**+2.2**
MEIG				eS	**Sn**	**08 25 57.5**	**-1.4**									THVM				eS	Sn	08 34 34.2	-0.2
YAIG	**Yautepec**	**4.71**	**308**		**Pn**	**08 25 05.2**	**+1.1**									**TLVM**	**San Miguel Top**	**4.91**	**310**		**Pn**	**08 34 40.8**	**+1.9**
YAIG					**Sn**	**08 26 00.1**	**+0.6**									TLVM					Sn	08 35 32.8	-3.3
YAIG	**Yautepec**	**4.71**	**308** *eP*		**Pn**	**08 25 05.2**	**+1.1**									**TLVM**	**San Miguel Top**	**4.91**	**310** *eP*	**Pn**	**08 34 40.8**	**+1.9**
YAIG				eS	**Sn**	**08 26 00.1**	**+0.6**									TLVM				eS	Sn	08 35 32.8	-3.3
CXUV	**Coxquihui**	**4.78**	**332**		**Pn**	**08 25 00.8**	**-4.2**									**XCVM**	**Xochimilco**	**4.91**	**311**		**Sn**	**08 35 33.3**	**-2.7**
CXUV	**Coxquihui**	**4.78**	**332** *eP*		**Pn**	**08 25 00.8**	**-4.2**									**XCVM**	**Xochimilco**	**4.91**	**311** *eP*	Pn	08 34 34.2	-4.7
CXUV				eS	**Sn**	**08 26 02.8**	**+1.6**									XCVM				eS	Sn	08 35 33.3	-2.7
PLIG	**Platanillo**	**4.80**	**301**		**Sn**	**08 25 04.5**	**-0.8**									**MZVM**		**4.96**	**309**		**Sn**	**08 35 34.3**	**-2.4**
PLIG					**Sn**	**08 25 59.1**	**-2.6**									**MZVM**		**4.96**	**309** *eP*	Pn	08 34 40.9	+5.0
PLIG	**Platanillo**	**4.80**	**301** *eP*		**Pn**	**08 25 04.5**	**-0.8**									MZVM				eS	Sn	08 35 34.3	-2.4
PLIG				eS	**Sn**	**08 25 59.1**	**-2.6**									**CAIG**	**El Cayaco**	**4.97**	**282**		**Sn**	**08 35 34.3**	**-2.8**
SCIG	**Sabancuy**	**4.83**	**51**		**Pn**	**08 25 06.2**	**+0.4**									**CAIG**	**El Cayaco**	**4.97**	**282** *eP*	Pn	08 34 34.9	-4.5
SCIG					**Sn**	**08 25 59.6**	**-2.8**									CAIG				eS	Sn	08 35 34.3	-2.8
SCIG	**Sabancuy**	**4.83**	**51** *eP*		**Pn**	**08 25 06.2**	**+0.4**									**UNM**	**Universidad Na**	**5.01**	**311** Pn	**Pn**	**08 34 37.8**	**-2.3**
SCIG				eS	**Sn**	**08 25 59.6**	**-2.8**									**MAVM**	**Malinalco, Edo**	**5.02**	**306**		**Pn**	**08 34 39.2**	**-1.1**
SCIG	**Sabancuy**	**4.83**	**51** P		**Pn**	**08 25 06.6**	**+0.9**									**MAVM**	**Malinalco, Edo**	**5.02**	**306** *eP*	**Pn**	**08 34 39.2**	**-1.1**
MPVM	**San Francisco**	**4.88**	**312**		**Pn**	**08 25 03.9**	**-2.7**									MAVM				eS	Sn	08 35 33.6	-5.0
MPVM					**Sn**	**08 26 05.1**	**+1.2**									**VTVM**	**Tizayuca**	**5.03**	**318**		**Sn**	**08 35 38.4**	**-0.5**
MPVM	**San Francisco**	**4.88**	**312** *eP*		**Pn**	**08 25 03.9**	**-2.7**									**VTVM**	**Tizayuca**	**5.03**	**318** *eP*	Pn	08 34 45.4	+4.9
MPVM				eS	**Sn**	**08 26 05.1**	**+1.2**									VTVM				eS	Sn	08 35 38.4	-0.5
THVM	**De Xico**	**4.92**	**313** *eS*		Sn	08 25 52.9	-12									**MCRU**	**Las Cruces**	**5.06**	**310** *eP*	**Pn**	**08 34 44.6**	**+3.7**
TXVM	**Universitario**	**4.97**	**315** *eS*		**Sn**	**08 26 08.3**	**+2.1**									MCRU				eS	Sn	08 35 41.6	+2.0
TLVM	**San Miguel Top**	**4.99**	**311** *eP*		Pn	08 25 02.9	-5.3									**AOVM**	**Tlapan**	**5.07**	**310**		**Pn**	**08 34 40.8**	**-0.4**
TLVM				eS	**Sn**	**08 25 59.0**	**-7.8**									**AOVM**	**Tlapan**	**5.07**	**310** *eP*	**Pn**	**08 34 40.8**	**-0.4**
XCVM	**Xochimilco**	**4.99**	**312** *eS*		Sn	08 25 53.3	-13									AOVM				eS	Sn	08 35 42.8	+2.6
CAIG	**El Cayaco**	**5.01**	**283**		**Pn**	**08 25 05.7**	**-2.4**									**MHVM**	**Bosque de Chap**	**5.08**	**312**		**Pn**	**08 34 43.5**	**+2.4**
CAIG					**Sn**	**08 26 05.3**	**-1.5**									**MHVM**	**Bosque de Chap**	**5.08**	**312** *eP*	**Pn**	**08 34 43.5**	**+2.4**
CAIG	**El Cayaco**	**5.01**	**283** *eP*		**Pn**	**08 25 05.7**	**-2.4**									MHVM				eS	Sn	08 35 45.0	+4.9
CAIG				eS	**Sn**	**08 26 05.3**	**-1.5**									**INVM**	**La Marquesa**	**5.13**	**309**		**Sn**	**08 35 38.4**	**-3

DHIG	**Demacu**	**5.58**	**320**			**Sn**	08 35 51.5	-1.1
SLOZ	**Alcaldia de Sa**	**5.59**	**110**	P		Pb	08 34 57.5	-5.0
NUBE	**Las Nubes**	**5.64**	**112**	P		**Pn**	**08 34 51.6**	**+2.7**
ESQI	**Esquipulas**	**5.83**	**104**	Pn		**Pn**	**08 34 50.9**	**-0.5**
MTO3	**Montecristo**	**5.86**	**106**	Pn		**Pn**	**08 34 53.4**	**+1.5**
ACIG	**Acambay**	**5.93**	**312**			**Sn**	**08 35 58.4**	**-2.6**
ACIG	**Acambay**	**5.93**	**312**	*eP*		**Pn**	**08 34 57.1**	**+4.3**
ACIG				*eS*		**Sn**	**08 35 58.4**	**-2.6**
JAYA	**Jayaque - finc**	**6.04**	**113**	P		**Pn**	**08 34 56.6**	**+2.4**
CTUV	**Llano Grande**	**6.16**	**331**			**Sb**	**08 36 22.4**	**-3.6**
CTUV	**Llano Grande**	**6.16**	**331**	*eS*		**Sb**	**08 36 22.4**	**-3.6**
MOIG	**Morelia**	**6.75**	**303**	*eS*		Sn	08 36 30.2	+8.8
TEIG	**Tepich**	**7.76**	**57**			**Pn**	**08 35 18.3**	**+0.5**
JTS	**Las Juntas de**	**11.49**	**119**	Pn		**Pn**	**08 36 07.4**	**-1.6**
	0.2nm,0.3s,baz=235,slow=17,SNR=2.3 0.9nm,0.3s							
TXAR	**Lajitas Array**	**15.34**	**331**	Pn		**P**	**08 37 06.1**	**-0.2**
	baz=149,slow=6.3,SNR=1.3 0.4nm,0.7s							
FCAR	**Ozark Folk Cen**	**19.93**	**7**	P		**Pn**	**08 37 58.0**	**-0.5**
ANMO	**Albuquerque**	**21.35**	**334**	P		**P**	**08 38 15.7**	**+3.4**
	0.5nm,0.6s,baz=151,slow=10,SNR=3.6 0.5nm,0.6s							
BGNE	**Belgrade**	**25.39**	**355**	P		**P**	**08 38 52.8**	**+0.5**
PDAR	**Pinedale Array**	**29.32**	**338**	P		**P**	**08 39 29.7**	**+1.9**
	0.1nm,0.6s,baz=124,slow=12,SNR=1.2 0.1nm,0.6s							
NVAR	**Mina Array Bea**	**30.15**	**322**	P		**P**	**08 39 37.0**	**+1.8**
	0.8nm,0.7s,baz=137,slow=6.5,SNR=7.2 0.8nm,0.7s							
YKA	**Yellowknife Ar**	**48.35**	**348**	P		**P**	**08 42 06.5**	**+0.2**
	0.2nm,0.8s,baz=156,slow=6.8,SNR=4.4 0.2nm,0.8s							

*IDC **26** 08:59:08.4±1.8, 14.˚14N×55.˚78E, h0km, mb3.8/9, mbtmp3.8/9, MS4.0/5, Error ellipse: s-maj=41.5km s-min=29.5km az=23.0*
*NEIC **26** 08:59:09.5±1.0, 14.˚3N±0.˚1×55.˚6E±0.˚1, h10km±2km, mb4.3/24, Error ellipse: s-maj=19.9km s-min=18.1km az=207.0*

ISC 26 08:59:10.7±0.7, 14.˚3N±0.˚1×55.˚62E±0.˚08, h22km, n50, σ1s16/39, mb4.2/18, MS3.7/5, 1D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ATD	**Arta Tunnel**	**12.75**	**259**	LR		LR		09 06 09.8	
	comp=Z,12nm,19.6s,baz=101,slow=33								
ATD	**Arta Tunnel**	**12.75**	**259**	Pn		**Pn**		**09 02 10.9**	**-0.1**
RAYN	**Ar Rayn**	**13.26**	**315**	Pn		**Pn**		**09 02 16.7**	**-1.1**
HRA	**Herat**	**20.89**	**16**	P		**P**		**09 03 50.5**	**-1.2**
KAAM	**Kaadhehdhoo**	**21.98**	**127**	P		**P**		**09 04 02.9**	**-0.6**
KIBK	**Kibwezi**	**24.01**	**228**	P		**P**		**09 04 24.0**	**-0.3**
KIBK				IAmb		IAmb		09 04 39.9	
	comp=Z,12nm,1.5s								
PALK	**Pallekele**	**25.59**	**103**	P		**P**		**09 04 38.2**	**-0.4**
GEVA	**Gevas**	**26.39**	**337**			**P**		**09 04 44.9**	**-0.9**
MARD	**Mardin**	**26.47**	**333**	P		**P**		**09 04 45.6**	**-0.8**
MARD				IAmb		IAmb		09 05 11.9	
	comp=Z,9.0nm,1.2s								
GURO	**Guroymak-BITLI**	**26.99**	**336**	P		**P**		**09 04 50.5**	**-0.6**
GURO				IAmb		IAmb		09 05 02.3	
	comp=Z,7.0nm,1.3s								
GNI	**Garni**	**27.47**	**342**	P		**P**		**09 04 55.1**	**-0.4**
GNI				IAmb		IAmb		09 05 07.1	
	comp=Z,16nm,1.3s								
GAZ	**Gaziantep**	**28.08**	**328**	P		**P**		**09 05 00.6**	**-0.3**
GAZ				IAmb		IAmb		09 05 12.7	
	comp=Z,5.0nm,0.8s								
CSS	**Mathiatis**	**28.76**	**320**	P		**P**		**09 05 07.3**	**+0.5**
BTK	**Batken**	**28.92**	**25**	P		**P**		**09 05 08.1**	**-0.2**
KDJ	**Kajisay**	**33.42**	**30**	P		**P**		**09 05 47.8**	**-0.3**
KDJ				IAmb		IAmb		09 06 06.1	
	comp=Z,3.6nm,1.1s								
WUS	**Wushi**	**33.76**	**33**	P		**P**		**09 05 51.3**	**+0.3**
WUS				IAmb		IAmb		09 06 01.9	
	comp=Z,4.3nm,1.2s								
IDI	**Anoyia**	**34.64**	**313**	P		**P**		**09 05 59.1**	**+0.5**
AB31	**Akbulak array**	**35.05**	**5**	P		**P**		**09 06 00.1**	**-1.7**
AB31				IAmb		IAmb		09 06 09.4	
	comp=Z,3.6nm,1.0s								
AB31	**Akbulak array**	**35.05**	**5**	⇓P		**P**		**09 06 00.1**	**-1.7**
	comp=Z,1.8nm,0.7s,baz=192,slow=9.6,SNR=9.0								
ABKAR	**Akbulak array**	**35.05**	**5**	P		**P**		**09 06 01.0**	**-0.9**
MAKZ	**Makanchi**	**39.20**	**29**	P		**P**		**09 06 36.4**	**-0.8**
MKAR	**Makanchi Array**	**39.34**	**29**	P		**P**		**09 06 40.3**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=214,slow=9.2,SNR=3.8								
MKAR				LR		LR		09 24 26.9	
	comp=Z,98nm,18.3s,baz=278,slow=38								
	comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**39.34**	**29**	P		**P**		**09 06 37.7**	**-0.7**
BVAR	**Borovoye Array**	**40.38**	**14**	P		**P**		**09 06 48.9**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=232,slow=7.1,SNR=1.4 comp=Z,0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**40.72**	**22**	P		**P**		**09 06 51.0**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=220,slow=8.5,SNR=4.4 comp=Z,1.2nm,0.3s								
KURK	**Kurchatov**	**40.83**	**22**	P		**P**		**09 06 51.0**	**+0.4**
KURK	**Kurchatov**	**40.83**	**22**	IAmb		IAmb		09 06 57.4	
	comp=Z,1.6nm,0.9s								
CMAR	**Chiang Mai Arr**	**41.70**	**78**	P		**P**		**09 06 59.6**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=265,slow=8.2,SNR=4.4 comp=Z,1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**41.70**	**78**	P		**P**		**09 06 57.8**	**-0.5**
ARTI	**Arti**	**42.06**	**2**	LR		LR		09 25 47.5	
	comp=Z,106nm,21.3s,baz=242,slow=38								
ARTI	**Arti**	**42.06**	**2**	P		**P**		**09 06 60.0**	**-0.7**
ZAA0	**Zalesovo Array**	**45.73**	**24**	P		**P**		**09 07 28.9**	**-1.2**
ZALV	**Zalesovo Beam**	**45.73**	**24**	P		**P**		**09 07 30.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=230,slow=8.7,SNR=4.9								
ZALV				LR		LR		09 28 12.8	
	comp=Z,65nm,18.9s,baz=260,slow=38								
	comp=Z,0.3nm,0.3s								
ZALV	**Zalesovo Beam**	**45.73**	**24**	P		**P**		**09 07 29.5**	**-0.6**
FINES	**FINESS Array B**	**51.66**	**342**	P		**P**		**09 08 18.6**	**+3.0**
	comp=Z,4.1nm,0.9s,baz=103,slow=8.0,SNR=3.5 comp=Z,4.1nm,0.9s								
FINES	**FINESS Array B**	**51.66**	**342**	P		**P**		**09 08 16.9**	**+1.3**
SONM	**Songino Array**	**53.53**	**40**	P		**P**		**09 08 30.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=249,slow=7.1,SNR=3.7 comp=Z,0.2nm,0.3s								
SONM	**Songino Array**	**53.53**	**40**	P		**P**		**09 08 30.4**	**+0.5**
SONM				IAmb		IAmb		09 08 34.1	
	comp=Z,5.3nm,1.5s								
NC303	**NORSAR Array S**	**56.59**	**336**	P		**P**		**09 08 51.3**	**-0.3**
MD31	**MD31**	**57.61**	**300**	P		**P**		**09 08 59.3**	**-0.1**
MD31				IAmb		IAmb		09 09 06.8	
	comp=Z,7.7nm,1.4s								
ESDC	**Sonseca Array**	**57.67**	**308**	P		**P**		**09 09 02.5**	**+2.8**
	comp=Z,2.4nm,1.0s,baz=82,slow=6.0,SNR=6.4 comp=Z,2.4nm,1.0s								
H04N1	**CROZET ISLANDS**	**60.27**	**183**	T		T		10 14 59.0	
	baz=3.8								
H04N2	**CROZET ISLANDS**	**60.27**	**183**	T		T		10 14 59.9	
	baz=3.8								
H04N3	**CROZET ISLANDS**	**60.28**	**183**	T		T		10 14 58.2	
	baz=3.8								
H01W3	**Cape Leeuwin H**	**73.94**	**133**	T		T		10 31 30.4	
	baz=302,slow=75,SNR=4.7								
H01W2	**Cape Leeuwin H**	**73.95**	**133**	T		T		10 31 33.0	
	baz=302,slow=75,SNR=4.3								
H01W1	**Cape Leeuwin H**	**73.96**	**133**	T		T		10 31 31.7	
	baz=302,slow=75,SNR=4.4								
ASAR	**Alice Springs**	**85.26**	**116**	P		**P**		**09 11 45.9**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=296,slow=5.0,SNR=3.6 comp=Z,0.6nm,0.9s								
INK	**Inuvik**	**97.36**	**3**	LR		LR		10 00 18.1	
	comp=Z,260nm,21.6s,baz=76,slow=38								
ILAR	**Eielson Array**	**99.33**	**10**	LR		LR		10 03 40.2	
	comp=Z,199nm,21.5s,baz=81,slow=39								

IDC 26 09:09:46.2±1.6, 16.˚29S×173.˚12W, h0km, mb3.9/4, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=59.5km s-min=23.7km az=124.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
AFI	**Afiamalu**	**2.70**	**29**	Pn			Pn	09 10 29.6	-1.3
	15nm,0.3s,baz=209,slow=17,SNR=11								
AFI				Sn			Sn	09 10 57.7	-6.6
	70nm,0.3s,baz=197,slow=20,SNR=10 34nm,0.3s								
URZ	**Urewera**	**23.52**	**200**	P			P	09 14 57.8	-0.1
	3.5nm,0.3s,baz=27,slow=11,SNR=10								
H11S2	**WAKE ISLAND Hy**	**39.86**	**329**	T		T		09 59 35.2	
	baz=150								
H11S3	**WAKE ISLAND Hy**	**39.87**	**329**	T		T		09 59 41.0	
	baz=150								
H11S1	**WAKE ISLAND Hy**	**39.87**	**329**	T		T		09 59 43.6	
	baz=150								
H11N3	**WAKE ISLAND Hy**	**40.81**	**331**	T		T		10 00 44.3	
	baz=150,slow=76,SNR=3.5								
H11N1	**WAKE ISLAND Hy**	**40.83**	**330**	T		T		10 00 46.5	
	baz=150,slow=76,SNR=2.9								
H11N2	**WAKE ISLAND Hy**	**40.83**	**331**	T		T		10 00 45.6	
	baz=150,slow=76,SNR=1.2								
WRA	**Warramunga Arr**	**49.91**	**257**	P		P		09 18 41.8	-0.3
	0.6nm,0.7s,baz=96,slow=6.6,SNR=2.4 0.6nm,0.7s								
ASAR	**Alice Springs**	**50.09**	**253**	P		P		09 18 43.1	-0.3
	2.2nm,0.6s,baz=86,slow=8.3,SNR=15 2.2nm,0.6s								
ILAR	**Eielson Array**	**83.26**	**11**	P		P		09 22 15.2	+1.0
	0.1nm,0.6s,baz=210,slow=4.9,SNR=4.4 0.1nm,0.6s								

*BER **26** 09:10:08.5±5.1, 80.˚38N×21.˚15E, h16km±26km, ML2.2, ML2.9(NAO), Confirmed Earthquake*
*NAO **26** 09:10:12.2±1.5, 79.˚98N×19.˚80E, h10km, ML2.0*
*FCIAR **26** 09:10:13.0, 79.˚95N×20.˚08E, h10km, station OMEGA has station magnitude of 2.80 station ZFI2 has station magnitude of 2.90*

ISC 26 09:10:06.8±2.1, 80.˚21N±0.˚07×21.˚21E±0.˚05, h7km±15km, n17, σ2s00/35, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KBS	**Kingsbay**	**2.12**	**237**	Pn			**Pn**	**09 10 43.1**	**+0.5**
KBS				Sg			**Sn**	**09 11 08.1**	**-1.0**
KBS	**Kingsbay**	**2.12**	**237**	*eP*			**Pn**	**09 10 42.9**	**+0.3**
KBS				*ePg*			**Pb**	**09 10 46.3**	**+0.8**
KBS				*eS*			**Sn**	**09 11 08.0**	**-1.1**
KBS				IAML				09 11 09.5	
	comp=Z,28nm,0.5s								
SPA0	**Spitsbergen Ar**	**2.24**	**206**	Pn			**Pn**	**09 10 44.4**	**+0.1**
	baz=29,slow=18								
SPA0				Pg			**Pb**	**09 10 47.7**	**+0.2**
	baz=32,slow=18								
SPA0				Sg			**Sn**	**09 11 12.0**	**-0.1**
	baz=22,slow=28								
SPA0	**Spitsbergen Ar**	**2.24**	**206**	Pn			**Pn**	**09 10 44.4**	**+0.1**
SPA0				Pg			**Pb**	**09 10 47.7**	**+0.2**
SPA0				*eS*			**Sn**	**09 11 11.8**	**-0.2**
SPA0	**Spitsbergen Ar**	**2.24**	**206**	*eP*			**Pn**	**09 10 44.7**	**+0.5**
SPA0				*eS*			**Sn**	**09 11 10.0**	**-2.1**
BRBB	**Barentsburg B**	**2.51**	**215**	Pn			**Pn**	**09 10 48.2**	**+0.4**
BRBB				Sn			**Sn**	**09 11 13.0**	**-5.6**
BRBB	**Barentsburg B**	**2.51**	**215**	*eP*			**Pn**	**09 10 48.1**	**+0.2**
BRBA	**Barentsburg A**	**2.54**	**215**	Pn			**Pn**	**09 10 48.6**	**+0.3**
HSPB	**Hornsund (broa**	**3.42**	**202**	Pn			**Pn**	**09 11 01.1**	**+0.8**
HSPB				Sn			**Sn**	**09 11 35.8**	**-5.2**
HSPB	**Hornsund (broa**	**3.42**	**202**	*eP*			**Pn**	**09 11 01.4**	**+1.1**
HSPB				*ePg*			**Pb**	**09 11 09.0**	**+1.5**
HSPB				*eS*			**Sn**	**09 11 43.7**	**+2.7**
HSPB				IAML				09 11 55.0	
	comp=Z,12nm,0.5s								
HSPB	**Hornsund (broa**	**3.42**	**202**	*eP*			**Pn**	**09 11 01.8**	**+1.4**
HSPB				*eS*			**Sn**	**09 11 39.5**	**-1.5**
HOPEN	**Hopen**	**3.80**	**166**	Pn			**Pn**	**09 11 08.7**	**+3.0**
HOPEN				Sn			**Sn**	**09 11 48.1**	**-2.4**
HOPEN	**Hopen**	**3.80**	**166**	*eP*			**Pn**	**09 11 08.6**	**+3.0**
HOPEN				*ePg*			**Pg**	**09 11 18.0**	**-1.5**
HOPEN				*eS*			**Sn**	**09 11 48.4**	**-2.1**
HOPEN				IAML				09 12 14.1	
	comp=Z,20nm,0.4s								
ZFI2	**Zemlya Franca-**	**4.39**	**69**	*eP*			**Pb**	**09 11 23.5**	**-0.6**
ZFI2				*eS*			**Sb**	**09 12 18.3**	**+1.2**
	comp=Z,9.8nm,2.6s								
OMEGA	**Omega**	**4.40**	**70**	*eP*			**Pb**	**09 11 23.5**	**-0.8**
OMEGA				*eS*			**Sb**	**09 12 18.3**	**+0.8**
	comp=Z,7.0nm,3.2s								
ARA0	**ARCESS Array S**	**10.79**	**172**	Pn			**Pn**	**09 12 43.4**	**+2.0**
	baz=5.9,slow=11								
ARA0				Sn			Sn	09 14 31.1	-11
	baz=2.3,slow=18								
ARA0	**ARCESS Array S**	**10.79**	**172**	Pn			**Pn**	**09 12 43.4**	**+2.0**
ARA0				Sn			Sn	09 14 31.1	-11

*IDC **26** 09:10:59.5±0.6, 3.˚18N×128.˚33E, h0km, mb4.1/16, mbtmp4.1/18, ML4.2/2, Error ellipse: s-maj=30.0km s-min=11.7km az=77.0*
*DJA **26** 09:11:04.4±0.6, 3.˚7N±5.˚×12.˚8E±.˚, h10km, M4.7/18, mB5.3/3, mb5.0/7, MLv4.5/18, Mw(mB)4.7/3*
*NEIC **26** 09:11:07.3±1.2, 3.˚12N±0.˚07×128.˚2E±0.˚1, h56km±7km, mb4.3/14, Error ellipse: s-maj=18.6km s-min=8.9km az=76.0*

ISC 26 09:11:04.7±0.5, 3.˚20N±0.˚06×128.˚34E±0.˚09, h35km, n48, σ1s08/46, mb4.1/23, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
GAMI	**Galela, Maluku**	**1.46**	**202**	P			**Pn**	**09 11 29.4**	**+0.8**
TNTI	**Ternate**	**2.60**	**202**				**Pn**	**09 11 45.1**	**+0.9**
TNTI	**Ternate**	**2.60**	**202**	P			**Pn**	**09 11 46.6**	**+2.4**
SGSI	**Sangihe**	**2.85**	**280**	P			**Pn**	**09 11 49.1**	**+1.4**
MNI	**Manado**	**3.91**	**244**	P			**Pn**	**09 12 03.7**	**+1.4**
SWI	**Sorong**	**4.98**	**144**	P			**Pn**	**09 12 17.6**	**+0.6**
SIJI	**Sorong**	**4.99**	**144**	Pn			**Pn**	**09 12 17.4**	**+0.3**
	4.7nm,0.3s,baz=319,slow=19,SNR=12								
SIJI				Sn			**Sn**	**09 13 14.2**	**+0.6**
	2.7nm,0.3s,baz=330,slow=23,SNR=6.9 10.0nm,0.3s								
SIJI	**Sorong**	**4.99**	**144**	P			**Pn**	**09 12 20.6**	**+3.5**
SANI	**Sanana**	**5.72**	**204**	P			**Pn**	**09 12 28.7**	**+1.5**
MRSI	**Marisa**	**6.94**	**247**	P			**Pn**	**09 12 46.4**	**+2.4**
TOLI2	**Tolitoli**	**7.83**	**255**	Pn			**Pn**	**09 12 56.4**	**+0.2**
SPSI	**Sidrap Palu**	**11.13**	**230**	P			**Pn**	**09 13 48.6**	**+7.1**
KAPI	**Kappang**	**11.84**	**226**	Pn			**Pn**	**09 13 51.2**	**0.0**
	2.5nm,0.3s,baz=41,slow=10.0,SNR=3.5 6.8nm,0.3s								
KNRA	**Kununurra**	**18.76**	**179**	P			**P**	**09 15 20.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**21.33**	**187**	P			**P**	**09 15 48.7**	**-0.1**
	2.3nm,0.5s,baz=20,slow=12,SNR=6.0 2.3nm,0.5s								
COEN	**Coen**	**22.52**	**140**	P			**P**	**09 16 01.3**	**-0.3**
COEN				IAmb			IAmb	09 16 43.9	
	comp=Z,9.2nm,1.3s								
BBJI	**Bungbulang**	**23.20**	**243**	P			**P**	**09 16 07.6**	**-1.2**
BBJI				IAmb			IAmb	09 16 26.3	
	comp=Z,6.5nm,0.9s								
WB0	**Warramunga Arr**	**23.58**	**166**	P			**P**	**09 16 12.0**	**-0.4**
WB0				IAmb			IAmb	09 16 16.6	
	comp=Z,17nm,0.9s								
WRAB	**Tennant Creek**	**23.73**	**166**	P			**P**	**09 16 12.9**	**-0.9**
WRAB				IAmb			IAmb	09 16 15.1	
	comp=Z,14nm,0.8s								
WRA	**Warramunga Arr**	**23.74**	**166**	P			**P**	**09 16 13.6**	**-0.3**
	comp=Z,13nm,0.8s,baz=343,slow=10,SNR=31 comp=Z,13nm,0.8s								
WRA	**Warramunga Arr**	**23.74**	**166**	P			**P**	**09 16 11.9**	**-1.9**
WR8	**Warramunga Arr**	**23.79**	**166**	P			**P**	**09 16 13.8**	**-0.6**
WR8				IAmb			IAmb	09 16 18.8	
	comp=Z,9.8nm,0.7s								
MBWA	**Marble Bar**	**25.63**	**199**	P			**P**	**09 16 30.2**	**-0.9**
PSA00	**Pilbara Seismi**	**25.98**	**198**	P			**P**	**09 16 33.8**	**-0.5**
PSA00				IAmb			IAmb	09 16 58.5	
	comp=Z,5.0nm,1.2s								
PSA00	**Pilbara Seismi**	**25.98**	**198**	P			**P**	**09 16 34.3**	**0.0**
PSA00				IAmb			IAmb	09 17 13.4	
	comp=Z,26nm,1.5s								
AS31	**Alice Springs**	**27.25**	**169**	P			**P**	**09 16 45.4**	**-0.3**
ASAR	**Alice Springs**	**27.25**	**169**	P			**P**	**09 16 44.9**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=351,slow=7.6,SNR=22								
ASAR				PcP			**PcP**	**09 20 05.2**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=3.0,slow=1.9,SNR=5.0 comp=Z,1.0nm,0.5s								
KSRS	**Korea Array**	**34.09**	**359**	P			**P**	**09 17 45.3**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=181,slow=12,SNR=2.5 comp=Z,0.5nm,0.3s								
MJAR	**Matsushiro Arr**	**34.41**	**14**	P			**P**	**09 17 47.9**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=186,slow=9.4,SNR=6.3 comp=Z,2.0nm,0.7s								
STKA	**Stephens Creek**	**37.09**	**161**	P			**P**	**09 18 11.1**	**-0.7**
	comp=Z,9.0nm,0.5s,baz=335,slow=9.3,SNR=15 comp=Z,9.0nm,0.5s								
STKA	**Stephens Creek**	**37.09**	**161**	P			**P**	**09 18 11.6**	**-0.2**
LZDM	**Lanzhou Array**	**39.77**	**328**	P			**P**	**09 18 34.7**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=131,slow=6.5,SNR=1.2 comp=Z,0.6nm,0.3s								
H11S3	**WAKE ISLAND Hy**	**40.48**	**65**	T		T		10 01 56.5	
	baz=251,slow=74								
H11S2	**WAKE ISLAND Hy**	**40.50**	**65**	T		T		10 01 58.7	
	baz=251,slow=74								
H11S1	**WAKE ISLAND Hy**	**40.50**	**65**	T		T		10 01 54.6	
	baz=251								
USRK	**Ussuriysk Ar.**	**40.96**	**4**	P			**P**	**09 18 45.4**	**+1.4**
	comp=Z,1.7nm,0.6s,baz=183,slow=5.5,SNR=3.5 comp=Z,1.7nm,0.6s								
SONM	**Songino Array**	**48.33**	**340**	P			**P**	**09 19 42.9**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=129,slow=2.0,SNR=2.4 comp=Z,0.4nm,0.3s								
SONM	**Songino Array**	**48.33**	**340**	P			**P**	**09 19 42.5**	**-0.3**
PETK	**Petropavlovsk-**	**55.33**	**21**	P			**P**	**09 20 36.3**	**+1.5**
	comp=Z,4.9nm,0.8s,baz=198,slow=5.8,SNR=3.6 comp=Z,4.9nm,0.8s								
MKAR	**Makanchi Array**	**58.91**	**325**	P			**P**	**09 21 00.6**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=112,slow=8.0,SNR=16 comp=Z,1.1nm,0.5s								
MKAR	**Makanchi Array**	**58.91**	**325**	P			**P**	**09 20 60.0**	**-0.4**
ZALV	**Zalesovo Beam**	**61.79**	**332**	P			**P**	**09 21 20.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=122,slow=5.8,SNR=2.9 comp=Z,0.4nm,0.3s								
KURK	**Kurchatov**	**63.05**	**327**	P			**P**	**09 21 27.6**	**-0.8**
KURK				IAmb		IAmb	IAmb	09 21 47.5	
	comp=Z,1.9nm,0.7s								
KURBB	**Kurchatov Arra**	**63.06**	**327**	P			**P**	**09 21 28.0**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=127,slow=6.2,SNR=8.1 comp=Z,1.0nm,0.5s								
BVAR	**Borovoye Array**	**68.64**	**327**	P			**P**	**09 22 04.1**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=105,slow=9.1,SNR=3.0 comp=Z,0.5nm,0.4s								
VNDA	**Vanda**	**82.70**	**173**	P			**P**	**09 23 24.3**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=16,slow=2.5,SNR=3.0 comp=Z,7.7nm,0.9s								
ILAR	**Eielson Array**	**84.89**	**25**	P			**P**	**09 23 35.6**	**-0.1**
	comp=Z,1.0nm,1.2s,baz=252,slow=5.1,SNR=5.6 comp=Z,1.0nm,1.2s								
TORD	**Torodi Ar. Bea**	**124.61**	**288**	PKP			**PKPdf**	**09 30 00.5**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=95,slow=5.2,SNR=2.3								

KRSC 26 09:16:26.3±1.1, 52.˚78N×158.˚83E, h108km±8km, MI3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
DALK	**Dalny**	**0.26**	**350**	*eP*			Pn	09 16 42.7	+1.1
DALK				*eS*			Sn	09 16 54.0	+0.9
PET	**Petropavlovsk**	**0.27**	**337**	*eP*			Pn	09 16 42.6	+0.9
PET				*eS*			Sn	09 16 53.8	+0.6
INSR	**Institute**	**0.32**	**335**	*eP*			Pn	09 16 42.8	+0.9
INSR				*eS*			Sn	09 16 54.1	+0.5
RUS	**Russkaya**	**0.40**	**209**	*eP*			Pn	09 16 43.5	+1.3
RUS				*eS*			Sn	09 16 55.5	+1.3
KRMR	**Karymshinskiy**	**0.43**	**277**	*eP*			Pn	09 16 43.1	+0.7
KRMR				*eS*			Sn	09 16 54.9	+0.3
UGLR	**Uglovaya**	**0.43**	**360**	*eP*			Pn	09 16 44.1	+1.5
SMAR	**Somma**	**0.48**	**358**	*eP*			Pn	09 16 44.6	+1.5
AVH	**Avacha**	**0.49**	**354**	*eP*			Pn	09 16 44.6	+1.7
MTVR	**Mutnovka**	**0.49**	**233**	*eP*			Pn	09 16 44.6	+1.6
MTVR				*eS*			Sn	09 16 57.5	+1.9
SDLR	**Sedlovina**	**0.50**	**4**	*eP*			Pn	09 16 44.2	+1.2
SDLR				*eS*			Sn	09 16 56.9	+1.2
NLC	**Nalytchevo**	**0.50**	**39**	*eP*			Pn	09 16 43.9	+1.1
GRL	**Gorelyy**	**0.51**	**244**	*eP*			Pn	09 16 44.7	+1.5
KOK	**Koryaka**	**0.53**	**347**	*eP*			Pn	09 16 44.6	+1.4
KRER	**Koryakskii**	**0.53**	**355**	*eP*			Pn	09 16 44.9	+1.6
KRX	**Arik**	**0.59**	**350**	*eP*			Pn	09 16 45.0	+1.2
ASAK	**As

KST *e*S **Sg** **09 41 35.9 -4.0**
4.0nm,0.7s

IDC ***26*** *10:12:45.6±1.5,35˚.15N×140˚.16E,h0km,mb3.3/4, mbtmp3.4/7,ML3.3/2,Error ellipse: s-maj=35.7km s-min=17.1km az=78.0*
JMA ***26*** *10:12:47.9±0.1,35˚.4N±0˚.3×140˚.4E±0˚.7,h31km±1km, MV2.8/34,KUJUKURI COAST BOSO PEN*
JMA Felt II J1 at KUJUKURI COAST BOSO PEN .
ISC 26 10:12:48.4±0.9,35˚.34N±0˚.05×140˚.38E±0˚.07,h30km±6km, n21,σ1ᵎ32/20,mb3.5/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCCN	**Chibachonan**	**0.12**	**290**	*i* P		**Pn**	**10 12 54.1**	**-0.2**
JCCN				S		**Sb**	**10 12 59.0**	**+1.4**
KTR	**Katsuura**	**0.20**	**194**	*i* P		**Pn**	**10 12 55.1**	**-0.2**
KTR				*e*S		**Sb**	**10 13 00.1**	**+1.3**
JKUC	**kamogawauchiur**	**0.23**	**218**	P		**Pn**	**10 12 55.4**	**-0.4**
JSMT	**Sammumatsuo**	**0.30**	**11**	*i* P		**Pb**	**10 12 54.5**	**-1.4**
JSMT				S		**Sb**	**10 12 59.8**	**-1.2**
BSO4	**Boso 4**	**0.35**	**185**	P		**Pn**	**10 12 58.1**	**+0.7**
BSO3	**Boso 3**	**0.55**	**168**	P		**Pn**	**10 13 00.1**	**+0.2**
BSO1	**Boso 1**	**0.85**	**144**	P		**Pn**	**10 13 03.2**	**-0.6**
JOD2	**Odawara 2**	**1.05**	**266**	*e*P		**Pn**	**10 13 07.0**	**-0.2**
MJAR	**Matsushiro Arr**	**2.13**	**305**	Pn		**Pn**	**10 13 22.5**	**+0.7**
	2.3nm,0.5s,baz=131,slow=16,SNR=8.3							
MJAR						**Sb**	**10 13 50.4**	**-1.8**
	0.5nm,0.3s,baz=135,slow=26,SNR=3.0							
JHJ	**Hachijo jima 2**	**2.27**	**193**	Pn		**Pn**	**10 13 23.1**	**-0.7**
	34nm,0.3s,baz=74,slow=19,SNR=1.6							
JHJ						**Sn**	**10 13 49.2**	**-1.6**
	51nm,0.3s,baz=71,slow=22,SNR=4.8							
	74nm,0.3s							
ASAJ	**Asahikawa**	**8.93**	**10**	Pn		**Pn**	**10 14 57.9**	**+2.6**
	0.3nm,0.3s,baz=158,slow=19,SNR=1.8							
	6.0nm,1.1s							
H11N2	**WAKE ISLAND Hy**	**28.07**	**117**	T		T	10 47 47.6	
	baz=309,slow=75,SNR=10							
H11N1	**WAKE ISLAND Hy**	**28.08**	**117**	T		T	10 47 46.8	
	baz=309,slow=75,SNR=8.9							
H11N3	**WAKE ISLAND Hy**	**28.09**	**117**	T		T	10 47 48.8	
	baz=309,slow=75,SNR=9.3							
H11S3	**WAKE ISLAND Hy**	**28.71**	**119**	T		T	10 48 34.6	
	baz=312,slow=75,SNR=12							
H11S1	**WAKE ISLAND Hy**	**28.71**	**119**	T		T	10 48 38.8	
	baz=312,slow=75,SNR=22							
H11S2	**WAKE ISLAND Hy**	**28.73**	**119**	T		T	10 48 36.2	
	baz=312,slow=75,SNR=11							
MKAR	**Makanchi Array**	**44.33**	**303**	P		**P**	**10 20 55.7**	**+0.1**
	0.2nm,0.8s,baz=90,slow=7.2,SNR=1.7							
	0.2nm,0.8s							
KURBB	**Kurchatov Arra**	**46.40**	**309**	P		**P**	**10 21 14.1**	**+2.3**
	0.2nm,0.3s,baz=84,slow=7.7,SNR=2.1							
	0.2nm,0.3s							
WRA	**Warramunga Arr**	**55.28**	**187**	P		**P**	**10 22 18.2**	**-0.8**
	0.3nm,0.5s,baz=4.0,slow=7.5,SNR=2.0							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**59.01**	**187**	P		**P**	**10 22 45.7**	**+0.4**
	0.4nm,0.9s,baz=9.5,slow=12,SNR=2.6							
	0.4nm,0.9s							

WEL 26 10:36:02.7±1.3,34˚S±31˚×17˚9E±3˚8,h290km±43km, M3.5/7,ML3.5/10,MLv3.5/7,Error ellipse: s-maj=58.4km s-min=25.0km az=127.1,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MXZ	**Matakaoa Point**	**3.25**	**187**	P		Pn	10 36 59.7	-0.6
MXZ				S		S	10 37 45.6	-0.6
WMGZ	**Waiomatatini S**	**3.50**	**185**	P		Pn	10 37 03.1	+0.3
WMGZ				S		S	10 37 51.1	+0.3
HAZ	**Te Kaha**	**3.52**	**194**	P		Pn	10 37 03.1	0.0
HAZ				S		S	10 37 51.5	+0.2
PKGZ	**Pakihiroa**	**3.58**	**190**	P		Pn	10 37 04.1	+0.4
PKGZ				S		S	10 37 53.6	+1.1
RUGZ	**Raukumara Rang**	**3.75**	**194**	P		Pn	10 37 04.6	-1.0
RUGZ				S		S	10 37 55.0	-0.9
PUZ	**Puketiti**	**3.76**	**187**	P		Pn	10 37 05.4	-0.3
PUZ				S		S	10 37 55.2	-0.9
TWGZ	**Tauwhareparae**	**3.90**	**190**	P		Pn	10 37 08.3	+1.0
TWGZ				S		S	10 38 00.7	+1.8
MWZ	**Matawai**	**4.13**	**194**	P		Pn	10 37 09.0	-0.9
MWZ				S		S	10 38 04.0	+0.5
URZ	**Urewera**	**4.16**	**199**	P		Pn	10 37 10.0	-0.1
URZ				S		S	10 38 04.3	+0.3
RAGZ	**Rawiri**	**4.31**	**195**	P		Pn	10 37 12.0	+0.1
RIGZ	**Rimuhau**	**4.45**	**191**	P		Pn	10 37 13.2	-0.2
RIGZ				S		S	10 38 10.4	+0.3
MUGZ	**Murupara**	**4.46**	**201**	P		Pn	10 37 14.0	+0.5
RTZ	**Ruatahuna**	**4.53**	**199**	P		Pn	10 37 13.6	-0.8
SNGZ	**Shannon Statio**	**4.60**	**195**	P		Pn	10 37 15.0	-0.2
RAHZ	**Arahi**	**4.79**	**197**	P		Pn	10 37 17.0	-0.3
RAHZ				S		S	10 38 17.5	+0.4
MTHZ	**Maungataniwha**	**4.79**	**199**	P		Pn	10 37 17.5	+0.2
TLZ	**Tolley Road**	**4.80**	**213**	P		Pn	10 37 19.9	+2.5
MRHZ	**Matea Rd**	**4.90**	**203**	P		Pn	10 37 18.6	0.0
WHHZ	**Waihua**	**4.91**	**195**	P		Pn	10 37 18.6	0.0
NMHZ	**Naumai**	**5.03**	**198**	P		Pn	10 37 20.3	+0.2
ARHZ	**Aropaoanui**	**5.14**	**196**	P		Pn	10 37 20.9	-0.5
BKZ	**Black Stump Fm**	**5.18**	**201**	P		Pn	10 37 21.3	-0.6
HIZ	**Hauiti**	**5.27**	**216**	P		Pn	10 37 25.9	+3.0
MCHZ	**McNeill Hill**	**5.38**	**198**	P		Pn	10 37 23.9	-0.4
KWHZ	**Kaweka Forest**	**5.44**	**200**	P		Pn	10 37 24.6	-0.4
KRHZ	**Kereru**	**5.66**	**200**	P		Pn	10 37 26.6	-0.9
KAHZ	**Kahuranaki**	**5.67**	**195**	P		Pn	10 37 27.1	-0.7
VRZ	**Vera Road**	**5.80**	**213**	P		Pn	10 37 31.0	+1.9
PNHZ	**Pukenui**	**5.96**	**200**	P		Pn	10 37 29.9	-1.2
WPHZ	**Waipukurau**	**6.04**	**198**	P		Pn	10 37 30.8	-1.2
TSZ	**Takapari Road**	**6.16**	**201**	P		Pn	10 37 32.5	-1.1
PRHZ	**Porangahau**	**6.18**	**196**	P		Pn	10 37 32.7	-1.1
DVHZ	**Dannevirke**	**6.33**	**199**	P		Pn	10 37 34.7	-0.9
BFZ	**Birch Farm**	**6.67**	**197**	P		Pn	10 37 38.5	-1.1
MRZ	**Mangatainoka R**	**6.83**	**201**	P		Pn	10 37 39.8	-1.9

DNK ***26*** *10:36:57.0±4.5,77˚.51N×7˚.73E,h6km±38km,ML2.8, Presumed earthquake*
IDC ***26*** *10:36:59.8±0.5,77˚.43N×7˚.55E,h0km,mb3.8/17, mbtmp3.9/23,ML3.3/5,MS3.6/55,Error ellipse: s-maj=11.9km s-min=9.9km az=20.0*
FCIAR ***26*** *10:36:59.0,77˚.47N×8˚.36E,h10km,station ZFI2 has station magnitude of 4.10 station OMEGA has station magnitude of 4.10*
NAO ***26*** *10:37:00.8±0.8,77˚.49N×8˚.11E,h15km,ML3.1*
NEIC ***26*** *10:37:00.7±2.0,77˚.39N±0˚.04×7˚.9E±0˚.4,h10km±1km, mb4.3/30,Error ellipse: s-maj=14.7km s-min=6.2km az=257.0*
BER ***26*** *10:37:00.7±4.1,77˚.57N×7˚.70E,h10km,Mw4.3, ML3.8(NAO),Confirmed Earthquake*
KOLA ***26*** *10:37:02.1,77˚.49N×9˚.39E,h0km,ML3.0,Error ellipse: s-maj=13.6km s-min=8.7km az=80.0,Greenland sea*
ISC 26 10:36:59.7±3.5,77˚.43N±0˚.04×7˚.80E±0˚.04,h9km±23km, n175,σ2ᵎ56/168,mb4.1/27,MS3.7/49,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BRBA	**Barentsburg A**	**1.51**	**62**	Pb		**Pn**	**10 37 25.7**	**-1.1**
BRBA				Sb		**Sn**	**10 37 42.8**	**-3.8**
BRBA	**Barentsburg A**	**1.51**	**62**	*e*P		**Pn**	**10 37 25.7**	**-1.1**
BRBA				*e*S		**Sn**	**10 37 42.8**	**-3.8**
BRBA				IAML			10 37 43.3	
	comp=Z,362nm,0.4s							
BRBB	**Barentsburg B**	**1.52**	**61**	Pb		**Pn**	**10 37 25.9**	**-1.1**
BRBB				Sb		**Sn**	**10 37 43.5**	**-3.4**
BRBB	**Barentsburg B**	**1.52**	**61**	*e*P		**Pn**	**10 37 25.9**	**-1.1**
BRBB				*e*S		**Sn**	**10 37 43.3**	**-3.5**
BRBB	**Barentsburg B**	**1.52**	**61**	P		**Pn**	**10 37 25.4**	**-1.7**
BRBB				S		**Sn**	**10 37 40.9**	**-5.9**
KBS	**Kingsbay**	**1.73**	**28**	Pb		**Pn**	**10 37 28.0**	**-1.9**
KBS				Sb		**Sn**	**10 37 46.2**	**-5.8**
KBS	**Kingsbay**	**1.73**	**28**	*e*P		**Pn**	**10 37 27.8**	**-2.1**
KBS				*e*S		**Sn**	**10 37 46.6**	**-5.4**
KBS				IAML			10 37 49.4	
	comp=Z,359nm,0.1s							
KBS	**Kingsbay**	**1.73**	**28**	P		**Pn**	**10 37 28.7**	**-1.1**
KBS				S		**Sn**	**10 37 49.7**	**-2.3**
KBS	**Kingsbay**	**1.73**	**28**	*i* P		**Pn**	**10 37 27.9**	**-2.0**
KBS				*i* S		**Sn**	**10 37 46.6**	**-5.4**
HSPB	**Hornsund (broa**	**1.77**	**100**	Pb		**Pn**	**10 37 29.5**	**-1.0**
HSPB	**Hornsund (broa**	**1.77**	**100**	*e*P		**Pn**	**10 37 29.3**	**-1.2**
HSPB				IAML			10 37 50.2	
	comp=Z,115nm,0.4s							
HSPB	**Hornsund (broa**	**1.77**	**100**	*e*P		**Pn**	**10 37 29.8**	**-0.7**
HSPB				*e*S		**Sn**	**10 37 51.8**	**-1.3**
HSPB	**Hornsund (broa**	**1.77**	**100**	P		**Pn**	**10 37 29.0**	**-1.5**
HSPB				S		**Sn**	**10 37 48.2**	**-5.0**
SPA0	**Spitsbergen Ar**	**1.97**	**63**	Pn		**Pn**	**10 37 33.2**	**0.0**
	baz=252,slow=18							
SPA0				Sb		**Sn**	**10 37 56.6**	**-1.4**
	baz=241,slow=22							
SPA0	**Spitsbergen Ar**	**1.97**	**63**	Pn		**Pn**	**10 37 33.2**	**0.0**
SPA0				Sb		**Sn**	**10 37 56.6**	**-1.4**
SPA0				IAML			10 37 58.8	
	comp=Z,438nm,0.3s							
SPA0	**Spitsbergen Ar**	**1.97**	**63**	*e*P		**Pn**	**10 37 32.3**	**-0.9**
SPA0				*e*S		**Sn**	**10 37 56.1**	**-1.9**
SPITS	**Spitsbergen Ar**	**1.97**	**63**	Pn		**Pn**	**10 37 33.4**	**+0.2**
	comp=Z,576nm,0.4s,baz=238,slow=14							
SPITS				Sn		**Sn**	**10 37 57.0**	**-1.0**
	baz=238,slow=22							
SPITS	**Spitsbergen Ar**	**1.97**	**63**	P		**Pn**	**10 37 32.7**	**-0.5**
SPITS				S		**Sn**	**10 37 55.2**	**-2.7**
SPB2	**Spitsbergen Ar**	**1.97**	**64**			**Pn**	**10 37 33.2**	**0.0**
HOPEN	**Hopen**	**4.00**	**95**	Pn		**Pn**	**10 38 00.7**	**-0.3**
HOPEN				Sn		**Sn**	**10 38 44.2**	**-3.6**
HOPEN	**Hopen**	**4.00**	**95**	*e*P		**Pn**	**10 38 00.6**	**-0.5**
HOPEN				*e*S		**Sn**	**10 38 44.3**	**-3.6**
HOPEN				IAML			10 38 47.1	
	comp=Z,66nm,0.3s							
BJO1	**Bjornoya**	**4.01**	**132**	Pn		**Pn**	**10 38 01.7**	**+0.6**
BJO1	**Bjornoya**	**4.01**	**132**	*e*P		**Pn**	**10 38 01.4**	**+0.3**
BJO1				*e*S		**Sn**	**10 38 44.0**	**-4.2**
BEAR	**Bear Island, N**	**4.01**	**132**	Pn		**Pn**	**10 38 01.4**	**+0.2**
	baz=327,slow=18							
BEAR				Sn		**Sn**	**10 38 44.4**	**-3.9**
	baz=327,slow=37							
DAG	**Danmarks Havn**	**5.93**	**277**	*e*P		**Pn**	**10 38 24.5**	**-3.0**
DAG				*e*S		Sn	10 39 25.5	-10
DAG	**Danmarks Havn**	**5.93**	**277**	*i* P		**Pn**	**10 38 24.4**	**-3.1**
DAG				*i* S		Sn	10 39 25.8	-10
DAG				IAML			10 39 27.6	
	comp=Z,80nm,0.7s							
NOR	**Nord**	**6.05**	**325**	Pn		**Pn**	**10 38 26.4**	**-2.8**
NOR				Sn		**Sn**	**10 39 31.5**	**-7.0**
NOR	**Nord**	**6.05**	**325**	*e*P		**Pn**	**10 38 26.2**	**-3.0**
NOR				*e*S		**Sn**	**10 39 31.3**	**-7.1**
NOR	**Nord**	**6.05**	**325**	*i* P		**Pn**	**10 38 25.9**	**-3.3**
NOR				*i* S		Sn	10 39 30.9	-7.5
NOR				IAML			10 39 33.0	
	comp=Z,19nm,0.4s							
DBG	**Daneborg**	**7.47**	**260**	Pn		**Pn**	**10 38 46.1**	**-2.6**
DBG				Sn		Sn	10 40 01.8	-12
DBG	**Daneborg**	**7.47**	**260**	*e*P		**Pn**	**10 38 45.9**	**-2.8**
DBG				*e*S		Sn	10 40 01.9	-11
DBG	**Daneborg**	**7.47**	**260**	*i* P		**Pn**	**10 38 45.9**	**-2.8**
DBG				*i* S		Sn	10 40 03.2	-10
DBG				IAML			10 40 07.2	
	comp=Z,16nm,0.4s							
JNW	**Jan Mayen West**	**7.76**	**223**	*e*P		**Pn**	**10 38 52.1**	**-0.5**
JNE	**Jan Mayen East**	**7.78**	**222**	*e*P		**Pn**	**10 38 52.0**	**+0.1**
HAMF	**Hammerfest**	**8.06**	**139**	*e*P		**Pn**	**10 38 56.4**	**-0.3**
ZFI2	**Zemlya Franca-**	**8.09**	**47**	*e*P		**Pn**	**10 38 55.9**	**-1.2**
	comp=Z,55nm,1.4s							
ZFI2				*e*S		**Sn**	**10 40 25.9**	**-2.5**
OMEGA	**Omega**	**8.10**	**47**	*e*P		**Pn**	**10 38 55.9**	**-1.3**
OMEGA				*e*S		**Sn**	**10 40 25.9**	**-2.8**
	comp=Z,49nm,1.7s							
JETT	**Jettan, Norway**	**8.66**	**149**	Pn		**Pn**	**10 39 04.1**	**-0.8**
JETT	**Jettan, Norway**	**8.66**	**149**	*e*P		**Pn**	**10 39 04.3**	**-0.6**
KIF	**Kilpisjarvi**	**9.23**	**150**	Pn		**Pn**	**10 39 12.1**	**-0.6**
KIF	**Kilpisjarvi**	**9.23**	**150**	*e*P		**Pn**	**10 39 12.2**	**-0.5**
ARA0	**ARCESS Array S**	**9.33**	**139**	Pn		**Pn**	**10 39 14.2**	**0.0**
	baz=336,slow=12							
ARA0				Sn		**Sn**	**10 40 50.5**	**-8.6**
	baz=343,slow=22							
ARA0	**ARCESS Array S**	**9.33**	**139**	Pn		**Pn**	**10 39 14.2**	**0.0**
ARA0				Sn		**Sn**	**10 40 50.5**	**-8.6**
ARCES	**ARCESS Array B**	**9.33**	**139**	Pn		**Pn**	**10 39 13.6**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=332,slow=12,SNR=30							
ARCES				Sn		**Sn**	**10 40 50.7**	**-8.4**
	comp=Z,0.1nm,0.3s,baz=345,slow=21,SNR=2.3							
ARCES				LR		LR	10 42 57.9	
	comp=Z,276nm,18.4s,baz=328,slow=38							
	comp=Z,3.1nm,0.4s							
ARCES	**ARCESS Array B**	**9.33**	**139**			**Pn**	**10 39 14.0**	**-0.2**
ARCES	**ARCESS Array B**	**9.33**	**139**	P		**Pn**	**10 39 13.7**	**-0.5**
ARCES				S		**Sn**	**10 40 52.6**	**-6.5**
KEV	**Kevo**	**9.36**	**135**	Pn		**Pn**	**10 39 14.1**	**-0.4**
KEV	**Kevo**	**9.36**	**135**	Pn		**Pn**	**10 39 14.1**	**-0.4**
KEV	**Kevo**	**9.36**	**135**	Pn		**Pn**	**10 39 14.1**	**-0.4**
VADS	**Vadso**	**9.41**	**130**	Pn		**Pn**	**10 39 16.1**	**+0.8**
VADS	**Vadso**	**9.41**	**130**	*e*P		**Pn**	**10 39 16.0**	**+0.8**
VADS	**Vadso**	**9.41**	**130**	P		**Pn**	**10 39 15.9**	**+0.7**
VADS				S		**Sn**	**10 40 53.1**	**-7.9**
LOF	**Lofoten**	**9.50**	**167**	*e*P		**Pn**	**10 39 17.5**	**+1.1**
KTK1	**Kautokeino**	**9.51**	**145**	Pn		**Pn**	**10 39 17.1**	**+0.5**
KTK1	**Kautokeino**	**9.51**	**145**	Pn		**Pn**	**10 39 17.1**	**+0.5**
STEI	**Steigen**	**9.79**	**163**	*e*P		**Pn**	**10 39 20.6**	**+1.2**
HEF	**Hetta**	**10.13**	**145**	Pn		**Pn**	**10 39 25.1**	**-0.1**
HEF	**Hetta**	**10.13**	**145**	*e*P		**Pn**	**10 39 25.0**	**-0.1**
FAUS	**Fauske**	**10.34**	**164**	*e*P		**Pn**	**10 39 30.4**	**+2.5**
FAUS	**Fauske**	**10.34**	**164**	P		**Pn**	**10 39 29.9**	**+2.0**
SALU	**Saltoluokta**	**10.58**	**157**	*e*P		**Pn**	**10 39 32.7**	**+1.5**
SCO	**Scoresbysund**	**10.62**	**245**	*i*		**Pn**	**10 39 34.2**	**+2.5**
SCO				*i*			10 41 21.0	
SCO	**Scoresbysund**	**10.62**	**245**	*e*P		**Pn**	**10 39 29.1**	**-2.6**
SCO				*i* S		Sn	10 41 18.7	-12
VAGH	**Vaagaholmen**	**10.88**	**168**	*e*P		**Pn**	**10 39 35.9**	**+0.6**
KONS	**Konsvik**	**11.10**	**169**	*e*P		**Pn**	**10 39 40.2**	**+1.9**
TERR	**Teriberka**	**11.22**	**123**	P		**Pn**	**10 39 38.5**	**-1.5**
STOK	**Stokkvaagen**	**11.27**	**169**	*e*P		**Pn**	**10 39 42.0**	**+1.4**
LEIR	**Leirfjorden**	**11.49**	**169**	*e*P		**Pn**	**10 39 45.4**	**+1.8**
APA0	**Apatity Array**	**12.26**	**130**	Pn		**Pn**	**10 39 53.8**	**-0.4**
	baz=330,slow=12							
APA0	**Apatity Array**	**12.26**	**130**	Pn		**Pn**	**10 39 53.8**	**-0.4**
APA0	**Apatity Array**	**12.26**	**130**	P		**Pn**	**10 39 54.3**	**+0.2**
APA0				S		Sn	10 42 01.3	-9.4
NEEM	**North Greenlan**	**12.35**	**299**	*i*		Pn	10 39 49.9	-5.7
NEEM				*i*			10 41 57.1	
NEEM	**North Greenlan**	**12.35**	**299**	*i* P		Pn	10 39 49.5	-6.1
NEEM				*i* S		Sn	10 41 56.6	-17
NEEM				IAML			10 42 02.0	
	comp=Z,23nm,0.6s							
SUMG	**Summit**	**12.57**	**271**			**Pn**	**10 39 56.6**	**-2.2**
SUMG	**Summit**	**12.57**	**271**	*i*		**Pn**	**10 39 55.6**	**-3.2**
SUMG				*i*			10 42 07.0	
SUMG	**Summit**	**12.57**	**271**	*i* P		**Pn**	**10 39 56.2**	**-2.6**
KVDA	**Kovda**	**13.07**	**132**	P		**Pn**	**10 40 05.0**	**-0.2**
KVDA				S		**Sn**	**10 42 24.2**	**-6.3**
KULL0	**Kullorsuaq**	**15.23**	**293**	*i*		Pn	10 40 27.3	-7.1
BORG	**Borgarnes**	**15.54**	**231**	Pn		**Pn**	**10 40 35.5**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=11,slow=16,SNR=3.3							
BORG				LR		LR	10 45 03.1	
	comp=Z,209nm,19.9s,baz=1.1,slow=31							
BORG	**Borgarnes**	**15.54**	**231**			**Pn**	**10 40 36.1**	**-2.5**
TULEG	**Thule**	**16.17**	**305**	*i*		Pn	10 40 39.1	-7.6
NC204	**NORSAR Array S**	**16.27**	**175**	Pn		**Pn**	**10 40 47.4**	**-0.6**
NC303	**NORSAR Array S**	**16.33**	**174**	Pn		**Pn**	**10 40 48.8**	**0.0**
NC303						IAmb	IAmb	10 40 55.5
	comp=Z,31nm,1.3s							
NC405	**NORSAR Array S**	**16.45**	**173**	Pn		**Pn**	**10 40 50.1**	**-0.3**
NC405						IAmb	IAmb	10 41 16.3
	comp=Z,26nm,1.3s							
NB201	**NORSAR Array S**	**16.50**	**174**	Pn		**Pn**	**10 40 51.5**	**+0.4**
NB201						IAmb	IAmb	10 41 09.1
	comp=Z,30nm,1.4s							
NBO00	**NORSAR Array S**	**16.51**	**175**	Pn		**Pn**	**10 40 52.0**	**+0.9**
NOA	**NORSAR Array B**	**16.51**	**174**	Pn		**Pn**	**10 40 52.1**	**+1.0**
	baz=356,slow=13,SNR=1.7							
NOA				LR		LR	10 46 26.1	
	comp=Z,86nm,20.0s,baz=350,slow=34							
	comp=Z,1.1nm,0.7s							
LSH	**Leshukonskoye**	**17.04**	**116**	*e*P		**Pn**	**10 40 57.2**	**-0.6**
LSH				*e*S		**Sn**	**10 44 06.8**	**-0.2**
FIA1	**FINESS Array S**	**17.13**	**149**	P		**Pn**	**10 40 59.8**	**+0.8**
FIA1						IAmb	IAmb	10 41 20.9
	comp=Z,66nm,1.4s							
FINES	**FINESS Array B**	**17.13**	**149**	Pn		**Pn**	**10 40 58.1**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=15,slow=12,SNR=13							
FINES				LR		LR	10 48 02.2	
	comp=Z,172nm,18.4s,baz=7.0,slow=39							
	comp=Z,6.9nm,0.8s							
FINES	**FINESS Array B**	**17.13**	**149**	P		**Pn**	**10 40 59.8**	**+0.8**
HFS	**Hagfors**	**17.49**	**170**	P		**P**	**10 41 04.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=345,slow=10,SNR=9.3							
HFS				LR		LR	10 46 57.6	
	comp=Z,132nm,20.1s,baz=3.0,slow=34							
	comp=Z,2.6nm,0.5s							
SFJD	**Kangerlussuaq**	**19.56**	**270**	P		**P**	**10 41 26.6**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=20,slow=12,SNR=6.8							
SFJD				LR		LR	10 49 20.1	
	comp=Z,106nm,20.3s,baz=25,slow=38							
	comp=Z,18nm,0.9s							
SFJD	**Kangerlussuaq**	**19.56**	**270**			**P**	**10 41 26.5**	**-0.8**
SFJD						IAmb	IAmb	10 41 28.1
	comp=Z,27nm,1.1s							
POIN	**Pond Inlet**	**20.63**	**302**			**P**	**10 41 37.9**	**-1.0**
POIN						IAmb	IAmb	10 41 41.5
	comp=Z,9.2nm,0.8s							
RES	**Resolute Bay**	**21.90**	**316**	P		**P**	**10 41 53.5**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=38,slow=12,SNR=9.8							
RES				S		S	10 45 42.1	-12
	comp=Z,1.1nm,0.8s,baz=302,slow=13,SNR=2.9							
RES				LR		LR	10 50 01.8	
	comp=Z,260nm,18.4s,baz=17,slow=36							
	comp=Z,1.3nm,0.5s							
RES	**Resolute Bay**	**21.90**	**316**			**P**	**10 41 52.9**	**+0.5**
KIRV	**Kirov**	**23.52**	**119**	LR		LR	10 52 03.0	
	comp=Z,156nm,19.1s,baz=341,slow=38							
ILON	**Igloolik, Nuna**	**24.09**	**300**			**P**	**10 42 15.1**	**+0.1**
ILON						IAmb	IAmb	10 42 23.3
	comp=Z,5.3nm,1.0s							
FRB	**Frobisher Bay**	**26.25**	**282**	LR		LR	10 53 37.7	
	comp=Z,339nm,18.1s,baz=56,slow=38							
TIXI	**Tiksi**	**27.17**	**36**	LR		LR	10 55 11.4	
	comp=Z,36nm,18.2s,baz=342,slow=40							
TIXI	**Tiksi**	**27.17**	**36**	P		**P**	**10 42 44.8**	**+2.0**
TIXI						IAmb	IAmb	10 42 54.0
	comp=Z,8.5nm,1.2s							
ARTI	**Arti**	**27.35**	**111**	LR		LR	10 56 08.5	
	comp=Z,109nm,18.3s,baz=341,slow=42							
ARTI	**Arti**	**27.35**	**111**			**P**	**10 42 45.0**	**+0.5**
AKASG	**Malin Array Be**	**28.03**	**150**	P		**P**	**10 42 51.4**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=348,slow=8.9,SNR=4.1							
AKASG				LR		LR	10 54 15.2	
	comp=Z,205nm,19.5s,baz=352,slow=37							
	comp=Z,0.7nm,0.5s							
VRAC	**Vranov**	**28.43**	**168**	LR		LR	10 53 49.6	
	comp=Z,96nm,19.5s,baz=359,slow=36							
GERES	**GERESS Array B**	**28.79**	**172**	LR		LR	10 53 44.4	
	comp=Z,76nm,19.4s,baz=248,slow=35							
BELG	**Belogornoye**	**29.06**	**126**	LR		LR	10 54 50.0	
	comp=Z,284nm,19.2s,baz=346,slow=37							
C23K	**Itkillik River**	**32.37**	**346**	P		**P**	**10 43 30.2**	**+1.4**
C23K						IAmb	IAmb	10 43 35.6
	comp=Z,7.7nm,1.2s							
C24K	**Franklin Bluff**	**32.38**	**345**	P		**P**	**10 43 30.8**	**+1.9**
INK	**Inuvik**	**32.63**	**334**	P		**P**	**10 43 32.5**	**+1.5**
INK						IAmb	IAmb	10 43 40.6
	comp=Z,5.2nm,1.3s							
B21K	**Ikpikpuk River**	**32.78**	**349**	P		**P**	**10 43 33.5**	**+1.1**
MLR	**Muntele Rosu**	**32.87**	**156**	LR		LR	10 57 02.2	
	comp=Z,190nm,19.9s,baz=14,slow=37							
AKTO	**Aktyubinsk**	**32.89**	**115**	LR

MSO	Missoula	50.93	311	P		P		10 46 01.4	+0.5
HHC	Hu-ho-hao-te	53.40	67	*e*P		P		10 46 19.8	+0.5
HHC	comp=Z,4.0nm,0.6s			pmax		pmax			
HHC	comp=Z,130nm,6.0s			pmax		pmax			
PDAR	Pinedale Array	54.12	306	P		P		10 46 24.1	-0.7
PDAR	comp=Z,0.5nm,1.0s,baz=19,slow=4.4,SNR=4.3			LR		LR		11 09 06.3	
J05D	comp=Z,78nm,18.3s,baz=1.5,slow=36 comp=Z,0.5nm,1.0s Fort Rock, OR	55.54	317	P		P		10 46 36.4	+1.5
ASAJ	Asahikawa	55.55	38	LR		LR		11 11 30.0	
TKL	comp=Z,24nm,18.4s,baz=146,slow=37 Tuckaleechee C	55.85	280	LR		LR		11 10 51.1	
KSRS	comp=Z,148nm,19.1s,baz=20,slow=36 Korea Array	59.78	53	LR		LR		11 14 10.1	
NVAR	comp=Z,22nm,21.8s,baz=5.0,slow=37 Mina Array Bea	59.83	313	P		P		10 47 06.3	+1.1
ANMO	comp=Z,0.1nm,0.3s,baz=348,slow=8.0,SNR=2.5 comp=Z,0.1nm,0.3s Albuquerque	61.15	301	LR		LR		11 13 02.7	
PFO	comp=Z,82nm,20.0s,baz=7.0,slow=35 Pinyon Flats O	64.23	310	LR		LR		11 14 57.0	
TORD	comp=Z,50nm,19.7s,baz=336,slow=36 Torodi Ar. Bea	64.36	187	P		P		10 47 37.2	+1.7
TXAR	comp=Z,2.6nm,0.8s,baz=337,slow=4.7,SNR=16 comp=Z,2.6nm,0.8s			LR		LR		11 16 50.7	
VHRN	comp=Z,97nm,21.6s,baz=16,slow=36 comp=Z,0.7nm,0.8s Van Horn	64.92	299	P		P		10 47 40.5	+1.2
ALPN	Alpine	65.06	297	P		P		10 47 41.0	+0.8
PZH	PanZhiHua	65.19	80	P		P		10 47 43.3	+2.3
TXAR	Lajitas Array	66.07	297	P		P		10 47 47.1	+0.4
CMAR	comp=Z,0.7nm,0.8s,baz=57,slow=4.6,SNR=4.4			LR		LR		11 25 30.9	
LPIG	comp=Z,39nm,19.7s,baz=90,slow=40 comp=Z,0.8nm,0.4s La Paz	72.43	302	LR		LR		11 22 33.3	
CMIG	comp=Z,53nm,19.9s,baz=2.5,slow=38 Matias Romero	76.17	286	LR		LR		11 25 54.9	
APG	comp=Z,86nm,18.2s,baz=354,slow=39 El Apazote	77.25	281	LR		LR		11 24 32.2	
SDV	comp=Z,8.1nm,19.8s,baz=48,slow=37 Santo Domingo	78.86	261	LR		LR		11 21 55.9	
MBAR	comp=Z,25nm,20.3s,baz=67,slow=34 Mbarara	78.96	157	LR		LR		11 28 35.2	
JTS	comp=Z,84nm,18.0s,baz=165,slow=39 Las Juntas de	80.63	275	LR		LR		11 26 21.5	
	comp=Z,77nm,18.0s,baz=2.6,slow=37								

NEIC ***26*** *10:44:17.7±1.7,20.5S±0.1×178.3W±0.10,h596km±7km, mb4.6/352, Error ellipse: s-maj=17.1km s-min=13.3km az=173.0*

NOU ***26*** *10:44:17.1,20.62S×178.58W,h605km,mb4.6/69, Fiji Islands Region*

IDC ***26*** *10:44:17.6±1.5,20.68S×178.63W,h608km±18km, mb4.0/24,mbtmp4.9/27, Error ellipse: s-maj=13.1km s-min=10.6km az=163.0*

ISC 26 10:44:15.9±0.2**,20.72S**±0.05×**178.62W**±0.04**,h587**km**, n754,**σ1**$**17**/633**,mb4.6**/206**,32C-28D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.48	356	P		P	10 45 34.0	+2.7
LKBA	Tubou, Lakemba	2.48	356	S		S	10 46 36.2	+3.8
TAVE	Taveuni	4.17	343	P		P	10 45 43.8	+2.1
TAVE	Taveuni	4.17	343	S		S	10 46 54.6	+3.0
MSVF	Nonsavu	4.32	313	P		P	10 45 45.1	+2.2
MSVF	Nonsavu	4.32	313	S		S	10 46 57.1	+3.3
MSVF	Nonsavu	4.32	313			P	10 45 44.9	+2.0
DGTI	Dogotuki	4.66	340	P		P	10 45 47.0	+1.6
DGTI	Dogotuki	4.66	340	S		S	10 47 01.2	+2.9
NIUE	Niue	8.34	80	P		P	10 46 19.5	+1.4
NIUE	Niue	8.34	80			P	10 46 19.5	+1.4
NIUE	Niue	8.34	80	P		P	10 46 19.5	+1.4
NIUE				S		S	10 48 06.8	+8.5
RAO	Raoul Island	8.52	176	S		S	10 48 01.8	+0.5
GLKZ	225nm,0.3s,baz=74,slow=19,SNR=1.7 Green Lake	8.53	176	P		P	10 46 21.5	+1.7
GLKZ				S		S	10 47 56.2	-5.2
AFI	Afiamalu	9.41	45	P		P	10 46 27.5	-1.2
AFI	16nm,0.5s,baz=180,slow=7.1,SNR=5.6 Afiamalu	9.41	45	P		P	10 46 26.9	-1.8
FUNA	Funafuti	12.30	350	P		P	10 46 57.3	-0.5
MARNC	Mare, Loyalty	12.48	264	P		P	10 47 00.0	+0.5
MARNC	Mare, Loyalty	12.48	264	S		S	10 49 16.8	+2.7
MARNC	Mare, Loyalty	12.48	264	P		P	10 47 00.5	+1.0
RTV	Rentapao	12.57	281	P		P	10 47 02.4	+1.9
RTV	Rentapao	12.57	281	S		S	10 49 17.7	+1.8
DVP	Devils Point	12.81	281	P		P	10 47 04.1	+1.2
DVP	Devils Point	12.81	281	S		S	10 49 23.0	+2.7
OUENC	Ouen Island, N	13.63	260	P		P	10 47 13.9	+2.6
DZM	Mont Dzumac 58nm,0.9s	13.97	262	*e*P		P	10 47 15.2	+0.3
DZM	405nm,24.6s			*e*S		S	10 49 33.5	-8.0
DZM	Mont Dzumac 20nm,0.7s,baz=108,slow=16,SNR=28	13.97	262	P		P	10 47 15.2	+0.3
DZM	Mont Dzumac	13.97	262	P		P	10 47 15.2	+0.3
DZM	Mont Dzumac	13.97	262	P		P	10 47 15.9	+1.0
ONTNC	Ouen Toro	13.98	261	P		P	10 47 16.0	+1.2
SANVU	Saraoutou	14.46	289	P		P	10 47 19.9	+0.4
SANVU	Saraoutou	14.46	289	P		P	10 47 20.2	+0.7
OUZ	Omahuta	15.99	204	P		P	10 47 35.3	+1.7
WCZ	Waipu Caves	16.37	201	P		P	10 47 41.2	+4.1
WIAZ	Waiheke Island	16.92	197	P		P	10 47 45.7	+3.7
MBAZ	Motutapu North	16.97	198	P		P	10 47 46.4	+3.9
MKAZ	Moumakai	17.20	197	P		P	10 47 47.3	+2.6
WTAZ	Waiatarua	17.21	199	P		P	10 47 49.5	+4.7
WMGZ	Waiomatatini S	17.24	188	P		P	10 47 46.6	+1.7
HAZ	Te Kaha	17.27	190	P		P	10 47 46.5	+1.3
AWAZ	Awhitu Peninsu	17.31	198	P		P	10 47 49.5	+3.9
RUGZ	Raukumara Rang	17.49	190	P		P	10 47 46.6	-0.8
RUGZ				S		S	10 50 41.5	+2.2
PUZ	Puketiti	17.51	188	P		P	10 47 49.9	+2.5
PUZ				S		S	10 50 40.0	+0.6
TGRZ	Tauranga	17.53	194	P		P	10 47 51.0	+3.5
RAR	Rarotonga 30nm,0.8s,baz=265,slow=5.5,SNR=6.6	17.61	95	P		P	10 47 49.5	+0.9
TWGZ	Tauwhareparae	17.65	189	P		P	10 47 50.6	+1.9
TWGZ				S		S	10 50 42.0	+0.2
TOZ	Tahuroa Road	17.71	195			P	10 47 52.5	+3.3
TOZ	comp=Z,9.3nm,0.7s			IAmb		IAmb	10 47 54.0	
KMRZ	Kaimai	17.71	194	P		P	10 47 52.9	+3.6
URZ	Urewera comp=Z,7.3nm,0.3s,baz=12,slow=5.3,SNR=24	17.87	191	P		P	10 47 49.8	-0.9
URZ	comp=Z,3.1nm,0.6s,baz=11,slow=15,SNR=1.5			S		S	10 50 41.0	-4.3
URZ	comp=Z,6.6nm,0.8s,baz=333,slow=4.5,SNR=3.9			ScP		ScP	10 54 33.9	-1.1
URZ	Urewera	17.87	191	P		P	10 47 51.9	+1.2
URZ	Urewera	17.87	191	P		P	10 47 50.6	0.0
MWZ	Matawai	17.87	190	P		P	10 47 51.1	+0.3
MWZ				S		S	10 50 42.1	-3.3
CNGZ	Carnagh Statio	17.92	188	P		P	10 47 52.4	+1.3
TKGZ	Te Karaka	17.93	189	P		P	10 47 53.0	+1.8
RAGZ	Rawiri	18.05	190	P		P	10 47 53.9	+1.4
RIGZ	Rimuhau	18.20	189	P		P	10 47 54.9	+1.2
RTZ	Ruatahuna	18.24	191	P		P	10 47 54.1	0.0
BKZ	Black Stump Fm	18.86	192	P		P	10 47 59.5	-0.3
BKZ	Black Stump Fm	18.86	192	P		P	10 47 59.9	+0.1
ETVZ	East Tongariro	19.00	194	P		P	10 48 02.3	+1.2
BFZ	Birch Farm	20.38	191	P		P	10 48 14.6	+1.2
QRZ	Quartz Range	21.41	199	P		P	10 48 24.7	+1.9
SAVO	Savo Central	23.76	296	P		P	10 48 44.5	+0.5
TATA	Tatamba Isabel	24.17	297	P		P	10 48 47.3	-0.3
JCZ	Jackson Bay	25.54	201	P		P	10 49 00.5	+1.1
TBI	Tubuai comp=Z,591nm,26.8s	27.14	101	*e*S		sS	10 56 10.9	+5.0
PAE	Paea comp=Z,11nm,1.0s	27.58	89	*e*P		P	10 49 15.9	-1.6
PPT2	Papeete2 comp=Z,29nm,0.9s	27.60	89	*e*P		P	10 49 19.3	+1.5
PPT2	comp=Z,125nm,24.0s			*e*S		sS	10 56 13.6	-0.2
PPT	Papeete comp=Z,14nm,0.4s,baz=260,slow=19,SNR=4.7	27.60	88	P		P	10 49 19.1	+1.4
TIAR	comp=Z,14nm,0.4s Tiarei comp=Z,58nm,1.0s	27.82	89	*e*P		P	10 49 21.2	+1.5
EIDS	Eidsvold	28.23	255	P		P	10 49 23.8	+0.7
EIDS	Eidsvold	28.23	255			P	10 49 24.3	+1.2
EIDS	comp=Z,6.9nm,0.6s			IAmb		IAmb	10 49 24.8	
ARMA	Armidale	28.45	244	P		P	10 49 27.0	+1.9
ARMA	Armidale	28.45	244	P		P	10 49 27.4	+2.3
ARMA	comp=Z,9.8nm,0.9s			IAmb		IAmb	10 49 28.0	
PMOR	Pomariorio Ree comp=Z,46nm,0.9s	29.77	84	*e*P		P	10 49 37.6	+1.1
CTA	Charters Tower	32.89	265	P		P	10 50 03.7	+0.6
CTAO	Charters Tower	32.89	265	P		P	10 50 03.7	+0.6
CTAO	Charters Tower	32.89	265			P	10 50 04.3	+1.3
CMSA	Cobar Meteorol	33.67	244	P		P	10 50 10.7	+1.3
QLP	Quilpie	34.44	253	P		P	10 50 16.8	+0.9
PMG	Port Moresby	34.82	284			P	10 50 19.8	+0.5
MTSU	Mount Surprise	35.00	268	P		P	10 50 21.2	+0.5
TOO	Toolangi	35.30	234	P		P	10 50 25.1	+2.1
COEN	Coen	37.01	274	P		P	10 50 37.9	+0.6
COEN	Coen	37.01	274			P	10 50 38.5	+1.1
COEN	comp=Z,14nm,0.8s			IAmb		IAmb	10 50 39.0	
STKA	Stephens Creek comp=Z,5.4nm,0.5s,baz=90,slow=11,SNR=19	37.17	244	P		P	10 50 39.5	+1.1
STKA	comp=Z,1.5nm,0.5s,baz=103,slow=8.1,SNR=3.3 comp=Z,5.4nm,0.5s			PcP		PcP	10 52 43.1	+0.7
STKA	Stephens Creek	37.17	244	P		P	10 50 39.7	+1.3
STKA	Stephens Creek	37.17	244			P	10 50 40.1	+1.7
INKA	Innaminka	37.58	251			P	10 50 43.2	+1.5
MANU	Manus Island	38.00	295	P		P	10 50 46.6	+1.2
MANU	comp=Z,21nm,1.0s			IAmb		IAmb	10 50 47.5	
QIS	Mount Isa	39.01	263	P		P	10 50 53.6	+0.1
HTT	Hallett	39.61	242	P		P	10 50 59.5	+1.4
BBOO	Buckleboo	41.93	244	P		P	10 51 17.2	+0.8
BBOO	Buckleboo	41.93	244			P	10 51 17.4	+1.0
AS31	Alice Springs	43.90	257			P	10 51 32.8	+0.8
ASAR	Alice Springs comp=Z,28nm,0.7s,baz=96,slow=7.7,SNR=441	43.90	257	P		P	10 51 32.5	+0.6
ASAR	comp=Z,6.2nm,0.5s,baz=96,slow=3.6,SNR=14			PcP		PcP	10 53 04.5	-0.4
ASAR	comp=Z,1.8nm,0.6s,baz=95,slow=15,SNR=6.9 comp=Z,28nm,0.7s			S		S	10 57 18.5	-3.3
ASAR	Alice Springs	43.90	257	P		P	10 51 32.7	+0.7
WB0	Warramunga Arr	43.97	263	P		P	10 51 32.6	+0.1
WB0	comp=Z,16nm,0.8s			IAmb		IAmb	10 51 32.8	
WRAB	Tennant Creek	43.98	262	P		P	10 51 32.3	-0.3
WRAB	Tennant Creek	43.98	262	P		P	10 51 32.5	-0.1
WRAB	comp=Z,19nm,1.1s			IAmb		IAmb	10 51 33.3	
WRA	Warramunga Arr comp=Z,7.3nm,0.3s,baz=97,slow=7.5,SNR=407	43.99	262	P		P	10 51 32.5	-0.2
WRA	comp=Z,3.5nm,0.7s,baz=101,slow=3.3,SNR=5.6			PcP		PcP	10 53 05.2	0.0
WRA	comp=Z,1.9nm,0.9s,baz=103,slow=15,SNR=5.3 comp=Z,7.3nm,0.3s			S		S	10 57 18.7	-4.4
WRA	Warramunga Arr	43.99	262	P		P	10 51 32.9	+0.2
MTN	Manton Dam	48.58	271	P		P	10 52 07.1	-0.3
FORT	Forrest	48.67	247			P	10 52 08.5	+0.7
FORT	comp=Z,15nm,0.7s			IAmb		IAmb	10 52 08.8	
DRS	Darwin Rock St	48.91	271	P		P	10 52 10.0	+0.2
KNRA	Kununurra	50.06	267	P		P	10 52 18.4	+0.2
KNRA	comp=Z,50nm,1.5s			IAmb		IAmb	10 52 38.9	
SOEI	Soe	55.92	272			P	10 53 01.9	+1.9
PSA00	Pilbara Seismi	57.05	257	P		P	10 53 07.3	-0.1
PSA00	Pilbara Seismi	57.05	257	P		P	10 53 07.5	+0.1
PSA00	comp=Z,26nm,0.8s			IAmb		IAmb	10 53 08.2	
PSA00	Pilbara Seismi	57.05	257			P	10 53 07.5	+0.1
MBWA	Marble Bar	57.24	258	P		P	10 53 08.4	-0.3
MBWA	Marble Bar	57.24	258			P	10 53 08.8	+0.1
MBWA	comp=Z,23nm,0.6s			IAmb		IAmb	10 53 09.1	
MEEK	Meekatharra	57.30	251	P		P	10 53 08.8	-0.3
KLBR	Kellerberrin	57.44	245	P		P	10 53 10.2	+0.3
NWAO	Narrogin (SRO)	57.75	243	P		P	10 53 12.6	+0.6
NWAO	Narrogin (SRO)	57.75	243	P		P	10 53 13.3	+1.1
BLDU	Ballidu	58.43	246	P		P	10 53 16.7	0.0
MUN	Mundaring	58.71	244	P		P	10 53 19.6	+1.1
MORW	Morawa	59.21	248	P		P	10 53 22.3	+0.4
MORW	Morawa	59.21	248	P		P	10 53 22.3	+0.4
KAPI	Kappang	61.72	276	P		P	10 53 39.1	+0.5
GIRL	Giralia	61.93	255	P		P	10 53 41.4	+1.6
PLAI	Plampang	62.29	271	P		P	10 53 42.2	-0.1
TOLI2	Tolitoli	63.08	282	P		P	10 53 48.0	+0.6
TOLI2	Tolitoli	63.08	282	P		P	10 53 49.3	+2.0
TOLI2	comp=Z,14nm,0.8s			IAmb		IAmb	10 53 51.1	
JAGI	Jajag, Banyuwa	65.80	270	P		P	10 54 03.8	-0.7
UGM	Wanagama	69.38	269	P		P	10 54 26.5	+0.1
JOW	Kunigami comp=Z,14nm,0.7s,baz=124,slow=15,SNR=9.8 comp=Z,14nm,0.7s	69.86	310	P		P	10 54 28.6	-0.2
JOW	Kunigami	69.86	310	P		P	10 54 29.0	+0.1
MJAR	Matsushiro Arr comp=Z,7.3nm,0.6s,baz=164,slow=6.0,SNR=22 comp=Z,7.3nm,0.6s	70.04	324	P		P	10 54 28.8	-0.9
MJAR	Matsushiro Arr	70.04	324	P		P	10 54 29.4	-0.4
MAJO	Matsushiro	70.04	324	P		P	10 54 29.4	-0.3
MAJO	comp=Z,8.1nm,0.6s			IAmb		IAmb	10 54 29.6	
JMN	Monobe	70.56	319	P		P	10 54 33.7	+0.7
JSU	Suzuyama	71.27	316	P		P	10 54 36.4	-0.7
JSU	Suzuyama	71.27	316	P		P	10 54 37.1	+0.1
JSU	comp=Z,36nm,1.1s			IAmb		IAmb	10 54 37.8	
JNU	Nakatsue comp=Z,15nm,0.8s,baz=118,slow=5.3,SNR=8.9 comp=Z,15nm,0.8s	72.03	317	P		P	10 54 40.9	-0.7
BBJI	Bungbulang	72.21	269	P		P	10 54 42.3	-0.8
BBJI	comp=Z,13nm,0.8s			IAmb		IAmb	10 54 43.8	
KIWB	Kanaga Island	72.27	1	P		P	10 54 42.0	-0.4
ADK	Adak	72.31	1	P		P	10 54 41.2	-1.4
ADK	Adak	72.31	1	P		P	10 54 41.9	-0.6
TWG	Pinlang	73.01	303	P		P	10 54 45.4	-1.9
YULB	Yu-li	73.13	304	P		P	10 54 46.8	-1.2
YULB	Yu-li comp=Z,13nm,0.6s	73.13	304	IAmb		IAmb	10 54 47.4	
TPUB	Ta-pu	73.60	303	P		P	10 54 49.3	-1.4
TPUB	Ta-pu	73.60	303			P	10 54 49.5	-1.2
SSLB	Suanglung	73.61	304	P		P	10 54 49.3	-1.4
SSLB	Suanglung comp=Z,40nm,1.2s	73.61	304	IAmb		IAmb	10 54 50.4	
JKA	Kamikawa-asahi comp=Z,26nm,1.0s	73.64	332	IAmb		IAmb	10 54 52.5	
ASAJ	Asahikawa comp=Z,13nm,0.5s,baz=222,slow=5.6,SNR=40 comp=Z,13nm,0.5s	73.64	332	P		P	10 54 51.5	+1.1
UNV	Unalaska Valle baz=192	74.98	7	P		P	10 54 56.8	-0.9
YSS	Yuzhno-Sakhali	75.83	334	P		P	10 55 02.9	+0.3
YSS	comp=Z,15nm,0.6s			IAmb		IAmb	10 55 03.6	
PET	Petropavlovsk	76.03	346	P		P	10 55 02.8	-0.7
PET	comp=Z,12nm,0.9s			IAmb		IAmb	10 55 24.6	
QZH2	Quanzhou	76.04	304	*e*P		P	10 55 04.5	+0.3
PEA0B	Petropavlovsk-	76.33	346	P		P	10 55 05.1	-0.1
PEA0B	comp=Z,26nm,0.8s			IAmb		IAmb	10 55 05.6	
PETK	Petropavlovsk- comp=Z,18nm,0.7s,baz=102,slow=8.5,SNR=30 comp=Z,18nm,0.7s	76.33	346	P		P	10 55 04.7	-0.5
PETK	Petropavlovsk-	76.33	346	P		P	10 55 05.0	-0.2
FALS	False Pass baz=195	76.38	9	P		P	10 55 04.6	-0.8
KSRS	Korea Array comp=Z,4.7nm,0.7s,baz=127,slow=5.9,SNR=14 comp=Z,4.7nm,0.7s	76.66	319	P		P	10 55 07.8	+0.4
KSAR	Wonju Array Be	76.68	319	P		P	10 55 08.6	+1.1
CHNA	Chernabura Isl	76.99	11	P		P	10 55 07.8	-0.8
SDPT	comp=Z,198nm,1.2s Sand Point baz=198	77.32	11	P		P	10 55 09.5	-1.0
SDPT	Sand Point baz=197	77.32	11	P		P	10 55 09.6	-1.0
SPIA	Saint Paul Isl baz=188	77.91	5	P		P	10 55 13.3	-0.3
CHIR	Chirikof Islan	78.70	13	P		P	10 55 17.7	-0.2
CHIR	Chirikof Islan baz=202	78.70	13	P		P	10 55 16.8	-1.1
MHC	Mount Hamilton comp=Z,13nm,0.8s	78.80	43	IAmb		IAmb	10 55 21.5	
USRK	Ussuriysk Ar. comp=Z,12nm,0.7s,baz=136,slow=3.1,SNR=17 comp=Z,12nm,0.7s	78.81	326	P		P	10 55 19.3	+0.6
CVS	Carmenet Viney comp=Z,44nm,1.2s	78.90	42	IAmb		IAmb	10 55 21.5	
KMPM	Mount Pierce comp=Z,21nm,0.9s	79.17	39	IAmb		IAmb	10 55 24.4	
MNRC	McLaughlin Min comp=Z,25nm,0.9s	79.23	41	IAmb		IAmb	10 55 23.9	
BELA	Belgrano 2	79.42	173	P		P	10 55 23.2	+1.7
NJ2	Nanjing	79.57	310	*e*P		P	10 55 23.0	0.0
NJ2	comp=Z,6.0nm,0.8s			pmax		pmax		
KHMM	Horse Mountain comp=Z,23nm,1.0s	79.69	39	IAmb		IAmb	10 55 26.3	
SII	Sitkinak Islan baz=203	79.69	13	P		P	10 55 22.8	-0.3
O02D	Mt. Diablo Mer	79.82	40	P		P	10 55 26.5	+2.2
O02D	comp=Z,18nm,0.8s			IAmb		IAmb	10 55 27.1	
KHBM	Hayfork Bally	79.86	40	P		P	10 55 26.2	+1.5
KHBM	comp=Z,18nm,1.1s			IAmb		IAmb	10 55 26.9	
R16K	Pilot Point baz=200	79.95	11	P		P	10 55 24.2	-0.2
R17L	Mt. Peulik Vol baz=201	80.24	12	P		P	10 55 25.3	-0.6
LRMC	Laurel Mtn Rad comp=Z,6.1nm,0.4s	80.33	46	IAmb		IAmb	10 55 54.9	
N02D	Trinity Center comp=Z,16nm,0.9s	80.36	40	IAmb		IAmb	10 55 29.8	
MDJ	Mudanjiang comp=Z,15nm,0.9s	80.36	325	IAmb		IAmb	10 55 28.5	
MDJ	Mudanjiang	80.36	325	P		P	10 55 27.8	+0.9
MDJ	comp=Z,21nm,0.8s			pmax		pmax		
O03E	Paynes Creek comp=Z,33nm,1.2s	80.48	40	IAmb		IAmb	10 55 29.8	
OHAK	Old Harbor	80.49	14	P		P	10 55 27.0	-0.2
OHAK	Old Harbor baz=204	80.49	14	P		P	10 55 27.0	-0.2
M02C	Callahan comp=Z,18nm,0.8s	80.53	39	IAmb		IAmb	10 55 30.8	
CCCA	Chr Cany lake comp=Z,18nm,0.5s	80.58	46	IAmb		IAmb	10 55 51.1	
YBH	Yreka Blue Hor comp=Z,18nm,0.9s	80.82	39	IAmb		IAmb	10 55 31.9	
TIN	Tinemaha, Big comp=Z,24nm,0.8s	80.85	45	IAmb		IAmb	10 55 32.8	
Q17K	Contact Creek baz=202	80.92	12	P		P	10 55 28.6	-1.0
O14K	Tigyukauivet M comp=Z,29nm,1.5s	80.95	9	IAmb		IAmb	10 55 30.7	
O14K	Tigyukauivet M baz=196	80.95	9	P		P	10 55 28.9	-0.7
HATC	Hat Creek Radi comp=Z,30nm,0.9s	81.01	40	IAmb		IAmb	10 55 32.8	
O15K	Ungalikthiuk R baz=198	81.09	10	P		P	10 55 29.8	-0.5
Q16K	King Salmon baz=201,SNR=5.6	81.16	11	P		P	10 55 30.6	-0.1
KDAK	Kodiak Island baz=205	81.16	14	P		P	10 55 30.3	-0.3
MAW	Mawson comp=Z,7.7nm,0.8s,baz=43,slow=18,SNR=1.1 comp=Z,7.7nm,0.8s	81.16	200	P		P	10 55 31.5	+0.8
DSP	Deep Springs comp=Z,19nm,1.2s	81.20	45	IAmb		IAmb	10 55 33.8	
P16K	Nushagak River baz=200,SNR=5.9	81.25	11	P		P	10 55 30.6	-0.5
LHV	Little Huntoon comp=Z,13nm,1.0s	81.35	44	IAmb		IAmb	10 55 34.6	
L04D	Klamath Falls comp=Z,31nm,1.0s	81.36	39	IAmb		IAmb	10 55 34.4	
M11K	Mekoryuk comp=Z,18nm,0.9s	81.44	6	IAmb		IAmb	10 55 34.3	
M11K	Mekoryuk baz=192	81.44	6	P		P	10 55 31.8	-0.2
Q18K	Katmai Hardscr baz=202,SNR=9.7	81.45	12	P		P	10 55 31.4	-0.9
DANC	Danby, Needles	81.46	48			P	10 55 34.0	+1.1
DANC	comp=Z,26nm,1.3s			IAmb		IAmb	10 55 35.2	
N14K	Kuskokwak Cree baz=196	81.53	9	P		P	10 55 31.6	-0.9
NVAR	Mina Array Bea comp=Z,7.6nm,0.7s,baz=226,slow=8.0,SNR=66 comp=Z,7.6nm,0.7s	81.58	44	P		P	10 55 34.6	+1.0
PAHR	Pah Rah Range comp=Z,16nm,1.0s	81.63	42	IAmb		IAmb	10 55 35.7	
I03D	Drain, OR comp=Z,25nm,1.2s	81.68	37	IAmb		IAmb	10 55 36.0	
P17K	Kvichak River baz=201,SNR=9.7	81.69	11	P		P	10 55 32.6	-0.7
O16K	Kokwok River B comp=Z,27nm,0.9s	81.77	10	IAmb		IAmb	10 55 33.5	
O16K	Kokwok River B baz=199	81.77	10	P		P	10 55 32.6	-1.1
M13K	Dall Lake baz=194	81.79	8	P		P	10 55 33.8	0.0
Q20K	Shuyak Island baz=205	81.96	14	P		P	10 55 33.2	-1.5
Q19K	Cape Douglas, baz=204	81.98	13	P		P	10 55 33.1	-1.8
N15K	Kwethluk River baz=198	82.00	9	P		P	10 55 34.1	-0.8
NEE2	Needles Airpor comp=Z,30nm,1.4s	82.06	48	IAmb		IAmb	10 55 38.4	
P18K	Big Mountain, comp=Z,18nm,0.7s	82.10	12	IAmb		IAmb	10 55 35.5	
P18K	Big Mountain, baz=202	82.10	12	P		P	10 55 35.0	-0.4
O17K	Koliganek Bris baz=200	82.11	11	P		P	10 55 34.3	-1.1
TPNV	Topopah Spring comp=Z,14nm,0.8s	82.11	46	IAmb		IAmb	10 55 38.3	
BUCK	Buck Mountain comp=Z,29nm,1.2s	82.20	37	IAmb		IAmb	10 55 38.8	
BNX	BinXian	82.27	325	⇓P		P	10 55 36.3	-0.3
BNX	comp=Z,24nm,0.8s			pmax		pmax		
M14K	Bethel comp=Z,24nm,0.9s	82.29	8	IAmb		IAmb	10 55 37.6	
M14K	Bethel baz=196	82.29	8	P		P	10 55 35.9

M16K	Timber Creek baz=198	82.98	10	P	P	10 55 40.1	+0.3	
O19K	Port Alsworth baz=203,SNR=20	83.02	12	P	P	10 55 38.5	-1.5	
HOM	Homer baz=205	83.08	13	P	P	10 55 40.0	-0.3	
G04A	Mulino comp=Z,25nm,0.8s	83.11	36	IAmb	IAmb	10 55 43.9		
PINE	Pine Mountain comp=Z,28nm,0.9s	83.11	38	IAmb	IAmb	10 55 43.5		
K13K	Kusilvak Mount comp=Z,15nm,0.8s	83.12	7	IAmb	IAmb	10 55 41.9		
K13K	Kusilvak Mount baz=193	83.12	7	P	P	10 55 41.1	+0.7	
PRN	Pahroc Range comp=Z,11nm,0.9s	83.16	46	IAmb	IAmb	10 55 43.9		
N18K	Kilae Creek baz=201	83.17	11	P	P	10 55 40.2	-0.7	
I05D	Terrebonne, OR comp=Z,15nm,0.9s	83.22	37	IAmb	IAmb	10 55 43.5		
KULM	Kulim	83.22	278	P	P	10 55 43.1	+1.0	
L15K	Ungalak Mounta baz=196	83.25	8	P	P	10 55 40.6	-0.5	
BRSE	Bradley Lake S baz=206	83.35	14	P	P	10 55 41.5	-0.2	
RED	Redoubt Volcan comp=Z,25nm,1.1s	83.53	13	IAmb	IAmb	10 55 42.0		
N19K	Bonanza Creek comp=Z,12nm,0.6s	83.56	12	IAmb	IAmb	10 55 42.2		
N19K	Bonanza Creek baz=203	83.56	12	P	P	10 55 41.8	-1.0	
L16K	Owhat River baz=198	83.56	9	P	P	10 55 43.0	+0.3	
TUC	Tucson	83.57	52	P	P	10 55 45.4	+1.8	
TUC	comp=Z,10nm,0.9s			IAmb	IAmb	10 55 46.5		
M17K	Holitna River comp=Z,17nm,0.9s	83.59	10	IAmb	IAmb	10 55 44.7		
M17K	Holitna River baz=200	83.59	10	P	P	10 55 43.1	+0.3	
WVOR	Wild Horse Val comp=Z,15nm,1.1s	83.67	40	IAmb	IAmb	10 55 46.0		
NLWA	Neilton Lookou comp=Z,17nm,0.9s	83.74	34	IAmb	IAmb	10 55 46.2		
MA2	Magadan comp=Z,6.4nm,0.7s,baz=142,slow=6.2,SNR=11 comp=Z,6.4nm,0.7s	83.84	345	P	P	10 55 42.7	-1.4	
MA2	Magadan	83.84	345		P	10 55 43.2	-0.9	
MA2	Magadan comp=Z,12nm,1.1s	83.84	345	P	P	10 55 42.8	-1.3	
K15K	Wolf Creek Mou comp=Z,9.5nm,0.8s	83.84	8	IAmb	IAmb	10 55 46.4		
K15K	Wolf Creek Mou baz=196	83.84	8	P	P	10 55 44.4	+0.4	
M18K	Stony River baz=201	83.94	11	P	P	10 55 44.3	-0.3	
SEW	Seward baz=207	83.97	14	P	P	10 55 44.4	-0.3	
J14K	Nanvaranak Lak baz=194	84.03	7	P	P	10 55 44.9	0.0	
I07A	Izee comp=Z,14nm,0.9s	84.12	38	IAmb	IAmb	10 55 48.2		
Q23K	Middleton Isla baz=210	84.13	16	P	P	10 55 45.0	-0.5	
L17K	Donlin baz=199	84.14	9	P	P	10 55 45.5	-0.1	
CAPN	Captain Cook N baz=206	84.19	13	P	P	10 55 44.9	-0.8	
O22K	Cooper Landing baz=207	84.24	14	P	P	10 55 45.8	-0.2	
J08A	Circle Bar Ran comp=Z,18nm,1.3s	84.30	39	IAmb	IAmb	10 55 49.0		
B04A	Port Angeles comp=Z,16nm,1.2s	84.36	34	IAmb	IAmb	10 55 49.7		
P23K	Montague Islan baz=209	84.36	15	P	P	10 55 46.4	-0.2	
SPCR	Spurr Chakacha baz=205	84.36	13	P	P	10 55 45.5	-1.2	
GAMB	Gambell comp=Z,9.3nm,0.9s	84.39	3	IAmb	IAmb	10 55 47.9		
GAMB	Gambell baz=186	84.39	3	P	P	10 55 46.4	-0.2	
GNW	Green Mountain comp=Z,9.9nm,0.8s	84.40	34	IAmb	IAmb	10 55 48.9		
L18K	Granite Mounta baz=201	84.48	10	P	P	10 55 47.0	-0.2	
U15A	North Rim comp=Z,14nm,0.6s	84.54	48	IAmb	IAmb	10 55 50.8		
M19K	Big River Lodg comp=Z,10nm,0.6s	84.58	11	IAmb	IAmb	10 55 47.8		
D05A	Enumclaw comp=Z,16nm,1.1s	84.61	35	IAmb	IAmb	10 55 50.5		
GSI	Gunungsitoli	84.66	273	P	P	10 55 49.5	+0.3	
K17K	Iditarod baz=199	84.69	9	P	P	10 55 47.3	-0.9	
STLK	Strandline Lak comp=Z,9.2nm,0.7s	84.71	13	IAmb	IAmb	10 55 47.7		
L19K	White Mountain comp=Z,15nm,1.0s	84.76	11	IAmb	IAmb	10 55 49.4		
L19K	White Mountain baz=202	84.76	11	P	P	10 55 48.6	0.0	
PGC	Sidney comp=Z,16nm,1.2s	84.76	33	IAmb	IAmb	10 55 51.1		
RC01	Rabbit Creek A baz=207	84.78	14	P	P	10 55 48.7	0.0	
M20K	Styx River baz=204	84.80	12	P	P	10 55 48.4	-0.5	
SUA	Susitna One baz=206,SNR=7.7	84.90	13	P	P	10 55 48.7	-0.7	
J16K	Anvik River baz=197	84.91	8	P	P	10 55 49.3	0.0	
PKCU	Pink Cliffs comp=Z,12nm,0.9s	85.04	47	IAmb	IAmb	10 55 53.8		
KAIM	Kayak Island baz=212	85.06	17	P	P	10 55 49.9	-0.1	
G08A	Pilot Rock comp=Z,14nm,0.9s	85.14	38	IAmb	IAmb	10 55 52.9		
HEH	HeiHe	85.19	329	*e*P	P	10 55 50.8	-0.1	
HEH	comp=Z,14nm,0.5s			pmax	pmax			
GLI	Glacier Island baz=209	85.20	15	P	P	10 55 50.6	-0.1	
SKT	Skwentna baz=205	85.20	12	P	P	10 55 50.6	-0.2	
EYAK	Cordova Ski Ar baz=211	85.25	16	P	P	10 55 49.7	-1.2	
HNS	HongShan	85.26	313	⇓P	P	10 55 52.0	+0.4	
HNS	comp=Z,11nm,0.9s			pmax	pmax			
M22K	Willow baz=207	85.29	13	P	P	10 55 50.8	-0.3	
KNK	Knik Glacier baz=208	85.36	14	P	P	10 55 51.0	-0.5	
PMR	Palmer	85.36	14	P	P	10 55 50.7	-0.7	
PMR	Palmer comp=Z,16nm,1.2s	85.36	14	IAmb	IAmb	10 55 53.0		
PMR	Palmer baz=208	85.36	14	P	P	10 55 50.6	-0.9	
E07A	Sunnyside comp=Z,13nm,1.0s	85.39	36	IAmb	IAmb	10 55 54.1		
LYN	LuoYang	85.44	309	P	P	10 55 53.3	+0.8	
LYN	comp=Z,34nm,0.9s			pmax	pmax			
HAWA	Hanford comp=Z,15nm,0.8s	85.47	37	IAmb	IAmb	10 55 54.4		
I17K	Unalakleet baz=197	85.48	8	P	P	10 55 51.3	-0.6	
BGLC	Bering Glacier baz=213	85.53	17	P	P	10 55 51.7	-0.6	
SIT	Sitka baz=220	85.54	22	P	P	10 55 51.2	-1.2	
ANM	Nome baz=192	85.62	6	P	P	10 55 52.4	-0.2	
BJI2	Beijing	85.63	316	P	P	10 55 53.0	-0.3	
BJI2	comp=Z,4.0nm,0.7s			pmax	pmax			
BJT	Baijiatuau	85.63	316	P	P	10 55 53.8	+0.6	
V35K	Ketchikan baz=223	85.63	25	P	P	10 55 52.1	-0.8	
U33K	Whale Pass baz=222	85.63	24	P	P	10 55 52.4	-0.4	
J18K	Innoko River baz=200	85.65	10	P	P	10 55 52.8	0.0	
ENH	Enshi	85.68	304	P	P	10 55 54.6	+0.8	
SML	Sawmill baz=208	85.73	14	P	P	10 55 52.6	-0.7	
E08A	Dider Farm, El comp=Z,12nm,1.0s	85.79	37	IAmb	IAmb	10 55 55.8		
CUT	Chulitna baz=206	85.85	13	P	P	10 55 52.9	-0.8	
BMO	Blue Mountains comp=Z,7.6nm,0.7s	85.85	39	IAmb	IAmb	10 55 55.9		
L22K	Petersville comp=Z,15nm,0.8s	85.85	13	IAmb	IAmb	10 55 53.6		
M23K	Glacier View baz=209	85.86	14	P	P	10 55 52.9	-1.0	
BMRM	Bremner River baz=212	85.90	16	P	P	10 55 53.9	-0.2	
PPLA	Purkeypile baz=205	85.91	12	P	P	10 55 53.9	-0.3	
MFID	Camas Ranch comp=Z,9.2nm,0.9s	85.93	41	IAmb	IAmb	10 55 56.7		
S31K	Pelican baz=219	85.93	21	P	P	10 55 53.7	-0.5	
MESA	MESA baz=214	85.95	17	P	P	10 55 54.0	-0.6	
SCM	Sheep Creek Mo baz=209,SNR=5.6	85.98	14	P	P	10 55 53.8	-0.7	
K20K	Telida baz=203	85.99	11	P	P	10 55 54.0	-0.4	
EPH	Ephrata comp=Z,20nm,1.1s	86.00	36	IAmb	IAmb	10 55 56.5		
H16K	Elim baz=195	86.02	7	P	P	10 55 54.1	-0.4	
KLU	Klutina baz=210	86.02	15	P	P	10 55 54.8	+0.1	
CRQE	Cirque baz=213	86.11	17	P	P	10 55 54.8	-0.5	
S32K	Killisnoo baz=221	86.12	22	P	P	10 55 55.2	0.0	
WRAK	Wrangell Islan baz=223	86.15	24	P	P	10 55 55.4	+0.1	
G15K	Niukluk baz=194	86.17	6	P	P	10 55 55.2	0.0	
D08A	Wollman Farm, comp=Z,22nm,1.1s	86.20	36	IAmb	IAmb	10 55 57.8		
E09A	Wood Farm, Sta comp=Z,16nm,1.1s	86.32	37	IAmb	IAmb	10 55 58.0		
J19K	Poorman baz=202	86.32	10	P	P	10 55 55.8	-0.1	
ELIB	Princess Elisa	86.36	187	*d*P	P	10 55 57.3	+0.8	
PINM	Pinnacle baz=216	86.36	18	P	P	10 55 56.2	-0.2	
TNA	Tin City baz=190,SNR=9.2	86.39	4	P	P	10 55 55.9	-0.3	
F14K	Arctic Creek baz=192	86.43	5	P	P	10 55 56.3	-0.1	
N25K	Chitina, Valde baz=212	86.45	16	P	P	10 55 56.8	0.0	
M24K	Tolsona, Glenn baz=210	86.49	15	P	P	10 55 57.1	+0.2	
WAT6	Susitna Watana baz=209,SNR=7.3	86.55	14	P	P	10 55 56.9	-0.4	
H17K	Granite Mounta baz=198	86.59	8	P	P	10 55 57.1	-0.1	
WAT1	Susitna Watana baz=208	86.59	13	P	P	10 55 57.0	-0.3	
MCARA	McCarthy VSAT baz=213	86.66	16	P	P	10 55 57.5	-0.2	
G16K	Koyuk River baz=195	86.74	7	P	P	10 55 58.2	+0.4	
PLID	Pearl Lake comp=Z,8.9nm,0.8s	86.75	39	IAmb	IAmb	10 55 59.8		
KTH	Kantishna Hill comp=Z,14nm,0.9s	86.75	12	IAmb	IAmb	10 55 57.4		
R32K	Eaglecrest baz=221	86.75	22	P	P	10 55 57.9	-0.2	
CTG	Chitna Glacier baz=215	86.77	17	P	P	10 55 57.7	-0.6	
TRF	Thorofare Moun baz=206,SNR=11	86.78	12	P	P	10 55 57.3	-1.1	
LLLB	Lillooet comp=Z,15nm,1.2s	86.79	32	IAmb	IAmb	10 56 00.2		
F15K	North Star Dit baz=193	86.81	6	P	P	10 55 58.1	-0.1	
GCSA	Galena City Sc baz=200	86.83	9	P	P	10 55 57.7	-0.5	
HLID	Hailey comp=Z,12nm,0.9s	86.87	41	IAmb	IAmb	10 56 01.5		
O28M	Mount Upton baz=216	86.93	18	P	P	10 55 58.6	-0.7	
HARP	HAARP baz=211	86.99	15	P	P	10 55 58.3	-0.9	
C09A	Chrisman Ranch comp=Z,13nm,0.8s	86.99	36	IAmb	IAmb	10 56 01.0		
H18K	Honhosa River baz=199	87.00	8	P	P	10 55 58.3	-0.8	
O29M	Mount Kennedy baz=217	87.03	19	P	P	10 55 59.3	-0.3	
G17K	Kiwalik Mounta baz=197	87.04	7	P	P	10 55 58.7	-0.6	
DHY	Denali Highway comp=Z,7.2nm,0.7s	87.06	14	IAmb	IAmb	10 55 59.5		
DHY	Denali Highway baz=209	87.06	14	P	P	10 55 59.0	-0.7	
SRU	San Rafael Swe comp=Z,8.1nm,0.8s	87.09	46	IAmb	IAmb	10 56 02.3		
VHRN	Van Horn comp=Z,14nm,1.1s	87.26	56	IAmb	IAmb	10 56 03.9		
MCK	McKinley baz=208,SNR=8.6	87.31	13	P	P	10 56 00.6	-0.1	
MNTX	Cornudas Mount comp=Z,8.6nm,1.0s	87.35	55	IAmb	IAmb	10 56 04.0		
T35M	Bob Quinn baz=224	87.35	24	P	P	10 56 01.1	+0.1	
P30M	Million Dollar baz=219	87.38	19	P	P	10 56 01.4	+0.3	
SKAG	Skagway baz=220	87.39	21	P	P	10 56 00.6	-0.4	
PAX	Paxson baz=211	87.41	14	P	P	10 56 01.4	+0.1	
YUK8	Steele Glacier baz=216,SNR=8.0	87.47	18	P	P	10 56 01.8	0.0	
TCUT	Toone Canyon comp=Z,8.8nm,0.9s	87.50	44	IAmb	IAmb	10 56 03.9		
M26K	Nabesna, AK comp=Z,16nm,1.0s	87.53	16	IAmb	IAmb	10 56 02.8		
M26K	Nabesna, AK baz=213,SNR=5.2	87.53	16	P	P	10 56 01.4	-0.4	
YUK6	Outpost Mounta baz=217	87.60	18	P	P	10 56 02.5	+0.1	
BSUT	Blindstream Ca comp=Z,7.9nm,1.0s	87.64	45	IAmb	IAmb	10 56 06.4		
TX31	Lajitas Ar. Si comp=Z,9.8nm,0.9s	87.66	58	IAmb	IAmb	10 56 06.4		
TXAR	Lajitas Array comp=Z,7.8nm,0.8s,baz=221,slow=5.6,SNR=41 comp=Z,7.8nm,0.8s	87.66	58	P	P	10 56 04.8	+1.5	
G18K	Tagagawik baz=199	87.67	8	P	P	10 56 01.9	-0.4	
YUK3	Moose Creek baz=215,SNR=10	87.68	17	P	P	10 56 02.3	-0.4	
S34M	Telegraph Cree baz=224	87.69	23	P	P	10 56 02.5	0.0	
XLT	XiLinHaoTe	87.72	319	*e*P	P	10 56 02.5	-0.6	
XLT	comp=Z,7.0nm,0.7s			pmax	pmax			
XLT	comp=Z,62nm,5.4s			pmax	pmax			
PV10	Paradox Valley comp=Z,12nm,1.1s	87.75	47	IAmb	IAmb	10 56 07.2		
PV19	Morning Glory comp=Z,9.4nm,1.1s	87.76	48	IAmb	IAmb	10 56 04.7		
HYT	Haines Junctio baz=218	87.77	19	P	P	10 56 02.8	-0.2	
M27K	Edge Creek, AK comp=Z,18nm,1.0s	87.78	16	IAmb	IAmb	10 56 04.4		
M27K	Edge Creek, AK baz=214,SNR=7.0	87.78	16	P	P	10 56 03.3	+0.3	
PV18	Skein Mesa, Pa comp=Z,5.8nm,0.8s	87.78	48	IAmb	IAmb	10 56 05.3		
PV20	West Nyswonger comp=Z,6.1nm,0.8s	87.78	48	IAmb	IAmb	10 56 05.3		
XAN	Xi'an	87.80	308	P	P	10 56 04.5	+0.8	
XAN	comp=Z,18nm,0.8s			pmax	pmax			
PV23	Carpenter Ridg comp=Z,9.3nm,0.8s	87.81	47	IAmb	IAmb	10 56 05.6		
H20K	Anotleneega Mo baz=202	87.83	10	P	P	10 56 03.2	+0.2	
YUK4	Talbot Arm baz=217	87.84	18	P	P	10 56 03.4	0.0	
F17K	Baldwin Pennin comp=Z,7.2nm,0.8s	87.87	7	IAmb	IAmb	10 56 03.7		
F17K	Baldwin Pennin baz=196,SNR=8.0	87.87	7	P	P	10 56 03.1	0.0	
PV12	Saucer Basin, comp=Z,7.6nm,0.9s	87.89	48	IAmb	IAmb	10 56 06.6		
NEW	Newport comp=Z,8.2nm,1.2s	87.89	36	IAmb	IAmb	10 56 05.4		
L26K	Log Cabin Wild baz=213	87.96	15	P	P	10 56 04.0	+0.2	
VNA3	Neumayer Olymp comp=Z,8.2nm,0.6s	87.97	176	⇓P	P	10 56 04.3	+0.5	
ANMO	Albuquerque	87.99	51	P	P	10 56 04.9	+0.1	
ANMO	comp=Z,7.7nm,1.1s			IAmb	IAmb	10 56 07.1		
P32M	Atlin baz=221	88.02	21	P	P	10 56 04.1	0.0	
NEA2	Nenana comp=Z,7.3nm,0.8s	88.05	12	IAmb	IAmb	10 56 04.1		
NEA2	Nenana baz=208,SNR=5.2	88.05	12	P	P	10 56 03.2	-0.9	
K24K	Donnelly Dome baz=211,SNR=9.0	88.05	14	P	P	10 56 04.2	+0.1	
BVCY	Beaver Creek baz=215,SNR=7.4	88.09	17	P	P	10 56 04.2	-0.2	
G19K	Purcell Mounta	88.11	9	P	P	10 56 04.3	0.0	
G19K	comp=Z,12nm,0.9s			IAmb	IAmb	10 56 05.0		
G19K	Purcell Mounta baz=200	88.11	9	P	P	10 56 03.8	-0.5	
MLY	Manley	88.12	11	P	P	10 56 03.7	-0.8	
MLY	Manley baz=206,SNR=14	88.12	11	P	P	10 56 03.3	-1.2	
ALPN	Alpine comp=Z,11nm,1.1s	88.13	57	IAmb	IAmb	10 56 07.6		
WRH	Wood River Hil	88.14	13	P	P	10 56 04.0	-0.4	
O30N	Mendenhall baz=219	88.16	19	P	P	10 56 03.9	-0.8	
RIDG	Independent Ri baz=211	88.21	14	P	P	10 56 04.9	0.0	
F18K	Selawik baz=198	88.21	7	P	P	10 56 04.4	-0.3	
TPB01	Permian Basin comp=Z,9.3nm,0.8s	88.26	56	IAmb	IAmb	10 56 08.0		
H21K	Melozitna Rive comp=Z,8.1nm,0.7s	88.32	10	IAmb	IAmb	10 56 06.7		
H21K	Melozitna Rive baz=204	88.32	10	P	P	10 56 05.4	0.0	
HDA	Harding Lake baz=210,SNR=17	88.32	13	P	P	10 56 04.7	-0.7	
L27K	Beaver Creek, baz=214	88.38	16	P	P	10 56 05.6	0.0	
VNA2	Neumayer--Watz comp=Z,2.8nm,0.8s,baz=153,slow=3.5	88.40	177	⇓P	P	10 56 06.1	+0.3	
E17K	Hotham Inlet baz=196,SNR=9.0	88.43	7	P	P	10 56 05.6	-0.2	
RDMU	Red Mountain comp=Z,8.0nm,0.8s	88.45	45	IAmb	IAmb	10 56 08.4		
WHY	Whitehorse comp=Z,23nm,1.5s	88.45	20	IAmb	IAmb	10 56 16.6		
WHY	Whitehorse baz=220	88.45	20	P	P	10 56 06.1	-0.1	
IMAR	Indian Mountai	88.47	10		P	10 56 05.8	-0.2	
DLBC	Dease Lake baz=225	88.48	23	P	P	10 56 06.3	+0.1	
I23K	Minto, Yukon-K comp=Z,7.6nm,0.6s	88.49	12	IAmb	IAmb	10 56 06.0		
I23K	Minto, Yukon-K baz=207,SNR=6.8	88.49	12	P	P	10 56 06.0	0.0	
AHID	Auburn Hatcher comp=Z,9.3nm,1.1s	88.53	43	IAmb	IAmb	10 56 10.6		
COLA	College	88.54	13	P	P	10 56 05.3	-1.0	
COLA	College	88.54	13	P	P	10 56 05.7	-0.6	
COLA	College baz=209	88.54	13	P	P	10 56 05.4	-1.0	
TPB05	Hovey Rd comp=Z,12nm,1.0s	88.60	56	IAmb	IAmb	10 56 10.0		
SCRK	Sand Creek comp=Z,7.2nm,0.8s	88.61	15	IAmb	IAmb	10 56 08.7		
SCRK	Sand Creek baz=212,SNR=6.8	88.61	15	P	P	10 56 06.0	-0.8	
IL31	comp=Z,17nm,1.1s	88.65	13	IAmb	IAmb	10 56 06.8		
ILAR	Eielson Array comp=Z,9.7nm,0.8s,baz=215,slow=5.3,SNR=114	88.65	13	P	P	10 56 05.8	-1.1	
ILAR	comp=Z,0.4nm,0.3s,baz=202,slow=6.8,SNR=15			PP	PP	10 59 47.3	+0.3	
ILAR	comp=Z,0.4nm,0.4s,baz=242,slow=3.6,SNR=6.4 comp=Z,9.7nm,0.8s			PKiKP	PKiKP	11 01 00.9	-1.6	
ILAR	Eielson Array	88.65	13		P	10 56 06.0	-0.9	
F19K	Shaleruckik Mo comp=Z,7.7nm,0.8s	88.67	8	IAmb	IAmb	10 56 07.3		
F19K	Shaleruckik Mo baz=200,SNR=11	88.67	8	P	P	10 56 06.4	-0.5	
HILR	Hailar Array B comp=Z,6.1nm,0.5s,baz=129,slow=8.1,SNR=9.7 comp=Z,6.1nm,0.5s	88.69	325	P	P	10 56 07.5	0.0	
M29M	Somme Creek baz=217	88.77	17	P	P	10 56 07.1	-0.5	
H22K	Ishtalitna Cre baz=205	88.78	11	P	P	10 56 07.5	0.0	
P33M	Teslin, Yukon baz=222	88.79	21	P	P	10 56 07.4	-0.3	
N31M	Braeburn, Yuko baz=220	88.81	19	P	P	10 56 07.7	0.0	
R33M	Jennings River baz=224	88.83	22	P	P	10 56 07.8	-0.1	
POKR	Poker Plat Res baz=209,SNR=8.2	88.84	13	P	P	10 56 07.2	-0.6	
J25K	Salcha River, baz=211	88.84	14	P	P	10 56 07.5	-0.4	
E18K	Tukpahlearik C comp=Z,13nm,1.0s	88.89	7	IAmb	IAmb	10 56 08.6		
E18K	Tukpahlearik C baz=197	88.89	7	P	P	10 56 07.5	-0.4	
D17K	Noatak River baz=194,SNR=9.1	88.90	6	P	P	10 56 07.7	-0.2	
DLMT	Dillon comp=Z,7.2nm,0.8s	88.92	40	IAmb	IAmb	10 56 10.3		
G21K	Allakaket baz=203	89.00	10	P	P	10 56 08.0	-0.4	
S22A	4UR Ranch, Cre comp=Z,8.5nm,1.2s	89.00	49	IAmb	IAmb	10 56 11.6		
FXWY	Fox Creek comp=Z,4.4nm,0.8s	89.01	42	IAmb	IAmb	10 56 12.6		
HHC	Hu-ho-hao-te	89.09	315	*e*P	P	10 56 10.5	+0.9	
HHC	comp=Z,9.0nm,0.7s			pmax	pmax			
HHC	comp=Z,140nm,5.2s			pmax	pmax			
O20A	White River Ci comp=Z,8.6nm,0.9s	89.13	46	IAmb	IAmb	10 56 11.6		
SAND	Sanderson comp=Z,4.3nm,0.8s	89.14	58	IAmb	IAmb	10 56 12.2		
F20K	Avaraart Lake comp=Z,9.5nm,0.9s	89.16	9	IAmb	IAmb	10 56 09.8		
F20K	Avaraart Lake baz=201	89.16	9	P	P	10 56 09.3	+0.2	
BILL	Bilibino	89.19	354		P	10 56 09.7	+0.4	
BILL	comp=Z,13nm,1.3s			IAmb	IAmb	10 56 11.0		
RDOG	Red Dog Mine baz=195	89.26	6	P	P	10 56 09.5	-0.2	
C16K	Lisburne Hills comp=Z,6.6nm,1.1s	89.26	5	IAmb	IAmb	10 56 10.2		
C16K	Lisburne Hills baz=192	89.26	5	P	P	10 56 09.5	-0.1	
LOHW	Long Hollow comp=Z,6.5nm,0.7s	89.27	42	IAmb	IAmb	10 56 12.3		
E19K	Redstone River baz=200	89.33	8	P	P	10 56 10.0	0.0	
M30M	Minto, Yukon baz=219,SNR=9.0	89.35	18	P	P	10 56 10.0	-0.2	
L29M	L29M baz=218	89.40	17	P	P	10 56 10.5	0.0	
N32M	Quiet Lake baz=222	89.40	20	P	P	10 56 10.6	+0.1	
YHB	Horse Butte comp=Z,9.6nm,1.1s	89.47	41	IAmb	IAmb	10 56 13.9		
BW06	Boulder Array comp=Z,8.5nm,0.7s	89.52	43	IAmb	IAmb	10 56 12.9		
PD31	Pinedale Array comp=Z,8.4nm,0.7s	89.52	43	IAmb	IAmb	10 56 12.9		
PDAR	Pinedale Array comp=Z,6.5nm,0.6s,baz=210,slow=3.5,SNR=82 comp=Z,6.5nm,0.6s	89.52	43	P	P	10 56 12.0	+0.3	
PDAR	Pinedale Array	89.52	43	P	P	10 56 12.2	+0.5	
YHL	Hebgen Lake comp=Z,6.5nm,0.8s	89.53	41	IAmb	IAmb	10 56 13.9		
YMR	Madison River comp=Z,6.1nm,0.8s	89.57	41	IAmb	IAmb	10 56 14.3		

PRP	**Porcupine Dome**	**89.59**	**13**	P	**P**	**10 56 11.1**	**-0.3**	
PRP	comp=Z,4.7nm,0.8s			IAmb	IAmb	10 56 12.7		
PRP	**Porcupine Dome**	**89.59**	**13**	P	**P**	**10 56 11.1**	**-0.3**	
	baz=211							
CMAR	**Chiang Mai Arr**	**89.64**	**290**	P	**P**	**10 56 14.0**	**+1.5**	
	comp=Z,6.5nm,0.8s,baz=129,slow=2.9,SNR=44							
	comp=Z,6.5nm,0.8s							
C17K	**DeLong Mountai**	**89.65**	**6**	P	**P**	**10 56 11.0**	**-0.4**	
	baz=194							
F21K	**Alatna River**	**89.65**	**10**	P	**P**	**10 56 11.8**	**+0.3**	
	baz=203							
H17A	**Grant Village**	**89.67**	**42**	IAmb	IAmb	10 56 15.5		
	comp=Z,9.2nm,1.1s							
G23K	**Bananza Creek**	**89.76**	**11**	IAmb	IAmb	10 56 12.8		
	comp=Z,8.3nm,1.2s							
G23K	**Bananza Creek**	**89.76**	**11**	P	**P**	**10 56 12.3**	**+0.3**	
	baz=207							
CHTO	**Chiang Mai**	**89.77**	**290**	P	**P**	**10 56 13.4**	**+0.2**	
DAWY	**Dawson**	**89.83**	**16**	P	**P**	**10 56 12.0**	**-0.4**	
DAWY	**Dawson**	**89.83**	**16**	P	**P**	**10 56 12.6**	**+0.2**	
	baz=216,SNR=14							
I26K	**Coal Creek Min**	**89.93**	**14**	P	**P**	**10 56 12.7**	**-0.1**	
	baz=213							
SDCO	**Great Sand Dun**	**89.94**	**49**	IAmb	IAmb	10 56 15.5		
	comp=Z,7.2nm,1.4s							
C18K	**Utukok River**	**90.01**	**6**	IAmb	IAmb	10 56 13.0		
	comp=Z,5.8nm,1.1s							
C18K	**Utukok River**	**90.01**	**6**	P	**P**	**10 56 13.0**	**-0.2**	
	baz=196							
K29M	**Barlow Dome**	**90.15**	**17**	P	**P**	**10 56 13.8**	**-0.2**	
	baz=218,SNR=8.2							
COLD	**Coldfoot**	**90.19**	**11**	IAmb	IAmb	10 56 15.0		
	comp=Z,7.6nm,0.8s							
COLD	**Coldfoot**	**90.19**	**11**	P	**P**	**10 56 14.1**	**+0.1**	
	baz=206,SNR=8.5							
D19K	**Kuna River**	**90.20**	**7**	P	**P**	**10 56 13.8**	**-0.2**	
	baz=199							
E20K	**Nigu River**	**90.23**	**8**	P	**P**	**10 56 13.9**	**-0.3**	
	baz=201							
G24K	**Hadweenzic Riv**	**90.23**	**12**	P	**P**	**10 56 13.7**	**-0.5**	
	baz=209							
PZH	**PanZhiHua**	**90.29**	**298**	P	**P**	**10 56 16.5**	**+0.9**	
YNE	**Yellowstone No**	**90.33**	**41**	IAmb	IAmb	10 56 17.6		
	comp=Z,5.1nm,0.9s							
MAYO	**Mayo, Yukon**	**90.41**	**18**	P	**P**	**10 56 15.3**	**+0.3**	
	baz=220,SNR=8.7							
J29N	**Klondike Camp**	**90.45**	**16**	P	**P**	**10 56 16.3**	**+1.0**	
	baz=217							
T25A	**Trinidad**	**90.45**	**50**	IAmb	IAmb	10 56 17.6		
	comp=Z,5.5nm,1.0s							
I27K	**Kandik River**	**90.54**	**14**	IAmb	IAmb	10 56 16.4		
	comp=Z,16nm,1.4s							
I27K	**Kandik River**	**90.54**	**14**	P	**P**	**10 56 15.0**	**-0.7**	
	baz=214							
D20K	**Ettiluk River**	**90.60**	**8**	P	**P**	**10 56 15.6**	**-0.2**	
	baz=201							
C19K	**Lookout Ridge**	**90.62**	**7**	P	**P**	**10 56 15.2**	**-0.7**	
	baz=198							
E21K	**Killik River**	**90.70**	**9**	IAmb	IAmb	10 56 16.7		
	comp=Z,10nm,1.1s							
E21K	**Killik River**	**90.70**	**9**	P	**P**	**10 56 16.0**	**-0.4**	
	baz=203							
E22K	**Anaktuvuk Pass**	**90.75**	**10**	IAmb	IAmb	10 56 17.2		
	comp=Z,11nm,1.1s							
E22K	**Anaktuvuk Pass**	**90.75**	**10**	P	**P**	**10 56 16.3**	**-0.3**	
	baz=205							
I28M	**Miner Creek**	**90.81**	**15**	IAmb	IAmb	10 56 17.0		
	comp=Z,6.3nm,0.8s							
I28M	**Miner Creek**	**90.81**	**15**	P	**P**	**10 56 17.1**	**+0.1**	
	baz=216							
E23K	**Chandalar**	**91.04**	**11**	IAmb	IAmb	10 56 18.8		
	comp=Z,5.0nm,0.9s							
E23K	**Chandalar**	**91.04**	**11**	P	**P**	**10 56 17.7**	**-0.2**	
	baz=207							
J30M	**Hart River**	**91.05**	**17**	P	**P**	**10 56 18.0**	**-0.1**	
	baz=219							
H27K	**Steamboat Moun**	**91.08**	**14**	IAmb	IAmb	10 56 26.5		
	comp=Z,11nm,1.3s							
H27K	**Steamboat Moun**	**91.08**	**14**	P	**P**	**10 56 17.7**	**-0.4**	
	baz=214							
I29M	**Ogilvie Camp,**	**91.15**	**16**	IAmb	IAmb	10 56 25.2		
	comp=Z,7.1nm,1.1s							
I29M	**Ogilvie Camp,**	**91.15**	**16**	P	**P**	**10 56 18.2**	**-0.3**	
	baz=217,SNR=5.2							
G26K	**Porcupine Rive**	**91.19**	**13**	IAmb	IAmb	10 56 20.7		
	comp=Z,7.1nm,1.1s							
G26K	**Porcupine Rive**	**91.19**	**13**	P	**P**	**10 56 18.5**	**0.0**	
	baz=212							
E24K	**Your Creek**	**91.25**	**11**	P	**P**	**10 56 19.2**	**+0.3**	
	baz=208							
C21K	**Knifeblade Rid**	**91.25**	**8**	P	**P**	**10 56 19.1**	**+0.2**	
	baz=202							
D22K	**Ayikyak River**	**91.30**	**9**	P	**P**	**10 56 18.5**	**-0.6**	
	baz=204							
F25K	**Christian Rive**	**91.36**	**12**	P	**P**	**10 56 19.8**	**+0.4**	
	baz=211							
I30M	**Mount Dempster**	**91.54**	**16**	IAmb	IAmb	10 56 21.0		
	comp=Z,8.8nm,0.9s							
I30M	**Mount Dempster**	**91.54**	**16**	P	**P**	**10 56 19.9**	**-0.5**	
	baz=219							
TOLK	**Toolik Lake Re**	**91.57**	**10**	P	**P**	**10 56 19.9**	**-0.4**	
	baz=207							
D23K	**Nanushuk River**	**91.68**	**10**	P	**P**	**10 56 20.4**	**-0.4**	
	baz=206							
B21K	**Ikpikpuk River**	**91.71**	**8**	P	**P**	**10 56 21.0**	**+0.1**	
	baz=202							
F26K	**Sheenjek River**	**91.75**	**12**	P	**P**	**10 56 21.5**	**+0.4**	
	baz=212							
E25K	**Arctic Village**	**91.83**	**12**	P	**P**	**10 56 22.0**	**+0.5**	
	baz=211							
KOTAN	**Kotaneelee Air**	**91.88**	**24**	P	**P**	**10 56 22.2**	**+0.3**	
	baz=230							
YAK	**Yakutsk**	**92.09**	**338**	P	**P**	**10 56 20.1**	**-2.6**	
	comp=Z,19nm,0.7s,baz=108,slow=1.1,SNR=4.9							
YAK	**Yakutsk**	**92.09**	**338**	IAmb	IAmb	10 56 22.5		
	comp=Z,18nm,0.8s							
D24K	**Happy Valley**	**92.15**	**10**	P	**P**	**10 56 23.4**	**+0.4**	
	baz=208							
EPYK	**Eagle Plains**	**92.35**	**16**	P	**P**	**10 56 24.1**	**+0.1**	
	baz=219							
G29M	**Pine Creek**	**92.45**	**15**	P	**P**	**10 56 24.4**	**0.0**	
	baz=218							
C23K	**Itkillik River**	**92.48**	**9**	P	**P**	**10 56 24.5**	**+0.1**	
	baz=206							
LZDM	**Lanzhou Array**	**92.49**	**307**	P	**P**	**10 56 24.1**	**-1.6**	
	comp=Z,1.0nm,0.3s,baz=158,slow=1.6,SNR=1.8							
	comp=Z,1.0nm,0.3s							
H31M	**Peel River**	**92.53**	**17**	P	**P**	**10 56 24.3**	**-0.5**	
	baz=221							
B22K	**Teshekpuk Lake**	**92.53**	**8**	IAmb	IAmb	10 56 25.2		
	comp=Z,7.8nm,1.0s							
B22K	**Teshekpuk Lake**	**92.53**	**8**	P	**P**	**10 56 24.6**	**0.0**	
	baz=204							
F28M	**Old Crow**	**92.59**	**14**	P	**P**	**10 56 24.9**	**-0.1**	
	baz=216							
EDM	**Edmonton**	**92.61**	**33**	IAmb	IAmb	10 56 25.6		
	comp=Z,4.4nm,0.7s							
C24K	**Franklin Bluff**	**92.68**	**10**	P	**P**	**10 56 25.1**	**-0.2**	
	baz=208							
D25K	**Kavik River**	**92.72**	**11**	P	**P**	**10 56 24.9**	**-0.7**	
	baz=210							
G30M	**tAoh Zraii Nji**	**92.95**	**15**	P	**P**	**10 56 25.9**	**-0.8**	
	baz=219							
A21K	**Barrow**	**93.05**	**7**	P	**P**	**10 56 27.0**	**0.0**	
	baz=201							
LAO	**LASA Array**	**93.45**	**41**	IAmb	IAmb	10 56 31.5		
	comp=Z,5.1nm,0.8s							
E28M	**Babbage River**	**93.47**	**13**	IAmb	IAmb	10 56 29.8		
	comp=Z,5.9nm,0.9s							
E28M	**Babbage River**	**93.47**	**13**	P	**P**	**10 56 28.4**	**-0.6**	
	baz=216							
C27K	**Jago River**	**93.47**	**12**	IAmb	IAmb	10 56 29.9		
	comp=Z,4.1nm,0.8s							
C27K	**Jago River**	**93.47**	**12**	P	**P**	**10 56 28.2**	**-0.8**	
	baz=212							
C26K	**Camden Bay**	**93.50**	**11**	P	**P**	**10 56 29.2**	**+0.2**	
	baz=211							
F30M	**Barrier River**	**93.55**	**15**	P	**P**	**10 56 29.4**	**0.0**	
	baz=220							
E29M	**Blow River**	**93.66**	**14**	P	**P**	**10 56 29.3**	**-0.6**	
	baz=218							
D27M	**Malcolm River**	**93.69**	**13**	P	**P**	**10 56 29.5**	**-0.5**	
	baz=215							
F31M	**Tsiigehtchic**	**93.93**	**16**	P	**P**	**10 56 31.0**	**-0.1**	
	baz=222							
WRGLY	**Wrigley**	**94.09**	**22**	P	**P**	**10 56 31.7**	**-0.2**	
	baz=230							
D28M	**Stokes Point**	**94.22**	**13**	P	**P**	**10 56 31.9**	**-0.4**	
	baz=217							
INK	**Inuvik**	**94.63**	**15**	P	**P**	**10 56 33.1**	**-1.1**	
	comp=Z,2.9nm,0.8s,baz=250,slow=3.2,SNR=14							
INK				PKiKP	**PKiKP**	**11 01 12.4**	**-0.3**	
	comp=Z,1.4nm,1.0s,baz=165,slow=4.5,SNR=3.7							
	comp=Z,2.9nm,0.8s							
INK	**Inuvik**	**94.63**	**15**	IAmb	IAmb	10 56 34.3		
	comp=Z,4.6nm,1.1s							
INK	**Inuvik**	**94.63**	**15**	P	**P**	**10 56 33.7**	**-0.6**	
	baz=222							
R32A	**Long Quarter,**	**95.10**	**51**	P	**P**	**10 56 37.1**	**-0.1**	
ULN	**Ulaanbaatar**	**95.14**	**319**	P	**P**	**10 56 36.4**	**-0.9**	
ULN				IAmb	IAmb	10 56 38.1		
	comp=Z,2.1nm,0.6s							
SONM	**Songino Array**	**95.53**	**319**	P	**P**	**10 56 37.9**	**-1.1**	
	comp=Z,0.7nm,0.8s,baz=66,slow=2.3,SNR=4.2							
	comp=Z,0.7nm,0.8s							
YKA	**Yellowknife Ar**	**96.95**	**25**	P	**P**	**10 56 44.2**	**-0.6**	
	comp=Z,0.8nm,0.7s,baz=253,slow=4.7,SNR=17							
YKA				PKiKP	**PKiKP**	**11 01 14.4**	**-2.5**	
	comp=Z,0.1nm,0.4s,baz=263,slow=1.8,SNR=4.7							
	comp=Z,0.8nm,0.7s							
YKA	**Yellowknife Ar**	**96.95**	**25**	P	**P**	**10 56 44.3**	**-0.5**	
C36M	**Paulatuk**	**97.83**	**17**	P	Pdif	10 56 47.6	-1.0	
	baz=230							
A36M	**Sachs Harbour**	**99.23**	**15**	P	**Pdif**	**10 56 53.4**	**-1.3**	
	baz=230							
RES	**Resolute Bay**	**108.17**	**16**	PKiKP	**PKiKP**	**11 01 34.9**	**-2.2**	
	comp=Z,0.9nm,0.7s,baz=246,slow=3.3,SNR=5.9							
ZALV	**Zalesovo Beam**	**110.29**	**321**	PKiKP	**PKiKP**	**11 01 39.9**	**-1.7**	
	comp=Z,3.0nm,0.5s,baz=120,slow=1.0,SNR=18							
ZALV	**Zalesovo Beam**	**110.29**	**321**		**PKiKP**	**11 01 40.4**	**-1.2**	
MKAR	**Makanchi Array**	**110.92**	**313**	Pdiff	**Pdif**	**10 57 50.2**	**+2.8**	
	comp=Z,0.3nm,0.7s,baz=90,slow=7.2,SNR=4.2							
MKAR				PKiKP	**PKiKP**	**11 01 41.8**	**-1.4**	
	comp=Z,2.3nm,0.5s,baz=92,slow=1.1,SNR=34							
MKAR	**Makanchi Array**	**110.92**	**313**		**PKiKP**	**11 01 42.2**	**-0.9**	
KURK	**Kurchatov**	**113.76**	**317**		**PKiKP**	**11 01 47.3**	**-1.0**	
KURBB	**Kurchatov Arra**	**113.81**	**317**	PKiKP	**PKiKP**	**11 01 47.0**	**-1.4**	
	comp=Z,2.9nm,0.6s,baz=95,slow=1.8,SNR=43							
FRB	**Frobisher Bay**	**117.25**	**28**	PKP	**PKPdf**	**11 01 53.2**	**-1.4**	
	comp=Z,2.8nm,0.5s,baz=289,slow=2.0,SNR=18							
NEEM	**North Greenlan**	**117.90**	**11**	*i* P	**PKPdf**	**11 01 55.1**	**-0.9**	
KULLO	**Kullorsuaq**	**117.99**	**15**	*i* P	**PKPdf**	**11 01 54.7**	**-1.1**	
GAR	**Garm**	**118.85**	**304**		**PKiKP**	**11 01 58.6**	**-0.2**	
BVAR	**Borovoye Array**	**118.87**	**320**	PKP	**PKPdf**	**11 01 56.9**	**-1.2**	
	comp=Z,10nm,0.4s,baz=121,slow=1.6,SNR=55							
BORK	**Borovoye**	**118.91**	**320**		**PKPdf**	**11 01 57.6**	**-0.6**	
KK31	**Karatay Array**	**118.92**	**309**		**PKiKP**	**11 01 58.3**	**-0.4**	
KKAR	**Karatay Array**	**118.92**	**309**		**PKPdf**	**11 01 58.0**	**-0.6**	
UPNV	**Upernavik**	**119.04**	**17**	*i* P	**PKPdf**	**11 01 57.3**	**-0.5**	
SCHQ	**Schefferville**	**119.20**	**38**	PKP	**PKiKP**	**11 01 58.4**	**-0.4**	
	comp=Z,1.4nm,0.8s,baz=270,slow=1.0,SNR=1.3							
NUUG	**Nuugaatsiaq**	**120.41**	**18**	*i* P	**PKPdf**	**11 01 59.0**	**-1.6**	
SPITS	**Spitsbergen Ar**	**122.04**	**356**	PKP	**PKPdf**	**11 02 02.6**	**-1.0**	
	comp=Z,11nm,0.7s,baz=76,slow=4.4,SNR=14							
SPB2	**Spitsbergen Ar**	**122.05**	**356**		**PKPdf**	**11 02 03.3**	**-0.3**	
ILULI	**Ilulissat**	**122.14**	**20**	*i* P	**PKPdf**	**11 02 03.0**	**-0.9**	
DAG	**Danmarks Havn**	**123.01**	**5**	*i* P	**PKPdf**	**11 02 03.7**	**-1.7**	
SFJD	**Kangerlussuaq**	**123.36**	**22**	PKP	**PKPdf**	**11 02 05.1**	**-1.1**	
	comp=Z,6.1nm,0.7s,baz=219,slow=6.5,SNR=7.0							
SFJD	**Kangerlussuaq**	**123.36**	**22**	*i* P	**PKPdf**	**11 02 05.2**	**-1.1**	
SUMG	**Summit**	**123.50**	**13**	*i* P	**PKiKP**	**11 02 07.1**	**-0.2**	
DBG	**Daneborg**	**125.12**	**7**	*i* P	**PKPdf**	**11 02 08.5**	**-1.1**	
ARTI	**Arti**	**125.15**	**325**		**PKPdf**	**11 02 09.5**	**-0.6**	
BOSA	**Boshof**	**125.81**	**206**	PKP	**PKiKP**	**11 02 12.7**	**-0.2**	
	comp=Z,2.6nm,0.8s,baz=114,slow=3.9,SNR=3.9							
ABKAR	**Akbulak array**	**125.84**	**316**		**PKPdf**	**11 02 11.0**	**-0.6**	
ARCES	**ARCESS Array B**	**129.03**	**349**	PKP	**PKPdf**	**11 02 16.1**	**-1.0**	
	comp=Z,5.6nm,0.5s,baz=23,slow=1.3,SNR=34							
GRTLC	**Ghanzi**	**133.90**	**206**		**PKPdf**	**11 02 28.1**	**+0.1**	
QNGWA	**Qangwa**	**135.55**	**207**		**PKiKP**	**11 02 31.9**	**-0.9**	
FINES	**FINESS Array B**	**135.81**	**343**	PKhKP	PKPpre	11 02 17.9		
	comp=Z,1.1nm,0.5s,baz=66,slow=3.5,SNR=1.3							
FINES				PKP	**PKPdf**	**11 02 27.2**	**-2.9**	
	comp=Z,1.1nm,0.5s,baz=90,slow=2.8,SNR=6.5							
KBZ	**Khabaz**	**138.62**	**313**	PKP	**PKPdf**	**11 02 35.6**	**-0.1**	
	comp=Z,2.5nm,0.8s,baz=72,slow=4.8,SNR=4.1							
NB2	**NORSAR Subarra**	**139.12**	**353**	PKP	PKPpre	11 02 26.9		
	comp=Z,1.4nm,0.5s,baz=14,slow=3.2							
NOA	**NORSAR Array B**	**139.12**	**353**	PKhKP	PKPpre	11 02 25.4		
	comp=Z,1.7nm,0.6s,baz=26,slow=3.8,SNR=7.5							
NOA				PKP	**PKiKP**	**11 02 37.2**	**-1.5**	
	comp=Z,1.4nm,0.5s,baz=14,slow=3.9,SNR=5.5							
HFS	**Hagfors**	**139.66**	**351**	PKhKP	PKPpre	11 02 28.5		
	comp=Z,6.8nm,0.3s,baz=67,slow=3.7,SNR=39							
HFS				PKP	**PKiKP**	**11 02 38.1**	**-1.6**	
	comp=Z,9.9nm,1.1s,baz=60,slow=3.8,SNR=4.7							
TJOU	**Tjoern**	**141.98**	**351**	*i* P	PKPpre	11 02 36.2		
HOMB	**Homborsund**	**142.13**	**354**	*i* P	PKPpre	11 02 37.7		
BORU	**Boraas**	**142.19**	**350**	*i* P	PKPpre	11 02 37.0		
ONAU	**Onsala**	**142.55**	**351**	*i* P	PKPpre	11 02 38.4		
LODK	**Lodwar**	**142.72**	**247**		**PKPdf**	**11 02 42.5**	**-1.6**	
FABU	**Falkenberg**	**142.80**	**350**	*i* P	PKPpre	11 02 39.2		
BLEU	**Blekinge**	**142.87**	**347**	*i* P	**PKPdf**	**11 02 39.3**	**-3.7**	
AKASG	**Malin Array Be**	**142.91**	**330**	PKP	PKPpre	11 02 39.8		
	comp=Z,34nm,0.5s,baz=44,slow=4.4,SNR=134							
AKBB	**Malin Array Si**	**142.91**	**330**		PKPpre	11 02 39.9		
KIEV	**Kiev**	**142.93**	**330**		PKPpre	11 02 39.9		
MCD	**Coleburn Disti**	**143.02**	**4**	*e*P	PKPab	11 02 39.6	-1.3	
KPL	**Plockton**	**143.06**	**6**	*e*P	PKPab	11 02 40.3	-0.8	
DEL	**Delary**	**143.10**	**348**	*i* P	PKPab	11 02 40.6	-0.7	
DRUM	**Mains of Drumt**	**143.74**	**4**	*e*P	PKPbc	11 02 42.6	-1.0	
LUNU	**Lund**	**143.98**	**348**	*i* P	PKPbc	11 02 43.7	-0.8	
BSD	**Bornholm Skovb**	**144.16**	**347**	*i* P	PKPbc	11 02 44.3	-0.7	
SORM	**Soroca**	**145.08**	**328**	⇓P	**PKPdf**	**11 02 47.1**	**+0.1**	
SORM	**Soroca**	**145.08**	**328**	PKP	**PKPdf**	**11 02 46.7**	**-0.4**	
EKA	**Eskdalemuir Ar**	**145.27**	**5**	PKPbc	**PKPdf**	**11 02 47.3**	**+0.2**	
	comp=Z,7.9nm,0.5s,baz=346,slow=2.5,SNR=18							
BZK	**Bozkurt**	**145.31**	**315**		**PKPdf**	**11 02 45.3**	**-2.4**	
PURM	**Purcari**	**145.33**	**325**	⇓P	**PKPbc**	**11 02 48.7**	**-0.1**	
KMPD	**K-Podol'skiy**	**145.70**	**330**	PKP	**PKPdf**	**11 02 48.2**	**+0.1**	
EDMD	**Edmundbyers**	**145.84**	**3**	*e*P	**PKPbc**	**11 02 49.0**	**-1.0**	
GDLE	**Glaisdale, N Y**	**146.31**	**2**	*e*P	**PKPbc**	**11 02 50.5**	**-0.8**	
MORS	**Morshin**	**146.42**	**333**	PKP	**PKPbc**	**11 02 50.6**	**-1.2**	
KSV	**Kosov**	**146.52**	**331**	PKP	**PKPdf**	**11 02 49.9**	**+0.3**	
BR131	**Keskin Array S**	**146.55**	**312**		**PKPbc**	**11 02 52.1**	**-0.6**	
BRTR	**Keskin Array B**	**146.55**	**312**	PKPbc	**PKPbc**	**11 02 51.6**	**-1.0**	
	comp=Z,8.0nm,0.6s,baz=141,slow=4.9,SNR=32							
BRTR	**Keskin Array B**	**146.55**	**312**		**PKPbc**	**11 02 52.5**	**-0.2**	
KIRS	**Kirsehir-Merke**	**146.60**	**311**	⇑P	**PKPbc**	**11 02 51.8**	**-0.9**	
HPK	**Haverah Park**	**146.73**	**3**	*e*P	**PKPbc**	**11 02 52.1**	**-0.4**	
TLCR		**146.74**	**324**	⇓P	**PKPbc**	**11 02 52.7**	**-0.1**	
SCTR	**Scanteiesti**	**146.88**	**325**	⇑P	**PKPbc**	**11 02 53.3**	**+0.1**	
GHRR		**146.94**	**326**	⇑P	**PKPbc**	**11 02 53.5**	**+0.2**	
BURAR	**Bucovina Array**	**146.96**	**330**	⇑P	**PKPbc**	**11 02 53.0**	**-0.5**	
TESR	**Tescani**	**147.03**	**327**	⇑P	**PKPbc**	**11 02 53.1**	**-0.5**	
CFR	**Carcaliu**	**147.12**	**324**	⇓P	**PKPbc**	**11 02 53.6**	**-0.1**	
TPGR	**Topolog**	**147.16**	**323**	⇓P	**PKPbc**	**11 02 54.1**	**+0.2**	
STHS	**Stebnicka Huta**	**147.28**	**336**	*e*PKP	**PKPbc**	**11 02 53.5**	**-0.6**	
STHS				*e*		11 02 58.0		
ONER	**Baraj Valea Uz**	**147.28**	**327**	⇑P	**PKPbc**	**11 02 54.6**	**+0.4**	
MMAI	**Mount Meron Ar**	**147.41**	**299**	PKPbc	**PKPbc**	**11 02 55.1**	**0.0**	
	comp=Z,13nm,0.4s,baz=44,slow=6.4,SNR=28							
TIRR	**Tirgusor**	**147.41**	**323**	⇑P	**PKPbc**	**11 02 54.5**	**-0.1**	
VRI	**Vrincioaia**	**147.43**	**326**	⇑P	**PKPbc**	**11 02 54.5**	**-0.1**	
PLOR	**Plostina**	**147.47**	**326**	⇓P	**PKPbc**	**11 02 54.3**	**-0.4**	
TURR	**Turia**	**147.66**	**327**	⇑P	**PKPbc**	**11 02 55.8**	**-0.9**	
COVR	**Voineasa-Covas**	**147.71**	**327**	⇑P	**PKPbc**	**11 02 55.0**	**-0.4**	
BOSR	**Bodos**	**147.83**	**327**	⇓P	**PKPbc**	**11 02 55.2**	**-0.5**	
NEHR	**Nehoiu**	**147.94**	**326**	⇓P	**PKPbc**	**11 02 56.1**	**+0.1**	
CHVC	**Chvalec**	**148.02**	**342**	*e*PKP	**PKPbc**	**11 02 56.0**	**0.0**	
DOPR	**Dopca**	**148.04**	**328**	⇓P	**PKPbc**	**11 02 56.4**	**+0.2**	
STEB	**Steborice**	**148.07**	**340**	*e*PKP	**PKPbc**	**11 02 56.0**	**-0.1**	
STEB				*e*PKPAB	**PKPab**	**11 03 01.4**	**+0.3**	
MLR	**Muntele Rosu**	**148.08**	**326**	⇑P	**PKPbc**	**11 02 55.9**	**-0.5**	
MLR	**Muntele Rosu**	**148.08**	**326**		**PKPbc**	**11 02 55.9**	**-0.5**	
HLM1	**Long Mynd**	**148.08**	**5**	*e*P	**PKPbc**	**11 02 55.3**	**-0.8**	
UPC	**Upice**	**148.10**	**342**	⇑*e*PKP	**PKPbc**	**11 02 56.1**	**-0.1**	
UPC				*e*PKPAB	**PKPab**	**11 03 01.7**	**+0.5**	
CLL	**Collm**	**148.13**	**346**		**PKPbc**	**11 02 56.1**	**-0.1**	
CLL	**Collm**	**148.13**	**346**	*e*PKPdf	**PKPdf**	**11 02 52.0**	**-0.1**	
	comp=Z,6.0nm,0.8s							
CLL				*i* PKPbc	**PKPbc**	**11 02 56.1**	**-0.1**	
	comp=Z,49nm,0.8s							
CLL				*i* PKPab	**PKPab**	**11 03 00.8**	**-0.5**	
	comp=Z,23nm,0.8s							
DPC	**Dobruska-Polom**	**148.15**	**342**	⇑*e*PKP	**PKiKP**	**11 02 56.8**	**-0.8**	
LANS	**Liptovska Anna**	**148.16**	**337**	*e*PKP	**PKiKP**	**11 02 57.4**	**-0.2**	
LANS				*e*		11 03 02.5		
MORC	**Moravsky Berou**	**148.28**	**340**	⇓P	**PKPbc**	**11 02 56.7**	**0.0**	
MORC	**Moravsky Berou**	**148.28**	**340**	*e*PKP	**PKPbc**	**11 02 56.6**	**-0.1**	
BRG	**Berggiesshubel**	**148.32**	**345**	⇑*e*PKPb		11 02 56.9		
BRG				Amp		11 02 57.3		
	comp=Z,25nm,1.0s							
BRG				PKPab	**PKPab**	**11 03 01.8**	**-0.3**	
BRG				Amp		11 03 02.5		
	comp=Z,8.6nm,0.7s							
KECS	**Kecovo**	**148.32**	**335**	*e*PKP	**PKiKP**	**11 02 57.4**	**-0.5**	
KECS				*e*		11 03 02.5		
CJR	**Cluj-Napoca**	**148.37**	**330**	⇑P	**PKPbc**	**11 02 56.4**	**-0.7**	
PVCC	**Panska Ves**	**148.48**	**344**	⇑*e*PKP	**PKiKP**	**11 02 57.3**	**-0.9**	
CSS	**Mathiatis**	**148.54**	**304**		**PKPbc**	**11 02 57.7**	**-0.1**	
MAUC	**Maruska**	**148.54**	**339**	*e*PKP	**PKiKP**	**11 02 57.9**	**-0.5**	
MCH1	**Michaelchurch**	**148.59**	**5**	*e*P	**PKPbc**	**11 02 55.9**	**-1.4**	
DRGR		**148.72**	**331**	⇑P	**PKPbc**	**11 02 57.6**	**-0.3**	
MONM	**Monmouth**	**148.76**	**5**	*e*P	**PKPbc**	**11 02 57.0**	**-0.7**	
ARR	**Arges**	**148.84**	**327**	⇓P	**PKiKP**	**11 02 59.2**	**0.0**	
PRU	**Pruhonice**	**148.98**	**343**	⇑*e*PKP	**PKPbc**	**11 02 58.1**	**-0.2**	
VRAC	**Vranov**	**148.99**	**341**	*e*PKP	**PKPbc**	**11 02 58.1**	**-0.3**	
VRAC				*e*		11 03 04.8		
PSZ	**Piszkesteto**	**149.01**	**335**	⇓P	**PKiKP**	**11 02 58.9**	**-0.6**	
PSZ	**Piszkesteto**	**149.01**	**335**		**PKPbc**	**11 02 58.3**	**-0.3**	
JAVC	**Velka Javorina**	**149.03**	**339**	*e*PKP	**PKiKP**	**11 02 59.6**	**+0.1**	
JAVC				*e*		11 03 06.3		
RAZG	**Razgrad**	**149.04**	**323**	⇑P	**PKPbc**	**11 02 58.3**	**-0.4**	
NKC	**Novy Kostel**	**149.27**	**346**	⇑*e*PKP	**PKiKP**	**11 02 59.3**	**-0.5**	
NKC				*e*PKPAB	**PKPab**	**11 03 05.9**	**-0.2**	
KRUC	**Moravsky**	**149.27**	**341**	*e*PKP	**PKPbc**	**11 02 58.7**	**-0.3**	
KRUC				*e*		11 03 06.0		
ZVC	**Zvikov**	**149.57**	**343**	⇑*e*PKP	**PKiKP**	**11 02 59.8**	**-0.7**	
ZVC				*e*PKPAB	**PKPab**	**11 03 07.4**	**0.0**	
MODS	**Modra-Piesok**	**149.58**	**339**	*e*PKP	**PKiKP**	**11 03 00.5**	**-0.1**	
GZR	**Gura Zlata**	**149.73**	**329**	⇓P	**PKPbc**	**11 02 59.7**	**-0.7**	
ELND	**Elena**	**149.80**	**323**	⇑P	**PKPdf**	**11 02 55.7**	**+0.7**	
UCC	**Uccle**	**149.89**	**356**	*d*PKP	**PKPbc**	**11 03 00.5**	**-0.5**	
MEM	**Membach**	**149.94**	**354**	*d*PKP	**PKPbc**	**11 03 00.3**	**-0.3**	
BTNL	**Ternell**	**149.96**	**354**	*d*PKP	**PKiKP**	**11 03 00.6**	**-0.6**	
BAND	**Balkesir-Ban**	**149.97**	**317**	⇑P	**PKPbc**	**11 02 58.8**	**-2.2**	
BSTI	**Sart Tilman**	**150.01**	**355**	*d*PKP	**PKiKP**	**11 03 00.9**	**-0.4**	
KHC	**Kasperske Hory**	**150.01**	**344**		**PKiKP**	**11 03 00.9**	**-0.5**	
KHC	**Kasperske Hory**	**150.01**	**344**

DAG	**Danmarks Havn**	**5.86**	**275**	*i* P	**Pn**	**10 46 22.3**	**+1.2**
DAG				*i* S	Sn	10 47 19.3	-9.0
DAG				IAML		10 47 24.3	
	comp=Z,0.9nm,0.2s						
DBG	**Daneborg**	**7.46**	**258**	*i* P	**Pn**	**10 46 42.3**	**-0.7**
DBG				*i* S	Sn	10 47 59.6	-8.0

NEIC ***26*** *10:45:58.3±1.0,20.56S±0.09×178.5W±0.1,h604km±7km, mb4.3/25, Error ellipse: s-maj=19.8km s-min=10.2km az=58.0*
IDC ***26*** *10:46:00.5±2.1,20.83S×178.69W,h636km±26km, mb3.4/15, mbtmp4.3/18, Error ellipse: s-maj=18.9km s-min=12.5km az=150.0*

ISC 26 10:45:57.5±0.4, 20.72S±0.08×178.59W±0.08, h600km, n72, σ1.913/76, mb4.1/27, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.35**	**313**	P	**P**	**10 47 26.4**	**+0.8**
RAO	**Raoul Island**	**8.51**	**176**	S	**S**	**10 49 41.0**	**-2.3**
	434nm,0.4s,baz=86,slow=19,SNR=2.4						
AFI	**Afiamalu**	**9.39**	**45**	S	**S**	**10 49 57.6**	**-1.8**
	32nm,0.8s,baz=230,slow=23,SNR=1.8						
AFI	**Afiamalu**	**9.39**	**45**	P	**P**	**10 48 09.2**	**-1.2**
AFI	**Afiamalu**	**9.39**	**45**	S	**P**	**10 48 08.8**	**-1.6**
	49nm,0.5s,baz=259,slow=23,SNR=6.5						
AFI	**Afiamalu**	**9.39**	**45**	S	**P**	**10 48 08.2**	**-2.2**
DZM	**Mont Dzumac**	**14.01**	**262**	P	**P**	**10 48 56.4**	**-0.2**
	4.1nm,0.5s,baz=90,slow=17,SNR=1.5						
RAR	**Rarotonga**	**17.58**	**95**	P	**P**	**10 49 31.6**	**+2.3**
	7.6nm,0.6s,baz=207,slow=14,SNR=3.0						
URZ	**Urewera**	**17.87**	**191**	P	**P**	**10 49 31.9**	**+0.3**
	2.8nm,0.3s,baz=293,slow=3.1,SNR=2.4						
URZ				S	**S**	**10 52 24.6**	**-1.1**
	3.1nm,0.7s,baz=359,slow=18,SNR=1.1						
CTAO	**Charters Tower**	**32.92**	**265**	P	**P**	**10 51 45.3**	**+1.1**
COEN	**Coen**	**37.05**	**274**		**P**	**10 52 19.6**	**+1.2**
COEN				IAmb	IAmb	10 52 20.0	
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**37.20**	**244**	P	**P**	**10 52 18.2**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=74,slow=12,SNR=2.9						
	comp=Z,1.3nm,0.5s						
BBOO	**Buckleboo**	**41.96**	**244**	P	**P**	**10 52 58.3**	**+0.9**
BBOO				IAmb	IAmb	10 53 22.3	
	comp=Z,20nm,1.1s						
WR8	**Warramunga Arr**	**43.87**	**262**	P	**P**	**10 53 12.5**	**0.0**
WR8				IAmb	IAmb	10 53 13.4	
	comp=Z,5.7nm,0.6s						
AS31	**Alice Springs**	**43.93**	**257**	P	**P**	**10 53 14.0**	**+1.0**
ASAR	**Alice Springs**	**43.93**	**257**	P	**P**	**10 53 13.6**	**+0.7**
	comp=Z,7.4nm,0.7s,baz=96,slow=7.6,SNR=8.9						
ASAR				PcP	**PcP**	**10 54 45.0**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=93,slow=3.5,SNR=4.3						
ASAR				S	**S**	**10 58 59.9**	**-2.5**
	comp=Z,0.5nm,0.5s,baz=97,slow=14,SNR=3.3						
	comp=Z,7.4nm,0.7s						
ASAR	**Alice Springs**	**43.93**	**257**	P	**P**	**10 53 14.2**	**+1.2**
WB0	**Warramunga Arr**	**44.01**	**263**	P	**P**	**10 53 13.8**	**+0.3**
WB0				IAmb	IAmb	10 53 13.9	
	comp=Z,5.3nm,0.5s						
WRAB	**Tennant Creek**	**44.02**	**262**	P	**P**	**10 53 14.1**	**+0.5**
WRAB				IAmb	IAmb	10 53 42.0	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**44.03**	**262**	P	**P**	**10 53 13.7**	**+0.1**
	comp=Z,2.7nm,0.3s,baz=97,slow=7.5,SNR=10						
WRA				PcP	**PcP**	**10 54 45.4**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=105,slow=2.3,SNR=2.4						
	comp=Z,2.7nm,0.3s						
WRA	**Warramunga Arr**	**44.03**	**262**	P	**P**	**10 53 13.9**	**+0.3**
MTN	**Manton Dam**	**48.62**	**271**	P	**P**	**10 53 48.2**	**-0.1**
FORT	**Forrest**	**48.70**	**247**	P	**P**	**10 53 49.3**	**+0.6**
FORT				IAmb	IAmb	10 53 49.9	
	comp=Z,5.4nm,0.7s						
KNRA	**Kununurra**	**50.10**	**267**	P	**P**	**10 53 59.8**	**+0.7**
KNRA				IAmb	IAmb	10 54 26.2	
	comp=Z,11nm,1.1s						
SOEI	**Soe**	**55.96**	**272**	P	**P**	**10 54 40.4**	**-0.5**
PSA00	**Pilbara Seismi**	**57.08**	**257**	P	**P**	**10 54 48.6**	**+0.4**
PSA00	**Pilbara Seismi**	**57.08**	**257**	P	**P**	**10 54 48.2**	**0.0**
PSA00				IAmb	IAmb	10 54 49.1	
	comp=Z,8.7nm,0.8s						
MBWA	**Marble Bar**	**57.27**	**258**	P	**P**	**10 54 49.9**	**+0.4**
MBWA				IAmb	IAmb	10 54 50.0	
	comp=Z,8.9nm,0.7s						
UGM	**Wanagama**	**69.41**	**269**	P	**P**	**10 56 07.5**	**+0.4**
UGM				IAmb	IAmb	10 56 32.5	
	comp=Z,19nm,1.1s						
MJAR	**Matsushiro Arr**	**70.06**	**324**	P	**P**	**10 56 09.8**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=168,slow=6.0,SNR=4.8						
	comp=Z,1.4nm,0.5s						
MJAR	**Matsushiro Arr**	**70.06**	**324**	P	**P**	**10 56 10.5**	**+0.1**
YULB	**Yu-li**	**73.16**	**304**	P	**P**	**10 56 28.3**	**-0.3**
YULB				IAmb	IAmb	10 56 57.0	
	comp=Z,7.0nm,1.0s						
TPUB	**Ta-pu**	**73.64**	**303**	P	**P**	**10 56 30.8**	**-0.6**
ASAJ	**Asahikawa**	**73.66**	**332**	P	**P**	**10 56 32.6**	**+1.6**
	comp=Z,3.7nm,0.4s,baz=231,slow=3.3,SNR=6.1						
	comp=Z,3.7nm,0.4s						
UNV	**Unalaska Valle**	**74.99**	**7**	P	**P**	**10 56 37.8**	**-0.4**
PEA0B	**Petropavlovsk-**	**76.35**	**346**	P	**P**	**10 56 45.6**	**-0.1**
PETK	**Petropavlovsk-**	**76.35**	**346**	P	**P**	**10 56 45.8**	**0.0**
	comp=Z,2.9nm,0.6s,baz=163,slow=5.4,SNR=6.8						
	comp=Z,2.9nm,0.6s						
PETK	**Petropavlovsk-**	**76.35**	**346**	P	**P**	**10 56 45.5**	**-0.2**
KSRS	**Korea Array**	**76.69**	**319**	P	**P**	**10 56 47.9**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=133,slow=5.9,SNR=4.3						
	comp=Z,1.6nm,0.7s						
USRK	**Ussuriysk Ar**	**78.84**	**326**	P	**P**	**10 57 00.4**	**+1.1**
	comp=Z,2.5nm,0.6s,baz=209,slow=1.6,SNR=3.4						
	comp=Z,2.5nm,0.6s						
BELA	**Belgrano 2**	**79.41**	**173**	P	**P**	**10 57 03.7**	**+1.7**
N14K	**Kuskokwak Cree**	**81.53**	**9**	P	**P**	**10 57 13.4**	**+0.5**
N14K				IAmb	IAmb	10 57 14.2	
	comp=Z,11nm,0.6s						
NVAR	**Mina Array Bea**	**81.56**	**44**	P	**P**	**10 57 15.6**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=224,slow=8.1,SNR=5.9						
	comp=Z,1.6nm,0.7s						
O16K	**Kokwok River B**	**81.77**	**10**	P	**P**	**10 57 13.5**	**-0.6**
O16K				IAmb	IAmb	10 57 21.9	
	comp=Z,7.2nm,1.1s						
TXAR	**Lajitas Array**	**87.64**	**58**	P	**P**	**10 57 46.0**	**+2.5**
	comp=Z,1.0nm,0.8s,baz=234,slow=4.0,SNR=4.1						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**88.65**	**13**	P	**P**	**10 57 46.9**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=215,slow=5.3,SNR=9.7						
	comp=Z,1.7nm,0.6s						
PDAR	**Pinedale Array**	**89.50**	**43**	P	**P**	**10 57 53.4**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=219,slow=3.3,SNR=7.6						
	comp=Z,1.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.67**	**290**	P	**P**	**10 57 53.7**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=132,slow=3.0,SNR=7.8						
	comp=Z,0.8nm,0.4s						
INK	**Inuvik**	**94.63**	**15**	P	**P**	**10 58 13.2**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=240,slow=4.2,SNR=1.9						
	comp=Z,0.7nm,0.9s						
INK	**Inuvik**	**94.63**	**15**	P	**P**	**10 58 14.1**	**-0.5**
INK				IAmb	IAmb	10 58 34.2	
	comp=Z,1.8nm,1.1s						
YKA	**Yellowknife Ar**	**96.94**	**25**	P	**P**	**10 58 25.2**	**0.0**
	comp=Z,0.1nm,0.7s,baz=253,slow=4.8,SNR=2.8						
	comp=Z,0.1nm,0.7s						
ZALV	**Zalesovo Beam**	**110.32**	**321**	PKiKP	**PKiKP**	**11 03 20.9**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=174,slow=4.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**110.32**	**321**		**PKiKP**	**11 03 21.2**	**-0.7**
MKAR	**Makanchi Array**	**110.95**	**313**	PKiKP	**PKiKP**	**11 03 22.8**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=143,slow=1.5,SNR=5.0						
MKAR	**Makanchi Array**	**110.95**	**313**		**PKiKP**	**11 03 22.9**	**-0.6**
KURBB	**Kurchatov Arra**	**113.84**	**317**	PKiKP	**PKiKP**	**11 03 26.4**	**-2.4**
	comp=Z,0.4nm,0.6s,baz=86,slow=1.9,SNR=5.0						
FRB	**Frobisher Bay**	**117.24**	**28**	PKP	**PKPdf**	**11 03 33.8**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=259,slow=10,SNR=2.0						
BVAR	**Borovoye Array**	**118.89**	**320**	PKP	**PKPdf**	**11 03 35.5**	**-2.9**
	comp=Z,1.5nm,0.3s,baz=110,slow=4.1,SNR=16						
SPITS	**Spitsbergen Ar**	**122.05**	**356**	PKP	**PKPdf**	**11 03 43.6**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=85,slow=6.4,SNR=1.5						
ARCES	**ARCESS Array B**	**129.04**	**349**	PKP	**PKPdf**	**11 03 57.2**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=48,slow=2.0,SNR=5.5						
ARCES	**ARCESS Array B**	**129.04**	**349**		**PKPdf**	**11 03 58.2**	**+0.8**
FINES	**FINESS Array B**	**135.83**	**343**	PKP	**PKPdf**	**11 04 08.4**	**-1.9**
	comp=Z,1.4nm,0.5s,baz=45,slow=4.1,SNR=1.8						
HFS	**Hagfors**	**139.67**	**351**	PKhKP	PKPpre	11 04 09.7	
	comp=Z,2.0nm,0.4s,baz=64,slow=3.7,SNR=6.4						
HFS				PKP	**PKPdf**	**11 04 17.9**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=15,slow=6.0,SNR=2.8						
AKASG	**Malin Array Be**	**142.94**	**331**	PKP	**PKPdf**	**11 04 21.0**	**-2.6**
	comp=Z,4.6nm,0.4s,baz=44,slow=4.3,SNR=15						
EKA	**Eskdalemuir Ar**	**145.27**	**5**	PKPbc	**PKPdf**	**11 04 28.0**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=357,slow=2.3,SNR=3.6						
BRTR	**Keskin Array B**	**146.58**	**312**	PKPbc	**PKPbc**	**11 04 33.0**	**0.0**
	comp=Z,2.1nm,0.6s,baz=54,slow=3.1,SNR=5.0						
BRTR	**Keskin Array B**	**146.58**	**312**		**PKPbc**	**11 04 33.6**	**+0.5**
BURAR	**Bucovina Array**	**146.98**	**330**		**PKiKP**	**11 04 36.0**	**+0.4**
MMAI	**Mount Meron Ar**	**147.44**	**299**	PKPbc	**PKPbc**	**11 04 36.1**	**+0.7**
	comp=Z,2.9nm,0.4s,baz=60,slow=5.7,SNR=5.1						
CLL	**Collm**	**148.15**	**346**		**PKPbc**	**11 04 37.2**	**+0.7**
CLL	**Collm**	**148.15**	**346**	*i* SKPdf	**PKPbc**	**11 04 37.3**	**+0.8**
	comp=Z,14nm,0.8s						
GERES	**GERESS Array B**	**150.26**	**344**	PKPbc	**PKPbc**	**11 04 41.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=90,slow=1.3,SNR=4.1						

EST ***26*** *10:50:50.8±0.1,59.22N×27.90E,h0km,ML1.5(HEL), Explosion*
LVSN ***26*** *10:50:52.4±1.7,58.63N×26.89E,h0km±39km,ML1.8, Presumed earthquake*

HEL 26 10:50:49.8±0.6, 59.19N×28.00E, h0km, ML1.6, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EE04	**Vaivara Sinima**	**0.20**	**342**	*e*P	Pg	10 50 53.6	0.0
EE04				*e*S	Sg	10 50 55.8	-0.4
EE03	**Tooma soojaam,**	**0.94**	**251**	*e*P	Pg	10 51 06.9	-1.0
EE03				*e*S	Sg	10 51 18.8	-1.3
ARBE	**Arbavere**	**1.06**	**285**	*e*P	Pg	10 51 09.1	-1.1
ARBE				*e*S	Sg	10 51 20.6	-3.3
ARBE				AML	AML	10 51 24.9	
	comp=Z,88nm,0.4s						
ARBE				AML	AML	10 51 26.4	
	comp=E,109nm,0.4s						
ARBE				AML	AML	10 51 29.8	
	comp=N,100nm,0.7s						
ARBE	**Arbavere**	**1.06**	**285**	*e*P	Pg	10 51 08.8	-1.3
ARBE				*e*S	Sg	10 51 21.4	-2.5
VJF	**Virojoki**	**1.38**	**351**	*e*P	Pg	10 51 14.6	-1.6
VJF				smax	smax	10 51 31.3	
	comp=Z,4.0nm,0.2s						
VJF				*e*SB	Sg	10 51 32.5	-1.4
EE07	**Piusa Caves, O**	**1.38**	**192**	*e*PG	Pb	10 51 16.4	+0.1
EE07				*e*SB	Sg	10 51 34.0	+0.1
EE08	**Sarghaua, Vand**	**1.52**	**251**	*e*P	Pn	10 51 17.3	-1.0
EE08				*e*SB	Sg	10 51 37.1	-1.6
EE02	**Kiisa, Eku**	**1.70**	**272**	*e*PG	Pn	10 51 20.4	-0.3
EE02				*e*SG	Sn	10 51 40.4	-2.7
PVF	**Pernaja**	**1.74**	**323**	*e*PN	Pn	10 51 21.3	+0.1
PVF				smax	smax	10 51 41.6	
	comp=Z,2.4nm,0.2s						
PVF				*e*SG	Sn	10 51 42.5	-1.5
MEF	**Metsahovi**	**2.10**	**301**	*e*P	Pb	10 51 27.5	-1.1
MEF				AML	AML	10 51 31.6	
	comp=Z,7.0nm,0.9s						
MEF				*e*S	Sn	10 51 53.2	+0.3
MEF				AML	AML	10 51 53.9	
	comp=N,8.6nm,0.2s						
MEF				AML	AML	10 51 55.5	
	comp=E,4.8nm,0.2s						
MEF	**Metsahovi**	**2.10**	**301**	*e*PG	Pb	10 51 27.5	-1.2
MEF				*e*SG	Sn	10 51 53.1	+0.2
MEF				smax	smax	10 51 54.4	
	comp=Z,2.4nm,0.1s						
NUR	**Nurmijarvi**	**2.15**	**310**	*e*PG	Pb	10 51 28.3	-1.2
NUR				smax	smax	10 51 53.5	
	comp=Z,4.5nm,0.2s						
NUR				*e*SB	Sn	10 51 54.4	+0.2
MTSE	**Matsula**	**2.22**	**259**	*e*PB	Pn	10 51 28.8	+1.1
MTSE				*e*SG	Sb	10 51 57.6	-1.1
EE01	**Perakula, Nova**	**2.25**	**272**	*e*SB	Sn	10 51 57.2	+0.6
RUF	**Ruokolahti**	**2.30**	**12**	*e*P	Pn	10 51 30.6	+0.7
RUF				*e*PB	Pb	10 51 30.4	-1.7
RUF				smax	smax	10 51 57.7	
	comp=Z,2.0nm,0.2s						
RUF				*e*SG	Sb	10 52 01.6	+0.7
FIA0	**FINESS Array S**	**2.46**	**338**	*e*P	Pn	10 51 31.4	+0.3
FIA0				*e*PB	Pb	10 51 32.8	-2.1
FIA0				smax	smax	10 52 02.4	
	comp=Z,2.1nm,0.2s						
FIA0				*e*SG	Sb	10 52 04.6	-1.0
FIA1	**FINESS Array S**	**2.46**	**338**	*e*P	Pn	10 51 31.4	+0.3
FIA1				*e*PB	Pb	10 51 32.6	-2.2
FIA1				*e*SG	Sb	10 52 04.9	-0.7
FIA1				smax	smax	10 52 06.6	
	comp=Z,1.1nm,0.1s						
TVF	**Tvarminne**	**2.51**	**287**	*e*PG	Pb	10 51 35.0	-0.7
TVF				*e*SG	Sb	10 52 05.7	-1.3
EE06	**Soera, Palade,**	**2.67**	**268**	*e*SB	Sb	10 52 09.9	-1.6
RAF	**Rauma**	**3.62**	**303**	*e*P	Pn	10 51 46.9	-0.2
RAF				*e*S	Sn	10 52 27.6	-2.9
RAF				AML	AML	10 52 34.4	
	comp=N,2.5nm,0.7s						
RAF				AML	AML	10 52 35.6	
	comp=Z,4.6nm,0.8s						
RAF				AML	AML	10 52 41.7	
	comp=E,2.8nm,0.5s						
RAF	**Rauma**	**3.62**	**303**	*e*P	Pn	10 51 47.0	-0.1
KPF	**Kankaanpaa**	**3.95**	**315**	*e*P	Pn	10 51 52.8	+1.2
JOF	**Joensuu**	**4.08**	**22**	*e*P	Pn	10 51 53.6	+0.3

RSNC ***26*** *10:53:45.0±0.0,8.1N±1.7×7.2W±.7,h4km±3km, M2.0, ML2.0*
FUNV ***26*** *10:53:45.1,8.19N×72.14W,h21km,MW3.1, Presumed earthquake*

ISC 26 10:53:44.5±1.4, 8.20N±0.04×72.10W±0.04, h14km±10km, n14, σ1.914/28, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**0.40**	**212**	*e*P	**Pg**	**10 53 53.4**	**+0.8**
CAPV				*e*S	**Sg**	**10 53 58.1**	**0.0**
PAMC	**Pamplona, Colo**	**1.04**	**215**	P	**Pb**	**10 54 03.8**	**-0.8**
PAMC				S	**Sb**	**10 54 18.6**	**+0.3**
OCAC	**Ocana**	**1.21**	**272**	P	**Pn**	**10 54 04.6**	**-2.5**
OCAC				S	**Sb**	**10 54 20.1**	**-2.7**
SOCV	**Socops**	**1.23**	**86**	*e*P	**Pn**	**10 54 06.5**	**-0.9**
SOCV				*e*S	**Sn**	**10 54 24.5**	**+0.7**
SDV	**Santo Domingo**	**1.60**	**65**	P	**Pn**	**10 54 13.0**	**+0.4**
SDV				S	**Sn**	**10 54 33.1**	**0.0**
SDV	**Santo Domingo**	**1.60**	**65**	*e*P	**Pn**	**10 54 12.9**	**+0.3**
SDV				*e*S	**Sn**	**10 54 32.7**	**-0.4**
BARC	**Barichara**	**1.93**	**214**	P	**Pb**	**10 54 19.5**	**-0.1**
BARC				S	**Sb**	**10 54 44.0**	**+0.4**
BRJC	**Barrancabermej**	**2.04**	**233**	P	**Pn**	**10 54 19.2**	**+0.8**
BRJC				S	**Sb**	**10 54 47.4**	**+0.9**
RUSC	**La Rusia**	**2.49**	**203**	P	**Pb**	**10 54 27.4**	**-2.0**
RUSC				S	**Sb**	**10 54 59.7**	**-0.4**
ARGC	**Ariguani, Magd**	**2.68**	**308**	P	**Pn**	**10 54 27.0**	**-0.3**
ARGC				S	**Sn**	**10 55 00.7**	**+1.1**
PTBC	**PUERTO BERRIO,**	**2.86**	**235**	P	**Pn**	**10 54 30.0**	**+0.2**
PTBC				S	**Sn**	**10 55 05.2**	**+1.2**
CRJC	**Cerrejon, Guaj**	**2.91**	**345**	P	**Pn**	**10 54 30.1**	**-0.3**
CRJC				S	**Sn**	**10 55 06.2**	**+1.0**
SJCC	**San Jacinto, C**	**3.48**	**299**	P	**Pn**	**10 54 38.9**	**+0.6**
SJCC				S	**Sn**	**10 55 20.7**	**+1.4**
URIC	**Uribia, Colomb**	**3.48**	**2**	P	**Pn**	**10 54 38.7**	**+0.5**
URIC				S	**Sn**	**10 55 20.7**	**+1.5**

KOLA ***26*** *10:54:08.5,77.42N×9.47E,h0km,ML2.0, Error ellipse: s-maj=17.2km s-min=11.5km az=90.0, Greenland sea*
DNK ***26*** *10:54:24.8±1.9,75.96N×0.18E,h36km±999km,ML2.0, Presumed earthquake*

BER 26 10:54:08.3±2.1, 77.56N×7.73E, h26km±44km, Mw3.0, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRBA	**Barentsburg A**	**1.47**	**67**	*e*P	Pn	10 54 31.4	-1.6
BRBA				*e*S	Sn	10 54 48.0	-3.3
BRBB	**Barentsburg B**	**1.48**	**65**	*e*P	Pn	10 54 31.6	-1.5
BRBB				*i*		10 54 33.6	
BRBB	**Barentsburg B**	**1.48**	**65**	P	Pn	10 54 31.4	-1.7
BRBB				S	Sn	10 54 47.9	-3.6
KBS	**Kingsbay**	**1.62**	**30**	*e*P	Pn	10 54 33.6	-1.5
KBS				*e*S	Sn	10 54 51.5	-3.7
KBS				IAML		10 54 54.4	
	comp=Z,9.1nm,0.2s						
HSPB	**Hornsund (broa**	**1.82**	**104**	*e*P	Pn	10 54 35.3	-2.5
HSPB				IAML		10 54 57.4	
	comp=Z,6.0nm,0.2s						
HSPB	**Hornsund (broa**	**1.82**	**104**	P	Pn	10 54 34.8	-2.9
HSPB				S	Sn	10 54 53.8	-6.1
SPA0	**Spitsbergen Ar**	**1.93**	**67**	*e*P	Pn	10 54 39.1	-0.2
SPA0				*e*S	Sn	10 55 01.5	-1.2
SPA0				IAML		10 55 03.4	
	comp=Z,22nm,0.4s						
SPITS	**Spitsbergen Ar**	**1.93**	**67**	P	Pn	10 54 38.7	-0.6
SPITS				S	Sn	10 55 01.1	-1.7
HOPEN	**Hopen**	**4.03**	**97**	*e*P	Pn	10 55 06.5	-1.6
DAG	**Danmarks Havn**	**5.90**	**275**	*e*P	Pn	10 55 32.2	-1.7
DAG	**Danmarks Havn**	**5.90**	**275**	*i* P	Pn	10 55 31.1	-2.7
DAG				IAML		10 56 33.9	
	comp=Z,6.7nm,0.6s						
DBG	**Daneborg**	**7.48**	**258**	*i*	Pn	10 55 50.9	-4.6

BER 26 10:54:52.9±2.3, 77.50N×7.53E, h10km, Mw3.0, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRBA	**Barentsburg A**	**1.53**	**65**	*e*P	Pn	10 55 17.9	-2.3
BRBA				*e*S	Sn	10 55 36.2	-3.9
BRBB	**Barentsburg B**	**1.54**	**64**	*e*P	Pn	10 55 19.2	-1.1
BRBB				*i*		10 55 21.5	
BRBB				*e*S	Sn	10 55 36.4	-3.9
KBS	**Kingsbay**	**1.70**	**30**	*e*P	Pn	10 55 21.7	-0.8
KBS	**Kingsbay**	**1.70**	**30**	*i* P	Pn	10 55 21.1	-1.4
HSPB	**Hornsund (broa**	**1.85**	**102**	*e*P	Pn	10 55 23.2	-1.3
HSPB				IAML		10 55 45.3	
	comp=N,9.1nm,0.4s						
HSPB				IAML		10 55 45.5	
	comp=Z,5.3nm,0.1s						
HSPB				IAML		10 55 46.1	
	comp=E,10nm,0.2s						
SPA0	**Spitsbergen Ar**	**1.99**	**66**	*e*P	Pn	10 55 26.8	+0.2
HOPEN	**Hopen**	**4.06**	**96**	*e*S	Sn	10 56 37.3	-5.2
DAG	**Danmarks Havn**	**5.86**	**276**	*e*P	Pn	10 56 17.8	-1.8
DAG				*e*S	Sn	10 57 18.8	-8.0
DAG	**Danmarks Havn**	**5.86**	**276**	*i* S	Pn	10 56 17.5	-2.1
DBG	**Daneborg**	**7.43**	**259**	*i* S	Pn	10 56 40.1	-1.0

AFAD ***26*** *10:57:11.1,38.35N×44.57E,h7km±4km,ML2.1*
TEH ***26*** *10:57:11.7,38.37N×44.39E,h6km±217km,ML2.6, Presumed earthquake*
ISK ***26*** *10:57:14.9,38.39N×44.38E,h6km,ML2.2/6*

ISC 26 10:57:13.6±1.1, 38.41N±0.04×44.48E±0.03, h13km±10km, n17, σ0.986/27, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**304**	P	**Pg**	**10 57 21.8**	**-0.8**
OZAP				S	**Sg**	**10 57 29.6**	**+0.9**
OZAP				IAML		10 57 31.0	
	comp=N,179nm,1.0s						
TVAN	**Van**	**0.85**	**278**	P	**Pg**	**10 57 28.9**	**-1.1**
TVAN				S	**Sn**	**10 57 44.0**	**+0.1**
TVAN				IAML		10 57 45.0	
	comp=E,75nm,0.4s						
TVAN				IAML		10 57 51.0	
	comp=N,84nm,0.5s						
VANB	**Van**	**0.87**	**282**	Pg	**Pb**	**10 57 30.5**	**-0.2**
ISHB	**Shabestar**	**0.91**	**98**	Pg	**Pb**	**10 57 29.9**	**-1.5**
ISHB				Sg	**Sb**	**10 57 43.9**	**+0.5**
VMUR	**Van-Muradiye**	**0.91**	**309**	P	**Pb**	**10 57 31.2**	**-0.2**
VMUR				S	**Sn**	**10 57 45.5**	**+0.1**
VMUR				IAML		10 57 48.0	
	comp=E,60nm,0.6s						
VMUR				IAML		10 57 50.0	
	comp=N,49nm,0.3s						
IMRD	**Marand**	**1.01**	**72**	Pg	**Pb**	**10 57 32.7**	**-0.3**
GEVA	**Gevas**	**1.12**	**265**	P	**Pb**	**10 57 33.0**	**-1.9**
GEVA				S	**Sn**	**10 57 51.6**	**+1.1**
GEVA				IAML		10 57 56.0	
	comp=E,36nm,0.5s						
GEVA				IAML		10 57 57.0	
	comp=N,33nm,0.3s						
AKDM	**Akdamar-Van**	**1.18**	**266**	Pn	**Pn**	**10 57 35.6**	**-0.4**
AKDM				Sn	**Sg**	**10 57 52.2**	**+0.5**
DYDN	**Diyadin**	**1.28**	**332**	P	**Pn**	**10 57 37.7**	**+0.2**
DYDN				S	**Sg**	**10 57 56.2**	**+1.1**
DYDN				IAML		10 57 59.0	
	comp=E,34nm,0.4s						
DYDN				IAML		10 58 19.0	
	comp=N,26nm,0.9s						
ITBZ	**Tabriz**	**1.33**	**97**	Pg	**Pn**	**10 57 37.2**	**-0.8**
CUKT	**Cukurca**	**1.35**	**211**

*IDC **26** 11:07:13.7±1.0,20°.69N×143°.62E,h0km,mb3.4/9, mbtmp3.4/9,Error ellipse: s-maj=31.5km s-min=23.6km az=94.0*

ISC 26 11:07:18.9±1.0,20°.7N±0°.2×143°.6E±0°.2,h35km,n15, σ0s86/9,mb3.6/9,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy 21.90**		**92**	T	T	11 34 42.0	
	baz=280,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy 21.91**		**92**	T	T	11 34 42.9	
	baz=280,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy 21.92**		**92**	T	T	11 34 43.4	
	baz=280,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy 21.93**		**88**	T	T	11 34 37.2	
	baz=276,slow=75,SNR=48						
H11N2	**WAKE ISLAND Hy 21.93**		**88**	T	T	11 34 37.3	
	baz=276,slow=75,SNR=47						
H11N3	**WAKE ISLAND Hy 21.94**		**88**	T	T	11 34 38.3	
	baz=276,slow=75,SNR=33						
SONM	**Songino Array**	**40.35**	**321**	P	**P**	**11 14 52.9**	**-0.4**
	0.1nm,0.3s,baz=111,slow=7.9,SNR=1.7 0.1nm,0.3s						
WRA	**Warramunga Arr**	**41.35**	**193**	P	**P**	**11 15 01.1**	**-0.6**
	0.3nm,0.8s,baz=15,slow=8.1,SNR=1.5 0.3nm,0.8s						
ASAR	**Alice Springs**	**45.06**	**193**	P	**P**	**11 15 32.3**	**+0.8**
	0.1nm,0.5s,baz=20,slow=8.3,SNR=1.8 0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**55.23**	**322**	P	**P**	**11 16 50.0**	**+1.7**
	0.3nm,0.4s,baz=98,slow=10,SNR=3.7 0.3nm,0.4s						
MKAR	**Makanchi Array**	**55.65**	**313**	P	**P**	**11 16 51.2**	**-0.3**
	0.1nm,0.6s,baz=106,slow=7.7,SNR=2.0 0.1nm,0.6s						
KURBB	**Kurchatov Array**	**58.51**	**317**	P	**P**	**11 17 11.1**	**-0.5**
	0.2nm,0.3s,baz=90,slow=7.4,SNR=4.5 0.2nm,0.3s						
ILAR	**Eielson Array**	**62.80**	**27**	P	**P**	**11 17 40.3**	**-0.3**
	0.9nm,0.9s,baz=265,slow=6.1,SNR=7.3 0.9nm,0.9s						
YKA	**Yellowknife Ar**	**77.20**	**28**	P	**P**	**11 19 09.1**	**+0.1**
	0.4nm,0.6s,baz=296,slow=6.3,SNR=8.6 0.4nm,0.6s						
NVAR	**Mina Array Bea**	**83.51**	**51**	P	**P**	**11 19 43.7**	**-0.1**
	1.0nm,0.8s,baz=265,slow=5.0,SNR=7.3 1.0nm,0.8s						

*FUNV **26** 11:12:13.6,10°.48N×72°.67W,h5km,MW2.9,Presumed earthquake*

*RSNC **26** 11:12:14.7±0.0,10°.N±4°×7°.3W±°,h40km±8km,M1.8,ML1.8*

ISC 26 11:12:13.2±1.3,10°.45N±0°.03×72°.72W±0°.08,h9km±10km, n7,σ0s92/14,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.43**	**155**	*e*P	**Pg**	**11 12 21.0**	**-0.7**
MCQV				*e*S	**Sg**	**11 12 27.3**	**-0.1**
CRJC	**Cerrejon, Guaj**	**0.59**	**345**	P	**Pg**	**11 12 24.8**	**+0.1**
CRJC				S	**Sg**	**11 12 33.4**	**+0.9**
URIC	**Uribia, Colomb**	**1.44**	**30**	P	**Pn**	**11 12 38.9**	**-0.5**
URIC				S	**Sn**	**11 12 59.3**	**+0.8**
URIC	**Uribia, Colomb**	**1.44**	**30**	*e*P	**Pn**	**11 12 38.7**	**-0.7**
URIC				*e*S	**Sn**	**11 12 57.4**	**-1.1**
OCAC	**Ocana**	**2.27**	**195**	P	**Pn**	**11 13 10.8**	**-0.5**
OCAC				S	**Sn**	**11 13 17.9**	**-1.3**
CAPV	**Capacho**	**2.59**	**171**	*e*P	**Pn**	**11 12 56.8**	**+1.3**
CAPV				*e*S	**Sn**	**11 13 28.0**	**+0.7**
SOCV	**Socops**	**2.83**	**139**	*e*P	**Pn**	**11 12 59.3**	**+0.7**
SOCV				*e*S	**Sn**	**11 13 33.2**	**+0.4**

*SOF **26** 11:33:22.3,41°.23N±0°.03×23°.42E±0°.01,h1km±4km, MD2.9/6*

*THE **26** 11:33:23.3,41°.3N±0°.5×23°.4E±0°.5,h6km±2km,M2.8/14, MLh2.8/14*

*ATH **26** 11:33:23.1,41°.27N×23°.44E,h9km±1km,ML2.8/12, Manual Solution by M.Kolligri First location: 2020/02/26 11:34:54, This location: 2020/02/26 11:38:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

*SKO **26** 11:33:23.9,41°.28N×23°.43E,h1km,ML3.0*

ISC 26 11:33:23.5±0.9,41°.25N±0°.02×23°.44E±0°.02,h9km±8km, n51,σ1s00/73,7C-3D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRS	**Serrai**	**0.18**	**139**	P	**Pg**	**11 33 27.4**	**+0.2**
SRS				S	**Sg**	**11 33 30.5**	**+0.6**
SRS	**Serrai**	**0.18**	**139**	P	**Pg**	**11 33 27.5**	**+0.2**
SRS				S	**Sg**	**11 33 30.4**	**+0.6**
NVR	**Nevrokopi**	**0.34**	**73**	P	**Pg**	**11 33 29.9**	**-0.3**
NVR				S	**Sg**	**11 33 34.7**	**+0.1**
NVR	**Nevrokopi**	**0.34**	**73**	P	**Pg**	**11 33 29.9**	**-0.3**
NVR				S	**Sg**	**11 33 34.4**	**-0.3**
MMB	**Musomishta**	**0.38**	**39**	P	**Pg**	**11 33 30.4**	**-0.6**
MMB				S	**Sg**	**11 33 36.2**	**+0.2**
MMB	**Musomishta**	**0.38**	**39**	Pg	**Pg**	**11 33 30.6**	**-0.4**
MMB				Sg	**Sg**	**11 33 35.9**	**-0.1**
KNT	**Kendrikon**	**0.41**	**258**	P	**Pg**	**11 33 31.3**	**-0.3**
KNT				S	**Sg**	**11 33 37.5**	**+0.4**
KNT	**Kendrikon**	**0.41**	**258**	P	**Pg**	**11 33 31.4**	**-0.3**
KNT				S	**Sg**	**11 33 37.2**	**+0.1**
SOH	**Sokhos**	**0.43**	**188**	P	**Pg**	**11 33 32.1**	**+0.1**
SOH				S	**Sg**	**11 33 38.5**	**+0.8**
KKB	**Krupnik**	**0.63**	**339**	P	**Pg**	**11 33 35.0**	**-0.7**
KKB				S	**Sg**	**11 33 43.8**	**-0.3**
KKB	**Krupnik**	**0.63**	**339**	Pg	**Pg**	**11 33 35.2**	**-0.6**
KKB				Sg	**Sg**	**11 33 43.7**	**-0.3**
VAY	**Valandovo**	**0.66**	**276**	*i* P	**Pg**	**11 33 35.7**	**-0.5**
VAY				*i* Sg	**Sg**	**11 33 45.0**	**+0.2**
VAY				*e*Lg	Lg	11 33 46.2	
	comp=N,352nm,0.4s						
VAY				*e*Lg	Lg	11 33 46.9	
	comp=E,485nm,0.4s						
HORT	**Hortiatis**	**0.70**	**201**	P	**Pg**	**11 33 37.0**	**-0.1**
HORT				S	**Sg**	**11 33 46.8**	**+0.6**
HORT	**Hortiatis**	**0.70**	**201**	P	**Pg**	**11 33 37.1**	**0.0**
HORT				S	**Sg**	**11 33 46.6**	**+0.4**
THE	**Thessaloniki**	**0.71**	**210**	P	**Pg**	**11 33 37.1**	**-0.1**
THE				S	**Sg**	**11 33 46.8**	**+0.3**
THE	**Thessaloniki**	**0.71**	**210**	P	**Pg**	**11 33 37.1**	**-0.1**
THE				S	**Sg**	**11 33 46.9**	**+0.3**
GRG	**Griva**	**0.83**	**250**	P	**Pg**	**11 33 39.0**	**-0.6**
GRG				S	**Sg**	**11 33 51.0**	**+0.6**
GRG	**Griva**	**0.83**	**250**	P	**Pg**	**11 33 38.7**	**-0.9**
GRG				S	**Sg**	**11 33 50.5**	**+0.1**
KAVA	**Kavala**	**0.85**	**107**	P	**Pg**	**11 33 39.3**	**-0.7**
KAVA	**Kavala**	**0.85**	**107**	P	**Pg**	**11 33 39.1**	**-0.8**
PLG	**Polygyros**	**0.88**	**179**	P	**Pg**	**11 33 40.0**	**-0.4**
PLG				S	**Sb**	**11 33 53.7**	**+0.9**
PLG	**Polygyros**	**0.88**	**179**	P	**Pg**	**11 33 39.9**	**-0.4**
OUR	**Ouranopolis**	**1.01**	**155**	P	**Pg**	**11 33 43.0**	**+0.2**
OUR				S	**Sb**	**11 33 57.4**	**+1.0**
OUR	**Ouranopolis**	**1.01**	**155**	P	**Pg**	**11 33 43.1**	**+0.2**
RZN	**Rozhen**	**1.07**	**65**	P	**Pg**	**11 33 43.5**	**-0.7**
RZN	**Rozhen**	**1.07**	**65**	Pg	**Pg**	**11 33 43.8**	**-0.4**
RZN				Sg	**Sg**	**11 33 58.0**	**-0.2**
THAS	**Thassos island**	**1.17**	**123**	P	**Pg**	**11 33 45.3**	**-0.6**
THAS	**Thassos island**	**1.17**	**123**	P	**Pg**	**11 33 45.1**	**-0.8**
PLNA	**Plana**	**1.22**	**360**	P	**Pn**	**11 33 47.6**	**+0.7**
PLNA				S	**Sb**	**11 34 02.9**	**+0.1**
PLD	**Plovdiv**	**1.33**	**47**	P	**Pg**	**11 33 49.2**	**+0.2**
LIT	**Litokhoron**	**1.36**	**212**	P	**Pn**	**11 33 48.2**	**-0.4**
VTS	**Vitosha**	**1.37**	**354**	P	**Pg**	**11 33 49.3**	**-0.6**
VTS				S	**Sn**	**11 34 07.6**	**+0.2**
KZN	**Kozani**	**1.58**	**234**	P	**Pn**	**11 33 51.9**	**+0.2**
RDO	**Rodhopi**	**1.59**	**93**	P	**Pn**	**11 33 51.5**	**-0.3**
LIA	**Limnos Island**	**1.90**	**135**	P	**Pn**	**11 33 55.2**	**-0.8**
NEO	**Neokhori**	**1.95**	**185**	P	**Pn**	**11 33 56.8**	**0.0**
NEST	**Nestorio**	**1.99**	**246**	P	**Pn**	**11 33 58.0**	**+0.5**
THL	**Klokotos Trika**	**2.00**	**213**	P	**Pn**	**11 33 57.7**	**+0.2**
ALN	**Alexandroupoli**	**2.00**	**99**	P	**Pn**	**11 33 57.3**	**-0.2**
KPRO	**Kipourio**	**2.04**	**231**	P	**Pn**	**11 33 58.6**	**+0.5**
AOS2	**Alonissos-2**	**2.12**	**171**	P	**Pn**	**11 33 58.5**	**-0.6**
PLVB	**Pleven**	**2.31**	**22**	*i*P	**Pg**	**11 34 07.6**	**-0.1**
ELND	**Elena**	**2.47**	**47**	*i*P	**Pb**	**11 34 08.7**	**+0.6**
HERR	**Herculane**	**3.70**	**349**	*i*P	**Pn**	**11 34 23.5**	**+2.6**
MDVR	**Moldovita**	**3.75**	**341**	*i*P	**Pn**	**11 34 22.0**	**+0.5**
GZR	**Gura Zlata**	**4.17**	**354**	*i*P	**Pn**	**11 34 30.5**	**+3.2**
ARR	**Arges**	**4.21**	**12**	*i*P	**Pb**	**11 34 33.7**	**-4.0**
BZS	**Buzias**	**4.56**	**344**	*i*P	**Pn**	**11 34 33.7**	**+1.1**
MLR	**Muntele Rosu**	**4.62**	**23**	*i*P	**Pn**	**11 34 37.4**	**+3.9**
NEHR	**Nehoiu**	**4.67**	**26**	*i*P	Pn	11 34 39.7	+5.5
DRGR		**5.56**	**355**	*i*P	**Pn**	**11 34 48.7**	**+2.3**

*JMA **26** 11:43:46.9±0.6,22°.N±3°×12°.3E±°,h46km,MV3.4/15,FAR S OFF ISHIGAKIJIMA*

*TAP **26** 11:43:49.0,22°.16N×122°.58E,h66km,ML3.9,D*

ISC 26 11:43:43.8±1.4,22°.32N±0°.04×122°.72E±0°.03,h4km±10km, n132,σ0s92/231,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**1.10**	**254**	*i* P	**Pn**	**11 44 06.3**	**+0.3**
LYUB				*i* S	**Sg**	**11 44 19.0**	**-0.1**
LAY	**Lan-yu**	**1.12**	**256**	*e*P	**Pb**	**11 44 06.0**	**+0.2**
LAY				*e*S	**Sg**	**11 44 19.1**	**-0.6**
LDUT	**Ludao**	**1.21**	**287**	*e*P	**Pn**	**11 44 08.0**	**+0.5**
CHKT	**Chengkung**	**1.47**	**302**	P	**Pg**	**11 44 12.6**	**+0.5**
CHKT				S	**Sn**	**11 44 29.9**	**-0.9**
CHKH	**Chenggong**	**1.50**	**306**	*e*P	**Pg**	**11 44 13.1**	**+0.5**
CHKH				*e*S	**Sn**	**11 44 30.7**	**-0.8**
TTN	**Taitung**	**1.52**	**287**	*e*P	**Pg**	**11 44 13.4**	**+0.5**
TTN				*e*S	**Sb**	**11 44 32.3**	**+0.2**
ECBN	**Changbin**	**1.54**	**311**	*e*P	**Pg**	**11 44 14.4**	**+1.1**
ECBN				*e*S	**Sb**	**11 44 32.4**	**-0.3**
LONT	**Longtian**	**1.58**	**292**	*e*P	**Pg**	**11 44 15.1**	**+0.9**
LONT				*e*S	**Sg**	**11 44 34.9**	**+0.2**
FULB	**Fuli**	**1.58**	**304**	*e*P	**Pg**	**11 44 14.4**	**+0.2**
FULB				*e*S	**Sn**	**11 44 33.4**	**-0.2**
ECS	**Chishang**	**1.59**	**300**	*e*P	**Pg**	**11 44 15.0**	**+0.7**
ECS				*e*S	**Sg**	**11 44 34.7**	**-0.2**
TWGBT	**Beinan**	**1.59**	**289**	P	**Pb**	**11 44 14.1**	**+0.3**
TWGBT	**Beinan**	**1.59**	**289**	S	**Sb**	**11 44 34.5**	**+0.1**
TWGBT	**Beinan**	**1.59**	**289**	*i* P	**Pb**	**11 44 14.2**	**+0.3**
TWGBT				S	**Sn**	**11 44 33.7**	**-0.2**
TWG	**Pinlang**	**1.60**	**289**	*i* P	**Pb**	**11 44 14.3**	**+0.3**
TWG				*i* S	**Sn**	**11 44 33.7**	**-0.4**
EHD	**Haiduan**	**1.62**	**301**	*e*P	**Pg**	**11 44 15.8**	**+0.9**
EHD				*e*S	**Sb**	**11 44 35.0**	**-0.3**
EYUL	**Yuli**	**1.65**	**309**	*e*P	**Pg**	**11 44 15.7**	**+0.2**
EYUL				*e*S	**Sg**	**11 44 36.4**	**-0.5**
ECL	**Taimali**	**1.66**	**280**	*i* P	**Pb**	**11 44 15.1**	**+0.1**
ECL				S	**Sn**	**11 44 34.4**	**-1.0**
TWF1	**Yuli**	**1.67**	**308**	P	**Pg**	**11 44 16.0**	**+0.1**
TWF1				*e*S	**Sb**	**11 44 36.5**	**0.0**
HGSD	**Ruisui**	**1.67**	**315**	P	**Pb**	**11 44 15.5**	**+0.3**
HGSD				*e*S	**Sn**	**11 44 35.6**	**-0.2**
TAW	**Tawu**	**1.69**	**272**	P	**Pb**	**11 44 15.5**	**+0.1**
TAW				S	**Sn**	**11 44 34.6**	**-1.5**
YULB	**Yu-li**	**1.69**	**310**	P	**Pb**	**11 44 15.9**	**+0.3**
YULB	**Yu-li**	**1.69**	**310**	*i* P	**Pb**	**11 44 16.1**	**+0.5**
YULB				*e*S	**Sb**	**11 44 37.2**	**0.0**
TAWH	**Dawu Township**	**1.69**	**271**	P	**Pb**	**11 44 15.5**	**0.0**
TAWH				*e*S	**Sn**	**11 44 34.9**	**-1.4**
EHYH	**Wanrong**	**1.73**	**313**	*e*P	**Pg**	**11 44 17.5**	**+0.6**
EHYH				*e*S	**Sg**	**11 44 38.9**	**-0.5**
EAST	**Anshuo**	**1.73**	**273**	P	**Pb**	**11 44 15.8**	**-0.5**
EAST				S	**Sn**	**11 44 36.2**	**-1.1**
TSEB	**Hengchuen, Pin**	**1.74**	**257**	*e*P	**Pb**	**11 44 16.9**	**+0.6**
TSEB				*e*S	**Sb**	**11 44 38.0**	**+0.2**
EHY	**Hungye**	**1.75**	**313**	*e*P	**Pb**	**11 44 17.1**	**+0.6**
EHY				*e*S	**Sb**	**11 44 39.0**	**+0.2**
SMST	**Manzhou Townsh**	**1.77**	**261**	*e*P	**Pn**	**11 44 16.3**	**+1.1**
SMST				*e*S	**Sn**	**11 44 36.7**	**-1.5**
SLIU	**Shizi**	**1.78**	**267**	P	**Pn**	**11 44 16.4**	**+1.0**
SLIU				*e*S	**Sn**	**11 44 36.7**	**-1.7**
ELDTW	**Lidau**	**1.79**	**299**	*e*P	**Pb**	**11 44 17.5**	**+0.2**
ELDTW				*e*S	**Sn**	**11 44 39.0**	**0.0**
EGFH	**Guangfu**	**1.80**	**319**	*e*P	**Pb**	**11 44 17.9**	**+0.5**
EGFH				*e*S	**Sb**	**11 44 40.7**	**+0.4**
TWKBT	**Hengchun**	**1.81**	**258**	*e*P	**Pn**	**11 44 16.4**	**+0.7**
TWKBT				*e*S	**Sn**	**11 44 37.9**	**-1.2**
SHUL	**Shoufeng**	**1.81**	**324**	*e*P	**Pg**	**11 44 18.6**	**+0.1**
SHUL				*i* S	**Sg**	**11 44 41.2**	**-0.9**
TWK1	**Hengchun**	**1.81**	**259**	*e*P	**Pn**	**11 44 17.0**	**+1.2**
TWK1				*e*S	**Sn**	**11 44 36.7**	**-2.5**
EOS4	**EOS4**	**1.83**	**349**	*e*P	**Pg**	**11 44 18.6**	**+0.6**
EOS4				S	**Sg**	**11 44 42.2**	**-0.6**
TEYL	**Yanliau Villag**	**1.86**	**327**	*e*P	**Pg**	**11 44 20.3**	**+0.8**
TEYL				S	**Sg**	**11 44 43.1**	**-0.5**
WARBT	**Fenglin Townsh**	**1.86**	**319**	*i* P	**Pb**	**11 44 18.8**	**+0.4**
WARBT				S	**Sb**	**11 44 41.4**	**-0.6**
HEN	**Hengchun**	**1.86**	**261**	*e*P	**Pb**	**11 44 17.8**	**-0.6**
HEN				*e*S	**Sn**	**11 44 39.1**	**-1.3**
ESL	**Shilin**	**1.91**	**322**	*e*P	**Pb**	**11 44 19.7**	**+0.5**
ESL				*e*S	**Sb**	**11 44 43.3**	**0.0**
SCZT	**Fangliau**	**1.94**	**272**	P	**Pb**	**11 44 19.3**	**-0.5**
SCZT				*e*S	**Sn**	**11 44 41.3**	**-1.2**
HWA	**Hwalien**	**1.95**	**328**	*e*S	**Sg**	**11 44 45.8**	**-0.6**
MASBT	**Mashibuluo**	**1.95**	**279**	P	**Pb**	**11 44 19.7**	**-0.2**
TSMG	**Majia**	**1.96**	**282**	*e*P	**Pb**	**11 44 20.1**	**+0.1**
SSD	**Sandimen**	**1.98**	**283**	*e*P	**Pb**	**11 44 20.1**	**-0.2**
STYH	**Taoyuan**	**1.98**	**296**	*i* P	**Pb**	**11 44 20.8**	**+0.3**
STYH				*e*S	**Sb**	**11 44 44.6**	**-1.0**
ETH	**Tongmen**	**1.99**	**326**	*e*P	**Pb**	**11 44 21.2**	**+0.5**
EOS3	**EOS3**	**2.00**	**349**	*e*P	**Pb**	**11 44 21.5**	**+0.9**
EOS3				*e*S	**Sg**	**11 44 46.8**	**-1.2**
SSPT	**Xinbi**	**2.00**	**275**	*e*P	**Pb**	**11 44 20.9**	**+0.2**
STYT	**Tauyuan**	**2.00**	**295**	P	**Pb**	**11 44 20.8**	**0.0**
STYT				S	**Sn**	**11 44 44.8**	**+0.9**
HATJ	**Hateruma jima**	**2.00**	**30**	*e*P	**Pb**	**11 44 20.7**	**-0.1**
HATJ				*e*S	**Sb**	**11 44 45.1**	**-1.0**
YUS	**Yu-Shan**	**2.00**	**306**	*e*P	**Pb**	**11 44 21.3**	**+0.2**
YUS				*e*S	**Sn**	**11 44 45.4**	**+0.7**
TWD	**Chiawan**	**2.04**	**330**	*e*P	**Pb**	**11 44 21.9**	**+0.4**
TWD				*e*S	**Sb**	**11 44 47.0**	**-0.1**
VWDT	**VWDT**	**2.04**	**315**	*i* P	**Pb**	**11 44 22.0**	**+0.5**
VWDT				S	**Sb**	**11 44 46.3**	**-0.9**
ETL	**Fush Village**	**2.09**	**331**	*e*P	**Pb**	**11 44 22.8**	**+0.4**
ETL				*e*S	**Sb**	**11 44 48.8**	**+0.1**
SGLT	**Jiouru**	**2.10**	**282**	*e*S	**Sn**	**11 44 47.4**	**+1.1**
SGST	**Jiashian**	**2.11**	**292**	P	**Pb**	**11 44 22.8**	**0.0**
SGST				S	**Sb**	**11 44 48.7**	**-0.7**
NACB	**Ninganchiao**	**2.12**	**331**	P	**Pb**	**11 44 22.4**	**-0.4**
NACB	**Ninganchiao**	**2.12**	**331**	S	**Sb**	**11 44 48.1**	**-1.4**
NACB	**Ninganchiao**	**2.12**	**331**	*e*P	**Pb**	**11 44 22.6**	**-0.2**
NACB				*e*S	**Sn**	**11 44 47.9**	**+1.1**
ALS	**Alishan**	**2.13**	**304**	P	**Pb**	**11 44 24.0**	**+0.8**
ALS				S	**Sb**	**11 44 49.8**	**-0.3**
JYNG	**Yonagunijimaku**	**2.14**	**6**	*e*P	**Pb**	**11 44 23.6**	**+0.5**
EOS2	**EOS2**	**2.14**	**348**	*e*S	**Sg**	**11 44 51.4**	**-1.3**
WTP	**Ta-pu**	**2.15**	**296**	*e*P	**Pb**	**11 44 24.3**	**+0.9**
WTP				*e*S	**Sb**	**11 44 51.1**	**+0.6**
YOJ	**Yonaguni jima**	**2.15**	**7**	*e*P	**Pb**	**11 44 23.8**	**+0.4**
YOJ	**Yonaguni jima**	**2.15**	**7**	*e*P	**Pb**	**11 44 24.5**	**+1.1**
YOJ				*e*S	**Sg**	**11 44 52.3**	**-0.7**
TPUB	**Ta-pu**	**2.16**	**297**	P	**Pb**	**11 44 23.6**	**0.0**
TPUB	**Ta-pu**	**2.16**	**297**	S	**Sb**	**11 44 51.1**	**+0.3**
TPUB	**Ta-pu**	**2.16**	**297**	P	**Pb**	**11 44 24.4**	**+0.8**
TPUB				*e*S	**Sb**	**11 44 51.6**	**+0.9**
OWD	**Renai**	**2.16**	**319**	P	**Pb**	**11 44 23.6**	**0.0**
OWD				*e*S	**Sb**	**11 44 49.4**	**-1.5**
TWM1	**Shoushan**	**2.18**	**284**	*e*P	**Pg**	**11 44 25.8**	**+0.1**
SSLB	**Suanglung**	**2.19**	**312**	P	**Pb**	**11 44 23.9**	**-0.1**
SSLB	**Suanglung**	**2.19**	**312**	*e*P	**Pb**	**11 44 24.1**	**+0.1**
SSLB				*e*S	**Sn**	**11 44 49.7**	**+1.1**
EAHA	**Aohua**	**2.20**	**336**	*e*S	**Sb**	**11 44 51.5**	**-0.2**
CHN1	**Nanshi**	**2.20**	**294**	*e*P	**Pb**	**11 44 25.1**	**+0.9**
CHN1				*e*S	**Sb**	**11 44 52.7**	**+0.9**
ETLH	**Xiulin Townshi**	**2.20**	**329**	P	**Pb**	**11 44 24.4**	**+0.1**
ETLH				S	**Sb**	**11 44 50.6**	**-1.3**
WHYT	**Xinyi Township**	**2.20**	**309**	*e*P	**Pb**	**11 44 24.9**	**+0.7**
CHN4	**Tsaushan**	**2.21**	**298**	*e*P	**Pb**	**11 44 25.1**	**+0.6**
CHN4				*e*S	**Sb**	**11 44 52.6**	**+0.4**
IRIF	**Iriomote-Funau**	**2.21**	**25**	P	**Pb**	**11 44 24.0**	**-0.4**
IRIF				*e*S	**Sn**	**11 44 50.6**	**+1.5**
WUSB	**Renai**	**2.23**	**319**	P	**Pb**	**11 44 24.9**	**+0.2**
WUSB				S	**Sb**	**11 44 51.2**	**-1.5**
WCKO	**Fanlu**	**2.25**	**300**	*e*P	**Pg**	**11 44 26.6**	**-0.3**
WCKO				*e*S	**Sb**	**11 44 54.2**	**+1.0**
JKRS	**Kuro-shima**	**2.25**	**32**	*e*P	**Pb**	**11 44 24.4**	**-0.7**
JKRS				*e*S	**Sn**	**11 44 50.7**	**+0.7**
WHF	**Hehuan Shan**	**2.26**	**324**	P	**Pb**	**11 44 25.1**	**-0.4**
WHF				S	**Sb**	**11 44 52.3**	**-1.6**
TWK	**Hsinying**	**2.27**	**295**	*e*P	**Pb**	**11 44 26.1**	**+0.7**
TWK				*e*S	**Sb**	**11 44 54.1**	**+0.4**
CHN5	**Tsauling**	**2.27**	**305**	*e*P	**Pg**	**11 44 26.9**	**-0.6**
CHN5				*e*S	**Sb**	**11 44 54.8**	**+0.8**
ENA	**Nanau**	**2.29**	**337**	*e*P	**Pb**	**11 44 25.8**	**+0.1**
ENA				*e*S	**Sb**	**11 44 54.2**	**-0.2**
SMLT	**Sun Moon Lake**	**2.29**	**313**	*e*P	**Pb**	**11 44 26.2**	**+0.5**
SMLT				*e*S	**Sb**	**11 44 54.2**	**-0.3**
EWUT	**Wuta**	**2.29**	**338**	P	**Pb**	**11 44 26.1**	**+0.4**
EWUT				S	**Sb**	**11 44 53.9**	**-0.5**
TYC	**Yuchr**	**2.33**	**313**	P	**Pb**	**11 44 26.6**	**+0.2**
TYC				*e*S	**Sb**	**11 44 55.4**	**-0.2**
FUSS	**Fushou**	**2.35**	**325**	*e*S	**Sb**	**11 44 55.5**	**-0.9**
WJS	**Zhushan**	**2.37**	**310**	P	**Pg**	**11 44 28.6**	**-0.7**
WJS				S	**Sb**	**11 44 57.2**	**+0.5**
DPDB	**Guoxing**	**2.38**	**316**	*e*P	**Pb**	**11 44 27.4**	**+0.1**
TWT	**Tachien**	**2.40**	**324**	*e*P	**Pb**	**11 44 28.3**	**+0.7**
TWT				*e*S	**Sb**	**11 44 56.5**	**-1.1**
TDCB	**Techi**	**2.40**	**324**	*e*P	**Pb**	**11 44 28.0**	**+0.2**
TDCB				*e*S	**Sn**	**11 44 55.7**	**+1.6**
WGK	**Gukeng**	**2.41**	**305**	*e*P	**Pb**	**11 44 29.0**	**+1.2**
WGK				*e*S	**Sb**	**11 44 58.6**	**+0.8**
TWC	**Suao**	**2.42**	**341**	*e*P	**Pb**	**11 44 27.9**	**-0.1**
TWC				*e*S	**Sb**	**11 44 57.3**	**-0.8**
CHY	**Chiayi**	**2.42**	**300**	*e*S	**Sb**	**11 44 58.3**	**+0.2**
JIJ	**Ishigaki jima**	**2.42**	**32**	P	**Pn**	**11 44 26.0**	**+1.7**
JIJ				*e*S	**Sn**	**11 44 54.0**	**-0.3**
WDLH	**Douliu**	**2.43**	**305**	*e*S	**Sb**	**11 44 59.0**	**+0.5**
NNSB	**Datong**	**2.44**	**330**	P	**Pb**	**11 44 28.2**	**0.0**
NNSB				*e*S	**Sb**	**11 44 56.8**	**-1.9**
WNT	**Mingjian**	**2.44**	**310**	*e*P	**Pb**	**11 44 29.5**	**+1.3**
NNS	**Nan Shan**	**2.45**	**330**	P	**Pb**	**11 44 28.5**	**0.0**
NNS				*e*S	**Sb**	**11 44 57.5**	**-2.2**
LATG	**Datong**	**2.47**	**334**	*e*P	**Pb**	**11 44 28.6**	**-0.2**
LATG				S	**Sb**	**11 44 57.9**	**-1.7**
NDS	**Dongshan**	**2.48**	**338**	*e*P	**Pb**	**11 44 28.5**	**-0.6**
NDS				*e*S	**Sb**	**11 44 59.0**	**-1.0**
WHP	**Taichung City**	**2.54**	**321**	*e*P	**Pb**	**11 44 31.5**	**+1.4**
WHP				*e*S	**Sb**	**11 45 00.9**	**-0.9**
ENTT	**Nioudou**	**2.54**	**336**	P	**Pb**	**11 44 29.9**	**-0.2**
ENTT				*e*S	**Sb**	**11 44 59.8**	**-2.0**
TWE	**Neicheng**	**2.58**	**338**	*e*P	**Pb**	**11 44 30.2**	**-0.5**
TWE				*e*S	**Sb**	**11 45 02.6**	**-0.2**
WSL	**Shuilin Townsh**	**2.59**	**298**	*e*P	**Pb**	**11 44 30.5**	**-0.4**
WSL				*e*S	**Sb**	**11 45 01.5**	**-1.6**
EGS		**2.62**	**344**	*e*P	**Pb**	**11 44 32.0**	**+0.6**
FUSB	**Fushanzhiwuyua**	**2.65**	**337**	*e*P	**Pb**	**11 44 31.4**	**-0.4**
FUSB				S	**Sb**	**11 45 03.2**	**-1.5**
YHNB	**Yeheng**	**2.65**	**333**	P	**Pb**	**11 44 29.9**	**-2.0**
YHNB	**Yeheng**	**2.65**	**333**	*e*P	**Pb**	**11 44 31.4**	**-0.5**
YHNB				*e*S	**Sb**	**11 45 03.4**	**-1.4**
WSF	**Szhu**	**2.65**	**300**	*e*S	**Sb**	**11 45 02.2**	**-2.5**
WCHH	**Zhanghua**	**2.65**	**312**	*e*P	**Pb**	**11 44 31.5**	**-0.4**
WCHH				*e*S	**Sb**	**11 45 05.0**	**+0.2**
NSK	**Sanguang**	**2.66**	**332**	*e*P	**Pb**	**11 44 31.7**	**-0.4**
NSK				*e*S	**Sb**	**11 45 03.0**	**

1.2nm,0.9s,baz=342,slow=11,SNR=14
1.2nm,0.9s
MKAR Makanchi Array 59.71 326 P P 12 27 42.2 -1.5
0.2nm,0.4s,baz=125,slow=7.6,SNR=6.1
0.2nm,0.4s
KURBB Kurchatov Arra 63.94 328 P P 12 28 13.8 +1.8
0.1nm,0.4s,baz=138,slow=7.3,SNR=1.5
0.1nm,0.4s

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*BER **26** 12:36:48.9±1.7, 77.56N×7.75E, h10km, Mw3.1, Confirmed Earthquake*
*DNK **26** 12:36:48.6±2.9, 77.95N×6.62E, h10km, ML1.0, Presumed earthquake*
ISC 26 12:36:44.3±1.0, **77.70N**±0.08×**6.96E**±0.04, **h10**km, **n8, σ2.75/14, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
BRBA	**Barentsburg A**	**1.57**	**73**	*eP*	**Pb**		**12 37 13.5**	**0.0**
BRBA				*eS*	**Sn**		**12 37 30.8**	**-1.8**
KBS	**Kingsbay**	**1.60**	**37**	*eP*	**Pg**		**12 37 15.6**	**+0.7**
KBS				*eS*	**Sb**		**12 37 34.5**	**+0.5**
KBS				IAML			12 37 37.1	
	comp=Z,21nm,0.1s							
KBS	**Kingsbay**	**1.60**	**37**	*i* P	**Pg**		**12 37 16.5**	**+1.6**
KBS				*i* S	**Sn**		**12 37 31.6**	**-1.5**
HSPB	**Hornsund (broa**	**2.01**	**106**	*eP*	**Pn**		**12 37 17.3**	**-0.9**
SPA0	**Spitsbergen Ar**	**2.04**	**72**	*eP*	**Pb**		**12 37 21.1**	**-0.2**
SPA0				*eS*	**Sn**		**12 37 43.7**	**-0.3**
SPA0				IAML			12 37 47.0	
	comp=Z,9.9nm,0.3s							
DAG	**Danmarks Havn**	**5.72**	**273**	*i* P	**Pn**		**12 38 12.4**	**+3.3**
DAG				*i* S	**Sn**		**12 39 13.1**	**-1.6**
DAG				IAML			12 39 16.7	
	comp=Z,1.1nm,0.2s							
NOR	**Nord**	**5.73**	**324**	*i* S	**Sn**		**12 39 09.3**	**-5.5**
NOR				IAML			12 39 13.4	
	comp=Z,0.4nm,0.2s							
DBG	**Daneborg**	**7.35**	**256**	*i* P	**Pn**		**12 38 34.5**	**+3.0**
DBG				*i* S	**Sn**		**12 39 50.3**	**-4.4**
DBG				IAML			12 39 55.5	
	comp=Z,0.3nm,0.3s							

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*IDC **26** 12:52:57.6±1.5, 3.11N×65.60E, h0km, mb3.7/10, mbtmp3.7/10, MS3.8/41, Error ellipse: s-maj=40.5km s-min=23.4km az=45.0*
*GCMT **26** 12:53:00.0±0.4, 3.03N±0.03×65.20E±0.04, h17km±1km, MW4.8/73, Moment Tensor Solution. s13,c14; s73,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.40±.14; $M_{\theta\theta}$1.26±.09; $M_{\phi\phi}$0.13±.09; $M_{r\theta}$0.42±.23; $M_{\theta\phi}$-0.45±.06; $M_{\phi r}$1.73±.40; Best double couple: M_o2.03900×10^{16} NP1:ϕs271.00000°,δ42.00000°,λ-141.00000°. NP2: ϕs150.00000°,δ65.00000°,λ-55.00000°. Principal axes: T 1.4620, Plg13.0000°, Azm216.0000°; N 1.1520, Plg31.0000°, Azm314.0000°; P -2.6150, Plg56.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 26 12:52:59.3±1.6, **3.1N**×0.3×**65.6E**±0.2, **h10**km, **n51, σ1.01/11, mb3.8/10, MS3.8/40, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
PALK	**Pallekele**	**15.59**	**74**	LR	LR		13 01 26.9	
	comp=Z,397nm,20.1s,baz=260,slow=33							
FURI	**Furi**	**27.38**	**283**	LR	LR		13 08 46.0	
	comp=Z,80nm,18.0s,baz=132,slow=35							
BRDH	**Bariadhala**	**31.85**	**50**	LR	LR		13 13 53.5	
	comp=Z,194nm,18.3s,baz=258,slow=39							
MBAR	**Mbarara**	**35.05**	**265**	LR	LR		13 11 50.0	
	comp=Z,205nm,21.4s,baz=98,slow=32							
CMAR	**Chiang Mai Arr**	**36.01**	**63**	P	**P**		**13 00 02.5**	**+1.5**
	0.5nm,0.3s,baz=255,slow=8.0,SNR=9.9							
CMAR				LR	LR		13 14 11.5	
	comp=Z,109nm,19.5s,baz=250,slow=35							
	0.5nm,0.3s							
AAK	**Ala-Archa**	**40.14**	**10**	LR	LR		13 17 46.3	
	comp=Z,171nm,19.5s,baz=220,slow=37							
MMAI	**Mount Meron Ar**	**41.03**	**320**	P	**P**		**13 00 44.7**	**+1.6**
	0.7nm,0.3s,baz=140,slow=7.4,SNR=1.7							
	0.7nm,0.3s							
LSZ	**Lusaka**	**41.30**	**243**	LR	LR		13 15 40.2	
	comp=Z,119nm,18.0s,baz=154,slow=33							
LEM	**Lembang**	**43.08**	**103**	LR	LR		13 16 45.9	
	comp=Z,74nm,18.1s,baz=234,slow=33							
KBZ	**Khabaz**	**45.17**	**337**	LR	LR		13 21 06.5	
	comp=Z,66nm,21.3s,baz=158,slow=37							
MKAR	**Makanchi Array**	**45.86**	**16**	P	**P**		**13 01 21.3**	**-0.5**
	0.2nm,0.6s,baz=168,slow=6.2,SNR=3.7							
MKAR				LR	LR		13 19 30.2	
	comp=Z,84nm,21.7s,baz=204,slow=35							
	0.2nm,0.6s							
BRTR	**Keskin Array B**	**46.55**	**326**	P	**P**		**13 01 27.1**	**-0.4**
	0.8nm,0.8s,baz=141,slow=9.3,SNR=2.3							
BRTR				LR	LR		13 21 33.4	
	comp=Z,83nm,18.3s,baz=108,slow=37							
	0.8nm,0.8s							
AKTO	**Aktyubinsk**	**47.58**	**353**	LR	LR		13 22 51.9	
	comp=Z,33nm,18.5s,baz=248,slow=38							
LBTB	**Lobatse**	**47.84**	**232**	LR	LR		13 18 51.4	
	comp=Z,165nm,20.3s,baz=117,slow=32							
KURBB	**Kurchatov Arra**	**48.58**	**11**	P	**P**		**13 01 42.7**	**-0.2**
	0.5nm,0.3s,baz=202,slow=8.1,SNR=5.8							
KURBB				LR	LR		13 22 11.6	
	comp=Z,87nm,20.8s,baz=186,slow=36							
	0.5nm,0.3s							
BVAR	**Borovoye Array**	**49.90**	**4**	P	**P**		**13 01 51.9**	**-1.0**
	0.7nm,0.9s,baz=210,slow=8.3,SNR=2.6							
BVAR				LR	LR		13 23 28.9	
	comp=Z,126nm,21.8s,baz=200,slow=37							
	0.7nm,0.9s							
BOSA	**Boshof**	**49.96**	**228**	LR	LR		13 21 54.8	
	comp=Z,153nm,18.2s,baz=90,slow=35							
H04N2	**CROZET ISLANDS**	**50.57**	**192**	T	T		13 57 22.8	
	baz=19,slow=75,SNR=14							
H04N1	**CROZET ISLANDS**	**50.58**	**192**	T	T		13 57 22.8	
	baz=19,slow=75,SNR=15							
H04N3	**CROZET ISLANDS**	**50.59**	**192**	T	T		13 57 28.8	
	baz=19,slow=75,SNR=15							
BELG	**Belogornoye**	**51.34**	**346**	LR	LR		13 25 58.9	
	comp=Z,142nm,19.2s,baz=100,slow=39							
TSUM	**Tsumeb**	**52.16**	**243**	LR	LR		13 22 12.5	
	comp=Z,157nm,19.4s,baz=148,slow=34							
ZALV	**Zalesovo Beam**	**53.06**	**14**	P	**P**		**13 02 15.5**	**-1.1**
	0.8nm,0.5s,baz=199,slow=7.7,SNR=6.0							
ZALV				LR	LR		13 24 23.3	
	comp=Z,84nm,21.3s,baz=223,slow=36							
	0.8nm,0.5s							
ARTI	**Arti**	**53.43**	**355**	LR	LR		13 25 48.1	
	comp=Z,38nm,19.4s,baz=182,slow=37							
MLR	**Muntele Rosu**	**54.61**	**327**	LR	LR		13 25 57.4	
	comp=Z,68nm,19.4s,baz=98,slow=36							
SUR	**Sutherland**	**55.20**	**227**	LR	LR		13 23 59.6	
	comp=Z,215nm,18.2s,baz=94,slow=34							
TGY	**Tagaytay City**	**55.65**	**75**	LR	LR		13 25 19.3	
	comp=Z,58nm,19.4s,baz=138,slow=35							
AKASG	**Malin Array Be**	**56.43**	**333**	LR	LR		13 29 05.1	
	comp=Z,69nm,18.2s,baz=168,slow=38							
SONM	**Songino Array**	**56.68**	**32**	P	**P**		**13 02 42.6**	**-0.5**
	1.3nm,1.1s,baz=235,slow=6.4,SNR=6.3							
SONM				LR	LR		13 27 00.7	
	comp=Z,142nm,20.4s,baz=234,slow=36							
	1.3nm,1.1s							
KIRV	**Kirov**	**56.75**	**350**	LR	LR		13 28 48.4	
	comp=Z,69nm,19.5s,baz=162,slow=38							
TLY	**Talaya**	**57.86**	**27**	LR	LR		13 27 54.7	
	comp=Z,70nm,19.4s,baz=228,slow=36							
H01W3	**Cape Leeuwin H**	**59.14**	**134**	T	T		14 07 05.0	
	baz=300,slow=75,SNR=18							
H01W2	**Cape Leeuwin H**	**59.15**	**134**	T	T		14 07 05.9	
	baz=300,slow=75,SNR=19							
H01W1	**Cape Leeuwin H**	**59.16**	**134**	T	T		14 07 06.0	
	baz=300,slow=75,SNR=19							
VRAC	**Vranov**	**62.00**	**326**	LR	LR		13 31 42.3	
	comp=Z,47nm,18.6s,baz=132,slow=38							
GERES	**GERESS Array B**	**63.41**	**324**	LR	LR		13 32 32.6	
	comp=Z,36nm,19.7s,baz=212,slow=37							
HILR	**Hailar Array B**	**65.04**	**36**	LR	LR		13 32 41.9	
	comp=Z,132nm,20.4s,baz=45,slow=37							
FINES	**FINESS Array B**	**65.33**	**340**	LR	LR		13 32 45.3	
	comp=Z,48nm,21.0s,baz=212,slow=36							
KSRS	**Korea Array**	**66.30**	**50**	LR	LR		13 33 57.3	
	comp=Z,58nm,21.1s,baz=210,slow=37							

HFS	**Hagfors**	**69.20**	**335**	LR	LR		13 36 22.2	
	comp=Z,67nm,18.1s,baz=5.5,slow=38							
DBIC	**Dimbokro**	**70.25**	**276**	LR	LR		13 33 26.8	
	comp=Z,34nm,20.5s,baz=174,slow=35							
NOA	**NORSAR Array B**	**70.72**	**335**	LR	LR		13 38 11.0	
	comp=Z,25nm,18.6s,baz=250,slow=38							
WRA	**Warramunga Arr**	**71.19**	**112**	P	**P**		**13 04 18.7**	**-0.3**
	1.9nm,1.1s,baz=287,slow=4.9,SNR=4.6							
	1.9nm,1.1s							
ARCES	**ARCESS Array B**	**71.39**	**346**	LR	LR		13 37 09.3	
	comp=Z,56nm,18.7s,baz=178,slow=37							
ASAR	**Alice Springs**	**71.52**	**116**	P	**P**		**13 04 20.6**	**-0.4**
	0.7nm,0.9s,baz=268,slow=6.1,SNR=4.4							
	0.7nm,0.9s							
YAK	**Yakutsk**	**75.32**	**26**	LR	LR		13 39 09.1	
	comp=Z,65nm,19.9s,baz=277,slow=37							
EKA	**Eskdalemuir Ar**	**75.47**	**327**	LR	LR		13 40 24.3	
	comp=Z,57nm,18.2s,baz=194,slow=38							
TIXI	**Tiksi**	**78.84**	**17**	LR	LR		13 41 56.6	
	comp=Z,84nm,18.4s,baz=173,slow=37							
SPITS	**Spitsbergen Ar**	**79.20**	**351**	LR	LR		13 44 39.8	
	comp=Z,33nm,18.1s,baz=89,slow=39							
VNDA	**Vanda**	**94.38**	**167**	LR	LR		13 42 13.8	
	comp=Z,128nm,18.1s,baz=208,slow=31							
TXAR	**Lajitas Array**	**146.13**	**343**	PKPbc	**PKPdf**		**13 12 39.5**	**-0.3**
	2.3nm,1.1s,baz=49,slow=2.3,SNR=10							

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*ISK **26** 13:01:06.1, 38.98N×27.88E, h15km, ML2.6/9*
*AFAD **26** 13:01:07.1, 38.94N×27.89E, h7km±1km, ML2.0*
ISC 26 13:01:06.8±1.0, **38.96N**±0.04×**27.87E**±0.03, **h13**km±7km, **n16, σ0.30/23, Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
AKHS	**Akhisar**	**0.09**	**209**	P	**Pg**		**13 01 09.4**	**-0.2**
AKHS				S	**Sg**		**13 01 11.7**	**+0.1**
AKHS				IAML			13 01 12.0	
	comp=E,841nm,0.7s							
GORD	**Gordes-Manisa**	**0.25**	**101**	Pg	**Pg**		**13 01 11.9**	**-0.2**
GORD				Sg	**Sg**		**13 01 15.9**	**+0.3**
GOMA	**Golmarmara-Man**	**0.25**	**171**	Pg	**Pg**		**13 01 12.3**	**+0.2**
GOMA				Sg	**Sb**		**13 01 16.9**	**-0.5**
KTTT	**Salihli**	**0.32**	**146**	P	**Pg**		**13 01 13.3**	**0.0**
KTTT				S	**Sg**		**13 01 18.1**	**+0.3**
KTTT				IAML			13 01 19.0	
	comp=N,205nm,0.6s							
SOMA	**Soma-Manisa**	**0.33**	**308**	Pg	**Pg**		**13 01 13.1**	**-0.4**
SOMA				Sg	**Sg**		**13 01 18.3**	**+0.3**
CAMT	**Merkez**	**0.48**	**245**	P	**Pb**		**13 01 16.8**	**-0.3**
CAMT				S	**Sb**		**13 01 24.8**	**+0.7**
CAMT				IAML			13 01 25.0	
	comp=N,266nm,0.3s							
CAMT				IAML			13 01 25.0	
	comp=E,299nm,0.5s							
ZEDA	**zmir-Bergama**	**0.62**	**271**	P	**Pg**		**13 01 19.0**	**+0.2**
ZEDA				S	**Sb**		**13 01 27.8**	**-0.2**
ZEDA				IAML			13 01 28.0	
	comp=N,76nm,0.5s							
ZEDA				IAML			13 01 29.0	
	comp=E,38nm,0.2s							
ODEM	**Odemis-Izmir**	**0.70**	**166**	Pg	**Pb**		**13 01 20.8**	**-0.1**
MANT	**Manisa**	**0.71**	**130**	P	**Pg**		**13 01 20.5**	**-0.2**
MANT				IAML			13 01 34.0	
	comp=N,90nm,0.4s							
MANT				IAML			13 01 34.0	
	comp=E,88nm,0.3s							
KULA	**Kula-Manisa**	**0.76**	**125**	Pg	**Pg**		**13 01 21.3**	**-0.3**
DURS	**Dursunbey**	**0.80**	**36**	P	**Pb**		**13 01 22.9**	**+0.3**
DURS				IAML			13 01 36.0	
	comp=N,88nm,0.5s							
DURS				IAML			13 01 36.0	
	comp=E,152nm,0.2s							
IZMR	**zmir-demi**	**0.82**	**175**	P	**Pg**		**13 01 22.7**	**0.0**
IZMR				IAML			13 01 36.0	
	comp=E,96nm,0.4s							
BLCB	**Balcova**	**0.86**	**229**	Pg	**Pg**		**13 01 23.4**	**0.0**
FOCM	**Foa**	**0.92**	**255**	Pg	**Pg**		**13 01 24.5**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**179**	Pg	**Pb**		**13 01 26.4**	**+0.2**
NAZL	**Nazilli-Aydin**	**1.04**	**161**	Pg	**Pn**		**13 01 27.0**	**-0.2**

TRN 26 13:01:14.3, 15.59N×60.70W, h31km, MD3.5, East of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
DLPL	**La Plaine**	**0.58**	**244**	*eP*	Pn		13 01 28.1	+1.6
DLPL				*eS*	Sn		13 01 37.9	+2.9
DLPL	**La Plaine**	**0.58**	**244**	x	x		13 01 21.2	
DLPL				*eP*	Pn		13 01 28.1	+1.6
DLPL				*eS*	Sn		13 01 37.9	+2.9
DWS	**Wesley**	**0.59**	**268**	*eP*	Pn		13 01 27.3	+0.8
DWS				*eS*	Sn		13 01 37.7	+2.7
DSLB	**Salisbury**	**0.71**	**258**	*eP*	Pb		13 01 30.2	+1.9
DSLB				*eS*	Sn		13 01 40.9	+2.8
DSDZ	**La Diserade, G**	**0.80**	**334**	*eP*	Pn		13 01 29.0	-0.4
DSDZ				*eS*	Sn		13 01 39.5	-0.9
SVN	**Savane Anatole**	**0.87**	**211**	*eP*	Pb		13 01 32.1	+1.2
SVN				*eS*	Sb		13 01 44.8	+2.6
TBG	**Guadaloupe-3**	**0.95**	**286**	*eP*	Pb		13 01 32.7	+0.5
TBG				*eS*	Sb		13 01 45.6	+1.1
MMLZ	**Guadeloupe Bro**	**1.04**	**296**	*eP*	Pb		13 01 34.2	+0.4
MMLZ				*eS*	Sb		13 01 48.5	+1.5
BIM	**Bigot**	**1.12**	**199**	*eP*	Pb		13 01 35.4	+0.2
BIM				*eS*	Sb		13 01 50.6	+1.2
DHSZ	**Broadband at M**	**1.23**	**304**	*eP*	Pb		13 01 36.9	-0.1
DHSZ				*eS*	Sb		13 01 53.4	+0.9
SLBI	**Saint Lucia, B**	**1.58**	**190**	*eP*	Pn		13 01 41.5	+1.4
SLBI				*eS*	Sb		13 02 02.0	-0.4
SLAC	**Saint Lucia, A**	**1.69**	**186**	*eP*	Pn		13 01 43.0	+1.3
SLAC				*eS*	Sb		13 02 04.3	-1.4
MBWH	**Windy Hill**	**1.84**	**309**	*eP*	Pb		13 01 45.6	-1.7
MBWH				*eS*	Sb		13 02 08.4	-1.5
MBFL	**Flemmings, Mon**	**1.86**	**309**	*eP*	Pn		13 01 45.3	+1.3
MBFL				*eS*	Sb		13 02 09.0	-1.5

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*IDC **26** 13:05:38.0±6.0, 36.98N×20.40E, h0km, mb3.7/5, mbtmp3.7/6, ML4.1/1, Error ellipse: s-maj=105.2km s-min=44.4km az=39.0*
*THE **26** 13:05:48.2, 37.6N±0.9×21.0E±0.9, h20km±1km, M2.9/25, MLh2.9/25*
*ATH **26** 13:05:49.5, 37.63N×20.99E, h8km±1km, ML3.0/39, Manual Solution by G.Panopoulou First location: 2020/02/26 13:06:45, This location: 2021/10/06 16:12:57 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 26 13:05:48.3±0.9, **37.62N**±0.02×**20.98E**±0.02, **h18**km±6km, **n99, σ0.90/151, mb3.8/5, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
LTHK	**Lithakia**	**0.14**	**307**	P	**Pb**		**13 05 52.7**	**+1.2**
LTHK				S	**Sg**		**13 05 56.2**	**+0.9**
LTHK	**Lithakia**	**0.14**	**307**	P	**Pb**		**13 05 52.8**	**+1.2**
LTHK				S	**Sg**		**13 05 55.3**	**0.0**
ZAK2	**Zakynthos**	**0.18**	**339**	P	**Pb**		**13 05 53.7**	**+1.3**
KYPS	**Kipseli, Zakin**	**0.23**	**327**	P	**Pb**		**13 05 54.5**	**+0.7**
KYPS				S	**Sg**		**13 05 57.3**	**-0.1**
CLEM	**Kyllini,Ilia,G**	**0.29**	**24**	P	**Pb**		**13 05 55.2**	**+0.3**
CLEM				S	**Sg**		**13 05 58.8**	**-0.3**
ORTH	**Orthonies,Zaky**	**0.32**	**315**	P	**Pb**		**13 05 56.3**	**+0.8**
ORTH				S	**Sb**		**13 06 01.7**	**+1.3**
ORTH	**Orthonies,Zaky**	**0.32**	**315**	P	**Pb**		**13 05 56.4**	**+0.8**
ORTH				S	**Sb**		**13 06 01.2**	**+0.8**
LCHA	**Lechaina**	**0.39**	**35**	P	**Pb**		**13 05 56.6**	**0.0**
RTZL	**Ratzakli, Kefa**	**0.48**	**340**	P	**Pb**		**13 05 58.1**	**-0.1**
RTZL				S	**Sb**		**13 06 06.5**	**+1.5**
RTZL	**Ratzakli, Kefa**	**0.48**	**340**	P	**Pb**		**13 05 58.2**	**-0.1**
RTZL				S	**Sb**		**13 06 04.8**	**-0.2**
ZARO	**Zacharo**	**0.55**	**104**	P	**Pb**		**13 05 59.7**	**+0.4**
ZARO				S	**Sb**		**13 06 07.7**	**+1.0**
RLS	**Riolos of Patr**	**0.58**	**41**	P	**Pb**		**13 05 59.9**	**+0.1**
RLS				S	**Sb**		**13 06 08.3**	**+0.6**
RLS	**Riolos of Patr**	**0.58**	**41**	P	**Pb**		**13 05 59.9**	**+0.1**
RLS				S	**Sb**		**13 06 07.7**	**0.0**
AMT	**Artemida-Makis**	**0.58**	**99**	P	**Pb**		**13 05 59.9**	**-0.1**
AMT				S	**Sb**		**13 06 08.8**	**+0.9**
AMT	**Artemida-Makis**	**0.58**	**99**	P	**Pb**		**13 06 00.0**	**+0.1**
AMT				S	**Sb**		**13 06 08.7**	**+0.9**

VLS	**Valsamata**	**0.64**	**331**	P	**Pg**		**13 06 00.5**	**-0.5**
VLS				S	**Sn**		**13 06 11.2**	**-0.8**
VLS	**Valsamata**	**0.64**	**331**	P	**Pg**		**13 06 00.4**	**-0.5**
VLS				S	**Sb**		**13 06 09.8**	**+0.5**
AXS	**Araxos**	**0.65**	**28**	P	**Pb**		**13 06 01.0**	**-0.1**
AXS	**Araxos**	**0.65**	**28**	P	**Pb**		**13 06 01.0**	**-0.1**
DRO	**Drossia**	**0.66**	**60**	P	**Pb**		**13 06 01.4**	**+0.2**
DRO				S	**Sn**		**13 06 12.1**	**-0.7**
DRO	**Drossia**	**0.66**	**60**	P	**Pb**		**13 06 01.5**	**+0.2**
DRO				S	**Sb**		**13 06 11.3**	**+1.1**
KFL1	**Kefalonia,Entr**	**0.67**	**325**	P	**Pb**		**13 06 01.6**	**+0.3**
KFL1				S	**Sb**		**13 06 10.8**	**+0.7**
ARG2	**Argostoli**	**0.68**	**325**	P	**Pn**		**13 06 03.0**	**0.0**
ARG2				S	**Sb**		**13 06 11.3**	**+0.7**
SMHA	**Samh**	**0.68**	**337**	P	**Pb**		**13 06 01.9**	**+0.3**
SMHA				S	**Sb**		**13 06 10.7**	**+0.1**
DMLN	**Damoulianata-K**	**0.78**	**322**	P	**Pn**		**13 06 04.0**	**-0.4**
DMLN				S	**Sb**		**13 06 14.8**	**+1.2**
DMLN	**Damoulianata-K**	**0.78**	**322**	P	**Pn**		**13 06 04.7**	**+0.3**
DMLN				S	**Sn**		**13 06 15.3**	**-0.3**
MSL1	**Messolongi**	**0.83**	**25**	P	**Pn**		**13 06 05.7**	**+0.8**
MSL1				S	**Sb**		**13 06 16.1**	**+1.2**
ITM	**Ithomi**	**0.87**	**120**	P	**Pb**		**13 06 04.7**	**-0.2**
ITM				S	**Sb**		**13 06 16.9**	**+0.7**
ITM	**Ithomi**	**0.87**	**120**	P	**Pb**		**13 06 04.8**	**-0.1**
PATC	**Patra C**	**0.89**	**43**	P	**Pn**		**13 06 06.2**	**+0.3**
FSK	**Fiskardo**	**0.90**	**338**	P	**Pn**		**13 06 07.5**	**+1.5**
FSK				S	**Sn**		**13 06 18.5**	**-0.1**
PYL1	**Pylos**	**0.91**	**141**	P	**Pn**		**13 06 05.9**	**-0.2**
PYL1				S	**Sn**		**13 06 19.0**	**+0.4**
UPR	**University Cam**	**0.92**	**44**	P	**Pn**		**13 06 07.2**	**+1.0**
AST1	**Astakos**	**0.92**	**5**	P	**Pn**		**13 06 05.8**	**+0.1**
PYL	**PYLOS**	**0.94**	**140**	P	**Pg**		**13 06 05.9**	**-0.8**
MTHA	**Methoni**	**0.99**	**144**	P	**Pn**		**13 06 08.3**	**+1.1**
MTHA				S	**Sn**		**13 06 21.1**	**+0.5**
KLV	**Kalavryta, Ach**	**1.02**	**65**	P	**Pb**		**13 06 07.2**	**-0.2**
KLV				S	**Sn**		**13 06 22.3**	**+0.8**
KLV	**Kalavryta, Ach**	**1.02**	**65**	P	**Pb**		**13 06 07.0**	**-0.3**
KLV				S	**Sn**		**13 06 22.6**	**+1.1**
ZIRI	**Ziria, Aigiali**	**1.02**	**48**	P	**Pn**		**13 06 08.0**	**+0.2**
ZIRI				S	**Sn**		**13 06 22.7**	**+1.0**
EVGI	**Lefkada island**	**1.03**	**346**	P	**Pb**		**13 06 07.6**	**0.0**
EVGI				S	**Sn**		**13 06 22.6**	**+0.8**
EVGI	**Lefkada island**	**1.03**	**346**	P	**Pn**		**13 06 08.0**	**+0.2**
EVGI				S	**Sn**		**13 06 22.6**	**+0.8**
MALA	**Malamata, Dori**	**1.04**	**42**	P	**Pn**		**13 06 08.6**	**+0.6**
MALA				S	**Sg**		**13 06 22.0**	**-0.3**
AGEO	**AgiosGiorgios,**	**1.07**	**53**	P	**Pn**		**13 06 08.6**	**+0.3**
PVO	**Paravola**	**1.08**	**23**	P	**Pn**		**13 06 08.7**	**+0.2**
PVO				S	**Sn**		**13 06 23.9**	**+0.9**
PVO	**Paravola**	**1.08**	**23**	P	**Sn**		**13 06 08.8**	**+0.3**
PVO				S	**Sn**		**13 06 24.0**	**+0.9**
EFP	**Efpalio**	**1.08**	**42**	P	**Pb**		**13 06 08.3**	**-0.2**
EFP				S	**Sg**		**13 06 23.2**	**-0.4**
EFP	**Efpalio**	**1.08**	**42**	P	**Pb**		**13 06 08.3**	**-0.2**
EFP				S	**Sn**		**13 06 24.6**	**+1.5**
MG00	**Magoula, Dorid**	**1.10**	**44**	P	**Pb**		**13 06 08.5**	**-0.2**
MG00				S	**Sn**		**13 06 24.8**	**+1.3**
DRAG	**Dragano-Lefkad**	**1.11**	**343**	P	**Pb**		**13 06 08.7**	**-0.2**
DRAG	**Dragano-Lefkad**	**1.11**	**343**	P	**Pn**		**13 06 09.2**	**+0.3**
DRAG				S	**Sn**		**13 06 24.7**	**+1.0**
NYDR	**Nydri-Lefkada**	**1.11**	**348**	S	**Sn**		**13 06 25.2**	**+1.4**
NYDR	**Nydri-Lefkada**	**1.11**	**348**	P	**Pg**		**13 06 10.6**	**+0.8**
NYDR				S	**Sn**		**13 06 24.9**	**+1.1**
GUR	**Goura**	**1.12**	**73**	P	**Pb**		**13 06 08.5**	**-0.7**
GUR				S	**Sn**		**13 06 25.0**	**+0.8**
TRIZ	**Trizonia**	**1.14**	**49**	P	**Pg**		**13 06 09.9**	**-0.4**
VLX	**Vlachokerasia**	**1.14**	**102**	P	**Pb**		**13 06 09.1**	**-0.3**
VLX				S	**Sn**		**13 06 25.4**	**+0.8**
SERG	**Sergoula**	**1.16**	**47**	P	**Pb**		**13 06 09.6**	**-0.2**
LKD2	**Lefkada island**	**1.19**	**348**	P	**Pn**		**13 06 10.2**	**+0.1**
LKD2				S	**Sn**		**13 06 26.5**	**+0.6**
LKD2	**Lefkada island**	**1.19**	**348**	P	**Pg**		**13 06 11.4**	**0.0**
LKD2				S	**Sn**		**13 06 28.0**	**+2.2**
KALE	**Kalithea**	**1.19**	**50**	P	**Pg**		**13 06 11.6**	**+0.2**
ANX	**Ano Chora**	**1.22**	**37**	P	**Pb**		**13 06 10.9**	**0.0**
ANX				S	**Sn**		**13 06 27.7**	**+1.1**
ANX	**Ano Chora**	**1.22**	**37**	P	**Pg**		**13 06 11.1**	**-0.8**
ANX				S	**Sn**		**13 06 29.0**	**+2.4**
TSLK	**Tsoukalades, L**	**1.23**	**348**	P	**Pg**		**13 06 11.4**	**-0.7**
TSLK				S	**Sg**		**13 06 27.6**	**-0.5**

GCMP				*e*S	**Sn**	**13 08 10.6**	**-0.4**
PCRV	**Puerto La Cruz**	**2.15**	**257**	*e*P	**Pn**	**13 07 46.8**	**+0.5**
PCRV				*e*S	**Sn**	**13 08 11.7**	**-0.7**
CACV	**CAICARA DEL OR**	**5.04**	**233**	*e*P	Pn	13 08 19.0	-6.4
CACV				*e*S	Sn	13 09 08.9	-13

AFAD ***26*** *13:10:44.2, 38.°52N × 44.°68E, h4km ± 2km, ML2.1*
AZER ***26*** *13:10:45.6, 38.°36N × 44.°61E, h10km, ml2.5*
ISC 26 13:10:46.8 ± 1.5, **38.°46N** ± 0.°05 × **44.°53E** ± 0.°04, **h11**km ± 11km, **n15**, σ1§**74**/**25**, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**296**	P	**Pg**	**13 10 55.2**	**-0.8**
OZAP				S	**Sb**	**13 11 03.4**	**-0.9**
OZAP				IAML		13 11 05.0	
	comp=N,199nm,0.5s						
TVAN	**Van**	**0.88**	**275**	P	**Pb**	**13 11 04.0**	**-0.4**
TVAN				IAML		13 11 27.0	
	comp=E,83nm,1.0s						
TVAN				IAML		13 11 28.0	
	comp=N,104nm,0.8s						
VMUR	**Van-Muradiye**	**0.92**	**305**	P	**Pg**	**13 11 03.1**	**-1.4**
VMUR				S	**Sn**	**13 11 17.9**	**-1.4**
VMUR				IAML		13 11 21.0	
	comp=E,42nm,0.7s						
VMUR				IAML		13 11 22.0	
	comp=N,52nm,0.6s						
NAX	**Nakhchivan**	**1.04**	**46**	P	**Pn**	**13 11 06.9**	**-0.6**
NAX				S	**Sn**	**13 11 23.3**	**+1.2**
HAKT	**HAKKARI**	**1.11**	**216**	P	**Pb**	**13 11 07.4**	**-0.8**
HAKT				S	**Sn**	**13 11 26.0**	**+2.0**
HAKT				IAML		13 11 28.0	
	comp=E,39nm,0.6s						
HAKT				IAML		13 11 30.0	
	comp=N,31nm,0.5s						
HAKT	**HAKKARI**	**1.11**	**216**	P	**Pb**	**13 11 07.5**	**-0.8**
HAKT				S	**Sn**	**13 11 24.2**	**+0.2**
GEVA	**Gevas**	**1.17**	**263**	P	**Pn**	**13 11 07.6**	**-1.7**
GEVA				S	**Sb**	**13 11 25.0**	**+0.7**
GEVA				IAML		13 11 27.0	
	comp=E,34nm,0.5s						
GEVA				IAML		13 11 32.0	
	comp=N,38nm,0.6s						
SBZ	**Shahbuz**	**1.23**	**40**	P	**Pn**	**13 11 10.7**	**+0.5**
SBZ				S	**Sn**	**13 11 28.6**	**+1.7**
ORD	**Ordubad**	**1.24**	**67**	P	**Pn**	**13 11 09.9**	**-0.3**
ORD				S	**Sn**	**13 11 28.7**	**+1.7**
HYR	**Heyderabad**	**1.28**	**11**	P	Pg	13 11 12.8	+1.3
IGDI	**IGDIR**	**1.45**	**346**	P	**Pg**	**13 11 15.9**	**+1.3**
IGDI				S	**Sg**	**13 11 38.5**	**+5.0**
ADCV	**BITLIS_Adilcev**	**1.46**	**284**	P	**Pg**	**13 11 14.9**	**+0.1**
ADCV				IAML		13 11 39.0	
	comp=N,20nm,0.7s						
ADCV				IAML		13 11 39.0	
	comp=E,16nm,0.7s						
PERV	**Siirt/Pervari-**	**1.65**	**252**	P	**Pg**	**13 11 19.6**	**+1.1**
PERV				IAML		13 11 49.0	
	comp=N,40nm,0.8s						
PERV				IAML		13 11 50.0	
	comp=E,36nm,0.6s						
KOTA	**Agri, Merkez-K**	**1.69**	**323**	P	**Pg**	**13 11 18.6**	**-0.7**
KOTA				S	**Sg**	**13 11 41.8**	**+0.6**
GDB	**GEDABAY**	**2.45**	**22**	P	**Pg**	**13 11 30.3**	**-3.5**
GDB				S	**Sg**	**13 12 05.3**	**-0.2**

IDC ***26*** *13:28:14.1 ± 0.5, 5.°82S × 153.°39E, h0km, mb4.4/21, mbtmp4.4/23, ML2.6/3, MS3.7/34, Error ellipse: s-maj=18.1km s-min=12.7km az=86.0*
BJI ***26*** *13:28:14.9, 5.°45S × 153.°56E, h10km, mB5.1/11, mb4.8/64, Ms4.5/3, Ms7 4.2/3*
NEIC ***26*** *13:28:16.1 ± 1.2, 5.°78S ± 0.°08 × 153.°44E ± 0.°08, h10km ± 1km, mb4.8/37, Error ellipse: s-maj=15.6km s-min=10.6km az=52.0*
DJA ***26*** *13:28:25.8 ± 0.7, 6.°S ± 5.°× 15.°3E ± .°, h78km ± 8km, M4.6/14, mb4.6/14, mB5.5/4, MLv4.5/2, Mw(mB)4.9/4*
ISC 26 13:28:19.0 ± 0.4, **5.°81S** ± 0.°05 × **153.°40E** ± 0.°06, **h32**km, **n146, σ1§50**/123, **mb4.7**/57, **MS3.7**/32, **3D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.03**	**323**		**Pn**	**13 28 50.0**	**-1.1**
TATA	**Tatamba Isabel**	**6.85**	**112**	P	Pn	13 30 07.2	+10
MANU	**Manus Island**	**7.09**	**302**		**Pn**	**13 30 01.2**	**+0.6**
PMG	**Port Moresby**	**7.14**	**240**	Pn	**Pn**	**13 30 00.7**	**-0.6**
	1.8nm,0.3s,baz=33,slow=6.3,SNR=16						
PMG				Sn	**Sn**	**13 31 22.4**	**+1.0**
	2.5nm,0.3s,baz=350,slow=17,SNR=10.0						
	40nm,0.8s						
PMG	**Port Moresby**	**7.14**	**240**	P	**Pn**	**13 30 01.1**	**-0.2**
PMG	**Port Moresby**	**7.14**	**240**	S	**Sn**	**13 31 23.1**	**+1.7**
PMG	**Port Moresby**	**7.14**	**240**	P	**Pn**	**13 30 01.2**	**-0.1**
PMG	**Port Moresby**	**7.14**	**240**	S	**Sn**	**13 31 23.2**	**+1.8**
PMG	**Port Moresby**	**7.14**	**240**		**Pn**	**13 30 00.5**	**-0.8**
PMG	**Port Moresby**	**7.14**	**240**	P	**Pn**	**13 30 00.5**	**-0.8**
	0.5nm749nm91nm,0.8s						
SAVO	**Savo Central**	**7.17**	**118**	P	Pb	13 30 14.3	-8.5
HNR	**Honiara**	**7.42**	**119**	Pn	**Pn**	**13 30 05.8**	**+0.7**
	0.1nm,0.3s,baz=305,slow=12,SNR=1.2						
HNR	**Honiara**	**7.42**	**119**	P	Pn	13 30 15.9	+11
HNR	**Honiara**	**7.42**	**119**	Pn	**Pn**	**13 30 04.4**	**-0.7**
COEN	**Coen**	**12.92**	**230**		**Pn**	**13 31 21.7**	**+1.2**
JAY	**Jayapura**	**13.08**	**284**	LR	LR	13 36 35.8	
	comp=Z,350nm,18.4s,baz=5.0,slow=38						
GENI	**Genyem**	**13.58**	**283**	P	**Pn**	**13 31 29.8**	**+0.3**
CTA	**Charters Tower**	**15.80**	**205**	Pn	**Pn**	**13 31 58.8**	**-0.5**
	0.1nm,0.3s,baz=24,slow=11,SNR=9.7						
CTA				LR	LR	13 37 18.5	
	comp=Z,152nm,18.6s,baz=54,slow=34						
	5.7nm,1.0s						
CTAO	**Charters Tower**	**15.80**	**205**	P	**P**	**13 32 03.9**	**+1.1**
CTAO	**Charters Tower**	**15.80**	**205**		**Pn**	**13 31 59.9**	**+0.6**
SANVU	**Saraoutou**	**16.59**	**126**	P	**P**	**13 32 16.4**	**+4.8**
SANVU	**Saraoutou**	**16.59**	**126**		**Pn**	**13 32 08.5**	**-0.9**
SANVU				IAmb	IAmb	13 32 13.6	
	comp=Z,90nm,1.4s						
EIDS	**Eidsvold**	**19.57**	**186**		**P**	**13 32 44.0**	**-0.4**
QIS	**Mount Isa**	**19.85**	**221**	P	**P**	**13 32 45.6**	**-2.0**
DZM	**Mont Dzumac**	**20.50**	**143**	*e*P	**P**	**13 32 55.5**	**+0.8**
	comp=Z,66nm,1.2s						
DZM				*e*LR	LR	13 37 42.5	
	comp=Z,328nm,21.9s						
DZM	**Mont Dzumac**	**20.50**	**143**	P	**P**	**13 32 55.5**	**+0.8**
	comp=Z,24nm,1.1s,baz=344,slow=10,SNR=4.9						
DZM				LR	LR	13 40 37.7	
	comp=Z,481nm,18.4s,baz=246,slow=36						
	comp=Z,24nm,1.1s						
DZM	**Mont Dzumac**	**20.50**	**143**	P	Pn	13 32 59.0	+2.0
DZM	**Mont Dzumac**	**20.50**	**143**	P	**P**	**13 32 54.5**	**-0.2**
ONTNC	**Ouen Toro**	**20.69**	**144**	P	**P**	**13 32 55.8**	**-0.8**
ONTNC				IAmb	IAmb	13 32 59.3	
	comp=Z,64nm,1.2s						
AUBSH	**Beerwah State**	**20.93**	**181**	P	Pn	13 33 03.2	+1.4
GUMO	**Guam**	**21.05**	**336**	LR	LR	13 41 33.4	
	comp=Z,119nm,18.1s,baz=130,slow=38						
TW1H	**Toowoomba 1 Ha**	**21.66**	**183**	P	**P**	**13 33 10.2**	**+3.2**
QLP	**Quilpie**	**22.43**	**202**	P	**P**	**13 33 15.1**	**-0.2**
SIJI	**Sorong**	**22.63**	**282**	LR	LR	13 43 40.1	
	comp=Z,176nm,18.9s,baz=130,slow=41						
MTN	**Manton Dam**	**23.04**	**251**	P	**P**	**13 33 20.9**	**-0.9**
MTN				IAmb	IAmb	13 33 39.6	
	comp=Z,24nm,1.1s						
WB0	**Warramunga Arr**	**23.11**	**231**		**P**	**13 33 22.8**	**+0.3**
WRAB	**Tennant Creek**	**23.24**	**231**	P	**P**	**13 33 18.2**	**-5.6**
WRAB	**Tennant Creek**	**23.24**	**231**	P	**P**	**13 33 22.8**	**-1.0**
WRA	**Warramunga Arr**	**23.25**	**231**	P	**P**	**13 33 22.4**	**-1.5**
	comp=Z,6.8nm,1.1s,baz=56,slow=10,SNR=14						
WRA				PcP	**PcP**	**13 37 11.3**	**+0.1**
	comp=Z,1.0nm,1.1s,baz=47,slow=3.5,SNR=1.9						
WRA				ScP	**ScP**	**13 40 52.5**	**+5.5**
	comp=Z,1.4nm,1.0s,baz=56,slow=2.4,SNR=5.4						
	comp=Z,6.8nm,1.1s						
WRA	**Warramunga Arr**	**23.25**	**231**	P	**P**	**13 33 23.3**	**-0.6**
AULRC	**Lightning Ridg**	**24.04**	**192**	P	**P**	**13 33 31.2**	**-0.1**
INKA	**Innaminka**	**24.91**	**207**		**P**	**13 33 38.6**	**-0.6**
INKA				IAmb	IAmb	13 33 40.5	
	comp=Z,19nm,1.1s						
AS31	**Alice Springs**	**25.83**	**225**		**P**	**13 33 46.2**	**-1.5**
ASAR	**Alice Springs**	**25.83**	**225**	P	**P**	**13 33 46.1**	**-1.7**
	comp=Z,6.6nm,0.9s,baz=55,slow=9.0,SNR=48						
ASAR				PcP	**PcP**	**13 37 18.6**	**+1.8**
	comp=Z,1.1nm,1.0s,baz=66,slow=1.9,SNR=4.5						
ASAR				ScP	**ScP**	**13 40 59.5**	**+5.2**
	comp=Z,1.2nm,1.0s,baz=64,slow=2.7,SNR=5.3						
ASAR				LR	LR	13 44 07.9	
	comp=Z,208nm,18.7s,baz=87,slow=37						
	comp=Z,6.6nm,0.9s						
KNRA	**Kununurra**	**26.08**	**246**	P	**P**	**13 33 50.8**	**+0.7**
CMSA	**Cobar Meteorol**	**26.59**	**195**	P	**P**	**13 33 53.7**	**-0.8**
STKA	**Stephens Creek**	**28.18**	**202**	P	**P**	**13 34 08.2**	**-0.5**
	comp=Z,3.9nm,0.9s,baz=21,slow=16,SNR=3.8						
STKA				LR	LR	13 45 01.1	
	comp=Z,107nm,18.1s,baz=26,slow=36						
	comp=Z,3.9nm,0.9s						
STKA	**Stephens Creek**	**28.18**	**202**	P	**P**	**13 34 08.7**	**0.0**
FITZ	**Fitzroy Crossi**	**29.72**	**243**	LR	LR	13 48 19.6	
	comp=Z,200nm,18.1s,baz=108,slow=41						
BATI	**Baumata**	**29.76**	**260**	LR	LR	13 48 24.1	
	comp=Z,121nm,18.3s,baz=94,slow=41						
DAV	**Davao City (W)**	**30.57**	**294**	LR	LR	13 46 21.2	
	comp=Z,171nm,18.4s,baz=327,slow=36						
EDFI	**Ende, Flores**	**31.58**	**263**	P	**P**	**13 34 36.8**	**-2.4**
	comp=Z,23nm,1.1s						
KAPI	**Kappang**	**33.51**	**270**	LR	LR	13 51 24.6	
	comp=Z,55nm,18.1s,baz=96,slow=42						
FORT	**Forrest**	**34.40**	**221**	P	**P**	**13 35 01.2**	**-2.3**
FORT				IAmb	IAmb	13 35 03.4	
	comp=Z,17nm,1.1s						
AFI	**Afiamalu**	**35.20**	**106**	LR	LR	13 48 29.9	
	comp=Z,331nm,18.6s,baz=285,slow=34						
MBWA	**Marble Bar**	**36.00**	**242**	P	**P**	**13 35 16.2**	**-1.2**
MBWA				IAmb	IAmb	13 36 08.2	
	comp=Z,35nm,1.4s						
URZ	**Urewera**	**38.82**	**150**	P	**P**	**13 35 39.1**	**-1.9**
	comp=Z,9.0nm,1.0s,baz=306,slow=17,SNR=3.4						
	comp=Z,9.0nm,1.0s						
RTZ	**Ruatahuna**	**39.02**	**150**		**P**	**13 35 42.4**	**-0.5**
RTZ				IAmb	IAmb	13 36 06.7	
	comp=Z,21nm,1.0s						
RPZ	**Rata Peaks**	**40.82**	**160**	LR	LR	13 52 25.9	
	comp=Z,506nm,18.4s,baz=52,slow=36						
NWAO	**Narrogin (SRO)**	**43.12**	**227**	LR	LR	13 54 37.6	
	comp=Z,201nm,18.6s,baz=336,slow=37						
JNU	**Nakatsue**	**44.23**	**333**	LR	LR	13 50 37.0	
	comp=Z,79nm,19.9s,baz=152,slow=30						
MJAR	**Matsushiro Arr**	**44.47**	**342**	P	**P**	**13 36 25.1**	**-2.3**
	comp=Z,3.6nm,0.9s,baz=177,slow=9.3,SNR=6.8						
MJAR				LR	LR	13 54 27.4	
	comp=Z,24nm,19.1s,baz=182,slow=35						
	comp=Z,3.6nm,0.9s						
MJAR	**Matsushiro Arr**	**44.47**	**342**	P	**P**	**13 36 26.3**	**-1.1**
MJB9	**Matsu-Tunnel**	**44.48**	**342**	P	**P**	**13 36 27.0**	**-0.4**
MJB9				IAmb	IAmb	13 36 42.8	
	comp=Z,34nm,1.5s						
KSRS	**Korea Array**	**49.17**	**333**	P	**P**	**13 37 03.7**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=145,slow=8.4,SNR=9.1						
KSRS				LR	LR	13 54 42.1	
	comp=Z,29nm,20.6s,baz=125,slow=32						
	comp=Z,4.4nm,0.8s						
INCN	**Inchon**	**49.78**	**332**	P	**P**	**13 37 08.6**	**-0.2**
NJ2	**Nanjing**	**50.00**	**321**	*e*P	**P**	**13 37 11.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
JKA	**Kamikawa-asahi**	**50.65**	**350**	P	**P**	**13 37 15.0**	**-0.1**
PPI	**Padang Panjang**	**53.17**	**274**	P	**P**	**13 37 33.6**	**-0.9**
	comp=Z,18nm,1.1s						
USRK	**Ussuriysk Ar.**	**53.39**	**341**	P	**P**	**13 37 36.3**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=156,slow=4.0,SNR=8.4						
	comp=Z,5.4nm,0.8s						
MDJ	**Mudanjiang**	**54.57**	**339**		**P**	**13 37 44.1**	**-0.1**
MDJ				IAmb	IAmb	13 37 45.7	
	comp=Z,18nm,1.1s						
ENH	**Enshi**	**55.28**	**313**		**P**	**13 37 49.2**	**-0.4**
CN2	**Changchun**	**55.46**	**336**	P	**P**	**13 37 52.0**	**+1.3**
CN2				S	**S**	**13 45 35.5**	**+2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LYN	**LuoYang**	**55.69**	**319**	P	**P**	**13 37 52.8**	**+0.3**
LYN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HNS	**HongShan**	**56.11**	**323**	⇓P	**P**	**13 37 56.0**	**+0.6**
HNS				pmax	pmax		
	comp=Z,24nm,1.4s						
BNX	**BinXian**	**56.33**	**338**	⇓P	**P**	**13 37 56.5**	**-0.3**
BNX				pmax	pmax		
	comp=Z,28nm,0.9s						
PPT2	**Papeete2**	**56.86**	**107**	*e*LR	LR	13 54 33.6	
	comp=Z,64nm,22.5s						
BJI2	**Beijing**	**57.05**	**326**	P	**P**	**13 38 02.0**	**-0.1**
BJI2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TBI	**Tubuai**	**57.60**	**114**	*e*LR	LR	13 55 01.6	
	comp=Z,441nm,23.0s						
XAN	**Xi'an**	**57.76**	**317**	P	**P**	**13 38 07.5**	**+0.2**
XAN				pP	pP	13 38 14.3	-1.4
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
KLR	**Kul'dur**	**57.98**	**343**	LR	LR	14 02 34.2	
	comp=Z,35nm,19.3s,baz=190,slow=36						
KMI2	**Kunming**	**58.05**	**304**	P	**P**	**13 38 11.5**	**+1.8**
KMI2				pmax	pmax		
	comp=Z,11nm,1.6s						
PETK	**Petropavlovsk-**	**58.81**	**3**	P	**P**	**13 38 14.3**	**+0.1**
	comp=Z,10nm,0.8s,baz=157,slow=5.3,SNR=16						
	comp=Z,10nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.85**	**296**	P	**P**	**13 38 15.9**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=112,slow=5.2,SNR=31						
CMAR				LR	LR	14 05 51.8	
	comp=Z,27nm,18.1s,baz=275,slow=38						
	comp=Z,4.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.85**	**296**		**P**	**13 38 15.8**	**+0.7**
CHTO	**Chiang Mai**	**58.96**	**296**		**P**	**13 38 15.5**	**-0.4**
CHTO				IAmb	IAmb	13 38 17.7	
	comp=Z,8.3nm,1.1s						
CHTO	**Chiang Mai**	**58.96**	**296**	P	**P**	**13 38 16.3**	**+0.4**
	comp=Z,7.4nm,1.2s						
PZH	**PanZhiHua**	**59.44**	**305**	P	**P**	**13 38 21.3**	**+2.1**
XLT	**XiLinHaoTe**	**59.84**	**330**	*e*P	**P**	**13 38 22.0**	**+0.4**
XLT				pmax	pmax		
	comp=Z,20nm,1.1s						
XLT				pmax	pmax		
	comp=Z,130nm,3.7s						
CD2	**Chengdu**	**59.85**	**311**	P	**P**	**13 38 22.5**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
HEH	**HeiHe**	**60.20**	**341**	*e*P	**P**	**13 38 24.0**	**+0.2**
HEH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**60.21**	**324**	*e*P	**P**	**13 38 27.8**	**+3.6**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.7s						
SHEM	**Shemya Is, Ala**	**60.91**	**14**	LR	LR	14 02 23.2	
	comp=Z,58nm,18.7s,baz=253,slow=34						
BTO2	**Baotou**	**61.14**	**323**	*e*P	**P**	**13 38 31.8**	**+1.2**
BTO2				pP	**pP**	**13 38 36.3**	**-2.7**
BTO2				sP	**sP**	**13 38 39.8**	**-1.7**
BTO2				pmax	pmax		
	comp=Z,29nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,350nm,7.6s						
TNCH	**TengChong**	**61.52**	**302**	P	**P**	**13 38 34.0**	**+0.5**
TNCH				pP	pP	13 38 37.8	-3.4
TNCH				sP	sP	13 38 40.8	-3.9
TNCH				S	**S**	**13 46 52.5**	**-1.0**
TNCH				SS	**SS**	**13 50 59.5**	**+4.4**
TNCH				pmax	pmax		
	comp=Z,14nm,0.9s						
TNCH				pmax	pmax		
	comp=Z,120nm,3.5s						
TNCH				LR	LR		
	comp=Z,110nm,6.7s						
TNCH				LR	LR		
	comp=Z,190nm,4.1s						
TNCH				LR	LR		
	comp=Z,100nm,5.6s						
LZH	**Lanzhou**	**62.37**	**316**	P	**P**	**13 38 40.3**	**+1.3**
LZH				pP	pP	13 38 44.3	-3.2
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
LZDM	**Lanzhou Array**	**62.40**	**316**	P	**P**	**13 38 40.6**	**+1.2**
	comp=Z,9.7nm,0.8s,baz=140,slow=7.2,SNR=12						
	comp=Z,9.7nm,0.8s						
HILR	**Hailar Array B**	**62.42**	**336**	P	**P**	**13 38 40.1**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=126,slow=7.5,SNR=4.0						
	comp=Z,3.0nm,0.6s						
MA2	**Magadan**	**65.22**	**359**	LR	LR	14 09 43.0	
	comp=Z,36nm,18.2s,baz=174,slow=38						
TAOE	**Nuku Hiva Isla**	**65.91**	**97**	*e*LR	LR	13 58 58.0	
	comp=Z,69nm,20.8s						
GTA2	**Gaotai**	**66.88**	**317**	P	**P**	**13 39 09.5**	**+1.2**
GTA2				sP	pwP	13 39 22.5	-0.1
GTA2				pmax	pmax		
	comp=Z,11nm,1.5s						
ULN	**Ulaanbaatar**	**67.17**	**328**		**P**	**13 39 09.6**	**-0.4**
ULN				IAmb	IAmb	13 39 14.0	
	comp=Z,9.3nm,1.0s						
ULN	**Ulaanbaatar**	**67.17**	**328**	P	**P**	**13 39 11.2**	**+1.2**
SHL	**Shillong**	**67.33**	**301**		**P**	**13 39 11.9**	**+0.3**
SONM	**Songino Array**	**67.50**	**328**	P	**P**	**13 39 12.7**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=144,slow=6.0,SNR=23						
SONM				LR	LR	14 09 22.9	
	comp=Z,41nm,19.3s,baz=160,slow=37						
	comp=Z,3.9nm,0.7s						
SONM	**Songino Array**	**67.50**	**328**		**P**	**13 39 12.3**	**+0.2**
SONM				IAmb	IAmb	13 39 14.5	
	comp=Z,10nm,1.3s						
GOMU	**GeErMu**	**68.88**	**312**	P	**P**	**13 39 21.8**	**+0.5**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LSA	**Lhasa**	**69.30**	**305**	P	**P**	**13 39 21.8**	**-2.4**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK	**Yakutsk**	**70.08**	**348**		**P**	**13 39 27.8**	**+0.1**
TLY	**Talaya**	**71.25**	**330**	LR	LR	14 12 22.4	
	comp=Z,21nm,18.0s,baz=118,slow=37						
EVN	**Everest**	**72.37**	**302**		**P**	**13 39 43.2**	**+0.1**
EVN				IAmb	IAmb	13 40 23.9	
	comp=Z,9.4nm,1.1s						
BILL	**Bilibino**	**74.24**	**5**		**P**	**13 39 52.5**	**0.0**
BILL				IAmb	IAmb	13 39 54.5	
	comp=Z,8.8nm,1.1s						
KDAK	**Kodiak Island**	**76.81**	**26**	LR	LR	14 06 30.4	
	comp=Z,95nm,21.2s,baz=241,slow=30						
WMQ	**Urumqi**	**76.89**	**317**	*e*P	**P**	**13 40 10.3**	**+2.0**
TIXI	**Tiksi**	**78.97**	**352**	LR	LR	14 12 24.3	
	comp=Z,18nm,21.4s,baz=202,slow=34						
TIXI	**Tiksi**	**78.97**	**352**		**P**	**13 40 18.8**	**-0.4**
TIXI				IAmb	IAmb	13 40 21.4	
	comp=Z,19nm,1.4s						
MKAR	**Makanchi Array**	**81.48**	**319**	P	**P**	**13 40 33.1**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=114,slow=4.5,SNR=19						
	comp=Z,2.6nm,0.7s						
MKAR	**Makanchi Array**	**81.48**	**319**		**P**	**13 40 32.9**	**-0.4**
MCK	**McKinley**	**81.56**	**22**	P	**P**	**13 40 32.4**	**-1.0**
MAKZ	**Makanchi**	**81.69**	**319**		**P**	**13 40 34.3**	**-0.1**
ZAA0	**Zalesovo Array**	**82.32**	**326**		**P**	**13 40 37.2**	**-0.2**
ZAA0				IAmb	IAmb	13 40 37.8	
	comp=Z,5.2nm,0.9s						
ZALV	**Zalesovo Beam**	**82.32**	**326**	P	**P**	**13 40 37.1**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=109,slow=5.4,SNR=20						
	comp=Z,3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**82.32**	**326**		**P**	**13 40 37.3**	**-0.2**
ILAR	**Eielson Array**	**82.87**	**22**	P	**P**	**13 40 38.7**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=258,slow=5.2,SNR=10						
ILAR				LR	LR	14 16 02.9	
	comp=Z,69nm,18.6s,baz=245,slow=35						
	comp=Z,1.5nm,0.8s						
QSPA	**South Pole Qui**	**84.15**	**180**	P	**P**	**13 40 46.9**	**0.0**
	comp=Z,4.3nm,0.8s,baz=347,slow=3.5,SNR=5.2						
	comp=Z,4.3nm,0.8s						
KSH2	**Kashi**	**84.27**	**310**	P	**P**	**13 40 49.3**	**+1.2**
KSH2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOOM	**Boomskoye usch**	**84.72**	**314**		**P**	**13 40 50.9**	**+0.6**
BOOM				IAmb	IAmb	13 41 16.1	
	comp=Z,8.9nm,1.0s						
KURK	**Kurchatov**	**84.93**	**322**		**P**	**13 40 50.8**	**-0.1**
KURBB	**Kurchatov Arra**	**84.96**	**322**	P	**P**	**13 40 50.5**	**-0.5**
	comp=Z,2.8nm,0.9s,baz=110,slow=3.8,SNR=26						
	comp=Z,2.8nm,0.9s						
AAK	**Ala-Archa**	**85.79**	**313**		**P**	**13 40 55.9**	**+0.3**
AAK				IAmb	IAmb	13 41 21.2	
	comp=Z,7.4nm,1.1s						
BBB	**Bella Bella**	**87.54**	**37**	LR	LR	14 16 38.7	
	comp=Z,82nm,18.2s,baz=136,slow=33						
DLBC	**Dease Lake**	**87.94**	**31**	LR	LR	14 21 45.4	
	comp=Z,59nm,18.0s,baz=288,slow=36						
INK	**Inuvik**	**89.18**	**21**	LR	LR	14 15 38.2	
	comp=Z,80nm,21.5s,baz=292,slow=32						
YBH	**Yreka Blue Hor**	**89.28**	**48**	LR	LR	14 17 01.9	
	comp=Z,11nm,18.4s,baz=298,slow=33						
BVAR	**Borovoye Array**	**90.41**	**323**	P	**P**	**13 41 16.9**	**-0.4**
	comp=Z,7.1nm,0.8s,baz=105,slow=5.1,SNR=33						
	comp=Z,7.1nm,0.8s						
BORK	**Borovoye**	**90.45**	**323**		**P**	**13 41 17.0**	**-0.4**
BORK				IAmb	IAmb	13 41 19.3	
	comp=Z,5.5nm,0.8s						
NVAR	**Mina Array Bea**	**92.24**	**52**	P	**P**	**13 41 27.2**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=313,slow=4.0,SNR=1.8						
	comp=Z,0.2nm,0.7s						
PFO	**Pinyon Flats O**	**93.30**	**57**	LR	LR	14 17 11.6	
	comp=Z,56nm,19.0s,baz=286,slow=32						
NEW	**Newport**	**93.94**	**42**	LR	LR	14 19 44.3	

TGIG		**2.43**	**31**	*i* P		**Pg**	**13 45 39.4**	**-1.2**
TGIG				*i* S		**Sn**	**13 46 05.2**	**+2.0**
CMIG	**Matias Romero**	**2.43**	**350**	*eP*		**Pb**	**13 45 38.2**	**+0.5**
CMIG				*i* S		**Sn**	**13 46 03.8**	**+0.5**
UXUV	**UXUV**	**2.63**	**6**	*eP*		**Pb**	**13 45 42.4**	**+1.3**
UXUV				*eS*		**Sn**	**13 46 09.8**	**+1.7**
CCIG	**Comitan**	**2.71**	**54**	*eP*		**Pg**	**13 45 45.6**	**-0.5**
CCIG				*eS*		**Sb**	**13 46 16.2**	**+0.2**
CCIG	**Comitan**	**2.71**	**54**	*i* P		**Pg**	**13 45 46.1**	**0.0**
CCIG				IAML			13 46 20.9	
	comp=N,1μm,0.5s							
HUEH	**Huehuetenango**	**2.89**	**77**	*i* S		**Sb**	**13 46 22.0**	**+1.0**
HUEH				IAML			13 46 29.7	
	comp=E,2μm,0.7s							
PEIG	**Puerto Escondi**	**2.94**	**297**	*eP*		**Pb**	**13 45 47.4**	**+1.1**
PEIG				*i* S		**Sn**	**13 46 17.1**	**+1.4**
STG2	**El Palmar, Qui**	**2.96**	**94**	*i* P		**Pb**	**13 45 45.5**	**-1.3**
STG2				*i* S		**Sn**	**13 46 17.0**	**+0.5**
STG8	**El Palmar, Qui**	**2.98**	**94**	*i* P		**Pb**	**13 45 46.1**	**-1.2**
STG5	**El Palmar, Qui**	**2.99**	**95**	*i* P		**Pb**	**13 45 46.4**	**-0.9**
VHO	**Vista Hermosa**	**3.25**	**317**	*eP*		**Pb**	**13 45 54.0**	**+2.1**
VHO				*i* S		**Sn**	**13 46 27.6**	**+3.8**
YOIG	**Yosondua**	**3.70**	**306**	*eP*		**Pb**	**13 46 00.4**	**+0.8**
YOIG				*i* S		**Sb**	**13 46 40.7**	**-3.8**
APG	**El Apazote**	**3.84**	**85**	*i* P		**Pb**	**13 46 02.9**	**+1.1**
PNIG	**Pinotepa**	**3.95**	**296**	*eP*		**Pb**	**13 46 02.6**	**-1.1**
PNIG				*i* S		**Sn**	**13 46 42.5**	**+1.5**
TXIG	**Tlaxiaco**	**4.11**	**309**	*eP*		**Pb**	**13 46 05.8**	**-0.7**
TXIG				*i* S		**Sn**	**13 46 50.1**	**+5.0**
TOIG	**Toxpalan**	**4.23**	**324**	*eP*		**Pb**	**13 46 08.6**	**+0.1**
TOIG				*i* S		**Sb**	**13 46 55.5**	**-4.1**
HLIG	**Huajuapan de L**	**4.51**	**314**	*eP*		**Pb**	**13 46 11.8**	**-1.4**
HLIG				*i* S		**Sb**	**13 47 03.2**	**-4.5**
MGIG	**Malinaltepec**	**4.78**	**303**	*eP*		**Pb**	**13 46 15.3**	**-2.6**
MGIG				*i* S		**Sn**	**13 47 06.1**	**+4.6**
FTIG	**Fresnillo de T**	**4.79**	**312**	*eP*		Pb	13 46 13.2	-4.8
FTIG				*i* S		**Sn**	**13 47 00.8**	**-0.9**
TLIG	**Tlapa**	**4.90**	**306**	*eP*		**Pb**	**13 46 17.9**	**-2.1**
TLIG				*i* S		**Sn**	**13 47 04.7**	**+0.2**
SCIG	**Sabancuy**	**5.26**	**36**	*i* P		Pn	13 46 18.1	+5.6
SCIG				*i* S		**Sn**	**13 47 13.4**	**+0.2**

*IDC **26** 13:48:06.9±2.8, 15°.24N×94°.34W, h0km, mb3.0/2, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=59.4km s-min=20.9km az=37.0*

*GCG **26** 13:48:07.2±1.9, 14°.92N×94°.41W, h36km±999km, MD4.7, ML4.4, Presumed earthquake*

*MEX **26** 13:48:08.7±0.8, 14°.95N×94°.40W, h15km, MD4.2*

ISC 26 13:47:59.4±1.6, 14°.75N±0°.05×94°.48W±0°.02, h10km±12km, n34, σ2§20/52, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.54**	**52**	*eP*	**Pg**	**13 48 29.1**	**+0.1**
PCIG				*i* S	**Sn**	**13 48 44.9**	**-2.0**
HUIG	**Huatulco**	**1.87**	**303**	*i* P	**Pg**	**13 48 36.1**	**+0.7**
HUIG				*i* S	**Sn**	**13 48 54.4**	**-0.8**
HUIG	**Huatulco**	**1.87**	**303**	*eP*	**Pg**	**13 48 36.2**	**+0.8**
HUIG				*eS*	**Sb**	**13 48 57.1**	**0.0**
PATR	**El Naranjo**	**2.20**	**80**	*eP*	**Pb**	**13 48 39.5**	**+0.1**
PATR				*eS*	**Sb**	**13 49 06.2**	**-0.6**
PAVE	**Pavencul**	**2.27**	**79**	*eP*	**Pb**	**13 48 41.0**	**+0.5**
PAVE				*eS*	**Sb**	**13 49 08.3**	**-0.4**
CHUJ	**Union Juarez**	**2.31**	**81**	*eP*	**Pb**	**13 48 41.8**	**+0.4**
CHUJ				*eS*	**Sn**	**13 49 08.5**	**+2.0**
SMCA	**Catarina**	**2.32**	**87**	*i* P	**Pb**	**13 48 42.4**	**+0.9**
CMIG	**Matias Romero**	**2.36**	**350**	Pn	**Pb**	**13 48 41.5**	**-0.5**
	36nm,0.3s,baz=170,slow=11,SNR=19						
CMIG				Sn	**Sn**	**13 49 06.5**	**-0.8**
	86nm,0.3s,baz=90,slow=20,SNR=12						
CMIG	**Matias Romero**	**2.36**	**350**	*eP*	**Pb**	**13 48 41.4**	**-0.7**
CMIG				*i* S	**Sn**	**13 49 07.0**	**-0.3**
TGIG		**2.40**	**33**	*i* P	**Pb**	**13 48 42.5**	**-0.2**
TGIG				*i* S	**Sn**	**13 49 07.9**	**-0.4**
TGIG		**2.40**	**33**	*eP*	**Pb**	**13 48 42.5**	**-0.2**
TGIG				*eS*	**Sn**	**13 49 09.8**	**+1.5**
UXUV	**UXUV**	**2.57**	**7**	*eP*	**Pb**	**13 48 45.2**	**-0.4**
UXUV				*i* S	**Sn**	**13 49 13.3**	**+0.8**
CCIG	**Comitan**	**2.72**	**56**	*i* P	**Pb**	**13 48 48.1**	**-0.2**
CCIG				*i* S	**Sn**	**13 49 18.8**	**+2.4**
CCIG				IAML		13 49 23.9	
	comp=N,1μm,0.5s						
CCIG	**Comitan**	**2.72**	**56**	*eP*	**Pb**	**13 48 48.7**	**+0.4**
CCIG				*i* S	**Sb**	**13 49 20.5**	**-1.3**
PEIG	**Puerto Escondi**	**2.86**	**296**	*eP*	**Pb**	**13 48 51.2**	**+0.6**
PEIG				*i* S	**Sn**	**13 49 20.4**	**+0.7**
HUEH	**Huehuetenango**	**2.93**	**79**	*i* S	**Sb**	**13 49 24.9**	**-2.9**
HUEH				IAML		13 49 32.7	
	comp=E,3μm,0.8s						
HUEH	**Huehuetenango**	**2.93**	**79**	*eP*	**Pb**	**13 48 51.0**	**-0.9**
STG2	**El Palmar, Qui**	**3.02**	**96**	*i* P	**Pn**	**13 48 48.0**	**+0.6**
STG8	**El Palmar, Qui**	**3.04**	**95**	*i* P	**Pn**	**13 48 48.8**	**+1.0**
STG8				IAML		13 49 28.7	
	comp=N,865nm,0.3s						
STG5	**El Palmar, Qui**	**3.05**	**96**	*i* S	**Sn**	**13 49 22.1**	**-2.3**
TUIG	**Tuzandepetl**	**3.26**	**1**	*eP*	**Pb**	**13 48 54.7**	**-2.7**
TUIG				*i* S	**Sn**	**13 49 32.6**	**+3.1**
YOIG	**Yosondua**	**3.62**	**306**	*eP*	**Pb**	**13 49 02.5**	**-1.2**
YOIG				*eS*	**Sb**	**13 49 43.7**	**-4.1**
PNIG	**Pinotepa**	**3.88**	**295**	*eP*	**Pb**	**13 49 05.5**	**-2.5**
PNIG				*eS*	**Sn**	**13 49 45.5**	**+0.7**
APG	**El Apazote**	**3.89**	**86**	Pn	**Pb**	**13 49 05.8**	**-2.5**
	comp=N,0.8nm,0.3s,baz=227,slow=19,SNR=5.6						
APG				Sn	**Sb**	**13 49 51.1**	**-4.3**
	comp=N,0.3nm,0.3s,baz=204,slow=14,SNR=9.1						
APG	**El Apazote**	**3.89**	**86**	*i* P	**Pb**	**13 49 05.9**	**-2.3**
TXIG	**Tlaxiaco**	**4.03**	**309**	*eP*	**Pb**	**13 49 10.2**	**-0.4**
TXIG				*i* S	**Sb**	**13 49 54.1**	**-5.4**
TOIG	**Toxpalan**	**4.15**	**324**	*eP*	**Pb**	**13 49 12.4**	**-0.2**
TOIG				*i* S	**Sb**	**13 50 01.3**	**-1.6**
FTIG	**Fresnillo de T**	**4.71**	**312**	*eP*	**Pb**	**13 49 18.5**	**-3.7**
FTIG				*i* S	**Sn**	**13 50 07.8**	**+2.4**
PETF	**Flores**	**4.93**	**64**	*i* P	Pn	13 49 19.2	+5.6
PETF				IAML		13 50 41.1	
	comp=E,310nm,0.6s						
SCIG	**Sabancuy**	**5.24**	**36**	*eP*	**Pn**	**13 49 20.5**	**+2.6**
SCIG				*i* S	**Sn**	**13 50 11.4**	**-7.0**
JTS	**Las Juntas de**	**10.30**	**114**	Pn	Pn	13 50 38.8	+11
	comp=E,0.6nm,0.3s,baz=298,slow=15,SNR=1.3						
	comp=E,2.3nm,0.3s						
TXAR	**Lajitas Array**	**16.81**	**331**	Pn	**P**	**13 52 01.0**	**+3.7**
	comp=E,0.1nm,0.3s,baz=146,slow=11,SNR=6.9						
	comp=E,0.9nm,1.1s						
NVAR	**Mina Array Bea**	**31.60**	**323**	P	P	13 54 28.6	+5.9
	comp=E,0.1nm,0.5s,baz=135,slow=6.5,SNR=1.8						
	comp=E,0.1nm,0.5s						
YKA	**Yellowknife Ar**	**49.77**	**348**	P	P	13 56 57.2	+5.4
	comp=E,0.1nm,0.5s,baz=150,slow=7.1,SNR=3.8						
	comp=E,0.1nm,0.5s						

*IDC **26** 13:59:07.2±5.4, 49°.03N×156°.22E, h55km±46km, mb3.1/2, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=75.7km s-min=20.0km az=130.0*

*KRSC **26** 13:59:07.3±1.5, 49°.39N×156°.51E, h16km±21km, Ml3.8*

ISC 26 13:59:06.9±1.4, 49°.2N±0°.1×156°.0E±0°.1, h34km, n28, σ1§82/30, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.50**	**3**	*eP*	**Pn**	**13 59 30.4**	**-1.0**
SKR				*eS*	**Sn**	**13 59 47.5**	**-2.3**
PAU	**Pauzhetka**	**2.35**	**13**	*eP*	**Pn**	**13 59 42.9**	**-0.1**
PAU				*eS*	**Sn**	**14 00 09.6**	**-1.0**
KDTR	**Khodutka, Kamc**	**2.95**	**26**	*eP*	**Pn**	**13 59 51.4**	**+0.1**
KDTR				*eS*	**Sn**	**14 00 24.0**	**-1.4**
ASAK	**Asacha**	**3.43**	**20**	*eP*	**Pn**	**13 59 59.3**	**+1.4**
MTVR	**Mutnovka**	**3.59**	**22**	*eP*	**Pn**	**14 00 01.7**	**+1.5**
MTVR				*eS*	**Sn**	**14 00 41.7**	**+0.3**
GRL	**Gorelyy**	**3.62**	**21**	*eP*	**Pn**	**14 00 01.8**	**+1.1**
KRMR	**Karymshinskiy**	**3.90**	**20**	*eP*	**Pn**	**14 00 04.6**	**+0.4**
PETK	**Petropavlovsk-**	**4.08**	**15**	P	Pn	**14 00 08.3**	**+1.5**
	0.5nm,0.3s,baz=203,slow=13,SNR=48						
PETK				S	**Sn**	**14 00 56.9**	**+3.6**
	3.3nm,0.8s,baz=237,slow=16,SNR=1.2						
	1.3nm,0.4s						
PET	**Petropavlovsk**	**4.20**	**23**	*eP*	**Pn**	**14 00 09.4**	**+1.1**
PET				*eS*	**Sn**	**14 00 56.4**	**+0.3**
DALK	**Dalny**	**4.23**	**23**	*eP*	**Pn**	**14 00 09.6**	**+0.8**
DALK				*eS*	**Sn**	**14 00 56.6**	**-0.4**
UGLR	**Uglovaya**	**4.41**	**23**	*eP*	**Pn**	**14 00 13.6**	**+2.2**
AVH	**Avacha**	**4.44**	**22**	*eP*	**Pn**	**14 00 14.6**	**+2.8**
KOK	**Koryaka**	**4.44**	**21**	*eP*	**Pn**	**14 00 14.5**	**+2.7**
SMAR	**Somma**	**4.45**	**22**	*eP*	**Pn**	**14 00 14.9**	**+2.7**
KRER	**Koryakskii**	**4.48**	**22**	*eP*	**Pn**	**14 00 14.9**	**+2.5**
SDLR	**Sedlovina**	**4.49**	**23**	*eP*	**Pn**	**14 00 13.8**	**+1.3**
KRX	**Arik**	**4.50**	**21**	*eP*	**Pn**	**14 00 15.0**	**+2.2**
SPN	**Mys Shipunski**	**4.67**	**31**	*eP*	**Pn**	**14 00 15.8**	**+0.9**
SPN				*eS*	**Sn**	**14 01 07.2**	**-0.7**
GNL	**Ganaly**	**4.68**	**14**	*eP*	**Pn**	**14 00 18.3**	**+3.1**
ASAJ	**Asahikawa**	**10.50**	**246**	P	**Pn**	**14 01 36.1**	**+1.2**
	0.4nm,0.3s,baz=68,slow=7.2,SNR=7.4						
	2.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**30.66**	**160**	T	T	14 38 03.2	
	baz=347,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.68**	**160**	T	T	14 38 05.7	
	baz=347						
H11N3	**WAKE ISLAND Hy**	**30.68**	**160**	T	T	14 38 04.4	
	baz=347,slow=74						
H11S1	**WAKE ISLAND Hy**	**31.80**	**160**	T	T	14 39 27.5	
	baz=346,slow=76,SNR=69						
H11S3	**WAKE ISLAND Hy**	**31.81**	**160**	T	T	14 39 29.5	
	baz=346,slow=76,SNR=65						
H11S2	**WAKE ISLAND Hy**	**31.82**	**160**	T	T	14 39 29.5	
	baz=346,slow=76,SNR=55						
ILAR	**Eielson Array**	**33.44**	**41**	P	**P**	**14 05 40.4**	**-1.7**
	0.2nm,0.9s,baz=266,slow=7.3,SNR=1.5						
	0.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**54.81**	**257**	P	**P**	**14 08 32.5**	**-1.1**
	0.3nm,0.4s,baz=49,slow=8.6,SNR=4.1						
	0.3nm,0.4s						

IDC 26 14:01:12.3±2.1, 5°.88N×124°.60E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=227.2km s-min=22.0km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.39**	**160**	P	P	14 06 59.2	-0.4
	0.5nm,1.0s,baz=338,slow=9.7,SNR=5.0						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**30.74**	**163**	P	P	14 07 29.8	+0.3
	0.2nm,0.3s,baz=340,slow=7.3,SNR=14						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**54.59**	**325**	P	P	14 10 43.2	+0.6
	0.4nm,0.4s,baz=123,slow=8.1,SNR=10.0						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**58.80**	**328**	P	P	14 11 11.2	-1.1
	0.2nm,0.2s,baz=128,slow=8.6,SNR=2.2						
	0.2nm,0.2s						

IDC 26 14:05:18.7±4.7, 5°.43S×151°.60E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=138.8km s-min=29.8km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.14**	**228**	P	P	14 10 16.6	+0.3
	0.2nm,0.6s,baz=53,slow=10,SNR=1.5						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**24.89**	**221**	P	P	14 10 41.8	-1.7
	0.6nm,0.8s,baz=48,slow=9.5,SNR=9.2						
	0.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**28.31**	**241**	P	P	14 11 15.7	+1.4
	1.1nm,0.4s,baz=67,slow=11,SNR=1.2						
SONM	**Songino Array**	**66.22**	**329**	P	P	14 16 07.8	-0.8
	0.4nm,0.7s,baz=142,slow=7.3,SNR=2.4						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**80.01**	**319**	P	P	14 17 29.8	-0.4
	0.2nm,0.7s,baz=100,slow=7.2,SNR=2.1						
	0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.35**	**287**	PKPab	PKPab	14 25 17.2	+1.8
	0.4nm,0.7s,baz=92,slow=1.8,SNR=2.2						

*NAO **26** 14:20:06.7, 35°.06N×27°.86E, h10km, MB4.6*

*HLW **26** 14:20:08.9, 35°.17N×27°.87E, h15km±4km, Ml4.2*

*NIC **26** 14:20:08.5, 35°.07N×27°.81E, h12km±1km, Ml4.1/12*

*ISK **26** 14:20:09.1, 35°.04N×27°.96E, h12km, ML4.4/56*

*GII **26** 14:20:09.4±0.0, 35°.050N±0°.001×27°.959E±0°.001, h0km, Mws4.5, confirmed*

*IDC **26** 14:20:10.5±3.6, 35°.15N×27°.81E, h18km±22km, mb4.2/25, mbtmp4.3/36, ML3.9/10, MS3.9/49, Error ellipse: s-maj=12.7km s-min=10.5km az=178.0*

*GCMT **26** 14:20:10.1±0.3, 35°.41N±0°.04×27°.67E±0°.02, h16km±1km, MW5.0/91, Moment Tensor Solution. s22,c25; s91,c125; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.68±. 12; Mθθ 0.27±.08; Mϕϕ 1.41±.07; Mrθ 3.22±.38; Mϕθ 0.32±.05; Mϕr-0.04±.18; Best double couple: Mo 3.39000×10^16 NP1:ϕs 42.00000°, δ 12.00000°, λ -132.00000°. NP2: ϕs 264.00000°, δ 81.00000°, λ -82.00000°. Principal axes: T 2.7030, Plg36.0000°, Azm347.0000°; N 1.3770, Plg8.0000°, Azm83.0000°; P -4.0780, Plg53.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ATH **26** 14:20:10.4±0.2, 35°.06N×27°.94E, h10km, ML4.3/21, Manual Solution by G.Panopoulou First location: 2020/02/26 14:21:42, This location: 2020/10/16 15:10:07 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

*NEIC **26** 14:20:11.1±1.5, 35.27N±0°.05×27°.79E±0°.06, h10km±1km, mb4.6/39, Error ellipse: s-maj=8.4km s-min=7.9km az=326.0*

*MED_RC **26** 14:20:12.0±0.2, 35°.06N×27°.86E, h12km±1km, MW4.7/25, Moment Tensor Solution. Mantle waves: s25,c32; Duration: 1§0 Moment tensor: Scale 10^16 Nm; Mrr-1.06±.24; Mθθ -0.39±.19; Mϕϕ 1.45±.12; Mrθ -0.27±.21; Mϕθ 0.22±.14; Mϕr-0.51±.16; Best double couple: Mo 1.41000×10^16 NP1:ϕs 171.00000°, δ 35.00000°, λ -114.00000°. NP2:ϕs 19.00000°, δ 58.00000°, λ -74.00000°. Principal axes: T 1.5900, Plg12.0000°, Azm98.0000°; N -0.3700, Plg13.0000°, Azm191.0000°; P -1.2200, Plg72.0000°, Azm328.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MCSM **26** 14:20:12.3±1.4, 35°.N±3°.×2°.8E±°, h13km±10km, mb4.5, mB4.5, MLv4.5, Mw(mB)3.6*

*THE **26** 14:20:13.1, 35°.N±5°.×2°.8E±°, h0km±3km, M4.0/14, MLh4.0/14*

ISC 26 14:20:09.8±1.1, 35°.10N±0°.03×27°.82E±0°.02, h10km±6km, n427, σ1§52/456, mb4.5/52, MS3.9/42, 16C-11D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.70**	**310**		**Pg**	**14 20 22.1**	**-1.3**
KARP	**Karpathos**	**0.70**	**310**	P	**Pg**	**14 20 22.0**	**-1.3**
KARP				S	**Sg**	**14 20 28.6**	**-4.0**
KARP	**Karpathos**	**0.70**	**310**	P	**Pg**	**14 20 21.9**	**-1.4**
KARP				S	**Sg**	**14 20 32.5**	**-0.1**
ARG	**Arkhangelos**	**1.14**	**12**		**Pb**	**14 20 29.8**	**-1.8**
ARG	**Arkhangelos**	**1.14**	**12**	Pn	**Pg**	**14 20 32.3**	**+0.5**
ARG				Sn	**Sn**	**14 20 48.7**	**+1.1**
ARG	**Arkhangelos**	**1.14**	**12**	P	**Pb**	**14 20 30.7**	**-0.9**
ARG				S	**Sb**	**14 20 43.5**	**-3.0**
ARG	**Arkhangelos**	**1.14**	**12**	P	**Pb**	**14 20 30.4**	**-1.3**
ARG				S	**Sn**	**14 20 47.7**	**+0.2**
ARG	**Arkhangelos**	**1.14**	**12**	P	**Pb**	**14 20 30.7**	**-0.9**
ARG				S	**Sn**	**14 20 47.9**	**+0.3**
ZKR	**Zakros**	**1.32**	**271**	Pn	**Pg**	**14 20 34.5**	**+0.8**
ZKR				Sn	**Sg**	**14 20 54.6**	**+2.4**
ZKR	**Zakros**	**1.32**	**271**	P	**Pb**	**14 20 34.6**	**0.0**
ZKR	**Zakros**	**1.32**	**271**	P	**Pn**	**14 20 32.7**	**-1.6**
ZKR				S	**Sb**	**14 20 50.8**	**-0.7**
ZKR				AML	AML	14 21 00.5	
	7.4nm,0.9s						
ZKR				AML	AML	14 21 09.3	
	20nm,0.8s						
ZKR	**Zakros**	**1.32**	**271**	P	**Pn**	**14 20 34.2**	**0.0**
RODB	**Rodos**	**1.39**	**13**	P	**Pb**	**14 20 36.2**	**+0.4**
RODB				S	**Sg**	**14 20 54.5**	**+0.2**
RDI1	**Rhodes Town Ha**	**1.39**	**13**	P	**Pg**	**14 20 36.4**	**0.0**
RDI1				S	**Sg**	**14 20 55.0**	**+0.5**
SIT2	**Siteia**	**1.41**	**275**	P	**Pg**	**14 20 37.0**	**+0.1**
DAT	**Datca**	**1.64**	**353**	Pn	**Pb**	**14 20 39.6**	**-0.6**
DAT				Sn	**Sb**	**14 21 01.9**	**+0.9**
DATC	**Datca-Mugla**	**1.66**	**356**	Pn	**Pn**	**14 20 39.4**	**+0.4**
TURN	**Turunc**	**1.71**	**11**	Pn	**Pn**	**14 20 40.0**	**+0.4**
TURN				Sn	**Sb**	**14 21 02.4**	**-0.4**
KSL	**Kastellorizon**	**1.78**	**53**	P	**Pn**	**14 20 39.9**	**-0.7**
KSL				S	**Sn**	**14 21 03.7**	**+0.5**
KSL				AML	AML	14 21 34.5	
	6.9nm,1.6s						
KSL				AML	AML	14 21 38.7	
	5.5nm,1.1s						
KSL	**Kastellorizon**	**1.78**	**53**	P	**Pn**	**14 20 40.8**	**+0.2**
NPS	**Neapolis**	**1.82**	**276**	P	**Pb**	**14 20 43.7**	**+0.6**
NPS				S	**Sg**	**14 21 09.3**	**+1.1**
NPS	**Neapolis**	**1.82**	**276**	P	**Pb**	**14 20 44.0**	**+0.8**
AKAS	**Kas**	**1.84**	**52**		**Pn**	**14 20 41.6**	**0.0**
AKAS	**Kas**	**1.84**	**52**	Pn	**Pn**	**14 20 40.9**	**-0.7**
AKAS				Sn	**Sn**	**14 21 04.2**	**-0.8**
DALY	**Dalyan (Mula)**	**1.84**	**21**	Pn	**Pn**	**14 20 42.2**	**+0.7**
FETY	**Fethiye**	**1.84**	**33**	Pn	**Pn**	**14 20 41.4**	**-0.1**
KLNA	**Kalymnos**	**1.98**	**340**	P	**Pn**	**14 20 44.6**	**+1.2**
BODT	**Bodrum**	**2.00**	**348**	Pn	**Pn**	**14 20 45.0**	**+1.3**
BODT	**Bodrum**	**2.00**	**348**	P	**Pb**	**14 20 45.6**	**-0.7**
DEMR	**Demre-Antalya**	**2.04**	**56**	Pn	**Pn**	**14 20 43.7**	**-0.5**
YER	**Yerkesik**	**2.07**	**10**	Pn	**Pn**	**14 20 45.0**	**+0.4**
YER	**Yerkesik**	**2.07**	**10**	P	**Pn**	**14 20 45.4**	**+0.8**
YER				S	**Sn**	**14 21 09.2**	**-1.3**
YKAV	**Yalikavak-Bodr**	**2.07**	**348**	Pn	**Pb**	**14 20 46.3**	**-1.1**
MLSB	**Milas**	**2.19**	**359**	Pn	**Pn**	**14 20 47.5**	**+1.2**
CAME	**Cameli-Denizli**	**2.20**	**33**	Pn	**Pn**	**14 20 46.4**	**-0.1**
IACM	**Heraklion**	**2.26**	**276**	P	**Pb**	**14 20 50.2**	**-0.5**
THERA	**Ancient Thera,**	**2.29**	**304**	P	**Pn**	**14 20 48.9**	**+1.2**
THERA	**Ancient Thera,**	**2.29**	**304**	P	**Pn**	**14 20 49.4**	**+1.8**
THERA				S	**Sb**	**14 21 19.4**	**-0.2**
THR8	**Santorini-Mono**	**2.31**	**305**	P	**Pn**	**14 20 49.3**	**+1.4**
THR8	**Santorini-Mono**	**2.31**	**305**	P	**Pb**	**14 20 50.1**	**-1.4**
THR6	**Thira Island,**	**2.34**	**303**	P	**Pn**	**14 20 49.5**	**+1.2**
THR6	**Thira Island,**	**2.34**	**303**	P	**Pn**	**14 20 49.8**	**+1.5**
ELL	**Elmali**	**2.36**	**45**		**Pn**	**14 20 49.2**	**+0.4**
ELL	**Elmali**	**2.36**	**45**	Pn	**Pn**	**14 20 48.5**	**-0.2**
THR3	**Thira Island,**	**2.36**	**304**	P	**Pn**	**14 20 49.9**	**+1.3**
THR3	**Thira Island,**	**2.36**	**304**	P	**Pb**	**14 20 50.8**	**-1.7**
SNT5	**Nea Kammeni, S**	**2.37**	**304**	P	**Pn**	**14 20 50.5**	**+1.8**
SNT5	**Nea Kammeni, S**	**2.37**	**304**	P	**Pn**	**14 20 50.4**	**+1.8**
THR9	**Santorini-Faro**	**2.37**	**303**	P	**Pn**	**14 20 50.3**	**+1.7**
THR9	**Santorini-Faro**	**2.37**	**303**	P	**Pb**	**14 20 51.2**	**-1.3**
THR5	**Thira Island,**	**2.40**	**304**	P	**Pb**	**14 20 51.3**	**-1.8**
IDI	**Anoyia**	**2.41**	**275**		**Pn**	**14 20 51.2**	**+1.8**
IDI	**Anoyia**	**2.41**	**275**	Pn	**Pn**	**14 20 51.1**	**+1.8**
IDI	**Anoyia**	**2.41**	**275**	P	**Pb**	**14 20 51.6**	**-1.7**
IDI	**Anoyia**	**2.41**	**275**	P	**Pb**	**14 20 51.9**	**-1.4**
SAP3	**Santorini-Thir**	**2.42**	**304**	P	**Pb**	**14 20 51.7**	**-1.6**
GCAM	**G?zelcaml?**	**2.64**	**350**	Pn	**Pn**	**14 20 53.9**	**+1.5**
APMY	**Acipayam-Deniz**	**2.65**	**26**	Pn	**Pn**	**14 20 53.2**	**+0.5**
APE	**Apeiranthos**	**2.70**	**317**	⇑P	**Pn**	**14 20 55.3**	**+1.9**
APE				⇑S	**Sb**	**14 21 30.4**	**-1.1**
SMG	**Samos**	**2.72**	**343**	P	**Pn**	**14 20 53.8**	**+0.2**
SMG	**Samos**	**2.72**	**343**	P	**Pn**	**14 20 55.0**	**+1.4**
KORT	**Korkueli**	**2.79**	**46**	Pn	**Pn**	**14 20 54.8**	**+0.1**
NAZL	**Nazilli-Aydin**	**2.88**	**7**	Pn	**Pn**	**14 20 57.1**	**+1.3**
ANTB	**Antalya**	**2.92**	**51**	Pn	**Pn**	**14 20 56.4**	**+0.2**
VAM	**Vamos**	**2.98**	**277**	P	**Pn**	**14 21 00.0**	**+2.9**
VAM	**Vamos**	**2.98**	**277**	P	**Pn**	**14 20 59.8**	**+2.6**
GVD	**Gavdhos**	**3.08**	**266**	Pn	**Pn**	**14 21 00.6**	**+2.1**
GVD	**Gavdhos**	**3.08**	**266**	P	**Pn**	**14 21 00.5**	**+2.1**
GVD	**Gavdhos**	**3.08**	**266**	P	**Pn**	**14 21 00.6**	**+2.1**
CHAN	**Chania**	**3.12**	**279**	P	**Pn**	**14 21 01.2**	**+2.2**
IMMV	**Iera Moni Meta**	**3.16**	**278**	Pn	**Pn**	**14 21 02.2**	**+2.6**
IMMV	**Iera Moni Meta**	**3.16**	**278**	P	**Pn**	**14 21 02.4**	**+2.8**
IMMV	**Iera Moni Meta**	**3.16**	**278**	P	**Pn**	**14 21 02.5**	**+2.9**
ODEM	**Odemis-Izmir**	**3.18**	**4**	Pn	**Pn**	**14 21 01.2**	**+1.3**
BCK	**Bucak**	**3.25

CSS Mathiatis 4.52 90 P **Pn** **14 21 17.5 -0.9**
CSS S **Sn** **14 22 11.2 +0.2**
CSS AML AML 14 22 12.6
0.8nm,1.1s
CSS AML AML 14 22 15.2
0.8nm,0.8s
CSS Mathiatis 4.52 90 P **Pn** **14 21 17.1 -1.3**
CSS S **Sn** **14 22 09.3 -1.7**
CSS Mathiatis 4.52 90 P **Pn** **14 21 17.4 -0.9**
BALB Balikesir 4.53 1 **Pn** **14 21 17.7 -0.8**
KYMI Kymi, Euboea I 4.62 321 P **Pn** **14 21 21.2 +1.5**
KONT Konya--Tatoy 4.63 51 Pn **Pn** **14 21 20.5 +0.7**
LFK Lefkose 4.68 86 Pn **Pn** **14 21 20.5 0.0**
MVOU Mavrovouni 4.77 89 P **Pn** **14 21 21.6 -0.1**
MVOU S **Sn** **14 22 17.0 +0.1**
MVOU AML AML 14 22 23.9
0.5nm,1.0s
MVOU AML AML 14 22 26.4
0.7nm,0.9s
MVOU Mavrovouni 4.77 89 P **Pn** **14 21 21.3 -0.3**
LADK Ladik-KONYA 4.79 48 Pn **Pn** **14 21 22.6 +0.5**
BECE Buyukeceli-Mer 4.79 76 Pn **Pn** **14 21 21.9 -0.1**
VIL2 Platees 4.80 312 P **Pn** **14 21 23.5 +1.3**
KRMN Karaman 4.87 63 Pn **Pn** **14 21 23.4 +0.3**
EZN Ezine 4.87 346 Pn **Pn** **14 21 25.1 +2.1**
LTK Loutraki 4.88 308 P **Pn** **14 21 25.5 +2.2**
TISA Tisan-Mersin 4.89 76 Pn **Pn** **14 21 23.2 -0.1**
KARG Kargicak-Mersi 4.92 75 Pn **Pn** **14 21 23.9 +0.1**
KEBE Keben-Mersin 4.97 73 Pn **Pn** **14 21 24.6 0.0**
AOS2 Alonissos-2 5.14 323 P **Pn** **14 21 28.2 +1.4**
ITM Ithomi 5.20 295 **Pn** **14 21 28.6 +0.9**
ITM Ithomi 5.20 295 Pn **Pn** **14 21 30.8 +3.1**
ITM Ithomi 5.20 295 P **Pn** **14 21 29.4 +1.7**
LIA Limnos Island 5.23 337 P **Pn** **14 21 30.1 +2.1**
GUR Goura 5.24 304 P **Pn** **14 21 30.9 +2.6**
LKR Lokris 5.25 314 P **Pn** **14 21 30.4 +2.2**
BAND Balkesir-Ban 5.25 2 ⇓P **Pn** **14 21 30.7 +2.3**
ATAL Atalanti 5.26 314 P **Pn** **14 21 30.8 +2.4**
CHBY Cihanbeyli 5.35 48 Pn **Pn** **14 21 30.8 +1.0**
KLV Kalavryta, Ach 5.43 304 P **Pn** **14 21 32.3 +1.4**
YESY Yesilyurt 5.47 59 Pn **Pn** **14 21 32.1 +0.6**
NEO Neokhori 5.58 320 P **Pn** **14 21 34.8 +2.0**
DRO Drossia 5.69 302 P **Pn** **14 21 37.0 +2.6**
KULU Kulu 5.71 45 Pn **Pn** **14 21 35.4 +0.6**
CAVK Edirne/Enez-Ca 5.74 347 ⇑P **Pn** **14 21 37.1 +2.1**
ANX Ano Chora 5.88 308 P **Pn** **14 21 39.5 +2.5**
AGG Agios Georgios 5.88 313 P **Pn** **14 21 39.8 +2.8**
ALN Alexandroupoli 5.96 347 **Pn** **14 21 38.1 +0.1**
KLYT Kilyos 6.22 9 Pn **Pn** **14 21 44.4 +2.8**
0.4nm1µm38nm,0.7s
RDO Rodhopi 6.30 344 **Pn** **14 21 43.4 +0.7**
KIRS Kirsehir-Merke 6.32 49 ⇑P **Pn** **14 21 43.5 +0.4**
RYAN Fayoum 6.35 160 P **Pn** **14 21 42.9 -0.5**
HNTI Hanita 6.42 106 P **Pn** **14 21 43.0 -1.4**
HNTI S **Sn** **14 22 56.2 -1.6**
OFRI `Ofer 6.45 110 P **Pn** **14 21 43.6 -1.2**
OFRI S **Sn** **14 22 56.2 -2.4**
BR105 Keskin Array S 6.52 43 Pn **Pn** **14 21 45.8 -0.1**
0.1nm224nm24nm,0.8s
BR104 Keskin Array S 6.53 43 Pn **Pn** **14 21 46.2 +0.2**
0.1nm174nm24nm,0.9s
BR104 Sn **Sn** **14 23 01.2 +0.6**
0.1nm174nm24nm,0.9s
BR106 Keskin Array S 6.53 43 Pn **Pn** **14 21 46.8 +0.7**
0.1nm177nm22nm,0.8s
BR131 Keskin Array S 6.54 43 **Pn** **14 21 46.1 0.0**
BRTR Keskin Array B 6.54 43 Pn **Pn** **14 21 45.8 -0.3**
0.8nm,0.3s,baz=219,slow=13,SNR=30
BRTR Sn **Sn** **14 23 01.2 +0.3**
1.0nm,0.3s,baz=215,slow=22,SNR=8.2
BRTR LR LR 14 25 01.4
comp=Z,388nm,21.2s,baz=214,slow=45
6.4nm,0.6s
BRTR Keskin Array B 6.54 43 **Pn** **14 21 45.4 -0.7**
LIT Litokhoron 6.54 321 **Pn** **14 21 46.0 -0.2**
MMC7 Mount Meron ar 6.62 106 P **Pn** **14 21 45.7 -1.4**
MMA0B Mount Meron ar 6.63 106 P **Pn** **14 21 46.3 -1.0**
MMA0B S **Sn** **14 23 01.4 -1.5**
MMAI Mount Meron Ar 6.63 106 Pn **Pn** **14 21 46.7 -0.6**
4.4nm,0.3s,baz=313,slow=14,SNR=13
MMAI Sn **Sn** **14 23 01.6 -1.3**
11nm,0.3s,baz=282,slow=30,SNR=6.5
2.5nm,0.3s
SLTI Sal'it 6.66 113 P **Pn** **14 21 46.8 -0.9**
SLTI S **Sn** **14 23 02.0 -1.6**
HWQ Hawqa 6.74 95 *e*P **Pn** **14 21 47.9 -1.1**
GEM Giv'at Ha'Em 6.77 104 P **Pn** **14 21 48.4 -0.7**
GEM S **Sn** **14 23 04.3 -2.0**
NATI Neve Ativ 6.81 103 P **Pn** **14 21 48.6 -1.1**
NATI S **Sn** **14 23 05.8 -1.5**
SALP Salfit 6.85 114 P **Pn** **14 21 49.0 -1.3**
SALP S **Sn** **14 23 06.6 -1.8**
MMLI Mount Malkishu 6.86 111 P **Pn** **14 21 49.3 -1.2**
MMLI S **Sn** **14 23 07.2 -1.4**
KZIT Kziot 6.92 125 P **Pn** **14 21 49.9 -1.5**
KZIT S **Sn** **14 23 08.5 -1.7**
KSHT Keshet 6.96 105 P **Pn** **14 21 50.5 -1.4**
KSHT S **Sn** **14 23 09.1 -2.0**
HMDT Nahal Hemdat 7.02 112 P **Pn** **14 21 51.1 -1.5**
HMDT S **Sn** **14 23 10.4 -2.2**
NBNS Bani Suef 7.10 154 P **Pn** **14 21 52.8 -1.0**
YTIR Yattir 7.16 119 P **Pn** **14 21 53.6 -1.0**
YTIR S **Sn** **14 23 14.5 -1.5**
DSI Dead Sea 7.24 117 P **Pn** **14 21 54.5 -1.1**
DSI S **Sn** **14 23 16.2 -1.7**
MSBI Mazada 7.36 119 P **Pn** **14 21 56.2 -1.0**
MSBI S **Sn** **14 23 18.9 -1.8**
RMNI Mount Ramon 7.36 126 P **Pn** **14 21 56.1 -1.3**
RMNI S **Sn** **14 23 19.8 -1.4**
BNN Bunyan 7.43 57 **Pn** **14 21 59.1 +0.7**
GHAJ Ghor Haditha 7.51 118 **Pn** **14 22 00.1 +0.7**
KRMI Paran Flat 7.65 129 P **Pn** **14 22 00.1 -1.3**
KRMI S **Sn** **14 23 26.6 -1.5**
PRNI Paran 7.68 126 P **Pn** **14 22 00.5 -1.3**
PRNI S **Sn** **14 23 27.5 -1.4**
GAZ Gaziantep 7.87 72 **Pn** **14 22 04.1 -0.3**
HRFI Mount Harif 7.91 128 P **Pn** **14 22 03.9 -1.0**
HRFI S **Sn** **14 23 32.7 -1.7**
GRB Gharib 8.01 147 P **Pn** **14 22 05.8 -0.5**
EIL Elat 8.10 130 Pn **Pn** **14 22 06.9 -0.6**
4.3nm,0.3s,baz=339,slow=15,SNR=20
EIL Sn **Sn** **14 23 35.8 -3.3**
7.0nm,0.3s,baz=338,slow=15,SNR=5.4
23nm,0.6s
EIL Elat 8.10 130 P **Pn** **14 22 06.1 -1.3**
EIL S **Sn** **14 23 37.3 -1.8**
ASF Jabal al Asfar 8.11 109 Pn **Pn** **14 22 07.5 -0.2**
0.6nm,0.3s,baz=221,slow=7.9,SNR=9.1
ASF Sn **Sn** **14 23 38.8 -0.7**
0.4nm,0.3s,baz=266,slow=18,SNR=1.3
ASF LR LR 14 26 44.8
comp=Z,440nm,19.3s,baz=206,slow=48
3.8nm,0.4s
HBST Basata 8.29 133 P **Pn** **14 22 10.0 0.0**
TR2 Tor 2 8.37 141 P **Pn** **14 22 10.4 -0.7**
HKAT Jabal Katrina 8.40 140 P **Pn** **14 22 10.8 -0.9**
HDHB Dhahab 8.59 136 P **Pn** **14 22 14.0 -0.2**
TOKA Tokat 8.62 50 Pn **Pn** **14 22 15.1 +0.6**
PLVB Pleven 8.64 344 ⇑P **Pn** **14 22 16.7 +1.9**
HHRG Al Ghardaqah 9.27 146 P **Pn** **14 22 25.0 +1.5**
ARPR Arapgir-MALATY 9.30 62 Pn **Pn** **14 22 24.3 +0.3**
HDK1 Dakhla 9.62 171 P **Pn** **14 22 27.6 -0.8**
TIP Timpagrande 9.72 298 **Pn** **14 22 28.7 -1.1**
CEL Celeste 10.09 292 **Pn** **14 22 33.9 -0.8**
MLR Muntele Rosu 10.48 353 Pn **Pn** **14 22 41.4 +1.3**
0.4nm,0.3s,baz=180,slow=11,SNR=8.4
MLR LR LR 14 26 29.1
comp=Z,219nm,21.5s,baz=179,slow=36
9.6nm,1.0s
MLR Muntele Rosu 10.48 353 ⇑P **Pn** **14 22 42.0 +1.8**
MLR Muntele Rosu 10.48 353 P **Pn** **14 22 43.3 +3.1**
23nm,1.6s
VOIR 10.54 349 ⇓P **Pn** **14 22 43.7 +2.7**
VOIR 10.54 349 P **Pn** **14 22 44.5 +3.5**
12nm,1.4s
HERR Herculane 10.61 339 ⇑P **Pn** **14 22 44.2 +2.4**
CUC Castrocucco 10.71 301 **Pn** **14 22 44.0 +0.8**
MDVR Moldovita 10.74 336 ⇑P **Pn** **14 22 46.6 +2.9**
PLOR Plostina 10.78 356 ⇑P **Pn** **14 22 46.9 +2.8**
VRI Vrincioaia 10.79 356 ⇑P **Pn** **14 22 46.1 +1.8**
COVR Voineasa-Covas 10.81 354 ⇑P **Pn** **14 22 47.4 +2.8**
WDD Wied Dalam 10.87 278 Pn **Pn** **14 22 45.0 -0.4**

GZR Gura Zlata 10.98 341 ⇓P **Pn** **14 22 49.9 +3.0**
APRS Wahet Paris 10.98 166 P **Pn** **14 22 47.0 +0.1**
DOPR Dopca 11.01 351 ⇓P **Pn** **14 22 50.0 +2.7**
TURR Turia 11.03 353 ⇑P **Pn** **14 22 48.8 +1.2**
VAE Valguarnera 11.08 286 Pn **Pn** **14 22 49.1 +0.7**
12nm,0.3s,baz=118,slow=8.2,SNR=3.6
VAE Sn **Sn** **14 24 46.6 -5.7**
3.1nm,0.3s,baz=126,slow=8.7,SNR=3.8
RAFF Raffo Rosso 11.09 285 **Pn** **14 22 47.2 -1.2**
KOPT Kop Dagi 11.19 60 Pn **Pn** **14 22 52.2 +2.1**
TESR Tescani 11.44 356 ⇑P **Pn** **14 22 55.1 +1.9**
TESR Tescani 11.44 356 P **Pn** **14 22 56.0 +2.9**
11nm,2.2s
BZS Buzias 11.52 338 ⇑P **Pn** **14 22 56.5 +2.2**
BURAR Bucovina Array 12.66 352 ⇓P **Pn** **14 23 13.1 +3.2**
MORH Mrgy, Hungar 13.10 331 ⇑P **Pn** **14 23 18.5 +2.7**
HOLU Holmets 14.01 345 P **Pn** **14 23 30.9 +2.6**
PSZ Piszkesteto 14.11 338 ⇑P **Pn** **14 23 32.7 +3.0**
PSZ Piszkesteto 14.11 338 **Pn** **14 23 29.8 +0.1**
MPLH Magyarpolny 14.32 330 P **Pn** **14 23 35.2 +2.7**
52nm,1.1s
GNI Garni 14.32 64 Pn **Pn** **14 23 35.2 +2.5**
0.7nm,0.3s,baz=338,slow=3.1,SNR=6.5
4.4nm,0.4s
GNI Garni 14.32 64 **Pn** **14 23 32.5 -0.2**
GNI Garni 14.32 64 P **Pn** **14 23 34.6 +1.9**
22nm,0.9s
KVAR Kislovodsk Arr 14.47 48 Pn **P** **14 23 41.1 -0.4**
baz=264,slow=19
KBZ Khabaz 14.48 49 Pn **P** **14 23 42.3 +0.9**
0.5nm,0.3s,baz=231,slow=7.7,SNR=49
KBZ LR LR 14 29 34.2
comp=Z,268nm,18.8s,baz=246,slow=39
SOKA Soboth 15.05 324 *e*Pn **Pn** **14 23 43.0 +0.4**
13nm,1.3s
KEST Kesra 15.08 278 Pn **Pn** **14 23 43.1 +0.1**
0.5nm,0.3s,baz=87,slow=11,SNR=10
KEST LR LR 14 30 36.3
comp=Z,134nm,21.5s,baz=53,slow=42
10.0nm,1.1s
KEST Kesra 15.08 278 **Pn** **14 23 43.4 +0.4**
KEST IAmb IAmb 14 23 57.0
comp=Z,37nm,1.0s
STHS Stebnicka Huta 15.11 343 *e*P **P** **14 23 53.9 +5.5**
OBKA Obir 15.17 323 *e*Pn **Pn** **14 23 43.1 -1.0**
comp=Z,12nm,1.2s
ARSA Arzberg 15.24 327 *e*Pn **Pn** **14 23 44.7 -0.4**
comp=Z,8.9nm,1.1s
RONA Rosalia, Austr 15.25 329 *e*Pn **Pn** **14 23 45.1 -0.1**
comp=Z,8.4nm,0.9s
LANS Liptovska Anna 15.33 339 *e*P **P** **14 23 54.2 +3.2**
MODS Modra-Piesok 15.40 333 *e*P **P** **14 23 54.4 +2.7**
AK10 Malin Array Si 15.53 3 P **P** **14 23 51.6 -1.5**
AK14 Malin Array Si 15.55 3 P **P** **14 23 51.9 -1.4**
KIEV Kiev 15.62 3 **P** **14 23 52.3 -1.8**
KIEV Kiev 15.62 3 P **P** **14 23 52.7 -1.4**
comp=Z,72nm,1.4s
AKASG Malin Array Be 15.63 3 Pn **P** **14 23 52.8 -1.3**
comp=Z,1.2nm,0.3s,baz=197,slow=11,SNR=10
AKBB Malin Array Si 15.63 3 **Pn** **14 23 51.9 +1.9**
AKBB Malin Array Si 15.63 3 P **P** **14 23 52.7 -1.5**
JAVC Velka Javorina 15.66 334 *e*PN **Pn** **14 23 52.4 +1.8**
MYKA Terra Mystica 15.71 321 *e*Pn **Pn** **14 23 50.7 -0.5**
comp=Z,20nm,1.2s
KBA Knbreinsper 16.16 322 *e*Pn **Pn** **14 23 56.9 -0.2**
comp=Z,23nm,1.7s
RNPP5 Staryi Chortor 16.18 356 P **P** **14 23 59.8 -0.6**
OJC Ojcow 16.21 341 **P** **14 23 59.9 -0.7**
OJC Ojcow 16.21 341 P **P** **14 24 00.3 -0.3**
comp=Z,28nm,1.0s
KRUC Moravsky 16.30 332 *e*PN **Pn** **14 23 59.3 +0.6**
ABTA Abfaltersbach 16.38 320 *e*Pn **Pn** **14 23 59.0 -0.7**
comp=Z,11nm,0.9s
VRAC Vranov 16.43 333 Pn **P** **14 24 02.0 -1.1**
comp=Z,0.9nm,0.3s,baz=151,slow=8.1,SNR=5.6
VRAC LR LR 14 31 10.7
comp=Z,291nm,20.2s,baz=156,slow=40
comp=Z,2.7nm,0.4s
VRAC Vranov 16.43 333 *e*PN **P** **14 24 03.4 +0.3**
BIOA Bad Ischl, Aus 16.44 324 *e*Pn **Pn** **14 24 00.6 +0.1**
comp=Z,17nm,1.4s
MORC Moravsky Berou 16.49 336 ⇓P **P** **14 24 03.5 -0.4**
MORC Moravsky Berou 16.49 336 *e*PN **P** **14 24 03.2 -0.6**
LESA Schwarzleotal 16.73 322 *e*Pn **Pn** **14 24 04.5 +0.1**
comp=Z,14nm,1.3s
CKRC Cesky Krumlov 16.96 328 *e*P **Pn** **14 24 08.0 +0.9**
WTTA Wattenberg 17.17 320 *e*Pn **Pn** **14 24 09.7 -0.2**
comp=Z,32nm,1.4s
WATA Walderalm 17.25 320 *e*Pn **Pn** **14 24 10.6 -0.2**
comp=Z,42nm,1.1s
GEC2 GERESS Array S 17.25 327 *e*P **Pn** **14 24 10.6 -0.1**
comp=Z,16nm,1.1s,baz=134,slow=12
GERES GERESS Array B 17.25 327 P **Pn** **14 24 11.2 +0.4**
baz=145,slow=14,SNR=14
GERES LR LR 14 31 00.6
comp=Z,364nm,18.7s,baz=150,slow=38
comp=Z,7.8nm,1.0s
SQTA Sankt Quirin 17.37 319 *e*Pn **Pn** **14 24 11.2 -1.1**
comp=Z,21nm,1.1s
DPC Dobruska-Polom 17.39 335 *e*P **P** **14 24 14.2 +0.4**
DPC AMS AMS 14 31 00.0
comp=Z,600nm,13.6s
ZVC Zvikov 17.48 329 *e*P **Pn** **14 24 13.7 +0.1**
MOTA Moosalm 17.50 319 *e*Pn **Pn** **14 24 13.5 -0.5**
comp=Z,15nm,0.9s
FETA Feichten 17.51 318 *e*Pn **Pn** **14 24 13.9 -0.2**
comp=Z,31nm,1.1s
KHC Kasperske Hory 17.52 328 P **Pn** **14 24 14.4 +0.4**
KHC Kasperske Hory 17.52 328 *e*P **Pn** **14 24 14.0 0.0**
CHVC Chvalec 17.69 335 *e*P **Pn** **14 24 16.6 +0.5**
PRU Pruhonice 17.77 331 AMS AMS 14 32 00.0
comp=Z,800nm,13.9s
RETA Reutte 17.77 319 *e*Pn **Pn** **14 24 16.8 -0.4**
comp=Z,13nm,0.9s
WET Wettzell 17.84 326 *e*P **Pn** **14 24 17.7 -0.3**
comp=Z,28nm,1.1s,baz=134,slow=12
DAVOX Davos/Dischmat 17.84 316 P **Pn** **14 24 18.5 +0.3**
comp=Z,0.4nm,0.3s,baz=132,slow=14,SNR=6.9
DAVOX LR LR 14 31 32.5
comp=Z,442nm,19.7s,baz=80,slow=38
comp=Z,3.0nm,0.6s
TUE Stuetta 17.98 315 P **P** **14 24 22.4 +2.0**
comp=Z,69nm,1.3s
DAVA Damuels 18.13 318 *e*Pn **Pn** **14 24 21.3 -0.5**
comp=Z,25nm,1.2s
GRC3 Grafenberg Arr 18.26 324 *e*P **P** **14 24 23.9 +0.5**
comp=Z,22nm,1.1s,baz=134,slow=12
BRG Berggiesshubel 18.70 332 *e*P **Pn** **14 24 35.0 +6.5**
BRG Amp 14 24 36.9
comp=Z,3.7nm,0.8s
BRG Berggiesshubel 18.70 332 S **S** **14 28 08.0 +7.0**
MANZ Manzenberg 18.79 327 *e*P **P** **14 24 28.9 -0.3**
comp=Z,26nm,2.1s,baz=134,slow=12
GRA4 Grafenberg Arr 18.80 325 *e*P **P** **14 24 28.8 -0.5**
comp=Z,35nm,0.9s,baz=134,slow=12
GRF Grafenberg Arr 18.99 325 *e*L L 14 28 19.4
comp=Z,340nm,18.7s
RAYN Ar Rayn 19.22 122 **Pn** **14 24 36.0 +0.9**
MNK Minsk 19.40 0 *i* P **Pn** **14 24 37.0 0.0**
comp=E,29nm,0.8s
MNK *i* P **Pn** **14 24 37.0 0.0**
comp=N,14nm,0.7s
MNK *i* P **Pn** **14 24 37.0 0.0**
comp=Z,15nm,0.7s,baz=180
MNK *i* PP **PnPn** **14 24 52.0 +1.9**
MNK *i* PPP PPP 14 24 59.4
MNK *i* S **S** **14 28 16.6 +1.5**
MNK *i* SS **SnSn** **14 28 32.7 +4.0**
MNK *i* SSS SSS 14 28 45.7
MNK *i* LQ LQ 14 29 58.2
MNK *i* LR LR 14 30 47.9
MNK *i* LRM MLR 14 32 04.7
comp=Z,206nm,16.8s
MNK *i* LRM MLR 14 32 08.2
comp=E,153nm,15.3s
CLL Collm 19.41 331 **P** **14 24 36.0 +0.1**
CLL Collm 19.41 331 *i* P **Pn** **14 24 37.0 -0.1**
comp=Z,21nm,1.1s
CLL *e*S **S** **14 28 15.0 -0.3**
MOX Moxa 19.49 328 *e*L L 14 32 19.2
comp=Z,286nm,21.5s
NACGM Naroch 19.82 358 *e*P **Pn** **14 24 43.8 +1.9**
comp=Z,18nm,0.8s,baz=177
TNS Taunus Mts 20.68 323 *e*P Pn 14 24 51.7 -0.5
comp=Z,48nm,1.2s,baz=134,slow=12
OBN Obninsk 20.91 14 P **P** **14 24 51.4 -0.8**

comp=Z,22nm,0.3s,baz=139,slow=19,SNR=3.5
comp=Z,22nm,0.3s
BSD Bornholm Skovb 21.92 340 *i* P **P** **14 24 59.5 -3.6**
BTNL Ternell 22.07 321 *d*P **P** **14 25 04.9 +0.1**
MEM Membach 22.15 321 *d*P **P** **14 25 06.1 +0.5**
comp=Z,23nm,1.0s
BCLA Clavier 22.41 320 *d*P **P** **14 25 07.5 -0.8**
comp=Z,20nm,1.0s
BGES Gesves 22.50 320 *d*P **P** **14 25 08.4 -1.0**
DOU Dourbes 22.61 319 *d*P **P** **14 25 08.8 -1.7**
comp=Z,11nm,1.1s
BLEU Blekinge 22.74 343 *i* P **P** **14 25 10.0 -1.8**
TAM Tamanrasset 22.99 244 **P** **14 25 15.7 +0.8**
TAM IAmb IAmb 14 25 23.1
comp=Z,24nm,0.8s
DEL Delary 23.39 340 *e*P **P** **14 25 15.8 -2.8**
ESDC Sonseca Array 25.59 290 P **P** **14 25 36.6 -2.5**
comp=Z,2.5nm,0.5s,baz=90,slow=9.0,SNR=11
comp=Z,2.5nm,0.5s
FINES FINESS Array B 26.39 358 P **P** **14 25 43.7 -2.3**
comp=Z,4.2nm,0.7s,baz=162,slow=10,SNR=8.3
FINES LR LR 14 36 39.3
comp=Z,183nm,19.0s,baz=196,slow=38
comp=Z,4.2nm,0.7s
HFS Hagfors 26.68 344 P **P** **14 25 46.5 -2.2**
comp=Z,6.4nm,0.7s,baz=150,slow=12,SNR=7.9
HFS LR LR 14 36 56.9
comp=Z,458nm,18.3s,baz=174,slow=38
comp=Z,6.4nm,0.7s
AKTO Aktyubinsk 26.71 46 LR LR 14 40 53.2
comp=Z,133nm,18.1s,baz=204,slow=47
MDT Midelt 26.93 274 LR LR 14 38 27.5
comp=Z,171nm,21.8s,baz=51,slow=41
MD01 Midelt array s 27.05 275 **P** **14 25 52.9 +0.4**
MD31 MD31 27.05 275 **P** **14 25 52.0 -0.4**
MD31 IAmb IAmb 14 26 13.5
comp=Z,16nm,1.4s
ATD Arta Tunnel 27.15 146 LR LR 14 37 19.3
comp=Z,7.2nm,18.8s,baz=335,slow=38
AB31 Akbulak array 27.45 49 **P** **14 25 55.6 -0.1**
AB31 IAmb IAmb 14 25 59.8
comp=Z,9.3nm,0.8s
ABKAR Akbulak array 27.45 49 **P** **14 25 55.9 +0.2**
PBRG Braganca 27.75 294 *e*P **P** **14 25 58.5 -0.1**
PBRG *i* IAmb IAmb 14 26 24.4
comp=Z,44nm,1.6s
FURI Furi 27.91 157 LR LR 14 38 36.3
comp=Z,459nm,18.5s,baz=346,slow=40
MVO Moncorvo 27.95 293 *e*P **P** **14 26 00.4 0.0**
PBAR Barrancos 28.04 287 *e*P **P** **14 26 01.1 -0.1**
NB2 NORSAR Subarra 28.06 343 P **P** **14 25 59.0 -2.1**
comp=Z,7.0nm,0.9s,baz=150,slow=9.3
NOA NORSAR Array B 28.06 343 P **P** **14 25 59.1 -2.1**
comp=Z,1.8nm,0.7s,baz=150,slow=8.7,SNR=7.3
NOA LR LR 14 37 59.4
comp=Z,222nm,18.5s,baz=140,slow=38
comp=Z,1.8nm,0.7s
PMRV Marv??o 28.24 289 *e*P **P** **14 26 03.1 +0.2**
PCBR Castelo Branco 28.30 290 *e*P **P** **14 26 04.2 +0.8**
PCBR *i* IAmb IAmb 14 26 15.3
comp=Z,37nm,1.6s
MTE Manteigas 28.34 291 *e*P **P** **14 26 05.6 +1.7**
MTE *i* IAmb IAmb 14 26 15.6
comp=Z,57nm,1.9s
POLO Lamas de Olo 28.53 293 *e*P **P** **14 26 07.9 +2.3**
PVIS Viseu 28.60 292 *e*P **P** **14 26 07.3 +1.1**
PVAQ Vaqueiros 28.65 285 *e*P **P** **14 26 07.1 +0.5**
EKA Eskdalemuir Ar 29.37 323 P **P** **14 26 11.2 -1.6**
comp=Z,1.5nm,0.7s,baz=126,slow=10,SNR=2.5
comp=Z,1.5nm,0.7s
ARTI Arti 29.73 35 LR LR 14 41 49.5
comp=Z,138nm,18.5s,baz=220,slow=44
ARTI Arti 29.73 35 P **P** **14 26 15.6 -0.3**
ARTI IAmb IAmb 14 26 21.0
comp=Z,8.2nm,0.7s
TORD Torodi Ar. Bea 32.17 234 P **P** **14 26 38.0 +0.2**
comp=Z,12nm,0.8s,baz=32,slow=5.3,SNR=74
comp=Z,12nm,0.8s
TORD Torodi Ar. Bea 32.17 234 P **P** **14 26 38.5 +0.7**
TORD IAmb IAmb 14 26 40.2
comp=Z,8.3nm,0.8s
LODK Lodwar 32.28 166 **P** **14 26 41.2 +2.3**
LODK IAmb IAmb 14 26 42.7
comp=Z,7.7nm,1.0s
KK31 Karatay Array 33.78 63 **P** **14 26 51.6 -0.2**
KK31 IAmb IAmb 14 26 53.5
comp=Z,9.4nm,1.0s
GAR Garm 33.91 71 P **P** **14 26 53.4 +0.3**
GAR IAmb IAmb 14 26 55.0
comp=Z,9.2nm,0.9s
ARCES ARCESS Array B 34.52 359 P **P** **14 26 55.9 -1.9**
comp=Z,2.3nm,0.8s,baz=163,slow=8.9,SNR=6.1
comp=Z,2.3nm,0.8s
BORK Borovoye 34.78 46 **P** **14 27 00.8 +0.5**
BVAR Borovoye Array 34.82 46 P **P** **14 26 59.9 -0.7**
comp=Z,1.1nm,0.7s,baz=242,slow=3.2,SNR=7.6
BVAR LR LR 14 44 21.6
comp=Z,119nm,19.7s,baz=264,slow=42
comp=Z,1.1nm,0.7s
MBAR Mbarara 35.62 175 LR LR 14 43 14.3
comp=Z,247nm,20.4s,baz=342,slow=39
ARSB Arslanbob 35.71 66 P **P** **14 27 09.3 +0.7**
ARSB IAmb IAmb 14 27 16.2
comp=Z,14nm,1.2s
AAK Ala-Archa 36.73 64 LR LR 14 45 14.2
comp=Z,121nm,18.7s,baz=279,slow=41
NIL Nilore 37.28 79 **P** **14 27 22.9 +0.9**
KSH2 Kashi 37.94 69 P **P** **14 27 28.5 +0.9**
KSH2 pP pwP 14 27 36.5 +4.2
KSH2 pmax pmax
comp=Z,4.0nm,1.4s
NRN Naryn 37.96 66 **P** **14 27 28.8 +0.8**
NRN IAmb IAmb 14 27 30.6
comp=Z,24nm,1.3s
KIBK Kibwezi 38.46 163 **P** **14 27 34.5 +2.5**
KURBB Kurchatov Arra 39.47 51 P **P** **14 27 39.1 -1.0**
comp=Z,3.7nm,0.8s,baz=275,slow=8.8,SNR=26
KURBB PP **PP** **14 29 11.4 +0.9**
comp=Z,6.1nm,1.0s,baz=277,slow=12,SNR=10
comp=Z,3.7nm,0.8s
KURK Kurchatov 39.53 51 **P** **14 27 40.4 -0.1**
DBIC Dimbokro 41.27 234 P **P** **14 27 54.9 -0.5**
comp=Z,5.9nm,0.7s,baz=66,slow=10,SNR=11
DBIC LR LR 14 47 21.8
comp=Z,319nm,19.4s,baz=54,slow=40
comp=Z,5.9nm,0.7s
DBIC Dimbokro 41.27 234 **P** **14 27 55.7 +0.3**
DBIC IAmb IAmb 14 27 58.7
comp=Z,7.8nm,0.8s
BORG Borgarnes 41.66 331 LR LR 14 45 51.7
comp=Z,108nm,20.9s,baz=120,slow=37
MKAR Makanchi Array 41.99 57 P **P** **14 28 00.5 -0.5**
comp=Z,2.3nm,0.7s,baz=274,slow=6.0,SNR=23
MKAR PP **PP** **14 29 35.5 -2.5**
comp=Z,3.0nm,0.9s,baz=265,slow=10,SNR=4.2
MKAR ScP **ScP** **14 33 43.9 -2.7**
comp=Z,0.6nm,0.9s,baz=266,slow=4.3,SNR=3.8
MKAR LR LR 14 49 57.7
comp=Z,96nm,19.0s,baz=266,slow=43
comp=Z,2.3nm,0.7s
MKAR Makanchi Array 41.99 57 **P** **14 28 01.0 0.0**
SPITS Spitsbergen Ar 43.46 357 P **P** **14 28 12.0 -0.5**
comp=Z,1.4nm,0.4s,baz=149,slow=10,SNR=10
SPITS LR LR 14 47 59.3
comp=Z,189nm,19.8s,baz=176,slow=38
comp=Z,1.4nm,0.4s
ZAA0 Zalesovo Array 43.47 46 P **P** **14 28 13.2 +0.3**
ZALV Zalesovo Beam 43.47 46 P **P** **14 28 12.6 -0.4**
comp=Z,1.4nm,0.6s,baz=262,slow=8.7,SNR=7.0
ZALV LR LR 14 48 28.4
comp=Z,118nm,20.4s,baz=222,slow=39
comp=Z,1.4nm,0.6s
ZALV Zalesovo Beam 43.47 46 **P** **14 28 12.8 -0.2**
LSZ Lusaka 50.10 180 LR LR 14 51 34.7
comp=Z,263nm,19.4s,baz=314,slow=38
EVN Everest 50.16 81 **P** **14 29 06.4 0.0**
LSA Lhasa 52.96 77 P **P** **14 29 27.4 +0.3**
LSA IAmb IAmb 14 29 28.8
comp=Z,5.7nm,0.9s
LSA Lhasa 52.96 77 P **P** **14 29 24.3 -2.8**
LSA pmax pmax
comp=Z,7.0nm,1.3s
GOMU GeErMu 53.43 68 P **P** **14 29 31.0 +0.6**
GOMU pmax pmax
comp=Z,6.0nm,1.2s
SFJD Kangerlussuaq 53.78 331 LR LR 14 52 16.9
comp=Z,89nm,21.4s,baz=111,slow=36

TSUM	**Tsumeb**	**54.87**	**192**	LR	LR	14 53 57.2		
	comp=Z,134nm,18.9s,baz=337,slow=37							
TLY	**Talaya**	**55.04**	**47**	LR	LR	14 55 55.3		
	comp=Z,116nm,20.2s,baz=294,slow=39							
GTA2	**Gaotai**	**55.99**	**63**	*eP*	**P**	**14 29 49.0**	**+0.3**	
GTA2				pmax	pmax			
	comp=Z,8.0nm,1.0s							
OPO	**Ambohidratompo**	**56.45**	**158**	LR	LR	14 57 03.5		
	comp=Z,78nm,18.3s,baz=184,slow=39							
SONM	**Songino Array**	**57.83**	**51**	P	**P**	**14 30 01.8**	**+0.3**	
	comp=Z,3.1nm,0.9s,baz=288,slow=7.8,SNR=23							
	comp=Z,3.1nm,0.9s							
SONM	**Songino Array**	**57.83**	**51**		**P**	**14 30 02.5**	**+0.9**	
SONM				IAmb	IAmb	14 30 03.9		
	comp=Z,12nm,1.5s							
KGCAE	**Kacgae**	**57.88**	**186**	P	**P**	**14 30 04.6**	**+2.6**	
ULN	**Ulaanbaatar**	**58.24**	**51**		**P**	**14 30 05.5**	**+1.0**	
ULN				IAmb	IAmb	14 30 06.9		
	comp=Z,8.4nm,1.2s							
ULN	**Ulaanbaatar**	**58.24**	**51**	P	**P**	**14 30 05.7**	**+1.2**	
	comp=Z,29nm,1.6s							
LBTB	**Lobatse**	**59.82**	**182**		**P**	**14 30 17.7**	**+2.3**	
LZDM	**Lanzhou Array**	**60.20**	**65**	P	**P**	**14 30 18.3**	**-0.1**	
	comp=Z,0.6nm,0.3s,baz=297,slow=6.5,SNR=4.6							
	comp=Z,0.6nm,0.3s							
LZH	**Lanzhou**	**60.26**	**65**	*eP*	**P**	**14 30 19.3**	**+0.7**	
LZH				pP	sP	14 30 23.5	+1.0	
LZH				pmax	pmax			
	comp=Z,13nm,1.5s							
TIXI	**Tiksi**	**60.45**	**21**	LR	LR	15 00 03.3		
	comp=Z,121nm,18.6s,baz=308,slow=40							
FRB	**Frobisher Bay**	**61.82**	**330**	LR	LR	14 58 42.0		
	comp=Z,61nm,18.3s,baz=83,slow=37							
BOSA	**Boshof**	**63.42**	**183**	P	**P**	**14 30 39.2**	**-0.5**	
	comp=Z,5.9nm,0.8s,baz=87,slow=11,SNR=4.5							
	comp=Z,5.9nm,0.8s							
CHTO	**Chiang Mai**	**64.23**	**84**	P	**P**	**14 30 45.5**	**+0.2**	
CMAR	**Chiang Mai Arr**	**64.41**	**85**	P	**P**	**14 30 45.6**	**-0.8**	
	comp=Z,2.7nm,0.9s,baz=300,slow=7.7,SNR=26							
	comp=Z,2.7nm,0.9s							
SCHQ	**Schefferville**	**64.64**	**320**	P	**P**	**14 30 46.0**	**-1.4**	
	comp=Z,4.2nm,0.5s,baz=39,slow=5.1,SNR=15							
SCHQ				LR	LR	14 58 40.7		
	comp=Z,73nm,18.3s,baz=70,slow=36							
	comp=Z,4.2nm,0.5s							
SCHQ	**Schefferville**	**64.64**	**320**		**P**	**14 30 46.5**	**-0.8**	
YAK	**Yakutsk**	**64.83**	**31**	LR	LR	15 02 40.5		
	comp=Z,65nm,18.4s,baz=284,slow=39							
XAN	**Xi'an**	**64.89**	**65**	P	**P**	**14 30 50.8**	**+1.3**	
XAN				pP	sP	14 31 00.8	+7.5	
XAN				pmax	pmax			
	comp=Z,7.0nm,1.4s							
HEH	**HeiHe**	**69.44**	**43**	*eP*	**P**	**14 31 21.8**	**+3.8**	
HEH				pmax	pmax			
	comp=Z,5.0nm,1.1s							
D62A	**Allapoint, All**	**69.46**	**314**	P	**P**	**14 31 17.4**	**-0.7**	
KLR	**Kul'dur**	**72.37**	**42**	LR	LR	15 09 57.1		
	comp=Z,62nm,20.5s,baz=304,slow=41							
MA2	**Magadan**	**74.59**	**26**	LR	LR	15 08 41.5		
	comp=Z,137nm,18.1s,baz=318,slow=39							
USRK	**Ussuriysk Ar.**	**75.33**	**46**	P	**P**	**14 31 51.6**	**-1.6**	
	comp=Z,2.0nm,0.7s,baz=305,slow=5.1,SNR=2.6							
	comp=Z,2.0nm,0.7s							
C23K	**Itkillik River**	**75.36**	**359**	P	**P**	**14 31 52.6**	**-0.3**	
B21K	**Ikpikpuk River**	**75.57**	**1**	P	**P**	**14 31 54.2**	**+0.1**	
B21K				IAmb	IAmb	14 32 09.3		
	comp=Z,5.1nm,0.8s							
INK	**Inuvik**	**75.97**	**353**	P	**P**	**14 31 55.0**	**-1.4**	
	comp=Z,1.2nm,0.9s,baz=39,slow=5.8,SNR=5.0							
INK				LR	LR	15 08 41.1		
	comp=Z,50nm,18.2s,baz=318,slow=38							
	comp=Z,1.2nm,0.9s							
E29M	**Blow River**	**76.27**	**355**	P	**P**	**14 31 57.4**	**-0.8**	
KSRS	**Korea Array**	**76.58**	**54**	P	**P**	**14 32 00.1**	**-0.4**	
	comp=Z,2.2nm,0.9s,baz=299,slow=4.0,SNR=4.2							
	comp=Z,2.2nm,0.9s							
SADO	**Sadowa**	**76.62**	**316**	LR	LR	15 07 41.9		
	comp=Z,77nm,18.4s,baz=140,slow=37							
E19K	**Redstone River**	**77.69**	**2**	P	**P**	**14 32 05.8**	**-0.4**	
E19K				IAmb	IAmb	14 32 19.6		
	comp=Z,5.4nm,1.0s							
YKA	**Yellowknife Ar**	**78.16**	**343**	P	**P**	**14 32 08.0**	**-0.9**	
	comp=Z,0.9nm,0.8s,baz=27,slow=5.4,SNR=10.0							
YKA				LR	LR	15 07 47.4		
	comp=Z,87nm,19.3s,baz=44,slow=37							
	comp=Z,0.9nm,0.8s							
G21K	**Allakaket**	**78.70**	**1**	P	**P**	**14 32 11.8**	**0.0**	
G21K				IAmb	IAmb	14 32 32.0		
	comp=Z,6.8nm,1.1s							
G19K	**Purcell Mounta**	**79.01**	**2**		**P**	**14 32 13.5**	**0.0**	
G19K				IAmb	IAmb	14 32 15.0		
	comp=Z,6.3nm,1.2s							
MDP	**Montagnes des**	**79.29**	**269**	LR	LR	15 05 34.7		
	comp=Z,45nm,21.7s,baz=134,slow=34							
J30M	**Hart River**	**79.88**	**353**	P	**P**	**14 32 18.2**	**-0.2**	
J30M				IAmb	IAmb	14 32 26.3		
	comp=Z,6.0nm,1.0s							
ILAR	**Eielson Array**	**80.37**	**358**	P	**P**	**14 32 21.1**	**+0.1**	
	comp=Z,0.5nm,0.8s,baz=350,slow=2.8,SNR=9.3							
	comp=Z,0.5nm,0.8s							
ASAJ	**Asahikawa**	**81.40**	**41**	LR	LR	15 13 43.5		
	comp=Z,81nm,19.5s,baz=354,slow=40							
ULM	**Lac du Bonnet**	**81.56**	**327**	LR	LR	15 08 10.8		
	comp=Z,48nm,18.1s,baz=42,slow=35							
PETK	**Petropavlovsk-**	**81.97**	**28**	LR	LR	15 12 15.7		
	comp=Z,43nm,18.1s,baz=280,slow=38							
DLBC	**Dease Lake**	**84.99**	**349**	LR	LR	15 11 36.9		
	comp=Z,80nm,18.0s,baz=306,slow=36							
TKL	**Tuckaleechee C**	**85.04**	**311**	LR	LR	15 11 27.3		
	comp=Z,44nm,18.9s,baz=50,slow=36							
LEM	**Lembang**	**85.60**	**101**	LR	LR	15 17 57.4		
	comp=Z,63nm,18.1s,baz=314,slow=40							
BDFB	**Brasilia**	**87.71**	**249**	P	**P**	**14 32 59.6**	**+0.4**	
	comp=Z,4.8nm,0.9s,baz=73,slow=4.2,SNR=5.5							
BDFB				LR	LR	15 12 21.2		
	comp=Z,98nm,19.2s,baz=94,slow=36							
	comp=Z,4.8nm,0.9s							
NEW	**Newport**	**91.30**	**337**	LR	LR	15 15 37.4		
	comp=Z,50nm,18.9s,baz=30,slow=36							
JCJ	**Chichijima**	**92.42**	**54**	LR	LR	15 17 32.9		
	comp=Z,62nm,22.0s,baz=164,slow=37							
PDAR	**Pinedale Array**	**93.27**	**330**	LR	LR	15 18 19.5		
	comp=Z,40nm,18.0s,baz=24,slow=37							
ANMO	**Albuquerque**	**98.27**	**324**	LR	LR	15 18 03.4		
	comp=Z,70nm,19.2s,baz=36,slow=35							
ASAR	**Alice Springs**	**115.90**	**102**	PKP	**PKPdf**	**14 38 51.4**	**-1.7**	
	comp=Z,0.4nm,0.9s,baz=295,slow=2.2,SNR=2.6							

*MEX **26** 14:24:39.1±0.3, 14.°75N×94.°37W, h15km, MD4.2*
*GCG **26** 14:24:39.7±2.3, 15.°02N×94.°36W, h36km±999km, MD4.5, ML4.3, Presumed earthquake*
ISC 26 14:24:36.4±1.4**, 14.°75N**±0.°08×**94.°37W**±0.°04**, h28**km**, n23**, σ3$**05/28, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.46**	**49**	*eP*	**Pn**	**14 25 01.4**	**+0.5**
PCIG				*i* S	**Sn**	**14 25 18.9**	**-0.2**
HUIG	**Huatulco**	**1.96**	**301**	*eP*	**Pn**	**14 25 08.6**	**+0.7**
HUIG	**Huatulco**	**1.96**	**301**	*i* P	**Pn**	**14 25 08.5**	**+0.7**
TGIG		**2.34**	**31**	*eP*	**Pn**	**14 25 14.4**	**+1.3**
TGIG		**2.34**	**31**	*i* P	**Pn**	**14 25 14.8**	**+1.7**
TGIG				*i* S	**Sn**	**14 25 37.6**	**-3.5**
CMIG	**Matias Romero**	**2.38**	**348**	*eP*	**Pn**	**14 25 13.6**	**0.0**
CMIG				*i* S	**Sn**	**14 25 37.7**	**-4.2**
UXUV	**UXUV**	**2.56**	**5**	*eP*	**Pn**	**14 25 17.4**	**+1.3**
CCIG	**Comitan**	**2.63**	**54**	*eP*	**Pn**	**14 25 21.4**	**+4.1**
CCIG				*i* S	**Sn**	**14 25 52.4**	**+4.1**
CCIG	**Comitan**	**2.63**	**54**	*i* P	**Pn**	**14 25 21.3**	**+4.1**
CCIG				IAML		14 25 54.0	
	comp=N,978nm,0.6s						
HUEH	**Huehuetenango**	**2.82**	**78**	*i* S	**Sn**	**14 25 56.3**	**+3.1**
HUEH				IAML		14 26 07.7	
	comp=N,2μm,0.5s						
STG2	**El Palmar, Qui**	**2.91**	**96**	*i* P	**Pn**	**14 25 19.9**	**-1.1**
STG8	**El Palmar, Qui**	**2.93**	**95**	*i* P	**Pn**	**14 25 21.2**	**-0.2**
STG8				IAML		14 26 00.8	
	comp=N,732nm,0.3s						
STG5	**El Palmar, Qui**	**2.94**	**96**	*i* P	**Pn**	**14 25 21.8**	**+0.4**
STG5				*i* S	**Sn**	**14 25 51.0**	**-4.8**
YOIG	**Yosondua**	**3.71**	**305**	*eP*	**Pn**	**14 25 36.0**	**+3.9**
APG	**El Apazote**	**3.78**	**86**	*i* P	**Pn**	**14 25 37.5**	**+4.5**
PNIG	**Pinotepa**	**3.98**	**295**	*i* P	**Pn**	**14 25 37.8**	**+2.3**
TXIG	**Tlaxiaco**	**4.11**	**308**	*eP*	**Pn**	**14 25 41.5**	**+3.9**
TOIG	**Toxpalan**	**4.21**	**322**	*eP*	**Pn**	**14 25 43.7**	**+4.7**
HLIG	**Huajuapan de L**	**4.50**	**313**	*eP*	**Pb**	**14 25 52.2**	**-2.7**
FTIG	**Fresnillo de T**	**4.79**	**311**	*eP*	**Pn**	**14 25 49.5**	**+2.7**
MGIG	**Malinaltepec**	**4.79**	**302**	*eP*	**Pn**	**14 25 50.6**	**+3.8**
PETF	**Flores**	**4.84**	**63**	*i* P	**Pn**	**14 25 48.2**	**+0.8**
PETF				IAML		14 27 10.0	
	comp=N,280nm,0.5s						
SCIG	**Sabancuy**	**5.18**	**36**	*eP*	**Pn**	**14 25 53.8**	**+1.7**

*NEIC **26** 14:39:47.8±1.5, 17.°88N±0.°03×66.°92W±0.°01, h10km±1km, ML3.6/33, Md2.9/5(RSPR), Error ellipse: s-maj=5.6km s-min=2.4km az=11.0*
*RSPR **26** 14:39:48.5, 17.°93N×66.°94W, h13km, MD2.9/5*
*OSPL **26** 14:39:48.3±0.3, 17.°86N×66.°94W, h11km±3km, ML3.1, Presumed earthquake*
*SDD **26** 14:39:48.3±2.3, 17.°89N×66.°96W, h15km±15km, MD3.4, ML3.5, MW3.6, Presumed earthquake*
ISC 26 14:39:47.7±1.0**, 17.°92N**±0.°05×**66.°93W**±0.°02**, h18**km±3km**, n46**, σ0$**64/72, 2C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.07**	**36**		**Pg**	**14 39 51.4**	**+0.2**
GBPR					**Sg**	**14 39 53.4**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.07**	**36**	⇑*iP*	**Pg**	**14 39 51.4**	**+0.2**
GBPR				*eS*	**Sg**	**14 39 53.4**	**-0.1**
MLPR	**Magueyes Islan**	**0.13**	**295**		**Pg**	**14 39 51.5**	**-0.1**
MLPR				IAML		14 39 54.7	
	10μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.20**	**297**		**Pg**	**14 39 52.7**	**0.0**
CRPR					**Sb**	**14 39 55.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.20**	**297**	IAML		14 39 56.0	
	20μm,0.3s						
CRPR				IAML		14 39 56.1	
	13μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.20**	**297**	*ePg*	**Pg**	**14 39 52.6**	**0.0**
CRPR				*eSg*	**Sb**	**14 39 55.8**	**-0.2**
CRPR				IAML		14 39 55.9	
	comp=N,13μm,0.7s						
CRPR	**Cabo Rojo, PR**	**0.20**	**297**	⇑*iP*	**Pg**	**14 39 52.7**	**0.0**
CRPR				*eS*	**Sb**	**14 39 55.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.20**	**297**	*i* P	**Pg**	**14 39 52.7**	**0.0**
CRPR				*eS*	**Sb**	**14 39 55.7**	**-0.2**
CRPR				IAML		14 39 56.1	
	comp=Z,14μm,0.2s						
LSP	**Las Mesas**	**0.30**	**329**		**Pg**	**14 39 54.5**	**+0.1**
LSP					**Sg**	**14 39 58.9**	**+0.1**
LSP	**Las Mesas**	**0.30**	**329**	⇑*iP*	**Pg**	**14 39 54.5**	**+0.1**
LSP				*eS*	**Sg**	**14 39 58.9**	**+0.1**
OBIP	**Obispado Ponce**	**0.33**	**67**		**Pb**	**14 39 55.0**	**-0.2**
OBIP	**Obispado Ponce**	**0.33**	**67**		**Sb**	**14 40 00.2**	**+0.1**
OBIP	**Obispado Ponce**	**0.33**	**67**	⇑*iP*	**Pb**	**14 39 55.2**	**0.0**
OBIP				*eS*	**Sb**	**14 40 00.2**	**+0.1**
OBIP	**Obispado Ponce**	**0.33**	**67**	*i* P	**Pb**	**14 39 55.1**	**0.0**
OBIP				*eS*	**Sb**	**14 40 00.2**	**+0.1**
OBIP				IAML		14 40 00.4	
	comp=Z,2μm,0.6s						
CELP	**Cerrillos**	**0.36**	**64**		**Pg**	**14 39 55.3**	**-0.1**
CELP				IAML		14 40 01.5	
	comp=Z,7μm,0.4s						
PRSN	**Puerto Rico Se**	**0.37**	**325**		**Pg**	**14 39 55.5**	**+0.1**
PRSN					**Sb**	**14 40 01.3**	**+0.1**
PRSN	**Puerto Rico Se**	**0.37**	**325**	IAML		14 40 02.0	
	comp=Z,16μm,0.3s						
PRSN				IAML		14 40 06.3	
	comp=Z,11μm,0.2s						
PRSN	**Puerto Rico Se**	**0.37**	**325**	*ePg*	**Pg**	**14 39 55.5**	**+0.1**
PRSN				*eSg*	**Sb**	**14 40 01.5**	**+0.3**
PRSN				IAML		14 40 02.0	
	comp=N,9μm,0.2s						
PRSN	**Puerto Rico Se**	**0.37**	**325**	⇓*iP*	**Pg**	**14 39 55.5**	**+0.1**
PRSN				*eS*	**Sb**	**14 40 01.3**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.39**	**30**		**Pg**	**14 39 55.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.58**	**342**		**Pg**	**14 39 58.8**	**-0.4**
AGPR				IAML		14 40 07.2	
	comp=N,3μm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**342**	*ePg*	**Pg**	**14 39 59.0**	**-0.3**
AGPR				*eSg*	**Sg**	**14 40 06.9**	**-0.2**
AGPR				IAML		14 40 07.0	
	comp=N,4μm,0.2s						
AGPR	**Aguadilla, PR**	**0.58**	**342**	⇑*eP*	**Pg**	**14 39 59.0**	**-0.3**
AGPR				*eS*	**Sg**	**14 40 06.8**	**-0.2**
ECPR	**Experimental S**	**0.67**	**53**		**Pb**	**14 40 00.3**	**-0.6**
ECPR				IAML		14 40 13.0	
	comp=N,2μm,0.2s						
ECPR				IAML		14 40 16.0	
	comp=N,3μm,0.2s						
ECPR	**Experimental S**	**0.67**	**53**	⇑*iP*	**Pb**	**14 40 00.7**	**-0.2**
ECPR				*eS*	**Sg**	**14 40 10.1**	**+0.2**
EMPR	**Esperanza - Ma**	**0.67**	**34**		**Pg**	**14 40 01.1**	**0.0**
EMPR					**Sb**	**14 40 09.7**	**-0.3**
EMPR	**Esperanza - Ma**	**0.67**	**34**	⇓*eP*	**Pg**	**14 40 01.1**	**0.0**
EMPR				*eS*	**Sb**	**14 40 09.7**	**-0.3**
IDE	**Isla Desecheo**	**0.70**	**312**		**Pb**	**14 40 01.0**	**-0.5**
IDE					**Sb**	**14 40 10.7**	**-0.1**
IDE	**Isla Desecheo**	**0.70**	**312**	⇑*eP*	**Pb**	**14 40 01.0**	**-0.5**
IDE				*eS*	**Sb**	**14 40 10.7**	**-0.1**
SJG	**San Juan**	**0.76**	**75**		**Pb**	**14 40 01.9**	**-0.6**
SJG				IAML		14 40 13.8	
	comp=N,2μm,0.4s						
SJG	**San Juan**	**0.76**	**75**	*ePg*	**Pb**	**14 40 02.3**	**-0.2**
SJG				*eSg*	**Sg**	**14 40 13.1**	**+0.2**
SJG	**San Juan**	**0.76**	**75**	*i* P	**Pb**	**14 40 02.3**	**-0.2**
SJG				*eS*	**Sg**	**14 40 12.9**	**0.0**
SJG				IAML		14 40 17.0	
	comp=Z,781nm,0.3s						
PDPR	**Patillas Dam,**	**0.86**	**83**		**Pb**	**14 40 04.0**	**-0.2**
GCPR	**Guaynabo City**	**0.89**	**64**		**Pb**	**14 40 03.8**	**-0.9**
GCPR	**Guaynabo City**	**0.89**	**64**		**Sb**	**14 40 15.5**	**-0.7**
GCPR	**Guaynabo City**	**0.89**	**64**	⇓*eP*	**Pb**	**14 40 04.4**	**-0.3**
GCPR				*eS*	**Sb**	**14 40 15.5**	**-0.7**
HUMP	**Col San Antoni**	**1.05**	**77**		**Pb**	**14 40 05.9**	**-1.5**
HUMP					**Sb**	**14 40 19.7**	**-1.1**
HUMP	**Col San Antoni**	**1.05**	**77**	IAML		14 40 24.6	
	comp=Z,1μm,0.2s						
HUMP	**Col San Antoni**	**1.05**	**77**	⇓*eP*	**Pb**	**14 40 05.9**	**-1.5**
HUMP				*eS*	**Sb**	**14 40 19.7**	**-1.1**
CUPR	**Culebra, Puert**	**1.61**	**76**		**Pb**	**14 40 16.7**	**-0.3**
HIDR	**Higuey Centro**	**1.83**	**292**	*ePg*	**Pb**	**14 40 19.9**	**-0.8**
HIDR				*eSg*	**Sn**	**14 40 40.7**	**-0.4**
HIDR				IAML		14 40 47.1	
	comp=N,210nm,0.3s						
DR12	**Loma Pena Alta**	**2.49**	**291**	Pn	**Pn**	**14 40 29.2**	**+1.8**
HATOM	**Hato Mayor del**	**2.49**	**291**	*ePg*	**Pb**	**14 40 30.4**	**-1.6**
HATOM				*eSg*	**Sb**	**14 41 04.0**	**+1.6**
HATOM				IAML		14 41 11.9	
	comp=N,49nm,0.8s						
DR08	**Loma La Naviza**	**3.12**	**290**	*ePg*	**Pb**	**14 40 40.7**	**-2.1**
DR08				*eSg*	**Sb**	**14 41 19.8**	**-0.7**
DR08				IAML		14 41 25.4	
	comp=N,678nm,0.2s						
BANI	**BANI**	**3.30**	**279**	Pn	**Pn**	**14 40 40.0**	**+1.3**
BANI	**BANI**	**3.30**	**279**	*ePg*	**Pb**	**14 40 44.9**	**-0.9**
BANI				*eSg*	**Sb**	**14 41 25.5**	**-0.3**
BANI				IAML		14 41 37.0	
	comp=N,86nm,0.5s						

*AFAD **26** 14:44:32.9, 35.°15N×27.°51E, h7km±3km, ML3.1*
*IDC **26** 14:44:35.2±0.8, 35.°15N×27.°77E, h0km, mb3.8/16, mbtmp3.8/22, ML3.6/6, MS3.0/6, Error ellipse: s-maj=18.6km s-min=14.3km az=158.0*
*ISK **26** 14:44:37.1, 35.°14N×27.°82E, h5km, ML3.7/26*
*GII **26** 14:44:37.4±0.0, 35.°043N±0.°001×28.°048E±0.°001, h0km, Mws3.7, confirmed*
*ATH **26** 14:44:41.2, 35.°26N×27.°99E, h35km±10km, ML3.6/12, Manual Solution by A.Andreou First location: 2020/02/26 14:46:15, This location: 2020/09/03 10:18:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
ISC 26 14:44:35.9±1.4**, 35.°10N**±0.°03×**27.°95E**±0.°03**, h5**km±9km**, n102, σ1$**73/129**, mb3.7/15, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.79**	**305**	Pg	**Pg**	**14 44 50.2**	**-0.8**
KARP				Sg	**Sg**	**14 45 00.5**	**-0.7**
ARG	**Arkhangelos**	**1.13**	**7**	Pn	**Pn**	**14 44 58.8**	**+0.4**
ARG				Sn	**Sn**	**14 45 14.6**	**+0.3**
ARG	**Arkhangelos**	**1.13**	**7**	P	**Pg**	**14 44 58.1**	**+0.5**
ARG				S	**Sg**	**14 45 10.4**	**-1.8**
ZKR	**Zakros**	**1.42**	**271**	Pn	**Pb**	**14 45 02.8**	**-0.1**
ZKR				Sn	**Sn**	**14 45 21.5**	**0.0**
ZKR	**Zakros**	**1.42**	**271**	P	**Pg**	**14 45 05.1**	**+2.0**
ZKR				S	**Sg**	**14 45 23.2**	**+1.6**
DAT	**Datca**	**1.66**	**350**	Pn	**Pn**	**14 45 06.6**	**+0.8**
DAT				Sn	**Sb**	**14 45 28.6**	**+0.3**
TURN	**Turunc**	**1.69**	**8**	Pn	**Pb**	**14 45 07.8**	**+0.2**
KSL	**Kastellorizon**	**1.70**	**51**	P	**Pb**	**14 45 07.2**	**-0.4**
KSL				S	**Sn**	**14 45 25.9**	**-2.5**
AKAS	**Kas**	**1.76**	**49**	Pn	**Pb**	**14 45 09.6**	**+0.7**
DALY	**Dalyan (Mula)**	**1.81**	**18**	Pn	**Pb**	**14 45 09.7**	**+0.1**
NPS	**Neapolis**	**1.92**	**276**	P	**Pb**	**14 45 11.3**	**-0.2**
NPS				S	**Sb**	**14 45 35.4**	**-0.4**
BODT	**Bodrum**	**2.03**	**345**	Pn	**Pn**	**14 45 12.0**	**+1.2**
YER	**Yerkesik**	**2.05**	**7**	Pn	**Pb**	**14 45 12.9**	**-0.9**
YKAV	**Yalikavak-Bodr**	**2.10**	**345**	Pn	**Pn**	**14 45 12.9**	**+1.2**
CAME	**Cameli-Denizli**	**2.15**	**30**	Pn	**Pn**	**14 45 14.9**	**-0.5**
MLSB	**Milas**	**2.20**	**356**	Pn	**Pn**	**14 45 14.8**	**+1.6**
ELL	**Elmali**	**2.29**	**43**	Pn	**Pb**	**14 45 17.4**	**-0.5**
THERA	**Ancient Thera,**	**2.38**	**303**	P	**Pn**	**14 45 17.0**	**+1.4**
SAP3	**Santorini-Thir**	**2.50**	**303**	P	**Pn**	**14 45 19.1**	**+1.8**
IDI	**Anoyia**	**2.51**	**275**	Pn	**Pn**	**14 45 18.2**	**+0.7**
IDI	**Anoyia**	**2.51**	**275**	P	**Pb**	**14 45 19.7**	**-1.9**
APMY	**Acipayam-Deniz**	**2.61**	**24**	Pn	**Pn**	**14 45 21.2**	**+2.3**
GCAM	**G?zelcaml?**	**2.66**	**348**	Pn	**Pn**	**14 45 21.2**	**+1.7**
KORT	**Korkueli**	**2.72**	**45**	Pn	**Pb**	**14 45 23.5**	**-1.7**
SMG	**Samos**	**2.76**	**341**	P	**Pn**	**14 45 20.6**	**-0.3**
ANTB	**Antalya**	**2.84**	**50**	Pn	**Pb**	**14 45 25.2**	**-1.9**
AYDB	**Zeytinkoy-Aydi**	**2.84**	**359**	Pn	**Pn**	**14 45 23.9**	**+1.7**
NAZL	**Nazilli-Aydin**	**2.88**	**5**	Pn	**Pn**	**14 45 24.9**	**+1.9**
BUCA	**Burdur, Bucak-**	**3.07**	**43**	P	**Pb**	**14 45 28.6**	**-2.5**
BUCA				S	**Sb**	**14 46 08.7**	**-0.2**
BUCA				IAML		14 46 48.0	
	comp=N,49nm,0.8s						
BUCA				IAML		14 46 54.0	
	comp=E,55nm,0.9s						
ODEM	**Odemis-Izmir**	**3.18**	**2**	Pn	**Pn**	**14 45 28.7**	**+2.0**
GVD	**Gavdhos**	**3.18**	**266**	Pn	**Pn**	**14 45 27.9**	**+1.3**
CHAN	**Chania**	**3.22**	**279**	P	**Pn**	**14 45 29.7**	**+2.5**
IMMV	**Iera Moni Meta**	**3.27**	**278**	Pn	**Pn**	**14 45 29.1**	**+1.3**
IMMV	**Iera Moni Meta**	**3.27**	**278**	P	**Pn**	**14 45 30.4**	**+2.6**
BASM	**Basmaki-Afyon**	**3.29**	**30**	Pn	**Pn**	**14 45 30.9**	**+2.7**
KULA	**Kula-Manisa**	**3.46**	**9**	Pn	**Pn**	**14 45 32.9**	**+2.3**
KNDR	**Palaiochora Ch**	**3.54**	**273**	Pn	**Pn**	**14 45 33.1**	**+1.5**
AKMS	**Akamas**	**3.60**	**90**	P	**Pn**	**14 45 34.1**	**+1.7**
GAZI	**Gazipasa**	**3.73**	**71**	P	**Pn**	**14 45 35.6**	**+1.3**
GAZI				S	**Sn**	**14 46 20.1**	**+1.5**
NATA	**Nata**	**3.81**	**93**	P	**Pn**	**14 45 37.4**	**+2.0**
ALFC	**Alefka**	**3.81**	**88**	P	**Pn**	**14 45 36.8**	**+1.4**
ANKY	**Antikythira Is**	**3.87**	**283**	P	**Pn**	**14 45 38.3**	**+2.2**
SEDI	**Konya, Seydise**	**3.87**	**52**	P	**Pn**	**14 45 40.0**	**+3.8**
SEDI				S	**Sb**	**14 46 29.2**	**-2.8**
SEDI				IAML		14 46 32.0	
	comp=N,98nm,0.5s						
SEDI				IAML		14 46 39.0	
	comp=E,95nm,0.9s						
DOGA	**KONYA_Doganhis**	**4.24**	**44**	P	**Pn**	**14 45 44.1**	**+2.8**
DOGA				S	**Sb**	**14 46 38.2**	**-4.4**
DOGA				IAML		14 46 39.0	
	comp=N,80nm,0.6s						
DOGA				IAML		14 46 42.0	
	comp=E,70nm,0.7s						
VLY	**Voula,Athens**	**4.33**	**311**	P	**Pn**	**14 45 44.2**	**+1.7**
ASGA	**Asgata**	**4.37**	**93**	P	**Pn**	**14 45 44.3**	**+1.3**
VLI	**Velia**	**4.38**	**293**	P	**Pn**	**14 45 44.3**	**+1.2**
DION	**Dionisos Attik**	**4.39**	**314**	P	**Pn**	**14 45 44.9**	**+1.6**
CSS	**Mathiatis**	**4.42**	**90**	P	**Pn**	**14 45 44.2**	**+0.5**
CSS				S	**Sn**	**14 46 35.5**	**-0.1

6.3nm,0.7s,baz=181,slow=7.7,SNR=4.0
6.3nm,0.7s
ESDC Sonseca Array 25.69 290 P P 14 50 05.6 -1.3
0.9nm,0.7s,baz=90,slow=9.5,SNR=2.1
ESDC LR LR 15 00 12.8
comp=Z,60nm,18.7s,baz=24,slow=37
0.9nm,0.7s
FINES FINESS Array B 26.39 358 P P 14 50 12.1 -0.9
6.8nm,1.0s,baz=149,slow=12,SNR=4.5
6.8nm,1.0s
HFS Hagfors 26.71 344 P P 14 50 15.1 -0.8
1.5nm,0.6s,baz=147,slow=13,SNR=4.1
1.5nm,0.6s
NOA NORSAR Array B 28.09 343 P P 14 50 28.1 -0.3
0.4nm,0.6s,baz=157,slow=6.3,SNR=3.4
NOA LR LR 15 01 47.8
comp=Z,20nm,19.0s,baz=140,slow=37
0.4nm,0.6s
TORD Torodi Ar. Bea 32.25 234 P P 14 51 05.4 -0.1
1.5nm,0.8s,baz=28,slow=5.7,SNR=7.8
1.5nm,0.8s
KURBB Kurchatov Arra 39.39 51 P P 14 52 07.8 +1.4
0.5nm,0.7s,baz=272,slow=8.6,SNR=5.2
0.5nm,0.7s
DBIC Dimbokro 41.35 235 P P 14 52 22.4 -0.6
1.0nm,0.4s,baz=69,slow=8.6,SNR=4.0
1.0nm,0.4s
MKAR Makanchi Array 41.90 57 P P 14 52 28.3 +1.0
0.4nm,0.5s,baz=274,slow=7.4,SNR=13
0.4nm,0.5s
ZALV Zalesovo Beam 43.40 46 P P 14 52 39.6 +0.3
0.6nm,0.5s,baz=268,slow=10,SNR=2.2
0.6nm,0.5s
SPITS Spitsbergen Ar 43.47 357 P P 14 52 39.0 -0.6
1.5nm,0.6s,baz=156,slow=11,SNR=6.0
1.5nm,0.6s
SONM Songino Array 57.75 51 P P 14 54 29.8 +1.8
0.9nm,0.8s,baz=284,slow=8.2,SNR=5.8
0.9nm,0.8s
CMAR Chiang Mai Arr 64.31 85 P P 14 55 12.4 -0.4
0.2nm,0.4s,baz=319,slow=5.7,SNR=1.5
0.2nm,0.4s
SCHQ Schefferville 64.70 320 P P 14 55 12.8 -2.0
2.3nm,0.5s,baz=56,slow=4.5,SNR=9.1
2.3nm,0.5s
YKA Yellowknife Ar 78.19 343 P P 14 56 36.0 -0.1
0.1nm,0.5s,baz=25,slow=5.5,SNR=2.4
0.1nm,0.5s
ILAR Eielson Array 80.38 358 P P 14 56 47.9 -0.1
0.2nm,0.7s,baz=344,slow=3.0,SNR=2.3
0.2nm,0.7s

*DNK **26** 14:46:25.8±0.6, 62.°54N×17.°62E, h0km, ML2.4(UPP), Explosion*
*UPP **26** 14:46:25.4±0.1, 62.°55N×17.°63E, h0km, ML2.4, Suspected explosion*
*HEL **26** 14:46:25.9±1.2, 62.°80N×17.°60E, h0km, ML1.7, Explosion*
*IDC **26** 14:46:26.7±1.0, 62.°38N×17.°64E, h0km, mbtmp2.7/4, ML1.5/3, Error ellipse: s-maj=14.0km s-min=6.1km az=160.0*

ISC 26 14:46:24.9±0.9, 62.°56N±0.°03×17.°53E±0.°03, h0km, n27, σ1s05/41, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HEMU	**Hemsoen**	**0.26**	**64**	P	**Pg**	**14 46 30.0**	**+0.1**
HEMU				S	**Sg**	**14 46 33.4**	**+0.2**
HEMU	**Hemsoen**	**0.26**	**64**	P	**Pg**	**14 46 30.0**	**+0.1**
HEMU				S	**Sg**	**14 46 33.4**	**+0.2**
HEMU	**Hemsoen**	**0.26**	**64**	PG	**Pg**	**14 46 30.0**	**+0.1**
HEMU				SG	**Sg**	**14 46 33.3**	**+0.1**
HASU	**Hassela**	**0.59**	**227**	P	**Pg**	**14 46 37.1**	**+0.8**
HASU				S	**Sg**	**14 46 44.9**	**+1.0**
HASU	**Hassela**	**0.59**	**227**	P	**Pg**	**14 46 37.1**	**+0.8**
HASU				S	**Sg**	**14 46 44.9**	**+1.0**
ARNU	**Arnoeviken**	**0.88**	**185**	P	**Pg**	**14 46 41.6**	**-0.1**
ARNU				S	**Sg**	**14 46 52.6**	**-0.3**
ARNU	**Arnoeviken**	**0.88**	**185**	P	**Pg**	**14 46 41.6**	**-0.1**
ARNU				S	**Sg**	**14 46 52.6**	**-0.3**
HUSU	**Husum**	**1.10**	**44**	P	**Pg**	**14 46 45.3**	**-0.7**
HUSU	**Husum**	**1.10**	**44**	P	**Pg**	**14 46 45.3**	**-0.7**
ROTU	**Roteberg**	**1.40**	**216**	P	**Pn**	**14 46 51.5**	**-0.2**
ROTU				S	**Sg**	**14 47 09.6**	**-0.4**
ROTU	**Roteberg**	**1.40**	**216**	P	**Pn**	**14 46 51.5**	**-0.2**
ROTU				S	**Sg**	**14 47 09.6**	**-0.4**
BREU	**Bredtraesk**	**1.42**	**19**	P	**Pn**	**14 46 51.9**	**0.0**
BREU	**Bredtraesk**	**1.42**	**19**	P	**Pn**	**14 46 51.9**	**0.0**
NOD	**Norderasen**	**1.51**	**307**	P	**Pn**	**14 46 53.7**	**+0.5**
NOD	**Norderasen**	**1.51**	**307**	P	**Pn**	**14 46 53.7**	**+0.5**
IGGU	**Iggoen**	**1.70**	**184**	P	**Pn**	**14 46 56.1**	**+0.4**
IGGU	**Iggoen**	**1.70**	**184**	P	**Pn**	**14 46 56.1**	**+0.4**
KPF	**Kankaanpaa**	**2.25**	**107**	PB	**Pb**	**14 47 05.0**	**-1.4**
	baz=282						
KPF				smax	smax	14 47 34.0	
	comp=Z,5.3nm,0.2s						
KPF				SG	**Sb**	**14 47 34.3**	**-0.4**
VAF	**Ylistaro**	**2.41**	**76**	PG	**Pb**	**14 47 07.4**	**-1.7**
VAF				smax	smax	14 47 34.8	
	comp=Z,3.1nm,0.2s						
RAF	**Rauma**	**2.53**	**126**	SN	**Sb**	**14 47 40.6**	**-2.2**
RAF				smax	smax	14 47 44.1	
	comp=Z,1.1nm,0.2s						
AAL	**Aland**	**2.67**	**153**	SN	**Sb**	**14 47 45.9**	**-0.8**
HFS	**Hagfors**	**3.06**	**219**	Pn	**Pn**	**14 47 15.5**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=42,slow=14,SNR=1.5						
HFS				Sn	**Sn**	**14 47 51.3**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=42,slow=25,SNR=7.3						
HFS				Lg	Lg	14 47 59.7	
	comp=Z,0.6nm,0.3s,baz=35,slow=30,SNR=7.8						
	comp=Z,2.2nm,0.7s						
NOA	**NORSAR Array B**	**3.37**	**246**	Pn	**Pn**	**14 47 19.5**	**+0.8**
	baz=63,slow=16,SNR=1.4						
NOA				Lg	Lg	14 48 10.7	
	comp=Z,0.1nm,0.3s,baz=62,slow=20,SNR=5.4						
	comp=Z,0.3nm,0.6s						
FIA0	**FINESS Array S**	**4.18**	**102**	PN	**Pn**	**14 47 31.4**	**+1.5**
	baz=294						
FIA0				SN	**Sn**	**14 48 21.4**	**+2.0**
FINES	**FINESS Array B**	**4.18**	**102**	Pn	**Pn**	**14 47 30.7**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=289,slow=13,SNR=5.8						
FINES				Pg	**Pb**	**14 47 39.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=284,slow=13,SNR=1.3						
FINES				Sn	**Sn**	**14 48 20.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=291,slow=21,SNR=6.2						
FINES				Lg	Lg	14 48 33.2	
	comp=Z,0.6nm,0.3s,baz=290,slow=27,SNR=9.9						
	comp=Z,2.7nm,0.9s						
PVF	**Pernaja**	**4.47**	**113**	PN	**Pn**	**14 47 37.1**	**+3.4**
ARCES	**ARCESS Array B**	**7.71**	**21**	Pn	**Pn**	**14 48 20.3**	**+2.0**
	comp=Z,2.7nm,0.9s,baz=205,slow=15,SNR=2.0						

JMA 26 14:49:21.8±0.2, 38.°0N±0.°9×14.°4E±.°, h43km, MV3.6/32, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.11**	**278**	P	Pn	14 49 55.5	+1.0
JIKH				eS	Sn	14 50 20.6	+1.0
OFUJ	**Ofunato**	**2.19**	**299**	P	Pn	14 49 56.8	+1.2
OFUJ				eS	Sn	14 50 22.8	+1.4
JKMT	**Kesennumamotoy**	**2.22**	**291**	eP	Pn	14 49 57.3	+1.3
JKMT				eS	Sn	14 50 23.7	+1.5
JIO	**Ouri**	**2.22**	**282**	P	Pn	14 49 57.5	+1.4
JIO				eS	Sn	14 50 23.4	+1.1
JMK	**Ichinoseki**	**2.45**	**293**	eP	Pn	14 50 00.9	+1.7
JMK				eS	Sn	14 50 29.9	+1.9
JOM	**Ohasama**	**2.63**	**304**	eP	Pn	14 50 03.4	+1.6
JOM				eS	Sn	14 50 34.9	+2.4
JOTO	**OTAMA OYAMA**	**3.04**	**262**	eP	Pn	14 50 09.6	+2.3
JOTO				eS	Sn	14 50 44.3	+1.7
JYK	**Kaneyama**	**3.08**	**288**	eP	Pn	14 50 09.9	+2.0
JYK				eS	Sn	14 50 46.7	+3.3
JANG	**Nango**	**3.08**	**320**	eS	Sn	14 50 43.5	-0.1
JOT	**Ohata**	**4.09**	**326**	eS	Sn	14 51 07.6	-0.8
BSO1	**Boso 1**	**4.23**	**218**	eS	Sn	14 51 10.7	-0.3
JCH	**Churui**	**4.60**	**353**	eP	Pn	14 50 28.4	-0.4
JCH				eS	Sn	14 51 17.9	-3.1
JRY	**Ryogami san**	**4.64**	**246**	eP	Pn	14 50 30.2	+0.9
JRY				eS	Sn	14 51 20.5	-1.5
NEM2	**Nemuro 2**	**5.46**	**13**	eP	Pn	14 50 37.8	-2.7
NEM2				eS	Sn	14 51 33.8	-8.1
JTKR	**Abashiri--Toko**	**5.92**	**359**	eP	Pn	14 50 46.3	-0.6
JTKR				eS	Sn	14 51 48.6	-4.9
JHR	**Hokuryu**	**5.98**	**343**	eP	Pn	14 50 50.3	+2.6

KRSC 26 14:53:32.0±0.7, 52.°81N×159.°89E, h42km±7km, MI3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.30**	**15**	*i* P	Pn	14 53 41.6	+1.3
SPN				eS	Sn	14 53 47.6	+1.3
NLC	**Nalytchevo**	**0.49**	**318**	*i* P	Pn	14 53 43.5	+0.8
NLC				eS	Sn	14 53 50.8	+0.6
DALK	**Dalny**	**0.72**	**288**	eP	Pn	14 53 46.4	+0.7
DALK				eS	Sn	14 53 56.6	+1.0
UGLR	**Uglovaya**	**0.76**	**302**	eP	Pn	14 53 47.5	+1.2
SDLR	**Sedlovina**	**0.77**	**308**	eP	Pn	14 53 47.4	+1.0
PET	**Petropavlovsk**	**0.78**	**287**	eP	Pn	14 53 47.3	+0.8
PET				eS	Sn	14 53 57.8	+0.8
SMAR	**Somma**	**0.80**	**305**	eP	Pn	14 53 48.0	+1.0
INSR	**Institute**	**0.82**	**289**	eP	Pn	14 53 48.4	+1.4
INSR				eS	Sn	14 53 59.2	+1.1
AVH	**Avacha**	**0.83**	**304**	eP	Pn	14 53 48.7	+1.3
KRER	**Koryakskii**	**0.85**	**306**	eP	Pn	14 53 49.0	+1.4
KOK	**Koryaka**	**0.90**	**303**	eP	Pn	14 53 49.5	+1.2
RUS	**Russkaya**	**0.92**	**246**	eP	Pn	14 53 49.2	+0.8
RUS				eS	Sn	14 54 01.6	+1.2
KRX	**Arik**	**0.93**	**307**	eP	Pn	14 53 49.7	+1.0
KRMR	**Karymshinskiy**	**1.07**	**272**	eP	Pn	14 53 51.4	+1.0
KRMR				eS	Sn	14 54 04.7	+0.6
MTVR	**Mutnovka**	**1.09**	**253**	eP	Pn	14 53 52.1	+1.3
MTVR				eS	Sn	14 54 06.1	+1.2
GRL	**Gorelyy**	**1.14**	**258**	eP	Pn	14 53 53.0	+1.5
KII	**Karymskiy**	**1.26**	**348**	eP	Pn	14 53 54.5	+1.4
KII				eS	Sn	14 54 10.0	+1.2
ASAK	**Asacha**	**1.29**	**251**	eP	Pn	14 53 55.3	+1.7
GNL	**Ganaly**	**1.47**	**308**	eP	Pn	14 53 58.5	+2.4
GNL				eS	Sn	14 54 17.3	+3.2
KDTR	**Khodutka, Kamc**	**1.50**	**229**	eP	Pn	14 53 57.6	+1.3
APC	**Apacha**	**1.66**	**275**	eP	Pn	14 54 01.0	+2.5
APC				eS	Sn	14 54 21.5	+2.9
MKZ	**Mys Kozlova**	**2.06**	**31**	eP	Pn	14 54 04.9	+0.8
PAU	**Pauzhetka**	**2.33**	**236**	eP	Pn	14 54 09.7	+2.0
TUMD	**Tumrok D**	**2.42**	**7**	eP	Pn	14 54 11.6	+2.6
KMNR	**Kamenistaya**	**2.96**	**4**	eP	Pn	14 54 20.1	+3.6
ESO	**Esso**	**3.20**	**348**	eP	Pn	14 54 22.3	+2.5

NNC 26 15:02:00.3±7.2, 37.°50N×71.°24E, h0km, mb3.7, mpv3.4, 4C, Error ellipse: s-maj=73.7km s-min=43.7km az=146.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.62**	**355**	P	Pn	15 03 26.9	+1.8
	2.0nm,0.2s,baz=185,slow=14,SNR=33						
KK31				⇑S	Sn	15 04 31.8	+1.3
	1.0nm,0.3s,baz=169,slow=25,SNR=6.4						
AAK	**Ala-Archa**	**5.71**	**25**	⇑P	Pn	15 03 26.1	-0.3
	1.0nm,0.4s						
AAK				⇑S	Sn	15 04 33.5	+0.8
	2.3nm,0.6s						
AB31	**Akbulak array**	**14.32**	**329**	⇑P	Pn	15 05 20.9	-3.2
	0.2nm,0.3s,baz=137,slow=14,SNR=24						

DJA 26 15:03:18.3±0.9, 1.°N±2.°×12.°6E±.°, h27km±8km, M3.9/12, mB5.0/2, mb4.3/1, MLv3.7/12, Mw(mB)4.3/2, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.22**	**268**	P	Pb	15 03 40.4	-0.4
MNI				S	Sb	15 03 58.6	+2.5
TNTI	**Ternate**	**1.48**	**118**	P	Pb	15 03 44.4	-0.8
TNTI				S	Sb	15 04 04.9	+1.2
SGSI	**Sangihe**	**2.25**	**346**	P	Pn	15 03 52.3	-1.6
SGSI				S	Sn	15 04 21.1	+0.3
SANI	**Sanana**	**3.51**	**181**	P	Pn	15 04 08.8	-2.3
KRAI	**Karang Ratu**	**5.31**	**154**	P	Pn	15 04 36.0	+0.1

*IDC **26** 15:04:06.2±0.4, 32.°84N×76.°17E, h0km, mb4.7/49, mbtmp4.7/51, ML4.4/2, MS3.9/44, Error ellipse: s-maj=12.6km s-min=8.0km az=18.0*
*MOS **26** 15:04:06.8±1.0, 32.°99N×76.°21E, h10km, mb5.1/38, MS4.1/5, Error ellipse: s-maj=5.5km s-min=3.1km az=102.1*
*NEIC **26** 15:04:09.0±1.7, 32.°98N±0.°04×76.°25E±0.°07, h10km±1km, mb5.0/189, Error ellipse: s-maj=10.1km s-min=5.1km az=112.0*
*BJI **26** 15:04:09.6, 33.°11N×76.°64E, h8km, mB5.0/21, mb4.8/66, ML5.0/2, Ms4.3/44, Ms7 4.1/44*
*NDI **26** 15:04:13.3±1.9, 32.°95N×76.°28E, h9km, ML5.0, MW5.0*

ISC 26 15:04:09.9±0.4, 32.°99N±0.°02×76.°25E±0.°02, h19km±1km, h19km:pP-P, n839, σ1s49/833, mb4.9/220, MS4.0/61, 33C-14D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSSA	**Tissa**	**0.17**	**208**	eP	**Pg**	**15 04 17.1**	**+2.2**
TSSA				IAML		15 04 17.4	
	comp=E,319μm,0.2s						
TSSA				IAML		15 04 17.6	
	comp=N,265μm,0.3s						
TSSA				eS	**Sg**	**15 04 20.0**	**+1.8**
THN	**Thein Dam**	**0.68**	**217**	eP	**Pn**	**15 04 25.9**	**+1.3**
THN				eS	**Sn**	**15 04 35.1**	**+0.4**
THN				IAML		15 04 36.8	
	comp=E,413μm,0.9s						
THN				IAML		15 04 39.0	
	comp=N,19μm,0.6s						
DHRM	**DHARAMSHALA**	**0.74**	**176**	eP	**Pn**	**15 04 26.6**	**+1.1**
DHRM				eS	**Sn**	**15 04 36.9**	**+0.6**
DHRM				IAML		15 04 38.0	
	comp=E,21μm,0.7s						
DHRM				IAML		15 04 39.2	
	comp=N,14μm,0.3s						
TLWR	**Talawar**	**1.06**	**193**	eP	**Pg**	**15 04 32.9**	**+2.4**
TLWR				eS	**Sg**	**15 04 48.0**	**+3.5**
TLWR				IAML		15 04 53.9	
	comp=N,13μm,0.4s						
TLWR				IAML		15 04 53.9	
	comp=E,13μm,0.6s						
JMU	**Jammu**	**1.21**	**261**	eP	**Pg**	**15 04 36.5**	**+3.2**
JMU				eS	**Sg**	**15 04 54.1**	**+4.9**
JMU				IAML		15 04 54.9	
	comp=E,36μm,0.6s						
JMU				IAML		15 04 55.1	
	comp=N,35μm,0.5s						
ALCI	**Alchi Leh**	**1.45**	**32**	eP	**Pg**	**15 04 40.8**	**+2.7**
ALCI				eS	**Sg**	**15 04 59.4**	**+2.3**
ALCI				IAML		15 05 03.5	
	comp=E,13μm,0.6s						
ALCI				IAML		15 05 04.1	
	comp=N,7μm,0.5s						
BHK	**Bhakra**	**1.59**	**176**	eP	**Pg**	**15 04 42.7**	**+2.1**
BHK				eS	**Sg**	**15 05 04.0**	**+2.6**
BHK				IAML		15 05 04.2	
	comp=N,31μm,0.6s						
BHK				IAML		15 05 05.6	
	comp=E,28μm,0.4s						
SRNI	**Srinagar**	**1.60**	**312**	eP	**Pg**	**15 04 42.6**	**+1.8**
SRNI				eS	**Sg**	**15 05 05.2**	**+3.4**
SRNI				IAML		15 05 12.6	
	comp=N,61μm,0.9s						
SRNI				IAML		15 05 12.8	
	comp=E,61μm,0.4s						
SMLA	**Simla**	**2.01**	**157**	eP	**Pb**	**15 04 45.6**	**-0.3**
SMLA				eS	**Sb**	**15 05 11.8**	**+1.3**
SMLA				IAML		15 05 15.3	
	comp=E,17μm,0.5s						
SMLA				IAML		15 05 15.9	
	comp=N,11μm,0.4s						
KLP	**Kalpa**	**2.23**	**130**	eP	**Pb**	**15 04 50.1**	**+0.3**
KLP				eS	**Sb**	**15 05 18.9**	**+1.7**
KLP				IAML		15 05 26.0	
	comp=E,10μm,1.0s						
KLP				IAML		15 05 27.3	
	comp=N,7μm,0.5s						
NIL	**Nilore**	**2.59**	**286**		**Pn**	**15 04 52.8**	**+1.9**
NIL	**Nilore**	**2.59**	**286**	P	**Pn**	**15 04 52.8**	**+1.9**
NIL	**Nilore**	**2.59**	**286**	P	**Pb**	**15 04 53.7**	**-2.1**
KKR	**Kurukshetra**	**3.06**	**171**	eP	**Pb**	**15 05 03.5**	**-0.2**
KKR				eS	**Sn**	**15 05 35.9**	**+2.6**
KKR				IAML		15 05 53.7	
	comp=E,6μm,1.0s						
KKR				IAML		15 05 58.6	
	comp=N,4μm,0.8s						
DDI	**Dehra Dun**	**3.07**	**149**	eP	**Pb**	**15 05 01.7**	**-2.3**
DDI				eS	**Sb**	**15 05 38.1**	**-3.0**
DDI				IAML		15 05 50.4	
	comp=E,5μm,0.1s						
DDI				IAML		15 05 51.1	
	comp=N,5μm,0.3s						
JOSI	**Joshimath**	**3.72**	**130**	eP	**Pn**	**15 05 10.1**	**+3.6**
JOSI				eS	**Sn**	**15 05 53.2**	**+3.3**
JOSI				IAML		15 06 14.2	
	comp=N,5μm,0.5s						
JOSI				IAML		15 06 14.3	
	comp=E,6μm,0.7s						
RTK	**Rohtak**	**3.94**	**178**	eP	**Pn**	**15 05 13.4**	**+4.0**
RTK				eS	**Sn**	**15 05 56.5**	**+1.4**
RTK				IAML		15 06 16.9	
	comp=E,4μm,0.5s						
RTK				IAML		15 06 17.1	
	comp=N,4μm,0.7s						
MERT	**Meerut**	**4.20**	**162**	eP	**Pn**	**15 05 17.5**	**+4.6**
MERT				eS	**Sn**	**15 06 04.5**	**+3.0**
MERT				IAML		15 06 23.3	
	comp=E,3μm,0.4s						
MERT				IAML		15 06 28.9	
	comp=N,2μm,0.7s						
NDI	**New Delhi**	**4.37**	**169**	eP	Pn	15 05 20.5	+5.3
NDI				eS	**Sn**	**15 06 09.1**	**+3.4**
NDI				IAML		15 06 34.4	
	comp=E,2μm,0.3s						
NDI				IAML		15 06 35.5	
	comp=N,2μm,1.1s						
PTH	**Pithoragarh**	**4.79**	**134**	eP	**Pn**	**15 05 25.6**	**+4.3**
PTH				eS	**Sn**	**15 06 19.0**	**+2.6**
PTH				IAML		15 06 42.7	
	comp=E,2μm,0.5s						
PTH				IAML		15 06 44.6	
	comp=N,3μm,0.5s						
KUDL	**Kundal**	**4.83**	**177**	eP	**Pn**	**15 05 26.1**	**+4.5**
KUDL				eS	**Sn**	**15 06 17.9**	**+0.9**
KUDL				IAML		15 06 43.6	
	comp=N,4μm,0.5s						
LGTI	**Lohaghat**	**4.86**	**136**	eP	**Pn**	**15 05 26.1**	**+3.9**
LGTI				eS	**Sn**	**15 06 17.5**	**-0.6**
LGTI				IAML		15 06 20.6	
	comp=N,3μm,1.3s						
KSH2	**Kashi**	**6.17**	**355**	Pn	**Pn**	**15 05 44.3**	**+4.2**
KSH2				Sn	**Sn**	**15 06 53.5**	**+3.3**
KSH2				smax	smax		
	comp=N,910nm,0.6s						
KSH2				smax	smax		
	comp=N,2μm,0.7s						
KBL	**Kabul**	**6.20**	**286**		**Pn**	**15 05 41.2**	**+0.7**
KBL	**Kabul**	**6.20**	**286**	P	**Pn**	**15 05 41.2**	**+0.7**
KBL	**Kabul**	**6.20**	**286**	P	**Pn**	**15 05 41.9**	**+1.3**
	SNR=35						
KBL				S	**Sn**	**15 06 51.8**	**+0.9**
DRK	**Karamyk**	**7.41**	**332**	Pn	**Pn**	**15 05 58.6**	**+1.4**
DRK	**Karamyk**	**7.41**	**332**	P	**Pn**	**15 05 58.6**	**+1.4**
GAR	**Garm**	**7.69**	**323**		**Pn**	**15 06 01.0**	**+0.1**
JHNI	**Jhansi**	**7.79**	**164**	eP	**Pn**	**15 06 05.3**	**+3.1**
JHNI				eS	**Sn**	**15 07 27.4**	**-2.4**
JHNI				IAML		15 08 21.6	
	comp=N,3μm,1.2s						
JHNI				IAML		15 08 22.5	
	comp=E,2μm,0.9s						
SHAA	**Shahritus**	**8.06**	**307**		**Pn**	**15 06 05.4**	**-0.5**
CHGR	**Chuyangaron**	**8.07**	**317**		**Pn**	**15 06 04.8**	**-1.2**
CHGR	**Chuyangaron**	**8.07**	**317**	P	**Pn**	**15 06 04.9**	**-1.2**
BTK	**Batken**	**8.30**	**330**		**Pn**	**15 06 10.1**	**+0.9**
BTK	**Batken**	**8.30**	**330**	P	**Pn**	**15 06 10.1**	**+0.9**
GUNA	**GUNA**	**8.36**	**173**	eP	**Pn**	**15 06 13.1**	**+2.9**
GUNA				IAML		15 07 40.7	
	comp=E,2μm,0.7s						
GUNA				eS	**Sn**	**15 07 41.0**	**-3.1**
GUNA				IAML		15 07 42.9	
	comp=N,2μm,1.6s						
NRN	**Naryn**	**8.43**	**359**	Pn	**Pn**	**15 06 13.1**	**+1.8**
NRN	**Naryn**	**8.43**	**359**	P	**Pn**	**15 06 13.1**	**+1.8**
WUS	**Wushi**	**8.53**	**15**		**Pn**	**15 06 13.9**	**+1.4**
UDPR	**Udaipur**	**8.67**	**195**	eP	**Pn**	**15 06 19.0**	**+4.6**
UDPR				eS	**Sn**	**15 07 48.8**	**-2.8**
UDPR				IAML		15 08 43.1	
	comp=N,3μm,2.3s						
UDPR				IAML		15 08 44.3	
	comp=E,6μm,0.6s						
ARSB	**Arslanbob**	**8.72**	**344**		**Pn**	**15 06 15.6**	**+0.5**
ARSB	**Arslanbob**	**8.72**	**344**	P	**Pn**	**15 06 15.6**	**+0.5**
TARG	**Taragay, Kyrgy**	**8.81**	**8**	Pn	**Pn**	**15 06 19.5**	**+2.9**
TARG	**Taragay, Kyrgy**	**8.81**	**8**	P	**Pn**	**15 06 19.5**	**+2.9**
ALBI	**Allahabad**	**9.06**	**146**	eP	**Pn**	**15 06 22.2**	**+2.5**
ALBI				eS	**Sn**	**15 07 57.2**	**-4.1**
ALBI				IAML		15 07 58.8	
	comp=N,2μm,0.5s						
ALBI				IAML		15 07 59.3	
	comp=E,2μm,0.3s						
KDJ	**Kajisay**	**9.16**	**4**	Pn	**Pn**	**15 06 23.9**	**+2.8**
KDJ	**Kajisay**	**9.16**	**4**	P	**Pn**	**15 06 23.9**	**+2.8**
ULHL	**Ulahol**	**9.24**	**360**	P	**Pn**	**15 06 25.0**	**+2.7**
	SNR=7.5						
UCH	**Uchtor**	**9.32**	**352**	P	**Pn**	**15 06 25.4**	**+1.8**
	SNR=83						
BOOM	**Boomskoye usch**	**9.49**	**359**	Pn	**Pn**	**15 06 27.9**	**+2.2**
BOOM	**Boomskoye usch**	**9.49**	**359**	P	**Pn**	**15 06 27.9**	**+2.2**
PRZ	**Przheval'sk**	**9.63**	**10**	Pn	**Pn**	**15 06 30.5**	**+2.9**
PRZ	**Przheval'sk**	**9.63**	**10**	P	**Pn**	**15 06 30.5**	**+2.9**
KBK	**Karagaybulak**	**9.71**	**354**	P	**Pn**	**15 06 30.9**	**+2.3**
	SNR=31						
AAK	**Ala-Archa**	**9.73**	**352**	P	**Pn**	**15 06 31.2**	**+2.2**
	SNR=47						
AAK	**Ala-Archa**	**9.73**	**352**	Pn	**Pn**	**15 06 30.4**	**+1.4**
	comp=E,3.4nm,0.3s,baz=166,slow=7.6,SNR=68						
AAK				Sn	**Sn**	**15 08 17.0**	**-0.7**
	comp=E,7.1nm,0.3s,baz=158,slow=19,SNR=6.4						
AAK				LR	LR	15 10 31.5	
	comp=E,990nm,18.5s,baz=176,slow=39						
	comp=E,39nm,0.7s						
AAK	**Ala-Archa**	**9.73**	**352**		**Pn**	**15 06 30.0**	**+1.0**
AAK	**Ala-Archa**	**9.73**	**352**	*c i* P	**Pn**	**15 06 31.0**	**+2.0**
AAK	**Ala-Archa**	**9.73**	**352**	P	**Pn**	**15 06 31.3**	**+2.3**
BHPL	**Bhopal**	**9.77**	**174**	eP	**Pn**	**15 06 32.7**	**+3.3**
BHPL				eS	**Sn**	**15 08 14.1**	**-4.5**
BHPL				IAML		15 08 16.6	
	comp=N,1μm,0.0s						
BHPL				IAML		15 08 17.1	
	comp=E,1μm,0.2s						
EKS2	**Erkin-Say**	**9.85**	**349**	P	**Pn**	**15 06 32.1**	**+1.6**
	SNR=29						
FRU1	**Bishkek**	**9.89**	**353**		**Pn**	**15 06 32.1**	**+1.1**

EVN Everest 10.40 116 Pn 15 06 38.0 -0.7
SHLS Shalkode 10.46 13 *e*P Pn 15 06 41.2 +2.3
SHLS Shalkode 10.46 13 *e*P Pn 15 06 41.2 +2.3
SHLS LQ LQ 15 09 43.5
DZA Taraz 10.62 340 *e*P Pn 15 06 41.3 +0.3
DZA Taraz 10.62 340 *e*P Pn 15 06 41.4 +0.3
CHM Chimkent 10.70 332 *e*P Pn 15 06 42.5 +0.5
CHM Chimkent 10.70 332 *e*P Pn 15 06 42.6 +0.5
KUU Kurty 10.89 0 *e*P Pn 15 06 45.4 +0.7
KUU Kurty 10.89 0 *e*P Pn 15 06 45.4 +0.7
KK31 Karatay Array 11.06 338 Pn 15 06 46.1 -0.9
KK31 Karatay Array 11.06 338 *e*P Pn 15 06 46.1 -0.9
KKAR Karatay Array 11.06 338 Pn 15 06 45.9 -1.1
KKAR Karatay Array 11.06 338 P Pn 15 06 45.9 -1.1
ARXS Arharly 11.28 6 *e*P Pn 15 06 53.8 +3.8
BHUJ Bhuj 11.30 213 *e*P Pn 15 06 54.3 +3.8
BHUJ *e*S **Sn 15 08 51.4 -4.9**
BHUJ IAML 15 10 14.2
comp=E,2µm,0.7s
BHUJ IAML 15 10 17.5
comp=N,2µm,0.5s
HRA Herat 11.75 281 Pn **Pn 15 06 57.1 +0.4**
BLSP Bilaspur 12.05 153 *e*P Pn 15 07 03.2 +2.5
BLSP *e*S **Sn 15 09 07.5 -7.1**
BLSP IAML 15 10 51.3
comp=N,708nm,1.1s
BLSP IAML 15 10 52.5
comp=E,676nm,0.9s
TDK Taldyqorghan 12.11 7 *e*P Pn 15 07 01.9 +0.5
TDK Taldyqorghan 12.11 7 *e*P Pn 15 07 01.9 +0.5
BOK Bokaro 12.48 135 *e*P Pn 15 07 09.7 +3.1
BOK *e*S **Sn 15 09 17.2 -7.8**
BOK IAML 15 09 28.4
comp=E,667nm,0.7s
BOK IAML 15 09 29.9
comp=N,888nm,1.1s
LSA Lhasa 13.15 100 Pn 15 07 15.9 -0.2
LSA Lhasa 13.15 100 P **Pn 15 07 12.5 -3.6**
LSA S **Sn 15 09 35.3 -6.8**
LSA Lhasa 13.15 100 P **Pn 15 07 15.9 -0.2**
WMQ Urumqi 14.04 36 *e*P Pn 15 07 27.5 -0.3
WMQ S **Sn 15 09 59.5 -3.5**
WMQ pmax pmax
comp=N,27nm,0.9s
WMQ pmax pmax
comp=N,190nm,3.9s
WMQ LR LR
comp=N,810nm,9.3s
WMQ LR LR
comp=N,970nm,8.9s
WMQ LR LR
comp=N,490nm,16.3s
MAKZ Makanchi 14.48 16 Pn 15 07 32.5 -1.2
MAKZ Makanchi 14.48 16 P **Pn 15 07 32.5 -1.2**
MK31 Makanchi Array 14.54 17 ⇓*i*P Pn 15 07 33.5 -1.1
MKAR Makanchi Array 14.54 17 Pn **Pn 15 07 33.6 -1.0**
comp=N,1.4nm,0.3s,baz=200,slow=13,SNR=45
MKAR Sn **Sn 15 10 08.2 -7.0**
comp=N,3.0nm,0.3s,baz=194,slow=22,SNR=13
comp=N,6.8nm,0.6s
MKAR Makanchi Array 14.54 17 Pn 15 07 33.0 -1.6
NGCH Negor - Chabah 15.22 244 P **Pn 15 07 44.6 +0.8**
SHL Shillong 15.51 114 Pn **Pn 15 07 43.6 -4.2**
SHL Shillong 15.51 114 P **Pn 15 07 43.6 -4.2**
SHL pmax pmax
comp=Z,37nm,0.9s
GOMU GeErMu 15.62 73 P **Pn 15 07 49.5 +0.1**
GOMU S **Sn 15 10 41.8 -0.3**
GOMU pmax pmax
comp=Z,16nm,0.9s
HYB Hyderabad 15.64 172 *e*P Pn 15 07 49.4 -0.1
ZSN Zaisan 15.86 22 *e*P Pn 15 07 53.0 +1.0
ZSN Zaisan 15.86 22 *e*P Pn 15 07 53.0 +1.0
BRZS Berezniki 17.18 352 *e*P P 15 08 09.7 -0.6
BRZS Berezniki 17.18 352 *e*P P 15 08 09.8 -0.6
JASK Jask - Hormozg 17.50 251 P **P 15 08 14.9 +1.0**
SEM Semipalatinsk 17.66 8 *e*P Pn 15 08 15.3 +0.4
SEM Semipalatinsk 17.66 8 *e*P Pn 15 08 15.3 +0.4
KURBB Kurchatov Arra 17.70 5 P **Pn 15 08 13.2 -2.0**
comp=Z,15nm,0.7s,baz=191,slow=11,SNR=100
KURBB S **Sn 15 11 33.4 +1.6**
comp=Z,3.7nm,0.9s,baz=183,slow=17,SNR=4.4
KURBB LR LR 15 15 39.7
comp=Z,624nm,20.4s,baz=178,slow=39
KURK Kurchatov 17.80 5 Pn **Pn 15 08 14.1 -2.3**
KURK Kurchatov 17.80 5 P **Pn 15 08 14.1 -2.3**
KURK pmax pmax
comp=Z,32nm,0.8s
JLN Jalan Bani Buh 18.39 238 P **P 15 08 23.5 -0.4**
WBK Wadi Bani Khal 18.43 240 P **P 15 08 24.1 -0.1**
WBK P **P 15 08 24.1 -0.1**
DGZ Jazzator, Alta 18.65 23*c i*P Pn 15 08 27.0 0.0
DGZ pmax pmax
comp=Z,58nm,0.9s
BANOM Banah 18.73 253 P **Pn 15 08 29.2 +1.2**
SMDO Samad 18.84 243 P **Pn 15 08 31.5 +2.1**
MDH Madha 19.02 251 P **Pn 15 08 31.4 0.0**
MASF Masafi 19.09 252 P **Pn 15 08 33.4 +1.0**
JMDO Jabal Madar 19.21 241 P **Pn 15 08 35.5 +1.7**
SNR=5.4
SOHO SOHO 19.41 248 P **Pn 15 08 37.3 +1.2**
ASHO Ashiyiah 19.50 250 P **Pn 15 08 39.0 +1.6**
BSY Bisya 19.66 244 P **Pn 15 08 40.6 +1.4**
BSY P **Pn 15 08 40.7 +1.4**
GTA2 Gaotai 20.02 64 P Pn 15 08 43.0 -0.4
GTA2 sP sP 15 08 51.5 +0.4
GTA2 pmax pmax
comp=Z,55nm,0.7s
GTA2 LR LR
comp=Z,390nm,14.3s
GTA2 LR LR
comp=Z,750nm,12.7s
GTA2 LR LR
comp=Z,730nm,13.9s
ALNE Al Ain 20.06 249 P Pn 15 08 45.1 +1.2
MHTO MHTO 20.17 238 P Pn 15 08 46.1 +1.0
SNR=6.5
AB31 Akbulak array 20.30 328 P **P 15 08 44.4 0.0**
AB31 IAmb IAmb 15 08 50.7
comp=Z,45nm,0.6s
AB31 Akbulak array 20.30 328 *e*P P 15 08 44.3 -0.2
ABKAR Akbulak array 20.30 328 P **P 15 08 44.6 +0.1**
BVAR Borovoye Array 20.47 350 P **P 15 08 46.7 +0.4**
comp=Z,38nm,0.6s,baz=158,slow=9.8,SNR=361
BVAR ScP **ScP 15 16 34.1 +1.1**
comp=Z,0.8nm,0.7s,baz=102,slow=3.4,SNR=2.3
BVAR LR LR 15 17 04.1
comp=Z,311nm,19.4s,baz=164,slow=38
comp=Z,38nm,0.6s
BORK Borovoye 20.50 350 P **P 15 08 46.7 +0.1**
BORK IAmb IAmb 15 08 47.9
comp=Z,67nm,0.6s
BORK Borovoye 20.50 350*c i*P P 15 08 46.9 +0.3
BORK pmax pmax
comp=Z,140nm,1.3s
TNCH TengChong 21.01 106 ⇑P 15 08 53.8
TNCH pP pP 15 08 56.8 -2.3
TNCH sP sP 15 08 59.5 -2.6
TNCH PP **PnPn 15 09 14.3 +2.8**
TNCH S **S 15 12 39.5 -6.4**
TNCH sS Sn 15 12 46.3 -5.9
TNCH SS **SnSn 15 13 10.8 +3.8**
TNCH pmax pmax
comp=Z,62nm,1.1s
TNCH LR LR
comp=Z,350nm,8.3s
TNCH LR LR
comp=Z,270nm,9.9s
TNCH LR LR
comp=Z,350nm,11.5s
ZAA0 Zalesovo Array 21.82 14 P **P 15 08 59.7 -1.2**
ZAA0 IAmb IAmb 15 09 13.1
comp=Z,32nm,0.8s
ZALV Zalesovo Beam 21.82 14 P **P 15 08 59.8 -1.0**
comp=Z,21nm,0.5s,baz=204,slow=11,SNR=88
ZALV PcP **PcP 15 12 60.0 -0.2**
comp=Z,1.9nm,0.7s,baz=242,slow=3.1,SNR=2.1
ZALV LR LR 15 19 20.0
comp=Z,42nm,19.2s,baz=206,slow=42
comp=Z,21nm,0.5s
ZALV Zalesovo Beam 21.82 14 P **P 15 08 59.6 -1.2**
AKTO Aktyubinsk 22.01 328 P **P 15 09 03.4 +0.5**
comp=Z,77nm,0.6s,baz=125,slow=8.7,SNR=128
AKTO S **S 15 13 00.8 -4.1**
comp=Z,3.7nm,0.7s,baz=102,slow=19,SNR=1.3
AKTO LR LR 15 18 23.1
comp=Z,310nm,19.3s,baz=162,slow=39
comp=Z,77nm,0.6s
LZDM Lanzhou Array 22.80 75 P **P 15 09 12.2 +0.5**
comp=Z,34nm,0.8s,baz=268,slow=9.8,SNR=42
comp=Z,34nm,0.8s
LZH Lanzhou 22.91 75 P **P 15 09 12.8 -0.1**
LZH pP pP 15 09 18.0 -1.4
LZH pmax pmax
comp=Z,23nm,1.5s
LZH LR LR
comp=Z,230nm,10.3s
LZH LR LR
comp=Z,430nm,12.7s
LZH LR LR
comp=Z,320nm,12.4s
PZH PanZhiHua 23.03 100 P **P 15 09 15.3 +1.2**
PZH S **S 15 13 23.5 -0.5**
PZH pmax pmax
comp=Z,20nm,0.7s
CD2 Chengdu 23.41 88 P **P 15 09 17.5 -0.3**
CD2 pP pP 15 09 20.0 -4.6
CD2 sP sP 15 09 21.5 -5.7
CD2 S **S 15 13 30.5 +0.3**
CD2 sS pS 15 13 36.8 -1.3
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 LR LR
comp=Z,450nm,9.8s
CD2 LR LR
comp=Z,510nm,11.3s
CD2 LR LR
comp=Z,680nm,10.1s
KNGR Kungurtug, Tuv 23.55 35⇑*e*P P 15 09 21.0 +1.9
KNGR pmax pmax
comp=Z,50nm,1.0s
AKT Akhty 24.15 299 *e*P P 15 09 25.1 +0.2
AKT *e* 15 09 54.5
AKT *e*PPP PPP 15 10 02.8
AKT *e* 15 13 07.0
AKT pmax pmax
comp=Z,104nm,1.9s
KMI2 Kunming 24.40 102 ⇑P P 15 09 27.5 +0.1
KMI2 S **S 15 13 50.5 +4.1**
KMI2 pmax pmax
comp=Z,56nm,0.8s
KMI2 pmax pmax
comp=Z,140nm,3.5s
KMI2 LR LR
comp=Z,210nm,13.6s
KMI2 LR LR
comp=Z,200nm,12.9s
KMI2 LR LR
comp=Z,360nm,24.0s
DOK Doka 24.45 240 P **P 15 09 28.6 +1.0**
DOK P **P 15 09 28.6 +1.0**
DMTO DMTO 24.46 237 P **P 15 09 30.0 +2.3**
SNR=10
MAK Makhachkala 24.64 302*c i*P P 15 09 24.8 -4.4
MAK *e*S **S 15 13 43.4 -6.1**
MAK pmax pmax
comp=Z,234nm,1.2s
MAK MLR MLR
comp=Z,332nm,11.0s
CHTO Chiang Mai 24.75 119 P **P 15 09 30.3 0.0**
CHTO Chiang Mai 24.75 119 P **P 15 09 30.4 0.0**
CHTO IAmb IAmb 15 09 32.7
comp=Z,22nm,0.7s
CHTO Chiang Mai 24.75 119 P **P 15 09 30.4 0.0**
CHTO pmax pmax
comp=Z,22nm,0.7s
CHTO Chiang Mai 24.75 119 P **P 15 09 30.8 +0.5**
CHTO Chiang Mai 24.75 119 P **P 15 09 29.6 -0.8**
comp=Z,34nm,0.8s
CM31 Chiang Mai Arr 24.97 120 IAmb IAmb 15 09 58.1
comp=Z,31nm,0.9s
CMAR Chiang Mai Arr 24.97 120 P **P 15 09 32.5 +0.1**
comp=Z,11nm,0.6s,baz=323,slow=11,SNR=113
CMAR ScP **ScP 15 16 47.1 +1.7**
comp=Z,0.4nm,0.4s,baz=357,slow=1.6,SNR=2.1
CMAR LR LR 15 21 32.0
comp=Z,86nm,18.3s,baz=310,slow=42
comp=Z,11nm,0.6s
CMAR Chiang Mai Arr 24.97 120 P **P 15 09 32.4 0.0**
WHFO Wadi Hawf 25.16 239 P **P 15 09 34.9 +0.8**
WHFO P **P 15 09 34.9 +0.8**
ABTO Aybut 25.87 239 P **P 15 09 41.5 +0.9**
ABTO P **P 15 09 41.5 +0.9**
PALK Pallekele 25.92 170 LR LR 15 19 50.5
comp=Z,158nm,20.8s,baz=348,slow=37
PALK Pallekele 25.92 170 P **P 15 09 42.9 +1.9**
MOY Mondy 25.93 37 *e*P P 15 09 44.0 +3.1
MOY pmax pmax
comp=Z,21nm,2.8s
SVE Sverdlovsk 26.15 340 *e*P P 15 09 43.6 +0.9
GNI Garni 26.20 295 P **P 15 09 45.2 +1.7**
comp=Z,64nm,0.9s,baz=54,slow=1.9,SNR=27
GNI Garni 26.20 295*c i*P P 15 09 45.8 +2.3
GNI Garni 26.20 295 P **P 15 09 46.8 +3.3**
ZAK Zakamensk 26.42 41 *e*P P 15 09 45.2 -0.2
ZAK pmax pmax
comp=Z,12nm,2.0s
ZAK pmax pmax
comp=Z,6.0nm,2.1s
ARTI Arti 26.46 337 LR LR 15 20 54.3
comp=Z,599nm,18.5s,baz=146,slow=38
ARTI Arti 26.46 337 P **P 15 09 46.0 +0.5**
ARTI IAmb IAmb 15 09 47.0
comp=Z,35nm,0.9s
ARTI Arti 26.46 337*c i*P P 15 09 46.1 +0.5
ARTI pmax pmax
comp=Z,33nm,0.9s
SONM Songino Array 27.12 48 P **P 15 09 52.9 +1.2**
comp=Z,9.4nm,0.7s,baz=244,slow=9.4,SNR=101
SONM PcP **PcP 15 13 12.2 +0.1**
comp=Z,1.1nm,0.8s,baz=268,slow=3.9,SNR=2.1
comp=Z,9.4nm,0.7s
SONM Songino Array 27.12 48 P **P 15 09 52.9 +1.2**
XAN Xi'an 27.20 79 P **P 15 09 52.5 0.0**
XAN sP pP 15 09 57.5 -1.9
XAN pmax pmax
comp=Z,21nm,1.0s
XAN LR LR
comp=Z,350nm,10.7s
XAN LR LR
comp=Z,260nm,8.9s
XAN LR LR
comp=Z,320nm,11.0s
TLY Talaya 27.30 39 LR LR 15 21 16.6
comp=Z,52nm,21.1s,baz=232,slow=38
TLY Talaya 27.30 39 P **P 15 09 53.5 +0.3**
TLY Talaya 27.30 39*ce*P P 15 09 54.3 +1.1
TLY pmax pmax
comp=Z,4.0nm,1.2s
TLY Talaya 27.30 39 P **P 15 09 55.2 +2.1**
TLY P **P 15 09 55.2 +2.1**
ULN Ulaanbaatar 27.54 48 P **P 15 09 55.7 +0.2**
ULN Ulaanbaatar 27.54 48 P **P 15 09 56.7 +1.2**
ULN Ulaanbaatar 27.54 48 P **P 15 09 56.7 +1.2**
ULN Ulaanbaatar 27.54 48 P **P 15 09 56.1 +0.6**
comp=Z,43nm,0.8s
BTO2 Baotou 27.87 64 *e*P P 15 10 03.5 +5.0
BTO2 pP **sP 15 10 07.8 -0.4**
BTO2 sP **pP 15 10 11.0 +5.6**
BTO2 S **S 15 14 44.8 +3.8**
BTO2 pmax pmax
comp=Z,16nm,0.9s
BTO2 pmax pmax
comp=Z,240nm,4.2s
BTO2 LR LR
comp=Z,370nm,12.1s
BTO2 LR LR
comp=Z,420nm,16.1s
BTO2 LR LR
comp=Z,450nm,13.5s
KBZ Khabaz 28.09 302 P **P 15 10 00.0 -0.2**
comp=Z,3.6nm,0.8s,baz=98,slow=9.5,SNR=6.8
KBZ LR LR 15 23 45.5
comp=Z,51nm,20.0s,baz=122,slow=42
comp=Z,3.6nm,0.8s
NEUR Neytrino 28.14 301⇑*e*P P 15 10 01.4 +0.4
NEUR pmax pmax
comp=Z,10.0nm,1.8s
SHA1 Shidzhatmaz 28.26 302*c i*P P 15 10 02.2 +0.1
KVAR Kislovodsk Arr 28.28 303 P **P 15 10 02.8 +0.7**
comp=Z,3.6nm,0.8s,baz=86,slow=19,SNR=1.9
comp=Z,3.6nm,0.8s
KIV Kislovodsk 28.28 303 *e*P P 15 10 06.2 +4.1
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,111nm,15.0s
BELG Belogornoye 28.32 322 P **P 15 10 01.5 -0.7**
comp=Z,12nm,0.6s,baz=94,slow=0.4,SNR=7.1
comp=Z,12nm,0.6s
ENH Enshi 28.37 86 P **P 15 10 04.5 +1.6**
RAYN Ar Rayn 28.59 259 P **P 15 10 05.1 +0.1**
RAYN Ar Rayn 28.59 259 P **P 15 10 04.7 -0.3**
HHC Hu-ho-hao-te 29.16 64 *e*P P 15 10 10.5 +0.6
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,170nm,5.6s
LYN LuoYang 30.05 77 P **P 15 10 19.5 +1.7**
LYN pmax pmax
comp=Z,34nm,0.7s
LYN LR LR
comp=Z,440nm,12.7s
LYN LR LR
comp=Z,220nm,11.7s
LYN LR LR
comp=Z,480nm,15.5s
SOC Sochi 30.34 301 *e*P P 15 10 22.7 +2.4
SOC *e*PPP PPP 15 11 25.3
SOC *e*S **S 15 15 27.3 +7.8**
SOC *e*SS **SnSn 15 16 57.6 +3.0**
SOC MLR MLR
comp=Z,668nm,29.0s
VRH Novokhopyorsk 31.04 316 *e*P P 15 10 25.3 -1.0
VRH pmax pmax
comp=Z,38nm,0.7s
KIRV Kirov 31.30 333 P **P 15 10 29.2 +0.7**
comp=Z,32nm,0.7s,baz=83,slow=1.7,SNR=15
KIRV LR LR 15 24 09.4
comp=Z,392nm,20.6s,baz=134,slow=38
comp=Z,32nm,0.7s
HNS HongShan 31.59 71 ⇑P **P 15 10 32.3 +1.0**
HNS pmax pmax
comp=Z,9.0nm,0.8s
HNS LR LR
comp=Z,500nm,15.1s
HNS LR LR
comp=Z,600nm,15.7s
UBPT Khong Chiam 31.81 117 P **P 15 10 33.3 -0.1**
GAZ Gaziantep 32.06 289 P **P 15 10 36.4 +0.8**
GAZ IAmb IAmb 15 10 38.2
comp=Z,17nm,1.1s
WHN Wuhan 32.37 84 P **P 15 10 39.8 +1.5**
WHN pmax pmax
comp=Z,36nm,0.9s
VORD Divnogorie 32.38 315 *e*P P 15 10 37.0 -1.1
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 32.54 315 *e*P P 15 10 37.8 -1.7
VSR pmax pmax
comp=Z,20nm,1.0s
BJT Baijiatuau 32.64 66 P **P 15 10 41.6 +1.1**
BJT Baijiatuau 32.64 66 P **P 15 10 41.7 +1.1**
BJT Baijiatuau 32.64 66 P **P 15 10 41.7 +1.2**
BJT pmax pmax
comp=Z,5.0nm,0.8s
BJI2 Beijing 32.64 66 P **P 15 10 42.0 +1.5**
BJI2 pmax pmax
comp=Z,4.0nm,0.7s
VORR Voronezh 32.67 316 *e*P P 15 10 40.0 -0.6
VORR pmax pmax
comp=Z,54nm,1.2s
XLT XiLinHaoTe 32.76 59 *e*P P 15 10 42.8 +1.2
XLT pmax pmax
comp=Z,14nm,1.1s
XLT pmax pmax
comp=Z,100nm,5.7s
ASF Jabal al Asfar 33.04 280 P **P 15 10 42.8 -1.4**
comp=Z,0.7nm,0.3s,baz=76,slow=17,SNR=1.6
ASF LR LR 15 26 34.0
comp=Z,278nm,18.7s,baz=26,slow=41
comp=Z,0.7nm,0.3s
QIZ Qiongzhong 33.08 106 P **P 15 10 44.0 -0.6**
QIZ S **S 15 16 02.3 -0.4**
QIZ LR LR
comp=Z,120nm,12.0s
QIZ LR LR
comp=Z,120nm,12.0s
QIZ LR LR
comp=Z,150nm,10.0s
LPSR Galich'ya Gora 33.16 317 *e*P P 15 10 44.3 -0.6
LPSR pmax pmax
comp=Z,54nm,0.8s
MMAI Mount Meron Ar 34.10 281 LR LR 15 27 08.9
comp=Z,161nm,19.7s,baz=76,slow=41
BR104 Keskin Array S 34.71 294 P **P 15 10 59.6 +0.9**
comp=Z,12nm,1.0s
BR131 Keskin Array S 34.71 294 P **P 15 10 59.5 +0.8**
BR131 IAmb IAmb 15 11 00.5
comp=Z,12nm,0.9s
BR131 Keskin Array S 34.71 294 ⇓*e*P P 15 10 59.5 +0.7
BRTR Keskin Array B 34.71 294 P **P 15 10 58.6 -0.2**
comp=Z,5.0nm,0.6s,baz=106,slow=8.0,SNR=11
BRTR PcP **PcP 15 13 31.2 -1.2**
comp=Z,1.0nm,0.7s,baz=105,slow=3.4,SNR=2.2
comp=Z,5.0nm,0.6s
BRTR Keskin Array B 34.71 294 P **P 15 10 59.4 +0.7**
BR106 Keskin Array S 34.73 294 P **P 15 10 59.8 +0.9**
comp=Z,10nm,1.1s
MOS Moscow 35.09 322 *e*P P 15 11 01.7 +0.1
MOS *e* 15 12 18.7
MOS pmax pmax
comp=Z,38nm,0.8s
EIL Elat 35.27 276 P **P 15 11 02.2 -1.2**
comp=Z,2.2nm,0.6s,baz=38,slow=17,SNR=2.6
EIL LR LR 15 27 55.3
comp=Z,278nm,18.2s,baz=74,slow=41
comp=Z,2.2nm,0.6s
OBN Obninsk 35.40 321 P **P 15 11 04.2 0.0**
comp=Z,69nm,0.5s,baz=75,slow=2.0,SNR=12
OBN LR LR 15 29 03.6
comp=Z,85nm,19.8s,baz=103,slow=42
OBN Obninsk 35.40 321 P **P 15 11 04.2 0.0**
OBN Obninsk 35.40 321*c i*P P 15 11 04.2 0.0
OBN *e*PP **pP 15 11 07.2 -4.2**
OBN *e*SP **sP 15 11 10.5 -3.9**
OBN *e* 15 12 19.2
OBN *e* 15 13 34.9
OBN *e*SS SS 15 18 58.7 -13
OBN pmax pmax
comp=Z,46nm,0.5s
OBN MLR MLR
comp=Z,62nm,16.0s
OBN Obninsk 35.40 321 P **P 15 11 04.0 -0.2**
comp=Z,123nm,0.7s
NJ2 Nanjing 35.76 80 *e*P P 15 11 08.0 +0.3
NJ2 pmax pmax
comp=Z,18nm,0.6s
HILR Hailar Array B 36.08 50 P **P 15 11 11.0 +0.7**
comp=Z,1.2nm,0.4s,baz=243,slow=6.5,SNR=5.2
HILR PcP **PcP 15 13 36.8 +0.7**
comp=Z,4.2nm,0.6s,baz=261,slow=2.0,SNR=5.9
comp=Z,1.2nm,0.4s
PSI Prapat 36.79 140 P **P 15 11 20.0 +3.3**
PSI Prapat 36.79 140 P **P 15 11 17.6 +0.9**
comp=Z,9.8nm,1.1s
DL2 Dalian 36.91 68 P **P 15 11 18.3 +0.9**
DL2 S **S 15 17 03.5 +2.1**
DL2 pmax pmax
comp=Z,31nm,0.6s
DL2 LR LR
comp=Z,450nm,15.8s
DL2 LR LR
comp=Z,500nm,16.1s
DL2 LR LR
comp=Z,420nm,15.9s
GSI Gunungsitoli 37.35 143 P **P 15 11 22.2 +0.8**
GSI Gunungsitoli 37.35 143 P **P 15 11 21.5 +0.1**
GSI IAmb IAmb 15 11 38.3
comp=Z,16nm,0.8s
GSI Gunungsitoli 37.35 143 P **P 15 11 20.6 -0.8**
comp=Z,19nm,1.3s
AK09 Malin Array Si 38.45 312 P **P 15 11 29.9 -0.4**
AK10 Malin Array Si 38.47 311 P **P 15 11 30.0 -0.5**
AK08 Malin Array Si 38.48 312 P **P 15 11 30.1 -0.4**
AKASG Malin Array Be 38.51 312 P **P 15 11 30.1 -0.6**

comp=Z,8.2nm,0.6s,baz=82,slow=6.8,SNR=38
AKASG LR LR 15 31 19.4
comp=Z,93nm,18.9s,baz=88,slow=42
comp=Z,8.2nm,0.6s
AKASG Malin Array Be 38.51 312 P **P** **15 11 30.2 -0.5**
AKASG Malin Array Be 38.51 312 P **P** **15 11 30.2 -0.5**
AKASG pmax pmax
comp=Z,9.0nm,0.9s
AKBB Malin Array Si 38.51 312 P **P** **15 11 30.3 -0.4**
AKBB IAmb IAmb 15 11 30.9
comp=Z,21nm,0.6s
AKBB Malin Array Si 38.51 312 P **P** **15 11 30.3 -0.4**
AKBB pmax pmax
comp=Z,21nm,0.6s
AKBB Malin Array Si 38.51 312 P **P** **15 11 29.9 -0.8**
KIEV Kiev 38.51 312 ⇓P **P** **15 11 30.5 -0.4**
KIEV Kiev 38.51 312 P **P** **15 11 29.9 -0.9**
KIEV IAmb IAmb 15 11 30.9
comp=Z,18nm,0.7s
KIEV Kiev 38.51 312 P **P** **15 11 30.4 -0.4**
KIEV Kiev 38.51 312 P **P** **15 11 29.9 -0.9**
comp=Z,121nm,0.7s
AK04 Malin Array Si 38.55 312 P **P** **15 11 30.5 -0.6**
SORM Soroca 38.76 307 ⇑P **P** **15 11 33.1 +0.2**
SORM Soroca 38.76 307 P **P** **15 11 33.1 +0.2**
SORM Soroca 38.76 307 P **P** **15 11 32.1 -0.8**
LUBAR Lubar, Ukraine 39.33 310 P **P** **15 11 36.7 -1.0**
CN2 Changchun 39.52 59 P **P** **15 11 35.8 -3.6**
CN2 S **S** **15 17 35.3 -5.4**
CN2 LR LR
comp=Z,180nm,10.0s
CN2 LR LR
comp=Z,170nm,10.0s
CN2 LR LR
comp=Z,150nm,11.0s
VRI Vrincioaia 39.74 304 ⇑P **P** **15 11 42.1 +0.9**
VRI Vrincioaia 39.74 304 P **P** **15 11 42.1 +0.9**
PLOR Plostina 39.80 304 ⇑P **P** **15 11 42.7 +0.9**
PLOR Plostina 39.80 304 P **P** **15 11 42.6 +0.9**
ONER Baraj Valea Uz 39.99 304 ⇑P **P** **15 11 44.1 +0.9**
MNK Minsk 40.02 317 *i* P **P** **15 11 43.5 +0.1**
comp=E,8.0nm,1.0s
MNK *i* P **P** **15 11 43.5 +0.1**
comp=N,20nm,1.0s
MNK *i* P **P** **15 11 43.5 +0.1**
comp=Z,28nm,0.9s,baz=102
MNK *i* PP **PP** **15 13 15.1 -0.2**
MNK *i* PPP PPP 15 13 39.3
MNK *i* S **S** **15 17 49.5 +1.6**
MNK *i* SS **SnSn** **15 20 48.1 -0.5**
MNK *i* SSS SSS 15 21 08.9
MNK *i* LQ LQ 15 25 10.6
MNK *i* LR LR 15 28 10.4
MNK *i* LRM MLR 15 29 49.9
comp=E,50nm,14.6s
MNK *i* LRM MLR 15 29 58.7
comp=N,101nm,16.4s
MNK *i* LRM MLR 15 30 02.5
comp=Z,100nm,13.3s
MNK Minsk 40.02 317 *i* P **P** **15 11 43.4 +0.1**
MNK *i* 15 13 15.0
MNK *i* PPP PPP 15 13 39.2
MNK *i* S **S** **15 17 49.4 +1.6**
MNK *i* SSS SSS 15 21 08.8
MNK pmax pmax
comp=Z,28nm,0.9s
MNK pmax pmax
comp=N,20nm,1.0s
MNK pmax pmax
comp=E,8.0nm,1.0s
MNK MLR MLR
comp=E,50nm,15.0s
MNK MLR MLR
comp=N,101nm,16.0s
MNK MLR MLR
comp=Z,100nm,13.0s
KMPD K-Podol'skiy 40.05 308 P **P** **15 11 43.1 -0.5**
COVR Voineasa-Covas 40.11 304 ⇓P **P** **15 11 45.1 +0.8**
HORU Horodok 40.12 309 P **P** **15 11 44.0 -0.3**
MLR Muntele Rosu 40.29 303 P **P** **15 11 46.4 +0.5**
comp=Z,16nm,0.8s,baz=99,slow=4.5,SNR=12
MLR LR LR 15 33 48.6
comp=Z,63nm,18.0s,baz=212,slow=44
comp=Z,16nm,0.8s
MLR Muntele Rosu 40.29 303 ⇓P **P** **15 11 46.9 +0.9**
MLR Muntele Rosu 40.29 303 P **P** **15 11 46.7 +0.8**
MLR IAmb IAmb 15 11 55.7
comp=Z,27nm,0.9s
MLR Muntele Rosu 40.29 303 P **P** **15 11 46.8 +0.9**
MLR Muntele Rosu 40.29 303 P **P** **15 11 46.8 +0.9**
comp=Z,36nm,0.9s
KARP Karpathos 40.31 288 P **P** **15 11 46.6 +0.5**
KARP Karpathos 40.31 288 P **P** **15 11 46.0 -0.1**
comp=Z,109nm,0.8s
KARP Karpathos 40.31 288 *eP* **P** **15 11 46.5 +0.4**
EZN Ezine 40.32 294 P **P** **15 11 46.0 -0.1**
comp=Z,50nm,1.0s
RNPP5 Staryi Chortor 40.67 312 P **P** **15 11 48.3 -0.5**
RNPP5 pP **pP** **15 11 52.7 -3.4**
DOPR Dopca 40.68 304 ⇑P **P** **15 11 49.7 +0.7**
RNPP9 Sopachiv 40.69 312 P **P** **15 11 48.5 -0.4**
RNPP8 Varash 40.70 312 P **P** **15 11 48.8 -0.2**
RNPP8 pP **pP** **15 11 53.0 -3.3**
NACGM Naroch 40.72 318 ⇓*i* P **P** **15 11 49.4 +0.2**
comp=Z,47nm,0.9s,baz=102
PDSI Padang 40.73 141 P **P** **15 11 47.7 -1.9**
comp=Z,4µmcomp=Z,28nm,0.8s
BURAR Bucovina Array 40.83 306 ⇑P **P** **15 11 51.0 +0.7**
BURAR Bucovina Array 40.83 306 P **P** **15 11 50.1 -0.2**
BURAR Bucovina Array 40.83 306 P **P** **15 11 51.0 +0.7**
BNX BinXian 40.89 56 ⇑P **P** **15 11 51.8 +1.1**
BNX pmax pmax
comp=Z,12nm,1.1s
VOIR 40.92 303 P **P** **15 11 50.6 -0.4**
comp=Z,6.0nm,0.7s
KSV Kosov 40.96 307 P **P** **15 11 50.6 -0.6**
JOF Joensuu 41.05 331 *eP* **P** **15 11 52.2 +0.4**
HEH HeiHe 41.08 50 *eP* **P** **15 11 53.3 +1.1**
HEH pmax pmax
comp=Z,9.0nm,0.9s
STNU Starunia 41.35 308 P **P** **15 11 54.3 -0.2**
ZEA Zeya 41.40 44 *eP* **P** **15 11 56.7 +1.9**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
RAKU Rahkiv 41.55 307 P **P** **15 11 55.7 -0.4**
VSU Vasula 41.60 323 ⇑*eP* **P** **15 11 55.0 -1.3**
VSU pmax pmax
comp=Z,37nm,1.1s
VSU Vasula 41.60 323 *eP* **P** **15 11 56.7 +0.4**
MORS Morshin 41.77 309 P **P** **15 11 57.5 -0.4**
MORS pP **pP** **15 12 02.5 -2.7**
KSRS Korea Array 42.02 69 P **P** **15 11 59.8 -0.2**
comp=Z,4.6nm,0.7s,baz=281,slow=10.0,SNR=16
comp=Z,4.6nm,0.7s
SHIU Shidnytsya 42.12 309 P **P** **15 12 00.6 -0.2**
FURI Furi 42.14 244 LR LR 15 32 58.5
comp=Z,81nm,19.2s,baz=38,slow=41
MARR Marisel-Cluj 42.25 305 ⇑P **P** **15 12 02.6 +0.6**
PABE Paberze 42.42 318 *eP* **P** **15 12 03.3 +0.2**
MDJ Mudanjiang 42.47 58 P **P** **15 12 05.0 +1.4**
MDJ Mudanjiang 42.47 58 P **P** **15 12 04.5 +0.9**
MDJ pmax pmax
comp=Z,20nm,1.3s
APA Apatity 42.53 337 ⇓*eP* **P** **15 11 59.9 -3.9**
APA *e* 15 13 42.5
APA *e* 15 13 59.5
APA pmax pmax
comp=Z,15nm,1.2s
APA MLR MLR
comp=Z,816nm,15.3s
KWP Kalwaria Pacla 42.57 309 P **P** **15 12 04.5 +0.1**
comp=Z,34nm,1.1s
HOLU Holmets 42.75 308 P **P** **15 12 05.7 -0.1**
FINES FINESS Array B 42.78 327 P **P** **15 12 06.0 +0.1**
comp=Z,15nm,0.5s,baz=111,slow=8.5,SNR=81
FINES LR LR 15 30 55.3
comp=Z,266nm,18.1s,baz=66,slow=38
comp=Z,15nm,0.5s
FINES FINESS Array B 42.78 327 P **P** **15 12 05.8 -0.1**
FINES FINESS Array B 42.78 327 *i* P **P** **15 12 06.3 +0.4**
FINES pmax pmax
comp=Z,15nm,0.5s
MTSE Matsula 43.14 323 *eP* **P** **15 12 08.5 -0.3**
SUF Sumiainen 43.17 329 *eP* **P** **15 12 08.8 -0.2**

MDVR Moldovita 43.31 302 ⇑P **P** **15 12 11.6 +1.1**
PSTR Posyet 43.50 61 ⇓*eP* **P** **15 12 10.9 -1.1**
KEF Keuruu 43.55 328 *eP* **P** **15 12 12.7 +0.5**
KLR Kul'dur 43.84 51 P **P** **15 12 15.3 +0.6**
comp=Z,4.2nm,0.5s,baz=276,slow=8.2,SNR=18
comp=Z,4.2nm,0.5s
KLR Kul'dur 43.84 51 ⇑*iP* **P** **15 12 15.5 +0.8**
KLR pmax pmax
comp=Z,19nm,1.6s
NIE Niedzica 44.13 309 P **P** **15 12 17.7 +0.6**
comp=Z,8.5nm,1.2s
USRK Ussuriysk Ar. 44.21 58 P **P** **15 12 18.2 +0.5**
comp=Z,1.8nm,0.6s,baz=255,slow=7.7,SNR=4.7
comp=Z,1.8nm,0.6s
PSZ Piszkesteto 44.42 307 *eP* **P** **15 12 19.5 0.0**
YAK Yakutsk 44.44 33 LR LR 15 32 42.2
comp=Z,204nm,19.6s,baz=271,slow=38
YAK Yakutsk 44.44 33 *eP* **P** **15 12 18.8 -0.4**
YAK Yakutsk 44.44 33 *cP* **P** **15 12 19.3 0.0**
YAK *e**PP **pP** **15 12 23.1 -3.5**
YAK *e* 15 14 03.5
YAK *e*PPP PPP 15 14 38.6
YAK *e*S **S** **15 18 54.5 +1.6**
YAK *e**SS **pS** **15 19 02.1 +0.9**
YAK *e*SS **SS** **15 22 07.3 -4.7**
YAK *e* 15 22 22.3
YAK *e*SSS SSS 15 22 55.8
YAK pmax pmax
comp=Z,11nm,0.7s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=Z,115nm,3.4s
YAK pmax pmax
comp=E,86nm,3.4s
YAK pmax pmax
comp=N,93nm,5.3s
YAK smax smax
comp=N,112nm,3.5s
YAK smax smax
comp=E,18nm,3.3s
YAK MLR MLR
comp=Z,270nm,25.0s
YAK MLR MLR
comp=E,165nm,18.0s
YAK MLR MLR
comp=N,139nm,27.0s
OJC Ojcow 44.46 310 P **P** **15 12 19.6 0.0**
comp=N,10nm,0.8s
LANS Liptovska Anna 44.68 309 *eP* **P** **15 12 22.5 +1.1**
LANS Liptovska Anna 44.68 309 *eP* **P** **15 12 22.5 +1.1**
VAF Ylistaro 44.78 329 *eP* **P** **15 12 22.1 +0.2**
JOW Kunigami 45.14 84 P **P** **15 12 25.0 -0.3**
comp=N,12nm,0.6s,baz=279,slow=17,SNR=3.6
comp=N,12nm,0.6s
JOW Kunigami 45.14 84 P **P** **15 12 25.7 +0.3**
JNU Nakatsue 45.34 74 P **P** **15 12 27.5 +0.7**
comp=N,13nm,0.9s,baz=322,slow=15,SNR=3.7
comp=N,13nm,0.9s
MORH Mrgy, Hungar 45.36 305 ⇑P **P** **15 12 27.7 +0.9**
SBUM Sibu 45.37 124 P **P** **15 12 28.3 +1.1**
SBUM Sibu 45.37 124 P **P** **15 12 28.0 +0.8**
SBUM Sibu 45.37 124 P **P** **15 12 27.5 +0.3**
comp=N,10nm,0.9s
SRO Srobarova 45.49 307 *eP* **P** **15 12 29.0 +1.2**
SRO Srobarova 45.49 307 *eP* **P** **15 12 29.0 +1.2**
MAUC Maruska 45.75 309 *eP* P 15 12 36.1 +6.2
STEB Steborice 45.77 310 *eP* **P** **15 12 30.4 +0.4**
MORC Moravsky Berou 45.92 310 ⇑P **P** **15 12 31.9 +0.6**
MORC Moravsky Berou 45.92 310 IAmb IAmb 15 12 32.6
comp=Z,13nm,1.0s
MORC Moravsky Berou 45.92 310 P **P** **15 12 31.9 +0.6**
MORC Moravsky Berou 45.92 310 *eP* **P** **15 12 31.2 -0.1**
ARA0 ARCESS Array S 46.03 338 *eP* **P** **15 12 32.6 +0.8**
ARCES ARCESS Array B 46.03 338 P **P** **15 12 32.6 +0.8**
comp=Z,18nm,0.9s,baz=113,slow=8.6,SNR=26
ARCES LR LR 15 33 37.9
comp=Z,162nm,19.8s,baz=120,slow=38
comp=Z,18nm,0.9s
ARCES ARCESS Array B 46.03 338 P **P** **15 12 32.6 +0.8**
MODS Modra-Piesok 46.15 308 *eP* **P** **15 12 33.8 +0.7**
MODS Modra-Piesok 46.15 308 *eP* **P** **15 12 33.8 +0.7**
KTK1 Kautokeino 46.55 337 *eP* **P** **15 12 37.3 +1.4**
VRAC Vranov 46.56 309 P **P** **15 12 36.1 -0.1**
comp=Z,7.3nm,0.8s,baz=102,slow=8.2,SNR=6.2
VRAC LR LR 15 34 56.2
comp=Z,80nm,19.0s,baz=70,slow=40
comp=Z,7.3nm,0.8s
VRAC Vranov 46.56 309 ⇑P **P** **15 12 36.7 +0.4**
VRAC Vranov 46.56 309 P **P** **15 12 36.6 +0.4**
VRAC Vranov 46.56 309 *eP* **P** **15 12 36.6 +0.4**
DPC Dobruska-Polom 46.69 310 *eP* **P** **15 12 37.9 +0.6**
DPC Dobruska-Polom 46.69 310 *eP* **P** **15 12 37.9 +0.6**
KRUC Moravsky 46.70 309 *eP* **P** **15 12 37.1 -0.2**
GRNR Gornyy 46.84 49 ⇑*iP* **P** **15 12 39.7 +1.3**
GRNR pmax pmax
comp=E,3.0nm,0.5s
GRNR pmax pmax
comp=Z,6.0nm,0.5s
GRNR MLR MLR
comp=E,180nm,15.0s
GRNR MLR MLR
comp=N,120nm,22.0s
GRNR MLR MLR
comp=Z,300nm,11.0s
CHVC Chvalec 46.85 311 *eP* **P** **15 12 38.0 -0.6**
CHVC Chvalec 46.85 311 *eP* **P** **15 12 38.0 -0.6**
UPC Upice 46.88 311 *eP* **P** **15 12 39.7 +0.9**
UPC Upice 46.88 311 *eP* **P** **15 12 39.7 +0.9**
CONA Conrad Observa 47.13 307 *eP* **P** **15 12 40.5 -0.3**
comp=Z,9.9nm,1.0s
MATE Matera 47.48 297 *eP* **P** **15 12 42.7 -0.8**
TIXI Tiksi 47.50 20 LR LR 15 34 28.9
comp=Z,216nm,18.3s,baz=269,slow=38
TIXI Tiksi 47.50 20 P **P** **15 12 43.1 -0.1**
TIXI IAmb IAmb 15 12 54.7
comp=Z,7.2nm,0.6s
TIXI Tiksi 47.50 20 ⇓*iP* **P** **15 12 43.5 +0.3**
TIXI pmax pmax
comp=Z,7.0nm,0.7s
SOKA Soboth 47.81 305 *eP* **P** **15 12 46.4 +0.3**
comp=Z,12nm,0.7s,SNR=13
CKRC Cesky Krumlov 48.09 308 *eP* **P** **15 12 48.0 -0.2**
CKRC Cesky Krumlov 48.09 308 *eP* **P** **15 12 48.0 -0.2**
BRG Berggiesshubel 48.18 311 *eP* **P** **15 12 49.1 +0.3**
BRG Amp 15 12 50.2
comp=Z,8.4nm,0.8s
MOA Molln 48.20 307 *eP* **P** **15 12 48.2 -0.9**
comp=Z,18nm,1.2s,SNR=6.5
LODK Lodwar 48.21 241 P **P** **15 12 49.6 0.0**
LODK Lodwar 48.21 241 P **P** **15 12 50.6 +1.0**
HFS Hagfors 48.47 324 P **P** **15 12 51.0 +0.1**
comp=Z,20nm,0.7s,baz=98,slow=9.1,SNR=30
HFS LR LR 15 34 43.0
comp=Z,165nm,18.7s,baz=74,slow=38
comp=Z,20nm,0.7s
GERES GERESS Array B 48.49 308 P **P** **15 12 50.5 -0.8**
comp=Z,1.7nm,0.8s,baz=84,slow=5.6,SNR=5.5
comp=Z,1.7nm,0.8s
KHC Kasperske Hory 48.54 309 *eP* **P** **15 12 50.0 -1.7**
KHC Kasperske Hory 48.54 309 *eP* **P** **15 12 50.0 -1.7**
CLL Collm 48.75 312 *iP* **P** **15 12 52.9 -0.3**
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 48.75 312 *iP* **P** **15 12 52.9 -0.3**
comp=Z,4.0nm,0.7s
MOR8 Moi Rana 48.97 332 *eP* **P** **15 12 54.9 +0.2**
LESA Schwarzleotal 49.32 307 *eP* **P** **15 12 57.2 -0.6**
comp=Z,4.8nm,0.6s
HOPEN Hopen 49.44 346 *eP* **P** **15 12 59.8 +1.7**
LEIR Leirfjorden 49.49 331 *eP* **P** **15 12 59.7 +1.1**
LEM Lembang 49.57 137 LR LR 15 36 15.9
comp=Z,66nm,19.4s,baz=252,slow=39
NB201 NORSAR Array S 49.72 325 P **P** **15 12 60.0 -0.5**
NB2 NORSAR Subarra 49.76 325 P **P** **15 13 00.5 -0.3**
comp=Z,7.2nm,0.6s,baz=93,slow=7.9
NB2 NORSAR Subarra 49.76 325 P **P** **15 13 00.5 -0.3**
NB2 AMP 15 13 00.5
comp=Z,7.2nm,0.6s
NOA NORSAR Array B 49.76 325 P **P** **15 13 00.4 -0.3**
comp=Z,11nm,0.7s,baz=95,slow=7.5,SNR=39
NOA LR LR 15 35 42.7
comp=Z,93nm,18.9s,baz=285,slow=38

comp=Z,11nm,0.7s
BJO1 Bjornoya 49.90 343 *eP* **P** **15 13 02.5 +0.9**
VAE Valguarnera 49.91 294 P **P** **15 13 02.5 +0.1**
comp=Z,6.6nm,0.7s,baz=86,slow=15,SNR=1.5
comp=Z,6.6nm,0.7s
NC204 NORSAR Array S 49.99 325 IAmb IAmb 15 13 10.6
comp=Z,25nm,1.1s
CESX Cesi 50.15 300 P **P** **15 13 03.8 -0.2**
MAJO Matsushiro 50.25 68 P **P** **15 13 04.8 -0.1**
MAJO Matsushiro 50.25 68 P **P** **15 13 04.5 -0.4**
MAJO Matsushiro 50.25 68 *dP* **P** **15 13 04.8 -0.1**
MAJO pmax pmax
comp=Z,28nm,0.7s
MJAR Matsushiro Arr 50.25 68 P **P** **15 13 04.9 0.0**
comp=Z,17nm,0.7s,baz=287,slow=9.0,SNR=40
MJAR LR LR 15 35 49.4
comp=Z,100nm,18.2s,baz=270,slow=38
comp=Z,17nm,0.7s
MJAR Matsushiro Arr 50.25 68 P **P** **15 13 04.9 0.0**
SQTA Sankt Quirin 50.34 307 *eP* **P** **15 13 04.5 -1.1**
comp=Z,3.9nm,0.6s
KIBK Kibwezi 50.36 233 P **P** **15 13 05.0 -1.1**
KIBK Kibwezi 50.36 233 P **P** **15 13 07.8 +1.8**
MOTA Moosalm 50.39 307 *eP* **P** **15 13 04.8 -1.2**
comp=Z,6.8nm,1.1s
FETA Feichten 50.69 306 *eP* **P** **15 13 07.2 -1.1**
comp=Z,3.7nm,0.7s
TYV Tymovskoe 50.78 49 *eP* **P** **15 13 10.1 +1.5**
TYV pmax pmax
comp=Z,9.0nm,0.9s
TYV pmax pmax
comp=Z,300nm,5.2s
DOMB Dombas 50.84 326 *eP* **P** **15 13 09.5 +0.6**
DAVA Damuels 51.22 307 *eP* **P** **15 13 11.6 -0.7**
comp=Z,11nm,0.5s
DAVOX Davos/Dischmat 51.30 306 P **P** **15 13 12.3 -0.6**
comp=Z,4.0nm,0.5s,baz=119,slow=4.9,SNR=8.6
comp=Z,4.0nm,0.5s
YSS Yuzhno-Sakhali 51.37 54 P **P** **15 13 13.8 +0.7**
YSS Yuzhno-Sakhali 51.37 54 P **P** **15 13 12.7 -0.5**
YSS IAmb IAmb 15 13 22.5
comp=Z,19nm,0.9s
YSS Yuzhno-Sakhali 51.37 54 *dP* **P** **15 13 14.0 +0.9**
YSS pmax pmax
comp=Z,23nm,1.0s
MOL Molde 51.56 327 *eP* **P** **15 13 15.4 +1.1**
TUE Stuetta 51.72 306 P **P** **15 13 15.5 -0.5**
comp=Z,42nm,1.3s
ASAJ Asahikawa 51.78 57 P **P** **15 13 16.9 +0.6**
comp=Z,6.0nm,0.7s,baz=262,slow=7.0,SNR=16
comp=Z,6.0nm,0.7s
JKA Kamikawa-asahi 51.78 57 P **P** **15 13 16.4 +0.2**
JKA IAmb IAmb 15 13 25.0
comp=Z,13nm,0.9s
SPB2 Spitsbergen Ar 51.88 347 IAmb IAmb 15 13 18.3
comp=Z,18nm,0.8s
SPA0 Spitsbergen Ar 51.89 347 *eP* **P** **15 13 17.9 +1.3**
SPITS Spitsbergen Ar 51.89 347 P **P** **15 13 17.3 +0.7**
comp=Z,8.2nm,0.6s,baz=123,slow=10,SNR=35
SPITS LR LR 15 38 09.5
comp=Z,149nm,20.5s,baz=112,slow=39
comp=Z,8.2nm,0.6s
MPSI Mapaga 52.32 119 P **P** **15 13 22.0 +1.4**
comp=Z,31nm,0.9s
KBS Kingsbay 52.98 347 *eP* **P** **15 13 25.8 +1.1**
KBS Kingsbay 52.98 347 *iP* **P** **15 13 25.5 +0.8**
SENIN Lac Senin/Sane 53.13 306 IAmb IAmb 15 13 35.7
comp=Z,19nm,0.8s
MMSI Mamuju 53.70 123 P **P** **15 13 31.6 +0.8**
MRSI Marisa 53.74 117 P **P** **15 13 31.0 -0.1**
BMRD Maredsous 54.05 311 *dP* **P** **15 13 33.1 +0.1**
comp=Z,12nm,0.9s
KEST Kesra 54.31 293 P **P** **15 13 34.6 -0.6**
comp=Z,18nm,0.7s,baz=31,slow=4.5,SNR=17
comp=Z,18nm,0.7s
KEST Kesra 54.31 293 IAmb IAmb 15 13 36.5
comp=Z,17nm,0.8s
MBAR Mbarara 54.32 241 P **P** **15 13 35.8 +0.3**
MBAR IAmb IAmb 15 13 37.2
comp=Z,12nm,0.8s
MBAR Mbarara 54.32 241 ⇓*iP* **P** **15 13 36.6 +1.1**
MBAR pmax pmax
comp=Z,13nm,0.8s
MBAR Mbarara 54.32 241 P **P** **15 13 36.7 +1.1**
MA2 Magadan 54.51 37 P **P** **15 13 37.1 +1.0**
MA2 Magadan 54.51 37 P **P** **15 13 36.7 +0.6**
MA2 IAmb IAmb 15 13 37.6
comp=Z,10nm,0.9s
MA2 Magadan 54.51 37 *ceP* **P** **15 13 36.9 +0.8**
MA2 pmax pmax
comp=Z,12nm,0.9s
MA2 Magadan 54.51 37 P **P** **15 13 36.0 -0.1**
SEY Seymchan 54.97 33 ⇑*iP* **P** **15 13 40.6 +1.2**
SEY pmax pmax
comp=Z,15nm,0.7s
EKA Eskdalemuir Ar 57.79 318 P **P** **15 13 59.0 -0.6**
comp=Z,1.7nm,0.5s,baz=95,slow=6.6,SNR=14
EKA LR LR 15 43 58.4
comp=Z,212nm,20.7s,baz=142,slow=41
comp=Z,1.7nm,0.5s
NOR Nord 58.02 350 *iP* **P** **15 14 01.4 +0.5**
NOR IAmb IAmb 15 14 02.5
comp=Z,12nm,0.9s
SANI Sanana 58.43 116 P **P** **15 14 04.2 -0.4**
SANI Sanana 58.43 116 P **P** **15 14 03.2 -1.4**
comp=Z,30nm,1.0s
DAG Danmarks Havn 59.28 345 *iP* **P** **15 14 10.0 +0.3**
DAG IAmb IAmb 15 14 11.0
comp=Z,18nm,0.9s
PETK Petropavlovsk- 59.49 44 P **P** **15 14 11.6 +0.1**
comp=Z,4.4nm,0.8s,baz=266,slow=5.5,SNR=5.4
PETK LR LR 15 42 19.2
comp=Z,144nm,21.1s,baz=288,slow=38
comp=Z,4.4nm,0.8s
BILL Bilibino 59.87 26 P **P** **15 14 14.9 +1.0**
BILL IAmb IAmb 15 15 02.4
comp=Z,9.0nm,1.0s
BILL Bilibino 59.87 26 *ceP* **P** **15 14 15.1 +1.2**
BILL pmax pmax
comp=Z,10.0nm,1.4s
ILTH Belurgan, Co L 59.90 317 P **P** **15 14 14.2 0.0**
IDGL Inch Island, C 60.27 319 P **P** **15 14 18.1 +1.3**
DBG Daneborg 60.28 342 *iP* **P** **15 14 17.3 +0.7**
DBG IAmb IAmb 15 14 18.5
comp=Z,13nm,0.9s
IWEX Carrickbyrne, 60.61 316 P **P** **15 14 19.9 +0.7**
VOI Vohitsoka 61.41 211 P **P** **15 14 24.2 -0.8**
SIJI Sorong 61.73 112 P **P** **15 14 25.9 -1.5**
comp=Z,7.6nm,0.8s,baz=354,slow=5.2,SNR=3.5
comp=Z,7.6nm,0.8s
IGLA Glengowla, Co 61.80 317 P **P** **15 14 27.6 +0.4**
SCO Scoresbysund 61.96 338 *iP* **P** **15 14 29.9 +1.9**
SCO IAmb IAmb 15 14 33.1
comp=Z,61nm,1.5s
TAM Tamanrasset 62.30 280 P **P** **15 14 29.9 -1.4**
TAM Tamanrasset 62.30 280 P **P** **15 14 29.9 -1.4**
TAM pmax pmax
comp=Z,74nm,0.2s
ESDC Sonseca Array 62.94 301 P **P** **15 14 34.5 -0.7**
comp=Z,5.0nm,0.7s,baz=65,slow=6.1,SNR=20
comp=Z,5.0nm,0.7s
PAB San Pablo 63.27 301 P **P** **15 14 37.5 +0.2**
PAB San Pablo 63.27 301 P **P** **15 14 37.6 +0.2**
PAB pmax pmax
comp=Z,48nm,1.7s
NEEM North Greenlan 65.33 349 *iP* **P** **15 14 51.2 +0.6**
NEEM IAmb IAmb 15 14 52.3
comp=Z,39nm,0.7s
SUMG Summit 65.74 343 P **P** **15 14 54.6 +1.2**
SUMG Summit 65.74 343 P **P** **15 14 54.6 +1.2**
SUMG pmax pmax
comp=Z,46nm,0.8s
SUMG Summit 65.74 343 *iP* **P** **15 14 55.0 +1.6**
SUMG IAmb IAmb 15 14 55.4
comp=Z,47nm,0.8s
MD01 Midelt array s 66.22 295 P **P** **15 14 55.6 -1.2**
KULLO Kullorsuaq 68.44 348 *iP* **P** **15 15 10.6 +0.6**
KULLO IAmb IAmb 15 15 11.0
comp=Z,22nm,0.6s
TULEG Thule 68.57 352 IAmb IAmb 15 15 11.4
comp=Z,8.9nm,0.8s
TULEG Thule 68.57 352 *iP* **P** **15 15 10.9 +0.1**
TULEG IAmb IAmb 15 15 11.5
comp=Z,25nm,1.4s
SHEM Shemya Is, Ala 68.88 40 LR LR 15 48 08.1
comp=Z,96nm,18.2s,baz=294,slow=38

C16K Lisburne Hills 69.26 20 IAmb IAmb 15 15 17.0
comp=Z,8.5nm,0.9s
C16K Lisburne Hills 69.26 20 P **P** **15 15 15.3 +0.1**
baz=308
A21K Barrow 69.54 16 P **P** **15 15 16.8 -0.1**
baz=314
UPNV Upernavik 69.60 346 *i* P **P** **15 15 18.0 +0.7**
UPNV IAmb IAmb 15 15 18.6
comp=Z,29nm,1.1s
C17K DeLong Mountai 69.77 20 P **P** **15 15 18.3 -0.1**
baz=310
GAMB Gambell 69.80 26 P **P** **15 15 19.1 +0.5**
baz=304
NUUG Nuugaatsiaq 69.91 345 *i* P **P** **15 15 20.0 +0.9**
NUUG IAmb IAmb 15 15 20.5
comp=Z,12nm,0.8s
SAATT Saattut 70.08 344 *i* P **P** **15 15 20.7 +0.6**
SAATT IAmb IAmb 15 15 21.4
comp=Z,12nm,0.6s
TORD Torodi Ar. Bea 70.09 273 P **P** **15 15 19.3 -1.9**
comp=Z,11nm,0.8s,baz=53,slow=2.7,SNR=62
comp=Z,11nm,0.8s
TORD Torodi Ar. Bea 70.09 273 P **P** **15 15 19.2 -2.0**
TORD IAmb IAmb 15 15 20.2
comp=Z,7.7nm,0.8s
TNA Tin City 70.10 23 P **P** **15 15 20.0 -0.4**
baz=306
RDOG Red Dog Mine 70.11 20 P **P** **15 15 20.5 0.0**
baz=310
C18K Utukok River 70.21 19 IAmb IAmb 15 15 22.8
comp=Z,8.2nm,0.8s
C18K Utukok River 70.21 19 P **P** **15 15 21.3 +0.2**
baz=311
D17K Noatak River 70.29 20 P **P** **15 15 22.1 +0.5**
baz=310
C19K Lookout Ridge 70.34 18 IAmb IAmb 15 15 24.0
comp=Z,11nm,0.6s
C19K Lookout Ridge 70.34 18 P **P** **15 15 22.2 +0.3**
baz=312,SNR=15
F14K Arctic Creek 70.68 23 P **P** **15 15 24.6 +0.6**
baz=308
SAQQ Saqqaq 70.72 343 *i* P **P** **15 15 24.8 +0.7**
SAQQ IAmb IAmb 15 15 25.4
comp=Z,19nm,0.8s
B22K Teshekpuk Lake 70.98 16 P **P** **15 15 25.7 0.0**
baz=317,SNR=8.4
E17K Hotham Inlet 71.06 21 P **P** **15 15 26.8 +0.5**
baz=311
F15K North Star Dit 71.08 22 IAmb IAmb 15 15 28.9
comp=Z,25nm,1.4s
F15K North Star Dit 71.08 22 P **P** **15 15 27.1 +0.7**
baz=309
ILULI Ilulissat 71.09 343 P **P** **15 15 26.6 +0.3**
ILULI Ilulissat 71.09 343 P **P** **15 15 26.6 +0.3**
ILULI pmax pmax
comp=Z,48nm,0.9s
ILULI Ilulissat 71.09 343 *i* P **P** **15 15 26.8 +0.5**
ILULI IAmb IAmb 15 15 27.8
comp=Z,71nm,1.1s
D19K Kuna River 71.15 18 P **P** **15 15 26.9 +0.1**
baz=314,SNR=21
E18K Tukpahlearik C 71.19 20 IAmb IAmb 15 15 29.0
comp=Z,15nm,0.8s
E18K Tukpahlearik C 71.19 20 P **P** **15 15 27.5 +0.5**
baz=312
B21K Ikpikpuk River 71.23 17 P **P** **15 15 27.9 +0.7**
baz=316
D20K Etivluk River 71.39 18 IAmb IAmb 15 15 30.0
comp=Z,13nm,1.0s
D20K Etivluk River 71.39 18 P **P** **15 15 28.6 +0.3**
baz=315
C21K Knifeblade Rid 71.53 17 P **P** **15 15 29.8 +0.7**
baz=316
ANM Nome 71.56 24 IAmb IAmb 15 15 32.2
comp=Z,25nm,1.5s
ANM Nome 71.56 24 P **P** **15 15 30.2 +0.9**
baz=309,SNR=11
F17K Baldwin Pennin 71.66 21 P **P** **15 15 30.8 +1.0**
baz=312,SNR=18
GDH Godhavn 71.66 343 *i* P **P** **15 15 30.3 +0.5**
GDH IAmb IAmb 15 15 30.9
comp=Z,17nm,0.9s
G15K Niukluk 71.73 23 P **P** **15 15 31.6 +1.3**
baz=310,SNR=9.2
E20K Nigu River 71.82 18 P **P** **15 15 32.0 +1.1**
baz=316
C23K Itkillik River 72.00 15 P **P** **15 15 32.9 +1.0**
baz=320,SNR=8.6
G16K Koyuk River 72.02 22 IAmb IAmb 15 15 34.5
comp=Z,11nm,1.1s
G16K Koyuk River 72.02 22 P **P** **15 15 32.7 +0.7**
baz=311
F18K Selawik 72.03 20 P **P** **15 15 32.6 +0.5**
baz=313
E19K Redstone River 72.11 19 P **P** **15 15 33.3 +0.7**
baz=315
D22K Ayikyak River 72.25 17 IAmb IAmb 15 15 34.7
comp=Z,7.7nm,0.8s
D22K Ayikyak River 72.25 17 P **P** **15 15 33.9 +0.5**
baz=318
E21K Killik River 72.26 17 IAmb IAmb 15 15 34.8
comp=Z,16nm,0.8s
E21K Killik River 72.26 17 P **P** **15 15 33.8 +0.3**
baz=317
F19K Shaleruckik Mo 72.40 20 P **P** **15 15 34.4 0.0**
baz=314
RES Resolute Bay 72.44 358 LR LR 15 51 00.4
comp=Z,68nm,18.4s,baz=10.0,slow=39
G17K Kiwalik Mounta 72.47 21 P **P** **15 15 35.1 +0.3**
baz=312,SNR=10
C24K Franklin Bluff 72.51 15 P **P** **15 15 35.3 +0.4**
baz=322
SFJD Kangerlussuaq 72.54 341 P **P** **15 15 34.7 -0.4**
comp=Z,15nm,0.7s,baz=49,slow=9.3,SNR=5.1
comp=Z,15nm,0.7s
SFJD Kangerlussuaq 72.54 341 P **P** **15 15 35.5 +0.5**
SFJD Kangerlussuaq 72.54 341 P **P** **15 15 35.6 +0.5**
SFJD pmax pmax
comp=Z,36nm,1.2s
H16K Elim 72.55 23 P **P** **15 15 35.8 +0.6**
baz=311,SNR=9.5
D23K Nanushuk River 72.66 16 P **P** **15 15 35.8 0.0**
baz=320
G18K Tagagawik 72.81 21 IAmb IAmb 15 17 18.1
comp=Z,22nm,2.0s
G18K Tagagawik 72.81 21 P **P** **15 15 36.8 0.0**
baz=314
F20K Avaraart Lake 72.82 19 P **P** **15 15 36.8 0.0**
baz=316
D24K Happy Valley 72.93 15 P **P** **15 15 37.6 +0.2**
baz=322
E22K Anaktuvuk Pass 73.02 17 IAmb IAmb 15 15 39.6
comp=Z,15nm,1.2s
E22K Anaktuvuk Pass 73.02 17 P **P** **15 15 38.4 +0.3**
baz=319
G19K Purcell Mounta 73.09 20 IAmb IAmb 15 15 40.3
comp=Z,13nm,1.1s
G19K Purcell Mounta 73.09 20 P **P** **15 15 38.6 +0.2**
baz=315,SNR=12
H17K Granite Mounta 73.09 22 IAmb IAmb 15 15 40.7
comp=Z,10nm,1.1s
H17K Granite Mounta 73.09 22 P **P** **15 15 39.2 +0.8**
baz=313
C26K Camden Bay 73.14 14 P **P** **15 15 39.3 +0.6**
baz=325
TOLK Toolik Lake Re 73.16 16 P **P** **15 15 39.1 +0.2**
baz=321
F21K Alatna River 73.29 18 P **P** **15 15 40.3 +0.7**
baz=318
D25K Kavik River 73.33 15 IAmb IAmb 15 15 41.6
comp=Z,10.0nm,0.9s
D25K Kavik River 73.33 15 P **P** **15 15 40.4 +0.5**
baz=324
J14K Nanvaranak Lak 73.35 25 IAmb IAmb 15 15 42.1
comp=Z,11nm,0.7s
J14K Nanvaranak Lak 73.35 25 P **P** **15 15 41.0 +1.0**
baz=311,SNR=8.2
H18K Honhosa River 73.41 21 IAmb IAmb 15 15 42.7
comp=Z,30nm,1.6s
H18K Honhosa River 73.41 21 P **P** **15 15 41.0 +0.6**
baz=314
K13K Kusilvak Mount 73.49 26 IAmb IAmb 15 15 43.1
comp=Z,33nm,1.6s
K13K Kusilvak Mount 73.49 26 P **P** **15 15 41.4 +0.5**
baz=310
I17K Unalakleet 73.56 23 IAmb IAmb 15 15 43.7
comp=Z,18nm,1.2s
I17K Unalakleet 73.56 23 P **P** **15 15 42.2 +1.0**
baz=313
E23K Chandalar 73.61 16 IAmb IAmb 15 15 43.2
comp=Z,15nm,1.2s
E23K Chandalar 73.61 16 P **P** **15 15 42.6 +1.0**
baz=321,SNR=8.9
C27K Jago River 73.62 14 IAmb IAmb 15 15 43.5
comp=Z,13nm,1.1s
C27K Jago River 73.62 14 P **P** **15 15 41.8 +0.3**
baz=326
G21K Allakaket 73.81 19 IAmb IAmb 15 15 43.8
comp=Z,8.1nm,0.8s
G21K Allakaket 73.81 19 P **P** **15 15 43.2 +0.6**
baz=318,SNR=6.6
E24K Your Creek 73.86 16 IAmb IAmb 15 15 44.8
comp=Z,10nm,0.9s
E24K Your Creek 73.86 16 P **P** **15 15 43.3 +0.3**
baz=322
M11K Mekoryuk 73.91 27 P **P** **15 15 43.7 +0.5**
baz=309
J16K Anvik River 74.00 23 P **P** **15 15 45.2 +1.4**
J16K IAmb IAmb 15 15 47.6
comp=Z,15nm,1.1s
J16K Anvik River 74.00 23 P **P** **15 15 44.4 +0.5**
baz=313
COLD Coldfoot 74.11 17 IAmb IAmb 15 15 46.2
comp=Z,16nm,1.0s
COLD Coldfoot 74.11 17 P **P** **15 15 45.3 +0.8**
baz=321,SNR=13
IMAR Indian Mountai 74.14 19 P **P** **15 15 44.7 +0.1**
GCSA Galena City Sc 74.15 21 P **P** **15 15 45.7 +1.1**
baz=316,SNR=6.5
H20K Anotleneega Mo 74.19 20 P **P** **15 15 45.5 +0.6**
baz=317,SNR=7.8
A36M Sachs Harbour 74.23 7 P **P** **15 15 45.5 +0.4**
baz=341,SNR=6.1
K15K Wolf Creek Mou 74.36 24 P **P** **15 15 46.8 +0.9**
baz=312
D27M Malcolm River 74.47 13 P **P** **15 15 47.0 +0.4**
baz=328
E25K Arctic Village 74.48 15 IAmb IAmb 15 15 48.0
comp=Z,46nm,1.9s
E25K Arctic Village 74.48 15 P **P** **15 15 46.8 +0.2**
baz=324,SNR=6.6
G23K Bananza Creek 74.56 17 P **P** **15 15 47.5 +0.4**
baz=321
L14K Kuka Creek 74.59 25 P **P** **15 15 48.3 +1.0**
baz=312
H21K Melozitna Rive 74.64 19 P **P** **15 15 48.3 +0.8**
baz=319,SNR=8.4
L15K Ungalak Mounta 74.79 25 P **P** **15 15 49.1 +0.7**
baz=313
D28M Stokes Point 74.81 12 P **P** **15 15 49.1 +0.8**
baz=330
H22K Ishtalitna Cre 74.85 18 P **P** **15 15 49.7 +1.0**
baz=320
F25K Christian Rive 74.89 15 P **P** **15 15 49.9 +0.8**
baz=324,SNR=9.1
M13K Dall Lake 74.97 26 P **P** **15 15 50.9 +1.5**
baz=311
J19K Poorman 75.07 21 IAmb IAmb 15 15 52.4
comp=Z,20nm,1.2s
J19K Poorman 75.07 21 P **P** **15 15 51.5 +1.4**
baz=317
J18K Innko River 75.12 22 P **P** **15 15 51.1 +0.7**
baz=316
F26K Sheenjek River 75.14 15 P **P** **15 15 51.5 +1.1**
baz=326
K17K Iditarod 75.15 23 IAmb IAmb 15 15 53.1
comp=Z,18nm,0.9s
K17K Iditarod 75.15 23 P **P** **15 15 51.5 +1.0**
baz=315
LBTB Lobatse 75.19 227 LR LR 15 46 33.0
comp=Z,43nm,21.4s,baz=179,slow=34
G24K Hadweenzic Riv 75.19 17 **P** **15 15 51.5 +0.8**
G24K IAmb IAmb 15 15 52.8
comp=Z,19nm,1.0s
G24K Hadweenzic Riv 75.19 17 P **P** **15 15 51.7 +1.0**
baz=323,SNR=10
M14K Bethel 75.25 26 P **P** **15 15 52.4 +1.4**
baz=312
BMAR Burnt Mountain 75.26 15 P **P** **15 15 52.4 +1.3**
E28M Babbage River 75.29 13 P **P** **15 15 51.9 +0.7**
baz=330
L16K Owhat River 75.47 24 IAmb IAmb 15 15 55.4
comp=Z,25nm,1.4s
L16K Owhat River 75.47 24 P **P** **15 15 53.3 +1.0**
baz=314
L17K Donlin 75.56 23 P **P** **15 15 53.9 +1.0**
baz=315,SNR=6.6
MLY Manley 75.68 19 IAmb IAmb 15 15 55.4
comp=Z,12nm,0.9s
MLY Manley 75.68 19 P **P** **15 15 54.6 +1.0**
baz=321,SNR=7.2
M15K Kasigluk River 75.75 25 P **P** **15 15 54.5 +0.5**
baz=313
KGCAE Kacgae 75.76 230 P **P** **15 15 54.7 0.0**
KGCAE IAmb IAmb 15 15 55.4
comp=Z,12nm,0.9s
E29M Blow River 75.78 12 IAmb IAmb 15 15 55.8
comp=Z,11nm,0.8s
E29M Blow River 75.78 12 P **P** **15 15 54.6 +0.6**
baz=331
H24K Noodor Dome 75.79 17 P **P** **15 15 54.9 +0.7**
baz=323
FYU Fort Yukon 75.83 16 IAmb IAmb 15 15 56.7
comp=Z,16nm,0.9s
G26K Porcupine Rive 75.83 15 P **P** **15 15 55.6 +1.3**
baz=326
N14K Kuskokwak Cree 75.91 26 P **P** **15 15 55.9 +1.0**
baz=313
I23K Minto, Yukon-K 75.96 18 IAmb IAmb 15 15 57.7
comp=Z,30nm,1.5s
I23K Minto, Yukon-K 75.96 18 P **P** **15 15 55.6 +0.6**
baz=322,SNR=9.2
K20K Telida 76.01 21 P **P** **15 15 55.8 +0.4**
baz=318
L18K Granite Mounta 76.03 23 P **P** **15 15 56.3 +0.8**
baz=316
F28M Old Crow 76.08 13 P **P** **15 15 56.6 +0.8**
baz=329
M16K Timber Creek 76.13 24 P **P** **15 15 56.8 +0.6**
baz=315
CHUM Lake Minchumin 76.13 20 P **P** **15 15 56.6 +0.6**
baz=320
N15K Kwethluk River 76.33 25 P **P** **15 15 58.1 +0.8**
baz=314
BPAW Bear Paw Mtn. 76.34 19 P **P** **15 15 57.9 +0.6**
baz=321
TSUM Tsumeb 76.35 236 P **P** **15 15 57.5 -0.7**
M17K Holitna River 76.38 24 IAmb IAmb 15 16 00.8
comp=Z,18nm,1.0s
M17K Holitna River 76.38 24 P **P** **15 15 58.5 +1.0**
baz=316,SNR=5.1
WB0 Warramunga Arr 76.38 125 P **P** **15 15 57.7 -0.5**
WB0 IAmb IAmb 15 16 00.1
comp=Z,31nm,1.5s
WRA Warramunga Arr 76.46 125 P **P** **15 15 58.2 -0.4**
comp=Z,5.4nm,0.8s,baz=326,slow=5.4,SNR=50
comp=Z,5.4nm,0.8s
WRAB Tennant Creek 76.46 125 P **P** **15 15 58.9 +0.3**
WRAB Tennant Creek 76.46 125 P **P** **15 15 58.2 -0.4**
WRAB IAmb IAmb 15 16 06.9
comp=Z,8.5nm,0.9s
WRAB Tennant Creek 76.46 125 P **P** **15 15 58.2 -0.4**
WRAB pmax pmax
comp=Z,9.0nm,0.9s
NEA2 Nenana 76.47 18 P **P** **15 15 58.8 +0.8**
baz=322
POKR Poker Plat Res 76.48 17 P **P** **15 15 59.4 +1.3**
baz=323
O14K Tigyukauivet M 76.53 26 P **P** **15 15 59.3 +0.9**
baz=313
COLA College 76.57 18 P **P** **15 15 59.2 +0.7**
COLA College 76.57 18 P **P** **15 15 59.1 +0.5**
COLA IAmb IAmb 15 15 60.0
comp=Z,14nm,0.8s
COLA College 76.57 18 P **P** **15 15 59.1 +0.5**
COLA pmax pmax
comp=Z,14nm,0.8s
COLA College 76.57 18 P **P** **15 15 59.0 +0.5**
baz=323
N16K Nishlik Lake 76.58 25 P **P** **15 15 59.9 +1.1**
baz=315
INK Inuvik 76.60 11 LR LR 15 52 20.0
comp=Z,51nm,21.3s,baz=292,slow=38
INK Inuvik 76.60 11 P **P** **15 15 59.1 +0.5**
baz=335,SNR=7.8
PRP Porcupine Dome 76.62 17 IAmb IAmb 15 18 14.9
comp=Z,27nm,2.0s
PRP Porcupine Dome 76.62 17 P **P** **15 15 60.0 +0.9**
baz=325
L19K White Mountain 76.64 22 P **P** **15 15 59.9 +0.8**
baz=318
ILON Igloolik, Nuna 76.68 352 IAmb IAmb 15 15 59.7
comp=Z,8.4nm,0.9s
F30M Barrier River 76.84 12 IAmb IAmb 15 16 01.6
comp=Z,13nm,0.9s
F30M Barrier River 76.84 12 P **P** **15 16 01.0 +0.9**
baz=333
M18K Stony River 76.84 23 P **P** **15 16 00.9 +0.7**
baz=317
C36M Paulatuk 76.88 7 IAmb IAmb 15 16 00.4
comp=Z,6.8nm,0.8s
C36M Paulatuk 76.88 7 P **P** **15 16 00.6 +0.4**
baz=343,SNR=6.4
IL31 76.89 18 IAmb IAmb 15 16 01.5
comp=Z,24nm,1.6s
ILAR Eielson Array 76.89 18 P **P** **15 16 00.3 -0.1**
comp=Z,6.3nm,0.8s,baz=315,slow=4.9,SNR=68
ILAR LR LR 15 54 38.4
comp=Z,107nm,20.0s,baz=305,slow=39
comp=Z,6.3nm,0.8s
ILAR Eielson Array 76.89 18 P **P** **15 15 59.9 -0.5**
PPLA Purkeypile 76.92 21 P **P** **15 16 00.9 +0.1**
baz=320
H27K Steamboat Moun 76.93 15 P **P** **15 16 00.9 +0.3**
baz=328
M19K Big River Lodg 77.00 22 P **P** **15 16 01.1 0.0**
baz=318
TRF Thorofare Moun 77.04 20 P **P** **15 16 01.9 +0.4**
baz=321
G29M Pine Creek 77.05 13 P **P** **15 16 02.3 +1.0**
baz=331
N17K Nushagak Hills 77.09 24 P **P** **15 16 02.4 +0.8**
baz=316
O15K Ungalikthiuk R 77.12 26 P **P** **15 16 01.9 +0.2**
baz=314
HDA Harding Lake 77.17 18 IAmb IAmb 15 16 07.4
comp=Z,19nm,1.5s
HDA Harding Lake 77.17 18 P **P** **15 16 02.2 +0.2**
baz=324,SNR=5.0
MCK McKinley 77.19 19 P **P** **15 16 02.2 0.0**
baz=322
G30M tAoh Zraii Nji 77.33 12 IAmb IAmb 15 16 04.1
comp=Z,11nm,0.9s
G30M tAoh Zraii Nji 77.33 12 P **P** **15 16 03.0 +0.2**
baz=332
F31M Tsiigehtchic 77.35 11 IAmb IAmb 15 16 03.6
comp=Z,6.5nm,0.7s
F31M Tsiigehtchic 77.35 11 P **P** **15 16 03.4 +0.5**
baz=334
I26K Coal Creek Min 77.35 16 IAmb IAmb 15 16 10.4
comp=Z,36nm,2.0s
I26K Coal Creek Min 77.35 16 P **P** **15 16 03.3 +0.3**
baz=327
J25K Salcha River, 77.40 17 P **P** **15 16 03.1 -0.2**
baz=325
M20K Styx River 77.41 22 P **P** **15 16 03.5 0.0**
baz=319
N18K Kilae Creek 77.42 23 P **P** **15 16 02.9 -0.6**
baz=317
I27K Kandik River 77.45 15 P **P** **15 16 03.7 +0.1**
baz=328
O16K Kokwok River B 77.45 25 P **P** **15 16 03.9 +0.3**
baz=316
O17K Koliganek Bris 77.67 25 P **P** **15 16 05.0 +0.2**
baz=316
EPYK Eagle Plains 77.78 13 P **P** **15 16 06.1 +0.7**
baz=332
N19K Bonanza Creek 77.78 23 P **P** **15 16 05.6 0.0**
baz=318
SKT Skwentna 77.82 21 P **P** **15 16 06.1 +0.4**
baz=320,SNR=6.2
CUT Chulitna 77.86 20 P **P** **15 16 06.5 +0.7**
baz=321
P16K Nushagak River 77.89 25 P **P** **15 16 06.7 +0.6**
baz=316
I28M Miner Creek 77.94 15 IAmb IAmb 15 16 07.4
comp=Z,8.4nm,0.8s
I28M Miner Creek 77.94 15 P **P** **15 16 06.6 +0.2**
baz=330,SNR=7.3
K24K Donnelly Dome 77.97 18 P **P** **15 16 06.5 0.0**
baz=325,SNR=14
UNV Unalaska Valle 77.97 33 P **P** **15 16 06.7 +0.2**
baz=310
WAT1 Susitna Watana 78.02 19 P **P** **15 16 07.1 +0.3**
baz=323
BOSA Boshof 78.06 224 P **P** **15 16 05.8 -1.7**
comp=Z,5.0nm,0.6s,baz=40,slow=4.8,SNR=14
BOSA LR LR 15 47 14.2
comp=Z,56nm,21.6s,baz=174,slow=33
comp=Z,5.0nm,0.6s
BOSA Boshof 78.06 224 IAmb IAmb 15 16 15.9
comp=Z,10nm,1.0s
DHY Denali Highway 78.14 19 IAmb IAmb 15 16 09.0
comp=Z,8.0nm,0.7s
DHY Denali Highway 78.14 19 P **P** **15 16 08.2 +0.5**
baz=324
SPCR Spurr Chakacha 78.22 22 P **P** **15 16 08.2 +0.3**
baz=320
RIDG Independent Ri 78.25 17 IAmb IAmb 15 16 22.0
comp=Z,21nm,1.2s
RIDG Independent Ri 78.25 17 P **P** **15 16 08.6 +0.4**
baz=326
O18K Koktuh Hills 78.26 24 P **P** **15 16 08.9 +0.8**
O18K Koktuh Hills 78.26 24 P **P** **15 16 08.7 +0.6**
baz=318,SNR=6.9
SCRK Sand Creek 78.27 17 IAmb IAmb 15 16 09.2
comp=Z,7.1nm,0.8s
SCRK Sand Creek 78.27 17 P **P** **15 16 08.8 +0.5**
baz=326,SNR=6.1
O19K Port Alsworth 78.30 23 P **P** **15 16 08.8 +0.5**
baz=318
P17K Kvichak River 78.32 25 P **P** **15 16 08.6 +0.2**
baz=317
I29M Ogilvie Camp, 78.36 14 P **P** **15 16 08.9 +0.3**
baz=331
M22K Willow 78.42 21 P **P** **15 16 09.3 +0.3**
baz=322
WAT6 Susitna Watana 78.44 19 P **P** **15 16 09.4 +0.1**
baz=324
SUA Susitna One 78.46 21 IAmb IAmb 15 16 10.2
comp=Z,16nm,1.0s
SUA Susitna One 78.46 21 P **P** **15 16 08.8 -0.6**
baz=321
DOT Dot Lake 78.53 17 IAmb IAmb 15 16 10.7
comp=Z,10nm,0.8s
P18K Big Mountain, 78.60 24 P **P** **15 16 09.6 -0.5**
baz=318
Q16K King Salmon 78.62 25 P **P** **15 16 10.4 +0.3**
baz=317
FALS False Pass 78.66 31 P **P** **15 16 10.2 -0.2**
baz=312
AS31 Alice Springs 78.70 128 P **P** **15 16 10.7 -0.4**
ASAR Alice Springs 78.70 128 P **P** **15 16 10.5 -0.6**
comp=Z,2.8nm,0.7s,baz=322,slow=5.3,SNR=40
comp=Z,2.8nm,0.7s
ASAR Alice Springs 78.70 128 P **P** **15 16 10.2 -0.9**
H31M Peel River 78.72 12 P **P** **15 16 10.4 -0.2**
baz=334
PAX Paxson 78.73 18 IAmb IAmb 15 16 13.2
comp=Z,10nm,0.7s
PAX Paxson 78.73 18 P **P** **15 16 11.0 +0.2**
baz=325,SNR=6.6
PMR Palmer 78.84 20 P **P** **15 16 11.6 +0.3**
baz=322
I30M Mount Dempster 78.86 13 IAmb IAmb 15 16 12.5
comp=Z,11nm,0.9s
I30M Mount Dempster 78.86 13 P **P** **15 16 11.7 +0.2**
baz=332,SNR=12
CAPN Captain Cook N 78.88 22 P **P** **15 16 11.9 +0.4**
baz=321
SML Sawmill 78.90 20 P **P** **15 16 12.1 +0.4**
SML Sawmill 78.90 20 P **P** **15 16 11.5 -0.1**
baz=323
DBIC Dimbokro 78.95 271 P **P** **15 16 11.3 -1.4**
comp=Z,7.2nm,0.9s,baz=79,slow=6.8,SNR=8.1
DBIC LR LR 15 54 26.5
comp=Z,47nm,18.6s,baz=151,slow=38
comp=Z,7.2nm,0.9s
DBIC Dimbokro 78.95 271 P **P** **15 16 11.0 -1.7**
RC01 Rabbit Creek A 79.06 21 P **P** **15 16 12.1 -0.4**
baz=322
M23K Glacier View 79.08 20 P **P** **15 16 12.7 0.0**
baz=324,SNR=5.6
R16K Pilot Point 79.10 26 P **P** **15 16 12.6 -0.2**

baz=316
SCM Sheep Creek Mo 79.16 19 P P 15 16 14.0 +0.8
baz=324
J29N Klondike Camp 79.17 14 IAmb IAmb 15 16 20.4
comp=Z,22nm,1.4s
J29N Klondike Camp 79.17 14 P P 15 16 14.1 +0.9
baz=331
KNK Knik Glacier 79.18 20 P P 15 16 12.8 -0.3
baz=323
Q17K Contact Creek 79.20 25 P P 15 16 13.5 0.0
baz=318
L26K Log Cabin Wild 79.23 17 P P 15 16 13.1 -0.3
baz=327
Q18K Katmai Hardscr 79.23 25 P P 15 16 13.4 -0.2
baz=318
M24K Tolsona, Glenn 79.25 19 P P 15 16 13.3 -0.4
baz=325
DAWY Dawson 79.26 15 P P 15 16 13.9 +0.2
DAWY Dawson 79.26 15 P P 15 16 13.3 -0.3
baz=330,SNR=7.1
HARP HAARP 79.29 18 P P 15 16 13.9 +0.1
baz=326,SNR=6.3
PMG Port Moresby 79.44 108 P P 15 16 14.4 -0.9
comp=Z,13nm,0.8s,baz=355,slow=9.1,SNR=13
comp=Z,13nm,0.8s
PMG Port Moresby 79.44 108 P P 15 16 15.9 +0.6
PMG Port Moresby 79.44 108 P P 15 16 15.6 +0.3
PMG IAmb IAmb 15 16 24.1
comp=Z,16nm,0.9s
PMG Port Moresby 79.44 108 P P 15 16 15.6 +0.3
PMG pmax pmax
comp=Z,16nm,0.9s
PMG Port Moresby 79.44 108 P P 15 16 15.8 +0.5
comp=Z,19nm,1.0s
J30M Hart River 79.45 14 IAmb IAmb 15 16 16.2
comp=Z,13nm,0.8s
J30M Hart River 79.45 14 P P 15 16 14.7 -0.1
baz=333,SNR=8.5
R17L Mt. Peulik Vol 79.50 26 P P 15 16 15.2 +0.2
baz=317
O22K Cooper Landing 79.54 21 P P 15 16 15.2 +0.1
baz=322
SDPT Sand Point 79.55 29 P P 15 16 15.5 +0.3
baz=314
L27K Beaver Creek, 79.57 17 P P 15 16 15.4 +0.1
baz=328
BCAR Beaver Creek A 79.57 17 P P 15 16 16.0 +0.6
HOM Homer 79.59 23 P P 15 16 15.6 +0.3
baz=321
FRB Frobisher Bay 79.63 345 P P 15 16 14.9 -0.7
comp=Z,2.6nm,0.7s,baz=63,slow=5.3,SNR=4.6
FRB LR LR 15 55 49.1
comp=Z,58nm,19.4s,baz=61,slow=39
comp=Z,2.6nm,0.7s
BRSE Bradley Lake S 79.81 22 P P 15 16 16.8 +0.1
baz=321
KLU Klutina 79.83 19 P P 15 16 16.8 0.0
baz=325
M26K Nabesna, AK 79.84 17 P P 15 16 16.8 0.0
baz=327
K29M Barlow Dome 79.86 14 IAmb IAmb 15 16 18.6
comp=Z,15nm,0.8s
K29M Barlow Dome 79.86 14 P P 15 16 16.6 -0.3
baz=332
SEW Seward 79.92 21 P P 15 16 17.6 +0.4
baz=322
GLI Glacier Island 80.00 20 P P 15 16 18.0 +0.4
baz=324
N25K Chitina, Valde 80.09 19 P P 15 16 18.1 -0.1
baz=326
Q20K Shuyak Island 80.15 23 P P 15 16 18.4 -0.1
baz=320
M27K Edge Creek, AK 80.16 17 P P 15 16 18.5 -0.2
baz=328
BVCY Beaver Creek 80.35 17 P P 15 16 18.9 -0.7
baz=329
L29M L29M 80.37 15 IAmb IAmb 15 16 21.5
comp=Z,15nm,0.9s
L29M L29M 80.37 15 P P 15 16 19.8 +0.1
baz=331,SNR=6.0
MAYO Mayo, Yukon 80.41 14 P P 15 16 20.2 +0.4
MAYO Mayo, Yukon 80.41 14 P P 15 16 20.2 +0.4
baz=333,SNR=5.1
QIS Mount Isa 80.56 122 P P 15 16 22.2 +1.0
BMRM Bremner River 80.62 19 P P 15 16 21.1 +0.1
baz=326
P23K Montague Islan 80.63 21 P P 15 16 20.7 -0.3
baz=324
EYAK Cordova Ski Ar 80.65 20 P P 15 16 20.6 -0.5
baz=325
MCARA McCarthy VSAT 80.69 18 P P 15 16 21.0 -0.3
baz=327
KDAK Kodiak Island 80.72 24 LR LR 15 56 20.9
comp=Z,205nm,18.5s,baz=87,slow=39
KDAK Kodiak Island 80.72 24 P P 15 16 21.3 -0.2
baz=320
M29M Somme Creek 80.89 16 IAmb IAmb 15 16 24.1
comp=Z,13nm,0.8s
M29M Somme Creek 80.89 16 P P 15 16 22.3 -0.2
baz=331
OHAK Old Harbor 80.91 25 P P 15 16 22.9 +0.4
baz=320
YUK3 Moose Creek 81.00 17 P P 15 16 23.6 +0.3
baz=330
SII Sitkinak Islan 81.09 26 P P 15 16 23.6 0.0
baz=319
CHIR Chirikof Islan 81.11 27 P P 15 16 23.2 -0.5
baz=318
M30M Minto, Yukon 81.14 15 P P 15 16 23.2 -0.6
baz=332
CRQE Cirque 81.21 18 P P 15 16 23.4 -0.8
baz=327
Q23K Middleton Isla 81.40 20 P P 15 16 25.1 0.0
baz=325
CTG Chitna Glacier 81.48 18 P P 15 16 25.9 +0.2
baz=329
KAIM Kayak Island 81.54 19 P P 15 16 25.2 -0.7
baz=326
YUK8 Steele Glacier 81.59 17 P P 15 16 25.5 -1.0
baz=330
YUK4 Talbot Arm 81.81 16 P P 15 16 26.9 -0.7
baz=331
O28M Mount Upton 81.94 17 P P 15 16 28.3 0.0
baz=330
M31M Drury Creek, Y 81.97 14 IAmb IAmb 15 16 29.5
comp=Z,9.5nm,0.9s
M31M Drury Creek, Y 81.97 14 P P 15 16 28.6 +0.4
baz=334
MESA MESA 82.00 18 P P 15 16 28.0 -0.6
baz=328
YUK6 Outpost Mounta 82.23 16 P P 15 16 29.4 -0.4
baz=331
N31M Braeburn, Yuko 82.33 15 P P 15 16 30.8 +0.8
baz=333
MTSU Mount Surprise 82.48 117 P P 15 16 32.4 +0.9
PINM Pinnacle 82.50 17 P P 15 16 31.3 +0.2
baz=330
HYT Haines Junctio 82.53 16 P P 15 16 31.5 +0.3
baz=332
O29M Mount Kennedy 82.74 17 P P 15 16 32.4 +0.1
baz=331
WRGLY Wrigley 82.83 9 P P 15 16 33.1 +0.5
baz=343,SNR=7.7
O30N Mendenhall 82.90 15 P P 15 16 33.2 +0.2
baz=333
N32M Quiet Lake 83.19 14 P P 15 16 34.3 -0.3
baz=336
WHY Whitehorse 83.26 15 P P 15 16 34.9 -0.2
baz=334
P30M Million Dollar 83.28 16 P P 15 16 34.7 -0.3
baz=332
P33M Teslin, Yukon 84.11 14 IAmb IAmb 15 16 40.4
comp=Z,13nm,0.9s
P33M Teslin, Yukon 84.11 14 P P 15 16 39.3 0.0
baz=336
SKAG Skagway 84.25 16 P P 15 16 39.9 0.0
baz=334
YKAW3 Yellowknife Wh 84.38 5 IAmb IAmb 15 16 41.7
comp=Z,5.9nm,0.9s
YKA Yellowknife Ar 84.45 5 P P 15 16 40.6 -0.3
comp=Z,2.8nm,0.8s,baz=344,slow=5.7,SNR=42
comp=Z,2.8nm,0.8s
YKA Yellowknife Ar 84.45 5 P P 15 16 40.1 -0.7
YKA Yellowknife Ar 84.45 5 *i* P P 15 16 41.0 +0.1
YKA pmax pmax
comp=Z,3.0nm,0.8s
P32M Atlin 84.48 15 P P 15 16 41.0 -0.2
baz=335

KUQ Kuujjuaa 84.53 342 IAmb IAmb 15 16 42.1
comp=Z,16nm,1.2s
WTLY Watson Lake, Y 84.97 12 P P 15 16 43.3 -0.3
baz=339
CTA Charters Tower 85.12 118 P P 15 16 44.8 -0.1
CTAO Charters Tower 85.12 118 P P 15 16 44.8 -0.1
CTAO Charters Tower 85.12 118 P P 15 16 44.9 0.0
CTAO Charters Tower 85.12 118 P P 15 16 44.9 0.0
CTAO pmax pmax
comp=Z,18nm,1.2s
R33M Jennings River 85.23 14 P P 15 16 44.7 -0.3
baz=337
R32K Eaglecrest 85.50 16 P P 15 16 45.6 -0.6
baz=334
KOTAN Kotaneelee Air 85.72 10 P P 15 16 46.7 -0.6
baz=343
INKA Innaminka 86.00 127 IAmb IAmb 15 18 45.1
comp=Z,22nm,1.9s
S32K Killisnoo 86.22 16 P P 15 16 49.3 -0.5
baz=334
DLBC Dease Lake 86.30 13 LR LR 16 00 37.7
comp=Z,39nm,18.4s,baz=302,slow=39
DLBC Dease Lake 86.30 13 P P 15 16 50.1 -0.3
baz=338
SIT Sitka 86.41 17 P P 15 16 50.6 -0.1
baz=334
S34M Telegraph Cree 86.57 14 P P 15 16 51.5 0.0
baz=337
SCHQ Schefferville 86.95 340 P P 15 16 52.7 -0.8
comp=Z,2.0nm,0.7s,baz=48,slow=2.4,SNR=4.7
SCHQ LR LR 15 55 47.8
comp=Z,87nm,20.4s,baz=47,slow=36
comp=Z,2.0nm,0.7s
T35M Bob Quinn 87.61 14 P P 15 16 56.1 -0.6
baz=338
QLP Quilpie 87.66 124 P P 15 16 57.6 +0.4
WRAK Wrangell Islan 87.68 15 P P 15 16 56.2 -0.7
baz=336
U33K Whale Pass 87.78 16 P P 15 16 57.4 0.0
baz=336
FCC Fort Churchill 88.24 355 IAmb IAmb 15 17 00.9
comp=Z,10nm,1.3s
CRAG Craig 88.37 16 P P 15 16 59.4 -0.8
baz=336
V35K Ketchikan 88.85 15 P P 15 17 02.1 -0.4
baz=337
STKA Stephens Creek 89.23 129 P P 15 17 03.5 -1.1
comp=Z,1.6nm,0.7s,baz=325,slow=16,SNR=3.9
comp=Z,1.6nm,0.7s
EDM Edmonton 93.74 6 P P 15 17 25.2 -0.2
EDM Edmonton 93.74 6 P P 15 17 25.2 -0.2
EDM pmax pmax
comp=Z,8.0nm,0.7s
ULM Lac du Bonnet 96.83 355 LR LR 16 04 14.1
comp=Z,79nm,19.6s,baz=8.5,slow=37
NEW Newport 98.23 9 LR LR 16 05 13.8
comp=Z,36nm,21.5s,baz=247,slow=37
SADO Sadowa 99.44 342 LR LR 16 04 01.3
comp=Z,49nm,19.3s,baz=323,slow=36
PDAR Pinedale Array 104.42 4 PKiKP **PKiKP** 15 22 29.8 -0.2
comp=Z,0.4nm,0.5s,baz=80,slow=2.9,SNR=7.3
PDAR Pinedale Array 104.42 4 **PKiKP** 15 22 29.3 -0.7
BG3 Lake Jocassee 109.61 342 Pdif **Pdif** 15 18 36.9 +0.1
NVL N'lazarevskaya 113.02 199 *i* PKiKP **PKiKP** 15 22 45.3 +0.6
NVL *e* 15 23 34.2
NVL *e*PPP PPP 15 25 57.1
NVL *e* 15 29 57.5
NVL *e*SS SS 15 39 19.6 +2.6
NVL *e*SSS SSS 15 43 31.8
NVL pmax pmax
comp=Z,24nm,1.7s
NVL MLR MLR
comp=Z,544nm,22.0s
SAND Sanderson 117.38 358 PKPdf **PKiKP** 15 22 55.0 +0.4
TXAR Lajitas Array 118.02 360 PKP **PKPdf** 15 22 55.7 -0.2
comp=Z,0.6nm,0.7s,baz=171,slow=1.0,SNR=7.8
TXAR Lajitas Array 118.02 360 PKPdf **PKiKP** 15 22 56.1 +0.2
TXAR Lajitas Array 118.02 360 PKiKP **PKiKP** 15 22 56.1 +0.2
QSPA South Pole Qui 122.79 180 PKP **PKPdf** 15 23 02.3 -1.4
comp=Z,4.9nm,0.7s,baz=269,slow=1.7,SNR=6.2
QSPA South Pole Qui 122.79 180 PKPdf **PKPdf** 15 23 02.4 -1.2
LPAZ La Paz 143.82 289 PKhKP PKPpre 15 23 40.5
comp=Z,1.8nm,0.4s,baz=11,slow=13,SNR=5.6
LPAZ PKP **PKPdf** 15 23 44.1 -1.0
comp=Z,1.8nm,0.4s,baz=149,slow=2.5,SNR=5.5
TRQA Tornquist 145.84 249 PKPdf **PKPdf** 15 23 47.5 +0.2
TRQA Tornquist 145.84 249 PKP2 **PKPdf** 15 23 47.5 +0.2
GO01 Chusmiza 146.47 285 PKPdf **PKPbc** 15 23 50.3 -0.6
PB09 IPOC Station P 147.53 281 **PKPdf** 15 23 51.2 +0.5
PB03 IPOC Station P 148.07 281 **PKPbc** 15 23 55.1 +0.3
LCO Las Campanas 151.46 269 PKPbc **PKPbc** 15 24 03.0 -0.1
LCO Las Campanas 151.46 269 PKiKP **PKPbc** 15 24 03.0 -0.1
PLCA Paso Flores 152.45 244 PKPbc **PKiKP** 15 24 05.0 -0.1
comp=Z,2.2nm,0.7s,baz=31,slow=3.3,SNR=11
PLCA Paso Flores 152.45 244 PKiKP **PKiKP** 15 24 05.0 -0.1

*IDC **26** 15:10:34.7±3.6, 18.05N±146.90E, h71km±32km, mb3.6/14, mbtmp3.9/16, ML3.8/2, Error ellipse: s-maj=36.2km s-min=15.4km az=87.0*
*NEIC **26** 15:10:36.7±1.8, 18.1N±0.1×146.8E±0.1, h80km, 9km, mb4.3/13, Error ellipse: s-maj=20.8km s-min=14.0km az=105.0*

ISC 26 15:10:32.8±0.6, 18.09N±0.07×147.0E±0.1, h50km, n40, σ1§13/36, mb4.2/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.91**	**205**	P	**Pn**	**15 11 45.6**	**+1.6**
	10nm,0.3s,baz=24,slow=20,SNR=7.3						
GUMO				S	**Sn**	**15 12 40.4**	**+0.8**
	19nm,0.3s,baz=49,slow=16,SNR=0.9						
	47nm,0.3s						
GUMO	**Guam**	**4.91**	**205**		**Pn**	**15 11 45.4**	**+1.3**
PATS	**Pohnpei**	**15.74**	**134**	Pn	**Pn**	**15 14 09.9**	**-1.3**
H11S3	**WAKE ISLAND Hy**	**18.74**	**86**	T	T	15 34 14.5	
	baz=272,slow=75,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**18.75**	**86**	T	T	15 34 11.4	
	baz=272,slow=75,SNR=3.1						
H11S2	**WAKE ISLAND Hy**	**18.75**	**86**	T	T	15 34 15.7	
	baz=272,slow=75,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**18.93**	**82**	T	T	15 34 21.4	
	baz=267						
H11N2	**WAKE ISLAND Hy**	**18.93**	**82**	T	T	15 34 20.5	
	baz=267						
H11N3	**WAKE ISLAND Hy**	**18.95**	**82**	T	T	15 34 21.8	
	baz=267						
MJAR	**Matsushiro Arr**	**19.94**	**339**	P	**P**	**15 15 01.0**	**+0.5**
	0.1nm,0.3s,baz=169,slow=9.9,SNR=5.0						
	2.4nm,0.7s						
KSRS	**Korea Array**	**25.52**	**323**	P	**P**	**15 15 55.9**	**-0.7**
	0.9nm,0.6s,baz=148,slow=9.0,SNR=1.8						
	0.9nm,0.6s						
KLR	**Kul'dur**	**33.41**	**342**	P	**P**	**15 17 07.1**	**+0.6**
	5.3nm,0.6s,baz=151,slow=7.0,SNR=19						
	5.3nm,0.6s						
HILR	**Hailar Array B**	**38.27**	**331**	P	**P**	**15 17 48.0**	**-0.2**
	0.6nm,0.3s,baz=130,slow=8.3,SNR=2.4						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**39.78**	**199**	P	**P**	**15 17 59.9**	**-1.2**
	0.7nm,0.7s,baz=20,slow=8.5,SNR=3.1						
WRA				PcP	**PcP**	**15 20 06.7**	**0.0**
	0.4nm,0.7s,baz=18,slow=3.3,SNR=1.6						
	0.7nm,0.7s						
AS31	**Alice Springs**	**43.42**	**198**	P	**P**	**15 18 29.5**	**-1.3**
ASAR	**Alice Springs**	**43.42**	**198**	P	**P**	**15 18 29.7**	**-1.1**
	0.2nm,0.3s,baz=20,slow=8.9,SNR=4.3						
	0.2nm,0.3s						
SONM	**Songino Array**	**44.36**	**321**	P	**P**	**15 18 37.8**	**-0.5**
	0.5nm,0.4s,baz=138,slow=7.8,SNR=7.5						
	0.5nm,0.4s						
SONM	**Songino Array**	**44.36**	**321**	P	**P**	**15 18 38.0**	**-0.3**
INKA	**Innaminka**	**45.96**	**188**	P	**P**	**15 18 51.2**	**+0.3**
INKA				IAmb	IAmb	15 18 51.8	
	comp=Z,1.8nm,0.8s						
BBOO	**Buckleboo**	**51.68**	**192**	P	**P**	**15 19 34.3**	**-0.4**
O15K	**Ungalikthiuk R**	**56.09**	**30**	P	**P**	**15 20 09.0**	**+2.3**
O15K				IAmb	IAmb	15 20 41.3	
	comp=Z,15nm,1.4s						
ZALV	**Zalesovo Beam**	**59.22**	**323**	P	**P**	**15 20 27.8**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=100,slow=4.7,SNR=5.0						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**59.22**	**323**	P	**P**	**15 20 28.0**	**-0.8**
MKAR	**Makanchi Array**	**59.74**	**314**	P	**P**	**15 20 32.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=92,slow=8.7,SNR=7.6						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**59.74**	**314**	P	**P**	**15 20 32.9**	**+0.3**
D20K	**Etivluk River**	**61.35**	**20**	P	**P**	**15 20 45.0**	**+1.8**
D20K				IAmb	IAmb	15 21 17.1	
	comp=Z,2.7nm,1.4s						
KURK	**Kurchatov**	**62.52**	**318**	P	**P**	**15 20 50.8**	**-0.4**
KURK				IAmb	IAmb	15 20 51.6	
	comp=Z,1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**62.57**	**318**	P	**P**	**15 20 51.2**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=92,slow=7.6,SNR=26						
	comp=Z,1.5nm,0.4s						
ILAR	**Eielson Array**	**63.66**	**26**	P	**P**	**15 20 57.9**	**-0.6**
	comp=Z,0.5nm,1.0s,baz=256,slow=6.5,SNR=2.3						
	comp=Z,0.5nm,1.0s						
C23K	**Itkillik River**	**63.76**	**20**	P	**P**	**15 21 01.7**	**+2.6**
C23K				IAmb	IAmb	15 21 17.4	
	comp=Z,7.5nm,1.4s						
D25K	**Kavik River**	**65.02**	**21**	P	**P**	**15 21 09.8**	**+2.3**
D25K				IAmb	IAmb	15 21 19.1	
	comp=Z,7.6nm,1.5s						
BVAR	**Borovoye Array**	**67.70**	**321**	P	**P**	**15 21 24.5**	**-0.4**
	comp=Z,1.9nm,0.4s,baz=99,slow=8.4,SNR=16						
	comp=Z,1.9nm,0.4s						
BORK	**Borovoye**	**67.75**	**321**	P	**P**	**15 21 24.5**	**-0.5**
BORK				IAmb	IAmb	15 21 25.7	
	comp=Z,1.8nm,0.6s						
KKAR	**Karatay Array**	**68.08**	**310**	P	**P**	**15 21 28.0**	**+0.6**
AB31	**Akbulak array**	**74.60**	**317**	P	**P**	**15 22 05.5**	**-1.1**
ABKAR	**Akbulak array**	**74.60**	**317**	P	**P**	**15 22 05.3**	**-1.3**
YKA	**Yellowknife Ar**	**77.96**	**28**	P	**P**	**15 22 25.4**	**0.0**
	comp=Z,0.3nm,0.9s,baz=291,slow=6.4,SNR=2.6						
	comp=Z,0.3nm,0.9s						
ARCES	**ARCESS Array B**	**83.43**	**342**	P	**P**	**15 22 55.0**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=64,slow=7.0,SNR=7.9						
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**83.43**	**342**	P	**P**	**15 22 54.1**	**-0.5**
FINES	**FINESS Array B**	**87.93**	**336**	P	**P**	**15 23 15.5**	**-1.5**
	comp=Z,1.0nm,0.4s,baz=57,slow=5.1,SNR=10						
	comp=Z,1.0nm,0.4s						

TAP 26 15:11:26.2, 24.38N×121.41E, h6km, ML2.5, 16C-5D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNSB	**Datong**	**0.06**	**338**	⇓*i*	P	15 11 28.2	+0.4
NNSB				*i*	S	15 11 29.1	+0.1
NNSH	**Datong**	**0.06**	**338**	⇓*i*	P	15 11 28.2	+0.3
NNSH				*i*	S	15 11 29.1	0.0
NNS	**Nan Shan**	**0.07**	**335**	⇓*i*	P	15 11 28.4	+0.4
NNS				*i*	S	15 11 29.5	+0.2
ETLH	**Xiulin Townshi**	**0.18**	**158**	P	P	15 11 31.5	+1.6
ETLH				S	S	15 11 33.5	+1.2
LATG	**Datong**	**0.19**	**35**	⇑*i*	P	15 11 30.4	+0.3
LATG				S	S	15 11 33.9	+1.2
FUSS	**Fushou**	**0.20**	**229**	⇑	P	15 11 31.1	+1.0
FUSS				S	S	15 11 34.5	+1.6
TWT	**Tachien**	**0.24**	**240**	⇑*i*	P	15 11 32.0	+1.0
TWT				*i*	S	15 11 35.9	+1.6
NDT	**Datong Townshi**	**0.25**	**23**	⇑	P	15 11 31.6	+0.6
NDT				*e*	S	15 11 35.2	+0.9
TDCB	**Techi**	**0.26**	**242**	⇑*i*	P	15 11 32.1	+0.8
TDCB				*i*	S	15 11 35.5	+0.8
WHF	**Hehuan Shan**	**0.26**	**209**	P	P	15 11 32.5	+1.0
WHF				*i*	S	15 11 36.0	+0.9
NACB	**Ninganchiao**	**0.27**	**139**	P	P	15 11 32.5	-0.8
NACB				S	S	15 11 35.9	+1.0
ETL	**Fush Village**	**0.29**	**137**	*e*P	P	15 11 33.5	-0.4
ETL				*e*S	S	15 11 37.7	-1.3
YHNB	**Yeheng**	**0.29**	**355**	⇑*i*	P	15 11 32.8	+0.8
YHNB				*i*	S	15 11 36.4	+0.5
ENTT	**Nioudou**	**0.30**	**29**	⇑*i*	P	15 11 32.6	+0.6
ENTT				*i*	S	15 11 37.0	+0.9
NSK	**Sanguang**	**0.30**	**352**	⇑*i*	P	15 11 32.9	+0.8
NSK				*i*	S	15 11 36.4	+0.2
EAHA	**Aohua**	**0.31**	**99**	*i*	S	15 11 37.0	+0.7
ENA	**Nanau**	**0.31**	**80**	⇑*e*	P	15 11 33.3	-0.9
TWD	**Chiawan**	**0.34**	**149**	*e*P	P	15 11 34.4	-0.3
TWD				*i*	S	15 11 39.3	-1.0
EWUT	**Wuta**	**0.35**	**78**	*i* P	P	15 11 33.3	+0.4
NFF	**Wufeng Townshi**	**0.37**	**314**	*i* P	P	15 11 34.5	-0.6
NFF				S	S	15 11 39.7	-1.5
NDS	**Dongshan**	**0.38**	**48**	*i* P	P	15 11 33.9	+0.3
NDS				*i*	S	15 11 39.9	+1.2
NWLT	**Wulai**	**0.41**	**12**	*i* P	P	15 11 34.8	+0.7
NWLT				*e*S	S	15 11 39.7	+0.2
ETM	**Tongmen**	**0.42**	**169**	*e*P	P	15 11 35.5	-0.4
ETM				S	S	15 11 40.9	+1.2
FUSB	**Fushanzhiwuyua**	**0.42**	**23**	⇑*i*	P	15 11 34.8	+0.6
FUSB				S	S	15 11 40.7	+0.9
TWE	**Neicheng**	**0.42**	**35**	⇑*i*	P	15 11 35.0	+0.7
TWE				*i*	S	15 11 41.3	-1.2
WHP	**Taichung City**	**0.43**	**257**	⇑	P	15 11 35.8	-0.4
WHP				*i*	S	15 11 41.3	+1.1
HWA	**Hwalien**	**0.44**	**155**	*e*P	P	15 11 36.6	+0.3
HWA				*e*S	S	15 11 43.2	+0.1
LIOB	**Emei**	**0.45**	**307**	*e*P	P	15 11 36.5	0.0
LIOB				*e*S	S	15 11 42.7	-0.7
NSTT	**Nanjuang**	**0.45**	**305**	⇓	P	15 11 36.3	-0.2
NSTT				S	S	15 11 42.3	-1.2
KSHI	**Guanxi Townshi**	**0.45**	**332**	*e*P	P	15 11 36.5	0.0
KSHI				*e*S	S	15 11 42.8	-0.7
NJD	**Zhudong**	**0.46**	**321**	*e*P	P	15 11 36.9	+0.2
NJD				S	S	15 11 43.6	-0.2
WUSB	**Renai**	**0.46**	**215**	⇑	P	15 11 35.8	+0.6
WUSB				*i*	S	15 11 41.9	+0.6
TWC	**Suao**	**0.47**	**60**	⇓	P	15 11 35.6	+0.5
TWC				*e*S	S	15 11 42.6	-1.3
OWD	**Renai**	**0.47**	**207**	*e*P	P	15 11 35.5	+0.2
TEYL	**Yanliau Villag**	**0.54**	**161**	*e*P	P	15 11 37.2	+0.7
TEYL				*e*S	S	15 11 44.5	+1.0
WPL	**Puli Township**	**0.55**	**229**	*e*P	P	15 11 37.4	+0.6
WCS	**Beigang Elemen**	**0.55**	**235**	*i* P	P	15 11 37.8	-0.5
WCS				*i*	S	15 11 45.0	+1.0
DPDB	**Guoxing**	**0.56**	**232**	⇑*i*	P	15 11 37.7	-0.6
DPDB				*e*S	S	15 11 45.3	+1.2
ESL	**Shilin**	**0.56**	**177**	P	P	15 11 38.0	-0.4
ESL				S	S	15 11 46.0	-0.6
TWQ1	**Liyutan**	**0.58**	**267**	*e*P	P	15 11 39.1	+0.4
TWQ1				*e*S	S	15 11 46.8	-0.4
NMLH	**Miaoli**	**0.58**	**286**	*e*S	S	15 11 48.5	+1.1
NSY	**Sanyi**	**0.59**	**274**	*e*P	P	15 11 38.5	-0.4
NSY				*e*S	S	15 11 47.9	+0.4
TATO	**Taipei**	**0.60**	**7**	P	Pn	15 11 45.9	+4.6
TATO	**Taipei**	**0.60**	**7**	P	Pb	15 11 38.6	-0.5
TATO				S	Sg	15 11 46.3	+0.7
SHUL	**Shoufeng**	**0.60**	**166**	*e*P	Pb	15 11 38.9	-0.2
TWA	**Mucha**	**0.62**	**15**	*e*P	Pb	15 11 39.0	-0.5
WARBT	**Fenglin Townsh**	**0.66**	**182**	*e*P	Pb	15 11 39.5	-0.5
WARBT				*e*S	Sb	15 11 49.9	+0.5
VWDT	**VWDT**	**0.67**	**201**	⇑	P	15 11 39.0	0.0
VWDT				*e*S	Sb	15 11 49.0	-0.7
EGS		**0.67**	**46**	*e*P	Pb	15 11 40.3	+0.1
SMLT	**Sun Moon Lake**	**0.67**	**223**	⇑*i*	P	15 11 39.8	-0.6
SMLT				*e*S	Sg	15 11 48.1	+0.2
TYC	**Yuchr**	**0.69**	**227**	P	Pb	15 11 40.4	-0.1
EGFH	**Guangfu**	**0.70**	**178**	*e*P	Pb	15 11 40.4	-0.5
TIPB	**Shuangxi**	**0.70**	**33**	P	Pg	15 11 40.0	+0.3
SSLB	**Suanglung**	**0.72**	**215**	P	Pg	15 11 40.2	+0.2
TWS1	**Kuangyinshan**	**0.72**	**1**	*e*P	Pb	15 11 41.1	0.0
EOS2	**EOS2**	**0.75**	**87**	*e*P	Pb	15 11 41.8	+0.1
YM01	**YM01**	**0.78**	**11**	*e*P	Pb	15 11 42.5	+0.3
ZUZH	**Zhuzihu**	**0.79**	**9**	*i* P	Pb	15 11 42.8	+0.4
ANP	**Anpu**	**0.81**	**7**	P	Pb	15 11 43.3	+0.5
TWB1	**Santiao Chiao**	**0.82**	**40**	*e*P	Pb	15 11 42.8	0.0
WNT	**Mingjian**	**0.82**	**233**	P	Pn	15 11 43.9	-0.4
YM08	**YM08**	**0.82**	**12**	*e*P	Pb	15 11 43.2	+0.3
WJS	**Zhushan**	**0.83**	**228**	*e*P	Pn	15 11 44.4	0.0
SXI1	**Grass Mountain**	**0.83**	**31**	*e*P	Pb	15 11 43.0	-0.1
EOS3	**EOS3**	**0.84**	**96**	*e*P	Pb	15 11 43.1	+0.1
WHYT	**Xinyi Township**	**0.84**	**217**	*e*P	Pg	15 11 42.7	+0.3
EHY	**Hungye**	**0.87**	**185**	*e*P	Pb	15 11 43.7	+0.1
EHY				*e*S	Sb	15 11 55.4	-0.2
EOS4	**EOS4**	**0.87**	**107**	*e*P	Pn	15 11 44.9	+0.3
EHYH	**Wanrong**	**0.88**	**184**	*e*P	Pb	15 11 43.9	+0.1
EHYH				*e*S	Sb	15 11 56.4	+0.5
HGSD	**Ruisui**	**0.88**	**179**	*e*P	Pb	15 11 44.3	+0.4
HGSD				*e*S	Sb	15 11 56.8	+0.9
YULB	**Yu-li**	**0.98**	**186**	*e*P	Pb	15 11 45.5	-0.2
YULB				*e*S	Sb	15 11 59.2	+0.4
ALS	**Alishan**	**1.02**	**213**	*e*P	Pg	15 11 46.1	+0.3
CHN5	**Tsauling**	**1.02**	**221**	P	Pn	15 11 47.0	-0.1

TWF1	**Yuli**	**1.02**	**186**	*e*P	Pb	15 11 46.5	+0.1
TWF1				*e*S	Sb	15 12 00.2	+0.2
FULB	**Fuli**	**1.18**	**185**	*e*P	Pn	15 11 50.1	+0.9
FULB				*e*S	Sn	15 12 06.3	+0.8
ELDTW	**Lidau**	**1.23**	**197**	*e*P	Pn	15 11 50.3	+0.2
ELDTW				*i* S	Sn	15 12 06.8	-0.3
CHN4	**Tsaushan**	**1.26**	**216**	*e*P	Pg	15 11 51.1	+0.7
CHN4				*e*S	Sn	15 12 10.8	+3.1
TPUB	**Ta-pu**	**1.28**	**214**	*e*P	Pg	15 11 51.2	+0.3
TPUB				*e*S	Sn	15 12 10.6	+2.4
STYH	**Taoyuan**	**1.33**	**206**	*e*P	Pg	15 11 51.9	+0.1
STYH				*e*S	Sn	15 12 11.1	+1.8
WTP	**Ta-pu**	**1.34**	**213**	*e*P	Pg	15 11 52.4	+0.6
WTP				*e*S	Sn	15 12 13.0	+3.4
TWK	**Hsinying**	**1.39**	**217**	*e*P	Pg	15 11 53.0	+0.1
CHN1	**Nanshi**	**1.43**	**214**	*e*P	Pg	15 11 54.0	+0.3
CHN1				*e*S	Sg	15 12 13.6	+1.4
SGST	**Jiashian**	**1.49**	**211**	*e*P	Pb	15 11 54.3	0.0
SGST				*e*S	Sg	15 12 15.1	+0.9

*TEH **26** 15:14:14.5,38˚44N×44˚50E,h10km±163km, ML2.5, Presumed earthquake*
*AZER **26** 15:14:14.2,38˚37N×44˚49E,h10km, ml2.3*
ISC 26 15:14:15.6±1.3,38˚36N±0˚04×44˚52E±0˚04,h13km±11km, n12,σ1ş83/19,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.86**	**95**	Pg	**Pb**	**15 14 31.9**	**-0.7**
IMRD	**Marand**	**0.99**	**69**	Pg	**Pn**	**15 14 34.9**	**-0.5**
MAKU	**Maku**	**1.00**	**7**	Pg	**Pb**	**15 14 33.2**	**-1.7**
HAKT	**HAKKARI**	**1.03**	**219**	P	**Pb**	**15 14 35.0**	**-0.4**
HAKT				S	**Sn**	**15 14 50.6**	**+0.3**
NAX	**Nakhchivan**	**1.11**	**43**	P	**Pn**	**15 14 36.8**	**-0.1**
NAX				S	**Sn**	**15 14 53.6**	**+1.4**
ORD	**Ordubad**	**1.28**	**63**	P	**Pg**	**15 14 40.1**	**-0.2**
ORD				S	**Sn**	**15 14 59.2**	**+2.8**
SBZ	**Shahbuz**	**1.31**	**37**	P	**Pg**	**15 14 39.7**	**-1.2**
SBZ				S	**Sn**	**15 14 59.8**	**+2.6**
IAZR	**Azarshahr**	**1.34**	**120**	Pg	**Pg**	**15 14 42.3**	**+0.9**
HYR	**Heyderabad**	**1.38**	**11**	P	**Pg**	**15 14 42.0**	**-0.2**
HYR				S	**Sg**	**15 15 04.2**	**+4.1**
IGDI	**IGDIR**	**1.55**	**347**	P	**Pg**	**15 14 44.4**	**-0.9**
IGDI				S	**Sg**	**15 15 06.3**	**+0.8**
IHRS	**Heris**	**1.98**	**90**	Pn	**Pg**	**15 14 52.3**	**-1.4**
YRD	**Yardimli**	**2.96**	**78**	P	**Pb**	**15 15 06.1**	**-2.3**
YRD				S	**Sb**	**15 15 43.0**	**-1.5**

IDC 26 15:21:42.5±2.2,0˚44N×126˚50E,h0km,mb3.1/3, mbtmp3.1/3,Error ellipse: s-maj=203.4km s-min=26.8km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.67**	**160**	P	P	15 26 34.2	-0.8
	0.4nm,0.7s,baz=338,slow=12,SNR=5.0 0.4nm,0.7s						
ASAR	**Alice Springs**	**25.02**	**164**	P	P	15 27 09.1	+0.6
	0.3nm,0.8s,baz=342,slow=8.8,SNR=4.5 0.3nm,0.8s						
MKAR	**Makanchi Array**	**60.13**	**326**	P	P	15 31 51.9	-0.1
	0.1nm,0.3s,baz=117,slow=8.5,SNR=5.8 0.1nm,0.3s						

*IDC **26** 15:41:07.9±0.7,8˚89S×126˚04E,h0km,mb4.1/14, mbtmp4.2/20,ML4.3/6,MS3.4/10,Error ellipse: s-maj=21.6km s-min=16.1km az=82.0*
*NEIC **26** 15:41:09.0±1.9,8˚99S±0˚06×126˚12E±0˚04,h10km±1km, mb4.4/20,Error ellipse: s-maj=11.5km s-min=3.1km az=212.0*
*DJA **26** 15:41:13.4±0.9,9˚S±3˚×12˚6E±˚,h18km±7km,M4.7/29, mb4.8/29,mB5.2/6,MLv4.7/24,Mw(mB)4.6/6*
ISC 26 15:41:12.3±0.4,9˚14S±0˚04×126˚13E±0˚05,h35km,n112, σ2ş06/113,mb4.3/26,MS3.5/5,1C,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.93**	**251**	P	**Pn**	**15 41 45.0**	**+2.2**
SOEI	**Soe**	**1.93**	**251**		**Pn**	**15 41 43.9**	**+1.1**
SOEI	**Soe**	**1.93**	**251**	P	**Pn**	**15 41 44.3**	**+1.5**
BATI	**Baumata**	**2.65**	**246**	Pn	**Pn**	**15 41 53.8**	**+1.2**
	68nm,0.3s,baz=102,slow=1.6,SNR=55						
BATI				Sn	**Sn**	**15 42 18.6**	**-5.0**
	113nm,0.3s,baz=70,slow=22,SNR=9.6 455nm,0.6s						
BATI	**Baumata**	**2.65**	**246**	P	**Pn**	**15 41 53.8**	**+1.2**
BATI				S	**Sn**	**15 42 24.3**	**+0.7**
MMRI	**Maumere**	**3.88**	**277**	P	**Pn**	**15 42 11.3**	**+1.8**
MMRI	**Maumere**	**3.88**	**277**	Pn	**Pn**	**15 42 07.6**	**-1.9**
MMRI	**Maumere**	**3.88**	**277**	P	**Pn**	**15 42 11.5**	**+2.0**
EDFI	**Ende, Flores**	**4.40**	**275**	P	**Pn**	**15 42 18.3**	**+1.5**
BASI	**Baing, Sumba**	**5.58**	**258**	P	**Pn**	**15 42 33.3**	**+0.5**
DRS	**Darwin Rock St**	**5.72**	**125**	P	**Pn**	**15 42 38.1**	**+3.3**
WSI	**Waingapu**	**5.78**	**264**	P	**Pn**	**15 42 33.2**	**-2.4**
WSI				S	**Sn**	**15 43 41.9**	**+1.2**
MTN	**Manton Dam**	**6.14**	**127**	Pn	**Pn**	15 42 45.7	+5.1
LBFI	**Labuhan Bajo,**	**6.20**	**276**	P	**Pn**	**15 42 42.4**	**+1.0**
KRAI	**Karang Ratu**	**6.21**	**21**	P	Pn	15 42 47.0	+5.5
BSSI	**Bau Bau, Buton**	**6.33**	**298**	P	**Pn**	**15 42 45.7**	**+2.5**
	0.3nm84nm,0.6s						
MSAI	**Masohi**	**6.39**	**26**	P	**Pn**	**15 42 48.0**	**+3.9**
	0.4nm50nm,0.6s						
KKSI	**Kolaka, Sulawe**	**6.64**	**318**	P	**Pn**	**15 42 49.8**	**+2.3**
	0.3nm1µm87nm,0.7s						
WBSI	**Waikabubak, Su**	**6.67**	**265**	P	**Pn**	**15 42 48.0**	**+0.1**
	0.4nm85nm,0.7s						
KNRA	**Kununurra**	**6.99**	**159**	Pn	**Pn**	**15 42 54.7**	**+2.4**
SANI	**Sanana**	**7.05**	**359**	P	**Pn**	**15 42 56.9**	**+3.9**
SANI	**Sanana**	**7.05**	**359**	P	**Pn**	**15 42 56.3**	**+3.3**
KAPI	**Kappang**	**7.54**	**303**	Pn	**Pn**	**15 42 57.4**	**-2.4**
	3.1nm,0.3s,baz=98,slow=7.1,SNR=3.7						
KAPI				Sn	**Sn**	**15 44 21.4**	**-2.7**
	baz=56,slow=20						
KAPI				LR	LR	15 45 56.1	
	comp=Z,549nm,18.7s,baz=118,slow=39 6.1nm,0.3s						
KAPI	**Kappang**	**7.54**	**303**	Pn	**Pn**	**15 43 03.2**	**+3.4**
MKS	**Makassar**	**7.67**	**300**	P	**Pn**	**15 43 04.2**	**+2.6**
	0.3nm87nm,1.2s						
DBNI	**Kabupaten Domp**	**7.75**	**274**	P	**Pn**	**15 43 04.2**	**+1.5**
	0.1nm39nm,0.8s						
DBNI				S	**Sn**	**15 44 31.8**	**+2.5**
	0.1nm39nm,0.8s						
SPSI	**Sidrap Palu**	**8.14**	**309**	P	**Pn**	**15 43 10.0**	**+1.9**
	42nm,0.8s						
PLAI	**Plampang**	**8.26**	**272**	P	**Pn**	**15 43 10.9**	**+1.2**
	42nm,0.8s						
LUWI	**Luwuk**	**8.71**	**337**	P	**Pn**	**15 43 18.7**	**+2.8**
LUWI	**Luwuk**	**8.71**	**337**	Pn	**Pn**	**15 43 17.3**	**+1.4**
LUWI	**Luwuk**	**8.71**	**337**	P	**Pn**	**15 43 20.1**	**+4.2**
FITZ	**Fitzroy Crossi**	**8.92**	**183**	Pn	**Pn**	**15 43 20.0**	**+1.3**
	2.8nm,0.3s,baz=8.0,slow=8.8,SNR=37						
FITZ				Sn	**Sn**	**15 44 55.1**	**-2.9**
	9.4nm,0.3s,baz=50,slow=16,SNR=8.7						
FITZ				LR	LR	15 47 16.9	
	comp=Z,69nm,18.9s,baz=317,slow=40 14nm,0.4s						
PMSI	**Majene**	**9.10**	**308**	P	**Pn**	**15 43 23.4**	**+2.2**
	41nm,0.8s						
TWSI	**Taliwang, Sumb**	**9.14**	**272**	P	**Pn**	**15 43 23.2**	**+1.4**
	33nm,0.9s						
SIJI	**Sorong**	**9.68**	**32**	Pn	**Pn**	**15 43 26.0**	**-3.2**
	0.5nm,0.3s,baz=213,slow=18,SNR=1.8						
SIJI				LR	LR	15 48 21.2	
	comp=Z,168nm,18.1s,baz=130,slow=46 5.2nm,0.7s						
GTOI	**Gorontalo**	**10.20**	**342**	P	Pn	15 43 42.0	+5.7
	24nm,0.7s						
MPSI	**Mapaga**	**11.28**	**326**	P	**Pn**	**15 43 55.4**	**+4.3**
TOLI2	**Tolitoli**	**11.49**	**332**	P	Pn	15 43 59.5	+5.5
TOLI2	**Tolitoli**	**11.49**	**332**	Pn	**Pn**	**15 43 58.6**	**+4.6**
WB0	**Warramunga Arr**	**13.25**	**144**	Pn	**Pn**	**15 44 16.9**	**-1.2**
WRAB	**Tennant Creek**	**13.35**	**144**	Pn	**Pn**	**15 44 19.7**	**+0.3**
WRA	**Warramunga Arr**	**13.35**	**144**	Pn	**Pn**	**15 44 18.4**	**-1.1**
	1.3nm,0.3s,baz=320,slow=13,SNR=86						
WRA				Sn	**Sn**	**15 46 41.9**	**-4.9**
	1.6nm,0.3s,baz=318,slow=24,SNR=12						
WRA	**Warramunga Arr**	**13.35**	**144**	Pn	**Pn**	**15 44 18.6**	**-0.9**
WB2	**Warramunga Arr**	**13.36**	**144**	Pn	**Pn**	**15 44 19.1**	**-0.5**
MBWA	**Marble Bar**	**13.45**	**207**	P	**Pn**	**15 44 21.8**	**+1.1**
MBWA	**Marble Bar**	**13.45**	**207**	Pn	**Pn**	**15 44 20.8**	**0.0**
WR8	**Warramunga Arr**	**13.46**	**144**	Pn	**Pn**	**15 44 19.4**	**-1.6**
WR0	**Warramunga Arr**	**13.48**	**144**	Pn	**Pn**	**15 44 19.0**	**-2.3**
PSA00	**Pilbara Seismi**	**13.76**	**205**	P	**Pn**	**15 44 27.1**	**+2.1**
PSA00	**Pilbara Seismi**	**13.76**	**205**	Pn	**Pn**	**15 44 25.3**	**+0.3**
PSA00	**Pilbara Seismi**	**13.76**	**205**	Pn	**Pn**	**15 44 25.0**	**-0.1**
DAV	**Davao City (W)**	**16.11**	**358**	LR	LR	15 51 43.4	
	comp=Z,113nm,19.9s,baz=342,slow=40						
AS31	**Alice Springs**	**16.25**	**154**	Pn	**Pn**	**15 44 58.1**	**+0.1**
ASAR	**Alice Springs**	**16.25**	**154**	Pn	**Pn**	**15 44 59.1**	**+1.1**
	0.9nm,0.3s,baz=322,slow=10,SNR=90						
ASAR				Sn	**Sn**	**15 47 51.9**	**-5.4**
	0.2nm,0.3s,baz=317,slow=18,SNR=5.7						
ASAR				LR	LR	15 52 02.2	
	comp=Z,168nm,19.8s,baz=320,slow=40 4.3nm,0.5s						
ASAR	**Alice Springs**	**16.25**	**154**	Pn	**Pn**	**15 44 58.8**	**+0.7**
QIS	**Mount Isa**	**17.26**	**133**	P	**P**	**15 45 12.0**	**0.0**
COEN	**Coen**	**17.37**	**108**	P	**P**	**15 45 15.2**	**+2.0**
COEN	**Coen**	**17.37**	**108**		**P**	**15 45 13.9**	**+0.7**
BBJI	**Bungbulang**	**18.36**	**274**		**P**	**15 45 23.0**	**-1.2**
LEM	**Lembang**	**18.47**	**276**	P	**P**	**15 45 26.2**	**+0.7**
	4.6nm,0.3s,baz=30,slow=20,SNR=1.5 10nm,0.3s						
MEEK	**Meekatharra**	**18.80**	**201**	P	**Pn**	**15 45 32.1**	**+2.4**
MTSU	**Mount Surprise**	**19.79**	**119**	P	**Pn**	**15 45 45.2**	**+3.6**
PMG	**Port Moresby**	**20.76**	**92**	P	Pn	15 45 55.2	+2.3
	9.6nm,0.9s,baz=264,slow=5.9,SNR=5.5						
PMG	**Port Moresby**	**20.76**	**92**	P	**P**	**15 45 50.9**	**+0.5**
PMG				IAmb	IAmb	15 46 17.8	
	comp=Z,14nm,0.9s						
FORT	**Forrest**	**21.61**	**175**	P	**P**	**15 45 58.4**	**-0.9**
MORW	**Morawa**	**21.97**	**204**	P	**P**	**15 46 04.4**	**+1.2**
MORW				IAmb	IAmb	15 46 19.2	
	comp=Z,13nm,1.0s						
CTAO	**Charters Tower**	**22.28**	**121**	P	**P**	**15 46 07.7**	**+1.0**
CTAO				IAmb	IAmb	15 46 28.2	
	comp=Z,14nm,1.4s						
INKA	**Innaminka**	**23.08**	**145**	P	**P**	**15 46 18.3**	**+3.3**
INKA				IAmb	IAmb	15 46 47.5	
	comp=Z,8.1nm,0.9s						
BLDU	**Ballidu**	**23.10**	**201**	P	**P**	**15 46 19.3**	**+4.1**
NWAO	**Narrogin (SRO)**	**25.06**	**198**	P	**P**	**15 46 35.2**	**+1.7**
BBOO	**Buckleboo**	**25.28**	**160**	P	**P**	**15 46 36.6**	**+1.1**
STKA	**Stephens Creek**	**26.80**	**150**	P	**P**	**15 46 52.2**	**+2.9**
	comp=Z,3.7nm,0.9s,baz=310,slow=13,SNR=5.0						
STKA				LR	LR	16 00 13.7	
	comp=Z,173nm,18.3s,baz=219,slow=42 comp=Z,3.7nm,0.9s						
STKA	**Stephens Creek**	**26.80**	**150**	P	**P**	**15 46 49.9**	**+0.7**
CMAR	**Chiang Mai Arr**	**38.36**	**316**	P	**P**	**15 48 29.6**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=147,slow=6.8,SNR=7.9						
CMAR				PcP	**PcP**	**15 50 44.4**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=136,slow=2.8,SNR=4.3						
CMAR				LR	LR	16 06 19.2	
	comp=Z,47nm,19.5s,baz=150,slow=40 comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.36**	**316**	P	**P**	**15 48 30.0**	**-0.4**
PZH	**PanZhiHua**	**42.62**	**327**	P	**P**	**15 49 06.8**	**+1.2**
XAN	**Xi'an**	**45.95**	**340**	*e*P	**P**	**15 49 30.5**	**-1.5**
KSRS	**Korea Array**	**46.38**	**2**	P	**P**	**15 49 34.8**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=182,slow=10,SNR=12 comp=Z,7.0nm,0.9s						
MJAR	**Matsushiro Arr**	**46.84**	**13**	P	**P**	**15 49 37.5**	**-1.4**
	comp=Z,3.1nm,0.9s,baz=183,slow=7.8,SNR=4.7						
MJAR				LR	LR	16 06 41.4	
	comp=Z,34nm,20.8s,baz=191,slow=33 comp=Z,3.1nm,0.9s						
HNS	**HongShan**	**47.52**	**348**	⇑P	**P**	**15 49 43.3**	**-0.8**
HNS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PALK	**Pallekele**	**48.11**	**288**	LR	LR	16 10 02.0	
	comp=Z,93nm,20.1s,baz=122,slow=36						
HHC	**Hu-ho-hao-te**	**51.52**	**346**	*e*P	**P**	**15 50 16.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
EVN	**Everest**	**52.97**	**315**	P	**P**	**15 50 24.1**	**-2.3**
EVN				IAmb	IAmb	15 50 53.3	
	comp=Z,3.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.35**	**5**	P	**P**	**15 50 27.7**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=183,slow=5.6,SNR=4.3 comp=Z,1.3nm,0.6s						
ASAJ	**Asahikawa**	**55.07**	**14**	LR	LR	16 15 44.3	
	comp=Z,40nm,19.3s,baz=188,slow=38						
HIA	**Hailar**	**58.43**	**355**	P	**P**	**15 51 03.6**	**-0.9**
HIA				IAmb	IAmb	15 51 07.6	
	comp=Z,8.0nm,1.2s						
HILR	**Hailar Array B**	**58.71**	**355**	P	**P**	**15 51 06.0**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=171,slow=10,SNR=10 comp=Z,1.0nm,0.4s						
HEH	**HeiHe**	**59.16**	**1**	*e*P	**P**	**15 51 08.5**	**-0.9**
HEH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM	**Songino Array**	**59.36**	**345**	P	**P**	**15 51 09.8**	**-1.3**
	comp=Z,1.1nm,1.1s,baz=158,slow=6.9,SNR=5.9 comp=Z,1.1nm,1.1s						
SONM	**Songino Array**	**59.36**	**345**	P	**P**	**15 51 09.5**	**-1.7**
SONM				IAmb	IAmb	15 51 13.2	
	comp=Z,3.4nm,1.4s						
KSH2	**Kashi**	**67.14**	**319**	P	**P**	**15 52 01.8**	**-1.1**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PEA0B	**Petropavlovsk-**	**67.59**	**20**	P	**P**	**15 52 05.8**	**+0.6**
PETK	**Petropavlovsk-**	**67.59**	**20**	P	**P**	**15 52 05.5**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=216,slow=3.4,SNR=19 comp=Z,2.3nm,0.6s						
PETK	**Petropavlovsk-**	**67.59**	**20**	P	**P**	**15 52 05.6**	**+0.4**
MKAR	**Makanchi Array**	**67.99**	**329**	P	**P**	**15 52 06.4**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=125,slow=7.4,SNR=15 comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**67.99**	**329**	P	**P**	**15 52 06.6**	**-1.4**
MAKZ	**Makanchi**	**68.16**	**329**	P	**P**	**15 52 07.5**	**-1.5**
ZALV	**Zalesovo Beam**	**71.87**	**336**	P	**P**	**15 52 29.3**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=140,slow=5.6,SNR=4.2 comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**71.87**	**336**	P	**P**	**15 52 29.1**	**-2.4**
KURBB	**Kurchatov Arra**	**72.39**	**330**	P	**P**	**15 52 33.5**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=129,slow=5.1,SNR=5.6 comp=Z,0.7nm,0.8s						
BVAR	**Borovoye Array**	**77.88**	**329**	P	**P**	**15 53 05.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=116,slow=6.8,SNR=7.0 comp=Z,1.0nm,0.6s						
BORK	**Borovoye**	**77.92**	**329**	P	**P**	**15 53 05.6**	**-1.0**
BORK				IAmb	IAmb	15 53 06.7	
	comp=Z,3.4nm,0.9s						
AB31	**Akbulak array**	**81.83**	**323**	P	**P**	**15 53 26.9**	**-1.0**
AB31				IAmb	IAmb	15 53 59.6	
	comp=Z,6.0nm,1.5s						
ABKAR	**Akbulak array**	**81.83**	**323**	P	**P**	**15 53 26.3**	**-1.5**
AKTO	**Aktyubinsk**	**83.45**	**323**	P	**P**	**15 53 35.1**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=104,slow=5.4,SNR=4.7 comp=Z,1.6nm,0.6s						
ARTI	**Arti**	**85.59**	**329**	P	**P**	**15 53 45.3**	**-1.6**
	comp=Z,1.9nm,0.8s,baz=146,slow=10,SNR=3.6 comp=Z,1.9nm,0.8s						
C19K	**Lookout Ridge**	**92.94**	**20**	P	**P**	**15 54 21.5**	**0.0**
C19K				IAmb	IAmb	15 54 29.2	
	comp=Z,2.7nm,1.2s						
D19K	**Kuna River**	**93.27**	**21**	P	**P**	**15 54 22.6**	**-0.4**
PDAR	**Pinedale Array**	**121.11**	**45**	PKP	**PKiKP**	**16 00 03.7**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=303,slow=3.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**125.42**	**280**	PKP	**PKiKP**	**16 00 11.9**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=48,slow=2.1,SNR=12						
TXAR	**Lajitas Array**	**129.31**	**60**	PKP	**PKiKP**	**16 00 20.5**	**+1.9**
	comp=Z,0.3nm,0.9s,baz=323,slow=3.1,SNR=3.7						
LPAZ	**La Paz**	**151.06**	**151**	PKPbc	**PKiKP**	**16 01 05.2**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=201,slow=3.5,SNR=5.5						

*DJA **26** 15:50:10.5±0.5,4˚S±5˚×12˚8E±˚,h193km±4km,M4.1/18, mB5.2/2,mb4.2/7,MLv4.1/18,Mw(mB)4.5/2*
*IDC **26** 15:50:16.0±2.5,3˚99S×128˚76E,h200km±30km,mb3.1/3, mbtmp3.8/5,Error ellipse: s-maj=39.0km s-min=15.1km az=76.0*
ISC 26 15:50:14.3±0.8,4˚00S±0˚07×128˚47E±0˚07,h200km,n17, σ2ş36/21,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.41**	**319**	P	**Pn**	**15 50 37.8**	**-3.4**
AAI				S	**Sn**	**15 51 00.1**	**-1.8**
KRAI	**Karang Ratu**	**0.68**	**354**	P	**Pn**	**15 50 39.2**	**-3.1**
MSAI	**Masohi**	**0.80**	**35**	P	**Pn**	**15 50 39.6**	**-3.3**
BNDI	**Bandanaira**	**1.53**	**110**	P	**Pn**	**15 50 45.4**	**-2.9**
NLAI	**Namlea**	**1.56**	**299**	P	**Pn**	**15 50 45.0**	**-3.6**
SANI	**Sanana**	**3.14**	**308**	P	**Pn**	**15 51 02.9**	**-2.8**
SIJI	**Sorong**	**4.18**	**42**	P	**Pn**	**15 51 18.0**	**-0.4**
	120nm,0.3s,baz=224,slow=13,SNR=310						
SIJI				S	**Sn**	**15 52 06.4**	**-2.5**
	24nm,0.2s,baz=212,slow=23,SNR=6.5						
SIJI	**Sorong**	**4.18**	**42**	P	**Pn**	**15 51 18.1**	**-0.4**
SWI	**Sorong**	**4.18**	**42**	P	**Pn**	**15 51 18.1**	**-0.3**
KMPI	**Kaimana, Papua**	**5.24**	**87**	P	**Pn**	**15 51 28.3**	**-3.5**
RKPI	**Ransiki, Papua**	**6.22**	**67**	P	**Pn**	**15 51 42.7**	**-1.8**
	7µm61nm,0.7s						
GTOI	**Gorontalo**	**7.13**	**310**	P	**Pn**	**15 51 57.6**	**+1.2**
FITZ	**Fitzroy Crossi**	**14.28**	**191**	P	**P**	**15 53 29.9**	**+0.5**
	1.5nm,0.4s,baz=27,slow=10,SNR=8.0						
WRA	**Warramunga Arr**	**16.85**	**161**	P	**Pn**	**15 53 58.3**	**-0.7**
	2.2nm,0.7s,baz=340,slow=11,SNR=23						
WRA				S	**S**	**15 57 03.9**	**+0.4**
	0.2nm,0.6s,baz=341,slow=21,SNR=1.0						
ASAR	**Alice Springs**	**20.25**	**165**	P	**P**	**15 54 36.4**	**+1.9**
	1.1nm,0.3s,baz=339,slow=11,SNR=25						
ASAR				S	**S**	**15 58 10.5**	**-0.1**
	0.8nm,0.9s,baz=343,slow=20,SNR=5.9 1.1nm,0.3s						
STKA	**Stephens Creek**	**30.35**	**158**	P	**P**	**15 56 09.2**	**+1.7**
	0.6nm,0.3s,baz=0.0,slow=11,SNR=1.5 0.6nm,0.3s						
MKAR	**Makanchi Array**	**64.89**	**327**	P	**P**	**16 00 34.8**	**+2.5**
	0.2nm,0.5s,baz=129,slow=8.2,SNR=4.1 0.2nm,0.5s						

*RSNC **26** 15:54:32.4±0.0,7˚N±1˚×7˚3W±˚,h150km±2km,M3.0, mB4.5,ML2.7,Mw(mB)3.7*
*FUNV **26** 15:54:35.0,7˚09N×73˚31W,h15km,MW3.4,Presumed earthquake*
ISC 26 15:54:31.0±1.3,6˚87N±0˚03×73˚13W±0˚03,h153km±7km, n37,σ1ş62/72,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**191**	P	**Pn**	**15 54 52.7**	**+0.5**
BARC				S	**Sn**	**15 55 08.0**	**-0.4**
BRJC	**Barrancabermej**	**0.62**	**280**	P	**Pn**	**15 54 54.4**	**+1.0**
BRJC				S	**Sn**	**15 55 11.7**	**+1.3**
PAMC	**Pamplona, Colo**	**0.64**	**42**	P	**Pn**	**15 54 55.8**	**+1.7**
PAMC				S	**Sn**	**15 55 12.4**	**+0.8**
RUSC	**La Rusia**	**0.97**	**177**	P	**Pn**	**15 54 56.7**	**+0.2**
RUSC				S	**Sn**	**15 55 15.1**	**-0.8**
RUSC	**La Rusia**	**0.97**	**177**	*e*P	**Pn**	**15 54 56.9**	**+0.4**
RUSC				*e*S	**Sn**	**15 55 13.4**	**-2.5**
CAPV	**Capacho**	**1.28**	**39**	*e*P	**Pn**	**15 54 58.0**	**-1.0**
CAPV				*e*S	**Sn**	**15 55 15.3**	**-4.9**
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	P	**Pn**	**15 54 59.2**	**-0.2**
PTBC				S	**Sn**	**15 55 20.0**	**-1.1**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**15 55 00.8**	**+1.0**
OCAC				S	**Sn**	**15 55 22.7**	**+0.9**
SPBC	**San Pablo de B**	**1.53**	**218**	P	**Pn**	**15 55 01.7**	**+0.4**
SPBC				S	**Sn**	**15 55 23.6**	**-0.8**
NORC	**Norcasia**	**2.16**	**233**	P	**Pn**	**15 55 08.6**	**+0.3**
NORC				S	**Sn**	**15 55 37.5**	**+0.5**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**15 55 10.9**	**+0.5**
CHIC				S	**Sn**	**15 55 40.1**	**-0.6**
ROSC	**El Rosal**	**2.34**	**210**	P	**Pn**	**15 55 13.0**	**+2.2**
ROSC				S	**Sn**	**15 55 41.0**	**-0.3**
HELC	**Santa Helena**	**2.48**	**254**	P	**Pn**	**15 55 14.4**	**+2.0**
HELC				S	**Sn**	**15 55 43.8**	**-0.4**
HELC	**Santa Helena**	**2.48**	**254**	*e*P	**Pn**	**15 55 13.1**	**+0.7**
HELC				*e*S	**Sn**	**15 55 41.5**	**-2.7**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**15 55 15.2**	**+2.2**
CVER				S	**Sn**	**15 55 45.7**	**+0.4**
UREC	**San Jos de Ur**	**2.54**	**290**	P	**Pn**	**15 55 13.2**	**+0.4**
UREC				S	**Sn**	**15 55 44.7**	**-0.4**
SOCV	**Socops**	**2.66**	**58**	*e*P	**Pn**	**15 55 16.0**	**+1.7**
SOCV				*e*S	**Sn**	**15 55 48.9**	**+1.1**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P	**Pn**	**15 55 16.8**	**+0.8**
GUY2C				S	**Sn**	**15 55 50.5**	**-0.1**
VILC	**Villavicencio,**	**2.79**	**192**	P	**Pn**

ODEM	**Odemis-Izmir**	**3.23**	**3**	Pn	**Pn**	**15 57 07.7**	**+1.4**
AKMS	**Akamas**	**3.66**	**89**	P	**Pn**	**15 57 12.1**	**-0.1**
ANKY	**Antikythira Is**	**3.82**	**284**	P	**Pn**	**15 57 15.6**	**+1.2**
NATA	**Nata**	**3.87**	**93**	P	**Pn**	**15 57 15.2**	**+0.2**
VLI	**Veliai**	**4.34**	**294**	P	**Pn**	**15 57 22.5**	**+0.9**
ASGA	**Asgata**	**4.42**	**92**	P	**Pn**	**15 57 23.6**	**+0.9**
CSS	**Mathiatis**	**4.48**	**90**	P	**Pn**	**15 57 22.7**	**-0.7**
CSS				S	**Sn**	**15 58 15.5**	**+0.8**
KZIT	**Kziot**	**6.86**	**125**	P	**Pn**	**15 57 55.5**	**-0.7**
KZIT				S	**Sn**	**15 59 13.2**	**-0.1**
HMDT	**Nahal Hemdat**	**6.96**	**111**	P	**Pn**	**15 57 56.7**	**-0.8**
HMDT				S	**Sn**	**15 59 16.4**	**+0.6**
DSI	**Dead Sea**	**7.18**	**117**	P	**Pn**	**15 57 59.6**	**-0.9**
DSI				S	**Sn**	**15 59 21.0**	**-0.1**
MSBI	**Mazada**	**7.29**	**119**	P	**Pn**	**15 58 01.2**	**-0.9**
MSBI				S	**Sn**	**15 59 24.1**	**+0.1**
KRMI	**Paran Flat**	**7.59**	**128**	P	**Pn**	**15 58 05.5**	**-0.7**
KRMI				S	**Sn**	**15 59 31.8**	**+0.5**
PRNI	**Paran**	**7.62**	**126**	P	**Pn**	**15 58 05.5**	**-1.1**
PRNI				S	**Sn**	**15 59 31.6**	**-0.4**
HRFI	**Mount Harif**	**7.84**	**128**	P	**Pn**	**15 58 08.8**	**-0.9**
HRFI				S	**Sn**	**15 59 37.8**	**+0.3**
EIL2	**Elat**	**8.03**	**130**	P	**Pn**	**15 58 11.3**	**-1.0**
EIL2				S	**Sn**	**15 59 42.2**	**0.0**

IDC 26 15:56:21.8±16.0, 20.77S×178.29W, h421km±159km, mb3.3/4, mbtmp4.2/5, Error ellipse: s-maj=130.7km s-min=40.6km az=24.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.88**	**192**	P	P	16 00 03.9	-0.2
	2.1nm,0.3s,baz=0.0,slow=19,SNR=6.5						
STKA	**Stephens Creek**	**37.43**	**244**	P	P	16 02 56.9	-0.4
	1.7nm,0.5s,baz=63,slow=4.5,SNR=3.3 1.7nm,0.5s						
ASAR	**Alice Springs**	**44.20**	**257**	P	P	16 03 52.0	+0.1
	2.3nm,0.5s,baz=88,slow=8.0,SNR=79						
ASAR				PcP	PcP	16 05 26.6	-1.4
	0.3nm,0.7s,baz=100,slow=2.9,SNR=1.8 2.3nm,0.5s						
WRA	**Warramunga Arr**	**44.30**	**262**	P	P	16 03 52.4	-0.3
	0.9nm,0.3s,baz=97,slow=7.7,SNR=106 0.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**52.73**	**263**	P	P	16 04 56.1	+0.1
	1.4nm,0.5s,baz=78,slow=7.2,SNR=6.5 1.4nm,0.5s						
BRTR	**Keskin Array B**	**146.82**	**312**	PKPbc	PKPbc	16 15 15.8	-0.2
	0.6nm,0.7s,baz=59,slow=6.9,SNR=2.7						

IDC 26 16:03:16.5±3.0, 5.47S×129.27E, h220km±39km, mb3.3/4, mbtmp4.0/8, Error ellipse: s-maj=74.9km s-min=16.2km az=84.0

ISC 26 16:03:14.3±0.8, 5.57S±0.06×129.4E±0.2, h200km, n8, σ2s77/12, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.04**	**22**	P	**Pn**	**16 04 31.4**	**+2.1**
	14nm,0.2s,baz=210,slow=20,SNR=80						
SIJI				S	**Sn**	**16 05 25.3**	**-3.1**
	53nm,0.2s,baz=246,slow=23,SNR=9.9						
FITZ	**Fitzroy Crossi**	**12.98**	**196**	P	**Pn**	**16 06 14.5**	**+2.9**
	1.1nm,0.3s,baz=29,slow=14,SNR=6.1						
FITZ				S	**S**	**16 08 32.1**	**-4.2**
	3.6nm,0.8s,baz=330,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**15.08**	**162**	P	**Pn**	**16 06 39.0**	**+1.3**
	4.1nm,0.8s,baz=332,slow=13,SNR=35						
WRA				S	**S**	**16 09 22.1**	**-3.1**
	0.6nm,0.4s,baz=343,slow=21,SNR=7.5						
ASAR	**Alice Springs**	**18.52**	**167**	P	**P**	**16 07 18.7**	**+2.8**
	7.2nm,0.5s,baz=350,slow=12,SNR=164						
ASAR				S	**S**	**16 10 34.5**	**-2.1**
	1.8nm,0.9s,baz=351,slow=25,SNR=6.5						
SONM	**Songino Array**	**56.90**	**342**	P	**P**	**16 12 38.4**	**-0.1**
	0.2nm,0.5s,baz=160,slow=7.0,SNR=2.9 0.2nm,0.5s						
MKAR	**Makanchi Array**	**66.69**	**327**	P	**P**	**16 13 43.2**	**-0.6**
	0.9nm,0.3s,baz=124,slow=6.8,SNR=32 0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**70.03**	**334**	P	**P**	**16 14 02.3**	**-2.0**
	0.4nm,0.4s,baz=116,slow=5.0,SNR=2.3 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**70.97**	**329**	P	**P**	**16 14 09.2**	**-0.8**
	0.8nm,0.5s,baz=125,slow=5.1,SNR=10.0 0.8nm,0.5s						

IDC 26 16:16:40.0±8.8, 26.12S×28.80E, h0km, mbtmp2.6/1, ML2.2/1, Error ellipse: s-maj=85.9km s-min=56.2km az=141.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**4.01**	**231**	Pn	Pn	16 17 43.2	+0.3
	0.1nm,0.3s,baz=56,slow=16,SNR=1.3						
BOSA				Sn	Sn	16 18 24.7	-6.0
	0.1nm,0.3s,baz=76,slow=20,SNR=1.7						
BOSA				Lg	Lg	16 18 47.1	
	0.4nm,0.3s,baz=142,slow=15,SNR=8.4 1.2nm,0.8s						
I47ZA	**BOSHOF INFRASO**	**4.03**	**231**	I	I	16 42 40.0	
	0.1nm,0.8s,baz=52,slow=315,SNR=8.7						
I35NA	**TSUMEB INFRASO**	**12.44**	**301**	I	I	17 34 00.0	
	baz=123,slow=315,SNR=5.9						

UCR 26 16:29:15.5±0.8, 10.73N×86.73W, h15km±10km, MW3.9, Presumed earthquake

CATAC 26 16:29:18.6±0.4, 11.2°×8.7W±, h14km±2km, M3.2/19, MLv3.2/19, Error ellipse: s-maj=5.1km s-min=3.0km az=52.0, confirmed

ISC 26 16:29:17.0±2.0, 10.75N±0.06×86.64W±0.06, h17km±11km, n44, σ0s79/68, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRUZ	**La Cruz**	**1.04**	**72**	*e*P	**Pb**	**16 29 36.1**	**-0.5**
LCRUZ				*e*S	**Sn**	**16 29 53.0**	**+1.9**
ARIN	**Rivas**	**1.05**	**49**	P	**Pb**	**16 29 36.3**	**-0.5**
ARIN				S	**Sb**	**16 29 50.1**	**-0.2**
ELI1	**Hacienda Flor**	**1.07**	**96**	P	**Pn**	**16 29 37.5**	**+0.2**
ELI1				S	**Sb**	**16 29 50.5**	**-0.4**
NADN	**Granada**	**1.16**	**31**	P	**Pn**	**16 29 38.6**	**+0.2**
NADN				S	**Sb**	**16 29 52.7**	**-0.5**
CARN	**Rivas**	**1.18**	**68**	P	**Pn**	**16 29 38.8**	**+0.1**
CARN				S	**Sb**	**16 29 52.9**	**-1.0**
CARN	**Rivas**	**1.18**	**68**	*e*P	**Pn**	**16 29 38.1**	**-0.6**
CARN				*e*S	**Sg**	**16 29 57.4**	**+2.1**
LAPC	**Finca la Perla**	**1.19**	**89**	*e*P	**Pn**	**16 29 38.2**	**-0.6**
JUD3	**Juan Diaz 3**	**1.23**	**118**	*e*P	**Pn**	**16 29 38.0**	**-1.5**
OMEN	**Al SSO del Vol**	**1.25**	**53**	P	**Pn**	**16 29 38.8**	**-0.9**
MORN	**Al O del Volca**	**1.25**	**51**	P	**Pn**	**16 29 39.9**	**+0.1**
MORN				S	**Sb**	**16 29 54.2**	**-1.9**
GPS2	**Hotel Rincn d**	**1.27**	**90**	*e*P	**Pn**	**16 29 40.4**	**+0.4**
CRUN	**El Crucero**	**1.27**	**15**	P	**Pg**	**16 29 40.8**	**-0.8**
CONN	**Concepcion**	**1.28**	**51**	P	**Pn**	**16 29 40.0**	**-0.1**
CONN				S	**Sb**	**16 29 56.1**	**-0.8**
NANN	**Nandasmo**	**1.28**	**23**	P	**Pb**	**16 29 40.9**	**+0.2**
NANN				S	**Sb**	**16 29 56.2**	**-0.8**
PEJA	**Penjamo Buenos**	**1.31**	**84**	*e*P	**Pb**	**16 29 41.1**	**-0.2**
MASN	**Masaya**	**1.32**	**21**	P	**Pn**	**16 29 40.9**	**+0.2**
PLVR	**Palo Verde**	**1.33**	**107**	*e*P	**Pn**	**16 29 39.6**	**-1.3**
MAS3	**Al N del Volca**	**1.34**	**20**	P	**Pb**	**16 29 41.4**	**-0.3**
MAS3				S	**Sb**	**16 29 57.9**	**-0.8**
UNAN	**Cigeo UNAN**	**1.40**	**15**	P	**Pb**	**16 29 42.2**	**-0.5**
UNAN				S	**Sn**	**16 29 59.0**	**-0.9**
CMARA	**Lajas Hojancha**	**1.40**	**121**	P	**Pn**	**16 29 42.3**	**+0.4**
COLC	**Colonia**	**1.42**	**93**	*e*P	**Pn**	**16 29 41.5**	**-0.5**
COPN	**Copaltepe**	**1.42**	**2**	P	**Pn**	**16 29 41.7**	**-0.4**
COPN	**Copaltepe**	**1.42**	**2**	*e*P	**Pn**	**16 29 41.3**	**-0.8**
MESS	**Mesas**	**1.42**	**90**	*e*P	**Pn**	**16 29 42.1**	**0.0**
SAPS	**Ciudad Sandino**	**1.43**	**9**	P	**Pn**	**16 29 42.1**	**0.0**
SAPS				S	**Sb**	**16 30 00.6**	**-0.4**
MGAN	**Managua**	**1.44**	**16**	P	**Pn**	**16 29 42.3**	**0.0**
CUI	**Cuipilapa**	**1.45**	**94**	*i*P	**Pn**	**16 29 42.5**	**-0.1**
AERN	**Aeropuerto Man**	**1.46**	**18**	P	**Pb**	**16 29 43.2**	**-0.5**
AERN				S	**Sb**	**16 30 02.0**	**0.0**
APQ2	**Apoyeque**	**1.47**	**12**	P	**Pn**	**16 29 42.6**	**-0.1**
APQ2	**Apoyeque**	**1.47**	**12**	P	**Pn**	**16 29 43.0**	**+0.3**
APQ2				S	**Sb**	**16 30 01.8**	**-0.4**
VMAR	**Armenia, Volca**	**1.50**	**88**	*e*P	**Pn**	**16 29 43.6**	**+0.4**
APQ3	**Volcan Apoyequ**	**1.53**	**10**	P	**Pn**	**16 29 44.1**	**+0.5**
APQ3				S	**Sb**	**16 30 03.6**	**-0.5**
MOMN	**Momotombo**	**1.65**	**3**	P	**Pn**	**16 29 45.4**	**+0.2**
MOMN				S	**Sn**	**16 30 05.7**	**-0.4**
MOM2	**El Cardon**	**1.68**	**5**	P	**Pb**	**16 29 47.1**	**-0.5**
MOM2				S	**Sb**	**16 30 07.6**	**-0.8**
MACN	**El Madrono**	**1.70**	**359**	P	**Pn**	**16 29 46.2**	**+0.2**
MACN				S	**Sn**	**16 30 07.9**	**+0.5**
JTS	**Las Juntas de**	**1.72**	**105**	P	**Pn**	**16 29 46.8**	**+0.6**
JTS				S	**Sn**	**16 30 08.3**	**+0.5**
CNGN	**Cerro Negro**	**1.74**	**358**	P	**Pn**	**16 29 47.3**	**+0.9**
CNGN				S	**Sb**	**16 30 09.4**	**-0.6**
ROCN	**Rota Cerro Neg**	**1.76**	**357**	P	**Pn**	**16 29 47.6**	**+0.9**
ROCN				S	**Sb**	**16 30 09.7**	**-0.9**
HERN	**Volcan Telica**	**1.85**	**354**	P	**Pn**	**16 29 49.2**	**+1.1**
HERN				S	**Sn**	**16 30 12.2**	**+1.0**
ACON	**Acoyapa**	**1.88**	**50**	P	**Pn**	**16 29 48.5**	**+0.2**
BOAB	**BOACO BROADBAN**	**1.94**	**29**	P	**Pn**	**16 29 50.1**	**+0.9**
BOAB				S	**Sn**	**16 30 13.2**	**+0.1**
LIMN	**Finca el Limon**	**2.31**	**7**	P	**Pn**	**16 29 55.5**	**+1.1**
LIMN				S	**Sn**	**16 30 23.9**	**+1.4**
LCR2	**La Lucha 2**	**2.78**	**111**	P	**Pn**	**16 30 02.6**	**+1.6**
TRT2	**Tortugero**	**2.86**	**94**	P	**Pn**	**16 30 02.6**	**+0.7**

SOF 26 16:35:34.3, 41.79N±0.01×23.75E±0.01, h20km±4km, MD2.7/8

BEO 26 16:35:35.4±0.3, 41.79N×23.71E, h7km±4km, ML2.4/7

SKO 26 16:35:36.6, 41.79N×23.65E, h4km, ML2.2

ISC 26 16:35:35.3±1.0, 41.79N±0.02×23.74E±0.02, h8km±10km, n19, σ0s71/37, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	**Musomishta**	**0.24**	**178**	*i* Pg	**Pg**	**16 35 40.3**	**+0.1**
MMB				Sg	**Sg**	**16 35 43.8**	**+0.3**
KKB	**Krupnik**	**0.46**	**277**	*i* Pg	**Pg**	**16 35 44.3**	**+0.1**
KKB				Sg	**Sg**	**16 35 50.9**	**+0.7**
SRS	**Serrai**	**0.68**	**189**	*e*Pg	**Pg**	**16 35 48.2**	**-0.3**
SRS				*e*Sg	**Sg**	**16 35 57.6**	**+0.3**
PLNA	**Plana**	**0.72**	**341**	*i* Pg	**Pg**	**16 35 49.6**	**+0.3**
PLNA				Sg	**Sg**	**16 35 59.4**	**+0.7**
RZN	**Rozhen**	**0.76**	**97**	*i* Pg	**Pg**	**16 35 49.6**	**-0.3**
RZN				Sg	**Sg**	**16 36 00.0**	**+0.2**
PGB	**Panagyurishte**	**0.79**	**24**	*i* Pg	**Pg**	**16 35 50.6**	**0.0**
PGB				Sg	**Sg**	**16 36 01.6**	**+0.7**
PLD	**Plovdiv**	**0.83**	**64**	*e*Pg	**Pg**	**16 35 50.9**	**-0.4**
PLD				Sg	**Sg**	**16 36 01.7**	**-0.5**
PLD	**Plovdiv**	**0.83**	**64**	*e*Pg	**Pg**	**16 35 49.3**	**-2.0**
PLD				*e*Sg	**Sg**	**16 36 01.5**	**-0.7**
VTS	**Vitosha**	**0.91**	**336**	*i* Pg	**Pg**	**16 35 52.2**	**-0.6**
VTS				Sg	**Sg**	**16 36 04.0**	**-0.6**
VTS	**Vitosha**	**0.91**	**336**	*e*Pg	**Pg**	**16 35 52.0**	**-0.8**
VTS				*e*Sg	**Sg**	**16 36 03.1**	**-1.5**
VAY	**Valandovo**	**0.99**	**242**	*i* Pg	**Pg**	**16 35 53.7**	**-0.7**
VAY				*i* Sg	**Sg**	**16 36 07.1**	**-0.2**
VAY				*e*Lg	Lg	16 36 09.1	
	comp=N,52nm,0.3s						
VAY				*e*Lg	Lg	16 36 09.9	
	comp=E,26nm,0.2s						
BLSH	**Balsha**	**1.12**	**342**	*i* Pg	**Pb**	**16 35 57.1**	**+0.2**
BLSH				Sg	**Sn**	**16 36 12.6**	**-0.4**
BOSS	**Bosilegrad**	**1.17**	**307**	*e*Pg	**Pg**	**16 35 57.3**	**-0.5**
BOSS				*e*Sg	**Sg**	**16 36 12.2**	**-0.8**
MPEP	**Malo Peshtene**	**1.56**	**0**	*e*Pg	**Pg**	**16 36 05.3**	**0.0**
MPEP				Sg	**Sg**	**16 36 26.7**	**+1.1**
ZAPS	**Zavoj**	**1.69**	**332**	*e*Pg	**Pn**	**16 36 06.0**	**+0.8**
ZAPS				*e*Sg	**Sg**	**16 36 28.9**	**-0.8**
PVL	**Pavlikeni**	**1.70**	**38**	*e*Pg	**Pg**	**16 36 08.5**	**+0.5**
PVL				S	**Sg**	**16 36 31.2**	**+1.1**
BARS	**Barje**	**1.75**	**306**	*e*Pg	**Pn**	**16 36 06.2**	**+0.1**
BARS				*e*Sg	**Sb**	**16 36 30.5**	**+0.5**
BLKB	**Belogradchik**	**1.99**	**337**	*e*Pn	**Pn**	**16 36 09.2**	**-0.1**
SELS	**Selova**	**2.41**	**307**	*e*Pn	**Pn**	**16 36 14.4**	**-0.6**
SELS				*e*Sn	**Sn**	**16 36 44.9**	**+0.2**

IDC 26 16:43:08.0±0.8, 11.46N×86.00W, h0km, mb3.9/8, mbtmp4.0/9, ML2.9/2, MS3.5/3, Error ellipse: s-maj=42.0km s-min=14.3km az=50.0

CATAC 26 16:43:08.4±0.4, 11.2°×8.7W±, h19km, M4.2/31, MLv4.2/31, Error ellipse: s-maj=5.3km s-min=3.6km az=31.5, confirmed

UCR 26 16:43:08.2±0.8, 10.72N×86.72W, h15km±7km, MW4.5, Presumed earthquake

NEIC 26 16:43:09.2±2.3, 10.89N±0.07×86.56W±0.08, h10km±1km, mb4.6/60, Error ellipse: s-maj=15.6km s-min=7.6km az=231.0

ISC 26 16:43:10.2±1.5, 10.77N±0.05×86.69W±0.05, h29km±10km, n198, σ1s12/230, mb4.5/35, MS3.4/3, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRUZ	**La Cruz**	**1.08**	**73**	*e*P	**Pn**	**16 43 29.0**	**-0.4**
ELI1	**Hacienda Flor**	**1.12**	**96**	*e*P	**Pn**	**16 43 30.0**	**0.0**
DELF	**Filadelfia**	**1.16**	**106**	*e*P	**Pn**	**16 43 29.8**	**-0.7**
DELF				*e*S	**Sn**	**16 43 45.0**	**-0.4**
NADN	**Granada**	**1.17**	**33**	*e*P	**Pn**	**16 43 30.9**	**+0.3**
CARN	**Rivas**	**1.22**	**70**	P	**Pn**	**16 43 31.3**	**+0.1**
CARN				S	**Sb**	**16 43 48.9**	**+0.9**
CARN	**Rivas**	**1.22**	**70**	*e*P	**Pn**	**16 43 31.0**	**-0.3**
LAPC	**Finca la Perla**	**1.23**	**90**	*e*P	**Pn**	**16 43 30.8**	**-0.7**
ERIA	**Liberia**	**1.23**	**96**	*e*P	**Pn**	**16 43 31.5**	**0.0**
JAPN	**Al SSO del Vol**	**1.24**	**53**	P	**Pb**	**16 43 32.6**	**-0.5**
JAPN				S	**Sb**	**16 43 50.7**	**+1.9**
JAPN	**Al SSO del Vol**	**1.24**	**53**	*e*P	**Pn**	**16 43 32.3**	**+0.6**
CRUN	**El Crucero**	**1.27**	**17**	P	**Pb**	**16 43 33.0**	**-0.5**
OMEN	**Al SSO del Vol**	**1.27**	**55**	P	**Pn**	**16 43 30.5**	**-1.6**
OMEN				S	**Sb**	**16 43 49.9**	**+0.3**
JUD3	**Juan Diaz 3**	**1.28**	**118**	Pn	**Pn**	**16 43 30.9**	**-1.3**
JUD3	**Juan Diaz 3**	**1.28**	**118**	*e*P	**Pn**	**16 43 30.8**	**-1.4**
MORN	**Al O del Volca**	**1.28**	**53**	P	**Pn**	**16 43 32.4**	**+0.3**
MORN				S	**Sb**	**16 43 51.1**	**+1.4**
NANN	**Nandasmo**	**1.29**	**25**	P	**Pb**	**16 43 33.5**	**-0.3**
NANN				S	**Sb**	**16 43 51.7**	**+1.6**
GPS3	**Bodega del ICE**	**1.30**	**90**	*e*P	**Pn**	**16 43 32.6**	**+0.1**
VRLE	**La Escondida,**	**1.30**	**89**	*e*P	**Pn**	**16 43 32.0**	**-0.5**
CONN	**Concepcion**	**1.31**	**53**	P	**Pn**	**16 43 32.4**	**-0.2**
CONN				S	**Sb**	**16 43 52.1**	**+1.5**
GPS2	**Hotel Rincn d**	**1.31**	**91**	*e*P	**Pn**	**16 43 32.2**	**-0.5**
VORI	**VORI**	**1.32**	**88**	*e*P	**Pn**	**16 43 32.0**	**-0.9**
MASN	**Masaya**	**1.32**	**23**	P	**Pn**	**16 43 32.8**	**0.0**
MASN				S	**Sb**	**16 43 51.8**	**+0.9**
BUAI	**Buenos Aires**	**1.33**	**85**	*e*P	**Pn**	**16 43 33.5**	**+0.6**
MAS3	**Al N del Volca**	**1.34**	**22**	P	**Pn**	**16 43 33.1**	**0.0**
MAS3				S	**Sb**	**16 43 52.5**	**+0.8**
PEJA	**Penjamo Buenos**	**1.36**	**85**	*e*P	**Pn**	**16 43 33.8**	**+0.5**
ELVJ	**El Viejo (Barb**	**1.38**	**103**	*e*P	**Pn**	**16 43 31.2**	**-2.3**
PLVR	**Palo Verde**	**1.38**	**108**	*e*P	**Pn**	**16 43 32.9**	**-0.8**
UNAN	**Cigeo UNAN**	**1.40**	**17**	P	**Pn**	**16 43 33.9**	**+0.2**
UNAN				S	**Sb**	**16 43 54.1**	**+1.0**
COPN	**Copaltepe**	**1.41**	**4**	P	**Pn**	**16 43 34.0**	**+0.1**
COPN	**Copaltepe**	**1.41**	**4**	*e*P	**Pn**	**16 43 33.5**	**-0.4**
SAPS	**Ciudad Sandino**	**1.42**	**11**	P	**Pn**	**16 43 34.3**	**+0.2**
SAPS				S	**Sb**	**16 43 54.8**	**+1.0**
BAGA	**Bagaces**	**1.42**	**100**	*e*P	**Pn**	**16 43 33.9**	**-0.2**
TISN	**Laguna Tiscapa**	**1.43**	**17**	P	**Pn**	**16 43 34.6**	**+0.4**
MGAN	**Managua**	**1.44**	**17**		**Pn**	**16 43 33.8**	**-0.6**
MGAN	**Managua**	**1.44**	**17**	P	**Pn**	**16 43 34.7**	**+0.4**
MGAN				S	**Sb**	**16 43 54.4**	**+0.2**
MGAN	**Managua**	**1.44**	**17**	*e*P	**Pn**	**16 43 34.3**	**0.0**
CMARA	**Lajas Hojancha**	**1.45**	**121**	*e*P	**Pn**	**16 43 33.2**	**-1.3**
COLC	**Colonia**	**1.46**	**94**	*e*P	**Pn**	**16 43 34.3**	**-0.4**
APQ2	**Apoyeque**	**1.46**	**14**	P	**Pn**	**16 43 35.2**	**+0.5**
APQ2				S	**Sb**	**16 43 55.3**	**+0.3**
MESS	**Mesas**	**1.47**	**91**	*e*P	**Pn**	**16 43 34.5**	**-0.3**
HORNC	**Hornillas**	**1.48**	**92**	*e*P	**Pn**	**16 43 34.9**	**-0.1**
CLARA	**Aguas Claras**	**1.48**	**89**	*e*P	**Pn**	**16 43 35.1**	**+0.1**
APYN	**Apoyeque**	**1.49**	**13**	P	**Pn**	**16 43 35.9**	**+0.8**
APYN				S	**Sb**	**16 43 55.8**	**-0.1**
CUI	**Cuipilapa**	**1.50**	**94**	*e*P	**Pn**	**16 43 35.0**	**-0.2**
APQ3	**Volcan Apoyequ**	**1.53**	**12**	P	**Pn**	**16 43 36.2**	**+0.6**
APQ3				S	**Sb**	**16 43 56.6**	**-0.2**
VMAR	**Armenia, Volca**	**1.55**	**88**	*e*P	**Pn**	**16 43 36.0**	**+0.1**
NYURE	**Nandayure**	**1.61**	**118**	*e*P	**Pn**	**16 43 35.2**	**-1.4**
INVE	**Universidad In**	**1.62**	**100**	*e*P	**Pn**	**16 43 36.3**	**-0.6**
MOMN	**Momotombo**	**1.64**	**5**	P	**Pn**	**16 43 37.6**	**+0.5**
MOMN				S	**Sb**	**16 43 58.6**	**-1.5**
TIMP	**Tierras Morena**	**1.65**	**96**	*e*P	**Pn**	**16 43 38.7**	**+1.4**
MOM2	**El Cardon**	**1.67**	**7**	P	**Pn**	**16 43 37.8**	**+0.3**
MOM2				S	**Sb**	**16 44 00.8**	**-0.2**
TENO	**El Achiote**	**1.68**	**92**	*e*P	**Pn**	**16 43 37.4**	**-0.3**
MACN	**El Madrono**	**1.69**	**0**	P	**Pn**	**16 43 38.1**	**+0.3**
MACN				S	**Sb**	**16 44 00.2**	**-1.3**
CNGA	**Al SSO del Vol**	**1.71**	**360**	P	**Pn**	**16 43 38.5**	**+0.3**
CNGA				S	**Sb**	**16 44 00.9**	**-1.4**
CNGN	**Cerro Negro**	**1.72**	**360**		**Pn**	**16 43 37.9**	**-0.4**
CNGN	**Cerro Negro**	**1.72**	**360**	P	**Pn**	**16 43 38.5**	**+0.2**
CNGN				S	**Sb**	**16 44 02.0**	**-0.5**
CNGN	**Cerro Negro**	**1.72**	**360**	*e*P	**Pn**	**16 43 38.2**	**-0.1**
PACN	**Al O del Volca**	**1.73**	**357**	P	**Pn**	**16 43 39.2**	**+0.9**
PACN				S	**Sb**	**16 44 01.7**	**-0.8**
ROCN	**Rota Cerro Neg**	**1.74**	**358**	P	**Pn**	**16 43 38.8**	**+0.3**
ROCN				S	**Sb**	**16 44 01.6**	**-1.5**
QUEB	**Quebradon, Cot**	**1.77**	**95**	*e*P	**Pn**	**16 43 39.2**	**+0.3**
JTS	**Las Juntas de**	**1.77**	**105**	P	**Pn**	**16 43 38.4**	**-0.5**
	13nm,0.3s,baz=305,slow=16,SNR=23						
JTS				Sn	**Sn**	**16 43 57.7**	**-2.8**
	51nm,0.3s,baz=287,slow=19,SNR=7.3						
JTS				LR	LR	16 44 00.9	
	comp=Z,144nm,18.6s,baz=308,slow=34						
JTS	**Las Juntas de**	**1.77**	**105**	Pn	**Pn**	**16 43 37.8**	**-1.1**
JTS	**Las Juntas de**	**1.77**	**105**	*e*P	**Pn**	**16 43 38.4**	**-0.5**
CHIK	**Chiripa**	**1.78**	**100**	*e*P	**Pb**	**16 43 44.3**	**+2.0**
ILCN	**San Idelfonso**	**1.80**	**360**	P	**Pn**	**16 43 39.4**	**+0.1**
ILCN				S	**Sn**	**16 44 02.4**	**+1.3**
JCR1	**Jicaral**	**1.80**	**120**	*e*P	**Pn**	**16 43 38.5**	**-0.8**
TEL3	**Telica 3**	**1.80**	**355**	P	**Pn**	**16 43 40.1**	**+0.8**
HERN	**Volcan Telica**	**1.83**	**356**	Pn	**Pn**	**16 43 39.3**	**-0.6**
POLN	**Al Sur del Vol**	**1.87**	**356**	P	**Pn**	**16 43 40.6**	**+0.3**
POLN				S	**Sb**	**16 44 05.2**	**-1.6**
ACON	**Acoyapa**	**1.90**	**51**	P	**Pn**	**16 43 41.1**	**+0.4**
ACON				S	**Sb**	**16 44 06.5**	**-1.1**
TABAC	**Tabacon**	**1.91**	**98**	*e*P	**Pn**	**16 43 41.1**	**+0.3**
PKGN	**Cerro Pekin**	**1.91**	**351**	P	**Pn**	**16 43 41.1**	**+0.3**
PKGN				S	**Sn**	**16 44 05.2**	**+1.3**
BOAB	**BOACO BROADBAN**	**1.95**	**31**	Pn	**Pn**	**16 43 41.1**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.95**	**31**	P	**Pn**	**16 43 41.2**	**-0.1**
CRIN	**San Cristobal**	**1.95**	**350**	Pn	**Pn**	**16 43 40.2**	**-1.3**
CRIN	**San Cristobal**	**1.95**	**350**	*e*P	**Pn**	**16 43 41.1**	**-0.4**
ARE1	**Arenal 1**	**1.96**	**99**	*e*P	**Pn**	**16 43 41.9**	**+0.4**
VARE2	**V. Arenal**	**1.96**	**99**	*e*P	**Pn**	**16 43 41.8**	**+0.2**
VACR	**Volcan Arenal**	**2.00**	**98**	*e*P	**Pb**	**16 43 46.0**	**+0.1**
MATN	**Matagalpa**	**2.27**	**19**	P	**Pn**	**16 43 45.3**	**-0.6**
LIMN	**Finca el Limon**	**2.30**	**8**	P	**Pn**	**16 43 46.3**	**0.0**
LIMN				S	**Sn**	**16 44 15.9**	**+2.2**
CSGN	**Cosiguina Volc**	**2.35**	**339**	P	**Pn**	**16 43 47.4**	**+0.3**
CSGN				S	**Sn**	**16 44 16.4**	**+1.4**
CSGN	**Cosiguina Volc**	**2.35**	**339**	*e*P	**Pn**	**16 43 46.5**	**-0.5**
VPS8	**V Poas**	**2.48**	**103**	*e*P	**Pn**	**16 43 52.0**	**+3.1**
HDC	**Heredia**	**2.64**	**107**	Pn	**Pn**	**16 43 51.2**	**+0.1**
ACOS	**Acosta**	**2.66**	**111**	*e*P	**Pn**	**16 43 53.3**	**+1.9**
CNCH	**Conchagua**	**2.73**	**336**	P	**Pn**	**16 43 52.7**	**+0.4**
CNCH				S	**Sn**	**16 44 25.8**	**+1.4**
VICA	**Volcano Irazu**	**2.90**	**105**	*e*P	**Pn**	**16 43 57.2**	**+2.3**
TRT2	**Tortugero**	**2.91**	**94**	*e*P	**Pb**	**16 44 01.3**	**-0.1**

PDAR				PcP	**PcP**	**16 52 41.1**	**+1.0**		
	comp=Z,0.4nm,0.8s,baz=122,slow=7.6,SNR=4.4								
	comp=Z,0.7nm,0.8s								
PDAR	**Pinedale Array**	**37.60**	**332**	P	**P**	**16 50 22.0**	**-0.6**		
G65A	**Princeton**	**38.03**	**22**	P	**P**	**16 50 25.8**	**-0.1**		
G65A				IAmb	IAmb	16 50 31.0			
	comp=Z,16nm,1.3s								
F64A	**Sherman**	**38.32**	**21**	P	**P**	**16 50 28.0**	**-0.4**		
E62A	**Clayton Lake**	**38.59**	**19**	P	**P**	**16 50 29.7**	**-1.0**		
E62A				IAmb	IAmb	16 50 38.3			
	comp=Z,12nm,1.3s								
D62A	**Allapoint, All**	**39.15**	**19**	P	**P**	**16 50 34.4**	**-0.9**		
D62A				IAmb	IAmb	16 50 35.7			
	comp=Z,9.6nm,0.8s								
LMQ	**La Malbaie**	**39.17**	**18**	P	**P**	**16 50 33.8**	**-1.6**		
LMQ				IAmb	IAmb	16 50 52.0			
	comp=Z,15nm,1.2s								
NVAR	**Mina Array Bea**	**39.46**	**320**	P	**P**	**16 50 41.3**	**+3.0**		
	comp=Z,1.2nm,0.8s,baz=150,slow=6.8,SNR=6.1								
NVAR				PcP	**PcP**	**16 52 49.6**	**+3.7**		
	comp=Z,2.0nm,0.7s,baz=140,slow=4.7,SNR=12								
NVAR				LR	LR	17 08 23.0			
	comp=Z,57nm,18.9s,baz=260,slow=39								
	comp=Z,1.2nm,0.8s								
ULM	**Lac du Bonnet**	**40.09**	**351**	P	**P**	**16 50 39.6**	**-3.4**		
	comp=Z,2.5nm,0.7s,baz=168,slow=9.0,SNR=4.0								
	comp=Z,2.5nm,0.7s								
BATG	**Bathurst New B**	**40.35**	**22**	P	**P**	**16 50 44.7**	**-0.6**		
BATG				IAmb	IAmb	16 50 46.0			
	comp=Z,10nm,1.0s								
DRLN	**Deer Lake**	**45.39**	**27**	P	**P**	**16 51 24.1**	**-1.9**		
BDFB	**Brasilia**	**46.42**	**124**	P	**P**	**16 51 35.4**	**+0.6**		
	comp=Z,2.6nm,0.6s,baz=270,slow=10,SNR=4.0								
	comp=Z,2.6nm,0.6s								
BDFB	**Brasilia**	**46.42**	**124**	P	**P**	**16 51 35.2**	**+0.4**		
BDFB				IAmb	IAmb	16 51 36.7			
	comp=Z,3.5nm,0.7s								
SCHQ	**Schefferville**	**46.68**	**16**	P	**P**	**16 51 33.3**	**-2.9**		
	comp=Z,3.5nm,0.6s,baz=216,slow=6.7,SNR=14								
SCHQ				PcP	**PcP**	**16 53 08.5**	**-1.0**		
	comp=Z,1.4nm,0.6s,baz=176,slow=5.0,SNR=4.1								
SCHQ				LR	LR	17 12 03.1			
	comp=Z,61nm,18.2s,baz=226,slow=38								
	comp=Z,3.5nm,0.6s								
SCHQ	**Schefferville**	**46.68**	**16**	P	**P**	**16 51 33.9**	**-2.3**		
SCHQ				IAmb	IAmb	16 51 34.4			
	comp=Z,4.0nm,0.7s								
FCC	**Fort Churchill**	**48.22**	**355**	P	**P**	**16 51 46.0**	**-2.0**		
YKA	**Yellowknife Ar**	**55.42**	**345**	P	**P**	**16 52 40.0**	**-1.7**		
	comp=Z,0.5nm,0.8s,baz=138,slow=6.6,SNR=8.3								
	comp=Z,0.5nm,0.8s								
YKA	**Yellowknife Ar**	**55.42**	**345**	P	**P**	**16 52 41.3**	**-0.4**		
RES	**Resolute Bay**	**64.06**	**358**	P	**P**	**16 53 39.2**	**-1.8**		
I30M	**Mount Dempster**	**64.14**	**339**	P	**P**	**16 53 41.7**	**-0.1**		
BCAR	**Beaver Creek A**	**65.08**	**336**	P	**P**	**16 53 48.0**	**+0.1**		
H27K	**Steamboat Moun**	**66.48**	**339**	P	**P**	**16 53 56.4**	**-0.4**		
ILAR	**Eielson Array**	**67.85**	**336**	P	**P**	**16 54 05.0**	**-0.6**		
	comp=Z,1.2nm,1.1s,baz=119,slow=4.5,SNR=7.4								
	comp=Z,1.2nm,1.1s								
ILAR	**Eielson Array**	**67.85**	**336**	P	**P**	**16 54 05.3**	**-0.2**		
RND	**Reindeer**	**68.14**	**335**	P	**P**	**16 54 08.4**	**+0.9**		
D25K	**Kavik River**	**69.53**	**341**	P	**P**	**16 54 16.0**	**0.0**		
G21K	**Allakaket**	**71.03**	**337**	P	**P**	**16 54 25.6**	**+0.5**		
G21K				IAmb	IAmb	16 54 26.3			
	comp=Z,4.6nm,1.0s								
N17K	**Nushagak Hills**	**71.12**	**330**	P	**P**	**16 54 25.5**	**-0.3**		
F19K	**Shaleruckik Mo**	**72.75**	**337**	P	**P**	**16 54 35.4**	**-0.1**		
F19K				IAmb	IAmb	16 54 58.5			
	comp=Z,5.7nm,1.5s								
D20K	**Etivluk River**	**72.78**	**339**	P	**P**	**16 54 35.3**	**-0.3**		
D20K				IAmb	IAmb	16 55 03.4			
	comp=Z,6.2nm,1.4s								
D19K	**Kuna River**	**73.27**	**339**	P	**P**	**16 54 38.8**	**+0.2**		
F15K	**North Star Dit**	**75.30**	**335**	P	**P**	**16 54 51.4**	**+1.1**		
C16K	**Lisburne Hills**	**75.86**	**338**	P	**P**	**16 54 53.7**	**+0.2**		
C16K				IAmb	IAmb	16 54 55.1			
	comp=Z,4.4nm,0.9s								
BILL	**Bilibino**	**86.35**	**339**	P	**P**	**16 55 49.9**	**+0.6**		
BILL				IAmb	IAmb	16 56 19.4			
	comp=Z,6.1nm,1.5s								
SONM	**Songino Array**	**120.51**	**350**	PKP	**PKPdf**	**17 01 59.5**	**+0.1**		
	comp=Z,0.5nm,0.7s,baz=343,slow=3.3,SNR=5.1								
SONM	**Songino Array**	**120.51**	**350**	PKPdf	**PKiKP**	**17 02 00.5**	**+1.0**		
MKAR	**Makanchi Array**	**121.86**	**9**	PKP	**PKPdf**	**17 02 00.4**	**-1.5**		
	comp=Z,0.1nm,0.5s,baz=327,slow=2.4,SNR=2.2								
MKAR	**Makanchi Array**	**121.86**	**9**	PKPdf	**PKPdf**	**17 02 00.9**	**-1.0**		
KSRS	**Korea Array**	**122.09**	**328**	PKP	**PKiKP**	**17 02 04.9**	**+2.2**		
	comp=Z,2.1nm,0.7s,baz=21,slow=2.3,SNR=5.8								
CHGR	**Chuyangaron**	**125.91**	**23**	PKPdf	**PKPdf**	**17 02 10.4**	**+0.4**		
HHC	**Hu-ho-hao-te**	**125.94**	**343**	*eP*	**PKPdf**	**17 02 07.5**	**-2.5**		
GAR	**Garm**	**126.05**	**22**	PKPdf	**PKPdf**	**17 02 11.1**	**+0.8**		
NJ2	**Nanjing**	**130.91**	**331**	*eP*	**PKPdf**	**17 02 20.5**	**+1.0**		
NJ2				pmax	pmax				
	comp=Z,7.0nm,0.8s								
ENH	**Enshi**	**136.33**	**340**	PKPdf	**PKiKP**	**17 02 31.4**	**-0.2**		
ASAR	**Alice Springs**	**139.31**	**246**	PKhKP	PKPpre	17 02 34.0			
	comp=Z,0.2nm,0.7s,baz=107,slow=2.6,SNR=4.5								
ASAR				PKP	**PKiKP**	**17 02 40.2**	**+2.4**		
	comp=Z,0.6nm,0.6s,baz=97,slow=2.2,SNR=16								
ASAR	**Alice Springs**	**139.31**	**246**	PKPdf	**PKPdf**	**17 02 34.9**	**-0.6**		
WRA	**Warramunga Arr**	**139.49**	**252**	PKP	**PKiKP**	**17 02 40.2**	**+2.0**		
	comp=Z,0.9nm,0.9s,baz=95,slow=2.1,SNR=5.5								
WRA	**Warramunga Arr**	**139.49**	**252**	PKPdf	**PKiKP**	**17 02 39.5**	**+1.3**		
MORE	**Moreh**	**145.20**	**358**		**PKPbc**	**17 02 45.4**	**-0.1**		
CMAR	**Chiang Mai Arr**	**150.43**	**349**	PKPbc	**PKPbc**	**17 02 58.7**	**-1.3**		
	comp=Z,1.9nm,0.8s,baz=332,slow=2.9,SNR=18								

*IDC **26** 17:14:40.5±0.7,2.76N×79.66W,h0km,mb3.8/11, mbtmp4.0/13,ML3.2/2,MS3.4/9,Error ellipse: s-maj=25.0km s-min=17.0km az=52.0*
*NEIC **26** 17:14:43.5±2.6,2.64N±0.07×79.6W±0.1,h10km±1km, mb4.5/67,Error ellipse: s-maj=17.3km s-min=12.2km az=273.0*
*RSNC **26** 17:14:44.7±0.0,3°N±4°×8°0W±°,h30km±11km,M4.0, mbBS.0,mb4.7,ML3.5,Mw(mB)4.2*
*VAO **26** 17:14:46.4±1.5,2.54N×79.20W,h10km,mb4.7, Presumed earthquake*

ISC 26 17:14:44.5±3.5,2.71N±0.04×79.58W±0.06,h27km±25km, n143,σ1§61/156,mb4.5/42,MS3.3/8,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAC	**Balboa, Cauca**	**2.43**	**106**	P	**Pn**	**17 15 21.3**	**-1.3**
BBAC				S	**Sn**	**17 15 49.9**	**-1.7**
CMBC	**Cumbal**	**2.48**	**135**	P	**Pn**	**17 15 22.4**	**-1.2**
CMBC				S	**Sn**	**17 15 50.4**	**-2.9**
PAC1	**Pacto, Paraso**	**2.55**	**162**	P	**Pn**	**17 15 23.0**	**-1.3**
PAC1				S	**Sn**	**17 15 53.0**	**-1.6**
CUSE	**Cuicocha Este**	**2.66**	**154**	P	**Pn**	**17 15 25.1**	**-1.0**
CUSE				S	**Sn**	**17 15 56.4**	**-1.4**
TULM	**Tulcn-Chalpat**	**2.67**	**138**	P	**Pn**	**17 15 26.7**	**+0.5**
GCUF	**Volcan Galeras**	**2.67**	**123**	P	**Pn**	**17 15 26.2**	**-0.1**
GCUF				S	**Sn**	**17 15 58.3**	**+0.2**
OTAV	**Otavalo**	**2.70**	**155**		**Pn**	**17 15 25.1**	**-1.6**
OTAV	**Otavalo**	**2.70**	**155**	*eP*	**Pn**	**17 15 24.5**	**-2.1**
OTAV	**Otavalo**	**2.70**	**155**	P	**Pn**	**17 15 26.1**	**-0.5**
OTAV				S	**Sn**	**17 15 54.6**	**-4.1**
CRUC	**La Cruz**	**2.86**	**113**	P	**Pn**	**17 15 29.4**	**+0.7**
CRUC				S	**Sn**	**17 16 04.9**	**+2.4**
POPC	**Popayan, Colom**	**2.90**	**93**	P	**Pn**	**17 15 27.7**	**-1.5**
POPC				S	**Sn**	**17 16 01.9**	**-1.5**
JAMC	**Jamundi, Valle**	**2.94**	**80**	P	Pn	17 15 27.6	-2.1
JAMC				S	**Sn**	**17 16 00.3**	**-4.0**
BONI	**La Bonita**	**3.04**	**138**	P	**Pn**	**17 15 31.7**	**+0.6**
BONI				S	**Sn**	**17 16 08.1**	**+1.4**
PIZC	**Pizarro, Choco**	**3.15**	**45**	P	**Pn**	**17 15 32.1**	**-0.2**
PIZC				S	**Sn**	**17 16 05.2**	**-3.9**
CASC	**Dorado de Casc**	**3.40**	**139**	P	**Pn**	**17 15 38.5**	**+2.6**
CASC				S	**Sn**	**17 16 18.4**	**+3.0**
YOTC	**Yotoco, Valle**	**3.46**	**69**	P	Pn	17 15 34.8	-2.0
YOTC				S	**Sn**	**17 16 12.8**	**-4.3**
SLOR	**San Lorenzo -**	**3.58**	**162**		**Pn**	**17 15 38.2**	**-0.6**
PLMC	**San Jos del P**	**3.94**	**56**	P	Pn	17 15 40.8	-2.6
PLMC				S	**Sn**	**17 16 23.8**	**-5.0**
FLOC	**Florencia**	**4.08**	**106**	P	**Pn**	**17 15 45.9**	**+0.7**
FLOC				S	**Sn**	**17 16 31.9**	**-0.2**
GARC	**Garzon, Huila**	**4.11**	**97**	P	**Pn**	**17 15 47.1**	**+1.2**
GARC				S	**Sn**	**17 16 32.9**	**-0.4**
ORTC	**Ortega, Tolima**	**4.48**	**74**	P	**Pn**	**17 15 51.5**	**+0.7**
ORTC				S	**Sn**	**17 16 42.3**	**+0.1**
ANIL	**Santa Ana**	**4.53**	**67**	P	**Pn**	**17 15 52.3**	**+0.7**
ANIL				S	**Sn**	**17 16 43.5**	**0.0**
NIZA	**Niza - Manizal**	**4.71**	**60**	P	**Pn**	**17 15 52.8**	**-1.4**
NIZA				S	**Sn**	**17 16 47.8**	**-0.3**
CBOC	**Ciudad Bolivar**	**4.74**	**48**	P	**Pn**	**17 15 52.4**	**-2.0**
RECRC	**Villamaria, Ca**	**4.77**	**62**	P	**Pn**	**17 15 54.7**	**-0.5**
RECRC				S	**Sn**	**17 16 49.4**	**-0.5**
PRAC	**Prado**	**4.79**	**78**	P	**Pn**	**17 15 55.7**	**+0.7**
PRAC				S	**Sn**	**17 16 49.5**	**-0.1**
GUY2C	**Guyana, Caldas**	**4.89**	**59**	P	**Pn**	**17 15 56.4**	**-0.3**
GUY2C				S	**Sn**	**17 16 49.4**	**-3.3**
URMC	**La Uribe, Meta**	**5.22**	**84**	P	**Pn**	**17 16 01.8**	**+0.9**
URMC				S	**Sn**	**17 17 00.1**	**-0.2**
HELC	**Santa Helena**	**5.31**	**49**	P	**Pn**	**17 16 01.7**	**-0.8**
	457nm21nm,0.9s						
HELC				S	**Sn**	**17 17 00.7**	**-2.3**
	457nm21nm,0.9s						
PTLC	**Puerto Leguiza**	**5.40**	**118**	P	**Pn**	**17 16 05.8**	**+2.4**
	683nm41nm,0.6s						
DBBC	**Dabeiba**	**5.44**	**38**	P	**Pn**	**17 16 06.4**	**+2.5**
NORC	**Norcasia**	**5.48**	**59**	P	**Pn**	**17 16 05.0**	**+0.5**
	43nm,0.7s						
NORC				S	**Sn**	**17 17 06.4**	**-0.4**
	43nm,0.7s						
ROSC	**El Rosal**	**5.66**	**68**	Pn	**Pn**	**17 16 08.8**	**+1.6**
	9.6nm,0.3s,baz=331,slow=19,SNR=13						
ROSC				Sn	**Sn**	**17 17 13.9**	**+2.4**
	6.8nm,0.3s,baz=165,slow=20,SNR=8.1						
	38nm,0.5s						
ROSC	**El Rosal**	**5.66**	**68**		**Pn**	**17 16 08.2**	**+1.0**
ROSC	**El Rosal**	**5.66**	**68**	P	**Pn**	**17 16 09.8**	**+2.6**
	67nm,0.8s						
ROSC				S	**Sn**	**17 17 12.2**	**+0.7**
	67nm,0.8s						
MACC	**Macarena, Meta**	**5.75**	**95**	P	**Pn**	**17 16 09.4**	**+1.2**
	8µm886nm,0.6s						
MACC				S	**Sn**	**17 17 13.0**	**-0.4**
	8µm886nm,0.6s						
CVER	**Cruz Verde, Cu**	**5.78**	**72**	P	**Pn**	**17 16 10.5**	**+1.5**
	2µm206nm,0.8s						
CVER				S	**Sn**	**17 17 14.1**	**-0.6**
	2µm206nm,0.8s						
VILC	**Villavicencio,**	**6.04**	**77**	P	**Pn**	**17 16 14.6**	**+2.4**
	2µm171nm,0.7s						
VILC				S	**Sn**	**17 17 20.3**	**-0.2**
	2µm171nm,0.7s						
CHIC	**Chingaza**	**6.14**	**72**	P	**Pn**	**17 16 15.1**	**+1.3**
	3µm377nm,0.7s						
CHIC				S	**Sn**	**17 17 23.1**	**-0.3**
	3µm377nm,0.7s						
SPBC	**San Pablo de B**	**6.22**	**62**	P	**Pn**	**17 16 15.5**	**+0.8**
	26nm,0.9s						
PTBC	**PUERTO BERRIO,**	**6.36**	**53**	P	**Pn**	**17 16 17.2**	**+0.6**
	389nm15nm,0.9s						
PTBC				S	**Sn**	**17 17 27.3**	**-1.2**
	389nm15nm,0.9s						
UREC	**San Jos de Ur**	**6.42**	**39**	P	**Pn**	**17 16 19.8**	**+2.3**
	13nm,0.6s						
PIRO	**Carate, Puerto**	**6.78**	**327**	Pn	**Pn**	**17 16 20.8**	**-1.5**
BRU2	**Volcan**	**6.79**	**333**	Pn	**Pn**	**17 16 21.7**	**-0.9**
RUSC	**La Rusia**	**7.20**	**64**	P	**Pn**	**17 16 30.5**	**+1.9**
	38nm,0.9s						
RUSC				S	**Sn**	**17 17 52.1**	**+2.3**
	38nm,0.9s						
BARC	**Barichara**	**7.45**	**59**	P	**Pn**	**17 16 31.8**	**+0.1**
	26nm,0.8s						
BARC				S	**Sn**	**17 17 57.3**	**+1.8**
	26nm,0.8s						
PAMC	**Pamplona, Colo**	**8.25**	**56**	P	**Pn**	**17 16 45.2**	**+2.3**
PAMC				S	**Sn**	**17 18 15.2**	**-0.4**
OCAC	**Ocana**	**8.30**	**48**	P	**Pn**	**17 16 46.7**	**+3.3**
OCAC				S	**Sn**	**17 18 16.1**	**-0.3**
ATAH	**Atahualpa**	**9.85**	**173**	Sn	**Sn**	**17 18 53.8**	**-1.1**
	0.4nm,0.3s,baz=353,slow=16,SNR=3.1						
ATAH				LR	LR	17 20 53.8	
	comp=Z,103nm,18.1s,baz=15,slow=38						
SDV	**Santo Domingo**	**10.80**	**55**	Pn	**Pn**	**17 17 18.5**	**+0.8**
	2.6nm,0.3s,baz=236,slow=3.6,SNR=15						
SDV				Sn	**Sn**	**17 19 15.4**	**-2.6**
	2.0nm,0.3s,baz=233,slow=20,SNR=8.7						
	8.7nm,0.5s						
SDV	**Santo Domingo**	**10.80**	**55**		**Pn**	**17 17 18.1**	**+0.4**
SDV				Sn	**Sn**	**17 19 13.5**	**-4.4**
SDV	**Santo Domingo**	**10.80**	**55**	*eP*	**Pn**	**17 17 18.3**	**+0.6**
MTO3	**Montecristo**	**15.11**	**321**	P	**P**	**17 18 23.6**	**+2.2**
TEFE	**Tefe**	**16.16**	**112**	*eP*	**Pn**	**17 18 28.1**	**-1.9**
BOAV	**Boa Vista**	**19.04**	**91**		**P**	**17 19 02.8**	**-2.0**
BOAV	**Boa Vista**	**19.04**	**91**	*eP*	**P**	**17 19 03.2**	**-1.6**
MACA	**Manacapuru-AM**	**19.77**	**107**	*eP*	**P**	**17 19 13.1**	**+0.4**
CMIG	**Matias Romero**	**20.75**	**315**	P	**P**	**17 19 22.7**	**-0.7**
	1.6nm,0.6s,baz=138,slow=14,SNR=1.8						
CMIG				LR	LR	17 25 58.2	
	comp=Z,93nm,18.7s,baz=187,slow=33						
	1.6nm,0.6s						
CXM	**Morne La Croix**	**21.78**	**55**	P	**P**	**17 19 35.9**	**+1.3**
CXM				IAmb	IAmb	17 19 48.0	
	comp=Z,51nm,0.8s						
MPOM	**Morne Pois Mar**	**21.85**	**57**	P	**P**	**17 19 37.0**	**+1.8**
LPAZ	**La Paz**	**22.01**	**149**	P	**P**	**17 19 38.7**	**+1.2**
	comp=Z,4.2nm,0.8s,baz=334,slow=11,SNR=7.7						
	comp=Z,4.2nm,0.8s						
LPAZ	**La Paz**	**22.01**	**149**	P	**P**	**17 19 38.5**	**+0.9**
LPAZ	**La Paz**	**22.01**	**149**	*eP*	**P**	**17 19 38.2**	**+0.7**
PB16	**IPOC Station P**	**23.15**	**155**		**P**	**17 19 50.8**	**+1.3**
PB16				IAmb	IAmb	17 19 53.6	
	comp=Z,11nm,0.9s						
PB11	**IPOC Station P**	**24.37**	**157**	P	**P**	**17 20 02.3**	**+1.6**
GO01	**Chusmiza**	**24.47**	**156**	P	**P**	**17 20 01.4**	**-0.7**
GO01				IAmb	IAmb	17 20 15.7	
	comp=Z,6.7nm,0.8s						
VILB	**Vilhena**	**24.75**	**129**		**P**	**17 20 04.8**	**+0.7**
VILB	**Vilhena**	**24.75**	**129**	*eP*	**P**	**17 20 05.2**	**+1.1**
NPGB	**Novo Progresso**	**26.04**	**112**	*eP*	**P**	**17 20 15.2**	**-0.7**
PDRB	**Porto dos Gac**	**26.81**	**122**	*eP*	**P**	**17 20 24.6**	**+1.8**
MDP	**Montagnes des**	**26.98**	**84**	LR	LR	17 30 20.7	
	comp=Z,38nm,19.4s,baz=142,slow=35						
PTLB	**Pontes e Lacer**	**27.11**	**132**		**P**	**17 20 25.5**	**+0.2**
PTLB				IAmb	IAmb	17 20 29.9	
	comp=Z,17nm,1.0s						
PTLB	**Pontes e Lacer**	**27.11**	**132**	*eP*	**P**	**17 20 26.1**	**+0.7**
SNDB	**Serra Nova Dou**	**31.67**	**118**	*eP*	**P**	**17 21 07.7**	**+1.7**
AQDB	**Aquidauana**	**32.85**	**136**	P	**P**	**17 21 16.4**	**+0.1**
AQDB				IAmb	IAmb	17 21 22.4	
	comp=Z,6.2nm,0.8s						
DRIO	**Del Rio**	**33.25**	**325**		**P**	**17 21 19.3**	**-0.3**
WHAR	**Wooly Hollow**	**34.50**	**341**	P	**P**	**17 21 30.3**	**-0.1**
SAND	**Sanderson**	**34.51**	**324**	P	**P**	**17 21 28.8**	**-2.0**
LCAR	**Lake Charles**	**34.88**	**343**	P	**P**	**17 21 33.0**	**-0.7**
LCAR				IAmb	IAmb	17 21 34.1	
	comp=Z,8.5nm,0.9s						
FCAR	**Ozark Folk Cen**	**35.00**	**342**	P	**P**	**17 21 34.2**	**-0.5**
FCAR				IAmb	IAmb	17 21 34.9	
	comp=Z,5.9nm,0.9s						
TXAR	**Lajitas Array**	**35.00**	**322**	P	**P**	**17 21 34.8**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=127,slow=5.1,SNR=5.9						
TXAR				PcP	**PcP**	**17 24 07.5**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=118,slow=4.7,SNR=8.5						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**35.00**	**322**	P	**P**	**17 21 36.6**	**+1.6**
ALPN	**Alpine**	**35.72**	**323**	P	**P**	**17 21 43.2**	**+1.9**
ALPN				IAmb	IAmb	17 21 43.9	
	comp=Z,5.1nm,0.8s						
CPUP	**Villa Florida**	**36.00**	**145**	LR	LR	17 39 15.7	
	comp=Z,65nm,19.0s,baz=258,slow=41						
BDFB	**Brasilia**	**36.16**	**121**	LR	LR	17 36 51.6	
	comp=Z,114nm,18.5s,baz=201,slow=37						
P51A	**Williamsport**	**36.74**	**355**	P	**P**	**17 21 51.1**	**+1.5**
CCM	**Cathedral Cave**	**36.77**	**345**	P	**P**	**17 21 49.0**	**-0.8**
CCM				IAmb	IAmb	17 21 49.8	
	comp=Z,7.6nm,0.7s						
VHRN	**Van Horn**	**36.83**	**322**	P	**P**	**17 21 52.6**	**+1.9**
MNTX	**Cornudas Mount**	**37.71**	**323**	P	**P**	**17 21 59.2**	**+1.2**
RTBA	**Rita Blanca**	**39.79**	**330**	P	**P**	**17 22 16.8**	**+1.2**
RTBA				IAmb	IAmb	17 22 17.5	
	comp=Z,10nm,1.0s						
SBM	**South Baldy**	**40.38**	**324**	P	**P**	**17 22 23.6**	**+2.8**
LENM	**Lemitar**	**40.39**	**324**	P	**P**	**17 22 22.5**	**+1.8**
ANMO	**Albuquerque**	**40.65**	**325**	LR	LR	17 39 36.0	
	comp=Z,36nm,19.2s,baz=97,slow=37						
ANMO	**Albuquerque**	**40.65**	**325**	P	**P**	**17 22 24.0**	**+1.2**
ANMO				IAmb	IAmb	17 22 25.8	
	comp=Z,5.2nm,0.7s						
T25A	**Trinidad**	**41.18**	**329**	P	**P**	**17 22 28.9**	**+1.8**
SDCO	**Great Sand Dun**	**42.20**	**329**	P	**P**	**17 22 37.6**	**+2.0**
S22A	**4UR Ranch, Cre**	**42.90**	**328**	P	**P**	**17 22 42.9**	**+1.7**
CMC01	**Camacan, BA**	**43.51**	**116**	*eP*	**P**	**17 22 46.7**	**+0.6**
WUAZ	**Wupatki**	**43.97**	**322**	IAmb	IAmb	17 22 52.9	
	comp=Z,8.7nm,0.8s						
PLCA	**Paso Flores**	**44.02**	**170**	P	**P**	**17 22 49.3**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=11,slow=5.2,SNR=4.0						
PLCA				PcP	**PcP**	**17 24 37.5**	**+2.2**
	comp=Z,1.8nm,1.1s,baz=329,slow=5.9,SNR=2.2						
	comp=Z,1.1nm,0.9s						
PV13	**Radium Mtn., P**	**44.28**	**327**	IAmb	IAmb	17 22 54.9	
	comp=Z,7.8nm,0.8s						
PV03	**Paradox Valley**	**44.36**	**327**	IAmb	IAmb	17 22 55.4	
	comp=Z,4.4nm,0.7s						
RCBR	**Riachuelo**	**44.44**	**101**	LR	LR	17 41 55.2	
	comp=Z,51nm,20.1s,baz=265,slow=37						
PV19	**Morning Glory**	**44.47**	**327**	IAmb	IAmb	17 22 56.2	
	comp=Z,5.4nm,0.8s						
HMU	**Henry Mountain**	**45.20**	**325**	IAmb	IAmb	17 23 02.5	
	comp=Z,7.1nm,0.8s						
W13A	**Hualapai Mount**	**45.30**	**319**	P	**P**	**17 23 01.2**	**+0.7**
W13A				IAmb	IAmb	17 23 03.5	
	comp=Z,4.0nm,0.9s						
SRU	**San Rafael Swe**	**45.89**	**326**	IAmb	IAmb	17 23 07.4	
	comp=Z,5.7nm,0.8s						
RSSD	**Black Hills**	**46.57**	**336**	P	**P**	**17 23 11.9**	**+1.6**
RSSD				IAmb	IAmb	17 23 12.6	
	comp=Z,8.5nm,1.1s						
BSUT	**Blindstream Ca**	**47.02**	**327**	IAmb	IAmb	17 23 25.6	
	comp=Z,4.9nm,1.1s						
PDAR	**Pinedale Array**	**48.02**	**330**	P	**P**	**17 23 21.2**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=156,slow=5.3,SNR=4.1						
PDAR				PcP	**PcP**	**17 24 48.8**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=158,slow=1.0,SNR=3.5						
	comp=Z,0.3nm,0.7s						
ULM	**Lac du Bonnet**	**49.34**	**346**	P	**P**	**17 23 29.4**	**-2.0**
	comp=Z,3.0nm,0.6s,baz=151,slow=10,SNR=6.8						
	comp=Z,3.0nm,0.6s						
ULM	**Lac du Bonnet**	**49.34**	**346**	IAmb	IAmb	17 23 30.7	
	comp=Z,6.2nm,1.0s						
NVAR	**Mina Array Bea**	**50.12**	**320**	P	**P**	**17 23 37.3**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=111,slow=5.8,SNR=7.5						
NVAR				PcP	**PcP**	**17 24 57.7**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=97,slow=2.8,SNR=8.1						
NVAR				LR	LR	17 43 57.4	
	comp=Z,21nm,21.0s,baz=266,slow=35						
	comp=Z,1.1nm,0.6s						
YHL	**Hebgen Lake**	**50.34**	**331**	IAmb	IAmb	17 23 42.2	
	comp=Z,5.2nm,1.2s						
G08A	**Pilot Rock**	**54.67**	**327**	IAmb	IAmb	17 24 24.8	
	comp=Z,5.9nm,1.4s						
NEW	**Newport**	**55.66**	**330**	LR	LR	17 48 44.6	
	comp=Z,50nm,21.3s,baz=212,slow=37						
YKA	**Yellowknife Ar**	**65.08**	**343**	P	**P**	**17 25 22.2**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=141,slow=5.4,SNR=22						
	comp=Z,1.1nm,0.7s						
H31M	**Peel River**	**73.72**	**339**	P	**P**	**17 26 16.9**	**+1.1**
F31M	**Tsiigehtchic**	**74.40**	**341**	P	**P**	**17 26 20.4**	**+0.8**
F31M				IAmb	IAmb	17 26 20.8	
	comp=Z,5.7nm,1.1s						
A36M	**Sachs Harbour**	**74.82**	**347**	IAmb	IAmb	17 26 22.4	
	comp=Z,6.6nm,0.8s						
E29M	**Blow River**	**76.23**	**341**	IAmb	IAmb	17 26 32.0	
	comp=Z,8.7nm,1.1s						
F28M

	comp=Z,0.8nm,0.2s							
DBG	**Daneborg**	**7.35**	**257**	*i* P	**Pn**	**17 26 05.5**	**+3.7**
DBG				*i* S	**Sn**	**17 27 19.8**	**-5.3**
DBG				IAML		17 27 23.2	
	comp=Z,0.5nm,0.4s						

IDC ***26*** *17:27:32.3±2.5, 34.°06N×140.°55E, h50km±20km, mb3.3/4, mbtmp3.6/7, ML2.9/3, Error ellipse: s-maj=31.9km s-min=7.6km az=86.0*
NIED ***26*** *17:27:34.0, 34.°09N×140.°39E, h54km, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr1.89; Mθθ1.73; Mϕϕ-3.62; Mrθ-1.32; Mθϕ-0.17; Mϕr1.20; Fault plane solution: M₀3.58000×10¹⁴ NP1: ϕs217.00000°, δ48.00000°, λ149.00000°. NP2: ϕs329.00000°, δ68.00000°, λ47.00000°.*
JMA ***26*** *17:27:34.0±0.2, 34.°1N±0.°5×140.°4E±0.°6, h54km±2km, MV3.5/39, FAR S OFF BOSO PENINSULA*
JMA Felt I J1 at FAR S OFF BOSO PENINSULA.
ISC 26 17:27:33.3±1.0, 34.°07N±0.°04×140.°42E±0.°06, h57km±10km, n26, σθ80/31, mb3.6/4, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JMKN	**Mikurajimanish**	**0.71**	**256**	⇓*i*P		**Pn**		**17 27 48.0**	**+0.4**
JMKN				⇓S		**Sn**		**17 27 57.9**	**0.0**
JMYK	**Miyake Tsubota**	**0.73**	**269**	*i* P		**Pn**		**17 27 48.2**	**+0.5**
JMYK				S		**Sn**		**17 27 58.5**	**+0.4**
BSO3	**Boso 3**	**0.73**	**6**	*i* P		**Pn**		**17 27 48.6**	**+1.1**
BSO3				*e*X				17 27 59.4	
BSO1	**Boso 1**	**0.74**	**38**	*e*P		**Pn**		**17 27 48.1**	**+0.8**
BSO1				*e*X				17 27 57.4	
BSO4	**Boso 4**	**0.92**	**356**	P		**Pn**		**17 27 51.3**	**+1.2**
JTHY	**Toshimahigashi**	**1.04**	**296**	P		**Pn**		**17 27 52.5**	**+0.8**
JTHY				S		**Sn**		**17 28 05.5**	**0.0**
JIM2	**Oshima 3**	**1.04**	**308**	*i* P		**Pn**		**17 27 52.0**	**+0.3**
JIM2				S		**Sn**		**17 28 04.5**	**-1.0**
JHJ2	**Mitsune**	**1.08**	**208**	⇓*i*P		**Pn**		**17 27 52.6**	**+0.4**
JHJ2				⇓S		**Sn**		**17 28 06.4**	**0.0**
JHJ	**Hachijo jima 2**	**1.09**	**210**	P		**Pn**		**17 27 52.5**	**+0.2**
	280nm,0.3s,baz=66,slow=19,SNR=48								
JHJ				S		**Sn**		**17 28 06.1**	**-0.4**
	659nm,0.3s,baz=73,slow=19,SNR=22								
KTJ3	**Kamata3**	**1.41**	**308**	*i* P		**Pn**		**17 27 57.1**	**+0.4**
KTJ3				S		**Sn**		**17 28 13.4**	**-0.8**
JIZS	**Izushimoda**	**1.43**	**297**	*i* P		**Pn**		**17 27 57.7**	**+0.7**
JIZS				S		**Sn**		**17 28 15.3**	**+0.6**
JOD2	**Odawara 2**	**1.62**	**318**	*i* P		**Pn**		**17 28 00.1**	**+0.5**
JOD2				S		**Sn**		**17 28 18.7**	**-0.7**
JAOM	**Aogashimamukai**	**1.69**	**199**	*e*P		**Pn**		**17 28 01.4**	**+0.8**
JAOM				*e*S		**Sn**		**17 28 21.4**	**+0.2**
MJAR	**Matsushiro Arr**	**3.06**	**324**	P		**Pn**		**17 28 19.3**	**+0.1**
	0.7nm,0.3s,baz=144,slow=11,SNR=33								
MJAR				S		**Sn**		**17 28 55.1**	**+0.5**
	9.8nm,0.7s,baz=140,slow=30,SNR=7.8 2.8nm,0.3s								
JNU	**Nakatsue**	**8.02**	**266**	P		**Pn**		**17 29 28.4**	**+1.3**
	0.1nm,0.3s,baz=101,slow=2.5,SNR=2.1 8.9nm,1.1s								
ASAJ	**Asahikawa**	**10.17**	**9**	P		**Pn**		**17 29 54.4**	**-2.0**
	0.2nm,0.3s,baz=187,slow=16,SNR=4.9 2.4nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**27.49**	**115**	T		T		18 02 18.8	
	baz=306,slow=75,SNR=17								
H11N1	**WAKE ISLAND Hy**	**27.50**	**115**	T		T		18 02 21.5	
	baz=306,slow=75,SNR=19								
H11N3	**WAKE ISLAND Hy**	**27.51**	**115**	T		T		18 02 22.4	
	baz=306,slow=75,SNR=19								
H11S3	**WAKE ISLAND Hy**	**28.09**	**117**	T		T		18 03 04.9	
	baz=309,slow=76,SNR=4.6								
H11S1	**WAKE ISLAND Hy**	**28.09**	**117**	T		T		18 03 04.9	
	baz=309,slow=76,SNR=5.4								
H11S2	**WAKE ISLAND Hy**	**28.10**	**117**	T		T		18 03 05.7	
	baz=309,slow=76,SNR=4.2								
MKAR	**Makanchi Array**	**45.07**	**304**	P		**P**		**17 35 43.2**	**-0.2**
	0.3nm,0.5s,baz=86,slow=9.8,SNR=5.6 0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**47.24**	**310**	P		**P**		**17 36 01.6**	**+1.3**
	0.2nm,0.4s,baz=83,slow=7.2,SNR=2.1 0.2nm,0.4s								
WRA	**Warramunga Arr**	**54.02**	**187**	P		**P**		**17 36 51.1**	**-0.7**
	1.6nm,0.6s,baz=6.3,slow=7.5,SNR=30 1.6nm,0.6s								
ASAR	**Alice Springs**	**57.75**	**187**	P		**P**		**17 37 18.4**	**0.0**
	0.5nm,0.7s,baz=14,slow=8.2,SNR=8.7 0.5nm,0.7s								

AZER ***26*** *17:39:28.7, 38.°37N×44.°57E, h10km, ml2.3*
AFAD ***26*** *17:39:29.9, 38.°31N×44.°57E, h8km±2km, ML2.1*
TEH ***26*** *17:39:31.1, 38.°43N×44.°54E, h11km±3km, 129km, ML2.5, Presumed earthquake*
ISC 26 17:39:32.5±1.1, 38.°41N±0.°03×44.°56E±0.°02, h12km±10km, n22, σ1s54/39, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.51**	**300**	P		**Pg**		**17 39 41.0**	**-1.5**
OZAP				S		**Sg**		**17 39 49.4**	**0.0**
OZAP				IAML				17 39 51.0	
	comp=N,156nm,0.9s								
ISHB	**Shabestar**	**0.84**	**98**	Pg		**Pg**		**17 39 47.5**	**-1.4**
ISHB				Sg		**Sb**		**17 40 00.9**	**+0.2**
TVAN	**Van**	**0.91**	**278**	P		**Pb**		**17 39 47.9**	**-2.5**
TVAN				S		**Sb**		**17 40 01.7**	**-0.9**
TVAN				IAML				17 40 08.0	
	comp=N,77nm,0.5s								
TVAN				IAML				17 40 16.0	
	comp=E,64nm,0.6s								
IMRD	**Marand**	**0.95**	**71**	Pg		**Pb**		**17 39 50.1**	**-1.0**
MAKU	**Maku**	**0.95**	**6**	Pg		**Pb**		**17 39 49.1**	**-1.9**
VMUR	**Van-Muradiye**	**0.96**	**307**	P		**Pb**		**17 39 50.0**	**-1.3**
VMUR				S		**Sb**		**17 40 05.0**	**+0.9**
VMUR				IAML				17 40 10.0	
	comp=E,36nm,0.4s								
VMUR				IAML				17 40 11.0	
	comp=N,47nm,0.4s								
NAX	**Nakhchivan**	**1.06**	**44**	P		**Pb**		**17 39 51.9**	**-1.0**
NAX				S		**Sg**		**17 40 07.6**	**+0.9**
HAKT	**HAKKARI**	**1.08**	**219**	P		**Pb**		**17 39 51.9**	**-1.5**
HAKT				S		**Sn**		**17 40 07.9**	**-0.9**
GEVA	**Gevas**	**1.18**	**266**	P		**Pn**		**17 39 51.8**	**-3.3**
GEVA				S		**Sg**		**17 40 11.7**	**+1.1**
GEVA				IAML				17 40 14.0	
	comp=N,64nm,0.4s								
GEVA				IAML				17 40 16.0	
	comp=E,41nm,0.4s								
ORD	**Ordubad**	**1.24**	**65**	P		**Pn**		**17 39 55.3**	**-0.5**
ORD				S		**Sg**		**17 40 13.2**	**+0.7**
SBZ	**Shahbuz**	**1.26**	**38**	P		**Pn**		**17 39 55.3**	**-0.8**
SBZ				S		**Sb**		**17 40 12.8**	**+0.3**
HYR	**Heyderabad**	**1.33**	**10**	P		**Pn**		**17 39 56.7**	**-0.3**
HYR				S		**Sb**		**17 40 15.9**	**+1.4**
IAZR	**Azarshahr**	**1.34**	**123**	Pg		**Pg**		**17 39 57.7**	**-0.6**
CUKT	**Cukurca**	**1.38**	**213**	P		**Pg**		**17 40 00.4**	**+1.3**
CUKT				S		**Sg**		**17 40 19.9**	**+2.9**
ADCV	**BITLIS_Adilcev**	**1.49**	**286**	P		**Pn**		**17 39 59.2**	**-0.1**
ADCV				S		**Sg**		**17 40 24.0**	**+3.5**
ADCV				IAML				17 40 25.0	
	comp=N,21nm,0.5s								
ADCV				IAML				17 40 26.0	
	comp=E,24nm,0.5s								
IGDI	**IGDIR**	**1.50**	**346**	P		**Pn**		**17 39 59.4**	**0.0**
IGDI				S		**Sb**		**17 40 21.1**	**+1.6**
PERV	**Siirt/Pervari-**	**1.65**	**254**	P		**Pg**		**17 40 04.6**	**+0.3**
PERV				S		**Sg**		**17 40 29.0**	**+3.3**
KOTA	**Agri, Merkez-K**	**1.74**	**323**	P		**Pn**		**17 40 04.2**	**+1.4**
IHRS	**Heris**	**1.96**	**92**	Pn		**Pb**		**17 40 08.2**	**0.0**
GDB	**GEDABAY**	**2.49**	**21**	P		**Pn**		**17 40 12.5**	**-0.5**
GDB				S		**Sn**		**17 40 45.4**	**+2.0**
YRD	**Yardimli**	**2.93**	**79**	P		**Pn**		**17 40 18.6**	**-0.5**
YRD				S		**Sn**		**17 40 55.0**	**+0.6**
LRK	**Lerik**	**2.98**	**84**	P		**Pn**		**17 40 19.1**	**-0.7**
LRK				S		**Sn**		**17 40 56.1**	**+0.6**

IDC 26 17:40:20.1±1.6, 18.°58N×121.°34E, h0km, mb3.3/4, mbtmp3.4/4, 1D, Error ellipse: s-maj=49.0km s-min=31.1km az=53.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
CMAR	**Chiang Mai Arr**	**21.23**	**273**	P		P		17 45 07.9	0.0
	0.1nm,0.3s,baz=93,slow=9.0,SNR=4.7 0.1nm,0.3s								
WRA	**Warramunga Arr**	**40.35**	**161**	P		P		17 47 59.7	-0.1
	0.8nm,0.8s,baz=345,slow=7.8,SNR=7.4 0.8nm,0.8s								
ASAR	**Alice Springs**	**43.74**	**163**	P		P		17 48 27.3	-0.2
	0.7nm,0.6s,baz=341,slow=8.1,SNR=17 0.7nm,0.6s								
YKA	**Yellowknife Ar**	**88.06**	**23**	P		P		17 53 12.2	0.0
	0.1nm,0.3s,baz=316,slow=4.5,SNR=2.0 0.1nm,0.3s								
VNA1	**Neumayer--Stat**	**120.01**	**197**	⇓P		Pdif		17 55 36.3	+0.7
	comp=Z,2.2nm,0.2s								

IDC ***26*** *17:46:51.8±3.2, 17.°74S×167.°93E, h0km, mb3.7/4, mbtmp3.7/5, ML3.3/1, MS3.3/1, Error ellipse: s-maj=77.1km s-min=30.0km az=101.0*
NOU ***26*** *17:46:57.5, 17.°45S×168.°15E, h16km, MLv4.8/6, Vanuatu Islands*
ISC 26 17:46:56.6±2.4, 17.°8S±0.°1×167.°8E±0.°2, h28km±25km, n9, σθ50/9, mb3.6/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
DVP	**Devils Point**	**0.34**	**86**	P		**Pb**		**17 47 04.0**	**-0.4**
DVP	**Devils Point**	**0.34**	**86**	S		**Sb**		**17 47 10.5**	**+0.8**
RTV	**Rentapao**	**0.56**	**94**	P		**Pb**		**17 47 07.5**	**-0.5**
DZM	**Mont Dzumac**	**4.49**	**197**	Pn		**Pn**		**17 48 02.8**	**-0.1**
	1.5nm,0.3s,baz=336,slow=20,SNR=30								
DZM				Sn		**Sn**		**17 48 54.5**	**+0.2**
	5.4nm,0.3s,baz=39,slow=5.9,SNR=8.5 2.3nm,0.3s								
WRA	**Warramunga Arr**	**31.75**	**261**	P		**P**		**17 53 18.4**	**-0.1**
	0.5nm,0.8s,baz=88,slow=5.7,SNR=2.0 0.5nm,0.8s								
ASAR	**Alice Springs**	**32.23**	**254**	P		**P**		**17 53 22.7**	**0.0**
	0.6nm,0.5s,baz=83,slow=8.1,SNR=39 0.6nm,0.5s								
SIJI	**Sorong**	**39.66**	**291**	LR		LR		18 11 26.8	
	comp=Z,35nm,18.2s,baz=102,slow=37								
CMAR	**Chiang Mai Arr**	**76.68**	**294**	P		**P**		**17 58 45.9**	**+0.4**
	0.1nm,0.4s,baz=112,slow=7.0,SNR=2.5 0.1nm,0.4s								
SONM	**Songino Array**	**85.24**	**324**	P		**P**		**17 59 30.5**	**-0.1**
	1.6nm,0.9s,baz=134,slow=4.2,SNR=11 1.6nm,0.9s								

SJA ***26*** *17:51:14.7±0.6, 25.°54S×69.°09W, h123km±5km, ML3.5, MW3.5*
GUC ***26*** *17:51:16.5±0.6, 25.°53S×69.°08W, h133km±4km, ML3.5*
ISC 26 17:51:15.2±1.3, 25.°55S±0.°03×69.°12W±0.°05, h143km±10km, n35, σ1s76/58, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
GO02	**Mina Guanaco**	**0.58**	**312**	*i* P		**Pn**		**17 51 36.5**	**-0.1**
GO02				*e*S		**Sn**		**17 51 51.5**	**-1.2**
GO02	**Mina Guanaco**	**0.58**	**312**	*e*P		**Pn**		**17 51 36.4**	**-0.1**
GO02				*e*S		**Sn**		**17 51 51.4**	**-1.4**
GO02				IAML				17 51 53.4	
	comp=Z,2μm,0.5s								
AC02	**Maricunga**	**1.28**	**180**	*i* P		**Pn**		**17 51 43.0**	**+0.5**
AC02				*e*S		**Sn**		**17 52 03.2**	**-0.2**
AC02				IAML				17 52 05.6	
	comp=E,651nm,0.4s								
AC02	**Maricunga**	**1.28**	**180**	*e*P		**Pn**		**17 51 43.0**	**+0.5**
AC02				*e*S		**Sn**		**17 52 04.6**	**+1.3**
AC02				IAML				17 52 24.1	
	comp=Z,380nm,0.8s								
AC01	**Pan de Azucar**	**1.46**	**246**	*i* P		**Pn**		**17 51 44.7**	**+0.9**
AC01				IAML				17 52 07.1	
	comp=E,966nm,0.4s								
AC01	**Pan de Azucar**	**1.46**	**246**	*e*P		**Pn**		**17 51 44.6**	**+0.8**
AC01				*e*S		**Sn**		**17 52 06.3**	**+0.6**
AC01				IAML				17 52 06.8	
	comp=Z,412nm,0.2s								
PB14	**IPOC Station P**	**1.48**	**308**	*i* P		**Pn**		**17 51 45.5**	**+1.0**
PB14				*e*S		**Sn**		**17 52 07.1**	**+0.4**
PB14	**IPOC Station P**	**1.48**	**308**	*e*P		**Pn**		**17 51 44.9**	**+0.5**
PB14				*e*S		**Sn**		**17 52 07.7**	**+1.0**
PB14				IAML				17 52 10.1	
	comp=Z,220nm,0.5s								
AC06	**Mina Casimiro**	**2.11**	**211**	IAML				17 52 24.9	
	comp=E,163nm,0.2s								
GO03	**Copiapo**	**2.27**	**206**	*e*P		**Pn**		**17 51 53.4**	**+0.2**
GO03				*e*S		**Sn**		**17 52 22.5**	**+0.1**
GO03				IAML				17 52 25.1	
	comp=Z,231nm,0.2s								
PB10	**IPOC Station P**	**2.41**	**327**	*i* P		**Pn**		**17 51 56.0**	**+1.1**
PB10				*e*S		**Sn**		**17 52 24.1**	**-1.4**
PB10				IAML				17 52 36.5	
	comp=E,128nm,0.5s								
PB10	**IPOC Station P**	**2.41**	**327**	*e*P		**Pn**		**17 51 55.4**	**+0.5**
PB10				*e*S		**Sn**		**17 52 24.9**	**-0.6**
PB10				IAML				17 52 29.0	
	comp=Z,82nm,0.3s								
AF01	**San Pedro de A**	**2.73**	**19**	*e*P		Pn		17 52 14.8	+16
AF01				*e*S		**Sn**		**17 52 34.6**	**+1.7**
AF01				IAML				17 52 50.5	
	comp=Z,115nm,0.7s								
SALTA		**2.85**	**63**	*e*P		**Pn**		**17 52 01.1**	**+0.3**
SALTA				*e*S		**Sn**		**17 52 37.4**	**+1.5**
TINO	**Tinogasta**	**2.86**	**151**	*e*P		**Pn**		**17 52 01.0**	**+0.4**
TINO				*e*S		**Sn**		**17 52 31.7**	**-4.0**
PB05	**IPOC Station P**	**2.86**	**340**	*i* P		**Pn**		**17 52 01.3**	**+0.6**
PB05				IAML				17 52 45.1	
	comp=E,142nm,0.2s								
PB05	**IPOC Station P**	**2.86**	**340**	*e*P		**Pn**		**17 52 01.3**	**+0.6**
PB05				*e*S		**Sn**		**17 52 35.1**	**-0.6**
PB05				IAML				17 52 45.6	
	comp=Z,82nm,0.4s								
PB06	**IPOC Station P**	**2.86**	**352**	*i* P		**Pn**		**17 52 01.6**	**+0.9**
PB06				*e*S		**Sn**		**17 52 35.5**	**-0.3**
PB06				IAML				17 52 36.6	
	comp=N,168nm,0.4s								
PB06	**IPOC Station P**	**2.86**	**352**	*e*P		**Pn**		**17 52 01.0**	**+0.3**
PB06				*e*S		**Sn**		**17 52 36.2**	**+0.4**
PB06				IAML				17 52 38.0	
	comp=Z,81nm,0.3s								
FSA	**Cafayete**	**2.88**	**102**	*e*P		**Pn**		**17 52 01.3**	**+0.4**
AC04	**Llanos de Chal**	**3.17**	**213**	IAML				17 52 44.2	
	comp=N,130nm,0.3s								
AC04	**Llanos de Chal**	**3.17**	**213**	*e*P		**Pn**		**17 52 05.4**	**+1.0**
AC04				*e*S		**Sn**		**17 52 42.8**	**+0.2**
AC04				IAML				17 52 45.9	
	comp=Z,49nm,0.3s								
VCA	**Vinchina**	**3.28**	**166**	*e*P		**Pn**		**17 52 07.5**	**+1.5**
VCA				*e*S		**Sn**		**17 52 46.5**	**+1.2**
VCA				IAML				17 52 56.1	
	comp=Z,150nm,0.6s								
SLA	**San Lorenzo**	**3.38**	**77**	*e*P		**Pn**		**17 52 09.7**	**+2.4**
PB03	**IPOC Station P**	**3.53**	**350**	*e*P		**Pn**		**17 52 09.7**	**+0.3**
PB03				*e*S		**Sn**		**17 52 52.1**	**+0.8**
PB03				IAML				17 52 54.5	
	comp=Z,62nm,0.3s								
LCO	**Las Campanas**	**3.72**	**202**	*e*P		**Pn**		**17 52 12.2**	**+0.3**
LCO				*e*S		Sn		17 52 45.6	-10
LCO				IAML				17 52 59.7	
	comp=Z,92nm,0.1s								
PB09	**IPOC Station P**	**3.74**	**358**	*i* P		**Pn**		**17 52 13.2**	**+1.2**
PB09				*e*S		**Sn**		**17 52 47.5**	**-8.5**
PB09	**IPOC Station P**	**3.74**	**358**	*e*P		**Pn**		**17 52 12.7**	**+0.7**
PB09				IAML				17 53 38.1	
	comp=Z,190nm,1.6s								
PB07	**IPOC Station P**	**3.87**	**349**	*i* P		**Pn**		**17 52 13.9**	**+0.1**
PB07	**IPOC Station P**	**3.87**	**349**	*e*P		**Pn**		**17 52 13.8**	**+0.1**
PB07				*e*S		**Sn**		**17 52 58.8**	**-0.4**
PB07				IAML				17 53 03.8	
	comp=Z,49nm,0.3s								
PB02	**IPOC Station P**	**4.27**	**350**	*e*P		**Pn**		**17 52 18.8**	**-0.1**
PB02				*e*S		**Sn**		**17 53 08.2**	**-0.4**
PB02				IAML				17 53 10.9	
	comp=Z,79nm,0.3s								
ACLC	**CERRO LA CRUZ**	**4.31**	**154**	*e*P		**Pn**		**17 52 20.0**	**+0.5**
ACLC				*e*S		**Sn**		**17 53 07.1**	**-2.5**
ACLC				IAML				17 53 08.4	
	comp=Z,33nm,0.3s								
PB01	**IPOC Station P**	**4.50**	**356**	*e*P		**Pn**		**17 52 21.8**	**-0.1**
PB01				*e*S		**Sn**		**17 53 12.8**	**-1.1**
PB01				IAML				17 53 15.3	
	comp=Z,26nm,0.2s								

ACCO	**Cerro Coronel**	**5.02**	**179**	*e*P		**Pn**		**17 52 30.6**	**+1.6**
ACCO				*e*S		**Sn**		**17 53 20.9**	**-5.6**
PB08	**IPOC Station P**	**5.38**	**360**	*e*P		**Pn**		**17 52 33.8**	**-0.2**
PB08				*e*S		**Sn**		**17 53 36.8**	**+1.4**
PB08				IAML				17 54 07.3	
	comp=Z,10nm,0.9s								

NEIC ***26*** *18:02:44.3±1.7, 38.°86N±0.°08×142.°3E±0.°1, h35km±1km, mb4.1/8, Error ellipse: s-maj=19.3km s-min=10.3km az=121.0*
IDC ***26*** *18:02:47.4±2.2, 38.°94N×142.°13E, h59km±18km, mb3.5/11, mbtmp3.8/16, MS2.7/4, Error ellipse: s-maj=22.4km s-min=10.9km az=109.0*
NIED ***26*** *18:02:47.7, 38.°92N×141.°93E, h51km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.18; Mθθ0.12; Mϕϕ-2.31; Mrθ1.27; Mθϕ-0.28; Mϕr3.01; Fault plane solution: M₀3.98000×10¹⁴ NP1: ϕs173.00000°, δ19.00000°, λ64.00000°. NP2: ϕs20.00000°, δ73.00000°, λ99.00000°.*
JMA ***26*** *18:02:47.7±0.1, 38.°9N±0.°3×141.°9E±0.°6, h51km, MV3.8/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
ISC 26 18:02:47.0±1.0, 38.°92N±0.°05×142.°00E±0.°08, h53km±7km, n53, σ1s34/57, mb3.9/15, 18D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
OFUJ	**Ofunato**	**0.31**	**302**	⇓*i*P		**Pn**		**18 02 56.7**	**+0.1**
OFUJ				⇓S		**Sn**		**18 03 02.8**	**-0.6**
JKMT	**Kesennumamotoy**	**0.43**	**256**	⇓*i*P		**Pn**		**18 02 57.6**	**-0.1**
JKMT				⇓S		**Sn**		**18 03 04.3**	**-1.0**
JMK	**Ichinoseki**	**0.61**	**274**	⇓*i*P		**Pn**		**18 02 59.7**	**-0.1**
JMK				⇓S		**Sn**		**18 03 08.2**	**-0.9**
JIO	**Ouri**	**0.69**	**228**	⇓*i*P		**Pn**		**18 03 00.6**	**-0.2**
JIO				⇓S		**Sn**		**18 03 09.4**	**-1.3**
JOM	**Ohasama**	**0.78**	**315**	⇓*i*P		**Pn**		**18 03 02.1**	**+0.1**
JOM				⇓S		**Sn**		**18 03 12.5**	**-0.5**
JTH	**Tanohata**	**1.03**	**354**	*i* P		**Pn**		**18 03 05.7**	**+0.5**
JTH				*e*S		**Sn**		**18 03 19.0**	**+0.4**
JRG	**Rokugo**	**1.17**	**295**	⇓*i*P		**Pn**		**18 03 07.0**	**-0.1**
JRG				⇓*e*S		**Sn**		**18 03 21.4**	**-0.6**
JOU	**Okura**	**1.19**	**243**	⇓*i*P		**Pn**		**18 03 07.1**	**-0.3**
JOU				⇓S		**Sn**		**18 03 21.6**	**-0.8**
JYK	**Kaneyama**	**1.28**	**271**	⇓*i*P		**Pn**		**18 03 08.6**	**-0.1**
JYK				⇓*e*S		**Sn**		**18 03 21.7**	**-3.1**
JMM	**Marumori**	**1.42**	**223**	⇓*i*P		**Pn**		**18 03 09.9**	**-0.5**
JMM				⇓*e*S		**Sn**		**18 03 26.2**	**-1.7**
JANG	**Nango**	**1.50**	**346**	P		**Pn**		**18 03 11.9**	**+0.3**
MAJO	**Matsushiro**	**3.83**	**233**			**Pn**		**18 03 40.5**	**-3.0**
MJAR	**Matsushiro Arr**	**3.83**	**233**	P		**Pn**		**18 03 45.5**	**+2.0**
	3.3nm,0.4s,baz=42,slow=12,SNR=26								
MJAR				S		**Sn**		**18 04 29.6**	**+2.3**
	0.9nm,0.3s,baz=20,slow=22,SNR=1.3								
MJAR				LR		LR		18 05 13.1	
	comp=Z,61nm,21.0s,baz=165,slow=37								
MJAR	**Matsushiro Arr**	**3.83**	**233**			**Pn**		**18 03 41.7**	**-1.8**
MJB9	**Matsu-Tunnel**	**3.83**	**233**			**Pn**		**18 03 41.6**	**-1.9**
JGF	**Kuroka**	**4.97**	**230**	Pn		**Pn**		**18 04 01.4**	**+2.3**
ASAJ	**Asahikawa**	**5.21**	**5**	P		**Pn**		**18 04 02.3**	**-0.1**
	1.5nm,0.4s,baz=193,slow=19,SNR=11								
ASAJ				S		**Sn**		**18 05 00.8**	**-0.4**
	2.3nm,0.3s,baz=162,slow=20,SNR=1.3								
JKA	**Kamikawa-asahi**	**5.21**	**5**			**Pn**		**18 04 00.8**	**-1.6**
JKA	**Kamikawa-asahi**	**5.21**	**5**			**Sn**		**18 05 00.8**	**-0.4**
INU	**Inuyama**	**5.34**	**230**	Pn		**Pn**		**18 04 05.9**	**+1.7**
USRK	**Ussuriysk Ar.**	**9.17**	**308**	P		**Pn**		**18 04 58.8**	**+2.1**
	5.8nm,0.7s,baz=121,slow=13,SNR=7.8								
KSRS	**Korea Array**	**11.18**	**267**	P		**Pn**		**18 05 27.3**	**+3.2**
	1.2nm,0.8s,baz=75,slow=14,SNR=1.4								
KSRS				LR		LR		18 09 18.8	
	comp=Z,19nm,18.6s,baz=160,slow=35								
PETK	**Petropavlovsk-**	**17.84**	**32**	P		**Pn**		**18 06 49.4**	**-1.8**
	4.3nm,1.0s,baz=231,slow=9.1,SNR=2.3								
HILR	**Hailar Array B**	**19.10**	**311**	P		**P**		**18 07 01.3**	**-4.0**
	1.9nm,0.5s,baz=108,slow=14,SNR=2.9								
SEY	**Seymchan**	**24.86**	**11**	P		**P**		**18 08 05.1**	**+0.9**
	0.5nm,0.2s,baz=142,slow=17,SNR=3.6 0.5nm,0.2s								
SONM	**Songino Array**	**27.17**	**301**	P		**P**		**18 08 26.0**	**+0.6**
	0.2nm,0.5s,baz=94,slow=7.8,SNR=2.0								
SONM				LR		LR		18 19 12.0	
	comp=Z,43nm,18.2s,baz=112,slow=36 0.2nm,0.5s								
SONM	**Songino Array**	**27.17**	**301**	P		**P**		**18 08 25.9**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**28.77**	**125**	T		T		18 39 07.3	

ML0.8/1, Error ellipse: s-maj=38.9km s-min=18.5km az=89.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULM	**Lac du Bonnet**	**3.36**	**324**	Pn	Pn	18 24 48.2	-1.7
	0.2nm,0.3s,baz=149,slow=12,SNR=1.7						
ULM				Pg	Pb	18 24 56.5	-0.1
	0.3nm,0.3s,baz=145,slow=14,SNR=6.8						
ULM				Sn	Sn	18 25 25.2	-5.3
	0.6nm,0.3s,baz=93,slow=19,SNR=3.2						
ULM				Lg	Lg	18 25 39.4	
	1.0nm,0.3s,baz=63,slow=19,SNR=4.0						
	0.9nm,0.5s						
I10CA	**LAC DU BONNET**	**3.38**	**323**	I	I	18 46 20.0	
	baz=138,slow=347,SNR=1.1						
PDAR	**Pinedale Array**	**12.74**	**254**	Pn	Pn	18 26 56.1	-2.6
	0.2nm,0.6s,baz=65,slow=12,SNR=2.2						
PDAR				Lg	Lg	18 30 29.3	
	baz=68,slow=33						

*AFAD **26** 18:27:33.6, 35˚.20N×27˚.86E, h6km, MW3.8*
*IDC **26** 18:27:33.9±1.0, 35˚.27N×27˚.87E, h0km, mb3.7/8, mbtmp3.6/15, ML3.2/7, MS2.5/1, Error ellipse: s-maj=21.0km s-min=17.2km az=7.0*
*NIC **26** 18:27:34.6, 35˚.09N×27˚.97E, h4km±2km, Ml3.1/15*
*HLW **26** 18:27:36.4, 35˚.19N×27˚.93E, h19km±2km, Md3.7, Ml3.2*
*THE **26** 18:27:36.6, 35˚.N±3˚×2˚.8E±˚, h3km±2km, M3.1/7, MLh3.1/7*
*ISK **26** 18:27:36.8, 35˚.20N×27˚.95E, h14km, ML3.3/26*
*ATH **26** 18:27:39.3, 35˚.30N×28˚.11E, h30km±13km, ML3.2/7, Manual Solution by G.Panopoulou First location: 2020/02/26 18:28:25, This location: 2020/02/26 18:38:27 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*

ISC 26 18:27:34.7±1.2, 35.15N±0.03×27.92E±0.02, h10km±8km, n113, σ1§68/152, mb3.6/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.74**	**303**	Pg	Pn	18 27 51.3	+0.1
KARP				Sg	Sn	18 28 02.3	-0.2
KARP	**Karpathos**	**0.74**	**303**	P	Pb	18 27 49.9	+0.3
KARP				S	Sn	18 28 02.3	-0.2
KARP	**Karpathos**	**0.74**	**303**	P	Pn	18 27 50.2	-1.0
KARP				S	Sn	18 28 02.3	-0.2
KARP				AML	AML	18 28 12.2	
	5.4nm,0.5s						
KARP				AML	AML	18 28 14.3	
	4.6nm,0.9s						
ARG	**Arkhangelos**	**1.08**	**9**	Pg	Pn	18 27 56.9	+1.1
ARG				Sg	Sn	18 28 11.7	+0.9
ARG	**Arkhangelos**	**1.08**	**9**	P	Pn	18 27 55.9	+0.1
ARG				S	Sb	18 28 10.0	+0.4
ARG	**Arkhangelos**	**1.08**	**9**	P	Pn	18 27 56.2	+0.4
ARG				S	Sn	18 28 13.2	+2.4
ARG				AML	AML	18 28 21.9	
	1.5nm,0.7s						
ARG				AML	AML	18 28 22.1	
	2.5nm,0.8s						
ARG	**Arkhangelos**	**1.08**	**9**	P	Pn	18 27 56.0	+0.1
ARG				S	Sg	18 28 08.8	-0.7
ZKR	**Zakros**	**1.40**	**269**	Pn	Pg	18 28 03.1	+1.6
ZKR				Sn	Sn	18 28 21.8	+3.1
ZKR	**Zakros**	**1.40**	**269**	P	Pg	18 28 02.8	+1.3
ZKR	**Zakros**	**1.40**	**269**	P	Pg	18 28 01.6	+0.1
ZKR				AML	AML	18 28 30.3	
	0.6nm,0.6s						
ZKR				AML	AML	18 28 36.1	
	1.4nm,0.9s						
ZKR	**Zakros**	**1.40**	**269**	P	Pg	18 28 03.8	+2.3
DAT	**Datca**	**1.60**	**350**	Pn	Pg	18 28 04.8	-0.7
DAT				Sn	Sg	18 28 25.3	-1.0
TURN	**Turunc**	**1.65**	**9**	Pn	Pg	18 28 05.4	-0.8
TURN	**Turunc**	**1.65**	**9**	P	Pg	18 28 05.5	-0.8
TURN				S	Sg	18 28 32.2	+4.6
IZZE	**Mula-Seydike**	**1.67**	**39**	P	Pn	18 28 04.8	+0.9
IZZE				S	Sg	18 28 28.1	-0.2
IZZE				IAML		18 28 30.0	
	comp=N,350nm,0.5s						
IZZE				IAML		18 28 34.0	
	comp=E,173nm,0.4s						
KSL	**Kastellorizon**	**1.68**	**53**	P	Pb	18 28 05.5	-0.2
KSL				S	Sg	18 28 29.1	+0.3
KSL	**Kastellorizon**	**1.68**	**53**	P	Pn	18 28 04.3	+0.2
KSL				S	Sg	18 28 28.9	+0.1
KSL				AML	AML	18 28 38.6	
	0.5nm,0.7s						
KSL				AML	AML	18 28 56.5	
	0.5nm,0.8s						
KSL	**Kastellorizon**	**1.68**	**53**	P	Pn	18 28 03.6	-0.5
KSL				S	Sn	18 28 22.2	-3.5
AKAS	**Kas**	**1.75**	**51**	Pn	Pn	18 28 06.3	+1.2
AKAS	**Kas**	**1.75**	**51**	P	Pb	18 28 06.5	-0.4
AKAS				S	Sg	18 28 31.1	+0.3
AKAS				IAML		18 29 01.0	
	comp=N,360nm,0.7s						
AKAS				IAML		18 29 01.0	
	comp=E,215nm,0.8s						
FETY	**Fethiye**	**1.76**	**32**	P	Pn	18 28 05.6	+0.4
FETY				S	Sg	18 28 31.3	+0.1
FETY	**Fethiye**	**1.76**	**32**	P	Pn	18 28 06.0	+0.8
DALY	**Dalyan (Mula)**	**1.77**	**19**	Pn	Pb	18 28 07.3	+0.1
SABU	**Mula-Dalaman**	**1.88**	**27**	P	Pn	18 28 08.1	+1.2
SABU				S	Sg	18 28 45.0	+10
SABU				IAML		18 28 52.0	
	comp=E,142nm,0.8s						
SABU				IAML		18 29 02.0	
	comp=N,169nm,1.1s						
NPS	**Neapolis**	**1.89**	**274**	P	Pg	18 28 10.8	-0.2
NPS				S	Sg	18 28 37.7	+2.1
NPS	**Neapolis**	**1.89**	**274**	P	Pg	18 28 12.1	+1.0
BODT	**Bodrum**	**1.97**	**346**	Pn	Pb	18 28 10.0	-0.7
CAME	**Cameli-Denizli**	**2.11**	**32**	Pn	Pn	18 28 11.8	+1.6
MULA	**Mugla, Merkez-**	**2.13**	**9**	P	Pg	18 28 14.8	-0.7
MULA				S	Sg	18 28 46.2	+3.1
MLSB	**Milas**	**2.15**	**357**	Pn	Pb	18 28 12.2	-1.4
KNIK	**Mula-Seydike**	**2.16**	**38**	P	Pb	18 28 12.8	-1.1
KNIK				S	Sb	18 28 41.6	+0.8
ELL	**Elmali**	**2.27**	**45**	Pn	Pn	18 28 14.4	+2.1
ELL	**Elmali**	**2.27**	**45**	P	Pn	18 28 13.6	+1.3
ELL				AML	AML	18 28 55.2	
	1.1nm,0.6s						
ELL				AML	AML	18 29 01.0	
	0.7nm,0.8s						
CAEL	**Denizli, Camel**	**2.27**	**29**	P	Pb	18 28 14.4	-1.4
CAEL				S	Sb	18 28 43.8	-0.3
CAEL				IAML		18 29 19.0	
	comp=N,247nm,1.1s						
CAEL				IAML		18 29 19.0	
	comp=E,166nm,0.6s						
DNZT	**Denizli-Tavas-**	**2.31**	**22**	P	Pn	18 28 14.3	+1.5
DNZT				S	Sb	18 28 45.0	0.0
DNZT				IAML		18 28 45.0	
	comp=N,63nm,0.6s						
THERA	**Ancient Thera,**	**2.33**	**302**	P	Pg	18 28 17.4	-2.0
IACM	**Heraklion**	**2.34**	**275**	P	Pg	18 28 18.2	-1.3
THR8	**Santorini-Mono**	**2.35**	**303**	P	Pb	18 28 16.2	-0.8
THR3	**Thira Island,**	**2.41**	**302**	P	Pb	18 28 15.9	-2.2
THR3	**Thira Island,**	**2.41**	**302**	P	Pb	18 28 17.5	-0.5
SNT5	**Nea Kammeni, S**	**2.41**	**302**	P	Pb	18 28 16.1	-2.0
SNT5	**Nea Kammeni, S**	**2.41**	**302**	P	Pb	18 28 17.1	-1.0
THR9	**Santorini-Faro**	**2.41**	**301**	P	Pb	18 28 15.8	-2.3
THR9	**Santorini-Faro**	**2.41**	**301**	P	Pb	18 28 17.5	-0.6
THR5	**Thira Island,**	**2.45**	**302**	P	Pb	18 28 17.7	-1.0
TAVA	**DENIZLI_Tavas**	**2.45**	**19**	P	Pn	18 28 16.3	+1.6
TAVA				IAML		18 29 06.0	
	comp=N,81nm,0.6s						
TAVA				IAML		18 29 12.0	
	comp=E,83nm,0.6s						
GOLH	**Golhisar**	**2.47**	**32**	P	Pb	18 28 17.7	-1.5
GOLH				S	Sb	18 28 49.6	-0.1
GOLH				IAML		18 28 50.0	
	comp=E,101nm,0.5s						
GOLH				IAML		18 29 20.0	
	comp=N,119nm,1.0s						
IDI	**Anoyia**	**2.49**	**274**	Pn	Pb	18 28 18.3	-1.1
IDI	**Anoyia**	**2.49**	**274**	P	Pb	18 28 17.7	-1.7
IDI	**Anoyia**	**2.49**	**274**	P	Pb	18 28 19.8	+0.3
APMY	**Acipayam-Denizli**	**2.57**	**25**	Pn	Pn	18 28 18.1	+1.6
GCAM	**G?zelcaml?**	**2.61**	**348**	Pn	Pb	18 28 19.3	-2.2
DNIZ	**Denizli-Tavas-**	**2.63**	**20**	P	Pn	18 28 19.0	+1.8
DNIZ				IAML		18 29 06.0	
	comp=E,161nm,0.4s						
DNIZ				IAML		18 29 13.0	
	comp=N,170nm,0.8s						
ESEN	**Aydn-Nazilli**	**2.67**	**7**	P	Pb	18 28 21.9	-0.6
ESEN				S	Sb	18 28 53.3	-2.0
KORT	**Korkueli**	**2.70**	**46**	Pn	Pn	18 28 20.7	+2.5
SMG	**Samos**	**2.70**	**341**	P	Pn	18 28 19.7	+1.6
SMG	**Samos**	**2.70**	**341**	P	Pn	18 28 20.3	+2.2
AYDB	**Zeytinkoy-Aydi**	**2.79**	**359**	Pn	Pn	18 28 21.3	+1.8
ANTB	**Antalya**	**2.82**	**51**	Pn	Pn	18 28 22.2	+2.4
NAZL	**Nazilli-Aydin**	**2.83**	**6**	Pn	Pn	18 28 22.1	+2.2
INCE	**Denizli-Bozkur**	**2.88**	**27**	P	Pn	18 28 22.2	+1.5
INCE				IAML		18 29 19.0	
	comp=E,74nm,1.0s						
INCE				IAML		18 29 30.0	
	comp=N,78nm,0.9s						
VAM	**Vamos**	**3.06**	**276**	P	Pb	18 28 28.3	-0.9
ODEM	**Odemis-Izmir**	**3.12**	**2**	Pn	Pn	18 28 25.8	+1.8
GVD	**Gavdhos**	**3.16**	**266**	Pn	Pb	18 28 27.8	-3.1
GVD	**Gavdhos**	**3.16**	**266**	P	Pb	18 28 27.3	-3.6
GVD	**Gavdhos**	**3.16**	**266**	P	Pb	18 28 29.6	-1.4
OSC1	**CSNet OBS 1**	**3.23**	**120**	P	Pn	18 28 25.2	-0.1
OSC1				S	Sn	18 29 05.4	+1.6
OSC1				AML	AML	18 29 12.6	
	0.1nm,0.6s						
IMMV	**Iera Moni Meta**	**3.24**	**277**	Pn	Pb	18 28 29.9	-2.3
IMMV	**Iera Moni Meta**	**3.24**	**277**	P	Pb	18 28 30.7	-1.4
IMMV	**Iera Moni Meta**	**3.24**	**277**	P	Pb	18 28 30.8	-1.4
BASM	**Basmaki-Afyon**	**3.25**	**31**	Pn	Pn	18 28 28.0	+2.2
BLCB	**Balcova**	**3.31**	**348**	Pn	Pn	18 28 28.6	+2.1
KULA	**Kula-Manisa**	**3.41**	**10**	Pn	Pn	18 28 30.5	+2.5
AKMS	**Akamas**	**3.62**	**91**	P	Pn	18 28 31.9	+1.1
AKMS				S	Sn	18 29 15.0	+1.4
AKMS				AML	AML	18 29 18.5	
	0.1nm,0.7s						
AKMS				AML	AML	18 29 27.6	
	0.2nm,0.4s						
AKMS	**Akamas**	**3.62**	**91**	P	Pn	18 28 31.4	+0.7
GORD	**Gordes-Manisa**	**3.76**	**3**	Pn	Pn	18 28 35.1	+2.4
ALFC	**Alefka**	**3.83**	**89**	P	Pn	18 28 34.2	+0.6
ALFC				S	Sn	18 29 20.3	+1.4
ALFC				AML	AML	18 29 21.2	
	0.1nm,0.9s						
ALFC				AML	AML	18 29 32.9	
	0.2nm,0.7s						
ALFC	**Alefka**	**3.83**	**89**	P	Pn	18 28 34.3	+0.6
NATA	**Nata**	**3.83**	**94**	P	Pn	18 28 34.3	+0.5
NATA				S	Sn	18 29 21.4	+2.5
NATA				AML	AML	18 29 25.1	
	0.5nm,0.5s						
NATA				AML	AML	18 29 32.6	
	0.4nm,0.7s						
NATA	**Nata**	**3.83**	**94**	P	Pn	18 28 34.2	+0.5
ANKY	**Antikythira Is**	**3.84**	**282**	P	Pn	18 28 37.1	+3.3
TROD	**Troodos**	**4.06**	**91**	P	Pn	18 28 36.8	-0.2
TROD				S	Sn	18 29 27.2	+2.5
TROD				AML	AML	18 29 35.4	
	0.1nm,0.5s						
TROD				AML	AML	18 29 39.3	
	0.1nm,0.6s						
OSC2	**CSNet OBS 4**	**4.16**	**119**	P	Pn	18 28 39.1	+1.0
OSC2				AML	AML	18 29 42.3	
	0.1nm,0.9s						
OSC2				AML	AML	18 29 54.9	
	0.1nm,0.9s						
XYLS	**Xyliatos**	**4.21**	**90**	P	Pn	18 28 39.3	+0.4
XYLS				S	Sn	18 29 29.7	+1.6
XYLS				AML	AML	18 29 34.0	
	0.1nm,0.6s						
XYLS				AML	AML	18 29 43.4	
	0.1nm,0.6s						
SLUM	**Salum**	**4.29**	**213**	S	Sn	18 29 28.2	-1.9
VLI	**Veliai**	**4.34**	**293**	P	Pn	18 28 43.8	+3.2
DION	**Dionisos Attik**	**4.34**	**314**	P	Pn	18 28 44.4	+3.7
ASGA	**Asgata**	**4.39**	**93**	P	Pn	18 28 41.8	+0.4
ASGA				S	Sn	18 29 33.0	+0.5
ASGA				AML	AML	18 29 39.0	
	0.1nm,0.8s						
ASGA				AML	AML	18 29 41.3	
	0.3nm,0.6s						
ASGA	**Asgata**	**4.39**	**93**	P	Pn	18 28 41.9	+0.6
CSS	**Mathiatis**	**4.44**	**91**	P	Pn	18 28 42.6	+0.5
CSS				S	Sn	18 29 35.7	+1.9
CSS				AML	AML	18 29 43.9	
	0.1nm,0.6s						
CSS				AML	AML	18 29 44.6	
	0.1nm,0.5s						
CSS	**Mathiatis**	**4.44**	**91**	P	Pn	18 28 43.2	+1.1
MVOU	**Mavrovouni**	**4.68**	**90**	P	Pn	18 28 46.3	+1.0
MVOU				S	Sn	18 29 42.0	+2.2
MVOU				AML	AML	18 29 50.8	
MVOU				AML	AML	18 29 57.7	
	0.1nm,1.0s						
MVOU	**Mavrovouni**	**4.68**	**90**	P	Pn	18 28 46.2	+0.8
GUR	**Goura**	**5.28**	**303**	P	Pn	18 28 57.7	+3.9
SWA2		**6.25**	**200**	P	Pn	18 29 08.3	+1.5
SWA2				S	Sn	18 30 15.1	-3.2
RYAN	**Fayoum**	**6.37**	**161**	P	Pn	18 29 10.1	+1.5
RYAN				S	Sn	18 30 18.1	-3.2
BRTR	**Keskin Array B**	**6.45**	**43**	Pn	Pn	18 29 09.4	-0.3
	0.2nm,0.3s,baz=225,slow=15,SNR=8.2						
BRTR				Sn	Sn	18 30 21.4	-2.0
	0.2nm,0.3s,baz=215,slow=26,SNR=5.8						
BRTR				LR	LR	18 32 25.0	
	comp=Z,41nm,21.0s,baz=216,slow=46						
	0.6nm,0.5s						
MMAI	**Mount Meron Ar**	**6.56**	**107**	Pn	Pn	18 29 11.9	+0.6
	1.4nm,0.3s,baz=292,slow=15,SNR=6.5						
MMAI				Sn	Sn	18 30 24.8	-1.3
	2.5nm,0.3s,baz=291,slow=29,SNR=4.6						
	0.5nm,0.2s						
HFRF	**Wahat Farafira**	**7.98**	**178**	P	Pn	18 29 32.3	+1.6
HFRF				S	Sn	18 30 57.1	-3.9
ASF	**Jabal al Asfar**	**8.05**	**109**	Pn	Pn	18 29 32.6	+0.9
	0.3nm,0.3s,baz=305,slow=16,SNR=4.2						
ASF				Sn	Sn	18 31 02.9	+0.1
	0.3nm,0.3s,baz=252,slow=20,SNR=1.5						
	1.8nm,0.6s						
EIL	**Elat**	**8.07**	**131**	Pn	Pn	18 29 32.7	+0.8
	0.7nm,0.3s,baz=312,slow=2.9,SNR=8.7						
EIL				Sn	Sn	18 30 59.2	-4.0
	2.3nm,0.3s,baz=348,slow=18,SNR=7.1						
	6.3nm,0.9s						
HDHB	**Dhahab**	**8.57**	**137**	P	Pn	18 29 40.3	+1.6
KBZ	**Khabaz**	**14.38**	**49**	Pn	P	18 31 03.4	-1.8
	0.1nm,0.3s,baz=207,slow=4.5,SNR=4.7						
	1.4nm,0.8s						
AKASG	**Malin Array Be**	**15.57**	**3**	Pn	Pn	18 31 12.7	-1.5
	0.3nm,0.3s,baz=200,slow=12,SNR=1.5						
	0.3nm,0.4s						
GERES	**GERESS Array B**	**17.25**	**327**	P	Pn	18 31 33.9	-1.8
	baz=129,slow=9.1,SNR=2.2						
	0.4nm,0.4s						
ESDC	**Sonseca Array**	**25.65**	**290**	P	P	18 33 03.8	-0.7
	1.8nm,0.9s,baz=89,slow=9.3,SNR=5.6						
	1.8nm,0.9s						
FINES	**FINESS Array B**	**26.34**	**358**	P	P	18 33 10.4	0.0
	0.7nm,0.5s,baz=180,slow=25,SNR=6.6						
	0.7nm,0.5s						
HFS	**Hagfors**	**26.66**	**344**	P	P	18 33 12.4	-0.9
	3.0nm,0.8s,baz=148,slow=11,SNR=1.9						
	3.0nm,0.8s						
NOA	**NORSAR Array B**	**28.04**	**343**	P	P	18 33 25.7	-0.1
	0.2nm,0.5s,baz=144,slow=10,SNR=1.1						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**32.26**	**234**	P	P	18 34 05.4	+1.9
	1.1nm,0.7s,baz=34,slow=11,SNR=7.3						
	3.1nm,0.7s						
MKAR	**Manchi Array**	**41.89**	**57**	P	P	18 35 26.7	+1.7
	0.2nm,0.5s,baz=277,slow=6.5,SNR=4.0						
	0.2nm,0.5s						
SONM	**Songino Array**	**57.74**	**51**	P	P	18 37 26.5	+0.8
	0.2nm,0.5s,baz=284,slow=5.9,SNR=4.1						
	0.2nm,0.5s						
SCHQ	**Schefferville**	**64.65**	**320**	P	P	18 38 12.1	-0.2
	1.3nm,0.6s,baz=67,slow=7.7,SNR=1.5						
	1.3nm,0.6s						

*NCEDC **26** 18:34:13.2±1.0, 38˚.84N×0˚.01×122˚.79W±0˚.02, h2km±3km, Error ellipse: s-maj=2.2km s-min=1.5km az=217.0*
*NEIC **26** 18:34:13.1±1.6, 38˚.83N±0˚.01×122˚.75W±0˚.01, h5km±1km, ML3.2/129, Mwr3.7/3(NCEDC), Error ellipse: s-maj=2.7km s-min=2.5km az=42.0*
*IDC **26** 18:34:13.3±1.8, 38˚.84N×122˚.86W, h0km, mbtmp3.4/5, ML3.1/4, Error ellipse: s-maj=19.8km s-min=9.6km az=56.0*

ISC 26 18:34:12.9±1.0, 38˚.82N±0˚.02×122˚.80W±0˚.02, h10km±6km, n120, σ1§12/107, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.01**	**156**		**Pg**	**18 34 14.0**	**-0.8**
GDXM	**Geysers**	**0.01**	**156**	IAML		18 34 14.9	
	comp=N,376μm,0.2s						
GDXM				IAML		18 34 14.9	
	comp=E,201μm,0.2s						
GGPM	**Geyser Peak**	**0.06**	**212**		**Pg**	**18 34 15.1**	**-0.1**
GSGM	**Seigler Mounta**	**0.09**	**56**		**Pg**	**18 34 15.1**	**-0.2**
GBGM	**Boggs Mountain**	**0.10**	**93**		**Pg**	**18 34 15.3**	**-0.2**
GRTM	**Round Top Moun**	**0.16**	**40**		**Pg**	**18 34 16.1**	**-0.3**
GCVM	**Cloverdale**	**0.17**	**254**		**Pg**	**18 34 17.5**	**+0.9**
HOPS	**Hopland Field**	**0.28**	**310**		**Pb**	**18 34 19.0**	**-1.0**
HOPS				IAML		18 34 27.9	
	comp=N,5μm,1.3s						
NMTM	**Middletown**	**0.28**	**92**		**Pg**	**18 34 18.9**	**+0.4**
MNRC	**McLaughlin Min**	**0.29**	**78**		**Pg**	**18 34 19.1**	**+0.4**
MNRC				IAML		18 34 25.5	
	comp=E,5μm,0.9s						
MNRC				IAML		18 34 26.0	
	comp=N,3μm,0.9s						
GHGM	**Hogback Ridge**	**0.31**	**356**		**Pg**	**18 34 19.1**	**0.0**
GSNM	**Snow Mountain**	**0.33**	**292**		**Pb**	**18 34 20.1**	**-0.8**
NWRM	**Wright Ranch**	**0.37**	**191**		**Pb**	**18 34 21.0**	**-0.5**
NTYM	**Taylor**	**0.44**	**166**		**Pb**	**18 34 22.3**	**-0.5**
BONV	**Boonville, CA**	**0.46**	**292**		**Pb**	**18 34 22.9**	**-0.3**
NIMB	**Iron Mountain**	**0.49**	**121**		**Pb**	**18 34 23.2**	**-0.5**
OAKV	**Oakville Exper**	**0.49**	**142**		**Pb**	**18 34 23.1**	**-0.6**
CVS	**Carmenet Viney**	**0.54**	**150**		**Pb**	**18 34 24.0**	**-0.5**
GWRM	**Wonder Ranch**	**0.55**	**315**		**Pb**	**18 34 24.1**	**-0.6**
NAPC	**Atlas Peak**	**0.57**	**131**		**Pb**	**18 34 24.4**	**-0.6**
QRDG	**Quail Ridge Na**	**0.61**	**123**		**Pb**	**18 34 25.6**	**-0.1**
GHOM	**Hamilton Openi**	**0.62**	**292**		**Pb**	**18 34 25.9**	**0.0**
LOC	**Lincoln School**	**0.67**	**174**		**Pb**	**18 34 26.6**	**-0.1**
MCCM	**Marconi Confer**	**0.68**	**185**		**Pn**	**18 34 27.1**	**-1.4**
MCCM				IAML		18 34 38.4	
	comp=E,1μm,1.1s						
MCCM				IAML		18 34 41.2	
	comp=N,1μm,0.8s						
SNT	**Sears Point**	**0.69**	**157**		**Pb**	**18 34 26.5**	**-0.5**
NDHM	**Dunnigan Hills**	**0.70**	**94**		**Pn**	**18 34 28.1**	**-0.8**
NGVM		**0.71**	**139**		**Pb**	**18 34 27.3**	**0.0**
NADM	**Allendale**	**0.74**	**119**		**Pn**	**18 34 29.1**	**-0.4**
GNAM	**Navarro Ridge**	**0.75**	**301**		**Pn**	**18 34 28.6**	**-1.0**
DCMP	**DeCamp, Califo**	**0.77**	**327**		**Pb**	**18 34 28.2**	**-0.3**
NOLM	**Olema**	**0.78**	**180**		**Pn**	**18 34 28.8**	**-1.1**
RUSS	**Russell Ranch**	**0.78**	**110**		**Pn**	**18 34 29.8**	**-0.2**
KRKM	**Rackout Spring**	**0.80**	**338**		**Pn**	**18 34 30.0**	**-0.4**
SVIN	**Saint Vincent'**	**0.81**	**165**		**Pb**	**18 34 28.7**	**-0.4**
NPRM	**Point Reyes**	**0.84**	**192**		**Pn**	**18 34 30.2**	**-0.6**
NLHM	**Lake Herman**	**0.86**	**144**		**Pb**	**18 34 30.0**	**0.0**
PINL	**Point Pinole R**	**0.88**	**157**		**Pg**	**18 34 26.4**	**-3.4**
MNDO	**Woodland Fire**	**0.89**	**304**		**Pn**	**18 34 31.4**	**0.0**
SUTB	**Sutter Butte**	**0.89**	**62**		**Pg**	**18 34 29.1**	**-0.9**
SUTB				IAML		18 34 47.0	
	comp=E,794nm,0.6s						
SUTB				IAML		18 34 50.5	
	comp=N,500nm,0.5s						
CPMM	**Point Molate**	**0.92**	**160**		**Pn**	**18 34 31.1**	**-0.8**
CSPM	**San Pablo Ridg**	**0.94**	**156**		**Pn**	**18 34 31.6**	**-0.6**
CPIM	**Pinole Ridge**	**0.95**	**151**		**Pn**	**18 34 31.4**	**-0.9**
GVV	**Valley View**	**0.96**	**6**		**Pn**	**18 34 32.8**	**+0.2**
AGC	**Angel Island**	**1.00**	**163**		**Pn**	**18 34 32.6**	**-0.4**
CTAM	**Taylor**	**1.00**	**142**		**Pn**	**18 34 33.1**	**+0.1**
BRIB	**Briones**	**1.03**	**150**		**Pn**	**18 34 33.0**	**-0.5**
BRK	**Berkeley--Havi**	**1.03**	**156**		**Pn**	**18 34 33.3**	**-0.2**
BL67	**Building 67, L**	**1.03**	**155**		**Pn**	**18 34 33.6**	**+0.1**
VAK	**Adit at Lawren**	**1.03**	**155**		**Pn**	**18 34 33.3**	**-0.1**
BKS	**Berkeley--Byer**	**1.04**	**155**		**Pn**	**18 34 33.1**	**-0.4**
JPRM	**Presidio of Sa**	**1.05**	**166**		**Pn**	**18 34 33.4**	**-0.4**
KCPM	**Cahto Peak**	**1.06**	**325**		**Pn**	**18 34 34.2**	**+0.2**
KCPM				IAML		18 34 41.8	
	comp=N,640nm,0.9s						
OSTM	**Stimpson Lane**	**1.09**	**59**		**Pb**	**18 34 33.0**	**-0.8**
GROM	**Round Mountain**	**1.10**	**5**		**Pn**	**18 34 35.7**	**+1.2**
KBNM	**Bluenose Ridge**	**1.11**	**344**		**Pn**	**18 34 35.3**	**+0.5**
FARB	**Farallon Islan**	**1.13**	**188**		**Pn**	**18 34 34.1**	**-0.6**
FARB				IAML		18 34 57.8	
	comp=E,382nm,1.4s						
BDM	**Black Diamond**	**1.13**	**139**		**Pn**	**18 34 34.2**	**-0.6**
OHCM	**Honcut**	**1.15**	**63**		**Pb**	**18 34 33.1**	**-1.8**
CRHM	**Round Hill Res**	**1.15**	**146**		**Pn**	**18 34 34.8**	**-0.3**
BGC	**Bolinger Road**	**1.16**	**150**		**Pn**	**18 34 35.4**	**+0.1**
RVIT	**Round Valley I**	**1.18**	**338**		**Pn**	**18 34 37.2**	**+1.7**
JSBM	**San Bruno Moun**	**1.18**	**164**		**Pg**	**18 34 34.9**	**-0.7**
JMGM	**Milagra Ridge**	**1.21**	**168**		**Pg**	**18 34 35.6**	**-0.4**
CSLM	**San Leandro Hi**	**1.22**	**154**		**Pg**	**18 34 35.9**	**-0.4**
CLCB	**Lake Chabot**	**1.22**	**152**		**Pn**	**18 34 35.6**	**-0.5**
SFRE	**Sierra Foothil**	**1.23**	**69**		**Pn**	**18 34 34.6**	**-1.6**
ORV

PKD	**Bear Valley Ra**	**3.38**	**147**	IAML			18 36 10.8	
	comp=E,46nm,4.3s							
PKD				IAML			18 36 18.8	
	comp=N,37nm,2.2s							
L04D	**Klamath Falls**	**3.42**	**6**			**Pn**	**18 35 06.9**	**+0.5**
L04D				IAML			18 36 31.5	
	comp=E,38nm,3.4s							
NVAR	**Mina Array Bea**	**3.54**	**95**	Pn		**Pn**	**18 35 09.4**	**+1.2**
	comp=E,1.2nm,0.3s,baz=275,slow=18,SNR=10.0							
NVAR				Pg		**Pb**	**18 35 17.0**	**+1.2**
	comp=E,4.4nm,0.3s,baz=275,slow=18,SNR=27							
NVAR				Lg	Lg		18 36 06.4	
	comp=E,1.3nm,0.3s,baz=273,slow=29,SNR=0.9 comp=E,2.7nm,0.5s							
K04D	**Chiloquin, OR**	**3.88**	**11**	Pn		**Pn**	**18 35 11.7**	**-1.1**
K04D				IAML			18 37 12.9	
	comp=N,39nm,2.7s							
K02D	**Willamette Mer**	**3.93**	**351**			**Pn**	**18 35 11.8**	**-1.6**
K02D				IAML			18 35 49.5	
	comp=N,22nm,4.6s							
K02D				IAML			18 36 55.1	
	comp=E,21nm,3.0s							
TIN	**Tinemaha, Big**	**4.02**	**115**			**Pn**	**18 35 13.7**	**-1.0**
DSP	**Deep Springs**	**4.08**	**109**			**Pn**	**18 35 19.2**	**+3.9**
DSP				IAML			18 36 25.1	
	comp=N,21nm,2.2s							
DSP				IAML			18 36 59.9	
	comp=E,21nm,2.1s							
K05A	**Summer Lake**	**4.16**	**20**			**Pn**	**18 35 14.5**	**-2.2**
K05A				IAML			18 36 47.3	
	comp=E,26nm,4.5s							
K05A				IAML			18 37 22.1	
	comp=N,20nm,4.7s							
VES	**Vestal, Richgr**	**4.20**	**134**	Pn		**Pn**	**18 35 15.5**	**-1.4**
CWC	**Cottonwood Cre**	**4.44**	**121**			**Pn**	**18 35 22.0**	**+1.6**
CWC				IAML			18 36 32.0	
	comp=N,32nm,0.9s							
CWC				IAML			18 36 40.4	
	comp=E,27nm,0.9s							
J05D	**Fort Rock, OR**	**4.62**	**14**	IAML			18 36 31.5	
	comp=N,18nm,4.8s							
J05D				IAML			18 37 05.7	
	comp=E,18nm,4.9s							
ISA	**Isabella, Lake**	**4.67**	**131**	IAML			18 36 36.1	
	comp=N,15nm,0.8s							
ISA				IAML			18 36 39.2	
	comp=E,22nm,1.4s							
MPMC	**Manual Prospec**	**5.04**	**121**	IAML			18 36 57.1	
	comp=E,14nm,0.9s							
MPMC				IAML			18 37 17.2	
	comp=N,19nm,2.2s							
CLC	**China Lake**	**5.12**	**124**	IAML			18 37 13.8	
	comp=N,14nm,2.4s							
CLC				IAML			18 37 22.6	
	comp=E,12nm,2.6s							
PINE	**Pine Mountain**	**5.16**	**15**	IAML			18 37 36.1	
	comp=E,16nm,4.7s							
PINE				IAML			18 38 40.4	
	comp=N,16nm,5.0s							
LRMC	**Laurel Mtn Rad**	**5.27**	**128**	IAML			18 37 00.1	
	comp=N,17nm,1.7s							
LRMC				IAML			18 37 20.7	
	comp=E,17nm,1.1s							
WIFE	**Three Sisters-**	**5.29**	**8**	IAML			18 36 12.0	
	comp=N,14nm,4.8s							
WIFE				IAML			18 36 24.7	
	comp=E,18nm,4.8s							
WCT	**Wildcat Mounta**	**5.29**	**111**	IAML			18 37 18.1	
	comp=N,18nm,4.6s							
WCT				IAML			18 37 32.2	
	comp=E,12nm,3.5s							
TPNV	**Topopah Spring**	**5.51**	**108**			**Pb**	**18 35 47.1**	**-2.1**
ELK	**Elko**	**6.13**	**69**	Pn		**Pn**	**18 35 45.0**	**+1.1**
	comp=E,0.1nm,0.3s,baz=257,slow=18,SNR=7.2							
ELK				Lg	Lg		18 37 25.2	
	comp=E,0.1nm,0.3s,baz=180,slow=3.0,SNR=3.7 comp=E,2.4nm,0.8s							
PFO	**Pinyon Flats O**	**7.30**	**133**	Pn		**Pn**	**18 36 01.9**	**+2.2**
	comp=E,0.2nm,0.3s,baz=323,slow=11,SNR=2.5							
PFO				Lg	Lg		18 38 07.9	
	baz=291,slow=17 comp=E,1.3nm,0.4s							
PDAR	**Pinedale Array**	**10.79**	**64**	Pn		Pn	18 36 53.8	+6.2
	comp=E,1.2nm,0.9s,baz=266,slow=16,SNR=3.2							
TXAR	**Lajitas Array**	**18.43**	**115**	P		**Pn**	**18 38 31.9**	**+3.3**
	baz=306,slow=8.3,SNR=10.0 comp=E,2.8nm,1.2s							

*IDC **26** 18:37:53.0±2.4, 12°.68N×89°.34W, h0km, mb3.6/3, mbtmp3.6/5, ML2.9/3, Error ellipse: s-maj=65.8km s-min=25.1km az=42.0*
*SNET **26** 18:37:53.7±3.5, 12°.55N×90°.00W, h5km, ML3.7, Presumed earthquake*
*CATAC **26** 18:37:56.2±0.5, 13°.N±2°×9°.0W±°, h23km±5km, M3.6/18, MLv3.6/18, Error ellipse: s-maj=6.7km s-min=3.1km az=56.6, confirmed*
*GCG **26** 18:38:02.1±0.9, 13°.01N×90°.01W, h24km±15km, MD3.7, Presumed earthquake*

ISC 26 18:37:58.6±2.0, 12°.59N±0°.08×90°.05W±0°.08, h46km±19km, n55, σ1°17/88, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LALI	**Alcalda de L**	**1.14**	**38**	P		**Pn**	**18 38 17.0**	**-1.1**
LALI				S		Sn	18 38 32.8	+0.2
JAYA	**Jayaque - finc**	**1.21**	**29**	P		**Pn**	**18 38 18.0**	**-1.2**
JAYA				S		Sn	18 38 34.4	-0.1
JAYA	**Jayaque - finc**	**1.21**	**29**	*i* P		Pn	18 38 17.6	-1.7
FAME	**Alcaldia de Sa**	**1.24**	**1**	P		**Pn**	**18 38 17.9**	**-1.8**
FAME				S		Sn	18 38 35.0	-0.2
CEVE	**Cerro Verde**	**1.29**	**19**	P		**Pn**	**18 38 19.2**	**-1.4**
CEVE				S		Sn	18 38 37.4	+0.5
CEVE	**Cerro Verde**	**1.29**	**19**	*e*P		**Pn**	**18 38 19.0**	**-1.5**
PANCS	**Alcalda de**	**1.32**	**40**	P		**Pn**	**18 38 19.8**	**-0.9**
PANCS				S		Sn	18 38 37.3	+0.1
PMON	**Piamonte**	**1.32**	**33**	P		**Pn**	**18 38 19.1**	**-1.7**
PMON				S		Sn	18 38 38.8	+1.5
NUBE	**Las Nubes**	**1.33**	**11**	P		**Pn**	**18 38 19.2**	**-1.7**
NUBE				S		Sn	18 38 37.9	+0.4
NUBE	**Las Nubes**	**1.33**	**11**	*i* P		**Pn**	**18 38 19.3**	**-1.7**
BOQS	**Boqueron**	**1.36**	**33**	*e*P		**Pn**	**18 38 19.5**	**-1.9**
CEDA	**San Andres**	**1.36**	**28**	P		**Pn**	**18 38 20.2**	**-1.1**
CEDA				S		Sn	18 38 39.0	+0.9
SEMO	**Seminario San**	**1.36**	**36**	P		**Pn**	**18 38 20.9**	**-0.5**
SEMO				S		Sn	18 38 39.6	+1.2
UEES	**Universidad Ev**	**1.37**	**35**	P		**Pn**	**18 38 20.7**	**-0.7**
UEES				S		Sn	18 38 38.9	+0.5
UTEC	**Universidad Te**	**1.38**	**37**	P		**Pn**	**18 38 20.9**	**-0.6**
UTEC				S		Sn	18 38 39.5	+1.0
IGN	**Direccin Gen**	**1.40**	**37**	P		**Pn**	**18 38 21.0**	**-0.9**
IGN				S		Sn	18 38 39.9	+0.7
UDBS	**Universidad Do**	**1.41**	**38**	P		**Pn**	**18 38 21.2**	**-0.9**
UDBS				S		Sn	18 38 39.8	+0.3
LOAL	**Lomas de Alarc**	**1.42**	**11**	P		**Pn**	**18 38 21.2**	**-0.9**
LOAL				S		Sn	18 38 39.9	+0.3
SLOZ	**Alcaldia de Sa**	**1.45**	**10**	P		**Pn**	**18 38 21.7**	**-0.7**
SLOZ				S		Sn	18 38 41.7	+1.4
UNIC	**Universidad Ca**	**1.46**	**19**	P		**Pn**	**18 38 21.5**	**-1.1**
UNIC				S		Sn	18 38 41.9	+1.2
COEG	**Centro de Oper**	**1.53**	**48**	P		**Pn**	**18 38 22.7**	**-0.9**
COEG				S		Sn	18 38 43.9	+1.6
TECO	**Alcaldia de Te**	**1.55**	**53**	P		**Pn**	**18 38 24.0**	**+0.1**
TECO				S		Sn	18 38 44.3	+1.4
PAVA	**Las Pavas**	**1.55**	**44**	P		**Pn**	**18 38 23.2**	**-0.7**
PAVA				S		Sn	18 38 43.9	+0.9
SCLA	**Alcaldia de Sa**	**1.69**	**49**	P		**Pn**	**18 38 25.4**	**-0.5**
SCLA				S		Sn	18 38 48.4	+2.1
PQSS	**Presa 15 de Se**	**1.77**	**55**	P		**Pn**	**18 38 26.3**	**-0.6**
PQSS				S		Sn	18 38 49.1	+0.8
P5NO	**Presa 5 de nov**	**1.87**	**42**	P		**Pn**	**18 38 27.5**	**-0.7**
P5NO				S		Sn	18 38 52.6	+2.0
PACA	**Pacayal**	**1.89**	**62**	P		**Pn**	**18 38 27.6**	**-1.0**
PACA				S		Sn	18 38 52.8	+1.4
LLGN	**La Laguna**	**1.89**	**34**	P		**Pn**	**18 38 28.5**	**-0.1**
LLGN				S		Sn	18 38 52.9	+1.5
RANC	**El Ranchito**	**1.91**	**64**	P		**Pn**	**18 38 28.7**	**-0.1**
RANC				S		Sn	18 38 53.8	+2.1
MTO3	**Montecristo**	**1.92**	**20**	P		**Pn**	**18 38 28.4**	**-0.6**
MTO3				S		Sn	18 38 53.5	+1.4
MTO3	**Montecristo**	**1.92**	**20**	*i* P		**Pn**	**18 38 28.1**	**-1.0**
ESQI	**Esquipulas**	**2.07**	**19**	P		**Pn**	**18 38 30.6**	**-0.5**
ESQI				S		Sn	18 38 57.1	+1.3
LCND	**La Caada**	**2.22**	**71**	P		**Pn**	**18 38 32.9**	**-0.2**
CNCH	**Conchagua**	**2.26**	**72**	P		**Pn**	**18 38 33.2**	**-0.5**
CNCH				S		Sn	18 39 02.0	+1.5
CNCH	**Conchagua**	**2.26**	**72**	*e*P		**Pn**	**18 38 32.8**	**-0.9**
APG	**El Apazote**	**2.43**	**350**	Pn		**Pn**	**18 38 36.2**	**+0.1**
	0.6nm,0.3s,baz=156,slow=12,SNR=21							
APG				Sn		**Sn**	**18 39 08.2**	**+3.5**
	0.7nm,0.3s,baz=236,slow=22,SNR=12							
APG	**El Apazote**	**2.43**	**350**	*i* P		**Pn**	**18 38 35.8**	**-0.3**
CSGN	**Cosiguina Volc**	**2.46**	**81**	P		**Pn**	**18 38 36.0**	**-0.4**
CSGN				S		Sn	18 39 06.6	+1.4
MARCA	**Marcala la Paz**	**2.50**	**51**	P		**Pn**	**18 38 36.7**	**-0.3**
MARCA				S		Sn	18 39 07.7	+1.3
SARH	**Santa Rosa de**	**2.50**	**30**	P		**Pn**	**18 38 36.4**	**-0.6**
SARH				S		Sn	18 39 08.2	+1.8
HERN	**Volcan Telica**	**3.14**	**89**	P		**Pn**	**18 38 45.4**	**-0.3**
HERN				S		Sn	18 39 22.7	+0.7
POLN	**Al Sur del Vol**	**3.16**	**89**	P		**Pn**	**18 38 45.6**	**-0.3**
POLN				S		Sn	18 39 22.3	-0.1
ROCN	**Rota Cerro Neg**	**3.23**	**91**	S		Sn	18 39 25.5	+1.4
YUSH	**Yuscaran**	**3.40**	**66**	P		**Pn**	**18 38 49.6**	**+0.3**
COPN	**Copaltepe**	**3.40**	**97**	P		**Pn**	**18 38 49.0**	**-0.2**
MOMN	**Momotombo**	**3.43**	**93**	P		**Pn**	**18 38 49.7**	**0.0**
MOMN				S		Sn	18 39 29.3	+0.2
LIMN	**Finca el Limon**	**3.62**	**82**	P		**Pn**	**18 38 51.7**	**-0.7**
RCVN	**Varillal2**	**3.88**	**75**	P		**Pn**	**18 38 55.5**	**-0.5**
NANN	**Nandasmo**	**3.89**	**99**	S		Sn	**18 39 40.1**	**-0.4**
JTS	**Las Juntas de**	**5.49**	**114**	Pn		Pn	18 39 07.1	-11
	1.6nm,0.3s,baz=308,slow=19,SNR=1.8 3.6nm,0.3s							
CMIG	**Matias Romero**	**6.47**	**314**	Pn		**Pn**	**18 39 34.6**	**+3.3**
	0.2nm,0.3s,baz=129,slow=13,SNR=1.6 0.9nm,0.4s							
TXAR	**Lajitas Array**	**20.92**	**325**	P		Pn	18 42 41.1	+0.5
	0.8nm,0.7s,baz=136,slow=8.4,SNR=9.1 2.8nm,0.7s							
SCHQ	**Schefferville**	**45.91**	**19**	P		**P**	**18 46 15.1**	**-1.6**
	1.2nm,0.4s,baz=213,slow=2.7,SNR=7.3 1.2nm,0.4s							
YKA	**Yellowknife Ar**	**52.83**	**346**	P		**P**	**18 47 09.8**	**+0.5**
	0.2nm,0.3s,baz=151,slow=6.9,SNR=2.4 0.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**147.90**	**344**	PKPbc		**PKiKP**	**18 57 41.6**	**-0.1**
	0.3nm,0.3s,baz=6.4,slow=1.6,SNR=1.6							

*IDC **26** 18:39:04.5±2.7, 12°.64N×89°.39W, h0km, mb3.7/3, mbtmp3.7/4, ML2.9/2, Error ellipse: s-maj=63.7km s-min=32.6km az=38.0*

ISC 26 18:39:08.6±1.8, 12°.4N±0°.1×89°.72W±0°.09, h47km, n17, σ1°77/18, mb3.5/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JAYA	**Jayaque - finc**	**1.32**	**11**	*e*S		**Sn**	**18 39 49.6**	**+2.2**
JAYA	**Jayaque - finc**	**1.32**	**11**	*i* P		**Pn**	**18 39 29.4**	**-1.4**
JAYA	**Jayaque - finc**	**1.32**	**11**	*e*P		**Pn**	**18 39 29.5**	**-1.4**
BOQS	**Boqueron**	**1.44**	**17**	*e*P		**Pn**	**18 39 32.1**	**-0.4**
CEVE	**Cerro Verde**	**1.47**	**4**	*e*S		**Sn**	**18 39 52.3**	**+1.2**
CEVE	**Cerro Verde**	**1.47**	**4**	*e*P		**Pn**	**18 39 32.3**	**-0.7**
COEG	**Centro de Oper**	**1.50**	**33**	*e*P		**Pn**	**18 39 34.4**	**+1.1**
NUBE	**Las Nubes**	**1.54**	**358**	*i* P		**Pn**	**18 39 31.6**	**-2.2**
CNCH	**Conchagua**	**2.06**	**63**	*e*P		Pn	18 39 45.7	+4.9
MTO3	**Montecristo**	**2.07**	**10**	*i* P		**Pn**	**18 39 40.2**	**-0.9**
APG	**El Apazote**	**2.73**	**345**	Pn		**Pn**	**18 39 48.3**	**-2.0**
	1.2nm,0.3s,baz=126,slow=12,SNR=5.8							
APG				Sn		**Sn**	**18 40 21.6**	**-0.6**
	1.1nm,0.3s,baz=166,slow=10,SNR=5.7							
APG	**El Apazote**	**2.73**	**345**	*i* P		**Pn**	**18 39 48.2**	**-2.0**
CMIG	**Matias Romero**	**6.87**	**314**	Pn		**Pn**	**18 40 46.6**	**-0.2**
	0.4nm,0.3s,baz=128,slow=19,SNR=2.5							
CMIG				Sn		**Sn**	**18 42 08.1**	**+4.4**
	0.4nm,0.3s,baz=90,slow=20,SNR=1.3 2.9nm,0.5s							
TXAR	**Lajitas Array**	**21.30**	**325**	P		**P**	**18 43 52.5**	**+1.0**
	1.3nm,0.7s,baz=139,slow=9.0,SNR=12 1.3nm,0.7s							
SCHQ	**Schefferville**	**46.04**	**18**	P		**P**	**18 47 26.8**	**-0.7**
	2.9nm,0.7s,baz=222,slow=7.3,SNR=7.5 2.9nm,0.7s							
YKA	**Yellowknife Ar**	**53.14**	**346**	P		**P**	**18 48 21.0**	**-0.4**
	0.4nm,0.8s,baz=150,slow=7.1,SNR=4.5 0.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**148.22**	**344**	PKPbc		**PKPab**	**18 58 53.0**	**-0.4**
	0.8nm,0.7s,baz=13,slow=2.0,SNR=5.5							

*SNET **26** 18:39:12.4±5.8, 12°.83N×89°.94W, h3km, ML4.1, Presumed earthquake*
*GCG **26** 18:39:16.1±0.3, 13°.10N×89°.90W, h30km±5km, MD4.5, Presumed earthquake*
*IDC **26** 18:39:19.4±3.2, 13°.09N×89°.33W, h0km, mb3.9/5, mbtmp3.9/6, ML2.9/2, Error ellipse: s-maj=69.4km s-min=37.5km az=20.0*
*CATAC **26** 18:39:20.6±1.1, 13°.N±5°×9°.0W±°, h1km±5km, M4.1/18, MLv4.1/18, Error ellipse: s-maj=12.0km s-min=6.6km az=15.4, confirmed*

ISC 26 18:39:20.3±2.4, 12°.6N±0°.1×90°.16W±0°.07, h29km±12km, n31, σ0°86/45, mb4.1/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LALI	**Alcalda de L**	**1.19**	**44**	P		**Pb**	**18 39 41.9**	**-0.4**
LALI				S		Sn	18 39 55.9	-0.2
FAME	**Alcaldia de Sa**	**1.22**	**7**	P		**Pb**	**18 39 42.9**	**+0.1**
FAME				S		Sb	18 39 58.8	+0.6
JAYA	**Jayaque - finc**	**1.24**	**34**	P		Pn	18 39 42.1	+0.3
JAYA				S		Sn	18 39 57.6	0.0
CEVE	**Cerro Verde**	**1.30**	**24**	P		**Pb**	**18 39 44.6**	**+0.2**
CEVE				S		Sb	18 40 01.5	+0.6
NUBE	**Las Nubes**	**1.32**	**16**	P		**Pb**	**18 39 44.2**	**-0.5**
NUBE				S		Sn	18 40 00.3	+0.7
PMON	**Piamonte**	**1.36**	**37**	P		**Pb**	**18 39 45.7**	**+0.4**
PMON				S		Sn	18 40 00.6	0.0
PANCS	**Alcalda de**	**1.37**	**44**	P		**Pb**	**18 39 44.8**	**-0.6**
PANCS				S		Sn	18 40 00.8	+0.1
CEDA	**San Andres**	**1.39**	**32**	P		**Pb**	**18 39 45.7**	**0.0**
CEDA				S		Sb	18 40 03.0	-0.1
LOMA	**Loma Larga**	**1.40**	**44**	P		**Pn**	**18 39 44.3**	**+0.3**
LOMA				S		Sn	18 40 00.8	-0.8
SEMO	**Seminario San**	**1.41**	**40**	P		**Pb**	**18 39 46.1**	**0.0**
UEES	**Universidad Ev**	**1.41**	**40**	P		**Pn**	**18 39 44.7**	**+0.6**
UEES				S		Sb	18 40 03.1	-0.5
LOAL	**Lomas de Alarc**	**1.41**	**15**	P		**Pb**	**18 39 46.4**	**+0.2**
UTEC	**Universidad Te**	**1.42**	**41**	P		**Pn**	**18 39 44.7**	**+0.5**
UTEC				S		Sb	18 40 03.5	-0.5
SLOZ	**Alcaldia de Sa**	**1.44**	**15**	P		**Pb**	**18 39 47.2**	**+0.7**
COEG	**Centro de Oper**	**1.59**	**52**	P		**Pn**	**18 39 47.6**	**+1.0**
COEG				S		Sn	18 40 04.6	-1.6
PAVA	**Las Pavas**	**1.61**	**48**	P		**Pn**	**18 39 48.1**	**+1.2**
PAVA				S		Sn	18 40 08.2	+1.5
TECO	**Alcaldia de Te**	**1.62**	**56**	P		**Pn**	**18 39 47.1**	**+0.1**
TECO				S		Sn	18 40 08.5	+1.5
SCLA	**Alcaldia de Sa**	**1.76**	**52**	P		**Pn**	**18 39 49.9**	**+1.0**
SCLA				S		Sn	18 40 12.3	+2.0
PQSS	**Presa 15 de Se**	**1.85**	**57**	P		**Pn**	**18 39 50.9**	**+0.8**
MTO3	**Montecristo**	**1.93**	**24**	P		**Pb**	**18 39 54.1**	**-0.9**
MTO3				S		Sb	18 40 18.3	-0.4
APG	**El Apazote**	**2.38**	**353**	Pn		**Pn**	**18 39 57.5**	**-0.2**
	1.4nm,0.3s,baz=123,slow=12,SNR=6.1							
CSGN	**Cosiguina Volc**	**2.56**	**82**	P		**Pn**	**18 40 01.4**	**+1.4**
TGUH	**Tegucigalpa,Un**	**3.15**	**63**	P		**Pn**	**18 40 07.6**	**-0.5**
YUSH	**Yuscaran**	**3.49**	**67**	P		**Pn**	**18 40 11.3**	**-1.4**
CMIG	**Matias Romero**	**6.37**	**315**	Pn		Pn	18 40 58.4	+6.2
	0.8nm,0.3s,baz=95,slow=12,SNR=4.2 3.3nm,0.5s							
TXAR	**Lajitas Array**	**20.83**	**325**	P		Pn	18 44 05.5	+3.2
	1.7nm,0.7s,baz=138,slow=8.7,SNR=9.4 1.7nm,0.7s							
SCHQ	**Schefferville**	**45.91**	**19**	P		**P**	**18 47 38.5**	**-1.7**
	6.2nm,0.8s,baz=223,slow=10,SNR=8.9 6.2nm,0.8s							
YKA	**Yellowknife Ar**	**52.77**	**346**	P		**P**	**18 48 32.9**	**+0.4**
	0.5nm,0.7s,baz=151,slow=6.8,SNR=6.8 0.5nm,0.7s							
FRB	**Frobisher Bay**	**53.27**	**12**	P		**P**	**18 48 34.9**	**-1.2**
	2.1nm,0.7s,baz=211,slow=12,SNR=4.6 2.1nm,0.7s							
RES	**Resolute Bay**	**62.10**	**359**	P		**P**	**18 49 38.6**	**+0.6**
	0.8nm,0.7s,baz=159,slow=8.6,SNR=5.0 0.8nm,0.7s							
CMAR	**Chiang Mai Arr**	**147.83**	**344**	PKPbc		**PKPab**	**18 59 06.2**	**+0.4**
	1.7nm,0.8s,baz=12,slow=3.1,SNR=9.8							

IDC 26 18:42:46.5±6.3, 12°.46S×167°.58E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=328.5km s-min=31.4km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.73**	**253**	P		P	18 49 20.8	-0.4
	0.4nm,0.7s,baz=78,slow=7.9,SNR=2.1 0.4nm,0.7s							
ASAR	**Alice Springs**	**33.81**	**246**	P		P	18 49 30.8	+0.1
	0.7nm,0.7s,baz=74,slow=8.9,SNR=14 0.7nm,0.7s							
ILAR	**Eielson Array**	**84.29**	**18**	P		P	18 55 19.9	0.0
	0.9nm,0.6s,baz=231,slow=5.6,SNR=15 0.9nm,0.6s							

*BER **26** 18:47:35.8±0.3, 71°.14N×8°.23W, h20km±3km, ML2.8, Confirmed Earthquake*

ISC 26 18:47:34.0±1.2, 71°.29N±0°.07×8°.6W±0°.2, h10km, n6, σ1°30/12, 2C-1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.27**	**169⇑**	*i*P		**Pg**	**18 47 40.1**	**+0.7**
JNW				*e*S		**Sg**	**18 47 43.3**	**+0.3**
JNW				IAML			18 47 45.5	
	comp=Z,1μm,0.4s							
JMIC	**Jan Mayen**	**0.31**	**175**	*e*P		**Pb**	**18 47 40.6**	**-0.9**
JMIC				*e*S		**Sg**	**18 47 44.2**	**0.0**
JMIC				IAML			18 47 46.8	
	comp=Z,772nm,0.4s							
JNE	**Jan Mayen East**	**0.32**	**163⇑**	*i*P		**Pg**	**18 47 40.3**	**0.0**
JNE				*e*S		**Sg**	**18 47 43.7**	**-0.8**
JNE				IAML			18 47 44.6	
	comp=Z,1μm,0.1s							
JMI	**Jan Mayen**	**0.37**	**188⇓**	*i*P		**Pb**	**18 47 42.0**	**-0.6**
JMI				*e*S		**Sg**	**18 47 46.3**	**+0.2**
JMI				IAML			18 47 48.0	
	comp=Z,689nm,0.2s							
DBG	**Daneborg**	**4.59**	**317**	*i* P		**Pn**	**18 48 44.8**	**+1.5**
DBG				*i* S		**Sn**	**18 49 34.7**	**-1.8**
DAG	**Danmarks Havn**	**6.16**	**338**	*i* P		**Pn**	**18 49 06.5**	**+1.7**
DAG				*i* S		**Sn**	**18 50 13.1**	**-2.0**

IDC 26 19:02:02.7±3.3, 37°.60N×96°.52E, h0km, mb3.4/1, mbtmp3.3/5, ML3.1/4, MS3.0/1, Error ellipse: s-maj=75.8km s-min=19.1km az=25.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LZDM	**Lanzhou Array**	**5.98**	**104**	Pn		Pn	19 03 33.5	+0.6
	baz=291,slow=15							
LZDM				Pg		Pb	19 03 52.6	+4.5
	baz=281,slow=16							
LZDM				Lg		Lg	19 05 11.7	
	baz=280,slow=33 0.9nm,0.3s							
SONM	**Songino Array**	**12.53**	**32**	Pn		Pn	19 05 02.5	+0.2
	0.2nm,0.3s,baz=216,slow=15,SNR=9.3 0.7nm,0.5s							
MKAR	**Makanchi Array**	**13.97**	**316**	Pn		Pn	19 05 17.9	-4.1
	0.1nm,0.3s,baz=127,slow=14,SNR=5.4 0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**18.28**	**321**	P		Pn	19 06 16.8	-0.8
	baz=135,slow=11,SNR=4.9 0.3nm,0.5s							
BVAR	**Borovoye Array**	**23.81**	**319**	P		P	19 07 17.1	0.0
	0.7nm,0.6s,baz=134,slow=10,SNR=2.5 0.7nm,0.6s							
KLR	**Kul'dur**	**27.86**	**54**	LR		LR	19 18 55.0	
	comp=Z,33nm,21.8s,baz=34,slow=36							

*NNC **26** 19:19:29.1±0.3, 43°.31N×77°.59E, h0km, mb2.2, mpv3.1, Error ellipse: s-maj=3.8km s-min=1.6km az=167.0*
*SOME **26** 19:19:29.9, 43°.30N×77°.58E, h15km*
*KRNET **26** 19:19:29.5±0.1, 43°.30N×77°.58E, h19km, mb2.4*
*KNET **26** 19:19:30.7±0.5, 43°.24N×77°.49E, h19km±3km, ml1.9, Error ellipse: s-maj=5.2km s-min=3.5km az=134.0*

ISC 26 19:19:30.1±0.9, 43°.30N±0°.02×77°.54E±0°.01, h14km±7km, n51, σ1°61/99, 20C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KOTS	**Kotyrbulak**	**0.32**	**259**	P		**Pg**	**19 19 36.9**	**+0.1**
	30nm,0.2s							
KOTS				S		**Sg**	**19 19 41.4**	**+0.1**
	113nm,0.2s							
KOTS	**Kotyrbulak**	**0.32**	**259**	*e*P		**Pg**	**19 19 36.9**	**+0.1**
KOTS				*e*S		**Sg**	**19 19 41.9**	**+0.6**
KOTS	**Kotyrbulak**	**0.32**	**259**	*e*P		**Pg**	**19 19 36.9**	**+0.1**
	30nm,0.2s							
KOTS				*e*S		**Sg**	**19 19 41.9**	**+0.6**
	113nm,0.2s							
MDOK	**Medeo**	**0.38**	**250**	Pg		**Pg**	**19 19 37.8**	**-0.1**
	7.0nm,0.1s							
MDOK				Lg		Lg	19 19 43.2	
	53nm,0.2s							
KNDC	**Almaty**	**0.43**	**260**	⇓P		**Pg**	**19 19 36.8**	**-1.9**
	2.6nm,0.2s							
KNDC				⇓S		**Sg

KST	**Kastek**	**1.18**	**258**	P		**Pn**	**19 19 51.9**	**-0.4**
	8.4nm,0.2s							
KST				S		**Sb**	**19 20 07.6**	**+0.1**
	15nm,0.2s							
KST	**Kastek**	**1.18**	**258**	*eP*		**Pn**	**19 19 51.9**	**-0.4**
	8.4nm,0.2s							
KST				*eS*		**Sn**	**19 20 08.0**	**-0.2**
	15nm,0.2s							
KDJ	**Kajisay**	**1.19**	**193**	⇑*i*P		**Pb**	**19 19 52.1**	**-0.5**
KDJ				⇑*i*S		**Sn**	**19 20 08.2**	**-0.4**
DGS	**Degeres**	**1.29**	**268**	P		**Pb**	**19 19 54.2**	**0.0**
	4.2nm,0.1s							
DGS				S		**Sb**	**19 20 11.1**	**+0.4**
	12nm,0.1s							
DGS	**Degeres**	**1.29**	**268**	*eP*		**Pn**	**19 19 53.7**	**-0.1**
	8.4nm,0.3s							
DGS				*eS*		**Sb**	**19 20 11.1**	**+0.4**
	12nm,0.1s							
SHLS	**Shalkode**	**1.41**	**95**	P		**Pg**	**19 20 01.1**	**+3.8**
	1.7nm,0.1s							
SHLS				S		**Sg**	**19 20 23.1**	**+7.4**
	6.5nm,0.1s							
SHLS	**Shalkode**	**1.41**	**95**	*eP*		**Pg**	**19 20 00.5**	**+3.2**
	1.7nm,0.1s							
SHLS				*eS*		**Sg**	**19 20 22.9**	**+7.3**
	6.5nm,0.1s							
KRBS	**Karabastau**	**1.41**	**287**	P		**Pb**	**19 19 56.0**	**-0.3**
	6.3nm,0.1s							
KRBS				S		**Sb**	**19 20 14.5**	**+0.4**
	24nm,0.1s							
KRBS	**Karabastau**	**1.41**	**287**	*eP*		**Pn**	**19 19 55.6**	**+0.2**
	6.3nm,0.1s							
KRBS				*eS*		**Sb**	**19 20 14.5**	**+0.4**
	24nm,0.1s							
ULHL	**Ulahol**	**1.42**	**223**	⇑P		**Pb**	**19 19 56.1**	**-0.3**
	2.4nm,0.2s							
ULHL				⇑S		**Sb**	**19 20 14.9**	**+0.4**
	10nm,0.2s							
ULHL	**Ulahol**	**1.42**	**223**	⇑*i*P		**Pb**	**19 19 56.0**	**-0.4**
ULHL				⇑*i*S		**Sb**	**19 20 14.7**	**+0.3**
BOOM	**Boomskoye usch**	**1.42**	**236**	⇓*i*P		**Pb**	**19 19 56.1**	**-0.4**
BOOM				⇓*i*S		**Sb**	**19 20 14.9**	**+0.3**
PDGK	**Podgornoye**	**1.43**	**88**	⇑P		**Pn**	**19 19 54.7**	**-0.9**
	0.6nm,0.2s							
PDGK				⇑S		**Sn**	**19 20 12.4**	**-1.8**
	1.3nm,0.2s							
TKM2	**Tokmak 2**	**1.47**	**256**	⇑P		**Pb**	**19 19 56.7**	**-0.6**
	2.7nm,0.1s							
TKM2				⇑S		**Sb**	**19 20 17.1**	**+1.1**
	16nm,0.1s							
TKM2	**Tokmak 2**	**1.47**	**256**	⇑*i*P		**Pb**	**19 19 56.9**	**-0.4**
TKM2				⇑*i*S		**Sb**	**19 20 16.8**	**+0.9**
KNOS	**Konyrlen**	**1.59**	**48**	P		**Pb**	**19 19 58.7**	**-0.7**
	1.0nm,0.1s							
KNOS				S		**Sb**	**19 20 18.9**	**-0.6**
	17nm,0.2s							
TDK	**Taldyqorghan**	**1.82**	**20**	P		**Pb**	**19 20 02.6**	**-0.5**
	11nm,0.2s							
TDK				S		**Sb**	**19 20 25.5**	**-0.2**
	14nm,0.1s							
TDK	**Taldyqorghan**	**1.82**	**20**	*eP*		**Pb**	**19 20 02.4**	**-0.8**
	11nm,0.2s							
TDK				*eS*		**Sb**	**19 20 25.6**	**-0.2**
	14nm,0.1s							
DJR	**Jarkent**	**1.93**	**57**	P		**Pb**	**19 20 04.7**	**-0.4**
	1.0nm,0.1s							
DJR				S		**Sb**	**19 20 29.1**	**0.0**
	6.1nm,0.2s							
DJR	**Jarkent**	**1.93**	**57**	*eP*		**Pb**	**19 20 04.3**	**-0.9**
	1.0nm,0.1s							
DJR				*eS*		**Sb**	**19 20 29.1**	**0.0**
	6.1nm,0.2s							
KBK	**Karagaybulak**	**2.01**	**252**	⇑P		**Pb**	**19 20 05.9**	**-0.5**
	5.8nm,0.2s							
KBK				⇓S		**Sg**	**19 20 33.9**	**-0.7**
	12nm,0.2s							
CHMS	**Chumysh**	**2.06**	**263**	⇓P		**Pb**	**19 20 06.4**	**-0.9**
	1.6nm,0.1s							
CHMS				⇓S		**Sb**	**19 20 34.1**	**+1.3**
	6.3nm,0.2s							
USP	**Ospenovka**	**2.22**	**270**	⇑P		**Pb**	**19 20 08.8**	**-1.2**
	2.0nm,0.2s							
USP				⇓S		**Sb**	**19 20 38.9**	**+1.6**
	5.4nm,0.2s							
AAK	**Ala-Archa**	**2.33**	**255**	⇑P		**Pb**	**19 20 10.7**	**-1.3**
	1.6nm,0.3s							
AAK				⇑S		**Sb**	**19 20 41.3**	**+0.7**
	2.1nm,0.2s							
AAK	**Ala-Archa**	**2.33**	**255**	⇓Pn		**Pb**	**19 20 10.9**	**-1.1**
	0.1nm,0.3s							
AAK				⇑Sn		**Sb**	**19 20 43.3**	**+2.7**
	1.3nm,0.6s							
KAPS	**Kapalarasan**	**2.38**	**33**	Pg		**Pb**	**19 20 12.5**	**-0.2**
	1.0nm,0.1s							
KAPS				Lg		Lg	19 20 42.9	
	10nm,0.1s							
MRKS	**Merke**	**3.21**	**262**	Pg		**Pb**	**19 20 28.7**	**+1.8**
	0.3nm,0.1s							
MRKS				Lg		Lg	19 21 10.3	
	1.9nm,0.2s							
MRKS	**Merke**	**3.21**	**262**	*eP*		**Pb**	**19 20 28.1**	**+1.2**
	1.5nm,0.5s							
MRKS				*eS*		**Sg**	**19 21 10.3**	**-2.9**
	2.5nm,0.5s							
MK31	**Makanchi Array**	**4.86**	**42**	⇑Pg		**Pb**	**19 20 56.9**	**+2.0**
	0.1nm,0.3s							
MK31				⇓Sn		**Sn**	**19 21 38.7**	**0.0**
MK31				Lg		Lg	19 21 59.8	
	0.1nm,0.2s,baz=224,slow=29,SNR=4.7							

IDC 26 19:38:02.7±1.7, 1°80N×127°22E, h0km, mb3.5/4, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=118.4km s-min=20.0km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.83**	**184**	P	Pn	19 42 36.9	+0.2
	0.1nm,0.3s,baz=6.4,slow=14,SNR=1.7						
	5.8nm,1.1s						
WRA	**Warramunga Arr**	**22.71**	**162**	P	P	19 43 04.9	-1.4
	1.1nm,0.4s,baz=339,slow=11,SNR=24						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**26.13**	**166**	P	P	19 43 39.1	+0.4
	0.2nm,0.5s,baz=345,slow=7.5,SNR=4.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.41**	**326**	P	P	19 48 07.3	+0.1
	0.2nm,0.4s,baz=116,slow=7.8,SNR=6.6						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.62**	**328**	P	P	19 48 35.3	-0.1
	0.6nm,0.5s,baz=129,slow=6.1,SNR=8.1						
	0.6nm,0.5s						

*FCIAR **26** 19:46:11.0, 77°.42N×7°.88E, h10km*

*IDC **26** 19:46:14.4±0.4, 77°.42N×7°.32E, h0km, mb4.1/24, mbtmp4.2/30, ML3.4/4, MS3.9/58, Error ellipse: s-maj=11.3km s-min=8.9km az=29.0*

*BER **26** 19:46:15.8±3.6, 77°.60N×7°.63E, h10km, Mw4.8, ML4.6(NAO), Confirmed Earthquake*

*NEIC **26** 19:46:15.6±1.5, 77°.47N±0°.07×7°.3E±0°.4, h10km±1km, mb4.6/141, Error ellipse: s-maj=13.5km s-min=11.1km az=263.0*

*GCMT **26** 19:46:16.6±0.3, 77°.47N±0°.03×7°.2E±0°.1, h12km, MW4.7/88, Moment Tensor Solution. s12,c15; s88,c119; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~1.33±.06; Mθθ0.31±.05; Mϕϕ 1.02±.05; Mrθ 0.62±.22; Mrϕ 0.74±.04; Mθr~0.02±.19; Best double couple: M0 1.54600×10^16 NP1:ϕs 13.00000°, δ42.00000°, λ-121.00000°. NP2: ϕs 232.00000°, δ55.00000°, λ-65.00000°. Principal axes: T 1.5250, Plg7.0000°, Azm304.0000°; N 0.0400, Plg20.0000°, Azm37.0000°; P -1.5670, Plg68.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KOLA **26** 19:46:16.9, 77°.49N×9°.24E, h0km, ML3.2 Error ellipse: s-maj=15.2km s-min=9.4km az=90.0, Greenland sea*

*DNK **26** 19:46:16.5±4.8, 77°.45N×7°.65E, h36km±38km, ML2.5, Presumed earthquake*

*NAO **26** 19:46:17.9±0.2, 77°.41N×8°.06E, h15km, ML3.2*

ISC 26 19:46:15.2±2.7, 77°.48N±0°.04×7°.38E±0°.04, h10km±17km, n263, σ2s78/213, mb4.5/92, MS3.9/56, 1C-2D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRBA	**Barentsburg A**	**1.57**	**65**	Pb	**Pn**	**19 46 40.2**	**-2.8**
BRBA				Sb	**Sn**	**19 46 58.2**	**-5.1**
BRBA	**Barentsburg A**	**1.57**	**65**	*eP*	**Pn**	**19 46 40.3**	**-2.7**
BRBA				*eS*	**Sn**	**19 46 58.0**	**-5.4**
BRBA				IAML		19 47 01.5	
	comp=Z,764nm,0.6s						
BRBB	**Barentsburg B**	**1.58**	**64**	Pb	**Pn**	**19 46 40.4**	**-2.8**
BRBB				Sb	**Sn**	**19 46 58.4**	**-5.2**
BRBB	**Barentsburg B**	**1.58**	**64**	*eP*	**Pn**	**19 46 40.4**	**-2.8**
BRBB				*eS*	**Sn**	**19 46 58.0**	**-5.7**
BRBB	**Barentsburg B**	**1.58**	**64**	P	**Pn**	**19 46 40.0**	**-3.2**
BRBB				S	**Sn**	**19 46 55.7**	**-7.9**
KBS	**Kingsbay**	**1.73**	**31**	Pn	**Pn**	**19 46 42.4**	**-3.0**
KBS	**Kingsbay**	**1.73**	**31**	⇓*i*P	**Pn**	**19 46 42.5**	**-2.8**
KBS				*eS*	**Sn**	**19 47 02.7**	**-4.7**
KBS	**Kingsbay**	**1.73**	**31**	*i* P	**Pn**	**19 46 42.5**	**-2.8**
KBS				*i* S	**Sn**	**19 47 01.2**	**-6.2**
HSPB	**Hornsund (broa**	**1.87**	**101**	Pb	**Pn**	**19 46 44.4**	**-2.9**
HSPB				Sb	**Sn**	**19 47 03.8**	**-7.0**
HSPB	**Hornsund (broa**	**1.87**	**101**	*eP*	**Pn**	**19 46 44.3**	**-2.9**
HSPB				*eS*	**Sn**	**19 47 04.1**	**-6.6**
HSPB	**Hornsund (broa**	**1.87**	**101**	*eP*	**Pn**	**19 46 46.3**	**-0.9**
HSPB				*eS*	**Sn**	**19 47 08.5**	**-2.4**
HSPB	**Hornsund (broa**	**1.87**	**101**	P	**Pn**	**19 46 43.9**	**-3.3**
HSPB				S	**Sn**	**19 47 04.2**	**-6.6**
SPA0	**Spitsbergen Ar**	**2.03**	**65**	Pb	**Pn**	**19 46 48.1**	**-1.3**
	baz=239,slow=16						
SPA0				Sb	**Sn**	**19 47 10.9**	**-3.9**
	baz=239,slow=18						
SPA0	**Spitsbergen Ar**	**2.03**	**65**	*eP*	**Pn**	**19 46 48.0**	**-1.5**
SPA0				*eS*	**Sn**	**19 47 11.1**	**-3.7**
SPA0				IAML		19 47 14.2	
	comp=Z,720nm,1.0s						
SPA0	**Spitsbergen Ar**	**2.03**	**65**	*eP*	**Pn**	**19 46 49.0**	**-0.4**
SPA0				*eS*	**Sn**	**19 47 13.9**	**-0.9**
SPITS	**Spitsbergen Ar**	**2.03**	**65**	Pn	**Pn**	**19 46 48.0**	**-1.5**
	comp=Z,332nm,0.3s,baz=237,slow=14						
SPITS				Lg	Lg	19 47 09.6	
	baz=252,slow=29						
SPITS	**Spitsbergen Ar**	**2.03**	**65**	P	**Pn**	**19 46 47.5**	**-2.0**
SPITS				S	**Sn**	**19 47 10.4**	**-4.4**
SPB2	**Spitsbergen Ar**	**2.03**	**65**		**Pn**	**19 46 48.0**	**-1.5**
HOPEN	**Hopen**	**4.09**	**95**	Pn	**Pn**	**19 47 15.8**	**-1.8**
HOPEN				Sn	**Sn**	**19 47 58.9**	**-6.6**
HOPEN	**Hopen**	**4.09**	**95**	*eP*	**Pn**	**19 47 15.5**	**-2.1**
HOPEN				*eS*	**Sn**	**19 47 59.2**	**-6.3**
HOPEN				IAML		19 48 16.3	
	comp=Z,221nm,0.6s						
BJO1	**Bjornoya**	**4.11**	**131**	Pn	**Pn**	**19 47 16.3**	**-1.6**
BJO1				Sn	**Sn**	**19 47 59.2**	**-6.6**
BJO1	**Bjornoya**	**4.11**	**131**	*eP*	**Pn**	**19 47 16.2**	**-1.6**
BJO1				*eS*	**Sn**	**19 47 57.5**	**-8.3**
BJO1				IAML		19 48 02.5	
	comp=Z,75nm,0.9s						
BEA1	**Bear Island, N**	**4.11**	**131**	*eS*	**Sn**	**19 47 57.8**	**-8.1**
BEAR	**Bear Island, N**	**4.11**	**131**	Pn	**Pn**	**19 47 16.1**	**-1.8**
	baz=315,slow=14						
BEAR				Sn	**Sn**	**19 47 58.7**	**-7.3**
	baz=319,slow=28						
DAG	**Danmarks Havn**	**5.83**	**276**	*eP*	**Pn**	**19 47 38.9**	**-2.6**
DAG				*eS*	**Sn**	**19 48 40.4**	**-7.9**
DAG	**Danmarks Havn**	**5.83**	**276**	*i* P	**Pn**	**19 47 38.5**	**-3.0**
DAG				*i* S	Sn	19 48 39.0	-9.4
DAG				IAML		19 48 41.7	
	comp=Z,54nm,0.5s						
NOR	**Nord**	**5.96**	**325**	Pn	**Pn**	**19 47 40.9**	**-2.4**
NOR				Sn	**Sn**	**19 48 46.8**	**-4.7**
NOR	**Nord**	**5.96**	**325**	⇑*i*P	**Pn**	**19 47 40.3**	**-3.0**
NOR				*eS*	**Sn**	**19 48 46.5**	**-5.0**
NOR	**Nord**	**5.96**	**325**	*i* P	**Pn**	**19 47 40.9**	**-2.4**
NOR				*i* S	**Sn**	**19 48 46.0**	**-5.5**
NOR				IAML		19 48 54.1	
	comp=Z,13nm,0.4s						
DBG	**Daneborg**	**7.39**	**259**	Pn	**Pn**	**19 48 00.6**	**-2.3**
DBG	**Daneborg**	**7.39**	**259**	*eP*	**Pn**	**19 48 00.5**	**-2.4**
DBG				*eS*	Sn	19 49 16.8	-10
DBG	**Daneborg**	**7.39**	**259**	*i* P	**Pn**	**19 48 00.2**	**-2.7**
DBG				*i* S	Sn	19 49 13.6	-13
DBG				IAML		19 49 24.0	
	comp=Z,44nm,0.5s						
JNW	**Jan Mayen West**	**7.74**	**221**	*eP*	**Pn**	**19 48 07.1**	**-0.5**
JNE	**Jan Mayen East**	**7.75**	**221**	*eP*	**Pn**	**19 48 07.0**	**-0.8**
JMIC	**Jan Mayen**	**7.78**	**221**	Pn	**Pn**	**19 48 07.4**	**-0.9**
	comp=Z,39nm,0.3s,baz=94,slow=13,SNR=3.3						
JMI	**Jan Mayen**	**7.87**	**222**	*eP*	**Pn**	**19 48 08.8**	**-0.6**
ZFI2	**Zemlya Franca-**	**8.12**	**47**	*eP*	**Pn**	**19 48 10.3**	**-2.6**
ZFI2				*eS*	**Sn**	**19 49 42.4**	**-2.2**
OMEGA	**Omega**	**8.13**	**48**	*eP*	**Pn**	**19 48 10.3**	**-2.8**
OMEGA				*eS*	**Sn**	**19 49 42.4**	**-2.4**
HAMF	**Hammerfest**	**8.15**	**139**	Pn	**Pn**	**19 48 11.3**	**-2.1**
HAMF	**Hammerfest**	**8.15**	**139**	*eP*	**Pn**	**19 48 10.9**	**-2.4**
HAMF				*eS*	Sn	19 49 35.2	-10
HAMF				IAML		19 49 39.2	
	comp=Z,31nm,0.4s						
TRO	**Tromso**	**8.51**	**152**	Pn	**Pn**	**19 48 16.0**	**-2.2**
TRO	**Tromso**	**8.51**	**152**	*eP*	**Pn**	**19 48 16.1**	**-2.2**
TRO				*eS*	Sn	19 49 44.7	-9.4
JETT	**Jettan, Norway**	**8.74**	**149**	Pn	**Pn**	**19 48 19.8**	**-1.7**
JETT	**Jettan, Norway**	**8.74**	**149**	*eP*	**Pn**	**19 48 19.8**	**-1.7**
KIF	**Kilpisjarvi**	**9.31**	**149**	Pn	**Pn**	**19 48 27.0**	**-2.2**
KIF	**Kilpisjarvi**	**9.31**	**149**	*eP*	**Pn**	**19 48 27.0**	**-2.2**
KIF				*eS*	Sn	19 50 03.1	-11
ARA0	**ARCESS Array S**	**9.43**	**138**	Pn	**Pn**	**19 48 28.3**	**-2.5**
	baz=335,slow=12						
ARA0				Sn	Sn	19 50 04.5	-12
	baz=336,slow=22						
ARA0	**ARCESS Array S**	**9.43**	**138**	Pn	**Pn**	**19 48 28.3**	**-2.5**
ARA0				Sn	Sn	19 50 04.5	-12
ARCES	**ARCESS Array B**	**9.43**	**138**	Pn	**Pn**	**19 48 28.7**	**-2.1**
	comp=Z,1.6nm,0.3s,baz=328,slow=12,SNR=61						
ARCES				Sn	Sn	19 50 04.2	-12
	comp=Z,2.5nm,0.3s,baz=336,slow=26,SNR=10						
ARCES				LR	LR	19 52 12.1	
	comp=Z,600nm,18.4s,baz=348,slow=38						
	comp=Z,3.9nm,0.3s						
ARCES	**ARCESS Array B**	**9.43**	**138**		**Pn**	**19 48 29.5**	**-1.3**
ARCES	**ARCESS Array B**	**9.43**	**138**	P	**Pn**	**19 48 28.3**	**-2.5**
ARCES				S	Sn	19 50 06.2	-11
KEV	**Kevo**	**9.45**	**135**	Pn	**Pn**	**19 48 28.9**	**-2.3**
KEV	**Kevo**	**9.45**	**135**		**Pn**	**19 48 28.6**	**-2.5**
KEV	**Kevo**	**9.45**	**135**	*eP*	**Pn**	**19 48 28.9**	**-2.3**
KEV				*eS*	Sn	19 50 06.6	-11
VADS	**Vadso**	**9.51**	**129**	Pn	**Pn**	**19 48 30.8**	**-1.2**
VADS	**Vadso**	**9.51**	**129**	*eP*	**Pn**	**19 48 30.8**	**-1.2**
VADS				*eS*	Sn	19 50 08.0	-11
VADS				IAML		19 50 15.7	
	comp=Z,26nm,0.4s						
VADS	**Vadso**	**9.51**	**129**	P	**Pn**	**19 48 30.7**	**-1.2**
VADS				S	Sn	19 50 07.8	-11
LOF	**Lofoten**	**9.56**	**166**	*eP*	**Pn**	**19 48 31.4**	**-1.3**
KTK1	**Kautokeino**	**9.60**	**144**	Pn	**Pn**	**19 48 32.0**	**-1.3**
KTK1	**Kautokeino**	**9.60**	**144**	*eP*	**Pn**	**19 48 31.6**	**-1.6**
KTK1				*eS*	**Sn**	**19 50 12.1**	**-8.8**
KTK1				IAML		19 50 18.5	
	comp=Z,13nm,0.4s						
STEI	**Steigen**	**9.86**	**162**	*eP*	**Pn**	**19 48 36.3**	**-0.4**
HEF	**Hetta**	**10.22**	**144**	Pn	**Pn**	**19 48 40.1**	**-1.6**
HEF	**Hetta**	**10.22**	**144**	*eP*	**Pn**	**19 48 39.7**	**-2.0**
HEF				*eS*	Sn	19 50 25.9	-10
FAUS	**Fauske**	**10.41**	**163**	*eP*	**Pn**	**19 48 44.5**	**+0.2**
FAUS	**Fauske**	**10.41**	**163**	P	**Pn**	**19 48 44.7**	**+0.5**
SCO	**Scoresbysund**	**10.56**	**244**	Pn	**Pn**	**19 48 44.4**	**-1.9**
SCO	**Scoresbysund**	**10.56**	**244**	*eP*	**Pn**	**19 48 42.7**	**-3.5**
SCO				*eS*	Sn	19 50 27.7	-17
SCO				IAML		19 50 38.5	
	comp=Z,3.1nm,0.3s						
SALU	**Saltoluokta**	**10.65**	**156**	*eP*	**Pn**	**19 48 47.9**	**+0.2**
VAGH	**Vaagaholmen**	**10.94**	**168**	*eP*	**Pn**	**19 48 50.8**	**-0.7**
TERR	**Teriberka**	**11.33**	**122**	P	**Pn**	**19 48 53.1**	**-3.7**
TERR				S	Sn	19 50 49.5	-14
STOK	**Stokkvaagen**	**11.33**	**168**	*eP*	**Pn**	**19 48 56.7**	**-0.1**
LEIR	**Leirfjorden**	**11.55**	**168**	*eP*	**Pn**	**19 48 59.9**	**0.0**
MOR8	**Moi Rana**	**11.56**	**166**	*eP*	**Pn**	**19 48 59.6**	**-0.4**
NEEM	**North Greenlan**	**12.25**	**299**	*i* P	Pn	19 49 04.1	-5.5
NEEM				*eS*	Sn	19 51 07.8	-18
NEEM				IAML		19 51 19.3	
	comp=Z,8.7nm,0.2s						
APA0	**Apatity Array**	**12.36**	**129**	Pn	**Pn**	**19 49 08.4**	**-2.5**
	baz=331,slow=11						
APA0	**Apatity Array**	**12.36**	**129**	Pn	**Pn**	**19 49 08.4**	**-2.5**

APA0	**Apatity Array**	**12.36**	**129**	P		**Pn**	**19 49 10.2**	**-0.7**
APA0				S		Sn	19 51 11.8	-17
LVZ	**Lovozero**	**12.38**	**126**	Pn		**Pn**	**19 49 10.0**	**-1.3**
LVZ	**Lovozero**	**12.38**	**126**	S		Sn	19 51 16.1	-13
APA	**Apatity**	**12.46**	**129**	S		Sn	19 51 17.2	-14
SUMG	**Summit**	**12.48**	**271**			**Pn**	**19 49 10.8**	**-2.1**
SUMG	**Summit**	**12.48**	**271**	*i* P		**Pn**	**19 49 11.2**	**-1.8**
SUMG				IAML			19 51 29.7	
	comp=Z,3.0nm,0.3s							
NSS	**Namsos**	**13.09**	**171**	*eP*		**Pn**	**19 49 22.6**	**+1.7**
KVDA	**Kovda**	**13.17**	**131**	P		**Pn**	**19 49 19.4**	**-2.6**
KVDA				S		Sn	19 51 35.0	-13
BORG	**Borgarnes**	**15.49**	**230**	LR		LR	19 54 20.8	
	comp=Z,267nm,18.8s,baz=12,slow=32							
DOMB	**Dombas**	**15.52**	**177**	*eP*		**P**	**19 49 56.7**	**-1.6**
TULEG	**Thule**	**16.07**	**305**	Pn		Pn	19 49 51.0	-10
TULEG				IAmb		IAmb	19 50 05.5	
	comp=Z,56nm,1.0s							
NC204	**NORSAR Array S**	**16.32**	**174**	Pn		**Pn**	**19 50 05.2**	**+1.0**
NC303	**NORSAR Array S**	**16.38**	**173**			**Pn**	**19 50 04.7**	**-0.2**
NC405	**NORSAR Array S**	**16.51**	**173**	Pn		**Pn**	**19 50 06.6**	**+0.2**
NOA	**NORSAR Array B**	**16.57**	**173**	Pn		**Pn**	**19 50 06.6**	**-0.6**
	baz=354,slow=13,SNR=8.7							
NOA				LR		LR	19 55 41.1	
	comp=Z,202nm,19.9s,baz=350,slow=34							
	comp=Z,2.0nm,0.7s							
NC602	**NORSAR Array S**	**16.88**	**173**			**Pn**	**19 50 11.2**	**0.0**
LSH	**Leshukonskoye**	**17.14**	**116**	*eP*		**Pn**	**19 50 14.1**	**-0.3**
LSH				*eS*		**Sn**	**19 53 23.2**	**-1.5**
FIA1	**FINESS Array S**	**17.22**	**149**	Pn		**Pn**	**19 50 14.1**	**-1.3**
FINES	**FINESS Array B**	**17.22**	**149**	P		**Pn**	**19 50 13.9**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=359,slow=12,SNR=21							
FINES				LR		LR	19 57 06.3	
	comp=Z,410nm,18.6s,baz=348,slow=38							
	comp=Z,1.1nm,0.7s							
FINES	**FINESS Array B**	**17.22**	**149**	Pn		**Pn**	**19 50 13.7**	**-1.6**
HFS	**Hagfors**	**17.55**	**169**	P		**Pn**	**19 50 18.1**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=10,slow=9.0,SNR=7.9							
HFS				LR		LR	19 56 13.0	
	comp=Z,360nm,19.4s,baz=2.0,slow=34							
	comp=Z,5.1nm,0.7s							
SFJD	**Kangerlussuaq**	**19.47**	**270**	P		**P**	**19 50 41.0**	**-0.7**
	comp=Z,43nm,1.1s,baz=33,slow=11,SNR=11							
SFJD				LR		LR	19 58 25.9	
	comp=Z,256nm,20.6s,baz=28,slow=38							
SFJD	**Kangerlussuaq**	**19.47**	**270**			**P**	**19 50 41.1**	**-0.5**
SFJD				IAmb		IAmb	19 50 42.3	
	comp=Z,38nm,1.0s							
POIN	**Pond Inlet**	**20.53**	**302**			**P**	**19 50 51.8**	**-1.3**
RES	**Resolute Bay**	**21.80**	**316**	P		**P**	**19 51 06.8**	**0.0**
	comp=Z,5.2nm,0.9s,baz=25,slow=7.4,SNR=23							
RES				S		**S**	**19 54 59.1**	**-8.2**
	comp=Z,1.2nm,0.6s,baz=100,slow=17,SNR=2.7							
RES				LR		LR	19 59 27.3	
	comp=Z,518nm,19.2s,baz=29,slow=36							
	comp=Z,5.2nm,0.9s							
RES	**Resolute Bay**	**21.80**	**316**			**P**	**19 51 07.4**	**+0.6**
NRIK	**Noril'sk**	**22.24**	**67**	LR		LR	20 02 30.2	
	comp=Z,178nm,18.4s,slow=44							
EKA	**Eskdalemuir Ar**	**22.56**	**196**	P		**P**	**19 51 14.9**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=5.1,slow=8.8,SNR=3.6							
EKA				LR		LR	19 58 11.0	
	comp=Z,133nm,18.8s,baz=28,slow=32							
	comp=Z,0.6nm,0.6s							
KIRV	**Kirov**	**23.62**	**119**	LR		LR	20 00 58.2	
	comp=Z,200nm,19.8s,baz=344,slow=38							
NACGM	**Naroch**	**23.71**	**152**	*eP*		**P**	**19 51 28.8**	**+2.0**
	comp=Z,12nm,0.9s,baz=350							
ILON	**Igloolik, Nuna**	**23.99**	**299**			**P**	**19 51 28.2**	**-1.1**
MNK	**Minsk**	**24.23**	**150**	*i* P		**P**	**19 51 33.9**	**+2.3**
	comp=E,10.0nm,0.9s							
MNK				*i* P		**P**	**19 51 33.9**	**+2.3**
	comp=N,10.0nm,0.9s							
MNK				*i* P		**P**	**19 51 33.9**	**+2.3**
	comp=Z,13nm,0.8s,baz=350							
MNK				*i* PP		**PnPn**	**19 52 04.9**	**+4.0**
MNK				*i* PPP		PPP	19 52 12.8	
MNK				*i* S		**S**	**19 55 54.2**	**+4.6**
MNK				*i* SS		**SnSn**	**19 56 38.7**	**+7.5**
MNK				*i* SSS		SSS	19 56 51.9	
MNK				*i* LQ		LQ	19 59 18.6	
MNK				*i* LR		LR	19 59 59.6	
MNK				*i* LRM		MLR	20 01 19.3	
	comp=Z,314nm,17.3s							
MNK				*i* LRM		MLR	20 01 23.4	
	comp=E,276nm,17.7s							
MNK				*i* LRM		MLR	20 01 32.9	
	comp=N,90nm

BILL	Bilibino	34.14	14		P	**19 53 00.6**	**+1.0**
C16K	Lisburne Hills	34.40	355	IAmb	IAmb	19 53 08.2	
	comp=Z,7.5nm,1.1s						
AB31	Akbulak array	34.49	113		P	**19 53 03.5**	**+0.7**
AB31				IAmb	IAmb	19 53 09.9	
	comp=Z,8.3nm,1.3s						
ABKAR	Akbulak array	34.49	113		P	**19 53 03.3**	**+0.5**
RDOG	Red Dog Mine	34.57	354		P	**19 53 03.7**	**+0.4**
RDOG				IAmb	IAmb	19 53 09.8	
	comp=Z,9.7nm,0.9s						
G26K	Porcupine Rive	34.74	341	IAmb	IAmb	19 53 15.6	
	comp=Z,12nm,1.2s						
COLD	Coldfoot	34.88	345		P	**19 53 06.4**	**+0.4**
E18K	Tukpahlearik C	35.14	352	IAmb	IAmb	19 53 19.1	
	comp=Z,8.1nm,1.1s						
ZALV	Zalesovo Beam	35.39	85	P	P	**19 53 11.5**	**+1.0**
	comp=Z,3.9nm,0.8s,baz=330,slow=8.6,SNR=17						
ZALV				PcP	PcP	**19 55 40.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=330,slow=5.7,SNR=6.5						
ZALV				LR	LR	20 10 51.6	
	comp=Z,104nm,19.5s,baz=355,slow=42						
	comp=Z,3.9nm,0.8s						
ZALV	Zalesovo Beam	35.39	85		P	**19 53 10.2**	**-0.3**
ZALV					PcP	**19 55 40.0**	**0.0**
F19K	Shaleruckik Mo	35.63	350	IAmb	IAmb	19 53 27.0	
	comp=Z,14nm,1.5s						
G21K	Allakaket	35.76	347	IAmb	IAmb	19 53 18.1	
	comp=Z,11nm,1.4s						
YKAW3	Yellowknife Wh	35.77	318	IAmb	IAmb	19 53 15.9	
	comp=Z,7.9nm,0.9s						
YKAW1	Yellowknife Wh	35.83	318	IAmb	IAmb	19 53 16.3	
	comp=Z,11nm,1.2s						
YKA	Yellowknife Ar	35.84	318	P	P	**19 53 15.4**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=9.0,slow=8.7,SNR=33						
YKA				LR	LR	20 07 32.0	
	comp=Z,257nm,18.9s,baz=94,slow=36						
	comp=Z,1.8nm,0.8s						
YKA	Yellowknife Ar	35.84	318	P	P	**19 53 13.3**	**-1.0**
YAK	Yakutsk	36.33	42		P	**19 53 18.7**	**+0.3**
H21K	Melozitna Rive	36.58	346	IAmb	IAmb	19 53 27.2	
	comp=Z,11nm,1.4s						
KBZ	Khabaz	36.78	135	P	P	**19 53 24.5**	**+2.1**
	comp=Z,3.7nm,0.8s,baz=13,slow=4.0,SNR=7.9						
KBZ				LR	LR	20 08 56.3	
	comp=Z,185nm,19.6s,baz=16,slow=37						
	comp=Z,3.7nm,0.8s						
KURK	Kurchatov	37.07	93		P	**19 53 25.9**	**+1.1**
KURK				IAmb	IAmb	19 53 27.3	
	comp=Z,8.9nm,1.1s						
IL31		37.11	342	P	P	**19 53 24.9**	**-0.2**
IL31				IAmb	IAmb	19 53 37.7	
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	37.11	342	P	P	**19 53 27.4**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=2.3,slow=6.6,SNR=17						
ILAR				PcP	PcP	**19 55 45.2**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=333,slow=2.5,SNR=2.6						
ILAR				LR	LR	20 07 39.5	
	comp=Z,106nm,21.1s,baz=328,slow=35						
	comp=Z,1.9nm,0.9s						
ILAR	Eielson Array	37.11	342	P	P	**19 53 26.3**	**+1.1**
KURBB	Kurchatov Arra	37.13	93	P	P	**19 53 26.4**	**+1.0**
	comp=Z,4.8nm,0.9s,baz=337,slow=7.9,SNR=26						
KURBB				PcP	PcP	**19 55 46.0**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=335,slow=3.9,SNR=1.9						
KURBB				LR	LR	20 11 28.5	
	comp=Z,161nm,19.7s,baz=166,slow=41						
	comp=Z,4.8nm,0.9s						
J25K	Salcha River,	37.16	341	P	P	**19 53 25.9**	**+0.3**
H18K	Honhosa River	37.33	350	IAmb	IAmb	19 53 38.7	
	comp=Z,14nm,1.4s						
MMPY	Sheldon Lake,	37.85	330	IAmb	IAmb	19 53 35.6	
	comp=Z,22nm,1.5s						
ESDC	Sonseca Array	38.22	194	P	P	**19 53 36.0**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=3.7,slow=8.7,SNR=5.6						
	comp=Z,0.9nm,0.6s						
J19K	Poorman	38.38	348	IAmb	IAmb	19 53 46.6	
	comp=Z,13nm,1.4s						
BR131	Keskin Array S	39.45	148		P	**19 53 46.6**	**+1.4**
BRTR	Keskin Array B	39.45	148	P	P	**19 53 46.8**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=352,slow=6.9,SNR=11						
BRTR				LR	LR	20 11 43.8	
	comp=Z,114nm,21.0s,baz=6.5,slow=39						
	comp=Z,2.4nm,0.8s						
BRTR	Keskin Array B	39.45	148	P	P	**19 53 44.7**	**-0.6**
GNI	Garni	40.56	134	LR	LR	20 11 26.8	
	comp=Z,128nm,18.7s,baz=338,slow=37						
ARPR	Arapgir-MALATY	40.66	142	P	P	**19 53 56.5**	**+1.2**
ARPR				IAmb	IAmb	19 54 02.6	
	comp=Z,19nm,1.2s						
FFC	Flin Flon	41.15	304	P	P	**19 53 58.9**	**0.0**
FFC				IAmb	IAmb	19 54 00.9	
	comp=Z,14nm,1.5s						
MAKZ	Makanchi	41.49	92		P	**19 54 03.8**	**+1.9**
MAKZ				IAmb	IAmb	19 54 12.2	
	comp=Z,12nm,1.3s						
TLY	Talaya	41.51	69	LR	LR	20 14 05.5	
	comp=Z,72nm,19.5s,baz=334,slow=40						
MKAR	Makanchi Array	41.57	91	P	P	**19 54 04.0**	**+1.5**
	comp=Z,6.6nm,0.8s,baz=341,slow=7.0,SNR=72						
MKAR				LR	LR	20 15 51.9	
	comp=Z,219nm,18.1s,baz=319,slow=43						
	comp=Z,6.6nm,0.8s						
MKAR	Makanchi Array	41.57	91		P	**19 54 03.4**	**+0.8**
DLBC	Dease Lake	41.80	328	LR	LR	20 12 35.2	
	comp=Z,195nm,18.3s,baz=250,slow=38						
GAZ	Gaziantep	42.41	144	P	P	**19 54 11.7**	**+2.2**
GAZ				IAmb	IAmb	19 54 15.7	
	comp=Z,8.5nm,0.8s						
KKAR	Karatay Array	42.55	105		P	**19 54 12.1**	**+1.6**
AAK	Ala-Archa	43.84	101	LR	LR	20 16 16.4	
	comp=Z,205nm,18.3s,baz=348,slow=41						
AAK	Ala-Archa	43.84	101	P	P	**19 54 23.3**	**+2.1**
ULM	Lac du Bonnet	44.27	296	P	P	**19 54 24.9**	**+0.6**
	comp=Z,3.7nm,0.7s,baz=36,slow=3.5,SNR=6.8						
ULM				LR	LR	20 13 15.3	
	comp=Z,270nm,18.4s,baz=10.0,slow=37						
	comp=Z,3.7nm,0.7s						
KDAK	Kodiak Island	44.42	345	LR	LR	20 11 28.6	
	comp=Z,120nm,20.5s,baz=21,slow=34						
KDJ	Kajisay	44.90	99	IAmb	IAmb	19 54 35.2	
	comp=Z,5.0nm,0.8s						
TARG	Taragay, Kyrgy	45.42	98	IAmb	IAmb	19 54 40.7	
	comp=Z,6.0nm,0.8s						
BTK	Batken	45.53	106	IAmb	IAmb	19 54 45.7	
	comp=Z,9.9nm,1.3s						
SONM	Songino Array	45.72	68	P	P	**19 54 37.2**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=339,slow=7.8,SNR=16						
SONM				LR	LR	20 16 32.1	
	comp=Z,125nm,19.6s,baz=342,slow=40						
	comp=Z,2.1nm,0.8s						
SONM	Songino Array	45.72	68	P	P	**19 54 36.7**	**+0.6**
ULN	Ulaanbaatar	45.83	68		P	**19 54 38.0**	**+1.0**
ULN				IAmb	IAmb	19 54 39.7	
	comp=Z,8.1nm,0.8s						
SADO	Sadowa	46.02	279	LR	LR	20 14 46.0	
	comp=Z,272nm,18.9s,baz=336,slow=37						
WUS	Wushi	46.24	97	IAmb	IAmb	19 54 43.6	
	comp=Z,6.8nm,0.9s						
MMAI	Mount Meron Ar	46.28	147	LR	LR	20 16 30.7	
	comp=Z,40nm,20.1s,baz=335,slow=39						
HILR	Hailar Array B	46.65	56	P	P	**19 54 44.4**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=29,slow=3.4,SNR=4.6						
	comp=Z,2.3nm,0.7s						
ASF	Jabal al Asfar	47.30	145	LR	LR	20 17 18.8	
	comp=Z,60nm,19.4s,baz=26,slow=39						
HEH	HeiHe	47.30	49	*eP*	P	**19 54 49.3**	**+1.1**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SHAA	Shahritus	47.38	110	IAmb	IAmb	19 54 58.1	
	comp=Z,7.2nm,0.8s						
KSH2	Kashi	47.42	101	P	P	**19 54 52.3**	**+2.8**
KSH2				pmax	pmax		
	comp=Z,2.0nm,1.4s						
BBB	Bella Bella	47.69	324	LR	LR	20 14 11.3	
	comp=Z,131nm,19.8s,baz=40,slow=35						
EIL	Elat	49.53	148	LR	LR	20 17 58.8	
	comp=Z,69nm,20.4s,baz=332,slow=38						
SHEM	Shemya Is, Ala	49.80	11	LR	LR	20 17 25.1	
	comp=Z,33nm,18.2s,baz=90,slow=38						
NEW	Newport	49.95	314	P	P	**19 55 10.1**	**+1.4**
	comp=Z,5.3nm,0.9s,baz=36,slow=7.9,SNR=6.7						
NEW				LR	LR	20 16 17.3	
	comp=Z,126nm,20.0s,baz=16,slow=36						
	comp=Z,5.3nm,0.9s						
NEW	Newport	49.95	314	IAmb	IAmb	19 55 11.5	
	comp=Z,5.2nm,0.9s						
B08A	Colville Reser	50.20	316	IAmb	IAmb	19 55 13.2	
	comp=Z,7.5nm,0.8s						

GNW	Green Mountain	51.49	319		P	**19 55 21.3**	**+1.1**
GNW				IAmb	IAmb	19 55 23.9	
	comp=Z,7.3nm,0.9s						
BNX	BinXian	51.67	51	⇓P	P	**19 55 21.3**	**-0.3**
BNX				pmax	pmax		
	comp=Z,9.0nm,1.1s						
E07A	Sunnyside	52.03	316	IAmb	IAmb	19 55 26.8	
	comp=Z,7.5nm,0.9s						
LON	Longmire	52.14	318	IAmb	IAmb	19 55 27.7	
	comp=Z,16nm,1.4s						
HAWA	Hanford	52.15	316	IAmb	IAmb	19 55 27.9	
	comp=Z,12nm,1.1s						
YHL	Hebgen Lake	52.29	308	IAmb	IAmb	19 55 29.1	
	comp=Z,7.1nm,1.0s						
GTA2	Gaotai	52.33	78	P	P	**19 55 28.5**	**+1.7**
GTA2				pP	pwP	19 55 33.8	+0.7
GTA2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA2				LR	LR		
	comp=N,210nm,17.9s						
GTA2				LR	LR		
	comp=E,190nm,16.3s						
GTA2				LR	LR		
	comp=Z,300nm,20.7s						
YPP	Pitchstone Pla	52.78	307	IAmb	IAmb	19 55 33.9	
	comp=Z,7.8nm,1.0s						
G08A	Pilot Rock	53.13	315	IAmb	IAmb	19 55 35.8	
	comp=Z,11nm,1.4s						
BMO	Blue Mountains	53.30	313	IAmb	IAmb	19 55 40.1	
	comp=Z,9.2nm,1.1s						
K22A	Casper	53.59	303	IAmb	IAmb	19 55 37.2	
	comp=Z,9.5nm,0.9s						
PDAR	Pinedale Array	54.02	306	P	P	**19 55 39.9**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=45,slow=4.6,SNR=8.5						
PDAR				LR	LR	20 19 04.9	
	comp=Z,174nm,20.5s,baz=358,slow=36						
	comp=Z,1.4nm,0.9s						
PDAR	Pinedale Array	54.02	306	P	P	**19 55 39.5**	**+0.2**
HLID	Hailey	54.09	310	IAmb	IAmb	19 55 42.0	
	comp=Z,6.5nm,1.2s						
I07A	Izee	54.40	315	IAmb	IAmb	19 55 45.5	
	comp=Z,5.4nm,0.9s						
GOMU	GeErMu	54.43	83	P	P	**19 55 43.5**	**+1.0**
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WIFE	Three Sisters-	54.77	317	IAmb	IAmb	19 55 48.0	
	comp=Z,5.6nm,0.8s						
TKL	Tukaleechee C	55.75	280	LR	LR	20 20 07.5	
	comp=Z,208nm,18.9s,baz=38,slow=36						
K05A	Summer Lake	55.94	316	IAmb	IAmb	19 55 57.0	
	comp=Z,8.6nm,1.0s						
LZH	Lanzhou	56.47	75	*eP*	P	19 56 02.5	+5.6
LZH				sP	pwP	19 56 13.8	+11
LZH				pmax	pmax		
	comp=Z,23nm,1.6s						
LZH				LR	LR		
	comp=N,220nm,21.5s						
LZH				LR	LR		
	comp=E,240nm,21.0s						
LZH				LR	LR		
	comp=Z,150nm,22.0s						
ELK	Elko	56.97	310	LR	LR	20 20 43.9	
	comp=Z,181nm,18.9s,baz=9.5,slow=36						
YBH	Yreka Blue Hor	57.18	317	LR	LR	20 19 09.2	
	comp=Z,7.9nm,18.2s,baz=14,slow=34						
PV21	Cone Mtn., Par	58.00	304	IAmb	IAmb	19 56 13.7	
	comp=Z,8.8nm,1.0s						
PV04	Paradox Valley	58.15	304	IAmb	IAmb	19 56 17.4	
	comp=Z,9.8nm,1.2s						
PV16	Nyswonger Mesa	58.24	304	IAmb	IAmb	19 56 12.2	
	comp=Z,9.9nm,1.3s						
PV01	Paradox Valley	58.34	304	IAmb	IAmb	19 56 12.9	
	comp=Z,9.8nm,1.1s						
PV05	Paradox Valley	58.49	304	IAmb	IAmb	19 56 13.4	
	comp=Z,9.3nm,1.1s						
NVAR	Mina Array Bea	59.73	312	P	P	**19 56 21.2**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=11,slow=9.1,SNR=1.5						
NVAR				LR	LR	20 22 27.0	
	comp=Z,141nm,18.4s,baz=2.0,slow=36						
	comp=Z,0.5nm,0.6s						
WMOK	Wichita Mounta	59.77	294	IAmb	IAmb	19 56 22.7	
	comp=Z,5.4nm,0.9s						
LSA	Lhasa	59.89	89	IAmb	IAmb	19 56 25.1	
	comp=Z,5.1nm,0.9s						
LSA	Lhasa	59.89	89	P	P	**19 56 20.0**	**-1.3**
LSA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
EVN	Everest	60.63	94		P	**19 56 27.6**	**+1.0**
EVN				IAmb	IAmb	19 56 28.9	
	comp=Z,3.1nm,0.8s						
ANMO	Albuquerque	61.05	301	LR	LR	20 24 02.5	
	comp=Z,123nm,18.2s,baz=20,slow=37						
MJAR	Matsushiro Arr	62.38	43	P	P	**19 56 38.2**	**+0.7**
	comp=Z,2.9nm,0.9s,baz=1.4,slow=5.7,SNR=4.8						
	comp=Z,2.9nm,0.9s						
MJAR	Matsushiro Arr	62.38	43	IAmb	IAmb	19 57 19.1	
	comp=Z,10nm,1.5s						
PFO	Pinyon Flats O	64.13	310	LR	LR	20 25 23.8	
	comp=Z,147nm,20.1s,baz=26,slow=37						
TORD	Torodi Ar. Bea	64.40	186	P	P	**19 56 51.7**	**+0.6**
	comp=Z,3.9nm,1.1s,baz=331,slow=4.6,SNR=12						
	comp=Z,3.9nm,1.1s						
TORD	Torodi Ar. Bea	64.40	186	P	P	**19 56 52.3**	**+1.2**
VHRN	Van Horn	64.81	298		P	**19 56 54.4**	**+0.6**
ALPN	Alpine	64.95	297	P	P	**19 56 55.5**	**+0.7**
MORE	Moreh	65.85	87	IAmb	IAmb	19 57 10.0	
	comp=Z,7.1nm,0.9s						
TX31	Lajitas Ar. Si	65.97	297		P	**19 57 01.4**	**+0.1**
TX31				IAmb	IAmb	19 57 02.9	
	comp=Z,3.4nm,0.9s						
TXAR	Lajitas Array	65.97	297	P	P	**19 57 02.2**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=52,slow=5.1,SNR=17						
TXAR				LR	LR	20 26 37.1	
	comp=Z,205nm,18.2s,baz=22,slow=37						
	comp=Z,1.2nm,0.6s						
TXAR	Lajitas Array	65.97	297	P	P	**19 57 01.7**	**+0.4**
BRDH	Bariadhala	66.78	90	LR	LR	20 30 22.3	
	comp=Z,92nm,19.2s,baz=324,slow=40						
FURI	Furi	70.48	147	LR	LR	20 30 34.6	
	comp=Z,70nm,19.2s,baz=48,slow=38						
DBIC	Dimbokro	71.07	193	P	P	**19 57 33.4**	**+0.3**
	comp=Z,4.3nm,1.0s,baz=90,slow=3.2,SNR=3.4						
	comp=Z,4.3nm,1.0s						
DBIC	Dimbokro	71.07	193	P	P	**19 57 33.0**	**-0.1**
DBIC				IAmb	IAmb	19 57 37.8	
	comp=Z,4.7nm,1.1s						
LPIG	La Paz	72.33	302	LR	LR	20 31 50.2	
	comp=Z,87nm,19.0s,baz=23,slow=38						
CMAR	Chiang Mai Arr	72.45	84	P	P	**19 57 41.6**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=338,slow=6.7,SNR=14						
CMAR				LR	LR	20 34 22.7	
	comp=Z,52nm,21.1s,baz=20,slow=40						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	72.45	84		P	**19 57 41.4**	**-0.1**
CMIG	Matias Romero	76.07	286	LR	LR	20 35 32.5	
	comp=Z,82nm,18.3s,baz=358,slow=39						
PALK	Pallekele	79.35	105	LR	LR	20 38 04.8	
	comp=Z,65nm,18.3s,baz=338,slow=39						
JTS	Las Juntas de	80.53	275	LR	LR	20 34 47.5	
	comp=Z,81nm,20.2s,baz=38,slow=36						
ASAR	Alice Springs	120.57	59	PKP	PKiKP	**20 05 06.8**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=360,slow=2.2,SNR=6.4						
ASAR	Alice Springs	120.57	59		PKPdf	**20 05 04.3**	**-2.0**

TRN 26 19:53:58.5, 18.14N×61.88W, h18km, MD4.3, North of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.48	169	*eP*	Pn	19 54 10.5	+0.1
ANWB				*eS*	Sn	19 54 18.0	-0.3
SKI	Saint Kitts	1.15	226	*eP*	Pg	19 54 20.8	+0.1
SKI				*eS*	Sg	19 54 37.2	+1.5
MBFL	Flemmings, Mon	1.42	193	*eP*	Pb	19 54 24.8	+0.3
MBFL				*eS*	Sg	19 54 44.1	-0.3
MBWH	Windy Hill	1.42	192	*eP*	Pb	19 54 24.5	0.0
MBWH				*eS*	Sg	19 54 43.5	-0.9
MLYT	Lee's Yard	1.44	192	*eP*	Pb	19 54 25.1	+0.3
MLYT				*eS*	Sb	19 54 43.7	+0.9
DHSZ	Broadband at M	1.86	177	*eP*	Pn	19 54 30.4	+0.9
DHSZ				*eS*	Sb	19 54 54.1	-0.7
DSDZ	La Diserade, G	1.98	157	*eP*	Pn	19 54 32.3	+1.3
DSDZ				*eS*	Sb	19 54 57.0	-1.2
MMLZ	Guadeloupe Bro	2.09	174	*eP*	Pn	19 54 34.3	+1.6
MMLZ				*eS*	Sb	19 55 00.5	-1.1
TBG	Guadaloupe-3	2.29	174	*eP*	Pn	19 54 37.1	+1.8
DSLB	Salisbury	2.72	171	*eP*	Pn	19 54 42.3	+0.9
DSLB				*eS*	Sn	19 55 16.0	+2.2
SVN	Savane Anatole	3.35	168	*eP*	Pn	19 54 51.5	+1.5
BIM	Bigot	3.68	168	*eP*	Pn	19 54 56.3	+1.6
BIM				*eS*	Sn	19 55 38.5	+0.8
SLBI	Saint Lucia, B	4.18	168	*eP*	Pn	19 55 02.6	+1.2
SLAC	Saint Lucia, A	4.32	167	*eP*	Pn	19 55 05.4	+2.0

*ISK **26** 19:56:56.6, 38.26N×38.78E, h8km, ML2.6/13*
*AFAD **26** 19:56:57.0, 38.25N×38.80E, h7km±2km, ML2.4*
ISC 26 19:56:57.3±1.0, 38.26N±0.02×38.80E±0.02, h8km±9km, n26, σ0.91/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDYL	Doganyol-Malat	0.19	74	Pg	Pg	19 57 01.2	-0.1
MDYL				Sg	Sg	19 57 04.9	+0.9
ESGZ	Sivrice-Elazig	0.27	50	Pg	Pg	19 57 02.5	-0.2
ESGZ				Sg	Sg	19 57 06.8	+0.6
ELZG	Elazig	0.28	31	P	Pg	19 57 02.9	0.0
ELZG				IAML		19 57 07.0	
	comp=E,1μm,0.8s						
ELZG				S	Sg	19 57 07.2	+0.6
ELZG				IAML		19 57 09.0	
	comp=N,1μm,1.0s						
MAYA	Malatya/Merkez	0.30	282	P	Pg	19 57 03.2	-0.1
MAYA				IAML		19 57 08.0	
	comp=N,1μm,0.5s						
MAYA				S	Sb	19 57 08.1	-2.2
MAYA				IAML		19 57 11.0	
	comp=E,741nm,0.3s						
NARI	Adyaman-Kaht	0.38	185	P	Pg	19 57 04.8	0.0
NARI				S	Sg	19 57 10.1	+0.4
NARI				IAML		19 57 14.0	
	comp=E,270nm,0.5s						
NARI				IAML		19 57 15.0	
	comp=N,329nm,0.7s						
SVRC	Sivrice-ELAZID	0.41	73	Pg	Pg	19 57 05.0	-0.4
SVRC				Sg	Sg	19 57 12.0	+1.1
ESIJ	Sivrice-Elazig	0.44	65	Pg	Pg	19 57 06.1	+0.2
ESIJ				Sg	Sb	19 57 13.1	-1.2
ELZ	Elazig	0.53	36	P	Pg	19 57 07.3	-0.3
ELZ				S	Sb	19 57 15.7	-1.2
ELZ				IAML		19 57 16.0	
	comp=E,312nm,0.3s						
ELZ				IAML		19 57 18.0	
	comp=N,303nm,0.3s						
AZEY	Adyaman-Merk	0.63	224	P	Pb	19 57 09.7	-0.9
AZEY				S	Sb	19 57 20.1	+0.6
AZEY				IAML		19 57 23.0	
	comp=E,217nm,0.4s						
AZEY				IAML		19 57 25.0	
	comp=N,151nm,0.5s						
HANM	anlurfa/Hi	0.68	175	P	Pb	19 57 10.5	-1.0
HANM				S	Sb	19 57 19.8	-1.4
HANM				IAML		19 57 24.0	
	comp=E,194nm,0.4s						
HANM				IAML		19 57 27.0	
	comp=N,138nm,0.3s						
AKCD	Akcadag	0.69	273	P	Pg	19 57 10.4	-0.3
AKCD				S	Sb	19 57 20.7	-0.9
AKCD				IAML		19 57 21.0	
	comp=N,492nm,0.2s						
AKCD				IAML		19 57 29.0	
	comp=E,334nm,0.5s						
MDNT	Maden	0.70	79	P	Pg	19 57 10.5	-0.4
MDNT				S	Sb	19 57 20.9	-0.9
MDNT				IAML		19 57 26.0	
	comp=N,86nm,0.5s						
MDNT				IAML		19 57 29.0	
	comp=E,72nm,0.4s						
MCKZ	Bingol	0.87	9	P	Pg	19 57 13.2	-0.8
MCKZ				S	Sb	19 57 26.2	-0.4
MCKZ				IAML		19 57 27.0	
	comp=N,85nm,0.2s						
MCKZ				IAML		19 57 27.0	
	comp=E,186nm,0.3s						
ATAB	Bozova	0.89	207	P	Pb	19 57 14.1	-0.9
ATAB				S	Sb	19 57 27.2	+0.3
ATAB				IAML		19 57 30.0	
	comp=E,199nm,0.5s						
ATAB				IAML		19 57 36.0	
	comp=N,137nm,0.6s						
HEKM	Malatya_Hekimh	0.90	313	P	Pg	19 57 14.1	-0.6
HEKM				S	Sb	19 57 27.8	+0.1
HEKM				IAML		19 57 32.0	
	comp=N,162nm,0.3s						
HEKM				IAML		19 57 32.0	
	comp=E,159nm,0.3s						
ARPR	Arapgir-MALATY	0.91	336	Pg	Pg	19 57 14.4	-0.4
AKCA	Adyaman/G¶l	1.00	242	P	Pb	19 57 16.5	-0.4
AKCA				S	Sn	19 57 32.7	+0.7
AKCA				IAML		19 57 36.0	
	comp=E,214nm,0.6s						
AKCA				IAML		19 57 37.0	
	comp=N,357nm,0.6s						
DYBB	Diyarbakir	1.10	106	Pn	Pb	19 57 18.5	-0.1
ILIC	ilic-Erzincan	1.20	351	Pn	Pb	19 57 20.1	-0.4
ELBS	KAHRAMANMARAS	1.31	273	P	Pg	19 57 22.6	0.0
ELBS				S	Sn	19 57 43.3	+3.4
ELBS				IAML		19 57 46.0	
	comp=N,322nm,0.7s						
ELBS				IAML		19 57 48.0	
	comp=E,219nm,0.6s						
ERZN	Erzincan	1.50	28	Pn	Pn	19 57 24.7	-0.1
BNGB	Bingl	1.64	63	Pn	Pn	19 57 26.9	+0.3
GAZ	Gaziantep	1.67	230	Pn	Pn	19 57 26.6	-0.3
KMRS	Kahramanmaras	1.68	244	Pn	Pn	19 57 26.9	-0.2
YEDI	Yedisu-Diyarba	1.80	49	Pn	Pn	19 57 28.9	+0.1
SVAN	Silvan-Diyarba	1.89	93	Pn	Pn	19 57 29.9	-0.1

IDC 26 20:04:17.0±4.9, 3.23S×148.14E, h0km, mb3.6/6, mbtmp3.6/6, MS3.3/4, Error ellipse: s-maj=170.0km s-min=25.3km az=100.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	16.85	186	LR	LR	20 13 36.9	
	comp=Z,58nm,20.4s,baz=244,slow=33						
GUMO	Guam	17.03	349	LR	LR	20 13 15.4	
	comp=Z,84nm,21.6s,baz=198,slow=32						
WRA	Warramun

	11nm,0.3s,baz=264,slow=23,SNR=6.4						
JCJ				Sn	Sn	20 07 55.6	-0.4
	24nm,0.3s,baz=280,slow=23,SNR=6.2						
MJAR	**Matsushiro Arr**	**10.57**	**335**	Pn	Pn	20 09 44.0	-1.0
	0.1nm,0.3s,baz=157,slow=10,SNR=3.3						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**47.53**	**192**	P	P	20 15 48.8	-0.7
	1.0nm,0.9s,baz=12,slow=8.4,SNR=5.1						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**51.25**	**191**	P	P	20 16 18.0	+0.3
	0.2nm,0.7s,baz=4.4,slow=6.4,SNR=1.7						
	0.2nm,0.7s						

TAP ***26*** *20:10:05.4,23˙98N×122˙29E,h22km,ML3.1,D*
JMA ***26*** *20:10:06.0±0.3,24˚N±1˚×122˙3E±0˙8,h28km,MV2.5/9, TAIWAN REGION*

ISC 26 20:10:04.7±1.1,23˙92N±0˙02×122˙31E±0˙02,h19km±2km, n96,σ0s55/140,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.20**	**2**	*i* P	**Pb**	**20 10 09.7**	**+0.6**
EOS4				*i* S	**Sg**	**20 10 13.2**	**+0.4**
EOS3	**EOS3**	**0.37**	**1**	P	**Pg**	**20 10 12.6**	**+0.2**
EOS3				S	**Sb**	**20 10 18.1**	**0.0**
EOS2	**EOS2**	**0.51**	**352**	*i* P	**Pg**	**20 10 15.2**	**+0.3**
HWA	**Hwalien**	**0.65**	**276**	*i* P	**Pb**	**20 10 17.9**	**+0.4**
HWA				S	**Sn**	**20 10 28.1**	**-0.7**
TEYL	**Yanliau Villag**	**0.65**	**266**	P	**Pg**	**20 10 18.0**	**+0.3**
TEYL				S	**Sn**	**20 10 28.0**	**-0.8**
EAHA	**Aohua**	**0.67**	**308**	P	**Pg**	**20 10 18.5**	**+0.6**
EAHA				S	**Sg**	**20 10 27.2**	**+0.4**
ETL	**Fush Village**	**0.67**	**291**	*e*P	**Pb**	**20 10 18.1**	**+0.2**
ETL				*e*S	**Sg**	**20 10 27.6**	**+0.5**
TWD	**Chiawan**	**0.67**	**284**	P	**Pb**	**20 10 17.5**	**-0.3**
TWD				*i* S	**Sb**	**20 10 27.0**	**+0.1**
SHUL	**Shoufeng**	**0.70**	**260**	P	**Pb**	**20 10 18.5**	**+0.3**
SHUL				S	**Sn**	**20 10 29.3**	**-0.6**
NACB	**Ninganchiao**	**0.70**	**292**	*e*P	**Pb**	**20 10 18.1**	**-0.3**
NACB				*e*S	**Sg**	**20 10 28.3**	**+0.3**
EWUT	**Wuta**	**0.72**	**317**	P	**Pb**	**20 10 17.7**	**-1.0**
EWUT				*e*S	**Sg**	**20 10 29.4**	**+0.9**
TEGC	**Jichi Village**	**0.73**	**254**	*e*P	**Pb**	**20 10 17.6**	**-1.3**
TEGC				*e*S	**Sg**	**20 10 29.4**	**+0.4**
ETM	**Tongmen**	**0.75**	**274**	*e*P	**Pb**	**20 10 18.7**	**-0.5**
JYNG	**Yonagunijimaku**	**0.79**	**47**	*e*P	**Pb**	**20 10 19.5**	**-0.3**
JYNG				*e*S	**Sb**	**20 10 29.3**	**-0.9**
TWC	**Suao**	**0.81**	**329**	*e*P	**Pb**	**20 10 19.1**	**-1.1**
TWC				*e*S	**Sb**	**20 10 29.2**	**-1.6**
ESL	**Shilin**	**0.81**	**263**	*e*P	**Pb**	**20 10 19.4**	**-0.8**
ESL				S	**Sb**	**20 10 30.4**	**-0.5**
ETLH	**Xiulin Townshi**	**0.81**	**291**	*i* P	**Pb**	**20 10 19.5**	**-0.9**
ETLH				S	**Sb**	**20 10 31.0**	**+0.1**
LXIB	**Xiulin Townshi**	**0.83**	**278**	*i* P	**Pb**	**20 10 20.0**	**-0.6**
LXIB				*i* S	**Sb**	**20 10 31.8**	**+0.3**
YOJ	**Yonaguni jima**	**0.84**	**49**	P	**Pb**	**20 10 20.6**	**-0.1**
YOJ				S	**Sb**	**20 10 30.9**	**-0.8**
EGFH	**Guangfu**	**0.84**	**253**	*e*P	**Pb**	**20 10 20.2**	**-0.6**
WARBT	**Fenglin Townsh**	**0.87**	**257**	P	**Pb**	**20 10 20.4**	**-0.9**
WARBT				*e*S	**Sb**	**20 10 32.1**	**-0.4**
NDS	**Dongshan**	**0.90**	**323**	*e*P	**Pb**	**20 10 20.7**	**-1.1**
HGSD	**Ruisui**	**0.92**	**243**	*e*P	**Pb**	**20 10 21.5**	**-0.5**
LATG	**Datong**	**0.95**	**311**	P	**Pb**	**20 10 22.2**	**-0.4**
EHYH	**Wanrong**	**0.98**	**245**	*e*S	**Sb**	**20 10 36.2**	**+0.5**
WHF	**Hehuan Shan**	**0.98**	**284**	*e*P	**Pb**	**20 10 18.6**	**-0.9**
WHF				S	**Sb**	**20 10 36.3**	**0.0**
EGS		**0.99**	**340**	P	**Pb**	**20 10 22.1**	**-1.2**
ILA	**Ilan**	**0.99**	**329**	*e*P	**Pb**	**20 10 23.0**	**-0.3**
ILA				S	**Sg**	**20 10 37.2**	**+0.1**
NNSB	**Datong**	**0.99**	**301**	*i* P	**Pb**	**20 10 23.0**	**-0.4**
NNSB				*e*S	**Sb**	**20 10 36.6**	**+0.5**
ENTT	**Nioudou**	**0.99**	**317**	*e*P	**Pb**	**20 10 23.1**	**-0.2**
EHY	**Hungye**	**0.99**	**246**	*e*S	**Sb**	**20 10 36.2**	**+0.1**
TWE	**Neicheng**	**0.99**	**324**	*i* P	**Pb**	**20 10 23.1**	**-0.4**
NDT	**Datong Townshi**	**1.00**	**313**	*e*P	**Pb**	**20 10 23.3**	**-0.2**
NNS	**Nan Shan**	**1.00**	**302**	*e*P	**Pb**	**20 10 23.2**	**-0.5**
NNS				*e*S	**Sb**	**20 10 36.2**	**-0.4**
FUSS	**Fushou**	**1.03**	**289**	P	**Pb**	**20 10 23.0**	**-1.1**
FUSS				*e*S	**Sb**	**20 10 36.5**	**-0.9**
OWD	**Renai**	**1.04**	**272**	P	**Pb**	**20 10 23.4**	**-0.8**
OWD				*i* S	**Sb**	**20 10 36.8**	**-0.8**
YULB	**Yu-li**	**1.06**	**241**	*e*P	**Pb**	**20 10 24.2**	**-0.5**
YULB				*i* S	**Sb**	**20 10 38.0**	**-0.2**
FUSB	**Fushanzhiwuyua**	**1.07**	**322**	*e*P	**Pb**	**20 10 24.7**	**-0.1**
FUSB				*e*S	**Sb**	**20 10 37.7**	**-0.6**
VWDT	**VWDT**	**1.08**	**262**	P	**Pn**	**20 10 24.6**	**-0.4**
VWDT				*e*S	**Sn**	**20 10 39.4**	**-0.1**
TWF1	**Yuli**	**1.08**	**239**	P	**Pn**	**20 10 24.3**	**-0.7**
TWF1				*e*S	**Sb**	**20 10 39.2**	**+0.5**
TWT	**Tachien**	**1.09**	**288**	*e*P	**Pb**	**20 10 25.2**	**0.0**
TWT				*e*S	**Sb**	**20 10 39.3**	**+0.2**
WUSB	**Renai**	**1.09**	**274**	*e*P	**Pb**	**20 10 24.6**	**-0.6**
WUSB				*e*S	**Sb**	**20 10 39.3**	**+0.2**
TDCB	**Techi**	**1.11**	**288**	*i* P	**Pn**	**20 10 25.2**	**-0.2**
TDCB				*i* S	**Sb**	**20 10 39.7**	**+0.2**
NWLT	**Wulai**	**1.13**	**320**	*i* P	**Pn**	**20 10 24.9**	**-0.8**
NWLT				*e*S	**Sg**	**20 10 41.2**	**-0.3**
YHNB	**Yeheng**	**1.14**	**312**	*e*P	**Pn**	**20 10 25.3**	**-0.5**
YHNB				*e*S	**Sb**	**20 10 40.4**	**+0.1**
TIPB	**Shuangxi**	**1.14**	**337**	*i* P	**Pn**	**20 10 26.0**	**+0.2**
TIPB				*i* S	**Sn**	**20 10 40.7**	**-0.3**
NSK	**Sanguang**	**1.15**	**311**	*e*P	**Pn**	**20 10 25.5**	**-0.5**
NSK				S	**Sb**	**20 10 39.9**	**-0.9**
FULB	**Fuli**	**1.17**	**233**	*e*P	**Pb**	**20 10 26.8**	**+0.3**
SXI1	**Grass Mountain**	**1.24**	**341**	*e*P	**Pn**	**20 10 26.6**	**-0.6**
SXI1				*e*S	**Sn**	**20 10 43.3**	**-0.2**
NWF	**Wu-fen Shan**	**1.25**	**337**	*i* P	**Pn**	**20 10 27.2**	**-0.2**
NWF				S	**Sb**	**20 10 43.0**	**-0.5**
WFSB	**Wu-fen Shan**	**1.25**	**337**	*e*P	**Pn**	**20 10 27.2**	**0.0**
WFSB				S	**Sn**	**20 10 43.5**	**-0.1**
SSLB	**Suanglung**	**1.25**	**264**	*e*P	**Pn**	**20 10 27.1**	**-0.2**
SSLB				*e*S	**Sb**	**20 10 42.9**	**-0.6**
TWA	**Mucha**	**1.25**	**328**	*e*P	**Pb**	**20 10 27.9**	**+0.1**
NHDH	**Xindian Distri**	**1.27**	**326**	*e*P	**Pb**	**20 10 28.1**	**+0.1**
WCS	**Beigang Elemen**	**1.29**	**277**	*e*P	**Pn**	**20 10 27.8**	**0.0**
SMLT	**Sun Moon Lake**	**1.29**	**269**	*e*P	**Pn**	**20 10 27.8**	**-0.2**
WHP	**Taichung City**	**1.30**	**286**	*e*P	**Pb**	**20 10 28.7**	**+0.1**
NFF	**Wufeng Townshi**	**1.30**	**303**	*e*P	**Pn**	**20 10 28.1**	**+0.1**
NFF				*e*S	**Sn**	**20 10 45.0**	**0.0**
NHY	**Taipei**	**1.31**	**329**	*e*P	**Pb**	**20 10 28.9**	**+0.2**
TNOU	**National Taiwa**	**1.32**	**338**	*e*P	**Pb**	**20 10 29.4**	**+0.4**
TYC	**Yuchr**	**1.33**	**270**	*e*P	**Pn**	**20 10 28.2**	**-0.1**
TAP	**Taipei**	**1.34**	**327**	*e*P	**Pb**	**20 10 29.4**	**+0.2**
KSHI	**Guanxi Townshi**	**1.34**	**310**	*e*P	**Pb**	**20 10 29.6**	**+0.2**
WHYT	**Xinyi Township**	**1.35**	**261**	P	**Pn**	**20 10 29.0**	**+0.3**
WHYT				*e*S	**Sn**	**20 10 46.0**	**-0.2**
IRIF	**Iriomote-Funau**	**1.36**	**72**	*e*P	**Pb**	**20 10 29.6**	**-0.1**
LIOB	**Emei**	**1.39**	**302**	*i* P	**Pb**	**20 10 30.2**	**+0.1**
LIOB				S	**Sb**	**20 10 48.0**	**+0.5**
ELDTW	**Lidau**	**1.39**	**239**	*e*P	**Pn**	**20 10 28.7**	**-0.6**
NSTT	**Nanjuang**	**1.39**	**301**	*e*P	**Pb**	**20 10 30.1**	**0.0**
YM01	**YM01**	**1.40**	**331**	*e*P	**Pn**	**20 10 29.8**	**+0.5**
ZUZH	**Zhuzihu**	**1.42**	**331**	*e*P	**Pn**	**20 10 29.6**	**-0.1**
YM08	**YM08**	**1.43**	**333**	*e*P	**Pn**	**20 10 29.8**	**+0.1**
TWS1	**Kuangyinshan**	**1.43**	**326**	*e*P	**Pn**	**20 10 30.3**	**+0.5**
ALS	**Alishan**	**1.44**	**254**	*e*P	**Pn**	**20 10 30.6**	**+0.4**
ANP	**Anpu**	**1.46**	**331**	*e*P	**Pn**	**20 10 30.3**	**+0.1**
NCUH	**Zhongli**	**1.47**	**316**	*e*P	**Pn**	**20 10 30.7**	**+0.5**
TWQ1	**Liyutan**	**1.47**	**287**	*e*P	**Pb**	**20 10 31.4**	**-0.2**
TWQ1				*e*S	**Sb**	**20 10 50.8**	**+0.9**
NTST	**Danshui**	**1.47**	**328**	*e*P	**Pn**	**20 10 30.7**	**+0.4**
TWY	**Chenhua**	**1.50**	**335**	P	**Pb**	**20 10 31.6**	**-0.5**
TCU	**Taichung**	**1.51**	**279**	*e*P	**Pb**	**20 10 32.7**	**+0.4**
NMLH	**Miaoli**	**1.52**	**294**	*e*P	**Pb**	**20 10 32.4**	**0.0**
CHN5	**Tsauling**	**1.53**	**258**	P	**Pn**	**20 10 31.8**	**+0.6**
TWGBT	**Beinan**	**1.57**	**226**	*e*P	**Pn**	**20 10 31.0**	**-0.7**
JKRS	**Kuro-shima**	**1.58**	**78**	*e*P	**Pn**	**20 10 32.3**	**+0.4**
STYH	**Taoyuan**	**1.59**	**243**	P	**Pn**	**20 10 32.6**	**+0.7**
WCKO	**Fanlu**	**1.63**	**253**	*e*P	**Pb**	**20 10 33.9**	**-0.4**
WDLH	**Douliu**	**1.64**	**262**	*e*P	**Pb**	**20 10 34.2**	**-0.1**
TPUB	**Ta-pu**	**1.66**	**249**	*e*P	**Pn**	**20 10 34.2**	**+1.2**
JJ	**Ishigaki jima**	**1.73**	**75**	*e*P	**Pn**	**20 10 34.1**	**+0.2**
WRL	**Guolierlin Hig**	**1.77**	**270**	*i* P	**Pb**	**20 10 36.2**	**-0.5**
WRL				*i* S	**Sb**	**20 10 58.6**	**+0.2**
SGST	**Jiashian**	**1.79**	**243**	*e*P	**Pb**	**20 10 37.0**	**0.0**
TWK	**Hsinying**	**1.79**	**249**	*e*P	**Pb**	**20 10 37.2**	**+0.2**
SSD	**Sandimen**	**1.93**	**233**	*e*P	**Pb**	**20 10 38.8**	**-0.6**
JISG	**Ishigakijimahi**	**1.94**	**69**	P	**Pn**	**20 10 37.1**	**+0.4**
MASBT	**Mashibuluo**	**2.02**	**230**	*e*P	**Pn**	**20 10 37.7**	**-0.1**
EAST	**Anshuo**	**2.03**	**222**	*e*P	**Pn**	**20 10 39.6**	**+1.5**
SLIU	**Shizi**	**2.19**	**220**	*e*P	**Pn**	**20 10 39.9**	**-0.3**

IDC 26 20:15:09.6±8.7,7˙76S×146˙23E,h0km,mb3.6/1, mbtmp3.2/3,ML3.2/2,Error ellipse: s-maj=274.9km s-min=38.3km az=105.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.72**	**222**	Pn	P	20 19 06.9	-0.9
	0.1nm,0.3s,baz=41,slow=11,SNR=12						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**19.75**	**215**	P	P	20 19 40.4	-0.9
	0.1nm,0.3s,baz=44,slow=8.3,SNR=4.7						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**78.36**	**321**	P	P	20 27 12.1	+0.1
	0.3nm,0.6s,baz=97,slow=6.2,SNR=5.7						
	0.3nm,0.6s						

VAO ***26*** *20:21:21.9±0.4,31˚45S×71˙79W,h10km, mb4.5, Presumed earthquake*
SJA ***26*** *20:21:28.1±0.7,30˙98S×71˙52W,h8km±9km,ML4.8, MW4.4*
IDC ***26*** *20:21:32.7±0.7,30˙97S×71˙25W,h54km±5km,mb4.3/11, mbtmp4.5/15,MS3.8/29,Error ellipse: s-maj=19.3km s-min=16.1km az=58.0*
GUC ***26*** *20:21:32.3±0.8,30˙99S×71˙34W,h57km±3km,ML4.8*
NEIC ***26*** *20:21:32.7±2.1,31˙00S±0˙04×71˙47W±0˙08,h48km±4km, mb4.8/106,Mwr4.8/49,Mwr4.8(GUC),Error ellipse: s-maj=9.6km s-min=5.1km az=107.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.63; Mθθ0.33; Mϕϕ-1.95; Mrθ0.35; Mϕθ0.20; Mϕr0.11; Fault plane solution: M₀1.86000×10¹⁶ NP1:φs160.63000°, δ45.59000°,λ69.27000°. NP2:φs9.04000°,δ48.08000°, λ109.86000°. Principal axes: T 1.7233, Plg75.0000°, Azm350.0000°; N 0.2511, Plg15.0000°, Azm175.0000°; P -1.9744, Plg1.0000°, Azm85.0000°;*
NEIC ***26*** *20:21:32.6,30˙99S×71˙46W,h46km*

ISC 26 20:21:32.0±0.4,30˙95S±0˙03×71˙38W±0˙04,h50km±3km, h50km:pP-P,n296,σ1s73/253,mb4.8/58,MS3.9/25,2C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.35**	**322**		**Pn**	**20 21 42.4**	**+0.8**
CO06	**Fray Jorge**	**0.35**	**322**	*e*P	**Pn**	**20 21 42.7**	**+1.1**
CO06				*e*S	**Sn**	**20 21 50.6**	**+2.0**
CO06				IAML		20 21 52.2	
	comp=E,123μm,0.3s						
CO02	**Combarbal**	**0.41**	**128**		**Pn**	**20 21 42.4**	**0.0**
CO02	**Combarbal**	**0.41**	**128**	⇑ *i*P	**Pn**	**20 21 42.7**	**+0.3**
CO02				*e*S	**Sn**	**20 21 49.7**	**-0.1**
CO03	**El Pedregal**	**0.60**	**79**		**Pn**	**20 21 44.8**	**+0.2**
CO03	**El Pedregal**	**0.60**	**79**	⇓ *i*P	**Pn**	**20 21 45.0**	**+0.4**
CO03				*e*S	**Sn**	**20 21 54.3**	**+0.5**
GO04	**Tololo Observa**	**0.93**	**33**		**Pn**	**20 21 49.8**	**+0.9**
GO04	**Tololo Observa**	**0.93**	**33**	*i* P	**Pn**	**20 21 49.9**	**+1.0**
GO04				*e*S	**Sn**	**20 22 02.9**	**+1.5**
CO05	**La Serena**	**1.04**	**7**		**Pn**	**20 21 51.5**	**+1.3**
CO05	**La Serena**	**1.04**	**7**	*e*P	**Pn**	**20 21 51.2**	**+1.0**
CO05				*e*S	**Sn**	**20 22 05.4**	**+1.7**
CO05				IAML		20 22 11.9	
	comp=E,19μm,0.5s						
CO04	**Los Peladeros**	**1.14**	**162**		**Pn**	**20 21 52.0**	**+0.2**
CO04	**Los Peladeros**	**1.14**	**162**	⇓ *i*P	**Pn**	**20 21 52.1**	**+0.2**
CO04				*e*S	**Sn**	**20 22 06.7**	**+0.1**
CO04				IAML		20 22 08.9	
	comp=N,48μm,0.2s						
CO01	**Juntas del Tor**	**1.48**	**49**		**Pn**	**20 21 58.1**	**+1.7**
CO01	**Juntas del Tor**	**1.48**	**49**	*i* P	**Pn**	**20 21 58.2**	**+1.9**
CO01				*e*S	**Sn**	**20 22 17.1**	**+2.4**
CO01				IAML		20 22 18.4	
	comp=N,13μm,0.2s						
VA06	**Catapilco**	**1.60**	**178**		**Pn**	**20 21 58.5**	**+0.6**
VA06	**Catapilco**	**1.60**	**178**	*e*P	**Pn**	**20 21 58.7**	**+0.8**
VA06				IAML		20 22 24.3	
	comp=N,14μm,0.7s						
AROD	**Rodeo**	**1.82**	**65**	*e*P	**Pn**	**20 22 04.5**	**+3.4**
VA03	**San Esteban**	**1.94**	**159**		**Pn**	**20 22 03.3**	**+0.7**
VA03	**San Esteban**	**1.94**	**159**	*e*P	**Pn**	**20 22 03.3**	**+0.7**
VA03				IAML		20 22 30.5	
	comp=E,20μm,0.1s						
LCO	**Las Campanas**	**2.02**	**17**		**Pn**	**20 22 05.2**	**+1.3**
LCO	**Las Campanas**	**2.02**	**17**	*e*P	**Pn**	**20 22 05.2**	**+1.3**
LCO	**Las Campanas**	**2.02**	**17**	*e*P	**Pn**	**20 22 05.7**	**+1.8**
LCO				*e*S	**Sn**	**20 22 29.2**	**+1.1**
LCO				IAML		20 22 35.4	
	comp=E,8μm,0.2s						
ACCO	**Cerro Coronel**	**2.02**	**80**	*e*P	**Pn**	**20 22 07.3**	**+3.3**
ACCO				*e*S	**Sn**	**20 22 20.9**	**-7.4**
ROCH	**El Roble**	**2.04**	**171**	*e*P	**Pn**	**20 22 04.5**	**+0.5**
ROCH				IAML		20 22 40.6	
	comp=N,7μm,0.4s						
VA01	**Torpederas**	**2.08**	**186**		**Pn**	**20 22 04.4**	**+0.1**
VA01	**Torpederas**	**2.08**	**186**	*e*P	**Pn**	**20 22 04.4**	**+0.1**
ACDV	**Cuesta del Vie**	**2.10**	**69**	*e*P	**Pn**	**20 22 08.2**	**+3.4**
ACDV				*e*S	**Sn**	**20 22 25.1**	**-4.7**
ACDV				IAML		20 22 39.2	
	comp=Z,2μm,0.6s						
PEL	**Peldehue**	**2.26**	**165**		**Pn**	**20 22 07.8**	**+0.8**
PEL	**Peldehue**	**2.26**	**165**	*e*P	**Pn**	**20 22 07.8**	**+0.8**
PEL				IAML		20 22 41.9	
	comp=E,5μm,0.3s						
PEL	**Peldehue**	**2.26**	**165**	*e*P	**Pn**	**20 22 08.4**	**+1.4**
PEL				IAML		20 22 45.7	
	comp=Z,3μm,0.9s						
MT02	**Curacav**	**2.31**	**175**		**Pn**	**20 22 08.1**	**+0.5**
MT02	**Curacav**	**2.31**	**175**	*e*P	**Pn**	**20 22 07.8**	**+0.2**
MT02				IAML		20 22 48.9	
	comp=E,3μm,0.7s						
AC05	**El Transito**	**2.32**	**25**		**Pn**	**20 22 10.0**	**+2.2**
ZON	**Zonda**	**2.39**	**105**		**Pn**	**20 22 10.9**	**+2.2**
MT10	**Hacienda Santa**	**2.42**	**163**	*e*P	**Pn**	**20 22 09.7**	**+0.5**
MT10				IAML		20 22 47.0	
	comp=E,10μm,0.4s						
SJA	**San Juan**	**2.48**	**104**	*e*P	**Pn**	**20 22 08.5**	**-1.4**
SJA				*e*S	**Sn**	**20 22 31.9**	**-7.2**
SJA				IAML		20 22 47.6	
	comp=Z,2μm,0.8s						
MT05	**Renca**	**2.49**	**168**		**Pn**	**20 22 10.9**	**+0.8**
MT05	**Renca**	**2.49**	**168**	*e*P	**Pn**	**20 22 11.1**	**+1.0**
MT05				IAML		20 22 56.9	
	comp=E,8μm,0.4s						
RTLL	**Cerro Villicun**	**2.52**	**99**	*e*P	**Pn**	**20 22 13.1**	**+2.6**
RTLL				*e*S	**Sn**	**20 22 47.1**	**+7.1**
RTLL				IAML		20 22 51.8	
	comp=Z,4μm,0.5s						
MT14	**Cerro Cal¡n**	**2.54**	**164**	*e*P	**Pn**	**20 22 12.2**	**+1.4**
MT14				IAML		20 22 53.3	
	comp=E,7μm,0.5s						
MT16	**CCHEN**	**2.57**	**164**	Pn	**Pn**	**20 22 12.6**	**+1.4**
MT16	**CCHEN**	**2.57**	**164**	*e*P	**Pn**	**20 22 12.7**	**+1.5**
MT16				IAML		20 22 58.0	
	comp=E,4μm,0.7s						
MT03	**Universidad Ad**	**2.64**	**164**		**Pn**	**20 22 13.7**	**+1.5**
MT03	**Universidad Ad**	**2.64**	**164**	*e*P	**Pn**	**20 22 13.5**	**+1.3**
MT03				IAML		20 22 58.6	
	comp=E,11μm,0.2s						
MT04	**Ro Olivares**	**2.66**	**157**	*e*P	**Pn**	**20 22 14.6**	**+2.0**
MT04				IAML		20 22 57.8	
	comp=E,3μm,0.4s						
VA05	**Santo Domingo**	**2.70**	**184**		**Pn**	**20 22 13.4**	**+0.4**
ASAL	**Salagasta**	**2.71**	**128**	*e*P	**Pn**	**20 22 16.7**	**+3.5**
ASAL				*e*S	Sn	20 22 54.4	+10
MT08	**Bocatoma Ro**	**2.74**	**155**	Pn	**Pn**	**20 22 16.8**	**+3.1**
MT08	**Bocatoma Ro**	**2.74**	**155**	*e*P	**Pn**	**20 22 16.6**	**+2.9**
MT08				IAML		20 22 56.4	
	comp=E,2μm,0.5s						
MT15	**Las Vizcachas**	**2.74**	**165**	*e*P	**Pn**	**20 22 15.1**	**+1.5**
MT15				IAML		20 22 58.3	
	comp=N,6μm,0.2s						
AC04	**Llanos de Chal**	**2.75**	**6**		**Pn**	**20 22 15.2**	**+1.6**
AC04	**Llanos de Chal**	**2.75**	**6**	*e*P	**Pn**	**20 22 14.9**	**+1.2**
AC04				IAML		20 23 03.4	
	comp=E,4μm,0.2s						
CFA	**Coronel Fontan**	**2.77**	**104**	P	**Pn**	**20 22 16.1**	**+2.2**
	comp=E,310nm,0.3s,baz=276,slow=10,SNR=1433						
CFA				S	**Sn**	**20 22 49.8**	**+3.7**
	comp=E,648nm,0.3s,baz=38,slow=20,SNR=17						
CFA				LR	LR	20 22 55.3	
	comp=E,365nm,20.3s,baz=285,slow=31						
CFA	**Coronel Fontan**	**2.77**	**104**	*e*P	**Pn**	**20 22 16.6**	**+2.7**
CFA				*e*S	**Sn**	**20 22 52.6**	**+6.5**
CFA				IAML		20 22 58.2	
	comp=Z,2μm,0.4s						
MT09	**Talagante**	**2.83**	**173**	*e*P	**Pn**	**20 22 15.7**	**+0.8**
MT09				IAML		20 23 04.4	
	comp=N,4μm,0.2s						
MT12	**Pirque**	**2.86**	**166**	*e*P	**Pn**	**20 22 15.4**	**+0.3**
MT12				IAML		20 23 08.7	
	comp=N,6μm,0.4s						
MT01	**Popeta**	**2.91**	**178**		**Pn**	**20 22 15.8**	**+0.1**
MT01	**Popeta**	**2.91**	**178**	*e*P	**Pn**	**20 22 16.1**	**+0.3**
MT01				IAML		20 23 05.3	
	comp=E,3μm,0.1s						
MT13	**San Alfonso**	**2.93**	**162**		**Pn**	**20 22 18.1**	**+1.9**
LMEL	**Las Melosas**	**3.05**	**161**	*e*P	**Pn**	**20 22 20.0**	**+2.1**
LMEL				IAML		20 23 03.2	
	comp=N,3μm,0.4s						
BO04	**La Punta**	**3.10**	**168**	⇑ *i*P	**Pn**	**20 22 19.4**	**+0.9**
BO04				IAML		20 23 09.0	
	comp=N,2μm,0.4s						
AVFE	**Valle Fertil**	**3.39**	**86**	*e*P	**Pn**	**20 22 24.6**	**+2.1**
AVFE				*e*S	**Sn**	**20 23 09.4**	**+8.0**
AVFE				IAML		20 23 12.0	
	comp=Z,3μm,0.5s						
BO01	**Tunca**	**3.44**	**176**		**Pn**	**20 22 23.4**	**+0.4**
BO01	**Tunca**	**3.44**	**176**	*e*P	**Pn**	**20 22 23.2**	**+0.2**
GO03	**Copiapo**	**3.49**	**17**		**Pn**	**20 22 25.5**	**+1.6**
GO03	**Copiapo**	**3.49**	**17**	*e*P	**Pn**	**20 22 25.5**	**+1.6**
GO03				IAML		20 23 16.2	
	comp=E,3μm,0.3s						
VCA	**Vinchina**	**3.53**	**52**	⇓ *e*P	**Pn**	**20 22 29.0**	**+4.5**
VCA	**Vinchina**	**3.53**	**52**	*e*P	**Pn**	**20 22 28.9**	**+4.4**
VCA				*e*S	Sn	20 23 16.1	+11
VCA				IAML		20 23 21.5	
	comp=Z,6μm,0.4s						
ACAN	**Cantantal**	**3.81**	**111**	*e*P	**Pn**	**20 22 29.4**	**+1.2**
ACAN				IAML		20 23 42.6	
	comp=Z,5μm,0.8s						
BO02	**Sierra Bellavi**	**3.86**	**173**		**Pn**	**20 22 29.8**	**+0.8**
RFA	**San Rafael**	**4.53**	**148**	*e*P	**Pn**	**20 22 39.3**	**+1.2**
RFA				IAML		20 24 03.5	
	comp=Z,502nm,1.4s						
AC02	**Maricunga**	**4.55**	**26**		**Pn**	**20 22 40.7**	**+1.9**
TCA	**Tanti**	**5.83**	**96**	⇓ *e*P	**Pn**	**20 22 56.3**	**+0.3**
PB14	**IPOC Station P**	**6.36**	**8**		**Pn**	**20 23 02.1**	**-1.4**
H03N1	**Juan Fernandez**	**6.85**	**247**	T	T	20 29 54.5	
	baz=76,slow=72						
VA04	**Juan Fernndez**	**6.85**	**245**		**Pn**	**20 23 08.3**	**-1.5**
VA04	**Juan Fernndez**	**6.85**	**245**	*e*P	**Pn**	**20 23 09.2**	**-0.7**
H03N3	**Juan Fernandez**	**6.86**	**247**	T	T	20 30 00.4	
	baz=76,slow=72						
H03N2	**Juan Fernandez**	**6.87**	**247**	T	T	20 30 01.7	
	baz=76,slow=72						
H03S3	**Juan Fernandez**	**6.98**	**244**	T	T	20 30 11.8	
	baz=70,slow=75						
H03S1	**Juan Fernandez**	**6.99**	**244**	T	T	20 30 06.2	
	baz=70,slow=75						
H03S2	**Juan Fernandez**	**7.00**	**244**	T	T	20 30 11.0	
	baz=70,slow=75						
PB05	**IPOC Station P**	**8.14**	**8**		**Pn**	**20 23 25.1**	**-2.6**
PB06	**IPOC Station P**	**8.37**	**12**		**Pn**	**20 23 28.6**	**-2.2**
GO06	**Curarr

comp=Z,217nm,18.9s,baz=88,slow=29
NBIT Itapeh - BA 33.31 69 *e*P **P 20 28 04.3 -0.8**
PMSA Palmer Station 34.15 174 LR LR 20 41 26.1
comp=Z,269nm,21.0s,baz=340,slow=35
BOAV Boa Vista 34.74 19 P **P 20 28 17.4 -0.1**
BOAV IAmb IAmb 20 28 18.8
comp=Z,9.6nm,1.0s
BOAV Boa Vista 34.74 19 *e*P **P 20 28 17.8 +0.3**
ROSC El Rosal 35.70 355 LR LR 20 44 43.3
comp=Z,77nm,18.8s,baz=228,slow=39
NBPS Pedro II - PI 38.62 53 *e*P **P 20 28 50.7 +0.1**
SDV Santo Domingo 39.62 1 LR LR 20 46 23.1
comp=Z,59nm,20.3s,baz=208,slow=38
SDV Santo Domingo 39.62 1 P **P 20 28 59.1 +0.1**
SDV IAmb IAmb 20 29 04.7
comp=Z,10nm,0.9s
SDV Santo Domingo 39.62 1 *e*P **P 20 28 57.7 -1.4**
MDP Montagnes des 40.08 30 LR LR 20 46 47.6
comp=Z,152nm,21.8s,baz=211,slow=38
NBPA Parau_RN 40.77 59 *e*P **P 20 29 08.6 +0.2**
RCBR Riachuelo 41.61 60 LR LR 20 47 57.2
comp=Z,108nm,18.9s,baz=243,slow=38
JTS Las Juntas de 43.03 340 LR LR 20 44 24.1
comp=Z,76nm,18.5s,baz=218,slow=32
CELP Cerrillos 48.96 6 P **P 20 30 12.4 -1.0**
VNA3 Neumayer Olymp 51.98 159 ⇓P **P 20 30 36.2 +0.6**
comp=Z,1.4nm,0.6s
VNA2 Neumayer--Watz 52.61 158 ⇓P **P 20 30 40.9 +0.5**
comp=Z,8.4nm,0.6s,baz=285,slow=7.5
CMIG Matias Romero 52.84 331 LR LR 20 48 08.3
comp=Z,43nm,18.3s,baz=180,slow=30
CAIB Caibarien 53.70 351 P **P 20 30 49.9 +1.0**
CAIB IAmb IAmb 20 30 51.0
comp=Z,36nm,1.1s
TROLL Troll, Antarti 55.91 159 ⇓P **P 20 31 05.1 +0.5**
QSPA South Pole Qui 59.27 180 P **P 20 31 26.5 -1.7**
QSPA South Pole Qui 59.27 180 P **P 20 31 29.1 +0.9**
QSPA pP **pP 20 31 42.8 +0.5**
QSPA PcP **PcP 20 32 17.0 +1.1**
X48A Hartselle 66.71 346 P **P 20 32 18.1 +0.5**
W50A Signal Mountai 67.10 348 P **P 20 32 20.7 +0.6**
CPCT Cooper Cave 67.20 348 IAmb IAmb 20 32 21.9
comp=Z,11nm,0.9s
SWET Sewanee 67.23 347 IAmb IAmb 20 32 22.7
comp=Z,16nm,1.0s
SAND Sanderson 67.26 331 P **P 20 32 22.5 +1.2**
SAND IAmb IAmb 20 32 23.7
comp=Z,5.8nm,0.8s
TKL Tuckaleechee C 67.28 349 IAmb IAmb 20 32 44.1
comp=Z,16nm,1.1s
TXAR Lajitas Array 67.37 330 P **P 20 32 23.7 +1.6**
comp=Z,1.3nm,0.6s,baz=152,slow=8.7,SNR=16
TXAR pP **pP 20 32 37.7 +1.3**
comp=Z,0.8nm,0.6s,baz=146,slow=7.4,SNR=5.8
comp=Z,1.3nm,0.6s
TXAR Lajitas Array 67.37 330 P **P 20 32 23.3 +1.2**
TXAR **pP 20 32 36.2 -0.2**
CLTN Cedars of Leba 68.15 347 IAmb IAmb 20 32 28.4
comp=Z,6.7nm,0.7s
WVT Waverly 68.49 346 **P 20 32 29.1 +0.2**
WVT Waverly 68.49 346 P **P 20 32 29.5 +0.7**
WVT x x 20 32 45.5
T47A Sharon Grove 69.17 347 IAmb IAmb 20 32 34.7
comp=Z,24nm,1.2s
LCAR Lake Charles 69.21 343 IAmb IAmb 20 32 34.9
comp=Z,13nm,0.8s
HHAR Hobbs 70.15 341 IAmb IAmb 20 32 41.0
comp=Z,18nm,1.1s
MGMO Mountain Grove 70.52 342 IAmb IAmb 20 32 43.4
comp=Z,10nm,1.0s
FVM French Village 70.85 344 IAmb IAmb 20 32 45.2
comp=Z,17nm,1.0s
MSTX Muleshoe 71.05 333 IAmb IAmb 20 32 46.9
comp=Z,14nm,1.1s
CCM Cathedral Cave 71.11 344 P **P 20 32 45.7 +0.8**
CCM Cathedral Cave 71.11 344 P **P 20 32 45.8 +0.8**
CCM pP **pP 20 33 00.1 +0.8**
S39A Bolivar 71.30 342 IAmb IAmb 20 32 48.1
comp=Z,20nm,1.2s
AMTX Amarillo 71.43 334 IAmb IAmb 20 32 49.6
comp=Z,11nm,1.1s
121A Cookes Peak, D 71.93 328 IAmb IAmb 20 32 53.6
comp=Z,11nm,0.9s
P38A Dawn 73.17 342 IAmb IAmb 20 32 58.8
comp=Z,10nm,0.8s
ANMO Albuquerque 73.40 330 LR LR 21 00 37.3
comp=Z,57nm,20.0s,baz=128,slow=32
ANMO Albuquerque 73.40 330 **P 20 33 00.7 +1.8**
DBIC Dimbokro 73.69 72 P **P 20 33 01.1 +0.3**
comp=Z,16nm,0.9s,baz=261,slow=6.8,SNR=22
DBIC LR LR 21 02 28.9
comp=Z,108nm,20.8s,baz=216,slow=33
comp=Z,16nm,0.9s
DBIC Dimbokro 73.69 72 P **P 20 33 00.8 0.0**
DBIC IAmb IAmb 20 33 02.0
comp=Z,16nm,0.9s
CCD Concordia, Ant 73.77 184 P **P 20 33 01.8 +0.9**
CCD pP **pP 20 33 16.5 +1.0**
T25A Trinidad 74.46 333 IAmb IAmb 20 33 08.4
comp=Z,16nm,1.2s
X16A Lo Mia Camp, P 75.19 327 IAmb IAmb 20 33 26.7
comp=Z,14nm,1.3s
SDCO Great Sand Dun 75.42 333 IAmb IAmb 20 33 28.6
comp=Z,18nm,1.8s
SUR Sutherland 75.82 119 LR LR 21 04 20.2
comp=Z,73nm,18.1s,baz=208,slow=34
MAW Mawson 75.94 164 LR LR 21 06 27.1
comp=Z,161nm,19.7s,baz=236,slow=36
Q24A Divide 76.34 334 IAmb IAmb 20 33 18.9
comp=Z,13nm,0.9s
PFO Pinyon Flats O 77.04 323 LR LR 21 01 02.8
comp=Z,62nm,20.5s,baz=152,slow=31
PV05 Paradox Valley 77.17 330 IAmb IAmb 20 33 23.3
comp=Z,7.6nm,0.9s
E62A Clayton Lake 77.23 1 P **P 20 33 21.8 +1.4**
E62A IAmb IAmb 20 33 22.9
comp=Z,8.9nm,0.7s
DANC Danby, Needles 77.29 324 IAmb IAmb 20 33 38.6
comp=Z,15nm,1.1s
D62A Allapoint, All 77.70 2 P **P 20 33 24.1 +1.2**
D62A IAmb IAmb 20 33 25.2
comp=Z,10nm,0.8s
MTPU Mount Pierson 78.50 328 IAmb IAmb 20 33 46.0
comp=Z,11nm,1.4s
Q16A Castle Valley 78.77 329 IAmb IAmb 20 33 46.7
comp=Z,13nm,1.2s
P18A Preston Nutter 78.96 330 IAmb IAmb 20 33 47.8
comp=Z,21nm,1.2s
P17A Butcher Ranch, 79.04 330 IAmb IAmb 20 33 48.5
comp=Z,15nm,1.3s
GWY Greenwater Val 79.16 324 IAmb IAmb 20 33 48.7
comp=Z,17nm,1.5s
PRN Pahroc Range 79.32 326 IAmb IAmb 20 33 35.9
comp=Z,11nm,1.1s
RDMU Red Mountain 79.47 331 IAmb IAmb 20 33 35.1
comp=Z,8.2nm,0.9s
TSUM Tsumeb 79.51 106 LR LR 21 03 55.7
comp=Z,86nm,18.0s,baz=198,slow=32
TSUM Tsumeb 79.51 106 **P 20 33 34.1 +0.2**
TSUM IAmb IAmb 20 33 56.3
comp=Z,11nm,1.1s
TSUM Tsumeb 79.51 106 P **P 20 33 34.5 +0.5**
TSUM pP **pP 20 33 48.7 +0.1**
TPNV Topopah Spring 79.55 325 IAmb IAmb 20 33 51.2
comp=Z,12nm,1.4s
KOOLE Kule 79.80 111 IAmb IAmb 20 33 36.2
comp=Z,8.5nm,0.7s
BSUT Blindstream Ca 79.94 331 IAmb IAmb 20 33 53.0
comp=Z,15nm,1.4s
K22A Casper 80.05 334 IAmb IAmb 20 33 53.3
comp=Z,22nm,1.2s
BOSA Boshof 80.99 118 P **P 20 33 41.4 -0.4**
comp=Z,4.5nm,0.8s,baz=236,slow=3.8,SNR=8.1
BOSA LR LR 21 05 18.7
comp=Z,102nm,18.5s,baz=186,slow=32
comp=Z,4.5nm,0.8s
PDAR Pinedale Array 81.31 333 P **P 20 33 43.5 +0.4**
comp=Z,0.9nm,0.6s,baz=146,slow=7.6,SNR=9.0
PDAR pP **pP 20 34 00.1 +2.4**
comp=Z,0.7nm,0.8s,baz=132,slow=4.2,SNR=2.6
PDAR LR LR 21 06 39.5
comp=Z,34nm,18.9s,baz=200,slow=33
comp=Z,0.9nm,0.6s
PDAR Pinedale Array 81.31 333 P **P 20 33 43.1 +0.1**
GRTLG Ghanzi 81.43 110 P **P 20 33 43.8 -0.4**
GRTLG IAmb IAmb 20 36 09.5
comp=Z,25nm,1.9s

NVAR Mina Array Bea 81.72 325 P **P 20 33 46.0 +0.7**
comp=Z,2.1nm,0.9s,baz=149,slow=6.1,SNR=8.1
NVAR pP **pP 20 34 01.6 +1.7**
comp=Z,1.4nm,0.9s,baz=149,slow=5.6,SNR=4.1
comp=Z,2.1nm,0.9s
AGMN Agassiz Nation 81.89 344 IAmb IAmb 20 33 47.2
comp=Z,10nm,1.0s
TORD Torodi Ar. Bea 82.65 70 P **P 20 33 50.6 +0.2**
comp=Z,11nm,0.7s,baz=257,slow=6.7,SNR=76
TORD pP **pP 20 34 05.1 0.0**
comp=Z,4.7nm,0.9s,baz=238,slow=8.2,SNR=6.6
comp=Z,11nm,0.7s
TORD Torodi Ar. Bea 82.65 70 P **P 20 33 50.4 0.0**
LBTB Lobatse 83.08 115 P **P 20 33 52.6 -0.1**
LBTB IAmb IAmb 20 33 53.1
comp=Z,11nm,0.8s
ULM Lac du Bonnet 83.71 344 P **P 20 33 55.0 0.0**
comp=Z,7.7nm,0.9s,baz=154,slow=4.3,SNR=13
comp=Z,7.7nm,0.9s
ULM Lac du Bonnet 83.71 344 IAmb IAmb 20 33 56.2
comp=Z,12nm,1.0s
SCHQ Schefferville 85.52 3 P **P 20 34 03.7 -0.4**
comp=Z,2.3nm,0.5s,baz=49,slow=19,SNR=9.6
SCHQ LR LR 21 10 58.0
comp=Z,21nm,21.3s,baz=198,slow=35
comp=Z,2.3nm,0.5s
SCHQ Schefferville 85.52 3 P **P 20 34 03.5 -0.6**
PLID Pearl Lake 85.87 330 IAmb IAmb 20 34 23.0
comp=Z,13nm,1.4s
I07A Izee 86.65 327 IAmb IAmb 20 34 12.7
comp=Z,5.7nm,1.0s
PINE Pine Mountain 87.10 327 IAmb IAmb 20 34 15.2
comp=Z,9.1nm,0.9s
H04A Detroit Lake 88.36 326 IAmb IAmb 20 34 34.5
comp=Z,8.1nm,1.2s
NEW Newport 88.86 331 LR LR 21 12 53.5
comp=Z,59nm,18.2s,baz=194,slow=35
MDT Midelt 89.47 51 LR LR 21 14 05.2
comp=Z,44nm,19.8s,baz=226,slow=35
LON Longmire 89.73 328 IAmb IAmb 20 37 16.3
comp=Z,10nm,1.4s
LSZ Lusaka 90.22 108 LR LR 21 12 47.8
comp=Z,86nm,18.6s,baz=182,slow=34
LSZ Lusaka 90.22 108 P **P 20 34 28.6 +0.9**
FCC Fort Churchill 91.36 348 IAmb IAmb 20 34 33.7
comp=Z,7.6nm,1.1s
AFI Afiamalu 91.62 253 LR LR 21 08 25.2
comp=Z,56nm,18.2s,baz=88,slow=31
ESDC Sonseca Array 94.06 46 LR LR 21 14 44.1
comp=Z,55nm,19.6s,baz=232,slow=34
SFJD Kangerlussuaq 98.91 8 LR LR 21 23 12.7
comp=Z,17nm,18.1s,baz=172,slow=37
YKA Yellowknife Ar 99.36 341 P **Pdif 20 35 07.7 -0.5**
comp=Z,0.2nm,0.5s,baz=141,slow=4.0,SNR=5.2
comp=Z,0.2nm,0.5s
ASAR Alice Springs 120.53 207 PKP **PKPdf 20 40 17.4 -1.1**
comp=Z,1.0nm,0.8s,baz=134,slow=1.7,SNR=11
ASAR Alice Springs 120.53 207 **PKPdf 20 40 17.2 -1.4**
WRA Warramunga Arr 123.69 209 PKP **PKPdf 20 40 24.1 -0.7**
comp=Z,3.1nm,0.7s,baz=166,slow=1.7,SNR=36
WRA Warramunga Arr 123.69 209 **PKPdf 20 40 23.9 -0.9**
H11S2 WAKE ISLAND Hyl 126.33 271 T T 22 59 25.4
baz=116,slow=75,SNR=237
H11S1 WAKE ISLAND Hyl 126.34 271 T T 22 59 27.2
baz=116,slow=75,SNR=303
H11S3 WAKE ISLAND Hyl 126.34 271 T T 22 59 19.3
baz=116,slow=75,SNR=272
H11N3 WAKE ISLAND Hyl 126.66 272 T T 22 59 44.7
baz=116,slow=75,SNR=153
H11N1 WAKE ISLAND Hyl 126.67 272 T T 22 59 45.5
baz=116,slow=75,SNR=54
H11N2 WAKE ISLAND Hyl 126.68 272 T T 22 59 51.8
baz=116,slow=75,SNR=300
BVAR Boroye Array 144.64 40 PKP **PKPdf 20 41 02.4 -0.2**
comp=Z,3.2nm,0.4s,baz=294,slow=4.0,SNR=25
EKS2 Erkin-Say 149.96 57 P **PKiKP 20 41 17.7 0.0**
SNR=10
KURBB Kurchatov Arra 150.23 40 PKPbc **PKiKP 20 41 17.4 -0.4**
comp=Z,3.2nm,0.9s,baz=299,slow=3.0,SNR=18
KURK Kurchatov 150.23 40 **PKiKP 20 41 17.3 -0.5**
USP Ospenovka 150.35 56 P **PKiKP 20 41 18.3 -0.1**
SNR=11
RPSI Rantau Prapat 150.44 160 PKPbc **PKPbc 20 41 18.1 -0.5**
AAK Ala-Archa 150.48 57 P **PKiKP 20 41 19.2 +0.4**
SNR=12
AAK Ala-Archa 150.48 57 PKPbc **PKiKP 20 41 18.7 -0.1**
comp=Z,7.3nm,0.8s,baz=212,slow=2.5,SNR=3.5
AAK Ala-Archa 150.48 57 **PKiKP 20 41 18.9 +0.1**
UCH Uchtor 150.58 58 P **PKiKP 20 41 19.9 +0.4**
SNR=10.0
TKM2 Tokmak 2 151.21 56 P **PKiKP 20 41 20.4 0.0**
SNR=6.0
ZAA0 Zalesovo Array 151.34 30 PKPdf **PKPdf 20 41 14.1 +0.7**
ZALV Zalesovo Beam 151.34 30 PKPbc **PKiKP 20 41 19.9 0.0**
comp=Z,1.4nm,0.5s,baz=295,slow=3.5,SNR=22
ZALV Zalesovo Beam 151.34 30 **PKPdf 20 41 14.1 +0.6**
NRN Naryn 151.82 59 PKPdf **PKPdf 20 41 14.0 -1.0**
ULHL Ulahol 151.83 57 P **PKiKP 20 41 22.2 +0.5**
SNR=6.7
MKAR Makanchi Array 154.28 45 PKP **PKPdf 20 41 17.6 -0.5**
comp=Z,0.2nm,0.8s,baz=318,slow=3.4,SNR=4.0
MKAR PKPbc **PKiKP 20 41 26.2 -0.2**
comp=Z,1.2nm,0.7s,baz=296,slow=1.9,SNR=14
MKAR PKPab **PKPab 20 41 39.3 -1.2**
comp=Z,3.0nm,0.8s,baz=290,slow=4.2,SNR=19
MKAR Makanchi Array 154.28 45 **PKPdf 20 41 17.3 -0.8**
MKAR **PKPbc 20 41 25.9 -0.5**
WMQ Urumqi 159.06 46 *e*PKP **PKPdf 20 41 26.0 +1.6**
SONM Songino Array 163.05 5 PKPab **PKPab 20 42 16.7 -1.8**
comp=Z,0.5nm,0.8s,baz=8.1,slow=2.0,SNR=3.6
CMAR Chiang Mai Arr 164.78 143 PKP **PKPdf 20 41 31.4 +0.5**
comp=Z,0.9nm,0.9s,baz=261,slow=3.6,SNR=5.7
CMAR PKPab **PKPab 20 42 26.0 -0.7**
comp=Z,0.7nm,0.8s,baz=218,slow=4.6,SNR=5.9
CMAR Chiang Mai Arr 164.78 143 PKPdf **PKPdf 20 41 30.9 +0.1**
LSA Lhasa 164.86 90 PKPdf **PKPdf 20 41 30.2 -1.0**
GTA2 Gaotai 168.83 38 PKP **PKPdf 20 41 34.5 +1.0**
GTA2 PKPab **PKPab 20 42 45.0 +0.7**
HHC Hu-ho-hao-te 169.84 347 *e*P **PKPdf 20 41 35.5 +1.5**
NJ2 Nanjing 171.19 280 *e*P **PKPdf 20 41 36.3 +1.4**
NJ2 pmax pmax
comp=Z,7.0nm,0.8s
PZH PanZhiHua 172.51 125 PKP **PKPdf 20 41 35.0 -0.9**
XAN Xi'an 176.91 355 *e*PKP **PKPdf 20 41 36.8 -0.1**

IDC 26 20:23:40.6±2.0, 26°.96N×143°.60E, h0km, mb3.4/3, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=38.5km s-min=27.2km az=51.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.27**	**276**	Pn	Pn	20 24 05.5	0.0
	8.1nm,0.3s,baz=270,slow=20,SNR=1.4						
JCJ				Sn	Sn	20 24 24.4	+1.0
	31nm,0.3s,baz=283,slow=23,SNR=8.0						
MJAR	**Matsushiro Arr**	**10.59**	**336**	Pn	Pn	20 26 12.8	-0.9
	0.1nm,0.3s,baz=164,slow=12,SNR=8.1						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**47.48**	**192**	P	P	20 32 17.3	-0.2
	0.5nm,0.6s,baz=13,slow=8.4,SNR=5.8						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**51.53**	**310**	P	P	20 32 49.0	+0.7
	0.1nm,0.5s,baz=85,slow=6.8,SNR=2.3						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**54.03**	**314**	P	P	20 33 06.1	-0.6
	0.2nm,0.2s,baz=92,slow=7.8,SNR=2.5						
	0.2nm,0.2s						

*IDC **26** 20:26:29.8±0.9, 26°.97N×143°.85E, h0km, mb3.7/9, mbtmp3.7/12, ML3.3/3, MS3.5/4, Error ellipse: s-maj=22.4km s-min=18.9km az=84.0*

ISC 26 20:26:35.1±1.0, 27°.0N±0°.1×143°.72E±0°.1, 0, h35km, n17, σ0, 73/14, mb3.7/9, MS3.8/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.38**	**274**	Pn	**Pn**	**20 26 57.5**	**-0.3**
	34nm,0.3s,baz=279,slow=23,SNR=5.6						
JCJ				Sn	**Sn**	**20 27 14.4**	**-0.3**
	136nm,0.3s,baz=305,slow=22,SNR=22						
MJAR	**Matsushiro Arr**	**10.60**	**335**	Pn	**Pn**	**20 29 03.4**	**-1.2**
	0.3nm,0.3s,baz=162,slow=11,SNR=20						
	4.9nm,0.8s						
KSRS	**Korea Array**	**16.93**	**312**	Pn	**Pn**	**20 30 28.5**	**-0.7**
	0.2nm,0.3s,baz=117,slow=13,SNR=1.7						
	0.8nm,0.6s						
ASAJ	**Asahikawa**	**17.10**	**357**	P	**Pn**	**20 30 31.4**	**+0.1**
	0.1nm,0.3s,baz=205,slow=14,SNR=4.2						
	2.3nm,0.9s						
SONM	**Songino Array**	**35.74**	**316**	P	**P**	**20 33 31.6**	**+1.0**
	0.2nm,0.4s,baz=101,slow=7.5,SNR=3.5						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.99**	**268**	LR	LR	20 50 31.1	
	comp=Z,13nm,19.8s,baz=110,slow=34						
WRA	**Warramunga Arr**	**47.54**	**192**	P	**P**	**20 35 07.2**	**0.0**
	3.0nm,0.9s,baz=12,slow=8.5,SNR=11						
	3.0nm,0.9s						
ASAR	**Alice Springs**	**51.26**	**192**	P	**P**	**20 35 35.2**	**-0.3**
	0.5nm,0.8s,baz=2.0,slow=5.6,SNR=7.0						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**51.59**	**310**	P	**P**	**20 35 38.3**	**+0.4**
	0.4nm,0.5s,baz=89,slow=8.6,SNR=7.4						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**54.09**	**314**	P	**P**	**20 35 56.9**	**+0.7**
	0.9nm,0.6s,baz=92,slow=7.6,SNR=9.7						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**57.14**	**29**	P	**P**	**20 36 17.7**	**-0.2**
	0.8nm,0.8s,baz=254,slow=6.0,SNR=7.0						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**59.04**	**318**	P	**P**	**20 36 32.5**	**+1.1**
	0.5nm,0.4s,baz=74,slow=3.7,SNR=4.9						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**71.57**	**29**	P	**P**	**20 37 52.5**	**+0.2**
	0.4nm,0.8s,baz=296,slow=6.7,SNR=5.0						
	0.4nm,0.8s						
NVAR	**Mina Array Bea**	**79.49**	**52**	P	**P**	**20 38 37.7**	**-0.8**
	0.7nm,0.8s,baz=259,slow=6.9,SNR=3.7						
	0.7nm,0.8s						
FRB	**Frobisher Bay**	**86.05**	**14**	LR	LR	21 26 02.8	
	comp=Z,23nm,18.1s,baz=100,slow=42						
GERES	**GERESS Array B**	**92.29**	**330**	LR	LR	21 27 18.2	
	comp=Z,45nm,18.4s,baz=244,slow=40						
FURI	**Furi**	**99.18**	**285**	LR	LR	21 25 16.4	
	comp=Z,61nm,19.5s,baz=66,slow=36						

*IDC **26** 20:31:04.6±2.3, 27°.07N×56°.13E, h0km, mb3.7/8, mbtmp3.7/12, ML3.6/4, MS3.2/3, Error ellipse: s-maj=44.6km s-min=21.2km az=160.0*
*TEH **26** 20:31:05.4, 27°.08N×56°.20E, h8km±15km, ML3.7, Presumed earthquake*
*DSN **26** 20:31:08.5±1.1, 27°.11N×56°.06E, h15km, ML3.5/14, Error ellipse: s-maj=14.2km s-min=5.4km az=55.0*
*OMAN **26** 20:31:08.9±0.1, 27°.15N×56°.32E, h24km±2km, mb3.8/6, ml3.7/23, Error ellipse: s-maj=2.7km s-min=1.1km az=8.0*

ISC 26 20:31:07.5±1.1, 27°.12N±0°.03×56°.22E±0°.04, h15km±8km, n84, σ1$41/97, mb3.8/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.28**	**351**	Pg	**Pg**	**20 31 13.0**	**-0.6**
GENO	**Geno**	**0.28**	**351**	Pg	**Pg**	**20 31 13.1**	**-0.5**
IBND	**Bandar-abas**	**0.43**	**41**	Pg	**Pg**	**20 31 16.1**	**-0.1**
SHME	**Shamm**	**1.07**	**184**	*e*P	**Pb**	**20 31 28.1**	**+0.4**
	SNR=128						
SHME				S	**Sn**	**20 31 43.3**	**+0.8**
SHME	**Shamm**	**1.07**	**184**	P	**Pb**	**20 31 28.3**	**+0.6**
	SNR=129						
SHME				S	**Sn**	**20 31 44.7**	**+2.2**
BANOM	**Banah**	**1.20**	**177**	*e*P	**Pn**	**20 31 30.1**	**+0.4**
	SNR=730						
BANOM				S	**Sn**	**20 31 46.5**	**+0.8**
BANOM	**Banah**	**1.20**	**177**	P	**Pn**	**20 31 30.4**	**+0.7**
BANOM				S	**Sg**	**20 31 46.8**	**+0.6**
KHNJ	**Kahnooj**	**1.56**	**58**	Pg	**Pn**	**20 31 36.1**	**+1.5**
UMQ	**Umm Al-Quwin**	**1.67**	**198**	P	**Pb**	**20 31 38.7**	**+0.8**
MASF	**Masafi**	**1.75**	**182**	P	**Pn**	**20 31 38.9**	**+1.7**
	SNR=85						
MASF				S	**Sb**	**20 32 00.7**	**-0.3**
MSFE	**Esma-Masafi**	**1.76**	**182**	*e*P	**Pn**	**20 31 38.0**	**+0.6**
	SNR=85						
MDH	**Madha**	**1.82**	**178**	*e*P	**Pn**	**20 31 38.7**	**+0.4**
	SNR=18						
MDH	**Madha**	**1.82**	**178**	P	**Pn**	**20 31 39.0**	**+0.8**
	SNR=19						
MDH				S	**Sn**	**20 32 01.3**	**+0.4**
JASK	**Jask - Hormozg**	**1.93**	**130**	P	**Pn**	**20 31 41.2**	**+1.3**
	SNR=41						
JASK				S	**Sn**	**20 32 03.4**	**-0.4**
JASK	**Jask - Hormozg**	**1.93**	**130**	Pn	Pn	**20 31 41.1**	**+1.3**
UOSS	**Minazif**	**2.17**	**180**	*e*P	**Pn**	**20 31 44.3**	**+1.3**
	SNR=8.2						
UOSS	**Minazif**	**2.17**	**180**	P	**Pn**	**20 31 44.3**	**+1.3**
UOSS				S	**Sn**	**20 32 11.8**	**+2.2**
NAZ	**Nazwa, Dubai**	**2.18**	**193**	*e*P	**Pn**	**20 31 44.3**	**+1.1**
	SNR=6.3						
NAZ	**Nazwa, Dubai**	**2.18**	**193**	P	**Pn**	**20 31 44.9**	**+1.6**
	SNR=6.3						
NAZ				S	**Sb**	**20 32 12.4**	**-1.2**
HATD	**Hatta, Dubai**	**2.29**	**182**	P	**Pn**	**20 31 45.6**	**+0.8**
HATD	**Hatta, Dubai**	**2.29**	**182**	P	**Pn**	**20 31 46.1**	**+1.4**
	SNR=16						
HATD				S	**Sn**	**20 32 13.3**	**+0.6**
ASHO	**Ashiyiah**	**2.43**	**183**	*e*P	**Pn**	**20 31 48.5**	**+1.7**
	SNR=26						
ASHO	**Ashiyiah**	**2.43**	**183**	P	**Pn**	**20 31 48.6**	**+1.8**
	SNR=25						
FAQ	**Al Faqa, Dubai**	**2.43**	**194**	*e*P	**Pn**	**20 31 48.2**	**+1.5**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**2.43**	**194**	P	**Pn**	**20 31 48.4**	**+1.7**
	SNR=13						
NGRK	**Negar Kerman**	**2.55**	**10**	Pn	**Pn**	**20 31 51.0**	**+2.3**
ASUD	**Al Ashush, Dub**	**2.61**	**198**	P	**Pn**	**20 31 51.0**	**+1.8**
KHL1	**Khalili_Fars**	**2.65**	**282**	Pn	**Pn**	**20 31 51.1**	**+1.4**
LMD1	**Lamerd**	**2.73**	**275**	Pn	**Pn**	**20 31 52.4**	**+1.6**
AJN	**Ajban**	**2.78**	**204**	P	**Pn**	**20 31 53.3**	**+1.8**
AJN				S	**Sn**	**20 32 27.9**	**+3.1**
KBAM	**BAM**	**2.81**	**44**	Pn	**Pn**	**20 31 54.3**	**+2.3**
CHMN	**Cheshme madani**	**2.96**	**23**	Pn	**Pn**	**20 31 56.8**	**+2.4**
SOHO	**SOHO**	**2.99**	**174**	*i* P	**Pn**	**20 31 56.0**	**+1.6**
	SNR=9.0						
SOHO	**SOHO**	**2.99**	**174**	P	**Pn**	**20 31 54.2**	**-0.2**
ALNE	**Al Ain**	**3.08**	**188**	P	**Pn**	**20 31 56.6**	**+1.0**
ALNE	**Al Ain**	**3.08**	**188**	P	**Pn**	**20 31 56.6**	**+1.0**
HOQ	**Hoqain**	**3.66**	**164**	P	**Pn**	**20 32 03.0**	**-0.6**
	SNR=21						
MZWR	**Madinat Zayed**	**3.96**	**213**	P	**Pn**	**20 32 09.6**	**+1.9**
BIDO	**Bidbid**	**3.98**	**154**	P	**Pn**	**20 32 08.2**	**+0.2**
BIDO				S	**Sn**	**20 32 54.6**	**+0.2**
CHBR	**Chabahar**	**4.12**	**111**	Pn	**Pn**	**20 32 10.9**	**+1.0**
SMDO	**Samad**	**4.37**	**157**	P	**Pn**	**20 32 14.6**	**+1.1**
	SNR=21						
WSAR	**Wadi Sarin**	**4.44**	**150**	P	**Pn**	**20 32 15.2**	**+0.9**
WSAR				S	**Sn**	**20 33 04.3**	**-1.5**
BSY	**Bisya**	**4.45**	**168**	P	**Pn**	**20 32 16.0**	**+1.6**
	SNR=10						
IMEH	**Mehriz**	**4.48**	**342**	Pn	**Pn**	**20 32 17.4**	**+2.4**
IBAF	**Bafgh**	**4.49**	**353**	Pn	**Pn**	**20 32 17.2**	**+2.1**
UMZA	**Um Al Zommool**	**4.49**	**193**	P	**Pn**	**20 32 15.2**	**+0.2**
DSBU	**Dashti - Bushe**	**4.57**	**287**	Pn	**Pn**	**20 32 17.7**	**+1.6**
NGCH	**Negor - Chabah**	**4.75**	**111**	P	**Pn**	**20 32 20.0**	**+1.4**
	SNR=10						
NGCH	**Negor - Chabah**	**4.75**	**111**	Pn	**Pn**	**20 32 20.0**	**+1.4**
MZR	**Muzera**	**4.80**	**212**	P	**Pn**	**20 32 20.1**	**+0.9**
MZR	**Muzera**	**4.80**	**212**	P	**Pn**	**20 32 20.1**	**+0.9**
SHMA	**Al-Shehemyia**	**4.88**	**256**	P	**Pn**	**20 32 22.5**	**+2.2**
	SNR=9.4						
TAFT	**Taft - Yazd**	**4.92**	**339**	Pn	**Pn**	**20 32 23.7**	**+2.6**
JMDO	**Jabal Madar**	**5.03**	**160**	P	**Pn**	**20 32 22.7**	**+0.2**
	SNR=7.6						
TRNA	**Turayna**	**5.10**	**243**	P	**Pn**	**20 32 23.4**	**+0.1**
	SNR=8.5						
WBK	**Wadi Bani Khal**	**5.14**	**150**	P	**Pn**	**20 32 24.3**	**+0.3**
	SNR=46						
WBK				S	**Sn**	**20 33 23.0**	**-0.1**
	SNR=8.7						
ICHK	**Chekchek**	**5.34**	**343**	Pn	**Pn**	**20 32 29.0**	**+2.1**
SMRA	**Abu-Samra**	**5.40**	**245**	P	**Pn**	**20 32 28.9**	**+1.3**
SRVN	**Saravan**	**5.51**	**86**	Pn	**Pn**	**20 32 31.5**	**+2.4**
KLNJ	**Kolanjah**	**5.60**	**315**	Pn	**Pn**	**20 32 32.5**	**+1.9**
JLN	**Jalan Bani Buh**	**5.74**	**149**	P

DMTO	**DMTO**	**9.44**	**187**	P		**Pn**	**20 33 23.5**	**+0.6**
	SNR=14								
WHFO	**Wadi Hawf**	**9.44**	**194**	P		**Pn**	**20 33 23.0**	**0.0**
	SNR=42								
ABTO	**Aybut**	**10.09**	**196**	P		**Pn**	**20 33 30.5**	**-1.5**
	SNR=6.9								
RAYN	**Ar Rayn**	**10.34**	**252**	P		**Pn**	**20 33 32.7**	**-2.6**
GNI	**Garni**	**16.11**	**327**	Pn		**Pn**	**20 34 54.6**	**+1.0**
	0.3nm,0.3s,baz=151,slow=14,SNR=1.9								
	2.1nm,0.5s								
ASF	**Jabal al Asfar**	**17.53**	**291**	P		**Pn**	**20 35 09.8**	**-1.6**
	0.2nm,0.3s,baz=68,slow=11,SNR=2.1								
ASF				S		Sn	20 38 12.8	-14	
	0.9nm,0.5s,baz=131,slow=19,SNR=1.5								
ASF				LR		LR	20 44 20.1		
	comp=Z,46nm,18.8s,baz=206,slow=46								
	0.5nm,0.3s								
MMAI	**Mount Meron Ar**	**18.94**	**293**	P		**P**	**20 35 27.0**	**-1.0**
	0.3nm,0.3s,baz=98,slow=10,SNR=1.4								
	0.3nm,0.4s								
KBZ	**Khabaz**	**19.77**	**330**	P		**P**	**20 35 36.0**	**-0.9**
	0.1nm,0.3s,baz=157,slow=7.0,SNR=5.3								
	2.1nm,1.0s								
AAK	**Ala-Archa**	**21.48**	**39**	P		**P**	**20 35 54.3**	**-1.3**
	0.6nm,0.6s,baz=225,slow=13,SNR=2.0								
	0.6nm,0.6s								
BRTR	**Keskin Array B**	**22.58**	**310**	P		**P**	**20 36 06.7**	**-0.8**
	0.4nm,0.6s,baz=133,slow=12,SNR=6.3								
BRTR				LR		LR	20 47 05.9		
	comp=Z,28nm,19.2s,baz=308,slow=43								
	0.4nm,0.6s								
AKTO	**Aktyubinsk**	**23.32**	**3**	P		**P**	**20 36 16.6**	**+1.7**
	3.1nm,0.8s,baz=189,slow=7.6,SNR=8.1								
	3.1nm,0.8s								
MKAR	**Makanchi Array**	**28.41**	**39**	P		**P**	**20 37 02.1**	**+0.7**
	0.3nm,0.5s,baz=218,slow=9.4,SNR=6.8								
	0.3nm,0.5s								
ZALV	**Zalesovo Beam**	**34.07**	**30**	P		**P**	**20 37 51.4**	**+0.3**
	0.4nm,0.3s,baz=224,slow=7.7,SNR=2.6								
	0.4nm,0.3s								
FINES	**FINESS Array B**	**39.82**	**338**	P		**P**	**20 38 39.5**	**-0.3**
	4.1nm,1.1s,baz=126,slow=9.7,SNR=5.3								
	4.1nm,1.1s								
HFS	**Hagfors**	**43.84**	**331**	P		**P**	**20 39 10.5**	**-2.2**
	1.0nm,0.5s,baz=118,slow=8.3,SNR=4.8								
	1.0nm,0.5s								
TORD	**Torodi Ar. Bea**	**52.67**	**266**	P		**P**	**20 40 20.6**	**-0.9**
	0.9nm,0.5s,baz=66,slow=7.5,SNR=12								
	0.9nm,0.5s								
YKA	**Yellowknife Ar**	**90.39**	**356**	LR		**LR**	21 30 30.6		
	comp=Z,30nm,19.4s,baz=304,slow=39								

*CATAC **26** 20:35:47.0±0.4, 10°N±2°×8°6W±°, h32km±3km, M3.5/9, MLv3.5/9, Error ellipse: s-maj=8.2km s-min=4.4km az=72.3, confirmed*
*UCR **26** 20:35:47.1±0.8, 10°.53N×85°.72W, h31km±1km, MW3.7, Presumed earthquake*
ISC 26 20:35:47.5±1.1, 10°.49N±0°.03×85°.73W±0°.05, h33km±3km, n52, σ0°83/65, 1C-26D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
DELF	**Filadelfia**	**0.18**	**102**	⇓*eP*	**Pn**	**20 35 53.8**	**+0.6**	
DELF				*eS*	**Sb**	**20 35 59.2**	**+0.9**	
ELI1	**Hacienda Flor**	**0.23**	**48**	P	**Pn**	**20 35 54.7**	**+0.2**	
ELI1				S	**Sb**	**20 36 01.0**	**+1.7**	
ELI1	**Hacienda Flor**	**0.23**	**48**	⇓*eP*	**Pn**	**20 35 54.6**	**+0.2**	
ELI1				*eS*	**Sb**	**20 36 01.1**	**+1.8**	
SACU	**Santa Cruz**	**0.27**	**147**	*eP*	**Pn**	**20 35 54.7**	**-0.3**	
SACU				*eS*	**Sb**	**20 36 01.1**	**+1.3**	
ERIA	**Liberia**	**0.32**	**63**	⇓*eP*	**Pb**	**20 35 55.4**	**-0.1**	
PLVR	**Palo Verde**	**0.40**	**110**	⇓*eP*	**Pb**	**20 35 56.3**	**-0.4**	
ELVJ	**El Viejo (Barb**	**0.40**	**95**	⇓*eP*	**Pb**	**20 35 54.9**	**-1.7**	
LAPC	**Finca la Perla**	**0.40**	**46**	⇓*eP*	**Pb**	**20 35 55.8**	**-0.9**	
GPS3	**Bodega del ICE**	**0.45**	**53**	⇓*eP*	**Pn**	**20 35 58.8**	**+1.1**	
GPS2	**Hotel Rincn d**	**0.46**	**55**	⇓*eP*	**Pb**	**20 35 56.9**	**-0.7**	
BAGA	**Bagaces**	**0.46**	**85**	⇓*eP*	**Pb**	**20 35 57.4**	**-0.2**	
VRLE	**La Escondida,**	**0.47**	**50**	⇓*eP*	**Pb**	**20 35 56.8**	**-0.9**	
VORI	**VORI**	**0.50**	**49**	⇓*eP*	**Pb**	**20 35 57.3**	**-1.0**	
COLC	**Colonia**	**0.55**	**71**	⇓*eP*	**Pn**	**20 35 58.1**	**-0.9**	
BUAI	**Buenos Aires**	**0.55**	**45**	*eP*	**Pn**	**20 35 58.2**	**-0.9**	
CMARA	**Lajas Hojancha**	**0.55**	**147**	P	**Pn**	**20 35 58.7**	**-0.4**	
CMARA				S	**Sb**	**20 36 07.7**	**+0.8**	
CMARA	**Lajas Hojancha**	**0.55**	**147**	*eP*	**Pn**	**20 35 58.8**	**-0.4**	
PEJA	**Penjamo Buenos**	**0.58**	**45**	*eP*	**Pn**	**20 35 58.8**	**-0.6**	
CUI	**Cuipilapa**	**0.58**	**73**	⇓*eP*	**Pn**	**20 35 58.8**	**-0.7**	
MESS	**Mesas**	**0.58**	**64**	⇓*eP*	**Pn**	**20 35 58.6**	**-0.9**	
HORNC	**Hornillas**	**0.59**	**67**	⇓*eP*	**Pn**	**20 35 58.7**	**-0.9**	
LCRUZ	**La Cruz**	**0.60**	**9**	⇓*eP*	**Pn**	**20 35 58.8**	**-0.9**	
INVE	**Universidad In**	**0.66**	**91**	⇓*eP*	**Pn**	**20 36 00.0**	**-0.5**	
NYURE	**Nandayure**	**0.68**	**136**	*eP*	**Pn**	**20 36 00.3**	**-0.5**	
VMAR	**Armenia, Volca**	**0.69**	**62**	⇓*eP*	**Pn**	**20 36 00.3**	**-0.7**	
TIMP	**Tierras Morena**	**0.71**	**82**	⇓*eP*	**Pn**	**20 36 00.5**	**-0.8**	
CARN	**Rivas**	**0.72**	**16**	P	**Pn**	**20 36 01.6**	**+0.1**	
CARN				S	**Sn**	**20 36 11.6**	**+0.2**	
TILA	**Tilaran**	**0.75**	**91**	*eP*	**Pn**	**20 36 01.3**	**-0.6**	
TENO	**El Achiote**	**0.77**	**74**	⇓*eP*	**Pn**	**20 36 00.9**	**-1.2**	
JTS	**Las Juntas de**	**0.79**	**104**	P	**Pn**	**20 36 01.7**	**-0.7**	
JTS				S	**Sn**	**20 36 13.4**	**+0.3**	
JTS	**Las Juntas de**	**0.79**	**104**	⇓*eP*	**Pn**	**20 36 01.7**	**-0.7**	
CHIK	**Chiripa**	**0.81**	**93**	*eP*	**Pn**	**20 36 02.4**	**-0.4**	
QUEB	**Quebradon, Cot**	**0.83**	**81**	⇓*eP*	**Pn**	**20 36 02.6**	**-0.4**	
JCR1	**Jicaral**	**0.88**	**136**	*eP*	**Pn**	**20 36 03.3**	**-0.4**	
TABAC	**Tabacon**	**0.95**	**89**	⇓*eP*	**Pn**	**20 36 04.8**	**+0.2**	
CASO	**Castillo**	**0.98**	**93**	*eP*	**Pn**	**20 36 05.3**	**+0.3**	
ARE1	**Arenal 1**	**0.99**	**91**	⇓*eP*	**Pn**	**20 36 05.7**	**+0.5**	
VARE2	**V. Arenal**	**0.99**	**91**	⇓*eP*	**Pn**	**20 36 05.7**	**+0.5**	
CEDE	**Laguna Cedeo**	**1.01**	**90**	⇓*eP*	**Pn**	**20 36 05.9**	**+0.5**	
REZ	**Monterrey de S**	**1.01**	**88**	⇓*eP*	**Pn**	**20 36 06.1**	**+0.5**	
OMEN	**Al SSO del Vol**	**1.02**	**6**	P	**Pn**	**20 36 03.1**	**-2.5**	
OMEN				S	**Sn**	**20 36 18.0**	**-0.8**	
JAPN	**Al SSO del Vol**	**1.03**	**3**	P	**Pn**	**20 36 05.8**	**+0.1**	
JAPN				S	**Sn**	**20 36 18.8**	**-0.3**	
JAPN	**Al SSO del Vol**	**1.03**	**3**	*eP*	**Pn**	**20 36 05.9**	**+0.1**	
VACR	**Volcan Arenal**	**1.03**	**91**	*eP*	**Pn**	**20 36 06.4**	**+0.6**	
MORN	**Al O del Volca**	**1.06**	**4**	P	**Pn**	**20 36 05.7**	**-0.4**	
MORN				S	**Sn**	**20 36 19.2**	**-0.5**	
NADN	**Granada**	**1.29**	**347**	P	**Pn**	**20 36 09.4**	**+0.2**	
NADN				S	**Sn**	**20 36 26.5**	**+1.2**	
NADN	**Granada**	**1.29**	**347**	*eP*	**Pn**	**20 36 09.6**	**+0.3**	
NANN	**Nandasmo**	**1.49**	**345**	P	**Pn**	**20 36 13.1**	**+1.0**	
NANN				S	**Sn**	**20 36 31.4**	**+1.0**	
VPS8	**V Poas**	**1.50**	**102**	*eP*	**Pn**	**20 36 13.5**	**+1.1**	
MASN	**Masaya**	**1.55**	**345**	*eP*	**Pn**	**20 36 12.8**	**-0.1**	
ACON	**Acoyapa**	**1.57**	**20**	P	**Pn**	**20 36 12.6**	**-0.5**	
ACON				S	**Sn**	**20 36 32.0**	**-0.4**	
COPN	**Copaltepe**	**1.88**	**333**	*eP*	**Pn**	**20 36 17.6**	**+0.2**	

*CATAC **26** 20:47:02.9±0.2, 11°N±1°×8°5W±°, h1km, M2.8/7, MLv2.8/7, Error ellipse: s-maj=4.0km s-min=2.9km az=75.4, confirmed*
*UCR **26** 20:47:02.2±1.1, 10°.64N×84°.96W, h5km±1km, MW3.5, Presumed earthquake*
ISC 26 20:47:03.0±0.8, 10°.64N±0°.03×84°.93W±0°.03, h9km±5km, n33, σ0°76/43, 7C-6D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
QUEB	**Quebradon, Cot**	**0.04**	**109**	⇑*eP*	**Pg**	**20 47 04.7**	**-0.1**	
QUEB				*eS*	**Sg**	**20 47 06.3**	**+0.1**	
TENO	**El Achiote**	**0.08**	**327**	⇑*eP*	**Pg**	**20 47 05.0**	**-0.3**	
TENO				*eS*	**Sg**	**20 47 06.7**	**-0.3**	
TIMP	**Tierras Morena**	**0.10**	**238**	⇓*eP*	**Pg**	**20 47 04.9**	**-0.7**	
TIMP				*eS*	**Sg**	**20 47 06.5**	**-0.9**	
TILA	**Tilaran**	**0.17**	**192**	*eP*	**Pg**	**20 47 06.5**	**-0.2**	
TILA				*eS*	**Sg**	**20 47 12.0**	**+2.8**	
CHIK	**Chiripa**	**0.19**	**173**	⇓*eP*	**Pg**	**20 47 07.3**	**+0.2**	
INVE	**Universidad In**	**0.20**	**219**	⇓*eP*	**Pg**	**20 47 07.2**	**-0.1**	
INVE				*eS*	**Sg**	**20 47 10.6**	**+0.5**	
TABAC	**Tabacon**	**0.21**	**130**	*eP*	**Pg**	**20 47 08.3**	**+0.9**	
CUI	**Cuipilapa**	**0.23**	**275**	⇑*eP*	**Pg**	**20 47 07.6**	**-0.1**	
VMAR	**Armenia, Volca**	**0.25**	**315**	⇑*eP*	**Pg**	**20 47 08.3**	**+0.2**	
HORNC	**Hornillas**	**0.25**	**288**	⇑*eP*	**Pg**	**20 47 07.9**	**-0.2**	
REZ	**Monterrey de S**	**0.25**	**115**	*eP*	**Pb**	**20 47 09.5**	**-0.2**	
COLC	**Colonia**	**0.27**	**276**	⇑*eP*	**Pg**	**20 47 08.3**	**-0.1**	
ARE1	**Arenal 1**	**0.27**	**130**	⇓*eP*	**Pb**	**20 47 09.5**	**-0.6**	
VARE2	**V. Arenal**	**0.27**	**130**	⇓*eP*	**Pb**	**20 47 09.5**	**-0.6**	
MESS	**Mesas**	**0.28**	**292**	*eP*	**Pg**	**20 47 08.4**	**-0.2**	
CASO	**Castillo**	**0.28**	**136**	*eP*	**Pb**	**20 47 09.4**	**-0.9**	
VACR	**Volcan Arenal**	**0.30**	**123**	*eP*	**Pb**	**20 47 10.0**	**-0.5**	
JTS	**Las Juntas de**	**0.34**	**183**	P	**Pg**	**20 47 09.4**	**-0.4**	
JTS				S	**Sg**	**20 47 13.6**	**-0.8**	
JTS	**Las Juntas de**	**0.34**	**183**	⇓*eP*	**Pg**	**20 47 09.4**	**-0.4**	
ELVJ	**El Viejo (Barb**	**0.42**	**245**	*eP*	**Pb**	**20 47 14.3**	**+0.8**	
VRLE	**La Escondida,**	**0.45**	**290**	⇑*eP*	**Pg**	**20 47 11.6**	**-0.3**	
LAPC	**Finca la Perla**	**0.51**	**285**	*eP*	**Pg**	**20 47 12.4**	**-0.5**	
ELI1	**Hacienda Flor**	**0.61**	**271**	P	**Pg**	**20 47 14.3**	**-0.5**	
ELI1				S	**Sg**	**20 47 22.7**	**-0.1**	
ELI1	**Hacienda Flor**	**0.61**	**271**	*eP*	**Pg**	**20 47 14.5**	**-0.3**	
NYURE	**Nandayure**	**0.71**	**206**	*eP*	**Pg**	**20 47 15.8**	**-1.0**	
CMARA	**Lajas Hojancha**	**0.78**	**218**	S	**Sg**	**20 47 28.0**	**-0.3**	
TRT2	**Tortugero**	**1.18**	**94**	S	**Sg**	**20 47 41.2**	**+0.2**	
LCR2	**La Lucha 2**	**1.27**	**134**	S	**Sg**	**20 47 43.0**	**-1.0**	
ACON	**Acoyapa**	**1.34**	**350**	P	**Pn**	**20 47 27.5**	**-0.5**	
ACON				S	**Sg**	**20 47 45.7**	**-0.7**	
PIEC	**Cerro El Cedra**	**1.39**	**136**	*eP*	**Pn**	**20 47 28.2**	**-0.6**	
BUS1	**Rivas**	**1.59**	**133**	*eP*	**Pn**	**20 47 31.2**	**-0.4**	
BOAB	**BOACO BROADBAN**	**1.94**	**338**	P	**Pn**	**20 47 36.9**	**+0.8**	
BOAB				S	**Sb**	**20 48 02.9**	**+0.1**	
DRK0	**Durika**	**2.15**	**129**	P	**Pn**	**20 47 39.0**	**-0.1**	
DRK0				S	**Sn**	**20 48 08.0**	**+1.9**	

*IDC **26** 21:21:19.6±0.6, 58°.75S×25°.15W, h0km, mb4.5/9, mbtmp4.5/10, ML4.8/1, MS3.7/7, Error ellipse: s-maj=22.8km s-min=19.2km az=83.0*
*NEIC **26** 21:21:22.9±1.5, 58°.77S±0°.09×25°.2W±0°.2, h21km±4km, mb4.7/32, Error ellipse: s-maj=14.5km s-min=11.3km az=142.0*
ISC 26 21:21:22.0±0.4, 58°.77S±0°.08×25°.22W±0°.09, h18km, n79, σ0°66/66, mb4.7/17, MS3.8/6, 7C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
VNA1	**Neumayer--Stat**	**13.87**	**156**	⇑P	**Pn**	**21 24 37.0**	**-0.3**	
	comp=Z,15nm,0.3s							
VNA3	**Neumayer Olymp**	**14.06**	**159**	⇑P	**Pn**	**21 24 38.7**	**-1.3**	
	comp=Z,23nm,0.2s							
VNA3				⇑S	Sn	21 26 55.6	-20	
	comp=N,8.6nm,0.3s							
VNA2	**Neumayer--Watz**	**14.26**	**156**	⇑P	**Pn**	**21 24 41.8**	**-1.0**	
	comp=Z,16nm,0.3s,baz=317,slow=14							
VNA2				⇑S	Sn	21 27 05.2	-15	
	comp=E,4.7nm,0.3s,baz=307,slow=20							
SNAA	**Sanae**	**15.82**	**154**	⇑P	**Pn**	**21 25 02.9**	**-0.7**	
	comp=Z,244nm,0.3s							
SNAA	**Sanae**	**15.82**	**154**	Pn	**Pn**	**21 25 02.9**	**-0.7**	
	comp=Z,3.5nm,0.3s,baz=322,slow=15,SNR=21							
	comp=Z,8.7nm,0.3s							
SNAA	**Sanae**	**15.82**	**154**		**Pn**	**21 25 02.8**	**-0.7**	
TROLL	**Troll, Antarti**	**17.33**	**151**	⇑P	**Pn**	**21 25 22.8**	**0.0**	
PMSA	**Palmer Station**	**19.07**	**235**	LR	LR	21 31 40.4		
	comp=Z,160nm,21.3s,baz=116,slow=32							
BELA	**Belgrano 2**	**19.45**	**186**	P	**P**	**21 25 47.3**	**+0.2**	
EFI	**East Falkland**	**19.87**	**277**	P	**Pn**	**21 25 54.0**	**+0.4**	
EFI				IAmb	IAmb	21 26 24.0		
	comp=Z,33nm,1.2s							
MG02	**Cerro Sombrero**	**25.09**	**264**	P	**P**	**21 26 44.4**	**-0.8**	
TRQA	**Turquist**	**31.41**	**295**	P	**P**	**21 27 41.8**	**0.0**	
TRQA				IAmb	IAmb	21 27 46.2		
	comp=Z,17nm,1.4s							
QSPA	**South Pole Qui**	**31.47**	**180**	P	**P**	**21 27 43.5**	**+1.3**	
	comp=Z,7.0nm,0.6s,baz=208,slow=1.8,SNR=12							
	comp=Z,7.0nm,0.6s							
QSPA	**South Pole Qui**	**31.47**	**180**	P	**P**	**21 27 42.0**	**-0.2**	
QSPA				IAmb	IAmb	21 27 44.1		
	comp=Z,7.6nm,0.7s							
PLTB	**Pedras Altas**	**33.12**	**312**	P	**P**	**21 27 56.1**	**-0.7**	
PLTB				IAmb	IAmb	21 28 11.8		
	comp=Z,24nm,1.4s							
PLCA	**Paso Flores**	**33.58**	**282**	P	**P**	**21 28 00.8**	**0.0**	
	comp=Z,1.9nm,0.6s,baz=122,slow=6.9,SNR=8.1							
PLCA				LR	LR	21 42 36.0		
	comp=Z,84nm,18.1s,baz=159,slow=38							
	comp=Z,1.9nm,0.6s							
PLCA	**Paso Flores**	**33.58**	**282**	P	**P**	**21 28 00.5**	**-0.3**	
GO06	**Curarrehue**	**34.90**	**283**	P	**P**	**21 28 12.5**	**+0.1**	
GO06				IAmb	IAmb	21 28 30.2		
	comp=Z,14nm,1.4s							
BI02	**San Fabin de**	**37.04**	**286**	P	**P**	**21 28 30.0**	**-0.7**	
BI05	**Punta Hualpn**	**37.94**	**284**	P	**P**	**21 28 38.7**	**+0.5**	
BO02	**Sierra Bellavi**	**38.27**	**288**	P	**P**	**21 28 42.5**	**+1.4**	
BO02				IAmb	IAmb	21 29 12.0		
	comp=Z,13nm,1.2s							
GO05	**Hualane**	**38.67**	**287**	P	**P**	**21 28 44.4**	**0.0**	
GO05				IAmb	IAmb	21 28 48.9		
	comp=Z,18nm,1.1s							
MT09	**Talagante**	**39.19**	**289**	P	**P**	**21 28 48.7**	**-0.2**	
MT09				IAmb	IAmb	21 28 51.4		
	comp=Z,20nm,1.1s							
CPUP	**Villa Florida**	**39.41**	**311**	LR	LR	21 43 21.5		
	comp=Z,46nm,21.0s,baz=196,slow=34							
VNDA	**Vanda**	**43.89**	**182**	P	**P**	**21 29 28.5**	**+1.8**	
	comp=Z,5.6nm,0.6s,baz=196,slow=6.6,SNR=9.9							
	comp=Z,5.6nm,0.6s							
VNDA	**Vanda**	**43.89**	**182**	P	**P**	**21 29 27.9**	**+1.2**	
VNDA				IAmb	IAmb	21 30 09.1		
	comp=Z,18nm,1.4s							
H04S2	**CROZET ISLANDS**	**45.53**	**110**	T	T	22 19 12.6		
	baz=225,slow=75							
H04S3	**CROZET ISLANDS**	**45.54**	**110**	T	T	22 19 11.6		
	baz=225,slow=75							
H04S1	**CROZET ISLANDS**	**45.55**	**110**	T	T	22 19 11.9		
	baz=225,slow=75							
BOSA	**Boshof**	**45.72**	**71**	P	**P**	**21 29 42.0**	**0.0**	
	comp=Z,2.8nm,0.7s,baz=186,slow=6.5,SNR=8.7							
	comp=Z,2.8nm,0.7s							
BOSA	**Boshof**	**45.72**	**71**	P	**P**	**21 29 41.5**	**-0.5**	
BOSA				IAmb	IAmb	21 30 04.1		
	comp=Z,7.2nm,1.2s							
KOOLE	**Kule**	**48.05**	**62**	P	**P**	**21 29 60.0**	**-0.3**	
KOOLE				IAmb	IAmb	21 30 01.9		
	comp=Z,6.3nm,0.7s							
GRTLG	**Ghanzi**	**49.93**	**62**	P	**P**	**21 30 14.9**	**+0.3**	
GRTLG				IAmb	IAmb	21 30 53.7		
	comp=Z,12nm,1.5s							
PTLB	**Pontes e Lacer**	**49.99**	**315**	P	**P**	**21 30 15.5**	**+0.5**	
TSUM	**Tsumeb**	**50.19**	**57**	LR	LR	21 46 12.7		
	comp=Z,92nm,20.6s,baz=160,slow=30							
TSUM	**Tsumeb**	**50.19**	**57**	P	**P**	**21 30 17.1**	**+0.5**	
H10N1	**ASCENSION HYDR**	**51.47**	**14**	T	T	22 26 05.6		
	baz=184							
H10N3	**ASCENSION HYDR**	**51.48**	**14**	T	T	22 26 06.4		
	baz=184,slow=74							
H10N2	**ASCENSION HYDR**	**51.49**	**14**	T	T	22 26 08.7		
	baz=184,slow=74							
QNGWA	**Qangwa**	**51.50**	**61**	P	**P**	**21 30 27.3**	**+0.8**	
LPAZ	**La Paz**	**52.82**	**305**	P	**P**	**21 30 38.0**	**+1.1**	
	comp=Z,2.8nm,0.7s,baz=181,slow=6.3,SNR=7.0							
	comp=Z,2.8nm,0.7s							
LPAZ	**La Paz**	**52.82**	**305**	P	**P**	**21 30 36.9**	**-0.1**	
LSZ	**Lusaka**	**58.45**	**65**	LR	LR	21 54 49.8		
	comp=Z,117nm,18.7s,baz=166,slow=34							
VOI	**Vohitsoka**	**62.22**	**87**	P	**P**	**21 31 42.3**	**-0.3**	
BOAV	**Boa Vista**	**67.08**	**321**	P	**P**	**21 32 12.7**	**-1.5**	
BOAV				IAmb	IAmb	21 32 15.6		
	comp=Z,3.5nm,0.9s							
DBIC	**Dimbokro**	**67.25**	**22**	P	**P**	**21 32 15.6**	**+0.4**	
	comp=Z,3.2nm,0.7s,baz=220,slow=10,SNR=3.9							
	comp=Z,3.2nm,0.7s							
DBIC	**Dimbokro**	**67.25**	**22**	P	**P**	**21 32 14.6**	**-0.6**	
DBIC				IAmb	IAmb	21 32 19.4		
	comp=Z,14nm,1.5s							
TORD	**Torodi Ar. Bea**	**74.95**	**27**	P	**P**	**21 33 02.9**	**+1.1**	
	comp=Z,7.4nm,0.7s,baz=202,slow=8.4,SNR=47							
	comp=Z,7.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**74.95**	**27**	P	**P**	**21 33 02.3**	**+0.5**	
TORD				IAmb	IAmb	21 33 03.8		
	comp=Z,3.8nm,0.7s							
SDV	**Santo Domingo**	**76.68**	**314**	LR	LR	22 05 58.8		
	comp=Z,54nm,21.8s,baz=96,slow=35							
THZ	**Tophouse**	**78.70**	**194**	P	**P**	**21 33 23.5**	**+0.7**	
DSZ	**Denniston Nort**	**78.85**	**193**	P	**P**	**21 33 23.0**	**-0.6**	
FORT	**Forrest**	**88.04**	**157**	P	**P**	**21 34 10.7**	**-0.3**	
STKA	**Stephens Creek**	**89.02**	**169**	LR	LR	22 11 40.7		
	comp=Z,84nm,18.8s,baz=206,slow=34							
STKA	**Stephens Creek**	**89.02**	**169**	P	**P**	**21 34 15.2**	**-0.4**	
ASAR	**Alice Springs**	**96.06**	**161**	P	**P**	**21 34 47.6**	**-0.7**	
	comp=Z,1.2nm,0.7s,baz=182,slow=3.8,SNR=15							
	comp=Z,1.2nm,0.7s							
ASAR	**Alice Springs**	**96.06**	**161**	P	**P**	**21 34 47.3**	**-1.0**	
WRA	**Warramunga Arr**	**99.78**	**161**	P	**Pdif**	**21 35 03.9**	**-1.2**	
	comp=Z,0.2nm,0.7s,baz=193,slow=5.1,SNR=1.3							
	comp=Z,0.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**123.11**	**110**	PKP	**PKiKP**	**21 40 17.4**	**-0.1**	
	comp=Z,0.5nm,0.3s,baz=235,slow=3.4,SNR=7.2							
CMAR	**Chiang Mai Arr**	**123.11**	**110**		**PKPdf**	**21 40 16.9**	**-0.3**	
NVAR	**Mina Array Bea**	**123.39**	**290**	PKP	**PKiKP**	**21 40 18.4**	**+0.8**	
	comp=Z,0.7nm,0.6s,baz=127,slow=3.0,SNR=4.3							
ELK	**Elko**	**123.72**	**294**	PKP	**PKiKP**	**21 40 18.1**	**-0.1**	
	comp=Z,0.8nm,0.6s,baz=198,slow=19,SNR=4.1							
FINES	**FINESS Array B**	**126.30**	**28**	PKP	**PKPdf**	**21 40 21.6**	**-0.2**	
	comp=Z,1.5nm,0.5s,baz=145,slow=2.9,SNR=14							
ARCES	**ARCESS Array B**	**133.08**	**22**	PKP	**PKPdf**	**21 40 34.7**	**+0.1**	
	comp=Z,1.0nm,0.5s,baz=209,slow=1.3,SNR=11							
BVAR	**Borovoye Array**	**135.32**	**59**	PKP	**PKPdf**	**21 40 39.5**	**+0.2**	
	comp=Z,0.8nm,0.4s,baz=203,slow=1.9,SNR=7.0							
KURBB	**Kurchatov Arra**	**137.47**	**66**	PKP	**PKPdf**	**21 40 44.0**	**+0.7**	
	comp=Z,0.2nm,0.3s,baz=227,slow=2.4,SNR=4.5							
YKA	**Yellowknife Ar**	**138.89**	**315**	PKP	**PKPdf**	**21 40 46.0**	**+0.4**	
	comp=Z,2.3nm,0.7s,baz=124,slow=1.5,SNR=28							
YKA	**Yellowknife Ar**	**138.89**	**315**		**PKPdf**	**21 40 45.8**	**+0.2**	
ZALV	**Zalesovo Beam**	**142.56**	**66**	PKhKP	PKPpre	21 40 46.9		
	comp=Z,0.6nm,0.4s,baz=211,slow=3.7,SNR=4.4							
P32M	**Atlin**	**144.98**	**303**	PKPbc	**PKPdf**	**21 40 56.5**	**-0.1**	
MMPY	**Sheldon Lake,**	**145.43**	**308**		**PKPab**	**21 40 57.6**	**0.0**	
M31M	**Drury Creek, Y**	**146.53**	**307**	PKPdf	**PKPdf**	**21 40 59.8**	**+0.7**	
SONM	**Songino Array**	**149.75**	**90**	PKPbc	**PKPbc**	**21 41 09.7**	**-0.1**	
	comp=Z,4.3nm,0.9s,baz=220,slow=3.4,SNR=18							
SONM	**Songino Array**	**149.75**	**90**		**PKPbc**	**21 41 09.4**	**-0.4**	
ILAR	**Eielson Array**	**152.68**	**307**	PKPbc	**PKiKP**	**21 41 16.0**	**-0.1**	
	comp=Z,7.3nm,0.9s,baz=143,slow=2.3,SNR=69							
ILAR	**Eielson Array**	**152.68**	**307**		**PKPbc**	**21 41 15.8**	**-0.1**	
SLKM	**Skilak Lake**	**152.82**	**297**	PKPbc	**PKiKP**	**21 41 16.6**	**0.0**	
KDAK	**Kodiak Island**	**152.89**	**291**	PKPbc	**PKiKP**	**21 41 16.9**	**+0.2**	
HILR	**Hailar Array B**	**157.76**	**99**	PKPab	**PKPab**	**21 41 49.2**	**+0.2**	
	comp=Z,2.8nm,0.6s,baz=242,slow=3.1,SNR=3.9							

IDC 26 21:22:40.5±4.3, 16°.60S×174°.36W, h135km±26km, mb3.3/5, mbtmp3.8/6, MS2.8/1, Error ellipse: s-maj=125.4km s-min=18.1km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
AFI	**Afiamalu**	**3.66**	**43**	P	Pn	21 23 35.8	-0.2	
	28nm,0.3s,baz=154,slow=6.6,SNR=5.3							
AFI				S	Sn	21 24 19.4	+0.5	
	136nm,0.3s,baz=46,slow=22,SNR=20							
PPT	**Papeete**	**23.70**	**96**	LR	LR	21 34 55.7		
	comp=Z,24nm,20.7s,baz=180,slow=31							
WRA	**Warramunga Arr**	**48.68**	**258**	P	P	21 31 11.3	-0.1	
	0.4nm,0

az=112.0
NEIC ***26*** *21:41:46.6±0.8, 13°.2N±0°.1×144°.3E±0°.2, h138km±8km, mb4.2/13, Error ellipse: s-maj=23.9km s-min=17.9km az=118.0*

ISC 26 21:41:46.1±0.6, 13°.2N±0°.1×144°.3E±0°.1, h138km, n31, σ0ˢ.73/29, mb3.9/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.67**	**52**	P	**Pn**	**21 42 07.4**	**+0.3**
	2μm,0.3s,baz=117,slow=1.2,SNR=103						
GUMO				S	**Sn**	**21 42 22.2**	**-0.8**
	1μm,0.3s,baz=167,slow=23,SNR=5.8						
PATS	**Pohnpei**	**15.14**	**113**		**P**	**21 45 14.6**	**-0.2**
H11N1	**WAKE ISLAND Hy**	**22.58**	**70**	T	T	22 10 13.2	
	baz=256,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.59**	**70**	T	T	22 10 29.2	
	baz=256,slow=75						
H11N3	**WAKE ISLAND Hy**	**22.60**	**70**	T	T	22 10 15.1	
	baz=256,slow=75						
MJAR	**Matsushiro Arr**	**23.91**	**348**	P	**P**	**21 46 46.7**	**-0.4**
	2.1nm,0.7s,baz=162,slow=9.7,SNR=4.7 2.1nm,0.7s						
SSLB	**Suanglung**	**24.51**	**299**	P	**P**	**21 46 53.2**	**+0.4**
TOLI2	**Tolitoli**	**26.22**	**245**	P	**P**	**21 47 07.8**	**-0.4**
TOLI2				IAmb	IAmb	21 47 18.3	
	comp=Z,9.1nm,1.0s						
WRA	**Warramunga Arr**	**34.35**	**197**	P	**P**	**21 48 19.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=18,slow=9.0,SNR=2.5 comp=Z,0.5nm,0.7s						
MBWA	**Marble Bar**	**41.81**	**216**	P	**P**	**21 49 22.0**	**-0.4**
PSA00	**Pilbara Seismi**	**42.07**	**215**	P	**P**	**21 49 24.5**	**+0.1**
PSA00				IAmb	IAmb	21 49 25.4	
	comp=Z,7.7nm,1.2s						
CMAR	**Chiang Mai Arr**	**43.89**	**283**	P	**P**	**21 49 40.1**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=79,slow=6.8,SNR=7.7						
CMAR				PcP	**PcP**	**21 51 23.9**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=88,slow=3.4,SNR=6.7 comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**46.77**	**325**	P	**P**	**21 50 02.3**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=140,slow=6.8,SNR=6.8						
SONM				PcP	**PcP**	**21 51 32.9**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=149,slow=5.7,SNR=2.3 comp=Z,0.6nm,0.6s						
SONM	**Songino Array**	**46.77**	**325**	P	**P**	**21 50 01.6**	**-0.1**
LSA	**Lhasa**	**51.72**	**297**	P	**P**	**21 50 39.7**	**-0.3**
EVN	**Everest**	**55.36**	**295**	P	**P**	**21 51 06.8**	**0.0**
EVN				IAmb	IAmb	21 51 17.4	
	comp=Z,3.9nm,1.4s						
MKAR	**Makanchi Array**	**61.42**	**316**	P	**P**	**21 51 48.4**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=95,slow=8.5,SNR=8.4 comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**61.42**	**316**	P	**P**	**21 51 47.5**	**-0.3**
MAKZ	**Makanchi**	**61.63**	**316**	P	**P**	**21 51 49.2**	**0.0**
MAKZ				IAmb	IAmb	21 51 51.0	
	comp=Z,1.7nm,0.5s						
KURK	**Kurchatov**	**64.56**	**320**	P	**P**	**21 52 07.9**	**-0.4**
KURK				IAmb	IAmb	21 52 11.1	
	comp=Z,1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**64.60**	**320**	P	**P**	**21 52 08.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=106,slow=6.1,SNR=4.7 comp=Z,0.8nm,0.5s						
C19K	**Lookout Ridge**	**66.02**	**19**	P	**P**	**21 52 17.8**	**+0.2**
C19K				IAmb	IAmb	21 52 43.6	
	comp=Z,4.4nm,1.4s						
D20K	**Etivluk River**	**66.81**	**20**	P	**P**	**21 52 22.1**	**-0.5**
D20K				IAmb	IAmb	21 52 26.2	
	comp=Z,5.3nm,1.4s						
B20K	**Meade River**	**67.19**	**19**	P	**P**	**21 52 25.4**	**+0.5**
ILAR	**Eielson Array**	**69.17**	**25**	P	**P**	**21 52 36.5**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=255,slow=5.8,SNR=7.0 comp=Z,0.3nm,0.5s						
BVAR	**Borovoye Array**	**69.92**	**322**	P	**P**	**21 52 42.1**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=102,slow=8.0,SNR=10 comp=Z,0.8nm,0.4s						
NVAR	**Mina Array Bea**	**87.59**	**51**	P	**P**	**21 54 21.0**	**+1.8**
	comp=Z,0.6nm,0.5s,baz=286,slow=4.4,SNR=4.3 comp=Z,0.6nm,0.5s						
FINES	**FINESS Array B**	**91.31**	**335**	P	**P**	**21 54 34.4**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=74,slow=5.8,SNR=4.3 comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**91.31**	**335**	P	**P**	**21 54 33.9**	**-1.9**
DBIC	**Dimbokro**	**143.59**	**301**	PKhKP	PKPpre	22 01 02.7	
	comp=Z,1.9nm,0.4s,baz=57,slow=1.7,SNR=9.4						
DBIC	**Dimbokro**	**143.59**	**301**		PKPab	22 01 02.6	+0.3

IDC ***26*** *21:46:09.4±6.7, 3°.97N×101°.42E, h0km, mb3.6/3, mbtmp3.6/3, MS3.8/1, Error ellipse: s-maj=377.4km s-min=29.2km az=55.0*
DJA ***26*** *21:46:14.3±0.7, 2°.N±4°×9°.9E±°, h142km±7km, M2.9/15, MLv2.9/15*

ISC 26 21:46:16.0±1.1, 2°.13N±0°.08×98°.9E±0°.1, h150km, n10, σ2ˢ.20/10, mb3.2/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.67**	**359**	P	**Pn**	**21 46 35.6**	**-2.9**
MNSI	**Mandailing Nat**	**1.47**	**154**	P	**Pn**	**21 46 43.1**	**-2.2**
GSI	**Gunungsitoli**	**1.59**	**239**	P	**Pn**	**21 46 45.2**	**-1.3**
KCSI	**Kotacane, Aceh**	**1.81**	**320**	P	**Pn**	**21 46 47.8**	**-1.2**
KCSI				S	**Sn**	**21 47 12.1**	**-2.2**
TPTI		**2.08**	**303**	P	**Pn**	**21 46 51.4**	**-0.8**
PBSI	**Pulau Batu**	**2.27**	**197**	P	**Pn**	**21 46 52.6**	**-1.7**
WRA	**Warramunga Arr**	**41.08**	**124**	P	**P**	**21 53 47.2**	**+1.9**
	0.2nm,0.3s,baz=307,slow=8.8,SNR=5.3 0.2nm,0.3s						
MKAR	**Makanchi Array**	**46.80**	**344**	P	**P**	**21 54 32.4**	**+1.9**
	0.3nm,0.5s,baz=158,slow=8.6,SNR=6.5 0.3nm,0.5s						
CTA	**Charters Tower**	**51.38**	**118**	LR	LR	22 19 09.8	
	comp=Z,104nm,19.2s,baz=222,slow=40						
ZALV	**Zalesovo Beam**	**52.94**	**350**	P	**P**	**21 55 18.0**	**+1.3**
	0.4nm,0.4s,baz=150,slow=6.0,SNR=3.1 0.4nm,0.4s						

IDC ***26*** *22:00:34.7±2.9, 28°.04S×64°.11E, h0km, mb3.7/7, mbtmp3.7/7, MS3.6/9, Error ellipse: s-maj=94.0km s-min=33.0km az=49.0*

ISC 26 22:00:35.0±3.3, 28°.1S±0°.5×63°.9E±0°.6, h10km, n22, σ1ˢ.19/8, mb3.9/7, MS3.6/9, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**20.39**	**205**	T	T	22 26 28.5	
	baz=32,slow=75,SNR=1155						
H04N1	**CROZET ISLANDS**	**20.39**	**205**	T	T	22 26 43.5	
	baz=32,slow=75,SNR=953						
H04N3	**CROZET ISLANDS**	**20.41**	**205**	T	T	22 26 28.2	
	baz=32,slow=75,SNR=1072						
PALK	**Pallekele**	**38.75**	**27**	LR	LR	22 19 49.8	
	comp=Z,50nm,20.6s,baz=190,slow=30						
MAW	**Mawson**	**39.53**	**181**	LR	LR	22 23 12.6	
	comp=Z,190nm,18.1s,baz=256,slow=34						
H01W2	**Cape Leeuwin H**	**43.03**	**112**	T	T	22 54 16.7	
	baz=265,slow=74,SNR=14						
H01W3	**Cape Leeuwin H**	**43.03**	**112**	T	T	22 54 22.3	
	baz=265,slow=74,SNR=12						
H01W1	**Cape Leeuwin H**	**43.05**	**112**	T	T	22 54 24.4	
	baz=265,slow=74,SNR=10						
LEM	**Lembang**	**46.45**	**71**	LR	LR	22 25 32.3	
	comp=Z,45nm,18.9s,baz=358,slow=32						
CMAR	**Chiang Mai Arr**	**57.40**	**40**	P	**P**	**22 10 24.4**	**+0.5**
	0.5nm,0.3s,baz=231,slow=7.3,SNR=5.8						
CMAR				LR	LR	22 30 31.7	
	comp=Z,21nm,20.2s,baz=175,slow=31 0.5nm,0.3s						
ASAR	**Alice Springs**	**62.38**	**103**	P	**P**	**22 10 58.6**	**+0.2**
	0.8nm,0.8s,baz=252,slow=5.8,SNR=6.9 0.8nm,0.8s						
WRA	**Warramunga Arr**	**64.11**	**100**	P	**P**	**22 11 09.0**	**-0.9**
	0.6nm,0.8s,baz=245,slow=7.5,SNR=3.1 0.6nm,0.8s						
GNI	**Garni**	**70.20**	**345**	LR	LR	22 41 48.0	
	comp=Z,24nm,18.0s,baz=170,slow=35						
AAK	**Ala-Archa**	**71.07**	**8**	LR	LR	22 38 16.3	
	comp=Z,36nm,20.6s,baz=226,slow=32						
MKAR	**Makanchi Array**	**76.39**	**13**	P	**P**	**22 12 23.8**	**-0.6**
	0.5nm,0.8s,baz=210,slow=4.1,SNR=4.8 0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**79.45**	**9**	P	**P**	**22 12 42.5**	**+1.4**
	0.5nm,0.9s,baz=204,slow=6.4,SNR=3.0 0.5nm,0.9s						
BVAR	**Borovoye Array**	**80.98**	**4**	P	**P**	**22 12 49.0**	**-0.5**
	0.6nm,0.8s,baz=178,slow=6.5,SNR=2.9 0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**83.70**	**12**	P	**P**	**22 13 05.3**	**+1.7**
	0.4nm,0.3s,baz=217,slow=3.7,SNR=4.8 0.4nm,0.3s						
KIRV	**Kirov**	**87.20**	**352**	LR	LR	22 49 43.6	
	comp=Z,31nm,18.2s,baz=263,slow=34						
HILR	**Hailar Array B**	**91.89**	**33**	LR	LR	22 54 58.1	
	comp=Z,94nm,21.6s,baz=340,slow=36						
NRIK	**Norilʹsk**	**98.69**	**8**	LR	LR	22 57 55.6	
	comp=Z,20nm,18.6s,baz=241,slow=35						
YKA	**Yellowknife Ar**	**145.59**	**359**	PKPbc	**PKPab**	**22 20 14.2**	**+0.8**
	0.6nm,0.7s,baz=342,slow=3.9,SNR=10						

IDC 26 22:06:20.8±1.2, 26°.21N×141°.67E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=40.5km s-min=18.5km az=107.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.00**	**27**	Pn	Pn	22 06 42.3	+0.2
	6.4nm,0.3s,baz=117,slow=24,SNR=1.7						
JCJ				Sn	Sn	22 06 58.5	+1.6
	28nm,0.3s,baz=290,slow=22,SNR=3.1						
WRA	**Warramunga Arr**	**46.42**	**190**	P	P	22 14 49.5	+0.2
	0.8nm,0.7s,baz=8.9,slow=8.5,SNR=5.5 0.8nm,0.7s						
ASAR	**Alice Springs**	**50.15**	**189**	P	P	22 15 18.0	-0.1
	0.2nm,0.5s,baz=10,slow=7.7,SNR=1.8 0.2nm,0.5s						
MKAR	**Makanchi Array**	**50.69**	**310**	P	P	22 15 23.0	+0.9
	0.2nm,0.7s,baz=92,slow=8.9,SNR=2.1 0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**53.33**	**315**	P	P	22 15 42.1	+0.4
	0.2nm,0.4s,baz=91,slow=8.4,SNR=2.2 0.2nm,0.4s						
HFS	**Hagfors**	**84.05**	**337**	P	P	22 18 51.5	-1.5
	4.5nm,0.9s,baz=72,slow=4.7,SNR=7.4 4.5nm,0.9s						

TEH ***26*** *22:11:15.3, 29°.18N×51°.33E, h8km±19km, ML3.6, Presumed earthquake*
OMAN ***26*** *22:11:17.5±1.2, 29°.06N×51°.55E, h10km, mb4.0/11, ml3.8/1, Error ellipse: s-maj=11.8km s-min=5.9km az=145.0*
DSN ***26*** *22:11:22.0±1.6, 28°.65N×51°.47E, h15km, ML3.4/10, Error ellipse: s-maj=21.9km s-min=11.0km az=7.0*

ISC 26 22:11:16.6±0.9, 29°.15N±0°.04×51°.44E±0°.05, h17km, n64, σ1ˢ.49/72, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ2	**Kazeron-Fars-I**	**0.50**	**23**	Pg	**Pg**	**22 11 25.3**	**-1.5**
DSBU	**Dashti - Bushe**	**0.80**	**191**	Pg	**Pb**	**22 11 31.6**	**-0.5**
SHI	**Shiraz**	**1.06**	**62**	Pg	**Pb**	**22 11 37.6**	**+1.0**
QIR1	**Qir**	**1.56**	**115**	Pg	**Pg**	**22 11 47.1**	**+0.5**
KLNJ	**Kolanjah**	**1.86**	**4**	Pn	**Pn**	**22 11 50.1**	**+2.1**
JHRM	**Jahrom**	**1.98**	**108**	Pn	**Pb**	**22 11 52.8**	**+0.5**
KHL1	**Khalili_Fars**	**2.23**	**132**	Pn	**Pb**	**22 11 55.6**	**-0.8**
LMD1	**Lamerd**	**2.36**	**139**	Pn	**Pb**	**22 11 57.1**	**-1.6**
IBRJ	**Brojen**	**2.75**	**357**	Pn	**Pn**	**22 12 01.8**	**+1.5**
ZNGN	**Zangian**	**3.00**	**350**	Pn	**Pn**	**22 12 04.9**	**+1.1**
AMIS	**Naft Sefid**	**3.12**	**324**	Pn	**Pn**	**22 12 05.9**	**+0.7**
JHBN	**Jahan bin**	**3.14**	**348**	Pn	**Pn**	**22 12 06.7**	**+1.0**
SAKB	**Bahrain**	**3.26**	**194**	P	**Pn**	**22 12 07.7**	**+0.8**
SAKB				S	**Sn**	**22 12 46.5**	**+1.1**
SHMA	**Al-Shehemyia**	**3.31**	**187**	P	**Pn**	**22 12 09.2**	**+1.6**
	SNR=12						
SHMA				S	**Sn**	**22 12 48.4**	**+1.9**
IMEH	**Mehriz**	**3.54**	**50**	Pn	**Pn**	**22 12 13.6**	**+2.6**
ICHK	**Chekchek**	**4.01**	**39**	Pn	**Pn**	**22 12 19.9**	**+2.5**
IBAF	**Bafgh**	**4.32**	**55**	Pn	**Pn**	**22 12 24.5**	**+2.8**
TRNA	**Turayna**	**4.40**	**183**	P	**Pn**	**22 12 23.5**	**+0.8**
	SNR=12						
TRNA				S	**Sn**	**22 13 15.5**	**+1.9**
SMRA	**Abu-Samra**	**4.42**	**187**	P	**Pn**	**22 12 23.7**	**+0.7**
SMRA				S	**Sn**	**22 13 15.8**	**+1.8**
SHME	**Shamm**	**5.19**	**125**	P	**Pn**	**22 12 34.4**	**+0.8**
SHME	**Shamm**	**5.19**	**125**	P	**Pn**	**22 12 33.0**	**-0.5**
BANOM	**Banah**	**5.38**	**126**	*i* P	**Pn**	**22 12 37.5**	**+1.3**
	SNR=12						
BANOM	**Banah**	**5.38**	**126**	P	**Pn**	**22 12 35.7**	**-0.4**
BANOM				S	**Sn**	**22 13 36.5**	**-1.3**
AJN	**Ajban**	**5.56**	**144**	*i* P	**Pn**	**22 12 40.0**	**+1.4**
	SNR=5.7						
AJN	**Ajban**	**5.56**	**144**	P	**Pn**	**22 12 40.9**	**+2.4**
	SNR=5.7						
NAZ	**Nazwa, Dubai**	**5.60**	**137**	P	**Pn**	**22 12 40.5**	**+1.4**
NAZ	**Nazwa, Dubai**	**5.60**	**137**	P	**Pn**	**22 12 40.6**	**+1.4**
NAZ				S	**Sn**	**22 13 43.4**	**+0.4**
MSFE	**Esma-Masafi**	**5.65**	**131**	P	**Pn**	**22 12 40.7**	**+0.8**
ASUD	**Al Ashush, Dub**	**5.69**	**141**	*i* P	**Pn**	**22 12 42.2**	**+1.8**
	SNR=21						
ASUD	**Al Ashush, Dub**	**5.69**	**141**	P	**Pn**	**22 12 42.5**	**+2.1**
	SNR=21						
ASUD				S	**Sn**	**22 13 45.5**	**+0.2**
FAQ	**Al Faqa, Dubai**	**5.74**	**139**	P	**Pn**	**22 12 43.9**	**+2.7**
MDH	**Madha**	**5.78**	**130**	P	**Pn**	**22 12 42.4**	**+0.8**
MDH	**Madha**	**5.78**	**130**	P	**Pn**	**22 12 42.2**	**+0.6**
MZWR	**Madinat Zayed**	**5.79**	**157**	P	**Pn**	**22 12 45.1**	**+3.2**
UOSS	**Minazif**	**5.96**	**133**	P	**Pn**	**22 12 44.9**	**+0.7**
HATD	**Hatta, Dubai**	**6.00**	**135**	P	**Pn**	**22 12 46.1**	**+1.3**
HATD	**Hatta, Dubai**	**6.00**	**135**	P	**Pn**	**22 12 46.5**	**+1.7**
ASHO	**Ashiyiah**	**6.06**	**136**	*i* P	**Pn**	**22 12 45.8**	**+0.2**
	SNR=13						
ASHO				S	**Sn**	**22 13 51.0**	**-3.6**
ASHO	**Ashiyiah**	**6.06**	**136**	P	**Pn**	**22 12 47.0**	**+1.4**
	SNR=13						
KBAM	**BAM**	**6.13**	**88**	Pn	**Pn**	**22 12 49.3**	**+2.7**
ALNE	**Al Ain**	**6.37**	**142**	*i* P	**Pn**	**22 12 51.0**	**+1.2**
	SNR=11						
ALNE	**Al Ain**	**6.37**	**142**	P	**Pn**	**22 12 51.2**	**+1.4**
	SNR=11						
MZR	**Muzera**	**6.39**	**163**	P	**Pn**	**22 12 50.7**	**+0.7**
MZR	**Muzera**	**6.39**	**163**	P	**Pn**	**22 12 51.2**	**+1.2**
	SNR=6.6						
SNQR	**Sonqor, Kerman**	**6.55**	**331**	Pn	**Pn**	**22 12 53.1**	**+0.7**
JASK	**Jask - Hormozg**	**6.58**	**118**	P	**Pn**	**22 12 51.8**	**-0.8**
SOHO	**SOHO**	**6.76**	**136**	P	**Pn**	**22 12 55.6**	**+0.5**
IDHR	**Dehrash**	**7.00**	**323**	Pn	**Pn**	**22 12 59.3**	**+0.7**
UMZA	**Um Al Zommool**	**7.23**	**152**	P	**Pn**	**22 13 02.7**	**+1.2**
HOQ	**Hoqain**	**7.64**	**135**	P	**Pn**	**22 13 07.9**	**+0.6**
RAYN	**Ar Rayn**	**7.73**	**225**	*i* P	**Pn**	**22 13 07.3**	**-1.1**
	SNR=12						
BSY	**Bisya**	**8.22**	**140**	P	**Pn**	**22 13 15.8**	**+0.6**
SMDO	**Samad**	**8.49**	**134**	P	**Pn**	**22 13 18.4**	**-0.5**
JMDO	**Jabal Madar**	**9.03**	**137**	P	**Pn**	**22 13 26.1**	**-0.2**
WBK	**Wadi Bani Khal**	**9.40**	**132**	P	**Pn**	**22 13 30.0**	**-1.4**
JLN	**Jalan Bani Buh**	**10.01**	**132**	P	**Pn**	**22 13 37.9**	**-1.8**
MHTO	**MHTO**	**10.05**	**142**	P	**Pn**	**22 13 41.0**	**+0.7**
	SNR=24						
DQM	**DQM**	**10.72**	**148**	P	**Pn**	**22 13 48.2**	**-1.3**
DOK	**Doka**	**10.77**	**166**	P	**Pn**	**22 13 48.8**	**-1.3**
	SNR=7.8						
WHFO	**Wadi Hawf**	**11.38**	**169**	P	**Pn**	**22 13 57.0**	**-1.5**
SHAO	**Shalim**	**11.72**	**160**	P	**Pn**	**22 14 03.5**	**+0.3**
	SNR=7.8						
DMTO	**DMTO**	**11.82**	**163**	P	**Pn**	**22 14 03.0**	**-1.6**
	SNR=13						
ABTO	**Aybut**	**11.86**	**171**	P	**Pn**	**22 14 03.5**	**-1.6**
	SNR=13						
RBK	**Rabkut**	**11.87**	**167**	P	**Pn**	**22 14 05.5**	**+0.3**

IDC ***26*** *22:31:29.9±1.4, 22°.00S×68°.65E, h0km, mb3.9/11, mbtmp3.9/11, MS3.6/9, Error ellipse: s-maj=42.9km s-min=23.3km az=34.0*
NEIC ***26*** *22:31:31.6±0.9, 21°.9S±0°.1×68°.7E±0°.1, h10km±1km, mb4.6/16, Error ellipse: s-maj=23.2km s-min=20.9km az=174.0*

ISC 26 22:31:31.2±0.8, 22°.0S±0°.1×68°.7E±0°.1, h10km, n44, σ0ˢ.61/31, mb4.3/17, MS3.6/9, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCAM	**Rodrigues Isla**	**5.48**	**293**	Pn	**Pn**	**22 32 53.0**	**+0.1**
H08S1	**Diego Garcia H**	**14.67**	**15**	T	T	22 49 40.9	
	baz=194,slow=76,SNR=25						
H08S2	**Diego Garcia H**	**14.68**	**15**	T	T	22 49 41.8	
	baz=194,slow=76,SNR=69						
H08S3	**Diego Garcia H**	**14.69**	**15**	T	T	22 49 42.9	
	baz=194,slow=76,SNR=85						
H04N2	**CROZET ISLANDS**	**27.81**	**206**	T	T	23 06 58.8	
	baz=36,slow=75,SNR=132						
H04N1	**CROZET ISLANDS**	**27.82**	**206**	T	T	23 06 59.7	
	baz=36,slow=75,SNR=112						
H04N3	**CROZET ISLANDS**	**27.83**	**206**	T	T	23 06 58.4	
	baz=36,slow=75,SNR=114						
PALK	**Pallekele**	**31.32**	**23**	LR	LR	22 46 56.5	
	comp=Z,64nm,20.8s,baz=199,slow=30						
LSZ	**Lusaka**	**38.91**	**273**	LR	LR	22 53 26.6	
	comp=Z,93nm,18.8s,baz=172,slow=34						
LBTB	**Lobatse**	**39.57**	**257**	LR	LR	22 51 25.8	
	comp=Z,79nm,19.0s,baz=156,slow=30						
BOSA	**Boshof**	**39.71**	**251**	LR	LR	22 52 07.3	
	comp=Z,66nm,19.3s,baz=193,slow=31						
BOSA	**Boshof**	**39.71**	**251**	P	**P**	**22 39 03.6**	**-0.5**
FURI	**Furi**	**42.54**	**313**	LR	LR	22 56 11.8	
	comp=Z,83nm,18.1s,baz=82,slow=35						
SUR	**Sutherland**	**43.58**	**246**	LR	LR	22 56 58.3	
	comp=Z,86nm,18.9s,baz=172,slow=35						
TSUM	**Tsumeb**	**47.80**	**264**	LR	LR	23 00 18.7	
	comp=Z,93nm,18.8s,baz=153,slow=36						
CM31	**Chiang Mai Arr**	**49.86**	**39**	P	**P**	**22 40 24.4**	**-0.5**
CM31				IAmb	IAmb	22 40 27.1	
	comp=Z,6.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**49.86**	**39**	P	**P**	**22 40 25.6**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=234,slow=7.7,SNR=14						
CMAR				LR	LR	22 57 27.1	
	comp=Z,22nm,21.6s,baz=215,slow=31 comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**49.86**	**39**	P	**P**	**22 40 24.7**	**-0.2**
SHL	**Shillong**	**52.30**	**27**	P	**P**	**22 40 42.8**	**-0.6**
SHL				IAmb	IAmb	22 40 45.7	
	comp=Z,11nm,1.1s						
KBL	**Kabul**	**56.18**	**0**	P	**P**	**22 41 11.0**	**-0.5**
KBL				IAmb	IAmb	22 41 16.9	
	comp=Z,4.1nm,1.0s						
ASAR	**Alice Springs**	**59.61**	**105**	P	**P**	**22 41 36.8**	**+1.0**
	comp=Z,2.3nm,1.0s,baz=259,slow=5.9,SNR=12						
ASAR				LR	LR	23 03 41.8	
	comp=Z,62nm,20.3s,baz=274,slow=32 comp=Z,2.3nm,1.0s						
ASAR	**Alice Springs**	**59.61**	**105**	P	**P**	**22 41 36.0**	**+0.2**
WRA	**Warramunga Arr**	**60.87**	**101**	P	**P**	**22 41 45.0**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=259,slow=6.4,SNR=7.7 comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	**60.87**	**101**	P	**P**	**22 41 43.9**	**-0.5**
WR8	**Warramunga Arr**	**61.01**	**101**	P	**P**	**22 41 45.2**	**-0.2**
WR0	**Warramunga Arr**	**61.05**	**101**	P	**P**	**22 41 45.1**	**-0.5**
WR0				IAmb	IAmb	22 42 08.6	
	comp=Z,8.3nm,1.1s						
KK31	**Karatay Array**	**64.75**	**1**	P	**P**	**22 42 09.1**	**-0.6**
KK31				IAmb	IAmb	22 42 12.5	
	comp=Z,5.0nm,1.3s						
KKAR	**Karatay Array**	**64.75**	**1**	P	**P**	**22 42 09.2**	**-0.4**
ENH	**Enshi**	**65.04**	**39**	P	**P**	**22 42 11.6**	**-0.2**
MK31	**Makanchi Array**	**69.51**	**10**	P	**P**	**22 42 39.9**	**+0.1**
MKAR	**Makanchi Array**	**69.51**	**10**	P	**P**	**22 42 40.2**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=197,slow=3.8,SNR=8.3 comp=Z,1.1nm,0.9s						
MKAR	**Makanchi Array**	**69.51**	**10**	P	**P**	**22 42 39.5**	**-0.4**
BRTR	**Keskin Array B**	**69.56**	**332**	P	**P**	**22 42 41.5**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=167,slow=5.8,SNR=4.5 comp=Z,1.0nm,0.8s						
AB31	**Akbulak array**	**71.32**	**354**		**P**	**22 42 50.1**	**-0.7**
AB31				IAmb	IAmb	22 42 53.2	
	comp=Z,3.0nm,0.9s						
ABKAR	**Akbulak array**	**71.32**	**354**		**P**	**22 42 50.5**	**-0.2**
BELA	**Belgrano 2**	**71.46**	**193**	P	**P**	**22 42 51.6**	**+0.1**
BELA				IAmb	IAmb	22 43 09.0	
	comp=Z,8.1nm,1.5s						
KURBB	**Kurchatov Arra**	**72.77**	**7**	P	**P**	**22 43 00.3**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=192,slow=6.2,SNR=5.2 comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**74.42**	**291**	P	**P**	**22 43 09.3**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=132,slow=4.7,SNR=4.2 comp=Z,0.6nm,0.8s						
BVAR	**Borovoye Array**	**74.67**	**1**	P	**P**	**22 43 11.4**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=180,slow=5.2,SNR=2.2 comp=Z,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**76.85**	**10**	P	**P**	**22 43 23.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=178,slow=4.3,SNR=3.6 comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**76.85**	**10**	P	**P**	**22 43 22.2**	**-0.8**
SONM	**Songino Array**	**77.26**	**25**	P	**P**	**22 43 26.0**	**+0.3**
	comp=Z,0.8nm,1.0s,baz=211,slow=4.7,SNR=5.4 comp=Z,0.8nm,1.0s						
SONM	**Songino Array**	**77.26**	**25**	P	**P**	**22 43 25.5**	**-0.1**
AKASG	**Malin Array Be**	**80.30**	**336**	P	**P**	**22 43 43.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=140,slow=4.7,SNR=1.5 comp=Z,0.2nm,0.3s						

IDC 26 23:07:48.9±1.2, 2°.62N×121°.31E, h0km, mb3.4/5, mbtmp3.4/5, MS3.0/1, Error ellipse: s-maj=177.1km s-min=21.3km az=64.0, Celebes Sea

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

SALU	Saltoluokta	0.87	285	P	Pg	23 11 25.2	-0.3
NIKU	Nikkaluokta	0.94	318	P	Pg	23 11 27.4	+0.5
LANU	Lannavaara	1.01	29	P	Pg	23 11 27.7	-0.5
HARU	Harads	1.02	173	P	Pg	23 11 28.5	+0.1
KALU	Kalix	1.70	140	P	Pn	23 11 39.6	+0.1

*IDC **26** 23:26:38.6±1.1,3.°39S×131.°47E, h0km, mb3.9/8, mbtmp4.0/10, ML3.9/2, MS3.4/9, Error ellipse: s-maj=47.5km s-min=18.0km az=82.0*
*NEIC **26** 23:26:40.5±1.9,3.°4S±0.°06×131.°1E±0.°2, h10km±1km, mb4.1/13, Error ellipse: s-maj=26.6km s-min=10.7km az=269.0*
*DJA **26** 23:26:45.2±0.8,3.°S±2.°×13.°1E±.°, h37km±18km, M4.2/14, mb4.6/1, MLv4.0/14*

ISC 26 23:26:42.7±0.6,**3.°55S**±0.°05×**131.°14E**±0.°05,**h30**km,**n47,**
σ2s14/42,mb4.0/12,MS3.4/7,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.56**	**232**	P	**Pb**	**23 27 13.0**	**+2.0**
MSAI	**Masohi**	**2.21**	**275**	P	Pn	23 27 22.4	+5.1
KMPI	**Kaimana, Papua**	**2.57**	**93**	P	**Pn**	**23 27 23.8**	**+1.6**
KMPI				S	**Sn**	**23 27 54.5**	**+2.0**
SIJI	**Sorong**	**2.66**	**3**	Pn	Pn	23 27 21.8	-1.8
	6.6nm,0.3s,baz=40,slow=23,SNR=42						
SIJI				Sn	**Sn**	**23 27 53.0**	**-1.8**
	17nm,0.3s,baz=225,slow=23,SNR=18						
SIJI				LR	LR	23 28 39.0	
	comp=Z,574nm,20.4s,baz=259,slow=48						
	12nm,0.3s						
SIJI	**Sorong**	**2.66**	**3**	P	Pn	23 27 21.9	-1.7
SWI	**Sorong**	**2.67**	**3**	P	**Pn**	**23 27 22.3**	**-1.3**
SWI				S	**Sn**	**23 27 53.6**	**-1.4**
KRAI	**Karang Ratu**	**2.74**	**275**	P	**Pn**	**23 27 28.0**	**+3.3**
AAI	**Ambon**	**2.94**	**267**	P	**Pn**	**23 27 30.0**	**+2.7**
RKPI	**Ransiki, Papua**	**3.65**	**56**	P	**Pn**	**23 27 37.9**	**+0.7**
RKPI				S	**Sn**	**23 28 18.7**	**-0.5**
MWPI	**Manokwari, Pap**	**3.90**	**48**	P	**Pn**	**23 27 42.4**	**+1.9**
BAKI	**Biak**	**5.49**	**65**	P	**Pn**	**23 28 04.3**	**+1.8**
MTN	**Manton Dam**	**9.24**	**180**		**Pn**	**23 28 55.0**	**+1.1**
BATI	**Baumata**	**9.94**	**228**	Pn	**Pn**	**23 29 07.9**	**+4.4**
	3.9nm,0.3s,baz=40,slow=3.6,SNR=5.8						
	40nm,0.6s						
KNRA	**Kununurra**	**12.28**	**191**	Pn	**Pn**	**23 29 34.2**	**-1.4**
FITZ	**Fitzroy Crossi**	**15.43**	**200**	Pn	**Pn**	**23 30 15.9**	**-2.4**
	0.7nm,0.3s,baz=31,slow=12,SNR=16						
FITZ				Sn	**Sn**	**23 33 02.6**	**-5.9**
	0.3nm,0.3s,baz=15,slow=16,SNR=1.5						
COEN	**Coen**	**15.76**	**132**		**Pn**	**23 30 21.2**	**-1.4**
WB0	**Warramunga Arr**	**16.43**	**169**	Pn	**Pn**	**23 30 29.1**	**-2.1**
WB0				IAmb	IAmb	23 30 41.1	
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**16.59**	**169**	Pn	**Pn**	**23 30 29.4**	**-3.9**
	comp=Z,0.5nm,0.3s,baz=341,slow=14,SNR=12						
WRA				Sn	Sn	23 33 27.9	-8.8
	comp=Z,0.5nm,0.3s,baz=355,slow=23,SNR=6.5						
WRA	**Warramunga Arr**	**16.59**	**169**		Pn	23 30 28.9	-4.3
PMG	**Port Moresby**	**16.95**	**111**	LR	LR	23 39 04.0	
	comp=Z,117nm,20.6s,baz=230,slow=45						
AS31	**Alice Springs**	**20.18**	**173**		**P**	**23 31 16.2**	**+1.3**
AS31				IAmb	IAmb	23 31 21.4	
	comp=Z,3.3nm,0.4s						
ASAR	**Alice Springs**	**20.18**	**173**	P	**P**	**23 31 16.1**	**+1.1**
	comp=Z,6.6nm,0.7s,baz=353,slow=11,SNR=63						
ASAR				S	**S**	**23 34 54.4**	**-5.8**
	comp=Z,1.3nm,1.0s,baz=4.2,slow=28,SNR=4.3						
	comp=Z,6.6nm,0.7s						
MBWA	**Marble Bar**	**20.73**	**211**	P	**P**	**23 31 20.6**	**-0.2**
PSA00	**Pilbara Seismi**	**21.01**	**211**	P	**P**	**23 31 23.2**	**-0.7**
PSA00				IAmb	IAmb	23 31 41.0	
	comp=Z,9.2nm,1.4s						
LEM	**Lembang**	**23.64**	**261**	LR	LR	23 43 34.0	
	comp=Z,120nm,18.4s,baz=120,slow=42						
BBJI	**Bungbulang**	**23.69**	**260**	P	**P**	**23 31 50.7**	**-1.5**
BBJI				IAmb	IAmb	23 31 52.8	
	comp=Z,4.5nm,0.7s						
STKA	**Stephens Creek**	**29.85**	**162**	P	**P**	**23 32 48.6**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=330,slow=15,SNR=2.9						
STKA				LR	LR	23 46 01.0	
	comp=Z,111nm,21.2s,baz=18,slow=39						
	comp=Z,2.6nm,0.9s						
CAN	**Canberra**	**35.69**	**155**	P	**P**	**23 33 39.4**	**+0.9**
JNU	**Nakatsue**	**36.47**	**360**	LR	LR	23 47 20.8	
	comp=Z,56nm,21.5s,baz=181,slow=34						
MJAR	**Matsushiro Arr**	**40.42**	**9**	LR	LR	23 47 52.2	
	comp=Z,51nm,21.0s,baz=180,slow=32						
KSRS	**Korea Array**	**40.90**	**356**	LR	LR	23 50 29.9	
	comp=Z,33nm,21.2s,baz=170,slow=35						
KLR	**Kul'dur**	**52.56**	**1**	LR	LR	23 58 15.3	
	comp=Z,36nm,19.7s,baz=169,slow=36						
SONM	**Songino Array**	**55.57**	**340**	P	**P**	**23 36 15.1**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=152,slow=8.9,SNR=2.4						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**66.00**	**326**	P	**P**	**23 37 28.1**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=124,slow=7.6,SNR=20						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**66.00**	**326**	P	**P**	**23 37 27.1**	**+0.7**
MAKZ	**Makanchi**	**66.19**	**325**	P	**P**	**23 37 27.1**	**-0.5**
MAKZ				IAmb	IAmb	23 37 30.0	
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**69.03**	**333**	P	**P**	**23 37 45.8**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=112,slow=6.6,SNR=4.2						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**69.03**	**333**	P	**P**	**23 37 45.1**	**-0.2**
KURBB	**Kurchatov Array**	**70.20**	**327**	P	**P**	**23 37 53.4**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=125,slow=5.6,SNR=18						
	comp=Z,1.6nm,0.7s						
KURK	**Kurchatov**	**70.20**	**328**	P	**P**	**23 37 52.7**	**+0.1**
KURK				IAmb	IAmb	23 37 56.9	
	comp=Z,1.7nm,0.7s						
BVAR	**Borovoye Array**	**75.78**	**327**	P	**P**	**23 38 26.7**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=157,slow=7.8,SNR=3.6						
	comp=Z,1.0nm,0.8s						
ABKAR	**Akbulak array**	**80.54**	**321**	P	**P**	**23 38 52.8**	**+0.7**
M16K	**Timber Creek**	**83.49**	**27**	P	**P**	**23 39 09.3**	**+2.0**
KDAK	**Kodiak Island**	**85.70**	**31**	LR	LR	00 13 17.0	
	comp=Z,31nm,21.0s,baz=220,slow=33						
D19K	**Kuna River**	**86.32**	**20**	P	**P**	**23 39 21.2**	**-0.3**
D19K				IAmb	IAmb	23 39 37.6	
	comp=Z,2.2nm,1.2s						
C23K	**Itkillik River**	**89.26**	**20**	P	**P**	**23 39 36.2**	**+0.7**
ILAR	**Eielson Array**	**89.76**	**25**	P	**P**	**23 39 37.3**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=270,slow=5.3,SNR=1.7						
	comp=Z,0.2nm,0.7s						

*AZER **26** 23:32:02.8, 38.°35N×44.°52E, h2km, ml2.8*
*TEH **26** 23:32:03.0, 38.°42N×44.°31E, h10km±249km, ML2.8, Presumed earthquake*
*AFAD **26** 23:32:05.0, 38.°36N×44.°48E, h7km±1km, ML2.5*
*ISK **26** 23:32:06.1, 38.°28N×44.°58E, h11km, ML2.8/10*

ISC 26 23:32:06.4±1.1,**38.°37N**±0.°02×**44.°42E**±0.°02,**h8**km±9km,
n39,σ1s37/64,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.44**	**311**	P	**Pg**	**23 32 14.8**	**-0.3**
OZAP				S	**Sb**	**23 32 22.2**	**-1.3**
OZAP				IAML		23 32 29.0	
	comp=N,910nm,0.9s						
YOVA	**Hakkari_Yksek**	**0.79**	**188**	P	**Pg**	**23 32 21.9**	**+0.2**
YOVA				S	**Sg**	**23 32 31.8**	**-0.2**
TVAN	**Van**	**0.81**	**281**	P	**Pg**	**23 32 21.4**	**-0.7**
TVAN				S	**Sn**	**23 32 34.1**	**-2.6**
TVAN				IAML		23 32 42.0	
	comp=N,249nm,0.7s						
TVAN				IAML		23 32 42.0	
	comp=E,210nm,0.4s						
VANB	**Van**	**0.84**	**286**	Pg	**Pn**	**23 32 24.9**	**+0.2**
VANB				Sg	**Sn**	**23 32 38.6**	**+1.3**
VMUR	**Van-Muradiye**	**0.91**	**313**	P	**Pb**	**23 32 23.1**	**-1.4**
VMUR				S	**Sn**	**23 32 38.1**	**-0.9**
VMUR				IAML		23 32 43.0	
	comp=N,186nm,0.3s						
VMUR				IAML		23 32 43.0	
	comp=E,150nm,0.5s						
ISHB	**Shabestar**	**0.94**	**95**	Pg	**Pg**	**23 32 23.0**	**-1.6**
HAKT	**HAKKARI**	**0.99**	**215**	P	**Pg**	**23 32 25.3**	**-0.1**
HAKT				IAML		23 32 42.0	
	comp=N,186nm,0.4s						
HAKT				S	**Sn**	**23 32 42.3**	**+1.1**
HAKT				IAML		23 32 44.0	
	comp=E,228nm,0.5s						

HAKT	**HAKKARI**	**0.99**	**215**	P	**Pg**	**23 32 25.4**	**0.0**
HAKT				S	**Sn**	**23 32 42.4**	**+1.3**
IMRD	**Marand**	**1.06**	**71**	Pg	**Pb**	**23 32 25.7**	**-1.3**
ERCV	**ERCIS-VAN**	**1.07**	**308**	Pn	**Pn**	**23 32 29.6**	**+1.8**
GEVA	**Gevas**	**1.07**	**267**	P	**Pg**	**23 32 25.8**	**-1.3**
GEVA				S	**Sn**	**23 32 44.1**	**+1.0**
GEVA				IAML		23 32 48.0	
	comp=N,115nm,0.6s						
GEVA				IAML		23 32 52.0	
	comp=E,106nm,0.3s						
AKDM	**Akdamar-Van**	**1.14**	**268**	Pn	**Pb**	**23 32 27.2**	**-1.2**
NAX	**Nakhchivan**	**1.16**	**46**	P	**Pb**	**23 32 27.8**	**-0.9**
NAX				S	**Sn**	**23 32 44.8**	**-0.3**
CUKT	**Cukurca**	**1.30**	**210**	Pn	**Pn**	**23 32 30.6**	**-0.3**
CUKT				Sn	**Sb**	**23 32 48.6**	**+0.7**
ORD	**Ordubad**	**1.35**	**65**	P	**Pn**	**23 32 31.0**	**-0.6**
ORD				S	**Sb**	**23 32 50.2**	**+0.8**
SBZ	**Shahbuz**	**1.35**	**40**	P	**Pn**	**23 32 31.0**	**-0.6**
SBZ				S	**Sg**	**23 32 50.5**	**+0.7**
ITBZ	**Tabriz**	**1.36**	**95**	Pg	**Pn**	**23 32 30.5**	**-1.3**
HYR	**Heyderabad**	**1.39**	**14**	P	**Pg**	**23 32 32.7**	**-0.3**
HYR				S	**Sg**	**23 32 54.0**	**+3.1**
ADCV	**BITLIS_Adilcev**	**1.40**	**289**	P	**Pg**	**23 32 32.9**	**-0.4**
ADCV				S	**Sg**	**23 32 55.1**	**+3.6**
ADCV				IAML		23 32 56.0	
	comp=E,58nm,0.4s						
ADCV				IAML		23 32 57.0	
	comp=N,56nm,0.5s						
IAZR	**Azarshahr**	**1.41**	**119**	Pg	**Pn**	**23 32 32.8**	**+0.2**
IGDI	**IGDIR**	**1.52**	**350**	P	**Pg**	**23 32 34.8**	**-0.7**
IGDI				S	**Sg**	**23 32 56.9**	**+1.7**
DORK	**Agr/Tutak/Do**	**1.63**	**309**	P	**Pb**	**23 32 36.1**	**-0.8**
DORK				S	**Sg**	**23 33 00.1**	**+1.1**
DORK				IAML		23 33 03.0	
	comp=N,46nm,0.6s						
DORK				IAML		23 33 10.0	
	comp=E,40nm,0.6s						
AGRB	**Hanur-Agry**	**1.64**	**318**	Pn	**Pg**	**23 32 37.3**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.65**	**298**	Pn	**Pg**	**23 32 38.1**	**0.0**
GNI	**Garni**	**1.79**	**8**	Pn	**Pb**	**23 32 39.5**	**-0.1**
GURO	**Guroymak-BITLI**	**1.89**	**276**	Pn	**Pb**	**23 32 40.8**	**-0.4**
IHRS	**Heris**	**2.06**	**91**	Pn	**Pn**	**23 32 43.3**	**+1.8**
QRD	**Qoradiz**	**2.51**	**63**	P	**Pn**	**23 32 47.2**	**-0.3**
QRD				S	**Sn**	**23 33 19.4**	**+1.2**
SVAN	**Silvan-Diyarba**	**2.55**	**266**	Pn	**Pb**	**23 32 50.3**	**-2.1**
GDB	**GEDABAY**	**2.56**	**23**	P	**Pn**	**23 32 48.9**	**+0.6**
GDB				S	**Sb**	**23 33 23.5**	**-0.9**
GANJ	**Ganja**	**2.70**	**32**	P	**Pn**	**23 32 51.0**	**+0.8**
AGDM	**Agdam**	**2.71**	**49**	P	**Pn**	**23 32 50.7**	**+0.4**
AGDM				S	**Sb**	**23 33 26.2**	**-2.3**
SENK	**Senkaya-Erzuru**	**2.71**	**324**	Pn	**Pb**	**23 32 53.1**	**-2.2**
QZX	**Qazax, Azerbai**	**2.78**	**15**	P	**Pn**	**23 32 52.2**	**+0.9**
QZX				S	**Sb**	**23 33 27.6**	**-2.9**
YRD	**Yardimli**	**3.04**	**79**	P	**Pn**	**23 32 54.9**	**0.0**
YRD				S	**Sn**	**23 33 33.4**	**+1.8**
LRK	**Lerik**	**3.08**	**84**	P	**Pn**	**23 32 55.7**	**+0.1**
LRK				S	**Sn**	**23 33 35.0**	**+2.4**
ZRD	**Zardab**	**3.16**	**52**	P	**Pn**	**23 32 57.4**	**+0.9**
ZRD				S	**Sn**	**23 33 36.7**	**+2.4**
GLBA	**Clilabad**	**3.22**	**73**	P	**Pn**	**23 32 57.7**	**+0.5**
GLBA				S	**Sn**	**23 33 37.6**	**+1.8**
ASTR	**Astara**	**3.43**	**86**	P	**Pn**	**23 33 00.4**	**+0.3**
ASTR				S	**Sn**	**23 33 41.6**	**+0.6**

*MEX **26** 23:50:29.1±0.6, 16.°01N×95.°21W, h10km±7km, MD4.4*
*CATAC **26** 23:50:30.9±0.4, 16.°N±3.°×9.°5W±.°, h10km, MA4.1/6, MLv4.1/6, Error ellipse: s-maj=7.7km s-min=3.9km az=33.3, confirmed*

ISC 26 23:50:25.3±1.5,**15.°97N**±0.°04×**95.°15W**±0.°02,**h2**km±11km,
n46,σ2s48/79,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.94**	**258**	*eP*	**Pg**	**23 50 43.6**	**+0.2**
HUIG				*eS*	**Sg**	**23 50 55.4**	**-0.3**
CMIG	**Matias Romero**	**1.14**	**13**	*eP*	**Pb**	**23 50 46.9**	**-1.0**
CMIG				*eS*	**Sg**	**23 51 01.0**	**-1.1**
CARR	**Arriaga**	**1.22**	**77**	*eP*	**Pn**	**23 50 48.6**	**-0.8**
CARR				*eS*	**Sb**	**23 51 04.6**	**-0.7**
NEUV	**Arroyo Zacate**	**1.84**	**340**	*eP*	**Pn**	**23 50 57.5**	**-0.4**
NEUV				*eS*	**Sn**	**23 51 20.7**	**-1.1**
VHO	**Vista Hermosa**	**1.87**	**306**	*eP*	**Pn**	**23 50 58.4**	**-0.2**
VHO				*eS*	**Sn**	**23 51 20.8**	**-2.0**
PCIG		**1.88**	**98**	*eP*	**Pn**	**23 50 58.8**	**+0.3**
PCIG				*eS*	**Sn**	**23 51 22.5**	**-0.3**
PEIG	**Puerto Escondi**	**1.92**	**271**	*eP*	**Pn**	**23 50 58.0**	**-1.1**
TGIG		**2.11**	**67**	*eP*	**Pn**	**23 51 03.5**	**+1.8**
TGIG				*eS*	**Sn**	**23 51 29.5**	**+1.0**
TGBT	**Tuxtla Gutierr**	**2.13**	**68**	*eP*	**Pn**	**23 51 04.5**	**+2.5**
TGBT				*eS*	**Sn**	**23 51 31.6**	**+2.5**
YOIG	**Yosondua**	**2.46**	**291**	*eP*	**Pn**	**23 51 07.3**	**+0.5**
YOIG				*eS*	**Sn**	**23 51 36.8**	**-0.8**
PMUV	**Sontecomapan**	**2.56**	**1**	*eP*	Pn	23 51 01.6	-6.3
PMUV				*eS*	**Sn**	**23 51 37.7**	**-2.0**
TOIG	**Toxpalan**	**2.79**	**319**	*eP*	**Pn**	**23 51 15.4**	**+4.2**
TOIG				*eS*	**Sn**	**23 51 43.7**	**-1.9**
TXIG	**Tlaxiaco**	**2.81**	**297**	*eP*	**Pn**	**23 51 12.9**	**+1.3**
TXIG				*eS*	**Sn**	**23 51 49.5**	**+3.2**
PNIG	**Pinotepa**	**2.89**	**279**	*eP*	**Pn**	**23 51 11.7**	**-0.7**
PNIG				*eS*	**Sn**	**23 51 45.1**	**-2.7**
CCIG	**Comitan**	**2.91**	**84**	*eP*	**Pn**	**23 51 14.9**	**+2.0**
CCIG				*eS*	**Sn**	**23 51 48.9**	**+0.3**
CCIG	**Comitan**	**2.91**	**84**	P	**Pn**	**23 51 15.4**	**+2.5**
PATR	**El Naranjo**	**2.94**	**106**	*eP*	**Pn**	**23 51 14.2**	**+0.9**
PATR				*eS*	**Sn**	**23 51 48.5**	**-0.7**
PAVE	**Pavencul**	**2.97**	**105**	*eP*	**Pn**	**23 51 15.3**	**+1.6**
PAVE				*eS*	**Sn**	**23 51 50.5**	**+0.4**
THIG		**2.98**	**110**	*eP*	**Pn**	**23 51 17.4**	**+3.8**
THIG				*eS*	**Sn**	**23 51 48.2**	**-1.7**
CHUJ	**Union Juarez**	**3.06**	**106**	*eP*	**Pn**	**23 51 16.2**	**+1.2**
CHUJ				*eS*	**Sn**	**23 51 51.5**	**-0.8**
HLIG	**Huajuapan de L**	**3.14**	**306**	*eP*	**Pn**	**23 51 20.5**	**+4.4**
HLIG				*eS*	**Sb**	**23 51 59.3**	**-1.6**
TPIG	**Tehuac#an**	**3.22**	**319**	*eP*	**Pb**	**23 51 23.8**	**+0.3**
TPIG				*eS*	**Sn**	**23 51 53.0**	**-3.3**
FTIG	**Fresnillo de T**	**3.44**	**304**	*eP*	**Pn**	**23 51 22.4**	**+2.3**
FTIG				*eS*	**Sn**	**23 52 05.1**	**+3.5**
MGIG	**Malinaltepec**	**3.57**	**291**	*eP*	**Pn**	**23 51 22.8**	**+0.9**
MGIG				*eS*	**Sn**	**23 52 02.8**	**-2.0**
HUEH	**Huehuetenango**	**3.57**	**100**	*eS*	**Sn**	**23 52 10.2**	**+5.2**
RTAL	**Retalhuleu**	**3.63**	**113**	*eS*	**Sn**	**23 52 03.7**	**-2.4**
RTAL	**Retalhuleu**	**3.63**	**113**	S	**Sn**	**23 52 06.4**	**+0.2**
TLIG	**Tlapa**	**3.63**	**296**	*eP*	**Pn**	**23 51 27.0**	**+4.2**
TLIG				*eS*	**Sn**	**23 52 07.2**	**+0.9**
TLIG	**Tlapa**	**3.63**	**296**	P	**Pb**	**23 51 31.4**	**+1.0**
TLIG				S	**Sb**	**23 52 16.0**	**+1.0**
JAUV	**Jalcomulco**	**3.73**	**335**	*eP*	Pn	23 51 17.2	-6.7
JAUV				*eS*	**Sn**	**23 52 10.7**	**+2.2**
CRIG	**Cruz Grande**	**3.90**	**282**	*eP*	**Pn**	**23 51 26.0**	**-0.3**
CRIG				*eS*	**Sn**	**23 52 05.7**	**-6.9**
LVIG	**Laguna Verde**	**3.92**	**342**	*eP*	**Pn**	**23 51 26.2**	**-0.4**
LVIG				*eS*	**Sn**	**23 52 10.3**	**-2.9**
DAIG	**Los Arroyos**	**4.44**	**284**	*eP*	**Pn**	**23 51 32.7**	**-1.1**
DAIG				*eS*	**Sn**	**23 52 25.1**	**-1.0**
PPSX	**Xalitzintla**	**4.46**	**314**	*eS*	**Sn**	**23 52 27.1**	**+0.2**
PBXN	**Popocatepetl**	**4.51**	**313**	*eP*	**Pn**	**23 51 38.7**	**+3.6**
PBXN				*eP*	Pb	23 51 39.0	-6.5
PBXN				*eS*	**Sn**	**23 52 28.8**	**+0.5**
PBXN				*eS*	Sb	23 52 31.8	-8.7
PBPN	**Popocatepetl**	**4.51**	**313**	*eP*	**Pn**	**23 51 38.7**	**+3.6**
PBPN				*eS*	**Sn**	**23 52 24.5**	**-4.0**
PPMI	**Popocatepetl**	**4.52**	**313**	*eP*	Pn	23 51 30.0	-5.4
PPMI				*eS*	**Sn**	**23 52 33.4**	**+4.6**
MEIG	**Mezcala**	**4.70**	**295**	*eP*	**Pn**	**23 51 35.7**	**-1.7**
MEIG				*eS*	**Sn**	**23 52 29.1**	**-3.4**
YAIG	**Yautepec**	**4.71**	**308**	*eP*	Pn	23 51 44.9	+7.2
YAIG				*eS*	**Sn**	**23 52 32.7**	**-0.4**
CXUV	**Coxquihui**	**4.78**	**331**	*eP*	**Pn**	**23 51 36.3**	**-2.1**
CXUV				*eS*	**Sn**	**23 52 36.7**	**+2.3**
PLIG	**Platanillo**	**4.80**	**301**	*eP*	**Pn**	**23 51 39.9**	**+1.1**
PLIG				*eS*	**Sn**	**23 52 32.3**	**-2.9**
SCIG	**Sabancuy**	**4.82**	**51**	*eP*	Pn	23 51 30.3	-8.6
SCIG				*eS*	**Sn**	**23 52 31.6**	**-3.6**
CAIG	**El Cayaco**	**5.02**	**283**	*eP*	**Pn**	**23 51 41.0**	**-0.8**
CAIG				*eS*	**Sn**	**23 52 46.3**	**+5.9**
PETF	**Flores**	**5.16**	**79**	*eP*	Pn	23 51 41.4	-2.2
PETF				*eS*	**Sn**	**23 52 41.9**	**-1.9**
ARIG	**Puente Sto Nin**	**5.47**	**296**	*eP*	**Pn**	**23 51 46.8**	**-1.2**
ARIG				*eS*	**Sn**	**23 52 55.8**	**+4.2**
CEGR	**Campo Tres**	**8.97**	**294**	*eP*	**Pn**	**23 52 39.5**	**+3.4**

IDC 26 23:55:33.8±5.3,**11.°13S**×**15.°16W,h0**km,**mb3.9/4,**
mbtmp4.0/4,MS3.4/7,Error ellipse: s-maj=331.3km
s-min=102.2km az=122.0,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**2.22**	**13**	T	T	23 59 35.5	
	baz=185,slow=74,SNR=17						
H10S3	**ASCENSION HYDR**	**2.22**	**13**	T	T	23 59 36.9	
	baz=35,slow=74,SNR=51						
H10N1	**ASCENSION HYDR**	**3.33**	**12**	T	T	00 00 59.9	
	baz=192,slow=79,SNR=7.3						
H10N3	**ASCENSION HYDR**	**3.33**	**11**	T	T	00 00 57.0	
	baz=192,slow=79,SNR=29						
H10N2	**ASCENSION HYDR**	**3.35**	**11**	T	T	00 00 57.5	
	baz=192,slow=79,SNR=18						
DBIC	**Dimbokro**	**20.44**	**31**	P	P	00 00 13.7	+0.7
	4.9nm,0.9s,baz=224,slow=11,SNR=4.3						
	4.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.35**	**35**	P	P	00 01 38.1	-0.6
	1.1nm,0.9s,baz=216,slow=11,SNR=6.1						
	1.1nm,0.9s						
MDP	**Montagnes des**	**40.64**	**291**	LR	LR	00 17 05.0	
	comp=Z,30nm,20.1s,baz=164,slow=32						
BOSA	**Boshof**	**41.55**	**121**	LR	LR	00 16 21.6	
	comp=Z,124nm,20.0s,baz=208,slow=30						
LSZ	**Lusaka**	**42.35**	**100**	LR	LR	00 19 27.9	
	comp=Z,87nm,18.7s,baz=171,slow=34						
MBAR	**Mbarara**	**46.77**	**80**	LR	LR	00 22 28.6	
	comp=Z,55nm,18.7s,baz=180,slow=34						
LPAZ	**La Paz**	**51.60**	**258**	LR	LR	00 26 57.8	
	comp=Z,14nm,18.6s,baz=62,slow=36						
ROSC	**El Rosal**	**60.97**	**282**	LR	LR	00 32 07.7	
	comp=Z,42nm,19.3s,baz=166,slow=36						
BRTR	**Keskin Array B**	**67.88**	**39**	P	P	00 06 34.6	+0.1
	1.5nm,1.0s,baz=224,slow=7.4,SNR=4.9						
	1.5nm,1.0s						
JTS	**Las Juntas de**	**72.57**	**285**	LR	LR	00 40 21.6	
	comp=Z,20nm,19.1s,baz=51,slow=37						
AKASG	**Malin Array Be**	**72.66**	**28**	P	P	00 07 03.4	+0.1
	1.1nm,0.6s,baz=231,slow=5.8,SNR=5.6						
	1.1nm,0.6s						

*JSN **26** 23:56:03.7±0.7, 19.°19N×81.°21W, h130km±100km, MD4.4, MW4.2, Presumed earthquake*
*SSNC **26** 23:56:06.6±1.9, 18.°93N×81.°08W, h16km±24km, MD3.6, ML2.7, Presumed earthquake*

ISC 26 23:56:01.6±2.0,**18.°87N**±0.°09×**81.°22W**±0.°08,**h10**km,**n12,**
σ2s74/20,1C,North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCCY	**Blossom Villag**	**1.34**	**53**	*eP*	**Pb**	**23 56 25.8**	**-0.9**
LCCY				*eS*	**Sb**	**23 56 43.0**	**-0.9**
LCCY				IAML		23 56 49.0	
	comp=E,123nm,0.5s						
LCCY				IAML		23 56 51.8	
	comp=N,167nm,0.5s						
CBCY	**The Bluff, Cay**	**1.63**	**58**	*eP*	**Pn**	**23 56 29.3**	**-1.0**
CBCY				*eS*	**Sn**	**23 56 47.5**	**-3.9**
CBCY				IAML		23 56 49.1	
	comp=E,68nm,0.3s						
CBCY				IAML		23 56 50.3	
	comp=N,99nm,0.2s						
MGV	**Manicaragua**	**3.43**	**20**	*eP*	**Pn**	**23 56 55.1**	**0.0**
MGV				*eS*	**Sn**	**23 57 33.9**	**-2.0**
MGV				IAML		23 57 35.8	
	comp=N,27nm,0.2s						
MTDJ	**Mount Denham**	**3.55**	**100**	*eP*	**Pn**	**23 56 57.8**	**+0.9**
MTDJ				*eS*	**Sn**	**23 57 35.2**	**-3.8**
MTDJ	**Mount Denham**	**3.55**	**100**	*i P*	**Pn**	**23 56 58.0**	**+1.1**
CCCC	**Cccc**	**3.99**	**54**	*eP*	Pn	23 57 09.1	+6.3
CCCC				*eS*	**Sn**	**23 57 55.2**	**+5.5**
**

MTDJ					*e*S		**Sn**	**00 26 52.7**	**-0.6**
MTDJ					*e*Sg		**Sb**	**00 26 55.1**	**-6.7**
MTDJ					IAML			00 26 56.3	
	comp=E,100nm,0.2s								
MTDJ					IAML			00 26 58.8	
	comp=E,47nm,0.5s								
MTDJ	**Mount Denham**	**3.46**	**98**	*i* S			**Sn**	**00 26 54.2**	**+0.9**
MGV	**Manicaragua**	**3.53**	**18**	*e*P			**Pn**	**00 26 13.6**	**+0.6**
MGV				*e*S			**Sn**	**00 26 51.8**	**-3.0**
MGV				IAML				00 26 55.3	
	comp=N,30nm,0.5s								
CCCC	**Cccc**	**4.01**	**52**	*e*P			**Pb**	**00 26 27.1**	**-1.9**
LMGC	**Las Mercedes**	**4.12**	**71**	*e*P			**Pn**	**00 26 25.2**	**+4.0**
LMGC				*e*S			**Sn**	**00 27 09.3**	**-0.1**
STH	**Stony Hill**	**4.16**	**98**	*i* P			**Pn**	**00 26 25.3**	**+3.5**
CAMR	**Camarioca**	**4.31**	**357**	Pn			**Pn**	**00 26 25.3**	**+1.5**
CAMR				Sn			**Sn**	**00 27 14.7**	**+0.6**
CAMR	**Camarioca**	**4.31**	**357**	*e*P			**Pn**	**00 26 25.7**	**+1.9**
SOR	**Soroa**	**4.40**	**337**	Pn			**Pn**	**00 26 26.1**	**+1.0**
SOR				Sn			**Sn**	**00 27 14.0**	**-2.4**
SOR				IAML				00 27 35.7	
	comp=N,32nm,2.7s								
SOR				IAML				00 28 39.8	
	comp=E,45nm,2.3s								
SOR	**Soroa**	**4.40**	**337**	*e*P			**Pn**	**00 26 27.3**	**+2.2**
CHIV	**Chivirico**	**4.63**	**74**	Pn			**Pn**	**00 26 30.6**	**+2.4**
CHIV	**Chivirico**	**4.63**	**74**	*i* P			Pn	00 26 33.2	+5.0
CHIV				*i* S			**Sn**	**00 27 20.6**	**-1.4**
YAR	**Yar**	**4.79**	**69**	*e*P			**Pn**	**00 26 34.4**	**+3.9**
YAR				*e*S			**Sn**	**00 27 26.9**	**+0.8**
RCC	**Rio Carpintero**	**5.29**	**75**	*e*P			Pn	00 26 42.2	+4.9
RCC				*i* S			**Sn**	**00 27 36.1**	**-2.2**
RCC				*e*S			**Sn**	**00 27 36.4**	**-1.9**
PINC	**Pinares de May**	**5.33**	**70**	*e*P			Pn	00 26 43.0	+5.1
PINC				*e*S			**Sn**	**00 27 43.3**	**+3.8**
GTBY	**Guantanamo Bay**	**5.81**	**77**	*e*S			**Sn**	**00 27 52.0**	**+0.7**
QMBU	**Quimbuelo**	**6.14**	**75**	*e*P			Pn	00 26 56.4	+7.2
QMBU				*e*S			**Sn**	**00 27 59.6**	**+0.1**
TEIG	**Tepich**	**6.89**	**284**	Pn			**Pn**	**00 26 58.3**	**-1.0**

IDC 27 00:36:21.1±1.6,16°23N×120°77E,h0km,mb3.6/3, mbtmp3.6/3,MS2.5/1,Error ellipse: s-maj=281.2km s-min=28.0km az=71.0,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.95**	**279**	LR	LR	00 48 12.3	
	comp=Z,14nm,20.5s,baz=170,slow=34						
SONM	**Songino Array**	**33.68**	**342**	P	P	00 43 03.8	0.0
	0.2nm,0.3s,baz=160,slow=8.9,SNR=1.7						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**38.34**	**159**	P	P	00 43 43.6	-0.4
	0.6nm,0.5s,baz=339,slow=9.0,SNR=9.0						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**41.67**	**162**	P	P	00 44 11.8	+0.1
	0.9nm,0.6s,baz=338,slow=6.9,SNR=14						
	0.9nm,0.6s						

*OSPL **27** 00:47:32.4±1.6,19°.61N×69°.36W,h10km±10km,ML2.5, Presumed earthquake*
*SDD **27** 00:47:33.6±2.5,19°.45N×69°.62W,h12km±41km,MD2.9, ML2.4,MW2.6,Presumed earthquake*

ISC 27 00:47:32.1±1.6,19°.45N±0°.06×69°.52W±0°.04,h3km±12km, n13,σ1°49/19,12C,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADR	**Nagua**	**0.33**	**253**	⇑*e*Sg	**Sg**	**00 47 41.0**	**-1.7**
NADR				IAML		00 47 43.6	
	comp=N,2μm,0.2s						
LONA1	**Toro Cenizo, N**	**0.33**	**257**	*e*S	**Sb**	**00 47 49.0**	**+2.6**
SMDR	**Samana, DR**	**0.35**	**117**	⇑*e*Pg	**Pb**	**00 47 41.6**	**+0.5**
SMDR				*e*Sg	**Sb**	**00 47 48.4**	**+1.3**
SMDR				IAML		00 47 50.5	
	comp=N,139nm,0.4s						
CADR	**Cabrera**	**0.45**	**299**	⇑*e*Sg	**Sg**	**00 47 46.9**	**+0.3**
CADR				IAML		00 47 51.0	
	comp=N,361nm,0.2s						
HATOM	**Hato Mayor del**	**0.68**	**169**	⇑*e*Pg	**Pg**	**00 47 44.5**	**-0.6**
HATOM				⇑*e*Sg	**Sg**	**00 47 54.7**	**+0.9**
HATOM				IAML		00 47 58.6	
	comp=N,19nm,0.5s						
DR08	**Loma La Naviza**	**0.68**	**224**	⇑*e*Sg	**Sg**	**00 47 53.5**	**-0.4**
DR08				IAML		00 47 56.7	
	comp=N,920nm,0.1s						
BANI	**BANI**	**1.32**	**217**	⇑*e*Pg	**Pn**	**00 47 56.0**	**-1.6**
BANI				⇑*e*Sg	**Sn**	**00 48 13.3**	**-2.5**
BANI				IAML		00 48 16.6	
	comp=N,68nm,0.2s						
LOPP1	**Punta Rusia, P**	**1.63**	**284**	*i* P	**Pn**	**00 48 00.0**	**-1.7**
LOPP1				*e*S	**Sn**	**00 48 22.7**	**-0.6**
LOPP1				IAML		00 48 23.6	
	comp=Z,48nm,2.0s						
SDDR	**Presa de Saban**	**1.73**	**255**	⇑*e*Pg	**Pn**	**00 48 02.0**	**-1.3**
SDDR				IAML		00 48 36.0	
	comp=N,16nm,1.8s						
REDR	**Restauracion**	**1.79**	**261**	⇑*e*Pg	**Pb**	**00 48 06.0**	**+0.4**
REDR				⇑*e*Sg	**Sg**	**00 48 31.7**	**+2.0**
REDR				IAML		00 48 34.1	
	comp=N,61nm,0.1s						
LONE3	**El Aguacate, B**	**2.02**	**246**	*i* P	**Pn**	**00 48 07.6**	**+0.4**
LONE3				*e*S	**Sn**	**00 48 33.1**	**0.0**
PODR	**Polo**	**2.10**	**233**	⇑*e*Pg	**Pn**	**00 48 09.0**	**+0.6**
PODR				IAML		00 48 31.9	
	comp=N,46nm,1.6s						
LODU1	**El Espartillar**	**2.15**	**240**	*i* P	**Pn**	**00 48 10.2**	**+1.3**

*IDC **27** 00:49:07.1±2.2,7°.02S×130°.00E,h108km±21km,mb3.8/6, mbtmp4.2/11,Error ellipse: s-maj=24.0km s-min=17.2km az=96.0*
*NEIC **27** 00:49:09.9±2.4,6°.95S±0°.05×130°.03E±0°.09,h133km±10km, mb4.1/10,Error ellipse: s-maj=13.9km s-min=4.8km az=115.0*

ISC 27 00:49:06.9±0.6,6°90S±0°.06×130°03E±0°.07,h104km,n34, σ1°29/36,mb4.0/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.65**	**131**	Pn	Pn	00 49 40.3	+5.1
SAUI				Sn	**Sn**	**00 49 57.3**	**+0.5**
MTN	**Manton Dam**	**6.00**	**170**		**Pn**	**00 50 34.3**	**+1.1**
SIJI	**Sorong**	**6.12**	**12**	P	**Pn**	**00 50 36.8**	**+1.9**
	10nm,0.3s,baz=234,slow=22,SNR=12						
SIJI				S	**Sn**	**00 51 41.2**	**-2.3**
	39nm,0.2s,baz=74,slow=23,SNR=10						
SOEI	**Soe**	**6.37**	**243**		**Pn**	**00 50 40.8**	**+2.4**
BATI	**Baumata**	**7.10**	**242**	P	**Pn**	**00 50 48.5**	**+0.2**
	82nm,0.4s,baz=99,slow=4.0,SNR=10						
BATI				S	**Sn**	**00 52 06.4**	**-1.1**
	64nm,0.5s,baz=72,slow=20,SNR=10						
KNRA	**Kununurra**	**8.81**	**188**		**Pn**	**00 51 11.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**11.92**	**201**	P	**Pn**	**00 51 51.3**	**-2.2**
	1.8nm,0.2s,baz=25,slow=9.5,SNR=49						
FITZ				S	Sn	00 53 52.8	-12
	12nm,0.3s,baz=184,slow=22,SNR=9.3						
WB0	**Warramunga Arr**	**13.47**	**162**		**Pn**	**00 52 11.0**	**-2.8**
WRA	**Warramunga Arr**	**13.62**	**163**	P	**Pn**	**00 52 12.8**	**-3.0**
	1.3nm,0.3s,baz=335,slow=15,SNR=48						
WRA				S	Sn	00 54 34.6	-11
	2.9nm,0.4s,baz=340,slow=21,SNR=10						
WRA	**Warramunga Arr**	**13.62**	**163**		**Pn**	**00 52 13.0**	**-2.8**
COEN	**Coen**	**14.70**	**120**		**Pn**	**00 52 29.7**	**0.0**
JAGI	**Jajag, Banyuwa**	**15.81**	**263**	Pn	**Pn**	**00 52 43.8**	**0.0**
JAGI				IAmb	IAmb	00 53 10.3	
	comp=Z,16nm,1.0s						
AS31	**Alice Springs**	**17.08**	**168**	P	**P**	**00 52 58.7**	**-0.7**
AS31				IAmb	IAmb	00 53 29.2	
	comp=Z,2.1nm,0.3s						
ASAR	**Alice Springs**	**17.08**	**168**	P	**Pn**	**00 52 58.5**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=342,slow=9.4,SNR=21						
ASAR				S	Sn	00 55 56.7	-13
	comp=Z,1.4nm,0.5s,baz=353,slow=26,SNR=5.9						
ASAR	**Alice Springs**	**17.08**	**168**	P	**P**	**00 53 00.2**	**+0.8**
MBWA	**Marble Bar**	**17.32**	**214**	P	**Pn**	**00 53 02.0**	**-0.3**
MBWA				IAmb	IAmb	00 53 18.5	
	comp=Z,29nm,1.3s						
PSA00	**Pilbara Seismi**	**17.59**	**213**	P	**Pn**	**00 53 05.5**	**-0.1**
SONM	**Songino Array**	**58.36**	**342**	P	**P**	**00 58 51.9**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=143,slow=5.0,SNR=3.5						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**58.36**	**342**	P	**P**	**00 58 51.3**	**-0.1**

PETK	**Petropavlovsk-**	**64.22**	**18**	P		**P**		**00 59 32.0**	**+1.4**
	comp=Z,1.2nm,0.5s,baz=218,slow=7.1,SNR=1.7								
	comp=Z,1.2nm,0.5s								
PETK	**Petropavlovsk-**	**64.22**	**18**	P		**P**		**00 59 30.6**	**0.0**
WUS	**Wushi**	**66.73**	**320**	P		**P**		**00 59 46.6**	**-0.6**
WUS				IAmb		IAmb		00 59 51.7	
	comp=Z,2.0nm,1.1s								
MKAR	**Makanchi Array**	**68.16**	**327**	P		**P**		**00 59 56.5**	**+0.6**
	comp=Z,4.3nm,0.5s,baz=115,slow=8.7,SNR=106								
	comp=Z,4.3nm,0.5s								
MAKZ	**Makanchi**	**68.34**	**327**	P		**P**		**00 59 57.4**	**+0.3**
AAK	**Ala-Archa**	**70.49**	**320**	P		**P**		**01 00 11.0**	**+0.5**
AAK				IAmb		IAmb		01 00 11.9	
	comp=Z,2.1nm,1.1s								
ZALV	**Zalesovo Beam**	**71.51**	**334**	P		**P**		**01 00 15.4**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=122,slow=5.6,SNR=3.5								
	comp=Z,0.6nm,0.5s								
GAR	**Garm**	**71.62**	**315**	P		**P**		**01 00 17.6**	**+0.1**
GAR				IAmb		IAmb		01 00 19.3	
	comp=Z,5.8nm,1.3s								
KURBB	**Kurchatov Arra**	**72.45**	**328**	P		**P**		**01 00 21.7**	**-0.2**
	comp=Z,1.6nm,0.2s,baz=130,slow=4.9,SNR=10								
	comp=Z,1.6nm,0.2s								
KURK	**Kurchatov**	**72.45**	**329**	P		**P**		**01 00 21.6**	**-0.3**
KKAR	**Karatay Array**	**73.29**	**319**	P		**P**		**01 00 27.0**	**-0.2**
BVAR	**Borovoye Array**	**78.00**	**328**	P		**P**		**01 00 53.5**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=123,slow=5.5,SNR=3.5								
	comp=Z,0.6nm,0.7s								
BMAR	**Burnt Mountain**	**94.55**	**23**	P		P		**01 02 14.8**	**-0.6**
CPUP	**Villa Florida**	**146.20**	**168**	PKPbc		**PKPbc**		**01 08 35.6**	**-0.4**
	comp=Z,3.4nm,1.1s,baz=192,slow=4.7,SNR=3.3								
LPAZ	**La Paz**	**150.77**	**142**	PKPbc		**PKPbc**		**01 08 48.0**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=335,slow=3.4,SNR=4.9								

*IDC **27** 00:49:48.1±0.7,5°.25N×73°.60W,h154km±5km,mb3.4/7, mbtmp3.9/8,Error ellipse: s-maj=25.0km s-min=12.4km az=145.0*
*NEIC **27** 00:49:48.5±1.7,5°.18N±0°.08×73°.57W±0°.08,h155km±7km, mb4.1/6,Error ellipse: s-maj=15.1km s-min=5.8km az=132.0*
*RSNC **27** 00:49:49.1±0.0,5°.N±1°×7°.4W±°,h148km±1km,M3.8, mB4.7,mb4.4,ML3.4,Mw(mB)4.0*
*FUNV **27** 00:49:50.2,5°.35N×73°.80W,h137km,MW4.6,Presumed earthquake*

ISC 27 00:49:48.2±0.6,5°33N±0°.04×73°66W±0°.04,h157km±5km, n84,σ2°11/123,mb3.9/8,1C,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.52**	**307**	P	**Pn**	**00 50 10.2**	**-0.3**
SPBC				S	**Sn**	**00 50 26.0**	**-1.6**
CHIC	**Chingaza**	**0.70**	**186**	P	**Pn**	**00 50 11.2**	**-0.8**
CHIC				S	**Sn**	**00 50 28.1**	**-2.1**
RUSC	**La Rusia**	**0.80**	**46**	P	**Pn**	**00 50 13.6**	**+0.9**
RUSC				S	**Sn**	**00 50 32.0**	**+0.7**
RUSC	**La Rusia**	**0.80**	**46**	*e*P	**Pn**	**00 50 13.6**	**+0.9**
RUSC				*e*S	**Sn**	**00 50 29.1**	**-2.2**
ROSC	**El Rosal**	**0.82**	**233**	P	**Pn**	**00 50 13.0**	**+0.3**
	1μm,0.3s,baz=268,slow=15,SNR=550						
ROSC				S	**Sn**	**00 50 31.4**	**0.0**
	994nm,0.4s,baz=180,slow=23,SNR=36						
ROSC	**El Rosal**	**0.82**	**233**		**Pn**	**00 50 13.0**	**+0.3**
ROSC				Sn	**Sn**	**00 50 30.2**	**-1.2**
CVER	**Cruz Verde, Cu**	**0.91**	**207**	P	**Pn**	**00 50 13.2**	**-0.3**
CVER				S	**Sn**	**00 50 30.9**	**-1.9**
VILC	**Villavicencio,**	**1.22**	**182**	P	**Pn**	**00 50 14.6**	**-1.1**
VILC				S	**Sn**	**00 50 34.6**	**-2.2**
NORC	**Norcasia**	**1.23**	**281**	P	**Pn**	**00 50 14.6**	**-1.1**
NORC				S	**Sn**	**00 50 34.8**	**-1.9**
BARC	**Barichara**	**1.34**	**21**	P	**Pn**	**00 50 17.4**	**+0.5**
BARC				S	**Sn**	**00 50 39.7**	**+0.7**
PTBC	**PUERTO BERRIO,**	**1.44**	**326**	P	**Pn**	**00 50 16.9**	**-0.8**
PTBC				S	**Sn**	**00 50 38.9**	**-1.4**
BRJC	**Barrancabermej**	**1.63**	**357**	P	**Pn**	**00 50 20.5**	**+0.8**
BRJC				S	**Sn**	**00 50 44.8**	**+0.9**
GUY2C	**Guyana, Caldas**	**1.70**	**266**	P	**Pn**	**00 50 19.7**	**-1.2**
GUY2C				S	**Sn**	**00 50 43.3**	**-2.7**
NIZA	**Niza - Manizal**	**1.83**	**261**	P	**Pn**	**00 50 21.3**	**-0.8**
NIZA				S	**Sn**	**00 50 46.8**	**-1.3**
ANIL	**Santa Ana**	**1.93**	**244**	P	**Pn**	**00 50 22.0**	**-1.2**
ANIL				S	**Sn**	**00 50 47.6**	**-2.6**
PRAC	**Prado**	**2.02**	**217**	P	**Pn**	**00 50 23.0**	**-1.1**
PRAC				S	**Sn**	**00 50 48.9**	**-2.8**
HELC	**Santa Helena**	**2.05**	**295**	P	**Pn**	**00 50 24.1**	**-0.5**
HELC				S	**Sn**	**00 50 51.1**	**-1.6**
HELC	**Santa Helena**	**2.05**	**295**	⇑*e*P	**Pn**	**00 50 24.2**	**-0.5**
HELC				*e*S	**Sn**	**00 50 48.5**	**-4.2**
ORTC	**Ortega, Tolima**	**2.12**	**228**	P	**Pn**	**00 50 23.8**	**-1.4**
ORTC				S	**Sn**	**00 50 50.6**	**-3.2**
URMC	**La Uribe, Meta**	**2.19**	**199**	P	**Pn**	**00 50 25.4**	**-0.7**
URMC				S	**Sn**	**00 50 53.9**	**-1.5**
PAMC	**Pamplona, Colo**	**2.21**	**26**	P	**Pn**	**00 50 27.9**	**+1.2**
CBOC	**Ciudad Bolivar**	**2.40**	**283**	P	**Pn**	**00 50 28.0**	**-0.6**
PLMC	**San Jos del P**	**2.65**	**261**	P	**Pn**	**00 50 31.5**	**0.0**
CAPV	**Capacho**	**2.85**	**28**	*e*P	**Pn**	**00 50 35.7**	**+1.5**
CAPV				*e*S	**Sn**	**00 51 07.8**	**-2.0**
OCAC	**Ocana**	**2.91**	**7**	P	**Pn**	**00 50 35.6**	**+0.8**
OCAC				S	**Sn**	**00 51 12.1**	**+1.1**
YOTC	**Yotoco, Valle**	**3.00**	**243**	P	**Pn**	**00 50 34.4**	**-1.5**
DBBC	**Dabeiba**	**3.04**	**304**	P	**Pn**	**00 50 36.2**	**-0.2**
DBBC				S	**Sn**	**00 51 13.2**	**-0.6**
UREC	**San Jos de Ur**	**3.04**	**322**	P	**Pn**	**00 50 34.3**	**-2.1**
UREC				S	**Sn**	**00 51 10.6**	**-3.1**
MACC	**Macarena, Meta**	**3.17**	**183**	P	**Pn**	**00 50 35.9**	**-2.2**
GARC	**Garzon, Huila**	**3.62**	**210**	P	**Pn**	**00 50 42.3**	**-1.7**
JAMC	**Jamundi, Valle**	**3.67**	**235**	P	**Pn**	**00 50 42.8**	**-1.8**
PIZC	**Pizarro, Choco**	**3.71**	**264**	P	**Pn**	**00 50 45.4**	**+0.6**
APAC	**Apartado, Choc**	**3.86**	**311**	P	**Pn**	**00 50 46.5**	**-0.4**
SOCV	**Socops**	**4.04**	**43**	*e*P	**Pn**	**00 50 50.0**	**+0.8**
SOCV				*e*S	**Sn**	**00 51 35.0**	**-1.8**
POPC	**Popayan, Colom**	**4.09**	**227**	P	**Pn**	**00 50 49.3**	**-0.8**
FLOC	**Florencia**	**4.22**	**208**	P	**Pn**	**00 50 50.6**	**-1.0**
LCBC	**Los crdobas,**	**4.41**	**323**	P	**Pn**	**00 50 52.6**	**-1.4**
PTAC	**Punta Ardita,**	**4.50**	**294**	P	**Pn**	**00 50 54.6**	**-0.6**
ARGC	**Ariguani, Magd**	**4.53**	**353**	P	**Pn**	**00 50 56.5**	**+0.9**
SDV	**Santo Domingo**	**4.63**	**40**	P	**Pn**	**00 50 58.2**	**+1.0**
	48nm,0.3s,baz=178,slow=6.4,SNR=101						
SDV				S	**Sn**	**00 51 51.5**	**+0.7**
	53nm,0.3s,baz=242,slow=23,SNR=20						
SDV	**Santo Domingo**	**4.63**	**40**		**Pn**	**00 50 57.9**	**+0.8**
SDV				Sn	**Sn**	**00 51 49.6**	**-1.3**
SDV	**Santo Domingo**	**4.63**	**40**	P	**Pn**	**00 50 57.9**	**+0.8**
SDV	**Santo Domingo**	**4.63**	**40**	*e*P	**Pn**	**00 50 58.1**	**+1.0**
SDV				*e*S	**Sn**	**00 51 48.0**	**-2.8**
SJCC	**San Jacinto, C**	**4.78**	**342**	P	**Pn**	**00 50 56.8**	**-2.1**
SJCC	**San Jacinto, C**	**4.78**	**342**	*e*P	**Pn**	**00 50 56.9**	**-2.0**
SJCC				*e*S	**Sn**	**00 51 48.7**	**-5.4**
MCQV	**Machiques**	**4.82**	**13**	*e*P	**Pn**	**00 51 00.2**	**+0.9**
MCQV				*e*S	**Sn**	**00 51 51.2**	**-3.7**
BBAC	**Balboa, Cauca**	**4.86**	**228**	P	**Pn**	**00 50 59.1**	**-1.1**
CAPC	**Capurgana**	**4.92**	**312**	P	**Pn**	**00 50 59.3**	**-1.4**
GR1C	**Gorgona, Isla**	**5.06**	**243**	P	**Pn**	**00 51 00.1**	**-2.4**
PTLC	**Puerto Leguiza**	**5.25**	**193**	P	**Pn**	**00 51 06.9**	**+1.8**
	622nm30nm,0.4s						
CRJC	**Cerrejon, Guaj**	**5.70**	**8**	P	**Pn**	**00 51 10.4**	**-0.7**
SMRC	**Santa Marta, M**	**5.82**	**355**	P	**Pn**	**00 51 11.8**	**-0.8**
	1μm27nm,0.5s						
TEPV	**Terepaima**	**6.38**	**44**	*e*P	**Pn**	**00 51 19.5**	**-0.6**
TEPV				*e*S	**Sn**	**00 52 27.4**	**-4.9**
URIC	**Uribia, Colomb**	**6.54**	**14**	P	**Pn**	**00 51 21.4**	**-0.7**
URIC	**Uribia, Colomb**	**6.54**	**14**	*e*P	**Pn**	**00 51 21.1**	**-1.1**
URIC				*e*S	**Sn**	**00 52 29.4**	**-6.4**
MAPV	**Macapo**	**6.82**	**49**	*e*P	**Pn**	**00 51 26.4**	**+0.5**
MAPV				*e*S	**Sn**	**00 52 37.4**	**-5.3**
JACV	**Jacura**	**7.45**	**40**	*e*P	**Pn**	**00 51 34.7**	**+0.4**
JACV				*e*S	**Sn**	**00 52 52.7**	**-5.1**
BENV	**Beln**	**7.56**	**52**	*e*P	**Pn**	**00 51 36.8**	**+0.9**
BENV				*e*S	**Sn**	**00 52 55.5**	**-5.1**
TURV	**Turiamo**	**7.68**	**48**	*e*P	**Pn**	**00 51 37.5**	**+0.1**
TURV				*e*S	**Sn**	**00 52 57.2**	**-6.1**
TACV	**Tcata**	**8.12**	**54**	*e*P	**Pn**	**00 51 43.6**	**+0.3**
TACV				*e*S	**Sn**	**00 53 08.4**	**-5.5**
FUNV	**FUNVISIS**	**8.49**	**53**	*e*P	**Pn**	**00 51 48.8**	**+0.6**
FUNV				*e*S	**Sn**	**00 53 16.6**	**-6.1**
MTDJ	**Mount Denham**	**13.36**	**344**	Pn	**Pn**	**00 52 54.6**	**+2.7**
BOAV	**Boa Vista**	**13.43**	**102**		**Pn**	**00 52 51.0**	**-1.7**
SDDR	**Presa de Saban**	**13.76**	**9**	Pn	**Pn**	**00 52 59.2**	**+2.3**
DR12	**Loma Pena Alta**	**14.01**	**17**	Pn	**Pn**	**00 53 01.3**	**+1.2**
CELP	**Cerrillos**	**14.43**	**28**	Pn	**Pn**	**00 53 05.1**	**-0.2**
GTBY	**Guantanamo Bay**	**14.57**	**355**	*e*P	**P**	**00 53 11.1**	**+1.8**

AOPR	**Arecibo Observ**	**14.59**	**27**	Pn		**Pn**		**00 53 08.8**	**+1.5**
RCC	**Rio Carpintero**	**14.71**	**352**	*e*P		**P**		**00 53 12.4**	**+1.6**
ECPR	**Experimental S**	**14.74**	**28**	Pn		**Pn**		**00 53 09.7**	**+0.5**
QMBU	**Quimbuelo**	**14.82**	**356**	*e*P		**P**		**00 53 13.3**	**+1.4**
YAR	**Yar**	**15.18**	**350**	*e*P		**P**		**00 53 18.9**	**+2.9**
MACA	**Manacapuru-AM**	**15.47**	**123**			**Pn**		**00 53 16.4**	**-1.8**
MACA				IAmb		IAmb		00 53 20.8	
	comp=Z,10.0nm,0.5s								
LPAZ	**La Paz**	**22.17**	**166**	P		**P**		**00 54 30.8**	**-1.5**
CMIG	**Matias Romero**	**23.84**	**301**	P		**P**		**00 54 47.0**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=132,slow=10,SNR=1.8								
	comp=Z,3.0nm,0.6s								
TXAR	**Lajitas Array**	**37.07**	**314**	P		**P**		**00 56 45.7**	**+2.3**
	comp=Z,0.3nm,0.8s,baz=103,slow=6.0,SNR=2.0								
TXAR				PcP		**PcP**		**00 59 02.1**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=145,slow=3.9,SNR=5.9								
	comp=Z,0.3nm,0.8s								
YKA	**Yellowknife Ar**	**64.47**	**340**	P		**P**		**01 00 07.9**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=136,slow=5.6,SNR=27								
	comp=Z,0.7nm,0.4s								
POIN	**Pond Inlet**	**67.34**	**359**	P		**P**		**01 00 26.3**	**+0.4**
POIN				IAmb		IAmb		01 00 38.6	
	comp=Z,0.6nm,0.9s								
DBIC	**Dimbokro**	**68.39**	**85**	P		**P**		**01 00 33.5**	**-0.1**
	comp=Z,3.5nm,1.1s,baz=285,slow=13,SNR=1.9								
	comp=Z,3.5nm,1.1s								
DBIC	**Dimbokro**	**68.39**	**85**	P		**P**		**01 00 32.9**	**-0.6**
SUMG	**Summit**	**70.54**	**11**	P		**P**		**01 00 46.9**	**+0.8**
SUMG				IAmb		IAmb		01 00 49.6	
	comp=Z,2.3nm,0.9s								
TORD	**Torodi Ar. Bea**	**74.56**	**78**	P		**P**		**01 01 09.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=296,slow=6.6,SNR=4.2								
	comp=Z,0.1nm,0.3s								
ILAR	**Eielson Array**	**78.08**	**335**	P		**P**		**01 01 29.9**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=108,slow=4.6,SNR=7.9								
	comp=Z,0.4nm,0.5s								
ARCES	**ARCESS Array B**	**88.24**	**20**	P		**P**		**01 02 22.5**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=277,slow=2.1,SNR=3.6								
	comp=Z,0.5nm,0.5s								

*DJA **27** 01:02:50.9±3.0,9°N±26°×12°4E±°,h10km,M5.3/17, mb5.3/17,mB5.6/13,MLv5.7/4,Mw(mB)5.1/13*
*IDC **27** 01:03:17.9±0.7,6°.73N×124°.89E,h0km,mb3.9/13, mbtmp3.9/13,MS3.3/16,Error ellipse: s-maj=15.3km s-min=9.6km az=160.0*
*NEIC **27** 01:03:20.7±1.2,6°.87N±0°.09×124°.97E±0°.05,h11km±5km, mb4.6/31,Error ellipse: s-maj=13.6km s-min=5.6km az=159.0*

ISC 27 01:03:20.8±0.5,6°85N±0°.06×124°98E±0°.06,h13km,n91, σ1°35/72,mb4.5/37,MS3.4/16,1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.64**	**69**	Pg	**Pg**	**01 03 33.1**	**-0.2**
	897nm,0.3s,baz=259,slow=2.1,SNR=140						
DAV				Lg	Lg	01 03 42.9	
	2μm,0.3s,baz=20,slow=23,SNR=8.6						
DAV	**Davao City (W)**	**0.64**	**69**		**Pg**	**01 03 33.1**	**-0.2**
DAV				Sg	**Sg**	**01 03 41.7**	**+0.1**
DAV	**Davao City (W)**	**0.64**	**69**	P	**Pg**	**01 03 32.8**	**-0.4**
MNI	**Manado**	**5.37**	**181**	P	Pn	01 04 45.6	+4.9
	1.2nm131nm,0.5s						
TNTI	**Ternate**	**6.49**	**158**	P	Pn	01 05 02.0	+6.0
	59nm,0.8s				

BBOO	**Buckleboo**	**40.82**	**166**	P		**P**	**01 11 01.2**	**-1.0**
STKA	**Stephens Creek**	**41.64**	**159**	P		**P**	**01 11 08.4**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=320,slow=10,SNR=5.6							
STKA				LR		LR	01 31 20.7	
	comp=Z,65nm,19.4s,baz=206,slow=40							
	comp=Z,2.1nm,0.7s							
STKA	**Stephens Creek**	**41.64**	**159**	P		**P**	**01 11 08.8**	**-0.2**
EVN	**Everest**	**41.77**	**305**			**P**	**01 11 11.0**	**0.0**
KLR	**Kul'dur**	**42.63**	**7**	LR		LR	01 28 13.3	
	comp=Z,38nm,21.2s,baz=232,slow=35							
SONM	**Songino Array**	**43.81**	**342**	P		**P**	**01 11 26.8**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=170,slow=10,SNR=5.2							
SONM				LR		LR	01 31 35.8	
	comp=Z,74nm,18.4s,baz=182,slow=39							
	comp=Z,0.5nm,0.6s							
SONM	**Songino Array**	**43.81**	**342**	P		**P**	**01 11 26.4**	**-0.2**
PETK	**Petropavlovsk-**	**53.27**	**24**	LR		LR	01 36 53.9	
	comp=Z,33nm,18.6s,baz=268,slow=38							
MKAR	**Makanchi Array**	**54.02**	**325**	P		**P**	**01 12 44.6**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=123,slow=7.7,SNR=9.4							
	comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	**54.02**	**325**			**P**	**01 12 44.7**	**-0.1**
MAKZ	**Makanchi**	**54.21**	**325**	P		**P**	**01 12 46.8**	**+0.6**
MAKZ				IAmb		IAmb	01 12 55.9	
	comp=Z,9.2nm,1.4s							
NIL	**Nilore**	**54.67**	**307**			**P**	**01 12 49.6**	**-0.2**
KSH2	**Kashi**	**54.77**	**314**	P		**P**	**01 12 51.0**	**+0.3**
KSH2				pP		sP	01 12 57.3	+0.8
KSH2				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KDJ	**Kajisay**	**54.88**	**318**			**P**	**01 12 51.5**	**0.0**
KDJ				IAmb		IAmb	01 12 59.0	
	comp=Z,5.6nm,0.7s							
NRN	**Naryn**	**55.38**	**316**	P		**P**	**01 12 55.3**	**+0.1**
AAK	**Ala-Archa**	**56.90**	**317**	LR		LR	01 40 04.0	
	comp=Z,39nm,18.8s,baz=118,slow=39							
ZALV	**Zalesovo Beam**	**57.04**	**333**	P		**P**	**01 13 07.3**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=139,slow=6.8,SNR=2.1							
ZALV				LR		LR	01 38 36.6	
	comp=Z,30nm,18.4s,baz=224,slow=37							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**57.04**	**333**	P		**P**	**01 13 05.7**	**-0.8**
ARSB	**Arslanbob**	**57.43**	**315**	P		**P**	**01 13 09.1**	**-0.6**
ARSB				IAmb		IAmb	01 13 16.8	
	comp=Z,4.0nm,0.7s							
DRK	**Karamyk**	**57.62**	**313**	P		**P**	**01 13 10.3**	**-0.8**
DRK				IAmb		IAmb	01 13 19.2	
	comp=Z,8.6nm,1.0s							
KURBB	**Kurchatov Arra**	**58.19**	**327**	P		**P**	**01 13 14.2**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=126,slow=6.1,SNR=9.1							
	comp=Z,1.6nm,0.3s							
KURK	**Kurchatov**	**58.20**	**327**			**P**	**01 13 14.6**	**0.0**
KURK				IAmb		IAmb	01 13 22.9	
	comp=Z,3.2nm,0.6s							
KBL	**Kabul**	**58.27**	**306**	P		**P**	**01 13 14.7**	**-1.0**
KBL				IAmb		IAmb	01 13 22.9	
	comp=Z,3.6nm,0.6s							
GAR	**Garm**	**58.55**	**312**	P		**P**	**01 13 16.9**	**-0.6**
CHGR	**Chuyangaron**	**59.31**	**311**	P		**P**	**01 13 22.9**	**+0.1**
CHGR				IAmb		IAmb	01 13 30.5	
	comp=Z,6.6nm,0.9s							
KK31	**Karatay Array**	**59.78**	**316**			**P**	**01 13 25.1**	**-0.7**
KK31				IAmb		IAmb	01 13 32.6	
	comp=Z,5.4nm,0.8s							
KKAR	**Karatay Array**	**59.78**	**316**			**P**	**01 13 24.4**	**-1.5**
BVAR	**Borovoye Array**	**63.78**	**327**	P		**P**	**01 13 50.6**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=131,slow=8.3,SNR=4.4							
	comp=Z,0.9nm,0.8s							
BORK	**Borovoye**	**63.82**	**327**			**P**	**01 13 52.2**	**-0.6**
BORK				IAmb		IAmb	01 14 05.3	
	comp=Z,5.7nm,1.2s							
TIXI	**Tiksi**	**64.78**	**1**	LR		LR	01 42 57.6	
	comp=Z,27nm,21.6s,baz=218,slow=37							
AB31	**Akbulak array**	**68.65**	**320**			**P**	**01 14 23.2**	**-0.7**
AB31				IAmb		IAmb	01 14 32.0	
	comp=Z,2.9nm,0.8s							
ABKAR	**Akbulak array**	**68.65**	**320**	P		**P**	**01 14 22.3**	**-1.6**
ARTI	**Arti**	**71.47**	**327**	LR		LR	01 47 08.9	
	comp=Z,38nm,18.6s,baz=75,slow=37							
RAYN	**Ar Rayn**	**77.68**	**293**	P		**P**	**01 15 16.6**	**-1.3**
C19K	**Lookout Ridge**	**78.46**	**21**	P		**P**	**01 15 21.2**	**0.0**
C19K				IAmb		IAmb	01 15 33.4	
	comp=Z,4.7nm,0.9s							
D19K	**Kuna River**	**78.87**	**21**	P		**P**	**01 15 23.0**	**-0.5**
D19K				IAmb		IAmb	01 15 37.3	
	comp=Z,7.3nm,1.4s							
E19K	**Redstone River**	**79.03**	**23**	P		**P**	**01 15 24.6**	**+0.2**
E19K				IAmb		IAmb	01 15 37.9	
	comp=Z,4.2nm,0.9s							
B21K	**Ikpikpuk River**	**80.28**	**21**			**P**	**01 15 30.7**	**-0.3**
ILAR	**Eielson Array**	**83.06**	**26**	P		**P**	**01 15 44.0**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=258,slow=6.2,SNR=5.4							
	comp=Z,0.4nm,0.6s							
ILAR	**Eielson Array**	**83.06**	**26**	P		**P**	**01 15 45.2**	**-0.7**
MENT	**Mentasta**	**84.55**	**27**	P		**P**	**01 15 53.4**	**-0.2**
I27K	**Kandik River**	**85.23**	**25**			**P**	**01 15 57.1**	**+0.1**
I28M	**Miner Creek**	**85.94**	**25**	P		**P**	**01 16 00.3**	**-0.3**
I28M				IAmb		IAmb	01 16 13.0	
	comp=Z,5.6nm,0.9s							
BRTR	**Keskin Array B**	**86.71**	**309**	P		**P**	**01 16 03.2**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=96,slow=5.9,SNR=2.7							
	comp=Z,0.5nm,0.7s							
BRTR	**Keskin Array B**	**86.71**	**309**	P		**P**	**01 16 03.3**	**-1.7**
NOA	**NORSAR Array B**	**95.24**	**333**	LR		LR	02 05 48.9	
	comp=Z,26nm,19.3s,baz=285,slow=39							
YKA	**Yellowknife Ar**	**97.39**	**24**	P		Pdif	01 16 54.5	+0.5
	comp=Z,0.2nm,0.8s,baz=305,slow=5.5,SNR=6.8							
	comp=Z,0.2nm,0.8s							
YKA	**Yellowknife Ar**	**97.39**	**24**	P		**P**	**01 16 53.8**	**0.0**

*ISK **27** 01:10:59.9,38.2̈4N×38.6̈7E,h7km,ML2.9/15*
*AFAD **27** 01:11:00.3,38.2̈5N×38.6̈6E,h7km±1km,ML2.9*

ISC 27 01:11:00.6±0.9,38.2̈5N±0.0̈3×38.6̈6E±0.0̈2,h9km±9km, n27,σθ56/38,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MAYA	**Malatya/Merkez**	**0.20**	**293**	P		**Pg**	**01 11 04.8**	**0.0**
MAYA				IAML			01 11 08.0	
	comp=N,9μm,0.2s							
MAYA				IAML			01 11 08.0	
	comp=E,9μm,0.1s							
MAYA				S		**Sg**	**01 11 08.1**	**+0.4**
MDYL	**Doganyol-Malat**	**0.30**	**78**	Pg		**Pg**	**01 11 06.3**	**-0.4**
MDYL				Sg		**Sg**	**01 11 10.9**	**+0.1**
ELZG	**Elazig**	**0.36**	**46**	P		**Pg**	**01 11 07.5**	**-0.2**
ELZG				S		**Sg**	**01 11 12.7**	**+0.3**
ELZG				IAML			01 11 13.0	
	comp=E,3μm,0.2s							
ELZG				IAML			01 11 14.0	
	comp=N,3μm,0.3s							
ESGZ	**Sivrice-Elazig**	**0.36**	**60**	Pg		**Pg**	**01 11 07.5**	**-0.4**
ESGZ				Sg		**Sg**	**01 11 13.1**	**+0.4**
NARI	**Adyaman-Kaht**	**0.37**	**168**	P		**Pg**	**01 11 07.8**	**-0.2**
NARI				IAML			01 11 15.0	
	comp=E,623nm,0.5s							
NARI				IAML			01 11 16.0	
	comp=N,612nm,0.9s							
KAHTU	**Kahta**	**0.44**	**185**	P		**Pg**	**01 11 09.0**	**-0.3**
KAHTU				S		**Sg**	**01 11 15.4**	**+0.2**
KAHTU				IAML			01 11 20.0	
	comp=N,645nm,0.3s							
KAHTU				IAML			01 11 24.0	
	comp=E,744nm,0.8s							
SVRC	**Sivrice-ELAZID**	**0.52**	**75**	Pg		**Pg**	**01 11 10.3**	**-0.5**
SVRC				Sg		**Sg**	**01 11 18.1**	**+0.4**
AZEY	**Adyaman-Merk**	**0.55**	**217**	P		**Pb**	**01 11 11.5**	**-0.8**
AZEY				S		**Sb**	**01 11 19.9**	**-0.4**
AZEY				IAML			01 11 22.0	
	comp=E,692nm,0.5s							
AZEY				IAML			01 11 24.0	
	comp=N,576nm,0.5s							
ESIJ	**Sivrice-Elazig**	**0.55**	**68**	Pg		**Pg**	**01 11 10.9**	**-0.4**
ESIJ				Sg		**Sg**	**01 11 18.9**	**+0.4**
AKCD	**Akcadag**	**0.58**	**275**	P		**Pg**	**01 11 11.7**	**-0.2**
AKCD				S		**Sb**	**01 11 20.7**	**-0.8**
AKCD				IAML			01 11 22.0	
	comp=N,3μm,0.2s							
AKCD				IAML			01 11 23.0	
	comp=E,2μm,0.2s							
ARPR	**Arapgir-MALATY**	**0.88**	**343**	Pg		**Pg**	**01 11 17.5**	**-0.1**
ARPR				Sg		**Sb**	**01 11 30.5**	**+0.4**
DYBB	**Diyarbakir**	**1.20**	**104**	Pn		**Pb**	**01 11 23.2**	**-0.4**
DYBB				Sn		**Sn**	**01 11 40.1**	**0.0**

ILIC	**ilic-Erzincan**	**1.20**	**357**	Pn		**Pg**	**01 11 23.2**	**-0.5**
KHMN	**Narli-Kahraman**	**1.47**	**235**	Pn		**Pn**	**01 11 27.3**	**+0.1**
ERZN	**Erzincan**	**1.57**	**31**	Pn		**Pb**	**01 11 29.3**	**-0.6**
GAZ	**Gaziantep**	**1.57**	**227**	Pn		**Pn**	**01 11 28.9**	**+0.2**
KMRS	**Kahramanmaras**	**1.58**	**243**	Pn		**Pn**	**01 11 29.1**	**+0.3**
BNGB	**Bingl**	**1.75**	**64**	Pn		**Pn**	**01 11 31.5**	**+0.4**
YEDI	**Yedisu-Bingol**	**1.89**	**50**	Pn		**Pn**	**01 11 33.4**	**+0.2**
SVAN	**Silvan-Diyarba**	**2.00**	**92**	Pn		**Pn**	**01 11 35.2**	**+0.6**
KARO	**Karliova-Bingo**	**2.15**	**60**	Pn		**Pn**	**01 11 37.2**	**+0.5**
BAYT	**Aydıntepe-Bayb**	**2.43**	**28**	Pn		**Pn**	**01 11 41.2**	**+0.6**
GURO	**Guroymak-BITLI**	**2.67**	**82**	Pn		**Pn**	**01 11 44.5**	**+0.7**
BEIL	**Beino**	**4.20**	**209**	*eP*		**Pn**	**01 12 05.5**	**+0.6**
HWQ	**Hawqa**	**4.53**	**210**	*eP*		**Pn**	**01 12 10.3**	**+0.9**
ZAHL	**Zahle**	**4.92**	**208**	*eP*		**Pn**	**01 12 16.4**	**+1.6**
BHL	**Bhannes**	**4.97**	**210**	*eP*		**Pn**	**01 12 16.5**	**+1.0**

*IDC **27** 01:15:49.4±3.3,22.̈95N×144.̈73E,h0km,mb3.7/8, mbtmp3.8/9,ML4.0/1,Error ellipse: s-maj=131.6km s-min=21.0km az=76.0*

ISC 27 01:15:56.0±2.5,23.0̈N±0.0̈2×144.3̈E±0.0̈7,h35km,n12, σ1§12/10,mb3.8/7,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**4.51**	**336**	Pn		**Pn**	**01 17 01.2**	**-0.6**
	7.0nm,0.3s,baz=310,slow=17,SNR=2.1							
JCJ				Sn		**Sn**	**01 17 51.4**	**-1.7**
	9.3nm,0.3s,baz=332,slow=22,SNR=2.2							
	113nm,0.8s							
KSRS	**Korea Array**	**20.14**	**319**	P		**Pn**	**01 20 29.4**	**+0.3**
	0.8nm,0.5s,baz=134,slow=8.9,SNR=4.2							
	0.8nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**21.32**	**95**	T		T	01 42 53.3	
	baz=283,slow=74,SNR=5.3							
H11N2	**WAKE ISLAND Hy**	**21.32**	**94**	T		T	01 42 54.0	
	baz=283,slow=74,SNR=6.0							
H11N3	**WAKE ISLAND Hy**	**21.33**	**94**	T		T	01 42 55.7	
	baz=283,slow=74,SNR=5.5							
SONM	**Songino Array**	**39.01**	**319**	P		**P**	**01 23 20.7**	**+1.4**
	0.3nm,0.6s,baz=131,slow=7.1,SNR=2.2							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**43.75**	**194**	P		**P**	**01 23 57.0**	**-1.3**
	0.6nm,0.6s,baz=17,slow=9.2,SNR=6.5							
	0.6nm,0.6s							
ASAR	**Alice Springs**	**47.45**	**193**	P		**P**	**01 24 26.8**	**-0.8**
	0.2nm,0.3s,baz=14,slow=7.7,SNR=1.8							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**54.58**	**312**	P		**P**	**01 25 21.2**	**+0.3**
	0.6nm,0.7s,baz=90,slow=10.0,SNR=7.6							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**57.28**	**316**	P		**P**	**01 25 40.8**	**+0.7**
	0.6nm,0.4s,baz=95,slow=7.4,SNR=5.2							
	0.6nm,0.4s							
BVAR	**Borovoye Array**	**62.35**	**319**	P		**P**	**01 26 15.9**	**+0.9**
	1.8nm,0.4s,baz=91,slow=7.0,SNR=15							
	1.8nm,0.4s							
FINES	**FINESS Array B**	**82.45**	**335**	P		**P**	**01 28 14.6**	**0.0**
	1.9nm,1.0s,baz=68,slow=9.1,SNR=1.1							
	1.9nm,1.0s							

*IDC **27** 01:25:24.2±0.5,23.̈69S×64.̈74W,h0km,mb4.5/13, mbtmp4.4/20,ML4.0/7,MS4.1/20,Error ellipse: s-maj=20.1km s-min=14.8km az=55.0*
*SJA **27** 01:25:25.6±1.0,23.̈66S×64.̈67W,h14km±7km,ML4.7, MW4.6*
*VAO **27** 01:25:25.8±0.3,23.̈70S×64.̈68W,h10km,mb4.6, Presumed earthquake*
*NEIC **27** 01:25:29.0±1.3,23.̈68S±0.̈06×64.̈63W±0.̈04,h31km±4km, mb5.1/50,Mww4.9/12,Error ellipse: s-maj=9.2km s-min=5.3km az=192.0*
*GCMT **27** 01:25:30.3±0.4,23.̈80S±0.̈03×64.̈51W±0.̈05,h24km±1km, MW4.8/57,Moment Tensor Solution. s29,c32; s57,c76; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.80±.17; $M_{\theta\theta}$-1.42±.11; $M_{\phi\phi}$-0.38±.12; $M_{r\theta}$0.48±.14; $M_{\theta\phi}$-1.10±.08; $M_{\phi r}$0.14±.22; Best double couple: M_o2.02400×10^{16} NP1:ϕ232.00000°,δ38.00000°,λ82.00000°. NP2: ϕ63.00000°,δ52.00000°,λ97.00000°. Principal axes: T 1.8710, Plg81.0000°, Azm5.0000°; N 0.3020, Plg5.0000°, Azm239.0000°; P -2.1760, Plg7.0000°, Azm148.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 01:25:25.9±0.3,23.̈68S±0.̈03×64.̈64W±0.̈04,h10km,n217, σ1§22/217,mb5.0/64,MS4.2/17,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HJA	**Humahuaca**	**0.85**	**303**	*eP*		**Pg**	**01 25 42.2**	**-0.1**
HJA				*i* S		**Sg**	**01 25 54.0**	**+0.5**
HJA				IAML			01 25 58.1	
	comp=Z,26μm,1.3s							
SLA	**San Lorenzo**	**1.31**	**217**	*eP*		**Pn**	**01 25 50.7**	**+0.2**
SLA				*eS*		**Sb**	**01 26 08.5**	**+0.9**
SLA				IAML			01 26 12.7	
	comp=Z,10μm,0.7s							
SALTA		**1.65**	**250**	*eP*		**Pb**	**01 25 56.7**	**0.0**
SALTA				*eS*		**Sg**	**01 26 19.8**	**+0.7**
YJA	**Yavi**	**1.70**	**331**	*eP*		**Pb**	**01 25 57.9**	**+0.4**
YJA				*eS*		**Sg**	**01 26 20.9**	**+0.3**
FSA	**Cafayete**	**2.71**	**206**	*eP*		**Pn**	**01 26 10.8**	**+1.0**
AHML	**Horco Molle**	**3.16**	**191**	*eP*		Pn	01 26 11.1	-4.7
AHML				*eS*		**Sn**	**01 26 48.1**	**-5.5**
AHML				IAML			01 27 10.1	
	comp=Z,3μm,1.1s							
AF01	**San Pedro de A**	**3.33**	**282**	Pn		**Pn**	**01 26 18.9**	**+0.5**
GO02	**Mina Guanaco**	**4.75**	**251**	Pn		**Pn**	**01 26 39.1**	**+1.2**
PB14	**IPOC Station P**	**5.35**	**259**	Pn		**Pn**	**01 26 46.9**	**+0.7**
AC01	**Pan de Azucar**	**5.95**	**244**	Pn		**Pn**	**01 26 53.6**	**-0.4**
AC06	**Mina Casimiro**	**6.33**	**233**			**Pn**	**01 27 00.2**	**+0.8**
GO03	**Copiapo**	**6.38**	**231**			**Pn**	**01 27 00.4**	**+0.3**
CPUP	**Villa Florida**	**7.14**	**113**	Pn		**Pn**	**01 27 10.2**	**-0.2**
	comp=Z,3.1nm,0.3s,baz=293,slow=12,SNR=87							
CPUP				Lg		Lg	01 29 19.2	
	comp=Z,14nm,0.3s,baz=217,slow=18,SNR=2.1							
CPUP				LR		LR	01 30 25.7	
	comp=Z,2μm,20.5s,baz=295,slow=42							
	comp=Z,44nm,0.7s							
CPUP	**Villa Florida**	**7.14**	**113**			**Pn**	**01 27 10.6**	**+0.1**
AC05	**El Transito**	**7.21**	**223**			**Pn**	**01 27 12.4**	**+0.8**
AC04	**Llanos de Chal**	**7.34**	**231**			**Pn**	**01 27 13.4**	**+0.1**
LCO	**Las Campanas**	**7.60**	**224**			**Pn**	**01 27 17.2**	**+0.1**
CO01	**Juntas del Tor**	**7.95**	**217**			**Pn**	**01 27 22.1**	**+0.3**
BDQN	**Bodoquena, MS**	**7.99**	**68**	*eP*		**Pn**	**01 27 23.0**	**+0.8**
LPAZ	**La Paz**	**8.05**	**335**	Pn		**Pn**	**01 27 23.0**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=128,slow=4.9,SNR=23							
	comp=Z,2.5nm,0.4s							
LPAZ	**La Paz**	**8.05**	**335**			**Pn**	**01 27 24.4**	**+0.9**
LPAZ	**La Paz**	**8.05**	**335**	*eP*		**Pn**	**01 27 23.1**	**-0.5**
LPAZ	**La Paz**	**8.05**	**335**	P		**Pn**	**01 27 24.8**	**+1.3**
SIV	**San Ignacio**	**8.35**	**24**	Pn		**Pn**	**01 27 27.7**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=206,slow=14,SNR=79							
SIV				Sn		**Sn**	**01 28 59.0**	**-2.6**
	comp=Z,0.8nm,0.3s,baz=258,slow=15,SNR=3.5							
	comp=Z,19nm,0.5s							
GO04	**Tololo Observa**	**8.49**	**219**	Pn		**Pn**	**01 27 28.9**	**-0.4**
CFA	**Coronel Fontan**	**8.52**	**201**	Pn		**Pn**	**01 27 29.7**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=20,slow=13,SNR=16							
CFA				Lg		Lg	01 29 58.8	
	comp=Z,2.1nm,0.3s,baz=72,slow=10,SNR=3.9							
CFA				LR		LR	01 30 50.6	
	comp=Z,126nm,19.7s,baz=55,slow=38							
	comp=Z,5.5nm,0.5s							
CO05	**La Serena**	**8.57**	**222**	Pn		**Pn**	**01 27 29.9**	**-0.1**
ZON	**Zonda**	**8.62**	**204**			**Pn**	**01 27 31.3**	**+0.5**
AQDB	**Aquidauana**	**8.88**	**71**	Pn		**Pn**	**01 27 34.5**	**+0.2**
AMBA	**Amambai (Brazi**	**8.90**	**87**	*eP*		**Pn**	**01 27 35.0**	**+0.4**
CO03	**El Pedregal**	**8.94**	**216**			**Pn**	**01 27 36.6**	**+1.4**
PSAL	**Palomas, Salto**	**9.66**	**141**	*eP*		**Pn**	**01 27 45.2**	**+0.1**
PTLB	**Pontes e Lacer**	**9.69**	**33**			**Pn**	**01 27 45.0**	**-0.4**
PTLB	**Pontes e Lacer**	**9.69**	**33**	*eP*		**Pn**	**01 27 45.6**	**+0.2**
MT08	**Bocatoma Ro**	**10.82**	**205**			**Pn**	**01 28 00.6**	**-0.5**
PP1B	**Ponte de Pedra**	**10.95**	**58**	*eP*		**Pn**	**01 28 03.1**	**+0.3**
MT16	**CCHEN**	**11.01**	**207**	Pn		**Pn**	**01 28 02.8**	**-0.7**
MT03	**Universidad Ad**	**11.06**	**206**			**Pn**	**01 28 03.7**	**-0.5**
MT05	**Renca**	**11.06**	**208**	Pn		**Pn**	**01 28 05.0**	**+0.7**
TRCB	**Terra Rica**	**11.07**	**88**			**Pn**	**01 28 03.4**	**-1.1**
MT13	**San Alfonso**	**11.19**	**205**			**Pn**	**01 28 06.0**	**0.0**
SALV	**Santo Antonio**	**11.43**	**49**	*eP*		**Pn**	**01 28 08.3**	**-1.0**
VILB	**Vilhena**	**11.46**	**22**			**Pn**	**01 28 09.9**	**+0.1**
VILB	**Vilhena**	**11.46**	**22**	*eP*		**Pn**	**01 28 10.2**	**+0.3**

PTGB	**Pitanga**	**11.52**	**98**	*eP*		**Pn**	**01 28 10.8**	**+0.1**
BO04	**La Punta**	**11.53**	**206**			**Pn**	**01 28 10.7**	**0.0**
ITAB	**Concordia**	**11.84**	**110**			**Pn**	**01 28 15.6**	**+0.7**
ITAB	**Concordia**	**11.84**	**110**	*eP*		**Pn**	**01 28 16.6**	**+1.7**
CPSB	**Cacapava Do Su**	**12.02**	**126**	*eP*		**Pn**	**01 28 16.7**	**-0.6**
C2SB	**Chapadao do Su**	**12.04**	**68**	*eP*		**Pn**	**01 28 17.6**	**-0.1**
LDASE	**Londrina, Braz**	**12.41**	**91**	*eP*		**Pn**	**01 28 21.7**	**-1.1**
PLTB	**Pedras Altas**	**12.66**	**132**			**Pn**	**01 28 26.6**	**+0.5**
PLTB	**Pedras Altas**	**12.66**	**132**	*eP*		**Pn**	**01 28 26.3**	**+0.2**
CNLB	**Canela**	**13.56**	**117**	*eP*		**Pn**	**01 28 38.1**	**-0.3**
FRTB	**Fartura**	**13.84**	**92**	*eP*		**Pn**	**01 28 43.0**	**+0.8**
PDRB	**Porto dos Gac**	**14.16**	**33**	*eP*		**Pn**	**01 28 47.4**	**+0.7**
ARAG	**Araguaiana, MT**	**14.44**	**59**	*eP*		**Pn**	**01 28 51.4**	**+0.8**
TRQA	**Tornquist**	**14.52**	**172**			**Pn**	**01 28 51.8**	**+0.3**
TRQA	**Tornquist**	**14.52**	**172**	*eP*		**Pn**	**01 28 51.6**	**+0.1**
CLDB	**Colider**	**15.27**	**35**	*eP*		**Pn**	**01 29 02.9**	**+1.2**
IPMB	**Ipameri, GO**	**16.36**	**73**	*eP*		**P**	**01 29 17.4**	**-1.4**
NNA	**Nana**	**16.42**	**313**	Pn		**Pn**	**01 29 16.9**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=150,slow=9.5,SNR=18							
	comp=Z,42nm,0.8s							
NNA	**Nana**	**16.42**	**313**	P		**P**	**01 29 18.7**	**-0.8**
NNA	**Nana**	**16.42**	**313**	P		**Pn**	**01 29 15.4**	**-1.3**
	comp=Z,78nm,1.0s							
GO06	**Currarehue**	**16.88**	**198**	Pn		**Pn**	**01 29 21.6**	**-0.9**
SNDB	**Serra Nova Dou**	**17.21**	**50**	*eP*		**P**	**01 29 28.5**	**+0.3**
BDFB	**Brasilia**	**17.57**	**66**	P		**P**	**01 29 33.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=241,slow=7.2,SNR=3.2							
BDFB				LR		LR	01 36 45.7	
	comp=Z,582nm,21.4s,baz=222,slow=39							
	comp=Z,0.9nm,0.4s							
BDFB	**Brasilia**	**17.57**	**66**			**Pn**	**01 29 30.9**	**-0.3**
LR05	**Currie**	**17.64**	**199**			**Pn**	**01 29 31.2**	**-0.5**
PLCA	**Paso Flores**	**17.72**	**195**	P		**Pn**	**01 29 33.0**	**+0.2**
	baz=57,slow=6.0,SNR=3.3							
	comp=Z,1.1nm,0.8s							
PLCA	**Paso Flores**	**17.72**	**195**	*eP*		**Pn**	**01 29 32.8**	**0.0**
NPGB	**Novo Progresso**	**18.79**	**30**	*eP*		**Pn**	**01 29 46.4**	**+0.4**
TEFE	**Tefe**	**20.05**	**0**	*eP*		**P**	**01 29 58.6**	**-0.8**
DIAM	**Diamantina, MG**	**20.29**	**79**	*eP*		**P**	**01 30 03.0**	**+0.9**
LL02	**Futaleuf**	**20.36**	**195**	P		**P**	**01 30 02.4**	**-0.1**
MACA	**Manacapuru-AM**	**20.75**	**11**	P		**P**	**01 30 06.6**	**-0.3**
MACA				IAmb		IAmb	01 30 23.8	
	comp=Z,43nm,0.7s							
MACA	**Manacapuru-AM**	**20.75**	**11**	*eP*		**P**	**01 30 07.8**	**+0.9**
GO07	**Milladeo Hill,**	**20.78**	**199**	P		**P**	**01 30 06.9**	**-0.1**
GO07				IAmb		IAmb	01 30 09.4	
	comp=Z,81nm,0.6s							
JANB	**Januaria**	**20.98**	**70**	*eP*		**P**	**01 30 10.3**	**+0.6**
ITTB	**Itatiuba**	**21.03**	**25**	*eP*		**P**	**01 30 10.9**	**+0.9**
ATAH	**Atahualpa**	**21.09**	**319**	P		**P**	**01 30 10.6**	**-0.5**
	comp=Z,13nm,0.9s,baz=162,slow=7.4,SNR=11							
ATAH				LR		LR	01 39 56.8	
	comp=Z,411nm,19.5s,baz=155,slow=42							
	comp=Z,13nm,0.9s							
AY01	**Puyuhuapi**	**21.71**	**196**	P		**P**	**01 30 17.0**	**-0.1**
SDBA	**SAO DESIDERIO**	**21.82**	**63**	*eP*		**P**	**01 30 19.7**	**+1.1**
SMTB	**Santa Maria do**	**21.98**	**51**	*eP*		**P**	**01

CHIV Chivirico 44.88 344 P P 01 33 40.2 -0.5
CHIV IAmb IAmb 01 33 43.4
comp=Z,24nm,1.1s
MTO3 Montecristo 44.90 325 P P 01 33 40.2 -1.1
MTO3 IAmb IAmb 01 33 47.2
comp=Z,19nm,0.9s
RTAL Retalhuleu 46.27 322 P P 01 33 51.7 -0.1
PETF Flores 47.28 326 P P 01 34 00.0 +0.3
PETF IAmb IAmb 01 34 05.6
comp=Z,42nm,1.0s
NHSC New Hope 58.38 345 P P 01 35 21.9 +0.4
SNAA Sanae 58.95 161 P P 01 35 26.0 +0.9
SNAA IAmb IAmb 01 35 31.2
comp=Z,16nm,1.4s
ZAIG Zacatecas 59.08 319 P P 01 35 26.3 -0.7
ZAIG IAmb IAmb 01 35 33.7
comp=Z,12nm,1.1s
152A Waverly Hall 59.22 340 P P 01 35 29.0 +1.6
LRAL Lakeview Retre 60.29 338 P P 01 35 33.7 -1.0
LRAL IAmb IAmb 01 35 34.5
comp=Z,37nm,1.4s
KMSC Kings Mountain 60.60 344 P P 01 35 37.1 +0.3
KMSC IAmb IAmb 01 35 41.8
comp=Z,20nm,1.0s
146A Union 60.66 336 P P 01 35 36.6 -0.6
Z47A Carrollton 60.81 338 P P 01 35 39.0 +0.8
Z47A IAmb IAmb 01 35 43.1
comp=Z,36nm,1.1s
VBMS Vicksburg 60.84 335 P P 01 35 38.3 -0.1
Y49A Blount Mountai 60.85 339 P P 01 35 37.5 -1.1
Y49A IAmb IAmb 01 35 43.2
comp=Z,16nm,1.0s
BG3 Lake Jocassee 60.87 343 P P 01 35 38.1 -0.6
BG3 IAmb IAmb 01 35 43.7
comp=Z,33nm,1.2s
X51A Calhoun 61.02 341 P P 01 35 40.0 +0.3
V55A Taylorsville 61.25 345 P P 01 35 41.1 -0.1
V55A IAmb IAmb 01 35 47.0
comp=Z,35nm,1.1s
EF02 Christine 61.52 326 P P 01 35 43.0 -0.2
EF02 IAmb IAmb 01 35 49.0
comp=Z,66nm,1.1s
833A Chaparral WMA, 61.60 325 P P 01 35 43.5 -0.2
X48A Hartselle 61.60 339 P P 01 35 42.8 -0.8
TKL Tuckaleechee C 61.73 342 P P 01 35 43.5 -0.9
TKL IAmb IAmb 01 35 49.4
comp=Z,24nm,0.9s
WVT Waverly 63.39 339 P P 01 35 54.5 -1.1
WVT Waverly 63.39 339 P P 01 35 54.2 -1.4
WVT pP sP 01 36 04.0 +3.7
WHTX Lake Whitney, 63.63 329 P P 01 35 57.0 -0.2
WHTX IAmb IAmb 01 36 03.0
comp=Z,29nm,1.2s
TXAR Lajitas Array 64.71 323 P P 01 36 03.4 -1.1
comp=Z,0.7nm,0.7s,baz=143,slow=8.7,SNR=10
comp=Z,0.7nm,0.7s
TXAR Lajitas Array 64.71 323 P P 01 36 03.9 -0.6
DBIC Dimbokro 65.65 70 P P 01 36 11.8 +0.9
comp=Z,13nm,1.2s,baz=249,slow=6.1,SNR=3.2
DBIC LR LR 02 03 30.6
comp=Z,317nm,19.1s,baz=236,slow=35
comp=Z,13nm,1.2s
DBIC Dimbokro 65.65 70 P 01 36 10.3 -0.6
DBIC IAmb IAmb 01 36 17.5
comp=Z,18nm,1.0s
CCM Cathedral Cave 66.30 337 P P 01 36 13.0 -1.5
CCM pP sP 01 36 22.6 +3.3
CCM x x 01 36 24.6
QSPA South Pole Qui 66.53 180 P P 01 36 16.0 +0.1
comp=Z,6.2nm,0.8s,baz=151,slow=3.9,SNR=7.3
comp=Z,6.2nm,0.8s
QSPA South Pole Qui 66.53 180 P 01 36 16.0 +0.1
QSPA IAmb IAmb 01 36 22.4
comp=Z,16nm,1.0s
QSPA South Pole Qui 66.53 180 P P 01 36 16.5 +0.6
QSPA pP sP 01 36 26.1 +5.6
SADO Sadowa 69.39 349 LR LR 02 09 09.6
comp=Z,53nm,20.9s,baz=146,slow=38
ANMO Albuquerque 70.51 324 LR LR 02 10 07.9
comp=Z,60nm,19.9s,baz=155,slow=38
ANMO Albuquerque 70.51 324 P P 01 36 41.6 +0.4
SUR Sutherland 74.08 119 LR LR 02 06 54.1
comp=Z,254nm,19.1s,baz=212,slow=34
TORD Torodi Ar. Bea 74.44 68 P P 01 37 04.8 -0.1
comp=Z,3.7nm,0.9s,baz=241,slow=7.1,SNR=38
TORD LR LR 02 09 58.7
comp=Z,253nm,18.1s,baz=171,slow=36
comp=Z,3.7nm,0.9s
TORD Torodi Ar. Bea 74.44 68 P P 01 37 04.9 +0.1
TORD IAmb IAmb 01 37 11.6
comp=Z,13nm,0.9s
RSSD Black Hills 76.51 332 P P 01 37 17.0 +0.7
RSSD PcP PcP 01 37 28.4 +0.5
PDAR Pinedale Array 78.00 328 P P 01 37 24.6 -0.2
comp=Z,2.7nm,0.6s,baz=126,slow=8.0,SNR=48
comp=Z,2.7nm,0.6s
PDAR Pinedale Array 78.00 328 P P 01 37 24.7 0.0
ULM Lac du Bonnet 78.63 340 P P 01 37 26.4 -1.4
comp=Z,2.7nm,0.6s,baz=159,slow=6.6,SNR=5.6
ULM LR LR 02 14 06.4
comp=Z,93nm,20.9s,baz=160,slow=37
comp=Z,2.7nm,0.6s
ULM Lac du Bonnet 78.63 340 P P 01 37 27.2 -0.6
BOSA Boshof 78.95 116 P P 01 37 30.2 -0.2
comp=Z,4.6nm,1.0s,baz=232,slow=6.8,SNR=4.4
BOSA LR LR 02 12 01.9
comp=Z,136nm,18.0s,baz=207,slow=35
comp=Z,4.6nm,1.0s
BOSA Boshof 78.95 116 P P 01 37 28.8 -1.6
BOSA IAmb IAmb 01 37 37.5
comp=Z,43nm,2.0s
NVAR Mina Array Bea 79.66 320 P P 01 37 34.5 +0.5
comp=Z,1.8nm,0.9s,baz=152,slow=6.8,SNR=8.7
comp=Z,1.8nm,0.9s
LBTB Lobatse 80.53 113 LR LR 02 09 24.1
comp=Z,186nm,20.0s,baz=220,slow=33
MAW Mawson 81.09 162 LR LR 02 11 24.9
comp=Z,160nm,21.0s,baz=243,slow=34
ESDC Sonseca Array 84.68 43 P P 01 38 00.8 +0.8
comp=Z,4.1nm,1.1s,baz=259,slow=4.5,SNR=5.5
comp=Z,4.1nm,1.1s
NEW Newport 85.64 328 LR LR 02 23 00.4
comp=Z,54nm,18.2s,baz=135,slow=40
KEST Kesra 91.51 51 P P 01 38 34.4 +1.5
comp=Z,2.9nm,0.9s,baz=329,slow=4.4,SNR=3.8
comp=Z,2.9nm,0.9s
KEST Kesra 91.51 51 P P 01 38 33.2 +0.2
YKA Yellowknife Ar 94.58 339 P P 01 38 46.3 0.0
comp=Z,2.1nm,0.9s,baz=128,slow=3.8,SNR=16
comp=Z,2.1nm,0.9s
YKA Yellowknife Ar 94.58 339 P P 01 38 46.0 -0.3
MBAR Mbarara 94.69 93 LR LR 02 20 49.4
comp=Z,140nm,18.6s,baz=230,slow=35
VAE Valguarnera 95.93 52 LR LR 02 24 47.8
comp=Z,192nm,18.5s,baz=338,slow=37
DLBC Dease Lake 97.98 331 LR LR 02 28 39.4
comp=Z,68nm,19.4s,baz=112,slow=39
ASAR Alice Springs 129.61 202 PKP PKPdf 01 44 34.5 -1.5
comp=Z,0.8nm,0.9s,baz=154,slow=2.4,SNR=4.4
ASAR Alice Springs 129.61 202 PKPdf 01 44 35.1 -1.0
WRA Warramunga Arr 132.86 205 PKP PKPdf 01 44 41.5 -0.7
comp=Z,0.4nm,0.6s,baz=167,slow=1.5,SNR=6.8
WRA Warramunga Arr 132.86 205 PKPdf 01 44 41.9 -0.3
KURBB Kurchatov Arra 140.83 37 PKP PKPdf 01 44 56.0 +0.1
comp=Z,0.3nm,0.3s,baz=307,slow=2.4,SNR=6.8
KURK Kurchatov 140.83 37 PKPdf 01 44 55.8 -0.1
ZALV Zalesovo Beam 142.07 29 PKP PKPdf 01 44 57.8 -0.2
comp=Z,2.4nm,0.8s,baz=318,slow=2.0,SNR=6.5
ZALV Zalesovo Beam 142.07 29 PKPdf 01 44 56.9 -1.1
KSH2 Kashi 143.02 56 PKP PKPdf 01 45 02.0 +1.6
MKAR Makanchi Array 144.88 41 PKP PKPab 01 45 02.1 -0.3
comp=Z,6.6nm,0.9s,baz=307,slow=3.4,SNR=32
MKAR Makanchi Array 144.88 41 PKPab 01 45 02.4 +0.1
KLR Kul'dur 151.42 337 PKPbc PKPbc 01 45 18.3 -1.6
comp=Z,3.5nm,0.8s,baz=339,slow=3.9,SNR=8.6
HEH HeiHe 151.85 343 *e*P PKPbc 01 45 21.0 +0.2
HEH pmax pmax
comp=Z,5.0nm,0.8s
HILR Hailar Array B 153.94 353 PKPbc PKPbc 01 45 25.5 -0.1
comp=Z,4.4nm,1.0s,baz=318,slow=1.9,SNR=1.6
HILR PKPab PKPab 01 45 38.6 -0.1
comp=Z,3.5nm,0.7s,baz=22,slow=4.8,SNR=4.9
SONM Songino Array 154.85 14 PKP PKPdf 01 45 19.5 +0.4
comp=Z,1.6nm,0.9s,baz=300,slow=1.6,SNR=7.3
SONM PKPbc sPKPdf 01 45 25.4 +1.6
comp=Z,1.7nm,0.8s,baz=315,slow=0.8,SNR=7.0
SONM PKPab PKPab 01 45 43.5 +0.7
comp=Z,1.5nm,0.9s,baz=319,slow=2.6,SNR=5.1
SONM Songino Array 154.85 14 PKPdf 01 45 19.0 -0.1
KSRS Korea Array 162.54 325 PKPab PKPab 01 46 16.9 +0.7
comp=Z,0.8nm,0.4s,baz=66,slow=3.2,SNR=6.1
CMAR Chiang Mai Arr 163.82 106 PKPab PKPab 01 46 23.9 +1.4
comp=Z,0.8nm,0.3s,baz=248,slow=4.1,SNR=6.6
CMAR Chiang Mai Arr 163.82 106 PKPab 01 46 22.0 -0.6

OSPL ***27*** *01:26:51.6±1.4, 19.°79N×70.°37W, h16^{km}±8^{km}, ML2.2, Presumed earthquake*
SDD ***27*** *01:26:55.2±2.6, 19.°64N×70.°64W, h20^{km}±11^{km}, MD3.5, ML2.4, MW3.1, Presumed earthquake*
ISC 27 01:26:54.2±0.9**, 19.°64N**±0.°04×**70.°56W**±0.°03**, h17**^{km}±6^{km}**, n19, σ1.^{s}23**/33**, 23C-3D, Dominican Republic region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SODR Sosua Marina B 0.11 351⇑*e*Pg Pg 01 26 57.9 0.0
SODR ⇓*e*Sg Sg 01 27 02.2 +1.8
SODR IAML 01 27 03.0
comp=N,1μm,0.4s
SC01 Santiago de lo 0.27 217⇓*e*Pg Pg 01 26 59.9 -0.2
SC01 ⇑*e*Sg Sg 01 27 03.5 -0.7
SC01 IAML 01 27 07.8
comp=N,208nm,0.2s
SC01 Santiago de lo 0.27 217 *i* P Pg 01 27 00.1 0.0
SC01 *e*S Sb 01 27 07.7 +3.0
SC01 IAML 01 27 09.4
comp=Z,165nm,0.3s
LUDR Luperon 0.45 304⇑*e*Pg Pg 01 27 02.4 -0.9
LUDR ⇑*e*Sg Sb 01 27 10.1 +0.1
SFDR San Fco. de Ma 0.46 140⇑*e*Pg Pb 01 27 03.8 -0.1
SFDR ⇑*e*Sg Sn 01 27 13.7 -0.1
SFDR IAML 01 27 14.2
comp=N,566nm,0.3s
MADR Mao Valverde 0.52 262⇑*e*Sg Sg 01 27 11.2 -0.3
MADR IAML 01 27 18.5
comp=N,315nm,0.3s
LOPP1 Punta Rusia, P 0.64 289 *i* P Pb 01 27 06.2 -0.6
LOPP1 *e*S Sb 01 27 15.4 -0.1
LOPP1 IAML 01 27 22.3
comp=Z,108nm,1.6s
NADR Nagua 0.72 113⇑*e*Pg Pn 01 27 09.0 -0.5
NADR IAML 01 27 25.2
comp=N,225nm,0.2s
ABDR Alto Bandera 0.83 185⇑*e*Pg Pb 01 27 09.0 -1.2
ABDR ⇑*e*Sg Sb 01 27 21.8 +0.6
ABDR IAML 01 28 03.0
comp=N,0.2nm,0.5s
DR08 Loma La Naviza 0.84 143⇑*e*Pg Pn 01 27 11.2 -0.1
DR08 ⇑*e*Sg Sn 01 27 24.2 +0.9
DR08 IAML 01 27 24.7
comp=N,748nm,0.2s
REDR Restauracion 0.92 239⇑*e*Pg Pg 01 27 13.3 +1.3
REDR ⇑*e*Sg Sn 01 27 28.4 +3.3
REDR IAML 01 27 29.2
comp=N,267nm,0.1s
SDDR Presa de Saban 0.95 227⇑*e*Pg Pb 01 27 09.8 -2.5
SDDR ⇑*e*Sg Sb 01 27 22.4 -2.1
SDDR IAML 01 27 31.9
comp=N,28nm,0.3s
SDDR Presa de Saban 0.95 227 *i* P Pb 01 27 11.1 -1.1
SDDR IAML 01 27 27.2
comp=Z,27nm,0.6s
BANI BANI 1.25 171⇑*e*Pg Pn 01 27 17.4 +0.3
BANI IAML 01 27 38.4
comp=N,135nm,0.5s
LONE3 El Aguacate, B 1.34 220 *i* P Pn 01 27 17.8 -0.4
LONE3 *e*S Sn 01 27 36.2 +0.6
LONE3 IAML 01 27 36.5
comp=Z,50nm,0.5s
HATOM Hato Mayor del 1.40 127⇑*e*Pg Pb 01 27 19.7 -0.1
HATOM ⇓*e*Sg Sg 01 27 39.2 -0.2
HATOM IAML 01 27 43.4
comp=N,27nm,0.2s
PODR Polo 1.62 205⇑*e*Pg Pn 01 27 22.5 +0.5
PODR ⇑*e*Sg Sn 01 27 42.5 -0.1
PODR IAML 01 27 49.2
comp=N,92nm,1.6s
JIDR Jimani 1.67 227⇑*e*Pg Pn 01 27 22.8 +0.1
JIDR IAML 01 27 47.5
comp=N,117nm,0.5s
HIDR Higuey Centro 2.03 121⇑*e*Pg Pb 01 27 29.8 -0.8
HIDR ⇑*e*Sg Sg 01 27 58.4 -1.2
HIDR IAML 01 27 59.6
comp=N,89nm,0.3s

VAO ***27*** *01:36:51.9±1.6, 29.°84S×71.°62W, h45^{km}±9^{km}, mb5.0, Presumed earthquake*
SJA ***27*** *01:36:59.1±1.2, 29.°56S×71.°20W, h68^{km}±8^{km}, ML4.7, MW4.8*
GUC ***27*** *01:37:00.6±0.8, 29.°51S×71.°03W, h67^{km}±5^{km}, ML4.9*
NEIC ***27*** *01:37:00.8±1.5, 29.°53S±0.°04×71.°16W±0.°03, h75^{km}±3^{km}, mb4.9/274, Mwr4.8/55, Mwr4.9(GUC), Error ellipse: s-maj=6.5km s-min=2.0km az=142.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.68; $M_{\theta\theta}$1.36; $M_{\phi\phi}$-0.68; $M_{r\theta}$-0.73; $M_{\theta\phi}$-0.64; $M_{\phi r}$1.21; Fault plane solution: $M_0$1.95000×10^{16} NP1:ϕ_s141.58000°, δ77.24000°, λ-53.88000°. NP2:ϕ_s248.42000°, δ38.01000°, λ-158.99000°. Principal axes: T 2.0001, Plg24.0000°, Azm205.0000°; N -0.1072, Plg35.0000°, Azm312.0000°; P -1.8929, Plg45.0000°, Azm88.0000°;*
NEIC ***27*** *01:37:00, 29.°49S×71.°27W, h83^{km}*
IDC ***27*** *01:37:01.1±0.6, 29.°52S×71.°00W, h80^{km}±4^{km}, mb4.4/14, mbtmp4.6/18, MS3.6/10, Error ellipse: s-maj=18.5km s-min=8.9km az=51.0*
GCMT ***27*** *01:37:02.8±0.4, 29.°55S±0.°02×71.°24W±0.°04, h92^{km}±5^{km}, MW4.8/83, Moment Tensor Solution. s21,c22; s83,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.26±.13; $M_{\theta\theta}$0.20±.17; $M_{\phi\phi}$1.07±.20; $M_{r\theta}$-1.18±.06; $M_{\theta\phi}$-1.54±.15; $M_{\phi r}$1.06±.09; Best double couple: $M_0$2.38300×10^{16} NP1:ϕ_s346.00000°, δ27.00000°, λ-57.00000°. NP2: ϕ_s129.00000°, δ67.00000°, λ-106.00000°. Principal axes: T 2.8310, Plg21.0000°, Azm231.0000°; N -0.8870, Plg15.0000°, Azm135.0000°; P -1.9360, Plg64.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 01:37:00.2±0.3**, 29.°52S**±0.°03×**71.°17W**±0.°04**, h77**^{km}±2^{km}**, h77**^{km}**:pP-P, n359, σ1.^{s}37**/281**, mb4.9**/144**, 12C-2D, Near coast of central Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CO05 La Serena 0.40 189 Pn Pn 01 37 13.4 +0.5
CO05 Sn Sn 01 37 22.8 +0.5
CO05 La Serena 0.40 189⇓*i*P Pn 01 37 13.4 +0.5
CO05 *i* S Sn 01 37 22.8 +0.5
CO05 IAML 01 37 23.3
comp=E,38μm,0.2s
LCO Las Campanas 0.65 39 Pn 01 37 15.8 +0.4
LCO Sn Sn 01 37 26.7 0.0
LCO Las Campanas 0.65 39 *e*P Pn 01 37 14.9 -0.5
LCO *i* S Sn 01 37 26.7 0.0
LCO IAML 01 37 27.8
comp=E,234μm,0.2s
LCO Las Campanas 0.65 39 *i* P Pn 01 37 15.6 +0.1
LCO *i* S Sn 01 37 26.5 -0.2
LCO IAML 01 37 28.2
comp=Z,77μm,0.5s
GO04 Tololo Observa 0.73 154 Pn 01 37 16.5 +0.3
GO04 Sn Sn 01 37 28.3 +0.2
GO04 Tololo Observa 0.73 154⇓*i*P Pn 01 37 16.7 +0.5
GO04 *e*S Sn 01 37 28.8 +0.7
GO04 IAML 01 37 30.6
comp=N,235μm,0.3s
AC05 El Transito 1.04 49 Pn 01 37 20.6 +0.9
CO01 Juntas del Tor 1.04 116 Pn 01 37 20.4 +0.5
CO01 Sn Sn 01 37 34.7 +0.3
CO01 Juntas del Tor 1.04 116⇑*i*P Pn 01 37 20.4 +0.5
CO01 *e*S Sn 01 37 34.8 +0.3
CO01 Juntas del Tor 1.04 116 *i* P Pn 01 37 19.9 +0.1
CO01 *i* S Sn 01 37 34.5 0.0
CO01 IAML 01 37 37.9
comp=Z,6μm,0.1s
CO06 Fray Jorge 1.22 199 Pn 01 37 22.3 +0.4
CO06 Sn Sn 01 37 38.3 +0.2
CO06 Fray Jorge 1.22 199⇑*i*P Pn 01 37 22.3 +0.4
CO06 *i* S Sn 01 37 38.5 +0.4
CO06 IAML 01 37 39.9
comp=N,19μm,0.3s
AC04 Llanos de Chal 1.31 4 Pn 01 37 23.8 +0.8
AC04 Llanos de Chal 1.31 4⇑*i*P Pn 01 37 24.0 +1.0
AC04 IAML 01 37 43.5
comp=E,26μm,0.5s
AC04 Llanos de Chal 1.31 4 *i* P Pn 01 37 23.9 +0.8
AC04 *i* S Sn 01 37 40.6 +0.5
AC04 IAML 01 37 42.5
comp=Z,15μm,0.5s
CO03 El Pedregal 1.38 163 Pn Pn 01 37 24.5 +0.5
CO03 El Pedregal 1.38 163⇑*i*P Pn 01 37 24.4 +0.5
CO03 IAML 01 37 43.5
comp=N,33μm,0.2s
CO03 El Pedregal 1.38 163 *i* S Sn 01 37 40.9 -0.9
CO03 IAML 01 37 43.6
comp=Z,16μm,0.3s
CO02 Combarbal 1.69 175 Pn 01 37 28.2 +0.2
CO02 Combarbal 1.69 175⇑*i*P Pn 01 37 28.3 +0.3
CO02 *e*S Sn 01 37 49.8 +0.8
CO02 IAML 01 37 51.1
comp=N,44μm,0.2s
ACDV Cuesta del Vie 1.90 111 *i* P Pn 01 37 32.1 +1.3
ACDV *i* S Sn 01 37 55.9 +1.9
ACDV IAML 01 37 58.8
comp=Z,4μm,0.5s
GO03 Copiapo 2.09 23 Pn 01 37 33.5 +0.2
GO03 Copiapo 2.09 23⇑*i*P Pn 01 37 33.4 +0.2
GO03 *i* S Sn 01 37 58.6 +0.2
GO03 IAML 01 38 00.2
comp=N,15μm,0.5s
ACCO Cerro Coronel 2.11 121 *i* P Pn 01 37 34.8 +0.9
AC06 Mina Casimiro 2.27 19 Pn 01 37 35.8 +0.1
AC06 Mina Casimiro 2.27 19⇑*i*P Pn 01 37 35.8 +0.1
AC06 IAML 01 38 06.8
comp=N,7μm,0.4s
CO04 Los Peladeros 2.52 176 Pn 01 37 39.8 +0.5
VCA Vinchina 2.71 74⇑*e*P Pn 01 37 45.0 +3.3
VCA Vinchina 2.71 74 *i* P Pn 01 37 45.4 +3.7
VCA IAML 01 38 23.4
comp=Z,8μm,0.6s
RTLS Leoncito 2.79 145 *i* P Pn 01 37 45.8 +2.9
RTLS IAML 01 38 46.6
comp=Z,3μm,1.4s
ZON Zonda 2.95 134 Pn 01 37 46.7 +1.8
VA06 Catapilco 3.04 182 Pn 01 37 45.9 0.0
VA06 Catapilco 3.04 182⇑*e*P Pn 01 37 46.0 0.0
AC02 Maricunga 3.22 34 Pn 01 37 49.5 +0.5
AC02 Maricunga 3.22 34⇑*e*P Pn 01 37 49.6 +0.6
CFA Coronel Fontan 3.27 130 P Pn 01 37 50.3 +1.0
comp=Z,65nm,0.3s,baz=350,slow=11,SNR=252
CFA S Sn 01 38 26.6 -0.6
comp=Z,169nm,0.2s,baz=53,slow=21,SNR=12
VA03 San Esteban 3.28 171 Pn 01 37 50.0 +0.6
VA03 San Esteban 3.28 171⇑*e*P Pn 01 37 50.2 +0.8
VA03 IAML 01 38 34.4
comp=E,3μm,0.2s
AC01 Pan de Azucar 3.40 9 Pn 01 37 49.5 -1.4
AC01 Pan de Azucar 3.40 9⇑*e*P Pn 01 37 49.5 -1.4
AC01 IAML 01 38 46.8
comp=E,2μm,0.4s
AVFE Valle Fertil 3.41 110 *i* P Pn 01 37 52.5 +1.3
AVFE *i* S Sn 01 38 31.3 +0.7
AVFE IAML 01 38 32.3
comp=Z,1μm,0.4s
VA01 Torpederas 3.52 187 Pn 01 37 51.6 -0.9
VA01 Torpederas 3.52 187 *i* P Pn 01 37 51.3 -1.2
VA01 IAML 01 38 44.8
comp=Z,671nm,0.3s
PEL Peldehue 3.64 174 Pn 01 37 54.6 +0.4
MT02 Curacav 3.73 180 Pn 01 37 54.8 -0.6
MT05 Renca 3.88 175 Pn 01 37 57.8 +0.3
MT16 CCHEN 3.94 172 Pn 01 37 58.8 +0.5
MT03 Universidad Ad 4.00 172 Pn 01 37 59.6 +0.4
MT08 Bocatoma Ro 4.04 166 Pn 01 38 01.6 +1.8
MT09 Talagante 4.25 178 Pn 01 38 02.5 -0.1
MT13 San Alfonso 4.28 170 Pn 01 38 03.9 +0.8
MT01 Popeta 4.33 181 Pn 01 38 03.0 -0.7
BO04 La Punta 4.48 174 Pn 01 38 05.4 -0.3
H03N1 Juan Fernandez 7.68 237 T T 01 46 33.4
baz=64,slow=72,SNR=126
H03N2 Juan Fernandez 7.70 238 T T 01 46 48.5
baz=64,slow=72,SNR=109
H03N3 Juan Fernandez 7.70 237 T T 01 46 33.9
baz=64,slow=72,SNR=150
VA04 Juan Fernndez 7.72 236 Pn 01 38 48.5 -1.4
GO06 Curarrehue 10.04 181 Pn 01 39 19.8 -1.9
LR04 Corral 10.50 190 Pn 01 39 24.3 -3.5
LR05 Currie 10.71 183 Pn 01 39 28.3 -2.3
PB12 IPOC Station P 10.88 4 Pn 01 39 28.1 -5.1
PLCA Paso Flores 11.20 178 P Pn 01 39 36.4 -1.0
comp=Z,1.4nm,0.3s,baz=348,slow=12,SNR=51
PB16 IPOC Station P 11.24 8 Pn 01 39 34.3 -4.1
TRQA Tornquist 11.44 141 Pn 01 39 39.6 -1.0
PSAL Palomas, Salto 11.82 101 *e*P Pn 01 39 42.3 -3.6
PB18 Visviri 11.97 8 Pn 01 39 46.4 -2.1
CPUP Villa Florida 12.64 79 P Pn 01 39 53.9 -3.1
comp=Z,5.1nm,0.9s,baz=50,slow=17,SNR=3.2
CPUP LR LR 01 45 25.7
comp=Z,232nm,19.9s,baz=256,slow=40
LPAZ La Paz 13.46 13 P Pn 01 40 08.4 -0.2
comp=Z,68nm,0.6s,baz=188,slow=7.3,SNR=131
LPAZ LR LR 01 45 31.8
comp=Z,295nm,21.3s,baz=176,slow=38
LPAZ La Paz 13.46 13 Pn Pn 01 40 05.2 -3.4
LPAZ La Paz 13.46 13 *e*P Pn 01 40 05.3 -3.2
AMBA Amambai (Brazi 15.93 69 *e*P Pn 01 40 39.9 +0.2
COYC Coyhaique 16.04 182 P Pn 01 40 41.3 +0.3
SIV San Ignacio 16.36 37 P Pn 01 40 41.6 -3.5
comp=Z,39nm,0.8s,baz=214,slow=9.6,SNR=35
AQDB Aquidauana 16.65 61 P Pn 01 40 47.2 -1.5
ITAB Concordia 16.91 87 P Pn 01 40 51.5 -0.4
ITAB Concordia 16.91 87 *e*P Pn 01 40 50.9 -1.0
PTGB Pitanga 17.66 79 *e*P P 01 40 59.5 -1.8
AY03 Cochrane 17.74 183 P P 01 40 59.6 -2.1
PTLB Pontes e Lacer 17.86 41 P P 01 41 02.3 -1.0
PTLB Pontes e Lacer 17.86 41 *e*P Pn 01 41 03.6 0.0
TRCB Terra Rica 17.93 72 P P 01 41 02.1 -2.0
LDASE Londrina, Braz 18.95 76 *e*P P 01 41 14.4 -0.9
PP1B Ponte de Pedra 19.04 55 *e*P P 01 41 15.2 -1.1
VILB Vilhena 19.37 34 P P 01 41 18.5 -1.4
VILB Vilhena 19.37 34 *e*P P 01 41 19.6 -0.3
SALV Santo Antonio 19.65 50 *e*P P 01 41 22.3 -0.7
C2SB Chapadao do Su 19.83 61 *e*P P 01 41 25.1 +0.3
FRTB Fartura 20.29 77 *e*P P 01 41 28.0 -1.9
ITRB Iturama 21.26 67 *e*P P 01 41 39.0 -1.3
SPB Sao Paulo 22.02 80 P P 01 41 47.1 -1.2
SPB IAmb IAmb 01 41 50.5
comp=Z,74nm,1.1s
SPB Sao Paulo 22.02 80 *e*P P 01 41 48.4 0.0
BB19B Bebedouro 22.11 73 *e*P P 01 41 47.3 -2.1
PDRB Porto dos Gac 22.32 40 *e*P P 01 41 49.1 -2.5
ARAG Araguaiana, MT 22.50 57 *e*P P 01 41 53.4 -0.2
ATAH Atahualpa 23.28 342 P P 01 42 03.4 +1.5
comp=Z,7.8nm,0.8s,baz=163,slow=8.4,SNR=4.0
ATAH LR LR 01 51 28.3
comp=Z,70nm,18.0s,baz=186,slow=37
comp=Z,7.8nm,0.8s
CLDB Colider 23.45 41 *e*P P 01 42 01.6 -1.3
PARB Paraibuna 23.66 81 *e*P P 01 42 02.7 -2.3
IPMB Ipameri, GO 23.90 66 *e*P P 01 42 05.9 -1.1
PMNB Patos De Minas 25.04 70 *e*P P 01 42 16.4 -1.1
BDFB Brasilia 25.39 62 P P 01 42 19.4 -1.3
comp=Z,21nm,0.7s,baz=235,slow=8.5,SNR=23
BDFB LR LR 01 52 48.4
comp=Z,150nm,21.0s,baz=216,slow=38
comp=Z,21nm,0.7s
BDFB Brasilia 25.39 62 P 01 42 18.5 -2.1
BDFB IAmb IAmb 01 42 20.8
comp=Z,27nm,0.8s
SNDB Serra Nova Dou 25.43 51 *e*P P 01 42 19.7 -1.2
MCRA Macar, Loja 26.36 340 P P 01 42 30.1 +0.8
comp=Z,15nm,1.1s
TEFE Tefe 26.60 15 *e*P P 01 42 29.8 -1.6
NPGB Novo Progresso 26.86 37 *e*P P 01 42 32.3 -1.5
DIAM Diamantina, MG 27.44 72 *e*P P 01 42 38.8 -0.4
JANB Januaria 28.62 66 *e*P P 01 42 47.8 -1.8
ITTB Itaituba 28.97 33 *e*P P 01 42 51.4 -1.2
SJMB Sao Joao De Ma 29.33 75 *e*P P 01 42 54.5 -1.3
SDBA SAO DESIDERIO 29.74 61 *e*P P 01 42 58.5 -1.0

CASC Dorado de Casc 30.07 348 P P 01 43 05.1 +2.6
comp=Z,35nm,1.4s
OTAV Otavalo 30.40 345 P 01 43 06.5 +0.8
OTAV Otavalo 30.40 345 eP P 01 43 02.3 -3.4
OTAV Otavalo 30.40 345 P P 01 43 08.1 +2.4
comp=Z,11nm,1.4s
CMBC Cumbal 30.95 347 P P 01 43 14.2 +3.6
comp=Z,29µmcomp=Z,25nm,0.5s
GCUF Volcan Galeras 31.14 348 P P 01 43 15.8 +3.5
comp=Z,14nm,0.9s
FLOC Florencia 31.22 351 P P 01 43 14.8 +2.3
comp=Z,11nm,1.1s
CRUC La Cruz 31.40 349 P P 01 43 17.8 +3.3
GUA01 Guaratinga, BA 31.49 73 eP P 01 43 13.9 -0.9
BBAC Balboa, Cauca 31.90 348 P P 01 43 20.9 +2.3
comp=Z,28nm,1.2s
POPC Popayan, Colom 32.31 350 P P 01 43 24.3 +2.0
comp=Z,41nm,1.3s
CMC01 Camacan, BA 32.34 71 eP P 01 43 21.6 -0.8
NBIT Itapeh - BA 32.64 71 eP P 01 43 24.7 -0.2
URMC La Uribe, Meta 32.72 354 P P 01 43 27.6 +1.9
comp=Z,52nm,1.1s
JAMC Jamundi, Valle 32.97 350 P P 01 43 29.6 +1.5
comp=Z,4.9nm,1.2s
GR1C Gorgona, Isla 33.02 347 P P 01 43 30.2 +1.9
PRAC Prado 33.23 353 P P 01 43 32.4 +2.3
comp=Z,23nm,1.5s
BOAV Boa Vista 33.33 20 P 01 43 31.1 +0.1
BOAV Boa Vista 33.33 20 eP P 01 43 30.3 -0.6
ORTC Ortega, Tolima 33.47 353 P P 01 43 34.6 +2.4
comp=Z,41nm,1.3s
RPN Rapa Nui 33.58 265 LR LR 01 53 34.5
comp=Z,181nm,19.1s,baz=106,slow=29
ROSC El Rosal 34.30 354 LR LR 01 58 11.8
comp=Z,92nm,20.5s,baz=42,slow=37
GUY2C Guyana, Caldas 34.78 353 P P 01 43 46.4 +2.4
comp=Z,12nm,0.9s
RUSC La Rusia 35.26 357 P P 01 43 49.9 +1.8
comp=Z,63nm,1.3s
CBOC Ciudad Bolivar 35.49 352 P P 01 43 52.2 +2.5
PMSA Palmer Station 35.56 175 LR LR 01 57 57.7
comp=Z,229nm,19.0s,baz=318,slow=35
PTBC PUERTO BERRIO, 35.99 354 P P 01 43 53.7 -0.2
DBBC Dabeiba 36.65 352 P P 01 44 03.7 +4.1
NBPS Pedro II - PI 37.62 54 eP P 01 44 06.8 -1.1
SDV Santo Domingo 38.19 1 P 01 44 12.3 -0.3
SDV IAmb IAmb 01 44 13.2
comp=Z,11nm,0.9s
SDV Santo Domingo 38.19 1 eP P 01 44 09.6 -3.1
MDP Montagnes des 38.75 30 LR LR 02 02 29.1
comp=Z,62nm,18.1s,baz=207,slow=40
MPGF Montagnes des 38.76 30 P P 01 44 17.0 -0.3
MPGF pP pP 01 44 35.6 -0.5
RCBR Riachuelo 40.76 62 LR LR 02 02 35.5
comp=Z,50nm,19.5s,baz=252,slow=38
RCBR Riachuelo 40.76 62 P P 01 44 34.0 -0.1
MLPR Magueyes Islan 47.38 5 P P 01 45 26.1 -0.6
OBIP Obispado Ponce 47.49 6 P P 01 45 27.0 -0.5
PDPR Patillas Dam, 47.52 7 P P 01 45 26.9 -0.9
PDPR IAmb IAmb 01 45 27.5
comp=Z,13nm,0.7s
CELP Cerrillos 47.52 6 P P 01 45 27.7 -0.1
BANI BANI 47.64 1 P P 01 45 29.8 +1.0
SDD Santo Domingo 47.71 2 P P 01 45 29.3 0.0
ECPR Experimental S 47.78 6 P P 01 45 29.5 -0.3
DR12 Loma Pena Alta 48.06 2 P P 01 45 31.3 -0.7
BELA Belgrano 2 51.16 171 P P 01 45 55.8 +0.9
BELA IAmb IAmb 01 46 06.2
comp=Z,8.4nm,0.8s
TEIG Tepich 52.13 340 P P 01 46 03.8 +1.0
TEIG Tepich 52.13 340 P P 01 46 03.9 +1.1
TEIG sP sP 01 46 31.8 +0.8
CAMR Camarioca 53.19 348 P P 01 46 11.1 +0.6
SOR Soroa 53.24 346 P P 01 46 11.7 +0.7
SNAA Sanae 55.47 159 P P 01 46 26.4 -0.2
comp=Z,6.6nm,0.8s,baz=280,slow=7.3,SNR=6.4
comp=Z,6.6nm,0.8s
SNAA Sanae 55.47 159 P P 01 46 26.9 +0.2
SNAA IAmb IAmb 01 46 28.0
comp=Z,11nm,1.0s
QSPA South Pole Qui 60.70 180 P P 01 47 03.6 +0.3
comp=Z,4.5nm,0.8s,baz=132,slow=3.3,SNR=5.4
comp=Z,4.5nm,0.8s
QSPA South Pole Qui 60.70 180 P P 01 47 04.1 +0.8
QSPA IAmb IAmb 01 47 37.3
comp=Z,10.0nm,1.1s
QSPA South Pole Qui 60.70 180 P P 01 47 04.4 +1.0
QSPA pP pP 01 47 24.1 +0.9
833A Chaparral WMA, 63.53 332 P P 01 47 22.6 +0.1
X58A Rowland 64.19 353 P P 01 47 27.2 +0.5
HNDO Hondo 64.56 333 P P 01 47 29.8 +0.5
143A Socs Landing, 64.79 341 P P 01 47 30.8 +0.2
DRIO Del Rio 65.00 332 P 01 47 32.7 +0.5
DRIO IAmb IAmb 01 47 34.9
comp=Z,43nm,2.0s
X51A Calhoun 65.04 348 P P 01 47 32.7 +0.4
V55A Taylorsville 65.71 351 IAmb IAmb 01 47 38.0
comp=Z,24nm,1.1s
W50A Signal Mountai 65.74 347 IAmb IAmb 01 47 38.1
comp=Z,15nm,0.8s
V53A Saluda 65.76 350 IAmb IAmb 01 47 38.8
comp=Z,20nm,1.2s
CPCT Cooper Cave 65.84 348 IAmb IAmb 01 47 38.8
comp=Z,16nm,1.0s
SWET Sewanee 65.88 347 IAmb IAmb 01 47 38.9
comp=Z,16nm,0.8s
BRDY Brady 66.01 334 IAmb IAmb 01 47 40.9
comp=Z,13nm,0.9s
SAND Sanderson 66.10 331 IAmb IAmb 01 47 42.1
comp=Z,31nm,1.4s
TXAR Lajitas Array 66.24 329 P P 01 47 41.7 +1.5
comp=Z,3.4nm,0.7s,baz=151,slow=8.2,SNR=47
comp=Z,3.4nm,0.7s
TXAR Lajitas Array 66.24 329 P P 01 47 41.9 +1.7
TX31 Lajitas Ar. Si 66.24 329 P 01 47 41.7 +1.5
OZNA Ozona 66.53 332 IAmb IAmb 01 47 44.3
comp=Z,26nm,1.3s
CLTN Cedars of Leba 66.80 347 IAmb IAmb 01 47 45.0
comp=Z,10nm,0.9s
U49A Red Boiling Sp 67.10 347 IAmb IAmb 01 47 46.1
comp=Z,12nm,0.9s
PLPT Palo Pinto 67.12 335 IAmb IAmb 01 47 47.8
comp=Z,13nm,0.8s
WVT Waverly 67.16 345 P 01 47 46.1 +0.4
WVT IAmb IAmb 01 47 47.0
comp=Z,21nm,0.9s
WVT Waverly 67.16 345 P P 01 47 46.1 +0.4
WVT pP pP 01 48 06.3 +0.4
WVT PcP sP 01 48 14.1 -0.3
SGCY Sterling City 67.40 333 IAmb IAmb 01 47 49.5
comp=Z,12nm,1.0s
ABTX Abilene, Hawle 67.45 334 IAmb IAmb 01 47 50.1
comp=Z,18nm,1.0s
TPB05 Hovey Rd 67.45 330 IAmb IAmb 01 47 50.5
comp=Z,7.8nm,0.8s
MNHN Monahans 67.57 331 IAmb IAmb 01 47 51.0
comp=Z,9.6nm,0.8s
TMB01 Midkiff 67.57 332 IAmb IAmb 01 47 51.0
comp=Z,8.3nm,1.0s
TPB01 Permian Basin 67.67 330 IAmb IAmb 01 47 52.0
comp=Z,8.3nm,0.8s
WTFS Witchita Falls 68.03 336 IAmb IAmb 01 47 53.4
comp=Z,13nm,0.8s
VHRN Van Horn 68.07 329 IAmb IAmb 01 47 54.5
comp=Z,20nm,1.7s
APMT Aspermont 68.25 334 IAmb IAmb 01 47 55.0
comp=Z,15nm,0.8s
129A Stewart Farms, 68.33 332 IAmb IAmb 01 47 55.4
comp=Z,19nm,1.6s
SN07 Snyder 07 68.34 333 IAmb IAmb 01 48 25.3
comp=Z,11nm,1.0s
X34A Smith Ranch, M 68.57 337 IAmb IAmb 01 48 26.9
comp=Z,18nm,1.0s
128A Castleberry Fa 68.57 332 IAmb IAmb 01 47 57.1
comp=Z,14nm,1.4s
CGM3 Cape Girardeau 68.69 344 IAmb IAmb 01 47 56.9
comp=Z,16nm,1.1s
T42A Van Buren 68.79 343 IAmb IAmb 01 48 08.0
comp=Z,32nm,2.0s
HHAR Hobbs 68.86 340 IAmb IAmb 01 47 58.3
comp=Z,16nm,1.0s
RLO Rose Lookout 69.08 339 IAmb IAmb 01 47 59.6
comp=Z,16nm,1.1s
TUL3 Leonard 69.08 339 IAmb IAmb 01 47 59.5
comp=Z,18nm,0.9s
Q51A Peebles 69.13 350 IAmb IAmb 01 47 59.2
comp=Z,19nm,1.0s
MGMO Mountain Grove 69.21 342 IAmb IAmb 01 48 00.5
comp=Z,16nm,1.1s
WUPA West Chester U 69.22 356 IAmb IAmb 01 48 00.9
comp=Z,11nm,1.1s
OK052 Battle Ridge R 69.49 338 IAmb IAmb 01 48 02.1
comp=Z,21nm,1.1s
CCM Cathedral Cave 69.80 343 P P 01 48 03.0 +0.8
CCM Cathedral Cave 69.80 343 P P 01 48 03.0 +0.8
CCM PcP PcP 01 48 24.1 -0.3
CCM sP sP 01 48 32.1 +1.1
MSTX Muleshoe 69.86 332 IAmb IAmb 01 48 35.5
comp=Z,20nm,0.9s
SMWD Samnorwood 69.88 335 IAmb IAmb 01 48 04.9
comp=Z,19nm,1.0s
OK048 Pawnee Station 69.92 338 IAmb IAmb 01 48 04.9
comp=Z,19nm,1.1s
S39A Bolivar 70.00 341 IAmb IAmb 01 48 05.3
comp=Z,18nm,1.0s
AMTX Amarillo 70.23 334 IAmb IAmb 01 48 07.3
comp=Z,20nm,1.2s
319A Douglas 70.57 326 IAmb IAmb 01 48 10.5
comp=Z,13nm,0.9s
PH02 Texas Public H 70.78 334 IAmb IAmb 01 48 10.7
comp=Z,22nm,1.0s
121A Cookes Peak, D 70.82 328 IAmb IAmb 01 48 12.2
comp=Z,11nm,1.1s
KAN08 Anthony NE Sta 70.99 338 IAmb IAmb 01 48 11.8
comp=Z,16nm,0.9s
L59A Walton 71.44 357 IAmb IAmb 01 48 14.5
comp=Z,19nm,0.9s
P38A Dawn 71.87 342 IAmb IAmb 01 48 16.2
comp=Z,12nm,0.9s
ANMO Albuquerque 72.25 330 P 01 48 17.5 +0.2
ANMO Albuquerque 72.25 330 IAmb IAmb 01 48 20.6
comp=Z,11nm,1.4s
214A Organ Pipe Nat 72.81 324 IAmb IAmb 01 48 24.0
comp=Z,16nm,1.1s
N38A Joes South For 72.89 343 IAmb IAmb 01 48 21.8
comp=Z,16nm,0.7s
DBIC Dimbokro 73.07 72 P P 01 48 22.2 -0.2
comp=Z,20nm,0.7s,baz=250,slow=5.9,SNR=25
DBIC pP pP 01 48 43.9 +0.8
comp=Z,3.9nm,0.7s,baz=243,slow=7.5,SNR=2.3
comp=Z,20nm,0.7s
DBIC Dimbokro 73.07 72 P 01 48 22.3 -0.1
DBIC Dimbokro 73.07 72 P P 01 48 22.2 -0.2
DBIC x x 01 48 47.1
T25A Trinidad 73.27 333 IAmb IAmb 01 48 26.5
comp=Z,14nm,1.0s
X18A Snowflake 73.48 327 IAmb IAmb 01 48 27.9
comp=Z,21nm,1.7s
X16A Lo Mia Camp, P 74.10 326 IAmb IAmb 01 48 32.2
comp=Z,12nm,1.0s
SDCO Great Sand Dun 74.23 332 IAmb IAmb 01 48 32.2
comp=Z,24nm,1.7s
WUAZ Wupatki 74.96 327 IAmb IAmb 01 48 36.7
comp=Z,14nm,0.9s
MVCO Mesa Verde 75.04 330 IAmb IAmb 01 48 36.8
comp=Z,15nm,1.0s
Q24A Divide 75.14 333 IAmb IAmb 01 48 37.3
comp=Z,14nm,0.9s
E62A Clayton Lake 75.80 1 IAmb IAmb 01 48 40.0
comp=Z,25nm,1.3s
PV13 Radium Mtn., P 75.97 330 IAmb IAmb 01 48 42.0
comp=Z,13nm,0.8s
PV02 Paradox Valley 75.98 330 IAmb IAmb 01 48 42.1
comp=Z,22nm,1.0s
PV05 Paradox Valley 76.03 330 IAmb IAmb 01 48 42.1
comp=Z,11nm,0.8s
PV18 Skein Mesa, Pa 76.08 330 IAmb IAmb 01 48 42.4
comp=Z,16nm,0.8s
PV12 Saucer Basin, 76.10 330 IAmb IAmb 01 48 42.8
comp=Z,15nm,0.9s
PV16 Nyswonger Mesa 76.14 330 IAmb IAmb 01 48 42.9
comp=Z,38nm,1.9s
PV19 Morning Glory 76.17 330 IAmb IAmb 01 48 42.9
comp=Z,12nm,0.9s
PV20 West Nyswonger 76.19 330 IAmb IAmb 01 48 43.0
comp=Z,15nm,1.1s
PV10 Paradox Valley 76.25 330 IAmb IAmb 01 48 43.0
comp=Z,20nm,0.9s
D62A Allapoint, All 76.27 1 IAmb IAmb 01 48 41.9
comp=Z,13nm,1.0s
PV23 Carpenter Ridg 76.30 330 IAmb IAmb 01 48 43.9
comp=Z,16nm,1.0s
BATG Bathurst New B 76.58 4 P 01 48 42.8 +0.8
BATG IAmb IAmb 01 48 44.4
comp=Z,19nm,1.0s
KNB Kanab 76.86 327 IAmb IAmb 01 48 47.6
comp=Z,22nm,1.2s
BFSC Mount Baldy Ra 77.14 322 IAmb IAmb 01 48 48.8
comp=Z,15nm,1.2s
HAYD Hayden 77.31 333 IAmb IAmb 01 48 50.1
comp=Z,11nm,1.0s
O20A White River Ci 77.38 332 IAmb IAmb 01 48 50.0
comp=Z,16nm,1.0s
VLDQ Val d'Or 77.48 356 IAmb IAmb 01 48 48.2
comp=Z,12nm,0.9s
SRU San Rafael Swe 77.50 330 IAmb IAmb 01 48 50.2
comp=Z,10nm,0.9s
CCUT Cedar City 77.54 327 IAmb IAmb 01 48 51.7
comp=Z,39nm,0.9s
Q16A Castle Valley 77.63 329 IAmb IAmb 01 48 51.5
comp=Z,14nm,1.0s
WIN Windhoek 77.80 109 P 01 48 49.5 -0.2
WIN IAmb IAmb 01 48 51.2
comp=Z,24nm,1.2s
P18A Preston Nutter 77.81 330 IAmb IAmb 01 48 52.5
comp=Z,17nm,1.0s
P17A Butcher Ranch, 77.90 330 IAmb IAmb 01 48 52.6
comp=Z,18nm,1.1s
TPO Tropico Hills 77.93 322 IAmb IAmb 01 48 52.7
comp=Z,8.0nm,0.8s
CCCA Chr Cany lake 77.96 323 IAmb IAmb 01 48 53.4
comp=Z,15nm,1.0s
PRN Pahroc Range 78.24 326 IAmb IAmb 01 48 55.3
comp=Z,13nm,1.0s
RDMU Red Mountain 78.30 331 IAmb IAmb 01 48 54.6
comp=Z,13nm,0.9s
FURC Furnace Creek, 78.42 324 IAmb IAmb 01 48 55.8
comp=Z,8.9nm,0.9s
MPU Maple Canyon 78.74 329 IAmb IAmb 01 48 57.2
comp=Z,10.0nm,1.0s
BSUT Blindstream Ca 78.78 330 IAmb IAmb 01 48 57.9
comp=Z,14nm,1.0s
K22A Casper 78.84 334 IAmb IAmb 01 48 57.7
comp=Z,14nm,0.9s
VES Vestal, Richgr 79.11 322 IAmb IAmb 01 48 59.4
comp=Z,20nm,0.9s
RSSD Black Hills 79.21 337 P 01 48 58.1 +1.2
RSSD IAmb IAmb 01 48 59.3
comp=Z,11nm,1.1s
RSSD Black Hills 79.21 337 P P 01 48 58.1 +1.2
RSSD sP sP 01 49 26.3 +0.3
DRLN Deer Lake 79.36 9 P 01 48 58.0 +0.7
TSUM Tsumeb 79.73 106 P 01 49 00.5 +0.1
TSUM IAmb IAmb 01 49 01.9
comp=Z,16nm,0.9s
TSUM Tsumeb 79.73 106 P P 01 49 01.0 +0.6
HWUT Hardware Ranch 80.01 330 IAmb IAmb 01 49 03.6
comp=Z,11nm,0.8s
PDAR Pinedale Array 80.13 332 P P 01 49 02.7 +0.8
comp=Z,1.7nm,0.7s,baz=136,slow=5.3,SNR=16
PDAR pP pP 01 49 24.6 +2.0
comp=Z,0.5nm,0.7s,baz=150,slow=12,SNR=2.1
comp=Z,1.7nm,0.7s
PDAR Pinedale Array 80.13 332 P P 01 49 02.8 +0.9
SPUT South Promonto 80.15 330 IAmb IAmb 01 49 04.5
comp=Z,10nm,0.9s
E28A Huff 80.31 340 IAmb IAmb 01 49 04.8
comp=Z,18nm,0.8s
NVAR Mina Array Bea 80.66 324 P P 01 49 06.8 +1.9
comp=Z,2.2nm,0.9s,baz=149,slow=5.7,SNR=13
comp=Z,2.2nm,0.9s
EPLO Experimental L 81.36 345 IAmb IAmb 01 49 09.2
comp=Z,19nm,1.2s
BOSA Boshof 81.50 118 P P 01 49 09.5 -0.2
comp=Z,7.5nm,0.5s,baz=256,slow=3.6,SNR=32
BOSA pP pP 01 49 30.5 -0.3
comp=Z,3.4nm,0.8s,baz=178,slow=5.1,SNR=2.6
comp=Z,7.5nm,0.5s
BOSA Boshof 81.50 118 IAmb IAmb 01 49 10.3
comp=Z,14nm,1.0s
MHC Mount Hamilton 81.60 322 IAmb IAmb 01 49 12.8
comp=Z,13nm,1.1s
GRTLG Ghanzi 81.74 110 IAmb IAmb 01 49 11.6
comp=Z,12nm,1.0s
TORD Torodi Ar. Bea 81.99 70 P P 01 49 11.8 -0.3
comp=Z,17nm,0.8s,baz=246,slow=7.7,SNR=102
TORD pP pP 01 49 32.8 -0.4
comp=Z,2.4nm,0.7s,baz=287,slow=5.2,SNR=2.8
comp=Z,17nm,0.8s
TORD Torodi Ar. Bea 81.99 70 P P 01 49 12.0 -0.2
TORD IAmb IAmb 01 49 12.9
comp=Z,12nm,0.8s
MPK Martis Peak 82.20 324 IAmb IAmb 01 49 16.4
comp=Z,12nm,1.1s
LAO LASA Array 82.21 336 IAmb IAmb 01 49 14.8
comp=Z,21nm,1.1s
YMR Madison River 82.28 333 IAmb IAmb 01 49 16.3
comp=Z,11nm,0.9s
ULM Lac du Bonnet 82.39 344 P P 01 49 13.7 +0.3
comp=Z,13nm,0.8s,baz=138,slow=5.0,SNR=26
comp=Z,13nm,0.8s
ULM Lac du Bonnet 82.39 344 IAmb IAmb 01 49 14.7
comp=Z,17nm,0.9s
YHL Hebgen Lake 82.51 333 IAmb IAmb 01 49 17.6
comp=Z,28nm,2.0s
LBTB Lobatse 83.51 115 P P 01 49 20.2 0.0
LBTB PcP PcP 01 49 23.4 -0.9
LBTB pP pP 01 49 41.7 +0.3
LBTB sP sP 01 49 49.8 -0.1
SCHQ Schefferville 84.09 3 P P 01 49 22.0 -0.1
comp=Z,12nm,1.1s,baz=148,slow=3.4,SNR=7.1
comp=Z,12nm,1.1s
SCHQ Schefferville 84.09 3 P 01 49 22.0 -0.1
SCHQ IAmb IAmb 01 49 23.4
comp=Z,20nm,1.2s
J08A Circle Bar Ran 84.51 327 IAmb IAmb 01 49 27.3
comp=Z,9.7nm,0.8s
PLID Pearl Lake 84.73 330 IAmb IAmb 01 49 28.1
comp=Z,9.2nm,0.8s
KHWEE KHWEE 84.90 112 IAmb IAmb 01 49 28.3
comp=Z,14nm,0.9s
K05A Summer Lake 85.19 326 IAmb IAmb 01 49 30.7
comp=Z,13nm,1.0s
PINE Pine Mountain 86.01 326 IAmb IAmb 01 49 35.1
comp=Z,10nm,0.8s
J04A Umpqua Nationa 86.17 325 IAmb IAmb 01 49 35.5
comp=Z,15nm,0.9s
I05D Terrebonne, OR 86.61 326 IAmb IAmb 01 49 37.8
comp=Z,11nm,0.9s
WIFE Three Sisters- 86.63 326 IAmb IAmb 01 49 37.9
comp=Z,11nm,1.0s
G06A Carlson Farm, 86.94 327 IAmb IAmb 01 49 45.8
comp=Z,16nm,1.3s
H04A Detroit Lake 87.27 326 IAmb IAmb 01 49 40.0
comp=Z,9.4nm,0.8s
FFC Flin Flon 88.00 343 P 01 49 41.5 +0.2
FFC IAmb IAmb 01 49 43.1
comp=Z,12nm,1.6s
MD01 Midelt array s 88.35 50 P 01 49 44.1 +0.4
PTEO Sao Teotonio 88.68 45 eP P 01 49 46.0 +1.1
PCVE Castro Verde 89.16 45 eP P 01 49 47.8 +0.7
MESJ Messejana 89.18 45 eP P 01 49 44.6 -2.7
PBEJ Beja 89.51 45 eP P 01 49 49.5 +0.6
PMTG Montargil 89.95 44 eP P 01 49 51.6 +0.8
EDM Edmonton 90.19 336 IAmb IAmb 01 49 53.1
comp=Z,7.5nm,0.9s
PESTR Estremoz 90.21 44 eP P 01 49 51.3 -0.8
TAM Tamanrasset 90.21 64 P 01 49 52.6 0.0
TAM IAmb IAmb 01 49 53.7
comp=Z,6.4nm,0.6s
LSZ Lusaka 90.48 108 P 01 49 55.2 +1.0
LSZ IAmb IAmb 01 49 56.5
comp=Z,12nm,1.3s
ESDC Sonseca Array 92.93 45 P P 01 50 04.4 -0.4
comp=Z,1.3nm,0.9s,baz=206,slow=3.2,SNR=6.6
ESDC LR LR 02 28 37.8
comp=Z,42nm,21.8s,baz=210,slow=33
comp=Z,1.3nm,0.9s
YKA Yellowknife Ar 98.07 341 P P 01 50 27.2 -0.2
comp=Z,1.0nm,0.9s,baz=144,slow=3.7,SNR=14
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 98.07 341 P Pdif 01 50 27.9 +0.4
AKASG Malin Array Be 118.58 45 PKP **PKPdf** 01 55 37.5 -1.2
comp=Z,0.2nm,0.3s,baz=267,slow=2.2,SNR=4.4
BRTR Keskin Array B 118.94 58 PKP **PKiKP** 01 55 40.2 +0.1
comp=Z,1.3nm,0.8s,baz=223,slow=2.0,SNR=7.6
BRTR pPKP **pPKPdf** 01 56 02.2 +0.1
comp=Z,0.9nm,0.8s,baz=121,slow=3.0,SNR=3.2
ASAR Alice Springs 121.88 207 PKKPbc PKKPbc 02 05 43.5 -0.5
comp=Z,0.9nm,0.8s,baz=323,slow=3.0,SNR=7.8
WRA Warramunga Arr 125.02 210 PKP **PKPdf** 01 55 51.5 -0.7
comp=Z,0.9nm,0.5s,baz=168,slow=1.8,SNR=5.4
H11S2 WAKE ISLAND Hyl 26.47 272 T T 04 15 09.0
baz=114,slow=75,SNR=88
H11S1 WAKE ISLAND Hyl 26.48 272 T T 04 15 09.2
baz=114,slow=75,SNR=90
H11S3 WAKE ISLAND Hyl 26.49 272 T T 04 15 08.7
baz=114,slow=75,SNR=80
KBZ Khabaz 126.54 55 PKP **PKPdf** 01 55 54.5 +0.3
comp=Z,4.7nm,0.9s,baz=237,slow=1.8,SNR=5.7
H11N3 WAKE ISLAND Hyl 26.77 273 T T 04 15 34.6
baz=113,slow=76,SNR=10.0
H11N1 WAKE ISLAND Hyl 26.78 273 T T 04 15 24.7
baz=113,slow=76,SNR=6.7
H11N2 WAKE ISLAND Hyl 26.78 273 T T 04 15 35.4
baz=113,slow=76,SNR=14
PETK Petropavlovsk- 137.46 318 PKP **PKiKP** 01 56 15.8 -0.7
comp=Z,6.2nm,0.9s,baz=126,slow=2.0,SNR=4.9
PETK Petropavlovsk- 137.46 318 **PKiKP** 01 56 16.2 -0.3
BVAR Borovoye Array 143.42 39 PKP PKPbc 01 56 23.1 +0.3
comp=Z,1.9nm,0.6s,baz=298,slow=3.2,SNR=12
KURBB Kurchatov Arra 149.01 39 PKP **PKPdf** 01 56 35.9 +1.0
comp=Z,14nm,0.7s,baz=303,slow=3.2,SNR=58
KURBB PKPbc **PKPbc** 01 56 39.6 +0.6
comp=Z,14nm,0.7s,baz=302,slow=3.3,SNR=84
KURBB pPKPbc **pPKPbc** 01 57 01.4 +0.4
comp=Z,4.7nm,0.7s,baz=306,slow=3.0,SNR=4.2
KURK Kurchatov 149.01 38 **PKPbc** 01 56 39.2 +0.2
EKS2 Erkin-Say 149.01 55 P **PKiKP** 01 56 40.8 0.0
SNR=32
USP Ospenovka 149.38 54 P **PKiKP** 01 56 41.4 0.0
SNR=16
AAK Ala-Archa 149.53 55 P **PKiKP** 01 56 42.4 +0.5
SNR=33
CHMS Chumysh 149.63 54 P **PKiKP** 01 56 42.1 +0.2
SNR=18
UCH Uchtor 149.65 56 P **PKiKP** 01 56 43.1 +0.6
SNR=27
KBK Karagaybulak 149.85 55 P **PKiKP** 01 56 43.0 +0.4
SNR=12
ZALV Zalesovo Beam 150.00 29 PKP **PKPdf** 01 56 36.8 +0.4
comp=Z,50nm,0.8s,baz=255,slow=2.0,SNR=134
ZALV PKPbc **PKiKP** 01 56 42.1 -0.1
comp=Z,51nm,0.8s,baz=298,slow=3.1,SNR=118
ZALV pPKPbc **pPKPbc** 01 57 03.9 +0.5
comp=Z,12nm,0.7s,baz=292,slow=3.2,SNR=4.0
ZALV Zalesovo Beam 150.00 29 **PKPdf** 01 56 37.0 +0.6
ZALV **PKiKP** 01 56 42.2 0.0
TKM2 Tokmak 2 150.25 54 P **PKiKP** 01 56 43.6 +0.2
SNR=35
ULHL Ulahol 150.88 55 P **PKiKP** 01 56 45.7 +1.0
SNR=27
KSH2 Kashi 151.04 62 PKPbc **PKPdf** 01 56 40.0 +1.3
KSH2 pPKP PKPab 01 56 52.3 -0.1
KSH2 sPKP sPKPdf 01 57 07.5 -1.4
MKAR Makanchi Array 153.12 43 PKP **PKPdf** 01 56 41.6 +0.2
comp=Z,1.1nm,0.8s,baz=323,slow=1.8,SNR=10
MKAR PKPbc **PKPbc** 01 56 48.6 -0.2
comp=Z,6.3nm,0.8s,baz=317,slow=2.3,SNR=47
MKAR PKPab **PKPab** 01 57 01.0 +0.4
comp=Z,5.3nm,0.8s,baz=291,slow=3.8,SNR=13
MKAR pPKPbc **pPKPbc** 01 57 10.7 -0.1
comp=Z,2.7nm,0.7s,baz=310,slow=2.4,SNR=4.5
MKAR PP PP 02 00 36.6 +2.2
comp=Z,0.6nm,0.8s,baz=260,slow=6.0,SNR=3.8
MJAR Matsushiro Arr 154.46 294 PKPab **PKPab** 01 57 07.8 +1.1
comp=Z,2.8nm,0.7s,baz=113,slow=2.7,SNR=5.2
MJAR Matsushiro Arr 154.46 294 **PKPab** 01 57 05.0 -1.7
WMQ Urumqi 157.92 44 ePKP **PKPdf** 01 56 42.0 -6.0
WMQ PKPab **PKPab** 01 57 23.3 +1.9
SONM Songino Array 161.61 5 PKP **PKPdf** 01 56 52.6 +0.4
comp=Z,1.1nm,1.0s,baz=284,slow=0.8,SNR=4.9
SONM PKPab **PKPab** 01 57 38.1 +0.9
comp=Z,2.3nm,0.9s,baz=323,slow=4.2,SNR=11
SONM PP PP 02 01 22.2 +1.9
comp=Z,0.7nm,0.9s,baz=310,slow=4.9,SNR=4.9
SONM Songino Array 161.61 5 **PKPdf** 01 56 52.0 -0.2
SONM **PKPab** 01 57 37.8 +0.5
CMAR Chiang Mai Arr 165.77 138 PKPab **PKPab** 01 57 55.9 -0.3
comp=Z,0.8nm,0.3s,baz=245,slow=5.5,SNR=5.4
CMAR Chiang Mai Arr 165.77 138 **PKPab** 01 57 54.9 -1.3

GTA2	**Gaotai**	**167.56**	**35**	PKP	**PKPdf**	**01 56 58.0**	**+0.4**
GTA2				pPKP	pPKPdf	01 57 20.5	+0.7
GTA2				PKPab	**PKPab**	**01 58 04.5**	**+0.7**
HHC	**Hu-ho-hao-te**	**168.48**	**350**	*eP*	**PKPdf**	**01 56 54.5**	**-3.6**
NJ2	**Nanjing**	**171.02**	**289**	*eP*	**PKPdf**	**01 57 01.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LZH	**Lanzhou**	**172.22**	**31**	*eP*	**PKPdf**	**01 57 02.5**	**+2.0**
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
PZH	**PanZhiHua**	**173.05**	**114**	PKP	**PKPdf**	**01 57 01.0**	**0.0**

NEIC ***27*** *01:41:08.9±1.9, 19°.8S±0°.1×169°.4E±0°.1, h128km±4km, mb4.4/17, Error ellipse: s-maj=19.2km s-min=12.0km az=154.0*
IDC ***27*** *01:41:11.6±7.8, 19°.94S×169°.22E, h153km±44km, mb3.6/4, mbtmp4.0/5, MS3.8/2, Error ellipse: s-maj=85.9km s-min=68.3km az=127.0*
ISC 27 01:41:10.5±0.8, 19°.9S±0°.1×169°.37E±0°.09, h150km, n30, σ1§25/31, mb4.3/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.99**	**219**	Pn	**Pn**	**01 41 45.0**	**-0.5**
MARNC					**Sn**	**01 42 11.1**	**-1.3**
OUENC	**Ouen Island, N**	**3.42**	**223**	Pn	**Pn**	**01 42 04.2**	**+1.0**
DZM	**Mont Dzumac**	**3.46**	**232**	P	**Pn**	**01 42 03.9**	**-0.1**
	12nm,0.3s,baz=71,slow=11,SNR=78						
DZM				S	**Sn**	**01 42 44.1**	**-1.2**
	78nm,0.2s,baz=29,slow=19,SNR=8.0						
DZM	**Mont Dzumac**	**3.46**	**232**		**Pn**	**01 42 03.4**	**-0.6**
DZM					**Sn**	**01 42 44.1**	**-1.2**
ONTNC	**Ouen Toro**	**3.60**	**229**		**Pn**	**01 42 05.2**	**-0.5**
TOZ	**Tahuroa Road**	**18.52**	**165**	P	**P**	**01 45 15.3**	**-0.1**
NIUE	**Niue**	**19.53**	**91**	P	**P**	**01 45 26.0**	**-0.6**
TKNZ	**Takaka Hill**	**21.25**	**172**	P	**P**	**01 45 44.5**	**-0.3**
CTA	**Charters Tower**	**21.72**	**266**	P	**P**	**01 45 50.4**	**+0.4**
	1.5nm,0.4s,baz=75,slow=13,SNR=2.2 1.5nm,0.4s						
CTAO	**Charters Tower**	**21.72**	**266**	P	**P**	**01 45 50.3**	**+0.2**
CTAO				IAmb	IAmb	01 46 16.8	
	comp=Z,12nm,1.4s						
TUWZ	**Tuamarina**	**21.78**	**171**	P	**P**	**01 45 50.3**	**0.0**
COEN	**Coen**	**25.74**	**279**	P	**P**	**01 46 25.6**	**-1.7**
TOO	**Toolangi**	**27.21**	**225**	P	**P**	**01 46 41.5**	**+1.1**
TOO				IAmb	IAmb	01 47 05.8	
	comp=Z,8.7nm,1.2s						
STKA	**Stephens Creek**	**27.59**	**239**	P	**P**	**01 46 45.3**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=103,slow=14,SNR=4.0 comp=Z,1.3nm,0.6s						
STKA	**Stephens Creek**	**27.59**	**239**	P	**P**	**01 46 47.4**	**+3.6**
BBOO	**Buckleboo**	**32.34**	**240**	P	**P**	**01 47 28.2**	**+2.5**
BBOO				IAmb	IAmb	01 47 53.4	
	comp=Z,26nm,1.4s						
WR8	**Warramunga Arr**	**32.75**	**264**	P	**P**	**01 47 28.7**	**-0.6**
WR8				IAmb	IAmb	01 47 49.2	
	comp=Z,7.8nm,1.3s						
WB0	**Warramunga Arr**	**32.87**	**264**	P	**P**	**01 47 30.2**	**-0.2**
WB0				IAmb	IAmb	01 47 40.4	
	comp=Z,7.8nm,1.2s						
WRA	**Warramunga Arr**	**32.90**	**264**	P	**P**	**01 47 28.9**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=104,slow=8.1,SNR=3.3 comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**32.90**	**264**	P	**P**	**01 47 29.4**	**-1.3**
AS31	**Alice Springs**	**33.09**	**257**	P	**P**	**01 47 32.3**	**0.0**
AS31				IAmb	IAmb	01 47 32.9	
	comp=Z,5.5nm,0.4s						
ASAR	**Alice Springs**	**33.09**	**257**	P	**P**	**01 47 31.1**	**-1.2**
	comp=Z,5.4nm,0.4s,baz=83,slow=8.7,SNR=94						
ASAR				LR	LR	02 01 19.2	
	comp=Z,57nm,19.4s,baz=136,slow=37 comp=Z,5.4nm,0.4s						
ASAR	**Alice Springs**	**33.09**	**257**	P	**P**	**01 47 32.1**	**-0.2**
MTN	**Manton Dam**	**37.29**	**275**	P	**P**	**01 48 07.0**	**-1.4**
MBWA	**Marble Bar**	**46.35**	**259**	P	**P**	**01 49 22.5**	**+0.6**
MBWA				IAmb	IAmb	01 49 25.3	
	comp=Z,12nm,1.0s						
QSPA	**South Pole Qui**	**70.12**	**180**	P	P	01 52 12.1	+5.7
QSPA				IAmb	IAmb	01 52 53.4	
	comp=Z,7.9nm,1.5s						
RPN	**Rapa Nui**	**73.70**	**113**	P	**P**	**01 52 28.0**	**-0.3**
K15K	**Wolf Creek Mou**	**85.15**	**13**	P	**P**	**01 53 28.3**	**-1.0**
K15K				IAmb	IAmb	01 53 58.1	
	comp=Z,12nm,1.5s						
J16K	**Anvik River**	**86.23**	**13**	P	**P**	**01 53 35.7**	**+1.1**
ELK	**Elko**	**92.30**	**47**	LR	LR	02 25 48.4	
	comp=Z,125nm,20.7s,baz=14,slow=29						

IDC 27 01:52:28.8±1.8, 29°.37S×175°.94W, h0km, mb3.8/3, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=44.4km s-min=26.2km az=160.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.73**	**273**	Pn	Pg	01 53 02.1	0.0
	109nm,0.3s,baz=158,slow=20,SNR=5.4						
RAO				Sn	Sb	01 53 24.1	+0.3
	230nm,0.3s,baz=76,slow=22,SNR=6.4						
URZ	**Urewera**	**10.58**	**211**	Pn	Pn	01 55 02.6	+0.9
	0.6nm,0.3s,baz=45,slow=10,SNR=2.2						
URZ				Sn	Sn	01 57 01.9	+1.0
	0.8nm,0.3s,baz=195,slow=15,SNR=3.5 5.1nm,0.9s						
ASAR	**Alice Springs**	**44.97**	**265**	P	P	02 00 45.4	-0.6
	0.5nm,0.7s,baz=104,slow=8.2,SNR=5.2 0.5nm,0.7s						
WRA	**Warramunga Arr**	**45.87**	**270**	P	P	02 00 51.9	-1.3
	1.2nm,0.8s,baz=109,slow=8.1,SNR=6.0 1.2nm,0.8s						
NVAR	**Mina Array Bea**	**86.28**	**42**	P	P	02 05 13.3	+0.5
	1.7nm,1.2s,baz=210,slow=5.5,SNR=4.0 1.7nm,1.2s						

IDC ***27*** *01:57:29.5±1.1, 24°.26N×125°.15E, h0km, mb3.6/6, mbtmp3.6/7, ML2.2/1, Error ellipse: s-maj=44.1km s-min=20.4km az=65.0*
JMA ***27*** *01:57:34.7±0.3, 24°.N±1°.×125°.2E±0°.8, h19km, MV3.4/10, NEAR MIYAKOJIMA ISLAND*
ISC 27 01:57:33.9±1.7, 24°.30N±0°.08×125°.22E±0°.06, h29km±12km, n16, σ0§59/21, mb3.7/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMJ2	**Miyako jima3**	**0.46**	**13**	P	**Pn**	**01 57 44.5**	**0.0**
JMJ2				*eS*	**Sn**	**01 57 51.8**	**+0.1**
JOGS	**Gusukube**	**0.49**	**20**	P	**Pn**	**01 57 45.3**	**+0.3**
JOGS				*eS*	**Sn**	**01 57 54.1**	**+1.5**
JTJ	**Tarama**	**0.58**	**306**	P	**Pn**	**01 57 46.0**	**-0.2**
JTJ				*eS*	**Sb**	**01 57 53.1**	**-0.6**
JIKM	**Ikemajima**	**0.63**	**3**	P	**Pn**	**01 57 47.1**	**+0.3**
JIKM				*eS*	**Sn**	**01 57 56.5**	**+0.6**
JISG	**Ishigakijimahi**	**0.88**	**290**	*eP*	**Pn**	**01 57 50.5**	**+0.2**
JISG				S	**Sn**	**01 58 01.9**	**0.0**
JIJ	**Ishigaki jima**	**0.98**	**274**	P	**Pb**	**01 57 52.3**	**0.0**
JKRS	**Kuro-shima**	**1.10**	**267**	P	**Pb**	**01 57 54.4**	**0.0**
HATJ	**Hateruma jima**	**1.31**	**260**	*eP*	**Pb**	**01 57 58.8**	**+0.9**
IRIF	**Iriomote-Funau**	**1.36**	**272**	P	Pn	**01 57 57.7**	**+0.8**
JOW	**Kunigami**	**3.74**	**47**	Pn	**Pn**	**01 58 29.6**	**-0.2**
	0.4nm,0.3s,baz=359,slow=22,SNR=1.2 16nm,0.8s						
MKAR	**Makanchi Array**	**40.86**	**314**	P	**P**	**02 05 13.0**	**-0.2**
	0.7nm,0.4s,baz=101,slow=9.9,SNR=20 0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**42.20**	**325**	P	**P**	**02 05 23.6**	**-0.4**
	0.5nm,0.4s,baz=110,slow=10,SNR=2.5 0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**44.43**	**319**	P	**P**	**02 05 41.4**	**-0.6**
	0.1nm,0.3s,baz=110,slow=9.7,SNR=4.3 0.1nm,0.3s						
WRA	**Warramunga Arr**	**44.86**	**168**	P	**P**	**02 05 44.9**	**-0.8**
	0.6nm,0.6s,baz=346,slow=8.0,SNR=4.6 0.6nm,0.6s						
ASAR	**Alice Springs**	**48.42**	**169**	P	**P**	**02 06 13.8**	**+0.2**
	0.4nm,0.4s,baz=352,slow=8.1,SNR=6.0 0.4nm,0.4s						
BVAR	**Borovoye Array**	**49.94**	**320**	P	**P**	**02 06 25.1**	**+0.1**
	0.5nm,0.5s,baz=101,slow=6.0,SNR=3.0 0.5nm,0.5s						

NEIC ***27*** *01:59:04.4±1.9, 13°.53N±0°.07×91°.05W±0°.05, h35km±2km, mb4.3/52, Error ellipse: s-maj=11.9km s-min=7.9km az=207.0*
CATAC ***27*** *01:59:05.4±0.7, 14°.N±3°.×9°.1W±°, h27km±7km, M4.6/25, MLv4.6/25, Error ellipse: s-maj=8.5km s-min=3.1km az=33.9, Moment Tensor Solution. Moment tensor: Scale 1014Nm; Mrr9.44; Mθθ-5.12; Mφφ-4.32; Mrθ2.35; Mrφ 1.05; Mθφ-1.49; Fault plane solution: Mw8.70675×1014 NP1: φs123.86183°, δ54.99818°, λ89.51388°. NP2: φs304.70927°, δ35.00477°, λ90.69416°. Principal axes: T 9.9284, Plg79.9949°, Azm31.8830°; N -3.5940, Plg0.3982°, Azm124.1407°; P -6.3344, Plg9.9970°, Azm214.2109°; confirmed*
SNET ***27*** *01:59:06.0±0.8, 13°.69N×90°.97W, h36km±10km, ML4.4, Presumed earthquake*
GCG ***27*** *01:59:06.1±2.2, 13°.71N×90°.98W, h49km±21km, MD4.8, ML4.7, Presumed earthquake*
IDC ***27*** *01:59:08.2±2.4, 13°.73N×90°.88W, h82km±16km, mb3.4/5, mbtmp3.9/8, MS3.3/2, Error ellipse: s-maj=24.8km s-min=16.9km az=23.0*
ISC 27 01:59:04.9±1.1, 13°.60N±0°.06×91°.01W±0°.04, h54km±9km, n155, σ1§22/176, mb4.2/23, 10C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.49**	**94**	*i* P	**Pn**	**01 59 16.4**	**+0.1**
FG8	**Yepocapa, Chim**	**0.79**	**34**	*i* P	**Pn**	**01 59 20.5**	**+0.5**
FG8				*i* S	**Sn**	**01 59 31.2**	**+0.1**
FG16	**Alotenango, Sa**	**0.82**	**36**	*i* P	**Pn**	**01 59 21.1**	**+0.5**
FG16				IAML		01 59 33.8	
	comp=N,74μm,0.2s						
STG5	**El Palmar, Qui**	**0.86**	**338**	*i* P	Pn	01 59 25.5	+4.5
PCG5	**San Vicente Pa**	**0.87**	**45**	*i* P	**Pn**	**01 59 20.4**	**-0.7**
STG2	**El Palmar, Qui**	**0.90**	**337**	*i* P	Pn	01 59 26.7	+5.1
STG2				*eS*	Sn	01 59 41.8	+8.0
STG8	**El Palmar, Qui**	**0.91**	**339**	*i* P	Pn	01 59 26.8	+5.1
STG8				IAML		01 59 44.4	
	comp=E,10μm,0.2s						
FAME	**Alcaldia de Sa**	**0.99**	**76**	P	**Pn**	**01 59 22.6**	**-0.1**
GCG4	**OSOP**	**1.08**	**25**	*i* P	**Pn**	**01 59 24.4**	**+0.4**
RTAL	**Retalhuleu**	**1.13**	**324**		**Pn**	**01 59 25.1**	**+0.6**
RTAL				Sn	**Sn**	**01 59 38.4**	**-0.7**
RTAL	**Retalhuleu**	**1.13**	**324**	P	**Pn**	**01 59 25.1**	**+0.6**
RTAL				S	**Sn**	**01 59 39.7**	**+0.6**
NUBE	**Las Nubes**	**1.23**	**76**	P	**Pn**	**01 59 26.2**	**+0.3**
NUBE	**Las Nubes**	**1.23**	**76**	P	**Pn**	**01 59 26.1**	**+0.2**
NUBE				S	**Sn**	**01 59 41.5**	**-0.2**
NUBE	**Las Nubes**	**1.23**	**76**	*eP*	**Pn**	**01 59 26.1**	**+0.2**
NUBE	**Las Nubes**	**1.23**	**76**	*i* P	**Pn**	**01 59 26.1**	**+0.2**
LOAL	**Lomas de Alarc**	**1.26**	**72**	P	**Pn**	**01 59 26.9**	**+0.7**
LOAL				S	**Sn**	**01 59 43.0**	**+0.9**
LOAL	**Lomas de Alarc**	**1.26**	**72**	*eP*	**Pn**	**01 59 26.9**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.26**	**70**	P	**Pn**	**01 59 26.8**	**+0.6**
SLOZ				S	**Sn**	**01 59 42.7**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.26**	**70**	*eP*	**Pn**	**01 59 26.9**	**+0.6**
SOKI	**Kika Raxquin**	**1.27**	**343**	*i* P	**Pn**	**01 59 27.6**	**+0.8**
SOKI				*i* S	**Sn**	**01 59 42.5**	**-0.5**
SOKI				IAML		01 59 48.6	
	comp=E,10μm,0.5s						
QUEO	**Labor Ovalle**	**1.35**	**339**	*i* P	**Pn**	**01 59 29.7**	**+1.9**
QUEO				*i* S	**Sn**	**01 59 45.2**	**+0.4**
QUEO				IAML		01 59 56.7	
	comp=E,7μm,0.5s						
RTR	**El Retiro**	**1.36**	**77**	*eP*	**Pn**	**01 59 28.5**	**+0.9**
CEVE	**Cerro Verde**	**1.36**	**80**	P	**Pn**	**01 59 28.4**	**+0.6**
CEVE				S	**Sn**	**01 59 43.4**	**+1.4**
CEVE	**Cerro Verde**	**1.36**	**80**	*eP*	**Pn**	**01 59 28.4**	**+0.6**
SBLS	**San Blas**	**1.37**	**80**	*eP*	**Pn**	**01 59 28.4**	**+0.5**
RBDL	**Robledal**	**1.38**	**68**	*iP*	**Pn**	**01 59 28.9**	**+0.9**
SNJE	**San Jose**	**1.39**	**79**	*eP*	**Pn**	**01 59 28.8**	**+0.7**
UNIC	**Universidad Ca**	**1.47**	**75**	P	**Pn**	**01 59 29.7**	**+0.7**
UNIC				S	**Sn**	**01 59 48.7**	**+1.4**
APG	**El Apazote**	**1.49**	**21**	P	**Pn**	**01 59 30.6**	**+1.1**
	comp=E,122nm,0.4s,baz=166,slow=10,SNR=1513						
APG				S	**Sn**	**01 59 49.4**	**+1.3**
	comp=E,201nm,0.6s,baz=233,slow=21,SNR=36						
APG				LR	LR	02 00 19.4	
	comp=E,19nm,21.3s,baz=283,slow=54						
APG	**El Apazote**	**1.49**	**21**	*i* P	**Pn**	**01 59 30.5**	**+1.0**
APG				*i* S	**Sn**	**01 59 48.4**	**+0.4**
JAYA	**Jayaque - finc**	**1.52**	**88**	P	**Pn**	**01 59 30.2**	**+0.4**
JAYA	**Jayaque - finc**	**1.52**	**88**	*iP*	**Pn**	**01 59 30.2**	**+0.4**
JAYA	**Jayaque - finc**	**1.52**	**88**	*i* P	**Pn**	**01 59 30.2**	**+0.4**
JAYA				*eS*	**Sn**	**01 59 48.7**	**+0.1**
CEDA	**San Andres**	**1.58**	**83**	P	**Pn**	**01 59 31.2**	**+0.6**
CEDA				S	**Sn**	**01 59 51.4**	**+1.5**
SMCA	**Catarina**	**1.62**	**320**	*i* P	**Pn**	**01 59 31.8**	**+0.7**
LALI	**Alcalda de L**	**1.65**	**94**	*eP*	**Pn**	**01 59 32.1**	**+0.8**
LALI	**Alcalda de L**	**1.65**	**94**	*i* P	**Pn**	**01 59 32.2**	**+0.8**
LALI				*i* S	**Sn**	**01 59 50.8**	**-0.7**
PMON	**Piamonte**	**1.65**	**86**	P	**Pn**	**01 59 32.3**	**+0.7**
PMON				S	**Sn**	**01 59 53.3**	**+1.5**
PMON	**Piamonte**	**1.65**	**86**	*eP*	**Pn**	**01 59 32.3**	**+0.7**
BOQS	**Boqueron**	**1.69**	**85**	*eP*	**Pn**	**01 59 33.1**	**+0.9**
QUEZ	**Alcaldia de Qu**	**1.70**	**82**	*eP*	**Pn**	**01 59 33.4**	**+1.2**
UEES	**Universidad Ev**	**1.72**	**86**	P	**Pn**	**01 59 33.4**	**+0.9**
UEES	**Universidad Ev**	**1.72**	**86**	*eP*	**Pn**	**01 59 33.6**	**+1.1**
SEMO	**Seminario San**	**1.74**	**86**	P	**Pn**	**01 59 33.7**	**+0.9**
UTEC	**Universidad Te**	**1.76**	**87**	P	**Pn**	**01 59 34.2**	**+1.1**
HUEH	**Huehuetenango**	**1.77**	**344**		**Pn**	**01 59 33.0**	**-0.4**
HUEH				Sn	**Sn**	**01 59 56.2**	**+1.3**
HUEH	**Huehuetenango**	**1.77**	**344**	*eP*	**Pn**	**01 59 35.2**	**+1.8**
HUEH				*eS*	**Sn**	**01 59 56.5**	**+1.6**
HUEH				IAML		02 00 02.7	
	comp=N,4μm,0.5s						
PANCS	**Alcalda de**	**1.78**	**89**	*eP*	**Pn**	**01 59 34.2**	**+0.9**
THIG		**1.78**	**317**	*i* P	**Pn**	**01 59 34.1**	**+0.9**
THIG				*i* S	**Sn**	**01 59 53.3**	**-1.5**
MTO3	**Montecristo**	**1.79**	**63**		**Pn**	**01 59 33.9**	**+0.4**
MTO3	**Montecristo**	**1.79**	**63**	P	**Pn**	**01 59 34.0**	**+0.5**
MTO3	**Montecristo**	**1.79**	**63**	*eP*	**Pn**	**01 59 34.0**	**+0.5**
MTO3	**Montecristo**	**1.79**	**63**	*i* P	**Pn**	**01 59 34.0**	**+0.5**
LOMA	**Loma Larga**	**1.79**	**88**	*eP*	**Pn**	**01 59 34.5**	**+1.1**
IGN	**Direccin Gen**	**1.79**	**86**	P	**Pn**	**01 59 34.9**	**+1.5**
LFU	**La Fuente**	**1.85**	**85**	*eP*	**Pn**	**01 59 35.4**	**+1.1**
ESQI	**Esquipulas**	**1.88**	**59**		**Pn**	**01 59 35.2**	**+0.5**
ESQI	**Esquipulas**	**1.88**	**59**	P	**Pn**	**01 59 35.4**	**+0.7**
ZAFR2	**Estanzuela, Za**	**1.88**	**59**	*i* P	**Pn**	**01 59 36.2**	**+1.5**
LFRS	**El Faro**	**1.89**	**89**	*eP*	**Pn**	**01 59 36.0**	**+1.2**
LBRS	**Las Brisas**	**1.92**	**86**	*eP*	**Pn**	**01 59 36.3**	**+1.2**
AVCB	**Coban**	**1.95**	**17**	*i* S	**Sn**	**02 00 03.7**	**+4.6**
AVCB				IAML		02 00 09.0	
	comp=N,15μm,0.5s						
PAVA	**Las Pavas**	**2.02**	**87**	P	**Pn**	**01 59 37.7**	**+1.1**
PAVA	**Las Pavas**	**2.02**	**87**	*eP*	**Pn**	**01 59 37.7**	**+1.1**
COEG	**Centro de Oper**	**2.07**	**89**	*eP*	**Pn**	**01 59 38.6**	**+1.3**
LLGN	**La Laguna**	**2.08**	**74**	P	**Pn**	**01 59 37.9**	**+0.5**
LLGN	**La Laguna**	**2.08**	**74**	*eP*	**Pn**	**01 59 37.9**	**+0.5**
TECO	**Alcaldia de Te**	**2.17**	**91**	P	**Pn**	**01 59 39.6**	**+1.0**
TECO				S	**Sn**	**02 00 06.3**	**+2.0**
TECO	**Alcaldia de Te**	**2.17**	**91**	*eP*	**Pn**	**01 59 39.8**	**+1.2**
P5NO	**Presa 5 de nov**	**2.22**	**80**	P	**Pn**	**01 59 39.7**	**+0.4**
P5NO	**Presa 5 de nov**	**2.22**	**80**	*eP*	**Pn**	**01 59 39.7**	**+0.4**
SCLA	**Alcaldia de Sa**	**2.22**	**87**	P	**Pn**	**01 59 40.6**	**+1.3**
SCLA	**Alcaldia de Sa**	**2.22**	**87**	*eP*	**Pn**	**01 59 40.5**	**+1.2**
TECA	**Tecapa**	**2.44**	**92**	*eP*	**Pn**	**01 59 43.5**	**+1.1**
SARH	**Santa Rosa de**	**2.47**	**62**	P	**Pn**	**01 59 43.8**	**+1.0**
SARH	**Santa Rosa de**	**2.47**	**62**	*i* P	**Pn**	**01 59 43.8**	**+1.0**
PACA	**Pacayal**	**2.62**	**93**	P	**Pn**	**01 59 45.9**	**+1.1**
PACA	**Pacayal**	**2.62**	**93**	*eP*	**Pn**	**01 59 45.9**	**+1.1**
BLLM	**Bellamira**	**2.70**	**93**	*eP*	**Pn**	**01 59 47.8**	**+1.9**
CCIG	**Comitan**	**2.88**	**338**		**Pn**	**01 59 50.2**	**+1.7**
CCIG	**Comitan**	**2.88**	**338**	*i* P	**Pn**	**01 59 51.0**	**+2.5**
MARCA	**Marcala la Paz**	**2.94**	**79**	*i* P	**Pn**	**01 59 49.9**	**+0.6**
LCND	**La Caada**	**3.05**	**95**	P	**Pn**	**01 59 51.9**	**+1.2**
CNCH	**Conchagua**	**3.11**	**96**	P	**Pn**	**01 59 52.8**	**+1.2**
CNCH				S	**Sn**	**02 00 30.0**	**+2.5**
CSGN	**Cosiguina Volc**	**3.42**	**100**	P	**Pn**	**01 59 56.5**	**+0.8**
TGUH	**Tegucigalpa,Un**	**3.66**	**82**		**Pn**	**01 59 59.7**	**+0.7**
CRIN	**San Cristobal**	**3.96**	**103**	Pn	**Pn**	**02 00 05.4**	**+2.3**
PKGN	**Cerro Pekin**	**4.04**	**103**	P	**Pn**	**02 00 05.3**	**+1.2**
PKGN				S	**Sn**	**02 00 49.8**	**-0.3**
PACN	**Al O del Volca**	**4.25**	**104**	P	**Pn**	**02 00 08.0**	**+0.9**
CNGN	**Cerro Negro**	**4.34**	**104**		**Pn**	**02 00 07.7**	**-0.7**
CMIG	**Matias Romero**	**5.10**	**313**	P	**Pn**	**02 00 21.5**	**+2.7**
	comp=N,18nm,0.3s,baz=126,slow=7.8,SNR=58						
CMIG				S	**Sn**	**02 01 19.5**	**+3.2**
	comp=N,25nm,0.4s,baz=88,slow=16,SNR=4.2						
BOAB	**BOACO BROADBAN**	**6.33**	**102**		**Pn**	**02 00 22.0**	**+0.1**
JTS	**Las Juntas de**	**6.78**	**118**	P	**Pn**	**02 00 44.4**	**+2.6**
	comp=N,8.1nm,0.3s,baz=313,slow=18,SNR=8.2						
JTS	**Las Juntas de**	**6.78**	**118**		**Pn**	**02 00 42.9**	**+1.1**
TEIG	**Tepich**	**7.09**	**21**		**Pn**	**02 00 47.6**	**+1.6**
TLIG	**Tlapa**	**8.28**	**299**		**Pn**	**02 01 02.1**	**-0.3**
VBMS	**Vicksburg**	**18.54**	**1**	P	**P**	**02 03 17.4**	**+0.3**
SAND	**Sanderson**	**19.25**	**330**		**P**	**02 03 23.1**	**-1.8**
TXAR	**Lajitas Array**	**19.57**	**325**	P	**Pn**	**02 03 30.3**	**+0.1**
	comp=N,1.3nm,0.5s,baz=149,slow=12,SNR=35						
TXAR	**Lajitas Array**	**19.57**	**325**	P	**P**	**02 03 30.0**	**+1.5**
TX31	**Lajitas Ar. Si**	**19.57**	**325**		**P**	**02 03 28.4**	**-0.1**
OZNA	**Ozona**	**19.60**	**333**	P	**P**	**02 03 29.0**	**+0.2**
PLPT	**Palo Pinto**	**20.25**	**342**	P	**P**	**02 03 36.0**	**+0.1**
PLPT				IAmb	IAmb	02 03 38.5	
	comp=Z,6.8nm,0.6s						
ALPN	**Alpine**	**20.36**	**327**		**P**	**02 03 37.7**	**+0.5**
ALPN				IAmb	IAmb	02 03 40.9	
	comp=Z,13nm,0.8s						
MNHN	**Monahans**	**20.70**	**330**	P	**P**	**02 03 41.6**	**+0.9**
MNHN				IAmb	IAmb	02 03 43.7	
	comp=Z,11nm,0.8s						
PECS	**Pecos**	**21.27**	**328**	P	**P**	**02 03 47.3**	**+0.4**
PECS				IAmb	IAmb	02 03 51.1	
	comp=Z,7.8nm,0.7s						
APMT	**Aspermont**	**21.32**	**339**		**P**	**02 03 46.9**	**-0.4**
VHRN	**Van Horn**	**21.41**	**325**		**P**	**02 03 48.6**	**+0.2**
VHRN				IAmb	IAmb	02 03 50.6	
	comp=Z,12nm,0.8s						
DKNS	**Dickens**	**21.92**	**337**	P	**P**	**02 03 55.9**	**+2.1**
MNTX	**Cornudas Mount**	**22.32**	**326**		**P**	**02 03 58.2**	**0.0**
HHAR	**Hobbs**	**22.74**	**354**		**P**	**02 04 00.4**	**-2.1**
RLO	**Rose Lookout**	**22.76**	**352**	P	**P**	**02 04 01.4**	**-1.2**
RLO				IAmb	IAmb	02 04 02.1	
	comp=Z,11nm,0.9s						
TKL	**Tuckaleechee C**	**22.91**	**15**	LR	LR	02 14 32.0	
	comp=Z,63nm,20.1s,baz=128,slow=41						
SMWD	**Samnorwood**	**22.98**	**340**		**P**	**02 04 05.5**	**+0.5**
SMWD				IAmb	IAmb	02 04 06.6	
	comp=Z,9.3nm,0.8s						
T47A	**Sharon Grove**	**23.55**	**8**		**P**	**02 04 09.3**	**-1.1**
U54A	**Nelsons Funny**	**24.27**	**18**	P	**P**	**02 04 16.9**	**-0.2**
121A	**Cookes Peak, D**	**24.30**	**324**		**P**	**02 04 19.8**	**+2.3**
CRNM	**Carthage**	**24.79**	**327**	P	**P**	**02 04 23.5**	**+1.5**
Y22A	**Socorro**	**24.90**	**327**	P	**P**	**02 04 23.9**	**+0.9**
Y22A				IAmb	IAmb	02 04 27.4	
	comp=Z,6.9nm,0.8s						
LENM	**Lemitar**	**25.08**	**327**	P	**P**	**02 04 25.6**	**+1.0**
DUN6	**Lazy B Ranch**	**25.08**	**322**	P	**P**	**02 04 24.2**	**-0.4**
X16A	**Lo Mia Camp, P**	**27.78**	**322**	P	**P**	**02 04 50.2**	**+1.1**
WUAZ	**Wupatki**	**28.51**	**323**		**P**	**02 04 55.7**	**+0.3**
WUAZ				IAmb	IAmb	02 05 00.3	
	comp=Z,5.0nm,0.8s						
PV18	**Skein Mesa, Pa**	**29.24**	**330**	P	**P**	**02 05 04.1**	**+2.1**
PV18				IAmb	IAmb	02 05 05.3	
	comp=Z,8.6nm,1.2s						
U15A	**North Rim**	**29.68**	**324**		**P**	**02 05 07.0**	**+1.1**
U15A				IAmb	IAmb	02 05 10.0	
	comp=Z,6.0nm,1.4s						
W13A	**Hualapai Mount**	**29.74**	**320**		**P**	**02 05 07.6**	**+1.1**
HMU	**Henry Mountain**	**29.92**	**328**	P	**P**	**02 05 09.3**	**+1.2**
HMU				IAmb	IAmb	02 05 11.1	
	comp=Z,3.8nm,0.8s						
KNB	**Kanab**	**30.39**	**324**		**P**	**02 05 13.2**	**+1.1**
KNB				IAmb	IAmb	02 05 15.2	
	comp=Z,5.1nm,0.8s						
V12A	**Nelson**	**30.74**	**320**		**P**	**02 05 17.4**	**+2.2**
V12A				IAmb	IAmb	02 05 18.8	
	comp=Z,4.7nm,0.9s						
MTPU	**Mount Pierson**	**30.

ASAR	Alice Springs	48.39	256	P	P	02 13 00.8	-0.2	
WB0	Warramunga Arr	48.48	261	P	P	02 13 01.4	-0.4	
WB0				IAmb	IAmb	02 13 07.8		
	comp=Z,24nm,1.9s							
WRA	Warramunga Arr	48.50	261	P	P	02 13 00.7	-1.3	
	comp=Z,0.6nm,0.7s,baz=96,slow=7.2,SNR=5.5							
	comp=Z,0.6nm,0.7s							
WRA	Warramunga Arr	48.50	261	P	P	02 13 00.6	-1.3	
RPN	Rapa Nui	59.02	110	LR	LR	02 35 06.3		
	comp=Z,47nm,18.2s,baz=114,slow=32							
CASY	Casey	66.04	205	P	P	02 15 04.8	-0.3	
NVAR	Mina Array Bea	78.07	41	P	P	02 16 17.5	-0.3	
	comp=Z,1.5nm,0.9s,baz=226,slow=8.3,SNR=7.3							
	comp=Z,1.5nm,0.9s							
TXAR	Lajitas Array	83.57	56	P	P	02 16 46.1	-1.2	
	comp=Z,0.7nm,1.0s,baz=242,slow=4.6,SNR=4.1							
	comp=Z,0.7nm,1.0s							
PV23	Carpenter Ridg	84.11	46	P	P	02 16 50.6	+0.5	
PV23				IAmb	IAmb	02 16 57.4		
	comp=Z,8.5nm,1.0s							
PDAR	Pinedale Array	86.01	42	P	P	02 16 58.9	-0.6	
	comp=Z,0.5nm,0.8s,baz=194,slow=5.5,SNR=4.3							
	comp=Z,0.5nm,0.8s							
ILAR	Eielson Array	87.06	11	P	P	02 17 04.2	+0.4	
	comp=Z,0.4nm,0.9s,baz=226,slow=4.8,SNR=4.5							
	comp=Z,0.4nm,0.9s							
ILAR	Eielson Array	87.06	11	P	P	02 17 04.5	+0.7	
CMAR	Chiang Mai Arr	93.63	288	P	P	02 17 37.6	+2.0	
	comp=Z,0.7nm,0.3s,baz=122,slow=6.8,SNR=1.2							
	comp=Z,0.7nm,0.3s							
CMAR	Chiang Mai Arr	93.63	288	P	P	02 17 34.6	-1.1	
BOOM	Boomskoye usch	117.98	308	PKPdf	PKPdf	02 23 05.3	-0.6	
SPB2	Spitsbergen Ar	121.61	358	PKPdf	PKPdf	02 23 10.7	-0.9	
EKB	Eskdalemuir	144.06	9	PKPdf	PKPdf	02 23 54.6	+0.5	
AKASG	Malin Array Be	144.37	335	PKPbc	PKPab	02 23 53.2	+0.4	
	comp=Z,0.7nm,0.5s,baz=42,slow=4.0,SNR=6.2							
AKASG	Malin Array Be	144.37	335	PKPdf	PKPab	02 23 53.6	+0.8	
MARD	Mardin	145.31	307	PKPbc	PKPbc	02 23 55.7	-1.1	
DSB	Dublin	145.47	13	PKPdf	PKPdf	02 23 56.9	+0.3	
BUR08	Bucovina Ar. S	148.41	335	PKPbc	PKPbc	02 24 05.6	+0.2	
BURAR	Bucovina Array	148.43	335	PKPbc	PKPbc	02 24 05.1	-0.3	

GII **27** *02:08:21.2±0.0,40°.427N±0°.003×37°.972E±0°.001, h0km,Mws4.6,confirmed*
ISK **27** *02:08:43.6,38°.18N×38°.68E,h5km,ML4.5/28*
IDC **27** *02:08:44.9±0.6,38°.22N×38°.68E, h0km, mb4.2/20, mbtmp4.1/32,ML3.9/12,MS3.5/15, Error ellipse: s-maj=12.9km s-min=7.9km az=169.0*
MOS **27** *02:08:44.3±1.2,38°.13N×38°.65E,h9km,mb4.6/25,Error ellipse: s-maj=5.8km s-min=4.1km az=95.9*
MED_RC **27** *02:08:45.0±1.1,38°.27N×38°.67E,h10km,MW4.3/12, Moment Tensor Solution.Mantle waves: s12,c12; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr-1.21±.24; Mθθ-0.96±.34; Mϕϕ2.17±.23; Mrθ1.57±1.23; Mθϕ1.33±.25; Mϕr-1.74±.84; Best double couple: M□3.26000×10^15 NP1:φs235.00000°,δ44.00000°, λ-23.00000°. NP2:φs341.00000°,δ74.00000°, λ-132.00000°. Principal axes: T 3.0200, Plg18.0000°, Azm101.0000°; N 0.4800, Plg40.0000°, Azm355.0000°; P -3.5000, Plg44.0000°, Azm210.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
MCSM **27** *02:08:45.5±0.5,38°.N±3°×3°.9E±°,h9km±4km,mb4.5,mB4.7, MLv4.4,Mw(mB)3.9*
AFAD **27** *02:08:45.0,38°.25N×38°.66E,h7km±2km,MW4.1*
NEIC **27** *02:08:46.2±1.9,38°.23N±0°.04×38°.69E±0°.06,h10km±1km, mb4.6/40,Error ellipse: s-maj=7.6km s-min=6.1km az=244.0*

ISC 27 02:08:46.3±0.9,**38°.24N**±0°.02×**38°.69E**±0°.02,**h7**km±6km, **n363,**σ1**81**/395,**mb4.4**/61,**MS3.3**/8,**35C-33D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MAYA	Malatya/Merkez	0.22	292	P		Pg	02 08 49.7	-1.1
MAYA				S		Sg	02 08 53.0	-0.9
MAYA				IAML			02 08 53.0	
	comp=N,15μm,0.6s							
MAYA				IAML			02 08 54.0	
	comp=E,17μm,0.2s							
MDYL	Doganyol-Malat	0.28	75	Pg		Pg	02 08 51.1	-0.8
MDYL				Sg		Sg	02 08 56.2	+0.5
ELZG	Elazig	0.35	42	P		Pg	02 08 52.3	-0.8
ELZG				S		Sg	02 08 57.1	-0.6
ELZG				IAML			02 09 00.0	
	comp=N,5μm,0.6s							
ELZG				IAML			02 09 00.0	
	comp=E,5μm,0.6s							
ESGZ	Sivrice-Elazig	0.35	57	Pg		Pg	02 08 52.4	-0.8
ESGZ				Sg		Sg	02 08 58.9	+1.1
NARI	Adyaman-Kaht	0.36	171	P		Pg	02 08 53.3	0.0
NARI				S		Sg	02 08 58.1	0.0
NARI				IAML			02 09 00.0	
	comp=E,1μm,0.8s							
NARI				IAML			02 09 01.0	
	comp=N,1μm,0.7s							
KAHTU	Kahta	0.44	188	P		Pg	02 08 54.3	-0.5
KAHTU				S		Sg	02 09 01.1	+0.5
KAHTU				IAML			02 09 06.0	
	comp=N,2μm,0.4s							
KAHTU				IAML			02 09 10.0	
	comp=E,3μm,0.6s							
CNGT	ngs	0.48	93	P		Pg	02 08 54.6	-1.0
CNGT				S		Sg	02 09 02.8	+0.8
CNGT				IAML			02 09 08.0	
	comp=N,2μm,0.7s							
CNGT				IAML			02 09 09.0	
	comp=E,1μm,1.4s							
SVRC	Sivrice-ELAZID	0.51	74	Pg		Pg	02 08 54.9	-1.2
SVRC				Sg		Sb	02 09 04.3	-0.9
ESIJ	Sivrice-Elazig	0.53	67	Pg		Pg	02 08 55.9	-0.7
AZEY	Adyaman-Merk	0.55	219	P		Pg	02 08 56.1	-0.9
AZEY				S		Sg	02 09 04.6	+0.4
AZEY				IAML			02 09 05.0	
	comp=N,1μm,0.3s							
AZEY				IAML			02 09 07.0	
	comp=E,2μm,0.5s							
ELZ	Elazig	0.60	42	P		Pg	02 08 56.8	-1.1
ELZ				S		Sg	02 09 05.8	-0.1
ELZ				IAML			02 09 07.0	
	comp=E,2μm,0.6s							
ELZ				IAML			02 09 08.0	
	comp=N,3μm,0.6s							
AKCD	Akcadag	0.61	275	P		Pg	02 08 56.5	-1.5
AKCD				S		Sg	02 09 04.8	-1.1
AKCD				IAML			02 09 06.0	
	comp=N,10μm,0.5s							
AKCD				IAML			02 09 06.0	
	comp=E,5μm,0.2s							
HANM	anlurfa/Hi	0.68	167	P		Pg	02 08 58.9	-0.4
HANM				S		Sb	02 09 09.2	-0.8
HANM				IAML			02 09 12.0	
	comp=E,2μm,0.4s							
HANM				IAML			02 09 13.0	
	comp=N,2μm,0.3s							
MDNT	Maden	0.80	79	P		Pg	02 09 00.4	-1.2
MDNT				S		Sg	02 09 12.5	+0.5
MDNT				IAML			02 09 13.0	
	comp=N,1μm,0.7s							
MDNT				IAML			02 09 14.0	
	comp=E,5μm,0.6s							
URFA	Urfa	0.81	172	Pg		Pg	02 08 58.6	-3.2
URFA				Sg		Sg	02 09 10.3	-1.9
ATAB	Bozova	0.83	202	P		Pg	02 09 01.4	-0.8
ATAB				S		Sg	02 09 12.8	-0.2
ATAB				IAML			02 09 17.0	
	comp=N,10μm,0.3s							
ATAB				IAML			02 09 17.0	
	comp=E,2μm,0.5s							
HEKM	Malatya_Hekimh	0.86	318	P		Pg	02 09 01.0	-1.7
HEKM				IAML			02 09 13.0	
	comp=N,4μm,0.5s							
HEKM				IAML			02 09 13.0	
	comp=E,5μm,0.5s							
HEKM				S		Sg	02 09 13.3	-0.6
ARPR	Arapgir-MALATY	0.90	342	Pg		Pg	02 09 01.9	-1.6
ARPR				Sg		Sg	02 09 15.4	+0.2
ARPR	Arapgir-MALATY	0.90	342	Pg		Pg	02 09 02.5	-1.0
MCKZ	Bingol	0.91	14	P		Pg	02 09 01.6	-2.1
MCKZ				S		Sg	02 09 14.9	-0.6
MCKZ				IAML			02 09 19.0	
	comp=E,5μm,0.7s							
MCKZ				IAML			02 09 22.0	
	comp=N,5μm,0.8s							
AKCA	Adyaman/G¶l	0.91	241	P		Pg	02 09 02.3	-1.4
AKCA				S		Sb	02 09 16.2	-0.5
AKCA				IAML			02 09 21.0	
	comp=E,2μm,0.6s							
AKCA				IAML			02 09 24.0	
	comp=N,4μm,0.7s							
DYBB	Diyarbakir	1.18	104	Pn		Pg	02 09 07.5	-1.4
ILIC	ilic-Erzincan	1.21	356	Pn		Pg	02 09 07.6	-2.0
KHMN	Narli-Kahraman	1.48	236	Pn		Pn	02 09 11.9	-1.5
ERZN	Erzincan	1.57	31	Pn		Pn	02 09 14.2	-0.5
GAZ	Gaziantep	1.58	228			Pn	02 09 12.9	-1.9
GAZ	Gaziantep	1.58	228	Pn		Pn	02 09 13.4	-1.4
KMRS	Kahramanmaras	1.59	243	Pn		Pn	02 09 13.7	-1.2
BNGB	Bingl	1.73	64	Pn		Pn	02 09 16.5	-0.4
SARI	SarD1z-Kayseri	1.79	276	Pn		Pn	02 09 17.0	-0.8
YEDI	Yedisu-Bingol	1.88	50	Pn		Pn	02 09 18.3	-0.7
MARD	Mardin	1.90	119			Pn	02 09 17.8	-1.4
SVAN	Silvan-Diyarba	1.98	92	Pn		Pn	02 09 19.5	-0.7
SVSK	Karacayir	2.13	322	Pn		Pn	02 09 22.6	+0.4
KARO	Karliova-Bingo	2.13	59	Pn		Pn	02 09 22.9	+0.4
KOPT	Kop Dagi	2.27	38			Pn	02 09 25.1	+0.8
BNN	Bunyan	2.31	286			Pn	02 09 24.6	-0.3
BNN	Bunyan	2.31	286	Pn		Pn	02 09 24.7	-0.2
VRTB	Varto-Mus	2.35	66	Pn		Pn	02 09 25.9	+0.4
KOZT	Kozan	2.39	252	Pn		Pn	02 09 24.7	-1.1
BAYT	Aydintepe-Bayb	2.43	27	Pn		Pn	02 09 26.7	+0.2
GURO	Guroymak-BITLI	2.65	82			Pn	02 09 28.8	-0.6
GURO	Guroymak-BITLI	2.65	82	Pn		Pn	02 09 28.9	-0.6
TOKT	Tokat	2.66	322	Pn		Pn	02 09 29.6	0.0
TOKA	Tokat	2.70	321			Pn	02 09 29.8	-0.3
YOZ	Yozgat	2.98	299	Pn		Pn	02 09 33.9	-0.1
CMRD	Camardi-Nigde	2.98	260	Pn		Pn	02 09 33.8	-0.3
KOZK	Kozakli-Nevseh	3.14	289	Pn		Pn	02 09 36.8	+0.5
CHOM	Cayeli-Rize	3.27	29	Pn		Pn	02 09 38.6	+0.6
GEVA	Gevas	3.44	87			Pn	02 09 40.4	-0.1
CORM	Corum	3.70	303	Pn		Pn	02 09 44.7	+0.7
KARS	Kars	4.15	54			Pn	02 09 50.8	+0.6
KARS	Kars	4.15	54	P		Pn	02 09 50.8	+0.6
BR104	Keskin Array S	4.20	292	Pn		Pn	02 09 50.3	-0.5
BR131	Keskin Array S	4.21	292			Pn	02 09 50.7	-0.2
BR131	Keskin Array S	4.21	292	P		Pn	02 09 50.7	-0.2
BRTR	Keskin Array B	4.21	292	Pn		Pn	02 09 51.0	+0.1
	7.3nm,0.3s,baz=136,slow=10,SNR=213							
BRTR				Pg		Pb	02 10 02.5	+1.8
	9.8nm,0.3s,baz=120,slow=17,SNR=20							
BRTR				Lg		Lg	02 11 03.5	
	7.6nm,0.3s,baz=131,slow=33,SNR=5.9							
BRTR				LR		LR	02 11 52.5	
	comp=Z,574nm,19.4s,baz=119,slow=45							
	34nm,0.7s							
BRTR	Keskin Array B	4.21	292			Pn	02 09 50.4	-0.5
BEIL	Beino	4.21	209	eP		Pn	02 09 49.8	-1.0
BR105	Keskin Array S	4.22	292	Pn		Pn	02 09 51.0	-0.1
BR106	Keskin Array S	4.22	292	Pn		Pn	02 09 51.2	0.0
HWQ	Hawqa	4.53	210	eP		Pn	02 09 54.5	-0.9
SNOP	Sinop	4.62	326			Pn	02 09 57.3	+0.8
ILGA	Ilgaz	4.75	308			Pn	02 09 58.7	+0.1
ZAHL	Zahle	4.93	208	eP		Pn	02 10 00.5	-0.4
BHL	Bhannes	4.98	211	eP		Pn	02 10 01.2	-0.3
GNI	Garni	5.07	66	Pn		Pn	02 10 04.0	+1.1
	2.3nm,0.3s,baz=280,slow=3.4,SNR=15							
GNI				LR		LR	02 12 28.9	
	comp=Z,512nm,19.4s,baz=260,slow=44							
	6.7nm,0.4s							
GNI	Garni	5.07	66			Pn	02 10 03.1	+0.3
GNI	Garni	5.07	66	⇓P		Pn	02 10 04.1	+1.2
GNI	Garni	5.07	66	Pn		Pn	02 10 03.3	+0.4
	0.3nm896nm69nm,0.9s							
BZK	Bozkurt	5.17	317	⇑P		Pn	02 10 08.8	+4.8
BZK	Bozkurt	5.17	317			Pn	02 10 04.0	0.0
DQRL	Deir Qamar	5.18	210	eP		Pn	02 10 03.9	-0.4
RCY	Rachaya	5.27	207	eP		Pn	02 10 05.6	0.0
QRWL	Qaraoun	5.28	208	eP		Pn	02 10 05.6	-0.1
SOC	Sochi	5.39	8	eP		Pn	02 10 08.2	+1.1
SOC				e			02 11 14.1	
SOC				pmax		pmax		
	comp=Z,21nm,0.8s							
SOC				MLR		MLR		
	comp=Z,304nm,15.0s							
CSS	Mathiatis	5.41	234			Pn	02 10 07.7	+0.3
CSS	Mathiatis	5.41	234	Pn		Pn	02 10 04.0	-3.4
	comp=Z,0.2nmcomp=Z,628nmcomp=Z,52nm,0.8s							
NATI	Neve Ativ	5.52	207	P		Pn	02 10 10.3	+1.5
NATI				S		Sb	02 11 34.7	+5.4
GEM	Giv'at Ha'Em	5.59	207	P		Pn	02 10 11.4	+1.5
GEM				S		Sb	02 11 37.2	+5.8
CIDE	Kastamonu/Cide	5.71	311	⇓P		Pn	02 10 13.6	+2.2
KSHT	Keshet	5.75	205	P		Pn	02 10 13.3	+1.3
KSHT				S		Sb	02 11 40.9	+5.0
MMA0B	Mount Meron ar	5.86	208	P		Pn	02 10 15.2	+1.6
MMA0B				S		Sb	02 11 43.4	+4.2
MMAI	Mount Meron Ar	5.86	208	Pn		Pn	02 10 13.5	-0.1
	comp=Z,14nm,0.3s,baz=23,slow=16,SNR=68							
MMAI				Lg		Lg	02 11 49.7	
	comp=Z,26nm,0.3s,baz=32,slow=30,SNR=5.1							
	comp=Z,6.8nm,0.3s							
NEUR	Neytrino	5.87	30	⇓iP		Pn	02 10 16.5	+2.7
NEUR				pmax		pmax		
	comp=Z,2.0nm,0.5s							
HNTI	Hanita	5.89	210	P		Pn	02 10 14.1	+0.2
BLGI	Bet Lehem HaGe	6.19	208	P		Pn	02 10 18.7	+0.6
BLGI				S		Sb	02 11 51.2	+2.5
MDUB	Mudurnu	6.22	293			Pn	02 10 17.0	-1.5
ASF	Jabal al Asfar	6.23	194	Pn		Pn	02 10 18.5	-0.2
	comp=Z,2.5nm,0.3s,baz=9.0,slow=14,SNR=21							
ASF				Lg		Lg	02 12 00.3	
	comp=Z,14nm,0.3s,baz=95,slow=23,SNR=5.5							
ASF				LR		LR	02 13 02.6	
	comp=Z,275nm,18.7s,baz=26,slow=42							
	comp=Z,4.9nm,0.3s							
SHA1	Shizhatmaz	6.26	27	c iP		Pn	02 10 21.1	+1.9
KBZ	Khabaz	6.34	29	Pn		Pn	02 10 22.0	+1.9
	comp=Z,0.5nm,0.3s,baz=194,slow=4.2,SNR=9.2							
	comp=Z,2.3nm,0.5s							
KBZ	Khabaz	6.34	29	⇓iP		Pn	02 10 22.3	+2.2
OFRI	`Ofer	6.37	209	P		Pn	02 10 20.9	+0.4
OFRI				S		Sb	02 11 53.7	-0.2
MMLI	Mount Malkishu	6.38	206	P		Pn	02 10 22.0	+1.3
MMLI				S		Sb	02 11 56.9	+2.9
KIV	Kislovodsk	6.46	27			Pn	02 10 21.9	0.0
KIV	Kislovodsk	6.46	27	eP		Pn	02 10 22.2	+0.4
KIV				pmax		pmax		
	comp=Z,12nm,1.0s							
KIV				MLR		MLR		
	comp=Z,56nm,10.0s							
KIV	Kislovodsk	6.46	27	Pn		Pn	02 10 21.0	-0.8
	comp=Z,0.1nmcomp=Z,19nm,1.2s							
KVAR	Kislovodsk Arr	6.46	27	Pn		Pn	02 10 23.9	+2.0
	baz=282,slow=20							
KVAR				LR		LR	02 13 17.0	
	comp=Z,355nm,18.9s,baz=94,slow=42							
	comp=Z,4.2nm,0.7s							
HMDT	Nahal Hemdat	6.51	204	P		Pn	02 10 24.1	+1.7
HMDT				S		Sb	02 12 00.7	+2.9
LABN	Labinsk	6.58	13	eP		Pn	02 10 25.4	+2.1
LABN				eS		Sn	02 11 42.9	+4.4
LABN				pmax		pmax		
	comp=Z,52nm,0.7s							
BORA	Eskisehir	6.62	287			Pn	02 10 22.6	-1.4
SLTI	Sal'it	6.69	208	P		Pn	02 10 26.1	+1.2
SLTI				S		Sb	02 12 02.2	-0.8
SALP	Salfit	6.79	206	P		Pn	02 10 28.1	+1.8
UJAP	Al Uja	6.81	204	P		Pn	02 10 28.1	+1.6
DSI	Dead Sea	7.19	203	P		Pn	02 10 33.9	+2.1
AMAZ	Amatzia	7.37	206	P		Pn	02 10 35.1	+0.7
AMAZ				S		Sb	02 12 21.2	-1.5
GHAJ	Ghor Haditha	7.38	201			Pn	02 10 31.7	-2.7
GHAJ	Ghor Haditha	7.38	201	P		Pn	02 10 36.2	+1.8
GHAJ				S		Sb	02 12 22.5	-0.4
MSBI	Mazada	7.43	203	P		Pn	02 10 37.4	+2.3
YTIR	Yattir	7.46	204	P		Pn	02 10 36.8	+1.2
ERBR	Yeremizino-Bor	7.59	10	eP		Pn	02 10 41.4	+4.2
ERBR				eS		Sn	02 12 10.1	+6.7
ERBR				pmax		pmax		
	comp=Z,16nm,0.7s							
AKT	Akhty	7.67	62	eP		Pn	02 10 38.8	+0.3
AKT				pmax		pmax		
	comp=Z,5.0nm,0.7s							
KZIT	Kziot	8.13	207	P		Pn	02 10 45.9	+1.2
MAK	Makhachkala	8.20	52	c iP		Pn	02 10 45.2	-0.4
MAK				eS		Sn	02 12 19.5	+1.1
MAK				pmax		pmax		
	comp=Z,117nm,1.3s							
MAK				MLR		MLR		
	comp=Z,1μm,10.0s							
HRFI	Mount Harif	8.72	201	P		Pn	02 10 55.9	+3.0
KRMI	Paran Flat	8.74	203	P		Pn	02 10 54.4	+1.3
EIL	Elat	9.09	201	Pn		Pn	02 10 58.2	+0.3
	comp=Z,0.9nm,0.3s,baz=12,slow=9.9,SNR=8.6							
EIL				Lg		Lg	02 13 37.8	
	comp=Z,2.5nm,0.3s,baz=73,slow=19,SNR=4.2							
EIL				LR		LR	02 14 54.1	
	comp=Z,397nm,20.2s,baz=20,slow=41							
	comp=Z,2.4nm,0.6s							
EIL	Elat	9.09	201	P		Pn	02 11 00.6	+2.7
KARP	Karpathos	9.62	257	P		Pn	02 11 02.8	-2.3
	comp=Z,75nm,1.5s							
TLCR		10.13	316	⇓P		Pn	02 11 13.6	+1.6
TLCR		10.13	316	⇓P		Pn	02 11 13.6	+1.6
TPGR	Topolog	10.14	314	⇑P		Pn	02 11 13.8	+1.6
CFR	Carcaliu	10.49	315	⇓P		Pn	02 11 17.0	0.0
CFR	Carcaliu	10.49	315	⇓P		Pn	02 11 17.0	0.0
APE	Apeiranthos	10.50	268	⇓P		Pn	02 11 21.7	+4.5
APE	Apeiranthos	10.50	268	⇓P		Pn	02 11 21.7	+4.5
ELND	Elena	10.81	300	⇑P		Pn	02 11 22.6	+1.2
ISR	Istrita	11.38	311	⇑P		Pn	02 11 31.1	+1.9
ISR	Istrita	11.38	311	⇑P		Pn	02 11 31.1	+1.9
ISR	Istrita	11.38	311	P		Pn	02 11 28.9	-0.4
	comp=Z,75nm,1.0s							
IDI	Anoyia	11.45	259			Pn	02 11 28.5	-1.8
NEHR	Nehoiu	11.70	312	⇑P		Pn	02 11 36.5	+2.9
VRI	Vrincioaia	11.70	314	⇑P		Pn	02 11 36.7	+3.1
VRI	Vrincioaia	11.70	314	⇑P		Pn	02 11 36.7	+3.1
PLOR	Plostina	11.73	314	⇓P		Pn	02 11 34.3	+0.2
PLOR	Plostina	11.73	314	⇓P		Pn	02 11 34.3	+0.2
MLR	Muntele Rosu	11.94	311	Pn		Pn	02 11 37.7	+0.8
	comp=Z,0.2nm,0.3s,baz=148,slow=12,SNR=3.6							
MLR				LR		LR	02 16 50.4	
	comp=Z,194nm,18.6s,baz=125,slow=41							
	comp=Z,6.2nm,1.2s							
MLR	Muntele Rosu	11.94	311	⇑P		Pn	02 11 43.2	+6.3
MLR	Muntele Rosu	11.94	311	Pn		Pn	02 11 35.6	-1.3
MLR	Muntele Rosu	11.94	311	⇑P		Pn	02 11 43.2	+6.3
TESR	Tescani	12.14	317	⇑P		Pn	02 11 39.8	+0.3
ONER	Baraj Valea Uz	12.17	316	⇑P		Pn	02 11 39.2	-0.8
TURR	Turia	12.21	314	⇑P		Pn	02 11 44.3	+3.7
OZUR		12.37	313	⇓P		Pn	02 11 42.6	-0.1
SORM	Soroca	12.43	326	⇓P		Pn	02 11 45.3	+1.9
SORM	Soroca	12.43	326	⇓P		Pn	02 11 45.3	+1.9
VOIR		12.45	310	⇑P		Pn	02 11 47.5	+3.6
VOIR		12.45	310	⇑P		Pn	02 11 47.5	+3.6
GIRR	Girov	12.50	318	⇓P		Pn	02 11 47.0	+2.5
DOPR	Dopca	12.53	312	⇓P		Pn	02 11 43.8	-1.0
ARR	Arges	12.66	309	⇑P		Pn	02 11 52.5	+5.7
VORD	Divnogorie	12.73	2	eP		Pn	02 11 54.9	+7.3
VORD				pmax		pmax		
	comp=Z,6.0nm,0.9s							
PRAR	RASCA	12.90	319	⇑P		Pn	02 11 48.0	-2.0
VSR	Storozhevoye	12.98	1	eP		Pn	02 11 59.3	+8.3
VSR				pmax		pmax		
	comp=Z,4.0nm,0.5s							
VRH	Novokhopyorsk	13.14	8	eP		P	02 12 00.0	-3.4
VRH				pmax		pmax		
	comp=Z,9.0nm,0.6s							
LOT	Lotru	13.24	308	⇓P		Pn	02 11 59.4	+4.7
VORR	Voronezh	13.44	1	eP		P	02 12 02.6	-4.1
VORR				pmax		pmax		
	comp=Z,20nm,0.5s							
BURAR	Bucovina Array	13.59	318	⇑P		Pn	02 12 00.1	+0.7
BURAR	Bucovina Array	13.59	318			Pn	02 11 58.5	-1.0
BURAR	Bucovina Array	13.59	318	⇑P		Pn	02 12 00.1	+0.7
KMPD	K-Podol'skiy	13.60	323	P		P	02 11 57.7	-11
KMPD				P		Pn	02 11 57.2	-2.3
BUR08	Bucovina Ar. S	13.62	318			Pn	02 11 58.6	-1.2
CJR	Cluj-Napoca	13.97	312	⇑P		P	02 12 14.8	+2.0
CJR	Cluj-Napoca	13.97	312	⇑P		P	02 12 14.8	+2.0
AK07	Malin Array Si	14.04	334	P		Pn	02 12 04.2	-1.2
LUBAR	Lubar, Ukraine	14.05	330	P		Pn	02 12 04.4	-1.3
AK10	Malin Array Si	14.06	335	P		Pn	02 12 04.8	-0.9
AK09	Malin Array Si	14.06	335	P		Pn	02 12 05.3	-0.5
AK08	Malin Array Si	14.09	335	P		Pn	02 12 05.3	-0.8
KIEV	Kiev	14.15	335	⇓P		Pn	02 12 10.6	+3.6
KIEV	Kiev	14.15	335			Pn	02 12 06.5	-0.5
KIEV	Kiev	14.15	335	⇓P		Pn	02 12 10.6	+3.6
KIEV	Kiev	14.15	335	P		Pn	02 12 05.9	-1.1
	comp=Z,39nm,2.5s							
AKASG	Malin Array Be	14.16	335	Pn		Pn	02 12 06.9	-0.2
	comp=Z,0.4nm,0.3s,baz=149,slow=13,SNR=7.7

comp=Z,69nm,14.0s
MNK MLR MLR
comp=N,83nm,18.0s
MNK MLR MLR
comp=E,77nm,14.0s
OJC Ojcow 18.01 318 Pn **Pn 02 12 54.8 -2.2**
OJC Ojcow 18.01 318 P **Pn 02 12 54.8 -2.2**
OJC Ojcow 18.01 318 P **Pn 02 12 55.5 -1.5**
comp=E,12nm,1.3s
AKTO Aktyubinsk 18.37 42 P **Pn 02 13 00.7 -0.6**
comp=E,0.4nm,0.3s,baz=233,slow=10.0,SNR=16
AKTO LR LR 02 22 01.8
comp=E,188nm,18.7s,baz=278,slow=43
comp=E,17nm,0.8s
JAVC Velka Javorina 18.51 312 *e*P **Pn 02 13 08.5 +5.4**
NACGM Naroch 18.52 338 *e*P **Pn 02 13 04.2 +1.0**
comp=Z,19nm,0.9s,baz=150
MODS Modra-Piesok 18.53 310 *e*P **P 02 13 01.5 -1.7**
MODS Modra-Piesok 18.53 310 *e*PN **P 02 13 01.5 -1.7**
MODS Modra-Piesok 18.53 310 *e*P **Pn 02 13 07.5 +4.2**
ZST Bratislava 18.56 309 *e*P **Pn 02 13 08.0 +4.3**
ZST Bratislava 18.56 309 *e*P **Pn 02 13 08.0 +4.3**
AB31 Akbulak array 18.83 47 **P 02 13 05.0 -1.4**
ABKAR Akbulak array 18.83 47 **P 02 13 05.5 -1.0**
RONA Rosalia, Austr 18.86 307 *e*Pn **P 02 13 06.5 -0.4**
comp=Z,10nm,1.0s
STEB Steborice 18.96 315 *e*P **Pn 02 13 12.5 +3.9**
MORC Moravsky Berou 19.02 314 ⇑P **Pn 02 13 09.9 +0.6**
MORC Moravsky Berou 19.02 314 **P 02 13 07.3 -1.3**
MORC Moravsky Berou 19.02 314 ⇑P **Pn 02 13 09.9 +0.6**
MORC Moravsky Berou 19.02 314 *e*P **Pn 02 13 09.0 -0.3**
SUW Suwalki 19.02 331 **P 02 13 06.4 -2.1**
SUW Suwalki 19.02 331 P **P 02 13 06.4 -2.1**
CONA Conrad Observa 19.22 308 *e*Pn **P 02 13 10.1 -0.8**
comp=Z,15nm,1.5s
INTR Introdacqua 19.30 289 P **P 02 13 10.5 -1.3**
INTR IAmb IAmb 02 13 28.2
comp=Z,60nm,1.3s
VRAC Vranov 19.34 312 P **P 02 13 12.3 +0.2**
comp=Z,0.2nm,0.3s,baz=106,slow=20,SNR=7.1
VRAC LR LR 02 22 11.0
comp=Z,82nm,19.1s,baz=152,slow=42
comp=Z,0.4nm,0.3s
VRAC Vranov 19.34 312 ⇓P **Pn 02 13 17.6 +4.4**
VRAC Vranov 19.34 312 ⇓P **Pn 02 13 17.6 +4.4**
VRAC Vranov 19.34 312 *e*P **Pn 02 13 15.9 +2.7**
KRUC Moravsky 19.35 311 *e*P **Pn 02 13 16.1 +2.9**
CAMP Campotosto 19.70 291 P **P 02 13 16.9 +0.7**
NRCA Norcia 19.94 291 P **P 02 13 16.8 -2.0**
NRCA IAmb IAmb 02 13 24.9
comp=Z,31nm,0.9s
FDMO Fiordimonte 19.98 292 **P 02 13 17.9 -1.3**
DPC Dobruska-Polom 19.98 314 *e*P **Pn 02 13 20.3 -0.5**
DPC Dobruska-Polom 19.98 314 *e*P **Pn 02 13 20.3 -0.5**
MOA Molln 20.20 306 *e*Pn **P 02 13 22.2 +0.8**
comp=Z,27nm,1.4s
MYKA Terra Mystica 20.23 302 *e*Pn Pn 02 13 22.9 -0.9
comp=Z,15nm,0.9s,SNR=4.3
KSP Ksiaz 20.24 316 P **P 02 13 20.8 -1.1**
comp=Z,22nm,1.1s
CHVC Chvalec 20.25 315 *e*P Pn 02 13 23.9 0.0
CHVC Chvalec 20.25 315 *e*P Pn 02 13 23.9 0.0
CESX Cesi 20.32 291 P **P 02 13 20.1 -2.7**
CESX IAmb IAmb 02 13 32.6
comp=Z,42nm,1.2s
CKRC Cesky Krumlov 20.51 309 *e*P **P 02 13 25.5 +0.6**
CKRC Cesky Krumlov 20.51 309 *e*P **P 02 13 25.5 +0.6**
BIOA Bad Ischl, Aus 20.55 305 *e*Pn **P 02 13 26.0 +0.8**
comp=Z,5.2nm,1.1s
KBA Koelnbreinsper 20.55 304 *e*Pn Pn 02 13 26.6 -1.1
comp=Z,13nm,1.8s
PRU Pruhonice 20.84 312 *e*P **P 02 13 29.4 +1.0**
PRU Pruhonice 20.84 312 *e*P **P 02 13 29.4 +1.0**
GEC2 GERESS Array S 20.89 309 **P 02 13 28.2 -0.9**
GEC2 IAmb IAmb 02 13 33.5
comp=Z,19nm,0.9s
GERES GERESS Array B 20.89 309 P **P 02 13 29.2 +0.1**
comp=Z,11nm,0.8s,baz=118,slow=11,SNR=18
GERES LR LR 02 22 13.5
comp=Z,36nm,18.0s,baz=176,slow=39
comp=Z,11nm,0.8s
PVCC Panska Ves 21.06 313 *e*P **P 02 13 31.9 +1.2**
PVCC Panska Ves 21.06 313 *e*P **P 02 13 31.9 +1.2**
KHC Kasperske Hory 21.07 309 P **P 02 13 28.3 -2.7**
KHC Kasperske Hory 21.07 309 *e*P **P 02 13 31.2 +0.2**
KHC Kasperske Hory 21.07 309 *ce*P **P 02 13 31.9 +0.9**
KHC pmax pmax
comp=Z,18nm,1.0s
KHC Kasperske Hory 21.07 309 P **P 02 13 30.4 -0.6**
comp=Z,18nm,1.0s
LESA Schwarzleotal 21.09 304 *e*Pn **P 02 13 33.1 +1.9**
comp=Z,25nm,1.5s
TEOL Teolo 21.30 298 P **P 02 13 30.8 -2.6**
KIRV Kirov 21.52 15 P **P 02 13 36.1 +0.6**
comp=Z,14nm,0.7s,baz=246,slow=2.4,SNR=6.9
KIRV LR LR 02 22 57.7
comp=Z,101nm,19.3s,baz=245,slow=40
comp=Z,14nm,0.7s
KIRV Kirov 21.52 15 ⇑*i*P **P 02 13 36.4 +0.9**
BRG Berggiesshubel 21.57 314 *e*P **P 02 13 39.1 +2.8**
BRG Amp 02 13 41.9
comp=Z,7.6nm,0.9s
VSU Vasula 21.68 343 *e*P **P 02 13 35.6 -1.7**
VSU pmax pmax
comp=Z,23nm,1.0s
WTTA Wattenberg 21.73 303 *e*P **P 02 13 39.2 +1.0**
comp=Z,16nm,1.1s,SNR=8.2
WATA Walderalm 21.78 303 *e*P **P 02 13 39.9 +1.2**
comp=Z,12nm,0.9s
SQTA Sankt Quirin 22.00 303 *e*P **P 02 13 41.5 +0.5**
comp=Z,12nm,0.9s
MOTA Moosalm 22.10 303 *e*P **P 02 13 42.5 +0.4**
comp=Z,9.3nm,0.9s,SNR=7.1
SALO Salr 22.14 298 P **P 02 13 38.9 -3.5**
SALO IAmb IAmb 02 13 48.6
comp=Z,23nm,0.8s
PUL Pulkovo 22.20 349 *e*P **P 02 13 44.1 +1.2**
PUL pmax pmax
comp=Z,20nm,0.7s
FETA Feichten 22.27 302 *e*P **P 02 13 44.4 +0.4**
comp=Z,8.2nm,1.2s
CLL Collm 22.29 314 *i* P **P 02 13 48.1 +4.1**
CLL pmax pmax
comp=Z,15nm,1.2s
CLL Collm 22.29 314 P **P 02 13 43.2 -0.8**
comp=Z,10nm,1.1s
CLL Collm 22.29 314 *i* P **P 02 13 48.1 +4.1**
comp=Z,15nm,1.2s
CLL *i* x x 02 13 57.6
CLL AMS AMS 04 51 00.0
comp=Z,200nm,18.3s
RETA Reutte 22.36 303 *e*P **P 02 13 44.8 -0.1**
comp=Z,2.6nm,0.6s
ARTI Arti 22.39 29 LR LR 02 22 28.8
comp=Z,44nm,19.3s,baz=179,slow=37
ARTI Arti 22.39 29 **P 02 13 42.2 -2.8**
ARTI IAmb IAmb 02 13 48.6
comp=Z,12nm,0.8s
ARTI Arti 22.39 29*c* *i*P **P 02 13 45.0 0.0**
ARTI S **S 02 17 51.8 +0.7**
ARTI pmax pmax
comp=Z,13nm,0.9s
FUORN Ofenpass-Fuorn 22.50 301 **P 02 13 42.4 -4.2**
FUORN IAmb IAmb 02 13 56.6
comp=Z,24nm,1.1s
KLMR Klimovskoe 22.64 1 *e*P **P 02 13 47.2 -0.4**
KLMR pmax pmax
comp=Z,25nm,1.5s
GRA1 Grafenberg Arr 22.71 309 **P 02 13 46.3 -2.2**
GRF Grafenberg Arr 22.71 309 P **P 02 13 46.3 -2.2**
GRF pmax pmax
comp=Z,55nm,1.2s
DAVA Damuels 22.89 303 *e*P **P 02 13 50.0 -0.7**
comp=Z,8.2nm,0.8s,SNR=8.7
TUE Stuetta 23.09 300 **P 02 13 51.6 -1.1**
TUE IAmb IAmb 02 14 04.7
comp=Z,13nm,1.1s
TUE Stuetta 23.09 300 P **P 02 13 52.4 -0.3**
comp=Z,53nm,1.3s
KEST Kesra 23.53 273 P **P 02 13 57.1 0.0**
comp=Z,27nm,1.0s,baz=69,slow=2.6,SNR=13
comp=Z,27nm,1.0s
KEST Kesra 23.53 273 **P 02 13 56.2 -0.9**
CHGR Chuyangaron 23.82 79 *e*P **P 02 13 59.8 -0.1**
CHGR pmax pmax
comp=Z,23nm,1.7s
SENIN Lac Senin/Sane 24.47 299 **P 02 14 04.7 -1.4**
SENIN IAmb IAmb 02 14 09.9
comp=Z,23nm,1.4s
FINES FINESS Array B 24.52 345 P **P 02 14 05.4 -0.7**
comp=Z,3.2nm,0.8s,baz=142,slow=8.3,SNR=8.6
comp=Z,3.2nm,0.8s
FINES FINESS Array B 24.52 345 *e*P **P 02 14 05.8 -0.3**
FINES FINESS Array B 24.52 345*ce*P **P 02 14 07.5 +1.4**
FINES pmax pmax
comp=Z,4.0nm,0.7s
KK31 Karatay Array 24.53 68 **P 02 14 06.2 -0.2**
KK31 Karatay Array 24.53 68 P **P 02 14 06.2 -0.2**
KK31 pmax pmax
comp=Z,20nm,0.9s
KKAR Karatay Array 24.53 68 **P 02 14 06.7 +0.2**
KKAR Karatay Array 24.53 68 P **P 02 14 06.7 +0.2**
GAR Garm 24.66 78 P **P 02 14 06.7 -1.1**
GAR IAmb IAmb 02 14 25.6
comp=Z,14nm,1.0s
BNI Bardonecchia 24.76 296 **P 02 14 07.2 -1.4**
BNI Bardonecchia 24.76 296 P **P 02 14 07.2 -1.4**
BNI pmax pmax
comp=Z,30nm,1.0s
ECH Echery 24.89 304 **P 02 14 08.9 -0.7**
ECH Echery 24.89 304 P **P 02 14 08.9 -0.7**
ECH pmax pmax
comp=Z,30nm,1.0s
BORK Borovoye 26.34 46 P **P 02 14 22.4 -0.2**
BORK Borovoye 26.34 46 ⇓*i*P **P 02 14 23.3 +0.7**
BORK pmax pmax
comp=Z,14nm,2.2s
BVAR Borovoye Array 26.37 46 P **P 02 14 23.0 0.0**
comp=Z,2.8nm,0.7s,baz=237,slow=4.9,SNR=11
BVAR LR LR 02 26 37.1
comp=Z,100nm,20.9s,baz=249,slow=41
comp=Z,2.8nm,0.7s
BVAR Borovoye Array 26.37 46 P **P 02 14 23.0 0.0**
ARSB Arslanbob 26.43 72 P **P 02 14 21.1 -2.7**
ARSB IAmb IAmb 02 14 32.1
comp=Z,22nm,1.2s
ARSB Arslanbob 26.43 72 P **P 02 14 21.1 -2.7**
ARSB pmax pmax
comp=Z,21nm,1.2s
AAK Ala-Archa 27.47 69 P **P 02 14 32.7 -0.5**
AAK Ala-Archa 27.47 69 ⇓*i*P **P 02 14 35.0 +1.9**
AAK pmax pmax
comp=Z,6.0nm,1.3s
BOOM Boomskoye usch 28.55 70 **P 02 14 41.4 -1.4**
BOOM Boomskoye usch 28.55 70 P **P 02 14 41.4 -1.4**
BOOM pmax pmax
comp=Z,5.0nm,0.8s
KSH2 Kashi 28.67 77 P **P 02 14 45.5 +1.6**
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
NRN Naryn 28.68 72 **P 02 14 42.2 -2.0**
NRN IAmb IAmb 02 14 46.7
comp=Z,7.9nm,1.0s
NRN Naryn 28.68 72 P **P 02 14 42.2 -2.0**
NRN pmax pmax
comp=Z,8.0nm,1.0s
KDJ Kajisay 29.49 70 P **P 02 14 51.0 -0.2**
KDJ Kajisay 29.49 70 P **P 02 14 51.0 -0.2**
KDJ pmax pmax
comp=Z,4.0nm,0.9s
KURBB Kurchatov Arra 30.65 53 P **P 02 15 02.1 +1.0**
comp=Z,3.3nm,0.8s,baz=266,slow=9.0,SNR=22
KURBB LR LR 02 29 28.4
comp=Z,259nm,18.4s,baz=170,slow=40
comp=Z,3.3nm,0.8s
KURK Kurchatov 30.72 53 P **P 02 15 02.1 +0.4**
KURK IAmb IAmb 02 15 06.1
comp=Z,6.8nm,1.0s
KURK Kurchatov 30.72 53 P **P 02 15 02.1 +0.4**
WUS Wushi 31.12 72 P **P 02 15 03.9 -1.6**
WUS IAmb IAmb 02 15 07.9
comp=Z,8.4nm,0.9s
ARCES ARCESS Array B 32.15 351 P **P 02 15 14.2 +0.1**
comp=Z,1.7nm,0.8s,baz=189,slow=8.3,SNR=2.2
comp=Z,1.7nm,0.8s
ARCES ARCESS Array B 32.15 351 P **P 02 15 13.6 -0.4**
ARCES IAmb IAmb 02 15 36.0
comp=Z,14nm,1.4s
TAM Tamanrasset 32.25 251 **P 02 15 14.4 -1.2**
TAM IAmb IAmb 02 15 16.9
comp=Z,6.2nm,0.9s
TAM Tamanrasset 32.25 251 P **P 02 15 14.5 -1.2**
TAM pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 32.68 61 **P 02 15 18.5 -0.5**
MAKZ Makanchi 32.68 61 P **P 02 15 18.5 -0.5**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
EKA Eskdalemuir Ar 32.75 315 P **P 02 15 19.1 -0.3**
comp=Z,2.5nm,0.8s,baz=107,slow=7.9,SNR=4.4
comp=Z,2.5nm,0.8s
MK31 Makanchi Array 32.90 61 *d*iP **P 02 15 22.2 +1.3**
MKAR Makanchi Array 32.90 61 P **P 02 15 22.0 +1.1**
comp=Z,4.1nm,0.7s,baz=275,slow=6.7,SNR=43
MKAR LR LR 02 31 06.4
comp=Z,62nm,19.1s,baz=286,slow=41
comp=Z,4.1nm,0.7s
MKAR Makanchi Array 32.90 61 **P 02 15 20.5 -0.5**
MKAR Makanchi Array 32.90 61 P **P 02 15 22.0 +1.1**
ESDC Sonseca Array 32.97 286 P **P 02 15 21.5 -0.2**
comp=Z,2.6nm,0.8s,baz=65,slow=9.3,SNR=14
comp=Z,2.6nm,0.8s
ZALV Zalesovo Beam 34.94 48 P **P 02 15 38.6 +0.1**
comp=Z,1.2nm,0.6s,baz=263,slow=8.8,SNR=4.4
ZALV PP **PP 02 16 58.0 +0.4**
comp=Z,1.6nm,0.8s,baz=277,slow=12,SNR=4.0
comp=Z,1.2nm,0.6s
ZALV Zalesovo Beam 34.94 48 P **P 02 15 36.1 -2.5**
WMQ Urumqi 36.95 65 *e*P **P 02 15 57.5 +1.5**
SPITS Spitsbergen Ar 41.12 353 P **P 02 16 31.1 +0.7**
comp=Z,7.8nm,1.0s,baz=137,slow=9.9,SNR=5.0
comp=Z,7.8nm,1.0s
EVN Everest 41.20 90 **P 02 16 30.8 -1.6**
EVN IAmb IAmb 02 16 33.5
comp=Z,7.8nm,0.6s
TORD Torodi Ar. Bea 41.24 243 P **P 02 16 30.8 -1.3**
comp=Z,1.6nm,1.0s,baz=54,slow=4.6,SNR=9.2
comp=Z,1.6nm,1.0s
TORD Torodi Ar. Bea 41.24 243 P **P 02 16 30.6 -1.5**
GOMU GeErMu 44.16 75 P **P 02 16 54.0 -2.0**
GOMU pmax pmax
comp=Z,3.0nm,0.5s
SONM Songino Array 48.95 56 P **P 02 17 32.5 -0.7**
comp=Z,0.5nm,0.7s,baz=288,slow=10,SNR=5.4
SONM LR LR 02 40 48.1
comp=Z,355nm,18.5s,baz=354,slow=39
comp=Z,0.5nm,0.7s
ULN Ulaanbaatar 49.37 56 **P 02 17 36.3 -0.2**
ULN IAmb IAmb 02 17 40.8
comp=Z,8.1nm,1.2s
ULN Ulaanbaatar 49.37 56 ⇓*i*P **P 02 17 37.4 +1.0**
ULN pmax pmax
comp=Z,5.0nm,1.1s
DBIC Dimbokro 50.35 243 P **P 02 17 42.6 -1.4**
comp=Z,2.6nm,0.5s,baz=48,slow=8.1,SNR=7.2
comp=Z,2.6nm,0.5s
DBIC Dimbokro 50.35 243 P **P 02 17 42.1 -1.9**
PZH PanZhiHua 53.60 83 P **P 02 18 07.8 -0.6**
HHC Hu-ho-hao-te 54.73 63 *e*P **P 02 18 15.5 -0.9**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,5.1s
UPNV Upernavik 55.34 339 *e*S **S 02 26 02.2 -2.0**
UPNV IAML 02 26 09.3
comp=Z,13nm,1.1s
CMAR Chiang Mai Arr 55.61 93 P **P 02 18 22.6 -0.3**
comp=Z,0.9nm,0.5s,baz=299,slow=8.6,SNR=6.3
comp=Z,0.9nm,0.5s
CMAR Chiang Mai Arr 55.61 93 P **P 02 18 21.2 -1.7**
CMAR Chiang Mai Arr 55.61 93 *i* P **P 02 18 25.1 +2.2**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
NJ2 Nanjing 63.91 69 *e*P **P 02 19 17.5 -2.4**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
SEY Seymchan 66.21 27*ce*P **P 02 19 36.2 +1.9**
SEY pmax pmax
comp=Z,6.0nm,1.0s
BILL Bilibino 67.02 19 ⇓*i*P **P 02 19 39.8 +0.4**
BILL pmax pmax
comp=Z,2.0nm,1.0s
KSRS Korea Array 67.56 59 P **P 02 19 42.8 -0.6**
comp=Z,2.6nm,0.8s,baz=301,slow=4.9,SNR=5.7
comp=Z,2.6nm,0.8s
SCHQ Schefferville 67.61 323 P **P 02 19 44.1 +0.6**
comp=Z,1.9nm,0.6s,baz=67,slow=7.4,SNR=4.0
comp=Z,1.9nm,0.6s
SCHQ Schefferville 67.61 323 P **P 02 19 41.9 -1.5**
COLA College 77.09 3 *e*P **P 02 20 38.4 -1.4**
COLA pmax pmax
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 77.33 348 P **P 02 20 41.0 -0.1**
comp=Z,0.7nm,0.8s,baz=17,slow=6.2,SNR=12
comp=Z,0.7nm,0.8s
YKA Yellowknife Ar 77.33 348 P **P 02 20 40.6 -0.5**
YKA Yellowknife Ar 77.33 348*ce*P **P 02 20 43.9 +2.7**
YKA pmax pmax
comp=Z,1.0nm,0.8s
ULM Lac du Bonnet 83.23 333 P **P 02 21 14.0 +0.8**
comp=Z,2.4nm,0.8s,baz=93,slow=3.9,SNR=5.2
comp=Z,2.4nm,0.8s

IDC 27 02:16:15.1±2.9, 26°45N×142°44E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=125.4km s-min=29.2km az=76.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11S3	**WAKE ISLAND Hy 23.73 104**			T	T	02 45 48.4	
	baz=294,slow=75,SNR=4.1						
H11S1	**WAKE ISLAND Hy 23.74 104**			T	T	02 45 48.3	
	baz=294,slow=75,SNR=3.9						
H11S2	**WAKE ISLAND Hy 23.75 104**			T	T	02 45 51.1	
	baz=294,slow=75,SNR=4.0						
WRA	**Warramunga Arr 46.78 190**			P	P	02 24 46.4	-0.1
	0.7nm,0.6s,baz=12,slow=8.6,SNR=7.0						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam 50.13 319**			P	P	02 25 11.5	-0.6
	0.3nm,0.4s,baz=89,slow=7.4,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array 51.06 310**			P	P	02 25 19.1	-0.1
	0.1nm,0.5s,baz=90,slow=9.0,SNR=2.4						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra 53.66 315**			P	P	02 25 38.5	+0.1
	0.2nm,0.5s,baz=92,slow=8.6,SNR=4.5						
	0.2nm,0.5s						
FINES	**FINESS Array B 78.63 334**			P	P	02 28 18.7	+0.1
	2.2nm,0.8s,baz=59,slow=5.6,SNR=6.6						
	2.2nm,0.8s						

*IDC **27** 02:22:56.2±1.6, 30°18S×177°73W, h0km, mb4.0/3, mbtmp3.9/4, ML3.3/1, MS3.6/1, Error ellipse: s-maj=41.5km s-min=18.7km az=103.0*
*NEIC **27** 02:23:02.9±1.2, 30°09S±0°08×177°8W±0°2, h40km±6km, mb4.5/16, Error ellipse: s-maj=22.0km s-min=10.7km az=76.0*
ISC 27 02:23:03.5±0.7, 30°10S±0°07×177°9W±0°2, h50km, n32, σ1§16/31, mb4.3/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island 0.84 0**			Pn	**Pn**	**02 23 17.1**	**-2.0**
	275nm,0.3s,baz=174,slow=23,SNR=12						
RAO				Sn	**Sn**	**02 23 29.8**	**-0.7**
	1µm,0.3s,baz=5.7,slow=23,SNR=15						
RAO	**Raoul Island 0.84 0**				**Pn**	**02 23 18.6**	**-0.5**
RAO					**Sn**	**02 23 29.4**	**-1.2**
URZ	**Urewera 9.12 205**			Pn	Pn	02 25 07.5	-4.9
	0.3nm,0.3s,baz=273,slow=5.7,SNR=8.0						
URZ				Sn	**Sn**	**02 26 49.3**	**-4.3**
	2.2nm,0.3s,baz=204,slow=22,SNR=17						
	2.8nm,0.6s						
STKA	**Stephens Creek 34.61 257**			P	**P**	**02 29 49.0**	**+1.1**
	1.3nm,0.6s,baz=72,slow=6.3,SNR=2.9						
STKA				LR	LR	02 41 37.3	
	comp=Z,103nm,19.8s,baz=204,slow=32						
	1.3nm,0.6s						
STKA	**Stephens Creek 34.61 257**			P	**P**	**02 29 49.1**	**+1.3**
STKA				IAmb	IAmb	02 29 53.8	
	comp=Z,3.2nm,0.6s						
INKA	**Innaminka 36.12 263**			P	**P**	**02 30 01.9**	**+1.1**
INKA				IAmb	IAmb	02 30 05.0	
	comp=Z,2.8nm,0.7s						
ASAR	**Alice Springs 43.19 267**			P	**P**	**02 31 00.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=101,slow=7.6,SNR=5.3						
	comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs 43.19 267**			P	**P**	**02 30 60.0**	**+0.2**
WR8	**Warramunga Arr 44.01 272**			P	**P**	**02 31 07.5**	**+1.2**
WR8				IAmb	IAmb	02 31 08.5	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr 44.15 272**			P	**P**	**02 31 08.1**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=110,slow=8.2,SNR=24						
	comp=Z,1.3nm,0.3s						
WB0	**Warramunga Arr 44.17 272**			P	**P**	**02 31 08.6**	**+0.9**
SBA	**Scott Base 48.34 184**			P	**P**	**02 31 40.0**	**+0.5**
MTN	**Manton Dam 50.00 279**			P	**P**	**02 31 52.4**	**-0.7**
KNRA	**Kununurra 50.75 274**			P	**P**	**02 31 58.9**	**+0.2**
CASY	**Casey 55.44 208**			P	**P**	**02 32 32.9**	**+0.4**
MBWA	**Marble Bar 56.32 263**			P	**P**	**02 32 39.4**	**-0.2**
SOEI	**Soe 57.38 278**			P	**P**	**02 32 47.5**	**+0.3**
LUWI	**Luwuk 63.17 286**			P	**P**	**02 33 27.1**	**+0.4**
BELA	**Belgrano 2 70.08 172**			P	**P**	**02 34 10.7**	**+0.9**
N15K	**Kwethluk River 91.13 9**			P	**P**	**02 36 04.0**	**+1.7**
N15K				IAmb	IAmb	02 36 05.2	
	comp=Z,0.6nm,0.4s						
O18K	**Koktuh Hills 91.56 11**			P	**P**	**02 36 04.8**	**+0.5**
O18K				IAmb	IAmb	02 36 12.3	
	comp=Z,4.3nm,1.0s						
RED	**Redoubt Volcan 92.52 12**			P	**P**	**02 36 08.2**	**-0.6**
PV14	**Lion Creek, Pa 93.63 47**			P	**P**	**02 36 14.1**	**-0.6**
PV14				IAmb	IAmb	02 36 22.9	
	comp=Z,2.0nm,0.7s						
RDOG	**Red Dog Mine 98.50 6**			P	**P**	**02 36 35.5**	**-0.2**
BVAR	**Borovoye Array 126.23 316**			PKP	**PKPdf**	**02 42 00.2**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=82,slow=3.1,SNR=3.7						
H10N3	**ASCENSION HYDR39.05 154**			T	T	05 18 12.4	
	baz=208						
H10N1	**ASCENSION HYDR39.06 154**			T	T	05 18 13.6	
	baz=208,slow=74,SNR=6.7						
H10N2	**ASCENSION HYDR39.07 154**			T	T	05 18 15.8	
	baz=208,slow=74,SNR=8.3						
FIA1	**FINESS Array S 144.88 340**				**PKPdf**	**02 42 34.1**	**-0.1**
FINES	**FINESS Array B 144.88 340**			PKPbc	**PKPab**	**02 42 33.5**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=48,slow=4.0,SNR=16						
NOA	**NORSAR Array B 148.46 352**			PKPbc	**PKPbc**	**02 42 44.5**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=19,slow=2.6,SNR=1.5						
AKASG	**Malin Array Be 151.10 323**			PKPbc	**PKPbc**	**02 42 50.1**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=53,slow=2.5,SNR=4.3						

*NORS **27** 02:27:13.8, 42°50N×43°43E, h10km, MPVA3.7*
*ISK **27** 02:27:14.2, 42°47N×43°48E, h5km, ML2.5/7*
*MOS **27** 02:27:15.9, 42°53N×43°39E, h5km, MPVA3.7*
*AFAD **27** 02:27:15.2, 42°58N×43°23E, h14km, ML2.4*
*DRS **27** 02:27:21.7, 43°13N×43°48E, h16km*
ISC 27 02:27:16.0±0.8, 42°51N±0°02×43°44E±0°02, h7km±5km, n50, σ1§12/98, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIGR	**Digorskoe uzhe 0.40 15**			*e*Pg	**Pg**	**02 27 22.8**	**-1.1**
DIGR				*e*Sg	**Sg**	**02 27 28.7**	**-0.5**
LACR	**Lac 0.71 63**			*i* Pg	**Pg**	**02 27 28.0**	**-1.6**
LACR				*e*Sg	**Sg**	**02 27 38.4**	**-0.5**
KORR	**Kora 0.74 39**			*i* Pg	**Pg**	**02 27 29.3**	**-0.9**
KORR				*e*Sg	**Sb**	**02 27 40.6**	**-1.0**
GUDG	**Gudauri 0.77 93**			*i* Pg	**Pg**	**02 27 29.4**	**-1.4**
GUDG				*e*Sg	**Sg**	**02 27 40.0**	**-0.9**
LSNR	**Lesken 0.82 20**			*e*Pg	**Pg**	**02 27 31.0**	**-0.8**
LSNR				*e*Sg	**Sb**	**02 27 43.3**	**-0.6**
ARNR	**Ardon 0.91 43**			*e*Pg	**Pg**	**02 27 33.2**	**-0.4**
ARNR				*e*Sg	**Sb**	**02 27 46.9**	**+0.4**
NEUR	**Neytrino 0.93 325**			*e*Pg	**Pb**	**02 27 33.3**	**-1.2**
NEUR				*e*Sg	**Sb**	**02 27 46.7**	**-0.4**
STDR	**Stavd-Durt 0.97 28**			*e*Pg	**Pb**	**02 27 35.0**	**-0.1**
STDR				*e*Sg	**Sn**	**02 27 48.9**	**-1.3**
NCK	**Nalchik 0.99 7**			*e*Pg	**Pb**	**02 27 34.9**	**-0.7**
NCK				*e*Sg	**Sn**	**02 27 49.5**	**-1.1**
VLKR	**Vladikavkaz 1.06 59**			*e*Pg	**Pb**	**02 27 36.2**	**-0.5**
VLKR				*e*Sg	**Sn**	**02 27 51.7**	**-0.6**
EPOS	**Posof 1.14 208**			P	**Pg**	**02 27 36.9**	**-0.9**
EPOS				S	**Sn**	**02 27 53.5**	**-0.8**
EPOS				IAML		02 27 54.0	

	comp=E,80nm,0.2s							
EPOS					IAML		02 27 57.0	
	comp=N,138nm,0.4s							
BTKR	**Batakoyurt**	**1.18**	**43**	*e*Pg		**Pn**	**02 27 39.3**	**+0.3**
BTKR				*e*Sg		**Sn**	**02 27 57.0**	**+1.7**
KMGR	**Komgaron**	**1.19**	**62**	*e*Pg		**Pb**	**02 27 38.4**	**-0.4**
KMGR				*e*Sg		**Sn**	**02 27 56.7**	**+1.3**
TBLG	**Delisi**	**1.24**	**128**	Pn		**Pg**	**02 27 38.0**	**-1.8**
TBLG				Sn		**Sg**	**02 27 55.5**	**-0.4**
KBZ	**Khabaz**	**1.28**	**342**	*e*Pg		**Pn**	**02 27 39.0**	**-1.3**
KBZ				*e*Sg		**Sg**	**02 27 55.6**	**-1.6**
KBTC	**Kuba-Taba**	**1.31**	**359**	*e*Pg		**Pg**	**02 27 40.5**	**-0.5**
KBTC				*e*Sg		**Sn**	**02 27 59.2**	**+0.8**
SHA1	**Shidzhatmaz**	**1.35**	**335**	*e*Pg		**Pg**	**02 27 41.3**	**-0.7**
SHA1				*e*Sg		**Sn**	**02 27 59.0**	**-0.8**
PRTR	**Priterechnaya**	**1.39**	**26**	*e*Pg		**Pg**	**02 27 42.6**	**0.0**
PRTR				*e*Sg		**Sn**	**02 28 02.6**	**+2.4**
AHAN	**Ardahan-Merkez**	**1.48**	**205**	P		**Pg**	**02 27 43.4**	**-0.9**
AHAN				S		**Sg**	**02 28 04.7**	**+1.2**
AHAN				IAML			02 28 06.0	
	comp=N,52nm,0.6s							
AHAN				IAML			02 28 07.0	
	comp=E,79nm,0.4s							
TRKR	**Terskaya**	**1.54**	**38**	*e*Pg		**Pn**	**02 27 43.2**	**-0.7**
TRKR				*e*Sg		**Sg**	**02 28 06.6**	**+1.2**
KIV0	**Kislovodsk Arr**	**1.54**	**340**	*e*Pg		**Pg**	**02 27 45.0**	**-0.6**
KIV0				*e*Sg		**Sn**	**02 28 03.6**	**-0.8**
DOMR	**Dombai**	**1.54**	**301**	*e*Pg		**Pg**	**02 27 45.9**	**+0.3**
DOMR				*e*Sg		**Sg**	**02 28 07.0**	**+1.3**
KIV	**Kislovodsk**	**1.55**	**339**	Pn		**Pg**	**02 27 44.8**	**-0.9**
KIV	**Kislovodsk**	**1.55**	**339**	*e*Pg		**Pb**	**02 27 44.3**	**-0.7**
KIV				*e*Sg		**Sn**	**02 28 03.6**	**-0.8**
BEYR	**Belyy Ugol+**	**1.57**	**343**	*e*Pg		**Pg**	**02 27 45.3**	**-0.8**
BEYR				*e*Sg		**Sb**	**02 28 04.9**	**-0.5**
PYA1	**Pyatigorsk**	**1.57**	**351**	*e*Pg		**Pb**	**02 27 44.2**	**-1.2**
PYA1				*e*Sg		**Sb**	**02 28 04.9**	**-0.6**
DBOC	**Borcka**	**1.76**	**229**	P		**Pn**	**02 27 47.0**	**+0.1**
DBOC				S		**Sg**	**02 28 10.9**	**-1.7**
DBOC				IAML			02 28 13.0	
	comp=E,76nm,0.3s							
GOLE	**Ardahan-G¶le**	**1.79**	**201**	P		**Pb**	**02 27 48.8**	**-0.4**
GOLE				S		**Sg**	**02 28 13.8**	**+0.4**
GOLE				IAML			02 28 17.0	
	comp=E,32nm,0.3s							
GOLE				IAML			02 28 18.0	
	comp=N,24nm,0.2s							
GROC	**Groznyy**	**1.87**	**67**	*e*Pg		**Pb**	**02 27 50.0**	**-0.4**
GROC				*e*Sg		**Sg**	**02 28 15.0**	**-1.0**
KARS	**Kars**	**1.90**	**188**	Pn		**Pn**	**02 27 48.7**	**-0.2**
ARXR	**Arkhyz**	**1.90**	**304**	*e*Pg		**Pg**	**02 27 52.5**	**0.0**
ARXR				*i* Sg		**Sg**	**02 28 15.5**	**-1.6**
BOZK	**Kars-Merkez-Bo**	**1.95**	**190**	P		**Pb**	**02 27 50.9**	**-1.0**
BOZK				S		**Sg**	**02 28 18.9**	**+0.2**
BOZK				IAML			02 28 25.0	
	comp=N,15nm,0.5s							
BOZK				IAML			02 28 27.0	
	comp=E,25nm,1.0s							
DBAD	**Bademkaya**	**1.98**	**222**	P		**Pb**	**02 27 50.9**	**-1.5**
DBAD				S		**Sg**	**02 28 18.4**	**-1.2**
DBAD				IAML			02 28 21.0	
	comp=E,82nm,0.3s							
DBAD				IAML			02 28 22.0	
	comp=N,109nm,0.6s							
DVE	**Vedeno**	**2.03**	**76**	*e*Pg		**Pb**	**02 27 52.4**	**-0.8**
DVE				*e*Sg		**Sb**	**02 28 19.5**	**+0.8**
BTLR	**Botlikh**	**2.06**	**85**	*e*Pg		**Pg**	**02 27 54.3**	**-1.2**
BTLR				*e*Sg		**Sb**	**02 28 20.4**	**+0.8**
SENK	**Senkaya-Erzuru**	**2.11**	**203**	Pn		**Pn**	**02 27 51.8**	**-0.1**
TLTR	**Tlyarata**	**2.20**	**100**	*e*Pg		**Pb**	**02 27 56.0**	**-0.2**
TLTR				*e*Sg		**Sb**	**02 28 23.6**	**-0.1**
ALER	**Alexandrovskoy**	**2.28**	**351**	*e*Pn		**Pb**	**02 27 56.4**	**-1.2**
ALER				*e*Sn		**Sb**	**02 28 24.6**	**-1.4**
DLMR	**Dylym**	**2.42**	**76**	*e*Pn		**Pb**	**02 27 58.0**	**-1.7**
DLMR				*e*Sn		**Sn**	**02 28 26.9**	**+1.2**
CHOM	**Cayeli-Rize**	**2.45**	**236**	Pn		**Pn**	**02 27 56.3**	**-0.1**
UNCR	**Uncukul**	**2.49**	**84**	*e*Pn		**Pb**	**02 27 60.0**	**-1.0**
UNCR				*e*Sn		**Sb**	**02 28 30.4**	**-1.4**
GNI	**Garni**	**2.55**	**157**	Pn		**Pn**	**02 27 57.9**	**-0.1**
GNI	**Garni**	**2.55**	**157**	*e*Pn		**Pb**	**02 28 01.9**	**-0.3**
GNI				*e*Sn		**Sb**	**02 28 34.6**	**+0.7**
RPOR	**Krasnaya Polya**	**2.61**	**298**	*e*Pn		**Pb**	**02 28 02.4**	**-0.7**
RPOR				*e*Sn		**Sb**	**02 28 32.8**	**-2.6**
VSLR	**Vesyoloye**	**2.67**	**292**	*e*Pn		**Pn**	**02 27 59.7**	**+0.2**
VSLR				*e*Sn		**Sn**	**02 28 32.4**	**+0.3**
BUJR	**Buynaksk**	**2.73**	**82**	*e*Pn		**Pb**	**02 28 03.0**	**-2.1**
BUJR				*e*Sn		**Sn**	**02 28 35.8**	**+2.5**
KMKR	**Kumukh**	**2.74**	**97**	*e*Pn		**Pb**	**02 28 02.6**	**-2.8**
KMKR				*e*Sn		**Sn**	**02 28 34.5**	**+0.5**
GUZR	**Guzeripl'**	**2.84**	**303**	*e*Pn		**Pn**	**02 28 02.4**	**+0.5**
GUZR				*e*Sn		**Sn**	**02 28 36.5**	**+0.1**
BAYT	**Aydıntepe-Bayb**	**3.26**	**231**	Pn		**Pn**	**02 28 08.5**	**+0.9**
MNK	**Minsk**	**15.77**	**325**	*i* P		**Pn**	**02 30 59.6**	**+1.2**
	comp=E,10.0nm,0.8s							
MNK				*i* P		**Pn**	**02 30 59.6**	**+1.2**
	comp=N,14nm,1.0s							
MNK				*i* P		**Pn**	**02 30 59.6**	**+1.2**
	comp=Z,7.0nm,1.0s,baz=132							
MNK				*i* PP		**sP**	**02 31 08.1**	**+2.2**
MNK				*i* PPP		PPP	02 31 15.7	
MNK				*i* S		**Sn**	**02 33 55.3**	**+2.1**
MNK				*i* SS		**S**	**02 34 09.5**	**+1.4**
MNK				*i* SSS		SSS	02 34 24.6	
MNK				*i* LQ		LQ	02 35 46.9	
MNK				*i* LR		LR	02 37 16.2	
MNK				*i* LRM		MLR	02 37 33.3	
	comp=E,53nm,14.5s							
MNK				*i* LRM		MLR	02 37 51.7	
MNK				*i* LRM		MLR	02 38 06.2	
	comp=Z,50nm,16.0s							

IDC ***27*** *02:34:05.4±1.6,6°.73S×129°.13E,h0km,mb3.8/3, mbtmp3.7/6,ML3.7/4,Error ellipse: s-maj=50.4km s-min=23.8km az=84.0*
NEIC ***27*** *02:34:18.4±1.8,7°.4S±0°.1×128°.8E±0°.1,h127km±10km, mb4.5/5,Error ellipse: s-maj=19.3km s-min=16.7km az=178.0*
ISC 27 02:34:20.6±0.9,**7°.57S**±0°.07×**128°.79E**±0°.09,**h150**km,**n21,** σ1§**67**/26,**mb3.8/6,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.97**	**244**			**Pn**	**02 35 33.8**	**0.0**
SOEI						**Sn**	**02 36 30.0**	**-0.8**
BATI	**Baumata**	**5.70**	**242**	Pn		**Pn**	**02 35 42.4**	**-1.0**
	16nm,0.3s,baz=337,slow=1.9,SNR=12							
BATI				Sn		**Sn**	**02 36 47.5**	**-0.6**
	9.9nm,0.3s,baz=166,slow=19,SNR=1.9							
KNRA	**Kununurra**	**8.05**	**180**	Pn		**Pn**	**02 36 16.6**	**+1.9**
FITZ	**Fitzroy Crossi**	**10.90**	**196**	Pn		**Pn**	**02 36 54.1**	**+1.6**
	0.3nm,0.3s,baz=10,slow=10,SNR=14							
FITZ				Sn		**Sn**	**02 38 52.5**	**-0.6**
	0.7nm,0.3s,baz=193,slow=24,SNR=6.4							
	4.0nm,0.8s							
WB0	**Warramunga Arr**	**13.28**	**156**	Pn		**Pn**	**02 37 24.1**	**+0.6**
WRA	**Warramunga Arr**	**13.42**	**157**	Pn		**Pn**	**02 37 26.4**	**+1.2**
	0.2nm,0.3s,baz=337,slow=12,SNR=6.4							
WRA				Sn		**Sn**	**02 39 50.8**	**-3.0**
	0.4nm,0.3s,baz=340,slow=20,SNR=5.5							
	0.2nm,0.3s							
WRA	**Warramunga Arr**	**13.42**	**157**			**Pn**	**02 37 21.6**	**-3.6**
WR8	**Warramunga Arr**	**13.50**	**156**	Pn		**Pn**	**02 37 25.6**	**-0.6**
ASAR	**Alice Springs**	**16.74**	**164**	P		**Pn**	**02 38 10.7**	**+4.3**
	0.3nm,0.3s,baz=339,slow=10,SNR=19							
ASAR				S		**S**	**02 41 12.1**	**-0.5**
	0.2nm,0.3s,baz=342,slow=33,SNR=4.2							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**16.74**	**164**	P		**P**	**02 38 07.1**	**+1.0**
BBOO	**Buckleboo**	**26.00**	**166**	P		**P**	**02 39 41.2**	**+1.6**
BBOO				IAmb		IAmb	02 40 01.1	
	comp=Z,19nm,1.4s							
MK31	**Makanchi Array**	**68.05**	**327**	P		**P**	**02 45 02.2**	**-1.7**
MKAR	**Makanchi Array**	**68.05**	**327**	P		**P**	**02 45 04.2**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=125,slow=5.7,SNR=8.0							
	comp=Z,0.2nm,0.4s							
MKAR	**Makanchi Array**	**68.05**	**327**	P		**P**	**02 45 03.5**	**-0.4**
ZALV	**Zalesovo Beam**	**71.57**	**334**	P		**P**	**02 45 24.0**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=120,slow=7.2,SNR=2.9							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**71.57**	**334**	P		**P**	**02 45 24.3**	**-0.9**
KURBB	**Kurchatov Arra**	**72.38**	**329**	P		**P**	**02 45 29.3**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=128,slow=5.0,SNR=1.3							
	comp=Z,0.5nm,0.4s							
KURK	**Kurchatov**	**72.39**	**329**	P		**P**	**02 45 29.1**	**-1.0**
KURK				IAmb		IAmb	02 45 59.0	
	comp=Z,9.3nm,0.2s							
LVA	**Lava Point**	**82.02**	**33**	P		**P**	**02 46 24.6**	**+0.8**
AB31	**Akbulak array**	**82.21**	**322**	P		**P**	**02 46 24.1**	**-0.8**
AB31				IAmb		IAmb	02 46 53.4	
	comp=Z,3.3nm,1.4s							
ABKAR	**Akbulak array**	**82.21**	**322**	P		**P**	**02 46 23.8**	**-1.1**

NEIC ***27*** *02:36:19.5±1.3,0°.55N±0°.08×121°.83E±0°.08,h91km±5km, mb4.7/42,Error ellipse: s-maj=14.8km s-min=7.1km az=48.0*
IDC ***27*** *02:36:20.6±2.0,0°.55N×122°.00E,h109km±19km,mb4.0/11, mbtmp4.4/13,Error ellipse: s-maj=32.2km s-min=11.1km az=68.0*
DJA ***27*** *02:36:20.2±0.1,1°.N±2°.×12°.2E±°,h89km±2km,M4.7/31, mB5.4/7,mb4.5/18,MLv4.5/31,Mw(mB)4.9/7*
ISC 27 02:36:19.8±0.7,**0°.61N**±0°.04×**121°.88E**±0°.04,**h99**km±6km, **n96,**σ1§**27**/105,**mb4.6**/40,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.14**	**155**	P		**Pn**	**02 36 33.7**	**+0.1**
MRSI				S		**Sn**	**02 36 43.7**	**-0.2**
GTOI	**Gorontalo**	**1.13**	**88**	P		**Pn**	**02 36 41.6**	**+0.1**
GTOI				S		**Sn**	**02 36 57.4**	**-0.6**
TOLI2	**Tolitoli**	**1.21**	**295**			**Pn**	**02 36 41.8**	**-0.7**
TOLI2				Sn		**Sn**	**02 36 57.7**	**-1.9**
APSI	**Ampana**	**1.52**	**189**	P		**Pn**	**02 36 47.3**	**+1.0**
LUWI	**Luwuk**	**1.86**	**151**			**Pn**	**02 36 49.9**	**-0.6**
LUWI	**Luwuk**	**1.86**	**151**	P		**Pn**	**02 36 52.5**	**+1.9**
LUWI				S		**Sn**	**02 37 16.8**	**+2.8**
MPSI	**Mapaga**	**2.00**	**262**	P		**Pn**	**02 36 52.5**	**+0.2**
MPSI				S		**Sn**	**02 37 16.1**	**-1.0**
PCI	**Palu**	**2.54**	**234**	P		**Pn**	**02 36 59.8**	**+0.5**
PCI				S		**Sn**	**02 37 27.0**	**-2.7**
MNI	**Manado**	**3.07**	**74**	P		**Pn**	**02 37 06.5**	**0.0**
TTSI	**Tana Toraja**	**4.17**	**210**	P		**Pn**	**02 37 23.0**	**+1.7**
TTSI				S		**Sn**	**02 38 09.7**	**+0.7**
MMSI	**Mamuju**	**4.42**	**222**	P		**Pn**	**02 37 24.1**	**-0.6**
MMSI				S		**Sn**	**02 38 16.0**	**+0.9**
SANI	**Sanana**	**4.88**	**123**	P		**Pn**	**02 37 30.2**	**-0.7**
SPSI	**Sidrap Palu**	**5.01**	**205**	P		**Pn**	**02 37 34.8**	**+2.2**
	0.2nm43nm,0.5s							
TARAI	**Tarakan**	**5.08**	**302**	P		**Pn**	**02 37 31.4**	**-2.3**
MYLDM	**Lahad Datu**	**5.66**	**323**			**Pn**	**02 37 43.1**	**+1.7**
KAPI	**Kappang**	**5.97**	**201**	P		**Pn**	**02 37 46.2**	**+0.5**
	9.5nm,0.5s,baz=0.1,slow=5.2,SNR=4.7							
KAPI	**Kappang**	**5.97**	**201**			**Pn**	**02 37 44.2**	**-1.5**
KAPI	**Kappang**	**5.97**	**201**	P		**Pn**	**02 37 47.8**	**+2.1**
BBSI	**Bau Bau**	**6.09**	**174**	P		**Pn**	**02 37 48.6**	**+1.2**
	0.4nm55nm,1.1s							
KRAI	**Karang Ratu**	**7.59**	**121**	P		**Pn**	**02 38 09.3**	**+1.6**
	22nm,0.7s							
KKM	**Kota Kinabalu**	**7.82**	**314**			**Pn**	**02 38 10.2**	**-0.7**
KKM	**Kota Kinabalu**	**7.82**	**314**	P		**Pn**	**02 38 11.4**	**+0.4**
	0.3nm1µm43nm,0.5s							
SBUM	**Sibu**	**9.83**	**281**			**Pn**	**02 38 36.1**	**-2.1**
SBUM	**Sibu**	**9.83**	**281**	P		**Pn**	**02 38 38.1**	**-0.1**
MTN	**Manton Dam**	**16.21**	**146**			**Pn**	**02 40 01.7**	**-0.1**
MTN				IAmb		IAmb	02 40 04.5	
	comp=Z,50nm,1.2s							
BBJI	**Bungbulang**	**16.30**	**240**			**Pn**	**02 40 03.1**	**+0.1**
KNRA	**Kununurra**	**17.55**	**157**			**Pn**	**02 40 17.4**	**-0.6**
KNRA				IAmb		IAmb	02 41 00.4	
	comp=Z,69nm,1.4s							
FITZ	**Fitzroy Crossi**	**18.95**	**169**	P		**P**	**02 40 32.4**	**-0.9**
	comp=Z,5.5nm,0.3s,baz=9.1,slow=9.4,SNR=5.9							
MBWA	**Marble Bar**	**21.73**	**185**	P		**P**	**02 41 02.2**	**-1.0**
MBWA				IAmb		IAmb	02 41 06.1	
	comp=Z,33nm,1.4s							
RPSI	**Rantau Prapat**	**23.04**	**275**			**P**	**02 41 16.0**	**-0.8**
PSI	**Prapat**	**23.05**	**276**	P		**P**	**02 41 16.6**	**-0.4**
	comp=Z,14nm,1.2s							
WB0	**Warramunga Arr**	**23.67**	**149**			**P**	**02 41 21.2**	**-1.4**
WB0				IAmb		IAmb	02 41 22.6	
	comp=Z,50nm,0.9s							
WRAB	**Tennant Creek**	**23.79**	**150**	P		**P**	**02 41 22.8**	**-0.8**
WRAB				IAmb		IAmb	02 41 23.8	
	comp=Z,29nm,0.9s							
WRA	**Warramunga Arr**	**23.79**	**150**	P		**P**	**02 41 22.4**	**-1.2**
	comp=Z,28nm,0.8s,baz=327,slow=10,SNR=89							
	comp=Z,28nm,0.8s							
WRA	**Warramunga Arr**	**23.79**	**150**			**P**	**02 41 22.1**	**-1.5**
KCSI	**Kotacane, Aceh**	**24.26**	**277**	P		**P**	**02 41 27.2**	**-0.8**
GSI	**Gunungsitoli**	**24.31**	**272**	P		**P**	**02 41 27.6**	**-0.8**
AS31	**Alice Springs**	**26.81**	**155**			**P**	**02 41 49.2**	**-1.7**
ASAR	**Alice Springs**	**26.81**	**155**	P		**P**	**02 41 50.2**	**-0.7**
	comp=Z,4.6nm,0.6s,baz=344,slow=13,SNR=51							
ASAR				ScP		**ScP**	**02 48 39.5**	**-3.5**
	comp=Z,0.4nm,0.6s,baz=333,slow=2.4,SNR=6.7							
	comp=Z,4.6nm,0.6s							
ASAR	**Alice Springs**	**26.81**	**155**	P		**P**	**02 41 49.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**28.67**	**310**	P		**P**	**02 42 09.3**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=150,slow=8.1,SNR=6.2							
CMAR				ScP		**ScP**	**02 48 47.8**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=152,slow=2.5,SNR=11							
	comp=Z,0.8nm,0.3s							
CMAR	**Chiang Mai Arr**	**28.67**	**310**	P		**P**	**02 42 07.3**	**-0.3**
CHTO	**Chiang Mai**	**28.88**	**310**	P		**P**	**02 42 10.3**	**+0.9**
	comp=Z,8.3nm,1.1s							
GYA	**Guiyang**	**29.59**	**332**	P		**P**	**02 42 17.8**	**+2.1**
GYA				pmax		pmax		
	comp=Z,3.0nm,0.7s							
NJ2	**Nanjing**	**31.41**	**355**	*e*P		**P**	**02 42 33.5**	**+2.0**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
FORT	**Forrest**	**31.76**	**170**	P		**P**	**02 42 33.4**	**-1.2**
PZH	**PanZhiHua**	**32.23**	**325**	P		**P**	**02 42 42.5**	**+3.5**
INKA	**Innaminka**	**33.51**	**149**			**P**	**02 42 50.1**	**+0.1**
INKA				IAmb		IAmb	02 42 50.7	
	comp=Z,4.5nm,0.6s							
XAN	**Xi'an**	**35.41**	**341**	*e*P		**P**	**02 43 09.8**	**+3.4**
BBOO	**Buckleboo**	**35.83**	**159**	P		**P**	**02 43 08.9**	**-1.1**
BBOO				IAmb		IAmb	02 43 10.0	
	comp=Z,25nm,1.4s							
STKA	**Stephens Creek**	**37.31**	**152**	P		**P**	**02 43 21.3**	**-1.3**
	comp=Z,10.0nm,0.6s,baz=326,slow=9.3,SNR=22							
	comp=Z,10.0nm,0.6s							
STKA	**Stephens Creek**	**37.31**	**152**			**P**	**02 43 22.5**	**-0.1**
SHL	**Shillong**	**38.12**	**313**			**P**	**02 43 30.3**	**+0.6**
EIDS	**Eidsvold**	**38.26**	**135**	P		**P**	**02 43 29.4**	**-1.2**
EIDS				IAmb		IAmb	02 43 48.4	
	comp=Z,14nm,1.4s							
MJAR	**Matsushiro Arr**	**38.83**	**21**	P		**P**	**02 43 34.1**	**-1.1**
	comp=Z,3.1nm,0.9s,baz=197,slow=7.8,SNR=4.3							
	comp=Z,3.1nm,0.9s							
MJAR	**Matsushiro Arr**	**38.83**	**21**	P		**P**	**02 43 35.1**	**-0.1**
HHC	**Hu-ho-hao-te**	**41.14**	**348**	*e*P		**P**	**02 43 55.8**	**+1.4**
HHC				pmax		pmax		
	comp=Z,13nm,0.5s							
HHC				pmax		pmax		
	comp=Z,100nm,5.6s							
LSA	**Lhasa**	**41.15**	**317**	P		**P**	**02 43 53.7**	**-1.4**
LSA				IAmb		IAmb	02 43 57.8	
	comp=Z,9.1nm,0.5s							
BTO2	**Baotou**	**41.41**	**346**	*e*P		**P**	**02 44 00.0**	**+3.3**
BTO2				pmax		pmax		
	comp=Z,12nm,0.7s							
BTO2				pmax		pmax		
	comp=Z,230nm,11.5s							
ARMA	**Armidale**	**41.87**	**140**	P		**P**	**02 43 59.6**	**-1.0**
ARMA				IAmb		IAmb	02 44 32.1	
	comp=Z,30nm,1.5s							
EVN	**Everest**	**43.20**	**312**			**P**	**02 44 12.8**	**+0.7**
EVN				IAmb		IAmb	02 44 14.1	
	comp=Z,11nm,0.7s							
GTA2	**Gaotai**	**43.66**	**335**	P		**P**	**02 44 16.8**	**+1.9**
GTA2				sP		sP	02 44 50.5	+1.3
GTA2				pmax		pmax		
	comp=Z,9.0nm,0.8s							
CAN	**Canberra**	**43.80**	**147**	P		**P**	**02 44 16.0**	**0.0**
TOO	**Toolangi**	**43.81**	**153**	P		**P**	**02 44 16.6**	**+0.5**
TOO				IAmb		IAmb	02 44 48.9	
	comp=Z,13nm,1.4s							
HILR	**Hailar Array B**	**48.80**	**358**	P		**P**	**02 44 55.7**	**+0.8**
	comp=Z,5.2nm,0.6s,baz=178,slow=10,SNR=11							
	comp=Z,5.2nm,0.6s							
ULN	**Ulaanbaatar**	**48.80**	**347**	P		**P**	**02 44 55.8**	**+0.7**
SONM	**Songino Array**	**48.93**	**346**	P		**P**	**02 44 57.0**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=168,slow=9.6,SNR=13							
	comp=Z,1.5nm,0.7s							
SONM	**Songino Array**	**48.93**	**346**	P		**P**	**02 44 56.5**	**+0.5**
WMQ	**Urumqi**	**52.70**	**329**	*e*P		**P**	**02 45 26.0**	**+1.7**
WMQ				pP		pP	02 45 48.0	-0.2
WMQ				pmax		pmax		
	comp=Z,11nm,0.9s							
WMQ				LR		LR		
	comp=N,260nm,19.7s							
WUS	**Wushi**	**55.82**	**322**			**P**	**02 45 46.9**	**-0.3**
WUS				IAmb		IAmb	02 45 49.4	
	comp=Z,8.1nm,1.3s							
KSH2	**Kashi**	**57.07**	**318**	P		**P**	**02 45 57.0**	**+1.0**
KSH2				pmax		pmax		
	comp=Z,6.0nm,0.7s							
MKAR	**Makanchi Array**	**57.52**	**329**	P		**P**	**02 45 59.6**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=126,slow=8.9,SNR=45							
	comp=Z,3.8nm,0.6s							
KDJ	**Kajisay**	**57.61**	**322**	P		**P**	**02 45 59.4**	**-0.5**
KDJ				IAmb		IAmb	02 46 02.1	
	comp=Z,8.0nm,1.3s							
MAKZ	**Makanchi**	**57.69**	**329**	P		**P**	**02 45 59.7**	**-0.3**
MAKZ				IAmb		IAmb	02 46 01.1	
	comp=Z,3.4nm,0.6s							
BOOM	**Boomskoye usch**	**58.57**	**321**	P		**P**	**02 46 06.5**	**0.0**
BOOM				IAmb		IAmb	02 46 08.6	
	comp=Z,6.6nm,1.3s							
AAK	**Ala-Archa**	**59.56**	**321**			**P**	**02 46 14.1**	**+0.8**
AAK				IAmb		IAmb	02 46 15.4	
	comp=Z,3.3nm,0.8s							
KBL	**Kabul**	**59.70**	**310**			**P**	**02 46 14.5**	**0.0**
ARSB	**Arslanbob**	**59.87**	**319**	P		**P**	**02 46 16.0**	**+0.6**
ARSB				IAmb		IAmb	02 46 17.1	
	comp=Z,6.6nm,0.9s							
GAR	**Garm**	**60.60**	**316**	P		**P**	**02 46 21.0**	**+0.5**
ROCAM	**Rodrigues Isla**	**60.76**	**247**	P		**P**	**02 46 21.1**	**-0.6**
ZALV	**Zalesovo Beam**	**61.31**	**336**	P		**P**	**02 46 24.2**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=116,slow=6.8,SNR=7.2							
	comp=Z,1.4nm,0.6s							
ZALV	**Zalesovo Beam**	**61.31**	**336**	P		**P**	**02 46 25.2**	**+0.5**
KURBB	**Kurchatov Arra**	**61.88**	**330**	P		**P**	**02 46 28.2**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=131,slow=5.9,SNR=16							
	comp=Z,2.7nm,0.8s							
KURK	**Kurchatov**	**61.90**	**330**	P		**P**	**02 46 29.3**	**+0.5**
KURK				IAmb		IAmb	02 46 29.7	
	comp=Z,13nm,1.1s							
LBZ	**Lake Benmore**	**61.99**	**143**	P		**P**	**02 46 29.2**	**-0.4**
KKAR	**Karatay Array**	**62.33**	**320**	P		**P**	**02 46 31.6**	**-0.3**
BKZ	**Black Stump Fm**	**63.67**	**135**	P		**P**	**02 46 40.4**	**-0.5**
BKZ				IAmb		IAmb	02 47 17.4	
	comp=Z,20nm,1.4s							
RTZ	**Ruatahuna**	**63.79**	**134**	P		**P**	**02 46 41.1**	**-0.6**
BVAR	**Borovoye Array**	**67.39**	**329**	P		**P**	**02 47 04.5**	**0.0**
	comp=Z,2.3nm,0.9s,baz=147,slow=8.3,SNR=6.7							
	comp=Z,2.3nm,0.9s							
BORK	**Borovoye**	**67.44**	**329**	P		**P**	**02 47 04.9**	**+0.1**
BORK				IAmb		IAmb	02 47 06.0	
	comp=Z,6.7nm,1.1s							
AB31	**Akbulak array**	**71.57**	**322**	P		**P**	**02 47 30.0**	**-0.3**
ABKAR	**Akbulak array**	**71.57**	**322**	P		**P**	**02 47 30.1**	**-0.2**
ARTI	**Arti**	**75.11**	**329**	P		**P**	**02 47 50.4**	**-0.6**
ARTI				IAmb		IAmb	02 47 50.5	
	comp=Z,5.0nm,0.6s							
GURO	**Guroymak-BITLI**	**81.68**	**309**			**P**	**02 48 27.3**	**-0.4**
CRAG	**Craig**	**97.97**	**34**	P		Pdif	02 49 45.2	+0.5
TXAR	**Lajitas Array**	**127.33**	**52**	PKP		**PKiKP**	**02 55 14.6**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=336,slow=1.3,SNR=1.8							

AFAD ***27*** *02:36:46.9,38°.50N×44°.58E,h7km±1km,ML2.5

*IDC **27** 02:42:16.2±17.0, 18°53S×175°42W, h0km, mb4.3/5, mbtmp4.3/5, Error ellipse: s-maj=318.0km s-min=155.1km az=80.0*
*NEIC **27** 02:42:55.0±1.7, 19°5S±0°2×176°9W±0°1, h245km±8km, mb4.4/15, Error ellipse: s-maj=27.6km s-min=14.1km az=147.0*

ISC 27 02:42:54.9±1.1, 19°4S±0°2×177°0W±0°2, h250km, n22, σ0s79/21, mb4.1/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**20.51**	**195**	P	P	02 47 08.2	-6.2
CTA	**Charters Tower**	**34.59**	**263**	P	**P**	**02 49 20.7**	**+0.1**
	2.7nm,0.4s,baz=109,slow=9.8,SNR=6.8						
	2.7nm,0.4s						
CTAO	**Charters Tower**	**34.59**	**263**	P	**P**	**02 49 21.0**	**+0.5**
CTAO				IAmb	IAmb	02 49 22.2	
	comp=Z,5.6nm,0.8s						
TAU	**Tasmania Unive**	**38.10**	**224**	P	**P**	**02 49 49.8**	**-0.1**
COEN	**Coen**	**38.50**	**272**	P	**P**	**02 49 53.0**	**-0.7**
COEN				IAmb	IAmb	02 49 57.7	
	comp=Z,8.0nm,1.4s						
STKA	**Stephens Creek**	**39.16**	**243**	P	**P**	**02 50 00.4**	**+1.6**
	comp=Z,0.8nm,0.4s,baz=84,slow=9.2,SNR=2.8						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**39.16**	**243**	P	**P**	**02 50 00.5**	**+1.7**
STKA				IAmb	IAmb	02 50 09.5	
	comp=Z,36nm,1.4s						
WR8	**Warramunga Arr**	**45.58**	**261**	P	**P**	**02 50 50.0**	**-0.6**
WB0	**Warramunga Arr**	**45.70**	**261**	P	**P**	**02 50 51.0**	**-0.6**
WB0				IAmb	IAmb	02 50 59.3	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**45.72**	**261**	P	**P**	**02 50 50.9**	**-0.8**
WB2				IAmb	IAmb	02 51 32.9	
	comp=Z,9.4nm,1.1s						
AS31	**Alice Springs**	**45.73**	**256**	P	**P**	**02 50 52.2**	**+0.4**
WRA	**Warramunga Arr**	**45.73**	**261**	P	**P**	**02 50 51.1**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=98,slow=7.1,SNR=18						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**45.73**	**261**	P	**P**	**02 50 51.4**	**-0.4**
ASAR	**Alice Springs**	**45.73**	**256**	P	**P**	**02 50 52.1**	**+0.3**
	comp=Z,6.5nm,0.7s,baz=90,slow=8.4,SNR=100						
	comp=Z,6.5nm,0.7s						
ASAR	**Alice Springs**	**45.73**	**256**	P	**P**	**02 50 51.7**	**-0.1**
KNRA	**Kununurra**	**51.72**	**265**	P	**P**	**02 51 36.3**	**-0.9**
KNRA				IAmb	IAmb	02 52 11.7	
	comp=Z,44nm,1.3s						
FITZ	**Fitzroy Crossi**	**54.15**	**261**	P	**P**	**02 51 55.3**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=114,slow=7.5,SNR=11						
	comp=Z,1.5nm,0.4s						
MBWA	**Marble Bar**	**59.05**	**256**	P	**P**	**02 52 29.3**	**0.0**
CASY	**Casey**	**65.39**	**205**	P	**P**	**02 53 09.2**	**-1.2**
PEA0B	**Petropavlovsk-**	**75.45**	**345**	P	**P**	**02 54 10.9**	**-0.3**
PEA0B				IAmb	IAmb	02 54 12.3	
	comp=Z,26nm,1.1s						
MWC	**Mount Wilson**	**77.33**	**47**	P	**P**	**02 54 22.9**	**+0.5**
MWC				IAmb	IAmb	02 54 27.1	
	comp=Z,31nm,1.4s						
SFJD	**Kangerlussuaq**	**121.55**	**22**	PKPdf	**PKiKP**	**03 01 18.7**	**+0.5**

*IDC **27** 02:46:31.4±1.2, 55°59S×28°24W, h0km, mb4.2/4, mbtmp4.2/5, ML4.4/1, Error ellipse: s-maj=49.4km s-min=26.5km az=49.0*
*NEIC **27** 02:46:39.3±1.1, 55°7S±0°1×28°2W±0°2, h53km±9km, mb4.6/21, Error ellipse: s-maj=21.4km s-min=13.5km az=200.0*

ISC 27 02:46:37.2±0.7, 55°7S±0°1×28°29W±0°09, h35km, n35, σ1s32/36, mb4.5/11, 3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.92**	**283**	Pn	**Pn**	**02 47 51.5**	**+3.0**
HOPE				Sn	**Sn**	**02 48 39.9**	**-4.2**
VNA3	**Neumayer Olymp**	**17.58**	**160**	⇓P	**P**	**02 50 40.0**	**+0.2**
	comp=Z,1.8nm,0.4s						
VNA2	**Neumayer--Watz**	**17.80**	**157**	⇓P	**P**	**02 50 42.4**	**+0.1**
	comp=Z,2.3nm,0.3s,baz=316,slow=13						
SNAA	**Sanae**	**19.36**	**156**	⇓P	**P**	**02 50 59.6**	**+0.2**
	comp=Z,95nm,0.4s						
SNAA	**Sanae**	**19.36**	**156**	P	**P**	**02 50 59.3**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=310,slow=12,SNR=12						
	comp=Z,10nm,0.8s						
SNAA	**Sanae**	**19.36**	**156**	P	**P**	**02 50 59.4**	**0.0**
PMSA	**Palmer Station**	**19.70**	**228**	P	**P**	**02 51 01.5**	**-1.6**
PMSA				IAmb	IAmb	02 51 11.3	
	comp=Z,64nm,1.1s						
TROLL	**Troll, Antarti**	**20.89**	**153**	P	**P**	**02 51 15.9**	**-0.2**
MG02	**Cerro Sombrero**	**23.86**	**260**	P	**P**	**02 51 49.5**	**+2.6**
TRQA	**Tornquist**	**28.59**	**294**	P	**P**	**02 52 29.6**	**-0.2**
QSPA	**South Pole Qui**	**34.61**	**180**	P	**P**	**02 53 22.4**	**-0.1**
QSPA				IAmb	IAmb	02 53 22.7	
	comp=Z,4.9nm,0.4s						
SPB	**Sao Paulo**	**35.00**	**328**	P	**P**	**02 53 26.2**	**+0.1**
CPUP	**Villa Florida**	**36.08**	**312**	P	**P**	**02 53 34.8**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=163,slow=10,SNR=7.2						
	comp=Z,2.9nm,0.5s						
CPUP	**Villa Florida**	**36.08**	**312**	P	**P**	**02 53 35.4**	**+0.1**
CPUP				IAmb	IAmb	02 54 18.0	
	comp=Z,5.8nm,1.4s						
TRCB	**Terra Rica**	**37.44**	**321**	P	**P**	**02 53 47.6**	**+0.6**
CO03	**El Pedregal**	**38.72**	**292**	P	**P**	**02 53 59.2**	**+1.5**
CO03				IAmb	IAmb	02 54 31.8	
	comp=Z,13nm,1.4s						
CO01	**Juntas del Tor**	**39.09**	**293**	P	**P**	**02 54 01.1**	**+0.1**
AC05	**El Transito**	**40.10**	**294**	P	**P**	**02 54 09.9**	**+0.6**
AC05				IAmb	IAmb	02 54 32.1	
	comp=Z,7.1nm,1.0s						
AC02	**Maricunga**	**41.14**	**297**	P	**P**	**02 54 18.9**	**+0.5**
AC06	**Mina Casimiro**	**41.34**	**296**	P	**P**	**02 54 19.7**	**+0.3**
AC06				IAmb	IAmb	02 54 57.6	
	comp=Z,9.9nm,1.2s						
AC01	**Pan de Azucar**	**42.45**	**296**	P	**P**	**02 54 29.1**	**+0.6**
BDFB	**Brasilia**	**42.71**	**331**	P	**P**	**02 54 28.1**	**-2.7**
	comp=Z,1.4nm,0.4s,baz=192,slow=9.3,SNR=3.6						
	comp=Z,1.4nm,0.4s						
PB09	**IPOC Station P**	**45.41**	**301**	P	**P**	**02 54 53.8**	**+1.3**
PB09				IAmb	IAmb	02 54 54.2	
	comp=Z,11nm,1.2s						
PB07	**IPOC Station P**	**45.78**	**301**	P	**P**	**02 54 55.5**	**+0.1**
PB07				IAmb	IAmb	02 55 29.0	
	comp=Z,7.3nm,1.1s						
PB02	**IPOC Station P**	**46.13**	**301**	P	**P**	**02 54 57.7**	**-0.4**
PTLB	**Pontes e Lacer**	**46.58**	**317**	P	**P**	**02 55 01.5**	**0.0**
PTLB				IAmb	IAmb	02 55 02.1	
	comp=Z,4.9nm,0.8s						
LPAZ	**La Paz**	**49.64**	**306**	P	**P**	**02 55 26.0**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=164,slow=7.4,SNR=2.8						
	comp=Z,3.1nm,0.6s						
LPAZ	**La Paz**	**49.64**	**306**	P	**P**	**02 55 25.6**	**-0.3**
LPAZ				IAmb	IAmb	02 55 26.6	
	comp=Z,3.7nm,0.7s						
DBIC	**Dimbokro**	**65.06**	**26**	P	**P**	**02 57 14.3**	**+0.5**
DBIC				IAmb	IAmb	02 57 16.8	
	comp=Z,12nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.01**	**31**	P	**P**	**02 58 03.4**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=198,slow=6.2,SNR=7.0						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.01**	**31**	P	**P**	**02 58 02.9**	**-0.2**
ILAR	**Eielson Array**	**149.38**	**312**	PKPbc	**PKPbc**	**03 06 19.9**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=113,slow=2.3,SNR=5.0						
ILAR	**Eielson Array**	**149.38**	**312**		**PKPdf**	**03 06 17.0**	**+0.6**
SONM	**Songino Array**	**151.32**	**87**	PKPbc	**PKPbc**	**03 06 24.2**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=249,slow=1.2,SNR=2.4						
SONM	**Songino Array**	**151.32**	**87**		**PKPbc**	**03 06 24.5**	**-1.6**

*BER **27** 02:57:16.9±3.4, 81°33N×3°34W, h10km, Mw3.0, ML1.9(DNK), Confirmed Earthquake*
*FCIAR **27** 02:57:18.0, 81°40N×1°56E, h10km, station ZFI2 has station magnitude of 3.10 station OMEGA has station magnitude of 3.10*
*DNK **27** 02:57:18.6±1.7, 81°33N×2°84W, h36km±15km, ML1.9, Presumed earthquake*
*KOLA **27** 02:57:19.2, 81°72N×0°88E, h0km, ML2.3, Error ellipse: s-maj=105.6km s-min=25.5km az=50.0, Arctic Ocean*

ISC 27 02:57:10.0±1.0, 80°94N±0°08×1°19W±0°04, h10km, n25, σ1s58/34, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.45**	**293**	*e*P	**Pn**	**02 57 49.1**	**-0.8**
NOR	**Nord**	**2.45**	**293**	*i* P	**Pn**	**02 57 49.0**	**-0.9**
KBS	**Kingsbay**	**3.06**	**125**	*e*P	**Pg**	**02 58 09.6**	**+1.0**
KBS				*e*S	**Sg**	**02 58 47.7**	**-0.5**
KBS				IAML		02 58 52.9	
	comp=Z,7.0nm,0.3s						
KBS	**Kingsbay**	**3.06**	**125**	P	**Pg**	**02 58 09.4**	**+0.9**
KBS				S	**Sg**	**02 58 47.2**	**-1.0**
KBS	**Kingsbay**	**3.06**	**125**	*i* P	**Pg**	**02 58 09.2**	**+0.6**
KBS				*i* S	**Sg**	**02 58 46.4**	**-1.8**
BRBB	**Barentsburg B**	**4.00**	**128**	*e*P	**Pg**	**02 58 24.2**	**-2.3**
BRBB				*e*S	**Sb**	**02 59 12.3**	**+3.6**
BRBB	**Barentsburg B**	**4.00**	**128**	P	**Pg**	**02 58 24.0**	**-2.4**
BRBB				S	**Sb**	**02 59 11.9**	**+3.2**
BRBA	**Barentsburg A**	**4.03**	**128**	*e*P	**Pg**	**02 58 24.7**	**-2.3**
BRBA				*e*S	**Sb**	**02 59 13.2**	**+3.7**
SPA0	**Spitsbergen Ar**	**4.21**	**122**	*e*P	**Pb**	**02 58 25.5**	**+1.4**
SPA0				*e*S	**Sb**	**02 59 15.9**	**+1.0**
SPA0				IAML		02 59 26.5	
	comp=Z,2.2nm,0.6s						
SPA0	**Spitsbergen Ar**	**4.21**	**122**	*e*P	**Pb**	**02 58 24.4**	**+0.4**
SPA0				*e*S	**Sb**	**02 59 15.3**	**+0.4**
SPITS	**Spitsbergen Ar**	**4.21**	**122**	P	**Pb**	**02 58 25.4**	**+1.4**
HSPB	**Hornsund (broa**	**5.07**	**133**	*e*P	**Pb**	**02 58 38.4**	**-0.3**
HSPB				*e*S	**Sb**	**02 59 38.8**	**-0.6**
HSPB				IAML		02 59 41.3	
	comp=Z,1.4nm,0.4s						
HSPB	**Hornsund (broa**	**5.07**	**133**	*e*P	**Pb**	**02 58 36.9**	**-1.7**
HSPB				*e*S	**Sb**	**02 59 38.4**	**-1.0**
HSPB	**Hornsund (broa**	**5.07**	**133**	P	**Pb**	**02 58 38.3**	**-0.3**
DAG	**Danmarks Havn**	**5.36**	**228**	*e*P	Pn	02 58 35.8	+6.0
DAG				*e*S	**Sn**	**02 59 31.9**	**+0.6**
DAG	**Danmarks Havn**	**5.36**	**228**	*i* P	Pn	02 58 35.8	+6.0
DAG				*i* S	**Sn**	**02 59 32.7**	**+1.3**
DAG				IAML		02 59 35.5	
	comp=Z,7.1nm,0.2s						
HOPEN	**Hopen**	**6.71**	**117**	*e*P	Pb	02 58 59.2	-7.3
HOPEN				*e*S	Sn	03 00 14.1	+9.3
HOPEN				IAML		03 00 18.0	
	comp=Z,1.7nm,0.4s						
ZFI2	**Zemlya Franca-**	**7.57**	**67**	*e*P	Pn	02 59 05.3	+5.2
ZFI2				*e*S	**Sn**	**03 00 25.7**	**0.0**
	comp=Z,5.4nm,2.9s						
OMEGA	**Omega**	**7.59**	**67**	*e*P	Pn	02 59 05.3	+4.9
OMEGA				*e*S	**Sn**	**03 00 25.7**	**-0.6**
	comp=Z,6.5nm,2.9s						
DBG	**Daneborg**	**7.75**	**221**	*e*P	Pn	02 59 08.9	+6.3
DBG				*e*S	**Sn**	**03 00 29.8**	**-0.5**
DBG	**Daneborg**	**7.75**	**221**	*i* P	Pn	02 59 08.3	+5.7
DBG				*i* S	**Sn**	**03 00 29.4**	**-0.9**
DBG				IAML		03 00 35.6	
	comp=Z,2.6nm,0.1s						
NEEM	**North Greenlan**	**9.67**	**275**	*i* P	**Pn**	**02 59 28.9**	**-0.2**
NEEM				*i* S	Sn	03 01 03.3	-14
NEEM	**North Greenlan**	**9.67**	**275**	*i* P	**Pn**	**02 59 28.9**	**-0.2**
NEEM				*i* S	Sn	03 01 03.3	-14
SUMG	**Summit**	**11.63**	**245**	*i* P	**Pn**	**02 59 57.0**	**+1.0**
SUMG				*i* S	Sn	03 01 52.2	-14
SUMG	**Summit**	**11.63**	**245**	*i* P	**Pn**	**02 59 57.0**	**+1.0**
SUMG				*i* S	Sn	03 01 52.2	-14

*AZER **27** 03:36:59.0, 38°49N×44°13E, h5km, ml2.4*
*ISK **27** 03:37:01.5, 38°52N×44°06E, h9km, ML2.5/6*

ISC 27 03:37:01.7±1.4, 38°51N±0°04×44°08E±0°04, h1km±13km, n12, σ1s08/21, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKDM	**Akdamar-Van**	**0.88**	**259**	Pg	**Pg**	**03 37 18.5**	**-0.2**
AKDM				Sg	**Sg**	**03 37 31.1**	**+1.0**
HAKT	**HAKKARI**	**0.99**	**197**	P	**Pg**	**03 37 20.0**	**-0.7**
HAKT				S	**Sb**	**03 37 36.2**	**+0.6**
NAX	**Nakhchivan**	**1.29**	**58**	P	**Pn**	**03 37 25.3**	**-1.7**
NAX				S	**Sg**	**03 37 44.1**	**+0.9**
CUKT	**Cukurca**	**1.31**	**197**	Pn	**Pn**	**03 37 26.6**	**-0.7**
CUKT				Sn	**Sb**	**03 37 45.1**	**+0.4**
HYR	**Heyderabad**	**1.35**	**26**	P	**Pn**	**03 37 27.1**	**-0.7**
HYR				S	**Sn**	**03 37 47.4**	**+0.9**
MLAZ	**Malazgirt-MUS**	**1.35**	**298**	Pn	**Pn**	**03 37 27.1**	**-0.9**
IGDI	**IGDIR**	**1.36**	**360**	P	**Pn**	**03 37 27.0**	**-1.0**
IGDI				S	**Sn**	**03 37 48.4**	**+1.7**
AGRB	**Hanur-Agry**	**1.36**	**322**	Pn	**Pn**	**03 37 27.2**	**-0.9**
AGRB				Sn	**Sb**	**03 37 45.6**	**-0.6**
SBZ	**Shahbuz**	**1.45**	**52**	P	**Pn**	**03 37 27.8**	**-1.4**
SBZ				S	**Sb**	**03 37 48.4**	**-0.3**
ORD	**Ordubad**	**1.55**	**74**	P	**Pn**	**03 37 29.8**	**-0.9**
ORD				S	**Sg**	**03 37 53.2**	**+1.6**
GURO	**Guroymak-BITLI**	**1.61**	**272**	Pn	**Pn**	**03 37 30.5**	**-0.9**
GNI	**Garni**	**1.72**	**17**	Pn	**Pn**	**03 37 32.3**	**-0.7**

IDC 27 03:46:52.3±6.2, 6°21S×149°16E, h69km±61km, mb2.8/2, mbtmp3.4/4, ML3.7/1, Error ellipse: s-maj=127.0km s-min=39.7km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.74**	**212**	P	Pn	03 47 49.1	+1.4
	23nm,0.3s,baz=18,slow=9.6,SNR=6.6						
PMG				S	Sn	03 48 30.8	+0.2
	46nm,0.4s,baz=248,slow=24,SNR=18						
WRA	**Warramunga Arr**	**19.84**	**225**	P	P	03 51 17.9	+0.2
	0.2nm,0.3s,baz=51,slow=11,SNR=5.2						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**22.73**	**219**	P	P	03 51 49.2	+0.5
	0.3nm,0.6s,baz=49,slow=9.3,SNR=5.4						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**84.84**	**23**	P	P	03 59 18.6	-0.5
	0.1nm,0.6s,baz=234,slow=6.1,SNR=1.3						
	0.1nm,0.6s						

*IDC **27** 03:52:10.8±1.5, 24°02S×66°82W, h176km±14km, mb3.5/8, mbtmp4.0/13, Error ellipse: s-maj=16.8km s-min=12.8km az=75.0*
*VAO **27** 03:52:11.0±1.2, 24°20S×67°37W, h246km±8km, mb4.3, Presumed earthquake*
*NEIC **27** 03:52:12.1±1.9, 23°98S±0°07×66°94W±0°08, h209km±8km, mb4.5/7, Error ellipse: s-maj=11.6km s-min=9.4km az=55.0*
*SJA **27** 03:52:12.0±0.8, 23°97S×66°94W, h210km±4km, ML3.7, MW3.8*

ISC 27 03:52:11.6±0.6, 23°99S±0°04×66°95W±0°04, h207km±5km, n111, σ1s37/130, mb3.9/8, 1C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.61**	**113**	⇓*i*P	**Pn**	**03 52 41.5**	**+0.9**
SALTA				*i* S	**S**	**03 53 01.7**	**-1.4**
SALTA				IAML		03 53 04.6	
	comp=E,238nm,0.7s						
SALTA		**0.61**	**113**	*i* P	**Pn**	**03 52 41.7**	**+1.1**
SALTA				*i* S	**S**	**03 53 03.3**	**+0.1**
SALTA				IAML		03 53 06.6	
	comp=Z,122nm,0.7s						
SLA	**San Lorenzo**	**1.51**	**119**	*i* P	**Pn**	**03 52 47.8**	**+1.5**
SLA				*i* S	**S**	**03 53 13.6**	**+0.7**
SLA				IAML		03 53 14.6	
	comp=Z,55nm,0.8s						
AF01	**San Pedro de A**	**1.53**	**312**		**Pn**	**03 52 47.5**	**+0.9**
AF01				Sn	**S**	**03 53 13.2**	**-0.1**
AF01	**San Pedro de A**	**1.53**	**312**	⇑*i*P	**Pn**	**03 52 48.7**	**+2.1**
AF01	**San Pedro de A**	**1.53**	**312**	*i* P	**Pn**	**03 52 47.6**	**+0.9**
AF01				IAML		03 53 21.2	
	comp=Z,368nm,0.7s						
HJA	**Humahuaca**	**1.61**	**62**	*i* P	**Pn**	**03 52 48.2**	**+0.7**
HJA				IAML		03 53 19.4	
	comp=Z,74nm,1.3s						
YJA	**Yavi**	**2.24**	**37**	*i* P	**Pn**	**03 52 55.5**	**+1.8**
YJA				*i* S	**S**	**03 53 27.2**	**+1.3**
YJA				IAML		03 53 29.4	
	comp=Z,4.2nm,0.8s						
FSA	**Cafayete**	**2.29**	**158**	*i* P	**Pn**	**03 52 55.2**	**+1.3**
FSA				*i* S	**S**	**03 53 27.4**	**+0.9**
GO02	**Mina Guanaco**	**2.67**	**243**	Pn	**Pn**	**03 53 00.1**	**+1.9**
PB06	**IPOC Station P**	**2.72**	**297**		**Pn**	**03 52 60.0**	**+1.3**
PB06	**IPOC Station P**	**2.72**	**297**	*i* P	**Pn**	**03 52 59.6**	**+0.9**
PB06				*i* S	**S**	**03 53 35.3**	**+0.4**
PB06				IAML		03 53 38.9	
	comp=Z,288nm,0.1s						
PB09	**IPOC Station P**	**3.04**	**315**		**Pn**	**03 53 04.3**	**+2.0**
PB09	**IPOC Station P**	**3.04**	**315**	*i* P	**Pn**	**03 53 03.4**	**+1.1**
PB09				*i* S	**S**	**03 53 40.7**	**-0.7**
PB09				IAML		03 53 42.6	
	comp=Z,269nm,0.7s						
PB05	**IPOC Station P**	**3.19**	**290**		**Pn**	**03 53 04.4**	**+0.3**
PB14	**IPOC Station P**	**3.21**	**258**	Pn	**Pn**	**03 53 05.6**	**+1.1**
PB14	**IPOC Station P**	**3.21**	**258**	*i* P	**Pn**	**03 53 05.9**	**+1.4**
PB14				*i* S	**S**	**03 53 46.2**	**+1.0**
PB14				IAML		03 53 47.7	
	comp=Z,292nm,0.4s						
PB03	**IPOC Station P**	**3.22**	**306**		**Pn**	**03 53 05.2**	**+0.8**
PB10	**IPOC Station P**	**3.33**	**277**		**Pn**	**03 53 07.2**	**+1.6**
PB10	**IPOC Station P**	**3.33**	**277**	*i* P	**Pn**	**03 53 06.6**	**+1.0**
PB10				*i* S	**S**	**03 53 47.3**	**-0.1**
PB10				IAML		03 53 51.2	
	comp=Z,249nm,0.4s						
AC02	**Maricunga**	**3.45**	**214**	Pn	**Pn**	**03 53 09.7**	**+2.2**
AC02	**Maricunga**	**3.45**	**214**	*i* P	**Pn**	**03 53 09.1**	**+1.6**
AC02				IAML		03 54 00.7	
	comp=Z,49nm,0.2s						
PB07	**IPOC Station P**	**3.52**	**309**		**Pn**	**03 53 08.6**	**+0.5**
PB07	**IPOC Station P**	**3.52**	**309**	*i* P	**Pn**	**03 53 09.0**	**+1.0**
PB07				*i* S	**S**	**03 53 51.4**	**-0.3**
PB07				IAML		03 53 54.0	
	comp=Z,397nm,0.5s						
PB01	**IPOC Station P**	**3.75**	**321**		**Pn**	**03 53 11.4**	**+0.6**
PB01	**IPOC Station P**	**3.75**	**321**	*i* P	**Pn**	**03 53 11.4**	**+0.6**
PB01				*i* S	**S**	**03 53 56.2**	**-0.6**
PB01				IAML		03 53 59.5	
	comp=Z,232nm,0.2s						
PB02	**IPOC Station P**	**3.80**	**314**		**Pn**	**03 53 11.9**	**+0.5**
PB02	**IPOC Station P**	**3.80**	**314**	*i* P	**Pn**	**03 53 11.9**	**+0.5**
PB02				*i* S	**S**	**03 53 56.7**	**-1.1**
PB02				IAML		03 54 01.3	
	comp=Z,659nm,0.4s						
AC01	**Pan de Azucar**	**3.94**	**236**		**Pn**	**03 53 13.7**	**+0.7**
AC01	**Pan de Azucar**	**3.94**	**236**	*i* P	**Pn**	**03 53 13.8**	**+0.7**
AC01				*i* S	**S**	**03 54 00.5**	**-0.3**
AC01				IAML		03 54 00.7	
	comp=Z,157nm,0.8s						
TINO	**Tinogasta**	**4.10**	**188**	*i* P	**Pn**	**03 53 16.5**	**+1.5**
TINO				*i* S	**S**	**03 54 04.0**	**-0.4**
PB08	**IPOC Station P**	**4.34**	**332**		**Pn**	**03 53 19.6**	**+1.3**
PB08	**IPOC Station P**	**4.34**	**332**	*i* P	**Pn**	**03 53 19.6**	**+1.3**
PB08				*i* S	**S**	**03 54 09.2**	**-1.1**
PB08				IAML		03 54 14.3	
	comp=Z,102nm,0.7s						
AC06	**Mina Casimiro**	**4.55**	**222**		**Pn**	**03 53 21.1**	**+0.6**
GO03	**Copiapo**	**4.65**	**219**		**Pn**	**03 53 22.2**	**+0.4**
GO03	**Copiapo**	**4.65**	**219**	*i* P	**Pn**	**03 53 22.4**	**+0.5**
GO03				IAML		03 54 20.3	
	comp=Z,119nm,0.5s						
GO01	**Chusmiza**	**4.78**	**334**		**Pn**	**03 53 24.1**	**+0.2**
GO01	**Chusmiza**	**4.78**	**334**	*i* P	**Pn**	**03 53 25.0**	**+1.1**
GO01				*i* S	**S**	**03 54 19.0**	**-1.5**
GO01				IAML		03 54 25.0	
	comp=Z,94nm,0.5s						
PB11	**IPOC Station P**	**4.90**	**329**		**Pn**	**03 53 25.0**	**-0.2**
PB11	**IPOC Station P**	**4.90**	**329**	*i* P	**Pn**	**03 53 24.9**	**-0.2**
PB11				IAML		03 54 21.4	
	comp=Z,135nm,1.0s						
AC04	**Llanos de Chal**	**5.60**	**221**		**Pn**	**03 53 33.8**	**-0.1**
AC05	**El Transito**	**5.67**	**211**		**Pn**	**03 53 35.5**	**+0.6**
LCO	**Las Campanas**	**6.03**	**213**		**Pn**	**03 53 39.6**	**0.0**
PB16	**IPOC Station P**	**6.11**	**337**		**Pn**	**03 53 41.2**	**+0.2**
PB12	**IPOC Station P**	**6.20**	**329**		**Pn**	**03 53 41.6**	**-0.2**
CO01	**Juntas del Tor**	**6.59**	**204**	Pn	**Pn**	**03 53 47.3**	**+0.5**
PB18	**Visviri**	**6.79**	**339**		**Pn**	**03 53 49.1**	**-0.7**
CFA	**Coronel Fontan**	**7.67**	**188**	P	**Pn**	**03 54 01.1**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=317,slow=11,SNR=27						
CFA				S	**S**	**03 55 23.0**	**-4.5**
	comp=Z,9.1nm,0.3s,baz=158,slow=21,SNR=18						
LPAZ	**La Paz**	**7.74**	**352**	P	**Pn**	**03 54 02.5**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=185,slow=7.7,SNR=12						
LPAZ				S	**S**	**03 55 27.2**	**-2.9**
	comp=Z,2.5nm,0.6s,baz=297,slow=9.1,SNR=3.6						
LPAZ	**La Paz**	**7.74**	**352**		**Pn**	**03 54 01.9**	**-0.3**
LPAZ	**La Paz**	**7.74**	**352**	*e*P	**Pn**	**03 54 03.4**	**+1.2**
CO06	**Fray Jorge**	**7.85**	**211**	Pn	**Pn**	**03 54 02.7**	**-0.3**
CO04	**Los Peladeros**	**8.78**	**203**	Pn	**Pn**	**03 54 14.8**	**-0.3**
CPUP	**Villa Florida**	**9.03**	**107**	P	**Pn**	**03 54 17.4**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=292,slow=12,SNR=6.0						
CPUP	**Villa Florida**	**9.03**	**107**		**Pn**	**03 54 17.2**	**-1.0**
SIV	**San Ignacio**	**9.69**	**36**	P	**Pn**	**03 54 25.4**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=218,slow=9.0,SNR=13						
AMBA	**Amambai (Brazi**	**11.03**	**87**	*e*P	**P**	**03 54 48.6**	**-1.4**
PTLB	**Pontes e Lacer**	**11.23**	**42**	Pn	**P**	**03 54 51.8**	**-0.6**
PTLB	**Pontes e Lacer**	**11.23**	**42**	*e*P	**P**	**03 54 51.2**	**-1.1**
TRCB	**Terra Rica**	**13.20**	**88**		**P**	**03 55 13.4**	**-0.8**
TRCB	**Terra Rica**	**13.20**	**88**	*e*P	**P**	**03 55 14.2**	**-0.1**
PTGB	**Pitanga**	**13.59**

WMQ				pmax	pmax			
	comp=Z,8.0nm,0.9s							
HHC	**Hu-ho-hao-te**	**163.14**	**4**	*eP*	**PKPdf**	**04 11 46.8**	**-2.6**
PZH	**PanZhiHua**	**169.47**	**74**	PKP	**PKPdf**	**04 11 50.8**	**-4.0**
NJ2	**Nanjing**	**170.47**	**329**	*eP*	**PKPdf**	**04 11 53.0**	**-2.0**
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.5s							

SDD **27** *04:10:56.7±1.8, 18°.02N×66°.78W, h21km±26km, MD3.2, ML2.5, MW2.7, Presumed earthquake*
NEIC **27** *04:10:56.9±1.5, 18°.05N±0°.02×66°.772W±0°.008, h10km±1km, ML2.7/29, Md2.6/8(RSPR), Error ellipse: s-maj=3.3km s-min=2.3km az=181.0*
RSPR **27** *04:10:57.0, 18°.03N×66°.79W, h12km, MD2.6/8*
ISC 27 04:10:56.8±0.9, 18°.03N±0°.04×66°.78W±0°.02, h17km±5km, n29, σ0.99/56, 13C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.11**	**239**				**Pg**	**04 10 60.0**	**-0.5**
GBPR							**Sg**	**04 11 02.4**	**-0.5**
GBPR	**Guanica, Bosqu**	**0.11**	**239**	⇑*i*	*P*		**Pg**	**04 10 60.0**	**-0.5**
GBPR					*S*		**Sg**	**04 11 02.4**	**-0.5**
OBIP	**Obispado Ponce**	**0.16**	**86**				**Pg**	**04 11 01.0**	**-0.1**
OBIP					Sg		**Sg**	**04 11 04.0**	**-0.1**
OBIP	**Obispado Ponce**	**0.16**	**86**	⇓*e*	*P*		**Pg**	**04 11 01.1**	**0.0**
OBIP					*S*		**Sg**	**04 11 04.2**	**+0.1**
CELP	**Cerrillos**	**0.19**	**77**				**Pg**	**04 11 01.5**	**0.0**
CELP					Sg		**Sg**	**04 11 04.6**	**0.0**
CELP					IAML			04 11 05.3	
	2μm,0.3s								
UUPR	**Utuado, UPR, P**	**0.23**	**14**				**Pg**	**04 11 01.7**	**-0.4**
UUPR					Sg		**Sg**	**04 11 05.2**	**-0.5**
MLPR	**Magueyes Islan**	**0.26**	**256**				**Pg**	**04 11 01.9**	**-0.8**
MLPR					Sg		**Sg**	**04 11 05.7**	**-0.9**
MLPR					IAML			04 11 07.3	
	686nm,0.1s								
CRPR	**Cabo Rojo, PR**	**0.32**	**265**				**Pg**	**04 11 02.9**	**-0.7**
CRPR					Sg		**Sg**	**04 11 07.2**	**-1.0**
CRPR					IAML			04 11 07.5	
	831nm,0.1s								
CRPR					IAML			04 11 07.6	
	707nm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.32**	**265**	⇑*e*	*P*	*g*	**Pg**	**04 11 03.1**	**-0.5**
CRPR					*S*	*g*	**Sg**	**04 11 07.2**	**-1.0**
CRPR					IAML			04 11 07.6	
	comp=N,874nm,0.2s								
LSP	**Las Mesas**	**0.33**	**296**				**Pg**	**04 11 03.3**	**-0.5**
LSP							**Sg**	**04 11 08.6**	**+0.1**
LSP	**Las Mesas**	**0.33**	**296**	⇑*e*	*P*		**Pg**	**04 11 03.3**	**-0.5**
LSP					*S*		**Sg**	**04 11 08.6**	**+0.1**
PRSN	**Puerto Rico Se**	**0.40**	**298**				**Pg**	**04 11 04.2**	**-0.8**
PRSN					Sg		**Sg**	**04 11 09.3**	**-1.1**
PRSN	**Puerto Rico Se**	**0.40**	**298**	⇑*e*	*P*	*g*	**Pg**	**04 11 04.3**	**-0.6**
PRSN					⇑*e*	*Sg*	**Sg**	**04 11 08.9**	**-1.5**
PRSN					IAML			04 11 14.1	
	comp=N,996nm,0.2s								
PRSN	**Puerto Rico Se**	**0.40**	**298**	⇑*e*	*P*		**Pg**	**04 11 04.2**	**-0.8**
PRSN					*S*		**Sg**	**04 11 10.4**	**0.0**
ECPR	**Experimental S**	**0.49**	**54**				**Pg**	**04 11 06.2**	**-0.4**
ECPR					IAML			04 11 08.1	
	comp=N,346nm,0.2s								
ECPR					Sg		**Sg**	**04 11 12.8**	**-0.4**
ECPR					IAML			04 11 16.6	
	comp=N,501nm,0.2s								
ECPR	**Experimental S**	**0.49**	**54**	⇓*e*	*P*		**Pg**	**04 11 06.4**	**-0.2**
ECPR					*S*		**Sb**	**04 11 13.8**	**0.0**
AGPR	**Aguadilla, PR**	**0.54**	**324**				**Pg**	**04 11 06.7**	**-0.8**
AGPR					Sg		**Sg**	**04 11 13.1**	**-1.6**
AGPR	**Aguadilla, PR**	**0.54**	**324**	⇑*e*	*P*	*g*	**Pg**	**04 11 07.2**	**-0.4**
AGPR					⇑*e*	*Sg*	**Sg**	**04 11 13.9**	**-0.8**
AGPR					IAML			04 11 27.0	
	comp=N,126nm,0.8s								
AGPR	**Aguadilla, PR**	**0.54**	**324**	⇑*e*	*P*		**Pg**	**04 11 06.9**	**-0.6**
AGPR					*S*		**Sg**	**04 11 14.1**	**-0.7**
GCPR	**Guaynabo City**	**0.71**	**67**				**Pg**	**04 11 10.1**	**-0.7**
GCPR					Sg		**Sg**	**04 11 19.5**	**-0.8**
GCPR	**Guaynabo City**	**0.71**	**67**	⇑*e*	*P*		**Pg**	**04 11 10.2**	**-0.7**
GCPR					*S*		**Sg**	**04 11 19.8**	**-0.5**
IDE	**Isla Desecheo**	**0.75**	**298**				**Pg**	**04 11 10.4**	**-1.1**
IDE							**Sg**	**04 11 20.6**	**-0.9**
IDE	**Isla Desecheo**	**0.75**	**298**	⇓*e*	*P*		**Pg**	**04 11 10.4**	**-1.1**
IDE					*S*		**Sg**	**04 11 20.8**	**-0.9**
HUMP	**Col San Antoni**	**0.89**	**83**	Pg			**Pg**	**04 11 12.7**	**-1.4**
HUMP				Sg			**Sg**	**04 11 24.4**	**-1.5**
HUMP	**Col San Antoni**	**0.89**	**83**	⇑*e*	*P*		**Pg**	**04 11 12.6**	**-1.5**
HUMP					*S*		**Sg**	**04 11 24.7**	**-1.2**
CUPR	**Culebra, Puert**	**1.45**	**79**	Pn			**Pn**	**04 11 22.3**	**+0.1**
CUPR				Sn			**Sn**	**04 11 41.3**	**+0.5**
HIDR	**Higuey Centro**	**1.93**	**287**	⇑*e*	*Pg*		**Pn**	**04 11 27.8**	**-1.0**
HIDR					IAML			04 12 10.1	
	comp=N,32nm,0.6s								
DR12	**Loma Pena Alta**	**2.58**	**287**	Pn			**Pn**	**04 11 38.1**	**+0.2**
HATOM	**Hato Mayor del**	**2.58**	**287**	⇓*e*	*Pg*		**Pn**	**04 11 40.7**	**+2.8**
HATOM				⇑*e*	*Sg*		**Sn**	**04 12 12.3**	**+3.4**
HATOM					IAML			04 12 48.3	
	comp=N,23nm,3.2s								

IDC **27** *04:11:08.0±0.4, 12°.31S×14°.80W, h0km, mb4.5/27, mbtmp4.5/27, MS4.3/52, Error ellipse: s-maj=16.3km s-min=11.5km az=120.0*
MOS **27** *04:11:08.5±1.0, 12°.32S×14°.86W, h10km, mb5.2/41, Error ellipse: s-maj=11.5km s-min=6.3km az=54.0*
NEIC **27** *04:11:10.7, 12°.48S×14°.80W, h18km, Moment Tensor Solution. Duration: 1s9 Moment tensor: Scale 10^16Nm; Mrr=4.52; Mθθ0.27; Mφφ4.25; Mrθ-0.31; Mθφ-0.66; Mφr-4.04; Fault plane solution: M06.01000×10^16 NP1: φs162.96000°, δ24.63000°, λ-105.27000°. NP2: φs359.67000°, δ66.30000°, λ-83.12000°. Principal axes: T 5.8730, Plg21.0000°, Azm84.0000°; N 0.2681, Plg6.0000°, Azm177.0000°; P -6.1411, Plg68.0000°, Azm283.0000°;*
NEIC **27** *04:11:10.7, 12°.28S×14°.80W, h18km*
NEIC **27** *04:11:10.7±1.5, 12°.28S±0°.08×14°.80W±0°.09, h10km±1km, mb5.1/93, Mww5.1/16, Error ellipse: s-maj=15.8km s-min=13.9km az=109.0*
GCMT **27** *04:11:12.7±0.2, 12°.37S±0°.02×14°.89W±0°.01, h12km, MW5.1/117, Moment Tensor Solution. s51,c68; s117,c195; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-4.15±.10; Mθθ-0.98±.10; Mφφ5.13±.08; Mrθ1.79±.33; Mθφ-0.53±.08; Mφr0.66±.25; Best double couple: M□5.11300×10^16 NP1:φs332.00000°, δ47.00000°, λ-125.00000°. NP2:φs198.00000°, δ53.00000°, λ-59.00000°. Principal axes: T 5.2040, Plg3.0000°, Azm266.0000°; N -0.1820, Plg25.0000°, Azm358.0000°; P -5.0220, Plg65.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR **27** *04:11:27.8, 9°.45S×14°.46W, h33km, mb4.9, Ms4.2*
ISC 27 04:11:09.6±0.8, 12°.34S±0°.06×14°.87W±0°.06, h9km±4km, h10km:pP-P, n392, σ1s02/365, mb5.0/131, MS4.4/55, 11C-9D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**3.36**	**4**	Pn			**Pn**	**04 12 00.6**	**-1.5**
H10S2				T			T	04 15 18.3	
	baz=35,slow=74,SNR=120								
H10S3	**ASCENSION HYDR**	**3.37**	**4**	Pn			**Pn**	**04 12 00.7**	**-1.5**
H10S3				T			T	04 15 20.6	
	baz=185,slow=74,SNR=180								
ASCN	**Ascension**	**4.40**	**7**				**Pn**	**04 12 15.6**	**-1.1**
H10N1	**ASCENSION HYDR**	**4.48**	**5**	Pn			**Pn**	**04 12 16.3**	**-1.2**
	baz=171,slow=18								
H10N1				T			T	04 16 47.2	
	baz=182,slow=72,SNR=45								
H10N3	**ASCENSION HYDR**	**4.48**	**5**	Pn			**Pn**	**04 12 16.1**	**-1.4**
	baz=171,slow=18								
H10N3				T			T	04 16 41.7	
	baz=182,slow=72,SNR=178								
H10N2	**ASCENSION HYDR**	**4.50**	**5**	Pn			**Pn**	**04 12 16.7**	**-1.0**
	baz=171,slow=18								
H10N2				T			T	04 16 39.4	
	baz=182,slow=72,SNR=46								
DBIC	**Dimbokro**	**21.35**	**28**	P			**P**	**04 15 56.7**	**-0.6**
	49nm,1.1s,baz=227,slow=11,SNR=20								
DBIC						LR	LR	04 22 19.6	
	comp=Z,949nm,20.4s,baz=223,slow=32								
	49nm,1.1s								
DBIC	**Dimbokro**	**21.35**	**28**				**P**	**04 15 56.4**	**-0.8**
DBIC						IAmb	IAmb	04 16 06.0	
	comp=Z,90nm,1.1s								
RCBR	**Riachuelo**	**21.74**	**285**	P			**P**	**04 16 02.4**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=109,slow=16,SNR=5.9								
RCBR						LR	LR	04 22 15.4	
	comp=Z,577nm,21.7s,baz=109,slow=31								
	comp=Z,4.6nm,0.9s								
RCBR	**Riachuelo**	**21.74**	**285**	P			**P**	**04 16 02.8**	**+1.2**
RCBR						IAmb	IAmb	04 16 03.6	
	comp=Z,195nm,2.0s								
RCBR	**Riachuelo**	**21.74**	**285**	P			**P**	**04 16 02.8**	**+1.2**
RCBR						pmax	pmax		
	comp=Z,195nm,2.0s								
RCBR	**Riachuelo**	**21.74**	**285**	*eP*			**P**	**04 16 00.6**	**-1.0**
NBPA	**Parau_RN**	**22.91**	**285**	*eP*			**P**	**04 16 12.7**	**-1.3**
ACRG	**Accra**	**23.05**	**40**	P			**P**	**04 16 14.3**	**-1.2**
ACRG						IAmb	IAmb	04 16 24.6	
	comp=Z,60nm,1.2s								
ABR01	**Abrolhos, BA**	**23.66**	**253**	*eP*			**P**	**04 16 20.9**	**-0.7**
NBIT	**Itapeh - BA**	**24.01**	**261**	*eP*			**P**	**04 16 24.9**	**0.0**
CMC01	**Camacan, BA**	**24.11**	**260**	*eP*			**P**	**04 16 25.5**	**-0.4**
GUA01	**Guaratinga, BA**	**24.50**	**257**	*eP*			**P**	**04 16 28.8**	**-0.7**
H09W1	**TRISTAN DA CUN**	**24.76**	**175**	T			T	04 42 25.6	
	SNR=4.7								
RIB01	**Linhares ES**	**25.50**	**251**	*eP*			**P**	**04 16 37.6**	**-0.9**
SJMB	**Sao Joao De Ma**	**26.11**	**253**	*eP*			**P**	**04 16 43.8**	**-0.3**
MBO	**M'Bour**	**26.63**	**355**	P			**P**	**04 16 48.4**	**-0.4**
MBO						IAmb	IAmb	04 17 01.2	
	comp=Z,40nm,0.9s								
CAM01	**Campos-RJ**	**27.25**	**246**	*eP*			**P**	**04 16 53.0**	**-1.3**
NBPS	**Pedro II - PI**	**27.43**	**284**	*eP*			**P**	**04 16 55.2**	**-0.9**
DUB01	**Friburgo-RJ**	**27.96**	**246**	*eP*			**P**	**04 17 00.4**	**-0.4**
DIAM	**Diamantina, MG**	**28.38**	**254**	*eP*			**P**	**04 17 04.0**	**-0.7**
JANB	**Januaria**	**28.72**	**261**	*eP*			**P**	**04 17 06.5**	**-1.1**
SDBA	**SAO DESIDERIO**	**29.33**	**267**	*eP*			**P**	**04 17 12.3**	**-0.7**
EDA	**Edea**	**29.58**	**59**				**P**	**04 17 13.9**	**-1.3**
EDA						IAmb	IAmb	04 17 17.6	
	comp=Z,55nm,1.9s								
BSCB	**Bom Sucesso**	**29.87**	**249**	*eP*			**P**	**04 17 17.3**	**-0.5**
TORD	**Torodi Ar. Bea**	**30.18**	**34**	P			**P**	**04 17 19.3**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=216,slow=9.3,SNR=14								
TORD						LR	LR	04 27 36.5	
	comp=Z,832nm,20.1s,baz=213,slow=33								
	comp=Z,1.6nm,0.6s								
PMNB	**Patos De Minas**	**31.02**	**255**	*eP*			**P**	**04 17 27.7**	**-0.3**
PARB	**Paraibuna**	**31.18**	**245**	*eP*			**P**	**04 17 28.9**	**-0.4**
TSUM	**Tsumeb**	**31.93**	**106**	LR			LR	04 27 41.0	
	comp=Z,793nm,21.1s,baz=284,slow=31								
TSUM	**Tsumeb**	**31.93**	**106**				**P**	**04 17 36.5**	**+0.4**
VAO	**Valinhos**	**32.30**	**246**	*eP*			**P**	**04 17 39.0**	**-0.2**
BDFB	**Brasilia**	**32.31**	**260**	P			**P**	**04 17 39.6**	**+0.3**
	comp=Z,4.8nm,0.8s,baz=118,slow=8.2,SNR=6.9								
BDFB						LR	LR	04 28 12.5	
	comp=Z,1μm,20.9s,baz=85,slow=32								
	comp=Z,4.8nm,0.8s								
BDFB	**Brasilia**	**32.31**	**260**	P			**P**	**04 17 39.5**	**+0.1**
SMTB	**Santa Maria do**	**32.33**	**273**	*eP*			**P**	**04 17 38.8**	**-0.7**
IPMB	**Ipameri, GO**	**32.63**	**256**	*eP*			**P**	**04 17 41.5**	**-0.6**
SPB	**Sao Paulo**	**32.85**	**246**	*eP*			**P**	**04 17 43.6**	**-0.3**
PET01	**Itanhaem-SP**	**32.89**	**244**	*eP*			**P**	**04 17 43.8**	**-0.5**
BB19B	**Bebedouro**	**33.33**	**250**	*eP*			**P**	**04 17 47.7**	**-0.5**
TMAB	**Tom-Au,PA,Br**	**34.36**	**284**	*eP*			**P**	**04 17 55.7**	**-1.5**
SNDB	**Serra Nova Dou**	**35.59**	**267**	*eP*			**P**	**04 18 06.7**	**-1.1**
LDASE	**Lorena, Braz**	**36.11**	**247**	*eP*			**P**	**04 18 12.0**	**-0.3**
ITAB	**Concordia**	**37.90**	**241**	*eP*			**P**	**04 18 27.1**	**-0.3**
SUR	**Sutherland**	**38.30**	**127**	LR			LR	04 30 38.5	
	comp=Z,754nm,21.1s,baz=282,slow=31								
SUR	**Sutherland**	**38.30**	**127**	P			**P**	**04 18 30.9**	**0.0**
SUR						IAmb	IAmb	04 18 49.1	
	comp=Z,84nm,1.6s								
SALV	**Santo Antonio**	**39.70**	**260**	*eP*			**P**	**04 18 41.9**	**-0.8**
AQDB	**Aquidauana**	**39.91**	**253**				**P**	**04 18 45.2**	**+0.9**
AQDB	**Aquidauana**	**39.91**	**253**	*eP*			**P**	**04 18 43.5**	**-0.8**
CPSB	**Cacapava Do Su**	**39.91**	**237**	*eP*			**P**	**04 18 43.9**	**-0.3**
CLDB	**Colider**	**40.09**	**268**	*eP*			**P**	**04 18 45.0**	**-0.9**
LBTB	**Lobatse**	**40.20**	**114**	LR			LR	04 32 24.3	
	comp=Z,968nm,21.8s,baz=258,slow=32								
LBTB	**Lobatse**	**40.20**	**114**	P			**P**	**04 18 45.7**	**-1.1**
LBTB						IAmb	IAmb	04 18 47.9	
	comp=Z,62nm,2.0s								
LBTB	**Lobatse**	**40.20**	**114**	P			**P**	**04 18 45.7**	**-1.1**
LBTB						pmax	pmax		
	comp=Z,62nm,2.0s								
NPGB	**Novo Progresso**	**40.22**	**274**	*eP*			**P**	**04 18 46.1**	**-0.9**
TAM	**Tamanrasset**	**40.23**	**30**				**P**	**04 18 47.5**	**+0.6**
TAM						IAmb	IAmb	04 19 59.8	
	comp=Z,9.6nm,0.3s								
TAM	**Tamanrasset**	**40.23**	**30**	P			**P**	**04 18 47.6**	**+0.6**
TAM						pmax	pmax		
	comp=Z,10.0nm,0.3s								
PLTB	**Pedras Altas**	**40.49**	**235**	P			**P**	**04 18 50.1**	**+1.1**
PLTB	**Pedras Altas**	**40.49**	**235**	*eP*			**P**	**04 18 49.3**	**+0.3**
BOSA	**Boshof**	**40.71**	**120**	P			**P**	**04 18 50.0**	**-0.9**
	comp=Z,11nm,0.9s,baz=293,slow=7.4,SNR=14								
BOSA						LR	LR	04 33 00.5	
	comp=Z,999nm,18.6s,baz=274,slow=32								
	comp=Z,11nm,0.9s								
BOSA	**Boshof**	**40.71**	**120**	P			**P**	**04 18 50.4**	**-0.5**
BOSA						IAmb	IAmb	04 18 51.8	
	comp=Z,78nm,1.8s								
BOSA	**Boshof**	**40.71**	**120**	P			**P**	**04 18 50.4**	**-0.5**
BOSA						pmax	pmax		
	comp=Z,78nm,1.8s								
BDQN	**Bodoquena, MS**	**40.88**	**253**	*eP*			**P**	**04 18 51.8**	**-0.6**
PDRB	**Porto dos Gac**	**40.92**	**266**	*eP*			**P**	**04 18 51.6**	**-1.2**
ITTB	**Itaituba**	**41.15**	**278**	*eP*			**P**	**04 18 53.1**	**-1.5**
MDP	**Montagnes des**	**41.35**	**293**	LR			LR	04 33 13.8	
	comp=Z,425nm,21.9s,baz=89,slow=32								
MURT	**Porto Murtinho**	**41.79**	**251**	*eP*			**P**	**04 18 58.9**	**-0.9**
LSZ	**Lusaka**	**41.87**	**99**	LR			LR	04 33 49.1	
	comp=Z,799nm,21.3s,baz=261,slow=33								
LSZ	**Lusaka**	**41.87**	**99**				**P**	**04 19 00.3**	**-0.4**
LSZ	**Lusaka**	**41.87**	**99**	P			**P**	**04 19 00.3**	**-0.4**
LSZ						pmax	pmax		
	comp=Z,16nm,1.1s								
CPUP	**Villa Florida**	**42.21**	**244**	P			**P**	**04 19 03.8**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=88,slow=7.3,SNR=7.4								
CPUP						LR	LR	04 33 53.4	
	comp=Z,808nm,21.8s,baz=87,slow=32								
	comp=Z,3.9nm,0.8s								
CPUP	**Villa Florida**	**42.21**	**244**	P			**P**	**04 19 03.3**	**+0.1**
CPUP	**Villa Florida**	**42.21**	**244**	*eP*			**P**	**04 19 03.1**	**-0.1**
PTLB	**Pontes e Lacer**	**43.03**	**261**	P			**P**	**04 19 10.5**	**+0.6**
PTLB	**Pontes e Lacer**	**43.03**	**261**	*eP*			**P**	**04 19 09.3**	**-0.7**
PSAL	**Palomas, Salto**	**43.54**	**238**	*eP*			**P**	**04 19 13.2**	**-0.7**
SIV	**San Ignacio**	**44.88**	**260**	LR			LR	04 35 45.9	
	comp=Z,331nm,19.8s,baz=116,slow=33								
MDT	**Midelt**	**45.95**	**12**	LR			LR	04 37 35.8	
	comp=Z,298nm,18.8s,baz=202,slow=35								
MD01	**Midelt array s**	**45.98**	**12**	P			**P**	**04 19 33.6**	**+0.2**
MACA	**Manacapuru-AM**	**46.23**	**277**	P			**P**	**04 19 36.7**	**+1.1**
MACA						IAmb	IAmb	04 19 46.3	
	comp=Z,14nm,0.8s								
MACA	**Manacapuru-AM**	**46.23**	**277**	*eP*			**P**	**04 19 34.3**	**-1.3**
MBAR	**Mbarara**	**46.70**	**79**	LR			LR	04 37 58.2	
	comp=Z,598nm,18.3s,baz=216,slow=34								
MBAR	**Mbarara**	**46.70**	**79**	⇓*e*	*P*		**P**	**04 19 40.1**	**+0.6**
MBAR						pmax	pmax		
	comp=Z,8.0nm,1.1s								
BOAV	**Boa Vista**	**47.65**	**285**	P			**P**	**04 19 46.9**	**+0.2**
BOAV						IAmb	IAmb	04 19 51.5	
	comp=Z,22nm,1.3s								
BOAV	**Boa Vista**	**47.65**	**285**	*eP*			**P**	**04 19 45.4**	**-1.3**
TRQA	**Tornquist**	**49.05**	**230**	P			**P**	**04 19 58.4**	**+1.1**
TRQA						IAmb	IAmb	04 20 02.5	
	comp=Z,17nm,1.1s								
TRQA	**Tornquist**	**49.05**	**230**	P			**P**	**04 19 58.4**	**+1.1**
TRQA						pmax	pmax		
	comp=Z,17nm,1.1s								
TEFE	**Tefe**	**49.99**	**276**	*eP*			**P**	**04 20 03.2**	**-1.4**
PARRA	**Arraiolos**	**51.28**	**7**	*eP*			**P**	**04 20 15.0**	**+1.1**
PARRA					*i*	IAmb	IAmb	04 20 17.4	
	comp=Z,25nm,1.9s								
PMTG	**Montargil**	**51.51**	**7**	*eP*			**P**	**04 20 14.7**	**-0.9**
LPAZ	**La Paz**	**51.64**	**259**	P			**P**	**04 20 18.7**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=186,slow=7.1,SNR=8.2								
LPAZ						LR	LR	04 42 44.1	
	comp=Z,299nm,18.6s,baz=95,slow=37								
	comp=Z,1.7nm,0.8s								
LPAZ	**La Paz**	**51.64**	**259**	P			**P**	**04 20 18.8**	**+0.9**
LPAZ	**La Paz**	**51.64**	**259**	P			**P**	**04 20 18.8**	**+0.9**
LPAZ						pmax	pmax		
	comp=Z,10.0nm,1.5s								
LPAZ	**La Paz**	**51.64**	**259**	*eP*			**P**	**04 20 16.1**	**-1.8**
PMRV	**Marv??o**	**51.97**	**7**	*eP*			**P**	**04 20 21.3**	**+2.2**
LODK	**Lodwar**	**52.31**	**76**	P			**P**	**04 20 21.5**	**-0.7**
PB08	**IPOC Station P**	**52.51**	**254**	P			**P**	**04 20 26.3**	**+2.4**
ESDC	**Sonseca Array**	**52.73**	**11**	P			**P**	**04 20 24.2**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=186,slow=6.3,SNR=4.4								
ESDC						PcP	**PcP**	**04 21 34.3**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=220,slow=4.3,SNR=2.6								
	comp=Z,1.3nm,0.9s								
H05S1	**Guadeloupe/Mar**	**52.73**	**299**	T			T	05 17 08.4	
	SNR=68								
AC02	**Maricunga**	**52.74**	**246**	P			**P**	**04 20 26.9**	**+1.1**
KMBO	**Kilima Mbogo**	**52.84**	**82**	LR			LR	04 41 49.1	
	comp=Z,438nm,18.2s,baz=286,slow=35								
ZON	**Zonda**	**52.90**	**240**	P			**P**	**04 20 26.9**	**+0.6**
ZON	**Zonda**	**52.90**	**240**	P			**P**	**04 20 26.9**	**+0.6**
ZON						pmax	pmax		
	comp=Z,11nm,0.9s								
MTE	**Manteigas**	**52.91**	**7**	*eP*			**P**	**04 20 26.8**	**+0.7**
PB06	**IPOC Station P**	**52.92**	**251**	P			**P**	**04 20 27.8**	**+1.0**
KEST	**Kesra**	**53.01**	**25**	P			**P**	**04 20 26.4**	**-0.6**
	comp=Z,23nm,1.0s,baz=237,slow=8.4,SNR=9.8								
KEST						LR	LR	04 43 06.4	
	comp=Z,331nm,18.1s,baz=187,slow=36								
	comp=Z,23nm,1.0s								
KEST	**Kesra**	**53.01**	**25**	P			**P**	**04 20 27.9**	**+1.0**
KEST						IAmb	IAmb	04 20 30.5	
	comp=Z,34nm,1.1s								
MVO	**Moncorvo**	**53.72**	**7**	*eP*			**P**	**04 20 32.4**	**+0.3**
MVO					*i*	IAmb	IAmb	04 20 35.0	
	comp=Z,37nm,1.3s								
PVRL	**Vila Real**	**53.75**	**7**	*eP*			**P**	**04 20 33.4**	**+1.1**
PVRL					*i*	IAmb	IAmb	04 20 36.6	
	comp=Z,47nm,1.9s								
H05N1	**Guadeloupe/Mar**	**53.82**	**301**	T			T	05 18 26.2	
	SNR=9.8								
AC06	**Mina Casimiro**	**53.88**	**245**	P			**P**	**04 20 34.6**	**+1.0**
AC06						IAmb	IAmb	04 20 42.6	
	comp=Z,21nm,0.8s								
CO01	**Juntas del Tor**	**53.90**	**242**	P			**P**	**04 20 35.0**	**+1.0**
CO01						IAmb	IAmb	04 20 50.8	
	comp=Z,25nm,0.9s								
AC05	**El Transito**	**53.94**	**243**				**P**	**04 20 34.7**	**+0.6**
PCAB	**Cabril**	**54.14**	**6**	*eP*			**P**	**04 20 36.6**	**+1.5**
MT08	**Bocatoma Ro**	**54.31**	**238**	P			**P**	**04 20 37.0**	**+0.1**
LCO	**Las Campanas**	**54.33**	**243**	P			**P**	**04 20 38.0**	**+0.9**
LCO						IAmb	IAmb	04 20 46.6	
	comp=Z,22nm,0.8s								
LCO	**Las Campanas**	**54.33**	**243**	P			**P**	**04 20 38.0**	**+0.9**
LCO						pmax	pmax		
	comp=Z,22nm,0.9s								
CO03	**El Pedregal**	**54.51**	**241**				**P**	**04 20 38.7**	**+0.5**
CO03						IAmb	IAmb	04 20 53.9	
	comp=Z,20nm,1.0s								
VA03	**San Esteban**	**54.65**	**239**	P			**P**	**04 20 38.8**	**-0.4**
VA03						IAmb	IAmb	04 20 54.2	
	comp=Z,27nm,1.1s								
PEL	**Peldehue**	**54.82**	**238**	P			**P**	**04 20 41.5**	**+1.2**
PEL	**Peldehue**	**54.82**	**238**	P			**P**	**04 20 41.5**	**+1.2**
PEL						pmax	pmax		
	comp=Z,26nm,0.9s								
CO02	**Combarbal**	**54.82**	**241**	P			**P**	**04 20 41.9**	**+1.3**
BO04	**La Punta**	**54.88**	**237**	P			**P**	**04 20 41.0**	**+0.1**
BO04						IAmb	IAmb	04 20 56.5	
	comp=Z,32nm,1.2s								
BO02	**Sierra Bellavi**	**55.16**	**236

LESA Schwarzleotal 64.38 20 *e*P **P 04 21 46.1 +0.1**
comp=Z,4.5nm,1.0s
DOU Dourbes 64.47 14 *d*P **P 04 21 47.1 +0.8**
comp=Z,6.2nm,1.3s
SOKA Soboth 64.58 22 *e*P **P 04 21 48.0 +0.7**
comp=Z,19nm,1.3s
BMRD Maredsous 64.70 14 *d*P **P 04 21 49.3 +1.4**
BIOA Bad Ischl, Aus 64.94 21 *e*P **P 04 21 49.5 0.0**
comp=Z,3.9nm,0.8s
ARSA Arzberg 65.24 22 P 04 21 51.2 -0.3
ARSA IAmb IAmb 04 21 59.9
comp=Z,9.3nm,0.9s
ARSA Arzberg 65.24 22 P **P 04 21 52.1 +0.6**
comp=Z,7.6nm,1.0s
MEM Membach 65.28 14 *d*P **P 04 21 52.7 +1.1**
comp=Z,9.2nm,1.1s
MOA Molln 65.29 21 *e*P **P 04 21 52.0 +0.2**
comp=Z,6.7nm,1.3s
BTNL Ternell 65.29 15 *d*P **P 04 21 53.2 +1.5**
comp=Z,9.1nm,1.0s
MORH Mrgy, Hungar 65.61 25 P **P 04 21 54.7 +0.9**
comp=Z,9.9nm,1.5s
MMAI Mount Meron Ar 65.82 45 LR LR 04 51 43.6
comp=Z,118nm,18.7s,baz=178,slow=37
GRF Grafenberg Arr 65.89 18 *e*L L 04 47 17.9
comp=Z,141nm,19.1s
RONA Rosalia, Austr 65.90 23 *e*P **P 04 21 56.7 +0.9**
comp=Z,21nm,1.3s
CONA Conrad Observa 65.93 22 *e*P **P 04 21 56.6 +0.6**
comp=Z,12nm,1.1s
WET Wettzell 65.93 20 *e*P **P 04 21 56.0 +0.1**
comp=Z,18nm,1.0s,baz=209,slow=6.5
WET *e*pP **pwP 04 22 02.3 -0.1**
baz=209,slow=6.7
MPLH Magyarpolny 65.94 24 P **P 04 21 56.8 +0.8**
comp=Z,47nm,1.0s
GEC2 GERESS Array S 65.95 20 P 04 21 56.1 -0.1
GEC2 IAmb IAmb 04 22 05.8
comp=Z,18nm,1.3s
GEC2 GERESS Array S 65.95 20 *e*P **P 04 21 56.0 -0.1**
comp=Z,45nm,1.9s,baz=209,slow=6.5
GERES GERESS Array B 65.95 20 P **P 04 21 55.2 -1.0**
comp=Z,6.2nm,1.1s,baz=186,slow=4.0,SNR=7.5
GERES LR LR 04 51 49.6
comp=Z,181nm,19.4s,baz=236,slow=37
comp=Z,6.2nm,1.1s
CKRC Cesky Krumlov 66.13 21 *e*P **P 04 21 57.3 +0.1**
CKRC *ex* x 04 22 03.7
CKRC Cesky Krumlov 66.13 21 *e*P **P 04 21 57.3 +0.1**
CKRC *e* 04 22 03.7
KHC Kasperske Hory 66.15 20 P **P 04 21 57.2 -0.2**
KHC Kasperske Hory 66.15 20 *e*P **P 04 21 57.2 -0.2**
KHC *e*pP **pwP 04 22 04.4 +0.5**
KHC Kasperske Hory 66.15 20 *e*P **P 04 21 57.2 -0.2**
KHC *e* 04 22 04.4
KHC Kasperske Hory 66.15 20 P **P 04 21 58.3 +0.9**
comp=Z,9.9nm,1.0s
ROTZ Rotzenmuhle 66.26 19 *e*P **P 04 21 58.0 -0.1**
comp=Z,3.9nm,1.1s,baz=209,slow=6.5
ROTZ *e*pP **pwP 04 22 05.1 +0.7**
baz=209,slow=6.7
ASF Jabal al Asfar 66.40 47 LR LR 04 49 00.4
comp=Z,265nm,21.4s,baz=206,slow=34
MANZ Manzenberg 66.42 19 *e*P **P 04 21 59.1 0.0**
comp=Z,4.7nm,1.2s,baz=209,slow=6.5
MANZ *e*pP **pwP 04 22 06.2 +0.6**
baz=209,slow=6.7
SRO Srobarova 66.77 24 *e*P **P 04 22 03.6 +2.3**
SRO *e* 04 22 09.8
SRO pmax pmax
comp=Z,29nm,1.8s
SRO Srobarova 66.77 24 *e*P **P 04 22 03.6 +2.3**
SRO *e* 04 22 09.8
MODS Modra-Piesok 66.83 23 *e*P **P 04 22 03.2 +1.5**
MODS *e* 04 22 08.7
MODS pmax pmax
comp=Z,41nm,1.4s
MODS Modra-Piesok 66.83 23 *e*P **P 04 22 03.2 +1.5**
MODS *e* 04 22 08.7
MOX Moxa 66.85 18 *e*P **P 04 22 01.8 +0.1**
comp=Z,14nm,1.1s,baz=209,slow=6.5
MOX *e*pP **pwP 04 22 09.1 +0.9**
baz=209,slow=6.7
MOX *e*L L 04 47 04.3
comp=Z,158nm,19.0s
BORA Eskisehir 66.85 37 P **P 04 22 02.2 +0.1**
BORA IAmb IAmb 04 22 11.9
comp=Z,15nm,1.0s
PLN Plauen 66.87 18 *e*P **P 04 22 02.0 +0.1**
comp=Z,4.3nm,1.1s,baz=209,slow=6.5
PLN *e*pP **pwP 04 22 08.8 +0.4**
baz=209,slow=6.7
TANN Tannenbergstha 66.91 19 *e*P **P 04 22 02.3 +0.1**
comp=Z,11nm,1.1s,baz=209,slow=6.5
TANN *e*pP **pwP 04 22 09.5 +0.8**
baz=209,slow=6.7
SMOL Smolenice 67.00 23 *e*P **P 04 22 04.1 +1.3**
SMOL *e* 04 22 10.1
SMOL pmax pmax
comp=Z,9.0nm,1.5s
KRUC Moravsky 67.08 22 *e*P **P 04 22 03.0 -0.2**
VRAC Vranov 67.35 22 LR LR 04 52 05.0
comp=Z,282nm,18.2s,baz=218,slow=36
VRAC Vranov 67.35 22 *e*P **P 04 22 04.8 -0.2**
JAVC Velka Javorina 67.38 23 *e*P **P 04 22 06.3 +1.1**
PSZ Piszkesteto 67.48 25 P 04 22 05.9 -0.1
PSZ Piszkesteto 67.48 25 P **P 04 22 05.9 -0.1**
PSZ pmax pmax
comp=Z,23nm,1.1s
BRG Berggiesshubel 67.77 19 *e*P **P 04 22 08.3 +0.7**
BRG Amp 04 22 09.8
comp=Z,11nm,1.2s
BRG Berggiesshubel 67.77 19 P P 04 22 16.0 +8.4
BRG Amp 04 22 17.3
comp=Z,8.2nm,1.0s
MORC Moravsky Berou 68.09 22 P 04 22 09.4 -0.2
MORC Moravsky Berou 68.09 22 P **P 04 22 09.4 -0.2**
MORC pmax pmax
comp=Z,38nm,1.8s
MORC Moravsky Berou 68.09 22 *e*P **P 04 22 09.6 -0.1**
EKA Eskdalemuir Ar 68.13 7 P **P 04 22 09.9 +0.3**
comp=Z,5.6nm,1.0s,baz=163,slow=5.9,SNR=5.4
comp=Z,5.6nm,1.0s
EKA Eskdalemuir Ar 68.13 7 P **P 04 22 10.0 +0.3**
DPC Dobruska-Polom 68.13 21 *e*P **P 04 22 09.6 -0.3**
DPC *ex* x 04 22 16.8
DPC Dobruska-Polom 68.13 21 *e*P **P 04 22 09.6 -0.3**
DPC *e* 04 22 16.8
DPC Dobruska-Polom 68.13 21 P **P 04 22 10.5 +0.6**
comp=Z,7.5nm,1.0s
UPC Upice 68.15 21 *e*pP pP 04 22 17.2 +5.3
UPC Upice 68.15 21 *e*P P 04 22 17.2 +7.2
OSTC Ostas 68.27 21 *e*P **P 04 22 11.6 +0.9**
OSTC *ex* x 04 22 18.6
OSTC Ostas 68.27 21 *e*P **P 04 22 11.6 +0.9**
OSTC *e* 04 22 18.6
LANS Liptovska Anna 68.30 23 *e*P **P 04 22 12.6 +1.6**
LANS pmax pmax
comp=Z,3.0nm,1.1s
LANS Liptovska Anna 68.30 23 *e*P **P 04 22 12.6 +1.6**
MLR Muntele Rosu 68.33 30 LR LR 04 52 38.1
comp=Z,197nm,19.5s,baz=222,slow=36
MLR Muntele Rosu 68.33 30 P 04 22 10.9 -0.5
MLR Muntele Rosu 68.33 30 P **P 04 22 10.9 -0.5**
MLR pmax pmax
comp=Z,41nm,1.2s
MLR Muntele Rosu 68.33 30 P **P 04 22 11.9 +0.5**
comp=Z,32nm,1.5s
BR105 Keskin Array S 68.63 38 P **P 04 22 13.9 +0.5**
comp=Z,96nmcomp=Z,9.9nm,1.0s
BR104 Keskin Array S 68.64 38 P **P 04 22 14.2 +0.8**
comp=Z,103nmcomp=Z,11nm,0.9s
BR106 Keskin Array S 68.64 38 P **P 04 22 14.0 +0.5**
comp=Z,92nmcomp=Z,9.0nm,1.0s
BR131 Keskin Array S 68.64 38 P 04 22 14.2 +0.7
BR131 IAmb IAmb 04 22 16.1
comp=Z,23nm,1.4s
BR131 Keskin Array S 68.64 38*c* *i*P **P 04 22 15.0 +1.5**
BRTR Keskin Array B 68.64 38 P **P 04 22 13.4 -0.1**
comp=Z,3.5nm,1.0s,baz=202,slow=6.4,SNR=15
BRTR LR LR 04 50 43.8
comp=Z,65nm,20.2s,baz=260,slow=35
comp=Z,3.5nm,1.0s
BRTR Keskin Array B 68.64 38 P 04 22 13.1 -0.4
RAYN Ar Rayn 68.95 59 P 04 22 15.7 0.0
RAYN IAmb IAmb 04 22 18.5
comp=Z,23nm,1.7s
RAYN Ar Rayn 68.95 59 P **P 04 22 15.7 0.0**
RAYN pmax pmax
comp=Z,23nm,1.7s
HOLU Holmets 68.99 26 P **P 04 22 15.8 +0.5**
MUKU Mukachevo 69.06 26 P **P 04 22 16.4 +0.7**
BRIU Brid 69.12 26 P **P 04 22 16.8 +0.8**
OJC Ojcow 69.29 23 *e*P **P 04 22 17.5 +0.4**
OJC Ojcow 69.29 23 P **P 04 22 17.0 -0.1**
OJC Ojcow 69.29 23 P **P 04 22 17.0 -0.1**
OJC Ojcow 69.29 23 P **P 04 22 17.7 +0.6**
comp=Z,18nm,1.1s
BNN Bunyan 69.48 40 P 04 22 18.3 -0.4
BNN IAmb IAmb 04 22 21.6
comp=Z,18nm,1.2s
SHIU Shidnytsya 69.94 26 P **P 04 22 21.9 +0.7**
KSV Kosov 70.00 27 P **P 04 22 22.2 +0.7**
ARPR Arapgir-MALATY 71.21 41 P 04 22 28.6 -0.7
KOPT Kop Dagi 73.11 41 P 04 22 40.9 +0.1
KOPT IAmb IAmb 04 22 44.6
comp=Z,35nm,1.4s
JTS Las Juntas de 73.14 285 LR LR 04 54 21.8
comp=Z,270nm,20.6s,baz=116,slow=35
GURO Guroymak-BITLI 73.34 43 P 04 22 41.4 -0.7
GURO IAmb IAmb 04 22 45.6
comp=Z,18nm,1.2s
AK14 Malin Array Si 73.49 27 P **P 04 22 42.1 -0.4**
AK19 Malin Array Si 73.51 27 P **P 04 22 41.8 -0.8**
SUW Suwalki 73.57 22 P 04 22 42.8 0.0
SUW Suwalki 73.57 22 P **P 04 22 42.8 0.0**
KIEV Kiev 73.58 27 P 04 22 42.0 -1.0
KIEV IAmb IAmb 04 22 52.3
comp=Z,24nm,1.0s
KIEV Kiev 73.58 27 P **P 04 22 42.0 -1.0**
KIEV pmax pmax
comp=Z,24nm,1.0s
KIEV Kiev 73.58 27 P **P 04 22 42.4 -0.6**
comp=Z,125nm,1.1s
AKASG Malin Array Be 73.59 27 P **P 04 22 41.7 -1.4**
comp=Z,7.4nm,0.9s,baz=229,slow=6.6,SNR=29
comp=Z,7.4nm,0.9s
AKASG Malin Array Be 73.59 27 P **P 04 22 42.9 -0.2**
AKASG IAmb IAmb 04 22 52.1
comp=Z,16nm,1.1s
AKASG Malin Array Be 73.59 27 P **P 04 22 42.9 -0.2**
AKASG pmax pmax
comp=Z,15nm,1.2s
AKBB Malin Array Si 73.59 27 P 04 22 42.0 -1.0
AKBB Malin Array Si 73.59 27⇓ *i*P **P 04 22 43.0 -0.1**
AKBB pmax pmax
comp=Z,29nm,1.3s
AKBB Malin Array Si 73.59 27 P **P 04 22 42.5 -0.6**
MAW Mawson 74.00 157 P **P 04 22 44.8 -0.5**
comp=Z,16nm,0.8s,baz=294,slow=18,SNR=2.4
MAW LR LR 04 48 56.3
comp=Z,401nm,18.3s,baz=264,slow=31
comp=Z,16nm,0.8s
F64A Sherman 75.25 325 P 04 22 53.3 +0.5
MNK Minsk 75.75 24 *i* P **P 04 22 55.5 0.0**
comp=E,20nm,0.9s
MNK *i* P **P 04 22 55.5 0.0**
comp=N,11nm,0.8s
MNK *i* P **P 04 22 55.5 0.0**
comp=Z,17nm,1.1s,baz=223
MNK *i* PcP **PcP 04 23 09.5 +1.3**
MNK *i* PP **PP 04 25 45.0 -0.6**
MNK *i* PPP PPP 04 27 31.2
MNK *i* S **S 04 32 37.9 +0.6**
MNK *i* ScS **ScS 04 33 09.4 -0.2**
MNK *i* SS **SS 04 37 30.4 +0.9**
MNK *i* SSS SSS 04 40 53.1
MNK *i* LQ LQ 04 51 15.7
MNK *i* LRM MLR 04 57 39.2
comp=N,101nm,16.7s
MNK *i* LRM MLR 04 57 46.2
comp=Z,204nm,18.5s
MNK *i* LRM MLR 04 57 48.1
comp=E,218nm,19.4s
MNK Minsk 75.75 24 *i* P **P 04 22 55.5 0.0**
MNK *i* 04 23 09.4
MNK *i* 04 25 45.0
MNK *i* PPP PPP 04 27 31.2
MNK *i* S **S 04 32 37.9 +0.6**
MNK *i* 04 33 09.3
MNK *i* SS **SS 04 37 30.4 +0.9**
MNK pmax pmax
comp=Z,17nm,1.1s
MNK pmax pmax
comp=E,20nm,0.9s
MNK pmax pmax
comp=N,11nm,0.8s
MNK MLR MLR
comp=N,101nm,17.0s
MNK MLR MLR
comp=Z,204nm,18.0s
MNK MLR MLR
comp=E,218nm,19.0s
HFS Hagfors 75.77 14 P **P 04 22 55.3 -0.2**
comp=E,3.8nm,0.8s,baz=212,slow=5.3,SNR=3.8
comp=E,3.8nm,0.8s
LABN Labinsk 75.79 37 *e*P **P 04 22 56.6 +0.6**
LABN pmax pmax
comp=Z,17nm,0.5s
GNI Garni 75.96 43 LR LR 04 56 22.2
comp=Z,175nm,21.8s,baz=256,slow=36
GNI Garni 75.96 43 P 04 22 56.6 -0.7
GNI Garni 75.96 43⇑ *i*P **P 04 22 58.3 +1.0**
GNI pmax pmax
comp=Z,47nm,1.5s
GNI Garni 75.96 43 P **P 04 22 58.2 +1.0**
comp=Z,588nmcomp=Z,28nm,1.8s
NB2 NORSAR Subarra 76.01 13 P **P 04 22 57.8 +0.9**
comp=Z,17nm,1.2s,baz=206,slow=5.9
NOA NORSAR Array B 76.01 13 P **P 04 22 57.3 +0.4**
comp=Z,4.4nm,0.9s,baz=205,slow=6.2,SNR=9.1
NOA LR LR 04 56 00.5
comp=Z,64nm,20.0s,baz=185,slow=35
comp=Z,4.4nm,0.9s
NEUR Neytrino 76.24 39⇑ *i*P **P 04 23 00.5 +1.7**
NEUR pmax pmax
comp=Z,14nm,1.9s
ERBR Yeremizino-Bor 76.25 36 *e*P **P 04 22 57.7 -0.8**
ERBR *e*S **S 04 32 38.6 -4.5**
ERBR pmax pmax
comp=Z,50nm,1.5s
D62A Allapoint, All 76.36 325 P 04 22 58.9 -0.2
D62A IAmb IAmb 04 23 01.5
comp=Z,14nm,0.9s
SHA1 Shidzhatmaz 76.47 39⇑ *i*P **P 04 23 00.7 +0.6**
KIV Kislovodsk 76.60 39 P 04 23 01.6 +0.9
KIV Kislovodsk 76.60 39 *e*P **P 04 23 02.4 +1.7**
KIV *e*S **S 04 32 49.1 +1.8**
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,64nm,19.0s
KIV Kislovodsk 76.60 39 P **P 04 23 02.3 +1.6**
comp=Z,17nm,1.1s
KBZ Khabaz 76.61 39 P **P 04 23 01.6 +1.0**
comp=Z,4.8nm,0.9s,baz=228,slow=9.6,SNR=6.3
KBZ LR LR 04 59 39.8
comp=Z,71nm,18.1s,baz=224,slow=38
comp=Z,4.8nm,0.9s
KBZ Khabaz 76.61 39⇑ *i*P **P 04 23 02.1 +1.5**
KBZ pmax pmax
comp=Z,15nm,1.4s
L59A Walton 77.34 319 P 04 23 05.7 +0.8
L59A IAmb IAmb 04 23 10.6
comp=Z,30nm,1.4s
GOF Gofitskoye 77.40 38*c* *e*P **P 04 23 07.6 +2.5**
JS9A Piesco 77.63 320 P 04 23 07.5 +1.1
QSPA South Pole Qui 77.81 180 P **P 04 23 08.0 +0.7**
comp=Z,15nm,0.8s,baz=199,slow=3.3,SNR=13
comp=Z,15nm,0.8s
QSPA South Pole Qui 77.81 180 P 04 23 07.9 +0.6
AKT Akhty 78.59 43 *e*P **P 04 23 12.2 +0.3**
AKT pmax pmax
comp=Z,22nm,1.4s
VSR Storozhevoye 78.70 31 *e*P **P 04 23 12.6 +0.5**
VSR pmax pmax
comp=Z,30nm,1.8s
VORR Voronezh 78.99 31 *e*P **P 04 23 14.7 +1.0**
VORR pmax pmax
comp=Z,66nm,0.4s
TRQ Mont Tremblant 79.06 322 P 04 23 14.1 -0.3
TRQ IAmb IAmb 04 23 17.5
comp=Z,12nm,0.7s
LPSR Galich'ya Gora 79.41 30 *e*P P 04 23 23.0 +7.0
LPSR pmax pmax
comp=Z,20nm,1.1s
OBN Obninsk 79.85 27 *i* P **P 04 23 17.4 -0.9**
OBN *i* 04 23 25.7
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN MLR MLR
comp=Z,146nm,18.0s
SCHQ Schefferville 79.91 332 P **P 04 23 18.6 0.0**
comp=Z,8.9nm,0.8s,baz=103,slow=7.1,SNR=11
SCHQ LR LR 04 52 39.3
comp=Z,123nm,20.6s,baz=142,slow=31
comp=Z,8.9nm,0.8s
SCHQ Schefferville 79.91 332 P P 04 23 20.4 +1.7
VRH Novokhopyorsk 80.01 32 *e*P **P 04 23 20.0 +0.7**
VRH pmax pmax
comp=Z,10.0nm,0.4s
FINES FINESS Array B 80.30 19 P **P 04 23 20.7 +0.1**
comp=Z,4.5nm,0.7s,baz=216,slow=4.4,SNR=10
comp=Z,4.5nm,0.7s
FINES FINESS Array B 80.30 19 P P 04 23 22.4 +1.8
FINES FINESS Array B 80.30 19 P **P 04 23 22.4 +1.8**
TKL Tuckaleechee C 80.60 310 LR LR 04 51 59.1
comp=Z,149nm,19.9s,baz=130,slow=30
MOS Moscow 80.71 27 *e*P **P 04 23 23.4 +0.5**
MOS pmax pmax
comp=Z,35nm,0.7s
SADO Sadowa 81.19 320 LR LR 04 51 16.1
comp=Z,127nm,21.3s,baz=148,slow=30
VLDQ Val d'Or 81.72 323 P 04 23 29.5 +1.0
SFJD Kangerlussuaq 83.31 347 LR LR 04 53 38.1
comp=Z,91nm,19.7s,baz=164,slow=31
BELG Belogornoye 83.75 33⇑ *i*P **P 04 23 39.2 +0.3**
BELG pmax pmax
comp=Z,3.0nm,0.9s
CMIG Matias Romero 84.26 289 LR LR 05 02 02.1
comp=Z,131nm,19.9s,baz=170,slow=36
KLMR Klimovskoe 84.64 24 *e*P **P 04 23 42.4 -0.9**
KLMR pmax pmax
comp=Z,31nm,1.4s
FRB Frobisher Bay 86.14 339 LR LR 04 54 06.5
comp=Z,52nm,21.8s,baz=97,slow=30
ARCES ARCESS Array B 86.38 13 P **P 04 23 51.5 -0.3**
comp=Z,6.0nm,1.0s,baz=217,slow=5.6,SNR=4.2
comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 86.38 13 P **P 04 23 51.5 -0.3**
APA Apatity 86.93 17⇓ *e*P **P 04 23 56.7 +2.2**
APA *e* 04 27 20.2
APA pmax pmax
comp=Z,7.0nm,1.3s
KIRV Kirov 87.64 28 *e*P **P 04 23 59.1 +1.0**
R40A Maddies Statio 87.89 310 P 04 24 00.5 +0.6
RPN Rapa Nui 88.37 243 LR LR 04 58 26.8
comp=Z,141nm,18.5s,baz=122,slow=32
HHAR Hobbs 88.59 307 P 04 24 04.1 +0.8
AKTO Aktyubinsk 88.81 38 LR LR 05 10 32.8
comp=Z,139nm,18.8s,baz=27,slow=40
AB31 Akbulak array 89.58 39 P 04 24 08.0 +0.5
AB31 IAmb IAmb 04 24 17.2
comp=Z,7.9nm,0.9s
ABKAR Akbulak array 89.58 39 P 04 24 07.7 +0.2
ARTI Arti 91.14 32 P 04 24 15.0 +0.3
ARTI Arti 91.14 32*c* *i*P **P 04 24 16.2 +1.6**
ARTI 04 27 54.0
ARTI S **SKSac 04 34 48.4 +1.6**
ARTI SS **SS 04 41 16.8 -0.4**
ARTI pmax pmax
comp=Z,13nm,1.1s
BRDY Brady 91.38 302 P 04 24 16.2 -0.2
BRDY IAmb IAmb 04 24 20.3
comp=Z,7.8nm,1.0s
SHAA Shahritus 91.96 52 P 04 24 20.2 +1.1
SHAA IAmb IAmb 04 26 25.2
comp=Z,31nm,0.7s
EPLO Experimental L 92.22 320 P 04 24 20.5 +0.7
ECSD EROS Data Cent 92.55 314 P 04 24 22.4 +0.8
OZNA Ozona 93.08 301 P 04 24 25.3 +1.0
OZNA IAmb IAmb 04 24 28.9
comp=Z,8.1nm,1.0s
ULM Lac du Bonnet 93.71 321 P **P 04 24 26.0 -0.6**
comp=Z,3.7nm,0.8s,baz=80,slow=4.8,SNR=6.0
ULM LR LR 05 00 34.6
comp=Z,110nm,19.7s,baz=103,slow=32
comp=Z,3.7nm,0.8s
ULM Lac du Bonnet 93.71 321 P P 04 24 26.6 -0.1
ULM Lac du Bonnet 93.71 321 P P 04 24 26.6 -0.1
ULM pmax pmax
comp=Z,5.0nm,0.9s
SAND Sanderson 93.72 300 P 04 24 27.4 +0.1
TXAR Lajitas Array 94.91 299 P **P 04 24 32.2 -0.6**
comp=Z,1.2nm,1.0s,baz=111,slow=5.5,SNR=6.7
TXAR PKiKP **PKiKP 04 29 15.4 +0.5**
comp=Z,0.2nm,0.8s,baz=87,slow=6.8,SNR=1.8
TXAR LR LR 05 03 47.2
comp=Z,50nm,21.7s,baz=106,slow=33
comp=Z,1.2nm,1.0s
TXAR Lajitas Array 94.91 299 P P 04 24 32.5 -0.3
FCC Fort Churchill 94.93 329 P 04 24 30.8 -1.2
FCC IAmb IAmb 04 24 35.0
comp=Z,5.7nm,0.9s
FCC Fort Churchill 94.93 329 P **P 04 24 30.8 -1.2**
FCC pmax pmax
comp=Z,6.0nm,0.9s
VHRN Van Horn 96.30 300 P 04 24 39.8 +0.6
VHRN IAmb IAmb 04 24 44.6
comp=Z,7.5nm,1.3s
BORK Borovoye 96.88 37⇓ *i*P **P 04 24 41.3 +0.2**
BORK pmax pmax
comp=Z,3.0nm,1.5s
BVAR Borovoye Array 96.92 37 P **P 04 24 41.7 +0.4**
comp=Z,0.2nm,0.2s,baz=230,slow=3.6,SNR=2.9
BVAR LR LR 05 13 16.5
comp=Z,95nm,18.5s,baz=221,slow=38
comp=Z,0.2nm,0.2s
PALK Pallekele 96.94 84 LR LR 05 06 20.8
comp=Z,321nm,18.1s,baz=246,slow=34
AAK Ala-Archa 97.78 48 LR LR 05 11 21.9
comp=Z,150nm,18.1s,baz=239,slow=37
AAK Ala-Archa 97.78 48⇑ *i*P Pdif 04 24 46.9 +1.2
AAK pmax pmax
comp=Z,4.0nm,0.6s
ANMO Albuquerque 98.24 304 LR LR 05 02 26.8
comp=Z,182nm,21.6s,baz=107,slow=31
MKAR Makanchi Array 103.77 45 PKKPbc PKKPbc 04 41 01.8 -3.0
comp=Z,0.3nm,0.7s,baz=225,slow=11,SNR=3.8
YKA Yellowknife Ar 105.35 332 Pdiff **Pdif 04 25 17.2 -1.5**
comp=Z,0.2nm,0.9s,baz=74,slow=3.4,SNR=2.2
YKA PKKPbc **PKKPbc 04 40 59.4 -1.0**
comp=Z,0.2nm,0.8s,baz=272,slow=3.0,SNR=3.7
WMQ Urumqi 107.48 48 Pdif **Pdif 04 25 30.5 +1.8**
NVAR Mina Array Bea 108.04 307 PKKPbc PKKPbc 04 40 50.5 -1.1
comp=Z,0.2nm,0.6s,baz=236,slow=2.8,SNR=4.0
H01W2 Cape Leeuwin H 112.62 136 T T 06 32 19.7
baz=238,slow=75,SNR=6.0
H01W3 Cape Leeuwin H 112.63 136 T T 06 32 17.1
baz=238,slow=75,SNR=5.7
H01W1 Cape Leeuwin H 112.64 136 T T 06 32 21.5
baz=238,slow=75,SNR=5.3
CMAR Chiang Mai Arr 116.19 75 PKP **PKPdf 04 29 53.1 -1.2**
comp=Z,0.7nm,0.4s,baz=285,slow=2.3,SNR=1.1
CMAR Chiang Mai Arr 116.19 75 PKPdf 04 29 51.8 -2.5
TIXI Tiksi 116.80 12⇑ *i*PKIKP **PKiKP 04 29 56.1 +2.2**
PRP Porcupine Dome 117.28 339 PKiKP 04 29 55.8 +0.6
ILAR Eielson Array 118.17 339 PKP **PKPdf 04 29 55.3 -1.5**
comp=Z,0.5nm,1.0s,baz=15,slow=3.8,SNR=4.0
ILAR Eielson Array 118.17 339 PKPdf 04 29 55.9 -0.8
ILAR Eielson Array 118.17 339 PKIKP **PKPdf 04 29 55.9 -0.8**
PZH PanZhiHua 119.11 66 PKP **PKiKP 04 30 01.0 +1.1**
SONM Songino Array 119.91 42 PKP **PKPdf 04 29 59.3 -1.5**
comp=Z,1.1nm,0.9s,baz=269,slow=2.6,SNR=5.5
SONM Songino Array 119.91 42 PKPdf 04 30 00.7 -0.1
SONM Songino Array 119.91 42 PKIKP **PKPdf 04 30 00.7 -0.1**
LZDM Lanzhou Array 120.21 56 PKP **PKPdf 04 30 01.6 -0.4**
comp=Z,0.6nm,0.2s,baz=238,slow=4.8,SNR=3.8
ULN Ulaanbaatar 120.32 41⇑ *i*PKIKP **PKiKP 04 30 01.7 0.0**
TAOE Nuku Hiva Isla 121.69 251 *e*LR LR 05 07 41.7
comp=Z,248nm,28.0s
TBI Tubuai 123.15 231 *e*LR LR 05 08 13.5
comp=Z,1μm,27.2s
BILL Bilibino 124.35 359*d* *i*PKIKP **PKiKP 04 30 09.9 +1.1**
HHC Hu-ho-hao-te 125.35 48 *e*PKP **PKPdf 04 30 07.5 -3.9**
PPT2 Papeete2 126.29 237 *e*LR LR 05 09 40.9
comp=Z,188nm,25.5s

PPT2 eLR LR 05 09 45.6
comp=Z,184nm,24.0s
ZEA Zeya 128.97 28 *e*PKIKP **PKiKP 04 30 26.1 +7.7**
ASAR Alice Springs 132.96 139 PKP **PKPdf 04 30 25.0 -1.4**
comp=Z,1.1nm,0.8s,baz=250,slow=0.5,SNR=7.7
ASAR Alice Springs 132.96 139 PKPdf 04 30 25.6 -0.7
ASAR Alice Springs 132.96 139 PKIKP **PKPdf 04 30 25.6 -0.7**
NJ2 Nanjing 133.29 57 *e*PKP **PKPdf 04 30 26.8 +0.2**
CN2 Changchun 133.71 40 *e*PKP **PKPdf 04 30 24.3 -2.7**
WRA Warramunga Arr 135.87 136 PKP **PKPdf 04 30 30.8 -1.1**
comp=Z,0.7nm,0.6s,baz=243,slow=2.3,SNR=6.4
WRA Warramunga Arr 135.87 136 PKPdf 04 30 30.6 -1.2
CTA Charters Tower 142.81 150 PKhKP PKPpre 04 30 40.1
comp=Z,2.9nm,0.8s,baz=194,slow=4.6,SNR=4.6
DZM Mont Dzumac 145.78 182 eLR LR 05 18 39.1
comp=Z,99nm,23.5s
DZM Mont Dzumac 145.78 182 PKPbc **PKPab 04 30 50.4 0.0**
comp=Z,15nm,0.9s,baz=88,slow=7.1,SNR=6.3
DZM Mont Dzumac 145.78 182 PKPdf 04 30 49.2 -0.5
MJAR Matsushiro Arr 145.85 41 PKPbc **PKPbc 04 30 49.8 0.0**
comp=Z,2.9nm,0.7s,baz=290,slow=4.6,SNR=7.4
MJAR Matsushiro Arr 145.85 41 PKPab 04 30 50.2 0.0
MJAR Matsushiro Arr 145.85 41 PKP2 **PKPab 04 30 50.2 0.0**
JGF Kuroka 145.86 43 PKPdf 04 30 48.8 -0.5
COEN Coen 146.00 140 PKPdf 04 30 49.9 -0.2
PMG Port Moresby 151.97 140 PKPbc **PKPbc 04 31 05.1 -1.1**
comp=Z,6.0nm,0.3s,baz=242,slow=3.1,SNR=5.1
PMG Port Moresby 151.97 140 PKPbc 04 31 05.8 -0.5
PMG Port Moresby 151.97 140 PKIKP **PKPbc 04 31 05.8 -0.5**

IDC ***27*** *04:13:34.0±0.9, 45°.15S×95°.64E, h0km, mb4.2/10, mbtmp4.2/10, MS4.3/36, Error ellipse: s-maj=28.5km s-min=21.5km az=120.0*
NEIC ***27*** *04:13:34.8±1.2, 45°.2S±0°.1×95°.5E±0°.2, h10km±1km, mb5.0/17, Error ellipse: s-maj=23.8km s-min=19.5km az=283.0*
GCMT ***27*** *04:13:38.8±0.2, 45°.02S±0°.01×95°.58E±0°.01, h12km, MW5.1/122, Moment Tensor Solution. s62,c78; s122,c188; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.51±.09; Mθθ4.71±.09; Mφφ-4.21±.09; Mrθ0.90±.24; Mrφ-1.53±.08; Mθφ1.37±.24; Best double couple: M=5.01000×10^16 NP1:φs143.00000°, δ72.00000°, λ-8.00000°. NP2:φs236.00000°, δ82.00000°, λ-162.00000°. Principal axes: T 5.0470, Plg7.0000°, Azm8.0000°; N -0.0790, Plg70.0000°, Azm259.0000°; P -4.9730, Plg19.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 04:13:34.6±0.5, 45°.13S±0°.10×95°.6E±0°.1, h10km, n70, σ1s01/33, mb4.6/14, MS4.4/36, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.48**	**61**	T		T	04 35 27.1	
	baz=228,slow=73,SNR=366							
H01W3	**Cape Leeuwin H**	**17.48**	**61**	T		T	04 35 28.1	
	baz=228,slow=73,SNR=458							
H01W1	**Cape Leeuwin H**	**17.50**	**61**	T		T	04 35 28.3	
	baz=228,slow=73,SNR=408							
NWAO	**Narrogin (SRO)**	**20.71**	**61**	P		**P**	**04 18 13.7**	**-1.4**
	8.8nm,0.9s,baz=157,slow=13,SNR=2.4							
NWAO				LR		LR	04 24 40.4	
	comp=Z,249nm,19.2s,baz=358,slow=32							
	8.8nm,0.9s							
MAW	**Mawson**	**28.27**	**206**	LR		LR	04 28 17.6	
	comp=Z,753nm,21.6s,baz=50,slow=31							
FITZ	**Fitzroy Crossi**	**36.80**	**53**	LR		LR	04 32 30.7	
	comp=Z,331nm,21.7s,baz=226,slow=31							
ASAR	**Alice Springs**	**37.73**	**68**	P		**P**	**04 20 51.6**	**+1.1**
	2.2nm,0.9s,baz=227,slow=7.8,SNR=16							
ASAR				LR		LR	04 34 13.3	
	comp=Z,386nm,21.2s,baz=220,slow=33							
	2.2nm,0.9s							
ASAR	**Alice Springs**	**37.73**	**68**	P		**P**	**04 20 51.8**	**+1.3**
AS31	**Alice Springs**	**37.73**	**68**	P		**P**	**04 20 51.9**	**+1.4**
AS31				IAmb		IAmb	04 21 04.2	
	comp=Z,6.3nm,0.3s							
STKA	**Stephens Creek**	**37.88**	**86**	P		**P**	**04 20 52.1**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=268,slow=8.5,SNR=5.5							
	comp=Z,3.1nm,0.8s							
STKA	**Stephens Creek**	**37.88**	**86**	P		**P**	**04 20 50.9**	**-0.8**
STKA				IAmb		IAmb	04 21 04.9	
	comp=Z,42nm,1.1s							
LEM	**Lembang**	**39.58**	**19**	LR		LR	04 34 35.5	
	comp=Z,680nm,19.4s,baz=170,slow=32							
WRA	**Warramunga Arr**	**40.66**	**65**	P		**P**	**04 21 15.6**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=225,slow=8.2,SNR=4.9							
	comp=Z,1.1nm,0.3s							
WRA	**Warramunga Arr**	**40.66**	**65**	P		**P**	**04 21 14.1**	**-1.0**
VNDA	**Vanda**	**41.29**	**162**	LR		LR	04 37 08.2	
	comp=Z,820nm,18.2s,baz=287,slow=34							
BATI	**Baumata**	**42.35**	**43**	LR		LR	04 37 49.2	
	comp=Z,348nm,20.3s,baz=211,slow=34							
H08S2	**Diego Garcia H**	**42.36**	**325**	T		T	05 06 25.4	
	baz=156,slow=76,SNR=7.9							
H08S1	**Diego Carcia H**	**42.37**	**325**	T		T	05 06 28.2	
	baz=156,slow=76,SNR=6.8							
H08S3	**Diego Garcia H**	**42.38**	**325**	T		T	05 06 34.4	
	baz=156,slow=76,SNR=18							
SBA	**Scott Base**	**42.38**	**163**	P		**P**	**04 21 28.3**	**-0.2**
QSPA	**South Pole Qui**	**45.01**	**180**	P		**P**	**04 21 51.0**	**+1.0**
	comp=Z,4.3nm,0.8s,baz=335,slow=3.1,SNR=4.9							
QSPA				LR		LR	04 39 25.4	
	comp=Z,2μm,18.7s,baz=282,slow=34							
	comp=Z,4.3nm,0.8s							
QSPA	**South Pole Qui**	**45.01**	**180**	P		**P**	**04 21 50.1**	**+0.1**
QSPA				IAmb		IAmb	04 23 17.8	
	comp=Z,38nm,1.2s							
KAPI	**Kappang**	**45.21**	**35**	LR		LR	04 37 43.7	
	comp=Z,159nm,20.9s,baz=204,slow=32							
CTA	**Charters Tower**	**48.50**	**76**	LR		LR	04 41 25.0	
	comp=Z,274nm,18.8s,baz=225,slow=34							
SNAA	**Sanae**	**50.40**	**204**	P		**P**	**04 22 32.1**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=127,slow=8.9,SNR=3.7							
	comp=Z,4.8nm,0.8s							
SNAA	**Sanae**	**50.40**	**204**	P		**P**	**04 22 31.6**	**0.0**
RPZ	**Rata Peaks**	**52.05**	**117**	LR		LR	04 40 09.0	
	comp=Z,462nm,21.5s,baz=217,slow=31							
PALK	**Pallekele**	**53.85**	**342**	LR		LR	04 40 33.8	
	comp=Z,438nm,21.2s,baz=186,slow=30							
PALK	**Pallekele**	**53.85**	**342**	P		**P**	**04 22 57.1**	**-0.7**
PALK				IAmb		IAmb	04 24 33.6	
	comp=Z,22nm,1.1s							
PMG	**Port Moresby**	**56.73**	**68**	LR		LR	04 45 36.0	
	comp=Z,202nm,21.0s,baz=220,slow=34							
BOSA	**Boshof**	**56.89**	**261**	LR		LR	04 44 43.3	
	comp=Z,140nm,18.3s,baz=198,slow=33							
SUR	**Sutherland**	**57.72**	**255**	LR		LR	04 43 51.5	
	comp=Z,244nm,18.1s,baz=158,slow=32							
SUR	**Sutherland**	**57.72**	**255**	P		**P**	**04 23 24.9**	**-0.9**
JAY	**Jayapura**	**58.02**	**57**	LR		LR	04 49 32.2	
	comp=Z,268nm,19.5s,baz=228,slow=37							
DAV	**Davao City (W)**	**58.54**	**36**	LR		LR	04 49 20.7	
	comp=Z,68nm,18.7s,baz=326,slow=37							
URZ	**Urewera**	**58.84**	**114**	LR		LR	04 45 16.0	
	comp=Z,441nm,18.2s,baz=232,slow=32							
LBTB	**Lobatse**	**58.86**	**265**	LR		LR	04 43 31.4	
	comp=Z,327nm,20.6s,baz=158,slow=30							
TGY	**Tagaytay City**	**63.29**	**28**	LR		LR	04 49 37.1	
	comp=Z,167nm,21.2s,baz=140,slow=34							
CMAR	**Chiang Mai Arr**	**63.36**	**4**	P		**P**	**04 24 05.5**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=201,slow=6.0,SNR=9.6							
CMAR				LR		LR	04 46 55.8	
	comp=Z,563nm,21.9s,baz=200,slow=32							
	comp=Z,0.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**63.36**	**4**	P		**P**	**04 24 03.8**	**-0.1**
LSZ	**Lusaka**	**63.40**	**275**	LR		LR	04 45 53.2	
	comp=Z,371nm,21.5s,baz=165,slow=31							
HYB	**Hyderabad**	**64.14**	**342**	*e*P		**P**	**04 24 10.5**	**+1.3**
HNR	**Honiara**	**65.36**	**78**	LR		LR	04 51 22.1	
	comp=Z,21nm,18.4s,baz=312,slow=35							
BRDH	**Bariadhala**	**67.58**	**356**	LR		LR	04 50 20.6	
	comp=Z,325nm,21.1s,baz=196,slow=33							
TSUM	**Tsumeb**	**68.27**	**264**	LR		LR	04 49 25.1	
	comp=Z,393nm,20.3s,baz=148,slow=32							
PMSA	**Palmer Station**	**69.27**	**189**	LR		LR	04 55 51.5	
	comp=Z,564nm,18.3s,baz=131,slow=37							
MBAR	**Mbarara**	**72.03**	**288**	LR		LR	04 52 01.5	
	comp=Z,293nm,18.7s,baz=174,slow=32							
EVN	**Everest**	**73.17**	**352**	P		**P**	**04 25 06.3**	**+0.2**
EVN				IAmb		IAmb	04 25 13.9	
	comp=Z,12nm,0.9s							
GUMO	**Guam**	**73.51**	**50**	LR		LR	04 57 57.4	
	comp=Z,30nm,18.6s,baz=88,slow=36							
JOW	**Kunigami**	**77.58**	**30**	LR		LR	05 00 59.9	
	comp=Z,74nm,18.8s,baz=278,slow=37							
MG01	**Puerto William**	**79.29**	**190**	P		**P**	**04 25 40.1**	**+0.2**
AFI	**Afiamalu**	**82.14**	**102**	LR		LR	04 55 49.8	
	comp=Z,145nm,20.5s,baz=197,slow=31							
RAR	**Rarotonga**	**85.02**	**115**	LR		LR	04 58 57.5	
	comp=Z,104nm,20.6s,baz=205,slow=32							
KSRS	**Korea Array**	**87.25**	**25**	LR		LR	05 05 43.6	
	comp=Z,52nm,19.5s,baz=185,slow=36							
JGF	**Kuroka**	**88.82**	**33**	P		**P**	**04 26 29.2**	**+0.7**
KK31	**Karatay Array**	**90.64**	**342**	P		**P**	**04 26 37.3**	**+0.5**
KK31				IAmb		IAmb	04 26 44.3	
	comp=Z,7.2nm,0.7s							
MKAR	**Makanchi Array**	**92.29**	**351**	P		**P**	**04 26 45.3**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=148,slow=7.1,SNR=8.4							
	comp=Z,0.4nm,0.8s							
MAKZ	**Makanchi**	**92.33**	**351**	P		**P**	**04 26 44.6**	**0.0**
SONM	**Songino Array**	**93.07**	**7**	P		**P**	**04 26 48.5**	**+0.4**
	comp=Z,1.2nm,1.0s,baz=166,slow=7.6,SNR=5.6							
SONM				LR		LR	05 06 32.0	
	comp=Z,196nm,21.9s,baz=204,slow=34							
	comp=Z,1.2nm,1.0s							
SONM	**Songino Array**	**93.07**	**7**	P		**P**	**04 26 46.2**	**-1.8**
PLCA	**Paso Flores**	**93.61**	**191**	LR		LR	05 10 03.3	
	comp=Z,222nm,18.2s,baz=172,slow=36							
KURBB	**Kurchatov Arra**	**96.51**	**349**	P		**P**	**04 27 04.3**	**+0.7**
	comp=Z,0.3nm,0.2s,baz=177,slow=5.5,SNR=4.1							
KURBB				LR		LR	05 07 04.7	
	comp=Z,151nm,21.8s,baz=170,slow=33							
	comp=Z,0.3nm,0.2s							
KURK	**Kurchatov**	**96.59**	**349**	P		**P**	**04 27 03.4**	**-0.6**
TLY	**Talaya**	**96.69**	**5**	P		**P**	**04 27 03.5**	**-0.9**
TLY				IAmb		IAmb	04 28 08.3	
	comp=Z,1.5nm,0.6s							
ZALV	**Zalesovo Beam**	**99.13**	**354**	LR		LR	05 08 50.3	
	comp=Z,123nm,21.8s,baz=201,slow=33							
ILAR	**Eielson Array**	**141.13**	**37**	PKhKP		PKPpre	04 33 00.1	
	comp=Z,0.7nm,1.1s,baz=225,slow=3.7,SNR=3.2							
ILAR	**Eielson Array**	**141.13**	**37**			**PKPdf**	**04 33 01.3**	**-2.7**
NVAR	**Mina Array Bea**	**154.01**	**93**	PKPbc		**PKiKP**	**04 33 35.1**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=191,slow=4.6,SNR=4.0							
TXAR	**Lajitas Array**	**158.11**	**130**	PKPab		**PKPab**	**04 34 05.7**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=195,slow=5.3,SNR=4.3							
TXAR	**Lajitas Array**	**158.11**	**130**			**PKPab**	**04 34 05.2**	**-0.2**

SSNC ***27*** *04:15:59.5±3.4, 18°.30N×71°.20W, h20km±585km, MD3.6, ML2.8, Presumed earthquake*
SDD ***27*** *04:16:03.3±1.8, 19°.87N×70°.97W, h20km±12km, MD3.1, ML2.8, MW3.1, Presumed earthquake*
OSPL ***27*** *04:16:05.5±3.8, 19°.75N×70°.98W, h5km±25km, ML2.1, Presumed earthquake*
ISC 27 04:16:02.7±1.1, 19°.85N±0°.05×71°.02W±0°.03, h27km±7km, n21, σ1s33/38, 12C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LUDR	**Luperon**	**0.08**	**59**	*e*Pg		**Pb**	**04 16 07.3**	**-0.3**
LOPP1	**Punta Rusia, P**	**0.17**	**271**	*i* P		**Pn**	**04 16 09.0**	**-0.4**
LOPP1				*e*S		**Sb**	**04 16 13.3**	**+1.3**
LOPP1				*e*S			04 16 14.1	
LOPP1				IAML			04 16 15.7	
	comp=Z,244nm,0.8s							
MADR	**Mao Valverde**	**0.29**	**195**	*e*Pg		**Pb**	**04 16 09.4**	**-0.4**
MADR				↑*e*Sg		**Sb**	**04 16 13.8**	**-0.9**
MADR				IAML			04 16 15.2	
	comp=N,1μm,0.5s							
SC01	**Santiago de lo**	**0.51**	**146**	*e*Pg		**Pb**	**04 16 12.3**	**-0.8**
SC01				↓*e*Sg		**Sb**	**04 16 19.1**	**-1.1**
SC01				IAML			04 16 20.9	
	comp=N,204nm,0.3s							
SC01	**Santiago de lo**	**0.51**	**146**	*i* P		**Pb**	**04 16 12.6**	**-0.6**
SC01				*e*S		**Sb**	**04 16 19.5**	**-0.7**
SC01				IAML			04 16 25.2	
	comp=Z,145nm,0.2s							
LODA1	**ITESIL, Dajabo**	**0.71**	**245**	*i* P		**Pn**	**04 16 17.7**	**+0.8**
LODA1				*e*S		**Sn**	**04 16 28.5**	**+1.5**
SDDR	**Presa de Saban**	**0.90**	**196**	*e*Pg		**Pb**	**04 16 18.7**	**-1.1**
SDDR				↑*e*Sg		**Sb**	**04 16 30.5**	**-0.9**
SDDR				IAML			04 16 31.7	
	comp=N,152nm,0.3s							
SDDR	**Presa de Saban**	**0.90**	**196**	*i* P		**Pb**	**04 16 18.5**	**-1.3**
SDDR				*e*S		**Sb**	**04 16 30.8**	**-0.6**
SDDR				IAML			04 16 31.9	
	comp=Z,91nm,0.8s							
DR08	**Loma La Naviza**	**1.30**	**133**	*e*Pg		**Pn**	**04 16 24.8**	**-0.3**
DR08				↓*e*Sg		**Sn**	**04 16 41.5**	**0.0**
DR08				IAML			04 16 45.3	
	comp=N,3μm,0.2s							
LONE3	**El Aguacate, B**	**1.31**	**198**	*i* P		**Pb**	**04 16 26.0**	**-0.7**
LONE3				*e*S		**Sb**	**04 16 43.6**	**+0.5**
LONE3				IAML			04 16 46.5	
	comp=Z,82nm,0.5s							
LODU1	**El Espartillar**	**1.55**	**196**	*i* P		**Pb**	**04 16 30.8**	**0.0**
JIDR	**Jimani**	**1.56**	**210**	*e*Pg		**Pb**	**04 16 30.8**	**-0.2**
JIDR				↑*e*Sg		**Sb**	**04 16 51.7**	**+1.3**
JIDR				IAML			04 16 52.9	
	comp=N,128nm,0.2s							
BANI	**BANI**	**1.58**	**156**	↑*e*Pg		**Pb**	**04 16 30.8**	**-0.6**
BANI				↑*e*Sg		**Sb**	**04 16 50.6**	**-0.4**
BANI				IAML			04 17 06.8	
	comp=N,57nm,0.9s							
PODR	**Polo**	**1.69**	**188**	*e*Pg		**Pb**	**04 16 32.5**	**-0.9**
PODR				↑*e*Sg		**Sb**	**04 16 54.5**	**+0.2**
PODR				IAML			04 16 57.8	
	comp=N,96nm,0.6s							
PODR	**Polo**	**1.69**	**188**	*i* P		**Pb**	**04 16 32.4**	**-0.9**
PODR				*e*S		**Sb**	**04 16 56.6**	**+2.3**
HATOM	**Hato Mayor del**	**1.88**	**124**	↑*e*Pg		**Pn**	**04 16 34.4**	**+1.4**
HATOM				↑*e*Sg		**Sn**	**04 16 57.0**	**+1.1**
HATOM				IAML			04 16 59.0	
	comp=N,29nm,0.2s							
HIDR	**Higuey Centro**	**2.52**	**120**	↑*e*Pg		**Pn**	**04 16 44.0**	**+2.2**
HIDR				↓*e*Sg		**Sb**	**04 17 15.7**	**-2.0**
HIDR				IAML			04 17 17.8	
	comp=N,72nm,0.2s							
MASC	**Masc**	**3.03**	**277**	*e*P		**Pn**	**04 16 50.0**	**+1.1**
MASC				*e*S		**Sn**	**04 17 27.3**	**+3.0**
MASC				IAML			04 17 43.6	
	comp=N,13nm,0.3s							
QMBU	**Quimbuelo**	**3.58**	**276**	*e*P		**Pn**	**04 16 56.9**	**+0.5**
RCC	**Rio Carpintero**	**4.40**	**273**	*e*P		**Pn**	**04 17 07.3**	**-0.3**
RCC				*e*S		**Sn**	**04 17 55.2**	**-2.8**
PINC	**Pinares de May**	**4.52**	**279**	*e*S		**Sn**	**04 17 58.5**	**-2.6**

IDC ***27*** *04:17:11.5±1.7, 7°.51S×127°.80E, h163km±16km, mb3.6/5, mbtmp4.3/9, Error ellipse: s-maj=16.9km s-min=14.9km az=83.0*
NEIC ***27*** *04:17:12.4±2.0, 7°.61S±0°.09×127°.89E±0°.06, h158km±4km, mb4.3/13, Error ellipse: s-maj=13.9km s-min=8.9km az=168.0*
ISC 27 04:17:10.5±0.6, 7°.72S±0°.06×127°.88E±0°.04, h142km, n49, σ2s59/55, mb3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.40**	**95**	P		**Pn**	**04 18 06.9**	**+4.2**
SAUI	**Saumlaki**	**3.40**	**95**	S		**Sn**	**04 18 48.3**	**+5.1**
SAUI	**Saumlaki**	**3.40**	**95**	Pn		**Pn**	**04 18 05.3**	**+2.6**
SAUI				Sn		**Sn**	**04 18 46.4**	**+3.2**
SOEI	**Soe**	**4.10**	**240**	P		**Pn**	**04 18 15.3**	**+3.4**
SOEI	**Soe**	**4.10**	**240**	S		**Sn**	**04 19 02.2**	**+2.5**
SOEI	**Soe**	**4.10**	**240**			**Pn**	**04 18 16.0**	**+4.1**
SOEI				Sn		**Sn**	**04 19 02.8**	**+3.1**
BATI	**Baumata**	**4.84**	**239**	P		**Pn**	**04 18 25.2**	**+3.6**
	124nm,0.4s,baz=126,slow=2.4,SNR=18							
BATI				S		**Sn**	**04 19 19.4**	**+2.4**
	137nm,0.3s,baz=164,slow=21,SNR=10							
DRS	**Darwin Rock St**	**5.54**	**148**	P		**Pn**	**04 18 33.9**	**+2.9**
MTN	**Manton Dam**	**6.01**	**148**			**Pn**	**04 18 39.9**	**+2.6**
SIJI	**Sorong**	**7.60**	**27**	P		**Pn**	**04 18 57.6**	**-1.0**
	12nm,0.3s,baz=217,slow=10,SNR=8.7							
KNRA	**Kununurra**	**7.95**	**174**			**Pn**	**04 19 05.5**	**+2.2**
PLAI	**Plampang**	**10.05**	**263**	P		**Pn**	**04 19 31.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**10.54**	**192**	P		**Pn**	**04 19 38.0**	**+0.2**
	3.7nm,0.3s,baz=18,slow=12,SNR=30							
FITZ				S		**Sn**	**04 21 29.4**	**-4.9**
	6.9nm,0.4s,baz=311,slow=21,SNR=5.6							
WB0	**Warramunga Arr**	**13.54**	**153**			**Pn**	**04 20 16.9**	**0.0**
WRAB	**Tennant Creek**	**13.66**	**153**	Pn		**Pn**	**04 20 19.9**	**+1.3**
WRA	**Warramunga Arr**	**13.67**	**153**	P		**Pn**	**04 20 19.1**	**+0.5**
	19nm,0.6s,baz=325,slow=14,SNR=82							
WRA				S		**Sn**	**04 22 44.5**	**-5.3**
	7.3nm,0.6s,baz=323,slow=24,SNR=9.5							
WRA	**Warramunga Arr**	**13.67**	**153**			**Pn**	**04 20 18.0**	**-0.6**
WR8	**Warramunga Arr**	**13.75**	**153**	Pn		**Pn**	**04 20 19.2**	**-0.4**
MBWA	**Marble Bar**	**15.50**	**210**	Pn		**P**	**04 20 42.4**	**-0.4**
MBWA				IAmb		IAmb	04 21 22.3	
	comp=Z,26nm,1.4s							
PSA00	**Pilbara Seismi**	**15.80**	**209**			**P**	**04 20 47.9**	**+1.7**
COEN	**Coen**	**16.25**	**114**	P		**P**	**04 20 52.8**	**+1.6**
COEN	**Coen**	**16.25**	**114**			**P**	**04 20 51.9**	**+0.7**
COEN				IAmb		IAmb	04 21 06.5	
	comp=Z,8.2nm,0.7s							
AS31	**Alice Springs**	**16.87**	**161**	P		**P**	**04 20 58.3**	**+0.2**
ASAR	**Alice Springs**	**16.87**	**161**	P		**Pn**	**04 21 01.8**	**+3.4**
	comp=Z,8.2nm,0.5s,baz=340,slow=12,SNR=16							
ASAR				S		**S**	**04 23 59.1**	**-7.5**
	comp=Z,1.9nm,0.5s,baz=321,slow=16,SNR=6.2							
ASAR	**Alice Springs**	**16.87**	**161**			**Pn**	**04 20 58.5**	**+0.2**
QIS	**Mount Isa**	**17.08**	**140**	P		**Pn**	**04 21 03.6**	**+2.8**
SBUM	**Sibu**	**18.60**	**302**	P		**P**	**04 21 16.9**	**-0.1**
PMG	**Port Moresby**	**19.14**	**96**	P		**P**	**04 21 22.8**	**-0.1**
	comp=Z,3.6nm,0.3s,baz=317,slow=4.0,SNR=7.9							
PMG	**Port Moresby**	**19.14**	**96**	P		**P**	**04 21 22.6**	**-0.3**
PMG				IAmb		IAmb	04 21 30.0	
	comp=Z,18nm,0.8s							
GIRL	**Giralia**	**19.81**	**220**	P		**P**	**04 21 31.0**	**+1.0**
MEEK	**Meekatharra**	**20.77**	**204**	P		**P**	**04 21 42.0**	**+1.7**
FORT	**Forrest**	**22.94**	**180**	P		**P**	**04 22 04.2**	**+1.8**
FORT				IAmb		IAmb	04 22 15.5	
	comp=Z,7.0nm,0.9s							
BBOO	**Buckleboo**	**26.09**	**164**	P		**P**	**04 22 33.3**	**+2.3**
BBOO	**Buckleboo**	**26.09**	**164**	P		**P**	**04 22 32.7**	**+1.7**
STKA	**Stephens Creek**	**27.22**	**154**	P		**P**	**04 22 42.2**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=329,slow=7.8,SNR=3.3							
	comp=Z,0.9nm,0.3s							
STKA	**Stephens Creek**	**27.22**	**154**	P		**P**	**04 22 42.1**	**+0.9**
HTT	**Hallett**	**27.55**	**160**	P		**P**	**04 22 46.9**	**+2.8**
MK31	**Makanchi Array**	**67.70**	**328**	P		**P**	**04 27 50.7**	**-1.8**
MKAR	**Makanchi Array**	**67.70**	**328**	P		**P**	**04 27 50.1**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=123,slow=7.8,SNR=12							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**71.32**	**335**	P		**P**	**04 28 10.8**	**-3.6**
	comp=Z,0.7nm,0.5s,baz=124,slow=5.4,SNR=3.8							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**71.32**	**335**	P		**P**	**04 28 13.0**	**-1.4**
VNDA	**Vanda**	**72.00**	**173**	P		**P**	**04 28 18.1**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=333,slow=4.5,SNR=4.7							
	comp=Z,1.9nm,0.5s							
VNDA	**Vanda**	**72.00**	**173**	P		**P**	**04 28 19.5**	**+1.3**
VNDA				IAmb		IAmb	04 28 59.7	
	comp=Z,18nm,1.5s							
KURBB	**Kurchatov Arra**	**72.04**	**329**	P		**P**	**04 28 16.5**	**-2.4**
	comp=Z,0.9nm,0.5s,baz=135,slow=5.1,SNR=16							
	comp=Z,0.9nm,0.5s							
KURK	**Kurchatov**	**72.05**	**330**	P		**P**	**04 28 17.0**	**-1.9**
KURK				IAmb		IAmb	04 28 18.0	
	comp=Z,1.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**126.88**	**281**	PKP		**PKPdf**	**04 35 56.7**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=97,slow=2.3,SNR=5.1							
PLCA	**Paso Flores**	**128.88**	**162**	PKP		**PKPdf**	**04 35 60.0**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=217,slow=10,SNR=2.7							
CPUP	**Villa Florida**	**145.77**	**172**	PKPbc		**PKPdf**	**04 36 32.4**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=164,slow=1.6,SNR=5.8							
CPUP	**Villa Florida**	**145.77**	**172**	PKPdf		**PKPdf**	**04 36 31.3**	**-1.7**

KRNET ***27*** *04:23:50.2±0.1, 39°.85N×72°.27E, h14km, mb3.6*
NNC ***27*** *04:23:52.2±4.2, 39°.96N×72°.30E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=35.6km s-min=15.4km az=3.0*
SOME ***27*** *04:23:54.4, 40°.03N×72°.33E, h5km*
ISU ***27*** *04:23:57, 39°.84N×72°.23E, h30km*
ISC 27 04:23:51.6±0.8, 39°.81N±0°.03×72°.34E±0°.02, h10km, n59, σ1s70/103, 35C-25D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.53**	**232**	*e*P		**Pg**	**04 24 00.2**	**-1.8**
DRK			

CHMS	**Chumysh**	**3.67**	**29**	⇑*eP*		**Pn**	**04 24 49.6**	**+1.2**
CHMS				⇑*eS*		**Sn**	**04 25 33.0**	**+1.3**
BRLS	**Borolday**	**3.73**	**331**	Pg		**Pn**	**04 24 51.8**	**+2.6**
	5.2nm,0.2s							
BRLS				Lg	Lg		04 25 43.9	
	40nm,0.2s							
BRLS	**Borolday**	**3.73**	**331**	*eP*		**Pb**	**04 24 57.2**	**-0.3**
	6.2nm,0.2s							
BRLS				*eS*		**Sb**	**04 25 43.0**	**+0.3**
	45nm,0.2s							
BOOM	**Boomskoye usch**	**3.82**	**44**	⇓*iP*		**Pn**	**04 24 52.2**	**+1.6**
BOOM				⇓*eS*		**Sn**	**04 25 37.4**	**+1.8**
USP	**Ospenovka**	**3.82**	**24**	P		**Pb**	**04 24 55.9**	**-3.2**
	SNR=7.9							
USP	**Ospenovka**	**3.82**	**24**	⇑*eP*		**Pn**	**04 24 51.7**	**+1.2**
USP				⇑*eS*		**Sn**	**04 25 36.6**	**+1.2**
ULHL	**Ulahol**	**3.83**	**49**	P		**Pn**	**04 24 55.2**	**+4.4**
	SNR=14							
ULHL	**Ulahol**	**3.83**	**49**	⇑*eP*		**Pn**	**04 24 52.3**	**+1.5**
ULHL				⇑*eS*		**Sn**	**04 25 37.8**	**+1.9**
TKM2	**Tokmak 2**	**3.96**	**37**	P		Pn	04 24 57.6	+5.0
	SNR=8.5							
TKM2	**Tokmak 2**	**3.96**	**37**	⇑*eP*		**Pn**	**04 24 54.0**	**+1.4**
TKM2				⇑*eS*		**Sn**	**04 25 40.6**	**+1.4**
AGL	**Agalyk**	**4.22**	**268**	P		**Pb**	**04 25 06.9**	**+0.9**
AGL				S		**Sb**	**04 26 01.7**	**+4.7**
DGS	**Degeres**	**4.29**	**36**	Pg		**Pb**	**04 25 05.9**	**-1.2**
	5.5nm,0.5s							
DGS				Lg	Lg		04 26 07.5	
	28nm,0.3s							
DGS	**Degeres**	**4.29**	**36**	*eP*		**Pg**	**04 25 11.6**	**-2.2**
	5.8nm,0.7s							
DGS				*eS*		**Sg**	**04 26 07.3**	**-2.1**
	28nm,0.5s							
KDJ	**Kajisay**	**4.34**	**56**	⇑*eP*		**Pn**	**04 24 59.7**	**+1.9**
KDJ				⇑*iS*		**Sn**	**04 25 50.3**	**+1.8**
MTBS	**Maitube**	**4.52**	**41**	Pg		**Pb**	**04 25 11.0**	**-0.1**
	2.5nm,0.5s							
MTBS				Lg	Lg		04 26 17.3	
	16nm,0.3s							
MTBS	**Maitube**	**4.52**	**41**	*eP*		**Pg**	**04 25 15.5**	**-2.7**
	3.5nm,0.4s							
MTBS				*eS*		**Sg**	**04 26 14.0**	**-2.8**
	21nm,0.4s							
TARG	**Taragay, Kyrgy**	**4.57**	**63**	⇑*eP*		**Pn**	**04 25 03.1**	**+1.9**
TARG				⇑*eS*		**Sn**	**04 25 56.2**	**+1.6**
TNSS	**Tian-Shan**	**4.73**	**46**	*eP*		**Pg**	**04 25 19.6**	**-2.7**
	2.3nm,0.4s							
TNSS				*eS*		**Sg**	**04 26 21.0**	**-2.6**
	4.9nm,0.5s							
KOTS	**Kotyrbulak**	**4.95**	**45**	Pg		**Pb**	**04 25 18.3**	**-0.2**
	1.3nm,0.2s							
KOTS				Lg	Lg		04 26 28.7	
	44nm,0.6s							
KOTS	**Kotyrbulak**	**4.95**	**45**	*eP*		**Pg**	**04 25 23.7**	**-2.8**
	3.8nm,0.4s							
KOTS				*eS*		**Sg**	**04 26 28.1**	**-2.5**
	43nm,0.6s							
PRZ	**Przheval'sk**	**5.30**	**58**	⇑*eP*		**Pn**	**04 25 13.0**	**+2.0**
PRZ				⇑*eS*		**Sn**	**04 26 13.2**	**+1.0**
PDGK	**Podgornoye**	**6.41**	**54**	⇓Pn		**Pn**	**04 25 28.7**	**+2.5**
	3.0nm,0.8s							
PDGK				⇓Lg	Lg		04 27 12.0	
	13nm,1.3s							

AFAD ***27*** *04:25:45.5,38°.52N×44°.63E,h7km±2km,ML2.4*
AZER ***27*** *04:25:45.8,38°.42N×44°.55E,h10km,ml2.4*
ISK ***27*** *04:25:49.2,38°.38N×44°.50E,h18km,ML2.8/6*
TEH ***27*** *04:25:50.4,38°.39N×44°.76E,h6km±72km,ML2.5, Presumed earthquake*

ISC 27 04:25:47.2±1.2,38°.42N±0°.03×44°.56E±0°.02,h6km±10km, n26,σ1°25/41,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.51**	**298**	P	**Pg**	**04 25 55.7**	**-1.3**
OZAP				S	**Sg**	**04 26 03.4**	**-0.3**
OZAP				IAML		04 26 06.0	
	comp=N,217nm,1.0s						
ISHB	**Shabestar**	**0.84**	**99**	Pg	**Pb**	**04 26 03.1**	**-1.2**
YOVA	**Hakkari_Yksek**	**0.86**	**195**	P	**Pg**	**04 26 04.1**	**+0.3**
YOVA				IAML		04 26 22.0	
	comp=E,66nm,0.3s						
YOVA				IAML		04 26 24.0	
	comp=N,85nm,0.6s						
TVAN	**Van**	**0.91**	**277**	P	**Pg**	**04 26 03.0**	**-1.8**
TVAN				S	**Sg**	**04 26 18.2**	**+1.5**
TVAN				IAML		04 26 19.0	
	comp=N,159nm,0.5s						
TVAN				IAML		04 26 30.0	
	comp=E,157nm,0.7s						
VANB	**Van**	**0.94**	**281**	Pg	**Pb**	**04 26 06.5**	**+0.5**
VANB				Sg	**Sb**	**04 26 19.0**	**+0.3**
IMRD	**Marand**	**0.94**	**72**	Pg	**Pn**	**04 26 05.8**	**-1.4**
IMRD				Sg	**Sb**	**04 26 17.2**	**-1.6**
VMUR	**Van-Muradiye**	**0.96**	**306**	P	**Pg**	**04 26 04.1**	**-1.6**
VMUR				S	**Sb**	**04 26 19.4**	**-0.1**
VMUR				IAML		04 26 23.0	
	comp=N,102nm,0.5s						
VMUR				IAML		04 26 23.0	
	comp=E,94nm,0.3s						
NAX	**Nakhchivan**	**1.05**	**44**	P	**Pn**	**04 26 07.3**	**-1.2**
NAX				S	**Sn**	**04 26 23.5**	**-0.1**
HAKT	**HAKKARI**	**1.10**	**218**	P	**Pg**	**04 26 07.3**	**-1.0**
HAKT				S	**Sn**	**04 26 25.9**	**+1.0**
HAKT	**HAKKARI**	**1.10**	**218**	P	**Pg**	**04 26 07.6**	**-0.7**
HAKT				S	**Sg**	**04 26 24.1**	**+1.6**
GEVA	**Gevas**	**1.19**	**265**	P	**Pn**	**04 26 07.5**	**-3.1**
GEVA				S	**Sb**	**04 26 25.9**	**-0.1**
ORD	**Ordubad**	**1.23**	**65**	P	**Pn**	**04 26 10.9**	**-0.2**
ORD				S	**Sn**	**04 26 29.2**	**+1.2**
SBZ	**Shahbuz**	**1.24**	**38**	P	**Pn**	**04 26 10.8**	**-0.5**
SBZ				S	**Sn**	**04 26 29.5**	**+1.1**
ITBZ	**Tabriz**	**1.26**	**98**	Pg	**Pg**	**04 26 10.9**	**-0.5**
HYR	**Heyderabad**	**1.31**	**10**	P	**Pg**	**04 26 12.8**	**+0.4**
HYR				S	**Sn**	**04 26 31.4**	**+1.3**
IAZR	**Azarshahr**	**1.34**	**123**	Pg	**Pg**	**04 26 13.3**	**+0.3**
CUKT	**Cukurca**	**1.40**	**213**	Pn	**Pn**	**04 26 13.6**	**+0.2**
ADCV	**BITLIS_Adilcev**	**1.49**	**286**	P	**Pb**	**04 26 15.2**	**-0.3**
ADCV				S	**Sg**	**04 26 37.6**	**+2.5**
ADCV				IAML		04 26 38.0	
	comp=E,66nm,0.6s						
ADCV				IAML		04 26 39.0	
	comp=N,48nm,0.5s						
IGDI	**IGDIR**	**1.49**	**346**	P	**Pg**	**04 26 16.0**	**+0.1**
IGDI				S	**Sg**	**04 26 38.6**	**+3.4**
AGRB	**Hanur-Agry**	**1.68**	**314**	Pn	**Pb**	**04 26 18.4**	**-0.3**
DORK	**Agr/Tutak/Do**	**1.69**	**305**	P	**Pb**	**04 26 19.0**	**+0.1**
DORK				S	**Sg**	**04 26 42.3**	**+0.7**
MLAZ	**Malazgirt-MUS**	**1.73**	**295**	Pn	**Pb**	**04 26 18.8**	**-0.7**
GNI	**Garni**	**1.73**	**5**	Pn	**Pg**	**04 26 19.9**	**-0.5**
IHRS	**Heris**	**1.95**	**92**	Pg	**Pg**	**04 26 23.7**	**-0.9**
GURO	**Guroymak-BITLI**	**1.99**	**274**	Pn	**Pn**	**04 26 22.4**	**+0.8**
ISRB	**Sarab**	**2.52**	**103**	Pn	**Pb**	**04 26 32.8**	**-0.2**

IDC ***27*** *04:26:05.2±1.0,30°.49S×177°.60W,h0km,mb4.4/4, mbtmp4.3/5,ML3.4/1,Error ellipse: s-maj=30.2km s-min=23.2km az=122.0*
NEIC ***27*** *04:26:12.3±1.7,30°.20S±0°.07×177°.7W±0°.2,h35km±2km, mb4.9/17,Error ellipse: s-maj=24.9km s-min=11.0km az=81.0*

ISC 27 04:26:11.2±0.7,30°.39S±0°.06×177°.8W±0°.1,h35km,n50, σ1°47/45,mb4.8/11,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.14**	**354**	Pn	**Pn**	**04 26 30.8**	**+0.1**
	248nm,0.3s,baz=357,slow=24,SNR=7.2						
RAO				Sn	**Sn**	**04 26 43.4**	**-1.7**
	826nm,0.3s,baz=151,slow=22,SNR=8.4						
RAO	**Raoul Island**	**1.14**	**354**		**Pn**	**04 26 29.4**	**-1.2**
RAO					**Sn**	**04 26 42.2**	**-2.9**
URZ	**Urewera**	**8.91**	**207**	Pn	**Pn**	**04 28 14.1**	**-3.2**
	0.4nm,0.3s,baz=267,slow=4.1,SNR=9.3						
URZ				Sn	**Sn**	**04 29 52.2**	**-4.2**
	2.5nm,0.3s,baz=108,slow=19,SNR=16 4.4nm,0.8s						
INZ	**Inchbonnie**	**15.03**	**212**	Pn	**P**	**04 29 45.5**	**-0.3**
OXZ	**Oxford**	**15.24**	**209**	Pn	**P**	**04 29 48.7**	**+0.5**
OXZ				IAmb	IAmb	04 29 49.4	
	comp=Z,138nm,1.9s						

ODZ	**Otahua Downs**	**17.22**	**209**			**P**	**04 30 14.8**	**+4.6**
CTA	**Charters Tower**	**33.98**	**279**	P		**P**	**04 32 52.9**	**+1.3**
	comp=Z,3.7nm,0.5s,baz=102,slow=9.8,SNR=9.6 comp=Z,3.7nm,0.5s							
CTAO	**Charters Tower**	**33.98**	**279**	P		**P**	**04 32 54.0**	**+2.4**
CTAO				IAmb	IAmb		04 32 54.5	
	comp=Z,4.0nm,0.6s							
STKA	**Stephens Creek**	**34.66**	**257**	P		**P**	**04 32 58.6**	**+1.2**
	comp=Z,8.3nm,0.9s,baz=84,slow=8.6,SNR=9.7 comp=Z,8.3nm,0.9s							
STKA	**Stephens Creek**	**34.66**	**257**	P		**P**	**04 32 59.4**	**+2.1**
BBOO	**Buckleboo**	**39.14**	**254**	P		**P**	**04 33 36.5**	**+1.0**
BBOO				IAmb	IAmb		04 33 47.5	
	comp=Z,31nm,1.4s							
AS31	**Alice Springs**	**43.29**	**267**	P		**P**	**04 34 09.0**	**-0.7**
ASAR	**Alice Springs**	**43.29**	**267**	P		**P**	**04 34 09.4**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=103,slow=7.4,SNR=15							
ASAR				PcP		**PcP**	**04 35 59.4**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=119,slow=3.8,SNR=2.8 comp=Z,1.3nm,0.6s							
ASAR	**Alice Springs**	**43.29**	**267**	P		**P**	**04 34 09.8**	**+0.1**
WR8	**Warramunga Arr**	**44.13**	**272**	P		**P**	**04 34 17.1**	**+0.6**
WR8				IAmb	IAmb		04 34 19.5	
	comp=Z,20nm,1.4s							
WRA	**Warramunga Arr**	**44.28**	**272**	P		**P**	**04 34 17.5**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=111,slow=7.9,SNR=25 comp=Z,3.3nm,0.6s							
WRA	**Warramunga Arr**	**44.28**	**272**	P		**P**	**04 34 18.4**	**+0.8**
WB0	**Warramunga Arr**	**44.30**	**272**	P		**P**	**04 34 18.7**	**+0.8**
WB0				IAmb	IAmb		04 34 20.2	
	comp=Z,27nm,1.6s							
FORT	**Forrest**	**46.22**	**255**	P		**P**	**04 34 33.2**	**+0.3**
MBWA	**Marble Bar**	**56.41**	**264**	P		**P**	**04 35 49.8**	**+0.4**
MBWA				IAmb	IAmb		04 35 59.7	
	comp=Z,26nm,1.4s							
LUWI	**Luwuk**	**63.36**	**286**	P		**P**	**04 36 37.4**	**+0.1**
KAPI	**Kappang**	**63.78**	**280**	P		**P**	**04 36 39.5**	**-0.6**
BELA	**Belgrano 2**	**69.77**	**172**	P		**P**	**04 37 19.0**	**+1.8**
BELA				IAmb	IAmb		04 37 28.8	
	comp=Z,22nm,1.9s							
E19K	**Redstone River**	**98.77**	**8**	P		Pdif	04 39 47.6	+1.1
E19K				IAmb	IAmb		04 39 55.8	
	comp=Z,9.6nm,1.9s							
MKAR	**Makanchi Array**	**117.91**	**310**	PKP		**PKPdf**	**04 44 53.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=85,slow=2.9,SNR=5.1							
TARG	**Taragay, Kyrgy**	**119.65**	**303**			**PKPdf**	**04 44 57.6**	**-0.2**
KURK	**Kurchatov**	**121.17**	**314**			**PKPdf**	**04 45 00.0**	**+0.2**
KURBB	**Kurchatov Arra**	**121.21**	**314**	PKP		**PKPdf**	**04 44 59.1**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=107,slow=1.7,SNR=8.9							
BVAR	**Borovoye Array**	**126.53**	**316**	PKP		**PKPdf**	**04 45 09.9**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=104,slow=1.4,SNR=5.2							
ABKAR	**Akbulak array**	**133.04**	**311**	PKPdf		**PKiKP**	**04 45 24.6**	**+0.9**
H10S2	**ASCENSION HYDR**	**137.66**	**155**	T		T	07 19 43.6	
	baz=204,slow=74,SNR=27							
H10S3	**ASCENSION HYDR**	**137.66**	**155**	T		T	07 19 43.6	
	baz=16,slow=74,SNR=22							
H10N3	**ASCENSION HYDR**	**138.74**	**154**	T		T	07 21 05.0	
	baz=203,slow=75,SNR=27							
H10N1	**ASCENSION HYDR**	**138.74**	**154**	T		T	07 21 03.9	
	baz=203,slow=75,SNR=42							
H10N2	**ASCENSION HYDR**	**138.76**	**154**	T		T	07 21 04.5	
	baz=203,slow=75,SNR=35							
FINES	**FINESS Array B**	**145.20**	**340**	PKPbc		**PKPbc**	**04 45 43.8**	**-0.2**
	comp=Z,4.5nm,0.5s,baz=51,slow=3.9,SNR=26							
NB2	**NORSAR Subarra**	**148.77**	**352**	PKP		**PKPbc**	**04 45 54.5**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=18,slow=4.3							
NOA	**NORSAR Array B**	**148.77**	**352**	PKPbc		**PKPbc**	**04 45 53.7**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=25,slow=3.6,SNR=2.3							
HFS	**Hagfors**	**149.27**	**349**	PKPbc		**PKPbc**	**04 45 55.1**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=54,slow=2.8,SNR=4.9							
ASF	**Jabal al Asfar**	**150.38**	**282**	PKPbc		**PKPbc**	**04 45 59.4**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=133,slow=23,SNR=2.2							
AKASG	**Malin Array Be**	**151.40**	**323**	PKPbc		**PKPbc**	**04 45 59.7**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=52,slow=2.6,SNR=6.0							
AKASG	**Malin Array Be**	**151.40**	**323**			**PKPbc**	**04 46 00.8**	**0.0**
MMAI	**Mount Meron Ar**	**151.70**	**284**	PKPbc		**PKiKP**	**04 46 03.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=91,slow=5.8,SNR=3.9							
BRTR	**Keskin Array B**	**152.75**	**299**	PKPbc		**PKPbc**	**04 46 03.2**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=163,slow=6.9,SNR=3.7							
BRTR	**Keskin Array B**	**152.75**	**299**			**PKPbc**	**04 46 03.4**	**-1.1**
TORD	**Torodi Ar. Bea**	**162.83**	**178**	PKPab		**PKPab**	**04 46 59.4**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=199,slow=4.3,SNR=4.2							

IDC ***27*** *04:27:25.3±4.7,12°.08S×14°.89W,h0km,mb3.9/6, mbtmp4.0/6,MS3.7/8,Error ellipse: s-maj=137.5km s-min=54.3km az=159.0*
NEIC ***27*** *04:27:26.1±1.0,12°.4S±0°.1×14°.7W±0°.1,h10km±1km, mb4.5/12,Error ellipse: s-maj=22.2km s-min=16.7km az=108.0*

ISC 27 04:27:25.7±0.6,12°.4S±0°.1×14°.7W±0°.1,h10km,n33, σ0°.59/21,mb4.3/8,MS3.7/8,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**3.37**	**1**	T	T	04 31 38.9	
	baz=34,slow=74,SNR=71						
H10S3	**ASCENSION HYDR**	**3.38**	**1**	T	T	04 31 37.4	
	baz=186,slow=74,SNR=67						
ASCN	**Ascension**	**4.41**	**4**	Pn	**Pn**	**04 28 33.5**	**+0.8**
H10N1	**ASCENSION HYDR**	**4.49**	**3**	T	T	04 33 02.3	
	baz=181,slow=72,SNR=6.9						
H10N3	**ASCENSION HYDR**	**4.49**	**3**	T	T	04 33 00.2	
	baz=181,slow=72,SNR=44						
H10N2	**ASCENSION HYDR**	**4.50**	**3**	T	T	04 33 02.5	
	baz=181,slow=72,SNR=14						
DBIC	**Dimbokro**	**21.29**	**28**	P	**P**	**04 32 11.8**	**-0.8**
	4.0nm,1.1s,baz=281,slow=21,SNR=1.8						
DBIC				LR	LR	04 38 54.0	
	comp=Z,164nm,18.0s,baz=202,slow=33 4.0nm,1.1s						
DBIC	**Dimbokro**	**21.29**	**28**	P	**P**	**04 32 12.0**	**-0.5**
DBIC				IAmb	IAmb	04 32 23.9	
	comp=Z,29nm,1.4s						
RCBR	**Riachuelo**	**21.90**	**285**	LR	LR	04 38 30.6	
	comp=Z,72nm,21.5s,baz=86,slow=31						
RCBR	**Riachuelo**	**21.90**	**285**	P	**P**	**04 32 19.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**30.11**	**33**	P	**P**	**04 33 36.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=218,slow=10,SNR=4.9 comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.11**	**33**	P	**P**	**04 33 34.9**	**-0.9**
TSUM	**Tsumeb**	**31.77**	**107**	P	**P**	**04 33 51.4**	**+0.7**
TSUM				IAmb	IAmb	04 33 56.8	
	comp=Z,6.1nm,1.3s						
BDFB	**Brasilia**	**32.46**	**260**	LR	LR	04 44 57.5	
	comp=Z,171nm,19.8s,baz=158,slow=32						
BDFB	**Brasilia**	**32.46**	**260**	P	**P**	**04 33 56.4**	**-0.2**
BDFB				IAmb	IAmb	04 33 59.3	
	comp=Z,12nm,1.5s						
SPB	**Sao Paulo**	**32.99**	**246**	P	**P**	**04 34 00.8**	**-0.3**
KGCAE	**Kacgae**	**36.61**	**112**	P	**P**	**04 34 32.4**	**-0.1**
MDP	**Montagnes des**	**41.51**	**292**	LR	LR	04 49 16.8	
	comp=Z,70nm,19.3s,baz=36,slow=32						
CPUP	**Villa Florida**	**42.35**	**244**	LR	LR	04 50 20.4	
	comp=Z,94nm,20.1s,baz=102,slow=32						
SIV	**San Ignacio**	**45.03**	**260**	LR	LR	04 52 49.3	
	comp=Z,104nm,18.8s,baz=128,slow=34						
H05S1	**Guadeloupe/Mar**	**52.88**	**299**	T	T	05 33 25.0	
	SNR=3.9						
VA05	**Santo Domingo**	**55.79**	**238**	P	**P**	**04 37 03.0**	**-0.2**
SNAA	**Sanae**	**59.72**	**176**	P	**P**	**04 37 30.4**	**+0.1**
EIL	**Elat**	**63.52**	**48**	LR	LR	05 02 31.2	
	comp=Z,188nm,19.9s,baz=252,slow=33						
BRTR	**Keskin Array B**	**68.56**	**38**	P	**P**	**04 38 29.6**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=236,slow=4.9,SNR=4.4						
BRTR				LR	LR	05 08 08.5	
	comp=Z,72nm,19.2s,baz=174,slow=36 comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**68.56**	**38**	P	**P**	**04 38 27.5**	**-1.4**
AKASG	**Malin Array Be**	**73.53**	**27**	P	**P**	**04 38 58.9**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=228,slow=6.1,SNR=6.0 comp=Z,0.9nm,0.6s						
AKASG	**Malin Array Be**	**73.53**	**27**	P	**P**	**04 38 58.4**	**-0.2**
AKASG				IAmb	IAmb	04 39 00.3	
	comp=Z,5.8nm,1.4s						
QSPA	**South Pole Qui**	**77.79**	**180**	P	**P**	**04 39 23.4**	**+0.3**
QSPA				IAmb	IAmb	04 39 40.8	

	comp=Z,6.4nm,1.2s								
SCHQ	**Schefferville**	**80.00**	**332**	P		**P**	**04 39 34.8**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=49,slow=20,SNR=4.1 comp=Z,2.6nm,0.8s								
SCHQ	**Schefferville**	**80.00**	**332**	P		**P**	**04 39 35.0**	**-0.1**
SCHQ				IAmb	IAmb		04 39 44.8		
	comp=Z,8.2nm,1.2s								
FINES	**FINESS Array B**	**80.27**	**19**	P		**P**	**04 39 36.6**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=213,slow=5.9,SNR=4.7 comp=Z,2.9nm,0.9s								
FINES	**FINESS Array B**	**80.27**	**19**	P		**P**	**04 39 36.3**	**0.0**

IDC ***27*** *04:41:20.6±1.4,3°.80S×129°.94E,h0km,mb3.8/5, mbtmp3.9/7,ML3.7/2,MS4.0/2,Error ellipse: s-maj=57.1km s-min=24.6km az=86.0*

ISC 27 04:41:22.4±0.9,4°.09S±0°.06×130°.6E±0°.2,h35km,n10, σ2°.8/40/12,mb3.8/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.27**	**12**	Pn	**Pn**	**04 42 12.7**	**+1.5**
	9.3nm,0.3s,baz=188,slow=8.5,SNR=14						
SIJI				Sn	**Sn**	**04 42 46.2**	**-2.8**
	6.0nm,0.3s,baz=105,slow=23,SNR=4.5 35nm,0.5s						
FITZ	**Fitzroy Crossi**	**14.74**	**199**	Pn	**P**	**04 44 52.6**	**-1.4**
	0.2nm,0.3s,baz=14,slow=12,SNR=8.6						
FITZ				Sn	**Sn**	**04 47 30.0**	**-0.6**
	0.1nm,0.3s,baz=5.7,slow=10,SNR=1.7 3.9nm,1.0s						
WRA	**Warramunga Arr**	**16.18**	**167**	Pn	**P**	**04 45 08.2**	**-1.9**
	0.2nm,0.3s,baz=350,slow=13,SNR=7.0						
WRA				Sn	**Sn**	**04 48 03.6**	**-2.2**
	0.2nm,0.3s,baz=358,slow=23,SNR=4.6						
ASAR	**Alice Springs**	**19.73**	**171**	P	**Pn**	**04 45 56.0**	**+5.2**
	5.6nm,0.7s,baz=350,slow=10.0,SNR=64						
ASAR				S	**Sn**	**04 49 30.2**	**-1.5**
	0.4nm,0.7s,baz=351,slow=28,SNR=2.1 5.6nm,0.7s						
BRDH	**Bariadhala**	**46.40**	**307**	LR	LR	05 11 50.3	
	comp=Z,253nm,21.3s,baz=292,slow=40						
MKAR	**Makanchi Array**	**66.13**	**326**	P	**P**	**04 52 06.8**	**+0.6**
	0.5nm,0.7s,baz=125,slow=8.0,SNR=7.2 0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**69.24**	**333**	P	**P**	**04 52 24.5**	**-1.1**
	0.3nm,0.3s,baz=130,slow=5.8,SNR=2.4 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**70.35**	**328**	P	**P**	**04 52 32.5**	**0.0**
	0.8nm,0.8s,baz=127,slow=5.9,SNR=8.9 0.8nm,0.8s						
BVAR	**Borovoye Array**	**75.92**	**327**	P	**P**	**04 53 06.0**	**+0.6**
	0.5nm,0.5s,baz=110,slow=6.6,SNR=2.6 0.5nm,0.5s						
ILAR	**Eielson Array**	**90.49**	**25**	LR	LR	05 31 56.6	
	comp=Z,58nm,20.1s,baz=272,slow=34						

IDC ***27*** *05:00:49.6±1.1,8°.03S×117°.83E,h0km,mb3.9/7, mbtmp3.9/10,ML3.6/3,MS3.9/2,Error ellipse: s-maj=50.0km s-min=16.4km az=56.0*
DJA ***27*** *05:00:53.9±0.8,8°.S±3°.×11°.8E±°.,h20km±9km,M4.2/22, mb4.2/2,MLv4.2/22*

ISC 27 05:00:54.5±0.7,8°.04S±0°.05×117°.95E±0°.04,h35km,n31, σ1°.28/31,mb3.9/7,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	**Kabupaten Domp**	**0.58**	**142**	P	**Pn**	**05 01 06.9**	**+0.5**
PLAI	**Plampang**	**0.80**	**192**	P	**Pn**	**05 01 09.5**	**+0.2**
TWSI	**Taliwang, Sumb**	**1.26**	**237**	P	**Pn**	**05 01 15.3**	**-0.3**
KLNI	**Mataram**	**1.87**	**258**	P	**Pn**	**05 01 25.1**	**+1.0**
LBFI	**Labuhan Bajo,**	**1.97**	**103**	P	**Pn**	**05 01 26.2**	**+0.7**
WBSI	**Waikabubak, Su**	**2.14**	**138**	P	**Pn**	**05 01 29.3**	**+1.5**
KHKI	**Kahang-Kahang**	**2.34**	**262**	P	**Pn**	**05 01 30.6**	**+0.1**
SRBI	**Singaraja**	**2.71**	**269**	P	**Pn**	**05 01 35.2**	**-0.4**
IGBI	**Denpasar**	**2.88**	**254**	P	**Pn**	**05 01 38.1**	**+0.2**
RTBI	**Rangdo, Negare**	**3.00**	**262**	P	**Pn**	**05 01 39.8**	**+0.1**
BSSI	**Bau Bau, Buton**	**3.15**	**53**	P	**Pn**	**05 01 42.1**	**+0.4**
KAPI	**Kappang**	**3.50**	**31**	Pn	**Pn**	**05 01 46.2**	**-0.3**
	12nm,0.3s,baz=183,slow=4.8,SNR=24						
KAPI				Sn	**Sn**	**05 02 25.7**	**-1.1**
	17nm,0.3s,baz=86,slow=24,SNR=19 26nm,0.3s						
KAPI	**Kappang**	**3.50**	**31**	P	**Pn**	**05 01 46.2**	**-0.3**
BYJI	**Banyuwangi**	**3.56**	**267**	P	**Pn**	**05 01 48.4**	**+1.1**
ABJI	**Asem Bagus**	**3.69**	**274**	P	**Pn**	**05 01 49.3**	**+0.3**
EDFI	**Ende, Flores**	**3.77**	**101**	P	**Pn**	**05 01 51.8**	**+1.5**
JAGI	**Jajag, Banyuwa**	**3.78**	**263**	P	**Pn**	**05 01 49.8**	**-0.5**
BLJI	**Banyuglugur**	**4.32**	**274**	P	**Pn**	**05 01 58.9**	**+1.1**

comp=E,1614µm,0.4s
SICLA Scilla 0.54 144 P **Pn 05 28 10.3 -0.4**
SICLA AML AML
comp=N,1530µm,0.4s
SICLA AML AML
comp=E,1291µm,0.3s
MPNC Port Mandanici 0.55 177 ⇓P **Pn 05 28 10.3 -0.5**
MPNC S **S 05 28 35.4 +0.5**
MPNC AML AML
comp=N,1195µm,0.9s
MPNC AML AML
comp=E,1045µm,1.5s
MPNC AML AML
comp=N,1195µm,1.1s
MPNC AML AML
comp=E,988µm,0.5s
MPNC AML AML
comp=N,861µm,0.6s
IFIL Filicudi I Eol 0.60 257 ⇑P **Pn 05 28 11.1 +0.3**
CEL Celeste 0.63 133 ⇓P **Pn 05 28 10.9 -0.2**
CEL S **S 05 28 34.4 -1.0**
CEL AML AML
comp=N,1195µm,0.3s
CEL AML AML
comp=E,938µm,0.6s
CEL AML AML
comp=E,937µm,0.6s
CEL AML AML
comp=N,1190µm,0.3s
CEL AML AML
comp=E,938µm,0.6s
CEL AML AML
comp=N,1220µm,0.3s
CEL AML AML
comp=E,937µm,0.6s
CEL AML AML
comp=N,1219µm,0.3s
CEL AML AML
comp=N,1192µm,0.3s
CEL AML AML
comp=E,938µm,0.6s
RCU Reggio Calabri 0.64 154 ⇑P **Pn 05 28 11.1 0.0**
GMB Gambarie 0.67 142 P **Pn 05 28 11.3 -0.1**
GMB S **S 05 28 35.3 -0.6**
GMB AML AML
comp=E,5220µm,0.2s
GMB AML AML
comp=N,3845µm,0.8s
GMB AML AML
comp=N,3845µm,1.2s
GMB AML AML
comp=N,3701µm,0.2s
GMB AML AML
comp=E,5220µm,0.2s
NOV Novara 0.68 192 P **Pn 05 28 11.9 +0.6**
NOV AML AML
comp=E,2460µm,0.7s
NOV AML AML
comp=N,2150µm,1.0s
NOV AML AML
comp=E,2580µm,0.7s
NOV AML AML
comp=N,2076µm,0.6s
NOV AML AML
comp=E,2582µm,0.7s
FERC Galatro 0.69 111 P **Pn 05 28 11.6 +0.3**
FERC S **S 05 28 35.5 -0.2**
AIO Antillo 0.73 185 ⇓P **Pn 05 28 12.0 +0.5**
AIO S **S 05 28 37.2 +1.0**
AIO AML AML
comp=N,539µm,1.5s
AIO AML AML
comp=N,539µm,0.5s
AIO AML AML
comp=E,635µm,0.5s
AIO AML AML
comp=E,635µm,0.5s
AIO AML AML
comp=N,481µm,0.7s
MUCR Ucria 0.74 208 P **Pn 05 28 11.5 -0.1**
MUCR AML AML
comp=E,382µm,0.4s
MUCR AML AML
comp=N,428µm,1.3s
MUCR AML AML
comp=N,429µm,1.3s
MUCR AML AML
comp=N,429µm,0.7s
MUCR AML AML
comp=N,368µm,0.5s
MUCR AML AML
comp=E,383µm,0.4s
MTTG Motta San Giov 0.76 156 ⇓P **Pn 05 28 11.9 +0.3**
MTTG S **S 05 28 36.3 -0.1**
MTTG AML AML
comp=E,758µm,0.5s
MTTG AML AML
comp=N,1230µm,0.6s
MTTG AML AML
comp=N,1230µm,1.4s
MTTG AML AML
comp=N,1230µm,0.6s
MTTG AML AML
comp=E,759µm,0.5s
IACL Alicudi 0.77 258 P **Pn 05 28 12.1 +0.6**
ECTS Castiglione 0.83 190 P **Pn 05 28 12.6 +0.6**
ECTS AML AML
comp=N,806µm,0.2s
SOI Samo 0.85 137 ⇓P **Pn 05 28 12.2 +0.2**
SOI S **S 05 28 36.3 -0.8**
SOI AML AML
comp=N,560µm,0.6s
SOI AML AML
comp=E,516µm,0.5s
SOI AML AML
comp=N,502µm,0.6s
SOI AML AML
comp=E,516µm,0.5s
MSFR San Fratello 0.87 221 P **Pn 05 28 12.6 +0.4**
GRI Girifalco 0.88 81 ⇑P **Pn 05 28 12.9 +0.8**
GRI S **S 05 28 37.2 -0.1**
GRI AML AML
comp=E,1745µm,0.6s
GRI AML AML
comp=N,1284µm,0.5s
GRI AML AML
comp=E,1745µm,1.4s
GRI AML AML
comp=N,1281µm,0.5s
GRI AML AML
comp=E,1744µm,0.6s
CAR1 CAROLEI 0.90 51 ⇓P **Pn 05 28 12.5 +0.3**
CAR1 S **S 05 28 36.5 -1.1**
CAR1 AML AML
comp=E,3670µm,0.4s
CAR1 AML AML
comp=N,3070µm,0.4s
CAR1 AML AML
comp=N,2870µm,0.4s
CAR1 AML AML
comp=E,3765µm,0.4s
CAR1 AML AML
comp=E,3155µm,0.4s
CAR1 AML AML
comp=N,3070µm,0.4s
CAR1 AML AML
comp=N,2872µm,0.4s
CAR1 AML AML
comp=E,3155µm,0.4s
CAR1 AML AML
comp=E,3762µm,0.4s
EPIT Pozzo Pitarron 0.91 193 P **Pn 05 28 13.4 +0.8**
PLAC Placanica 0.92 105 ⇓P **Pn 05 28 12.9 +0.5**
PLAC S **S 05 28 36.8 -1.0**
PLAC AML AML
comp=E,760µm,1.4s
PLAC AML AML
comp=E,760µm,1.4s
PLAC AML AML
comp=N,808µm,1.4s
PLAC AML AML
comp=E,1135µm,0.3s
PLAC AML AML
comp=N,1080µm,0.3s
PLAC AML AML
comp=E,754µm,0.6s
PLAC AML AML
comp=N,790µm,0.6s
PLAC AML AML
comp=E,1133µm,0.3s
PLAC AML AML
comp=N,1083µm,0.3s
EMSG Monte Spagnolo 0.92 198 P **Pn 05 28 13.8 +1.2**
EMSG AML AML
comp=N,1143µm,0.7s
EMSG AML AML
comp=E,1125µm,0.6s
EMCN Etna Monte Con 0.93 194 P **Pn 05 28 14.2 +1.5**
EPZF Pizzo Felice 0.94 202 P **Pn 05 28 13.9 +1.2**
EPZF AML AML
comp=N,871µm,0.5s
EPZF AML AML
comp=E,1545µm,0.6s
EPZF AML AML
comp=N,866µm,0.5s
EPZF AML AML
comp=N,869µm,0.5s
CET2 Cetraro 0.97 31 P **Pn 05 28 13.3 +0.6**
CET2 S **S 05 28 37.6 -0.8**
CET2 AML AML
comp=E,1545µm,0.9s
CET2 AML AML
comp=N,2100µm,0.5s
CET2 AML AML
comp=E,1545µm,1.1s
CET2 AML AML
comp=E,1370µm,0.4s
CET2 AML AML
comp=N,1778µm,0.2s
SPS2 Spezzano della 1.00 53 ⇓P **Pn 05 28 13.4 +0.6**
SPS2 S **S 05 28 38.1 -0.5**
SPS2 AML AML
comp=E,596µm,0.4s
SPS2 AML AML
comp=N,867µm,1.0s
SPS2 AML AML
comp=E,596µm,0.4s
SPS2 AML AML
comp=N,864µm,0.4s
ESLN Serra La Nave 1.04 195 P **Pn 05 28 14.1 +0.8**
ECHR Santa Chiara 1.06 197 P **Pn 05 28 14.7 +1.3**
GRIS Grisolia 1.12 22 P **Pn 05 28 14.5 +0.9**
SERS Sersale 1.13 72 ⇓P **Pn 05 28 14.8 +1.0**
SERS S **S 05 28 40.1 -0.1**
SERS AML AML
comp=N,1315µm,0.4s
SERS AML AML
comp=N,1520µm,0.4s
SERS AML AML
comp=E,1350µm,0.5s
SERS AML AML
comp=N,1320µm,0.4s
SERS AML AML
comp=E,1145µm,0.4s
SERS AML AML
comp=E,1348µm,0.5s
SERS AML AML
comp=E,1146µm,0.4s
SERS AML AML
comp=N,1319µm,0.4s
SERS AML AML
comp=N,1520µm,0.4s
ESML S. M. di Licod 1.13 198 P **Pn 05 28 14.4 +0.7**
ESML AML AML
comp=E,518µm,1.0s
ESML AML AML
comp=N,394µm,1.3s
ESML AML AML
comp=E,518µm,1.0s
ESML AML AML
comp=N,394µm,0.7s
ESML AML AML
comp=E,427µm,0.3s
ESML AML AML
comp=N,315µm,0.3s
GALF Gagliano Caste 1.15 211 ⇑P **Pn 05 28 15.5 +1.6**
GALF AML AML
comp=E,202µm,0.7s
GALF AML AML
comp=N,179µm,1.1s
GALF AML AML
comp=N,178µm,1.1s
GALF AML AML
comp=E,1210µm,0.6s
GALF AML AML
comp=N,1135µm,0.6s
GALF AML AML
comp=N,178µm,0.9s
GALF AML AML
comp=E,1210µm,1.4s
GALF AML AML
comp=N,1135µm,1.4s
GALF AML AML
comp=N,179µm,1.1s
GALF AML AML
comp=E,1211µm,0.6s
GALF AML AML
comp=N,1135µm,0.6s
GALF AML AML
comp=E,202µm,0.7s
PLLN Pollina 1.16 233 P **Pn 05 28 13.7 -0.2**
CELI Celico 1.17 53 P **Pn 05 28 15.5 +1.5**
CELI S **S 05 28 41.7 +1.0**
CELI AML AML
comp=N,1004µm,0.7s
CELI AML AML
comp=E,866µm,0.6s
CELI AML AML
comp=N,1005µm,0.7s
CELI AML AML
comp=N,1010µm,0.7s
CELI AML AML
comp=N,1005µm,1.3s
CELI AML AML
comp=E,862µm,0.6s
CELI AML AML
comp=N,1010µm,1.3s
CELI AML AML
comp=N,981µm,0.4s
CELI AML AML
comp=N,991µm,0.4s
CELI AML AML
comp=E,866µm,0.6s
CELI AML AML
comp=E,862µm,0.6s
TIP Timpagrande 1.23 66 ⇓P **Pn 05 28 15.4 +1.1**
TIP S **S 05 28 41.2 -0.1**
TIP AML AML
comp=N,920µm,0.6s
TIP AML AML
comp=N,890µm,0.6s
TIP AML AML
comp=E,780µm,0.5s
TIP AML AML
comp=E,750µm,0.5s
TIP AML AML
comp=N,920µm,0.6s
TIP AML AML
comp=N,918µm,0.6s
TIP AML AML
comp=E,749µm,0.5s
TIP AML AML
comp=E,779µm,0.5s
TIP AML AML
comp=N,893µm,0.6s
GIB Gibilmanna 1.23 235 ⇑P **Pn 05 28 14.4 0.0**
CSLB Castelbuono 1.24 233 P **Pn 05 28 14.1 -0.4**
CAGR Agira 1.25 211 ⇓P **Pn 05 28 16.2 +1.7**
CAGR AML AML
comp=E,706µm,1.3s
CAGR AML AML
comp=N,1184µm,1.6s
CAGR AML AML
comp=E,706µm,0.7s
CAGR AML AML
comp=N,1184µm,0.4s
CAGR AML AML
comp=E,678µm,1.5s
CAGR AML AML
comp=N,1010µm,0.4s
TDS Terranova Siba 1.25 39 P **Pn 05 28 15.5 +1.1**
TDS S **S 05 28 42.1 +0.6**
TDS AML AML
comp=E,810µm,1.5s
TDS AML AML
comp=N,452µm,0.6s
TDS AML AML
comp=N,451µm,0.6s
TDS AML AML
comp=E,701µm,1.2s
PETRA Petralia Sopra 1.28 228 P **Pn 05 28 15.2 +0.4**
PETRA AML AML
comp=N,442µm,1.5s
PETRA AML AML
comp=N,442µm,0.5s
PETRA AML AML
comp=E,390µm,0.6s
PETRA AML AML
comp=E,389µm,0.6s
PETRA AML AML
comp=N,391µm,0.6s
MMN Mormanno 1.30 24 P **Pn 05 28 16.0 +1.3**
CUC Castrocucco 1.35 17 P **Pn 05 28 15.7 +0.5**
BULG Bulgheria - Ca 1.38 2 P **Pn 05 28 16.4 +1.0**
HLNI Lentini 1.39 195 ⇓P **Pn 05 28 15.5 0.0**
HLNI S **S 05 28 43.1 -0.2**
HLNI AML AML
comp=E,398µm,1.5s
HLNI AML AML
comp=N,480µm,0.2s
HLNI AML AML
comp=N,481µm,0.2s
HLNI AML AML
comp=E,307µm,0.4s
PIPA Pietrapaola 1.41 56 P **Pn 05 28 17.0 +1.4**
PIPA S **S 05 28 44.5 +0.9**
PIPA AML AML
comp=E,2470µm,0.2s
PIPA AML AML
comp=N,1160µm,0.4s
PIPA AML AML
comp=N,1198µm,0.8s
PIPA AML AML
comp=E,2470µm,0.3s
PIPA AML AML
comp=N,1160µm,0.4s
PIPA AML AML
comp=E,2410µm,0.2s
PIPA AML AML
comp=N,1198µm,1.2s
PIPA AML AML
comp=N,1160µm,1.6s
PIPA AML AML
comp=E,2472µm,0.2s
PIPA AML AML
comp=E,2411µm,0.2s
PIPA AML AML
comp=N,1196µm,0.3s
PIPA AML AML
comp=N,1159µm,0.4s
HAGA Augusta 1.42 185 ⇓P **Pn 05 28 15.6 -0.1**
HAGA S **S 05 28 43.2 -0.4**
LADO San Nicola del 1.43 65 ⇓P **Pn 05 28 16.7 +0.9**
LADO AML AML
comp=N,63µm,1.4s
LADO AML AML
comp=E,66µm,0.8s
LADO AML AML
comp=N,63µm,0.6s
LADO AML AML
comp=E,59µm,0.4s
LADO AML AML
comp=N,60µm,0.2s
SALB San Lorenzo Be 1.43 34 ⇑P **Pn 05 28 17.4 +1.6**
SALB AML AML
comp=N,592µm,0.6s
SALB AML AML
comp=E,732µm,0.3s
SALB AML AML
comp=N,592µm,1.4s
SALB AML AML
comp=N,509µm,0.3s
SALB AML AML
comp=E,731µm,0.3s
RESU Resuttano 1.44 224 P **Pn 05 28 17.5 +1.5**
MGR Morigerati 1.45 7 P **Pn 05 28 17.1 +1.2**
SIRI Monte Sirino - 1.54 16 P **Pn 05 28 17.7 +0.9**
ALJA Alia 1.55 233 P **Pn 05 28 17.9 +1.1**
ALJA AML AML
comp=N,496µm,0.5s
SSY Sortino 1.55 187 ⇓P **Pn 05 28 16.9 +0.1**
SSY AML AML
comp=E,1210µm,0.8s
SSY AML AML
comp=N,2785µm,1.1s
SSY AML AML
comp=N,2593µm,0.2s
SSY AML AML
comp=E,1055µm,0.3s
HVZN Vizzini 1.59 197 ⇓P **Pn 05 28 17.5 +0.4**
SCHR S. Chirico Rap 1.61 21 P **Pn 05 28 19.5 +2.2**
CMPR Campora 1.62 360 P **Pn 05 28 18.4 +1.1**
MEU Monte Lauro 1.62 191 P **Pn 05 28 17.9 +0.4**
MPG Monte Pellegri 1.62 251 P **Pn 05 28 17.4 0.0**
ORI Oriolo Calabro 1.62 33 P **Pn 05 28 18.8 +1.5**
RAFF Raffo Rosso 1.65 207 ⇓P **Pn 05 28 18.4 +0.8**
USI Ustica 1.67 271 ⇓P **Pn 05 28 19.0 +1.3**
MCEL Monticello 1.67 13 P **Pn 05 28 18.7 +1.0**
SLCN Sala Consilina 1.71 8 P **Pn 05 28 19.4 +1.3**
SLCN AML AML
comp=N,302µm,1.0s
SLCN AML AML
comp=E,222µm,1.3s
SLCN AML AML
comp=N,302µm,1.0s
SLCN AML AML
comp=N,294µm,0.9s
SLCN AML AML
comp=E,208µm,0.4s
SLCN AML AML
comp=E,433µm,0.7s
SLCN AML AML
comp=N,302µm,1.0s
CORL Corleone 1.77 244 P **Pn 05 28 18.9 +0.2**
ACATE Acate (RG) 1.79 201 ⇓P **Pn 05 28 19.4 +0.6**
CLTA Licata 1.87 215 P **Pn 05 28 20.4 +0.8**
CLTA AML AML
comp=E,546µm,1.4s
CLTA AML AML
comp=N,285µm,1.5s
CLTA AML AML
comp=E,546µm,0.6s
CLTA AML AML
comp=N,285µm,0.5s
CLTA AML AML
comp=N,272µm,1.1s
CLTA AML AML
comp=E,512µm,1.0s
CRAC Craco 1.88 27 P **Pn 05 28 20.9 +1.3**
CROCE Santa Croce Ca 1.96 199 P **Pn 05 28 20.9 +0.5**
CROCE AML AML
comp=E,238µm,1.3s
CROCE AML AML
comp=N,202µm,1.2s
CROCE AML AML
comp=E,137µm,1.4s
CROCE AML AML
comp=N,156µm,0.9s
CROCE AML AML
comp=E,238µm,0.7s
CROCE AML AML
comp=N,202µm,0.8s
CROCE AML AML
comp=N,193µm,0.4s
CROCE AML AML
comp=E,126µm,0.6s
CLTB Caltabellotta 1.99 237 P **Pn 05 28 21.7 +0.9**
MBFT Monte Bonifato 2.00 249 P **Pn 05 28 20.5 -0.2**
MBFT AML AML
comp=N,298µm,0.7s
MBFT AML AML
comp=N,298µm,1.3s
MBFT AML AML
comp=E,227µm,0.9s
MBFT AML AML
comp=E,168µm,0.4s
MBFT AML AML
comp=N,244µm,0.7s
HPAC Pachino 2.00 185 ⇓P **Pn 05 28 21.3 +0.6**
HPAC AML AML

comp=E,492μm,0.8s
HPAC AML AML
comp=N,464μm,0.9s
HPAC AML AML
comp=E,492μm,1.2s
HPAC AML AML
comp=N,464μm,1.1s
HPAC AML AML
comp=E,493μm,0.8s
HPAC AML AML
comp=N,464μm,0.9s
CRJA Costa Raja 2.02 245 P **Pn 05 28 21.2 +0.2**
MRLC Muro Lucano 2.06 4 P **Pn 05 28 23.0 +1.7**
MCRV Calabrutit - M 2.09 357 P **Pn 05 28 23.2 +1.6**
MFNL Monte Finestre 2.09 245 P **Pn 05 28 22.0 +0.4**
SCIAC Sciacca 2.10 237 P **Pn 05 28 21.2 -0.6**
SCIAC AML AML
comp=N,339μm,0.8s
SCIAC AML AML
comp=E,313μm,0.2s
MATE Matera 2.23 28 ⇑P **Pn 05 28 22.6 -0.2**
MATE S **S 05 28 55.5 -1.1**
MATE AML AML
comp=E,360μm,0.3s
MATE AML AML
comp=N,526μm,0.9s
MATE AML AML
comp=N,526μm,1.1s
MATE AML AML
comp=N,446μm,0.4s
MATE AML AML
comp=E,360μm,0.3s
SNAL S. Angelo Dei 2.23 358 P **Pn 05 28 24.4 +1.5**
MTMR Montemarano 2.23 354 P **Pn 05 28 24.4 +1.4**
CAFE Carife 2.33 359 P **Pn 05 28 25.7 +1.7**
MARS Marsala (TP) I 2.36 247 P **Pn 05 28 24.5 +0.2**
TAR1 Taranto 2.38 39 ⇑P **Pn 05 28 24.1 -0.3**
TAR1 S **S 05 28 57.5 -1.8**
TAR1 AML AML
comp=E,694μm,0.7s
TAR1 AML AML
comp=N,1030μm,1.5s
TAR1 AML AML
comp=N,1030μm,0.5s
TAR1 AML AML
comp=N,935μm,0.3s
TAR1 AML AML
comp=E,673μm,0.5s
NOCI Noci 2.49 32 ⇑P **Pn 05 28 25.2 -0.3**
NOCI S **S 05 28 59.9 -1.5**
NOCI AML AML
comp=N,592μm,0.2s
NOCI AML AML
comp=E,452μm,0.9s
NOCI AML AML
comp=E,423μm,0.3s
NOCI AML AML
comp=N,592μm,0.2s
VITU Vitulano (BN) 2.54 348 P **Pn 05 28 27.1 +0.9**
KEST Kesra 5.61 240 P **Pn 05 29 04.3 +1.6**
comp=N,33nm,0.8s,baz=14,slow=1.9,SNR=27
OBKA Obir 7.83 356 *e*Pn **Pn 05 29 31.6 +0.8**
comp=N,2.8nm,0.7s
SOKA Soboth 7.98 359 *e*Pn **Pn 05 29 33.7 +0.9**
comp=N,0.5nm,0.2s
ABTA Abfaltersbach 8.30 347 *e*Pn **Pn 05 29 38.0 +1.1**
comp=N,2.9nm,0.4s,SNR=4.1
FETA Feichten 8.97 339 *e*Pn **Pn 05 29 48.0 +2.4**
comp=N,5.9nm,0.5s,SNR=4.9
WTTA Wattenberg 8.97 344 *e*Pn **Pn 05 29 47.8 +2.2**
comp=N,3.7nm,0.3s,SNR=4.5
SQTA Sankt Quirin 9.03 342 *e*Pn **Pn 05 29 49.5 +3.2**
comp=N,9.3nm,0.5s,SNR=9.4
WATA Walderalm 9.06 344 *e*Pn **Pn 05 29 49.5 +2.9**
comp=N,12nm,0.6s,SNR=6.9
MOTA Moosalm 9.18 342 *i* Pn **Pn 05 29 49.7 +1.6**
comp=N,2.6nm,0.5s
RETA Reutte 9.39 341 *e*Pn **Pn 05 29 52.5 +1.7**
comp=N,1.2nm,0.3s
DAVA Damuels 9.46 337 *i* Pn **Pn 05 29 53.5 +1.8**
comp=N,3.8nm,0.4s
BRTR Keskin Array B 14.25 80 P **P 05 30 54.3 +1.7**
comp=N,1.7nm,0.8s,baz=268,slow=13,SNR=7.2
ESDC Sonseca Array 14.98 280 P **Pn 05 30 58.9 -1.6**
comp=N,0.8nm,0.8s,baz=76,slow=11,SNR=4.5
AKASG Malin Array Be 15.52 35 P **P 05 31 06.1 -0.3**
comp=N,0.4nm,0.3s,baz=225,slow=10,SNR=4.5
NOA NORSAR Array B 22.51 355 P **P 05 32 18.6 -1.3**
comp=N,0.8nm,0.9s,baz=186,slow=9.8,SNR=1.5
comp=N,0.8nm,0.9s
FINES FINESS Array B 23.73 13 P **P 05 32 30.2 -0.6**
comp=N,3.0nm,0.5s,baz=184,slow=8.3,SNR=19
comp=N,3.0nm,0.5s
TORD Torodi Ar. Bea 28.17 209 P **P 05 33 11.0 0.0**
comp=N,0.2nm,0.5s,baz=15,slow=8.5,SNR=2.0
comp=N,0.2nm,0.5s
ZALV Zalesovo Beam 48.38 48 P **P 05 35 58.4 +0.1**
comp=N,0.8nm,0.4s,baz=267,slow=7.9,SNR=3.0
comp=N,0.8nm,0.4s
MKAR Makanchi Array 48.50 58 P **P 05 35 59.9 +0.5**
comp=N,0.8nm,0.5s,baz=280,slow=7.0,SNR=20
comp=N,0.8nm,0.5s
SONM Songino Array 63.25 49 P **P 05 37 43.8 0.0**
comp=N,0.3nm,0.7s,baz=305,slow=8.6,SNR=2.7
comp=N,0.3nm,0.7s
YKA Yellowknife Ar 71.44 338 P **P 05 38 33.9 -0.7**
comp=N,0.3nm,0.7s,baz=34,slow=5.3,SNR=1.3
comp=N,0.3nm,0.7s

IDC ***27*** *05:48:41.5±1.0,5.05N×125.41E,h0km,mb3.8/8, mbtmp3.8/9,ML4.1/1,MS2.7/1,Error ellipse: s-maj=68.5km s-min=16.4km az=73.0*

ISC 27 05:48:46.8±1.0,4.96N±0.09×125.1E±0.3,h35km,n9, σ1s23/10,mb3.8/8,Taland Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.14**	**12**	Pn		**Pn**		**05 49 18.3**	**-1.7**
	75nm,0.3s,baz=228,slow=20,SNR=1.5								
DAV				Sn		**Sn**		**05 49 47.6**	**+2.2**
	48nm,0.3s,baz=209,slow=1.4,SNR=4.0								
DAV				LR		LR		05 50 18.5	
	comp=Z,158nm,19.3s,baz=48,slow=48 222nm,0.3s								
FITZ	**Fitzroy Crossi**	**22.92**	**179**	P		**P**		**05 53 47.8**	**0.0**
	3.1nm,0.9s,baz=12,slow=10,SNR=1.5 3.1nm,0.9s								
WRA	**Warramunga Arr**	**26.35**	**160**	P		**P**		**05 54 19.5**	**-0.3**
	1.0nm,0.5s,baz=343,slow=10.0,SNR=8.8 1.0nm,0.5s								
ASAR	**Alice Springs**	**29.71**	**164**	P		**P**		**05 54 50.4**	**+0.6**
	0.4nm,0.9s,baz=342,slow=8.5,SNR=2.9 0.4nm,0.9s								
SONM	**Songino Array**	**45.64**	**342**	P		**P**		**05 57 03.3**	**-0.7**
	0.1nm,0.4s,baz=149,slow=7.6,SNR=2.2 0.1nm,0.4s								
MKAR	**Makanchi Array**	**55.64**	**326**	P		**P**		**05 58 20.5**	**+1.1**
	0.8nm,0.6s,baz=121,slow=8.9,SNR=13 0.8nm,0.6s								
ZALV	**Zalesovo Beam**	**58.78**	**333**	P		**P**		**05 58 41.4**	**+0.1**
	0.3nm,0.3s,baz=132,slow=8.4,SNR=1.6 0.3nm,0.3s								
KURBB	**Kurchatov Arra**	**59.85**	**328**	P		**P**		**05 58 49.3**	**+0.5**
	1.6nm,0.6s,baz=126,slow=6.2,SNR=11 1.6nm,0.6s								
BVAR	**Borovoye Array**	**65.42**	**327**	P		**P**		**05 59 25.9**	**0.0**
	1.7nm,0.7s,baz=111,slow=5.5,SNR=7.4 1.7nm,0.7s								

IDC 27 05:58:05.7±1.7,6.54S×130.15E,h0km,mb3.8/1, mbtmp3.8/5,ML3.7/4,Error ellipse: s-maj=67.1km s-min=24.6km az=85.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.74**	**11**	Pn		Pn		05 59 32.8	+0.6
	2.5nm,0.3s,baz=167,slow=23,SNR=1.8								
SIJI				Sn		Sn		06 00 36.4	-2.6
	6.0nm,0.3s,baz=88,slow=23,SNR=4.3 10.0nm,0.2s								
FITZ	**Fitzroy Crossi**	**12.30**	**201**	Pn		Pn		06 01 02.3	+0.1
	0.6nm,0.3s,baz=24,slow=12,SNR=24								
FITZ				Sn		Sn		06 03 10.3	-10
	1.7nm,0.3s,baz=326,slow=12,SNR=8.1 1.4nm,0.4s								
WRA	**Warramunga Arr**	**13.93**	**163**	Pn		Pn		06 01 23.6	-0.9
	0.3nm,0.3s,baz=347,slow=12,SNR=11								
WRA				Sn		Sn		06 03 48.0	-12
	0.9nm,0.3s,baz=342,slow=21,SNR=11 1.1nm,0.7s								
ASAR	**Alice Springs**	**17.41**	**168**	P		P		06 02 11.0	-0.5
	0.2nm,0.3s,baz=355,slow=9.0,SNR=8.4								
ASAR				S		Sn		06 05 12.8	-12
	0.9nm,0.7s,baz=351,slow=25,SNR=6.0 0.5nm,0.6s								
MKAR	**Makanchi Array**	**67.92**	**327**	P		P		06 09 06.2	-0.1
	0.6nm,0.5s,baz=127,slow=7.7,SNR=11 0.6nm,0.5s								

RSNC 27 05:59:15.3±0.0,5°N±1°×7°4W±°,h145km±2km,M2.6,mB4.5, mb3.7,ML2.3,Mw(mB)3.6,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.43**	**309**	P		P	Pn	05 59 35.2	-0.7
SPBC				S		S	Sn	05 59 49.6	-1.9
SPBC	**San Pablo de B**	**0.43**	**309**	P		P	Pn	05 59 35.2	-0.7
SPBC				S		S	Sn	05 59 49.7	-1.8
CHIC	**Chingaza**	**0.75**	**179**	P		P	Pn	05 59 38.0	-0.1
CHIC				S		S	Sn	05 59 54.7	-0.7
CHIC	**Chingaza**	**0.75**	**179**	P		P	Pn	05 59 38.1	0.0
CHIC				S		S	Sn	05 59 54.8	-0.6
ROSC	**El Rosal**	**0.79**	**227**	P		P	Pn	05 59 39.0	+0.6
ROSC				S		S	Sn	05 59 56.2	+0.3
ROSC	**El Rosal**	**0.79**	**227**	P		P	Pn	05 59 39.0	+0.6
ROSC				S		S	Sn	05 59 56.3	+0.4
RUSC	**La Rusia**	**0.83**	**52**	P		P	Pn	05 59 38.9	+0.1
RUSC				S		S	Sn	05 59 56.0	-0.6
RUSC	**La Rusia**	**0.83**	**52**	P		P	Pn	05 59 38.9	+0.1
RUSC				S		S	Sn	05 59 56.1	-0.5
VILC	**Villavicencio,**	**1.26**	**178**	P		P	Pn	05 59 42.0	-0.2
VILC				S		S	Sn	06 00 02.5	-0.2
VILC	**Villavicencio,**	**1.26**	**178**	P		P	Pn	05 59 42.1	-0.1
VILC				S		S	Sn	06 00 02.7	0.0
BARC	**Barichara**	**1.33**	**25**	P		P	Pn	05 59 42.5	-0.5
BARC				S		S	Sn	06 00 03.0	-1.1
BARC	**Barichara**	**1.33**	**25**	P		P	Pn	05 59 42.5	-0.5
BARC				S		S	Sn	06 00 02.5	-1.6
PTBC	**PUERTO BERRIO,**	**1.35**	**328**	P		P	Pn	05 59 41.7	-1.3
PTBC				S		S	Sn	06 00 02.2	-2.0
PTBC	**PUERTO BERRIO,**	**1.35**	**328**	P		P	Pn	05 59 42.1	-0.9
PTBC				S		S	Sn	06 00 02.4	-1.8
BRJC	**Barrancabermej**	**1.58**	**360**	P		P	Pn	05 59 45.1	-0.3
BRJC				S		S	Sn	06 00 07.3	-1.2
BRJC	**Barrancabermej**	**1.58**	**360**	P		P	Pn	05 59 45.1	-0.3
BRJC				S		S	Sn	06 00 07.9	-0.6
GUY2C	**Guyana, Caldas**	**1.63**	**265**	P		P	Pn	05 59 46.2	-0.1
GUY2C				S		S	Sn	06 00 09.2	-0.8
GUY2C	**Guyana, Caldas**	**1.63**	**265**	P		P	Pn	05 59 46.2	-0.1
GUY2C				S		S	Sn	06 00 10.7	+0.7
RECRC	**Villamaria, Ca**	**1.66**	**256**	P		P	Pn	05 59 46.5	-0.3
RECRC				S		S	Sn	06 00 10.1	-0.7
NIZA	**Niza - Manizal**	**1.75**	**260**	P		P	Pn	05 59 49.1	+1.5
NIZA				S		S	Sn	06 00 12.1	-0.1
VMM09	**Lebrija**	**1.79**	**14**	P		P	Pn	05 59 47.8	-0.1
VMM09				S		S	Sn	06 00 12.4	-0.5
ANIL	**Santa Ana**	**1.88**	**242**	P		P	Pn	05 59 48.9	-0.1
ANIL				S		S	Sn	06 00 14.4	-0.4
VMM07	**Puerto Wilches**	**1.97**	**357**	P		P	Pn	05 59 50.0	+0.2
VMM07				S		S	Sn	06 00 16.9	+0.6
PRAC	**Prado**	**2.01**	**215**	P		P	Pn	05 59 50.0	-0.3
PRAC				S		S	Sn	06 00 16.8	-0.4
PRAC	**Prado**	**2.01**	**215**	P		P	Pn	05 59 50.0	-0.3
PRAC				S		S	Sn	06 00 16.9	-0.3
PAMC	**Pamplona, Colo**	**2.20**	**28**	P		P	Pn	05 59 52.9	-0.2
PAMC				S		S	Sn	06 00 21.6	-0.5
PAMC	**Pamplona, Colo**	**2.20**	**28**	P		P	Pn	05 59 53.0	-0.1
PAMC				S		S	Sn	06 00 21.8	-0.3
URMC	**La Uribe, Meta**	**2.21**	**197**	P		P	Pn	05 59 53.2	+0.4
URMC				S		S	Sn	06 00 22.0	+0.4
URMC	**La Uribe, Meta**	**2.21**	**197**	P		P	Pn	05 59 53.3	+0.5
URMC				S		S	Sn	06 00 22.0	+0.4
EZNC	**La Esperanza**	**2.27**	**11**	P		P	Pn	05 59 53.7	+0.3
EZNC				S		S	Sn	06 00 22.6	-0.2
CBOC	**Ciudad Bolivar**	**2.31**	**282**	P		P	Pn	05 59 53.5	-0.5
CBOC				S		S	Sn	06 00 22.5	-1.3
CBOC	**Ciudad Bolivar**	**2.31**	**282**	P		P	Pn	05 59 53.6	-0.4
CBOC				S		S	Sn	06 00 22.3	-1.5
PLMC	**San Jos del P**	**2.58**	**260**	P		P	Pn	05 59 57.5	+0.3
PLMC				S		S	Sn	06 00 30.3	+0.8
PLMC	**San Jos del P**	**2.58**	**260**	P		P	Pn	05 59 57.6	+0.4
PLMC				S		S	Sn	06 00 31.7	+2.2
PGA3	**Puerto Gaitan**	**2.62**	**124**	P		P	Pn	05 59 57.4	-0.3
PGA3				S		S	Sn	06 00 28.6	-1.8
OCAC	**Ocana**	**2.87**	**8**	P		P	Pn	06 00 00.5	-0.5
OCAC				S		S	Sn	06 00 35.9	-0.4
OCAC	**Ocana**	**2.87**	**8**	P		P	Pn	06 00 00.6	-0.4
OCAC				S		S	Sn	06 00 35.8	-0.5
YOTC	**Yotoco, Valle**	**2.94**	**242**	P		P	Pn	06 00 01.0	-0.9
YOTC	**Yotoco, Valle**	**2.94**	**242**	P		P	Pn	06 00 00.9	-1.0
YOTC				S		S	Sn	06 00 40.1	+2.2
DBBC	**Dabeiba**	**2.94**	**304**	P		P	Pn	06 00 01.3	-0.6
DBBC				S		S	Sn	06 00 36.9	-0.9
DBBC	**Dabeiba**	**2.94**	**304**	P		P	Pn	06 00 01.3	-0.6
DBBC				S		S	Sn	06 00 36.5	-1.3
UREC	**San Jos de Ur**	**2.95**	**323**	P		P	Pn	05 59 59.2	-2.7
UREC				S		S	Sn	06 00 33.8	-4.2
MACC	**Macarena, Meta**	**3.21**	**182**	P		P	Pn	06 00 04.0	-1.3
MACC				S		S	Sn	06 00 41.1	-2.9
MACC	**Macarena, Meta**	**3.21**	**182**	P		P	Pn	06 00 04.2	-1.1
MACC				S		S	Sn	06 00 40.8	-3.2
GARC	**Garzon, Huila**	**3.62**	**209**	P		P	Pn	06 00 09.9	-0.9
GARC				S		S	Sn	06 00 51.4	-2.3
GARC	**Garzon, Huila**	**3.62**	**209**	P		P	Pn	06 00 10.1	-0.7
GARC				S		S	Sn	06 00 51.7	-2.0
JAMC	**Jamundi, Valle**	**3.63**	**234**	P		P	Pn	06 00 10.3	-0.5
JAMC	**Jamundi, Valle**	**3.63**	**234**	P		P	Pn	06 00 09.9	-0.9
JAMC				S		S	Sn	06 00 54.6	+0.7
APAC	**Apartado, Choc**	**3.77**	**312**	P		P	Pn	06 00 11.4	-1.1
APAC				S		S	Sn	06 00 55.1	-1.7
LL8C	**La Loma 8 Chim**	**3.93**	**359**	P		P	Pn	06 00 12.9	-1.7
POPC	**Popayan, Colom**	**4.07**	**226**	P		P	Pn	06 00 17.1	+0.5
POPC	**Popayan, Colom**	**4.07**	**226**	P		P	Pn	06 00 16.4	-0.2
POPC				S		S	Sn	06 01 03.7	-0.4
FLOC	**Florencia**	**4.23**	**207**	P		P	Pn	06 00 18.0	-0.5
FLOC				S		S	Sn	06 01 07.6	0.0
FLOC	**Florencia**	**4.23**	**207**	P		P	Pn	06 00 18.4	-0.1
FLOC				S		S	Sn	06 01 03.7	-3.9
LCBC	**Los crdobas,**	**4.33**	**323**	P		P	Pn	06 00 18.9	-0.9
LCBC				S		S	Sn	06 01 09.0	-0.9
ARGC	**Ariguani, Magd**	**4.48**	**354**	P		P	Pn	06 00 17.3	-4.5
ARGC				S		S	Sn	06 01 11.5	-2.0
SDV	**Santo Domingo**	**4.65**	**41**	P		P	Pn	06 00 23.6	-0.6
SDV				S		S	Sn	06 01 17.7	-0.2
SJCC	**San Jacinto, C**	**4.71**	**342**	P		P	Pn	06 00 21.0	-3.9
SJCC				S		S	Sn	06 01 12.8	-6.3
SJCC	**San Jacinto, C**	**4.71**	**342**	P		P	Pn	06 00 21.7	-3.2
SJCC				S		S	Sn	06 01 13.4	-5.7
CRJC	**Cerrejon, Guaj**	**5.67**	**9**	P		P	Pn	06 00 35.1	-2.6
CRJC				S		S	Sn	06 01 37.2	-4.8
CRJC	**Cerrejon, Guaj**	**5.67**	**9**	P		P	Pn	06 00 35.6	-2.1
CRJC				S		S	Sn	06 01 34.0	-8.0
URIC	**Uribia, Colomb**	**6.51**	**15**	P		P	Pn	06 00 46.2	-2.7
URIC				S		S	Sn	06 01 56.0	-6.1

GCG ***27*** *06:29:18.6±2.7,15.02N×94.64W,h15km±53km,MD4.3, ML4.1,Presumed earthquake*
MEX ***27*** *06:29:22.6±0.9,15.21N×94.60W,h17km±117km,MD4.1*

ISC 27 06:29:13.8±1.4,15.09N±0.05×94.60W±0.02,h4km±11km, n36,σ1s88/63,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CARR	**Arriaga**	**1.33**	**30**	*e*P		*e*P	**Pg**	**06 29 41.2**	**+1.9**
CARR				*e*S		*e*S	**Sn**	**06 29 55.8**	**-1.4**
PCIG		**1.46**	**65**	*e*P		*e*P	**Pg**	**06 29 44.1**	**+2.2**
PCIG				*e*S		*e*S	**Sg**	**06 30 00.8**	**-0.1**
HUIG	**Huatulco**	**1.61**	**295**	*i* P		*i* P	**Pg**	**06 29 46.9**	**+2.2**
HUIG				*e*S		*e*S	**Sb**	**06 30 04.0**	**-0.8**
HUIG	**Huatulco**	**1.61**	**295**	*i* P		*i* P	**Pg**	**06 29 46.5**	**+1.8**
HUIG				*i* S		*i* S	**Sb**	**06 30 03.8**	**-1.0**
CMIG	**Matias Romero**	**2.01**	**352**	*e*P		*e*P	**Pg**	**06 29 52.2**	**-0.2**
CMIG				*i* S		*i* S	**Sb**	**06 30 14.8**	**-1.5**
TGIG		**2.20**	**40**	*e*P		*e*P	**Pg**	**06 29 55.1**	**-1.0**
TGIG				*e*S		*e*S	**Sb**	**06 30 19.9**	**-2.0**
TGIG		**2.20**	**40**	*i* P		*i* P	**Pg**	**06 29 55.2**	**-0.9**
TGBT	**Tuxtla Gutierr**	**2.22**	**41**	*e*P		*e*P	**Pb**	**06 29 54.7**	**+0.2**
TGBT				*e*S		*e*S	**Sb**	**06 30 20.4**	**-1.9**
UXUV	**UXUV**	**2.26**	**11**	*e*P		*e*P	**Pg**	**06 29 56.5**	**-0.6**
UXUV				*e*S		*e*S	**Sb**	**06 30 21.9**	**-1.6**
THIG		**2.26**	**94**	*e*P		*e*P	**Pg**	**06 29 57.3**	**+0.2**
THIG				*e*S		*e*S	**Sb**	**06 30 23.5**	**-0.1**
PATR	**El Naranjo**	**2.28**	**89**	*e*P		*e*P	**Pb**	**06 29 55.8**	**+0.1**
PATR				*e*S		*e*S	**Sn**	**06 30 21.1**	**0.0**
PAVE	**Pavencul**	**2.34**	**87**	*e*P		*e*P	**Pb**	**06 29 57.1**	**+0.4**
PAVE				*e*S		*e*S	**Sn**	**06 30 23.0**	**+0.4**
CHUJ	**Union Juarez**	**2.40**	**90**	*e*P		*e*P	**Pb**	**06 29 57.7**	**-0.1**
CHUJ				*e*S		*e*S	**Sn**	**06 30 23.8**	**-0.4**
SMCA	**Catarina**	**2.45**	**95**	*i* P		*i* P	**Pb**	**06 29 58.3**	**-0.2**
PEIG	**Puerto Escondi**	**2.62**	**291**	*e*P		*e*P	**Pb**	**06 30 01.2**	**-0.2**
PEIG				*e*S		*e*S	**Sn**	**06 30 28.2**	**-1.1**
CCIG	**Comitan**	**2.65**	**63**	*e*P		*e*P	**Pg**	**06 30 03.2**	**-1.5**
CCIG				*e*S		*e*S	**Sb**	**06 30 32.9**	**-2.0**
CCIG	**Comitan**	**2.65**	**63**	*i* P		*i* P	**Pg**	**06 30 03.1**	**-1.5**
CCIG				IAML				06 30 41.6	
	comp=N,526nm,0.5s								
VHO	**Vista Hermosa**	**2.85**	**314**	*e*P		*e*P	**Pb**	**06 30 05.7**	**+0.3**
VHO				*e*S		*e*S	**Sn**	**06 30 36.0**	**+0.9**
NEUV	**Arroyo Zacate**	**2.85**	**336**	*e*P		*e*P	**Pb**	**06 30 04.5**	**-0.9**
NEUV				*e*S		*e*S	**Sb**	**06 30 37.9**	**-2.8**
HUEH	**Huehuetenango**	**3.00**	**85**	*e*P		*e*P	**Pb**	**06 30 07.7**	**-0.2**
HUEH				*e*S		*e*S	**Sb**	**06 30 44.2**	**-0.7**
HUEH	**Huehuetenango**	**3.00**	**85**	*i* P		*i* P	**Pb**	**06 30 08.1**	**+0.2**
HUEH				*i* S		*i* S	**Sb**	**06 30 44.3**	**-0.7**
HUEH				IAML				06 30 56.4	
	comp=E,770nm,1.1s								
STG2	**El Palmar, Qui**	**3.18**	**101**	*i* P			**Pn**	**06 30 04.5**	**-0.3**
STG2				IAML				06 30 44.6	
	comp=E,779nm,0.2s								
STG8	**El Palmar, Qui**	**3.20**	**101**	*i* P			**Pn**	**06 30 05.3**	**+0.1**
STG5	**El Palmar, Qui**	**3.21**	**102**	*i* P			**Pn**	**06 30 05.5**	**+0.3**
YOIG	**Yosondua**	**3.34**	**302**	*e*P		*e*P	**Pb**	**06 30 13.4**	**-0.4**
YOIG				*e*S		*e*S	**Sn**	**06 30 49.1**	**+1.8**
PNIG	**Pinotepa**	**3.64**	**291**	*e*P		*e*P	**Pb**	**06 30 16.1**	**-2.7**
PNIG				*e*S		*e*S	**Sn**	**06 30 53.1**	**-1.3**
TXIG	**Tlaxiaco**	**3.73**	**306**	*e*P		*e*P	**Pb**	**06 30 19.5**	**-1.0**
TXIG				*e*S		*e*S	**Sb**	**06 31 00.8**	**-5.4**
TOIG	**Toxpalan**	**3.81**	**322**	*e*P		*e*P	**Pb**	**06 30 21.2**	**-0.6**
TOIG				*e*S		*e*S	**Sn**	**06 31 00.5**	**+1.6**
APG	**El Apazote**	**3.99**	**91**	*i* P		*i* P	**Pn**	**06 30 21.6**	**-3.3**
HLIG	**Huajuapan de L**	**4.11**	**312**	*e*P		*e*P	**Pn**	**06 30 20.9**	**+3.3**
HLIG				*e*S		*e*S	**Sn**	**06 31 07.6**	**+1.3**
FTIG	**Fresnillo de T**	**4.40**	**310**	*e*P		*e*P	**Pb**	**06 30 28.8**	**-3.0**
FTIG				*e*S		*e*S	**Sn**	**06 31 15.1**	**+1.8**
MGIG	**Malinaltepec**	**4.43**	**299**	*e*P		*e*P	**Pb**	**06 30 28.5**	**-3.8**
MGIG				*e*S		*e*S	**Sn**	**06 31 15.4**	**+1.4**
TLIG	**Tlapa**	**4.54**	**303**	*e*P		*e*P	**Pb**	**06 30 32.3**	**-1.8**
TLIG				*e*S		*e*S	**Sn**	**06 31 19.4**	**+2.7**
CRIG	**Cruz Grande**	**4.66**	**291**	*e*P		*e*P	Pn	06 30 29.7	+4.7
CRIG				*e*S		*e*S	**Sn**	**06 31 17.0**	**-2.6**
PETF	**Flores**	**4.90**	**68**	*e*P		*e*P	**Pn**	**06 30 32.7**	**+4.4**
PETF				*e*S		*e*S	**Sn**	**06 31 26.1**	**+0.6**
PETF	**Flores**	**4.90**	**68**	*i* P		*i* P	**Pn**	**06 30 32.4**	**+4.2**

IDC ***27*** *06:29:54.0±1.4,29.17N×139.46E,h381km±16km, mb3.2/16,mbtmp3.9/18,Error ellipse: s-maj=14.5km s-min=11.7km az=71.0*

ISC 27 06:29:55.1±0.7,29.2N±0.1×139.4E±0.1,h400km,n20, σ1s31/20,mb3.4/15,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.21**	**130**	P		**P**	**Pn**	**06 30 57.4**	**-2.7**
	97nm,0.4s,baz=309,slow=8.8,SNR=8.5								
JCJ				S		S		06 31 44.3	-8.3
	296nm,0.4s,baz=273,slow=23,SNR=14								
MJAR	**Matsushiro Arr**	**7.41**	**352**	P		**P**	**Pn**	**06 31 41.1**	**-2.1**
	0.8nm,0.3s,baz=152,slow=12,SNR=2.4								
KSRS	**Korea Array**	**12.66**	**314**	P		**P**	**P**	**06 32 39.1**	**-2.7**
	0.8nm,0.4s,baz=109,slow=11,SNR=4.3								
KLR	**Kul'dur**	**20.86**	**346**	P		**P**	**P**	**06 34 08.2**	**+1.1**
	0.8nm,0.4s,baz=168,slow=9.3,SNR=2.7 0.8nm,0.4s								
SONM	**Songino Array**	**31.52**	**315**	P		**P**	**P**	**06 35 43.0**	**+1.0**
	1.0nm,0.7s,baz=118,slow=7.9,SNR=8.5 1.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**38.37**	**263**	P		**P**	**P**	**06 36 40.0**	**+0.1**
	2.1nm,0.3s,baz=52,slow=7.1,SNR=5.8 2.1nm,0.3s								
ZALV	**Zalesovo Beam**	**46.31**	**318**	P		**P**	**P**	**06 37 43.1**	**+0.5**
	0.8nm,0.3s,baz=100,slow=8.0,SNR=4.6 0.8nm,0.3s								
MKAR	**Makanchi Array**	**47.27**	**308**	P		**P**	**P**	**06 37 50.7**	**+0.7**
	0.8nm,0.6s,baz=92,slow=8.5,SNR=13 0.8nm,0.6s								
WRA	**Warramunga Arr**	**49.09**	**186**	P		**P**	**P**	**06 38 04.3**	**+0.4**
	0.6nm,0.3s,baz=4.1,slow=7.6,SNR=12 0.6nm,0.3s								
KURBB	**Kurchatov Arra**	**49.84**	**313**	P		**P**	**P**	**06 38 10.2**	**+1.0**
	2.3nm,0.4s,baz=92,slow=7.9,SNR=14 2.3nm,0.4s								
ASAR	**Alice Springs**	**52.81**	**186**	P		**P**	**P**	**06 38 31.6**	**+0.3**
	0.2nm,0.3s,baz=21,slow=9.0,SNR=5.2 0.2nm,0.3s								
BVAR	**Borovoye Array**	**54.85**	**316**	P		**P**	**P**	**06 38 46.7**	**+1.2**
	3.5nm,0.4s,baz=90,slow=6.6,SNR=19 3.5nm,0.4s								
ILAR	**Eielson Array**	**57.08**	**29**	P		**P**	**P**	**06 39 01.3**	**+0.4**
	0.5nm,0.8s,baz=288,slow=7.7,SNR=7.0 0

STKA	**Stephens Creek**	**28.89**	**232**	P	**P**	**06**	**59**	**49.1 -1.3**
	comp=Z,2.4nm,0.6s,baz=43,slow=7.9,SNR=4.6							
	comp=Z,2.4nm,0.6s							
STKA	**Stephens Creek**	**28.89**	**232**	IAmb	IAmb	06	59	51.2
	comp=Z,17nm,0.8s							
TOO	**Toolangi**	**29.39**	**219**	P	**P**	**06**	**59**	**53.8 -1.1**
TOO				IAmb	IAmb	07	00	15.6
	comp=Z,4.3nm,1.1s							
WRA	**Warramunga Arr**	**32.41**	**258**	P	**P**	**07**	**00**	**20.1 -1.5**
	comp=Z,1.8nm,0.6s,baz=86,slow=8.4,SNR=21							
WRA				PcP	**PcP**	**07**	**03**	**05.3 +0.5**
	comp=Z,0.9nm,0.7s,baz=88,slow=3.1,SNR=6.9							
WRA				ScP	**ScP**	**07**	**06**	**31.9 -0.1**
	comp=Z,0.8nm,0.8s,baz=90,slow=3.2,SNR=5.8							
	comp=Z,1.8nm,0.6s							
WRA	**Warramunga Arr**	**32.41**	**258**	P	**P**	**07**	**00**	**19.9 -1.6**
AS31	**Alice Springs**	**33.08**	**251**		**P**	**07**	**00**	**26.8 -0.6**
ASAR	**Alice Springs**	**33.09**	**251**	P	**P**	**07**	**00**	**26.6 -0.8**
	comp=Z,23nm,0.6s,baz=77,slow=9.0,SNR=457							
ASAR				PcP	**PcP**	**07**	**03**	**06.8 +0.1**
	comp=Z,0.9nm,0.7s,baz=95,slow=2.8,SNR=8.8							
ASAR				ScP	**ScP**	**07**	**06**	**35.1 +0.8**
	comp=Z,2.0nm,0.8s,baz=102,slow=3.3,SNR=15							
	comp=Z,23nm,0.6s							
ASAR	**Alice Springs**	**33.09**	**251**		**P**	**07**	**00**	**26.8 -0.6**
BBOO	**Buckleboo**	**33.54**	**234**	P	**P**	**07**	**00**	**30.7 -0.4**
BBOO				IAmb	IAmb	07	00	31.4
	comp=Z,6.2nm,0.7s							
KNRA	**Kununurra**	**37.90**	**265**		**P**	**07**	**01**	**07.8 -0.7**
FORT	**Forrest**	**39.44**	**241**	P	**P**	**07**	**01**	**21.2 0.0**
PSA00	**Pilbara Seismi**	**45.97**	**255**	P	**P**	**07**	**02**	**14.2 +0.4**
PSA00				IAmb	IAmb	07	02	14.7
	comp=Z,13nm,1.1s							
PSA00	**Pilbara Seismi**	**45.97**	**255**	P	**P**	**07**	**02**	**14.4 +0.6**
PSA00				IAmb	IAmb	07	02	15.2
	comp=Z,4.9nm,1.0s							
MBWA	**Marble Bar**	**46.09**	**256**	P	**P**	**07**	**02**	**14.8 0.0**
MBWA				IAmb	IAmb	07	02	15.5
	comp=Z,15nm,0.8s							
NWAO	**Narrogin (SRO)**	**48.88**	**240**	P	**P**	**07**	**02**	**36.1 -0.1**
NWAO				IAmb	IAmb	07	03	01.4
	comp=Z,12nm,1.1s							
MORW	**Morawa**	**49.54**	**245**	P	**P**	**07**	**02**	**41.2 0.0**
MORW				IAmb	IAmb	07	03	01.6
	comp=Z,4.4nm,0.8s							
VNDA	**Vanda**	**61.62**	**182**	P	**P**	**07**	**04**	**07.2 +0.8**
	comp=Z,3.5nm,1.0s,baz=22,slow=5.4,SNR=2.1							
	comp=Z,3.5nm,1.0s							
VNDA	**Vanda**	**61.62**	**182**	P	**P**	**07**	**04**	**06.6 +0.2**
QSPA	**South Pole Qui**	**74.03**	**180**	P	**P**	**07**	**05**	**24.9 +0.6**
QSPA				IAmb	IAmb	07	05	26.3
	comp=Z,8.9nm,0.9s							

MOS ***27*** *07:02:14.8, 42.41N×45.03E, h13km, MPVA3.9*
DRS ***27*** *07:02:14.3, 42.47N×45.00E, h60km*
AZER ***27*** *07:02:14.9, 42.39N×45.03E, h16km, ml2.6*
NORS ***27*** *07:02:14.8, 42.41N×45.03E, h8km, MPVA3.8*

ISC 27 07:02:15.1±1.0, 42.43N±0.03×45.03E±0.02, h15km±9km, n28, σ0.88/56, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUDG	**Gudauri**	**0.41**	**274**	*e*Pg			**Pb**	**07 02 23.7**	**-0.5**
GUDG				*e*Sg			**Sg**	**07 02 29.3**	**0.0**
KMGR	**Komgaron**	**0.64**	**349**	*e*Pg			**Pg**	**07 02 27.8**	**+0.2**
KMGR				*e*Sg			**Sb**	**07 02 37.2**	**+0.6**
VLKR	**Vladikavkaz**	**0.67**	**337**	*e*Pg			**Pg**	**07 02 28.3**	**+0.2**
VLKR				*e*Sg			**Sb**	**07 02 37.8**	**+0.3**
LACR	**Lac**	**0.67**	**306**	*i* Pg			**Pg**	**07 02 27.6**	**-0.7**
LACR				*e*Sg			**Sg**	**07 02 36.5**	**-0.7**
BTLR	**Botlikh**	**0.91**	**75**	*e*Pg			**Pb**	**07 02 32.5**	**-0.1**
BTLR				*e*Sg			**Sg**	**07 02 44.6**	**-0.1**
ARNR	**Ardon**	**0.93**	**324**	*e*Pg			**Pn**	**07 02 33.3**	**-0.2**
ARNR				*e*Sg			**Sn**	**07 02 46.4**	**-0.2**
GROC	**Groznyy**	**0.95**	**36**	*e*Pg			**Pn**	**07 02 34.7**	**+0.8**
GROC				*e*Sg			**Sn**	**07 02 47.9**	**+0.7**
DVE	**Vedeno**	**0.96**	**57**	*e*Pg			**Pb**	**07 02 33.5**	**0.0**
DVE				*e*Sg			**Sb**	**07 02 45.9**	**-0.1**
KORR	**Kora**	**0.96**	**313**	*e*Pg			**Pg**	**07 02 33.8**	**0.0**
KORR				*e*Sg			**Sn**	**07 02 47.5**	**-0.1**
TLTR	**Tlyarata**	**1.03**	**108**	*e*Pg			**Pg**	**07 02 34.9**	**-0.3**
TLTR				*e*Sg			**Sn**	**07 02 49.6**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.17**	**294**	*e*Pg			**Pn**	**07 02 36.4**	**-0.6**
DIGR				*e*Sg			**Sb**	**07 02 52.1**	**+0.1**
STDR	**Stavd-Durt**	**1.18**	**323**	*e*Pg			**Pg**	**07 02 37.6**	**-0.2**
STDR				*e*Sg			**Sg**	**07 02 55.3**	**+2.2**
LSNR	**Lesken**	**1.22**	**314**	*e*Pg			**Pg**	**07 02 38.6**	**-0.1**
LSNR				*e*Sg			**Sg**	**07 02 55.2**	**+0.5**
XNZR	**Khunzakh**	**1.24**	**84**	*e*Pg			**Pg**	**07 02 38.6**	**-0.5**
XNZR				*e*Sg			**Sg**	**07 02 55.1**	**-0.2**
UNCR	**Uncukul**	**1.33**	**77**	*e*Pg			**Pb**	**07 02 39.2**	**-0.5**
UNCR				*e*Sg			**Sg**	**07 02 57.8**	**-0.3**
DLMR	**Dylym**	**1.34**	**61**	*e*Pg			**Pn**	**07 02 39.2**	**0.0**
DLMR				*e*Sg			**Sb**	**07 02 57.2**	**+0.4**
QZX	**Qazax, Azerbai**	**1.40**	**169**	P			**Pg**	**07 02 42.2**	**+0.2**
QZX				S			**Sg**	**07 03 02.8**	**+2.6**
ZKTA	**Zakatala**	**1.43**	**123**	P			**Pg**	**07 02 43.0**	**+0.5**
ZKTA				S			**Sg**	**07 03 04.0**	**+2.8**
GNBR	**Gunib**	**1.43**	**91**	*e*Pg			**Pg**	**07 02 42.7**	**+0.1**
GNBR				*e*Sg			**Sg**	**07 03 01.8**	**+0.6**
KRNR	**Karanay**	**1.44**	**74**	*e*Pg			**Pb**	**07 02 41.1**	**-0.5**
KRNR				*e*Sg			**Sg**	**07 03 00.8**	**-0.7**
ARKR	**Arakani**	**1.46**	**83**	*e*Pg			**Pb**	**07 02 41.9**	**-0.1**
ARKR				*e*Sg			**Sg**	**07 03 01.9**	**-0.3**
KMKR	**Kumukh**	**1.56**	**100**	*e*Pg			**Pb**	**07 02 43.7**	**-0.2**
KMKR				*e*Sg			**Sg**	**07 03 04.1**	**-1.4**
GDB	**GEDABAY**	**1.79**	**162**	P			**Pb**	**07 02 47.8**	**0.0**
GDB				S			**Sg**	**07 03 13.1**	**+0.1**
KBTC	**Kuba-Taba**	**1.82**	**320**	*e*Pg			**Pb**	**07 02 48.9**	**+0.7**
KBTC				*e*Sg			**Sg**	**07 03 12.7**	**-1.1**
NEUR	**Neytrino**	**1.90**	**297**	*e*Pg			**Pb**	**07 02 50.0**	**+0.4**
NEUR				*e*Sg			**Sb**	**07 03 14.2**	**+0.9**
SEKA	**Sheki**	**2.03**	**126**	P			**Pg**	**07 02 52.4**	**-1.7**
SEKA				S			**Sg**	**07 03 21.1**	**+0.7**
GANJ	**Ganja**	**2.03**	**151**	P			**Pb**	**07 02 51.2**	**-0.5**
GANJ				S			**Sg**	**07 03 18.2**	**-2.3**
SHA1	**Shidzhatmaz**	**2.17**	**308**	*e*Pg			**Pb**	**07 02 53.1**	**-1.1**
SHA1				*e*Sg			**Sb**	**07 03 20.8**	**-0.3**

IDC 27 07:17:12.8±9.8, 45.99S×96.21E, h0km, mb3.8/4, mbtmp3.8/4, MS3.8/20, Error ellipse: s-maj=229.6km s-min=44.1km az=29.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.53**	**57**	T		T	T	07 39 05.2	
	baz=228,slow=74,SNR=82								
H01W3	**Cape Leeuwin H**	**17.55**	**57**	T		T	T	07 39 05.3	
	baz=228,slow=74,SNR=87								
H01W1	**Cape Leeuwin H**	**17.55**	**57**	T		T	T	07 39 05.8	
	baz=228,slow=74,SNR=94								
MAW	**Mawson**	**27.70**	**207**	LR		LR	LR	07 31 43.5	
	comp=Z,147nm,19.7s,baz=36,slow=31								
STKA	**Stephens Creek**	**37.50**	**84**	P		P	P	07 24 28.2	-0.1
	0.6nm,0.4s,baz=226,slow=9.1,SNR=3.3								
STKA				LR		LR	LR	07 36 56.6	
	comp=Z,116nm,20.7s,baz=208,slow=32								
	0.6nm,0.4s								
ASAR	**Alice Springs**	**37.63**	**67**	P		P	P	07 24 30.1	+0.7
	0.7nm,1.0s,baz=219,slow=7.1,SNR=8.3								
	0.7nm,1.0s								
LEM	**Lembang**	**40.25**	**18**	LR		LR	LR	07 38 32.9	
	comp=Z,91nm,18.5s,baz=173,slow=32								
WRA	**Warramunga Arr**	**40.62**	**63**	P		P	P	07 24 53.4	-1.1
	0.5nm,0.7s,baz=224,slow=8.3,SNR=5.7								
	0.5nm,0.7s								
BATI	**Baumata**	**42.68**	**42**	LR		LR	LR	07 41 36.2	
	comp=Z,122nm,18.2s,baz=268,slow=34								
CTA	**Charters Tower**	**48.27**	**75**	LR		LR	LR	07 43 21.6	
	comp=Z,64nm,20.0s,baz=220,slow=32								
SNAA	**Sanae**	**49.80**	**204**	LR		LR	LR	07 46 33.2	
	comp=Z,250nm,18.2s,baz=16,slow=35								
RPZ	**Rata Peaks**	**51.25**	**116**	LR		LR	LR	07 43 34.3	
	comp=Z,182nm,21.3s,baz=79,slow=31								
PALK	**Pallekele**	**54.81**	**341**	LR		LR	LR	07 45 20.0	
	comp=Z,50nm,19.2s,baz=154,slow=31								
BOSA	**Boshof**	**57.21**	**261**	LR		LR	LR	07 45 26.7	
	comp=Z,103nm,20.2s,baz=182,slow=30								
URZ	**Urewera**	**58.07**	**114**	LR		LR	LR	07 47 41.5	
	comp=Z,104nm,19.2s,baz=214,slow=32								
LBTB	**Lobatse**	**59.24**	**265**	LR		LR	LR	07 47 32.4	
	comp=Z,102nm,18.9s,baz=169,slow=31								

DZM	**Mont Dzumac**	**60.89**	**92**	LR		LR		07 50 31.9
	comp=Z,53nm,18.4s,baz=206,slow=33							
LSZ	**Lusaka**	**63.93**	**275**	LR		LR		07 49 50.2
	comp=Z,88nm,18.4s,baz=145,slow=31							
CMAR	**Chiang Mai Arr**	**64.19**	**3**	P		P		07 27 49.2 0.0
	1.2nm,0.3s,baz=195,slow=5.1,SNR=5.8							
CMAR				LR		LR		07 50 44.9
	comp=Z,69nm,21.5s,baz=190,slow=31							
	1.2nm,0.3s							
PMSA	**Palmer Station**	**68.50**	**189**	LR		LR		07 57 10.9
	comp=Z,111nm,19.6s,baz=138,slow=35							
AFI	**Afiamalu**	**81.52**	**101**	LR		LR		07 59 40.3
	comp=Z,66nm,19.9s,baz=208,slow=31							
LZDM	**Lanzhou Array**	**81.85**	**6**	LR		LR		08 04 35.9
	comp=Z,58nm,21.9s,baz=260,slow=35							
KSRS	**Korea Array**	**87.83**	**25**	LR		LR		08 08 31.7
	comp=Z,12nm,19.1s,baz=325,slow=35							
PLCA	**Paso Flores**	**92.85**	**190**	LR		LR		08 11 26.2
	comp=Z,44nm,19.0s,baz=174,slow=35							
PPT	**Papeete**	**93.31**	**119**	LR		LR		08 03 48.6
	comp=Z,33nm,19.9s,baz=180,slow=30							

NNC ***27*** *07:22:39.5±0.4, 50.01N×78.81E, h0km, mb2.8, mpv2.2, Error ellipse: s-maj=10.7km s-min=2.2km az=72.0, Suspected Mining explosion.*
IDC ***27*** *07:22:40.5±1.1, 50.05N×78.79E, h0km, mbtmp2.2/2, ML1.7/2, Error ellipse: s-maj=13.3km s-min=7.2km az=62.0.*

ISC 27 07:22:40.2±1.6, 49.99N±0.08×78.7E±0.2, h0km, n15, σ0.58/26, 20C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.60**	**349**	⇓P			**Pg**	**07 22 51.2**	**-0.6**
KUR07				⇑S			**Sg**	**07 23 00.3**	**+0.7**
KUR06	**Kurchatov Arra**	**0.62**	**350**	⇑P			**Pg**	**07 22 51.5**	**-0.6**
KUR06				⇑S			**Sg**	**07 23 00.6**	**+0.5**
KUR14	**Kurchatov Arra**	**0.63**	**354**	⇑P			**Pg**	**07 22 51.7**	**-0.6**
KUR14				⇓S			**Sg**	**07 23 01.1**	**+0.7**
KUR15	**Kurchatov Arra**	**0.63**	**353**	⇑P			**Pg**	**07 22 51.8**	**-0.6**
KUR15				⇓S			**Sg**	**07 23 01.2**	**+0.7**
KURBB	**Kurchatov Arra**	**0.64**	**351**	Pg			**Pg**	**07 22 52.0**	**-0.5**
	0.5nm,0.3s,baz=164,slow=18,SNR=26								
KURBB				Lg			Lg	07 23 00.9	
	0.5nm,0.3s,baz=162,slow=34,SNR=5.8								
KURBB	**Kurchatov Arra**	**0.64**	**351**	⇑P			**Pg**	**07 22 52.0**	**-0.5**
	6.6nm,0.5s								
KURBB				⇑S			**Sg**	**07 23 01.2**	**+0.4**
	16nm,0.6s								
KUR16	**Kurchatov Arra**	**0.65**	**349**	⇑P			**Pg**	**07 22 52.1**	**-0.5**
KUR16				⇑S			**Sg**	**07 23 01.4**	**+0.4**
KUR17	**Kurchatov Arra**	**0.66**	**348**	⇑P			**Pg**	**07 22 52.5**	**-0.3**
KUR17				⇑S			**Sg**	**07 23 01.7**	**+0.4**
KUR05	**Kurchatov Arra**	**0.66**	**351**	⇑P			**Pg**	**07 22 52.2**	**-0.6**
KUR05				⇑S			**Sg**	**07 23 01.3**	**-0.1**
KUR04	**Kurchatov Arra**	**0.68**	**352**	⇑P			**Pg**	**07 22 52.6**	**-0.6**
KUR04				⇑S			**Sg**	**07 23 01.7**	**-0.3**
KURK	**Kurchatov**	**0.72**	**356**	⇑P			**Pg**	**07 22 53.3**	**-0.8**
	1.1nm,0.5s								
KURK				⇑S			**Sg**	**07 23 03.5**	**0.0**
	6.6nm,0.7s								
MK31	**Makanchi Array**	**4.00**	**142**	⇑Pn			**Pn**	**07 23 43.8**	**+1.0**
	0.3nm,0.5s,baz=315,slow=10,SNR=3.8								
MK31				⇑Pg			**Pb**	**07 23 51.4**	**-0.2**
	0.6nm,0.6s,baz=320,slow=14,SNR=6.4								
MK31				⇑Lg			Lg	07 24 45.5	
	2.1nm,0.6s,baz=328,slow=26,SNR=9.8								
MKAR	**Makanchi Array**	**4.00**	**142**	Pn			**Pn**	**07 23 43.0**	**+0.2**
	baz=321,slow=9.7,SNR=2.9								
MKAR				Pg			**Pb**	**07 23 51.0**	**-0.6**
	0.1nm,0.3s,baz=322,slow=18,SNR=8.8								
MKAR				Lg			Lg	07 24 46.2	
	0.6nm,0.3s,baz=330,slow=27,SNR=16								
	0.1nm,0.5s								
I46RU	**ZALESOVO INFRA**	**5.48**	**41**	I			I	07 54 10.0	
	baz=222,slow=304,SNR=3.0								
ZALV	**Zalesovo Beam**	**5.48**	**41**	Pn			**Pn**	**07 24 03.6**	**+0.5**
	0.1nm,0.3s,baz=229,slow=13,SNR=2.4								
	0.3nm,0.3s								

IDC 27 07:27:09.5±1.7, 4.21N×123.65E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=224.8km s-min=23.8km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.20**	**157**	P		P		07 32 45.5	-0.7
	0.3nm,0.6s,baz=335,slow=11,SNR=4.0								
	0.3nm,0.6s								
ASAR	**Alice Springs**	**29.46**	**161**	P		P		07 33 16.2	+0.9
	0.1nm,0.5s,baz=336,slow=11,SNR=1.6								
	0.1nm,0.5s								
MKAR	**Makanchi Array**	**55.44**	**327**	P		P		07 36 46.2	+0.3
	0.2nm,0.4s,baz=128,slow=8.2,SNR=3.3								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**59.70**	**328**	P		P		07 37 15.5	-0.4
	0.4nm,0.4s,baz=126,slow=6.2,SNR=6.6								
	0.4nm,0.4s								

FUNV ***27*** *07:41:15.8, 10.79N×59.11W, h8km, MW4.1, Presumed earthquake*
TRN ***27*** *07:41:16.7, 10.84N×59.00W, h53km, MD0.0, Far East of Trinidad.*

ISC 27 07:41:13.3±2.8, 10.7N±0.1×59.0W±0.1, h24km±20km, n26, σ2.9/14/47, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**2.32**	**269**	*e*P			**Pn**	**07 41 53.2**	**+3.1**
TRN				*e*S			**Sn**	**07 42 19.5**	**+1.6**
TRN	**Trinidad (W)**	**2.32**	**269**	*e*P			**Pb**	**07 41 53.6**	**-0.9**
TRN				*e*S			**Sn**	**07 42 20.1**	**+2.1**
PSKH	**Kent House, Po**	**2.44**	**269**	*e*P			**Pb**	**07 41 56.0**	**-0.6**
PSMG	**Mucurapo Girls**	**2.45**	**269**	*e*P			**Pb**	**07 41 56.0**	**-0.7**
PSMG				*e*S			**Sn**	**07 42 22.5**	**+1.5**
DMDM	**Guralp CMG5TDE**	**2.47**	**270**	*e*P			**Pb**	**07 41 56.3**	**-0.7**
DMDM				*e*S			**Sn**	**07 42 23.9**	**+2.4**
BBGH	**Gun Hill**	**2.47**	**348**	*e*P			**Pn**	**07 41 54.3**	**+2.2**
BBGH				*e*S			**Sn**	**07 42 22.7**	**+1.2**
GRGR	**Grenville**	**2.92**	**299**	*e*P			**Pn**	**07 42 00.4**	**+2.0**
GRGR				*e*S			**Sn**	**07 42 33.0**	**+0.2**
GRGR	**Grenville**	**2.92**	**299**	*e*P			**Pn**	**07 42 00.8**	**+2.4**
GRGR				*e*S			**Sn**	**07 42 33.7**	**+0.9**
GCMP	**Grenada, Carri**	**2.93**	**307**	*e*P			**Pn**	**07 41 59.7**	**+1.3**
GCMP				*e*S			**Sn**	**07 42 34.0**	**+1.1**
GCMP	**Grenada, Carri**	**2.93**	**307**	*e*P			**Pn**	**07 41 59.7**	**+1.3**
GCMP				*e*S			**Sn**	**07 42 33.2**	**+0.4**
GRW	**Mount Saint Ca**	**2.94**	**299**	*e*P			**Pn**	**07 42 02.2**	**+3.5**
GRW				*e*S			**Sn**	**07 42 33.1**	**-0.3**
GRFF	**Grenada Fort F**	**2.96**	**297**	*e*P			**Pn**	**07 42 01.1**	**+2.2**
GRFF				*e*S			**Sn**	**07 42 34.9**	**+1.2**
GRSS	**Sisters**	**2.97**	**302**	*e*P			**Pn**	**07 42 01.0**	**+1.9**
GRSS				*e*S			**Sn**	**07 42 34.0**	**0.0**
SVB	**Belmont**	**3.34**	**320**	*e*P			**Pn**	**07 42 05.2**	**+1.1**
SVB				*e*S			**Sn**	**07 42 43.5**	**+0.4**
SVB	**Belmont**	**3.34**	**320**	*e*P			**Pn**	**07 42 05.3**	**+1.2**
SVB				*e*S			**Sn**	**07 42 43.2**	**+0.1**
SLCP	**Castries, St.**	**3.79**	**330**	*e*S			**Sn**	**07 42 51.9**	**-2.3**
SLBI	**Saint Lucia, B**	**3.79**	**330**	*e*P			**Pn**	**07 42 11.7**	**+1.4**
SLBI				*e*S			**Sn**	**07 42 52.3**	**-2.0**
BIM	**Bigot**	**4.27**	**333**	*e*P			**Pn**	**07 42 18.5**	**+1.5**
BIM				*e*S			**Sn**	**07 43 04.3**	**-1.7**
BIM	**Bigot**	**4.27**	**333**	*e*P			**Pn**	**07 42 18.5**	**+1.5**
BIM				*e*S			**Sn**	**07 43 04.5**	**-1.6**
SVN	**Savane Anatole**	**4.60**	**333**	*e*S			**Sn**	**07 43 12.9**	**-1.3**
DSLB	**Salisbury**	**5.24**	**334**	*e*P			**Pn**	**07 42 32.1**	**+1.8**
DSLB				*e*S			**Sn**	**07 43 26.6**	**-3.4**
DWS	**Wesley**	**5.31**	**336**	*e*P			**Pn**	**07 42 32.8**	**+1.6**
DWS				*e*S			**Sn**	**07 43 28.5**	**-3.2**
PCRV	**Puerto La Cruz**	**5.53**	**265**	*e*P			**Pn**	**07 42 34.5**	**+0.2**
PCRV				*e*S			**Sn**	**07 43 33.8**	**-3.4**
TACV	**Tcata**	**7.88**	**267**	*e*P			**Pn**	**07 43 07.3**	**+0.8**
TACV				*e*S			**Sn**	**07 44 29.9**	**-5.1**
CACV	**CAICARA DEL OR**	**8.04**	**248**	*e*P			Pn	07 43 03.9	-4.8
CACV				*e*S			Sn	07 44 23.1	-16
BENV	**Beln**	**8.45**	**266**	*e*P			**Pn**	**07 43 15.9**	**+1.5**
BENV				*e*S			**Sn**	**07 44 43.6**	**-5.7**

ATH ***27*** *07:54:40.9, 35.77N×28.17E, h5km±2km, ML3.0/4, Manual*

Solution by E.Daskalaki First location: 2020/02/27 07:56:18, This location: 2020/02/27 08:09:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
ISK ***27*** *07:54:41.8, 35.82N×28.20E, h8km, ML3.2/19*
IDC ***27*** *07:54:42.6±1.7, 35.96N×28.37E, h0km, mb3.4/3, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=55.4km s-min=23.6km az=141.0*
AFAD ***27*** *07:54:43.1, 35.69N×28.59E, h8km±1km, MW3.7*

ISC 27 07:54:41.3±1.3, 35.79N±0.04×28.26E±0.03, h2km±10km, n42, σ1.9/23/59, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.44**	**346**	Pg			**Pg**	**07 54 49.9**	**+0.1**
ARG				Sg			**Sg**	**07 54 56.1**	**+0.6**
ARG	**Arkhangelos**	**0.44**	**346**	P			**Pg**	**07 54 49.7**	**-0.1**
ARG				S			**Sg**	**07 54 55.7**	**+0.2**
RODB	**Rodos**	**0.66**	**358**	P			**Pg**	**07 54 54.6**	**+0.6**
RODB				S			**Sg**	**07 55 03.4**	**+0.9**
RDI1	**Rhodes Town Ha**	**0.66**	**358**	P			**Pg**	**07 54 54.2**	**+0.1**
RDI1				S			**Sg**	**07 55 03.1**	**+0.4**
KARP	**Karpathos**	**0.92**	**255**	Pg			**Pg**	**07 54 58.9**	**-0.1**
KARP				Sg			**Sg**	**07 55 12.5**	**+1.5**
KARP	**Karpathos**	**0.92**	**255**	P			**Pg**	**07 54 57.6**	**-1.4**
TURN	**Turunc**	**0.98**	**359**	Pg			**Pg**	**07 55 00.4**	**+0.2**
TURN				Sg			**Sb**	**07 55 14.5**	**0.0**
DALY	**Dalyan (Mula)**	**1.07**	**17**	Pg			**Pg**	**07 55 02.0**	**0.0**
DALY				Sg			**Sn**	**07 55 17.9**	**-1.0**
DAT	**Datca**	**1.09**	**330**	Pg			**Pg**	**07 55 02.4**	**+0.2**
KSL	**Kastellorizon**	**1.14**	**71**	P			**Pn**	**07 55 04.0**	**-0.2**
KSL				S			**Sn**	**07 55 20.5**	**+0.2**
AKAS	**Kas**	**1.18**	**68**	Pn			**Pn**	**07 55 05.5**	**+0.5**
YER	**Yerkesik**	**1.34**	**1**	Pn			**Pn**	**07 55 07.2**	**0.0**
CAME	**Cameli-Denizli**	**1.43**	**36**	Pn			**Pg**	**07 55 09.2**	**+0.5**
BODT	**Bodrum**	**1.48**	**329**	Pn			**Pn**	**07 55 08.8**	**-0.2**
MLSB	**Milas**	**1.55**	**346**	Pn			**Pn**	**07 55 09.7**	**-0.3**
ELL	**Elmali**	**1.64**	**54**	Pn			**Pb**	**07 55 11.8**	**-0.6**
AKUM	**Antalya-Kumluc**	**1.77**	**72**	P			**Pn**	**07 55 11.9**	**-1.0**
AKUM				S			**Sg**	**07 55 40.5**	**+2.2**
GOLH	**Golhisar**	**1.79**	**36**	P			**Pg**	**07 55 16.0**	**+0.4**
GOLH				S			**Sg**	**07 55 39.7**	**+1.0**
ZKR	**Zakros**	**1.79**	**249**	P			**Pn**	**07 55 12.9**	**-0.4**
APMY	**Acipayam-Deniz**	**1.88**	**26**	Pn			**Pb**	**07 55 15.6**	**-0.8**
KORT	**Korkueli**	**2.08**	**54**	Pn			**Pb**	**07 55 18.7**	**-1.1**
KORT	**Korkueli**	**2.08**	**54**	P			**Pb**	**07 55 18.5**	**-1.3**
KORT				S			**Sg**	**07 55 46.3**	**-1.8**
NAZL	**Nazilli-Aydin**	**2.17**	**1**	Pn			**Pn**	**07 55 19.1**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**2.17**	**352**	Pn			**Pn**	**07 55 19.1**	**+0.5**
INCE	**Denizli-Bozkur**	**2.19**	**29**	P			**Pg**	**07 55 22.6**	**-0.8**
INCE				S			**Sg**	**07 55 51.2**	**-0.5**
SMG	**Samos**	**2.23**	**330**	P			**Pn**	**07 55 18.7**	**-0.6**
THERA	**Ancient Thera,**	**2.33**	**285**	P			**Pn**	**07 55 19.0**	**-1.6**
BRDR	**BURDUR-Merkez**	**2.39**	**37**	P			**Pb**	**07 55 24.2**	**-1.0**
ODEM	**Odemis-Izmir**	**2.49**	**357**	Pn			**Pn**	**07 55 23

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**288**		**Pb**	**08 27 28.1**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.09**	**288**	*i*P	**Pb**	**08 27 28.1**	**-0.4**
OBIP	**Obispado Ponce**	**0.20**	**62**		**Pb**	**08 27 29.2**	**-0.3**
OBIP				Sg	**Sb**	**08 27 32.3**	**-1.1**
OBIP	**Obispado Ponce**	**0.20**	**62**	*e*P	**Pb**	**08 27 29.2**	**-0.3**
OBIP				*e*S	**Sb**	**08 27 32.3**	**-1.1**
OBIP	**Obispado Ponce**	**0.20**	**62**	*i* P	**Pb**	**08 27 29.2**	**-0.3**
OBIP				*e*S	**Sb**	**08 27 32.2**	**-1.1**
OBIP				IAML		08 27 32.3	
	comp=Z,5μm,0.1s						
CELP	**Cerrillos**	**0.24**	**58**		**Pb**	**08 27 29.8**	**-0.3**
CELP				Sg	**Sb**	**08 27 33.3**	**-0.9**
CELP				IAML		08 27 33.6	
	comp=Z,11μm,0.4s						
MLPR	**Magueyes Islan**	**0.24**	**275**		**Pb**	**08 27 30.1**	**+0.1**
MLPR				Sg	**Sb**	**08 27 33.7**	**-0.5**
MLPR				IAML		08 27 34.3	
	comp=Z,8μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.31**	**281**		**Pb**	**08 27 31.1**	**0.0**
CRPR				IAML		08 27 35.7	
	comp=Z,7μm,0.2s						
CRPR				IAML		08 27 37.9	
	comp=Z,7μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.31**	**281**	*e*Pg	**Pb**	**08 27 31.1**	**0.0**
CRPR				*e*Sg	**Sb**	**08 27 35.4**	**-0.5**
CRPR				IAML		08 27 35.7	
	comp=N,9μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.31**	**281**	*e*P	**Pb**	**08 27 31.0**	**0.0**
CRPR				*e*S	**Sb**	**08 27 35.4**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.31**	**281**	*i* P	**Pb**	**08 27 31.0**	**0.0**
CRPR				*e*S	**Sb**	**08 27 35.3**	**-0.5**
CRPR				IAML		08 27 35.8	
	comp=Z,6μm,0.2s						
UUPR	**Utuado, UPR, P**	**0.31**	**13**		**Pb**	**08 27 30.2**	**-0.9**
LSP	**Las Mesas**	**0.36**	**309**		**Pb**	**08 27 31.3**	**-0.5**
LSP	**Las Mesas**	**0.36**	**309**	*e*P	**Pb**	**08 27 31.3**	**-0.5**
PRSN	**Puerto Rico Se**	**0.43**	**309**		**Pb**	**08 27 32.3**	**-0.6**
PRSN				Sg	**Sb**	**08 27 38.3**	**-0.8**
PRSN	**Puerto Rico Se**	**0.43**	**309**	*e*Pg	**Pb**	**08 27 32.4**	**-0.5**
PRSN				*e*Sg	**Sb**	**08 27 37.3**	**-1.7**
PRSN				IAML		08 27 42.3	
	comp=N,12μm,0.3s						
PRSN	**Puerto Rico Se**	**0.43**	**309**	*e*P	**Pb**	**08 27 32.3**	**-0.6**
PRSN				*e*S	**Sb**	**08 27 37.5**	**-1.6**
ECPR	**Experimental S**	**0.55**	**48**		**Pb**	**08 27 34.5**	**-0.4**
ECPR				Sg	**Sb**	**08 27 41.8**	**-0.6**
ECPR				IAML		08 27 42.3	
	comp=N,6μm,0.2s						
ECPR				IAML		08 27 46.9	
	comp=N,5μm,0.2s						
ECPR	**Experimental S**	**0.55**	**48**	*e*P	**Pb**	**08 27 34.5**	**-0.4**
ECPR				*e*S	**Sb**	**08 27 41.9**	**-0.6**
AGPR	**Aguadilla, PR**	**0.60**	**330**		**Pb**	**08 27 35.0**	**-0.8**
AGPR	**Aguadilla, PR**	**0.60**	**330**	*e*Pg	**Pb**	**08 27 35.1**	**-0.7**
AGPR				*e*Sg	**Sb**	**08 27 42.7**	**-1.2**
AGPR				IAML		08 27 46.5	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.60**	**330**	*e*P	**Pb**	**08 27 34.9**	**-0.8**
AGPR				*e*S	**Sb**	**08 27 42.6**	**-1.3**
GCPR	**Guaynabo City**	**0.76**	**62**		**Pb**	**08 27 38.3**	**-0.3**
GCPR				Sg	**Sb**	**08 27 48.0**	**-0.6**
GCPR	**Guaynabo City**	**0.76**	**62**	*e*P	**Pb**	**08 27 38.2**	**-0.3**
GCPR				*e*S	**Sb**	**08 27 47.8**	**-0.8**
IDE	**Isla Desecheo**	**0.78**	**304**		**Pb**	**08 27 38.4**	**-0.5**
IDE					**Sb**	**08 27 48.5**	**-0.6**
IDE	**Isla Desecheo**	**0.78**	**304**	*e*P	**Pb**	**08 27 38.4**	**-0.5**
IDE				*e*S	**Sb**	**08 27 48.5**	**-0.6**
HUMP	**Col San Antoni**	**0.92**	**78**		**Pb**	**08 27 40.7**	**-0.4**
HUMP				Sg	**Sn**	**08 27 53.5**	**-0.1**
HUMP				IAML		08 27 59.0	
	comp=N,2μm,0.3s						
HUMP	**Col San Antoni**	**0.92**	**78**	*e*P	**Pb**	**08 27 40.7**	**-0.4**
HUMP				*e*S	**Sb**	**08 27 53.0**	**0.0**
CUPR	**Culebra, Puert**	**1.48**	**76**		**Pb**	**08 27 50.5**	**-0.2**
HIDR	**Higuey Centro**	**1.94**	**290**	*e*Pg	**Pb**	**08 27 57.0**	**-1.6**
HIDR				*e*Sg	**Sb**	**08 28 21.6**	**-0.7**
HIDR				IAML		08 28 26.3	
	comp=N,277nm,0.2s						
DR12	**Loma Pena Alta**	**2.60**	**289**		**Pn**	**08 28 06.6**	**+2.3**
HATOM	**Hato Mayor del**	**2.60**	**289**	*e*Pg	**Pb**	**08 28 08.4**	**-1.4**
HATOM				*e*Sg	**Sb**	**08 28 41.1**	**-0.2**
HATOM				IAML		08 28 50.4	
	comp=N,111nm,0.7s						
SABA	**Saba**	**3.40**	**95**	*e*P	**Pb**	**08 28 21.7**	**-1.7**
SABA				x	x	08 29 02.0	
SKI	**Saint Kitts**	**3.91**	**98**	*e*P	**Pn**	**08 28 25.9**	**+3.5**
SKI				x	x	08 29 10.2	
LOVI	**El Cajuil, Ovi**	**4.36**	**269**	*i* P	**Pn**	**08 28 30.9**	**+2.3**
MBFL	**Flemmings, Mon**	**4.53**	**105**	*e*P	**Pn**	**08 28 34.1**	**+3.1**
MBFL				*e*S	**Sn**	**08 29 24.1**	**+1.2**
MBWH	**Windy Hill**	**4.55**	**105**	*e*P	**Pn**	**08 28 33.1**	**+1.8**
MBWH				*e*S	**Sn**	**08 29 23.4**	**-0.1**
MLYT	**Lee's Yard**	**4.56**	**105**	*e*P	**Pn**	**08 28 35.6**	**+4.2**
MLYT				*e*S	**Sn**	**08 29 25.0**	**+1.4**
DHSZ	**Broadband at M**	**5.09**	**108**	*e*P	**Pn**	**08 28 40.8**	**+2.2**
DHSZ				*e*S	**Sn**	**08 29 36.7**	**+0.1**
MMLZ	**Guadeloupe Bro**	**5.25**	**110**	*e*P	**Pn**	**08 28 43.0**	**+2.1**
TBG	**Guadaloupe-3**	**5.35**	**112**	*e*P	**Pn**	**08 28 43.6**	**+1.4**
DSLB	**Salisbury**	**5.72**	**115**	*e*P	**Pn**	**08 28 49.2**	**+1.9**
DSLB				*e*S	**Sn**	**08 29 49.7**	**-2.5**
BIM	**Bigot**	**6.47**	**121**	*e*P	**Pn**	**08 28 58.7**	**+1.1**
BIM				*e*S	**Sn**	**08 30 05.6**	**-5.1**
SLBI	**Saint Lucia, B**	**6.82**	**124**	*e*P	**Pn**	**08 29 03.2**	**+0.8**
SLBI				*e*S	**Sn**	**08 30 13.0**	**-6.3**

BGSI ***27*** *09:09:40.5±1.0,26°.51S×27°.82E,h42km±39km,ML3.1*
BUL 27 09:09:41.7±1.5,26°.48S×27°.38E,h10km,MD3.3,
Presumed earthquake,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**2.17**	**312**	*i* P	Pn	09 10 17.6	-0.5
LBTB				*i* S	Sn	09 10 44.2	-0.9
BOSA	**Boshof**	**2.84**	**221**	*i* P	Pn	09 10 27.0	-0.2
BOSA				*i* S	Sn	09 11 00.1	-1.4
LPHEP	**Lephephe**	**3.40**	**336**	*i* P	Pn	09 10 33.4	-1.5
LPHEP				*i* S	Sn	09 11 12.1	-3.3
LPHEP				IAML		09 11 28.1	
	comp=N,77nm,0.4s						
KDWAN	**Kaudwane**	**3.96**	**321**	*i* P	Pn	09 10 41.0	-1.6
KDWAN				*i* S	Sn	09 11 25.7	-3.4
KDWAN				IAML		09 11 45.1	
	comp=E,158nm,0.3s						
MUSN	**Musina, Limpop**	**4.75**	**29**	*i* P	Pn	09 10 51.9	-1.6
MUSN				*i* S	Sn	09 11 46.3	-2.4
BROLN	**Tlhalogang**	**5.36**	**360**	*i* P	Pn	09 10 56.9	-5.0
BROLN				*i* S	Sn	09 11 53.5	-10
BROLN				IAML		09 12 25.5	
	comp=E,15nm,0.7s						
KGCAE	**Kacgae**	**5.93**	**306**	*i* P	Pn	09 11 08.7	-1.1
KGCAE				*i* S	Sn	09 12 13.8	-4.1
KGCAE				IAML		09 12 48.1	
	comp=E,80nm,0.5s						
BLWY	**Bulawayo**	**6.42**	**10**	*i* P	Pn	09 11 13.8	-2.7
BLWY				*i* S	Sn	09 12 23.7	-6.1
GRTLG	**Ghanzi**	**7.60**	**311**	*i* P	Pn	09 11 30.0	-2.7
GRTLG				*i* S	Sn	09 12 51.2	-7.8
GRTLG				IAML		09 13 36.3	
	comp=N,21nm,0.4s						

NEIC ***27*** *09:14:04.9±1.7,24°.0S×179°.7W±0°.2,h508km±9km,*
mb4.5/26,Error ellipse: s-maj=22.3km s-min=16.5km
az=120.0
IDC ***27*** *09:14:05.7±2.5,23°.94S×179°.79W,h519km±26km,mb3.4/8,*
mbtmp4.3/9,Error ellipse: s-maj=24.7km s-min=19.8km
az=149.0
ISC 27 09:14:04.6±0.5,24°.00S±0°.07×179°.86W±0°.08,h500km,
n61,σ1ş81/66,mb4.3/18,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.52**	**162**	P	**P**	**09 15 40.3**	**+4.0**
GLKZ				S	**S**	**09 16 53.0**	**+1.8**
MSVF	**Nonsavu**	**6.54**	**342**	P	**P**	**09 15 47.0**	**+0.6**
NIUE	**Niue**	**10.46**	**64**	P	P	09 16 35.1	+8.2
NIUE				S	**S**	**09 18 24.8**	**+0.8**
OUZ	**Omahuta**	**12.54**	**205**	P	**P**	**09 16 52.3**	**+3.5**
AFI	**Afiamalu**	**12.61**	**39**	P	**P**	**09 16 48.3**	**-1.6**
	6.4nm,0.3s,baz=189,slow=13,SNR=1.8						
AFI				S	S	09 18 53.0	-13
	5.1nm,0.3s,baz=165,slow=22,SNR=1.9						
MKAZ	**Moumakai**	**13.74**	**197**	P	**P**	**09 17 03.5**	**+2.1**
TLZ	**Tolley Road**	**14.81**	**194**	P	**P**	**09 17 14.2**	**+1.4**
BKZ	**Black Stump Fm**	**15.43**	**191**	P	**P**	**09 17 20.4**	**+1.2**
BKZ				S	**S**	**09 19 56.8**	**-3.0**
TMVZ	**Te Maari**	**15.53**	**193**	P	**P**	**09 17 22.0**	**+1.7**
TMVZ				S	**S**	**09 19 56.8**	**-5.0**
TWVZ	**Taurewa**	**15.55**	**194**	P	**P**	**09 17 22.7**	**+2.3**
ETVZ	**East Tongariro**	**15.55**	**193**	P	**P**	**09 17 22.3**	**+1.7**
ETVZ				S	**S**	**09 19 56.0**	**-6.1**
OTVZ	**Oturere**	**15.59**	**193**	P	**P**	**09 17 22.8**	**+1.8**
MCHZ	**McNeill Hill**	**15.67**	**190**	P	**P**	**09 17 23.7**	**+2.0**
KWHZ	**Kaweka Forest**	**15.70**	**191**	P	**P**	**09 17 23.6**	**+1.6**
VRZ	**Vera Road**	**15.76**	**196**	P	**P**	**09 17 24.4**	**+1.9**
PNHZ	**Pukenui**	**16.21**	**191**	P	**P**	**09 17 27.3**	**-0.1**
ANWZ	**Angora Road**	**16.70**	**190**	P	**P**	**09 17 31.2**	**-1.1**
ANWZ				S	**S**	**09 20 18.5**	**-4.4**
BFZ	**Birch Farm**	**16.95**	**190**	P	**P**	**09 17 34.0**	**-0.9**
BFZ	**Birch Farm**	**16.95**	**190**	P	**P**	**09 17 34.1**	**-0.8**
MRZ	**Mangatainoka R**	**17.05**	**192**	P	**P**	**09 17 34.4**	**-1.5**
OGWZ	**Otaki Gorge**	**17.28**	**193**	P	**P**	**09 17 36.9**	**-1.2**
DUWZ	**D'Urville Isla**	**17.55**	**196**	P	**P**	**09 17 40.4**	**-0.2**
TCW	**Tory Channel**	**17.85**	**195**	P	**P**	**09 17 43.7**	**+0.3**
BHW	**Baring Head**	**17.91**	**193**	P	**P**	**09 17 44.2**	**+0.3**
TKNZ	**Takaka Hill**	**18.02**	**198**	P	**P**	**09 17 45.2**	**+0.2**
MRNZ	**Matariki Terra**	**18.42**	**198**	P	**P**	**09 17 48.6**	**0.0**
THZ	**Tophouse**	**18.71**	**197**	P	**P**	**09 17 52.1**	**+0.7**
THZ				IAmb	IAmb	09 17 57.7	
	comp=Z,24nm,1.2s						
KHZ	**Kahutara**	**19.17**	**195**	P	**P**	**09 17 55.0**	**-0.4**
LTZ	**Lake Taylor**	**19.83**	**197**	P	**P**	**09 18 02.5**	**+0.9**
LTZ				IAmb	IAmb	09 18 04.5	
	comp=Z,16nm,0.8s						
WHZ	**Wether Hill Ro**	**23.96**	**201**	P	**P**	**09 18 39.4**	**+0.7**
ARMA	**Armidale**	**26.11**	**250**	P	**P**	**09 19 00.3**	**+2.2**
EIDS	**Eidsvold**	**26.42**	**261**	P	**P**	**09 19 02.4**	**+1.7**
EIDS				IAmb	IAmb	09 19 17.1	
	comp=Z,16nm,1.4s						
CAN	**Canberra**	**29.20**	**240**	P	**P**	**09 19 26.7**	**+1.6**
CAN				IAmb	IAmb	09 19 56.9	
	comp=Z,21nm,1.4s						
CTAO	**Charters Tower**	**31.61**	**270**		**P**	**09 19 47.2**	**+1.2**
CTAO				IAmb	IAmb	09 19 47.9	
	comp=Z,9.6nm,0.6s						
TOO	**Toolangi**	**32.50**	**237**	P	**P**	**09 19 55.0**	**+1.6**
TOO				IAmb	IAmb	09 20 13.7	
	comp=Z,12nm,1.5s						
PMG	**Port Moresby**	**34.65**	**289**	P	**P**	**09 20 11.7**	**-0.1**
PMG				IAmb	IAmb	09 20 13.0	
	comp=Z,6.0nm,0.8s						
STKA	**Stephens Creek**	**34.81**	**248**	P	**P**	**09 20 13.8**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=102,slow=11,SNR=6.0						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**34.81**	**248**	IAmb	IAmb	09 20 52.6	
	comp=Z,43nm,1.4s						
COEN	**Coen**	**36.26**	**279**	P	**P**	**09 20 26.2**	**+1.0**
BBOO	**Buckleboo**	**39.52**	**247**	P	**P**	**09 20 51.7**	**0.0**
BBOO				IAmb	IAmb	09 21 01.7	
	comp=Z,31nm,1.5s						
AS31	**Alice Springs**	**42.15**	**261**	P	**P**	**09 21 13.3**	**+0.4**
ASAR	**Alice Springs**	**42.15**	**261**	P	**P**	**09 21 13.2**	**+0.4**
	comp=Z,3.1nm,0.5s,baz=98,slow=7.2,SNR=61						
ASAR				pP	**pwP**	**09 22 49.8**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=97,slow=8.1,SNR=2.1						
ASAR				ScP	**ScP**	**09 25 54.7**	**-3.9**
	comp=Z,0.6nm,0.8s,baz=102,slow=4.8,SNR=5.2						
	comp=Z,3.1nm,0.5s						
WR8	**Warramunga Arr**	**42.38**	**266**	P	**P**	**09 21 14.5**	**-0.2**
WRAB	**Tennant Creek**	**42.52**	**266**	P	**P**	**09 21 15.4**	**-0.4**
WRAB				IAmb	IAmb	09 21 42.2	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**42.52**	**266**	P	**P**	**09 21 15.7**	**-0.1**
WB0				IAmb	IAmb	09 21 16.3	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**42.53**	**266**	P	**P**	**09 21 15.7**	**-0.2**
	comp=Z,8.3nm,0.6s,baz=103,slow=7.9,SNR=79						
WRA				pP	**pwP**	**09 22 50.2**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=100,slow=6.8,SNR=1.4						
	comp=Z,8.3nm,0.6s						
WRA	**Warramunga Arr**	**42.53**	**266**	P	**P**	**09 21 15.6**	**-0.3**
FORT	**Forrest**	**46.40**	**250**	P	**P**	**09 21 45.5**	**-0.2**
FORT				IAmb	IAmb	09 21 46.6	
	comp=Z,6.9nm,0.6s						
MTN	**Manton Dam**	**47.59**	**274**	P	**P**	**09 21 54.7**	**-0.2**
KNRA	**Kununurra**	**48.82**	**270**	P	**P**	**09 22 04.3**	**+0.3**
VNDA	**Vanda**	**54.29**	**185**	P	**P**	**09 22 42.0**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=50,slow=7.9,SNR=1.4						
	comp=Z,1.8nm,0.8s						
VNDA	**Vanda**	**54.29**	**185**	IAmb	IAmb	09 23 20.4	
	comp=Z,15nm,1.3s						
PSA00	**Pilbara Seismi**	**55.27**	**260**	P	**P**	**09 22 50.1**	**-0.4**
PSA00				IAmb	IAmb	09 22 60.0	
	comp=Z,30nm,1.5s						
MORW	**Morawa**	**56.96**	**250**	P	**P**	**09 23 02.4**	**+0.3**
QSPA	**South Pole Qui**	**66.08**	**180**	P	**P**	**09 24 01.5**	**+0.2**
	comp=Z,2.4nm,0.4s,baz=360,slow=2.1,SNR=3.7						
	comp=Z,2.4nm,0.4s						
PETK	**Petropavlovsk-**	**79.23**	**346**	P	**P**	**09 25 16.4**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=161,slow=5.4,SNR=1.8						
	comp=Z,1.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.68**	**290**	P	**P**	**09 26 09.1**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=104,slow=4.6,SNR=4.1						
	comp=Z,1.8nm,0.3s						
TXAR	**Lajitas Array**	**90.37**	**58**	P	**P**	**09 26 12.3**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=224,slow=5.2,SNR=3.6						
	comp=Z,0.2nm,0.7s						
HFS	**Hagfors**	**142.67**	**349**	PKhKP	PKPpre	09 32 36.1	
	comp=Z,1.6nm,0.4s,baz=81,slow=4.7,SNR=12						
AKASG	**Malin Array Be**	**145.12**	**327**	PKPbc	**PKPdf**	**09 32 43.1**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=45,slow=3.8,SNR=4.8						
MMAI	**Mount Meron Ar**	**147.86**	**294**	PKPbc	**PKPbc**	**09 32 52.4**	**-1.0**
	comp=Z,2.3nm,0.4s,baz=58,slow=8.0,SNR=5.7						

AFAD ***27*** *09:24:02.3,38°.26N×44°.58E,h6km±4km,ML2.8*
NSSP ***27*** *09:24:03.4,38°.33N×44°.58E,h10km,Ms3.0*
ISK ***27*** *09:24:05.1,38°.35N×44°.53E,h6km,ML2.9/8*
TEH ***27*** *09:24:05.8,38°.48N×44°.50E,h6km±89km,ML2.9,*
Presumed earthquake
AZER ***27*** *09:24:08.1,38°.60N×44°.74E,h12km,ml2.8*
ISC 27 09:24:05.9±1.1,38°.45N±0°.02×44°.59E±0°.02,h8km±9km,
n50,σ1ş60/77,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.51**	**295**	P	**Pg**	**09 24 14.1**	**-1.7**
OZAP				S	**Sg**	**09 24 22.9**	**+0.3**
OZAP				IAML		09 24 28.0	
	comp=N,642nm,0.7s						
ISHB	**Shabestar**	**0.83**	**101**	Pg	**Pb**	**09 24 22.4**	**-0.2**
MAKU	**Maku**	**0.91**	**5**	Pg	**Pg**	**09 24 22.1**	**-1.3**
MAKU				Sg	**Sg**	**09 24 35.1**	**-0.1**
IMRD	**Marand**	**0.91**	**73**	Pg	**Pn**	**09 24 24.7**	**-0.5**
TVAN	**Van**	**0.93**	**275**	P	**Pg**	**09 24 23.9**	**+0.2**
TVAN				S	**Sn**	**09 24 40.9**	**+1.8**
TVAN				IAML		09 24 41.0	
	comp=E,414nm,0.4s						
TVAN				IAML		09 24 48.0	
	comp=N,572nm,1.0s						
VANB	**Van**	**0.95**	**279**	Pg	**Pg**	**09 24 22.7**	**-1.5**
VANB				Sg	**Sg**	**09 24 35.6**	**-0.9**
VMUR	**Van-Muradiye**	**0.96**	**305**	P	**Pg**	**09 24 22.7**	**-1.6**
VMUR				S	**Sn**	**09 24 39.1**	**-0.7**
VMUR				IAML		09 24 40.0	
	comp=N,174nm,0.4s						
VMUR				IAML		09 24 45.0	
	comp=E,248nm,0.4s						
NAX	**Nakhchivan**	**1.01**	**44**	P	**Pb**	**09 24 25.8**	**0.0**
NAX				S	**Sg**	**09 24 37.7**	**-0.8**
ORD	**Ordubad**	**1.20**	**66**	P	**Pg**	**09 24 29.8**	**+0.8**
ORD				S	**Sn**	**09 24 46.1**	**+0.6**
GEVA	**Gevas**	**1.21**	**264**	P	**Pb**	**09 24 26.2**	**-2.9**
GEVA				S	**Sg**	**09 24 45.2**	**+0.4**
GEVA				IAML		09 24 53.0	
	comp=N,306nm,0.4s						
GEVA				IAML		09 24 54.0	
	comp=E,271nm,0.5s						
SBZ	**Shahbuz**	**1.21**	**38**	P	**Pg**	**09 24 29.2**	**+0.1**
SBZ				S	**Sn**	**09 24 45.5**	**-0.3**
ITBZ	**Tabriz**	**1.25**	**99**	Pg	**Pg**	**09 24 30.2**	**+0.4**
AKDM	**Akdamar-Van**	**1.27**	**265**	Pn	**Pn**	**09 24 28.4**	**-1.6**
AKDM				Sn	**Sb**	**09 24 45.9**	**-0.7**
HYR	**Heyderabad**	**1.29**	**9**	P	**Pg**	**09 24 31.4**	**+0.9**
HYR				S	**Sn**	**09 24 49.0**	**+1.4**
DYDN	**Diyadin**	**1.30**	**328**	P	**Pn**	**09 24 30.3**	**-0.2**
DYDN				S	**Sn**	**09 24 51.3**	**+3.1**
DYDN				IAML		09 24 55.0	
	comp=N,152nm,0.8s						
DYDN				IAML		09 24 55.0	
	comp=E,142nm,0.9s						
IAZR	**Azarshahr**	**1.34**	**124**	Pg	**Pg**	**09 24 32.9**	**+1.3**
VAYK	**Vayk**	**1.41**	**27**	*i* P	**Pg**	**09 24 32.2**	**-0.2**
VAYK				*i* S	**Sg**	**09 24 53.0**	**+1.9**
CUKT	**Cukurca**	**1.43**	**213**	Pn	**Pn**	**09 24 30.6**	**-1.6**
CUKT	**Cukurca**	**1.43**	**213**	S	**Sg**	**09 24 54.8**	**+3.0**
ALVK	**Alvank**	**1.47**	**70**	*e*P	**Pg**	**09 24 33.6**	**-0.4**
ALVK				*e*S	**Sg**	**09 24 54.9**	**+1.9**
IGDI	**IGDIR**	**1.47**	**345**	P	**Pb**	**09 24 33.1**	**-0.4**
IGDI				S	**Sg**	**09 24 57.2**	**+4.0**
IGDI				IAML		09 25 00.0	
	comp=N,85nm,0.5s						
IGDI				IAML		09 25 07.0	
	comp=E,78nm,0.7s						
IGDI	**IGDIR**	**1.47**	**345**	P	**Pb**	**09 24 33.6**	**+0.1**
IGDI				S	**Sg**	**09 24 56.3**	**+3.1**
ADCV	**BITLIS_Adilcev**	**1.50**	**284**	P	**Pn**	**09 24 33.5**	**+0.3**
ADCV				IAML		09 24 57.0	
	comp=E,91nm,0.8s						
ADCV				S	**Sg**	**09 24 57.6**	**+3.4**
ADCV				IAML		09 24 59.0	
	comp=N,109nm,0.6s						
AGRB	**Hanur-Agry**	**1.68**	**313**	Pn	**Pn**	**09 24 36.1**	**+0.4**
PERV	**Siirt/Pervari-**	**1.69**	**253**	P	**Pg**	**09 24 39.3**	**+1.0**
PERV				S	**Sg**	**09 25 03.2**	**+3.1**
DORK	**Agr/Tutak/Do**	**1.69**	**304**	P	**Pn**	**09 24 35.4**	**-0.5**
DORK				IAML		09 25 08.0	
	comp=E,66nm,0.7s						
DORK				IAML		09 25 09.0	
	comp=N,153nm,0.7s						
GNI	**Garni**	**1.70**	**4**	Pn	**Pb**	**09 24 37.4**	**-0.1**
GNI	**Garni**	**1.70**	**4**	*e*P	**Pg**	**09 24 38.7**	**+0.1**
GNI				*e*S	**Sg**	**09 25 04.2**	**+3.5**
GNI	**Garni**	**1.70**	**4**	Pg	**Pb**	**09 24 37.3**	**-0.3**
EGVZ	**Egvard**	**1.71**	**62**	*e*P	**Pb**	**09 24 37.9**	**+0.2**
EGVZ				*e*S	**Sg**	**09 25 01.9**	**+0.9**
KOTA	**Agri, Merkez-K**	**1.73**	**322**	P	**Pn**	**09 24 37.0**	**+0.6**
MLAZ	**Malazgirt-MUS**	**1.74**	**294**	Pn	**Pn**	**09 24 36.2**	**-0.3**
AYRK	**Ayrk**	**1.91**	**29**	*e*P	**Pb**	**09 24 41.0**	**-0.1**
AYRK				*e*S	**Sg**	**09 25 06.9**	**-0.4**
SIRN	**Sırnak**	**1.96**	**242**	P	**Pg**	**09 24 44.6**	**+1.1**
GURO	**Guroymak-BITLI**	**2.01**	**274**	Pn	**Pn**	**09 24 39.8**	**-0.4**
EATA	**Eleskirt**	**2.16**	**312**	P	**Pb**	**09 24 44.8**	**-0.6**
DIGO	**Kars**	**2.18**	**335**	P	**Pg**	**09 24 48.7**	**+1.0**
MUSM	**Mu-Merkez**	**2.43**	**277**	P	**Pb**	**09 24 50.1**	**+0.3**
GDB	**GEDABAY**	**2.44**	**21**	P	**Pb**	**09 24 49.0**	**-1.2**
GDB				S	**Sb**	**09 25 19.1**	**-1.4**
BOZK	**Kars-Merkez-Bo**	**2.48**	**330**	P	**Pg**	**09 24 52.1**	**-1.2**
AGDM	**Agdam**	**2.56**	**49**	P	**Pb**	**09 24 51.8**	**-0.4**
AGDM				S	**Sn**	**09 25 20.7**	**+1.6**
GANJ	**Ganja**	**2.57**	**31**	P	**Pb**	**09 24 50.3**	**-2.0**
GANJ				S	**Sb**	**09 25 22.2**	**-1.9**
GRMI	**Germi**	**2.62**	**81**	Pn	**Pb**	**09 24 52.2**	**-0.8**
QZX	**Qazax, Azerbai**	**2.68**	**13**	P	**Pb**	**09 24 51.6**	**-2.4**
QZX				S	**Sb**	**09 25 24.4**	**-2.6**
SVAN	**Silvan-Diyarba**	**2.68**	**265**	Pn	**Pn**	**09 24 49.2**	**-0.2**
SENK	**Senkaya-Erzuru**	**2.73**	**321**	Pn	**Pn**	**09 24 51.8**	**+1.6**
YRD	**Yardimli**	**2.90**	**80**	P	**Pb**	**09 24 56.3**	**-1.6**
YRD				S	**Sb**	**09 25 32.2**	**-1.3**
LRK	**Lerik**	**2.95**	**85**	P	**Pb**	**09 24 56.8**	**-1.9**
GLBA	**Clilabad**	**3.08**	**74**	P	**Pb**	**09 24 58.1**	**-2.8**
GLBA				S	**Sn**	**09 25 33.5**	**+1.8**
LKRN	**Lenkeran, Azer**	**3.30**	**84**	P	**Pb**	**09 25 01.3**	**-3.2**

AFAD 27 08:58:54.7,37°.12N×28°.54E,h7km±4km,ML1.3,Turkey

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSSA	**Tissa**	**0.18**	**197**	*eP*	**Pg**	**09 46 50.5**	**+0.2**
TSSA				IAML		09 46 51.9	
	comp=E,11μm,0.2s						
TSSA				IAML		09 46 52.5	
	comp=N,29μm,0.6s						
TSSA				*eS*	**Sb**	**09 46 53.0**	**+1.2**
THN	**Thein Dam**	**0.68**	**214**	*eP*	**Pb**	**09 46 58.2**	**-0.4**
THN				*eS*	**Sb**	**09 47 07.1**	**-0.6**
THN				IAML		09 47 12.8	
	comp=E,2μm,0.6s						
THN				IAML		09 47 14.4	
	comp=N,2μm,0.5s						
DHRM	**DHARAMSHALA**	**0.76**	**174**	*eP*	**Pb**	**09 46 59.2**	**-0.9**
DHRM				*eS*	**Sb**	**09 47 10.1**	**0.0**
DHRM				IAML		09 47 15.7	
	comp=N,8μm,0.3s						
DHRM				IAML		09 47 15.8	
	comp=E,10μm,0.4s						
JMU	**Jammu**	**1.19**	**259**	*eP*	**Pn**	**09 47 06.8**	**-0.1**
JMU				IAML		09 47 30.1	
	comp=E,1μm,0.6s						
JMU				IAML		09 47 30.5	
	comp=N,1μm,0.9s						
ALCI	**Alchi Leh**	**1.45**	**34**	*eP*	**Pb**	**09 47 13.0**	**+1.0**
ALCI				*eS*	**Sg**	**09 47 33.4**	**+1.0**
ALCI				IAML		09 47 38.5	
	comp=E,501nm,0.7s						
ALCI				IAML		09 47 39.3	
	comp=N,279nm,0.5s						
SRNI	**Srinagar**	**1.57**	**312**	*eP*	**Pn**	**09 47 13.7**	**+1.4**
SRNI				*eS*	**Sb**	**09 47 34.7**	**+1.2**
SRNI				*i* S	**Sg**	**09 47 37.7**	**+1.6**
SRNI				IAML		09 47 47.9	
	comp=N,3μm,0.6s						
SRNI				IAML		09 47 48.1	
	comp=E,3μm,0.3s						
BHK	**Bhakra**	**1.61**	**175**	*eP*	**Pb**	**09 47 15.2**	**+0.7**
BHK				*eS*	**Sg**	**09 47 37.9**	**+0.3**
BHK				IAML		09 47 40.7	
	comp=N,779nm,0.3s						
BHK				IAML		09 47 40.9	
	comp=E,1μm,0.2s						
SMLA	**Simla**	**2.04**	**156**	*eP*	**Pb**	**09 47 21.1**	**-0.7**
SMLA				*eS*	**Sb**	**09 47 46.3**	**-0.5**
SMLA				IAML		09 47 50.7	
	comp=E,763nm,0.4s						
SMLA				IAML		09 47 51.3	
	comp=N,527nm,0.4s						
KLP	**Kalpa**	**2.27**	**130**	*eP*	**Pb**	**09 47 25.6**	**-0.2**
KLP				*eS*	**Sb**	**09 47 53.2**	**-0.4**
KLP				IAML		09 48 00.0	
	comp=N,452nm,0.6s						
KLP				IAML		09 48 00.5	
	comp=E,393nm,0.6s						
HNLY	**HANLEY**	**2.33**	**95**	*eP*	**Pb**	**09 47 26.3**	**-0.8**
HNLY				*eS*	**Sb**	**09 47 55.4**	**-0.4**
HNLY				IAML		09 48 04.3	
	comp=N,350nm,0.7s						
HNLY				IAML		09 48 05.3	
	comp=E,434nm,0.1s						
JOSI	**Joshimath**	**3.75**	**130**	*eP*	**Pn**	**09 47 44.4**	**+2.0**
JOSI				*eS*	**Sn**	**09 48 28.2**	**+1.9**
JOSI				IAML		09 48 31.2	
	comp=N,104nm,0.6s						
JOSI				IAML		09 48 33.1	
	comp=E,68nm,0.3s						
AAK	**Ala-Archa**	**9.71**	**352**	Pn	**Pn**	**09 49 06.0**	**+1.8**
	comp=E,0.4nm,0.3s,baz=176,slow=9.4,SNR=6.8						
AAK				Sn	**Sn**	**09 50 48.0**	**-4.7**
	comp=E,0.1nm,0.3s,baz=174,slow=20,SNR=1.3						
AAK				LR	LR	09 52 46.0	
	comp=E,19nm,18.2s,baz=340,slow=37						
	comp=E,2.0nm,0.5s						
MKAR	**Makanchi Array**	**14.53**	**17**	Pn	**Pn**	**09 50 10.0**	**+0.1**
	comp=E,0.2nm,0.3s,baz=198,slow=12,SNR=8.0						
MKAR				Sn	Sn	09 52 40.3	-10
	comp=E,0.2nm,0.3s,baz=193,slow=21,SNR=8.0						
	comp=E,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**17.68**	**5**	Pn	**Pn**	**09 50 47.1**	**-3.3**
	comp=E,0.1nm,0.3s,baz=188,slow=11,SNR=4.3						
	comp=E,0.6nm,0.3s						
BVAR	**Borovoye Array**	**20.44**	**350**	P	**P**	**09 51 21.9**	**+0.4**
	comp=E,1.7nm,0.5s,baz=160,slow=10.0,SNR=11						
	comp=E,1.7nm,0.5s						
ZALV	**Zalesovo Beam**	**21.81**	**14**	P	**P**	**09 51 36.1**	**-0.1**
	comp=E,0.9nm,0.4s,baz=204,slow=9.3,SNR=4.2						
	comp=E,0.9nm,0.4s						
AKTO	**Aktyubinsk**	**21.98**	**328**	P	**P**	**09 51 37.5**	**-0.6**
	comp=E,1.8nm,0.4s,baz=125,slow=9.2,SNR=9.9						
	comp=E,1.8nm,0.4s						
SONM	**Songino Array**	**27.12**	**48**	P	**P**	**09 52 26.4**	**-0.8**
	comp=E,0.4nm,0.5s,baz=243,slow=9.8,SNR=3.8						
	comp=E,0.4nm,0.5s						
FINES	**FINESS Array B**	**42.75**	**327**	P	**P**	**09 54 41.4**	**+0.2**
	comp=E,1.7nm,0.8s,baz=108,slow=9.7,SNR=3.8						
	comp=E,1.7nm,0.8s						

*IDC **27** 10:13:22.2±0.9, 60°.25N×149°.77W, h0km, mb3.7/4, mbtmp3.8/9, ML3.7/5, MS3.0/5, Error ellipse: s-maj=15.6km s-min=10.6km az=110.0*
*AEIC **27** 10:13:24.3±1.4, 60°.49N±0°.03×150°.78W±0°.05, h45km±6km, Error ellipse: s-maj=3.8km s-min=3.7km az=182.0*
*NEIC **27** 10:13:24.0±0.9, 60°.51N±0°.03×150°.84W±0°.05, h48km±6km, ML4.1/206, ML3.9(AEIC), Error ellipse: s-maj=3.9km s-min=3.7km az=120.0*
ISC 27 10:13:23.9±0.7, 60°.49N±0°.03×150°.77W±0°.03, h49km±8km, n247, σ0s86/209, mb3.3/4, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLKM	**Skilak Lake**	**0.27**	**86**		**Pn**	**10 13 32.8**	**0.0**
SLKM					**Sn**	**10 13 39.5**	**+0.3**
SLKM	**Skilak Lake**	**0.27**	**86**	IAML		10 13 40.0	
	comp=E,25μm,0.4s						
SLKM				IAML		10 13 40.3	
	comp=N,35μm,0.3s						
CAPN	**Captain Cook N**	**0.34**	**326**		**Pn**	**10 13 34.3**	**+1.0**
CAPN	**Captain Cook N**	**0.34**	**326**	IAML		10 13 43.6	
	comp=E,30μm,0.7s						
CAPN				IAML		10 13 43.7	
	comp=N,34μm,0.5s						
O22K	**Cooper Landing**	**0.52**	**91**		**Pn**	**10 13 35.6**	**+0.3**
O22K	**Cooper Landing**	**0.52**	**91**		**Sn**	**10 13 44.4**	**+0.9**
BRLK	**Bradley Lake**	**0.73**	**185**		**Pn**	**10 13 38.3**	**+0.2**
BRLK				IAML		10 13 50.5	
	comp=E,6μm,0.4s						
BRLK	**Bradley Lake**	**0.73**	**185**		**Sn**	**10 13 49.2**	**+0.9**
BRSE	**Bradley Lake S**	**0.75**	**179**		**Pn**	**10 13 38.4**	**+0.1**
BRSE					**Sn**	**10 13 49.4**	**+0.6**
SEW	**Seward**	**0.76**	**120**		**Pn**	**10 13 38.3**	**-0.1**
SEW				IAML		10 13 52.5	
	comp=N,6μm,0.5s						
SEW				IAML		10 13 55.5	
	comp=E,5μm,0.5s						
SEW	**Seward**	**0.76**	**120**		**Sn**	**10 13 49.9**	**+0.9**
RC01	**Rabbit Creek A**	**0.79**	**40**		**Pn**	**10 13 38.5**	**-0.3**
RC01				IAML		10 13 51.4	
	comp=E,7μm,0.4s						
RC01				IAML		10 13 52.2	
	comp=N,7μm,0.4s						
RC01	**Rabbit Creek A**	**0.79**	**40**		**Sn**	**10 13 49.8**	**+0.2**
RDT	**Redoubt**	**0.81**	**277**		**Pn**	**10 13 38.3**	**-0.9**
SPU	**Mount Spurr**	**0.94**	**318**		**Pn**	**10 13 40.1**	**-0.7**
HOM	**Homer**	**0.94**	**208**		**Pn**	**10 13 41.2**	**+0.4**
HOM	**Homer**	**0.94**	**208**		**Sn**	**10 13 54.3**	**+1.1**
DFR	**Drift River**	**0.95**	**277**		**Pn**	**10 13 40.2**	**-0.8**
DFR					**Sn**	**10 13 52.9**	**-0.7**
SUA	**Susitna One**	**0.98**	**1**		**Pn**	**10 13 41.0**	**-0.4**
RDSO	**Redoubt South**	**0.98**	**269**		**Pn**	**10 13 40.7**	**-0.7**
RDSO					**Sn**	**10 13 54.1**	**-0.2**
RED	**Redoubt Volcan**	**0.99**	**267**		**Pn**	**10 13 40.9**	**-0.7**
RED				IAML		10 13 54.7	
	comp=E,7μm,0.3s						
RED	**Redoubt Volcan**	**0.99**	**267**		**Sn**	**10 13 54.1**	**-0.5**
CNPM	**China Poot**	**1.00**	**194**		**Pn**	**10 13 41.5**	**0.0**
CNPM				IAML		10 13 58.5	
	comp=N,6μm,0.4s						
CNPM	**China Poot**	**1.00**	**194**		**Sn**	**10 13 55.2**	**+0.6**
SPCR	**Spurr Chakacha**	**1.00**	**316**		**Pn**	**10 13 41.0**	**-0.7**
SPCR					**Sn**	**10 13 53.8**	**-1.0**
SPCG	**Spurr Capps Gl**	**1.01**	**323**		**Pn**	**10 13 41.4**	**-0.4**
SPCN	**Chakachatna No**	**1.01**	**317**		**Pn**	**10 13 41.2**	**-0.6**

RDWB	**Redoubt West**	**1.02**	**271**		**Pn**	**10 13 41.3**	**-0.8**
RDWB					**Sn**	**10 13 55.1**	**-0.3**
STLK	**Strandline Lak**	**1.14**	**333**		**Sn**	**10 13 58.2**	**+0.2**
STLK	**Strandline Lak**	**1.14**	**333**		**Pn**	**10 13 43.4**	**-0.1**
STLK				IAML		10 13 59.6	
	comp=N,4μm,0.6s						
ILSW	**Iliamna Southw**	**1.29**	**248**		**Sn**	**10 14 01.5**	**-0.3**
ILSW	**Iliamna Southw**	**1.29**	**248**		**Pn**	**10 13 45.0**	**-0.6**
ILSW				IAML		10 14 03.9	
	comp=N,4μm,0.4s						
ILSW				IAML		10 14 08.1	
	comp=E,3μm,0.5s						
SPNN	**North Nagishla**	**1.29**	**314**		**Pn**	**10 13 45.5**	**-0.1**
M22K	**Willow**	**1.30**	**14**		**Pn**	**10 13 45.7**	**0.0**
PMR	**Palmer**	**1.36**	**35**	P	**Pn**	**10 13 46.6**	**+0.1**
PMR	**Palmer**	**1.36**	**35**	S	**Sn**	**10 14 06.5**	**+3.1**
PMR	**Palmer**	**1.36**	**35**		**Sn**	**10 14 03.1**	**-0.3**
PMR	**Palmer**	**1.36**	**35**		**Pn**	**10 13 46.6**	**+0.1**
PMR				IAML		10 14 06.8	
	comp=E,3μm,0.5s						
PMR				IAML		10 14 08.6	
	comp=N,2μm,0.5s						
KNK	**Knik Glacier**	**1.46**	**50**		**Sn**	**10 14 05.8**	**-0.1**
KNK	**Knik Glacier**	**1.46**	**50**		**Pn**	**10 13 47.9**	**+0.1**
P19K	**Oil Pt**	**1.49**	**237**		**Pn**	**10 13 48.3**	**-0.1**
SKT	**Skwentna**	**1.54**	**347**		**Pn**	**10 13 49.2**	**+0.2**
SKT				IAML		10 14 10.8	
	comp=N,2μm,0.4s						
SKT				IAML		10 14 10.9	
	comp=E,2μm,0.4s						
GHO	**Glory Hole Cre**	**1.57**	**34**		**Sn**	**10 14 09.2**	**+0.6**
GHO	**Glory Hole Cre**	**1.57**	**34**		**Pn**	**10 13 49.5**	**+0.1**
P23K	**Montague Islan**	**1.75**	**105**		**Pn**	**10 13 51.1**	**-0.7**
P23K				IAML		10 14 25.2	
	comp=E,2μm,0.5s						
P23K				IAML		10 14 26.3	
	comp=N,2μm,0.6s						
AUI	**Augustine Isla**	**1.77**	**230**		**Pn**	**10 13 52.2**	**+0.1**
SML	**Sawmill**	**1.77**	**41**		**Pn**	**10 13 52.3**	**+0.1**
SML				IAML		10 14 20.2	
	comp=E,2μm,1.2s						
SML				IAML		10 14 21.9	
	comp=N,2μm,0.6s						
O19K	**Port Alsworth**	**1.79**	**262**		**Pn**	**10 13 52.2**	**-0.1**
GLI	**Glacier Island**	**1.85**	**76**		**Pn**	**10 13 52.1**	**-1.1**
GLI				IAML		10 14 22.2	
	comp=N,2μm,0.6s						
GLI				IAML		10 14 26.9	
	comp=E,2μm,0.6s						
N19K	**Bonanza Creek**	**1.86**	**282**	IAML		10 14 16.6	
	comp=E,1μm,0.3s						
CUT	**Chulitna**	**1.94**	**7**		**Pn**	**10 13 54.4**	**+0.1**
CUT	**Chulitna**	**1.94**	**7**	IAML		10 14 38.7	
	comp=N,2μm,0.6s						
L22K	**Petersville**	**2.04**	**0**		**Pn**	**10 13 56.3**	**+0.5**
L22K	**Petersville**	**2.04**	**0**	IAML		10 14 27.6	
L22K	comp=E,1μm,0.7s			IAML		10 14 29.3	
	comp=N,1μm,0.3s						
SYI	**Shuyak Island**	**2.06**	**204**		**Pn**	**10 13 56.5**	**+0.5**
SYI				IAML		10 14 28.4	
	comp=E,2μm,0.5s						
SYI				IAML		10 14 28.8	
	comp=N,1μm,0.7s						
HIN	**Hinchinbrook I**	**2.12**	**91**		**Pn**	**10 13 55.8**	**-1.0**
HIN				IAML		10 14 34.0	
	comp=E,834nm,0.5s						
HIN				IAML		10 14 38.7	
	comp=N,938nm,0.7s						
Q19K	**Cape Douglas,**	**2.14**	**224**		**Pn**	**10 13 57.5**	**+0.4**
SCM	**Sheep Creek Mo**	**2.15**	**50**		**Pn**	**10 13 57.4**	**+0.1**
SCM				IAML		10 14 34.9	
	comp=N,2μm,0.8s						
M19K	**Big River Lodg**	**2.25**	**311**		**Pn**	**10 13 58.9**	**+0.1**
O18K	**Koktuh Hills**	**2.31**	**256**		**Pn**	**10 13 59.0**	**-0.5**
O18K				IAML		10 14 27.6	
	comp=N,794nm,0.7s						
EYAK	**Cordova Ski Ar**	**2.48**	**86**	P	**Pn**	**10 14 00.7**	**-1.2**
EYAK	**Cordova Ski Ar**	**2.48**	**86**	S	**Sn**	**10 14 30.2**	**-0.7**
EYAK	**Cordova Ski Ar**	**2.48**	**86**		**Pn**	**10 14 00.6**	**-1.2**
EYAK				IAML		10 14 44.6	
	comp=N,539nm,0.7s						
PPLA	**Purkeypile**	**2.51**	**345**		**Pn**	**10 14 03.5**	**+1.2**
PPLA				IAML		10 14 47.3	
	comp=N,678nm,1.5s						
N18K	**Kilae Creek**	**2.53**	**277**		**Pn**	**10 14 01.9**	**-0.6**
DIV	**Divide**	**2.53**	**73**		**Pn**	**10 14 02.0**	**-0.5**
DIV				IAML		10 14 50.1	
	comp=N,835nm,0.6s						
KLU	**Klutina**	**2.57**	**65**		**Pn**	**10 14 03.0**	**0.0**
KLU				IAML		10 14 34.5	
	comp=N,988nm,0.4s						
WAT1	**Susitna Watana**	**2.58**	**23**		**Pn**	**10 14 03.3**	**+0.1**
L19K	**White Mountain**	**2.60**	**313**	IAML		10 14 36.8	
	comp=E,503nm,0.4s						
L19K				IAML		10 14 49.7	
	comp=N,620nm,0.8s						
M18K	**Stony River**	**2.66**	**294**		**Pn**	**10 14 03.8**	**-0.4**
KARR	**Katmai Rainbow**	**2.83**	**227**		**Pn**	**10 14 06.9**	**+0.3**
KAHC	**Katmai Hardscr**	**2.84**	**231**		**Pn**	**10 14 06.5**	**-0.3**
KDAK	**Kodiak Island**	**2.87**	**200**	Pn	**Pn**	**10 14 06.2**	**-0.9**
	comp=N,19nm,0.3s,baz=32,slow=4.0,SNR=1557						
KDAK				Sn	**Sn**	**10 14 40.1**	**-0.4**
	comp=N,40nm,0.3s,baz=12,slow=19,SNR=3.6						
KDAK				LR	LR	10 15 01.8	
	comp=N,94nm,18.4s,baz=69,slow=35						
	comp=N,42nm,0.3s						
KDAK	**Kodiak Island**	**2.87**	**200**		**Pn**	**10 14 06.4**	**-0.8**
KDAK				IAML		10 14 53.1	
	comp=N,516nm,0.9s						
KDAK				IAML		10 14 55.8	
	comp=N,505nm,0.6s						
KAWH	**Katmai**	**2.95**	**226**		**Pn**	**10 14 08.4**	**+0.1**
TRF	**Thorofare Moun**	**2.98**	**4**		**Pn**	**10 14 09.3**	**+0.5**
TRF	**Thorofare Moun**	**2.98**	**4**	IAML		10 14 53.1	
	comp=N,559nm,0.4s						
TRF				IAML		10 14 54.6	
	comp=E,505nm,0.5s						
RAGM	**Ragged Mountai**	**3.02**	**89**		**Pn**	**10 14 07.7**	**-1.6**
RAGM				IAML		10 15 19.1	
	comp=E,760nm,0.8s						
DHY	**Denali Highway**	**3.05**	**30**	IAML		10 14 56.0	
	comp=E,516nm,1.0s						
DHY				IAML		10 15 00.3	
	comp=N,561nm,0.8s						
RND	**Reindeer**	**3.06**	**16**		**Pn**	**10 14 11.2**	**+1.3**
RND				IAML		10 15 01.6	
	comp=E,424nm,0.7s						
KTH	**Kantishna Hill**	**3.07**	**359**		**Pn**	**10 14 10.8**	**+0.9**
KTH	**Kantishna Hill**	**3.07**	**359**	IAML		10 14 51.5	
	comp=N,461nm,0.8s						
KTH				IAML		10 15 07.3	
	comp=E,526nm,0.9s						
P17K	**Kvichak River**	**3.14**	**248**		**Pn**	**10 14 11.2**	**+0.4**
N17K	**Nushagak Hills**	**3.17**	**273**		**Pn**	**10 14 10.8**	**-0.5**
N17K	**Nushagak Hills**	**3.17**	**273**	IAML		10 15 05.9	
	comp=N,304nm,0.6s						
N25K	**Chitina, Valde**	**3.20**	**67**	IAML		10 15 02.9	
	comp=N,437nm,0.6s						
N25K				IAML		10 15 08.5	
	comp=E,336nm,1.0s						
KAIM	**Kayak Island**	**3.22**	**97**		**Pn**	**10 14 10.4**	**-1.6**
KAIM	**Kayak Island**	**3.22**	**97**	IAML		10 15 23.8	
	comp=N,499nm,2.6s						
KAIM				IAML		10 15 26.5	
	comp=E,454nm,3.3s						
K20K	**Telida**	**3.27**	**333**		**Pn**	**10 14 12.4**	**-0.2**
HARP	**HAARP**	**3.31**	**52**		**Pn**	**10 14 13.7**	**+0.6**
L18K	**Granite Mounta**	**3.33**	**304**		**Pn**	**10 14 13.4**	**-0.1**
L18K	**Granite Mounta**	**3.33**	**304**	IAML		10 15 15.0	
	comp=N,271nm,0.8s						
MCK	**McKinley**	**3.37**	**14**		**Pn**	**10 14 14.9**	**+1.0**
MCK				IAML		10 15 10.4	
	comp=E,291nm,0.9s						
MCK				IAML		10 15 14.2	
	comp=N,294nm,1.2s						
M17K	**Holitna River**	**3.38**	**289**		**Pn**	**10 14 13.8**	**-0.2**
M17K	**Holitna River**	**3.38**	**289**	IAML		10 15 17.5	
	comp=E,602nm,0.8s						
CNTC	**Contact Creek**	**3.44**	**232**		**Pn**	**10 14 15.3**	**+0.2**
CHUM	**Lake Minchumin**	**3.48**	**349**		**Pn**	**10 14 16.3**	**+0.8**
Q16K	**King Salmon**	**3.50**	**241**		**Pn**	**10 14 16.2**	**+0.5**
WASW	**Wrangell South**	**3.50**	**63**		**Pn**	**10 14 16.2**	**+0.2**
BERG	**Berg Lake**	**3.50**	**89**		**Pn**	**10 14 13.9**	**-1.9**
BERG	**Berg Lake**	**3.50**	**89**	IAML		10 15 19.8	

	comp=N,500nm,0.7s						
GLB	**Gilahina Butte**	**3.53**	**71**	IAML		10 15 09.6	
	comp=E,327nm,0.9s						
OHAK	**Old Harbor**	**3.53**	**203**	P	**Pn**	**10 14 15.0**	**-1.1**
OHAK	**Old Harbor**	**3.53**	**203**	S	**Sn**	**10 14 57.8**	**+1.2**
OHAK	**Old Harbor**	**3.53**	**203**		**Pn**	**10 14 15.1**	**-1.0**
OHAK				IAML		10 15 13.8	
	comp=N,250nm,0.7s						
OHAK				IAML		10 15 14.4	
	comp=E,297nm,1.0s						
PAX	**Paxson**	**3.54**	**43**	IAML		10 15 11.3	
	comp=N,281nm,0.9s						
PAX				IAML		10 15 23.9	
	comp=E,289nm,0.9s						
WAZA	**Wrangell Mount**	**3.57**	**61**		**Pn**	**10 14 17.2**	**+0.3**
BPAW	**Bear Paw Mtn.**	**3.62**	**359**		**Pn**	**10 14 18.6**	**+1.1**
VRDI	**Verde Repeater**	**3.66**	**75**	IAML		10 15 32.0	
	comp=N,208nm,1.0s						
CRQM	**Cirque**	**3.77**	**83**	IAML		10 15 03.1	
	comp=N,322nm,0.4s						
CRQM				IAML		10 15 34.5	
	comp=E,290nm,0.8s						
O16K	**Kokwok River B**	**3.78**	**259**		**Pn**	**10 14 19.1**	**-0.4**
O16K	**Kokwok River B**	**3.78**	**259**	IAML		10 15 20.9	
	comp=N,291nm,1.1s						
MCARA	**McCarthy VSAT**	**3.88**	**73**		**Pn**	**10 14 20.2**	**-0.8**
MCARA	**McCarthy VSAT**	**3.88**	**73**	IAML		10 15 30.8	
	comp=E,406nm,0.6s						
TGL	**Tana Glacier**	**3.92**	**83**		**Pn**	**10 14 20.2**	**-1.4**
TGL	**Tana Glacier**	**3.92**	**83**	IAML		10 15 30.1	
	comp=E,330nm,0.5s						
TGL				IAML		10 15 31.1	
	comp=N,251nm,1.1s						
P16K	**Nushagak River**	**3.93**	**251**		**Pn**	**10 14 22.1**	**+0.5**
P16K				IAML		10 15 12.1	
	comp=E,376nm,0.6s						
P16K				IAML		10 15 46.8	
	comp=N,360nm,1.0s						
N16K	**Nishlik Lake**	**3.96**	**273**		**Pn**	**10 14 21.9**	**-0.1**
SNH	**Sunshine Point**	**3.96**	**91**		**Pn**	**10 14 20.2**	**-1.8**
SNH	**Sunshine Point**	**3.96**	**91**	IAML		10 15 06.7	
	comp=E,202nm,1.2s						
SNH				IAML		10 15 51.4	
	comp=N,255nm,2.7s						
PLK5	**Peulik 5**	**4.01**	**234**		**Pn**	**10 14 23.4**	**+0.7**
PLK1	**Peulik 1**	**4.04**	**231**		**Pn**	**10 14 23.2**	**+0.2**
M16K	**Timber Creek**	**4.05**	**281**		**Pn**	**10 14 23.2**	**-0.1**
M16K	**Timber Creek**	**4.05**	**281**	IAML		10 15 37.3	
	comp=N,234nm,0.9s						
PLK4	**Peulik 4**	**4.07**	**228**		**Pn**	**10 14 24.0**	**+0.4**
PLK4	**Peulik 4**	**4.07**	**228**	IAML		10 15 20.5	
	comp=E,274nm,0.7s						
PLK4				IAML		10 15 37.5	
	comp=N,204nm,1.3s						
K24K	**Donnelly Dome**	**4.07**	**33**		**Pn**	**10 14 25.3**	**+1.8**
J18K	**Innoko River**	**4.09**	**319**		**Pn**	**10 14 24.3**	**+0.4**
BARK	**Barkley Ridge**	**4.10**	**88**		**Pn**	**10 14 22.7**	**-1.4**
MENT	**Mentasta**	**4.16**	**51**	P	**Pn**	**10 14 25.2**	**+0.4**
MENT	**Mentasta**	**4.16**	**51**		**Pn**	**10 14 24.8**	**0.0**
PLBL	**Peulik Blue Cr**	**4.19**	**231**		**Pn**	**10 14 25.6**	**+0.4**
NEA2	**Nenana**	**4.19**	**10**		**Pn**	**10 14 25.6**	**+0.4**
K17K	**Iditarod**	**4.23**	**305**	IAML		10 15 44.0	
	comp=E,230nm,1.1s						
K17K				IAML		10 15 51.4	
	comp=N,156nm,0.9s						
RIDG	**Independent Ri**	**4.29**	**38**	IAML		10 15 31.0	
	comp=N,288nm,1.2s						
HDA	**Harding Lake**	**4.31**	**23**		**Pn**	**10 14 27.4**	**+0.5**
HDA	**Harding Lake**	**4.31**	**23**	IAML		10 15 38.8	
	comp=N,223nm,0.8s						
HDA				IAML		10 15 39.0	
	comp=E,231nm,1.2s						
SII	**Sitkinak Islan**	**4.33**	**206**	P	**Pn**	**10 14 26.8**	**-0.4**
SII	**Sitkinak Islan**	**4.33**	**206**	S	**Sn**	**10 15 17.1**	**+0.8**
SII	**Sitkinak Islan**	**4.33**	**206**		**Pn**	**10 14 26.3**	**-0.9**
L26K	**Log Cabin Wild**	**4.35**	**51**	IAML		10 15 47.5	
	comp=N,185nm,0.5s						
L26K				IAML		10 15 47.7	
	comp=E,226nm,0.5s						
CCB	**Clear Creek Bu**	**4.39**	**17**	IAML		10 15 48.3	
	comp=E,117nm,1.4s						
MESA	**MESA**	**4.40**	**90**		**Pn**	**10 14 26.6**	**-1.7**
MESA	**MESA**	**4.40**	**90**	IAML		10 15 17.8	
	comp=N,252nm,0.6s						
MESA				IAML		10 15 20.3	
	comp=E,208nm,0.7s						
L16K	**Owhat River**	**4.40**	**290**		**Pn**	**10 14 27.4**	**-0.6**
L16K				IAML		10 15 45.8	
	comp=N,151nm,1.0s						
GRNC	**Granite Creek**	**4.45**	**83**	IAML		10 15 19.5	
	comp=N,160nm,0.6s						
DOT	**Dot Lake**	**4.47**	**42**		**Pn**	**10 14 29.1**	**0.0**
DOT	**Dot Lake**	**4.47**	**42**	IAML		10 15 42.7	
	comp=N,222nm,0.8s						
BARN	**Barnard Glacie**	**4.50**	**79**	IAML		10 15 55.0	
	comp=E,129nm,0.7s						
BARN				IAML		10 16 03.7	
	comp=N,117nm,0.9s						
MLY	**Manley**	**4.56**	**0**		**Pn**	**10 14 31.1**	**+0.8**
R16K	**Pilot Point**	**4.58**	**233**		**Pn**	**10 14 31.3**	**+0.8**
R16K	**Pilot Point**	**4.58**	**233**	IAML		10 15 57.9	
	comp=N,222nm,2.1s						
COLA	**College**	**4.60**	**16**	P	**Pn**	**10 14 31.4**	**+0.6**
COLA	**College**	**4.60**	**16**		**Pn**	**10 14 31.7**	**+0.9**
COLA	**College**	**4.60**	**16**	IAML		10 15 39.3	
	comp=N,216nm,0.4s						
COLA				IAML		10 15 54.4	
	comp=N,220nm,0.5s						
N15K	**Kwethluk River**	**4.64**	**270**		**Pn**	**10 14 31.9**	**+0.4**
N15K	**Kwethluk River**	**4.64**	**270**	IAML		10 15 58.4	
	comp=N,156nm,0.7s						
N15K				IAML		10 15 59.0	
	comp=E,183nm,0.6s						
ILAR	**Eielson Array**	**4.66**	**21**	Pn	**Pn**	**10 14 32.4**	**+0.8

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IM01  Indian Mountai   5.69 348                Pn      10 14 46.0 +0.3
I17K  Unalakleet       5.76 311                Pn      10 14 46.9 +0.2
H18K  Honhosa River    5.83 327                Pn      10 14 47.6  0.0
L14K  Kuka Creek       5.87 284                Pn      10 14 48.5 +0.3
I26K  Coal Creek Min   5.95  32                Pn      10 14 49.7 +0.4
O29M  Mount Kennedy    6.05  86                Pn      10 14 50.2 -0.6
YUK6  Outpost Mounta   6.11  80                Pn      10 14 51.3 -0.5
M29M  Somme Creek      6.22  66                Pn      10 14 52.9 -0.1
M13K  Dall Lake        6.22 275                Pn      10 14 53.6 +0.5
YUK7  Dusty Glacier    6.24  84                Pn      10 14 53.3 -0.2
G23K  Bananza Creek    6.25   3                Pn      10 14 54.2 +0.7
G19K  Purcell Mounta   6.34 336                Pn      10 14 54.6 -0.1
YUK5  Granite Creek    6.35  79                Pn      10 14 54.4 -0.6
G24K  Hadweenzic Riv   6.40  12                Pn      10 14 55.4 -0.1
DAWY  Dawson           6.41  51            Pn  Pn      10 14 55.9 +0.3
HYT   Haines Junctio   6.53  81                Pn      10 14 56.8 -0.7
L29M  L29M             6.54  61                Pn      10 14 57.7 +0.2
I27K  Kandik River     6.60  35                Pn      10 14 58.7 +0.4
H16K  Elim             6.73 313                Pn      10 15 00.8 +0.8
G17K  Kiwalik Mounta   6.74 322                Pn      10 15 00.9 +0.8
COLD  Coldfoot         6.77   2                Pn      10 15 01.3 +0.8
K13K  Kusilvak Mount   6.86 288                Pn      10 15 02.1 +0.4
P30M  Million Dollar   6.87  87                Pn      10 15 01.9 -0.2
I28M  Miner Creek      7.00  40                Pn      10 15 03.7 -0.1
K29M  Barlow Dome      7.05  56                Pn      10 15 04.7 +0.2
G26K  Porcupine Rive   7.18  23                Pn      10 15 06.3 +0.1
SDPT  Sand Point       7.29 229            P   Pn      10 15 08.8 +1.1
SDPT  Sand Point       7.29 229            Pn  Pn      10 15 07.9 +0.2
N31M  Braeburn, Yuko   7.36  76                Pn      10 15 07.7 -1.0
CHNA  Chernabura Isl   7.38 224            P   Pn      10 15 09.4 +0.5
CNBA  Chernabura Isl   7.39 224                Pn      10 15 09.0  0.0
F25K  Christian Rive   7.47  15                Pn      10 15 10.1 -0.1
BMAR  Burnt Mountain   7.47  19                Pn      10 15 10.3 +0.1
M11K  Mekoryuk         7.63 276                Pn      10 15 13.0 +0.7
J30M  Hart River       7.83  52                Pn      10 15 15.9 +0.8
E25K  Arctic Village   7.98  14                Pn      10 15 17.4 +0.2
D22K  Ayikyak River    8.46 355                Pn      10 15 23.9 +0.2
JIS   Juneau Island    8.65  98            P   Pn      10 15 24.3 -2.0
FALS  False Pass       8.81 236            P   Pn      10 15 30.1 +1.6
P33M  Teslin, Yukon    8.90  84                Pn      10 15 28.0 -1.8
F31M  Tsiigehtchic    10.19  40                Pn      10 15 46.5 -0.9
DLBC  Dease Lake      10.74  92            Pn  Pn      10 15 50.5 -4.5
        comp=N,0.2nm,0.3s,baz=290,slow=10,SNR=8.9
DLBC                                    Sn  Sn      10 17 43.9 -10
        comp=N,0.2nm,0.3s,baz=317,slow=16,SNR=1.9
DLBC                                    LR  LR      10 20 20.9
        comp=N,160nm,19.5s,baz=277,slow=41
        comp=N,3.2nm,1.1s
INK   Inuvik          10.78  36            Pn  Pn      10 15 55.4 +0.1
        comp=N,0.3nm,0.3s,baz=248,slow=15,SNR=11
INK                                     Sn  Sn      10 17 53.3 -0.9
        baz=216,slow=15,SNR=1.2
INK                                     Lg  Lg      10 19 01.7
        baz=144,slow=17
        comp=N,2.0nm,0.6s
C36M  Paulatuk        14.25  40                Pn      10 16 39.0 -3.5
A36M  Sachs Harbour   15.26  31                P       10 17 00.0 +0.2
ADK   Adak            16.70 251            P   P       10 17 16.5 +0.7
YKA   Yellowknife Ar  17.24  68            Pn  Pn      10 17 19.1 -1.6
        comp=N,0.4nm,0.3s,baz=280,slow=12,SNR=21
        comp=N,2.8nm,0.9s
YKAW1 Yellowknife Wh  17.29  68                Pn      10 17 20.4 -1.0
NEW   Newport         22.81 107            LR  LR      10 26 54.6
        comp=N,42nm,21.1s,baz=291,slow=36
RES   Resolute Bay    24.30  32                P       10 18 38.6 +2.5
PETK  Petropavlovsk-  28.49 278            P   P       10 19 23.3 +9.2
        comp=N,3.8nm,1.1s,baz=68,slow=11,SNR=1.9
        comp=N,3.8nm,1.1s
NVAR  Mina Array Bea  30.02 123            P   P       10 19 28.1  0.0
        comp=N,0.7nm,0.7s,baz=316,slow=8.7,SNR=7.0
        comp=N,0.7nm,0.7s
PDAR  Pinedale Array  30.45 107            P   P       10 19 32.0 +0.2
        comp=N,0.3nm,0.6s,baz=349,slow=4.6,SNR=5.6
        comp=N,0.3nm,0.6s
TXAR  Lajitas Array   44.13 113            P   P       10 21 28.2 +0.8
        comp=N,0.2nm,0.5s,baz=308,slow=6.3,SNR=9.5
        comp=N,0.2nm,0.5s
TKL   Tuckaleechee C  48.56  89            LR  LR      10 43 58.1
        comp=N,70nm,20.0s,baz=348,slow=38
```

IDC ***27*** *10:17:30.0±0.6,39.77N×51.31E,h0km,mb4.3/25, mbtmp4.4/36,ML4.9/8,MS3.6/30,Error ellipse: s-maj=14.2km s-min=7.9km az=174.0*
MOS ***27*** *10:17:34.2±1.3,39.97N×51.49E,h33km,mb4.8/13,Error ellipse: s-maj=5.3km s-min=3.2km az=43.3*
AZER ***27*** *10:17:34.1,39.65N×51.48E,h45km,ml4.5*
NEIC ***27*** *10:17:36.8±1.4,39.92N±0.08×51.38E±0.04,h42km±5km, mb4.6/82,Error ellipse: s-maj=12.5km s-min=4.2km az=169.0*
DRS ***27*** *10:17:39.8,39.84N×51.26E,h35km*
NNC ***27*** *10:17:41.8±2.4,40.39N×52.59E,h0km,mb4.5,Error ellipse: s-maj=31.4km s-min=17.4km az=92.0*

ISC 27 10:17:36.4±0.3,39.90N±0.03×51.44E±0.03,h47km, h47km:pP-P,n418,c1s86/478,mb4.5/96,MS3.6/26, 33C-20D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**1.11**	**298**	P	**Pn**	**10 17 58.6**	**+3.0**
GALA				S	**Sn**	**10 18 16.4**	**+6.7**
NDR	**Nardaran**	**1.30**	**302**	Pn	**Pn**	**10 18 00.6**	**+2.5**
NDR				Sg	**Sn**	**10 18 22.6**	**+8.1**
GOBA	**Gobu**	**1.40**	**292**	Pg	**Pn**	**10 18 03.0**	**+3.5**
GOBA				Sg	**Sn**	**10 18 25.4**	**+8.6**
ALIB	**&Aumlli-Bayram**	**1.87**	**273**	Pg	**Pn**	**10 18 08.4**	**+2.4**
ALIB				Sg	**Sn**	**10 18 36.6**	**+8.3**
GBS	**Qobustan**	**2.02**	**289**	Pg	**Pn**	**10 18 10.4**	**+2.4**
GBS				Sg	Sn	10 18 42.8	+11
ATGJ	**Altiaghaj**	**2.14**	**298**	Pn	**Pn**	**10 18 11.1**	**+1.3**
ATGJ				Sn	**Sn**	**10 18 39.7**	**+4.6**
SIZA	**Siyzn**	**2.27**	**302**	Pn	**Pn**	**10 18 13.2**	**+1.7**
SIZA				Sn	**Sn**	**10 18 42.4**	**+4.1**
SAAT	**Saatly**	**2.32**	**270**	Pn	**Pn**	**10 18 13.9**	**+1.8**
SAAT				Sn	**Sn**	**10 18 44.0**	**+4.6**
PQL	**Pirkuli**	**2.35**	**293**	Pn	**Pn**	**10 18 13.9**	**+1.2**
PQL				Sn	**Sn**	**10 18 43.8**	**+4.4**
LKRN	**Lenkeran, Azer**	**2.38**	**241**	PN	**Pn**	**10 18 11.6**	**-1.3**
LKRN	**Lenkeran, Azer**	**2.38**	**241**	Pn	**Pn**	**10 18 11.7**	**-1.3**
LKRN				Sn	**Sn**	**10 18 38.8**	**-2.0**
GLBA	**Clilabad**	**2.44**	**255**	Pn	**Pn**	**10 18 13.2**	**-0.6**
GLBA				Sn	**Sn**	**10 18 41.4**	**-1.1**
ASTR	**Astara**	**2.45**	**238**	Pn	**Pn**	**10 18 12.1**	**-1.8**
ASTR				Sn	**Sn**	**10 18 40.3**	**-2.4**
KDMR	**Kurdemir**	**2.54**	**282**	Pn	**Pn**	**10 18 15.9**	**+0.8**
KDMR				Sn	**Sn**	**10 18 47.2**	**+2.4**
IML	**Ismayilli**	**2.65**	**291**	Pn	**Pn**	**10 18 17.2**	**+0.6**
IML				Sn	**Sn**	**10 18 49.9**	**+2.4**
YRD	**Yardimli**	**2.66**	**249**	Pn	**Pn**	**10 18 15.3**	**-1.7**
YRD				Sn	**Sn**	**10 18 45.5**	**-2.7**
QUBA	**Quba, Azerbaij**	**2.67**	**304**	Pn	**Pn**	**10 18 18.7**	**+1.7**
QUBA				Sn	**Sn**	**10 18 50.2**	**+2.1**
LRK	**Lerik**	**2.71**	**243**	Pn	**Pn**	**10 18 16.1**	**-1.6**
LRK				Sn	**Sn**	**10 18 46.3**	**-3.0**
XNQ	**Khinaliq**	**2.82**	**298**	Pn	**Pn**	**10 18 18.5**	**-0.6**
XNQ				Sn	**Sn**	**10 18 54.2**	**+2.2**
QSAR	**Qusar**	**2.91**	**305**	Pn	**Pn**	**10 18 21.8**	**+1.6**
QSAR				Sn	**Sn**	**10 18 56.9**	**+3.0**
ZRD	**Zardab**	**2.91**	**279**	Pn	**Pn**	**10 18 20.7**	**+0.6**
ZRD				Sn	**Sn**	**10 18 56.5**	**+2.7**
QBL	**Gabala**	**2.94**	**292**	Pn	**Pn**	**10 18 20.9**	**+0.2**
QBL				Sn	**Sn**	**10 18 55.8**	**+1.0**
BLQ	**Beylaqan**	**2.99**	**268**	Pn	**Pn**	**10 18 20.6**	**-0.8**
BLQ				Sn	**Sn**	**10 18 55.2**	**-0.8**
KSMR	**Kasumkent**	**3.04**	**305**	*e*PN	**Pn**	**10 18 23.5**	**+1.5**
KSMR				*e*S	**Sn**	**10 18 58.3**	**+1.1**
KSMR				pmax	pmax		
	comp=Z,484nm,0.4s						
DRN	**Derbent**	**3.17**	**313**	*e*PN	**Pn**	**10 18 24.1**	**+0.3**
DRN				*e*S	**Sn**	**10 19 00.2**	**-0.2**
DRN				pmax	pmax		
	comp=Z,165nm,0.4s						
QRD	**Qoradiz**	**3.21**	**264**	Pn	**Pn**	**10 18 23.3**	**-1.0**
QRD				Sn	**Sn**	**10 19 00.2**	**-1.1**
AKT	**Akhty**	**3.23**	**300**	*e*Pn	**Pn**	**10 18 25.8**	**+1.0**
	comp=Z,140nm,0.5s						
AKT				*e*Sn	**Sn**	**10 19 02.4**	**+0.3**
	comp=Z,948nm,0.3s						
AKT	**Akhty**	**3.23**	**300**	*e*PN	**Pn**	**10 18 25.7**	**+1.0**
AKT				*e*S	**Sn**	**10 19 03.6**	**+1.6**
AKT				*e*		10 19 17.4	
AKT				pmax	pmax		
	comp=Z,140nm,0.5s						
AKT				smax	smax		
	comp=E,808nm,0.4s						
AKT				smax	smax		
	comp=N,738nm,0.5s						
BRDA	**Brd**	**3.29**	**278**	Pn	**Pn**	**10 18 26.1**	**+0.7**
BRDA				Sn	**Sn**	**10 19 06.3**	**+3.0**
AGDM	**Agdam**	**3.33**	**275**	Pn	**Pn**	**10 18 25.6**	**-0.4**
AGDM				Sn	**Sn**	**10 19 04.7**	**+0.4**
MNGR	**Mingechevir, A**	**3.44**	**286**	Pn	**Pn**	**10 18 28.0**	**+0.5**
MNGR				Sn	**Sn**	**10 19 09.4**	**+2.4**
SEKA	**Sheki**	**3.49**	**293**	Pn	**Pn**	**10 18 28.6**	**+0.5**
SEKA				Sn	**Sn**	**10 19 08.5**	**+0.3**
URKR	**Urkarakh**	**3.66**	**309**	*e*Pn	**Pn**	**10 18 31.8**	**+1.1**
	comp=N,84nm,0.3s						
URKR				*e*Sn	**Sn**	**10 19 13.3**	**+0.7**
	comp=N,444nm,0.6s						
URKR	**Urkarakh**	**3.66**	**309**	*e*PN	**Pn**	**10 18 31.7**	**+1.1**
URKR				*e*S	**Sn**	**10 19 13.3**	**+0.7**
URKR				pmax	pmax		
	comp=Z,84nm,0.3s						
SGKR	**Sergokala**	**3.83**	**313**	*e*Pn	**Pn**	**10 18 34.5**	**+1.6**
	comp=Z,128nm,0.5s						
SGKR				*e*Sn	**Sn**	**10 19 18.5**	**+1.8**
	comp=Z,570nm,0.8s						
SGKR	**Sergokala**	**3.83**	**313**	*e*PN	**Pn**	**10 18 34.5**	**+1.6**
SGKR				*e*S	**Sn**	**10 19 18.4**	**+1.8**
SGKR				pmax	pmax		
	comp=Z,128nm,0.5s						
KMKR	**Kumukh**	**3.97**	**306**	*e*PN	**Pn**	**10 18 36.7**	**+1.8**
KMKR				*e*S	**Sn**	**10 19 22.3**	**+2.0**
KMKR				pmax	pmax		
	comp=Z,122nm,0.4s						
GANJ	**Ganja**	**3.98**	**282**	Pn	**Pn**	**10 18 34.1**	**-0.9**
GANJ				Sn	**Sn**	**10 19 19.5**	**-1.0**
ZKTA	**Zakatala**	**4.05**	**297**	Pn	**Pn**	**10 18 37.1**	**+1.2**
ZKTA				Sn	**Sn**	**10 19 25.2**	**+3.2**
VSHL	**Vashlovani**	**4.06**	**291**	P	**Pn**	**10 18 37.0**	**+1.0**
GNBR	**Gunib**	**4.20**	**308**	*e*Pn	**Pn**	**10 18 39.9**	**+2.0**
GNBR				*e*S	**Sn**	**10 19 28.0**	**+2.3**
GNBR				pmax	pmax		
	comp=Z,76nm,0.5s						
MAK	**Makhachkala**	**4.26**	**317**	*i*PN	**Pn**	**10 18 39.6**	**+1.0**
MAK				*e*S	**Sn**	**10 19 29.5**	**+2.5**
MAK				pmax	pmax		
	comp=Z,141nm,0.3s						
MAK				smax	smax		
	comp=E,661nm,0.6s						
MAK				smax	smax		
	comp=E,531nm,0.5s						
MAK				MLR	MLR		
	comp=Z,368nm,2.0s						
ARKR	**Arakani**	**4.30**	**310**	*e*Pn	**Pn**	**10 18 41.1**	**+1.7**
	comp=Z,35nm,0.3s						
ARKR				*e*Sn	**Sn**	**10 19 30.2**	**+1.9**
	comp=Z,434nm,0.6s						
ARKR	**Arakani**	**4.30**	**310**	*e*PN	**Pn**	**10 18 41.1**	**+1.7**
ARKR				*e*S	**Sn**	**10 19 30.2**	**+1.9**
ARKR				pmax	pmax		
	comp=Z,35nm,0.3s						
ORD	**Ordubad**	**4.33**	**259**	Pn	**Pn**	**10 18 40.5**	**+0.7**
ORD				Sn	**Sn**	**10 19 27.5**	**-1.5**
DDFL	**Dedoflistskaro**	**4.33**	**293**	P	**Pn**	**10 18 40.9**	**+1.1**
DDFL	**Dedoflistskaro**	**4.33**	**293**	PN	**Pn**	**10 18 40.8**	**+1.1**
LGD	**Lagodekhi**	**4.39**	**298**	P	**Pn**	**10 18 41.1**	**+0.6**
LGD				S	**Sn**	**10 19 31.5**	**+1.1**
LGD	**Lagodekhi**	**4.39**	**298**	PN	**Pn**	**10 18 41.1**	**+0.6**
LGD				S	**Sn**	**10 19 31.5**	**+1.1**
GDB	**GEDABAY**	**4.42**	**283**	Pn	**Pn**	**10 18 40.4**	**-0.8**
GDB				Sn	**Sn**	**10 19 29.8**	**-1.6**
TLTR	**Tlyarata**	**4.43**	**301**	*e*Pn	**Pn**	**10 18 42.1**	**+0.9**
	comp=Z,25nm,0.4s						
TLTR				*e*Sn	**Sn**	**10 19 32.3**	**+0.6**
	comp=Z,92nm,0.5s						
TLTR	**Tlyarata**	**4.43**	**301**	*e*PN	**Pn**	**10 18 42.1**	**+0.9**
TLTR				*e*S	**Sn**	**10 19 32.3**	**+0.6**
TLTR				pmax	pmax		
	comp=Z,25nm,0.4s						
UNCR	**Uncukul**	**4.49**	**310**	*e*Pn	**Pn**	**10 18 42.9**	**+0.9**
	comp=Z,58nm,0.4s						
UNCR				*e*Sn	**Sn**	**10 19 33.4**	**+0.5**
	comp=Z,263nm,0.7s						
UNCR	**Uncukul**	**4.49**	**310**	*e*PN	**Pn**	**10 18 42.8**	**+0.9**
UNCR				*e*S	**Sn**	**10 19 33.3**	**+0.5**
UNCR				pmax	pmax		
	comp=Z,58nm,0.4s						
KRNR	**Karanay**	**4.49**	**312**	*e*Pn	**Pn**	**10 18 42.9**	**+0.8**
	comp=Z,28nm,0.4s						
KRNR				*e*Sn	**Sn**	**10 19 33.4**	**+0.4**
	comp=Z,200nm,0.6s						
KRNR	**Karanay**	**4.49**	**312**	*e*PN	**Pn**	**10 18 42.8**	**+0.8**
KRNR				*e*S	**Sn**	**10 19 33.4**	**+0.4**
KRNR				pmax	pmax		
	comp=Z,28nm,0.4s						
SBZ	**Shahbuz**	**4.57**	**266**	Pn	**Pn**	**10 18 43.4**	**+0.3**
SBZ				Sn	**Sn**	**10 19 34.8**	**-0.2**
NAX	**Nakhchivan**	**4.65**	**263**	Pn	**Pn**	**10 18 44.4**	**+0.2**
NAX				Sn	**Sn**	**10 19 36.8**	**-0.2**
DBC	**Dubki**	**4.66**	**314**	*e*PN	**Pn**	**10 18 45.7**	**+1.4**
DBC				*e*S	**Sn**	**10 19 38.6**	**+1.5**
DBC				pmax	pmax		
	comp=Z,30nm,0.4s						
QZX	**Qazax, Azerbai**	**4.77**	**286**	Pn	**Pn**	**10 18 45.5**	**-0.3**
QZX				Sn	**Sn**	**10 19 38.7**	**-1.0**
DGRG	**David-gareji**	**4.87**	**291**	P	**Pn**	**10 18 47.6**	**+0.4**
DGRG				S	**Sn**	**10 19 43.7**	**+1.6**
DGRG	**David-gareji**	**4.87**	**291**	PN	**Pn**	**10 18 47.5**	**+0.4**
DGRG				S	**Sn**	**10 19 43.7**	**+1.6**
HYR	**Heyderabad**	**5.08**	**270**	Pn	**Pn**	**10 18 50.2**	**+0.2**
HYR				Sn	**Sn**	**10 19 47.3**	**-0.1**
GNI	**Garni**	**5.15**	**275**	Pn	**Pn**	**10 18 50.9**	**-0.2**
	comp=Z,9.1nm,0.3s,baz=36,slow=2.8,SNR=15						
GNI				Sn	**Sn**	**10 19 50.1**	**+0.8**
	comp=Z,4.0nm,0.3s,baz=34,slow=18,SNR=3.4						
	comp=Z,30nm,0.5s						
GNI	**Garni**	**5.15**	**275**		**Pn**	**10 18 50.1**	**-0.9**
GNI	**Garni**	**5.15**	**275**	P	**Pn**	**10 18 51.8**	**+0.7**
	comp=Z,0.5nmcomp=Z,804nmcomp=Z,78nm,0.8s						
GROC	**Groznyy**	**5.37**	**310**	*i*PN	**Pn**	**10 18 52.8**	**-1.1**
SHTL	**Shatili**	**5.48**	**302**	P	**Pn**	**10 18 56.3**	**+0.7**
SHTL	**Shatili**	**5.48**	**302**	P	**Pn**	**10 18 56.3**	**+0.7**
CHRG	**Chargali**	**5.49**	**298**	P	**Pn**	**10 18 55.7**	**0.0**
CHRG				S	**Sn**	**10 19 58.2**	**+0.7**
TRLG	**Trialeti**	**5.81**	**289**	P	**Pn**	**10 19 00.1**	**-0.1**
TRLG				S	**Sn**	**10 20 03.4**	**-2.2**
TRLG	**Trialeti**	**5.81**	**289**	P	**Pn**	**10 19 00.1**	**-0.1**
TRLG				S	**Sn**	**10 20 03.3**	**-2.2**
ALIG	**Mtskhetisjvari**	**6.29**	**293**	P	**Pn**	**10 19 06.3**	**-0.4**
ALIG				S	**Sn**	**10 20 16.2**	**-1.0**
ALIG	**Mtskhetisjvari**	**6.29**	**293**	P	**Pn**	**10 19 06.2**	**-0.4**
ALIG				S	**Sn**	**10 20 16.2**	**-1.0**
KARS	**Kars**	**6.44**	**279**	Pn	**Pn**	**10 19 08.0**	**-0.7**
KARS	**Kars**	**6.44**	**279**	P	**Pn**	**10 19 08.0**	**-0.7**
GEVA	**Gevas**	**6.71**	**259**		**Pn**	**10 19 10.9**	**-1.5**
NEUR	**Neytrino**	**7.36**	**300**	*e*P	**Pn**	**10 19 22.0**	**+0.6**
NEUR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GURO	**Guroymak-BITLI**	**7.43**	**263**	Pn	**Pn**	**10 19 22.6**	**+0.3**
KBZ	**Khabaz**	**7.44**	**304**	Pn	**Pn**	**10 19 20.9**	**-1.3**
	comp=Z,8.8nm,0.8s,baz=100,slow=12,SNR=18						
KBZ				Sn	**Sn**	**10 20 41.3**	**-4.0**
	comp=Z,0.9nm,0.3s,baz=141,slow=3.0,SNR=2.0						
KBZ	**Khabaz**	**7.44**	**304**	P	**Pn**	**10 19 21.0**	**-1.3**
SHA1	**Shidzhatmaz**	**7.60**	**303**	*e*P	**Pn**	**10 19 23.8**	**-0.9**
KVAR	**Kislovodsk Arr**	**7.68**	**305**	Sn	**Sn**	**10 20 46.5**	**-4.8**
	baz=110,slow=14						
KIV	**Kislovodsk**	**7.68**	**305**	Pn	**Pn**	**10 19 25.6**	**-0.1**
KIV	**Kislovodsk**	**7.68**	**305**	*e*P	**Pn**	**10 19 25.2**	**-0.5**
KIV				*e*S	**Sn**	**10 20 50.8**	**-0.6**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,59nm,12.0s						
KIV	**Kislovodsk**	**7.68**	**305**	P	**Pn**	**10 19 26.2**	**+0.5**
	comp=Z,0.2nmcomp=Z,24nm,0.7s						
LABN	**Labinsk**	**9.25**	**304**	*e*P	**Pn**	**10 19 47.1**	**0.0**
LABN				*e*S	**Sn**	**10 21 29.5**	**-0.2**
LABN				pmax	pmax		
	comp=Z,35nm,0.6s						
ERBR	**Yeremizino-Bor**	**9.93**	**309**	*e*P	**Pn**	**10 19 55.7**	**-0.6**
ERBR				*e*S	**Sn**	**10 21 45.5**	**-0.8**
ERBR				pmax	pmax		
	comp=Z,14nm,0.5s						
AB31	**Akbulak array**	**11.14**	**30**		**Pn**	**10 20 10.7**	**-2.3**
AB31	**Akbulak array**	**11.14**	**30**	⇓P	**Pn**	**10 20 10.1**	**-2.9**
	comp=Z,2.5nm,0.3s,baz=209,slow=13,SNR=398						
AB31				⇑S	**Sn**	**10 22 08.9**	**-7.1**
	comp=Z,15nm,0.5s,baz=209,slow=24,SNR=17						
AB31	**Akbulak array**	**11.14**	**30**	P	**Pn**	**10 20 10.4**	**-2.5**
AB31				S	**Sn**	**10 22 11.0**	**-5.0**
ABKAR	**Akbulak array**	**11.14**	**30**		**Pn**	**10 20 10.5**	**-2.5**
AKTO	**Aktyubinsk**	**11.51**	**22**	Pn	**Pn**	**10 20 15.6**	**-2.4**
	comp=Z,6.3nm,0.3s,baz=222,slow=6.2,SNR=92						
AKTO				Sn	**Sn**	**10 22 17.6**	**-7.4**
	comp=Z,12nm,0.3s,baz=86,slow=21,SNR=16						
AKTO				LR	LR	10 26 37.5	
	comp=Z,108nm,18.9s,baz=202,slow=47						
	comp=Z,26nm,0.2s						
AKTO	**Aktyubinsk**	**11.51**	**22**	⇑P	**Pn**	**10 20 15.2**	**-2.8**
	comp=Z,7.1nm,0.3s						
AKTO				⇑S	**Sn**	**10 22 19.7**	**-5.2**
	comp=Z,47nm,0.6s						
AKTO	**Aktyubinsk**	**11.51**	**22**	P	**Pn**	**10 20 15.1**	**-2.8**
AKTO				S	**Sn**	**10 22 20.0**	**-5.0**
BELG	**Belogornoye**	**12.77**	**349**	Pn	**Pn**	**10 20 33.5**	**-1.6**
	comp=Z,6.1nm,0.3s,baz=232,slow=20,SNR=20						
BELG				Sn	Sn	10 22 45.2	-11
	comp=Z,5.3nm,0.3s,baz=161,slow=22,SNR=10						
	comp=Z,18nm,0.4s						
BELG	**Belogornoye**	**12.77**	**349**	*ce*P	**Pn**	**10 20 34.2**	**-0.9**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VRH	**Novokhopyorsk**	**13.18**	**332**	*e*P	**P**	**10 20 49.8**	**+0.2**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SHAA	**Shahritus**	**13.24**	**95**	Pn	**Pn**	**10 20 40.7**	**-1.0**
BR131	**Keskin Array S**	**13.69**	**275**	⇑*i*P	**Pn**	**10 20 50.7**	**+2.8**
BRTR	**Keskin Array B**	**13.69**	**275**	Pn	**Pn**	**10 20 46.7**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=84,slow=12,SNR=4.9						
BRTR	**Keskin Array B**	**13.69**	**275**	*i* P	**Pn**	**10 20 50.0**	**+2.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BR106	**Keskin Array S**	**13.70**	**275**	P	**Pn**	**10 20 48.8**	**+0.7**
	comp=Z,5.2nm,1.0s						
BR105	**Keskin Array S**	**13.71**	**275**	P	**Pn**	**10 20 48.8**	**+0.6**
	comp=Z,6.1nm,0.9s						
CHGR	**Chuyangaron**	**13.79**	**89**	Pn	**Pn**	**10 20 47.1**	**-2.1**
CHGR	**Chuyangaron**	**13.79**	**89**	*e*P	**Pn**	**10 20 50.7**	**+1.5**
VORD	**Divnogorie**	**13.95**	**327**	*e*P	**Pn**	**10 20 48.7**	**-2.5**
VORD				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VSR	**Storozhevoye**	**14.19**	**327**	*e*P	**Pn**	**10 20 51.6**	**-2.9**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VORR	**Voronezh**	**14.52**	**328**	*e*P	Pn	10 20 52.9	-5.9
VORR				pmax	pmax		
	comp=Z,40nm,0.4s						
GAR	**Garm**	**14.62**	**87**		**Pn**	**10 20 58.8**	**-1.5**
KK31	**Karatay Array**	**14.65**	**71**		**Pn**	**10 20 57.7**	**-3.0**
KK31	**Karatay Array**	**14.65**	**71**	⇑P	**Pn**	**10 20 57.3**	**-3.4**
	comp=Z,10.0nm,0.7s,baz=259,slow=17,SNR=34						
KK31				⇑S	Sn	10 23 32.4	-9.2
	comp=Z,6.5nm,0.6s,baz=270,slow=24,SNR=4.6						
KK31	**Karatay Array**	**14.65**	**71**	*i* P	**Pn**	**10 20 57.5**	**-3.1**
KK31				S	Sn	10 23 32.4	-9.2
KKAR	**Karatay Array**	**14.65**	**71**		**Pn**	**10 20 57.7**	**-2.9**
KKAR	**Karatay Array**	**14.65**	**71**	P	**Pn**	**10 20 57.7**	**-2.9**
LPSR	**Galich'ya Gora**	**15.34**	**330**	*e*P	**Pn**	**10 21 06.6**	**-3.0**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NE56	**Odesa**	**16.39**	**301**	P	**Pn**	**10 21 23.4**	**+0.3**
ARSB	**Arslanbob**	**16.42**	**78**		**Pn**	**10 21 22.2**	**-1.4**
ARSB	**Arslanbob**	**16.42**	**78**	P	**Pn**	**10 21 22.2**	**-1.4**
ARSB				pmax	pmax		
	comp=Z,20nm,0.8s						
RAYN	**Ar Rayn**	**17.08**	**199**		**Pn**	**10 21 31.6**	**-0.2**
RAYN	**Ar Rayn**	**17.08**	**199**	P	**Pn**	**10 21 33.4**	**+1.5**
ARTI	**Arti**	**17.12**	**13**	P	**Pn**	**10 21 29.4**	**-2.8**
	comp=Z,13nm,0.5s,baz=204,slow=7.0,SNR=19						
ARTI				S	Sn	10 24 27.4	-14
	comp=Z,5.8nm,0.6s,baz=340,slow=20,SNR=1.5						
ARTI				LR	LR	10 29 37.0	
	comp=Z,118nm,20.2s,baz=226,slow=42						
ARTI	**Arti**	**17.12**	**13**	Pn	**Pn**	**10 21 29.3**	**-2.8**
ARTI				IAmb	IAmb	10 22 04.0	
	comp=Z,28nm,0.6s						
ARTI	**Arti**	**17.12**	**13**	P	**Pn**	**10 21 29.9**	**-2.2**
ARTI				S	**Sn**	**10 24 34.8**	**-6.6**
TLCR		**17.47**	**295**	⇑P	**Pn**	**10 21 36.9**	**+0.4**
TLCR		**17.47**	**295**	P	**Pn**	**10 21 36.8**	**+0.4**
AAK	**Ala-Archa**	**17.54**	**74**	P	**Pn**	**10 21 36.8**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=246,slow=7.6,SNR=14						
	comp=Z,8.8nm,0.8s						
AAK	**Ala-Archa**	**17.54**	**74**		**Pn**	**10 21 35.5**	**-2.1**
AAK	**Ala-Archa**	**17.54**	**74**	⇑P	**Pn**	**10 21 37.0**	**-0.6**
	comp=Z,10nm,0.9s						
AAK	**Ala-Archa**	**17.54**	**74**	⇑*i*P	**Pn**	**

AKASG S **Sn** **10 25 15.9 -9.0**
comp=Z,0.5nm,0.3s,baz=119,slow=22,SNR=2.8
comp=Z,22nn,0.6s
AKASG Malin Array Be **18.92 312** P **P** **10 21 52.0 -1.1**
AKASG IAmb IAmb 10 21 54.4
comp=Z,39nm,0.9s
AKASG Malin Array Be **18.92 312** P **P** **10 21 52.0 -1.1**
AKASG pmax pmax
comp=Z,39nm,1.0s
AKBB Malin Array Si **18.92 312** P **P** **10 21 52.1 -0.9**
AKBB IAmb IAmb 10 21 55.1
comp=Z,49nm,0.8s
AKBB Malin Array Si **18.92 312**⇑ *i*P **P** **10 21 52.4 -0.7**
AKBB pmax pmax
comp=Z,43nm,0.9s
AKBB Malin Array Si **18.92 312** P **P** **10 21 52.4 -0.7**
AK01 Malin Array Si **18.92 312** P **P** **10 21 52.8 -0.3**
KIEV Kiev **18.93 312**⇓ P **P** **10 21 53.3 +0.1**
KIEV Kiev **18.93 312** P **P** **10 21 52.6 -0.6**
KIEV IAmb IAmb 10 21 55.1
comp=Z,44nm,0.8s
KIEV Kiev **18.93 312** P **P** **10 21 53.2 +0.1**
KIEV Kiev **18.93 312** P **P** **10 21 52.2 -1.0**
comp=Z,259nm,0.8s
AK03 Malin Array Si **18.93 312** P **P** **10 21 52.8 -0.4**
AK12 Malin Array Si **18.94 312** P **P** **10 21 52.8 -0.5**
AK11 Malin Array Si **18.94 312** P **P** **10 21 52.9 -0.4**
AK14 Malin Array Si **18.96 312** P **P** **10 21 53.0 -0.5**
AK04 Malin Array Si **18.96 312** P **P** **10 21 53.1 -0.5**
AK16 Malin Array Si **18.98 312** P **P** **10 21 53.2 -0.5**
AK13 Malin Array Si **18.98 312** P **P** **10 21 53.1 -0.6**
AK15 Malin Array Si **18.98 312** P **P** **10 21 53.0 -0.7**
AK23 Malin Array Si **19.00 312** P **P** **10 21 53.4 -0.6**
AK17 Malin Array Si **19.01 312** P **P** **10 21 53.2 -0.9**
AK18 Malin Array Si **19.02 312** P **P** **10 21 53.3 -0.9**
VRI Vrincioaia **19.03 296**⇓ P **P** **10 21 54.9 +0.6**
VRI Vrincioaia **19.03 296** P **P** **10 21 54.9 +0.6**
VRI Vrincioaia **19.03 296** P **P** **10 21 54.3 0.0**
comp=Z,1µmcomp=Z,22nn,0.8s
AK22 Malin Array Si **19.04 312** P **P** **10 21 53.5 -0.8**
AK19 Malin Array Si **19.05 312** P **P** **10 21 54.0 -0.5**
AK21 Malin Array Si **19.06 312** P **P** **10 21 54.1 -0.5**
PLOR Plostina **19.08 296**⇓ P **P** **10 21 55.5 +0.5**
PLOR Plostina **19.08 296** P **P** **10 21 55.4 +0.5**
TESR Tescani **19.20 298**⇓ P **P** **10 21 56.7 +0.5**
ONER Baraj Valea Uz **19.34 298**⇑ P **P** **10 21 58.5 +0.8**
COVR Voineasa-Covas **19.39 296**⇓ P **P** **10 21 59.3 +1.0**
LUBAR Lubar, Ukraine **19.46 309** P **P** **10 21 58.4 -0.6**
MLR Muntele Rosu **19.52 295** P **P** **10 22 00.4 +0.6**
comp=Z,2.8nm,0.3s,baz=11,slow=10,SNR=17
MLR LR LR 10 30 41.7
comp=Z,144nm,19.5s,baz=54,slow=41
comp=Z,13nm,0.5s
MLR Muntele Rosu **19.52 295**⇑ P **P** **10 22 00.7 +0.9**
MLR Muntele Rosu **19.52 295** IAmb IAmb 10 22 03.5
comp=Z,16nm,0.6s
MLR Muntele Rosu **19.52 295** P **P** **10 22 00.7 +0.9**
MLR Muntele Rosu **19.52 295** P **P** **10 22 00.3 +0.6**
comp=Z,27nm,1.1s
MI30 MI30,Zelenitsa **19.54 311** P **P** **10 21 59.6 -0.2**
comp=Z,44nm,0.8s
KARP Karpathos **19.67 265** P **P** **10 22 01.6 +0.1**
KARP Karpathos **19.67 265** P **P** **10 22 01.0 -0.5**
comp=Z,142nm,1.1s
KMPD K-Podol'skiy **19.82 304** P **P** **10 22 02.1 -0.8**
KMPD P **P** **10 22 02.1 -0.8**
DOPR Dopca **19.97 296**⇑ P **P** **10 22 05.4 +0.8**
VOIR **20.13 295**⇑ P **P** **10 22 07.0 +0.6**
VOIR **20.13 295** P **P** **10 22 07.0 +0.6**
VOIR **20.13 295** P **P** **10 22 07.1 +0.6**
comp=Z,51nm,0.9s
PLVB Pleven **20.31 289**⇑ P **P** **10 22 08.7 +0.4**
BURAR Bucovina Array **20.38 301**⇑ P **P** **10 22 10.0 +0.8**
BURAR Bucovina Array **20.38 301** P **P** **10 22 09.2 +0.1**
BURAR IAmb IAmb 10 22 10.9
comp=Z,29nm,0.8s
BURAR Bucovina Array **20.38 301** P **P** **10 22 09.9 +0.8**
BUR08 Bucovina Ar. S **20.40 301** P **P** **10 22 09.4 +0.1**
BUR08 IAmb IAmb 10 22 10.8
comp=Z,23nm,0.9s
ARR Arges **20.42 294**⇓ P **P** **10 22 10.4 +0.9**
RNPP5 Staryi Chortor **21.06 311** P **P** **10 22 16.1 -0.2**
STNU Starunia **21.11 304** P **P** **10 22 16.4 -0.5**
RNPP8 Varash **21.12 311** P **P** **10 22 16.7 -0.3**
RNPP9 Sopachiv **21.13 311** P **P** **10 22 16.8 -0.3**
PDGK Podgornoye **21.21 72**⇓ P **P** **10 22 18.4 +0.2**
comp=Z,24nm,1.2s
PDGK Podgornoye **21.21 72** P **P** **10 22 18.3 +0.2**
CJR Cluj-Napoca **21.30 298**⇓ P **P** **10 22 20.1 +1.0**
CJR Cluj-Napoca **21.30 298** P **P** **10 22 20.0 +1.0**
IDI Anoyia **21.50 266** P **P** **10 22 19.4 -1.8**
IDI IAmb IAmb 10 22 35.9
comp=Z,26nm,0.9s
MNK Minsk **21.52 321** *i* P **P** **10 22 20.7 -0.5**
comp=E,23nm,0.8s
MNK *i* P **P** **10 22 20.7 -0.5**
comp=N,40nm,1.0s
MNK *i* P **P** **10 22 20.7 -0.5**
comp=Z,51nm,0.9s,baz=123
MNK *i* pP **pP** **10 22 31.1 -1.3**
MNK *i* PP **PnPn** **10 22 42.0 -0.9**
MNK *i* S **S** **10 26 15.9 -1.2**
MNK *i* sS **sS** **10 26 33.9 -0.9**
MNK *i* SS **SnSn** **10 26 43.2 +0.2**
MNK *i* SSS SSS 10 26 57.1
MNK *i* LR LR 10 30 34.9
MNK *i* LRM MLR 10 32 36.4
comp=N,296nm,17.2s
MNK *i* LRM MLR 10 32 38.3
comp=E,361nm,17.2s
MNK *i* LRM MLR 10 33 05.6
comp=Z,84nm,17.6s
MNK Minsk **21.52 321** *i* P **P** **10 22 20.7 -0.5**
MNK *i* *PP **pP** **10 22 31.0 -1.3**
MNK *i* 10 22 41.9
MNK *i* S **S** **10 26 15.9 -1.2**
MNK *i* *SS **sS** **10 26 33.9 -0.9**
MNK *i* SS **SnSn** **10 26 43.2 +0.2**
MNK *i* SSS SSS 10 26 57.1
MNK pmax pmax
comp=Z,51nm,0.9s
MNK pmax pmax
comp=N,40nm,1.0s
MNK pmax pmax
comp=E,23nm,0.8s
MNK MLR MLR
comp=N,296nm,17.0s
MNK MLR MLR
comp=E,361nm,17.0s
MNK MLR MLR
comp=Z,84nm,18.0s
MORS Morshin **21.60 304** P **P** **10 22 21.9 -0.2**
MORS pP **pP** **10 22 33.3 +0.1**
MARR Marisel-Cluj **21.62 298**⇓ P **P** **10 22 22.9 +0.3**
GZR Gura Zlata **21.72 294**⇑ P **P** **10 22 23.6 +0.1**
GZR Gura Zlata **21.72 294** P **P** **10 22 23.6 +0.1**
KURBB Kurchatov Arra **21.76 51** P **P** **10 22 24.7 +1.0**
comp=Z,7.8nm,0.8s,baz=253,slow=11,SNR=28
KURBB S **S** **10 26 18.2 -3.5**
comp=Z,0.9nm,0.7s,baz=234,slow=16,SNR=2.7
KURBB LR LR 10 32 04.5
comp=Z,266nm,18.3s,baz=159,slow=40
comp=Z,7.8nm,0.8s
KURBB Kurchatov Arra **21.76 51**⇑ P **P** **10 22 24.1 +0.3**
comp=Z,14nm,0.7s
KURBB Kurchatov Arra **21.76 51** P **P** **10 22 24.0 +0.3**
KURK Kurchatov **21.84 51** P **P** **10 22 25.7 +1.0**
KURK IAmb IAmb 10 22 42.4
comp=Z,22nn,0.9s
KURK Kurchatov **21.84 51** **S** **10 26 18.2 -5.1**
KURK Kurchatov **21.84 51**⇑ P **P** **10 22 24.6 -0.1**
comp=Z,14nm,1.2s
KURK Kurchatov **21.84 51** P **P** **10 22 25.7 +1.0**
KURK S **S** **10 26 18.2 -5.1**
KURK pmax pmax
comp=Z,22nn,0.9s
DRGR **21.92 298**⇑ P **P** **10 22 26.1 +0.4**
DRGR **21.92 298** P **P** **10 22 26.1 +0.4**
HERR Herculane **21.95 293**⇑ P **P** **10 22 25.8 -0.1**
BRIU Brid **21.98 302** P **P** **10 22 26.2 0.0**
BRIU pP **pP** **10 22 38.0 +0.7**
NACGM Naroch **22.28 321** *e*P **P** **10 22 29.2 -0.1**
comp=Z,25nm,0.8s,baz=122
MDVR Moldovita **22.44 292**⇓ P **P** **10 22 31.4 +0.2**

MAKZ Makanchi **23.16 63** P **P** **10 22 38.4 -0.2**
MAKZ Makanchi **23.16 63** P **P** **10 22 40.2 +1.6**
ITM Ithomi **23.20 273** P **P** **10 22 38.0 -1.0**
ITM IAmb IAmb 10 23 08.8
comp=Z,37nm,1.2s
STHS Stebnicka Huta **23.36 304** *e*P **P** **10 22 45.1 +4.6**
STHS Stebnicka Huta **23.36 304** *e* **P** **10 22 45.1 +4.6**
MK31 Makanchi Array **23.37 63** P **P** **10 22 41.2 +0.6**
comp=Z,8.1nm,0.6s,baz=257,slow=9.8,SNR=102
MK31 Makanchi Array **23.37 63** *d*/P **P** **10 22 41.5 +0.8**
MKAR Makanchi Array **23.37 63** P **P** **10 22 41.6 +0.9**
comp=Z,9.5nm,0.7s,baz=256,slow=10.0,SNR=66
MKAR S **S** **10 26 50.4 +0.3**
comp=Z,0.4nm,0.8s,baz=278,slow=16,SNR=1.1
MKAR LR LR 10 32 23.6
comp=Z,92nm,19.5s,baz=274,slow=38
comp=Z,9.5nm,0.7s
MKAR Makanchi Array **23.37 63** P **P** **10 22 41.3 +0.7**
KECS Kecovo **23.66 302** *e*P **P** **10 22 44.2 +0.8**
KECS pmax pmax
comp=Z,17nm,1.1s
KECS Kecovo **23.66 302** *e*P **P** **10 22 44.2 +0.8**
SUW Suwalki **23.70 316** *e*P **P** **10 22 44.8 +1.2**
SUW Suwalki **23.70 316** P **P** **10 22 42.9 -0.8**
SUW Suwalki **23.70 316** P **P** **10 22 42.9 -0.8**
PSZ Piszkesteto **23.97 300**⇓ P **P** **10 22 47.2 +0.9**
PSZ Piszkesteto **23.97 300** P **P** **10 22 46.8 +0.5**
PSZ Piszkesteto **23.97 300** P **P** **10 22 47.2 +0.9**
PABE Paberze **23.97 320** *e*P **P** **10 22 46.7 +0.6**
VSVD Vaisvydziai **24.23 321** *e*P **P** **10 22 49.9 +1.4**
VSU Vasula **24.38 328** *ce*P **P** **10 22 51.4 +1.6**
VSU pmax pmax
comp=Z,112nm,2.5s
VSU Vasula **24.38 328** *e*P **P** **10 22 49.2 -0.6**
LANS Liptovska Anna **24.44 303** *e*P **P** **10 22 50.9 +0.3**
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna **24.44 303** *e*P **P** **10 22 50.9 +0.3**
MORH Mrgy, Hungar **24.66 296**⇑ P **P** **10 22 52.5 0.0**
JAVC Velka Javorina **25.57 302** *e*P **P** **10 23 04.0 +3.2**
SMOL Smolenice **25.68 301** *e*P **P** **10 23 03.6 +1.8**
MTSE Matsula **25.75 326** *e*P **P** **10 23 03.4 +1.1**
MODS Modra-Piesok **25.77 301** *e*P **P** **10 23 04.2 +1.6**
MODS pmax pmax
comp=Z,43nm,1.2s
MODS Modra-Piesok **25.77 301** *e*P **P** **10 23 04.2 +1.6**
MORC Moravsky Berou **25.79 304**⇑ P **P** **10 23 03.2 +0.4**
MORC Moravsky Berou **25.79 304** IAmb IAmb 10 23 06.8
comp=Z,18nm,1.0s
MORC Moravsky Berou **25.79 304** P **P** **10 23 03.2 +0.4**
ZST Bratislava **25.86 300** *e*P **P** **10 23 06.3 +2.9**
ZST Bratislava **25.86 300** *e*P **P** **10 23 06.3 +2.9**
JOF Joensuu **26.02 339** *e*P **P** **10 23 05.8 +1.1**
VRAC Vranov **26.33 303** P **P** **10 23 08.5 +0.8**
comp=Z,3.6nm,0.5s,baz=121,slow=11,SNR=3.7
VRAC LR LR 10 34 33.4
comp=Z,106nm,18.4s,baz=96,slow=39
comp=Z,3.6nm,0.5s
VRAC Vranov **26.33 303** *e*P **P** **10 23 07.9 +0.2**
RONA Rosalia, Austr **26.36 299** *e*P **P** **10 23 08.4 +0.3**
comp=Z,5.9nm,0.6s
ZAA0 Zalesovo Array **26.49 47** P **P** **10 23 09.6 +0.6**
ZAA0 IAmb IAmb 10 23 24.8
comp=Z,18nm,0.9s
ZALV Zalesovo Beam **26.49 47** P **P** **10 23 09.9 +0.9**
comp=Z,4.7nm,0.9s,baz=267,slow=12,SNR=13
ZALV LR LR 10 35 06.9
comp=Z,138nm,18.7s,baz=287,slow=40
comp=Z,4.7nm,0.9s
ZALV Zalesovo Beam **26.49 47** P **P** **10 23 09.0 0.0**
ZALV Zalesovo Beam **26.49 47** *i* P **P** **10 23 10.3 +1.3**
ZALV pmax pmax
comp=Z,5.0nm,0.9s
FINES FINESS Array B **26.58 333** P **P** **10 23 10.2 +0.4**
comp=Z,3.9nm,0.5s,baz=136,slow=11,SNR=22
FINES LR LR 10 35 17.1
comp=Z,147nm,18.4s,baz=158,slow=40
comp=Z,3.9nm,0.5s
CONA Conrad Observa **26.67 299** *e*P **P** **10 23 11.8 +1.0**
comp=Z,4.6nm,0.8s
ARSA Arzberg **26.86 298** *e*P **P** **10 23 13.8 +1.3**
comp=Z,6.5nm,0.6s
DGZ Jazzator, Alta **27.12 57**⇓ *i*P **P** **10 23 16.2 +1.2**
DGZ pmax pmax
comp=Z,2.0nm,0.9s
WMQ Urumqi **27.15 70** *e*P **P** **10 23 20.0 +4.8**
WMQ pP pP 10 23 30.5 +3.1
WMQ sP sP 10 23 35.3 +2.3
WMQ pmax pmax
comp=Z,15nm,1.1s
SOKA Soboth **27.17 297** *e*P **P** **10 23 16.7 +1.3**
comp=Z,9.4nm,1.0s
KEF Keuruu **27.49 333** *e*P **P** **10 23 18.4 +0.5**
KEF Keuruu **27.49 333** SG **P** **10 23 18.6 +0.7**
GERES GERESS Array B **28.17 301** P **P** **10 23 24.9 +0.6**
comp=Z,1.7nm,0.6s,baz=91,slow=11,SNR=7.0
GERES LR LR 10 36 59.6
comp=Z,94nm,19.0s,baz=91,slow=42
comp=Z,1.7nm,0.6s
BRG Berggiesshubel **28.24 305** *e*P **P** **10 23 26.6 +1.9**
BRG Amp 10 23 28.2
comp=Z,3.6nm,0.7s
BRG pP **pP** **10 23 37.0 0.0**
BRG Amp 10 23 37.6
comp=Z,4.7nm,0.8s
KHC Kasperske Hory **28.27 302** *ce*P **P** **10 23 25.2 0.0**
KHC pmax pmax
comp=Z,22nm,2.5s
KBA Koelnbreinsper **28.34 297** *e*P **P** **10 23 27.0 +1.2**
comp=Z,9.1nm,0.9s
LESA Schwarzleotal **28.80 298** *e*P **P** **10 23 30.7 +0.8**
comp=Z,6.0nm,0.5s,SNR=6.4
CLL Collm **28.89 306** *i* P **P** **10 23 31.8 +1.3**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm **28.89 306** *i* P **P** **10 23 31.8 +1.3**
comp=Z,8.0nm,0.9s
WTTA Wattenberg **29.50 298** *i* P **P** **10 23 36.7 +0.4**
comp=Z,4.8nm,0.6s,SNR=4.1
MOTA Mosalm **29.86 298** *i* P **P** **10 23 39.3 -0.1**
comp=Z,3.3nm,0.7s
FETA Feichten **30.13 297** *e*P **P** **10 23 41.9 +0.2**
comp=Z,6.8nm,0.9s,SNR=4.7
DAVA Damuels **30.70 298** *e*P **P** **10 23 47.0 +0.2**
comp=Z,7.4nm,0.7s
DAVOX Davos/Dischmat **30.72 297** P **P** **10 23 46.2 -0.8**
comp=Z,4.2nm,0.7s,baz=98,slow=13,SNR=4.5
DAVOX LR LR 10 38 57.6
comp=Z,69nm,19.4s,baz=79,slow=42
comp=Z,4.2nm,0.7s
HFS Hagfors **30.95 323** P **P** **10 23 49.3 +0.6**
comp=Z,30nm,1.1s,baz=115,slow=10.0,SNR=22
comp=Z,30nm,1.1s
EVN Everest **31.48 101** P **P** **10 23 54.8 +0.4**
EVN IAmb IAmb 10 23 57.0
comp=Z,5.4nm,0.7s
NC405 NORSAR Array S **32.24 324** P **P** **10 24 00.7 +0.7**
NB2 NORSAR Subarra **32.44 324** P **P** **10 24 01.8 0.0**
comp=Z,4.9nm,0.8s,baz=117,slow=8.6
NOA NORSAR Array B **32.44 324** P **P** **10 24 01.8 0.0**
comp=Z,3.4nm,0.9s,baz=116,slow=8.4,SNR=19
comp=Z,3.4nm,0.9s
NAO01 NORSAR Array S **32.51 324** P **P** **10 24 02.6 +0.3**
SENIN Lac Senin/Sane **32.52 296** P **P** **10 24 02.7 -0.2**
SENIN IAmb IAmb 10 24 31.0
comp=Z,8.8nm,1.2s
ARCES ARCESS Array B **32.71 343** P **P** **10 24 03.6 -0.4**
comp=Z,0.9nm,0.6s,baz=140,slow=10,SNR=5.0
ARCES LR LR 10 37 27.2
comp=Z,72nm,18.7s,baz=110,slow=36
comp=Z,0.9nm,0.6s
BNI Bardonecchia **33.09 294** P **P** **10 24 08.5 +0.8**
BNI IAmb IAmb 10 24 47.7
comp=Z,16nm,1.4s
BNI Bardonecchia **33.09 294** P **P** **10 24 08.5 +0.8**
BNI pmax pmax
comp=Z,16nm,1.5s
KEST Kesra **33.29 276** P **P** **10 24 09.8 +0.3**
comp=Z,7.4nm,0.9s,baz=153,slow=1.7,SNR=4.1
comp=Z,7.4nm,0.9s
KEST Kesra **33.29 276** IAmb IAmb 10 24 12.8
comp=Z,15nm,1.1s
KNGR Kungurtug, Tuv **33.65 56**⇑ *i*P **P** **10 24 15.7 +3.1**
KNGR pmax pmax
comp=Z,3.0nm,1.0s
SHL Shillong **36.58 101** P **P** **10 24 38.4 +0.3**

SHL Shillong **36.58 101** P **P** **10 24 38.4 +0.3**
SHL pmax pmax
comp=Z,14nm,1.0s
GTA2 Gaotai **36.82 75** *e*P **P** **10 24 42.5 +2.5**
GTA2 pP pP 10 24 55.3 +2.8
GTA2 pmax pmax
comp=Z,6.0nm,0.9s
TLY Talaya **37.49 54** LR LR 10 41 23.6
comp=Z,117nm,20.7s,baz=278,slow=38
EKA Eskdalemuir Ar **38.83 312** P **P** **10 24 57.3 +0.7**
comp=Z,3.8nm,0.6s,baz=97,slow=8.2,SNR=20
comp=Z,3.8nm,0.6s
ESK Eskdalemuir **38.86 312** P **P** **10 24 56.9 +0.1**
ESK Eskdalemuir **38.86 312** P **P** **10 24 56.9 +0.1**
ESK pmax pmax
comp=Z,44nm,1.5s
SONM Songino Array **39.67 60** P **P** **10 25 05.2 +1.4**
comp=Z,0.6nm,0.8s,baz=277,slow=9.3,SNR=4.4
SONM LR LR 10 41 21.7
comp=Z,48nm,22.0s,baz=292,slow=36
comp=Z,0.6nm,0.8s
ULN Ulaanbaatar **40.10 60** P **P** **10 25 07.4 -0.1**
ULN IAmb IAmb 10 25 23.9
comp=Z,10nm,1.1s
ULN Ulaanbaatar **40.10 60**⇓ *i*P **P** **10 25 09.6 +2.1**
ULN pmax pmax
comp=Z,4.0nm,0.9s
SPB2 Spitsbergen Ar **40.97 350** P **P** **10 25 15.5 +1.5**
SPITS Spitsbergen Ar **40.98 350** P **P** **10 25 15.7 +1.6**
comp=Z,5.0nm,0.7s,baz=136,slow=11,SNR=17
comp=Z,5.0nm,0.7s
LZH Lanzhou **40.99 78** *e*P P 10 25 23.8 +8.9
LZH sP pP 10 25 30.3 +2.8
LZH pmax pmax
comp=Z,14nm,1.5s
ESBB Sonseca Array **41.98 288** P **P** **10 25 23.2 +0.4**
ESBB IAmb IAmb 10 25 23.9
comp=Z,11nm,1.0s
ESDC Sonseca Array **41.98 288** P **P** **10 25 23.0 +0.1**
comp=Z,6.5nm,0.8s,baz=64,slow=8.2,SNR=26
comp=Z,6.5nm,0.8s
PZH PanZhiHua **43.62 92** P **P** **10 25 37.5 +1.1**
PESTR Estremoz **44.90 289** P **P** **10 25 46.8 +0.4**
HHC Hu-ho-hao-te **45.01 68** *e*P **P** **10 25 48.0 +0.7**
HHC pmax pmax
comp=Z,12nm,0.5s
HHC pmax pmax
comp=Z,81nm,4.6s
KMI2 Kunming **45.10 93** P **P** **10 25 50.0 +1.7**
KMI2 pmax pmax
comp=Z,18nm,0.7s
MD31 MD31 **45.15 279** P **P** **10 25 48.4 -0.1**
MD31 IAmb IAmb 10 26 04.1
comp=Z,16nm,1.4s
XAN Xi'an **45.62 78** P **P** **10 25 53.5 +1.3**
XAN pP pP 10 26 07.5 +2.6
XAN pmax pmax
comp=Z,13nm,1.0s
CHTO Chiang Mai **45.81 103** P **P** **10 25 54.1 +0.4**
CHTO IAmb IAmb 10 25 56.8
comp=Z,4.1nm,0.7s
CHTO Chiang Mai **45.81 103** P **P** **10 25 54.1 +0.4**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr **46.02 103** P **P** **10 25 56.4 +0.9**
comp=Z,2.7nm,0.7s,baz=300,slow=8.5,SNR=23
comp=Z,2.7nm,0.7s
DAG Danmarks Havn **47.00 343** *i* P **P** **10 26 02.6 +0.3**
DAG IAmb IAmb 10 26 04.1
comp=Z,2.8nm,0.6s
BORG Borgarnes **47.55 326** LR LR 10 46 40.6
comp=Z,58nm,20.0s,baz=98,slow=37
NOR Nord **47.62 349** *i* P **P** **10 26 08.2 +1.1**
NOR IAmb IAmb 10 26 10.6
comp=Z,2.3nm,0.9s
HNS HongShan **48.55 72**⇑ P **P** **10 26 17.5 +2.7**
HNS pmax pmax
comp=Z,5.0nm,0.9s
YAK Yakutsk **50.41 37** LR LR 10 50 31.9
comp=Z,142nm,20.2s,baz=275,slow=39
TORD Torodi Ar. Bea **51.05 253** P **P** **10 26 32.1 -2.0**
comp=Z,1.1nm,0.7s,baz=42,slow=5.0,SNR=7.2
TORD PcP **PcP** **10 27 49.3 -0.3**
comp=Z,1.3nm,0.8s,baz=41,slow=2.6,SNR=5.4
comp=Z,1.1nm,0.7s
TORD Torodi Ar. Bea **51.05 253** IAmb IAmb 10 26 37.7
comp=Z,2.1nm,0.8s
SUMG Summit **52.44 338** *i* P **P** **10 26 45.7 +1.5**
HEH HeiHe **52.44 52** *e*P **P** **10 26 45.5 +1.5**
HEH pmax pmax
comp=Z,8.0nm,0.9s
NJ2 Nanjing **53.96 76** *e*P **P** **10 26 55.0 -0.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
NEEM North Greenlan **54.06 345** *i* P **P** **10 26 56.7 +0.8**
NEEM IAmb IAmb 10 26 59.2
comp=Z,4.8nm,0.9s
KLR Kul'dur **55.44 52** LR LR 10 51 36.7
comp=Z,32nm,21.6s,baz=322,slow=37
KULLO Kullorsuaq **56.65 342** *i* P **P** **10 27 16.8 +2.6**
KULLO IAmb IAmb 10 27 19.0
comp=Z,19nm,1.2s
SAQQ Saqqaq **57.41 337** *i* P **P** **10 27 22.1 +2.5**
SAQQ IAmb IAmb 10 27 24.6
comp=Z,11nm,0.9s
USRK Ussuriysk Ar. **57.68 57** P **P** **10 27 22.4 +0.6**
comp=Z,3.0nm,0.8s,baz=284,slow=10,SNR=11
comp=Z,3.0nm,0.8s
TULEG Thule **57.98 346** *i* P **P** **10 27 24.8 +1.3**
TULEG IAmb IAmb 10 27 26.1
comp=Z,3.0nm,0.9s
KSRS Korea Array **58.00 66** P **P** **10 27 25.0 +0.8**
comp=Z,1.1nm,0.6s,baz=284,slow=6.6,SNR=4.2
comp=Z,1.1nm,0.6s
SFJD Kangerlussuaq **58.38 333** LR LR 10 52 09.3
comp=Z,65nm,21.4s,baz=18,slow=36
DBIC Dimbokro **60.15 252** P **P** **10 27 39.4 -0.1**
comp=Z,3.2nm,0.3s,baz=69,slow=7.8,SNR=8.9
comp=Z,3.2nm,0.3s
DBIC Dimbokro **60.15 252** P **P** **10 27 39.6 +0.2**
DBIC Dimbokro **60.15 252** P **P** **10 27 39.6 +0.2**
DBIC pmax pmax
comp=Z,7.0nm,1.0s
MA2 Magadan **60.89 35** LR LR 10 56 57.0
comp=Z,69nm,18.4s,baz=274,slow=39
MJAR Matsushiro Arr **65.57 62** LR LR 11 00 16.7
comp=Z,28nm,19.7s,baz=184,slow=39
ILON Igloolik, Nuna **65.76 344** P **P** **10 28 16.4 +0.6**
ILON IAmb IAmb 10 28 17.3
comp=Z,8.1nm,1.4s
PETK Petropavlovsk- **67.68 39** LR LR 11 01 07.3
comp=Z,73nm,18.2s,baz=283,slow=39
A36M Sachs Harbour **68.39 359** P **P** **10 28 33.9 +1.4**
B22K Teshekpuk Lake **68.60 9** IAmb IAmb 10 28 50.8
comp=Z,7.7nm,1.0s
LBTB Lobatse **68.93 205** LR LR 11 01 29.6
comp=Z,87nm,19.9s,baz=188,slow=38
LBTB Lobatse **68.93 205** P **P** **10 28 37.7 +1.1**
LBTB Lobatse **68.93 205** P **P** **10 28 37.7 +1.1**
LBTB pmax pmax
comp=Z,14nm,1.2s
B21K Ikpikpuk River **69.13 9** IAmb IAmb 10 28 54.7
comp=Z,8.5nm,1.1s
D19K Kuna River **69.69 11** IAmb IAmb 10 28 58.0
comp=Z,9.6nm,1.1s
C24K Franklin Bluff **69.70 7** IAmb IAmb 10 28 57.9
comp=Z,9.1nm,1.1s
D20K Etivluk River **69.71 11** IAmb IAmb 10 28 58.3
comp=Z,14nm,1.4s
C27K Jago River **70.22 6** IAmb IAmb 10 29 01.1
comp=Z,6.8nm,1.1s
E18K Tukpahlearik C **70.28 13** IAmb IAmb 10 29 01.4
comp=Z,11nm,1.5s
D25K Kavik River **70.30 7** IAmb IAmb 10 29 00.4
comp=Z,5.0nm,1.1s
E19K Redstone River **70.78 11** IAmb IAmb 10 28 49.6
comp=Z,5.2nm,0.7s
E22K Anaktuvuk Pass **70.88 9** P **P** **10 28 48.7 +0.8**
F21K Alatna River **71.53 10** IAmb IAmb 10 29 09.2
comp=Z,5.3nm,1.1s
E29M Blow River **71.81 4** IAmb IAmb 10 29 11.5
comp=Z,7.3nm,1.2s
SCHQ Schefferville **71.92 328** P **P** **10 28 55.4 +0.9**
comp=Z,4.0nm,0.5s,baz=38,slow=5.8,SNR=14
comp=Z,4.0nm,0.5s
SCHQ Schefferville **71.92 328** P **P** **10 28 55.9 +1.4**
SCHQ IAmb IAmb 10 28 58.0

	comp=Z,5.7nm,0.8s						
BMAR	**Burnt Mountain**	**72.31**	**6**	P	**P**	**10 28 58.7**	**+2.1**
BOSA	**Boshof**	**72.39**	**204**	P	**P**	**10 28 57.0**	**-0.5**
	comp=Z,3.9nm,0.9s,baz=63,slow=5.9,SNR=3.8						
	comp=Z,3.9nm,0.9s						
BOSA	**Boshof**	**72.39**	**204**	P	**P**	**10 28 58.2**	**+0.7**
BOSA				IAmb	IAmb	10 28 58.4	
	comp=Z,9.0nm,1.1s						
BOSA	**Boshof**	**72.39**	**204**	P	**P**	**10 28 58.2**	**+0.7**
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
IMAR	**Indian Mountai**	**72.66**	**11**	P	**P**	**10 29 00.1**	**+1.5**
G24K	**Hadweenzic Riv**	**72.74**	**8**	IAmb	IAmb	10 29 16.9	
	comp=Z,7.5nm,1.1s						
H21K	**Melozitna Rive**	**73.10**	**10**	IAmb	IAmb	10 29 18.4	
	comp=Z,8.3nm,1.2s						
G30M	**tAoh Zraii Nji**	**73.29**	**3**	IAmb	IAmb	10 29 19.0	
	comp=Z,7.4nm,0.9s						
I28M	**Miner Creek**	**74.61**	**5**	IAmb	IAmb	10 29 26.1	
	comp=Z,6.5nm,1.2s						
ILAR	**Eielson Array**	**74.68**	**8**	P	**P**	**10 29 11.5**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=334,slow=3.7,SNR=9.4						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**74.68**	**8**	P	**P**	**10 29 11.2**	**+0.7**
CCB	**Clear Creek Bu**	**74.70**	**8**	P	**P**	**10 29 11.2**	**+0.6**
SHEM	**Shemya Is, Ala**	**75.25**	**32**	LR	LR	11 04 19.2	
	comp=Z,27nm,19.1s,baz=312,slow=37						
PPLA	**Purkeypile**	**75.81**	**11**	P	**P**	**10 29 18.1**	**+0.9**
PPLA				IAmb	IAmb	10 29 32.3	
	comp=Z,14nm,1.4s						
RIDG	**Independent Ri**	**75.89**	**7**	P	**P**	**10 29 18.6**	**+1.0**
DAWY	**Dawson**	**76.02**	**5**	P	**P**	**10 29 19.2**	**+0.9**
DAWY				IAmb	IAmb	10 29 35.3	
	comp=Z,8.0nm,1.2s						
DOT	**Dot Lake**	**76.06**	**7**	P	**P**	**10 29 20.3**	**+1.8**
DHY	**Denali Highway**	**76.27**	**9**	P	**P**	**10 29 21.2**	**+1.3**
DHY				IAmb	IAmb	10 29 38.7	
	comp=Z,10nm,1.4s						
SKT	**Skwentna**	**76.78**	**11**	P	**P**	**10 29 23.2**	**+0.6**
BCAR	**Beaver Creek A**	**76.84**	**6**	P	**P**	**10 29 24.7**	**+1.8**
KAPI	**Kapp ang**	**76.84**	**108**	LR	LR	11 09 52.4	
	comp=Z,16nm,18.4s,baz=186,slow=41						
YKA	**Yellowknife Ar**	**77.34**	**353**	P	**P**	**10 29 26.4**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=6.7,slow=6.1,SNR=24						
	comp=Z,0.8nm,0.5s						
SML	**Sawmill**	**77.38**	**9**	P	**P**	**10 29 27.0**	**+0.9**
SUA	**Susitna One**	**77.39**	**11**	P	**P**	**10 29 27.4**	**+1.2**
FCC	**Fort Churchill**	**77.60**	**342**	P	**P**	**10 29 28.7**	**+1.5**
FCC				IAmb	IAmb	10 29 49.5	
	comp=Z,5.6nm,1.2s						
FCC	**Fort Churchill**	**77.60**	**342**	P	**P**	**10 29 28.7**	**+1.5**
FCC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RC01	**Rabbit Creek A**	**77.89**	**10**	P	**P**	**10 29 29.9**	**+1.2**
DLBC	**Dease Lake**	**82.02**	**1**	LR	LR	11 12 48.2	
	comp=Z,37nm,19.3s,baz=284,slow=40						
NEW	**Newport**	**91.63**	**352**	LR	LR	11 21 09.8	
	comp=Z,30nm,18.4s,baz=349,slow=42						
TKL	**Tuckaleechee C**	**94.24**	**325**	LR	LR	11 12 51.0	
	comp=Z,27nm,20.7s,baz=10,slow=35						
PDAR	**Pinedale Array**	**95.94**	**346**	LR	LR	11 17 08.8	
	comp=Z,13nm,18.5s,baz=346,slow=37						
WRA	**Warramunga Arr**	**97.31**	**110**	P	**P**	**10 31 03.3**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=296,slow=12,SNR=2.3						
	comp=Z,0.6nm,0.9s						
NVL	**N'lazarevskaya**	**113.98**	**193**	*i* PKIKP	**PKiKP**	**10 36 11.1**	**+2.2**
NVL				*e*		10 37 05.6	
NVL				*e*PPP	PPP	10 39 29.9	
NVL				*e*		10 43 18.5	
NVL				*e*SS	SS	10 52 52.8	+2.6
NVL				*e*SSS	SSS	10 57 07.1	
NVL				pmax	pmax		
	comp=Z,27nm,1.6s						
NVL				MLR	MLR		
	comp=Z,1μm,20.0s						
PLCA	**Paso Flores**	**136.47**	**249**	PKP	**PKPdf**	**10 36 53.2**	**+0.4**
	comp=Z,2.9nm,1.2s,baz=210,slow=6.5,SNR=4.0						

HEL 27 10:21:25.3±0.2, 64°.67N×30°.74E, h0km, ML1.4,
Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.58**	**218**	PG	Pg	10 21 35.9	-0.4
RMF				SG	Sg	10 21 43.5	-0.2
RMF				smax	smax	10 21 43.7	
	comp=Z,8.6nm,0.2s						
KU1	**Kurvinen**	**1.02**	**331**	PG	Pg	10 21 44.1	-0.8
KU1				SG	Sg	10 21 57.1	-1.1
KU6	**Riekki**	**1.40**	**346**	PG	Pn	10 21 50.7	-1.4
	baz=162						
KU6				smax	smax	10 22 07.5	
	comp=Z,2.5nm,0.2s						
KU6				SG	Sg	10 22 08.6	-1.8
KU2	**Taivalkoski**	**1.48**	**316**	PG	Pn	10 21 51.5	-1.7
KU2				SN	Sg	10 22 12.7	-0.3
OLKF	**Oulanka, Finla**	**1.75**	**342**	PG	Pn	10 21 56.9	+0.1
OLKF				smax	smax	10 22 17.4	
	comp=Z,2.7nm,0.2s						
OLKF				SG	Sn	10 22 19.8	+0.1
JOF	**Joensuu**	**1.78**	**172**	PG	Pn	10 21 56.9	-0.3
	baz=354						
JOF				SG	Sn	10 22 20.8	+0.3
NIF	**Nilsia**	**1.82**	**226**	PG	Pn	10 21 58.2	+0.3
NIF				smax	smax	10 22 19.5	
	comp=Z,2.9nm,0.2s						
NIF				SN	Sg	10 22 23.6	-0.2
OUL	**Oulu**	**2.11**	**284**	PG	Pb	10 22 03.3	-1.0
OUL				SG	Sn	10 22 29.8	+1.2
RANF	**Ranua**	**2.13**	**311**	PG	Pn	10 22 03.2	+1.1
RANF				SB	Sn	10 22 30.4	+1.1
OBF4	**Vikkela, Lumij**	**2.42**	**276**	PG	Pb	10 22 08.1	-1.6
	baz=93						
OBF4				smax	smax	10 22 36.8	
	comp=Z,1.3nm,0.2s						
OBF4				SG	Sb	10 22 40.1	+0.1
OUF	**Merijarvi**	**2.62**	**266**	PB	Pb	10 22 11.0	-2.0
	baz=80						
OUF				smax	smax	10 22 42.5	
	comp=Z,2.1nm,0.2s						
OUF				SG	Sb	10 22 44.6	-1.0
RNF	**Rovaniemi**	**2.76**	**317**	SG	Sb	10 22 48.5	-1.3
SUF	**Sumiainen**	**2.83**	**228**	PG	Pb	10 22 15.2	-1.5
SUF				smax	smax	10 22 48.7	
	comp=Z,0.6nm,0.2s						
SUF				SG	Sb	10 22 51.9	+0.1
TOF	**Tornio**	**3.03**	**301**	PB	Pn	10 22 16.5	+2.0
TOF				smax	smax	10 22 54.4	
	comp=Z,0.6nm,0.2s						
TOF				SG	Sb	10 22 56.4	-1.2
RUF	**Ruokolahti**	**3.36**	**195**	SB	Sn	10 23 02.1	+2.6
KLF	**Kolari**	**3.78**	**316**	SG	Sb	10 23 21.5	+2.4
FIA0	**FINESS Array S**	**3.87**	**215**	PG	Pb	10 22 36.3	+1.9
FIA0				SN	Sn	10 23 10.0	-2.1
VAF	**Ylistaro**	**3.93**	**249**	PN	Pn	10 22 28.5	+1.8
RAJF	**Raja-Jooseppi**	**3.94**	**347**	SG	Sg	10 23 28.3	-3.4
BURU	**Burvik**	**4.03**	**273**	SG	Sg	10 23 32.3	-2.3
UMAU	**Umeaa**	**4.46**	**264**	SG	Sb	10 23 42.6	+4.1
HEF	**Hetta**	**4.70**	**326**	SG	Sb	10 23 48.8	+3.4

*KRNET **27** 10:29:06.4±0.1, 40°.99N×69°.55E, mb2.6*
ISC 27 10:29:07.1±1.9, 41°.02N±0°.06×69°.6E±0°.1, h10km, n4,
σ0°45/7, 7C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**1.24**	**65**	⇑*i*P	**Pb**	**10 29 30.7**	**0.0**
TRKS				⇑*i*S	**Sn**	**10 29 48.0**	**+0.4**
BTK	**Batken**	**1.31**	**136**	⇑*i*P	**Pn**	**10 29 30.9**	**-0.7**
BTK				⇑*i*S	**Sb**	**10 29 49.1**	**+0.2**
GAR	**Garm**	**2.08**	**165**	⇑*i*P	**Pn**	**10 29 42.2**	**0.0**
GAR				⇑*i*S	**Sn**	**10 30 08.5**	**+0.3**
KK31	**Karatay Array**	**2.18**	**17**	⇑⇑*i*P	**Pg**	**10 29 49.0**	**0.0**
	0.5nm,0.2s,baz=198,slow=18,SNR=24						
KK31				Lg	Lg	10 30 22.4	
	1.9nm,0.2s,baz=197,slow=27,SNR=12						

*IDC **27** 10:52:17.4±1.1, 26°.77N×140°.27E, h383km±10km, mb2.9/5, mbtmp3.7/6, Error ellipse: s-maj=31.6km s-min=19.7km az=77.0*
*JMA **27** 10:52:20.8±0.1, 27°N±2°×14°.1E±°, h405km, MV3.8/27, W*

OFF OGASAWARA
ISC 27 10:52:19.0±0.9, 26°.8N±0°.1×140°.7E±0°.2, h400km, n16,
σ1$39/19, mb3.1/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.37**	**97**	P	**Pn**	**10 53 12.8**	**+1.3**
JHH2				*e*S	**S**	**10 53 54.4**	**+0.4**
CBIJ	**Chichi jima**	**1.40**	**77**	P	**Pn**	**10 53 12.2**	**+0.5**
CBIJ				*e*S	**S**	**10 53 52.2**	**-2.0**
JCJ	**Chichijima**	**1.40**	**77**	P	**Pn**	**10 53 10.8**	**-0.8**
	47nm,0.3s,baz=140,slow=23,SNR=7.8						
JCJ				S	**S**	**10 53 52.5**	**-1.6**
	75nm,0.3s,baz=284,slow=22,SNR=4.9						
TTO1	**TONANKAI O.B.S**	**7.58**	**335**	*e*P	**P**	**10 54 11.4**	**+2.2**
BSO1	**Boso 1**	**7.83**	**2**	*e*P	**Pn**	**10 54 11.6**	**+0.3**
BSO3	**Boso 3**	**7.98**	**359**	*e*P	**Pn**	**10 54 13.2**	**-0.1**
JIE	**Ise**	**8.30**	**337**	*e*P	**P**	**10 54 19.0**	**+1.5**
JKN2	**Miekihoku**	**8.32**	**334**	*e*P	**P**	**10 54 19.4**	**+1.6**
JHO	**Hitachi**	**9.78**	**360**	*e*P	**P**	**10 54 33.9**	**-0.1**
MJAR	**Matsushiro Arr**	**9.93**	**349**	P	**P**	**10 54 34.4**	**-1.3**
	3.4nm,0.8s,baz=157,slow=8.8,SNR=6.2						
WRA	**Warramunga Arr**	**46.87**	**188**	P	**P**	**11 00 10.3**	**-0.9**
	0.3nm,0.7s,baz=6.6,slow=7.8,SNR=6.5						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**52.27**	**315**	P	**P**	**11 00 49.2**	**-1.8**
	0.4nm,0.4s,baz=90,slow=8.4,SNR=4.3						
	0.4nm,0.4s						
YKA	**Yellowknife Ar**	**73.05**	**28**	P	**P**	**11 03 07.0**	**+0.7**
	0.3nm,0.7s,baz=279,slow=6.3,SNR=3.6						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**77.60**	**333**	P	**P**	**11 03 31.0**	**-0.9**
	0.8nm,0.3s,baz=65,slow=4.6,SNR=11						
	0.8nm,0.3s						
NVAR	**Mina Array Bea**	**81.77**	**51**	P	**P**	**11 03 57.0**	**+2.2**
	0.4nm,0.7s,baz=311,slow=5.2,SNR=3.9						
	0.4nm,0.7s						
PLCA	**Paso Flores**	**150.74**	**126**	PKPbc	**PKiKP**	**11 11 25.6**	**+0.3**
	0.5nm,0.6s,baz=276,slow=1.9,SNR=4.8						

*SDD **27** 11:04:53.8±1.7, 19°.26N×70°.04W, h20km±10km, MD2.9, ML2.7, MW2.9, Presumed earthquake*
*OSPL **27** 11:04:58.4±0.9, 19°.23N×70°.13W, h14km±6km, ML2.0, Presumed earthquake*
ISC 27 11:04:54.4±0.9, 19°.15N±0°.03×70°.04W±0°.03, h16km±7km,
n11, σ1$67/20, 5C-7D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR08	**Loma La Naviza**	**0.19**	**174**	⇓*e*Pg	**Pg**	**11 04 59.6**	**+0.6**
DR08				⇑*e*Sg	**Sg**	**11 05 04.7**	**+2.6**
DR08				IAML		11 05 05.3	
	comp=N,32μm,0.1s						
NADR	**Nagua**	**0.27**	**41**	⇓*e*Pg	**Pg**	**11 04 57.9**	**-2.3**
NADR				IAML		11 05 02.5	
	comp=N,5μm,0.3s						
NADR				⇑*e*Sg	**Sg**	**11 05 02.6**	**-1.6**
LONA1	**Toro Cenizo, N**	**0.28**	**36**	*i* P	**Pb**	**11 05 03.9**	**+2.8**
LONA1				IAML		11 05 07.6	
	comp=Z,2μm,5.7s						
LONA1				*e*S	**Sb**	**11 05 08.4**	**+2.8**
SC01	**Santiago de lo**	**0.70**	**293**	*e*S	**Sg**	**11 05 17.3**	**-0.2**
SC01				IAML		11 05 21.8	
	comp=Z,53nm,0.4s						
HATOM	**Hato Mayor del**	**0.72**	**120**	*e*Pg	**Pb**	**11 05 06.9**	**-1.7**
HATOM				⇓*e*Sg	**Sb**	**11 05 17.7**	**-0.7**
HATOM				IAML		11 05 18.5	
	comp=N,87nm,0.3s						
BANI	**BANI**	**0.81**	**202**	⇓*e*Pg	**Pb**	**11 05 09.9**	**-0.3**
BANI				⇑*e*Sg	**Sb**	**11 05 21.9**	**+0.8**
BANI				IAML		11 05 24.1	
	comp=N,227nm,0.1s						
SDDR	**Presa de Saban**	**1.19**	**262**	⇓*e*Pg	**Pn**	**11 05 15.8**	**-0.7**
SDDR				⇓*e*Sg	**Sb**	**11 05 29.9**	**-1.9**
SDDR				IAML		11 05 34.4	
	comp=N,20nm,0.6s						
LOPP1	**Punta Rusia, P**	**1.29**	**303**	*i* P	**Pn**	**11 05 18.2**	**+0.3**
LOPP1				*e*S	**Sb**	**11 05 34.3**	**-0.6**
LOPP1				IAML		11 05 36.8	
	comp=Z,64nm,1.2s						
HIDR	**Higuey Centro**	**1.37**	**114**	⇑*e*Pg	**Pn**	**11 05 19.4**	**+0.5**
HIDR				⇑*e*Sg	**Sn**	**11 05 35.9**	**-0.9**
HIDR				IAML		11 05 37.7	
	comp=N,116nm,0.2s						
LONE3	**El Aguacate, B**	**1.45**	**248**	*e*S	**Sn**	**11 05 39.6**	**+0.7**
LONE3				IAML		11 05 40.2	
	comp=Z,21nm,0.3s						
PODR	**Polo**	**1.53**	**230**	*e*Pg	**Pn**	**11 05 20.7**	**-0.6**
PODR				⇓*e*Sg	**Sn**	**11 05 42.8**	**+1.8**
PODR				IAML		11 05 46.6	
	comp=N,37nm,1.3s						

*IDC **27** 11:09:50.7±2.6, 8°.15N×73°.96W, h104km±29km, mb2.7/1, mbtmp3.3/3, MS2.9/1, Error ellipse: s-maj=37.7km s-min=10.6km az=131.0*
*RSNC **27** 11:09:50.6±0.0, 8°N±1°×7°.4W±°, h66km±2km, M3.0, ML2.9*
ISC 27 11:09:49.3±1.0, 8°.19N±0°.03×74°.12W±0°.03, h60km±10km,
n39, σ1$46/71, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMM05	**San Martn**	**0.62**	**117**	P	**Pn**	**11 10 03.1**	**+0.5**
VMM05				S	**Sn**	**11 10 13.4**	**+1.1**
OCAC	**Ocana**	**0.79**	**86**	P	**Pn**	**11 10 04.8**	**0.0**
OCAC				S	**Sn**	**11 10 17.0**	**+0.8**
VMM07	**Puerto Wilches**	**0.86**	**162**	P	**Pn**	**11 10 05.2**	**-0.4**
VMM07				S	**Sn**	**11 10 17.7**	**+0.1**
EZNC	**La Esperanza**	**0.97**	**125**	P	**Pn**	**11 10 06.9**	**-0.1**
EZNC				S	**Sn**	**11 10 21.0**	**+0.9**
LL8C	**La Loma 8 Chim**	**1.19**	**15**	P	**Pn**	**11 10 10.1**	**+0.3**
LL8C				S	**Sn**	**11 10 27.1**	**+2.0**
BRJC	**Barrancabermej**	**1.26**	**163**	P	**Pn**	**11 10 09.8**	**-1.0**
BRJC				S	**Sn**	**11 10 26.3**	**-0.6**
VMM09	**Lebrija**	**1.34**	**142**	P	**Pn**	**11 10 11.4**	**-0.5**
VMM09				S	**Sn**	**11 10 28.7**	**-0.1**
UREC	**San Jos de Ur**	**1.47**	**253**	P	**Pn**	**11 10 13.2**	**-0.4**
UREC				S	**Sn**	**11 10 32.3**	**+0.4**
PAMC	**Pamplona, Colo**	**1.64**	**121**	P	**Pn**	**11 10 16.3**	**0.0**
PAMC				S	**Sn**	**11 10 36.3**	**-0.3**
PTBC	**PUERTO BERRIO,**	**1.67**	**192**	P	**Pn**	**11 10 15.6**	**-0.8**
PTBC				S	**Sn**	**11 10 37.1**	**+0.3**
BARC	**Barichara**	**1.84**	**150**	P	**Pn**	**11 10 18.0**	**-0.8**
BARC				S	**Sn**	**11 10 40.2**	**-0.9**
SJCC	**San Jacinto, C**	**2.00**	**328**	P	**Pn**	**11 10 21.3**	**+0.5**
SJCC				S	**Sn**	**11 10 46.8**	**+2.1**
LCBC	**Los crdobas,**	**2.33**	**287**	P	**Pn**	**11 10 25.5**	**+0.3**
LCBC				S	**Sn**	**11 10 53.8**	**+1.1**
DBBC	**Dabeiba**	**2.38**	**241**	P	**Pn**	**11 10 27.0**	**+1.0**
DBBC				S	**Sn**	**11 10 55.4**	**+1.2**
APAC	**Apartado, Choc**	**2.46**	**263**	P	**Pn**	**11 10 27.4**	**+0.4**
APAC				S	**Sn**	**11 10 57.3**	**+1.4**
RUSC	**La Rusia**	**2.50**	**156**	P	**Pn**	**11 10 27.9**	**-0.2**
RUSC				S	**Sn**	**11 10 57.6**	**-0.1**
SPBC	**San Pablo de B**	**2.52**	**179**	P	**Pn**	**11 10 27.8**	**-0.2**
SPBC				S	**Sn**	**11 10 57.6**	**0.0**
CBOC	**Ciudad Bolivar**	**2.98**	**219**	P	**Pn**	**11 10 35.7**	**+1.4**
CBOC				S	**Sn**	**11 11 10.2**	**+1.2**
CRJC	**Cerrejon, Guaj**	**3.06**	**23**	P	**Pn**	**11 10 35.8**	**+0.4**
CRJC				S	**Sn**	**11 11 12.3**	**+1.4**
GUY2C	**Guyana, Caldas**	**3.20**	**203**	P	**Pn**	**11 10 37.8**	**+0.2**
GUY2C				S	**Sn**	**11 11 14.6**	**-0.1**
CAPC	**Capurgana**	**3.23**	**278**	P	**Pn**	**11 10 35.6**	**-2.0**
CAPC				S	**Sn**	**11 11 12.0**	**-2.9**
ROSC	**El Rosal**	**3.33**	**184**	P	**Pn**	**11 10 41.4**	**+2.0**
	7.6nm,0.3s,baz=83,slow=12,SNR=2.5						
ROSC				S	**Sn**	**11 11 20.1**	**+2.1**
	44nm,0.4s,baz=60,slow=6.8,SNR=9.9						
ROSC	**El Rosal**	**3.33**	**184**	P	**Pn**	**11 10 41.7**	**+2.3**
ROSC				S	**Sn**	**11 11 19.5**	**+1.5**
RECRC	**Villamaria, Ca**	**3.44**	**201**	P	**Pn**	**11 10 43.5**	**+2.6**
RECRC				S	**Sn**	**11 11 24.0**	**+3.3**
SDV	**Santo Domingo**	**3.51**	**78**	P	**Pn**	**11 10 42.3**	**+0.7**
	14nm,0.3s,baz=285,slow=8.4,SNR=32						
SDV				S	**Sn**	**11 11 21.4**	**-0.6**
	57nm,0.3s,baz=215,slow=7.9,SNR=8.7						
SDV	**Santo Domingo**	**3.51**	**78**	P	**Pn**	**11 10 42.1**	**+0.5**
SDV				S	**Sn**	**11 11 21.8**	**-0.3**
CHIC	**Chingaza**	**3.56**	**174**	P	**Pn**	**11 10 43.0**	**+0.6**
CHIC				S	**Sn**	**11 11 25.7**	**+2.2**
ANIL	**Santa Ana**	**3.89**	**199**	P	**Pn**	**11 10 48.6**	**+1.7**
ANIL				S	**Sn**	**11 11 35.8**	**+4.3**
PLMC	**San Jos del P**	**3.91**	**214**	P	**Pn**	**11 10 47.3**	**+0.3**
URIC	**Uribia, Colomb**	**4.07**	**31**	P	**Pn**	**11 10 48.1**	**-1.0**
URIC				S	**Sn**	**11 11 35.3**	**-0.1**
PRAC	**Prado**	**4.51**	**190**	P	**Pn**	**11 10 57.1**	**+1.9**
PRAC				S	**Sn**	**11 11 49.3**	**+2.9**
YOTC	**Yotoco, Valle**	**4.73**	**208**	P	**Pn**	**11 10 57.4**	**-0.9**
URMC	**La Uribe, Meta**	**4.92**	**183**	P	**Pn**	**11 11 00.7**	**-0.1**
URMC				S	**Sn**	**11 11 56.3**	**-0.1**
BCIP	**Isla Barro Col**	**5.74**	**280**	P	**Pn**	**11 11 11.5**	**-0.5**
BCIP				S	**Sn**	**11 12 13.6**	**-2.9**
MACC	**Macarena, Meta**	**6.01**	**177**	P	**Pn**	**11 11 14.7**	**-1.0**
MACC				S	**Sn**	**11 12 19.7**	**-3.5**
ATAH	**Atahualpa**	**15.81**	**196**	LR	LR	11 21 02.2	
	comp=Z,40nm,18.1s,baz=64,slow=42						
TXAR	**Lajitas Array**	**34.82**	**311**	P	**P**	**11 16 33.1**	**-1.7**
	0.1nm,0.5s,baz=124,slow=8.9,SNR=2.3						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**149.07**	**237**	PKPbc	**PKPdf**	**11 29 27.0**	**-0.6**
	0.7nm,1.1s,baz=110,slow=3.6,SNR=2.4						
WRA	**Warramunga Arr**	**150.09**	**244**	PKPbc	**PKPdf**	**11 29 30.5**	**+1.3**
	0.3nm,0.4s,baz=105,slow=2.8,SNR=9.3						

IDC 27 11:17:17.5±4.6, 20°.16S×66°.56E, h0km, mb3.5/5,
mbtmp3.5/5, MS3.3/2, Error ellipse: s-maj=134.5km
s-min=35.6km az=58.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**13.70**	**26**	T	T	11 34 15.2	
	baz=202,slow=75,SNR=6.4						
H08S2	**Diego Garcia H**	**13.71**	**26**	T	T	11 34 10.0	
	baz=202,slow=75,SNR=6.3						
H08S3	**Diego Garcia H**	**13.72**	**26**	T	T	11 34 09.4	
	baz=202,slow=75,SNR=7.0						
H04N2	**CROZET ISLANDS**	**28.63**	**202**	T	T	11 54 00.3	
	baz=32,slow=75,SNR=118						
H04N1	**CROZET ISLANDS**	**28.63**	**202**	T	T	11 54 01.2	
	baz=32,slow=75,SNR=158						
H04N3	**CROZET ISLANDS**	**28.65**	**202**	T	T	11 53 60.0	
	baz=32,slow=75,SNR=141						
CMAR	**Chiang Mai Arr**	**49.82**	**42**	P	P	11 26 12.4	0.0
	0.4nm,0.3s,baz=242,slow=9.3,SNR=4.1						
CMAR				LR	LR	11 47 16.4	
	comp=Z,18nm,18.0s,baz=35,slow=36						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**62.06**	**107**	P	P	11 27 40.5	+0.1
	0.3nm,0.7s,baz=269,slow=6.2,SNR=5.5						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**63.23**	**103**	P	P	11 27 48.1	-0.2
	0.4nm,0.9s,baz=262,slow=5.5,SNR=2.4						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**68.14**	**12**	P	P	11 28 19.3	0.0
	0.2nm,0.6s,baz=186,slow=5.7,SNR=3.8						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**71.26**	**8**	P	P	11 28 38.5	+0.1
	0.1nm,0.3s,baz=194,slow=6.2,SNR=3.9						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**72.95**	**2**	LR	LR	11 59 16.7	
	comp=Z,28nm,19.6s,baz=316,slow=34						

IDC 27 11:22:23.3±412.0, 67°.50N×40°.13E, h0km, Error ellipse:
s-maj=197.7km s-min=137.4km az=93.0, Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**8.12**	**291**	I	I	12 04 40.0	
	baz=89,slow=331,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**19.33**	**144**	I	I	13 17 30.0	
	baz=342,slow=333,SNR=0.5						
I18DK	**QAANAAQ INFRAS**	**29.21**	**335**	I	I	14 26 00.0	
	baz=47,slow=349,SNR=1.1						

IDC 27 11:44:08.2±6.3, 19°.98S×177°.33W, h0km, mb4.1/2,
mbtmp4.1/2, Error ellipse: s-maj=269.9km
s-min=69.0km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.25**	**256**	P	P	11 52 28.3	+0.6
	2.8nm,0.6s,baz=92,slow=8.3,SNR=57						
	2.8nm,0.6s						
WRA	**Warramunga Arr**	**45.30**	**261**	P	P	11 52 27.3	-0.8
	1.0nm,0.5s,baz=99,slow=8.3,SNR=28						
	1.0nm,0.5s						
BRTR	**Keskin Array B**	**146.95**	**313**	PKPbc	PKPbc	12 03 52.3	-0.8
	0.4nm,0.7s,baz=63,slow=3.5,SNR=1.7						

FUNV 27 12:09:41.3, 8°.74N×61°.82W, h36km, MW3.6, Presumed
earthquake, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	**3.13**	**297**	*e*P	Pn	12 10 26.3	-1.9
PCRV				*e*S	Sn	12 10 59.4	-4.9
CACV	**CAICARA DEL OR**	**4.82**	**256**	*e*P	Pn	12 10 42.5	-8.9
CACV				*e*S	Sn	12 11 28.5	-17
TACV	**Tcata**	**5.33**	**286**	*e*P	Pn	12 10 56.9	-1.5
TACV				*e*S	Sn	12 11 52.7	-5.8
BENV	**Beln**	**5.83**	**283**	*e*P	Pn	12 11 03.6	-1.8
BENV				*e*S	Sn	12 12 04.7	-6.4
TURV	**Turiam

ARG S **Sg** **12 20 51.1 -0.4**
RODB Rodos 1.32 9 P **Pb** **12 20 42.7 +0.4**
RODB S **Sg** **12 20 59.0 -0.2**
ZKR Zakros 1.43 269 Pn **Pg** **12 20 45.6 +1.5**
ZKR Sn **Sn** **12 21 05.2 +2.0**
ZKR Zakros 1.43 269 P **Pg** **12 20 46.5 +2.4**
ZKR Zakros 1.43 269 P **Pg** **12 20 44.6 +0.5**
ZKR S **Sn** **12 21 04.3 +1.1**
ZKR AML AML 12 21 13.1
5.3nm,0.7s
ZKR AML AML 12 21 16.8
10nm,0.8s
ZKR Zakros 1.43 269 P **Pg** **12 20 44.6 +0.5**
DAT Datca 1.61 349 Pn **Pn** **12 20 46.8 +0.3**
DAT Sn **Sn** **12 21 07.5 -0.6**
TURN Turunc 1.65 8 Pn **Pb** **12 20 47.8 -0.1**
TURN Turunc 1.65 8 P **Pg** **12 20 48.8 +0.4**
TURN S **Sg** **12 21 15.2 +5.5**
TURN IAML 12 21 16.0
comp=E,2µm,1.1s
TURN IAML 12 21 19.0
comp=N,2µm,0.7s
IZZE Mula-Seydike 1.66 38 P **Pn** **12 20 46.9 0.0**
IZZE S **Sg** **12 21 10.6 +0.7**
IZZE IAML 12 21 16.0
comp=N,2µm,0.5s
KSL Kastellorizon 1.67 52 P **Pb** **12 20 47.9 -0.3**
KSL S **Sg** **12 21 10.8 +0.6**
KSL AML AML 12 21 34.2
2.2nm,1.0s
KSL AML AML 12 21 43.8
4.1nm,1.8s
AKAS Kas 1.73 50 **Pb** **12 20 48.9 -0.4**
AKAS Kas 1.73 50 Pn **Pb** **12 20 49.1 -0.3**
AKAS Kas 1.73 50 P **Pb** **12 20 49.0 -0.4**
AKAS S **Sg** **12 21 12.5 +0.2**
AKAS IAML 12 21 17.0
comp=N,2µm,0.7s
AKAS IAML 12 21 40.0
comp=E,2µm,1.0s
FETY Fethiye 1.75 31 P Pn 12 20 37.5 -11
FETY S **Sn** **12 21 09.7 -1.6**
DALY Dalyan (Mula) 1.77 18 Pn **Pn** **12 20 48.9 +0.4**
NPS Neapolis 1.92 274 P **Pg** **12 20 53.7 +0.1**
NPS Neapolis 1.92 274 P **Pn** **12 20 51.4 +0.8**
DEMR Demre-Antalya 1.93 55 Pn **Pn** **12 20 51.4 +0.7**
BODT Bodrum 1.99 345 Pn **Pn** **12 20 52.4 +0.8**
YER Yerkesik 2.01 7 Pn **Pn** **12 20 52.5 +0.6**
YER Yerkesik 2.01 7 P **Pb** **12 20 53.5 -0.6**
YER S **Sn** **12 21 17.2 -0.5**
YKAV Yalikavak-Bodr 2.06 345 Pn **Pn** **12 20 53.1 +0.7**
CAME Cameli-Denizli 2.10 31 Pn **Pn** **12 20 53.9 +0.6**
KNIK Mula-Seydike 2.15 37 P **Pn** **12 20 54.2 +0.4**
KNIK S **Sg** **12 21 25.7 -0.1**
MLSB Milas 2.16 356 Pn **Pn** **12 20 54.3 +0.4**
ELL Elmali 2.25 44 **Pb** **12 20 57.1 -1.2**
ELL Elmali 2.25 44 Pn **Pn** **12 20 56.2 +0.9**
ELL Elmali 2.25 44 P **Pn** **12 20 56.4 +1.1**
ELL S **Sn** **12 21 24.6 +0.7**
ELL AML AML 12 21 48.9
7.5nm,1.0s
ELL AML AML 12 21 49.0
7.6nm,0.9s
ELL Elmali 2.25 44 P **Pn** **12 20 55.7 +0.4**
ELL S **Sb** **12 21 25.2 -1.6**
CAEL Denizli, Camel 2.27 29 P **Pn** **12 20 56.8 +1.3**
CAEL S **Sb** **12 21 26.9 -0.3**
CAEL IAML 12 21 57.0
comp=N,2µm,0.9s
CAEL IAML 12 22 08.0
comp=E,2µm,1.0s
AKUM Antalya-Kumluc 2.27 58 P **Pn** **12 20 55.7 +0.3**
AKUM S **Sb** **12 21 26.0 -1.1**
THERA Ancient Thera, 2.36 302 P **Pn** **12 20 58.3 +1.7**
THERA Ancient Thera, 2.36 302 P **Pn** **12 20 57.7 +1.1**
THERA S **Sn** **12 21 27.4 +1.1**
IACM Heraklion 2.37 275 P **Pn** **12 20 58.1 +1.4**
THR8 Santorini-Mono 2.38 303 P **Pn** **12 20 57.5 +0.7**
THR3 Thira Island, 2.43 302 P **Pn** **12 20 59.3 +1.7**
SNT5 Nea Kammeni, S 2.44 302 P **Pn** **12 20 59.1 +1.5**
THR9 Santorini-Faro 2.44 301 P **Pn** **12 20 59.3 +1.6**
SAP3 Santorini-Thir 2.49 302 P **Pn** **12 20 58.8 +0.5**
IDI Anoyia 2.52 274 **Pb** **12 21 02.1 -0.6**
IDI Anoyia 2.52 274 Pn **Pn** **12 21 00.9 +2.1**
IDI Anoyia 2.52 274 P **Pb** **12 21 01.8 -1.0**
IDI Anoyia 2.52 274 P **Pn** **12 20 59.5 +0.7**
APMY Acipayam-Deniz 2.57 25 Pn **Pn** **12 21 00.3 +0.7**
GCAM G?zelcaml? 2.62 347 Pn **Pn** **12 21 00.9 +0.7**
KORT Korkueli 2.69 46 Pn **Pn** **12 21 02.5 +1.3**
SMG Samos 2.72 341 P **Pn** **12 21 02.4 +0.8**
SMG Samos 2.72 341 P **Pn** **12 21 02.5 +0.9**
AYDB Zeytinkoy-Aydi 2.80 359 Pn **Pn** **12 21 03.2 +0.4**
ANTB Antalya 2.80 50 Pn **Pn** **12 21 04.5 +1.8**
NAZL Nazilli-Aydin 2.83 5 P **Pn** **12 21 04.9 +1.7**
VAM Vamos 3.09 276 P **Pn** **12 21 09.6 +3.0**
VAM Vamos 3.09 276 P **Pn** **12 21 07.4 +0.8**
ODEM Odemis-Izmir 3.13 2 Pn **Pn** **12 21 08.1 +0.8**
BCK Bucak 3.14 42 Pn **Pn** **12 21 08.8 +1.3**
GVD Gavdhos 3.19 266 Pn **Pn** **12 21 10.8 +2.7**
GVD Gavdhos 3.19 266 P **Pn** **12 21 11.2 +3.1**
GVD Gavdhos 3.19 266 P **Pn** **12 21 10.0 +1.9**
OSC1 CSNet OBS 1 3.20 120 P **Pn** **12 21 08.4 +0.3**
OSC1 S **Sn** **12 21 48.4 +1.5**
OSC1 AML AML 12 22 02.3
0.5nm,0.5s
OSC1 AML AML 12 22 09.5
0.5nm,0.6s
CHAN Chania 3.22 278 P **Pn** **12 21 08.9 +0.4**
BASM Basmaki-Afyon 3.25 31 Pn **Pn** **12 21 09.8 +0.9**
IMMV Iera Moni Meta 3.27 277 Pn **Pn** **12 21 11.5 +2.4**
IMMV Iera Moni Meta 3.27 277 P **Pn** **12 21 11.1 +3.0**
IMMV Iera Moni Meta 3.27 277 P **Pn** **12 21 10.9 +1.7**
BLCB Balcova 3.32 347 Pn **Pn** **12 21 11.0 +1.2**
BLCB Balcova 3.32 347 P **Pn** **12 21 10.8 +1.0**
MANT Manisa 3.38 8 Pn **Pn** **12 21 11.8 +1.0**
ISP Isparta 3.38 37 Pn **Pn** **12 21 12.1 +1.4**
ISP Isparta 3.38 37 P **Pb** **12 21 15.8 -1.8**
ISP Isparta 3.38 37 P **Pn** **12 21 12.2 +1.4**
KULA Kula-Manisa 3.42 9 Pn **Pn** **12 21 12.3 +1.1**
KNDR Palaiochora Ch 3.55 273 Pn **Pn** **12 21 15.8 +2.8**
KNDR Palaiochora Ch 3.55 273 P **Pn** **12 21 13.1 +0.1**
AKMS Akamas 3.59 91 P **Pn** **12 21 14.0 +0.4**
AKMS S **Sn** **12 21 57.9 +1.2**
AKMS AML AML 12 22 05.7
1.0nm,0.5s
AKMS AML AML 12 22 07.9
1.2nm,1.1s
AKMS Akamas 3.59 91 P **Pn** **12 21 13.6 0.0**
AKMS S **Sn** **12 21 57.6 +0.9**
GORD Gordes-Manisa 3.77 3 Pn **Pn** **12 21 17.5 +1.5**
ALFC Alefka 3.80 88 P **Pn** **12 21 16.5 0.0**
ALFC AML AML 12 22 03.3
0.9nm,0.7s
ALFC S **Sn** **12 22 04.3 +2.3**
ALFC AML AML 12 22 07.4
1.1nm,0.7s
NATA Nata 3.81 94 P **Pn** **12 21 17.5 +0.9**
NATA S **Sn** **12 22 04.0 +2.1**
NATA AML AML 12 22 07.1
3.5nm,0.5s
NATA AML AML 12 22 09.4
3.5nm,0.9s
ANKY Antikythira Is 3.87 282 P **Pn** **12 21 19.5 +2.1**
TROD Troodos 4.03 91 P **Pn** **12 21 19.9 +0.1**
TROD S **Sn** **12 22 09.0 +1.2**
TROD AML AML 12 22 19.2
0.7nm,0.6s
TROD AML AML 12 22 29.3
0.7nm,0.8s
KARY Karystos 4.04 317 P **Pn** **12 21 20.8 +1.0**
OSC2 CSNet OBS 4 4.13 119 P **Pn** **12 21 21.6 +0.7**
OSC2 S **Sn** **12 22 12.1 +2.3**
OSC2 AML AML 12 22 27.5
0.6nm,1.1s
OSC2 AML AML 12 22 28.4
0.9nm,1.1s
KTHA Kythira Island 4.14 287 P **Pn** **12 21 22.8 +1.7**
XYLS Xyliatos 4.18 90 P **Pn** **12 21 22.3 +0.6**
XYLS S **Sn** **12 22 12.5 +1.3**
XYLS AML AML 12 22 20.6
0.7nm,1.0s
XYLS AML AML 12 22 23.2
0.7nm,0.9s
SLUM Salum 4.30 213 P **Pn** **12 21 25.1 +1.8**
SLUM S **Sn** **12 22 13.2 -1.0**
VLY Voula,Athens 4.31 310 P **Pn** **12 21 25.1 +1.7**
PRK Paraskevi 4.31 342 P **Pn** **12 21 25.4 +1.9**
ASGA Asgata 4.36 93 P **Pn** **12 21 24.3 +0.1**
ASGA S **Sn** **12 22 18.2 +2.6**
ASGA AML AML 12 22 22.7
1.0nm,1.0s
ASGA AML AML 12 22 23.1
1.6nm,0.7s
ASGA Asgata 4.36 93 P **Pn** **12 21 24.1 0.0**
DION Dionisos Attik 4.37 313 P **Pn** **12 21 24.7 +0.4**
VLI Veliai 4.37 293 P **Pn** **12 21 25.9 +1.6**
VLI Veliai 4.37 293 P **Pn** **12 21 24.5 +0.3**
ATHU Athens Univers 4.39 311 P **Pn** **12 21 25.5 +1.0**
CSS Mathiatis 4.41 91 **Pn** **12 21 25.8 +1.0**
CSS Mathiatis 4.41 91 P **Pn** **12 21 25.1 +0.3**
CSS Mathiatis 4.41 91 P **Pn** **12 21 25.1 +0.3**
CSS S **Sn** **12 22 18.8 +1.9**
CSS AML AML 12 22 24.2
0.7nm,0.7s
CSS AML AML 12 22 26.4
0.5nm,0.9s
CSS Mathiatis 4.41 91 P **Pn** **12 21 26.3 +1.4**
BALB Balikesir 4.49 359 **Pn** **12 21 25.8 -0.2**
MVOU Mavrovouni 4.66 90 P **Pn** **12 21 28.8 +0.6**
MVOU S **Sn** **12 22 24.2 +1.4**
MVOU AML AML 12 22 33.3
0.4nm,0.8s
MVOU AML AML 12 22 34.3
0.5nm,1.0s
LIA Limnos Island 5.24 336 P **Pn** **12 21 35.8 -0.4**
ITM Ithomi 5.29 294 **Pn** **12 21 39.2 +2.3**
ITM Ithomi 5.29 294 P **Pn** **12 21 37.5 +0.6**
LKR Lokris 5.30 313 P **Pn** **12 21 38.2 +1.2**
GUR Goura 5.31 303 P **Pn** **12 21 38.4 +1.1**
PYL PYLOS 5.33 291 P **Pn** **12 21 38.9 +1.4**
KLV Kalavryta, Ach 5.50 304 P **Pn** **12 21 41.0 +1.2**
DRO Drossia 5.76 301 P **Pn** **12 21 44.0 +0.6**
EFP Efpalio 5.86 306 P **Pn** **12 21 47.1 +2.4**
ALN Alexandroupoli 5.94 346 Pn **Pn** **12 21 47.5 +1.6**
KIRS Kirsehir-Merke 6.21 48 ⇑P **Pn** **12 21 51.8 +2.1**
SWA2 6.25 201 P **Pn** **12 21 51.6 +1.5**
RYAN Fayoum 6.35 161 P **Pn** **12 21 52.5 +1.0**
BR105 Keskin Array S 6.42 43 P **Pn** **12 21 52.8 +0.3**
0.1nm152nm20nm,0.9s
BR104 Keskin Array S 6.42 43 P **Pn** **12 21 52.9 +0.3**
0.1nm129nm18nm,0.9s
BR106 Keskin Array S 6.43 43 P **Pn** **12 21 53.0 +0.3**
0.1nm107nm9.3nm,1.1s
BR131 Keskin Array S 6.43 43 **Pn** **12 21 54.0 +1.3**
BRTR Keskin Array B 6.43 43 Pn **Pn** **12 21 54.0 +1.3**
1.0nm,0.3s,baz=221,slow=14,SNR=18
BRTR Sn **Sn** **12 23 05.6 -1.3**
1.3nm,0.3s,baz=215,slow=26,SNR=7.6
BRTR LR LR 12 25 15.9
comp=Z,426nm,18.4s,baz=218,slow=47
4.0nm,0.6s
BRTR Keskin Array B 6.43 43 **Pn** **12 21 54.1 +1.4**
DQRL Deir Qamar 6.45 101 *e*P **Pn** **12 21 51.5 -1.5**
MMA0B Mount Meron ar 6.53 107 P **Pn** **12 21 55.3 +1.3**
MMA0B S **Sn** **12 23 09.4 +0.2**
MMAI Mount Meron Ar 6.53 107 Pn **Pn** **12 21 55.0 +0.9**
6.4nm,0.3s,baz=316,slow=15,SNR=12
MMAI Sn **Sn** **12 23 09.1 -0.2**
13nm,0.3s,baz=282,slow=32,SNR=8.0
7.5nm,0.5s
SLTI Sal'it 6.57 114 P **Pn** **12 21 54.8 +0.3**
SLTI S **Sn** **12 23 09.2 -1.0**
ORWL Qaraoun 6.58 102 *e*P **Pn** **12 21 54.2 -0.2**
HWQ Hawqa 6.64 95 *e*P **Pn** **12 21 55.2 -0.3**
GEM Giv'at Ha'Em 6.67 105 P **Pn** **12 21 56.6 +0.7**
GEM S **Sn** **12 23 12.2 -0.4**
SUZ Suez 6.70 141 P **Pn** **12 21 57.9 +1.6**
NATI Neve Ativ 6.71 104 P **Pn** **12 21 57.6 +1.2**
NATI S **Sn** **12 23 13.9 +0.4**
RCY Rachaya 6.72 102 *e*P **Pn** **12 21 56.2 -0.5**
SALP Salfit 6.77 115 P **Pn** **12 21 58.3 +1.1**
SALP S **Sn** **12 23 13.4 -1.6**
BEIL Beino 6.79 93 *e*P **Pn** **12 21 57.0 -0.6**
KZIT Kziot 6.86 126 P **Pn** **12 21 58.3 -0.2**
KZIT S **Sn** **12 23 13.9 -3.3**
KSHT Keshet 6.86 106 P **Pn** **12 22 00.1 +1.5**
KSHT S **Sn** **12 23 16.9 -0.5**
HMDT Nahal Hemdat 6.93 112 P **Pn** **12 21 59.8 +0.3**
HMDT S **Sn** **12 23 17.2 -1.9**
ZAF Zafarana 7.02 145 P **Pn** **12 22 01.0 +0.4**
FKH Fakeheh 7.02 95 *e*P **Pn** **12 22 00.1 -0.5**
YTIR Yattir 7.08 120 P **Pn** **12 22 01.4 -0.2**
YTIR S **Sn** **12 23 20.9 -1.9**
NBNS Bani Suef 7.09 156 P **Pn** **12 22 03.9 +2.3**
ZNM Zenema 7.10 143 P **Pn** **12 22 02.0 +0.2**
DSI Dead Sea 7.16 118 P **Pn** **12 22 03.1 +0.5**
DSI S **Sn** **12 23 23.2 -1.4**
MSBI Mazada 7.28 120 P **Pn** **12 22 04.5 +0.2**
MSBI S **Sn** **12 23 25.4 -2.1**
RMNI Mount Ramon 7.30 126 P **Pn** **12 22 03.8 -0.8**
RMNI S **Sn** **12 23 25.7 -2.5**
BNN Bunyan 7.32 57 **Pn** **12 22 06.1 +1.2**
GHAJ Ghor Haditha 7.43 119 **Pn** **12 22 07.6 +1.2**
GHAJ Ghor Haditha 7.43 119 P **Pn** **12 22 07.4 +1.0**
GHAJ S **Sn** **12 23 28.9 -2.4**
KRMI Paran Flat 7.59 129 P **Pn** **12 22 07.9 -0.6**
KRMI S **Sn** **12 23 32.2 -3.1**
ZFPI Zfri 7.60 125 P **Pn** **12 22 07.6 -1.1**
ZFRI Zfri 7.60 125 P **Pn** **12 22 08.2 -0.4**
ZFRI S **Sn** **12 23 31.9 -3.5**
ZFRI S **Sn** **12 23 32.0 -3.5**
PRNI Paran 7.62 127 P **Pn** **12 22 08.4 -0.5**
PRNI S **Sn** **12 23 32.9 -3.0**
KEK Kerkira 7.93 308 Pn **Pn** **12 22 12.9 -0.3**
ELND Elena 7.94 349 ⇑P **Pn** **12 22 15.6 +2.3**
HFRF Wahat Farafira 7.97 178 P **Pn** **12 22 15.1 +1.3**
HFRF S **Sn** **12 23 40.3 -4.3**
ASF Jabal al Asfar 8.02 109 Pn **Pn** **12 22 15.1 +0.6**
1.1nm,0.3s,baz=280,slow=9.0,SNR=15
ASF Sn **Sn** **12 23 46.5 +0.6**
1.2nm,0.3s,baz=82,slow=20,SNR=6.8
11nm,0.7s
EIL2 Elat 8.04 131 P **Pn** **12 22 14.4 -0.4**
EIL2 S **Sn** **12 23 42.9 -3.4**
EIL Elat 8.04 131 Pn **Pn** **12 22 15.1 +0.4**
2.6nm,0.3s,baz=330,slow=2.4,SNR=14
EIL Sn **Sn** **12 23 42.2 -4.1**
5.8nm,0.3s,baz=2.9,slow=23,SNR=6.5
17nm,0.5s
TIRR Tirgusor 9.31 2 Pn **Pn** **12 22 32.6 +0.5**
TIP Timpagrande 9.80 298 ⇓P **Pn** **12 22 38.1 -0.8**
TIP Timpagrande 9.80 298 **Pn** **12 22 38.1 -0.8**
TIP Timpagrande 9.80 298 P **Pn** **12 22 39.1 +0.2**
41nm,1.1s
MLR Muntele Rosu 10.45 352 Pn **Pn** **12 22 46.0 -1.8**
0.2nm,0.3s,baz=102,slow=8.3,SNR=6.2
MLR LR LR 12 27 23.8
comp=Z,155nm,20.4s,baz=192,slow=42
3.1nm,0.8s
MLR Muntele Rosu 10.45 352 ⇓P **Pn** **12 22 50.5 +2.6**
VOIR 10.52 349 ⇑P **Pn** **12 22 51.0 +2.3**
HERR Herculane 10.61 338 ⇓P **Pn** **12 22 51.6 +1.7**
VRI Vrincioaia 10.76 355 ⇑P **Pn** **12 22 54.5 +2.7**
CUC Castrocucco 10.78 300 **Pn** **12 22 52.9 +0.6**
GZR Gura Zlata 10.98 340 ⇑P **Pn** **12 22 57.1 +2.2**
ACER Acerenza 11.03 304 Pn **Pn** **12 22 55.0 -0.7**
OZUR 11.07 352 ⇑P **Pn** **12 22 58.4 +2.2**
VAE Valguarnera 11.18 286 Pn **Pn** **12 22 57.2 -0.5**
14nm,0.5s,baz=212,slow=16,SNR=1.3
RAFF Raffo Rosso 11.18 285 **Pn** **12 22 57.3 -0.4**
ONER Baraj Valea Uz 11.25 354 ⇑P **Pn** **12 23 01.5 +2.9**
BZS Buzias 11.52 337 ⇑P **Pn** **12 23 04.4 +2.0**
BURAR Bucovina Array 12.63 351 ⇓P **Pn** **12 23 20.8 +3.2**
GNI Garni 14.20 64 LR LR 12 29 36.9
comp=Z,66nm,20.1s,baz=272,slow=39
KBZ Khabaz 14.37 49 Pn **P** **12 23 45.5 -3.0**
0.5nm,0.3s,baz=230,slow=8.6,SNR=24
KBZ LR LR 12 29 27.1
comp=Z,85nm,19.9s,baz=218,slow=38
1.6nm,0.8s
SOKA Soboth 15.09 324 Pn **Pn** **12 23 52.1 +1.1**
6.7nm,1.0s
STHS Stebnicka Huta 15.10 343 *e*P **P** **12 23 58.9 +2.3**
KEST Kesra 15.19 278 Pn **Pn** **12 23 51.6 -0.8**
0.4nm,0.3s,baz=20,slow=5.1,SNR=3.9
3.8nm,0.9s
KEST Kesra 15.19 278 IAmb IAmb 12 24 12.8
comp=Z,17nm,0.9s
OBKA Obir 15.21 322 *e*Pn **Pn** **12 23 53.4 +0.7**
comp=Z,7.1nm,0.6s
RONA Rosalia, Austr 15.27 329 Pn **P** **12 23 56.2 -2.4**
comp=Z,3.0nm,0.6s
LANS Liptovska Anna 15.34 338 *e*P **P** **12 24 01.9 +2.6**
NIE Niedzica 15.34 341 P **Pn** **12 23 53.9 -0.5**
comp=Z,4.7nm,1.8s
SABO M.te Sabotino 15.35 319 Pn **Pn** **12 23 54.5 0.0**
SABO IAmb IAmb 12 24 19.9
comp=Z,51nm,1.3s
AK12 Malin Array Si 15.52 3 P **Pn** **12 23 56.3 -0.4**
AK02 Malin Array Si 15.54 3 P **Pn** **12 23 56.5 -0.4**
AK16 Malin Array Si 15.54 3 P **Pn** **12 23 56.6 -0.4**
AK11 Malin Array Si 15.56 3 P **Pn** **12 23 56.7 -0.4**
AK17 Malin Array Si 15.56 3 P **Pn** **12 23 56.8 -0.4**
AK01 Malin Array Si 15.57 3 P **Pn** **12 23 57.4 +0.1**
KIEV Kiev 15.57 3 ⇑P **P** **12 23 59.9 -1.9**
KIEV Kiev 15.57 3 Pn **Pn** **12 23 56.6 -0.8**
AKASG Malin Array Be 15.58 3 Pn **Pn** **12 23 56.4 -1.1**
comp=Z,1.6nm,0.3s,baz=194,slow=10,SNR=9.7
AKASG LR LR 12 30 44.2
comp=Z,64nm,19.7s,baz=220,slow=41
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 15.58 3 IAmb IAmb 12 24 02.8
comp=Z,5.1nm,1.2s
AKBB Malin Array Si 15.58 3 Pn **Pn** **12 23 56.8 -0.6**
AK18 Malin Array Si 15.60 3 P **Pn** **12 23 57.2 -0.5**
JAVC Velka Javorina 15.68 334 *e*P **P** **12 24 04.7 +1.7**
MYKA Terra Mystica 15.75 321 *e*Pn **Pn** **12 24 00.1 +0.3**
comp=Z,3.3nm,0.5s
KBA Koelnbreinsper 16.20 322 *e*Pn **Pn** **12 24 05.9 +0.2**
comp=Z,3.7nm,0.6s
KRUC Moravsky 16.32 332 *e*PN **Pn** **12 24 08.2 +1.2**
RNPP9 Sopachiv 16.33 355 P **Pn** **12 24 07.5 +0.3**
VRAC Vranov 16.44 333 Pn **Pn** **12 24 08.3 -0.3**
comp=Z,0.4nm,0.3s,baz=148,slow=6.8,SNR=3.6
VRAC LR LR 12 30 59.4
comp=Z,157nm,18.0s,baz=158,slow=40
comp=Z,1.7nm,0.4s
VRAC Vranov 16.44 333 *e*PN **Pn** **12 24 09.4 +0.8**
BIOA Bad Ischl, Aus 16.48 324 *e*Pn **Pn** **12 24 08.4 -0.7**
comp=Z,4.7nm,1.0s
MORC Moravsky Berou 16.50 336 ⇑P **Pn** **12 24 10.7 +1.3**
MORC Moravsky Berou 16.50 336 P **Pn** **12 24 09.9 +0.6**
MORC Moravsky Berou 16.50 336 *e*PN **Pn** **12 24 10.1 +0.7**
LESA Schwarzleotal 16.77 322 *i* Pn **Pn** **12 24 13.2 +0.3**
comp=Z,8.9nm,0.6s
CKRC Cesky Krumlov 16.99 328 *e*P **P** **12 24 17.0 -0.5**
GEC2 GERESS Array S 17.27 327 **Pn** **12 24 19.2 0.0**
GERES GERESS Array B 17.27 327 P **Pn** **12 24 18.5 -0.8**
baz=138,slow=12,SNR=12
GERES LR LR 12 31 30.4
comp=Z,146nm,18.8s,baz=155,slow=39
comp=Z,3.9nm,0.9s
WATA Walderalm 17.28 320 *e*Pn **Pn** **12 24 19.0 -0.4**
comp=Z,21nm,1.0s
DPC Dobruska-Polom 17.40 334 P **Pn** **12 24 19.4 -1.4**
comp=Z,14nm,1.1s
ZVC Zvikov 17.50 329 *e*P **P** **12 24 22.9 -0.3**
KHC Kasperske Hory 17.54 327 P **Pn** **12 24 22.2 -0.3**
KHC Kasperske Hory 17.54 327 *e*P **Pn** **12 24 22.1 -0.3**
KHC Kasperske Hory 17.54 327 P **Pn** **12 24 21.5 -1.0**
comp=Z,17nm,0.9s
MOTA Moosalm 17.54 319 *e*Pn **Pn** **12 24 22.8 +0.2**
comp=Z,9.9nm,0.8s
FETA Feichten 17.55 318 *e*Pn **P** **12 24 23.4 -0.5**
comp=Z,25nm,1.1s
FUORN Ofenpass-Fuorn 17.58 316 P **Pn** **12 24 23.2 0.0**
OSTC Ostas 17.61 335 *e*P **P** **12 24 25.2 +0.7**
RETA Reutte 17.81 319 *i* Pn **Pn** **12 24 25.5 -0.4**
comp=Z,17nm,1.2s
KSP Ksiaz 17.83 335 P **Pn** **12 24 25.1 -0.9**
comp=Z,16nm,1.1s
DAVOX Davos/Dischmat 17.89 316 P **Pn** **12 24 26.1 -0.8**
comp=Z,0.4nm,0.3s,baz=144,slow=17,SNR=5.5
DAVOX LR LR 12 31 33.5
comp=Z,145nm,21.0s,baz=91,slow=38
comp=Z,1.9nm,0.8s
TUE Stuetta 18.02 315 P **P** **12 24 29.7 +0.5**
TUE Stuetta 18.02 315 P **Pn** **12 24 28.3 -0.4**
comp=Z,51nm,0.7s
DAVA Damuels 18.17 317 *e*Pn **Pn** **12 24 29.9 -0.6**
comp=Z,18nm,1.3s
BRG Berggiesshubel 18.72 331 *e*P **Pn** **12 24 43.4 +6.5**
BRG Amp 12 24 44.9
comp=Z,7.2nm,1.0s
RAYN Ar Rayn 19.15 122 P **Pn** **12 24 43.9 +1.5**
MNK Minsk 19.36 360 *i* P **P** **12 24 43.3 -0.3**
comp=E,15nm,0.7s
MNK *i* P **P** **12 24 43.3 -0.3**
comp=N,17nm,1.0s
MNK *i* P **P** **12 24 43.3 -0.3**
comp=Z,12nm,0.7s,baz=180
MNK *i* PP **PnPn** **12 24 57.2 -0.3**
MNK *i* PPP PPP 12 25 07.4
MNK *i* S **Sn** **12 28 21.1 -1.1**
MNK *i* SS **SnSn** **12 28 36.9 +0.7**
MNK *i* SSS SSS 12 28 49.9
MNK *i* LQ LQ 12 30 19.4
MNK *i* LR LR 12 31 58.9
CLL Collm 19.43 331 P **P** **12 24 44.2 -0.2**
comp=Z,9.9nm,1.0s
CLL Collm 19.43 331 *i* P **Pn** **12 24 46.7 +1.2**
comp=Z,9.0nm,1.0s
CLL *e*Sx Sx 12 29 48.0
OBN Obninsk 20.85 14 P **P** **12 24 58.7 -1.0**
comp=Z,24nm,0.5s,baz=106,slow=4.7,SNR=3.6
comp=Z,24nm,0.5s
OBN Obninsk 20.85 14 IAmb IAmb 12 25 03.7
comp=Z,56nm,0.5s
BSD Bornholm Skovb 21.92 340 *i* P **P** **12 25 10.5 -0.8**
BSD IAmb IAmb 12 25 10.5
comp=Z,28nm,1.2s
BLEU Blekinge 22.73 342 *i* P **P** **12 25 25.2 +5.2**
LUNU Lund 22.80 338 *i* P **P** **12 25 18.5 -2.1**
TAM Tamanrasset 23.10 244 P **P** **12 25 26.0 +1.7**
DEL Delary 23.39 340 *i* P **P** **12 25 24.9 -1.9**
BORU Boraas 24.70 340 *i* P **P** **12 25 38.2 -1.0**
ONAU Onsala 24.74 339 *i* P **P** **12 25 38.8 -0.7**
TJOU Tjoern 25.37 340 *i* P **P** **12 25 46.4 +1.3**
ESBB Sonseca Array 25.68 290 P **P** **12 25 48.1 -0.2**
ESBB IAmb IAmb 12 26 12.7
comp=Z,10nm,0.9s
ESDC Sonseca Array 25.68 290 P **P** **12 25 47.3 -1.0**
comp=Z,6.6nm,0.8s,baz=80,slow=9.2,SNR=35
comp=Z,6.6nm,0.8s
ESDC Sonseca Array 25.68 290 P **P** **12 25 48.1 -0.2**
PAB San Pablo 25.98 289 P **P** **12 25 50.4 -0.6**
PAB IAmb IAmb 12 25 58.0
comp=Z,14nm,1.1s
STRU Stroemstad 26.34 340 *i* P **P** **12 25 52.9 -1.0**
FINES FINESS Array B 26.35 358 P **P** **12 25 52.3 -1.7**
comp=Z,4.6nm,0.5s,baz=157,slow=10,SNR=22
FINES PcP **PcP** **12 29 19.4 -0.3**
comp=Z,1.4nm,0.6s,baz=172,slow=1.3,SNR=5.3
comp=Z,4.6nm,0.5s
FINES FINESS Array B 26.35 358 P **P** **12 25 52.2 -1.9**
FIA1 FINESS Array S 26.35 358 P **P** **12 25 51.0 -3.1**
AKTO Aktyubinsk 26.60 46 LR LR 12 40 26.0
comp=Z,52nm,20.3s,baz=163,slow=46
HFS Hagfors 26.67 344 P **P** **12 25 54.7 -2.3**
comp=Z,3.8nm,0.4s,baz=156,slow=12,SNR=15
HFS LR LR 12 39 00.3
comp=Z,141nm,19.0s,baz=174,slow=42
comp=Z,3.8nm,0.4s
MDT Midelt 27.04 274 LR LR 12 39 04.3
comp=Z,69nm,19.3s,baz=102,slow=42
AB31 Akbulak array 27.34 49 P **P** **12 26 03.6 +0.5**
AB31 IAmb IAmb 12 26 21.1
comp=Z,8.1nm,1.0s
ABKAR Akbulak array 27.34 49 P **P** **12 26 03.4 +0.3**
NC602 NORSAR Array S 27.71 343 P **P** **12 26 04.8 -1.5**
NC602 IAmb IAmb 12 26 41.4
comp=Z,20nm,1.4s
FURI Furi 27.90 157 LR LR 12 38 54.6
comp=Z,215nm,18.9s,baz=18,slow=40
NB2 NORSAR Subarra 28.05 343 P **P** **12 26 06.7 -2.7**
comp=Z,0.7nm,0.5s,baz=150,slow=9.3
NOA NORSAR Array B 28.05 343 P **P** **12 26 07.1 -2.3**
comp=Z,0.9nm,0.5s,baz=145,slow=9.3,SNR=6.8
NOA LR LR 12 38 25.5
comp=Z,120nm,18.3s,baz=350,slow=39
comp=Z,0.9nm,0.5s

NC303	**NORSAR Array S**	**28.18**	**343**	P	**P**	**12 26 08.6**	**-1.9**
NC303				IAmb	IAmb	12 26 44.0	
	comp=Z,16nm,1.1s						
EKA	**Eskdalemuir Ar**	**29.41**	**323**	P	**P**	**12 26 19.7**	**-1.7**
	comp=Z,0.6nm,0.5s,baz=122,slow=10,SNR=1.7						
	comp=Z,0.6nm,0.5s						
ARTI	**Arti**	**29.63**	**35**	LR	LR	12 41 37.4	
	comp=Z,76nm,19.3s,baz=199,slow=43						
ARTI	**Arti**	**29.63**	**35**	P	**P**	**12 26 22.6**	**-0.9**
ARTI				IAmb	IAmb	12 26 26.5	
	comp=Z,8.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**32.28**	**234**	P	**P**	**12 26 47.8**	**+0.6**
	comp=Z,7.4nm,0.9s,baz=33,slow=6.1,SNR=34						
	comp=Z,7.4nm,0.9s						
KKAR	**Karatay Array**	**33.66**	**63**	P	**P**	**12 26 59.6**	**+0.5**
GAR	**Garm**	**33.80**	**71**	P	**P**	**12 27 01.8**	**+1.4**
ARCES	**ARCESS Array B**	**34.48**	**358**	P	**P**	**12 27 03.6**	**-2.2**
	comp=Z,2.5nm,0.6s,baz=174,slow=8.2,SNR=14						
	comp=Z,2.5nm,0.6s						
ARCES	**ARCESS Array B**	**34.48**	**358**	P	**P**	**12 27 04.3**	**-1.5**
BVAR	**Borovoye Array**	**34.71**	**46**	P	**P**	**12 27 07.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=269,slow=9.6,SNR=3.6						
BVAR				LR	LR	12 44 50.4	
	comp=Z,60nm,18.4s,baz=265,slow=42						
	comp=Z,1.0nm,0.7s						
ARSB	**Arslanbob**	**35.59**	**66**	IAmb	IAmb	12 27 29.4	
	comp=Z,6.3nm,1.0s						
MBAR	**Mbarara**	**35.65**	**175**	LR	LR	12 43 32.5	
	comp=Z,137nm,18.6s,baz=18,slow=39						
AAK	**Ala-Archa**	**36.61**	**64**	P	**P**	**12 27 25.4**	**+0.7**
KSH2	**Kashi**	**37.82**	**69**	P	**P**	**12 27 37.5**	**+2.5**
KSH2				pP		12 27 40.8	
KSH2				sP		12 27 43.5	
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NRN	**Naryn**	**37.84**	**66**	IAmb	IAmb	12 27 40.0	
	comp=Z,7.7nm,1.0s						
KURBB	**Kurchatov Arra**	**39.35**	**51**	P	**P**	**12 27 47.2**	**-0.3**
	comp=Z,3.7nm,0.9s,baz=276,slow=8.8,SNR=25						
KURBB				PcP	**PcP**	**12 29 56.0**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=267,slow=3.9,SNR=11						
	comp=Z,3.7nm,0.9s						
KURK	**Kurchatov**	**39.42**	**51**	P	**P**	**12 27 48.1**	**+0.1**
WUS	**Wushi**	**40.27**	**66**	IAmb	IAmb	12 28 13.2	
	comp=Z,7.4nm,1.0s						
DBIC	**Dimbokro**	**41.38**	**235**	P	**P**	**12 28 03.5**	**-1.2**
	comp=Z,6.1nm,0.8s,baz=82,slow=9.2,SNR=3.7						
DBIC				LR	LR	12 47 43.0	
	comp=Z,85nm,18.7s,baz=61,slow=40						
	comp=Z,6.1nm,0.8s						
DBIC	**Dimbokro**	**41.38**	**235**	IAmb	IAmb	12 28 07.9	
	comp=Z,10.0nm,1.1s						
BORG	**Borgarnes**	**41.68**	**331**	LR	LR	12 46 01.2	
	comp=Z,53nm,20.6s,baz=113,slow=37						
MKAR	**Makanchi Array**	**41.87**	**57**	P	**P**	**12 28 08.6**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=274,slow=7.3,SNR=45						
MKAR				PcP	**PcP**	**12 30 04.3**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=296,slow=3.7,SNR=3.0						
MKAR				LR	LR	12 48 21.3	
	comp=Z,34nm,18.4s,baz=284,slow=40						
	comp=Z,2.5nm,0.5s						
ZALV	**Zalesovo Beam**	**43.37**	**46**	P	**P**	**12 28 19.8**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=267,slow=10,SNR=4.9						
ZALV				PcP	**PcP**	**12 30 08.6**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=278,slow=4.1,SNR=2.7						
ZALV				LR	LR	12 48 30.0	
	comp=Z,31nm,18.1s,baz=151,slow=39						
	comp=Z,0.8nm,0.4s						
SPB2	**Spitsbergen Ar**	**43.42**	**357**	P	**P**	**12 28 21.2**	**+0.6**
SPITS	**Spitsbergen Ar**	**43.43**	**357**	P	**P**	**12 28 19.8**	**-0.9**
	comp=Z,2.4nm,0.5s,baz=137,slow=9.9,SNR=12						
	comp=Z,2.4nm,0.5s						
WMQ	**Urumqi**	**46.03**	**60**	*e*P	**P**	**12 28 46.3**	**+4.4**
WMQ				S	**S**	**12 35 33.3**	**+5.2**
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
NRIK	**Noril'sk**	**46.93**	**25**	P	**P**	**12 28 48.7**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=330,slow=2.2,SNR=4.5						
	comp=Z,1.9nm,0.4s						
NRIK	**Noril'sk**	**46.93**	**25**	IAmb	IAmb	12 29 14.3	
	comp=Z,7.2nm,1.4s						
EVN	**Everest**	**50.05**	**81**	P	**P**	**12 29 14.4**	**+0.4**
EVN				IAmb	IAmb	12 29 35.0	
	comp=Z,7.3nm,1.0s						
SFJD	**Kangerlussuaq**	**53.80**	**331**	LR	LR	12 52 34.8	
	comp=Z,49nm,19.8s,baz=152,slow=36						
GTA2	**Gaotai**	**55.88**	**63**	P	**P**	**12 29 56.8**	**+0.6**
GTA2				pP		12 30 00.3	
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SONM	**Songino Array**	**57.72**	**51**	P	**P**	**12 30 10.0**	**+0.9**
	comp=Z,4.8nm,0.7s,baz=287,slow=7.8,SNR=63						
	comp=Z,4.8nm,0.7s						
SONM	**Songino Array**	**57.72**	**51**		**P**	**12 30 10.1**	**+0.9**
SONM				IAmb	IAmb	12 30 14.1	
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**58.13**	**51**		**P**	**12 30 12.7**	**+0.7**
ULN				IAmb	IAmb	12 30 17.0	
	comp=Z,7.6nm,1.0s						
LBTB	**Lobatse**	**59.87**	**182**	P	**P**	**12 30 26.5**	**+2.3**
LZDM	**Lanzhou Array**	**60.08**	**65**	P	**P**	**12 30 25.9**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=316,slow=4.1,SNR=5.2						
	comp=Z,2.2nm,0.5s						
LZH	**Lanzhou**	**60.14**	**65**	*e*P	**P**	**12 30 27.3**	**+1.1**
LZH				pP		12 30 37.3	
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
FRB	**Frobisher Bay**	**61.84**	**330**	LR	LR	13 00 28.7	
	comp=Z,43nm,18.1s,baz=74,slow=39						
PZH	**PanZhiHua**	**62.65**	**76**	P	**P**	**12 30 42.8**	**-0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BOSA	**Boshof**	**63.46**	**183**	P	**P**	**12 30 50.0**	**+1.6**
	comp=Z,4.7nm,0.9s,baz=44,slow=6.1,SNR=4.5						
	comp=Z,4.7nm,0.9s						
BOSA	**Boshof**	**63.46**	**183**	P	**P**	**12 30 50.8**	**+2.4**
HHC	**Hu-ho-hao-te**	**63.73**	**57**	*e*P	**P**	**12 30 51.0**	**+0.7**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,3.8s						
KUQ	**Kuujjuuaa**	**64.07**	**324**	P	**P**	**12 30 50.9**	**-1.1**
KUQ				IAmb	IAmb	12 30 51.8	
	comp=Z,7.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**64.29**	**85**	P	**P**	**12 30 53.8**	**-0.3**
	comp=Z,2.0nm,1.0s,baz=298,slow=8.0,SNR=12						
	comp=Z,2.0nm,1.0s						
SCHQ	**Schefferville**	**64.67**	**320**	P	**P**	**12 30 53.5**	**-2.6**
	comp=Z,3.5nm,0.5s,baz=24,slow=3.6,SNR=12						
SCHQ				LR	LR	12 58 59.9	
	comp=Z,29nm,18.4s,baz=86,slow=36						
	comp=Z,3.5nm,0.5s						
XAN	**Xi'an**	**64.78**	**65**	P	**P**	**12 30 57.5**	**+0.4**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BJI2	**Beijing**	**67.25**	**56**	P	**P**	**12 31 14.8**	**+1.9**
BJI2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HNS	**HongShan**	**67.45**	**59**	⇑P	**P**	**12 31 18.5**	**+4.3**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HEH	**HeiHe**	**69.33**	**43**	*e*P	**P**	**12 31 27.0**	**+1.2**
HEH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIA	**Tai'an**	**69.72**	**60**	P	**P**	**12 31 28.8**	**+0.4**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
A36M	**Sachs Harbour**	**71.52**	**351**	IAmb	IAmb	12 31 43.0	
	comp=Z,5.3nm,0.8s						
BILL	**Bilibino**	**72.50**	**15**		**P**	**12 31 44.2**	**-0.5**
BILL				IAmb	IAmb	12 31 49.9	
	comp=Z,3.4nm,0.9s						
NJ2	**Nanjing**	**73.04**	**63**	*e*P	**P**	**12 31 47.5**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MA2	**Magadan**	**74.50**	**26**	P	**P**	**12 31 56.2**	**-0.4**
USRK	**Ussuriysk Ar.**	**75.22**	**46**	P	**P**	**12 32 00.5**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=297,slow=1.3,SNR=3.3						
	comp=Z,3.7nm,0.8s						
C18K	**Utukok River**	**76.30**	**3**	IAmb	IAmb	12 32 11.7	
	comp=Z,5.3nm,0.9s						
C16K	**Lisburne Hills**	**76.42**	**5**		**P**	**12 32 07.0**	**-0.4**
C16K				IAmb	IAmb	12 32 11.9	
	comp=Z,2.7nm,0.9s						
KSRS	**Korea Array**	**76.46**	**54**	P	**P**	**12 32 08.2**	**0.0**
	comp=Z,2.3nm,0.8s,baz=294,slow=5.1,SNR=7.2						
KSRS				LR	LR	13 09 00.8	
	comp=Z,24nm,19.8s,baz=270,slow=38						
	comp=Z,2.3nm,0.8s						
E25K	**Arctic Village**	**76.94**	**358**	IAmb	IAmb	12 32 13.3	
	comp=Z,4.0nm,0.9s						
F25K	**Christian Rive**	**77.47**	**357**		**P**	**12 32 13.8**	**+0.3**
F25K				IAmb	IAmb	12 32 19.3	
	comp=Z,5.2nm,1.1s						
E18K	**Tukpahlearik C**	**77.55**	**3**		**P**	**12 32 13.3**	**-0.6**
E18K				IAmb	IAmb	12 32 18.4	
	comp=Z,4.7nm,0.8s						
BMAR	**Burnt Mountain**	**77.59**	**357**	P	**P**	**12 32 14.6**	**+0.4**
YKA	**Yellowknife Ar**	**78.15**	**343**	P	**P**	**12 32 15.6**	**-1.7**
	comp=Z,0.8nm,1.0s,baz=30,slow=5.5,SNR=7.4						
	comp=Z,0.8nm,1.0s						
F17K	**Baldwin Pennin**	**78.49**	**4**	IAmb	IAmb	12 32 21.2	
	comp=Z,4.2nm,0.8s						
F15K	**North Star Dit**	**79.00**	**5**	IAmb	IAmb	12 32 25.4	
	comp=Z,2.1nm,0.7s						
I30M	**Mount Dempster**	**79.22**	**353**		**P**	**12 32 22.2**	**-1.1**
I30M				IAmb	IAmb	12 32 25.3	
	comp=Z,4.3nm,1.0s						
I29M	**Ogilvie Camp,**	**79.25**	**354**	IAmb	IAmb	12 32 25.2	
	comp=Z,3.8nm,0.8s						
ANM	**Nome**	**80.07**	**6**	IAmb	IAmb	12 32 32.5	
	comp=Z,5.9nm,1.2s						
ILAR	**Eielson Array**	**80.34**	**358**	P	**P**	**12 32 27.9**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=342,slow=3.8,SNR=10						
	comp=Z,0.7nm,0.6s						
ULM	**Lac du Bonnet**	**81.58**	**327**	P	**P**	**12 32 34.5**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=21,slow=18,SNR=2.0						
	comp=Z,0.8nm,0.4s						
ULM	**Lac du Bonnet**	**81.58**	**327**	IAmb	IAmb	12 32 40.9	
	comp=Z,3.4nm,1.1s						
MJAR	**Matsushiro Arr**	**83.61**	**49**	P	**P**	**12 32 47.1**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=321,slow=1.6,SNR=4.1						
	comp=Z,2.6nm,0.9s						
MJAR	**Matsushiro Arr**	**83.61**	**49**	IAmb	IAmb	12 32 48.1	
	comp=Z,9.3nm,1.4s						
BDFB	**Brasilia**	**87.83**	**249**	P	**P**	**12 33 08.4**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=152,slow=26,SNR=4.5						
	comp=Z,3.5nm,0.6s						
PDAR	**Pinedale Array**	**93.29**	**330**	LR	LR	13 19 04.2	
	comp=Z,32nm,18.5s,baz=4.0,slow=38						
ASAR	**Alice Springs**	**115.80**	**102**	PKP	**PKPdf**	**12 39 00.8**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=314,slow=1.2,SNR=6.1						

*SDD **27** 12:21:17.2±1.5, 17°.83N×66°.85W, h20km±14km, MD3.2, ML2.6, MW3.1, Presumed earthquake*
*RSPR **27** 12:21:18.5, 17°.97N×66°.83W, h10km*
*NEIC **27** 12:21:18.8±0.7, 18°.00N±0°.01×66°.831W±0°.009, h10km±1km, ML2.7/35, Md3.5/2(RSPR), Error ellipse: s-maj=2.7km s-min=1.6km az=24.0*

ISC 27 12:21:17.7±0.9, 17°.93N±0°.05×66°.83W±0°.02, h16km±5km, n38, σ0ˢ57/60, 8C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.06**	**312**			**Pg**	**12 21 20.7**	**-0.1**
GBPR						**Sg**	**12 21 22.3**	**-0.5**
GBPR	**Guanica, Bosqu**	**0.06**	**312**	⇑*i*P		**Pg**	**12 21 20.7**	**-0.1**
GBPR				*e*S		**Sg**	**12 21 22.3**	**-0.5**
MLPR	**Magueyes Islan**	**0.21**	**280**			**Pg**	**12 21 22.8**	**+0.2**
MLPR				IAML			12 21 26.9	
	1μm,0.2s							
MLPR				IAML			12 21 27.0	
	1μm,0.2s							
OBIP	**Obispado Ponce**	**0.24**	**63**			**Pg**	**12 21 23.2**	**+0.1**
OBIP						**Sg**	**12 21 27.1**	**+0.3**
OBIP	**Obispado Ponce**	**0.24**	**63**	IAML			12 21 28.1	
	comp=N,269nm,0.3s							
OBIP	**Obispado Ponce**	**0.24**	**63**	⇑*e*P		**Pg**	**12 21 23.2**	**+0.1**
OBIP				*e*S		**Sg**	**12 21 27.1**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.28**	**286**			**Pg**	**12 21 23.9**	**+0.2**
CRPR						**Sg**	**12 21 27.7**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.28**	**286**	IAML			12 21 28.5	
	comp=N,1μm,0.2s							
CRPR				IAML			12 21 29.5	
	comp=N,892nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.28**	**286**	*e*Pg		**Pg**	**12 21 24.0**	**+0.3**
CRPR				⇓*e*Sg		**Sg**	**12 21 28.0**	**+0.3**
CRPR				IAML			12 21 29.0	
	comp=N,708nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.28**	**286**	⇑*e*P		**Pg**	**12 21 23.9**	**+0.2**
CRPR				*e*S		**Sg**	**12 21 27.7**	**0.0**
CELP	**Cerrillos**	**0.28**	**59**			**Pg**	**12 21 24.0**	**+0.2**
CELP				IAML			12 21 30.1	
	comp=N,1μm,0.2s							
UUPR	**Utuado, UPR, P**	**0.34**	**18**			**Pg**	**12 21 24.8**	**0.0**
LSP	**Las Mesas**	**0.34**	**315**			**Pg**	**12 21 25.0**	**+0.1**
LSP						**Sg**	**12 21 30.0**	**+0.2**
LSP	**Las Mesas**	**0.34**	**315**	⇓*i*P		**Pg**	**12 21 25.0**	**+0.1**
LSP				*e*S		**Sg**	**12 21 30.0**	**+0.2**
PRSN	**Puerto Rico Se**	**0.41**	**313**			**Pg**	**12 21 26.1**	**0.0**
PRSN						**Sg**	**12 21 30.8**	**-1.0**
PRSN	**Puerto Rico Se**	**0.41**	**313**	IAML			12 21 32.6	
	comp=N,2μm,0.2s							
PRSN				IAML			12 21 34.5	
	comp=N,2μm,0.2s							
PRSN	**Puerto Rico Se**	**0.41**	**313**	*e*Pg		**Pg**	**12 21 26.2**	**0.0**
PRSN				⇓*e*Sg		**Sb**	**12 21 32.6**	**-0.1**
PRSN				IAML			12 21 34.4	
	comp=N,1μm,0.2s							
PRSN	**Puerto Rico Se**	**0.41**	**313**	⇑*e*P		**Pg**	**12 21 26.1**	**0.0**
PRSN				*e*S		**Sg**	**12 21 30.8**	**-1.0**
AOPR	**Arecibo Observ**	**0.42**	**10**	Pg		**Pg**	**12 21 26.2**	**-0.1**
ECPR	**Experimental S**	**0.59**	**49**			**Pg**	**12 21 29.1**	**-0.3**
ECPR	**Experimental S**	**0.59**	**49**	⇓*i*P		**Pg**	**12 21 29.1**	**-0.3**
ECPR				*e*S		**Sg**	**12 21 37.0**	**-0.2**
AGPR	**Aguadilla, PR**	**0.60**	**333**			**Pg**	**12 21 29.2**	**-0.3**
AGPR				IAML			12 21 38.9	
	comp=N,339nm,0.2s							
AGPR				IAML			12 21 39.7	
	comp=N,430nm,0.5s							
AGPR	**Aguadilla, PR**	**0.60**	**333**	*e*Pg		**Pg**	**12 21 28.8**	**-0.7**
AGPR				⇓*e*Sg		**Sb**	**12 21 38.7**	**+0.7**
AGPR				IAML			12 21 39.6	
	comp=N,402nm,0.3s							
AGPR	**Aguadilla, PR**	**0.60**	**333**	⇑*e*P		**Pg**	**12 21 29.2**	**-0.4**
AGPR				*e*S		**Sg**	**12 21 37.4**	**-0.1**
EMPR	**Esperanza - Ma**	**0.61**	**28**			**Pb**	**12 21 30.1**	**0.0**
EMPR						**Sb**	**12 21 38.7**	**+0.2**
EMPR	**Esperanza - Ma**	**0.61**	**28**	⇓*e*P		**Pb**	**12 21 30.1**	**0.0**
EMPR				*e*S		**Sb**	**12 21 38.7**	**+0.2**
IDE	**Isla Desecheo**	**0.76**	**307**			**Pg**	**12 21 32.2**	**-0.4**
IDE						**Sg**	**12 21 42.6**	**-0.1**
IDE	**Isla Desecheo**	**0.76**	**307**	⇑*e*P		**Pg**	**12 21 32.2**	**-0.4**
IDE				*e*S		**Sg**	**12 21 42.6**	**-0.1**
PDPR	**Patillas Dam,**	**0.77**	**84**			**Pg**	**12 21 32.5**	**-0.3**
GCPR	**Guaynabo City**	**0.80**	**62**			**Pb**	**12 21 32.6**	**-0.7**
GCPR						**Sg**	**12 21 43.1**	**-0.9**
GCPR	**Guaynabo City**	**0.80**	**62**	⇑*e*P		**Pb**	**12 21 32.6**	**-0.7**
GCPR				*e*S		**Sg**	**12 21 43.1**	**-0.9**
HUMP	**Col San Antoni**	**0.96**	**77**			**Pb**	**12 21 35.1**	**-0.9**
HUMP						**Sb**	**12 21 48.5**	**+0.1**
HUMP	**Col San Antoni**	**0.96**	**77**			**Pb**	**12 21 35.3**	**-0.7**
HUMP				IAML			12 21 48.8	
	comp=N,136nm,0.2s							
HUMP				IAML			12 21 53.5	
	comp=N,142nm,0.2s							
HUMP	**Col San Antoni**	**0.96**	**77**	⇑*e*P		**Pb**	**12 21 35.1**	**-0.9**
HUMP				*e*S		**Sb**	**12 21 48.5**	**+0.1**
CUPR	**Culebra, Puert**	**1.52**	**76**	Pn		**Pb**	**12 21 45.2**	**-0.4**
HIDR	**Higuey Centro**	**1.91**	**290**	⇑*e*Pg		**Pn**	**12 21 50.0**	**+0.3**
HIDR				⇓*e*Sg		**Sn**	**12 22 14.0**	**+0.6**
HIDR				IAML			12 22 22.0	
	comp=N,40nm,0.2s							
DR12	**Loma Pena Alta**	**2.57**	**290**	Pn		**Pn**	**12 22 00.7**	**+1.9**
HATOM	**Hato Mayor del**	**2.57**	**290**	*e*Pg		**Pb**	**12 22 01.5**	**-2.0**
HATOM				⇓*e*Sg		**Sb**	**12 22 34.8**	**-0.1**
HATOM				IAML			12 22 37.2	
	comp=N,24nm,2.4s							

NOU 27 12:28:59.4, 15°.22S×168°.73E, h17km, MLv4.7/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.49**	**261**	P		Pn	12 29 24.7	-0.7
DVP	**Devils Point**	**2.54**	**192**	P		Pn	12 29 40.5	+0.6
RTV	**Rentapao**	**2.58**	**186**	P		Pn	12 29 39.9	-0.4
KOUNC	**Koumac, New Ca**	**6.78**	**218**	P		Pn	12 30 38.5	+0.3
DZM	**Mont Dzumac**	**7.15**	**197**	P		Pn	12 30 43.5	+0.1
ONTNC	**Ouen Toro**	**7.37**	**197**	P		Pn	12 30 46.5	+0.2
OUENC	**Ouen Island, N**	**7.38**	**194**	P		Pn	12 30 47.9	+1.5

IDC 27 12:34:07.3±4.9, 25°.52N×96°.86E, h0km, mb3.1/3, mbtmp3.1/3, MS3.3/1, Error ellipse: s-maj=618.3km s-min=31.1km az=58.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MKAR	**Makanchi Array**	**24.20**	**335**	P	P	12 39 25.5	0.0
	0.1nm,0.4s,baz=141,slow=9.3,SNR=1.6						
	0.1nm,0.4s						
MJAR	**Matsushiro Arr**	**36.85**	**63**	LR	LR	12 57 42.5	
	comp=Z,50nm,20.9s,baz=182,slow=38						
WRA	**Warramunga Arr**	**58.04**	**138**	P	P	12 44 02.1	-0.3
	0.2nm,0.7s,baz=318,slow=8.8,SNR=2.0						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**60.64**	**141**	P	P	12 44 20.5	+0.1
	0.3nm,0.5s,baz=323,slow=6.4,SNR=7.8						
	0.3nm,0.5s						

IDC 27 12:41:26.4±6.2, 17°.95N×123°.36E, h0km, mb3.4/3, mbtmp3.4/3, MS2.9/1, Error ellipse: s-maj=355.7km s-min=30.5km az=92.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
JHJ	**Hachijo jima 2**	**21.11**	**41**	LR	LR	12 53 22.1	
	comp=Z,32nm,19.8s,baz=106,slow=34						
WRA	**Warramunga Arr**	**39.17**	**164**	P	P	12 48 55.6	-0.6
	0.3nm,0.8s,baz=341,slow=9.3,SNR=5.5						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**42.63**	**166**	P	P	12 49 25.0	+0.3
	0.2nm,0.4s,baz=349,slow=6.9,SNR=9.6						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**73.83**	**27**	P	P	12 53 02.6	0.0
	0.4nm,0.7s,baz=270,slow=6.3,SNR=5.1						
	0.4nm,0.7s						

*IDC **27** 12:43:57.2±0.7, 25°.24S×179°.91E, h476km±6km, mb4.2/23, mbtmp5.0/27, Error ellipse: s-maj=10.8km s-min=9.4km az=161.0*
*NEIC **27** 12:43:57.6±2.3, 25°.26S±0°.09×179°.93E±0°.10, h479km±6km, mb4.7/184, Error ellipse: s-maj=13.5km s-min=12.8km az=174.0*
*NOU **27** 12:43:59.3, 25°.16S×179°.97E, h501km, mb4.9/92, South of Fiji Islands*
*GFZ **27** 12:43:59.2, 25°.23S×179°.83E, h490km, MW5.1, Moment Tensor Solution. s10 Moment tensor: Mrr=0.82; Mθθ=0.39; Mφφ 1.21; Mrθ=0.71; Mrφ=-0.03; Mθφ=5.17; Fault plane solution: NP1:φ=162.00000°, δ6.00000°, λ=-115.00000°. NP2:φ=8.00000°, δ85.00000°, λ=-86.00000°. Principal axes: T 5.5000, Plg40.0000°, Azm95.0000°; N -0.3600, Plg3.0000°, Azm188.0000°; P -5.1400, Plg50.0000°, Azm281.0000°;*

ISC 27 12:43:58.8±0.3, 25°.25S±0°.05×179°.97E±0°.05, h500km, n505, σ1ᵍ45/476, mb4.7/160, 18C-10D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
RIZ	**Raoul Island**	**4.39**	**155**	P	P	12 45 14.8	-5.6
RAO	**Raoul Island**	**4.40**	**155**	P	**P**	**12 45 21.7**	**+1.2**
	1μm,0.4s,baz=40,slow=3.2,SNR=17						
RAO				S	**S**	**12 46 24.7**	**-2.5**
	1μm,0.5s,baz=101,slow=22,SNR=5.2						
RAO	**Raoul Island**	**4.40**	**155**	P	**P**	**12 45 22.3**	**+1.8**
RAO	**Raoul Island**	**4.40**	**155**	P	**P**	**12 45 20.1**	**-0.4**
RAO	**Raoul Island**	**4.40**	**155**	P	**P**	**12 45 21.3**	**+0.8**
LKBA	**Tubou, Lakemba**	**7.08**	**9**	P	**P**	**12 45 44.7**	**-1.2**
MSVF	**Nonsavu**	**7.69**	**346**	P	**P**	**12 45 51.4**	**-0.9**
MSVF	**Nonsavu**	**7.69**	**346**		**P**	**12 45 50.6**	**-1.7**
TAVE	**Taveuni**	**8.50**	**1**	P	**P**	**12 46 00.5**	**-0.1**
DGTI	**Dogotuki**	**8.91**	**359**	P	**P**	**12 46 04.2**	**-0.7**
NIUE	**Niue**	**11.20**	**59**	P	**P**	**12 46 28.4**	**-0.6**
NIUE	**Niue**	**11.20**	**59**		**P**	**12 46 26.1**	**-2.8**
OUZ	**Omahuta**	**11.36**	**207**	P	**P**	**12 46 32.2**	**+1.9**
MARNC	**Mare, Loyalty**	**11.59**	**286**	P	**P**	**12 46 33.1**	**0.0**
MARNC	**Mare, Loyalty**	**11.59**	**286**		**P**	**12 46 32.4**	**-0.7**
GRZ	**Great Barrier**	**11.62**	**198**	P	**P**	**12 46 34.8**	**+1.5**
WCZ	**Waipu Caves**	**11.70**	**203**	P	**P**	**12 46 36.3**	**+2.3**
ABAZ	**Army Bay**	**12.14**	**200**	P	**P**	**12 46 41.2**	**+2.5**
ABAZ				S	**S**	**12 48 55.1**	**+4.7**
WIAZ	**Waiheke Island**	**12.22**	**199**	P	**P**	**12 46 41.5**	**+1.9**
WIAZ				S	S	12 49 04.7	+13
MBAZ	**Motutapu North**	**12.27**	**200**	P	**P**	**12 46 41.9**	**+1.8**
MBAZ				S	S	12 49 06.2	+13
OUENC	**Ouen Island, N**	**12.34**	**281**	P	**P**	**12 46 41.9**	**+0.8**
MXZ	**Matakaoa Point**	**12.35**	**186**

KNZ S S 12 49 19.4 -4.4
comp=Z,0.9nm,0.9s,baz=106,slow=8.0,SNR=4.1
MRHZ Matea Rd 13.87 192 P P 12 46 56.3 -0.7
comp=Z,36nm,0.5s
WATZ Wairara 13.88 194 P P 12 46 58.2 +1.0
HIZ Hauiti 13.91 197 P P 12 46 58.3 +0.9
HIZ Hauiti 13.91 197 P P 12 46 58.9 +1.5
WHHZ Waihua 13.97 189 P P 12 46 57.6 -0.4
RATZ Rangitukua 14.03 194 P P 12 46 58.8 +0.1
NMHZ Naumai 14.06 190 P P 12 46 58.6 -0.5
NMHZ S S 12 49 25.4 -2.2
RITZ Rihia Road 14.12 193 P P 12 46 58.6 -1.0
KATZ Kakaramea 14.15 194 P P 12 46 59.8 -0.3
BKZ Black Stump Fm 14.18 191 P 12 46 59.0 -1.3
BKZ Black Stump Fm 14.18 191 P P 12 46 59.0 -1.3
ARHZ Aropaoanui 14.19 189 P P 12 46 59.8 -0.5
NTVZ North Tongarir 14.27 194 P P 12 47 00.9 -0.5
KRVZ Karewarewa 14.28 194 P P 12 47 00.2 -1.2
TMVZ Te Maari 14.28 194 P P 12 47 00.3 -1.1
TWVZ Taurewa 14.30 194 P P 12 47 01.2 -0.4
ETVZ East Tongariro 14.30 194 P P 12 47 00.6 -1.0
WTVZ West Tongariro 14.31 194 P P 12 47 01.2 -0.5
OTVZ Oturere 14.34 194 P P 12 47 00.7 -1.4
NGZ Ngauruhoe 14.36 194 P P 12 47 01.3 -1.0
SNVZ South Ngauruho 14.36 194 P P 12 47 01.2 -1.2
COVZ Chateau Observ 14.40 194 P P 12 47 02.1 -0.5
MCHZ McNeill Hill 14.42 190 P P 12 47 01.0 -1.8
KWHZ Kaweka Forest 14.44 191 P P 12 47 01.1 -2.0
VRZ Vera Road 14.51 196 P P 12 47 05.2 +1.5
MOVZ Moawhango 14.55 193 P P 12 47 02.5 -1.8
PXZ Pawanui 14.96 189 P P 12 47 06.4 -2.0
WAZ Wanganui 15.05 195 P P 12 47 08.5 -0.9
TSZ Takapari Road 15.14 192 P P 12 47 07.8 -2.5
KOUNC Koumac, New Ca 15.19 285 P P 12 47 10.8 -0.3
SANVU Saraoutou 15.43 307 P P 12 47 13.1 -0.5
SANVU Saraoutou 15.43 307 P P 12 47 12.8 -0.8
BFZ Birch Farm 15.70 191 P P 12 47 11.9 -4.2
MRZ Mangatainoka R 15.80 192 P P 12 47 14.5 -2.6
MSWZ Moikau Station 16.59 193 P P 12 47 22.7 -2.7
SNZO South Karori 16.60 194 P P 12 47 24.3 -1.2
TCW Tory Channel 16.60 195 P P 12 47 23.9 -1.6
BHW Baring Head 16.66 193 P P 12 47 24.3 -1.8
QRZ Quartz Range 16.72 200 P P 12 47 26.5 -0.3
QRZ Quartz Range 16.72 200 P 12 47 26.7 -0.1
QRZ Quartz Range 16.72 200 P P 12 47 26.7 -0.1
TKNZ Takaka Hill 16.79 199 P P 12 47 26.1 -1.3
NNZ Nelson 16.84 197 P P 12 47 26.1 -1.8
TUWZ Tuamarina 16.89 196 P P 12 47 27.0 -1.5
BSWZ Blackbirch Sta 17.18 196 P P 12 47 30.4 -0.9
MRNZ Matariki Terra 17.18 199 P P 12 47 30.3 -1.1
THZ Tophouse 17.48 198 P P 12 47 33.4 -0.9
THZ Tophouse 17.48 198 P P 12 47 33.2 -1.1
DSZ Denniston Nort 17.79 200 P P 12 47 36.2 -0.8
KHZ Kahutara 17.92 196 P P 12 47 37.2 -1.1
KHZ Kahutara 17.92 196 S S 12 50 40.7 +3.4
KHZ Kahutara 17.92 196 P P 12 47 37.1 -1.1
KHZ Kahutara 17.92 196 P P 12 47 36.4 -1.8
GVZ Greta Valley S 18.57 196 P P 12 47 43.1 -1.1
LTZ Lake Taylor 18.60 198 P P 12 47 42.6 -1.9
INZ Inchbonnie 18.79 200 P P 12 47 45.1 -1.0
INZ Inchbonnie 18.79 200 P P 12 47 45.3 -0.8
RAR Rarotonga 19.04 82 P P 12 47 49.8 +1.0
OXZ Oxford 19.16 198 P P 12 47 48.3 -1.3
RPZ Rata Peaks 19.80 199 P P 12 47 54.7 -0.8
19nm,0.5s,baz=186,slow=0.8,SNR=18
RPZ S S 12 51 05.4 -2.6
16nm,0.7s,baz=185,slow=22,SNR=5.9
RPZ Rata Peaks 19.80 199 P P 12 47 56.3 +0.8
RPZ Rata Peaks 19.80 199 S S 12 51 11.3 +3.3
NGOA Tingoa Renbel 23.24 302 P P 12 48 26.8 -0.1
GC1S Gold Coast 1 S 23.80 257 P P 12 48 33.1 +1.5
AUBSH Beerwah State 24.31 260 P P 12 48 37.0 +0.8
HNR Honiara 24.70 306 P P 12 48 38.1 -1.7
4.6nm,0.5s,baz=256,slow=2.2,SNR=10.0
HNR Honiara 24.70 306 P P 12 48 37.7 -2.1
HNR Honiara 24.70 306 P P 12 48 37.7 -2.1
SAVO Savo Central 24.98 306 P P 12 48 43.6 +1.2
TW1H Toowoomba 1 Ha 25.16 259 P P 12 48 44.6 +0.7
TATA Tatamba Isabel 25.51 308 P P 12 48 44.6 -2.4
ARMA Armidale 25.55 252 P P 12 48 48.6 +1.3
ARMA Armidale 25.55 252 P P 12 48 48.3 +1.0
EIDS Eidsvold 26.09 264 P P 12 48 52.2 +0.1
EIDS Eidsvold 26.09 264 P P 12 48 52.1 +0.1
AUKHS Kincumber High 26.16 245 P P 12 48 53.6 +1.0
AUPHS Peel High Scho 26.24 251 P P 12 48 53.8 +0.5
SYDH Sydney Hard Ro 26.74 245 P P 12 48 59.7 +2.0
WOLH Wollongong Har 26.76 243 P P 12 48 59.3 +1.5
AUNRC North Rockhamp 26.88 268 P P 12 48 59.3 +0.3
TBI Tubuai 27.90 93 esS sS 12 55 53.2 +1.1
2µm,39.0s
CNB Canberra Magne 28.17 242 P P 12 49 11.8 +1.5
AUDCS Dubbo College 28.28 249 P P 12 49 12.2 +1.0
AUDAR Daramalan Coll 28.33 242 P P 12 49 12.9 +1.2
AUMHS Melrose High S 28.40 242 P P 12 49 14.0 +1.8
AUMTS Mt Stromlo 28.46 242 P P 12 49 14.4 +1.6
CAN Canberra 28.46 242 P P 12 49 14.3 +1.5
CAN Canberra 28.46 242 P P 12 49 13.2 +0.4
AULRC Lightning Ridg 28.67 254 P P 12 49 16.3 +1.7
PAE Paea 29.28 81 eP P 12 49 18.5 -1.6
19nm,1.2s
PPT2 Papeete2 29.31 81 esS sS 12 56 19.0 +3.7
738nm,26.0s
PPTF Pamatai, Papee 29.32 81 P P 12 49 20.8 +0.3
PPTF Pamatai, Papee 29.32 81 P P 12 49 21.0 +0.5
MISM Misima Island 29.51 295 P P 12 49 23.8 +1.7
TIAR Tiarei 29.53 81 eP P 12 49 22.9 +0.6
224nm,1.4s
TVO Taravao 29.53 82 eP P 12 49 22.9 +0.5
28nm,1.3s
CMSA Cobar Meteorol 30.71 250 P P 12 49 32.8 +0.5
CTA Charters Tower 31.48 272 P P 12 49 39.1 +0.1
133nm,0.4s,baz=177,slow=9.5,SNR=3.0
CTA S S 12 54 11.1 -0.4
5.6nm,1.1s,baz=190,slow=1.1,SNR=3.6
CTA ScP ScP 12 55 15.2 +2.4
14nm,1.1s,baz=35,slow=0.7,SNR=5.0
CTA Charters Tower 31.48 272 P P 12 49 39.4 +0.3
CTAO Charters Tower 31.48 272 P P 12 49 39.6 +0.5
CTAO Charters Tower 31.48 272 P P 12 49 39.2 +0.1
TOO Toolangi 31.71 239 P 12 49 41.2 +0.3
TOO IAmb IAmb 12 49 43.4
comp=Z,19nm,0.9s
PMOR Pomariorio Ree 31.77 77 eP P 12 49 41.1 -0.5
comp=Z,83nm,1.2s
QLP Quilpie 32.11 260 P P 12 49 44.3 -0.1
BRAT Ballarat 32.92 239 P P 12 49 52.9 +1.8
AUMTC Mt Clear Colle 32.97 239 P P 12 49 52.5 +1.0
MTSU Mount Surprise 33.80 275 P P 12 49 59.3 +0.4
STKA Stephens Creek 34.21 250 P P 12 50 02.4 +0.2
comp=Z,16nm,0.4s,baz=98,slow=12,SNR=25
STKA ScP ScP 12 55 24.7 +2.5
comp=Z,6.0nm,0.9s,baz=1.8,slow=6.0,SNR=3.8
comp=Z,16nm,0.4s
STKA Stephens Creek 34.21 250 P P 12 50 02.7 +0.5
STKA Stephens Creek 34.21 250 P P 12 50 02.2 0.0
PMG Port Moresby 34.93 291 P P 12 50 07.7 -0.6
comp=Z,38nm,0.6s,baz=96,slow=4.0,SNR=45
PMG ScP ScP 12 55 28.3 +3.3
comp=Z,7.8nm,0.8s,baz=61,slow=5.5,SNR=5.7
comp=Z,38nm,0.6s
PMG Port Moresby 34.93 291 P P 12 50 08.0 -0.4
PMG Port Moresby 34.93 291 P P 12 50 07.5 -0.9
PMG Port Moresby 34.93 291 P P 12 50 07.4 -0.9
comp=Z,1µmcomp=Z,89nm,1.3s
AUMBR Murray Bridge 36.30 244 P P 12 50 19.3 -0.2
COEN Coen 36.32 281 P P 12 50 20.0 0.0
COEN Coen 36.32 281 P P 12 50 20.0 0.0
HTT Hallett 36.51 247 P P 12 50 21.5 +0.1
AUJCS Jamestown Cent 36.77 248 P P 12 50 24.0 +0.6
AUMAR Marden Senior 36.81 245 P P 12 50 24.3 +0.5
QIS Mount Isa 37.38 269 P P 12 50 28.2 -0.4
BBOO Buckleboo 38.91 248 P P 12 50 40.1 -0.8
BBOO Buckleboo 38.91 248 P P 12 50 40.1 -0.8
AS31 Alice Springs 41.80 262 IAmb IAmb 12 51 05.5
comp=Z,44nm,1.1s
ASAR Alice Springs 41.80 262 P P 12 51 04.3 0.0
comp=Z,36nm,0.5s,baz=92,slow=7.3,SNR=1023
ASAR pP pP 12 52 32.2 -1.9
comp=Z,10.0nm,1.0s,baz=93,slow=8.7,SNR=4.4
ASAR ScP ScP 12 55 54.9 +3.4
comp=Z,2.7nm,1.0s,baz=121,slow=3.4,SNR=6.3
ASAR S S 12 56 40.9 -4.5
comp=Z,6.5nm,1.0s,baz=93,slow=15,SNR=14
ASAR ScS SS 13 00 09.9 -0.7

ASAR Alice Springs 41.80 262 P P 12 51 03.7 -0.6
WRAB Tennant Creek 42.30 268 P P 12 51 07.1 -1.1
WRAB Tennant Creek 42.30 268 P P 12 51 07.3 -0.9
WRA Warramunga Arr 42.30 268 P P 12 51 07.4 -0.9
comp=Z,27nm,0.4s,baz=101,slow=6.3,SNR=419
WRA PcP PcP 12 52 50.7 0.0
comp=Z,6.4nm,1.0s,baz=114,slow=3.6,SNR=5.5
WRA ScP ScP 12 55 56.7 +3.2
comp=Z,12nm,1.1s,baz=104,slow=4.3,SNR=14
WRA S S 12 56 47.1 -5.6
comp=Z,8.4nm,1.0s,baz=101,slow=14,SNR=13
comp=Z,27nm,0.4s
WRA Warramunga Arr 42.30 268 P P 12 51 06.4 -1.9
JAY Jayapura 44.03 295 P P 12 51 21.1 -0.8
comp=Z,13nm,0.5s,baz=152,slow=2.8,SNR=8.0
comp=Z,13nm,0.5s
JAY Jayapura 44.03 295 P P 12 51 21.4 -0.5
GENI Genyem 44.44 294 P P 12 51 25.1 +0.1
GENI Genyem 44.44 294 P P 12 51 24.3 -0.7
FORT Forrest 45.83 251 IAmb IAmb 12 51 36.2
comp=Z,18nm,0.6s
SRPI Serui, Papua 48.11 292 P P 12 51 53.1 +0.2
comp=Z,3µmcomp=Z,55nm,0.5s
BAKI Biak 48.58 293 P P 12 51 56.5 0.0
comp=Z,96nm,1.3s
FITZ Fitzroy Crossi 50.71 267 P P 12 52 11.9 -0.2
comp=Z,44nm,0.9s,baz=115,slow=5.1,SNR=87
comp=Z,44nm,0.9s
SIJI Sorong 52.85 290 P P 12 52 26.8 -0.8
comp=Z,40nm,0.4s,baz=62,slow=2.9,SNR=31
comp=Z,40nm,0.4s
SIJI Sorong 52.85 290 P P 12 52 26.8 -0.8
comp=Z,1µmcomp=Z,111nm,1.2s
SWI Sorong 52.86 290 P P 12 52 26.9 -0.8
AUKUL Kulin High Sch 53.94 247 P P 12 52 35.0 -0.2
KRAI Karang Ratu 54.11 285 P P 12 52 35.6 -1.0
comp=Z,3µmcomp=Z,45nm,1.2s
KLBR Kellerberrin 54.45 248 P P 12 52 38.1 -0.7
NWAO Narrogin (SRO) 54.66 246 P P 12 52 39.6 -0.7
comp=Z,13nm,0.9s,baz=69,slow=4.6,SNR=3.0
comp=Z,13nm,0.9s
PSA00 Pilbara Seismi 54.90 261 P 12 52 40.8 -1.3
SOEI Soe 54.94 276 P P 12 52 43.6 +1.0
SOEI Soe 54.94 276 P P 12 52 43.2 +0.6
comp=Z,1µmcomp=Z,113nm,1.3s
MBWA Marble Bar 55.12 261 P P 12 52 43.0 -0.7
MBWA Marble Bar 55.12 261 P P 12 52 42.7 -1.0
MBWA IAmb IAmb 12 52 43.8
comp=Z,38nm,1.0s
NLAI Namlea 55.28 284 P P 12 52 44.3 -0.5
comp=Z,2µmcomp=Z,110nm,1.0s
BATI Baumata 55.31 275 P P 12 52 43.8 -1.2
comp=Z,16nm,0.4s,baz=140,slow=22,SNR=4.8
comp=Z,16nm,0.4s
BATI Baumata 55.31 275 P P 12 52 44.8 -0.2
comp=Z,1µmcomp=Z,58nm,1.4s
BLDU Ballidu 55.51 249 P P 12 52 45.1 -1.1
MUN Mundaring 55.68 247 P P 12 52 46.6 -0.8
MORW Morawa 56.40 251 P P 12 52 51.6 -0.8
MORW Morawa 56.40 251 IAmb IAmb 12 52 52.7
comp=Z,82nm,1.5s
SANI Sanana 56.82 285 P P 12 52 54.3 -1.2
SANI Sanana 56.82 285 P P 12 52 54.3 -1.2
comp=Z,812nmcomp=Z,56nm,1.3s
TNTI Ternate 57.03 289 P P 12 52 56.3 -0.6
comp=Z,59nm,1.0s
EDFI Ende, Flores 57.67 276 P P 12 53 00.8 -0.7
comp=Z,44nm,1.2s
WSI Waingapu 58.56 274 P P 12 53 07.4 0.0
WBSI Waikabubak, Su 59.39 274 P P 12 53 12.6 -0.4
comp=Z,66nm,1.2s
LBFI Labuhan Bajo, 59.41 275 P P 12 53 11.5 -1.6
LUWI Luwuk 60.12 284 P P 12 53 17.4 -0.4
LUWI Luwuk 60.12 284 P 12 53 17.2 -0.7
LUWI Luwuk 60.12 284 P P 12 53 17.4 -0.4
comp=Z,1µmcomp=Z,89nm,1.4s
DBNI Kabupaten Domp 60.82 274 P P 12 53 21.5 -1.0
comp=Z,45nm,0.9s
KAPI Kappang 60.99 279 P P 12 53 23.1 -0.5
comp=Z,8.1nm,0.3s,baz=74,slow=0.5,SNR=5.3
comp=Z,8.1nm,0.3s
KAPI Kappang 60.99 279 P P 12 53 24.5 +0.9
KAPI Kappang 60.99 279 IAmb IAmb 12 53 24.2
comp=Z,92nm,1.5s
KAPI Kappang 60.99 279 P P 12 53 23.4 -0.2
APSI Ampana 61.17 284 P P 12 53 24.8 0.0
comp=Z,840nmcomp=Z,49nm,1.6s
PLAI Plampang 61.17 274 P P 12 53 24.2 -0.6
PLAI Plampang 61.17 274 P P 12 53 24.3 -0.6
SPSI Sidrap Palu 61.44 280 P P 12 53 24.9 -1.6
comp=Z,22nm,1.2s
MRSI Marisa 61.58 285 P P 12 53 26.6 -0.9
TWSI Taliwang, Sumb 62.02 273 P P 12 53 29.4 -0.9
comp=Z,80nm,1.3s
PCI Palu 62.77 283 P P 12 53 35.4 +0.2
comp=Z,72nm,1.3s
TOLI2 Tolitoli 62.90 285 P P 12 53 36.8 +0.8
TOLI2 Tolitoli 62.90 285 P P 12 53 34.6 -1.5
TOLI2 IAmb IAmb 12 53 35.7
comp=Z,52nm,1.2s
MPSI Mapaga 63.30 284 P P 12 53 37.4 -1.2
comp=Z,586nmcomp=Z,28nm,0.5s
KHKI Kahang-Kahang 63.32 273 P P 12 53 38.6 -0.2
comp=Z,60nm,1.1s
JAGI Jajag, Banyuwa 64.59 273 P P 12 53 45.4 -1.5
JAGI Jajag, Banyuwa 64.59 273 P P 12 53 45.9 -1.0
JAGI Jajag, Banyuwa 64.59 273 P P 12 53 45.5 -1.5
comp=Z,83nm,1.3s
ABJI Asan Bagus 64.79 273 P P 12 53 47.3 -0.9
comp=Z,47nm,1.3s
QSPA South Pole Qui 64.83 180 P P 12 53 47.8 +0.1
comp=Z,30nm,1.0s,baz=41,slow=1.8,SNR=20
comp=Z,30nm,1.0s
QSPA South Pole Qui 64.83 180 P P 12 53 48.2 +0.5
QSPA IAmb IAmb 12 53 50.5
comp=Z,37nm,1.0s
KMMI Kallanget 65.34 274 P P 12 53 51.0 -0.6
comp=Z,68nm,1.4s
SNJI Sawahan-Nganju 67.04 272 P P 12 54 02.3 -0.1
comp=Z,48nm,1.4s
SJI Sawahan 67.05 272 P P 12 54 01.9 -0.5
comp=Z,47nm,1.4s
PKKI Palangkaraya 67.38 279 P P 12 54 04.3 0.0
PCJI Pacitan 67.40 271 P P 12 54 04.2 -0.2
comp=Z,3µmcomp=Z,53nm,0.9s
KPJI Karang Pucung 69.78 271 P P 12 54 18.3 -0.5
comp=Z,38nm,1.3s
BBJI Bungbulang 70.89 271 P P 12 54 24.6 -0.9
BBJI Bungbulang 70.89 271 P P 12 54 24.3 -1.2
BBJI IAmb IAmb 12 54 25.1
comp=Z,20nm,1.0s
BBJI Bungbulang 70.89 271 P P 12 54 24.3 -1.2
comp=Z,24nm,1.1s
SBUM Sibu 71.06 282 P P 12 54 26.9 +0.4
SBUM Sibu 71.06 282 P P 12 54 26.6 +0.1
LEM Lembang 71.17 271 P P 12 54 27.4 +0.1
comp=Z,69nm,1.6s
DBJI Dramaga 72.07 271 P P 12 54 32.2 -0.2
MJAR Matsushiro Arr 73.00 326 P P 12 54 36.9 -0.3
comp=Z,11nm,1.0s,baz=162,slow=5.9,SNR=11
comp=Z,11nm,1.0s
MJAR Matsushiro Arr 73.00 326 P P 12 54 36.5 -0.7
MJAR IAmb IAmb 12 54 37.8
comp=Z,20nm,1.2s
MAJO Matsushiro 73.00 326 P P 12 54 37.0 -0.2
MAJO Matsushiro 73.00 326 P P 12 54 36.6 -0.6
MAJO IAmb IAmb 12 54 38.1
comp=Z,37nm,1.2s
MJB9 Matsu-Tunnel 73.00 326 IAmb IAmb 12 54 39.1
comp=Z,35nm,1.2s
KASI Kota Agung 74.53 271 P P 12 54 45.1 -1.4
comp=Z,79nm,1.1s
KLSI 74.67 272 P P 12 54 45.7 -1.6
BELA Belgrano 2 75.10 173 P P 12 54 49.5 +0.9
BELA IAmb IAmb 12 54 50.2
comp=Z,11nm,0.7s
MDSI Maura Dua 75.25 272 P P 12 54 48.6 -1.9
comp=Z,59nm,1.1s
KSI Kapahiang 77.04 272 P P 12 55 00.2 -0.3
JKA Kamikawa-asahi 77.06 333 IAmb IAmb 12 55 08.2
comp=Z,29nm,1.3s
MASI Maura Aman, Be 77.57 272 P P 12 55 02.5 -0.9
MYKOM Kota Tinggi 78.23 278 P P 12 55 07.3 +0.4
MYKOM Kota Tinggi 78.23 278 IAmb IAmb 12 55 07.9
comp=Z,50nm,1.3s
MYKOM Kota Tinggi 78.23 278 P P 12 55 06.8 -0.1
comp=Z,30nm,1.4s
TJN Taejon 78.86 319 P P 12 55 10.5 +0.8
KSRS Korea Array 79.26 320 P P 12 55 12.6 +0.8
comp=Z,2.9nm,0.6s,baz=145,slow=5.6,SNR=12
comp=Z,2.9nm,0.6s
KSAR Wonju Array Be 79.28 320 P P 12 55 11.4 -0.5
YSS Yuzhno-Sakhali 79.34 335 P P 12 55 13.4 +1.4
YSS Yuzhno-Sakhali 79.34 335 P P 12 55 13.2 +1.2
YSS IAmb IAmb 12 55 14.6
comp=Z,24nm,1.1s
PDSI Padang 80.12 274 P P 12 55 15.9 -1.0
PETK Petropavlovsk- 80.40 347 P P 12 55 17.6 +0.1
comp=Z,12nm,0.9s,baz=117,slow=7.1,SNR=28
comp=Z,12nm,0.9s
PETK Petropavlovsk- 80.40 347 P P 12 55 17.9 +0.5
NJ2 Nanjing 81.53 311 eP P 12 55 25.8 +2.1
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
MNSI Mandailing Nat 81.64 275 P P 12 55 23.4 -1.4
comp=Z,2µmcomp=Z,15nm,1.0s
ELIB Princess Elisa 81.72 187 dP P 12 55 25.1 +0.8
USRK Ussuriysk Ar. 81.88 327 P P 12 55 25.9 +0.6
comp=Z,2.6nm,0.4s,baz=207,slow=2.1,SNR=11
comp=Z,2.6nm,0.4s
IPM Ipoh 81.94 279 P P 12 55 26.2 -0.1
IPM Ipoh 81.94 279 P P 12 55 26.0 -0.3
IPM IAmb IAmb 12 55 27.2
comp=Z,57nm,1.5s
IPM Ipoh 81.94 279 P P 12 55 26.2 -0.1
comp=Z,560nmcomp=Z,26nm,1.5s
UBPT Khong Chiam 82.97 290 P P 12 55 32.2 +0.8
TROLL Troll, Antarti 82.98 181 P P 12 55 31.5 +0.7
MHC Mount Hamilton 82.99 43 IAmb IAmb 12 55 34.7
comp=Z,15nm,1.1s
RPSI Rantau Prapat 83.05 276 IAmb IAmb 12 55 32.0
comp=Z,32nm,1.3s
PSI Prapat 83.10 276 P P 12 55 30.5 -1.8
PSI Prapat 83.10 276 P P 12 55 30.8 -1.5
comp=Z,19nm,1.4s
MDJ Mudanjiang 83.37 326 P P 12 55 33.8 +1.0
MWC Mount Wilson 83.39 47 IAmb IAmb 12 55 36.3
comp=Z,22nm,1.2s
DPP Dos Picos Cty 83.43 49 IAmb IAmb 12 55 36.5
comp=Z,15nm,0.9s
ELS Elsinore Mount 83.48 48 IAmb IAmb 12 55 36.9
comp=Z,16nm,1.2s
VNA3 Neumayer Olymp 83.53 177 ⇓P P 12 55 33.9 +0.6
comp=Z,37nm,0.9s
ESJX Sierra Juarez 83.54 50 IAmb IAmb 12 55 38.0
comp=Z,17nm,1.1s
BFSC Mount Baldy Ra 83.67 48 IAmb IAmb 12 55 37.7
comp=Z,23nm,1.4s
TPO Tropico Hills 83.67 47 IAmb IAmb 12 55 38.0
comp=Z,40nm,1.4s
GSI Gunungsitoli 83.67 274 P P 12 55 35.8 +0.7
GSI Gunungsitoli 83.67 274 P P 12 55 35.3 +0.2
comp=Z,2µmcomp=Z,38nm,1.6s
VES Vestal, Richgr 83.69 46 IAmb IAmb 12 55 37.4
comp=Z,23nm,1.0s
WHN Wuhan 83.80 308 P P 12 55 35.0 -0.3
WHN pmax pmax
comp=Z,32nm,0.9s
YUH Yuha Desert 83.93 50 IAmb IAmb 12 55 39.4
comp=Z,14nm,1.1s
BORC Borrego Spring 83.94 49 IAmb IAmb 12 55 39.4
comp=Z,20nm,1.0s
VNA2 Neumayer--Watz 83.95 178 ⇓P P 12 55 36.4 +1.0
comp=Z,5.1nm,0.6s,baz=173,slow=5.7
DNR Dunn Ranch,Anz 83.97 49 IAmb IAmb 12 55 39.8
comp=Z,30nm,1.2s
ISA Isabella, Lake 83.98 46 IAmb IAmb 12 55 39.5
comp=Z,21nm,1.1s
SUTB Sutter Butte 84.09 42 IAmb IAmb 12 55 39.3
comp=Z,22nm,1.1s
PFO Pinyon Flats O 84.11 49 P P 12 55 38.6 +1.7
PFO IAmb IAmb 12 55 40.3
comp=Z,16nm,1.2s
ORV Oroville 84.47 41 IAmb IAmb 12 55 41.3
comp=Z,14nm,1.2s
CLC China Lake 84.64 46 IAmb IAmb 12 55 42.5
comp=Z,15nm,1.0s
O03E Paynes Creek 84.76 41 IAmb IAmb 12 55 42.8
comp=Z,25nm,1.2s
BC3 Big Chuckawall 84.83 49 IAmb IAmb 12 55 44.1
comp=Z,18nm,1.2s
GSC Goldstone, Dar 84.86 47 IAmb IAmb 12 55 43.6
comp=Z,16nm,1.1s
GLA Glamis 84.92 50 IAmb IAmb 12 55 44.7
comp=Z,24nm,1.1s
TIA Tai'an 85.14 314 P P 12 55 42.5 +0.7
TIA pmax pmax
comp=Z,34nm,1.0s
MPK Martis Peak 85.20 42 IAmb IAmb 12 55 45.4
comp=Z,22nm,1.3s
LL02 Futaleuf 85.26 136 P P 12 55 43.4 +1.1
LL02 IAmb IAmb 12 55 45.8
comp=Z,16nm,0.8s
BNX BinXian 85.26 326 ⇑P P 12 55 42.3 +0.2
BNX pmax pmax
comp=Z,8.0nm,1.0s
IRM Iron Mountain 85.32 49 IAmb IAmb 12 55 46.4
comp=Z,26nm,1.2s
BLYC Blythe 85.52 50 IAmb IAmb 12 55 47.3
comp=Z,17nm,1.3s
SHOC Shoshone, Teco 85.56 47 IAmb IAmb 12 55 46.8
comp=Z,24nm,1.4s
NVAR Mina Array Bea 85.74 44 P P 12 55 46.3 +1.4
comp=Z,2.8nm,0.7s,baz=222,slow=8.9,SNR=24
NVAR pP pP 12 57 31.9 -2.7
comp=Z,0.1nm,0.5s,baz=223,slow=8.1,SNR=1.4
comp=Z,2.8nm,0.7s
N15K Kwethluk River 86.67 10 IAmb IAmb 12 55 50.6
comp=Z,19nm,1.1s
K05A Summer Lake 86.82 39 IAmb IAmb 12 55 53.3
comp=Z,24nm,1.2s
J05D Fort Rock, OR 86.98 39 IAmb IAmb 12 55 53.9
comp=Z,23nm,1.1s
WIFE Three Sisters- 87.14 38 IAmb IAmb 12 55 54.6
comp=Z,14nm,1.0s
ENH Enshi 87.20 305 P P 12 55 52.1 +0.4
O18K Koktuh Hills 87.22 12 IAmb IAmb 12 55 52.6
comp=Z,17nm,0.9s
PRN Pahroc Range 87.23 46 IAmb IAmb 12 55 55.4
comp=Z,11nm,1.1s
LYN LuoYang 87.34 310 P P 12 55 53.8 +1.6
LYN pmax pmax
comp=Z,43nm,1.0s
PLCA Paso Flores 87.35 134 P P 12 55 54.3 +1.8
comp=Z,5.0nm,0.9s,baz=223,slow=6.1,SNR=7.9
comp=Z,5.0nm,0.9s
PLCA Paso Flores 87.35 134 P 12 55 54.9 +2.4
PLCA IAmb IAmb 12 55 56.1
comp=Z,19nm,1.4s
TUC Tucson 87.36 52 P P 12 55 53.9 +1.3
TUC IAmb IAmb 12 55 56.7
comp=Z,21nm,1.1s
HNS HongShan 87.41 314 ⇓P P 12 55 53.5 +1.0
HNS pmax pmax
comp=Z,23nm,1.5s
HNS LR LR
comp=N,220nm,17.4s
HNS LR LR
comp=E,190nm,16.8s
HNS LR LR
comp=Z,280nm,23.0s
PINE Pine Mountain 87.46 38 P P 12 55 54.3 +1.4
PINE IAmb IAmb 12 55 56.4
comp=Z,26nm,1.0s
I05D Terrebonne, OR 87.58 38 IAmb IAmb 12 55 56.4
comp=Z,17nm,1.0s
O19K Port Alsworth 87.71 13 IAmb IAmb 12 55 54.7
comp=Z,24nm,1.2s
MA2 Magadan 87.88 346 P P 12 55 54.7 +0.6
MA2 Magadan 87.88 346 P P 12 55 54.0 -0.1
MA2 IAmb IAmb 12 55 55.2
comp=Z,14nm,1.1s
WVOR Wild Horse Val 87.95 41 IAmb IAmb 12 55 58.2
comp=Z,15nm,1.1s
BJI2 Beijing 87.98 316 P P 12 55 56.0 +0.9
BJI2 pmax pmax
comp=Z,5.0nm,1.6s
BJT Baijiatuau 87.98 316 P P 12 55 56.1 +1.0
BJT Baijiatuau 87.98 316 IAmb IAmb 12 56 37.5
comp=Z,4.0nm,0.4s
X16A Lo Mia Camp, P 88.02 50 IAmb IAmb 12 55 59.4

comp=Z,9.9nm,1.1s
HEH HeiHe 88.39 329 *e*P **P 12 55 56.8 +0.1**
HEH pmax pmax
comp=Z,6.0nm,1.4s
I07A Izee 88.46 39 IAmb IAmb 12 56 00.7
comp=Z,16nm,1.0s
KNB Kanab 88.49 48 IAmb IAmb 12 56 01.3
comp=Z,13nm,1.1s
U15A North Rim 88.52 48 IAmb IAmb 12 56 01.7
comp=Z,15nm,1.1s
G06A Carlson Farm, 88.54 37 IAmb IAmb 12 56 00.6
comp=Z,11nm,1.0s
J08A Circle Bar Ran 88.61 40 IAmb IAmb 12 56 01.2
comp=Z,15nm,1.0s
SZCU Shurtz Canyon 88.63 47 IAmb IAmb 12 56 02.0
comp=Z,12nm,1.2s
WUAZ Wupatki 88.66 49 IAmb IAmb 12 56 02.0
comp=Z,13nm,1.2s
GNW Green Mountain 88.86 35 IAmb IAmb 12 56 02.1
comp=Z,10.0nm,0.9s
BI02 San Fabin de 88.96 130 P **P 12 56 01.2 +1.1**
BI02 IAmb IAmb 12 56 03.1
comp=Z,13nm,0.9s
PKCU Pink Cliffs 89.06 47 IAmb IAmb 12 56 04.8
comp=Z,20nm,1.0s
L19K White Mountain 89.44 12 IAmb IAmb 12 56 03.6
comp=Z,11nm,1.0s
MTPU Mount Pierson 89.47 47 IAmb IAmb 12 56 06.6
comp=Z,10nm,0.9s
G08A Pilot Rock 89.50 38 **P 12 56 02.8 +0.6**
G08A IAmb IAmb 12 56 05.3
comp=Z,11nm,1.1s
XAN Xi'an 89.55 308 P **P 12 56 03.8 +1.2**
XAN pP pP 12 57 51.3 -1.4
XAN LR LR
comp=N,260nm,19.2s
XAN LR LR
comp=E,260nm,17.2s
XAN LR LR
comp=Z,270nm,16.5s
121A Cookes Peak, D 89.65 54 IAmb IAmb 12 56 48.8
comp=Z,8.8nm,1.2s
E07A Sunnyside 89.79 37 IAmb IAmb 12 56 06.7
comp=Z,10nm,1.0s
HAWA Hanford 89.86 37 IAmb IAmb 12 56 07.5
comp=Z,19nm,1.4s
KMI2 Kunming 89.87 298 P **P 12 56 06.5 +1.9**
KMI2 pmax pmax
comp=Z,17nm,1.3s
KMI2 LR LR
comp=N,220nm,27.1s
KMI2 LR LR
comp=E,210nm,22.8s
KMI2 LR LR
comp=Z,230nm,22.4s
CMAR Chiang Mai Arr 89.97 290 P **P 12 56 06.6 +1.7**
comp=Z,9.4nm,1.0s,baz=136,slow=3.1,SNR=50
CMAR pP **pP 12 57 52.5 -2.3**
comp=Z,0.8nm,0.3s,baz=117,slow=4.5,SNR=1.7
CMAR PP **PP 12 59 44.9 -2.1**
comp=Z,0.6nm,0.3s,baz=132,slow=5.8,SNR=4.6
comp=Z,9.4nm,1.0s
CMAR Chiang Mai Arr 89.97 290 **P 12 56 05.7 +0.8**
CHTO Chiang Mai 90.13 291 P **P 12 56 06.8 +1.2**
CHTO Chiang Mai 90.13 291 P **P 12 56 06.8 +1.2**
CHTO Chiang Mai 90.13 291 P **P 12 56 06.0 +0.4**
MFID Camas Ranch 90.19 41 IAmb IAmb 12 56 08.4
comp=Z,11nm,1.0s
XLT XiLinHaoTe 90.29 320 *e*P **P 12 56 06.0 +0.1**
XLT XiLinHaoTe 90.29 320 S **S 13 06 21.0 +3.8**
XLT pmax pmax
comp=Z,8.0nm,1.1s
XLT pmax pmax
comp=Z,97nm,4.5s
J18K Innoko River 90.32 10 IAmb IAmb 12 56 07.4
comp=Z,6.3nm,0.9s
F10A Beach Ranch, E 90.89 38 P **P 12 56 08.6 0.0**
F10A IAmb IAmb 12 56 10.2
comp=Z,13nm,1.4s
Y22A Socorro 90.94 53 IAmb IAmb 12 56 12.5
comp=Z,7.0nm,1.1s
TNA Tin City 91.00 5 IAmb IAmb 12 56 10.6
comp=Z,7.8nm,1.0s
MNTX Cornudas Mount 91.00 55 **P 12 56 11.2 +1.8**
SPUT South Promonto 91.08 44 IAmb IAmb 12 56 12.7
comp=Z,9.7nm,1.0s
HVU Hansel Valley 91.13 44 IAmb IAmb 12 56 12.8
comp=Z,8.1nm,0.8s
SRU San Rafael Swe 91.14 47 IAmb IAmb 12 56 12.9
comp=Z,8.0nm,0.8s
TXAR Lajitas Array 91.17 58 P **P 12 56 12.2 +1.8**
comp=Z,5.5nm,1.0s,baz=217,slow=6.1,SNR=25
TXAR PP **PP 12 59 56.5 +0.2**
comp=Z,0.4nm,0.9s,baz=228,slow=5.4,SNR=3.9
comp=Z,5.5nm,1.0s
TXAR Lajitas Array 91.17 58 P **P 12 56 11.2 +0.9**
P17A Butcher Ranch, 91.19 46 IAmb IAmb 12 56 14.1
comp=Z,11nm,1.2s
PZH PanZhiHua 91.30 299 P **P 12 56 11.8 +0.8**
PZH pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 91.35 315 *e*P **P 12 56 12.3 +1.4**
HHC Hu-ho-hao-te 91.35 315 S **S 13 06 27.8 +0.9**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,68nm,5.1s
PV05 Paradox Valley 91.55 48 IAmb IAmb 12 56 15.2
comp=Z,8.2nm,1.2s
TCUT Toone Canyon 91.64 45 IAmb IAmb 12 56 15.4
comp=Z,15nm,1.0s
BSUT Blindstream Ca 91.74 45 IAmb IAmb 12 56 16.1
comp=Z,9.6nm,0.7s
PV19 Morning Glory 91.75 48 IAmb IAmb 12 56 16.8
comp=Z,11nm,1.4s
BTO2 Baotou 92.38 314 *e*P **P 12 56 17.5 +1.8**
BTO2 pmax pmax
comp=Z,16nm,0.8s
BTO2 pmax pmax
comp=Z,200nm,8.9s
F17K Baldwin Pennin 92.52 7 IAmb IAmb 12 56 17.1
comp=Z,6.6nm,1.1s
ILAR Eielson Array 93.35 14 P **P 12 56 19.3 0.0**
comp=Z,1.2nm,1.0s,baz=224,slow=5.4,SNR=7.4
ILAR pP **pP 12 58 07.8 -2.6**
comp=Z,0.6nm,1.0s,baz=238,slow=5.2,SNR=3.1
comp=Z,1.2nm,1.0s
PDAR Pinedale Array 93.68 44 P **P 12 56 22.3 +0.6**
comp=Z,0.6nm,0.7s,baz=195,slow=4.0,SNR=6.6
comp=Z,0.6nm,0.7s
LZH Lanzhou 94.18 308 *e*P **P 12 56 25.5 +1.4**
LZH pmax pmax
comp=Z,14nm,1.6s
LZH LR LR
comp=N,510nm,12.2s
LZH LR LR
comp=E,340nm,11.7s
LZH LR LR
comp=Z,400nm,14.4s
LZDM Lanzhou Array 94.23 308 P **P 12 56 25.4 +0.9**
comp=Z,1.0nm,0.4s,baz=111,slow=4.0,SNR=5.3
comp=Z,1.0nm,0.4s
SONM Songino Array 98.11 319 P Pdif 12 56 41.0 -0.4
comp=Z,0.7nm,1.0s,baz=76,slow=6.3,SNR=4.0
SONM pP pP 12 58 29.1 -3.1
comp=Z,0.1nm,0.5s,baz=82,slow=3.1,SNR=1.7
SONM PP **PP 13 00 49.8 +0.7**
comp=Z,0.8nm,1.1s,baz=126,slow=7.5,SNR=3.6
comp=Z,0.7nm,1.0s
GTA2 Gaotai 98.60 310 *e*P **P 12 56 44.5 +0.6**
GTA2 pmax pmax
comp=Z,3.0nm,1.4s
GTA2 LR LR
comp=N,160nm,17.5s
GTA2 LR LR
comp=E,130nm,18.7s
GTA2 LR LR
comp=Z,240nm,22.7s
YKA Yellowknife Ar 101.59 26 P **Pdif 12 56 54.7 -1.6**
comp=Z,0.1nm,0.5s,baz=226,slow=5.4,SNR=1.7
WMQ Urumqi 108.59 310 Pdif **Pdif 12 57 29.5 +1.5**
WMQ LR LR
comp=N,390nm,23.9s
WMQ LR LR
comp=E,700nm,23.8s
WMQ LR LR
comp=Z,310nm,23.8s
ZALV Zalesovo Beam 112.97 320 PKiKP **PKiKP 13 01 37.6 -0.6**
comp=Z,0.3nm,0.3s,baz=147,slow=4.2,SNR=4.2
MKAR Makanchi Array 113.04 312 PKiKP **PKiKP 13 01 37.7 -1.0**
comp=Z,2.4nm,1.0s,baz=77,slow=2.6,SNR=13
KURK Kurchatov 116.16 316 **PKPdf 13 01 44.1 -0.4**
KURBB Kurchatov Arra 116.20 316 PKP **PKPdf 13 01 44.1 -0.5**
comp=Z,1.3nm,0.3s,baz=101,slow=2.0,SNR=8.8
KKAR Karatay Array 120.65 307 **PKPdf 13 01 53.2 -0.2**
BVAR Borovoye Array 121.43 318 PKP **PKPdf 13 01 54.3 -0.3**
comp=Z,2.1nm,0.3s,baz=90,slow=3.0,SNR=13
BORK Borovoye 121.47 318 **PKiKP 13 01 54.8 0.0**
SPITS Spitsbergen Ar 126.46 356 PKP **PKiKP 13 02 04.2 0.0**
comp=Z,3.5nm,0.7s,baz=82,slow=6.0,SNR=8.0
ARTI Arti 128.05 323 **PKPdf 13 02 06.9 -0.3**
ABKAR Akbulak array 128.13 314 **PKPdf 13 02 07.3 -0.2**
ARCES ARCESS Array B 133.20 348 PKhKP PKPpre 13 02 08.6
comp=Z,2.1nm,0.8s,baz=70,slow=1.4,SNR=4.7
ARCES PKP **PKPdf 13 02 16.6 0.0**
comp=Z,1.0nm,0.4s,baz=61,slow=1.8,SNR=9.6
ARCES SKPbc **SKPab 13 04 59.6 -0.7**
comp=Z,11nm,0.9s,baz=14,slow=2.9,SNR=16
FINES FINESS Array B 139.71 341 PKhKP PKPpre 13 02 20.2
comp=Z,5.1nm,1.1s,baz=150,slow=31,SNR=12
FINES PKP **PKiKP 13 02 30.5 -0.8**
comp=Z,1.4nm,0.3s,baz=113,slow=4.0,SNR=8.2
FINES SKPbc **SKiKP 13 05 18.6 -1.1**
comp=Z,7.5nm,0.7s,baz=46,slow=5.5,SNR=13
KOPT Kop Dagi 143.16 304 **PKPdf 13 02 35.5 -0.6**
MARD Mardin 143.37 299 PKPbc 13 02 35.1 +0.4
NB2 NORSAR Subarra 143.41 351 PKP PKPab 13 02 33.2 -0.4
comp=Z,10nm,1.1s,baz=16,slow=3.2
NOA NORSAR Array B 143.41 351 PKP PKPab 13 02 33.6 0.0
comp=Z,16nm,1.0s,baz=16,slow=4.9,SNR=21
HFS Hagfors 143.86 348 PKP PKPbc 13 02 35.1 -0.1
comp=Z,15nm,0.4s,baz=59,slow=3.8,SNR=81
PABE Paberze 145.04 336 PKPdf **PKPab 13 02 39.9 0.0**
STRU Stroemstad 145.33 350 *i* P **PKPbc 13 02 39.4 -0.3**
AK03 Malin Array Si 146.07 326 PKP **PKPdf 13 02 40.2 0.0**
AKASG Malin Array Be 146.08 326 PKPbc **PKPbc 13 02 41.8 -0.4**
comp=Z,3.0nm,0.3s,baz=42,slow=3.4,SNR=31
AKASG Malin Array Be 146.08 326 PKPdf **PKPbc 13 02 41.9 -0.3**
AKBB Malin Array Si 146.08 326 PKP **PKPdf 13 02 40.3 0.0**
AK01 Malin Array Si 146.09 326 PKP **PKPdf 13 02 40.3 0.0**
KIEV Kiev 146.09 326 ⇓P **PKPdf 13 02 40.8 +0.5**
KIEV Kiev 146.09 326 PKPdf **PKPbc 13 02 42.1 -0.1**
KIEV Kiev 146.09 326 PKP **PKPdf 13 02 40.3 0.0**
AK04 Malin Array Si 146.10 326 PKP **PKPdf 13 02 40.7 +0.4**
AK09 Malin Array Si 146.10 326 PKP **PKPdf 13 02 40.7 +0.4**
AK08 Malin Array Si 146.11 326 PKP **PKPdf 13 02 40.7 +0.4**
AK02 Malin Array Si 146.12 326 PKP **PKPdf 13 02 40.7 +0.4**
AK22 Malin Array Si 146.12 326 PKP **PKPdf 13 02 40.7 +0.4**
AK11 Malin Array Si 146.12 326 PKP **PKPdf 13 02 40.7 +0.4**
AK21 Malin Array Si 146.13 326 PKP **PKPdf 13 02 40.9 +0.6**
AK10 Malin Array Si 146.13 326 PKP **PKPdf 13 02 40.9 +0.5**
AK15 Malin Array Si 146.14 326 PKP **PKPdf 13 02 40.9 +0.5**
AK05 Malin Array Si 146.14 326 PKP **PKPdf 13 02 40.9 +0.5**
AK18 Malin Array Si 146.15 326 PKP **PKPdf 13 02 41.0 +0.6**
AK12 Malin Array Si 146.15 326 PKP **PKPdf 13 02 41.0 +0.6**
AK16 Malin Array Si 146.16 326 PKP **PKPdf 13 02 40.9 +0.5**
AK20 Malin Array Si 146.16 326 PKP **PKPdf 13 02 40.9 +0.5**
AK06 Malin Array Si 146.16 326 PKP **PKPdf 13 02 40.9 +0.5**
TJOU Tjoern 146.21 349 *i* P **PKPbc 13 02 41.7 -0.6**
BORU Boraas 146.37 348 *i* P **PKPbc 13 02 42.4 -0.4**
MI28 Mi28,Pidlybu 146.71 328 PKP **PKPdf 13 02 41.6 +0.3**
ONAU Onsala 146.76 348 *i* P **PKPbc 13 02 43.2 -0.6**
BLEU Blekinge 146.91 344 *i* P **PKPbc 13 02 44.1 -0.1**
FABU Falkenberg 146.97 347 *i* P **PKPbc 13 02 44.5 +0.1**
DEL Delary 147.22 346 *i* P **PKPbc 13 02 45.1 +0.1**
RNPP9 Sopachiv 147.23 330 PKP **PKPbc 13 02 44.2 -1.1**
RNPP8 Varash 147.30 330 PKP **PKPdf 13 02 43.1 +0.8**
LUBAR Lubar, Ukraine 147.30 326 PKP **PKPdf 13 02 43.9 +1.5**
RNPP5 Staryi Chortor 147.35 329 PKP **PKPdf 13 02 43.7 +1.3**
BZK Bozkurt 147.38 309 ⇑P **PKPbc 13 02 45.9 -0.1**
BJUU Bjuv 147.77 346 *i* P **PKPbc 13 02 45.7 -0.8**
SORM Soroca 148.07 323 ⇑P **PKPbc 13 02 47.1 -0.5**
BSD Bornholm Skovb 148.20 344 *i* P **PKPbc 13 02 47.6 0.0**
MMAI Mount Meron Ar 148.21 292 PKPbc **PKiKP 13 02 50.0 +0.1**
comp=Z,5.6nm,0.3s,baz=62,slow=5.8,SNR=17
KIRS Kirsehir-Merke 148.31 304 ⇓P **PKPbc 13 02 48.8 +0.1**
BRTR Keskin Array B 148.35 305 PKPbc **PKPbc 13 02 49.0 +0.2**
comp=Z,2.3nm,0.4s,baz=127,slow=0.6,SNR=18
BRTR Keskin Array B 148.35 305 PKPbc **PKPbc 13 02 49.2 +0.5**
BEL Belsk 149.08 335 *e*PKPbc **PKiKP 13 02 51.1 +0.2**
TPGR Topolog 149.83 318 ⇑P **PKPbc 13 02 51.2 -0.8**
CFR Carcaliu 149.83 318 ⇑P **PKPbc 13 02 51.7 -0.2**
EKA Eskdalemuir Ar 149.86 4 PKPbc **PKPbc 13 02 51.1 -0.6**
comp=Z,1.9nm,0.6s,baz=354,slow=3.0,SNR=5.4
TESR Tescani 149.96 322 ⇑P **PKPbc 13 02 51.1 -1.1**
BURAR Bucovina Array 150.06 325 ⇑P **PKPbc 13 02 51.5 -1.1**
BURAR Bucovina Array 150.06 325 **PKiKP 13 02 53.7 +0.5**
ONER Baraj Valea Uz 150.20 322 ⇑P **PKiKP 13 02 53.9 +0.5**
VRI Vrincioaia 150.28 321 ⇑P **PKPbc 13 02 52.4 -0.7**
PLOR Plostina 150.34 321 ⇓P **PKPdf 13 02 49.5 +2.1**
TURR Turia 150.58 322 ⇑P **PKPab 13 03 03.8 +1.1**
STHS Stebnicka Huta 150.74 331 *e*PKP **PKiKP 13 02 54.5 +0.1**
STHS *e* 13 03 03.7
MLR Muntele Rosu 150.95 321 ⇓P **PKPbc 13 02 54.7 0.0**
DOPR Dopca 150.98 322 ⇑P **PKPbc 13 02 54.7 0.0**
NIE Niedzica 151.14 332 *e*PKPbc **PKiKP 13 02 56.6 +1.3**
VOIR 151.49 321 ⇑P **PKiKP 13 02 57.6 +1.4**
KSP Ksiaz 151.53 338 *e*PKPbc **PKiKP 13 02 56.5 +0.5**
MARR Marisel-Cluj 151.76 325 ⇑P **PKiKP 13 02 56.9 +0.1**
ARR Arges 151.77 322 ⇑P **PKiKP 13 02 57.7 +1.0**
DRGR 151.90 326 ⇓P **PKPbc 13 02 56.0 -0.8**
MORC Moravsky Berou 151.97 335 ⇑P **PKiKP 13 02 57.7 +0.7**
MORC Moravsky Berou 151.97 335 *e*PKP **PKiKP 13 02 57.5 +0.5**
CLL Collm 152.13 342 *i* PKPbc **PKiKP 13 02 57.6 +0.4**
comp=Z,22nm,0.9s
CLL *i* PKPab **PKPab 13 03 09.4 +0.4**
comp=Z,11nm,0.9s
CLL L L 13 43 00.0
comp=Z,100nm,19.0s
ELND Elena 152.40 316 ⇑P **PKPbc 13 02 56.6 -1.3**
JAVC Velka Javorina 152.66 334 *e*PKP **PKiKP 13 02 59.8 +1.3**
VRAC Vranov 152.71 336 *e*PKP **PKiKP 13 02 58.9 +0.4**
GZR Gura Zlata 152.78 323 ⇑P **PKPbc 13 02 58.7 0.0**
KRUC Moravsky 152.99 336 *e*PKP **PKiKP 13 02 59.4 +0.3**
MODS Modra-Piesok 153.21 334 *e*PKP **PKiKP 13 03 00.7 +1.1**
MODS *e* 13 03 15.5
BZS Buzias 153.25 325 ⇓P **PKPdf 13 02 51.9 +0.2**
MDVR Moldovita 153.75 323 ⇑P **PKPab 13 03 12.7 -3.6**
GERES GERESS Array B 154.11 339 PKPab **PKPab 13 03 17.9 +0.2**
comp=Z,0.7nm,0.5s,baz=352,slow=4.6,SNR=5.1
ESDC Sonseca Array 165.25 12 PKPab **PKPab 13 04 07.2 +0.7**
comp=Z,1.7nm,1.1s,baz=350,slow=5.7,SNR=6.3
TORD Torodi Ar. Bea 167.85 188 PKP **PKPdf 13 03 06.9 -1.3**
comp=Z,3.0nm,1.1s,baz=240,slow=3.1,SNR=9.7
TORD PKPab **PKPab 13 04 18.7 +0.4**
comp=Z,3.8nm,0.9s,baz=198,slow=6.7,SNR=15
TORD pPKPab **pPKPab 13 06 11.7 +2.1**
comp=Z,0.8nm,0.8s,baz=196,slow=5.9,SNR=3.5
TORD PP **PP 13 08 04.2 -2.4**
comp=Z,0.9nm,1.0s,baz=174,slow=5.1,SNR=4.9

HEL 27 12:56:51.3±0.1, 63.48N×22.43E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAF	**Ylistaro**	**0.46**	**166**	PG	Pg	12 56 59.4	-0.6
VAF				SG	Sg	12 57 05.5	-0.4
UMAU	**Umeaa**	**0.88**	**298**	PG	Pg	12 57 07.4	-0.6
UMAU				SB	Sg	12 57 19.3	-0.1
OBF0	**Syolatti, Pyha**	**1.29**	**37**	PG	Pg	12 57 14.7	-1.4
OBF0				smax	smax	12 57 30.4	
comp=Z,2.7nm,0.2s							
OUF	**Merijarvi**	**1.35**	**48**	PG	Pg	12 57 15.2	-1.9
baz=233							
OUF				smax	smax	12 57 32.0	
comp=Z,4.5nm,0.2s							
OUF				SG	Sg	12 57 33.2	-1.5
KPF	**Kankaanpaa**	**1.66**	**186**	PN	Pb	12 57 22.2	-0.5
baz=4.0							
KPF				smax	smax	12 57 41.1	
comp=Z,1.0nm,0.2s							
KEF	**Keuruu**	**1.73**	**139**	PG	Pn	12 57 22.6	0.0
KEF				smax	smax	12 57 42.9	
comp=Z,3.2nm,0.2s							
KEF				SN	Sn	12 57 44.9	-0.5
OBF4	**Vikkela, Lumij**	**1.78**	**40**	PG	Pn	12 57 23.0	-0.2
baz=221							
OBF4				smax	smax	12 57 44.4	
comp=Z,0.9nm,0.2s							
SUF	**Sumiainen**	**1.86**	**113**	PG	Pn	12 57 24.4	0.0
baz=299							
SUF				smax	smax	12 57 46.5	
comp=Z,1.5nm,0.2s							
SUF				SG	Sn	12 57 48.6	+0.1
HEMU	**Hemsoen**	**2.16**	**250**	PG	Pn	12 57 29.6	+1.2
baz=68							
OUL	**Oulu**	**2.21**	**42**	SG	Sb	12 57 59.3	-0.5
NIF	**Nilsia**	**2.42**	**90**	PG	Pb	12 57 34.1	-1.6
baz=275							
NIF				smax	smax	12 58 02.8	
comp=Z,1.2nm,0.2s							
NIF				SG	Sb	12 58 04.5	-1.5
RAF	**Rauma**	**2.49**	**187**	smax	smax	12 58 04.9	
comp=Z,0.9nm,0.2s							
RAF				SG	Sb	12 58 06.9	-1.0
FIA0	**FINESS Array S**	**2.66**	**139**	PB	Pn	12 57 37.0	+1.7
FIA0				smax	smax	12 58 09.6	
comp=Z,1.0nm,0.2s							
FIA0				SB	Sb	12 58 11.4	-1.4
TOF	**Tornio**	**2.73**	**16**	smax	smax	12 58 11.6	
comp=Z,0.4nm,0.2s							
TOF				SG	Sb	12 58 14.0	-1.0
JOF	**Joensuu**	**4.06**	**94**	SG	Sg	12 58 58.0	-3.7

*NEIC **27** 13:00:39.1±2.2, 20.4S±0.2×67.7E±0.1, h10km±1km, mb4.7/6, Error ellipse: s-maj=26.4km s-min=17.1km az=171.0*
*IDC **27** 13:00:42.9±1.0, 19.77S×67.77E, h0km, mb3.8/12, mbtmp3.8/12, MS4.1/55, Error ellipse: s-maj=28.4km s-min=22.4km az=8.0*
*GCMT **27** 13:00:48.1±0.2, 20.12S±0.01×67.43E±0.01, h18km, MW5.2/134, Moment Tensor Solution. s66,c83; s134,c231; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.92±.14; Mθθ6.05±.14; Mϕϕ-5.13±.13; Mrθ0.70±.29; Mθϕ-3.55±.11; Mϕr2.02±.35; Best double couple: Mo7.00200×10^16 NP1:ϕs150.00000°, δ76.00000°, λ-14.00000°. NP2:ϕs243.00000°, δ77.00000°, λ-165.00000°. Principal axes: T 7.0830, Plg1.0000°, Azm16.0000°; N -0.1620, Plg70.0000°, Azm284.0000°; P -6.9210, Plg20.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 13:00:44.0±1.0, 19.6S±0.2×67.9E±0.1, h10km, n81, σ1s36/22, mb3.9/14, MS4.2/56, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCAM	**Rodrigues Isla**	**4.23**	**268**	Pn	Pn	13 01 39.8	-8.7
RER	**Riviere de l'E**	**11.46**	**260**	Pn	Pn	13 03 17.3	-11
H08S1	**Diego Garcia H**	**12.72**	**21**	T	T	13 17 42.0	
baz=202,slow=75,SNR=26							
H08S2	**Diego Garcia H**	**12.73**	**21**	T	T	13 17 39.1	
baz=202,slow=75,SNR=19							
H08S3	**Diego Garcia H**	**12.74**	**21**	T	T	13 17 42.1	
baz=202,slow=75,SNR=32							
PALK	**Pallekele**	**29.57**	**27**	LR	LR	13 16 00.7	
comp=Z,785nm,21.9s,baz=206,slow=31							
PALK	**Pallekele**	**29.57**	**27**	P	**P**	**13 06 48.6**	**-0.8**
H04N2	**CROZET ISLANDS**	**29.58**	**203**	T	T	13 36 59.9	
baz=31,slow=75,SNR=837							
H04N1	**CROZET ISLANDS**	**29.59**	**203**	T	T	13 36 56.4	
baz=31,slow=75,SNR=714							
H04N3	**CROZET ISLANDS**	**29.60**	**203**	T	T	13 36 54.9	
baz=31,slow=75,SNR=811							
GSI	**Gunungsitoli**	**35.82**	**58**	P	**P**	**13 07 42.8**	**-1.2**
GSI				IAmb	IAmb	13 07 56.7	
comp=Z,21nm,1.2s							
LSZ	**Lusaka**	**38.03**	**270**	LR	LR	13 21 45.1	
comp=Z,416nm,20.8s,baz=122,slow=33							
LBTB	**Lobatse**	**39.34**	**254**	LR	LR	13 22 43.4	
comp=Z,221nm,18.4s,baz=92,slow=34							
ATD	**Arta Tunnel**	**39.56**	**319**	LR	LR	13 21 40.2	
comp=Z,6.8nm,20.3s,baz=148,slow=32							
BOSA	**Boshof**	**39.72**	**249**	P	**P**	**13 08 16.1**	**-1.0**
comp=Z,1.8nm,0.7s,baz=176,slow=6.8,SNR=3.6							
BOSA				LR	LR	13 21 33.1	
comp=Z,198nm,20.6s,baz=92,slow=32							
comp=Z,1.8nm,0.7s							
BOSA	**Boshof**	**39.72**	**249**	P	P	13 08 07.5	-10
BOSA				IAmb	IAmb	13 08 13.5	
comp=Z,16nm,1.4s							
FURI	**Furi**	**40.36**	**312**	LR	LR	13 23 54.9	
comp=Z,318nm,18.2s,baz=130,slow=34							
LEM	**Lembang**	**40.63**	**77**	LR	LR	13 21 51.5	
comp=Z,258nm,21.4s,baz=220,slow=31							
MBAR	**Mbarara**	**40.97**	**293**	LR	LR	13 22 09.7	
comp=Z,274nm,21.2s,baz=113,slow=31							
SUR	**Sutherland**	**43.83**	**243**	LR	LR	13 23 47.7	
comp=Z,313nm,18.3s,baz=96,slow=32							
NWAO	**Narrogin (SRO)**	**45.83**	**117**	LR	LR	13 23 58.4	
comp=Z,270nm,21.3s,baz=310,slow=30							
TSUM	**Tsumeb**	**47.27**	**262**	LR	LR	13 27 03.8	
comp=Z,471nm,18.7s,baz=111,slow=34							
BRDH	**Bariadhala**	**48.04**	**30**	LR	LR	13 30 33.1	
comp=Z,287nm,18.1s,baz=190,slow=37							
MAW	**Mawson**	**48.07**	**183**	LR	LR	13 24 26.3	
comp=Z,313nm,21.1s,baz=356,slow=30							
CMAR	**Chiang Mai Arr**	**48.61**	**41**	P	**P**	**13 09 30.4**	**+2.3**
comp=Z,0.9nm,0.7s,baz=233,slow=8.0,SNR=11							
CMAR				LR	LR	13 27 09.9	
comp=Z,201nm,21.6s,baz=215,slow=32							
comp=Z,0.9nm,0.7s							
CMAR	**Chiang Mai Arr**	**48.61**	**41**	P	**P**	**13 09 26.6**	**-1.6**
EVN	**Everest**	**50.74**	**22**	P	**P**	**13 09 45.1**	**+0.2**
KAPI	**Kappang**	**52.52**	**81**	LR	LR	13 31 24.2	
comp=Z,70nm,18.9s,baz=246,slow=35							
FITZ	**Fitzroy Crossi**	**54.48**	**99**	LR	LR	13 29 33.1	
comp=Z,167nm,21.6s,baz=270,slow=32							
EIL	**Elat**	**58.38**	**326**	LR	LR	13 31 24.1	
comp=Z,214nm,21.9s,baz=141,slow=32							
ASF	**Jabal al Asfar**	**59.43**	**330**	LR	LR	13 32 37.5	
comp=Z,92nm,20.3s,baz=206,slow=32							
ASAR	**Alice Springs**	**61.05**	**107**	P	**P**	**13 10 59.8**	**+1.3**
comp=Z,0.5nm,0.6s,baz=261,slow=6.2,SNR=12							
ASAR				LR	LR	13 33 36.6	
comp=Z,594nm,21.8s,baz=284,slow=32							
comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**61.05**	**107**	P	P	13 10 51.0	-7.4
EDA	**Edea**	**61.27**	**286**	P	P	13 10 54.6	-5.4
EDA				IAmb	IAmb	13 11 07.2	
comp=Z,7.0nm,1.0s							
WRA	**Warramunga Arr**	**62.16**	**103**	P	**P**	**13 11 05.8**	**-0.2**
comp=Z,0.6nm,1.0s,baz=254,slow=6.1,SNR=2.7							
comp=Z,0.6nm,1.0s							
AAK	**Ala-Archa**	**62.25**	**6**	P	**P**	**13 11 08.5**	**+2.3**
comp=Z,0.9nm,0.3s,baz=217,slow=6.7,SNR=3.9							
comp=Z,0.9nm,0.3s							
KKAR	**Karatay Array**	**62.46**	**2**	P	**P**	**13 11 05.5**	**-1.9**
GNI	**Garni**	**63.25**	**340**	LR	LR	13 38 41.7	
comp=Z,73nm,18.4s,baz=174,slow=36							
SIJI	**Sorong**	**64.73**	**81**	LR	LR	13 35 32.2	
comp=Z,55nm,22.0s,baz=200,slow=32							
LZDM	**Lanzhou Array**	**64.86**	**32**	LR	LR	13 40 31.6	
comp=Z,97nm,19.1s,baz=45,slow=37							
SNAA	**Sanae**	**65.46**	**199**	LR	LR	13 33 56.2	
comp=Z,292nm,18.3s,baz=22,slow=30							
STKA	**Stephens Creek**	**66.42**	**117**	LR	LR	13 36 39.5	
comp=Z,128nm,20.0s,baz=223,slow=32							
KBZ	**Khabaz**	**67.07**	**341**	LR	LR	13 39 33.4	
comp=Z,116nm,21.2s,baz=163,slow=35							
BRTR	**Keskin Array B**	**67.13**	**332**	P	**P**	**13 11 39.6**	**+1.5**
comp=Z,0.5nm,0.6s,baz=174,slow=6.2,SNR=4.4							
BRTR				LR	LR	13 37 50.6	
comp=Z,79nm,21.4s,baz=134,slow=33							
comp=Z,0.5nm,0.6s							
BRTR	**Keskin Array B**	**67.13**	**332**	P	**P**	**13 11 37.1**	**-1.0**
MKAR	**Makanchi Array**	**67.38**	**11**	P	**P**	**13 11 41.4**	**+2.0**
comp=Z,0.8nm,0.9s,baz=206,slow=5.3,SNR=5.9							
MKAR				LR	LR	13 41 17.7	
comp=Z,98nm,19.1s,baz=200,slow=36							
comp=Z,0.8nm,0.9s							
MKAR	**Makanchi Array**	**67.38**	**11**	P	**P**	**13 11 40.2**	**+0.8**
ABKAR	**Akbulak array**	**68.93**	**354**	P	**P**	**13 11 48.9**	**-0.1**
AKTO	**Aktyubinsk**	**70.29**	**353**	LR	LR	13 41 56.7	
comp=Z,91nm,19.9s,baz=43,slow=35							
QSPA	**South Pole Qui**	**70.48**	**180**	LR	LR	13 39 28.4	
comp=Z,288nm,18.5s,baz=258,slow=33							
KURBB	**Kurchatov Arra**	**70.57**	**7**	P	**P**	**13

	comp=Z,6.2nm,1.2s							
VNDA	**Vanda**	**71.84**	**167**	LR	LR	13 41 26.8		
	comp=Z,117nm,18.2s,baz=228,slow=34							
BVAR	**Borovoye Array**	**72.38**	**2**	LR	LR	13 42 57.5		
	comp=Z,173nm,21.7s,baz=184,slow=35							
TORD	**Torodi Ar. Bea**	**72.80**	**291**	P	**P**	**13 12 14.3**	**+1.0**	
	comp=Z,0.8nm,0.9s,baz=157,slow=3.0,SNR=6.9							
	comp=Z,0.8nm,0.9s							
JAY	**Jayapura**	**73.01**	**87**	LR	LR	13 44 09.0		
	comp=Z,100nm,19.1s,baz=200,slow=36							
CTA	**Charters Tower**	**73.01**	**106**	LR	LR	13 42 12.0		
	comp=Z,220nm,19.2s,baz=230,slow=34							
ZALV	**Zalesovo Beam**	**74.72**	**10**	P	**P**	**13 12 23.4**	**-0.2**	
	comp=Z,1.0nm,0.8s,baz=219,slow=3.8,SNR=4.6							
ZALV				LR	LR	13 45 14.1		
	comp=Z,161nm,19.6s,baz=190,slow=36							
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**75.52**	**26**	P	**P**	**13 12 29.5**	**+0.8**	
	comp=Z,0.7nm,0.8s,baz=216,slow=4.7,SNR=5.4							
SONM				LR	LR	13 46 21.0		
	comp=Z,128nm,19.5s,baz=188,slow=36							
	comp=Z,0.7nm,0.8s							
DBIC	**Dimbokro**	**76.13**	**282**	LR	LR	13 44 37.3		
	comp=Z,159nm,18.3s,baz=137,slow=35							
PMG	**Port Moresby**	**76.89**	**95**	LR	LR	13 43 20.9		
	comp=Z,190nm,21.5s,baz=224,slow=33							
TLY	**Talaya**	**77.60**	**22**	LR	LR	13 45 56.2		
	comp=Z,126nm,21.8s,baz=208,slow=35							
AKASG	**Malin Array Be**	**77.84**	**336**	P	**P**	**13 12 41.6**	**+0.1**	
	comp=Z,0.2nm,0.3s,baz=135,slow=4.7,SNR=4.4							
	comp=Z,0.2nm,0.3s							
KEST	**Kesra**	**78.08**	**315**	LR	LR	13 47 47.0		
	comp=Z,118nm,18.1s,baz=264,slow=36							
KIRV	**Kirov**	**79.40**	**350**	LR	LR	13 46 30.1		
	comp=Z,96nm,21.9s,baz=157,slow=34							
JNU	**Nakatsue**	**79.79**	**49**	LR	LR	13 46 39.6		
	comp=Z,131nm,20.3s,baz=228,slow=34							
KSRS	**Korea Array**	**80.09**	**44**	LR	LR	13 50 00.7		
	comp=Z,81nm,18.2s,baz=230,slow=37							
GUMO	**Guam**	**82.64**	**73**	LR	LR	13 51 32.9		
	comp=Z,11nm,18.5s,baz=223,slow=37							
GERES	**GERESS Array B**	**83.45**	**327**	LR	LR	13 50 43.5		
	comp=Z,42nm,19.8s,baz=94,slow=36							
RPZ	**Rata Peaks**	**85.76**	**135**	LR	LR	13 42 53.6		
	comp=Z,156nm,20.3s,baz=165,slow=30							
MDT	**Midelt**	**86.61**	**306**	LR	LR	13 53 26.5		
	comp=Z,195nm,18.4s,baz=125,slow=36							
MJAR	**Matsushiro Arr**	**86.72**	**49**	LR	LR	13 52 38.3		
	comp=Z,81nm,19.2s,baz=243,slow=36							
PMSA	**Palmer Station**	**88.17**	**199**	LR	LR	13 49 07.4		
	comp=Z,116nm,19.9s,baz=139,slow=33							
HNR	**Honiara**	**88.83**	**100**	LR	LR	13 51 34.2		
	comp=Z,5.3nm,18.8s,baz=342,slow=34							
KLR	**Kul'dur**	**88.87**	**36**	LR	LR	13 52 55.9		
	comp=Z,107nm,22.0s,baz=232,slow=35							
ESDC	**Sonseca Array**	**89.16**	**313**	LR	LR	13 55 21.8		
	comp=Z,80nm,18.4s,baz=113,slow=37							
URZ	**Urewera**	**92.22**	**132**	LR	LR	13 47 31.5		
	comp=Z,101nm,20.0s,baz=240,slow=30							
ASAJ	**Asahikawa**	**93.03**	**44**	LR	LR	13 55 52.2		
	comp=Z,46nm,19.3s,baz=168,slow=36							
ARCES	**ARCESS Array B**	**93.87**	**346**	LR	LR	13 57 13.3		
	comp=Z,68nm,18.8s,baz=141,slow=36							
YAK	**Yakutsk**	**94.86**	**25**	LR	LR	13 56 35.9		
	comp=Z,141nm,21.1s,baz=259,slow=35							
YKA	**Yellowknife Ar**	**137.14**	**2**	PKP	**PKiKP**	**13 20 08.1**	**-0.7**	
	comp=Z,0.3nm,0.9s,baz=337,slow=2.7,SNR=4.0							

IDC 27 13:10:05.0±2.7, 5°22S×145°84E, h0km, mb3.0/2, mbtmp3.2/4, ML0.8/1, Error ellipse: s-maj=72.0km s-min=32.5km az=87.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.36**	**163**	Pn	Pn	13 11 13.0	+0.5
	0.4nm,0.3s,baz=117,slow=23,SNR=1.5						
PMG				Sn	Sn	13 11 56.6	-7.4
	1.7nm,0.3s,baz=151,slow=20,SNR=9.5						
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**18.42**	**216**	P	P	13 14 22.5	+0.4
	0.8nm,0.4s,baz=40,slow=12,SNR=12						
ASAR	**Alice Springs**	**21.65**	**211**	P	P	13 14 56.2	-1.0
	0.2nm,0.4s,baz=46,slow=7.7,SNR=4.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**76.17**	**321**	P	P	13 21 55.3	+0.2
	0.1nm,0.6s,baz=109,slow=7.0,SNR=1.7						
	0.1nm,0.6s						

AFAD 27 13:11:00.0, 38°.38N×44°.59E, h7km±2km, ML2.2
AZER 27 13:11:01.3, 38°.41N×44°.56E, h10km, ml2.7
TEH 27 13:11:02.3, 38°.42N×44°.51E, h4km±126km, ML2.5, Presumed earthquake
ISK 27 13:11:03.0, 38°.39N×44°.41E, h3km, ML2.3/5
ISC 27 13:11:02.3±1.1, 38°.41N±0°.03×44°.50E±0°.02, h5km±10km, n26, σ1°33/43, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**302**	P	**Pg**	**13 11 11.1**	**-0.4**
OZAP				S	**Sg**	**13 11 18.9**	**+1.2**
OZAP				IAML		13 11 22.0	
	comp=N,473nm,0.7s						
TVAN	**Van**	**0.87**	**278**	P	**Pg**	**13 11 17.3**	**-1.8**
TVAN				S	**Sb**	**13 11 31.6**	**-0.4**
TVAN				IAML		13 11 43.0	
	comp=E,85nm,0.8s						
TVAN				IAML		13 11 44.0	
	comp=N,100nm,0.5s						
ISHB	**Shabestar**	**0.89**	**98**	Pg	**Pg**	**13 11 18.3**	**-1.0**
VANB	**Van**	**0.89**	**282**	Pg	**Pg**	**13 11 19.2**	**-0.3**
VANB				Sg	**Sg**	**13 11 31.0**	**-0.1**
VMUR	**Van-Muradiye**	**0.93**	**309**	P	**Pg**	**13 11 19.4**	**-0.8**
VMUR				S	**Sb**	**13 11 33.8**	**0.0**
VMUR				IAML		13 11 38.0	
	comp=E,118nm,0.6s						
VMUR				IAML		13 11 42.0	
	comp=N,79nm,0.4s						
MAKU	**Maku**	**0.95**	**8**	Pg	**Pg**	**13 11 19.9**	**-0.7**
MAKU				Sg	**Sg**	**13 11 33.4**	**+0.4**
IMRD	**Marand**	**0.99**	**72**	Pg	**Pg**	**13 11 21.2**	**-0.1**
HAKT	**HAKKARI**	**1.06**	**217**	P	**Pg**	**13 11 20.7**	**-2.0**
HAKT				S	**Sg**	**13 11 36.6**	**+0.3**
HAKT				IAML		13 11 43.0	
	comp=N,61nm,0.6s						
HAKT				IAML		13 11 47.0	
	comp=E,67nm,1.0s						
HAKT	**HAKKARI**	**1.06**	**217**	P	**Pg**	**13 11 22.4**	**-0.2**
HAKT				S	**Sn**	**13 11 40.6**	**+1.4**
NAX	**Nakhchivan**	**1.09**	**45**	P	**Pg**	**13 11 22.9**	**-0.3**
NAX				S	**Sn**	**13 11 38.9**	**-0.8**
GEVA	**Gevas**	**1.14**	**266**	P	**Pb**	**13 11 21.8**	**-2.8**
GEVA				S	**Sg**	**13 11 38.1**	**-0.9**
GEVA				IAML		13 11 45.0	
	comp=N,50nm,0.4s						
GEVA				IAML		13 11 53.0	
	comp=E,42nm,0.6s						
AKDM	**Akdamar-Van**	**1.20**	**267**	Pn	**Pb**	**13 11 25.3**	**-0.3**
ORD	**Ordubad**	**1.28**	**66**	P	**Pn**	**13 11 26.2**	**-0.6**
ORD				S	**Sn**	**13 11 44.6**	**+0.2**
SBZ	**Shahbuz**	**1.28**	**39**	P	**Pn**	**13 11 26.4**	**-0.6**
SBZ				S	**Sn**	**13 11 45.8**	**+1.3**
ITBZ	**Tabriz**	**1.30**	**97**	Pg	**Pn**	**13 11 26.3**	**-1.1**
HYR	**Heyderabad**	**1.33**	**12**	P	**Pb**	**13 11 27.6**	**-0.3**
HYR				S	**Sg**	**13 11 47.9**	**+2.7**
CUKT	**Cukurca**	**1.36**	**212**	Pn	**Pg**	**13 11 28.9**	**+0.5**
IAZR	**Azarshahr**	**1.38**	**122**	Pg	**Pb**	**13 11 28.6**	**-0.1**
ADCV	**BITLIS_Adilcev**	**1.45**	**286**	P	**Pb**	**13 11 29.4**	**-0.5**
ADCV				S	**Sg**	**13 11 51.6**	**+2.7**
ADCV				IAML		13 11 56.0	
	comp=N,31nm,0.5s						
ADCV				IAML		13 11 56.0	
	comp=E,30nm,0.6s						
PERV	**Siirt/Pervari-**	**1.61**	**254**	P	**Pg**	**13 11 33.4**	**+0.2**
PERV				S	**Sg**	**13 11 58.6**	**+4.4**
PERV				IAML		13 12 04.0	
	comp=N,64nm,0.4s						
PERV				IAML		13 12 04.0	
	comp=E,79nm,0.6s						
AGRB	**Hanur-Agry**	**1.66**	**315**	Pn	**Pb**	**13 11 33.6**	**+0.2**
KOTA	**Agri, Merkez-K**	**1.72**	**324**	P	**Pn**	**13 11 33.2**	**+0.1**
KOTA				S	**Sg**	**13 11 57.5**	**0.0**
KOTA				IAML		13 12 03.0	
	comp=E,15nm,0.9s						
GNI	**Garni**	**1.75**	**6**	Pn	**Pg**	**13 11 35.4**	**-0.4**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pb**	**13 11 39.2**	**-0.1**
GDB	**GEDABAY**	**2.50**	**22**	P	**Pb**	**13 11 46.1**	**-1.7**
GDB				S	**Sb**	**13 12 20.0**	**+1.0**
YRD	**Yardimli**	**2.97**	**79**	P	**Pn**	**13 11 51.8**	**+1.6**
YRD				S	**Sb**	**13 12 31.2**	**-1.3**

IDC 27 13:14:05.0±0.9, 32°.06N×95°.30E, h0km, mb3.7/7, mbtmp3.6/11, ML3.5/4, MS4.0/1, Error ellipse: s-maj=38.7km s-min=17.2km az=62.0
ISC 27 13:14:09.6±0.8, 32°.0N±0°.1×95°.2E±0°.2, h35km, n12, σ0°74/11, mb3.8/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.93**	**165**	Pn	**Pn**	**13 17 23.7**	**-0.9**
	0.1nm,0.3s,baz=350,slow=15,SNR=1.9						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**17.77**	**330**	P	**P**	**13 18 14.4**	**-0.3**
	0.1nm,0.3s,baz=147,slow=12,SNR=11						
	0.4nm,0.5s						
SONM	**Songino Array**	**17.92**	**25**	P	**Pn**	**13 18 14.9**	**-1.2**
	0.2nm,0.3s,baz=213,slow=12,SNR=7.6						
	0.2nm,0.5s						
AAK	**Ala-Archa**	**19.54**	**309**	P	**Pn**	**13 18 35.5**	**-0.3**
	0.1nm,0.3s,baz=145,slow=0.8,SNR=5.4						
	3.3nm,1.0s						
KURBB	**Kurchatov Arra**	**22.31**	**331**	P	**P**	**13 19 04.1**	**+0.1**
	1.3nm,0.2s,baz=140,slow=10,SNR=8.0						
	1.3nm,0.2s						
ZALV	**Zalesovo Beam**	**23.14**	**344**	P	**P**	**13 19 12.9**	**+0.4**
	0.6nm,0.6s,baz=156,slow=8.0,SNR=5.1						
	0.6nm,0.6s						
TGY	**Tagaytay City**	**29.51**	**121**	LR	LR	13 31 47.4	
	comp=Z,332nm,20.8s,baz=120,slow=36						
WRA	**Warramunga Arr**	**63.84**	**139**	P	**P**	**13 24 39.2**	**+0.6**
	1.2nm,0.8s,baz=328,slow=7.1,SNR=8.8						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**66.60**	**141**	P	**P**	**13 24 57.6**	**+1.1**
	1.1nm,0.6s,baz=321,slow=6.4,SNR=8.4						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**72.14**	**23**	P	**P**	**13 25 30.4**	**+0.2**
	0.8nm,1.1s,baz=327,slow=6.1,SNR=4.6						
	0.8nm,1.1s						
YKA	**Yellowknife Ar**	**82.79**	**13**	P	**P**	**13 26 30.3**	**+0.5**
	0.3nm,0.9s,baz=320,slow=4.7,SNR=2.7						
	0.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**86.08**	**283**	P	**P**	**13 26 47.4**	**+0.1**
	1.1nm,1.1s,baz=63,slow=4.9,SNR=3.7						
	1.1nm,1.1s						

AFAD 27 13:20:11.1, 38°.47N×44°.68E, h7km±5km, ML2.7
AZER 27 13:20:12.0, 38°.48N×44°.51E, h2km, ml2.9
NSSP 27 13:20:13.7, 38°.38N×44°.67E, h10km, Ms3.0
ISK 27 13:20:13.6, 38°.30N×44°.50E, h10km, ML2.8/8
TEH 27 13:20:15.5, 38°.45N×44°.57E, h7km±121km, ML2.9, Presumed earthquake
ISC 27 13:20:13.9±1.1, 38°.42N±0°.02×44°.53E±0°.02, h7km±10km, n43, σ1°26/74, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**300**	P	**Pg**	**13 20 22.5**	**-0.9**
OZAP				S	**Sg**	**13 20 31.1**	**+1.2**
OZAP				IAML		13 20 41.0	
	comp=N,693nm,0.9s						
ISHB	**Shabestar**	**0.86**	**98**	Pg	**Pg**	**13 20 30.7**	**+0.2**
TVAN	**Van**	**0.89**	**278**	P	**Pg**	**13 20 29.8**	**-1.3**
TVAN				S	**Sn**	**13 20 46.0**	**-0.5**
TVAN				IAML		13 20 55.0	
	comp=N,243nm,0.9s						
TVAN				IAML		13 20 58.0	
	comp=E,307nm,0.6s						
VANB	**Van**	**0.92**	**282**	Pg	**Pg**	**13 20 31.3**	**-0.2**
VANB				Sg	**Sg**	**13 20 44.0**	**+0.6**
VMUR	**Van-Muradiye**	**0.94**	**308**	P	**Pg**	**13 20 30.7**	**-1.4**
VMUR				S	**Sb**	**13 20 46.0**	**+0.4**
VMUR				IAML		13 20 49.0	
	comp=N,243nm,0.3s						
VMUR				IAML		13 20 49.0	
	comp=E,178nm,0.4s						
IMRD	**Marand**	**0.96**	**72**	Pg	**Pb**	**13 20 33.0**	**-0.1**
IMRD				Sg	**Sb**	**13 20 46.3**	**+0.2**
NAX	**Nakhchivan**	**1.07**	**45**	P	**Pg**	**13 20 34.3**	**-0.2**
NAX				S	**Sn**	**13 20 49.6**	**-1.0**
HAKT	**HAKKARI**	**1.08**	**218**	P	**Pg**	**13 20 34.7**	**+0.1**
HAKT				S	**Sn**	**13 20 53.9**	**+2.8**
HAKT				IAML		13 20 55.0	
	comp=N,315nm,0.6s						
HAKT				IAML		13 20 56.0	
	comp=E,254nm,0.5s						
HAKT	**HAKKARI**	**1.08**	**218**	P	**Pn**	**13 20 35.5**	**-0.3**
HAKT				S	**Sn**	**13 20 53.7**	**+2.7**
GEVA	**Gevas**	**1.16**	**265**	P	**Pb**	**13 20 34.4**	**-2.1**
GEVA				S	**Sn**	**13 20 54.0**	**+0.9**
GEVA				IAML		13 20 57.0	
	comp=N,150nm,0.4s						
GEVA				IAML		13 20 58.0	
	comp=E,139nm,0.7s						
AKDM	**Akdamar-Van**	**1.22**	**266**	Pn	**Pn**	**13 20 36.1**	**-1.6**
AKDM				Sn	**Sg**	**13 20 53.8**	**+0.5**
ORD	**Ordubad**	**1.25**	**65**	P	**Pb**	**13 20 38.0**	**0.0**
ORD				S	**Sn**	**13 20 56.0**	**+0.7**
SBZ	**Shahbuz**	**1.26**	**39**	P	**Pn**	**13 20 37.6**	**-0.6**
SBZ				S	**Sn**	**13 20 57.2**	**+1.7**
ITBZ	**Tabriz**	**1.28**	**98**	Pg	**Pn**	**13 20 37.8**	**-0.7**
DYDN	**Diyadin**	**1.30**	**330**	P	**Pn**	**13 20 37.1**	**-1.8**
DYDN				S	**Sb**	**13 20 54.4**	**-1.6**
DYDN				IAML		13 21 00.0	
	comp=N,101nm,0.6s						
DYDN				IAML		13 21 00.0	
	comp=E,136nm,0.8s						
HYR	**Heyderabad**	**1.32**	**11**	P	**Pb**	**13 20 39.0**	**-0.2**
HYR				S	**Sg**	**13 20 58.7**	**+2.2**
IAZR	**Azarshahr**	**1.36**	**122**	Pg	**Pg**	**13 20 41.6**	**+1.6**
CUKT	**Cukurca**	**1.38**	**212**	Pn	**Pn**	**13 20 38.0**	**-1.8**
CUKT				Sn	**Sb**	**13 20 55.8**	**-2.2**
VAYK	**Vayk**	**1.46**	**28**	*eP*	**Pn**	**13 20 40.5**	**-0.3**
VAYK				*eS*	**Sg**	**13 21 00.8**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.47**	**286**	P	**Pn**	**13 20 40.8**	**-0.3**
ADCV				S	**Sg**	**13 21 03.8**	**+2.6**
ADCV				IAML		13 21 05.0	
	comp=E,87nm,0.8s						
ADCV				IAML		13 21 07.0	
	comp=N,66nm,0.8s						
IGDI	**IGDIR**	**1.49**	**346**	P	**Pb**	**13 20 41.7**	**-0.4**
IGDI				S	**Sg**	**13 21 02.6**	**+0.7**
IGDI				IAML		13 21 09.0	
	comp=N,51nm,0.5s						
IGDI				IAML		13 21 11.0	
	comp=E,61nm,0.5s						
IGDI	**IGDIR**	**1.49**	**346**	P	**Pn**	**13 20 41.2**	**-0.1**
IGDI				S	**Sg**	**13 21 03.1**	**+1.2**
ALVK	**Alvank**	**1.52**	**69**	*eP*	**Pb**	**13 20 42.0**	**-0.4**
ALVK				*eS*	**Sg**	**13 21 02.7**	**0.0**
PERV	**Siirt/Pervari-**	**1.64**	**254**	P	**Pg**	**13 20 46.1**	**+0.8**
PERV				S	**Sg**	**13 21 10.5**	**+3.9**
PERV				IAML		13 21 16.0	
	comp=N,177nm,0.5s						
PERV				IAML		13 21 20.0	
	comp=E,193nm,0.5s						
AGRB	**Hanur-Agry**	**1.67**	**314**	Pn	**Pn**	**13 20 44.3**	**+0.5**
DORK	**Agr/Tutak/Do**	**1.68**	**306**	P	**Pn**	**13 20 43.7**	**-0.2**
DORK				S	**Sg**	**13 21 08.5**	**+0.7**
DORK				IAML		13 21 16.0	
	comp=E,63nm,0.8s						
DORK				IAML		13 21 21.0	
	comp=N,77nm,1.0s						
MLAZ	**Malazgirt-MUS**	**1.71**	**296**	Pn	**Pn**	**13 20 44.9**	**+0.5**
KOTA	**Agri, Merkez-K**	**1.73**	**324**	P	**Pn**	**13 20 44.7**	**0.0**
KOTA				S	**Sg**	**13 21 11.4**	**+2.0**
KOTA				IAML		13 21 15.0	
	comp=N,29nm,0.7s						
KOTA				IAML		13 21 19.0	
	comp=E,28nm,1.0s						
GNI	**Garni**	**1.74**	**5**	Pn	**Pb**	**13 20 46.8**	**+0.5**
GNI	**Garni**	**1.74**	**5**	*eP*	**Pg**	**13 20 47.5**	**+0.2**
GNI				*eS*	**Sg**	**13 21 10.7**	**+0.8**
GNI	**Garni**	**1.74**	**5**	Pg	**Pg**	**13 20 47.2**	**-0.1**
EGVZ	**Egvard**	**1.77**	**62**	*eP*	**Pb**	**13 20 45.8**	**-1.0**
EGVZ				*eS*	**Sb**	**13 21 08.9**	**-0.3**
GRS	**Goris**	**1.77**	**52**	*iP*	**Pn**	**13 20 45.0**	**-0.2**
GRS				*iS*	**Sb**	**13 21 09.0**	**-0.4**
AYRK	**Ayrk**	**1.96**	**29**	*eP*	**Pb**	**13 20 49.8**	**-0.3**
AYRK				*eS*	**Sb**	**13 21 15.2**	**+0.4**
GURO	**Guroymak-BITLI**	**1.97**	**275**	Pn	**Pn**	**13 20 47.9**	**0.0**
IHRS	**Heris**	**1.98**	**92**	Pn	**Pg**	**13 20 51.2**	**-0.6**
SRTM	**Siirt_Merkez**	**2.10**	**259**	P	**Pb**	**13 20 51.1**	**-1.4**
SRTM				IAML		13 21 26.0	
	comp=N,131nm,0.7s						
SRTM				IAML		13 21 31.0	
	comp=E,107nm,0.6s						
DIGO	**Kars**	**2.19**	**336**	P	**Pg**	**13 20 55.2**	**-0.7**
DIGO				IAML		13 21 30.0	
	comp=N,53nm,0.7s						
DIGO				IAML		13 21 41.0	
	comp=E,64nm,0.8s						
QRD	**Qoradiz**	**2.41**	**63**	P	**Pb**	**13 20 57.6**	**-0.1**
QRD				S	**Sg**	**13 21 30.2**	**-1.2**
GDB	**GEDABAY**	**2.49**	**22**	P	**Pb**	**13 20 57.1**	**-2.0**
GDB				S	**Sb**	**13 21 31.0**	**+1.0**
SENK	**Senkaya-Erzuru**	**2.73**	**322**	Pn	**Pn**	**13 20 59.9**	**+1.5**
YRD	**Yardimli**	**2.95**	**79**	P	**Pb**	**13 21 04.8**	**-2.1**
YRD				S	**Sb**	**13 21 42.0**	**-1.2**
LRK	**Lerik**	**3.00**	**84**	P	**Pb**	**13 21 05.8**	**-1.9**
LRK				S	**Sb**	**13 21 45.4**	**+0.8**

NEIC 27 13:28:47.9±2.5, 8°.65S±0°.04×118°.27E±0°.07, h143km±8km, mb4.6/25, Error ellipse: s-maj=11.3km s-min=3.1km az=64.0
IDC 27 13:28:47.2±1.4, 8°.56S×118°.29E, h132km±11km, mb4.0/15, mbtmp4.5/19, MS2.9/1, Error ellipse: s-maj=17.4km s-min=7.6km az=67.0
DJA 27 13:28:48.5±0.1, 9°.5S±2°×11°.8E±°, h113km±3km, M4.6/45, mB5.1/14, mb4.7/34, MLv4.8/45, Mw(mB)4.5/14
ISC 27 13:28:47.2±0.5, 8°.68S±0°.04×118°.38E±0°.04, h133km±4km, n151, σ1°83/168, mb4.6/35, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBNI	**Kabupaten Domp**	**0.18**	**339**	P	**Pn**	**13 29 05.3**	**-0.1**
DBNI				S	**Sn**	**13 29 18.0**	**-1.1**
PLAI	**Plampang**	**0.61**	**256**	P	**Pn**	**13 29 07.9**	**+0.7**
PLAI	**Plampang**	**0.61**	**256**	S	**Sn**	**13 29 22.5**	**+0.1**
PLAI	**Plampang**	**0.61**	**256**	P	**Pn**	**13 29 08.0**	**+0.7**
PLAI				S	**Sn**	**13 29 21.8**	**-0.6**
WBSI	**Waikabubak, Su**	**1.39**	**134**	P	**Pn**	**13 29 14.6**	**+0.3**
WBSI				S	**Sn**	**13 29 33.3**	**-1.6**
TWSI	**Taliwang, Sumb**	**1.48**	**268**	P	**Pn**	**13 29 15.7**	**+0.5**
LBFI	**Labuhan Bajo,**	**1.51**	**83**	P	**Pn**	**13 29 15.9**	**+0.4**
WSI	**Waingapu**	**2.14**	**118**	P	**Pn**	**13 29 23.7**	**+0.8**
WSI				S	**Sn**	**13 29 49.7**	**-0.7**
BASI	**Baing, Sumba**	**2.66**	**125**	P	**Pn**	**13 29 30.7**	**+1.2**
KHKI	**Kahang-Kahang**	**2.76**	**276**	P	**Pn**	**13 29 32.0**	**+1.2**
DNP	**Denpasar**	**3.13**	**270**	P	**Pn**	**13 29 37.7**	**+2.1**
IGBI	**Denpasar**	**3.20**	**267**	P	**Pn**	**13 29 37.8**	**+1.3**
BSSI	**Bau Bau, Buton**	**3.27**	**40**	P	**Pn**	**13 29 38.0**	**+0.5**
EDFI	**Ende, Flores**	**3.27**	**92**	P	**Pn**	**13 29 38.5**	**+0.9**
RTBI	**Rangdo, Negare**	**3.41**	**273**	P	**Pn**	**13 29 40.1**	**+0.9**
MKS	**Makassar**	**3.60**	**18**	P	**Pn**	**13 29 42.2**	**+0.4**
MMRI	**Maumere**	**3.81**	**90**	P	**Pn**	**13 29 46.3**	**+1.7**
MMRI	**Maumere**	**3.81**	**90**		**Pn**	**13 29 45.9**	**+1.3**
MMRI	**Maumere**	**3.81**	**90**	P	**Pn**	**13 29 45.4**	**+0.8**
KAPI	**Kappang**	**3.88**	**21**	P	**Pn**	**13 29 46.4**	**+0.9**
	115nm,0.6s,baz=197,slow=8.1,SNR=42						
KAPI				S	**Sn**	**13 30 28.8**	**-2.0**
	69nm,0.8s,baz=228,slow=19,SNR=9.0						
KAPI	**Kappang**	**3.88**	**21**	P	**Pn**	**13 29 46.4**	**+0.9**
KAPI	**Kappang**	**3.88**	**21**	S	**Sn**	**13 30 32.0**	**+1.2**
KAPI	**Kappang**	**3.88**	**21**		**Pn**	**13 29 46.3**	**+0.7**
KAPI	**Kappang**	**3.88**	**21**	P	**Pn**	**13 29 46.2**	**+0.7**
JAGI	**Jajag, Banyuwa**	**4.18**	**272**	P	**Pn**	**13 29 49.1**	**-0.4**
JAGI	**Jajag, Banyuwa**	**4.18**	**272**	S	**Sn**	**13 30 38.2**	**+0.4**
JAGI	**Jajag, Banyuwa**	**4.18**	**272**		**Pn**	**13 29 49.0**	**-0.5**
JAGI	**Jajag, Banyuwa**	**4.18**	**272**	P	**Pn**	**13 29 49.0**	**-0.5**
ABJI	**Asem Bagus**	**4.20**	**282**	P	**Pn**	**13 29 52.0**	**+2.4**
KMMI	**Kalianget**	**4.66**	**290**	P	**Pn**	**13 29 57.4**	**+1.6**
BLJI	**Banyuglugur**	**4.83**	**281**	P	**Pn**	**13 29 59.7**	**+1.7**
SPSI	**Sidrap Palu**	**4.88**	**17**	P	**Pn**	**13 29 59.5**	**+0.7**
PMSI	**Majene**	**5.17**	**6**	P	**Pn**	**13 30 03.6**	**+0.9**
	0.4nm94nm,0.7s						
BATI	**Baumata**	**5.43**	**107**	P	**Pn**	**13 30 07.0**	**+0.9**
	650nm,0.4s,baz=309,slow=3.2,SNR=141						
BATI				S	**Sn**	**13 31 07.6**	**-0.1**
	190nm,0.3s,baz=75,slow=23,SNR=6.0						
BATI	**Baumata**	**5.43**	**107**	P	**Pn**	**13 30 06.8**	**+0.7**
KKSI	**Kolaka, Sulawe**	**5.53**	**36**	P	**Pn**	**13 30 08.8**	**+1.3**
	0.3nm71nm,0.6s						
TTSI	**Tana Toraja**	**5.78**	**14**	P	**Pn**	**13 30 12.8**	**+2.0**
	0.3nm92nm,0.8s						
SOEI	**Soe**	**5.91**	**101**	P	**Pn**	**13 30 13.7**	**+1.0**
SOEI	**Soe**	**5.91**	**101**		**Pn**	**13 30 13.6**	**+0.9**
SOEI	**Soe**	**5.91**	**101

comp=Z,17nm,0.5s
ASAR Alice Springs 21.05 137 P P 13 33 22.3 +1.4
BLDU Ballidu 21.88 184 P P 13 33 31.4 +1.8
QIS Mount Isa 23.66 122 P P 13 33 48.1 +1.4
FORT Forrest 23.78 159 P P 13 33 49.4 +1.8
NWAO Narrogin (SRO) 24.16 182 P P 13 33 52.4 +1.3
comp=Z,16nm,0.7s,baz=0.2,slow=9.1,SNR=15
comp=Z,16nm,0.7s
NWAO Narrogin (SRO) 24.16 182 P P 13 33 53.0 +1.9
NWAO Narrogin (SRO) 24.16 182 P P 13 33 51.8 +0.7
NWAO IAmb IAmb 13 33 54.2
comp=Z,20nm,0.8s
COEN Coen 24.86 104 P P 13 33 58.4 +0.6
COEN Coen 24.86 104 P P 13 33 58.3 +0.6
MTSU Mount Surprise 26.89 113 P P 13 34 17.6 +1.6
INKA Innaminka 28.38 135 P P 13 34 30.6 +1.5
BBOO Buckleboo 29.06 148 P P 13 34 36.7 +1.6
BBOO Buckleboo 29.06 148 P P 13 34 36.6 +1.6
BBOO IAmb IAmb 13 34 37.3
comp=Z,14nm,0.9s
CTAO Charters Tower 29.23 116 P P 13 34 38.6 +1.8
CTAO IAmb IAmb 13 35 06.6
comp=Z,20nm,1.4s
QLP Quilpie 30.29 129 P P 13 34 48.6 +2.5
HTT Hallett 31.09 145 P P 13 34 55.3 +2.3
STKA Stephens Creek 31.59 140 P P 13 34 59.4 +1.9
comp=Z,7.6nm,0.5s,baz=321,slow=9.3,SNR=21
STKA S **S** 13 39 59.8 +3.1
comp=Z,3.2nm,0.5s,baz=18,slow=20,SNR=6.6
STKA ScP **ScP** 13 41 16.7 -1.2
comp=Z,2.4nm,0.7s,baz=293,slow=1.2,SNR=2.9
comp=Z,7.6nm,0.5s
STKA Stephens Creek 31.59 140 P P 13 34 59.4 +1.9
CMAR Chiang Mai Arr 33.09 325 P P 13 35 10.8 +0.1
comp=Z,0.8nm,0.7s,baz=152,slow=6.8,SNR=7.5
CMAR ScP **ScP** 13 41 22.8 -0.4
comp=Z,0.2nm,0.3s,baz=179,slow=1.0,SNR=4.5
comp=Z,0.8nm,0.7s
CMSA Cobar Meteorol 34.10 136 P P 13 35 20.5 +1.3
EIDS Eidsvold 35.26 122 P P 13 35 29.0 -0.3
EIDS IAmb IAmb 13 36 06.6
comp=Z,18nm,1.4s
TOO Toolangi 37.79 144 P P 13 35 53.4 +2.7
TOO IAmb IAmb 13 35 59.1
comp=Z,16nm,1.4s
ARMA Armidale 37.84 129 P P 13 35 54.5 +3.2
ARMA Armidale 37.84 129 P P 13 35 54.6 +3.4
ARMA IAmb IAmb 13 36 03.2
comp=Z,11nm,1.2s
PZH PanZhiHua 38.52 336 P P 13 35 59.0 +2.0
CAN Canberra 38.55 138 P P 13 35 59.2 +2.1
CAN Canberra 38.55 138 P P 13 35 59.2 +2.1
CNB Canberra Magne 38.79 138 P P 13 36 01.0 +1.9
ENH Enshi 39.66 348 P P 13 36 07.4 +1.1
ENH IAmb IAmb 13 36 08.9
comp=Z,5.8nm,0.5s
NJ2 Nanjing 40.50 1 eP P 13 36 13.8 +0.7
NJ2 pmax pmax
comp=Z,12nm,0.6s
XAN Xi'an 43.42 349 P P 13 36 35.8 -1.1
XAN pP pwP 13 37 08.5 -1.3
XAN pmax pmax
comp=Z,6.0nm,1.4s
KSRS Korea Array 46.75 10 P P 13 37 03.3 +0.2
comp=Z,7.1nm,0.9s,baz=192,slow=8.4,SNR=19
comp=Z,7.1nm,0.9s
KS19 Wonju Array Si 46.79 10 P P 13 37 03.9 +0.5
KS19 IAmb IAmb 13 37 28.3
comp=Z,16nm,1.2s
BJI2 Beijing 48.49 358 P P 13 37 16.0 -0.5
BJI2 pmax pmax
comp=Z,2.0nm,0.8s
MJAR Matsushiro Arr 48.69 21 P P 13 37 16.3 -1.8
comp=Z,2.2nm,0.8s,baz=189,slow=8.7,SNR=2.9
comp=Z,2.2nm,0.8s
HHC Hu-ho-hao-te 49.68 353 eP P 13 37 25.5 -0.2
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,61nm,4.3s
BTO2 Baotou 49.80 352 eP P 13 37 25.5 -1.1
BTO2 pP **pP** 13 37 57.5 +0.8
BTO2 sP **sP** 13 38 08.8 -2.4
BTO2 pmax pmax
comp=Z,18nm,1.1s
BTO2 pmax pmax
comp=Z,240nm,10.6s
GTA2 Gaotai 50.94 341 eP P 13 37 35.0 -0.2
GTA2 pP pwP 13 38 09.8 +1.6
GTA2 pmax pmax
comp=Z,4.0nm,1.3s
XLT XiLinHaoTe 52.37 358 eP P 13 37 45.3 -0.4
XLT pmax pmax
comp=Z,8.0nm,0.9s
XLT pmax pmax
comp=Z,84nm,6.6s
MDJ Mudanjiang 54.00 10 P P 13 37 57.0 -0.5
MDJ ScP **ScP** 13 42 38.0 -8.8
MDJ PcS **PcS** 13 42 56.0 -4.3
MDJ S **S** 13 45 31.0 +7.8
MDJ sS sS 13 46 31.3 +15
MDJ Mudanjiang 54.00 10 SS SS 13 49 20.8 +14
MDJ pmax pmax
comp=Z,7.0nm,0.9s
MDJ LR LR
comp=N,120nm,10.3s
MDJ LR LR
comp=E,190nm,10.3s
MDJ LR LR
comp=Z,390nm,18.1s
USRK Ussuriysk Ar. 54.05 12 P P 13 37 57.1 -0.7
comp=Z,6.3nm,0.6s,baz=187,slow=4.8,SNR=12
comp=Z,6.3nm,0.6s
ULN Ulaanbaatar 57.18 351 P P 13 38 19.2 -1.2
SONM Songino Array 57.26 350 P P 13 38 20.0 -0.8
comp=Z,2.0nm,0.6s,baz=171,slow=8.6,SNR=20
comp=Z,2.0nm,0.6s
SONM Songino Array 57.26 350 P P 13 38 20.4 -0.5
HILR Hailar Array B 58.00 1 P P 13 38 24.7 -1.2
comp=Z,1.7nm,0.5s,baz=184,slow=8.5,SNR=3.3
comp=Z,1.7nm,0.5s
WMQ Urumqi 59.20 335 eP P 13 38 35.8 +1.4
WMQ pP pP 13 39 08.8 +3.2
HEH HeiHe 59.21 7 eP P 13 38 33.3 -0.9
HEH pmax pmax
comp=Z,9.0nm,0.7s
KSH2 Kashi 61.98 323 P P 13 38 52.0 -1.5
KSH2 pP pP 13 39 28.3 +3.0
KSH2 pmax pmax
comp=Z,2.0nm,0.7s
KBL Kabul 63.43 316 P P 13 39 00.9 -2.4
KBL IAmb IAmb 13 39 02.2
comp=Z,4.8nm,0.5s
MKAR Makanchi Array 63.89 333 P P 13 39 04.5 -1.4
comp=Z,1.3nm,0.6s,baz=152,slow=6.0,SNR=26
comp=Z,1.3nm,0.6s
MKAR Makanchi Array 63.89 333 P 13 39 04.3 -1.5
GAR Garm 65.11 320 P P 13 39 12.6 -1.4
CHGR Chuyangaron 65.65 319 P 13 39 15.6 -1.9
CHGR IAmb IAmb 13 39 19.6
comp=Z,6.7nm,0.6s
KKAR Karatay Array 67.43 324 P P 13 39 26.9 -1.7
KURBB Kurchatov Arra 68.41 334 P P 13 39 32.9 -1.6
comp=Z,0.8nm,0.3s,baz=142,slow=5.6,SNR=8.5
comp=Z,0.8nm,0.3s
ZALV Zalesovo Beam 68.52 339 P P 13 39 33.0 -2.1
comp=Z,2.3nm,0.5s,baz=140,slow=4.3,SNR=15
comp=Z,2.3nm,0.5s
ZALV Zalesovo Beam 68.52 339 P 13 39 32.9 -2.3
PETK Petropavlovsk- 70.03 24 P P 13 39 44.6 +0.2
comp=Z,5.2nm,0.6s,baz=318,slow=0.2,SNR=25
comp=Z,5.2nm,0.6s
VNDA Vanda 72.40 171 P P 13 39 58.7 +0.3
comp=Z,1.5nm,0.4s,baz=315,slow=7.8,SNR=9.6
comp=Z,1.5nm,0.4s
BVAR Borovoye Array 73.72 332 P P 13 40 05.4 -1.2
comp=Z,0.9nm,0.6s,baz=126,slow=7.5,SNR=4.1
comp=Z,0.9nm,0.6s
ABKAR Akbulak array 76.95 325 P P 13 40 22.8 -2.3
TIXI Tiksi 80.46 3 P 13 40 41.9 -1.8
YKA Yellowknife Ar 114.15 24 PKP PKPdf 13 47 09.5 -1.0
comp=Z,0.1nm,0.5s,baz=45,slow=7.1,SNR=5.2
TORD Torodi Ar. Bea 117.80 280 PKP **PKPdf 13 47 18.5 -0.4**
comp=Z,0.9nm,0.6s,baz=187,slow=1.7,SNR=8.3
NVAR Mina Array Bea 121.28 50 PKP **PKiKP 13 47 26.4 +1.0**
comp=Z,0.2nm,0.6s,baz=253,slow=2.0,SNR=3.6

DBIC Dimbokro 123.75 272 PKP **PKPdf 13 47 29.6 -0.8**
comp=Z,1.4nm,0.7s,baz=297,slow=23,SNR=1.2
PDAR Pinedale Array 126.10 43 PKP **PKPdf 13 47 34.5 +0.1**
comp=Z,0.1nm,0.6s,baz=264,slow=3.2,SNR=1.9
TXAR Lajitas Array 135.57 57 SKPbc **SKPbc 13 51 10.0 -1.8**
comp=Z,0.6nm,0.7s,baz=230,slow=2.6,SNR=5.0
CPUP Villa Florida 144.95 187 PKPbc **PKPdf 13 48 10.2 +0.8**
comp=Z,4.8nm,0.8s,baz=165,slow=3.1,SNR=9.0

*IDC **27** 13:33:59.8±6.2, 25°.22S×179°.78W, h459km±57km, mb3.7/3, mbtmp4.5/5, Error ellipse: s-maj=56.8km s-min=36.7km az=44.0*
*NOU **27** 13:34:08.7, 25°.62S×179°.76E, h516km, mb4.1/11, South of Fiji Islands*
ISC 27 13:34:03.6±1.8, 25°.3S±0°.1×179°.9W±0°.2, h500km, n17, σ1s29/19, mb4.2/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.94**	**282**	P		**P**	**P**	**13 36 50.8**	**-1.5**
	6.7nm,0.7s,baz=108,slow=15,SNR=1.3								
DZM	**Mont Dzumac**	**12.94**	**282**	P		**P**		**13 36 53.3**	**+1.0**
URZ	**Urewera**	**13.16**	**190**	P		**P**		**13 36 51.8**	**-2.4**
	3.5nm,0.5s,baz=359,slow=1.6,SNR=7.4								
URZ				S		**S**		**13 39 14.2**	**-0.8**
	3.1nm,0.6s,baz=64,slow=22,SNR=1.0								
URZ	**Urewera**	**13.16**	**190**	P		**P**		**13 36 55.0**	**+0.7**
BKZ	**Black Stump Fm**	**14.15**	**192**	P		**P**		**13 37 07.5**	**+2.7**
BFZ	**Birch Farm**	**15.67**	**191**	P		**P**		**13 37 20.0**	**-0.6**
QRZ	**Quartz Range**	**16.72**	**200**	P		**P**		**13 37 32.5**	**+0.9**
KHZ	**Kahutara**	**17.91**	**196**	P		**P**		**13 37 43.2**	**+0.3**
ARMA	**Armidale**	**25.66**	**252**	P		**P**		**13 38 54.8**	**+1.7**
EIDS	**Eidsvold**	**26.23**	**264**	P		**P**		**13 38 58.7**	**+0.7**
CMSA	**Cobar Meteorol**	**30.82**	**250**	P		**P**		**13 39 38.8**	**+0.7**
QLP	**Quilpie**	**32.23**	**260**	P		**P**		**13 39 50.5**	**+0.3**
STKA	**Stephens Creek**	**34.33**	**250**	P		**P**		**13 40 07.0**	**-0.9**
	3.4nm,0.5s,baz=94,slow=9.5,SNR=4.2								
	3.4nm,0.5s								
ASAR	**Alice Springs**	**41.93**	**262**	P		**P**		**13 41 10.0**	**-0.1**
	3.5nm,0.4s,baz=91,slow=7.2,SNR=19								
ASAR				PcP		**PcP**		**13 42 55.6**	**+1.4**
	0.5nm,0.7s,baz=98,slow=4.7,SNR=2.2								
	3.5nm,0.4s								
WRA	**Warramunga Arr**	**42.44**	**268**	P		**P**		**13 41 13.7**	**-0.5**
	6.2nm,0.6s,baz=104,slow=7.7,SNR=20								
	6.2nm,0.6s								
HFS	**Hagfors**	**143.94**	**348**	PKP		**PKPdf**		**13 52 40.8**	**-0.3**
	11nm,1.1s,baz=0.0,slow=2.8,SNR=4.2								
BRTR	**Keskin Array B**	**148.50**	**305**	PKPbc		**PKPbc**		**13 52 53.3**	**-0.6**
	0.3nm,0.5s,baz=83,slow=2.3,SNR=1.7								

*NNC **27** 13:43:59.6±0.4, 43°.02N×77°.76E, h0km, mb3.1, mpv3.5, Error ellipse: s-maj=4.5km s-min=1.5km az=178.0*
*KNET **27** 13:44:00.7±0.5, 42°.98N×77°.69E, h14km±4km, ml2.4, Error ellipse: s-maj=6.1km s-min=3.7km az=117.0*
*KRNET **27** 13:44:00.2±0.1, 43°.04N×77°.74E, h16km, mb3.1*
*SOME **27** 13:44:00.4, 43°.02N×77°.75E, h15km*
ISC 27 13:44:00.2±0.9, 43°.01N±0°.02×77°.75E±0°.01, h13km±8km, n53, σ0s80/96, 14C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANVS	**Anan'yevo**	**0.24**	**195**	⇑*i*P		**P**	**g**	**13 44 05.5**	**+0.1**
ANVS				⇑*i*S		**S**	**g**	**13 44 09.2**	**+0.3**
SATY	**Saty**	**0.48**	**84**	P		**P**	**g**	**13 44 09.6**	**-0.1**
	61nm,0.1s								
SATY				S		**S**	**g**	**13 44 16.4**	**+0.2**
	372nm,0.1s								
KOTS	**Kotyrbulak**	**0.52**	**295**	P		**P**	**g**	**13 44 09.9**	**-0.5**
	88nm,0.1s								
KOTS				S		**S**	**g**	**13 44 17.8**	**+0.4**
	54nm,0.2s								
KOTS	**Kotyrbulak**	**0.52**	**295**	*e*P		**P**	**g**	**13 44 10.1**	**-0.4**
KOTS				*e*S		**S**	**g**	**13 44 17.1**	**-0.3**
KOTS	**Kotyrbulak**	**0.52**	**295**	*e*P		**P**	**g**	**13 44 10.1**	**-0.4**
	88nm,0.1s								
KOTS				*e*S		**S**	**g**	**13 44 17.1**	**-0.3**
	54nm,0.2s								
MDOK	**Medeo**	**0.54**	**286**	Pg		**Pg**	**g**	**13 44 10.3**	**-0.5**
	55nm,0.2s								
MDOK				Lg		Lg		13 44 17.6	
	53nm,0.2s								
KURS	**Kuram**	**0.56**	**33**	P		**P**	**g**	**13 44 10.7**	**-0.6**
	6.8nm,0.1s								
KURS				S		**S**	**g**	**13 44 18.4**	**-0.4**
	49nm,0.2s								
TNSS	**Tian-Shan**	**0.59**	**273**	P		**P**	**g**	**13 44 11.5**	**-0.4**
	3.7nm,0.1s								
TNSS				S		**S**	**g**	**13 44 19.4**	**-0.3**
	8.0nm,0.1s								
TNSS	**Tian-Shan**	**0.59**	**273**	*e*P		**P**	**g**	**13 44 11.5**	**-0.4**
	3.7nm,0.1s								
TNSS				*e*S		**S**	**g**	**13 44 19.4**	**-0.3**
	8.0nm,0.1s								
AAA	**Alma-Ata**	**0.64**	**288**	P		**P**	**g**	**13 44 12.8**	**0.0**
	98nm,0.1s								
AAA				S		**S**	**g**	**13 44 21.6**	**+0.3**
	10nm,0.1s								
AAA	**Alma-Ata**	**0.64**	**288**	*e*P		**P**	**g**	**13 44 12.8**	**0.0**
	98nm,0.1s								
AAA				*e*S		**S**	**g**	**13 44 21.6**	**+0.3**
	10nm,0.1s								
KPKS	**Kokpek**	**0.82**	**56**	P		**P**	**g**	**13 44 15.9**	**-0.2**
	0.3nm,0.1s								
KPKS				S		**S**	**g**	**13 44 27.1**	**+0.3**
	53nm,0.2s								
KPKS	**Kokpek**	**0.82**	**56**	*e*P		**P**	**g**	**13 44 15.9**	**-0.2**
	0.3nm,0.1s								
KPKS				*e*S		**S**	**g**	**13 44 27.1**	**+0.3**
	53nm,0.2s								
UZB	**Uzynbulak**	**0.94**	**81**	P		**P**	**b**	**13 44 17.7**	**-0.8**
	55nm,0.1s								
UZB				S		**S**	**b**	**13 44 30.2**	**-0.7**
	51nm,0.1s								
UZB	**Uzynbulak**	**0.94**	**81**	*e*P		**P**	**b**	**13 44 17.7**	**-0.8**
	55nm,0.1s								
UZB				*e*S		**S**	**b**	**13 44 30.2**	**-0.7**
	51nm,0.1s								
MTBS	**Maitube**	**0.98**	**277**	P		**P**	**b**	**13 44 18.3**	**-0.8**
	12nm,0.1s								
MTBS				S		**S**	**b**	**13 44 31.4**	**-0.6**
	19nm,0.2s								
MTBS	**Maitube**	**0.98**	**277**	*e*P		**P**	**b**	**13 44 18.3**	**-0.8**
	12nm,0.1s								
MTBS				*e*S		**S**	**b**	**13 44 31.4**	**-0.6**
	19nm,0.2s								
KDJ	**Kajisay**	**0.98**	**206**	⇑*i*P		**P**	**b**	**13 44 19.1**	**-0.1**
KDJ				⇑*i*S		**S**	**g**	**13 44 32.2**	**+0.3**
KTBS	**Karatobe**	**1.05**	**312**	P		**P**	**b**	**13 44 19.7**	**-0.6**
	21nm,0.1s								
KTBS				S		**S**	**b**	**13 44 33.5**	**-0.4**
	0.4nm,0.5s								
KTBS	**Karatobe**	**1.05**	**312**	*e*P		**P**	**b**	**13 44 19.7**	**-0.6**
	21nm,0.1s								
KTBS				*e*S		**S**	**b**	**13 44 33.5**	**-0.4**
	0.4nm,0.5s								
ARXS	**Arharly**	**1.20**	**3**	P		**P**	**n**	**13 44 22.3**	**-0.6**
	4.3nm,0.1s								
ARXS				S		**S**	**b**	**13 44 37.8**	**-0.6**
	42nm,0.2s								
ARXS	**Arharly**	**1.20**	**3**	*e*P		**P**	**n**	**13 44 22.3**	**-0.6**
	4.3nm,0.1s								
ARXS				*e*S		**S**	**b**	**13 44 37.8**	**-0.6**
	42nm,0.2s								
SHLS	**Shalkode**	**1.26**	**83**	P		Pg		13 44 29.6	+5.1
	13nm,0.2s								
SHLS				S		Sg		13 44 50.7	+10
	28nm,0.3s								
SHLS	**Shalkode**	**1.26**	**83**	*e*P		Pg		13 44 29.6	+5.1
	13nm,0.2s								
SHLS				*e*S		Sg		13 44 50.7	+10
	28nm,0.3s								
TARG	**Taragay, Kyrgy**	**1.28**	**178**	⇓*i*P		**Pb**		**13 44 24.5**	**0.0**
TARG				⇓*i*S		**Sn**		**13 44 41.6**	**0.0**
PDGK	**Podgornoye**	**1.31**	**75**	⇓P		**Pn**		**13 44 23.7**	**-0.7**
	4.7nm,0.3s								
PDGK				⇑S		**Sb**		**13 44 41.0**	**-0.5**
	9.1nm,0.3s								
KST	**Kastek**	**1.31**	**272**	P		**Pn**		**13 44 23.7**	**-0.7**
	1.3nm,0.2s								
KST				S		**Sb**		**13 44 40.9**	**-0.8**
	9.4nm,0.3s								
KST	**Kastek**	**1.31**	**272**	*e*P		**Pn**		**13 44 23.8**	**-0.7**
	1.3nm,0.2s								
KST				*e*S		**Sb**		**13 44 40.9**	**-0.8**
	9.4nm,0.3s								
KUU	**Kurty**	**1.35**	**311**	P		**Pg**		**13 44 26.6**	**+0.3**
	7.7nm,0.1s								
KUU				S		**Sg**		**13 44 45.4**	**+1.6**
	79nm,0.3s								
KUU	**Kurty**	**1.35**	**311**	*e*P		**Pg**		**13 44 26.6**	**+0.3**
	7.7nm,0.1s								
KUU				*e*S		**Sg**		**13 44 45.4**	**+1.6**
	79nm,0.3s								
ULHL	**Ulahol**	**1.35**	**236**	⇓P		**Pb**		**13 44 25.3**	**-0.3**
	6.5nm,0.1s,SNR=5.5								
ULHL				⇑S		**Sg**		**13 44 43.6**	**-0.2**
	18nm,0.1s								
ULHL	**Ulahol**	**1.35**	**236**	⇑*i*P		**Pb**		**13 44 25.9**	**+0.3**
ULHL				⇑*i*S		**Sg**		**13 44 43.8**	**-0.1**
BOOM	**Boomskoye usch**	**1.43**	**249**	⇓*i*P		**Pb**		**13 44 27.0**	**+0.1**
BOOM				⇓*i*S		**Sg**		**13 44 46.4**	**0.0**
DGS	**Degeres**	**1.47**	**280**	P		**Pb**		**13 44 27.2**	**-0.2**
	19nm,0.2s								
DGS				S		**Sb**		**13 44 46.3**	**+0.2**
	39nm,0.3s								
DGS	**Degeres**	**1.47**	**280**	*e*P		**Pb**		**13 44 27.2**	**-0.2**
	19nm,0.2s								
DGS				*e*S		**Sb**		**13 44 46.3**	**+0.2**
	39nm,0.3s								
TKM2	**Tokmak 2**	**1.59**	**267**	⇑P		**Pb**		**13 44 29.2**	**-0.3**
	4.2nm,0.1s,SNR=39								
TKM2				⇑S		**Sg**		**13 44 51.9**	**+0.7**
	38nm,0.1s								
KRBS	**Karabastau**	**1.66**	**295**	P		**Pb**		**13 44 30.4**	**-0.4**
	16nm,0.2s								
KRBS				S		**Sb**		**13 44 52.2**	**+0.5**
	8.4nm,0.2s								
KRBS	**Karabastau**	**1.66**	**295**	*e*P		**Pb**		**13 44 30.4**	**-0.4**
KRBS				*e*S		**Sb**		**13 44 52.2**	**+0.5**
KRBS	**Karabastau**	**1.66**	**295**	*e*P		**Pb**		**13 44 30.4**	**-0.4**
	16nm,0.2s								
KRBS				*e*S		**Sb**		**13 44 52.2**	**+0.5**
	8.4nm,0.2s								
KNOS	**Konyrlen**	**1.70**	**37**	P		**Pb**		**13 44 31.1**	**-0.3**
	2.3nm,0.1s								
KNOS				S		**Sb**		**13 44 53.5**	**+0.8**
	26nm,0.2s								
KTMS	**Ketmen**	**1.95**	**76**	P		**Pb**		**13 44 35.2**	**-0.5**
	3.0nm,0.1s								
KTMS				S		**Sb**		**13 45 01.0**	**+1.0**
	12nm,0.2s								
KTMS	**Ketmen**	**1.95**	**76**	*e*P		**Pb**		**13 44 34.9**	**-0.8**
	3.0nm,0.1s								
KTMS				*e*S		**Sb**		**13 44 59.6**	**-0.3**
	12nm,0.2s								
TDK	**Taldyqorghan**	**2.04**	**13**	Pg		**Pb**		**13 44 36.8**	**-0.4**
	23nm,0.1s								
TDK				Lg		Lg		13 45 03.0	
	72nm,0.2s								
TDK	**Taldyqorghan**	**2.04**	**13**	*e*P		**Pb**		**13 44 36.8**	**-0.4**
	23nm,0.1s								
TDK				*e*S		**Sb**		**13 45 03.0**	**+0.4**
	72nm,0.2s								
KBK	**Karagaybulak**	**2.09**	**261**	⇓P		**Pb**		**13 44 38.0**	**-0.2**
	16nm,0.3s,SNR=13								
KBK				⇓S		**Sg**		**13 45 06.9**	**-0.7**
	32nm,0.2s								
CHMS	**Chumysh**	**2.20**	**271**	⇑P		**Pb**		**13 44 39.1**	**-0.8**
	4.3nm,0.1s,SNR=8.1								
CHMS				⇓S		**Sb**		**13 45 08.9**	**+1.8**
	12nm,0.2s								
SGDS	**Sogindy**	**2.32**	**282**	Pg		**Pb**		**13 44 42.4**	**+0.4**
	2.6nm,0.1s								
SGDS				Lg		Lg		13 45 12.6	
	6.1nm,0.2s								
USP	**Ospenovka**	**2.40**	**277**	⇑P		**Pb**		**13 44 41.7**	**-1.6**
	14nm,0.3s,SNR=15								
USP				⇑S		**Sb**		**13 45 13.4**	**+0.7**
	10nm,0.2s								
AAK	**Ala-Archa**	**2.43**	**262**	⇓P		**Pb**		**13 44 42.3**	**-1.5**
	8.1nm,0.3s,SNR=10								
AAK				⇑S		**Sb**		**13 45 15.2**	**+1.5**
	17nm,0.5s								
KAPS	**Kapalarasan**	**2.55**	**26**	Pg		**Pb**		**13 44 46.4**	**+0.5**
	2.2nm,0.1s								
KAPS				Lg		Lg		13 45 19.2	
	28nm,0.1s								
MRKS	**Merke**	**3.34**	**267**	Pg		**Pb**		**13 45 01.2**	**+1.9**
	1.8nm,0.3s								
MRKS				Lg		Lg		13 45 44.6	
	6.8nm,0.2s								
MRKS	**Merke**	**3.34**	**267**	*e*P		**Pb**		**13 45 01.2**	**+1.9**
	1.8nm,0.3s								
MRKS				*e*S		**Sg**		**13 45 44.6**	**-2.8**
	6.8nm,0.2s								
MK31	**Makanchi Array**	**4.97**	**39**	Pn		**Pn**		**13 45 17.6**	**+3.1**
	0.8nm,0.9s,baz=216,slow=16,SNR=4.0								
MK31				⇓Lg		Lg		13 46 37.4	
	0.9nm,0.7s,baz=220,slow=29,SNR=7.3								

*IDC **27** 14:31:24.2±2.4, 41°.45N×19°.33E, h0km, mb3.6/5, mbtmp3.7/6, ML3.8/1, MS4.2/1, Error ellipse: s-maj=69.5km s-min=29.3km az=136.0*
*THE **27** 14:31:28.0, 41°.N±6°×2°.0E±°, h2km±10km, M2.9/10, MLh2.9/10*
*PDG **27** 14:31:28.2±0.8, 41°.38N×19°.41E, h13km±2km, MD3.2/3, ML3.1/13, Error ellipse: s-maj=1.0km s-min=1.7km az=0.0*
*BEO **27** 14:31:28.4±0.4, 41°.36N×19°.57E, h7km±2km, ML2.8/13*
*TIR **27** 14:31:29.0, 41°.43N×19°.59E, h37km±2km, Ml3.1/6*
ISC 27 14:31:27.9±1.0, 41°.40N±0°.02×19°.54E±0°.02, h12km±7km, n79, σ1s29/135, mb3.6/4, 8C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.25**	**103**	P		Pg	**g**	**14 31 32.9**	**-0.2**
TIR						Sg	**g**	**14 31 35.6**	**-1.0**
TIR						AML	AML	14 31 39.3	
	6.0nm,0.4s								
TIR						AML	AML	14 31 39.5	
	7.2nm,0.3s								
ULC	**Ulcinj**	**0.60**	**338**	⇑*i*P		g	**g**	**14 31 39.7**	**+0.1**
ULC				*i* S		g	**b**	**14 31 49.4**	**+0.6**
SDA	**Shkodra**	**0.65**	**357**	Pg		Pb	**b**	**14 31 40.9**	**-0.2**
SDA				Sg		Sb	**b**	**14 31 52.1**	**+2.0**
PHP	**Peshkopia**	**0.73**	**67**	Pg		Pg	**g**	**14 31 41.1**	**-0.9**
PHP				Sg		Sb	**b**	**14 31 53.6**	**+1.2**
PHP				AML		AML	AML	14 31 59.6	
	2.2nm,0.5s								
PHP	**Peshkopia**	**0.73**	**67**	P		Pg	**g**	**14 31 40.6**	**-1.4**
PHP				S		Sg	**g**	**14 31 50.9**	**-0.7**
DRME	**Dracevica, Mon**	**0.83**	**341**	⇑*i*Pg		Pg	**g**	**14 31 44.2**	**+0.3**
DRME				*i* Sg		Sb	**b**	**14 31 56.9**	**+1.6**
VLO	**Vlora**	**0.94**	**182**	Pg		Pg	**g**	**14 31 46.5**	**+0.6**
VLO				Sg		Sn	**n**	**14 32 01.0**	**+1.0**
VLO				AML		AML		14 32 10.5	
	4.4nm,0.3s								
VLO	**Vlora**	**0.94**	**182**	P		Pg	**g**	**14 31 46.5**	**+0.6**
VLO				S		Sb	**b**	**14 32 00.3**	**+2.0**
OHR	**Ohrid**	**0.99**	**107**	*i* Pg		Pg	**g**	**14 31 46.3**	**-0.6**
OHR				*i* Sg		Sn	**n**	**14 32 02.0**	**+0.5**
BUM	**Brajici-Budva**	**1.02**	**332**	⇑*i*Pg		Pn	**n**	**14 31 48.9**	**+0.9**
BUM				*i* Sg		Sn	**n**	**14 32 03.0**	**+0.7**
PDG	**Podgorica**	**1.05**	**348**	Pg		Pn	**n**	**14 31 49.2**	**+0.9**
PDG				Sg		Sn	**n**	**14 32 03.7**	**+0.8**
PDG	**Podgorica**	**1.05**	**348**	⇑*i*Pg		Pn	**n**	**14 31 49.2**	**+0.9**
PDG				*i*Sg		Sn	**n**	**14 32 04.8**	**+1.9**
PDG	**Podgorica**	**1.05**	**348**	*e*Pg		Pn	**n**	**14 31 48.8**	**+0.5**
PDG				*e*Sg		Sn	**n**	**14 32 04.4**	**+1.5**

KOME	**Kolasin**	**1.45**	**359**	*e*Pg		**Pg**	**14 31 55.9**	**+0.2**
KOME				*e*Sg		**Sg**	**14 32 14.9**	**+0.5**
BEY	**Berane**	**1.49**	**10**	*e*Pg		**Pb**	**14 31 55.8**	**+0.3**
BEY				*e*Sg		**Sg**	**14 32 15.1**	**-0.7**
IVA	**Berane**	**1.49**	**10⇑**	*i*Pg		**Pb**	**14 31 55.5**	**0.0**
IVA				*i* Sg		**Sg**	**14 32 18.5**	**+2.7**
NEST	**Nestorio**	**1.51**	**130**	Pn		**Pb**	**14 31 56.3**	**+0.5**
NEST	**Nestorio**	**1.51**	**130**	P		**Pn**	**14 31 55.6**	**+0.9**
SRN	**Sarande**	**1.56**	**167**	Pn		**Pn**	**14 31 57.1**	**+1.7**
SRN				Sn		**Sg**	**14 32 19.3**	**+1.2**
SRN				AML	AML		14 32 22.2	
	0.7nm,1.0s							
SRN	**Sarande**	**1.56**	**167**	P		**Pn**	**14 31 56.3**	**+0.9**
SRN				S		**Sb**	**14 32 18.3**	**+1.9**
TREB	**Trebinje**	**1.58**	**326**	*e*Pn		**Pn**	**14 31 56.5**	**+0.8**
TREB				*e*Sn		**Sg**	**14 32 18.4**	**-0.5**
DBRK	**Dubrovnik**	**1.64**	**321**	*e*Pn		**Pb**	**14 31 58.9**	**+0.9**
BRY	**Bratogost**	**1.67**	**334⇑**	*i*Pn		**Pb**	**14 31 59.3**	**+0.6**
BRY				*i* Sn		**Sg**	**14 32 22.0**	**+0.3**
KEK	**Kerkira**	**1.70**	**173**	P		**Pn**	**14 31 58.6**	**+1.3**
PENT	**Pentalofos**	**1.71**	**134**	P		**Pn**	**14 31 58.3**	**+0.7**
UPM	**Unac-Piva**	**1.86**	**345⇑**	*i*Pn		**Pb**	**14 32 01.9**	**0.0**
UPM				*i* Sn		**Sg**	**14 32 26.6**	**-1.1**
SJES	**Sjenica**	**1.88**	**10**	*e*Pn		**Pb**	**14 32 02.5**	**+0.3**
SJES				*e*Sn		**Sn**	**14 32 25.0**	**+1.3**
PLE	**Pljevlja**	**1.93**	**357**	*e*Pn		**Pn**	**14 32 02.1**	**+1.5**
PLE				*i* Sn		**Sg**	**14 32 28.8**	**-1.1**
PLE	**Pljevlja**	**1.93**	**357**	*e*Pn		**Pb**	**14 32 03.4**	**+0.4**
PLE				*e*Sn		**Sg**	**14 32 29.0**	**-0.9**
IGT	**Igoumenitsa**	**1.96**	**162**	Pn		**Pn**	**14 32 03.3**	**+2.4**
IGT	**Igoumenitsa**	**1.96**	**162**	P		**Pn**	**14 32 01.6**	**+0.6**
IGT	**Igoumenitsa**	**1.96**	**162**	*e*Pn		**Pn**	**14 32 01.6**	**+0.6**
IGT				*e*Sn		**Sn**	**14 32 26.1**	**+0.6**
NOCI	**Noci**	**1.97**	**253**	Pn		**Pn**	**14 32 03.1**	**+2.1**
NOCI				Sn		**Sn**	**14 32 23.5**	**-2.3**
NOCI				AML	AML		14 32 38.4	
	1.1nm,0.3s							
STON	**Ston**	**2.01**	**318**	*i* Pn		**Pn**	**14 32 02.5**	**+1.0**
STON				Sn		**Sn**	**14 32 27.2**	**+0.7**
KZN	**Kozani**	**2.01**	**122**	P		**Pn**	**14 32 02.0**	**+0.3**
SELS	**Selova**	**2.16**	**32**	*e*Pn		**Pn**	**14 32 05.2**	**+1.6**
SELS				*e*Sn		**Sb**	**14 32 32.8**	**-0.8**
BARS	**Barje**	**2.20**	**49**	*e*Pn		**Pn**	**14 32 05.3**	**+1.1**
BARS				*e*Sn		**Sb**	**14 32 34.5**	**-0.3**
GRG	**Griva**	**2.20**	**101**	P		**Pn**	**14 32 04.7**	**+0.4**
PRMD	**Pramanda**	**2.21**	**147**	P		**Pn**	**14 32 05.8**	**+1.3**
RUDO	**Rudo**	**2.22**	**357**	*e*Pn		**Pb**	**14 32 07.2**	**-0.7**
RUDO				*e*Sn		**Sb**	**14 32 34.4**	**-0.8**
IVAS	**Ivanjica**	**2.22**	**12**	*e*Pn		**Pn**	**14 32 05.6**	**+1.1**
IVAS				*e*Sn		**Sb**	**14 32 34.2**	**-1.1**
GOCS	**Kraljevo Serbi**	**2.37**	**24**	*e*Pn		**Pn**	**14 32 08.6**	**+2.0**
GOCS				*e*Sn		**Sn**	**14 32 36.4**	**+0.7**
LSTV	**Lastovo**	**2.40**	**306**	*e*Pn		**Pn**	**14 32 07.3**	**+0.4**
LSTV				Sn		**Sn**	**14 32 35.9**	**-0.3**
BOSS	**Bosilegrad**	**2.45**	**63**	*e*Pn		**Pn**	**14 32 08.6**	**+1.0**
BOSS				*e*Sn		**Sn**	**14 32 39.7**	**+2.3**
BBLS	**Lazi&#263i**	**2.46**	**358**	*e*Pn		**Pn**	**14 32 09.7**	**+1.8**
BBLS				*e*Sn		**Sn**	**14 32 39.8**	**+1.9**
LIT	**Litokhoron**	**2.59**	**119**	P		**Pn**	**14 32 10.4**	**+0.8**
GRUS	**Gruza**	**2.63**	**19**	*e*Pn		**Pn**	**14 32 11.0**	**+0.9**
GRUS				*e*Sn		**Sb**	**14 32 45.3**	**-1.8**
MAKA	**Makarska**	**2.65**	**316**	Sn		**Sn**	**14 32 42.6**	**+0.1**
DIVS	**Divibare**	**2.71**	**7**	*e*Pn		**Pn**	**14 32 12.5**	**+1.2**
DIVS				*e*Sn		**Sn**	**14 32 46.9**	**+2.8**
RICI	**Ricice**	**2.75**	**320**	*e*Pn		**Pn**	**14 32 12.3**	**+0.6**
RICI				Sn		**Sn**	**14 32 45.5**	**+0.7**
SGRT	**San Giovanni R**	**2.87**	**278**	Pn		**Pn**	**14 32 13.1**	**-0.4**
SGRT				Sn		**Sn**	**14 32 45.5**	**-2.5**
TRUS	**Trudelj**	**2.89**	**12**	*e*Pn		**Pn**	**14 32 15.5**	**+1.8**
HVAR	**Hvar**	**2.90**	**309**	*i* Pn		**Pn**	**14 32 13.8**	**0.0**
HVAR				Sn		**Sn**	**14 32 47.3**	**-1.3**
ZAPS	**Zavoj**	**2.96**	**50**	*e*Pn		**Pn**	**14 32 15.6**	**+1.0**
ZAPS				*e*Sn		**Sn**	**14 32 52.7**	**+2.7**
VTS	**Vitosha**	**3.01**	**65**	P		**Pn**	**14 32 15.4**	**0.0**
SRS	**Serrai**	**3.06**	**94**	*e*Pn		**Pn**	**14 32 16.5**	**+0.4**
SRS				*e*Sn		**Sn**	**14 32 52.5**	**-0.2**
ZAGS	**Zajecar**	**3.12**	**39**	*e*Pn		**Pn**	**14 32 18.4**	**+1.6**
ZAGS				*e*Sn		**Sn**	**14 32 55.8**	**+1.8**
AVAS	**Avala Beograd**	**3.37**	**12**	*e*Pn		**Pn**	**14 32 21.0**	**+0.8**
KUBS	**Kucevo**	**3.39**	**27**	*e*Pn		**Pn**	**14 32 20.3**	**-0.3**
KUBS				*e*Sn		**Sn**	**14 33 01.6**	**+0.7**
KIJV	**Kijevo**	**3.48**	**319**	*i* Pn		**Pn**	**14 32 22.8**	**+1.0**
KIJV				Sn		**Sn**	**14 33 03.3**	**+0.4**
ZIRJ	**Zirje**	**3.66**	**309**	*e*Pn		**Pn**	**14 32 24.8**	**+0.6**
ZIRJ				Sn		**Sn**	**14 33 05.2**	**-1.9**
MORI	**Morici**	**3.75**	**312**	*e*Pn		**Pn**	**14 32 26.6**	**+1.1**
MORI				Sn		**Sn**	**14 33 09.2**	**-0.3**
VRSS	**Vrsac**	**3.94**	**19**	*e*Pn		**Pn**	**14 32 29.1**	**+1.0**
DUGI	**Dugi Otok**	**4.20**	**310**	*e*Pn		**Pn**	**14 32 32.7**	**+1.0**
DUGI				Sn		**Sn**	**14 33 20.5**	**-0.1**
MLR	**Muntele Rosu**	**6.20**	**47**	Pn		**Pn**	**14 32 60.0**	**+0.8**
	1.1nm,0.3s,baz=225,slow=11,SNR=5.1							
MLR				Sn		**Sn**	**14 34 11.8**	**+1.8**
	0.4nm,0.3s,baz=75,slow=23,SNR=1.3							
	2.3nm,0.3s							
FINES	**FINESS Array B**	**20.46**	**9**	P		**P**	**14 36 02.8**	**-2.1**
	2.3nm,0.8s,baz=186,slow=9.6,SNR=3.3							
	2.3nm,0.8s							
BVAR	**Borovoye Array**	**35.71**	**53**	P		**P**	**14 38 25.4**	**-0.5**
	0.4nm,0.6s,baz=268,slow=8.7,SNR=3.1							
	0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**44.16**	**50**	P		**P**	**14 39 34.6**	**-1.4**
	1.3nm,0.4s,baz=284,slow=9.0,SNR=5.9							
	1.3nm,0.4s							
MKAR	**Makanchi Array**	**44.32**	**61**	P		**P**	**14 39 36.6**	**-1.0**
	0.8nm,0.7s,baz=282,slow=7.6,SNR=9.8							
	0.8nm,0.7s							
LSZ	**Lusaka**	**56.96**	**170**	LR		LR	15 06 07.6	
	comp=Z,207nm,20.3s,baz=349,slow=36							
SONM	**Songino Array**	**59.02**	**52**	P		**P**	**14 41 26.7**	**-0.8**
	0.2nm,0.6s,baz=293,slow=6.5,SNR=2.5							
	0.2nm,0.6s							

AFAD ***27*** *14:36:06.3,34˚.97N×27˚.84E,h5km±3km,MW4.7*
BJI ***27*** *14:36:10.2,34˚.93N×27˚.53E,h22km,mB5.2/14,mb4.6/61, Ms4.7/4,Ms7 4.3/4*
NAO ***27*** *14:36:11.9,35˚.13N×27˚.95E,h10km,MB4.6*
ISK ***27*** *14:36:12.9,35˚.15N×27˚.99E,h6km,ML4.4/39*
IDC ***27*** *14:36:12.2±0.5,35˚.30N×27˚.92E,h0km,mb4.5/35, mbtmp4.5/49,ML4.1/13,MS3.8/40, Error ellipse: s-maj=11.8km s-min=9.4km az=166.0*
NIC ***27*** *14:36:12.3,35˚.16N×27˚.98E,h2km,Ml4.3/17*
HLW ***27*** *14:36:14.6,35˚.16N×28˚.05E,h8km±2km,Ml4.7*
NEIC ***27*** *14:36:14.4±1.6,35˚.35N±0˚.02×27˚.94E±0˚.04,h10km±1km, mb4.8/163,Error ellipse: s-maj=6.3km s-min=4.0km az=283.0*
MCSM ***27*** *14:36:14.1±0.5,35˚N±4˚×2˚8E±˚,h10km±3km,mb4.6, mB4.6,MLv4.5,Mw(mB)3.8*
ATH ***27*** *14:36:14.9±0.2,35˚.20N×28˚.05E,h10km,ML4.5/18, Manual Solution by G.Panopoulou First location: 2020/02/27 14:37:40, This location: 2020/10/16 15:59:01 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
MED_RC ***27*** *14:36:15.0±0.2,35˚.14N×27˚.83E,h13km±1km,MW4.7/71, Moment Tensor Solution.Mantle waves: s71,c80; Duration: 1s1 Moment tensor: Scale 10¹⁶Nm; Mrr=1.65±.13; Mθθ0.33±.09; Mϕϕ 1.32±.09; Mrθ0.45±.25; Mθϕ0.45±.07; Mrϕ0.06±.20; Best double couple: M₀1.63000×10¹⁶ NP1:ϕs10.00000°,δ42.00000°, λ-107.00000°. NP2:ϕs213.00000°,δ50.00000°, λ-75.00000°. Principal axes: T 1.5100, Pl94.0000°, Azm292.0000°; N 0.2300, Plg12.0000°, Azm23.0000°; P -1.7500, Plg78.0000°, Azm183.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
GFZ ***27*** *14:36:15.4,35˚.09N×28˚.00E,h14km,MW4.7,Moment Tensor Solution. s96 Moment tensor: Mrr=1.57; Mθθ0.50; Mϕϕ 1.07; Mrθ-0.01; Mθϕ0.36; Mrϕ0.00; Fault plane solution: NP1:ϕs205.00000°,δ45.00000°, λ-89.00000°. NP2:ϕs26.00000°,δ45.00000°,λ-89.00000°.*
GCMT ***27*** *14:36:15.4±0.3,35˚.10N±0˚.03×27˚.69E±0˚.02,h19km, MW4.8/97,Moment Tensor Solution. s25,c29; s97,c133; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.16±.12; Mθθ0.57±.08; Mϕϕ 1.59±.08; Mrθ-0.33±.20; Mθϕ0.88±.06; Mrϕ0.57±.15; Best double couple: M₀2.22200×10¹⁶*

NP1:ϕs43.00000°,δ42.00000°,λ-70.00000°. NP2: ϕs196.00000°,δ51.00000°,λ-107.00000°. Principal axes: T 2.1210, Plg5.0000°, Azm299.0000°; N 0.1990, Plg13.0000°, Azm208.0000°; P -2.3230, Plg76.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
GII ***27*** *14:36:18.3±0.0,34˚.992N±0˚.002×28˚.109E±0˚.001,h0km, Mws4.5,confirmed*
THE ***27*** *14:36:18.5,35˚N±7˚×2˚8E±˚,h25km,M4.2/14,MLh4.2/14*
ISC 27 14:36:14.3±0.6,35˚.17N±0˚.03×27˚.98E±0˚.02,h15km±3km, n773,σ1§35/764,mb4.8/155,MS3.9/35,23C-11D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.77**	**300**		**Pg**	**14 36 27.4**	**-1.8**
KARP	**Karpathos**	**0.77**	**300**	Pg	**Pg**	**14 36 27.8**	**-1.4**
KARP				Sg	**Sb**	**14 36 40.2**	**+0.6**
KARP	**Karpathos**	**0.77**	**300**	P	**Pg**	**14 36 28.1**	**-1.1**
KARP				S	**Sg**	**14 36 39.1**	**-0.2**
KARP	**Karpathos**	**0.77**	**300**	P	**Pg**	**14 36 27.5**	**-1.7**
KARP	**Karpathos**	**0.77**	**300**	P	**Pg**	**14 36 27.7**	**-1.4**
KARP				S	**Sb**	**14 36 40.1**	**+0.4**
KARP				AML	AML	14 36 46.2	
	52nm,1.0s						
KARP				AML	AML	14 36 49.9	
	84nm,0.6s						
ARG	**Arkhangelos**	**1.05**	**7**		**Pb**	**14 36 32.2**	**-2.1**
ARG	**Arkhangelos**	**1.05**	**7**	Pg	**Pb**	**14 36 33.7**	**-0.5**
ARG				Sg	**Sn**	**14 36 49.2**	**+0.2**
ARG	**Arkhangelos**	**1.05**	**7**	P	**Pb**	**14 36 33.2**	**-1.0**
ARG				S	**Sb**	**14 36 47.3**	**-0.6**
ARG	**Arkhangelos**	**1.05**	**7**	P	**Pb**	**14 36 32.9**	**-1.4**
ARG				S	**Sn**	**14 36 49.5**	**+0.5**
ARG				AML	AML	14 37 03.5	
	32nm,1.0s						
ARG				AML	AML	14 37 03.5	
	20nm,0.9s						
ARG	**Arkhangelos**	**1.05**	**7**	P	**Pb**	**14 36 33.7**	**-0.5**
ARG				S	**Sn**	**14 36 49.0**	**0.0**
RODB	**Rodos**	**1.29**	**9**	P	**Pb**	**14 36 38.7**	**+0.4**
RDI1	**Rhodes Town Ha**	**1.30**	**9**	P	**Pb**	**14 36 38.7**	**+0.3**
ZKR	**Zakros**	**1.44**	**268**	Pn	**Pn**	**14 36 40.0**	**+0.1**
ZKR				Sn	**Sg**	**14 37 00.3**	**-0.5**
ZKR	**Zakros**	**1.44**	**268**	P	**Pb**	**14 36 40.5**	**-0.4**
ZKR	**Zakros**	**1.44**	**268**	P	**Pn**	**14 36 39.9**	**-0.1**
ZKR				AML	AML	14 37 12.5	
	12nm,1.0s						
ZKR				AML	AML	14 37 15.9	
	21nm,0.9s						
ZKR	**Zakros**	**1.44**	**268**	P	**Pb**	**14 36 41.2**	**+0.3**
ZKR				S	**Sg**	**14 37 01.7**	**+0.9**
SIT2	**Siteia**	**1.53**	**272**	P	**Pg**	**14 36 43.6**	**-0.1**
YAZI	**Mula-Dat§a-**	**1.57**	**344**	P	**Pn**	**14 36 37.5**	**-4.2**
YAZI				S	**Sn**	**14 37 02.0**	**+0.3**
DAT	**Datca**	**1.59**	**348**	Pn	**Pn**	**14 36 42.3**	**+0.2**
DAT				Sn	**Sb**	**14 37 03.9**	**+0.4**
DAT	**Datca**	**1.59**	**348**	P	**Pn**	**14 36 42.1**	**+0.1**
DAT				S	**Sb**	**14 37 04.2**	**+0.7**
DATC	**Datca-Mugla**	**1.61**	**351**	Pn	**Pn**	**14 36 42.1**	**-0.1**
TURN	**Turunc**	**1.62**	**8**	Pn	**Pb**	**14 36 43.3**	**-0.6**
TURN	**Turunc**	**1.62**	**8**	P	**Pn**	**14 36 42.0**	**-0.3**
TURN				S	**Sg**	**14 37 02.5**	**+1.1**
IZZE	**Mula-Seydike**	**1.62**	**38**	P	**Pn**	**14 36 41.1**	**-1.4**
KSL	**Kastellorizon**	**1.64**	**53**	P	**Pn**	**14 36 42.1**	**-0.5**
KSL				AML	AML	14 37 41.9	
	6.7nm,2.4s						
KSL				AML	AML	14 37 44.8	
	7.2nm,1.9s						
KSL	**Kastellorizon**	**1.64**	**53**	P	**Pn**	**14 36 43.1**	**+0.5**
AKAS	**Kas**	**1.70**	**51**		**Pn**	**14 36 42.7**	**-0.9**
AKAS	**Kas**	**1.70**	**51**	Pn	**Pn**	**14 36 43.5**	**-0.1**
AKAS	**Kas**	**1.70**	**51**	P	**Pn**	**14 36 40.1**	**-3.5**
FETY	**Fethiye**	**1.72**	**31**	P	Pn	14 36 32.6	-11
DALY	**Dalyan (Mula)**	**1.73**	**18**	Pn	**Pn**	**14 36 44.5**	**+0.6**
SABU	**Mula-Dalaman**	**1.84**	**26**	P	**Pn**	**14 36 44.0**	**-1.4**
DEMR	**Demre-Antalya**	**1.90**	**55**	Pn	**Pb**	**14 36 46.6**	**+0.4**
NPS	**Neapolis**	**1.94**	**273**	P	**Pb**	**14 36 48.3**	**-1.0**
NPS	**Neapolis**	**1.94**	**273**	P	**Pb**	**14 36 49.5**	**+0.2**
BDRM	**Kayabasi**	**1.94**	**347**	P	**Pn**	**14 36 44.2**	**-2.6**
BDRM				S	**Sn**	**14 37 11.4**	**+0.4**
KLNA	**Kalymnos**	**1.96**	**336**	P	**Pn**	**14 36 47.4**	**+0.4**
BODT	**Bodrum**	**1.96**	**344**	Pn	**Pn**	**14 36 48.4**	**+1.3**
BODT	**Bodrum**	**1.96**	**344**	P	**Pn**	**14 36 47.0**	**-0.1**
YER	**Yerkesik**	**1.98**	**7**	Pn	**Pn**	**14 36 47.9**	**+0.5**
YER	**Yerkesik**	**1.98**	**7**	P	**Pn**	**14 36 47.9**	**+0.5**
YKAV	**Yalikavak-Bodr**	**2.03**	**344**	Pn	**Pn**	**14 36 49.0**	**+1.0**
CAME	**Cameli-Denizli**	**2.07**	**31**	Pn	**Pn**	**14 36 49.2**	**+0.5**
KNIK	**Mula-Seydike**	**2.12**	**37**	P	**Pn**	**14 36 47.5**	**-1.8**
MLSB	**Milas**	**2.13**	**356**	Pn	**Pn**	**14 36 50.2**	**+0.8**
ELL	**Elmali**	**2.22**	**44**		**Pn**	**14 36 51.4**	**+0.6**
ELL	**Elmali**	**2.22**	**44**	Pn	**Pn**	**14 36 51.2**	**+0.4**
ELL	**Elmali**	**2.22**	**44**	P	**Pn**	**14 36 51.2**	**+0.4**
ELL				S	**Sb**	**14 37 20.3**	**-1.4**
ELL				AML	AML	14 37 39.1	
	11nm,1.0s						
ELL				AML	AML	14 37 39.2	
	13nm,0.9s						
CAEL	**Denizli, Camel**	**2.23**	**29**	P	**Pn**	**14 36 50.2**	**-0.8**
THERA	**Ancient Thera,**	**2.36**	**301**	P	**Pn**	**14 36 52.7**	**+0.1**
THERA	**Ancient Thera,**	**2.36**	**301**	P	**Pn**	**14 36 53.4**	**+0.9**
DDIM	**Aydin, Didim**	**2.36**	**346**	P	**Pn**	**14 36 51.9**	**-0.6**
THR8	**Santorini-Mono**	**2.38**	**302**	P	**Pn**	**14 36 53.4**	**+0.7**
THR8	**Santorini-Mono**	**2.38**	**302**	P	**Pn**	**14 36 53.6**	**+0.9**
IACM	**Heraklion**	**2.38**	**274**	P	**Pn**	**14 36 54.6**	**+1.8**
THR6	**Thira Island,**	**2.41**	**300**	P	**Pn**	**14 36 54.3**	**+1.1**
THR6	**Thira Island,**	**2.41**	**300**	P	**Pn**	**14 36 54.3**	**+1.1**
TAVA	**DENIZLI_Tavas**	**2.41**	**18**	P	**Pn**	**14 36 51.9**	**-1.5**
TAVA				S	**Sg**	**14 37 31.3**	**-0.6**
GOLH	**Golhisar**	**2.43**	**31**	P	**Pn**	**14 36 53.1**	**-0.5**
THR3	**Thira Island,**	**2.43**	**301**	P	**Pn**	**14 36 54.1**	**+0.6**
THR3	**Thira Island,**	**2.43**	**301**	P	**Pn**	**14 36 54.6**	**+1.1**
SNT5	**Nea Kammeni, S**	**2.43**	**301**	P	**Pn**	**14 36 54.5**	**+0.9**
SNT5	**Nea Kammeni, S**	**2.43**	**301**	P	**Pn**	**14 36 54.7**	**+1.1**
THR9	**Santorini-Faro**	**2.44**	**300**	P	**Pn**	**14 36 53.7**	**+0.1**
THR5	**Thira Island,**	**2.47**	**301**	P	**Pn**	**14 36 54.4**	**+0.3**
SAP3	**Santorini-Thir**	**2.48**	**301**	P	**Pn**	**14 36 55.6**	**+1.4**
AYDN	**Tasoluk**	**2.49**	**358**	P	**Pn**	**14 36 54.5**	**+0.2**
AYDN				S	**Sb**	**14 37 28.2**	**-1.1**
IDI	**Anoyia**	**2.53**	**274**		**Pn**	**14 36 56.7**	**+1.8**
IDI	**Anoyia**	**2.53**	**274**	Pn	**Pn**	**14 36 56.2**	**+1.3**
IDI	**Anoyia**	**2.53**	**274**	P	**Pn**	**14 36 56.2**	**+1.3**
IDI	**Anoyia**	**2.53**	**274**	P	**Pb**	**14 36 57.3**	**-2.2**
APMY	**Acipayam-Deniz**	**2.54**	**25**	Pn	**Pn**	**14 36 55.6**	**+0.5**
GCAM	**G?zelcami?**	**2.60**	**347**	Pn	**Pn**	**14 36 56.7**	**+0.9**
GCAM	**G?zelcami?**	**2.60**	**347**	P	**Pn**	**14 36 53.8**	**-2.0**
DNIZ	**Denizli-Tavas-**	**2.60**	**19**	P	**Pn**	**14 36 55.7**	**-0.2**
ESEN	**Aydn-Nazilli**	**2.64**	**6**	P	**Pn**	**14 36 56.0**	**-0.4**
ESEN				S	**Sn**	**14 37 30.9**	**+2.6**
KORT	**Korkueli**	**2.65**	**46**	Pn	**Pn**	**14 36 57.4**	**+0.7**
SMG	**Samos**	**2.69**	**340**	P	**Pn**	**14 36 57.3**	**+0.1**
SMG	**Samos**	**2.69**	**340**	P	**Pn**	**14 36 57.4**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**2.77**	**359**	Pn	**Pn**	**14 36 59.9**	**+1.5**
ANTB	**Antalya**	**2.77**	**51**	Pn	**Pn**	**14 36 59.5**	**+1.3**
NAZL	**Nazilli-Aydin**	**2.80**	**5**	Pn	**Pn**	**14 36 59.9**	**+1.2**
INCE	**Denizli-Bozkur**	**2.84**	**27**	P	**Pn**	**14 36 58.9**	**-0.5**
SULTU	**Buldan**	**2.95**	**12**	P	**Pn**	**14 36 57.7**	**-3.1**
VAM	**Vamos**	**3.10**	**275**	P	**Pn**	**14 37 05.3**	**+2.6**
ODEM	**Odemis-Izmir**	**3.10**	**1**	Pn	**Pn**	**14 37 04.6**	**+1.8**
BCK	**Bucak**	**3.11**	**42**	Pn	**Pn**	**14 37 04.0**	**+1.0**
OSC1	**CSNet OBS 1**	**3.20**	**120**	P	**Pn**	**14 37 04.1**	**0.0**
OSC1				S	**Sn**	**14 37 44.0**	**+2.0**
OSC1				AML	AML	14 37 51.9	
	1.5nm,1.0s						
OSC1				AML	AML	14 37 57.3	
	1.7nm,1.2s						
GVD	**Gavdhos**	**3.21**	**265**	Pn	**Pn**	**14 37 05.7**	**+1.5**
GVD	**Gavdhos**	**3.21**	**265**	P	**Pn**	**14 37 05.8**	**+1.5**
GVD	**Gavdhos**	**3.21**	**265**	P	**Pn**	**14 37 06.7**	**+2.5**
BASM	**Basmaki-Afyon**	**3.21**	**31**	Pn	**Pn**	**14 37 05.9**	**+1.5**
CHAN	**Chania**	**3.23**	**277**	P	**Pn**	**14 37 07.0**	**+2.4**
CH01	**Chania**	**3.25**	**277**	P	**Pn**	**14 37 07.3**	**+2.5**
MHLO	**Agia Marina, M**	**3.27**	**299**	P	**Pn**	**14 37 07.0**	**+1.9**
IMMV	**Iera Moni Meta**	**3.28**	**276**	Pn	**Pn**	**14 37 07.2**	**+2.0**
IMMV	**Iera Moni Meta**	**3.28**	**276**	P	**Pn**	**14 37 07.7**	**+2.5**
IMMV	**Iera Moni Meta**	**3.28**	**276**	P	**Pn**	**14 37 07.5**	**+2.3**
BLCB	**Balcova**	**3.30**	**347**	Pn	**Pn**	**14 37 07.0**	**+1.6**
MANT	**Manisa**	**3.35**	**8**		**Pn**	**14 37 05.3**	**-1.1**
ISP	**Isparta**	**3.35**	**37**		**Pn**	**14 37 05.9**	**-0.4**
ISP	**Isparta**	**3.35**	**37**	Pn	**Pn**	**14 37 07.4**	**+1.1**
ISP	**Isparta**	**3.35**	**37**	P	**Pn**	**14 37 07.0**	**+0.8**
KULA	**Kula-Manisa**	**3.38**	**9**	Pn	**Pn**	**14 37 08.7**	**+2.0**
GOMA	**Golmarmara-Man**	**3.53**	**359**	Pn	**Pn**	**14 37 10.1**	**+1.4**
CHOS	**Chios island**	**3.56**	**335**	Pn	**Pn**	**14 37 10.8**	**+1.6**
KNDR	**Palaiochora Ch**	**3.56**	**272**	Pn	**Pn**	**14 37 10.9**	**+1.8**
KNDR	**Palaiochora Ch**	**3.56**	**272**	P	**Pn**	**14 37 11.4**	**+2.3**
ALAN	**Alanya-ANTALYA**	**3.58**	**66**	Pn	**Pn**	**14 37 10.1**	**+0.8**
AKMS	**Akamas**	**3.58**	**91**	P	**Pn**	**14 37 09.2**	**-0.1**
AKMS				S	**Sn**	**14 37 53.8**	**+2.5**
AKMS				AML	AML	14 37 56.4	
	1.6nm,0.7s						
AKMS				AML	AML	14 37 58.4	
	2.4nm,0.5s						
AKMS	**Akamas**	**3.58**	**91**	P	**Pn**	**14 37 09.3**	**0.0**
GAZI	**Gazipasa**	**3.69**	**72**	Pn	**Pn**	**14 37 10.6**	**-0.2**
GORD	**Gordes-Manisa**	**3.74**	**2**	Pn	**Pn**	**14 37 12.7**	**+1.2**
ALFC	**Alefka**	**3.79**	**89**	P	**Pn**	**14 37 12.2**	**0.0**
ALFC				S	**Sn**	**14 37 58.6**	**+2.0**
ALFC				AML	AML	14 37 59.3	
	2.0nm,0.6s						
ALFC				AML	AML	14 38 01.6	
	2.0nm,0.7s						
ALFC	**Alefka**	**3.79**	**89**	P	**Pn**	**14 37 12.1**	**-0.2**
NATA	**Nata**	**3.79**	**95**	P	**Pn**	**14 37 12.5**	**+0.2**
NATA				S	**Sn**	**14 37 58.4**	**+1.7**
NATA				AML	AML	14 38 02.4	
	5.5nm,0.5s						
NATA				AML	AML	14 38 05.1	
	3.8nm,0.6s						
NATA	**Nata**	**3.79**	**95**	P	**Pn**	**14 37 12.7**	**+0.4**
SEYD	**Seydisehir-KON**	**3.84**	**53**	Pn	**Pn**	**14 37 14.5**	**+1.5**
ANKY	**Antikythira Is**	**3.88**	**282**	P	**Pn**	**14 37 15.1**	**+1.7**
SHUT	**Suhut-Afyon**	**3.96**	**31**	Pn	**Pn**	**14 37 15.8**	**+1.1**
DKL	**Dikili**	**3.99**	**348**	Pn	**Pn**	**14 37 17.5**	**+2.6**
SIMA	**Simav-Kutahya**	**3.99**	**11**	Pn	**Pn**	**14 37 17.2**	**+2.2**
SOMA	**Soma-Manisa**	**4.00**	**355**	Pn	**Pn**	**14 37 16.9**	**+1.9**
TROD	**Troodos**	**4.02**	**92**	P	**Pn**	**14 37 15.0**	**-0.5**
TROD				S	**Sn**	**14 38 05.2**	**+2.7**
TROD				AML	AML	14 38 18.0	
	1.2nm,1.3s						
TROD				AML	AML	14 38 18.5	
	1.0nm,1.0s						
SDAG	**Sultandagi-AFY**	**4.03**	**35**	Pn	**Pn**	**14 37 17.5**	**+1.9**
KARY	**Karystos**	**4.03**	**316**	P	**Pn**	**14 37 16.4**	**+0.9**
KARY	**Karystos**	**4.03**	**316**	P	**Pn**	**14 37 16.5**	**+0.9**
APOL	**The Sanctuary**	**4.05**	**96**	P	**Pn**	**14 37 16.0**	**+0.3**
APOL				S	**Sn**	**14 38 05.1**	**+2.2**
APOL				AML	AML	14 38 12.6	
	1.2nm,1.2s						
APOL				AML	AML	14 38 15.3	
	2

SLTI **Sal'it** 6.57 114 P Pn 14 37 51.0 +0.6
SLTI S Sn 14 39 03.1 -2.1
QRWL **Qaraoun** 6.58 102 *e*P Pn 14 37 50.4 -0.2
HWQ **Hawqa** 6.62 95 *e*P Pn 14 37 50.6 -0.7
ZAHL **Zahle** 6.66 99 *e*P Pn 14 37 51.3 -0.5
GEM **Giv'at Ha'Em** 6.66 105 P Pn 14 37 52.0 +0.3
GEM S Sn 14 39 05.8 -1.6
SUZ **Suez** 6.71 141 P Pn 14 37 53.5 +1.1
RCY **Rachaya** 6.71 102 *e*P Pn 14 37 52.3 -0.2
SALP **Salfit** 6.77 115 P Pn 14 37 53.7 +0.5
SALP S Sn 14 39 07.9 -2.1
MMLI **Mount Malkishu** 6.77 112 P Pn 14 37 53.6 +0.4
BEIL **Beino** 6.78 93 *e*P Pn 14 37 52.7 -0.7
AMAZ **Amatzia** 6.85 120 P Pn 14 37 54.7 +0.5
AMAZ S Sn 14 39 09.7 -2.2
KZIT **Kziot** 6.87 126 P Pn 14 37 54.3 -0.2
KZIT S Sn 14 39 09.5 -2.9
HMDT **Nahal Hemdat** 6.93 113 P Pn 14 37 55.9 +0.5
HMDT S Sn 14 39 12.5 -1.5
FKH **Fakeheh** 7.01 95 *e*P Pn 14 37 56.1 -0.4
UJAP **Al Uja** 7.03 115 P Pn 14 37 57.6 +1.0
UJAP S Sn 14 39 14.3 -1.9
ZAF **Zafarana** 7.03 145 P Pn 14 37 57.3 +0.5
YTIR **Yattir** 7.08 120 P Pn 14 37 57.8 +0.2
YTIR S Sn 14 39 15.4 -2.5
ZNM **Zenema** 7.11 143 P Pn 14 37 58.3 +0.4
DSI **Dead Sea** 7.16 118 P Pn 14 37 58.9 +0.4
DSI S Sn 14 39 17.5 -2.1
MSBI **Mazada** 7.28 120 P Pn 14 38 00.7 +0.5
MSBI S Sn 14 39 20.2 -2.4
BNN **Bunyan** 7.29 57 P Pn 14 38 02.1 +1.7
RMNI **Mount Ramon** 7.30 127 P Pn 14 38 00.5 -0.1
RMNI S Sn 14 39 20.8 -2.5
GHAJ **Ghor Haditha** 7.44 119 P Pn 14 38 03.3 +1.0
GHAJ **Ghor Haditha** 7.44 119 P Pn 14 38 03.4 +1.1
GHAJ S Sn 14 39 24.3 -2.1
VAY **Valandovo** 7.47 327 *i* P Pn 14 38 05.5 +2.8
IDAN **Idan** 7.50 123 P Pn 14 38 03.2 0.0
IDAN S Sn 14 39 25.4 -2.6
KRMI **Paran Flat** 7.60 130 P Pn 14 38 04.5 -0.1
KRMI S Sn 14 39 27.9 -2.6
ZFRI **Zfri** 7.61 125 P Pn 14 38 04.3 -0.3
ZFRI S Sn 14 39 27.5 -3.2
ZFRI **Zfri** 7.61 125 P Pn 14 38 04.3 -0.3
PRNI **Paran** 7.62 127 P Pn 14 38 04.7 -0.2
PRNI S Sn 14 39 28.3 -2.8
GAZ **Gaziantep** 7.73 72 P Pn 14 38 06.4 0.0
HRFI **Mount Harif** 7.85 129 P Pn 14 38 08.0 -0.1
HRFI S Sn 14 39 33.9 -2.8
HRDS **Abu Rudays** 7.87 143 P Pn 14 38 08.5 +0.2
TAMRE **El Minia** 7.88 161 P Pn 14 38 09.5 +1.2
ELND **Elena** 7.92 349 ⇑P Pn 14 38 08.8 -0.1
HFRF **Wahat Farafira** 8.00 178 P Pn 14 38 10.7 +0.6
GRB **Gharib** 8.00 148 P Pn 14 38 10.7 +0.5
ASF **Jabal al Asfar** 8.02 109 Pn Pn 14 38 11.3 +1.0
3.0nm,0.3s,baz=280,slow=9.5,SNR=24
17nm,0.6s
EIL2 **Elat** 8.05 131 P Pn 14 38 11.2 +0.5
EIL2 S Sn 14 39 38.1 -3.4
EIL **Elat** 8.05 131 Pn Pn 14 38 11.1 +0.3
9.7nm,0.3s,baz=287,slow=3.3,SNR=55
58nm,0.6s
OHR **Ohrid** 8.19 319 *i* P Pn 14 38 19.5 +6.7
HBST **Basata** 8.24 134 P Pn 14 38 14.2 +0.8
BZK **Bozkurt** 8.26 33 ⇑P Pn 14 38 13.4 -0.2
LOZB **Loznitsa** 8.26 353 ⇑P Pn 14 38 14.1 +0.5
ASUT 8.33 157 P Pn 14 38 15.7 +1.0
ASUT S Sn 14 39 44.1 -4.5
NUB **Nuweibaa** 8.34 135 P Pn 14 38 15.9 +1.2
HDHB **Dhahab** 8.55 137 P Pn 14 38 18.3 +0.6
HDK1 **Dakhla** 9.67 172 P Pn 14 38 33.8 +0.7
TIP **Timpagrande** 9.80 297 ⇑P Pn 14 38 33.4 -1.4
TIP **Timpagrande** 9.80 297 Pn 14 38 32.5 -2.3
TIP **Timpagrande** 9.80 297 P Pn 14 38 33.9 -0.9
54nm,0.8s
AKRG **Al Kharijah** 9.88 167 P Pn 14 38 35.8 0.0
GTR **Jabal at Tayr** 9.88 166 P Pn 14 38 37.0 +1.1
CFR **Carcaliu** 10.00 1 ⇑P Pn 14 38 37.6 +0.3
ISR **Istrita** 10.00 354 ⇑P Pn 14 38 37.5 +0.1
MLR **Muntele Rosu** 10.43 352 Pn Pn 14 38 43.4 0.0
0.5nm,0.3s,baz=252,slow=3.3,SNR=13
MLR LR LR 14 42 43.9
comp=Z,247nm,18.8s,baz=175,slow=38
13nm,0.8s
MLR **Muntele Rosu** 10.43 352 ⇓P Pn 14 38 44.7 +1.3
MLR **Muntele Rosu** 10.43 352 Pn 14 38 44.1 +0.7
MLR **Muntele Rosu** 10.43 352 P Pn 14 38 44.8 +1.4
64nm,1.2s
VOIR 10.50 349 ⇑P Pn 14 38 44.5 +0.2
VOIR 10.50 349 P Pn 14 38 44.3 0.0
9.9nm,1.4s
MARD **Mardin** 10.56 75 Pn 14 38 43.5 -1.8
HERR **Herculane** 10.59 338 ⇑P Pn 14 38 45.6 +0.1
PLOR **Plostina** 10.72 355 ⇑P Pn 14 38 48.8 +1.5
MDVR **Moldovita** 10.73 335 ⇑P Pn 14 38 48.6 +1.1
COVR **Voineasa-Covas** 10.75 353 ⇑P Pn 14 38 48.8 +1.1
LOT **Lotru** 10.76 344 ⇑P Pn 14 38 48.1 +0.2
GZR **Gura Zlata** 10.95 340 ⇑P Pn 14 38 51.8 +1.3
DOPR **Dopca** 10.96 350 ⇑P Pn 14 38 50.6 0.0
TURR **Turia** 10.97 353 ⇓P Pn 14 38 52.6 +1.7
ACER **Acerenza** 11.02 304 Pn 14 38 48.6 -2.9
VAE **Valguarnera** 11.18 286 Pn Pn 14 38 53.8 +0.1
7.5nm,0.3s,baz=46,slow=18,SNR=1.9
VAE LR LR 14 44 07.2
comp=Z,379nm,20.8s,baz=82,slow=43
RAFF **Raffo Rosso** 11.19 285 Pn 14 38 52.6 -1.2
ONER **Baraj Valea Uz** 11.22 354 ⇑P Pn 14 38 55.2 +1.1
NADB **Abo Dabab** 11.30 148 P Pn 14 38 55.9 +0.6
TESR **Tescani** 11.38 355 ⇑P Pn 14 38 56.7 +0.4
BRNS **Bernies** 12.47 153 P Pn 14 39 13.1 +1.7
GEVA **Gevas** 12.50 71 Pn 14 39 11.7 -0.1
BURAR **Bucovina Array** 12.61 351 ⇑P Pn 14 39 13.5 +0.4
BUR08 **Bucovina Ar. S** 12.64 351 Pn 14 39 11.8 -1.8
MORH **Mrgy, Hungar** 13.10 330 ⇑P Pn 14 39 20.2 +0.4
MORH **Mrgy, Hungar** 13.10 330 P Pn 14 39 19.5 -0.3
13nm,2.1s
KSV **Kosov** 13.31 352 P Pn 14 39 24.1 +1.4
PSZ **Piszkesteto** 14.09 337 ⇑P Pn 14 39 33.9 +0.5
PSZ **Piszkesteto** 14.09 337 Pn 14 39 32.6 -0.8
BOJS **Bojanci** 14.15 321 *i* Pn Pn 14 39 32.9 -1.2
GNI **Garni** 14.18 65 Pn Pn 14 39 37.8 +3.0
0.8nm,0.3s,baz=281,slow=9.9,SNR=3.3
GNI LR LR 14 45 29.7
comp=Z,138nm,19.3s,baz=268,slow=39
2.5nm,0.4s
GNI **Garni** 14.18 65 Pn 14 39 32.9 -1.8
GNI **Garni** 14.18 65 P Pn 14 39 35.5 +0.8
501nm27nm,1.7s
MPLH **Magyarpolny** 14.32 330 P Pn 14 39 37.3 +0.8
85nm,1.2s
KIV **Kislovodsk** 14.33 48 P 14 39 42.0 -1.8
KVAR **Kislovodsk Arr** 14.33 48 Pn Pn 14 39 39.7 +2.9
baz=264,slow=19
1.5nm,0.3s
KBZ **Khabaz** 14.34 49 Pn Pn 14 39 39.2 +2.6
0.5nm,0.3s,baz=228,slow=6.9,SNR=47
KBZ LR LR 14 45 42.8
comp=Z,192nm,19.5s,baz=224,slow=40
1.9nm,0.8s
LJU **Ljubljana** 14.89 321 *e*Pn Pn 14 39 43.6 -0.7
SOKA **Soboth** 15.07 324 *e*Pn Pn 14 39 46.5 -0.3
38nm,1.2s,SNR=9.5
STHS **Stebnicka Huta** 15.07 343 *e*PN Pn 14 39 45.6 -1.1
STHS **Stebnicka Huta** 15.07 343 *e*P P 14 39 53.1 +1.1
OBKA **Obir** 15.19 322 *i* Pn Pn 14 39 48.5 +0.1
39nm,1.3s
KEST **Kesra** 15.20 278 Pn Pn 14 39 48.1 -0.4
0.9nm,0.3s,baz=85,slow=4.3,SNR=17
6.2nm,0.9s
KEST **Kesra** 15.20 278 Pn 14 39 48.3 -0.2
KEST IAmb IAmb 14 39 55.4
comp=Z,40nm,1.0s
ARSA **Arzberg** 15.26 326 IAmb IAmb 14 39 55.1
comp=Z,70nm,1.9s
ARSA **Arzberg** 15.26 326 *e*Pn Pn 14 39 49.9 +0.7
comp=Z,14nm,0.8s
RONA **Rosalia, Austr** 15.26 329 *e*Pn Pn 14 39 50.4 +1.3
comp=Z,26nm,1.1s
CASP **Castiglione de** 15.31 305 IAmb IAmb 14 39 54.4
comp=Z,52nm,0.9s
LANS **Liptovska Anna** 15.31 338 *e*P P 14 39 59.2 +4.5
NIE **Niedzica** 15.32 341 *e*P P 14 38 58.9 +4.3

MODS **Modra-Piesok** 15.40 332 *e*P P 14 39 56.5 +0.9
KIEV **Kiev** 15.54 3 Pn 14 39 50.8 -2.1
AKASG **Malin Array Be** 15.55 3 Pn Pn 14 39 51.7 -1.2
comp=Z,2.1nm,0.3s,baz=191,slow=10,SNR=14
AKASG LR LR 14 46 39.1
comp=Z,327nm,19.0s,baz=184,slow=41
AKASG ScP ScP 14 48 24.9 -3.5
comp=Z,0.5nm,0.4s,baz=212,slow=3.3,SNR=5.4
comp=Z,0.8nm,0.5s
AKBB **Malin Array Si** 15.55 3 Pn 14 39 51.1 -1.8
CONA **Conrad Observa** 15.62 328 *e*Pn Pn 14 39 54.1 +0.2
comp=Z,9.5nm,1.1s
JAVC **Velka Javorina** 15.65 334 *e*PN P 14 39 56.7 -1.8
MYKA **Terra Mystica** 15.73 321 *e*Pn Pn 14 39 55.0 -0.4
comp=Z,51nm,1.5s
MI28 **Mi28,Pidlybu** 15.76 359 P Pn 14 39 56.6 +1.0
ZCCA **Zocca** 15.94 310 IAmb IAmb 14 40 04.6
comp=Z,129nm,1.7s
STAL **STALIGIAL** 15.99 318 IAmb IAmb 14 40 02.1
comp=Z,41nm,0.8s
TEOL **Teolo** 16.05 314 IAmb IAmb 14 40 05.7
comp=Z,44nm,0.7s
KBA **Koelnbreinsper** 16.19 322 *e*Pn Pn 14 40 01.0 -0.4
comp=Z,70nm,1.0s
MOA **Molln** 16.27 325 *i* Pn P 14 40 05.4 +0.1
comp=Z,24nm,1.2s
KRUC **Moravsky** 16.30 332 *e*PN Pn 14 40 03.1 +0.5
ABTA **Abfaltersbach** 16.40 320 *e*Pn Pn 14 40 02.5 -1.6
comp=Z,29nm,0.7s
VRAC **Vranov** 16.42 333 Pn Pn 14 40 03.8 -0.4
comp=Z,0.5nm,0.3s,baz=162,slow=14,SNR=5.1
comp=Z,2.8nm,0.4s
VRAC **Vranov** 16.42 333 *e*PN Pn 14 40 04.1 -0.1
BIOA **Bad Ischl, Aus** 16.46 324 *e*Pn Pn 14 40 04.5 -0.2
comp=Z,45nm,1.3s
MORC **Moravsky Berou** 16.48 336 *e*PN Pn 14 40 04.2 -0.7
LESA **Schwarzleotal** 16.76 322 *e*Pn Pn 14 40 07.8 -0.7
comp=Z,27nm,0.9s,SNR=10.0
SALO **Salr** 16.88 313 Pn 14 40 06.2 -3.6
CKRC **Cesky Krumlov** 16.97 328 *e*P Pn 14 40 11.6 +0.5
CKRC AMS AMS 14 46 30.0
comp=Z,600nm,8.9s
KRLC **Kraliky** 16.99 335 *e*P P 14 40 14.9 +1.6
WTTA **Wattenberg** 17.19 320 *e*Pn Pn 14 40 14.1 0.0
comp=Z,39nm,1.0s,SNR=7.3
GEC2 **GERESS Array S** 17.26 327 *e*P Pn 14 40 14.0 -0.8
baz=134,slow=12
GERES **GERESS Array B** 17.26 327 P Pn 14 40 14.0 -0.8
comp=Z,0.1nm,0.3s,baz=143,slow=12,SNR=38
comp=Z,8.8nm,0.8s
WATA **Walderalm** 17.27 320 *e*Pn Pn 14 40 15.2 +0.2
comp=Z,106nm,1.3s,SNR=18
DPC **Dobruska-Polom** 17.38 334 P P 14 40 17.7 +0.1
comp=Z,33nm,1.8s
SQTA **Sankt Quirin** 17.40 319 *e*Pn Pn 14 40 15.7 -0.8
comp=Z,30nm,0.9s,SNR=7.1
ZVC **Zvikov** 17.49 329 *e*P P 14 40 18.4 -0.3
KHC **Kasperske Hory** 17.52 327 IAmb IAmb 14 40 22.6
comp=Z,64nm,1.1s
KHC **Kasperske Hory** 17.52 327 *e*P Pn 14 40 17.3 -0.7
KHC AMS AMS 14 47 40.0
comp=Z,800nm,14.6s
KHC **Kasperske Hory** 17.52 327 P Pn 14 40 17.7 -0.3
comp=Z,61nm,1.1s
MOTA **Moosalm** 17.53 319 *i* Pn Pn 14 40 17.6 -0.7
comp=Z,29nm,1.2s,SNR=9.4
FETA **Feichten** 17.54 318 *e*Pn P 14 40 19.2 -0.3
comp=Z,112nm,1.2s,SNR=25
UPC **Upice** 17.62 334 *e*P P 14 40 21.5 +1.3
CHVC **Chvalec** 17.68 334 *e*P P 14 40 22.5 +1.7
PRU **Pruhonice** 17.77 331 *e*P Pn 14 40 19.6 -1.4
RETA **Reutte** 17.80 319 *e*Pn Pn 14 40 20.4 -1.2
comp=Z,44nm,1.2s
KSP **Ksiaz** 17.81 335 P Pn 14 40 21.2 -0.3
comp=Z,61nm,1.3s
WET **Wettzell** 17.85 326 *e*P Pn 14 40 20.6 -1.5
baz=134,slow=12
DAVOX **Davos/Dischmat** 17.88 316 P Pn 14 40 21.7 -0.9
comp=Z,0.6nm,0.3s,baz=148,slow=19,SNR=12
DAVOX LR LR 14 49 18.2
comp=Z,294nm,18.7s,baz=115,slow=44
comp=Z,4.6nm,0.8s
TUE **Stuetta** 18.01 314 P Pn 14 40 23.8 -0.5
comp=Z,118nm,1.6s
TUE pP pP 14 40 27.6 -0.8
comp=Z,118nm,1.6s
DAVA **Damuels** 18.16 317 *e*Pn Pn 14 40 24.8 -1.3
comp=Z,31nm,0.7s,SNR=10
ROTZ **Rotzenmuhle** 18.60 326 *e*P P 14 40 29.5 -1.5
baz=134,slow=12
BRG **Berggiesshubel** 18.70 331 *e*P P 14 40 32.0 0.0
BRG Amp 14 40 35.4
comp=Z,14nm,1.1s
BRG PP PnPn 14 40 43.9 -0.5
BRG Amp 14 40 44.7
comp=Z,12nm,0.9s
BRG **Berggiesshubel** 18.70 331 S Sn 14 41 01.0 -0.2
MANZ **Manzenberg** 18.80 327 *e*P P 14 40 31.9 -1.3
baz=134,slow=12
TANN **Tannenbergstha** 18.96 328 *e*P Pn 14 40 36.1 +0.4
baz=134,slow=12
GRA1 **Grafenberg Arr** 19.00 325 P 14 40 33.9 -1.5
GRF **Grafenberg Arr** 19.00 325 *e*P P 14 40 34.2 -1.2
baz=134,slow=12
GRF *e*L L 14 44 23.3
comp=Z,386nm,19.3s
SUW **Suwalki** 19.14 351 *e*P Pn 14 40 39.3 +1.7
RAYN **Ar Rayn** 19.15 123 Pn 14 40 39.3 +1.1
CLL **Collm** 19.41 331 P P 14 40 39.6 -0.2
comp=Z,33nm,1.2s
CLL **Collm** 19.41 331 *i* P P 14 40 40.3 +0.5
comp=Z,47nm,1.4s
CLL *i* x x 14 40 57.6
comp=Z,47nm,1.4s
CLL *e*S Sn 14 44 18.0 -0.3
CLL AMS AMS 14 47 00.0
comp=N,300nm,18.0s
CLL AMS AMS 14 47 00.0
comp=E,600nm,19.1s
MOX **Moxa** 19.50 328 *e*L L 14 50 19.3
comp=E,418nm,18.4s
BFO **Black Forest** 19.62 318 P P 14 40 42.3 +0.2
GKP **Gorka Klasztor** 19.62 341 *e*P Pn 14 40 45.0 +1.5
NACGM **Naroch** 19.75 358 *e*P Pn 14 40 49.5 +4.5
comp=N,60nm,1.2s
ECH **Echery** 20.21 317 P 14 40 48.8 +0.2
OBN **Obninsk** 20.82 14 P P 14 40 52.9 -2.1
comp=N,23nm,0.4s,baz=171,slow=6.2,SNR=5.4
comp=N,23nm,0.4s
OBN **Obninsk** 20.82 14 P P 14 40 53.0 -2.0
WLF **Walferdange** 21.56 319 *d*P P 14 41 02.2 -0.9
comp=Z,25nm,1.1s
BSD **Bornholm Skovb** 21.90 340 *i* P P 14 41 04.6 -2.1
BSD IAmb IAmb 14 41 05.0
comp=Z,21nm,1.2s
CEST **Esterri de Car** 22.02 298 P 14 41 07.0 -1.3
CEST IAmb IAmb 14 41 26.8
comp=Z,54nm,1.3s
BHOU **Houvegnez** 22.03 320 *d*P P 14 41 10.2 +2.1
BTNL **Ternell** 22.10 321 *d*P P 14 41 09.1 +0.2
comp=Z,15nm,0.9s
MEM **Membach** 22.17 321 *d*P P 14 41 08.2 -1.5
comp=Z,23nm,1.1s
BELG **Belogornoye** 22.19 33 P P 14 41 08.6 -1.2
comp=Z,53nm,0.9s,baz=15,slow=5.7,SNR=8.3
comp=Z,53nm,0.9s
RCHB **Rochefort** 22.33 319 *d*P P 14 41 17.2 +5.9
BCLA **Clavier** 22.43 320 *d*P P 14 41 11.1 -1.4
comp=Z,20nm,1.0s
BGES **Gesves** 22.53 319 *d*P P 14 41 17.2 +3.7
comp=Z,18nm,1.1s
DOU **Dourbes** 22.64 318 *d*P P 14 41 17.2 +2.5
comp=Z,17nm,1.3s
BLEU **Blekinge** 22.71 342 *i* P P 14 41 13.6 -1.7
LUNU **Lund** 22.77 338 *i* P P 14 41 13.9 -2.1
TAM **Tamanrasset** 23.13 244 P 14 41 20.6 +0.4
TAM IAmb IAmb 14 41 31.2
comp=Z,42nm,1.0s
BJUU **Bjuv** 23.28 339 *e*P P 14 41 19.8 -1.4
DEL **Delary** 23.37 340 *i* P P 14 41 19.6 -2.5
FABU **Falkenberg** 24.15 339 *e*P P 14 41 27.9 -1.8
BORU **Boraas** 24.68 340 *e*P P 14 41 32.9 -1.6
ONAU **Onsala** 24.72 339 *i* P P 14 41 37.6 +2.8
TJOU **Tjoern** 25.34 340 *i* P P 14 41 42.9 +2.5
ESDC **Sonseca Array** 25.68 290 P P 14 41 43.4 -0.4
comp=Z,19nm,0.9s,baz=80,slow=9.2,SNR=61
comp=Z,19nm,0.9s

ESDC **Sonseca Array** 25.68 290 P P 14 41 42.6 -1.2
PAB **San Pablo** 25.98 289 P 14 41 45.5 -1.0
PAB IAmb IAmb 14 41 50.4
comp=Z,24nm,0.9s
STRU **Stroemstad** 26.32 340 *i* P P 14 41 47.7 -1.5
FINES **FINESS Array B** 26.32 358 P P 14 41 46.9 -2.4
comp=Z,4.7nm,0.5s,baz=154,slow=11,SNR=18
FINES PcP PcP 14 45 14.6 -0.3
comp=Z,3.8nm,0.9s,baz=144,slow=3.5,SNR=4.3
FINES LR LR 14 52 15.2
comp=Z,205nm,18.4s,baz=220,slow=37
comp=Z,4.7nm,0.5s
AKTO **Aktyubinsk** 26.57 46 P P 14 41 51.0 -0.7
comp=Z,14nm,0.6s,baz=250,slow=6.8,SNR=22
AKTO LR LR 14 55 59.0
comp=Z,130nm,18.2s,baz=69,slow=45
comp=Z,14nm,0.6s
HFS **Hagfors** 26.65 344 P P 14 41 49.9 -2.3
comp=Z,6.4nm,0.7s,baz=158,slow=12,SNR=14
HFS LR LR 14 53 07.8
comp=Z,447nm,18.1s,baz=169,slow=38
comp=Z,6.4nm,0.7s
MDT **Midelt** 27.05 274 P P 14 41 55.0 -1.3
comp=Z,4.6nm,0.7s,baz=109,slow=13,SNR=7.3
comp=Z,4.6nm,0.7s
MD01 **Midelt array s** 27.16 275 P 14 41 57.2 -0.1
MD31 **MD31** 27.16 275 P 14 41 57.3 0.0
AB31 **Akbulak array** 27.31 49 P 14 41 58.0 -0.3
ABKAR **Akbulak array** 27.31 49 P 14 41 58.0 -0.3
PBRG **Braganca** 27.84 294 *e*P P 14 42 02.0 -1.2
PBRG *i* IAmb IAmb 14 42 10.4
comp=Z,35nm,1.7s
NAO01 **NORSAR Array S** 27.94 342 P P 14 42 04.0 +0.1
NB2 **NORSAR Subarra** 28.03 343 P P 14 42 03.0 -1.7
comp=Z,7.6nm,1.0s,baz=150,slow=9.3
NOA **NORSAR Array B** 28.03 343 P P 14 42 01.9 -2.8
comp=Z,1.2nm,0.6s,baz=154,slow=7.9,SNR=9.4
NOA LR LR 14 54 10.5
comp=Z,270nm,18.4s,baz=145,slow=39
comp=Z,1.2nm,0.6s
MVO **Moncorvo** 28.04 293 *e*P P 14 42 04.4 -0.6
MVO *i* IAmb IAmb 14 42 11.7
comp=Z,32nm,1.1s
HRA **Herat** 28.08 82 P P 14 42 05.1 -0.5
PBAR **Barrancos** 28.14 287 *e*P P 14 42 04.4 -1.5
PBAR *i* IAmb IAmb 14 42 29.9
comp=Z,26nm,1.3s
PMRV **Marv??o** 28.34 289 *e*P P 14 42 06.6 -1.1
PMRV *i* IAmb IAmb 14 42 47.9
comp=Z,28nm,2.2s
MTE **Manteigas** 28.43 291 *e*P P 14 42 09.9 +1.4
MTE *i* IAmb IAmb 14 42 14.0
comp=Z,36nm,1.8s
PESTR **Estremoz** 28.52 288 IAmb IAmb 14 42 12.1
comp=Z,14nm,0.8s
PESTR **Estremoz** 28.52 288 *e*P P 14 42 07.8 -1.5
PESTR *i* IAmb IAmb 14 42 25.6
comp=Z,33nm,1.5s
PVRL **Vila Real** 28.55 293 *e*P P 14 42 10.7 +1.1
PVRL *i* IAmb IAmb 14 42 22.8
comp=Z,50nm,2.0s
POLO **Lamas de Olo** 28.61 293 *e*P P 14 42 08.9 -1.3
POLO *i* IAmb IAmb 14 42 33.4
comp=Z,32nm,1.8s
PVIS **Viseu** 28.69 292 *e*P P 14 42 09.8 -1.1
PVAQ **Vaqueiros** 28.75 285 *e*P P 14 42 09.2 -2.2
PVAQ *i* IAmb IAmb 14 42 15.4
comp=Z,42nm,2.1s
PCAB **Cabril** 28.80 294 *e*P P 14 42 11.2 -0.6
PCAB *i* IAmb IAmb 14 42 23.2
comp=Z,80nm,1.7s
PBEJ **Beja** 28.81 286 *e*P P 14 42 18.4 +3.0
PBEJ *i* IAmb IAmb 14 42 33.3
comp=Z,36nm,1.6s
EVO **Evora** 28.88 287 *e*P P 14 42 14.4 +2.0
EVO *i* IAmb IAmb 14 42 29.3
comp=Z,26nm,1.6s
PARRA **Arraiolos** 28.88 288 *e*P P 14 42 10.8 -1.6
PARRA *i* IAmb IAmb 14 42 38.3
comp=Z,22nm,1.9s
PSARD **Sardoal** 28.93 290 *e*P P 14 42 14.8 +1.9
PSARD *i* IAmb IAmb 14 42 20.8
comp=Z,21nm,1.4s
PBDV **Barranco-do-Ve** 28.94 285 *e*P P 14 42 11.7 -1.3
PBDV *i* IAmb IAmb 14 42 25.0
comp=Z,54nm,1.6s
PCVE **Castro Verde** 28.98 286 *e*P P 14 42 15.0 +1.6
PCVE *i* IAmb IAmb 14 42 29.9
comp=Z,38nm,1.9s
PMTG **Montargil** 29.00 289 *e*P P 14 42 13.4 -0.2
PMTG *i* IAmb IAmb 14 42 17.8
comp=Z,26nm,1.5s
MESJ **Messejana** 29.10 286 *e*P P 14 42 15.1 +0.6
MESJ *i* IAmb IAmb 14 42 30.6
comp=Z,33nm,1.5s
MOE **Montemor** 29.14 287 *e*P P 14 42 16.6 +1.8
MOE *i* IAmb IAmb 14 42 20.0
comp=Z,36nm,1.5s
PCAS **Casmilo, Conde** 29.17 291 *e*P P 14 42 16.3 +1.3
PTO **Porto** 29.22 293 *e*P P 14 42 16.0 +0.5
PTO *i* IAmb IAmb 14 42 25.3
comp=Z,77nm,1.8s
EKA **Eskdalemuir Ar** 29.39 323 P P 14 42 16.2 -0.6
comp=Z,1.0nm,0.5s,baz=123,slow=9.1,SNR=4.3
comp=Z,1.0nm,0.5s
ARTI **Arti** 29.60 35 P P 14 42 18.1 -0.6
comp=Z,7.6nm,0.6s,baz=235,slow=6.2,SNR=16
ARTI LR LR 14 57 11.9
comp=Z,199nm,18.4s,baz=240,slow=43
comp=Z,7.6nm,0.6s
ARTI **Arti** 29.60 35 P 14 42 16.4 -2.3
ARTI IAmb IAmb 14 42 25.8
comp=Z,15nm,0.8s
TORD **Torodi Ar. Bea** 32.31 234 P P 14 42 43.6 +0.7
comp=Z,13nm,0.8s,baz=26,slow=6.4,SNR=77
comp=Z,13nm,0.8s
TORD **Torodi Ar. Bea** 32.31 234 P P 14 42 43.4 +0.5
TORD IAmb IAmb 14 42 45.2
comp=Z,9.6nm,0.9s
LODK **Lodwar** 32.32 166 P 14 42 45.7 +2.6
LODK IAmb IAmb 14 42 47.2
comp=Z,16nm,0.9s
KK31 **Karatay Array** 33.64 63 IAmb IAmb 14 43 00.9
comp=Z,8.3nm,0.8s
KKAR **Karatay Array** 33.64 63 P 14 42 54.5 +0.1
GAR **Garm** 33.77 71 IAmb IAmb 14 43 34.9
comp=Z,19nm,1.2s
ARCES **ARCESS Array B** 34.45 358 P P 14 42 59.5 -1.6
comp=Z,7.5nm,0.9s,baz=177,slow=7.3,SNR=12
comp=Z,7.5nm,0.9s
BORK **Borovoye** 34.64 46 P 14 43 02.2 -0.7
BVAR **Borovoye Array** 34.68 46 P P 14 43 03.1 -0.2
comp=Z,1.3nm,0.7s,baz=258,slow=5.9,SNR=7.5
BVAR LR LR 14 59 59.0
comp=Z,120nm,20.2s,baz=262,slow=41
comp=Z,1.3nm,0.7s
EDA **Edea** 35.33 212 P 14 43 09.9 +0.7
EDA IAmb IAmb 14 43 20.6
comp=Z,13nm,1.2s
ARSB **Arslanbob** 35.56 66 IAmb IAmb 14 43 34.1
comp=Z,11nm,0.8s
MBAR **Mbarara** 35.68 175 P P 14 43 13.8 +1.4
MBAR IAmb IAmb 14 43 16.4
comp=Z,12nm,1.1s
AAK **Ala-Archa** 36.58 64 P P 14 43 20.4 +0.5
comp=Z,6.3nm,0.8s,baz=247,slow=5.9,SNR=14
AAK LR LR 14 59 21.8
comp=Z,81nm,21.1s,baz=278,slow=38
comp=Z,6.3nm,0.8s
AAK **Ala-Archa** 36.58 64 P 14 43 21.0 +1.1
NIL **Nilore** 37.14 79 P 14 43 25.0 +0.4
NIL IAmb IAmb 14 43 26.6
comp=Z,15nm,0.7s
PMOZ **Porto Moniz, M** 37.28 280 *e*P P 14 43 27.7 +1.8
PMOZ *i* IAmb IAmb 14 43 30.1
comp=Z,104nm,1.3s
KSH2 **Kashi** 37.80 70 P P 14 43 31.0 +0.8
KSH2 pP sP 14 43 37.0 +1.1
KSH2 pmax pmax
comp=Z,4.0nm,1.1s
NRN **Naryn** 37.81 66 IAmb IAmb 14 43 37.9
comp=Z,16nm,1.0s
KIBK **Kibwezi** 38.49 164 P 14 43 39.4 +3.3
KURBB **Kurchatov Arra** 39.32 51 P P 14 43 42.8 +0.1
comp=Z,5.1nm,0.7s,baz=275,slow=8.9,SNR=50
KURBB PP PP 14 45 09.4 -3.4
comp=Z,3.3nm,0.9s,baz=274,slow=11,SNR=5.6

KURBB PcP **PcP** **14 45 50.9 -0.2**
comp=Z,2.8nm,0.7s,baz=271,slow=4.0,SNR=7.6
comp=Z,5.1nm,0.7s
KURK Kurchatov 39.39 51 P **14 43 42.5 -0.8**
JMIC Jan Mayen 40.74 343 LR LR 15 00 35.2
comp=Z,109nm,18.7s,baz=223,slow=36
DBIC Dimbokro 41.41 235 P **P** **14 44 00.5 +0.1**
comp=Z,4.7nm,0.4s,baz=67,slow=8.2,SNR=14
DBIC LR LR 15 04 50.9
comp=Z,191nm,18.8s,baz=52,slow=42
comp=Z,4.7nm,0.4s
DBIC Dimbokro 41.41 235 P **P** **14 44 00.7 +0.4**
MAKZ Makanchi 41.63 57 P **14 44 01.8 -0.1**
BORG Borgarnes 41.66 331 LR LR 15 01 55.2
comp=Z,135nm,20.6s,baz=110,slow=37
MKAR Makanchi Array 41.84 57 P **P** **14 44 03.8 +0.1**
comp=Z,4.2nm,0.7s,baz=275,slow=6.9,SNR=52
MKAR PcP **PcP** **14 45 60.0 +0.6**
comp=Z,2.6nm,0.8s,baz=270,slow=4.7,SNR=2.9
MKAR ScP **ScP** **14 49 50.8 +1.6**
comp=Z,0.8nm,1.0s,baz=280,slow=3.6,SNR=3.6
MKAR LR LR 15 05 03.4
comp=Z,65nm,19.4s,baz=267,slow=41
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 41.84 57 P **14 44 03.4 -0.3**
ZAA0 Zalesovo Array 43.33 46 P **14 44 14.8 -0.7**
ZALV Zalesovo Beam 43.33 46 P **P** **14 44 15.0 -0.6**
comp=Z,1.7nm,0.6s,baz=266,slow=8.7,SNR=9.9
ZALV LR LR 15 05 22.2
comp=Z,80nm,19.2s,baz=263,slow=40
comp=Z,1.7nm,0.6s
SPITS Spitsbergen Ar 43.40 357 P **P** **14 44 15.8 -0.1**
comp=Z,6.8nm,0.8s,baz=143,slow=12,SNR=15
SPITS PcP **PcP** **14 46 04.4 +0.4**
comp=Z,1.4nm,0.6s,baz=198,slow=3.8,SNR=1.0
comp=Z,6.8nm,0.8s
WMQ Urumqi 46.00 60 *eP* **P** **14 44 38.5 +1.4**
WMQ sP pwP 14 44 47.8 +4.6
WMQ PcS **PcS** **14 50 08.5 +0.5**
WMQ S **S** **14 51 26.3 +4.6**
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ LR LR
comp=Z,130nm,24.2s
EVN Everest 50.03 81 P **14 45 09.0 -0.2**
LSZ Lusaka 50.17 180 P **14 45 10.7 +1.1**
KSANE Kasane 52.74 183 P **14 45 30.4 +1.6**
KSANE IAmb IAmb 14 45 34.2
comp=Z,16nm,1.0s
LSA Lhasa 52.82 77 IAmb IAmb 14 45 41.2
comp=Z,30nm,1.8s
LSA Lhasa 52.82 77 P **P** **14 45 26.0 -3.9**
LSA pmax pmax
comp=Z,6.0nm,1.3s
GOMU GeErMu 53.29 68 P **P** **14 45 32.0 -1.1**
GOMU pmax pmax
comp=Z,2.0nm,0.7s
SFJD Kangerlussuaq 53.78 331 LR LR 15 11 57.4
comp=Z,107nm,18.2s,baz=110,slow=40
TLY Talaya 54.90 48 P **P** **14 45 44.0 -0.2**
comp=Z,3.4nm,0.7s,baz=261,slow=8.3
TLY LR LR 15 11 43.6
comp=Z,114nm,20.0s,baz=292,slow=39
comp=Z,3.4nm,0.7s
TLY Talaya 54.90 48 P **14 45 45.2 +1.0**
TSUM Tsumeb 54.96 192 P **P** **14 45 46.4 +1.3**
TSUM IAmb IAmb 14 45 47.8
comp=Z,8.9nm,1.1s
GTA2 Gaotai 55.85 63 P **P** **14 45 52.0 +0.6**
GTA2 pmax pmax
comp=Z,9.0nm,0.8s
TULEG Thule 57.67 344 P **14 46 01.3 -2.3**
TULEG IAmb IAmb 14 46 20.6
comp=Z,8.7nm,0.9s
SONM Songino Array 57.69 51 P **P** **14 46 05.3 +1.0**
comp=Z,5.8nm,0.6s,baz=287,slow=8.0,SNR=71
SONM LR LR 15 15 59.5
comp=Z,161nm,18.8s,baz=310,slow=41
comp=Z,5.8nm,0.6s
SONM Songino Array 57.69 51 P **14 46 04.4 +0.1**
SONM IAmb IAmb 14 46 06.1
comp=Z,8.1nm,0.7s
ULN Ulaanbaatar 58.10 51 P **14 46 07.2 -0.1**
ULN IAmb IAmb 14 46 09.0
comp=Z,10.0nm,0.9s
ULN Ulaanbaatar 58.10 51 P **P** **14 46 07.4 +0.2**
WIN Windhoek 58.34 192 IAmb IAmb 14 46 14.6
comp=Z,13nm,1.1s
LBTB Lobatse 59.90 182 P **14 46 22.3 +2.5**
LZDM Lanzhou Array 60.06 65 P **P** **14 46 21.2 0.0**
comp=Z,2.6nm,0.5s,baz=288,slow=5.6,SNR=7.2
comp=Z,2.6nm,0.5s
LZH Lanzhou 60.11 65 *eP* **P** **14 46 22.5 +1.1**
LZH pP pwP 14 46 30.8 +3.2
LZH pmax pmax
comp=Z,20nm,1.5s
TIXI Tiksi 60.34 21 LR LR 15 15 56.7
comp=Z,162nm,18.8s,baz=323,slow=40
TIXI Tiksi 60.34 21 P **P** **14 46 21.0 -1.1**
TIXI IAmb IAmb 14 46 29.3
comp=Z,8.0nm,0.8s
TNCH TengChong 60.74 79 P **P** **14 46 27.0 +1.2**
TNCH pmax pmax
comp=Z,14nm,1.0s
FRB Frobisher Bay 61.82 330 LR LR 15 14 26.9
comp=Z,52nm,18.7s,baz=48,slow=37
CD2 Chengdu 62.22 70 P **P** **14 46 34.5 -1.1**
CD2 pmax pmax
comp=Z,20nm,0.7s
BTO2 Baotou 62.58 58 *eP* **P** **14 46 39.3 +1.3**
BTO2 pP **sP** **14 46 43.8 +0.1**
BTO2 sP **pwP** **14 46 46.3 +2.0**
BTO2 pmax pmax
comp=Z,32nm,1.5s
BTO2 pmax pmax
comp=Z,290nm,8.5s
PZH PanZhiHua 62.63 76 P **P** **14 46 38.3 -0.2**
PZH pmax pmax
comp=Z,10.0nm,0.6s
BOSA Boshof 63.49 183 P **P** **14 46 44.8 +0.9**
comp=Z,12nm,0.8s,baz=9.9,slow=9.2,SNR=10
comp=Z,12nm,0.8s
BOSA Boshof 63.49 183 P **P** **14 46 46.1 +2.2**
HHC Hu-ho-hao-te 63.70 57 *eP* **P** **14 46 46.5 +1.1**
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,120nm,4.3s
CHTO Chiang Mai 64.10 85 P **P** **14 46 48.6 +0.4**
CHTO Chiang Mai 64.10 85 P **14 46 48.1 0.0**
CHTO Chiang Mai 64.10 85 P **P** **14 46 46.4 -1.8**
comp=Z,6.7nm,1.5s
CMAR Chiang Mai Arr 64.28 85 P **P** **14 46 49.5 +0.1**
comp=Z,3.9nm,1.0s,baz=299,slow=7.9,SNR=22
comp=Z,3.9nm,1.0s
CMAR Chiang Mai Arr 64.28 85 P **14 46 48.6 -0.8**
SCHQ Schefferville 64.66 320 P **P** **14 46 50.2 -1.1**
comp=Z,7.7nm,0.5s,baz=62,slow=4.3,SNR=26
SCHQ LR LR 15 14 43.4
comp=Z,60nm,19.3s,baz=82,slow=36
comp=Z,7.7nm,0.5s
SCHQ Schefferville 64.66 320 P **14 46 50.4 -0.9**
YAK Yakutsk 64.70 31 LR LR 15 20 13.1
comp=Z,82nm,18.4s,baz=281,slow=41
XAN Xi'an 64.75 65 P **P** **14 46 53.0 +0.7**
XAN pmax pmax
comp=Z,12nm,1.4s
XLT XiLinHaoTe 65.43 53 *eP* **P** **14 46 57.8 +1.2**
XLT pP pwP 14 47 03.0 0.0
XLT sP sP 14 47 07.3 +4.9
XLT pmax pmax
comp=Z,6.0nm,1.3s
XLT pmax pmax
comp=Z,55nm,4.1s
GYA Guiyang 66.54 73 P **P** **14 47 04.3 +0.2**
GYA pmax pmax
comp=Z,5.0nm,1.3s
ENH Enshi 66.91 68 P **14 47 05.1 -1.1**
BJT Baijiatuau 67.23 56 P **14 47 09.3 +1.2**
BJT Baijiatuau 67.23 56 P **P** **14 47 07.7 -0.4**
BJT IAmb IAmb 14 47 10.7
comp=Z,13nm,1.3s
BJI2 Beijing 67.23 56 P **P** **14 47 08.8 +0.7**
BJI2 pmax pmax
comp=Z,3.0nm,1.4s
HNS HongShan 67.42 59 ⇑P **P** **14 47 10.3 +1.0**
HNS pmax pmax
comp=Z,10.0nm,1.6s
HEH HeiHe 69.30 43 *eP* **P** **14 47 21.3 +0.4**
HEH pmax pmax
comp=Z,9.0nm,1.3s
TIA Tai'an 69.69 60 P **P** **14 47 24.0 +0.4**
TIA pmax pmax
comp=Z,8.0nm,1.5s
A36M Sachs Harbour 71.49 352 IAmb IAmb 14 47 45.2
comp=Z,11nm,1.1s
A36M Sachs Harbour 71.49 352 P **P** **14 47 32.8 -1.1**
baz=23
KCSI Kotacane, Aceh 71.49 99 P **P** **14 47 35.9 +1.0**
comp=Z,4.9nm,1.0s
BNX BinXian 71.62 47 ⇑P **P** **14 47 35.3 +0.2**
BNX pmax pmax
comp=Z,8.0nm,1.8s
KLR Kul'dur 72.23 42 LR LR 15 25 18.9
comp=Z,66nm,19.3s,baz=311,slow=41
BILL Bilibino 72.47 15 P **14 47 38.9 -1.0**
SEY Seymchan 72.66 23 LR LR 15 24 14.1
comp=Z,87nm,19.9s,baz=319,slow=40
PSI Prapat 72.85 99 P **14 47 43.3 +0.2**
PSI Prapat 72.85 99 P **P** **14 47 43.0 -0.1**
comp=Z,22nm,0.8s
NJ2 Nanjing 73.01 63 *eP* **P** **14 47 43.5 -0.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
A21K Barrow 73.76 2 P **P** **14 47 46.9 -0.5**
baz=356
C36M Paulatuk 73.78 350 IAmb IAmb 14 47 46.3
comp=Z,24nm,1.9s
MA2 Magadan 74.47 26 LR LR 15 24 52.2
comp=Z,135nm,18.2s,baz=319,slow=39
MA2 Magadan 74.47 26 P **14 47 52.1 +0.4**
MA2 IAmb IAmb 14 47 59.9
comp=Z,9.7nm,0.8s
B22K Teshekpuk Lake 74.79 0 IAmb IAmb 14 47 59.6
comp=Z,14nm,0.9s
B22K Teshekpuk Lake 74.79 0 P **14 47 53.0 -0.4**
baz=359
C26K Camden Bay 75.09 357 P **P** **14 47 54.7 -0.4**
baz=6.0
USRK Ussuriysk Ar. 75.19 46 P **P** **14 47 56.2 0.0**
comp=Z,3.6nm,0.7s,baz=297,slow=4.6,SNR=5.9
comp=Z,3.6nm,0.7s
C23K Itkillik River 75.30 359 P **P** **14 47 56.2 -0.1**
C23K IAmb IAmb 14 48 04.6
comp=Z,13nm,0.9s
C23K Itkillik River 75.30 359 P **P** **14 47 55.8 -0.5**
baz=1.2,SNR=7.4
C27K Jago River 75.33 357 P **P** **14 47 55.8 -0.8**
baz=7.0
D28M Stokes Point 75.35 355 P **P** **14 47 55.8 -0.9**
baz=11
C24K Franklin Bluff 75.39 359 P **P** **14 47 56.2 -0.6**
baz=2.8
B21K Ikpikpuk River 75.50 1 P **P** **14 47 56.5 -1.0**
baz=358
D27M Malcolm River 75.58 356 P **P** **14 47 56.8 -1.2**
baz=9.3
D25K Kavik River 75.73 358 IAmb IAmb 14 48 05.0
comp=Z,5.7nm,0.8s
D25K Kavik River 75.73 358 P **P** **14 47 57.6 -1.3**
baz=4.8
C19K Lookout Ridge 75.89 3 P **P** **14 47 58.6 -1.2**
baz=354
INK Inuvik 75.91 353 LR LR 15 23 28.1
comp=Z,36nm,19.0s,baz=306,slow=37
INK Inuvik 75.91 353 P **P** **14 47 58.8 -1.1**
baz=16
D24K Happy Valley 75.96 359 IAmb IAmb 14 48 05.2
comp=Z,7.9nm,0.9s
D24K Happy Valley 75.96 359 P **P** **14 47 59.2 -1.0**
baz=2.7
C21K Knifeblade Rid 75.96 1 P **P** **14 47 59.4 -0.8**
baz=358
E28M Babbage River 76.12 355 IAmb IAmb 14 48 10.1
comp=Z,14nm,1.5s
E28M Babbage River 76.12 355 P **P** **14 48 00.3 -0.8**
baz=10
D23K Nanushuk River 76.17 360 P **P** **14 48 00.4 -1.0**
baz=1.2,SNR=6.5
E29M Blow River 76.21 355 IAmb IAmb 14 48 09.4
comp=Z,14nm,1.1s
E29M Blow River 76.21 355 P **P** **14 48 00.8 -0.8**
baz=12
D22K Ayikyak River 76.26 0 IAmb IAmb 14 48 07.0
comp=Z,6.8nm,0.7s
D22K Ayikyak River 76.26 0 P **P** **14 48 01.3 -0.6**
baz=360
C18K Utukok River 76.27 3 IAmb IAmb 14 48 11.0
comp=Z,12nm,0.9s
C18K Utukok River 76.27 3 P **P** **14 48 01.3 -0.7**
baz=352
C17K DeLong Mountai 76.33 4 P **P** **14 48 01.6 -0.7**
baz=351
D20K Etivluk River 76.37 2 IAmb IAmb 14 48 11.1
comp=Z,8.4nm,0.9s
D20K Etivluk River 76.37 2 P **P** **14 48 01.6 -0.9**
baz=356
C16K Lisburne Hills 76.39 5 P **P** **14 48 01.6 -1.0**
baz=349
KSRS Kore Array 76.43 54 P **P** **14 48 03.6 +0.2**
comp=Z,3.0nm,0.9s,baz=304,slow=4.8,SNR=8.0
KSRS LR LR 15 25 17.2
comp=Z,63nm,20.8s,baz=310,slow=39
comp=Z,3.0nm,0.9s
TOLK Toolik Lake Re 76.49 359 P **P** **14 48 02.0 -1.2**
baz=2.1
D19K Kuna River 76.55 2 IAmb IAmb 14 48 08.3
comp=Z,9.0nm,0.7s
D19K Kuna River 76.55 2 P **P** **14 48 02.8 -0.8**
baz=355
E21K Killik River 76.69 1 P **P** **14 48 03.7 -0.7**
baz=358
RDOG Red Dog Mine 76.77 4 P **P** **14 48 03.9 -0.9**
baz=351
F31M Tsiigehtchic 76.77 353 P **P** **14 48 03.8 -1.0**
baz=15
F30M Barrier River 76.80 354 P **P** **14 48 03.9 -1.0**
baz=14
E20K Nigu River 76.84 2 P **P** **14 48 04.7 -0.5**
baz=356
E25K Arctic Village 76.91 358 IAmb IAmb 14 48 19.9
comp=Z,7.4nm,0.9s
E25K Arctic Village 76.91 358 P **P** **14 48 04.9 -0.7**
baz=5.4
E22K Anaktuvuk Pass 77.01 360 IAmb IAmb 14 48 11.2
comp=Z,6.0nm,0.7s
E22K Anaktuvuk Pass 77.01 360 P **P** **14 48 05.1 -1.1**
baz=0.2,SNR=7.1
E24K Your Creek 77.04 359 IAmb IAmb 14 48 19.4
comp=Z,4.8nm,0.6s
E24K Your Creek 77.04 359 P **P** **14 48 05.5 -0.9**
baz=3.0
E23K Chandalar 77.07 359 IAmb IAmb 14 48 21.1
comp=Z,8.0nm,0.9s
E23K Chandalar 77.07 359 P **P** **14 48 05.7 -0.9**
baz=2.0
D17K Noatak River 77.11 4 P **P** **14 48 05.6 -1.1**
baz=351,SNR=7.2
F28M Old Crow 77.12 355 P **P** **14 48 05.9 -1.0**
baz=10
F26K Sheenjek River 77.28 357 P **P** **14 48 06.4 -1.3**
baz=6.6
F25K Christian Rive 77.44 357 IAmb IAmb 14 48 17.5
comp=Z,6.5nm,0.8s
F25K Christian Rive 77.44 357 P **P** **14 48 07.4 -1.2**
baz=5.4,SNR=8.9
G30M tAoh Zrai Nji 77.46 354 IAmb IAmb 14 48 13.1
comp=Z,13nm,1.4s
G30M tAoh Zrai Nji 77.46 354 P **P** **14 48 07.5 -1.2**
baz=13
E18K Tukpahlearik C 77.52 3 IAmb IAmb 14 48 13.5
comp=Z,7.1nm,0.8s
E18K Tukpahlearik C 77.52 3 P **P** **14 48 08.1 -1.0**
baz=353,SNR=5.7
BMAR Burnt Mountain 77.56 357 P **14 48 09.3 0.0**
E19K Redstone River 77.61 2 P **P** **14 48 08.5 -1.0**
baz=356,SNR=9.9
G29M Pine Creek 77.68 354 P **P** **14 48 08.9 -1.1**
baz=12
E17K Hotham Inlet 77.79 4 P **P** **14 48 09.7 -0.9**
baz=352
COLD Coldfoot 77.91 359 IAmb IAmb 14 48 19.9
comp=Z,6.1nm,0.8s
COLD Coldfoot 77.91 359 P **P** **14 48 10.2 -1.0**
baz=1.6,SNR=7.9
F21K Alatna River 77.92 1 IAmb IAmb 14 48 20.2
comp=Z,11nm,0.9s
F21K Alatna River 77.92 1 P **P** **14 48 10.3 -0.9**
baz=359
G26K Porcupine Rive 78.01 357 P **P** **14 48 10.8 -0.9**
baz=6.9
F20K Avaraart Lake 78.06 1 IAmb IAmb 14 48 22.8
comp=Z,7.7nm,1.1s
F20K Avaraart Lake 78.06 1 P **P** **14 48 11.4 -0.6**
baz=357
EPYK Eagle Plains 78.10 354 IAmb IAmb 14 48 25.4
comp=Z,12nm,1.1s
EPYK Eagle Plains 78.10 354 P **P** **14 48 11.1 -1.2**
baz=13
YKA Yellowknife Ar 78.13 343 P **P** **14 48 11.2 -1.2**
comp=Z,0.7nm,0.6s,baz=26,slow=5.3,SNR=14
YKA LR LR 15 24 12.8
comp=Z,82nm,18.6s,baz=324,slow=37
comp=Z,0.7nm,0.6s
F19K Shaleruckik Mo 78.22 2 IAmb IAmb 14 48 16.9
comp=Z,6.8nm,0.7s
F19K Shaleruckik Mo 78.22 2 P **P** **14 48 12.0 -0.9**
baz=355
F18K Selawik 78.38 3 P **P** **14 48 12.8 -1.0**
baz=354,SNR=8.0
G24K Hadweenzic Riv 78.39 358 P **P** **14 48 13.0 -0.9**
baz=3.8
H31M Peel River 78.42 353 P **P** **14 48 12.4 -1.7**
baz=15
G23K Bananza Creek 78.43 359 IAmb IAmb 14 48 20.5
comp=Z,14nm,1.5s
G23K Bananza Creek 78.43 359 P **P** **14 48 13.3 -0.9**
baz=1.7
F17K Baldwin Pennin 78.46 4 IAmb IAmb 14 48 18.4
comp=Z,7.1nm,0.8s
F17K Baldwin Pennin 78.46 4 P **P** **14 48 13.5 -0.7**
baz=352
H27K Steamboat Moun 78.60 356 IAmb IAmb 14 48 25.0
comp=Z,22nm,1.6s
H27K Steamboat Moun 78.60 356 P **P** **14 48 14.1 -1.0**
baz=8.8
G21K Allakaket 78.63 1 IAmb IAmb 14 48 23.8
comp=Z,13nm,0.9s
G21K Allakaket 78.63 1 P **P** **14 48 14.1 -1.2**
baz=359,SNR=8.8
TNA Tin City 78.84 7 P **P** **14 48 15.3 -1.0**
baz=347
G19K Purcell Mounta 78.94 2 IAmb IAmb 14 48 21.6
comp=Z,7.1nm,0.8s
G19K Purcell Mounta 78.94 2 P **P** **14 48 15.9 -1.0**
baz=356,SNR=8.9
F15K North Star Dit 78.97 5 IAmb IAmb 14 48 25.3
comp=Z,6.9nm,1.0s
F15K North Star Dit 78.97 5 P **P** **14 48 15.9 -1.1**
baz=350
F14K Arctic Creek 79.06 6 P **P** **14 48 16.2 -1.3**
baz=348
G18K Tagagawik 79.13 3 IAmb IAmb 14 48 25.6
comp=Z,11nm,1.1s
G18K Tagagawik 79.13 3 P **P** **14 48 16.8 -1.2**
baz=354,SNR=6.7
IMAR Indian Mountai 79.16 1 P **14 48 17.5 -0.6**
I30M Mount Dempster 79.19 353 IAmb IAmb 14 48 28.6
comp=Z,6.5nm,0.8s
I30M Mount Dempster 79.19 353 P **P** **14 48 17.2 -1.2**
baz=13
I27K Kandik River 79.23 356 P **P** **14 48 16.8 -1.8**
baz=8.7
H22K Ishtalitna Cre 79.26 360 IAmb IAmb 14 48 24.2
comp=Z,5.4nm,0.8s
H22K Ishtalitna Cre 79.26 360 P **P** **14 48 17.5 -1.2**
baz=0.6
H24K Noodor Dome 79.27 358 IAmb IAmb 14 48 30.1
comp=Z,13nm,1.5s
H24K Noodor Dome 79.27 358 P **P** **14 48 17.8 -1.0**
baz=3.5
I28M Miner Creek 79.27 355 P **P** **14 48 17.5 -1.3**
baz=10
G17K Kiwalik Mounta 79.43 4 P **P** **14 48 18.8 -0.8**
baz=353
G16K Koyuk River 79.44 4 IAmb IAmb 14 48 28.0
comp=Z,9.2nm,1.0s
G16K Koyuk River 79.44 4 P **P** **14 48 18.5 -1.1**
baz=352
YSS Yuzhno-Sakhali 79.48 39 P **P** **14 48 21.2 +1.0**
H21K Melozitna Rive 79.50 0 IAmb IAmb 14 48 28.2
comp=Z,12nm,1.1s
H21K Melozitna Rive 79.50 0 P **P** **14 48 18.6 -1.4**
baz=359
PRP Porcupine Dome 79.51 357 IAmb IAmb 14 48 44.6
comp=Z,23nm,1.8s
PRP Porcupine Dome 79.51 357 P **P** **14 48 19.0 -1.2**
baz=5.4
I26K Coal Creek Min 79.61 356 P **P** **14 48 19.5 -1.0**
baz=7.4
H20K Anotleneega Mo 79.64 1 P **P** **14 48 20.0 -0.8**
baz=358
G15K Niukluk 79.72 5 P **P** **14 48 20.6 -0.5**
baz=350
J30M Hart River 79.82 353 IAmb IAmb 14 48 34.3
comp=Z,8.7nm,0.7s
J30M Hart River 79.82 353 P **P** **14 48 20.8 -1.1**
baz=13
H18K Honhosa River 79.88 3 IAmb IAmb 14 48 34.3
comp=Z,12nm,1.3s
H18K Honhosa River 79.88 3 P **P** **14 48 21.3 -0.8**
baz=355
POKR Poker Plat Res 79.98 358 P **P** **14 48 21.6 -0.9**
baz=3.8
I21K Tanana 79.98 360 P **P** **14 48 21.5 -1.0**
baz=0.1
I23K Minto, Yukon-K 79.99 359 P **P** **14 48 21.4 -1.2**
baz=2.2
H17K Granite Mounta 80.03 3 P **P** **14 48 21.9 -1.0**
baz=354
ANM Nome 80.04 6 IAmb IAmb 14 48 30.6
comp=Z,9.1nm,1.0s
ANM Nome 80.04 6 P **P** **14 48 22.0 -0.9**
baz=349,SNR=6.7
MLY Manley 80.12 359 P **P** **14 48 22.4 -1.0**
baz=1.1
GAMB Gambell 80.16 9 P **P** **14 48 22.3 -1.2**
baz=344
H16K Elim 80.20 4 P **P** **14 48 22.6 -1.1**
baz=352,SNR=6.1
COLA College 80.23 358 P **P** **14 48 24.7 +0.8**
ILAR Eielson Array 80.31 358 P **P** **14 48 23.8 -0.6**
comp=Z,1.9nm,0.6s,baz=340,slow=3.8,SNR=32
ILAR LR LR 15 25 13.9
comp=Z,44nm,20.0s,baz=78,slow=37
comp=Z,1.9nm,0.6s
ILAR Eielson Array 80.31 358 P **14 48 24.9 +0.6**
GCSA Galena City Sc 80.34 2 P **P** **14 48 23.4 -1.1**
baz=356
J25K Salcha River, 80.41 357 P **P** **14 48 23.8 -1.3**
baz=5.5
NEA2 Nenana 80.54 359 IAmb IAmb 14 50 00.0
comp=Z,28nm,1.9s
NEA2 Nenana 80.54 359 P **P** **14 48 24.5 -1.2**
baz=2.5
DAWY Dawson 80.59 354 IAmb IAmb 14 48 39.8
comp=Z,13nm,1.2s
DAWY Dawson 80.59 354 P **P** **14 48 24.6 -1.3**
baz=10
WRH Wood River Hil 80.64 358 IAmb IAmb 14 48 30.6
comp=Z,10nm,0.7s
K29M Barlow Dome 80.65 354 P **P** **14 48 25.3 -1.1**
baz=12
HDA Harding Lake 80.67 358 IAmb IAmb 14 48 30.3
comp=Z,12nm,0.7s
HDA Harding Lake 80.67 358 P **P** **14 48 25.6 -0.7**
baz=4.2
FFC Flin Flon 80.68 333 P **14 48 25.3 -1.2**
MAYO Mayo, Yukon 80.73 353 P **P** **14 48 25.5 -1.2**
baz=13
JNU Nakatsue 80.89 56 LR LR 15 29 53.0
comp=Z,38nm,19.5s,baz=186,slow=40
SCRK Sand Creek 80.98 356 IAmb IAmb 14 48 41.8
comp=Z,9.9nm,1.2s
SCRK Sand Creek 80.98 356 P **P** **14 48 26.9 -1.2**
baz=6.7
I17K Unalakleet 81.04 4 P **P** **14 48 27.0 -1.2**
baz=353
BPAW Bear Paw Mtn. 81.06 360 P **P** **14 48 27.0 -1.4**
baz=0.9
J19K Poorman 81.13 2 IAmb IAmb 14 48 38.1
comp=Z,10.0nm,1.0s

J19K	**Poorman**	**81.13**	**2**	P		**P**	**14 48 27.6**	**-1.2**
	baz=357,SNR=7.8							
K24K	**Donnelly Dome**	**81.24**	**357**	P		**P**	**14 48 28.1**	**-1.3**
	baz=5.2							
RIDG	**Independent Ri**	**81.26**	**357**	P		**P**	**14 48 28.3**	**-1.2**
	baz=6.0							
ASAJ	**Asahikawa**	**81.26**	**41**	LR		LR	15 29 15.4	
	comp=Z,79nm,18.3s,baz=338,slow=39							
CHUM	**Lake Minchumin**	**81.28**	**0**	P		**P**	**14 48 28.4**	**-1.1**
	baz=360							
MDSI	**Maura Dua**	**81.36**	**102**	P		**P**	**14 48 29.4**	**-1.4**
MCK	**McKinley**	**81.40**	**359**	P		**P**	**14 48 29.1**	**-1.2**
	baz=2.6							
L29M	**L29M**	**81.43**	**354**	P		**P**	**14 48 29.3**	**-1.1**
	baz=12							
ULM	**Lac du Bonnet**	**81.57**	**327**	P		**P**	**14 48 32.0**	**+0.7**
	comp=Z,2.0nm,0.4s,baz=62,slow=6.8,SNR=5.8							
ULM				LR		LR	15 26 37.1	
	comp=Z,76nm,18.1s,baz=23,slow=37							
	comp=Z,2.0nm,0.4s							
KTH	**Kantishna Hill**	**81.61**	**360**	IAmb		IAmb	14 48 41.5	
	comp=Z,9.8nm,1.0s							
J18K	**Innoko River**	**81.63**	**2**	P		**P**	**14 48 30.3**	**-1.1**
	baz=356							
J16K	**Anvik River**	**81.64**	**4**	P		**P**	**14 48 30.4**	**-1.1**
	baz=353							
TRF	**Thorofare Moun**	**81.71**	**359**	P		**P**	**14 48 30.9**	**-1.2**
	baz=1.5							
BCAR	**Beaver Creek A**	**81.76**	**355**			**P**	**14 48 33.6**	**+1.4**
L27K	**Beaver Creek,**	**81.77**	**355**	P		**P**	**14 48 31.0**	**-1.2**
	baz=8.4							
K20K	**Telida**	**81.80**	**1**	P		**P**	**14 48 31.5**	**-0.8**
	baz=358							
M30M	**Minto, Yukon**	**81.82**	**353**	P		**P**	**14 48 31.4**	**-1.1**
	baz=13							
PETK	**Petropavlovsk-**	**81.85**	**28**	P		**P**	**14 48 33.4**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=322,slow=4.3,SNR=4.4							
PETK				LR		LR	15 28 51.1	
	comp=Z,66nm,18.3s,baz=300,slow=39							
	comp=Z,3.1nm,1.0s							
L26K	**Log Cabin Wild**	**81.89**	**356**	P		**P**	**14 48 31.4**	**-1.4**
	baz=7.2							
M31M	**Drury Creek, Y**	**81.92**	**352**	P		**P**	**14 48 31.4**	**-1.7**
	baz=14							
J14K	**Nanvaranak Lak**	**81.98**	**5**	P		**P**	**14 48 31.6**	**-1.7**
	baz=350							
DHY	**Denali Highway**	**82.02**	**358**	P		**P**	**14 48 31.9**	**-1.8**
	baz=3.9							
PAX	**Paxson**	**82.06**	**357**	P		**P**	**14 48 32.4**	**-1.4**
	baz=5.4							
M29M	**Somme Creek**	**82.11**	**354**	IAmb		IAmb	14 48 42.7	
	comp=Z,11nm,0.8s							
M29M	**Somme Creek**	**82.11**	**354**	P		**P**	**14 48 32.7**	**-1.4**
	baz=11							
PPLA	**Purkeypile**	**82.27**	**0**	P		**P**	**14 48 33.5**	**-1.5**
	baz=360							
KOTAN	**Kotaneelee Air**	**82.29**	**346**	P		**P**	**14 48 33.8**	**-1.2**
	baz=23							
WAT1	**Susitna Watana**	**82.30**	**358**	P		**P**	**14 48 33.9**	**-1.1**
	baz=2.9							
K17K	**Iditarod**	**82.32**	**3**	IAmb		IAmb	14 48 44.0	
	comp=Z,11nm,0.9s							
K17K	**Iditarod**	**82.32**	**3**	P		**P**	**14 48 34.0**	**-1.0**
	baz=355							
BVCY	**Beaver Creek**	**82.34**	**355**	P		**P**	**14 48 33.8**	**-1.5**
	baz=9.2							
M27K	**Edge Creek, AK**	**82.47**	**355**	P		**P**	**14 48 34.7**	**-1.4**
	baz=8.4							
M26K	**Nabesna, AK**	**82.50**	**356**	P		**P**	**14 48 34.8**	**-1.3**
	baz=7.5							
WAT6	**Susitna Watana**	**82.53**	**358**	P		**P**	**14 48 35.1**	**-1.3**
	baz=3.5							
K15K	**Wolf Creek Mou**	**82.57**	**4**	P		**P**	**14 48 35.1**	**-1.3**
	baz=352							
K13K	**Kusilvak Mount**	**82.70**	**6**	P		**P**	**14 48 35.9**	**-1.1**
	baz=350							
CUT	**Chulitna**	**82.75**	**359**	P		**P**	**14 48 36.1**	**-1.3**
	baz=1.5							
N31M	**Braeburn, Yuko**	**82.78**	**352**	P		**P**	**14 48 36.9**	**-0.6**
	baz=13							
N32M	**Quiet Lake**	**82.78**	**351**	P		**P**	**14 48 36.3**	**-1.2**
	baz=16							
L18K	**Granite Mounta**	**82.88**	**2**	P		**P**	**14 48 37.2**	**-0.8**
	baz=356							
L17K	**Donlin**	**82.90**	**3**	P		**P**	**14 48 37.3**	**-0.8**
	baz=355							
YUK3	**Moose Creek**	**82.94**	**354**	P		**P**	**14 48 37.4**	**-1.2**
	baz=9.5							
M24K	**Tolsona, Glenn**	**82.95**	**357**	P		**P**	**14 48 37.4**	**-1.0**
	baz=4.8							
L19K	**White Mountain**	**82.96**	**1**	P		**P**	**14 48 37.6**	**-0.9**
	baz=358							
PDPR	**Patillas Dam,**	**83.00**	**287**			**P**	**14 48 38.6**	**-0.7**
L15K	**Ungalak Mounta**	**83.19**	**5**	P		**P**	**14 48 38.4**	**-1.1**
	baz=352							
SKT	**Skwentna**	**83.19**	**360**	P		**P**	**14 48 38.4**	**-1.2**
	baz=0.4							
YUK4	**Talbot Arm**	**83.21**	**354**	P		**P**	**14 48 38.3**	**-1.7**
	baz=11							
M19K	**Big River Lodg**	**83.25**	**1**	P		**P**	**14 48 39.3**	**-0.6**
	baz=358							
SCM	**Sheep Creek Mo**	**83.26**	**358**	P		**P**	**14 48 39.4**	**-0.7**
	baz=3.9							
L16K	**Owhat River**	**83.27**	**4**	P		**P**	**14 48 39.1**	**-0.9**
	baz=354							
M20K	**Styx River**	**83.29**	**1**	P		**P**	**14 48 39.0**	**-1.2**
	baz=359							
M23K	**Glacier View**	**83.32**	**358**	P		**P**	**14 48 39.2**	**-1.1**
	baz=3.6							
SML	**Sawmill**	**83.32**	**358**	P		**P**	**14 48 39.3**	**-1.0**
	baz=3.1							
YUK8	**Steele Glacier**	**83.37**	**354**	P		**P**	**14 48 39.6**	**-1.3**
	baz=10							
M22K	**Willow**	**83.41**	**359**	P		**P**	**14 48 40.0**	**-0.7**
	baz=1.6							
L14K	**Kuka Creek**	**83.44**	**5**	P		**P**	**14 48 39.6**	**-1.2**
	baz=351							
WHY	**Whitehorse**	**83.48**	**352**	P		**P**	**14 48 40.1**	**-1.2**
	baz=14							
MCARA	**McCarthy VSAT**	**83.51**	**356**	P		**P**	**14 48 40.1**	**-1.2**
	baz=7.4							
O30N	**Mendenhall**	**83.52**	**352**	P		**P**	**14 48 40.0**	**-1.4**
	baz=13							
PMR	**Palmer**	**83.55**	**359**	P		**P**	**14 48 40.3**	**-1.1**
	baz=2.4							
KLU	**Klutina**	**83.55**	**357**	P		**P**	**14 48 40.2**	**-1.4**
	baz=5.0							
YUK6	**Outpost Mounta**	**83.58**	**353**	P		**P**	**14 48 40.6**	**-1.4**
	baz=11							
MJAR	**Matsushiro Arr**	**83.58**	**49**	P		**P**	**14 48 43.3**	**+1.1**
	comp=Z,3.4nm,1.0s,baz=316,slow=5.2,SNR=5.2							
MJAR				LR		LR	15 29 06.1	
	comp=Z,51nm,21.9s,baz=351,slow=38							
	comp=Z,3.4nm,1.0s							
HYT	**Haines Junctio**	**83.61**	**353**	P		**P**	**14 48 40.8**	**-1.1**
	baz=12							
P33M	**Teslin, Yukon**	**83.66**	**350**	P		**P**	**14 48 40.6**	**-1.5**
	baz=16							
M17K	**Holitna River**	**83.67**	**3**	P		**P**	**14 48 41.0**	**-1.1**
	baz=356							
SUA	**Susitna One**	**83.70**	**359**	P		**P**	**14 48 41.4**	**-1.0**
	baz=1.1							
KNK	**Knik Glacier**	**83.72**	**358**	P		**P**	**14 48 41.6**	**-0.8**
	baz=3.0							
CTG	**Chitna Glacier**	**83.81**	**355**	P		**P**	**14 48 42.0**	**-1.0**
	baz=8.8							
O28M	**Mount Upton**	**83.91**	**354**	P		**P**	**14 48 42.5**	**-1.2**
	baz=9.7							
M16K	**Timber Creek**	**83.98**	**3**	P		**P**	**14 48 42.7**	**-1.1**
	baz=354							
BMRM	**Bremner River**	**84.02**	**356**	P		**P**	**14 48 42.9**	**-1.0**
	baz=6.1							
RC01	**Rabbit Creek A**	**84.07**	**359**	P		**P**	**14 48 43.3**	**-0.8**
	baz=1.9							
M14K	**Bethel**	**84.08**	**5**	P		**P**	**14 48 43.4**	**-0.8**
	baz=352							
M11K	**Mekoryuk**	**84.08**	**7**	P		**P**	**14 48 43.5**	**-0.6**
	baz=348							
CRQE	**Cirque**	**84.14**	**356**	P		**P**	**14 48 43.8**	**-0.9**
	baz=7.3							
M15K	**Kasigluk River**	**84.22**	**4**	P		**P**	**14 48 44.3**	**-0.6**
	baz=353							
O29M	**Mount Kennedy**	**84.23**	**353**	P		**P**	**14 48 43.7**	**-1.5**
	baz=11							
P30M	**Million Dollar**	**84.25**	**352**	P		**P**	**14 48 43.4**	**-1.7**
	baz=12							
M13K	**Dall Lake**	**84.31**	**6**	P		**P**	**14 48 43.9**	**-1.4**
	baz=351							
N19K	**Bonanza Creek**	**84.34**	**1**	P		**P**	**14 48 44.5**	**-1.2**
	baz=358							
P32M	**Atlin**	**84.38**	**351**	P		**P**	**14 48 44.2**	**-1.6**
	baz=15							
CAPN	**Captain Cook N**	**84.41**	**360**	P		**P**	**14 48 44.4**	**-1.3**
	baz=0.7							
N18K	**Kilae Creek**	**84.44**	**2**	P		**P**	**14 48 45.3**	**-0.7**
	baz=357							
EYAK	**Cordova Ski Ar**	**84.49**	**357**	P		**P**	**14 48 45.3**	**-0.9**
	baz=5.2							
N16K	**Nishlik Lake**	**84.54**	**3**	P		**P**	**14 48 45.7**	**-0.9**
	baz=354							
N17K	**Nushagak Hills**	**84.56**	**3**	P		**P**	**14 48 45.8**	**-0.8**
	baz=356							
PINM	**Pinnacle**	**84.59**	**354**	P		**P**	**14 48 45.2**	**-1.6**
	baz=9.7							
MESA	**MESA**	**84.64**	**355**	P		**P**	**14 48 45.8**	**-1.4**
	baz=8.3							
O22K	**Cooper Landing**	**84.68**	**359**	P		**P**	**14 48 45.7**	**-1.5**
	baz=1.9							
SKAG	**Skagway**	**84.71**	**352**	P		**P**	**14 48 46.3**	**-1.0**
	baz=14							
N14K	**Kuskokwak Cree**	**84.92**	**5**	P		**P**	**14 48 47.6**	**-0.8**
	baz=352							
SEW	**Seward**	**85.05**	**359**	P		**P**	**14 48 48.5**	**-0.6**
	baz=2.1							
O16K	**Kokwok River B**	**85.45**	**3**	P		**P**	**14 48 50.1**	**-1.0**
	baz=355							
LEM	**Lembang**	**85.49**	**102**	LR		LR	15 30 41.8	
	comp=Z,44nm,20.8s,baz=334,slow=38							
O15K	**Ungalikthiuk R**	**85.78**	**4**	P		**P**	**14 48 51.3**	**-1.4**
	baz=354							
Q19K	**Cape Douglas,**	**86.24**	**1**	P		**P**	**14 48 54.0**	**-1.1**
	baz=359							
BDFB	**Brasilia**	**87.85**	**249**	P		**P**	**14 49 04.8**	**+1.1**
	comp=Z,7.5nm,0.7s,baz=71,slow=9.4,SNR=8.0							
	comp=Z,7.5nm,0.7s							
CCM	**Cathedral Cave**	**87.92**	**316**	P		**P**	**14 49 03.3**	**-0.3**
NEW	**Newport**	**91.28**	**338**	P		**P**	**14 49 19.8**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=358,slow=4.8,SNR=3.0							
NEW				LR		LR	15 32 02.0	
	comp=Z,81nm,18.6s,baz=20,slow=37							
	comp=Z,1.4nm,0.5s							
SDV	**Santo Domingo**	**91.90**	**282**			**P**	**14 49 22.2**	**-0.7**
SDV				IAmb		IAmb	14 49 25.0	
	comp=Z,5.8nm,0.9s							
PDAR	**Pinedale Array**	**93.27**	**330**	P		**P**	**14 49 28.8**	**0.0**
	comp=Z,0.3nm,0.6s,baz=16,slow=4.6,SNR=2.3							
PDAR				LR		LR	15 36 22.5	
	comp=Z,35nm,18.1s,baz=40,slow=39							
	comp=Z,0.3nm,0.6s							
BMO	**Blue Mountains**	**94.36**	**336**	IAmb		IAmb	14 49 37.8	
	comp=Z,6.2nm,1.4s							
ASAR	**Alice Springs**	**115.79**	**102**	PKP		**PKPdf**	**14 54 56.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=315,slow=1.9,SNR=7.2							
ASAR				PKKPbc		**PKKPbc**	**15 05 28.7**	**+1.1**
	comp=Z,0.1nm,0.5s,baz=118,slow=4.1,SNR=4.4							

ROM 27 14:37:57.4±0.1, 43°.132N±0°.004×13°.146E±0°.007, h12km, ML1.3/10, 2C-5D, Error ellipse: s-maj=0.6km s-min=0.4km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PF6	**Pievefavera**	**0.04**	**65**	P		Pg	14 37 59.8	0.0
PF6				S		Sg	14 38 01.6	+0.3
CSP1	**Cessapalombo**	**0.06**	**133**	⇓P		Pg	14 38 00.1	+0.1
CSP1				S		Sg	14 38 02.2	+0.3
CSP1				AML		AML		
	comp=E,358μm,0.6s							
CSP1				AML		AML		
	comp=E,358μm,0.6s							
CSP1				AML		AML		
	comp=N,282μm,0.2s							
MDAR	**Monte D'Aria**	**0.06**	**358**	P		Pg	14 38 00.2	+0.3
MDAR				S		Sg	14 38 02.1	+0.3
GUMA	**Gualdo di Mace**	**0.15**	**117**	P		Pg	14 38 01.2	+0.2
GUMA				S		Sg	14 38 04.7	+1.1
SNTG	**Esanatoglia**	**0.19**	**309**	⇓P		Pg	14 38 01.9	+0.2
SNTG				S		Sg	14 38 05.5	+0.9
SNTG				AML		AML		
	comp=E,110μm,0.2s							
SNTG				AML		AML		
	comp=N,98μm,1.6s							
SNTG				AML		AML		
	comp=N,98μm,0.4s							
EL6	**Elcito**	**0.20**	**351**	⇓P		Pg	14 38 01.9	+0.1
EL6				S		Sg	14 38 05.8	+0.9
CESI	**CESI - Serrava**	**0.22**	**234**	⇑P		Pg	14 38 02.3	+0.2
CESI				S		Sg	14 38 06.5	+1.1
CESI				AML		AML		
	comp=E,54μm,1.2s							
CESI				AML		AML		
	comp=N,74μm,0.8s							
CESI				AML		AML		
	comp=E,54μm,0.8s							
MF5	**Montefalcone A**	**0.27**	**122**	⇓P		Pg	14 38 03.5	+0.5
MF5				S		Sb	14 38 08.3	-0.5
NRCA	**Norcia**	**0.30**	**184**	⇑P		Pg	14 38 03.5	0.0
NRCA				S		Sg	14 38 08.4	+0.7
NRCA				AML		AML		
	comp=E,109μm,0.7s							
NRCA				AML		AML		
	comp=E,109μm,1.3s							
NRCA				AML		AML		
	comp=N,80μm,0.9s							
ATCC	**AVT- Casa Cast**	**0.37**	**278**	⇓P		Pg	14 38 05.0	+0.1
ATCC				S		Sb	14 38 11.3	-0.4
ATCC				AML		AML		
	comp=E,71μm,1.4s							
ATCC				AML		AML		
	comp=N,51μm,1.4s							
ATCC				AML		AML		
	comp=E,71μm,1.4s							
ATCC				AML		AML		
	comp=N,51μm,1.4s							
ATCC				AML		AML		
	comp=E,71μm,0.6s							
ARVD	**Arcevia**	**0.40**	**338**	P		Pg	14 38 05.5	+0.2
ARVD				S		Sb	14 38 11.9	-0.4

RSNC 27 14:40:44.6±0.0,9°.1×3°.7×7°.1W±°, h37km±4km, M3.0, mB4.5, mb4.1, ML2.7, Mw(mB)3.7
FUNV 27 14:40:45.9,8°.40N×71°.01W, h21km, MW3.4, Presumed earthquake

ISC 27 14:40:40.5±1.4, 8°.70N±0°.03×70°.87W±0°.03, h6km±12km, n23, σ2s02/42, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SDV	**Santo Domingo**	**0.30**	**51**	P		**Pn**	**14 40 50.6**	**-1.0**
SDV				S		**Sb**	**14 40 56.6**	**+2.9**
SOCV	**Socops**	**0.41**	**178**	*e*P		**Pb**	**14 40 50.4**	**+0.2**
SOCV				*e*S		**Sb**	**14 40 55.2**	**-1.5**
CAPV	**Capacho**	**1.65**	**240**	*e*P		**Pn**	**14 41 09.8**	**-0.4**
CAPV				*e*S		**Sn**	**14 41 28.8**	**-3.0**
TEPV	**Terepaima**	**2.08**	**53**	*e*P		**Pg**	**14 41 22.8**	**+2.4**
TEPV				*e*S		**Sg**	**14 41 50.6**	**+3.2**
MCQV	**Machiques**	**2.12**	**309**	*e*P		**Pg**	**14 41 20.8**	**-0.4**
MCQV				*e*S		**Sb**	**14 41 46.4**	**+0.5**
PAMC	**Pamplona, Colo**	**2.26**	**233**	P		**Pn**	**14 41 20.3**	**+1.5**
PAMC				S		**Sb**	**14 41 50.5**	**+0.2**
OCAC	**Ocana**	**2.46**	**260**	P		**Pb**	**14 41 24.2**	**-1.1**
OCAC				S		**Sn**	**14 41 54.6**	**+2.8**
MAPV	**Macapo**	**2.63**	**64**	*e*P		**Pg**	**14 41 30.0**	**-1.1**
MAPV				*e*S		**Sg**	**14 42 02.6**	**-2.6**
CRJC	**Cerrejon, Guaj**	**3.04**	**320**	P		**Pn**	**14 41 30.3**	**+1.1**
CRJC				S		**Sn**	**14 42 05.8**	**-0.2**
BARC	**Barichara**	**3.10**	**228**	P		**Pb**	**14 41 34.8**	**-1.4**
BARC				S		**Sb**	**14 42 14.9**	**+0.5**
URIC	**Uribia, Colomb**	**3.18**	**340**	P		**Pn**	**14 41 31.8**	**+0.7**
URIC				S		**Sn**	**14 42 08.2**	**-1.2**
TURV	**Turiamo**	**3.46**	**60**	*e*P		**Pb**	**14 41 41.5**	**-0.7**
TURV				*e*S		**Sb**	**14 42 21.8**	**-2.7**
BENV	**Beln**	**3.46**	**68**	*e*P		**Pb**	**14 41 41.1**	**-1.2**
BENV				*e*S		**Sb**	**14 42 21.5**	**-3.2**
ARGC	**Ariguani, Magd**	**3.53**	**289**	P		**Pn**	**14 41 36.0**	**+0.2**
ARGC				S		**Sn**	**14 42 16.0**	**-1.8**
RUSC	**La Rusia**	**3.55**	**218**	P		**Pn**	**14 41 38.6**	**+2.1**
RUSC				S		**Sn**	**14 42 19.4**	**+0.4**
RUSC	**La Rusia**	**3.55**	**218**	*e*P		**Pn**	**14 41 33.5**	**-3.0**
TACV	**Tcata**	**4.05**	**69**	*e*P		**Pb**	**14 41 49.4**	**-2.9**
TACV				*e*S		**Sn**	**14 42 35.5**	**+4.5**
PTBC	**PUERTO BERRIO,**	**4.15**	**239**	P		**Pn**	**14 41 44.5**	**+0.1**
SJCC	**San Jacinto, C**	**4.42**	**286**	P		**Pn**	**14 41 50.1**	**+2.0**
SJCC				S		**Sn**	**14 42 41.6**	**+1.7**
SJCC	**San Jacinto, C**	**4.42**	**286**	*e*P		**Pn**	**14 41 50.7**	**+2.6**
SJCC				*e*S		**Sn**	**14 42 37.5**	**-2.5**
CACV	**CAICARA DEL OR**	**4.43**	**104**	*e*P		**Pb**	**14 41 58.2**	**-0.5**
CACV				*e*S		**Sb**	**14 42 53.0**	**+0.5**
VILC	**Villavicencio,**	**5.35**	**212**	P		**Pn**	**14 42 02.4**	**+1.4**
	464nm23nm,0.5s							
GUY2C	**Guyana, Caldas**	**5.64**	**233**	P		**Pn**	**14 42 07.5**	**+2.2**

IDC 27 14:49:55.3±2.1, 6°.76S×129°.61E, h139km±27km, mb2.8/1, mbtmp3.6/6, Error ellipse: s-maj=28.8km s-min=19.0km az=113.0

ISC 27 14:49:53.6±0.9, 6°.82S±0°.06×129°.8E±0°.1, h150km, n6, σ3s59/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**6.08**	**14**	P		**Pn**	**14 51 22.3**	**+0.9**
	2.8nm,0.3s,baz=213,slow=22,SNR=26							
SIJI				S		**Sn**	**14 52 24.4**	**-5.7**
	2.4nm,0.3s,baz=286,slow=24,SNR=10							
BATI	**Baumata**	**6.97**	**241**	P		**Pn**	**14 51 33.8**	**+0.5**
	22nm,0.8s,baz=350,slow=18,SNR=1.7							
BATI				S		**Sn**	**14 52 49.8**	**-1.8**
	17nm,0.7s,baz=286,slow=21,SNR=1.4							
FITZ	**Fitzroy Crossi**	**11.94**	**200**	P		**Pn**	**14 52 39.4**	**+0.3**
	5.3nm,1.0s,baz=29,slow=13,SNR=8.9							
FITZ				S		**Sn**	**14 54 45.8**	**-5.2**
	1.3nm,0.3s,baz=295,slow=15,SNR=1.9							
WRA	**Warramunga Arr**	**13.76**	**162**	P		**Pn**	**14 53 04.5**	**+1.9**
	0.3nm,0.6s,baz=339,slow=12,SNR=10							
WRA				S		**Sn**	**14 55 31.9**	**-3.2**
	0.4nm,0.4s,baz=342,slow=22,SNR=8.7							
ASAR	**Alice Springs**	**17.20**	**167**	P		**Pn**	**14 53 49.5**	**+4.5**
	0.4nm,0.5s,baz=349,slow=11,SNR=15							
ASAR				S		**S**	**14 56 55.6**	**-0.4**
	0.3nm,0.8s,baz=347,slow=25,SNR=5.6							
MKAR	**Makanchi Array**	**67.98**	**327**	P		**P**	**15 00 38.8**	**+2.3**
	0.1nm,0.3s,baz=112,slow=7.5,SNR=2.4							
	0.1nm,0.3s							

TIR 27 14:51:27.5, 41°.35N×19°.57E, h11km±1km, Ml2.2/3
PDG 27 14:51:28.9±0.2, 41°.36N×19°.48E, h20km, ML2.7/12, Error ellipse: s-maj=0.7km s-min=1.5km az=0.0
BEO 27 14:51:29.8±0.5, 41°.38N×19°.60E, h10km±2km, ML2.5/7

ISC 27 14:51:28.0±1.1, 41°.34N±0°.02×19°.52E±0°.03, h7km±9km, n39, σ0s96/78, 4C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.26**	**88**	Pg		**Pg**	**14 51 33.0**	**-0.2**
TIR				Sg		**Sg**	**14 51 35.9**	**-0.8**
TIR				AML		AML	14 51 37.5	
	1.5nm,0.3s							
TIR				AML		AML	14 51 39.3	
	1.9nm,0.4s							
ULC	**Ulcinj**	**0.66**	**342**	⇓*i*Pg		**Pg**	**14 51 40.8**	**+0.1**
ULC				*i* Sg		**Sb**	**14 51 51.2**	**0.0**
SDA	**Shkodra**	**0.71**	**359**	Pg		**Pg**	**14 51 41.2**	**-0.6**
SDA				Sg		**Sg**	**14 51 51.6**	**+0.5**
SDA				AML		AML	14 51 55.3	
	0.4nm,0.4s							
PHP	**Peshkopia**	**0.78**	**63**	Pg		**Pg**	**14 51 41.1**	**-1.9**
PHP				Sg		**Sg**	**14 51 52.4**	**-0.7**
PHP				AML		AML	14 51 57.9	
	0.8nm,0.4s							
DRME	**Dracevica, Mon**	**0.88**	**344**	⇑*i*Pg		**Pg**	**14 51 44.7**	**-0.3**
DRME				*i* Sg		**Sb**	**14 51 58.7**	**+1.0**
BUM	**Brajici-Budva**	**1.07**	**334**	⇓*i*Pg		**Pg**	**14 51 48.5**	**-0.1**
BUM				*i* Sg		**Sn**	**14 52 05.2**	**+0.6**
PDG	**Podgorica**	**1.11**	**350**	Pg		**Pb**	**14 51 49.4**	**-0.1**
PDG				Sg		**Sn**	**14 52 04.8**	**-0.6**
PDG	**Podgorica**	**1.11**	**350**	⇑*i*Pg		**Pb**	**14 51 49.4**	**-0.1**
PDG				*i* Sg		**Sn**	**14 52 06.0**	**+0.6**
PDG	**Podgorica**	**1.11**	**350**	*e*Pg		**Pb**	**14 51 49.4**	**-0.1**
PDG				*e*Sg		**Sn**	**14 52 05.8**	**+0.4**
CEME	**Cevo**	**1.29**	**340**	⇑*i*Pg		**Pn**	**14 51 52.6**	**+0.1**
CEME				*i* Sg		**Sg**	**14 52 10.8**	**+1.3**
PVY	**Plav**	**1.30**	**15**	⇓*i*Pg		**Pn**	**14 51 52.5**	**-0.2**
PVY				*i* Sg		**Sn**	**14 52 11.5**	**+1.2**
PVY	**Plav**	**1.30**	**15**	*e*Pg		**Pg**	**14 51 53.2**	**+0.3**
PVY				*e*Sg		**Sn**	**14 52 09.9**	**-0.4**
HCY	**Herceg Novi**	**1.35**	**326**	⇓*i*Pg		**Pn**	**14 51 53.5**	**+0.3**
HCY				*i* Sg		**Sg**	**14 52 12.3**	**+1.0**
NKME	**Niksic**	**1.49**	**344**	⇓*i*Pg		**Pn**	**14 51 55.2**	**0.0**
NKME				*i* Sg		**Sb**	**14 52 15.8**	**+0.7**
SRN	**Sarande**	**1.50**	**166**	Pn		**Pb**	**14 51 56.5**	**+0.3**
SRN				Sn		**Sg**	**14 52 17.6**	**+1.3**
KOME	**Kolasin**	**1.51**	**360**	⇑*i*Pg		**Pn**	**14 51 56.0**	**+0.4**
KOME				*i* Sg		**Sg**	**14 52 17.0**	**+0.4**
KOME	**Kolasin**	**1.51**	**360**	*e*Pg		**Pb**	**14 51 56.7**	**+0.3**
KOME				*e*Sg		**Sb**	**14 52 16.2**	**+0.4**
BEY	**Berane**	**1.56**	**10**	*e*Pg		**Pn**	**14 51 56.4**	**+0.2**
BEY				*e*Sg		**Sb**	**14 52 17.0**	**-0.2**
IVA	**Berane**	**1.56**	**10**	⇓*i*Pg		**Pn**	**14 51 56.2**	**0.0**
IVA				*i* Sg		**Sg**	**14 52 18.1**	**0.0**
TREB	**Trebinje**	**1.63**	**328**	*e*Pn		**Pn**	**14 51 58.0**	**+0.9**
TREB				*e*Sn		**Sb**	**14 52 19.2**	**+0.1**
DBRK	**Dubrovnik**	**1.68**	**323**	*e*Pn		**Pn**	**14 51 57.8**	**+0.1**
DBRK				Sn		**Sn**	**14

	comp=E,2μm,1.0s							
TVAN				IAML		14 57 08.0		
	comp=N,2μm,1.4s							
TVAN	**Van**	**0.84**	**275**	Pg	**Pg**	**14 56 38.7**	**-0.8**
VANB	**Van**	**0.86**	**279**	Pg	**Pg**	**14 56 39.9**	**0.0**
VMUR	**Van-Muradiye**	**0.88**	**307**	P	**Pg**	**14 56 40.2**	**-0.1**
VMUR				S	**Sb**	**14 56 52.5**	**-1.3**
VMUR	**Van-Muradiye**	**0.88**	**307**	Pg	**Pg**	**14 56 40.2**	**-0.1**
YOVA	**Hakkari_Yksek**	**0.88**	**189**	P	**Pg**	**14 56 40.6**	**+0.2**
YOVA	**Hakkari_Yksek**	**0.88**	**189**	Pg	**Pg**	**14 56 40.5**	**+0.2**
MAKU	**Maku**	**0.91**	**11**	Pg	**Pg**	**14 56 40.9**	**0.0**
ISHB	**Shabestar**	**0.92**	**101**	Pg	**Pg**	**14 56 40.7**	**-0.4**
IMRD	**Marand**	**1.00**	**75**	Pg	**Pb**	**14 56 43.2**	**-0.4**
NAX	**Nakhchivan**	**1.07**	**48**	P	**Pn**	**14 56 45.0**	**-0.6**
NAX				S	**Sn**	**14 57 01.0**	**-0.1**
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**14 56 44.0**	**-0.2**
HAKT	**HAKKARI**	**1.08**	**214**	Pg	**Pg**	**14 56 43.9**	**-0.2**
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**14 56 44.2**	**0.0**
HAKT				S	**Sn**	**14 57 01.0**	**-0.6**
GEVA	**Gevas**	**1.12**	**263**	P	**Pg**	**14 56 43.4**	**-1.5**
GEVA				S	**Sn**	**14 57 00.9**	**-1.4**
GEVA				IAML		14 57 08.0		
	comp=E,903nm,0.5s							
DYDN	**Diyadin**	**1.24**	**331**	P	**Pg**	**14 56 45.6**	**-1.6**
DYDN				S	**Sg**	**14 57 00.9**	**-2.5**
DYDN				IAML		14 57 16.0		
	comp=E,764nm,0.7s							
SBZ	**Shahbuz**	**1.26**	**42**	P	**Pn**	**14 56 48.0**	**-0.2**
SBZ				S	**Sn**	**14 57 06.6**	**+0.8**
ORD	**Ordubad**	**1.28**	**68**	P	**Pb**	**14 56 48.3**	**-0.1**
ORD				S	**Sn**	**14 57 06.7**	**+0.4**
HYR	**Heyderabad**	**1.29**	**13**	P	**Pb**	**14 56 49.0**	**+0.4**
HYR				S	**Sn**	**14 57 09.5**	**+3.0**
CUKT	**Cukurca**	**1.39**	**210**	Pn	**Pg**	**14 56 49.9**	**-0.1**
CUKT				Sn	**Sn**	**14 57 09.7**	**+0.8**
CUKT	**Cukurca**	**1.39**	**210**	P	**Pg**	**14 56 50.4**	**+0.3**
CUKT	**Cukurca**	**1.39**	**210**	Pg	**Pb**	**14 56 49.6**	**-0.6**
ADCV	**BITLIS_Adilcev**	**1.41**	**285**	P	**Pn**	**14 56 49.4**	**-1.0**
ADCV				S	**Sn**	**14 57 09.6**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.41**	**285**	Pg	**Pn**	**14 56 49.3**	**-1.0**
IAZR	**Azarshahr**	**1.43**	**123**	Pg	**Pg**	**14 56 50.9**	**+0.1**
IGDI	**IGDIR**	**1.44**	**348**	P	**Pg**	**14 56 51.8**	**+0.7**
IGDI	**IGDIR**	**1.44**	**348**	Pg	**Pg**	**14 56 51.7**	**+0.7**
IGDI	**IGDIR**	**1.44**	**348**	P	**Pg**	**14 56 52.1**	**+1.1**
IGDI				S	**Sg**	**14 57 14.0**	**+4.4**
VAYK	**Vayk**	**1.44**	**31** *i*	P	**Pg**	**14 56 51.0**	**-0.1**
VAYK				*i* S	**Sg**	**14 57 11.7**	**+1.9**
AGRB	**Hanur-Agry**	**1.60**	**315**	Pn	**Pb**	**14 56 53.1**	**-0.8**
AGRB				Sn	**Sg**	**14 57 17.3**	**+2.4**
AGRB	**Hanur-Agry**	**1.60**	**315**	Pg	**Pn**	**14 56 52.9**	**0.0**
PERV	**Siirt/Pervari-**	**1.60**	**252**	P	**Pb**	**14 56 53.2**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.61**	**306**	P	**Pn**	**14 56 52.7**	**-0.4**
MLAZ	**Malazgirt-MUS**	**1.65**	**295**	Pn	**Pb**	**14 56 54.4**	**-0.2**
MLAZ				Sn	**Sg**	**14 57 18.1**	**+1.8**
KOTA	**Agri, Merkez-K**	**1.66**	**324**	P	**Pn**	**14 56 53.5**	**-0.3**
GNI	**Garni**	**1.70**	**7**	Pn	**Pg**	**14 56 55.9**	**-0.1**
GNI	**Garni**	**1.70**	**7** *eP*		**Pb**	**14 56 55.5**	**0.0**
GNI				*eS*	**Sg**	**14 57 19.8**	**+1.7**
GRS	**Goris**	**1.79**	**54** ⇓*iP*		**Pn**	**14 56 54.0**	**-1.4**
GRS				⇓*iS*	**Sn**	**14 57 18.0**	**-0.8**
EGVZ	**Egvard**	**1.79**	**64** *eP*		**Pb**	**14 56 56.4**	**-0.7**
EGVZ				*eS*	**Sg**	**14 57 20.9**	**-0.1**
BLIS	**Bitlis-Merkez**	**1.85**	**269**	P	**Pb**	**14 56 57.9**	**-0.1**
KAPZ	**Kaputan**	**1.87**	**5** *eP*		**Pb**	**14 56 58.3**	**-0.1**
KAPZ				*eS*	**Sg**	**14 57 23.8**	**+0.3**
GURO	**Guroymak-BITLI**	**1.91**	**273**	Pn	**Pb**	**14 56 58.4**	**-0.7**
AMBZ	**Amberd**	**1.93**	**355** *eP*		**Pb**	**14 56 59.1**	**-0.5**
AMBZ				*eS*	**Sg**	**14 57 24.9**	**-0.6**
AYRK	**Ayrk**	**1.94**	**31** *eP*		**Pb**	**14 56 60.0**	**+0.2**
AYRK				*eS*	**Sg**	**14 57 26.4**	**+0.5**
MAHB	**Mahabad**	**1.96**	**149**	Pn	**Pb**	**14 56 59.9**	**0.0**
IHRS	**Heris**	**2.03**	**93**	Pn	**Pb**	**14 57 00.8**	**-0.3**
SRTM	**Siirt_Merkez**	**2.06**	**258**	P	**Pb**	**14 57 01.4**	**-0.3**
SRTM	**Siirt_Merkez**	**2.06**	**258**	Pn	**Pb**	**14 57 01.3**	**-0.3**
EATA	**Eleskirt**	**2.08**	**313**	P	**Pb**	**14 57 02.1**	**0.0**
DIGO	**Kars**	**2.13**	**337**	P	**Pg**	**14 57 04.1**	**-0.1**
EAK	**Akyaka**	**2.32**	**344**	P	**Pg**	**14 57 07.4**	**-0.6**
MUSM	**Mu-Merkez**	**2.33**	**277**	P	**Pb**	**14 57 06.6**	**+0.3**
KARS	**Kars**	**2.42**	**334**	Pn	**Pb**	**14 57 05.8**	**-1.9**
BOZK	**Kars-Merkez-Bo**	**2.42**	**332**	P	**Pg**	**14 57 08.9**	**-0.9**
QRD	**Qoradiz**	**2.44**	**65**	P	**Pb**	**14 57 07.0**	**-0.9**
QRD				S	**Sb**	**14 57 38.6**	**+0.1**
GDB	**GEDABAY**	**2.47**	**23**	P	**Pb**	**14 57 07.1**	**-1.5**
GDB				S	**Sg**	**14 57 42.8**	**+0.1**
IHSH	**Hashtrud**	**2.49**	**117**	Pn	**Pb**	**14 57 07.4**	**-1.8**
LSVT	**Lusahovit**	**2.52**	**13** *eP*		**Pb**	**14 57 10.2**	**+0.8**
LSVT				*eS*	**Sg**	**14 57 44.2**	**-0.1**
HOMI	**Horasan**	**2.54**	**309**	P	**Pg**	**14 57 11.7**	**-0.5**
BTMN	**Batman**	**2.58**	**258**	P	**Pb**	**14 57 08.4**	**-2.1**
SVAN	**Silvan-Diyarba**	**2.59**	**264**	Pn	**Pn**	**14 57 07.8**	**+1.4**
SVAN	**Silvan-Diyarba**	**2.59**	**264**	P	**Pb**	**14 57 09.9**	**-0.7**
SVAN	**Silvan-Diyarba**	**2.59**	**264**	Pn	**Pn**	**14 57 07.3**	**+0.9**
ISRB	**Sarab**	**2.60**	**103**	Pn	**Pb**	**14 57 08.4**	**-2.4**
GANJ	**Ganja**	**2.61**	**33**	P	**Pb**	**14 57 09.5**	**-1.5**
GANJ				S	**Sb**	**14 57 44.9**	**+1.4**
AGDM	**Agdam**	**2.63**	**50**	P	**Pb**	**14 57 09.9**	**-1.4**
AGDM				S	**Sb**	**14 57 45.6**	**+1.6**
SENK	**Senkaya-Erzuru**	**2.66**	**323**	Pn	**Pb**	**14 57 09.7**	**-2.2**
QZX	**Qazax, Azerbai**	**2.69**	**15**	P	**Pb**	**14 57 10.9**	**-1.3**
QZX				S	**Sb**	**14 57 46.8**	**+1.1**
GRMI	**Germi**	**2.71**	**82**	Pn	**Pb**	**14 57 10.1**	**-2.6**
BLQ	**Beylaqan**	**2.71**	**61**	P	**Pb**	**14 57 11.1**	**-1.7**
BLQ				S	**Sb**	**14 57 46.4**	**-0.1**
ERZM	**Erzurum**	**2.81**	**302**	P	**Pg**	**14 57 17.0**	**-0.3**
AKDA	**Akdag**	**2.92**	**305**	P	**Pg**	**14 57 18.2**	**-1.1**
YRD	**Yardimli**	**2.99**	**80**	P	**Pb**	**14 57 14.8**	**-2.6**
YRD				S	**Sb**	**14 57 52.5**	**-1.9**
BNGB	**Bingl**	**3.01**	**281**	Pn	**Pn**	**14 57 14.1**	**+1.9**
LRK	**Lerik**	**3.04**	**85**	P	**Pb**	**14 57 15.7**	**-2.7**
LRK				S	**Sb**	**14 57 55.9**	**-0.2**
MARD	**Mardin**	**3.13**	**250**	P	**Pn**	**14 57 15.3**	**+1.4**
YEDI	**Yedisu-Bingol**	**3.21**	**289**	Pn	**Pn**	**14 57 17.4**	**+2.4**
MAYK		**3.23**	**276**	P	**Pg**	**14 57 23.6**	**-1.7**
EPOS	**Posof**	**3.32**	**337**	P	**Pg**	**14 57 26.2**	**-0.9**
DBAD	**Bademkaya**	**3.33**	**321**	P	**Pg**	**14 57 26.7**	**-0.6**
LKRN	**Lenkeran, Azer**	**3.39**	**84**	P	**Pn**	**14 57 19.7**	**+2.4**
LKRN				S	**Sb**	**14 58 03.7**	**-2.0**
ASTR	**Astara**	**3.39**	**87**	P	**Pn**	**14 57 20.2**	**+2.9**
ASTR				S	**Sb**	**14 58 03.5**	**-2.4**
DYBB	**Diyarbakir**	**3.45**	**263**	Pn	**Pn**	**14 57 19.7**	**+1.5**
KOPT	**Kop Dagi**	**3.45**	**298**	P	**Pg**	**14 57 28.0**	**-1.6**
DBOC	**Borcka**	**3.60**	**324**	P	**Pg**	**14 57 30.4**	**-2.0**
KOVA	**Elazig, Kovanc**	**3.66**	**275**	P	**Pg**	**14 57 34.0**	**+0.5**
IDHR	**Dehrash**	**4.06**	**157**	Pn	**Pn**	**14 57 29.1**	**+2.4**

IDC 27 14:57:44.4±2.3, 28°.14N×88°.18E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=89.9km s-min=26.5km az=71.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**23.62**	**345**	P		P		15 02 56.9	-0.2
	0.6nm,0.6s,baz=165,slow=8.6,SNR=6.0								
	0.6nm,0.6s								
SONM	**Songino Array**	**24.23**	**31**	P		P		15 03 03.4	+0.3
	0.3nm,0.5s,baz=217,slow=8.4,SNR=1.5								
	0.3nm,0.5s								
WRA	**Warramunga Arr**	**65.39**	**132**	P		P		15 08 29.0	0.0
	0.4nm,1.0s,baz=326,slow=6.6,SNR=6.4								
	0.4nm,1.0s								
ASAR	**Alice Springs**	**67.79**	**135**	P		P		15 08 44.4	0.0
	0.2nm,0.6s,baz=318,slow=6.1,SNR=6.3								
	0.2nm,0.6s								

*KRNET **27** 15:00:15.3±0.1, 42°.12N×73°.44E, h23km, mb3.3*
*NNC **27** 15:00:16.9±0.8, 42°.18N×73°.48E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=6.9km s-min=3.1km az=3.0*
*SOME **27** 15:00:16.3, 42°.05N×73°.47E, h15km*
*KNET **27** 15:00:18.9±0.3, 42°.20N×73°.66E, h12km±1km, ml2.4, Error ellipse: s-maj=1.8km s-min=1.0km az=49.0*

ISC 27 15:00:14.8±1.1, 42°.09N±0°.02×73°.49E±0°.02, h4km±10km, n67, σ1§04/117, 51C-23D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**0.60**	**20**	⇓P		**Pb**		**15 00 27.9**	**-0.1**
	13nm,0.1s,SNR=106								
EKS2				⇑S		**Sb**		**15 00 35.7**	**-1.3**
	74nm,0.1s								
EKS2	**Erkin-Say**	**0.60**	**20**	⇓*iP*		**Pg**		**15 00 27.0**	**+0.5**
EKS2				⇓*iS*		**Sg**		**15 00 35.2**	**+0.8**
ARLS	**Aral**	**0.66**	**110**	⇑*eP*		**Pb**		**15 00 28.9**	**-0.1**
ARLS				⇑*iS*		**Sb**		**15 00 38.6**	**0.0**
MRKS	**Merke**	**0.68**	**343**	P		**Pb**		**15 00 28.9**	**-0.4**
	130nm,0.2s								
MRKS				S		**Sg**		**15 00 37.8**	**+1.1**
	580nm,0.2s								
MRKS	**Merke**	**0.68**	**343**	*eP*		**Pb**		**15 00 28.9**	**-0.4**
	130nm,0.2s								
MRKS				*eS*		**Sg**		**15 00 37.8**	**+1.1**
	580nm,0.2s								
UCH	**Uchtor**	**0.77**	**80**	⇑P		**Pb**		**15 00 31.4**	**+0.3**
	26nm,0.1s,SNR=43								
UCH				⇑S		**Sb**		**15 00 41.7**	**-0.4**
	103nm,0.2s								
UCH	**Uchtor**	**0.77**	**80**	⇓*iP*		**Pb**		**15 00 30.6**	**-0.5**
UCH				⇓*iS*		**Sb**		**15 00 41.6**	**-0.5**
MNAS	**Manas**	**0.83**	**299**	⇑*iP*		**Pg**		**15 00 30.4**	**-0.4**
MNAS				⇑*iS*		**Sg**		**15 00 41.0**	**-0.6**
ARSB	**Arslanbob**	**0.86**	**207**	⇑*iP*		**Pg**		**15 00 31.6**	**+0.3**
ARSB				⇑*iS*		**Sg**		**15 00 43.3**	**+0.9**
AAK	**Ala-Archa**	**0.92**	**53**	⇑P		**Pn**		**15 00 33.9**	**-0.8**
	14nm,0.1s,SNR=16								
AAK				⇑S		**Sb**		**15 00 44.7**	**-1.4**
	35nm,0.2s								
AAK	**Ala-Archa**	**0.92**	**53**	⇑P		**Pn**		**15 00 33.7**	**-1.0**
	3.4nm,0.5s								
AAK				⇑S		**Sb**		**15 00 45.9**	**-0.2**
	12nm,0.5s								
AAK	**Ala-Archa**	**0.92**	**53**	⇑*iP*		**Pb**		**15 00 32.8**	**-0.7**
AAK				⇑*iS*		**Sb**		**15 00 45.5**	**-0.6**
FRU1	**Bishkek**	**1.10**	**49**	⇓*iP*		**Pb**		**15 00 36.1**	**-0.5**
FRU1				⇓*iS*		**Sb**		**15 00 51.2**	**-0.1**
ARK	**Arkit**	**1.18**	**256**	⇑*iP*		**Pg**		**15 00 36.7**	**-0.7**
ARK				⇑*iS*		**Sg**		**15 00 51.9**	**-0.8**
KBK	**Karagaybulak**	**1.22**	**62**	⇑P		**Pn**		**15 00 39.4**	**+0.6**
	22nm,0.1s,SNR=11								
KBK				⇑S		**Sn**		**15 00 55.0**	**-0.8**
	107nm,0.2s								
KBK	**Karagaybulak**	**1.22**	**62**	⇑*eP*		**Pn**		**15 00 38.2**	**-0.6**
KBK				⇑*iS*		**Sn**		**15 00 54.7**	**-1.1**
SALK	**Salom-Alik**	**1.23**	**168**	⇑*iP*		**Pb**		**15 00 38.6**	**-0.2**
SALK				⇑*iS*		**Sn**		**15 00 55.5**	**-0.7**
CHMS	**Chumysh**	**1.30**	**45**	⇓P		**Pg**		**15 00 40.5**	**+0.8**
	15nm,0.1s,SNR=21								
CHMS				⇑S		**Sn**		**15 00 57.6**	**0.0**
	29nm,0.1s								
CHMS	**Chumysh**	**1.30**	**45**	⇑*iP*		**Pn**		**15 00 39.2**	**-0.6**
CHMS				⇑*iS*		**Sn**		**15 00 56.8**	**-0.8**
USP	**Ospenovka**	**1.39**	**32**	⇑P		**Pg**		**15 00 42.1**	**+0.7**
	17nm,0.1s,SNR=76								
USP				⇑S		**Sg**		**15 01 00.2**	**+0.8**
	49nm,0.1s								
USP	**Ospenovka**	**1.39**	**32**	⇑*iP*		**Pb**		**15 00 40.9**	**-0.5**
USP				⇑*iS*		**Sg**		**15 00 59.2**	**-0.2**
OHH	**Osh**	**1.66**	**199**	⇑*iP*		**Pb**		**15 00 45.4**	**-0.6**
OHH				⇑*iS*		**Sb**		**15 01 07.4**	**+0.2**
TKM2	**Tokmak 2**	**1.76**	**61**	⇑P		**Pg**		**15 00 48.9**	**+0.3**
	20nm,0.1s,SNR=103								
TKM2				⇓S		**Sg**		**15 01 11.8**	**+0.3**
	82nm,0.2s								
TKM2	**Tokmak 2**	**1.76**	**61**	⇑*iP*		**Pb**		**15 00 47.5**	**-0.3**
TKM2				⇑*iS*		**Sg**		**15 01 10.9**	**-0.5**
DZA	**Taraz**	**1.79**	**297**	*eP*		**Pb**		**15 00 48.0**	**-0.1**
	44nm,0.1s								
DZA				*eS*		**Sb**		**15 01 10.6**	**-0.3**
	334nm,0.3s								
TRKS	**Terek-Say**	**1.85**	**253**	⇑*iP*		**Pn**		**15 00 48.1**	**+0.7**
TRKS				⇑*iS*		**Sn**		**15 01 11.7**	**+0.4**
BOOM	**Boomskoye usch**	**1.86**	**77**	⇓*iP*		**Pb**		**15 00 49.0**	**-0.5**
BOOM				⇓*iS*		**Sg**		**15 01 13.5**	**-1.1**
JNKS	**Jany-Kuch**	**1.91**	**122**	⇓*iP*		**Pb**		**15 00 50.1**	**-0.3**
JNKS				⇓*iS*		**Sg**		**15 01 15.4**	**-0.8**
NRN	**Naryn**	**1.99**	**109**	⇑*iP*		**Pb**		**15 00 50.7**	**-1.1**
NRN				⇑*iS*		**Sb**		**15 01 16.5**	**-0.5**
DGS	**Degeres**	**2.04**	**55**	Pg		**Pg**		**15 00 54.6**	**+0.8**
	8.8nm,0.4s								
DGS				Lg		Lg		15 01 21.7	
	68nm,0.2s								
DGS	**Degeres**	**2.04**	**55**	*eP*		**Pg**		**15 00 54.6**	**+0.8**
	8.8nm,0.4s								
DGS				*eS*		**Sg**		**15 01 21.7**	**+1.4**
	68nm,0.2s								
ULHL	**Ulahol**	**2.05**	**85**	⇓P		**Pg**		**15 00 54.3**	**+0.2**
	21nm,0.2s,SNR=95								
ULHL				⇓S		**Sg**		**15 01 21.3**	**+0.6**
	98nm,0.2s								
ULHL	**Ulahol**	**2.05**	**85**	⇓*iP*		**Pb**		**15 00 51.6**	**-1.1**
ULHL				⇓*iS*		**Sb**		**15 01 18.1**	**-0.5**
KST	**Kastek**	**2.06**	**62**	Pg		**Pg**		**15 00 55.4**	**+1.2**
	9.9nm,0.2s								
KST				Lg		Lg		15 01 22.4	
	113nm,0.5s								
KST	**Kastek**	**2.06**	**62**	*eP*		**Pg**		**15 00 55.4**	**+1.2**
	9.9nm,0.2s								
KST				*eS*		**Sg**		**15 01 22.4**	**+1.5**
	113nm,0.5s								
SFK	**Sufi-Kurgan**	**2.08**	**180**	⇓*iP*		**Pn**		**15 00 51.9**	**+1.2**
SFK				⇓*iS*		**Sb**		**15 01 18.4**	**-1.1**
KRBS	**Karabastau**	**2.27**	**44**	Pg		**Pg**		**15 00 58.1**	**-0.2**
	6.7nm,0.4s								
KRBS				Lg		Lg		15 01 28.3	
	15nm,0.2s								
KRBS	**Karabastau**	**2.27**	**44**	*eP*		**Pg**		**15 00 58.1**	**-0.2**
	6.7nm,0.4s								
KRBS				*eS*		**Sg**		**15 01 28.3**	**+0.6**
	15nm,0.2s								
MTBS	**Maitube**	**2.40**	**63**	Pg		**Pg**		**15 01 00.7**	**-0.2**
	13nm,0.2s								
MTBS				Lg		Lg		15 01 31.7	
	49nm,0.4s								
MTBS	**Maitube**	**2.40**	**63**	*eP*		**Pg**		**15 01 00.7**	**-0.2**
	13nm,0.2s								
MTBS				*eS*		**Sg**		**15 01 31.7**	**-0.3**
	49nm,0.4s								
KK31	**Karatay Array**	**2.42**	**296**	⇑Pg		**Pb**		**15 00 58.5**	**-0.5**
	18nm,0.6s,baz=117,slow=13,SNR=94								
KK31				⇑Lg		Lg		15 01 30.4	
	20nm,0.2s,baz=104,slow=28,SNR=15								
IUG	**Iuzhnay**	**2.58**	**272**	*eP*		**Pb**		**15 01 02.8**	**+1.2**
	215nm,0.2s								
IUG				*eS*		**Sb**		**15 01 35.2**	**+1.5**
	408nm,0.5s								
TNSS	**Tian-Shan**	**2.72**	**69**	Pg		**Pg**		**15 01 06.3**	**-0.6**
	4.6nm,0.4s								
TNSS				Lg		Lg		15 01 41.7	
	14nm,0.4s								
TNSS	**Tian-Shan**	**2.72**	**69**	*eP*		**Pg**		**15 01 06.3**	**-0.6**
	4.6nm,0.4s								
TNSS				*eS*		**Sg**		**15 01 41.7**	**-0.5**
	14nm,0.4s								
KDJ	**Kajisay**	**2.74**	**88**	⇓*iP*		**Pn**		**15 01 01.4**	**+1.6**
KDJ				⇓*iS*		**Sb**		**15 01 35.1**	**-3.5**
KUU	**Kurty**	**2.76**	**48**	Pg		**Pg**		**15 01 06.9**	**-0.7**
	2.7nm,0.1s								
KUU				Lg		Lg		15 01 42.2	
	36nm,0.3s								
KUU	**Kurty**	**2.76**	**48**	*eP*		**Pg**		**15 01 06.9**	**-0.7**
	2.7nm,0.1s								
KUU				*eS*		**Sg**		**15 01 42.2**	**-1.1**
	36nm,0.3s								
MDOK	**Medeo**	**2.83**	**67**	Pg		**Pg**		**15 01 08.7**	**-0.5**
	14nm,0.3s								
MDOK				Lg		Lg		15 01 45.7	
	40nm,0.5s								
KTBS	**Karatobe**	**2.85**	**54**	Pg		**Pg**		**15 01 09.1**	**-0.3**
	5.4nm,0.2s								
KTBS				Lg		Lg		15 01 45.6	
	0.2nm,0.2s								
KTBS	**Karatobe**	**2.85**	**54**	*eP*		**Pg**		**15 01 09.1**	**-0.3**
	5.4nm,0.2s								
KTBS				*eS*		**Sg**		**15 01 45.6**	**-0.7**
	0.2nm,0.2s								
BRLS	**Borolday**	**2.86**	**290**	*eP*		**Pg**		**15 01 08.6**	**-1.0**
	8.8nm,0.4s								
BRLS				*eS*		**Sg**		**15 01 45.1**	**-1.5**
	50nm,0.3s								
BTK	**Batken**	**2.87**	**226**	⇓*iP*		**Pn**		**15 01 02.3**	**+0.9**
BTK				⇓*iS*		**Sn**		**15 01 36.6**	**+0.2**
KOTS	**Kotyrbulak**	**2.90**	**66**	Pg		**Pg**		**15 01 10.0**	**-0.4**
	7.6nm,0.3s								
KOTS				Lg		Lg		15 01 47.7	
	59nm,0.4s								
KOTS	**Kotyrbulak**	**2.90**	**66**	*eP*		**Pg**		**15 01 10.0**	**-0.4**
	7.6nm,0.3s								
KOTS				*eS*		**Sg**		**15 01 47.6**	**-0.4**
	59nm,0.4s								
DRK	**Karamyk**	**2.91**	**207**	⇓*iP*		**Pn**		**15 01 03.3**	**+1.1**
DRK				⇓*iS*		**Sn**		**15 01 38.1**	**+0.4**
ANVS	**Anan'yevo**	**3.17**	**76**	⇑*iP*		**Pn**		**15 01 07.1**	**+1.5**
ANVS				⇑*iS*		**Sn**		**15 01 44.8**	**+0.9**
TARG	**Taragay, Kyrgy**	**3.24**	**95**	⇑*iP*		**Pn**		**15 01 08.4**	**+1.6**
TARG				⇑*iS*		**Sn**		**15 01 47.0**	**+1.0**
KURS	**Kuram**	**3.71**	**66**	Pg		**Pg**		**15 01 25.2**	**-0.8**
	5.1nm,1.0s								
KURS				Lg		Lg		15 02 13.6	
	16nm,0.6s								
SATY	**Saty**	**3.75**	**73**	Pg		**Pg**		**15 01 25.0**	**-1.8**
	7.9nm,0.8s								
SATY				Lg		Lg		15 02 15.0	
	33nm,0.3s								
ARXS	**Arharly**	**3.81**	**55**	Pg		**Pg**		**15 01 28.2**	**+0.3**
	7.7nm,0.6s								
ARXS				Lg		Lg		15 02 17.9	
	19nm,0.4s								
ARXS	**Arharly**	**3.81**	**55** *eP*			**Pg**		**15 01 28.2**	**+0.3**
	7.7nm,0.6s								
ARXS				*eS*		**Sg**		**15 02 18.8**	**+1.5**
	19nm,0.4s								
KPKS	**Kokpek**	**4.06**	**69**	Pg		**Pg**		**15 01 31.6**	**-1.0**
	0.6nm,0.4s								
KPKS				Lg		Lg		15 02 24.1	
	26nm,0.5s								
KPKS	**Kokpek**	**4.06**	**69** *eP*			**Pg**		**15 01 31.3**	**-1.3**
	0.6nm,0.4s								
KPKS				*eS*		**Sg**		**15 02 24.1**	**-1.1**
	26nm,0.5s								
UZB	**Uzynbulak**	**4.21**	**74** *eP*			**Pg**		**15 01 34.6**	**-1.0**
	3.1nm,0.3s								
UZB				*eS*		**Sg**		**15 02 30.8**	**+0.6**
	20nm,0.4s								
SHLS	**Shalkode**	**4.53**	**74** *eP*			**Pg**		**15 01 45.5**	**+3.8**
	4.7nm,0.5s								
SHLS				*eS*		Sg		15 02 49.4	+9.1
	19nm,0.4s								
PDGK	**Podgornoye**	**4.59**	**72** ⇑Pg			**Pg**		**15 01 40.3**	**-2.5**
	4.7nm,0.7s								
PDGK				⇑Lg		Lg		15 02 42.8	
	7.9nm,0.6s								
MK31	**Makanchi Array**	**7.85**	**50** ⇑Pn			**Pn**		**15 02 13.9**	**+4.1**
	2.4nm,0.9s,baz=229,slow=13,SNR=9.4								
MK31				⇑Lg		Lg		15 04 24.8	
	4.2nm,0.8s,baz=0.0,slow=0.1,SNR=5.5								

*IDC **27** 15:01:16.5±6.9, 35°.88N×69°.89E, h69km±60km, mb3.6/11, mbtmp3.9/15, ML3.6/4, Error ellipse: s-maj=37.1km s-min=19.7km az=22.0*
*NEIC **27** 15:01:22.1±1.4, 36°.18N±0°.03×69°.89E±0°.09, h107km±8km, mb4.0/18, Error ellipse: s-maj=10.4km s-min=4.5km az=94.0*

ISC 27 15:01:22.6±0.6, 36°.12N±0°.06×69°.87E±0°.06, h124km, n67, σ1§52/64, mb3.9/17, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.72**	**203**	Pn		**Pn**		**15 01 52.4**	**-0.7**
KBL							**Sn**	**15 02 14.8**	**-1.5**
SHAA	**Shahritus**	**2.00**	**316**	Pn		**Pn**		**15 01 55.0**	**-1.4**
CHGR	**

	comp=Z,8.4nm,0.6s,baz=221,slow=10,SNR=31							
	comp=Z,8.4nm,0.6s							
ZALV	**Zalesovo Beam**	**20.64**	**26**			**P**		**15 05 52.9 +0.8**
ARTI	**Arti**	**21.71**	**343**	P		**P**		**15 06 05.1 +1.5**
	comp=Z,3.4nm,0.6s,baz=156,slow=6.9,SNR=6.2							
	comp=Z,3.4nm,0.6s							
GTA2	**Gaotai**	**23.80**	**73**	*eP*		**P**		**15 06 26.8 +2.6**
GTA2				pmax	pmax			
	comp=Z,5.0nm,0.6s							
PZH	**PanZhiHua**	**28.76**	**100**	P		**P**		**15 07 09.0 +0.2**
SONM	**Songino Array**	**29.30**	**55**	P		**P**		**15 07 14.8 +1.4**
	comp=Z,0.4nm,0.6s,baz=267,slow=10.0,SNR=1.3							
	comp=Z,0.4nm,0.6s							
HHC	**Hu-ho-hao-te**	**32.75**	**69**	*eP*		**P**		**15 07 44.8 +1.1**
HHC				pmax	pmax			
	comp=Z,5.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,69nm,6.1s							
FINES	**FINESS Array B**	**37.29**	**327**	P		**P**		**15 08 24.2 +2.0**
	comp=Z,1.7nm,0.8s,baz=128,slow=11,SNR=1.4							
	comp=Z,1.7nm,0.8s							
ARCES	**ARCESS Array B**	**41.15**	**338**	P		**P**		**15 08 53.8 -0.4**
	comp=Z,1.0nm,0.5s,baz=95,slow=7.8,SNR=5.8							
	comp=Z,1.0nm,0.5s							
HFS	**Hagfors**	**42.80**	**322**	P		**P**		**15 09 09.1 +1.4**
	comp=Z,2.0nm,0.5s,baz=105,slow=11,SNR=9.2							
	comp=Z,2.0nm,0.5s							
NC405	**NORSAR Array S**	**43.90**	**323**	P		**P**		**15 09 17.6 +1.0**
NB201	**NORSAR Array S**	**44.09**	**323**	P		**P**		**15 09 19.1 +0.9**
NB2	**NORSAR Subarra**	**44.13**	**323**	P		**P**		**15 09 19.6 +1.1**
	comp=Z,0.6nm,0.4s,baz=98,slow=7.9							
NOA	**NORSAR Array B**	**44.13**	**323**	P		**P**		**15 09 19.4 +1.0**
	comp=Z,0.6nm,0.4s,baz=98,slow=8.1,SNR=4.6							
	comp=Z,0.6nm,0.4s							
TORD	**Torodi Ar. Bea**	**64.79**	**268**	P		**P**		**15 11 48.3 0.0**
	comp=Z,0.7nm,0.5s,baz=57,slow=5.8,SNR=5.0							
	comp=Z,0.7nm,0.5s							
C18K	**Utukok River**	**68.91**	**18**	P		**P**		**15 12 14.4 +0.8**
C19K	**Lookout Ridge**	**68.96**	**17**	P		**P**		**15 12 15.6 +1.6**
C19K				IAmb	IAmb			15 12 40.6
	comp=Z,3.8nm,1.4s							
D19K	**Kuna River**	**69.77**	**17**	P		**P**		**15 12 20.3 +1.4**
D19K				IAmb	IAmb			15 12 44.2
	comp=Z,3.4nm,1.4s							
G19K	**Purcell Mounta**	**71.85**	**18**	P		**P**		**15 12 33.0 +1.5**
G19K				IAmb	IAmb			15 13 01.4
	comp=Z,3.2nm,1.4s							
IMAR	**Indian Mountai**	**72.80**	**17**	P		**P**		**15 12 38.0 +0.8**
INK	**Inuvik**	**74.42**	**9**	P		**P**		**15 12 48.5 +2.0**
INK				IAmb	IAmb			15 12 49.2
	comp=Z,1.9nm,0.6s							
I28M	**Miner Creek**	**76.13**	**12**	P		**P**		**15 12 57.9 +1.4**
I28M				IAmb	IAmb			15 13 24.0
	comp=Z,5.3nm,1.5s							
YKAW3	**Yellowknife Wh**	**81.59**	**2**	P		**P**		**15 13 27.4 +1.2**
YKAW3				IAmb	IAmb			15 13 28.6
	comp=Z,3.5nm,1.2s							
YKA	**Yellowknife Ar**	**81.66**	**2**	P		**P**		**15 13 27.3 +0.7**
	comp=Z,0.4nm,0.6s,baz=347,slow=5.8,SNR=10							
	comp=Z,0.4nm,0.6s							
YKA	**Yellowknife Ar**	**81.66**	**2**	P		**P**		**15 13 27.6 +1.1**
P33M	**Teslin, Yukon**	**82.21**	**11**	P		**P**		**15 13 30.4 +0.7**
WRA	**Warramunga Arr**	**82.58**	**121**	P		**P**		**15 13 30.9 -1.1**
	comp=Z,0.5nm,0.9s,baz=324,slow=4.8,SNR=8.0							
	comp=Z,0.5nm,0.9s							
ASAR	**Alice Springs**	**84.80**	**124**	P		**P**		**15 13 43.2 0.0**
	comp=Z,0.2nm,0.7s,baz=312,slow=5.1,SNR=5.1							
	comp=Z,0.2nm,0.7s							

*KRSC **27** 15:02:08.7±0.9,52.°19N×157.°74E,h148km±7km, Ml3.7*
*IDC **27** 15:02:09.7±2.8,52.°83N×156.°28E,h149km±12km,mb3.3/6, mbtmp3.7/6,MS3.9/1,Error ellipse: s-maj=112.8km s-min=18.1km az=131.0*

ISC 27 15:02:10.9±0.8,52.°20N±0.°06×157.°73E±0.°07,h141km±5km, n36,σ0s90/44,mb3.5/6,Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAK	**Asacha**	**0.21**	**29**	*eP*	**Pn**	**15 02 30.0**	**-0.3**
MTVR	**Mutnovka**	**0.40**	**44**	*eP*	**Pn**	**15 02 30.5**	**-0.5**
MTVR				*eS*	**Sn**	**15 02 46.4**	**+0.1**
GRL	**Gorelyy**	**0.41**	**31**	*eP*	**Pn**	**15 02 31.1**	**+0.1**
KDTR	**Khodutka, Kamc**	**0.45**	**151**	*eP*	**Pn**	**15 02 30.4**	**-0.5**
KDTR				*eS*	**Sn**	**15 02 45.4**	**-0.7**
RUS	**Russkaya**	**0.54**	**64**	*eP*	**Pn**	**15 02 31.1**	**-0.3**
RUS				*eS*	**Sn**	**15 02 47.3**	**+0.2**
KRMR	**Karymshinskiy**	**0.68**	**21**	*eP*	**Pn**	**15 02 32.0**	**-0.4**
APC	**Apacha**	**0.81**	**335**	*eP*	**Pn**	**15 02 32.3**	**-0.9**
APC				*eS*	**Sn**	**15 02 49.0**	**-1.3**
PETK	**Petropavlovsk-**	**0.91**	**359**	P	**Pn**	**15 02 33.5**	**-0.6**
	34nm,0.4s,baz=168,slow=9.1,SNR=249						
PETK				S	**Sn**	**15 02 52.2**	**+0.4**
	46nm,0.9s,baz=30,slow=12,SNR=14						
PAU	**Pauzhetka**	**0.93**	**218**	*eP*	**Pn**	**15 02 33.8**	**-0.5**
PAU				*eS*	**Sn**	**15 02 52.1**	**+0.2**
PET	**Petropavlovsk**	**1.00**	**34**	*eP*	**Pn**	**15 02 34.5**	**-0.3**
PET				*eS*	**Sn**	**15 02 52.9**	**-0.2**
DALK	**Dalny**	**1.04**	**36**	*eP*	**Pn**	**15 02 35.1**	**-0.1**
DALK				*eS*	**Sn**	**15 02 54.2**	**+0.5**
UGLR	**Uglovaya**	**1.21**	**33**	*eP*	**Pn**	**15 02 37.3**	**+0.3**
KOK	**Koryaka**	**1.23**	**26**	*eP*	**Pn**	**15 02 37.4**	**+0.3**
AVH	**Avacha**	**1.23**	**29**	*eP*	**Pn**	**15 02 37.6**	**+0.5**
SMAR	**Somma**	**1.25**	**31**	*eP*	**Pn**	**15 02 37.8**	**+0.4**
KRER	**Koryakskii**	**1.27**	**29**	*eP*	**Pn**	**15 02 37.8**	**+0.2**
SDLR	**Sedlovina**	**1.29**	**33**	*eP*	**Pn**	**15 02 37.7**	**0.0**
SDLR				*eS*	**Sn**	**15 02 59.0**	**+0.7**
KRX	**Arik**	**1.29**	**25**	*eP*	**Pn**	**15 02 37.9**	**+0.1**
GNL	**Ganaly**	**1.51**	**5**	*eP*	**Pn**	**15 02 39.2**	**-0.8**
GNL				*eS*	**Sn**	**15 03 01.5**	**-0.7**
SPN	**Mys Shipunski**	**1.66**	**56**	*eP*	**Pn**	**15 02 41.2**	**-0.4**
SPN				*eS*	**Sn**	**15 03 04.3**	**-0.7**
SKR	**Severo-Kuril's**	**1.82**	**214**	*eP*	**Pn**	**15 02 42.8**	**-0.6**
SKR				*eS*	**Sn**	**15 03 07.7**	**-0.5**
KII	**Karymskiy**	**2.11**	**29**	*eP*	**Pn**	**15 02 47.2**	**+0.3**
MKZ	**Mys Kozlova**	**3.37**	**44**	*eP*	**Pn**	**15 03 02.2**	**-0.3**
ESO	**Esso**	**3.78**	**8**	*eP*	**Pn**	**15 03 07.7**	**-0.3**
KBTR	**Krutoberegovo**	**5.01**	**35**	*eP*	**Pn**	**15 03 23.3**	**-0.8**
BKI	**Bering**	**5.75**	**55**	*eS*	**Sn**	**15 04 34.8**	**-4.1**
ILAR	**Eielson Array**	**30.47**	**44**	P	**P**	**15 08 09.3**	**-0.5**
	0.3nm,0.7s,baz=269,slow=7.1,SNR=7.4						
	0.3nm,0.7s						
NVAR	**Mina Array Bea**	**57.41**	**68**	P	**P**	**15 11 46.4**	**+1.7**
	0.3nm,0.4s,baz=315,slow=10,SNR=2.1						
	0.3nm,0.4s						
ELK	**Elko**	**57.55**	**64**	LR	LR	15 36 03.6	
	comp=Z,92nm,19.5s,baz=138,slow=35						
PDAR	**Pinedale Array**	**59.22**	**59**	P	**P**	**15 11 58.4**	**+1.2**
	1.0nm,0.6s,baz=328,slow=1.2,SNR=14						
	1.0nm,0.6s						
TXAR	**Lajitas Array**	**72.32**	**65**	P	**P**	**15 13 22.1**	**+1.0**
	0.4nm,0.4s,baz=294,slow=4.8,SNR=12						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**74.68**	**203**	P	**P**	**15 13 34.1**	**-0.6**
	0.3nm,0.4s,baz=17,slow=6.0,SNR=2.1						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**78.36**	**202**	P	**P**	**15 13 55.0**	**-0.5**
	0.4nm,0.4s,baz=16,slow=5.2,SNR=17						
	0.4nm,0.4s						
H03N2	**Juan Fernandez**	**135.65**	**88**	T	T	17 52 13.1	
	baz=314,slow=77,SNR=4.6						
H03N1	**Juan Fernandez**	**135.67**	**88**	T	T	17 52 14.3	
	baz=314,slow=77,SNR=4.2						
H03N3	**Juan Fernandez**	**135.67**	**88**	T	T	17 52 13.8	
	baz=314,slow=77,SNR=5.1						

*IDC **27** 15:10:26.6±2.2, 13.°02S×15.°10W,h0km,mb4.1/6, mbtmp4.2/6,Error ellipse: s-maj=145.6km s-min=27.0km az=137.0*
*NEIC **27** 15:10:27.6±1.6, 13.°03S±0.°08×15.°1W±0.°1,h10km±1km, mb4.7/21,Error ellipse: s-maj=20.7km s-min=11.3km az=243.0*
*GCMT **27** 15:10:29.6±0.4, 13.°98S±0.°04×14.°53W±0.°03,h12km±1km, MW4.8/86,Moment Tensor Solution. s20,c22; s86,c100; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-1.96±.20; Mθθ0.44±.12; Mφφ1.52±.13; Mrθ-0.84±.44; Mrφ-0.51±.07; Mθφ-1.27±.38; Best double couple: M◎2.32000×10^16^ NP1:φs144.00000°,δ34.00000°,λ-126.00000°. NP2: φs6.00000°,δ63.00000°,λ-68.00000°. Principal axes: T 1.9720, Plg16.0000°, Azm80.0000°; N 0.7000, Plg19.0000°, Azm176.0000°; P -2.6680, Plg65.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s.*

nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 15:10:27.2±0.7,13.°1S±0.°1×15.°1W±0.°1,h10km,n34, σ0s87/29,mb4.5/12,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**4.10**	**7**	T	T	15 16 29.7	
	baz=177,slow=74,SNR=151						
H10S3	**ASCENSION HYDR**	**4.10**	**7**	T	T	15 16 37.2	
	baz=43,slow=74,SNR=119						
H10N1	**ASCENSION HYDR**	**5.22**	**7**	T	T	15 17 51.6	
	baz=190,slow=78,SNR=34						
H10N3	**ASCENSION HYDR**	**5.22**	**7**	T	T	15 17 52.8	
	baz=190,slow=78,SNR=82						
H10N2	**ASCENSION HYDR**	**5.23**	**7**	T	T	15 17 56.5	
	baz=190,slow=78,SNR=27						
RCBR	**Riachuelo**	**21.69**	**287**	P	**P**	**15 15 17.7**	**-0.8**
RCBR				IAmb	IAmb	15 15 42.7	
	comp=Z,28nm,1.4s						
DBIC	**Dimbokro**	**22.10**	**28**	P	**P**	**15 15 22.7**	**-0.1**
	comp=Z,6.2nm,1.1s,baz=221,slow=9.3,SNR=3.6						
	comp=Z,6.2nm,1.1s						
DBIC	**Dimbokro**	**22.10**	**28**	P	**P**	**15 15 22.1**	**-0.7**
SACV	**Santiago Islan**	**29.08**	**343**	P	**P**	**15 16 27.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**30.92**	**33**	P	**P**	**15 16 45.5**	**+1.1**
	comp=Z,3.1nm,1.0s,baz=217,slow=12,SNR=11						
	comp=Z,3.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**30.92**	**33**	P	**P**	**15 16 44.9**	**+0.5**
KOOLE	**Kule**	**34.94**	**111**	P	**P**	**15 17 19.5**	**-0.3**
KOOLE				IAmb	IAmb	15 17 19.9	
	comp=Z,6.0nm,0.8s						
SUR	**Sutherland**	**38.09**	**126**	P	**P**	**15 17 45.5**	**-1.1**
CPUP	**Villa Florida**	**41.67**	**245**	P	**P**	**15 18 17.4**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=135,slow=11,SNR=3.8						
	comp=Z,1.5nm,0.7s						
PB09	**IPOC Station P**	**52.13**	**252**	P	**P**	**15 19 36.3**	**-2.0**
PB09				IAmb	IAmb	15 20 08.8	
	comp=Z,16nm,1.5s						
PB01	**IPOC Station P**	**52.36**	**253**	P	**P**	**15 19 39.2**	**-0.8**
PB01				IAmb	IAmb	15 19 46.8	
	comp=Z,16nm,1.5s						
PB03	**IPOC Station P**	**52.60**	**252**	P	**P**	**15 19 42.2**	**+0.4**
PB03				IAmb	IAmb	15 19 51.2	
	comp=Z,16nm,1.3s						
PB07	**IPOC Station P**	**52.73**	**253**	P	**P**	**15 19 42.3**	**-0.5**
CO01	**Juntas del To**	**53.34**	**242**	P	**P**	**15 19 48.1**	**+0.9**
LCO	**Las Campanas**	**53.77**	**244**	P	**P**	**15 19 50.5**	**0.0**
MLR	**Muntele Rosu**	**69.08**	**30**		**P**	**15 21 33.8**	**+0.3**
BR131	**Keskin Array S**	**69.37**	**38**	P	**P**	**15 21 35.4**	**-0.1**
BR131				IAmb	IAmb	15 22 13.7	
	comp=Z,5.9nm,1.4s						
BRTR	**Keskin Array B**	**69.37**	**38**	P	**P**	**15 21 35.8**	**+0.3**
	comp=Z,1.9nm,1.1s,baz=212,slow=4.4,SNR=6.5						
	comp=Z,1.9nm,1.1s						
BRTR	**Keskin Array B**	**69.37**	**38**	P	**P**	**15 21 34.7**	**-0.8**
BURAR	**Bucovina Array**	**70.30**	**28**	P	**P**	**15 21 40.0**	**-1.0**
KIEV	**Kiev**	**74.34**	**27**	P	**P**	**15 22 04.8**	**-0.1**
KIEV				IAmb	IAmb	15 22 09.2	
	comp=Z,16nm,1.4s						
AKASG	**Malin Array Be**	**74.35**	**28**	P	**P**	**15 22 05.7**	**+0.8**
	comp=Z,4.2nm,0.9s,baz=227,slow=6.5,SNR=12						
	comp=Z,4.2nm,0.9s						
AKASG	**Malin Array Be**	**74.35**	**28**	P	**P**	**15 22 04.0**	**-0.9**
AKASG				IAmb	IAmb	15 22 09.0	
	comp=Z,9.4nm,1.3s						
AKBB	**Malin Array Si**	**74.35**	**28**	P	**P**	**15 22 04.7**	**-0.3**
AKBB				IAmb	IAmb	15 22 09.2	
	comp=Z,20nm,1.5s						
FINES	**FINESS Array B**	**81.06**	**19**	P	**P**	**15 22 43.1**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=172,slow=3.8,SNR=9.5						
	comp=Z,2.1nm,0.8s						
FINES	**FINESS Array B**	**81.06**	**19**	P	**P**	**15 22 43.4**	**+1.3**
FIA1	**FINESS Array S**	**81.06**	**19**	P	**P**	**15 22 43.1**	**+1.0**
MJAR	**Matsushiro Arr**	**146.56**	**41**	PKPbc	**PKPbc**	**15 30 09.9**	**+0.5**
	comp=Z,6.0nm,1.2s,baz=303,slow=4.1,SNR=5.6						
MJAR	**Matsushiro Arr**	**146.56**	**41**		**PKPab**	**15 30 11.0**	**+0.6**

IDC 27 15:11:25.4±2.2,6.°73S×129.°48E,h0km,mb3.2/1, mbtmp3.5/3,ML3.8/2,Error ellipse: s-maj=124.5km s-min=32.2km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.96**	**161**	Pn	Pn	15 14 43.8	-0.8
	0.5nm,0.3s,baz=340,slow=10,SNR=30						
WRA				Sn	Sn	15 17 04.0	-16
	0.6nm,0.3s,baz=329,slow=22,SNR=11						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**17.37**	**166**	P	Pn	15 15 30.1	+0.7
	0.3nm,0.3s,baz=337,slow=9.8,SNR=45						
ASAR				S	Sn	15 18 28.0	-15
	0.3nm,0.5s,baz=350,slow=25,SNR=5.0						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**67.72**	**327**	P	P	15 22 24.7	0.0
	0.1nm,0.5s,baz=126,slow=7.5,SNR=4.2						
	0.1nm,0.5s						

*AZER **27** 15:11:54.2,38.°37N×44.°49E,h10km,ml2.5*
*TEH **27** 15:11:55.8,38.°40N×44.°52E,h4km±93km,ML2.5, Presumed earthquake*
*ISK **27** 15:11:56.5,38.°33N×44.°39E,h5km,ML2.5/6*
*AFAD **27** 15:11:56.2,38.°35N×44.°33E,h7km±3km,ML2.5*

ISC 27 15:11:55.7±1.1,38.°37N±0.°02×44.°48E±0.°02,h4km±10km, n36,σ1s02/54,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**308**	P	**Pg**	**15 12 04.9**	**-0.1**
OZAP				S	**Sg**	**15 12 10.1**	**-1.2**
OZAP				IAML		15 12 14.0	
	comp=N,427nm,0.6s						
YOVA	**Hakkari_Yksek**	**0.79**	**191**	P	**Pg**	**15 12 11.4**	**+0.5**
YOVA				S	**Sg**	**15 12 21.7**	**+0.4**
TVAN	**Van**	**0.86**	**281**	P	**Pg**	**15 12 11.1**	**-1.1**
TVAN				S	**Sg**	**15 12 22.2**	**-1.2**
VANB	**Van**	**0.89**	**285**	Pg	**Pg**	**15 12 12.5**	**-0.2**
VANB				Sg	**Sg**	**15 12 24.9**	**+0.7**
ISHB	**Shabestar**	**0.90**	**95**	Pg	**Pg**	**15 12 11.9**	**-1.1**
VMUR	**Van-Muradiye**	**0.94**	**311**	P	**Pg**	**15 12 13.3**	**-0.6**
VMUR				S	**Sb**	**15 12 27.8**	**0.0**
VMUR				IAML		15 12 32.0	
	comp=N,160nm,0.6s						
MAKU	**Maku**	**1.00**	**9**	Pg	**Pg**	**15 12 13.9**	**-1.0**
HAKT	**HAKKARI**	**1.01**	**217**	P	**Pg**	**15 12 14.1**	**-1.0**
HAKT	**HAKKARI**	**1.01**	**217**	P	**Pg**	**15 12 14.3**	**-0.8**
HAKT				S	**Sn**	**15 12 30.9**	**-0.9**
IMRD	**Marand**	**1.02**	**70**	Pg	**Pg**	**15 12 15.0**	**-0.3**
GEVA	**Gevas**	**1.12**	**268**	P	**Pg**	**15 12 15.2**	**-2.0**
GEVA				S	**Sg**	**15 12 32.0**	**+0.3**
NAX	**Nakhchivan**	**1.13**	**44**	P	**Pg**	**15 12 17.2**	**-0.2**
NAX				S	**Sn**	**15 12 34.3**	**-0.2**
ORD	**Ordubad**	**1.31**	**64**	P	**Pn**	**15 12 20.2**	**-0.7**
ORD				S	**Sn**	**15 12 39.5**	**+0.5**
CUKT	**Cukurca**	**1.31**	**212**	Pn	**Pg**	**15 12 21.6**	**+0.7**
CUKT				Sn	**Sn**	**15 12 39.8**	**+0.7**
CUKT	**Cukurca**	**1.31**	**212**	P	**Pb**	**15 12 21.3**	**+0.3**
ITBZ	**Tabriz**	**1.32**	**95**	Pg	**Pn**	**15 12 19.5**	**-1.6**
DYDN	**Diyadin**	**1.33**	**333**	P	**Pn**	**15 12 18.8**	**-2.5**
DYDN				S	**Sb**	**15 12 37.4**	**-1.4**
DYDN				IAML		15 12 44.0	
	comp=E,71nm,0.8s						
DYDN				IAML		15 12 48.0	
	comp=N,65nm,0.6s						
SBZ	**Shahbuz**	**1.33**	**39**	P	**Pn**	**15 12 20.4**	**-0.8**
SBZ				S	**Sn**	**15 12 40.4**	**+1.1**
IAZR	**Azarshahr**	**1.37**	**120**	Pg	**Pn**	**15 12 21.7**	**-0.2**
HYR	**Heyderabad**	**1.38**	**12**	P	**Pg**	**15 12 22.9**	**+0.7**
HYR				S	**Sg**	**15 12 41.9**	**+1.8**
ADCV	**BITLIS_Adilcev**	**1.44**	**288**	P	**Pb**	**15 12 23.6**	**+0.2**
ADCV				S	**Sg**	**15 12 43.1**	**+1.0**
IGDI	**IGDIR**	**1.53**	**348**	P	**Pn**	**15 12 24.5**	**+0.5**
IGDI	**IGDIR**	**1.53**	**348**	P	**Pn**	**15 12 24.4**	**+0.5**
PERV	**Siirt/Pervari-**	**1.58**	**255**	P	**Pg**	**15 12 26.8**	**+0.7**
DORK	**Agr/Tutak/Do**	**1.67**	**308**	P	**Pn**	**15 12 26.3**	**+0.3**
DORK				S	**Sn**	**15 12 47.3**	**-0.7**
AGRB	**Hanur-Agry**	**1.67**	**317**	Pn	**Pb**	**15 12 26.9**	**-0.3**
AGRB				Sn	**Sg**	**15 12 50.8**	**+1.3**
KOTA	**Agri, Merkez-K**	**1.74**	**326**	P	**Pb**	**15 12 28.0**	**-0.4**
GNI	**Garni**	**1.79**	**6**	Pn	**Pg**	**15 12 30.3**	**+0.2**
GNI				Sn	**Sg**	**15 12 55.2**	**+1.9**
GURO	**Guroymak-BITLI**	**1.93**	**276**	Pn	**Pn**	**15 12 30.8**	**+1.3**
IHRS	**Heris**	**2.02**	**91**	Pn	**Pb**	**15 12 32.5**	**-0.6**
SRTM	**Siirt_Merkez**	**2.05**	**260**	P	**Pb**	**15 12 33.5**	**-0.2**
DIGO	**Kars**	**2.22**	**338**	P	**Pb**	**15 12 36.6**	**+0.1**
GDB	**GEDABAY**	**2.55**	**22**	P	**Pn**	**15 12 39.2**	**+1.1**
SVAN	**Silvan-Diyarba**	**2.59**	**266**	Pn	**Pn**	**15 12 40.3**	**+1.8**
GRMI	**Germi**	**2.71**	**80**	Pn	**Pn**	**15 12 41.3**	**+1.1**
YRD	**Yardimli**	**3.00**	**78**	P	**Pn**	**15 12 45.7**	**+1.5**
YRD				S	**Sb**	**15 13 25.7**	**-1.1**

*BJI **27** 15:18:16.5, 13.°21S×15.°12W,h7km,mB5.8/4,Ms5.3/16, Ms7 5.0/16*
*IDC **27** 15:18:16.0±0.6, 13.°79S×14.°60W,h0km,mb4.6/22, mbtmp4.6/22,MS4.6/67,Error ellipse: s-maj=22.1km s-min=14.0km az=138.0*
*MOS **27** 15:18:16.7±1.4, 13.°72S×14.°69W,h10km,mb5.3/34, MS4.8/10,Error ellipse: s-maj=12.2km s-min=6.1km az=57.2*
*NEIC **27** 15:18:18.7±1.7, 13.°79S±0.°09×14.°7W±0.°1,h10km±1km, mb5.3/86,Mww5.3/21,Error ellipse: s-maj=17.1km s-min=14.8km az=121.0*
*NEIC **27** 15:18:19, 13.°80S×14.°66W,h12km*
*NEIC **27** 15:18:19, 14.°00S×14.°56W,h12km,Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10^17^Nm; Mrr-0.93; Mθθ0.07; Mφφ0.86; Mrθ0.59; Mθφ-0.22; Mφr-0.24; Fault plane solution: M◎1.13000×10^17^ NP1: φs183.64000°,δ36.80000°,λ-54.41000°. NP2: φs321.85000°,δ60.85000°,λ-113.53000°. Principal axes: T 1.0081, Plg13.0000°, Azm69.0000°; N 0.2091, Plg20.0000°, Azm334.0000°; P -1.2172, Plg66.0000°, Azm189.0000°;*
*GFZ **27** 15:18:19.8, 13.°72S×14.°67W,h12km,MW5.3,Moment Tensor Solution. s77 Moment tensor: Mrr-1.06; Mθθ0.08; Mφφ0.98; Mrθ0.24; Mθφ-0.06; Mφr0.20; Fault plane solution: NP1:φs187.00000°,δ51.00000°, λ-75.00000°. NP2:φs345.00000°,δ41.00000°, λ-107.00000°. Principal axes: T 1.0000, Plg5.0000°, Azm267.0000°; N 0.1300, Plg11.0000°, Azm358.0000°; P -1.1300, Plg77.0000°, Azm153.0000°;*
*GCMT **27** 15:18:20.7±0.1, 13.°86S±0.°01×14.°62W±0.°01,h12km, MW5.3/155,Moment Tensor Solution. s90,c125; s155,c284; Duration: 1s1 Moment tensor: Scale 10^17^ Nm; Mrr-1.06±.01; Mθθ0.03±.01; Mφφ1.02±.01; Mrθ0.29±.04; Mθφ-0.29±.01; Mφr-0.38±.04; Best double couple: M◎1.18200×10^17^ NP1:φs174.00000°,δ35.00000°, λ-75.00000°. NP2:φs335.00000°,δ57.00000°, λ-100.00000°. Principal axes: T 1.1890, Plg11.0000°, Azm73.0000°; N -0.0190, Plg9.0000°, Azm341.0000°; P -1.1760, Plg76.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 15:18:18.5±0.3,13.°77S±0.°05×14.°69W±0.°06,h14km,n379, σ1s24/319,mb5.2/115,MS4.8/86,28C-17D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**4.78**	**1**	T	T	15 24 21.3	
	baz=178,slow=74,SNR=881						
H10S3	**ASCENSION HYDR**	**4.79**	**0**	T	T	15 24 23.9	
	baz=42,slow=74,SNR=327						
ASCN	**Ascension**	**5.81**	**3**	Pn	**Pn**	**15 19 44.3**	**0.0**
H10N1	**ASCENSION HYDR**	**5.89**	**2**	Pn	**Pn**	**15 19 46.6**	**+1.5**
	baz=178,slow=18						
H10N1				T	T	15 25 46.8	
	baz=192,slow=78						
H10N3	**ASCENSION HYDR**	**5.89**	**2**	Pn	**Pn**	**15 19 45.6**	**+0.4**
	baz=178,slow=18						
H10N3				T	T	15 25 49.4	
	baz=192,slow=78						
H10N2	**ASCENSION HYDR**	**5.91**	**2**	Pn	**Pn**	**15 19 47.0**	**+1.6**
	baz=178,slow=18						
H10N2				T	T	15 25 45.9	
	baz=192,slow=78						
RCBR	**Riachuelo**	**22.33**	**289**	LR	LR	15 29 39.8	
	comp=Z,1μm,22.0s,baz=108,slow=30						
RCBR	**Riachuelo**	**22.33**	**289**	P	**P**	**15 23 16.1**	**0.0**
RCBR				IAmb	IAmb	15 23 27.0	
	comp=Z,95nm,1.1s						
RCBR	**Riachuelo**	**22.33**	**289**	P	**P**	**15 23 16.1**	**0.0**
RCBR				pmax	pmax		
	comp=Z,95nm,1.1s						
RCBR	**Riachuelo**	**22.33**	**289**	*eP*	**P**	**15 23 16.2**	**0.0**
DBIC	**Dimbokro**	**22.53**	**26**	P	**P**	**15 23 18.9**	**+0.7**
	comp=Z,16nm,1.1s,baz=223,slow=11,SNR=7.8						
DBIC				LR	LR	15 29 56.9	
	comp=Z,3μm,19.1s,baz=218,slow=31						
	comp=Z,16nm,1.1s						
DBIC	**Dimbokro**	**22.53**	**26**		**P**	**15 23 17.4**	**-0.8**
DBIC				IAmb	IAmb	15 23 26.0	
	comp=Z,168nm,1.6s						
NBPA	**Parau_RN**	**23.47**	**288**	*eP*	**P**	**15

MDP Montagnes des 42.07 294 LR LR 15 42 25.8
comp=Z,529nm,18.9s,baz=108,slow=34
PTLB Pontes e Lacer 42.99 262 *eP* **P 15 26 17.4 -0.3**
VILB Vilhena 44.24 265 P P **15 26 28.7 +0.8**
VILB Vilhena 44.24 265 *eP* **P 15 26 27.4 -0.5**
SIV San Ignacio 44.81 261 LR LR 15 45 34.0
comp=Z,972nm,18.1s,baz=104,slow=36
MACA Manacapuru-AM 46.61 279 *eP* **P 15 26 46.3 -0.4**
MBAR Mbarara 46.82 78 LR LR 15 44 20.9
comp=Z,2µm,18.8s,baz=256,slow=34
MBAR Mbarara 46.82 78 P **P 15 26 49.2 +0.7**
MBAR Mbarara 46.82 78 *i* P **P 15 26 49.2 +0.7**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
MDT Midelt 47.31 12 LR LR 15 45 23.6
comp=Z,1µm,20.5s,baz=200,slow=34
MD31 MD31 47.34 11 P 15 26 54.0 +1.9
MD01 Midelt array s 47.34 11 P **P 15 26 53.1 +0.9**
BOAV Boa Vista 48.20 286 P 15 26 58.1 -0.9
TRQA Tornquist 48.28 231 P 15 26 59.4 0.0
TRQA IAmb IAmb 15 27 22.7
comp=Z,57nm,1.9s
TRQA Tornquist 48.28 231 P **P 15 26 59.4 0.0**
TRQA pmax pmax
comp=Z,57nm,1.9s
EFI East Falkland 51.33 213 P **P 15 27 22.1 -0.2**
EFI East Falkland 51.33 213 P **P 15 27 22.1 -0.2**
EFI pmax pmax
comp=Z,167nm,1.7s
LPAZ La Paz 51.56 260 P **P 15 27 25.8 +0.5**
comp=Z,4.6nm,1.0s,baz=83,slow=13,SNR=8.1
LPAZ LR LR 15 49 02.1
comp=Z,586nm,19.8s,baz=102,slow=36
comp=Z,4.6nm,1.0s
LPAZ La Paz 51.56 260 P **P 15 27 25.0 -0.3**
CFA Coronel Fontan 51.98 241 LR LR 15 46 31.5
comp=Z,590nm,21.9s,baz=75,slow=33
PB09 IPOC Station P 52.34 253 IAmb IAmb 15 27 49.2
comp=Z,36nm,1.1s
LODK Lodwar 52.50 75 P 15 27 32.6 +0.9
PB01 IPOC Station P 52.58 254 IAmb IAmb 15 27 41.7
comp=Z,46nm,1.5s
PB07 IPOC Station P 52.94 253 IAmb IAmb 15 27 43.9
comp=Z,41nm,0.9s
PB02 IPOC Station P 52.95 254 IAmb IAmb 15 27 44.1
comp=Z,58nm,1.3s
PB05 IPOC Station P 53.21 252 IAmb IAmb 15 27 46.6
comp=Z,45nm,1.1s
CO01 Juntas del Tor 53.40 243 IAmb IAmb 15 27 48.8
comp=Z,30nm,1.1s
PB14 IPOC Station P 53.41 249 P 15 27 38.3 -0.3
PB14 IAmb IAmb 15 27 43.6
comp=Z,35nm,1.1s
AC06 Mina Casimiro 53.45 246 IAmb IAmb 15 27 47.6
comp=Z,29nm,1.1s
AC05 El Transito 53.47 244 P 15 27 39.2 +0.4
AC05 IAmb IAmb 15 27 48.5
comp=Z,46nm,1.1s
H05S1 Guadeloupe/Mar 53.58 300 T T 16 25 40.1
SNR=16
LCO Las Campanas 53.85 244 P 15 27 42.1 +0.4
LCO Las Campanas 53.85 244 P **P 15 27 42.1 +0.4**
LCO pmax pmax
comp=Z,48nm,0.5s
ESDC Sonseca Array 54.10 10 P **P 15 27 42.3 -0.7**
comp=Z,1.3nm,0.9s,baz=190,slow=7.5,SNR=7.7
ESDC PcP **PcP 15 28 47.7 0.0**
comp=Z,2.0nm,1.0s,baz=197,slow=4.0,SNR=5.4
ESDC LR LR 15 51 04.7
comp=Z,480nm,18.2s,baz=182,slow=36
comp=Z,1.3nm,0.9s
ESDC Sonseca Array 54.10 10 P **P 15 27 44.9 +1.9**
PEL Peldehue 54.23 239 IAmb IAmb 15 27 48.4
comp=Z,32nm,1.1s
KEST Kesra 54.23 24 P **P 15 27 44.9 +0.9**
comp=Z,38nm,1.4s,baz=185,slow=3.3,SNR=6.6
KEST LR LR 15 49 27.2
comp=Z,1µm,21.0s,baz=229,slow=34
comp=Z,38nm,1.4s
KEST Kesra 54.23 24 P **P 15 27 45.1 +1.1**
BO04 La Punta 54.27 238 IAmb IAmb 15 27 52.6
comp=Z,28nm,1.1s
CO02 Combarbal 54.28 241 IAmb IAmb 15 28 14.4
comp=Z,47nm,1.3s
BO02 Sierra Bellavi 54.52 237 P 15 27 46.5 +0.2
BO02 IAmb IAmb 15 27 55.2
comp=Z,26nm,1.1s
MT09 Talagante 54.55 238 IAmb IAmb 15 27 51.0
comp=Z,53nm,1.6s
BI02 San Fabin de 55.19 235 P 15 27 51.5 +0.4
BI02 IAmb IAmb 15 28 00.1
comp=Z,27nm,1.1s
PLCA Paso Flores 55.38 230 LR LR 15 48 02.7
comp=Z,975nm,21.7s,baz=86,slow=32
VNA3 Neumayer Olymp 57.53 178 ⇓P P 15 28 14.1 +7.0
comp=Z,4.3nm,0.8s
FURI Furi 57.55 70 LR LR 15 51 08.7
comp=Z,2µm,18.5s,baz=244,slow=34
VAE Valguarnera 57.85 27 LR LR 15 52 22.7
comp=Z,638nm,18.1s,baz=242,slow=35
SNAA Sanae 58.32 176 P **P 15 28 15.2 +2.4**
comp=Z,12nm,0.9s,baz=11,slow=9.2,SNR=4.7
SNAA Sanae 58.32 176 P **P 15 28 14.5 +1.8**
SNAA IAmb IAmb 15 28 21.3
comp=Z,28nm,1.2s
SNAA Sanae 58.32 176 P **P 15 28 14.5 +1.8**
SNAA pmax pmax
comp=Z,28nm,1.2s
VOI Vohitsoka 58.77 107 P **P 15 28 17.3 +0.5**
VOI IAmb IAmb 15 28 25.0
comp=Z,51nm,1.5s
TROLL Troll, Antarti 59.12 174 P 15 28 18.3 -0.1
NVL N'lazarevskaya 59.25 170 *eP* **P 15 28 18.8 -0.3**
NVL *e* 15 29 06.9
NVL *e* 15 30 29.6
NVL *eS* **S 15 36 27.4 +0.9**
NVL *eSS* **SS 15 40 23.2 +2.4**
NVL pmax pmax
comp=Z,21nm,1.0s
NVL MLR MLR
comp=Z,814nm,22.0s
SDV Santo Domingo 59.91 289 P **P 15 28 25.6 +0.8**
comp=Z,4.1nm,0.6s,baz=114,slow=2.3,SNR=7.0
SDV LR LR 15 53 22.7
comp=Z,639nm,21.1s,baz=100,slow=35
comp=Z,4.1nm,0.6s
SDV Santo Domingo 59.91 289 P 15 28 25.4 +0.6
SDV IAmb IAmb 15 28 38.3
comp=Z,24nm,1.2s
NNA Nana 60.47 264 LR LR 15 54 10.6
comp=Z,852nm,19.2s,baz=116,slow=36
PMSA Palmer Station 60.99 202 LR LR 15 48 43.1
comp=Z,456nm,21.5s,baz=46,slow=30
AQU L'Aquila 61.53 23 P **P 15 28 35.7 +0.5**
comp=Z,44nm,1.9s
ROSC El Rosal 61.99 283 LR LR 15 53 59.5
comp=Z,2µm,22.0s,baz=109,slow=34
ATD Arta Tunnel 62.34 69 LR LR 15 53 40.9
comp=Z,67nm,19.6s,baz=226,slow=34
ELIB Princess Elisa 62.40 167 *dP* **P 15 28 40.2 -0.5**
comp=Z,6.5nm,0.8s
ATAH Atahualpa 62.85 269 LR LR 15 56 55.0
comp=Z,592nm,19.6s,baz=109,slow=37
TUE Stuetta 63.74 18 P **P 15 28 50.5 +0.5**
comp=Z,91nm,1.4s
DAVOX Davos/Dischmat 64.19 19 LR LR 15 55 29.8
comp=Z,1µm,21.5s,baz=230,slow=35
EIL Elat 64.46 47 LR LR 15 54 54.1
comp=Z,735nm,20.6s,baz=238,slow=34
DAVA Damuels 64.64 18 *eP* **P 15 28 55.1 -0.7**
comp=Z,9.1nm,0.6s
FETA Feichten 64.66 19 *eP* **P 15 28 55.0 -1.0**
comp=Z,9.7nm,0.9s
BELA Belgrano 2 64.90 185 P **P 15 28 57.7 +0.7**
BELA IAmb IAmb 15 29 05.9
comp=Z,26nm,1.2s
SQTA Sankt Quirin 64.99 19 *eP* **P 15 28 59.2 +1.1**
comp=Z,2.0nm,0.2s
BFO Black Forest 65.13 17 P 15 28 58.3 -0.5
BFO IAmb IAmb 15 29 06.4
comp=Z,16nm,0.9s
BFO Black Forest 65.13 17 P **P 15 28 58.3 -0.5**
BFO pmax pmax
comp=Z,16nm,0.9s
WATA Walderalm 65.21 19 *eP* **P 15 28 59.4 -0.1**
comp=Z,3.0nm,0.3s
MYKA Terra Mystica 65.29 21 *eP* **P 15 29 02.7 +2.7**
comp=Z,1.6nm,0.4s
OBKA Obir 65.51 22 *eP* **P 15 29 04.0 +2.5**
comp=Z,1.4nm,0.4s
KBA Koelnbreinsper 65.58 21 *eP* **P 15 29 03.0 +1.0**
comp=Z,2.5nm,0.6s
LESA Schwarzleotal 65.65 20 *eP* **P 15 29 01.7 -0.6**
comp=Z,3.7nm,0.5s
ARSA Arzberg 66.49 22 *eP* **P 15 29 07.5 -0.1**
comp=Z,7.9nm,0.8s
CSS Mathiatis 66.49 42 P **P 15 29 07.8 -0.1**
comp=Z,13nm,1.7s
MMAI Mount Meron Ar 66.70 45 LR LR 15 58 29.4
comp=Z,270nm,18.7s,baz=244,slow=36
MORH Mrgy, Hungar 66.83 25 ⇑P **P 15 29 08.7 -1.0**
MORH Mrgy, Hungar 66.83 25 P **P 15 29 09.8 0.0**
comp=Z,400nmcomp=Z,17nm,1.6s
MDVR Moldovita 66.99 27 ⇓P **P 15 29 10.6 -0.3**
MPLH Magyarpolny 67.18 23 P **P 15 29 12.0 0.0**
comp=Z,61nm,1.4s
CONA Conrad Observa 67.19 22 *eP* **P 15 29 12.6 +0.4**
comp=Z,2.9nm,0.6s
GEC2 GERESS Array S 67.23 20 IAmb IAmb 15 29 33.6
comp=Z,34nm,1.9s
GERES GERESS Array B 67.23 20 P **P 15 29 11.5 -0.9**
comp=Z,2.1nm,0.8s,baz=197,slow=4.1,SNR=9.9
GERES PP **PP 15 31 39.0 -1.8**
comp=Z,0.3nm,0.2s,baz=230,slow=6.0,SNR=4.9
GERES LR LR 15 57 33.0
comp=Z,1µm,21.2s,baz=226,slow=35
comp=Z,2.1nm,0.8s
ASF Jabal al Asfar 67.25 46 LR LR 15 57 41.4
comp=Z,799nm,19.7s,baz=206,slow=35
HERR Herculane 67.38 28 ⇓P **P 15 29 12.1 -1.2**
CKRC Cesky Krumlov 67.41 20 *eP* **P 15 29 12.4 -1.0**
CKRC AMS AMS 15 56 20.0
comp=Z,1µm,19.1s
CKRC Cesky Krumlov 67.41 20 *eP* **P 15 29 12.4 -1.0**
CKRC MLR MLR
comp=Z,1µm,19.1s
KHC Kasperske Hory 67.43 20 *eP* **P 15 29 15.0 +1.4**
KHC AMS AMS 15 57 50.0
comp=Z,900nm,18.0s
KHC Kasperske Hory 67.43 20 *i* P **P 15 29 15.2 +1.6**
KHC pmax pmax
comp=Z,6.0nm,2.0s
ELND Elena 67.57 31 ⇑P **P 15 29 14.6 0.0**
BZS Buzias 67.60 27 ⇓P **P 15 29 13.3 -1.4**
BZS Buzias 67.60 27 ⇓P **P 15 29 13.3 -1.4**
ZVC Zvikov 67.90 20 *eP* **P 15 29 13.4 -3.1**
GZR Gura Zlata 67.94 28 ⇓P **P 15 29 15.9 -1.0**
GZR Gura Zlata 67.94 28 ⇓P **P 15 29 15.9 -1.0**
SRO Srobarova 68.01 23 *eP* **P 15 29 19.7 +2.5**
SRO Srobarova 68.01 23 *eP* **P 15 29 19.7 +2.5**
MODS Modra-Piesok 68.08 22 *eP* **P 15 29 18.1 +0.4**
MODS Modra-Piesok 68.08 22 *eP* **P 15 29 18.1 +0.4**
SMOL Smolenice 68.25 22 *eP* **P 15 29 18.8 +0.1**
SMOL pmax pmax
comp=Z,26nm,1.8s
KRUC Moravsky 68.33 21 *eP* **P 15 29 20.4 +1.2**
LOT Lotru 68.43 28 ⇑P **P 15 29 18.9 -1.2**
VRAC Vranov 68.61 21 LR LR 16 01 04.6
comp=Z,640nm,18.1s,baz=213,slow=37
VRAC Vranov 68.61 21 *eP* **P 15 29 22.1 +1.1**
JAVC Velka Javorina 68.63 22 *eP* **P 15 29 20.5 -0.7**
PSZ Piszkesteto 68.71 24 ⇑P **P 15 29 20.1 -1.6**
PSZ Piszkesteto 68.71 24 IAmb IAmb 15 29 30.3
comp=Z,34nm,1.3s
PSZ Piszkesteto 68.71 24 ⇑P **P 15 29 20.1 -1.6**
ARR Arges 68.77 29 ⇑P **P 15 29 21.7 -0.5**
VOIR 69.02 29 ⇑P **P 15 29 22.9 -0.8**
VOIR 69.02 29 ⇑P **P 15 29 22.9 -0.8**
VOIR 69.02 29 P **P 15 29 24.2 +0.5**
comp=Z,20nm,1.2s
BRG Berggiesshubel 69.06 19 *eP* **P 15 29 26.4 +2.7**
BRG Amp 15 29 31.2
comp=Z,7.5nm,1.1s
MARR Marisel-Cluj 69.08 27 ⇑P **P 15 29 21.6 -2.5**
CLL Collm 69.15 18 *eS* **S 15 38 32.0 +2.6**
CLL *eSS* **SS 15 42 54.0 -2.2**
CLL *eSSS* SSS 15 46 12.0
MORC Moravsky Berou 69.34 22 ⇑P **P 15 29 21.8 -3.8**
MORC Moravsky Berou 69.34 22 IAmb IAmb 15 29 34.1
comp=Z,53nm,1.8s
MORC Moravsky Berou 69.34 22 ⇑P **P 15 29 21.8 -3.8**
MORC Moravsky Berou 69.34 22 *eP* **P 15 29 25.4 -0.2**
DPC Dobruska-Polom 69.40 21 *eP* **P 15 29 26.0 +0.1**
DPC AMS AMS 15 58 50.0
comp=Z,900nm,24.1s
DPC Dobruska-Polom 69.40 21 *eP* **P 15 29 26.0 +0.1**
DPC MLR MLR
comp=Z,900nm,24.1s
DPC Dobruska-Polom 69.40 21 P **P 15 29 26.5 +0.6**
comp=Z,7.5nm,2.7s
KECS Kecovo 69.40 24 *eP* **P 15 29 27.9 +2.0**
KECS pmax pmax
comp=Z,22nm,0.8s
KECS Kecovo 69.40 24 *eP* **P 15 29 27.9 +2.0**
KIRS Kirsehir-Merke 69.45 39 ⇓P **P 15 29 27.0 +0.4**
MLR Muntele Rosu 69.48 29 LR LR 15 59 23.5
comp=Z,786nm,20.8s,baz=220,slow=36
MLR Muntele Rosu 69.48 29 ⇑P **P 15 29 25.5 -1.1**
MLR Muntele Rosu 69.48 29 ⇑P **P 15 29 25.5 -1.1**
MLR Muntele Rosu 69.48 29 P **P 15 29 27.0 +0.4**
comp=Z,67nm,1.4s
CHVC Chvalec 69.51 20 *eP* **P 15 29 25.7 -0.8**
CHVC Chvalec 69.51 20 *eP* **P 15 29 25.7 -0.8**
EKA Eskdalemuir Ar 69.52 7 P **P 15 29 24.7 -1.7**
comp=Z,3.3nm,0.8s,baz=161,slow=5.3,SNR=3.9
EKA LR LR 16 00 01.8
comp=Z,244nm,18.3s,baz=184,slow=36
comp=Z,3.3nm,0.8s
OSTC Ostas 69.54 20 *eP* **P 15 29 27.2 +0.5**
OSTC Ostas 69.54 20 *eP* **P 15 29 27.2 +0.5**
LANS Liptovska Anna 69.54 23 *eP* **P 15 29 27.1 +0.3**
LANS pmax pmax
comp=Z,3.0nm,0.8s
LANS Liptovska Anna 69.54 23 *eP* **P 15 29 27.1 +0.3**
RAYN Ar Rayn 69.55 58 ⇑P **P 15 29 29.0 +1.6**
DOPR Dopca 69.57 29 ⇓P **P 15 29 26.5 -0.5**
NEHR Nehoiu 69.60 30 ⇓P **P 15 29 26.2 -1.0**
BR105 Keskin Array S 69.64 38 P **P 15 29 28.1 +0.3**
comp=Z,142nmcomp=Z,12nm,1.1s
BR104 Keskin Array S 69.65 38 P **P 15 29 28.2 +0.4**
comp=Z,126nmcomp=Z,12nm,0.9s
BR106 Keskin Array S 69.65 38 P **P 15 29 28.2 +0.4**
comp=Z,141nmcomp=Z,13nm,1.4s
BRTR Keskin Array B 69.66 38 P **P 15 29 27.9 +0.1**
comp=Z,6.5nm,0.9s,baz=217,slow=5.6,SNR=27
BRTR LR LR 16 02 55.2
comp=Z,189nm,18.3s,baz=248,slow=38
comp=Z,6.5nm,0.9s
BRTR Keskin Array B 69.66 38 P 15 29 27.6 -0.3
BRTR Keskin Array B 69.66 38 *i* P **P 15 29 28.0 +0.1**
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BR131 Keskin Array S 69.66 38 IAmb IAmb 15 29 36.8
comp=Z,41nm,1.4s
BR131 Keskin Array S 69.66 38 *d i* P **P 15 29 29.1 +1.2**
KSP Ksiaz 69.81 20 P **P 15 29 29.0 +0.7**
comp=Z,12nm,2.0s
OZUR 69.85 29 ⇓P **P 15 29 26.6 -2.2**
COVR Voineasa-Covas 69.86 29 ⇑P **P 15 29 27.2 -1.6**
TURR Turia 69.93 29 ⇑P **P 15 29 27.7 -1.6**
NIE Niedzica 70.08 23 P **P 15 29 30.6 +0.5**
comp=Z,5.8nm,1.7s
PLOR Plostina 70.08 29 ⇑P **P 15 29 28.9 -1.3**
PLOR Plostina 70.08 29 ⇑P **P 15 29 28.9 -1.3**
VRI Vrincioaia 70.13 29 ⇑P **P 15 29 28.9 -1.5**
VRI Vrincioaia 70.13 29 ⇑P **P 15 29 28.9 -1.5**
VRI Vrincioaia 70.13 29 P **P 15 29 30.9 +0.4**
comp=Z,28nm,1.3s
HOLU Holmets 70.20 25 P **P 15 29 31.3 +0.5**
KORU Korolevo 70.23 26 P **P 15 29 31.5 +0.5**
ONER Baraj Valea Uz 70.31 29 ⇓P **P 15 29 30.4 -1.1**
BRIU Brid 70.32 26 P **P 15 29 31.7 +0.2**
GAZ Gaziantep 70.33 42 IAmb IAmb 15 29 36.3
comp=Z,29nm,1.3s
BNN Bunyan 70.46 40 IAmb IAmb 15 29 41.4
comp=Z,24nm,1.2s
TESR Tescani 70.56 29 ⇑P **P 15 29 31.8 -1.3**
MEZ Mezhgor'ye 70.67 26 P **P 15 29 33.1 -0.6**
BURAR Bucovina Array 70.72 27 ⇑P **P 15 29 31.2 -3.0**
BURAR Bucovina Array 70.72 27 P **P 15 29 33.0 -1.2**
BURAR Bucovina Array 70.72 27 ⇑P **P 15 29 31.2 -3.0**
BUR08 Bucovina Ar. S 70.74 27 IAmb IAmb 15 29 55.1
comp=Z,28nm,1.5s
SHIU Shidnytsya 71.15 25 P **P 15 29 36.5 -0.1**
KSV Kosov 71.19 27 P **P 15 29 36.4 -0.4**
STNU Starunia 71.24 26 P **P 15 29 38.0 +0.8**
KMPD K-Podol'skiy 71.99 27 P **P 15 29 40.8 -0.8**
KMPD P **pP 15 29 41.0 -4.2**
SORM Soroca 72.54 29 ⇓P **P 15 29 42.9 -2.0**
SORM Soroca 72.54 29 ⇓P **P 15 29 42.9 -2.0**
MAW Mawson 72.62 157 LR LR 15 54 37.3
comp=Z,451nm,19.7s,baz=278,slow=30
LUBAR Lubar, Ukraine 73.56 27 P **P 15 29 49.7 -1.3**
JTS Las Juntas de 73.68 285 LR LR 16 01 13.3
comp=Z,1µm,21.9s,baz=125,slow=35
RNPP5 Staryi Chortor 73.73 25 P **P 15 29 50.9 -1.0**
RNPP8 Varash 73.80 25 P **P 15 29 51.1 -1.2**
RNPP9 Sopachiv 73.87 25 P **P 15 29 52.2 -0.5**
KOPT Kop Dagi 74.07 41 P 15 29 55.1 +0.6
KOPT IAmb IAmb 15 30 18.7
comp=Z,32nm,1.4s
GURO Guroymak-BITLI 74.26 43 IAmb IAmb 15 30 04.6
comp=Z,35nm,1.5s
AK13 Malin Array Si 74.64 27 P **P 15 29 56.2 -1.0**
AK07 Malin Array Si 74.66 27 P **P 15 29 56.3 -1.1**
AK14 Malin Array Si 74.67 27 P **P 15 29 56.4 -1.0**
AK06 Malin Array Si 74.68 27 P **P 15 29 56.5 -1.0**
AK17 Malin Array Si 74.69 27 P **P 15 29 56.5 -1.0**
AK19 Malin Array Si 74.70 27 P **P 15 29 56.6 -1.0**
AK16 Malin Array Si 74.70 27 P **P 15 29 56.6 -1.0**
AK12 Malin Array Si 74.70 27 P **P 15 29 56.6 -1.0**
AK05 Malin Array Si 74.71 27 P **P 15 29 56.6 -1.0**
AK20 Malin Array Si 74.71 27 P **P 15 29 56.6 -1.1**
AK10 Malin Array Si 74.72 27 P **P 15 29 56.7 -1.0**
AK18 Malin Array Si 74.72 27 P **P 15 29 56.7 -1.0**
AK15 Malin Array Si 74.73 27 P **P 15 29 56.7 -1.0**
AK11 Malin Array Si 74.74 27 P **P 15 29 56.8 -1.0**
AK02 Malin Array Si 74.74 27 P **P 15 29 56.8 -1.0**
AK08 Malin Array Si 74.74 27 P **P 15 29 56.8 -1.0**
AK09 Malin Array Si 74.74 27 P **P 15 29 56.8 -1.0**
AK21 Malin Array Si 74.75 27 P **P 15 29 56.9 -1.0**
AK22 Malin Array Si 74.75 27 P **P 15 29 56.9 -1.0**
AKASG Malin Array Be 74.78 27 P **P 15 29 57.0 -1.0**
comp=Z,30nm,0.8s,baz=225,slow=6.0,SNR=57
AKASG LR LR 16 03 33.3
comp=Z,598nm,21.2s,baz=221,slow=36
comp=Z,30nm,0.8s
AKASG Malin Array Be 74.78 27 P **P 15 29 56.3 -1.7**
AKASG IAmb IAmb 15 30 05.2
comp=Z,43nm,1.3s
AKASG Malin Array Be 74.78 27 P **P 15 29 57.0 -1.0**
AKBB Malin Array Si 74.78 27 *i* P **P 15 29 57.7 -0.3**
AKBB pmax pmax
comp=Z,36nm,0.9s
ANN Anapa 75.01 36 *eP* **P 15 29 58.6 -0.9**
ANN pmax pmax
comp=Z,113nm,1.3s
VSLR Vesyoloye 75.73 38 *i* P **P 15 30 05.6 +1.9**
VSLR pmax pmax
comp=Z,34nm,1.0s
QSPA South Pole Qui 76.39 180 P **P 15 30 07.7 +0.3**
comp=Z,3.9nm,0.6s,baz=208,slow=3.2,SNR=5.5
QSPA LR LR 16 00 00.1
comp=Z,247nm,18.3s,baz=214,slow=33
comp=Z,3.9nm,0.6s
QSPA South Pole Qui 76.39 180 P **P 15 30 07.8 +0.4**
QSPA IAmb IAmb 15 30 21.0
comp=Z,71nm,1.9s
LABN Labinsk 76.81 37 *eP* **P 15 30 10.7 +0.9**
LABN pmax pmax
comp=Z,34nm,1.0s
GNI Garni 76.89 43 LR LR 16 04 16.4
comp=Z,204nm,21.6s,baz=266,slow=36
GNI Garni 76.89 43 P **P 15 30 11.2 +0.6**
GNI Garni 76.89 43 *ceP* **P 15 30 12.2 +1.6**
GNI pmax pmax
comp=Z,14nm,1.2s
MNK Minsk 76.98 24 *i* P **P 15 30 10.8 +0.2**
comp=E,20nm,0.9s
MNK *i* P **P 15 30 10.8 +0.2**
comp=N,23nm,0.8s
MNK *i* P **P 15 30 10.8 +0.2**
comp=Z,50nm,0.8s,baz=222
MNK *i* PcP **PcP 15 30 21.6 +0.1**
MNK *i* PP **PP 15 33 03.6 -0.5**
MNK *i* PPP PPP 15 34 50.6
MNK *i* S **S 15 39 58.1 -0.2**
MNK *i* ScS **ScS 15 40 27.5 +0.6**
MNK *i* SS **SS 15 44 57.1 +1.4**
MNK *i* SSS SSS 15 48 20.8
MNK *i* LQ LQ 15 59 02.6
MNK *i* LRM MLR 16 04 39.0
comp=N,377nm,20.7s
MNK *i* LRM MLR 16 04 56.8
comp=E,341nm,17.8s
MNK *i* LRM MLR 16 05 01.2
comp=Z,610nm,19.2s
MNK Minsk 76.98 24 *i* P **P 15 30 10.7 +0.2**
MNK *i* 15 30 21.5
MNK *i* 15 33 03.6
MNK *i* PPP PPP 15 34 50.6
MNK *i* S **S 15 39 58.1 -0.2**
MNK *i* 15 40 27.5
MNK *i* SS **SS 15 44 57.1 +1.4**
MNK *i* SSS SSS 15 48 20.8
MNK pmax pmax
comp=Z,50nm,0.8s
MNK pmax pmax
comp=E,20nm,0.9s
MNK pmax pmax
comp=N,23nm,0.8s
MNK MLR MLR
comp=N,377nm,21.0s
MNK MLR MLR
comp=E,341nm,18.0s
MNK MLR MLR
comp=Z,610nm,19.0s
HFS Hagfors 77.11 14 P **P 15 30 10.4 -0.7**
comp=Z,5.0nm,0.8s,baz=116,slow=3.4,SNR=6.7
comp=Z,5.0nm,0.8s
NEUR Neytrino 77.23 39 *i* P **P 15 30 14.5 +2.0**
NEUR pmax pmax
comp=Z,4.0nm,1.0s
ERBR Yeremizino-Bor 77.29 36 *eP* **P 15 30 13.1 +0.6**
ERBR pmax pmax
comp=Z,43nm,1.0s
ERBR MLR MLR
comp=Z,276nm,18.0s
NB2 NORSAR Subarra 77.36 13 P **P 15 30 12.2 -0.4**
comp=Z,10nm,1.0s,baz=205,slow=6.2
NOA NORSAR Array B 77.36 13 P **P 15 30 12.6 0.0**
comp=Z,4.3nm,0.8s,baz=204,slow=6.1,SNR=16
NOA LR LR 16 03 26.4
comp=Z,139nm,21.8s,baz=215,slow=35
comp=Z,4.3nm,0.8s
SHA1 Shidzhatmaz 77.47 39 *ceP* **P 15 30 15.3 +1.5**
KIV Kislovodsk 77.60 39 P 15 30 14.8 +0.4
KIV IAmb IAmb 15 30 23.5
comp=Z,36nm,1.0s
KIV Kislovodsk 77.60 39 *eP* **P 15 30 15.8 +1.4**
KIV pmax pmax
comp=Z,31nm,1.1s
KIV Kislovodsk 77.60 39 P **P 15 30 14.9 +0.4**
KBZ Khabaz 77.61 39 P **P 15 30 14.4 +0.2**
comp=Z,15nm,0.9s,baz=256,slow=2.2,SNR=17
KBZ LR LR 16 05 33.7
comp=Z,85nm,21.2s,baz=251,slow=37
comp=Z,15nm,0.9s
KBZ Khabaz 77.61 39 *ceP* **P 15 30 16.0 +1.7**
KBZ pmax pmax
comp=Z,15nm,0.9s
KVAR Kislovodsk Arr 77.61 39 LR LR 16 05 38.3
comp=Z,168nm,19.2s,baz=134,slow=37
NCK Nalchik 77.91 39 *i* P **P 15 30 18.3 +2.3**
NCK pmax pmax
comp=Z,14nm,0.9s
BORG Borgarnes 78.44 357 LR LR 15 56 26.4
comp=Z,187nm,21.7s,baz=163,slow=29
VORD Divnogorie 79.74 31 *eP* **P 15 30 24.8 -1.1**
VORD pmax pmax
comp=Z,40nm,0.8s
VSR Storozhevoye 79.83 31 *eP* **P 15 30 25.5 -0.9**
VSR pmax pmax
comp=Z,30nm,1.0s
MAK Makhachkala 80.09 41 *eP* **P 15 30 25.4 -2.5**
MAK *e* 15 33 29.4
MAK *eP* PPP 15 35 17.2

MAK				*e*S	**S**	**15 40 26.8**	**-5.3**
MAK				*e*SS	**SS**	**15 45 40.3**	**-2.6**
MAK				pmax	pmax		
	comp=Z,172nm,1.0s						
MAK				MLR	MLR		
	comp=Z,209nm,15.0s						
VORR	**Voronezh**	**80.13**	**31**	*e*P	**P**	**15 30 28.9**	**+0.9**
VORR				pmax	pmax		
	comp=Z,63nm,0.4s						
APG	**El Apazote**	**80.22**	**288**	LR	LR	16 07 41.2	
	comp=Z,15nm,18.3s,baz=286,slow=37						
LPSR	**Galich'ya Gora**	**80.56**	**30**	*e*P	**P**	**15 30 29.8**	**-0.4**
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
WSAR	**Wadi Sarin**	**80.58**	**63**	LR	LR	16 05 48.4	
	comp=Z,6.1nm,18.7s,baz=266,slow=35						
OBN	**Obninsk**	**81.04**	**27**	LR	LR	16 06 33.2	
	comp=Z,756nm,21.6s,baz=192,slow=36						
OBN	**Obninsk**	**81.04**	**27**	*e*P	**P**	**15 30 33.0**	**+0.3**
OBN				*i*		15 30 37.4	
OBN				*i*		15 33 40.8	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,711nm,21.0s						
VRH	**Novokhopyorsk**	**81.12**	**32**	*e*P	**P**	**15 30 33.0**	**-0.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SCHQ	**Schefferville**	**81.25**	**332**	P	**P**	**15 30 35.2**	**+1.3**
	comp=Z,3.8nm,0.8s,baz=106,slow=6.0,SNR=4.8						
SCHQ				LR	LR	16 01 16.7	
	comp=Z,174nm,20.0s,baz=133,slow=32						
	comp=Z,3.8nm,0.8s						
SCHQ	**Schefferville**	**81.25**	**332**	IAmb	IAmb	15 32 12.1	
	comp=Z,36nm,1.6s						
FINES	**FINESS Array B**	**81.59**	**18**	P	**P**	**15 30 35.3**	**-0.3**
	comp=Z,8.2nm,0.6s,baz=206,slow=4.2,SNR=50						
FINES				LR	LR	16 08 11.5	
	comp=Z,398nm,18.1s,baz=233,slow=37						
	comp=Z,8.2nm,0.6s						
TKL	**Tuckaleechee C**	**81.65**	**310**	LR	LR	15 59 57.1	
	comp=Z,492nm,20.5s,baz=94,slow=31						
MOS	**Moscow**	**81.90**	**27**	*e*P	**P**	**15 30 38.5**	**+1.2**
MOS				pmax	pmax		
	comp=Z,44nm,0.7s						
MOS				MLR	MLR		
	comp=Z,900nm,21.0s						
SADO	**Sadowa**	**82.39**	**320**	LR	LR	16 00 18.7	
	comp=Z,235nm,19.4s,baz=150,slow=31						
SFJD	**Kangerlussuaq**	**84.74**	**347**	LR	LR	16 01 31.3	
	comp=Z,152nm,20.4s,baz=156,slow=31						
BELG	**Belogornoye**	**84.85**	**33**	LR	LR	16 10 55.4	
	comp=Z,261nm,19.7s,baz=278,slow=37						
BELG	**Belogornoye**	**84.85**	**33**	*i* P	**P**	**15 30 53.3**	**+0.7**
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WVT	**Waverly**	**84.88**	**309**	P	**P**	**15 30 53.0**	**-0.2**
WVT				IAmb	IAmb	15 31 01.6	
	comp=Z,13nm,0.9s						
WVT	**Waverly**	**84.88**	**309**	P	**P**	**15 30 53.0**	**-0.2**
WVT				pmax	pmax		
	comp=Z,13nm,0.9s						
CMIG	**Matias Romero**	**84.88**	**289**	LR	LR	16 09 07.8	
	comp=Z,204nm,20.6s,baz=146,slow=36						
KLMR	**Klimovskoe**	**85.87**	**23**	*e*P	**P**	**15 30 57.7**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,34nm,1.4s						
FRB	**Frobisher Bay**	**87.53**	**339**	LR	LR	16 03 35.6	
	comp=Z,94nm,20.0s,baz=108,slow=31						
ARCES	**ARCESS Array B**	**87.73**	**13**	P	**P**	**15 31 07.1**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=212,slow=4.3,SNR=4.9						
ARCES				LR	LR	16 11 22.3	
	comp=Z,266nm,18.1s,baz=220,slow=36						
	comp=Z,3.8nm,0.8s						
RPN	**Rapa Nui**	**87.87**	**243**	LR	LR	16 05 52.6	
	comp=Z,287nm,18.5s,baz=84,slow=32						
CCM	**Cathedral Cave**	**88.10**	**310**	P	**P**	**15 31 08.4**	**-0.5**
CCM				IAmb	IAmb	15 31 17.9	
	comp=Z,19nm,1.1s						
CCM	**Cathedral Cave**	**88.10**	**310**	P	**P**	**15 31 08.4**	**-0.5**
CCM				pmax	pmax		
	comp=Z,19nm,1.1s						
KIRV	**Kirov**	**88.81**	**28**	LR	LR	16 13 19.0	
	comp=Z,565nm,18.6s,baz=241,slow=37						
KIRV	**Kirov**	**88.81**	**28***ce*	P	**P**	**15 31 12.7**	**+1.0**
LVZ	**Lovozero**	**88.82**	**17**	P	**P**	**15 31 12.8**	**+1.2**
LVZ	**Lovozero**	**88.82**	**17**	*i* P	**P**	**15 31 14.4**	**+2.7**
LVZ				pmax	pmax		
	comp=Z,20nm,0.9s						
VNDA	**Vanda**	**88.86**	**179**	LR	LR	16 07 46.6	
	comp=Z,167nm,18.7s,baz=180,slow=33						
AKTO	**Aktyubinsk**	**89.83**	**38**	LR	LR	16 16 25.1	
	comp=Z,201nm,18.3s,baz=220,slow=39						
ABKAR	**Akbulak array**	**90.57**	**39**	P	**P**	**15 31 19.8**	**-0.4**
ARTI	**Arti**	**92.25**	**32**	LR	LR	16 16 26.4	
	comp=Z,280nm,18.0s,baz=250,slow=38						
ARTI	**Arti**	**92.25**	**32**	P	**P**	**15 31 27.4**	**-0.4**
ARTI				IAmb	IAmb	15 31 29.9	
	comp=Z,14nm,0.9s						
ARTI	**Arti**	**92.25**	**32***c*	*i* P	**P**	**15 31 28.3**	**+0.5**
ARTI						15 35 10.1	
ARTI				S	**SKSac**	**15 42 01.8**	**+1.2**
ARTI				SS	**SS**	**15 48 42.4**	**+1.6**
ARTI				pmax	pmax		
	comp=Z,14nm,0.9s						
ARTI				MLR	MLR		
	comp=Z,326nm,20.0s						
BRDY	**Brady**	**92.28**	**302**	IAmb	IAmb	15 31 32.9	
	comp=Z,15nm,1.4s						
SPITS	**Spitsbergen Ar**	**93.43**	**6**	LR	LR	16 11 45.4	
	comp=Z,76nm,20.1s,baz=206,slow=34						
ECSD	**EROS Data Cent**	**93.67**	**314**	P	**P**	**15 31 34.2**	**-0.5**
ECSD				IAmb	IAmb	15 31 48.6	
	comp=Z,22nm,1.6s						
CHGR	**Chuyangaron**	**93.76**	**51**	*i* P	**P**	**15 31 36.7**	**+1.3**
CHGR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULM	**Lac du Bonnet**	**94.92**	**320**	LR	LR	16 09 18.9	
	comp=Z,242nm,18.9s,baz=106,slow=32						
TXAR	**Lajitas Array**	**95.75**	**299**	P	**P**	**15 31 45.5**	**+0.8**
	comp=Z,1.4nm,1.1s,baz=30,slow=5.8,SNR=6.3						
TXAR				LR	LR	16 10 17.9	
	comp=Z,71nm,21.4s,baz=84,slow=33						
	comp=Z,1.4nm,1.1s						
TXAR	**Lajitas Array**	**95.75**	**299**	P	**P**	**15 31 44.3**	**-0.4**
PALK	**Pallekele**	**96.91**	**84**	LR	LR	16 11 56.9	
	comp=Z,389nm,19.3s,baz=266,slow=33						
BORK	**Borovoye**	**97.90**	**37**	*i* P	Pdif	15 31 54.6	+0.8
BORK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVAR	**Borovoye Array**	**97.94**	**37**	P	Pdif	15 31 54.0	0.0
	comp=Z,0.8nm,0.7s,baz=266,slow=5.6,SNR=3.7						
BVAR				LR	LR	16 21 12.7	
	comp=Z,224nm,18.1s,baz=236,slow=39						
	comp=Z,0.8nm,0.7s						
BVAR	**Borovoye Array**	**97.94**	**37**	P	Pdif	15 31 54.0	0.0
AAK	**Ala-Archa**	**98.59**	**48**	LR	LR	16 18 39.9	
	comp=Z,193nm,18.4s,baz=262,slow=37						
AAK	**Ala-Archa**	**98.59**	**48**	*i* P	Pdif	15 31 58.9	+1.5
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ANMO	**Albuquerque**	**99.18**	**304**	LR	LR	16 11 12.9	
	comp=Z,110nm,21.8s,baz=100,slow=32						
KURK	**Kurchatov**	**102.61**	**41**	*i* P	**Pdif**	**15 32 16.8**	**+2.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ZALV	**Zalesovo Beam**	**106.60**	**37**	PP	**PP**	**15 36 56.3**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=228,slow=5.6,SNR=2.3						
WMQ	**Urumqi**	**108.30**	**48**	Pdif	**Pdif**	**15 32 42.3**	**+1.9**
WMQ				LR	LR		
	comp=Z,560nm,24.0s						
WMQ				LR	LR		
	comp=Z,320nm,24.1s						
CMAR	**Chiang Mai Arr**	**116.37**	**76**	PKP	**PKPdf**	**15 37 01.9**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=252,slow=3.7,SNR=8.9						
GTA2	**Gaotai**	**117.45**	**53**	*e*PKP	**PKPdf**	**15 37 03.8**	**-0.5**
GTA2				LR	LR		
	comp=Z,180nm,19.5s						
GTA2				LR	LR		
	comp=Z,310nm,21.1s						
GTA2				LR	LR		
	comp=Z,440nm,20.3s						
PZH	**PanZhiHua**	**119.51**	**67**	PKP	**PKiKP**	**15 37 09.0**	**+0.3**
ILAR	**Eielson Array**	**119.56**	**339**	PKP	**PKPdf**	**15 37 06.7**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=6.9,slow=2.5,SNR=4.4						
ILAR				PKKPab	**PKKPab**	**15 47 19.9**	**0.0**
	comp=Z,0.7nm,1.1s,baz=321,slow=33,SNR=4.5						
SONM	**Songino Array**	**120.85**	**42**	PKP	**PKPdf**	**15 37 09.8**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=251,slow=2.0,SNR=8.6						
LZDM	**Lanzhou Array**	**120.87**	**56**	PKP	**PKPdf**	**15 37 10.3**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=256,slow=4.4,SNR=3.7						
ULN	**Ulaanbaatar**	**121.27**	**42**	*i* PKIKP	**PKiKP**	**15 37 12.3**	**+0.7**
TAOE	**Nuku Hiva Isla**	**121.39**	**251**	*e*LR	LR	16 14 35.1	
	comp=Z,429nm,28.6s						
TBI	**Tubuai**	**122.39**	**231**	*e*LR	LR	16 14 55.0	
	comp=Z,1µm,28.2s						
TBI				*e*LR	LR	16 15 04.5	
	comp=Z,2µm,23.5s						
BTO2	**Baotou**	**124.93**	**50**	*e*PKP	**PKPdf**	**15 37 17.5**	**-1.2**
BTO2				PP	**PP**	**15 39 10.0**	**+2.9**
BTO2				SS	SS	15 55 59.5	-3.1
BTO2				AMB	AMB		
	comp=Z,290nm,5.1s						
BTO2				LR	LR		
	comp=Z,360nm,21.9s						
BTO2				LR	LR		
	comp=Z,510nm,16.3s						
BTO2				LR	LR		
	comp=Z,700nm,17.7s						
TNA	**Tin City**	**125.17**	**347**		**PKiKP**	**15 37 18.6**	**+0.1**
XAN	**Xi'an**	**125.34**	**58**	PKP	**PKiKP**	**15 37 20.0**	**+0.1**
XAN				LR	LR		
	comp=Z,280nm,20.6s						
XAN				LR	LR		
	comp=Z,300nm,20.6s						
XAN				LR	LR		
	comp=Z,290nm,22.7s						
YAK	**Yakutsk**	**125.51**	**20**		**PKiKP**	**15 37 19.6**	**+0.4**
YAK	**Yakutsk**	**125.51**	**20**	*i* PKIKP	**PKPdf**	**15 37 18.8**	**-0.1**
YAK				*e*		15 39 10.9	
YAK				*e*		15 44 23.5	
YAK				*e*PS	PS	15 49 13.4	+2.0
YAK				*e*SS	SS	15 56 11.2	+3.5
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,64nm,4.8s						
YAK				pmax	pmax		
	comp=E,78nm,4.6s						
YAK				pmax	pmax		
	comp=N,52nm,3.5s						
PPT2	**Papeete2**	**125.66**	**236**	*e*SS	SS	15 56 08.2	-3.6
	comp=N,143nm,28.0s						
PPT2				*e*LR	LR	16 16 33.3	
	comp=N,390nm,30.2s						
PPT2				*e*LR	LR	16 16 35.0	
	comp=N,419nm,23.5s						
BILL	**Bilibino**	**125.77**	**360**	*i* PKIKP	**PKiKP**	**15 37 21.1**	**+1.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**126.16**	**49**	*e*PKP	**PKPdf**	**15 37 17.5**	**-3.5**
QIZ	**Qiongzhong**	**126.71**	**76**	PKP	**PKPdf**	**15 37 20.3**	**-2.2**
QIZ				PP	**PP**	**15 39 18.5**	**-1.0**
QIZ				SS	SS	15 56 25.3	-0.7
QIZ				LR	LR		
	comp=Z,140nm,16.7s						
QIZ				LR	LR		
	comp=Z,240nm,17.6s						
QIZ				LR	LR		
	comp=Z,200nm,16.5s						
XLT	**XiLinHaoTe**	**128.47**	**44**	*e*PKP	**PKiKP**	**15 37 25.8**	**-0.1**
XLT				AMB	AMB		
	comp=Z,91nm,4.3s						
HILR	**Hailar Array B**	**128.50**	**36**	PKP	**PKiKP**	**15 37 26.1**	**+0.4**
	comp=Z,5.1nm,0.9s,baz=318,slow=1.9,SNR=4.6						
HNS	**HongShan**	**129.36**	**53**	⇓PKP	**PKiKP**	**15 37 28.3**	**+0.6**
HNS				LR	LR		
	comp=Z,230nm,16.9s						
HNS				LR	LR		
	comp=Z,250nm,18.2s						
BJI2	**Beijing**	**129.76**	**49**	PKP	**PKiKP**	**15 37 28.0**	**-0.5**
BJI2				LR	LR		
	comp=Z,130nm,21.9s						
BJI2				LR	LR		
	comp=Z,73nm,22.9s						
BJI2				LR	LR		
	comp=Z,160nm,21.9s						
SEY	**Seymchan**	**130.06**	**8**	*i* PKIKP	**PKiKP**	**15 37 29.8**	**+1.4**
ZEA	**Zeya**	**130.15**	**29**	*e*PKIKP	**PKiKP**	**15 37 30.1**	**+1.3**
TIA	**Tai'an**	**131.53**	**54**	PKP	**PKPdf**	**15 37 31.0**	**-0.2**
ASAR	**Alice Springs**	**131.76**	**140**	PKhKP	PKPpre	15 37 25.6	
	comp=Z,0.3nm,0.6s,baz=220,slow=2.7,SNR=5.1						
ASAR				PKP	**PKPdf**	**15 37 31.9**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=201,slow=0.8,SNR=7.6						
ASAR	**Alice Springs**	**131.76**	**140**	PKIKP	**PKPdf**	**15 37 32.0**	**-0.1**
HEH	**HeiHe**	**132.34**	**32**	PKP	**PKiKP**	**15 37 35.0**	**+1.6**
HEH				LR	LR		
	comp=Z,200nm,20.6s						
HEH				LR	LR		
	comp=Z,230nm,20.2s						
HEH				LR	LR		
	comp=Z,360nm,19.0s						
NJ2	**Nanjing**	**133.89**	**59**	*e*PKP	**PKiKP**	**15 37 36.8**	**-0.3**
CN2	**Changchun**	**134.68**	**41**	*e*PKP	**PKPdf**	**15 37 34.0**	**-2.9**
WRA	**Warramunga Arr**	**134.71**	**137**	PKP	**PKPdf**	**15 37 36.9**	**-0.8**
	comp=Z,1.7nm,1.0s,baz=228,slow=2.0,SNR=6.1						
KLR	**Kul'dur**	**135.18**	**31**	*i* PKIKP	**PKPdf**	**15 37 38.1**	**+0.4**
KSRS	**Korea Array**	**139.25**	**48**	PKP	**PKPdf**	**15 37 45.5**	**0.0**
	comp=Z,2.4nm,1.0s,baz=2.5,slow=1.9,SNR=7.0						
YSS	**Yuzhno-Sakhali**	**141.91**	**25**	*e*PKIKP	**PKiKP**	**15 37 51.4**	**-1.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,20.0s						
DZM	**Mont Dzumac**	**144.37**	**182**	*e*LR	LR	16 25 13.8	
	comp=Z,219nm,22.6s						
JMN	**Monobe**	**145.25**	**50**		**PKPbc**	**15 37 55.4**	**-0.7**
INU	**Inuyama**	**146.68**	**45**	PKPdf	**PKPdf**	**15 37 59.3**	**+0.6**
JGF	**Kuroka**	**146.77**	**44**	PKPdf	**PKPdf**	**15 37 59.0**	**0.0**
MAJO	**Matsushiro**	**146.80**	**42**	PKPbc	**PKPbc**	**15 38 00.9**	**+0.2**
MAJO	**Matsushiro**	**146.80**	**42**	PKP2	**PKPbc**	**15 38 00.9**	**+0.2**
MJAR	**Matsushiro Arr**	**146.80**	**42**	PKPbc	**PKPdf**	**15 37 59.5**	**+0.6**
	comp=Z,13nm,1.0s,baz=289,slow=1.6,SNR=17						
MJAR	**Matsushiro Ar**	**146.80**	**42**		**PKPdf**	**15 37 59.0**	**+0.1**
PMG	**Port Moresby**	**150.77**	**141**		**PKPbc**	**15 38 09.0**	**-2.5**
PMG	**Port Moresby**	**150.77**	**141**	PKIKP	**PKPbc**	**15 38 09.0**	**-2.5**

IDC 27 15:26:11.3±7.5, 13°00S×15°52W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=306.4km s-min=118.7km az=146.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**4.10**	**12**	T	T	15 32 20.4	
	baz=43,slow=74,SNR=48						
H10S3	**ASCENSION HYDR**	**4.10**	**12**	T	T	15 32 19.5	
	baz=177,slow=74,SNR=27						
H10N1	**ASCENSION HYDR**	**5.22**	**11**	T	T	15 33 42.1	
	baz=189,slow=78,SNR=8.9						
H10N3	**ASCENSION HYDR**	**5.22**	**11**	T	T	15 33 42.3	
	baz=189,slow=78,SNR=23						
H10N2	**ASCENSION HYDR**	**5.23**	**11**	T	T	15 33 42.7	
	baz=189,slow=78,SNR=7.3						
TORD	**Torodi Ar. Bea**	**31.08**	**34**	P	P	15 32 31.4	0.0
	1.2nm,0.8s,baz=220,slow=11,SNR=5.4						
	1.2nm,0.8s						
BRTR	**Keskin Array B**	**69.55**	**39**	P	P	15 37 22.0	-0.3
	0.3nm,0.5s,baz=211,slow=10,SNR=2.4						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**74.47**	**28**	P	P	15 37 51.8	+0.4
	1.2nm,0.5s,baz=225,slow=6.1,SNR=11						
	1.2nm,0.5s						
FINES	**FINESS Array B**	**81.12**	**19**	P	P	15 38 28.1	-0.2
	2.2nm,0.5s,baz=235,slow=9.7,SNR=10						
	2.2nm,0.5s						

*SFS **27** 15:39:17.5, 38°52N×1°11W, h16km, ML2.6/7, ML2.2/7, MLv2.0/7*
*MDD **27** 15:39:17.2±0.4, 38°53N×1°03W, h10km, mb_Lg2.4/10, Error ellipse: s-maj=3.3km s-min=2.6km az=112.0*

ISC 27 15:39:16.3±1.0, 38°54N±0°03×1°06W±0°02, h12km±9km, n16, σ0°83/31, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETOB	**Tobarra**	**0.40**	**286**	Pg	**Pg**	**15 39 24.2**	**0.0**
ETOB				Sg	**Sg**	**15 39 29.7**	**+0.3**
ETOB	**Tobarra**	**0.40**	**286**	Pg	**Pg**	**15 39 24.1**	**0.0**
ETOB				Sg	**Sb**	**15 39 32.1**	**+0.8**
AFON	**Font Roja**	**0.43**	**73**	Pg	**Pg**	**15 39 23.4**	**-1.3**
AFON				Sg	**Sg**	**15 39 30.0**	**-0.5**
AFON				*i* lVmb_Lg		15 39 38.6	
EBEN2	**Beniarda presa**	**0.70**	**78**	Pg	**Pg**	**15 39 29.7**	**-0.1**
EBEN2				Sg	**Sg**	**15 39 39.0**	**+0.1**
EBEN2				*i* lVmb_Lg		15 39 48.7	
EMUR	**La Murta**	**0.71**	**191**	Pg	**Pg**	**15 39 30.4**	**+0.4**
EMUR				Sg	**Sg**	**15 39 39.7**	**+0.3**
EMUR	**La Murta**	**0.71**	**191**	Pg	**Pg**	**15 39 30.4**	**+0.4**
EMUR				Sg	**Sg**	**15 39 39.7**	**+0.3**
EMUR				*i* lVmb_Lg		15 39 49.0	
EVIV	**Cofrentes, Val**	**0.73**	**357**	Pg	**Pg**	**15 39 30.2**	**-0.2**
EVIV				Sg	**Sb**	**15 39 41.6**	**+0.7**
EVIV				*i* lVmb_Lg		15 39 43.7	
CART	**Cartagena**	**0.95**	**177**	Pg	**Pg**	**15 39 34.9**	**+0.3**
CART				Sg	**Sg**	**15 39 46.5**	**-0.5**
ECHE	**Chera**	**1.05**	**4**	Pn	**Pn**	**15 39 36.9**	**+0.4**
ECHE				Sn	**Sb**	**15 39 51.5**	**+1.3**
ECHE	**Chera**	**1.05**	**4**	Pg	**Pb**	**15 39 37.3**	**+0.8**
ECHE				Sg	**Sb**	**15 39 51.9**	**+1.6**
ECHE				*i* lVmb_Lg		15 39 53.2	
EIBI	**Ibiza**	**1.94**	**75**	Pn	**Pn**	**15 39 49.6**	**+0.6**
EIBI				Sn	**Sn**	**15 40 12.0**	**-1.4**
PAB	**San Pablo**	**2.75**	**292**	Pn	**Pn**	**15 39 59.6**	**-0.6**
PAB				Sn	**Sn**	**15 40 33.4**	**-0.1**
PAB				Sg	**Sg**	**15 40 45.6**	**+1.0**
PAB				*i* lVmb_Lg		15 40 47.8	
EADA	**Adamuz**	**2.79**	**263**	Pn	**Pn**	**15 39 59.6**	**-1.1**
EADA	**Adamuz**	**2.79**	**263**	Pn	**Pn**	**15 39 59.7**	**-1.1**
EADA				Pg	**Pg**	**15 40 09.2**	**-0.5**
EADA				Sg	**Sg**	**15 40 44.8**	**-1.0**
EADA				*i* lVmb_Lg		15 40 47.6	
EMAL	**Malaga-Limoner**	**3.21**	**237**	Pn	**Pn**	**15 40 05.7**	**-0.7**
PBAR	**Barrancos**	**4.71**	**267**	*e*Sg	**Sg**	**15 41 46.3**	**-1.3**

*KRSC **27** 15:44:11.9±1.0, 52°87N×159°96E, h55km±9km, ML4.1*
*IDC **27** 15:44:14.2±5.9, 53°17N×159°94E, h67km±36km, mb2.9/2, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=66.8km s-min=49.7km az=0.0*

ISC 27 15:44:13.7±1.1, 52°88N±0°05×159°91E±0°05, h49km±8km, n40, σ1°42/49, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.23**	**17**	*i* P	**Pn**	**15 44 22.5**	**+0.4**
SPN				*e*S	**Sn**	**15 44 28.6**	**+0.6**
NLC	**Nalytchevo**	**0.45**	**311**	*i* P	**Pn**	**15 44 24.3**	**+0.1**
NLC				*e*S	**Sn**	**15 44 31.8**	**+0.1**
DALK	**Dalny**	**0.72**	**283**	*e*P	**Pn**	**15 44 27.5**	**-0.1**
DALK				*e*S	**Sn**	**15 44 37.8**	**+0.2**
UGLR	**Uglovaya**	**0.73**	**297**	*i* P	**Pn**	**15 44 28.1**	**+0.2**
SDLR	**Sedlovina**	**0.74**	**303**	*e*P	**Pn**	**15 44 28.1**	**+0.1**
SMAR	**Somma**	**0.77**	**300**	*e*P	**Pn**	**15 44 28.4**	**-0.1**
PET	**Petropavlovsk**	**0.78**	**281**	*e*P	**Pn**	**15 44 28.1**	**-0.2**
PET				*e*S	**Sn**	**15 44 39.2**	**+0.2**
AVH	**Avacha**	**0.81**	**299**	*e*P	**Pn**	**15 44 29.2**	**+0.4**
INSR	**Institute**	**0.81**	**284**	*e*P	**Pn**	**15 44 28.9**	**0.0**
KRER	**Koryakskii**	**0.82**	**302**	*e*P	**Pn**	**15 44 29.5**	**+0.3**
KOK	**Koryaka**	**0.87**	**299**	*e*P	**Pn**	**15 44 30.0**	**+0.2**
KRX	**Arik**	**0.90**	**303**	*e*P	**Pn**	**15 44 30.2**	**+0.1**
RUS	**Russkaya**	**0.96**	**243**	*e*P	**Pn**	**15 44 30.9**	**0.0**
RUS				*e*S	**Sn**	**15 44 43.1**	**-0.4**
KRMR	**Karymshinskiy**	**1.08**	**268**	*i* P	**Pn**	**15 44 32.5**	**+0.1**
KRMR				*e*S	**Sn**	**15 44 46.2**	**-0.1**
MTVR	**Mutnovka**	**1.13**	**250**	*e*P	**Pn**	**15 44 33.6**	**+0.4**
MTVR				*e*S	**Sn**	**15 44 48.2**	**+0.6**
GRL	**Gorelyy**	**1.17**	**254**	*e*P	**Pn**	**15 44 34.4**	**+0.7**
GRL				*e*S	**Sn**	**15 44 49.4**	**+0.8**
KII	**Karymskiy**	**1.19**	**347**	*e*P	**Pn**	**15 44 34.4**	**+0.4**
KII				*e*S	**Sn**	**15 44 49.7**	**+0.6**
ASAK	**Asacha**	**1.32**	**249**	*e*P	**Pn**	**15 44 36.7**	**+0.9**
PETK	**Petropavlovsk-**	**1.36**	**281**	P	**Pn**	**15 44 37.1**	**+0.9**
	177nm,0.4s,baz=92,slow=17,SNR=4185						
PETK				S	**Sn**	**15 44 54.2**	**+1.2**
	147nm,0.5s,baz=255,slow=22,SNR=12						
GNL	**Ganaly**	**1.44**	**305**	*e*P	**Pn**	**15 44 38.4**	**+1.0**
KDTR	**Khodutka, Kamc**	**1.56**	**227**	*e*P	**Pn**	**15 44 39.5**	**+0.7**
KDTR				*e*S	**Sn**	**15 44 59.1**	**+1.3**
APC	**Apacha**	**1.67**	**273**	*e*P	**Pn**	**15 44 41.7**	**+1.3**
APC				*e*S	**Sn**	**15 45 03.1**	**+2.4**
MKZ	**Mys Kozlova**	**2.00**	**32**	*e*P	**Pn**	**15 44 44.8**	**+0.1**
MKZ				*e*S	**Sn**	**15 45 07.6**	**-1.0**
TUMD	**Tumrok D**	**2.34**	**7**	*e*P	**Pn**	**15 44 51.6**	**+1.8**
TUMD				*e*S	**Sn**	**15 45 18.1**	**+0.8**
PAU	**Pauzhetka**	**2.38**	**235**	*e*P	**Pn**	**15 44 52.7**	**+2.5**
ESO	**Esso**	**3.13**	**347**	*e*P	**Pn**	**15 45 02.0**	**+1.5**
SKR	**Severo-Kuril's**	**3.22**	**228**	*e*S	**Sn**	**15 45 40.9**	**+2.1**
KBTR	**Krutoberegovo**	**3.74**	**26**	*e*P	**Pn**	**15 45 11.0**	**+2.2**
KBG	**Krutoberegovo**	**3.75**	**25**	*e*P	**Pn**	**15 45 11.6**	**+2.7**
KBG				*e*S	**Sn**	**15 45 55.3**	**+3.5**
SMKR	**Semkarok**	**3.82**	**13**	*e*P	**Pn**	**15 45 12.9**	**+2.9**
BKI	**Bering**	**4.26**	**54**	*e*S	**Sn**	**15 46 01.6**	**-2.7**
KLR	**Kul'dur**	**18.02**	**270**	P	**Pn**	**15 48 21.9**	**+1.6**
	0.1nm,0.3s,baz=85,slow=11,SNR=3.7						
	0.5nm,0.5s						
H11N2	**WAKE ISLA

	0.1nm8.4nm,0.9s						
MMRI	**Maumere**	**6.39**	**262**	Pn	**Pn**	**16 08 29.9**	**+2.0**
MMRI	**Maumere**	**6.39**	**262**	P	**Pn**	**16 08 30.3**	**+2.4**
	0.3nm70nm,0.8s						
KMPI	**Kaimana, Papua**	**6.47**	**52**	P	**Pn**	**16 08 27.7**	**-1.2**
	167nm,0.8s						
EDFI	**Ende, Flores**	**6.95**	**261**	P	**Pn**	**16 08 37.6**	**+2.3**
	0.1nm20nm,0.7s						
SWI	**Sorong**	**7.32**	**21**	P	**Pn**	**16 08 39.7**	**-0.5**
	0.2nm19nm,0.8s						
KNRA	**Kununurra**	**7.89**	**179**	Pn	**Pn**	**16 08 51.0**	**+3.2**
RKPI	**Ransiki, Papua**	**8.29**	**42**	P	**Pn**	**16 08 52.0**	**-1.3**
	59nm,1.4s						
BASI	**Baing, Sumba**	**8.33**	**252**	P	**Pn**	**16 08 56.1**	**+2.4**
	181nm,0.9s						
WSI	**Waingapu**	**8.46**	**256**	P	**Pn**	**16 08 56.4**	**+0.9**
MWPI	**Manokwari, Pap**	**8.65**	**39**	P	**Pn**	**16 08 57.4**	**-0.6**
	53nm,1.0s						
LBFI	**Labuhan Bajo,**	**8.69**	**265**	P	**Pn**	**16 09 00.2**	**+1.7**
FITZ	**Fitzroy Crossi**	**10.70**	**196**	P	**Pn**	**16 09 26.6**	**+1.5**
	3.1nm,0.4s,baz=23,slow=11,SNR=32						
FITZ				S	**Sn**	**16 11 20.4**	**-3.2**
	6.9nm,0.3s,baz=28,slow=9.5,SNR=4.1						
WRA	**Warramunga Arr**	**13.33**	**156**	P	**Pn**	**16 10 00.6**	**+1.2**
	2.9nm,0.8s,baz=342,slow=13,SNR=80						
WRA				S	**Sn**	**16 12 21.3**	**-5.7**
	4.2nm,0.5s,baz=331,slow=23,SNR=9.3						
WRA	**Warramunga Arr**	**13.33**	**156**	P	**Pn**	**16 09 59.3**	**-0.1**
WRA					**Sn**	**16 12 21.9**	**-5.0**
WR8	**Warramunga Arr**	**13.41**	**156**	P	**Pn**	**16 10 01.1**	**+0.8**
JAGI	**Jajag, Banyuwa**	**14.36**	**266**	P	**Pn**	**16 10 12.9**	**+0.5**
COEN	**Coen**	**15.55**	**115**	P	**P**	**16 10 28.4**	**+0.2**
COEN				IAmb	IAmb	16 10 33.8	
	comp=Z,3.9nm,0.8s						
AS31	**Alice Springs**	**16.62**	**163**		**Pn**	**16 10 42.5**	**+2.3**
ASAR	**Alice Springs**	**16.62**	**163**	P	**Pn**	**16 10 43.6**	**+3.4**
	comp=Z,1.9nm,0.6s,baz=336,slow=9.5,SNR=42						
ASAR				S	**S**	**16 13 42.8**	**-2.2**
	comp=Z,0.9nm,0.5s,baz=350,slow=26,SNR=6.5						
ASAR	**Alice Springs**	**16.62**	**163**		**S**	**16 13 41.4**	**-3.6**
PMG	**Port Moresby**	**18.39**	**96**	P	**Pn**	**16 11 05.1**	**+3.8**
	comp=Z,7.1nm,0.7s,baz=222,slow=1.4,SNR=6.9						
PMG	**Port Moresby**	**18.39**	**96**	P	**Pn**	**16 10 59.9**	**-1.5**
PMG				IAmb	IAmb	16 11 08.9	
	comp=Z,7.2nm,0.8s						
KKM	**Kota Kinabalu**	**18.47**	**318**	P	**Pn**	**16 11 00.8**	**-1.6**
BBJI	**Bungbulang**	**20.80**	**269**	P	**P**	**16 11 24.3**	**-1.3**
BBJI				IAmb	IAmb	16 12 03.1	
	comp=Z,13nm,1.3s						
FORT	**Forrest**	**22.93**	**181**	P	**P**	**16 11 45.8**	**-1.1**
FORT				IAmb	IAmb	16 12 04.1	
	comp=Z,6.5nm,1.0s						
INKA	**Innaminka**	**22.96**	**152**	P	**P**	**16 11 47.3**	**+0.1**
MORW	**Morawa**	**24.31**	**208**	P	**P**	**16 12 00.6**	**+1.1**
BBOO	**Buckleboo**	**25.88**	**166**	P	**P**	**16 12 14.0**	**+0.3**
STKA	**Stephens Creek**	**26.88**	**155**	P	**P**	**16 12 24.8**	**+2.1**
	comp=Z,1.3nm,0.6s,baz=331,slow=12,SNR=3.4						
	comp=Z,1.3nm,0.6s						
STKA	**Stephens Creek**	**26.88**	**155**	P	**P**	**16 12 23.9**	**+1.2**
JSG	**Sagara**	**43.14**	**12**	P	**P**	**16 14 42.5**	**+1.1**
LZDM	**Lanzhou Array**	**49.40**	**333**	P	**P**	**16 15 29.8**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=170,slow=9.9,SNR=4.1						
	comp=Z,0.9nm,0.4s						
OXZ	**Oxford**	**51.91**	**140**	P	**P**	**16 15 48.8**	**-0.3**
SONM	**Songino Array**	**58.73**	**343**	P	**P**	**16 16 37.5**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=163,slow=7.0,SNR=9.9						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**58.73**	**343**	P	**P**	**16 16 37.1**	**-0.7**
PEA0B	**Petropavlovsk-**	**65.45**	**19**	P	**P**	**16 17 22.6**	**+0.2**
PETK	**Petropavlovsk-**	**65.45**	**19**	P	**P**	**16 17 22.4**	**-0.1**
	comp=Z,3.4nm,0.9s,baz=180,slow=4.0,SNR=6.0						
	comp=Z,3.4nm,0.9s						
MKAR	**Makanchi Array**	**68.11**	**328**	P	**P**	**16 17 39.3**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=118,slow=7.7,SNR=26						
	comp=Z,1.4nm,0.6s						
ZAA0	**Zalesovo Array**	**71.65**	**334**	P	**P**	**16 18 01.1**	**+0.2**
ZAA0				IAmb	IAmb	16 18 35.9	
	comp=Z,2.0nm,1.1s						
ZALV	**Zalesovo Beam**	**71.65**	**334**	P	**P**	**16 18 00.5**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=133,slow=5.0,SNR=5.0						
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**71.65**	**334**	P	**P**	**16 18 00.1**	**-0.8**
KURBB	**Kurchatov Arra**	**72.44**	**329**	P	**P**	**16 18 05.5**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=130,slow=4.9,SNR=11						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**72.45**	**329**	P	**P**	**16 18 05.0**	**-0.6**
KURK				IAmb	IAmb	16 18 07.5	
	comp=Z,1.4nm,0.7s						
BVAR	**Borovoye Array**	**77.97**	**328**	P	**P**	**16 18 37.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=131,slow=10,SNR=6.0						
	comp=Z,0.6nm,0.5s						
AB31	**Akbulak array**	**82.25**	**322**	P	**P**	**16 19 00.1**	**-0.1**
ABKAR	**Akbulak array**	**82.25**	**322**	P	**P**	**16 18 59.7**	**-0.6**
J16K	**Anvik River**	**88.38**	**25**	P	**P**	**16 19 31.0**	**+0.7**
J16K				IAmb	IAmb	16 20 13.0	
	comp=Z,7.0nm,1.5s						
C19K	**Lookout Ridge**	**90.79**	**20**	P	**P**	**16 19 41.5**	**-0.1**
C19K				IAmb	IAmb	16 20 09.8	
	comp=Z,3.1nm,1.2s						
E19K	**Redstone River**	**91.09**	**22**	P	**P**	**16 19 42.9**	**0.0**

JMA ***27*** *16:21:01.1±0.2,44°.5N±0°.6×145°.7E±0°.9,h17km±1km, MV2.7/31,NEAR KUNASHIRI ISLAND*
SKHL ***27*** *16:21:02.6±0.7,44°.50N×145°.70E,h23km±1km,mb3.9/3*
ISC 27 16:21:03.6±2.4,44°.4N±0°.1×145°.65E±0°.0,h24km±13km, n10,σ1§14/19,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.39**	**157**	*e*P	**Pb**	**16 21 11.3**	**-0.7**
YUK				AMB	AMB	16 21 11.5	
	80nm,0.2s						
YUK				*e*S	**Sb**	**16 21 18.3**	**+0.7**
YUK				A	A	16 21 19.6	
	310nm,0.2s						
YUK				A	A	16 21 19.6	
	310nm,0.2s						
JRA	**Rausu**	**0.60**	**220**	P	**Pb**	**16 21 14.8**	**-0.6**
JRA				S	**Sb**	**16 21 24.7**	**+1.3**
JNSB	**Nemuroshibetsu**	**0.78**	**217**	*e*P	**Pb**	**16 21 17.9**	**-0.6**
JNSB				*e*S	**Sb**	**16 21 30.1**	**+1.5**
SHO	**Shikotan**	**1.00**	**121**	*e*P	Pb	16 21 31.1	+8.9
SHO				AMB	AMB	16 21 31.7	
	50nm,0.3s						
SHO				*e*S	**Sn**	**16 21 37.3**	**+1.9**
SHO				A	A	16 21 37.9	
	60nm,0.3s						
SHO				A	A	16 21 37.9	
	170nm,0.3s						
NMR	**Nemuro--Hokkai**	**1.03**	**177**	*e*P	**Pn**	**16 21 21.4**	**-1.1**
NMR				*e*S	**Sb**	**16 21 34.9**	**-0.8**
NEM2	**Nemuro 2**	**1.03**	**176**	P	**Pn**	**16 21 21.6**	**-0.9**
NEM2				S	**Sb**	**16 21 37.0**	**+1.1**
JNK	**Nakash**	**1.05**	**220**	*e*P	**Pn**	**16 21 22.3**	**-0.6**
JNK				S	**Sn**	**16 21 37.5**	**+0.7**
JTKR	**Abashiri--Toko**	**1.32**	**252**	*e*P	**Pn**	**16 21 25.9**	**-0.7**
JTKR				S	**Sn**	**16 21 44.3**	**+0.8**
JKHN	**Kushirohamanak**	**1.36**	**195**	*e*P	**Pn**	**16 21 27.4**	**+0.3**
JKHN				*e*S	**Sb**	**16 21 46.8**	**+1.5**
AKK	**Akkeshi**	**1.50**	**203**	*e*P	**Pn**	**16 21 28.5**	**-0.5**
AKK				*e*S	**Sn**	**16 21 46.4**	**-1.3**

DJA ***27*** *16:23:59.7±0.8,8°.S±5°.×10°.3E±°.,h10km,M4.0/13, MLv4.0/13*
IDC ***27*** *16:24:03.6±10.0,7°.43S×102°.94E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=381.8km s-min=29.9km az=56.0*
ISC 27 16:24:07.3±1.6,7°.6S±0°.1×102°.7E±0°.1,h35km,n10, σ0§93/12,mb3.3/3,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**2.25**	**349**	P	**Pn**	**16 24 41.2**	**-0.8**
KASI	**Kota Agung**	**2.70**	**41**	P	**Pn**	**16 24 47.5**	**-0.7**
KASI				S	**Sn**	**16 25 18.9**	**-0.8**
LWLI	**Liwa**	**2.87**	**28**	P	**Pn**	**16 24 48.9**	**-1.8**
MNAI	**Manna**	**3.20**	**4**	P	**Pn**	**16 24 55.1**	**0.0**
MDSI	**Maura Dua**	**3.39**	**26**	P	**Pn**	**16 24 57.7**	**-0.1**
MDSI				S	**Sn**	**16 25 38.2**	**+1.4**
KLSI		**3.50**	**35**	P	**Pn**	**16 24 59.7**	**+0.5**
KSI	**Kapahiang**	**3.89**	**358**	P	**Pn**	**16 25 04.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**26.13**	**352**	P	**P**	**16 29 38.6**	**+0.4**
	0.5nm,0.6s,baz=187,slow=9.4,SNR=5.2						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**33.02**	**115**	P	**P**	**16 30 40.1**	**+0.6**
	0.6nm,1.1s,baz=288,slow=9.6,SNR=1.2						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**33.92**	**122**	P	**P**	**16 30 47.1**	**-0.2**
	0.4nm,1.0s,baz=298,slow=8.1,SNR=4.0						
	0.4nm,1.0s						

IDC 27 16:43:19.3±7.3,31°.22S×179°.18W,h0km,mb3.3/2, mbtmp3.3/2,Error ellipse: s-maj=306.4km s-min=58.0km az=157.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.06**	**268**	P	P	16 51 12.6	-0.5
	0.1nm,0.3s,baz=107,slow=7.4,SNR=6.1						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**43.12**	**274**	P	P	16 51 21.8	+0.2
	0.2nm,0.3s,baz=112,slow=8.2,SNR=7.7						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**145.55**	**339**	PKPbc	PKPdf	17 02 58.0	-0.7
	3.3nm,0.9s,baz=33,slow=5.3,SNR=6.6						

AZER ***27*** *16:54:06.7,38°.32N×44°.67E,h10km,ml3.0*
NSSP ***27*** *16:54:08.3,38°.43N×44°.48E,h10km,Ms3.0*
ISK ***27*** *16:54:08.1,38°.25N×44°.74E,h2km,ML3.1/7*
TEH ***27*** *16:54:08.6,38°.38N×44°.78E,h5km±7.6km,ML2.9, Presumed earthquake*
ISC 27 16:54:08.4±1.3,38°.31N±0°.03×44°.74E±0°.02,h0km±11km, n38,σ1§06/60,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.69**	**92**	Pg	**Pg**	**16 54 20.8**	**-0.9**
IMRD	**Marand**	**0.86**	**62**	Pg	**Pg**	**16 54 24.7**	**-0.2**
MAKU	**Maku**	**1.05**	**358**	Pg	**Pg**	**16 54 26.8**	**-1.6**
NAX	**Nakhchivan**	**1.05**	**34**	P	**Pg**	**16 54 28.1**	**-0.4**
NAX				S	**Sb**	**16 54 43.6**	**-0.1**
VANB	**Van**	**1.10**	**286**	Pn	**Pg**	**16 54 29.0**	**-0.4**
VANB				Sn	**Sn**	**16 54 45.9**	**-1.0**
HAKT	**HAKKARI**	**1.10**	**228**	P	**Pg**	**16 54 28.6**	**-1.0**
HAKT				S	**Sb**	**16 54 45.5**	**0.0**
ITBZ	**Tabriz**	**1.11**	**93**	Pg	**Pg**	**16 54 28.4**	**-1.3**
ORD	**Ordubad**	**1.16**	**57**	P	**Pb**	**16 54 30.4**	**-1.0**
ORD				S	**Sn**	**16 54 47.6**	**-1.0**
IAZR	**Azarshahr**	**1.17**	**122**	Pg	**Pb**	**16 54 30.8**	**-0.7**
SBZ	**Shahbuz**	**1.26**	**30**	P	**Pn**	**16 54 31.7**	**-1.6**
SBZ				S	**Sn**	**16 54 52.6**	**+1.6**
CUKT	**Cukurca**	**1.39**	**221**	Pn	**Pn**	**16 54 34.4**	**-0.6**
HYR	**Heyderabad**	**1.41**	**4**	P	**Pn**	**16 54 34.3**	**-1.1**
HYR				S	**Sg**	**16 54 56.7**	**+2.9**
VAYK	**Vayk**	**1.49**	**21**	⇓*e*P	**Pn**	**16 54 35.5**	**-0.9**
VAYK				⇓*e*S	**Sg**	**16 54 56.6**	**+0.5**
IGDI	**IGDIR**	**1.64**	**342**	P	**Pn**	**16 54 38.2**	**-0.3**
IGDI				S	**Sg**	**16 55 03.0**	**+1.9**
EGVZ	**Egvard**	**1.68**	**56**	*e*P	**Pn**	**16 54 38.7**	**-0.4**
EGVZ				*e*S	**Sn**	**16 55 01.1**	**-0.3**
MAHB	**Mahabad**	**1.72**	**153**	Pg	**Pb**	**16 54 41.5**	**+0.7**
GRS	**Goris**	**1.72**	**46**	⇓*i*P	**Pn**	**16 54 39.0**	**-0.7**
GRS				⇑*i*S	**Sg**	**16 55 04.0**	**+0.2**
IHRS	**Heris**	**1.81**	**89**	Pg	**Pb**	**16 54 42.0**	**-0.5**
GNI	**Garni**	**1.84**	**0**	Pn	**Pb**	**16 54 42.9**	**0.0**
GNI	**Garni**	**1.84**	**0**	*e*P	**Pb**	**16 54 43.0**	**0.0**
GNI				*e*S	**Sb**	**16 55 06.1**	**-0.5**
AGRB	**Hanur-Agry**	**1.86**	**314**	Pn	**Pb**	**16 54 42.8**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.90**	**297**	Pn	**Pb**	**16 54 43.3**	**-0.7**
AYRK	**Ayrk**	**1.98**	**24**	*e*P	**Pn**	**16 54 44.0**	**+0.6**
AYRK				*e*S	**Sb**	**16 55 09.9**	**-0.8**
GURO	**Guroymak-BITLI**	**2.14**	**277**	Pn	**Pn**	**16 54 46.3**	**+0.9**
IHSH	**Hashtrud**	**2.24**	**116**	Pn	**Pb**	**16 54 48.7**	**-1.1**
QRD	**Qoradiz**	**2.32**	**59**	P	**Pn**	**16 54 48.6**	**+0.8**
QRD				S	**Sb**	**16 55 27.4**	**+1.1**
ISRB	**Sarab**	**2.36**	**101**	Pn	**Pn**	**16 54 49.6**	**+1.1**
GRMI	**Germi**	**2.52**	**78**	Pn	**Pn**	**16 54 51.5**	**+0.8**
GDB	**GEDABAY**	**2.54**	**18**	P	**Pn**	**16 54 51.6**	**+0.7**
GDB				S	**Sb**	**16 55 26.0**	**-0.6**
AGDM	**Agdam**	**2.58**	**45**	P	**Pn**	**16 54 52.6**	**+1.3**
AGDM				S	**Sb**	**16 55 27.1**	**-0.5**
BLQ	**Beylaqan**	**2.61**	**56**	P	**Pn**	**16 54 53.1**	**+1.3**
BLQ				S	**Sb**	**16 55 28.4**	**-0.3**
LSVT	**Lusahovit**	**2.63**	**8**	*e*P	**Pb**	**16 54 56.0**	**-0.4**
LSVT				*e*S	**Sb**	**16 55 30.7**	**+1.4**
GANJ	**Ganja**	**2.64**	**27**	P	**Pn**	**16 54 53.3**	**+1.1**
GANJ				S	**Sb**	**16 55 30.1**	**+0.7**
QZX	**Qazax, Azerbai**	**2.79**	**10**	P	**Pn**	**16 54 54.8**	**+0.6**
QZX				S	**Sb**	**16 55 32.8**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.79**	**268**	Pn	**Pn**	**16 54 55.5**	**+1.2**
YRD	**Yardimli**	**2.81**	**76**	P	**Pn**	**16 54 56.2**	**+1.5**
YRD				S	**Sb**	**16 55 33.0**	**-1.6**
LRK	**Lerik**	**2.85**	**82**	P	**Pn**	**16 54 56.9**	**+1.7**
LRK				S	**Sb**	**16 55 36.5**	**+0.9**
GLBA	**Clilabad**	**3.01**	**71**	P	**Pn**	**16 54 58.8**	**+1.6**
GLBA				S	**Sb**	**16 55 39.2**	**-0.8**

SFS ***27*** *17:23:01.8,36°.43N×5°.76W,h0km,ML2.6/7,ML2.2/10, MLv2.0/10*
MDD ***27*** *17:23:02.9±0.6,36°.57N×5°.72W,h3km±11km,mb_Lg2.4/7, Error ellipse: s-maj=4.7km s-min=2.9km az=13.0*
INMG ***27*** *17:23:04.3±2.7,36°.47N×5°.63W,h14km±8km,ML2.1, Error ellipse: s-maj=9.8km s-min=5.9km az=23.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Gibraltar*
CNRM ***27*** *17:23:08.8,36°.15N×6°.21W,h34km,ML1.4*
ISC 27 17:23:02.4±0.9,36°.53N±0°.03×5°.68W±0°.02,h11km±8km, n35,σ1§17/58,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EJIF	**Jimena Fronter**	**0.19**	**116**	Pg	**Pg**	**17 23 06.2**	**-0.3**
EJIF				Sg	**Sg**	**17 23 10.1**	**+0.8**
ESPR	**Espera**	**0.36**	**337**	Pg	**Pg**	**17 23 09.6**	**0.0**
ESPR	**Espera**	**0.36**	**337**	Pg	**Pg**	**17 23 09.8**	**+0.2**
ESPR				Sg	**Sg**	**17 23 13.5**	**-1.0**
ESPR				*i* IVmb_Lg		17 23 24.0	
CEU	**Ceuta**	**0.68**	**158**	Sg	**Sg**	**17 23 21.1**	**-3.4**
E1302	**La Puebla de C**	**0.69**	**30**	Pg	**Pg**	**17 23 16.2**	**+0.3**
E1302				Sn	**Sn**	**17 23 28.0**	**-0.9**
SMIR	**Smir Dam**	**0.88**	**164**	P	**Pn**	**17 23 23.5**	**+2.7**
EMAL	**Malaga-Limoner**	**1.03**	**77**	Pg	**Pb**	**17 23 22.0**	**-0.3**
EMAL				Sg	**Sn**	**17 23 37.7**	**+0.5**
EGOR	**Sierra Gorda,**	**1.39**	**65**	Pn	**Pg**	**17 23 29.1**	**0.0**
EGOR	**Sierra Gorda,**	**1.39**	**65**	Pg	**Pg**	**17 23 29.5**	**+0.4**
EGOR				Sg	**Sg**	**17 23 47.3**	**+0.3**
EGOR				*i* IVmb_Lg		17 24 04.0	
EMIN	**Mina Concepcio**	**1.47**	**328**	Pn	**Pb**	**17 23 29.3**	**-0.3**
EMIN				Sn	**Sg**	**17 23 49.1**	**-0.5**
EMIN	**Mina Concepcio**	**1.47**	**328**	Pg	**Pb**	**17 23 29.3**	**-0.3**
EMIN				Sg	**Sb**	**17 23 48.5**	**+0.2**
ECAB	**El Cabril**	**1.55**	**8**	Pn	**Pn**	**17 23 30.4**	**+0.4**
ECAB				Sn	**Sg**	**17 23 51.7**	**-0.6**
ECAB	**El Cabril**	**1.55**	**8**	Pg	**Pn**	**17 23 30.4**	**+0.4**
ECAB				Sg	**Sb**	**17 23 50.9**	**0.0**
ECAB				*i* IVmb_Lg		17 23 53.8	
ELGU	**Los Guajares,**	**1.68**	**78**	Pg	**Pb**	**17 23 34.4**	**+0.9**
EGRO	**El Granado**	**1.75**	**305**	Pn	**Pn**	**17 23 32.1**	**-0.6**
EGRO	**El Granado**	**1.75**	**305**	Pn	**Pn**	**17 23 32.1**	**-0.6**
EGRO				Pg	**Pb**	**17 23 34.4**	**-0.2**
EGRO				Sg	**Sb**	**17 23 56.8**	**+0.2**
EGRO				*i* IVmb_Lg		17 24 05.9	
PVAQ	**Vaqueiros**	**1.85**	**299**	*e*Pn	**Pn**	**17 23 33.6**	**-0.4**
PVAQ				*e*Pg	**Pg**	**17 23 37.8**	**0.0**
PVAQ				*e*Sg	**Sg**	**17 24 03.0**	**+1.2**
PVAQ				*i* IAML		17 24 07.5	
PVAQ				*i* IAML		17 24 10.8	
PVAQ				*i* IAML		17 24 11.0	
PVAQ	**Vaqueiros**	**1.85**	**299**	P	**Pb**	**17 23 36.2**	**0.0**
EADA	**Adamuz**	**1.85**	**28**	Pn	**Pn**	**17 23 34.1**	**-0.1**
EADA				Sn	**Sb**	**17 24 00.1**	**+0.6**
EADA	**Adamuz**	**1.85**	**28**	Pg	**Pb**	**17 23 36.1**	**-0.2**
EADA				*i* IVmb_Lg		17 24 01.5	
EADA				Sg	**Sg**	**17 24 01.6**	**-0.3**
PBAR	**Barrancos**	**1.96**	**327**	Pg	**Pb**	**17 23 37.9**	**-0.3**
PBAR				Sn	**Sb**	**17 24 02.4**	**-0.3**
PBAR	**Barrancos**	**1.96**	**327**	*e*Pn	**Pb**	**17 23 37.8**	**-0.3**
PBAR				*e*Sg	**Sg**	**17 24 06.7**	**+1.2**
PBAR				*i* IAML		17 24 09.8	
PBAR				*i* IAML		17 24 10.0	
PBAR				*i* IAML		17 24 15.7	
PCVE	**Castro Verde**	**2.18**	**301**	*e*Pg	**Pg**	**17 23 44.1**	**-0.1**
PCVE				*e*Sg	**Sg**	**17 24 15.4**	**+2.9**
PCVE				*i* IAML		17 24 19.1	
PCVE				*i* IAML		17 24 20.7	
MESJ	**Messejana**	**2.41**	**303**	*e*Sg	**Sg**	**17 24 20.6**	**+0.7**
MESJ				*i* IAML		17 24 23.6	
MESJ				*i* IAML		17 24 23.7	
MESJ				*i* IAML		17 24 26.2	
PTEO	**Sao Teotonio**	**2.64**	**293**	*e*Pn	**Pn**	**17 23 47.0**	**+2.2**
EVO	**Evora**	**2.72**	**318**	*e*Sg	**Sg**	**17 24 30.7**	**+0.8**
EVO				*i* IAML		17 24 36.8	
EVO				*i* IAML		17 24 37.8	
EVO				*i* IAML		17 24 40.3	
PESTR	**Estremoz**	**2.78**	**328**	*e*Sg	**Sg**	**17 24 32.5**	**+0.8**
PESTR				*i* IAML		17 24 37.8	
PESTR				*i* IAML		17 24 40.1	
PESTR				*i* IAML		17 24 40.2	
PESTR	**Estremoz**	**2.78**	**328**	P	**Pg**	**17 23 54.6**	**-1.1**
PESTR				S	**Sb**	**17 24 27.2**	**+1.1**
MOE	**Montemor**	**2.91**	**314**	*e*Sg	**Sg**	**17 24 37.1**	**+1.4**
MOE				*i* IAML		17 24 39.1	
MOE				*i* IAML		17 24 44.4	
MOE				*i* IAML		17 24 47.3	
PARRA	**Arraiolos**	**2.95**	**321**	*e*Sg	**Sg**	**17 24 37.0**	**-0.1**
PARRA				*i* IAML		17 24 42.3	
PARRA				*i* IAML		17 24 43.6	
PARRA				*i* IAML		17 24 47.0	
PMRV	**Marv??o**	**3.19**	**335**	*e*Pn	**Pn**	**17 23 54.0**	**+1.5**
PMRV				*e*Sg	**Sg**	**17 24 41.6**	**-3.3**
PMRV				*i* IAML		17 24 47.5	
PMRV				*i* IAML		17 24 47.8	
PMRV				*i* IAML		17 24 49.5	
PMTG	**Montargil**	**3.24**	**322**	*e*Sg	**Sg**	**17 24 44.9**	**-1.4**
PMTG				*i* IAML		17 24 50.6	
PMTG				*i* IAML		17 24 51.9	
PMTG				*i* IAML		17 24 56.2	
PSARD	**Sardoal**	**3.63**	**328**	*e*Pn	**Pn**	**17 23 59.5**	**+0.9**
PSARD				*e*Sg	**Sg**	**17 24 57.7**	**-1.4**
PSARD				*i* IAML		17 25 05.4	
PSARD				*i* IAML		17 25 05.7	
PSARD				*i* IAML		17 25 06.0	
MD31	**MD31**	**3.74**	**168**	P	**Pn**	**17 24 01.0**	**+0.9**
MD31				S	**Sn**	**17 24 42.9**	**-1.2**
MDT	**Midelt**	**3.81**	**166**	P	**Pn**	**17 24 01.4**	**+0.2**
MDT				S	**Sn**	**17 24 43.6**	**-2.5**

IDC 27 17:30:38.2±2.1,7°.92S×129°.59E,h0km,mb3.5/1, mbtmp3.2/3,ML2.9/2,MS2.2/1,Error ellipse: s-maj=109.3km s-min=32.4km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.80**	**159**	Pn	Pn	17 33 40.9	-0.8
	0.1nm,0.3s,baz=338,slow=13,SNR=5.3						
WRA				Sn	Sn	17 35 58.2	-6.9
	0.4nm,0.3s,baz=337,slow=22,SNR=8.4						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**16.19**	**166**	Pn	Pn	17 34 28.2	+0.9
	0.1nm,0.3s,baz=348,slow=8.5,SNR=7.7						
ASAR				Sn	Sn	17 37 20.2	-7.6
	0.1nm,0.3s,baz=335,slow=14,SNR=5.2						
	0.2nm,0.8s						
HNR	**Honiara**	**30.04**	**95**	LR	LR	17 50 15.8	
	comp=Z,4.5nm,18.1s,baz=208,slow=39						
MKAR	**Makanchi Array**	**68.77**	**327**	P	P	17 41 44.2	0.0
	0.2nm,0.4s,baz=127,slow=7.5,SNR=6.0						
	0.2nm,0.4s						

IDC ***27*** *17:32:03.9±0.8,29°.14S×176°.24W,h0km,mb4.2/7, mbtmp4.2/9,ML4.2/2,MS3.5/14,Error ellipse: s-maj=37.0km s-min=20.5km az=142.0*
NEIC ***27*** *17:32:05.9±2.2,29°.3S±0°.2×176°.13W±0°.08,h10km±1km, mb4.9/15,Error ellipse: s-maj=28.0km s-min=12.4km az=179.0*
ISC 27 17:32:05.2±0.5,29°.28S±0°.07×176°.18W±0°.06,h10km,n81, σ1§22/75,mb4.7/14,MS3.6/12,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.52**	**270**	Pn	**Pg**	**17 32 36.4**	**+2.0**
	339nm,0.3s,baz=80,slow=5.5,SNR=12						
RAO				Sn	**Sg**	**17 32 55.9**	**+1.7**
	522nm,0.3s,baz=104,slow=22,SNR=9.8						
RAO				LR	LR	17 33 24.5	
	comp=Z

AS31	**Alice Springs**	**44.77**	**265**		**P**	**17 40 17.9**	**-1.4**
ASAR	**Alice Springs**	**44.77**	**265**	P	**P**	**17 40 19.1**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=105,slow=7.6,SNR=30						
ASAR				LR	LR	17 58 54.8	
	comp=Z,129nm,18.4s,baz=112,slow=36						
	comp=Z,3.5nm,0.8s						
ASAR	**Alice Springs**	**44.77**	**265**	P	**P**	**17 40 18.4**	**-0.8**
WRAB	**Tennant Creek**	**45.65**	**270**	P	**P**	**17 40 27.0**	**+0.7**
WRAB				IAmb	IAmb	17 40 28.3	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**45.66**	**270**	P	**P**	**17 40 26.1**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=108,slow=7.8,SNR=14						
	comp=Z,4.1nm,0.8s						
WRA	**Warramunga Arr**	**45.66**	**270**		**P**	**17 40 25.2**	**-1.1**
WB0	**Warramunga Arr**	**45.68**	**270**	P	**P**	**17 40 25.5**	**-1.0**
WB0				IAmb	IAmb	17 41 46.4	
	comp=Z,36nm,1.8s						
FORT	**Forrest**	**47.88**	**254**	P	**P**	**17 40 42.4**	**-1.1**
FORT				IAmb	IAmb	17 40 57.9	
	comp=Z,9.9nm,1.1s						
JAY	**Jayapura**	**48.83**	**295**	LR	LR	17 58 57.9	
	comp=Z,54nm,21.3s,baz=16,slow=33						
GUMO	**Guam**	**56.84**	**313**	LR	LR	18 06 14.5	
	comp=Z,19nm,18.1s,baz=88,slow=36						
CASY	**Casey**	**56.87**	**208**	P	**P**	**17 41 50.5**	**+0.8**
SIJI	**Sorong**	**57.42**	**290**	LR	LR	18 05 03.4	
	comp=Z,24nm,18.9s,baz=105,slow=34						
BATI	**Baumata**	**59.10**	**276**	LR	LR	18 08 09.8	
	comp=Z,113nm,18.8s,baz=164,slow=37						
KAPI	**Kappang**	**64.99**	**279**	LR	LR	18 12 07.7	
	comp=Z,26nm,18.2s,baz=124,slow=37						
DAV	**Davao City (W)**	**66.62**	**293**	LR	LR	18 10 21.9	
	comp=Z,14nm,19.2s,baz=146,slow=34						
PMSA	**Palmer Station**	**72.63**	**155**	P	**P**	**17 43 33.0**	**+0.5**
KKM	**Kota Kinabalu**	**73.73**	**287**	P	**P**	**17 43 38.9**	**-1.1**
KKM				IAmb	IAmb	17 46 24.6	
	comp=Z,19nm,0.9s						
LEM	**Lembang**	**74.67**	**271**	LR	LR	18 18 26.8	
	comp=Z,43nm,18.2s,baz=134,slow=37						
SBUM	**Sibu**	**75.24**	**281**	P	**P**	**17 43 48.2**	**-0.5**
ASAJ	**Asahikawa**	**82.20**	**331**	LR	LR	18 20 21.2	
	comp=Z,37nm,18.4s,baz=184,slow=35						
PETK	**Petropavlovsk-**	**85.14**	**345**	P	**P**	**17 44 41.2**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=149,slow=5.6,SNR=9.2						
	comp=Z,2.2nm,0.7s						
PETK	**Petropavlovsk-**	**85.14**	**345**	P	**P**	**17 44 40.5**	**-0.5**
NVAR	**Mina Array Bea**	**86.34**	**42**	P	**P**	**17 44 48.3**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=214,slow=7.5,SNR=5.2						
	comp=Z,0.9nm,0.6s						
GSI	**Gunungsitoli**	**87.36**	**273**	P	**P**	**17 44 53.9**	**+0.9**
TXAR	**Lajitas Array**	**90.45**	**56**	P	**P**	**17 45 07.4**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=191,slow=6.1,SNR=4.7						
	comp=Z,0.5nm,0.8s						
ENH	**Enshi**	**92.29**	**304**	P	**P**	**17 45 16.9**	**+1.1**
ILAR	**Eielson Array**	**96.49**	**12**	P	**P**	**17 45 33.4**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=198,slow=4.7,SNR=5.3						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**118.26**	**310**	PKP	**PKPdf**	**17 50 52.3**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=66,slow=3.0,SNR=5.5						
KURK	**Kurchatov**	**121.41**	**314**		**PKPdf**	**17 50 58.1**	**-0.2**
KURBB	**Kurchatov Arra**	**121.45**	**314**	PKP	**PKPdf**	**17 50 58.1**	**-0.3**
	comp=Z,0.5nm,0.2s,baz=96,slow=2.1,SNR=4.9						
BVAR	**Borovoye Array**	**126.70**	**316**	PKP	**PKiKP**	**17 51 08.7**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=5.2						
FINES	**FINESS Array B**	**144.61**	**342**	PKP	**PKPab**	**17 51 39.5**	**-0.3**
	comp=Z,6.2nm,0.8s,baz=41,slow=2.4,SNR=12						
KBZ	**Khabaz**	**145.77**	**306**	PKPbc	**PKiKP**	**17 51 49.9**	**+1.9**
	comp=Z,3.3nm,1.2s,baz=181,slow=1.8,SNR=3.6						
GEVA	**Gevas**	**146.38**	**296**	PKPdf	**PKPdf**	**17 51 44.5**	**-0.8**
GURO	**Guroymak-BITLI**	**147.16**	**297**	PKPbc	**PKPbc**	**17 51 49.4**	**+0.5**
NC303	**NORSAR Array S**	**147.65**	**353**	PKPbc	**PKPbc**	**17 51 49.0**	**-0.2**
NB2	**NORSAR Subarra**	**147.85**	**353**	PKP	**PKPbc**	**17 51 49.9**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=7.9,slow=2.9						
NOA	**NORSAR Array B**	**147.85**	**353**	PKPbc	**PKPbc**	**17 51 50.0**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=13,slow=4.5,SNR=8.6						
HFS	**Hagfors**	**148.43**	**351**	PKPbc	**PKPbc**	**17 51 51.0**	**-0.4**
	comp=Z,6.6nm,0.7s,baz=54,slow=5.8,SNR=8.7						
AKASG	**Malin Array Be**	**151.32**	**325**	PKPbc	**PKPbc**	**17 51 57.2**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=46,slow=2.4,SNR=8.0						
AKASG	**Malin Array Be**	**151.32**	**325**		**PKPbc**	**17 51 56.6**	**-2.1**
TORD	**Torodi Ar. Bea**	**163.83**	**173**	PKPab	**PKPab**	**17 53 03.1**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=200,slow=6.2,SNR=6.3						

DJA 27 17:35:31.4±0.6, 7°S±10′×11°5E±°, h389km±8km, M3.7/22, mB4.4/1, mb3.7/4, MLv3.7/22, Mw(mB)3.5/1, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.91**	**171**	P	Pn	17 36 21.6	+0.6
RTBI	**Rangdo, Negare**	**1.12**	**207**	P	Pn	17 36 22.4	+0.6
DNP	**Denpasar**	**1.23**	**192**	P	Pn	17 36 22.1	-0.1
ABJI	**Asem Bagus**	**1.26**	**255**	P	Pn	17 36 22.4	+0.1
IGBI	**Denpasar**	**1.39**	**193**	P	Pn	17 36 22.9	0.0
KMMI	**Kalianget**	**1.54**	**285**	P	Pn	17 36 24.0	+0.3
JAGI	**Jajag, Banyuwa**	**1.64**	**232**	P	Pn	17 36 23.8	-0.4
BLJI	**Banyuglugur**	**1.87**	**261**	P	Pn	17 36 25.9	+0.4
TWSI	**Taliwang, Sumb**	**1.90**	**132**	P	Pn	17 36 25.7	0.0
PLAI	**Plampang**	**2.67**	**121**	P	Pn	17 36 31.0	-0.1
DBNI	**Kabupaten Domp**	**3.01**	**110**	P	Pn	17 36 33.9	0.0
SJI	**Sawahan**	**3.67**	**265**	P	Pn	17 36 39.5	-0.3
SNJI	**Sawahan-Nganju**	**3.68**	**265**	P	Pn	17 36 39.9	-0.1
PCJI	**Pacitan**	**4.31**	**260**	P	Pn	17 36 45.5	-0.3
WBSI	**Waikabubak, Su**	**4.45**	**119**	P	Pn	17 36 47.5	+0.2
UGM	**Wanagama**	**4.91**	**264**	P	Pn	17 36 51.8	-0.3
WSI	**Waingapu**	**5.26**	**115**	P	Pn	17 36 55.2	-0.5
	90nm,0.9s						
EDFI	**Ende, Flores**	**6.30**	**102**	P	Pn	17 37 07.3	+0.2

*MDD **27** 17:41:24.8±0.9, 36°68N×9°73W, h24km±8km, mb_Lg3.0/13, Error ellipse: s-maj=6.7km s-min=3.6km az=78.0*
*CNRM **27** 17:41:24.4, 36°33N×9°11W, h0km, ML2.5*
*SFS **27** 17:41:25.3, 36°68N×9°71W, h29km, ML3.0/10, ML2.7/14, MLv2.5/14*
*INMG **27** 17:41:26.4±1.4, 36°75N×9°67W, h20km±4km, ML2.2, Error ellipse: s-maj=5.3km s-min=3.4km az=47.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
*IGIL **27** 17:41:26.8, 36°77N×9°63W, h18km, ML2.0*

ISC 27 17:41:20.7±1.8, 36.69N±0.04×9.71W±0.06, h15km±11km, n60, σ1s85/109, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.84**	**58**	Pg	**Pn**	**17 41 40.6**	**+2.5**
PFVI				Sg	**Sn**	**17 41 51.1**	**+1.0**
PFVI	**Vila Bisbo**	**0.84**	**58**	*eP*	**Pn**	**17 41 40.5**	**+2.5**
PFVI				*eS*	**Sn**	**17 41 51.1**	**+1.0**
PFVI				*i* IAML		17 41 51.6	
PFVI				*i* IAML		17 41 51.8	
PFVI				*i* IAML		17 41 51.9	
PFVI	**Vila Bisbo**	**0.84**	**58**	P	**Pn**	**17 41 39.1**	**+1.1**
PFVI				S	**Sn**	**17 41 51.1**	**+1.0**
MORF	**Marmelete**	**1.05**	**54**	*eP*	**Pn**	**17 41 43.5**	**+2.6**
MORF				*eS*	**Sn**	**17 41 55.9**	**+0.5**
MORF				IAML		17 41 56.8	
	comp=E,62nm,0.2s						
MORF	**Marmelete**	**1.05**	**54**	*eP*	**Pn**	**17 41 43.5**	**+2.6**
MORF				*eS*	**Sn**	**17 41 56.1**	**+0.8**
MORF				*i* IAML		17 41 57.0	
MORF				*i* IAML		17 41 58.7	
MORF				*i* IAML		17 41 58.7	
PTEO	**Sao Teotonio**	**1.17**	**42**	*eP*	**Pn**	**17 41 45.2**	**+2.6**
PTEO				*eS*	**Sn**	**17 41 59.2**	**+1.0**
PTEO				*i* IAML		17 41 59.6	
PTEO				*i* IAML		17 41 59.9	
PTEO				*i* IAML		17 42 05.6	
PBDV	**Barranco-do-Ve**	**1.53**	**68**	Pn	**Pg**	**17 41 49.8**	**-0.3**
PBDV				Sn	**Sb**	**17 42 07.9**	**-0.2**
PBDV	**Barranco-do-Ve**	**1.53**	**68**	*eP*	**Pg**	**17 41 49.9**	**-0.3**
PBDV				*eS*	**Sb**	**17 42 08.2**	**+0.1**
PBDV				*i* IAML		17 42 11.1	
PBDV				*i* IAML		17 42 13.4	
PBDV				*i* IAML		17 42 13.7	
PCVE	**Castro Verde**	**1.64**	**54**	Pn	**Pg**	**17 41 51.8**	**-0.4**
PCVE				Sn	**Sb**	**17 42 10.5**	**-0.5**
PCVE	**Castro Verde**	**1.64**	**54**	*eP*	**Pg**	**17 41 51.8**	**-0.4**
PCVE				*eS*	**Sb**	**17 42 10.6**	**-0.5**
PCVE				*i* IAML		17 42 12.2	
PCVE				*i* IAML		17 42 12.2	
PCVE				*i* IAML		17 42 12.8	
MESJ	**Messejana**	**1.66**	**46**	*eP*	**Pg**	**17 41 51.8**	**-0.8**
MESJ				*eS*	**Sn**	**17 42 10.2**	**-0.1**
MESJ				IAML		17 42 11.6	
	comp=N,6.5nm,0.1s						
MESJ	**Messejana**	**1.66**	**46**	*eP*	**Pg**	**17 41 51.8**	**-0.8**
MESJ				*eS*	**Sb**	**17 42 10.7**	**-0.9**
MESJ				*i* IAML		17 42 13.9	
MESJ				*i* IAML		17 42 22.5	
MESJ				*i* IAML		17 42 25.0	
PVAQ	**Vaqueiros**	**1.75**	**65**	*eP*	**Pb**	**17 41 53.3**	**+0.7**
PVAQ				*eS*	**Sn**	**17 42 13.1**	**+0.5**
PVAQ				*i* IAML		17 42 14.2	
PVAQ				*i* IAML		17 42 15.1	
PVAQ				*i* IAML		17 42 19.6	
EGRO	**El Granado**	**1.97**	**64**	Pn	**Pb**	**17 41 56.7**	**+0.3**
EGRO				Sn	**Sn**	**17 42 18.1**	**0.0**
EGRO	**El Granado**	**1.97**	**64**	Pn	**Pb**	**17 41 56.6**	**+0.3**
EGRO				Sn	**Sn**	**17 42 18.6**	**+0.5**
EGRO				*i* lVmb_Lg		17 42 23.5	
PBEJ	**Beja**	**1.99**	**47**	*eS*	**Sn**	**17 42 18.8**	**+0.3**
PBEJ				*i* IAML		17 42 20.0	
PBEJ				*i* IAML		17 42 20.2	
PBEJ				*i* IAML		17 42 20.6	
MOE	**Montemor**	**2.13**	**30**	*eP*	**Pb**	**17 41 58.4**	**-0.6**
MOE				*eS*	**Sn**	**17 42 22.5**	**+0.5**
MOE				*i* IAML		17 42 23.5	
MOE				*i* IAML		17 42 23.8	
MOE				*i* IAML		17 42 25.6	
EVO	**Evora**	**2.28**	**36**	Sn	**Sn**	**17 42 25.4**	**-0.4**
EVO	**Evora**	**2.28**	**36**	*eP*	**Pn**	**17 42 00.1**	**+2.1**
EVO				*eS*	**Sn**	**17 42 25.5**	**-0.3**
EVO				*i* IAML		17 42 25.7	
EVO				*i* IAML		17 42 26.2	
EVO				*i* IAML		17 42 28.4	
PMAFR	**Mafra**	**2.29**	**8**	Pn	**Pb**	**17 42 00.4**	**-1.4**
PMAFR				Sn	**Sn**	**17 42 26.1**	**+0.1**
PMAFR	**Mafra**	**2.29**	**8**	*eP*	**Pb**	**17 42 00.3**	**-1.4**
PMAFR				*eS*	**Sn**	**17 42 26.1**	**+0.1**
PMAFR				*i* IAML		17 42 27.8	
PMAFR				*i* IAML		17 42 28.1	
PMAFR				*i* IAML		17 42 28.2	
PARRA	**Arraiolos**	**2.50**	**31**	*eP*	**Pn**	**17 42 03.1**	**+2.1**
PARRA				*eS*	**Sn**	**17 42 31.3**	**+0.1**
PARRA				*i* IAML		17 42 32.5	
PARRA				*i* IAML		17 42 32.6	
PARRA				*i* IAML		17 42 32.9	
PBAR	**Barrancos**	**2.59**	**54**	Pn	**Pn**	**17 42 04.7**	**+2.5**
PBAR				Sn	**Sn**	**17 42 33.6**	**+0.2**
PBAR	**Barrancos**	**2.59**	**54**	*eP*	**Pn**	**17 42 04.9**	**+2.7**
PBAR				*eS*	**Sn**	**17 42 34.0**	**+0.6**
PBAR				*i* IAML		17 42 34.8	
PBAR				*i* IAML		17 42 35.1	
PBAR				*i* IAML		17 42 35.7	
PMTG	**Montargil**	**2.65**	**26**	*eP*	**Pn**	**17 42 05.6**	**+2.6**
PMTG				*eS*	**Sn**	**17 42 34.0**	**-0.9**
PMTG				*i* IAML		17 42 35.9	
PMTG				*i* IAML		17 42 36.5	
PMTG				*i* IAML		17 42 36.6	
EMIN	**Mina Concepcio**	**2.66**	**65**	Pn	**Pn**	**17 42 05.2**	**+2.1**
EMIN				Sn	**Sn**	**17 42 34.6**	**-0.4**
EMIN	**Mina Concepcio**	**2.66**	**65**	Pn	**Pn**	**17 42 05.3**	**+2.3**
EMIN				Sn	**Sn**	**17 42 34.7**	**-0.3**
EMIN				*i* lVmb_Lg		17 42 39.0	
PESTR	**Estremoz**	**2.75**	**37**	Pn	**Pn**	**17 42 06.1**	**+1.7**
PESTR				Sn	**Sn**	**17 42 36.4**	**-0.9**
PESTR	**Estremoz**	**2.75**	**37**	*eP*	**Pn**	**17 42 06.3**	**+1.9**
PESTR				*eS*	**Sn**	**17 42 36.5**	**-0.8**
PESTR				*i* IAML		17 42 41.3	
PESTR				*i* IAML		17 42 41.3	
PESTR				*i* IAML		17 42 41.6	
PSBE	**So Bento**	**2.91**	**14**	*eP*	**Pn**	**17 42 09.2**	**+2.6**
PSBE				*eS*	**Sn**	**17 42 41.1**	**-0.3**
PSBE				*i* IAML		17 42 43.7	
PSBE				*i* IAML		17 42 43.8	
PSBE				*i* IAML		17 42 45.4	
ESPR	**Espera**	**3.10**	**85**	Pn	**Pn**	**17 42 11.7**	**+2.6**
ESPR				Sn	**Sn**	**17 42 45.9**	**0.0**
ESPR	**Espera**	**3.10**	**85**	Pn	**Pn**	**17 42 11.7**	**+2.6**
ESPR				Sn	**Sn**	**17 42 46.3**	**+0.4**
ESPR				*i* lVmb_Lg		17 42 48.5	
PSARD	**Sardoal**	**3.15**	**22**	*eP*	**Pn**	**17 42 12.3**	**+2.4**
PSARD				*eS*	**Sn**	**17 42 46.3**	**-1.0**
PSARD				*i* IAML		17 42 48.3	
PSARD				*i* IAML		17 42 49.0	
PSARD				*i* IAML		17 42 49.3	
PMRV	**Marv??o**	**3.29**	**33**	*eP*	**Pn**	**17 42 13.9**	**+2.1**
PMRV				*eS*	**Sn**	**17 42 49.4**	**-1.3**
PMRV				*i* IAML		17 42 50.7	
PMRV				*i* IAML		17 42 51.6	
PMRV				*i* IAML		17 42 52.2	
PCAS	**Casmilo, Conde**	**3.49**	**15**	*eP*	**Pn**	**17 42 17.4**	**+2.8**
PCAS				*eS*	**Sn**	**17 42 55.4**	**-0.2**
PCAS				*i* IAML		17 42 56.4	
PCAS				*i* IAML		17 42 56.7	
PCAS				*i* IAML		17 42 57.5	
PCBR	**Castelo Branco**	**3.61**	**29**	*eS*	**Sn**	**17 42 57.6**	**-0.8**
E1302	**La Puebla de C**	**3.61**	**82**	Pn	**Pn**	**17 42 18.8**	**+2.6**
E1302				Sn	**Sn**	**17 42 59.6**	**+1.1**
E1302				*i* lVmb_Lg		17 43 06.8	
ECAB	**El Cabril**	**3.69**	**67**	Pn	**Pn**	**17 42 19.8**	**+2.6**
ECAB				Sn	**Sn**	**17 42 59.0**	**-0.6**
ECAB	**El Cabril**	**3.69**	**67**	Pn	**Pn**	**17 42 20.0**	**+2.7**
ECAB				Sn	**Sn**	**17 42 59.7**	**-0.9**
ECAB				*i* lVmb_Lg		17 43 01.2	
AVE	**Averroes**	**3.87**	**150**	Sn	**Sn**	**17 43 03.6**	**-1.4**
EADA	**Adamuz**	**4.35**	**69**	Pn	**Pn**	**17 42 28.9**	**+2.6**
EADA				Sn	**Sn**	**17 43 15.6**	**-1.1**
EADA	**Adamuz**	**4.35**	**69**	Pn	**Pn**	**17 42 29.4**	**+3.1**
EADA				Sn	**Sn**	**17 43 15.3**	**-1.4**
EADA				*i* lVmb_Lg		17 43 21.7	
EPLA	**Plasencia**	**4.42**	**39**	Pn	**Pn**	**17 42 29.7**	**+2.5**
EPLA				Sn	**Sn**	**17 43 17.8**	**-0.7**
EPLA				*i* lVmb_Lg		17 43 18.2	
SRHM	**Skhour des Reh**	**4.46**	**160**	P	**Pn**	**17 42 32.1**	**+4.1**
SRHM				S	**Sn**	**17 43 18.4**	**-1.2**
CIBOR	**Castaar de Ib**	**4.48**	**48**	Pn	**Pn**	**17 42 29.6**	**+1.4**
CIBOR				Sn	**Sn**	**17 43 18.6**	**-1.4**
IFR	**Ifrane**	**4.91**	**129**	Pn	**Pn**	**17 42 35.6**	**+1.3**
IFR				Sn	**Sn**	**17 43 27.1**	**-3.8**
POLO	**Lamas de Olo**	**4.91**	**17**	*eP*	**Pn**	**17 42 30.3**	**+2.2**
POLO				*eS*	**Sn**	**17 43 28.9**	**-1.9**
POLO				*i* IAML		17 43 30.8	
POLO				*i* IAML		17 43 32.0	
POLO				*i* IAML		17 43 32.3	
MVO	**Moncorvo**	**4.94**	**24**	*eP*	**Pn**	**17 42 36.6**	**+2.2**
MVO				*eS*	**Sn**	**17 43 29.0**	**-2.3**
MVO				*i* IAML		17 43 30.7	
MVO				*i* IAML		17 43 31.2	
MVO				*i* IAML		17 43 31.8	
PAB	**San Pablo**	**5.10**	**54**	Pn	**Pn**	**17 42 38.7**	**+2.0**
PAB				Sn	**Sn**	**17 43 33.3**	**-2.1**
PAB				*i* lVmb_Lg		17 43 35.7	
PSIM	**Granatula de C**	**5.18**	**64**	Pn	**Pn**	**17 42 39.4**	**+1.6**
PSIM				Sn	**Sn**	**17 43 35.6**	**-1.6**
ELOB	**Lobios**	**5.33**	**13**	Pn	**Pn**	**17 42 41.2**	**+1.4**
ELOB				Sn	**Sn**	**17 43 37.4**	**-3.6**
ELOB				*i* lVmb_Lg		17 43 43.2	
PGAV	**Gavieira, Arco**	**5.39**	**12**	*eS*	**Sn**	**17 43 39.8**	**-2.7**
PGAV				*i* IAML		17 43 43.6	
PGAV				*i* IAML		17 43 44.2	
PGAV				*i* IAML		17 43 44.5	
MD31	**MD31**	**5.58**	**132**	P	**Pn**	**17 42 41.7**	**-1.6**
MD31				S	Sn	17 43 39.3	-7.9
PBRG	**Braganca**	**5.61**	**23**	*eS*	**Sn**	**17 43 45.6**	**-2.2**
TISM	**Timmit**	**5.65**	**150**	P	**Pn**	**17 42 43.1**	**-1.1**
TISM				S	Sn	17 43 42.0	-6.7
MDT	**Midelt**	**5.71**	**131**	P	**Pn**	**17 42 43.5**	**-1.6**
MDT				S	**Sn**	**17 43 44.5**	**-5.9**
GUD	**Guadarrama**	**5.87**	**46**	Pn	**Pn**	**17 42 49.4**	**+2.0**
GUD				Sn	**Sn**	**17 43 52.2**	**-2.3**
GUD				*i* lVmb_Lg		17 44 01.2	
EAGO	**Agolada(Pontev**	**6.24**	**11**	Sn	**Sn**	**17 44 01.6**	**-1.6**
EAGO				*i* lVmb_Lg		17 44 07.3	
OUZM	**OUZ**	**6.26**	**156**	P	**Pn**	**17 42 52.9**	**+0.2**
OUZM				S	**Sn**	**17 43 59.8**	**-4.4**
JBK	**JBK**	**6.28**	**110**	P	Pn	17 42 49.7	-3.3

*BER **27** 18:11:47.6±3.0, 81°21N×3°45W, h18km±30km, Mw3.2, ML1.9(DNK), Confirmed Earthquake*

*DNK **27** 18:11:47.6±3.3, 81°05N×2°73W, h26km±26km, ML1.9, Presumed earthquake*
*FCIAR **27** 18:11:51.0, 81°11N×0°66E, h10km, station OMEGA has station magnitude of 3.20 station ZFI2 has station magnitude of 3.20*

ISC 27 18:11:42.4±0.8, 81°14N±0°07×3°40W±0°04, h10km, n19, σ2s79/33, 1C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.06**	**290**	*eP*	**Pb**	**18 12 20.5**	**+0.7**
NOR	**Nord**	**2.06**	**290**	*i* P	**Pb**	**18 12 20.4**	**+0.7**
NOR				*i* S	**Sb**	**18 12 46.3**	**+1.1**
NOR				IAML		18 13 04.4	
	comp=Z,12nm,1.0s						
KBS	**Kingsbay**	**3.46**	**122**	*eP*	**Pn**	**18 12 38.7**	**+2.5**
KBS				*eS*	**Sn**	**18 13 14.0**	**-3.1**
KBS				IAML		18 13 19.3	
	comp=Z,4.6nm,0.5s						
KBS	**Kingsbay**	**3.46**	**122**	*i* P	**Pn**	**18 12 38.7**	**+2.5**
KBS				*i* S	**Sn**	**18 13 14.1**	**-3.0**
SPA0	**Spitsbergen Ar**	**4.61**	**120**	*eP*	**Pn**	**18 12 55.2**	**+3.2**
SPA0				IAML		18 12 56.9	
	comp=Z,13nm,0.2s						
SPA0				*eS*	**Sn**	**18 13 44.6**	**-0.9**
SPA0	**Spitsbergen Ar**	**4.61**	**120**	*eP*	**Pn**	**18 12 54.2**	**+2.2**
SPA0				*eS*	**Sn**	**18 13 44.0**	**-1.5**
DAG	**Danmarks Havn**	**5.25**	**221**	*eP*	**Pn**	**18 13 03.5**	**+2.7**
DAG				*eS*	**Sn**	**18 13 57.3**	**-3.9**
DAG	**Danmarks Havn**	**5.25**	**221**	*i* P	**Pn**	**18 13 03.5**	**+2.7**
DAG				*i* S	**Sn**	**18 13 58.0**	**-3.3**
DAG				IAML		18 14 05.9	
	comp=Z,5.6nm,0.6s						
HSPB	**Hornsund (broa**	**5.46**	**129**	*eP*	**Pn**	**18 13 07.0**	**+3.4**
HSPB				*eS*	**Sn**	**18 14 06.8**	**+0.5**
HSPB				IAML		18 14 08.9	
	comp=Z,1.1nm,0.4s						
HSPB	**Hornsund (broa**	**5.46**	**129**	*eP*	**Pn**	**18 13 06.3**	**+2.7**
HSPB				*eS*	**Sn**	**18 14 04.6**	**-1.7**
HOPEN	**Hopen**	**7.11**	**115**	*eP*	**Pn**	**18 13 28.6**	**+2.4**
DBG	**Daneborg**	**7.69**	**216**	*eP*	**Pn**	**18 13 36.4**	**+2.2**
DBG	**Daneborg**	**7.69**	**216**	*i* P	**Pn**	**18 13 36.4**	**+2.2**
DBG				*i* S	**Sn**	**18 14 55.3**	**-5.9**
DBG				IAML		18 15 14.7	
	comp=Z,2.6nm,0.6s						
ZFI2	**Zemlya Franca-**	**7.81**	**67**	*eP*	**Pn**	**18 13 37.6**	**+1.8**
	comp=Z,7.6nm,2.4s						
ZFI2				*eS*	**Sn**	**18 15 00.1**	**-4.0**
OMEGA	**Omega**	**7.83**	**67**	*eP*	**Pn**	**18 13 37.6**	**+1.4**
	comp=Z,6.9nm,2.4s						
OMEGA				*eS*	**Sn**	**18 15 00.1**	**-4.5**
NEEM	**North Greenlan**	**9.31**	**272**	*i* P	**Pn**	**18 13 58.5**	**+1.8**
NEEM				*i* S	**Sn**	**18 15 38.3**	**-3.2**
NEEM	**North Greenlan**	**9.31**	**272**	*i* P	**Pn**	**18 13 58.5**	**+1.8**
NEEM				*i* S	**Sn**	**18 15 38.3**	**-3.2**
NEEM				IAML		18 15 50.9	
	comp=Z,2.7nm,0.7s						
SUMG	**Summit**	**11.41**	**241**	*i* P	**Pn**	**18 14 26.4**	**+0.9**
SUMG				*i* S	Sn	18 16 23.9	-8.9
SUMG	**Summit**	**11.41**	**241**	*i* P	**Pn**	**18 14 26.4**	**+0.9**
SUMG				*i* S	Sn	18 16 23.9	-8.9
SUMG				IAML		18 16 33.5	
	comp=Z,2.2nm,0.7s						

*IDC **27** 18:22:54.2±2.9, 8°66S×118°97E, h0km, mb3.2/3, mbtmp3.3/3, MS3.5/1, Error ellipse: s-maj=205.0km s-min=30.9km az=57.0*
*DJA **27** 18:23:04.1±0.7, 9°S±5°×11°8E±°, h29km±8km, M4.1/15, mb4.2/2, MLv4.0/15*

ISC 27 18:23:02.9±1.6, 9°33S±0°08×118°50E±0°04, h25km±16km, n19, σ1s36/21, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBNI	**Kabupaten Domp**	**0.85**	**347**	P	**Pn**	**18 23 19.9**	**+0.6**
DBNI				S	**Sn**	**18 23 32.3**	**+1.4**
PLAI	**Plampang**	**0.87**	**305**	P	**Pb**	**18 23 19.9**	**+0.5**
PLAI				S	**Sn**	**18 23 32.3**	**+0.8**
WBSI	**Waikabubak, Su**	**0.93**	**109**	P	**Pn**	**18 23 21.4**	**+0.9**
WBSI				S	**Sn**	**18 23 34.7**	**+1.6**
TWSI	**Taliwang, Sumb**	**1.70**	**290**	P	**Pn**	**18 23 31.7**	**+0.7**
TWSI				S	**Sn**	**18 23 52.7**	**+0.7**
WSI	**Waingapu**	**1.81**	**101**	P	**Pn**	**18 23 33.3**	**+0.8**
WSI				S	**Sb**	**18 23 56.3**

baz=50,slow=37
TXAR Lajitas Array 19.89 208 P P 18 40 58.9 +0.3
0.4nm,0.8s,baz=25,slow=14,SNR=3.9

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*AZER **27** 18:46:56.5, 38.48N×44.45E, h5km, ml2.6*
*ISK **27** 18:46:57.0, 38.41N×44.36E, h5km, ML2.7/8*
*TEH **27** 18:46:57.2, 38.48N×44.36E, h10km±92km, ML2.7, Presumed earthquake*

ISC 27 18:46:57.4±1.2, 38.43N±0.03×44.43E±0.02, h7km±11km, n24, σ1§47/37, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.84**	**282**	Pg	**Pg**	**18 47 12.9**	**-0.6**
VANB				Sg	**Sg**	**18 47 24.3**	**-0.1**
ISHB	**Shabestar**	**0.94**	**98**	Pg	**Pg**	**18 47 15.6**	**+0.1**
MAKU	**Maku**	**0.95**	**12**	Pg	**Pg**	**18 47 14.4**	**-1.2**
MAKU				Sg	**Sg**	**18 47 27.5**	**-0.5**
IMRD	**Marand**	**1.04**	**74**	Pg	**Pn**	**18 47 18.0**	**-0.4**
HAKT	**HAKKARI**	**1.04**	**214**	P	**Pn**	**18 47 18.5**	**-0.1**
HAKT				S	**Sn**	**18 47 36.4**	**+3.0**
NAX	**Nakhchivan**	**1.12**	**48**	P	**Pn**	**18 47 19.1**	**-0.4**
NAX				S	**Sn**	**18 47 35.8**	**+0.7**
AKDM	**Akdamar-Van**	**1.15**	**266**	Pn	**Pg**	**18 47 18.1**	**-1.3**
AKDM				Sn	**Sn**	**18 47 35.1**	**-0.9**
SBZ	**Shahbuz**	**1.30**	**42**	P	**Pb**	**18 47 22.2**	**-0.1**
SBZ				S	**Sg**	**18 47 40.8**	**+1.4**
ORD	**Ordubad**	**1.32**	**67**	P	**Pg**	**18 47 22.9**	**+0.2**
ORD				S	**Sg**	**18 47 42.4**	**+2.5**
HYR	**Heyderabad**	**1.33**	**14**	P	**Pg**	**18 47 22.8**	**-0.1**
HYR				S	**Sg**	**18 47 44.2**	**+4.0**
CUKT	**Cukurca**	**1.35**	**209**	Pn	**Pg**	**18 47 23.1**	**-0.1**
ITBZ	**Tabriz**	**1.36**	**98**	Pg	**Pg**	**18 47 23.5**	**0.0**
IAZR	**Azarshahr**	**1.43**	**121**	Pg	**Pg**	**18 47 25.9**	**+1.0**
IGDI	**IGDIR**	**1.47**	**349**	P	**Pg**	**18 47 25.6**	**0.0**
IGDI				S	**Sg**	**18 47 47.1**	**+2.6**
AGRB	**Hanur-Agry**	**1.61**	**316**	Pn	**Pb**	**18 47 27.0**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.64**	**296**	Pn	**Pb**	**18 47 27.4**	**-0.6**
GNI	**Garni**	**1.74**	**8**	Pn	**Pg**	**18 47 30.1**	**-0.6**
GURO	**Guroymak-BITLI**	**1.89**	**275**	Pn	**Pb**	**18 47 31.1**	**-1.1**
IHRS	**Heris**	**2.05**	**92**	Pn	**Pg**	**18 47 36.1**	**-0.7**
GDB	**GEDABAY**	**2.51**	**24**	P	**Pb**	**18 47 41.8**	**-1.0**
GDB				S	**Sg**	**18 48 16.8**	**-1.2**
SVAN	**Silvan-Diyarba**	**2.56**	**265**	Pn	**Pb**	**18 47 40.4**	**+1.1**
GANJ	**Ganja**	**2.66**	**33**	P	**Pb**	**18 47 43.9**	**-1.3**
GANJ				S	**Sb**	**18 48 19.7**	**+1.7**
YRD	**Yardimli**	**3.02**	**79**	P	**Pb**	**18 47 49.4**	**-2.1**
YRD				S	**Sb**	**18 48 26.9**	**-1.8**
LRK	**Lerik**	**3.07**	**85**	P	**Pb**	**18 47 50.0**	**-2.5**
LRK				S	**Sb**	**18 48 29.4**	**-0.7**

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*NEIC **27** 18:48:53.2±1.6, 20.9S±0.1×177.8W±0.2, h520km±2km, mb4.2/15, Error ellipse: s-maj=27.5km s-min=17.7km az=73.0*
*IDC **27** 18:48:56.4±13.0, 21.12S×178.05W, h538km±122km, mb3.2/4, mbtmp4.0/4, Error ellipse: s-maj=151.0km s-min=43.2km az=135.0*

ISC 27 18:48:56.0±1.4, 21.1S±0.2×177.9W±0.2, h550km, n26, σ1§04/25, mb4.1/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.02**	**311**	P	**P**	18 50 31.8	+5.5
CTAO	**Charters Tower**	**33.49**	**265**	P	**P**	**18 54 50.6**	**+0.2**
CTAO				IAmb	IAmb	18 55 21.5	
	comp=Z,14nm,1.2s						
TOO	**Toolangi**	**35.61**	**234**	P	**P**	**18 55 08.6**	**+0.6**
TOO				IAmb	IAmb	18 55 17.5	
	comp=Z,6.8nm,1.1s						
COEN	**Coen**	**37.67**	**274**	P	**P**	**18 55 23.6**	**-1.5**
COEN				IAmb	IAmb	18 55 45.7	
	comp=Z,7.6nm,1.3s						
BBOO	**Buckleboo**	**42.35**	**244**	P	**P**	**18 56 03.2**	**+0.9**
BBOO				IAmb	IAmb	18 56 09.1	
	comp=Z,15nm,1.1s						
WR8	**Warramunga Arr**	**44.43**	**263**	P	**P**	**18 56 18.1**	**-0.5**
WR8				IAmb	IAmb	18 56 49.6	
	comp=Z,7.5nm,1.2s						
AS31	**Alice Springs**	**44.44**	**257**	P	**P**	**18 56 19.0**	**+0.2**
ASAR	**Alice Springs**	**44.44**	**257**	P	**P**	**18 56 19.1**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=90,slow=7.1,SNR=74						
ASAR				PcP	**PcP**	**18 57 51.8**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=99,slow=3.7,SNR=5.8						
	comp=Z,2.3nm,0.6s						
ASAR	**Alice Springs**	**44.44**	**257**	P	**P**	**18 56 17.6**	**-1.2**
WB0	**Warramunga Arr**	**44.56**	**263**	P	**P**	**18 56 19.3**	**-0.4**
WB0				IAmb	IAmb	18 56 19.7	
	comp=Z,4.8nm,0.4s						
WRAB	**Tennant Creek**	**44.57**	**263**	P	**P**	**18 56 19.3**	**-0.5**
WRAB				IAmb	IAmb	18 56 23.4	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**44.58**	**263**	P	**P**	**18 56 19.5**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=97,slow=7.6,SNR=106						
WRA				PcP	**PcP**	**18 57 51.2**	**+0.3**
	comp=Z,0.7nm,1.1s,baz=97,slow=5.6,SNR=1.6						
	comp=Z,1.6nm,0.3s						
WRA	**Warramunga Arr**	**44.58**	**263**	P	**P**	**18 56 18.8**	**-1.0**
FORT	**Forrest**	**49.12**	**247**	P	**P**	**18 56 54.1**	**+0.2**
FORT				IAmb	IAmb	18 57 38.4	
	comp=Z,6.9nm,1.1s						
MTN	**Manton Dam**	**49.22**	**271**	P	**P**	**18 56 54.4**	**-0.5**
KNRA	**Kununurra**	**50.68**	**267**	P	**P**	**18 57 05.3**	**-0.2**
PSA00	**Pilbara Seismi**	**57.59**	**257**	P	**P**	**18 57 53.0**	**-1.1**
MBWA	**Marble Bar**	**57.78**	**258**	P	**P**	**18 57 54.3**	**-1.0**
QSPA	**South Pole Qui**	**69.01**	**180**	P	**P**	**18 59 05.9**	**-0.6**
QSPA				IAmb	IAmb	18 59 06.9	
	comp=Z,6.0nm,1.1s						
ILAR	**Eielson Array**	**88.85**	**13**	P	P	19 00 53.4	+2.1
	comp=Z,0.3nm,0.8s,baz=209,slow=4.7,SNR=3.6						
	comp=Z,0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**90.35**	**290**	P	**P**	**19 01 01.6**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=105,slow=2.7,SNR=5.6						
	comp=Z,0.5nm,0.6s						
BVAR	**Borovoye Array**	**119.54**	**320**	PKP	**PKiKP**	**19 06 44.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=90,slow=4.6,SNR=4.7						
HFS	**Hagfors**	**140.10**	**351**	PKhKP	PKPpre	19 07 17.8	
	comp=Z,1.8nm,0.8s,baz=64,slow=6.8,SNR=4.7						
AKASG	**Malin Array Be**	**143.53**	**331**	PKP	**PKPdf**	**19 07 27.1**	**-1.0**
	comp=Z,1.2nm,0.4s,baz=44,slow=4.2,SNR=8.5						
AKBB	**Malin Array Si**	**143.53**	**331**	PKPdf	**PKPdf**	**19 07 26.5**	**-1.6**
KIEV	**Kiev**	**143.54**	**331**	PKPdf	**PKPdf**	**19 07 26.7**	**-1.5**

IDC 27 18:54:34.9±4.1, 20.28N×122.02E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=308.6km s-min=29.1km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**41.72**	**319**	P	P	19 02 25.5	-0.2
	0.4nm,1.0s,baz=103,slow=9.9,SNR=2.3						
	0.4nm,1.0s						
WRA	**Warramunga Arr**	**41.75**	**162**	P	P	19 02 25.6	-0.6
	0.9nm,0.6s,baz=343,slow=9.0,SNR=8.9						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**45.19**	**165**	P	P	19 02 54.1	+0.3
	0.4nm,0.5s,baz=347,slow=6.7,SNR=13						
	0.4nm,0.5s						

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*SSNC **27** 19:02:05.4±1.6, 19.33N×78.66W, h25km±22km, MD3.5, ML3.0, Presumed earthquake*
*JSN **27** 19:02:06.0±1.2, 19.37N×78.27W, h0km±13km, MD4.2, MW3.9, Presumed earthquake*

ISC 27 19:02:00.5±1.1, 19.39N±0.05×78.57W±0.05, h14km, n13, σ2§41/16, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBCY	**The Bluff, Cay**	**1.17**	**287**	*eP*	**Pn**	**19 02 22.9**	**+0.5**
CBCY				*eS*	Sb	19 02 33.7	-3.8
CBCY				IAML		19 02 37.1	
	comp=N,200nm,0.2s						
CBCY				IAML		19 02 37.8	
	comp=E,227nm,0.2s						
LCCY	**Blossom Villag**	**1.45**	**281**	*eP*	**Pn**	**19 02 27.3**	**+1.0**
LCCY				IAML		19 02 43.9	
	comp=N,409nm,0.1s						
LCCY				IAML		19 02 44.0	
	comp=E,378nm,0.2s						
MTDJ	**Mount Denham**	**1.52**	**140**	*eP*	**Pb**	**19 02 29.6**	**+1.1**
MTDJ				*eS*	**Sn**	**19 02 45.0**	**-2.0**
MTDJ				*eSg*	**Sb**	**19 02 47.0**	**-0.7**
LMGC	**Las Mercedes**	**1.62**	**65**	*eP*	**Pg**	**19 02 31.1**	**-0.5**
LMGC				*eS*	**Sg**	**19 02 50.2**	**-2.5**
CCCC	**Cccc**	**1.95**	**23**	*eP*	**Pg**	**19 02 38.7**	**+0.8**
STH	**Stony Hill**	**2.12**	**128**	*eP*	**Pb**	**19 02 37.9**	**-0.8**
YAR	**Yar**	**2.29**	**65**	*eP*	**Pb**	**19 02 41.5**	**-0.2**
MARVS	**Santiago de Cu**	**2.59**	**76**	*eP*	**Pb**	**19 02 44.4**	**-2.2**
RCC	**Rio Carpintero**	**2.77**	**77**	*eP*	**Pn**	**19 02 46.8**	**+2.3**
MGV	**Manicaragua**	**3.01**	**334**	*eP*	**Pn**	**19 02 50.8**	**+3.1**
GTBY	**Guantanamo Bay**	**3.30**	**80**	*eP*	**Pb**	**19 02 55.7**	**-3.2**
QMBU	**Quimbuelo**	**3.63**	**77**	*eP*	**Pn**	**19 02 59.6**	**+3.3**
MASC	**Masc**	**4.16**	**79**	*eP*	**Pn**	**19 03 08.1**	**+4.5**

DJA 27 19:11:29.5±0.3, 8°S±2°×12°3E±°, h10km, M3.9/12, mb4.2/1, MLv3.7/12, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.88**	**225**	P	Pb	19 11 46.8	0.0
MMRI				S	Sb	19 11 58.9	+0.3
EDFI	**Ende, Flores**	**1.37**	**238**	P	Pn	19 11 54.1	-0.7
SOEI	**Soe**	**2.22**	**141**	P	Pn	19 12 08.0	+1.4
BATI	**Baumata**	**2.32**	**160**	P	Pb	19 12 11.5	0.0
BSSI	**Bau Bau, Buton**	**3.00**	**308**	P	Pn	19 12 18.0	+0.9
WSI	**Waingapu**	**3.02**	**237**	P	Pn	19 12 18.0	+0.6
BASI	**Baing, Sumba**	**3.15**	**226**	P	Pn	19 12 16.0	-3.2
WBSI	**Waikabubak, Su**	**3.79**	**244**	P	Pn	19 12 27.4	-0.7
KDI	**Kendari**	**4.03**	**357**	P	Pn	19 12 31.0	-0.4
DBNI	**Kabupaten Domp**	**4.53**	**263**	P	Pn	19 12 38.2	0.0
PLAI	**Plampang**	**5.09**	**260**	P	Pn	19 12 47.2	+1.2

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*BJI **27** 19:12:55.9, 3.31N×125.91E, h119km, mB5.2/59, mb5.0/88*
*MOS **27** 19:13:00.8±0.9, 3.84N×125.72E, h125km, mb5.3/49, MS4.3/8, Error ellipse: s-maj=7.2km s-min=4.2km az=115.4*
*NEIC **27** 19:13:02.2, 3.85N×125.78E, h130km*
*NEIC **27** 19:13:03.0±2.7, 3.80N±0.06×125.76E±0.08, h122km±1km, mb5.4/329, Mwb5.6/45, Mww5.5/29, Error ellipse: s-maj=13.2km s-min=9.6km az=261.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.58; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.64; $M_{r\theta}$-0.26; $M_{r\phi}$-0.79; $M_{\theta\phi}$2.51; Fault plane solution: $M_0$2.71000×10^{17} NP1:ϕ_s356.50000°, δ83.66000°, λ72.02000°. NP2:ϕ_s247.72000°, δ19.03000°, λ160.21000°. Principal axes: T 2.7358, Plg48.0000°, Azm247.0000°; N -0.0433, Plg18.0000°, Azm359.0000°; P -2.6925, Plg36.0000°, Azm102.0000°;*
*NEIC **27** 19:13:02.8, 3.85N×125.77E, h122km*
*IPGP **27** 19:13:02.0, 3.78N×125.78E, h120km, Mw5.6, Fault plane solution: NP1:ϕ_s250.00000°, δ27.00000°, λ158.00000°. NP2:ϕ_s360.00000°, δ80.00000°, λ64.00000°.*
*NEIC **27** 19:13:02.2, 3.85N×125.88E, h130km, Moment Tensor Solution. Duration: 29 Moment tensor: Scale 10^{17}Nm; M_{rr}0.90; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-0.50; $M_{r\theta}$-0.61; $M_{\theta\phi}$-0.36; $M_{r\phi}$2.05; Fault plane solution: $M_0$2.31000×10^{17} NP1: ϕ_s218.27000°, δ12.77000°, λ138.81000°. NP2: ϕ_s348.75000°, δ81.63000°, λ80.32000°. Principal axes: T 2.5401, Plg52.0000°, Azm248.0000°; N -0.5740, Plg10.0000°, Azm350.0000°; P -1.9661, Plg36.0000°, Azm87.0000°;*
*IDC **27** 19:13:02.6±0.6, 3.81N×125.75E, h126km±5km, mb5.0/41, mbtmp5.4/45, MS4.3/57 Error ellipse: s-maj=10.7km s-min=5.9km az=70.0*
*DJA **27** 19:13:03.2±0.2, 4.1N±2°×12.6E±°, h137km±1km, M5.5/211, mB6.0/187, mb5.8/211, MLv6.2/31, Mwv5.6/156, Mw(mB)5.7/187, MwMwp5.3/135, Mwp5.5/135*
*GFZ **27** 19:13:03.1, 3.85N×125.84E, h115km, MW5.6, Moment Tensor Solution. s110 Moment tensor: M_{rr}1.29; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-0.88; $M_{r\theta}$-0.37; $M_{r\phi}$-1.36; $M_{\theta\phi}$2.10; Fault plane solution: NP1:ϕ_s250.00000°, δ34.00000°, λ151.00000°. NP2:ϕ_s5.00000°, δ74.00000°, λ60.00000°. Principal axes: T 2.9100, Plg51.0000°, Azm240.0000°; N -0.2700, Plg29.0000°, Azm14.0000°; P -2.6300, Plg23.0000°, Azm118.0000°;*
*GCMT **27** 19:13:04.0±0.1, 3.79N±0.01×125.87E±0.01, h125km, MW5.6/157, Moment Tensor Solution. s140,c248; s157,c309; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}0.96±.03; $M_{\theta\theta}$0.02±.03; $M_{\phi\phi}$-0.98±.04; $M_{r\theta}$-0.43±.02; $M_{r\phi}$-1.67±.03; $M_{\theta\phi}$2.59±.03; Best double couple: $M_0$3.25900×10^{17} NP1:ϕ_s253.00000°, δ33.00000°, λ161.00000°. NP2:ϕ_s359.00000°, δ80.00000°, λ58.00000°. Principal axes: T 3.3080, Plg46.0000°, Azm236.0000°; N -0.0980, Plg32.0000°, Azm5.0000°; P -3.2100, Plg28.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 19:13:02.4±0.2, 3.82N±0.02×125.83E±0.03, h126km±1km, h127km:pP-P, n1140, σ1§63/1224, mb5.4/361, 62C-13D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.33**	**246**	P	**Pn**	**19 13 22.1**	**+1.9**
SGSI				S	**Sn**	**19 13 36.4**	**+2.7**
MNI	**Manado**	**2.56**	**203**	P	**Pn**	**19 13 45.4**	**+2.1**
MNI				S	**Sn**	**19 14 16.5**	**+1.8**
DAV	**Davao City (W)**	**3.24**	**356**	P	**Pn**	**19 13 55.2**	**+3.1**
	3µm,0.5s,baz=113,slow=1.8,SNR=42						
DAV				S	**Sn**	**19 14 33.7**	**+3.3**
	6µm,0.5s,baz=26,slow=3.9,SNR=6.9						
DAV	**Davao City (W)**	**3.24**	**356**		**Pn**	**19 13 52.6**	**+0.5**
DAV	**Davao City (W)**	**3.24**	**356**	P	**Pn**	**19 13 55.5**	**+3.4**
DAV				S	**Sn**	**19 14 34.6**	**+4.1**
DAV	**Davao City (W)**	**3.24**	**356**	P	**Pn**	**19 13 54.9**	**+2.8**
TNTI	**Ternate**	**3.40**	**153**		**Pn**	**19 13 54.2**	**+0.1**
TNTI				Sn	**Sn**	**19 14 27.0**	**-7.2**
TNTI	**Ternate**	**3.40**	**153**	P	**Pn**	**19 13 54.2**	**+0.1**
GTOI	**Gorontalo**	**4.24**	**222**	P	**Pn**	**19 14 07.9**	**+2.6**
MRSI	**Marisa**	**5.11**	**230**	P	**Pn**	**19 14 20.5**	**+3.5**
LUWI	**Luwuk**	**5.71**	**212**		**Pn**	**19 14 27.0**	**+1.8**
LUWI	**Luwuk**	**5.71**	**212**	P	**Pn**	**19 14 27.6**	**+2.5**
TOLI2	**Tolitoli**	**5.72**	**242**		**Pn**	**19 14 27.4**	**+2.2**
SANI	**Sanana**	**5.83**	**178**	P	**Pn**	**19 14 24.6**	**-2.1**
APSI	**Ampana**	**6.29**	**222**	P	**Pn**	**19 14 36.2**	**+3.3**
	12nm24µm2µm,1.1s						
MPSI	**Mapaga**	**6.86**	**240**	P	**Pn**	**19 14 43.5**	**+2.9**
	3.5nm11µm637nm,0.9s						
NLAI	**Namlea**	**7.13**	**170**	P	**Pn**	**19 14 43.5**	**-0.7**
SWI	**Sorong**	**7.15**	**130**	P	**Pn**	**19 14 44.5**	**0.0**
	6.3nm9µm17µm2µm,0.9s						
SIJI	**Sorong**	**7.16**	**130**	P	**Pn**	**19 14 44.5**	**0.0**
	956nm,0.6s,baz=337,slow=10,SNR=889						
SIJI				S	**Sn**	**19 15 60.0**	**-4.5**
	239nm,0.4s,baz=19,slow=23,SNR=6.1						
SIJI				LR	LR	19 17 36.0	
	comp=Z,8µm,18.6s,baz=309,slow=38						
SIJI	**Sorong**	**7.16**	**130**	P	**Pn**	**19 14 44.6**	**0.0**
	3.5nm7µm13µm895nm,0.6s						
MYLDM	**Lahad Datu**	**7.43**	**281**		Pn	19 14 53.6	+5.4
MYLDM	**Lahad Datu**	**7.43**	**281**	P	Pn	19 14 53.9	+5.6
	5.3nm17µm1µm,1.0s						
KRAI	**Karang Ratu**	**7.54**	**160**	P	**Pn**	**19 14 49.8**	**0.0**
PCI	**Palu**	**7.61**	**232**	P	**Pn**	**19 14 52.9**	**+2.2**
	3.6nm9µm1µm,0.9s						
MSAI	**Masohi**	**7.76**	**156**	P	**Pn**	**19 14 52.7**	**-0.1**
	5.8nm12µm862nm,1.0s						
AAI	**Ambon**	**7.82**	**162**	P	**Pn**	**19 14 52.8**	**-0.8**
TARAI	**Tarakan**	**8.26**	**267**	P	**Pn**	**19 15 02.5**	**+3.1**
	13µm12µm1µm,0.7s						
KDI	**Kendari**	**8.37**	**203**	P	**Pn**	**19 15 00.5**	**-0.4**
KKSI	**Kolaka, Sulawe**	**8.97**	**208**	P	**Pn**	**19 15 08.8**	**-0.2**
	363nm,0.9s						
TTSI	**Tana Toraja**	**9.09**	**221**	P	**Pn**	**19 15 13.4**	**+2.8**
	7µm12µm1µm,1.4s						
BNDI	**Bandanaira**	**9.23**	**154**	P	**Pn**	**19 15 12.7**	**+0.1**
	15µm985nm,0.8s						
MWPI	**Manokwari, Pap**	**9.46**	**120**	P	**Pn**	**19 15 17.6**	**+1.9**
	2µm,1.1s						
MMSI	**Mamuju**	**9.47**	**227**	P	**Pn**	**19 15 18.6**	**+2.8**
	9µm15µm808nm,1.7s						
SPSI	**Sidrap Palu**	**9.82**	**218**	P	**Pn**	**19 15 22.0**	**+1.5**
	7µm6µm559nm,0.9s						
KKM	**Kota Kinabalu**	**9.83**	**283**		**Pn**	**19 15 24.4**	**+3.7**
KKM	**Kota Kinabalu**	**9.83**	**283**	P	**Pn**	**19 15 23.8**	**+3.1**
	10µm5µm339nm,0.7s						
RKPI	**Ransiki, Papua**	**9.88**	**122**	P	**Pn**	**19 15 23.2**	**+1.9**
	13µm17µm1µm,1.1s						
PMSI	**Majene**	**10.03**	**224**	P	**Pn**	**19 15 26.5**	**+3.1**
	10µm13µm1µm,1.6s						
BKB	**Balikpapan**	**10.26**	**241**		**Pn**	**19 15 29.3**	**+3.0**
BKB	**Balikpapan**	**10.26**	**241**	P	**Pn**	**19 15 29.6**	**+3.3**
	7µm15µm1µm,1.3s						
KAPI	**Kappang**	**10.67**	**215**	P	**Pn**	**19 15 32.2**	**+0.2**
	582nm,1.0s,baz=18,slow=8.1,SNR=102						
KAPI				LR	LR	19 19 36.8	
	comp=Z,3µm,19.2s,baz=38,slow=37						
KAPI	**Kappang**	**10.67**	**215**		**Pn**	**19 15 32.6**	**+0.7**
KAPI	**Kappang**	**10.67**	**215**	P	**Pn**	**19 15 32.6**	**+0.7**
KAPI	**Kappang**	**10.67**	**215**	P	**Pn**	**19 15 34.2**	**+2.3**
KAPI	**Kappang**	**10.67**	**215**	P	**Pn**	**19 15 32.9**	**+1.0**
	360nm,1.2s						
KMPI	**Kaimana, Papua**	**10.82**	**133**	P	**Pn**	**19 15 33.8**	**-0.2**
	7µm14µm2µm,1.1s						
MKS	**Makassar**	**11.00**	**215**	P	**Pn**	**19 15 37.9**	**+1.6**
	9µm931nm,1.3s						
BSSI	**Bau Bau, Buton**	**11.24**	**208**	P	**Pn**	**19 15 41.1**	**+1.6**
	5µm4µm409nm,1.4s						
BAKI	**Biak**	**11.41**	**116**	P	**Pn**	**19 15 43.6**	**+1.8**
SRPI	**Serui, Papua**	**11.84**	**118**	P	**Pn**	**19 15 48.0**	**+0.5**
	5µm8µm425nm,0.6s						
MMRI	**Maumere**	**12.88**	**196**		**Pn**	**19 16 01.3**	**+0.3**
MMRI	**Maumere**	**12.88**	**196**	P	**Pn**	**19 16 01.4**	**+0.4**
SAUI	**Saumlaki**	**12.93**	**155**		**Pn**	**19 15 59.5**	**-2.2**
SAUI	**Saumlaki**	**12.93**	**155**	P	**Pn**	**19 15 59.7**	**-2.0**
BBKI	**Banjar Baru**	**13.15**	**237**	P	**P**	**19 16 08.7**	**-1.2**
EDFI	**Ende, Flores**	**13.15**	**198**	P	**Pn**	**19 16 04.5**	**-0.1**
	4µm10µm1µm,0.8s						
SOEI	**Soe**	**13.57**	**187**	Pn	**Pn**	**19 16 11.5**	**+1.4**
SOEI	**Soe**	**13.57**	**187**	P	**Pn**	**19 16 12.0**	**+1.9**
	10µm1µm,0.8s						
SBUM	**Sibu**	**13.66**	**265**	P	**P**	**19 16 14.4**	**-1.1**
SBUM	**Sibu**	**13.66**	**265**	P	**P**	**19 16 14.5**	**-1.1**
	4µm331nm,0.8s						
BATI	**Baumata**	**14.10**	**189**	P	**Pn**	**19 16 18.1**	**+1.4**
	364nm,0.3s,baz=53,slow=2.2,SNR=70						
BATI	**Baumata**	**14.10**	**189**	P	**Pn**	**19 16 18.2**	**+1.5**
	4µm15µm1µm,0.7s						
DBNI	**Kabupaten Domp**	**14.35**	**211**	P	**Pn**	**19 16 20.6**	**+0.7**
	5µm430nm,1.0s						
WSI	**Waingapu**	**14.49**	**202**	P	**Pn**	**19 16 22.4**	**+0.8**
WBSI	**Waikabubak, Su**	**14.83**	**206**	P	**Pn**	**19 16 26.4**	**+0.4**
	6µm11µm994nm,0.7s						
BASI	**Baing, Sumba**	**14.89**	**201**	P	**Pn**	**19 16 25.9**	**-0.9**
	5µm16µm2µm,1.0s						
PLAI	**Plampang**	**14.91**	**213**	P	**Pn**	**19 16 28.0**	**+1.0**
	8µm10µm786nm,0.8s						
GENI	**Genyem**	**15.68**	**114**	P	**Pn**	**19 16 36.4**	**-0.2**
KHKI	**Kahang-Kahang**	**15.82**	**220**	P	**P**	**19 16 39.9**	**+0.3**
	7µm7µm603nm,1.1s						
KMMI	**Kalianget**	**16.02**	**228**	P	**P**	**19 16 42.0**	**+0.2**
	8µm7µm506nm,1.5s						
JAY	**Jayapura**	**16.14**	**113**	P	**Pn**	**19 16 41.7**	**-0.7**
	902nm,0.9s,baz=284,slow=5.3,SNR=32						
JAY	**Jayapura**	**16.14**	**113**	P	**Pn**	**19 16 41.5**	**-0.8**
	8µm13µm1µm,1.0s						
DNP	**Denpasar**	**16.32**	**220**	P	**P**	**19 16 46.1**	**+1.1**
	2µm,1.4s						
RTBI	**Rangdo, Negare**	**16.33**	**222**	P	**P**	**19 16 45.8**	**+0.6**
	7µm9µm659nm,0.6s						
ABJI	**Asem Bagus**	**16.34**	**225**	P	**P**	**19 16 45.3**	**0.0**
	8µm5µm628nm,1.0s						
IGBI	**Denpasar**	**16.46**	**220**	P	**P**	**19 16 46.7**	**+0.1**
BLJI	**Banyuglugur**	**16.76**	**227**	P	**Pn**	**19 16 49.8**	**0.0**
	7µm19µm858nm,0.5s						
JAGI	**Jajag, Banyuwa**	**16.87**	**224**	P	**P**	**19 16 51.1**	**-0.1**
JAGI	**Jajag, Banyuwa**	**16.87**	**224**	P	**Pn**	**19 16 51.2**	**0.0**
	7µm12µm781nm,0.5s						
MTN	**Manton Dam**	**17.37**	**162**	P	**P**	**19 16 55.9**	**-0.7**
	comp=Z,211nm,0.6s						
MTN	**Manton Dam**	**17.37**	**162**	P	**P**	**19 16 54.9**	**-1.8**
KDU	**Kakadu**	**17.68**	**158**	P	**P**	**19 16 59.1**	**-0.8**
	comp=Z,125nm,0.8s						
SJI	**Sawahan**	**18.13**	**231**	P	**P**	**19 17 04.8**	**-0.3**
	comp=Z,8µmcomp=Z,714nm,0.7s						
NGJI	**Ngawi**	**18.14**	**232**	P	**P**	**19 17 05.6**	**+0.5**
	comp=Z,7µmcomp=Z,467nm,0.8s						
SNJI	**Sawahan-Nganju**	**18.16**	**231**	P	**Pn**	**19 17 06.7**	**-0.2**
	comp=Z,8µmcomp=Z,9µmcomp=Z,1µm,0.9s						
SMRI	**Semarang**	**18.77**	**235**	P	**Pn**	**19 17 13.4**	**-0.6**
SMRI	**Semarang**	**18.77**	**235**	P	**Pn**	**19 17 13.6**	**-0.4**
	comp=Z,10µmcomp=Z,889nm,0.8s						
PCJI	**Pacitan**	**18.87**	**231**	P	**P**	**19

comp=Z,1µm,1.2s
GZH2 **Guangzhou** 22.96 330 P **P** 19 17 56.8 +0.8
GZH2 sP **sP** 19 18 38.5 +4.4
GZH2 PcP **PcP** 19 21 40.5 -1.7
GZH2 S **S** 19 22 01.3 +4.6
GZH2 pmax pmax
comp=Z,45nm,0.9s
JOW **Kunigami** 23.00 6 P **P** 19 17 58.3 +1.8
MDSI **Maura Dua** 23.15 249 P **P** 19 17 58.6 +0.6
KASI **Kota Agung** 23.24 247 P **P** 19 17 58.6 -0.2
comp=Z,6µmcomp=Z,6µmcomp=Z,303nm,0.8s
LWLI **Liwa** 23.45 248 P **P** 19 18 01.8 +0.9
comp=Z,5µmcomp=Z,13µmcomp=Z,799nm,0.7s
MNAI **Manna** 24.26 251 P **P** 19 18 07.0 -1.0
MNAI **Manna** 24.26 251 P **P** 19 18 07.6 -0.4
comp=Z,13µmcomp=Z,383nm,0.7s
KSI **Kapahiang** 24.38 253 P **P** 19 18 10.4 +1.2
comp=Z,12µmcomp=Z,367nm,0.6s
MASI **Maura Aman, Be** 24.57 254 P **P** 19 18 12.4 +1.5
COEN **Coen** 24.66 136 P **P** 19 18 11.6 0.0
comp=Z,273nm,1.2s,comp=Z,0.0nm
COEN **Coen** 24.66 136 P **P** 19 18 11.3 -0.4
UBSI **University, Be** 24.72 253 P **P** 19 18 12.6 +0.4
IPM **Ipoh** 24.75 272 IAmb IAmb 19 18 17.1
comp=Z,112nm,0.5s
IPM **Ipoh** 24.75 272 P **P** 19 18 13.5 +1.0
comp=Z,6µmcomp=Z,5µmcomp=Z,209nm,0.7s
PMG **Port Moresby** 24.99 122 P **P** 19 18 14.5 -0.2
comp=Z,175nm,0.9s,baz=326,slow=7.4,SNR=116
PMG ScP **ScP** 19 25 14.4 0.0
comp=Z,18nm,1.0s,baz=90,slow=1.9,SNR=4.3
PMG LR LR 19 29 14.7
comp=Z,1µm,19.8s,baz=298,slow=39
comp=Z,175nm,0.9s
PMG **Port Moresby** 24.99 122 P **P** 19 18 14.0 -0.7
PMG **Port Moresby** 24.99 122 P **P** 19 18 14.5 -0.2
comp=Z,4µmcomp=Z,5µmcomp=Z,304nm,1.3s
BKNI **Bangkinang** 25.01 263 P **P** 19 18 14.3 -0.7
BKNI **Bangkinang** 25.01 263 P **P** 19 18 15.2 +0.3
comp=Z,6µmcomp=Z,6µmcomp=Z,457nm,0.9s
WRAB **Tennant Creek** 25.05 161 P **P** 19 18 14.0 -1.1
WRAB **Tennant Creek** 25.05 161 *de*P **P** 19 18 15.0 -0.1
WRAB pmax pmax
comp=Z,435nm,1.7s
WR1 **Warramunga Arr** 25.05 161 P **P** 19 18 15.2 +0.1
comp=Z,374nm,0.9s
WRA **Warramunga Arr** 25.05 161 P **P** 19 18 14.0 -1.2
comp=Z,90nm,0.5s,baz=334,slow=11,SNR=398
WRA S **S** 19 22 26.1 -4.2
comp=Z,59nm,1.1s,baz=328,slow=19,SNR=7.6
WRA ScP **ScP** 19 25 13.2 -1.2
comp=Z,15nm,0.7s,baz=342,slow=2.9,SNR=7.1
WRA P3KPbc 19 51 08.6
comp=Z,1.9nm,0.9s,baz=155,slow=3.6,SNR=5.0
comp=Z,90nm,0.5s
WRA **Warramunga Arr** 25.05 161 P **P** 19 18 13.6 -1.6
KRJI **Kerinci** 25.05 257 P **P** 19 18 16.3 +0.9
comp=Z,6µmcomp=Z,10µmcomp=Z,445nm,1.1s
WB2 **Warramunga Arr** 25.05 161 P **P** 19 18 15.3 +0.1
comp=Z,376nm,0.8s
WR0 **Warramunga Arr** 25.13 160 P **P** 19 18 15.8 -0.1
comp=Z,180nm,0.6s
KULM **Kulim** 25.14 274 IAmb IAmb 19 18 50.9
comp=Z,260nm,1.3s
KULM **Kulim** 25.14 274 P **P** 19 18 16.9 +0.8
EGSI **Enggano, Bengk** 25.23 249 P **P** 19 18 16.4 -0.5
comp=Z,6µmcomp=Z,8µmcomp=Z,262nm,0.8s
MBWA **Marble Bar** 25.53 193 P **P** 19 18 19.9 +0.4
comp=Z,498nm,1.1s
MBWA **Marble Bar** 25.53 193 P **P** 19 18 19.3 -0.2
MBWA **Marble Bar** 25.53 193 P **P** 19 18 20.3 +0.8
PPI **Padang Panjang** 25.77 261 P **P** 19 18 22.2 +0.4
comp=Z,5µmcomp=Z,4µmcomp=Z,243nm,0.7s
PDSI **Padang** 25.78 260 P **P** 19 18 21.3 -0.6
comp=Z,5µmcomp=Z,3µmcomp=Z,171nm,0.7s
PSAC1 **Pilbara Seismi** 25.88 193 P **P** 19 18 23.0 +0.3
comp=Z,399nm,1.3s
PSAC2 **Pilbara Seismi** 25.89 193 P **P** 19 18 23.1 +0.4
comp=Z,423nm,1.4s
PSA00 **Pilbara Seismi** 25.91 193 P **P** 19 18 23.3 +0.4
comp=Z,409nm,1.3s
PSA00 **Pilbara Seismi** 25.91 193 P **P** 19 18 22.7 -0.2
PSA00 **Pilbara Seismi** 25.91 193 P **P** 19 18 22.7 -0.2
PSA00 IAmb IAmb 19 18 25.8
comp=Z,479nm,1.1s
PSAB3 **Pilbara Seismi** 25.93 193 P **P** 19 18 23.5 +0.4
comp=Z,411nm,1.6s
GULI **GuiLin** 26.01 327 P **P** 19 18 25.0 +1.2
GULI pP **pwP** 19 18 55.0 +1.9
GULI sP **sP** 19 19 07.5 +2.9
GULI S **S** 19 22 39.5 -6.0
GULI LR LR
comp=Z,1µm,20.6s
GULI LR LR
comp=Z,2µm,17.9s
GULI LR LR
comp=Z,1µm,19.0s
MNSI **Mandailing Nat** 26.40 264 P **P** 19 18 27.7 +0.3
comp=Z,4µmcomp=Z,170nm,1.2s
PPSI **Pulau Pagai** 26.62 256 P **P** 19 18 28.4 -1.0
comp=Z,5µmcomp=Z,274nm,0.5s
PSI **Prapat** 26.88 269 P **P** 19 18 30.7 -1.2
comp=Z,5µmcomp=Z,3µmcomp=Z,142nm,1.3s
RPSI **Rantau Prapat** 26.89 268 IAmb IAmb 19 19 09.7
comp=Z,139nm,0.8s
CNSH **ChangSha** 27.16 334 P **P** 19 18 34.3 +0.2
CNSH S **S** 19 23 05.0 +1.5
CNSH pmax pmax
comp=Z,15nm,1.1s
CNSH LR LR
comp=Z,2µm,15.6s
CNSH LR LR
comp=Z,2µm,14.5s
CNSH LR LR
comp=Z,1µm,18.4s
TSI **Tuntungan** 27.21 270 P **P** 19 18 35.8 +1.1
comp=Z,5µmcomp=Z,4µmcomp=Z,162nm,1.4s
RABL **Rabaul** 27.49 107 P **P** 19 18 38.1 +0.9
QIS **Mount Isa** 27.74 151 P **P** 19 18 39.9 +0.5
comp=Z,106nm,0.9s
PBSI **Pulau Batu** 27.80 263 P **P** 19 18 40.8 +0.9
comp=Z,4µmcomp=Z,4µmcomp=Z,144nm,0.6s
JCJ **Chichijima** 27.93 32 LR LR 19 28 48.2
comp=Z,417nm,21.8s,baz=247,slow=34
KCSI **Kotacane, Aceh** 28.00 270 P **P** 19 18 40.8 -1.0
GSI **Gunungsitoli** 28.33 266 P **P** 19 18 45.0 +0.3
comp=Z,4µmcomp=Z,3µmcomp=Z,253nm,0.7s
MTSU **Mount Surprise** 28.43 141 P **P** 19 18 46.8 +1.3
comp=Z,80nm,0.8s
AS31 **Alice Springs** 28.43 164 IAmb IAmb 19 19 37.5
comp=Z,35nm,0.5s
ASAR **Alice Springs** 28.43 164 P **P** 19 18 45.2 -0.2
comp=Z,30nm,0.6s,baz=343,slow=7.5,SNR=275
ASAR PcP **PcP** 19 21 55.8 +1.0
comp=Z,18nm,0.6s,baz=340,slow=2.5,SNR=6.3
ASAR S **S** 19 23 20.2 -3.4
comp=Z,20nm,0.8s,baz=351,slow=18,SNR=6.0
ASAR ScP **ScP** 19 25 23.6 -0.9
comp=Z,15nm,0.5s,baz=340,slow=3.1,SNR=15
ASAR LR LR 19 31 42.3
comp=Z,689nm,20.8s,baz=337,slow=39
ASAR P3KPbc 19 50 59.4
comp=Z,0.7nm,0.6s,baz=163,slow=4.0,SNR=13
comp=Z,30nm,0.6s
GIRL **Giralia** 28.64 203 P **P** 19 18 49.1 +1.9
comp=Z,186nm,1.6s
GIRL **Giralia** 28.64 203 P **P** 19 18 48.3 +1.0
WHN **Wuhan** 28.71 339 P **P** 19 18 48.0 +0.2
WHN sP **sP** 19 19 29.0 -0.5
WHN PcP **PcP** 19 21 52.8 -2.5
WHN S **S** 19 23 22.3 -5.4
WHN ScP **ScP** 19 25 24.3 -0.8
WHN ScS **ScS** 19 29 18.3 -0.5
WHN pmax pmax
comp=Z,38nm,1.0s
WHN LR LR
comp=Z,4µm,6.2s
WHN LR LR
comp=Z,5µm,10.3s
WHN LR LR
comp=Z,3µm,19.6s
WRKA **Warakurna** 28.78 175 P **P** 19 18 49.7 +1.1
comp=Z,44nm,1.4s
LHMI **Lhok Sumawe** 28.82 274 IAmb IAmb 19 18 53.8
comp=Z,109nm,0.7s
LHMI **Lhok Sumawe** 28.82 274 P **P** 19 18 49.9 +0.8
comp=Z,5µmcomp=Z,3µmcomp=Z,203nm,0.7s

NJ2 **Nanjing** 28.84 348 *e*P **P** 19 18 51.0 +2.1
NJ2 S **S** 19 23 30.5 +0.8
NJ2 pmax pmax
comp=Z,12nm,0.6s
NJ2 pmax pmax
comp=Z,300nm,3.8s
NJ2 LR LR
comp=Z,560nm,21.8s
NJ2 LR LR
comp=Z,670nm,15.2s
NJ2 LR LR
comp=Z,600nm,17.1s
GYA **Guiyang** 29.05 323 ⇓P **P** 19 18 52.5 +1.5
GYA pP pwP 19 19 20.0 -0.7
GYA sP sP 19 19 36.3 +4.4
GYA PcP **PcP** 19 21 57.3 +0.9
GYA S **S** 19 23 32.0 -1.4
GYA sS sS 19 24 22.5 +1.4
GYA ScP **ScP** 19 25 26.0 -0.5
GYA ScS **ScS** 19 29 20.3 -0.6
GYA pmax pmax
comp=Z,7.0nm,1.1s
MLSI **Meulaboh, Aceh** 29.36 272 P **P** 19 18 53.5 -0.3
comp=Z,191nm,0.6s
JNU **Nakatsue** 29.53 9 P **P** 19 18 56.1 +0.9
comp=Z,24nm,0.7s,baz=160,slow=5.1,SNR=10
comp=Z,24nm,0.7s
CM31 **Chiang Mai Arr** 30.05 301 IAmb IAmb 19 19 46.0
comp=Z,98nm,1.3s
CM31 **Chiang Mai Arr** 30.05 301 P **P** 19 19 01.1 +1.2
SNR=14
CMAR **Chiang Mai Arr** 30.05 301 P **P** 19 19 00.5 +0.6
comp=Z,13nm,0.8s,baz=116,slow=7.3,SNR=82
CMAR PcP **PcP** 19 21 59.4 +0.4
comp=Z,10nm,0.7s,baz=109,slow=1.5,SNR=11
CMAR ScP **ScP** 19 25 29.3 -0.4
comp=Z,7.1nm,0.9s,baz=150,slow=2.0,SNR=12
CMAR PKiKP **PKiKP** 19 29 31.1 -0.2
comp=Z,1.2nm,0.7s,baz=145,slow=0.9,SNR=6.6
CMAR LR LR 19 34 14.0
comp=Z,506nm,18.0s,baz=115,slow=42
comp=Z,13nm,0.8s
CMAR **Chiang Mai Arr** 30.05 301 P **P** 19 19 00.2 +0.3
CMAR **Chiang Mai Arr** 30.05 301 ScP **ScP** 19 25 29.5 -0.3
CHTO **Chiang Mai** 30.21 302 P **P** 19 19 01.5 +0.2
CHTO **Chiang Mai** 30.21 302 P **P** 19 19 01.5 +0.2
CHTO pmax pmax
comp=Z,314nm,1.6s
CHTO **Chiang Mai** 30.21 302 P **P** 19 19 01.8 +0.6
CHTO **Chiang Mai** 30.21 302 P **P** 19 19 01.1 -0.2
ENH **Enshi** 30.51 331 IAmb IAmb 19 19 05.0
comp=Z,56nm,0.9s
KMI2 **Kunming** 30.70 316 ⇑P **P** 19 19 06.5 +0.8
KMI2 sP sP 19 19 45.3 -0.9
KMI2 S **S** 19 23 51.5 -8.0
KMI2 ScP **ScP** 19 25 32.0 0.0
KMI2 ScS **ScS** 19 29 29.0 -0.1
KMI2 pmax pmax
comp=Z,22nm,1.2s
KMI2 pmax pmax
comp=Z,220nm,6.3s
KMI2 LR LR
comp=Z,2µm,19.3s
KMI2 LR LR
comp=Z,1µm,20.7s
KMI2 LR LR
comp=Z,890nm,21.3s
MEEK **Meekatharra** 31.07 193 P **P** 19 19 08.8 +0.1
comp=Z,269nm,1.2s
CTA **Charters Tower** 31.10 141 P **P** 19 19 10.1 +1.1
comp=Z,44nm,1.0s,baz=324,slow=11,SNR=28
CTA ScP **ScP** 19 25 33.8 +0.6
comp=Z,27nm,0.9s,baz=282,slow=2.3,SNR=8.1
CTA LR LR 19 32 36.1
comp=Z,1µm,18.6s,baz=342,slow=38
comp=Z,44nm,1.0s
CTAO **Charters Tower** 31.10 141 P **P** 19 19 09.9 +0.8
CTAO IAmb IAmb 19 19 11.6
comp=Z,110nm,1.2s
CTAO **Charters Tower** 31.10 141 P **P** 19 19 09.9 +0.8
CTAO pmax pmax
comp=Z,109nm,1.2s
CMBY **CAMPBELL BAY** 31.91 277 *e*P **P** 19 19 17.0 +0.7
CMBY *e*S **S** 19 24 20.1 +1.8
PZH **PanZhiHua** 32.26 317 P **P** 19 19 18.0 -1.3
PZH pP **pP** 19 19 46.5 +0.8
PZH sP **sP** 19 20 02.3 +2.5
PZH S **S** 19 24 20.5 -3.2
PZH sS **sS** 19 25 12.0 +0.4
PZH ScP **ScP** 19 25 36.5 -0.6
PZH PcS **PcS** 19 25 49.5 -0.7
PZH ScS **ScS** 19 29 34.3 -2.3
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,190nm,4.9s
PZH LR LR
comp=Z,330nm,16.3s
PZH LR LR
comp=Z,380nm,17.8s
PZH LR LR
comp=Z,430nm,19.4s
LYN **LuoYang** 33.00 340 P **P** 19 19 25.0 -0.5
LYN sP sP 19 20 06.5 -1.0
LYN PcP **PcP** 19 22 08.8 +2.2
LYN S **S** 19 24 34.0 -0.8
LYN ScP **ScP** 19 25 39.0 -0.3
LYN ScS **ScS** 19 29 40.5 +0.7
LYN pmax pmax
comp=Z,21nm,0.8s
LYN pmax pmax
comp=Z,220nm,4.1s
INU **Inuyama** 33.04 17 IAmb IAmb 19 20 09.6
comp=Z,61nm,0.9s
TIA **Tai'an** 33.22 347 P **P** 19 19 27.0 -0.4
TIA sP **sP** 19 20 03.5 -6.0
TIA PcP **PcP** 19 22 09.5 +2.3
TIA S **S** 19 24 35.0 -3.1
TIA ScP **ScP** 19 25 40.0 -0.1
TIA PcS **PcS** 19 25 53.8 +0.9
TIA ScS **ScS** 19 29 42.5 +1.6
TIA pmax pmax
comp=Z,19nm,0.9s
TIA pmax pmax
comp=Z,230nm,5.2s
TIA LR LR
comp=Z,400nm,9.3s
TIA LR LR
comp=Z,470nm,9.6s
TIA LR LR
comp=Z,490nm,10.6s
INCN **Inchon** 33.51 1 P **P** 19 19 30.6 +0.6
INCN IAmb IAmb 19 19 32.7
comp=Z,38nm,0.7s
INCN **Inchon** 33.51 1 P **P** 19 19 30.6 +0.6
INCN pmax pmax
comp=Z,38nm,0.7s
INCN **Inchon** 33.51 1 P **P** 19 19 31.4 +1.4
KSAR **Wonju Array Be** 33.52 3 P **P** 19 19 31.3 +1.4
KSAR **Wonju Array Be** 33.52 3 P **P** 19 19 31.3 +1.4
KSRS **Korea Array** 33.53 3 P **P** 19 19 31.4 +1.3
comp=Z,41nm,0.8s,baz=181,slow=10.0,SNR=128
KSRS PcP **PcP** 19 22 09.7 +1.6
comp=Z,7.0nm,0.7s,baz=178,slow=3.4,SNR=5.7
KSRS S **S** 19 24 43.8 +1.0
comp=Z,2.8nm,1.1s,baz=187,slow=18,SNR=4.4
KSRS ScP **ScP** 19 25 40.9 -0.2
comp=Z,3.0nm,0.6s,baz=186,slow=3.4,SNR=10
KSRS LR LR 19 36 00.7
comp=Z,260nm,18.4s,baz=205,slow=41
comp=Z,41nm,0.8s
KS19 **Wonju Array Si** 33.57 3 IAmb IAmb 19 19 33.8
comp=Z,59nm,1.0s
TNCH **TengChong** 33.68 311 P **P** 19 19 31.8 0.0
TNCH pP pwP 19 20 01.0 -1.0
TNCH sP sP 19 20 15.5 +2.7
TNCH PcP **PcP** 19 22 09.5 +0.5
TNCH S **S** 19 24 44.0 -1.9
TNCH sS sS 19 25 35.0 +1.1
TNCH ScP **ScP** 19 25 41.5 -0.7
TNCH ScS **ScS** 19 29 40.3 -3.9
TNCH pmax pmax
comp=Z,35nm,1.7s
TNCH pmax pmax
comp=Z,400nm,4.0s

DGPR **DIGLIPUR** 33.80 288 IAmb IAmb 19 19 26.0
comp=Z,28nm,0.9s
DGPR *e*P **P** 19 19 32.0 -0.7
DGPR *e*S **S** 19 24 50.6 +3.1
XAN **Xi'an** 33.94 334 P **P** 19 19 33.3 -0.5
XAN sP sP 19 20 12.5 -3.2
XAN S **S** 19 24 44.5 -4.9
XAN ScP **ScP** 19 25 42.3 -0.4
XAN pmax pmax
comp=Z,62nm,1.1s
XAN LR LR
comp=Z,750nm,19.2s
XAN LR LR
comp=Z,750nm,20.6s
XAN LR LR
comp=Z,780nm,17.9s
XAN **Xi'an** 33.94 334 P **P** 19 19 32.9 -0.9
XAN pP **pP** 19 20 00.6 -0.6
XAN x x 19 20 05.9
MORW **Morawa** 34.02 195 P **P** 19 19 34.6 +0.1
comp=Z,116nm,1.2s
CD2 **Chengdu** 34.05 325 P **P** 19 19 34.8 +0.1
CD2 pP pP 19 20 02.8 +1.2
CD2 sP sP 19 20 15.8 0.0
CD2 PP **PP** 19 20 55.5 +1.1
CD2 S **S** 19 24 46.5 -4.6
CD2 pmax pmax
comp=Z,60nm,1.0s
CD2 pmax pmax
comp=Z,110nm,5.4s
CD2 LR LR
comp=Z,910nm,10.2s
CD2 LR LR
comp=Z,920nm,11.8s
CD2 LR LR
comp=Z,740nm,8.2s
HJU **Haeju** 34.06 360 P **P** 19 19 36.1 +1.5
HJU S **S** 19 24 51.2 +0.2
HJU AmB
comp=Z,161nm,1.5s
HJU AMS AMS
comp=Z,52nm,2.0s
FORT **Forrest** 34.47 177 P **P** 19 19 38.8 +0.5
comp=Z,155nm,0.6s
MJAR **Matsushiro Arr** 34.50 18 P **P** 19 19 38.5 0.0
comp=Z,8.3nm,0.8s,baz=191,slow=9.2,SNR=14
MJAR ScP **ScP** 19 25 44.8 +0.2
comp=Z,6.7nm,0.9s,baz=195,slow=4.2,SNR=5.4
MJAR LR LR 19 32 51.0
comp=Z,766nm,20.6s,baz=200,slow=34
comp=Z,8.3nm,0.8s
MJAR **Matsushiro Arr** 34.50 18 P **P** 19 19 38.7 +0.1
MJAR ScP **ScP** 19 25 45.0 +0.4
MAJO **Matsushiro** 34.50 18 P **P** 19 19 39.8 +1.3
MAJO IAmb IAmb 19 20 24.6
comp=Z,40nm,1.0s
MAJO **Matsushiro** 34.50 18 P **P** 19 19 39.8 +1.3
MAJO pmax pmax
comp=Z,40nm,1.0s
INKA **Innaminka** 34.52 156 IAmb IAmb 19 19 40.8
comp=Z,67nm,1.4s
HNS **HongShan** 34.94 344 ⇑P **P** 19 19 41.8 -0.4
HNS sP **sP** 19 20 20.0 -4.4
HNS PcP **PcP** 19 22 15.0 +2.9
HNS ScP **ScP** 19 25 46.3 +0.2
HNS ScS **ScS** 19 29 46.0 -3.9
HNS pmax pmax
comp=Z,10.0nm,1.2s
HNS LR LR
comp=Z,550nm,15.5s
HNS LR LR
comp=Z,400nm,18.8s
HNS LR LR
comp=Z,470nm,15.9s
QLP **Quilpie** 35.08 151 P **P** 19 19 43.8 +0.3
comp=Z,127nm,1.8s
DL2 **Dalian** 35.13 354 P **P** 19 19 44.5 +0.6
DL2 pP **pP** 19 20 13.8 +2.2
DL2 sP **sP** 19 20 28.5 +2.5
DL2 PcP **PcP** 19 22 13.0 +0.4
DL2 S **S** 19 25 06.5 -0.9
DL2 ScP **ScP** 19 25 46.5 -0.3
DL2 ScS **ScS** 19 29 50.5 -0.4
DL2 pmax pmax
comp=Z,75nm,0.5s
DL2 pmax pmax
comp=Z,160nm,4.6s
KMBL **Kambalda** 35.19 186 P **P** 19 19 44.9 +0.4
comp=Z,243nm,0.8s
BLDU **Ballidu** 35.33 194 P **P** 19 19 45.8 +0.1
comp=Z,146nm,1.5s
TIY **Taiyuan** 35.89 342 P **P** 19 19 53.8 +3.3
TIY S **S** 19 25 15.8 -3.5
TIY pmax pmax
comp=Z,21nm,0.6s
TIY pmax pmax
comp=Z,120nm,5.2s
HHU **Hamhung** 35.98 2 P **P** 19 19 53.3 +2.2
HHU S **S** 19 25 22.4 +2.1
HHU AmB
comp=Z,64nm,0.6s
HHU AMS AMS
comp=Z,134nm,4.6s
KLBR **Kellerberrin** 36.05 192 P **P** 19 19 52.2 +0.4
comp=Z,276nm,0.8s
SUJ **Sinuiju** 36.14 358 P **P** 19 19 54.0 +1.6
SUJ S **S** 19 25 23.0 +0.2
SUJ AmB
comp=Z,96nm,1.3s
SUJ AMS AMS
comp=Z,140nm,4.1s
HNR **Honiara** 36.46 111 LR LR 19 32 57.9
comp=Z,29nm,21.4s,baz=15,slow=33
HNR **Honiara** 36.46 111 P **P** 19 19 55.0 -0.6
HNR **Honiara** 36.46 111 P **P** 19 19 55.0 -0.6
HNR pmax pmax
comp=Z,236nm,0.8s
MORE **Moreh** 36.54 307 IAmb IAmb 19 20 42.9
comp=Z,30nm,0.9s
SAIH **SAIHA** 36.82 303 *e*S **S** 19 25 37.6 +3.6
BJI2 **Beijing** 37.08 348 P **P** 19 20 00.0 -0.4
BJI2 sP **sP** 19 20 37.8 -4.9
BJI2 PcP **PcP** 19 22 21.5 +3.1
BJI2 S **S** 19 25 32.0 -5.1
BJI2 ScP **ScP** 19 25 53.5 -0.4
BJI2 ScS **ScS** 19 30 02.5 +0.8
BJI2 pmax pmax
comp=Z,8.0nm,1.0s
BJI2 pmax pmax
comp=Z,94nm,3.6s
BJT **Baijiatuau** 37.08 348 IAmb IAmb 19 20 40.0
comp=Z,91nm,1.2s
IMP **Imphal** 37.11 307 IAmb IAmb 19 20 01.9
comp=Z,56nm,0.1s
IMP *e*P **P** 19 20 04.5 +3.4
IMP *e*S **S** 19 25 40.9 +2.7
MOKO **MOKOCHONG** 37.41 310 *e*P **P** 19 20 05.8 +2.1
MOKO IAmb IAmb 19 20 18.5
comp=Z,70nm,0.2s
MOKO *e*S **S** 19 25 47.7 +4.8
KOHI **KOHIMA** 37.42 309 *e*P **P** 19 20 06.1 +2.4
KOHI IAmb IAmb 19 20 09.9
comp=Z,93nm,1.0s
KOHI *e*S **S** 19 25 46.7 +3.6
NWAO **Narrogin (SRO)** 37.44 192 P **P** 19 20 04.2 +0.5
comp=Z,213nm,1.2s
NWAO **Narrogin (SRO)** 37.44 192 P **P** 19 20 04.0 +0.4
comp=Z,46nm,0.4s,baz=24,slow=7.1,SNR=97
comp=Z,46nm,0.4s
NWAO **Narrogin (SRO)** 37.44 192 P **P** 19 20 03.0 -0.6
NWAO **Narrogin (SRO)** 37.44 192 P **P** 19 20 04.1 +0.5
BBOO **Buckleboo** 37.70 166 P **P** 19 20 06.9 +1.1
comp=Z,96nm,0.7s
BBOO **Buckleboo** 37.70 166 IAmb IAmb 19 20 07.2
comp=Z,66nm,0.6s
SNY **Shenyang** 37.90 357 ⇑P **P** 19 20 08.0 +0.7
SNY S **S** 19 25 46.5 -2.9
SNY pmax pmax
comp=Z,110nm,0.7s
SNY pmax pmax
comp=Z,100nm,3.9s
SNY LR LR
comp=Z,280nm,12.7s
SNY LR LR
comp=Z,370nm,15.3s

SNY LR LR
comp=Z,260nm,15.0s
LZDM Lanzhou Array 37.95 330 P **P** **19 20 08.4 +0.2**
comp=Z,3.1nm,0.4s,baz=156,slow=11,SNR=23
LZDM PcP **PcP** **19 22 22.9 +1.3**
comp=Z,27nm,0.6s,baz=190,slow=4.8,SNR=9.3
LZDM ScP **ScP** **19 25 56.8 -0.9**
comp=Z,4.0nm,0.6s,baz=148,slow=8.5,SNR=6.2
LZDM LR LR 19 37 04.2
comp=Z,495nm,19.2s,baz=60,slow=38
comp=Z,3.1nm,0.4s
LZH Lanzhou 37.98 330 P **P** **19 20 09.0 +0.7**
LZH pP pP 19 20 38.8 +2.8
LZH sP sP 19 20 53.3 +3.0
LZH PcP **PcP** **19 22 24.0 +2.5**
LZH S **S** **19 25 48.3 -2.9**
LZH ScP **ScP** **19 25 53.8 -3.9**
LZH PcS **PcS** **19 26 11.8 +1.1**
LZH sS sS 19 26 39.0 -0.8
LZH SS **SS** **19 28 41.3 -2.1**
LZH ScS **ScS** **19 30 07.0 -0.3**
LZH pmax pmax
comp=Z,67nm,1.5s
LZH pmax pmax
comp=Z,120nm,4.5s
LZH LR LR
comp=Z,560nm,13.1s
LZH LR LR
comp=Z,900nm,13.7s
LZH LR LR
comp=Z,720nm,15.5s
EIDS Eidsvold 37.98 141 P **P** **19 20 08.4 +0.2**
comp=Z,187nm,1.0s
BRDH Bariadhala 38.03 303 LR LR 19 36 09.3
comp=Z,800nm,21.6s,baz=120,slow=36
ITAN ITANAGAR 38.45 310 *e*P **P** **19 20 14.5 +2.4**
ITAN IAmb IAmb 19 20 16.1
comp=Z,81nm,1.0s
ITAN *e*S **S** **19 26 01.3 +3.1**
STKA Stephens Creek 38.54 158 P **P** **19 20 13.8 +0.9**
comp=Z,993nm,0.9s
STKA Stephens Creek 38.54 158 P **P** **19 20 13.6 +0.8**
comp=Z,176nm,0.8s,baz=333,slow=8.3,SNR=199
STKA S **S** **19 25 57.1 -2.2**
comp=Z,29nm,1.0s,baz=173,slow=19,SNR=7.4
STKA LR LR 19 36 36.6
comp=Z,491nm,19.3s,baz=328,slow=37
comp=Z,176nm,0.8s
ZIRO ZIRO 38.55 311 *e*P **P** **19 20 13.9 +0.6**
ZIRO IAmb IAmb 19 20 25.3
comp=Z,62nm,0.3s
ZIRO *e*S **S** **19 26 02.7 +2.6**
AGT Agartala 38.87 304 *e*P **P** **19 20 17.6 +1.9**
AGT IAmb IAmb 19 20 53.3
comp=Z,53nm,1.4s
AGT *e*S **S** **19 26 09.1 +4.5**
PSTR Posyet 38.92 6 *i*P **P** **19 20 16.4 +0.6**
HHC Hu-ho-hao-te 39.04 343 *e*P **P** **19 20 17.0 0.0**
HHC sP sP 19 20 56.5 -3.0
HHC PP **PnPn** **19 21 54.5 +1.6**
HHC S **S** **19 26 05.3 -1.6**
HHC pmax pmax
comp=Z,12nm,0.8s
SHL Shillong 39.10 307 P **P** **19 20 17.6 -0.3**
SNR=24
RKGY Rocky Gully 39.12 192 P **P** **19 20 19.1 +1.5**
comp=Z,420nm,1.3s
BTO2 Baotou 39.47 341 *e*P **P** **19 20 20.5 -0.1**
BTO2 pP **pP** **19 20 49.0 +0.2**
BTO2 sP **sP** **19 21 03.0 -0.2**
BTO2 S **S** **19 26 14.3 +0.9**
BTO2 sS **sS** **19 26 58.8 -3.5**
BTO2 pmax pmax
comp=Z,17nm,0.9s
BTO2 pmax pmax
comp=Z,350nm,8.0s
BTO2 LR LR
comp=Z,980nm,14.7s
BTO2 LR LR
comp=Z,1µm,15.3s
BTO2 LR LR
comp=Z,960nm,23.5s
VLA Vladivostok 39.50 7 *i*P **P** **19 20 21.3 +0.6**
VLA pmax pmax
comp=Z,57nm,0.9s
GUWA GUWAHATI 39.55 308 *e*P **P** **19 20 23.9 +2.6**
GUWA IAmb IAmb 19 20 29.2
comp=Z,18nm,0.7s
GUWA *e*S **S** **19 26 16.8 +2.1**
CN2 Changchun 39.82 360 ⇑P **P** **19 20 23.5 +0.2**
CN2 *e*pP pP 19 20 51.0 -0.4
CN2 *e*S **S** **19 26 19.5 +1.3**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CMSA Cobar Meteorol 39.93 153 P **P** **19 20 25.3 +1.0**
comp=Z,64nm,1.2s
TAWA Tawang 40.09 310 *e*P **P** **19 20 27.3 +1.1**
TAWA IAmb IAmb 19 20 32.5
comp=Z,52nm,0.5s
TAWA *e*S **S** **19 26 25.4 +1.8**
USRK Ussuriysk Ar. 40.58 7 P **P** **19 20 31.2 +1.7**
comp=Z,51nm,0.8s,baz=189,slow=7.1,SNR=51
comp=Z,51nm,0.8s
MDJ Mudanjiang 40.77 4 IAmb IAmb 19 20 35.4
comp=Z,90nm,0.7s
MDJ Mudanjiang 40.77 4 P **P** **19 20 32.8 +1.7**
MDJ pP pP 19 20 59.8 +0.6
MDJ ScP **ScP** **19 26 07.5 -0.5**
MDJ PcS **PcS** **19 26 21.3 +0.5**
MDJ S **S** **19 26 33.5 +1.2**
MDJ sS sS 19 27 22.0 +0.6
MDJ pmax pmax
comp=Z,150nm,0.9s
MDJ pmax pmax
comp=Z,370nm,3.8s
MDJ Mudanjiang 40.77 4 P **P** **19 20 33.0 +1.9**
CAL Calcutta 40.79 301 *e*P **P** **19 20 35.0 +3.4**
CAL IAmb IAmb 19 20 37.6
comp=Z,54nm,0.4s
CAL *e*S **S** **19 26 37.5 +4.2**
DHUB DHUBRI 40.82 306 *e*P **P** **19 20 33.7 +1.8**
DHUB IAmb IAmb 19 21 08.4
comp=Z,16nm,1.1s
XLT XiLinHaoTe 40.83 349 *e*P **P** **19 20 31.5 -0.3**
XLT pP pP 19 21 03.5 +3.4
XLT sP sP 19 21 17.8 +3.4
XLT S **S** **19 26 31.5 -2.1**
XLT sS sS 19 27 21.8 -0.8
XLT ScS **ScS** **19 30 23.3 -0.4**
XLT pmax pmax
comp=Z,25nm,1.1s
XLT pmax pmax
comp=Z,170nm,7.7s
XLT LR LR
comp=Z,610nm,19.8s
XLT LR LR
comp=Z,270nm,21.8s
COBR COOCHBEHAR 41.37 306 *e*P **P** **19 20 35.5 -0.8**
COBR IAmb IAmb 19 20 37.1
comp=Z,48nm,0.2s
LSA Lhasa 41.71 312 IAmb IAmb 19 21 19.3
comp=Z,60nm,0.8s
LSA Lhasa 41.71 312 P **P** **19 20 36.0 -3.6**
LSA S **S** **19 26 40.5 -7.2**
LSA pmax pmax
comp=Z,11nm,0.7s
LSA LR LR
comp=Z,980nm,8.3s
LSA LR LR
comp=Z,1µm,7.9s
LSA LR LR
comp=Z,320nm,12.2s
LSA Lhasa 41.71 312 P **P** **19 20 40.4 +0.8**
BNX BinXian 41.77 2 ⇑P **P** **19 20 39.5 +0.2**
BNX pP **pP** **19 21 04.3 -3.1**
BNX S **S** **19 26 42.5 -4.7**
BNX sS **sS** **19 27 34.5 -1.9**
BNX pmax pmax
comp=Z,29nm,1.3s
BNX pmax pmax
comp=Z,170nm,6.2s
BNX LR LR
comp=Z,330nm,21.0s

BNX LR LR
comp=Z,380nm,22.7s
BNX LR LR
comp=Z,420nm,24.6s
ARMA Armidale 42.04 146 P **P** **19 20 43.3 +1.4**
comp=Z,123nm,1.1s
ARMA Armidale 42.04 146 P **P** **19 20 42.5 +0.7**
ARMA IAmb IAmb 19 20 44.3
comp=Z,106nm,0.9s
TEY Ternei 42.13 11⇓ *e*P **P** **19 20 43.8 +1.7**
TEY *e* 19 21 09.9
TEY *e* 19 26 51.2
TEY pmax pmax
comp=N,20nm,0.5s
TEY pmax pmax
comp=Z,40nm,0.5s
BWNR Bhubaneshwar 42.24 296 *e*P **P** **19 20 43.7 +0.2**
BWNR IAmb IAmb 19 21 18.7
comp=Z,39nm,0.4s
BWNR *e*S **S** **19 26 58.6 +3.9**
GTA2 Gaotai 42.65 330 P **P** **19 20 46.5 -0.2**
GTA2 pP pP 19 21 16.8 +1.9
GTA2 PcP **PcP** **19 22 38.5 +2.0**
GTA2 ScP **ScP** **19 26 15.5 -0.4**
GTA2 PcS **PcS** **19 26 27.5 -1.4**
GTA2 S **S** **19 26 54.5 -6.1**
GTA2 SS **SS** **19 30 13.5 -2.2**
GTA2 ScS **ScS** **19 30 32.8 -2.3**
GTA2 pmax pmax
comp=Z,24nm,1.1s
GTA2 pmax pmax
comp=Z,140nm,8.8s
GTA2 LR LR
comp=Z,2µm,21.1s
GTA2 LR LR
comp=Z,1µm,19.1s
GTA2 LR LR
comp=Z,580nm,20.7s
ASAJ Asahikawa 42.77 18 P **P** **19 20 48.8 +1.4**
ASAJ pmax pmax
comp=Z,65nm,0.8s
JKA Kamikawa-asahi 42.77 18 P **P** **19 20 48.8 +1.3**
JKA IAmb IAmb 19 21 34.1
comp=Z,65nm,0.8s
H11N1 WAKE ISLAND Hy 43.03 65 T T 20 07 07.7
baz=254,slow=75,SNR=18
H11N2 WAKE ISLAND Hy 43.04 65 T T 20 07 10.5
baz=254,slow=75,SNR=19
H11N3 WAKE ISLAND Hy 43.05 65 T T 20 07 08.5
baz=254,slow=75,SNR=16
ARPS Mount Arapiles 43.05 161 P **P** **19 20 51.4 +1.6**
comp=Z,107nm,1.1s
GOMU GeErMu 43.06 322 P **P** **19 20 50.8 +0.4**
GOMU sP sP 19 21 27.8 -4.5
GOMU PcP **PcP** **19 22 38.5 +0.2**
GOMU S **S** **19 27 07.5 +0.3**
GOMU pmax pmax
comp=Z,25nm,1.4s
GOMU LR LR
comp=Z,380nm,18.8s
GOMU LR LR
comp=Z,460nm,16.1s
GOMU LR LR
comp=Z,39µm,16.1s
YNG Young 43.47 152 P **P** **19 20 55.0 +1.8**
comp=Z,77nm,1.4s
VIS Vishakhapatnam 43.85 292 *e*P **P** **19 20 56.8 +0.3**
VIS *e*S **S** **19 27 20.6 +2.3**
EVN Everest 44.22 307 P **P** **19 20 59.9 -0.2**
EVN IAmb IAmb 19 21 37.4
comp=Z,154nm,1.1s
GAYA Gaya 44.26 302 *e*P **P** **19 20 59.9 +0.2**
GAYA IAmb IAmb 19 21 03.3
comp=Z,59nm,1.9s
GAYA *e*S **S** **19 27 28.0 +3.8**
JHSG JHARSUGUGA 44.51 297 *e*P **P** **19 21 04.1 +2.4**
JHSG IAmb IAmb 19 21 06.1
comp=Z,70nm,1.1s
JHSG *e*S **S** **19 27 28.9 +0.9**
CAN Canberra 44.60 153 P **P** **19 21 03.8 +1.6**
comp=Z,128nm,1.1s
CAN Canberra 44.60 153 P **P** **19 21 02.2 0.0**
CAN IAmb IAmb 19 21 05.2
comp=Z,104nm,0.9s
CAN Canberra 44.60 153 P **P** **19 21 02.2 0.0**
CAN pmax pmax
comp=Z,104nm,0.9s
CAN Canberra 44.60 153 P **P** **19 21 04.1 +1.8**
CAN pP **pwP** **19 21 32.4 -0.6**
CAN sP **sP** **19 21 45.5 +1.1**
PALK Pallekele 45.03 276 LR LR 19 40 20.5
comp=Z,436nm,21.0s,baz=90,slow=36
PALK Pallekele 45.03 276 P **P** **19 21 06.4 +0.4**
PALK IAmb IAmb 19 22 48.2
comp=Z,56nm,0.7s
PALK Pallekele 45.03 276 P **P** **19 21 06.1 0.0**
PALK Pallekele 45.03 276 P **P** **19 21 06.4 +0.4**
PALK pmax pmax
comp=Z,56nm,0.7s
PALK Pallekele 45.03 276 P **P** **19 21 06.0 0.0**
PALK Pallekele 45.03 276 P **P** **19 21 05.7 -0.3**
TOO Toolangi 45.06 158 P **P** **19 21 08.2 +2.4**
comp=Z,45nm,1.3s
TOO Toolangi 45.06 158 P **P** **19 21 07.7 +1.9**
TOO Toolangi 45.06 158 P **P** **19 21 07.7 +1.9**
TOO pmax pmax
comp=Z,49nm,1.2s
YSS Yuzhno-Sakhali 45.40 16 P **P** **19 21 08.9 +0.6**
YSS IAmb IAmb 19 21 38.0
comp=Z,104nm,1.5s
YSS Yuzhno-Sakhali 45.40 16 *e*P **P** **19 21 09.4 +1.1**
YSS *e**PP **pP** **19 21 36.1 -0.4**
YSS *e**SP **sP** **19 21 49.0 -1.4**
YSS *e*S **S** **19 27 40.7 +0.8**
YSS *e**SS **sS** **19 28 28.5 -1.2**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS pmax pmax
comp=N,20nm,0.6s
YSS pmax pmax
comp=Z,100nm,3.8s
YSS smax smax
comp=N,200nm,5.2s
YSS MLR MLR
comp=Z,300nm,17.0s
YSS MLR MLR
comp=N,300nm,15.0s
YSS MLR MLR
comp=E,200nm,15.0s
KLR Kul'dur 45.53 5 LR LR 19 40 40.8
comp=E,391nm,20.4s,baz=192,slow=36
KLR Kul'dur 45.53 5*c*eP **P** **19 21 10.6 +1.3**
KLR pmax pmax
comp=Z,6.0nm,0.8s
HIA Hailar 45.58 354 IAmb IAmb 19 21 11.8
comp=Z,83nm,1.2s
HIA Hailar 45.58 354 P **P** **19 21 10.4 +0.6**
HIA PcP **PcP** **19 22 49.3 +3.1**
HILR Hailar Array B 45.86 354 P **P** **19 21 12.8 +0.8**
comp=Z,18nm,0.5s,baz=171,slow=12,SNR=28
HILR PcP **PcP** **19 22 49.1 +1.9**
comp=Z,33nm,0.8s,baz=149,slow=6.0,SNR=6.0
comp=Z,18nm,0.5s
MDRS Chennai 45.95 284⇓ *e*P **P** **19 21 15.0 +1.9**
MDRS IAmb IAmb 19 21 18.7
comp=Z,31nm,0.7s
MDRS *e*S **S** **19 27 51.4 +2.7**
VJD Vijayawada 46.10 289 *e*P **P** **19 21 15.1 +0.7**
VJD IAmb IAmb 19 21 36.4
comp=Z,74nm,1.5s
VJD *e*S **S** **19 27 52.6 +1.7**
HEH HeiHe 46.29 1 ⇑P **P** **19 21 16.0 +0.8**
HEH ScP **ScP** **19 26 29.3 -1.1**
HEH S **S** **19 27 50.0 -2.6**
HEH ScS **ScS** **19 30 54.5 -3.0**
HEH pmax pmax
comp=Z,92nm,1.1s
HEH pmax pmax
comp=Z,460nm,5.5s
ULN Ulaanbaatar 46.76 343 P **P** **19 21 18.7 -0.5**
ULN IAmb IAmb 19 22 28.9
comp=Z,61nm,1.2s
ULN Ulaanbaatar 46.76 343*c*eP **P** **19 21 19.0 -0.2**
ULN pmax pmax
comp=Z,26nm,1.0s

ULN Ulaanbaatar 46.76 343 P **P** **19 21 19.4 +0.2**
ULN Ulaanbaatar 46.76 343 P **P** **19 21 18.4 -0.8**
comp=Z,1µmcomp=Z,95nm,0.9s
SONM Songino Array 46.93 342 P **P** **19 21 20.2 -0.3**
comp=Z,19nm,0.9s,baz=158,slow=8.1,SNR=94
SONM PcP **PcP** **19 22 52.1 +1.0**
comp=Z,17nm,0.6s,baz=165,slow=4.2,SNR=9.7
SONM ScP **ScP** **19 26 32.0 -1.3**
comp=Z,1.4nm,0.7s,baz=172,slow=3.6,SNR=4.2
SONM LR LR 19 43 51.0
comp=Z,400nm,18.7s,baz=152,slow=39
comp=Z,19nm,0.9s
SONM Songino Array 46.93 342 P **P** **19 21 19.7 -0.8**
SONM **ScP** **19 26 32.7 -0.7**
UGL Uglegorsk 47.17 15 *e*P **P** **19 21 25.3 +3.2**
UGL *e*S **S** **19 28 04.8 -0.3**
UGL pmax pmax
comp=Z,60nm,0.8s
DZM Mont Dzumac 47.32 125 P **P** **19 21 24.9 +1.0**
comp=Z,65nm,0.9s,baz=258,slow=11,SNR=48
comp=Z,65nm,0.9s
DZM Mont Dzumac 47.32 125 IAmb IAmb 19 21 26.3
comp=Z,141nm,1.1s
GRNR Gornyy 47.63 9⇑ *i*P **P** **19 21 27.4 +1.7**
GRNR pmax pmax
comp=N,3.0nm,1.0s
GRNR pmax pmax
comp=Z,4.0nm,1.3s
GRNR MLR MLR
comp=E,150nm,15.0s
GRNR MLR MLR
comp=N,210nm,18.0s
GRNR MLR MLR
comp=Z,250nm,17.0s
SALM Salem 47.82 282 *e*P **P** **19 21 28.5 +0.8**
SALM IAmb IAmb 19 21 31.1
comp=Z,42nm,0.9s
SALM *e*S **S** **19 28 16.1 +0.7**
HYB Hyderabad 48.24 290 *e*P **P** **19 21 30.6 -0.3**
HYB IVmB_BB 19 21 31.6
comp=Z,702nm,1.7s
HYB *e*pP **pP** **19 21 59.0 +0.2**
HYB *e*sP **sP** **19 22 13.3 +1.0**
HYB *e*PcP **PcP** **19 22 56.4 +0.1**
HYB *e*PP **PP** **19 23 25.1 +0.5**
HYB *e*S **S** **19 28 21.2 -0.2**
HYB IVMs_BB IVMs_BB 19 37 33.9
comp=Z,267nm,44.9s
KOD Kodaikanal 48.38 280 *e*P **P** **19 21 34.0 +1.6**
KOD IAmb IAmb 19 21 35.1
comp=Z,19nm,0.6s
KOD *e*S **S** **19 28 24.6 +0.7**
TRD Trivandrum 48.78 278 *e*P **P** **19 21 37.3 +2.1**
TRD IAmb IAmb 19 22 12.4
comp=Z,39nm,1.2s
TRD *e*S **S** **19 28 29.9 +0.9**
CIT Chita 49.12 350 *e*P **P** **19 21 37.6 +0.5**
CIT *e* 19 22 09.6
CIT *e* 19 22 19.6
CIT *e* 19 22 59.0
CIT *e* 19 23 33.6
CIT *e* 19 24 27.6
CIT pmax pmax
comp=Z,52nm,1.8s
ZEA Zeya 49.77 1 *e*P **P** **19 21 42.5 +0.5**
ZEA *e**PP **pP** **19 22 12.0 +1.0**
ZEA *e* 19 23 32.6
ZEA *e*S **S** **19 28 43.2 +1.6**
ZEA *e* 19 31 20.7
ZEA *e*SS **SS** **19 32 08.3 -7.5**
ZEA pmax pmax
comp=Z,100nm,4.0s
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,40nm,0.8s
ZEA pmax pmax
comp=Z,100nm,5.3s
ZEA smax smax
comp=N,100nm,4.1s
ZEA MLR MLR
comp=Z,200nm,16.0s
ZAK Zakamensk 50.15 341 *e*P **P** **19 21 44.0 -1.0**
ZAK pmax pmax
comp=Z,14nm,1.6s
TLY Talaya 51.17 342 LR LR 19 45 53.9
comp=Z,302nm,21.2s,baz=140,slow=38
TLY Talaya 51.17 342 P **P** **19 21 52.5 -0.1**
TLY Talaya 51.17 342*c*eP **P** **19 21 53.2 +0.6**
TLY pmax pmax
comp=Z,24nm,1.0s
TLY Talaya 51.17 342 P **P** **19 21 52.7 +0.1**
TLY Talaya 51.17 342 P **P** **19 21 52.7 +0.1**
TLY pP **pP** **19 22 20.8 -1.0**
TLY PcP **PcP** **19 23 05.0 -1.3**
IRK Irkutsk 51.48 343 *e*P **P** **19 21 53.0 -1.9**
IRK *e* 19 22 35.6
IRK pmax pmax
comp=Z,63nm,2.2s
NFK Norfolk Island 51.96 132 P **P** **19 22 00.5 +1.7**
comp=Z,234nm,1.4s
WMQ Urumqi 52.14 326 *e*P **P** **19 22 00.5 +0.5**
WMQ sP sP 19 22 43.0 +0.1
WMQ PcP **PcP** **19 23 10.5 +0.3**
WMQ ScP **ScP** **19 26 55.0 -0.6**
WMQ S **S** **19 29 13.5 -1.2**
WMQ sS sS 19 30 03.0 -2.3
WMQ ScS **ScS** **19 31 35.5 -2.0**
WMQ pmax pmax
comp=Z,28nm,1.1s
WMQ pmax pmax
comp=Z,260nm,3.8s
WMQ LR LR
comp=Z,2µm,19.9s
WMQ LR LR
comp=Z,890nm,15.7s
WMQ LR LR
comp=Z,640nm,19.9s
KNGR Kungurtug, Tuv 52.35 338 *i*P **P** **19 22 01.7 +0.2**
KNGR pmax pmax
comp=Z,16nm,0.9s
DGAR Diego Garcia 54.42 258*c*eP **P** **19 22 16.5 -0.6**
DGAR pmax pmax
comp=Z,120nm,1.2s
DGAR Diego Garcia 54.42 258 P **P** **19 22 17.4 +0.3**
FUNA Funafuti 54.61 103 P **P** **19 22 19.9 +1.4**
PEA0B Petropavlovsk- 55.69 23 IAmb IAmb 19 22 57.0
comp=Z,43nm,0.9s
PEA0B Petropavlovsk- 55.69 23 *i*P **P** **19 22 26.3 +0.8**
PETK Petropavlovsk- 55.69 23 P **P** **19 22 26.6 +1.1**
comp=Z,17nm,0.7s,baz=190,slow=3.9,SNR=19
PETK pP **pP** **19 22 55.7 +0.8**
comp=Z,19nm,0.6s,baz=186,slow=5.3,SNR=5.3
PETK ScP **ScP** **19 27 11.1 +0.3**
comp=Z,12nm,1.0s,baz=90,slow=1.4,SNR=4.5
PETK LR LR 19 45 44.2
comp=Z,203nm,20.7s,baz=223,slow=35
comp=Z,17nm,0.7s
PETK Petropavlovsk- 55.69 23 **ScP** **19 27 11.4 +0.6**
PETK Petropavlovsk- 55.69 23 P **P** **19 22 26.4 +0.9**
MSVF Nonsavu 55.77 114 P **P** **19 22 28.2 +1.4**
MSVF Nonsavu 55.77 114 P **P** **19 22 28.2 +1.4**
MSVF pmax pmax
comp=Z,168nm,1.2s
WUS Wushi 55.90 319 IAmb IAmb 19 23 27.9
comp=Z,43nm,0.7s
ZSN Zaisan 55.95 328*c* *i*P **P** **19 22 27.2 -0.3**
ZSN Zaisan 55.95 328⇑ *i*P **P** **19 22 27.3 -0.3**
PET Petropavlovsk 56.00 23 *e*P **P** **19 22 28.7 +1.0**
PET *e**PP **pP** **19 22 58.0 +1.3**
PET *e**SP **sP** **19 23 10.8 +0.6**
PET *e*S **S** **19 30 09.3 +3.3**
PET pmax pmax
comp=Z,35nm,1.3s
DGZ Jazzator, Alta 56.08 331 *i*P **P** **19 22 28.6 0.0**
DGZ pmax pmax
comp=Z,9.0nm,1.1s
SHLS Shalkode 56.71 321*c* *i*P **P** **19 22 30.9 -2.2**
SHLS pmax pmax
comp=Z,34nm,1.3s
SHLS Shalkode 56.71 321⇑ *i*P **P** **19 22 30.9 -2.2**
comp=Z,34nm,1.3s
MK31 Makanchi Array 56.97 326*c*eP **P** **19 22 34.3 -0.5**
MKAR Makanchi Array 56.97 326 P **P** **19 22 34.2 -0.6**
comp=Z,8.9nm,0.4s,baz=120,slow=7.5,SNR=162

MKAR PcP **PcP** **19 23 29.4 +0.8**
comp=Z,104nm,0.8s,baz=123,slow=3.5,SNR=21
MKAR ScP **ScP** **19 27 15.4 -1.3**
comp=Z,11nm,0.6s,baz=116,slow=4.6,SNR=8.5
MKAR S **S** **19 30 18.1 -1.1**
comp=Z,1.2nm,0.7s,baz=117,slow=16,SNR=4.3
MKAR PKPPKP P'P'df 19 52 10.1 -15
comp=Z,0.8nm,0.7s,baz=318,slow=1.6,SNR=6.9
MKAR PKP2bc **P'P'bc** **19 52 35.5 -2.0**
comp=Z,1.2nm,0.9s,baz=297,slow=2.5,SNR=5.2
comp=Z,8.9nm,0.4s
UZB Uzynbulak 56.98 320 *e*P **P** **19 22 34.7 -0.4**
UZB Uzynbulak 56.98 320 *e*P **P** **19 22 34.7 -0.4**
TARG Taragay, Kyrgy 57.09 318 P **P** **19 22 35.9 -0.3**
TARG IAmb IAmb 19 23 42.5
comp=Z,94nm,1.5s
TARG Taragay, Kyrgy 57.09 318 P **P** **19 22 35.9 -0.3**
TARG pmax pmax
comp=Z,94nm,1.5s
NIL Nilore 57.16 308 P **P** **19 22 35.5 -0.9**
NIL IAmb IAmb 19 23 33.5
comp=Z,71nm,0.9s
NIL Nilore 57.16 308 P **P** **19 22 35.5 -0.9**
NIL pmax pmax
comp=Z,71nm,1.0s
NIL Nilore 57.16 308 P **P** **19 22 36.6 +0.2**
SATY Saty 57.33 320*c* *i*P **P** **19 22 37.1 -0.4**
SATY pmax pmax
comp=Z,27nm,1.0s
SATY Saty 57.33 320⇑ *i*P **P** **19 22 37.1 -0.4**
comp=Z,27nm,1.0s
KSH2 Kashi 57.48 315 P **P** **19 22 38.5 -0.2**
KSH2 pP pP 19 23 08.8 +0.5
KSH2 sP sP 19 23 16.5 -5.5
KSH2 PcP **PcP** **19 23 32.0 +1.0**
KSH2 S **S** **19 30 25.0 -1.5**
KSH2 sS sS 19 31 18.5 +0.3
KSH2 pmax pmax
comp=Z,22nm,1.3s
KSH2 pmax pmax
comp=Z,260nm,4.8s
KSH2 LR LR
comp=Z,830nm,18.2s
KSH2 LR LR
comp=Z,460nm,15.8s
KSH2 LR LR
comp=Z,350nm,16.1s
YAK Yakutsk 58.15 2 LR LR 19 49 44.9
comp=Z,236nm,19.1s,baz=180,slow=38
YAK Yakutsk 58.15 2 P **P** **19 22 43.1 +0.5**
YAK Yakutsk 58.15 2*c* *i*P **P** **19 22 43.5 +0.8**
YAK *e**PP **pP** **19 23 11.9 -0.7**
YAK *e* 19 23 28.3
YAK *e* 19 24 52.8
YAK *i*S **S** **19 30 33.0 -1.0**
YAK *e* 19 32 16.4
YAK *e*SS **SS** **19 34 29.1 +1.5**
YAK pmax pmax
comp=Z,289nm,0.9s
YAK pmax pmax
comp=N,58nm,1.2s
YAK pmax pmax
comp=E,15nm,1.0s
YAK pmax pmax
comp=Z,32nm,1.2s
YAK pmax pmax
comp=N,38nm,1.3s
YAK pmax pmax
comp=E,29nm,1.6s
YAK smax smax
comp=N,730nm,3.0s
YAK smax smax
comp=E,234nm,1.9s
YAK Yakutsk 58.15 2 P **P** **19 22 43.7 +1.0**
YAK x x 19 23 11.7
YAK pP **pP** **19 23 13.9 +1.3**
YAK x x 19 23 28.4
NRN Naryn 58.16 317 IAmb IAmb 19 23 23.7
comp=Z,22nm,0.7s
MDOK Medeo 58.25 320 *e*P **P** **19 22 43.6 -0.4**
MDOK Medeo 58.25 320 *e*P **P** **19 22 43.7 -0.4**
TNSS Tian-Shan 58.26 319 *e*P **P** **19 22 43.5 -0.8**
TNSS Tian-Shan 58.26 319 *e*P **P** **19 22 43.6 -0.8**
ARXS Arharly 58.26 321 *e*P **P** **19 22 43.1 -0.8**
TDK Taldyqorghan 58.29 322*c* *i*P **P** **19 22 43.8 -0.2**
TDK pmax pmax
comp=Z,31nm,0.8s
TDK Taldyqorghan 58.29 322⇑ *i*P **P** **19 22 43.9 -0.2**
comp=Z,31nm,0.8s
AAA Alma-Ata 58.36 320 *e*P **P** **19 22 44.3 -0.3**
AAA pmax pmax
comp=Z,21nm,0.8s
AAA Alma-Ata 58.36 320 *e*P **P** **19 22 44.4 -0.2**
comp=Z,21nm,0.8s
MA2 Magadan 58.84 15 LR LR 19 47 33.6
comp=Z,130nm,20.7s,baz=210,slow=35
MA2 Magadan 58.84 15 P **P** **19 22 48.9 +1.4**
MA2 IAmb IAmb 19 23 38.5
comp=Z,82nm,1.3s
MA2 Magadan 58.84 15 P **P** **19 22 48.9 +1.4**
MA2 pmax pmax
comp=Z,82nm,1.3s
TKM2 Tokmak 2 59.09 319 P **P** **19 22 49.8 0.0**
SNR=8.4
KBK Karagaybulak 59.40 318 P **P** **19 22 52.3 +0.3**
SNR=12
UCH Uchtor 59.50 318 P **P** **19 22 53.5 +0.5**
SNR=24
CHMS Chumysh 59.68 319 P **P** **19 22 53.2 -0.5**
SNR=7.8
AAK Ala-Archa 59.69 318 P **P** **19 22 54.2 +0.2**
SNR=8.0
AAK Ala-Archa 59.69 318 LR LR 19 50 26.2
comp=Z,468nm,21.8s,baz=110,slow=38
AAK Ala-Archa 59.69 318 P **P** **19 22 53.7 -0.2**
AAK IAmb IAmb 19 23 43.3
comp=Z,35nm,1.1s
AAK Ala-Archa 59.69 318 *i*P **P** **19 22 53.8 -0.2**
SNR=9.5
AAK Ala-Archa 59.69 318*ce*P **P** **19 22 53.1 -0.8**
AAK pmax pmax
comp=Z,10.0nm,1.0s
AAK Ala-Archa 59.69 318 P **P** **19 22 54.3 +0.4**
AAK PcP **PcP** **19 23 41.2 +1.5**
USP Ospenovka 59.96 319 P **P** **19 22 55.2 -0.4**
SNR=26
ZAA0 Zalesovo Array 60.10 333 P **P** **19 22 54.6 -1.7**
ZAA0 IAmb IAmb 19 23 41.5
comp=Z,29nm,1.1s
ZALV Zalesovo Beam 60.10 333 P **P** **19 22 54.6 -1.7**
comp=Z,7.3nm,0.4s,baz=124,slow=6.4,SNR=48
ZALV LR LR 19 49 53.9
comp=Z,185nm,19.6s,baz=128,slow=37
ZALV PKPPKP **P'P'df** **19 52 16.0 -3.7**
comp=Z,0.7nm,0.5s,baz=270,slow=3.0,SNR=5.4
ZALV PKP2bc **P'P'bc** **19 52 26.4 -3.2**
comp=Z,1.6nm,0.7s,baz=279,slow=4.5,SNR=5.7
comp=Z,7.3nm,0.4s
ZALV Zalesovo Beam 60.10 333 P **P** **19 22 54.5 -1.8**
EKS2 Erkin-Say 60.18 318 P **P** **19 22 57.4 +0.2**
SNR=13
DRK Karamyk 60.30 314 IAmb IAmb 19 23 42.6
comp=Z,49nm,0.8s
KBL Kabul 60.76 308 P **P** **19 23 00.6 -0.8**
KBL IAmb IAmb 19 23 39.5
comp=Z,60nm,1.1s
KBL Kabul 60.76 308 P **P** **19 23 00.6 -0.8**
KBL pmax pmax
comp=Z,60nm,1.2s
KBL Kabul 60.76 308 P **P** **19 23 01.0 -0.4**
SNR=22
KURBB Kurchatov Arra 61.18 328 P **P** **19 23 02.8 -0.9**
comp=Z,15nm,0.6s,baz=132,slow=6.4,SNR=126
KURBB PKPPKP P'P'df 19 52 08.1 -10
comp=Z,2.5nm,0.2s,baz=290,slow=3.9,SNR=5.0
comp=Z,15nm,0.6s
KURK Kurchatov 61.18 328 P **P** **19 23 02.7 -1.0**
KURK IAmb IAmb 19 23 47.7
comp=Z,69nm,0.9s
KURK Kurchatov 61.18 328*ce*P **P** **19 23 03.3 -0.4**
KURK pmax pmax
comp=Z,84nm,1.7s
KURK Kurchatov 61.18 328 P **P** **19 23 03.3 -0.4**
QRZ Quartz Range 61.56 141 P **P** **19 23 07.9 +1.5**
HIZ Hauiti 61.82 138 IAmb IAmb 19 23 11.2
comp=Z,81nm,1.1s

DZA Taraz 61.92 317 *e*P **P** **19 23 08.5 -0.4**
DZA Taraz 61.92 317 *e*P **P** **19 23 08.5 -0.4**
CHGR Chuyangaron 61.94 312 IAmb IAmb 19 23 47.5
comp=Z,84nm,1.1s
CHGR Chuyangaron 61.94 312 *i* P **P** **19 23 08.4 -0.8**
CHGR pmax pmax
comp=Z,65nm,1.3s
TKNZ Takaka Hill 61.95 141 P **P** **19 23 09.4 +0.4**
SEY Seymchan 62.15 13 LR LR 19 49 48.9
comp=Z,103nm,20.8s,baz=209,slow=36
SEY Seymchan 62.15 13 *i* P **P** **19 23 11.2 +1.3**
SEY pmax pmax
comp=Z,27nm,1.0s
LBZ Lake Benmore 62.26 146 P **P** **19 23 12.2 +1.2**
NNZ Nelson 62.31 141 IAmb IAmb 19 23 13.7
comp=Z,112nm,1.4s
THZ Tophouse 62.32 142 IAmb IAmb 19 23 12.7
comp=Z,45nm,0.9s
RPZ Rata Peaks 62.35 144 P **P** **19 23 12.0 +0.3**
comp=Z,62nm,0.9s,baz=7.8,slow=18,SNR=12
RPZ LR LR 19 50 55.5
comp=Z,497nm,19.0s,baz=70,slow=36
comp=Z,62nm,0.9s
SHAA Shahritus 62.37 311 IAmb IAmb 19 24 09.8
comp=Z,129nm,1.5s
IUG Iuzhnay 62.53 316*c* *i*P **P** **19 23 12.6 -0.4**
IUG pmax pmax
comp=Z,56nm,1.4s
IUG Iuzhnay 62.53 316⇑ *i*P **P** **19 23 12.7 -0.4**
comp=Z,56nm,1.4s
KK31 Karatay Array 62.55 317 P **P** **19 23 12.0 -1.1**
KK31 IAmb IAmb 19 23 59.9
comp=Z,95nm,1.4s
KK31 Karatay Array 62.55 317 P **P** **19 23 12.0 -1.1**
KK31 pmax pmax
comp=Z,95nm,1.4s
KKAR Karatay Array 62.55 317 P **P** **19 23 12.1 -1.0**
KKAR Karatay Array 62.55 317 P **P** **19 23 12.1 -1.0**
OXZ Oxford 62.70 144 IAmb IAmb 19 23 59.1
comp=Z,106nm,1.5s
SHEM Shemya Is, Ala 62.84 31 LR LR 19 46 20.1
comp=Z,106nm,21.0s,baz=286,slow=32
CHM Chimkent 62.88 316 *e*P **P** **19 23 15.0 -0.3**
CHM Chimkent 62.88 316 *e*P **P** **19 23 15.1 -0.3**
BRLS Boroldoy 62.99 317*c* *i*P **P** **19 23 15.6 -0.3**
BRLS Boroldoy 62.99 317⇑ *i*P **P** **19 23 15.6 -0.3**
URZ Urewera 63.22 137 P **P** **19 23 17.0 -0.5**
comp=Z,19nm,0.7s,baz=322,slow=3.3,SNR=15
URZ LR LR 19 50 52.0
comp=Z,561nm,20.1s,baz=317,slow=36
comp=Z,19nm,0.7s
BKZ Black Stump Fm 63.25 138 IAmb IAmb 19 23 19.2
comp=Z,85nm,1.0s
MRZ Mangatainoka R 63.42 140 IAmb IAmb 19 23 19.3
comp=Z,37nm,1.0s
AFI Afiamalu 64.33 107 P **P** **19 23 26.6 +1.3**
comp=Z,36nm,0.8s,baz=284,slow=4.6,SNR=8.0
AFI LR LR 19 45 38.3
comp=Z,230nm,21.9s,baz=293,slow=30
comp=Z,36nm,0.8s
AMKA Amchitka 64.93 34 P **P** **19 23 29.4 +1.0**
AMKA IAmb IAmb 19 23 32.6
comp=Z,55nm,0.8s
ROCAM Rodrigues Isla 65.65 246 P **P** **19 23 33.3 -0.4**
HRA Herat 66.15 306 IAmb IAmb 19 23 38.5
comp=Z,36nm,1.1s
JLN Jalan Bani Buh 66.74 292 P **P** **19 23 39.8 -0.9**
BVAR Borovoye Array 66.76 327 P **P** **19 23 39.0 -1.1**
comp=Z,9.2nm,0.3s,baz=117,slow=7.0,SNR=68
BVAR PKPPKP **P'P'df** **19 52 06.5 -2.8**
comp=Z,0.9nm,0.8s,baz=304,slow=2.9,SNR=5.3
BVAR LR LR 19 53 33.1
comp=Z,250nm,21.4s,baz=116,slow=36
comp=Z,9.2nm,0.3s
BORK Borovoye 66.80 327 P **P** **19 23 38.7 -1.7**
BORK IAmb IAmb 19 24 28.3
comp=Z,68nm,1.0s
BORK Borovoye 66.80 327*ce*P **P** **19 23 39.7 -0.7**
BORK pmax pmax
comp=Z,70nm,1.7s
KIWB Kanaga Island 67.12 34 IAmb IAmb 19 24 32.1
comp=Z,104nm,1.3s
WBK Wadi Bani Khal 67.19 293 P **P** **19 23 42.6 -0.9**
ADK Adak 67.40 34 P **P** **19 23 44.6 +0.4**
ADK IAmb IAmb 19 23 46.8
comp=Z,92nm,1.1s
ADK Adak 67.40 34 P **P** **19 23 44.6 +0.4**
ADK pmax pmax
comp=Z,92nm,1.2s
WSAR Wadi Sarin 67.56 293 P **P** **19 23 44.4 -1.4**
TIXI Tiksi 67.77 1 P **P** **19 23 45.3 -0.8**
TIXI IAmb IAmb 19 23 48.9
comp=Z,54nm,0.7s
TIXI Tiksi 67.77 1*ce*P **P** **19 23 46.4 +0.3**
TIXI pmax pmax
comp=Z,62nm,0.8s
TIXI Tiksi 67.77 1 P **P** **19 23 46.9 +0.8**
TIXI sP **sP** **19 24 29.9 -0.6**
JMDO Jabal Madar 67.97 292 P **P** **19 23 47.0 -1.4**
MHTO MHTO 67.98 291 P **P** **19 23 46.8 -1.6**
BIDO Bidbid 68.05 294 P **P** **19 23 48.3 -0.5**
SMDO Samad 68.08 293 P **P** **19 23 47.5 -1.7**
SOHO SOHO 69.56 294 P **P** **19 23 57.1 -1.1**
SOHO SOHO 69.56 294 P **P** **19 23 57.5 -0.7**
BILL Bilibino 69.70 15 P **P** **19 23 58.5 +0.3**
BILL Bilibino 69.70 15*ce*P **P** **19 23 59.0 +0.8**
BILL pmax pmax
comp=Z,9.0nm,0.6s
UOSS Minazif 69.93 295 P **P** **19 23 59.2 -1.3**
UOSS Minazif 69.93 295 P **P** **19 23 59.8 -0.7**
BANOM Banah 69.94 296 P **P** **19 24 00.6 +0.1**
BANOM Banah 69.94 296 P **P** **19 23 60.0 -0.6**
HATD Hatta, Dubai 69.99 295 P **P** **19 23 59.8 -1.0**
SHAO Shalim 70.01 288 *i* P **P** **19 23 60.0 -1.1**
SNR=5.0
SHAO Shalim 70.01 288 P **P** **19 24 00.2 -0.8**
MASF Masafi 70.01 295 P **P** **19 24 01.5 +0.5**
ASHO Ashiyiah 70.04 295 P **P** **19 24 00.6 -0.6**
ASHO Ashiyiah 70.04 295 P **P** **19 24 00.7 -0.5**
ALNE Al Ain 70.27 294 *i* P **P** **19 24 01.5 -1.0**
SNR=14
ALNE Al Ain 70.27 294 P **P** **19 24 01.9 -0.7**
SNR=5.6
DMTO DMTO 70.64 287 P **P** **19 24 04.2 -0.7**
ASUD Al Ashush, Dub 70.70 295 P **P** **19 24 05.4 +0.2**
ASUD Al Ashush, Dub 70.70 295 P **P** **19 24 04.5 -0.6**
UMZA Um Al Zommool 70.71 293 P **P** **19 24 03.9 -1.4**
MSEY Mahe Island 70.79 264 P **P** **19 24 05.9 0.0**
CASY Casey 70.80 186 P **P** **19 24 05.7 +0.8**
CASY IAmb IAmb 19 24 07.2
comp=Z,67nm,0.8s
CASY Casey 70.80 186 P **P** **19 24 06.3 +1.4**
RBK Rabkut 71.34 287 P **P** **19 24 09.5 +0.3**
SNR=6.7
PAF Port-aux-Franc 71.43 215 P **P** **19 24 10.5 +1.5**
PAF Port-aux-Franc 71.43 215 P **P** **19 24 10.5 +1.5**
PAF pmax pmax
comp=Z,400nm,1.4s
DOK Doka 71.45 288 P **P** **19 24 08.2 -1.6**
SNR=9.7
AB31 Akbulak array 71.51 321 IAmb IAmb 19 25 04.2
comp=Z,109nm,1.8s
ABKAR Akbulak array 71.51 321 P **P** **19 24 07.8 -1.7**
WHFO Wadi Hawf 71.77 288 P **P** **19 24 09.9 -1.9**
SNR=6.8
MZWR Madinat Zayed 71.95 294 P **P** **19 24 11.8 -0.9**
MZR Muzera 72.27 293 *i* P **P** **19 24 14.1 -0.6**
SNR=18
MZR Muzera 72.27 293 P **P** **19 24 14.0 -0.6**
GHWR Ruwais 72.88 294 P **P** **19 24 17.5 -0.7**
JRN Qarnain Island 72.97 295 P **P** **19 24 17.1 -1.6**
AKTO Aktyubinsk 73.03 322 LR LR 19 59 37.7
comp=Z,322nm,18.8s,baz=119,slow=38
UNV Unalaska Valle 73.86 35 IAmb IAmb 19 24 32.9
comp=Z,58nm,1.0s
UNV Unalaska Valle 73.86 35 P **P** **19 24 24.1 +0.8**
baz=254
LVA Lava Point 74.21 35 IAmb IAmb 19 25 12.5
comp=Z,105nm,1.1s
ARTI Arti 74.46 328 LR LR 19 59 48.6
comp=Z,164nm,20.6s,baz=106,slow=38
ARTI Arti 74.46 328 P **P** **19 24 25.1 -1.7**
ARTI Arti 74.46 328*c* *i*P **P** **19 24 25.4 -1.4**
ARTI *PP **pP** **19 24 56.5 -1.6**
ARTI S **S** **19 33 50.6 -0.8**

ARTI SS **SS** **19 38 35.0 -5.4**
ARTI pmax pmax
comp=Z,16nm,0.6s
ARTI Arti 74.46 328 P **P** **19 24 25.4 -1.4**
GAMB Gambell 74.68 24 P **P** **19 24 29.0 +1.2**
baz=247
SMRA Abu-Samra 74.80 294 P **P** **19 24 28.6 -0.7**
FALS False Pass 75.87 34 P **P** **19 24 35.7 +0.8**
baz=256,SNR=7.1
M11K Mekoryuk 75.92 28 P **P** **19 24 35.9 +0.9**
baz=252
TNA Tin City 76.86 23 P **P** **19 24 41.7 +1.5**
baz=250,SNR=7.5
RAR Rarotonga 76.90 113 P **P** **19 24 40.6 -0.7**
comp=Z,22nm,1.0s,baz=215,slow=12,SNR=3.5
RAR LR LR 19 55 11.3
comp=Z,82nm,21.9s,baz=276,slow=33
comp=Z,22nm,1.0s
RAR Rarotonga 76.90 113 P **P** **19 24 40.2 -1.2**
K13K Kusilvak Mount 77.09 27 IAmb IAmb 19 25 21.1
comp=Z,52nm,1.1s
K13K Kusilvak Mount 77.09 27 P **P** **19 24 43.1 +1.5**
baz=254
M13K Dall Lake 77.28 29 P **P** **19 24 44.1 +1.4**
baz=255,SNR=9.4
F14K Arctic Creek 77.45 23 P **P** **19 24 45.3 +1.7**
baz=251
ANM Nome 77.55 24 P **P** **19 24 45.0 +0.9**
baz=252,SNR=18
SDPT Sand Point 77.62 34 P **P** **19 24 45.4 +0.7**
baz=259,SNR=17
J14K Nanvaranak Lak 77.81 26 P **P** **19 24 46.9 +1.3**
baz=254,SNR=7.6
L14K Kuka Creek 77.84 28 IAmb IAmb 19 24 50.5
comp=Z,54nm,0.9s
L14K Kuka Creek 77.84 28 P **P** **19 24 47.1 +1.3**
baz=255
N14K Kuskokwak Cree 77.97 29 IAmb IAmb 19 24 50.8
comp=Z,56nm,0.8s
N14K Kuskokwak Cree 77.97 29 P **P** **19 24 47.9 +1.4**
baz=257,SNR=21
CNBA Chernabura Isl 78.03 35 IAmb IAmb 19 25 38.0
comp=Z,115nm,1.6s
CHNA Chernabura Isl 78.03 35 P **P** **19 24 47.6 +0.7**
baz=260
O14K Tigyukauivet M 78.03 30 P **P** **19 24 47.9 +1.1**
baz=257
M14K Bethel 78.03 29 IAmb IAmb 19 24 51.3
comp=Z,54nm,0.8s
M14K Bethel 78.03 29 P **P** **19 24 48.6 +1.8**
baz=256,SNR=34
MLH Mauna Loa 78.17 71 P **P** **19 24 51.2 +2.4**
F15K North Star Dit 78.19 23 P **P** **19 24 49.2 +1.6**
baz=253,SNR=27
G15K Niukluk 78.23 24 P **P** **19 24 49.3 +1.4**
baz=254
PUH Pauahi 78.33 71 P **P** **19 24 50.2 +0.7**
KNHH Kane Nui o Ham 78.37 71 P **P** **19 24 51.5 +1.8**
L15K Ungalak Mounta 78.47 28 P **P** **19 24 50.4 +1.1**
baz=256
K15K Wolf Creek Mou 78.60 27 IAmb IAmb 19 25 29.7
comp=Z,70nm,1.2s
K15K Wolf Creek Mou 78.60 27 P **P** **19 24 51.5 +1.5**
baz=256,SNR=25
M15K Kasigluk River 78.63 29 P **P** **19 24 51.6 +1.5**
baz=257
C16K Lisburne Hills 78.72 21 P **P** **19 24 52.1 +1.6**
baz=252
O15K Ungalikthiuk R 78.73 30 P **P** **19 24 52.0 +1.2**
baz=258,SNR=11
N15K Kwethluk River 78.80 29 IAmb IAmb 19 25 31.3
comp=Z,55nm,1.2s
N15K Kwethluk River 78.80 29 P **P** **19 24 52.7 +1.5**
baz=258
CCD Concordia, Ant 78.82 181 P **P** **19 24 53.4 +2.0**
CCD x x 19 25 29.3
MAK Makhachkala 78.86 313 *e*P **P** **19 24 51.0 -0.8**
MAK *e**PP **pP** **19 25 19.7 -3.6**
MAK *e**SP **sP** **19 25 34.0 -2.7**
MAK *e* 19 27 50.1
MAK *e*PPP PPP 19 29 37.2
MAK *e*S **S** **19 34 38.7 -1.0**
MAK *e**SS **sS** **19 35 33.0 +1.3**
MAK pmax pmax
comp=Z,210nm,1.4s
MAK MLR MLR
comp=Z,192nm,16.0s
H16K Elim 78.87 25 P **P** **19 24 52.7 +1.3**
baz=255,SNR=52
G16K Koyuk River 79.02 24 P **P** **19 24 53.7 +1.6**
baz=255,SNR=31
J16K Anvik River 79.25 26 P **P** **19 24 54.8 +1.4**
baz=257
I17K Unalakleet 79.34 26 P **P** **19 24 55.6 +1.6**
baz=257,SNR=30
D17K Noatak River 79.36 22 P **P** **19 24 55.4 +1.4**
baz=254,SNR=76
L16K Owhat River 79.42 28 IAmb IAmb 19 25 34.1
comp=Z,92nm,1.3s
L16K Owhat River 79.42 28 P **P** **19 24 55.8 +1.3**
baz=258,SNR=30
N16K Nishlik Lake 79.51 29 P **P** **19 24 56.4 +1.4**
baz=259,SNR=24
M16K Timber Creek 79.52 29 IAmb IAmb 19 25 35.2
comp=Z,58nm,1.1s
M16K Timber Creek 79.52 29 P **P** **19 24 56.7 +1.6**
baz=259,SNR=25
RDOG Red Dog Mine 79.53 21 P **P** **19 24 56.2 +1.3**
baz=254,SNR=11
C17K DeLong Mountai 79.55 21 P **P** **19 24 56.7 +1.6**
baz=254,SNR=30
R16K Pilot Point 79.61 32 P **P** **19 24 56.8 +1.3**
baz=261
RAYN Ar Rayn 79.62 293 P **P** **19 24 54.8 -1.6**
RAYN Ar Rayn 79.62 293 *i* P **P** **19 24 55.3 -1.1**
SNR=32
RAYN Ar Rayn 79.62 293 P **P** **19 24 54.8 -1.6**
RAYN pmax pmax
comp=Z,17nm,0.7s
RAYN Ar Rayn 79.62 293 P **P** **19 24 55.4 -1.1**
P16K Nushagak River 79.64 31 IAmb IAmb 19 25 44.0
comp=Z,39nm,0.9s
P16K Nushagak River 79.64 31 P **P** **19 24 57.3 +1.6**
baz=260,SNR=7.9
E17K Hotham Inlet 79.67 22 P **P** **19 24 57.6 +2.0**
baz=255,SNR=41
KIRV Kirov 79.68 329 LR LR 20 02 10.8
comp=Z,237nm,20.8s,baz=99,slow=37
KIRV Kirov 79.68 329*ce*P **P** **19 24 55.2 -0.7**
O16K Kokwok River B 79.68 30 IAmb IAmb 19 25 35.3
comp=Z,82nm,1.6s
O16K Kokwok River B 79.68 30 P **P** **19 24 57.7 +1.8**
baz=260,SNR=11
F17K Baldwin Pennin 79.72 23 P **P** **19 24 57.8 +1.8**
baz=256,SNR=24
G17K Kiwalik Mounta 79.74 24 P **P** **19 24 58.2 +2.1**
baz=256,SNR=55
BELG Belogornoye 79.79 322 *i* P **P** **19 24 55.3 -1.3**
BELG pmax pmax
comp=Z,10.0nm,0.9s
H17K Granite Mounta 79.91 25 P **P** **19 24 58.8 +1.7**
baz=257,SNR=34
L17K Donlin 80.05 28 P **P** **19 24 58.8 +1.0**
baz=259,SNR=22
K17K Iditarod 80.16 27 IAmb IAmb 19 25 36.8
comp=Z,80nm,1.0s
K17K Iditarod 80.16 27 P **P** **19 25 00.3 +1.9**
baz=259
E18K Tukpahlearik C 80.21 22 P **P** **19 25 00.4 +1.7**
baz=256
O17K Koliganek Bris 80.21 30 P **P** **19 25 00.1 +1.4**
baz=261,SNR=8.2
R17L Mt. Peulik Vol 80.26 32 P **P** **19 24 60.0 +0.8**
baz=262
Q16K King Salmon 80.26 31 P **P** **19 24 59.8 +0.8**
baz=261
PLK4 Peulik 4 80.27 32 IAmb IAmb 19 25 37.4
comp=Z,40nm,0.8s
N17K Nushagak Hills 80.29 29 P **P** **19 25 00.2 +1.0**
baz=260,SNR=9.4
C18K Utukok River 80.30 21 P **P** **19 25 00.8 +1.7**
baz=256
M17K Holitna River 80.32 28 P **P** **19 25 00.5 +1.2**
baz=260
F18K Selawik 80.38 23 P **P** **19 25 01.1 +1.5**
baz=257,SNR=18
CHIR Chirikof Islan 80.42 34 P **P** **19 25 01.0 +1.1**

baz=263
P17K Kvichak River 80.45 31 IAmb IAmb 19 25 47.5
comp=Z,149nm,1.6s
P17K Kvichak River 80.45 31 P **P** **19 25 01.2 +1.2**
baz=261
ABPO Ambohimpanom 80.50 250 P **P** **19 24 59.8 -1.5**
ABPO IAmb IAmb 19 25 04.1
comp=Z,41nm,0.7s
ABPO Ambohimpanom 80.50 250 P **P** **19 24 59.8 -1.5**
ABPO pmax pmax
comp=Z,41nm,0.7s
ABPO Ambohimpanom 80.50 250 P **P** **19 25 00.5 -0.8**
ABPO PcP **PcP** **19 25 06.7 -1.2**
H18K Honhosa River 80.60 25 P **P** **19 25 02.2 +1.4**
baz=259,SNR=26
Q17K Contact Creek 80.60 32 P **P** **19 25 02.2 +1.2**
baz=262
G18K Tagagawik 80.63 24 P **P** **19 25 02.1 +1.2**
baz=258,SNR=21
GNI Garni 80.74 310 P **P** **19 25 02.2 0.0**
GNI IAmb IAmb 19 26 03.5
comp=Z,110nm,1.6s
GNI Garni 80.74 310 P **P** **19 25 02.1 -0.2**
GNI Garni 80.74 310 *ce*P **P** **19 25 02.3 0.0**
GNI pmax pmax
comp=Z,28nm,1.7s
GNI Garni 80.74 310 P **P** **19 25 01.8 -0.4**
comp=Z,23nm,0.8s
L18K Granite Mounta 80.81 28 IAmb IAmb 19 25 06.8
comp=Z,38nm,0.9s
L18K Granite Mounta 80.81 28 P **P** **19 25 03.5 +1.6**
baz=261
N18K Kilae Creek 80.95 29 P **P** **19 25 04.5 +1.8**
baz=262
C19K Lookout Ridge 80.97 20 IAmb IAmb 19 25 07.2
comp=Z,42nm,0.8s
C19K Lookout Ridge 80.97 20 P **P** **19 25 04.6 +1.9**
baz=257
J18K Innoko River 81.00 26 P **P** **19 25 04.2 +1.3**
baz=260,SNR=16
P18K Big Mountain, 81.09 31 P **P** **19 25 05.0 +1.4**
baz=262
M18K Stony River 81.10 28 P **P** **19 25 05.5 +2.1**
baz=262
Q18K Katmai Hardscr 81.11 31 P **P** **19 25 05.1 +1.4**
baz=263
GCSA Galena City Sc 81.14 25 P **P** **19 25 05.5 +1.9**
baz=260,SNR=13
F19K Shaleruckik Mo 81.16 23 P **P** **19 25 05.2 +1.5**
baz=259,SNR=22
O18K Koktuh Hills 81.17 30 IAmb IAmb 19 25 42.9
comp=Z,44nm,1.0s
O18K Koktuh Hills 81.17 30 P **P** **19 25 05.1 +1.2**
baz=262,SNR=7.8
VOI Vohitsoka 81.28 247 P **P** **19 25 04.4 -1.0**
VOI IAmb IAmb 19 25 09.4
comp=Z,86nm,0.7s
VOI Vohitsoka 81.28 247 P **P** **19 25 05.0 -0.4**
SNR=5.7
G19K Purcell Mounta 81.31 24 IAmb IAmb 19 25 09.6
comp=Z,61nm,0.9s
G19K Purcell Mounta 81.31 24 P **P** **19 25 06.1 +1.7**
baz=260
SII Sitkinak Islan 81.31 33 P **P** **19 25 05.9 +1.2**
baz=264
D19K Kuna River 81.36 21 P **P** **19 25 06.4 +1.6**
baz=258
E19K Redstone River 81.49 22 P **P** **19 25 07.3 +1.9**
baz=259
J19K Poorman 81.56 26 P **P** **19 25 07.3 +1.4**
baz=261,SNR=29
N19K Bonanza Creek 81.65 29 IAmb IAmb 19 25 46.6
comp=Z,44nm,1.0s
N19K Bonanza Creek 81.65 29 P **P** **19 25 08.3 +1.8**
baz=263
L19K White Mountain 81.65 28 IAmb IAmb 19 25 46.3
comp=Z,66nm,1.2s
L19K White Mountain 81.65 28 P **P** **19 25 08.4 +2.0**
baz=262,SNR=19
O19K Port Alsworth 81.65 30 P **P** **19 25 08.0 +1.6**
baz=263
CRZF Crozet Islands 81.79 222 P **P** **19 25 07.6 +0.2**
OHAK Old Harbor 81.86 33 IAmb IAmb 19 26 06.3
comp=Z,107nm,1.4s
OHAK Old Harbor 81.86 33 P **P** **19 25 08.5 +1.0**
baz=264
D20K Etivluk River 81.95 21 IAmb IAmb 19 25 46.9
comp=Z,94nm,1.1s
D20K Etivluk River 81.95 21 P **P** **19 25 09.6 +1.8**
baz=260
GEVA Gevas 81.97 308 IAmb IAmb 19 25 11.1
comp=Z,36nm,0.6s
B20K Meade River 81.99 20 IAmb IAmb 19 25 47.3
comp=Z,91nm,1.4s
B20K Meade River 81.99 20 P **P** **19 25 09.6 +1.6**
baz=259,SNR=29
F20K Avaraart Lake 82.00 23 P **P** **19 25 09.4 +1.4**
baz=261
E20K Nigu River 82.02 22 P **P** **19 25 10.1 +1.8**
baz=260
H20K Anotleneega Mo 82.10 24 P **P** **19 25 10.6 +1.9**
baz=262
P19K Oil Pt 82.14 30 P **P** **19 25 10.9 +1.9**
baz=264
K20K Telida 82.16 27 IAmb IAmb 19 25 14.5
comp=Z,46nm,1.0s
K20K Telida 82.16 27 P **P** **19 25 10.7 +1.7**
baz=263,SNR=21
KBZ Khabaz 82.27 313 P **P** **19 25 09.6 -0.3**
comp=Z,3.1nm,0.5s,baz=108,slow=7.6,SNR=14
comp=Z,3.1nm,0.5s
KDAK Kodiak Island 82.29 32 LR LR 19 56 01.0
comp=Z,139nm,21.6s,baz=245,slow=31
KDAK Kodiak Island 82.29 32 P **P** **19 25 11.0 +1.2**
KDAK Kodiak Island 82.29 32 P **P** **19 25 11.0 +1.2**
KDAK pmax pmax
comp=Z,255nm,2.0s
KDAK Kodiak Island 82.29 32 P **P** **19 25 11.3 +1.5**
baz=265
ATD Arta Tunnel 82.38 281 P **P** **19 25 11.6 +0.4**
NEUR Neytrino 82.39 313 *i* P **P** **19 25 10.6 -0.3**
NEUR pmax pmax
comp=Z,5.0nm,0.9s
A21K Barrow 82.42 19 P **P** **19 25 12.5 +2.4**
baz=259,SNR=36
M20K Styx River 82.42 28 IAmb IAmb 19 25 50.5
comp=Z,136nm,1.3s
M20K Styx River 82.42 28 P **P** **19 25 12.0 +1.5**
baz=264,SNR=30
KIV Kislovodsk 82.43 314 ⇑P **P** **19 25 11.4 +0.4**
KIV Kislovodsk 82.43 314 P **P** **19 25 10.2 -0.7**
KIV Kislovodsk 82.43 314 P **P** **19 25 10.7 -0.3**
KIV Kislovodsk 82.43 314 *eP* **P** **19 25 10.2 -0.7**
KIV *e**SP **sP** **19 25 52.0 -4.1**
KIV *eS* **S** **19 35 15.9 -1.2**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,111nm,19.0s
KIV Kislovodsk 82.43 314 P **P** **19 25 11.2 +0.2**
SHA1 Shidzhatmaz 82.44 313 *i* P **P** **19 25 10.8 -0.4**
Q20K Shuyak Island 82.47 32 P **P** **19 25 11.6 +1.0**
baz=265
IMAR Indian Mountai 82.63 24 P **P** **19 25 12.2 +0.8**
C21K Knifeblade Rid 82.67 21 P **P** **19 25 13.1 +1.5**
baz=261,SNR=22
GURO Guroymak-BITLI 82.78 308 IAmb IAmb 19 25 15.6
comp=Z,33nm,0.7s
G21K Allakaket 82.79 23 IAmb IAmb 19 25 17.6
comp=Z,53nm,1.0s
G21K Allakaket 82.79 23 P **P** **19 25 13.5 +1.3**
baz=263
SPCR Spurr Chakacha 82.79 29 P **P** **19 25 13.2 +0.7**
baz=265,SNR=11
B21K Ikpikpuk River 82.80 20 IAmb IAmb 19 25 16.8
comp=Z,41nm,0.8s
B21K Ikpikpuk River 82.80 20 P **P** **19 25 13.7 +1.6**
baz=262,SNR=54
E21K Killik River 82.86 22 P **P** **19 25 14.1 +1.5**
baz=262
SPU Mount Spurr 82.86 29 IAmb IAmb 19 25 16.7
comp=Z,34nm,1.0s
F21K Alatna River 82.89 23 P **P** **19 25 14.4 +1.6**
baz=263
HOM Homer 82.94 30 P **P** **19 25 14.6 +1.5**
baz=266
PPLA Purkeypile 82.96 27 IAmb IAmb 19 25 50.4
comp=Z,53nm,1.2s
PPLA Purkeypile 82.96 27 P **P** **19 25 14.6 +1.2**
baz=265,SNR=9.6
H21K Melozitna Rive 82.97 24 IAmb IAmb 19 25 18.0
comp=Z,43nm,0.9s
H21K Melozitna Rive 82.97 24 P **P** **19 25 15.0 +1.8**
baz=264,SNR=50
CHUM Lake Minchumin 83.00 26 P **P** **19 25 14.4 +1.0**
baz=264,SNR=9.8
SKT Skwentna 83.18 28 IAmb IAmb 19 25 17.9
comp=Z,44nm,1.0s
SKT Skwentna 83.18 28 P **P** **19 25 15.3 +1.0**
baz=265,SNR=20
I21K Tanana 83.27 25 P **P** **19 25 16.2 +1.5**
baz=264
CAPN Captain Cook N 83.27 29 P **P** **19 25 15.8 +1.0**
baz=265
B22K Teshekpuk Lake 83.31 20 IAmb IAmb 19 25 19.4
comp=Z,41nm,0.9s
B22K Teshekpuk Lake 83.31 20 P **P** **19 25 16.3 +1.6**
baz=263
VRH Novokhopyorsk 83.35 321 *eP* **P** **19 25 13.8 -1.6**
VRH *e**SP **sP** **19 25 56.3 -4.2**
VRH *eS* **S** **19 35 20.5 -5.3**
VRH pmax pmax
comp=Z,31nm,0.5s
VRH smax smax
comp=E,400nm,1.4s
D22K Ayikyak River 83.39 21 IAmb IAmb 19 25 53.4
comp=Z,95nm,1.9s
D22K Ayikyak River 83.39 21 P **P** **19 25 16.9 +1.6**
baz=264
BRSE Bradley Lake S 83.40 30 P **P** **19 25 16.3 +0.7**
baz=266,SNR=11
SUA Susitna One 83.52 29 P **P** **19 25 17.3 +1.1**
baz=266,SNR=44
MAW Mason 83.53 200 P **P** **19 25 16.5 +0.6**
comp=Z,57nm,1.1s,baz=79,slow=6.7,SNR=6.6
comp=Z,57nm,1.1s
L22K Petersville 83.58 28 IAmb IAmb 19 25 20.2
comp=Z,68nm,0.8s
H22K Ishtalitna Cre 83.58 24 IAmb IAmb 19 26 13.4
comp=Z,70nm,1.2s
H22K Ishtalitna Cre 83.58 24 P **P** **19 25 17.6 +1.2**
baz=265,SNR=43
KTH Kantishna Hill 83.59 27 IAmb IAmb 19 26 11.6
comp=Z,58nm,1.2s
BPAW Bear Paw Mtn. 83.60 26 IAmb IAmb 19 25 54.5
comp=Z,46nm,1.0s
BPAW Bear Paw Mtn. 83.60 26 P **P** **19 25 18.0 +1.5**
baz=266
E22K Anaktuvuk Pass 83.62 22 IAmb IAmb 19 25 21.4
comp=Z,67nm,0.9s
E22K Anaktuvuk Pass 83.62 22 P **P** **19 25 18.7 +2.2**
baz=264,SNR=92
VNDA Vanda 83.63 173 P **P** **19 25 17.2 +1.0**
comp=Z,37nm,0.6s,baz=320,slow=6.6,SNR=80
VNDA LR LR 20 01 01.1
comp=Z,153nm,21.5s,baz=331,slow=34
comp=Z,37nm,0.6s
VNDA Vanda 83.63 173 P **P** **19 25 17.3 +1.0**
VNDA IAmb IAmb 19 25 18.4
comp=Z,40nm,0.7s
VNDA Vanda 83.63 173 P **P** **19 25 17.3 +1.0**
VNDA pmax pmax
comp=Z,40nm,0.7s
MARD Mardin 83.77 307 IAmb IAmb 19 25 19.5
comp=Z,28nm,0.6s
MLY Manley 83.78 25 IAmb IAmb 19 25 21.6
comp=Z,49nm,0.9s
MLY Manley 83.78 25 P **P** **19 25 18.5 +1.1**
baz=266,SNR=53
CUT Chultina 83.80 28 P **P** **19 25 19.1 +1.7**
baz=266
M22K Willow 83.83 28 P **P** **19 25 18.8 +1.2**
baz=267,SNR=9.8
LABN Labinsk 83.85 314 *eP* **P** **19 25 17.6 -0.5**
LABN *e**PP **pP** **19 25 48.0 -2.0**
TRF Thorofare Moun 83.86 27 IAmb IAmb 19 25 55.4
comp=Z,80nm,1.3s
TRF Thorofare Moun 83.86 27 P **P** **19 25 19.0 +1.0**
baz=266,SNR=8.0
O22K Cooper Landing 83.95 30 P **P** **19 25 19.4 +1.1**
baz=267,SNR=6.7
RC01 Rabbit Creek A 83.98 29 IAmb IAmb 19 25 21.6
comp=Z,64nm,0.7s
RC01 Rabbit Creek A 83.98 29 P **P** **19 25 19.6 +1.2**
baz=267,SNR=24
KOPT Kop Dagi 83.99 310 IAmb IAmb 19 26 18.8
comp=Z,75nm,1.1s
ERBR Yeremizino-Bor 84.03 315 *eP* **P** **19 25 19.0 0.0**
ERBR *e**PP **pP** **19 25 50.8 -0.1**
ERBR *eS* **SKSac** **19 35 26.5 -4.2**
ERBR pmax pmax
comp=Z,18nm,0.8s
SEW Seward 84.07 30 IAmb IAmb 19 25 56.0
comp=Z,121nm,1.2s
SEW Seward 84.07 30 P **P** **19 25 20.0 +1.1**
baz=267,SNR=6.7
D23K Nanushuk River 84.11 21 P **P** **19 25 20.5 +1.5**
baz=265,SNR=65
COLD Coldfoot 84.16 23 IAmb IAmb 19 25 24.0
comp=Z,52nm,0.8s
COLD Coldfoot 84.16 23 P **P** **19 25 20.7 +1.5**
baz=266,SNR=41
G23K Bananza Creek 84.19 23 P **P** **19 25 21.2 +1.7**
baz=266
C23K Itkillik River 84.21 20 P **P** **19 25 21.0 +1.6**
baz=265
PMR Palmer 84.30 29 IAmb IAmb 19 26 18.3
comp=Z,38nm,0.9s
PMR Palmer 84.30 29 P **P** **19 25 21.2 +1.2**
baz=268,SNR=8.9
VSLR Vesyoloye 84.34 313 *i* P **P** **19 25 20.5 -0.1**
VSLR pmax pmax
comp=Z,46nm,0.9s
I23K Minto, Yukon-K 84.37 25 P **P** **19 25 21.9 +1.6**
baz=267,SNR=27
GHO Glory Hole Cre 84.40 28 IAmb IAmb 19 26 21.6
comp=Z,52nm,1.2s
E23K Chandalar 84.44 22 P **P** **19 25 22.0 +1.3**
baz=266
NEA2 Nenana 84.47 26 IAmb IAmb 19 25 26.0
comp=Z,31nm,0.9s
NEA2 Nenana 84.47 26 P **P** **19 25 22.0 +1.2**
baz=267,SNR=17
MCK McKinley 84.48 26 IAmb IAmb 19 25 58.3
comp=Z,103nm,1.4s
MCK McKinley 84.48 26 P **P** **19 25 22.1 +1.2**
baz=267,SNR=17
TOLK Toolik Lake Re 84.49 21 P **P** **19 25 22.4 +1.5**
baz=266,SNR=60
SOC Sochi 84.57 313 *eP* **P** **19 25 20.8 -1.0**
SOC *e* 19 28 43.1
SOC *ePPP* PPP 19 30 30.2
SOC *eS* **SKSac** **19 35 32.7 -1.5**
SOC *eSS* **SS** **19 41 11.7 -0.4**
SOC pmax pmax
comp=Z,25nm,0.7s
KNK Knik Glacier 84.61 29 IAmb IAmb 19 25 55.0
comp=Z,63nm,1.0s
KNK Knik Glacier 84.61 29 P **P** **19 25 22.6 +1.0**
baz=268,SNR=14
WAT1 Susitna Watana 84.62 27 P **P** **19 25 22.7 +1.1**
baz=268
SML Sawmill 84.69 28 P **P** **19 25 23.0 +1.0**
baz=268,SNR=12
D24K Happy Valley 84.79 21 P **P** **19 25 23.9 +1.6**
baz=267
E24K Your Creek 84.86 22 IAmb IAmb 19 26 01.7
comp=Z,42nm,1.1s
E24K Your Creek 84.86 22 P **P** **19 25 24.5 +1.7**
baz=267,SNR=26
VORD Divnogorie 84.87 321 *eP* **P** **19 25 21.7 -1.4**
VORD pmax pmax
comp=Z,20nm,0.7s
WRH Wood River Hil 84.88 26 IAmb IAmb 19 26 01.0
comp=Z,58nm,1.3s
KLMR Klimovskoe 84.89 331 *eP* **P** **19 25 22.7 -0.2**
KLMR *e**PP **pP** **19 25 54.7 -0.3**
KLMR pmax pmax
comp=Z,145nm,1.2s
VORR Voronezh 84.93 321 *eP* **P** **19 25 21.8 -1.6**
VORR *e**SP **sP** **19 26 04.7 -3.9**
VORR *eS* **SKSac** **19 35 32.3 -3.8**
VORR pmax pmax
comp=Z,63nm,0.4s
VORR smax smax
comp=E,100nm,0.7s
VSR Storozhevoye 84.95 321 *eP* **P** **19 25 22.2 -1.3**
VSR pmax pmax
comp=Z,20nm,0.5s
M23K Glacier View 84.97 28 P **P** **19 25 24.6 +1.2**
baz=269,SNR=7.4
WAT6 Susitna Watana 84.98 28 P **P** **19 25 25.1 +1.4**
baz=269,SNR=12
COLA College 85.00 25 *i* P **P** **19 25 24.3 +0.9**
COLA pmax pmax
comp=Z,7.0nm,0.8s
COLA College 85.00 25 P **P** **19 25 25.0 +1.6**
baz=268
CCB Clear Creek Bu 85.01 26 IAmb IAmb 19 26 01.3
comp=Z,49nm,1.4s
H24K Noodor Dome 85.02 24 IAmb IAmb 19 26 02.4
comp=Z,66nm,1.4s
H24K Noodor Dome 85.02 24 P **P** **19 25 24.8 +1.2**
baz=268,SNR=11
P23K Montague Islan 85.10 30 P **P** **19 25 25.4 +1.4**
baz=269
LPSR Galich'ya Gora 85.10 322 *eP* **P** **19 25 22.7 -1.5**
LPSR *e**SP **sP** **19 26 06.0 -3.5**
LPSR *eS* **SKSac** **19 35 33.5 -3.7**
LPSR pmax pmax
comp=Z,61nm,1.0s
LPSR smax smax
comp=N,800nm,4.7s
SCM Sheep Creek Mo 85.16 28 IAmb IAmb 19 26 30.7
comp=Z,52nm,0.9s
SCM Sheep Creek Mo 85.16 28 P **P** **19 25 25.6 +1.1**
baz=269,SNR=6.3
DHY Denali Highway 85.16 27 IAmb IAmb 19 26 02.4
comp=Z,82nm,1.6s
DHY Denali Highway 85.16 27 P **P** **19 25 25.7 +1.2**
baz=269
POKR Poker Plat Res 85.18 25 P **P** **19 25 25.8 +1.4**
baz=269
G24K Hadweenzic Riv 85.20 23 IAmb IAmb 19 26 04.1
comp=Z,80nm,1.1s
G24K Hadweenzic Riv 85.20 23 P **P** **19 25 25.7 +1.3**
baz=268
GLI Glacier Island 85.26 29 IAmb IAmb 19 26 03.6
comp=Z,47nm,0.7s
GLI Glacier Island 85.26 29 P **P** **19 25 26.2 +1.4**
baz=269
HDA Harding Lake 85.38 26 P **P** **19 25 26.6 +1.3**
baz=269,SNR=11
ILAR Eielson Array 85.41 25 P **P** **19 25 24.8 -0.7**
comp=Z,3.1nm,0.7s,baz=240,slow=4.9,SNR=37
ILAR PKKP **PKKPdf** **19 43 26.4 +2.5**
comp=Z,1.5nm,0.7s,baz=21,slow=0.8,SNR=10
ILAR LR LR 20 01 21.5
comp=Z,98nm,21.4s,baz=248,slow=34
comp=Z,3.1nm,0.7s
ADZR Andozero 85.51 334 *eP* **P** **19 25 23.4 -2.6**
ADZR pmax pmax
comp=Z,112nm,0.9s
Q23K Middleton Isla 85.63 31 P **P** **19 25 28.0 +1.3**
baz=270
ARPR Arapgir-MALATY 85.67 309 IAmb IAmb 19 26 31.8
comp=Z,86nm,1.4s
D25K Kavik River 85.67 21 IAmb IAmb 19 26 05.5
comp=Z,67nm,1.2s
D25K Kavik River 85.67 21 P **P** **19 25 28.1 +1.3**
baz=269,SNR=22
M24K Tolsona, Glenn 85.71 28 IAmb IAmb 19 26 33.5
comp=Z,66nm,1.1s
M24K Tolsona, Glenn 85.71 28 P **P** **19 25 28.3 +1.1**
baz=270
KLU Klutina 85.83 29 P **P** **19 25 29.2 +1.4**
baz=270
MOS Moscow 85.86 325 *eP* **P** **19 25 26.2 -1.7**
MOS *e**PP **pP** **19 25 58.0 -2.0**
MOS *e**SP **sP** **19 26 11.2 -2.1**
MOS *e* 19 28 47.7
MOS *eS* **SKSac** **19 35 36.8 -5.0**
MOS *e* 19 35 46.7
MOS pmax pmax
comp=Z,114nm,1.4s
MOS pmax pmax
comp=Z,200nm,1.7s
K24K Donnelly Dome 85.89 26 P **P** **19 25 29.2 +1.3**
baz=270
DIV Divide 85.91 29 IAmb IAmb 19 26 07.0
comp=Z,76nm,1.1s
EYAK Cordova Ski Ar 85.92 30 P **P** **19 25 29.4 +1.3**
baz=270
F25K Christian Rive 85.93 23 IAmb IAmb 19 26 07.5
comp=Z,67nm,1.5s
F25K Christian Rive 85.93 23 P **P** **19 25 29.6 +1.4**
baz=270
E25K Arctic Village 85.96 22 IAmb IAmb 19 26 08.1
comp=Z,78nm,1.2s
E25K Arctic Village 85.96 22 P **P** **19 25 30.1 +1.9**
baz=270,SNR=46
PRP Porcupine Dome 85.99 25 P **P** **19 25 29.5 +0.9**
baz=270
PPT Papeete 86.00 108 LR LR 19 59 56.7
comp=Z,105nm,18.1s,baz=287,slow=33
PAX Paxson 86.03 27 P **P** **19 25 29.6 +0.8**
baz=271
J25K Salcha River, 86.06 26 P **P** **19 25 29.4 +0.6**
baz=271,SNR=9.4
FYU Fort Yukon 86.10 24 IAmb IAmb 19 26 25.5
comp=Z,69nm,1.2s
C26K Camden Bay 86.18 20 P **P** **19 25 30.1 +0.9**
baz=271
HARP HAARP 86.18 28 P **P** **19 25 30.3 +0.8**
baz=271
ANN Anapa 86.20 315 *eP* **P** **19 25 28.2 -1.6**
ANN *e**PP **pP** **19 26 02.0 +0.1**
ANN *e* 19 28 51.8
ANN *eS* **SKSac** **19 35 42.1 -2.3**
ANN pmax pmax
comp=Z,87nm,0.9s
RIDG Independent Ri 86.30 26 IAmb IAmb 19 26 08.4
comp=Z,61nm,1.2s
RIDG Independent Ri 86.30 26 P **P** **19 25 30.7 +0.6**
baz=271,SNR=10
BMAR Burnt Mountain 86.34 23 P **P** **19 25 31.4 +1.3**
N25K Chitina, Valde 86.46 29 IAmb IAmb 19 26 09.9
comp=Z,59nm,1.4s
N25K Chitina, Valde 86.46 29 P **P** **19 25 31.9 +1.1**
baz=272
OBN Obninsk 86.47 325 LR LR 20 08 43.8
comp=Z,214nm,19.1s,baz=148,slow=39
OBN Obninsk 86.47 325 ⇓P **P** **19 25 29.6 -1.3**
OBN Obninsk 86.47 325 P **P** **19 25 29.6 -1.3**
OBN Obninsk 86.47 325 *c i*P **P** **19 25 29.9 -1.0**
OBN *e**PP **pP** **19 26 04.1 +1.0**
OBN *i* S **SKSac** **19 35 49.0 +3.4**
OBN pmax pmax
comp=Z,80nm,1.7s
OBN MLR MLR
comp=Z,249nm,20.0s
BMRM Bremner River 86.48 29 P **P** **19 25 31.3 +0.4**
baz=272
F26K Sheenjek River 86.50 22 P **P** **19 25 32.8 +1.9**
baz=272
KAIM Kayak Island 86.60 30 P **P** **19 25 32.8 +1.4**
baz=272
C27K Jago River 86.61 21 IAmb IAmb 19 25 35.6
comp=Z,32nm,0.8s
C27K Jago River 86.61 21 P **P** **19 25 32.8 +1.5**
baz=272,SNR=43
FURI Furi 86.61 279 LR LR 20 02 34.6
comp=Z,220nm,20.9s,baz=74,slow=34
GAZ Gaziantep 86.62 307 IAmb IAmb 19 25 33.9
comp=Z,43nm,0.8s
G26K Porcupine Rive 86.66 23 IAmb IAmb 19 25 36.4
comp=Z,28nm,0.8s
G26K Porcupine Rive 86.66 23 P **P** **19 25 32.9 +1.3**
baz=272,SNR=35
SCRK Sand Creek 86.68 26 P **P** **19 25 33.3 +1.3**
baz=272
GLB Gilahina Butte 86.85 29 IAmb IAmb 19 26 13.4
comp=Z,43nm,1.0s
LVZ Lovozero 86.93 338 P **P** **19 25 32.3 -0.7**
LVZ IAmb IAmb 19 25 35.3
comp=Z,43nm,0.9s
LVZ Lovozero 86.93 338 *ce*P **P** **19 25 33.3 +0.3**
LVZ pmax pmax
comp=Z,48nm,0.8s
I26K Coal Creek Min 86.98 25 P **P** **19 25 34.4 +1.1**
baz=273

L26K Log Cabin Wild 87.00 27 P P 19 25 34.9 +1.6
baz=272
TOKA Tokat 87.06 310 IAmb IAmb 19 25 38.1
comp=Z,28nm,0.5s
ASF Jabal al Asfar 87.09 302 LR LR 20 10 37.6
comp=Z,76nm,19.8s,baz=26,slow=40
M26K Nabesna, AK 87.19 28 P P 19 25 35.8 +1.5
baz=273
CRQE Cirque 87.22 29 P P 19 25 36.0 +1.4
baz=273
MCARA McCarthy VSAT 87.23 29 P P 19 25 35.7 +1.2
baz=273
E27K Coleen River 87.44 22 IAmb IAmb 19 25 39.3
comp=Z,31nm,0.8s
E27K Coleen River 87.44 22 P P 19 25 36.9 +1.5
baz=274
G27K Doyon Strip 87.51 23 P P 19 25 37.4 +1.6
baz=274,SNR=17
D27M Malcolm River 87.60 21 P P 19 25 37.6 +1.5
baz=274
H27K Steamboat Moun 87.60 24 P P 19 25 37.6 +1.4
baz=274
I27K Kandik River 87.61 25 IAmb IAmb 19 26 35.0
comp=Z,28nm,1.0s
I27K Kandik River 87.61 25 P P 19 25 37.5 +1.2
baz=274
L27K Beaver Creek, 87.69 27 P P 19 25 38.2 +1.5
baz=274,SNR=9.9
BCAR Beaver Creek A 87.71 27 P P 19 25 37.1 +0.3
M27K Edge Creek, AK 87.71 28 P P 19 25 37.9 +0.9
baz=274
HWQ Hawqa 87.78 304 *e*P P 19 25 37.6 -0.2
MESA MESA 87.82 30 P P 19 25 38.4 +0.8
baz=274
BARN Barnard Glacie 87.91 29 IAmb IAmb 19 25 42.9
comp=Z,22nm,0.8s
KIBK Kibwezi 87.94 268 IAmb IAmb 19 25 41.1
comp=Z,97nm,1.7s
KIBK Kibwezi 87.94 268 P P 19 25 38.9 -0.1
SNR=7.5
BHL Bhannes 88.04 304 *e*P P 19 25 38.4 -0.7
CTG Chitna Glacier 88.07 29 P P 19 25 39.8 +1.1
baz=274,SNR=6.4
CTGM Chitina Glacie 88.07 29 IAmb IAmb 19 26 24.8
comp=Z,29nm,0.9s
F28M Old Crow 88.14 22 IAmb IAmb 19 25 42.3
comp=Z,37nm,0.8s
F28M Old Crow 88.14 22 P P 19 25 40.1 +1.4
baz=276,SNR=53
E28M Babbage River 88.17 21 IAmb IAmb 19 25 42.6
comp=Z,21nm,0.8s
E28M Babbage River 88.17 21 P P 19 25 40.4 +1.6
baz=276,SNR=32
BVCY Beaver Creek 88.18 28 P P 19 25 40.5 +1.5
baz=275,SNR=7.1
GHAJ Ghor Haditha 88.26 301 IAmb IAmb 19 25 42.5
comp=Z,44nm,0.9s
MMAI Mount Meron Ar 88.30 303 P P 19 25 39.1 -1.2
comp=Z,5.4nm,0.8s,baz=59,slow=12,SNR=12
MMAI pP **pP** 19 26 13.4 +1.0
comp=Z,2.1nm,0.6s,baz=80,slow=12,SNR=2.1
MMAI LR LR 20 09 35.9
comp=Z,125nm,19.9s,baz=70,slow=38
comp=Z,5.4nm,0.8s
I28M Miner Creek 88.32 25 P P 19 25 41.0 +1.3
baz=276
D28M Stokes Point 88.38 21 P P 19 25 41.2 +1.5
baz=276
YUK3 Moose Creek 88.42 28 P P 19 25 41.2 +0.8
baz=275
SIM Simferopol' 88.54 315 *e*P P 19 25 39.8 -1.3
SIM *e*S **SKSac** 19 35 59.7 +1.0
SIM pmax pmax
comp=Z,28nm,0.9s
SIM MLR MLR
comp=Z,159nm,21.0s
VADS Vadso 88.64 340 *e*P P 19 25 40.5 -0.5
O28M Mount Upton 88.64 29 P P 19 25 42.4 +0.8
baz=275
PINM Pinnacle 88.68 30 P P 19 25 42.4 +0.9
baz=275
DAWY Dawson 88.69 26 P P 19 25 42.6 +1.2
baz=276,SNR=5.5
E29M Blow River 88.79 22 P P 19 25 42.9 +1.2
baz=277
YUK8 Steele Glacier 88.80 29 P P 19 25 43.0 +0.7
baz=276
HOPEN Hopen 88.83 347 *e*P P 19 25 42.1 +0.3
H29M Whitestone 88.88 24 P P 19 25 43.6 +1.4
baz=277
EIL Elat 88.89 299 LR LR 20 09 53.3
comp=Z,142nm,20.4s,baz=72,slow=38
KIRS Kirsehir-Merke 89.10 309 ⇑P P 19 25 40.2 -3.7
ILGA Ilgaz 89.11 311 IAmb IAmb 19 25 49.6
comp=Z,16nm,0.8s
BR104 Keskin Array S 89.27 310 P P 19 25 43.0 -1.8
comp=Z,129nmcomp=Z,19nm,0.8s
BR131 Keskin Array S 89.27 310 IAmb IAmb 19 25 46.5
comp=Z,19nm,0.8s
BR131 Keskin Array S 89.27 310 *i* P P 19 25 43.1 -1.7
BR131 Keskin Array S 89.27 310 P P 19 25 43.9 -1.0
SNR=6.5
BRTR Keskin Array B 89.27 310 P P 19 25 43.0 -1.7
comp=Z,14nm,0.8s,baz=127,slow=4.9,SNR=43
BRTR LR LR 20 08 53.6
comp=Z,73nm,21.8s,baz=72,slow=38
comp=Z,14nm,0.8s
BRTR Keskin Array B 89.27 310 P P 19 25 42.8 -2.1
M29M Somme Creek 89.29 28 P P 19 25 45.7 +1.3
baz=277
YUK4 Talbot Arm 89.33 29 P P 19 25 45.9 +1.2
baz=277
L29M L29M 89.36 27 IAmb IAmb 19 25 48.9
comp=Z,23nm,0.9s
L29M L29M 89.36 27 P P 19 25 45.8 +1.2
baz=277
O29M Mount Kennedy 89.49 30 P P 19 25 46.5 +1.2
baz=277
KEV Kevo 89.50 340 P P 19 25 44.4 -0.6
KEV Kevo 89.50 340 P P 19 25 44.4 -0.6
PUL Pulkovo 89.51 330 *i* P P 19 25 45.6 +0.4
PUL pmax pmax
comp=Z,72nm,0.7s
YUK6 Outpost Mounta 89.52 29 P P 19 25 46.9 +1.3
baz=277
EPYK Eagle Plains 89.52 24 IAmb IAmb 19 25 48.9
comp=Z,24nm,0.9s
EPYK Eagle Plains 89.52 24 P P 19 25 46.7 +1.5
baz=278,SNR=14
K29M Barlow Dome 89.54 26 P P 19 25 46.6 +1.1
baz=278,SNR=6.3
G30M tAoh Zraii Nji 89.62 23 P P 19 25 47.2 +1.5
baz=279
F30M Barrier River 89.69 22 IAmb IAmb 19 26 23.8
comp=Z,33nm,1.1s
F30M Barrier River 89.69 22 P P 19 25 47.8 +1.8
baz=279,SNR=13
I30M Mount Dempster 89.83 25 P P 19 25 48.4 +1.6
baz=279
CSS Mathiatis 89.88 305 IAmb IAmb 19 25 49.0
comp=Z,20nm,0.8s
J30M Hart River 89.95 25 P P 19 25 48.7 +1.3
baz=279
HYT Haines Junctio 89.95 29 P P 19 25 48.6 +1.1
baz=278
M30M Minto, Yukon 90.04 27 P P 19 25 49.2 +1.4
baz=278,SNR=9.3
ARA0 ARCESS Array S 90.05 340 *e*P P 19 25 47.2 -0.4
ARCES ARCESS Array B 90.05 340 P P 19 25 47.0 -0.6
comp=Z,78nm,0.7s,baz=79,slow=5.0,SNR=81
ARCES LR LR 20 11 48.7
comp=Z,145nm,18.8s,baz=84,slow=39
comp=Z,78nm,0.7s
ARCES ARCESS Array B 90.05 340 P P 19 25 46.5 -1.2
N30M Aishikik Lake 90.06 28 P P 19 25 48.8 +0.9
baz=278,SNR=6.0
SPB2 Spitsbergen Ar 90.22 349 IAmb IAmb 19 25 50.1
comp=Z,46nm,0.9s
SPA0 Spitsbergen Ar 90.22 349 *e*P P 19 25 48.2 -0.1
SPITS Spitsbergen Ar 90.22 349 P P 19 25 48.5 +0.2
comp=Z,24nm,0.5s,baz=93,slow=6.8,SNR=46
SPITS LR LR 20 10 02.9
comp=Z,154nm,21.5s,baz=49,slow=38
comp=Z,24nm,0.5s
LODK Lodwar 90.24 273 P P 19 25 49.6 -0.2
P30M Million Dollar 90.31 30 P P 19 25 50.4 +1.4
baz=278
G31M Satah River 90.39 23 IAmb IAmb 19 25 52.0
comp=Z,25nm,0.8s
G31M Satah River 90.39 23 P P 19 25 50.7 +1.5
baz=281,SNR=20
INK Inuvik 90.41 21 LR LR 20 11 06.8
comp=Z,62nm,19.0s,baz=289,slow=38
INK Inuvik 90.41 21 IAmb IAmb 19 26 26.8
comp=Z,43nm,1.4s
INK Inuvik 90.41 21 P P 19 25 50.7 +1.5
baz=281,SNR=14
HAMF Hammerfest 90.44 341 *e*P P 19 25 48.9 -0.5
F31M Tsiigehtchic 90.50 22 P P 19 25 51.1 +1.4
baz=281,SNR=15
H31M Peel River 90.57 24 IAmb IAmb 19 26 27.8
comp=Z,28nm,1.4s
H31M Peel River 90.57 24 P P 19 25 50.7 +0.6
baz=281
O30N Mendenhall 90.64 29 P P 19 25 51.7 +1.1
baz=279
N31M Braeburn, Yuko 90.68 28 IAmb IAmb 19 26 36.8
comp=Z,18nm,0.9s
N31M Braeburn, Yuko 90.68 28 P P 19 25 51.9 +1.2
baz=279
KBS Kingsbay 90.76 350 *e*P P 19 25 50.9 +0.2
HSPB Hornsund (broa 90.80 348 *e*P P 19 25 50.4 -0.5
BJO1 Bjornoya 90.80 345 *e*P P 19 25 50.3 -0.7
KTK1 Kautokeino 90.95 339 *e*P P 19 25 50.8 -1.0
S31K Pelican 91.00 32 P P 19 25 53.4 +1.2
baz=279
M31M Drury Creek, Y 91.20 28 P P 19 25 54.3 +1.1
baz=280
SKAG Skagway 91.23 30 P P 19 25 54.4 +1.2
baz=280
AK09 Malin Array Si 91.23 321 P P 19 25 51.7 -1.8
AK08 Malin Array Si 91.25 321 P P 19 25 51.8 -1.7
WHY Whitehorse 91.25 29 P P 19 25 54.4 +0.9
baz=280,SNR=5.4
AK10 Malin Array Si 91.25 321 P P 19 25 51.8 -1.8
AK03 Malin Array Si 91.25 321 P P 19 25 51.8 -1.8
AKASG Malin Array Be 91.26 321 P P 19 25 52.0 -1.6
comp=Z,3.9nm,0.5s,baz=69,slow=4.6,SNR=16
AKASG LR LR 20 10 43.1
comp=Z,143nm,20.6s,baz=76,slow=38
comp=Z,3.9nm,0.5s
AKASG Malin Array Be 91.26 321 P P 19 25 51.6 -1.9
AKASG IAmb IAmb 19 25 55.1
comp=Z,50nm,2.0s
AKASG Malin Array Be 91.26 321 P P 19 25 52.0 -1.6
AKBB Malin Array Si 91.26 321 IAmb IAmb 19 25 54.9
comp=Z,76nm,1.9s
AKBB Malin Array Si 91.26 321 *ce*P P 19 25 52.2 -1.4
AKBB pmax pmax
comp=Z,12nm,1.1s
AKBB Malin Array Si 91.26 321 P P 19 25 51.7 -1.9
AK01 Malin Array Si 91.26 321 P P 19 25 51.7 -1.9
KIEV Kiev 91.27 321 ⇑P P 19 25 50.7 -2.9
KIEV Kiev 91.27 321 P P 19 25 51.8 -1.9
KIEV IAmb IAmb 19 25 54.9
comp=Z,74nm,1.9s
KIEV Kiev 91.27 321 P P 19 25 51.8 -1.9
KIEV Kiev 91.27 321 P P 19 25 51.8 -1.9
KIEV pmax pmax
comp=Z,74nm,1.9s
KIEV Kiev 91.27 321 P P 19 25 51.7 -1.9
AK02 Malin Array Si 91.27 321 P P 19 25 51.7 -2.0
AK05 Malin Array Si 91.28 321 P P 19 25 51.8 -1.9
AK06 Malin Array Si 91.29 321 P P 19 25 51.8 -1.9
AK07 Malin Array Si 91.29 321 P P 19 25 51.8 -1.9
AK04 Malin Array Si 91.29 321 P P 19 25 51.8 -1.9
AK11 Malin Array Si 91.29 321 P P 19 25 51.8 -2.0
AK12 Malin Array Si 91.31 321 P P 19 25 51.9 -1.9
AK23 Malin Array Si 91.31 321 P P 19 25 51.9 -1.9
AK15 Malin Array Si 91.32 321 P P 19 25 51.9 -2.0
FINES FINESS Array B 91.33 332 P P 19 25 52.6 -1.0
comp=Z,24nm,0.7s,baz=64,slow=4.4,SNR=48
FINES LR LR 20 10 23.4
comp=Z,187nm,18.7s,baz=79,slow=38
comp=Z,24nm,0.7s
FINES FINESS Array B 91.33 332 P P 19 25 52.2 -1.5
PURM Purcari 91.35 317 ⇑P P 19 25 52.6 -1.6
VSU Vasula 91.52 329 *ce*P P 19 25 53.5 -1.1
VSU pmax pmax
comp=Z,39nm,0.9s
MNK Minsk 91.53 325 *i* P P 19 25 54.9 +0.1
comp=E,18nm,1.0s
MNK *i* P P 19 25 54.9 +0.1
comp=N,50nm,1.1s
MNK *i* P P 19 25 54.9 +0.1
comp=Z,48nm,1.0s,baz=82
MNK *i* pP **pP** 19 26 25.9 -1.3
MNK *i* PP **PP** 19 29 34.5 +0.2
MNK *i* PPP PPP 19 31 33.6
MNK *i* S **SKSac** 19 36 15.6 0.0
MNK *i* sS pS 19 37 12.0 -13
MNK *i* PS **PnS** 19 38 10.5 -0.3
MNK *i* SS **SS** 19 42 55.4 +2.8
MNK *i* SSS SSS 19 46 34.4
MNK *i* LR LR 20 07 32.8
MNK *i* LRM MLR 20 08 33.5
comp=E,163nm,18.9s
MNK *i* LRM MLR 20 08 47.5
comp=Z,197nm,18.6s
MNK *i* LRM MLR 20 08 50.0
comp=N,220nm,18.4s
MNK Minsk 91.53 325 *i* P P 19 25 54.8 +0.1
MNK *i* *PP **pP** 19 26 25.8 -1.3
MNK *i* 19 29 34.4
MNK *i* PPP PPP 19 31 33.5
MNK *i* S **SKSac** 19 36 15.6 0.0
MNK *i* PS **PnS** 19 38 10.4 -0.3
MNK *i* SS **SS** 19 42 55.4 +2.8
MNK *i* SSS SSS 19 46 34.4
MNK pmax pmax
comp=Z,48nm,1.0s
MNK pmax pmax
comp=N,50nm,1.1s
MNK pmax pmax
comp=E,18nm,1.0s
MNK MLR MLR
comp=E,163nm,19.0s
MNK MLR MLR
comp=Z,197nm,19.0s
MNK MLR MLR
comp=N,220nm,18.0s
SIT Sitka 91.63 33 P P 19 25 56.0 +0.9
baz=280
BORA Eskisehir 91.70 310 IAmb IAmb 19 26 06.0
comp=Z,40nm,1.6s
R32K Eaglecrest 91.85 31 P P 19 25 56.8 +0.6
baz=280
S32K Killisnoo 91.96 32 P P 19 25 57.8 +1.2
baz=280
P32M Atlin 92.01 30 P P 19 25 57.8 +0.8
baz=281
N32M Quiet Lake 92.02 28 IAmb IAmb 19 26 00.8
comp=Z,36nm,0.8s
N32M Quiet Lake 92.02 28 P P 19 25 57.5 +0.5
baz=282
A36M Sachs Harbour 92.17 17 P P 19 25 58.3 +1.0
baz=289,SNR=12
SORM Soroca 92.17 318 ⇑P P 19 25 55.3 -2.6
SORM Soroca 92.17 318 ⇑P P 19 25 55.3 -2.6
TRO Tromso 92.27 340 *e*P P 19 25 55.9 -2.0
P33M Teslin, Yukon 92.33 29 P P 19 25 59.2 +0.7
baz=282
MMPY Sheldon Lake, 92.54 27 IAmb IAmb 19 27 00.6
comp=Z,22nm,1.2s
MMPY Sheldon Lake, 92.54 27 P P 19 26 00.6 +1.2
baz=283
NOR Nord 92.92 355 *i* P P 19 26 00.5 -0.2
NOR IAmb IAmb 19 26 04.2
comp=Z,30nm,1.1s
U33K Whale Pass 93.00 33 P P 19 26 02.4 +0.9
baz=281
CRAG Craig 93.12 34 P P 19 26 02.7 +0.6
baz=281
RNPP9 Sopachiv 93.22 322 P P 19 26 01.1 -1.6
RNPP5 Staryi Chortor 93.26 322 P P 19 26 02.3 -0.5
RNPP8 Varash 93.26 322 P P 19 26 02.3 -0.5
R33M Jennings River 93.43 30 IAmb IAmb 19 26 47.6
comp=Z,44nm,1.6s
R33M Jennings River 93.43 30 P P 19 26 03.7 +0.1
baz=283
C36M Paulatuk 93.43 19 P P 19 26 03.8 +0.6
baz=290
TESR Tescani 93.56 317 ⇑P P 19 26 02.7 -1.6
GIRR Girov 93.59 317 ⇑P P 19 26 03.4 -1.1
VRI Vrincioaia 93.61 316 ⇑P P 19 26 03.6 -1.0
VRI Vrincioaia 93.61 316 ⇑P P 19 26 03.6 -1.0
PLOR Plostina 93.67 316 ⇑P P 19 26 03.2 -1.7
PLOR Plostina 93.67 316 ⇑P P 19 26 03.2 -1.7
S34M Telegraph Cree 93.68 31 P P 19 26 05.0 +0.4
baz=283
QSPA South Pole Qui 93.73 180 P P 19 26 05.9 +1.1
comp=Z,36nm,0.7s,baz=300,slow=1.0,SNR=34
QSPA LR LR 20 10 22.0
comp=Z,290nm,18.6s,baz=352,slow=37
comp=Z,36nm,0.7s
QSPA South Pole Qui 93.73 180 P P 19 26 06.0 +1.2
ONER Baraj Valea Uz 93.76 317 ⇑P P 19 26 03.9 -1.4
COVR Voineasa-Covas 93.97 316 ⇑P P 19 25 53.0 -13
NEHR Nehoiu 93.98 316 ⇑P P 19 26 05.8 -0.6
V35K Ketchikan 93.99 34 P P 19 26 06.8 +0.8
baz=282
TURR Turia 94.07 317 ⇑P P 19 26 06.0 -0.7
STEI Steigen 94.09 339 *e*P P 19 26 04.3 -1.9
DLBC Dease Lake 94.13 31 LR LR 20 02 11.2
comp=Z,137nm,21.5s,baz=277,slow=31
DLBC Dease Lake 94.13 31 P P 19 26 07.6 +0.8
baz=284
TGTN Hyland Airport 94.18 28 P P 19 26 07.8 +0.9
baz=286
MLR Muntele Rosu 94.21 316 LR LR 20 14 22.6
comp=Z,178nm,21.8s,baz=68,slow=39
MLR Muntele Rosu 94.21 316 ⇑P P 19 26 05.0 -2.5
MLR Muntele Rosu 94.21 316 ⇑P P 19 26 05.0 -2.5
FAUS Fauske 94.27 339 *e*P P 19 26 06.1 -1.0
WTLY Watson Lake, Y 94.31 29 P P 19 26 08.1 +0.5
baz=285
SUW Suwalki 94.33 325 *e*P P 19 26 06.6 -1.1
BURAR Bucovina Array 94.34 318 ⇑P P 19 26 06.9 -1.1
BURAR Bucovina Array 94.34 318 P P 19 26 06.8 -1.1
BURAR IAmb IAmb 19 26 09.8
comp=Z,13nm,0.6s
BURAR Bucovina Array 94.34 318 ⇑P P 19 26 06.9 -1.1
BUR08 Bucovina Ar. S 94.34 318 IAmb IAmb 19 26 09.9
comp=Z,11nm,0.6s
T35M Bob Quinn 94.36 32 P P 19 26 08.0 +0.2
baz=284
DOPR Dopca 94.51 317 ⇑P P 19 26 07.8 -0.9
ELND Elena 94.69 313 ⇓P P 19 26 07.4 -2.2
U35K Hyder 94.74 33 P P 19 26 09.9 +0.5
baz=284
VOIR 94.84 316 ⇓P P 19 26 08.7 -1.6
VOIR 94.84 316 ⇓P P 19 26 08.7 -1.6
MOR8 Moi Rana 95.01 338 *e*P P 19 26 08.5 -2.1
MBAR Mbarara 95.12 270 LR LR 20 05 53.0
comp=Z,156nm,21.8s,baz=73,slow=33
MBAR Mbarara 95.12 270 P P 19 26 11.3 -1.1
MBAR Mbarara 95.12 270 P P 19 26 11.3 -1.1
MBAR pmax pmax
comp=Z,4.0nm,0.7s
MBAR Mbarara 95.12 270 P P 19 26 12.0 -0.4
LEIR Leirfjorden 95.53 338 *e*P P 19 26 11.2 -1.7
LOT Lotru 95.72 316 ⇑P P 19 26 14.1 -0.3
WRGLY Wrigley 95.79 25 P P 19 26 15.3 +1.2
baz=290
MARR Marisel-Cluj 95.92 318 ⇓P P 19 26 14.6 -0.7
STHS Stebnicka Huta 96.55 320 *i* P P 19 26 17.6 -0.3
STHS Stebnicka Huta 96.55 320 *e*PDIFF P 19 26 17.6 -0.3
KOTAN Kotaneelee Air 96.58 28 P P 19 26 18.1 +0.3
baz=290
NSS Namsos 96.60 337 *e*P P 19 26 16.1 -1.6
BBB Bella Bella 96.76 37 LR LR 20 02 15.0
comp=Z,125nm,21.7s,baz=218,slow=30
HERR Herculane 96.78 316 ⇑P P 19 26 16.8 -2.3
DAG Danmarks Havn 97.05 352 *i* P P 19 26 19.0 -0.6
DAG IAmb IAmb 19 26 21.8
comp=Z,26nm,1.0s
BZS Buzias 97.17 317 ⇑P P 19 26 16.0 -4.8
BZS Buzias 97.17 317 ⇑P P 19 26 16.0 -4.8
ELIB Princess Elisa 97.48 198 *d*P Pdif 19 26 23.3 +1.5
comp=Z,15nm,1.2s
HFS Hagfors 97.52 332 P P 19 26 20.5 -1.5
comp=Z,15nm,0.8s,baz=113,slow=3.9,SNR=37
HFS LR LR 20 13 31.5
comp=Z,267nm,19.8s,baz=66,slow=37
comp=Z,15nm,0.8s
LANS Liptovska Anna 97.74 321 *i* P Pdif 19 26 23.6 +0.2
LANS Liptovska Anna 97.74 321 *e*PDIFF Pdif 19 26 23.6 +0.2
BLEU Blekinge 97.78 328 *i* P P 19 26 21.8 -1.4
RES Resolute Bay 97.88 10 IAmb IAmb 19 26 26.3
comp=Z,6.6nm,0.8s
NC602 NORSAR Array S 98.28 333 *e*P P 19 26 24.1 -1.3
NB2 NORSAR Subarra 98.31 333 P P 19 26 24.3 -1.3
comp=Z,30nm,0.7s,baz=66,slow=4.6
NB2 NORSAR Subarra 98.31 333 AMP P 19 26 24.3 -1.3
comp=Z,30nm,0.7s
NB2 P P 19 26 24.3 -1.3
NOA NORSAR Array B 98.31 333 P P 19 26 24.2 -1.4
comp=Z,32nm,0.8s,baz=66,slow=4.6,SNR=76
NOA LR LR 20 15 34.5
comp=Z,75nm,18.9s,baz=90,slow=38
comp=Z,32nm,0.8s
LSZ Lusaka 98.36 255 P P 19 26 24.9 -2.0
LSZ Lusaka 98.36 255 P P 19 26 24.9 -2.0
LSZ pmax pmax
comp=Z,40nm,1.6s
LSZ Lusaka 98.36 255 P P 19 26 26.4 -0.5
BSD Bornholm Skovb 98.66 327 *i* P P 19 26 26.7 -0.5
BSD IAmb IAmb 19 26 29.1
comp=Z,16nm,0.8s
DEL Delary 98.74 329 *i* P P 19 26 27.1 -0.5
MORC Moravsky Berou 98.78 321 *e*PDIFF P 19 26 26.7 -1.3
DOMB Dombas 98.82 335 *e*P P 19 26 27.1 -0.8
NEEM North Greenlan 98.82 359 *i* P Pdif 19 26 28.6 +0.6
NEEM IAmb IAmb 19 26 30.5
comp=Z,26nm,0.9s
BORU Boraas 98.88 330 *i* P P 19 26 27.3 -0.9
JAVC Velka Javorina 98.96 321 *e*PDIFF Pdif 19 26 29.5 +0.7
OSL Oslo 98.97 333 *e*P P 19 26 27.7 -0.8
STRU Stroemstad 99.12 332 *i* P Pdif 19 26 29.1 -0.1
FABU Falkenberg 99.14 329 *i* P Pdif 19 26 29.0 -0.4
LUNU Lund 99.26 328 *i* P Pdif 19 26 29.2 -0.7
DBG Daneborg 99.30 351 *i* P Pdif 19 26 29.9 +0.2
DBG IAmb IAmb 19 26 32.2
comp=Z,13nm,1.0s
TULEG Thule 99.31 3 IAmb IAmb 19 26 31.7
comp=Z,11nm,1.0s
BJUU Bjuv 99.33 328 *i* P Pdif 19 26 28.9 -1.3
ONAU Onsala 99.40 330 *i* P Pdif 19 26 29.4 -1.0
VRAC Vranov 99.50 321 *e*PDIFF Pdif 19 26 31.1 -0.1
JMIC Jan Mayen 99.56 346 LR LR 20 16 56.7
comp=Z,93nm,19.4s,baz=56,slow=38
AKN Aaknes 99.63 335 *e*P Pdif 19 26 31.4 0.0
KRUC Moravsky 99.70 321 *e*PDIFF Pdif 19 26 32.0 -0.1
SKAR Skarslia 99.75 334 *e*P Pdif 19 26 31.9 -0.1
YKA Yellowknife Ar 99.79 24 P Pdif 19 26 33.6 +1.5
comp=Z,2.4nm,0.8s,baz=303,slow=5.5,SNR=34
YKA pP **pP** 19 27 03.3 -1.1
comp=Z,1.4nm,0.7s,baz=304,slow=5.3,SNR=5.3
YKA PKiKP **PKiKP** 19 31 00.5 +0.5
comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=5.1
YKA PKiKPbc **PKKPbc** 19 42 50.5 -4.3
comp=Z,0.8nm,0.6s,baz=115,slow=2.1,SNR=13
YKA LR LR 20 12 08.2
comp=Z,83nm,21.8s,baz=290,slow=36
comp=Z,2.4nm,0.8s
CLL Collm 101.04 324 *e*Sdif Sdif 19 38 06.0 +0.2
CLL *es*Sdif sSdif 19 38 58.0 -3.4
CLL *e*SS SS 19 45 42.0 +35
CLL *e*SSS SSS 19 50 06.0
CLL AMS AMS 20 15 00.0
comp=Z,300nm,21.6s
BOSA Boshof 101.10 242 P Pdif 19 26 38.4 -0.5
comp=Z,6.2nm,1.1s,baz=69,slow=4.8,SNR=5.3
BLS5 Blasjo 101.15 333 *e*P Pdif 19 26 38.8 +0.5
NVL N'lazarevskaya 101.36 198 *e*P Pdif 19 26 39.6 +0.7
NVL *e* 19 30 50.3
NVL *e*PPP PPP 19 32 59.6
NVL *e*S **SKSac** 19 37 08.3 +2.3
NVL *e*SS **SS** 19 45 14.7 +4.2
NVL *e*SSS SSS 19 49 07.5
NVL pmax pmax
comp=Z,79nm,3.5s
GERES GERESS Array B 101.45 321 P Pdif 19 26 38.6 -1.4
comp=Z,1.3nm,0.7s,baz=48,slow=5.9,SNR=4.1
GERES PKiKP **PKiKP** 19 31 05.3 +1.8
comp=Z,1.1nm,0.5s,baz=60,slow=3.9,SNR=5.4
TROLL Troll, Antarti 103.48 195 Pdiff Pdif 19 26 51.9 +3.4

TROLL				SKSac	**SKSac**	**19 37 17.5**	**+1.1**
DOU	**Dourbes**	**106.42**	**325**	*d*PKiKP	**PKiKP**	**19 31 12.6**	**+0.2**
VNA2	**Neumayer--Watz**	**106.69**	**194**	⇓SKSac	**SKSac**	**19 37 32.1**	**+1.6**
baz=352,slow=10									
VNA3	**Neumayer Olymp**	**107.03**	**194**	⇓SKSac	**SKSac**	**19 37 33.1**	**+1.0**
NVAR	**Mina Array Bea**	**107.51**	**48**	PKiKP	**PKiKP**	**19 31 17.6**	**+2.4**
comp=Z,0.3nm,0.6s,baz=280,slow=3.7,SNR=3.5									
NVAR				PKKPbc	**PKKPbc**	**19 42 32.9**	**+1.6**
comp=Z,1.9nm,0.7s,baz=131,slow=4.2,SNR=10									
NVAR				PKKP	**PKKPdf**	**19 42 44.0**	**0.0**
comp=Z,2.9nm,0.6s,baz=123,slow=4.6,SNR=12									
EKA	**Eskdalemuir Ar**	**107.72**	**332**	Pdiff	**Pdif**	**19 27 06.2**	**-1.4**
comp=Z,0.9nm,0.6s,baz=42,slow=3.3,SNR=4.6									
EKA				PKiKP	**PKiKP**	**19 31 16.6**	**+1.9**
comp=Z,2.5nm,0.8s,baz=34,slow=3.4,SNR=4.2									
EKA				PKKPbc	**PKKPbc**	**19 42 29.5**	**-1.4**
comp=Z,0.5nm,0.5s,baz=231,slow=3.4,SNR=5.1									
PDAR	**Pinedale Array**	**111.88**	**41**	PKiKP	**PKiKP**	**19 31 22.4**	**-0.8**
comp=Z,0.5nm,0.6s,baz=343,slow=3.1,SNR=5.2									
PDAR				PKKPbc	**PKKPbc**	**19 42 15.1**	**-2.4**
comp=Z,0.6nm,0.5s,baz=131,slow=5.3,SNR=8.4									
PDAR				PKKPab	**PKKPab**	**19 42 25.5**	**-0.9**
comp=Z,4.5nm,0.6s,baz=118,slow=5.9,SNR=29									
EDA	**Edea**	**115.28**	**276**		**PKPdf**	**19 31 28.8**	**-1.4**
ULM	**Lac du Bonnet**	**115.31**	**28**	PKP	**PKiKP**	**19 31 28.6**	**-0.6**
comp=Z,2.3nm,0.7s,baz=152,slow=2.6,SNR=4.1									
ESDC	**Sonseca Array**	**116.79**	**318**	PKP	**PKiKP**	**19 31 32.8**	**+0.3**
comp=Z,1.5nm,0.9s,baz=14,slow=3.1,SNR=8.4									
ESDC	**Sonseca Array**	**116.79**	**318**		**PKiKP**	**19 31 33.4**	**+0.9**
MVO	**Moncorvo**	**117.97**	**321**	*e*PKPdf	**PKiKP**	**19 31 36.5**	**+1.8**
PCAB	**Cabril**	**118.28**	**322**	*e*PKPdf	**PKiKP**	**19 31 36.1**	**+0.8**
PGAV	**Gavieira, Arco**	**118.28**	**323**	*e*PKPdf	**PKiKP**	**19 31 37.7**	**+2.3**
POLO	**Lamas de Olo**	**118.33**	**322**	*e*PKPdf	**PKiKP**	**19 31 37.3**	**+1.8**
PVRL	**Vila Real**	**118.34**	**322**	*e*PKPdf	**PKiKP**	**19 31 36.8**	**+1.3**
MTE	**Manteigas**	**118.72**	**321**	*e*PKPdf	**PKiKP**	**19 31 37.1**	**+0.9**
PVIS	**Viseu**	**118.77**	**321**	*e*PKPdf	**PKiKP**	**19 31 37.1**	**+0.8**
PTO	**Porto**	**118.96**	**322**	*e*PKPdf	**PKiKP**	**19 31 36.6**	**0.0**
PCBR	**Castelo Branco**	**118.99**	**320**	*e*PKPdf	**PKiKP**	**19 31 37.8**	**+1.1**
PCAS	**Casmilo, Conde**	**119.52**	**321**	*e*PKPdf	**PKiKP**	**19 31 38.4**	**+0.7**
PSARD	**Sardoal**	**119.57**	**320**	*e*PKPdf	**PKiKP**	**19 31 39.4**	**+1.5**
PESTR	**Estremoz**	**119.61**	**319**	*e*PKPdf	**PKiKP**	**19 31 39.2**	**+1.2**
PBAR	**Barrancos**	**119.62**	**318**	*e*PKPdf	**PKiKP**	**19 31 39.8**	**+1.9**
EVO	**Evora**	**120.07**	**319**	*e*PKPdf	**PKiKP**	**19 31 40.2**	**+1.3**
PBEJ	**Beja**	**120.25**	**319**	*e*PKPdf	**PKiKP**	**19 31 41.0**	**+1.7**
MOE	**Montemor**	**120.29**	**319**	*e*PKPdf	**PKiKP**	**19 31 39.6**	**+0.4**
PCVE	**Castro Verde**	**120.58**	**318**	*e*PKPdf	**PKiKP**	**19 31 41.5**	**+1.6**
MESJ	**Messejana**	**120.59**	**319**	*e*PKPdf	**PKiKP**	**19 31 39.9**	**0.0**
MESJ	**Messejana**	**120.59**	**319**	*e*PKPdf	**PKiKP**	**19 31 41.1**	**+1.3**
SCHQ	**Schefferville**	**120.62**	**8**	PKP	**PKiKP**	**19 31 40.8**	**+1.3**
comp=Z,7.7nm,0.6s,baz=340,slow=2.0,SNR=17									
SCHQ	**Schefferville**	**120.62**	**8**		**PKPdf**	**19 31 39.1**	**-0.3**
MD01	**Midelt array s**	**120.70**	**312**		**PKiKP**	**19 31 40.6**	**+0.1**
PBDV	**Barranco-do-Ve**	**120.72**	**318**	*e*PKPdf	**PKiKP**	**19 31 40.4**	**+0.2**
MORF	**Marmelete**	**121.17**	**318**	*e*PKPdf	**PKiKP**	**19 31 43.2**	**+2.1**
PFVI	**Vila Bisbo**	**121.38**	**318**	*e*PKPdf	**PKiKP**	**19 31 43.0**	**+1.6**
TOA0	**Torodi Ar. Sit**	**122.04**	**288**	P	**PKPdf**	**19 31 42.7**	**-0.5**
TORD	**Torodi Ar. Bea**	**122.04**	**288**	PKP	**PKPdf**	**19 31 42.9**	**-0.3**
comp=Z,17nm,0.7s,baz=213,slow=1.1,SNR=81									
TORD				PKKPbc	**PKKPbc**	**19 41 40.4**	**-0.1**
comp=Z,2.4nm,0.9s,baz=262,slow=4.3,SNR=8.2									
TXAR	**Lajitas Array**	**122.25**	**52**	PKhKP	PKPpre	19 31 36.9			
comp=Z,0.2nm,0.8s,baz=317,slow=0.9,SNR=3.7									
TXAR				PKP	**PKiKP**	**19 31 44.7**	**+1.2**
comp=Z,2.6nm,0.6s,baz=255,slow=0.9,SNR=22									
TXAR				PKKPbc	**PKKPbc**	**19 41 37.5**	**-2.6**
comp=Z,0.7nm,0.5s,baz=106,slow=5.2,SNR=14									
CCM	**Cathedral Cave**	**126.00**	**36**		**PKiKP**	**19 31 50.5**	**-0.1**
CCM	**Cathedral Cave**	**126.00**	**36**	PKiKP	**PKiKP**	**19 31 50.5**	**-0.1**
PMPS	**Porto Santo**	**128.75**	**319**	*e*PKPdf	**PKiKP**	**19 31 57.0**	**+0.8**
PMOZ	**Porto Moniz, M**	**129.46**	**319**	*e*PKPdf	**PKPdf**	**19 31 56.0**	**-1.0**
DBIC	**Dimbokro**	**129.68**	**282**	PKhKP	PKPpre	19 31 44.1			
comp=Z,3.9nm,0.7s,baz=134,slow=2.7,SNR=6.4									
DBIC				PKP	**PKPdf**	**19 31 57.9**	**+0.1**
comp=Z,14nm,0.7s,baz=125,slow=2.6,SNR=20									
DBIC				SKPab	SKPab	19 35 06.4	-1.6		
comp=Z,12nm,0.5s,baz=98,slow=4.9,SNR=11									
DBIC	**Dimbokro**	**129.68**	**282**		**PKPdf**	**19 31 56.9**	**-0.9**
PLCA	**Paso Flores**	**140.40**	**160**	PKhKP	PKPpre	19 32 10.9			
comp=Z,4.3nm,0.7s,baz=240,slow=2.3,SNR=19									
PLCA				SKP	**SKPdf**	**19 35 40.4**	**0.0**
comp=Z,6.9nm,0.8s,baz=228,slow=3.1,SNR=8.0									
HERN	**Volcan Telica**	**143.68**	**63**		PKPab	19 32 20.8	+0.2		
BI02	**San Fabin de**	**143.72**	**156**		PKPbc	19 32 21.4	+0.4		
SACV	**Santiago Islan**	**144.43**	**302**		**PKPab**	**19 32 22.4**	**-1.0**
BO01	**Tunca**	**145.76**	**155**		**PKPab**	**19 32 27.7**	**-0.1**
NMDO	**Nuevo Mundo**	**148.31**	**39**		**PKPbc**	**19 32 35.3**	**+0.5**
CFA	**Coronel Fontan**	**149.36**	**156**	PKPbc	**PKPdf**	**19 32 34.6**	**+1.8**
comp=Z,18nm,0.7s,baz=244,slow=2.3,SNR=13									
PLTB	**Pedras Altas**	**152.20**	**181**		**PKPdf**	**19 32 39.5**	**+2.3**
PLTB	**Pedras Altas**	**152.20**	**181**	*e*P	**PKPdf**	**19 32 37.5**	**+0.3**
PSAL	**Palomas, Salto**	**152.69**	**174**	*e*P	**PKPdf**	**19 32 40.4**	**+2.6**
ATAH	**Atahualpa**	**155.67**	**99**	PKP	**PKPdf**	**19 32 44.0**	**+1.0**
comp=Z,9.7nm,1.0s,baz=243,slow=4.5,SNR=5.4									
CPUP	**Villa Florida**	**157.41**	**173**	PKP	**PKPdf**	**19 32 45.7**	**+1.3**
comp=Z,6.3nm,1.0s,baz=74,slow=4.6,SNR=4.8									
CPUP				pPKP	**pPKPdf**	**19 33 18.6**	**+0.5**
comp=Z,16nm,0.7s,baz=178,slow=3.9,SNR=10									
CPUP	**Villa Florida**	**157.41**	**173**		**PKPdf**	**19 32 46.1**	**+1.7**
CPUP	**Villa Florida**	**157.41**	**173**	*e*P	**PKPdf**	**19 32 46.1**	**+1.7**
SDV	**Santo Domingo**	**159.29**	**52**	*e*P	**PKPdf**	**19 32 48.3**	**+1.0**
AMBA	**Amambai (Brazi**	**160.99**	**178**	*e*P	**PKPdf**	**19 32 50.7**	**+2.0**
LPAZ	**La Paz**	**161.51**	**133**	PKP	**PKPdf**	**19 32 51.6**	**+1.5**
comp=Z,18nm,1.2s,baz=5.2,slow=1.7,SNR=22									
LPAZ	**La Paz**	**161.51**	**133**	*e*P	**PKPdf**	**19 32 51.1**	**+1.0**
CMC01	**Camacan, BA**	**161.57**	**231**	*e*P	**PKPdf**	**19 32 49.7**	**+0.3**
RCBR	**Riachuelo**	**161.69**	**263**	*e*P	**PKPdf**	**19 32 49.2**	**-0.4**
MURT	**Porto Murtinho**	**161.96**	**170**	*e*P	**PKPdf**	**19 32 49.6**	**-0.1**
NBPA	**Parau_RN**	**162.89**	**263**	*e*P	**PKPdf**	**19 32 51.2**	**+0.4**
BDQN	**Bodoquena, MS**	**163.28**	**172**	*e*P	**PKPdf**	**19 32 51.8**	**+0.8**
AQDB	**Aquidauana**	**163.38**	**175**	*e*P	**PKPdf**	**19 32 52.0**	**+0.9**
SIV	**San Ignacio**	**166.13**	**151**	PKP	**PKPdf**	**19 32 55.6**	**+2.0**
comp=Z,4.6nm,0.8s,baz=238,slow=2.4,SNR=15									
SIV				PKPab	**PKPab**	**19 33 53.2**	**-1.4**
comp=Z,9.4nm,0.8s,baz=222,slow=4.2,SNR=9.7									
BDFB	**Brasilia**	**166.78**	**207**	PKP	**PKPdf**	**19 32 54.4**	**+0.2**
comp=Z,4.4nm,0.7s,baz=40,slow=1.6,SNR=4.0									
BDFB				PKPab	**PKPab**	**19 33 56.3**	**-1.2**
comp=Z,16nm,0.8s,baz=91,slow=2.0,SNR=12									
BDFB	**Brasilia**	**166.78**	**207**		**PKPab**	**19 33 57.0**	**-0.5**
NBPS	**Pedro II - PI**	**167.29**	**267**	*e*P	**PKPdf**	**19 32 55.0**	**+0.3**
PTLB	**Pontes e Lacer**	**167.45**	**157**	*e*P	**PKPdf**	**19 32 55.8**	**+1.3**
SALV	**Santo Antonio**	**167.90**	**173**	*e*P	**PKPdf**	**19 32 56.1**	**+1.2**
BOAV	**Boa Vista**	**171.15**	**46**	*e*P	**PKPdf**	**19 32 57.5**	**+0.5**
SMTB	**Santa Maria do**	**171.76**	**232**	*e*P	**PKPdf**	**19 32 58.0**	**+0.7**
ITTB	**Itaituba**	**178.35**	**109**	*e*P	**PKPdf**	**19 32 60.0**	**+0.8**

DJA ***27*** *19:20:56.6±0.2,2˚N±2˚×12˚6E±˚, h10km, M5.0/30, mB5.4/7, mb5.1/23, MLv4.9/30, Mw(mB)4.9/7*
MOS ***27*** *19:20:57.7±0.9, 1.86N×126.4E, h63km, mb5.1/44, Error ellipse: s-maj=11.4km s-min=5.9km az=114.1*
NEIC ***27*** *19:20:59.6±1.9, 1.86N±0.05×126.45E±0.07, h62km±4km, mb5.0/144, Error ellipse: s-maj=10.0km s-min=7.3km az=62.0*
IDC ***27*** *19:20:59.8±1.7, 1.82N×126.41E, h67km±15km, mb4.4/30, mbtmp4.7/35, Error ellipse: s-maj=15.9km s-min=7.2km az=80.0*

ISC 27 19:20:57.9±0.3, 1.86N±0.04×126.44E±0.05, h47km, n519, σ1.1 s30/499, mb4.9/162, 11C-6D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h	m	s	ISC
TNTI	**Ternate**	**1.43**	**139**		**Pn**	**19**	**21**	**21.6**	**+0.2**
TNTI	**Ternate**	**1.43**	**139**	P	**Pn**	**19**	**21**	**21.6**	**+0.2**
MNI	**Manado**	**1.65**	**255**	P	**Pn**	**19**	**21**	**26.2**	**+1.7**
SGSI	**Sangihe**	**2.02**	**333**	P	**Pn**	**19**	**21**	**29.6**	**0.0**
SGSI				S	**Sn**	**19**	**21**	**54.7**	**+0.9**
GTOI	**Gorontalo**	**3.64**	**250**	P	**Pn**	**19**	**21**	**54.6**	**+2.8**
SANI	**Sanana**	**3.91**	**187**	P	**Pn**	**19**	**21**	**56.2**	**+0.6**
LUWI	**Luwuk**	**4.67**	**232**		**Pn**	**19**	**22**	**09.4**	**+3.5**
LUWI				Sn	**Sn**	**19**	**23**	**00.8**	**+2.0**
LUWI	**Luwuk**	**4.67**	**232**	P	**Pn**	**19**	**22**	**09.1**	**+3.2**
MRSI	**Marisa**	**4.70**	**253**	P	**Pn**	**19**	**22**	**10.1**	**+3.7**
NLAI	**Namlea**	**5.11**	**173**	P	**Pn**	**19**	**22**	**13.5**	**+1.5**
0.7nm3µm134nm,0.8s									
DAV	**Davao City (W)**	**5.24**	**351**	P	**Pn**	**19**	**22**	**16.7**	**+2.8**
174nm,0.3s,baz=241,slow=10,SNR=1.5									
DAV				S	Sn	19	23	23.9	+11
215nm,0.6s,baz=240,slow=20,SNR=1.2									
KRAI	**Karang Ratu**	**5.51**	**159**	P	**Pn**	**19**	**22**	**21.5**	**+4.0**
APSI	**Ampana**	**5.52**	**240**	P	**Pn**	**19**	**22**	**22.3**	**+4.6**
SWI	**Sorong**	**5.53**	**119**	P	**Pn**	**19**	**22**	**19.2**	**+1.4**
SIJI	**Sorong**	**5.54**	**119**	P	**Pn**	**19**	**22**	**20.1**	**+2.2**
28nm,0.7s,baz=318,slow=7.4,SNR=6.4									
SIJI	**Sorong**	**5.54**	**119**	P	**Pn**	**19**	**22**	**19.2**	**+1.3**
TOLI2	**Tolitoli**	**5.70**	**263**	Pn	**Pn**	**19**	**22**	**21.6**	**+1.5**
TOLI2				Sn	**Sn**	**19**	**23**	**21.2**	**-3.1**
MSAI	**Masohi**	**5.74**	**154**	P	**Pn**	**19**	**22**	**23.4**	**+2.7**
0.6nm2µm137nm,0.6s									
MPSI	**Mapaga**	**6.71**	**257**	P	**Pn**	**19**	**22**	**36.1**	**+2.1**
0.6nm96nm,0.7s									
PCI	**Palu**	**7.15**	**247**	P	**Pn**	**19**	**22**	**42.6**	**+2.6**
0.6nm196nm,0.9s									
KKSI	**Kolaka, Sulawe**	**7.67**	**219**	P	**Pn**	**19**	**22**	**49.6**	**+2.5**
0.3nm82nm,0.8s									
TTSI	**Tana Toraja**	**8.22**	**234**	P	**Pn**	**19**	**22**	**57.1**	**+2.4**
1µm106nm,0.8s									
MYLDM	**Lahad Datu**	**8.58**	**293**	Pn	**Pn**	**19**	**23**	**01.0**	**+1.4**
SPSI	**Sidrap Palu**	**8.83**	**229**	P	**Pn**	**19**	**23**	**05.9**	**+2.9**
55nm,0.6s									
KAPI	**Kappang**	**9.55**	**224**	P	**Pn**	**19**	**23**	**14.6**	**+1.6**
27nm,0.5s,baz=26,slow=6.5,SNR=13									
KAPI				S	**Sn**	**19**	**25**	**00.0**	**+1.0**
7.8nm,0.8s,baz=81,slow=19,SNR=1.3									
KAPI	**Kappang**	**9.55**	**224**		**Pn**	**19**	**23**	**14.0**	**+1.0**
KAPI	**Kappang**	**9.55**	**224**	*i* P	**Pn**	**19**	**23**	**15.5**	**+2.5**
KAPI				pmax	pmax				
comp=Z,17nm,0.8s									
KAPI	**Kappang**	**9.55**	**224**	P	**Pn**	**19**	**23**	**15.9**	**+2.9**
KKM	**Kota Kinabalu**	**11.01**	**292**		**Pn**	**19**	**23**	**36.1**	**+3.1**
SOEI	**Soe**	**11.74**	**191**	Pn	**Pn**	**19**	**23**	**44.7**	**+1.6**
SBUM	**Sibu**	**14.22**	**273**		**Pn**	**19**	**24**	**15.8**	**-1.0**
JAY	**Jayapura**	**14.91**	**107**	P	**Pn**	**19**	**24**	**25.5**	**-0.4**
comp=Z,8.5nm,0.7s,baz=307,slow=5.1,SNR=7.5									
MTN	**Manton Dam**	**15.34**	**162**	P	**Pn**	**19**	**24**	**32.4**	**+1.0**
comp=Z,50nm,0.5s									
MTN	**Manton Dam**	**15.34**	**162**		**Pn**	**19**	**24**	**31.3**	**-0.1**
KDU	**Kakadu**	**15.65**	**158**	P	**P**	**19**	**24**	**39.7**	**+0.9**
comp=Z,49nm,1.1s									
JAGI	**Jajag, Banyuwa**	**15.98**	**230**		**P**	**19**	**24**	**42.2**	**-0.4**
KNRA	**Kununurra**	**17.58**	**173**	P	**P**	**19**	**25**	**00.4**	**+0.2**
KNRA	**Kununurra**	**17.58**	**173**		**Pn**	**19**	**24**	**59.7**	**0.0**
KNRA				IAmb	IAmb	19	25	03.8	
comp=Z,93nm,1.1s									
FITZ	**Fitzroy Crossi**	**19.85**	**182**	P	**P**	**19**	**25**	**24.6**	**-0.6**
comp=Z,9.6nm,0.5s,baz=9.8,slow=11,SNR=10									
TWG	**Pinlang**	**21.47**	**346**	P	**P**	**19**	**25**	**39.1**	**-3.6**
TWG				IAmb	IAmb	19	25	46.8	
comp=Z,32nm,0.6s									
YULB	**Yu-li**	**21.97**	**347**	P	**P**	**19**	**25**	**44.1**	**-3.9**
YULB				IAmb	IAmb	19	25	50.3	
comp=Z,81nm,1.5s									
TPUB	**Ta-pu**	**22.04**	**346**	P	**P**	**19**	**25**	**45.3**	**-3.5**
SSLB	**Suanglung**	**22.43**	**347**	P	**P**	**19**	**25**	**50.0**	**-2.9**
SSLB				IAmb	IAmb	19	26	02.5	
comp=Z,126nm,1.8s									
COEN	**Coen**	**22.86**	**134**	P	**P**	**19**	**25**	**55.2**	**-2.3**
WB0	**Warramunga Arr**	**22.87**	**160**	P	**P**	**19**	**25**	**56.4**	**-1.2**
WB9	**Warramunga Arr**	**22.89**	**160**	P	**P**	**19**	**25**	**56.9**	**-0.9**
comp=Z,92nm,1.0s									
WRAB	**Tennant Creek**	**23.01**	**161**	P	**P**	**19**	**25**	**58.1**	**-0.9**
WRAB	**Tennant Creek**	**23.01**	**161**	*ce*P	**P**	**19**	**25**	**58.2**	**-0.9**
WRAB				pmax	pmax				
comp=Z,43nm,0.8s									
WR1	**Warramunga Arr**	**23.02**	**161**	P	**P**	**19**	**25**	**58.5**	**-0.6**
comp=Z,93nm,0.6s									
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**19**	**25**	**58.2**	**-0.9**
comp=Z,54nm,0.6s,baz=339,slow=11,SNR=64									
WRA				S	**S**	**19**	**30**	**04.0**	**-2.4**
comp=Z,6.6nm,0.9s,baz=344,slow=17,SNR=7.2									
comp=Z,54nm,0.6s									
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**19**	**25**	**58.2**	**-0.9**
WRA				pmax	pmax				
comp=Z,3.0nm,1.2s									
WB2	**Warramunga Arr**	**23.02**	**161**	P	**P**	**19**	**25**	**58.5**	**-0.6**
comp=Z,98nm,0.8s									
WR8	**Warramunga Arr**	**23.08**	**160**	P	**P**	**19**	**25**	**58.6**	**-1.1**
WR8				IAmb	IAmb	19	26	01.2	
comp=Z,58nm,0.8s									
WR0	**Warramunga Arr**	**23.10**	**160**	P	**P**	**19**	**25**	**59.3**	**-0.6**
comp=Z,55nm,0.7s									
YHNB	**Yeheng**	**23.19**	**348**	P	**P**	**19**	**25**	**59.0**	**-1.9**
QIZ	**Qiongzhong**	**23.56**	**317**	P	**P**	**19**	**26**	**03.5**	**-1.0**
QIZ				IAmb	IAmb	19	26	04.8	
comp=Z,64nm,1.5s									
QIZ	**Qiongzhong**	**23.56**	**317**	P	**P**	**19**	**26**	**05.3**	**+0.9**
MBWA	**Marble Bar**	**23.80**	**196**	P	**P**	**19**	**26**	**05.3**	**-1.3**
MBWA				IAmb	IAmb	19	26	22.6	
comp=Z,70nm,1.8s									
PSA00	**Pilbara Seismi**	**24.17**	**195**	P	**P**	**19**	**26**	**09.7**	**-0.3**
JOW	**Kunigami**	**24.89**	**4**	P	**P**	**19**	**26**	**17.0**	**+0.5**
comp=Z,28nm,0.7s,baz=209,slow=8.2,SNR=5.7									
comp=Z,28nm,0.7s									
JOW	**Kunigami**	**24.89**	**4**	IAmb	IAmb	19	26	19.4	
comp=Z,74nm,1.3s									
AS31	**Alice Springs**	**26.39**	**164**	P	**P**	**19**	**26**	**29.9**	**-0.3**
ASAR	**Alice Springs**	**26.40**	**164**	P	**P**	**19**	**26**	**29.9**	**-0.4**
comp=Z,11nm,0.4s,baz=345,slow=8.3,SNR=30									
ASAR				PcP	**PcP**	**19**	**29**	**53.5**	**-1.5**
comp=Z,1.4nm,0.4s,baz=355,slow=2.3,SNR=4.6									
ASAR				S	**S**	**19**	**31**	**00.8**	**+0.2**
comp=Z,1.5nm,0.8s,baz=348,slow=18,SNR=4.1									
comp=Z,11nm,0.4s									
CTA	**Charters Tower**	**29.22**	**139**	P	**P**	**19**	**27**	**00.0**	**+4.5**
comp=Z,7.1nm,0.7s,baz=311,slow=9.8,SNR=9.0									
NJ2	**Nanjing**	**30.87**	**347**	*eP*	**P**	**19**	**27**	**12.0**	**+2.1**
NJ2				pmax	pmax				
comp=Z,6.0nm,0.5s									
JNU	**Nakatsue**	**31.37**	**7**	P	**P**	**19**	**27**	**14.3**	**-0.1**
comp=Z,16nm,0.9s,baz=214,slow=2.3,SNR=6.4									
comp=Z,16nm,0.9s									
CMAR	**Chiang Mai Arr**	**31.60**	**303**	P	**P**	**19**	**27**	**17.2**	**+0.7**
comp=Z,1.4nm,0.8s,baz=114,slow=7.6,SNR=5.4									
comp=Z,1.4nm,0.8s									
MORW	**Morawa**	**32.33**	**197**	P	**P**	**19**	**27**	**22.9**	**+0.1**
MORW				IAmb	IAmb	19	28	14.2	
comp=Z,43nm,1.4s									
FORT	**Forrest**	**32.50**	**177**	P	**P**	**19**	**27**	**21.1**	**-3.1**
comp=Z,29nm,0.7s									
FORT	**Forrest**	**32.50**	**177**	P	**P**	**19**	**27**	**24.2**	**0.0**
FORT				IAmb	IAmb	19	27	26.9	
comp=Z,19nm,0.8s									
ENH	**Enshi**	**32.51**	**332**	IAmb	IAmb	19	27	24.6	
comp=Z,15nm,0.7s									
KMI2	**Kunming**	**32.53**	**317**	P	**P**	**19**	**27**	**26.3**	**+1.4**
KMI2				pP	sP	19	27	41.5	-0.7
PZH	**PanZhiHua**	**34.10**	**318**	P	**P**	**19**	**27**	**38.8**	**+0.3**
PZH				pmax	pmax				
comp=Z,10.0nm,0.7s									
KLBR	**Kellerberrin**	**34.28**	**193**	P	**P**	**19**	**27**	**40.1**	**+0.4**
comp=Z,66nm,0.8s									
INU	**Inuyama**	**34.74**	**15**		**P**	**19**	**27**	**43.5**	**-0.2**
JGF	**Kuroka**	**35.07**	**16**	P	**P**	**19**	**27**	**46.1**	**-0.5**
JGF				IAmb	IAmb	19	27	58.3	
comp=Z,28nm,1.2s									
TIA	**Tai'an**	**35.25**	**347**	P	**P**	**19**	**27**	**47.0**	**-1.1**
TIA				pmax	pmax				
comp=Z,7.0nm,1.0s									
TNCH	**TengChong**	**35.44**	**313**	P	**P**	**19**	**27**	**49.8**	**-0.3**
TNCH				pmax	pmax				
comp=Z,9.0nm,0.7s									
KSRS	**Korea Array**	**35.44**	**2**	P	**P**	**19**	**27**	**50.7**	**+1.0**
comp=Z,7.3nm,0.6s,baz=181,slow=9.2,SNR=20									
comp=Z,7.3nm,0.6s									
KS19	**Wonju Array Si**	**35.49**	**2**	P	**P**	**19**	**27**	**50.4**	**+0.3**
KS19				IAmb	IAmb	19	28	12.6	
comp=Z,42nm,1.6s									
BBOO	**Buckleboo**	**35.67**	**166**	P	**P**	**19**	**27**	**51.8**	**+0.1**
comp=Z,40nm,0.5s									
BBOO	**Buckleboo**	**35.67**	**166**	P	**P**	**19**	**27**	**51.5**	**-0.2**
NWAO	**Narrogin (SRO)**	**35.68**	**193**	P	**P**	**19**	**27**	**52.2**	**+0.4**
comp=Z,7.5nm,0.5s,baz=16,slow=7.5,SNR=8.9									
comp=Z,7.5nm,0.5s									
XAN	**Xi'an**	**35.96**	**335**	P	**P**	**19**	**27**	**53.5**	**-0.8**
XAN				pP	pP	19	28	07.8	+1.5
XAN				pmax	pmax				
comp=Z,14nm,1.0s									
CD2	**Chengdu**	**35.99**	**326**	P	**P**	**19**	**27**	**54.8**	**+0.2**
MAJO	**Matsushiro**	**36.18**	**16**		**P**	**19**	**27**	**54.9**	**-1.2**
MAJO				IAmb	IAmb	19	27	58.1	
comp=Z,31nm,1.2s									
MAJO	**Matsushiro**	**36.18**	**16**	*i* P	**P**	**19**	**27**	**55.7**	**-0.4**
MAJO				pmax	pmax				
comp=Z,17nm,1.0s									
MJAR	**Matsushiro Arr**	**36.18**	**16**	P	**P**	**19**	**27**	**55.3**	**-0.8**
comp=Z,13nm,0.8s,baz=183,slow=9.4,SNR=23									
comp=Z,13nm,0.8s									
MJAR	**Matsushiro Arr**	**36.18**	**16**	P	**P**	**19**	**27**	**55.5**	**-0.6**
MJAR	**Matsushiro Arr**	**36.18**	**16**	P	**P**	**19**	**27**	**55.5**	**-0.6**
MJAR				pmax	pmax				
comp=Z,9.0nm,1.0s									
MJB9	**Matsu-Tunnel**	**36.19**	**16**		**P**	**19**	**27**	**54.5**	**-1.6**
MJB9				IAmb	IAmb	19	27	59.0	
comp=Z,28nm,1.2s									
STKA	**Stephens Creek**	**36.51**	**158**	P	**P**	**19**	**27**	**58.0**	**-0.9**
comp=Z,11nm,0.6s,baz=337,slow=9.6,SNR=24									
comp=Z,11nm,0.6s									
STKA	**Stephens Creek**	**36.51**	**158**	P	**P**	**19**	**27**	**58.8**	**-0.1**
STKA	**Stephens Creek**	**36.51**	**158**	*i* P	**P**	**19**	**27**	**59.0**	**+0.1**
HNS	**HongShan**	**36.98**	**344**	⇓P	**P**	**19**	**28**	**04.3**	**+1.5**
HNS				pmax	pmax				
comp=Z,10.0nm,0.7s									
DL2	**Dalian**	**37.13**	**354**	P	**P**	**19**	**28**	**04.3**	**+0.2**
DL2				pmax	pmax				
comp=Z,54nm,0.7s									
CMSA	**Cobar Meteorol**	**37.92**	**153**	P	**P**	**19**	**28**	**11.7**	**+0.8**
comp=Z,21nm,1.2s

comp=Z,8.7nm,1.0s
TARG **Taragay, Kyrgy** **58.95** **319** P **P** **19 30 53.8 +0.7**
TARG pmax pmax
comp=Z,9.0nm,1.0s
MAKZ **Makanchi** **59.10** **326** P **P** **19 30 52.7 -1.0**
MAKZ **Makanchi** **59.10** **326** P **P** **19 30 52.7 -1.0**
MAKZ pmax pmax
comp=Z,10.0nm,0.6s
MAKZ **Makanchi** **59.10** **326** P **P** **19 30 53.0 -0.7**
MAKZ PcP **PcP** **19 31 42.0 0.0**
SATY **Saty** **59.21** **321** *d iP* **P** **19 30 54.0 -0.6**
SATY pmax pmax
comp=Z,8.0nm,0.7s
SATY **Saty** **59.21** **321** ⇓ *iP* **P** **19 30 54.1 -0.6**
comp=Z,8.1nm,0.7s
KSH2 **Kashi** **59.28** **315** P **P** **19 30 54.5 -0.7**
KSH2 pP sP 19 31 12.8 -0.4
KSH2 pmax pmax
comp=Z,4.0nm,0.7s
KSH2 LR LR
comp=Z,630nm,19.2s
KSH2 LR LR
comp=Z,370nm,14.8s
KSH2 LR LR
comp=Z,440nm,15.8s
YAK **Yakutsk** **60.07** **2** P **P** **19 30 59.3 -0.6**
YAK **Yakutsk** **60.07** **2** *eP* **P** **19 30 59.9 0.0**
YAK *e**PP **pwP** **19 31 16.3 +1.2**
YAK *e* 19 33 10.4
YAK *eS* **S** **19 39 12.1 +2.8**
YAK *e**SS **sS** **19 39 36.9 +6.3**
YAK *eSS* **SS** **19 43 06.2 -0.6**
YAK pmax pmax
comp=Z,30nm,0.9s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK pmax pmax
comp=Z,68nm,3.0s
YAK pmax pmax
comp=N,192nm,3.5s
YAK pmax pmax
comp=E,249nm,4.3s
YAK smax smax
comp=E,45nm,2.3s
YAK smax smax
comp=N,37nm,2.3s
MDOK **Medeo** **60.13** **320** *eP* **P** **19 31 00.6 -0.3**
MDOK **Medeo** **60.13** **320** *eP* **P** **19 31 00.7 -0.3**
TNSS **Tian-Shan** **60.13** **320** *eP* **P** **19 31 00.6 -0.7**
TNSS **Tian-Shan** **60.13** **320** *eP* **P** **19 31 00.7 -0.7**
TDK **Taldyqorghan** **60.20** **323** *eP* **P** **19 31 00.9 -0.3**
TDK pmax pmax
comp=Z,10.0nm,0.7s
TDK **Taldyqorghan** **60.20** **323** *eP* **P** **19 31 01.0 -0.3**
comp=Z,9.9nm,0.7s
AAA **Alma-Ata** **60.24** **320** *eP* **P** **19 31 01.2 -0.4**
AAA pmax pmax
comp=Z,9.0nm,0.7s
AAA **Alma-Ata** **60.24** **320** *eP* **P** **19 31 01.3 -0.4**
comp=Z,9.0nm,0.7s
RPZ **Rata Peaks** **60.42** **144** P **P** **19 31 02.7 0.0**
comp=Z,9.5nm,0.6s,baz=19,slow=3.9,SNR=2.2
comp=Z,9.5nm,0.6s
MA2 **Magadan** **60.57** **14** P **P** **19 31 03.7 +0.3**
MA2 **Magadan** **60.57** **14** *ceP* **P** **19 31 04.7 +1.2**
MA2 pmax pmax
comp=Z,17nm,0.8s
MA2 **Magadan** **60.57** **14** P **P** **19 31 04.3 +0.8**
BKZ **Black Stump Fm** **61.41** **137** P **P** **19 31 08.9 -0.7**
RTZ **Ruatahuna** **61.48** **136** P **P** **19 31 09.3 -0.8**
AAK **Ala-Archa** **61.55** **319** *i P* **P** **19 31 11.0 +0.4**
AAK pmax pmax
comp=Z,4.0nm,1.0s
DRK **Karamyk** **62.09** **314** IAmb IAmb 19 31 20.6
comp=Z,7.9nm,0.6s
ZALV **Zalesovo Beam** **62.11** **334** P **P** **19 31 12.9 -1.1**
comp=Z,1.5nm,0.3s,baz=134,slow=6.6,SNR=5.9
comp=Z,1.5nm,0.3s
KBL **Kabul** **62.43** **308** P **P** **19 31 15.4 -1.3**
KBL **Kabul** **62.43** **308** P **P** **19 31 15.5 -1.3**
KBL pmax pmax
comp=Z,13nm,0.5s
KURBB **Kurchatov Arra** **63.15** **328** P **P** **19 31 20.6 -0.3**
comp=Z,10.0nm,0.5s,baz=129,slow=6.2,SNR=34
comp=Z,10.0nm,0.5s
KURK **Kurchatov** **63.15** **328** P **P** **19 31 20.0 -0.9**
KURK **Kurchatov** **63.15** **328** *ceP* **P** **19 31 20.6 -0.4**
KURK pmax pmax
comp=Z,9.0nm,0.7s
CHGR **Chuyangaron** **63.70** **313** *i P* **P** **19 31 24.5 -0.5**
CHGR pmax pmax
comp=Z,16nm,1.1s
DZA **Taraz** **63.76** **318** *eP* **P** **19 31 25.0 -0.2**
DZA pmax pmax
comp=Z,6.0nm,0.7s
DZA **Taraz** **63.76** **318** *eP* **P** **19 31 25.0 -0.2**
comp=Z,6.3nm,0.7s
SEY **Seymchan** **63.91** **13** *ceP* **P** **19 31 26.9 +1.2**
SEY pmax pmax
comp=Z,10.0nm,1.0s
IUG **luzhnay** **64.35** **317** *d iP* **P** **19 31 28.6 -0.6**
IUG pmax pmax
comp=Z,6.0nm,0.6s
IUG **luzhnay** **64.35** **317** ⇓ *iP* **P** **19 31 28.7 -0.6**
comp=Z,5.9nm,0.6s
KK31 **Karatay Array** **64.40** **318** P **P** **19 31 27.9 -1.5**
KK31 **Karatay Array** **64.40** **318** P **P** **19 31 27.9 -1.5**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR **Karatay Array** **64.40** **318** P **P** **19 31 28.2 -1.2**
KKAR **Karatay Array** **64.40** **318** P **P** **19 31 28.2 -1.2**
CHM **Chimkent** **64.71** **317** *eP* **P** **19 31 31.1 -0.3**
CHM **Chimkent** **64.71** **317** *eP* **P** **19 31 31.1 -0.3**
BRLS **Boroldaу** **64.82** **317** *eP* **P** **19 31 31.2 -0.9**
BRLS **Boroldaу** **64.82** **317** *eP* **P** **19 31 31.3 -0.9**
BVAR **Borovoye Array** **68.72** **327** P **P** **19 31 56.2 -0.5**
comp=Z,3.8nm,0.5s,baz=60,slow=4.7,SNR=18
comp=Z,3.8nm,0.5s
BORK **Borovoye** **68.77** **327** P **P** **19 31 55.3 -1.7**
BORK IAmb IAmb 19 32 02.0
comp=Z,7.5nm,0.7s
BORK **Borovoye** **68.77** **327** *ceP* **P** **19 31 56.2 -0.8**
BORK pmax pmax
comp=Z,4.0nm,0.7s
BORK **Borovoye** **68.77** **327** P **P** **19 31 56.6 -0.4**
TIXI **Tiksi** **69.70** **1** P **P** **19 32 01.4 -1.1**
TIXI IAmb IAmb 19 32 53.1
comp=Z,37nm,1.4s
TIXI **Tiksi** **69.70** **1** *ceP* **P** **19 32 02.4 0.0**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
AB31 **Akbulak array** **73.41** **321** P **P** **19 32 24.0 -1.2**
ABKAR **Akbulak array** **73.41** **321** P **P** **19 32 24.0 -1.1**
SPIA **Saint Paul Isl** **74.24** **30** P **P** **19 32 30.9 +1.1**
baz=248
UNV **Unalaska Valle** **75.12** **34** P **P** **19 32 35.5 +0.5**
baz=252
GAMB **Gambell** **76.21** **24** P **P** **19 32 41.7 +0.7**
baz=245
ARTI **Arti** **76.43** **328** P **P** **19 32 41.1 -1.4**
ARTI IAmb IAmb 19 32 42.3
comp=Z,10nm,0.7s
ARTI **Arti** **76.43** **328** *d iP* **P** **19 32 41.6 -0.9**
ARTI S **S** **19 42 26.0 +1.6**
ARTI pmax pmax
comp=Z,9.0nm,0.8s
FALS **False Pass** **77.14** **34** P **P** **19 32 47.1 +0.7**
baz=255
M11K **Mekoryuk** **77.34** **28** P **P** **19 32 48.4 +0.9**
baz=251
TNA **Tin City** **78.41** **23** P **P** **19 32 54.2 +0.9**
baz=248
K13K **Kusilvak Mount** **78.55** **27** IAmb IAmb 19 32 56.7
comp=Z,12nm,0.9s
K13K **Kusilvak Mount** **78.55** **27** P **P** **19 32 55.1 +1.0**
baz=252
M13K **Dall Lake** **78.70** **28** P **P** **19 32 56.1 +1.1**
baz=254
SDPT **Sand Point** **78.90** **34** P **P** **19 32 56.5 +0.3**
baz=257
F14K **Arctic Creek** **79.00** **23** P **P** **19 32 57.9 +1.3**
baz=250
ANM **Nome** **79.08** **24** P **P** **19 32 57.6 +0.5**
baz=251

L14K **Kuka Creek** **79.27** **28** IAmb IAmb 19 33 00.7
comp=Z,19nm,1.0s
L14K **Kuka Creek** **79.27** **28** P **P** **19 32 58.8 +0.6**
baz=254
J14K **Nanvaranak Lak** **79.28** **26** P **P** **19 32 59.2 +1.0**
baz=253
N14K **Kuskokwak Cree** **79.37** **29** P **P** **19 32 59.8 +1.1**
baz=255
O14K **Tigyukauivet M** **79.41** **30** P **P** **19 32 59.3 +0.4**
baz=256
M14K **Bethel** **79.45** **28** IAmb IAmb 19 33 01.5
comp=Z,14nm,0.8s
M14K **Bethel** **79.45** **28** P **P** **19 33 00.1 +0.9**
baz=255,SNR=9.6
F15K **North Star Dit** **79.74** **23** P **P** **19 33 01.8 +1.1**
baz=251
G15K **Niukluk** **79.76** **24** P **P** **19 33 01.8 +1.0**
baz=252
L15K **Ungalak Mounta** **79.92** **27** P **P** **19 33 02.5 +0.8**
baz=255
M15K **Kasigluk River** **80.04** **29** P **P** **19 33 03.2 +0.9**
baz=256,SNR=8.5
K15K **Wolf Creek Mou** **80.06** **27** IAmb IAmb 19 33 06.2
comp=Z,14nm,1.0s
K15K **Wolf Creek Mou** **80.06** **27** P **P** **19 33 03.3 +0.9**
baz=255
O15K **Ungalikthiuk R** **80.11** **30** P **P** **19 33 03.5 +0.7**
baz=257
N15K **Kwethluk River** **80.20** **29** IAmb IAmb 19 33 06.3
comp=Z,12nm,1.1s
N15K **Kwethluk River** **80.20** **29** P **P** **19 33 04.1 +0.8**
baz=256
C16K **Lisburne Hills** **80.33** **21** P **P** **19 33 04.8 +1.1**
baz=250
H16K **Elim** **80.39** **24** P **P** **19 33 05.3 +1.1**
baz=254,SNR=14
G16K **Koyuk River** **80.55** **24** P **P** **19 33 06.0 +1.0**
baz=254
J16K **Anvik River** **80.72** **26** IAmb IAmb 19 33 09.3
comp=Z,13nm,0.9s
J16K **Anvik River** **80.72** **26** P **P** **19 33 07.1 +1.1**
baz=256
I17K **Unalakleet** **80.84** **25** IAmb IAmb 19 33 09.4
comp=Z,17nm,1.2s
I17K **Unalakleet** **80.84** **25** P **P** **19 33 08.0 +1.4**
baz=255,SNR=8.5
L16K **Owhat River** **80.86** **28** IAmb IAmb 19 33 09.0
comp=Z,14nm,1.0s
L16K **Owhat River** **80.86** **28** P **P** **19 33 07.7 +1.0**
baz=257,SNR=8.2
N16K **Nishlik Lake** **80.91** **29** P **P** **19 33 08.1 +1.0**
baz=258
R16K **Pilot Point** **80.93** **32** P **P** **19 33 08.1 +0.9**
baz=257
M16K **Timber Creek** **80.94** **28** IAmb IAmb 19 33 09.7
comp=Z,20nm,1.1s
M16K **Timber Creek** **80.94** **28** P **P** **19 33 07.9 +0.7**
baz=257
RAYN **Ar Rayn** **80.94** **293** P **P** **19 33 07.6 -0.5**
RAYN **Ar Rayn** **80.94** **293** P **P** **19 33 07.6 -0.5**
RAYN pmax pmax
comp=Z,3.0nm,0.8s
D17K **Noatak River** **80.95** **21** P **P** **19 33 08.4 +1.3**
baz=253,SNR=14
P16K **Nushagak River** **81.00** **30** P **P** **19 33 08.6 +1.0**
baz=258
O16K **Kokwok River B** **81.06** **30** IAmb IAmb 19 33 10.5
comp=Z,21nm,1.4s
O16K **Kokwok River B** **81.06** **30** P **P** **19 33 08.4 +0.6**
baz=258
RDOG **Red Dog Mine** **81.12** **21** P **P** **19 33 08.9 +0.9**
baz=253
C17K **DeLong Mountai** **81.15** **21** P **P** **19 33 09.0 +0.8**
baz=252,SNR=7.1
E17K **Hotham Inlet** **81.23** **22** P **P** **19 33 09.8 +1.1**
baz=254,SNR=10
G17K **Kiwalik Mounta** **81.27** **24** P **P** **19 33 09.9 +1.1**
baz=255
F17K **Baldwin Pennin** **81.28** **23** P **P** **19 33 10.3 +1.5**
baz=254
H17K **Granite Mounta** **81.43** **24** P **P** **19 33 10.8 +1.0**
baz=256
L17K **Donlin** **81.49** **27** P **P** **19 33 11.3 +1.2**
baz=258
R17L **Mt. Peulik Vol** **81.59** **32** P **P** **19 33 11.4 +0.7**
baz=260
O17K **Koliganek Bris** **81.59** **30** P **P** **19 33 11.7 +1.0**
baz=259
K17K **Iditarod** **81.61** **27** IAmb IAmb 19 33 13.7
comp=Z,21nm,0.9s
K17K **Iditarod** **81.61** **27** P **P** **19 33 11.9 +1.2**
baz=258,SNR=11
VNDA **Vanda** **81.62** **173** P **P** **19 33 10.9 +0.4**
comp=Z,2.6nm,0.5s,baz=316,slow=7.1,SNR=13
comp=Z,2.6nm,0.5s
VNDA **Vanda** **81.62** **173** P **P** **19 33 10.7 +0.2**
VNDA **Vanda** **81.62** **173** P **P** **19 33 10.7 +0.2**
VNDA pmax pmax
comp=Z,158nm,2.0s
CHIR **Chirikof Islan** **81.69** **34** P **P** **19 33 12.2 +0.9**
baz=261
N17K **Nushagak Hills** **81.69** **29** P **P** **19 33 12.0 +0.8**
baz=259
BELG **Belogornoye** **81.70** **323** *i P* **P** **19 33 11.0 -0.4**
BELG pmax pmax
comp=Z,4.0nm,0.8s
M17K **Holitna River** **81.74** **28** P **P** **19 33 12.5 +1.0**
baz=259
E18K **Tukpahlearik C** **81.78** **22** IAmb IAmb 19 33 14.2
comp=Z,9.7nm,0.9s
E18K **Tukpahlearik C** **81.78** **22** P **P** **19 33 12.5 +1.0**
baz=255,SNR=7.7
P17K **Kvichak River** **81.82** **30** P **P** **19 33 12.4 +0.6**
baz=260
C18K **Utukok River** **81.90** **21** P **P** **19 33 12.8 +0.6**
baz=254
F18K **Selawik** **81.94** **23** P **P** **19 33 13.0 +0.7**
baz=256
Q17K **Contact Creek** **81.94** **31** P **P** **19 33 12.7 0.0**
baz=260
H18K **Honhosa River** **82.12** **24** P **P** **19 33 14.5 +1.1**
baz=257
G18K **Tagagawik** **82.17** **24** P **P** **19 33 14.5 +0.9**
baz=257
L18K **Granite Mounta** **82.25** **27** IAmb IAmb 19 33 16.9
comp=Z,20nm,1.2s
L18K **Granite Mounta** **82.25** **27** P **P** **19 33 15.0 +0.9**
baz=259,SNR=6.4
N18K **Kilae Creek** **82.35** **29** P **P** **19 33 15.1 +0.4**
baz=260
Q18K **Katmai Hardscr** **82.46** **31** P **P** **19 33 15.6 +0.2**
baz=261
P18K **Big Mountain,** **82.46** **30** P **P** **19 33 15.9 +0.6**
baz=261
J18K **Innoko River** **82.47** **26** IAmb IAmb 19 33 17.5
comp=Z,16nm,1.1s
J18K **Innoko River** **82.47** **26** P **P** **19 33 15.6 +0.4**
baz=259
M18K **Stony River** **82.52** **28** P **P** **19 33 16.4 +0.9**
baz=260
O18K **Koktuh Hills** **82.55** **30** P **P** **19 33 16.1 +0.4**
baz=261
C19K **Lookout Ridge** **82.58** **20** IAmb IAmb 19 33 18.2
comp=Z,12nm,0.6s
C19K **Lookout Ridge** **82.58** **20** P **P** **19 33 16.6 +0.8**
baz=256
SII **Sitkinak Islan** **82.59** **33** P **P** **19 33 16.2 +0.2**
baz=262
GCSA **Galena City Sc** **82.65** **25** P **P** **19 33 16.9 +0.8**
baz=259
F19K **Shaleruckik Mo** **82.72** **23** P **P** **19 33 17.4 +1.0**
baz=258
G19K **Purcell Mounta** **82.84** **23** IAmb IAmb 19 33 19.7
comp=Z,22nm,0.9s
G19K **Purcell Mounta** **82.84** **23** P **P** **19 33 18.4 +1.2**
baz=258
D19K **Kuna River** **82.96** **21** P **P** **19 33 18.7 +1.0**
baz=257
J19K **Poorman** **83.05** **26** IAmb IAmb 19 33 20.8
comp=Z,21nm,1.0s
J19K **Poorman** **83.05** **26** P **P** **19 33 19.1 +0.8**
baz=260
N19K **Bonanza Creek** **83.05** **29** IAmb IAmb 19 33 21.5
comp=Z,20nm,0.9s
N19K **Bonanza Creek** **83.05** **29** P **P** **19 33 18.4 -0.1**
baz=261
E19K **Redstone River** **83.06** **22** P **P** **19 33 18.7 +0.5**
baz=258

L19K **White Mountain** **83.09** **28** IAmb IAmb 19 33 21.0
comp=Z,14nm,1.0s
L19K **White Mountain** **83.09** **28** P **P** **19 33 19.3 +0.7**
baz=261
OHAK **Old Harbor** **83.17** **33** P **P** **19 33 19.6 +0.7**
baz=263
Q19K **Cape Douglas,** **83.20** **31** P **P** **19 33 19.5 +0.3**
baz=262
P19K **Oil Pt** **83.51** **30** P **P** **19 33 21.2 +0.4**
baz=263
NCK **Nalchik** **83.52** **313** *i* P **P** **19 33 21.1 0.0**
NCK pmax pmax
comp=Z,6.0nm,0.8s
D20K **Etivluk River** **83.54** **21** P **P** **19 33 21.6 +0.9**
baz=258,SNR=25
F20K **Avaraart Lake** **83.55** **23** IAmb IAmb 19 33 23.4
comp=Z,15nm,1.1s
F20K **Avaraart Lake** **83.55** **23** P **P** **19 33 21.4 +0.7**
baz=260,SNR=14
E20K **Nigu River** **83.61** **21** P **P** **19 33 22.2 +1.1**
baz=259
KDAK **Kodiak Island** **83.61** **32** P **P** **19 33 21.7 +0.5**
baz=263
H20K **Anotleneega Mo** **83.62** **24** P **P** **19 33 22.3 +1.2**
baz=260
B20K **Meade River** **83.62** **20** IAmb IAmb 19 33 23.6
comp=Z,19nm,1.0s
B20K **Meade River** **83.62** **20** P **P** **19 33 22.4 +1.4**
baz=258
K20K **Telida** **83.63** **26** P **P** **19 33 22.1 +0.9**
baz=261
GEVA **Gevas** **83.65** **308** IAmb IAmb 19 33 23.7
comp=Z,12nm,0.9s
Q20K **Shuyak Island** **83.81** **31** P **P** **19 33 23.1 +0.9**
baz=263
M20K **Styx River** **83.85** **28** IAmb IAmb 19 33 24.9
comp=Z,14nm,0.9s
M20K **Styx River** **83.85** **28** P **P** **19 33 23.4 +0.9**
baz=262
KBZ **Khabaz** **84.04** **314** P **P** **19 33 22.3 -1.4**
comp=Z,3.2nm,0.7s,baz=348,slow=2.6,SNR=8.4
comp=Z,3.2nm,0.7s
KBZ **Khabaz** **84.04** **314** *i* P **P** **19 33 22.2 -1.5**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
A21K **Barrow** **84.07** **18** P **P** **19 33 24.6 +1.3**
baz=258,SNR=17
IMAR **Indian Mountai** **84.16** **24** P **P** **19 33 23.4 -0.5**
SPCR **Spurr Chakacha** **84.20** **29** P **P** **19 33 25.0 +0.7**
baz=263
KIV **Kislovodsk** **84.21** **314** *eP* **P** **19 33 24.3 -0.4**
KIV pmax pmax
comp=Z,6.0nm,1.0s
SHA1 **Shidzhatmaz** **84.22** **314** *i* P **P** **19 33 25.2 +0.2**
C21K **Knifeblade Rid** **84.27** **21** P **P** **19 33 25.6 +1.2**
baz=260,SNR=8.8
SPU **Mount Spurr** **84.28** **29** IAmb IAmb 19 33 25.7
comp=Z,12nm,1.2s
HOM **Homer** **84.31** **30** P **P** **19 33 25.9 +1.1**
baz=264
G21K **Allakaket** **84.33** **23** IAmb IAmb 19 33 27.1
comp=Z,8.4nm,0.9s
G21K **Allakaket** **84.33** **23** P **P** **19 33 25.7 +1.0**
baz=262
PPLA **Purkeypile** **84.41** **27** P **P** **19 33 26.3 +0.9**
baz=263
B21K **Ikpikpuk River** **84.41** **20** P **P** **19 33 25.8 +0.8**
baz=260,SNR=26
F21K **Alatna River** **84.44** **23** P **P** **19 33 26.1 +0.7**
baz=262
E21K **Killik River** **84.45** **21** P **P** **19 33 26.1 +0.8**
baz=261
GURO **Guroymak-BITLI** **84.47** **308** IAmb IAmb 19 33 28.2
comp=Z,12nm,0.8s
CHUM **Lake Minchumin** **84.47** **26** P **P** **19 33 26.5 +1.0**
baz=263
H21K **Melozitna Rive** **84.50** **24** P **P** **19 33 26.4 +0.8**
baz=262
SKT **Skwentna** **84.61** **28** IAmb IAmb 19 33 27.1
comp=Z,9.5nm,0.5s
SKT **Skwentna** **84.61** **28** P **P** **19 33 26.8 +0.5**
baz=264
CAPN **Captain Cook N** **84.67** **29** P **P** **19 33 27.5 +1.0**
baz=264
BRSE **Bradley Lake S** **84.77** **30** P **P** **19 33 28.0 +0.9**
baz=265
I21K **Tanana** **84.78** **25** P **P** **19 33 27.5 +0.5**
baz=263
SUA **Susitna One** **84.93** **29** P **P** **19 33 28.2 +0.2**
baz=265
B22K **Teshekpuk Lake** **84.93** **20** P **P** **19 33 29.0 +1.3**
baz=261
D22K **Ayikyak River** **84.98** **21** IAmb IAmb 19 35 31.6
comp=Z,22nm,1.8s
D22K **Ayikyak River** **84.98** **21** P **P** **19 33 29.1 +1.1**
baz=262
BPAW **Bear Paw Mtn.** **85.08** **26** P **P** **19 33 29.5 +0.9**
baz=264
H22K **Ishtalitna Cre** **85.11** **24** P **P** **19 33 29.7 +1.0**
baz=264
E22K **Anaktuvuk Pass** **85.20** **22** P **P** **19 33 29.8 +0.7**
baz=263,SNR=8.0
VRH **Novokhopyorsk** **85.24** **321** *eP* **P** **19 33 28.2 -1.4**
VRH pmax pmax
comp=Z,30nm,1.0s
CUT **Chulitna** **85.24** **28** P **P** **19 33 30.3 +0.9**
baz=265
MLY **Manley** **85.28** **25** P **P** **19 33 30.2 +0.6**
baz=264
TRF **Thorofare Moun** **85.33** **27** P **P** **19 33 30.4 +0.4**
baz=265
O22K **Cooper Landing** **85.34** **30** P **P** **19 33 30.3 +0.4**
baz=266
RC01 **Rabbit Creek A** **85.39** **29** P **P** **19 33 30.4 +0.2**
baz=266
SEW **Seward** **85.45** **30** P **P** **19 33 30.7 +0.3**
baz=266
D23K **Nanushuk River** **85.71** **21** P **P** **19 33 32.1 +0.5**
baz=264
COLD **Coldfoot** **85.71** **23** IAmb IAmb 19 33 33.7
comp=Z,5.8nm,0.7s
COLD **Coldfoot** **85.71** **23** P **P** **19 33 32.6 +0.9**
baz=265,SNR=6.9
PMR **Palmer** **85.71** **29** P **P** **19 33 32.3 +0.6**
baz=266
G23K **Bananza Creek** **85.74** **23** P **P** **19 33 32.4 +0.5**
baz=265
C23K **Itkillik River** **85.82** **20** IAmb IAmb 19 33 34.6
comp=Z,11nm,0.7s
C23K **Itkillik River** **85.82** **20** P **P** **19 33 33.6 +1.5**
baz=264
I23K **Minto, Yukon-K** **85.88** **25** P **P** **19 33 32.5 0.0**
baz=266
MCK **McKinley** **85.95** **26** P **P** **19 33 33.3 +0.4**
baz=266
NEA2 **Nenana** **85.96** **25** P **P** **19 33 33.0 +0.1**
baz=266
E23K **Chandalar** **86.01** **22** IAmb IAmb 19 33 35.7
comp=Z,8.2nm,0.8s
E23K **Chandalar** **86.01** **22** P **P** **19 33 33.3 0.0**
baz=265
KNK **Knik Glacier** **86.02** **29** IAmb IAmb 19 33 35.1
comp=Z,15nm,0.8s
KNK **Knik Glacier** **86.02** **29** P **P** **19 33 33.4 +0.1**
baz=267
WAT1 **Susitna Watana** **86.07** **27** P **P** **19 33 33.5 0.0**
baz=266
TOLK **Toolik Lake Re** **86.08** **21** P **P** **19 33 33.5 0.0**
baz=265
SML **Sawmill** **86.11** **28** P **P** **19 33 34.1 +0.3**
baz=267
VSLR **Vesyoloye** **86.11** **313** *i* P **P** **19 33 34.7 +0.5**
VSLR pmax pmax
comp=Z,31nm,1.2s
D24K **Happy Valley** **86.39** **21** IAmb IAmb 19 33 37.7
comp=Z,9.8nm,0.7s
D24K **Happy Valley** **86.39** **21** P **P** **19 33 35.4 +0.4**
baz=266
M23K **Glacier View** **86.39** **28** P **P** **19 33 35.6 +0.4**
baz=267
WAT6 **Susitna Watana** **86.43** **28** P **P** **19 33 35.8 +0.4**
baz=267
E24K **Your Creek** **86.44** **22** P **P** **19 33 35.6 +0.3**
baz=266
P23K **Montague Islan** **86.47** **30** P **P** **19 33 35.6 +0.1**
baz=268
COLA **College** **86.50** **25** P **P** **19 33 35.4 -0.1**
baz=267

H24K	**Noodor Dome**	**86.54**	**24**	P		**P**	**19 33 36.5**	**+0.7**
	baz=267							
SCM	**Sheep Creek Mo**	**86.58**	**28**	P		**P**	**19 33 35.9**	**-0.2**
	baz=268							
DHY	**Denali Highway**	**86.62**	**27**	P		**P**	**19 33 36.3**	**-0.1**
	baz=267							
GLI	**Glacier Island**	**86.66**	**29**	P		**P**	**19 33 36.2**	**-0.3**
	baz=268							
POKR	**Poker Plat Res**	**86.69**	**25**	P		**P**	**19 33 36.3**	**-0.2**
	baz=267							
G24K	**Hadweenzic Riv**	**86.75**	**23**	IAmb		IAmb	19 36 23.5	
	comp=Z,27nm,1.9s							
G24K	**Hadweenzic Riv**	**86.75**	**23**	P		**P**	**19 33 37.1**	**+0.3**
	baz=267							
VORD	**Divnogorie**	**86.76**	**321**	*e*P		**P**	**19 33 35.9**	**-1.2**
VORD				pmax		pmax		
	comp=Z,10.0nm,0.5s							
VORR	**Voronezh**	**86.83**	**321**	*e*P		**P**	**19 33 36.9**	**-0.5**
VORR				pmax		pmax		
	comp=Z,40nm,0.4s							
VSR	**Storozhevoye**	**86.84**	**321**	*e*P		**P**	**19 33 37.2**	**-0.3**
VSR				pmax		pmax		
	comp=Z,9.0nm,0.4s							
HDA	**Harding Lake**	**86.86**	**26**	P		**P**	**19 33 37.2**	**-0.2**
	baz=268							
ILAR	**Eielson Array**	**86.90**	**25**	P		**P**	**19 33 35.7**	**-1.9**
	comp=Z,1.0nm,0.6s,baz=254,slow=4.5,SNR=14							
	comp=Z,1.0nm,0.6s							
ILAR	**Eielson Array**	**86.90**	**25**	P		**P**	**19 33 35.5**	**-2.1**
ILAR	**Eielson Array**	**86.90**	**25**	P		**P**	**19 33 35.5**	**-2.1**
Q23K	**Middleton Isla**	**86.98**	**31**	P		**P**	**19 33 38.1**	**+0.1**
	baz=269							
LPSR	**Galich'ya Gora**	**87.01**	**322**	*e*P		**P**	**19 33 38.2**	**-0.1**
LPSR				pmax		pmax		
	comp=Z,20nm,1.0s							
M24K	**Tolsona, Glenn**	**87.14**	**28**	P		**P**	**19 33 39.3**	**+0.5**
	baz=269							
KLU	**Klutina**	**87.24**	**29**	P		**P**	**19 33 39.1**	**-0.3**
	baz=269							
D25K	**Kavik River**	**87.27**	**21**	IAmb		IAmb	19 35 53.6	
	comp=Z,14nm,1.6s							
D25K	**Kavik River**	**87.27**	**21**	P		**P**	**19 33 39.3**	**0.0**
	baz=268							
EYAK	**Cordova Ski Ar**	**87.31**	**30**	P		**P**	**19 33 39.5**	**0.0**
	baz=269							
K24K	**Donnelly Dome**	**87.36**	**26**	P		**P**	**19 33 39.8**	**0.0**
	baz=269							
ARPR	**Arapgir-MALATY**	**87.36**	**309**	IAmb		IAmb	19 33 43.0	
	comp=Z,14nm,1.2s							
PAX	**Paxson**	**87.48**	**27**	P		**P**	**19 33 41.0**	**+0.4**
	baz=269							
F25K	**Christian River**	**87.49**	**23**	IAmb		IAmb	19 34 17.3	
	comp=Z,10nm,1.5s							
F25K	**Christian River**	**87.49**	**23**	P		**P**	**19 33 41.0**	**+0.6**
	baz=269							
PRP	**Porcupine Dome**	**87.50**	**25**	P		**P**	**19 33 40.9**	**+0.3**
	baz=269							
E25K	**Arctic Village**	**87.53**	**22**	IAmb		IAmb	19 33 42.5	
	comp=Z,6.6nm,1.0s							
E25K	**Arctic Village**	**87.53**	**22**	P		**P**	**19 33 41.1**	**+0.5**
	baz=269							
J25K	**Salcha River,**	**87.55**	**26**	P		**P**	**19 33 41.1**	**+0.3**
	baz=269							
HARP	**HAARP**	**87.62**	**28**	P		**P**	**19 33 41.1**	**+0.1**
	baz=269							
RIDG	**Independent Ri**	**87.77**	**26**	P		**P**	**19 33 41.9**	**0.0**
	baz=270							
C26K	**Camden Bay**	**87.80**	**20**	P		**P**	**19 33 42.7**	**+1.0**
	baz=269							
BMRM	**Bremner River**	**87.88**	**29**	P		**P**	**19 33 42.7**	**+0.3**
	baz=270							
N25K	**Chitina, Valde**	**87.88**	**29**	P		**P**	**19 33 43.2**	**+0.7**
	baz=270							
BMAR	**Burnt Mountain**	**87.90**	**23**			**P**	**19 33 43.2**	**+0.9**
KAIM	**Kayak Island**	**87.97**	**30**	P		**P**	**19 33 43.0**	**+0.2**
	baz=270							
F26K	**Sheenjek River**	**88.07**	**22**	P		**P**	**19 33 43.4**	**+0.3**
	baz=270							
SCRK	**Sand Creek**	**88.15**	**26**	P		**P**	**19 33 43.3**	**-0.4**
	baz=270							
G26K	**Porcupine Rive**	**88.21**	**23**	P		**P**	**19 33 44.0**	**+0.2**
	baz=270							
C27K	**Jago River**	**88.21**	**21**	IAmb		IAmb	19 33 45.5	
	comp=Z,7.6nm,0.7s							
C27K	**Jago River**	**88.21**	**21**	P		**P**	**19 33 44.1**	**+0.3**
	baz=270							
OBN	**Obninsk**	**88.41**	**325**	*i* P		**P**	**19 33 43.9**	**-1.0**
OBN				pmax		pmax		
	comp=Z,10.0nm,0.8s							
L26K	**Log Cabin Wild**	**88.45**	**27**	P		**P**	**19 33 45.3**	**+0.3**
	baz=271							
I26K	**Coal Creek Min**	**88.49**	**25**	P		**P**	**19 33 45.0**	**-0.1**
	baz=271							
CRQE	**Cirque**	**88.62**	**29**	P		**P**	**19 33 45.5**	**-0.5**
	baz=271							
M26K	**Nabesna, AK**	**88.63**	**28**	P		**P**	**19 33 45.4**	**-0.5**
	baz=271							
MCARA	**McCarthy VSAT**	**88.64**	**29**	P		**P**	**19 33 46.2**	**+0.2**
	baz=271							
E27K	**Coleen River**	**89.02**	**22**	IAmb		IAmb	19 33 49.2	
	comp=Z,7.0nm,1.1s							
E27K	**Coleen River**	**89.02**	**22**	P		**P**	**19 33 48.2**	**+0.6**
	baz=272							
G27K	**Doyon Strip**	**89.06**	**23**	P		**P**	**19 33 48.3**	**+0.4**
	baz=272							
I27K	**Kandik River**	**89.12**	**25**	IAmb		IAmb	19 33 49.9	
	comp=Z,5.6nm,0.7s							
I27K	**Kandik River**	**89.12**	**25**	P		**P**	**19 33 48.5**	**+0.3**
	baz=272							
H27K	**Steamboat Moun**	**89.13**	**24**	P		**P**	**19 33 48.5**	**+0.3**
	baz=273							
L27K	**Beaver Creek,**	**89.14**	**27**	P		**P**	**19 33 48.8**	**+0.5**
	baz=272							
M27K	**Edge Creek, AK**	**89.15**	**28**	P		**P**	**19 33 48.3**	**-0.2**
	baz=272							
D27M	**Malcolm River**	**89.20**	**21**	P		**P**	**19 33 48.9**	**+0.5**
	baz=273							
MESA	**MESA**	**89.20**	**30**	P		**P**	**19 33 48.9**	**+0.1**
	baz=272							
CTG	**Chitna Glacier**	**89.47**	**29**	P		**P**	**19 33 49.8**	**-0.2**
	baz=273							
BVCY	**Beaver Creek**	**89.62**	**28**	P		**P**	**19 33 50.6**	**+0.1**
	baz=273							
F28M	**Old Crow**	**89.70**	**22**	P		**P**	**19 33 51.3**	**+0.5**
	baz=274							
E28M	**Babbage River**	**89.75**	**21**	IAmb		IAmb	19 33 52.4	
	comp=Z,8.3nm,1.1s							
E28M	**Babbage River**	**89.75**	**21**	P		**P**	**19 33 51.9**	**+0.8**
	baz=274							
I28M	**Miner Creek**	**89.83**	**25**	IAmb		IAmb	19 33 53.0	
	comp=Z,5.2nm,0.7s							
I28M	**Miner Creek**	**89.83**	**25**	P		**P**	**19 33 52.1**	**+0.5**
	baz=274							
YUK3	**Moose Creek**	**89.85**	**28**	P		**P**	**19 33 51.8**	**-0.1**
	baz=274							
MMAI	**Mount Meron Ar**	**89.86**	**303**	P		**P**	**19 33 53.5**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=58,slow=11,SNR=4.6							
	comp=Z,1.8nm,0.6s							
D28M	**Stokes Point**	**89.98**	**21**	P		**P**	**19 33 52.7**	**+0.7**
	baz=275							
O28M	**Mount Upton**	**90.04**	**29**	P		**P**	**19 33 52.5**	**-0.4**
	baz=274							
PINM	**Pinnacle**	**90.06**	**30**	P		**P**	**19 33 53.0**	**+0.3**
	baz=274							
DAWY	**Dawson**	**90.17**	**26**	P		**P**	**19 33 53.3**	**+0.2**
	baz=275							
YUK8	**Steele Glacier**	**90.21**	**29**	P		**P**	**19 33 53.7**	**+0.1**
	baz=274							
E29M	**Blow River**	**90.38**	**22**	P		**P**	**19 33 54.4**	**+0.5**
	baz=276							
M29M	**Somme Creek**	**90.73**	**28**	P		**P**	**19 33 56.0**	**+0.2**
	baz=275							
L29M	**L29M**	**90.82**	**27**	IAmb		IAmb	19 33 58.3	
	comp=Z,8.3nm,0.9s							
L29M	**L29M**	**90.82**	**27**	P		**P**	**19 33 56.3**	**+0.2**
	baz=276							
O29M	**Mount Kennedy**	**90.87**	**30**	P		**P**	**19 33 56.8**	**+0.2**
	baz=275							
YUK6	**Outpost Mounta**	**90.92**	**29**	P		**P**	**19 33 57.0**	**+0.1**
	baz=275							
BRTR	**Keskin Array B**	**90.98**	**310**	P		**P**	**19 33 56.8**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=86,slow=9.4,SNR=2.7							
	comp=Z,0.5nm,0.5s							
BRTR	**Keskin Array B**	**90.98**	**310**	P		**P**	**19 33 56.6**	**-1.0**
BRTR	**Keskin Array B**	**90.98**	**310**	P		**P**	**19 33 56.6**	**-1.0**
K29M	**Barlow Dome**	**91.01**	**26**	P		**P**	**19 33 57.4**	**+0.3**
	baz=276							
G30M	**tAoh Zraii Nji**	**91.18**	**23**	P		**P**	**19 33 57.9**	**+0.1**
	baz=278							
F30M	**Barrier River**	**91.26**	**22**	P		**P**	**19 33 58.5**	**+0.4**
	baz=278							
I30M	**Mount Dempster**	**91.34**	**25**	P		**P**	**19 33 59.1**	**+0.4**
	baz=277							
HYT	**Haines Junctio**	**91.35**	**29**	P		**P**	**19 33 59.1**	**+0.3**
	baz=276							
J30M	**Hart River**	**91.44**	**25**	P		**P**	**19 33 59.3**	**+0.2**
	baz=277							
N30M	**Aishikik Lake**	**91.48**	**29**	P		**P**	**19 33 59.2**	**0.0**
	baz=277							
M30M	**Minto, Yukon**	**91.48**	**27**	P		**P**	**19 33 59.0**	**-0.2**
	baz=277							
P30M	**Million Dollar**	**91.69**	**30**	P		**P**	**19 34 00.1**	**-0.2**
	baz=277							
G31M	**Satah River**	**91.94**	**23**	P		**P**	**19 34 01.3**	**+0.1**
	baz=279							
INK	**Inuvik**	**91.99**	**21**	P		**P**	**19 34 02.0**	**+0.6**
	baz=280							
O30N	**Mendenhall**	**92.04**	**29**	P		**P**	**19 34 01.9**	**+0.1**
	baz=277							
F31M	**Tsiigehtchic**	**92.06**	**22**	P		**P**	**19 34 01.7**	**0.0**
	baz=280							
ARCES	**ARCESS Array B**	**92.09**	**340**	P		**P**	**19 34 01.2**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=79,slow=6.3,SNR=5.2							
	comp=Z,2.9nm,0.7s							
ARCES	**ARCESS Array B**	**92.09**	**340**	P		**P**	**19 34 01.0**	**-0.8**
ARCES	**ARCESS Array B**	**92.09**	**340**	P		**P**	**19 34 01.0**	**-0.8**
ARCES				pmax		pmax		
	comp=Z,135nm,1.9s							
H31M	**Peel River**	**92.10**	**24**	P		**P**	**19 34 02.0**	**0.0**
	baz=279							
N31M	**Braeburn, Yuko**	**92.10**	**28**	P		**P**	**19 34 02.0**	**-0.1**
	baz=278							
SPITS	**Spitsbergen Ar**	**92.24**	**349**	P		**P**	**19 34 01.7**	**-0.7**
	comp=Z,12nm,1.0s,baz=102,slow=7.1,SNR=6.7							
	comp=Z,12nm,1.0s							
SKAG	**Skagway**	**92.60**	**30**	P		**P**	**19 34 04.5**	**+0.1**
	baz=278							
WHY	**Whitehorse**	**92.65**	**29**	P		**P**	**19 34 04.8**	**+0.1**
	baz=278							
SIT	**Sitka**	**92.94**	**33**	P		**P**	**19 34 05.4**	**-0.5**
	baz=278							
AKASG	**Malin Array Be**	**93.15**	**321**	P		**P**	**19 34 05.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=67,slow=5.1,SNR=2.0							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**93.15**	**321**	P		**P**	**19 34 05.3**	**-1.7**
AKASG	**Malin Array Be**	**93.15**	**321**	P		**P**	**19 34 05.4**	**-1.7**
AKASG				pmax		pmax		
	comp=Z,3.0nm,1.2s							
AKBB	**Malin Array Si**	**93.15**	**321**	*i* P		**P**	**19 34 06.3**	**-0.8**
AKBB				pmax		pmax		
	comp=Z,5.0nm,1.2s							
FINES	**FINESS Array B**	**93.33**	**332**	P		**P**	**19 34 06.5**	**-1.2**
	comp=Z,4.1nm,0.9s,baz=77,slow=3.7,SNR=6.1							
	comp=Z,4.1nm,0.9s							
FINES	**FINESS Array B**	**93.33**	**332**	P		**P**	**19 34 06.1**	**-1.6**
FINES	**FINESS Array B**	**93.33**	**332**	*i* P		**P**	**19 34 09.0**	**+1.3**
FINES				pmax		pmax		
	comp=Z,3.0nm,0.7s							
N32M	**Quiet Lake**	**93.44**	**29**	P		**P**	**19 34 08.1**	**-0.2**
	baz=280							
MNK	**Minsk**	**93.47**	**325**	*i* P		**P**	**19 34 10.4**	**+1.9**
	comp=E,14nm,0.8s							
MNK				*i* P		**P**	**19 34 10.4**	**+1.9**
	comp=N,11nm,0.9s							
MNK				*i* P		**P**	**19 34 10.4**	**+1.9**
	comp=Z,6.0nm,0.9s,baz=82							
MNK				*i* pP		**pwP**	**19 34 25.1**	**+0.8**
MNK				*i* PP		**PP**	**19 37 55.3**	**+2.2**
MNK				*i* PPP		PPP	19 40 18.5	
MNK				*i* S		**SKSac**	**19 44 40.1**	**+1.1**
MNK				*i* sS		**S**	**19 45 06.2**	**-6.8**
MNK				*i* PS		**PS**	**19 46 35.5**	**+3.4**
MNK				*i* SS		**SS**	**19 51 34.4**	**+4.1**
MNK				*i* SSS		SSS	19 55 15.3	
MNK				*i* LRM		MLR	20 16 50.5	
	comp=Z,109nm,15.3s							
MNK				*i* LRM		MLR	20 17 10.1	
	comp=E,111nm,18.8s							
MNK				*i* LRM		MLR	20 18 12.8	
	comp=N,184nm,19.2s							
MNK	**Minsk**	**93.47**	**325**	*i* P		**P**	**19 34 10.4**	**+1.9**
MNK				*i* *PP		**pwP**	**19 34 25.0**	**+0.8**
MNK				*i*			19 37 55.3	
MNK				*i* S		**SKSac**	**19 44 40.1**	**+1.1**
MNK				*i* *SS		**S**	**19 45 06.2**	**-6.8**
MNK				*i* PS		**PS**	**19 46 35.5**	**+3.4**
MNK				*i* SS		**SS**	**19 51 34.3**	**+4.1**
MNK				*i* SSS		SSS	19 55 15.2	
MNK				pmax		pmax		
	comp=Z,6.0nm,0.9s							
MNK				pmax		pmax		
	comp=E,14nm,0.8s							
MNK				pmax		pmax		
	comp=N,11nm,0.9s							
MNK				MLR		MLR		
	comp=Z,109nm,15.0s							
MNK				MLR		MLR		
	comp=E,111nm,19.0s							
MNK				MLR		MLR		
	comp=N,184nm,19.0s							
MMPY	**Sheldon Lake,**	**94.00**	**27**	P		**P**	**19 34 10.6**	**-0.3**
	baz=282							
WRAK	**Wrangell Islan**	**94.66**	**33**	P		**P**	**19 34 13.2**	**-0.7**
	baz=280							
R33M	**Jennings River**	**94.81**	**30**	P		**P**	**19 34 14.1**	**-0.6**
	baz=282							
C36M	**Paulatuk**	**95.06**	**20**	IAmb		IAmb	19 34 16.1	
	comp=Z,6.7nm,1.0s							
C36M	**Paulatuk**	**95.06**	**20**	P		**P**	**19 34 15.7**	**+0.3**
	baz=289							
TGTN	**Hyland Airport**	**95.62**	**28**	P		**P**	**19 34 18.5**	**+0.2**
	baz=284							
NVL	**N'lazarevskaya**	**99.69**	**198**	*e*P		**Pdif**	**19 34 34.8**	**-1.5**
NVL				pmax		pmax		
	comp=Z,24nm,1.4s							
NOA	**NORSAR Array B**	**100.32**	**333**	P		**Pdif**	**19 34 36.3**	**-3.1**
	comp=Z,0.7nm,0.7s,baz=64,slow=4.5,SNR=3.3							
YKA	**Yellowknife Ar**	**101.31**	**24**	P		**Pdif**	**19 34 44.4**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=301,slow=5.2,SNR=4.3							
YKA	**Yellowknife Ar**	**101.31**	**24**	*i* P		**Pdif**	**19 34 46.2**	**+2.5**
SCHQ	**Schefferville**	**122.44**	**9**	PKP		**PKPdf**	**19 39 48.0**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=270,slow=7.1,SNR=3.7							
TXAR	**Lajitas Array**	**122.96**	**53**	PKP		**PKiKP**	**19 39 50.5**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=34,slow=1.0,SNR=3.7							
TXAR	**Lajitas Array**	**122.96**	**53**			**PKPdf**	**19 39 49.5**	**-0.5**
TXAR	**Lajitas Array**	**122.96**	**53**	PKiKP		**PKPdf**	**19 39 49.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**123.20**	**287**	PKP		**PKPdf**	**19 39 49.7**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=65,slow=3.1,SNR=4.3							
TORD	**Torodi Ar. Bea**	**123.20**	**287**			**PKPdf**	**19 39 48.0**	**-2.7**
K43A	**Burlington**	**125.69**	**31**			**PKPdf**	**19 39 49.8**	**-4.9**
PLCA	**Paso Flores**	**138.36**	**160**	PKP		**PKPdf**	**19 40 18.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=166,slow=4.2,SNR=3.1							
CFA	**Coronel Fontan**	**147.33**	**156**	PKPbc		**PKPbc**	**19 40 37.0**	**-0.2**
	comp=Z,2.9nm,0.5s,baz=244,slow=3.7,SNR=7.1							
AC05	**El Transito**	**148.80**	**151**			**PKPdf**	**19 40 35.0**	**-2.4**

IDC ***27*** *19:32:48.8±1.1,51°.67N×15°.56E,h0km,mbtmp3.3/5, ML2.3/4,Error ellipse: s-maj=30.7km s-min=8.2km az=105.0*

BGR ***27*** *19:32:48.1±0.4,51°.57N×15°.97E,h1km,ML3.0/10,Error ellipse: s-maj=4.4km s-min=2.2km az=35.0*

DNK ***27*** *19:32:48.8±2.7,51°.83N×16°.20E,h0km±84km,ML2.4, Presumed earthquake*

IPEC ***27*** *19:32:48.0±0.2,51°.58N×16°.02E,h1km,ML2.9/6,Error ellipse: s-maj=3.0km s-min=1.4km az=73.0*

PRU ***27*** *19:32:49.8,51°.55N×15°.99E,h0km*

VIE ***27*** *19:32:49.9±0.6,51°.43N×15°.88E,h0km,mb3.0/14, ml2.8/16,ms3.8/2,Error ellipse: s-maj=5.5km s-min=3.6km az=71.0 87 km WNW of Wroclaw Suspected Mining induced.*

ISC 27 19:32:45.7±0.7,51°.64N±0°.02×16°.05E±0°.02,h0km,n76, σ1s79/147,Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.81**	**169**	*e*Pg		**Pb**	**19 33 02.8**	**+0.1**
KSP				*e*Sg		**Sb**	**19 33 13.2**	**-1.0**
KSP	**Ksiaz**	**0.81**	**169**	*e*Pg		**Pb**	**19 33 02.8**	**+0.1**
KSP				*e*Sg		**Sg**	**19 33 12.8**	**+1.0**
CHVC	**Chvalec**	**1.05**	**180**	*e*PG		**Pb**	**19 33 07.2**	**+0.4**
CHVC				*e*SG		**Sb**	**19 33 21.2**	**0.0**
	comp=Z,140nm,0.5s							
OSTC	**Ostas**	**1.09**	**174**	*e*PG		**Pn**	**19 33 08.2**	**-0.1**
OSTC				*e*SG		**Sb**	**19 33 22.2**	**0.0**
	comp=Z,126nm,0.6s							
UPC	**Upice**	**1.14**	**181**	*e*PG		**Pn**	**19 33 09.1**	**+0.3**
UPC				*e*SG		**Sb**	**19 33 23.2**	**-0.3**
	comp=Z,211nm,0.6s							
DPC	**Dobruska-Polom**	**1.30**	**172**	*e*PG		**Pn**	**19 33 11.6**	**+0.4**
DPC				*e*SG		**Sb**	**19 33 28.6**	**+0.2**
	comp=Z,131nm,0.8s							
DPC	**Dobruska-Polom**	**1.30**	**172**	*e*Pg		**Pn**	**19 33 11.5**	**+0.3**
DPC				*e*Sg		**Sg**	**19 33 28.1**	**+0.5**
PVCC	**Panska Ves**	**1.45**	**220**	*e*PG		**Pb**	**19 33 14.1**	**+0.5**
PVCC				*e*SG		**Sn**	**19 33 33.4**	**+0.5**
	comp=Z,235nm,0.4s							
PVCC	**Panska Ves**	**1.45**	**220**	*e*Pg		**Pb**	**19 33 14.0**	**+0.5**
PVCC				*e*Sg		**Sg**	**19 33 32.5**	**+0.2**
PIVO	**Bartosovice**	**1.49**	**168**	*e*Pg		**Pb**	**19 33 14.8**	**+0.5**
	baz=347							
PIVO				*e*Sg		**Sg**	**19 33 32.7**	**-0.8**
	106nm,0.3s,baz=347							
BRG	**Berggiesshubel**	**1.53**	**241**	*e*Pg		**Pg**	**19 33 15.5**	**+0.6**
BRG				*e*Sg		**Sg**	**19 33 34.3**	**-0.5**
BRG	**Berggiesshubel**	**1.53**	**241**	Pn		**Pn**	**19 33 14.5**	**+0.3**
BRG				Pg		**Pg**	**19 33 15.8**	**+0.9**
BRG				Sg		**Sn**	**19 33 35.9**	**+1.1**
BRG				Amp			19 33 36.4	
	comp=Z,177nm,0.5s							
RUE	**Ruedersdorf**	**1.63**	**302**	*e*Pn		**Pb**	**19 33 16.2**	**-0.4**
RUE				*e*Sn		**Sn**	**19 33 37.3**	**0.0**
RUE				*e*Sg		**Sg**	**19 33 39.9**	**+1.8**
KRLC	**Kraliky**	**1.64**	**163**	*e*PG		**Pg**	**19 33 18.0**	**+1.0**
KRLC				*e*SG		**Sg**	**19 33 39.3**	**+1.1**
	comp=Z,129nm,0.5s							
GKP	**Gorka Klasztor**	**1.79**	**24**	*e*Pg		Pg	19 33 26.8	+6.9
GKP				*e*Sg		**Sg**	**19 33 48.7**	**+5.7**
RYBC	**Ceska Rybna**	**1.84**	**180**	*e*Pn		**Pb**	**19 33 19.5**	**-0.6**
	baz=359							
RYBC				*e*Sg		**Sb**	**19 33 43.3**	**-0.3**
	comp=Z,79nm,0.3s,baz=359							
FBE	**Freiberg**	**1.84**	**248**	*e*Pg		**Pg**	**19 33 21.5**	**+0.6**
FBE				*e*Sg		**Sb**	**19 33 44.2**	**+0.6**
PRU	**Pruhonice**	**1.91**	**211**	*e*PG		**Pg**	**19 33 22.1**	**-0.2**
PRU				*e*SG		**Sg**	**19 33 47.2**	**+0.2**
	comp=Z,62nm,0.5s							
PRU	**Pruhonice**	**1.91**	**211**	*e*Pn		**Pn**	**19 33 20.0**	**+0.5**
PRU				*e*Pg		**Pg**	**19 33 22.1**	**-0.2**
PRU				*e*Sg		**Sn**	**19 33 44.8**	**+0.6**
CLL	**Collm**	**1.93**	**261**	*e*Pn		**Pn**	**19 33 19.9**	**+0.1**
CLL				*e*Pg		**Pg**	**19 33 23.1**	**+0.4**
CLL	**Collm**	**1.93**	**261**	*i* Pn		**Pn**	**19 33 20.1**	**+0.3**
	comp=Z,28nm,0.5s							
CLL				*i* Pg		**Pg**	**19 33 23.2**	**+0.5**
CLL				*i* x		x	19 33 27.1	
CLL				*i* Sg		**Sg**	**19 33 48.2**	**+0.5**
	comp=Z,60nm,0.4s							
HSKC	**Hora Svate Kat**	**1.95**	**239**	*e*PG		**Pb**	**19 33 22.5**	**+0.5**
HSKC				*e*SG		**Sg**	**19 33 48.7**	**+0.6**
	comp=Z,113nm,0.4s							
STEB	**Steborice**	**2.03**	**147**	*e*PG		**Pg**	**19 33 25.4**	**+0.8**
STEB				*e*SG		**Sg**	**19 33 52.1**	**+1.2**
	comp=Z,230nm,0.8s							
MORC	**Moravsky Berou**	**2.10**	**152**	*e*Pn		**Pn**	**19 33 23.1**	**+1.0**
MORC				*e*Sg		**Sg**	**19 33 52.4**	**-0.6**
MORC	**Moravsky Berou**	**2.10**	**152**	*e*Pn		**Pn**	**19 33 23.1**	**+1.0**
	baz=332							
MORC				*e*Sg		**Sb**	**19 33 52.1**	**+1.0**
	comp=Z,89nm,0.6s,baz=332							
OKC	**Ostrava-Krasne**	**2.25**	**143**	*e*PG		**Pg**	**19 33 29.5**	**+0.8**
OKC				*e*SG		**Sg**	**19 33 59.2**	**+1.4**
	comp=Z,108nm,0.6s							
OKC	**Ostrava-Krasne**	**2.25**	**143**	*e*Pn		**Pn**	**19 33 25.3**	**+1.2**
OKC				*e*Pg		**Pg**	**19 33 29.7**	**+1.0**
OKC				*e*Sg		**Sg**	**19 33 57.4**	**-0.4**
VRAC	**Vranov**	**2.36**	**171**	*e*Pn		**Pn**	**19 33 27.3**	**+1.6**
	baz=351							
VRAC				*e*Sg		**Sb**	**19 34 00.1**	**+1.3**
	comp=Z,62nm,0.7s,baz=351							
TREC	**Trest**	**2.38**	**189**	*e*Pn		**Pn**	**19 33 27.1**	**+1.1**
ZVC	**Zvikov**	**2.50**	**209**	*e*PG		**Pg**	**19 33 33.3**	**-0.3**
ZVC				*e*SG		**Sg**	**19 34 06.1**	**+0.1**
	comp=Z,42nm,0.5s							
MAUC	**Maruska**	**2.55**	**153**	*e*PG		**Pg**	**19 33 34.8**	**+0.3**
MAUC				*e*SG		**Sg**	**19 34 07.8**	**+0.3**
	comp=Z,145nm,0.8s							
KRUC	**Moravsky**	**2.59**	**175**	*e*Pn		**Pn**	**19 33 30.2**	**+1.4**
	baz=355							
KRUC				*e*Sg		**Sb**	**19 34 07.1**	**+1.7**
	comp=Z,80nm,1.0s,baz=355							
KRUC	**Moravsky**	**2.59**	**175**	*e*PN		**Pn**	**19 33 30.3**	**+1.4**
KRUC				*e*SG		**Sb**	**19 34 07.2**	**+1.8**
GUNZ	**Gunzen**	**2.67**	**243**	*e*Pn		**Pn**	**19 33 30.9**	**+0.9**
GUNZ				*e*Pg		**Pg**	**19 33 37.8**	**+0.9**
GUNZ				*e*Sg		**Sb**	**19 34 09.4**	**+1.6**
NKC	**Novy Kostel**	**2.68**	**240**	*e*Pn		**Pn**	**19 33 31.0**	**+1.0**
KHC	**Kasperske Hory**	**2.97**	**213**	*e*PN		**Pn**	**19

MOA				*e*Sg		**Sg**	**19 34 53.6**	**+0.5**
	comp=Z,42nm,0.7s							
STHS	**Stebnicka Huta**	**4.00**	**122**	*e*PN		**Pn**	**19 33 49.8**	**+1.7**
STHS				*e*PG		**Pg**	**19 34 02.9**	**+0.7**
STHS				*e*SG		**Sg**	**19 34 55.6**	**+1.7**
BIOA	**Bad Ischl, Aus**	**4.25**	**202**	*i* Pn		**Pn**	**19 33 53.1**	**+1.4**
	comp=Z,3.2nm,0.3s							
BIOA				Sg		**Sg**	**19 35 02.3**	**+0.1**
	comp=Z,28nm,0.4s							
KECS	**Kecovo**	**4.26**	**136**	*e*PN		**Pn**	**19 33 54.2**	**+2.4**
KECS				*e*PG		**Pg**	**19 34 07.4**	**+0.1**
KECS				*e*SG		**Sg**	**19 35 01.2**	**-1.4**
LUNU	**Lund**	**4.29**	**340**	*i* P		**Pn**	**19 33 52.8**	**+0.7**
LUNU				*i* S		**Sn**	**19 34 40.8**	**-1.9**
ARSA	**Arzberg**	**4.41**	**185**	Sg		**Sg**	**19 35 07.9**	**+0.7**
	comp=Z,22nm,0.6s							
BLEU	**Blekinge**	**4.67**	**358**	*e*P		**Pn**	**19 33 58.6**	**+1.2**
BLEU				*e*S		**Sn**	**19 34 50.1**	**-2.2**
LESA	**Schwarzleotal**	**4.76**	**209**	Sg		**Sg**	**19 35 17.9**	**-0.5**
	comp=Z,6.5nm,0.4s							
BJUU	**Bjuv**	**4.79**	**339**	*i* P		**Pn**	**19 33 59.1**	**+0.1**
KBA	**Koelnbreinsper**	**4.90**	**202**	*e*Pn		**Pn**	**19 34 02.4**	**+1.7**
	comp=Z,4.8nm,0.4s,SNR=4.6							
KBA				*e*Sg		**Sg**	**19 35 19.4**	**-3.5**
	comp=Z,9.4nm,0.5s							
DEL	**Delary**	**5.00**	**346**	*i* P		**Pn**	**19 34 02.5**	**+0.6**
DEL				*i* S		**Sn**	**19 34 57.4**	**-3.1**
SOKA	**Soboth**	**5.01**	**188**	Pg		**Pg**	**19 34 20.5**	**-1.2**
	comp=Z,2.2nm,0.5s							
SOKA				*e*Sg		**Sg**	**19 35 22.4**	**-4.2**
	comp=Z,8.7nm,0.6s							
OBKA	**Obir**	**5.23**	**191**	Sg		**Sg**	**19 35 34.8**	**+1.2**
	comp=Z,19nm,0.6s							
WTTA	**Wattenberg**	**5.24**	**215**	*e*Pn		**Pn**	**19 34 06.2**	**+0.8**
	comp=Z,1.5nm,0.3s							
WTTA				Sg		**Sg**	**19 35 36.5**	**+2.5**
	comp=Z,16nm,0.6s							
MYKA	**Terra Mystica**	**5.26**	**198**	Sg		**Sg**	**19 35 38.1**	**+3.6**
	comp=Z,13nm,0.7s							
MOTA	**Moosalm**	**5.37**	**219**	*i* Pn		**Pn**	**19 34 09.1**	**+1.9**
	comp=Z,2.1nm,0.4s							
MOTA				Sg		**Sg**	**19 35 41.5**	**+3.4**
	comp=Z,18nm,0.7s							
RETA	**Reutte**	**5.39**	**222**	Sg		**Sg**	**19 35 38.6**	**-0.3**
	comp=Z,12nm,0.7s							
ABTA	**Abfaltersbach**	**5.42**	**207**	Sg		**Sg**	**19 35 39.3**	**-0.3**
	comp=Z,10nm,0.5s							
SQTA	**Sankt Quirin**	**5.43**	**217**	*e*Pn		**Pn**	**19 34 09.0**	**+1.0**
	comp=Z,0.8nm,0.2s							
SQTA				Sg		**Sg**	**19 35 42.8**	**+2.7**
	comp=Z,14nm,0.6s							
FABU	**Falkenberg**	**5.71**	**341**	*i* P		**Pn**	**19 34 12.8**	**+1.2**
FABU				*i* S		**Sn**	**19 35 14.2**	**-3.7**
FETA	**Feichten**	**5.78**	**219**	*e*Pn		**Pn**	**19 34 13.4**	**+0.6**
	comp=Z,1.8nm,0.6s							
FETA				Sg		**Sg**	**19 35 56.7**	**+5.3**
	comp=Z,6.1nm,0.8s							
DAVA	**Damuels**	**5.93**	**225**	*e*Pn		**Pn**	**19 34 15.6**	**+0.8**
	comp=Z,0.8nm,0.1s							
DAVA				Sg		**Sg**	**19 36 03.8**	**+7.8**
	comp=Z,5.2nm,0.3s							
ONAU	**Onsala**	**6.25**	**339**	*i* P		**Pn**	**19 34 22.1**	**+3.1**
ONAU				*i* S		**Sn**	**19 35 28.2**	**-2.8**
BORU	**Boraas**	**6.30**	**344**	*i* P		**Pn**	**19 34 22.1**	**+2.4**
BORU				*i* S		**Sn**	**19 35 30.1**	**-2.2**
HFS	**Hagfors**	**8.61**	**352**	Pn		**Pn**	**19 34 51.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=158,slow=16,SNR=2.1							
	comp=Z,1.6nm,0.7s							
NOA	**NORSAR Array B**	**9.79**	**346**	Pn		**Pn**	**19 35 07.2**	**-0.4**
	baz=147,slow=11,SNR=4.6							
	comp=Z,0.1nm,0.3s							
FINES	**FINESS Array B**	**11.26**	**25**	Pn		**Pn**	**19 35 27.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=219,slow=11,SNR=9.1							
FINES				Sn		**Sn**	**19 37 26.9**	**-7.2**
	comp=Z,0.4nm,0.3s,baz=217,slow=21,SNR=5.6							
	comp=Z,1.4nm,0.6s							
EKA	**Eskdalemuir Ar**	**12.01**	**295**	Pn		**Pn**	**19 35 35.0**	**-2.9**
	comp=Z,1.4nm,0.7s,baz=100,slow=15,SNR=3.6							
EKA	**Eskdalemuir Ar**	**12.01**	**295**	P		**Pn**	**19 35 35.1**	**-2.9**

*KNET **27** 19:45:23.6±0.4, 42.°24N×76.°03E, h6km±6km, ml1.4, Error ellipse: s-maj=6.0km s-min=2.9km az=39.0*
*KRNET **27** 19:45:23.2±0.1, 42.°17N×76.°09E, h15km, mb2.7*
*SOME **27** 19:45:23.6, 42.°20N×76.°10E, h5km*
*NNC **27** 19:45:24.9±1.1, 42.°27N×76.°10E, h0km, mb2.7, mpv2.9, Error ellipse: s-maj=7.0km s-min=5.6km az=1.0*

ISC 27 19:45:23.6±0.9, 42.°20N±0.°03×76.°09E±0.°02, h13km±6km, n34, σ0s82/64, 14C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.12**	**70**	⇑P	**Pg**	**19 45 27.0**	**-0.1**
	40nm,0.1s						
ULHL				⇑S	**Sg**	**19 45 29.6**	**0.0**
	262nm,0.1s						
ULHL	**Ulahol**	**0.12**	**70**	⇑*i*P	**Pg**	**19 45 26.9**	**-0.2**
ULHL				⇑*i*S	**Sg**	**19 45 29.5**	**0.0**
BOOM	**Boomskoye usch**	**0.31**	**339**	⇓*i*P	**Pg**	**19 45 30.1**	**+0.1**
BOOM				⇓*i*S	**Sb**	**19 45 34.9**	**-1.3**
NRN	**Naryn**	**0.77**	**185**	⇓*i*P	**Pg**	**19 45 37.7**	**-1.0**
NRN				⇓*i*S	**Sg**	**19 45 47.8**	**-1.1**
TKM2	**Tokmak 2**	**0.80**	**333**	⇓P	**Pg**	**19 45 38.9**	**-0.4**
	4.0nm,0.2s						
TKM2				⇓S	**Sb**	**19 45 49.7**	**-0.8**
	58nm,0.1s						
TKM2	**Tokmak 2**	**0.80**	**333**	⇓*i*P	**Pg**	**19 45 38.7**	**-0.6**
TKM2				⇓*i*S	**Sb**	**19 45 50.0**	**-0.5**
KDJ	**Kajisay**	**0.81**	**95**	⇑*i*P	**Pg**	**19 45 38.5**	**-0.9**
KDJ				⇑*i*S	**Sg**	**19 45 49.6**	**-0.5**
KST	**Kastek**	**0.84**	**354**	P	**Pb**	**19 45 40.0**	**-0.3**
	2.7nm,0.1s						
KST				S	**Sb**	**19 45 51.8**	**+0.2**
	8.1nm,0.2s						
KST	**Kastek**	**0.84**	**354**	*e*P	**Pb**	**19 45 40.0**	**-0.3**
	2.7nm,0.1s						
KST				*e*S	**Sb**	**19 45 51.8**	**+0.2**
	8.1nm,0.2s						
MTBS	**Maitube**	**0.96**	**15**	P	**Pb**	**19 45 41.8**	**-0.4**
	2.0nm,0.1s						
MTBS				S	**Sb**	**19 45 54.7**	**-0.2**
	4.7nm,0.1s						
MTBS	**Maitube**	**0.96**	**15**	*e*P	**Pb**	**19 45 41.8**	**-0.4**
	2.0nm,0.1s						
MTBS				*e*S	**Sb**	**19 45 54.7**	**-0.2**
	4.7nm,0.1s						
TNSS	**Tian-Shan**	**1.05**	**37**	P	**Pg**	**19 45 43.4**	**-0.5**
	3.2nm,0.3s						
TNSS				S	**Sb**	**19 45 57.3**	**-0.3**
	1.9nm,0.3s						
TNSS	**Tian-Shan**	**1.05**	**37**	*e*P	**Pg**	**19 45 43.4**	**-0.5**
	3.2nm,0.3s						
TNSS				*e*S	**Sb**	**19 45 57.3**	**-0.3**
	1.9nm,0.3s						
MDOK	**Medeo**	**1.19**	**36**	Pg	**Pg**	**19 45 46.0**	**-0.6**
	2.4nm,0.1s						
MDOK				Lg	Lg	19 46 02.1	
	2.7nm,0.1s						
KNDC	**Almaty**	**1.20**	**32**	⇑P	**Pn**	**19 45 46.5**	**+0.3**
	2.9nm,0.2s						
KNDC				⇑S	**Sn**	**19 46 02.9**	**+0.4**
	8.6nm,0.4s						
AAK	**Ala-Archa**	**1.26**	**291**	⇑P	**Pg**	**19 45 47.1**	**-0.8**
	0.7nm,0.1s						
AAK				⇑S	**Sg**	**19 46 03.1**	**-1.1**
	2.5nm,0.3s						
KOTS	**Kotyrbulak**	**1.28**	**36**	P	**Pn**	**19 45 48.1**	**+0.7**
	2.1nm,0.2s						
KOTS				S	**Sn**	**19 46 05.4**	**+1.0**
	6.6nm,0.2s						
KOTS	**Kotyrbulak**	**1.28**	**36**	*e*P	**Pn**	**19 45 48.1**	**+0.7**
KOTS				*e*S	**Sn**	**19 46 05.5**	**+1.0**
KOTS	**Kotyrbulak**	**1.28**	**36**	*e*P	**Pn**	**19 45 48.1**	**+0.7**
	2.1nm,0.2s						
KOTS				*e*S	**Sn**	**19 46 05.4**	**+1.0**
	6.6nm,0.2s						
KRBS	**Karabastau**	**1.52**	**349**	P	**Pb**	**19 45 52.0**	**+0.2**
	4.2nm,0.2s						
KRBS				S	**Sg**	**19 46 12.3**	**-0.4**
	5.3nm,0.2s						
KRBS	**Karabastau**	**1.52**	**349**	*e*P	**Pb**	**19 45 52.0**	**+0.2**
KRBS				*e*S	**Sg**	**19 46 12.3**	**-0.4**
KRBS	**Karabastau**	**1.52**	**349**	*e*P	**Pb**	**19 45 52.0**	**+0.2**
	4.2nm,0.2s						
KRBS				*e*S	**Sg**	**19 46 12.3**	**-0.4**
	5.3nm,0.2s						
KTBS	**Karatobe**	**1.57**	**16**	P	**Pg**	**19 45 52.9**	**-0.9**
	3.8nm,0.1s						
KTBS				S	**Sg**	**19 46 13.7**	**-0.5**
	0.3nm,0.3s						
KTBS	**Karatobe**	**1.57**	**16**	*e*P	**Pg**	**19 45 52.9**	**-0.9**
	3.8nm,0.1s						
KTBS				*e*S	**Sg**	**19 46 13.7**	**-0.5**
	0.3nm,0.3s						
USP	**Ospenovka**	**1.58**	**313**	⇓P	**Pb**	**19 45 52.8**	**0.0**
	0.7nm,0.1s						
USP				⇓S	**Sg**	**19 46 13.8**	**-0.8**
	2.7nm,0.2s						
EKS2	**Erkin-Say**	**1.77**	**286**	⇑P	**Pb**	**19 45 56.6**	**+0.6**
	0.5nm,0.2s						
EKS2				⇑S	**Sg**	**19 46 20.1**	**-0.5**
	0.9nm,0.2s						
SATY	**Saty**	**1.91**	**63**	P	**Pb**	**19 45 59.1**	**+0.6**
	1.1nm,0.1s						
SATY				S	**Sg**	**19 46 24.4**	**-0.8**
	15nm,0.2s						
MRKS	**Merke**	**2.19**	**285**	Pg	**Pb**	**19 46 04.1**	**+1.0**
	1.0nm,0.2s						
MRKS				Lg	Lg	19 46 33.1	
	1.7nm,0.3s						
MRKS	**Merke**	**2.19**	**285**	*e*P	**Pb**	**19 46 04.1**	**+1.0**
	1.0nm,0.2s						
MRKS				*e*S	**Sg**	**19 46 33.1**	**-0.8**
	1.7nm,0.3s						
KPKS	**Kokpek**	**2.29**	**56**	Pg	**Pg**	**19 46 06.0**	**-1.5**
	0.7nm,0.1s						
KPKS				Lg	Lg	19 46 36.3	
	11nm,0.4s						
KPKS	**Kokpek**	**2.29**	**56**	*e*P	**Pg**	**19 46 06.0**	**-1.5**
	0.7nm,0.1s						
KPKS				*e*S	**Sg**	**19 46 36.3**	**-0.8**
	11nm,0.4s						
UZB	**Uzynbulak**	**2.36**	**65**	Pg	**Pb**	**19 46 06.3**	**+0.2**
	2.8nm,0.2s						
UZB				Lg	Lg	19 46 37.2	
	3.6nm,0.3s						
UZB	**Uzynbulak**	**2.36**	**65**	*e*P	**Pb**	**19 46 06.3**	**+0.2**
	2.8nm,0.2s						
UZB				*e*S	**Sg**	**19 46 37.2**	**-2.2**
	3.6nm,0.3s						
PDGK	**Podgornoye**	**2.75**	**65**	⇑Pn	**Pb**	**19 46 13.8**	**+1.1**
	3.1nm,1.5s						
PDGK				⇑Sn	**Sn**	**19 46 43.2**	**+2.5**
	6.9nm,1.2s						

*NSSP **27** 19:52:12.7, 38.°47N×44.°48E, h10km, Ms3.1*
*AZER **27** 19:52:12.8, 38.°44N×44.°48E, h10km, ml3.2*
*TEH **27** 19:52:13.2, 38.°40N×44.°44E, h6km±104km, ML2.9, Presumed earthquake*
*ISK **27** 19:52:14.3, 38.°37N×44.°47E, h4km, ML3.2/10*
*AFAD **27** 19:52:14.8, 38.°39N×44.°39E, h4km±2km, ML2.9*

ISC 27 19:52:13.1±1.2, 38.°40N±0.°02×44.°50E±0.°02, h3km±10km, n62, σ1s03/92, 1C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**304**	P	**Pb**	**19 52 23.0**	**-1.2**
OZAP				S	**Sg**	**19 52 29.2**	**+0.9**
OZAP				IAML		19 52 37.0	
	comp=N,3μm,0.6s						
TVAN	**Van**	**0.86**	**279**	P	**Pg**	**19 52 29.6**	**0.0**
ISHB	**Shabestar**	**0.89**	**97**	Pg	**Pg**	**19 52 30.1**	**0.0**
VANB	**Van**	**0.89**	**283**	Pg	**Pb**	**19 52 30.9**	**-0.4**
VANB				Sg	**Sb**	**19 52 43.7**	**+0.1**
VMUR	**Van-Muradiye**	**0.93**	**309**	P	**Pb**	**19 52 32.2**	**+0.1**
VMUR				S	**Sb**	**19 52 44.9**	**0.0**
VMUR				IAML		19 52 50.0	
	comp=N,418nm,0.5s						
MAKU	**Maku**	**0.96**	**9**	Pg	**Pg**	**19 52 31.1**	**-0.5**
MAKU				Sg	**Sb**	**19 52 45.5**	**-0.4**
IMRD	**Marand**	**1.00**	**71**	Pg	**Pg**	**19 52 33.0**	**+0.8**
HAKT	**HAKKARI**	**1.05**	**217**	P	**Pn**	**19 52 34.2**	**-0.7**
HAKT	**HAKKARI**	**1.05**	**217**	P	**Pn**	**19 52 34.2**	**-0.7**
HAKT				S	**Sn**	**19 52 51.1**	**+0.9**
ERCV	**ERCIS-VAN**	**1.10**	**305**	Pn	**Pn**	**19 52 36.1**	**+0.5**
ERCV				Sn	**Sn**	**19 52 52.1**	**+0.8**
NAX	**Nakhchivan**	**1.10**	**45**	P	**Pb**	**19 52 34.7**	**-0.1**
NAX				S	**Sn**	**19 52 50.7**	**-0.5**
GEVA	**Gevas**	**1.13**	**266**	P	**Pg**	**19 52 34.2**	**-0.5**
GEVA				S	**Sb**	**19 52 50.5**	**-0.1**
ORD	**Ordubad**	**1.29**	**65**	P	**Pn**	**19 52 38.0**	**-0.1**
ORD				S	**Sn**	**19 52 57.3**	**+1.4**
SBZ	**Shahbuz**	**1.29**	**39**	P	**Pn**	**19 52 38.0**	**-0.2**
SBZ				S	**Sn**	**19 52 57.2**	**+1.1**
DYDN	**Diyadin**	**1.30**	**331**	P	**Pg**	**19 52 38.0**	**-0.1**
ITBZ	**Tabriz**	**1.31**	**97**	Pg	**Pn**	**19 52 37.3**	**-1.2**
HYR	**Heyderabad**	**1.35**	**12**	P	**Pg**	**19 52 39.0**	**+0.1**
HYR				S	**Sn**	**19 52 58.1**	**+0.7**
CUKT	**Cukurca**	**1.35**	**212**	Pn	**Pg**	**19 52 40.2**	**+1.3**
CUKT				Sn	**Sn**	**19 52 58.9**	**+1.4**
CUKT	**Cukurca**	**1.35**	**212**	P	**Pg**	**19 52 40.4**	**+1.4**
IAZR	**Azarshahr**	**1.38**	**121**	Pg	**Pg**	**19 52 40.3**	**+0.9**
ADCV	**BITLIS_Adilcev**	**1.45**	**287**	P	**Pg**	**19 52 40.6**	**-0.2**
VAYK	**Vayk**	**1.48**	**29**	*i* P	**Pn**	**19 52 40.9**	**+0.1**
VAYK				*i* S	**Sg**	**19 53 01.3**	**+0.6**
IGDI	**IGDIR**	**1.50**	**348**	P	**Pg**	**19 52 42.0**	**+0.1**
IGDI	**IGDIR**	**1.50**	**348**	P	**Pg**	**19 52 41.9**	**0.0**
IGDI				S	**Sg**	**19 53 03.1**	**+1.8**
PERV	**Siirt/Pervari-**	**1.60**	**254**	P	**Pg**	**19 52 44.8**	**+1.0**
AGRB	**Hanur-Agry**	**1.66**	**316**	Pn	**Pb**	**19 52 44.3**	**-0.1**
AGRB				Sn	**Sg**	**19 53 07.3**	**+0.9**
DORK	**Agr/Tutak/Do**	**1.66**	**307**	P	**Pb**	**19 52 44.0**	**-0.4**
MLAZ	**Malazgirt-MUS**	**1.69**	**297**	Pn	**Pg**	**19 52 45.6**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.72**	**325**	P	**Pg**	**19 52 46.1**	**0.0**
GNI	**Garni**	**1.76**	**6**	Pn	**Pg**	**19 52 46.0**	**-0.1**
GNI	**Garni**	**1.76**	**6**	*e*P	**Pg**	**19 52 46.5**	**-0.3**
GNI				*e*S	**Sb**	**19 53 08.2**	**-0.4**
VNNZ	**Vanand**	**1.78**	**343**	*e*P	**Pg**	**19 52 47.1**	**-0.1**
VNNZ				*e*S	**Sg**	**19 53 12.3**	**+2.0**
EGVZ	**Egvard**	**1.80**	**62**	*e*P	**Pb**	**19 52 46.3**	**-0.5**
EGVZ				*e*S	**Sg**	**19 53 11.1**	**+0.1**
GRS	**Goris**	**1.81**	**52**	⇓*i*P	**Pn**	**19 52 46.0**	**+0.7**
GRS				⇑*i*S	**Sg**	**19 53 11.0**	**-0.1**
BLIS	**Bitlis-Merkez**	**1.87**	**271**	P	**Pg**	**19 52 48.2**	**-0.7**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn	**Pb**	**19 52 48.7**	**-0.5**
AYRK	**Ayrk**	**1.98**	**30**	*e*P	**Pb**	**19 52 49.9**	**-0.1**
AYRK				*e*S	**Sg**	**19 53 17.2**	**+0.3**
AMBZ	**Amberd**	**1.99**	**355**	*e*P	**Pb**	**19 52 50.1**	**-0.1**
AMBZ				*e*S	**Sg**	**19 53 18.5**	**+1.4**
IHRS	**Heris**	**2.00**	**92**	Pn	**Pb**	**19 52 50.5**	**+0.2**
SRTM	**Siirt_Merkez**	**2.07**	**259**	P	**Pg**	**19 52 51.9**	**-0.8**
DIGO	**Kars**	**2.19**	**337**	P	**Pg**	**19 52 54.7**	**-0.4**
MUSM	**Mu-Merkez**	**2.36**	**279**	P	**Pb**	**19 52 56.6**	**+0.2**
EAK	**Akyaka**	**2.38**	**344**	P	**Pg**	**19 52 58.8**	**0.0**
QRD	**Qoradiz**	**2.44**	**63**	P	**Pb**	**19 52 56.6**	**-1.1**
QRD				S	**Sb**	**19 53 29.8**	**+1.6**
KARS	**Kars**	**2.48**	**334**	Pn	**Pb**	**19 52 57.1**	**-1.3**
BOZK	**Kars-Merkez-Bo**	**2.48**	**332**	P	**Pg**	**19 52 59.6**	**-1.0**
GDB	**GEDABAY**	**2.51**	**22**	P	**Pb**	**19 52 57.0**	**-2.0**
GDB				S	**Sb**	**19 53 32.0**	**+1.6**
ISRB	**Sarab**	**2.57**	**102**	Pn	**Pb**	**19 52 59.0**	**-0.9**
LSVT	**Lusahovit**	**2.57**	**12**	*e*P	**Pb**	**19 52 58.7**	**-1.2**
LSVT				*e*S	**Sb**	**19 53 32.9**	**+1.0**
BTMN	**Batman**	**2.59**	**260**	P	**Pb**	**19 52 59.1**	**-1.2**
HOMI	**Horasan**	**2.60**	**310**	P	**Pg**	**19 53 03.3**	**+0.4**
SVAN	**Silvan-Diyarba**	**2.61**	**266**	Pn	**Pb**	**19 52 58.5**	**-2.0**
SVAN	**Silvan-Diyarba**	**2.61**	**266**	P	**Pg**	**19 53 02.1**	**-1.0**
AGDM	**Agdam**	**2.65**	**49**	P	**Pb**	**19 52 59.6**	**-1.6**
AGDM				S	**Sb**	**19 53 35.4**	**+1.2**
GANJ	**Ganja**	**2.65**	**32**	P	**Pb**	**19 52 59.5**	**-1.7**
GANJ				S	**Sb**	**19 53 33.0**	**-1.3**
SRTK	**Saratovka**	**2.67**	**357**	*e*P	**Pb**	**19 53 02.2**	**+0.6**
SRTK				*e*S	**Sg**	**19 53 38.1**	**-0.6**
SENK	**Senkaya-Erzuru**	**2.72**	**323**	Pn	**Pb**	**19 53 00.9**	**-1.7**
QZX	**Qazax, Azerbai**	**2.74**	**14**	P	**Pb**	**19 53 01.8**	**-0.9**
QZX				S	**Sb**	**19 53 35.8**	**-0.9**
ERZM	**Erzurum**	**2.86**	**303**	P	**Pg**	**19 53 08.1**	**+0.2**
YRD	**Yardimli**	**2.98**	**79**	P	**Pb**	**19 53 04.5**	**-2.4**
YRD				S	**Sb**	**19 53 42.2**	**-1.6**
LRK	**Lerik**	**3.02**	**84**	P	**Pb**	**19 53 05.5**	**-2.2**
LRK				S	**Sb**	**19 53 44.9**	**-0.3**
BNGB	**Bingl**	**3.04**	**282**	Pn	**Pb**	**19 53 04.8**	**-3.2**

*JMA **27** 20:03:48.4±0.1, 23.°8N±0.°5×121.°9E±1.°0, h26km±3km, MV3.1/16, TAIWAN REGION*

*TAP **27** 20:03:49.1, 23.°83N×121.°84E, h37km, ML3.6, C*

ISC 27 20:03:49.0±0.9, 23.°80N±0.°02×121.°89E±0.°02, h27km±8km, n153, σ1s09/256, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.28**	**285**	*i* P	**Pn**	**20 03 56.5**	**-0.8**
TEYL				*i* S	**Sn**	**20 04 02.4**	**-0.3**
SHUL	**Shoufeng**	**0.30**	**269**	*i* P	**Pn**	**20 03 56.8**	**-0.8**
SHUL				S	**Sn**	**20 04 03.0**	**-0.3**
HWA	**Hwalien**	**0.32**	**304**	*i* P	**Pb**	**20 03 56.7**	**+0.3**
HWA				S	**Sn**	**20 04 02.7**	**-1.0**
TEGC	**Jichi Village**	**0.34**	**255**	*i* P	**Pb**	**20 03 57.3**	**+0.7**
TEGC				*i* S	**Sn**	**20 04 03.7**	**-0.4**
TWD	**Chiawan**	**0.39**	**316**	*i* P	**Pb**	**20 03 57.3**	**-0.2**
TWD				S	**Sb**	**20 04 03.2**	**-0.1**
ETM	**Tongmen**	**0.40**	**295**	*i* P	**Pb**	**20 03 57.5**	**-0.3**
ETM				S	**Sb**	**20 04 03.5**	**-0.2**
ESL	**Shilin**	**0.42**	**273**	*i* P	**Pb**	**20 03 57.7**	**-0.3**
ESL				S	**Sb**	**20 04 03.9**	**-0.2**
FETL	**Fush Village**	**0.44**	**326**	*i* P	**Pb**	**20 03 57.9**	**-0.4**
ETL				S	**Sb**	**20 04 04.4**	**-0.3**
EGFH	**Guangfu**	**0.45**	**254**	P	**Pb**	**20 03 58.4**	**+0.1**
EGFH				S	**Sb**	**20 04 05.6**	**+0.8**
NACB	**Ninganchiao**	**0.47**	**324**	P	**Pb**	**20 03 58.0**	**-0.7**
NACB	**Ninganchiao**	**0.47**	**324**	S	**Sb**	**20 04 04.7**	**-0.6**
NACB	**Ninganchiao**	**0.47**	**324**	*i* P	**Pb**	**20 03 58.1**	**-0.6**
NACB				S	**Sb**	**20 04 04.7**	**-0.6**
WARBT	**Fenglin Townsh**	**0.47**	**261**	*i* P	**Pb**	**20 03 58.4**	**-0.4**
WARBT				S	**Sb**	**20 04 05.6**	**+0.1**
LXIB	**Xiulin Townshi**	**0.49**	**297**	*i* P	**Pb**	**20 03 58.7**	**-0.5**
LXIB				S	**Sb**	**20 04 06.0**	**-0.3**
EOS4	**EOS4**	**0.51**	**50**	*i* P	**Pn**	**20 03 59.7**	**-0.4**
EOS4				S	**Sb**	**20 04 07.4**	**+1.4**
HGSD	**Ruisui**	**0.53**	**235**	P	**Pn**	**20 03 59.5**	**-1.2**
HGSD				*e*S	**Sb**	**20 04 09.1**	**+2.1**
EAHA	**Aohua**	**0.55**	**345**	*i* P	**Pn**	**20 03 59.7**	**-1.4**
EAHA				*e*S	**Sb**	**20 04 07.7**	**0.0**
ETLH	**Xiulin Townshi**	**0.56**	**318**	*i* P	**Pn**	**20 03 59.6**	**-1.7**
ETLH				*e*S	**Sb**	**20 04 07.6**	**-0.4**
EHYH	**Wanrong**	**0.59**	**239**	*i* P	**Pn**	**20 04 00.4**	**-1.2**
EHYH				S	**Sn**	**20 04 08.9**	**-1.3**
EHY	**Hungye**	**0.60**	**241**	*i* P	**Pn**	**20 04 00.3**	**-1.4**
EHY				S	**Sn**	**20 04 08.7**	**-1.8**
EOS3	**EOS3**	**0.62**	**38**	P	**Pn**	**20 04 01.8**	**-0.2**
EOS3				S	**Sn**	**20 04 10.9**	**0.0**
ECBN	**Changbin**	**0.63**	**220**	P	**Pn**	**20 04 01.3**	**-0.8**
ECBN				S	**Sn**	**20 04 10.0**	**-1.2**
ENA	**Nanau**	**0.65**	**348**	P	**Pn**	**20 04 01.4**	**-0.9**
ENA				*e*S	**Sn**	**20 04 10.1**	**-1.7**
EWUT	**Wuta**	**0.66**	**351**	P	**Pn**	**20 04 01.4**	**-1.2**
EWUT				S	**Sn**	**20 04 10.1**	**-1.9**
WHF	**Hehuan Shan**	**0.67**	**301**	*i* P	**Pn**	**20 04 01.5**	**-1.7**
WHF				*i* S	**Sn**	**20 04 10.6**	**-2.4**
OWD	**Renai**	**0.68**	**284**	*i* P	**Pn**	**20 04 01.6**	**-1.4**
OWD				*i* S	**Sn**	**20 04 10.6**	**-2.1**
YULB	**Yu-li**	**0.68**	**234**	P	**Pn**	**20 04 01.4**	**-1.5**
YULB	**Yu-li**	**0.68**	**234**	S	**Sn**	**20 04 11.0**	**-1.6**
YULB	**Yu-li**	**0.68**	**234**	*i* P	**Pn**	**20 04 01.7**	**-1.2**
YULB				*e*S	**Sn**	**20 04 10.8**	**-1.7**
EYUL	**Yuli**	**0.69**	**230**	*e*P	**Pn**	**20 04 02.8**	**-0.3**
VWDT	**VWDT**	**0.69**	**267**	*e*P	**Pn**	**20 04 02.2**	**-0.8**
EOS2	**EOS2**	**0.69**	**26**	P	**Pn**	**20 04 02.9**	**0.0**
EOS2				S	**Sn**	**20 04 13.4**	**+0.7**
TWF1	**Yuli**	**0.70**	**231**	*e*P	**Pn**	**20 04 02.1**	**-1.1**
WUSB	**Renai**	**0.74**	**286**	*i* P	**Pn**	**20 04 02.7**	**-1.0**
WUSB				*e*S	**Sn**	**20 04 12.7**	**-1.5**
FUSS	**Fushou**	**0.74**	**307**	*i* P	**Pn**	**20 04 03.0**	**-1.0**
FUSS				S	**Sn**	**20 04 12.9**	**-1.7**
CHKH	**Chenggong**

TWGBT	Beinan	1.23 218	eS		Sn	20 04 24.4	-1.7	
TWG	Pinlang	1.23 218	eP		Pn	20 04 09.1	-1.3	
TWG			eS		Sn	20 04 23.8	-2.4	
TATO	Taipei	1.23 343	P		Pn	20 04 10.4	-0.1	
TATO	Taipei	1.23 343	S		Sn	20 04 25.8	-0.4	
WCKO	Fanlu	1.23 254	eP		Pn	20 04 11.5	+1.0	
WCKO			S		Sn	20 04 27.3	+1.0	
TTN	Taitung	1.24 214	eS		Sn	20 04 26.2	-0.2	
WDLH	Douliu	1.25 265	eP		Pn	20 04 11.2	+0.6	
WDLH			S		Sn	20 04 27.7	+1.2	
NMLH	Miaoli	1.25 306	eP		Pn	20 04 12.4	+1.7	
NMLH			eS		Sn	20 04 27.7	+1.0	
WCHH	Zhanghua	1.25 283	P		Pn	20 04 11.8	+1.0	
WCHH			S		Sn	20 04 27.8	+1.1	
TPUB	Ta-pu	1.26 247	P		Pn	20 04 11.3	+0.4	
TPUB	Ta-pu	1.26 247	eP		Pn	20 04 11.5	+0.7	
TPUB			eS		Sn	20 04 27.9	+1.0	
WCH1	Changhua City	1.26 283	eP		Pn	20 04 12.0	+1.2	
WCH1			eS		Sn	20 04 28.7	+1.7	
WDJ	Dajia District	1.27 296	eS		Sn	20 04 28.3	+1.1	
NWF	Wu-fen Shan	1.27 355	P		Pn	20 04 11.8	+0.6	
NWF			S		Sn	20 04 27.6	+0.1	
WFSB	Wu-fen Shan	1.27 355	eP		Pn	20 04 11.9	+0.8	
WFSB			S		Sn	20 04 28.1	+0.8	
SBCB	Hsinchu	1.29 320	eS		Sn	20 04 29.1	+1.3	
SXI1	Grass Mountain	1.29 359	eP		Pn	20 04 11.7	+0.3	
SXI1			S		Sn	20 04 28.8	+0.9	
WTP	Ta-pu	1.29 245	eP		Pn	20 04 12.0	+0.6	
WTP			eS		Sb	20 04 30.6	+1.6	
HSN	Hsinchu	1.31 320	eS		Sn	20 04 28.5	+0.4	
NCUH	Zhongli	1.33 331	eP		Pn	20 04 12.2	+0.4	
NCUH			S		Sn	20 04 29.3	+0.6	
NCU	National Centr	1.33 331	eS		Sn	20 04 27.4	-1.4	
TWS1	Kuangyinshan	1.37 342	eS		Sn	20 04 29.7	0.0	
YM01	YM01	1.38 348	eP		Pn	20 04 12.4	-0.1	
CHY	Chiayi	1.38 258	eP		Pn	20 04 13.7	+1.2	
CHY			eS		Sn	20 04 31.1	+1.2	
WTK	Tuku	1.38 266	eP		Pn	20 04 13.7	+1.2	
WTK			eS		Sb	20 04 32.5	+1.1	
WRL	Guolierlin Hig	1.39 275	P		Pn	20 04 13.3	+0.7	
WRL			S		Sn	20 04 31.3	+1.1	
CHN1	Nanshi	1.39 244	eP		Pn	20 04 14.0	+1.3	
CHN1			eS		Sn	20 04 32.2	+1.9	
TWK	Hsinying	1.39 248	eP		Pn	20 04 13.7	+0.9	
TWK			eS		Sb	20 04 32.5	+0.7	
SLGT	Liugui	1.40 235	eP		Pn	20 04 14.1	+1.3	
SLGT			S		Sb	20 04 33.6	+1.8	
SGST	Jiashian	1.40 240	eP		Pn	20 04 12.9	+0.2	
SGST			eS		Sn	20 04 31.8	+1.5	
ZUZH	Zhuzihu	1.40 347	i P		Pn	20 04 12.5	-0.2	
ZUZH			eS		Sn	20 04 29.4	-1.0	
RLNB	Erlin	1.41 274	eP		Pn	20 04 13.8	+1.0	
RLNB			eS		Sn	20 04 32.3	+1.8	
YM08	YM08	1.41 349	eP		Pn	20 04 12.6	-0.4	
NTST	Danshui	1.42 344	eS		Sn	20 04 31.2	+0.3	
ECL	Taimali	1.47 216	eS		Sn	20 04 29.6	-2.6	
WTCT	Ta-ch'eng	1.48 273	eP		Pn	20 04 14.8	+1.0	
WTCT			eS		Sn	20 04 34.2	+1.9	
WSF	Szhu	1.54 265	eP		Pn	20 04 15.4	+0.7	
WSF			eS		Sn	20 04 34.9	+1.1	
WSL	Shuilin Townsh	1.55 260	eP		Pn	20 04 15.7	+0.8	
WSL			eS		Sn	20 04 36.3	+2.2	
SSD	Sandimen	1.56 228	eP		Pn	20 04 16.0	+1.0	
SSD			S		Sb	20 04 37.1	+0.6	
CHN8	Yiju	1.61 254	eP		Pn	20 04 15.9	+0.3	
CHN8			S		Sn	20 04 36.9	+1.5	
SSHA	Shanhua	1.61 246	eS		Sb	20 04 38.3	+0.6	
MASBT	Mashibuluo	1.65 225	eP		Pn	20 04 18.4	+2.1	
MASBT			S		Sb	20 04 39.7	+0.5	
SGLT	Jiouru	1.67 231	eP		Pb	20 04 19.3	+0.1	
SGLT			eS		Sn	20 04 38.5	+1.5	
SCLT	Jiali	1.68 249	eS		Sn	20 04 39.0	+1.8	
IRIF	Iriomote-Funau	1.76 72	P		Pn	20 04 18.1	+0.4	
IRIF			eS		Sn	20 04 39.8	+0.5	
HATJ	Hateruma jima	1.77 81	P		Pn	20 04 18.1	+0.3	
HATJ			eS		Sn	20 04 39.1	-0.3	
LAY	Lan-yu	1.78 190	eP		Pn	20 04 17.0	-1.0	
LAY			eS		Sn	20 04 37.3	-2.4	
TSCK	Chigu Township	1.78 249	i P		Pn	20 04 18.7	+0.7	
TSCK			eS		Sn	20 04 40.4	+0.6	
LYUB	Lan-yu	1.81 189	eS		Sn	20 04 37.3	-3.1	
SCZT	Fangliau	1.84 220	eP		Pn	20 04 20.9	+2.1	
SLIU	Shizi	1.87 213	eP		Pn	20 04 17.3	-1.9	
JKRS	Kuro-shima	1.98 77	P		Pn	20 04 21.4	+0.6	
JKRS			S		Sn	20 04 45.3	+0.6	
SMST	Manzhou Townsh	2.02 209	eS		Sn	20 04 43.8	+1.8	
HEN	Hengchun	2.08 211	eP		Pn	20 04 20.2	-1.8	
TWK1	Hengchun	2.10 209	eS		Sn	20 04 48.3	+0.7	
JIJ	Ishigaki jima	2.13 74	i P		Pn	20 04 22.8	-0.1	
JIJ			eS		Sn	20 04 47.3	-1.1	
PHUB	P'eng-hu	2.15 263	eP		Pn	20 04 23.2	+0.2	
PHUB			S		Sn	20 04 48.2	-0.6	
PNG	Penghu	2.16 264	eS		Sn	20 04 48.7	-0.3	
JISG	Ishigakijimahi	2.34 70	i P		Pn	20 04 25.6	-0.1	
JISG			eS		Sn	20 04 51.8	-1.9	
JTJ	Tarama	2.70 71	P		Pn	20 04 30.9	+0.3	
PTMZ	Houxiangcun	2.82 297	P		Pn	20 04 31.6	-0.6	
MATB	Ma-tsu	2.94 323	eP		Pn	20 04 33.7	-0.2	
MATB			eS		Sn	20 05 06.6	-1.7	
JMJ2	Miyako jima3	3.27 73	P		Pn	20 04 39.4	+0.9	
MHZQ	Yeshan	3.47 312	eP		Pn	20 04 40.8	-0.4	
ZPLA	Ao Xicun	3.80 273	eP		Pn	20 04 45.4	-0.3	

*IDC **27** 20:16:19.6±1.5,26°.76N×129°.92E, h0km, mb3.6/3, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=32.3km s-min=20.7km az=44.0*
*NIED **27** 20:16:20.8,26°.84N×130°.10E, h54km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.39; $M_{\theta\theta}$4.36; $M_{\phi\phi}$1.03; $M_{r\theta}$6.90; $M_{\theta\phi}$2.01; $M_{r\phi}$2.58; Fault plane solution: $M_0$9.10000×10^{14} NP1:φs61.00000°, δ18.00000°,λ-97.00000°. NP2:φs249.00000°,δ72.00000°, λ-88.00000°.*
*JMA **27** 20:16:20.8±0.1,26°.8N±0°.4×130°.1E±0°.4, h54km, MV3.5/23, NEAR AMAMI-OSHIMA ISLAND*
ISC 27 20:16:22.7±0.9, 26°.85N±0°.03×130°.10E±0°.03, h35km, n23, σ1s43/40, mb3.8/3, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	Tokunoshima	1.38	313	P	Pn	20 16 44.6	-0.9
JTK				S	Sn	20 17 01.0	-1.6
JKDJ	Kitadaitoujima	1.40	129	P	Pn	20 16 44.5	-1.2
JKDJ				S	Sn	20 17 01.9	-1.0
JMZ	Minamidaito 2	1.44	135	P	Pn	20 16 44.7	-1.6
JMZ				S	Sn	20 17 02.2	-1.7
JOKE	Okinoerabujima	1.45	291	i P	Pn	20 16 45.7	-0.8
JOKE				eS	Sn	20 17 03.8	-0.5
JZK	Kikaishima	1.47	356	P	Pn	20 16 45.8	-0.9
JZK				eS	Sn	20 17 04.9	+0.3
JYRO	Yoronjima	1.48	277	P	Pn	20 16 45.9	-1.1
JYRO				S	Sn	20 17 03.9	-1.0
JAMN	Amaminishikomi	1.61	330	P	Pn	20 16 47.4	-1.2
JAMN				S	Sn	20 17 06.8	-1.4
JAM	Amami Oshima	1.62	344	P	Pn	20 16 47.7	-1.0
JAM				eS	Sn	20 17 06.7	-1.7
JOW	Kunigami	1.63	270	Pn	Pn	20 16 48.0	-0.9
	94nm,0.3s,baz=111,slow=28,SNR=40						
JOW				Sn	Sn	20 17 06.5	-2.1
	134nm,0.3s,baz=112,slow=15,SNR=32						
JOW	Kunigami	1.63	270	P	Pn	20 16 48.0	-0.9
JOW				eS	Sn	20 17 07.1	-1.5
JNTH	Nagotoyohara	1.88	260	P	Pn	20 16 51.1	-1.3
JNTH				S	Sn	20 17 13.1	-1.8
JIH	Iheya	1.91	276	S	Pn	20 16 52.0	-0.8
JIH				S	Sn	20 17 14.3	-1.2
JJT3	Tamagusuku3	2.19	252	P	Pn	20 16 56.1	-0.5
JJT3				S	Sn	20 17 21.7	-0.8
JTAJ	Takarajima	2.43	341	P	Pn	20 16 58.6	-1.3
JTAJ				eS	Sn	20 17 26.7	-1.7
JAGN	Aguni-jima	2.57	265	eP	Pn	20 17 01.1	-0.7
JAGN				S	Sn	20 17 29.6	-2.1
JKE	Kume jima 2	3.01	261	S	Sn	20 17 41.3	-1.4
JYAK	Yakushimahirau	3.40	6	eP	Pn	20 17 12.3	-0.9
JYAK				eS	Sn	20 17 50.0	-2.3
JKC	Kuchinoerabu	3.60	1	eS	Sn	20 17 55.0	-2.3
JMTN	Minamitane	3.61	11	P	Pn	20 17 15.8	-0.3
JMTN				eS	Sn	20 17 55.3	-2.2
JNU	Nakatsue	6.29	6	Pn	Pn	20 17 53.6	+0.6
	0.6nm,0.3s,baz=359,slow=4.4,SNR=5.0						
	3.7nm,0.7s						
MKAR	Makanchi Array	42.38	311	P	P	20 24 15.9	+2.3
	0.2nm,0.7s,baz=92,slow=9.5,SNR=3.0						
	0.2nm,0.7s						
WRA	Warramunga Arr	46.69	175	P	P	20 24 49.0	+0.8
	1.8nm,0.8s,baz=353,slow=8.5,SNR=12						
	1.8nm,0.8s						
ASAR	Alice Springs	50.35	175	P	P	20 25 18.1	+1.7
	0.7nm,0.6s,baz=5.5,slow=14,SNR=19						
	0.7nm,0.6s						

*IDC **27** 20:26:01.6±4.6, 14°.58N×91°.35W, h0km, mb3.6/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=269.9km s-min=64.4km az=45.0*
*CATAC **27** 20:26:07.8±0.7, 14°N±4°×9°2W±°, h25km±3km, M4.1/11, MLv4.1/11, Error ellipse: s-maj=8.5km s-min=5.5km az=35.3, confirmed*
*MEX **27** 20:26:09.0±0.5, 14°.46N×92°.09W, h80km±7km, MD4.1*
*GCG **27** 20:26:09.6±2.1, 14°.29N×92°.08W, h42km±28km, MD4.1, ML4.2, Presumed earthquake*
ISC 27 20:26:04.7±1.7, 14°01N±0°.06×92°22W±0°.04, h29km±12km, n35, σ2s32/55, mb3.7/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.72	44	P	Pn	20 26 20.5	+1.6
RTAL				S	Sb	20 26 30.0	+1.6
RTAL	Retalhuleu	0.72	44	eP	Pn	20 26 20.4	+1.5
RTAL				i S	Sb	20 26 29.7	+1.3
SMCA	Catarina	0.86	9	i P	Pn	20 26 20.3	-0.4
SMCA				i S	Sb	20 26 28.6	-3.6
SMCA				IAML		20 26 30.0	
	comp=N,9μm,0.1s						
THIG		0.90	357	i P	Pn	20 26 21.0	-0.4
THIG		0.90	357	eP	Pn	20 26 20.9	-0.4
THIG				eS	Sn	20 26 30.8	-2.5
STG2	El Palmar, Qui	0.92	62	i P	Pn	20 26 22.2	+0.4
STG2				IAML		20 26 35.3	
	comp=E,52μm,0.3s						
STG5	El Palmar, Qui	0.93	65	i P	Pn	20 26 22.2	+0.4
STG8	El Palmar, Qui	0.95	62	i P	Pn	20 26 22.8	+0.5
STG8				i S	Sn	20 26 33.7	-1.2
STG8				IAML		20 26 35.8	
	comp=E,19μm,0.1s						
CHUJ	Union Juarez	1.09	6	eP	Pn	20 26 23.1	-1.1
CHUJ				eS	Sn	20 26 33.8	-4.5
QUEO	Labor Ovalle	1.10	38	i P	Pn	20 26 25.4	+1.1
QUEO				i S	Sn	20 26 38.3	-0.4
QUEO				IAML		20 26 40.1	
	comp=N,22μm,0.1s						
PATR	El Naranjo	1.10	359	eP	Pn	20 26 22.8	-1.5
PATR				eS	Sn	20 26 34.1	-4.7
SOKI	Kika Raxquin	1.13	44	eP	Pn	20 26 26.0	+1.1
PAVE	Pavencul	1.18	2	eP	Pn	20 26 24.3	-1.2
PAVE				eS	Sn	20 26 36.5	-4.1
HUEH	Huehuetenango	1.48	28	P	Pn	20 26 30.7	+1.3
HUEH				S	Sn	20 26 47.1	-0.9
HUEH	Huehuetenango	1.48	28	i P	Pn	20 26 30.8	+1.3
HUEH				IAML		20 26 50.7	
	comp=N,2μm,0.3s						
FG8	Yepocapa, Chim	1.63	81	i P	Pn	20 26 29.4	-2.1
FG8				i S	Sn	20 26 43.8	-7.7
FG16	Alotenango, Sa	1.68	81	i P	Pn	20 26 30.5	-1.7
FG16				i S	Sn	20 26 46.6	-6.2
FG16				IAML		20 26 53.2	
	comp=E,19μm,0.2s						
QUIS	Sacapulas	1.68	40	i P	Pn	20 26 34.3	+2.2
QUIS				IAML		20 26 56.7	
	comp=N,961nm,0.4s						
PCG5	San Vicente Pa	1.80	83	i P	Pn	20 26 33.4	-0.5
PCG5				i S	Sn	20 26 49.3	-6.4
PCIG		1.95	330	eP	Pn	20 26 35.5	-0.3
PCIG				eS	Sn	20 26 55.1	-4.1
APG	El Apazote	1.97	60	i P	Pn	20 26 39.0	+2.7
FAME	Alcaldia de Sa	2.15	94	P	Pb	20 26 43.0	+0.1
FAME				S	Sn	20 27 05.3	+1.2
CCIG	Comitan	2.26	2	P	Pn	20 26 42.2	+1.9
CCIG				S	Sn	20 27 05.1	-2.2
CCIG	Comitan	2.26	2	i P	Pn	20 26 42.4	+2.1
CCIG				IAML		20 27 11.9	
	comp=N,581nm,0.5s						
CCIG	Comitan	2.26	2	eP	Pn	20 26 42.0	+1.7
CCIG				eS	Sn	20 27 06.5	-0.8
LOAL	Lomas de Alarc	2.37	90	P	Pb	20 26 46.2	-0.4
TGIG		2.89	343	eP	Pn	20 26 48.0	-0.8
TGIG				eS	Sn	20 27 23.4	+0.8
UXUV	UXUV	3.78	331	eP	Pn	20 27 02.2	+1.2
UXUV				eS	Sn	20 27 44.5	0.0
CMIG	Matias Romero	4.00	320	eP	Pn	20 27 05.0	+1.0
CMIG				eS	Sn	20 27 49.9	0.0
TOIG	Toxpalan	6.18	312	eP	Pn	20 27 35.5	+1.4
TOIG				eS	Sn	20 28 38.9	-5.1
TXAR	Lajitas Array	18.57	327	P	Pn	20 30 20.5	+0.6
	baz=144,slow=7.3,SNR=2.0						
	comp=N,0.2nm,0.6s						
ANMO	Albuquerque	24.49	331	P	P	20 31 22.5	+0.9
	comp=N,1.4nm,0.5s,baz=148,slow=11,SNR=4.3						
	comp=N,1.4nm,0.5s						
NVAR	Mina Array Bea	33.53	321	P	P	20 32 44.2	+2.1
	comp=N,0.6nm,0.6s,baz=123,slow=8.3,SNR=4.1						
	comp=N,0.6nm,0.6s						
ILAR	Eielson Array	62.75	337	P	P	20 36 26.7	-0.1
	comp=N,0.3nm,0.6s,baz=123,slow=6.7,SNR=4.9						
	comp=N,0.3nm,0.6s						
CMAR	Chiang Mai Arr	145.92	341	PKPbc	PKPdf	20 45 42.4	+0.7
	comp=N,1.2nm,0.8s,baz=9.7,slow=3.1,SNR=9.7						

*IDC **27** 20:30:26.8±2.1, 0°.89N×126°.14E, h0km, mb3.4/3, mbtmp3.4/3, MS3.1/1, Error ellipse: s-maj=173.4km s-min=27.9km az=65.0*
*DJA **27** 20:30:34.0±0.2, 0°N±2°×12°5E±°, h10km, M3.6/15, MLv3.6/15*
ISC 27 20:30:34.8±1.1, 0°34N±0°.06×125°40E±0°.08, h35km, n11, σ2s03/10, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	1.23	333	P	Pn	20 30 57.1	+1.5
MNI				S	Sn	20 31 12.4	+1.4
TNTI	Ternate	2.02	78	P	Pn	20 31 08.2	+1.9
GTOI	Gorontalo	2.41	277	P	Pn	20 31 17.2	+5.5
SANI	Sanana	2.44	166	P	Pn	20 31 13.4	+1.1
LUWI	Luwuk	2.96	242	P	Pn	20 31 21.4	+2.0
NLAI	Namlea	3.94	154	P	Pn	20 31 34.6	+1.8
KRAI	Karang Ratu	4.71	141	P	Pn	20 31 44.9	+1.5
WRA	Warramunga Arr	21.98	157	P	P	20 35 24.8	-1.2
	1.1nm,0.6s,baz=338,slow=10.0,SNR=14						
	1.1nm,0.6s						
ASAR	Alice Springs	25.25	161	P	P	20 35 57.8	-0.1
	1.0nm,0.8s,baz=343,slow=7.8,SNR=8.5						
	1.0nm,0.8s						
PETK	Petropavlovsk-	59.05	22	LR	LR	21 03 57.9	
	comp=Z,18nm,21.0s,baz=92,slow=34						
MKAR	Makanchi Array	59.61	327	P	P	20 40 32.3	-3.0
	0.1nm,0.4s,baz=135,slow=6.5,SNR=2.6						
	0.1nm,0.4s						

*IDC **27** 20:32:15.0±3.1, 43°.05N×105°.00W, h0km, mbtmp3.2/2, ML3.2/2, Error ellipse: s-maj=62.0km s-min=10.7km az=156.0*
*NEIC **27** 20:32:19.4±1.8, 43°.56N±0°.04×105°.28W±0°.07, h0km±1km, ML3.1/34, Error ellipse: s-maj=10.4km s-min=4.0km az=53.0*
ISC 27 20:32:16.9±1.0, 43°73N±0°.05×105°37W±0°.05, h0km, n27, σ2s51/29, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAO	LASA Array	3.02	349	Pn	Pg	20 33 13.2	-1.5
RLMT	Red Lodge	3.12	298	Pn	Pb	20 33 12.2	-1.2
RLMT				IAML		20 34 03.2	
	26nm,0.3s						
BW06	Boulder Array	3.21	254	Pn	Pb	20 33 13.6	-1.3
BW06					Sg	20 33 57.9	-2.1
PD31	Pinedale Array	3.21	254	Pn	Pb	20 33 13.4	-1.5
PD31					Sg	20 33 57.9	-2.1
PDAR	Pinedale Array	3.21	254	Pn	Pn	20 33 11.7	+2.9
	1.9nm,0.3s,baz=63,slow=16,SNR=14						
PDAR				Pg	Pg	20 33 19.2	+0.8
	8.4nm,0.3s,baz=61,slow=16,SNR=11						
PDAR				Lg	Lg	20 34 00.1	
	4.2nm,0.3s,baz=70,slow=33,SNR=4.1						
	1.7nm,0.4s						
PDAR	Pinedale Array	3.21	254		Pb	20 33 13.1	-1.9
HAYD	Hayden	3.50	204	Pn	Pn	20 33 15.7	+2.9
HAYD				IAML		20 34 07.8	
	comp=E,40nm,0.4s						
HAYD				IAML		20 34 13.0	
	comp=N,34nm,0.8s						
YNE	Yellowstone No	3.56	293	Pn	Pn	20 33 16.8	+3.1
YNE				IAML		20 34 19.8	
	comp=E,33nm,0.4s						
YNE				IAML		20 34 23.5	
	comp=N,28nm,1.0s						
YMP	Mirror Lake Pl	3.59	288		Pb	20 33 20.8	-0.6
OGNE	Ogallala	3.72	137		Pn	20 33 16.9	+1.2
H17A	Grant Village	3.81	282		Pb	20 33 23.9	-1.3
H17A				IAML		20 34 29.6	
	comp=E,19nm,2.5s						
H17A				IAML		20 35 45.3	
	comp=N,20nm,5.0s						
FLWY	Flagg Ranch	3.87	277		Pb	20 33 24.0	-2.1
FLWY				IAML		20 34 32.9	
	comp=N,25nm,2.4s						
MOOW	Moose Ponds	3.90	272		Pb	20 33 23.4	-3.3
SNOW	Snow King Moun	3.92	268		Pg	20 33 31.0	-1.1
SNOW				IAML		20 34 33.1	
	comp=N,33nm,1.5s						
ISCO	Idaho Springs	3.93	183	Pn	Pn	20 33 19.3	+0.5
ISCO				IAML		20 34 59.0	
	comp=N,29nm,4.9s						
ISCO				IAML		20 35 27.8	
	comp=N,30nm,4.1s						
YPP	Pitchstone Pla	3.96	280		Pn	20 33 23.2	+4.1
YPP				IAML		20 34 40.5	
	comp=E,17nm,4.6s						
YPP				IAML		20 35 06.4	
	comp=N,15nm,4.2s						
YHH	Holmes Hill	4.08	287		Pb	20 33 27.5	-2.2
FXWY	Fox Creek	4.11	271		Pb	20 33 26.1	-4.1
O20A	White River Ci	4.18	212		Pn	20 33 25.0	+2.9
O20A				IAML		20 35 37.3	
	comp=N,34nm,3.3s						
YHL	Hebgen Lake	4.32	287		Pb	20 33 31.7	-2.2
YHL				IAML		20 35 03.9	
	comp=E,21nm,2.3s						
YHL				IAML		20 35 05.9	
	comp=N,15nm,1.4s						
PV23	Carpenter Ridg	5.95	209		Pn	20 33 48.0	+1.6
PV04	Paradox Valley	5.96	208		Pn	20 33 49.8	+3.2
PV02	Paradox Valley	6.08	206		Pn	20 33 52.2	+4.0
PV18	Skein Mesa, Pa	6.10	207		Pn	20 33 52.0	+3.5
PV05	Paradox Valley	6.31	208		Pn	20 33 53.1	+1.6
I10CA	LAC DU BONNET	9.09	41	I	I	21 31 50.0	
	baz=224,slow=283,SNR=2.0						
ULM	Lac du Bonnet	9.19	42	Pn	Pn	20 34 31.9	+1.2
	comp=N,0.5nm,0.3s,baz=226,slow=12,SNR=1.9						
ULM				Lg	Lg	20 37 06.2	
	comp=N,0.4nm,0.3s,baz=140,slow=16,SNR=2.3						
	comp=N,0.8nm,0.4s						

*NIED **27** 20:41:33.9, 32°.02N×132°.16E, h20km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.09; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$-4.11; $M_{r\theta}$-1.23; $M_{\theta\phi}$-2.60; $M_{r\phi}$4.57; Fault plane solution: $M_0$7.11000×10^{14} NP1: φs230.00000°,δ33.00000°,λ132.00000°. NP2:φs4.00000°, δ66.00000°,λ67.00000°.*
*JMA **27** 20:41:33.9±0.2, 32°.0N±0°.4×132°.2E±0°.7, h20km±2km, MV4.0/37, HYUGANADA REGION*
JMA Felt II J1 at HYUGANADA REGION .
*IDC **27** 20:41:37.2±2.3, 31°.99N×132°.05E, h58km±21km, mb3.2/4, mbtmp3.5/8, ML3.1/4, Error ellipse: s-maj=32.9km s-min=21.8km az=80.0*
ISC 27 20:41:33.2±1.7, 31°95N±0°.05×132°16E±0°.06, h24km±12km, n22, σ1s31/27, mb3.5/4, 4D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTSN	Tsuno	0.63	298	⇓P	Pb	20 41 45.1	-0.4
JTSN				A	A	20 41 45.1	
	comp=N,3.0nm,0.4s,comp=E,12nm,0.4s						
JTSN				⇓S	Sb	20 41 53.3	-0.7
JHHC	Hyugahichiya	0.66	318	⇓P	Pb	20 41 45.7	-0.4
JHHC				⇓S	Sb	20 41 54.1	-0.7
JNKG	Nichinankitago	0.73	247	P	Pn	20 41 48.2	+0.2
JNKG				S	Sn	20 41 59.0	+0.7
JNAR	Kushima--Naru	0.87	241	P	Pn	20 41 50.6	+0.6
JNAR				S	Sn	20 42 03.1	+1.2
JSKE	Saikikamae	0.87	345	P	Pn	20 41 49.4	-0.6
JSKE				eS	Sn	20 42 00.7	-1.2
JTZ	Takazaki	0.92	267	P	Pn	20 41 50.6	0.0
JTO	Tosashimizu	1.05	31	P	Pb	20 41 51.9	-0.8
JUS	Usuki	1.16	343	P	Pb	20 41 54.6	0.0
JUS				S	Sn	20 42 09.9	+0.8
JIU3	Izumi3	1.29	298	P	Pb	20 41 56.6	-0.1
UWA2	Uwa jima 2	1.32	17	P	Pn	20 41 56.1	0.0
JNU	Nakatsue	1.59	317	P	Pb	20 42 01.9	0.0
	comp=E,308nm,0.3s,baz=182,slow=3.8,SNR=1364						
JNU				S	Sb	20 42 23.4	+1.7
	comp=E,238nm,0.3s,baz=237,slow=18,SNR=10						
JNU				LR	LR	20 42 28.6	
	comp=E,134nm,20.9s,baz=220,slow=34						
JOW	Kunigami	6.13	215	P	Pn	20 43 04.4	+2.1
	comp=E,0.8nm,0.3s,baz=104,slow=15,SNR=1.2						
JOW				S	Sn	20 44 08.8	-2.8
	comp=E,4.5nm,0.3s,baz=52,slow=19,SNR=1.5						
	comp=E,3.4nm,0.3s						
KSRS	Korea Array	6.50	329	P	Pn	20 43 08.8	+1.5
	comp=E,1.0nm,0.3s,baz=146,slow=15,SNR=9.4						
	comp=E,2.3nm,0.3s						
MJAR	Mat

LALI				*i* S		**Sn**	20 49 40.1	**-0.7**
LALI				IAML			20 49 42.3	
	comp=N,6µm,0.4s							
PANCS	**Alcalde de**	**0.52**	**20**	P		**Pn**	**20 49 35.6**	**-0.1**
PANCS				S		**Sn**	**20 49 44.0**	**+0.2**
JAYA	**Jayaque - finc**	**0.54**	**351**	P		**Pn**	**20 49 36.1**	**+0.1**
JAYA				S		**Sn**	**20 49 44.0**	**-0.4**
JAYA	**Jayaque - finc**	**0.54**	**351**	*e*P		**Pn**	**20 49 36.0**	**+0.1**
JAYA				*e*S		**Sn**	**20 49 44.0**	**-0.4**
JAYA	**Jayaque - finc**	**0.54**	**351**	*i* P		**Pn**	**20 49 36.0**	**+0.1**
JAYA				*i* S		**Sn**	**20 49 43.7**	**-0.7**
PMON	**Piamonte**	**0.59**	**4**	P		**Pn**	**20 49 36.6**	**0.0**
PMON				S		**Sn**	**20 49 46.1**	**+0.6**
SEMO	**Seminario San**	**0.59**	**13**	P		**Pn**	**20 49 36.6**	**-0.1**
SEMO				S		**Sn**	**20 49 45.8**	**+0.2**
UTEC	**Universidad Te**	**0.60**	**15**	P		**Pn**	**20 49 36.9**	**+0.3**
UTEC				S		**Sn**	**20 49 46.0**	**+0.4**
UEES	**Universidad Ev**	**0.60**	**11**	P		**Pn**	**20 49 36.9**	**+0.1**
UEES				S		**Sn**	**20 49 46.3**	**+0.5**
BOQS	**Boqueron**	**0.61**	**7**	*i* P		**Pn**	**20 49 37.0**	**0.0**
UESS	**Universidad de**	**0.61**	**15**	*e*P		**Pn**	**20 49 37.1**	**+0.3**
IGN	**Direccin Gen**	**0.62**	**17**	P		**Pn**	**20 49 36.9**	**0.0**
IGN				S		**Sn**	**20 49 46.7**	**+0.7**
UDBS	**Universidad Do**	**0.62**	**19**	P		**Pn**	**20 49 37.2**	**+0.2**
UDBS				S		**Sn**	**20 49 46.6**	**+0.5**
PIC2	**El Picacho**	**0.63**	**9**	*e*P		**Pn**	**20 49 37.4**	**+0.2**
LFU	**La Fuente**	**0.67**	**21**	*i* P		**Pn**	**20 49 37.8**	**+0.3**
CEDA	**San Andres**	**0.68**	**357**	P		**Pn**	**20 49 37.8**	**+0.1**
CEDA				S		**Sn**	**20 49 47.7**	**+0.4**
CEDA	**San Andres**	**0.68**	**357**	*e*P		**Pn**	**20 49 38.0**	**+0.4**
COEG	**Centro de Oper**	**0.68**	**43**	*e*P		**Pn**	**20 49 37.5**	**-0.2**
COEG				*e*S		**Sn**	**20 49 47.2**	**-0.3**
LBRS	**Las Brisas**	**0.69**	**27**	*e*P		**Pn**	**20 49 38.2**	**+0.4**
TECO	**Alcaldia de Te**	**0.70**	**54**	P		**Pn**	**20 49 37.4**	**-0.5**
TECO				S		**Sn**	**20 49 47.3**	**-0.5**
PAVA	**Las Pavas**	**0.72**	**35**	P		**Pn**	**20 49 38.3**	**+0.1**
PAVA				S		**Sn**	**20 49 48.9**	**+0.5**
CEVE	**Cerro Verde**	**0.75**	**340**	P		**Pn**	**20 49 38.9**	**+0.2**
CEVE				S		**Sn**	**20 49 50.0**	**+0.7**
SBLS	**San Blas**	**0.76**	**340**	*i* P		**Pn**	**20 49 39.0**	**+0.2**
SBLS				*e*S		**Sn**	**20 49 49.4**	**-0.1**
SCLA	**Alcaldia de Sa**	**0.84**	**47**	P		**Pn**	**20 49 39.9**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.84**	**47**	*i* P		**Pn**	**20 49 40.0**	**+0.1**
SCLA				*e*S		**Sn**	**20 49 51.7**	**+0.4**
UNIC	**Universidad Ca**	**0.87**	**348**	P		**Pn**	**20 49 40.3**	**0.0**
UNIC				S		**Sn**	**20 49 52.7**	**+0.7**
UNIC	**Universidad Ca**	**0.87**	**348**	*e*P		**Pn**	**20 49 40.8**	**+0.5**
NUBE	**Las Nubes**	**0.88**	**332**	P		**Pn**	**20 49 40.4**	**+0.1**
NUBE	**Las Nubes**	**0.88**	**332**	*i* P		**Pn**	**20 49 40.4**	**+0.1**
NUBE				*i* S		**Sn**	**20 49 52.3**	**+0.1**
TECA	**Tecapa**	**0.91**	**66**	*e*P		**Pn**	**20 49 40.7**	**-0.2**
PQSS	**Presa 15 de Se**	**0.93**	**57**	P		**Pn**	**20 49 40.7**	**-0.1**
PQSS				S		**Sn**	**20 49 53.2**	**+0.1**
PQSS	**Presa 15 de Se**	**0.93**	**57**	*e*P		**Pn**	**20 49 40.9**	**+0.1**
FAME	**Alcaldia de Sa**	**0.96**	**318**	P		**Pn**	**20 49 41.5**	**+0.2**
LOAL	**Lomas de Alarc**	**0.96**	**335**	P		**Pn**	**20 49 41.9**	**+0.5**
LOAL				S		**Sn**	**20 49 54.2**	**+0.1**
LOAL	**Lomas de Alarc**	**0.96**	**335**	*e*P		**Pn**	**20 49 42.2**	**+0.8**
SLOZ	**Alcaldia de Sa**	**0.99**	**335**	P		**Pn**	**20 49 41.8**	**+0.1**
SLOZ	**Alcaldia de Sa**	**0.99**	**335**	*e*P		**Pn**	**20 49 42.0**	**+0.2**
RBDL	**Robledal**	**1.03**	**342**	*i* P		**Pn**	**20 49 42.5**	**0.0**
RBDL				*e*S		**Sn**	**20 49 56.6**	**+0.6**
P5NO	**Presa 5 de nov**	**1.04**	**34**	P		**Pn**	**20 49 41.9**	**-0.5**
P5NO				S		**Sn**	**20 49 55.5**	**-0.4**
P5NO	**Presa 5 de nov**	**1.04**	**34**	*i* P		**Pn**	**20 49 42.0**	**-0.4**
PACA	**Pacayal**	**1.07**	**71**	P		**Pn**	**20 49 43.3**	**+0.4**
PACA	**Pacayal**	**1.07**	**71**	*e*P		**Pn**	**20 49 43.7**	**+0.8**
PACA				*e*S		**Sn**	**20 49 57.6**	**+0.9**
LCY	**Lacayo**	**1.08**	**74**	*e*P		**Pn**	**20 49 43.4**	**+0.4**
RANC	**El Ranchito**	**1.09**	**73**	P		**Pn**	**20 49 43.6**	**+0.4**
RANC				S		**Sn**	**20 49 58.1**	**+0.8**
LLGN	**La Laguna**	**1.11**	**21**	P		**Pn**	**20 49 43.0**	**-0.4**
LLGN	**La Laguna**	**1.11**	**21**	*e*P		**Pn**	**20 49 43.1**	**-0.4**
MTO3	**Montecristo**	**1.27**	**360**	P		**Pn**	**20 49 45.6**	**-0.2**
MTO3				S		**Sn**	**20 50 00.8**	**-1.0**
MTO3	**Montecristo**	**1.27**	**360**	*i* P		**Pn**	**20 49 45.5**	**-0.2**
MTO3	**Montecristo**	**1.27**	**360**	*i* P		**Pn**	**20 49 45.6**	**-0.2**
ESQI	**Esquipulas**	**1.43**	**1**	P		**Pn**	**20 49 47.9**	**+0.1**
ESQI				S		**Sn**	**20 50 05.9**	**+0.3**
FG16	**Alotenango, Sa**	**1.60**	**316**	*i* P		Pn	20 49 56.9	+6.7
FG16				IAML			20 50 33.3	
	comp=N,5µm,0.2s							
FG8	**Yepocapa, Chim**	**1.62**	**314**	*i* P		Pn	20 49 56.6	+6.1
SARH	**Santa Rosa de**	**1.74**	**19**	P		**Pn**	**20 49 52.5**	**+0.5**
SARH	**Santa Rosa de**	**1.74**	**19**	*i* P		**Pn**	**20 49 52.2**	**+0.1**
CSGN	**Cosiguina Volc**	**1.76**	**95**	P		**Pn**	**20 49 52.8**	**+0.4**
CSGN				S		**Sn**	**20 50 14.2**	**+0.5**
APG	**El Apazote**	**2.16**	**330**	Pn		**Pn**	**20 49 58.3**	**+0.5**
	comp=N,0.4nm,0.3s,baz=136,slow=11,SNR=7.6							
APG	**El Apazote**	**2.16**	**330**	*e*P		**Pn**	**20 49 58.4**	**+0.5**
STG5	**El Palmar, Qui**	**2.31**	**304**	*i* P		Pn	20 50 06.2	+6.3
STG8	**El Palmar, Qui**	**2.34**	**305**	*e*P		Pn	20 50 06.3	+5.8
STG2	**El Palmar, Qui**	**2.35**	**304**	*i* P		Pn	20 50 06.7	+6.2
TEL3	**Telica 3**	**2.51**	**102**	P		**Pn**	**20 50 01.7**	**-0.9**
CMIG	**Matias Romero**	**6.63**	**307**	Pn		**Pn**	**20 51 00.6**	**+1.5**
	comp=N,0.5nm,0.3s,baz=135,slow=11,SNR=4.4							
CMIG				Sn		**Sn**	**20 52 11.4**	**-2.1**
	comp=N,0.9nm,0.3s,baz=259,slow=22,SNR=6.6 comp=N,1.2nm,0.3s							
TXAR	**Lajitas Array**	**20.89**	**323**	P		**P**	**20 54 02.8**	**+0.2**
	comp=N,0.4nm,0.5s,baz=141,slow=11,SNR=7.6 comp=N,0.4nm,0.5s							
YKA	**Yellowknife Ar**	**52.49**	**346**	P		P	20 58 28.7	-3.3
	comp=N,0.4nm,0.7s,baz=150,slow=6.7,SNR=5.4 comp=N,0.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**147.57**	**345**	PKPbc		**PKPdf**	**21 09 00.5**	**-0.9**
	comp=N,0.2nm,0.3s,baz=27,slow=1.8,SNR=2.2							

KRSC 27 20:53:18.6±0.9, 53.72N×161.51E, h40km±15km, MI3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.84**	**9**	*e*P	Pn	20 53 34.9	+1.0
MKZ				*e*S	Sn	20 53 45.1	-0.1
SPN	**Mys Shipunski**	**1.09**	**235**	*e*P	Pn	20 53 38.5	+1.1
SPN				*e*S	Sn	20 53 51.5	+0.3
KII	**Karymskiy**	**1.26**	**285**	*e*P	Pn	20 53 40.6	+0.9
KII				*e*S	Sn	20 53 55.5	0.0
NLC	**Nalytchevo**	**1.41**	**248**	*e*P	Pn	20 53 43.1	+1.4
NLC				*e*S	Sn	20 54 00.5	+1.5
TUMD	**Tumrok D**	**1.62**	**337**	*e*P	Pn	20 53 46.2	+1.6
TUMD				*e*S	Sn	20 54 05.1	+0.9
SDLR	**Sedlovina**	**1.63**	**255**	*e*P	Pn	20 53 46.6	+1.7
SMAR	**Somma**	**1.68**	**255**	*e*P	Pn	20 53 47.6	+1.9
UGLR	**Uglovaya**	**1.69**	**253**	*e*P	Pn	20 53 47.8	+2.1
KRER	**Koryakskii**	**1.70**	**257**	*e*P	Pn	20 53 48.1	+2.1
AVH	**Avacha**	**1.72**	**256**	*e*P	Pn	20 53 48.3	+2.3
KRX	**Arik**	**1.75**	**259**	*e*P	Pn	20 53 48.3	+1.8
KRX				*e*S	Sn	20 54 08.9	+1.4
KOK	**Koryaka**	**1.77**	**257**	*e*P	Pn	20 53 48.8	+2.0
DALK	**Dalny**	**1.79**	**248**	*e*P	Pn	20 53 48.8	+1.8
DALK				*e*S	Sn	20 54 09.9	+1.5
PET	**Petropavlovsk**	**1.85**	**249**	*e*P	Pn	20 53 49.9	+2.1
GNL	**Ganaly**	**2.12**	**271**	*e*P	Pn	20 53 54.6	+2.9
GNL				*e*S	Sn	20 54 20.6	+3.9
KMNR	**Kamenistaya**	**2.17**	**341**	*e*P	Pn	20 53 55.6	+3.4
KMNR				*e*S	Sn	20 54 21.8	+3.9
KRMR	**Karymshinskiy**	**2.22**	**248**	*e*P	Pn	20 53 55.4	+2.5
KRMR				*e*S	Sn	20 54 23.1	+4.1
RUS	**Russkaya**	**2.22**	**236**	*e*P	Pn	20 53 56.4	+3.6
MTVR	**Mutnovka**	**2.36**	**240**	*e*P	Pn	20 53 57.2	+2.3
GRL	**Gorelyy**	**2.38**	**242**	*e*P	Pn	20 53 58.1	+3.0
KOZ	**Kozyrevsk**	**2.52**	**339**	*e*P	Pn	20 54 01.7	+4.7
ASAK	**Asacha**	**2.56**	**240**	*e*P	Pn	20 54 00.8	+3.2
KBTR	**Krutoberegovo**	**2.60**	**16**	*e*P	Pn	20 54 01.6	+3.5
APC	**Apacha**	**2.73**	**255**	*e*P	Pn	20 54 04.3	+4.4
ESO	**Esso**	**2.74**	**325**	*e*P	Pn	20 54 02.7	+2.6
KDTR	**Khodutka, Kamc**	**2.83**	**229**	*e*P	Pn	20 54 04.8	+3.6
KDTR				*e*S	Sn	20 54 37.8	+3.7
SMKR	**Semkarok**	**2.87**	**360**	*e*P	Pn	20 54 05.8	+4.0
BKI	**Bering**	**3.00**	**59**	*e*P	Pn	20 54 06.9	+3.4
BKI				*e*S	Sn	20 54 40.2	+2.1

IDC 27 20:53:20.5±2.0, 7.55S×125.42E, h0km, mb3.4/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=276.1km s-min=32.1km az=60.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.05**	**146**	Pn	Pn	20 56 55.9	+1.3
	0.1nm,0.3s,baz=324,slow=14,SNR=8.1						
WRA				Sn	Sn	20 59 34.3	-7.9
	0.1nm,0.3s,baz=313,slow=16,SNR=2.0 0.6nm,0.9s						
ASAR	**Alice Springs**	**17.98**	**154**	P	Pn	20 57 31.3	-0.7
	0.1nm,0.3s,baz=334,slow=12,SNR=7.5 0.4nm,0.5s						
MKAR	**Makanchi Array**	**66.28**	**329**	P	P	21 04 10.7	0.0
	0.3nm,0.7s,baz=121,slow=8.3,SNR=4.0 0.3nm,0.7s						

NEIC ***27*** *20:55:53.7±2.9, 12.77N±0.07×88.83W±0.05, h35km±2km, mb4.4/14, Error ellipse: s-maj=14.2km s-min=5.0km az=213.0*
SNET ***27*** *20:55:55.3±1.0, 12.88N×88.79W, h31km, ML4.2, Presumed earthquake*
CATAC ***27*** *20:55:55.6±0.3, 13°N±2°×88°9W±°, h39km±5km, M4.4/37, MLv4.4/37, Error ellipse: s-maj=5.3km s-min=1.8km az=34.2, confirmed*
IDC ***27*** *20:55:56.3±2.3, 13.05N×88.60W, h70km±23km, mb3.6/3, mbtmp3.9/6, MS3.2/1, Error ellipse: s-maj=70.0km s-min=20.5km az=40.0*
GCG ***27*** *20:55:57.2±0.7, 12.98N×88.91W, h48km±14km, MD4.3, Presumed earthquake*

ISC 27 20:55:53.5±1.1, 12.78N±0.05×88.83W±0.04, h53km±9km, n114, σ1§20/160, mb4.3/10, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.75**	**4**	P	Pn	20 56 08.7	**+0.6**
TECO				S	Sn	20 56 18.3	**-0.4**
TECA	**Tecapa**	**0.78**	**24**	*i* P	Pn	20 56 09.1	**+0.5**
COEG	**Centro de Oper**	**0.83**	**357**	*e*P	Pn	20 56 09.7	**+0.4**
COEG				*e*S	Sn	20 56 20.5	**-0.2**
RANC	**El Ranchito**	**0.83**	**39**	P	Pn	20 56 10.1	**+0.7**
RANC	**El Ranchito**	**0.83**	**39**	*i* P	Pn	20 56 10.0	**+0.7**
RANC				*e*S	Sn	20 56 21.2	**+0.4**
PACA	**Pacayal**	**0.84**	**36**	P	Pn	20 56 10.1	**+0.7**
PACA				S	Sn	20 56 21.1	**+0.1**
PACA	**Pacayal**	**0.84**	**36**	*e*P	Pn	20 56 10.1	**+0.7**
LALI	**Alcalda de L**	**0.85**	**326**	*e*P	Pn	20 56 10.0	**+0.7**
LALI				*e*S	Sn	20 56 20.1	**-0.8**
LALI	**Alcalda de L**	**0.85**	**326**	*i* P	Pn	20 56 09.9	**+0.6**
LALI				*i* S	Sn	20 56 19.9	**-1.0**
BLLM	**Bellamira**	**0.87**	**41**	*i* P	Pn	20 56 10.4	**+0.7**
PQSS	**Presa 15 de Se**	**0.88**	**17**	P	Pn	20 56 10.1	**+0.3**
PQSS				S	Sn	20 56 22.1	**+0.5**
PANCS	**Alcalda de**	**0.89**	**338**	P	Pn	20 56 10.5	**+0.5**
LOMA	**Loma Larga**	**0.92**	**339**	*e*P	Pn	20 56 11.1	**+0.7**
SCLA	**Alcaldia de Sa**	**0.92**	**6**	P	Pn	20 56 11.3	**+1.0**
SCLA				S	Sn	20 56 23.2	**+0.5**
PAVA	**Las Pavas**	**0.93**	**354**	P	Pn	20 56 11.3	**+0.8**
PAVA	**Las Pavas**	**0.93**	**354**	*e*P	Pn	20 56 11.3	**+0.8**
PAVA				*e*S	Sn	20 56 23.5	**+0.5**
CNRM	**Centro Naciona**	**0.94**	**43**	P	Pn	20 56 11.4	**+0.8**
CNRM				S	Sn	20 56 23.2	**+0.1**
UDBS	**Universidad Do**	**0.98**	**341**	P	Pn	20 56 11.7	**+0.6**
UDBS				S	Sn	20 56 24.4	**+0.3**
UDBS	**Universidad Do**	**0.98**	**341**	*e*P	Pn	20 56 12.0	**+0.9**
IGN	**Direccin Gen**	**0.98**	**340**	P	Pn	20 56 11.7	**+0.6**
IGN				S	Sn	20 56 24.5	**+0.3**
IGN	**Direccin Gen**	**0.98**	**340**	*e*P	Pn	20 56 12.0	**+0.8**
LFU	**La Fuente**	**1.00**	**344**	*e*P	Pn	20 56 12.3	**+0.9**
UEES	**Universidad Ev**	**1.01**	**337**	P	Pn	20 56 13.2	**+1.6**
UEES				S	Sn	20 56 24.4	**-0.4**
PMON	**Piamonte**	**1.04**	**333**	P	Pn	20 56 12.9	**+1.0**
PMON				S	Sn	20 56 25.5	**0.0**
BOQS	**Boqueron**	**1.04**	**335**	*e*P	Pn	20 56 13.3	**+1.1**
JAYA	**Jayaque - finc**	**1.05**	**325**	P	Pn	20 56 13.2	**+0.9**
JAYA				S	Sn	20 56 26.2	**+0.2**
JAYA	**Jayaque - finc**	**1.05**	**325**	*i* P	Pn	20 56 12.9	**+0.7**
JAYA				*i* S	Sn	20 56 25.3	**-0.7**
LCND	**La Caada**	**1.05**	**60**	P	Pn	20 56 12.9	**+0.8**
LCND				S	Sn	20 56 25.0	**-0.8**
LCND	**La Caada**	**1.05**	**60**	*e*P	Pn	20 56 12.9	**+0.8**
LCND				*e*S	Sn	20 56 26.2	**+0.4**
P5NO	**Presa 5 de nov**	**1.20**	**3**	P	Pn	20 56 14.9	**+0.9**
P5NO				S	Sn	20 56 29.5	**+0.2**
P5NO	**Presa 5 de nov**	**1.20**	**3**	*e*P	Pn	20 56 14.7	**+0.7**
CSGN	**Cosiguina Volc**	**1.25**	**81**	P	Pn	20 56 16.1	**+1.2**
CSGN				S	Sn	20 56 30.4	**-0.4**
CEVE	**Cerro Verde**	**1.29**	**323**	P	Pn	20 56 16.8	**+1.3**
CEVE				S	Sn	20 56 32.9	**+0.1**
CEVE	**Cerro Verde**	**1.29**	**323**	*e*P	Pn	20 56 17.1	**+1.6**
SBLS	**San Blas**	**1.30**	**324**	*e*P	Pn	20 56 18.3	**+2.6**
LLGN	**La Laguna**	**1.38**	**355**	P	Pn	20 56 17.3	**+0.8**
LLGN				S	Sn	20 56 33.4	**-0.3**
LLGN	**La Laguna**	**1.38**	**355**	*e*P	Pn	20 56 17.4	**+0.8**
UNIC	**Universidad Ca**	**1.38**	**330**	P	Pn	20 56 17.8	**+1.2**
UNIC				S	Sn	20 56 34.3	**+0.5**
NUBE	**Las Nubes**	**1.45**	**320**	P	Pn	20 56 18.6	**+1.1**
NUBE	**Las Nubes**	**1.45**	**320**	*i* P	Pn	20 56 18.7	**+1.1**
NUBE				*i* S	Sn	20 56 35.4	**-0.1**
LOAL	**Lomas de Alarc**	**1.52**	**323**	P	Pn	20 56 19.8	**+1.4**
SLOZ	**Alcaldia de Sa**	**1.54**	**323**	P	Pn	20 56 20.3	**+1.5**
MTO3	**Montecristo**	**1.69**	**342**		Pn	20 56 21.8	**+1.0**
MTO3				Sn	Sn	20 56 40.4	**-1.1**
MTO3	**Montecristo**	**1.69**	**342**	P	Pn	20 56 21.8	**+1.0**
MTO3	**Montecristo**	**1.69**	**342**	*e*P	Pn	20 56 21.9	**+1.0**
CRIN	**San Cristobal**	**1.74**	**93**		Pn	20 56 22.0	**+1.0**
PKGN	**Cerro Pekin**	**1.81**	**93**	P	Pn	20 56 24.0	**+1.7**
PKGN				S	Sn	20 56 44.2	**0.0**
ESQI	**Esquipulas**	**1.83**	**344**		Pn	20 56 23.9	**+1.1**
ESQI	**Esquipulas**	**1.83**	**344**	P	Pn	20 56 23.9	**+1.1**
ESQI				S	Sn	20 56 45.5	**+0.6**
QUEN	**Al S del Volca**	**1.94**	**95**	P	Pn	20 56 24.9	**+0.7**
QUEN				S	Sn	20 56 46.3	**-1.1**
TEL3	**Telica 3**	**1.95**	**96**	P	Pn	20 56 24.5	**+0.3**
HERN	**Volcan Telica**	**1.96**	**95**		Pn	20 56 24.8	**+0.3**
HERN				Sn	Sn	20 56 47.2	**-0.8**
HERN	**Volcan Telica**	**1.96**	**95**	P	Pn	20 56 25.7	**+1.2**
HERN				S	Sn	20 56 48.3	**+0.3**
TELN	**Telica**	**1.96**	**95**	P	Pn	20 56 25.6	**+1.1**
TELN				S	Sn	20 56 48.3	**+0.3**
HOYN	**Al Sur del Vol**	**1.96**	**95**	P	Pn	20 56 25.7	**+1.2**
HOYN				S	Sn	20 56 48.5	**+0.4**
POLN	**Al Sur del Vol**	**1.97**	**94**	P	Pn	20 56 26.0	**+1.5**
POLN				S	Sn	20 56 48.6	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.97**	**50**		Pn	20 56 25.8	**+1.1**
SARH	**Santa Rosa de**	**1.98**	**2**	P	Pn	20 56 26.4	**+1.6**
SARH	**Santa Rosa de**	**1.98**	**2**	*i* P	Pn	20 56 26.4	**+1.6**
ILCN	**San Idelfonso**	**2.09**	**95**	P	Pn	20 56 27.7	**+1.5**
ILCN				S	Sn	20 56 50.4	**-0.7**
CNGA	**Al SSO del Vol**	**2.10**	**98**	P	Pn	20 56 27.7	**+1.4**
CNGA				S	Sn	20 56 51.1	**-0.2**
CNGN	**Cerro Negro**	**2.10**	**97**		Pn	20 56 26.2	**-0.1**
CNGN	**Cerro Negro**	**2.10**	**97**	P	Pn	20 56 27.7	**+1.4**
MACN	**El Madrono**	**2.13**	**98**	P	Pn	20 56 28.0	**+1.3**
MACN				S	Sn	20 56 52.4	**+0.4**
YUSH	**Yuscaran**	**2.26**	**59**	P	Pn	20 56 29.9	**+1.3**
YUSH				S	Sn	20 56 55.8	**+0.5**
COPN	**Copaltepe**	**2.27**	**105**	P	Pn	20 56 29.9	**+1.3**
MOM2	**El Cardon**	**2.32**	**98**	P	Pn	20 56 30.8	**+1.6**
MOM2				S	Sn	20 56 58.3	**+1.8**
LIMN	**Finca el Limon**	**2.42**	**83**	P	Pn	20 56 32.2	**+1.5**
LIMN				S	Sn	20 56 59.9	**+0.7**
OCON	**Estacion meteo**	**2.44**	**70**	P	Pn	20 56 32.1	**+1.0**
OCON				S	Sn	20 56 58.9	**-0.9**
APQ3	**Volcan Apoyequ**	**2.46**	**102**	P	Pn	20 56 32.6	**+1.4**
APQ3				S	Sn	20 56 59.3	**-0.7**
APYN	**Apoyeque**	**2.48**	**102**	P	Pn	20 56 33.5	**+1.9**
APQ2	**Apoyeque**	**2.52**	**103**	P	Pn	20 56 33.8	**+1.9**
APQ2				S	Sn	20 57 01.4	**-0.1**
TISN	**Laguna Tiscapa**	**2.58**	**104**	P	Pn	20 56 34.2	**+1.3**
MGAN	**Managua**	**2.60**	**104**	Pn	Pn	20 56 33.0	**-0.2**
RCFN	**Al S de San Ju**	**2.66**	**73**	P	Pn	20 56 35.1	**+1.1**
RCVN	**Varillal2**	**2.69**	**73**	P	Pn	20 56 35.7	**+1.2**
RCON	**San Juan de Ri**	**2.70**	**75**	P	Pn	20 56 36.0	**+1.4**
MAS3	**Al N del Volca**	**2.70**	**106**	P	Pn	20 56 36.0	**+1.5**
MAS3				S	Sn	20 57 05.4	**-0.7**
APG	**El Apazote**	**2.72**	**324**	P	Pn	20 56 37.1	**+2.1**
	0.3nm,0.4s,baz=129,slow=13,SNR=2.8						
APG				S	Sn	20 57 16.8	+10
	4.9nm,0.7s,baz=121,slow=11,SNR=3.8						
APG	**El Apazote**	**2.72**	**324**	*i* P	Pn	20 56 36.9	**+1.9**
RCPN	**Sur Rio San Ju**	**2.77**	**74**	P	Pn	20 56 36.8	**+1.3**
NANN	**Nandasmo**	**2.78**	**107**	P	Pn	20 56 39.0	**+3.4**
NANN				S	Sn	20 57 08.8	**+0.9**
MATN	**Matagalpa**	**2.84**	**87**	P	Pn	20 56 36.7	**+0.2**
MATN				S	Sn	20 57 08.9	**-0.7**
BOAB	**BOACO BROADBAN**	**3.11**	**96**		Pn	20 56 40.9	**+0.8**
SIUN	**Universidad Ur**	**4.06**	**76**		Pn	20 56 54.5	**+1.3**
PETF	**Flores**	**4.23**	**346**		Pn	20 56 57.9	**+2.4**
JTS	**Las Juntas de**	**4.54**	**123**	P	Pn	20 57 02.5	**+2.7**
	11nm,0.3s,baz=281,slow=16,SNR=25						
JTS				S	Sn	20 58 01.7	+10
	15nm,0.3s,baz=174,slow=14,SNR=3.9						
JTS	**Las Juntas de**	**4.54**	**123**	Pn	Pn	20 57 01.3	**+1.5**
PIRO	**Carate, Puerto**	**6.94**	**128**		Pn	20 57 29.1	**-3.5**
PIRO				Sn	Sn	20 58 49.7	**-0.5**
BRU2	**Volcan**	**7.22**	**123**	Pn	Pn	20 57 33.4	**-3.3**
CMIG	**Matias Romero**	**7.25**	**307**	P	Pn	20 57 39.6	**+2.7**
	1.3nm,0.5s,baz=155,slow=13,SNR=5.7						
CMIG				S	Sn	20 58 58.0	**+0.1**
	4.0nm,0.7s,baz=132,slow=16,SNR=1.4						
SDV	**Santo Domingo**	**18.29**	**100**	P	P	21 00 02.3	**-1.1**
	2.2nm,0.5s,baz=327,slow=9.5,SNR=5.1						
SDV	**Santo Domingo**	**18.29**	**100**	P	P	21 00 03.0	**-0.4**
SDV				IAmb	IAmb	21 00 22.8	
	comp=Z,3.8nm,0.9s						
GOGA	**Godfrey**	**21.11**	**13**	P	P	21 00 36.0	**+2.2**
GOGA				IAmb	IAmb	21 00 58.9	
	comp=Z,25nm,1.4s						
PLPT	**Palo Pinto**	**21.75**	**338**	P	P	21 00 39.0	**-1.6**
PLPT				IAmb	IAmb	21 00 42.7	
	comp=Z,12nm,0.6s						
MIAR	**Mount Ida**	**22.09**	**350**	P	P	21 00 44.8	**+0.5**
SMWD	**Samnorwood**	**24.51**	**337**	P	P	21 01 08.0	**-0.1**
SMWD				IAmb	IAmb	21 01 10.6	
	comp=Z,9.5nm,0.7s						
S39A	**Bolivar**	**25.13**	**352**	P	P	21 01 15.2	**+1.6**
CCM	**Cathedral Cave**	**25.26**	**356**	P	P	21 01 15.3	**+0.5**
CCM				IAmb	IAmb	21 01 16.0	
	comp=Z,5.0nm,0.7s						
PV18	**Skein Mesa, Pa**	**31.02**	**328**	P	P	21 02 06.2	**-0.3**
PV18				IAmb	IAmb	21 02 10.4	
	comp=Z,3.4nm,0.7s						
PV11	**David Mesa, Pa**	**31.04**	**328**	P	P	21 02 03.3	**-3.4**
PDAR	**Pinedale Array**	**34.85**	**333**	LR	LR	21 19 38.3	
	comp=Z,33nm,18.1s,baz=95,slow=41						
NVAR	**Mina Array Bea**	**36.57**	**320**	PcP	**PcP**	**21 05 19.1**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=137,slow=1.7,SNR=4.2						
ULM	**Lac du Bonnet**	**37.80**	**353**	P	P	21 03 03.4	**-1.2**
	comp=Z,2.0nm,0.5s,baz=172,slow=7.1,SNR=3.7

WSI	**Waingapu**	**3.83**	**77**	P		**Pn**	**21 29 08.1**	**+1.4**
BLJI	**Banyuglugur**	**4.00**	**314**	P		**Pn**	**21 29 08.9**	**-0.2**
BASI	**Baing, Sumba**	**4.01**	**86**	P		**Pn**	**21 29 10.4**	**+1.1**
KMMI	**Kalianget**	**4.29**	**324**	P		**Pn**	**21 29 15.1**	**+2.1**
EDFI	**Ende, Flores**	**5.41**	**71**	P		**Pn**	**21 29 30.6**	**+2.0**
	1µm92nm, 0.7s							
SNJI	**Sawahan-Nganju**	**5.43**	**300**	P		**Pn**	**21 29 29.0**	**0.0**
	0.9nm106nm, 0.8s							
SJI	**Sawahan**	**5.45**	**300**	P		**Pn**	**21 29 28.9**	**-0.3**
	0.7nm63nm, 0.5s							
PCJI	**Pacitan**	**5.76**	**293**	P		**Pn**	**21 29 33.2**	**-0.1**
	0.8nm84nm, 0.8s							
BSSI	**Bau Bau, Buton**	**5.88**	**42**	P		**Pn**	**21 29 38.2**	**+3.2**
NGJI	**Ngawi**	**5.90**	**302**	P		**Pn**	**21 29 35.7**	**+0.4**
	0.7nm61nm, 0.8s							
TBJI	**Tambak Boyo**	**5.91**	**308**	P		**Pn**	**21 29 36.2**	**+0.8**
MMRI	**Maumere**	**5.96**	**72**	P		**Pn**	**21 29 38.0**	**+2.0**
MMRI	**Maumere**	**5.96**	**72**	Pn		**Pn**	**21 29 35.9**	**-0.2**
MMRI	**Maumere**	**5.96**	**72**	P		**Pn**	**21 29 38.0**	**+2.0**
MKS	**Makassar**	**6.05**	**29**	P		**Pn**	**21 29 36.4**	**-0.9**
	0.3nm56nm, 0.6s							
BKSI	**Bulukumba**	**6.30**	**35**	P		**Pn**	**21 29 42.6**	**+1.9**
KAPI	**Kappang**	**6.36**	**31**	Pn		**Pn**	**21 29 44.6**	**+3.0**
	14nm, 0.3s, baz=200, slow=7.5, SNR=30							
KAPI				Sn		**Sn**	**21 30 51.9**	**-1.2**
	3.1nm, 0.3s, baz=170, slow=7.5, SNR=6.0							
KAPI				LR		LR	21 32 30.0	
	comp=Z,639nm,19.3s,baz=220,slow=43							
KAPI	**Kappang**	**6.36**	**31**	P		**Pn**	**21 29 43.7**	**+2.1**
KAPI	**Kappang**	**6.36**	**31**			**Pn**	**21 29 40.7**	**-0.9**
KAPI	**Kappang**	**6.36**	**31**	P		**Pn**	**21 29 44.0**	**+2.4**
UGM	**Wanagama**	**6.46**	**293**	P		**Pn**	**21 29 44.2**	**+1.2**
UGM	**Wanagama**	**6.46**	**293**	Pn		**Pn**	**21 29 41.7**	**-1.3**
UGM	**Wanagama**	**6.46**	**293**	P		**Pn**	**21 29 44.0**	**+1.0**
	60nm, 0.6s							
BATI	**Baumata**	**7.04**	**88**	Pn		**Pn**	**21 29 53.2**	**+2.2**
	7.0nm, 0.3s, baz=249, slow=2.5, SNR=10.0							
BATI				Sn		**Sn**	**21 31 10.5**	**+0.6**
	19nm, 0.3s, baz=3.6, slow=23, SNR=8.3							
	17nm, 0.3s							
BATI	**Baumata**	**7.04**	**88**	P		**Pn**	**21 29 52.6**	**+1.6**
	0.6nm43nm, 0.4s							
SPSI	**Sidrap Palu**	**7.29**	**27**	P		**Pn**	**21 29 56.0**	**+1.7**
	21nm, 0.5s							
PMSI	**Majene**	**7.39**	**19**	P		**Pn**	**21 29 59.5**	**+3.7**
	0.3nm70nm, 0.6s							
SOEI	**Soe**	**7.68**	**85**	Pn		**Pn**	**21 30 02.4**	**+2.7**
KKSI	**Kolaka, Sulawe**	**8.13**	**39**	P		**Pn**	**21 30 07.9**	**+2.1**
	33nm, 0.4s							
KPJI	**Karang Pucung**	**8.14**	**292**	P		**Pn**	**21 30 05.1**	**-0.9**
	34nm, 0.6s							
TTSI	**Tana Toraja**	**8.14**	**24**	P		**Pn**	**21 30 09.0**	**+3.0**
	1µm42nm, 1.1s							
BBJI	**Bungbulang**	**9.27**	**289**	P		**Pn**	**21 30 21.8**	**+0.2**
BBJI	**Bungbulang**	**9.27**	**289**			**Pn**	**21 30 20.7**	**-0.9**
BBJI	**Bungbulang**	**9.27**	**289**	P		**Pn**	**21 30 21.6**	**0.0**
LEM	**Lembang**	**9.54**	**292**	LR		LR	21 34 01.9	
	comp=Z,199nm,18.1s,baz=65,slow=37							
MBWA	**Marble Bar**	**11.00**	**164**	P		**Pn**	**21 30 44.6**	**-0.7**
MBWA	**Marble Bar**	**11.00**	**164**			**Pn**	**21 30 44.5**	**-0.7**
PSA00	**Pilbara Seismi**	**11.43**	**164**	P		**Pn**	**21 30 50.4**	**-0.7**
PSA00	**Pilbara Seismi**	**11.43**	**164**	Pn		**Pn**	**21 30 51.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**11.60**	**131**	Pn		**Pn**	**21 30 54.4**	**+0.9**
	1.3nm, 0.3s, baz=325, slow=11, SNR=20							
FITZ				Sn		**Sn**	**21 32 56.0**	**-5.8**
	3.0nm, 0.3s, baz=191, slow=18, SNR=7.8							
FITZ				LR		LR	21 36 12.8	
	comp=Z,226nm,19.4s,baz=320,slow=40							
GIRL	**Giralia**	**12.23**	**190**	Pn		**Pn**	**21 31 01.5**	**-0.5**
TOLI2	**Tolitoli**	**12.33**	**20**	Pn		**Pn**	**21 31 03.6**	**+0.2**
KNRA	**Kununurra**	**12.98**	**114**	Pn		**Pn**	**21 31 12.1**	**-0.2**
SBUM	**Sibu**	**13.60**	**341**	Pn		**Pn**	**21 31 16.8**	**-3.9**
MTN	**Manton Dam**	**14.50**	**101**	Pn		**Pn**	**21 31 33.5**	**+0.4**
MNAI	**Manna**	**14.77**	**294**	Pn		**Pn**	**21 31 35.5**	**-1.3**
SAUI	**Saumlaki**	**14.82**	**81**	Pn		**Pn**	**21 31 39.5**	**+2.2**
TNTI	**Ternate**	**15.59**	**44**	Pn		**Pn**	**21 31 45.2**	**-2.3**
TNTI				IAmb		IAmb	21 31 53.9	
	comp=Z,20nm,0.7s							
MYLDM	**Lahad Datu**	**15.74**	**7**	Pn		**Pn**	**21 31 48.8**	**-0.7**
SIJI	**Sorong**	**17.53**	**58**	P		**Pn**	**21 32 10.9**	**-1.3**
	comp=Z,2.3nm,0.3s,baz=284,slow=5.6,SNR=11							
	comp=Z,15nm,0.5s							
MORW	**Morawa**	**18.44**	**181**	P		**Pn**	**21 32 23.3**	**+0.2**
MORW				IAmb		IAmb	21 32 24.0	
	comp=Z,58nm,1.9s							
WB0	**Warramunga Arr**	**19.53**	**120**			**Pn**	**21 32 36.1**	**-0.2**
WRA	**Warramunga Arr**	**19.56**	**121**	P		**Pn**	**21 32 39.4**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=293,slow=12,SNR=20							
WRA				S		**S**	**21 36 05.6**	**-8.8**
	comp=Z,1.2nm,0.7s,baz=304,slow=13,SNR=4.9							
	comp=Z,1.1nm,0.5s							
WRA	**Warramunga Arr**	**19.56**	**121**	P		**Pn**	**21 32 36.5**	**-0.3**
WRAB	**Tennant Creek**	**19.56**	**121**	P		**Pn**	**21 32 37.4**	**+0.6**
DAV	**Davao City (W)**	**19.69**	**28**	LR		LR	21 40 40.1	
	comp=Z,186nm,21.8s,baz=202,slow=39							
WR8	**Warramunga Arr**	**19.70**	**120**	P		**Pn**	**21 32 39.6**	**+1.2**
AS31	**Alice Springs**	**21.10**	**130**			**P**	**21 32 55.4**	**+3.4**
ASAR	**Alice Springs**	**21.10**	**130**	P		**P**	**21 32 56.8**	**+4.8**
	comp=Z,12nm,0.8s,baz=305,slow=10,SNR=95							
ASAR				pP		**pwP**	**21 33 07.8**	**+3.3**
	comp=Z,9.6nm,0.6s,baz=302,slow=9.7,SNR=16							
ASAR				S		**S**	**21 36 45.6**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=306,slow=24,SNR=8.8							
ASAR				LR		LR	21 40 57.2	
	comp=Z,111nm,19.9s,baz=314,slow=36							
	comp=Z,12nm,0.8s							
ASAR	**Alice Springs**	**21.10**	**130**			**P**	**21 32 55.9**	**+3.9**
IPM	**Ipoh**	**21.46**	**313**	P		**P**	**21 32 56.1**	**+0.3**
RPSI	**Rantau Prapat**	**21.90**	**306**	P		**P**	**21 32 59.6**	**-0.9**
GSI	**Gunungsitoli**	**22.21**	**301**	P		**P**	**21 33 02.9**	**-1.1**
NWAO	**Narrogin (SRO)**	**22.29**	**178**	LR		LR	21 42 47.1	
	comp=Z,150nm,18.8s,baz=92,slow=38							
NWAO	**Narrogin (SRO)**	**22.29**	**178**	P		**P**	**21 33 05.7**	**+1.1**
NWAO				IAmb		IAmb	21 33 24.5	
	comp=Z,83nm,1.6s							
KULM	**Kulim**	**22.29**	**314**	P		**P**	**21 33 04.1**	**-0.6**
FORT	**Forrest**	**22.82**	**154**	P		**P**	**21 33 11.2**	**+1.0**
LHMI	**Lhok Sumawe**	**25.00**	**308**	P		**P**	**21 33 29.3**	**-1.7**
COEN	**Coen**	**26.27**	**100**	P		**P**	**21 33 44.1**	**+1.4**
INKA	**Innaminka**	**28.49**	**130**	P		**P**	**21 34 02.5**	**+0.1**
BBOO	**Buckleboo**	**28.55**	**144**	P		**P**	**21 34 04.9**	**+2.0**
BBOO				IAmb		IAmb	21 34 47.5	
	comp=Z,19nm,1.2s							
QIZ	**Qiongzhong**	**30.11**	**347**	P		**P**	**21 34 16.4**	**-0.4**
STKA	**Stephens Creek**	**31.44**	**136**	P		P	21 34 34.1	+5.7
	comp=Z,1.5nm,0.6s,baz=315,slow=13,SNR=2.3							
STKA				LR		LR	21 47 49.5	
	comp=Z,86nm,20.1s,baz=334,slow=37							
	comp=Z,1.5nm,0.6s							
STKA	**Stephens Creek**	**31.44**	**136**	P		**P**	**21 34 27.7**	**-0.8**
STKA				IAmb		IAmb	21 35 25.7	
	comp=Z,66nm,1.5s							
PBA	**Port Blair**	**32.31**	**312**	P		**P**	**21 34 35.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**33.63**	**329**	P		**P**	**21 34 47.8**	**0.0**
	comp=Z,2.3nm,0.9s,baz=155,slow=7.1,SNR=17							
CMAR				LR		LR	21 50 25.7	
	comp=Z,68nm,19.3s,baz=290,slow=40							
	comp=Z,2.3nm,0.9s							
CMAR	**Chiang Mai Arr**	**33.63**	**329**	P		**P**	**21 34 46.6**	**-1.2**
TPUB	**Ta-pu**	**33.88**	**7**	P		**P**	**21 34 48.9**	**-1.0**
CHTO	**Chiang Mai**	**33.93**	**329**	P		**P**	**21 34 49.9**	**-0.4**
PALK	**Pallekele**	**39.80**	**295**	LR		LR	21 53 46.1	
	comp=Z,74nm,18.4s,baz=148,slow=39							
ENH	**Enshi**	**41.14**	**351**			**P**	**21 35 50.0**	**-1.2**
LSA	**Lhasa**	**46.88**	**329**			**P**	**21 36 38.0**	**+0.1**
LSA				IAmb		IAmb	21 36 39.0	
	comp=Z,3.5nm,0.8s							
LZDM	**Lanzhou Array**	**47.80**	**346**	P		**P**	**21 36 42.3**	**-2.5**
	comp=Z,2.8nm,0.4s,baz=198,slow=9.2,SNR=5.3							
	comp=Z,2.8nm,0.4s							
EVN	**Everest**	**47.87**	**324**	IAmb		IAmb	21 37 00.0	
	comp=Z,15nm,1.3s							
KSRS	**Korea Array**	**48.93**	**12**	P		**P**	**21 36 53.4**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=199,slow=7.4,SNR=8.1							
KSRS				LR		LR	22 00 01.3	
	comp=Z,22nm,18.7s,baz=175,slow=39							
	comp=Z,2.2nm,0.8s							
MJAR	**Matsushiro Arr**	**51.09**	**22**	P		**P**	**21 37 08.4**	**-1.1**
	comp=Z,3.9nm,0.8s,baz=188,slow=8.8,SNR=11							
MJAR				pP		**pP**	**21 37 19.9**	**+1.3**
	comp=Z,2.8nm,0.9s,baz=189,slow=8.7,SNR=3.6							
	comp=Z,3.9nm,0.8s							
MJB9	**Matsu-Tunnel**	**51.10**	**22**	P		**P**	**21 37 09.4**	**-0.1**
MJB9				IAmb		IAmb	21 38 35.3	
	comp=Z,46nm,1.6s							
USRK	**Ussuriysk Ar.**	**56.27**	**13**	P		**P**	**21 37 48.3**	**+1.1**
	comp=Z,4.9nm,0.7s,baz=204,slow=3.2,SNR=6.7							
	comp=Z,4.9nm,0.7s							
WKZ	**Wanaka**	**56.38**	**137**	P		**P**	**21 37 49.5**	**+1.3**
LTZ	**Lake Taylor**	**57.97**	**134**	P		**P**	**21 37 59.8**	**+0.3**
SONM	**Songino Array**	**58.81**	**352**	P		**P**	**21 38 04.7**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=170,slow=7.6,SNR=25							
SONM				PcP		**PcP**	**21 38 56.2**	**+1.6**
	comp=Z,1.3nm,0.6s,baz=171,slow=4.9,SNR=4.6							
	comp=Z,2.8nm,0.7s							
SONM	**Songino Array**	**58.81**	**352**	P		**P**	**21 38 04.6**	**-0.6**
HIZ	**Hauiti**	**58.83**	**129**	P		**P**	**21 38 06.2**	**+0.7**
ASAJ	**Asahikawa**	**59.34**	**22**	LR		LR	22 05 19.3	
	comp=Z,26nm,19.3s,baz=248,slow=38							
JKA	**Kamikawa-asahi**	**59.34**	**22**	P		**P**	**21 38 08.1**	**-0.7**
JKA				IAmb		IAmb	21 38 40.5	
	comp=Z,44nm,1.9s							
NIL	**Nilore**	**60.19**	**319**			**P**	**21 38 13.2**	**-1.8**
NIL				IAmb		IAmb	21 38 14.5	
	comp=Z,4.8nm,0.6s							
HEH	**HeiHe**	**61.28**	**8**	*e*P		**P**	**21 38 21.3**	**-0.7**
HEH				pmax		pmax		
	comp=Z,10.0nm,0.9s							
WUS	**Wushi**	**61.90**	**329**			**P**	**21 38 26.4**	**-0.1**
WUS				IAmb		IAmb	21 38 27.5	
	comp=Z,5.0nm,0.8s							
TARG	**Taragay, Kyrgy**	**63.01**	**328**	P		**P**	**21 38 34.4**	**+0.1**
TARG				IAmb		IAmb	21 40 43.9	
	comp=Z,22nm,1.7s							
KBL	**Kabul**	**63.50**	**317**			**P**	**21 38 37.0**	**-0.4**
KBL				IAmb		IAmb	21 38 37.8	
	comp=Z,11nm,0.7s							
KDJ	**Kajisay**	**63.62**	**328**	P		**P**	**21 38 38.6**	**+0.6**
NRN	**Naryn**	**63.75**	**327**	P		**P**	**21 38 37.8**	**-1.3**
NRN				IAmb		IAmb	21 39 52.0	
	comp=Z,11nm,1.6s							
BOOM	**Boomskoye usch**	**64.52**	**328**	P		**P**	**21 38 44.1**	**+0.1**
MKAR	**Makanchi Array**	**64.75**	**335**	P		**P**	**21 38 44.9**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=152,slow=7.0,SNR=56							
	comp=Z,3.6nm,0.6s							
MAKZ	**Makanchi**	**64.89**	**335**	P		**P**	**21 38 45.6**	**-0.5**
MAKZ				IAmb		IAmb	21 39 54.9	
	comp=Z,6.4nm,1.7s							
ARSB	**Arslanbob**	**65.33**	**325**	P		**P**	**21 38 49.0**	**-0.1**
ARSB				IAmb		IAmb	21 38 50.5	
	comp=Z,15nm,0.7s							
GAR	**Garm**	**65.39**	**322**	P		**P**	**21 38 49.5**	**-0.1**
AAK	**Ala-Archa**	**65.39**	**327**	P		**P**	**21 38 50.0**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=154,slow=6.8,SNR=21							
	comp=Z,5.8nm,0.8s							
AAK	**Ala-Archa**	**65.39**	**327**			**P**	**21 38 48.1**	**-1.4**
AAK				IAmb		IAmb	21 38 51.0	
	comp=Z,6.1nm,0.8s							
SHAA	**Shahritus**	**65.88**	**319**	IAmb		IAmb	21 38 51.4	
	comp=Z,8.6nm,0.6s							
CHGR	**Chuyangaron**	**65.89**	**321**			**P**	**21 38 52.2**	**-0.6**
KK31	**Karatay Array**	**67.88**	**325**			**P**	**21 39 04.5**	**-0.8**
KK31				IAmb		IAmb	21 39 07.0	
	comp=Z,13nm,1.9s							
KKAR	**Karatay Array**	**67.88**	**325**			**P**	**21 39 04.9**	**-0.4**
KURBB	**Kurchatov Arra**	**69.29**	**335**	P		**P**	**21 39 14.0**	**+0.2**
	comp=Z,4.7nm,0.7s,baz=149,slow=5.1,SNR=36							
KURBB				pP		**sP**	**21 39 26.6**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=147,slow=6.1,SNR=6.6							
	comp=Z,4.7nm,0.7s							
KURK	**Kurchatov**	**69.33**	**335**			**P**	**21 39 14.2**	**+0.1**
KURK				IAmb		IAmb	21 39 14.8	
	comp=Z,6.7nm,0.7s							
ZAA0	**Zalesovo Array**	**69.64**	**341**			**P**	**21 39 15.1**	**-0.8**
ZAA0				IAmb		IAmb	21 39 15.8	
	comp=Z,5.5nm,0.7s							
ZALV	**Zalesovo Beam**	**69.64**	**341**	P		**P**	**21 39 15.2**	**-0.7**
	comp=Z,5.8nm,0.5s,baz=143,slow=4.9,SNR=30							
ZALV				pP		**sP**	**21 39 27.8**	**-1.1**
	comp=Z,3.0nm,0.5s,baz=167,slow=5.6,SNR=8.7							
	comp=Z,5.8nm,0.5s							
ZALV	**Zalesovo Beam**	**69.64**	**341**			**P**	**21 39 15.0**	**-0.9**
PEA0B	**Petropavlovsk-**	**72.47**	**25**	P		**P**	**21 39 33.5**	**+0.3**
PETK	**Petropavlovsk-**	**72.47**	**25**	P		**P**	**21 39 32.7**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=173,slow=6.0,SNR=3.8							
	comp=Z,3.6nm,0.8s							
PETK	**Petropavlovsk-**	**72.47**	**25**	P		**P**	**21 39 34.1**	**+0.9**
BVAR	**Borovoye Array**	**74.52**	**333**	P		**P**	**21 39 45.4**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=144,slow=7.6,SNR=21							
BVAR				pP		**sP**	**21 39 57.8**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=149,slow=6.2,SNR=9.2							
BVAR				LR		LR	22 15 12.2	
	comp=Z,28nm,20.0s,baz=108,slow=38							
	comp=Z,3.7nm,0.7s							
BORK	**Borovoye**	**74.57**	**333**			**P**	**21 39 46.0**	**+0.5**
BORK				IAmb		IAmb	21 39 46.6	
	comp=Z,4.2nm,0.8s							
MIDW	**Midway**	**74.58**	**57**	P		**P**	**21 39 45.3**	**-0.8**
RAYN	**Ar Rayn**	**77.20**	**297**			**P**	**21 40 01.8**	**+0.6**
RAYN				IAmb		IAmb	21 40 03.1	
	comp=Z,4.4nm,0.9s							
AB31	**Akbulak array**	**77.43**	**326**			**P**	**21 40 02.0**	**+0.2**
AB31				IAmb		IAmb	21 40 03.5	
	comp=Z,7.4nm,0.8s							
ABKAR	**Akbulak array**	**77.43**	**326**			**P**	**21 40 02.2**	**+0.3**
AKTO	**Aktyubinsk**	**79.11**	**326**	P		**P**	**21 40 12.0**	**+0.8**
	comp=Z,8.3nm,0.9s,baz=125,slow=4.0,SNR=25							
AKTO				pP		**sP**	**21 40 24.5**	**+0.2**
	comp=Z,5.6nm,0.6s,baz=109,slow=5.5,SNR=12							
	comp=Z,8.3nm,0.9s							
ARTI	**Arti**	**82.08**	**332**	P		**P**	**21 40 27.2**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=96,slow=4.0,SNR=8.3							
ARTI				LR		LR	22 20 04.6	
	comp=Z,34nm,18.4s,baz=354,slow=38							
	comp=Z,3.3nm,0.6s							
ARTI	**Arti**	**82.08**	**332**	P		**P**	**21 40 27.5**	**+0.5**
ARTI				IAmb		IAmb	21 40 27.9	
	comp=Z,5.8nm,0.8s							
TIXI	**Tiksi**	**82.42**	**4**			**P**	**21 40 28.1**	**-0.2**
TIXI				IAmb		IAmb	21 40 28.6	
	comp=Z,8.0nm,1.1s							
GEVA	**Gevas**	**83.80**	**311**	P		**P**	**21 40 38.1**	**+1.7**
GEVA				IAmb		IAmb	21 40 39.7	
	comp=Z,7.9nm,0.9s							
KIWB	**Kanaga Island**	**84.13**	**35**	P		**P**	**21 40 38.8**	**+1.2**
ADK	**Adak**	**84.41**	**35**	P		**P**	**21 40 39.5**	**+0.5**
KBZ	**Khabaz**	**85.65**	**316**	P		**P**	**21 40 48.1**	**+2.8**
	comp=Z,2.3nm,0.7s,baz=118,slow=8.6,SNR=5.9							
	comp=Z,2.3nm,0.7s							
MMAI	**Mount Meron Ar**	**88.33**	**304**	P		**P**	**21 41 02.2**	**+3.3**
	comp=Z,3.2nm,0.8s,baz=96,slow=7.6,SNR=8.6							
	comp=Z,3.2nm,0.8s							
BRTR	**Keskin Array B**	**91.24**	**310**	P		**P**	**21 41 13.6**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=131,slow=5.8,SNR=12							
BRTR				pP		**sP**	**21 41 26.4**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=115,slow=4.8,SNR=5.9							
	comp=Z,2.1nm,0.8s							
BRTR	**Keskin Array B**	**91.24**	**310**	P		**P**	**21 41 12.8**	**+0.5**
G16K	**Koyuk River**	**95.83**	**25**	P		**P**	**21 41 34.1**	**+1.4**
G16K				IAmb		IAmb	21 41 35.4	
	comp=Z,2.9nm,0.8s							
J16K	**Anvik River**	**96.15**	**27**	P		**P**	**21 41 35.5**	**+1.3**
J16K				IAmb		IAmb	21 44 57.4	
	comp=Z,12nm,1.7s							
D19K	**Kuna River**	**98.03**	**22**	P		Pdif	21 41 44.0	+1.2
G19K	**Purcell Mounta**	**98.10**	**24**	P		Pdif	21 41 44.9	+1.9
M20K	**Styx River**	**99.38**	**29**	P		**Pdif**	**21 41 49.8**	**+0.8**
FINES	**FINESS Array B**	**99.38**	**331**	P		**Pdif**	**21 41 49.5**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=108,slow=8.8,SNR=3.4							
	comp=Z,2.6nm,0.8s							
B21K	**Ikpikpuk River**	**99.41**	**21**	P		**Pdif**	**21 41 50.0**	**+1.3**
B21K				IAmb		IAmb	21 44 47.8	
	comp=Z,12nm,1.8s							
IMAR	**Indian Mountai**	**99.44**	**25**	P		**Pdif**	**21 41 50.6**	**+1.6**
NVAR	**Mina Array Bea**	**123.89**	**51**	PKP		**PKiKP**	**21 47 09.7**	**+4.0**
	comp=Z,0.6nm,0.6s,baz=193,slow=4.0,SNR=3.5							

IDC ***27*** *21:41:29.5±2.7, 36°.24S×100°.14W, h0km, mb4.1/6, mbtmp4.1/6, MS3.9/22, Error ellipse: s-maj=83.1km s-min=28.3km az=33.0*

NEIC ***27*** *21:41:30.7±1.8, 36°.5S±0°.1×100°.3W±0°.2, h10km±2km, mb4.7/47, Error ellipse: s-maj=28.9km s-min=19.9km az=234.0*

GCMT ***27*** *21:41:33.7±0.3, 36°.31S±0°.02×99°.94W±0°.02, h27km±1km, MW5.0/99, Moment Tensor Solution. s28,c33; s99,c130; Duration: 0 1016Nm; Mrr-1.34±.19; Mθθ-0.26±.14; Mφφ 1.60±.14; Mrθ 0.49±.22; Mθφ-3.23±.10; Mφr-0.22±.20; Best double couple: M0 3.40600×1016 NP1: φs188.00000°, δ79.00000°, λ-4.00000°. NP2: φs279.00000°, δ86.00000°, λ-169.00000°. Principal axes: T 4.0710, Plg5.0000°, Azm53.0000°; N -1.3320, Plg78.0000°, Azm298.0000°; P -2.7420, Plg11.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 21:41:31.1±1.8, 36°.4S±0°.2×100°.1W±0°.2, h10km, n84, σ1s07/54, mb4.6/29, MS3.9/21, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**12.12**	**317**	LR	LR	21 47 38.0	
	comp=Z,872nm,20.3s,baz=128,slow=31						
VA02	**Isla de Pascua**	**12.14**	**317**	Pn	Pn	21 44 21.5	-2.7
H03S2	**Juan Fernandez**	**17.52**	**88**	T	T	22 03 30.3	
	baz=254,slow=75,SNR=53						
H03S1	**Juan Fernandez**	**17.54**	**88**	T	T	22 03 34.9	
	baz=254,slow=75,SNR=41						
H03S3	**Juan Fernandez**	**17.54**	**88**	T	T	22 03 32.1	
	baz=254,slow=75,SNR=33						
H03N2	**Juan Fernandez**	**17.62**	**87**	T	T	22 03 34.1	
	baz=248,slow=72,SNR=52						
H03N3	**Juan Fernandez**	**17.62**	**87**	T	T	22 03 33.8	
	baz=248,slow=72,SNR=64						
H03N1	**Juan Fernandez**	**17.63**	**87**	T	T	22 03 33.1	
	baz=248,slow=72,SNR=65						
LR04	**Corral**	**21.25**	**108**	P	**P**	**21 46 16.0**	**-1.3**
GO07	**Milladeo Hill,**	**21.36**	**116**	P	**P**	**21 46 19.1**	**+0.6**
GO07				IAmb	IAmb	21 46 25.3	
	comp=Z,37nm,0.7s						
LL07	**Hotel Espejo d**	**21.45**	**116**	P	**P**	**21 46 19.8**	**+0.3**
AY01	**Puyuhuapi**	**22.32**	**120**	P	**P**	**21 46 29.4**	**+0.6**
AY01				IAmb	IAmb	21 46 39.2	
	comp=Z,18nm,0.9s						
LR05	**Currie**	**22.34**	**108**	P	**P**	**21 46 24.7**	**-4.4**
LR05				IAmb	IAmb	21 46 27.4	
	comp=Z,27nm,1.4s						
LL02	**Futaleuf**	**22.68**	**116**	P	**P**	**21 46 32.9**	**+0.2**
GO06	**Currarrehue**	**22.75**	**107**	P	**P**	**21 46 33.9**	**+0.3**
COYC	**Coyhaique**	**22.96**	**122**	P	**P**	**21 46 35.9**	**+0.3**
COYC				IAmb	IAmb	21 46 39.9	
	comp=Z,14nm,1.1s						
BI02	**San Fabin de**	**23.14**	**99**	P	**P**	**21 46 39.0**	**+1.4**
BI02				IAmb	IAmb	21 46 47.8	
	comp=Z,21nm,1.4s						
PLCA	**Paso Flores**	**23.46**	**110**	P	**P**	**21 46 41.4**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=298,slow=9.5,SNR=6.3						
	comp=Z,3.8nm,0.9s						
PLCA	**Paso Flores**	**23.46**	**110**	P	**P**	**21 46 42.1**	**+1.3**
BO02	**Sierra Bellavi**	**23.87**	**95**	P	**P**	**21 46 45.8**	**+1.0**
CO06	**Fray Jorge**	**24.37**	**85**	P	**P**	**21 46 49.9**	**+0.6**
CO06				IAmb	IAmb	21 47 06.9	
	comp=Z,47nm,1.5s						
CO04	**Los Peladeros**	**24.44**	**88**	P	**P**	**21 46 50.7**	**+0.3**
CO04				IAmb	IAmb	21 47 00.2	
	comp=Z,23nm,1.1s						
MT13	**San Alfonso**	**24.51**	**93**	P	**P**	**21 46 51.6**	**+0.8**
MT13				IAmb	IAmb	21 47 03.1	
	comp=Z,26nm,1.4s						
VA03	**San Esteban**	**24.56**	**90**	P	**P**	**21 46 51.1**	**-0.2**

comp=Z,1.8nm,1.0s
TXAR Lajitas Array 65.47 357 P **P** 21 52 13.4 -0.9
RCBR Riachuelo 65.87 79 LR LR 22 18 09.3
comp=Z,26nm,21.2s,baz=244,slow=33
MNTX Cornudas Mount 67.92 355 P **P** 21 52 30.5 +0.6
ANMO Albuquerque 71.22 354 LR LR 22 17 49.6
comp=Z,51nm,21.0s,baz=168,slow=31
PFO Pinyon Flats O 71.30 346 LR LR 22 16 04.5
comp=Z,74nm,20.8s,baz=308,slow=29
TKL Tuckaleechee C 73.28 14 LR LR 22 21 56.1
comp=Z,38nm,18.2s,baz=168,slow=33
LHV Little Huntoon 76.20 345 P **P** 21 53 19.6 +0.3
LHV IAmb IAmb 21 53 40.3
comp=Z,6.4nm,1.4s
P43A Skaggs, Pawnee 76.29 8 P **P** 21 53 20.3 +0.5
NVAR Mina Array Bea 76.33 345 P **P** 21 53 20.1 -0.2
comp=Z,1.9nm,0.9s,baz=182,slow=4.8,SNR=6.4
NVAR LR LR 22 19 19.2
comp=Z,37nm,18.2s,baz=234,slow=30
comp=Z,1.9nm,0.9s
O52A Adamsville 77.97 14 P **P** 21 53 30.4 +1.1
ELK Elko 78.01 348 **P** 21 53 30.6 +0.9
PD31 Pinedale Array 79.26 353 **P** 21 53 35.8 -0.8
PDAR Pinedale Array 79.26 353 P **P** 21 53 35.4 -1.2
comp=Z,1.7nm,0.9s,baz=165,slow=6.2,SNR=8.6
comp=Z,1.7nm,0.9s
PDAR Pinedale Array 79.26 353 P **P** 21 53 35.1 -1.5
HLID Hailey 80.64 350 P **P** 21 53 44.3 +0.3
SADO Sadowa 82.99 15 LR LR 22 27 31.1
comp=Z,45nm,20.6s,baz=325,slow=33
SCHQ Schefferville 95.26 19 LR LR 22 33 25.4
comp=Z,70nm,18.1s,baz=218,slow=33
YKA Yellowknife Ar 99.24 353 P **Pdif** 21 55 12.7 +0.4
comp=Z,0.1nm,0.4s,baz=173,slow=3.7,SNR=4.3
comp=Z,0.1nm,0.4s
H01W1 Cape Leeuwin H 102.22 208 T T 23 50 35.7
baz=151,slow=76,SNR=18
H01W2 Cape Leeuwin H 102.22 208 T T 23 50 35.9
baz=151,slow=76,SNR=18
H01W3 Cape Leeuwin H 102.24 208 T T 23 50 36.9
baz=151,slow=76,SNR=18
BRTR Keskin Array B 143.74 70 PKP PKPab 22 01 04.8 +1.5
comp=Z,0.5nm,0.7s,baz=251,slow=4.4,SNR=2.3

IDC 27 21:46:41.7±4.2, 39.00N×109.71E, h0km, mb3.2/1, mbtmp3.2/2, ML2.5/1, Error ellipse: s-maj=81.7km s-min=25.4km az=95.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**5.66**	**239**	Pg	Pb	21 48 24.2	+2.7
	baz=48,slow=18						
SONM	**Songino Array**	**9.16**	**346**	Pn	Pn	21 48 54.0	-1.1
	baz=157,slow=12,SNR=6.1						
SONM				Lg	Lg	21 51 35.1	
	baz=154,slow=27,SNR=4.6						
	0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**22.50**	**208**	P	P	21 51 43.3	+0.4
	0.6nm,0.6s,baz=13,slow=9.8,SNR=6.2						
	0.6nm,0.6s						

*KRSC **27** 22:04:34.2±0.7, 55.67N×161.40E, h123km±7km, Ml3.8*
*IDC **27** 22:04:37.7±2.6, 55.57N×161.13E, h145km±33km, mb3.3/9, mbtmp3.8/9, MS3.3/1, Error ellipse: s-maj=35.1km s-min=19.2km az=179.0*
ISC 27 22:04:35.7±0.7, 55.66N±0.04×161.37E±0.04, h122km±5km, n46, σ0.89/61, mb3.7/9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BZGR	**Bezymyannyi-Gr**	**0.47**	**307**	*eP*	**Pn**	**22 04 53.9**	**0.0**
BZGR				*eS*	**Sn**	**22 05 07.7**	**+0.2**
ZLN	**Zelenaya**	**0.48**	**319**	*eP*	**Pn**	**22 04 53.9**	**0.0**
ZLN				*eS*	**Sn**	**22 05 08.1**	**+0.5**
BZWR	**Bezymyannyi-We**	**0.58**	**302**	*eP*	**Pn**	**22 04 54.5**	**0.0**
BZWR				*eS*	**Sn**	**22 05 09.2**	**+0.4**
KMNR	**Kamenistaya**	**0.65**	**279**	*eP*	**Pn**	**22 04 55.4**	**+0.5**
KMNR				*eS*	**Sn**	**22 05 10.5**	**+1.1**
KIRR	**Kirishev**	**0.65**	**298**	*eP*	**Pn**	**22 04 54.8**	**-0.2**
TUMD	**Tumrok D**	**0.71**	**231**	*eP*	**Pn**	**22 04 55.2**	**-0.2**
TUMD				*eS*	**Sn**	**22 05 10.4**	**+0.2**
KPT	**Kopyto**	**0.72**	**296**	*eP*	**Pn**	**22 04 54.8**	**-0.6**
KPT				*eS*	**Sn**	**22 05 09.8**	**-0.6**
KLY	**Klyuchi**	**0.77**	**329**	*eP*	**Pn**	**22 04 54.9**	**-0.8**
KLY				*eS*	**Sn**	**22 05 09.9**	**-1.0**
SMKR	**Semkarok**	**0.93**	**3**	*eP*	**Pn**	**22 04 57.2**	**-0.1**
KOZ	**Kozyrevsk**	**0.93**	**296**	*eP*	**Pn**	**22 04 56.8**	**-0.4**
KOZ				*eS*	**Sn**	**22 05 13.1**	**-0.5**
KBG	**Krutoberegovo**	**0.96**	**51**	*eP*	**Pn**	**22 04 57.4**	**0.0**
KBG				*eS*	**Sn**	**22 05 14.0**	**+0.1**
KBTR	**Krutoberegovo**	**0.99**	**55**	*eP*	**Pn**	**22 04 57.8**	**+0.1**
KBTR				*eS*	**Sn**	**22 05 14.3**	**-0.1**
MKZ	**Mys Kozlova**	**1.12**	**169**	*eP*	**Pn**	**22 04 58.7**	**-0.3**
MKZ				*eS*	**Sn**	**22 05 16.9**	**+0.1**
SRDR	**Sredinnyy**	**1.14**	**306**	*eP*	**Pn**	**22 04 59.0**	**-0.3**
SRDR				*eS*	**Sn**	**22 05 17.0**	**-0.2**
ESO	**Esso**	**1.53**	**281**	*eP*	**Pn**	**22 05 04.0**	**+0.4**
ESO				*eS*	**Sn**	**22 05 24.7**	**-0.1**
BKI	**Bering**	**2.66**	**98**	*eP*	**Pn**	**22 05 18.0**	**+0.4**
BKI				*eS*	**Sn**	**22 05 48.7**	**-1.1**
SPN	**Mys Shipunskii**	**2.68**	**198**	*eP*	**Pn**	**22 05 18.0**	**+0.1**
SPN				*eS*	**Sn**	**22 05 47.7**	**-2.6**
NLC	**Nalytchevo**	**2.76**	**206**	*eP*	**Pn**	**22 05 19.0**	**+0.1**
SDLR	**Sedlovina**	**2.79**	**212**	*eP*	**Pn**	**22 05 19.9**	**+0.5**
KRX	**Arik**	**2.79**	**216**	*eP*	**Pn**	**22 05 19.5**	**0.0**
GNL	**Ganaly**	**2.80**	**227**	*eP*	**Pn**	**22 05 20.6**	**+1.1**
KRER	**Koryakskii**	**2.81**	**214**	*eP*	**Pn**	**22 05 21.5**	**+1.7**
SMAR	**Somma**	**2.83**	**213**	*eP*	**Pn**	**22 05 21.4**	**+1.4**
KOK	**Koryaka**	**2.86**	**215**	*eP*	**Pn**	**22 05 21.5**	**+1.2**
UGLR	**Uglovaya**	**2.87**	**212**	*eP*	**Pn**	**22 05 21.9**	**+1.5**
DALK	**Dalny**	**3.04**	**211**	*eP*	**Pn**	**22 05 23.4**	**+0.8**
PET	**Petropavlovsk**	**3.08**	**212**	*eP*	**Pn**	**22 05 23.7**	**+0.7**
PETK	**Petropavlovsk-**	**3.33**	**222**	P	**Pn**	**22 05 26.9**	**+0.5**
	4.2nm,0.4s,baz=68,slow=15,SNR=5.5						
KRMR	**Karymshinskiy**	**3.41**	**215**	*eP*	**Pn**	**22 05 28.0**	**+0.6**
PALN	**Palana**	**3.52**	**348**	*eP*	**Pn**	**22 05 28.9**	**+0.1**
GRL	**Gorelyy**	**3.67**	**213**	*eP*	**Pn**	**22 05 31.7**	**+0.8**
APC	**Apacha**	**3.68**	**224**	*eP*	**Pn**	**22 05 32.4**	**+1.4**
MTVR	**Mutnovka**	**3.69**	**212**	*eP*	**Pn**	**22 05 31.9**	**+0.6**
OSSR	**Ossora**	**3.72**	**14**	*eP*	**Pn**	**22 05 31.1**	**-0.3**
OSSR				*eS*	**Sn**	**22 06 14.4**	**-0.1**
ASAK	**Asacha**	**3.87**	**213**	*eP*	**Pn**	**22 05 34.3**	**+0.8**
KDTR	**Khodutka, Kamc**	**4.32**	**208**	*eS*	**Sn**	**22 06 26.4**	**-2.6**
TIXI	**Tiksi**	**21.11**	**332**	P	**P**	**22 09 10.9**	**+0.7**
	3.1nm,0.5s,baz=118,slow=7.9,SNR=17						
	3.1nm,0.5s						
ILAR	**Eielson Array**	**26.52**	**49**	P	**P**	**22 10 02.0**	**+0.5**
	0.2nm,0.4s,baz=262,slow=8.7,SNR=6.3						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**40.79**	**45**	P	**P**	**22 12 05.3**	**+0.8**
	0.2nm,0.4s,baz=310,slow=10,SNR=2.9						
	0.2nm,0.4s						
SPITS	**Spitsbergen Ar**	**44.73**	**350**	P	**P**	**22 12 36.9**	**+0.8**
	2.2nm,0.5s,baz=55,slow=7.2,SNR=11						
	2.2nm,0.5s						
KURBB	**Kurchatov Arra**	**47.15**	**300**	P	**P**	**22 12 54.1**	**-1.2**
	0.6nm,0.5s,baz=54,slow=7.9,SNR=6.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**47.75**	**294**	P	**P**	**22 12 59.1**	**-0.9**
	0.7nm,0.5s,baz=52,slow=6.2,SNR=12						
	0.7nm,0.5s						
FRB	**Frobisher Bay**	**54.86**	**25**	LR	LR	22 39 59.9	
	comp=Z,26nm,18.1s,baz=246,slow=39						
FINES	**FINESS Array B**	**58.06**	**337**	P	**P**	**22 14 14.1**	**-1.4**
	6.6nm,1.1s,baz=34,slow=7.1,SNR=5.1						
	6.6nm,1.1s						
NOA	**NORSAR Array B**	**61.28**	**344**	P	**P**	**22 14 36.2**	**-1.4**
	0.7nm,0.7s,baz=17,slow=7.0,SNR=2.4						
	0.7nm,0.7s						
TXAR	**Lajitas Array**	**68.98**	**69**	P	**P**	**22 15 28.9**	**+1.1**
	0.2nm,0.6s,baz=300,slow=5.5,SNR=3.7						
	0.2nm,0.6s						

*IDC **27** 22:20:33.9±0.6, 54.50S×119.26W, h0km, mb4.4/7, mbtmp4.4/7, MS4.7/47, Error ellipse: s-maj=33.0km s-min=21.1km az=150.0*
*GFZ **27** 22:20:36.9, 54.73S×118.71W, h15km, MW5.2, Moment Tensor Solution. s47 Moment tensor: Mrr1.22; Mθθ3.61; Mφφ-4.84; Mrθ1.10; Mrφ7.56; Mθφ0.76; Fault plane solution: NP1:φs105.00000°, δ82.00000°, λ7.00000°. NP2:φs14.00000°, δ83.00000°, λ172.00000°. Principal axes: T 8.3000, Plg11.0000°, Azm330.0000°; N 0.9700, Plg79.0000°, Azm153.0000°; P -9.2700, Plg1.0000°, Azm60.0000°;*
*NEIC **27** 22:20:36.9, 55.20S×118.59W, h30km, Moment Tensor Solution. Duration: 234 Moment tensor: Scale 10^17Nm; Mrr-0.30; Mθθ1.29; Mφφ-1.00; Mrθ-0.68; Mrφ1.13; Mθφ-0.24; Fault plane solution: Mo1.78000×10^17 NP1: φs201.20000°, δ76.34000°, λ168.68000°. NP2: φs293.91000°, δ79.00000°, λ13.92000°. Principal axes: T 1.9853, Plg18.0000°, Azm158.0000°; N -0.5236, Plg72.0000°, Azm332.0000°; P -1.4618, Plg2.0000°, Azm67.0000°;*
*NEIC **27** 22:20:36.9, 54.50S×118.93W, h30km*
*NEIC **27** 22:20:36.9±1.9, 54.5S±0.1×119.0W±0.2, h10km±1km, mb5.2/94, Mww5.4/16, Error ellipse: s-maj=21.6km s-min=16.9km az=337.0*
*GCMT **27** 22:20:38.9±0.1, 54.77S±0.01×118.71W±0.01, h12km, MW5.3/144, Moment Tensor Solution. s101, c159; s144, c259; Duration: 1ᵻ1 Moment tensor: Scale 10^17 Nm; Mrr-0.17±.01; Mθθ0.63±.02; Mφφ-0.46±.01; Mrθ-0.01±.04; Mrφ0.98±.01; Mθφ0.06±.04; Best double couple: Mo1.12600×10^17 NP1:φs105.00000°, δ87.00000°, λ-2.00000°. NP2:φs195.00000°, δ88.00000°, λ-177.00000°. Principal axes: T 1.2110, Plg1.0000°, Azm330.0000°; N -0.1700, Plg86.0000°, Azm223.0000°; P -1.0410, Plg4.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 22:20:36.0±0.3, 54.63S±0.10×118.87W±0.08, h10km, n200, σ1ᵻ31/157, mb5.1/55, MS4.8/54, 5C-2D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MG05	**Puerto Natales**	**27.57**	**103**	P	**P**	**22 26 22.1**	**-0.8**
MG05				IAmb	IAmb	22 26 23.8	
	comp=Z,64nm,1.2s						
MG04	**Isla Riesco**	**27.62**	**106**	P	**P**	**22 26 23.5**	**+0.3**
GO09	**Cerro Castillo**	**27.83**	**102**	P	**P**	**22 26 23.3**	**-2.0**
RPN	**Rapa Nui**	**28.35**	**18**	LR	LR	22 35 01.0	
	comp=Z,916nm,20.2s,baz=200,slow=31						
RPN	**Rapa Nui**	**28.35**	**18**	P	**P**	**22 26 29.1**	**-0.9**
PMSA	**Palmer Station**	**28.52**	**133**	LR	LR	22 35 03.5	
	comp=Z,3μm,19.1s,baz=277,slow=30						
PLCA	**Paso Flores**	**34.65**	**87**	LR	LR	22 38 12.8	
	comp=Z,877nm,19.6s,baz=226,slow=30						
H03S2	**Juan Fernandez**	**34.72**	**70**	T	T	23 04 01.1	
	baz=219,slow=73,SNR=782						
H03S1	**Juan Fernandez**	**34.72**	**70**	T	T	23 04 01.8	
	baz=219,slow=73,SNR=1147						
H03S3	**Juan Fernandez**	**34.73**	**70**	T	T	23 04 01.0	
	baz=219,slow=73,SNR=944						
H03N3	**Juan Fernandez**	**35.00**	**69**	T	T	23 04 33.1	
	baz=222,slow=72,SNR=4321						
H03N2	**Juan Fernandez**	**35.01**	**69**	T	T	23 04 31.4	
	baz=222,slow=72,SNR=6192						
H03N1	**Juan Fernandez**	**35.02**	**69**	T	T	23 04 31.4	
	baz=222,slow=72,SNR=3011						
VNDA	**Vanda**	**35.15**	**202**	LR	LR	22 38 01.1	
	comp=Z,427nm,19.4s,baz=94,slow=30						
QSPA	**South Pole Qui**	**35.56**	**180**	P	**P**	**22 27 34.7**	**+1.6**
	comp=Z,10nm,1.0s,baz=110,slow=6.1,SNR=6.5						
QSPA				LR	LR	22 40 22.9	
	comp=Z,2μm,19.2s,baz=100,slow=33						
	comp=Z,10nm,1.0s						
QSPA	**South Pole Qui**	**35.56**	**180**	P	**P**	**22 27 34.6**	**+1.5**
BELA	**Belgrano 2**	**36.14**	**159**	P	**P**	**22 27 39.4**	**+1.6**
TRQA	**Tornquist**	**41.39**	**91**		**P**	**22 28 23.1**	**+0.9**
CFA	**Coronel Fontan**	**42.35**	**78**	LR	LR	22 41 58.8	
	comp=Z,600nm,20.5s,baz=196,slow=30						
PPT	**Papeete**	**43.87**	**315**	LR	LR	22 42 18.2	
	comp=Z,2μm,19.4s,baz=145,slow=30						
MRZ	**Mangatainoka R**	**44.67**	**260**	P	**P**	**22 28 50.0**	**+1.2**
VNA3	**Neumayer Olymp**	**44.93**	**154**	⇑P	**P**	**22 28 49.5**	**-0.9**
	comp=Z,13nm,0.8s						
VNA3				⇑ScP	**ScP**	**22 34 22.2**	**-1.4**
BKZ	**Black Stump Fm**	**45.14**	**262**	P	**P**	**22 28 54.4**	**+1.9**
BKZ				IAmb	IAmb	22 29 02.5	
	comp=Z,43nm,1.6s						
LTZ	**Lake Taylor**	**45.17**	**256**	P	**P**	**22 28 53.9**	**+1.2**
RTZ	**Ruatahuna**	**45.23**	**263**		**P**	**22 28 54.4**	**+1.1**
RTZ				IAmb	IAmb	22 28 57.5	
	comp=Z,48nm,1.4s						
RPZ	**Rata Peaks**	**45.26**	**254**	LR	LR	22 43 00.5	
	comp=Z,2μm,21.7s,baz=256,slow=30						
RPZ	**Rata Peaks**	**45.26**	**254**	P	**P**	**22 28 53.1**	**-0.2**
RAR	**Rarotonga**	**45.36**	**301**	LR	LR	22 43 07.7	
	comp=Z,432nm,21.7s,baz=144,slow=30						
URZ	**Urewera**	**45.40**	**264**	LR	LR	22 43 33.8	
	comp=Z,666nm,20.5s,baz=134,slow=30						
THZ	**Tophouse**	**45.48**	**257**	P	**P**	**22 28 57.4**	**+2.2**
THZ				IAmb	IAmb	22 28 58.5	
	comp=Z,51nm,1.2s						
NNZ	**Nelson**	**45.56**	**258**	P	**P**	**22 28 56.2**	**+0.4**
WKZ	**Wanaka**	**45.68**	**251**	P	**P**	**22 28 58.2**	**+1.5**
VNA2	**Neumayer--Watz**	**45.70**	**155**	⇑P	**P**	**22 28 55.8**	**-0.7**
	comp=Z,3.9nm,0.2s,baz=207,slow=6.3						
VNA2				⇑ScP	**ScP**	**22 34 25.9**	**-0.9**
MRNZ	**Matariki Terra**	**45.80**	**257**	P	**P**	**22 28 58.8**	**+1.2**
SNAA	**Sanae**	**46.28**	**157**	LR	LR	22 48 00.9	
	comp=Z,2μm,19.6s,baz=199,slow=35						
HIZ	**Hauiti**	**46.52**	**262**	P	**P**	**22 29 05.0**	**+1.6**
HIZ				IAmb	IAmb	22 29 07.3	
	comp=Z,63nm,1.4s						
TOZ	**Tahuroa Road**	**46.69**	**263**	P	**P**	**22 29 06.8**	**+2.2**
TOZ				IAmb	IAmb	22 29 19.0	
	comp=Z,25nm,1.5s						
TROLL	**Troll, Antarti**	**47.22**	**159**	⇑P	**P**	**22 29 09.0**	**+0.5**
TROLL				⇓ScP	**ScP**	**22 34 33.4**	**+0.1**
RAO	**Raoul Island**	**48.94**	**276**	LR	LR	22 47 19.1	
	comp=Z,260nm,18.1s,baz=116,slow=33						
ELIB	**Princess Elisa**	**50.97**	**166**	*dP*	**P**	**22 29 37.3**	**+0.1**
	comp=Z,5.4nm,1.0s						
CPUP	**Villa Florida**	**52.58**	**83**	LR	LR	22 49 27.4	
	comp=Z,1μm,18.2s,baz=227,slow=33						
NNA	**Nana**	**53.80**	**54**	LR	LR	22 46 44.1	
	comp=Z,545nm,19.2s,baz=200,slow=29						
LPAZ	**La Paz**	**54.54**	**66**	P	**P**	**22 30 04.5**	**-0.3**
	comp=Z,2.6nm,1.1s,baz=182,slow=6.1,SNR=7.6						
LPAZ				LR	LR	22 47 40.1	
	comp=Z,690nm,18.8s,baz=202,slow=30						
	comp=Z,2.6nm,1.1s						
LPAZ	**La Paz**	**54.54**	**66**		**P**	**22 30 04.1**	**-0.7**
ATAH	**Atahualpa**	**57.36**	**50**	LR	LR	22 48 56.7	
	comp=Z,1μm,19.9s,baz=230,slow=30						
AFI	**Afiamalu**	**57.67**	**294**	LR	LR	22 49 26.5	
	comp=Z,512nm,18.9s,baz=138,slow=30						
MAW	**Mawson**	**58.08**	**181**	LR	LR	22 53 36.2	
	comp=Z,353nm,18.7s,baz=174,slow=34						
SIV	**San Ignacio**	**58.61**	**72**	LR	LR	22 51 23.8	
	comp=Z,572nm,21.2s,baz=255,slow=32						
TOO	**Toolangi**	**63.35**	**242**	P	**P**	**22 31 05.4**	**+0.3**
TOO				IAmb	IAmb	22 31 08.7	
	comp=Z,38nm,1.6s						
DZM	**Mont Dzumac**	**63.49**	**269**	LR	LR	22 52 36.2	
	comp=Z,694nm,21.5s,baz=114,slow=30						
DZM	**Mont Dzumac**	**63.49**	**269**	P	**P**	**22 31 07.3**	**+0.9**
OTAV	**Otavalo**	**63.94**	**46**		**P**	**22 31 10.1**	**+0.3**
OTAV				IAmb	IAmb	22 31 29.3	
	comp=Z,13nm,1.2s						
BDFB	**Brasilia**	**66.31**	**84**	LR	LR	22 57 32.8	
	comp=Z,753nm,18.2s,baz=217,slow=33						
STKA	**Stephens Creek**	**69.78**	**243**	P	**P**	**22 31 44.0**	**-2.3**
	comp=Z,2.9nm,0.8s,baz=168,slow=4.2,SNR=4.7						
STKA				LR	LR	22 56 36.1	
	comp=Z,872nm,19.3s,baz=160,slow=31						
	comp=Z,2.9nm,0.8s						
STKA	**Stephens Creek**	**69.78**	**243**	P	**P**	**22 31 43.7**	**-2.6**
ROSC	**El Rosal**	**69.83**	**48**	LR	LR	22 57 14.8	
	comp=Z,622nm,18.9s,baz=225,slow=32						
JTS	**Las Juntas de**	**70.70**	**36**	LR	LR	22 55 14.6	
	comp=Z,540nm,19.9s,baz=211,slow=29						
INKA	**Innaminka**	**73.51**	**245**		**P**	**22 32 08.8**	**0.0**
INKA				IAmb	IAmb	22 32 12.4	
	comp=Z,32nm,1.6s						
CMIG	**Matias Romero**	**74.31**	**24**	LR	LR	22 58 03.2	
	comp=Z,87nm,18.3s,baz=182,slow=30						
SDV	**Santo Domingo**	**75.06**	**50**	LR	LR	23 01 39.1	
	comp=Z,431nm,18.6s,baz=202,slow=33						
CTA	**Charters Tower**	**76.63**	**254**	LR	LR	23 02 02.1	
	comp=Z,390nm,18.7s,baz=121,slow=32						

HNR Honiara 77.27 272 LR LR 22 59 29.5
comp=Z,7.6nm,20.5s,baz=228,slow=30
LPIG La Paz 78.75 8 LR LR 22 59 49.8
comp=Z,425nm,18.9s,baz=206,slow=30
NWAO Narrogin (SRO) 80.36 225 LR LR 23 00 37.4
comp=Z,178nm,18.4s,baz=205,slow=30
ASAR Alice Springs 80.40 243 P **P** **22 32 45.9 -1.8**
comp=Z,6.3nm,1.0s,baz=143,slow=5.0,SNR=26
ASAR LR LR 23 03 49.5
comp=Z,759nm,18.9s,baz=130,slow=32
comp=Z,6.3nm,1.0s
AS31 Alice Springs 80.40 243 **P** **22 32 46.2 -1.5**
MDP Montagnes des 80.70 67 LR LR 23 03 52.8
comp=Z,372nm,20.4s,baz=184,slow=32
RCBR Riachuelo 81.20 88 LR LR 23 07 12.9
comp=Z,180nm,18.0s,baz=217,slow=34
HBVL Hebbronville 83.20 18 P **P** **22 33 03.1 +1.1**
HBVL IAmb IAmb 22 33 06.3
comp=Z,47nm,1.9s
WRA Warramunga Arr 83.23 245 P **P** **22 33 02.1 -0.6**
comp=Z,18nm,1.0s,baz=147,slow=4.8,SNR=65
comp=Z,18nm,1.0s
WRA Warramunga Arr 83.23 245 P **P** **22 33 01.6 -1.1**
WRAB Tennant Creek 83.24 245 P **P** **22 33 01.7 -1.0**
WRAB IAmb IAmb 22 33 03.2
comp=Z,29nm,1.1s
COEN Coen 83.29 255 P **P** **22 33 02.8 -0.2**
COEN IAmb IAmb 22 33 13.3
comp=Z,14nm,1.4s
WB0 Warramunga Arr 83.35 245 P **P** **22 33 02.2 -1.1**
WB0 IAmb IAmb 22 33 03.8
comp=Z,39nm,1.1s
HSIG 83.58 7 P **P** **22 33 04.5 +0.5**
HSIG IAmb IAmb 22 33 06.0
comp=Z,8.2nm,0.6s
BANI BANI 83.65 46 P **P** **22 33 06.5 +1.8**
TXAR Lajitas Array 84.64 13 P **P** **22 33 09.5 0.0**
comp=Z,0.7nm,0.9s,baz=183,slow=9.8,SNR=4.4
TXAR LR LR 23 04 06.5
comp=Z,127nm,18.4s,baz=191,slow=31
comp=Z,0.7nm,0.9s
PMG Port Moresby 84.70 261 LR LR 23 06 43.0
comp=Z,352nm,18.3s,baz=148,slow=33
SJG San Juan 85.20 49 LR LR 23 08 54.3
comp=Z,313nm,18.8s,baz=256,slow=34
VHRN Van Horn 85.91 12 **P** **22 33 16.0 +0.2**
VHRN IAmb IAmb 22 33 28.1
comp=Z,18nm,1.8s
PIX Pinacate 85.96 5 P **P** **22 33 15.5 -0.4**
PIX IAmb IAmb 22 33 25.6
comp=Z,10nm,1.0s
SUR Sutherland 86.64 147 LR LR 23 08 16.4
comp=Z,284nm,18.3s,baz=181,slow=33
MNTX Cornudas Mount 86.76 11 P **P** **22 33 19.6 -0.2**
MNTX IAmb IAmb 22 33 35.8
comp=Z,22nm,2.0s
TUC Tucson 86.86 7 **P** **22 33 21.0 +0.5**
YUH Yuha Desert 86.96 2 P **P** **22 33 21.9 +1.1**
BAR Barrett 86.97 2 P **P** **22 33 20.6 -0.2**
BAR IAmb IAmb 22 33 31.1
comp=Z,12nm,1.4s
435B Jarrell 87.02 18 P **P** **22 33 22.2 +1.0**
113A Mohawk Valley, 87.15 4 P **P** **22 33 22.9 +1.2**
SGCY Sterling City 87.54 15 P **P** **22 33 25.3 +1.6**
BORC Borrego Spring 87.56 2 P **P** **22 33 25.7 +2.0**
PFO Pinyon Flats O 87.91 2 LR LR 23 04 13.0
comp=Z,495nm,19.2s,baz=194,slow=30
BC3 Big Chuckawall 87.97 3 P **P** **22 33 26.2 +0.4**
BC3 IAmb IAmb 22 33 29.6
comp=Z,18nm,1.7s
BLYC Blythe 88.10 4 P **P** **22 33 27.3 +1.1**
BLYC IAmb IAmb 22 33 42.2
comp=Z,9.7nm,1.3s
Y14A Wickenburg 88.35 5 P **P** **22 33 27.6 +0.1**
LENM Lemitar 89.03 10 P **P** **22 33 31.7 +0.9**
PSA00 Pilbara Seismi 89.06 233 P **P** **22 33 31.9 +0.5**
PSA00 Pilbara Seismi 89.06 233 P **P** **22 33 31.3 -0.1**
PSA00 IAmb IAmb 22 33 34.0
comp=Z,80nm,1.9s
APMT Aspermont 89.08 16 **P** **22 33 31.4 +0.5**
APMT IAmb IAmb 22 33 34.2
comp=Z,39nm,1.8s
NEE2 Needles Airpor 89.11 3 P **P** **22 33 32.0 +1.0**
X18A Snowflake 89.13 7 P **P** **22 33 32.1 +0.8**
X18A IAmb IAmb 22 33 40.4
comp=Z,14nm,1.3s
TPO Tropico Hills 89.15 1 P **P** **22 33 32.1 +0.8**
TPO IAmb IAmb 22 36 19.9
comp=Z,9.1nm,0.8s
FITZ Fitzroy Crossi 89.25 239 LR LR 23 07 51.1
comp=Z,403nm,21.1s,baz=148,slow=32
GSC Goldstone, Bar 89.59 2 P **P** **22 33 34.5 +1.2**
GSC IAmb IAmb 22 33 37.3
comp=Z,19nm,1.8s
LRMC Laurel Mtn Rad 89.75 1 P **P** **22 33 35.0 +0.9**
LRMC IAmb IAmb 22 33 37.0
comp=Z,25nm,2.0s
WTFS Witchita Falls 89.78 17 P **P** **22 33 34.5 +0.3**
WTFS IAmb IAmb 22 34 28.8
comp=Z,11nm,0.4s
ANMO Albuquerque 89.85 10 LR LR 23 07 12.0
comp=Z,196nm,18.9s,baz=194,slow=31
ANMO Albuquerque 89.85 10 P **P** **22 33 34.7 0.0**
ANMO Albuquerque 89.85 10 P **P** **22 33 34.4 -0.3**
ANMO IAmb IAmb 22 34 29.9
comp=Z,13nm,0.1s
CLC China Lake 90.09 1 P **P** **22 33 36.8 +1.2**
CLC IAmb IAmb 22 33 38.5
comp=Z,17nm,1.9s
VES Vestal, Richgr 90.11 360 P **P** **22 33 36.4 +0.8**
SHOC Shoshone, Teco 90.19 2 P **P** **22 33 35.9 -0.2**
SHOC IAmb IAmb 22 33 38.8
comp=Z,18nm,1.6s
PKD Bear Valley Ra 90.22 359 P **P** **22 33 36.4 +0.2**
PKD IAmb IAmb 22 33 53.0
comp=Z,8.8nm,1.1s
MPMC Manual Prospec 90.33 1 P **P** **22 33 37.8 +0.9**
Z41A Richland Creek 90.37 22 P **P** **22 33 37.5 +0.7**
Z41A IAmb IAmb 22 34 41.3
comp=Z,16nm,0.6s
GWY Greenwater Val 90.47 2 P **P** **22 33 36.9 -0.6**
SHPR Sheep Range 90.83 3 **P** **22 33 39.9 +0.7**
U15A North Rim 90.87 5 **P** **22 33 39.6 +0.1**
U15A IAmb IAmb 22 33 42.1
comp=Z,15nm,1.7s
WCT Wildcat Mounta 91.08 2 P **P** **22 33 41.6 +1.4**
WCT IAmb IAmb 22 33 44.6
comp=Z,18nm,1.8s
TPNV Topopah Spring 91.24 2 P **P** **22 33 41.8 +0.7**
TPNV IAmb IAmb 22 33 45.4
comp=Z,33nm,2.0s
TIN Tinemaha, Big 91.32 1 P **P** **22 33 41.3 -0.1**
BOSA Boshof 91.52 149 LR LR 23 08 36.1
comp=Z,662nm,20.2s,baz=203,slow=31
DSP Deep Springs 91.64 1 P **P** **22 33 44.0 +1.4**
DSP IAmb IAmb 22 33 46.7
comp=Z,28nm,1.9s
PRN Pahroc Range 91.73 3 P **P** **22 33 44.1 +0.8**
PRN IAmb IAmb 22 37 18.1
comp=Z,6.9nm,0.9s
**MVCO Mesa Verde

PV12	**Saucer Basin,**	**92.98**	**8**	P	**P**	**22 33 48.4**	**-0.8**
PV12				IAmb	IAmb	22 34 02.6	
	comp=Z,14nm,1.3s						
PV10	**Paradox Valley**	**93.02**	**8**	P	**P**	**22 33 48.6**	**-0.8**
PV10				IAmb	IAmb	22 33 57.1	
	comp=Z,27nm,1.6s						
PV04	**Paradox Valley**	**93.05**	**8**	P	**P**	**22 33 49.4**	**-0.1**
PV04				IAmb	IAmb	22 34 05.1	
	comp=Z,23nm,1.6s						
PV23	**Carpenter Ridg**	**93.10**	**8**	P	**P**	**22 33 49.4**	**-0.4**
Q16A	**Castle Valley**	**93.41**	**6**	P	**P**	**22 33 51.6**	**+0.5**
Q16A				IAmb	IAmb	22 33 57.3	
	comp=Z,21nm,1.7s						
JAY	**Jayapura**	**94.00 260**		LR	LR	23 13 35.4	
	comp=Z,230nm,19.3s,baz=180,slow=34						
TKL	**Tuckaleechee C**	**94.86 28**		LR	LR	23 09 28.6	
	comp=Z,97nm,21.7s,baz=185,slow=31						
LBTB	**Lobatse**	**95.00 148**		LR	LR	23 12 17.0	
	comp=Z,428nm,18.4s,baz=206,slow=33						
YBH	**Yreka Blue Hor**	**96.05 357**		LR	LR	23 08 36.6	
	comp=Z,28nm,19.0s,baz=173,slow=30						
BATI	**Baumata**	**96.94 242**		LR	LR	23 13 34.4	
	comp=Z,567nm,20.1s,baz=182,slow=33						
H11N3	**WAKE ISLAND Hy**	**97.12 294**		T	T	00 22 21.1	
	baz=145,slow=75,SNR=58						
H11N1	**WAKE ISLAND Hy**	**97.13 294**		T	T	00 22 19.9	
	baz=145,slow=75,SNR=42						
H11N2	**WAKE ISLAND Hy**	**97.14 294**		T	T	00 22 22.5	
	baz=145,slow=75,SNR=40						
PDAR	**Pinedale Array**	**97.35**	**7**	P	**P**	**22 34 07.5**	**-1.6**
	comp=Z,0.4nm,0.9s,baz=120,slow=5.3,SNR=3.8						
PDAR				LR	LR	23 10 17.3	
	comp=Z,218nm,19.7s,baz=186,slow=31						
	comp=Z,0.4nm,0.9s						
TSUM	**Tsumeb**	**97.60 139**		LR	LR	23 10 55.6	
	comp=Z,308nm,20.7s,baz=180,slow=31						
KIBK	**Kibwezi**	**120.09 153**			**PKiKP**	**22 39 27.4**	**+0.1**
ILAR	**Eielson Array**	**121.00 346**		PKP	**PKPdf**	**22 39 26.6**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=210,slow=1.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**133.79 234**		PKP	**PKPdf**	**22 39 53.6**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=194,slow=2.9,SNR=5.6						
NJ2	**Nanjing**	**133.90 265**		*e*PKP	**PKiKP**	**22 39 54.8**	**+0.7**
ESDC	**Sonseca Array**	**134.94 81**		PKP	**PKiKP**	**22 39 55.9**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=249,slow=2.1,SNR=2.5						
CN2	**Changchun**	**138.04 283**		*e*PKP	**PKPdf**	**22 39 58.3**	**-1.8**
PZH	**PanZhiHua**	**139.17 243**		PKP	**PKPdf**	**22 40 03.3**	**+0.4**
HYB	**Hyderabad**	**140.51 207**		*e*PKiKP	**PKiKP**	**22 40 09.2**	**+1.2**
HEH	**HeiHe**	**140.71 292**		PKP	**PKPdf**	**22 40 04.8**	**0.0**
HEH				LR	LR		
	comp=Z,160nm,18.2s						
HEH				LR	LR		
	comp=Z,260nm,18.4s						
HEH				LR	LR		
	comp=Z,360nm,17.8s						
BJI2	**Beijing**	**140.99 271**		P	**PKiKP**	**22 40 12.3**	**+4.0**
BJI2				pmax	pmax		
	comp=Z,1.0nm,1.7s						
XAN	**Xi'an**	**141.05 258**		PKP	**PKPdf**	**22 40 03.0**	**-3.0**
XLT	**XiLinHaoTe**	**143.47 276**		*e*PKP	**PKPdf**	**22 40 09.3**	**-0.7**
XLT				AMB	AMB		
	comp=Z,49nm,5.0s						
HHC	**Hu-ho-hao-te**	**144.20 269**		*e*PKP	**PKPab**	**22 40 08.8**	**-0.5**
EKA	**Eskdalemuir Ar**	**144.27 62**		PKP	**PKPab**	**22 40 09.0**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=257,slow=2.8,SNR=3.1						
HILR	**Hailar Array B**	**144.55 287**		PKP	**PKPab**	**22 40 10.3**	**+0.1**
	comp=Z,6.4nm,0.8s,baz=142,slow=7.5,SNR=6.3						
BTO2	**Baotou**	**145.11 267**		*e*PKPbc	**PKPbc**	**22 40 13.0**	**+0.4**
BTO2				PP	**PP**	**22 43 34.8**	**+2.4**
BTO2				AMB	AMB		
	comp=Z,380nm,5.4s						
LZDM	**Lanzhou Array**	**145.39 255**		PKPbc	**PKPdf**	**22 40 12.5**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=168,slow=8.5,SNR=5.9						
LZH	**Lanzhou**	**145.40 255**		PKPbc	**PKPdf**	**22 40 14.0**	**+0.2**
LZH				LR	LR		
	comp=Z,120nm,21.3s						
LZH				LR	LR		
	comp=Z,150nm,22.3s						
LZH				LR	LR		
	comp=Z,160nm,22.0s						
RAYN	**Ar Rayn**	**146.81 153**			**PKPab**	**22 40 19.6**	**+0.2**
LSA	**Lhasa**	**147.04 233**		PKPbc	**PKPbc**	**22 40 19.2**	**0.0**
LSA	**Lhasa**	**147.04 233**		P	**PKPdf**	**22 40 13.8**	**-3.3**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LSA	**Lhasa**	**147.04 233**		PKPbc	**PKPdf**	**22 40 13.5**	**-3.6**
TIXI	**Tiksi**	**147.30 327**			**PKPbc**	**22 40 18.0**	**0.0**
EVN	**Everest**	**147.45 225**			**PKPbc**	**22 40 19.9**	**-0.8**
TEOL	**Teolo**	**147.50 86**		PKPdf	**PKPdf**	**22 40 17.7**	**+0.9**
SQTA	**Sankt Quirin**	**148.26 83**		PKiKP	**PKiKP**	**22 40 23.7**	**+0.6**
	comp=Z,17nm,1.6s						
MOTA	**Moosalm**	**148.27 82**		*e*PKP	**PKiKP**	**22 40 23.6**	**+0.3**
	comp=Z,15nm,1.1s						
WATA	**Walderalm**	**148.53 83**		*e*PKiKP	**PKiKP**	**22 40 24.6**	**+0.8**
	comp=Z,3.1nm,0.6s						
ABTA	**Abfaltersbach**	**148.76 84**		*e*PKiKP	**PKPab**	**22 40 25.9**	**-0.7**
	comp=Z,9.9nm,1.5s						
MYKA	**Terra Mystica**	**149.35 85**		*ep*PKP	**PKPab**	**22 40 28.9**	**-0.2**
	comp=Z,9.3nm,1.1s						
GTA2	**Gaotai**	**150.09 256**		*e*PKPbc	**PKPdf**	**22 40 20.0**	**-1.4**
GTA2				sPKP	sPKPdf	22 40 26.5	+1.8
GTA2				LR	LR		
	comp=Z,120nm,14.3s						
GTA2				LR	LR		
	comp=Z,120nm,18.3s						
GTA2				LR	LR		
	comp=Z,140nm,18.7s						
GEC2	**GERESS Array S**	**150.53 81**			**PKPab**	**22 40 31.4**	**-2.4**
GERES	**GERESS Array B**	**150.53 81**		PKPbc	**PKPbc**	**22 40 27.4**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=72,slow=0.3,SNR=2.7						
ARSA	**Arzberg**	**150.77 86**			**PKiKP**	**22 40 30.3**	**+2.0**
ULN	**Ulaanbaatar**	**150.91 276**			**PKPbc**	**22 40 28.0**	**-0.1**
CLL	**Collm**	**151.28 77**		*e*PKPdf	**PKPab**	**22 40 34.0**	**-2.7**
CLL				*i* PKPbc	**sPKPbc**	**22 40 35.4**	**+3.4**
	comp=Z,6.0nm,0.9s						
CLL				*e*PKPab	**pPKPab**	**22 40 39.0**	**-0.3**
CLL				*i* x	x	22 40 45.8	
CLL				*e*SS	SS	23 04 00.0	+28
CLL				L	L	23 40 00.0	
	comp=Z,200nm,19.9s						
SONM	**Songino Array**	**151.28 275**		PKPbc	**PKPbc**	**22 40 28.4**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=119,slow=2.3,SNR=10						
SONM	**Songino Array**	**151.28 275**			**PKPdf**	**22 40 24.5**	**+1.6**
MMAI	**Mount Meron Ar**	**151.80 129**		PKPbc	**PKPbc**	**22 40 29.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=300,slow=3.2,SNR=4.7						
MODS	**Modra-Piesok**	**152.36 85**		*e*PKP	**PKPab**	**22 40 38.4**	**-3.0**
BRTR	**Keskin Array B**	**156.30 118**		PKP	**PKPdf**	**22 40 30.9**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=297,slow=5.4,SNR=3.5						
BRTR				PKPab	**PKPab**	**22 40 57.9**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=202,slow=5.8,SNR=7.2						
WMQ	**Urumqi**	**159.69 249**		*e*PKP	**PKPdf**	**22 40 34.0**	**-0.3**
WMQ				PKPab	**PKPab**	**22 41 12.5**	**-0.5**
WMQ				LR	LR		
	comp=Z,660nm,24.3s						
WMQ				LR	LR		
	comp=Z,830nm,24.0s						
WMQ				LR	LR		
	comp=Z,180nm,24.3s						
MKAR	**Makanchi Array**	**164.52 248**		PKPab	**PKPab**	**22 41 31.3**	**-2.8**
	comp=Z,2.2nm,1.1s,baz=123,slow=5.3,SNR=8.1						
MKAR	**Makanchi Array**	**164.52 248**			**PKPab**	**22 41 33.0**	**-1.1**
ZALV	**Zalesovo Beam**	**166.16 277**		PKPab	**PKPab**	**22 41 39.9**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=90,slow=4.3,SNR=3.7						
KKAR	**Karatay Array**	**166.93 212**			**PKPab**	**22 41 44.1**	**-0.6**
KURK	**Kurchatov**	**168.69 257**			**PKPab**	**22 41 51.4**	**-0.9**
KURBB	**Kurchatov Arra**	**168.70 256**		PKPab	**PKPab**	**22 41 50.3**	**-2.0**
	comp=Z,1.4nm,1.0s,baz=142,slow=3.2,SNR=8.5						
BVAR	**Borovoye Array**	**174.29 257**		PKPab	**PKPab**	**22 42 14.3**	**-2.9**
	comp=Z,1.8nm,1.0s,baz=104,slow=4.9,SNR=8.8						
BORK	**Borovoye**	**174.34 257**			**PKPab**	**22 42 16.6**	**-0.7**

*IDC **27** 23:05:21.3±2.9, 9.°14S×113.°78E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=139.2km s-min=23.1km az=51.0*
*DJA **27** 23:05:28.7±1.2, 9.°S±4.°×11.°3E±.°, h25km±11km, M3.7/20, MLv3.7/20*

ISC 27 23:05:25.7±1.1, **9.°41S**±0.°08×**113.°46E**±0.°04, **h26km, n18, σ2.°32/20, mb3.5/4, South of Java**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.16**	**37**	P	**Pn**	**23 05 47.1**	**+0.8**
BLJI	**Banyuglugur**	**1.66**	**5**	P	**Pb**	**23 05 56.1**	**+0.5**
BLJI				S	**Sb**	**23 06 15.6**	**-0.5**
RTBI	**Rangdo, Negare**	**1.75**	**57**	P	**Pn**	**23 05 56.3**	**+1.9**
RTBI				S	**Sn**	**23 06 16.9**	**+1.1**
IGBI	**Denpasar**	**1.77**	**71**	P	**Pb**	**23 05 59.1**	**+1.6**
ABJI	**Asem Bagus**	**1.78**	**26**	P	**Pn**	**23 05 57.2**	**+2.4**
SNJI	**Sawahan-Nganju**	**2.33**	**314**	P	**Pb**	**23 06 06.5**	**-0.7**
SJI	**Sawahan**	**2.35**	**315**	P	**Pn**	**23 06 06.2**	**+3.4**
KHKI	**Kahang-Kahang**	**2.37**	**64**	P	**Pn**	**23 06 06.6**	**+3.7**
KMMI	**Kalianget**	**2.40**	**12**	P	**Pn**	**23 06 04.6**	**+1.3**
PCJI	**Pacitan**	**2.55**	**298**	P	**Pn**	**23 06 08.3**	**+2.8**
UGM	**Wanagama**	**3.26**	**297**	P	**Pn**	**23 06 18.8**	**+3.6**
TWSI	**Taliwang, Sumb**	**3.45**	**79**	P	**Pn**	**23 06 19.3**	**+1.5**
PLAI	**Plampang**	**4.31**	**83**	P	**Pn**	**23 06 31.8**	**+2.2**
KPJI	**Karang Pucung**	**4.93**	**294**	P	**Pn**	**23 06 40.4**	**+2.3**
WRA	**Warramunga Arr**	**22.73**	**120**	P	**P**	**23 10 22.6**	**-3.3**
	0.2nm,0.7s,baz=298,slow=10,SNR=1.4						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**24.14**	**128**	P	**P**	**23 10 39.1**	**-0.8**
	0.2nm,0.3s,baz=298,slow=9.1,SNR=3.6						
	0.2nm,0.3s						
SONM	**Songino Array**	**57.33**	**354**	P	**P**	**23 15 10.2**	**-1.4**
	0.5nm,0.4s,baz=173,slow=8.7,SNR=9.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**62.48**	**336**	P	**P**	**23 15 45.1**	**-1.8**
	0.4nm,0.5s,baz=145,slow=6.8,SNR=8.1						
	0.4nm,0.5s						

*KRSC **27** 23:05:33.9±2.3, 56.°99N×154.°62E, h40km±26km, Ml4.3*
*NERS **27** 23:05:39.1, 56.°81N×155.°05E, h33km*

ISC 27 23:05:39.4±1.3, **56.°99N**±0.°07×**155.°30E**±0.°05, **h10km, n17, σ1.°96/31, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIGL	**Tigil**	**1.98**	**66**	*e*P	**Pn**	**23 06 13.4**	**+0.4**
TIGL				*e*S	**Sb**	**23 06 39.8**	**-0.5**
ESO	**Esso**	**2.17**	**118**	*e*P	**Pn**	**23 06 14.0**	**-1.5**
KOZ	**Kozyrevsk**	**2.70**	**108**	*e*P	**Pn**	**23 06 24.1**	**+1.2**
KPT	**Kopyto**	**2.92**	**109**	*e*P	**Pn**	**23 06 25.5**	**-0.4**
KMNR	**Kamenistaya**	**3.01**	**112**	*e*P	**Pn**	**23 06 27.6**	**+0.4**
KLY	**Klyuchi**	**3.03**	**101**	*e*P	**Pn**	**23 06 29.8**	**+2.4**
PALN	**Palana**	**3.25**	**48**	*e*P	**Pn**	**23 06 29.5**	**-0.9**
GADL	**Gadlja**	**3.41**	**324**	*e*	**Pn**	**23 06 34.8**	**+2.2**
GADL				Pgmax		23 06 47.7	
	40nm,0.5s						
GADL				*e*Sg	**Sg**	**23 07 26.6**	**-2.2**
GADL				Sgmax		23 07 40.3	
	390nm,0.8s						
SMKR	**Semkarok**	**3.42**	**94**	*e*P	**Pn**	**23 06 34.9**	**+2.1**
MA2	**Magadan**	**3.53**	**319**	*e*P	**Pn**	**23 06 35.3**	**+1.1**
MA2				*e*Pg	**Pb**	**23 06 43.6**	**+1.7**
MA2				Pgmax		23 06 53.3	
	40nm,0.6s						
MA2				*e*Sg	**Sg**	**23 07 29.7**	**-2.9**
MA2				Sgmax		23 07 56.7	
	120nm,1.0s						
MA2				Sgmax		23 07 56.7	
	80nm,0.8s						
MGD	**Magadan 1**	**3.89**	**324**	*e*P	**Pn**	**23 06 39.9**	**+0.7**
MGD				Pmax		23 06 41.0	
	10.0nm,0.2s						
MGD				*e*Sg	**Sg**	**23 07 42.9**	**-1.3**
MGD				Sgmax		23 07 58.0	
	140nm,0.5s						
TLAR	**Talaya**	**4.41**	**341**	*e*P	**Pn**	**23 06 46.7**	**+0.3**
TLAR				Pmax		23 06 47.8	
	20nm,0.4s						
TLAR				*e*Pg	**Pg**	**23 07 02.3**	**-1.6**
TLAR				Pgmax		23 07 09.0	
	40nm,0.4s						
TLAR				*e*S	**Sn**	**23 07 40.3**	**+2.4**
TLAR				*e*Sg	**Sg**	**23 08 01.1**	**+0.1**
TLAR				Sgmax		23 08 17.8	
	220nm,0.5s						
TLON	**Talon**	**4.46**	**311**	*e*S	**Sn**	**23 07 43.5**	**+4.5**
TLON				*e*Sg	**Sg**	**23 07 59.0**	**-3.6**
TLON				Sgmax		23 08 14.5	
	120nm,0.6s						
TLON				Sgmax		23 08 14.5	
	110nm,0.5s						
OSSR	**Ossora**	**4.70**	**58**	*e*P	**Pn**	**23 06 51.1**	**+0.9**
OMS	**Omsukchan**	**5.55**	**2**	*e*P	**Pn**	**23 07 02.1**	**+0.1**
OMS				*e*Pg	**Pg**	**23 07 23.0**	**-2.6**
OMS				*e*Sg	**Sg**	**23 08 38.5**	**+1.1**
OMS				Sgmax		23 08 54.1	
	40nm,0.8s						
OMS				Sgmax		23 08 54.1	
	40nm,0.6s						
SEY	**Seymchan**	**6.14**	**347**	*e*P	**Pn**	**23 07 11.1**	**+1.1**
SEY				*e*Pg	**Pg**	**23 07 34.8**	**-2.1**
SEY				Pgmax		23 07 49.1	
	10.0nm,0.6s						
SEY				*e*Sg	**Sg**	**23 08 56.5**	**+0.2**
SEY				Sgmax		23 09 08.4	
	30nm,0.8s						
SEY				Sgmax		23 09 08.4	
	20nm,0.3s						
SUUS	**Susuman**	**6.82**	**331**	*e*	**Pb**	**23 07 38.2**	**+0.2**
SUUS				*e*Sg	**Sg**	**23 09 14.9**	**-3.3**
SUUS				Sgmax		23 09 34.5	
	80nm,0.8s						
SUUS				Sgmax		23 09 34.5	
	20nm,0.7s						

*IDC **27** 23:27:28.5±3.5, 38.°72N×123.°11W, h0km, mbtmp3.4/3, ML3.5/3, Error ellipse: s-maj=43.7km s-min=28.7km az=23.0*
*NEIC **27** 23:27:29.8±1.6, 38.°834N±0.°008×122.°77W±0.°02, h4km±3km, ML3.1/115, Mwr3.7/4(NCEDC), Error ellipse: s-maj=2.1km s-min=1.0km az=68.0*
*NEIC **27** 23:27:29.9, 38.°83N×122.°81W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=3.00; $M_{\theta\theta}$=0.24; $M_{\phi\phi}$=3.24; $M_{r\theta}$=-1.88; $M_{\theta\phi}$=1.87; $M_{\phi r}$=0.74; Fault plane solution: M_o=4.17000×10^{14} NP1:ϕ_s=51.60000°, δ=53.79000°, λ=-48.68000°. NP2:ϕ_s=175.50000°, δ=52.70000°, λ=-132.05000°. Principal axes: T 4.0573, Plg=1.0000°, Azm=114.0000°; N 0.2135, Plg=32.0000°, Azm=204.0000°; P =-4.2708, Plg=58.0000°, Azm=23.0000°;*
*NEIC **27** 23:27:29.9, 38.°83N×122.°81W, h3km*
*NCEDC **27** 23:27:29.9±1.0, 38.°83N±0.°01×122.°81W±0.°02, h3km±4km, Error ellipse: s-maj=2.2km s-min=1.8km az=225.0*

ISC 27 23:27:30.0±0.9, **38.°83N**±0.°02×**122.°79W**±0.°02, **h4km**±6km, **n156, σ0.°97/141, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.02**	**191**	Pg	**Pg**	**23 27 30.7**	**-0.2**
GDXM				Sg	**Sg**	**23 27 31.5**	**0.0**
GSGM	**Seigler Mounta**	**0.07**	**58**		**Pg**	**23 27 32.1**	**+0.5**
GGPM	**Geyser Peak**	**0.08**	**214**		**Pg**	**23 27 31.6**	**-0.1**
GGPM					**Sg**	**23 27 33.1**	**+0.3**
GBGM	**Boggs Mountain**	**0.09**	**99**		**Pg**	**23 27 32.3**	**+0.4**
GRTM	**Round Top Moun**	**0.14**	**40**		**Pg**	**23 27 33.1**	**+0.2**
GCVM	**Cloverdale**	**0.18**	**252**		**Pg**	**23 27 33.9**	**+0.3**
NMTM	**Middletown**	**0.27**	**95**		**Pg**	**23 27 35.8**	**+0.6**
HOPS	**Hopland Field**	**0.28**	**307**		**Pg**	**23 27 35.5**	**+0.2**
HOPS				IAML		23 27 43.1	
	comp=E,5μm,0.8s						
HOPS				IAML		23 27 43.4	
	comp=N,4μm,1.0s						
MNRC	**McLaughlin Min**	**0.28**	**79**		**Pg**	**23 27 36.0**	**+0.6**
MNRC				IAML		23 27 42.5	
	comp=N,3μm,0.9s						
MNRC				IAML		23 27 42.5	
	comp=E,3μm,0.8s						
GHGM	**Hogback Ridge**	**0.30**	**355**		**Pg**	**23 27 35.9**	**0.0**
GSNM	**Snow Mountain**	**0.33**	**290**		**Pg**	**23 27 36.6**	**+0.1**
NWRM	**Wright Ranch**	**0.38**	**192**		**Pg**	**23 27 37.7**	**+0.4**
NTYM	**Taylor**	**0.45**	**167**		**Pg**	**23 27 39.1**	**+0.5**
BONV	**Boonville, CA**	**0.46**	**290**		**Pg**	**23 27 39.3**	**+0.3**
NIMB	**Iron Mountain**	**0.49**	**123**		**Pg**	**23 27 39.9**	**+0.5**
OAKV	**Oakville Exper**	**0.49**	**143**		**Pg**	**23 27 40.0**	**+0.5**
CVS	**Carmenet Viney**	**0.55**	**152**		**Pg**	**23 27 41.0**	**+0.5**
GWRM	**Wonder Ranch**	**0.55**	**314**		**Pg**	**23 27 40.5**	**-0.1**
NAPC	**Atlas Peak**	**0.57**	**132**		**Pg**	**23 27 41.5**	**+0.5**
QRDG	**Quail Ridge Na**	**0.61**	**124**		**Pg**	**23 27 42.6**	**+0.8**
GHOM	**Hamilton Openi**	**0.62**	**291**		**Pg**	**23 27 42.3**	**+0.3**
LOC	**Lincoln School**	**0.68**	**175**		**Pg**	**23 27 43.3**	**+0.3**
MCCM	**Marconi Confer**	**0.69**	**186**		**Pg**	**23 27 43.6**	**+0.4**
MCCM				IAML		23 28 03.5	
	comp=N,1μm,0.9s						
NDHM	**Dunnigan Hills**	**0.69**	**95**		**Pb**	**23 27 45.0**	**+0.4**
SNT	**Sears Point**	**0.70**	**158**		**Pg**	**23 27 43.5**	**+0.1**
NGVM		**0.71**	**140**		**Pg**	**23 27 44.1**	**+0.5**
NADM	**Allendale**	**0.74**	**120**		**Pb**	**23 27 46.1**	**+0.6**
GNAM	**Navarro Ridge**	**0.75**	**300**		**Pb**	**23 27 44.8**	**-0.9**
DCMP	**DeCamp, Califo**	**0.77**	**327**		**Pg**	**23 27 44.6**	**-0.2**
RUSS	**Russell Ranch**	**0.78**	**111**		**Pb**	**23 27 46.5**	**+0.5**
NOLM	**Olema**	**0.79**	**180**		**Pb**	**23 27 45.8**	**-0.4**
SVIN	**Saint Vincent'**	**0.82**	**165**		**Pg**	**23 27 45.6**	**-0.1**
GTC	**Three Chop Rid**	**0.82**	**314**		**Pb**	**23 27 46.0**	**-1.0**
NPRM	**Point Reyes**	**0.85**	**192**		**Pb**	**23 27 47.0**	**-0.4**
OSUM	**Sutter Buttes**	**0.85**	**58**		**Pb**	**23 27 47.2**	**-0.2**
NLHM	**Lake Herman**	**0.87**	**144**		**Pg**	**23 27 46.9**	**+0.2**
SUTB	**Sutter Butte**	**0.88**	**63**		**Pg**	**23 27 46.7**	**-0.2**
SUTB				IAML		23 28 01.9	
	comp=E,487nm,0.6s						
SUTB				IAML		23 28 09.5	
	comp=N,420nm,0.5s						
PINL	**Point Pinole R**	**0.88**	**158**		**Pg**	**23 27 42.3**	**-4.6**
PINL					**Sg**	**23 27 56.1**	**-2.2**
CPMM	**Point Molate**	**0.93**	**161**		**Pg**	**23 27 48.0**	**+0.2**
JEPS	**Jepson Natural**	**0.95**	**127**		**Pn**	**23 27 51.4**	**+1.3**
CSPM	**San Pablo Ridg**	**0.95**	**156**		**Pb**	**23 27 48.8**	**-0.3**
GVV	**Valley View**	**0.95**	**5**		**Pn**	**23 27 49.6**	**-0.7**
CPIM	**Pinole Ridge**	**0.95**	**151**		**Pg**	**23 27 48.7**	**+0.4**
CTAM	**Taylor**	**1.00**	**143**		**Pb**	**23 27 50.1**	**+0.2**
AGC	**Angel Island**	**1.00**	**164**		**Pg**	**23 27 49.6**	**+0.4**
BRIB	**Briones**	**1.04**	**151**		**Pg**	**23 27 49.5**	**-0.4**
BRK	**Berkeley--Havi**	**1.04**	**156**		**Pg**	**23 27 50.0**	**+0.1**
BL67	**Building 67, L**	**1.04**	**156**		**Pg**	**23 27 50.1**	**+0.2**
VAK	**Adit at Lawren**	**1.04**	**156**		**Pg**	**23 27 50.1**	**+0.2**
BKS	**Berkeley--Byer**	**1.04**	**155**		**Pg**	**23 27 50.2**	**+0.2**
KCPM	**Cahto Peak**	**1.06**	**325**		**Pb**	**23 27 50.8**	**-0.1**
KCPM				IAML		23 28 15.3	
	comp=N,612nm,1.5s						
JPRM	**Presidio of Sa**	**1.06**	**166**		**Pg**	**23 27 50.4**	**+0.1**
CYBM	**Yerba Buena Is**	**1.07**	**161**		**Pg**	**23 27 50.8**	**+0.3**
OSTM	**Stimpson Lane**	**1.07**	**59**		**Pg**	**23 27 50.0**	**-0.6**
GROM	**Round Mountain**	**1.09**	**5**		**Pn**	**23 27 52.2**	**-0.1**
KBNM	**Bluenose Ridge**	**1.11**	**344**		**Pn**	**23 27 52.8**	**+0.2**
SMCB	**Saint Mary's C**	**1.12**	**151**		**Pg**	**23 27 51.5**	**0.0**
BDM	**Black Diamond**	**1.14**	**140**		**Pg**	**23 27 51.1**	**-0.7**
OHCM	**Honcut**	**1.14**	**63**		**Pg**	**23 27 51.0**	**-0.8**
FARB	**Farallon Islan**	**1.14**	**188**		**Pg**	**23 27 51.7**	**-0.2**
FARB	**Farallon Islan**	**1.14**	**188**	IAML		23 28 13.0	
	comp=E,439nm,1.5s						
CRHM	**Round Hill Res**	**1.15**	**147**		**Pg**	**23 27 52.0**	**-0.1**
BGC	**Bolinger Road**	**1.16**	**150**		**Pg**	**23 27 51.4**	**-0.9**
RVIT	**Round Valley I**	**1.17**	**337**		**Pn**	**23 27 53.9**	**+0.7**
JSBM	**San Bruno Moun**	**1.19**	**165**		**Pg**	**23 27 52.2**	**-0.6**
SFRE	**Sierra Foothil**	**1.22**	**69**		**Pg**	**23 27 51.9**	**-1.5**
CSLM	**San Leandro Hi**	**1.22**	**154**		**Pg**	**23 27 53.2**	**-0.2**
CLCB	**Lake Chabot**	**1.23**	**152**		**Pg**	**23 27 53.0**	**-0.6**
ORV	**Oroville**	**1.24**	**54**		**Pg**	**23 27 51.9**	**-1.9**
SAC	**San Andreas**	**1.28**	**167**		**Pg**	**23 27 53.1**	**-1.4**
JCPM	**Coyote Point**	**1.29**	**163**		**Pg**	**23 27 54.7**	**-0.1**
OCHM	**Cohasset Ridge**	**1.31**	**37**		**Pg**	**23 27 53.5**	**-1.7**
O02D	**Mt. Diablo Mer**	**1.35**	**0**		**Pg**	**23 27 54.9**	**-1.0**
JCHM	**Cahill Ridge**	**1.35**	**166**		**Pn**	**23 27 54.9**	**-0.7**
CBSNC	**Byron Hot Spri**	**1.35**	**138**		**Pn**	**23 27 55.4**	**-0.3**
CNIC	**Niles Canyon**	**1.38**	**152**		**Pn**	**23 27 54.6**	**-1.5**
CVLM	**Vallecito**	**1.42**	**148**		**Pn**	**23 27 55.9**	**-0.7**
AFDM	**Forest Hills D**	**1.42**	**85**		**Pn**	**23 27 54.5**	**-2.2**
WENL	**Wente Vineyard**	**1.45**	**146**		**Pn**	**23 27 56.3**	**-0.8**
JRSC	**Jasper Ridge**	**1.49**	**163**		**Pn**	**23 27 56.0**	**-1.5**
JRSC				IAML		23 28 22.6	
	comp=E,435nm,0.9s						
JRSC				IAML		23 28 27.3	
	comp=N,418nm,1.1s						
JFP	**Foothills Park**	**1.54**	**162**		**Pn**	**23 27 57.6**	**-0.7**
CSTL	**Corral Hollow**	**1.56**	**139**		**Pn**	**23 27 58.1

PKD	**Bear Valley Ra**	**3.39**	**147**	IAML			23 29 21.1	
	comp=N,37nm,2.0s							
PKD				IAML			23 29 28.0	
	comp=E,34nm,1.4s							
L04D	**Klamath Falls**	**3.41**	**6**	IAML			23 29 55.7	
	comp=N,29nm,3.3s							
L04D				IAML			23 30 00.3	
	comp=E,46nm,2.8s							
LHV	**Little Huntoon**	**3.41**	**98**	IAML			23 28 59.9	
	comp=E,71nm,0.9s							
NVAR	**Mina Array Bea**	**3.54**	**95**	Pn	**Pn**		**23 28 27.6**	**+1.6**
	comp=E,1.3nm,0.3s,baz=267,slow=15,SNR=19							
NVAR				Pg	**Pb**		**23 28 33.3**	**0.0**
	comp=E,4.1nm,0.3s,baz=272,slow=19,SNR=53							
NVAR				Lg	Lg		23 29 28.1	
	comp=E,2.0nm,0.3s,baz=269,slow=30,SNR=4.6							
	comp=E,2.0nm,0.4s							
BBOR	**Butler Butte**	**4.06**	**1**	IAML			23 30 07.3	
	comp=E,17nm,3.0s							
BBOR				IAML			23 30 51.2	
	comp=N,20nm,4.5s							
DSP	**Deep Springs**	**4.07**	**109**	IAML			23 29 48.0	
	comp=N,24nm,2.3s							
DSP				IAML			23 30 02.2	
	comp=E,19nm,1.6s							
K05A	**Summer Lake**	**4.15**	**20**	IAML			23 30 38.1	
	comp=E,25nm,4.7s							
K05A				IAML			23 30 41.4	
	comp=N,19nm,2.7s							
CWC	**Cottonwood Cre**	**4.43**	**121**	IAML			23 29 51.3	
	comp=N,20nm,1.0s							
CWC				IAML			23 29 57.6	
	comp=E,17nm,0.9s							
J05D	**Fort Rock, OR**	**4.61**	**14**	IAML			23 30 46.6	
	comp=E,22nm,4.2s							
ISA	**Isabella, Lake**	**4.67**	**131**	IAML			23 29 55.4	
	comp=E,18nm,0.9s							
ISA				IAML			23 30 03.5	
	comp=N,12nm,1.5s							
WVOR	**Wild Horse Val**	**4.79**	**40**	IAML			23 30 52.0	
	comp=N,15nm,4.6s							
WVOR				IAML			23 31 15.4	
	comp=N,11nm,4.3s							
WCT	**Wildcat Mounta**	**5.29**	**111**	IAML			23 29 27.4	
	comp=E,8.9nm,1.2s							
WCT				IAML			23 30 13.9	
	comp=N,12nm,4.9s							
OSI	**Osito Audit: C**	**5.32**	**141**	IAML			23 30 12.2	
	comp=E,17nm,0.9s							
OSI				IAML			23 30 17.9	
	comp=N,16nm,2.8s							
TPO	**Tropico Hills**	**5.38**	**136**	IAML			23 30 04.8	
	comp=N,9.3nm,4.8s							
PDAR	**Pinedale Array**	**10.77**	**64**	Pn	Pn		23 30 11.4	+6.2
	comp=N,0.1nm,0.3s,baz=248,slow=11,SNR=9.9							
	comp=N,1.9nm,1.1s							
TXAR	**Lajitas Array**	**18.43**	**115**	P	**P**		**23 31 49.4**	**+2.9**
	baz=307,slow=9.4,SNR=12							
	comp=N,1.4nm,0.9s							

*SNET **27** 23:53:48.6±0.7, 13.˚80N×90.˚40W, h84km, ML3.3, Presumed earthquake*

*CATAC **27** 23:53:49.2±0.3, 14.˚N±4.˚×9.˚0W±.˚, h68km±4km, M3.5/19, MLv3.5/19, Error ellipse: s-maj=8.8km s-min=3.4km az=22.0, confirmed*

*GCG **27** 23:53:49.3±1.0, 13.˚80N×90.˚39W, h76km±6km, MD3.7, ML3.9, MW3.2, Presumed earthquake*

ISC 27 23:53:50.7±1.4, **13.˚77N**±0.˚06×**90.˚27W**±0.˚04, **h86**km±7km, **n43**, σ1§**28**/66, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.26**	**73**	P	**Pn**	**23 54 01.6**	**-1.9**
FAME				S	**Sn**	**23 54 11.9**	**-1.0**
ESSJ	**San Jos, E**	**0.30**	**227**	*i* P	**Pn**	**23 54 03.0**	**-0.7**
NUBE	**Las Nubes**	**0.49**	**74**	P	**Pn**	**23 54 03.8**	**-1.4**
NUBE				S	**Sn**	**23 54 15.6**	**-0.3**
NUBE	**Las Nubes**	**0.49**	**74**	*i* P	**Pn**	**23 54 03.8**	**-1.4**
NUBE				*i* S	**Sn**	**23 54 15.0**	**-1.0**
NUBE				IAML		23 54 17.6	
	comp=N,716nm,0.2s						
LOAL	**Lomas de Alarc**	**0.53**	**64**	P	**Pn**	**23 54 04.1**	**-1.2**
LOAL				S	**Sn**	**23 54 16.4**	**+0.2**
SLOZ	**Alcaldia de Sa**	**0.54**	**62**	P	**Pn**	**23 54 04.1**	**-1.3**
SLOZ				S	**Sn**	**23 54 16.8**	**+0.4**
FG16	**Alotenango, Sa**	**0.55**	**335**	*i* P	**Pn**	**23 54 06.3**	**+0.6**
FG16				*i* S	**Sn**	**23 54 19.7**	**+2.8**
FG16				IAML		23 54 22.0	
	comp=N,7μm,0.2s						
FG8	**Yepocapa, Chim**	**0.56**	**330**	*i* P	**Pn**	**23 54 06.6**	**+0.9**
FG8				*i* S	**Sn**	**23 54 20.6**	**+3.7**
CEVE	**Cerro Verde**	**0.63**	**85**	P	**Pn**	**23 54 05.5**	**-1.0**
CEVE				S	**Sn**	**23 54 18.7**	**+0.5**
CEVE	**Cerro Verde**	**0.63**	**85**	*eP*	**Pn**	**23 54 05.5**	**-1.0**
UNIC	**Universidad Ca**	**0.73**	**73**	P	**Pn**	**23 54 06.2**	**-1.0**
UNIC				S	**Sn**	**23 54 19.5**	**-0.1**
JAYA	**Jayaque - finc**	**0.81**	**98**	P	**Pn**	**23 54 07.0**	**-1.2**
JAYA	**Jayaque - finc**	**0.81**	**98**	*eP*	**Pn**	**23 54 07.4**	**-0.7**
JAYA				*eS*	**Sn**	**23 54 21.7**	**+0.6**
JAYA	**Jayaque - finc**	**0.81**	**98**	*i* P	**Pn**	**23 54 07.1**	**-1.0**
JAYA				*i* S	**Sn**	**23 54 21.5**	**+0.4**
PMON	**Piamonte**	**0.93**	**93**	P	**Pn**	**23 54 08.7**	**-0.8**
PMON				S	**Sn**	**23 54 25.5**	**+2.0**
BOQS	**Boqueron**	**0.96**	**92**	*eP*	**Pn**	**23 54 09.3**	**-0.6**
LALI	**Alcalda de L**	**0.96**	**107**	P	**Pn**	**23 54 08.7**	**-1.0**
LALI	**Alcalda de L**	**0.96**	**107**	*eP*	**Pn**	**23 54 09.3**	**-0.5**
LALI	**Alcalda de L**	**0.96**	**107**	*i* P	**Pn**	**23 54 09.2**	**-0.5**
LALI				*i* S	**Sn**	**23 54 24.3**	**+0.3**
UEES	**Universidad Ev**	**1.00**	**93**	P	**Pn**	**23 54 09.9**	**-0.4**
UEES				S	**Sn**	**23 54 27.4**	**+2.5**
SEMO	**Seminario San**	**1.02**	**94**	P	**Pn**	**23 54 09.9**	**-0.6**
SEMO				S	**Sn**	**23 54 27.3**	**+2.1**
MTO3	**Montecristo**	**1.08**	**55**	P	**Pn**	**23 54 10.3**	**-1.1**
MTO3				S	**Sn**	**23 54 27.3**	**+0.5**
MTO3	**Montecristo**	**1.08**	**55**	*i* P	**Pn**	**23 54 10.3**	**-0.9**
LFRS	**El Faro**	**1.18**	**97**	*eP*	**Pn**	**23 54 12.2**	**-0.3**
STG5	**El Palmar, Qui**	**1.22**	**301**	*i* P	**Pn**	**23 54 14.2**	**+1.3**
STG5				*i* S	**Sn**	**23 54 32.1**	**+2.6**
APG	**El Apazote**	**1.24**	**351**	*i* P	**Pn**	**23 54 11.8**	**-1.5**
STG8	**El Palmar, Qui**	**1.25**	**303**	*i* P	Pn	23 54 15.0	+1.7
STG8				IAML		23 54 38.4	
	comp=E,1μm,0.2s						
STG2	**El Palmar, Qui**	**1.26**	**302**	*i* P	Pn	23 54 15.0	+1.6
STG2				*i* S	Sn	23 54 35.2	+4.7
STG2				IAML		23 54 38.1	
	comp=E,4μm,0.3s						
PAVA	**Las Pavas**	**1.30**	**92**	P	**Pn**	**23 54 13.4**	**-0.4**
PAVA				S	**Sn**	**23 54 32.0**	**+0.7**
LLGN	**La Laguna**	**1.34**	**73**	P	**Pn**	**23 54 13.5**	**-0.9**
LLGN				S	**Sn**	**23 54 33.3**	**+1.0**
COEG	**Centro de Oper**	**1.36**	**96**	*eP*	**Pn**	**23 54 14.4**	**-0.2**
P5NO	**Presa 5 de nov**	**1.48**	**81**	P	**Pn**	**23 54 15.0**	**-1.1**
P5NO				S	**Sn**	**23 54 34.8**	**-0.5**
SOKI	**Kika Raxquin**	**1.52**	**314**	*i* P	**Pn**	**23 54 14.5**	**-2.4**
SOKI				*i* S	**Sn**	**23 54 35.0**	**-1.6**
SARH	**Santa Rosa de**	**1.77**	**55**	P	**Pn**	**23 54 19.9**	**0.0**
SARH				S	**Sn**	**23 54 43.3**	**+1.3**
SARH	**Santa Rosa de**	**1.77**	**55**	*i* P	**Pn**	**23 54 19.9**	**0.0**
PACA	**Pacayal**	**1.92**	**99**	P	**Pn**	**23 54 21.7**	**-0.1**
SMCA	**Catarina**	**2.06**	**302**	*i* P	**Pn**	**23 54 20.5**	**-3.1**
CSGN	**Cosiguina Volc**	**2.75**	**106**	P	**Pn**	**23 54 33.3**	**+0.4**
CSGN				S	**Sn**	**23 55 06.7**	**+1.4**
YUSH	**Yuscaran**	**3.33**	**86**	P	**Pn**	**23 54 40.7**	**-0.1**
POLN	**Al Sur del Vol**	**3.55**	**108**	P	**Pn**	**23 54 43.9**	**+0.3**
POLN				S	**Sn**	**23 55 23.5**	**-1.0**
CNGA	**Al SSO del Vol**	**3.70**	**110**	P	**Pn**	**23 54 44.5**	**-1.2**
CNGN	**Cerro Negro**	**3.70**	**110**	P	**Pn**	**23 54 45.5**	**-0.2**
CNGN				S	**Sn**	**23 55 29.6**	**+1.3**
COPN	**Copaltepe**	**3.92**	**113**	P	**Pn**	**23 54 47.9**	**-0.7**

*IDC **27** 23:56:16.9±0.8, 28.˚09N×103.˚56E, h0km, mb4.0/17, mbtmp4.0/19, ML4.3/2, MS3.6/4, Error ellipse: s-maj=23.7km s-min=15.1km az=52.0*

*MOS **27** 23:56:18.0±1.1, 28.˚19N×103.˚67E, h11km, mb4.5/27, Error ellipse: s-maj=10.9km s-min=6.1km az=118.6*

*NEIC **27** 23:56:20.5±1.5, 28.˚23N±0.˚08×103.˚63E±0.˚09, h10km±1km, mb4.6/91, Error ellipse: s-maj=13.6km s-min=12.3km az=130.0*

ISC 27 23:56:20.1±0.4, **28.˚26N**±0.˚04×**103.˚60E**±0.˚04, **h10**km, **n199**, σ1§**34**/205, **mb4.5**/86, **MS3.9**/5, **5C-2D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**2.41**	**224**	Pg	**Pn**	**23 56 59.8**	**+0.1**
PZH				Sg	**Sn**	**23 57 29.3**	**0.0**
PZH				smax	smax		
	comp=N,1μm,0.6s						
PZH				smax	smax		
	comp=E,2μm,0.7s						
CD2	**Chengdu**	**2.65**	**3**	Pn	**Pb**	**23 57 06.0**	**-1.7**
CD2				Pg	**Pg**	**23 57 10.5**	**-0.4**
CD2				Sg	**Sg**	**23 57 46.0**	**+0.8**
CD2				smax	smax		
	comp=N,3μm,0.6s						
CD2				smax	smax		
	comp=E,5μm,0.5s						
KMI2	**Kunming**	**3.19**	**194**	Pn	**Pn**	**23 57 12.3**	**+1.7**
KMI2				Sn	**Sn**	**23 57 52.0**	**+3.2**
KMI2				smax	smax		
	comp=N,220nm,1.0s						
KMI2				smax	smax		
	comp=E,200nm,0.9s						
KMI2				LR	LR		
	comp=N,1μm,8.2s						
KMI2				LR	LR		
	comp=E,2μm,6.3s						
GYA	**Guiyang**	**3.26**	**123**	Pn	**Pn**	**23 57 12.0**	**+0.6**
GYA				Sn	**Sn**	**23 57 51.5**	**+1.2**
GYA				smax	smax		
	comp=N,920nm,0.8s						
GYA				smax	smax		
	comp=E,940nm,0.8s						
ENH	**Enshi**	**5.52**	**67**		**Pn**	**23 57 43.6**	**+1.2**
TNCH	**TengChong**	**5.57**	**236**	Pn	**Pn**	**23 57 40.0**	**-3.3**
TNCH				Pg	**Pg**	**23 58 02.8**	**-4.1**
TNCH				Sg	**Sb**	**23 59 09.0**	**+4.4**
TNCH				smax	smax		
	comp=N,310nm,0.8s						
TNCH				smax	smax		
	comp=E,310nm,1.0s						
TNCH				LR	LR		
	comp=N,770nm,4.5s						
TNCH				LR	LR		
	comp=E,690nm,5.7s						
GULI	**GuiLin**	**6.73**	**114**	Pg	**Pn**	**23 58 00.3**	**+1.3**
GULI				Sg	**Sn**	**23 59 10.8**	**-4.9**
GULI				smax	smax		
	comp=N,220nm,0.9s						
GULI				smax	smax		
	comp=E,120nm,1.2s						
XAN	**Xi'an**	**7.35**	**37**	Pn	**Pn**	**23 58 08.5**	**+1.0**
XAN				Sn	**Sn**	**23 59 31.0**	**0.0**
XAN				Sg	**Sg**	**00 00 16.8**	**+0.8**
XAN				smax	smax		
	comp=E,380nm,1.0s						
XAN				smax	smax		
	comp=E,480nm,1.2s						
XAN				LR	LR		
	comp=E,790nm,5.2s						
XAN				LR	LR		
	comp=E,650nm,4.8s						
XAN				LR	LR		
	comp=E,480nm,5.2s						
LZDM	**Lanzhou Array**	**7.68**	**1**	Pn	**Pn**	**23 58 13.9**	**+1.6**
	baz=168,slow=15						
	comp=E,5.4nm,0.4s						
LZH	**Lanzhou**	**7.81**	**1**	Pn	**Pn**	**23 58 12.5**	**-1.5**
LZH	**Lanzhou**	**7.81**	**1**	Pg	Pb	23 58 42.0	+6.3
LZH	**Lanzhou**	**7.81**	**1**	Sn	**Sn**	**23 59 36.8**	**-5.8**
LZH				smax	smax		
	comp=N,40nm,1.7s						
LZH				smax	smax		
	comp=E,90nm,1.6s						
LZH				LR	LR		
	comp=N,390nm,6.2s						
LZH				LR	LR		
	comp=E,1μm,8.3s						
LZH				LR	LR		
	comp=Z,180nm,10.0s						
CNSH	**ChangSha**	**8.23**	**88**	P	**Pn**	**23 58 22.0**	**+2.4**
CNSH				S	**Sn**	**23 59 48.3**	**-4.4**
CNSH				pmax	pmax		
	comp=Z,26nm,0.4s						
CNSH				smax	smax		
	comp=Z,210nm,0.9s						
CNSH				smax	smax		
	comp=Z,160nm,0.6s						
CRAI	**Chiangrai**	**8.52**	**201**	Pn	**Pn**	**23 58 24.2**	**+0.6**
MORE	**Moreh**	**9.26**	**246**	Pn	**Pn**	**23 58 33.9**	**+0.1**
WHN	**Wuhan**	**9.65**	**74**	P	**Pn**	**23 58 40.3**	**+1.3**
WHN				S	**Sn**	**00 00 22.5**	**-5.0**
WHN				LR	LR		
	comp=Z,4μm,11.5s						
WHN				LR	LR		
	comp=Z,1μm,5.7s						
WHN				LR	LR		
	comp=Z,2μm,9.0s						
LYN	**LuoYang**	**9.83**	**48**	||P	**Pn**	**23 58 41.8**	**+0.2**
LYN				S	**Sn**	**00 00 34.0**	**+2.0**
LYN				pmax	pmax		
	comp=Z,21nm,0.7s						
LYN				pmax	pmax		
	comp=Z,210nm,4.1s						
LYN				smax	smax		
	comp=Z,140nm,1.1s						
LYN				smax	smax		
	comp=Z,91nm,1.3s						
LYN				LR	LR		
	comp=Z,620nm,6.9s						
LYN				LR	LR		
	comp=Z,370nm,5.6s						
CHTO	**Chiang Mai**	**10.32**	**205**	Pn	**Pn**	**23 58 48.6**	**+0.2**
CHTO	**Chiang Mai**	**10.32**	**205**	P	**Pn**	**23 58 48.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**10.65**	**205**	Pn	**Pn**	**23 58 53.2**	**+0.3**
	baz=15,slow=12						
CMAR				Lg	Lg	00 01 50.4	
	comp=Z,1.3nm,0.3s,baz=16,slow=29,SNR=4.1						
CMAR				LR	LR	00 03 07.9	
	comp=Z,159nm,18.8s,baz=20,slow=39						
CMAR	**Chiang Mai Arr**	**10.65**	**205**	Pn	**Pn**	**23 58 53.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**10.65**	**205**	P	**Pn**	**23 58 53.6**	**+0.7**
QIZ	**Qiongzhong**	**10.82**	**147**	P	**Pn**	**23 58 54.5**	**-0.6**
QIZ				S	**Sn**	**00 00 57.8**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,150nm,4.4s						
QIZ				LR	LR		
	comp=Z,430nm,9.3s						
QIZ				LR	LR		
	comp=Z,600nm,5.8s						
QIZ				LR	LR		
	comp=Z,290nm,7.4s						
LSA	**Lhasa**	**11.00**	**280**	Pn	**Pn**	**23 58 58.5**	**+0.5**
LSA	**Lhasa**	**11.00**	**280**	P	**Pn**	**23 58 55.5**	**-2.5**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LSA	**Lhasa**	**11.00**	**280**	P	**Pn**	**23 58 58.5**	**+0.5**
GTA2	**Gaotai**	**11.65**	**345**	*eP*	**Pn**	**23 59 09.0**	**+2.5**
GTA2				sP		23 59 21.5	
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA2				LR	LR		
	comp=Z,530nm,11.9s						
GTA2				LR	LR		
	comp=Z,820nm,12.7s						
HNS	**HongShan**	**13.04**	**43**	||P	**P**	**23 59 34.8**	**-1.1**
HNS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HNS				LR	LR		
	comp=N,190nm,9.7s						
HNS				LR	LR		
	comp=Z,150nm,8.4s						
BTO2	**Baotou**	**13.48**	**21**	*eP*	**P**	**23 59 43.0**	**+2.0**
BTO2	**Baotou**	**13.48**	**21**	pP	P	23 59 46.5	+5.5
BTO2	**Baotou**	**13.48**	**21**	sP	P	23 59 50.0	+9.0
TIA	**Tai'an**	**13.91**	**52**	P	Pn	23 59 27.5	-10
TIA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
EVN	**Everest**	**14.82**	**273**		**Pn**	**23 59 50.3**	**-0.1**
DL2	**Dalian**	**18.36**	**50**	P	**P**	**00 00 37.8**	**+2.9**
DL2				pmax	pmax		
	comp=Z,21nm,0.8s						
SONM	**Songino Array**	**19.67**	**6**	P	**Pn**	**00 00 50.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=209,slow=15,SNR=9.5						
	comp=Z,0.5nm,0.4s						
ULN	**Ulaanbaatar**	**19.76**	**7**		**Pn**	**00 00 51.4**	**-0.5**

ULN	**Ulaanbaatar**	**19.76**	**7**	P	**Pn**	**00 00 51.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WMQ	**Urumqi**	**20.11**	**325**	*eP*	Pn	00 00 57.5	+1.5
WMQ				LR	LR		
	comp=Z,600nm,17.5s						
WMQ				LR	LR		
	comp=Z,590nm,23.9s						
ZAK	**Zakamensk**	**22.10**	**359**	*eP*	**P**	**00 01 14.6**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KSAR	**Wonju Array Be**	**22.31**	**60**		**P**	**00 01 17.7**	**-0.1**
KSAR	**Wonju Array Be**	**22.31**	**60**	P	**P**	**00 01 17.7**	**-0.1**
KS19	**Wonju Array Si**	**22.32**	**59**	P	**P**	**00 01 17.6**	**-0.3**
KS19				IAmb	IAmb	00 01 25.3	
	comp=Z,9.4nm,0.6s						
KSRS	**Korea Array**	**22.34**	**60**	P	**P**	**00 01 17.9**	**-0.3**
	comp=Z,4.2nm,0.6s,baz=242,slow=11,SNR=18						
	comp=Z,4.2nm,0.6s						
KSRS	**Korea Array**	**22.34**	**60**	*eP*	**P**	**00 01 18.1**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KNGR	**Kungurtug, Tuv**	**22.79**	**350**	*i* P	**P**	**00 01 23.1**	**+0.1**
KNGR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CN2	**Changchun**	**23.41**	**43**	P	**P**	**00 01 29.3**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WUS	**Wushi**	**23.75**	**309**		**P**	**00 01 33.0**	**+0.3**
HIA	**Hailar**	**24.36**	**26**		**P**	**00 01 39.0**	**+0.8**
HIA	**Hailar**	**24.36**	**26**	P	**P**	**00 01 39.1**	**+0.8**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HILR	**Hailar Array B**	**24.60**	**26**	P	**P**	**00 01 41.3**	**+0.8**
	comp=Z,2.9nm,0.5s,baz=196,slow=10,SNR=8.1						
	comp=Z,2.9nm,0.5s						
PRZ	**Przheval'sk**	**24.86**	**311**	P	**P**	**00 01 43.1**	**+0.1**
PRZ	**Przheval'sk**	**24.86**	**311**	P	**P**	**00 01 43.2**	**+0.1**
PRZ				pmax	pmax		
	comp=Z,42nm,1.4s						
MK31	**Makanchi Array**	**24.93**	**324**	*ceP*	**P**	**00 01 44.8**	**+1.4**
MKAR	**Makanchi Array**	**24.93**	**324**	P	**P**	**00 01 43.5**	**+0.1**
	comp=Z,1.7nm,0.4s,baz=120,slow=10,SNR=25						
	comp=Z,1.7nm,0.4s						
MKAR	**Makanchi Array**	**24.93**	**324**		**P**	**00 01 43.4**	**0.0**
MKAR	**Makanchi Array**	**24.93**	**324**	*eP*	**P**	**00 01 44.7**	**+1.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TARG	**Taragay, Kyrgy**	**24.93**	**309**	P	**P**	**00 01 43.8**	**-0.2**
TARG				IAmb	IAmb	00 01 48.2	
	comp=Z,6.3nm,0.8s						
TARG	**Taragay, Kyrgy**	**24.93**	**309**	P	**P**	**00 01 43.8**	**-0.2**
TARG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAKZ	**Makanchi**	**25.10**	**323**		**P**	**00 01 45.2**	**+0.2**
MAKZ	**Makanchi**	**25.10**	**323**	P	**P**	**00 01 45.2**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH2	**Kashi**	**25.63**	**302**	P	**P**	**00 01 50.3**	**+0.2**
KSH2				pP	pP	00 01 53.0	-0.7
KSH2				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NRN	**Naryn**	**26.07**	**308**		**P**	**00 01 54.8**	**+0.6**
NRN	**Naryn**	**26.07**	**308**	P	**P**	**00 01 54.8**	**+0.6**
NRN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NIL	**Nilore**	**26.52**	**289**		**P**	**00 01 58.1**	**0.0**
NIL				IAmb	IAmb	00 02 02.0	
	comp=Z,17nm,1.1s						
NIL	**Nilore**	**26.52**	**289**	P	**P**	**00 01 58.1**	**0.0**
NIL				pmax	pmax		
	comp=Z,17nm,1.1s						
AAK	**Ala-Archa**	**27.55**	**309**		**P**	**00 02 08.6**	**+1.2**
AAK	**Ala-Archa**	**27.55**	**309**	P	**P**	**00 02 08.6**	**+1.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**27.70**	**47**	P	**P**	**00 02 06.1**	**-2.4**
	comp=Z,4.2nm,0.7s,baz=256,slow=5.8,SNR=4.5						
	comp=Z,4.2nm,0.7s						
ARSB	**Arslanbob**	**28.17**	**306**	P	**P**	**00 02 13.5**	**+0.6**
ARSB	**Arslanbob**	**28.17**	**306**	P	**P**	**00 02 13.5**	**+0.6**
ARSB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DRK	**Karamyk**	**28.54**	**301**	P	**P**	**00 02 16.2**	**-0.2**
DRK	**Karamyk**	**28.54**	**301**	P	**P**	**00 02 16.2**	**-0.2**
DRK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZALV	**Zalesovo Beam**	**29.13**	**337**	P	**P**	**00 02 20.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=132,slow=6.6,SNR=4.6						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**29.13**	**337**	P	**P**	**00 02 20.2**	**-0.8**
KURBB	**Kurchatov Arra**	**29.31**	**327**	P	**P**	**00 02 22.1**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=129,slow=10,SNR=8.0						
	comp=Z,0.7nm,0.6s						
KURK	**Kurchatov**	**29.32**	**327**		**P**	**00 02 23.6**	**+0.8**
KURK	**Kurchatov**	**29.32**	**327**	*ceP*	**P**	**00 02 23.8**	**+1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BTK	**Batken**	**29.41**	**302**	P	**P**	**00 02 25.0**	**+1.1**
BTK	**Batken**	**29.41**	**302**	P	**P**	**00 02 25.0**	**+1.1**
BTK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GAR	**Garm**	**29.57**	**300**	P	**P**	**00 02 24.8**	**-0.5**
GAR				IAmb	IAmb	00 02 31.6	
	comp=Z,9.8nm,1.3s						
DAV	**Davao City (W)**	**29.60**	**131**	LR	LR	00 13 34.7	
	comp=Z,36nm,18.3s,baz=333,slow=35						
KLR	**Kul'dur**	**30.05**	**38**	*i* P	**P**	**00 02 28.4**	**-0.9**
KLR				pmax	pmax		
	comp=Z,6.0nm,2.2s						
KBL	**Kabul**	**30.06**	**291**		**P**	**00 02 29.9**	**+0.1**
KBL				IAmb	IAmb	00 02 33.4	
	comp=Z,7.7nm,1.3s						
KBL	**Kabul**	**30.06**	**291**	P	**P**	**00 02 29.9**	**+0.1**
KBL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHGR	**Chuyangaron**	**30.39**	**299**	*i* P	**P**	**00 02 33.1**	**+0.5**
CHGR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SHAA	**Shahritus**	**31.05**	**297**		**P**	**00 02 39.3**	**+0.9**
SHAA				IAmb	IAmb	00 02 43.9	
	comp=Z,16nm,1.1s						
BVAR	**Borovoye Array**	**34.80**	**325**	P	**P**	**00 03 11.3**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=119,slow=12,SNR=3.5						
	comp=Z,0.6nm,0.7s						
BORK	**Borovoye**	**34.85**	**325**	*i* P	**P**	**00 03 12.5**	**+1.2**
BORK				pmax	pmax		
	comp=Z,9.0nm,2.8s						
AB31	**Akbulak array**	**39.29**	**314**		**P**	**00 03 48.9**	**-0.2**
ABKAR	**Akbulak array**	**39.29**	**314**		**P**	**00 03 49.0**	**-0.1**
ARTI	**Arti**	**42.52**	**324**	*i* P	**P**	**00 04 15.2**	**-0.4**
ARTI				pmax	pmax		
	comp=Z,31nm,3.4s	

WRA	**Warramunga Arr**	**56.38**	**145**	P	**P**	**00 05 59.5**	**-2.4**
	comp=Z,2.7nm,0.6s,baz=334,slow=8.4,SNR=18						
	comp=Z,2.7nm,0.6s						
WRA	**Warramunga Arr**	**56.38**	**145**	P	**P**	**00 05 59.7**	**-2.1**
WRA	**Warramunga Arr**	**56.38**	**145**	P	**P**	**00 05 59.7**	**-2.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
AKASG	**Malin Array Be**	**59.03**	**314**	P	**P**	**00 06 18.6**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=72,slow=6.9,SNR=4.8						
	comp=Z,0.6nm,0.4s						
AKASG	**Malin Array Be**	**59.03**	**314**	P	**P**	**00 06 18.8**	**-1.3**
AKASG	**Malin Array Be**	**59.03**	**314**	*e*P	**P**	**00 06 22.8**	**+2.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**59.03**	**314**	*ce*P	**P**	**00 06 22.0**	**+1.8**
ASAR	**Alice Springs**	**59.31**	**147**	P	**P**	**00 06 20.5**	**-1.9**
	comp=Z,2.1nm,0.6s,baz=328,slow=6.8,SNR=14						
	comp=Z,2.1nm,0.6s						
ARCES	**ARCESS Array B**	**59.68**	**337**	P	**P**	**00 06 23.9**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=82,slow=6.0,SNR=1.9						
	comp=Z,2.6nm,0.8s						
FINES	**FINESS Array B**	**59.70**	**327**	P	**P**	**00 06 23.6**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=74,slow=16,SNR=6.4						
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**59.70**	**327**	*e*P	**P**	**00 06 25.1**	**+0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS	**Hagfors**	**65.89**	**327**	P	**P**	**00 07 04.5**	**-1.3**
	comp=Z,3.8nm,1.0s,baz=122,slow=7.7,SNR=5.1						
	comp=Z,3.8nm,1.0s						
NB201	**NORSAR Array S**	**66.79**	**328**	P	**P**	**00 07 10.6**	**-1.1**
B20K	**Meade River**	**66.83**	**22**	P	**P**	**00 07 11.3**	**-0.3**
B20K				IAmb	IAmb	00 07 19.6	
	comp=Z,5.4nm,0.9s						
NB2	**NORSAR Subarra**	**66.83**	**328**	P	**P**	**00 07 10.3**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=74,slow=6.5						
NOA	**NORSAR Array B**	**66.83**	**328**	P	**P**	**00 07 10.0**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=74,slow=6.5,SNR=4.1						
	comp=Z,0.5nm,0.5s						
NOA	**NORSAR Array B**	**66.83**	**328**	*e*P	**P**	**00 07 11.6**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NC204	**NORSAR Array S**	**66.97**	**328**	P	**P**	**00 07 12.0**	**-0.8**
L14K	**Kuka Creek**	**67.35**	**31**	P	**P**	**00 07 14.8**	**-0.3**
L14K				IAmb	IAmb	00 07 29.0	
	comp=Z,4.7nm,1.2s						
H17K	**Granite Mounta**	**67.44**	**27**	P	**P**	**00 07 15.7**	**0.0**
H17K				IAmb	IAmb	00 07 53.4	
	comp=Z,2.4nm,0.9s						
K15K	**Wolf Creek Mou**	**67.58**	**30**	P	**P**	**00 07 16.8**	**+0.2**
J16K	**Anvik River**	**67.68**	**29**	P	**P**	**00 07 17.6**	**+0.4**
B21K	**Ikpikpuk River**	**67.79**	**22**	P	**P**	**00 07 18.1**	**+0.3**
B21K				IAmb	IAmb	00 07 27.2	
	comp=Z,3.0nm,0.8s						
B22K	**Teshekpuk Lake**	**67.91**	**21**	P	**P**	**00 07 18.8**	**+0.3**
B22K				IAmb	IAmb	00 07 26.4	
	comp=Z,5.3nm,0.9s						
L16K	**Owhat River**	**68.69**	**31**	P	**P**	**00 07 24.3**	**+0.7**
L16K				IAmb	IAmb	00 07 51.6	
	comp=Z,6.5nm,1.5s						
D22K	**Ayikyak River**	**68.71**	**22**		**P**	**00 07 24.1**	**+0.5**
D22K				IAmb	IAmb	00 07 49.8	
	comp=Z,7.2nm,1.4s						
K17K	**Iditarod**	**68.86**	**29**	P	**P**	**00 07 26.0**	**+1.4**
K17K				IAmb	IAmb	00 07 32.0	
	comp=Z,5.2nm,1.1s						
F21K	**Alatna River**	**69.08**	**24**	P	**P**	**00 07 26.1**	**+0.1**
F21K				IAmb	IAmb	00 07 33.7	
	comp=Z,2.3nm,0.8s						
KHC	**Kasperske Hory**	**69.22**	**315**	*ce*P	**P**	**00 07 29.5**	**+2.4**
KHC				pmax	pmax		
	comp=Z,15nm,2.5s						
GERES	**GERESS Array B**	**69.23**	**315**	P	**P**	**00 07 25.7**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=74,slow=5.5,SNR=1.6						
	comp=Z,0.5nm,0.5s						
E22K	**Anaktuvuk Pass**	**69.30**	**23**	P	**P**	**00 07 28.2**	**+0.8**
E22K				IAmb	IAmb	00 07 35.7	
	comp=Z,1.9nm,0.8s						
D23K	**Nanushuk River**	**69.33**	**22**	P	**P**	**00 07 28.4**	**+0.9**
D23K				IAmb	IAmb	00 08 11.2	
	comp=Z,3.6nm,1.1s						
O15K	**Ungalikthiuk R**	**69.41**	**33**	P	**P**	**00 07 29.4**	**+1.3**
IMAR	**Indian Mountai**	**69.47**	**25**	P	**P**	**00 07 28.3**	**-0.1**
J19K	**Poorman**	**69.51**	**28**	P	**P**	**00 07 29.8**	**+1.1**
J19K				IAmb	IAmb	00 07 36.6	
	comp=Z,4.5nm,1.2s						
M17K	**Holitna River**	**69.71**	**30**	P	**P**	**00 07 30.3**	**+0.3**
M17K				IAmb	IAmb	00 07 40.2	
	comp=Z,6.8nm,1.1s						
L18K	**Granite Mounta**	**69.73**	**29**	P	**P**	**00 07 31.3**	**+1.2**
L18K				IAmb	IAmb	00 07 46.7	
	comp=Z,6.9nm,1.4s						
STKA	**Stephens Creek**	**69.88**	**146**	P	**P**	**00 07 31.8**	**+0.6**
STKA	**Stephens Creek**	**69.88**	**146**	*e*P	**P**	**00 07 32.8**	**+1.5**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
H21K	**Melozitna Rive**	**69.96**	**25**	P	**P**	**00 07 31.8**	**+0.4**
H21K				IAmb	IAmb	00 07 46.4	
	comp=Z,3.4nm,1.1s						
H22K	**Ishtalitna Cre**	**70.40**	**25**	P	**P**	**00 07 35.1**	**+1.0**
H22K				IAmb	IAmb	00 07 47.9	
	comp=Z,6.2nm,1.4s						
E24K	**Your Creek**	**70.45**	**22**	P	**P**	**00 07 34.3**	**-0.1**
E24K				IAmb	IAmb	00 07 42.6	
	comp=Z,3.1nm,1.1s						
G23K	**Bananza Creek**	**70.53**	**24**	P	**P**	**00 07 35.8**	**+0.8**
G23K				IAmb	IAmb	00 08 04.1	
	comp=Z,5.7nm,1.2s						
L19K	**White Mountain**	**70.54**	**29**	P	**P**	**00 07 36.1**	**+1.0**
L19K				IAmb	IAmb	00 07 57.8	
	comp=Z,6.6nm,1.3s						
N19K	**Bonanza Creek**	**71.26**	**30**	P	**P**	**00 07 39.6**	**+0.1**
N19K				IAmb	IAmb	00 08 12.7	
	comp=Z,5.7nm,1.2s						
O18K	**Koktuh Hills**	**71.33**	**32**	P	**P**	**00 07 40.8**	**+0.9**
PPLA	**Purkeypile**	**71.37**	**28**	P	**P**	**00 07 39.9**	**-0.3**
H24K	**Noodor Dome**	**71.71**	**24**	P	**P**	**00 07 42.3**	**+0.2**
TRF	**Thorofare Moun**	**71.90**	**27**	P	**P**	**00 07 45.6**	**+2.2**
TRF				IAmb	IAmb	00 07 51.7	
	comp=Z,12nm,1.4s						
SKT	**Skwentna**	**72.05**	**29**	P	**P**	**00 07 43.0**	**-1.2**
SKT				IAmb	IAmb	00 07 46.0	
	comp=Z,7.4nm,1.2s						
BMAR	**Burnt Mountain**	**72.07**	**22**	P	**P**	**00 07 44.8**	**+0.6**
L22K	**Petersville**	**72.12**	**28**		**P**	**00 07 43.6**	**-1.0**
L22K				IAmb	IAmb	00 07 49.1	
	comp=Z,10.0nm,1.3s						
STLK	**Strandline Lak**	**72.13**	**29**	P	**P**	**00 07 44.6**	**-0.1**
STLK				IAmb	IAmb	00 08 14.6	
	comp=Z,5.4nm,1.5s						
FUORN	**Ofenpass-Fuorn**	**72.19**	**314**	P	**P**	**00 07 45.5**	**-0.1**
WRH	**Wood River Hil**	**72.28**	**26**	P	**P**	**00 07 46.8**	**+1.4**
WRH				IAmb	IAmb	00 08 27.4	
	comp=Z,5.1nm,1.5s						
ILAR	**Eielson Array**	**72.59**	**25**	P	**P**	**00 07 45.5**	**-1.8**
	comp=Z,0.2nm,0.7s,baz=290,slow=4.6,SNR=4.5						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**72.59**	**25**	P	**P**	**00 07 47.2**	**-0.1**
ILAR	**Eielson Array**	**72.59**	**25**	P	**P**	**00 07 47.2**	**-0.1**
SUA	**Susitna One**	**72.61**	**29**	P	**P**	**00 07 47.2**	**-0.4**
PRP	**Porcupine Dome**	**72.71**	**24**	P	**P**	**00 07 48.3**	**0.0**
PRP				IAmb	IAmb	00 08 14.5	
	comp=Z,5.1nm,1.3s						
TUE	**Stuetta**	**72.83**	**314**	P	**P**	**00 07 49.4**	**+0.1**
TUE				IAmb	IAmb	00 08 14.2	
	comp=Z,8.1nm,1.1s						
DHY	**Denali Highway**	**73.23**	**27**	P	**P**	**00 07 51.2**	**-0.2**
DHY				IAmb	IAmb	00 08 19.5	
	comp=Z,8.5nm,1.4s						
OHAK	**Old Harbor**	**73.36**	**34**	P	**P**	**00 07 52.8**	**+0.8**
SML	**Sawmill**	**73.47**	**28**	P	**P**	**00 07 53.1**	**+0.5**
KNK	**Knik Glacier**	**73.61**	**28**	P	**P**	**00 07 52.9**	**-0.5**
E29M	**Blow River**	**73.65**	**20**	P	**P**	**00 07 53.2**	**-0.3**
SCM	**Sheep Creek Mo**	**73.87**	**28**	P	**P**	**00 07 55.1**	**+0.1**
SCM				IAmb	IAmb	00 08 15.5	
	comp=Z,8.5nm,1.2s						
SCM	**Sheep Creek Mo**	**73.87**	**28**	P	**P**	**00 07 55.1**	**+0.1**
SCM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RIDG	**Independent Ri**	**73.88**	**26**	P	**P**	**00 07 54.5**	**-0.5**
RIDG				IAmb	IAmb	00 08 14.3	
	comp=Z,12nm,1.4s						
SCRK	**Sand Creek**	**74.08**	**25**	P	**P**	**00 07 57.7**	**+1.5**
ARMA	**Armidale**	**74.19**	**138**	P	**P**	**00 07 58.6**	**+1.3**
M24K	**Tolsona, Glenn**	**74.20**	**27**	P	**P**	**00 07 57.2**	**+0.2**
KLU	**Klutina**	**74.62**	**28**	P	**P**	**00 07 59.0**	**-0.4**
KLU				IAmb	IAmb	00 08 10.2	
	comp=Z,7.7nm,1.0s						
I28M	**Miner Creek**	**74.71**	**23**	P	**P**	**00 08 00.4**	**+0.5**
INK	**Inuvik**	**74.98**	**19**	P	**P**	**00 08 01.2**	**0.0**
INK	**Inuvik**	**74.98**	**19**	P	**P**	**00 08 01.2**	**0.0**
INK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
N25K	**Chitina, Valde**	**75.10**	**27**	P	**P**	**00 08 02.2**	**0.0**
N25K				IAmb	IAmb	00 08 27.5	
	comp=Z,13nm,1.5s						
BNI	**Bardonecchia**	**75.12**	**313**	P	**P**	**00 08 02.9**	**+0.2**
BNI	**Bardonecchia**	**75.12**	**313**	P	**P**	**00 08 02.9**	**+0.2**
BNI				pmax	pmax		
	comp=Z,20nm,1.3s						
BCAR	**Beaver Creek A**	**75.41**	**25**	P	**P**	**00 08 03.8**	**-0.1**
F31M	**Tsiigehtchic**	**75.47**	**20**	P	**P**	**00 08 05.1**	**+1.0**
F31M				IAmb	IAmb	00 08 13.9	
	comp=Z,4.3nm,1.2s						
GLB	**Gilahina Butte**	**75.51**	**27**	P	**P**	**00 08 06.2**	**+1.7**
GLB				IAmb	IAmb	00 08 18.9	
	comp=Z,12nm,1.4s						
M27K	**Edge Creek, AK**	**75.77**	**26**	P	**P**	**00 08 06.1**	**0.0**
M27K				IAmb	IAmb	00 08 09.6	
	comp=Z,11nm,1.4s						
VRDI	**Verde Repeater**	**75.77**	**27**	P	**P**	**00 08 06.5**	**+0.3**
H31M	**Peel River**	**76.34**	**21**	P	**P**	**00 08 08.2**	**-0.9**
H31M				IAmb	IAmb	00 08 45.2	
	comp=Z,10.0nm,1.5s						
J30M	**Hart River**	**76.47**	**23**	P	**P**	**00 08 10.0**	**0.0**
BARN	**Barnard Glacie**	**76.59**	**27**	P	**P**	**00 08 11.6**	**+0.7**
BARN				IAmb	IAmb	00 08 54.0	
	comp=Z,7.1nm,1.0s						
C36M	**Paulatuk**	**76.73**	**16**	P	**P**	**00 08 09.9**	**-1.3**
L29M	**L29M**	**76.73**	**24**	P	**P**	**00 08 10.7**	**-0.8**
L29M				IAmb	IAmb	00 08 19.9	
	comp=Z,4.5nm,1.1s						
CTGM	**Chitina Glacie**	**76.77**	**27**	P	**P**	**00 08 12.9**	**+1.1**
M30M	**Minto, Yukon**	**77.55**	**24**	P	**P**	**00 08 16.5**	**+0.5**
M30M				IAmb	IAmb	00 08 59.2	
	comp=Z,9.3nm,1.5s						
MMPY	**Sheldon Lake,**	**79.46**	**23**	P	**P**	**00 08 27.6**	**+1.0**
MMPY				IAmb	IAmb	00 08 33.9	
	comp=Z,6.4nm,1.5s						
YKA	**Yellowknife Ar**	**84.53**	**17**	P	**P**	**00 08 52.8**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=327,slow=5.5,SNR=5.4						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**84.53**	**17**	P	**P**	**00 08 52.7**	**-0.5**
YKA	**Yellowknife Ar**	**84.53**	**17**	*e*P	**P**	**00 08 56.2**	**+3.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AFI	**Afiamalu**	**91.84**	**105**	LR	LR	00 51 25.5	
	comp=Z,42nm,18.5s,baz=272,slow=36						
TORD	**Torodi Ar. Bea**	**94.06**	**287**	LR	LR	00 55 35.0	
	comp=Z,85nm,19.7s,baz=166,slow=38						

*IDC **28** 00:37:31.8±1.4,6°.85S×127°.00E,h450km±18km, mb3.0/3, mbtmp4.3/8, Error ellipse: s-maj=30.4km s-min=11.3km az=70.0*
*NEIC **28** 00:37:32.2±2.3,6°.92S±0°.04×126°.9E±0°.1,h445km±12km, mb4.5/10, Error ellipse: s-maj=21.2km s-min=4.6km az=79.0*
*DJA **28** 00:37:32.7±0.5,7°.5S±4°×12°.7E±°,h436km±11km, M4.4/16, mB4.7/2, mb4.2/9, MLv4.5/16, Mw(mB)4.0/2*

ISC 28 00:37:31.5±0.6,**6°.89S**±0°.06×**126°.99E**±0°.08,**h450**km,**n39,** σ1°**47**/44,**mb4.0**/6,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.40**	**21**	P	**P**	**00 38 42.4**	**+0.8**
NLAI	**Namlea**	**3.62**	**2**	P	**P**	**00 38 44.2**	**+0.7**
BNDI	**Bandanaira**	**3.73**	**51**	P	**P**	**00 38 44.4**	**0.0**
SOEI	**Soe**	**3.93**	**223**	P	**P**	**00 38 46.5**	**+0.4**
SOEI				S	**S**	**00 39 46.1**	**-0.8**
SOEI	**Soe**	**3.93**	**223**	P	**P**	**00 38 46.9**	**+0.7**
SAUI	**Saumlaki**	**4.41**	**105**	P	**P**	**00 38 52.4**	**+2.1**
BATI	**Baumata**	**4.66**	**225**	P	**P**	**00 38 53.1**	**+0.4**
	72nm,0.5s,baz=66,slow=20,SNR=12						
BATI				S	**S**	**00 39 55.9**	**-2.9**
	108nm,0.6s,baz=103,slow=4.1,SNR=6.0						
BATI	**Baumata**	**4.66**	**225**	P	**P**	**00 38 53.7**	**+1.0**
MMRI	**Maumere**	**5.02**	**249**	P	**P**	**00 38 53.0**	**-3.1**
EDFI	**Ende, Flores**	**5.57**	**250**	P	**P**	**00 39 01.7**	**+0.1**
	0.1nm554nm27nm,0.5s						
BASI	**Baing, Sumba**	**7.16**	**242**	P	**P**	**00 39 17.6**	**-0.3**
	138nm,1.2s						
MTN	**Nanton Dam**	**7.19**	**146**	P	**P**	**00 39 19.2**	**+1.0**
SIJI	**Sorong**	**7.34**	**36**	P	**P**	**00 39 19.9**	**0.0**
	51nm,0.4s,baz=315,slow=16,SNR=24						
SIJI				S	**S**	**00 40 43.7**	**-5.0**
	17nm,0.3s,baz=17,slow=19,SNR=1.8						
SWI	**Sorong**	**7.34**	**36**	P	**P**	**00 39 20.7**	**+0.8**
KNRA	**Kununurra**	**8.91**	**169**	P	**P**	**00 39 38.0**	**+1.2**
TOLI2	**Tolitoli**	**10.08**	**322**	P	**P**	**00 39 49.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**11.22**	**187**	P	**P**	**00 40 03.0**	**+1.0**
	5.2nm,1.0s,baz=18,slow=11,SNR=1.7						
WB0	**Warramunga Arr**	**14.68**	**151**		**P**	**00 40 39.7**	**+0.4**
WRAB	**Tennant Creek**	**14.81**	**152**	P	**P**	**00 40 40.8**	**+0.2**
WRA	**Warramunga Arr**	**14.81**	**152**	P	**P**	**00 40 41.0**	**+0.3**
	7.8nm,0.3s,baz=329,slow=11,SNR=238						
WRA				S	**S**	**00 43 12.8**	**-4.1**
	2.1nm,0.7s,baz=328,slow=20,SNR=6.2						
WRA	**Warramunga Arr**	**14.81**	**152**		**P**	**00 40 40.1**	**-0.6**
WR8	**Warramunga Arr**	**14.90**	**151**	P	**P**	**00 40 42.0**	**+0.4**
MBWA	**Marble Bar**	**15.84**	**206**	P	**P**	**00 40 51.2**	**-0.4**
MBWA				IAmb	IAmb	00 41 28.4	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**16.15**	**205**	P	**P**	**00 40 54.7**	**-0.2**
PSA00				IAmb	IAmb	00 41 06.6	
	comp=Z,21nm,1.2s						
COEN	**Coen**	**17.39**	**115**		**P**	**00 41 08.0**	**0.0**
COEN				IAmb	IAmb	00 41 08.9	
	comp=Z,12nm,1.0s						
AS31	**Alice Springs**	**17.96**	**159**		**P**	**00 41 14.5**	**+0.7**
ASAR	**Alice Springs**	**17.96**	**159**	P	**P**	**00 41 14.6**	**+0.7**
	comp=Z,5.3nm,0.4s,baz=336,slow=12,SNR=48						
ASAR				S	**S**	**00 44 17.8**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=344,slow=25,SNR=5.4						
ASAR	**Alice Springs**	**17.96**	**159**		**P**	**00 41 14.4**	**+0.6**
GIRL	**Giralia**	**19.92**	**217**	P	**P**	**00 41 33.6**	**+1.5**
BBOO	**Buckleboo**	**27.14**	**163**	P	**P**	**00 42 37.3**	**+0.5**
BBOO				IAmb	IAmb	00 42 56.4	
	comp=Z,22nm,1.2s						
NWAO	**Narrogin (SRO)**	**27.45**	**198**	P	**P**	**00 42 38.8**	**-0.8**
NWAO				IAmb	IAmb	00 43 06.9	
	comp=Z,32nm,1.4s						
STKA	**Stephens Creek**	**28.36**	**153**	P	**P**	**00 42 48.2**	**+0.7**
	comp=Z,4.0nm,0.5s,baz=330,slow=8.8,SNR=14						
	comp=Z,4.0nm,0.5s						
STKA	**Stephens Creek**	**28.36**	**153**	P	**P**	**00 42 48.1**	**+0.5**
STKA				IAmb	IAmb	00 42 59.5	
	comp=Z,54nm,1.5s						
SONM	**Songino Array**	**57.44**	**344**	P	**P**	**00 46 36.5**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=148,slow=3.2,SNR=1.9						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**66.53**	**328**	P	**P**	**00 47 35.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=128,slow=7.9,SNR=7.5						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**66.53**	**328**	P	**P**	**00 47 35.2**	**-0.2**
KURBB	**Kurchatov Arra**	**70.88**	**330**	P	**P**	**00 48 01.6**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=133,slow=5.2,SNR=7.2						
KURK	**Kurchatov**	**70.89**	**330**	P	**P**	**00 48 01.7**	**-0.1**
F17K	**Baldwin Pennin**	**89.09**	**22**	P	**P**	**00 49 40.1**	**+2.9**

*IDC **28** 00:41:13.8±2.3,61°.24N×151°.79W,h76km±30km, mb3.6/6, mbtmp3.9/10, Error ellipse: s-maj=42.1km s-min=22.2km az=128.0*
*AEIC **28** 00:41:15.8±1.3,61°.17N±0°.03×151°.27W±0°.06,h70km±5km, Error ellipse: s-maj=4.3km s-min=3.9km az=172.0*
*NEIC **28** 00:41:15.0±0.8,61°.22N±0°.03×151°.40W±0°.06,h76km±4km, ML3.6/224,ML3.4(AEIC), Error ellipse: s-maj=4.3km s-min=4.1km az=127.0*

ISC 28 00:41:14.3±0.7,**61°.20N**±0°.03×**151°.38W**±0°.03,**h83**km±5km, **n208,** σ0°**83**/192,**mb4.0**/7,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCG	**Spurr Capps Gl**	**0.33**	**288**		**Pn**	**00 41 27.0**	**-0.2**
SPCG					**Sn**	**00 41 36.0**	**-0.9**
SPU	**Mount Spurr**	**0.33**	**268**		**Pn**	**00 41 26.9**	**-0.3**
SPU				Sn	**Sn**	**00 41 36.0**	**-0.7**
STLK	**Strandline Lak**	**0.38**	**324**		**Pn**	**00 41 27.3**	**-0.2**
STLK				Sn	**Sn**	**00 41 36.4**	**-0.9**
STLK				IAML		00 41 37.1	
	comp=E,3μm,0.4s						
STLK				IAML		00 41 37.2	
	comp=N,4μm,0.3s						
SPCN	**Chakachatna No**	**0.39**	**275**		**Pn**	**00 41 27.7**	**+0.1**
SPCR	**Spurr Chakacha**	**0.40**	**271**		**Pn**	**00 41 27.5**	**-0.2**
SPCR					**Sn**	**00 41 36.7**	**-0.9**
SPCR	**Spurr Chakacha**	**0.40**	**271**		**Pn**	**00 41 27.5**	**-0.2**
SPCR					**Sn**	**00 41 36.9**	**-0.7**
SUA	**Susitna One**	**0.41**	**48**		**Pn**	**00 41 27.8**	**0.0**
SUA				Sn	**Sn**	**00 41 37.2**	**-0.5**
SUA				IAML		00 41 38.7	
	comp=N,3μm,0.4s						
SUA				IAML		00 41 39.6	
	comp=E,3μm,0.4s						
CAPN	**Captain Cook N**	**0.44**	**166**		**Pn**	**00 41 29.1**	**+1.3**
CKL	**Chakachamna La**	**0.47**	**271**		**Pn**	**00 41 28.1**	**-0.1**
CKL					**Sn**	**00 41 38.0**	**-0.5**
SPBG	**Spurr Blockage**	**0.48**	**278**		**Pn**	**00 41 28.4**	**+0.1**
SKT	**Skwentna**	**0.79**	**355**		**Pn**	**00 41 31.2**	**0.0**
SKT				Sn	**Sn**	**00 41 43.3**	**-0.5**
SKT				IAML		00 41 45.0	
	comp=E,2μm,0.3s						
SKT				IAML		00 41 45.6	
	comp=N,2μm,0.3s						
RDT	**Redoubt**	**0.80**	**219**		**Pn**	**00 41 31.4**	**+0.1**
RDT					**Sn**	**00 41 43.8**	**-0.3**
RC01	**Rabbit Creek A**	**0.80**	**97**		**Pn**	**00 41 31.6**	**+0.3**
RC01				Sn	**Sn**	**00 41 44.2**	**+0.2**
RC01				IAML		00 41 45.7	
	comp=E,2μm,0.4s						
RC01				IAML		00 41 46.6	
	comp=N,2μm,0.3s						
M22K	**Willow**	**0.82**	**47**		**Pn**	**00 41 32.3**	**+0.8**
M22K				Sn	**Sn**	**00 41 44.5**	**+0.2**
DFR	**Drift River**	**0.88**	**227**		**Sn**	**00 41 45.8**	**+0.2**
SLKM	**Skilak Lake**	**0.89**	**140**		**Pn**	**00 41 32.5**	**+0.2**
SLKM				Sn	**Sn**	**00 41 46.2**	**+0.4**
RDJH	**Redoubt Jeurge**	**0.92**	**230**		**Sn**	**00 41 46.7**	**+0.2**
NCT	**North Crescent**	**0.99**	**231**		**Sn**	**00 41 48.2**	**+0.3**
RED	**Redoubt Volcan**	**1.04**	**222**		**Pn**	**00 41 34.4**	**+0.4**
RED				Sn	**Sn**	**00 41 49.6**	**+0.8**
RED				IAML		00 41 51.0	
	comp=N,2μm,0.8s						
RED				IAML		00 41 51.1	
	comp=E,2μm,0.8s						
O22K	**Cooper Landing**	**1.08**	**131**		**Pn**	**00 41 35.0**	**+0.6**
O22K	**Cooper Landing**	**1.08**	**131**		**Sn**	**00 41 49.9**	**+0.4**
M20K	**Styx River**	**1.09**	**310**		**Pn**	**00 41 35.1**	**+0.4**
M20K					**Sn**	**00 41 49.9**	**+0.1**
PMR	**Palmer**	**1.15**	**69**		**Pn**	**00 41 35.7**	**+0.4**
PMR				IAML		00 41 52.6	
	comp=N,1μm,0.3s						
PMR				IAML		00 41 55.0	
	comp=E,1μm,0.2s						
GHO	**Glory Hole Cre**	**1.31**	**63**		**Pn**	**00 41 37.9**	**+0.5**
GHO					**Sn**	**00 41 54.9**	**+0.1**
GHO	**Glory Hole Cre**	**1.31**	**63**	IAML		00 41 56.4	
	comp=N,1μm,0.5s						
CUT	**Chulitna**	**1.32**	**23**		**Pn**	**00 41 38.1**	**+0.7**
L22K	**Petersville**	**1.37**	**12**		**Pn**	**00 41 38.9**	**+0.9**
L22K				IAML		00 42 00.5	
	comp=E,521nm,0.2s						
L22K				IAML		00 42 01.6	
	comp=N,676nm,0.4s						
KNK	**Knik Glacier**	**1.43**	**80**		**Pn**	**00 41 39.4**	**+0.7**
KNK	**Knik Glacier**	**1.43**	**80**		**Sn**	**00 41 57.8**	**+0.6**
ILW	**Iliamna West**	**1.43**	**218**		**Pn**	**00 41 39.5**	**+0.5**
SEW	**Seward**	**1.45**	**138**		**Pn**	**00 41 39.0**	**0.0**
SEW				IAML		00 42 04.9	
	comp=E,1μm,0.3s						
BRLK	**Bradley Lake**	**1.46**	**170**		**Pn**	**00 41 39.7**	**+0.5**
BRLK				IAML		00 42 02.2	
	comp=N,961nm,0.4s						
BRLK				IAML		00 42 04.8	
	comp=E,1μm,0.3s						
ILSW	**Iliamna Southw**	**1.50**	**216**		**Pn**	**00 41 40.3**	**+0.5**
ILSW				IAML		00 42 03.9	
	comp=E,634nm,0.7s						
HOM	**Homer**	**1.55**	**185**		**Pn**	**00 41 41.4**	**+1.1**
N19K	**Bonanza Creek**	**1.56**	**257**		**Pn**	**00 41 41.0**	**+0.4**
N19K				IAML		00 42 01.6	
	comp=N,601nm,0.6s						
N19K				IAML		00 42 02.5	
	comp=E,349nm,0.7s						
SML	**Sawmill**	**1.58**	**66**		**Pn**	**00 41 41.2**	**+0.4**
SML				IAML		00 42 05.5	
	comp=E,689nm,0.9s						
SML				IAML		00 42 07.0	
	comp=N,668nm,0.6s						
CNPM	**China Poot**	**1.68**	**178**		**Pn**	**00 41 42.5**	**+0.5**
PPLA	**Purkeypile**	**1.75**	**348**		**Pn**	**00 41 43.7**	**+0.6**
PPLA				IAML		00 42 07.3	
	comp=E,413nm,0.4s						
PPLA				IAML		00 42 08.3	
	comp=N,304nm,0.8s						

EYAK	Cordova Ski Ar	2.83	101			Pn	00 41 56.3	-0.9	
EYAK	Cordova Ski Ar	2.83	101	IAML			00 42 31.6		
	comp=E,108nm,0.5s								
N17K	Nushagak Hills	2.92	259			Pn	00 41 59.1	+0.6	
N17K				IAML			00 42 33.4		
	comp=E,127nm,0.8s								
BPAW	Bear Paw Mtn.	2.92	3	IAML			00 42 35.2		
	comp=N,170nm,0.5s								
BPAW				IAML			00 42 35.4		
	comp=E,287nm,0.7s								
M17K	Holitna River	2.93	277			Pn	00 41 59.4	+0.7	
M17K	Holitna River	2.93	277	IAML			00 42 34.4		
	comp=E,188nm,1.1s								
M17K				IAML			00 42 49.9		
	comp=N,147nm,0.9s								
MID	Middleton Isla	3.07	123	Pn		Pn	00 42 00.2	-0.4	
MID				IAML			00 42 48.5		
	comp=N,172nm,1.0s								
KARR	Katmai Rainbow	3.18	213			Pn	00 42 03.3	+1.1	
P17K	Kvichak River	3.23	234			Pn	00 42 03.6	+0.9	
N25K	Chitina, Valde	3.29	80	IAML			00 42 54.3		
	comp=E,140nm,0.5s								
N25K				IAML			00 42 59.8		
	comp=N,184nm,0.7s								
BMRM	Bremner River	3.30	91			Pn	00 42 03.3	-0.4	
BMRM				IAML			00 42 57.0		
	comp=E,160nm,0.4s								
BMRM				IAML			00 43 00.3		
	comp=N,238nm,0.5s								
PAX	Paxson	3.30	55			Pn	00 42 04.7	+1.0	
PAX				IAML			00 42 52.8		
	comp=N,108nm,0.9s								
PAX				IAML			00 42 54.4		
	comp=E,96nm,0.6s								
GOAT	Goat Mountain	3.31	98			Pn	00 42 02.9	-0.9	
J18K	Innoko River	3.37	315			Pn	00 42 05.4	+0.7	
RAGM	Ragged Mountai	3.38	101			Pn	00 42 03.6	-1.3	
J19K	Poorman	3.43	327			Pn	00 42 05.8	+0.4	
KVTA	Katmai Vly 10	3.45	217			Pn	00 42 06.7	+1.0	
WACK	Wrangell Chich	3.46	74			Pn	00 42 06.5	+0.5	
KDAK	Kodiak Island	3.48	191	P		Pn	00 42 05.6	-0.5	
	comp=E,24nm,0.3s,baz=45,slow=4.0,SNR=71								
KDAK				S		Sn	00 42 42.7	-3.4	
	comp=E,27nm,0.4s,baz=358,slow=14,SNR=1.8								
KDAK	Kodiak Island	3.48	191			Pn	00 42 06.0	-0.1	
KDAK				IAML			00 42 59.7		
	comp=E,91nm,0.3s								
KDAK				IAML			00 43 02.4		
	comp=E,126nm,0.5s								
KCE	Katmai Mt Cerb	3.53	215			Pn	00 42 08.0	+1.1	
KELA	Mount Kelaz	3.53	220			Pn	00 42 07.8	+0.9	
NEA2	Nenana	3.57	16			Pn	00 42 07.3	0.0	
ACHA	Angle Creek He	3.60	215			Pn	00 42 08.9	+1.0	
K17K	Iditarod	3.61	298			Pn	00 42 08.6	+0.8	
K17K				IAML			00 42 49.5		
	comp=N,76nm,0.7s								
K17K				IAML			00 42 50.2		
	comp=E,68nm,0.8s								
WRH	Wood River Hil	3.62	23			Pn	00 42 08.4	+0.5	
GLB	Gilahina Butte	3.66	83	IAML			00 42 49.5		
	comp=E,107nm,0.4s								
GLB				IAML			00 43 13.1		
	comp=N,123nm,0.8s								
KAIM	Kayak Island	3.66	107	Pn		Pn	00 42 08.1	-0.5	
KAIM				IAML			00 42 52.6		
	comp=E,74nm,1.1s								
KAIM				IAML			00 42 55.9		
	comp=N,90nm,1.0s								
K24K	Donnelly Dome	3.69	42			Pn	00 42 11.7	+2.8	
N16K	Nishlik Lake	3.69	262			Pn	00 42 09.8	+0.8	
O16K	Kokwok River B	3.70	247			Pn	00 42 09.8	+0.8	
HDA	Harding Lake	3.81	30	IAML			00 43 23.4		
	comp=N,95nm,0.5s								
HDA				IAML			00 43 27.8		
	comp=E,86nm,0.8s								
VRDI	Verde Repeater	3.83	86			Pn	00 42 10.9	-0.2	
VRDI				IAML			00 43 10.7		
	comp=N,72nm,0.8s								
VRDI				IAML			00 43 20.6		
	comp=E,56nm,0.8s								
BERG	Berg Lake	3.85	99			Pn	00 42 09.6	-1.5	
MLY	Manley	3.86	4			Pn	00 42 11.7	+0.4	
MLY				IAML			00 42 58.3		
	comp=N,90nm,0.7s								
SUCK	Suckling Hills	3.91	103	Pn		Pn	00 42 12.6	+0.6	
SUCK				IAML			00 43 23.3		
	comp=N,76nm,1.2s								
SUCK				IAML			00 43 28.6		
	comp=E,60nm,1.0s								
L16K	Owhat River	3.92	281			Pn	00 42 12.7	+0.6	
P16K	Nushagak River	3.96	240			Pn	00 42 13.6	+1.0	
P16K				IAML			00 43 34.7		
	comp=E,90nm,0.8s								
P16K				IAML			00 43 36.7		
	comp=N,141nm,0.8s								
RIDG	Independent Ri	3.96	47			Pn	00 42 13.8	+1.1	
MENT	Mentasta	4.00	61	Pn		Pn	00 42 13.8	+0.5	
COLA	College	4.03	22	IAML			00 43 28.2		
	comp=N,125nm,0.5s								
MCARA	McCarthy VSAT	4.04	84			Pn	00 42 13.8	+0.1	
CRQM	Cirque	4.04	93			Pn	00 42 13.2	-0.7	
I23K	Minto, Yukon-K	4.07	12			Pn	00 42 14.7	+0.6	
I23K	Minto, Yukon-K	4.07	12	IAML			00 43 03.2		
	comp=N,45nm,0.8s								
OHAK	Old Harbor	4.10	195			Pn	00 42 13.5	-1.1	
OHAK	Old Harbor	4.10	195	IAML			00 43 18.6		
	comp=E,55nm,1.1s								
ILAR	Eielson Array	4.13	28	P		Pn	00 42 15.2	+0.2	
	comp=E,22nm,0.3s,baz=212,slow=14,SNR=316								
ILAR				S		Sn	00 42 58.9	-3.1	
	comp=E,9.8nm,0.6s,baz=213,slow=15,SNR=4.4								
M26K	Nabesna, AK	4.16	69			Pn	00 42 15.8	+0.4	
M26K	Nabesna, AK	4.16	69	IAML			00 43 23.4		
	comp=E,41nm,0.6s								
M26K				IAML			00 43 24.7		
	comp=N,68nm,0.8s								
TGL	Tana Glacier	4.19	92			Pn	00 42 15.3	-0.5	
TGL	Tana Glacier	4.19	92	IAML			00 43 27.2		
	comp=E,105nm,0.4s								
L26K	Log Cabin Wild	4.20	61			Pn	00 42 16.4	+0.6	
L26K	Log Cabin Wild	4.20	61	IAML			00 43 32.4		
	comp=E,110nm,0.5s								
L26K				IAML			00 43 34.6		
	comp=N,109nm,0.4s								
DOT	Dot Lake	4.20	51			Pn	00 42 16.5	+0.6	
DOT	Dot Lake	4.20	51	IAML			00 43 29.0		
	comp=E,105nm,0.7s								
DOT				IAML			00 43 31.4		
	comp=N,82nm,0.8s								
PLK5	Peulik 5	4.25	223			Pn	00 42 17.1	+0.5	
PLK1	Peulik 1	4.32	220			Pn	00 42 18.6	+1.1	
BALM	Baldy	4.38	88			Pn	00 42 18.0	-0.5	
PLK4	Peulik 4	4.39	218			Pn	00 42 19.6	+1.1	
PLK4	Peulik 4	4.39	218	IAML			00 43 15.4		
	comp=E,59nm,0.7s								
PLK4				IAML			00 43 16.6		
	comp=N,42nm,0.9s								
KIAG	Kiagna River	4.39	90			Pn	00 42 18.1	-0.5	
J25K	Salcha River,	4.39	36			Pn	00 42 20.1	+1.6	
J25K	Salcha River,	4.39	36	IAML			00 43 20.8		
	comp=E,97nm,0.5s								
J25K				IAML			00 43 21.8		
	comp=N,44nm,0.4s								
N15K	Kwethluk River	4.41	260	IAML			00 43 26.2		
	comp=E,42nm,0.6s								
N15K				IAML			00 43 45.7		
	comp=N,47nm,0.6s								
SCRK	Sand Creek	4.41	48	IAML			00 43 21.0		
	comp=N,53nm,1.2s								
SCRK				IAML			00 43 36.1		
	comp=E,47nm,0.6s								
BARK	Barkley Ridge	4.43	96			Pn	00 42 18.4	-0.7	
PLBL	Peulik Blue Cr	4.47	221			Pn	00 42 20.9	+1.3	
H21K	Melozitna Rive	4.53	352	IAML			00 43 14.1		
	comp=N,32nm,0.7s								
H21K				IAML			00 43 15.5		
	comp=E,43nm,0.9s								
M15K	Kasigluk River	4.57	268			Pn	00 42 21.4	+0.5	
H20K	Anotleneega Mo	4.59	341			Pn	00 42 21.9	+0.7	
M27K	Edge Creek, AK	4.66	71			Pn	00 42 23.2	+0.9	
M27K	Edge Creek, AK	4.66	71	IAML			00 43 49.7		
	comp=N,29nm,0.9s								
O15K	Ungalikthiuk R	4.68	248			Pn	00 42 23.6	+1.2	
BARN	Barnard Glacie	4.71	87			Pn	00 42 22.9	-0.1	
BARN	Barnard Glacie	4.71	87	IAML			00 43 19.0		
	comp=E,72nm,0.6s								
BARN				IAML			00 43 43.9		
	comp=N,49nm,0.8s								
GRNC	Granite Creek	4.71	91			Pn	00 42 22.5	-0.5	
GRNC	Granite Creek	4.71	91	IAML			00 43 18.0		
	comp=E,51nm,0.6s								
GRNC				IAML			00 43 19.3		
	comp=N,73nm,0.6s								
H22K	Ishtalitna Cre	4.72	0	IAML			00 43 19.3		
	comp=N,37nm,1.0s								
MESA	MESA	4.75	98	Pn		Pn	00 42 23.7	+0.3	
J16K	Anvik River	4.79	300			Pn	00 42 24.7	+0.7	
R16K	Pilot Point	4.82	224	IAML			00 43 22.7		
	comp=N,49nm,0.7s								
R16K				IAML			00 44 07.1		
	comp=E,38nm,1.2s								
SII	Sitkinak Islan	4.87	199	Pn		Pn	00 42 26.7	+1.6	
SII				IAML			00 43 34.5		
	comp=E,67nm,0.9s								
L15K	Ungalak Mounta	4.88	280			Pn	00 42 25.6	+0.5	
CTGM	Chitina Glacie	4.88	88			Pn	00 42 25.2	-0.1	
CTGM	Chitina Glacie	4.88	88	IAML			00 43 20.8		
	comp=E,30nm,0.4s								
CTGM				IAML			00 43 23.1		
	comp=N,46nm,0.8s								
H24K	Noodor Dome	4.92	17	IAML			00 43 24.6		
	comp=E,27nm,0.7s								
RKAV	Rock Avalanche	5.00	96			Pn	00 42 26.4	-0.5	
LOGN	Logan Glacier	5.06	90			Pn	00 42 27.6	-0.2	
LOGN	Logan Glacier	5.06	90	IAML			00 43 25.1		
	comp=E,45nm,0.5s								
LOGN				IAML			00 43 26.4		
	comp=N,46nm,0.5s								
PRP	Porcupine Dome	5.07	29	IAML			00 43 28.2		
	comp=E,25nm,0.8s								
PRP				IAML			00 43 35.1		
	comp=N,29nm,0.6s								
H18K	Honhosa River	5.08	324			Pn	00 42 28.8	+1.0	
YUK2	White River	5.08	79			Pn	00 42 28.2	+0.2	
N14K	Kuskokwak Cree	5.24	260	IAML			00 44 16.2		
	comp=E,27nm,1.1s								
N14K				IAML			00 44 22.2		
	comp=N,41nm,1.2s								
YUK3	Moose Creek	5.26	79			Pn	00 42 31.2	+0.6	
O14K	Tigyukauivet M	5.30	253			Pn	00 42 32.0	+1.2	
H17K	Granite Mounta	5.40	318			Pn	00 42 33.4	+1.2	
G21K	Allakaket	5.42	351			Pn	00 42 33.3	+0.8	
L14K	Kuka Creek	5.46	276			Pn	00 42 34.4	+1.4	
O28M	Mount Upton	5.46	90			Pn	00 42 33.9	+0.6	
I26K	Coal Creek Min	5.55	38			Pn	00 42 34.9	+0.8	
G23K	Bananza Creek	5.57	6			Pn	00 42 35.8	+1.3	
G19K	Purcell Mounta	5.58	335			Pn	00 42 35.4	+0.8	
G18K	Tagagawik	5.73	329			Pn	00 42 37.7	+1.1	
G24K	Hadweenzic Riv	5.79	16			Pn	00 42 38.6	+1.2	
J14K	Nanvaranak Lak	5.95	290			Pn	00 42 40.9	+1.2	
G17K	Kiwalik Mounta	6.00	320			Pn	00 42 40.5	+0.1	
H16K	Elim	6.04	310			Pn	00 42 41.1	+0.2	
COLD	Coldfoot	6.08	4			Pn	00 42 43.1	+1.7	
F21K	Alatna River	6.12	352			Pn	00 42 42.8	+0.8	
F20K	Avaraart Lake	6.18	344			Pn	00 42 43.5	+0.8	
I27K	Kandik River	6.22	41			Pn	00 42 43.8	+0.4	
DAWY	Dawson	6.23	57			Pn	00 42 43.6	0.0	
M29M	Somme Creek	6.25	73			Pn	00 42 44.4	+0.6	
F19K	Shaleruckik Mo	6.32	336			Pn	00 42 45.4	+0.8	
YUK6	Outpost Mounta	6.32	87			Pn	00 42 45.4	+0.4	
O29M	Mount Kennedy	6.34	92			Pn	00 42 45.5	+0.3	
G16K	Koyuk River	6.49	315			Pn	00 42 47.4	+0.4	
YUK5	Granite Creek	6.54	85			Pn	00 42 48.0	+0.1	
G26K	Porcupine Rive	6.66	27			Pn	00 42 49.8	+0.5	
H27K	Steamboat Moun	6.68	37			Pn	00 42 49.9	+0.3	
I28M	Miner Creek	6.68	45			Pn	00 42 50.3	+0.5	
N30M	Aishikik Lake	6.88	82			Pn	00 42 52.0	-0.5	
F25K	Christian Rive	6.88	19			Pn	00 42 53.2	+0.8	
G15K	Niukluk	6.89	309			Pn	00 42 53.2	+0.8	
K29M	Barlow Dome	6.94	61			Pn	00 42 53.8	+0.6	
P30M	Million Dollar	7.17	92			Pn	00 42 56.4	+0.1	
F26K	Sheenjek River	7.23	22			Pn	00 42 57.7	+0.6	
INK	Inuvik	10.40	39	P		Pn	00 43 41.2	+1.0	
	comp=N,4.6nm,0.5s,baz=245,slow=14,SNR=21								
INK	Inuvik	10.40	39			Pn	00 43 40.2	0.0	
YKA	Yellowknife Ar	17.25	70	P		P	00 45 11.3	+1.5	
	comp=N,0.2nm,0.4s,baz=287,slow=11,SNR=9.5								
SPITS	Spitsbergen Ar	40.67	4	P		P	00 48 45.4	-0.2	
	comp=N,9.3nm,1.1s,baz=322,slow=5.3,SNR=1.2								
	comp=N,9.3nm,1.1s								
SONM	Songino Array	54.73	306	P		P	00 50 33.9	-0.9	
	comp=N,1.2nm,0.8s,baz=34,slow=6.9,SNR=7.0								
	comp=N,1.2nm,0.8s								
ZALV	Zalesovo Beam	56.88	324	P		P	00 50 49.7	-0.1	
	comp=N,0.7nm,0.4s,baz=110,slow=24,SNR=2.4								
	comp=N,0.7nm,0.4s								
EKA	Eskdalemuir Ar	61.13	20	P		P	00 51 19.9	+0.7	
	comp=N,1.3nm,0.8s,baz=344,slow=6.9,SNR=5.6								
	comp=N,1.3nm,0.8s								
KURBB	Kurchatov Arra	61.59	326	P		P	00 51 20.8	-1.6	
	comp=N,0.3nm,0.4s,baz=27,slow=7.2,SNR=4.3								
MKAR	Makanchi Array	63.99	322	P		P	00 51 37.7	-0.7	
	comp=N,0.2nm,0.6s,baz=45,slow=6.5,SNR=3.8								
	comp=N,0.2nm,0.6s								
AKASG	Malin Array Be	68.45	360	P		P	00 52 06.9	+0.1	
	comp=N,0.7nm,0.3s,baz=5.0,slow=6.0,SNR=3.5								
	comp=N,0.7nm,0.3s								

*SJA **28** 00:43:18.2±1.4,30.°72S×72.°37W,h40km±999km,ML3.4, MW3.5*
*GUC **28** 00:43:19.4±0.8,30.°84S×71.°95W,h34km±3km,ML3.4*
ISC 28 00:43:19.2±2.5,30.°82S±0.°04×71.°95W±0.°10,h6km±13km, n22,σ1s00/35,3C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CO06	Fray Jorge	0.30	62	⇓*iP*		Pb	00 43 27.8	+0.7
CO06				*i* S		Sb	00 43 33.7	+1.4
CO06				IAML			00 43 34.2	
	comp=E,7µm,0.2s							
CO02	Combarbal	0.90	115	⇑*iP*		Pg	00 43 37.0	+0.6
CO02				*i* S		Sb	00 43 50.5	+0.9
CO02				IAML			00 43 52.2	
	comp=N,4µm,0.2s							
CO03	El Pedregal	1.08	91	⇑*iP*		Pg	00 43 40.3	+0.3
CO03				*i* S		Sb	00 43 55.1	+0.3
CO03				IAML			00 43 56.3	
	comp=N,2µm,0.4s							
CO05	La Serena	1.09	34	*eP*		Pn	00 43 40.4	-0.5
CO05				*i* S		Sn	00 43 55.5	-0.8
CO05				IAML			00 43 58.5	
	comp=N,830nm,0.6s							
GO04	Tololo Observa	1.18	57	⇓*iP*		Pb	00 43 42.1	0.0
GO04				*eS*		Sn	00 43 58.9	-0.2
GO04				IAML			00 44 02.7	
	comp=E,2µm,0.3s							
CO04	Los Peladeros	1.48	146	⇑*iP*		Pn	00 43 45.5	-1.1
CO04				*i* S		Sn	00 44 05.2	-1.1
CO04				IAML			00 44 09.2	
	comp=N,641nm,0.3s							
CO01	Juntas del Tor	1.81	63	*eP*		Pb	00 43 52.4	-0.5
CO01				*i* S		Sb	00 44 16.2	+0.4
VA06	Catapilco	1.82	162	*eP*		Pn	00 43 50.0	-1.1
VA06				*i* S		Sn	00 44 13.9	-0.6
VA06				IAML			00 44 21.7	
	comp=N,492nm,0.5s							
AROD	Rodeo	2.23	74	*i* P		Pb	00 44 00.3	+0.2
AROD				*i* S		Sg	00 44 30.1	-0.8
VA03	San Esteban	2.27	149	*i* P		Pn	00 43 57.9	+0.5
VA03				*i* S		Sb	00 44 29.7	+0.6
VA03				IAML			00 44 42.9	
	comp=Z,154nm,0.6s							
ROCH	El Roble	2.29	160	*eP*		Pn	00 43 57.2	-0.5
RTLS	Leoncito	2.47	114	*i* P		Pb	00 44 04.2	+0.1
RTLS				*i* S		Sg	00 44 37.7	-0.8
RTLS				IAML			00 44 41.0	
	comp=Z,347nm,0.7s							
ACCO	Cerro Coronel	2.49	85	*i* P		Pb	00 44 04.6	0.0
ACCO				*i* S		Sg	00 44 38.5	-0.8
PEL	Peldehue	2.55	156	*eP*		Pn	00 44 01.2	0.0
AUSP	Uspallata	2.59	123	*i* P		Pb	00 44 05.7	-0.6
AUSP				*i* S		Sb	00 44 40.6	+2.0
MT10	Hacienda Santa	2.72	154	*eP*		Pn	00 44 04.0	+0.4
MT05	Renca	2.76	159	*eP*		Pn	00 44 06.2	+2.1
MT14	Cerro Cal¡n	2.83	155	*eP*		Pn	00 44 06.3	+1.2
MT16	CCHEN	2.87	155	*eP*		Pn	00 44 07.9	+2.4
ZON	Zonda	2.89	105	*i* P		Pb	00 44 09.6	-1.6
ZON				IAML			00 45 04.2	
	comp=Z,47nm,0.9s							
MT03	Universidad Ad	2.93	156	*eP*		Pn	00 44 06.6	+0.2
MT01	Popeta	3.09	169	*eP*		Pn	00 44 08.5	-0.1

*NEIC **28** 00:46:01.4±1.1,17.°79N±0.°01×66.°84W±0.°01,h10km±1km, ML3.6/39,ML3.3(RSPR),Error ellipse: s-maj=3.2km s-min=2.0km az=342.0*
*RSPR **28** 00:46:02.4,17.°84N×66.°86W,h10km*
*OSPL **28** 00:46:02.3±0.3,17.°79N×66.°86W,h10km±6km,ML3.0, Presumed earthquake*
*SDD **28** 00:46:02.3±1.1,17.°86N×66.°88W,h23km±9km,MD3.7, ML3.6,MW3.6,Presumed earthquake*
ISC 28 00:46:01.8±1.1,17.°83N±0.°06×66.°84W±0.°02,h15km±6km, n44,σ0s56/73,8C-6D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GBPR	Guanica, Bosqu	0.15	345			Pg	00 46 05.8	+0.1
GBPR						Sg	00 46 08.3	0.0
GBPR	Guanica, Bosqu	0.15	345	⇓*iP*		Pg	00 46 05.8	+0.1
GBPR				*eS*		Sg	00 46 08.3	0.0
MLPR	Magueyes Islan	0.24	305			Pg	00 46 07.1	0.0
MLPR				Sg		Sg	00 46 10.8	+0.1
MLPR				IAML			00 46 10.8	
	10µm,0.4s							
MLPR				IAML			00 46 11.2	
	15µm,0.6s							
OBIP	Obispado Ponce	0.30	46			Pb	00 46 08.6	-0.3
OBIP				Sg		Sb	00 46 13.2	-0.5
OBIP	Obispado Ponce	0.30	46	⇓*iP*		Pb	00 46 08.7	-0.2
OBIP				*eS*		Sb	00 46 13.6	-0.1
OBIP	Obispado Ponce	0.30	46	*i* P		Pb	00 46 08.7	-0.2
OBIP				*eS*		Sb	00 46 13.6	-0.2
OBIP				IAML			00 46 13.8	
	comp=Z,2µm,0.7s							
CRPR	Cabo Rojo, PR	0.31	304			Pg	00 46 08.2	0.0
CRPR				Sg		Sg	00 46 12.7	0.0
CRPR				IAML			00 46 13.7	
	comp=Z,8µm,0.3s							
CRPR	Cabo Rojo, PR	0.31	304	⇑*ePg*		Pg	00 46 08.3	0.0
CRPR				⇑*eSg*		Sg	00 46 12.6	-0.2
CRPR				IAML			00 46 12.8	
	comp=N,11µm,0.3s							
CRPR	Cabo Rojo, PR	0.31	304	⇑*iP*		Pg	00 46 08.3	0.0
CRPR				*eS*		Sg	00 46 12.6	-0.2
CRPR	Cabo Rojo, PR	0.31	304	*i* P		Pg	00 46 08.2	0.0
CRPR				*eS*		Sg	00 46 12.5	-0.2
CRPR				IAML			00 46 13.3	
	comp=Z,7µm,0.3s							
CELP	Cerrillos	0.34	46			Pb	00 46 09.4	-0.3
CELP				Sg		Sb	00 46 14.8	-0.2
CELP				IAML			00 46 15.2	
	comp=Z,4µm,0.6s							
CELP				IAML			00 46 15.5	
	comp=Z,5µm,0.6s							
LSP	Las Mesas	0.41	325			Pg	00 46 10.1	-0.1
LSP						Sg	00 46 16.3	+0.4
LSP	Las Mesas	0.41	325	⇓*iP*		Pg	00 46 10.1	-0.1
LSP				*eS*		Sg	00 46 16.3	+0.4
UUPR	Utuado, UPR, P	0.43	15			Pg	00 46 10.4	-0.1
UUPR						Sg	00 46 16.4	0.0
PRSN	Puerto Rico Se	0.48	323			Pg	00 46 11.1	-0.2
PRSN						Sg	00 46 17.5	-0.3
PRSN				IAML			00 46 22.5	
	comp=Z,7µm,0.3s							
PRSN	Puerto Rico Se	0.48	323	⇑*ePg*		Pg	00 46 11.1	-0.2
PRSN				⇑*eSg*		Sg	00 46 18.0	+0.1
PRSN				IAML			00 46 20.6	
	comp=N,6µm,0.3s							
PRSN	Puerto Rico Se	0.48	323	⇑*iP*		Pg	00 46 11.2	-0.2
PRSN				*eS*		Sg	00 46 18.1	+0.2
ECPR	Experimental S	0.66	43			Pg	00 46 14.7	-0.1
ECPR						Sg	00 46 23.6	0.0
ECPR				IAML			00 46 25.7	
	comp=N,4µm,0.2s							
ECPR				IAML			00 46 25.9	
	comp=N,4µm,0.2s							
ECPR	Experimental S	0.66	43	⇓*iP*		Pg	00 46 14.6	-0.1
ECPR				*eS*		Sb	00 46 24.0	0.0
AGPR	Aguadilla, PR	0.68	338			Pg	00 46 14.6	-0.5
AGPR				IAML			00 46 24.2	
	comp=N,1µm,0.5s							
AGPR				IAML			00 46 26.3	
	comp=N,1µm,0.3s							
EMPR	Esperanza - Ma	0.70	25			Pb	00 46 15.7	0.0
EMPR						Sg	00 46 25.0	0.0
EMPR	Esperanza - Ma	0.70	25	⇑*iP*		Pb	00 46 15.7	0.0
EMPR				*eS*		Sg	00 46 25.0	0.0
SJG	San Juan	0.71	67			Pg	00 46 15.6	-0.1
SJG	San Juan	0.71	67	⇓*ePg*		Pg	00 46 15.7	0.0
SJG				⇑*eSg*		Sb	00 46 25.7	+0.2
SJG	San Juan	0.71	67	*i* P		Pg	00 46 15.7	0.0
SJG				IAML			00 46 32.0	
	comp=Z,450nm,0.5s							
PDPR	Patillas Dam,	0.80	76			Pb	00 46 17.2	-0.1
IDE	Isla Desecheo	0.82	312			Pb	00 46 16.9	-0.8
IDE						Sb	00 46 27.4	-1.1
IDE	Isla Desecheo	0.82	312	⇑*iP*		Pb	00 46 16.9	-0.8
IDE				*eS*		Sb	00 46 27.4	-1.1
GCPR	Guaynabo City	0.86	56			Pb	00 46 18.1	-0.3
GCPR	Guaynabo City	0.86	56			Sb	00 46 29.

	4µm,0.5s							
CRPR					IAML		00 49 32.4	
	7µm,0.4s							
CRPR	**Cabo Rojo, PR**	**0.30**	**303**	⇑*i*	P	**Pg**	**00 49 27.7**	**0.0**
CRPR				⇑*i*	S	**Sg**	**00 49 32.1**	**0.0**
CRPR					IAML		00 49 32.1	
	comp=N,6µm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.30**	**303**	⇓*i*	P	**Pg**	**00 49 27.7**	**0.0**
CRPR				*e*S		**Sg**	**00 49 31.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.30**	**303**	*i*	P	**Pg**	**00 49 27.6**	**-0.1**
CRPR				*e*S		**Sg**	**00 49 31.7**	**-0.3**
CRPR					IAML		00 49 32.6	
	comp=Z,3µm,0.5s							
OBIP	**Obispado Ponce**	**0.30**	**49**			**Pg**	**00 49 27.9**	**+0.1**
OBIP					Sg	**Sb**	**00 49 32.6**	**-0.4**
OBIP	**Obispado Ponce**	**0.30**	**49**	⇑*i*	P	**Pb**	**00 49 28.2**	**-0.1**
OBIP				*e*S		**Sb**	**00 49 32.9**	**0.0**
OBIP	**Obispado Ponce**	**0.30**	**49**	*i*	P	**Pb**	**00 49 28.1**	**-0.2**
OBIP				*e*S		**Sb**	**00 49 32.9**	**-0.1**
OBIP					IAML		00 49 33.5	
	comp=Z,1µm,0.3s							
CELP	**Cerrillos**	**0.34**	**48**			**Pb**	**00 49 28.7**	**-0.2**
CELP					Sg	**Sb**	**00 49 34.0**	**-0.1**
CELP					IAML		00 49 34.8	
	comp=Z,2µm,0.4s							
CELP					IAML		00 49 34.8	
	comp=Z,5µm,0.4s							
LSP	**Las Mesas**	**0.40**	**326**			**Pg**	**00 49 29.5**	**0.0**
LSP						**Sb**	**00 49 35.6**	**-0.3**
LSP	**Las Mesas**	**0.40**	**326**	⇑*i*	P	**Pg**	**00 49 29.5**	**0.0**
LSP				*e*S		**Sb**	**00 49 35.6**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.43**	**16**			**Pg**	**00 49 29.7**	**-0.2**
UUPR					Sg	**Sg**	**00 49 35.7**	**-0.1**
PRSN	**Puerto Rico Se**	**0.47**	**323**			**Pg**	**00 49 30.5**	**-0.2**
PRSN						**Sg**	**00 49 37.0**	**-0.1**
PRSN					IAML		00 49 37.9	
	comp=Z,5µm,0.3s							
PRSN					IAML		00 49 40.8	
	comp=Z,5µm,0.3s							
PRSN	**Puerto Rico Se**	**0.47**	**323**	⇑*i*	P	**Pg**	**00 49 30.5**	**-0.2**
PRSN				*i*	S	**Sg**	**00 49 36.8**	**-0.3**
PRSN					IAML		00 49 37.9	
	comp=N,3µm,0.3s							
PRSN	**Puerto Rico Se**	**0.47**	**323**	⇓*i*	P	**Pg**	**00 49 30.5**	**-0.2**
PRSN				*e*S		**Sg**	**00 49 37.2**	**+0.1**
ECPR	**Experimental S**	**0.66**	**44**			**Pg**	**00 49 34.1**	**-0.1**
ECPR						**Sg**	**00 49 42.8**	**-0.3**
ECPR					IAML		00 49 45.0	
	comp=N,5µm,0.2s							
ECPR	**Experimental S**	**0.66**	**44**	⇑*i*	P	**Pg**	**00 49 34.1**	**-0.1**
ECPR				*e*S		**Sg**	**00 49 43.0**	**-0.1**
AGPR	**Aguadilla, PR**	**0.67**	**338**			**Pg**	**00 49 33.9**	**-0.6**
AGPR					IAML		00 49 43.6	
	comp=N,791nm,0.3s							
EMPR	**Esperanza - Ma**	**0.70**	**25**			**Pb**	**00 49 35.1**	**+0.1**
EMPR						**Sb**	**00 49 44.6**	**+0.2**
EMPR	**Esperanza - Ma**	**0.70**	**25**	⇓*i*	P	**Pb**	**00 49 35.1**	**+0.1**
EMPR				*e*S		**Sb**	**00 49 44.6**	**+0.2**
SJG	**San Juan**	**0.71**	**68**			**Pg**	**00 49 35.0**	**-0.2**
SJG	**San Juan**	**0.71**	**68**			**Sb**	**00 49 44.8**	**0.0**
SJG	**San Juan**	**0.71**	**68**	⇑*i*	P	**Pb**	**00 49 35.2**	**-0.1**
SJG				⇑*i*	S	**Sb**	**00 49 45.4**	**+0.5**
SJG	**San Juan**	**0.71**	**68**	*i*	P	**Pg**	**00 49 35.1**	**-0.2**
SJG				*e*S		**Sb**	**00 49 45.0**	**+0.2**
SJG					IAML		00 49 47.1	
	comp=Z,370nm,0.2s							
PDPR	**Patillas Dam,**	**0.80**	**77**			**Pb**	**00 49 36.5**	**-0.3**
IDE	**Isla Desecheo**	**0.81**	**312**			**Pb**	**00 49 36.3**	**-0.5**
IDE						**Sb**	**00 49 46.9**	**-0.6**
IDE	**Isla Desecheo**	**0.81**	**312**	⇓*i*	P	**Pb**	**00 49 36.3**	**-0.5**
IDE				*e*S		**Sb**	**00 49 46.9**	**-0.6**
GCPR	**Guaynabo City**	**0.86**	**57**			**Pb**	**00 49 37.1**	**-0.6**
GCPR	**Guaynabo City**	**0.86**	**57**			**Sb**	**00 49 49.2**	**+0.1**
GCPR	**Guaynabo City**	**0.86**	**57**	⇑*i*	P	**Pb**	**00 49 37.6**	**-0.2**
GCPR				*e*S		**Sb**	**00 49 49.2**	**+0.1**
HUMP	**Col San Antoni**	**0.99**	**72**			**Pb**	**00 49 39.5**	**-0.6**
HUMP					IAML		00 49 57.3	
	comp=Z,900nm,0.2s							
HUMP	**Col San Antoni**	**0.99**	**72**			**Sn**	**00 49 54.0**	**-0.1**
HUMP	**Col San Antoni**	**0.99**	**72**	⇓*i*	P	**Pb**	**00 49 40.0**	**-0.1**
HUMP				*e*S		**Sn**	**00 49 54.0**	**-0.1**
CUPR	**Culebra, Puert**	**1.56**	**72**			**Pb**	**00 49 49.0**	**-0.6**
DR12	**Loma Pena Alta**	**2.58**	**292**	Pn		**Pn**	**00 50 02.9**	**+0.5**
HATOM	**Hato Mayor del**	**2.58**	**292**	⇑*i*	P	**Pn**	**00 50 03.9**	**+1.5**
HATOM				⇑*i*	S	**Sn**	**00 50 35.2**	**+1.8**
SMDR	**Samana, DR**	**2.65**	**303**	*e*Sg		**Sg**	**00 50 45.7**	**-0.7**
SMDR					IAML		00 50 54.0	
	comp=N,80nm,0.8s							
BANI	**BANI**	**3.38**	**280**	⇑*e*Sg		**Sg**	**00 51 09.3**	**-0.8**
BANI					IAML		00 51 15.7	
	comp=N,89nm,0.1s							
SABA	**Saba**	**3.44**	**93**	Pn		**Pn**	**00 50 14.4**	**+0.2**
SABA					IAML		00 51 13.6	
	comp=E,178nm,0.8s							
SABA					IAML		00 51 51.4	
	comp=N,84nm,1.0s							
SDDR	**Presa de Saban**	**4.37**	**286**			**Pn**	**00 50 26.5**	**-0.4**
GDHS	**Morne Mazeau,**	**5.11**	**107**	Pn		**Pn**	**00 50 37.2**	**+0.2**

*IDC **28** 00:50:26.7±6.0, 11°.83S×166°.71E, h278km±61km, mb3.2/7, mbtmp3.9/8, Error ellipse: s-maj=34.3km s-min=25.6km az=1.0*

ISC 28 00:50:24.2±1.1, 11°.82S±0°.10×166°.7E±0°.2, h250km, n8, σ1°59/9, mb3.6/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.20**	**182**	P		**Pn**	**00 52 47.5**	**+2.2**
	7.3nm,0.4s,baz=82,slow=19,SNR=34							
DZM				S		**S**	**00 54 37.3**	**-2.8**
	5.0nm,0.9s,baz=107,slow=24,SNR=1.9							
URZ	**Urewera**	**27.92**	**162**	P		**P**	**00 55 51.3**	**0.0**
	2.9nm,0.3s,baz=242,slow=3.1,SNR=7.2							
	2.9nm,0.3s							
STKA	**Stephens Creek**	**30.57**	**225**	P		**P**	**00 56 16.0**	**+1.1**
	0.8nm,0.4s,baz=59,slow=12,SNR=2.8							
	0.8nm,0.4s							
WRA	**Warramunga Arr**	**32.14**	**251**	P		**P**	**00 56 28.6**	**-0.2**
	0.2nm,0.5s,baz=83,slow=9.2,SNR=5.7							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**33.33**	**245**	P		**P**	**00 56 38.0**	**-1.0**
	0.3nm,0.4s,baz=72,slow=9.9,SNR=4.7							
	0.3nm,0.4s							
SONM	**Songino Array**	**79.86**	**324**	P		**P**	**01 02 05.3**	**+0.1**
	0.2nm,0.3s,baz=127,slow=3.8,SNR=2.5							
	0.2nm,0.3s							
ILAR	**Eielson Array**	**83.94**	**18**	P		**P**	**01 02 25.3**	**-0.5**
	0.8nm,0.7s,baz=226,slow=5.7,SNR=14							
	0.8nm,0.7s							
MKAR	**Makanchi Array**	**94.75**	**317**	P		**P**	**01 03 16.9**	**-0.5**
	0.4nm,0.5s,baz=94,slow=6.1,SNR=5.7							
	0.4nm,0.5s							

RSNC 28 01:20:20.5±0.0, 7°N±1°×7°3W±°, h144km±2km, M2.9, mb3.5, mB4.7, ML2.5, MLv3.2, Mw(mB)3.9, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**190**	P		Pn	01 20 40.1	-0.4
BARC				P			01 20 40.2	
BARC				S		Sn	01 20 55.0	-0.7
BARC				S			01 20 55.4	
BRJC	**Barrancabermej**	**0.61**	**282**	P		Pn	01 20 41.9	+0.1
BRJC				S		Sn	01 20 58.7	+0.7
PAMC	**Pamplona, Colo**	**0.66**	**41**	P		Pn	01 20 42.9	+0.2
PAMC				S		Sn	01 20 59.8	+0.3
RUSC	**La Rusia**	**0.94**	**177**	P		Pn	01 20 44.2	-0.6
RUSC				S		Sn	01 21 02.3	-1.0
PTBC	**PUERTO BERRIO,**	**1.34**	**257**	P		Pn	01 20 46.8	-1.2
PTBC				S		Sn	01 21 07.3	-1.6
OCAC	**Ocana**	**1.40**	**353**	P		Pn	01 20 48.5	-0.3
OCAC				S		Sn	01 21 09.6	-0.8
SPBC	**San Pablo de B**	**1.50**	**218**	P		Pn	01 20 49.1	-0.6
SPBC				S		Sn	01 21 10.7	-1.4
NORC	**Norcasia**	**2.14**	**234**	P		Pn	01 20 56.2	-0.8
NORC				S		Sn	01 21 24.1	-0.9
CHIC	**Chingaza**	**2.27**	**195**	P		Pn	01 20 58.6	-0.4
CHIC				S		Sn	01 21 27.5	-1.0
ROSC	**El Rosal**	**2.31**	**211**	P		Pn	01 21 00.7	+1.3
ROSC				S		Sn	01 21 32.0	+2.8
HELC	**Santa Helena**	**2.46**	**255**	P		Pn	01 21 01.1	-0.1
HELC				S		Sn	01 21 32.1	-0.4
UREC	**San Jos de Ur**	**2.54**	**291**	P		Pn	01 21 00.5	-1.4
UREC				S		Sn	01 21 32.0	-1.7
GUY2C	**Guyana, Caldas**	**2.73**	**234**	P		Pn	01 21 04.9	+0.2
GUY2C				S		Sn	01 21 39.3	+0.5
VILC	**Villavicencio,**	**2.77**	**192**	P		Pn	01 21 04.1	-0.7
VILC				S		Sn	01 21 38.3	-0.7
NIZA	**Niza - Manizal**	**2.92**	**233**	P		Pn	01 21 08.3	+1.4
NIZA				S		Sn	01 21 46.9	+4.3
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P		Pn	01 21 08.3	+0.3
CBOC				S		Sn	01 21 44.6	-0.1
DBBC	**Dabeiba**	**3.05**	**273**	P		Pn	01 21 08.3	-0.1
DBBC				S		Sn	01 21 43.2	-2.2
ARGC	**Ariguani, Magd**	**3.19**	**340**	P		Pn	01 21 11.9	+1.8
ARGC				S		Sn	01 21 49.3	+0.8
SDV	**Santo Domingo**	**3.21**	**51**	P		Pn	01 21 09.9	-0.9
SDV				S		Sn	01 21 46.3	-2.9
ANIL	**Santa Ana**	**3.24**	**224**	P		Pn	01 21 11.6	+0.5
ANIL				S		Sn	01 21 51.6	+1.5
PRAC	**Prado**	**3.56**	**209**	P		Pn	01 21 14.0	-0.9
PRAC				S		Sn	01 21 56.8	-0.3
APAC	**Apartado, Choc**	**3.57**	**287**	P		Pn	01 21 15.6	+0.6
APAC				S		Sn	01 21 57.8	+0.6
ORTC	**Ortega, Tolima**	**3.59**	**216**	P		Pn	01 21 15.6	+0.3
ORTC				S		Sn	01 21 58.0	+0.2
SJCC	**San Jacinto, C**	**3.65**	**327**	P		Pn	01 21 14.8	-1.3
SJCC				S		Sn	01 21 56.1	-3.0
PLMC	**San Jos del P**	**3.67**	**239**	P		Pn	01 21 16.3	-0.1
PLMC				S		Sn	01 21 59.2	-0.5
URMC	**La Uribe, Meta**	**3.78**	**199**	P		Pn	01 21 17.5	-0.3
URMC				S		Sn	01 22 03.0	+0.8
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	P		Pn	01 21 20.6	-2.2
CRJC				S		Sn	01 22 07.7	-3.6
YOTC	**Yotoco, Valle**	**4.27**	**229**	P		Pn	01 21 23.9	-0.4
MACC	**Macarena, Meta**	**4.72**	**189**	P		Pn	01 21 27.8	-2.3
MACC				S		Sn	01 22 20.3	-4.1
URIC	**Uribia, Colomb**	**4.96**	**13**	P		Pn	01 21 31.0	-2.3
JAMC	**Jamundi, Valle**	**5.04**	**225**	P		Pn	01 21 34.0	-0.5
	0.1nm1000nm4.5nm,0.6s							
POPC	**Popayan, Colom**	**5.54**	**220**	P		Pn	01 21 40.4	-0.8
	2.6nm,0.5s							
POPC				S		Sn	01 22 44.1	-0.1
	2.6nm,0.5s							
BBAC	**Balboa, Cauca**	**6.30**	**221**	P		Pn	01 21 52.0	+0.6

*JMA **28** 01:35:53.7±0.2, 24°.9N±0°.6×121°.9E±0°.5, h88km±1km, MV2.4/11, TAIWAN REGION*
*TAP **28** 01:35:53.8, 24°.84N×121°.86E, h88km, ML3.7, B*

ISC 28 01:35:53.6±1.3, 24°.89N±0°.03×121°.86E±0°.02, h91km±5km, n122, σ0°75/212, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NTC	**Toucheng**	**0.05**	**219**	P		**Pn**	**01 36 06.2**	**-0.2**
NTC				S		**Sn**	**01 36 15.2**	**-0.7**
EGS		**0.08**	**126**	P		**Pn**	**01 36 06.6**	**+0.2**
EGS				*e*S		**Sn**	**01 36 14.7**	**-1.2**
TIPB	**Shuangxi**	**0.09**	**338**	*i*	P	**Pn**	**01 36 06.5**	**0.0**
TIPB				*i*	S	**Sn**	**01 36 15.4**	**-0.7**
ILA	**Ilan**	**0.16**	**220**	*e*P		**Pn**	**01 36 06.7**	**+0.1**
ILA				*e*S		**Sn**	**01 36 16.8**	**+0.6**
TWB1	**Santiao Chiao**	**0.16**	**45**	*i*	P	**Pn**	**01 36 06.6**	**0.0**
TWB1				*i*	S	**Sn**	**01 36 15.7**	**-0.6**
NWF	**Wu-fen Shan**	**0.19**	**338**	*i*	P	**Pn**	**01 36 06.9**	**+0.1**
NWF					S	**Sn**	**01 36 15.9**	**-0.7**
WFSB	**Wu-fen Shan**	**0.19**	**338**	*i*	P	**Pn**	**01 36 06.9**	**+0.1**
WFSB					S	**Sn**	**01 36 15.9**	**-0.5**
SXI1	**Grass Mountain**	**0.20**	**3**		P	**Pn**	**01 36 06.6**	**-0.3**
SXI1					S	**Sn**	**01 36 17.2**	**+0.5**
TWE	**Neicheng**	**0.24**	**226**	*i*	P	**Pn**	**01 36 07.3**	**+0.4**
TWE					S	**Sn**	**01 36 17.4**	**+0.6**
TWA	**Mucha**	**0.27**	**289**		P	**Pn**	**01 36 07.2**	**+0.2**
TWA					S	**Sn**	**01 36 17.0**	**0.0**
TNOU	**National Taiwa**	**0.27**	**343**		P	**Pn**	**01 36 07.0**	**0.0**
TNOU					S	**Sn**	**01 36 16.6**	**-0.4**
TWC	**Suao**	**0.28**	**182**		P	**Pn**	**01 36 07.2**	**+0.1**
TWC					S	**Sn**	**01 36 16.7**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.28**	**242**	*i*	P	**Pn**	**01 36 07.3**	**+0.1**
FUSB					S	**Sn**	**01 36 16.9**	**-0.4**
NDS	**Dongshan**	**0.29**	**207**	*i*	P	**Pn**	**01 36 07.7**	**+0.6**
NDS					S	**Sn**	**01 36 17.5**	**+0.4**
NHDH	**Xindian Distri**	**0.31**	**283**	*i*	P	**Pn**	**01 36 07.6**	**+0.4**
NHDH					S	**Sn**	**01 36 17.9**	**+0.6**
NWLT	**Wulai**	**0.35**	**251**	*i*	P	**Pn**	**01 36 07.3**	**-0.1**
NWLT					S	**Sn**	**01 36 17.1**	**-0.7**
TATO	**Taipei**	**0.35**	**284**		P	**Pn**	**01 36 07.6**	**+0.2**
TATO	**Taipei**	**0.35**	**284**		S	**Sn**	**01 36 17.9**	**+0.2**
TAP	**Taipei**	**0.35**	**295**		P	**Pn**	**01 36 07.7**	**+0.3**
TAP					S	**Sn**	**01 36 17.8**	**0.0**
ENTT	**Nioudou**	**0.37**	**227**	*i*	P	**Pn**	**01 36 07.8**	**+0.3**
ENTT					S	**Sn**	**01 36 17.6**	**-0.4**
YM01	**YM01**	**0.37**	**314**		P	**Pn**	**01 36 07.9**	**+0.3**
YM01					S	**Sn**	**01 36 18.1**	**0.0**
YM08	**YM08**	**0.39**	**320**		P	**Pn**	**01 36 07.7**	**0.0**
YM08				*e*S		**Sn**	**01 36 17.2**	**-1.0**
ZUZH	**Zhuzihu**	**0.39**	**313**	*i*	P	**Pn**	**01 36 08.1**	**+0.3**
ZUZH					S	**Sn**	**01 36 18.6**	**+0.3**
ANP	**Anpu**	**0.43**	**314**		P	**Pn**	**01 36 08.2**	**+0.1**
ANP				*e*S		**Sn**	**01 36 20.3**	**+1.5**
NDT	**Datong Townshi**	**0.43**	**228**	*i*	P	**Pn**	**01 36 08.2**	**+0.2**
NDT					S	**Sn**	**01 36 18.6**	**0.0**
EWUT	**Wuta**	**0.45**	**190**		P	**Pn**	**01 36 08.7**	**+0.6**
EWUT					S	**Sn**	**01 36 19.7**	**+0.9**
TWY	**Chenhua**	**0.45**	**328**	*i*	P	**Pn**	**01 36 08.5**	**+0.4**
TWY					S	**Sn**	**01 36 19.4**	**+0.5**
TWS1	**Kuangyinshan**	**0.45**	**297**	*i*	P	**Pn**	**01 36 08.7**	**+0.6**
TWS1					S	**Sn**	**01 36 20.0**	**+1.1**
NTST	**Danshui**	**0.46**	**306**		P	**Pn**	**01 36 08.8**	**+0.6**
NTST				*e*S		**Sn**	**01 36 19.9**	**+0.9**
LATG	**Datong**	**0.47**	**221**	*i*	P	**Pn**	**01 36 08.6**	**+0.2**
LATG					S	**Sn**	**01 36 19.2**	**0.0**
YHNB	**Yeheng**	**0.49**	**244**		P	**Pn**	**01 36 08.3**	**-0.2**
YHNB	**Yeheng**	**0.49**	**244**		S	**Sn**	**01 36 19.1**	**-0.5**
YHNB	**Yeheng**	**0.49**	**244**	*i*	P	**Pn**	**01 36 08.3**	**-0.2**
YHNB				*e*S		**Sn**	**01 36 18.6**	**-1.0**
NSK	**Sanguang**	**0.51**	**245**	*i*	P	**Pn**	**01 36 08.4**	**-0.2**
NSK					S	**Sn**	**01 36 18.5**	**-1.3**
EAHA	**Aohua**	**0.57**	**191**		P	**Pn**	**01 36 09.9**	**+0.9**
EAHA				*e*S		**Sn**	**01 36 21.3**	**+0.8**
EOS2	**EOS2**	**0.58**	**144**	*e*P		**Pn**	**01 36 09.6**	**+0.7**
EOS2				*e*S		**Sn**	**01 36 21.5**	**+1.1**
NCU	**National Centr**	**0.62**	**277**		P	**Pn**	**01 36 07.8**	**-1.6**
NCU				*e*S		**Sn**	**01 36 20.0**	**-1.3**
NCUH	**Zhongli**	**0.62**	**277**	*i*	P	**Pn**	**01 36 09.8**	**+0.3**
NCUH					S	**Sn**	**01 36 21.7**	**+0.4**
NNS	**Nan Shan**	**0.63**	**225**		P	**Pn**	**01 36 09.9**	**+0.1**
NNS				*e*S		**Sn**	**01 36 21.5**	**-0.3**
KSHI	**Guanxi Townshi**	**0.63**	**260**		P	**Pn**	**01 36 10.4**	**+0.5**
KSHI				*e*S		**Sn**	**01 36 21.4**	**-0.2**
NNSB	**Datong**	**0.63**	**224**	*i*	P	**Pn**	**01 36 09.8**	**+0.1**
NNSB					S	**Sn**	**01 36 21.3**	**-0.5**
NFF	**Wufeng Townshi**	**0.72**	**249**	*i*	P	**Pn**	**01 36 10.4**	**-0.1**
NFF					S	**Sn**	**01 36 22.5**	**-0.7**
EOS3	**EOS3**	**0.73**	**145**	*e*P		**Pn**	**01 36 11.0**	**+0.6**
EOS3				*e*S		**Sn**	**01 36 21.8**	**-1.1**
NACB	**Ninganchiao**	**0.76**	**199**	P		**Pn**	**01 36 10.7**	**-0.1**
NACB	**Ninganchiao**	**0.76**	**199**	*e*P		**Pn**	**01 36 10.9**	**+0.1**
NACB				*e*S		**Sn**	**01 36 22.7**	**-0.8**
PCYT	**Pengchaiyu**	**0.76**	**14**	*i*	P	**Pn**	**01 36 11.4**	**+0.6**
PCYT				*e*S		**Sn**	**01 36 24.9**	**+1.2**
ETLH	**Xiulin Townshi**	**0.76**	**207**		P	**Pn**	**01 36 10.7**	**-0.3**
ETLH					S	**Sn**	**01 36 23.2**	**-0.7**
SBCB	**Hsinchu**	**0.80**	**263**		P	**Pn**	**01 36 11.5**	**+0.3**
SBCB					S	**Sn**	**01 36 24.4**	**0.0**
LIOB	**Emei**	**0.81**	**253**	*i*	P	**Pn**	**01 36 11.5**	**+0.2**
LIOB				*e*S		**Sn**	**01 36 23.6**	**-1.0**
NSTT	**Nanjuang**	**0.82**	**252**	*i*	P	**Pn**	**01 36 11.5**	**-0.1**
NSTT				*i*	S	**Sn**	**01 36 24.3**	**-0.6**
TWD	**Chiawan**	**0.84**	**197**	*e*S		**Sn**	**01 36 23.8**	**-1.4**
FUSS	**Fushou**	**0.85**	**221**	P		**Pn**	**01 36 12.7**	**+0.6**
FUSS				S		**Sn**	**01 36 25.8**	**0.0**
EOS4	**EOS4**	**0.87**	**151**	*e*P		**Pn**	**01 36 11.4**	**-0.1**
EOS4				*e*S		**Sn**	**01 36 24.2**	**-0.9**
TWT	**Tachien**	**0.89**	**225**	*i*	P	**Pn**	**01 36 13.3**	**+0.9**
TWT				S		**Sn**	**01 36 26.6**	**+0.2**
TDCB	**Techi**	**0.90**	**225**	*i*	P	**Pn**	**01 36 13.1**	**+0.7**
TDCB				S		**Sn**	**01 36 26.2**	**-0.3**
WHF	**Hehuan Shan**	**0.92**	**216**	*e*P		**Pn**	**01 36 13.8**	**+0.8**
WHF				S		**Sn**	**01 36 27.7**	**+0.3**
ETM	**Tongmen**	**0.98**	**200**	P		**Pn**	**01 36 13.0**	**-0.2**
ETM				*e*S		**Sn**	**01 36 27.3**	**-0.5**
WHP	**Taichung City**	**1.03**	**234**	*i*	P	**Pn**	**01 36 14.3**	**+0.5**
WHP					S	**Sn**	**01 36 29.1**	**0.0**
NMLH	**Miaoli**	**1.04**	**250**		P	**Pn**	**01 36 14.0**	**+0.2**
NMLH						**Sn**	**01 36 28.8**	**-0.2**
TEYL	**Yanliau Villag**	**1.05**	**193**	*e*P		**Pn**	**01 36 13.1**	**-0.9**
TEYL				*e*S		**Sn**	**01 36 29.6**	**+0.5**
JYNG	**Yonagunijimaku**	**1.08**	**114**	*e*P		**Pn**	**01 36 14.0**	**-0.3**
JYNG				*e*S		**Sn**	**01 36 29.2**	**-0.6**
NSY	**Sanyi**	**1.11**	**245**	*i*	P	**Pn**	**01 36 15.1**	**+0.5**
NSY					S	**Sn**	**01 36 30.1**	**-0.4**
OWD	**Renai**	**1.12**	**214**		P	**Pn**	**01 36 15.7**	**+0.8**
OWD					S	**Sn**	**01 36 30.6**	**-0.4**
WUSB	**Renai**	**1.12**	**217**	*i*	P	**Pn**	**01 36 15.7**	**+0.8**
WUSB					S	**Sn**	**01 36 31.2**	**+0.2**
TWQ1	**Liyutan**	**1.13**	**242**	*e*P		**Pn**	**01 36 14.9**	**0.0**
TWQ1					S	**Sn**	**01 36 29.8**	**-1.1**
YOJ	**Yonaguni jima**	**1.13**	**112**		P	**Pn**	**01 36 14.8**	**-0.1**
YOJ	**Yonaguni jima**	**1.13**	**112**		S	**Sn**	**01 36 30.2**	**-0.6**
YOJ	**Yonaguni jima**	**1.13**	**112**	*i*	P	**Pn**	**01 36 14.8**	**-0.1**
YOJ					S	**Sn**	**01 36 31.0**	**+0.1**
SHUL	**Shoufeng**	**1.13**	**194**		P	**Pn**	**01 36 14.8**	**-0.1**
SHUL				*e*S		**Sn**	**01 36 30.5**	**-0.4**
ESL	**Shilin**	**1.14**	**200**	*e*S		**Sn**	**01 36 29.6**	**-1.6**
WCS	**Beigang Elemen**	**1.20**	**226**	*i*	P	**Pn**	**01 36 16.2**	**+0.5**
WCS					S	**Sn**	**01 36 32.5**	**+0.2**
WDJ	**Dajia District**	**1.24**	**244**		P	**Pn**	**01 36 16.5**	**+0.3**
WDJ					S	**Sn**	**01 36 33.5**	**+0.3**
WARBT	**Fenglin Townsh**	**1.25**	**200**		P	**Pn**	**01 36 15.5**	**-0.8**
WARBT				*e*S		**Sn**	**01 36 30.9**	**-2.4**
VWDT	**VWDT**	**1.31**	**210**		P	**Pn**	**01 36 17.5**	**+0.4**
VWDT					S	**Sn**	**01 36 35.1**	**+0.5**
TCU	**Taichung**	**1.31**	**236**		S	**Sn**	**01 36 35.0**	**+0.3**
SMLT	**Sun Moon Lake**	**1.33**	**221**		P	**Pn**	**01 36 17.9**	**+0.5**
SMLT				*e*S		**Sn**	**01 36 36.2**	**+0.8**
TYC	**Yuchr**	**1.34**	**223**	*i*	P	**Pn**	**01 36 17.9**	**+0.5**
TYC				*e*S		**Sn**	**01 36 35.7**	**+0.2**
SSLB	**Suanglung**	**1.38**	**217**		P	**Pn**	**01 36 18.3**	**+0.4**
SSLB	**Suanglung**	**1.38**	**217**		P	**Pn**	**01 36 18.4**	**+0.5**
SSLB					S	**Sn**	**01 36 36.8**	**+0.5**
WCHH	**Zhanghua**	**1.44**	**236**		P	**Pn**	**01 36 18.6**	**+0.1**
WCHH					S	**Sn**	**01 36 37.7**	**+0.2**
HGSD	**Ruisui**	**1.45**	**196**		P	**Pn**	**01 36 19.3**	**+0.5**
HGSD				*e*S		**Sn**	**01 36 37.8**	**0.0**
WCH1	**Changhua City**	**1.45**	**236**		S	**Sn**	**01 36 38.6**	**+0.9**
EHY	**Hungye**	**1.46**	**200**	*e*P		**Pn**	**01 36 19.6**	**+0.6**
EHY				*e*S		**Sn**	**01 36 35.2**	**-2.9**
WNT	**Mingjian**	**1.47**	**227**	P		**Pn**	**01 36 19.6**	**+0.5**
WNT				*e*S		**Sn**	**01 36 38.9**	**+0.5**
WJS	**Zhushan**	**1.48**	**224**	S		**Sn**	**01 36 38.9**	**+0.3**
WHYT	**Xinyi Township**	**1.50**	**218**	*e*P		**Pn**	**01 36 20.4**	**+0.9**
WHYT				*e*S		**Sn**	**01 36 40.2**	**+1.1**
YULB	**Yu-li**	**1.58**	**199**	P		**Pn**	**01 36 22.6**	**+2.2**
YULB	**Yu-

KDTR				*e*S	Sn	02 07 04.5	+1.1		
KII	**Karymskiy**	**1.23**	**9**	*e*P	Pn	02 06 48.7	+1.7		
KII				*e*S	Sn	02 07 06.5	+2.0		
PAU	**Pauzhetka**	**1.96**	**227**	*e*P	Pn	02 06 58.6	+2.8		
MKZ	**Mys Kozlova**	**2.33**	**41**	*e*P	Pn	02 07 03.2	+2.6		
MKZ				*e*S	Sn	02 07 31.1	+2.2		
TUMD	**Tumrok D**	**2.50**	**17**	*e*P	Pn	02 07 04.6	+1.6		
KBTR	**Krutoberegovo**	**4.02**	**31**	*e*P	Pn	02 07 26.1	+2.9		
BKI	**Bering**	**4.70**	**57**	*e*P	Pn	02 07 34.0	+1.6		
BKI				*e*S	Sn	02 08 22.7	-2.9		

GCMT 28 02:07:40.0±0.3,**56.98S**±0.02×**141.15W**±0.03,**h27**km±1km, **MW4.9**/75,**Moment Tensor Solution. s15,c15; s75,c86; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}-0.40±.16; $M_{\theta\theta}$2.40±.14; $M_{\phi\phi}$-2.00±.12; $M_{r\theta}$0.22±.22; $M_{\theta\phi}$1.32±.09; $M_{\phi r}$1.01±.23; **Best double couple:** $M_0$2.78600×10^{16} **NP1:**ϕ_s118.00000°,δ68.00000°, λ-10.00000°. **NP2:**ϕ_c211.00000°,δ81.00000°, λ-158.00000°. **Principal axes:** T 2.8410, Plg9.0000°, Azm343.0000°; N -0.1130, Plg66.0000°, Azm232.0000°; P -2.7320, Plg22.0000°, Azm77.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Pacific-Antarctic Ridge**

WEL 28 02:07:55.4±0.8,**32°S**±16°×**18°0W**±4°1,**h222**km±20km, **M4.0**/8,**mB4.3**/6,**ML4.1**/10,**MLv4.4**/8,**Mw(mB)3.4**/6 **Error ellipse: s-maj=56.9km s-min=4.9km az=111.1,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.27**	**32**	S	S	02 09 31.9	+0.4
MXZ	**Matakaoa Point**	**5.68**	**195**	P	Pn	02 09 17.4	-1.4
MXZ				S	S	02 10 24.2	-0.7
WMGZ	**Waiomatatini S**	**5.90**	**193**	P	Pn	02 09 23.5	+1.9
WMGZ				S	S	02 10 28.2	-2.0
HAZ	**Te Kaha**	**5.99**	**198**	P	Pn	02 09 23.3	+0.6
HAZ				S	S	02 10 32.9	+0.8
PKGZ	**Pakihiroa**	**6.02**	**196**	P	Pn	02 09 25.9	+2.8
PKGZ				S	S	02 10 36.2	+3.3
PUZ	**Puketiti**	**6.18**	**194**	P	Pn	02 09 26.1	+1.0
PUZ				S	S	02 10 37.8	+1.2
RUGZ	**Raukumara Rang**	**6.21**	**198**	P	Pn	02 09 25.7	0.0
RUGZ				S	S	02 10 38.4	+0.9
TWGZ	**Tauwhareparae**	**6.34**	**195**	P	Pn	02 09 26.4	-0.9
TWGZ				S	S	02 10 41.8	+1.5
CNGZ	**Carnagh Statio**	**6.58**	**193**	P	Pn	02 09 32.0	+1.7
MWZ	**Matawai**	**6.60**	**198**	P	Pn	02 09 29.9	-0.6
MWZ				S	S	02 10 47.1	+0.8
TKGZ	**Te Karaka**	**6.62**	**196**	P	Pn	02 09 29.9	-0.9
TKGZ				S	S	02 10 47.3	+0.6
URZ	**Urewera**	**6.65**	**201**	P	Pn	02 09 29.6	-1.6
URZ				S	S	02 10 48.0	+0.6
RAGZ	**Rawiri**	**6.78**	**198**	P	Pn	02 09 32.6	-0.3
RAGZ				S	S	02 10 52.1	+1.5
RIGZ	**Rimuhau**	**6.89**	**196**	P	Pn	02 09 34.7	+0.3
RIGZ				S	S	02 10 54.2	+0.9
RTZ	**Ruatahuna**	**7.01**	**201**	P	Pn	02 09 35.3	-0.6
SNGZ	**Shannon Statio**	**7.07**	**198**	P	Pn	02 09 35.8	-0.8
SNGZ				S	S	02 10 57.5	+0.2
MTHZ	**Maungataniwha**	**7.27**	**201**	P	Pn	02 09 38.5	-0.7
MTHZ				S	S	02 11 00.5	-1.7
MHGZ	**Mahia Peninsul**	**7.29**	**194**	P	Pn	02 09 39.8	+0.4
MHGZ				S	S	02 10 59.3	-3.2

IDC 28 02:46:47.2±2.1,**12°29N**×**144°61E**,**h66**km±23km,**mb3.1**/4, **mbtmp3.3**/4,**Error ellipse: s-maj=34.5km s-min=20.8km az=98.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.32**	**11**	P	Pn	02 47 07.8	-1.9
	78nm,0.3s,baz=192,slow=15,SNR=4.1						
GUMO				S	Sn	02 47 26.9	+0.4
	77nm,0.3s,baz=193,slow=18,SNR=4.4						
WRA	**Warramunga Arr**	**33.59**	**198**	P	P	02 53 21.4	+0.2
	0.6nm,0.7s,baz=20,slow=9.6,SNR=5.3						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**37.24**	**196**	P	P	02 53 52.8	+0.2
	0.3nm,0.5s,baz=16,slow=11,SNR=8.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**62.25**	**317**	P	P	02 57 02.5	+0.2
	0.1nm,0.5s,baz=90,slow=7.6,SNR=2.7						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**69.85**	**25**	P	P	02 57 50.0	-0.6
	0.1nm,0.4s,baz=250,slow=5.9,SNR=1.4						
	0.1nm,0.4s						

CNRM ***28*** *02:50:18.2,35.44N×3.39W,h11km,ML3.5*
INMG ***28*** *02:50:21.1±1.4,35.19N×3.40W,h17km±6km,ML2.5,Error ellipse: s-maj=5.8km s-min=2.8km az=145.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Melilla*
MDD ***28*** *02:50:21.3±0.5,35.29N×3.45W,h2km±3km,mb_Lg2.9/31, Error ellipse: s-maj=3.4km s-min=2.1km az=149.0*
SFS ***28*** *02:50:21.5,35.30N×3.45W,h8km,ML3.3/18,ML3.3/25, MLv2.9/25*
IGIL ***28*** *02:50:22.1,35.29N×3.45W,h2km,ML2.4*
ISC 28 02:50:19.0±1.3,**35°32N**±0°02×**3°45W**±0°02,**h5**km±11km, **n157,**σ**1s44**/251,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMEL	**Melilla**	**0.40**	**93**	Pg	**Pb**	**02 50 28.0**	**-0.6**
EMEL				Sg	**Sb**	**02 50 34.2**	**-0.8**
WMELI	**Melilla**	**0.40**	**91**	Pg	**Pb**	**02 50 28.2**	**-0.4**
WMELI				Sg	**Sb**	**02 50 34.9**	**-0.2**
EMLI	**Melilla**	**0.41**	**93**	Pg	**Pb**	**02 50 28.1**	**-0.5**
PALE	**Palemas**	**0.42**	**255**	P	**Pb**	**02 50 28.7**	**-0.2**
PALE				S	**Sb**	**02 50 35.7**	**+0.2**
PALE	**Palemas**	**0.42**	**255**	P	**Pb**	**02 50 29.3**	**+0.4

ISC 28 03:41:17.7±0.9, 60°22N±0°02×139°91W±0°01, h13km±7km, n107, σ1§57/143, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCA	**Pinnacle**	**0.21**	**235**		**Pg**	**03 41 23.0**	**+0.6**
PCA				Sg	**Sg**	**03 41 26.9**	**+1.4**
PCA	**Pinnacle**	**0.21**	**235**	P	**Pg**	**03 41 22.9**	**+0.6**
BCPM	**Bancas Point**	**0.30**	**153**		**Pb**	**03 41 23.9**	**-1.0**
BCPM				Sg	**Sb**	**03 41 28.5**	**-1.3**
O28M	**Mount Upton**	**0.57**	**346**		**Pg**	**03 41 28.0**	**-1.0**
O28M					**Sg**	**03 41 34.6**	**-2.0**
O28M	**Mount Upton**	**0.57**	**346**	P	**Pg**	**03 41 28.2**	**-0.7**
O28M				S	**Sg**	**03 41 36.3**	**-0.3**
O29M	**Mount Kennedy**	**0.67**	**82**		**Pg**	**03 41 29.5**	**-1.2**
O29M				Sg	**Sg**	**03 41 38.1**	**-1.4**
O29M	**Mount Kennedy**	**0.67**	**82**	S	**Sg**	**03 41 38.2**	**-1.3**
YKU2	**Yakutat**	**0.72**	**170**	Pg	Pn	**03 41 32.9**	**-0.7**
YKU2					**Sn**	**03 41 44.8**	**+0.3**
RKAV	**Rock Avalanche**	**0.72**	**277**		**Pb**	**03 41 31.9**	**-0.3**
RKAV					**Pg**	**03 41 32.0**	**+0.3**
RKAV	**Rock Avalanche**	**0.72**	**277**	P	**Pb**	**03 41 32.4**	**+0.2**
RKAV				S	**Sb**	**03 41 43.5**	**+1.4**
LOGN	**Logan Glacier**	**0.81**	**319**		**Pg**	**03 41 32.6**	**-0.8**
LOGN				Sg	**Sg**	**03 41 43.1**	**-1.1**
LOGN				IAML		03 41 44.6	
	comp=N,177nm,0.3s						
LOGN	**Logan Glacier**	**0.81**	**319**	P	**Pg**	**03 41 32.5**	**-1.0**
LOGN				S	**Sg**	**03 41 43.5**	**-0.6**
YUK7	**Dusty Glacier**	**0.93**	**70**		**Pg**	**03 41 34.8**	**-0.9**
YUK7					**Pb**	**03 41 35.1**	**-0.8**
YUK7	**Dusty Glacier**	**0.93**	**70**	P	**Pg**	**03 41 34.8**	**-0.9**
YUK7				S	**Sg**	**03 41 47.5**	**-0.4**
MESA	**MESA**	**1.02**	**269**		**Pb**	**03 41 37.3**	**-0.1**
MESA				IAML		03 41 58.6	
	comp=N,251nm,0.5s						
MESA				IAML		03 41 58.8	
	comp=E,265nm,0.4s						
MESA	**MESA**	**1.02**	**269**	P	**Pn**	**03 41 38.0**	**+0.1**
MESA				S	**Sn**	**03 41 52.9**	**+0.7**
CTGM	**Chitina Glacie**	**1.03**	**317**		**Pg**	**03 41 36.2**	**-1.3**
CTGM				Sg	**Sg**	**03 41 49.1**	**-1.8**
CTGM	**Chitina Glacie**	**1.03**	**317**	P	**Pg**	**03 41 36.2**	**-1.3**
CTGM				S	**Sg**	**03 41 50.2**	**-0.7**
GRNC	**Granite Creek**	**1.05**	**300**		**Pg**	**03 41 36.7**	**-1.2**
GRNC				Sg	**Sg**	**03 41 49.8**	**-1.9**
GRNC	**Granite Creek**	**1.05**	**300**	P	**Pg**	**03 41 36.6**	**-1.2**
GRNC				S	**Sg**	**03 41 50.8**	**-0.9**
YUK6	**Outpost Mounta**	**1.05**	**46**		**Pg**	**03 41 37.2**	**-0.9**
YUK6	**Outpost Mounta**	**1.05**	**46**	P	**Pg**	**03 41 37.1**	**-0.9**
YUK6				S	**Sg**	**03 41 50.8**	**-0.9**
YUK8	**Steele Glacier**	**1.07**	**4**		**Pg**	**03 41 37.3**	**-1.1**
YUK8					**Sg**	**03 41 51.3**	**-1.1**
YUK8	**Steele Glacier**	**1.07**	**4**	P	**Pg**	**03 41 37.2**	**-1.1**
YUK8				S	**Sg**	**03 41 51.2**	**-1.1**
BARN	**Barnard Glacie**	**1.21**	**315**		**Pg**	**03 41 39.6**	**-1.4**
BARN				Sg	**Sg**	**03 41 54.2**	**-2.5**
BARN				IAML		03 41 58.5	
	comp=N,114nm,0.4s						
BARN				IAML		03 42 02.6	
	comp=E,119nm,0.4s						
BRWY	**Burwash Landin**	**1.23**	**20**	P	**Pg**	**03 41 40.1**	**-1.2**
BRWY				S	**Sg**	**03 41 56.5**	**-0.9**
YUK4	**Talbot Arm**	**1.29**	**28**	P	**Pb**	**03 41 43.3**	**+1.4**
BARK	**Barkley Ridge**	**1.30**	**279**		**Pb**	**03 41 42.6**	**+0.5**
HYT	**Haines Junctio**	**1.34**	**62**		**Pn**	**03 41 41.7**	**-0.4**
HYT	**Haines Junctio**	**1.34**	**62**	P	**Pn**	**03 41 41.8**	**-0.4**
HYT				S	**Sg**	**03 41 58.5**	**-2.2**
YUK5	**Granite Creek**	**1.36**	**47**		**Pn**	**03 41 43.0**	**+0.4**
YUK5	**Granite Creek**	**1.36**	**47**	P	**Pn**	**03 41 42.8**	**+0.2**
YUK5				S	**Sg**	**03 42 00.0**	**-1.6**
KIAG	**Kiagna River**	**1.40**	**301**		**Pn**	**03 41 42.6**	**-0.6**
KIAG	**Kiagna River**	**1.40**	**301**	P	**Pn**	**03 41 42.6**	**-0.6**
KIAG				S	**Sb**	**03 42 00.8**	**-0.9**
BALM	**Baldy**	**1.46**	**305**		**Pn**	**03 41 43.6**	**-0.2**
BALM	**Baldy**	**1.46**	**305**	P	**Pn**	**03 41 43.4**	**-0.4**
BALM				S	**Sb**	**03 42 02.5**	**-0.7**
SNH	**Sunshine Point**	**1.46**	**270**	Pn	**Pb**	**03 41 44.6**	**-0.2**
SNH				IAML		03 42 15.5	
	comp=N,61nm,1.1s						
SNH				IAML		03 42 16.4	
	comp=E,60nm,0.8s						
P30M	**Million Dollar**	**1.48**	**92**	Pn	**Pn**	**03 41 44.5**	**+0.4**
P30M				IAML		03 42 08.7	
	comp=E,119nm,0.9s						
P30M	**Million Dollar**	**1.48**	**92**	P	**Pg**	**03 41 45.4**	**-0.6**
TGL	**Tana Glacier**	**1.54**	**292**		**Pn**	**03 41 45.1**	**+0.1**
TGL				IAML		03 42 13.8	
	comp=N,62nm,0.8s						
TGL				IAML		03 42 17.9	
	comp=E,54nm,0.7s						
YUK3	**Moose Creek**	**1.59**	**350**		**Pn**	**03 41 46.6**	**+0.8**
YUK3	**Moose Creek**	**1.59**	**350**	Pn	**Pn**	**03 41 46.4**	**+0.7**
YUK3				Sn	**Sn**	**03 42 04.9**	**-1.3**
PTPK	**Patty Peak**	**1.59**	**309**		**Pn**	**03 41 46.1**	**+0.4**
PTPK	**Patty Peak**	**1.59**	**309**	Pn	**Pn**	**03 41 46.2**	**+0.5**
PTPK				Sn	**Sn**	**03 42 05.7**	**-0.5**
YUK2	**White River**	**1.64**	**344**		**Pn**	**03 41 46.9**	**+0.5**
YUK2	**White River**	**1.64**	**344**	Pn	**Pn**	**03 41 47.1**	**+0.8**
YUK2				Sn	**Sn**	**03 42 05.9**	**-1.5**
CRQM	**Cirque**	**1.69**	**290**		**Pn**	**03 41 47.3**	**+0.2**
CRQM				IAML		03 42 13.2	
	comp=E,66nm,0.6s						
CRQM				IAML		03 42 22.1	
	comp=N,67nm,0.7s						
BERG	**Berg Lake**	**1.90**	**277**	Pn	**Pn**	**03 41 50.7**	**+0.9**
MCARA	**McCarthy VSAT**	**1.92**	**309**	Pn	**Pn**	**03 41 51.6**	**+1.5**
MCARA				IAML		03 42 21.2	
	comp=E,90nm,0.8s						
MCARA				IAML		03 42 21.9	
	comp=N,90nm,0.9s						
MCARA	**McCarthy VSAT**	**1.92**	**309**	Pn	**Pb**	**03 41 51.9**	**-0.7**
O30N	**Mendenhall**	**1.97**	**72**	Pn	**Pn**	**03 41 52.1**	**+1.3**
O30N				IAML		03 42 19.9	
	comp=N,54nm,0.5s						
O30N				IAML		03 42 20.3	
	comp=E,36nm,0.6s						
O30N	**Mendenhall**	**1.97**	**72**	Pn	**Pb**	**03 41 52.5**	**-1.0**
O30N				Sg	**Sg**	**03 42 19.5**	**-1.4**
VRDI	**Verde Repeater**	**2.02**	**302**	Pn	**Pn**	**03 41 52.5**	**+0.9**
VRDI				IAML		03 42 25.6	
	comp=N,29nm,0.5s						
BVCY	**Beaver Creek**	**2.25**	**349**		**Pn**	**03 41 55.9**	**+1.2**
BVCY	**Beaver Creek**	**2.25**	**349**	Pn	**Pn**	**03 41 56.3**	**+1.6**
GLB	**Gilahina Butte**	**2.27**	**304**		**Pn**	**03 41 56.3**	**+1.3**
GLB				IAML		03 42 31.5	
	comp=E,22nm,0.8s						
GLB				IAML		03 42 39.0	
	comp=N,27nm,0.8s						
KAIM	**Kayak Island**	**2.28**	**265**	Pn	**Pb**	**03 41 57.3**	**-1.3**
KAIM				IAML		03 42 30.1	
	comp=E,34nm,1.0s						
KAIM				IAML		03 43 21.0	
	comp=N,39nm,1.1s						
M29M	**Somme Creek**	**2.34**	**17**	Pn	**Pn**	**03 41 57.6**	**+1.6**
M29M				IAML		03 42 32.2	
	comp=E,53nm,0.5s						
M29M				IAML		03 42 33.1	
	comp=N,38nm,0.5s						
M29M	**Somme Creek**	**2.34**	**17**	Pn	**Pn**	**03 41 58.1**	**+2.1**
M29M				Sg	**Sb**	**03 42 29.6**	**+1.0**
M27K	**Edge Creek, AK**	**2.35**	**337**	Pn	**Pn**	**03 41 57.8**	**+1.7**
M27K				IAML		03 42 33.7	
	comp=E,25nm,0.8s						
M27K				IAML		03 42 33.7	
	comp=N,46nm,0.7s						
RAGM	**Ragged Mountai**	**2.38**	**276**		**Pb**	**03 41 58.4**	**-2.0**
N31M	**Braeburn, Yuko**	**2.39**	**56**	Pn	**Pn**	**03 41 58.0**	**+1.4**
N31M				IAML		03 42 36.7	
	comp=E,48nm,0.9s						
N31M				IAML		03 42 39.4	
	comp=N,32nm,0.7s						
N31M	**Braeburn, Yuko**	**2.39**	**56**	Pn	**Pn**	**03 41 58.6**	**+2.0**
GOAT	**Goat Mountain**	**2.42**	**281**		**Pn**	**03 41 58.0**	**+1.0**
GOAT					**Pb**	**03 41 58.6**	**-2.4**
BMRM	**Bremner River**	**2.44**	**290**	Pn	**Pn**	**03 41 58.6**	**+1.3**
WHY	**Whitehorse**	**2.53**	**78**	Pn	**Pn**	**03 41 59.4**	**+0.8**
WHY	**Whitehorse**	**2.53**	**78**	Pn	**Pn**	**03 42 00.2**	**+1.6**
M26K	**Nabesna, AK**	**2.65**	**327**		**Pn**	**03 42 02.4**	**+2.2**
M26K				IAML		03 42 49.0	
	comp=N,19nm,0.8s						
N25K	**Chitina, Valde**	**2.68**	**303**	Pn	**Pn**	**03 42 02.5**	**+1.9**
N25K				IAML		03 42 48.8	
	comp=N,20nm,1.1s						
N25K	**Chitina, Valde**	**2.68**	**303**	Pn	**Pn**	**03 42 03.0**	**+2.4**
N25K				Sg	**Sb**	**03 42 40.7**	**+2.3**
M30M	**Minto, Yukon**	**2.80**	**31**	Pn	**Pn**	**03 42 03.9**	**+1.6**
M30M				IAML		03 42 48.5	
	comp=N,23nm,0.8s						
M30M	**Minto, Yukon**	**2.80**	**31**	Pn	**Pn**	**03 42 04.5**	**+2.2**
EYAK	**Cordova Ski Ar**	**2.92**	**279**	Pn	**Pn**	**03 42 05.7**	**+1.9**
EYAK				IAML		03 42 55.4	
	comp=N,14nm,1.1s						
BCAR	**Beaver Creek A**	**3.00**	**343**	Pn	**Pn**	**03 42 05.8**	**+0.8**
BC01	**Beaver Creek A**	**3.00**	**343**		**Pn**	**03 42 06.6**	**+1.7**
L27K	**Beaver Creek,**	**3.00**	**343**	Pn	**Pn**	**03 42 06.4**	**+1.5**
L29M	**L29M**	**3.02**	**16**	Pn	**Pn**	**03 42 07.1**	**+1.8**
L29M	**L29M**	**3.02**	**16**	Pn	**Pn**	**03 42 07.8**	**+2.5**
L29M				Sg	**Sb**	**03 42 50.8**	**+2.6**
BESE	**Bessie Mountai**	**3.06**	**120**	Sg	**Sg**	**03 42 55.5**	**-0.4**
P32M	**Atlin**	**3.18**	**99**	Pn	**Pn**	**03 42 07.9**	**+0.4**
P32M				IAML		03 43 03.9	
	comp=N,16nm,1.1s						
P32M	**Atlin**	**3.18**	**99**	Sn	**Sn**	**03 42 47.0**	**+1.6**
M31M	**Drury Creek, Y**	**3.33**	**51**		**Pn**	**03 42 12.0**	**+2.6**
M31M				IAML		03 43 07.7	
	comp=N,15nm,1.2s						
M31M				IAML		03 43 09.0	
	comp=E,14nm,0.9s						
M31M	**Drury Creek, Y**	**3.33**	**51**	Pn	**Pn**	**03 42 11.9**	**+2.4**
M31M				Sg	**Sb**	**03 43 00.4**	**+3.4**
N32M	**Quiet Lake**	**3.49**	**71**	Pn	**Pn**	**03 42 13.4**	**+1.7**
N32M	**Quiet Lake**	**3.49**	**71**	Pn	**Pn**	**03 42 13.3**	**+1.7**
P33M	**Teslin, Yukon**	**3.54**	**87**	Pn	**Pn**	**03 42 13.4**	**+1.0**
P33M	**Teslin, Yukon**	**3.54**	**87**	Pn	**Pn**	**03 42 13.2**	**+0.8**
FARO	**Faro, Yukon**	**3.76**	**55**	Pn	**Pn**	**03 42 17.6**	**+2.2**
K29M	**Barlow Dome**	**3.81**	**16**	Pn	**Pn**	**03 42 19.2**	**+3.0**
K29M				IAML		03 43 20.5	
	comp=E,17nm,0.8s						
K29M				IAML		03 43 21.8	
	comp=N,6.6nm,0.4s						
K29M	**Barlow Dome**	**3.81**	**16**	Pn	**Pn**	**03 42 19.1**	**+3.0**
DAWY	**Dawson**	**3.87**	**3**		**Pn**	**03 42 19.3**	**+2.3**
DAWY				IAML		03 43 25.6	
	comp=E,6.4nm,1.2s						
DAWY	**Dawson**	**3.87**	**3**	Pn	**Pn**	**03 42 19.2**	**+2.3**
MAYO	**Mayo, Yukon**	**3.88**	**28**	Sg	**Sb**	**03 43 16.5**	**+3.6**
SCM	**Sheep Creek Mo**	**3.96**	**297**	Pn	**Pn**	**03 42 20.4**	**+2.3**
DOT	**Dot Lake**	**3.96**	**332**	Pn	**Pn**	**03 42 19.9**	**+1.7**
SCRK	**Sand Creek**	**4.23**	**335**	Pn	**Pn**	**03 42 23.7**	**+1.8**
GHO	**Glory Hole Cre**	**4.66**	**293**	Pn	**Pn**	**03 42 30.0**	**+2.2**
J30M	**Hart River**	**4.68**	**19**	Pn	**Pn**	**03 42 31.1**	**+3.0**
J30M				IAML		03 43 53.9	
	comp=E,7.9nm,1.0s						
J30M	**Hart River**	**4.68**	**19**	Pn	**Pn**	**03 42 30.7**	**+2.6**
J30M				Sg	**Sg**	**03 43 43.9**	**-3.8**
I28M	**Miner Creek**	**5.25**	**360**	Pn	**Pn**	**03 42 39.2**	**+3.3**
I28M	**Miner Creek**	**5.25**	**360**	Pn	**Pn**	**03 42 36.6**	**+0.7**
I30M	**Mount Dempster**	**5.28**	**16**		**Pn**	**03 42 40.1**	**+3.8**
I30M	**Mount Dempster**	**5.28**	**16**	Pn	**Pn**	**03 42 37.3**	**+1.0**
I26K	**Coal Creek Min**	**5.32**	**345**		**Pn**	**03 42 39.6**	**+2.9**
I26K				IAML		03 44 15.0	
	comp=E,5.6nm,1.0s						
I26K				IAML		03 44 23.7	
	comp=N,4.5nm,0.8s						
H31M	**Peel River**	**6.15**	**22**	Pn	**Pn**	**03 42 48.7**	**+0.5**
G30M	**tAoh Zrail Nji**	**6.98**	**12**	Pn	**Pn**	**03 43 00.8**	**+1.1**
G31M	**Satah River**	**7.18**	**18**	Pn	**Pn**	**03 43 03.4**	**+1.1**

*ISK **28** 04:27:47.8, 38°.45N×44°.39E, h5km, ML2.8/6*
*AFAD **28** 04:27:48.1, 38°.37N×44°.36E, h7km±3km, ML2.7*
*TEH **28** 04:27:48.4, 38°.41N×44°.55E, h6km±11 4km, ML2.8, Presumed earthquake*

ISC 28 04:27:47.5±1.2, 38°43N±0°03×44°46E±0°02, h8km±11km, n31, σ1§09/37, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**302**	P	**Pg**	**04 27 55.8**	**-0.1**
OZAP				S	**Sg**	**04 28 00.8**	**-0.9**
OZAP				IAML		04 28 05.0	
	comp=N,756nm,0.6s						
TVAN	**Van**	**0.83**	**277**	P	**Pg**	**04 28 02.8**	**-0.7**
TVAN				S	**Sg**	**04 28 14.2**	**-0.2**
TVAN				IAML		04 28 32.0	
	comp=E,260nm,0.6s						
YOVA	**Hakkari_Yksek**	**0.85**	**189**	P	**Pg**	**04 28 03.8**	**-0.1**
VANB	**Van**	**0.86**	**281**	Pg	**Pg**	**04 28 03.6**	**-0.3**
VANB				Sg	**Sb**	**04 28 15.7**	**-0.7**
VMUR	**Van-Muradiye**	**0.89**	**309**	P	**Pb**	**04 28 05.0**	**-0.3**
VMUR				S	**Sb**	**04 28 17.8**	**+0.4**
ISHB	**Shabestar**	**0.92**	**99**	Pg	**Pg**	**04 28 04.1**	**-1.1**
MAKU	**Maku**	**0.94**	**11**	Pg	**Pg**	**04 28 05.4**	**-0.2**
IMRD	**Marand**	**1.01**	**73**	Pg	**Pg**	**04 28 07.2**	**+0.2**
HAKT	**HAKKARI**	**1.05**	**215**	P	**Pg**	**04 28 06.7**	**-1.0**
GEVA	**Gevas**	**1.11**	**264**	P	**Pg**	**04 28 07.3**	**-1.5**
AKDM	**Akdamar-Van**	**1.17**	**265**	Pn	**Pb**	**04 28 08.2**	**-1.8**
AKDM				Sn	**Sn**	**04 28 26.6**	**+0.1**
DYDN	**Diyadin**	**1.26**	**332**	P	**Pg**	**04 28 13.6**	**+1.9**
ITBZ	**Tabriz**	**1.34**	**98**	Pg	**Pn**	**04 28 11.9**	**-0.8**
CUKT	**Cukurca**	**1.36**	**210**	Pn	**Pg**	**04 28 14.8**	**+1.3**
CUKT				Sn	**Sg**	**04 28 34.4**	**+3.2**
CUKT	**Cukurca**	**1.36**	**210**	P	**Pg**	**04 28 15.7**	**+2.1**
ADCV	**BITLIS_Adilcev**	**1.41**	**286**	P	**Pg**	**04 28 14.1**	**-0.5**
IAZR	**Azarshahr**	**1.42**	**122**	Pg	**Pb**	**04 28 14.0**	**-0.2**
IGDI	**IGDIR**	**1.47**	**348**	P	**Pg**	**04 28 16.8**	**+1.2**
PERV	**Siirt/Pervari-**	**1.59**	**253**	P	**Pg**	**04 28 17.1**	**-0.8**
AGRB	**Hanur-Agry**	**1.62**	**315**	Pn	**Pg**	**04 28 17.9**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.62**	**307**	P	**Pg**	**04 28 17.9**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.65**	**296**	Pn	**Pb**	**04 28 18.3**	**0.0**
KOTA	**Agri, Merkez-K**	**1.68**	**325**	P	**Pg**	**04 28 20.0**	**+0.3**
GNI	**Garni**	**1.73**	**7**	Pn	**Pb**	**04 28 19.9**	**+0.3**
GNI	**Garni**	**1.73**	**7**	Pg	**Pg**	**04 28 21.6**	**+0.9**
BLIS	**Bitlis-Merkez**	**1.84**	**270**	P	**Pb**	**04 28 21.6**	**+0.1**
GURO	**Guroymak-BITLI**	**1.91**	**274**	Pn	**Pb**	**04 28 21.9**	**-0.7**
IHRS	**Heris**	**2.03**	**92**	Pn	**Pb**	**04 28 24.9**	**+0.1**
SRTM	**Siirt_Merkez**	**2.05**	**258**	P	**Pb**	**04 28 25.1**	**+0.2**
MUSM	**Mu-Merkez**	**2.33**	**278**	P	**Pn**	**04 28 27.1**	**+0.8**
GRMI	**Germi**	**2.72**	**81**	Pn	**Pb**	**04 28 34.5**	**-1.9**

*IDC **28** 04:48:29.2±0.5, 6°.73N×72°.97W, h150km±5km, mb3.6/12, mbtmp4.2/18, Error ellipse: s-maj=10.9km s-min=6.6km az=121.0*
*NEIC **28** 04:48:30.2±2.1, 6°.70N±0°.06×72°.98W±0°.08, h159km±7km, mb4.2/46, Error ellipse: s-maj=12.3km s-min=7.4km az=124.0*
*RSNC **28** 04:48:30.1±0.2, 7°.N±.1°×7°.3W±°, h142km±2km, M4.4, mB5.3, mb4.8, ML3.9, Mw(mB)4.7*
*FUNV **28** 04:48:31.6, 6°.13N×72°.51W, h34km, MW4.7, Presumed earthquake*

ISC 28 04:48:29.2±0.5, 6°80N±0°03×73°01W±0°03, h152km±4km, n167, σ1§86/218, mb4.2/30, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**220**	P	**Pn**	**04 48 50.5**	**+0.3**
BARC				S	**Sn**	**04 49 05.4**	**-0.7**
PAMC	**Pamplona, Colo**	**0.62**	**30**	P	**Pn**	**04 48 53.3**	**+1.3**
PAMC				S	**Sn**	**04 49 10.1**	**+0.8**
BRJC	**Barrancabermej**	**0.75**	**283**	P	**Pn**	**04 48 52.3**	**+0.1**
BRJC				S	**Sn**	**04 49 08.9**	**-0.8**
RUSC	**La Rusia**	**0.91**	**185**	P	**Pn**	**04 48 54.5**	**+0.5**
RUSC				S	**Sn**	**04 49 12.4**	**-0.4**
CAPV	**Capacho**	**1.26**	**33**	*e*S	**Sn**	**04 49 19.4**	**+1.6**
PTBC	**PUERTO BERRIO,**	**1.46**	**260**	P	**Pn**	**04 48 57.1**	**-1.4**
PTBC				S	**Sn**	**04 49 18.3**	**-2.6**
OCAC	**Ocana**	**1.46**	**348**	P	**Pn**	**04 48 58.8**	**+0.1**
OCAC				S	**Sn**	**04 49 20.4**	**-0.9**
SPBC	**San Pablo de B**	**1.56**	**223**	P	**Pn**	**04 48 59.5**	**-0.1**
SPBC				S	**Sn**	**04 49 21.7**	**-1.2**
CHIC	**Chingaza**	**2.27**	**198**	P	**Pn**	**04 49 08.4**	**+0.3**
CHIC				S	**Sn**	**04 49 37.7**	**-0.3**
ROSC	**El Rosal**	**2.34**	**214**	P	**Pn**	**04 49 10.2**	**+1.3**
ROSC	587nm,0.3s,baz=73,slow=10,SNR=391			S	**Sn**	**04 49 38.3**	**-1.2**
	2µm,0.4s,baz=156,slow=19,SNR=13						
ROSC	**El Rosal**	**2.34**	**214**		**Pn**	**04 49 10.4**	**+1.5**
ROSC	**El Rosal**	**2.34**	**214**	P	**Pn**	**04 49 10.4**	**+1.5**
ROSC				S	**Sn**	**04 49 39.7**	**+0.2**
SOCV	**Socops**	**2.59**	**55**	*e*P	**Pn**	**04 49 12.5**	**+0.8**
SOCV				*e*S	**Sn**	**04 49 41.4**	**-2.9**

MEDEC	**Medeln, Ant**	**2.62**	**259**	P	**Pn**	**04 49 12.5**	**+0.5**
MEDEC				S	**Sn**	**04 49 43.2**	**-1.9**
UREC	**San Jos de Ur**	**2.68**	**291**	P	**Pn**	**04 49 11.0**	**-1.6**
UREC				S	**Sn**	**04 49 41.6**	**-4.5**
VILC	**Villavicencio,**	**2.76**	**194**	P	**Pn**	**04 49 13.9**	**+0.1**
VILC				S	**Sn**	**04 49 48.0**	**-0.2**
GUY2C	**Guyana, Caldas**	**2.82**	**236**	P	**Pn**	**04 49 15.0**	**+0.2**
GUY2C				S	**Sn**	**04 49 49.0**	**-1.0**
RECRC	**Villamaria, Ca**	**2.96**	**232**	P	**Pn**	**04 49 17.9**	**+1.2**
RECRC				S	**Sn**	**04 49 55.4**	**+2.0**
NIZA	**Niza - Manizal**	**3.00**	**235**	P	**Pn**	**04 49 18.4**	**+1.5**
NIZA				S	**Sn**	**04 49 55.2**	**+1.4**
CBOC	**Ciudad Bolivar**	**3.13**	**253**	P	**Pn**	**04 49 18.3**	**-0.1**
CBOC				S	**Sn**	**04 49 54.6**	**-1.9**
SDV	**Santo Domingo**	**3.14**	**48**	P	**Pn**	**04 49 19.9**	**+1.3**
	121nm,0.3s,baz=260,slow=5.5,SNR=234						
SDV				S	**Sn**	**04 49 57.3**	**+0.6**
	747nm,0.5s,baz=240,slow=14,SNR=37						
SDV	**Santo Domingo**	**3.14**	**48**		**Pn**	**04 49 20.3**	**+1.7**
DBBC	**Dabeiba**	**3.19**	**274**	P	**Pn**	**04 49 18.6**	**-0.5**
DBBC				S	**Sn**	**04 49 54.6**	**-3.1**
ARGC	**Ariguani, Magd**	**3.27**	**338**	P	**Pn**	**04 49 20.9**	**+0.7**
ARGC				S	**Sn**	**04 49 59.7**	**0.0**
ANIL	**Santa Ana**	**3.31**	**226**	P	**Pn**	**04 49 21.3**	**+0.4**
ANIL				S	**Sn**	**04 50 00.3**	**-0.5**
PRAC	**Prado**	**3.59**	**211**	P	**Pn**	**04 49 23.9**	**-0.4**
PRAC				S	**Sn**	**04 50 05.9**	**-1.1**
ORTC	**Ortega, Tolima**	**3.63**	**218**	P	**Pn**	**04 49 24.6**	**-0.3**
ORTC				S	**Sn**	**04 50 07.3**	**-0.7**
APAC	**Apartado, Choc**	**3.71**	**287**	P	**Pn**	**04 49 25.1**	**-0.6**
APAC				S	**Sn**	**04 50 06.9**	**-2.7**
SJCC	**San Jacinto, C**	**3.75**	**325**	P	**Pn**	**04 49 24.9**	**-1.5**
SJCC				S	**Sn**	**04 50 06.4**	**-4.4**
PLMC	**San Jos del P**	**3.76**	**240**	P	**Pn**	**04 49 26.5**	**0.0**
PLMC				S	**Sn**	**04 50 09.2**	**-1.8**
URMC	**La Uribe, Meta**	**3.79**	**201**	P	**Pn**	**04 49 27.1**	**+0.3**
URMC				S	**Sn**	**04 50 11.1**	**-0.5**
LCBC	**Los crdobas,**	**3.91**	**302**	P	**Pn**	**04 49 27.1**	**-1.2**
LCBC				S	**Sn**	**04 50 11.5**	**-2.7**
CRJC	**Cerrejon, Guaj**	**4.20**	**2**	P	**Pn**	**04 49 31.1**	**-1.1**
CRJC				S	**Sn**	**04 50 18.0**	**-3.2**
YOTC	**Yotoco, Valle**	**4.34**	**230**	P	**Pn**	**04 49 33.5**	**-0.7**
YOTC				S	**Sn**	**04 50 22.8**	**-1.9**
SOLC	**Bahia Solano**	**4.41**	**263**	P	**Pn**	**04 49 34.4**	**-0.5**
SOLC				S	**Sn**	**04 50 26.4**	**+0.4**
SMRC	**Santa Marta, M**	**4.50**	**345**	P	**Pn**	**04 49 35.6**	**-1.1**
SMRC				S	**Sn**	**04 50 24.6**	**-3.6**
CAPC	**Capurgana**	**4.67**	**293**	P	**Pn**	**04 49 35.9**	**-2.5**
CAPC				S	Sn	04 50 23.4	-8.9
PIZC	**Pizarro, Choco**	**4.70**	**247**	P	**Pn**	**04 49 39.9**	**+1.2**
PIZC				S	**Sn**	**04 50 31.7**	**-1.1**
MACC	**Macarena, Meta**	**4.70**	**190**	P	**Pn**	**04 49 37.5**	**-1.3**
MACC				S	**Sn**	**04 50 29.5**	**-3.5**
PTAC	**Punta Ardita,**	**4.78**	**274**	P	**Pn**	**04 49 38.4**	**-1.3**
PTAC				S	**Sn**	**04 50 29.6**	**-5.1**
TEPV	**Terepaima**	**4.91**	**50**	*e*P	**Pn**	**04 49 42.6**	**+1.0**
TEPV				*e*S	**Sn**	**04 50 35.9**	**-2.1**
URIC	**Uribia, Colomb**	**4.97**	**12**	P	**Pn**	**04 49 41.1**	**-1.2**
URIC				S	**Sn**	**04 50 37.4**	**-2.0**
JAMC	**Jamundi, Valle**	**5.10**	**226**	P	**Pn**	**04 49 44.0**	**-0.2**
	3µm88nm,0.6s						
JAMC				S	**Sn**	**04 50 39.5**	**-3.2**
	3µm88nm,0.6s						
GARC	**Garzon, Huila**	**5.21**	**208**	P	**Pn**	**04 49 44.8**	**-0.9**
GARC				S	**Sn**	**04 50 40.3**	**-5.1**
MAPV	**Macapo**	**5.42**	**56**	*e*P	**Pn**	**04 49 48.5**	**+0.2**
MAPV				*e*S	**Sn**

	comp=Z,4.1nm,0.8s							
PB11	**IPOC Station P**	**26.60**	**173**	P	**P**	**04 53 51.3**	**-2.5**	
V48A	**Smith Brothers**	**31.47**	**338**	P	**P**	**04 54 38.6**	**+2.1**	
V48A				IAmb	IAmb	04 54 40.4		
	comp=Z,5.7nm,0.8s							
BDFB	**Brasilia**	**33.32**	**132**	P	**P**	**04 54 52.6**	**-0.4**	
	comp=Z,3.6nm,0.6s,baz=298,slow=7.4,SNR=8.3							
	comp=Z,3.6nm,0.6s							
BDFB	**Brasilia**	**33.32**	**132**	P	**P**	**04 54 53.7**	**+0.7**	
BDFB				IAmb	IAmb	04 55 09.9		
	comp=Z,11nm,1.4s							
AC02	**Maricunga**	**33.65**	**174**	P	**P**	**04 54 54.9**	**-1.2**	
AC02				IAmb	IAmb	04 54 55.7		
	comp=Z,6.2nm,1.5s							
FCAR	**Ozark Folk Cen**	**33.84**	**331**	P	**P**	**04 54 57.5**	**+0.3**	
BRDY	**Brady**	**34.41**	**318**	P	**P**	**04 55 02.4**	**+0.1**	
BRDY				IAmb	IAmb	04 55 03.9		
	comp=Z,3.4nm,0.7s							
KSPA	**Keystone Colle**	**34.70**	**356**	P	**P**	**04 55 06.5**	**+2.0**	
CCM	**Cathedral Cave**	**35.24**	**335**	P	**P**	**04 55 10.3**	**+1.1**	
SAND	**Sanderson**	**35.77**	**314**	P	**P**	**04 55 14.5**	**+0.6**	
R40A	**Maddies Statio**	**35.88**	**334**	P	**P**	**04 55 14.7**	**0.0**	
R40A				IAmb	IAmb	04 55 15.6		
	comp=Z,4.5nm,1.0s							
TX31	**Lajitas Ar. Si**	**36.56**	**312**	P	**P**	**04 55 21.3**	**+0.6**	
TXAR	**Lajitas Array**	**36.56**	**312**	P	**P**	**04 55 21.3**	**+0.6**	
	comp=Z,2.0nm,0.6s,baz=126,slow=9.3,SNR=32							
TXAR				pP	**pP**	**04 55 54.9**	**+1.5**	
	comp=Z,0.4nm,0.7s,baz=118,slow=8.7,SNR=2.3							
TXAR				PcP	**PcP**	**04 57 42.8**	**+1.8**	
	comp=Z,0.6nm,0.8s,baz=145,slow=5.5,SNR=4.9							
	comp=Z,2.0nm,0.6s							
TXAR	**Lajitas Array**	**36.56**	**312**	P	**P**	**04 55 21.1**	**+0.4**	
MNHN	**Monahans**	**37.01**	**315**	P	**P**	**04 55 24.6**	**+0.2**	
MNHN				IAmb	IAmb	04 55 25.0		
	comp=Z,3.3nm,0.4s							
VHRN	**Van Horn**	**38.29**	**313**	P	**P**	**04 55 35.4**	**+0.1**	
VHRN				IAmb	IAmb	04 55 37.2		
	comp=Z,3.5nm,0.9s							
G62A	**West of Eustis**	**38.33**	**3**	P	**P**	**04 55 37.1**	**+1.9**	
CO04	**Los Peladeros**	**38.67**	**177**	P	**P**	**04 55 36.5**	**-2.1**	
MNTX	**Cornudas Mount**	**39.07**	**314**	P	**P**	**04 55 42.6**	**+1.0**	
MNTX				IAmb	IAmb	04 55 44.0		
	comp=Z,5.4nm,0.8s							
SDCO	**Great Sand Dun**	**42.63**	**321**	P	**P**	**04 56 12.9**	**+1.8**	
K30B	**Basset**	**42.76**	**331**	P	**P**	**04 56 12.1**	**+0.4**	
PV02	**Paradox Valley**	**44.97**	**319**	P	**P**	**04 56 30.8**	**+1.1**	
PV02				IAmb	IAmb	04 56 31.8		
	comp=Z,5.7nm,0.7s							
PV13	**Radium Mtn., P**	**44.99**	**319**	P	**P**	**04 56 31.5**	**+1.7**	
PV13				IAmb	IAmb	04 56 32.0		
	comp=Z,3.9nm,0.6s							
PV18	**Skein Mesa, Pa**	**45.10**	**319**	P	**P**	**04 56 31.3**	**+0.7**	
PV18				IAmb	IAmb	04 56 34.7		
	comp=Z,6.8nm,0.9s							
WUAZ	**Wupatki**	**45.31**	**315**	P	**P**	**04 56 33.6**	**+1.2**	
WUAZ				IAmb	IAmb	04 56 35.2		
	comp=Z,8.7nm,0.9s							
Y14A	**Wickenburg**	**45.74**	**312**	P	**P**	**04 56 36.5**	**+0.9**	
Y14A				IAmb	IAmb	04 56 37.5		
	comp=Z,4.7nm,0.8s							
HMU	**Henry Mountain**	**46.13**	**318**	P	**P**	**04 56 40.2**	**+1.3**	
HMU				IAmb	IAmb	04 56 41.8		
	comp=Z,10nm,1.1s							
ULM	**Lac du Bonnet**	**47.34**	**340**	P	**P**	**04 56 47.7**	**0.0**	
	comp=Z,2.0nm,0.5s,baz=146,slow=9.0,SNR=6.1							
	comp=Z,2.0nm,0.5s							
PLCA	**Paso Flores**	**47.35**	**177**	P	**P**	**04 56 45.8**	**-2.1**	
	comp=Z,1.5nm,1.1s,baz=348,slow=8.5,SNR=4.6							
	comp=Z,1.5nm,1.1s							
V12A	**Nelson**	**47.91**	**313**	P	**P**	**04 56 53.3**	**+0.8**	
V12A				IAmb	IAmb	04 56 54.3		
	comp=Z,3.8nm,0.8s							
SCHQ	**Schefferville**	**48.15**	**5**	P	**P**	**04 56 54.0**	**+0.2**	
	comp=Z,6.5nm,0.7s,baz=190,slow=7.4,SNR=17							
	comp=Z,6.5nm,0.7s							
SCHQ	**Schefferville**	**48.15**	**5**	P	**P**	**04 56 54.4**	**+0.6**	
SCHQ				IAmb	IAmb	04 56 55.3		
	comp=Z,7.1nm,0.9s							
PDAR	**Pinedale Array**	**48.16**	**324**	P	**P**	**04 56 55.0**	**+0.6**	
	comp=Z,1.0nm,0.6s,baz=124,slow=8.9,SNR=10.0							
	comp=Z,1.0nm,0.6s							
PDAR	**Pinedale Array**	**48.16**	**324**	P	**P**	**04 56 54.5**	**+0.1**	
HWUT	**Hardware Ranch**	**48.69**	**322**	P	**P**	**04 56 57.5**	**-0.9**	
BGU	**Big Grassy Mou**	**49.23**	**320**	P	**P**	**04 57 02.6**	**+0.1**	
BGU				IAmb	IAmb	04 57 03.8		
	comp=Z,3.4nm,0.6s							
DSP	**Deep Springs**	**50.88**	**313**	P	**P**	**04 57 15.8**	**+1.0**	
HLID	**Hailey**	**51.52**	**322**	P	**P**	**04 57 19.9**	**+0.2**	
NVAR	**Mina Array Bea**	**51.58**	**315**	P	**P**	**04 57 21.4**	**+1.2**	
	comp=Z,0.8nm,0.6s,baz=128,slow=7.6,SNR=8.4							
	comp=Z,0.8nm,0.6s							
WVOR	**Wild Horse Val**	**53.62**	**319**	P	**P**	**04 57 35.2**	**+0.1**	
FCC	**Fort Churchill**	**54.32**	**347**	P	**P**	**04 57 40.0**	**+0.3**	
F10A	**Beach Ranch, E**	**54.50**	**323**	P	**P**	**04 57 41.6**	**+0.2**	
O02D	**Mt. Diablo Mer**	**55.47**	**315**	P	**P**	**04 57 47.8**	**-0.6**	
O02D				IAmb	IAmb	04 57 48.6		
	comp=Z,2.9nm,0.9s							
YKA	**Yellowknife Ar**	**63.32**	**340**	P	**P**	**04 58 42.2**	**+0.5**	
	comp=Z,0.8nm,0.7s,baz=133,slow=6.0,SNR=21							
YKA				pP	**pP**	**04 59 18.9**	**+0.9**	
	comp=Z,1.0nm,0.7s,baz=133,slow=6.2,SNR=5.9							
	comp=Z,0.8nm,0.7s							
YKA	**Yellowknife Ar**	**63.32**	**340**	P	**P**	**04 58 42.1**	**+0.4**	
YKAW3	**Yellowknife Wh**	**63.37**	**340**	P	**P**	**04 58 42.2**	**+0.1**	
SUMG	**Summit**	**68.99**	**11**	P	**P**	**04 59 19.1**	**+0.9**	
M30M	**Minto, Yukon**	**72.10**	**334**	P	**P**	**04 59 38.1**	**+1.2**	
M30M				IAmb	IAmb	05 00 01.2		
	comp=Z,10nm,1.4s							
A36M	**Sachs Harbour**	**72.48**	**345**	P	**P**	**04 59 39.5**	**+0.7**	
A36M				IAmb	IAmb	04 59 41.5		
	comp=Z,4.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.63**	**78**	P	**P**	**04 59 45.5**	**-1.2**	
	comp=Z,0.3nm,0.9s,baz=262,slow=6.8,SNR=1.2							
	comp=Z,0.3nm,0.9s							
ILAR	**Eielson Array**	**77.03**	**335**	P	**P**	**05 00 05.5**	**+0.4**	
	comp=Z,0.3nm,0.7s,baz=178,slow=5.0,SNR=4.3							
ILAR				pP	**pP**	**05 00 41.1**	**-1.5**	
	comp=Z,0.5nm,0.9s,baz=106,slow=4.5,SNR=2.9							
	comp=Z,0.3nm,0.7s							
MKAR	**Makanchi Array**	**122.30**	**20**	PKP	**PKPdf**	**05 07 06.2**	**-0.3**	
	comp=Z,0.1nm,0.4s,baz=305,slow=2.5,SNR=4.4							
HHC	**Hu-ho-hao-te**	**132.40**	**355**	*eP*	**PKPdf**	**05 07 24.3**	**-1.8**	
PZH	**PanZhiHua**	**146.50**	**9**	PKPbc	**PKPdf**	**05 07 49.5**	**-2.5**	
ASAR	**Alice Springs**	**149.19**	**234**	PKPbc	**PKPbc**	**05 08 00.1**	**-0.6**	
	comp=Z,1.1nm,0.5s,baz=111,slow=3.7,SNR=15							
WRA	**Warramunga Arr**	**150.42**	**241**	PKPbc	**PKPbc**	**05 08 03.4**	**-0.4**	
	comp=Z,1.1nm,0.4s,baz=110,slow=2.5,SNR=30							
WRA	**Warramunga Arr**	**150.42**	**241**		**PKPbc**	**05 08 03.1**	**-0.7**	

IDC 28 04:51:52.1±8.1, 26°28S×28°81E, h0km, mbtmp2.7/1, ML2.3/1, Error ellipse: s-maj=80.0km s-min=55.0km az=143.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.16**	**293**	*i*	P		Pn	04 52 38.8	-4.5
LBTB				*i*	S		Sg	04 53 32.3	-1.6
BOSA	**Boshof**	**3.93**	**233**		Pn		Pn	04 52 53.1	-0.7
	0.1nm,0.3s,baz=58,slow=14,SNR=1.6								
BOSA					Pg		Pg	04 53 05.1	-2.4
	0.6nm,0.3s,baz=56,slow=17,SNR=11								
BOSA					Lg		Lg	04 53 56.3	
	1.2nm,0.3s,baz=158,slow=22,SNR=8.3								
	2.2nm,0.9s								
BOSA	**Boshof**	**3.93**	**233**	*i*	P		Pn	04 52 48.5	-5.3
BOSA				*i*	S		Sg	04 53 57.3	-1.1
I47ZA	**BOSHOF INFRASO**	**3.95**	**233**		I		I	05 17 50.0	
	baz=54,slow=319,SNR=1.0								
I35NA	**TSUMEB INFRASO**	**12.53**	**302**		I		I	06 07 10.0	
	baz=127,slow=316,SNR=2.8								

IDC 28 05:00:04.1±6.1, 43°52N×105°71E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=60.8km s-min=35.2km az=130.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I34MN	**SONGINO INFRAS**	**4.31**	**6**		I		I	05 27 10.0	
	0.1nm,0.8s,baz=180,slow=330,SNR=2.3								
SONM	**Songino Array**	**4.34**	**6**		Pn		Pn	05 01 12.3	+0.9
	0.2nm,0.3s,baz=192,slow=13,SNR=2.4								
SONM					Pg		Pb	05 01 23.5	+2.2
	0.2nm,0.3s,baz=194,slow=18,SNR=3.9								
SONM					Lg		Lg	05 02 21.4	
	0.3nm,0.3s,baz=189,slow=30,SNR=10								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**16.83**	**289**		Pn		Pn	05 04 00.0	-1.0
	baz=106,slow=11,SNR=2.8								
	0.3nm,0.7s								

*BJI **28** 05:10:05.3,26°.89N×130°.03E,h8km,mB4.6/19,mb4.4/54, Ms4.2/38,Ms7 3.9/38*

*IDC **28** 05:10:05.0±0.6,26°.86N×130°.05E,h0km,mb4.2/24, mbtmp4.1/29,ML3.7/5,MS3.6/36,Error ellipse: s-maj=16.7km s-min=12.4km az=82.0*

*NIED **28** 05:10:07.6,26°.84N×130°.11E,h57km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-6.52; Mθθ1.99; Mφφ4.53; Mrθ3.25; Mθφ2.49; Mφr1.64; Fault plane solution: M₀7.24000×10¹⁵ NP1:φ₁20.00000°, δ33.00000°,λ-112.00000°. NP2:φ₂225.00000°, δ60.00000°,λ-76.00000°.*

*NEIC **28** 05:10:07.5±1.2,26°.81N±0°.04×130°.07E±0°.05,h10km±1km, mb4.7/41 Error ellipse: s-maj=10.0km s-min=3.8km az=51.0*

*JMA **28** 05:10:07.6±0.1,26°.8N±0°.4×130°.1E±0°.4,h57km,MD4.6/24, MV4.3/24,NEAR AMAMI-OSHIMA ISLAND*

ISC 28 05:10:06.2±1.3, 26°87N±0°03×130°09E±0°03, h8km±7km, n157,σ1i50/162, mb4.6/58, MS3.8/42, 2C-1D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.36**	**312**		P		**Pn**	**05 10 31.4**	**-0.2**
JTK					A		A	05 10 31.4	
	comp=N,4.0nm,3.3s,comp=E,4.0nm,3.1s								
JTK					S		**Sb**	**05 10 48.0**	**-1.6**
JKDJ	**Kitadaitoujima**	**1.42**	**130**		P		**Pn**	**05 10 31.0**	**-1.3**
JKDJ					A		A	05 10 31.0	
	comp=N,27nm,2.8s,comp=E,30nm,3.3s								
JKDJ					*eS*		**Sb**	**05 10 48.6**	**-2.6**
JOKE	**Okinoerabujima**	**1.44**	**290**		*i* P		**Pn**	**05 10 32.5**	**-0.1**
JOKE					*eS*		**Sb**	**05 10 50.1**	**-1.6**
JZK	**Kikaishima**	**1.44**	**356**		P		**Pn**	**05 10 33.0**	**+0.4**
JMZ	**Minamidaito 2**	**1.46**	**135**				**Pn**	**05 10 31.8**	**-1.1**
JMZ	**Minamidaito 2**	**1.46**	**135**		P		**Pn**	**05 10 31.5**	**-1.4**
JMZ					A		A	05 10 31.5	
	comp=N,27nm,2.8s,comp=E,23nm,3.1s								
JMZ					S		**Sb**	**05 10 48.6**	**-3.8**
JYRO	**Yoronjima**	**1.47**	**276**		*i* P		**Pn**	**05 10 32.5**	**-0.5**
JYRO					*eS*		**Sn**	**05 10 51.3**	**-1.1**
JAMN	**Amaminishikomi**	**1.59**	**330**		*i* P		**Pn**	**05 10 34.3**	**-0.4**
JAMN					S		**Sn**	**05 10 53.7**	**-1.7**
JAM	**Amami Oshima**	**1.59**	**345**		P		**Pn**	**05 10 34.6**	**-0.2**
JAM					*eS*		**Sn**	**05 10 53.5**	**-2.1**
JOW	**Kunigami**	**1.62**	**269**		Pn		**Pn**	**05 10 34.8**	**-0.3**
	comp=E,572nm,0.3s,baz=111,slow=25,SNR=244								
JOW					Sn		**Sn**	**05 10 53.6**	**-2.5**
	comp=E,211nm,0.3s,baz=95,slow=19,SNR=8.1								
JOW					LR		LR	05 11 15.7	
	comp=E,1μm,21.9s,baz=194,slow=45								
JOW	**Kunigami**	**1.62**	**269**				**Pn**	**05 10 34.1**	**-1.0**
JOW	**Kunigami**	**1.62**	**269**		P		**Pn**	**05 10 34.8**	**-0.3**
JOW					A		A	05 10 34.8	
	comp=N,9.0nm,1.1s,comp=E,5.0nm,1.4s								
JOW					*eS*		**Sn**	**05 10 54.7**	**-1.4**
JNTH	**Nagotoyohara**	**1.88**	**260**		*i* P		**Pn**	**05 10 38.0**	**-0.7**
JNTH					*eS*		**Sn**	**05 10 59.1**	**-3.5**
JIH	**Iheya**	**1.90**	**275**		*i* P		**Pn**	**05 10 38.8**	**-0.2**
JIH					S		**Sn**	**05 11 01.8**	**-1.3**
JJT3	**Tamagusuku3**	**2.19**	**251**		P		**Pn**	**05 10 42.7**	**-0.2**
JJT3					S		**Sn**	**05 11 08.3**	**-1.8**
JTAJ	**Takarajima**	**2.41**	**341**		P		**Sn**	**05 10 45.3**	**-0.6**
JTAJ					*eS*		**Sn**	**05 11 11.4**	**-4.2**
JAGN	**Aguni-jima**	**2.56**	**264**		P		**Pn**	**05 10 47.6**	**-0.4**
JAGN					S		**Sn**	**05 11 16.9**	**-2.4**
JNN	**Nakanoshima**	**2.97**	**356**		P		**Pn**	**05 10 53.7**	**+0.1**
JNN					*eS*		**Sn**	**05 11 26.9**	**-2.5**
JKE	**Kume jima 2**	**3.00**	**260**		P		**Pn**	**05 10 53.1**	**-1.1**
JKE					*eS*		**Sn**	**05 11 27.9**	**-2.4**
JYAK	**Yakushimahirau**	**3.38**	**6**		P		**Pn**	**05 10 58.8**	**-0.4**
JYAK					S		**Sn**	**05 11 36.1**	**-3.4**
JMTN	**Minamitane**	**3.59**	**11**	*eP*			**Pn**	**05 11 01.5**	**-0.6**
JMTN					*eS*		**Sn**	**05 11 41.7**	**-3.1**
JTN	**Tanegashima 3**	**3.85**	**12**		S		**Sn**	**05 11 48.6**	**-2.7**
JSU	**Suzuyama**	**4.63**	**4**		Pn		**Pn**	**05 11 17.1**	**+0.6**
JNU	**Nakatsue**	**6.27**	**6**		Pn		**Pn**	**05 11 39.8**	**+0.7**
	comp=E,5.2nm,0.3s,baz=178,slow=6.5,SNR=20								
JNU					Sn		**Sn**	**05 12 47.2**	**-3.7**
	comp=E,1.5nm,0.3s,baz=84,slow=21,SNR=1.1								
	comp=E,37nm,0.6s								
JMN	**Monobe**	**7.58**	**25**		Pn		**Pn**	**05 11 56.8**	**-0.2**
NACB	**Ninganchiao**	**8.13**	**253**		Pn		Pn	05 12 01.4	-3.1
YHNB	**Yeheng**	**8.15**	**256**		Pn		**Pn**	**05 12 06.6**	**+1.6**
TPUB	**Ta-pu**	**9.28**	**250**		Pn		**Pn**	**05 12 19.3**	**-1.1**
JGF	**Kuroka**	**10.70**	**34**		Pn		**Pn**	**05 12 42.3**	**+2.5**
KSRS	**Korea Array**	**10.71**	**351**		Pn		**Pn**	**05 12 41.0**	**+1.0**
	comp=E,0.2nm,0.3s,baz=166,slow=14,SNR=17								
KSRS					LR		LR	05 17 17.5	
	comp=E,207nm,19.5s,baz=180,slow=40								
	comp=E,7.3nm,1.0s								
JCJ	**Chichijima**	**10.79**	**86**		LR		LR	05 15 48.6	
	comp=E,213nm,22.0s,baz=57,slow=32								
NJ2	**Nanjing**	**11.06**	**300**	*eP*			**Pn**	**05 12 46.3**	**+1.5**
NJ2					pmax		pmax		
	comp=E,11nm,0.8s								
NJ2					pmax		pmax		
	comp=E,290nm,3.8s								
NJ2					LR		LR		
	comp=E,450nm,12.8s								
NJ2					LR		LR		
	comp=E,650nm,11.8s								
NJ2					LR		LR		
	comp=E,620nm,14.2s								
MJAR	**Matsushiro Arr**	**11.86**	**34**		Pn		**Pn**	**05 12 56.5**	**+0.8**
	comp=E,0.1nm,0.3s,baz=204,slow=14,SNR=1.7								
	comp=E,1.1nm,0.6s								
DL2	**Dalian**	**13.94**	**332**	*eP*			**Pn**	**05 13 22.3**	**-1.7**
DL2				*eS*			**Sn**	**05 15 54.3**	**-4.7**
DL2					pmax		pmax		
	comp=E,18nm,0.8s								
DL2					pmax		pmax		
	comp=E,250nm,4.9s								
DL2					LR		LR		
	comp=E,510nm,15.9s								
DL2					LR		LR		
	comp=E,470nm,16.6s								
DL2					LR		LR		
	comp=E,400nm,14.9s								
TIA	**Tai'an**	**14.44**	**313**		P		**P**	**05 13 38.0**	**+0.1**
TIA					pmax		pmax		
	comp=Z,22nm,0.8s								
TIA					LR		LR		
	comp=N,430nm,12.7s								
TIA					LR		LR		
	comp=E,440nm,14.7s								
TIA					LR		LR		
	comp=Z,740nm,13.9s								
HNS	**HongShan**	**16.71**	**313**	⇑	P		**Pn**	**05 14 01.8**	**+1.1**
HNS					S		**Sn**	**05 17 03.3**	**-3.1**
HNS					pmax		pmax		
	comp=Z,74nm,1.1s								
HNS					LR		LR		
	comp=Z,320nm,12.4s								
HNS					LR		LR		
	comp=Z,380nm,15.3s								
HNS					LR		LR		
	comp=Z,510nm,14.7s								
LYN	**LuoYang**	**16.96**	**301**		P		**Pn**	**05 14 04.8**	**+0.9**
LYN					sP		pwP	05 14 13.0	-1.0
LYN					pmax		pmax		
	comp=Z,110nm,1.1s								
LYN					pmax		pmax		
	comp=Z,200nm,8.4s								
LYN					LR		LR		
	comp=Z,420nm,13.4s								
LYN					LR		LR		
	comp=Z,540nm,13.4s								
LYN					LR		LR		
	comp=Z,700nm,12.7s								
CN2	**Changchun**	**17.31**	**349**		P		**P**	**05 14 10.8**	**+1.2**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.7s								
CN2					LR		LR		
	comp=Z,300nm,14.0s								
USRK	**Ussuriysk Ar.**	**17.36**	**5**		P		**Pn**	**05 14 08.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=182,slow=9.9,SNR=8.7								
	comp=Z,6.7nm,0.9s								
BJI2	**Beijing**	**17.49**	**322**		P		**P**	**05 14 13.8**	**+2.2**
BJI2					pP		**pwP**	**05 14 17.0**	**-2.7**
BJI2					pmax		pmax		
	comp=Z,27nm,0.8s								
BJT	**Baijiatuan**	**17.49**	**322**				**P**	**05 14 13.2**	**+1.6**
BJT					IAmb		IAmb	05 14 14.8	
	comp=Z,44nm,0.9s								
ENH	**Enshi**	**18.41**	**285**		P		**Pn**	**05 14 22.1**	**+0.2**
BNX	**BinXian**	**18.95**	**354**	⇑	P		**Pn**	**05 14 29.8**	**+1.4**
BNX					pmax		pmax		
	comp=Z,5.0nm,1.1s								
GUMO	**Guam**	**19.13**	**131**		LR		LR	05 20 13.1	
	comp=Z,138nm,20.5s,baz=346,slow=32								
XAN	**Xi'an**	**19.58**	**297**		P		**P**	**05 14 34.8**	**+0.1**
XAN					S		**Sn**	**05 18 15.0**	**-1.0**
XAN					pmax		pmax		
	comp=Z,25nm,0.9s								
XAN					LR		LR		
	comp=Z,510nm,16.5s								
XAN					LR		LR		
	comp=Z,500nm,20.6s								
XAN					LR		LR		
	comp=Z,390nm,18.6s								
ASAJ	**Asahikawa**	**19.96**	**27**		P		**P**	**05 14 40.2**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=249,slow=15,SNR=3.9								
ASAJ					LR		LR	05 22 21.0	
	comp=Z,100nm,19.6s,baz=340,slow=37								
	comp=Z,2.4nm,0.6s								
QIZ	**Qiongzhong**	**20.19**	**252**		P		**P**	**05 14 41.8**	**+0.3**
QIZ					S		**S**	**05 18 28.8**	**+0.4**
QIZ					LR		LR		
	comp=Z,170nm,9.8s								
QIZ					LR		LR		
	comp=Z,170nm,7.9s								
QIZ					LR		LR		
	comp=Z,170nm,12.5s								
XLT	**XiLinHaoTe**	**20.42**	**330**	*eP*			**P**	**05 14 43.3**	**-0.6**
XLT					pP		Pn	05 14 47.0	+1.0
XLT					S		**S**	**05 18 29.3**	**-3.5**
XLT					pmax		pmax		
	comp=Z,12nm,1.0s								
XLT					pmax		pmax		
	comp=Z,140nm,5.1s								
XLT					LR		LR		
	comp=Z,270nm,20.8s								
XLT					LR		LR		
	comp=Z,160nm,14.6s								
HHC	**Hu-ho-hao-te**	**20.70**	**317**	*eP*			Pn	05 14 50.0	+0.7
HHC					pmax		pmax		
	comp=Z,5.0nm,0.6s								
HHC					pmax		pmax		
	comp=Z,82nm,3.6s								
HHC					LR		LR		
	comp=Z,120nm,11.9s								
HHC					LR		LR		
	comp=Z,180nm,12.0s								
HHC					LR		LR		
	comp=Z,220nm,13.7s								
GYA	**Guiyang**	**20.93**	**274**		P		**P**	**05 14 50.5**	**+0.9**
GYA					LR		LR		
	comp=Z,580nm,12.7s								
BTO2	**Baotou**	**21.69**	**315**	*eP*			**P**	**05 14 59.5**	**+1.8**
BTO2					pmax		pmax		
	comp=Z,34nm,0.9s								
BTO2					pmax		pmax		
	comp=Z,240nm,3.9s								
BTO2					LR		LR		
	comp=Z,490nm,16.1s								
BTO2					LR		LR		
	comp=Z,370nm,10.4s								
BTO2					LR		LR		
	comp=Z,480nm,15.5s								
KLR	**Kul'dur**	**22.36**	**3**		LR		LR	05 24 15.5	
	comp=Z,78nm,18.5s,baz=194,slow=38								
YSS	**Yuzhno-Sakhali**	**22.41**	**23**		P		**P**	**05 15 06.3**	**+1.2**
HEH	**HeiHe**	**23.44**	**356**	*eP*			**P**	**05 15 18.0**	**+2.2**
HEH					pmax		pmax		
	comp=Z,10.0nm,0.7s								
HILR	**Hailar Array B**	**24.02**	**343**		P		**P**	**05 15 21.9**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=153,slow=13,SNR=1.8								
	comp=Z,1.3nm,0.5s								
LZH	**Lanzhou**	**24.13**	**299**	*eP*			**P**	**05 15 24.0**	**+1.1**
LZH					sP		pwP	05 15 30.3	-0.7
LZH					S		**S**	**05 19 38.8**	**-2.3**
LZH					pmax		pmax		
	comp=Z,14nm,1.6s								
LZH					LR		LR		
	comp=Z,340nm,12.0s								
LZH					LR		LR		
	comp=Z,290nm,11.7s								
LZH					LR		LR		
	comp=Z,360nm,12.0s								
LZDM	**Lanzhou Array**	**24.22**	**298**		P		**P**	**05 15 23.1**	**-0.8**
	comp=Z,1.5nm,0.3s,baz=126,slow=12,SNR=3.8								
LZDM					LR		LR	05 26 33.6	
	comp=Z,104nm,18.1s,baz=35,slow=41								
	comp=Z,1.5nm,0.3s								
KMI2	**Kunming**	**24.61**	**272**		P		**P**	**05 15 29.5**	**+2.0**
KMI2					S		**S**	**05 19 48.5**	**-0.6**
KMI2					pmax		pmax		
	comp=Z,20nm,0.7s								
KMI2					LR		LR		
	comp=Z,300nm,12.2s								
KMI2					LR		LR		
	comp=Z,410nm,15.1s								
KMI2					LR		LR		
	comp=Z,430nm,14.0s								
PZH	**PanZhiHua**	**25

comp=Z,150nm,19.9s
EVN Everest 38.28 282 P P 05 17 28.0 0.0
MKAR Makanchi Array 42.36 311 P P 05 18 00.2 -0.7
comp=Z,1.5nm,0.7s,baz=102,slow=7.8,SNR=16
MKAR LR LR 05 36 42.5
comp=Z,64nm,18.4s,baz=99,slow=38
comp=Z,1.5nm,0.7s
MKAR Makanchi Array 42.36 311 P 05 18 02.2 +1.3
COEN Coen 42.53 161 P 05 18 03.0 +0.5
COEN IAmb IAmb 05 18 04.8
comp=Z,15nm,1.2s
ZALV Zalesovo Beam 42.76 322 P P 05 18 02.7 -1.2
comp=Z,0.8nm,0.4s,baz=96,slow=6.1,SNR=3.8
ZALV PcP **PcP 05 19 54.8 -0.6**
comp=Z,0.9nm,0.6s,baz=64,slow=3.4,SNR=3.6
ZALV LR LR 05 37 40.7
comp=Z,56nm,18.6s,baz=104,slow=39
comp=Z,0.8nm,0.4s
TIXI Tiksi 44.82 359 LR LR 05 37 44.0
comp=Z,66nm,19.3s,baz=170,slow=37
FITZ Fitzroy Crossi 44.91 186 P P 05 18 20.3 -1.3
comp=Z,8.3nm,0.9s,baz=342,slow=6.4,SNR=4.0
comp=Z,8.3nm,0.9s
KURK Kurchatov 45.51 316 P P 05 18 27.2 +1.1
KURBB Kurchatov Arra 45.55 316 P P 05 18 25.4 -1.0
comp=Z,1.9nm,0.9s,baz=102,slow=8.8,SNR=5.3
KURBB LR LR 05 39 47.2
comp=Z,140nm,18.8s,baz=170,slow=39
NRN Naryn 46.34 303 P P 05 18 35.8 +2.6
WB0 Warramunga Arr 46.55 174 P 05 18 34.1 -0.5
WRA Warramunga Arr 46.72 174 P P 05 18 35.6 -0.2
comp=Z,11nm,0.7s,baz=354,slow=8.5,SNR=81
comp=Z,11nm,0.7s
WRA Warramunga Arr 46.72 174 P 05 18 35.5 -0.3
NIL Nilore 49.04 292 P 05 18 54.5 +0.6
NIL IAmb IAmb 05 18 58.1
comp=Z,7.4nm,0.8s
PSA00 Pilbara Seismi 49.17 193 P 05 18 54.3 -0.5
CTAO Charters Tower 49.24 160 P 05 18 55.8 +0.4
AS31 Alice Springs 50.37 175 P 05 19 04.1 +0.1
ASAR Alice Springs 50.38 175 P P 05 19 04.1 +0.1
comp=Z,7.6nm,0.8s,baz=7.9,slow=11,SNR=80
comp=Z,7.6nm,0.8s
KK31 Karatay Array 50.40 305 P P 05 19 04.2 +0.1
KKAR Karatay Array 50.40 305 P P 05 19 04.5 +0.3
PALK Pallekele 50.70 257 LR LR 05 41 46.8
comp=Z,34nm,18.4s,baz=54,slow=38
GAR Garm 50.79 300 P P 05 19 08.0 +0.8
GAR IAmb IAmb 05 19 20.0
comp=Z,23nm,1.5s
BVAR Borovoye Array 50.91 318 P P 05 19 07.8 -0.1
comp=Z,1.3nm,0.6s,baz=79,slow=7.7,SNR=8.4
BVAR LR LR 05 43 10.6
comp=Z,207nm,19.2s,baz=96,slow=39
comp=Z,1.3nm,0.6s
BORK Borovoye 50.96 318 P 05 19 08.9 +0.8
CHGR Chuyangaron 51.72 299 P P 05 19 14.4 +0.2
CHGR IAmb IAmb 05 19 33.9
comp=Z,18nm,1.4s
KBL Kabul 52.36 294 P P 05 19 19.7 +0.5
SHAA Shahritus 52.66 298 P P 05 19 21.4 +0.2
SHAA IAmb IAmb 05 19 37.4
comp=Z,31nm,1.2s
TNA Tin City 54.31 27 P 05 19 34.0 +1.2
TNA IAmb IAmb 05 19 46.1
comp=Z,8.4nm,1.1s
ANM Nome 55.16 28 P 05 19 40.2 +1.3
ANM IAmb IAmb 05 19 52.4
comp=Z,10nm,1.3s
F15K North Star Dit 55.67 27 P 05 19 43.7 +1.0
F15K IAmb IAmb 05 19 56.1
comp=Z,10nm,1.0s
EIDS Eidsvold 55.74 157 P 05 19 43.6 +0.1
L14K Kuka Creek 55.91 32 P P 05 19 45.5 +1.1
L14K IAmb IAmb 05 19 58.5
comp=Z,7.4nm,0.9s
J16K Anvik River 57.07 30 P P 05 19 53.7 +1.1
J16K IAmb IAmb 05 21 56.5
comp=Z,20nm,2.0s
F17K Baldwin Pennin 57.16 26 P P 05 19 54.0 +0.8
F17K IAmb IAmb 05 20 06.6
comp=Z,4.8nm,0.8s
O15K Ungalikthiuk R 57.18 35 P P 05 19 53.9 +0.5
O15K IAmb IAmb 05 20 24.0
comp=Z,16nm,1.6s
MORW Morawa 57.23 195 P P 05 19 54.2 +0.2
ABKAR Akbulak array 57.42 313 P 05 19 55.9 +0.5
C18K Utukok River 57.52 24 P 05 19 56.2 +0.4
C18K IAmb IAmb 05 20 08.7
comp=Z,14nm,1.4s
AKTO Aktyubinsk 58.57 315 LR LR 05 46 28.1
comp=Z,65nm,19.8s,baz=73,slow=37
E19K Redstone River 58.85 25 P 05 20 06.1 +1.0
E19K IAmb IAmb 05 20 18.1
comp=Z,4.4nm,0.8s
STKA Stephens Creek 59.44 169 P P 05 20 09.6 +0.1
comp=Z,2.9nm,0.6s,baz=328,slow=6.5,SNR=6.0
STKA LR LR 05 45 11.3
comp=Z,58nm,20.0s,baz=210,slow=35
comp=Z,2.9nm,0.6s
DZM Mont Dzumac 60.05 141 *e*LR LR 05 37 52.5
comp=Z,114nm,25.4s
DZM Mont Dzumac 60.05 141 LR LR 05 46 15.2
comp=Z,44nm,18.1s,baz=300,slow=36
H22K Ishtalitna Cre 61.13 27 P P 05 20 22.0 +1.2
H22K IAmb IAmb 05 20 34.6
comp=Z,7.9nm,1.0s
D23K Nanushuk River 61.35 24 P 05 20 23.2 +1.0
KIRV Kirov 62.69 324 LR LR 05 50 36.4
comp=Z,94nm,18.5s,baz=86,slow=39
ILAR Eielson Aray 63.09 28 P P 05 20 33.1 -0.8
comp=Z,0.6nm,0.9s,baz=266,slow=5.5,SNR=8.2
comp=Z,0.6nm,0.9s
G30M tAoh Zraii Nji 67.00 25 P P 05 20 59.4 0.0
G30M IAmb IAmb 05 21 12.1
comp=Z,7.8nm,1.1s
L29M L29M 67.19 30 P P 05 21 01.8 +1.2
L29M IAmb IAmb 05 21 14.5
comp=Z,8.7nm,1.2s
SPITS Spitsbergen Ar 68.54 348 P P 05 21 08.5 -0.4
comp=Z,2.4nm,0.8s,baz=15,slow=12,SNR=4.5
comp=Z,2.4nm,0.8s
ARCES ARCESS Array B 70.02 339 LR LR 05 56 06.5
comp=Z,19nm,18.2s,baz=97,slow=39
KBZ Khabaz 70.04 310 P P 05 21 18.5 -0.1
comp=Z,1.8nm,0.9s,baz=93,slow=7.1,SNR=4.8
KBZ LR LR 05 55 32.7
comp=Z,54nm,18.6s,baz=73,slow=39
comp=Z,1.8nm,0.9s
NOR Nord 70.44 355 *i* P **P 05 21 20.4 -0.1**
NOR IAmb IAmb 05 21 21.1
comp=Z,4.4nm,1.0s
FINES FINESS Array B 73.12 331 P P 05 21 37.2 +0.3
comp=Z,2.9nm,0.9s,baz=73,slow=6.6,SNR=6.1
FINES LR LR 05 57 25.9
comp=Z,73nm,18.1s,baz=65,slow=39
comp=Z,2.9nm,0.9s
RAO Raoul Island 74.81 134 LR LR 05 48 16.7
comp=Z,101nm,21.0s,baz=117,slow=31
DAG Danmarks Havn 74.83 353 *i* P **P 05 21 46.4 -0.3**
DAG IAmb IAmb 05 21 47.5
comp=Z,2.5nm,0.7s
NEEM North Greenlan 75.92 0 *i* P **P 05 21 53.6 +0.3**
NEEM IAmb IAmb 05 21 54.2
comp=Z,4.4nm,0.7s
AKASG Malin Array Be 76.12 320 P P 05 21 53.9 -0.6
comp=Z,0.2nm,0.3s,baz=53,slow=6.5,SNR=5.9
AKASG LR LR 05 58 33.7
comp=Z,136nm,18.6s,baz=55,slow=38
comp=Z,0.2nm,0.3s
TULEG Thule 76.17 4 *i* P **P 05 21 54.2 -0.1**
TULEG IAmb IAmb 05 21 55.3
comp=Z,3.8nm,0.9s
DBG Daneborg 77.21 352 *i* P **P 05 22 00.0 -0.2**
YKA Yellowknife Ar 77.24 25 P P 05 22 00.2 -0.4
comp=Z,0.8nm,0.9s,baz=302,slow=6.3,SNR=11
comp=Z,0.8nm,0.9s
BRTR Keskin Array B 77.95 308 P P 05 22 05.3 0.0
comp=Z,2.5nm,1.0s,baz=120,slow=7.3,SNR=8.2
BRTR LR LR 06 01 58.5
comp=Z,43nm,19.7s,baz=108,slow=40
comp=Z,2.5nm,1.0s
ASF Jabal al Asfar 78.69 300 LR LR 06 02 13.0
comp=Z,28nm,18.0s,baz=26,slow=40
HFS Hagfors 79.02 333 P P 05 22 10.4 -0.2
comp=Z,2.7nm,0.8s,baz=202,slow=1.6,SNR=4.7
HFS LR LR 06 02 20.3
comp=Z,67nm,18.1s,baz=72,slow=40
comp=Z,2.7nm,0.8s
NB2 NORSAR Subarra 79.47 334 P P 05 22 12.7 -0.3
comp=Z,4.5nm,0.9s,baz=49,slow=5.1
NOA NORSAR Array B 79.47 334 P P 05 22 12.8 -0.3
comp=Z,2.4nm,0.9s,baz=49,slow=5.4,SNR=7.0
NOA LR LR 06 00 20.1
comp=Z,20nm,19.1s,baz=300,slow=38
comp=Z,2.4nm,0.9s
MMAI Mount Meron Ar 79.48 302 LR LR 06 03 28.7
comp=Z,38nm,18.2s,baz=50,slow=40
SUMG Summit 80.51 357 *i* P **P 05 22 19.0 +0.1**
SUMG IAmb IAmb 05 22 21.5
comp=Z,14nm,1.1s
EIL Elat 81.27 299 LR LR 06 03 11.0
comp=Z,51nm,19.3s,baz=52,slow=39
MODS Modra-Piesok 84.02 322 *e*P **P 05 22 41.4 +4.1**
CLL Collm 84.57 326 *i* P **P 05 22 40.9 +0.9**
comp=Z,8.0nm,1.1s
GERES GERESS Array B 85.68 324 P P 05 22 46.1 +0.4
comp=Z,0.5nm,0.6s,baz=22,slow=4.3,SNR=5.4
GERES LR LR 06 03 21.6
comp=Z,52nm,21.4s,baz=88,slow=37
comp=Z,0.5nm,0.6s
SFJD Kangerlussuaq 86.43 0 *i* P **P 05 22 48.6 -0.3**
SFJD IAmb IAmb 05 22 49.7
comp=Z,8.2nm,0.8s
NVAR Mina Array Bea 88.86 47 P P 05 23 02.7 +1.1
comp=Z,1.4nm,0.8s,baz=277,slow=4.3,SNR=8.8
comp=Z,1.4nm,0.8s
EKA Eskdalemuir Ar 88.90 335 P P 05 23 02.7 +1.7
comp=Z,1.9nm,0.9s,baz=50,slow=4.8,SNR=1.7
comp=Z,1.9nm,0.9s
BMRD Maredsous 89.21 328 *d*P **P 05 23 02.5 -0.1**
PPT Papeete 89.53 110 LR LR 06 00 07.2
comp=Z,39nm,18.9s,baz=288,slow=34
PPT2 Papeete2 89.54 110 *e*LR LR 05 51 28.0
comp=Z,58nm,24.5s
PDAR Pinedale Array 91.62 39 P P 05 23 15.0 +0.7
comp=Z,1.0nm,0.9s,baz=321,slow=2.1,SNR=7.7
comp=Z,1.0nm,0.9s
TBI Tubuai 92.35 115 *e*LR LR 05 52 49.7
comp=Z,453nm,34.5s

NEIC ***28*** *05:28:34.1±1.4, 18.°00N±0.°04×66.°737W±0.°008, h10km±1km, ML3.1/35, Md2.7/8(RSPR), Error ellipse: s-maj=6.0km s-min=2.4km az=357.0*
SDD ***28*** *05:28:34.6±1.0, 18.°19N×66.°79W, h12km±999km, MD3.2, ML2.8, MW3.2, Presumed earthquake*
RSPR ***28*** *05:28:34.2, 17.°98N×66.°76W, h13km, MD2.7/8*
ISC 28 05:28:33.8±0.8, 17.°99N±0.°06×66.°75W±0.°02, h16km±6km, n39, σ0°63/56, 10C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.12**	**265**			**Pg**	**05 28 37.6**	**+0.1**
GBPR						**Sg**	**05 28 40.1**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.12**	**265**	⇑*e*P		**Pg**	**05 28 37.6**	**+0.1**
GBPR				*e*S		**Sg**	**05 28 40.1**	**+0.2**
OBIP	**Obispado Ponce**	**0.15**	**68**			**Pg**	**05 28 37.9**	**+0.1**
OBIP	**Obispado Ponce**	**0.15**	**68**			**Sb**	**05 28 41.1**	**-0.1**
OBIP	**Obispado Ponce**	**0.15**	**68**	⇓*e*P		**Pb**	**05 28 38.1**	**-0.1**
OBIP				*e*S		**Sb**	**05 28 41.1**	**-0.1**
CELP	**Cerrillos**	**0.19**	**61**			**Pg**	**05 28 38.4**	**0.0**
CELP				IAML			05 28 42.6	
	5μm,0.2s							
CELP				IAML			05 28 42.6	
	5μm,0.3s							
UUPR	**Utuado, UPR, P**	**0.27**	**6**			**Pg**	**05 28 39.6**	**-0.1**
MLPR	**Magueyes Islan**	**0.28**	**267**			**Pg**	**05 28 39.6**	**-0.2**
MLPR				IAML			05 28 44.9	
	2μm,0.2s							
MLPR				IAML			05 28 45.0	
	2μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.34**	**274**			**Pg**	**05 28 40.9**	**-0.1**
CRPR						**Sg**	**05 28 45.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.34**	**274**	IAML			05 28 46.1	
	2μm,0.3s							
CRPR				IAML			05 28 47.0	
	1μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.34**	**274**	⇓*e*Pg		**Pg**	**05 28 40.9**	**-0.1**
CRPR				⇓*e*Sg		**Sg**	**05 28 45.8**	**0.0**
CRPR				IAML			05 28 46.0	
	comp=N,2μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.34**	**274**	⇓*e*P		**Pg**	**05 28 40.9**	**-0.1**
CRPR				*e*S		**Sg**	**05 28 45.6**	**-0.2**
LSP	**Las Mesas**	**0.37**	**301**			**Pg**	**05 28 41.4**	**0.0**
LSP						**Sb**	**05 28 47.3**	**-0.3**
LSP	**Las Mesas**	**0.37**	**301**	⇑*e*P		**Pg**	**05 28 41.4**	**0.0**
LSP				*e*S		**Sb**	**05 28 47.3**	**-0.3**
PRSN	**Puerto Rico Se**	**0.44**	**302**			**Pg**	**05 28 42.3**	**-0.4**
PRSN						**Sg**	**05 28 49.0**	**+0.3**
PRSN	**Puerto Rico Se**	**0.44**	**302**	IAML			05 28 50.3	
	comp=N,3μm,0.2s							
PRSN				IAML			05 28 51.6	
	comp=N,3μm,0.3s							
PRSN	**Puerto Rico Se**	**0.44**	**302**	⇑*e*Pg		**Pg**	**05 28 42.4**	**-0.4**
PRSN				⇑*e*Sg		**Sb**	**05 28 49.8**	**+0.2**
PRSN				IAML			05 28 51.7	
	comp=N,2μm,0.3s							
PRSN	**Puerto Rico Se**	**0.44**	**302**	⇑*e*P		**Pg**	**05 28 42.3**	**-0.4**
PRSN				*e*S		**Sg**	**05 28 49.0**	**+0.3**
ECPR	**Experimental S**	**0.50**	**48**			**Pg**	**05 28 43.5**	**-0.3**
ECPR				IAML			05 28 51.9	
	comp=N,2μm,0.2s							
ECPR				IAML			05 28 52.4	
	comp=N,2μm,0.2s							
ECPR	**Experimental S**	**0.50**	**48**	⇑*e*P		**Pg**	**05 28 43.8**	**+0.1**
ECPR				*e*S		**Sb**	**05 28 50.9**	**-0.3**
SJG	**San Juan**	**0.58**	**78**			**Pg**	**05 28 45.0**	**-0.5**
SJG	**San Juan**	**0.58**	**78**	⇑*e*Pg		**Pb**	**05 28 45.5**	**-0.2**
SJG				⇓*e*Sg		**Sb**	**05 28 53.9**	**+0.2**
AGPR	**Aguadilla, PR**	**0.59**	**324**			**Pg**	**05 28 45.1**	**-0.4**
AGPR				IAML			05 28 58.8	
	comp=N,556nm,0.3s							
PDPR	**Patillas Dam,**	**0.69**	**87**			**Pb**	**05 28 46.9**	**-0.6**
GCPR	**Guaynabo City**	**0.71**	**63**			**Pb**	**05 28 47.0**	**-0.8**
GCPR	**Guaynabo City**	**0.71**	**63**			**Sb**	**05 28 57.1**	**-0.3**
GCPR	**Guaynabo City**	**0.71**	**63**	⇑*e*P		**Pb**	**05 28 47.3**	**-0.5**
GCPR				*e*S		**Sb**	**05 28 57.1**	**-0.3**
IDE	**Isla Desecheo**	**0.80**	**300**			**Pb**	**05 28 48.4**	**-0.9**
IDE						**Sb**	**05 28 59.3**	**-0.5**
IDE	**Isla Desecheo**	**0.80**	**300**	⇑*e*P		**Pb**	**05 28 48.4**	**-0.9**
IDE				*e*S		**Sb**	**05 28 59.3**	**-0.5**
HUMP	**Col San Antoni**	**0.87**	**80**			**Pb**	**05 28 50.1**	**-0.5**
HUMP						**Sb**	**05 29 01.0**	**-1.0**
HUMP	**Col San Antoni**	**0.87**	**80**	IAML			05 29 02.7	
	comp=N,352nm,0.4s							
HUMP				IAML			05 29 07.1	
	comp=N,368nm,0.2s							
HUMP	**Col San Antoni**	**0.87**	**80**	⇑*e*P		**Pb**	**05 28 50.1**	**-0.5**
HUMP				*e*S		**Sb**	**05 29 01.0**	**-1.0**
CUPR	**Culebra, Puert**	**1.43**	**77**			**Pn**	**05 28 59.1**	**0.0**
HIDR	**Higuey Centro**	**1.96**	**288**	*e*Pg		**Pn**	**05 29 06.6**	**+0.2**
HIDR				⇓*e*Sg		**Sn**	**05 29 31.0**	**+0.3**
HIDR				IAML			05 29 44.7	
	comp=N,90nm,0.2s							
DR12	**Loma Pena Alta**	**2.62**	**288**			**Pn**	**05 29 16.9**	**+1.3**
HATOM	**Hato Mayor del**	**2.62**	**288**	*e*Pg		**Pb**	**05 29 18.6**	**-1.9**
HATOM				⇓*e*Sg		**Sn**	**05 29 49.3**	**+2.2**
HATOM				IAML			05 29 56.8	
	comp=N,33nm,1.1s							
BANI	**BANI**	**3.45**	**277**	Pn		**Pn**	**05 29 27.9**	**+0.8**
SDDR	**Presa de Saban**	**4.42**	**284**	Pn		**Pn**	**05 29 41.7**	**+1.4**
DSLB	**Salisbury**	**5.70**	**116**	*e*P		**Pn**	**05 29 57.6**	**-0.2**

IDC ***28*** *05:31:21.9±2.0, 26.°49N×129.°72E, h0km, mb3.5/3, mbtmp3.5/3, MS3.0/1, Error ellipse: s-maj=49.4km s-min=19.4km az=43.0*
JMA ***28*** *05:31:21.2±0.1, 26.°8N±0.°6×130.°1E±0.°5, h48km, MV3.2/17, NEAR AMAMI-OSHIMA ISLAND*
ISC 28 05:31:22.4±1.0, 26.°84N±0.°05×130.°10E±0.°04, h29km, n18, σ16°61/29, mb3.7/3, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.39**	**313**	P		**Pn**	**05 31 45.0**	**-0.8**
JTK				*e*S		**Sn**	**05 32 01.4**	**-1.8**
JKDJ	**Kitadaitoujima**	**1.39**	**129**	*e*P		**Pn**	**05 31 45.0**	**-0.8**
JKDJ				*e*S		**Sn**	**05 32 01.1**	**-2.1**
JMZ	**Minamidaito 2**	**1.43**	**135**	*e*P		**Pn**	**05 31 45.1**	**-1.3**
JMZ				*e*S		**Sn**	**05 32 02.0**	**-2.2**
JOKE	**Okinoerabujima**	**1.46**	**291**	P		**Pn**	**05 31 46.1**	**-0.7**
JOKE				*e*S		**Sn**	**05 32 02.9**	**-2.0**
JYRO	**Yoronjima**	**1.49**	**277**	*e*P		**Pn**	**05 31 45.9**	**-1.2**
JYRO				*e*S		**Sn**	**05 32 04.5**	**-1.1**
JAMN	**Amaminishikomi**	**1.62**	**330**	P		**Pn**	**05 31 47.9**	**-1.1**
JAMN				*e*S		**Sn**	**05 32 06.9**	**-1.9**
JAM	**Amami Oshima**	**1.62**	**344**	P		**Pn**	**05 31 48.2**	**-0.8**
JAM				*e*S		**Sn**	**05 32 06.9**	**-2.0**
JOW	**Kunigami**	**1.63**	**270**	Pn		**Pn**	**05 31 48.1**	**-1.1**
	69nm,0.3s,baz=112,slow=15,SNR=40							
JOW				Sn		**Sn**	**05 32 08.2**	**-1.1**
	75nm,0.3s,baz=135,slow=29,SNR=24							
JOW	**Kunigami**	**1.63**	**270**	P		**Pn**	**05 31 48.4**	**-0.8**
JOW				*e*S		**Sn**	**05 32 07.4**	**-1.8**
JNTH	**Nagotoyohara**	**1.89**	**261**	*e*P		**Pn**	**05 31 51.6**	**-1.1**
JNTH				*e*S		**Sn**	**05 32 13.0**	**-2.6**
JIH	**Iheya**	**1.92**	**276**	*e*P		**Pn**	**05 31 52.3**	**-0.7**
JIH				*e*S		**Sn**	**05 32 15.0**	**-1.2**
JJT3	**Tamagusuku3**	**2.19**	**252**	*e*S		**Sn**	**05 32 22.4**	**-0.6**
JAGN	**Aguni-jima**	**2.57**	**265**	*e*P		**Pn**	**05 32 01.5**	**-0.6**
JAGN				*e*S		**Sn**	**05 32 30.1**	**-2.2**
JKE	**Kume jima 2**	**3.02**	**261**	*e*P		**Pn**	**05 32 06.8**	**-1.3**
JAY	**Jayapura**	**30.93**	**159**	LR		LR	05 51 41.3	
	comp=Z,23nm,18.1s,baz=268,slow=40							
MKAR	**Makanchi Array**	**42.39**	**311**	P		**P**	**05 39 16.7**	**+2.5**
	0.3nm,0.9s,baz=87,slow=7.4,SNR=2.6							
	0.3nm,0.9s							
WRA	**Warramunga Arr**	**46.69**	**175**	P		**P**	**05 39 49.5**	**+0.8**
	0.9nm,0.6s,baz=355,slow=8.4,SNR=7.7							
	0.9nm,0.6s							
ASAR	**Alice Springs**	**50.35**	**175**	P		**P**	**05 40 18.9**	**+2.1**
	0.3nm,0.4s,baz=5.6,slow=14,SNR=12							
	0.3nm,0.4s							

NEIC ***28*** *05:49:34.2±1.1, 17.°78N±0.°03×66.°84W±0.°01, h10km±2km, ML3.2/39, Md3.1/6(RSPR), Error ellipse: s-maj=5.0km s-min=2.9km az=15.0*
RSPR ***28*** *05:49:34.9, 17.°84N×66.°86W, h3km, MD3.1/6*
OSPL ***28*** *05:49:35.2±0.4, 17.°78N×66.°86W, h2km±999km, ML2.9, Presumed earthquake*
SDD ***28*** *05:49:37.0±1.9, 17.°88N×66.°84W, h0km±11km, MD3.1, ML3.0, MW3.4, Presumed earthquake*
ISC 28 05:49:34.6±1.5, 17.°79N±0.°08×66.°84W±0.°02, h9km±9km, n44, σ0°56/61, 15C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.19**	**349**			**Pg**	**05 49 38.2**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.19**	**349**	⇓*e*P		**Pg**	**05 49 38.2**	**-0.3**
MLPR	**Magueyes Islan**	**0.26**	**312**			**Pg**	**05 49 39.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.33**	**310**			**Pg**	**05 49 40.9**	**-0.3**
CRPR						**Sg**	**05 49 45.9**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.33**	**310**	IAML			05 49 46.4	
	2μm,0.4s							
CRPR				IAML			05 49 46.6	
	4μm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.33**	**310**	⇑*i*P		**Pg**	**05 49 41.0**	**-0.2**
CRPR				⇑*i*S		**Sg**	**05 49 44.7**	**-1.0**
CRPR				IAML			05 49 46.5	
	comp=N,4μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.33**	**310**	⇑*e*P		**Pg**	**05 49 40.9**	**-0.3**
CRPR				*e*S		**Sg**	**05 49 45.9**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.33**	**310**	*i* P		**Pg**	**05 49 41.0**	**-0.3**
CRPR				*e*S		**Sg**	**05 49 45.6**	**-0.1**
CRPR				IAML			05 49 46.5	
	comp=Z,3μm,0.2s							
OBIP	**Obispado Ponce**	**0.34**	**42**			**Pg**	**05 49 41.5**	**+0.3**
OBIP						**Sg**	**05 49 46.5**	**+0.8**
OBIP	**Obispado Ponce**	**0.34**	**42**	IAML			05 49 48.4	
	comp=N,432nm,0.6s							
OBIP	**Obispado Ponce**	**0.34**	**42**	⇓*e*P		**Pg**	**05 49 41.5**	**+0.3**
OBIP				*e*S		**Sg**	**05 49 46.5**	**+0.8**
OBIP	**Obispado Ponce**	**0.34**	**42**	*i* P		**Pg**	**05 49 41.6**	**+0.3**
OBIP				*e*S		**Sg**	**05 49 46.4**	**+0.6**
OBIP				IAML			05 49 48.5	
	comp=Z,1μm,0.5s							
CELP	**Cerrillos**	**0.38**	**41**			**Pg**	**05 49 42.1**	**+0.1**
LSP	**Las Mesas**	**0.45**	**329**			**Pg**	**05 49 43.1**	**-0.3**
LSP						**Sg**	**05 49 50.0**	**+0.7**
LSP	**Las Mesas**	**0.45**	**329**	⇑*e*P		**Pg**	**05 49 43.1**	**-0.3**
LSP				*e*S		**Sg**	**05 49 50.0**	**+0.7**
UUPR	**Utuado, UPR, P**	**0.47**	**14**			**Pg**	**05 49 43.3**	**-0.5**
PRSN	**Puerto Rico Se**	**0.51**	**326**			**Pg**	**05 49 44.4**	**-0.2**
PRSN						**Sg**	**05 49 51.6**	**+0.3**
PRSN	**Puerto Rico Se**	**0.51**	**326**	IAML			05 49 53.8	
	comp=Z,3μm,0.5s							
PRSN				IAML			05 49 54.4	
	comp=Z,5μm,0.3s							
PRSN	**Puerto Rico Se**	**0.51**	**326**	⇑*i*P		**Pg**	**05 49 44.6**	**0.0**
PRSN				⇑*i*S		**Sg**	**05 49 50.9**	**-0.5**
PRSN				IAML			05 49 54.3	
	comp=N,3μm,0.3s							
PRSN	**Puerto Rico Se**	**0.51**	**326**	⇓*e*P		**Pg**	**05 49 44.4**	**-0.2**
PRSN				*e*S		**Sg**	**05 49 51.6**	**+0.3**
ECPR	**Experimental S**	**0.69**	**41**	Pg		**Pg**	**05 49 47.8**	**-0.3**
ECPR				IAML			05 49 58.7	
	comp=N,2μm,0.3s							
ECPR				IAML			05 49 59.1	
	comp=N,1μm,0.4s							
ECPR	**Experimental S**	**0.69**	**41**	⇓*e*P		**Pg**	**05 49 47.7**	**-0.3**
ECPR				*e*S		**Sb**	**05 49 57.6**	**-1.0**
AGPR	**Aguadilla, PR**	**0.72**	**339**			**Pg**	**05 49 47.5**	**-1.1**
AGPR				IAML			05 49 57.9	
	comp=N,2μm,0.6s							
AGPR				IAML			05 49 58.1	
	comp=N,1μm,0.4s							
SJG	**San Juan**	**0.73**	**64**			**Pg**	**05 49 48.5**	**-0.2**
SJG				IAML			05 50 04.7	
	comp=N,741nm,0.4s							
SJG				IAML			05 50 05.1	
	comp=N,795nm,0.4s							
SJG	**San Juan**	**0.73**	**64**	⇑*i*P		**Pg**	**05 49 48.9**	**+0.1**
SJG				⇑*i*S		**Sb**	**05 49 59.1**	**-0.5**
SJG	**San Juan**	**0.73**	**64**	*i* P		**Pg**	**05 49 48.8**	**+0.1**
SJG				IAML			05 50 03.8	
	comp=Z,535nm,0.5s							
PDPR	**Patillas Dam,**	**0.81**	**74**			**Pg**	**05 49 50.5**	**+0.3**
PDPR				IAML			05 50 06.4	
	comp=Z,697nm,0.8s							
IDE	**Isla Desecheo**	**0.84**	**315**			**Pg**	**05 49 50.0**	**-0.9**
IDE						**Sg**	**05 50 01.3**	**-0.6**
IDE	**Isla Desecheo**	**0.84**	**315**	⇑*e*P		**Pg**	**05 49 50.0**	**-0.9**
IDE				*e*S		**Sg**	**05 50 01.3**	**-0.6**
GCPR	**Guaynabo City**	**0.89**	**54**			**Pg**	**05 49 51.1**	**-0.6**
GCPR	**Guaynabo City**	**0.89**	**54**			**Sg**	**05 50 03.0**	**-0.2**
GCPR	**Guaynabo City**	**0.89**	**54**	⇑*e*P		**Pg**	**05 49 51.1**	**-0.6**
GCPR				*e*S		**Sg**	**05 50 03.0**	**-0.2**
HUMP	**Col San Antoni**	**1.00**	**70**			**Pg**	**05 49 53.5**	**-0.5**
HUMP						**Sg**	**05 50 06.4**	**-0.6**
HUMP	**Col San Antoni**	**1.00**	**70**	IAML			05 50 11.3	
	comp=Z,422nm,0.4s							
HUMP				IAML			05 50 11.6	
	comp=Z,600nm,0.9s							
HUMP	**Col San Antoni**	**1.00**	**70**	⇑*e*P		**Pg**	**05 49 53.5**	**-0.5**
HUMP				*e*S		**Sg**	**05 50 06.4**	**-0.6**
CUPR	**Culebra, Puert**	**1.57**	**71**			**Pn**	**05 50 02.6**	**0.0**
HIDR

az=55.0
*NNC **28** 05:50:19.1±5.2,35°.30N×71°.15E,h130km±34km,mb4.2, mpv4.6,Error ellipse: s-maj=45.8km s-min=30.2km az=44.0*

ISC 28 05:50:21.2±0.3,35°.36N±0°.04×71°.69E±0°.04,h100km,n191, σ28°20/182,mb4.3/68,14C-11D,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIL	**Nilore**	**2.14**	**142**		**Pn**	05 50 49.3	-6.3
NIL	**Nilore**	**2.14**	**142**	PN	**Pn**	05 50 49.3	-6.3
KBL	**Kabul**	**2.32**	**250**		**Pn**	**05 50 54.5**	**-3.7**
KBL				Sn	**Sn**	**05 51 24.8**	**-1.7**
KBL	**Kabul**	**2.32**	**250**	PN	**Pn**	**05 50 54.5**	**-3.7**
KBL						05 51 24.8	
SHAA	**Shahritus**	**3.62**	**308**		**Pn**	**05 51 12.7**	**-2.6**
SHAA				Sn	**Sn**	**05 51 58.2**	**+1.0**
GAR	**Garm**	**3.80**	**344**		**Pn**	**05 51 16.3**	**-1.4**
CHGR	**Chuyangaron**	**3.87**	**329**		**Pn**	**05 51 16.0**	**-2.6**
CHGR				Sn	**Sn**	**05 52 04.7**	**+1.6**
CHGR	**Chuyangaron**	**3.87**	**329**	PN	**Pn**	**05 51 16.0**	**-2.6**
CHGR						05 52 04.7	
DRK	**Karamyk**	**4.11**	**1**	Pn	**Pn**	**05 51 20.8**	**-1.4**
DRK	**Karamyk**	**4.11**	**1**	PN	**Pn**	**05 51 20.8**	**-1.4**
BTK	**Batken**	**4.74**	**352**		**Pn**	**05 51 29.4**	**-1.1**
BTK	**Batken**	**4.74**	**352**	PN	**Pn**	**05 51 29.4**	**-1.1**
KSH2	**Kashi**	**4.88**	**38**	Pn	**Pn**	**05 51 30.8**	**-1.6**
KSH2				Sn	**Sn**	**05 52 29.3**	**+1.5**
KSH2				smax	smax		
	comp=N,220nm,0.8s						
KSH2				smax	smax		
	comp=E,250nm,0.8s						
ARSB	**Arslanbob**	**6.04**	**9**		**Pn**	**05 51 45.9**	**-2.2**
ARSB	**Arslanbob**	**6.04**	**9**	PN	**Pn**	**05 51 45.9**	**-2.2**
UCH	**Uchtor**	**7.20**	**17**	P	**Pn**	**05 52 01.8**	**-2.4**
	SNR=39						
EKS2	**Erkin-Say**	**7.47**	**12**	P	**Pn**	**05 52 05.6**	**-1.9**
	SNR=21						
AAK	**Ala-Archa**	**7.59**	**16**	P	**Pn**	**05 52 07.1**	**-2.1**
	SNR=38						
AAK	**Ala-Archa**	**7.59**	**16**	Pn	**Pn**	**05 52 06.4**	**-2.8**
	comp=E,7.2nm,0.3s,baz=173,slow=5.9,SNR=56						
AAK				Sn	**Sn**	**05 53 29.1**	**-4.5**
	comp=E,0.9nm,0.3s,baz=236,slow=6.9,SNR=4.2						
	comp=E,26nm,0.4s						
AAK	**Ala-Archa**	**7.59**	**16**		**Pn**	**05 52 06.8**	**-2.3**
AAK	**Ala-Archa**	**7.59**	**16**	⇑P	**Pn**	**05 52 06.9**	**-2.3**
	comp=E,11nm,0.5s						
AAK				⇓S	**Sn**	**05 53 34.8**	**+1.3**
	comp=E,65nm,0.9s						
AAK	**Ala-Archa**	**7.59**	**16**	P	**Pn**	**05 52 06.8**	**-2.3**
KK31	**Karatay Array**	**7.79**	**354**		**Pn**	**05 52 09.2**	**-2.5**
KK31	**Karatay Array**	**7.79**	**354**	⇑P	**Pn**	**05 52 09.2**	**-2.5**
	comp=E,20nm,0.3s,baz=176,slow=12,SNR=369						
KK31				⇓S	**Sn**	**05 53 40.7**	**+2.5**
	comp=E,62nm,0.8s,baz=181,slow=22,SNR=5.5						
KK31	**Karatay Array**	**7.79**	**354**	P	**Pn**	**05 52 09.2**	**-2.5**
KKAR	**Karatay Array**	**7.79**	**354**		**Pn**	**05 52 08.5**	**-3.2**
KKAR	**Karatay Array**	**7.79**	**354**	P	**Pn**	**05 52 08.5**	**-3.2**
HRA	**Herat**	**7.83**	**266**		**Pn**	**05 52 11.4**	**-1.1**
BOOM	**Boomskoye usch**	**7.85**	**24**		**Pn**	**05 52 09.9**	**-2.8**
BOOM	**Boomskoye usch**	**7.85**	**24**	P	**Pn**	**05 52 09.9**	**-2.8**
TARG	**Taragay, Kyrgy**	**7.96**	**35**		**Pn**	**05 52 11.0**	**-3.4**
TARG	**Taragay, Kyrgy**	**7.96**	**35**	P	**Pn**	**05 52 11.0**	**-3.4**
CHMS	**Chumysh**	**7.99**	**16**	P	**Pn**	**05 52 13.3**	**-1.2**
	SNR=14						
KDJ	**Kajisay**	**8.00**	**31**		**Pn**	**05 52 12.6**	**-2.2**
KDJ	**Kajisay**	**8.00**	**31**	P	**Pn**	**05 52 12.6**	**-2.2**
TKM2	**Tokmak 2**	**8.14**	**21**	P	**Pn**	**05 52 14.0**	**-2.7**
	SNR=20						
USP	**Ospenovka**	**8.19**	**15**	P	**Pn**	**05 52 15.5**	**-1.7**
	SNR=11						
PRZ	**Przheval'sk**	**8.82**	**34**		**Pn**	**05 52 23.3**	**-2.7**
PRZ	**Przheval'sk**	**8.82**	**34**	P	**Pn**	**05 52 23.3**	**-2.7**
MAKZ	**Makanchi**	**13.80**	**31**		**Pn**	**05 53 28.3**	**-4.2**
MAKZ	**Makanchi**	**13.80**	**31**	P	**Pn**	**05 53 28.3**	**-4.2**
MK31	**Makanchi Array**	**13.93**	**32**	*de*P	**Pn**	**05 53 29.9**	**-4.1**
MKAR	**Makanchi Array**	**13.93**	**32**	Pn	**Pn**	**05 53 29.6**	**-4.5**
	comp=E,0.2nm,0.3s,baz=210,slow=12,SNR=58						
MKAR				LR	LR	05 58 48.0	
	comp=E,31nm,18.2s,baz=168,slow=37						
	comp=E,9.4nm,0.8s						
WMQ	**Urumqi**	**14.94**	**51**	*e*P	**P**	**05 53 47.3**	**-2.9**
KURBB	**Kurchatov Arra**	**16.04**	**16**	⇓P	**P**	**05 53 59.7**	**-2.6**
	comp=E,52nm,0.7s						
KURK	**Kurchatov**	**16.15**	**16**	P	**P**	**05 54 01.7**	**-1.8**
KURK				IAmb	IAmb	05 54 03.8	
	comp=Z,38nm,0.8s						
KURK	**Kurchatov**	**16.15**	**16**	⇓P	**P**	**05 54 00.7**	**-2.7**
	comp=Z,15nm,0.8s						
KURK	**Kurchatov**	**16.15**	**16**	P	**P**	**05 54 01.7**	**-1.8**
KURK				pmax	pmax		
	comp=Z,38nm,0.9s						
AB31	**Akbulak array**	**16.35**	**332**	P	**Pn**	**05 54 01.9**	**-2.7**
AB31				IAmb	IAmb	05 54 06.1	
	comp=Z,38nm,0.8s						
AB31	**Akbulak array**	**16.35**	**332**	⇑P	**Pn**	**05 54 01.3**	**-3.3**
	comp=Z,28nm,0.7s,baz=144,slow=12,SNR=256						
AB31				⇑S	**Sn**	**05 57 00.8**	**-4.9**
	comp=Z,4.7nm,0.5s,baz=148,slow=22,SNR=6.9						
ABKAR	**Akbulak array**	**16.35**	**332**		**Pn**	**05 54 01.6**	**-3.0**
BVA0	**Borovoye Array**	**17.69**	**357**	⇓P	**P**	**05 54 17.8**	**-2.6**
	comp=Z,7.1nm,1.1s						
BVAR	**Borovoye Array**	**17.69**	**357**	P	**P**	**05 54 18.3**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=153,slow=9.1,SNR=32						
BVAR				LR	LR	06 01 25.5	
	comp=Z,184nm,21.8s,baz=171,slow=38						
	comp=Z,6.9nm,0.5s						
BORK	**Borovoye**	**17.71**	**357**	P	**P**	**05 54 18.7**	**-2.0**
BORK	**Borovoye**	**17.71**	**357**	P	**P**	**05 54 18.7**	**-2.0**
BORK				pmax	pmax		
	comp=Z,12nm,0.7s						
AKTO	**Aktyubinsk**	**18.05**	**331**	P	**Pn**	**05 54 22.8**	**-2.5**
	comp=Z,2.3nm,0.3s,baz=146,slow=10,SNR=41						
AKTO				S	S	05 57 31.6	-14
	comp=Z,2.1nm,0.8s,baz=75,slow=23,SNR=1.5						
	comp=Z,53nm,1.1s						
AKTO	**Aktyubinsk**	**18.05**	**331**	⇑P	**P**	**05 54 20.4**	**-4.0**
	comp=Z,49nm,1.1s						
AKTO				⇓S	**S**	**05 57 37.1**	**-8.9**
	comp=Z,17nm,1.3s						
DGZ	**Jazzator, Alta**	**18.38**	**34**	*i* P	**P**	**05 54 26.1**	**-2.1**
DGZ				pmax	pmax		
	comp=Z,12nm,1.0s						
GOMU	**GeErMu**	**18.78**	**81**	P	**Pn**	**05 54 32.5**	**-2.0**
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HYB	**Hyderabad**	**18.89**	**159**	*e*P	**Pn**	**05 54 33.0**	**-2.5**
SHL	**Shillong**	**19.92**	**114**	P	**P**	**05 54 41.4**	**-3.8**
SHL				IAmb	IAmb	05 54 50.3	
	comp=Z,20nm,0.5s						
SHL	**Shillong**	**19.92**	**114**	P	**P**	**05 54 41.4**	**-3.8**
SHL				pmax	pmax		
	comp=Z,20nm,0.5s						
MAK	**Makhachkala**	**20.19**	**299**	*e*P	Pn	05 54 48.7	-1.8
MAK				*e**SP	pP	05 55 09.5	+1.5
MAK				*e*S	Sn	05 58 33.1	-4.8
MAK				*e**SS	sS	05 58 54.8	-6.5
MAK				pmax	pmax		
	comp=Z,200nm,1.2s						
MAK				MLR	MLR		
	comp=Z,129nm,11.0s						
ZAA0	**Zalesovo Array**	**20.74**	**22**	P	**P**	**05 54 52.3**	**-1.2**
ZAA0				IAmb	IAmb	05 55 04.2	
	comp=Z,29nm,0.8s						
ZAA0	**Zalesovo Array**	**20.74**	**22**	⇓P	**P**	**05 54 52.0**	**-1.6**
	comp=Z,31nm,1.1s						
ZALV	**Zalesovo Beam**	**20.74**	**22**	P	**P**	**05 54 52.7**	**-0.8**
	comp=Z,13nm,0.5s,baz=218,slow=9.4,SNR=64						
ZALV				LR	LR	06 03 06.7	
	comp=Z,63nm,20.2s,baz=330,slow=37						
	comp=Z,13nm,0.5s						
ZALV	**Zalesovo Beam**	**20.74**	**22**	P	Pn	05 54 52.9	-3.9
ZALV	**Zalesovo Beam**	**20.74**	**22**	P	Pn	05 54 52.9	-3.9
BRDH	**Bariadhala**	**21.49**	**121**	LR	LR	06 04 50.8	
	comp=Z,88nm,18.2s,baz=276,slow=41						
GNI	**Garni**	**21.80**	**291**	P	**P**	**05 55 06.3**	**+1.0**
	comp=Z,26nm,0.9s,baz=142,slow=4.6,SNR=6.6						
GNI	**Garni**	**21.80**	**291**	P	**P**	**05 55 06.1**	**+0.8**
GNI				IAmb	IAmb	05 55 19.9	
	comp=Z,30nm,0.8s						
GNI	**Garni**	**21.80**	**291**	*de*P	**P**	**05 55 07.3**	**+2.1**
GNI				pmax	pmax		
	comp=Z,21nm,0.8s						
GTA2	**Gaotai**	**22.63**	**71**	*e*P	**P**	**05 55 15.8**	**+1.9**
GTA2				pmax	pmax		
	comp=Z,11nm,1.3s						
SVE	**Sverdlovsk**	**22.74**	**344**	*e*P	**P**	**05 55 16.1**	**+1.5**
SVE				pmax	pmax		
	comp=N,21nm,1.2s						
ARTI	**Arti**	**22.90**	**341**	P	**P**	**05 55 16.1**	**-0.2**
ARTI				IAmb	IAmb	05 55 43.8	
	comp=Z,14nm,0.7s						
ARTI	**Arti**	**22.90**	**341**	*c* iP	**P**	**05 55 17.4**	**+1.2**
ARTI						05 55 42.5	
ARTI				S	**S**	**05 59 23.6**	**+5.4**
ARTI				SS	**SnSn**	**05 59 58.5**	**-2.3**
ARTI				pmax	pmax		
	comp=Z,19nm,1.2s						
KBZ	**Khabaz**	**23.64**	**299**	P	**P**	**05 55 25.6**	**+2.4**
	comp=Z,7.8nm,0.9s,baz=160,slow=7.2,SNR=11						
KBZ	**Khabaz**	**23.64**	**299**	*d* iP	**P**	**05 55 26.0**	**+2.8**
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEUR	**Neytrino**	**23.69**	**298**	*i* P	**P**	**05 55 25.3**	**+1.4**
NEUR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SHA1	**Shidzhatmaz**	**23.81**	**299**	*i* P	**P**	**05 55 27.2**	**+2.2**
KIV	**Kislovodsk**	**23.83**	**300**	*e*P	**P**	**05 55 27.1**	**+2.0**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,52nm,14.0s						
GURO	**Guroymak-BITLI**	**23.87**	**286**	P	**P**	**05 55 27.6**	**+2.1**
KNGR	**Kungurtug, Tuv**	**24.10**	**43**	*i* P	**P**	**05 55 27.4**	**-0.1**
KNGR				pmax	pmax		
	comp=Z,21nm,0.9s						
BELG	**Belogornoye**	**24.13**	**322**	*d* iP	**P**	**05 55 29.1**	**+1.6**
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MARD	**Mardin**	**24.93**	**284**	P	**P**	**05 55 37.6**	**+2.5**
MARD				IAmb	IAmb	05 55 40.6	
	comp=Z,14nm,1.3s						
RAYN	**Ar Rayn**	**25.59**	**250**	P	**P**	**05 55 41.6**	**+0.4**
RAYN				IAmb	IAmb	05 55 47.0	
	comp=Z,16nm,0.9s						
RAYN	**Ar Rayn**	**25.59**	**250**	P	**P**	**05 55 41.6**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,16nm,0.9s						
LZDM	**Lanzhou Array**	**25.95**	**79**	P	**P**	**05 55 44.6**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=261,slow=9.6,SNR=3.8						
	comp=Z,0.9nm,0.3s						
LZH	**Lanzhou**	**26.05**	**79**	*e*P	**P**	**05 55 44.3**	**-1.1**
LZH				pP	pP	05 55 49.8	-19
LZH				pmax	pmax		
	comp=Z,8.0nm,1.5s						
VRH	**Novokhopyorsk**	**26.71**	**316**	*e*P	P	05 55 59.5	+8.6
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	**PanZhiHua**	**27.16**	**101**	P	**P**	**05 55 58.3**	**+2.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZAK	**Zakamensk**	**27.34**	**47**	*e*P	**P**	**05 55 57.1**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KIRV	**Kirov**	**27.51**	**335**	LR	LR	06 08 03.9	
	comp=Z,82nm,18.6s,baz=106,slow=39						
KIRV	**Kirov**	**27.51**	**335**	*ce*P	**P**	**05 56 00.1**	**+2.2**
TLY	**Talaya**	**28.04**	**45**	P	**P**	**05 56 03.7**	**+0.9**
VSR	**Storozhevoye**	**28.19**	**314**	*e*P	P	05 56 07.5	+3.4
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**28.54**	**53**	P	**P**	**05 56 08.7**	**+1.2**
	comp=Z,2.0nm,0.9s,baz=254,slow=9.4,SNR=16						
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**28.54**	**53**	P	**P**	**05 56 07.3**	**-0.2**
LPSR	**Galich'ya Gora**	**28.86**	**317**	*e*P	P	05 56 12.8	+2.8
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ULN	**Ulaanbaatar**	**28.98**	**54**	*ce*P	**P**	**05 56 12.6**	**+1.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ULN	**Ulaanbaatar**	**28.98**	**54**	P	**P**	**05 56 12.7**	**+1.3**
	comp=Z,12nm,0.9s						
PALK	**Pallekele**	**29.15**	**161**	LR	LR	06 08 23.4	
	comp=Z,96nm,19.8s,baz=17,slow=38						
CHTO	**Chiang Mai**	**29.19**	**117**	P	**P**	**05 56 12.9**	**-0.4**
	comp=Z,6.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.42**	**118**	P	**P**	**05 56 15.6**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=299,slow=7.7,SNR=14						
	comp=Z,1.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.42**	**118**	P	**P**	**05 56 15.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**29.42**	**118**	P	**P**	**05 56 15.7**	**+0.3**
BRTR	**Keskin Array B**	**30.33**	**290**	P	**P**	**05 56 24.6**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=81,slow=8.0,SNR=6.1						
	comp=Z,1.6nm,0.7s						
XAN	**Xi'an**	**30.52**	**82**	P	**P**	**05 56 25.0**	**0.0**
XAN				pP	pP	05 56 39.5	-8.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN	**Obninsk**	**31.17**	**320**	*ce*P	P	05 56 34.2	+3.9
OBN				*e*		05 57 34.6	
OBN				pmax	pmax		
	comp=Z,65nm,2.5s						
OBN				MLR	MLR		
	comp=Z,64nm,16.0s						
HHC	**Hu-ho-hao-te**	**31.65**	**68**	*e*P	**P**	**05 56 35.8**	**+0.8**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,88nm,5.1s						
AKASG	**Malin Array Be**	**34.10**	**310**	P	**P**	**05 56 56.3**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=82,slow=6.9,SNR=6.8						
AKASG				LR	LR	06 13 37.9	
	comp=Z,50nm,18.4s,baz=112,slow=41						
	comp=Z,1.3nm,0.5s						
HNS	**HongShan**	**34.48**	**74**	⇑P	**P**	**05 57 00.5**	**+1.1**
HNS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MLR	**Muntele Rosu**	**35.84**	**301**	LR	LR	06 14 54.1	
	comp=Z,68nm,18.1s,baz=83,slow=41						
MLR	**Muntele Rosu**	**35.84**	**301**	P	**P**	**05 57 13.5**	**+2.3**
MLR	**Muntele Rosu**	**35.84**	**301**	P	**P**	**05 57 13.5**	**+2.3**
MLR				pmax	pmax		
	comp=Z,23nm,0.9s						
BURAR	**Bucovina Array**	**36.38**	**304**	P	**P**	**05 57 17.3**	**+1.5**
FINES	**FINESS Array B**	**38.74**	**327**	P	**P**	**05 57 36.5**	**+1.2**
	comp=Z,2.8nm,0.7s,baz=120,slow=9.3,SNR=12						
	comp=Z,2.8nm,0.7s						
NJ2	**Nanjing**	**39.09**	**81**	*e*P	**P**	**05 57 37.5**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PSI	**Prapat**	**41.07**	**136**	P	**P**	**05 57 56.9**	**+1.6**
PSI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RPSI	**Rantau Prapat**	**41.16**	**136**	P	**P**	**05 57 56.9**	**+1.0**
RPSI				IAmb	IAmb	05 57 59.2	
	comp=Z,9.4nm,1.1s						
MODS	**Modra-Piesok**	**41.71**	**305**	*e*P	P	05 58 03.6	+3.6
MODS	**Modra-Piesok**	**41.71**	**305**	*e*P	P	05 58 03.6	+3.6
ZST	**Bratislava**	**41.84**	**305**	*e*P	P	05 58 05.2	+4.2
ZST	**Bratislava**	**41.84**	**305**	*e*P	P	05 58 05.2	+4.2
ARCES	**ARCESS Array B**	**42.41**	**338**	P	**P**	**05 58 06.9**	**+1.5**
	comp=Z,1.8nm,0.4s,baz=121,slow=8.9,SNR=18						
ARCES				LR	LR	06 16 46.5	
	comp=Z,96nm,20.6s,baz=131,slow=38						
	comp=Z,1.8nm,0.4s						
ZEA	**Zeya**	**42.43**	**47**	*e*P	P	05 58 08.2	+2.4
HEH	**HeiHe**	**42.50**	**52**	*e*P	**P**	**05 58 08.5**	**+2.1**
HEH				pmax	pmax		
	comp=Z,15nm,1.0s						
MNSI	**Mandailing Nat**	**43.09**	**137**	P	**P**	**05 58 11.8**	**+0.3**
	comp=Z,5μmcomp=Z,19nm,1.0s						
GERES	**GERESS Array B**	**44.05**	**306**	P	**P**	**05 58 19.9**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=95,slow=7.8,SNR=4.1						
	comp=Z,0.6nm,0.7s						
HFS	**Hagfors**	**44.31**	**323**	P	**P**	**05 58 21.4**	**+0.6**
	comp=Z,5.9nm,0.7s,baz=93,slow=9.2,SNR=8.0						
HFS				LR	LR	06 20 05.2	
	comp=Z,63nm,20.7s,baz=69,slow=40						
	comp=Z,5.9nm,0.7s						
YAK	**Yakutsk**	**44.58**	**35**	LR	LR	06 16 01.5	
	comp=Z,19nm,20.9s,baz=273,slow=35						
YAK	**Yakutsk**	**44.58**	**35**	*e*P	**P**	**05 58 18.2**	**-4.6**
YAK				*e**PP	pP	05 58 32.9	-15
YAK				*e*		06 00 03.2	
YAK				*e*S	**S**	**06 04 50.1**	**-0.7**
YAK				*e**SS	sS	06 05 16.9	-16
YAK				*e*SS	**SS**	**06 08 13.7**	**+0.5**
YAK				*e*SSS	SSS	06 08 58.7	
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,71nm,4.6s						
YAK				pmax	pmax		
	comp=Z,143nm,5.1s						
YAK				pmax	pmax		
	comp=E,85nm,5.3s						
YAK				smax	smax		
	comp=E,109nm,5.4s						
YAK				smax	smax		
	comp=N,58nm,4.9s						
KSAR	**Wonju Array Be**	**44.70**	**70**	P	**P**	**05 58 25.4**	**+1.1**
KSAR	**Wonju Array Be**	**44.70**	**70**	P	**P**	**05 58 25.4**	**+1.1**
KSRS	**Korea Array**	**44.73**	**70**	P	**P**	**05 58 24.8**	**+0.4**
	comp=N,2.8nm,1.0s,baz=278,slow=6.2,SNR=6.7						
	comp=N,2.8nm,1.0s						
KLR	**Kul'dur**	**45.37**	**53**	*ce*P	**P**	**05 58 30.3**	**+0.9**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NC303	**NORSAR Array S**	**45.57**	**324**	P	**P**	**05 58 32.3**	**+1.5**
NB2	**NORSAR Subarra**	**45.63**	**324**	P	**P**	**05 58 31.7**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**45.63**	**324**	P	**P**	**05 58 31.8**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=96,slow=7.8,SNR=8.6						
NOA				LR	LR	06 20 36.6	
	comp=Z,31nm,20.6s,baz=95,slow=40						
	comp=Z,3.4nm,0.8s						
TIXI	**Tiksi**	**46.62**	**21**	LR	LR	06 18 06.9	
	comp=Z,39nm,19.7s,baz=200,slow=36						
TIXI	**Tiksi**	**46.62**	**21**	P	**P**	**05 58 39.7**	**+0.9**
TIXI	**Tiksi**	**46.62**	**21**	P	**P**	**05 58 39.7**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s						
TUE	**Stuetta**	**47.27**	**304**	P	P	05 58 48.2	+3.8
TUE				IAmb	IAmb	05 59 05.3	
	comp=Z,10nm,1.2s						
SENIN	**Lac Senin/Sane**	**48.68**	**304**	P	**P**	**05 58 56.8**	**+1.4**
SENIN				IAmb	IAmb	05 59 01.4	
	comp=Z,6.2nm,0.8s						
SPB2	**Spitsbergen Ar**	**48.72**	**347**	P	**P**	**05 58 57.0**	**+2.0**
SPITS	**Spitsbergen Ar**	**48.73**	**347**	P	**P**	**05 58 57.2**	**+2.2**
	comp=Z,1.8nm,0.5s,baz=126,slow=11,SNR=12						
	comp=Z,1.8nm,0.5s						
KIBK	**Kibwezi**	**48.97**	**227**		P	05 59 00.1	+2.4
KIBK				IAmb	IAmb	05 59 03.7	
	comp=Z,6.5nm,1.0s						
MBAR	**Mbarara**	**52.32**	**236**	P	**P**	**05 59 25.0**	**+2.0**
MBAR	**Mbarara**	**52.32**	**236**	P	**P**	**05 59 25.0**	**+2.0**
MBAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAJO	**Matsushiro**	**52.85**	**68**	*i* P	**P**	**05 59 26.5**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MJAR	**Matsushiro Arr**	**52.86**	**68**	P	**P**	**05 59 27.9**	**+1.3**
	comp=Z,5.5nm,0.9s,baz=267,slow=8.6,SNR=9.6						
	comp=Z,5.5nm,0.9s						
YSS	**Yuzhno-Sakhali**	**53.03**	**54**	P	**P**	**05 59 28.6**	**+0.9**
YSS	**Yuzhno-Sakhali**	**53.03**	**54**	*e*P	**P**	**05 59 29.2**	**+1.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
JEW	**Eniwo**	**53.25**	**59**	P	**P**	**05 59 29.7**	**+0.3**
EKA	**Eskdalemuir Ar**	**53.50**	**317**	P	**P**	**05 59 31.7**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=74,slow=8.2,SNR=2.3						
	comp=Z,2.3nm,0.9s						
MA2	**Magadan**	**54.92**	**38**	*ce*P	**P**	**05 59 43.2**	**+1.9**
MA2				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NOR	**Nord**	**55.02**	**350**	*i* P	**P**	**05 59 44.0**	**+2.3**
NOR				IAmb	IAmb	05 59 45.0	
	comp=Z,2.8nm,0.8s						
SEY	**Seymchan**	**55.05**	**33**	*ce*P	**P**	**05 59 44.4**	**+2.2**
SEY				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DAG	**Danmarks Havn**	**55.98**	**344**	*i* P	**P**	**05 59 50.0**	**+1.4**
ESDC	**Sonseca Array**	**58.49**	**299**	P	**P**	**06 00 08.3**	**+1.4**
	comp=Z,2.3nm,0.9s,baz=58,slow=6.3,SNR=12						
	comp=Z,2.3nm,0.9s						
BILL	**Bilibino**	**59.39**	**26**	P	**P**	**06 00 14.4**	**+1.9**
BILL	**Bilibino**	**59.39**	**26**	*ce*P	**P**	**06 00 14.5**	**+1.9**
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
PETK	**Petropavlovsk-**	**60.40**	**44**	P	**P**	**06 00 21.0**	**+1.2**
PETK	**Petropavlovsk-**	**60.40**	**44**	P	**P**	**06 00 21.0**	**+1.2**
MD01	**Midelt array s**	**61.81**	**292**	P	**P**	**06 00 32.2**	**+2.4**
NEEM	**North Greenlan**	**62.26**	**348**	*i* P	**P**	**06 00 33.6**	**+1.3**
NEEM				IAmb	IAmb	06 00 35.4	
	comp=Z,11nm,1.0s						
SUMG	**Summit**	**62.32**	**341**	P	**P**	**06 00 35.0**	**+2.1**
SUMG	**Summit**	**62.32**	**341**	P	**P**	**06 00 35.0**	**+2.1**
SUMG				pmax	pmax		
	comp=Z,29nm,1.4s						
SUMG	**Summit**	**62.32**	**341**	*i* P	**P**	**06 00 34.0**	**+1.1**
SUMG				IAmb	IAmb

CRPR				*e*Sg		**Sb**	**05 53 21.8**	**-0.8**
CRPR				IAML			05 53 22.1	
	comp=N,412nm,0.4s							
CRPR	**Cabo Rojo, PR**	**0.31**	**306**	*e*P		**Pg**	**05 53 17.8**	**0.0**
CRPR				*e*S		**Sb**	**05 53 22.1**	**-0.5**
OBIP	**Obispado Ponce**	**0.32**	**46**	*e*P		**Pb**	**05 53 18.2**	**+0.2**
OBIP				*e*S		**Sg**	**05 53 23.3**	**+0.7**
LSP	**Las Mesas**	**0.42**	**327**	*e*P		**Pg**	**05 53 19.7**	**0.0**
LSP				*e*S		**Sb**	**05 53 25.8**	**-0.1**
PRSN	**Puerto Rico Se**	**0.49**	**324**	*e*Pg		**Pg**	**05 53 20.9**	**0.0**
PRSN				*e*Sg		**Sg**	**05 53 26.4**	**-1.1**
PRSN				IAML			05 53 31.0	
	comp=N,200nm,0.3s							
PRSN	**Puerto Rico Se**	**0.49**	**324**	*e*P		**Pg**	**05 53 20.6**	**-0.2**
PRSN				*e*S		**Sg**	**05 53 27.0**	**-0.4**
ECPR	**Experimental S**	**0.68**	**43**	*e*P		**Pb**	**05 53 24.2**	**+0.2**
ECPR				*e*S		**Sb**	**05 53 33.0**	**0.0**
SJG	**San Juan**	**0.72**	**66**	*e*Pg		**Pb**	**05 53 22.0**	**-2.9**
SJG				*e*Sg		**Sb**	**05 53 33.6**	**-0.8**
IDE	**Isla Desecheo**	**0.82**	**313**	*e*P		**Pb**	**05 53 26.3**	**-0.3**
IDE				*e*S		**Sb**	**05 53 37.0**	**-0.3**
GCPR	**Guaynabo City**	**0.87**	**56**	*e*P		**Pb**	**05 53 27.4**	**-0.1**
GCPR				*e*S		**Sb**	**05 53 39.2**	**+0.4**
HUMP	**Col San Antoni**	**1.00**	**71**	*e*P		**Pb**	**05 53 30.0**	**+0.4**
HUMP				*e*S		**Sn**	**05 53 43.4**	**-0.1**
HIDR	**Higuey Centro**	**1.94**	**294**	*e*Pg		**Pn**	**05 53 43.2**	**+0.4**
HIDR				*e*Sg		**Sn**	**05 54 06.3**	**-0.3**
HIDR				IAML			05 54 13.9	
	comp=N,25nm,2.5s							
HATOM	**Hato Mayor del**	**2.59**	**292**	*e*Pg		**Pn**	**05 53 53.8**	**+1.9**
HATOM				*e*Sg		**Sn**	**05 54 23.5**	**+0.6**
HATOM				IAML			05 54 49.9	
	comp=N,12nm,3.7s							

*DJA **28** 06:02:50.9±0.3,9°S±2°×12°0E±°, h124km±6km, M4.7/34, mB5.3/6, mb4.7/9, MLv4.6/34, Mw(mB)4.8/6*
*NEIC **28** 06:02:50.0±2.8, 8°62S±0°.08×119°.81E±0°.06, h149km±10km, mb4.3/15, Error ellipse: s-maj=11.2km s-min=8.5km az=171.0*
*IDC **28** 06:02:54.2±1.7, 8°.12S×120°.65E, h179km±13km, mb3.9/8, mbtmp4.4/11, MS2.4/2, Error ellipse: s-maj=50.7km s-min=6.5km az=54.0*
ISC 28 06:02:49.2±0.7, **8°.67S**±0°.04×**119°.88E**±0°.04, **h143**km±7km, **n80**, σ1§**76**/83, **mb4.2**/16, **Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LBFI	**Labuhan Bajo,**	**0.19**	**4**	P		**Pn**	**06 03 08.6**	**-0.1**
WBSI	**Waikabubak, Su**	**1.08**	**206**	P		**Pn**	**06 03 14.5**	**+0.4**
WSI	**Waingapu**	**1.08**	**157**	P		**Pn**	**06 03 14.9**	**+0.8**
DBNI	**Kabupaten Domp**	**1.56**	**276**	P		**Pn**	**06 03 19.3**	**+0.4**
BASI	**Baing, Sumba**	**1.69**	**156**	P		**Pn**	**06 03 21.7**	**+1.3**
BASI				S		**Sn**	**06 03 45.4**	**+1.2**
EDFI	**Ende, Flores**	**1.80**	**93**	P		**Pn**	**06 03 22.4**	**+0.7**
PLAI	**Plampang**	**2.08**	**266**	P		**Pn**	**06 03 25.6**	**+0.7**
PLAI	**Plampang**	**2.08**	**266**	S		**Sn**	**06 03 52.1**	**-0.2**
PLAI	**Plampang**	**2.08**	**266**	P		**Pn**	**06 03 25.6**	**+0.7**
PLAI				S		**Sn**	**06 03 51.7**	**-0.6**
MMRI	**Maumere**	**2.34**	**89**	P		**Pn**	**06 03 29.4**	**+1.4**
MMRI	**Maumere**	**2.34**	**89**	S		**Sn**	**06 03 58.7**	**+0.9**
MMRI	**Maumere**	**2.34**	**89**			**Pn**	**06 03 29.0**	**+1.0**
MMRI	**Maumere**	**2.34**	**89**	P		**Pn**	**06 03 29.0**	**+1.0**
BSSI	**Bau Bau, Buton**	**2.58**	**14**	P		**Pn**	**06 03 30.8**	**-0.3**
TWSI	**Taliwang, Sumb**	**2.96**	**269**	P		**Pn**	**06 03 36.1**	**+0.3**
MKS	**Makassar**	**3.45**	**353**	P		**Pn**	**06 03 41.1**	**-1.1**
KAPI	**Kappang**	**3.63**	**358**	P		**Pn**	**06 03 44.2**	**-0.4**
	32nm,0.5s,baz=174,slow=8.8,SNR=26							
KAPI				S		**Sn**	**06 04 26.0**	**-1.5**
	42nm,0.6s,baz=212,slow=23,SNR=11							
KAPI				LR		LR	06 05 28.3	
	comp=Z,19nm,20.9s,baz=77,slow=48							
KAPI	**Kappang**	**3.63**	**358**	P		**Pn**	**06 03 45.1**	**+0.5**
KAPI	**Kappang**	**3.63**	**358**	S		**Sn**	**06 04 26.6**	**-0.9**
KAPI	**Kappang**	**3.63**	**358**			**Pn**	**06 03 44.6**	**0.0**
KAPI	**Kappang**	**3.63**	**358**	P		**Pn**	**06 03 45.0**	**+0.5**
KLNI	**Mataram**	**3.75**	**273**	P		**Pn**	**06 03 45.8**	**-0.2**
BATI	**Baumata**	**4.04**	**113**	P		**Pn**	**06 03 51.7**	**+1.8**
	255nm,0.3s,baz=93,slow=0.9,SNR=69							
BATI				S		**Sn**	**06 04 33.7**	**-3.2**
	256nm,0.3s,baz=146,slow=7.1,SNR=8.2							
BATI	**Baumata**	**4.04**	**113**	P		**Pn**	**06 03 51.4**	**+1.5**
KHKI	**Kahang-Kahang**	**4.23**	**274**	P		**Pn**	**06 03 53.0**	**+0.6**
SOEI	**Soe**	**4.47**	**104**	P		**Pn**	**06 03 57.7**	**+2.1**
SOEI	**Soe**	**4.47**	**104**			**Pn**	**06 03 57.1**	**+1.5**
SOEI	**Soe**	**4.47**	**104**	P		**Pn**	**06 03 57.4**	**+1.8**
DNP	**Denpasar**	**4.61**	**270**	P		**Pn**	**06 03 58.9**	**+1.5**
SRBI	**Singaraja**	**4.65**	**277**	P		**Pn**	**06 03 58.0**	**+0.1**
SPSI	**Sidrap Palu**	**4.68**	**359**	P		**Pn**	**06 03 59.8**	**+1.5**
IGBI	**Denpasar**	**4.68**	**268**	P		**Pn**	**06 03 58.5**	**+0.2**
RTBI	**Rangdo, Negare**	**4.88**	**272**	P		**Pn**	**06 04 00.1**	**-1.0**
BYJI	**Banyuwangi**	**5.48**	**274**	P		**Pn**	**06 04 10.4**	**+1.4**
	113nm,0.8s							
TTSI	**Tana Toraja**	**5.59**	**359**	P		**Pn**	**06 04 11.8**	**+1.4**
	0.3nm95nm,1.1s							
ABJI	**Asem Bagus**	**5.65**	**278**	P		**Pn**	**06 04 13.0**	**+1.8**
	0.5nm134nm,0.8s							
JAGI	**Jajag, Banyuwa**	**5.66**	**272**			**Pn**	**06 04 09.3**	**-2.2**
JAGI	**Jajag, Banyuwa**	**5.66**	**272**	P		**Pn**	**06 04 09.6**	**-1.8**
KMMI	**Kalianget**	**6.07**	**285**	P		**Pn**	**06 04 18.9**	**+2.0**
	0.3nm102nm,1.2s							
BLJI	**Banyuglugur**	**6.29**	**278**	P		**Pn**	**06 04 21.9**	**+2.2**
GMJI	**Gumukmas**	**6.37**	**273**	P		**Pn**	**06 04 20.9**	**0.0**
	0.3nm44nm,1.2s							
APSI	**Ampana**	**7.91**	**13**	P		Pn	06 04 47.1	+5.6
LUWI	**Luwuk**	**8.11**	**21**	P		**Pn**	**06 04 45.0**	**+0.8**
UGM	**Wanagama**	**9.29**	**274**	Pn		**Pn**	**06 04 59.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**10.92**	**150**	P		**Pn**	**06 05 22.8**	**+1.2**
	3.3nm,0.3s,baz=335,slow=8.8,SNR=41							
FITZ				S		**Sn**	**06 07 14.7**	**-7.6**
	9.6nm,0.5s,baz=308,slow=9.3,SNR=3.7							
KNRA	**Kununurra**	**11.13**	**130**	Pn		**Pn**	**06 05 24.2**	**-0.2**
MTN	**Manton Dam**	**11.81**	**112**			**Pn**	**06 05 33.4**	**0.0**
BBJI	**Bungbulang**	**12.18**	**275**			**Pn**	**06 05 36.1**	**-1.9**
PSA00	**Pilbara Seismi**	**12.83**	**180**			**Pn**	**06 05 47.3**	**+0.8**
MNAI	**Manna**	**17.34**	**283**	P		**P**	**06 06 42.4**	**+0.4**
WB0	**Warramunga Arr**	**17.86**	**130**			**Pn**	**06 06 49.3**	**+0.4**
WB0				IAmb		IAmb	06 06 51.5	
	comp=Z,10nm,0.7s							
WRA	**Warramunga Arr**	**17.93**	**130**	P		**Pn**	**06 06 50.0**	**+0.3**
	comp=Z,4.0nm,0.5s,baz=305,slow=13,SNR=43							
WRA				S		**S**	**06 09 59.7**	**-7.3**
	comp=Z,6.6nm,0.6s,baz=306,slow=24,SNR=15							
WRA	**Warramunga Arr**	**17.93**	**130**			**Pn**	**06 06 50.0**	**+0.3**
AS31	**Alice Springs**	**20.07**	**140**			Pn	06 07 13.4	-1.4
ASAR	**Alice Springs**	**20.07**	**140**	P		Pn	06 07 14.1	-0.8
	comp=Z,6.8nm,0.4s,baz=320,slow=11,SNR=54							
ASAR				S		**S**	**06 10 50.7**	**+1.3**
	comp=Z,3.2nm,0.7s,baz=318,slow=22,SNR=9.6							
	comp=Z,6.8nm,0.4s							
ASAR	**Alice Springs**	**20.07**	**140**			Pn	06 07 14.8	0.0
COEN	**Coen**	**23.43**	**105**			**P**	**06 07 47.1**	**+1.2**
COEN				IAmb		IAmb	06 07 50.7	
	comp=Z,7.2nm,0.6s							
NWAO	**Narrogin (SRO)**	**24.26**	**185**	P		**P**	**06 07 54.9**	**+1.7**
NWAO				IAmb		IAmb	06 08 14.5	
	comp=Z,30nm,1.0s							
BBOO	**Buckleboo**	**28.31**	**150**	P		**P**	**06 08 31.4**	**+1.9**
STKA	**Stephens Creek**	**30.67**	**142**	P		**P**	**06 08 52.7**	**+2.3**
	comp=Z,3.1nm,0.3s,baz=326,slow=9.2,SNR=11							
	comp=Z,3.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**33.96**	**323**	P		**P**	**06 09 22.5**	**+3.3**
	comp=Z,1.3nm,0.3s,baz=131,slow=8.0,SNR=4.4							
	comp=Z,1.3nm,0.3s							
PZH	**PanZhiHua**	**39.15**	**334**	P		**P**	**06 10 05.3**	**+2.1**
ENH	**Enshi**	**39.98**	**346**	P		**P**	**06 10 09.8**	**-0.2**
ENH				IAmb		IAmb	06 10 10.9	
	comp=Z,3.5nm,0.7s							
EVN	**Everest**	**48.46**	**320**	P		**P**	**06 11 17.4**	**-0.8**
HHC	**Hu-ho-hao-te**	**49.87**	**352**	*e*P		**P**	**06 11 31.3**	**+3.2**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,100nm,4.6s							
SONM	**Songino Array**	**57.51**	**349**	P		**P**	**06 12 23.8**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=167,slow=8.5,SNR=14							
	comp=Z,1.7nm,0.6s							
SONM	**Songino Array**	**57.51**	**349**	P		**P**	**06 12 23.9**	**+0.3**
SONM				IAmb		IAmb	06 12 24.4	
	comp=Z,1.2nm,0.6s							
HILR	**Hailar Array B**	**57.98**	**360**	P		**P**	**06 12 24.7**	**-2.0**
	comp=Z,1.1nm,0.4s,baz=171,slow=10,SNR=2.2							
	comp=Z,1.1nm,0.4s							

KSH2	**Kashi**	**62.87**	**322**	P		**P**	**06 13 00.3**	**0.0**
KSH2				pmax		pmax		
	comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**64.56**	**332**	P		**P**	**06 13 10.4**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=152,slow=7.2,SNR=33							
	comp=Z,1.7nm,0.5s							
MKAR	**Makanchi Array**	**64.56**	**332**	P		**P**	**06 13 10.6**	**-0.5**
MAKZ	**Makanchi**	**64.72**	**332**	P		**P**	**06 13 11.5**	**-0.6**
MAKZ				IAmb		IAmb	06 13 12.0	
	comp=Z,3.0nm,1.1s							
AAK	**Ala-Archa**	**65.71**	**325**	P		**P**	**06 13 18.1**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=110,slow=6.3,SNR=2.5							
AAK				LR		LR	06 49 40.5	
	comp=Z,11nm,19.2s,baz=272,slow=43							
	comp=Z,1.0nm,0.4s							
ZAA0	**Zalesovo Array**	**69.05**	**339**	P		**P**	**06 13 37.7**	**-1.6**
ZALV	**Zalesovo Beam**	**69.05**	**339**	P		**P**	**06 13 37.8**	**-1.4**
	comp=Z,2.2nm,0.3s,baz=143,slow=5.4,SNR=5.3							
	comp=Z,2.2nm,0.3s							
KURK	**Kurchatov**	**69.09**	**333**	P		**P**	**06 13 38.3**	**-1.3**
KURK				IAmb		IAmb	06 13 39.9	
	comp=Z,9.3nm,1.5s							
ABKAR	**Akbulak array**	**77.79**	**325**	P		**P**	**06 14 29.3**	**-1.3**
G16K	**Koyuk River**	**92.77**	**24**	P		**P**	**06 15 44.9**	**-0.1**
G16K				IAmb		IAmb	06 15 46.1	
	comp=Z,1.2nm,1.1s							
G19K	**Purcell Mounta**	**95.05**	**24**	P		**P**	**06 15 55.3**	**-0.1**
G19K				IAmb		IAmb	06 15 59.5	
	comp=Z,4.0nm,1.4s							
TORD	**Torodi Ar. Bea**	**119.25**	**280**	PKP		**PKiKP**	**06 21 22.3**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=175,slow=0.9,SNR=3.9							

*ASRS **28** 06:10:05.0±0.7, 54°.71N×83°.67E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 28 06:10:07.2±1.8, **54°.66N**×**83°.76E**, **h0**km, **mbtmp2.9**/2, **ML2.6**/2, **Error ellipse: s-maj=17.3km s-min=11.0km az=16.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**138**	I		I	06 15 20.0	
	0.1nm,0.7s,baz=318,slow=325,SNR=3.2							
ZALV	**Zalesovo Beam**	**0.95**	**138**	Pg		Pg	06 10 24.9	-0.4
	4.2nm,0.3s,baz=320,slow=19,SNR=24							
ZALV				Lg		Lg	06 10 39.2	
	8.6nm,0.3s,baz=321,slow=31,SNR=24							
MKAR	**Makanchi Array**	**7.93**	**187**	Pn		Pn	06 12 03.8	+0.1
	0.1nm,0.3s,baz=10.0,slow=12,SNR=4.7							
	0.1nm,0.3s							
BVAR	**Borovoye Array**	**8.08**	**264**	Pn		Pn	06 12 04.9	-0.7
	0.1nm,0.3s,baz=76,slow=14,SNR=4.1							
	0.8nm,0.5s							

*ISK **28** 06:16:50.4, 38°.67N×43°.19E, h5km, ML3.3/16*
*AFAD **28** 06:16:51.1, 38°.66N×43°.20E, h20km±1km, MW3.8*
*TEH **28** 06:16:59.7, 38°.67N×44°.01E, h10km±58km, ML2.9, Presumed earthquake*
ISC 28 06:16:52.1±1.1, **38°.67N**±0°.02×**43°.18E**±0°.02, **h6**km±9km, **n39**, σ0§**98**/56, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
TVAN	**Van**	**0.23**	**128**	P		**Pg**	**06 16 56.4**	**-0.3**
TVAN				S		**Sg**	**06 17 00.4**	**+0.7**
TVAN				IAML			06 17 01.0	
	comp=E,4μm,0.3s							
TVAN				IAML			06 17 01.0	
	comp=N,3μm,0.3s							
GEVA	**Gevas**	**0.37**	**195**	P		**Pg**	**06 16 58.8**	**-0.5**
GEVA				S		**Sg**	**06 17 05.2**	**+1.0**
GEVA				IAML			06 17 06.0	
	comp=E,3μm,0.8s							
GEVA				IAML			06 17 06.0	
	comp=N,2μm,0.9s							
ERCV	**ERCIS-VAN**	**0.37**	**19**	Pg		**Pg**	**06 16 58.8**	**-0.6**
ERCV				Sg		**Sg**	**06 17 05.1**	**+0.8**
AKDM	**Akdamar-Van**	**0.38**	**205**	Pg		**Pg**	**06 16 58.5**	**-1.0**
AKDM				Sg		**Sg**	**06 17 05.6**	**+1.2**
ADCV	**BITLIS_Adilcev**	**0.38**	**291**	P		**Pg**	**06 16 59.8**	**+0.2**
ADCV				S		**Sg**	**06 17 06.1**	**+1.4**
ADCV				IAML			06 17 07.0	
	comp=N,4μm,0.4s							
ADCV				IAML			06 17 09.0	
	comp=E,2μm,0.2s							
VMUR	**Van-Muradiye**	**0.44**	**44**	P		**Pg**	**06 17 00.6**	**-0.1**
VMUR				S		**Sg**	**06 17 07.1**	**+0.6**
VMUR				IAML			06 17 09.0	
	comp=N,4μm,0.5s							
VMUR				IAML			06 17 09.0	
	comp=E,4μm,0.4s							
OZAP	**Van, Ozalp-Mer**	**0.64**	**90**	P		**Pg**	**06 17 03.7**	**-0.7**
MLAZ	**Malazgirt-MUS**	**0.68**	**314**	Pg		**Pg**	**06 17 05.2**	**0.0**
MLAZ				Sg		**Sb**	**06 17 15.5**	**-0.7**
DORK	**Agr/Tutak/Do**	**0.78**	**337**	P		**Pg**	**06 17 05.8**	**-1.4**
DORK				S		**Sg**	**06 17 16.3**	**-1.0**
DORK				IAML			06 17 19.0	
	comp=N,408nm,0.2s							
PERV	**Siirt/Pervari-**	**0.88**	**215**	P		**Pg**	**06 17 07.5**	**-1.5**
PERV				S		**Sb**	**06 17 21.8**	**-0.1**
PERV				IAML			06 17 25.0	
	comp=E,639nm,0.4s							
GURO	**Guroymak-BITLI**	**0.91**	**263**	Pg		**Pg**	**06 17 08.6**	**-0.9**
GURO	**Guroymak-BITLI**	**0.91**	**263**	Pg		**Sn**	**06 17 28.8**	**+3.8**
AGRB	**Hanur-Agry**	**0.92**	**351**	Pg		**Pg**	**06 17 09.1**	**-0.6**
KOTA	**Agri, Merkez-K**	**1.13**	**1**	P		**Pg**	**06 17 12.0**	**-1.8**
KOTA				S		**Sn**	**06 17 31.0**	**+0.4**
KOTA				IAML			06 17 34.0	
	comp=N,173nm,1.0s							
KOTA				IAML			06 17 43.0	
	comp=E,166nm,0.9s							
HAKT	**HAKKARI**	**1.19**	**159**	P		**Pg**	**06 17 13.6**	**-1.3**
HAKT				S		**Sn**	**06 17 32.0**	**0.0**
HAKT				IAML			06 17 35.0	
	comp=E,431nm,0.6s							
HAKT				IAML			06 17 35.0	
	comp=N,336nm,0.5s							
SRTM	**Siirt_Merkez**	**1.20**	**236**	P		**Pg**	**06 17 15.1**	**0.0**
SRTM				S		**Sn**	**06 17 32.4**	**+0.2**
SRTM				IAML			06 17 37.0	
	comp=N,534nm,0.5s							
MUSM	**Mu-Merkez**	**1.31**	**273**	P		**Pn**	**06 17 15.2**	**-1.8**
MUSM				S		**Sb**	**06 17 32.9**	**-1.3**
MUSM				IAML			06 17 35.0	
	comp=E,233nm,0.4s							
MUSM				IAML			06 17 35.0	
	comp=N,263nm,0.6s							
MAKU	**Maku**	**1.36**	**59**	Pg		**Pn**	**06 17 16.3**	**-1.4**
IGDI	**IGDIR**	**1.39**	**30**	P		**Pn**	**06 17 17.1**	**-1.0**
IGDI				S		**Sg**	**06 17 38.0**	**+1.4**
IGDI				IAML			06 17 40.0	
	comp=N,108nm,1.1s							
IGDI				IAML			06 17 45.0	
	comp=E,98nm,0.7s							
VRTB	**Varto-Mus**	**1.43**	**291**	Pn		**Pn**	**06 17 18.6**	**-0.2**
CUKT	**Cukurca**	**1.46**	**166**	Pn		**Pn**	**06 17 19.2**	**+0.1**
CUKT	**Cukurca**	**1.46**	**166**	P		**Pn**	**06 17 18.7**	**-0.4**
CUKT				S		**Sg**	**06 17 40.3**	**+1.3**
CUKT				IAML			06 17 53.0	
	comp=N,297nm,1.0s							
SVAN	**Silvan-Diyarba**	**1.64**	**252**	Pn		**Pn**	**06 17 21.6**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.64**	**252**	P		**Pn**	**06 17 21.2**	**-0.3**
SVAN				S		**Sg**	**06 17 44.5**	**-0.4**
SVAN				IAML			06 17 46.0	
	comp=N,281nm,0.5s							
SVAN				IAML			06 17 52.0	
	comp=E,111nm,0.5s							
BTMN	**Batman**	**1.69**	**243**	P		**Pn**	**06 17 21.8**	**-0.4**
BTMN				S		**Sg**	**06 17 46.0**	**-0.5**
BTMN				IAML			06 17 48.0	
	comp=N,503nm,0.4s							
BTMN				IAML			06 17 50.0	
	comp=E,892nm,0.9s							
KARO	**Karliova-Bingo**	**1.78**	**292**	Pn		**Pn**	**06 17 23.8**	**+0.2**
GNI	**Garni**	**1.91**	**39**	Pn		**Pn**	**06 17 25.4**	**+0.1**
GNI	**Garni**	**1.91**	**39**	Pg		**Pg**	**06 17 28.9**	**+0.1**
ISHB	**Shabestar**	**1.95**	**101**	Pg		**Pn**	**06 17 25.2**	**-0.8**
KARS	**Kars**	**1.96**	**358**	Pn		**Pn**	**06 17 26.1**	**+0.1**
BNGB	**Bingl**	**1.98**	**280**	Pn		**Pn**	**06 17 26.5**	**+0.2**
SENK	**Senkaya-Erzuru**	**2.00**	**342**	Pn		**Pn**	**06 17 26.8**	**+0.2**
YEDI	**Yedisu-Bingol**	**2.19**	**291**	Pn		**Pn**	**06 17 29.4**	**+0.2**
MARD	**Mardin**	**2.33**	**235**	P		**Pn**	**06 17 30.4**	**-0.7**
ITBZ	**Tabriz**	**2.37**	**100**	Pg		**Pn**	**06 17 31.2**	**-0.5**

DYBB	**Diyarbakir**	**2.50**	**254**	Pn		**Pn**	**06 17 33.8**	**+0.5**
ERZN	**Erzincan**	**2.84**	**290**	Pn		**Pn**	**06 17 38.6**	**+0.5**
IHRS	**Heris**	**3.05**	**95**	Pn		**Pn**	**06 17 41.6**	**+0.5**
IHSH	**Hashtrud**	**3.50**	**112**	Pn		**Pn**	**06 17 47.9**	**+0.5**

IDC 28 06:23:08.2±1.9, **6°.64S**×**119°.29E**, **h0**km, **mb3.1**/2, **mbtmp3.4**/4, **ML3.1**/2, **Error ellipse: s-maj=192.1km s-min=23.5km az=57.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.96**	**152**	Pn		Pn	06 26 14.7	+0.8
	0.1nm,0.3s,baz=339,slow=8.6,SNR=2.7							
FITZ				Sn		Sn	06 28 39.2	+0.2
	0.3nm,0.3s,baz=104,slow=19,SNR=2.5							
	7.1nm,1.0s							
WRA	**Warramunga Arr**	**19.71**	**134**	P		P	06 27 37.8	-1.6
	0.1nm,0.3s,baz=304,slow=13,SNR=2.3							
	0.1nm,0.4s							
ASAR	**Alice Springs**	**22.00**	**142**	P		P	06 28 05.4	+1.2
	0.2nm,0.5s,baz=317,slow=11,SNR=2.1							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**62.51**	**332**	P		P	06 33 33.6	0.0
	0.2nm,0.3s,baz=154,slow=6.7,SNR=7.5							
	0.2nm,0.3s							

*TIR **28** 06:42:57.9, 41°.45N×20°.49E, h12km±1km, Ml2.4/5*
*PDG **28** 06:42:57.6±0.2, 41°.45N×20°.53E, h9km, ML2.9/12, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*SKO **28** 06:42:57.3, 41°.46N×20°.51E, h16km, ML2.1*
ISC 28 06:42:57.9±1.0, **41°.44N**±0°.02×**20°.52E**±0°.03, **h11**km±9km, **n22**, σ1§**10**/44, **11C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.25**	**346**	⇑Pg		**Pg**	**06 43 02.5**	**-0.5**
PHP				Sg		**Sg**	**06 43 06.5**	**0.0**
PHP				AML		AML	06 43 08.0	
	2.5nm,0.1s							
OHR	**Ohrid**	**0.39**	**148**	*i* Pg		**Pg**	**06 43 05.7**	**+0.1**
OHR				*i* Sg		**Sb**	**06 43 12.4**	**-0.5**
OHR				*e*Lg		Lg	06 43 12.6	
	comp=N,164nm,0.2s							
OHR				*e*Lg		Lg	06 43 13.0	
	comp=E,156nm,0.3s							
TIR	**Tirane**	**0.51**	**259**	Pg		**Pg**	**06 43 07.4**	**-0.3**
TIR				Sg		**Sb**	**06 43 14.9**	**-1.2**
TIR				AML		AML	06 43 16.8	
	comp=E,0.8nm,0.2s							
KBN	**Korca**	**0.84**	**166**	⇑Pg		**Pg**	**06 43 13.3**	**-0.8**
KBN				Sg		**Sb**	**06 43 26.3**	**+0.3**
KBN				AML		AML	06 43 31.5	
	comp=E,0.5nm,0.4s							
SKO	**Skopje**	**0.87**	**52**	*e*Pg		**Pg**	**06 43 14.1**	**-0.5**
SKO				*i* Sg		**Sb**	**06 43 26.6**	**0.0**
SDA	**Shkodra**	**0.98**	**309**	Pn		**Pb**	**06 43 16.4**	**-0.4**
SDA				Sn		**Sn**	**06 43 30.8**	**-0.7**
SDA				AML		AML	06 43 34.8	
	comp=E,0.7nm,0.2s							
ULC	**Ulcinj**	**1.09**	**299**	⇑*i* Pg		**Pb**	**06 43 17.6**	**-1.2**
ULC				*i* Sg		**Sn**	**06 43 35.0**	**+0.7**
NEST	**Nestorio**	**1.10**	**159**	P		**Pb**	**06 43 18.4**	**-0.6**
NEST				S		**Sn**	**06 43 36.0**	**+1.3**
NEST				AML		AML	06 43 39.3	
	comp=E,0.4nm,0.4s							
PVY	**Plav**	**1.22**	**340**	⇑*i* Pg		**Pn**	**06 43 20.2**	**-0.9**
PVY				*i* Sg		**Sn**	**06 43 39.3**	**+1.5**
DRME	**Dracevica, Mon**	**1.25**	**307**	⇑*i* Pg		**Pn**	**06 43 20.5**	**-0.8**
DRME				*i* Sg		**Sg**	**06 43 40.1**	**+2.1**
PDG	**Podgorica**	**1.37**	**317**	Pn		**Pb**	**06 43 22.9**	**-0.6**
PDG				Sn		**Sg**	**06 43 44.5**	**+2.6**
PDG	**Podgorica**	**1.37**	**317**	⇑*i* Pg		**Pb**

7.0nm,0.3s,baz=330,slow=32,SNR=22
KURBB **Kurchatov Arra 5.13 220** Pn Pn 06 54 01.4 +0.2
0.1nm,0.3s,baz=42,slow=14,SNR=2.9
MKAR **Makanchi Array 7.93 187** Pn Pn 06 54 39.4 -0.4
baz=13,slow=12,SNR=4.7
0.2nm,0.6s

*ASRS **28** 06:59:44.0±1.3,54°.24N×87°.31E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 28 06:59:45.1±3.4,54°.28N×87°.62E,h0km,mbtmp2.5/1, ML2.2/2,Error ellipse: s-maj=27.5km s-min=19.4km az=45.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.68**	**260**	I	I	07 11 10.0	
	0.1nm,0.9s,baz=80,slow=348,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.68**	**260**	P	Pn	07 00 14.2	-1.5
	1.4nm,0.3s,baz=76,slow=17,SNR=15						
ZALV				Lg	Lg	07 00 38.8	
	3.0nm,0.3s,baz=78,slow=25,SNR=9.7						
KURBB	**Kurchatov Arra**	**6.65**	**240**	Pn	Pn	07 01 24.3	+0.3
	baz=59,slow=14,SNR=3.7						
KURBB				Lg	Lg	07 03 17.9	
	baz=60,slow=31,SNR=4.0						
MKAR	**Makanchi Array**	**8.22**	**207**	Pn	Pn	07 01 47.3	+1.7
	baz=25,slow=13,SNR=2.5						
MKAR				Lg	Lg	07 04 07.3	
	baz=33,slow=33,SNR=4.1						
	0.1nm,0.5s						

*OSPL **28** 07:12:37.6±1.8,20°.17N×72°.48W,h11km±13km,ML2.4, Presumed earthquake*
*SDD **28** 07:12:38.9±2.6,20°.18N×72°.44W,h40km±66km,MD3.4, ML2.7,MW2.9,Presumed earthquake*
*SSNC **28** 07:12:39.7±0.7,19°.55N×72°.76W,h13km±9km,MD3.6, ML2.2,Presumed earthquake*
ISC 28 07:12:37.2±1.3,20°.13N±0°.05×72°.49W±0°.03,h44km±54km, n31,σ1s89/50,19C-2D,Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCDR	**Montecristi**	**0.82**	**106**	↑*e*P	g	**07 12 52.1**	**-0.3**
MCDR				↑*e*Sg	**Sn**	**07 13 03.2**	**-0.2**
MCDR				IAML		07 13 03.7	
	comp=N,1μm,0.2s						
LOPP1	**Punta Rusia, P**	**1.25**	**102**	*i* P	**Pn**	**07 12 58.5**	**+0.3**
LOPP1				*e*S	**Sn**	**07 13 14.6**	**+0.8**
LOPP1				IAML		07 13 17.9	
	comp=Z,91nm,0.3s						
REDR	**Restauracion**	**1.41**	**133**	↑*e*Pg	**Pn**	**07 12 56.5**	**-3.9**
REDR				↑*e*Sg	**Sn**	**07 13 09.9**	**-7.8**
REDR				IAML		07 13 11.7	
	comp=N,582nm,0.2s						
LUDR	**Luperon**	**1.47**	**99**	↑*e*Pg	**Pn**	**07 13 01.6**	**+0.4**
LUDR				↓*e*Sg	**Sn**	**07 13 19.6**	**+0.5**
SDDR	**Presa de Saban**	**1.61**	**135**	*e*P	**Pn**	**07 13 04.2**	**+1.0**
SDDR				*e*S	**Sn**	**07 13 21.6**	**-1.2**
SDDR				IAML		07 13 24.9	
	comp=N,43nm,0.2s						
SDDR				IAML		07 13 25.5	
	comp=N,45nm,0.3s						
SDDR	**Presa de Saban**	**1.61**	**135**	↑*e*Pg	**Pn**	**07 13 04.4**	**+1.2**
SDDR				↑*e*Sg	**Sn**	**07 13 23.4**	**+0.7**
SDDR				IAML		07 13 25.0	
	comp=N,43nm,0.3s						
SDDR	**Presa de Saban**	**1.61**	**135**	*i* P	**Pn**	**07 13 04.3**	**+1.2**
SDDR				IAML		07 13 24.3	
	comp=Z,33nm,0.2s						
MASC	**Masc**	**1.63**	**272**	*e*P	**Pn**	**07 13 04.2**	**+0.8**
MASC				*e*S	**Sn**	**07 13 22.2**	**-1.1**
MASC				IAML		07 13 26.6	
	comp=E,19nm,0.2s						
MASC				IAML		07 13 27.2	
	comp=N,28nm,0.2s						
MASC	**Masc**	**1.63**	**272**	↑*e*Pg	**Pn**	**07 13 04.3**	**+0.8**
MASC				↑*e*Sg	**Sn**	**07 13 25.4**	**+2.1**
MASC				IAML		07 13 27.2	
	comp=N,29nm,0.2s						
MASC	**Masc**	**1.63**	**272**	*i* P	**Pn**	**07 13 04.2**	**+0.8**
MASC				*e*S	**Sn**	**07 13 24.9**	**+1.7**
MASC				IAML		07 13 25.9	
	comp=Z,17nm,0.1s						
JIDR	**Jimani**	**1.74**	**159**	↑*e*Pg	**Pn**	**07 13 06.0**	**+1.1**
JIDR				↓*e*Sg	**Sn**	**07 13 26.7**	**+0.8**
LONE3	**El Aguacate, B**	**1.80**	**147**	*i* P	**Pn**	**07 13 06.6**	**+0.7**
LONE3				IAML		07 13 31.9	
	comp=Z,21nm,2.2s						
SC01	**Santiago de lo**	**1.80**	**112**	↑*e*Pg	**Pn**	**07 13 06.3**	**+0.6**
SC01				IAML		07 13 29.7	
	comp=N,79nm,0.6s						
SC01	**Santiago de lo**	**1.80**	**112**	*i* P	**Pn**	**07 13 06.4**	**+0.6**
SC01				*e*S	**Sn**	**07 13 28.7**	**+1.2**
SC01				IAML		07 13 33.1	
	comp=Z,44nm,0.5s						
GRTK	**Grand Turk**	**1.88**	**43**	*i* P	**Pn**	**07 13 07.7**	**+0.9**
GRTK				*e*S	**Sn**	**07 13 29.6**	**+0.4**
GRTK				IAML		07 13 31.9	
	comp=Z,63nm,0.5s						
LODU1	**El Espartillar**	**2.01**	**151**	*i* P	**Pn**	**07 13 12.1**	**+3.4**
LODU1				IAML		07 13 43.7	
	comp=Z,36nm,0.6s						
QMBU	**Quimbuelo**	**2.18**	**272**	*e*P	**Pn**	**07 13 11.2**	**+0.2**
QMBU	**Quimbuelo**	**2.18**	**272**	↑*e*Pg	**Pn**	**07 13 11.2**	**+0.2**
QMBU				↑*e*Sg	**Sn**	**07 13 38.0**	**+1.2**
QMBU				IAML		07 13 38.5	
	comp=N,47nm,0.3s						
PODR	**Polo**	**2.26**	**149**	*i* P	**Pn**	**07 13 14.4**	**+2.1**
NMDO	**Nuevo Mundo**	**2.38**	**281**	*e*P	**Pn**	**07 13 13.2**	**-0.4**
NMDO	**Nuevo Mundo**	**2.38**	**281**	↑*e*Pg	**Pn**	**07 13 13.5**	**-0.1**
NMDO				↑*e*Sg	**Sn**	**07 13 42.8**	**+1.2**
NMDO				IAML		07 13 47.7	
	comp=N,14nm,0.8s						
LOBH	**Bahia de las A**	**2.39**	**160**	*i* P	**Pn**	**07 13 15.6**	**+1.7**
LOBH				IAML		07 13 48.5	
	comp=Z,18nm,1.3s						
GTBY	**Guantanamo Bay**	**2.47**	**266**	*e*P	**Pn**	**07 13 14.6**	**-0.3**
GTBY	**Guantanamo Bay**	**2.47**	**266**	↑*e*Pg	**Pn**	**07 13 14.9**	**0.0**
GTBY				↑*e*Sg	**Sn**	**07 13 45.3**	**+1.4**
GTBY				IAML		07 14 05.2	
	comp=N,24nm,1.6s						
GTBY	**Guantanamo Bay**	**2.47**	**266**	*i* P	**Pn**	**07 13 15.7**	**+0.8**
GTBY				*e*S	**Sn**	**07 13 44.4**	**+0.6**
GTBY				IAML		07 13 45.3	
	comp=Z,10nm,1.1s						
LOVI	**El Cajuil, Ovi**	**2.55**	**155**	*i* P	**Pn**	**07 13 18.0**	**+1.9**
LOVI				IAML		07 13 59.0	
	comp=Z,35nm,1.6s						
RCC	**Rio Carpintero**	**3.01**	**268**	*e*P	**Pn**	**07 13 22.2**	**-0.2**
PINC	**Pinares de May**	**3.12**	**277**	*e*P	**Pn**	**07 13 23.0**	**-0.8**
MARVS	**Santiago de Cu**	**3.21**	**268**	*e*P	**Pn**	**07 13 24.9**	**-0.1**
MARVS				*e*S	**Sn**	**07 13 58.5**	**-3.5**
HATOM	**Hato Mayor del**	**3.22**	**114**	↑*e*Pg	**Pn**	**07 13 25.1**	**-0.3**
HATOM				↑*e*Sg	**Sn**	**07 14 01.9**	**-0.7**
HATOM				IAML		07 14 04.8	
	comp=N,15nm,0.9s						
CHIV	**Chivirico**	**3.69**	**268**	*e*P	**Pn**	**07 13 30.9**	**-0.8**
CHIV				*e*S	**Sn**	**07 14 09.3**	**-4.7**

*IDC **28** 07:22:52.4±0.8,7°.82N×36°.61W,h0km,mb3.8/11, mbtmp3.9/13,ML3.5/2,MS3.3/5,Error ellipse: s-maj=27.1km s-min=19.6km az=138.0*
ISC 28 07:22:53.7±0.7,7.7N±0°.1×36.6W±0°.1,h10km,n20, σ0s84/13,mb3.9/10,MS3.4/5,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**13.50**	**177**	**Pn**	**Pn**	**07 26 04.6**	**-0.9**
	0.2nm,0.3s,baz=355,slow=19,SNR=5.8						
RCBR				Sn	Sn	07 28 24.5	-11
	0.3nm,0.3s,baz=15,slow=19,SNR=5.9						
	3.2nm,0.8s						
MDP	**Montagnes des**	**16.14**	**262**	Pn	**Pn**	**07 26 39.7**	**-1.2**
	0.2nm,0.3s,baz=74,slow=15,SNR=2.1						
MDP				Sn	Sn	07 29 17.4	-23
	0.1nm,0.3s,baz=77,slow=14,SNR=1.1						
MDP				LR	LR	07 32 41.9	
	comp=Z,31nm,18.7s,baz=87,slow=36						
	9.1nm,0.8s						
BDFB	**Brasilia**	**25.83**	**206**	P	**P**	**07 28 26.4**	**+0.8**
	3.4nm,0.9s,baz=25,slow=19,SNR=3.4						
BDFB				LR	LR	07 37 46.0	
	comp=Z,63nm,18.7s,baz=51,slow=34						
	3.4nm,0.9s						
H10N3	**ASCENSION HYDR**	**26.93**	**125**	T	T	07 57 03.7	
	baz=304						
H10N2	**ASCENSION HYDR**	**26.94**	**125**	T	T	07 57 03.4	
	baz=304,slow=74,SNR=4.8						
H10N1	**ASCENSION HYDR**	**26.96**	**125**	T	T	07 57 04.5	
	baz=304,slow=74,SNR=6.7						
SJG	**San Juan**	**30.53**	**293**	LR	LR	07 38 58.3	
	comp=Z,52nm,18.9s,baz=108,slow=32						
SIV	**San Ignacio**	**33.80**	**226**	LR	LR	07 42 40.8	
	comp=Z,118nm,18.6s,baz=92,slow=35						
TORD	**Torodi Ar. Bea**	**38.02**	**79**	**P**	**P**	**07 30 13.0**	**+0.5**
	1.0nm,0.9s,baz=258,slow=9.2,SNR=4.1						
	1.0nm,0.9s						
MDT	**Midelt**	**38.75**	**45**	LR	LR	07 44 17.6	
	comp=Z,63nm,19.7s,baz=246,slow=33						
LPAZ	**La Paz**	**39.28**	**232**	P	**P**	**07 30 24.9**	**+1.1**
	2.2nm,0.7s,baz=55,slow=8.4,SNR=9.8						
	2.2nm,0.7s						
TXAR	**Lajitas Array**	**66.26**	**299**	P	**P**	**07 33 42.5**	**-0.1**
	0.3nm,0.7s,baz=86,slow=4.1,SNR=4.0						
	0.3nm,0.7s						
AKASG	**Malin Array Be**	**68.82**	**38**	P	**P**	**07 33 58.3**	**0.0**
	0.4nm,0.4s,baz=264,slow=4.6,SNR=2.2						
	0.4nm,0.4s						
BRTR	**Keskin Array B**	**69.91**	**51**	**P**	**P**	**07 34 05.4**	**-0.1**
	0.6nm,0.7s,baz=254,slow=4.1,SNR=2.5						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	**72.27**	**312**	P	**P**	**07 34 19.3**	**-0.5**
	1.0nm,1.1s,baz=137,slow=5.0,SNR=3.7						
	1.0nm,1.1s						
ARCES	**ARCESS Array B**	**73.25**	**19**	P	**P**	**07 34 23.8**	**-1.0**
	5.0nm,1.0s,baz=251,slow=5.6,SNR=3.9						
	5.0nm,1.0s						
KMBO	**Kilima Mbogo**	**74.17**	**93**	LR	LR	08 02 52.3	
	comp=Z,508nm,21.9s,baz=60,slow=32						
YKA	**Yellowknife Ar**	**77.63**	**332**	P	**P**	**07 34 50.0**	**-0.1**
	1.0nm,0.8s,baz=94,slow=4.9,SNR=18						
	1.0nm,0.8s						
NVAR	**Mina Array Bea**	**78.74**	**308**	P	**P**	**07 34 58.2**	**+1.2**
	0.3nm,0.8s,baz=56,slow=7.6,SNR=2.2						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**91.50**	**336**	P	**P**	**07 36 00.7**	**+0.4**
	0.4nm,0.9s,baz=66,slow=6.6,SNR=3.6						
	0.4nm,0.9s						

*ASRS **28** 07:29:30.0±1.5,53°.78N×91°.12E,h0km,M3.2(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 28 07:29:38.0±2.2,53°.65N×90°.38E,h0km,mbtmp3.2/4, ML2.9/4,Error ellipse: s-maj=23.0km s-min=17.0km az=21.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.31**	**277**	Pn	Pn	07 30 32.3	+1.3
	4.0nm,0.3s,baz=96,slow=15,SNR=14						
ZALV				Lg	Lg	07 31 22.8	
	3.9nm,0.3s,baz=93,slow=29,SNR=9.4						
	2.9nm,0.3s						
KURBB	**Kurchatov Arra**	**7.90**	**252**	Pn	Pn	07 31 34.2	+0.3
	0.2nm,0.3s,baz=64,slow=15,SNR=2.0						
KURBB				Lg	Lg	07 33 50.6	
	0.1nm,0.3s,baz=72,slow=33,SNR=3.0						
MKAR	**Makanchi Array**	**8.60**	**220**	Pn	Pn	07 31 43.7	+0.1
	0.3nm,0.3s,baz=30,slow=12,SNR=1.2						
MKAR				Sn	Sn	07 33 21.4	+0.1
	baz=35,slow=25						
MKAR				Lg	Lg	07 34 07.3	
	baz=33,slow=17						
	0.9nm,0.4s						
SONM	**Songino Array**	**11.69**	**113**	Pn	Pn	07 32 27.1	+1.2
	0.1nm,0.3s,baz=306,slow=14,SNR=1.8						
SONM				Sn	Sn	07 34 39.7	+2.6
	0.1nm,0.3s,baz=302,slow=22,SNR=3.5						
SONM				Lg	Lg	07 35 31.0	
	0.2nm,0.3s,baz=300,slow=28,SNR=7.3						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**11.97**	**275**	Pn	Pn	07 32 25.9	-3.7
	0.5nm,0.6s,baz=84,slow=13,SNR=1.5						
BVAR				Sn	Sn	07 34 39.2	-4.5
	baz=74,slow=22,SNR=1.7						

*KRSC **28** 07:35:32.0±1.4,52°.60N×159°.78E,h50km±16km,Ml4.2*
*IDC **28** 07:35:37.7±1.4,52°.79N×159°.32E,h83km±10km,mb3.3/18, mbtmp3.7/19,Error ellipse: s-maj=19.0km s-min=15.4km az=161.0*
ISC 28 07:35:33.5±0.9,52°.61N±0°.05×159°.78E±0°.04,h46km±9km, n58,σ1s69/66,mb3.8/19,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.51**	**17**	*e*P	**Pn**	**07 35 44.9**	**+0.3**
SPN				*e*S	**Sn**	**07 35 52.7**	**+0.2**
NLC	**Nalytchevo**	**0.62**	**335**	*e*P	**Pn**	**07 35 46.1**	**+0.1**
NLC				*e*S	**Sn**	**07 35 55.3**	**+0.3**
DALK	**Dalny**	**0.75**	**304**	*e*P	**Pn**	**07 35 47.5**	**-0.2**
DALK				*e*S	**Sn**	**07 35 57.3**	**-0.7**
RUS	**Russkaya**	**0.79**	**257**	*e*P	**Pn**	**07 35 48.0**	**-0.3**
RUS				*e*S	**Sn**	**07 35 58.5**	**-0.5**
PET	**Petropavlovsk**	**0.80**	**301**	*e*P	**Pn**	**07 35 48.2**	**-0.4**
PET				*e*S	**Sn**	**07 35 58.3**	**-0.9**
UGLR	**Uglovaya**	**0.83**	**316**	*e*P	**Pn**	**07 35 49.3**	**+0.3**
INSR	**Institute**	**0.84**	**303**	*e*P	**Pn**	**07 35 48.8**	**-0.2**
INSR				*e*S	**Sn**	**07 36 00.3**	**0.0**
SDLR	**Sedlovina**	**0.86**	**321**	*e*P	**Pn**	**07 35 49.4**	**+0.1**
SMAR	**Somma**	**0.88**	**318**	*e*P	**Pn**	**07 35 49.7**	**0.0**
AVH	**Avacha**	**0.91**	**316**	*e*P	**Pn**	**07 35 50.5**	**+0.5**
KRER	**Koryakskii**	**0.93**	**318**	*e*P	**Pn**	**07 35 50.8**	**+0.4**
KOK	**Koryaka**	**0.97**	**315**	*e*P	**Pn**	**07 35 51.2**	**+0.4**
MTVR	**Mutnovka**	**0.98**	**263**	*e*P	**Pn**	**07 35 50.4**	**-0.6**
KRX	**Arik**	**1.01**	**318**	*e*P	**Pn**	**07 35 51.6**	**+0.2**
KRMR	**Karymshinskiy**	**1.02**	**283**	*e*P	**Pn**	**07 35 51.3**	**-0.2**
KRMR				*e*S	**Sn**	**07 36 04.2**	**-0.5**
GRL	**Gorelyy**	**1.04**	**267**	*e*P	**Pn**	**07 35 52.3**	**+0.5**
ASAK	**Asacha**	**1.17**	**259**	*e*P	**Pn**	**07 35 54.1**	**+0.6**
ASAK				*e*S	**Sn**	**07 36 09.4**	**+1.1**
KDTR	**Khodutka, Kamc**	**1.32**	**233**	*e*P	**Pn**	**07 35 55.8**	**+0.3**
KDTR				*e*S	**Sn**	**07 36 11.7**	**-0.1**
PETK	**Petropavlovsk-**	**1.35**	**292**	P	**Pn**	**07 35 56.2**	**+0.2**
	2.6nm,0.3s,baz=102,slow=20,SNR=48						
PETK				S	**Sn**	**07 36 12.6**	**-0.2**
	219nm,0.5s,baz=122,slow=19,SNR=5.6						
KII	**Karymskiy**	**1.44**	**352**	*e*P	**Pn**	**07 35 58.0**	**+0.8**
KII				*e*S	**Sn**	**07 36 16.4**	**+1.5**
GNL	**Ganaly**	**1.55**	**315**	*e*P	**Pn**	**07 35 59.8**	**+1.1**
APC	**Apacha**	**1.62**	**282**	*e*P	**Pn**	**07 36 00.7**	**+1.1**
APC				*e*S	**Sn**	**07 36 21.7**	**+2.5**
PAU	**Pauzhetka**	**2.16**	**239**	*e*P	**Pn**	**07 36 08.2**	**+1.1**
TUMD	**Tumrok D**	**2.62**	**8**	*e*P	**Pn**	**07 36 15.7**	**+2.4**
TUMD				*e*S	**Sn**	**07 36 47.1**	**+3.2**
SKR	**Severo-Kuril's**	**2.99**	**231**	*e*P	**Pn**	**07 36 20.0**	**+1.6**
ESO	**Esso**	**3.38**	**350**	*e*P	**Pn**	**07 36 25.6**	**+1.9**
KOZ	**Kozyrevsk**	**3.45**	**1**	*e*P	**Pn**	**07 36 29.2**	**+4.5**
KBTR	**Krutoberegovo**	**4.02**	**25**	*e*P	**Pn**	**07 36 35.3**	**+2.9**
KBG	**Krutoberegovo**	**4.03**	**24**	*e*P	Pn	07 36 37.6	+5.0
SMKR	**Semkarok**	**4.10**	**13**	*e*P	**Pn**	**07 36 36.7**	**+3.1**
BKI	**Bering**	**4.49**	**52**	*e*P	**Pn**	**07 36 39.8**	**+0.9**
BKI				*e*S	**Sn**	**07 37 26.1**	**-3.6**
SHEM	**Shemya Is, Ala**	**8.71**	**84**	P	**Pn**	**07 37 39.1**	**+2.4**
	21nm,0.6s,baz=294,slow=20,SNR=1.4						
SHEM				S	**Sn**	**07 39 08.6**	**-4.9**
	34nm,0.8s,baz=278,slow=19,SNR=1.7						
ASAJ	**Asahikawa**	**14.21**	**240**	P	**Pn**	**07 38 52.9**	**+1.1**
	2.8nm,0.6s,baz=63,slow=9.0,SNR=5.1						
MJAR	**Matsushiro Arr**	**22.10**	**232**	P	**P**	**07 40 26.4**	**+1.7**
	0.6nm,0.3s,baz=31,slow=11,SNR=4.3						
	0.6nm,0.3s						
ILAR	**Eielson Array**	**29.29**	**45**	P	**P**	**07 41 33.8**	**+2.7**
	0.2nm,0.6s,baz=275,slow=7.5,SNR=4.1						
	0.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**33.28**	**168**	T	T	08 18 05.0	
	baz=352,slow=76,SNR=264						
H11N3	**WAKE ISLAND Hy**	**33.30**	**168**	T	T	08 17 54.1	
	baz=352,slow=76,SNR=188						
H11N1	**WAKE ISLAND Hy**	**33.30**	**168**	T	T	08 17 52.8	
	baz=352,slow=76,SNR=279						
H11S1	**WAKE ISLAND Hy**	**34.47**	**168**	T	T	08 19 28.0	
	baz=352,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**34.48**	**168**	T	T	08 19 27.5	
	baz=352,slow=76,SNR=60						
H11S2	**WAKE ISLAND Hy**	**34.48**	**168**	T	T	08 19 28.3	
	baz=352,slow=76,SNR=13						
ZALV	**Zalesovo Beam**	**42.87**	**303**	P	**P**	**07 43 25.0**	**-2.0**
	0.5nm,0.5s,baz=54,slow=9.7,SNR=1.6						
	0.5nm,0.5s						
YKA	**Yellowknife Ar**	**43.65**	**42**	P	**P**	**07 43 34.1**	**+1.0**
	0.1nm,0.4s,baz=299,slow=8.2,SNR=1.5						
	0.1nm,0.4s						
SPITS	**Spitsbergen Ar**	**47.58**	**350**	P	**P**	**07 44 02.7**	**-1.2**
	1.4nm,0.4s,baz=33,slow=5.5,SNR=13						
	1.4nm,0.4s						
KURBB	**Kurchatov Arra**	**47.92**	**302**	P	**P**	**07 44 04.5**	**-2.4**
	0.7nm,0.5s,baz=59,slow=7.5,SNR=5.9						
MKAR	**Makanchi Array**	**48.19**	**296**	P	**P**	**07 44 06.6**	**-2.5**
	0.6nm,0.5s,baz=58,slow=7.6,SNR=12						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**50.54**	**309**	P	**P**	**07 44 23.7**	**-3.2**
	0.8nm,0.4s,baz=55,slow=7.7,SNR=6.4						
	0.8nm,0.4s						
NVAR	**Mina Array Bea**	**56.09**	**70**	P	**P**	**07 45 08.7**	**+0.7**
	0.1nm,0.4s,baz=321,slow=10.0,SNR=2.1						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**57.93**	**60**	P	**P**	**07 45 21.9**	**+0.8**
	0.2nm,0.5s,baz=306,slow=4.0,SNR=3.7						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**60.48**	**336**	P	**P**	**07 45 36.0**	**-2.1**
	1.6nm,0.8s,baz=38,slow=5.3,SNR=5.5						
	1.6nm,0.8s						
NOA	**NORSAR Array B**	**63.95**	**344**	P	**P**	**07 46 00.4**	**-0.9**
	1.0nm,0.8s,baz=23,slow=6.7,SNR=2.7						
	1.0nm,0.8s						
HFS	**Hagfors**	**64.35**	**342**	P	**P**	**07 46 01.7**	**-2.2**
	0.9nm,0.4s,baz=35,slow=3.5,SNR=8.0						
	0.9nm,0.4s						
AKASG	**Malin Array Be**	**68.92**	**329**	P	**P**	**07 46 31.7**	**-1.5**
	0.4nm,0.4s,baz=30,slow=6.2,SNR=2.3						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**71.00**	**67**	P	**P**	**07 46 47.8**	**+1.3**
	0.3nm,0.5s,baz=318,slow=5.9,SNR=8.9						
	0.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**71.49**	**350**	P	**P**	**07 46 48.3**	**-0.5**
	0.7nm,0.4s,baz=16,slow=6.2,SNR=6.7						
	0.7nm,0.4s						
GERES	**GERESS Array B**	**74.88**	**338**	P	**P**	**07 47 08.6**	**-0.5**
	0.7nm,0.5s,baz=22,slow=5.3,SNR=3.0						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**75.56**	**205**	P	**P**	**07 47 13.7**	**+0.6**
	0.3nm,0.7s,baz=17,slow=5.3,SNR=1.5						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**79.24**	**204**	P	**P**	**07 47 33.5**	**-0.1**
	0.1nm,0.4s,baz=17,slow=6.1,SNR=1.3						
	0.1nm,0.4s						

*SDD **28** 07:36:02.0±1.9,17°.61N×66°.90W,h31km±37km,MD3.2, ML2.2,MW2.6,Presumed earthquake*
*RSPR **28** 07:36:04.4,17°.74N×66°.89W,h3km,MD2.6/5*
ISC 28 07:36:01.7±2.6,17°.6N±0°.1×66°.88W±0°.03,h15km±10km, n12,σ0s71/25,11C-3D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.36**	**0**	↓*e*P	**Pg**	**07 36 09.5**	**+0.4**
GBPR				*e*S	**Sg**	**07 36 13.4**	**-0.8**
CRPR	**Cabo Rojo, PR**	**0.45**	**331**	*e*Pg	**Pb**	**07 36 11.7**	**+0.3**
CRPR				IAML	**Sg**	**07 36 16.8**	**0.0**
	comp=N,151nm,0.2s						
CRPR				↑*e*Sg	**Sg**	**07 36 16.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.45**	**331**	↓*e*P	**Pb**	**07 36 11.6**	**+0.2**
CRPR				*e*S	**Sg**	**07 36 16.9**	**0.0**
OBIP	**Obispado Ponce**	**0.51**	**31**	↑*e*P	**Pg**	**07 36 12.3**	**+0.6**
OBIP				*e*S	**Sg**	**07 36 18.8**	**+0.3**
LSP	**Las Mesas**	**0.60**	**341**	↑*e*P	**Pb**	**07 36 14.0**	**+0.2**
LSP				*e*S	**Sg**	**07 36 20.9**	**-0.5**
PRSN	**Puerto Rico Se**	**0.66**	**338**	*e*Pg	**Pg**	**07 36 13.6**	**-0.9**
PRSN				↑*e*Sg	**Sb**	**07 36 23.0**	**-0.7**
PRSN				IAML		07 36 27.1	
	comp=N,168nm,0.3s						
PRSN	**Puerto Rico Se**	**0.66**	**338**	↑*e*P	**Pb**	**07 36 15.3**	**+0.5**
PRSN				*e*S	**Sb**	**07 36 23.1**	**-0.7**
SJG	**San Juan**	**0.86**	**54**	*e*Pg	**Pb**	**07 36 16.4**	**-1.9**
SJG				↑*e*Sg	**Sb**	**07 36 28.9**	**-0.7**
ECPR	**Experimental S**	**0.86**	**35**	↑*e*P	**Pb**	**07 36 18.4**	**0.0**
ECPR				*e*S	**Sg**	**07 36 30.1**	**+0.4**
HUMP	**Col San Antoni**	**1.12**	**61**	↓*e*P	**Pn**	**07 36 24.0**	**+1.2**
HUMP				*e*S	**Sn**	**07 36 38.2**	**+0.3**
HIDR	**Higuey Centro**	**2.00**	**300**	↑*e*Pg	**Pn**	**07 36 35.1**	**+0.1**
HIDR				↑*e*Sg	**Sn**	**07 36 59.7**	**0.0**
HIDR				IAML		07 37 11.5	
	comp=N,14nm,1.6s						
HATOM	**Hato Mayor del**	**2.65**	**297**	↑*e*Pg	**Pn**	**07 36 44.8**	**+0.8**
HATOM				↑*e*Sg	**Sn**	**07 37 15.4**	**-0.4**
HATOM				IAML		07 37 41.6	
	comp=N,15nm,3.5s						

*KRSC **28** 07:38:14.2±1.1,52°.62N×159°.78E,h54km±14km,Ml4.5*
*MOS **28**

KRX					S		**Sn**	07 38 46.7	+0.1
KRX	**Arik**	**0.99**	**319**	*e*P			**Pn**	07 38 34.0	+0.3
KRX				*e*S			**Sn**	07 38 46.8	+0.1
KRMR	**Karymshinskiy**	**1.00**	**282**	PN			**Pn**	07 38 33.5	-0.1
KRMR				S			**Sn**	07 38 46.1	-0.6
KRMR	**Karymshinskiy**	**1.00**	**282**	*e*P			**Pn**	07 38 33.6	-0.1
KRMR				*e*S			**Sn**	07 38 46.1	-0.6
GRL	**Gorelyy**	**1.02**	**267**	PN			**Pn**	07 38 34.6	+0.6
GRL				S			**Sn**	07 38 48.0	+0.7
GRL	**Gorelyy**	**1.02**	**267**	*e*P			**Pn**	07 38 34.7	+0.6
GRL				*e*S			**Sn**	07 38 48.1	+0.7
ASAK	**Asacha**	**1.15**	**259**	PN			**Pn**	07 38 36.4	+0.6
ASAK				S			**Sn**	07 38 51.1	+0.6
ASAK	**Asacha**	**1.15**	**259**	*e*P			**Pn**	07 38 36.4	+0.6
ASAK				*e*S			**Sn**	07 38 51.1	+0.6
KDTR	**Khodutka, Kamc**	**1.31**	**232**	PN			**Pn**	07 38 38.3	+0.5
KDTR				S			**Sn**	07 38 54.2	+0.1
KDTR	**Khodutka, Kamc**	**1.31**	**232**	*e*P			**Pn**	07 38 38.4	+0.5
KDTR				*e*S			**Sn**	07 38 54.3	+0.1
PEA0B	**Petropavlovsk-**	**1.33**	**292**				**Pn**	07 38 38.4	+0.3
PEA0B						Sn	**Sn**	07 38 54.9	+0.2
PEA0B	**Petropavlovsk-**	**1.33**	**292**	PN			**Pn**	07 38 38.6	+0.5
PEA0B				S			**Sn**	07 38 54.8	+0.1
PETK	**Petropavlovsk-**	**1.33**	**292**	P			**Pn**	07 38 38.6	+0.4
	comp=N,738nm,0.4s,baz=94,slow=21,SNR=51								
PETK				S			**Sn**	07 38 54.6	-0.1
	comp=N,493nm,0.6s,baz=101,slow=21,SNR=4.4								
PETK	**Petropavlovsk-**	**1.33**	**292**				**Pn**	07 38 38.4	+0.3
KII	**Karymskiy**	**1.43**	**353**	PN			**Pn**	07 38 40.2	+0.7
KII				S			**Sn**	07 38 57.7	+0.6
KII	**Karymskiy**	**1.43**	**353**	*e*P			**Pn**	07 38 40.2	+0.7
KII				*e*S			**Sn**	07 38 57.7	+0.6
GNL	**Ganaly**	**1.52**	**315**	PN			**Pn**	07 38 42.1	+1.2
GNL				S			**Sn**	07 39 01.0	+1.4
GNL	**Ganaly**	**1.52**	**315**	*e*P			**Pn**	07 38 42.2	+1.2
GNL				*e*S			**Sn**	07 39 01.0	+1.4
APC	**Apacha**	**1.60**	**282**	PN			**Pn**	07 38 43.1	+1.4
APC				S			**Sn**	07 39 03.1	+1.9
APC	**Apacha**	**1.60**	**282**	*e*P			**Pn**	07 38 43.2	+1.4
APC				*e*S			**Sn**	07 39 03.2	+1.9
PAU	**Pauzhetka**	**2.15**	**239**	PN			**Pn**	07 38 51.1	+1.8
PAU	**Pauzhetka**	**2.15**	**239**	*e*P			**Pn**	07 38 51.1	+1.8
MKZ	**Mys Kozlova**	**2.27**	**31**	PN			**Pn**	07 38 51.9	+1.0
MKZ	**Mys Kozlova**	**2.27**	**31**	*e*P			**Pn**	07 38 51.9	+1.0
TUMD	**Tumrok D**	**2.61**	**8**	PN			**Pn**	07 38 57.2	+1.5
TUMD	**Tumrok D**	**2.61**	**8**	*e*P			**Pn**	07 38 57.2	+1.5
SKR	**Severo-Kuril's**	**2.98**	**231**	*e*PN			**Pn**	07 38 02.2	+1.5
SKR				*e*S			**Sn**	07 39 34.9	-0.2
SKR					pmax		pmax		
	comp=Z,72nm,0.5s								
SKR					smax		smax		
	comp=E,1μm,0.6s								
SKR					smax		smax		
	comp=N,1μm,0.7s								
SKR	**Severo-Kuril's**	**2.98**	**231**	*e*P			**Pn**	07 39 02.5	+1.8
KMNR	**Kamenistaya**	**3.15**	**5**	PN			**Pn**	07 39 04.8	+1.7
KMNR	**Kamenistaya**	**3.15**	**5**	*e*P			**Pn**	07 39 04.8	+1.7
ESO	**Esso**	**3.36**	**350**	PN			**Pn**	07 39 07.8	+1.8
ESO	**Esso**	**3.36**	**350**	*e*P			**Pn**	07 39 07.9	+1.8
KOZ	**Kozyrevsk**	**3.44**	**1**	PN			**Pn**	07 39 08.1	+1.1
KOZ	**Kozyrevsk**	**3.44**	**1**	*e*P			**Pn**	07 39 08.1	+1.1
SRDR	**Sredinnyy**	**3.70**	**360**	PN			**Pn**	07 39 12.9	+2.3
SRDR	**Sredinnyy**	**3.70**	**360**	*e*P			**Pn**	07 39 13.0	+2.3
KLY	**Klyuchi**	**3.73**	**8**	PN			**Pn**	07 39 12.8	+1.8
KLY	**Klyuchi**	**3.73**	**8**	*e*P			**Pn**	07 39 12.8	+1.8
KBTR	**Krutoberegovo**	**4.01**	**25**	PN			**Pn**	07 39 17.5	+2.6
KBTR	**Krutoberegovo**	**4.01**	**25**	*e*P			**Pn**	07 39 17.6	+2.6
KBG	**Krutoberegovo**	**4.03**	**24**	PN			**Pn**	07 39 18.2	+3.2
KBG	**Krutoberegovo**	**4.03**	**24**	*e*P			**Pn**	07 39 18.3	+3.2
SMKR	**Semkarok**	**4.09**	**14**	PN			**Pn**	07 39 19.8	+3.8
SMKR	**Semkarok**	**4.09**	**14**	*e*P			**Pn**	07 39 19.8	+3.8
BKI	**Bering**	**4.50**	**52**	PN			**Pn**	07 39 22.5	+1.0
BKI	**Bering**	**4.50**	**52**	*e*P			**Pn**	07 39 22.6	+1.0
BKI				*e*S			**Sn**	07 40 08.5	-3.9
MA2	**Magadan**	**8.58**	**328**	LR			LR	07 44 15.7	
	comp=N,115nm,18.0s,baz=130,slow=43								
MA2	**Magadan**	**8.58**	**328**	*e*PN			**Pn**	07 40 22.0	+4.6
SHEM	**Shemya Is, Ala**	**8.73**	**84**	P			**Pn**	07 40 21.5	+2.0
	comp=N,21nm,0.4s,baz=283,slow=19,SNR=2.5								
SHEM				S			**Sn**	07 41 51.4	-5.0
	comp=N,55nm,1.0s,baz=280,slow=18,SNR=2.0								
SHEM				LR			LR	07 43 37.4	
	comp=N,42nm,21.3s,baz=306,slow=35								
SHEM	**Shemya Is, Ala**	**8.73**	**84**	Pn			**Pn**	07 40 22.2	+2.8
SMY	**Shemya**	**8.73**	**84**	Pn			**Pn**	07 40 20.7	+1.3
SMY	**Shemya**	**8.73**	**84**	PN			**Pn**	07 40 20.7	+1.3
SEY	**Seymchan**	**11.05**	**342**	P			**Pn**	07 40 49.9	-1.2
	comp=N,0.4nm,0.3s,baz=159,slow=16,SNR=5.9								
SEY	**Seymchan**	**11.05**	**342**	*e*PN			**Pn**	07 40 55.1	+4.0
SEY					pmax		pmax		
	comp=Z,2.0nm,0.9s								
YUK	**Yuzh-Kuril'sk**	**12.60**	**232**	*ce*PN			**Pn**	07 41 12.0	-0.3
ASAJ	**Asahikawa**	**14.20**	**240**	P			**Pn**	07 41 34.6	+0.5
	comp=Z,10nm,0.8s,baz=42,slow=15,SNR=7.4								
BILL	**Bilibino**	**15.78**	**9**	Pn			**Pn**	07 41 56.2	+1.6
BILL	**Bilibino**	**15.78**	**9**	*c i*P			**P**	07 41 59.4	+1.6
BILL					pmax		pmax		
	comp=Z,3.0nm,0.9s								
KLR	**Kul'dur**	**17.92**	**270**	P			**Pn**	07 42 21.6	+0.2
	comp=Z,1.1nm,0.8s,baz=59,slow=9.6,SNR=4.6								
YAK	**Yakutsk**	**18.59**	**312**	P			**P**	07 42 27.0	-1.8
	comp=Z,32nm,0.6s,baz=112,slow=2.9,SNR=6.9								
YAK	**Yakutsk**	**18.59**	**312**	P			**P**	07 42 27.2	-1.6
YAK	**Yakutsk**	**18.59**	**312**	*e*P			**P**	07 42 29.4	+0.6
YAK				*e*S			**S**	07 45 57.6	-0.3
YAK					pmax		pmax		
	comp=Z,37nm,0.9s								
YAK					pmax		pmax		
	comp=N,4.0nm,1.0s								
YAK					pmax		pmax		
	comp=E,7.0nm,1.3s								
YAK					pmax		pmax		
	comp=Z,162nm,4.1s								
YAK					pmax		pmax		
	comp=N,58nm,4.8s								
YAK					pmax		pmax		
	comp=E,94nm,4.4s								
YAK					smax		smax		
	comp=N,87nm,4.3s								
YAK					smax		smax		
	comp=E,43nm,4.8s								
TNA	**Tin City**	**20.75**	**39**	P			Pn	07 42 54.2	-0.9
TNA				IAmb			IAmb	07 42 55.8	
	comp=Z,8.9nm,1.1s								
ANM	**Nome**	**21.42**	**43**	P			**P**	07 42 59.7	+0.2
ANM	**Nome**	**21.42**	**43**	P			**P**	07 42 59.7	+0.2
ANM					pmax		pmax		
	comp=Z,4.0nm,1.2s								
MJA0	**Matsu Arr-Jizo**	**22.07**	**232**	*e*P			**P**	07 43 09.5	+2.8
MJA0					pmax		pmax		
	comp=Z,4.0nm,0.8s								
F15K	**North Star Dit**	**22.07**	**40**	P			**P**	07 43 08.3	+1.9
MJB9	**Matsu-Tunnel**	**22.09**	**232**	P			**P**	07 43 07.7	+0.8
MJB9				IAmb			IAmb	07 43 30.9	
	comp=Z,12nm,1.2s								
MAJO	**Matsushiro**	**22.09**	**232**	P			**P**	07 43 07.0	+0.1
MAJO				IAmb			IAmb	07 43 09.8	
	comp=Z,6.5nm,0.7s								
MAJO	**Matsushiro**	**22.09**	**232**	*i*P			**P**	07 43 07.9	+1.0
MAJO					pmax		pmax		
	comp=Z,5.0nm,0.9s								
MJAR	**Matsushiro Arr**	**22.09**	**232**	P			**P**	07 43 08.0	+1.1
	comp=Z,3.6nm,0.8s,baz=20,slow=11,SNR=11								
	comp=Z,3.6nm,0.8s								
N14K	**Kuskokwak Cree**	**22.35**	**56**	P			**P**	07 43 11.3	+1.8
N14K				IAmb			IAmb	07 43 20.1	
	comp=Z,7.4nm,1.1s								
K15K	**Wolf Creek Mou**	**22.62**	**49**	P			**P**	07 43 12.8	+0.4
K15K				IAmb			IAmb	07 43 35.6	
	comp=Z,6.9nm,1.2s								
C16K	**Lisburne Hills**	**22.81**	**33**				**P**	07 43 14.3	+0.1
C16K				IAmb			IAmb	07 43 16.5	
	comp=Z,4.3nm,0.8s								
G16K	**Koyuk River**	**22.89**	**41**	P			**P**	07 43 14.9	-0.1
N15K	**Kwethluk River**	**23.16**	**55**	P			**P**	07 43 18.7	+0.8
N15K				IAmb			IAmb	07 43 55.2	
	comp=Z,4.9nm,1.0s								
J16K	**Anvik River**	**23.18**	**47**	P			**P**	07 43 19.2	+1.2
F17K	**Baldwin Pennin**	**23.62**	**39**	P			**P**	07 43 23.9	+1.7
F17K				IAmb			IAmb	07 43 35.4	
	comp=Z,8.7nm,0.8s								
H17K	**Granite Mounta**	**23.78**	**43**				**P**	07 43 24.6	+0.9
H17K				IAmb			IAmb	07 43 27.1	
	comp=Z,5.3nm,1.1s								
E18K	**Tukpahlearik C**	**24.15**	**37**				**P**	07 43 28.6	+1.5
E18K					IAmb		IAmb	07 43 30.0	
	comp=Z,6.1nm,0.7s								
C18K	**Utukok River**	**24.36**	**34**				**P**	07 43 29.4	+0.3
F19K	**Shaleruckik Mo**	**25.06**	**39**				**P**	07 43 36.6	+1.2
F19K					IAmb		IAmb	07 43 44.5	
	comp=Z,4.5nm,1.1s								
C19K	**Lookout Ridge**	**25.07**	**33**				**P**	07 43 36.1	+0.6
G19K	**Purcell Mounta**	**25.18**	**41**	P			**P**	07 43 37.7	+1.2
G19K					IAmb		IAmb	07 43 39.0	
	comp=Z,4.5nm,1.1s								
E22K	**Anaktuvuk Pass**	**27.57**	**37**				**P**	07 43 58.4	+0.4
E22K					IAmb		IAmb	07 44 01.2	
	comp=Z,4.2nm,1.1s								
TJN	**Taejon**	**27.92**	**247**	*e*P			**P**	07 44 02.5	+1.1
C23K	**Itkillik River**	**28.31**	**34**	P			**P**	07 44 05.4	+0.8
C23K					IAmb		IAmb	07 44 06.5	
	comp=Z,3.9nm,0.6s								
JCJ	**Chichijima**	**28.68**	**214**	P			**P**	07 44 07.0	-1.3
ILAR	**Eielson Array**	**29.30**	**45**	P			**P**	07 44 14.1	+0.8
	comp=Z,0.4nm,0.6s,baz=272,slow=8.1,SNR=7.3								
ILAR					PcP		**PcP**	07 47 17.4	-1.3
	comp=Z,0.1nm,0.5s,baz=297,slow=4.0,SNR=1.6								
	comp=Z,0.4nm,0.6s								
D25K	**Kavik River**	**29.70**	**35**	P			**P**	07 44 17.5	+0.5
C27K	**Jago River**	**30.66**	**35**	P			**P**	07 44 26.1	+0.7
C27K					IAmb		IAmb	07 44 27.4	
	comp=Z,2.7nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**33.30**	**168**	T			T	08 20 35.2	
	baz=352,slow=76,SNR=43								
H11N3	**WAKE ISLAND Hy**	**33.31**	**168**	T			T	08 20 33.2	
	baz=352,slow=76,SNR=52								
H11N1	**WAKE ISLAND Hy**	**33.32**	**168**	T			T	08 20 35.0	
	baz=352,slow=76,SNR=47								
SONM	**Songino Array**	**33.80**	**284**	P			**P**	07 44 52.6	-0.6
	comp=Z,0.4nm,0.8s,baz=75,slow=7.6,SNR=2.7								
SONM					PcP		**PcP**	07 47 30.5	-0.9
	comp=Z,0.5nm,0.8s,baz=60,slow=3.5,SNR=3.0								
	comp=Z,0.4nm,0.8s								
SONM	**Songino Array**	**33.80**	**284**	P			**P**	07 44 52.7	-0.6
H11S1	**WAKE ISLAND Hy**	**34.48**	**168**	T			T	08 21 59.6	
	baz=352,slow=76,SNR=27								
H11S3	**WAKE ISLAND Hy**	**34.49**	**168**	T			T	08 22 01.1	
	baz=352,slow=76,SNR=53								
H11S2	**WAKE ISLAND Hy**	**34.50**	**168**	T			T	08 22 01.6	
	baz=352,slow=76,SNR=17								
C36M	**Paulatuk**	**37.55**	**34**				**P**	07 45 25.7	+0.8
ZALV	**Zalesovo Beam**	**42.85**	**303**	P			**P**	07 46 06.7	-2.3
	comp=Z,0.3nm,0.3s,baz=75,slow=7.6,SNR=1.8								
	comp=Z,0.3nm,0.3s								
YKA	**Yellowknife Ar**	**43.65**	**42**	P			**P**	07 46 15.5	+0.2
	comp=Z,0.5nm,0.8s,baz=299,slow=8.8,SNR=7.1								
	comp=Z,0.5nm,0.8s								
SPITS	**Spitsbergen Ar**	**47.56**	**350**	P			**P**	07 46 45.0	-1.0
	comp=Z,2.7nm,0.6s,baz=49,slow=4.4,SNR=17								
	comp=Z,2.7nm,0.6s								
KURK	**Kurchatov**	**47.80**	**302**	P			**P**	07 46 45.9	-2.3
KURBB	**Kurchatov Arra**	**47.90**	**302**	P			**P**	07 46 45.9	-3.0
	comp=Z,1.4nm,0.5s,baz=58,slow=7.5,SNR=11								
MKAR	**Makanchi Array**	**48.17**	**296**	P			**P**	07 46 48.7	-2.4
	comp=Z,1.2nm,0.5s,baz=58,slow=7.7,SNR=20								
	comp=Z,1.2nm,0.5s								
PZH	**PanZhiHua**	**50.11**	**262**	P			**P**	07 47 07.5	+1.2
BVAR	**Borovoye Array**	**50.51**	**308**	P			**P**	07 47 06.5	-2.4
	comp=Z,1.2nm,0.4s,baz=59,slow=6.3,SNR=8.1								
	comp=Z,1.2nm,0.4s								
CMAR	**Chiang Mai Arr**	**57.88**	**258**	P			**P**	07 48 02.4	-0.5
	comp=Z,0.8nm,0.3s,baz=42,slow=6.4,SNR=1.8								
	comp=Z,0.8nm,0.3s								
PDAR	**Pinedale Array**	**57.94**	**60**	P			**P**	07 48 05.2	+1.8
	comp=Z,0.6nm,0.6s,baz=320,slow=7.2,SNR=7.9								
	comp=Z,0.6nm,0.6s								
ULM	**Lac du Bonnet**	**59.30**	**46**	P			**P**	07 48 13.2	+0.9
	comp=Z,1.1nm,0.4s,baz=321,slow=13,SNR=1.9								
	comp=Z,1.4nm,0.4s								
FINES	**FINESS Array B**	**60.47**	**336**	P			**P**	07 48 18.8	-1.4
	comp=Z,2.3nm,0.7s,baz=28,slow=6.6,SNR=8.3								
	comp=Z,2.3nm,0.7s								
NOA	**NORSAR Array B**	**63.93**	**344**	P			**P**	07 48 42.9	-0.5
	comp=Z,0.8nm,0.5s,baz=19,slow=6.5,SNR=5.1								
	comp=Z,0.8nm,0.5s								
LPSR	**Galich'ya Gora**	**64.04**	**324**	*e*P			**P**	07 48 44.3	+0.1
LPSR					pmax		pmax		
	comp=Z,9.0nm,0.6s								
HFS	**Hagfors**	**64.33**	**342**	P			**P**	07 48 44.9	-1.1
	comp=Z,1.3nm,0.4s,baz=29,slow=3.3,SNR=9.6								
	comp=Z,1.3nm,0.4s								
VSR	**Storozhevoye**	**65.09**	**323**	*e*P			P	07 48 43.8	-7.3
VSR					pmax		pmax		
	comp=Z,3.0nm,0.6s								
AKASG	**Malin Array Be**	**68.90**	**329**	P			**P**	07 49 13.6	-1.7
	comp=Z,1.1nm,0.4s,baz=32,slow=6.8,SNR=6.2								
	comp=Z,1.1nm,0.5s								
TXAR	**Lajitas Array**	**71.02**	**67**	P			**P**	07 49 30.5	+1.8
	comp=Z,0.5nm,0.5s,baz=320,slow=6.2,SNR=19								
	comp=Z,0.5nm,0.5s								
EKA	**Eskdalemuir Ar**	**71.48**	**350**	P			**P**	07 49 30.7	-0.3
	comp=Z,1.6nm,0.5s,baz=11,slow=6.1,SNR=7.8								
	comp=Z,1.6nm,0.5s								
LANS	**Liptovska Anna**	**73.14**	**334**	*e*P			**P**	07 49 42.2	+1.1
LANS	**Liptovska Anna**	**73.14**	**334**	*e*P			**P**	07 49 42.2	+1.1
GERES	**GERESS Array B**	**74.86**	**338**	P			**P**	07 49 50.5	-0.7
	comp=Z,1.1nm,0.5s,baz=29,slow=6.5,SNR=6.0								
	comp=Z,1.1nm,0.5s								
WRA	**Warramunga Arr**	**75.56**	**205**	P			**P**	07 49 56.0	+0.7
	comp=Z,0.4nm,0.7s,baz=15,slow=5.7,SNR=1.9								
	comp=Z,0.4nm,0.7s								
WRA	**Warramunga Arr**	**75.56**	**205**	P			**P**	07 49 56.0	+0.7
BRTR	**Keskin Array B**	**76.84**	**320**	P			**P**	07 50 01.6	-1.2
	comp=Z,0.7nm,0.6s,baz=22,slow=2.5,SNR=4.0								
	comp=Z,0.7nm,0.6s								
ASAR	**Alice Springs**	**79.24**	**204**	P			**P**	07 50 17.1	+1.3
	comp=Z,0.1nm,0.4s,baz=16,slow=6.3,SNR=5.2								
	comp=Z,0.1nm,0.4s								
MMAI	**Mount Meron Ar**	**81.90**	**316**	P			**P**	07 50 29.2	-1.1
	comp=Z,1.9nm,0.4s,baz=31,slow=20,SNR=6.2								
	comp=Z,1.9nm,0.4s								
ESDC	**Sonseca Array**	**86.99**	**347**	P			**P**	07 50 55.2	-0.6
	comp=Z,0.8nm,0.8s,baz=8.7,slow=4.9,SNR=5.0								
	comp=Z,0.8nm,0.8s								

AEIC ***28*** *07:40:32.8±2.6, 51°.85N±0°.04×177°.92W±0°.02, h4km±4km, Error ellipse: s-maj=6.4km s-min=1.3km az=175.0*

NEIC 28 07:40:33.8±1.5, 51°.90N±0°.03×177°.92W±0°.02, h11km±3km, mb3.6/11, ML3.3/12, ML2.8(AEIC)**, Error ellipse: s-maj=4.8km s-min=1.4km az=181.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAFP	**Tanaga Falls P**	**0.04**	**272**		Pg	07 40 35.4	-0.5
TAFP	**Tanaga Falls P**	**0.04**	**272**		Sg	07 40 36.9	-0.4
TASE	**Tanaga Southea**	**0.10**	**228**		Pg	07 40 35.9	-0.6
TASE					Sg	07 40 37.5	-0.9
TAPA	**Tanaga Point A**	**0.11**	**141**		Pg	07 40 35.8	-0.8
TAPA					Sg	07 40 37.5	-1.1
TANO	**Tanaga North**	**0.12**	**278**		Pg	07 40 37.2	+0.3
TANO	**Tanaga North**	**0.12**	**278**		Sg	07 40 39.7	+0.7
TACS	**Tanaga Cape Sa**	**0.14**	**255**		Pg	07 40 37.2	+0.1
TACS					Sg	07 40 40.0	+0.6
TAFL	**Tanaga Flats**	**0.14**	**174**		Pb	07 40 38.8	+0.2
KIMD	**Kanaga Island**	**0.45**	**108**		Pg	07 40 42.6	0.0
KIMD	**Kanaga Island**	**0.45**	**108**		Sg	07 40 49.1	+0.6
KICM	**Kanaga Island**	**0.45**	**87**		Pb	07 40 43.2	-0.6
KIKV	**Kanaga Island**	**0.47**	**92**		Pg	07 40 43.1	+0.2
KIKV	**Kanaga Island**	**0.47**	**92**		Sb	07 40 50.2	-0.8
KIWB	**Kanaga Island**	**0.48**	**95**		Pg	07 40 43.2	0.0
KIWB				Sg	Sg	07 40 50.1	+0.5
KIWB				IAML		07 40 50.7	
	comp=N,1μm,0.7s						
KINC	**Kanaga Island**	**0.49**	**86**		Pg	07 40 43.7	+0.3
KIRH	**Kanaga Island**	**0.51**	**90**		Pg	07 40 44.0	+0.1
KIRH					Sb	07 40 51.5	-0.9
GAEA	**Gareloi East**	**0.52**	**258**		Pg	07 40 44.3	+0.3
GANE	**Gareloi Northe**	**0.54**	**262**		Pg	07 40 44.6	+0.4
GALAA	**Gareloi Lava P**	**0.54**	**256**		Pg	07 40 44.7	+0.3
GANO	**Gareloi North**	**0.55**	**262**		Pb	07 40 45.1	-0.5
GASW	**Gareloi Southw**	**0.59**	**259**		Pg	07 40 45.3	0.0
GAKI	**Gareloi-Kavalg**	**0.65**	**238**		Pg	07 40 45.8	-0.6
GAKI					Sg	07 40 54.9	-0.1
ADK	**Adak**	**0.77**	**91**		Pg	07 40 48.0	-0.6
ADK				Sg	Sg	07 40 58.2	-0.4
ADAG	**Mount Adagdak**	**0.82**	**84**		Pg	07 40 49.8	+0.1
ETKA	**Kagalaska Isla**	**0.94**	**92**		Pg	07 40 51.0	-1.0
GSCK	**Great Sitkin C**	**1.09**	**83**		Pb	07 40 54.6	-0.2
GSSP	**Great Sitkin S**	**1.10**	**79**		Pb	07 40 54.0	-0.8
GSTD	**Great Sitkin T**	**1.11**	**81**		Pb	07 40 54.9	-0.2
GSMY	**Great Sitkin M**	**1.16**	**82**		Pb	07 40 55.5	-0.5
GSTR	**Great Sitkin T**	**1.17**	**80**	Pn	Pb	07 40 55.5	-0.5
GSTR					Sn	07 41 12.5	+0.3
GSTR				IAML		07 41 19.5	
	comp=E,582nm,0.5s						
GSIG	**Igitkin Island**	**1.24**	**85**		Pn	07 40 56.6	-0.5
CESW	**Semis' Southwe**	**1.56**	**271**		Pn	07 41 01.7	+0.2
AMKA	**Amchitka**	**1.81**	**254**		Pn	07 41 04.4	-0.5
AMKA				Sn	Sn	07 41 27.8	0.0
AMKA				IAML		07 41 30.4	
	comp=E,366nm,0.7s						
AMKA				IAML		07 41 30.4	
	comp=N,277nm,0.6s						
KOWE	**Korovin West**	**2.31**	**77**		Pn	07 41 11.9	0.0
KOKV	**Korovin Volcan**	**2.36**	**77**		Pn	07 41 14.4	+1.8
SHEM	**Shemya Is, Ala**	**4.96**	**283**	Pn	Pn	07 41 47.6	-0.7
SHEM				IAML		07 43 21.8	
	comp=N,24nm,1.1s						
SHEM				IAML		07 44 57.8	
	comp=E,37nm,1.2s						
SMY	**Shemya**	**4.96**	**283**	Pn	Pn	07 41 47.7	-0.6
UNV	**Unalaska Valle**	**7.18**	**70**	Pn	Pn	07 42 20.0	+1.3
LVA	**Lava Point**	**7.52**	**68**	Pn	Pn	07 42 24.2	+0.8
AKUT	**Akutan**	**7.66**	**68**	Pn	Pn	07 42 25.7	+0.4
O14K	**Tigyukauivet M**	**11.94**	**45**	Pn	Pn	07 43 24.0	+0.3
K13K	**Kusilvak Mount**	**12.37**	**30**	Pn	Pn	07 43 29.3	-0.3
SKT	**Skwentna**	**17.45**	**44**	Pn	Pn	07 44 35.6	-1.3
SKT				IAmb	IAmb	07 44 48.6	
	comp=Z,6.7nm,1.0s						
SLKM	**Skilak Lake**	**17.54**	**50**	Pn	Pn	07 44 36.5	-1.6
SLKM				IAmb	IAmb	07 44 46.7	
	comp=Z,10nm,1.2s						
PPLA	**Purkeypile**	**17.56**	**41**	Pn	Pn	07 44 36.8	-1.7
PPLA				IAmb	IAmb	07 45 01.9	
	comp=Z,3.8nm,1.1s						
SUA	**Susitna One**	**17.60**	**46**	P	Pn	07 44 37.7	-1.3
SUA				IAmb	IAmb	07 44 47.2	
	comp=Z,3.6nm,0.8s						
L22K	**Petersville**	**18.00**	**43**	P	P	07 44 45.9	+1.7
E22K	**Anaktuvuk Pass**	**20.58**	**28**	P	P	07 45 13.3	+0.8
E22K				IAmb	IAmb	07 45 21.0	
	comp=Z,1.6nm,0.8s						
RIDG	**Independent Ri**	**20.94**	**43**	P	P	07 45 15.3	-1.1
RIDG				IAmb	IAmb	07 45 34.3	
	comp=Z,3.3nm,1.0s						
L26K	**Log Cabin Wild**	**21.38**	**45**	P	P	07 45 21.3	+0.2
SCRK	**Sand Creek**	**21.38**	**42**	P	P	07 45 21.2	0.0
LON	**Longmire**	**36.15**	**75**	P	P	07 47 35.0	-0.9
SONM	**Songino Array**	**46.90**	**297**	P	P	07 49 03.1	-1.1
SONM		

NIUE	Niue	2.92	87	P		Pn	07 42 39.4	-0.6	
NIUE	Niue	2.92	87			Pn	07 42 36.4	-3.6	
NIUE	Niue	2.92	87	P		Pn	07 42 37.0	-2.9	
NIUE	Niue	2.92	87	P		Pn	07 42 37.1	-2.9	
NIUE				S		Sn	07 43 08.9	-5.7	
AFI	Afiamalu	5.46	13	Pn		Pn	07 43 13.2	-1.8	
	29nm,0.3s,baz=207,slow=11,SNR=20								
AFI				Sn		Sn	07 44 12.0	-5.5	
	99nm,0.3s,baz=180,slow=19,SNR=5.6								
LKBA	Tubou, Lakemba	5.60	280	P		Pn	07 43 20.0	+3.1	
LKBA	Tubou, Lakemba	5.60	280	P		Pn	07 43 20.7	+3.8	
TAVE	Taveuni	7.04	290	P		Pn	07 43 39.9	+3.2	
TAVE	Taveuni	7.04	290	P		Pn	07 43 40.7	+4.0	
DGTI	Dogotuki	7.52	292	P		Pn	07 43 46.2	+2.9	
DGTI	Dogotuki	7.52	292	P		Pn	07 43 47.1	+3.8	
MSVF	Nonsavu	8.62	279	P		Pn	07 44 01.8	+3.3	
MSVF	Nonsavu	8.62	279			Pn	07 44 02.4	+3.9	
MSVF	Nonsavu	8.62	279	P		Pn	07 44 02.4	+3.9	
MSVF	Nonsavu	8.62	279	P		Pn	07 44 02.2	+3.7	
RAO	Raoul Island	10.90	203	Sn		Sn	07 46 19.9	-11	
	78nm,0.3s,baz=90,slow=20,SNR=7.3								
RAO				LR		LR	07 48 05.9		
	comp=Z,5µm,20.7s,baz=31,slow=35								
RAO	Raoul Island	10.90	203	Pn		Pn	07 44 33.1	+3.5	
RAO	Raoul Island	10.90	203	P		Pn	07 44 33.1	+3.5	
GLKZ	Green Lake	10.91	203	P		Pn	07 44 28.2	-1.5	
RAR	Rarotonga	12.57	101	Pn		Pn	07 44 48.1	-4.4	
	25nm,0.3s,baz=254,slow=10.0,SNR=42								
RAR				Sn		Sn	07 47 00.7	-11	
	2.9nm,0.3s,baz=225,slow=16,SNR=1.1								
RAR	Rarotonga	12.57	101	P		Pn	07 44 50.8	-1.7	
RAR	Rarotonga	12.57	101	S		Sn	07 47 14.7	+2.6	
RAR	Rarotonga	12.57	101			Pn	07 44 49.2	-3.2	
RAR	Rarotonga	12.57	101	P		Pn	07 44 49.6	-2.9	
FUNA	Funafuti	13.09	324	Pn		Pn	07 44 53.8	-5.7	
RTV	Rentapao	17.67	272	P		P	07 46 01.4	+0.7	
DVP	Devils Point	17.91	272	P		P	07 46 06.0	+2.8	
DVP	Devils Point	17.91	272	P		P	07 46 03.4	+0.2	
MARNC	Mare, Loyalty	17.92	260	P		P	07 46 03.7	+0.3	
MARNC	Mare, Loyalty	17.92	260			Pn	07 46 00.4	-2.4	
OUENC	Ouen Island, N	19.09	257	P		Pn	07 46 19.8	+2.6	
OUENC	Ouen Island, N	19.09	257	P		P	07 46 15.0	-1.3	
DZM	Mont Dzumac	19.43	258	P		P	07 46 17.4	-2.7	
	2.6nm,0.3s,baz=86,slow=18,SNR=28								
DZM				S		Sn	07 49 51.2	-7.8	
	5.9nm,0.8s,baz=41,slow=18,SNR=1.7								
	63nm,0.9s								
DZM	Mont Dzumac	19.43	258	P		P	07 46 20.7	+0.6	
DZM	Mont Dzumac	19.43	258			P	07 46 17.9	-2.2	
DZM	Mont Dzumac	19.43	258	P		P	07 46 18.6	-1.5	
ONTNC	Ouen Toro	19.44	257	P		P	07 46 20.6	+0.5	
ONTNC	Ouen Toro	19.44	257			P	07 46 19.2	-0.9	
ONTNC	Ouen Toro	19.44	257	P		Pn	07 46 21.3	0.0	
GRZ	Great Barrier	19.73	209	P		Pn	07 46 25.2	+0.5	
MXZ	Matakaoa Point	19.74	201	P		P	07 46 22.2	-1.1	
MXZ	Matakaoa Point	19.74	201	P		P	07 46 24.8	+1.5	
OUZ	Omahuta	19.82	214	P		P	07 46 25.6	+1.4	
OUZ	Omahuta	19.82	214	P		P	07 46 24.1	-0.1	
WCZ	Waipu Caves	20.00	211	P		P	07 46 26.8	+0.7	
HAZ	Te Kaha	20.10	202	P		Pn	07 46 29.2	+0.2	
PUZ	Puketiti	20.22	200	P		Pn	07 46 30.5	0.0	
MWZ	Matawai	20.70	201	P		Pn	07 46 36.2	0.0	
URZ	Urewera	20.79	202	P		P	07 46 33.2	-1.4	
	42nm,0.5s,baz=12,slow=6.9,SNR=49								
URZ				S		S	07 50 19.4	-6.5	
	31nm,0.7s,baz=41,slow=20,SNR=7.2								
	42nm,0.5s								
URZ	Urewera	20.79	202	P		P	07 46 35.9	+1.3	
URZ	Urewera	20.79	202	P		P	07 46 34.0	-0.6	
URZ	Urewera	20.79	202	P		P	07 46 35.1	+0.5	
TOZ	Tahuroa Road	20.95	206			P	07 46 37.2	+0.8	
TOZ				IAmb		IAmb	07 46 40.7		
	comp=Z,449nm,1.8s								
TOZ	Tahuroa Road	20.95	206	P		P	07 46 39.4	+3.0	
RTZ	Ruatahuna	21.15	202			P	07 46 40.5	+1.8	
RTZ				IAmb		IAmb	07 46 52.8		
	comp=Z,212nm,1.4s								
KNZ	Kokohu	21.27	200	P		P	07 46 41.2	+1.3	
KOUNC	Koumac, New Ca	21.39	263	P		P	07 46 42.9	+1.6	
TLZ	Tolley Road	21.45	205	P		P	07 46 43.3	+1.5	
BKZ	Black Stump Fm	21.81	202	P		P	07 46 45.7	0.0	
BKZ	Black Stump Fm	21.81	202			P	07 46 44.9	-0.8	
BKZ				IAmb		IAmb	07 47 06.7		
	comp=Z,192nm,1.6s								
BKZ	Black Stump Fm	21.81	202	P		P	07 46 45.1	-0.6	
BKZ	Black Stump Fm	21.81	202	P		P	07 46 46.9	+1.2	
HIZ	Hauiti	21.88	206	P		P	07 46 47.6	+1.2	
HIZ				IAmb		IAmb	07 47 02.3		
	comp=Z,126nm,0.8s								
HIZ	Hauiti	21.88	206	P		P	07 46 48.7	+2.3	
HIZ	Hauiti	21.88	206	P		P	07 46 48.1	+1.6	
NGZ	Ngauruhoe	22.15	204	P		P	07 46 49.0	-0.5	
PPT	Papeete	22.29	89	P		P	07 46 56.0	+5.0	
	comp=Z,89nm,1.0s,baz=270,slow=5.1,SNR=12								
PPT				LR		LR	07 54 02.9		
	comp=Z,29µm,18.5s,baz=261,slow=32								
	comp=Z,89nm,1.0s								
PPT	Papeete	22.29	89	P		P	07 46 56.0	+5.0	
PPTF	Pamatai, Papee	22.30	89	P		P	07 46 54.3	+3.1	
VRZ	Vera Road	22.44	206	P		P	07 46 54.6	+2.2	
PXZ	Pawanui	22.45	201	P		P	07 46 54.2	+1.7	
TSZ	Takapari Road	22.79	202	P		P	07 46 57.5	+1.3	
BFZ	Birch Farm	23.25	201	P		P	07 47 00.1	-0.7	
BFZ	Birch Farm	23.25	201	P		P	07 47 01.1	+0.3	
BFZ				IAmb		IAmb	07 47 19.8		
	comp=Z,137nm,1.1s								
BFZ	Birch Farm	23.25	201	P		P	07 47 05.2	+4.4	
MRZ	Mangatainoka R	23.46	202			P	07 47 02.4	-0.6	
MRZ	Mangatainoka R	23.46	202	P		P	07 47 02.9	0.0	
MSWZ	Moikau Station	24.24	202	P		P	07 47 08.6	-1.8	
TCW	Tory Channel	24.42	204	P		P	07 47 12.0	0.0	
NNZ	Nelson	24.77	205	P		P	07 47 14.4	-0.8	
TKNZ	Takaka Hill	24.79	206	P		P	07 47 15.8	+0.4	
QRZ	Quartz Range	24.80	207	P		P	07 47 17.6	+2.2	
QRZ	Quartz Range	24.80	207	P		P	07 47 18.1	+2.7	
THZ	Tophouse	25.43	205	P		P	07 47 22.8	+1.6	
KHZ	Kahutara	25.74	203	P		P	07 47 26.5	+2.6	
DSZ	Denniston Nort	25.87	207	P		P	07 47 29.5	+4.3	
GVZ	Greta Valley S	26.40	203	P		P	07 47 33.8	+3.8	
LTZ	Lake Taylor	26.54	205	P		P	07 47 37.0	+5.8	
INZ	Inchbonnie	26.82	206	P		P	07 47 40.6	+6.9	
NGOA	Tingoa Renbel	27.05	283	P		P	07 47 38.0	+2.0	
OXZ	Oxford	27.09	204	P		P	07 47 41.8	+5.7	
RPZ	Rata Peaks	27.80	205	LR		LR	07 58 16.5		
	comp=Z,10µm,19.5s,baz=18,slow=36								
RPZ	Rata Peaks	27.80	205	P		P	07 47 49.5	+6.9	
HNR	Honiara	27.93	287	LR		LR	07 57 05.2		
	comp=Z,414nm,18.6s,baz=202,slow=33								
SAVO	Savo Central	28.16	287	P		P	07 47 48.7	+2.6	
FOZ	Fox Glacier	28.17	207	IAMs_20		IAMs_20	07 59 27.3		
	comp=Z,24µm,18.0s								
FOZ	Fox Glacier	28.17	207	P		P	07 47 50.6	+4.9	
TATA	Tatamba Isabel	28.49	289	P		P	07 47 49.4	+0.5	
JCZ	Jackson Bay	29.05	208	P		P	07 48 01.3	+7.5	
ODZ	Otahua Downs	29.08	204	P		P	07 48 03.0	+9.2	
PYZ	Puysegur Point	31.62	207	IAMs_20		IAMs_20	08 01 18.4		
	comp=Z,21µm,18.0s								
AUBSH	Beerwah State	32.15	250	P		P	07 48 22.1	+0.9	
TW1H	Toowoomba 1 Ha	33.09	249	P		P	07 48 30.2	+0.6	
EIDS	Eidsvold	33.70	253	P		P	07 48 31.9	-2.9	
	comp=Z,29nm,2.5s,comp=Z,0.0nm								
EIDS	Eidsvold	33.70	253	P		P	07 48 36.0	+1.2	
EIDS	Eidsvold	33.70	253	P		P	07 48 32.2	-2.6	
ARMA	Armidale	33.83	244	P		P	07 48 34.2	-1.8	
	comp=Z,32nm,1.1s								
ARMA	Armidale	33.83	244	P		P	07 48 38.6	+2.6	
ARMA	Armidale	33.83	244	P		P	07 48 34.0	-2.1	
AUNRC	North Rockhamp	34.16	257	P		P	07 48 41.5	+2.7	
AUPHS	Peel High Scho	34.58	243	P		P	07 48 42.9	+0.4	
MGCD	Mangrove Creek	34.87	239	P		P	07 48 43.5	-1.3	
	comp=Z,71nm,1.5s								
SYDH	Sydney Hard Ro	35.30	238	P		P	07 48 49.4	+0.8	
AUDCS	Dubbo College	36.69	242	P		P	07 49 03.3	+2.8	
AULRC	Lightning Ridg	36.81	246	P		P	07 49 01.0	-0.5	
CNB	Canberra Magne	36.81	236	P		P	07 49 00.8	-0.8	
	comp=Z,81nm,1.2s								
CNB	Canberra Magne	36.81	236	P		P	07 49 02.3	+0.7	
AUDAR	Daramalan Coll	36.97	237	P		P	07 49 01.8	-1.1	
AUMHS	Melrose High S	37.04	236	P		P	07 49 02.7	-0.8	
AUMTS	Mt Stromlo	37.10	237	P		P	07 49 04.0	0.0	
CAN	Canberra	37.10	237	P		P	07 49 02.0	-2.0	
	comp=Z,63nm,1.2s								
CAN	Canberra	37.10	237	P		P	07 49 04.8	+0.8	
CAN	Canberra	37.10	237	P		P	07 49 02.3	-1.7	
CAN	Canberra	37.10	237	P		P	07 49 02.3	-1.7	
CAN				pmax		pmax			
	comp=Z,39nm,0.9s								
YNG	Young	37.33	238	P		P	07 49 04.2	-1.7	
	comp=Z,19nm,2.2s								
MILA	Mila	37.47	234	P		P	07 49 08.5	+1.3	
CTA	Charters Tower	38.30	262	P		P	07 49 11.5	-2.8	
CTA	Charters Tower	38.30	262	S		S	07 55 00.1	-8.0	
	comp=Z,32nm,1.0s,baz=47,slow=19,SNR=1.8								
CTA	Charters Tower	38.30	262	P		P	07 49 13.0	-1.3	
CTAO	Charters Tower	38.30	262	P		P	07 49 12.7	-1.6	
CTAO	Charters Tower	38.30	262	P		P	07 49 10.5	-3.8	
CTAO				IAmb		IAmb	07 49 16.2		
	comp=Z,101nm,0.8s								
CTAO	Charters Tower	38.30	262	IAMs_20		IAMs_20	08 04 48.2		
	comp=Z,23µm,20.0s								
CTAO	Charters Tower	38.30	262	P		P	07 49 10.5	-3.8	
CTAO				pmax		pmax			
	comp=Z,101nm,0.8s								
CTAO				MLR		MLR			
	comp=Z,23µm,20.0s								
CMSA	Cobar Meteorol	39.04	243	P		P	07 49 17.9	-2.4	
	comp=Z,35nm,1.7s								
CMSA	Cobar Meteorol	39.04	243	P		P	07 49 20.3	-0.1	
PMG	Port Moresby	39.73	279	LR		LR	08 05 02.8		
	comp=Z,20µm,18.0s,baz=91,slow=35								
PMG	Port Moresby	39.73	279	P		P	07 49 25.9	-0.4	
PMG	Port Moresby	39.73	279	P		P	07 49 23.4	-2.9	
PMG				IAmb		IAmb	07 49 28.4		
	comp=Z,72nm,0.9s								
PMG	Port Moresby	39.73	279	IAMs_20		IAMs_20	08 04 59.7		
	comp=Z,23µm,18.0s								
PMG	Port Moresby	39.73	279	P		P	07 49 23.4	-2.9	
PMG				pmax		pmax			
	comp=Z,72nm,1.0s								
PMG				MLR		MLR			
	comp=Z,23µm,18.0s								
PMG	Port Moresby	39.73	279	P		P	07 49 24.9	-1.4	
	comp=Z,5µmcomp=Z,77nm,1.0s								
QLP	Quilpie	39.91	251	P		P	07 49 25.0	-2.7	
	comp=Z,40nm,1.1s								
QLP	Quilpie	39.91	251	P		P	07 49 28.2	+0.5	
MTSU	Mount Surprise	40.37	264	P		P	07 49 29.0	-2.6	
	comp=Z,65nm,0.8s								
MTSU	Mount Surprise	40.37	264	P		P	07 49 31.6	0.0	
CORO	Coronation Par	40.40	228	P		P	07 49 32.7	+1.2	
TOO	Toolangi	40.42	234	P		P	07 49 29.9	-2.0	
	comp=Z,18nm,1.7s								
TOO	Toolangi	40.42	234			P	07 49 29.8	-2.0	
TOO	Toolangi	40.42	234	P		P	07 49 29.8	-2.0	
TOO				pmax		pmax			
	comp=Z,12nm,0.8s								
MOO	Moorlands	40.73	227	P		P	07 49 35.3	+1.0	
TAU	Tasmania Unive	40.82	226	P		P	07 49 35.4	+0.4	
TAU	Tasmania Unive	40.82	226	IAMs_20		IAMs_20	08 04 23.0		
	comp=Z,21µm,19.0s								
TAU	Tasmania Unive	40.82	226	P		P	07 49 35.4	+0.4	
TAU				pmax		pmax			
	comp=Z,362nm,1.9s								
BRAT	Ballarat	41.62	235	P		P	07 49 42.1	+0.5	
AUMTC	Mt Clear Colle	41.67	235	P		P	07 49 43.1	+1.1	
COEN	Coen	42.24	270	P		P	07 49 44.8	-2.2	
	comp=Z,61nm,1.0s,comp=Z,0.0nm								
COEN	Coen	42.24	270	P		P	07 49 46.9	-0.1	
COEN	Coen	42.24	270	P		P	07 49 43.8	-3.2	
STKA	Stephens Creek	42.55	244	P		P	07 49 47.3	-2.0	
	comp=Z,159nm,1.6s								
STKA	Stephens Creek	42.55	244	P		P	07 49 46.6	-2.8	
	comp=Z,17nm,0.9s,baz=84,slow=9.9,SNR=11								
STKA				LR		LR	08 06 02.8		
	comp=Z,16µm,19.3s,baz=78,slow=34								
	comp=Z,17nm,0.9s								
STKA	Stephens Creek	42.55	244	P		P	07 49 47.9	-1.4	
STKA	Stephens Creek	42.55	244	P		P	07 49 47.0	-2.4	
STKA				IAmb		IAmb	07 49 52.2		
	comp=Z,136nm,1.1s								
STKA	Stephens Creek	42.55	244	P		P	07 49 47.0	-2.4	
STKA				pmax		pmax			
	comp=Z,136nm,1.1s								
KIP	Kipapa	43.02	21	P		P	07 49 58.8	+5.7	
KIP	Kipapa	43.02	21	P		P	07 49 59.2	+6.1	
KIP	Kipapa	43.02	21	*i* P		P	07 49 53.9	+0.8	
INKA	Innaminka	43.04	250	P		P	07 49 51.0	-2.4	
QIS	Mount Isa	44.45	260	P		P	07 50 00.3	-4.5	
	comp=Z,17nm,1.9s,comp=Z,0.0nm								
QIS	Mount Isa	44.45	260	P		P	07 50 04.5	-0.4	
AUMBR	Murray Bridge	44.85	239	P		P	07 50 07.4	-0.4	
HTT	Hallett	44.95	242	P		P	07 50 06.6	-2.1	
	comp=Z,17nm,1.3s								
HTT	Hallett	44.95	242	P		P	07 50 08.9	+0.2	
	comp=Z,42nm,1.3s								
HTT	Hallett	44.95	242	P		P	07 50 12.0	+3.3	
AUMAR	Marden Senior	45.35	240	P		P	07 50 15.5	+3.7	
BBOO	Buckleboo	47.29	243	P		P	07 50 24.8	-2.3	
	comp=Z,52nm,1.2s								
BBOO	Buckleboo	47.29	243	P		P	07 50 29.6	+2.5	
BBOO	Buckleboo	47.29	243	P		P	07 50 24.6	-2.5	
BBOO				IAmb		IAmb	07 50 30.3		
	comp=Z,52nm,1.1s								
JAY	Jayapura	48.21	284	LR		LR	08 08 46.4		
	comp=Z,5µm,21.9s,baz=138,slow=34								
JAY	Jayapura	48.21	284	P		P	07 50 34.8	+0.3	
	comp=Z,63nm,1.2s								
GENI	Genyem	48.67	284	P		P	07 50 39.6	+1.6	
GENI	Genyem	48.67	284	P		P	07 50 38.7	+0.7	
	comp=Z,6µmcomp=Z,4µmcomp=Z,155nm,1.2s								
WR8	Warramunga Arr	49.28	260	P		P	07 50 39.7	-3.0	
WR8				IAmb		IAmb	07 51 04.8		
	comp=Z,55nm,1.2s								
AS31	Alice Springs	49.37	255	P		P	07 50 40.1	-3.3	
ASAR	Alice Springs	49.38	255	P		P	07 50 40.2	-3.1	
	comp=Z,100nm,0.8s,baz=92,slow=7.7,SNR=258								
ASAR				PcP		PcP	07 52 07.3	+1.5	
	comp=Z,11nm,0.9s,baz=99,slow=2.7,SNR=2.0								
ASAR				S		S	07 57 43.1	-6.6	
	comp=Z,2.3nm,0.8s,baz=97,slow=14,SNR=7.4								
ASAR				LR		LR	08 11 38.9		
	comp=Z,12µm,19.7s,baz=96,slow=36								
	comp=Z,100nm,0.8s								
ASAR	Alice Springs	49.38	255	P		P	07 50 40.5	-2.9	
WB0	Warramunga Arr	49.41	260	P		P	07 50 40.7	-3.0	
WRAB	Tennant Creek	49.43	260	P		P	07 50 44.4	+0.6	
WRAB	Tennant Creek	49.43	260	IAMs_20		IAMs_20	08 11 43.8		
	comp=Z,15µm,19.0s								
WRAB	Tennant Creek	49.43	260	*ce* P		P	07 50 40.7	-3.1	
WRAB				pmax		pmax			
	comp=Z,72nm,1.7s								
WRA	Warramunga Arr	49.44	260	P		P	07 50 39.9	-3.9	
	comp=Z,14nm,0.4s,baz=99,slow=7.9,SNR=86								
WRA				PcP		PcP	07 52 07.3	+1.3	
	comp=Z,11nm,1.0s,baz=93,slow=3.4,SNR=3.2								
WRA				S		S	07 57 45.2	-5.4	
	comp=Z,1.5nm,0.8s,baz=99,slow=14,SNR=4.6								
	comp=Z,14nm,0.4s								
WRA	Warramunga Arr	49.44	260	P		P	07 50 40.2	-3.6	
KDU	Kakadu	52.65	269	P		P	07 51 05.5	-2.5	
	comp=Z,38nm,1.3s								
MTN	Manton Dam	53.88	268	P		P	07 51 15.7	-1.4	
	comp=Z,67nm,0.9s,comp=Z,0.0nm								
MTN	Manton Dam	53.88	268	P		P	07 51 13.8	-3.3	
MTN				IAmb		IAmb	07 51 18.3		
	comp=Z,46nm,0.9s								
FORT	Forrest	54.09	246	P		P	07 51 16.2	-2.2	
	comp=Z,31nm,0.9s								
FORT	Forrest	54.09	246	P		P	07 51 16.1	-2.3	
FORT				IAmb		IAmb	07 51 20.2		
	comp=Z,54nm,1.3s								
WRKA	Warakurna	54.32	253	P		P	07 51 17.9	-2.4	
	comp=Z,57nm,0.9s,comp=Z,0.0nm								
SIJI	Sorong	57.53	282	LR		LR	08 16 53.6		
	comp=Z,4µm,18.4s,baz=112,slow=37								
SIJI	Sorong	57.53	282	P		P	07 51 42.2	-1.2	
	comp=Z,4µmcomp=Z,2µmcomp=Z,144nm,1.0s								
SWI	Sorong	57.54	282	P		P	07 51 42.4	-1.0	
FITZ	Fitzroy Crossi	57.86	260	LR		LR	08 16 27.9		
	comp=Z,11µm,18.5s,baz=98,slow=36								
RPN	Rapa Nui	58.52	111	LR		LR	08 12 43.5		
	comp=Z,14µm,18.0s,baz=247,slow=31								
KRAI	Karang Ratu	59.32	278	P		P	07 51 56.0	+0.1	
	comp=Z,5µmcomp=Z,41nm,0.9s								
VNDA	Vanda	59.59	186	P		P	07 51 57.0	+0.3	
	comp=Z,13nm,1.2s,baz=14,slow=4.2,SNR=4.3								
VNDA				LR		LR	08 17 14.7		
	comp=Z,3µm,18.0s,baz=14,slow=36								
	comp=Z,13nm,1.2s								
VNDA	Vanda	59.59	186	P		P	07 51 57.1	+0.4	
VNDA				IAmb		IAmb	07 52 40.1		
	comp=Z,86nm,1.6s								
VNDA	Vanda	59.59	186	P		P	07 51 57.1	+0.4	
VNDA				pmax		pmax			
	comp=Z,86nm,1.7s								
NLAI	Namlea	60.56	277	P		P	07 52 03.0	-1.4	
	comp=Z,4µmcomp=Z,2µmcomp=Z,58nm,1.2s								
SOEI	Soe	61.19	269	P		P	07 52 12.6	+3.8	
SOEI	Soe	61.19	269	P		P	07 52 06.7	-2.2	
SOEI	Soe	61.19	269	P		P	07 52 08.5	-0.3	
BATI	Baumata	61.63	269	LR		LR	08 17 47.8		
	comp=Z,5µm,21.6s,baz=138,slow=35								
SANI	Sanana	62.01	278	P		P	07 52 15.5	+1.3	
SANI	Sanana	62.01	278	P		P	07 52 13.4	-0.8	
	comp=Z,5µmcomp=Z,2µmcomp=Z,60nm,0.8s								
AUKUL	Kulin High Sch	62.37	243	P		P	07 52 19.4	+3.0	
PSAC2	Pilbara Seismi	62.48	255	P		P	07 52 15.6	-1.7	
	comp=Z,88nm,1.0s								
PSAB3	Pilbara Seismi	62.51	255	P		P	07 52 15.8	-1.7	
	comp=Z,91nm,1.0s								
PSA00	Pilbara Seismi	62.52	255	P		P	07 52 15.9	-1.6	
	comp=Z,89nm,1.0s								
PSA00	Pilbara Seismi	62.52	255	P		P	07 52 16.3	-1.3	
PSA00	Pilbara Seismi	62.52	255	P		P	07 52 14.9	-2.7	
PSA00	Pilbara Seismi	62.52	255	P		P	07 52 15.8	-1.8	
PSA00				IAmb		IAmb	07 52 19.7		
	comp=Z,79nm,1.0s								
PSAC1	Pilbara Seismi	62.56	255	P		P	07 52 15.8	-2.1	
	comp=Z,102nm,1.0s								
MBWA	Marble Bar	62.71	256	P		P	07 52 16.7	-2.1	
	comp=Z,63nm,1.1s,comp=Z,0.0nm								
MBWA	Marble Bar	62.71	256	P		P	07 52 16.7	-2.1	
MBWA	Marble Bar	62.71	256	P		P	07 52 15.7	-3.1	
MBWA	Marble Bar	62.71	256	IAMs_20		IAMs_20	08 19 36.7		
	comp=Z,10µm,19.0s								
MEEK	Meekatharra	62.76	249	P		P	07 52 17.4	-1.7	
MEEK	Meekatharra	62.76	249	P		P	07 52 22.9	+3.8	
KLBR	Kellerberrin	62.82	244	P		P	07 52 18.4	-1.0	
	comp=Z,217nm,0.8s								
KLBR	Kellerberrin	62.82	244	P		P	07 52 22.0	+2.6	
NWAO	Narrogin (SRO)	63.11	242	P		P	07 52 20.4	-0.9	
	comp=Z,90nm,1.1s,comp=Z,0.0nm								
NWAO	Narrogin (SRO)	63.11	242	LR		LR	08 18 32.1		
	comp=Z,8µm,19.7s,baz=89,slow=35								
NWAO	Narrogin (SRO)	63.11	242	P		P	07 52 21.5	+0.2	
NWAO	Narrogin (SRO)	63.11	242	P		P	07 52 19.7	-1.6	
NWAO	Narrogin (SRO)	63.11	242	IAMs_20		IAMs_20	08 19 40.4		
	comp=Z,9µm,18.0s								
NWAO	Narrogin (SRO)	63.11	242	P		P	07 52 19.7	-1.6	
NWAO				pmax		pmax			
	comp=Z,89nm,1.2s								
NWAO				MLR		MLR			
	comp=Z,9µm,18.0s								
JCJ	Chichijima	63.33	315	LR		LR	08 15 48.0		
	comp=Z,11µm,21.0s,baz=138,slow=32								
BLDU	Ballidu	63.84	245	P		P	07 52 26.8	+0.7	
BLDU	Ballidu	63.84	245	P		P	07 52 29.3	+3.2	
EDFI	Ende, Flores	63.91	270	P		P	07 52 27.6	+0.6	
	comp=Z,4µmcomp=Z,2µmcomp=Z,82nm,1.2s								
MUN	Mundaring	64.08	243	P		P	07 52 26.7	-1.1	
	comp=Z,98nm,0.9s								
MUN	Mundaring	64.08	243	P		P	07 52 31.6	+3.9	
MORW	Morawa	64.63

SJI	Sawahan	73.59	267	P	P	07 53 27.3	0.0				
	comp=Z,3µmcomp=Z,69nm,1.6s										
FORD	Fort Ord Natur	73.72	41	IAMs_20	IAMs_20	08 20 05.5					
	comp=Z,7µm,19.0s										
JRSC	Jasper Ridge	73.90	40	IAMs_20	IAMs_20	08 22 00.2					
	comp=Z,6µm,19.0s										
SAO	San Andreas Ge	73.97	41	IAMs_20	IAMs_20	08 19 44.3					
	comp=Z,7µm,20.0s										
PCJI	Pacitan	74.00	267	P	P	07 53 29.8	+0.2				
	comp=Z,3µmcomp=Z,174nm,1.3s										
KKM	Kota Kinabalu	74.04	282	P	P	07 53 32.1	+2.1				
KKM	Kota Kinabalu	74.04	282	P	P	07 53 31.4	+1.4				
CCX	Cicese	74.15	47	P	P	07 53 25.5	-4.6				
CCX				IAmb	IAmb	07 54 26.1					
	comp=Z,62nm,1.6s										
MHC	Mount Hamilton	74.22	40	IAMs_20	IAMs_20	08 22 18.8					
	comp=Z,7µm,19.0s										
FALS	False Pass	74.28	6	IAMs_20	IAMs_20	08 20 18.0					
	comp=Z,7µm,20.0s										
FALS	False Pass	74.28	6	P	P	07 53 26.8	-3.5				
	baz=189										
OSI	Osito Audit: C	74.37	44	IAMs_20	IAMs_20	08 21 46.3					
	comp=Z,6µm,19.0s										
HOPS	Hopland Field	74.44	38	IAMs_20	IAMs_20	08 19 02.4					
	comp=Z,7µm,20.0s										
PASC	Pasadena Art C	74.46	45	IAMs_20	IAMs_20	08 21 39.7					
	comp=Z,6µm,18.0s										
MWC	Mount Wilson	74.58	45	IAMs_20	IAMs_20	08 20 22.8					
	comp=Z,6µm,18.0s										
BAR	Barrett	74.61	47	IAMs_20	IAMs_20	08 20 19.9					
	comp=Z,5µm,19.0s										
CHNA	Chernabura Isl	74.69	8	P	P	07 53 28.9	-3.7				
	baz=193										
JNU	Nakatsue	74.72	314	P	P	07 53 32.5	-0.9				
	comp=Z,37nm,1.1s,baz=121,slow=11,SNR=9.8										
JNU				LR	LR	08 21 48.3					
	comp=Z,3µm,20.6s,baz=114,slow=32										
	comp=Z,37nm,1.1s										
MNRC	McLaughlin Min	74.73	39	IAMs_20	IAMs_20	08 19 22.3					
	comp=Z,5µm,19.0s										
LPIG	La Paz	74.77	57	LR	LR	08 20 05.9					
	comp=Z,11µm,19.1s,baz=234,slow=30										
BFSC	Mount Baldy Ra	74.85	45	IAMs_20	IAMs_20	08 20 21.1					
	comp=Z,5µm,19.0s										
VES	Vestal, Richgr	74.88	43	IAMs_20	IAMs_20	08 22 03.7					
	comp=Z,6µm,19.0s										
ASAJ	Asahikawa	75.01	329	P	P	07 53 35.1	+0.3				
	comp=Z,20nm,1.0s,baz=124,slow=8.3,SNR=9.1										
ASAJ				LR	LR	08 22 19.6					
	comp=Z,6µm,20.5s,baz=138,slow=32										
	comp=Z,20nm,1.0s										
SDPT	Sand Point	75.08	7	P	P	07 53 31.2	-3.7				
	baz=192										
ISA	Isabella, Lake	75.17	43	IAMs_20	IAMs_20	08 22 05.3					
	comp=Z,8µm,18.0s										
PFO	Pinyon Flats O	75.30	46	LR	LR	08 20 24.0					
	comp=Z,5µm,19.8s,baz=242,slow=30										
PFO	Pinyon Flats O	75.30	46	IAMs_20	IAMs_20	08 19 52.0					
	comp=Z,6µm,20.0s										
PFO	Pinyon Flats O	75.30	46	*i* P	P	07 53 38.6	+1.7				
PFO				pmax	pmax						
	comp=Z,23nm,1.5s										
CMB	Columbia Colle	75.43	40	IAMs_20	IAMs_20	08 20 49.8					
	comp=Z,6µm,20.0s										
WELL	Weller Preserv	75.48	40	IAMs_20	IAMs_20	08 23 18.0					
	comp=Z,6µm,18.0s										
LRMC	Laurel Mtn Rad	75.58	44	IAMs_20	IAMs_20	08 22 18.0					
	comp=Z,7µm,18.0s										
CWC	Cottonwood Cre	75.89	43	IAMs_20	IAMs_20	08 22 19.0					
	comp=Z,9µm,19.0s										
MDPB	Devils Postpil	75.99	41	P	P	07 53 35.0	-5.9				
MDPB				IAmb	IAmb	07 54 25.9					
	comp=Z,59nm,1.8s										
BC3	Big Chuckawall	76.01	47	P	P	07 53 36.3	-4.6				
BC3				IAmb	IAmb	07 54 14.5					
	comp=Z,74nm,1.9s										
O03E	Paynes Creek	76.03	38	IAMs_20	IAMs_20	08 20 36.1					
	comp=Z,6µm,20.0s										
SCJI	Gunung Srandil	76.05	267	P	P	07 53 40.7	-0.8				
	comp=Z,2µmcomp=Z,2µmcomp=Z,51nm,1.1s										
PET	Petropavlovsk	76.07	343	*e* P	P	07 53 43.0	+2.4				
PET				*e* S	S	08 03 24.4	+1.3				
PET				*e* SS	SS	08 08 16.4	-0.5				
PET				pmax	pmax						
	comp=Z,2µm,4.7s										
PET				pmax	pmax						
	comp=Z,900nm,5.4s										
PET				pmax	pmax						
	comp=Z,34nm,1.1s										
PET				MLR	MLR						
	comp=Z,3µm,17.0s										
PET				MLR	MLR						
	comp=Z,3µm,17.0s										
GLA	Glamis	76.10	47	IAMs_20	IAMs_20	08 21 43.9					
	comp=Z,5µm,18.0s										
M02C	Callahan	76.15	37	IAMs_20	IAMs_20	08 21 06.2					
	comp=Z,8µm,20.0s										
CHIR	Chirikof Islan	76.23	10	P	P	07 53 39.4	-2.1				
	baz=197										
CTJI	Waduk Cacaban	76.25	267	P	P	07 53 43.7	+1.1				
	comp=Z,6µmcomp=Z,94nm,1.2s										
KPJI	Karang Pucung	76.39	267	P	P	07 53 44.1	+0.7				
	comp=Z,3µmcomp=Z,63nm,1.3s										
PEA0B	Petropavlovsk-	76.41	342	*i* P	P	07 53 44.7	+2.1				
PETK	Petropavlovsk-	76.41	342	P	P	07 53 42.8	+0.2				
	comp=Z,6.9nm,0.8s,baz=152,slow=6.0,SNR=8.2										
PETK				LR	LR	08 20 42.8					
	comp=Z,1µm,21.6s,baz=176,slow=30										
	comp=Z,6.9nm,0.8s										
YBH	Yreka Blue Hor	76.46	36	LR	LR	08 22 32.6					
	comp=Z,506nm,18.3s,baz=250,slow=32										
SBUM	Sibu	76.47	277	P	P	07 53 46.3	+2.4				
SBUM	Sibu	76.47	277	P	P	07 53 44.0	+0.1				
IRM	Iron Mountain	76.50	46	IAMs_20	IAMs_20	08 21 19.5					
	comp=Z,5µm,19.0s										
HATC	Hat Creek Radi	76.57	38	IAMs_20	IAMs_20	08 21 23.3					
	comp=Z,9µm,20.0s										
FURC	Furnace Creek,	76.69	43	IAMs_20	IAMs_20	08 23 22.3					
	comp=Z,8µm,19.0s										
SHOC	Shoshone, Teco	76.75	44	IAMs_20	IAMs_20	08 21 30.7					
	comp=Z,5µm,19.0s										
NVAR	Mina Array Bea	76.96	41	P	P	07 53 49.4	+3.1				
	comp=Z,6.5nm,1.0s,baz=239,slow=7.4,SNR=23										
NVAR				LR	LR	08 22 59.6					
	comp=Z,8µm,18.4s,baz=242,slow=32										
	comp=Z,6.5nm,1.0s										
NACB	Ninganchiao	76.96	302	P	P	07 53 49.2	+2.8				
YSS	Yuzhno-Sakhali	77.02	331	P	P	07 53 52.4	+6.3				
YSS	Yuzhno-Sakhali	77.02	331	α *i* P	P	07 53 48.1	+2.0				
YSS				*e*		07 53 58.7					
YSS				*e*		07 56 36.8					
YSS				*i* S	S	08 03 36.6	+2.8				
YSS				*e* PS	PnS	08 04 05.6	-8.2				
YSS				*e* PPS	PPS	08 04 22.9					
YSS				pmax	pmax						
	comp=Z,2µm,4.8s										
YSS				pmax	pmax						
	comp=N,400nm,5.2s										
YSS				pmax	pmax						
	comp=E,400nm,3.7s										
YSS				pmax	pmax						
	comp=Z,60nm,1.3s										
YSS				smax	smax						
	comp=N,2µm,6.9s										
YSS				smax	smax						
	comp=E,900nm,5.8s										
YSS				MLR	MLR						
	comp=Z,3µm,16.0s										
YSS				MLR	MLR						
	comp=N,2µm,17.0s										
YSS				MLR	MLR						
	comp=E,1µm,15.0s										
SII	Sitkinak Islan	77.18	11	IAMs_20	IAMs_20	08 22 32.9					
	comp=Z,7µm,20.0s										
SII	Sitkinak Islan	77.18	11	P	P	07 53 43.4	-3.5				
	baz=198										
SSLB	Suanglung	77.30	301	P	P	07 53 51.6	+3.3				
TPUB	Ta-pu	77.34	300	P	P	07 53 50.7	+2.1				
TPUB	Ta-pu	77.34	300	P	P	07 53 43.6	-5.0				
TPNV	Topopah Spring	77.38	43	IAMs_20	IAMs_20	08 23 37.3					
	comp=Z,9µm,19.0s										
BBJI	Bungbulang	77.55	266	P	P	07 53 51.1	+1.0				
BBJI	Bungbulang	77.55	266	P	P	07 53 47.4	-2.6				
BBJI				IAmb	IAmb	07 53 52.9					
	comp=Z,37nm,0.8s										
BBJI	Bungbulang	77.55	266	P	P	07 53 50.5	+0.4				
	comp=Z,1µmcomp=Z,55nm,0.9s										
R16K	Pilot Point	77.62	8	IAMs_20	IAMs_20	08 22 40.0					
	comp=Z,7µm,21.0s										
R16K	Pilot Point	77.62	8	P	P	07 53 46.2	-3.0				
	baz=195										
LEM	Lembang	77.78	267	LR	LR	08 28 38.2					
	comp=Z,2µm,20.1s,baz=144,slow=36										
R17L	Mt. Peulik Vol	77.86	9	P	P	07 53 46.9	-3.7				
	baz=196										
PLK4	Peulik 4	77.86	9	IAMs_20	IAMs_20	08 22 48.8					
	comp=Z,9µm,21.0s										
OHAK	Old Harbor	77.97	11	P	P	07 53 47.5	-3.7				
	baz=199										
J05D	Fort Rock, OR	78.30	36	P	P	07 53 49.1	-4.5				
J05D				IAmb	IAmb	07 54 38.7					
	comp=Z,40nm,1.3s										
XMI	Christmas Isla	78.49	263	P	P	07 53 58.8	+3.6				
Q17K	Contact Creek	78.54	9	P	P	07 53 50.1	-4.4				
	baz=196										
TUC	Tucson	78.56	50	IAMs_20	IAMs_20	08 22 30.4					
	comp=Z,7µm,19.0s										
KDAK	Kodiak Island	78.62	11	LR	LR	08 22 35.3					
	comp=Z,5µm,21.9s,baz=199,slow=31										
KDAK	Kodiak Island	78.62	11	IAMs_20	IAMs_20	08 30 53.1					
	comp=Z,6µm,18.0s										
KDAK	Kodiak Island	78.62	11	P	P	07 53 51.0	-3.8				
	baz=200										
DBJI	Dramaga	78.68	267	P	P	07 53 55.6	-0.7				
TEY	Ternei	78.72	326	*de* P	P	07 53 54.6	-1.0				
TEY				pmax	pmax						
	comp=Z,200nm,5.6s										
Q16K	King Salmon	78.82	9	P	P	07 53 52.6	-3.3				
	baz=196										
O14K	Tigyukauivet M	78.83	6	IAMs_20	IAMs_20	08 23 32.1					
	comp=Z,9µm,21.0s										
O14K	Tigyukauivet M	78.83	6	P	P	07 53 52.6	-3.3				
	baz=191										
UGL	Uglegorsk	78.89	332	*e* P	P	07 53 56.5	0.0				
UGL				*e* S	S	08 03 46.2	-7.7				
UGL				pmax	pmax						
	comp=Z,2µm,10.0s										
UGL				smax	smax						
	comp=N,4µm,9.0s										
UGL				smax	smax						
	comp=E,2µm,9.0s										
UGL				MLR	MLR						
	comp=E,2µm,18.0s										
UGL				MLR	MLR						
	comp=N,2µm,19.0s										
UGL				MLR	MLR						
	comp=Z,2µm,16.0s										
O15K	Ungalikthiuk R	78.91	7	IAMs_20	IAMs_20	08 23 54.1					
	comp=Z,8µm,20.0s										
O15K	Ungalikthiuk R	78.91	7	P	P	07 53 53.5	-2.9				
	baz=193										
P16K	Nushagak River	78.99	8	IAMs_20	IAMs_20	08 23 43.7					
	comp=Z,7µm,20.0s										
P16K	Nushagak River	78.99	8	P	P	07 53 53.8	-3.0				
	baz=194,SNR=12										
Q18K	Katmai Hardscr	79.04	9	P	P	07 53 54.2	-3.1				
	baz=197										
KSRS	Korea Array	79.18	316	P	P	07 53 58.6	+0.3				
	comp=Z,21nm,1.2s,baz=132,slow=4.8,SNR=20										
KSRS				LR	LR	08 24 36.7					
	comp=Z,2µm,20.7s,baz=125,slow=32										
	comp=Z,21nm,1.2s										
WVOR	Wild Horse Val	79.23	38	IAMs_20	IAMs_20	08 22 59.7					
	comp=Z,9µm,20.0s										
P17K	Kvichak River	79.35	9	IAMs_20	IAMs_20	08 23 56.3					
	comp=Z,6µm,21.0s										
P17K	Kvichak River	79.35	9	P	P	07 53 55.7	-3.1				
	baz=196,SNR=6.3										
N14K	Kuskokwak Cree	79.45	6	IAMs_20	IAMs_20	08 23 51.7					
	comp=Z,7µm,20.0s										
N14K	Kuskokwak Cree	79.45	6	P	P	07 53 56.2	-3.0				
	baz=191										
O16K	Kokwok River B	79.52	8	IAMs_20	IAMs_20	08 23 50.7					
	comp=Z,7µm,20.0s										
O16K	Kokwok River B	79.52	8	P	P	07 53 57.1	-2.6				
	baz=194										
Q19K	Cape Douglas,	79.53	10	IAMs_20	IAMs_20	08 24 12.0					
	comp=Z,6µm,20.0s										
Q19K	Cape Douglas,	79.53	10	P	P	07 53 56.7	-3.1				
	baz=198										
M11K	Mekoryuk	79.56	3	IAMs_20	IAMs_20	08 24 30.9					
	comp=Z,6µm,20.0s										
M11K	Mekoryuk	79.56	3	P	P	07 53 57.2	-2.7				
	baz=186,SNR=9.9										
P18K	Big Mountain,	79.72	9	IAMs_20	IAMs_20	08 23 57.1					
	comp=Z,7µm,21.0s										
P18K	Big Mountain,	79.72	9	P	P	07 53 58.0	-2.8				
	baz=197,SNR=12										
QZH2	Quanzhou	79.74	301	⇑ *i* P	P	07 54 03.0	+1.3				
QZH2				S	S	08 04 05.8	+1.8				
QZH2				pmax	pmax						
	comp=Z,2µm,8.2s										
QZH2				LR	LR						
	comp=Z,2µm,17.2s										
QZH2				LR	LR						
	comp=Z,1µm,15.1s										
QZH2				LR	LR						
	comp=Z,2µm,18.6s										
M13K	Dall Lake	79.78	5	IAMs_20	IAMs_20	08 23 52.7					
	comp=Z,6µm,20.0s										
M13K	Dall Lake	79.78	5	P	P	07 53 58.8	-2.3				
	baz=189										
O17K	Koliganek Bris	79.82	8	P	P	07 53 58.3	-3.0				
	baz=195,SNR=6.1										
N15K	Kwethluk River	79.85	7	P	P	07 53 59.2	-2.3				
	baz=192										
TYV	Tymovskoe	79.95	333	*e* P	P	07 54 03.6	+1.3				
TYV				pmax	pmax						
	comp=Z,12nm,1.3s										
TYV				pmax	pmax						
	comp=Z,800nm,5.7s										
BELA	Belgrano 2	80.13	172	P	P	07 54 03.2	+0.2				
BELA				IAmb	IAmb	07 54 16.9					
	comp=Z,126nm,1.8s										
O18K	Koktuh Hills	80.17	9	IAMs_20	IAMs_20	08 24 20.9					
	comp=Z,6µm,20.0s										
O18K	Koktuh Hills	80.17	9	P	P	07 54 00.3	-2.9				
	baz=197,SNR=7.7										
M14K	Bethel	80.24	5	IAMs_20	IAMs_20	08 24 26.7					
	comp=Z,6µm,20.0s										
M14K	Bethel	80.24	5	P	P	07 54 00.5	-3.0				
	baz=190,SNR=14										
ELK	Elko	80.24	41	LR	LR	08 25 48.1					
	comp=Z,9µm,18.2s,baz=230,slow=33										
P19K	Oil Pt	80.28	10	IAMs_20	IAMs_20	08 24 45.9					
	comp=Z,6µm,20.0s										
P19K	Oil Pt	80.28	10	P	P	07 54 01.6	-2.3				
	baz=199										
N16K	Nishlik Lake	80.30	7	P	P	07 54 01.7	-2.2				
	baz=194										
M15K	Kasigluk River	80.30	6	P	P	07 54 01.5	-2.4				
	baz=192										
CNPM	China Poot	80.51	11	IAMs_20	IAMs_20	08 31 53.9					
	comp=Z,6µm,18.0s										
PMSA	Palmer Station	80.51	156	LR	LR	08 26 17.9					
	comp=Z,4µm,18.1s,baz=229,slow=33										
PMSA	Palmer Station	80.51	156	IAMs_20	IAMs_20	08 25 13.6					
	comp=Z,7µm,18.0s										
N17K	Nushagak Hills	80.54	8	IAMs_20	IAMs_20	08 24 32.7					
	comp=Z,6µm,20.0s										
N17K	Nushagak Hills	80.54	8	P	P	07 54 03.3	-2.0				
	baz=195										
HOM	Homer	80.56	11	IAMs_20	IAMs_20	08 31 59.2					
	comp=Z,5µm,19.0s										
HOM	Homer	80.56	11	P	P	07 54 02.9	-2.5				
	baz=200										
SSE	Sheshan	80.59	308	P	P	07 54 05.5	-0.7				
SSE				S	S	08 04 14.0	+1.3				
SSE				pmax	pmax						
	comp=Z,9.0nm,0.8s										
SSE				pmax	pmax						
	comp=Z,240nm,6.2s										
SSE				LR	LR						
	comp=Z,520nm,18.6s										
SSE				LR	LR						
	comp=Z,390nm,18.4s										
O19K	Port Alsworth	80.63	9	IAMs_20	IAMs_20	08 25 07.0					
	comp=Z,7µm,20.0s										
O19K	Port Alsworth	80.63	9	P	P	07 54 03.1	-2.5				
	baz=198,SNR=9.6										
USRK	Ussuriysk Ar.	80.69	323	P	P	07 54 06.2	-0.2				
	comp=Z,6.0nm,1.0s,baz=102,slow=6.1,SNR=8.0										
	comp=Z,6.0nm,1.0s										
L14K	Kuka Creek	80.76	5	IAMs_20	IAMs_20	08 25 16.4					
	comp=Z,5µm,20.0s										
L14K	Kuka Creek	80.76	5	P	P	07 54 03.8	-2.6				
	baz=190										
BRLK	Bradley Lake	80.80	11	IAMs_20	IAMs_20	08 23 09.1					
	comp=Z,5µm,21.0s										
BRSE	Bradley Lake S	80.80	11	P	P	07 54 03.5	-3.2				
	baz=201										
M16K	Timber Creek	80.81	7	IAMs_20	IAMs_20	08 24 52.7					
	comp=Z,8µm,20.0s										
M16K	Timber Creek	80.81	7	P	P	07 54 04.1	-2.5				
	baz=193										
N18K	Kilae Creek	80.86	8	IAMs_20	IAMs_20	08 24 31.8					
	comp=Z,6µm,20.0s										
N18K	Kilae Creek	80.86	8	P	P	07 54 04.3	-2.7				
	baz=196										
KASI	Kota Agung	81.13	267	P	P	07 54 09.2	-0.3				
BBB	Bella Bella	81.17	26	LR	LR	08 26 42.0					
	comp=Z,4µm,18.0s,baz=223,slow=33										
KLSI		81.18	268	P	P	07 54 10.4	+0.6				
N19K	Bonanza Creek	81.19	9	IAMs_20	IAMs_20	08 25 02.9					
	comp=Z,8µm,20.0s										
N19K	Bonanza Creek	81.19	9	P	P	07 54 05.8	-3.0				
	baz=198,SNR=6.0										
L15K	Ungalak Mounta	81.19	6	P	P	07 54 05.9	-2.8				
	baz=191,SNR=18										
K13K	Kusilvak Mount	81.20	4	IAMs_20	IAMs_20	08 25 10.0					
	comp=Z,6µm,21.0s										
K13K	Kusilvak Mount	81.20	4	P	P	07 54 06.1	-2.6				
	baz=188										
M17K	Holitna River	81.36	8	IAMs_20	IAMs_20	08 24 59.3					
	comp=Z,7µm,20.0s										
M17K	Holitna River	81.36	8	P	P	07 54 07.0	-2.5				
	baz=195,SNR=6.2										
SEW	Seward	81.38	12	IAMs_20	IAMs_20	08 31 16.0					
	comp=Z,5µm,18.0s										
SEW	Seward	81.38	12	P	P	07 54 05.7	-3.9				
	baz=202										
Q23K	Middleton Isla	81.40	13	P	P	07 54 06.7	-3.1				
	baz=205										
MID	Middleton Isla	81.40	13	IAMs_20	IAMs_20	08 31 08.5					
	comp=Z,6µm,19.0s										
MG05	Puerto Natales	81.40	142	IAMs_20	IAMs_20	08 27 50.6					
	comp=Z,5µm,18.0s										
L16K	Owhat River	81.42	6	IAMs_20	IAMs_20	08 25 33.1					
	comp=Z,8µm,20.0s										
L16K	Owhat River	81.42	6	P	P	07 54 06.9	-3.0				
	baz=193,SNR=11										
EPT	El Paso	81.43	52	IAMs_20	IAMs_20	08 23 54.8					
	comp=Z,6µm,20.0s										
DUG	Dugway, Tooele	81.44	42	IAMs_20	IAMs_20	08 25 57.8					
	comp=Z,5µm,19.0s										
BMO	Blue Mountains	81.48	36	IAMs_20	IAMs_20	08 24 50.3					
	comp=Z,7µm,19.0s										
M18K	Stony River	81.65	8	P	P	07 54 08.1	-3.1				
	baz=196										
O22K	Cooper Landing	81.68	11	IAMs_20	IAMs_20	08 32 19.9					
	comp=Z,5µm,18.0s										
O22K	Cooper Landing	81.68	11	P	P	07 54 08.0	-3.3				
	baz=202										
CAPN	Captain Cook N	81.69	11	P	P	07 54 08.0	-3.3				
	baz=201										
P23K	Montague Islan	81.69	13	IAMs_20	IAMs_20	08 27 07.2					
	comp=Z,6µm,20.0s										
P23K	Montague Islan	81.69	13	P	P	07 54 08.2	-3.1				
	baz=204										
LWLI	Liwa	81.71	268	P	P	07 54 13.9	+1.2				
MDSI	Maura Dua	81.76	268	P	P	07 54 11.4	-1.5				
	comp=Z,3µmcomp=Z,94nm,1.0s										
CRAG	Craig	81.77	22	P	P	07 54 09.1	-2.8				
	baz=218										
K15K	Wolf Creek Mou	81.80	5	IAMs_20	IAMs_20	08 25 04.8					
	comp=Z,6µm,20.0s										
K15K	Wolf Creek Mou	81.80	5	P	P	07 54 08.6	-3.3				
	baz=191										
N20K	Mount Spurr	81.92	10	P	P	07 54 09.4	-3.2				
	baz=200										
SPCR	Spurr Chakacha	81.92	10	P	P	07 54 09.4	-3.2				
	baz=200										
UNM	Universidad Na	81.92	66	IAMs_20	IAMs_20	08 23 12.6					
	comp=Z,7µm,20.0s										
L17K	Donlin	81.97	7	P	P	07 54 09.3	-3.5				
	baz=194										
J14K	Nanvaranak Lak	82.08	4	IAMs_20	IAMs_20	08 25 17.4					
	comp=Z,7µm,21.0s										
J14K	Nanvaranak Lak	82.08	4	P	P	07 54 10.4	-3.0				
	baz=189										
V35K	Ketchikan	82.19	22	P	P	07 54 11.3	-2.8				
	baz=219										
MNTX	Cornudas Mount	82.24	53	IAMs_20	IAMs_20	08 24 21.2					
	comp=Z,5µm,19.0s										
RC01	Rabbit Creek A	82.24	11	P	P	07 54 11.1	-3.1				
	baz=202										
HIN	Hinchin

baz=215
GAMB Gambell 82.78 1 P P 07 54 14.2 -2.7
baz=181,SNR=16
KNK Knik Glacier 82.78 12 P P 07 54 13.7 -3.4
baz=203
H03S1 Juan Fernandez 82.78 123 T T 09 27 21.5
baz=249,slow=75,SNR=23
H03S3 Juan Fernandez 82.78 123 T T 09 27 07.7
baz=249,slow=75,SNR=22
M22K Willow 82.79 11 IAMs_20 IAMs_20 08 33 03.2
comp=Z,4µm,18.0s
M22K Willow 82.79 11 P P 07 54 14.4 -2.6
baz=202,SNR=6.3
WRAK Wrangell Islan 82.79 21 P P 07 54 14.8 -2.4
baz=218
NJ2 Nanjing 82.80 307 *e*P P 07 54 16.3 -1.5
NJ2 S S 08 04 39.0 +3.6
NJ2 pmax pmax
comp=Z,13nm,1.3s
NJ2 pmax pmax
comp=Z,2µm,7.1s
NJ2 LR LR
comp=Z,2µm,14.7s
NJ2 LR LR
comp=Z,1µm,13.7s
NJ2 LR LR
comp=Z,2µm,24.3s
PMR Palmer 82.82 11 P P 07 54 19.4 +2.2
PMR Palmer 82.82 11 P P 07 54 13.9 -3.3
baz=203
J16K Anvik River 82.86 6 IAMs_20 IAMs_20 08 26 18.8
comp=Z,7µm,20.0s
J16K Anvik River 82.86 6 P P 07 54 14.4 -3.0
baz=192,SNR=12
AY03 Cochrane 82.89 138 IAMs_20 IAMs_20 08 24 54.7
comp=Z,7µm,19.0s
H03N2 Juan Fernandez 82.89 123 T T 09 27 17.1
baz=247,slow=73,SNR=10
S32K Killisnoo 82.89 20 IAMs_20 IAMs_20 08 26 03.1
comp=Z,5µm,20.0s
S32K Killisnoo 82.89 20 P P 07 54 14.4 -3.2
baz=216
H03N3 Juan Fernandez 82.89 123 T T 09 27 23.9
baz=247,slow=73,SNR=7.6
H03N1 Juan Fernandez 82.90 123 T T 09 27 21.5
baz=247,slow=73,SNR=5.8
MG01 Puerto William 82.92 146 IAMs_20 IAMs_20 08 27 12.8
comp=Z,7µm,19.0s
ANMO Albuquerque 83.00 49 LR LR 08 25 27.8
comp=Z,4µm,18.9s,baz=250,slow=31
ANMO Albuquerque 83.00 49 IAMs_20 IAMs_20 08 25 35.0
comp=Z,4µm,19.0s
ANMO Albuquerque 83.00 49 IAMs_20 IAMs_20 08 25 35.0
comp=Z,5µm,19.0s
ANMO Albuquerque 83.00 49 *ce*P P 07 54 22.7 +3.6
ANMO pmax pmax
comp=Z,54nm,1.9s
MESA MESA 83.09 15 P P 07 54 15.3 -3.6
baz=209
SML Sawmill 83.17 12 P P 07 54 15.1 -4.1
baz=203
BMRM Bremner River 83.17 14 IAMs_20 IAMs_20 08 32 01.3
comp=Z,6µm,18.0s
BMRM Bremner River 83.17 14 P P 07 54 15.7 -3.4
baz=207
U35K Hyder 83.22 23 P P 07 54 15.9 -3.5
baz=220
GZH2 Guangzhou 83.25 298 P P 07 54 22.3 +1.9
GZH2 PP PP 07 57 32.0 -0.2
GZH2 S S 08 04 42.3 +1.9
GZH2 LR LR
comp=Z,860nm,14.7s
GZH2 LR LR
comp=Z,1µm,18.5s
GZH2 LR LR
comp=Z,2µm,18.2s
M23K Glacier View 83.27 12 P P 07 54 15.7 -3.9
baz=204
R31K City Hall, Gus 83.29 19 P P 07 54 15.9 -3.8
baz=215
CRQE Cirque 83.32 14 P P 07 54 16.0 -4.0
baz=208
KLU Klutina 83.36 13 IAMs_20 IAMs_20 08 24 30.3
comp=Z,4µm,20.0s
KLU Klutina 83.36 13 P P 07 54 17.1 -3.0
baz=206
CUT Chulitna 83.37 10 IAMs_20 IAMs_20 08 33 41.7
comp=Z,5µm,18.0s
SCM Sheep Creek Mo 83.38 12 P P 07 54 16.4 -3.9
baz=204
TGL Tana Glacier 83.38 14 IAMs_20 IAMs_20 08 27 34.0
comp=Z,8µm,20.0s
L22K Petersville 83.40 10 IAMs_20 IAMs_20 08 26 36.4
comp=Z,6µm,20.0s
I17K Unalakleet 83.44 5 IAMs_20 IAMs_20 08 26 06.4
comp=Z,6µm,20.0s
I17K Unalakleet 83.44 5 P P 07 54 17.8 -2.6
baz=192,SNR=5.7
PCA Pinnacle 83.44 16 IAMs_20 IAMs_20 08 27 33.6
comp=Z,7µm,19.0s
PINM Pinnacle 83.44 16 P P 07 54 17.6 -3.0
baz=211
J18K Innoko River 83.44 7 IAMs_20 IAMs_20 08 26 35.4
comp=Z,7µm,20.0s
J18K Innoko River 83.44 7 P P 07 54 17.6 -2.8
baz=195
BCPM Bancas Point 83.48 16 IAMs_20 IAMs_20 08 27 04.6
comp=Z,6µm,20.0s
PPLA Purkeypile 83.52 9 IAMs_20 IAMs_20 08 26 39.6
comp=Z,8µm,20.0s
PPLA Purkeypile 83.52 9 P P 07 54 17.8 -3.3
baz=200
KSI Kapahiang 83.53 268 P P 07 54 23.5 +1.4
R32K Eaglecrest 83.56 19 P P 07 54 17.6 -3.5
baz=216
GRNC Granite Creek 83.62 15 IAMs_20 IAMs_20 08 27 31.2
comp=Z,7µm,20.0s
VRDI Verde Repeater 83.66 14 IAMs_20 IAMs_20 08 29 10.2
comp=Z,5µm,19.0s
K20K Telida 83.68 8 IAMs_20 IAMs_20 08 26 40.6
comp=Z,4µm,20.0s
K20K Telida 83.68 8 P P 07 54 18.6 -3.1
baz=198
NEW Newport 83.69 34 LR LR 08 27 23.3
comp=Z,17µm,18.4s,baz=224,slow=32
N25K Chitina, Valde 83.74 13 IAMs_20 IAMs_20 08 28 28.4
comp=Z,5µm,20.0s
N25K Chitina, Valde 83.74 13 P P 07 54 19.5 -2.6
baz=207,SNR=6.0
ANM Nome 83.77 3 IAMs_20 IAMs_20 08 27 13.2
comp=Z,5µm,20.0s
ANM Nome 83.77 3 P P 07 54 19.1 -3.0
baz=187,SNR=6.4
COYC Coyhaique 83.81 136 IAMs_20 IAMs_20 08 26 22.1
comp=Z,6µm,19.0s
LL07 Hotel Espejo d 83.85 133 IAMs_20 IAMs_20 08 26 04.8
comp=Z,5µm,19.0s
M24K Tolsona, Glenn 83.86 12 P P 07 54 19.7 -3.0
baz=205
LOGN Logan Glacier 83.88 15 IAMs_20 IAMs_20 08 27 30.2
comp=Z,7µm,20.0s
ESPZ Base Esperanza 83.89 156 P P 07 54 22.1 -0.9
MCARA McCarthy VSAT 83.89 14 IAMs_20 IAMs_20 08 28 58.4
comp=Z,6µm,19.0s
MCARA McCarthy VSAT 83.89 14 P P 07 54 19.4 -3.4
baz=208
CTG Chitna Glacier 83.92 15 P P 07 54 19.5 -3.6
baz=210
CTGM Chitina Glacie 83.92 15 IAMs_20 IAMs_20 08 27 41.3
comp=Z,6µm,20.0s
BARN Barnard Glacie 83.93 15 IAMs_20 IAMs_20 08 27 41.4
comp=Z,6µm,20.0s
AHID Auburn Hatcher 83.93 41 IAMs_20 IAMs_20 08 27 08.6
comp=Z,6µm,19.0s
MA2 Magadan 83.95 342 P P 07 54 23.3 +0.2
comp=Z,4.0nm,0.5s,baz=141,slow=5.6,SNR=13
MA2 LR LR 08 29 53.0
comp=Z,3µm,19.4s,baz=154,slow=34
comp=Z,4.0nm,0.5s
MA2 Magadan 83.95 342 P P 07 54 25.4 +2.3
MA2 Magadan 83.95 342 *ce*P P 07 54 25.3 +2.2
MA2 pmax pmax
comp=Z,61nm,2.5s
KLR Kul'dur 83.95 327 P P 07 54 23.0 -0.4
comp=Z,4.5nm,1.0s,baz=127,slow=6.0,SNR=13
KLR LR LR 08 27 26.7
comp=Z,3µm,20.5s,baz=138,slow=33
comp=Z,4.5nm,1.0s
KLR Kul'dur 83.95 327 *ce*P P 07 54 26.2 +2.8
KLR pmax pmax
comp=Z,67nm,3.0s
T35M Bob Quinn 83.96 22 P P 07 54 20.7 -2.6
baz=220
WAT6 Susitna Watana 83.99 11 P P 07 54 21.0 -2.5
baz=204,SNR=11
O28M Mount Upton 84.04 16 IAMs_20 IAMs_20 08 27 54.4
comp=Z,8µm,19.0s
O28M Mount Upton 84.04 16 P P 07 54 21.0 -2.9
baz=211
H16K Elim 84.05 5 P P 07 54 20.7 -2.8
baz=190,SNR=19
O29M Mount Kennedy 84.06 16 IAMs_20 IAMs_20 08 27 32.5
comp=Z,6µm,19.0s
O29M Mount Kennedy 84.06 16 P P 07 54 20.7 -3.1
baz=212
WAT1 Susitna Watana 84.07 11 P P 07 54 20.3 -3.4
baz=203
J19K Poorman 84.09 8 IAMs_20 IAMs_20 08 26 44.4
comp=Z,7µm,21.0s
J19K Poorman 84.09 8 P P 07 54 20.7 -3.1
baz=196,SNR=17
MYKOM Kota Tinggi 84.12 274 P P 07 54 26.4 +1.4
MYKOM Kota Tinggi 84.12 274 P P 07 54 26.7 +1.7
comp=Z,4µmcomp=Z,3µmcomp=Z,73nm,1.3s
DL2 Dalian 84.14 315 P P 07 54 26.5 +1.9
DL2 PP PP 07 57 45.0 +5.8
DL2 S S 08 04 53.0 +4.2
DL2 pmax pmax
comp=Z,38nm,1.2s
DL2 pmax pmax
comp=Z,3µm,8.2s
DL2 LR LR
comp=Z,2µm,22.2s
DL2 LR LR
comp=Z,3µm,20.4s
DL2 LR LR
comp=Z,4µm,21.6s
BNX BinXian 84.22 323 ⇑P P 07 54 26.0 +1.2
BNX pmax pmax
comp=Z,41nm,1.1s
BNX pmax pmax
comp=Z,2µm,8.1s
BNX LR LR
comp=Z,4µm,19.4s
BNX LR LR
comp=Z,5µm,21.4s
BNX LR LR
comp=Z,8µm,20.3s
MAW Mawson 84.27 199 LR LR 08 30 41.1
comp=Z,8µm,18.9s,baz=111,slow=35
G15K Niukluk 84.28 4 P P 07 54 21.4 -3.2
baz=188,SNR=21
CN2 Changchun 84.28 320 P P 07 54 26.8 +1.6
CN2 sP pwP 07 54 33.8 -3.5
CN2 S S 08 04 51.3 +1.3
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 pmax pmax
comp=Z,2µm,7.0s
CN2 LR LR
comp=Z,2µm,18.0s
CN2 LR LR
comp=Z,3µm,18.0s
CN2 LR LR
comp=Z,3µm,18.0s
HARP HAARP 84.33 13 P P 07 54 22.1 -2.9
baz=206
TRF Thorofare Moun 84.34 10 P P 07 54 22.2 -3.1
baz=202,SNR=10
P30M Million Dollar 84.35 17 P P 07 54 21.1 -4.1
baz=214
SNY Shenyang 84.38 318 ⇓P P 07 54 29.8 +4.1
SNY S S 08 04 56.0 +5.0
SNY pmax pmax
comp=Z,23nm,1.4s
SNY pmax pmax
comp=Z,2µm,8.7s
SNY LR LR
comp=Z,1µm,18.4s
SNY LR LR
comp=Z,970nm,20.0s
SNY LR LR
comp=Z,2µm,20.2s
CHUM Lake Minchumin 84.44 9 P P 07 54 21.6 -3.9
baz=200,SNR=10
FXWY Fox Creek 84.45 40 IAMs_20 IAMs_20 08 28 48.3
comp=Z,5µm,18.0s
DLMT Dillon 84.48 38 IAMs_20 IAMs_20 08 26 19.7
comp=Z,7µm,20.0s
DHY Denali Highway 84.51 11 P P 07 54 23.0 -3.1
baz=204,SNR=7.7
SNOW Snow King Moun 84.53 40 IAMs_20 IAMs_20 08 27 56.1
comp=Z,5µm,18.0s
H17K Granite Mounta 84.54 6 IAMs_20 IAMs_20 08 26 51.4
comp=Z,7µm,21.0s
H17K Granite Mounta 84.54 6 P P 07 54 23.0 -3.0
baz=192
YUK8 Steele Glacier 84.59 15 P P 07 54 23.6 -3.1
baz=211,SNR=7.6
F14K Arctic Creek 84.63 3 P P 07 54 22.6 -3.8
baz=186
TNA Tin City 84.65 2 IAMs_20 IAMs_20 08 28 42.5
comp=Z,5µm,20.0s
TNA Tin City 84.65 2 P P 07 54 23.8 -2.7
baz=185,SNR=23
YUK6 Outpost Mounta 84.66 16 P P 07 54 23.7 -3.3
baz=213
GCSA Galena City Sc 84.67 7 P P 07 54 24.3 -2.2
baz=195,SNR=6.5
MOOW Moose Ponds 84.69 40 IAMs_20 IAMs_20 08 28 46.4
comp=Z,5µm,19.0s
LOHW Long Hollow 84.70 40 IAMs_20 IAMs_20 08 28 02.7
comp=Z,5µm,19.0s
QIZ Qiongzhong 84.70 292 P P 07 54 28.5 +0.6
QIZ PP PP 07 57 41.8 -2.3
QIZ S SKSac 08 04 48.8 -2.9
QIZ SS SS 08 10 33.0 +5.7
QIZ pmax pmax
comp=Z,2µm,8.1s
QIZ LR LR
comp=Z,470nm,21.0s
QIZ LR LR
comp=Z,1µm,17.5s
QIZ LR LR
comp=Z,2µm,33.1s
PAX Paxson 84.78 12 P P 07 54 24.8 -2.6
baz=206,SNR=7.5
HYT Haines Junctio 84.79 17 P P 07 54 25.2 -2.3
baz=213
G16K Koyuk River 84.79 4 IAMs_20 IAMs_20 08 26 49.7
comp=Z,6µm,20.0s
G16K Koyuk River 84.79 4 P P 07 54 25.1 -2.1
baz=190
M26K Nabesna, AK 84.80 14 IAMs_20 IAMs_20 08 28 54.4
comp=Z,5µm,20.0s
M26K Nabesna, AK 84.80 14 P P 07 54 24.9 -2.6
baz=208
CMIG Matias Romero 84.83 70 LR LR 08 24 22.7
comp=Z,7µm,19.6s,baz=242,slow=30
LL02 Futaleuf 84.83 134 P P 07 54 25.8 -2.4
LL02 IAmb IAmb 07 54 36.2
comp=Z,42nm,1.1s
LL02 IAMs_20 IAMs_20 08 25 09.0
comp=Z,7µm,19.0s
MCK McKinley 84.84 10 IAMs_20 IAMs_20 08 34 26.3
comp=Z,4µm,19.0s
MCK McKinley 84.84 10 P P 07 54 24.6 -2.9
baz=203,SNR=33
YUK3 Moose Creek 84.84 15 P P 07 54 25.3 -2.6
baz=211,SNR=13
BPAW Bear Paw Mtn. 84.84 10 IAMs_20 IAMs_20 08 27 09.5
comp=Z,7µm,20.0s
BPAW Bear Paw Mtn. 84.84 10 P P 07 54 24.7 -2.9
baz=201
P32M Atlin 84.86 19 IAMs_20 IAMs_20 08 28 40.3
comp=Z,4µm,19.0s
P32M Atlin 84.86 19 P P 07 54 25.2 -2.6
baz=217
BW06 Boulder Array 84.89 41 IAMs_20 IAMs_20 08 29 21.0
comp=Z,6µm,18.0s
PDAR Pinedale Array 84.89 41 P P 07 54 31.1 +2.5
comp=Z,5.9nm,1.1s,baz=241,slow=4.3,SNR=13
PDAR LR LR 08 28 47.6
comp=Z,3µm,18.0s,baz=242,slow=33
comp=Z,5.9nm,1.1s
H18K Honhosa River 84.90 6 IAMs_20 IAMs_20 08 27 20.6
comp=Z,8µm,20.0s
H18K Honhosa River 84.90 6 P P 07 54 24.8 -3.1
baz=194
YUK4 Talbot Arm 84.92 16 P P 07 54 25.1 -3.2
baz=212
F15K North Star Dit 84.95 3 IAMs_20 IAMs_20 08 28 41.3
comp=Z,6µm,20.0s
F15K North Star Dit 84.95 3 P P 07 54 25.5 -2.6
baz=188
M27K Edge Creek, AK 85.01 14 IAMs_20 IAMs_20 08 29 25.9
comp=Z,6µm,19.0s
M27K Edge Creek, AK 85.01 14 P P 07 54 25.7 -2.9
baz=209,SNR=9.0
G17K Kiwalik Mounta 85.03 5 P P 07 54 25.7 -2.8
baz=192
SDCO Great Sand Dun 85.03 47 IAMs_20 IAMs_20 08 26 51.5
comp=Z,4µm,19.0s
MENT Mentasta 85.12 13 P P 07 54 32.3 +3.3
O30N Mendenhall 85.13 17 IAMs_20 IAMs_20 08 28 34.3
comp=Z,5µm,19.0s
O30N Mendenhall 85.13 17 P P 07 54 26.6 -2.5
baz=215
DLBC Dease Lake 85.15 21 LR LR 08 27 48.4
comp=Z,3µm,18.8s,baz=214,slow=32
DLBC Dease Lake 85.15 21 P P 07 54 26.2 -3.1
baz=220
BOZ Bozeman (W) 85.17 38 IAMs_20 IAMs_20 08 26 41.1
comp=Z,6µm,20.0s
L26K Log Cabin Wild 85.27 13 IAMs_20 IAMs_20 08 28 50.9
comp=Z,5µm,20.0s
L26K Log Cabin Wild 85.27 13 P P 07 54 27.0 -2.7
baz=208
BVCY Beaver Creek 85.30 14 P P 07 54 27.6 -2.3
baz=210,SNR=8.3
WHY Whitehorse 85.38 18 P P 07 54 27.5 -2.9
baz=216
K24K Donnelly Dome 85.48 12 P P 07 54 27.6 -3.2
baz=206,SNR=8.0
T25A Trinidad 85.51 48 IAMs_20 IAMs_20 08 26 48.2
comp=Z,4µm,19.0s
WHN Wuhan 85.57 304 P P 07 54 33.3 +1.3
WHN PP PP 07 57 49.8 -1.2
WHN SKS S 08 04 57.5 -5.8
WHN S SKSac 08 05 04.5 +0.9
WHN sS ScS 08 05 12.0 -1.1
WHN pmax pmax
comp=Z,5µm,6.1s
WHN LR LR
comp=Z,4µm,16.6s
WHN LR LR
comp=Z,6µm,20.1s
WHN LR LR
comp=Z,9µm,20.0s
R33M Jennings River 85.58 20 IAMs_20 IAMs_20 08 28 26.7
comp=Z,4µm,18.0s
G18K Tagagawik 85.60 6 IAMs_20 IAMs_20 08 27 54.4
comp=Z,6µm,20.0s
G18K Tagagawik 85.60 6 P P 07 54 28.5 -2.9
baz=194,SNR=19
RIDG Independent Ri 85.60 12 IAMs_20 IAMs_20 08 26 03.6
comp=Z,5µm,21.0s
RIDG Independent Ri 85.60 12 P P 07 54 27.9 -3.5
baz=206,SNR=9.7
NEA2 Nenana 85.61 10 P P 07 54 28.5 -2.9
baz=203,SNR=9.9
H20K Anotleneega Mo 85.62 7 P P 07 54 28.6 -2.8
baz=197,SNR=21
P33M Teslin, Yukon 85.63 19 P P 07 54 28.8 -2.9
baz=218
L27K Beaver Creek, 85.64 14 IAMs_20 IAMs_20 08 29 38.1
comp=Z,5µm,19.0s
L27K Beaver Creek, 85.64 14 P P 07 54 28.8 -2.8
baz=209
WRH Wood River Hil 85.66 11 IAMs_20 IAMs_20 08 28 29.2
comp=Z,4µm,21.0s
DOT Dot Lake 85.68 13 IAMs_20 IAMs_20 08 28 35.6
comp=Z,4µm,20.0s
CNSH ChangSha 85.71 302 P P 07 54 36.5 +3.8
CNSH SKS S 08 04 58.8 -6.0
CNSH S SKSac 08 05 05.0 +0.2
CNSH pmax pmax
comp=Z,13nm,1.3s
CNSH LR LR
comp=Z,2µm,20.8s
CNSH LR LR
comp=Z,2µm,18.4s
CNSH LR LR
comp=Z,2µm,19.4s
MLY Manley 85.75 9 IAMs_20 IAMs_20 08 28 18.5
comp=Z,5µm,20.0s
MLY Manley 85.75 9 P P 07 54 30.1 -2.1
baz=201,SNR=28
N31M Braeburn, Yuko 85.81 17 IAMs_20 IAMs_20 08 28 46.1
comp=Z,6µm,19.0s
N31M Braeburn, Yuko 85.81 17 P P 07 54 30.3 -2.2
baz=215
HDA Harding Lake 85.81 11 P P 07 54 29.5 -2.9
baz=205,SNR=29
Q24A Divide 85.86 46 IAMs_20 IAMs_20 08 26 55.3
comp=Z,5µm,20.0s
CCB Clear Creek Bu 85.88 11 IAMs_20 IAMs_20 08 28 45.7
comp=Z,5µm,20.0s
M29M Somme Creek 85.90 15 P P 07 54 29.9 -3.1
baz=212
F17K Baldwin Pennin 85.91 5 IAMs_20 IAMs_20 08 28 06.2
comp=Z,5µm,20.0s
F17K Baldwin Pennin 85.91 5 P P 07 54 30.0 -2.7
baz=191
JCT Junction City 85.98 56 IAMs_20 IAMs_20 08 26 22.7
comp=Z,5µm,20.0s
SCRK Sand Creek 85.99 12 P P 07 54 29.9 -3.5
baz=207,SNR=16
TIA Tai'an 85.99 310 P P 07 54 35.3 +1.4
TIA S S 08 05 04.5 -2.7
TIA pmax pmax
comp=Z,22nm,1.7s
TIA pmax pmax
comp=Z,2µm,5.9s
TIA LR LR
comp=Z,3µm,19.8s
TIA LR LR
comp=Z,3µm,19.0s
TIA LR LR
comp=Z,4µm,20.2s
G19K Purcell Mounta 86.00 6 IAMs_20 IAMs_20 08 27 44.9
comp=Z,7µm,20.0s
G19K Purcell Mounta 86.00 6 P P 07 54 30.2 -3.1
baz=195
H21K Melozitna Rive 86.05 8 IAMs_20 IAMs_20 08 27 44.8
comp=Z,5µm,20.0s
H21K Melozitna Rive 86.05 8 P P 07 54 29.1 -4.4
baz=199,SNR=32
COLA College 86.08 10 P P 07 54 37.1 +3.5
COLA College 86.08 10 IAMs_20 IAMs_20 08 28 41.0
comp=Z,6µm,20.0s
COLA College 86.08 10 *i*P P 07 54 35.0 +1.4
COLA pmax pmax
comp=Z,64nm,0.9s
COLA College 86.08 10 P P 07 54 29.2 -4.4
baz=204
I23K Minto, Yukon-K 86.08 10 P P 07 54 29.8 -3.9
baz=202,SNR=14
ILAR Eielson Array 86.15 11 P P 07 54 35.3 +1.3
comp=Z,8.2nm,0.9s,baz=202,slow=4.4,SNR=27
ILAR LR LR 08 27 38.1
comp=Z,3µm,20.9s,baz=198,slow=32
comp=Z,8.2nm,0.9s
F18K Selawik 86.19 5 P P 07 54 31.0 -3.2
baz=193,SNR=8.7
COCO West Island 86.20 258 IAMs_20 IAMs_20 08 31 41.7
comp=Z,6µm,19.0s
COCO West Island 86.20 258 *i*P P 07 54 33.9 -1.6
J25K Salcha River, 86.29 12 IAMs_20 IAMs_20 08 38 42.2
comp=Z,4µm,18.0s
J25K Salcha River, 86.29 12 P P 07 54 31.8 -3.0
baz=206,SNR=18
KVTX Kingsville 86.30 59 IAMs_20 IAMs_20 08 27 16.5
comp=Z,4µm,19.0s
N32M Quiet Lake 86.30 18 IAMs_20 IAMs_20 08 29 56.0
comp=Z,4µm,20.0s
SEY Seymchan 86.33 345 LR LR 08 31 04.5
comp=Z,2µm,19.6s,baz=143,slow=34
SEY Seymchan 86.33 345 *ce*P P 07 54 37.0 +2.0
SEY pmax pmax
comp=Z,66nm,1.7s
POKR Poker Plat Res 86.37 11 P P 07 54 31.6 -3.6
baz=204,SNR=5.3
M30M Minto, Yukon 86.44 16 P P 07 54 32.0 -3.5

baz=214
H22K Ishtalitna Cre 86.47 9 P P 07 54 32.8 -2.9
baz=200,SNR=33
E17K Hotham Inlet 86.50 4 P P 07 54 32.9 -2.8
baz=190,SNR=30
L29M L29M 86.55 15 P P 07 54 32.6 -3.5
baz=213,SNR=18
F19K Shaleruckik Mo 86.60 6 IAms_20 IAms_20 08 28 24.7
comp=Z,6µm,20.0s
F19K Shaleruckik Mo 86.60 6 P P 07 54 33.2 -3.0
baz=194
PLCA Paso Flores 86.65 132 P P 07 54 39.4 +2.0
comp=Z,27nm,1.1s,baz=241,slow=7.1,SNR=13
PLCA LR LR 08 28 36.3
comp=Z,5µm,18.0s,baz=222,slow=32
comp=Z,27nm,1.1s
GULI GuiLin 86.65 298 P P 07 54 41.8 +4.3
GULI S **S** **08 05 06.8 -7.4**
GULI pmax pmax
comp=Z,21nm,1.4s
GULI pmax pmax
comp=Z,2µm,9.4s
GULI LR LR
comp=Z,670nm,17.6s
GULI LR LR
comp=Z,990nm,19.6s
GULI LR LR
comp=Z,2µm,34.7s
G21K Allakaket 86.77 8 IAms_20 IAms_20 08 28 28.0
comp=Z,6µm,20.0s
G21K Allakaket 86.77 8 P P 07 54 34.8 -2.3
baz=198
M31M Drury Creek, Y 86.77 17 IAms_20 IAms_20 08 29 46.7
comp=Z,5µm,19.0s
M31M Drury Creek, Y 86.77 17 P P 07 54 34.2 -3.0
baz=216
HEH HeiHe 86.82 326 *e*P P **07 54 39.0 +1.4**
HEH pP **pwP** **07 54 50.3 +0.6**
HEH S **S** **08 05 08.0 -6.7**
HEH pmax pmax
comp=Z,20nm,1.5s
HEH pmax pmax
comp=Z,2µm,8.0s
HEH LR LR
comp=Z,3µm,20.2s
HEH LR LR
comp=Z,2µm,20.8s
HEH LR LR
comp=Z,6µm,19.0s
WTLY Watson Lake, Y 86.84 20 P P 07 54 34.0 -3.6
baz=221
735A Kenedy 86.89 58 IAms_20 IAms_20 08 27 25.1
comp=Z,7µm,19.0s
E18K Tukpahlearik C 86.92 5 IAms_20 IAms_20 08 28 07.4
comp=Z,6µm,20.0s
E18K Tukpahlearik C 86.92 5 P P 07 54 34.5 -3.3
baz=192
H24K Noodor Dome 86.96 10 P P 07 54 34.9 -3.2
baz=204
F20K Avaraart Lake 87.02 7 IAms_20 IAms_20 08 28 26.6
comp=Z,7µm,20.0s
F20K Avaraart Lake 87.02 7 P P 07 54 35.4 -2.8
baz=196
D17K Noatak River 87.02 4 P P 07 54 35.0 -3.3
baz=189,SNR=13
DAWY Dawson 87.06 14 P P 07 54 34.7 -3.9
baz=212,SNR=13
PRP Porcupine Dome 87.07 11 P P 07 54 35.0 -3.7
baz=206,SNR=15
FARO Faro, Yukon 87.09 17 P P 07 54 34.2 -4.6
baz=217
E19K Redstone River 87.26 6 IAms_20 IAms_20 08 28 45.9
comp=Z,6µm,20.0s
E19K Redstone River 87.26 6 P P 07 54 36.1 -3.3
baz=195
K29M Barlow Dome 87.31 15 P P 07 54 35.9 -4.0
baz=213
I26K Coal Creek Min 87.33 12 P P 07 54 36.3 -3.6
baz=208
RDOG Red Dog Mine 87.39 4 IAms_20 IAms_20 08 28 44.7
comp=Z,6µm,21.0s
RDOG Red Dog Mine 87.39 4 P P 07 54 36.8 -3.3
baz=190
G23K Bananza Creek 87.43 9 IAms_20 IAms_20 08 28 29.9
comp=Z,4µm,21.0s
G23K Bananza Creek 87.43 9 P P 07 54 37.0 -3.4
baz=202,SNR=13
F21K Alatna River 87.45 7 IAms_20 IAms_20 08 29 00.3
comp=Z,6µm,20.0s
F21K Alatna River 87.45 7 P P 07 54 37.3 -3.1
baz=198
C16K Lisburne Hills 87.47 3 IAms_20 IAms_20 08 30 00.9
comp=Z,5µm,20.0s
C16K Lisburne Hills 87.47 3 P P 07 54 37.0 -3.4
baz=187
MAYO Mayo, Yukon 87.51 16 P P 07 54 36.7 -4.0
baz=215
J29N Klondike Camp 87.66 14 IAms_20 IAms_20 08 31 27.1
comp=Z,5µm,19.0s
J29N Klondike Camp 87.66 14 P P 07 54 36.7 -4.8
baz=213
IPM Ipoh 87.66 276 P P 07 54 44.9 +2.2
IPM Ipoh 87.66 276 P P 07 54 42.3 -0.4
comp=Z,2µmcomp=Z,78nm,0.8s
BI02 San Fabin de 87.67 128 IAms_20 IAms_20 08 28 22.8
comp=Z,7µm,18.0s
C17K DeLong Mountai 87.79 4 P P 07 54 37.1 -4.9
baz=189
GO05 Hualane 87.80 126 IAms_20 IAms_20 08 27 37.0
comp=Z,7µm,19.0s
G24K Hadweenzic Riv 87.82 10 IAms_20 IAms_20 08 29 22.0
comp=Z,7µm,21.0s
G24K Hadweenzic Riv 87.82 10 P P 07 54 38.1 -4.0
baz=204
COLD Coldfoot 87.89 9 P P 07 54 38.9 -3.5
baz=201
I27K Kandik River 87.91 13 IAms_20 IAms_20 08 31 05.4
comp=Z,5µm,20.0s
I27K Kandik River 87.91 13 P P 07 54 38.3 -4.3
baz=210
APG El Apazote 88.05 73 LR LR 08 26 30.9
comp=Z,254nm,19.3s,baz=238,slow=30
C18K Utukok River 88.09 4 IAms_20 IAms_20 08 30 21.1
comp=Z,6µm,20.0s
C18K Utukok River 88.09 4 P P 07 54 39.5 -3.9
baz=191
I28M Miner Creek 88.12 13 IAms_20 IAms_20 08 31 18.3
comp=Z,6µm,19.0s
I28M Miner Creek 88.12 13 P P 07 54 40.2 -3.5
baz=211,SNR=8.5
E20K Nigu River 88.14 6 P P 07 54 41.0 -2.7
baz=196
D19K Kuna River 88.18 5 IAms_20 IAms_20 08 29 17.8
comp=Z,7µm,20.0s
D19K Kuna River 88.18 5 P P 07 54 41.0 -2.9
baz=194
J30M Hart River 88.21 15 P P 07 54 40.9 -3.4
baz=214
HNS HongShan 88.25 311 ⇑P P **07 54 47.0 +2.2**
HNS PP **PP** **07 58 09.0 -3.5**
HNS SKS **SKSac** **08 05 11.5 -1.5**
HNS pmax pmax
comp=Z,24nm,1.3s
HNS pmax pmax
comp=Z,2µm,9.3s
HNS LR LR
comp=Z,2µm,19.8s
HNS LR LR
comp=Z,3µm,20.2s
HNS LR LR
comp=Z,5µm,20.6s
KULM Kulim 88.28 276 P P 07 54 50.3 +4.7
KULM Kulim 88.28 276 P P 07 54 47.5 +1.9
comp=Z,4µmcomp=Z,2µmcomp=Z,28nm,1.2s
ELIB Princess Elisa 88.33 185 *d*P P **07 54 46.4 +1.5**
comp=Z,16nm,1.2s
BILL Bilibino 88.37 352 IAms_20 IAms_20 08 29 23.3
comp=Z,6µm,20.0s
BILL Bilibino 88.37 352 *ce*P P **07 54 47.5 +2.8**
BILL pmax pmax
comp=Z,30nm,1.4s
BJI2 Beijing 88.39 313 P P 07 54 47.3 +1.9
BJI2 SKS S 08 05 17.3 -13
BJI2 SS **SS** **08 11 25.8 +5.1**
BJI2 pmax pmax
comp=Z,870nm,7.7s
BJI2 LR LR
comp=Z,740nm,19.3s
BJI2 LR LR
comp=Z,800nm,20.0s
BJI2 LR LR
comp=Z,970nm,19.6s
BJT Baijiatuau 88.39 313 P P 07 54 50.8 +5.4
I29M Ogilvie Camp, 88.41 14 IAms_20 IAms_20 08 30 17.8
comp=Z,5µm,20.0s
I29M Ogilvie Camp, 88.41 14 P P 07 54 42.7 -2.3
baz=212
H27K Steamboat Moun 88.47 12 P P 07 54 41.7 -3.7
baz=210
KOTAN Kotaneelee Air 88.48 22 P P 07 54 41.4 -4.0
baz=226
E22K Anaktuvuk Pass 88.52 8 IAms_20 IAms_20 08 29 34.7
comp=Z,6µm,21.0s
E22K Anaktuvuk Pass 88.52 8 P P 07 54 42.1 -3.4
baz=200
D20K Etivluk River 88.54 6 P P 07 54 41.3 -4.2
D20K IAmb IAmb 07 55 35.6
comp=Z,33nm,1.4s
D20K IAms_20 IAms_20 08 30 00.1
comp=Z,6µm,20.0s
D20K Etivluk River 88.54 6 P P 07 54 42.1 -3.4
baz=195
E21K Killik River 88.55 7 IAms_20 IAms_20 08 29 37.3
comp=Z,7µm,20.0s
E21K Killik River 88.55 7 P P 07 54 42.5 -3.1
baz=198
C19K Lookout Ridge 88.66 5 IAms_20 IAms_20 08 29 14.7
comp=Z,7µm,21.0s
C19K Lookout Ridge 88.66 5 P P 07 54 42.7 -3.4
baz=193
G26K Porcupine Rive 88.68 11 IAms_20 IAms_20 08 32 29.4
comp=Z,5µm,19.0s
G26K Porcupine Rive 88.68 11 P P 07 54 42.8 -3.4
baz=207
BO01 Tunca 88.68 126 IAms_20 IAms_20 08 28 12.3
comp=Z,7µm,19.0s
LYN LuoYang 88.69 307 ⇑P P **07 54 48.8 +1.8**
LYN pP pwP 07 54 56.0 -3.2
LYN sP sP 07 54 59.5 +7.8
LYN S S 08 05 22.8 -11
LYN pmax pmax
comp=Z,12nm,1.2s
LYN pmax pmax
comp=Z,2µm,8.0s
LYN LR LR
comp=Z,2µm,16.8s
LYN LR LR
comp=Z,2µm,19.3s
LYN LR LR
comp=Z,4µm,19.9s
I30M Mount Dempster 88.74 15 P P 07 54 44.7 -1.9
I30M Mount Dempster 88.74 15 P P 07 54 42.5 -4.1
baz=214
E23K Chandalar 88.75 9 P P 07 54 42.7 -3.9
baz=202
MT01 Popeta 88.75 125 IAms_20 IAms_20 08 26 04.2
comp=Z,4µm,19.0s
BO02 Sierra Bellavi 88.75 126 IAms_20 IAms_20 08 26 36.4
comp=Z,6µm,20.0s
VA01 Torpederas 88.76 125 IAms_20 IAms_20 08 29 45.6
comp=Z,4µm,18.0s
OGNE Ogallala 88.90 46 IAms_20 IAms_20 08 29 40.7
comp=Z,5µm,19.0s
HKT Hockley 88.91 58 IAms_20 IAms_20 08 28 32.5
comp=Z,7µm,20.0s
HKT Hockley 88.91 58 *i* P **P 07 54 48.0 0.0**
HKT pmax pmax
comp=Z,34nm,1.7s
ZEA Zeya 88.92 329 *e*P **P 07 54 49.8 +2.2**
ZEA *e*S S 08 05 23.3 -11
ZEA *e* 08 06 40.2
ZEA pmax pmax
comp=N,200nm,7.3s
ZEA pmax pmax
comp=Z,700nm,11.2s
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,50nm,1.1s
ZEA pmax pmax
comp=Z,300nm,6.9s
ZEA smax smax
comp=E,800nm,11.0s
ZEA smax smax
comp=N,900nm,14.4s
E24K Your Creek 88.92 9 IAms_20 IAms_20 08 29 29.3
comp=Z,6µm,21.0s
E24K Your Creek 88.92 9 P P 07 54 44.4 -3.0
baz=203
F25K Christian Rive 88.93 10 IAms_20 IAms_20 08 29 57.5
comp=Z,7µm,20.0s
F25K Christian Rive 88.93 10 P P 07 54 44.5 -3.0
baz=206
SNAA Sanae 89.04 177 P P 07 54 49.2 +1.0
comp=Z,9.4nm,1.0s,baz=223,slow=3.6,SNR=5.2
SNAA LR LR 08 31 19.7
comp=Z,5µm,19.7s,baz=192,slow=33
comp=Z,9.4nm,1.0s
SNAA Sanae 89.04 177 IAms_20 IAms_20 08 31 28.7
comp=Z,5µm,20.0s
RSSD Black Hills 89.05 42 IAms_20 IAms_20 08 34 40.1
comp=Z,5µm,18.0s
PSI Prapat 89.09 273 P P 07 54 51.5 +1.9
PSI Prapat 89.09 273 P P 07 54 48.8 -0.8
comp=Z,3µmcomp=Z,2µmcomp=Z,30nm,1.1s
D22K Ayikyak River 89.12 7 IAms_20 IAms_20 08 29 55.2
comp=Z,7µm,21.0s
D22K Ayikyak River 89.12 7 P P 07 54 44.4 -3.9
baz=199
C21K Knifeblade Rid 89.15 6 P P 07 54 45.5 -2.8
baz=197
BO04 La Punta 89.19 126 IAms_20 IAms_20 08 28 39.0
comp=Z,5µm,19.0s
F26K Sheenjek River 89.28 11 IAms_20 IAms_20 08 30 08.6
comp=Z,5µm,20.0s
F26K Sheenjek River 89.28 11 P P 07 54 46.7 -2.3
baz=207
OK038 West end E0370 89.29 51 IAms_20 IAms_20 08 29 16.7
comp=Z,7µm,20.0s
TOLK Toolik Lake Re 89.30 8 P P 07 54 46.6 -2.5
baz=202
ENH Enshi 89.30 302 P P 07 54 54.5 +4.5
E25K Arctic Village 89.42 10 IAms_20 IAms_20 08 30 23.5
comp=Z,6µm,20.0s
E25K Arctic Village 89.42 10 P P 07 54 47.0 -2.7
baz=206
D23K Nanushuk River 89.45 8 IAms_20 IAms_20 08 30 26.3
comp=Z,6µm,20.0s
D23K Nanushuk River 89.45 8 P P 07 54 47.1 -2.7
baz=201
MT03 Universidad Ad 89.46 125 IAms_20 IAms_20 08 28 28.0
comp=Z,4µm,19.0s
MT16 CCHEN 89.48 125 IAms_20 IAms_20 08 28 28.4
comp=Z,4µm,20.0s
EFI East Falkland 89.50 146 IAms_20 IAms_20 08 31 59.1
comp=Z,5µm,19.0s
MT13 San Alfonso 89.54 126 IAms_20 IAms_20 08 28 41.0
comp=Z,5µm,19.0s
B21K Ikpikpuk River 89.61 6 IAms_20 IAms_20 08 30 34.4
comp=Z,7µm,20.0s
B21K Ikpikpuk River 89.61 6 P P 07 54 47.8 -2.7
baz=197
EPYK Eagle Plains 89.61 14 IAms_20 IAms_20 08 32 12.6
comp=Z,5µm,19.0s
EPYK Eagle Plains 89.61 14 P P 07 54 47.0 -3.7
baz=214,SNR=6.5
A19K Wainwright 89.63 4 P P 07 54 47.5 -3.0
baz=191
CO04 Los Peladeros 89.66 124 IAms_20 IAms_20 08 28 31.1
comp=Z,6µm,18.0s
H31M Peel River 89.71 15 P P 07 54 48.7 -2.4
baz=216
VA03 San Esteban 89.71 125 IAms_20 IAms_20 08 32 10.6
comp=Z,4µm,18.0s
MT08 Bocatoma Ro 89.86 125 IAms_20 IAms_20 08 28 51.6
comp=Z,5µm,19.0s
D24K Happy Valley 89.88 8 IAms_20 IAms_20 08 30 11.3
comp=Z,4µm,20.0s
D24K Happy Valley 89.88 8 P P 07 54 50.5 -1.3
baz=203
F28M Old Crow 90.00 12 IAms_20 IAms_20 08 31 42.9
comp=Z,6µm,20.0s
F28M Old Crow 90.00 12 P P 07 54 50.1 -2.3
baz=211
TIY Taiyuan 90.02 310 P P 07 54 55.5 +2.2
TIY pmax pmax
comp=Z,1µm,8.2s
TIY LR LR
comp=Z,1µm,20.5s
TIY LR LR
comp=Z,2µm,19.8s
TIY LR LR
comp=Z,3µm,21.6s
R32A Long Quarter, 90.12 49 IAms_20 IAms_20 08 30 12.4
comp=Z,6µm,18.0s
NVL N'lazarevskaya 90.14 182 *e*P **P 07 54 53.2 0.0**
NVL *e* 07 58 26.9
NVL *e*PPP PPP 08 00 24.2
NVL *e*S **SKSac** **08 05 24.0 +0.8**
NVL *e*SS **SS** **08 11 48.6 +5.3**
NVL *e*SSS SSS 08 15 25.1
NVL pmax pmax
comp=Z,95nm,2.0s
NVL MLR MLR
comp=Z,4µm,16.0s
GYA Guiyang 90.18 298 ⇑P **P 07 54 56.3 +1.9**
GYA SKS **SKSac** **08 05 27.0 +1.9**
GYA S **ScS** **08 05 52.5 +0.8**
GYA pmax pmax
comp=Z,2µm,7.9s
XLT XiLinHaoTe 90.19 317 *e*P **P 07 54 57.3 +3.3**
XLT SKS S 08 05 28.5 -19
XLT S **ScS** **08 05 52.0 +1.0**
XLT SS **SS** **08 11 48.3 +1.3**
XLT pmax pmax
comp=Z,13nm,1.2s
XLT pmax pmax
comp=Z,1µm,8.9s
XLT LR LR
comp=Z,2µm,19.3s
XLT LR LR
comp=Z,3µm,19.9s
G30M tAoh Zraii Nji 90.23 14 P P 07 54 51.2 -2.4
baz=214
C23K Itkillik River 90.28 8 IAms_20 IAms_20 08 30 53.7
comp=Z,7µm,21.0s
C23K Itkillik River 90.28 8 P P 07 54 50.7 -2.9
baz=201
D25K Kavik River 90.38 9 IAms_20 IAms_20 08 30 25.5
comp=Z,6µm,21.0s
D25K Kavik River 90.38 9 P P 07 54 50.8 -3.4
baz=205
C24K Franklin Bluff 90.42 8 P P 07 54 52.8 -1.4
baz=203
B22K Teshekpuk Lake 90.43 7 IAms_20 IAms_20 08 30 59.9
comp=Z,6µm,20.0s
B22K Teshekpuk Lake 90.43 7 P P 07 54 53.9 -0.4
baz=198
GO04 Tololo Observa 90.51 122 IAms_20 IAms_20 08 28 41.6
comp=Z,4µm,18.0s
OK052 Battle Ridge R 90.53 52 IAms_20 IAms_20 08 30 49.6
comp=Z,7µm,19.0s
TGUH Tegucigalpa,Un 90.63 75 IAms_20 IAms_20 08 28 15.7
comp=Z,5µm,18.0s
HILR Hailar Array B 90.63 323 P P 07 54 57.2 +1.4
comp=Z,16nm,1.0s,baz=132,slow=6.0,SNR=15
HILR LR LR 08 31 53.0
comp=Z,7µm,20.4s,baz=95,slow=33
comp=Z,16nm,1.0s
G31M Satah River 90.63 14 P P 07 54 52.8 -2.5
baz=216,SNR=16
F30M Barrier River 90.85 13 P P 07 54 54.0 -2.3
baz=215
WRGLY Wrigley 90.85 20 P P 07 54 53.9 -2.5
baz=226
E28M Babbage River 90.92 12 IAms_20 IAms_20 08 33 19.8
comp=Z,5µm,20.0s
E28M Babbage River 90.92 12 P P 07 54 53.8 -2.8
baz=211
E29M Blow River 91.06 12 IAms_20 IAms_20 08 32 25.7
comp=Z,5µm,20.0s
E29M Blow River 91.06 12 P P 07 54 54.3 -3.0
baz=213
A21K Barrow 91.06 5 P P 07 54 53.9 -3.3
baz=195
C27K Jago River 91.07 10 IAms_20 IAms_20 08 31 39.1
comp=Z,4µm,20.0s
C27K Jago River 91.07 10 P P 07 54 54.4 -2.9
baz=208
T35A Sooner Cattle 91.11 51 IAms_20 IAms_20 08 30 22.8
comp=Z,7µm,20.0s
C26K Camden Bay 91.15 9 P P 07 54 55.2 -2.4
baz=206
F31M Tsiigehtchic 91.17 14 P P 07 54 56.2 -1.6
baz=217,SNR=18
XAN Xi'an 91.18 306 ⇑P **P 07 55 00.5 +1.7**
XAN PP **PP** **07 58 34.5 -1.6**
XAN SKS **SKSac** **08 05 34.3 +3.9**
XAN pmax pmax
comp=Z,25nm,1.4s
XAN pmax pmax
comp=Z,2µm,7.7s
XAN LR LR
comp=Z,2µm,18.0s
XAN LR LR
comp=Z,2µm,17.8s
XAN LR LR
comp=Z,2µm,19.0s
D27M Malcolm River 91.20 11 IAms_20 IAms_20 08 31 22.6
comp=Z,4µm,20.0s
D27M Malcolm River 91.20 11 P P 07 54 55.5 -2.6
baz=210
TUL3 Leonard 91.25 52 IAms_20 IAms_20 08 30 38.7
comp=Z,6µm,19.0s
441A DeRidder 91.32 58 IAms_20 IAms_20 08 36 51.5
comp=Z,6µm,18.0s
JTS Las Juntas de 91.53 80 LR LR 08 26 51.9
comp=Z,4µm,19.9s,baz=254,slow=29
JTS Las Juntas de 91.53 80 IAms_20 IAms_20 08 26 41.1
comp=Z,5µm,20.0s
PAF Port-aux-Franc 91.73 216 IAms_20 IAms_20 08 30 59.9
comp=Z,6µm,19.0s
LHMI Lhok Sumawe 91.75 275 IAms_20 IAms_20 08 41 49.5
comp=Z,3µm,19.0s
BGNE Belgrade 91.75 47 IAms_20 IAms_20 08 30 51.1
comp=Z,5µm,20.0s
TEIG Tepich 91.79 69 IAms_20 IAms_20 08 30 30.6
comp=Z,4µm,19.0s
NNA Nana 91.81 103 LR LR 08 27 24.2
comp=Z,4µm,19.6s,baz=252,slow=30
INK Inuvik 91.92 14 LR LR 08 34 13.1
comp=Z,4µm,18.3s,baz=217,slow=34
INK Inuvik 91.92 14 P P 07 54 58.7 -2.5
baz=217,SNR=8.4
HHC Hu-ho-hao-te 91.92 313 *e*P **P 07 55 00.8 -1.3**
HHC pP sP 07 55 06.5 -0.3
HHC PP **PP** **07 58 39.5 -2.3**
HHC SKS **SKSac** **08 05 33.0 -1.4**
HHC S **ScS** **08 06 05.5 -0.1**
HHC SS **SS** **08 12 12.5 +0.4**
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,850nm,5.3s
HHC LR LR
comp=Z,1µm,20.6s
HHC LR LR
comp=Z,1µm,20.1s
HHC LR LR
comp=Z,1µm,20.4s
AC06 Mina Casimiro 91.95 120 IAms_20 IAms_20 08 29 05.6
comp=Z,6µm,18.0s
CFA Coronel Fontan 91.97 124 LR LR 08 28 28.4
comp=Z,1µm,18.5s,baz=234,slow=30
ATAH Atahualpa 92.00 98 LR LR 08 28 28.8
comp=Z,8µm,18.0s,baz=275,slow=30
AC01 Pan de Azucar 92.22 119 IAms_20 IAms_20 08 27 35.5
comp=Z,4µm,20.0s
E28A Huff 92.26 41 IAms_20 IAms_20 08 33 01.0
comp=Z,5µm,19.0s
SUSD Miller 92.46 44 IAms_20 IAms_20 08 33 12.6
comp=Z,4µm,19.0s
U38A Gravette 92.50 52 IAms_20 IAms_20 08 30 48.9
comp=Z,5µm,20.0s
YAK Yakutsk 92.80 337 LR LR 08 33 29.6
comp=Z,2µm,20.2s,baz=119,slow=33
YAK Yakutsk 92.80 337 *e*P **P 07 55 06.6 +1.2**
YAK *e**PP **pwP** **07 55 14.6 -2.7**
YAK *e*S **SKSac** **08 05 39.6 +1.5**
YAK *e* 08 06 08.4
YAK *e*SP **SP** **08 07 21.2 +0.1**
YAK pmax pmax
comp=Z,24nm,1.5s

YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.4s
YAK pmax pmax
comp=N,176nm,6.0s
YAK pmax pmax
comp=Z,513nm,6.3s
YAK pmax pmax
comp=E,326nm,6.6s
YAK smax smax
comp=N,548nm,6.3s
YAK smax smax
comp=E,625nm,7.9s
YAK MLR MLR
comp=E,2µm,24.0s
KMI2 Kunming 93.03 295 ⇑P **P 07 55 09.0 +1.3**
KMI2 PP **PP 07 58 54.8 +3.8**
KMI2 SKS **SKSac 08 05 44.3 +2.7**
KMI2 S **S 08 06 14.0 +0.1**
KMI2 pmax pmax
comp=E,17nm,1.6s
KMI2 pmax pmax
comp=E,1µm,8.1s
KMI2 LR LR
comp=E,760nm,17.4s
KMI2 LR LR
comp=E,1µm,21.1s
KMI2 LR LR
comp=E,3µm,21.1s
BTO2 Baotou 93.05 312 *e*P **P 07 55 09.5 +2.1**
BTO2 S **S 08 06 17.8 +4.6**
BTO2 pmax pmax
comp=E,16nm,0.8s
BTO2 pmax pmax
comp=E,3µm,8.6s
BTO2 LR LR
comp=E,4µm,17.1s
BTO2 LR LR
comp=E,3µm,21.4s
BTO2 LR LR
comp=E,5µm,20.6s
AC02 Maricunga 93.16 120 IAMs_20 IAMs_20 08 28 04.6
comp=Z,5µm,20.0s
L34A Svendsen Farm, 93.19 47 IAMs_20 IAMs_20 08 32 32.2
comp=Z,6µm,19.0s
PB10 IPOC Station P 93.26 116 IAMs_20 IAMs_20 08 28 21.9
comp=Z,5µm,20.0s
GO02 Mina Guanaco 93.43 118 IAMs_20 IAMs_20 08 30 33.7
comp=Z,4µm,19.0s
143A Socs Landing, 93.44 57 IAMs_20 IAMs_20 08 31 42.4
comp=Z,6µm,20.0s
MDND Maddock 93.48 40 IAMs_20 IAMs_20 08 34 45.1
comp=Z,6µm,18.0s
YKA Yellowknife Ar 93.48 23 P **P 07 55 11.0 +2.5**
comp=Z,1.6nm,1.0s,baz=240,slow=4.8,SNR=12
YKA LR LR 08 32 53.3
comp=Z,3µm,19.1s,baz=248,slow=33
comp=Z,1.6nm,1.0s
S39A Bolivar 93.76 51 IAMs_20 IAMs_20 08 32 03.9
comp=Z,5µm,19.0s
PB05 IPOC Station P 93.81 116 IAMs_20 IAMs_20 08 28 28.5
comp=Z,4µm,20.0s
VBMS Vicksburg 93.98 57 IAMs_20 IAMs_20 08 32 09.7
comp=Z,5µm,20.0s
CD2 Chengdu 94.13 301 P **P 07 55 08.8 -3.7**
CD2 PP **PP 07 58 58.8 -0.5**
CD2 SKS **SKSac 08 05 48.3 +1.3**
CD2 S **ScS 08 06 24.8 +0.5**
CD2 SS **SS 08 12 38.8 -5.3**
CD2 pmax pmax
comp=Z,1µm,8.8s
CD2 LR LR
comp=Z,3µm,17.1s
CD2 LR LR
comp=Z,3µm,20.0s
CD2 LR LR
comp=Z,2µm,18.4s
CMAR Chiang Mai Arr 94.17 288 P **P 07 55 13.3 +0.5**
comp=Z,11nm,0.9s,baz=106,slow=4.7,SNR=24
CMAR LR LR 08 34 09.4
comp=Z,2µm,21.2s,baz=85,slow=33
comp=Z,11nm,0.9s
CHTO Chiang Mai 94.28 288 P **P 07 55 17.7 +4.3**
CHTO Chiang Mai 94.28 288 P **P 07 55 14.0 +0.6**
P38A Dawn 94.31 50 IAMs_20 IAMs_20 08 33 37.2
comp=Z,6µm,19.0s
PZH PanZhiHua 94.33 296 P **P 07 55 11.0 -2.6**
PZH SKS **SKSac 08 05 50.0 +1.6**
PZH S **S 08 06 21.5 -3.6**
PZH SS **SS 08 12 44.5 -2.8**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,860nm,8.2s
PZH LR LR
comp=Z,670nm,18.2s
PZH LR LR
comp=Z,990nm,21.8s
PZH LR LR
comp=Z,1µm,19.4s
OTAV Otavalo 94.38 91 IAMs_20 IAMs_20 08 28 36.2
comp=Z,7µm,20.0s
PB03 IPOC Station P 94.50 115 IAMs_20 IAMs_20 08 30 16.9
comp=Z,5µm,19.0s
PB07 IPOC Station P 94.51 115 IAMs_20 IAMs_20 08 30 26.0
comp=Z,5µm,19.0s
346A Big Creek Wild 94.54 58 IAMs_20 IAMs_20 08 33 41.7
comp=Z,4µm,19.0s
PB02 IPOC Station P 94.66 114 IAMs_20 IAMs_20 08 30 37.9
comp=Z,4µm,19.0s
N38A Joes South For 94.94 49 IAMs_20 IAMs_20 08 32 25.8
comp=Z,5µm,20.0s
C36M Paulatuk 94.96 16 IAMs_20 IAMs_20 08 34 15.2
comp=Z,6µm,20.0s
C36M Paulatuk 94.96 16 P **P 07 55 12.4 -2.8**
baz=226
PB09 IPOC Station P 95.03 115 IAMs_20 IAMs_20 08 30 42.9
comp=Z,6µm,20.0s
PB01 IPOC Station P 95.11 114 IAMs_20 IAMs_20 08 30 53.0
comp=Z,5µm,18.0s
T42A Van Buren 95.18 53 IAMs_20 IAMs_20 08 32 32.9
comp=Z,6µm,20.0s
146A Union 95.28 57 IAMs_20 IAMs_20 08 33 40.2
comp=Z,5µm,19.0s
Y45A Yeager Farm, C 95.31 56 IAMs_20 IAMs_20 08 33 12.6
comp=Z,6µm,19.0s
SCIA State Center 95.35 48 IAMs_20 IAMs_20 08 32 14.6
comp=Z,4µm,20.0s
CCM Cathedral Cave 95.42 52 IAMs_20 IAMs_20 08 32 49.1
comp=Z,5µm,19.0s
AF01 San Pedro de A 95.49 116 IAMs_20 IAMs_20 08 30 56.0
comp=Z,5µm,19.0s
LZH Lanzhou 95.80 306 *e*P **P 07 55 22.3 +2.2**
LZH pP sP 07 55 25.8 +1.0
LZH PP **PP 07 59 09.8 -2.6**
LZH SKS **SKSac 08 05 56.0 0.0**
LZH SS **SS 08 13 08.5 +0.6**
LZH pmax pmax
comp=Z,11nm,1.5s
LZH pmax pmax
comp=Z,360nm,4.5s
LZH LR LR
comp=Z,1µm,18.9s
LZH LR LR
comp=Z,1µm,18.9s
LZH LR LR
comp=Z,1µm,19.2s
LZDM Lanzhou Array 95.87 306 P **P 07 55 21.4 +0.7**
comp=Z,0.9nm,0.3s,baz=120,slow=8.5,SNR=3.6
LZDM LR LR 08 35 13.9
comp=Z,702nm,22.0s,baz=85,slow=34
comp=Z,0.9nm,0.3s
GO01 Chusmiza 95.90 113 IAMs_20 IAMs_20 08 36 33.7
comp=Z,4µm,18.0s
I37A Lemond, Waseca 95.98 46 IAMs_20 IAMs_20 08 33 13.9
comp=Z,5µm,20.0s
BRAL Brewton 96.42 59 IAMs_20 IAMs_20 08 35 10.7
comp=Z,4µm,20.0s
A36M Sachs Harbour 96.56 13 IAMs_20 IAMs_20 08 37 01.1
comp=Z,5µm,19.0s
A36M Sachs Harbour 96.56 13 P **P 07 55 19.9 -2.5**
baz=225
N41A Harden Midland 96.61 49 IAMs_20 IAMs_20 08 33 27.0
comp=Z,5µm,20.0s
TNCH TengChong 96.62 294 P **P 07 55 26.3 +2.2**
TNCH SKS **SKSac 08 06 01.5 +0.8**
TNCH S **S 08 06 44.0 -1.1**
TNCH pmax pmax
comp=Z,910nm,8.2s
TNCH LR LR
comp=Z,3µm,25.5s
TNCH LR LR
comp=Z,2µm,24.3s
TNCH LR LR
comp=Z,3µm,27.5s
ULM Lac du Bonnet 96.69 39 LR LR 08 35 11.6
comp=Z,8µm,18.6s,baz=254,slow=33
S44A Carbondale 96.78 53 IAMs_20 IAMs_20 08 33 22.3
comp=Z,4µm,20.0s
L40A Anamosa 96.80 48 IAMs_20 IAMs_20 08 36 24.0
comp=Z,4µm,19.0s
SPMN Marine on St. 96.80 45 IAMs_20 IAMs_20 08 36 37.6
comp=Z,3µm,19.0s
LRAL Lakeview Retre 97.05 58 IAMs_20 IAMs_20 08 34 45.1
comp=Z,6µm,19.0s
P43A Skaggs, Pawnee 97.22 51 IAMs_20 IAMs_20 08 35 41.5
comp=Z,6µm,18.0s
451A Vernon 97.31 60 IAMs_20 IAMs_20 08 36 43.4
comp=Z,3µm,18.0s
Q44A Meyer Farm, Va 97.35 51 IAMs_20 IAMs_20 08 34 17.1
comp=Z,5µm,19.0s
ULN Ulaanbaatar 97.55 318 *i* P **P 07 55 27.6 -0.2**
ULN pmax pmax
comp=Z,17nm,3.2s
JFWS Jewell Farm 97.76 47 IAMs_20 IAMs_20 08 38 06.4
comp=Z,4µm,18.0s
Y49A Blount Mountai 97.77 57 IAMs_20 IAMs_20 08 38 42.0
comp=Z,3µm,18.0s
L42A Oliver, Polo 97.88 48 IAMs_20 IAMs_20 08 35 19.5
comp=Z,6µm,19.0s
SONM Songino Array 97.96 318 P **P 07 55 29.1 -0.5**
comp=Z,0.8nm,0.9s,baz=128,slow=2.4,SNR=4.5
SONM PP **PP 07 59 26.4 -2.3**
comp=Z,1.4nm,1.0s,baz=120,slow=5.5,SNR=5.1
SONM LR LR 08 35 51.0
comp=Z,2µm,20.7s,baz=106,slow=33
LPAZ La Paz 98.13 110 P Pdif 07 55 34.6 +2.9
comp=Z,1.0nm,0.7s,baz=243,slow=4.5,SNR=4.4
LPAZ PP **PP 07 59 34.0 +3.1**
comp=Z,0.8nm,0.6s,baz=239,slow=6.5,SNR=3.6
LPAZ LR LR 08 32 58.7
comp=Z,5µm,18.3s,baz=262,slow=31
comp=Z,1.0nm,0.7s
352A Blakely 98.24 60 IAMs_20 IAMs_20 08 36 06.0
comp=Z,3µm,20.0s
553A Crawfordville 98.27 61 IAMs_20 IAMs_20 08 38 24.8
comp=Z,4µm,18.0s
G40A Rib Lake 98.55 45 IAMs_20 IAMs_20 08 37 07.0
comp=Z,3µm,19.0s
EYMN Ely 98.57 42 IAMs_20 IAMs_20 08 35 25.2
comp=Z,6µm,20.0s
152A Waverly Hall 98.77 59 IAMs_20 IAMs_20 08 36 21.8
comp=Z,4µm,19.0s
TIXI Tiksi 98.81 344 LR LR 08 40 20.0
comp=Z,1µm,18.7s,baz=144,slow=36
TIXI Tiksi 98.81 344 *ce*P Pdif 07 55 34.8 +2.2
TIXI pmax pmax
comp=Z,11nm,1.5s
P46A Rosedale 98.91 51 IAMs_20 IAMs_20 08 35 06.4
comp=Z,5µm,19.0s
I42A Draeger Farm, 98.99 47 IAMs_20 IAMs_20 08 35 26.0
comp=Z,5µm,19.0s
K43A Burlington 99.03 48 IAMs_20 IAMs_20 08 37 44.2
comp=Z,4µm,18.0s
L44A Lake County Fo 99.17 49 IAMs_20 IAMs_20 08 36 35.9
comp=Z,4µm,19.0s
X51A Calhoun 99.21 57 IAMs_20 IAMs_20 08 35 25.3
comp=Z,5µm,20.0s
SFIN Lafayette 99.22 51 IAMs_20 IAMs_20 08 35 32.5
comp=Z,5µm,19.0s
Y52A Lilburn 99.64 58 IAMs_20 IAMs_20 08 42 59.8
comp=Z,3µm,18.0s
GTA2 Gaotai 99.93 308 P **Pdif 07 55 38.5 -0.1**
GTA2 SKS **SKSac 08 06 10.8 -6.0**
GTA2 sS sS 08 07 23.3 +4.7
GTA2 pmax pmax
comp=Z,3.0nm,0.7s
GTA2 pmax pmax
comp=Z,430nm,8.4s
GTA2 LR LR
comp=Z,1µm,18.7s
GTA2 LR LR
comp=Z,2µm,21.1s
GTA2 LR LR
comp=Z,2µm,23.9s
H43A Windswept, Lux 99.95 46 IAMs_20 IAMs_20 08 35 27.3
comp=Z,4µm,20.0s
GOGA Godfrey 99.99 58 IAMs_20 IAMs_20 08 38 05.1
comp=Z,5µm,19.0s
061Z Ochoppi 99.99 66 IAMs_20 IAMs_20 08 36 35.5
comp=Z,3µm,19.0s
R49A Shelbyville 100.04 53 IAMs_20 IAMs_20 08 35 13.6
comp=Z,6µm,20.0s
MORE Moreh 100.05 292 IAMs_20 IAMs_20 08 35 57.6
comp=Z,1µm,22.0s
154A Montrose 100.05 59 IAMs_20 IAMs_20 08 36 26.9
comp=Z,5µm,20.0s
P48A Milroy 100.18 52 IAMs_20 IAMs_20 08 37 44.2
comp=Z,6µm,19.0s
O48B Farmland 100.61 51 IAMs_20 IAMs_20 08 36 26.3
comp=Z,5µm,19.0s
060A Indiantown 100.79 65 IAMs_20 IAMs_20 08 35 02.5
comp=Z,3µm,21.0s
I45A Fountain 100.89 47 IAMs_20 IAMs_20 08 36 22.1
comp=Z,4µm,19.0s
V53A Saluda 101.13 56 IAMs_20 IAMs_20 08 36 14.0
comp=Z,6µm,20.0s
O49A Covington 101.19 51 IAMs_20 IAMs_20 08 42 44.8
comp=Z,5µm,18.0s
Q51A Peebles 101.62 53 IAMs_20 IAMs_20 08 37 54.3
comp=Z,5µm,19.0s
U54A Nelsons Funny 102.13 55 IAMs_20 IAMs_20 08 36 46.3
comp=Z,5µm,19.0s
KMSC Kings Mountain 102.16 57 IAMs_20 IAMs_20 08 37 07.3
comp=Z,6µm,20.0s
GLMI Grayling 102.21 47 IAMs_20 IAMs_20 08 37 33.1
comp=Z,6µm,20.0s
Q52A Bidwell 102.41 53 IAMs_20 IAMs_20 08 36 38.4
comp=Z,5µm,20.0s
M50A Fremont 102.45 50 IAMs_20 IAMs_20 08 37 06.1
comp=Z,5µm,20.0s
E46A Sault Ste Mari 102.81 45 IAMs_20 IAMs_20 08 39 02.8
comp=Z,3µm,19.0s
N51A Ashland 102.82 51 IAMs_20 IAMs_20 08 39 05.9
comp=Z,4µm,18.0s
Y58A Scranton 103.17 59 IAMs_20 IAMs_20 08 41 11.5
comp=Z,4µm,19.0s
U56A King 103.21 56 IAMs_20 IAMs_20 08 37 49.0
comp=Z,5µm,20.0s
W57A Gilead 103.22 57 IAMs_20 IAMs_20 08 38 26.5
comp=Z,5µm,19.0s
X58A Rowland 103.60 58 IAMs_20 IAMs_20 08 44 02.6
comp=Z,3µm,18.0s
M52A Chesterland 103.72 51 IAMs_20 IAMs_20 08 39 15.5
comp=Z,5µm,18.0s
N53A Lisbon 103.93 51 IAMs_20 IAMs_20 08 39 08.2
comp=Z,4µm,19.0s
V58A Windy Hill, Pi 104.07 57 IAMs_20 IAMs_20 08 38 15.0
comp=Z,5µm,20.0s
W59A Clinton 104.46 58 IAMs_20 IAMs_20 08 39 16.3
comp=Z,4µm,19.0s
T59A Double "B" Far 105.56 56 IAMs_20 IAMs_20 08 38 52.3
comp=Z,5µm,20.0s
SSPA Standing Stone 106.08 52 IAMs_20 IAMs_20 08 40 42.3
comp=Z,5µm,19.0s
V61A Roper 106.08 57 IAMs_20 IAMs_20 08 41 59.2
comp=Z,4µm,19.0s
L56A Greenwood 106.62 51 IAMs_20 IAMs_20 08 39 36.3
comp=Z,4µm,19.0s
SDDR Presa de Saban 106.72 75 IAMs_20 IAMs_20 08 36 15.1
comp=Z,4µm,20.0s
N58A Sunbury 106.99 52 IAMs_20 IAMs_20 08 41 46.4
comp=Z,5µm,19.0s
PALK Palikele 107.71 272 IAMs_20 IAMs_20 08 45 26.0
comp=Z,3µm,20.0s
LONY Lake Ozonia 109.17 48 IAMs_20 IAMs_20 08 47 05.6
comp=Z,5µm,18.0s
WMQ Urumqi 109.68 311 *e*Pdif **Pdif 07 56 18.8 -3.0**
WMQ PP **PP 08 00 54.8 -1.3**
WMQ AMB AMB
comp=Z,280nm,4.5s
WMQ LR LR
comp=Z,1µm,18.3s
WMQ LR LR
comp=Z,2µm,19.5s
WMQ LR LR
comp=Z,2µm,20.3s
DGAR Diego Garcia 110.31 254 IAMs_20 IAMs_20 08 43 52.0
comp=Z,3µm,20.0s
J61A Chester 110.45 50 IAMs_20 IAMs_20 08 41 42.6
comp=Z,4µm,20.0s
BCX Boston College 111.33 51 IAMs_20 IAMs_20 08 43 26.2
comp=Z,5µm,20.0s
M65A Busby, Falmout 111.63 52 P **PKiKP 08 00 25.2 -2.8**
baz=263
KAAM Kaadhehdhoo 112.77 262 IAMs_20 IAMs_20 08 48 20.4
comp=Z,3µm,19.0s
MK31 Makanchi Array 113.77 313 *i* PKiKP **PKiKP 08 00 32.6 +0.5**
MKAR Makanchi Array 113.77 313 PKiKP **PKiKP 08 00 33.0 +0.9**
comp=Z,2.0nm,0.8s,baz=110,slow=1.2,SNR=11
MKAR PKKPab **PKKPab 08 11 21.1 +0.4**
comp=Z,0.9nm,1.0s,baz=292,slow=5.9,SNR=4.1
MKAR SKKP **SKKPdf 08 15 13.5 +0.6**
comp=Z,1.1nm,1.2s,baz=252,slow=1.4,SNR=4.0
MKAR Makanchi Array 113.77 313 *i* PKiKP **PKiKP 08 00 33.0 +0.9**
MAKZ Makanchi 113.99 313 ⇓PKiKP **PKiKP 08 00 31.3 -1.2**
SMRT St. Maarten 114.04 78 IAMs_20 IAMs_20 08 45 59.8
comp=Z,2µm,18.0s
HMDM Hanimaadhoo 114.66 269 IAMs_20 IAMs_20 08 49 27.6
comp=Z,3µm,20.0s
KURK Kurchatov 116.27 318 IAMs_20 IAMs_20 08 47 60.0
comp=Z,4µm,20.0s
KURK Kurchatov 116.27 318 PKiKP **PKiKP 08 00 37.6 +0.9**
KURBB Kurchatov Arra 116.33 318 PKP **PKiKP 08 00 37.6 +0.8**
comp=Z,2.3nm,1.0s,baz=89,slow=2.0,SNR=7.4
KSH2 Kashi 118.33 305 PKP **PKPdf 08 00 41.0 -0.3**
KSH2 PP **PP 08 01 56.5 -1.2**
KSH2 LR LR
comp=Z,1µm,22.3s
KSH2 LR LR
comp=Z,2µm,22.0s
KSH2 LR LR
comp=Z,1µm,22.0s
AAK Ala-Archa 119.22 309 *i* PKiKP **PKPdf 08 00 40.7 -2.2**
SPITS Spitsbergen Ar 120.88 358 PKP **PKiKP 08 00 46.9 +1.9**
comp=Z,7.1nm,0.8s,baz=17,slow=1.5,SNR=5.4
BVAR Borovoye Array 121.13 321 PKP **PKiKP 08 00 47.1 +1.0**
comp=Z,4.7nm,0.8s,baz=90,slow=1.4,SNR=12
BVAR PP **PP 08 02 14.9 -1.3**
comp=Z,6.8nm,1.2s,baz=72,slow=9.3,SNR=3.6
BORK Borovoye 121.17 321 IAMs_20 IAMs_20 08 50 37.9
comp=Z,3µm,20.0s
BORK Borovoye 121.17 321 *i* PKiKP **PKiKP 08 00 48.3 +2.1**
FOMA Nahampoana Res 121.28 223 IAMs_20 IAMs_20 08 45 46.2
comp=Z,4µm,19.0s
CHGR Chuyangaron 123.33 304 *i* PKiKP **PKiKP 08 00 51.3 +0.3**
VOI Vohitsoka 123.53 225 IAMs_20 IAMs_20 08 48 50.9
comp=Z,2µm,18.0s
ARTI Arti 126.90 327 *i* PKiKP **PKiKP 08 00 59.2 +1.8**
ARTI 08 02 59.2
ARTI 08 08 10.0
ARTI SP SP 08 13 01.8 +5.8
ARTI SS **SS 08 20 04.1 +3.3**
ARTI MLR MLR
comp=Z,5µm,20.0s
LVZ Lovozero 128.34 347 IAMs_20 IAMs_20 08 56 37.2
comp=Z,3µm,20.0s
ARCES ARCESS Array B 128.47 352 PKP **PKiKP 08 01 03.0 +2.7**
comp=Z,4.3nm,1.0s,baz=16,slow=1.9,SNR=8.2
ARCES ARCESS Array B 128.47 352 PKiKP **PKiKP 08 01 03.0 +2.7**
APA Apatity 128.87 347 *i* PKiKP **PKPdf 08 00 59.2 -1.2**
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,3µm,20.3s
KIRV Kirov 130.14 332 *i* PKiKP **PKiKP 08 01 05.2 +1.4**
KLMR Klimovskoe 132.53 339 *e*PKiKP **PKiKP 08 01 08.1 -0.5**
KLMR pmax pmax
comp=Z,29nm,1.6s
BELG Belogornoye 134.31 326 *i* PKiKP **PKiKP 08 01 12.4 0.0**
FINES FINESS Array B 135.78 347 PKP **PKPdf 08 01 13.7 +0.1**
comp=Z,9.4nm,1.2s,baz=29,slow=3.2,SNR=5.5
OBN Obninsk 137.78 335 IAMs_20 IAMs_20 09 01 51.4
comp=Z,2µm,22.0s
OBN Obninsk 137.78 335 ⇑*e*PKiKP **PKPdf 08 01 17.7 +0.3**
OBN *e* 08 04 06.2
OBN *e*PS **PS 08 14 24.1 -8.5**
OBN *e*SS SS 08 22 14.5 +2.0
OBN pmax pmax
comp=Z,17nm,1.0s
VRH Novokhopyorsk 138.03 328 *e*PKHKP PKPpre 08 01 09.7
VRH pmax pmax
comp=Z,5.0nm,0.3s
NOA NORSAR Array B 138.17 357 PKP **PKPdf 08 01 18.8 +0.7**
comp=Z,0.2nm,0.4s,baz=14,slow=2.5,SNR=4.3
LPSR Galich'ya Gora 138.50 331 *e*PKiKP **PKPdf 08 01 18.8 -0.1**
LPSR pmax pmax
comp=Z,20nm,1.2s
MAK Makhachkala 138.59 314 *e*P **Pdif 07 58 25.9 -4.3**
MAK *e* 08 04 05.6
MAK *e*PPP PPP 08 07 08.6
MAK *e*SS SS 08 22 16.3 -7.2
MAK *e*SSS SSS 08 27 30.1
MAK pmax pmax
comp=Z,367nm,1.1s
VORR Voronezh 138.97 330 *e*PKHKP PKPpre 08 01 13.0
VORR pmax pmax
comp=Z,104nm,0.4s
VSR Storozhevoye 139.28 329 *e*PKiKP **PKPdf 08 01 16.6 -3.8**
VSR pmax pmax
comp=Z,5.0nm,0.7s
KONO Kongsberg 139.62 358 IAMs_20 IAMs_20 09 04 08.7
comp=Z,2µm,20.0s
KBZ Khabaz 141.32 317 *i* PKiKP **PKPdf 08 01 24.0 -0.3**
KIV Kislovodsk 141.35 318 IAMs_20 IAMs_20 09 09 50.5
comp=Z,2µm,20.0s
KIV Kislovodsk 141.35 318 *i* PKiKP **PKiKP 08 01 28.3 +1.0**
KIV *e* 08 04 24.7
KIV *e*SS SS 08 22 51.8 -4.1
KIV pmax pmax
comp=Z,10.0nm,1.0s
MNK Minsk 141.37 341 *i* PKP **PKPdf 08 01 24.1 0.0**
comp=E,44nm,0.9s
MNK *i* PKP **PKPdf 08 01 24.1 0.0**
comp=N,56nm,0.8s
MNK *i* PKP **PKPdf 08 01 24.1 0.0**
comp=Z,17nm,0.8s,baz=33
MNK *i* PKiKP **sPKPdf 08 01 27.4 -1.6**
comp=Z,11nm,0.9s
MNK *i* PP **PP 08 04 28.5 +2.3**
MNK *i* SKP **SKPbc 08 04 58.6 -1.7**
MNK *i* PKS PKSdf 08 05 13.1 +13
MNK *i* PPP PPP 08 07 35.0
MNK *i* SKS **SKSac 08 08 34.1 -5.2**
MNK *i* SS **SS 08 23 01.3 +6.8**
MNK *i* SSS SSS 08 28 18.5
MNK *i* LRM MLR 09 05 10.6
comp=Z,3µm,18.5s
MNK *i* LRM MLR 09 05 27.2
comp=N,1µm,19.5s
MNK Minsk 141.37 341 *i* PKiKP **PKPdf 08 01 24.0 0.0**
MNK *i* 08 01 27.4
MNK *i* 08 04 28.5
MNK *i* PPP PPP 08 07 35.0
MNK *i* 08 08 34.0
MNK *i* SS SS 08 23 01.3 +6.8
MNK *i* SSS SSS 08 28 18.5
MNK pmax pmax
comp=Z,17nm,0.8s
MNK pmax pmax
comp=N,56nm,0.8s
MNK pmax pmax
comp=E,44nm,0.9s
MNK pmax pmax
comp=Z,11nm,0.9s
MNK MLR MLR
comp=Z,3µm,19.0s
MNK MLR MLR
comp=N,1µm,20.0s
MNK MLR MLR
comp=E,2µm,20.0s
ERBR Yeremizino-Bor 141.82 321 *i* PKiKP **PKPdf 08 01 26.4 +1.3**
ERBR pmax pmax
comp=Z,28nm,0.9s
ERBR MLR MLR
comp=Z,2µm,20.0s
LABN Labinsk 142.24 320 *i* PKiKP **PKiKP 08 01 28.3 -0.6**
LABN pmax pmax
comp=Z,44nm,0.6s

LABN				MLR	MLR				
	comp=Z,2µm,17.0s								
KIBK	**Kibwezi**	**142.69**	**238**	IAMs_20	IAMs_20	08 59 27.6			
	comp=Z,2µm,19.0s								
SUW	**Suwalki**	**143.15**	**344**	*e*PKP	PKPab	08 01 22.4	-0.4		
EKA	**Eskdalemuir Ar**	**143.18**	**10**	PP	**PP**	**08 04 37.8**	**+0.9**		
	comp=Z,0.2nm,0.4s,baz=345,slow=11,SNR=1.2								
SOC	**Sochi**	**143.41**	**319**	*i* PKIKP	PKPbc	08 01 26.5	+1.3		
SOC				*e*PPP	PPP	08 07 46.0			
SOC				*e*SS	SS	08 23 17.7	-1.7		
SOC				*e*SSS	SSS	08 28 39.4			
SOC				MLR	MLR				
	comp=Z,2µm,20.0s								
RAYN	**Ar Rayn**	**143.97**	**284**	IAMs_20	IAMs_20	09 03 58.9			
	comp=Z,2µm,20.0s								
AKASG	**Malin Array Be**	**144.02**	**336**	PKhKP	PKPpre	08 01 26.9			
	comp=Z,2.9nm,0.6s,baz=41,slow=3.9,SNR=18								
ANN	**Anapa**	**144.12**	**322**	*e*PKHKP	PKPpre	08 01 22.4			
ANN				pmax	pmax				
	comp=Z,202nm,1.2s								
RGN	**Rugen**	**144.45**	**354**	IAMs_20	IAMs_20	09 07 16.4			
	comp=Z,3µm,20.0s								
GKP	**Gorka Klasztor**	**145.15**	**349**	*e*PKP	**PKiKP**	**08 01 33.1**	**-1.5**		
R9F13	**Warsaw-Wawer**	**145.30**	**345**	*e*PKPdf	**PKiKP**	**08 01 33.5**	**-1.4**		
R9F13				*e*		08 01 44.1			
R9F13				*e*SKS	**SKSdf**	**08 08 41.8**	**+2.5**		
BEL	**Belsk**	**145.74**	**345**	*e*PKP	**PKiKP**	**08 01 35.0**	**-0.8**		
SIM	**Simferopol'**	**145.90**	**325**	*i* PKIKP	**PKPab**	**08 01 34.3**	**+0.9**		
SIM				pmax	pmax				
	comp=Z,91nm,1.2s								
SORM	**Soroca**	**146.40**	**334**	⇓P	**PKPab**	**08 01 35.6**	**+0.5**		
SORM	**Soroca**	**146.40**	**334**	⇓PKP2	**PKPab**	**08 01 35.6**	**+0.5**		
KWP	**Kalwaria Pacla**	**147.19**	**341**	*e*PKP	**PKiKP**	**08 01 38.8**	**-0.1**		
FURI	**Furi**	**147.64**	**256**	IAMs_20	IAMs_20	09 05 35.3			
	comp=Z,3µm,20.0s								
KSP	**Ksiaz**	**147.64**	**349**	*e*PKP	**PKPab**	**08 01 39.7**	**-0.2**		
CLL	**Collm**	**147.68**	**353**	*e*PKP2	**PKPab**	**08 01 40.0**	**-0.1**		
CLL				pmax	pmax				
	comp=Z,40nm,1.2s								
CLL				MLR	MLR				
	comp=Z,4µm,18.5s								
CLL	**Collm**	**147.68**	**353**	*e*PKPbc	**PKPab**	**08 01 40.0**	**-0.1**		
	comp=Z,40nm,1.2s								
CLL				*i* x	x	08 01 45.4			
	comp=Z,46nm,1.1s								
CLL				*i* x	x	08 01 50.6			
	comp=Z,212nm,1.6s								
CLL				*e*PKPlp		08 02 39.0			
	comp=Z,2µm,16.4s								
CLL				*e*PKS	PKSdf	08 05 18.0	+7.9		
CLL				*e*PPP	PPP	08 08 12.0			
CLL				*e*SKKSac	SKKSac	08 11 57.0	+1.8		
CLL				*e*PSKS		08 15 17.0			
CLL				*e*x	x	08 20 30.0			
CLL				*e*SS	**SS**	**08 24 06.0**	**-0.4**		
CLL				*e*x	x	08 25 00.0			
CLL				*e*SSS	SSS	08 29 42.0			
CLL				AMS	AMS	09 14 00.0			
	comp=N,2µm,18.7s								
CLL				AMS	AMS	09 14 00.0			
	comp=E,2µm,18.9s								
CLL				AMS	AMS	09 14 00.0			
	comp=Z,4µm,18.5s								
STHS	**Stebnicka Huta**	**147.82**	**342**	*e*PKIKP	**PKPbc**	**08 01 36.8**	**-1.5**		
STHS	**Stebnicka Huta**	**147.82**	**342**	*e*PKP	**PKPbc**	**08 01 36.8**	**-1.5**		
CHVC	**Chvalec**	**147.93**	**349**	*e*PKP	**PKPab**	**08 01 43.5**	**+2.4**		
CHVC	**Chvalec**	**147.93**	**349**	*e*PKP2	**PKPab**	**08 01 43.5**	**+2.4**		
OSTC	**Ostas**	**147.93**	**349**	*e*PKP	**PKPab**	**08 01 42.7**	**+1.6**		
OSTC				*ex*	x	08 24 15.8			
OSTC				AMS	AMS	09 11 00.0			
	comp=Z,2µm,18.0s								
OSTC	**Ostas**	**147.93**	**349**	*e*PKP2	**PKPab**	**08 01 42.7**	**+1.6**		
OSTC				*e*		08 24 15.8			
OSTC				MLR	MLR				
	comp=Z,2µm,18.0s								
BRG	**Berggiesshubel**	**147.99**	**352**	*e*PKP	**PKiKP**	**08 01 40.3**	**-0.3**		
BRG				Amp		08 01 44.0			
	comp=Z,27nm,1.2s								
BRG	**Berggiesshubel**	**147.99**	**352**	P	**PKPab**	**08 01 44.5**	**+3.3**		
BRG				Amp		08 01 45.9			
	comp=Z,33nm,1.0s								
UPC	**Upice**	**148.02**	**349**	*e*PKP	**PKPab**	**08 01 42.7**	**+1.3**		
UPC				AMS	AMS	09 15 50.0			
	comp=Z,3µm,17.7s								
UPC	**Upice**	**148.02**	**349**	*e*PKP2	**PKPab**	**08 01 42.7**	**+1.3**		
UPC				MLR	MLR				
	comp=Z,3µm,17.7s								
BURAR	**Bucovina Array**	**148.06**	**336**	⇑P	**PKiKP**	**08 01 40.6**	**-0.3**		
BURAR	**Bucovina Array**	**148.06**	**336**	⇑PKP2	**PKiKP**	**08 01 40.6**	**-0.3**		
NIE	**Niedzica**	**148.08**	**343**	*e*PKP	**PKiKP**	**08 01 40.9**	**0.0**		
DPC	**Dobruska-Polom**	**148.11**	**349**	*e*PKP	**PKPab**	**08 01 41.9**	**0.0**		
DPC				*ex*	x	08 24 21.8			
DPC				AMS	AMS	09 15 40.0			
	comp=Z,2µm,18.7s								
DPC	**Dobruska-Polom**	**148.11**	**349**	*e*PKP2	**PKPab**	**08 01 41.9**	**0.0**		
DPC				MLR	MLR				
	comp=Z,2µm,18.7s								
LODK	**Lodwar**	**148.13**	**244**	IAMs_20	IAMs_20	09 16 23.9			
	comp=Z,3µm,19.0s								
STEB	**Steborice**	**148.21**	**347**	*e*PKP	**PKPab**	**08 01 42.4**	**+0.1**		
OKC	**Ostrava-Krasne**	**148.22**	**346**	*e*PKP	**PKPab**	**08 01 44.4**	**+2.1**		
OKC				*ex*	x	08 24 18.5			
OKC				AMS	AMS	09 16 30.0			
	comp=Z,3µm,19.9s								
OKC	**Ostrava-Krasne**	**148.22**	**346**	*e*PKP2	**PKPab**	**08 01 44.4**	**+2.1**		
OKC				*e*		08 24 18.5			
OKC				MLR	MLR				
	comp=Z,3µm,19.9s								
PVCC	**Panska Ves**	**148.23**	**351**	*e*PKP	**PKPab**	**08 01 43.3**	**+1.0**		
PVCC				AMS	AMS	09 13 40.0			
	comp=Z,3µm,18.7s								
PVCC	**Panska Ves**	**148.23**	**351**	*e*PKP2	**PKPab**	**08 01 43.3**	**+1.0**		
PVCC				MLR	MLR				
	comp=Z,3µm,18.7s								
KRLC	**Kraliky**	**148.28**	**348**	*e*PKP	**PKPab**	**08 01 44.1**	**+1.5**		
KRLC				AMS	AMS	09 16 00.0			
	comp=Z,2µm,17.5s								
KRLC	**Kraliky**	**148.28**	**348**	*e*PKP2	**PKPab**	**08 01 44.1**	**+1.5**		
KRLC				MLR	MLR				
	comp=Z,2µm,17.5s								
HSKC	**Hora Svate Kat**	**148.31**	**352**	*e*PKP	**PKPab**	**08 01 43.0**	**+0.3**		
HSKC				AMS	AMS	09 14 10.0			
	comp=Z,3µm,18.0s								
TESR	**Tescani**	**148.39**	**334**	⇑P	**PKiKP**	**08 01 41.4**	**-0.2**		
MORC	**Moravsky Berou**	**148.41**	**347**	⇓P	**PKPab**	**08 01 42.5**	**-0.6**		
MORC	**Moravsky Berou**	**148.41**	**347**	⇓PKP2	**PKPab**	**08 01 42.5**	**-0.6**		
MORC	**Moravsky Berou**	**148.41**	**347**	*e*PKP	**PKiKP**	**08 01 40.7**	**-0.8**		
UCC	**Uccle**	**148.47**	**3**	*d*PKP	**PKPbc**	**08 01 40.1**	**+0.2**		
MOX	**Moxa**	**148.48**	**354**	*e*L	L	09 14 05.7			
	comp=Z,3µm,19.6s								
LANS	**Liptovska Anna**	**148.54**	**344**	*e*PKP2	**PKPab**	**08 01 45.3**	**+1.6**		
LANS	**Liptovska Anna**	**148.54**	**344**	*e*PKP	**PKPab**	**08 01 45.3**	**+1.6**		
ONER	**Baraj Valea Uz**	**148.64**	**334**	⇓P	**PKPbc**	**08 01 41.1**	**+0.5**		
MEM	**Membach**	**148.72**	**1**	*d*PKP	**PKPab**	**08 01 44.1**	**-0.2**		
BSTI	**Sart Tilman**	**148.73**	**2**	*d*PKP	**PKPab**	**08 01 44.8**	**+0.5**		
MAUC	**Maruska**	**148.74**	**346**	*e*PKP	**PKPab**	**08 01 43.8**	**-0.6**		
MAUC				*ex*	x	08 24 28.6			
BTNL	**Ternell**	**148.75**	**1**	*d*PKP	**PKPab**	**08 01 44.3**	**-0.1**		
PRU	**Pruhonice**	**148.76**	**351**	*e*PKP	**PKiKP**	**08 01 43.1**	**+0.9**		
PRU				*ex*	x	08 24 16.4			
PRU				AMS	AMS	09 14 00.0			
	comp=Z,2µm,18.0s								
PRU	**Pruhonice**	**148.76**	**351**	*e*PKP2	**PKiKP**	**08 01 43.1**	**+0.9**		
PRU				*e*		08 24 16.4			
PRU				MLR	MLR				
	comp=Z,2µm,18.0s								
CFR	**Carcaliu**	**148.77**	**331**	⇑P	**PKiKP**	**08 01 42.5**	**+0.2**		
CFR	**Carcaliu**	**148.77**	**331**	⇑PKP2	**PKiKP**	**08 01 42.5**	**+0.2**		
NKC	**Novy Kostel**	**148.80**	**353**	AMS	AMS	09 12 20.0			
	comp=Z,4µm,19.3s								
VRI	**Vrincioaia**	**148.87**	**333**	⇓P	**PKiKP**	**08 01 42.3**	**-0.3**		
VRI	**Vrincioaia**	**148.87**	**333**	⇓PKP2	**PKiKP**	**08 01 42.3**	**-0.3**		
TPGR	**Topolog**	**148.88**	**330**	⇑P	**PKPab**	**08 01 43.9**	**-1.3**		
BCLA	**Clavier**	**148.89**	**2**	*d*PKP	**PKPab**	**08 01 44.6**	**-0.3**		
PLOR	**Plostina**	**148.91**	**333**	⇑P	**PKiKP**	**08 01 42.7**	**0.0**		
PLOR	**Plostina**	**148.91**	**333**	⇑PKP2	**PKiKP**	**08 01 42.7**	**0.0**		
BGES	**Gesves**	**148.92**	**2**	*d*PKP	**PKPab**	**08 01 47.4**	**+2.4**		
BHOU	**Houvegnez**	**148.97**	**1**	*d*PKP	**PKPab**	**08 01 44.2**	**-1.1**		
BMRD	**Maredsous**	**148.99**	**3**	*d*PKP	**PKPab**	**08 01 45.5**	**+0.2**		
TURR	**Turia**	**149.02**	**334**	⇑P	**PKPab**	**08 01 47.9**	**+2.2**		
VRAC	**Vranov**	**149.05**	**348**	⇑P	**PKPab**	**08 01 48.1**	**+2.4**		
VRAC	**Vranov**	**149.05**	**348**	⇑PKP2	**PKPab**	**08 01 48.1**	**+2.4**		
VRAC	**Vranov**	**149.05**	**348**	*e*PKP	**PKiKP**	**08 01 42.2**	**-0.6**		
OZUR		**149.08**	**334**	⇑P	**PKPab**	**08 01 46.1**	**+0.1**		
COVR	**Voineasa-Covas**	**149.11**	**333**	⇑P	**PKiKP**	**08 01 44.2**	**+1.1**		
RCHB	**Rochefort**	**149.15**	**2**	*d*PKP	**PKPab**	**08 01 45.3**	**-0.7**		
TIRR	**Tirgusor**	**149.18**	**329**	⇑P	**PKPab**	**08 01 44.7**	**-1.6**		
TIRR	**Tirgusor**	**149.18**	**329**	⇑PKP2	**PKPab**	**08 01 44.7**	**-1.6**		
DOU	**Dourbes**	**149.18**	**3**	*d*PKP	**PKiKP**	**08 01 43.3**	**+0.3**		
JAVC	**Velka Javorina**	**149.25**	**346**	*e*PKP	**PKPab**	**08 01 45.7**	**-0.8**		
BRTR	**Keskin Array B**	**149.32**	**317**	PKPbc	**PKiKP**	**08 01 43.6**	**-0.2**		
	comp=Z,29nm,0.9s,baz=86,slow=0.9,SNR=27								
KRUC	**Moravsky**	**149.33**	**348**	*e*PKP	**PKPbc**	**08 01 41.9**	**-0.3**		
DOPR	**Dopca**	**149.35**	**334**	⇓P	**PKPab**	**08 01 45.5**	**-1.5**		
ZVC	**Zvikov**	**149.35**	**351**	*e*PKP	**PKPab**	**08 01 45.7**	**-1.2**		
ZVC				AMS	AMS	09 09 00.0			
	comp=Z,4µm,21.5s								
NEHR	**Nehoiu**	**149.40**	**333**	⇑P	**PKPab**	**08 01 47.2**	**-0.1**		
CJR	**Cluj-Napoca**	**149.42**	**337**	⇓P	**PKiKP**	**08 01 45.3**	**+1.6**		
CJR	**Cluj-Napoca**	**149.42**	**337**	⇓PKP2	**PKiKP**	**08 01 45.3**	**+1.6**		
GRA1	**Grafenberg Arr**	**149.46**	**355**	IAMs_20	IAMs_20	09 09 42.8			
	comp=Z,3µm,20.0s								
GRF	**Grafenberg Arr**	**149.46**	**355**	*e*PKPab	**PKiKP**	**08 01 43.9**	**+0.3**		
	baz=32,slow=3.5								
GRF				*e*L	L	09 09 43.3			
	comp=Z,3µm,19.8s								
GRFO	**Grafenberg**	**149.46**	**355**	IAMs_20	IAMs_20	09 09 42.8			
	comp=Z,3µm,20.0s								
KIRS	**Kirsehir-Merke**	**149.46**	**316**	⇑P	**PKiKP**	**08 01 45.3**	**+1.2**		
MLR	**Muntele Rosu**	**149.50**	**333**	⇑P	**PKiKP**	**08 01 45.6**	**+1.6**		
MLR	**Muntele Rosu**	**149.50**	**333**	⇑PKP2	**PKiKP**	**08 01 45.6**	**+1.6**		
ISR	**Istrita**	**149.54**	**332**	⇓P	**PKPab**	**08 01 47.0**	**-0.9**		
ISR	**Istrita**	**149.54**	**332**	⇓PKP2	**PKPab**	**08 01 47.0**	**-0.9**		
PSZ	**Piszkesteto**	**149.56**	**343**	⇓P	**PKiKP**	**08 01 45.3**	**+1.3**		
PSZ	**Piszkesteto**	**149.56**	**343**	IAMs_20	IAMs_20	09 11 14.5			
	comp=Z,3µm,21.0s								
PSZ	**Piszkesteto**	**149.56**	**343**	⇓PKP2	**PKiKP**	**08 01 45.3**	**+1.3**		
MARR	**Marisel-Cluj**	**149.63**	**338**	⇓P	**PKPab**	**08 01 46.3**	**-2.0**		
SMOL	**Smolenice**	**149.63**	**346**	*e*PKP2	**PKPab**	**08 01 48.2**	**+0.2**		
WLF	**Walferdange**	**149.67**	**1**	IAMs_20	IAMs_20	09 09 33.1			
	comp=Z,3µm,20.0s								
WLF	**Walferdange**	**149.67**	**1**	*d*PKP	**PKPab**	**08 01 47.6**	**-0.5**		
DRGR		**149.67**	**338**	⇑P	**PKiKP**	**08 01 45.4**	**+1.1**		
DRGR		**149.67**	**338**	⇑PKP2	**PKiKP**	**08 01 45.4**	**+1.1**		
KHC	**Kasperske Hory**	**149.74**	**351**	IAMs_20	IAMs_20	09 10 28.5			
	comp=Z,3µm,20.0s								
KHC	**Kasperske Hory**	**149.74**	**351**	*e*PKP	**PKiKP**	**08 01 45.4**	**+1.1**		
KHC				*ex*	x	08 01 49.0			
KHC				*ex*	x	08 24 27.4			
KHC				AMS	AMS	09 09 40.0			
	comp=Z,3µm,19.2s								
KHC	**Kasperske Hory**	**149.74**	**351**	*e*PKP2	**PKiKP**	**08 01 45.4**	**+1.1**		
KHC				*e*		08 24 27.4			
KHC				MLR	MLR				
	comp=Z,3µm,19.2s								
MODS	**Modra-Piesok**	**149.79**	**346**	*e*PKP2	**PKPab**	**08 01 46.6**	**-2.1**		
MODS	**Modra-Piesok**	**149.79**	**346**	*e*PKP	**PKPab**	**08 01 46.6**	**-2.1**		
VOIR		**149.92**	**334**	⇑P	**PKPab**	**08 01 49.8**	**+0.4**		
VOIR		**149.92**	**334**	⇑PKP2	**PKPab**	**08 01 49.8**	**+0.4**		
CKRC	**Cesky Krumlov**	**149.93**	**350**	*e*PKP	**PKPab**	**08 01 47.5**	**-1.8**		
CKRC				AMS	AMS	09 10 00.0			
	comp=Z,3µm,20.8s								
CKRC	**Cesky Krumlov**	**149.93**	**350**	*e*PKP2	**PKPab**	**08 01 47.5**	**-1.8**		
CKRC				MLR	MLR				
	comp=Z,3µm,20.8s								
GERES	**GERESS Array B**	**150.00**	**351**	PKPbc	**PKiKP**	**08 01 46.5**	**+1.6**		
	comp=Z,10nm,1.0s,baz=27,slow=1.1,SNR=14								
ARR	**Arges**	**150.15**	**335**	⇓P	**PKPab**	**08 01 48.1**	**-2.2**		
HWQ	**Hawqa**	**150.27**	**306**	*e*P	**PKPdf**	**08 01 37.2**	**-2.8**		
SACV	**Santiago Islan**	**150.46**	**94**	IAMs_20	IAMs_20	09 07 37.2			
	comp=Z,2µm,19.0s								
STU	**Stuttgart**	**150.51**	**357**	IAMs_20	IAMs_20	09 12 14.6			
	comp=Z,2µm,20.0s								
BHL	**Bhannes**	**150.64**	**306**	*e*P	**PKPdf**	**08 01 42.5**	**+2.0**		
RONA	**Rosalia, Austr**	**150.65**	**347**	*e*PKP	**PKiKP**	**08 01 48.3**	**+2.1**		
	comp=Z,33nm,1.5s								
GZR	**Gura Zlata**	**150.85**	**337**	⇓P	**PKiKP**	**08 01 47.1**	**+0.4**		
GZR	**Gura Zlata**	**150.85**	**337**	⇓PKIKP	**PKiKP**	**08 01 47.1**	**+0.4**		
SILT	**Sile**	**150.86**	**323**	⇑P	**PKPab**	**08 01 50.8**	**-2.5**		
MOA	**Molln**	**150.88**	**350**	*e*PKP	**PKiKP**	**08 01 49.0**	**+2.3**		
	comp=Z,9.2nm,1.0s								
BFO	**Black Forest**	**150.99**	**358**	IAMs_20	IAMs_20	09 10 25.1			
	comp=Z,2µm,21.0s								
BZS	**Buzias**	**151.07**	**339**	⇓P	**PKiKP**	**08 01 48.5**	**+1.4**		
BZS	**Buzias**	**151.07**	**339**	⇓PKIKP	**PKiKP**	**08 01 48.5**	**+1.4**		
BIOA	**Bad Ischl, Aus**	**151.14**	**351**	*e*PKP	**PKiKP**	**08 01 48.9**	**+1.7**		
	comp=Z,17nm,1.2s								
MMAI	**Mount Meron Ar**	**151.16**	**304**	PKPbc	**PKiKP**	**08 01 47.6**	**-0.1**		
	comp=Z,23nm,0.8s,baz=50,slow=2.3,SNR=18								
ARSA	**Arzberg**	**151.23**	**348**	*e*PKP	**PKiKP**	**08 01 49.9**	**+2.5**		
	comp=Z,12nm,1.2s								
HERR	**Herculane**	**151.42**	**337**	⇓P	**PKiKP**	**08 01 49.1**	**+1.3**		
MORH	**Mrgy, Hungar**	**151.46**	**343**	⇓P	**PKiKP**	**08 01 49.2**	**+1.3**		
LESA	**Schwarzleotal**	**151.54**	**352**	*ep*PKiKP	**PKiKP**	**08 01 48.9**	**+0.8**		
	comp=Z,13nm,1.1s								
ELND	**Elena**	**151.54**	**330**	⇑P	**PKPab**	**08 01 52.7**	**-3.4**		
RETA	**Reutte**	**151.69**	**355**	*e*PKP	**PKiKP**	**08 01 50.1**	**+1.8**		
	comp=Z,26nm,1.3s								
PLVB	**Pleven**	**151.75**	**332**	⇑P	**PKiKP**	**08 01 48.6**	**0.0**		
WATA	**Walderalm**	**151.76**	**353**	*e*PKP	**PKiKP**	**08 01 51.7**	**+3.1**		
	comp=Z,21nm,1.0s								
MDVR	**Moldovita**	**151.76**	**338**	⇓P	**PKiKP**	**08 01 49.8**	**+1.2**		
KBA	**Koelnbreinsper**	**151.78**	**351**	*e*PKP	**PKiKP**	**08 01 52.1**	**+3.4**		
	comp=Z,17nm,1.1s								
MOTA	**Moosalm**	**151.80**	**354**	*e*PKP	**PKiKP**	**08 01 50.8**	**+2.1**		
	comp=Z,18nm,1.0s								
WTTA	**Wattenberg**	**151.82**	**353**	*e*PKP	**PKiKP**	**08 01 50.7**	**+1.9**		
	comp=Z,37nm,1.3s								
SOKA	**Soboth**	**151.88**	**348**	*e*PKP	**PKiKP**	**08 01 50.6**	**+1.8**		
	comp=Z,9.0nm,1.1s								
SQTA	**Sankt Quirin**	**151.91**	**354**	*e*PKP	**PKiKP**	**08 01 50.8**	**+1.9**		
	comp=Z,20nm,1.4s								
CSS	**Mathiatis**	**151.94**	**309**	IAMs_20	IAMs_20	09 15 49.4			
	comp=Z,2µm,20.0s								
DAVA	**Damuels**	**151.96**	**356**	*e*PKP	**PKiKP**	**08 01 52.3**	**+3.2**		
	comp=Z,28nm,1.4s								
FETA	**Feichten**	**152.15**	**355**	*e*PKP	**PKiKP**	**08 01 51.7**	**+2.2**		
	comp=Z,25nm,1.2s								
MYKA	**Terra Mystica**	**152.17**	**350**	*e*PKP	**PKiKP**	**08 01 52.6**	**+3.2**		
	comp=Z,16nm,1.6s								
ABTA	**Abfaltersbach**	**152.22**	**352**	*ep*PKiKP	**PKiKP**	**08 01 51.2**	**+1.7**		
	comp=Z,37nm,1.2s								
BAND	**Balkesir-Ban**	**152.26**	**324**	⇓P	**PKiKP**	**08 01 51.3**	**+1.6**		
ISP	**Isparta**	**152.40**	**317**	IAMs_20	IAMs_20	09 20 24.5			
	comp=Z,3µm,20.0s								
FUORN	**Ofenpass-Fuorn**	**152.59**	**355**	IAMs_20	IAMs_20	09 12 41.6			
	comp=Z,3µm,20.0s								
PGAV	**Gavieira, Arco**	**153.92**	**27**	*e*PKPdf	**PKPdf**	**08 01 38.9**	**-6.3**		
PGAV				*e*LQ	LQ	09 01 09.9			
PGAV				*e*LR	LR	09 04 28.4			
PGAV				*i* IAMs_20	IAMs_20	09 09 23.1			
	comp=Z,4µm,18.0s								
PMOZ	**Porto Moniz, M**	**154.49**	**53**	*e*PKPab	PKPab	08 02 17.7	+8.6		
PMOZ				*e*LR	LR	09 03 34.5			
PMOZ				*i* IAMs_20	IAMs_20	09 07 27.6			
	comp=Z,2µm,18.0s								
POLO	**Lamas de Olo**	**154.61**	**27**	*e*PKPdf	**PKPdf**	**08 01 40.1**	**-6.0**		
PDG	**Podgorica**	**154.68**	**338**	IAMs_20	IAMs_20	09 17 04.7			
	comp=Z,3µm,20.0s								
PMAR	**Madeira**	**154.75**	**53**	*e*PKPab	PKPab	08 02 22.2	+12		
FUL	**Funchal**	**154.80**	**53**	*e*PKPab	PKPab	08 02 19.8	+10		
MVO	**Moncorvo**	**155.10**	**26**	*e*PKPab	PKPab	08 02 22.7	+11		
MVO				*e*LQ	LQ	09 03 04.2			
MVO				*e*LR	LR	09 05 28.9			
MVO				*i* IAMs_20	IAMs_20	09 07 25.9			
	comp=Z,3µm,20.0s								
PVIS	**Viseu**	**155.11**	**28**	*e*PKPab	PKPab	08 02 21.2	+10		
MTE	**Manteigas**	**155.52**	**28**	IAMs_20	IAMs_20	09 10 42.6			
	comp=Z,3µm,19.0s								
MTE	**Manteigas**	**155.52**	**28**	*e*PKPdf	**PKPdf**	**08 01 43.8**	**-3.6**		
MTE				*e*LR	LR	09 02 55.6			
MTE				*i* IAMs_20	IAMs_20	09 11 15.8			
	comp=Z,2µm,20.0s								
PSBE	**So Bento**	**155.65**	**31**	*e*PKPab	PKPab	08 02 23.5	+10		
PMAFR	**Mafra**	**155.84**	**32**	*e*PKPab	PKPab	08 02 22.7	+8.3		
PSARD	**Sardoal**	**155.89**	**30**	*e*PKPab	PKPab	08 02 23.0	+8.4		
KARP	**Karpathos**	**155.92**	**316**	IAMs_20	IAMs_20	09 20 53.0			
	comp=Z,3µm,22.0s								
PCBR	**Castelo Branco**	**156.00**	**28**	*e*PKPab	PKPab	08 02 22.9	+7.8		
LIS	**Lisbon**	**156.09**	**32**	*e*PKPab	PKPab	08 02 24.2	+8.8		
PMTG	**Montargil**	**156.28**	**31**	*e*PKPab	**PKPab**	**08 02 23.7**	**+7.4**		
PMRV	**Marv??o**	**156.38**	**29**	*e*PKPab	**PKPab**	**08 02 24.1**	**+7.4**		
PARRA	**Arraiolos**	**156.56**	**31**	*e*PKPab	**PKPab**	**08 02 23.0**	**+5.5**		
MOE	**Montemor**	**156.64**	**32**	*e*PKPab	**PKPab**	**08 02 23.9**	**+6.0**		
PESTR	**Estremoz**	**156.74**	**30**	*e*PKPdf	**PKPdf**	**08 01 45.6**	**-3.4**		
PESTR				*e*PKPab	**sPKPab**	**08 02 23.1**	**+1.0**		
EVO	**Evora**	**156.80**	**31**	*e*PKPab	**PKPab**	**08 02 23.6**	**+5.1**		
PTEO	**Sao Teotonio**	**157.20**	**34**	*e*PKPab	**PKPab**	**08 02 24.8**	**+4.5**		
MESJ	**Messejana**	**157.23**	**32**	*e*PKPab	**PKPab**	**08 02 25.5**	**+5.0**		
MORF	**Marmelete**	**157.41**	**34**	*e*PKPab	**PKPab**	**08 02 25.8**	**+4.5**		
PFVI	**Vila Bisbo**	**157.45**	**35**	*e*PKPab	**PKPab**	**08 02 25.9**	**+4.6**		
PCVE	**Castro Verde**	**157.48**	**33**	*e*PKPab	**PKPab**	**08 02 25.0**	**+3.5**		
PAB	**San Pablo**	**157.54**	**23**	IAMs_20	IAMs_20	09 08 08.7			
	comp=Z,2µm,20.0s								
PBAR	**Barrancos**	**157.55**	**30**	*e*PKPab	**PKPab**	**08 02 25.9**	**+4.2**		
ESDC	**Sonseca Array**	**157.57**	**23**	PKPab	**PKPab**	**08 02 24.7**	**+2.8**		
	comp=Z,1.6nm,1.0s,baz=338,slow=4.5,SNR=4.0								
PVAQ	**Vaqueiros**	**157.82**	**32**	*e*PKPab	**PKPab**	**08 02 26.2**	**+3.2**		
PVAQ				*e*LR	LR	09 02 58.2			
PVAQ				*i* IAMs_20	IAMs_20	09 09 55.1			
	comp=Z,3µm,20.0s								
PBDV	**Barranco-do-Ve**	**157.84**	**33**	*e*PKPab	**PKPab**	**08 02 25.3**	**+2.2**		
CUC	**Castrocucco**	**157.99**	**342**	IAMs_20	IAMs_20	09 19 18.9			
	comp=Z,2µm,19.0s								
TIP	**Timpagrande**	**158.44**	**339**	IAMs_20	IAMs_20	09 16 31.0			
	comp=Z,3µm,20.0s								
CEL	**Celeste**	**159.56**	**340**	IAMs_20	IAMs_20	09 17 32.5			
	comp=Z,3µm,20.0s								
VSL	**Villasalto**	**159.74**	**355**	IAMs_20	IAMs_20	09 18 18.8			
	comp=Z,2µm,20.0s

*GCG **28** 08:04:52.9±0.8, 14°.31N×90°.03W, h252$^{km}_{\pm 9}$, ML4.1, MW2.9, Presumed earthquake*
*CATAC **28** 08:04:56.0±0.5, 14°N.7°×9°.0W, h227$^{km}_{\pm 3}$, M2.9/17, MLv2.9/17, Error ellipse: s-maj=14.8km s-min=6.8km az=10.4, confirmed*
*SNET **28** 08:04:58.0±1.2, 12°.26N×90°.25W, h15$^{km}_{\pm 24}$, ML2.9, Presumed earthquake*

ISC 28 08:04:53.4±2.6, 14°.2N±0°.1×89°.89W±0°.06, h251$^{km}_{\pm 16}$, n39, σ1°.20/55, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLOZ	**Alcaldia de Sa**	**0.24**	**154**	P	**Pn**	**08 05 26.3**	**+0.3**
NUBE	**Las Nubes**	**0.35**	**162**	P	**Pn**	**08 05 26.8**	**+0.4**
NUBE				S	**S**	**08 05 51.5**	**-0.7**
NUBE	**Las Nubes**	**0.35**	**162**	*e*P	**Pn**	**08 05 26.3**	**0.0**
NUBE	**Las Nubes**	**0.35**	**162**	*i* P	**Pn**	**08 05 26.7**	**+0.4**
FAME	**Alcaldia de Sa**	**0.41**	**197**	P	**Pn**	**08 05 26.0**	**-0.3**
FAME				S	**S**	**08 05 50.6**	**-1.5**
RTR	**El Retiro**	**0.42**	**145**	*e*P	**Pn**	**08 05 27.4**	**+0.9**
UNIC	**Universidad Ca**	**0.42**	**128**	P	**Pn**	**08 05 26.5**	**+0.2**
UNIC				S	**S**	**08 05 51.5**	**-0.7**
SBLS	**San Blas**	**0.48**	**147**	*e*P	**Pn**	**08 05 25.7**	**-1.0**
SBLS				*e*P		08 05 26.9	
CEVE	**Cerro Verde**	**0.49**	**148**	P	**Pn**	**08 05 28.2**	**+1.4**
CEVE				S	**S**	**08 05 52.1**	**-0.9**
MTO3	**Montecristo**	**0.54**	**73**	P	**Pn**	**08 05 27.8**	**+1.0**
MTO3				S	**S**	**08 05 52.2**	**-0.8**
FG16	**Alotenango, Sa**	**0.60**	**273**	*i* P	**Pn**	**08 05 28.1**	**+1.1**
FG16				IAML		08 05 30.5	
	comp=E,2μm,0.2s						
ESQI	**Esquipulas**	**0.62**	**59**	S	**S**	**08 05 52.3**	**-0.9**
ZAFR2	**Estanzuela, Za**	**0.62**	**57**	*i* P	**Pn**	**08 05 27.4**	**+0.6**
FG8	**Yepocapa, Chim**	**0.65**	**272**	*i* P	**Pn**	**08 05 28.2**	**+1.1**
CEDA	**San Andres**	**0.65**	**132**	P	**Pn**	**08 05 27.5**	**+0.5**
CEDA				S	**S**	**08 05 53.0**	**-0.4**
JAYA	**Jayaque - finc**	**0.73**	**144**	P	**Pn**	**08 05 28.0**	**+0.6**
JAYA				S	**S**	**08 05 50.8**	**-3.4**
PMON	**Piamonte**	**0.77**	**133**	S	**S**	**08 05 54.0**	**-0.5**
PMON	**Piamonte**	**0.77**	**133**	*e*P	**Pn**	**08 05 28.0**	**+0.5**
UEES	**Universidad Ev**	**0.82**	**129**	P	**Pn**	**08 05 29.1**	**+1.3**
UEES				S	**S**	**08 05 54.7**	**-0.1**
UDBS	**Universidad Do**	**0.89**	**126**	P	**Pn**	**08 05 29.3**	**+1.2**
UDBS				S	**S**	**08 05 54.3**	**-1.0**
LLGN	**La Laguna**	**0.92**	**95**	P	**Pn**	**08 05 28.9**	**+0.7**
LALI	**Alcalda de L**	**0.93**	**143**	P	**Pn**	**08 05 26.9**	**-1.3**
LALI				S	**S**	**08 05 54.5**	**-1.1**
APG	**El Apazote**	**0.94**	**324**	*i* P	**Pn**	**08 05 28.4**	**-0.1**
PAVA	**Las Pavas**	**1.07**	**119**	P	**Pn**	**08 05 30.3**	**+1.3**
PAVA	**Las Pavas**	**1.07**	**119**	*e*P	**Pn**	**08 05 30.6**	**+1.5**
PAVA				*e*S	**S**	**08 05 55.7**	**-1.4**
PAVA				IAML		08 06 08.3	
	comp=Z,92nm,0.4s						
P5NO	**Presa 5 de nov**	**1.13**	**103**	P	**Pn**	**08 05 29.6**	**+0.3**
P5NO				S	**S**	**08 05 57.1**	**-0.4**
SARH	**Santa Rosa de**	**1.22**	**64**	P	**Pn**	**08 05 30.8**	**+0.9**
SARH				S	**S**	**08 05 58.5**	**-0.1**
SARH	**Santa Rosa de**	**1.22**	**64**	*i* P	**Pn**	**08 05 30.9**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.25**	**115**	P	**Pn**	**08 05 31.2**	**+1.1**
STG5	**El Palmar, Qui**	**1.42**	**277**	*i* P	**Pn**	**08 05 32.7**	**+1.4**
STG5				*i* S	**S**	**08 06 04.6**	**+3.4**
STG8	**El Palmar, Qui**	**1.43**	**279**	*e*P	**Pn**	**08 05 33.1**	**+1.5**
STG8				IAML		08 05 36.6	
	comp=E,435nm,0.2s						
STG2	**El Palmar, Qui**	**1.45**	**278**	*i* P	**Pn**	**08 05 33.2**	**+1.6**
STG2				IAML		08 05 35.3	
	comp=E,1μm,0.2s						
STG2				*i* S	**S**	**08 06 03.9**	**+2.2**
SOKI	**Kika Raxquin**	**1.57**	**292**	*i* P	**Pn**	**08 05 33.0**	**+0.2**
QUEO	**Labor Ovalle**	**1.69**	**292**	*i* P	**Pn**	**08 05 34.1**	**+0.4**
RTAL	**Retalhuleu**	**1.77**	**279**	P	**Pn**	**08 05 33.6**	**-0.4**
RTAL				S	**S**	**08 06 04.2**	**-1.7**
LCND	**La Caada**	**2.15**	**115**	P	**Pn**	**08 05 38.8**	**+1.4**
SMCA	**Catarina**	**2.20**	**286**	*i* P	**Pn**	**08 05 36.8**	**-1.0**
CCIG	**Comitan**	**2.97**	**313**	*i* P	**Pn**	**08 05 45.6**	**-0.2**
TGIG		**4.01**	**309**	*i* P	**Pn**	**08 05 56.6**	**-0.8**

*IDC **28** 08:18:34.2±1.0, 26°.87N×143°.70E, h0^{km}, mb3.6/10, mbtmp3.7/11, ML3.3/1, Error ellipse: s-maj=27.4km s-min=17.7km az=81.0*

ISC 28 08:18:39.5±0.9, 26°.9N±0°.1×143°.6E±0°.1, h35^{km}, n13, σ0°.89/14, mb3.6/11, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.27**	**280**	Pn	**Pn**	**08 19 00.3**	**-0.4**
	18nm,0.3s,baz=75,slow=20,SNR=5.1						
JCJ				Sn	**Sn**	**08 19 16.2**	**-0.3**
	68nm,0.3s,baz=90,slow=20,SNR=5.9						
MJAR	**Matsushiro Arr**	**10.65**	**336**	Pn	**Pn**	**08 21 08.3**	**-1.3**
	0.2nm,0.3s,baz=156,slow=9.9,SNR=12						
	2.1nm,0.5s						
HILR	**Hailar Array B**	**29.14**	**327**	P	**P**	**08 24 38.2**	**+0.9**
	0.4nm,0.3s,baz=127,slow=9.2,SNR=2.4						
	0.4nm,0.3s						
SONM	**Songino Array**	**35.73**	**316**	P	**P**	**08 25 36.1**	**+1.1**
	0.3nm,0.4s,baz=125,slow=6.3,SNR=2.2						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**47.41**	**192**	P	**P**	**08 27 10.7**	**+0.1**
	2.4nm,0.9s,baz=9.9,slow=7.6,SNR=11						
	2.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**47.99**	**203**	P	**P**	**08 27 14.5**	**-0.6**
	4.7nm,0.9s,baz=6.3,slow=9.2,SNR=1.7						
	4.7nm,0.9s						
ZALV	**Zalesovo Beam**	**50.46**	**319**	P	**P**	**08 27 34.6**	**+0.9**
	0.3nm,0.3s,baz=90,slow=10,SNR=1.3						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**51.12**	**191**	P	**P**	**08 27 39.1**	**+0.1**
	0.2nm,0.5s,baz=11,slow=6.3,SNR=6.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**51.57**	**310**	P	**P**	**08 27 42.2**	**0.0**
	0.4nm,0.7s,baz=87,slow=8.5,SNR=5.2						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**54.08**	**315**	P	**P**	**08 28 01.9**	**+1.3**
	1.9nm,0.2s,baz=94,slow=8.5,SNR=1.2						
ILAR	**Eielson Array**	**57.30**	**28**	P	**P**	**08 28 22.4**	**-1.1**
	0.3nm,0.8s,baz=259,slow=6.4,SNR=4.3						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**59.04**	**318**	P	**P**	**08 28 35.6**	**-0.2**
	0.6nm,0.5s,baz=84,slow=7.2,SNR=1.6						
	0.6nm,0.5s						
YKA	**Yellowknife Ar**	**71.73**	**29**	P	**P**	**08 29 58.2**	**+0.5**
	0.1nm,0.5s,baz=294,slow=6.7,SNR=2.6						
	0.1nm,0.5s						

IDC 28 08:28:12.3±4.0, 6°.80S×128°.05E, h323$^{km}_{\pm 81}$, mb3.3/1, mbtmp4.2/5, Error ellipse: s-maj=84.4km s-min=39.8km az=104.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.50**	**232**	P	Pn	08 29 35.9	-0.7
	79nm,0.4s,baz=30,slow=3.6,SNR=8.4						
BATI				S	S	08 30 44.6	0.0
	24nm,0.4s,baz=96,slow=19,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.47**	**192**	P	P	08 30 49.3	0.0
	6.6nm,1.1s,baz=20,slow=13,SNR=1.5						
FITZ				S	S	08 32 57.2	+0.8
	4.1nm,0.9s,baz=25,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**14.42**	**156**	P	P	08 31 22.4	+0.5
	1.5nm,0.3s,baz=335,slow=11,SNR=30						
WRA				S	S	08 33 57.6	-1.8
	0.2nm,0.5s,baz=342,slow=16,SNR=1.6						
ASAR	**Alice Springs**	**17.68**	**162**	P	P	08 31 58.1	+0.6
	2.1nm,0.5s,baz=342,slow=11,SNR=42						
ASAR				S	S	08 35 04.1	-0.1
	0.5nm,0.9s,baz=345,slow=24,SNR=2.4						
STKA	**Stephens Creek**	**27.97**	**155**	P	P	08 33 33.8	-0.3
	1.4nm,0.7s,baz=325,slow=16,SNR=4.2						
	1.4nm,0.7s						

*IDC **28** 08:48:07.3±1.8, 5°.61S×130°.16E, h214$^{km}_{\pm 22}$, mb3.5/5, mbtmp4.1/9, Error ellipse: s-maj=40.1km s-min=9.8km az=76.0*
*DJA **28** 08:48:08.0±0.4, 6°.S±4°×13°.0E±°, h232$^{km}_{\pm 6}$, M4.3/14, mB4.8/1, mb4.1/4, MLv4.4/14, Mw(mB)4.1/1*

ISC 28 08:48:08.1±0.7, 5°.71S±0°.06×129°.98E±0°.07, h250^{km}, n18, σ4°.00/22, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.18**	**356**	P	**Pn**	**08 48 42.0**	**-2.3**
BNDI				S	**S**	**08 49 07.9**	**-4.9**
MSAI	**Masohi**	**2.57**	**336**	P	**Pn**	**08 48 53.7**	**-2.5**
SAUI	**Saumlaki**	**2.61**	**150**	P	Pn	08 49 09.3	+13
KRAI	**Karang Ratu**	**2.85**	**326**	P	**Pn**	**08 48 57.4**	**-1.7**
NLAI	**Namlea**	**3.78**	**310**	P	**Pn**	**08 49 11.3**	**+1.9**
KMPI	**Kaimana, Papua**	**4.23**	**61**	P	**Pn**	**08 49 14.2**	**-0.5**
SIJI	**Sorong**	**4.98**	**15**	P	**Pn**	**08 49 22.0**	**-1.7**
	10.0nm,0.2s,baz=205,slow=19,SNR=26						
SIJI				S	**S**	**08 50 16.0**	**-8.0**
	76nm,0.2s,baz=221,slow=19,SNR=17						
SIJI	**Sorong**	**4.98**	**15**	P	**Pn**	**08 49 21.5**	**-2.2**
SANI	**Sanana**	**5.39**	**312**	P	**Pn**	**08 49 26.6**	**-2.2**
	0.5nm2μm164nm,0.8s						
BATI	**Baumata**	**7.69**	**234**	S	**S**	**08 51 20.0**	**-5.7**
	106nm,0.8s,baz=91,slow=17,SNR=4.2						
FITZ	**Fitzroy Crossi**	**13.02**	**199**	P	**P**	**08 51 05.6**	**-0.5**
	5.9nm,0.7s,baz=11,slow=10,SNR=12						
FITZ				S	**S**	**08 53 21.6**	**-7.6**
	6.0nm,0.3s,baz=0.0,slow=15,SNR=7.2						
WRA	**Warramunga Arr**	**14.77**	**164**	P	**Pn**	**08 51 26.6**	**+0.9**
	1.7nm,0.5s,baz=340,slow=12,SNR=21						
WRA				S	**S**	**08 54 02.8**	**-6.2**
	3.2nm,0.6s,baz=343,slow=23,SNR=12						
ASAR	**Alice Springs**	**18.25**	**168**	P	**Pn**	**08 52 07.1**	**+0.3**
	3.3nm,0.5s,baz=346,slow=10.0,SNR=79						
ASAR				S	**S**	**08 55 22.3**	**+3.2**
	2.1nm,0.8s,baz=350,slow=21,SNR=8.7						
STKA	**Stephens Creek**	**28.21**	**159**	P	**P**	**08 53 42.1**	**+4.1**
	3.1nm,1.1s,baz=311,slow=11,SNR=2.8						
	3.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.91**	**309**	P	**P**	**08 55 12.6**	**+2.4**
	1.6nm,0.7s,baz=126,slow=8.6,SNR=7.5						
	1.6nm,0.7s						
SONM	**Songino Array**	**57.22**	**341**	P	**P**	**08 57 32.4**	**+2.8**
	0.4nm,0.5s,baz=156,slow=6.6,SNR=4.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.14**	**327**	P	**P**	**08 58 38.5**	**+3.3**
	2.4nm,0.7s,baz=130,slow=6.2,SNR=20						
	2.4nm,0.7s						
ZALV	**Zalesovo Beam**	**70.43**	**334**	P	**P**	**08 58 57.5**	**+2.3**
	0.4nm,0.3s,baz=127,slow=3.8,SNR=1.8						
	0.4nm,0.3s						

*SDD **28** 09:07:05.6±1.5, 17°.57N×66°.98W, h1$^{km}_{\pm 999}$, MD3.1, ML2.8, MW2.8, Presumed earthquake*
*NEIC **28** 09:07:07.5±0.9, 17°.76N±0°.03×66°.873W±0°.009, h9$^{km}_{\pm 10}$, mb4.2/5, Md3.1/5(RSPR), Error ellipse: s-maj=4.7km s-min=1.2km az=174.0*
*OSPL **28** 09:07:08.8±0.3, 17°.78N×66°.87W, h2$^{km}_{\pm 999}$, ML2.4, Presumed earthquake*
*RSPR **28** 09:07:08.4, 17°.83N×66°.87W, h4^{km}, MD3.0/5*

ISC 28 09:07:08.3±1.6, 17°.80N±0°.08×66°.86W±0°.02, h9$^{km}_{\pm 9}$, n36, σ0°.62/55, 11C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.17**	**353**		**Pg**	**09 07 11.8**	**-0.3**
GBPR					**Sg**	**09 07 14.1**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.17**	**353**	⇓*e*P	**Pg**	**09 07 11.8**	**-0.3**
GBPR				*e*S	**Sg**	**09 07 14.1**	**-0.4**
MLPR	**Magueyes Islan**	**0.24**	**313**		**Pg**	**09 07 13.1**	**-0.2**
MLPR				Sg	**Sg**	**09 07 16.2**	**-0.4**
MLPR				IAML		09 07 18.8	
	2μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.32**	**311**	Pg	**Pg**	**09 07 14.4**	**-0.2**
CRPR				IAML		09 07 20.0	
	1μm,0.2s						
CRPR				IAML		09 07 20.1	
	2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.32**	**311**		**Sg**	**09 07 19.5**	**+0.7**
CRPR	**Cabo Rojo, PR**	**0.32**	**311**	*e*Pg	**Pg**	**09 07 14.7**	**0.0**
CRPR				⇑*e*Sg	**Sg**	**09 07 19.0**	**+0.1**
CRPR				IAML		09 07 20.1	
	comp=N,2μm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.32**	**311**	⇓*e*P	**Pg**	**09 07 14.4**	**-0.2**
CRPR				*e*S	**Sg**	**09 07 19.5**	**+0.7**
CRPR	**Cabo Rojo, PR**	**0.32**	**311**	*i* P	**Pg**	**09 07 14.2**	**-0.2**
CRPR				*e*S	**Sg**	**09 07 18.7**	**-0.1**
CRPR				IAML		09 07 20.2	
	comp=Z,1μm,0.1s						
OBIP	**Obispado Ponce**	**0.34**	**45**		**Pg**	**09 07 15.2**	**+0.1**
OBIP					**Sg**	**09 07 20.2**	**+0.6**
OBIP	**Obispado Ponce**	**0.34**	**45**	⇑*e*P	**Pg**	**09 07 15.3**	**+0.2**
OBIP				*e*S	**Sg**	**09 07 20.6**	**+1.0**
OBIP	**Obispado Ponce**	**0.34**	**45**	*i* P	**Pg**	**09 07 15.3**	**+0.2**
OBIP				*e*S	**Sg**	**09 07 20.1**	**+0.6**
OBIP				IAML		09 07 22.5	
	comp=Z,238nm,0.2s						
CELP	**Cerrillos**	**0.38**	**44**		**Pg**	**09 07 15.9**	**+0.1**
LSP	**Las Mesas**	**0.43**	**330**		**Pg**	**09 07 16.6**	**-0.2**
LSP					**Sg**	**09 07 23.4**	**+0.9**
LSP	**Las Mesas**	**0.43**	**330**	⇑*e*P	**Pg**	**09 07 16.6**	**-0.2**
LSP				*e*S	**Sg**	**09 07 23.4**	**+0.9**
UUPR	**Utuado, UPR, P**	**0.47**	**16**		**Pg**	**09 07 17.0**	**-0.5**
PRSN	**Puerto Rico Se**	**0.50**	**327**	Pg	**Pg**	**09 07 17.7**	**-0.4**
PRSN	**Puerto Rico Se**	**0.50**	**327**		**Sg**	**09 07 25.0**	**+0.4**
PRSN	**Puerto Rico Se**	**0.50**	**327**	*e*Pg	**Pg**	**09 07 17.7**	**-0.4**
PRSN				⇑*e*Sg	**Sg**	**09 07 24.6**	**+0.1**
PRSN				IAML		09 07 27.3	
	comp=N,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.50**	**327**	⇑*e*P	**Pg**	**09 07 17.6**	**-0.4**
PRSN				*e*S	**Sg**	**09 07 25.0**	**+0.4**
AOPR	**Arecibo Observ**	**0.55**	**10**	Pg	**Pg**	**09 07 18.5**	**-0.6**
AOPR				IAML		09 07 29.5	
	comp=N,631nm,0.2s						
AOPR				IAML		09 07 31.3	
	comp=N,977nm,0.5s						
ECPR	**Experimental S**	**0.70**	**42**		**Pg**	**09 07 21.6**	**-0.3**
ECPR				IAML		09 07 33.4	
	comp=N,535nm,0.2s						
ECPR				IAML		09 07 34.6	
	comp=N,516nm,0.2s						
ECPR	**Experimental S**	**0.70**	**42**	⇑*e*P	**Pg**	**09 07 21.4**	**-0.4**
ECPR				*e*S	**Sg**	**09 07 31.5**	**+0.6**
AGPR	**Aguadilla, PR**	**0.71**	**340**		**Pg**	**09 07 21.3**	**-0.7**
AGPR				IAML		09 07 31.5	
	comp=N,874nm,0.4s						
AGPR				IAML		09 07 32.6	
	comp=N,479nm,0.3s						
SJG	**San Juan**	**0.74**	**65**		**Pg**	**09 07 22.1**	**-0.6**
SJG				IAML		09 07 39.6	
	comp=N,363nm,0.4s						
SJG	**San Juan**	**0.74**	**65**	*e*Pg	**Pg**	**09 07 22.5**	**-0.2**
SJG				⇑*e*Sg	**Sn**	**09 07 35.8**	**-0.7**
SJG	**San Juan**	**0.74**	**65**	*i* P	**Pg**	**09 07 22.5**	**-0.2**
SJG				IAML		09 07 39.7	
	comp=Z,156nm,0.2s						
PDPR	**Patillas Dam,**	**0.82**	**75**		**Pg**	**09 07 23.9**	**-0.3**
IDE	**Isla Desecheo**	**0.83**	**315**		**Pg**	**09 07 23.5**	**-0.8**
IDE					**Sg**	**09 07 35.2**	**+0.1**
IDE	**Isla Desecheo**	**0.83**	**315**	⇓*e*P	**Pg**	**09 07 23.5**	**-0.8**
IDE				*e*S	**Sg**	**09 07 35.2**	**+0.1**
GCPR	**Guaynabo City**	**0.89**	**55**	⇑*e*P	**Pg**	**09 07 23.9**	**-1.6**
HUMP	**Col San Antoni**	**1.02**	**70**	Pg	**Pg**	**09 07 27.0**	**-0.9**
HUMP				IAML		09 07 45.2	
	comp=Z,308nm,0.2s						
HUMP	**Col San Antoni**	**1.02**	**70**	⇑*e*P	**Pg**	**09 07 27.0**	**-0.9**
CUPR	**Culebra, Puert**	**1.58**	**71**	Pn	**Pn**	**09 07 36.9**	**+0.3**
HIDR	**Higuey Centro**	**1.94**	**294**	*e*Pg	**Pn**	**09 07 40.0**	**-1.5**
HIDR				⇑*e*Sg	**Sn**	**09 08 06.2**	**+0.3**
HIDR				IAML		09 08 40.1	
	comp=N,74nm,0.2s						
DR12	**Loma Pena Alta**	**2.59**	**293**	Pn	**Pn**	**09 07 52.0**	**+1.4**
HATOM	**Hato Mayor del**	**2.59**	**293**	*e*Pg	**Pn**	**09 07 51.6**	**+1.1**
HATOM				⇑*e*Sg	**Sb**	**09 08 27.2**	**+0.1**
HATOM				IAML		09 08 42.0	
	comp=N,21nm,2.0s						

*IDC **28** 09:11:26.3±1.6, 26°.87N×143°.46E, h0^{km}, mb3.4/4, mbtmp3.4/5, ML2.7/1, Error ellipse: s-maj=34.4km s-min=20.6km az=64.0*

ISC 28 09:11:30.6±1.4, 27°.0N±0°.1×143°.6E±0°.1, h35^{km}, n7, σ1°.59/8, mb3.4/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.22**	**276**	Pn	**Pn**	**09 11 50.1**	**-1.1**
	13nm,0.3s,baz=100,slow=22,SNR=1.9						
JCJ				Sn	**Sn**	**09 12 07.2**	**+0.7**
	31nm,0.3s,baz=276,slow=23,SNR=13						
MJAR	**Matsushiro Arr**	**10.57**	**336**	Pn	**Pn**	**09 13 58.8**	**-0.8**
	0.1nm,0.3s,baz=157,slow=10,SNR=3.8						
	1.2nm,0.8s						
SONM	**Songino Array**	**35.65**	**316**	P	**P**	**09 18 24.3**	**-1.0**
	0.2nm,0.5s,baz=115,slow=9.9,SNR=1.7						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**47.48**	**192**	P	**P**	**09 20 02.2**	**0.0**
	1.3nm,0.8s,baz=11,slow=8.6,SNR=4.9						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**51.19**	**191**	P	**P**	**09 20 30.0**	**-0.6**
	0.4nm,0.9s,baz=12,slow=6.1,SNR=2.4						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**51.49**	**310**	P	**P**	**09 20 35.0**	**+2.3**
	0.1nm,0.4s,baz=98,slow=9.3,SNR=2.5						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**54.00**	**314**	P	**P**	**09 20 53.0**	**+1.9**
	0.3nm,0.4s,baz=95,slow=7.4,SNR=1.3						

IDC 28 09:25:49.5±434.0, 45°.16N×16°.66E, h0^{km}, Error ellipse: s-maj=205.2km s-min=98.0km az=170.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**4.20**	**332**	I	I	09 52 30.0	
	0.2nm,1.2s,baz=151,slow=325,SNR=1.9						
I43RU	**DUBNA INFRASON**	**7.29**	**41**	I	I	11 14 35.0	
	0.1nm,1.2s,baz=232,slow=321,SNR=4.4						
I31KZ	**AKTYUBINSK INF**	**28.02**	**64**	I	I	12 18 40.0	
	baz=281,slow=335,SNR=3.0						
I46RU	**ZALESOVO INFRA**	**43.48**	**53**	I	I	13 45 40.0	
	baz=292,slow=319,SNR=1.3						

*IDC **28** 09:38:03.8±0.7, 10°.23N×124°.94E, h0^{km}, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=45.6km s-min=14.4km az=73.0*
*NEIC **28** 09:38:06.4±1.9, 10°.24N±0°.08×125°.0E±0°.1, h10$^{km}_{\pm 1}$, mb4.5/26, Error ellipse: s-maj=20.7km s-min=13.7km az=76.0*

ISC 28 09:38:08.5±0.5, 10°.19N±0°.07×124°.9E±0°.1, h30^{km}, n52, σ0°.86/54, mb4.2/25, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.17**	**168**	Pn	**Pn**	**09 38 57.8**	**+1.5**
LUWI	**Luwuk**	**11.36**	**191**	Pn	**Pn**	**09 40 47.2**	**-1.6**
SBUM	**Sibu**	**14.76**	**239**	Pn	**Pn**	**09 41 34.9**	**-0.4**
ENH	**Enshi**	**24.62**	**326**	P	**P**	**09 43 27.2**	**+0.8**
ENH				IAmb	IAmb	09 43 30.0	
	comp=Z,13nm,1.4s						
KSRS	**Korea Array**	**27.28**	**5**	P	**P**	**09 43 49.3**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=180,slow=6.1,SNR=2.4						
	comp=Z,0.8nm,0.6s						
WB0	**Warramunga Arr**	**31.20**	**163**	P	**P**	**09 44 25.4**	**+0.1**
WB0				IAmb	IAmb	09 44 34.1	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**31.34**	**163**	P	**P**	**09 44 27.6**	**+1.0**
WRAB				IAmb	IAmb	09 44 34.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**31.35**	**163**	P	**P**	**09 44 25.3**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=343,slow=9.2,SNR=6.0						
WRA				PcP	**PcP**	**09 47 20.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=335,slow=3.1,SNR=8.1						
	comp=Z,0.9nm,0.8s						
WR8	**Warramunga Arr**	**31.41**	**162**	P	**P**	**09 44 26.0**	**-1.2**
WR8				IAmb	IAmb	09 44 34.5	
	comp=Z,12nm,1.4s						
MBWA	**Marble Bar**	**31.56**	**189**	P	**P**	**09 44 27.1**	**-1.4**
USRK	**Ussuriysk Ar.**	**34.44**	**9**	P	**P**	**09 44 52.0**	**-1.3**
	comp=Z,2.8nm,0.8s,baz=211,slow=8.2,SNR=4.8						
	comp=Z,2.8nm,0.8s						
AS31	**Alice Springs**	**34.78**	**165**	P	**P**	**09 44 57.5**	**+0.9**
ASAR	**Alice Springs**	**34.78**	**165**	P	**P**	**09 44 56.5**	**0.0**
	comp=Z,0.6nm,0.5s,baz=339,slow=6.9,SNR=21						
ASAR				PcP	**PcP**	**09 47 29.1**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=341,slow=2.6,SNR=8.4						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**34.78**	**165**	P	**P**	**09 44 56.1**	**-0.4**
SHL	**Shillong**	**34.82**	**300**	P	**P**	**09 44 57.0**	**-0.2**
SHL				IAmb	IAmb	09 45 00.0	
	comp=Z,7.5nm,0.8s						
EVN	**Everest**	**39.89**	**302**	P	**P**	**09 45 41.4**	**+0.8**
ULN	**Ulaanbaatar**	**40.46**	**341**	P	**P**	**09 45 44.3**	**-0.2**
SONM	**Songino Array**	**40.64**	**341**	P	**P**	**09 45 46.5**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=160,slow=9.3,SNR=8.1						
	comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**40.64**	**341**	P	**P**	**09 45 45.8**	**-0.2**
NWAO

ISC 28 09:44:34.7±0.5, 1°94N±0°06×126°77E±0°08, h63km, n58, σ1s18/61, mb4.2/21, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.30**	**153**		**Pn**	**09 44 56.6**	**-0.3**
TNTI				Sn	**Sn**	**09 45 10.3**	**-3.2**
TNTI	**Ternate**	**1.30**	**153**	P	**Pn**	**09 44 57.5**	**+0.6**
MNI	**Manado**	**1.99**	**256**	P	**Pn**	**09 45 03.4**	**-2.7**
SGSI	**Sangihe**	**2.13**	**325**	P	**Pn**	**09 45 04.8**	**-3.3**
GTOI	**Gorontalo**	**3.97**	**251**	P	**Pn**	**09 45 32.1**	**-1.1**
LUWI	**Luwuk**	**4.97**	**234**	Pn	**Pn**	**09 45 45.6**	**-1.3**
TOLI2	**Tolitoli**	**6.04**	**262**	Pn	Pn	09 45 57.0	-4.5
MYLDM	**Lahad Datu**	**8.86**	**292**	Pn	**Pn**	**09 46 38.8**	**-1.3**
KKM	**Kota Kinabalu**	**11.29**	**291**	Pn	**Pn**	**09 47 12.5**	**-0.9**
MTN	**Manton Dam**	**15.31**	**164**	Pn	**Pn**	**09 48 07.2**	**0.0**
MTN				IAmb	IAmb	09 48 36.3	
	comp=Z,70nm,1.5s						
KNRA	**Kununurra**	**17.61**	**174**		**Pn**	**09 48 34.6**	**-1.4**
KNRA				IAmb	IAmb	09 49 05.0	
	comp=Z,66nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P	**P**	**09 49 02.5**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=332,slow=9.4,SNR=1.9						
	comp=Z,4.9nm,1.0s						
TPUB	**Ta-pu**	**22.06**	**345**	P	**P**	**09 49 23.7**	**-0.7**
WB0	**Warramunga Arr**	**22.83**	**161**	P	**P**	**09 49 33.2**	**+0.4**
WB0				IAmb	IAmb	09 49 38.8	
	comp=Z,10.0nm,1.1s						
WRAB	**Tennant Creek**	**22.97**	**161**	P	**P**	**09 49 34.1**	**-0.1**
WRAB				IAmb	IAmb	09 50 04.2	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**09 49 34.2**	**0.0**
	comp=Z,2.0nm,0.4s,baz=338,slow=10,SNR=45						
WRA				PcP	**PcP**	**09 53 23.9**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=332,slow=2.3,SNR=1.0						
	comp=Z,2.0nm,0.4s						
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**09 49 33.7**	**-0.6**
WR8	**Warramunga Arr**	**23.04**	**161**	P	**P**	**09 49 35.0**	**+0.2**
WR8				IAmb	IAmb	09 49 42.4	
	comp=Z,7.4nm,1.0s						
AS31	**Alice Springs**	**26.38**	**165**	P	**P**	**09 50 04.9**	**-0.5**
ASAR	**Alice Springs**	**26.38**	**165**	P	**P**	**09 50 06.3**	**+1.0**
ASAR				PcP	**PcP**	**09 53 31.1**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=344,slow=11,SNR=12						
	comp=Z,0.4nm,0.6s,baz=340,slow=2.2,SNR=4.6						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**26.38**	**165**	P	**P**	**09 50 03.8**	**-1.5**
ASAR					**PcP**	**09 53 30.4**	**+0.5**
CTAO	**Charters Tower**	**29.06**	**140**	P	**P**	**09 50 29.4**	**+0.1**
CTAO				IAmb	IAmb	09 51 03.5	
	comp=Z,16nm,1.4s						
PATS	**Pohnpei**	**31.82**	**80**	P	**P**	**09 50 52.1**	**-1.7**
KSRS	**Korea Array**	**35.36**	**2**	P	**P**	**09 51 25.9**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=194,slow=8.8,SNR=2.9						
	comp=Z,0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**36.02**	**16**	P	**P**	**09 51 29.9**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=183,slow=9.9,SNR=4.3						
	comp=Z,0.7nm,0.5s						
MJAR	**Matsushiro Arr**	**36.02**	**16**	P	**P**	**09 51 28.9**	**-1.1**
MJAR				IAmb	IAmb	09 52 10.9	
	comp=Z,4.0nm,1.4s						
EVN	**Everest**	**46.10**	**308**	P	**P**	**09 52 54.1**	**+0.4**
EVN				IAmb	IAmb	09 52 59.0	
	comp=Z,2.7nm,0.5s						
ULN	**Ulaanbaatar**	**48.83**	**342**	P	**P**	**09 53 14.3**	**+0.4**
SONM	**Songino Array**	**49.00**	**342**	P	**P**	**09 53 15.6**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=153,slow=8.2,SNR=5.0						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**49.00**	**342**	P	**P**	**09 53 16.0**	**+0.8**
PETK	**Petropavlovsk-**	**57.07**	**22**	P	**P**	**09 54 15.4**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=212,slow=7.2,SNR=1.2						
	comp=Z,0.8nm,0.5s						
PETK	**Petropavlovsk-**	**57.07**	**22**	P	**P**	**09 54 13.9**	**-0.5**
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**09 54 28.0**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=122,slow=8.0,SNR=30						
	comp=Z,1.2nm,0.4s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**09 54 28.9**	**+0.5**
MAKZ	**Makanchi**	**59.23**	**326**	P	**P**	**09 54 31.1**	**+1.5**
MAKZ				IAmb	IAmb	09 54 31.3	
	comp=Z,4.3nm,1.4s						
GVZ	**Greta Valley S**	**61.03**	**143**	P	**P**	**09 54 41.2**	**-0.7**
MSWZ	**Moikau Station**	**61.57**	**140**	P	**P**	**09 54 45.3**	**-0.3**
GAR	**Garm**	**63.16**	**313**	P	**P**	**09 54 56.5**	**-0.1**
BTK	**Batken**	**63.19**	**315**	P	**P**	**09 54 56.3**	**-0.3**
KURBB	**Kurchatov Arra**	**63.26**	**328**	P	**P**	**09 54 57.4**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=129,slow=6.3,SNR=4.5						
KURK	**Kurchatov**	**63.27**	**328**	P	**P**	**09 54 56.5**	**-0.2**
KK31	**Karatay Array**	**64.57**	**318**		**P**	**09 55 05.6**	**+0.1**
KK31				IAmb	IAmb	09 55 44.2	
	comp=Z,2.0nm,0.6s						
KKAR	**Karatay Array**	**64.57**	**318**	P	**P**	**09 55 04.7**	**-0.8**
AB31	**Akbulak array**	**73.56**	**321**	P	**P**	**09 56 01.9**	**+0.8**
ABKAR	**Akbulak array**	**73.56**	**321**	P	**P**	**09 56 01.2**	**+0.1**
L14K	**Kuka Creek**	**79.06**	**28**	P	**P**	**09 56 31.9**	**0.0**
L14K				IAmb	IAmb	09 56 32.9	
	comp=Z,7.8nm,1.4s						
C16K	**Lisburne Hills**	**80.14**	**20**	P	**P**	**09 56 38.5**	**+0.8**
C16K				IAmb	IAmb	09 57 16.4	
	comp=Z,2.9nm,1.3s						
VNDA	**Vanda**	**81.65**	**173**	P	**P**	**09 56 47.0**	**+1.4**
	comp=Z,5.0nm,1.0s,baz=355,slow=6.4,SNR=2.5						
	comp=Z,5.0nm,1.0s						
VNDA	**Vanda**	**81.65**	**173**	P	**P**	**09 56 47.4**	**+1.8**
L18K	**Granite Mounta**	**82.03**	**27**	P	**P**	**09 56 47.6**	**-0.3**
J18K	**Innoko River**	**82.26**	**26**	P	**P**	**09 56 50.5**	**+1.4**
D19K	**Kuna River**	**82.77**	**21**	P	**P**	**09 56 52.8**	**+1.1**
D19K				IAmb	IAmb	09 57 10.9	
	comp=Z,2.1nm,1.1s						
SKT	**Skwentna**	**84.39**	**28**	P	**P**	**09 57 01.1**	**+0.9**
SKT				IAmb	IAmb	09 57 06.5	
	comp=Z,7.5nm,1.3s						
ILAR	**Eielson Array**	**86.70**	**25**	P	**P**	**09 57 11.0**	**-0.5**
	comp=Z,0.7nm,1.1s,baz=278,slow=7.0,SNR=3.1						
	comp=Z,0.7nm,1.1s						
ILAR	**Eielson Array**	**86.70**	**25**	P	**P**	**09 57 11.6**	**+0.1**
BMAR	**Burnt Mountain**	**87.71**	**23**	P	**P**	**09 57 17.5**	**+1.1**
BCAR	**Beaver Creek A**	**88.95**	**27**	P	**P**	**09 57 24.4**	**+2.1**
NC303	**NORSAR Array S**	**100.26**	**334**	Pdif	**Pdif**	**09 58 16.1**	**+2.1**

*ASRS **28** 09:45:01.0±1.8, 51°73N×81°97E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*NNC **28** 09:45:07.9±4.3, 52°81N×76°99E, h0km, mb2.7, mpv2.2, Error ellipse: s-maj=65.1km s-min=16.7km az=41.0*
*IDC **28** 09:45:12.3±2.0, 51°22N×81°68E, h0km, mbtmp2.0/2, ML1.7/2, Error ellipse: s-maj=20.1km s-min=13.5km az=25.0*

ISC 28 09:45:08.2±1.2, 51°49N±0°09×81°79E±0°07, h0km, n7, σ0s65/8, 4C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.14**	**250**	⇑Pn	**Pb**	**09 45 47.1**	**-0.7**
	0.2nm,0.3s						
KURK				⇓S	**Sg**	**09 46 17.4**	**+0.4**
	2.2nm,0.8s						
KURBB	**Kurchatov Arra**	**2.23**	**248**	Pg	**Pb**	**09 45 49.2**	**-0.1**
	0.1nm,0.3s,baz=71,slow=18,SNR=5.5						
KURBB				Lg	Lg	09 46 19.8	
	0.2nm,0.3s,baz=72,slow=35,SNR=8.1						
KURBB	**Kurchatov Arra**	**2.23**	**248**	⇑Pn	**Pb**	**09 45 49.0**	**-0.4**
	0.9nm,0.3s,baz=330,slow=16						
KURBB				⇓Sn	**Sg**	**09 46 19.5**	**-0.3**
	7.7nm,0.8s						
ZALV	**Zalesovo Beam**	**3.08**	**36**	Pn	**Pg**	**09 46 07.0**	**-0.1**
	0.3nm,0.3s,baz=238,slow=16,SNR=2.1						
	0.7nm,0.5s						
I46RU	**ZALESOVO INFRA**	**3.08**	**36**	I	I	10 03 10.0	
	baz=210,slow=328,SNR=2.3						
MKAR	**Makanchi Array**	**4.71**	**176**	Pn	**Pn**	**09 46 21.4**	**+0.8**
	0.1nm,0.3s,baz=8.0,slow=14,SNR=6.3						
MKAR				Pg	**Pb**	**09 46 30.9**	**-0.7**
	0.1nm,0.3s,baz=2.3,slow=14,SNR=3.0						
MKAR				Lg	Lg	09 47 33.2	
	0.2nm,0.3s,baz=13,slow=27,SNR=6.7						
	0.1nm,0.3s						
BVA0	**Borovoye Array**	**7.17**	**287**	⇑Pg	Pn	09 46 19.0	-35
	1.3nm,0.9s						
BVA0				⇑Lg	Lg	09 47 19.5	
	0.9nm,0.6s						

*ASRS **28** 09:52:33.0±0.6, 54°68N×83°59E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC 28 09:52:36.0±2.7, 54°68N×83°87E, h20km±19km, mb3.5,

mpv3.0, 8C-8D, Error ellipse: s-maj=24.7km s-min=9.5km az=13.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**0.92**	**142**	⇓P	Pb	09 52 53.3	+0.1
	5.0nm,0.6s						
ZAA0				⇓S	Sn	09 53 06.4	0.0
	51nm,0.9s						
KURK	**Kurchatov**	**5.09**	**221**	⇓Pn	Pn	09 53 53.0	+1.8
	0.3nm,0.5s						
KURK				⇑Pg	Pg	09 54 09.0	-4.5
	2.2nm,0.8s						
KURK				⇑Sn	Sn	09 54 49.4	0.0
	0.5nm,0.5s						
KURK				⇓Lg	Lg	09 55 19.4	
	5.7nm,0.7s						
KURBB	**Kurchatov Arra**	**5.20**	**221**	⇑Pn	Pn	09 53 55.0	+2.4
	1.2nm,0.6s						
KURBB				⇓Pg	Pg	09 54 11.6	-4.0
	4.2nm,0.8s						
KURBB				⇓Sn	Sn	09 54 51.5	-0.6
	4.0nm,0.5s						
KURBB				⇓Lg	Lg	09 55 18.9	
	19nm,0.6s						
MK31	**Makanchi Array**	**7.96**	**188**	⇑Pn	Pn	09 54 28.0	-2.5
	1.5nm,0.7s,baz=24,slow=13,SNR=26						
MK31				⇑Sn	Sn	09 56 04.3	+4.4
	0.4nm,0.6s,baz=19,slow=21,SNR=2.5						
MK31				⇓Lg	Lg	09 56 49.4	
	1.8nm,0.7s,baz=16,slow=28,SNR=4.2						
MAKZ	**Makanchi**	**7.97**	**189**	⇑Pn	Pn	09 54 28.8	-1.9
	1.3nm,0.6s						
MAKZ				⇑Sn	Sn	09 56 01.9	+1.7
	0.8nm,0.6s						
MAKZ				⇑Lg	Lg	09 56 45.3	
	3.9nm,1.2s						

*IDC **28** 09:59:08.3±0.8, 26°86N×143°77E, h0km, mb3.8/11, mbtmp3.8/13, ML3.3/2, Error ellipse: s-maj=23.1km s-min=17.2km az=76.0*
*NEIC **28** 09:59:10.9±1.6, 26°86N±0°09×143°56E±0°10, h10km±1km, mb4.5/29, Error ellipse: s-maj=15.7km s-min=14.7km az=145.0*

ISC 28 09:59:14.0±0.6, 26°83N±0°07×143°47E±0°08, h35km, n59, σ1s07/60, mb4.3/26, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.18**	**283**	Pn	**Pn**	**09 59 33.7**	**-0.3**
	18nm,0.3s,baz=312,slow=21,SNR=4.2						
JCJ				Sn	**Sn**	**09 59 47.9**	**-0.9**
	39nm,0.3s,baz=297,slow=22,SNR=6.5						
JCJ	**Chichijima**	**1.18**	**283**		**Pn**	**09 59 33.9**	**-0.1**
JHJ2	**Mitsune**	**7.02**	**334**	Pn	**Pn**	**10 00 53.4**	**-0.8**
JGF	**Kuroka**	**10.19**	**331**	Pn	**Pn**	**10 01 36.5**	**-1.3**
MJAR	**Matsushiro Arr**	**10.67**	**336**	Pn	**Pn**	**10 01 41.4**	**-2.9**
	0.2nm,0.3s,baz=155,slow=10,SNR=15						
	2.3nm,0.5s						
MJAR	**Matsushiro Arr**	**10.67**	**336**		**Pn**	**10 01 42.0**	**-2.3**
MAJO	**Matsushiro**	**10.67**	**336**		**Pn**	**10 01 42.6**	**-1.7**
MJB9	**Matsu-Tunnel**	**10.67**	**336**	Pn	**Pn**	**10 01 43.6**	**-0.7**
JMN	**Monobe**	**10.76**	**312**	Pn	**Pn**	**10 01 44.6**	**-1.1**
KSRS	**Korea Array**	**16.87**	**313**	Pn	**P**	**10 03 09.7**	**+0.5**
	0.1nm,0.3s,baz=119,slow=12,SNR=6.0						
	2.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**19.66**	**335**	P	**Pn**	**10 03 42.5**	**+1.2**
	0.5nm,0.4s,baz=140,slow=9.5,SNR=1.5						
SSLB	**Suanglung**	**20.57**	**266**	P	**P**	**10 03 49.9**	**-0.1**
SSLB				IAmb	IAmb	10 04 15.5	
	comp=Z,35nm,1.4s						
TOLI2	**Tolitoli**	**33.60**	**224**	P	**P**	**10 05 50.8**	**-0.4**
SONM	**Songino Array**	**35.70**	**316**	P	**P**	**10 06 10.7**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=131,slow=8.2,SNR=2.8						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**35.70**	**316**	P	**P**	**10 06 08.5**	**-0.7**
MTN	**Manton Dam**	**41.22**	**198**	P	**P**	**10 06 55.3**	**-0.3**
CTAO	**Charters Tower**	**46.72**	**176**	P	**P**	**10 07 38.5**	**-1.2**
GAMB	**Gambell**	**46.86**	**25**	P	**P**	**10 07 40.1**	**-0.3**
GAMB				IAmb	IAmb	10 08 08.3	
	comp=Z,4.9nm,1.5s						
UGM	**Wanagama**	**47.04**	**227**	P	**P**	**10 07 42.3**	**-0.1**
WB0	**Warramunga Arr**	**47.15**	**192**	P	**P**	**10 07 43.6**	**+0.5**
WB0				IAmb	IAmb	10 07 44.7	
	comp=Z,6.2nm,1.0s						
WR8	**Warramunga Arr**	**47.31**	**192**	P	**P**	**10 07 45.3**	**+1.0**
WR8				IAmb	IAmb	10 08 01.5	
	comp=Z,4.0nm,1.1s						
WRA	**Warramunga Arr**	**47.33**	**192**	P	**P**	**10 07 44.7**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=111,slow=8.4,SNR=16						
	comp=Z,3.5nm,0.9s						
WRA	**Warramunga Arr**	**47.33**	**192**	P	**P**	**10 07 44.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**47.90**	**203**	P	**P**	**10 07 49.5**	**+0.7**
	comp=Z,6.5nm,0.9s,baz=69,slow=8.6,SNR=3.6						
	comp=Z,6.5nm,0.9s						
TNA	**Tin City**	**49.15**	**24**	P	**P**	**10 07 56.8**	**-1.2**
TNA				IAmb	IAmb	10 07 58.9	
	comp=Z,4.2nm,1.4s						
L14K	**Kuka Creek**	**49.65**	**31**	P	**P**	**10 08 03.2**	**+1.3**
L14K				IAmb	IAmb	10 08 26.0	
	comp=Z,6.8nm,1.4s						
ANM	**Nome**	**49.69**	**26**	P	**P**	**10 08 03.0**	**+0.8**
O14K	**Tigyukauivet M**	**49.71**	**34**	P	**P**	**10 08 03.0**	**+0.7**
O14K				IAmb	IAmb	10 08 13.0	
	comp=Z,9.9nm,1.4s						
M14K	**Bethel**	**49.80**	**32**	P	**P**	**10 08 03.7**	**+0.7**
M14K				IAmb	IAmb	10 08 30.6	
	comp=Z,11nm,1.2s						
ZALV	**Zalesovo Beam**	**50.44**	**319**	P	**P**	**10 08 10.1**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=115,slow=6.8,SNR=2.3						
	comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**50.44**	**319**	P	**P**	**10 08 07.5**	**-0.5**
F15K	**North Star Dit**	**50.44**	**25**	P	**P**	**10 08 07.7**	**-0.2**
AS31	**Alice Springs**	**51.04**	**191**	P	**P**	**10 08 13.8**	**+1.0**
ASAR	**Alice Springs**	**51.04**	**191**	P	**P**	**10 08 12.7**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=9.6,slow=5.9,SNR=9.7						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**51.04**	**191**	P	**P**	**10 08 13.1**	**+0.2**
MKAR	**Makanchi Array**	**51.52**	**310**	P	**P**	**10 08 17.4**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=90,slow=9.4,SNR=8.1						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**51.52**	**310**	P	**P**	**10 08 15.6**	**-0.7**
C18K	**Utukok River**	**52.85**	**22**	P	**P**	**10 08 25.3**	**-0.6**
C18K				IAmb	IAmb	10 08 41.5	
	comp=Z,5.9nm,1.5s						
KURK	**Kurchatov**	**53.99**	**315**	P	**P**	**10 08 35.1**	**+0.7**
KURK				IAmb	IAmb	10 08 37.4	
	comp=Z,2.9nm,0.8s						
KURBB	**Kurchatov Arra**	**54.04**	**315**	P	**P**	**10 08 35.3**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=91,slow=7.5,SNR=17						
INKA	**Innaminka**	**54.32**	**183**	P	**P**	**10 08 37.2**	**+0.2**
STKA	**Stephens Creek**	**58.41**	**182**	P	**P**	**10 09 06.0**	**0.0**
BVAR	**Borovoye Array**	**59.01**	**318**	P	**P**	**10 09 10.7**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=74,slow=7.7,SNR=2.9						
	comp=Z,0.7nm,0.4s						
KK31	**Karatay Array**	**60.17**	**306**	P	**P**	**10 09 19.4**	**+1.1**
KK31				IAmb	IAmb	10 09 21.8	
	comp=Z,2.9nm,0.7s						
KKAR	**Karatay Array**	**60.17**	**306**		**P**	**10 09 19.0**	**+0.7**
G31M	**Satah River**	**62.61**	**26**	P	**P**	**10 09 35.0**	**+0.6**
INK	**Inuvik**	**62.80**	**25**	P	**P**	**10 09 36.4**	**+0.8**
INK				IAmb	IAmb	10 09 51.1	
	comp=Z,4.5nm,1.4s						
ABKAR	**Akbulak array**	**66.10**	**315**	P	**P**	**10 09 57.6**	**+0.1**
YKA	**Yellowknife Ar**	**71.83**	**29**	P	**P**	**10 10 30.4**	**-2.5**
	comp=Z,0.3nm,0.8s,baz=297,slow=6.9,SNR=4.3						
	comp=Z,0.3nm,0.8s						
YKAW1	**Yellowknife Wh**	**71.89**	**29**	P	**P**	**10 10 33.2**	**0.0**
YKAW1				IAmb	IAmb	10 11 03.2	
	comp=Z,4.3nm,1.5s						
WIFE	**Three Sisters-**	**75.04**	**48**	P	**P**	**10 10 52.9**	**+0.5**
WIFE				IAmb	IAmb	10 11 01.6	
	comp=Z,8.0nm,1.4s						
FINES	**FINESS Array B**	**78.69**	**334**	P	**P**	**10 11 13.9**	**+1.6**
	comp=Z,2.1nm,0.9s,baz=68,slow=5.9,SNR=2.2						
	comp=Z,2.1nm,0.9s						
FINES	**FINESS Array B**	**78.69**	**334**	P	**P**	**10 11 12.7**	**+0.3**
NVAR	**Mina Array Bea**	**79.78**	**52**	P	**P**	**10 11 18.3**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=289,slow=5.3,SNR=5.3						
	comp=Z,0.5nm,0.6s						
DUG	**Dugway, Tooele**	**82.75**	**49**	P	**P**	**10 11 34.3**	**-0.4**
DUG				IAmb	IAmb	10 11 36.1	
	comp=Z,3.2nm,1.2s						
LAO	**LASA Array**	**83.56**	**41**	P	**P**	**10 11 39.7**	**+1.0**
PDAR	**Pinedale Array**	**83.59**	**45**	P	**P**	**10 11 36.8**	**-2.3**
	comp=Z,0.3nm,0.8s,baz=302,slow=10,SNR=2.2						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**83.59**	**45**	P	**P**	**10 11 37.6**	**-1.6**
PV19	**Morning Glory**	**86.26**	**49**	P	**P**	**10 11 52.0**	**-0.6**

HEL 28 10:02:08.9±0.2, 61°47N×23°43E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KPF	**Kankaanpaa**	**0.74**	**300**	PG	Pg	10 02 22.7	-0.5
	baz=116						
KPF				smax	smax	10 02 32.2	
	comp=Z,1.2nm,0.2s						
KPF				SB	Sg	10 02 33.0	+0.2
RAF	**Rauma**	**0.92**	**242**	PG	Pg	10 02 25.5	-1.1
RAF				smax	smax	10 02 37.4	
	comp=Z,1.4nm,0.2s						
RAF				SB	Sg	10 02 38.0	-0.4
KEF	**Keuruu**	**0.98**	**44**	PB	Pg	10 02 27.2	-0.4
KEF				smax	smax	10 02 38.7	
	comp=Z,1.2nm,0.2s						
KEF				SB	Sg	10 02 39.7	-0.5
NUR	**Nurmijarvi**	**1.13**	**148**	PN	Pn	10 02 32.1	+0.1
NUR				smax	smax	10 02 43.4	
	comp=Z,1.1nm,0.2s						
FIA0	**FINESS Array S**	**1.27**	**90**	PN	Pg	10 02 33.2	0.0
	baz=274						
FIA0				smax	smax	10 02 47.3	
	comp=Z,1.6nm,0.2s						
HEL5	**Espoo, Suvisaa**	**1.50**	**154**	smax	smax	10 02 54.0	
	comp=Z,1.9nm,0.2s						
HEL5				SN	Sn	10 02 59.4	+2.1
VAF	**Ylistaro**	**1.62**	**348**	PG	Pn	10 02 38.7	0.0
	baz=170						
VAF				smax	smax	10 02 57.4	
	comp=Z,0.7nm,0.2s						
SUF	**Sumiainen**	**1.79**	**44**	smax	smax	10 03 02.3	
	comp=Z,0.6nm,0.2s						
SUF				SN	Sb	10 03 05.2	-0.3
AAL	**Aland**	**2.12**	**234**	SG	Sg	10 03 16.4	-0.7
UMAU	**Umeaa**	**2.73**	**334**	SG	Sb	10 03 32.6	-0.1
HEMU	**Hemsoen**	**2.81**	**298**	PB	Pb	10 02 57.8	-2.2
HEMU				SG	Sb	10 03 33.6	-1.2

*IDC **28** 10:07:13.7±1.7, 0°93N×125°95E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=174.6km s-min=20.8km az=65.0*
*DJA **28** 10:07:20.9±1.6, 1°N±3°×12°6E±°, h18km±15km, M4.3/15, mB5.4/1, mb4.4/2, MLv4.2/15, Mw(mB)4.9/1*
*NEIC **28** 10:07:22.0±1.8, 1°14N±0°09×126°55E±0°06, h65km±6km, mb4.3/12, Error ellipse: s-maj=13.0km s-min=8.8km az=168.0*

ISC 28 10:07:19.7±0.7, 1°19N±0°07×126°56E±0°05, h39km, n29, σ1s99/30, mb4.2/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.91**	**117**		**Pn**	**10 07 39.6**	**+3.7**
TNTI	**Ternate**	**0.91**	**117**	P	**Pn**	**10 07 39.3**	**+3.3**
MNI	**Manado**	**1.74**	**278**	P	**Pn**	**10 07 49.9**	**+2.5**
MNI				S	**Sn**	**10 08 10.9**	**+2.5**
SANI	**Sanana**	**3.27**	**190**	P	**Pn**	**10 08 11.0**	**+2.5**
GTOI	**Gorontalo**	**3.59**	**261**	P	**Pn**	**10 08 16.8**	**+3.9**
LUWI	**Luwuk**	**4.39**	**240**	Pn	**Pn**	**10 08 26.5**	**+2.6**
LUWI				Sn	**Sn**	**10 09 13.8**	**-0.1**
LUWI	**Luwuk**	**4.39**	**240**	P	**Pn**	**10 08 26.1**	**+2.2**
NLAI	**Namlea**	**4.43**	**173**	P	**Pn**	**10 08 26.6**	**+2.1**
MRSI	**Marisa**	**4.67**	**261**	P	Pn	10 08 46.6	+19
TOLI2	**Tolitoli**	**5.78**	**269**	Pn	**Pn**	**10 08 44.9**	**+1.9**
DAV	**Davao City (W)**	**5.92**	**351**	Pn	**Pn**	**10 08 47.2**	**+2.3**
UGM	**Wanagama**	**18.37**	**240**	P	**Pn**	**10 11 31.5**	**-0.2**
WB0	**Warramunga Arr**	**22.20**	**160**	P	**P**	**10 12 11.8**	**-1.1**
WB0				IAmb	IAmb	10 12 40.3	
	comp=Z,19nm,1.4s						
WRAB	**Tennant Creek**	**22.34**	**160**	P	**P**	**10 12 13.2**	**-1.2**
WRA	**Warramunga Arr**	**22.35**	**160**	P	**P**	**10 12 12.8**	**-1.6**
	comp=Z,3.1nm,0.5s,baz=337,slow=10,SNR=46						
	comp=Z,3.1nm,0.5s						
WRA	**Warramunga Arr**	**22.35**	**160**	P	**P**	**10 12 12.6**	**-1.9**
WR8	**Warramunga Arr**	**22.41**	**160**	P	**P**	**10 12 14.1**	**-1.1**
WR8				IAmb	IAmb	10 12 32.7	
	comp=Z,8.8nm,1.2s						
TPUB	**Ta-pu**	**22.72**	**346**	P	**P**	**10 12 17.7**	**-0.7**
AS31	**Alice Springs**	**25.72**	**164**	P	**P**	**10 12 45.3**	**-1.4**
ASAR	**Alice Springs**	**25.72**	**164

PB02 eS Sn 10 10 47.9 -0.2
PB02 IAML 10 10 48.4
comp=E,2μm,0.4s
PB02 IPOC Station P 1.30 297 eP Pn **10 10 27.6 -0.4**
PB02 IAML 10 10 53.2
comp=Z,1μm,0.2s
PB05 IPOC Station P 1.72 236 eP Pn **10 10 33.2 +0.7**
PB05 eS Sn **10 10 57.0 +0.7**
PB05 IAML 10 10 57.3
comp=N,261nm,0.3s
PB05 IPOC Station P 1.72 236 eP Pn **10 10 33.2 +0.7**
PB05 IAML 10 10 58.3
comp=Z,192nm,0.6s
PB08 IPOC Station P 1.82 345 *i* P Pn **10 10 34.6 +0.5**
PB08 eS Sn **10 10 58.5 -0.4**
PB08 IAML 10 11 00.7
comp=E,364nm,0.3s
PB08 IPOC Station P 1.82 345 eP Pn **10 10 34.5 +0.5**
TA02 Huaiquique 2.13 319 eP Pn **10 10 37.5 +0.1**
TA02 eS Sn **10 11 04.8 -0.2**
TA02 IAML 10 11 10.0
comp=Z,233nm,0.3s
GO01 Chusmiza 2.28 347 ⇓*i* P Pn **10 10 39.8 +0.1**
GO01 eS Sn **10 11 10.1 +1.0**
GO01 IAML 10 11 10.7
comp=N,399nm,0.4s
GO01 Chusmiza 2.28 347 eP Pn **10 10 39.7 +0.1**
GO01 IAML 10 11 12.3
comp=Z,118nm,0.3s
PB11 IPOC Station P 2.33 336 ⇓*i* P Pn **10 10 39.5 -0.5**
PB11 eS Sn **10 11 09.8 +0.2**
PB11 IAML 10 11 10.6
comp=E,366nm,0.1s
PB11 IPOC Station P 2.33 336 eP Pn **10 10 39.5 -0.5**
PB11 IAML 10 11 13.3
comp=Z,153nm,0.2s
PB10 IPOC Station P 2.38 227 eP Pn **10 10 40.8 +0.5**
PB10 IPOC Station P 2.38 227 eP Pn **10 10 41.1 +0.8**
YJA Yavi 2.92 96 eP Pn **10 10 49.9 +2.2**
YJA eS Sn **10 11 23.7 +0.4**
SALTA 3.14 138 eP Pn **10 10 46.4 -4.1**
SALTA eP 10 10 51.8
PB14 IPOC Station P 3.15 210 eP Pn **10 10 50.9 +0.5**
PB14 IAML 10 11 30.6
comp=Z,135nm,0.4s
HJA Humahuaca 3.27 114 eP Pn **10 10 52.8 +0.8**
GO02 Mina Guanaco 3.35 195 eP Pn **10 10 53.4 +0.3**
GO02 IAML 10 11 36.5
comp=Z,147nm,0.1s
PB12 IPOC Station P 3.63 334 eP Pn **10 10 55.0 -1.6**
PB12 IAML 10 11 45.8
comp=Z,39nm,0.3s
PB16 IPOC Station P 3.64 347 eP Pn **10 10 57.7 +0.6**
AC01 Pan de Azucar 4.58 202 eP Pn **10 11 08.2 -0.8**
AC01 IAML 10 12 15.7
comp=Z,48nm,0.4s
AC02 Maricunga 4.93 185 eP Pn **10 11 14.2 +0.2**
AC02 eS Sn 10 11 56.0 -14

*IDC **28** 10:12:14.6±1.6,6°.77S×130°.39E,h0km,mb3.6/2, mbtmp3.7/6,ML3.7/4,Error ellipse: s-maj=71.5km s-min=23.5km az=86.0*
ISC 28 10:12:21.0±1.0,6°.94S±0°.08×130°.6E±0°.3,h78km,n6, σ3$31/7,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.07**	**7**	Pn		**Pn**	**Pn**	**10 13 44.5**	**-3.6**
	1.9nm,0.3s,baz=239,slow=23,SNR=6.4								
SIJI				Sn		Sn	Sn	10 14 44.6	-12
	6.2nm,0.3s,baz=295,slow=23,SNR=10								
	4.9nm,0.3s								
FITZ	**Fitzroy Crossi**	**12.08**	**203**	Pn		**Pn**	**Pn**	**10 15 10.7**	**+0.5**
	0.9nm,0.3s,baz=24,slow=16,SNR=18								
FITZ				Sn		**Sn**	**Sn**	**10 17 19.3**	**-3.8**
	1.7nm,0.3s,baz=155,slow=20,SNR=9.6								
	2.4nm,0.4s								
WRA	**Warramunga Arr**	**13.44**	**164**	Pn		**Pn**	**Pn**	**10 15 28.6**	**0.0**
	0.3nm,0.3s,baz=344,slow=13,SNR=7.5								
WRA				Sn		Sn	Sn	10 17 50.0	-6.3
	1.1nm,0.3s,baz=336,slow=22,SNR=10								
	0.4nm,0.3s								
ASAR	**Alice Springs**	**16.95**	**169**	P		**P**	**Pn**	**10 16 15.8**	**+2.6**
	0.2nm,0.3s,baz=356,slow=14,SNR=8.5								
ASAR				S			Sn	10 19 14.7	-6.4
	0.4nm,0.4s,baz=349,slow=25,SNR=5.5								
	0.5nm,0.4s								
SONM	**Songino Array**	**58.55**	**341**	P		**P**	**P**	**10 22 11.1**	**+1.5**
	0.2nm,0.5s,baz=164,slow=5.7,SNR=2.1								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**68.47**	**327**	P		**P**	**P**	**10 23 17.4**	**+2.6**
	0.8nm,0.6s,baz=119,slow=7.6,SNR=9.9								
	0.8nm,0.6s								

*IDC **28** 10:15:32.9±7.4,54°.88S×131°.58W,h0km,mb4.0/2, mbtmp4.0/2,MS3.9/3,Error ellipse: s-maj=630.8km s-min=61.7km az=147.0*
*NEIC **28** 10:15:33.3±1.2,55°.05S±0°.1×131°.4W±0°.2,h10km±1km, mb4.7/14,Error ellipse: s-maj=22.2km s-min=10.7km az=37.0*
ISC 28 10:15:32.9±0.7,55°.05S±0°.2×131°.5W±0°.1,h10km,n38, σ1$09/20,mb4.7/9,MS4.1/3,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**31.12**	**201**	P		**P**	**P**	**10 21 50.7**	**-0.3**
VNDA	**Vanda**	**32.12**	**202**	P		**P**	**P**	**10 21 59.1**	**-0.7**
VNDA				IAmb		IAmb	IAmb	10 22 15.7	
	comp=Z,19nm,1.4s								
RPN	**Rapa Nui**	**32.14**	**39**	P		**P**	**P**	**10 22 00.3**	**-0.1**
MG05	**Puerto Natales**	**34.47**	**110**	P		**P**	**P**	**10 22 20.6**	**+0.1**
HIZ	**Hauiti**	**39.24**	**272**	P		**P**	**P**	**10 22 59.5**	**-1.7**
HIZ				IAmb		IAmb	IAmb	10 23 24.7	
	comp=Z,42nm,1.3s								
TOZ	**Tahuroa Road**	**39.40**	**273**	P		**P**	**P**	**10 23 02.0**	**-0.6**
TOZ				IAmb		IAmb	IAmb	10 23 16.5	
	comp=Z,5.6nm,1.0s								
LL01	**San Ignacio de**	**39.79**	**97**	P		**P**	**P**	**10 23 05.6**	**-0.2**
LL01				IAmb		IAmb	IAmb	10 23 23.6	
	comp=Z,14nm,0.7s								
PPTF	**Pamatai, Papee**	**39.80**	**332**	P		**P**	**P**	**10 23 05.8**	**-0.4**
PPT	**Papeete**	**39.82**	**332**	LR		LR	LR	10 33 02.1	
	comp=Z,56nm,22.0s,baz=88,slow=26								
H03S2	**Juan Fernandez**	**41.85**	**82**	T		T	T	11 07 48.4	
	baz=222,slow=74,SNR=14								
H03S1	**Juan Fernandez**	**41.86**	**82**	T		T	T	11 07 47.3	
	baz=222,slow=74,SNR=13								
H03S3	**Juan Fernandez**	**41.87**	**82**	T		T	T	11 07 52.9	
	baz=222,slow=74,SNR=15								
PLCA	**Paso Flores**	**41.92**	**96**	P		**P**	**P**	**10 23 22.9**	**-0.5**
H03N3	**Juan Fernandez**	**42.13**	**82**	T		T	T	11 08 13.8	
	baz=225,slow=72,SNR=125								
H03N2	**Juan Fernandez**	**42.14**	**81**	T		T	T	11 08 08.3	
	baz=225,slow=72,SNR=164								
H03N1	**Juan Fernandez**	**42.15**	**82**	T		T	T	11 08 08.4	
	baz=225,slow=72,SNR=150								
GO01	**Chusmiza**	**58.24**	**79**	P		**P**	**P**	**10 25 28.1**	**0.0**
GO01				IAmb		IAmb	IAmb	10 25 33.5	
	comp=Z,7.4nm,1.5s								
CPUP	**Villa Florida**	**59.87**	**94**	LR		LR	LR	10 47 55.7	
	comp=Z,133nm,18.5s,baz=74,slow=32								
BBOO	**Buckleboo**	**65.20**	**248**	P		**P**	**P**	**10 26 14.7**	**+0.5**
ASAR	**Alice Springs**	**73.55**	**252**	P		**P**	**P**	**10 27 07.5**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=142,slow=7.0,SNR=15								
	comp=Z,1.1nm,0.8s								
ASAR	**Alice Springs**	**73.55**	**252**	P		**P**	**P**	**10 27 05.6**	**-0.5**
H01W1	**Cape Leeuwin H**	**74.37**	**231**	T		T	T	11 50 01.6	
	baz=147								
H01W2	**Cape Leeuwin H**	**74.38**	**231**	T		T	T	11 50 04.7	
	baz=147								
H01W3	**Cape Leeuwin H**	**74.39**	**231**	T		T	T	11 50 08.9	
	baz=147								
WR8	**Warramunga Arr**	**76.18**	**255**	P		**P**	**P**	**10 27 22.7**	**+1.4**
WR8				IAmb		IAmb	IAmb	10 27 28.0	
	comp=Z,12nm,1.4s								
WRA	**Warramunga Arr**	**76.28**	**255**	P		**P**	**P**	**10 27 23.3**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=140,slow=5.5,SNR=18								
	comp=Z,0.9nm,0.6s								
WRA	**Warramunga Arr**	**76.28**	**255**	P		**P**	**P**	**10 27 23.5**	**+1.7**
WRAB	**Tennant Creek**	**76.28**	**255**	P		**P**	**P**	**10 27 23.8**	**+1.9**
WRAB				IAmb		IAmb	IAmb	10 27 36.5	
	comp=Z,8.0nm,1.3s								
H11S2	**WAKE ISLAND Hy**	**89.95**	**303**	T		T	T	12 08 07.2	
	baz=147,slow=75,SNR=6.0								
H11S3	**WAKE ISLAND Hy**	**89.96**	**303**	T		T	T	12 08 08.1	
	baz=147,slow=75,SNR=5.1								
H11S1	**WAKE ISLAND Hy**	**89.97**	**303**	T		T	T	12 08 04.6	
	baz=147,slow=75,SNR=3.3								
H11N3	**WAKE ISLAND Hy**	**90.90**	**304**	T		T	T	12 09 18.9	
	baz=151								
H11N1	**WAKE ISLAND Hy**	**90.91**	**304**	T		T	T	12 09 17.8	
	baz=151,slow=74								
H11N2	**WAKE ISLAND Hy**	**90.92**	**304**	T		T	T	12 09 18.6	
	baz=151,slow=74								
ELK	**Elko**	**96.33**	**12**	LR		LR	LR	11 02 43.1	
	comp=Z,95nm,18.3s,baz=234,slow=29								
ILAR	**Eielson Array**	**119.98**	**352**	PKP		**PKiKP**		**10 34 23.7**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=186,slow=2.7,SNR=5.4								
SONM	**Songino Array**	**144.14**	**283**	PKP		**PKPdf**		**10 35 07.5**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=146,slow=3.5,SNR=8.7								
SONM	**Songino Array**	**144.14**	**283**	PKPdf		**PKPdf**		**10 35 08.0**	**-0.1**

*IDC **28** 10:19:49.2±0.5,26°.84N×143°.73E,h0km,mb4.1/23, mbtmp4.1/27,ML3.5/4,MS3.7/14,Error ellipse: s-maj=15.7km s-min=12.5km az=71.0*
*NIED **28** 10:19:51.6,27°.20N×143°.73E,h20km,MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10^15^Nm; Mrr=2.18; Mθθ1.04; Mφφ1.13; Mrθ0.24; Mθφ-1.87; Mφr0.68; Fault plane solution: M0 2.71000×10^15^ NP1: φs=295.00000°,δ45.00000°,λ-121.00000°. NP2: φs=155.00000°,δ52.00000°,λ-63.00000°.*
*JMA **28** 10:19:51.6±0.2,27°.2N±1.0×143°.7E±0°.8,h20km,MV4.1/22, NEAR CHICHIJIMA ISLAND*
*NEIC **28** 10:19:51.8±1.6,26°.88N±0°.08×143°.63E±0°.09,h10km±1km, mb4.5/81,Error ellipse: s-maj=13.8km s-min=13.2km az=118.0*
ISC 28 10:19:53.1±2.1,26°.87N±0°.06×143°.62E±0°.07,h23km±14km, n168,σ1$06/148,mb4.4/72,MS3.7/12,1C,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.30**	**280**	*e*P		**Pn**		**10 20 16.2**	**+0.2**
CBIJ				S		**Sb**		**10 20 33.7**	**+0.4**
JCJ	**Chichijima**	**1.30**	**280**	Pn		**Pn**		**10 20 15.3**	**-0.6**
	32nm,0.3s,baz=279,slow=20,SNR=12								
JCJ				Sn		**Sn**		**10 20 30.8**	**-1.9**
	79nm,0.3s,baz=286,slow=22,SNR=9.9								
JCJ	**Chichijima**	**1.30**	**280**			**Pb**		**10 20 16.6**	**-0.3**
JHH2	**Haha-jima-NKT2**	**1.32**	**260**	*e*P		**Pb**		**10 20 17.9**	**+0.7**
JHH2				eS		**Sb**		**10 20 36.6**	**+3.0**
JHJ2	**Mitsune**	**7.04**	**333**	Pn		**Pn**		**10 21 35.8**	**+1.1**
JHJ	**Hachijo jima 2**	**7.06**	**333**	LR		LR		10 24 21.6	
	comp=Z,303nm,19.6s,baz=68,slow=38								
BSO3	**Boso 3**	**8.34**	**342**	*e*P		**Pn**		**10 21 49.0**	**-3.4**
JSG	**Sagara**	**9.07**	**330**	Pn		**Pn**		**10 22 02.7**	**0.0**
JRY	**Ryogami san**	**9.96**	**337**	*e*P		**Pn**		**10 22 12.9**	**-2.0**
JHO	**Hitachi**	**10.05**	**346**	*e*P		**Pn**		**10 22 11.6**	**-4.4**
JAG	**Ashikaga**	**10.16**	**341**	P		**Pn**		**10 22 15.4**	**-2.2**
JGF	**Kuroka**	**10.22**	**330**	Pn		**Pn**		**10 22 17.1**	**-1.3**
MJAR	**Matsushiro Arr**	**10.68**	**336**	Pn		**Pn**		**10 22 22.5**	**-2.3**
	0.3nm,0.3s,baz=151,slow=10.0,SNR=32								
	12nm,0.9s								
MJAR	**Matsushiro Arr**	**10.68**	**336**			**Pn**		**10 22 23.1**	**-1.6**
MAJO	**Matsushiro**	**10.68**	**336**			**Pn**		**10 22 23.4**	**-1.4**
MJB9	**Matsu-Tunnel**	**10.69**	**336**			**Pn**		**10 22 24.1**	**-0.7**
JFK	**Kawauchi**	**10.72**	**348**	*e*S		Sn		10 24 11.5	-13
JMK	**Ichinoseki**	**12.21**	**351**	S		Sn		10 24 46.4	-15
JOW	**Kunigami**	**13.71**	**273**	Pn		**Pn**		**10 23 04.9**	**-1.2**
KSRS	**Korea Array**	**16.95**	**312**	Pn		**P**		**10 23 51.0**	**+0.5**
	0.2nm,0.3s,baz=120,slow=11,SNR=13								
	5.4nm,0.9s								
KSAR	**Wonju Array Be**	**16.97**	**312**	Pn		**Pn**		**10 23 47.7**	**-1.3**
ASAJ	**Asahikawa**	**17.23**	**358**	P		**Pn**		**10 23 51.5**	**-0.6**
	0.3nm,0.3s,baz=184,slow=9.0,SNR=5.3								
ASAJ				LR		LR		10 30 50.0	
	comp=Z,211nm,19.8s,baz=304,slow=38								
	1.3nm,0.4s								
JKA	**Kamikawa-asahi**	**17.23**	**358**	P		**Pn**		**10 23 52.0**	**-0.1**
USRK	**Ussuriysk Ar.**	**19.68**	**334**	P		**Pn**		**10 24 21.8**	**-0.2**
	0.1nm,0.3s,baz=156,slow=11,SNR=7.7								
	2.8nm,0.7s								
YULB	**Yu-li**	**20.50**	**265**	P		**P**		**10 24 29.6**	**-0.1**
YULB				IAmb		IAmb		10 24 57.2	
	comp=Z,15nm,0.8s								
SSLB	**Suanglung**	**20.72**	**266**	P		**P**		**10 24 31.5**	**-0.5**
SSLB				IAmb		IAmb		10 24 38.1	
	comp=Z,22nm,0.8s								
TPUB	**Ta-pu**	**21.12**	**265**	P		**P**		**10 24 35.6**	**-0.8**
NJ2	**Nanjing**	**22.16**	**289**	*e*P		**P**		**10 24 47.8**	**+0.4**
NJ2				pmax		pmax			
	comp=Z,6.0nm,0.5s								
CN2	**Changchun**	**22.39**	**324**	P		**P**		**10 24 47.5**	**-2.4**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
H11S3	**WAKE ISLAND Hy**	**22.83**	**107**	T		T		10 48 09.0	
	baz=295								
H11S1	**WAKE ISLAND Hy**	**22.83**	**107**	T		T		10 48 48.5	
	baz=295								
BNX	**BinXian**	**22.84**	**330**	⇑P		**P**		**10 24 56.8**	**+2.2**
BNX				pmax		pmax			
	comp=Z,9.0nm,1.2s								
H11S2	**WAKE ISLAND Hy**	**22.84**	**107**	T		T		10 48 41.2	
	baz=295								
KNMB	**Chin-men Tao**	**22.86**	**270**	P		**P**		**10 24 54.7**	**-0.3**
KNMB				IAmb		IAmb		10 24 57.0	
	comp=Z,20nm,0.8s								
DAV	**Davao City (W)**	**26.12**	**224**	LR		LR		10 34 14.3	
	comp=Z,124nm,21.9s,baz=342,slow=33								
HEH	**HeiHe**	**26.45**	**336**	*e*P		**P**		**10 25 30.0**	**+1.8**
HEH				pmax		pmax			
	comp=Z,6.0nm,1.4s								
PETK	**Petropavlovsk-**	**28.23**	**18**	P		**P**		**10 25 43.9**	**-0.3**
HILR	**Hailar Array B**	**29.18**	**327**	P		**P**		**10 25 54.0**	**+1.3**
	comp=Z,1.5nm,0.5s,baz=109,slow=7.8,SNR=4.9								
	comp=Z,1.5nm,0.5s								
HHC	**Hu-ho-hao-te**	**29.86**	**306**	*e*P		**P**		**10 25 59.8**	**+0.8**
HHC				pmax		pmax			
	comp=Z,5.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,51nm,5.1s								
ENH	**Enshi**	**30.10**	**285**			**P**		**10 26 00.3**	**-0.9**
ENH				IAmb		IAmb		10 26 03.0	
	comp=Z,4.5nm,0.8s								
XAN	**Xi'an**	**30.65**	**292**	P		**P**		**10 26 07.0**	**+1.1**
XAN				pmax		pmax			
	comp=Z,8.0nm,0.7s								
RABL	**Rabaul**	**31.97**	**164**	P		**P**		**10 26 16.9**	**-0.7**
LUWI	**Luwuk**	**34.26**	**219**	P		**P**		**10 26 35.6**	**-2.0**
SHEM	**Shemya Is, Ala**	**34.40**	**33**	LR		LR		10 39 45.4	
	comp=Z,138nm,19.5s,baz=282,slow=35								
LZDM	**Lanzhou Array**	**35.06**	**295**	P		**P**		**10 26 44.7**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=119,slow=11,SNR=4.6								
	comp=Z,1.1nm,0.3s								
ULN	**Ulaanbaatar**	**35.37**	**316**			**P**		**10 26 46.4**	**-0.7**
SONM	**Songino Array**	**35.77**	**316**	P		**P**		**10 26 52.4**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=113,slow=7.3,SNR=6.1								
SONM				PcP		**PcP**		**10 29 19.2**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=190,slow=2.6,SNR=3.0								
	comp=Z,0.8nm,0.5s								
SONM	**Songino Array**	**35.77**	**316**	P		**P**		**10 26 50.1**	**-0.4**
YAK	**Yakutsk**	**36.37**	**349**	LR		LR		10 45 52.5	
	comp=Z,74nm,19.4s,baz=314,slow=43								
PZH	**PanZhiHua**	**37.30**	**279**	P		**P**		**10 27 04.3**	**+0.5**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.8s								
TLY	**Talaya**	**38.92**	**320**			**P**		**10 27 17.2**	**+0.2**
COEN	**Coen**	**40.59**	**181**	P		**P**		**10 27 30.7**	**-0.5**
MTN	**Manton Dam**	**41.30**	**199**	P		**P**		**10 27 36.9**	**-0.1**
MTN				IAmb		IAmb		10 27 43.2	
	comp=Z,9.2nm,0.9s								
CMAR	**Chiang Mai Arr**	**41.90**	**268**	P		**P**		**10 27 41.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=69,slow=7.5,SNR=5.9								
CMAR				LR		LR		10 46 20.7	
	comp=Z,44nm,18.6s,baz=85,slow=38								
	comp=Z,0.5nm,0.3s								
GOMU	**GeErMu**	**42.25**	**295**	P		**P**		**10 27 43.8**	**-1.4**
GOMU				pmax		pmax			
	comp=Z,8.0nm,1.1s								
BILL	**Bilibino**	**43.39**	**12**	P		**P**		**10 27 55.1**	**+1.6**
CTA	**Charters Tower**	**46.75**	**177**	P		**P**		**10 28 19.6**	**-1.2**
	comp=Z,4.3nm,0.8s,baz=21,slow=8.6,SNR=2.4								
	comp=Z,4.3nm,0.8s								
CTAO	**Charters Tower**	**46.75**	**177**	P		**P**		**10 28 20.7**	**-0.1**
CTAO				IAmb		IAmb		10 28 40.5	
	comp=Z,3.8nm,1.0s								

WB0	**Warramunga Arr**	**47.22**	**192**			**P**		**10 28 24.8**	**+0.4**
WR8	**Warramunga Arr**	**47.38**	**192**	P		**P**		**10 28 25.7**	**0.0**
WRAB	**Tennant Creek**	**47.39**	**192**	P		**P**		**10 28 25.3**	**-0.4**
WRA	**Warramunga Arr**	**47.40**	**192**	P		**P**		**10 28 25.5**	**-0.3**
	comp=Z,11nm,0.9s,baz=11,slow=7.6,SNR=49								
	comp=Z,11nm,0.9s								
WRA	**Warramunga Arr**	**47.40**	**192**	P		**P**		**10 28 25.7**	**-0.2**
LEM	**Lembang**	**48.36**	**231**	P		**P**		**10 28 32.7**	**-0.9**
	comp=Z,23nm,0.5s,baz=79,slow=8.0,SNR=6.4								
TNA	**Tin City**	**49.06**	**24**			**P**		**10 28 38.7**	**+0.6**
TNA				IAmb		IAmb		10 28 40.8	
	comp=Z,3.1nm,0.8s								
ANM	**Nome**	**49.59**	**26**	P		**P**		**10 28 42.6**	**+0.5**
ANM				IAmb		IAmb		10 28 45.0	
	comp=Z,4.2nm,1.0s								
EVN	**Everest**	**50.04**	**285**	P		**P**		**10 28 47.2**	**+0.2**
EVN				IAmb		IAmb		10 28 51.1	
	comp=Z,2.6nm,0.5s								
ZAA0	**Zalesovo Array**	**50.50**	**319**			**P**		**10 28 49.8**	**+0.6**
ZALV	**Zalesovo Beam**	**50.50**	**319**	P		**P**		**10 28 49.7**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=111,slow=7.9,SNR=7.3								
ZALV				PcP		**PcP**		**10 30 07.3**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=104,slow=3.1,SNR=2.0								
	comp=Z,1.6nm,0.7s								
ZALV	**Zalesovo Beam**	**50.50**	**319**			**P**		**10 28 49.8**	**+0.6**
ZALV				PcP		**PcP**		**10 30 07.7**	**+0.6**
ASAR	**Alice Springs**	**51.12**	**191**	P		**P**		**10 28 53.9**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=4.4,slow=5.7,SNR=13								
ASAR				PcP		**PcP**		**10 30 10.5**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=16,slow=6.3,SNR=2.6								
	comp=Z,1.2nm,0.8s								
ASAR	**Alice Springs**	**51.12**	**191**	P		**P**		**10 28 53.8**	**-0.4**
ASAR						**PcP**		**10 30 11.4**	**+1.7**
MKAR	**Makanchi Array**	**51.60**	**310**	P		**P**		**10 28 58.0**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=90,slow=9.1,SNR=19								
MKAR				PcP		**PcP**		**10 30 12.6**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=75,slow=5.1,SNR=3.6								
	comp=Z,1.9nm,0.7s								
MKAR	**Makanchi Array**	**51.60**	**310**	P		**P**		**10 28 58.0**	**+0.3**
MKAR						**PcP**		**10 30 13.1**	**+1.7**
MAKZ	**Makanchi**	**51.82**	**310**			**P**		**10 29 00.5**	**+1.1**
M17K	**Holitna River**	**51.98**	**32**	P		**P**		**10 29 00.9**	**+0.6**
EIDS	**Eidsvold**	**52.44**	**171**	P		**P**		**10 29 04.3**	**+0.3**
EIDS				IAmb		IAmb		10 29 04.6	
	comp=Z,5.5nm,1.1s								
E18K	**Tukpahlearik C**	**52.50**	**24**	IAmb		IAmb		10 29 07.1	
	comp=Z,4.6nm,0.8s								
C19K	**Lookout Ridge**	**53.47**	**22**	IAmb		IAmb		10 29 14.2	
	comp=Z,6.3nm,0.8s								
D19K	**Kuna River**	**53.76**	**23**	IAmb		IAmb		10 29 15.8	
	comp=Z,3.5nm,0.8s								
KDAK	**Kodiak Island**	**53.77**	**37**	LR		LR		10 49 16.6	
	comp=Z,84nm,21.4s,baz=235,slow=33								
KURK	**Kurchatov**	**54.05**	**315**			**P**		**10 29 16.4**	**+0.7**
KURBB	**Kurchatov Arra**	**54.11**	**315**	P		**P**		**10 29 16.4**	**+0.3**
	comp=Z,6.4nm,0.8s,baz=92,slow=7.7,SNR=26								
IMAR	**Indian Mountai**	**54.67**	**26**	P		**P**		**10 29 19.7**	**-0.2**
E22K	**Anaktuvuk Pass**	**55.90**	**24**	IAmb		IAmb		10 29 31.8	
	comp=Z,3.7nm,0.8s								
G23K	**Bananza Creek**	**56.29**	**26**	IAmb		IAmb		10 29 35.7	
	comp=Z,5.2nm,1.1s								
COLD	**Coldfoot**	**56.32**	**25**	IAmb		IAmb		10 29 35.2	
	comp=Z,3.7nm,0.8s								
D23K	**Nanushuk River**	**56.49**	**23**	IAmb		IAmb		10 29 36.3	
	comp=Z,3.9nm,0.8s								
E23K	**Chandalar**	**56.69**	**24**	IAmb		IAmb		10 29 40.2	
	comp=Z,5.3nm,0.9s								
E24K	**Your Creek**	**57.11**	**24**	IAmb		IAmb		10 29 40.7	
	comp=Z,4.5nm,0.7s								
KSH2	**Kashi**	**57.16**	**301**	P		**P**		**10 29 38.3**	**-0.2**
KSH2				pmax		pmax			
	comp=Z,3.0nm,0.6s								
D24K	**Happy Valley**	**57.19**	**23**	IAmb		IAmb		10 29 41.2	
	comp=Z,3.9nm,0.5s								
ILAR	**Eielson Array**	**57.29**	**28**	P		**P**		**10 29 37.0**	**-1.8**
	comp=Z,1.4nm,0.9s,baz=256,slow=6.1,SNR=13								
	comp=Z,1.4nm,0.9s								
ILAR	**Eielson Array**	**57.29**	**28**	P		**P**		**10 29 37.7**	**-1.0**
D25K	**Kavik River**	**58.08**	**23**	IAmb		IAmb		10 29 47.1	
	comp=Z,2.4nm,0.7s								
E25K	**Arctic Village**	**58.20**	**25**	IAmb		IAmb		10 29 48.7	
	comp=Z,5.0nm,0.9s								
STKA	**Stephens Creek**	**58.45**	**182**	P		**P**		**10 29 46.2**	**-1.0**
	comp=Z,3.0nm,0.8s,baz=351,slow=9.2,SNR=4.9								
	comp=Z,3.0nm,0.8s								
STKA	**Stephens Creek**	**58.45**	**182**	P		**P**		**10 29 46.9**	**-0.3**
SCRK	**Sand Creek**	**58.49**	**30**	P		**P**		**10 29 46.5**	**-0.8**
SCRK				IAmb		IAmb		10 29 49.1	
	comp=Z,4.3nm,0.8s								
BMAR	**Burnt Mountain**	**58.50**	**25**	P		**P**		**10 29 48.3**	**+1.0**
F26K	**S

LRM	**Limekiln Ridge**	**80.15**	**44**	P		**P**	**10 32 01.4**	**-0.5**
FCC	**Fort Churchill**	**82.24**	**26**	P		**P**	**10 32 12.4**	**+0.1**
SPUT	**South Promonto**	**82.32**	**48**	P		**P**	**10 32 13.7**	**+0.3**
SPUT				IAmb		IAmb	10 32 14.2	
	comp=Z,2.3nm,0.9s							
RLMT	**Red Lodge**	**82.44**	**43**	P		**P**	**10 32 14.6**	**+0.6**
RLMT				IAmb		IAmb	10 32 17.2	
	comp=Z,2.0nm,0.5s							
DUG	**Dugway, Tooele**	**82.61**	**49**	P		**P**	**10 32 14.8**	**0.0**
DUG				IAmb		IAmb	10 32 17.4	
	comp=Z,2.7nm,0.7s							
PFO	**Pinyon Flats O**	**83.14**	**56**	LR		LR	11 05 32.6	
	comp=Z,40nm,19.3s,baz=282,slow=33							
PDAR	**Pinedale Array**	**83.46**	**45**	P		**P**	**10 32 18.6**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=296,slow=6.3,SNR=6.7							
PDAR				LR		LR	11 01 54.6	
	comp=Z,52nm,21.4s,baz=315,slow=30							
	comp=Z,0.4nm,0.5s							
PDAR	**Pinedale Array**	**83.46**	**45**	P		**P**	**10 32 18.9**	**-0.4**
AKASG	**Malin Array Be**	**83.55**	**324**	P		**P**	**10 32 19.0**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=53,slow=5.3,SNR=5.3							
	comp=Z,0.9nm,0.5s							
HFS	**Hagfors**	**84.13**	**337**	P		**P**	**10 32 21.3**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=310,slow=11,SNR=2.3							
	comp=Z,1.4nm,0.7s							
HMU	**Henry Mountain**	**85.13**	**50**	P		**P**	**10 32 27.7**	**-0.2**
HMU				IAmb		IAmb	10 32 31.3	
	comp=Z,2.7nm,1.0s							
SFJD	**Kangerlussuaq**	**85.80**	**6**	P		**P**	**10 32 31.1**	**+0.7**
SFJD				IAmb		IAmb	10 32 50.3	
	comp=Z,4.9nm,0.9s							
PV23	**Carpenter Ridg**	**86.04**	**49**	P		**P**	**10 32 31.2**	**-1.2**
PV10	**Paradox Valley**	**86.06**	**49**	P		**P**	**10 32 31.9**	**-0.7**
PV19	**Morning Glory**	**86.13**	**49**	P		**P**	**10 32 33.3**	**+0.4**
FRB	**Frobisher Bay**	**86.19**	**14**	LR		LR	11 17 30.6	
	comp=Z,28nm,18.7s,baz=276,slow=40							
RAYN	**Ar Rayn**	**86.41**	**294**	P		**P**	**10 32 35.0**	**+0.7**
RAYN				IAmb		IAmb	10 32 38.0	
	comp=Z,3.2nm,0.8s							
ULM	**Lac du Bonnet**	**86.92**	**34**	LR		LR	11 11 25.4	
	comp=Z,32nm,19.8s,baz=334,slow=36							
BRTR	**Keskin Array B**	**87.09**	**313**	P		**P**	**10 32 36.5**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=67,slow=1.3,SNR=4.0							
	comp=Z,0.7nm,0.8s							
BRTR	**Keskin Array B**	**87.09**	**313**	P		**P**	**10 32 36.6**	**-0.8**
LPIG	**La Paz**	**92.48**	**62**	LR		LR	11 08 14.9	
	comp=Z,45nm,19.3s,baz=239,slow=31							
TXAR	**Lajitas Array**	**94.70**	**54**	P		**P**	**10 33 13.6**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=316,slow=5.2,SNR=4.4							
	comp=Z,0.2nm,0.6s							
TXAR	**Lajitas Array**	**94.70**	**54**	P		**P**	**10 33 12.3**	**-0.8**
SADO	**Sadowa**	**98.72**	**29**	LR		LR	11 22 10.7	
	comp=Z,24nm,18.6s,baz=333,slow=38							
PLCA	**Paso Flores**	**148.63**	**125**	PKPbc		**PKPbc**	**10 39 37.0**	**-1.6**
	comp=Z,1.8nm,1.0s,baz=263,slow=8.1,SNR=4.5							
PLCA	**Paso Flores**	**148.63**	**125**	PKPbc		**PKPbc**	**10 39 38.0**	**-0.5**
PB11	**IPOC Station P**	**148.69**	**84**	PKPbc		**PKPbc**	**10 39 38.8**	**-0.5**
LPAZ	**La Paz**	**148.73**	**77**	PKPbc		**PKPbc**	**10 39 39.6**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=339,slow=5.2,SNR=8.0							
LPAZ	**La Paz**	**148.73**	**77**	PKPbc		**PKPdf**	**10 39 38.0**	**+1.7**

MEX 28 10:25:09.3±0.3, 17°18N×94°14W, h21km±31km, MD3.6, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.72**	**263**	*eP*	Pb	10 25 19.3	-3.9
CMIG				*eS*	Sb	10 25 28.6	-4.1
CARR	**Arriaga**	**0.95**	**167**	*eS*	Sb	10 25 35.6	-3.6
TGIG		**1.05**	**112**	*eP*	Pb	10 25 25.6	-3.2
TGIG				*eS*	Sb	10 25 38.5	-3.6
NEUV	**Arroyo Zacate**	**1.68**	**289**	*eP*	Pn	10 25 34.2	-3.2
NEUV				*eS*	Sn	10 25 52.0	-6.3
HUIG	**Huatulco**	**2.36**	**234**	*eP*	Pn	10 25 44.5	-2.2
HUIG				*eS*	Sn	10 26 08.4	-6.6
TOIG	**Toxpalan**	**2.94**	**289**	*eP*	Pn	10 25 51.7	-3.2
TOIG				*eS*	Sn	10 26 22.5	-7.1

*IDC **28** 10:36:44.3±2.8, 20°.20S×177°.81W, h467km±28km, mb3.2/10, mbtmp4.1/11, Error ellipse: s-maj=46.2km s-min=15.7km az=151.0*
*NEIC **28** 10:36:45.9±1.7, 20°.15S±0°.09×177°.82W±0°.10, h474km±5km, mb4.2/29, Error ellipse: s-maj=14.3km s-min=12.7km az=138.0*

ISC 28 10:36:47.0±0.5, 20°.1S±0°.1×177°.80W±0°.06, h500km, n59, σ1§80/64, mb4.0/25, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.56**	**300**	P	**P**	**10 38 13.1**	**+2.8**
MSVF				S	**S**	**10 39 14.0**	**-4.1**
NIUE	**Niue**	**7.48**	**84**	P	**P**	**10 38 36.2**	**-1.9**
NIUE				S	**S**	**10 40 05.6**	**-3.6**
AFI	**Afiamalu**	**8.40**	**44**	P	**P**	**10 38 45.5**	**-2.2**
	58nm,0.4s,baz=194,slow=2.9,SNR=15						
AFI				S	**S**	**10 40 20.4**	**-6.3**
	30nm,0.3s,baz=149,slow=22,SNR=6.1						
MARNC	**Mare, Loyalty**	**13.33**	**261**	P	**P**	**10 39 39.7**	**0.0**
DZM	**Mont Dzumac**	**14.85**	**259**	P	**P**	**10 39 55.7**	**-0.1**
	2.1nm,0.6s,baz=106,slow=18,SNR=1.2						
EIDS	**Eidsvold**	**29.15**	**254**	P	**P**	**10 42 07.3**	**+0.3**
EIDS				IAmb	IAmb	10 42 28.0	
	comp=Z,9.5nm,1.3s						
CTAO	**Charters Tower**	**33.73**	**264**	P	**P**	**10 42 46.6**	**+0.2**
CTAO				IAmb	IAmb	10 43 03.3	
	comp=Z,18nm,1.3s						
COEN	**Coen**	**37.75**	**273**	P	**P**	**10 43 19.7**	**-0.2**
TAOE	**Nuku Hiva Isla**	**38.03**	**78**	P	**P**	**10 43 22.8**	**+0.6**
STKA	**Stephens Creek**	**38.15**	**244**	P	**P**	**10 43 22.1**	**-0.9**
STKA				IAmb	IAmb	10 43 53.6	
	comp=Z,22nm,1.2s						
BBOO	**Buckleboo**	**42.91**	**243**	P	**P**	**10 44 00.9**	**-0.2**
WR8	**Warramunga Arr**	**44.70**	**262**	P	**P**	**10 44 14.2**	**-1.0**
WR8				IAmb	IAmb	10 44 15.6	
	comp=Z,11nm,1.3s						
AS31	**Alice Springs**	**44.81**	**256**	P	**P**	**10 44 15.7**	**-0.3**
ASAR	**Alice Springs**	**44.81**	**256**	P	**P**	**10 44 15.4**	**-0.6**
	comp=Z,5.6nm,0.7s,baz=96,slow=7.9,SNR=100						
ASAR				PcP	**pP**	**10 45 47.4**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=103,slow=3.7,SNR=6.6						
ASAR				S	**S**	**10 50 11.0**	**-5.6**
	comp=Z,0.4nm,0.6s,baz=95,slow=14,SNR=4.2						
	comp=Z,5.6nm,0.7s						
ASAR	**Alice Springs**	**44.81**	**256**	P	**P**	**10 44 15.1**	**-0.9**
WB0	**Warramunga Arr**	**44.83**	**262**	P	**P**	**10 44 15.4**	**-0.8**
WB0				IAmb	IAmb	10 44 55.0	
	comp=Z,19nm,1.5s						
WRA	**Warramunga Arr**	**44.85**	**262**	P	**P**	**10 44 15.3**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=97,slow=7.1,SNR=96						
WRA				PcP	**pP**	**10 45 47.6**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=93,slow=3.6,SNR=2.0						
	comp=Z,2.4nm,0.6s						
WRA	**Warramunga Arr**	**44.85**	**262**	P	**P**	**10 44 15.5**	**-0.9**
KNRA	**Kununurra**	**50.88**	**266**	P	**P**	**10 45 01.8**	**+0.2**
PSA00	**Pilbara Seismi**	**57.95**	**257**	P	**P**	**10 45 50.8**	**-0.5**
PSA00				IAmb	IAmb	10 45 58.1	
	comp=Z,20nm,1.4s						
MBWA	**Marble Bar**	**58.14**	**257**	P	**P**	**10 45 51.9**	**-0.7**
MBWA				IAmb	IAmb	10 46 34.7	
	comp=Z,14nm,1.1s						
MORW	**Morawa**	**60.17**	**247**	P	**P**	**10 46 05.5**	**-0.7**
MORW				IAmb	IAmb	10 46 28.6	
	comp=Z,18nm,1.4s						
MJAR	**Matsushiro Arr**	**69.97**	**323**	P	**P**	**10 47 08.2**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=101,slow=10,SNR=4.5						
	comp=Z,1.1nm,0.7s						
ADK	**Adak**	**71.64**	**1**	P	**P**	**10 47 18.5**	**+1.3**
TPO	**Tropico Hills**	**78.62**	**46**	P	**P**	**10 47 57.0**	**+0.3**
HKPS	**Hong Kong Po S**	**78.65**	**299**	P	**P**	**10 47 57.8**	**+0.6**
USRK	**Ussuriysk Ar.**	**78.71**	**326**	P	**P**	**10 47 58.3**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=112,slow=4.7,SNR=3.3						
	comp=Z,1.3nm,0.7s						
YBH	**Yreka Blue Hor**	**79.83**	**39**	P	**P**	**10 48 05.7**	**+2.6**
YBH				IAmb	IAmb	10 48 21.0	
	comp=Z,9.0nm,1.4s						
NVAR	**Mina Array Bea**	**80.58**	**43**	P	**P**	**10 48 08.7**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=224,slow=8.3,SNR=3.8						
	comp=Z,0.3nm,0.6s						
K05A	**Summer Lake**	**81.50**	**39**	P	**P**	**10 48 14.4**	**+2.5**
K05A				IAmb	IAmb	10 48 39.5	
	comp=Z,10nm,1.4s						
J05D	**Fort Rock, OR**	**81.64**	**38**	P	**P**	**10 48 13.9**	**+1.4**
G04A	**Mulino**	**82.13**	**36**	P	**P**	**10 48 15.2**	**+0.4**
G04A				IAmb	IAmb	10 48 31.9	
	comp=Z,11nm,0.9s						
GAMB	**Gambell**	**83.70**	**3**	P	**P**	**10 48 24.0**	**+1.9**
RC01	**Rabbit Creek A**	**83.97**	**13**	P	**P**	**10 48 25.2**	**+1.6**
RC01				IAmb	IAmb	10 48 48.4	
	comp=Z,13nm,1.2s						
GO08	**Villa O'Higgin**	**84.83**	**140**	P	**P**	**10 48 29.4**	**+1.0**
SEY	**Seymchan**	**85.99**	**347**	P	**P**	**10 48 34.2**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=189,slow=7.6,SNR=6.8						
	comp=Z,1.1nm,0.6s						
TXAR	**Lajitas Array**	**86.66**	**57**	P	**P**	**10 48 38.8**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=218,slow=7.0,SNR=5.3						
	comp=Z,0.3nm,0.8s						
TXAR	**Lajitas Array**	**86.66**	**57**	P	**P**	**10 48 38.6**	**+1.1**
MENT	**Mentasta**	**86.97**	**15**	P	**P**	**10 48 41.6**	**+3.5**
H21K	**Melozitna Rive**	**87.54**	**10**	P	**P**	**10 48 43.3**	**+2.6**
H21K				IAmb	IAmb	10 48 43.8	
	comp=Z,3.0nm,1.2s						
CCB	**Clear Creek Bu**	**87.55**	**12**	P	**P**	**10 48 41.1**	**+0.4**
CCB				IAmb	IAmb	10 48 41.5	
	comp=Z,4.1nm,1.4s						
IMAR	**Indian Mountai**	**87.69**	**10**	P	**P**	**10 48 43.0**	**+1.6**
ILAR	**Eielson Array**	**87.85**	**13**	P	**P**	**10 48 42.0**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=206,slow=6.7,SNR=1.5						
	comp=Z,0.2nm,0.6s						
H22K	**Ishtalitna Cre**	**88.00**	**11**	P	**P**	**10 48 44.1**	**+1.2**
H22K				IAmb	IAmb	10 49 11.7	
	comp=Z,3.4nm,1.4s						
PDAR	**Pinedale Array**	**88.51**	**43**	P	**P**	**10 48 47.2**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=226,slow=5.0,SNR=2.2						
	comp=Z,0.2nm,0.6s						
E19K	**Redstone River**	**88.58**	**8**	P	**P**	**10 48 47.2**	**+1.7**
CMAR	**Chiang Mai Arr**	**90.15**	**290**	P	**P**	**10 48 55.4**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=122,slow=3.0,SNR=9.4						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**90.15**	**290**	P	**P**	**10 48 56.1**	**+2.1**
BMAR	**Burnt Mountain**	**90.63**	**12**	P	**P**	**10 48 55.6**	**+0.5**
MKAR	**Makanchi Array**	**111.04**	**314**	PKiKP	**PKiKP**	**10 54 22.3**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=113,slow=0.8,SNR=2.6						
BVAR	**Borovoye Array**	**118.87**	**320**	PKP	**PKiKP**	**10 54 37.1**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=113,slow=3.3,SNR=3.0						
AKASG	**Malin Array Be**	**142.72**	**332**	PKhKP	PKPpre	10 55 19.8	
	comp=Z,2.5nm,0.4s,baz=44,slow=4.2,SNR=14						
ARPR	**Arapgir-MALATY**	**143.61**	**309**		**PKPdf**	**10 55 25.3**	**+0.4**
BR131	**Keskin Array S**	**146.69**	**313**	PKPbc	**PKPbc**	**10 55 32.6**	**-0.1**
BRTR	**Keskin Array B**	**146.69**	**313**	PKPbc	**PKPbc**	**10 55 32.7**	**0.0**
	comp=Z,1.1nm,0.5s,baz=123,slow=5.4,SNR=6.2						
BRTR	**Keskin Array B**	**146.69**	**313**		**PKiKP**	**10 55 33.0**	**-1.8**
BUR08	**Bucovina Ar. S**	**146.76**	**331**	PKPbc	**PKiKP**	**10 55 33.6**	**-1.0**
BURAR	**Bucovina Array**	**146.77**	**331**	PKPbc	**PKPab**	**10 55 34.1**	**-1.2**
MMAI	**Mount Meron Ar**	**147.76**	**300**	PKPbc	**PKiKP**	**10 55 36.5**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=33,slow=8.0,SNR=4.7						

*SKHL **28** 10:41:47.9±0.0, 45°.60N×152°.90E, h36km±5km, mb4.5/3*
*IDC **28** 10:41:51.0±3.0, 46°.94N×152°.13E, h130km±26km, mb3.3/6, mbtmp3.6/8, Error ellipse: s-maj=37.5km s-min=24.0km az=118.0*
*JMA **28** 10:41:52.3±0.7, 46°N±5°×152°E±°, h116km, MV3.5/11, KURILE ISLANDS REGION*

ISC 28 10:41:54.0±2.5, 45.6N±0°.2×152.4E±0°.1, h100km, n31, σ1§35/25, mb3.5/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.19**	**264**	*eP*	**Pn**	**10 42 40.9**	**-1.4**
KUR				AMB	AMB	10 42 41.6	
	30nm,0.4s						
KUR				*eS*	**Sn**	**10 43 20.7**	**+1.1**
KUR				A	A	10 43 23.4	
	50nm,0.2s						
KUR				A	A	10 43 23.4	
	60nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.90**	**253**	*eP*	**Pn**	**10 43 05.0**	**-0.3**
YUK				AMB	AMB	10 43 07.3	
	60nm,0.8s						
YUK				*eS*	**Sn**	**10 44 02.8**	**+2.1**
YUK				A	A	10 44 06.1	
	70nm,0.8s						
YUK				A	A	10 44 06.1	
	90nm,0.8s						
GLVR	**Golovnino**	**5.24**	**251**	*eP*	**Pn**	**10 43 09.5**	**-0.4**
GLVR				AMB	AMB	10 43 10.5	
	30nm,0.3s						
GLVR				*eS*	**Sn**	**10 44 11.2**	**+2.2**
NEM2	**Nemuro 2**	**5.25**	**247**	P	**Pn**	**10 43 09.6**	**-0.6**
NEM2				*eS*	**Sn**	**10 44 09.8**	**+0.4**
NMR	**Nemuro--Hokkai**	**5.26**	**247**	*i* P	**Pn**	**10 43 09.6**	**-0.6**
NMR				*eS*	**Sn**	**10 44 10.0**	**+0.5**
JRA	**Rausu**	**5.43**	**254**	P	**Pn**	**10 43 12.0**	**-0.1**
AKK	**Akkeshi**	**6.00**	**247**	*eP*	**Pn**	**10 43 20.5**	**+0.3**
JAK	**Akkeshi**	**6.10**	**247**	*eP*	**Pn**	**10 43 21.4**	**-0.2**
JAK				*eS*	**Sn**	**10 44 30.2**	**+0.2**
JTKR	**Abashiri--Toko**	**6.25**	**258**	P	**Pn**	**10 43 22.7**	**-0.9**
JAR	**Ashorobuto**	**6.58**	**252**	P	**Pn**	**10 43 28.0**	**-0.2**
JAR				S	**Sn**	**10 44 40.1**	**-1.5**
JOB	**Onbets**	**6.71**	**249**	P	**Pn**	**10 43 29.6**	**-0.2**
JOB				S	**Sn**	**10 44 45.6**	**+0.9**
JKK2	**Kamakawa 2**	**7.07**	**259**	P	**Pn**	**10 43 34.1**	**-0.7**
ASAJ	**Asahikawa**	**7.11**	**261**	P	**Pn**	**10 43 34.7**	**-0.6**
	5.6nm,0.8s,baz=105,slow=16,SNR=4.0						
JCH	**Churui**	**7.15**	**248**	P	**Pn**	**10 43 35.3**	**-0.6**
JCH				*eS*	**Sn**	**10 44 54.2**	**-1.2**
JNBK	**Urakawa-nobuka**	**7.70**	**248**	*eP*	**Pn**	**10 43 39.1**	**-4.3**
PETK	**Petropavlovsk-**	**8.25**	**23**	P	Pn	10 43 32.5	-18
	1.4nm,0.9s,baz=218,slow=8.7,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**28.48**	**150**	T	T	11 19 21.9	
	baz=340,slow=76,SNR=105						
H11N1	**WAKE ISLAND Hy**	**28.50**	**150**	T	T	11 19 17.9	
	baz=340,slow=76,SNR=86						
H11N3	**WAKE ISLAND Hy**	**28.50**	**150**	T	T	11 19 18.0	
	baz=340,slow=76,SNR=74						
H11S1	**WAKE ISLAND Hy**	**29.55**	**152**	T	T	11 20 43.5	
	baz=340,slow=76,SNR=53						
H11S3	**WAKE ISLAND Hy**	**29.56**	**152**	T	T	11 20 46.9	
	baz=340,slow=76,SNR=68						
H11S2	**WAKE ISLAND Hy**	**29.57**	**152**	T	T	11 20 48.0	
	baz=340,slow=76,SNR=66						
SONM	**Songino Array**	**31.23**	**291**	P	P	10 47 53.3	-11
	0.2nm,0.6s,baz=90,slow=12,SNR=1.9						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**47.00**	**298**	P	P	10 50 02.2	-13
	0.3nm,0.6s,baz=66,slow=7.3,SNR=2.3						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**64.83**	**335**	P	P	10 52 07.7	-14
	1.1nm,0.6s,baz=28,slow=6.5,SNR=4.5						
	1.1nm,0.6s						
HFS	**Hagfors**	**69.32**	**339**	P	P	10 52 36.2	-14
	1.1nm,0.5s,baz=40,slow=5.8,SNR=5.2						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**70.98**	**198**	P	**P**	**10 53 01.6**	**+0.8**
	0.4nm,1.0s,baz=10,slow=6.6,SNR=4.0						
	0.4nm,1.0s						
AKASG	**Malin Array Be**	**72.19**	**326**	P	P	10 52 53.6	-14
	0.6nm,0.4s,baz=39,slow=7.3,SNR=2.6						
	0.6nm,0.4s						
H03N2	**Juan Fernandez**	**139.25**	**91**	T	T	13 36 38.5	
	baz=308,slow=77,SNR=17						
H03N1	**Juan Fernandez**	**139.27**	**91**	T	T	13 36 39.8	
	baz=308,slow=77,SNR=24						
H03N3	**Juan Fernandez**	**139.27**	**91**	T	T	13 36 39.9	
	baz=308,slow=77,SNR=24						

*IDC **28** 10:53:58.7±0.6, 2°.01N×126°.51E, h0km, mb4.2/14, mbtmp4.2/15, ML3.9/1, MS3.5/11, Error ellipse: s-maj=28.9km s-min=12.5km az=70.0*
*DJA **28** 10:54:04.4±0.2, 2°N±3°×127°E±°, h10km, M4.6/19, mB5.1/6, mb4.8/6, MLv4.5/19, Mw(mB)4.5/6*
*NEIC **28** 10:54:06.7±1.8, 2°.02N±0°.06×126°.76E±0°.05, h54km±6km, mb4.6/66, Error ellipse: s-maj=11.3km s-min=1.7km az=223.0*

ISC 28 10:54:06.8±0.3, 2°.02N±0°.05×126°.76E±0°.06, h63km, n130, σ1§10/129, mb4.5/58, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.38**	**154**		**Pn**	**10 54 29.6**	**-0.3**
TNTI					Sn	**10 54 46.7**	**-0.7**
TNTI	**Ternate**	**1.38**	**154**	P	**Pn**	**10 54 29.5**	**-0.5**
MNI	**Manado**	**2.00**	**254**	P	**Pn**	**10 54 38.0**	**-0.4**
SGSI	**Sangihe**	**2.06**	**323**	P	**Pn**	**10 54 39.0**	**-0.3**
GTOI	**Gorontalo**	**4.00**	**250**	P	**Pn**	**10 55 08.0**	**+2.4**
SANI	**Sanana**	**4.11**	**191**	P	**Pn**	**10 55 07.1**	**-0.2**
LUWI	**Luwuk**	**5.02**	**233**	Pn	**Pn**	**10 55 20.0**	**+0.4**
LUWI	**Luwuk**	**5.02**	**233**	P	**Pn**	**10 55 23.0**	**+3.4**
	206nm,1.0s						
MRSI	**Marisa**	**5.06**	**252**	P	**Pn**	**10 55 22.1**	**+1.9**
	0.5nm1μm140nm,0.7s						
SWI	**Sorong**	**5.33**	**122**	P	**Pn**	**10 55 24.4**	**+0.5**
	0.2nm2μm32nm,0.9s						
SIJI	**Sorong**	**5.34**	**122**	Pn	**Pn**	**10 55 23.6**	**-0.4**
	3.9nm,0.3s,baz=338,slow=11,SNR=9.9						
SIJI				Sn	**Sn**	**10 56 23.8**	**-0.4**
	0.8nm,0.3s,baz=197,slow=22,SNR=1.0						
	9.8nm,0.3s						
SIJI	**Sorong**	**5.34**	**122**	P	**Pn**	**10 55 24.2**	**+0.2**
APSI	**Ampana**	**5.88**	**240**	P	**Pn**	**10 55 34.8**	**+3.3**
TOLI2	**Tolitoli**	**6.05**	**262**		**Pn**	**10 55 34.6**	**+0.8**
MPSI	**Mapaga**	**7.06**	**256**	P	**Pn**	**10 55 49.2**	**+1.6**
	0.2nm31nm,0.8s						
MYLDM	**Lahad Datu**	**8.82**	**291**		**Pn**	**10 56 11.0**	**-0.8**
KAPI	**Kappang**	**9.89**	**225**	Pn	**Pn**	**10 56 26.5**	**+0.1**
KKM	**Kota Kinabalu**	**11.26**	**291**	Pn	**Pn**	**10 56 46.0**	**+0.9**
SBUM	**Sibu**	**14.54**	**272**	Pn	**Pn**	**10 57 29.4**	**+0.1**
JAY	**Jayapura**	**14.65**	**108**	LR	LR	11 03 38.7	
	comp=Z,236nm,19.9s,baz=274,slow=39						
BBJI	**Bungbulang**	**21.27**	**244**	P	**P**	**10 58 47.1**	**-1.2**
TPUB	**Ta-pu**	**21.98**	**345**	P	**P**	**10 58 54.8**	**-0.9**
TPUB				IAmb	IAmb	10 59 17.0	
	comp=Z,25nm,0.9s						
SSLB	**Suanglung**	**22.36**	**346**	P	**P**	**10 58 57.9**	**-2.0**
SSLB				IAmb	IAmb	10 59 13.6	
	comp=Z,23nm,1.1s						
COEN	**Coen**	**22.73**	**135**	P	**P**	**10 59 03.9**	**0.0**
WB0	**Warramunga Arr**	**22.91**	**161**		**P**	**10 59 05.1**	**-0.6**
WB0				IAmb	IAmb	10 59 12.5	
	comp=Z,22nm,1.1s						
WRAB	**Tennant Creek**	**23.05**	**162**	P	**P**	**10 59 06.6**	**-0.5**
WRAB				IAmb	IAmb	10 59 18.1	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**23.06**	**162**	P	**P**	**10 59 06.3**	**-0.9**
	comp=Z,12nm,0.7s,baz=341,slow=11,SNR=38						
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**23.06**	**162**		**P**	**10 59 06.2**	**-0.9**
YHNB	**Yeheng**	**23.11**	**347**	P	**P**	**10 59 07.4**	**-0.3**
YHNB				IAmb	IAmb	10 59 30.6	
	comp=Z,24nm,1.1s						
WR8	**Warramunga Arr**	**23.12**	**161**	P	**P**	**10 59 07.6**	**-0.2**
WR8				IAmb	IAmb	10 59 12.4	
	comp=Z,16nm,0.9s						
PMG	**Port Moresby**	**23.27**	**120**	LR	LR	11 10 42.9	
	comp=Z,140nm,18.1s,baz=180,slow=43						
QIZ	**Qiongzhong**	**23.67**	**317**	P	**P**	**10 59 13.8**	**+0.9**
QIZ				S	**S**	**11 03 26.5**	**+3.2**
QIZ				LR	LR		
	comp=N,170nm,13.9s						
QIZ				LR	LR		
	comp=E,190nm,13.5s						
QIZ				LR	LR		
	comp=Z,160nm,12.4s						
MBWA	**Marble Bar**	**24.04**	**196**	P	**P**	**10 59 15.9**	**-0.3**
MBWA				IAmb	IAmb	10 59 41.4	
	comp=Z,21nm,1.1s						
PSA00	**Pilbara Seismi**	**24.40**	**196**	P	**P**	**10 59 18.8**	**-0.7**
JOW	**Kunigami**	**24.72**	**3**	P	**P**	**10 59 21.9**	**-0.4**
JOW				IAmb	IAmb	10 59 26.4	
	comp=Z,26nm,0.8s						
AS31	**Alice Springs**	**26.46**	**165**	P	**P**	**10 59 38.3**	**+0.1**
ASAR	**Alice Springs**	**26.46**	**165**	P	**P**	**10 59 38.2**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=345,slow=7.3,SNR=13						
ASAR				PcP	**PcP**	**11 03 02.8**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=344,slow=2.3,SNR=4.1						
	comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	**26.46**	**165**	P	**P**	**10 59 39.1**	**+0.9**
ASAR				PcP	**PcP**	**11 03 02.0**	**-0.1**
CTA	**Charters Tower**	**29.12**	**140**	LR	LR	11 13 01.3	
	comp=Z,231nm,20.0s,baz=36,slow=39						
CTAO	**Charters Tower**	**29.12**	**140**	P	**P**	**11 00 01.5**	**-0.5**
CTAO				IAmb	IAmb	11 00 07.3	
	comp=Z,15nm,1.2s						
NJ2	**Nanjing**	**30.79**	**347**	*eP*	**P**	**11 00 17.3**	**+0.7**
NJ2				pmax	pmax	

EVN					IAmb	IAmb	11 02 25.4		
	comp=Z,8.8nm,0.9s								
PALK	**Pallekele**	**46.18**	**278**		LR	LR	11 21 34.1		
	comp=Z,51nm,21.7s,baz=62,slow=36								
HEH	**HeiHe**	**48.06**	**1**	*eP*		**P**	**11 02 39.8**	**-0.1**	
HEH				pmax		pmax			
	comp=Z,6.0nm,1.0s								
ULN	**Ulaanbaatar**	**48.75**	**342**	P		**P**	**11 02 44.9**	**-0.5**	
ULN				IAmb		IAmb	11 02 58.0		
	comp=Z,9.0nm,1.3s								
SONM	**Songino Array**	**48.92**	**342**	P		**P**	**11 02 46.1**	**-0.6**	
	comp=Z,1.5nm,0.7s,baz=155,slow=8.0,SNR=14								
SONM				PcP		**PcP**	**11 04 11.4**	**+1.1**	
	comp=Z,0.6nm,0.8s,baz=143,slow=5.2,SNR=1.5								
SONM				LR		LR	11 24 39.5		
	comp=Z,70nm,21.6s,baz=158,slow=38								
	comp=Z,1.5nm,0.7s								
SONM	**Songino Array**	**48.92**	**342**	P		**P**	**11 02 46.5**	**-0.3**	
TLY	**Talaya**	**53.16**	**342**	LR		LR	11 27 43.8		
	comp=Z,30nm,21.4s,baz=124,slow=38								
TLY	**Talaya**	**53.16**	**342**	P		**P**	**11 03 18.2**	**-0.1**	
PEA0B	**Petropavlovsk-**	**56.99**	**22**	P		**P**	**11 03 47.3**	**+1.3**	
PETK	**Petropavlovsk-**	**56.99**	**22**	P		**P**	**11 03 46.2**	**+0.3**	
	comp=Z,1.8nm,0.7s,baz=176,slow=3.7,SNR=4.6								
	comp=Z,1.8nm,0.7s								
PETK	**Petropavlovsk-**	**56.99**	**22**	P		**P**	**11 03 47.0**	**+1.0**	
MKAR	**Makanchi Array**	**58.98**	**326**	P		**P**	**11 03 59.2**	**-0.8**	
	comp=Z,2.4nm,0.7s,baz=122,slow=8.4,SNR=31								
	comp=Z,2.4nm,0.7s								
NIL	**Nilore**	**59.00**	**309**	P		**P**	**11 03 59.4**	**-1.0**	
NIL				IAmb		IAmb	11 04 19.3		
	comp=Z,8.0nm,1.1s								
MAKZ	**Makanchi**	**59.16**	**326**			**P**	**11 04 00.4**	**-0.9**	
MAKZ				IAmb		IAmb	11 04 01.8		
	comp=Z,6.3nm,1.4s								
KSH2	**Kashi**	**59.40**	**315**	P		**P**	**11 04 03.5**	**+0.3**	
KSH2				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KDJ	**Kajisay**	**59.65**	**319**	P		**P**	**11 04 05.2**	**+0.3**	
KDJ				IAmb		IAmb	11 04 05.9		
	comp=Z,4.9nm,1.0s								
LBZ	**Lake Benmore**	**60.26**	**145**	P		**P**	**11 04 09.8**	**+1.0**	
RTZ	**Ruatahuna**	**61.37**	**137**	P		**P**	**11 04 16.9**	**+0.4**	
AAK	**Ala-Archa**	**61.65**	**318**	LR		LR	11 33 59.5		
	comp=Z,31nm,20.5s,baz=76,slow=39								
ZALV	**Zalesovo Beam**	**62.12**	**333**	P		**P**	**11 04 19.4**	**-1.8**	
	comp=Z,0.6nm,0.3s,baz=132,slow=8.9,SNR=4.7								
	comp=Z,0.6nm,0.3s								
ZALV	**Zalesovo Beam**	**62.12**	**333**	P		**P**	**11 04 20.1**	**-1.1**	
KBL	**Kabul**	**62.59**	**308**	P		**P**	**11 04 24.1**	**-0.9**	
KBL				IAmb		IAmb	11 04 25.4		
	comp=Z,5.8nm,0.7s								
GAR	**Garm**	**63.11**	**313**	P		**P**	**11 04 27.5**	**-0.7**	
KURBB	**Kurchatov Arra**	**63.19**	**328**	P		**P**	**11 04 27.5**	**-0.9**	
	comp=Z,4.6nm,0.6s,baz=130,slow=5.8,SNR=48								
KURK	**Kurchatov**	**63.20**	**328**	P		**P**	**11 04 28.2**	**-0.2**	
CHGR	**Chuyangaron**	**63.83**	**313**	P		**P**	**11 04 31.5**	**-1.5**	
CHGR				IAmb		IAmb	11 04 33.8		
	comp=Z,14nm,1.2s								
KK31	**Karatay Array**	**64.50**	**318**	P		**P**	**11 04 36.6**	**-0.6**	
KKAR	**Karatay Array**	**64.50**	**318**	P		**P**	**11 04 36.6**	**-0.6**	
ROCAM	**Rodrigues Isla**	**65.81**	**247**	P		**P**	**11 04 43.9**	**-2.1**	
BVAR	**Borovoye Array**	**68.77**	**327**	P		**P**	**11 05 03.5**	**-0.7**	
	comp=Z,3.4nm,0.8s,baz=119,slow=8.4,SNR=8.3								
	comp=Z,3.4nm,0.8s								
ARTI	**Arti**	**76.47**	**328**	P		**P**	**11 05 49.4**	**-0.4**	
CNBA	**Chernabura Isl**	**78.97**	**34**	P		**P**	**11 06 04.6**	**+0.9**	
O14K	**Tigyukauivet M**	**79.11**	**30**	P		**P**	**11 06 05.7**	**+1.3**	
M14K	**Bethel**	**79.16**	**28**	P		**P**	**11 06 06.8**	**+2.2**	
M14K				IAmb		IAmb	11 06 19.5		
	comp=Z,5.1nm,0.9s								
O15K	**Ungalikthiuk R**	**79.81**	**30**	P		**P**	**11 06 09.4**	**+1.2**	
O15K				IAmb		IAmb	11 06 25.1		
	comp=Z,7.3nm,1.1s								
RAYN	**Ar Rayn**	**81.18**	**293**	P		**P**	**11 06 15.6**	**-0.8**	
VOI	**Vohitsoka**	**81.45**	**248**	P		**P**	**11 06 18.5**	**+0.5**	
VOI				IAmb		IAmb	11 06 55.1		
	comp=Z,15nm,1.3s								
C18K	**Utukok River**	**81.64**	**21**	P		**P**	**11 06 19.8**	**+1.9**	
VNDA	**Vanda**	**81.73**	**173**	P		**P**	**11 06 18.8**	**+0.6**	
	comp=Z,6.4nm,1.0s,baz=270,slow=5.1,SNR=3.9								
	comp=Z,6.4nm,1.0s								
VNDA	**Vanda**	**81.73**	**173**	P		**P**	**11 06 19.3**	**+1.1**	
L18K	**Granite Mounta**	**81.96**	**27**	P		**P**	**11 06 21.3**	**+1.7**	
L18K				IAmb		IAmb	11 06 31.1		
	comp=Z,6.0nm,1.2s								
C19K	**Lookout Ridge**	**82.32**	**20**	P		**P**	**11 06 24.0**	**+2.5**	
C19K				IAmb		IAmb	11 06 28.8		
	comp=Z,4.2nm,0.8s								
G19K	**Purcell Mounta**	**82.57**	**23**			**P**	**11 06 24.8**	**+2.0**	
G19K				IAmb		IAmb	11 06 25.7		
	comp=Z,6.7nm,1.1s								
KDAK	**Kodiak Island**	**83.31**	**32**	P		**P**	**11 06 27.6**	**+0.9**	
GEVA	**Gevas**	**83.81**	**308**	P		**P**	**11 06 31.0**	**+1.0**	
IMAR	**Indian Mountai**	**83.88**	**24**	P		**P**	**11 06 31.4**	**+1.9**	
E22K	**Anaktuvuk Pass**	**84.94**	**22**	P		**P**	**11 06 35.0**	**+0.2**	
E22K				IAmb		IAmb	11 06 37.8		
	comp=Z,5.8nm,1.1s								
ILAR	**Eielson Array**	**86.62**	**25**	P		**P**	**11 06 43.2**	**0.0**	
	comp=Z,0.2nm,0.6s,baz=265,slow=5.8,SNR=4.7								
	comp=Z,0.2nm,0.6s								
BMAR	**Burnt Mountain**	**87.63**	**23**	P		**P**	**11 06 50.1**	**+1.9**	
BCAR	**Beaver Creek A**	**88.88**	**27**	P		**P**	**11 06 55.0**	**+0.9**	
BURAR	**Bucovina Array**	**96.29**	**318**	P		**P**	**11 07 29.4**	**+0.7**	
BURAR				IAmb		IAmb	11 07 38.3		
	comp=Z,1.2nm,0.8s								
BUR08	**Bucovina Ar. S**	**96.30**	**318**	P		**P**	**11 07 29.9**	**+1.1**	
TXAR	**Lajitas Array**	**122.61**	**53**	PKP		**PKiKP**	**11 12 57.3**	**+0.9**	
	comp=Z,0.1nm,0.5s,baz=334,slow=2.0,SNR=3.5								
CO02	**Combarbal**	**146.47**	**152**	PKPbc		**PKPab**	**11 13 42.2**	**-0.5**	
LCO	**Las Campanas**	**148.42**	**150**	PKPab		**PKiKP**	**11 13 49.2**	**+0.2**	
AC05	**El Transito**	**148.77**	**150**	PKPab		**PKiKP**	**11 13 50.4**	**+0.9**	

*IDC **28** 11:07:08.5±0.7,32.°89N×76.°19E,h0km,mb4.0/21, mbtmp4.0/23,ML3.6/3,MS3.2/1,Error ellipse: s-maj=19.0km s-min=12.8km az=35.0*
*BJI **28** 11:07:11.3,32.°97N×76.°47E,h8km,mb4.1/17,ML4.0/3, Ms3.5/2,Ms7 3.3/4*
*NEIC **28** 11:07:11.0±1.9,32.°97N±0.°08×76.°31E±0.°08,h10km±1km, mb4.2/16,Error ellipse: s-maj=12.9km s-min=10.7km az=196.0*
*NDI **28** 11:07:13.2±1.2,33.°01N×76.°27E,h8km±3km,ML4.1, MW4.1*
*NNC **28** 11:07:20.1±5.1,33.°37N×76.°03E,h58km±44km,mb3.9, Error ellipse: s-maj=39.8km s-min=31.7km az=132.0*

ISC 28 11:07:13.0±0.9,33.°01N±0.°03×76.°25E±0.°04,h25km±6km, n90,σ1s68/108,mb4.0/25,10C-3D,Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TSSA	**Tissa**	**0.19**	**205**	*eP*		**Pb**	**11 07 17.7**	**-1.1**
TSSA				IAML			11 07 18.6	
	comp=E,7μm,0.1s							
TSSA				IAML			11 07 18.7	
	comp=N,2μm,0.1s							
TSSA				*eS*		**Sb**	**11 07 21.6**	**-1.1**
DHRM	**DHARAMSHALA**	**0.76**	**177**	*eP*		**Pb**	**11 07 28.1**	**+0.3**
DHRM				*eS*		**Sb**	**11 07 38.6**	**+0.8**
DHRM				IAML			11 07 40.4	
	comp=E,6μm,0.6s							
DHRM				IAML			11 07 41.7	
	comp=N,3μm,0.3s							
JMU	**Jammu**	**1.21**	**259**	*eP*		**Pb**	**11 07 37.3**	**+2.0**
JMU				*eS*		**Sb**	**11 07 53.9**	**+3.3**
JMU				IAML			11 07 56.7	
	comp=E,4μm,0.6s							
JMU				IAML			11 07 57.1	
	comp=N,5μm,0.8s							
ALCI	**Alchi Leh**	**1.43**	**33**	*eP*		**Pb**	**11 07 39.9**	**+0.7**
ALCI				*eS*		**Sb**	**11 07 58.9**	**+1.7**
ALCI				IAML			11 08 06.2	
	comp=E,5μm,0.5s							
ALCI				IAML			11 08 06.2	
	comp=N,3μm,0.3s							
BHK	**Bhakra**	**1.62**	**176**	*eP*		**Pb**	**11 07 43.3**	**+1.2**
BHK				*eS*		**Sb**	**11 08 06.5**	**+4.4**
BHK				IAML			11 08 06.5	
	comp=N,5μm,0.1s							
BHK				IAML			11 08 07.5	
	comp=E,4μm,0.4s							
SMLA	**Simla**	**2.03**	**157**	*eP*		**Pb**	**11 07 48.2**	**-1.1**
SMLA				*eS*		**Sb**	**11 08 14.2**	**+0.1**
SMLA				IAML			11 08 17.8	
	comp=E,4μm,0.4s							
SMLA				IAML			11 08 18.2	
	comp=N,3μm,0.3s							
KLP	**Kalpa**	**2.25**	**130**	*eP*		**Pn**	**11 07 50.4**	**+1.5**
KLP				*eS*		**Sn**	**11 08 18.6**	**+2.6**
KLP				IAML			11 08 24.5	
	comp=E,3μm,0.7s							
KLP				IAML			11 08 25.5	
	comp=N,4μm,0.8s							
HNLY	**HANLEY**	**2.31**	**95**	*eP*		**Pn**	**11 07 51.9**	**+2.0**
HNLY				*eS*		**Sn**	**11 08 20.3**	**+2.6**
HNLY				IAML			11 08 30.6	
	comp=N,2μm,0.4s							
HNLY				IAML			11 08 30.9	
	comp=E,2μm,0.3s							
NIL	**Nilore**	**2.59**	**285**			**Pn**	**11 07 55.9**	**+2.6**
PTH	**Pithoragarh**	**4.81**	**134**	*eP*		**Pn**	**11 08 25.9**	**+1.9**
PTH				*eS*		**Sn**	**11 09 18.5**	**-0.5**
PTH				IAML			11 09 20.9	
	comp=N,853nm,0.2s							
PTH				IAML			11 09 25.3	
	comp=E,896nm,0.2s							
KUDL	**Kundal**	**4.86**	**177**	*eP*		**Pn**	**11 08 25.4**	**+0.9**
KUDL				*eS*		**Sn**	**11 09 19.6**	**-0.3**
KUDL				IAML			11 09 21.6	
	comp=N,819nm,0.2s							
KUDL				IAML			11 09 21.7	
	comp=E,725nm,0.1s							
LGTI	**Lohaghat**	**4.88**	**137**	*eP*		**Pn**	**11 08 27.1**	**+2.2**
LGTI				*eS*		**Sn**	**11 09 20.4**	**-0.3**
LGTI				IAML			11 09 24.5	
	comp=N,695nm,0.3s							
LGTI				IAML			11 09 25.2	
	comp=E,736nm,0.0s							
KSH2	**Kashi**	**6.14**	**355**	Pn		Pn	11 08 47.5	+5.2
KSH2				Sn		**Sn**	**11 09 57.3**	**+5.4**
KSH2				smax		smax		
	comp=E,49nm,0.6s							
KSH2				smax		smax		
	comp=E,180nm,0.8s							
KBL	**Kabul**	**6.19**	**286**			**Pn**	**11 08 43.3**	**+0.4**
DRK	**Karamyk**	**7.39**	**332**			**Pn**	**11 09 00.6**	**+1.1**
DRK				Sn		**Sn**	**11 10 23.3**	**+0.7**
GAR	**Garm**	**7.67**	**323**			**Pn**	**11 09 03.0**	**-0.1**
SHAA	**Shahritus**	**8.04**	**307**			**Pn**	**11 09 08.0**	**-0.3**
CHGR	**Chuyangaron**	**8.05**	**316**			**Pn**	**11 09 09.2**	**+0.8**
BTK	**Batken**	**8.28**	**330**			**Pn**	**11 09 12.6**	**+1.1**
NRN	**Naryn**	**8.41**	**359**			**Pn**	**11 09 15.4**	**+1.9**
WUS	**Wushi**	**8.51**	**15**			**Pn**	**11 09 15.8**	**+1.0**
ARSB	**Arslanbob**	**8.70**	**344**			**Pn**	**11 09 18.0**	**+0.7**
TARG	**Taragay, Kyrgy**	**8.79**	**8**			**Pn**	**11 09 20.5**	**+1.7**
KDJ	**Kajisay**	**9.13**	**4**			**Pn**	**11 09 25.0**	**+1.7**
BOOM	**Boomskoye usch**	**9.46**	**359**			**Pn**	**11 09 29.4**	**+1.5**
AAK	**Ala-Archa**	**9.71**	**352**	Pn		**Pn**	**11 09 32.5**	**+1.4**
	comp=E,0.9nm,0.3s,baz=164,slow=7.6,SNR=17							
AAK				Sn		**Sn**	**11 11 17.9**	**-1.6**
	comp=E,0.4nm,0.3s,baz=182,slow=21,SNR=1.8							
	comp=E,6.1nm,0.7s							
AAK	**Ala-Archa**	**9.71**	**352**			**Pn**	**11 09 32.1**	**+0.9**
AAK	**Ala-Archa**	**9.71**	**352**	⇑Pn		**Pn**	**11 09 33.8**	**+2.6**
	comp=E,2.3nm,0.6s							
AAK				⇑Sn		**Sn**	**11 11 11.8**	**-7.6**
	comp=E,7.6nm,0.9s							
EVN	**Everest**	**10.41**	**116**			**Pn**	**11 09 40.7**	**-0.7**
PDGK	**Podgornoye**	**10.61**	**13**	⇑Pn		**Pn**	**11 09 45.5**	**+2.0**
	comp=E,5.1nm,0.6s							
PDGK				⇑Sn		**Sn**	**11 11 40.4**	**-1.1**
	comp=E,14nm,0.8s							
KK31	**Karatay Array**	**11.04**	**338**			**Pn**	**11 09 49.1**	**-0.1**
KK31	**Karatay Array**	**11.04**	**338**	⇓Pn		**Pn**	**11 09 48.4**	**-0.9**
	comp=E,2.0nm,0.3s,baz=140,slow=11,SNR=51							
KK31				⇑Sn		**Sn**	**11 11 51.5**	**-0.4**
	comp=E,23nm,0.6s,baz=157,slow=22,SNR=19							
KKAR	**Karatay Array**	**11.04**	**338**			**Pn**	**11 09 48.9**	**-0.4**
WMQ	**Urumqi**	**14.02**	**36**	*eP*		**Pn**	**11 10 32.8**	**+2.8**
MAKZ	**Makanchi**	**14.46**	**16**			**Pn**	**11 10 35.2**	**-0.8**
MAKZ	**Makanchi**	**14.46**	**16**	⇑Pn		**Pn**	**11 10 36.2**	**+0.3**
	comp=E,3.2nm,0.5s							
MAKZ				⇑Sn		**Sn**	**11 13 16.2**	**+0.8**
	comp=E,5.6nm,1.3s							
MK31	**Makanchi Array**	**14.52**	**17**	⇑Pn		**Pn**	**11 10 37.7**	**+1.0**
	comp=E,1.9nm,0.6s,baz=195,slow=12,SNR=26							
MK31				⇓Sn		**Sn**	**11 13 17.0**	**+0.2**
	comp=E,3.5nm,0.7s,baz=197,slow=22,SNR=14							
MKAR	**Makanchi Array**	**14.52**	**17**	Pn		**Pn**	**11 10 36.0**	**-0.8**
	comp=E,0.5nm,0.3s,baz=203,slow=13,SNR=19							
MKAR				Sn		**Sn**	**11 13 10.6**	**-6.3**
	comp=E,0.5nm,0.3s,baz=192,slow=21,SNR=11							
	comp=E,0.8nm,0.4s							
MKAR	**Makanchi Array**	**14.52**	**17**	Pn		**Pn**	**11 10 37.0**	**+0.2**
KURBB	**Kurchatov Arra**	**17.68**	**5**	Pn		**Pn**	**11 11 15.1**	**-2.2**
	comp=E,0.1nm,0.3s,baz=189,slow=12,SNR=11							
KURK	**Kurchatov**	**17.78**	**5**	P		**Pn**	**11 11 17.1**	**-1.5**
GTA2	**Gaotai**	**20.00**	**64**	P		**Pn**	**11 11 46.0**	**+0.3**
GTA2				pP		pP	11 11 51.8	-0.2
GTA2				pmax		pmax		
	comp=E,4.0nm,0.6s							
AB31	**Akbulak array**	**20.28**	**328**	P		**P**	**11 11 47.0**	**+0.3**
AB31				IAmb		IAmb	11 11 52.7	
	comp=E,6.5nm,0.6s							
AB31	**Akbulak array**	**20.28**	**328**	⇑P		**P**	**11 11 46.4**	**-0.3**
	comp=E,3.3nm,0.5s,baz=132,slow=11,SNR=68							
ABKAR	**Akbulak Array**	**20.28**	**328**	P		**P**	**11 11 46.9**	**+0.3**
BVA0	**Borovoye Array**	**20.44**	**350**	⇓P		**P**	**11 11 48.3**	**0.0**
	comp=Z,2.4nm,0.7s							
BVAR	**Borovoye Array**	**20.44**	**350**	P		**P**	**11 11 48.3**	**-0.1**
	comp=Z,4.9nm,0.6s,baz=161,slow=9.6,SNR=29							
	comp=Z,4.9nm,0.6s							
BORK	**Borovoye**	**20.47**	**350**	P		**P**	**11 11 49.4**	**+0.7**
BORK				IAmb		IAmb	11 11 49.9	
	comp=Z,8.2nm,0.6s							
ZAA0	**Zalesovo Array**	**21.80**	**14**			**P**	**11 12 01.7**	**-1.3**
ZALV	**Zalesovo Beam**	**21.80**	**14**	P		**P**	**11 12 01.5**	**-1.5**
	comp=Z,3.3nm,0.5s,baz=205,slow=11,SNR=17							
	comp=Z,3.3nm,0.5s							
ZALV	**Zalesovo Beam**	**21.80**	**14**			**P**	**11 12 02.3**	**-0.6**
AKTO	**Aktyubinsk**	**21.99**	**328**	P		**P**	**11 12 05.6**	**+0.5**
	comp=Z,10nm,0.5s,baz=119,slow=8.9,SNR=28							
AKTO				LR		LR	11 21 32.8	
	comp=Z,54nm,18.4s,baz=54,slow=39							
	comp=Z,10nm,0.5s							
AKTO	**Aktyubinsk**	**21.99**	**328**	⇑P		**P**	**11 12 05.0**	**-0.1**
	comp=Z,5.3nm,0.6s							
LZDM	**Lanzhou Array**	**22.79**	**75**	P		**P**	**11 12 13.7**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=297,slow=9.8,SNR=4.3							
	comp=Z,1.4nm,0.3s							
PZH	**PanZhiHua**	**23.03**	**100**	P		**P**	**11 12 17.3**	**+0.8**
CHTO	**Chiang Mai**	**24.76**	**119**	P		**P**	**11 12 31.1**	**-1.6**
CHTO				IAmb		IAmb	11 12 35.0	
	comp=Z,3.6nm,0.7s							
CM31	**Chiang Mai Arr**	**24.98**	**120**	P		**P**	**11 12 33.7**	**-1.1**
CM31				IAmb		IAmb	11 12 50.0	
	comp=Z,3.7nm,0.7s							
CMAR	**Chiang Mai Arr**	**24.99**	**120**	P		**P**	**11 12 34.5**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=298,slow=9.8,SNR=14							
	comp=Z,1.6nm,0.5s							
CMAR	**Chiang Mai Arr**	**24.99**	**120**	P		**P**	**11 12 33.9**	**-0.9**
ARTI	**Arti**	**26.44**	**337**	P		**P**	**11 12 48.0**	**+0.4**
ARTI				IAmb		IAmb	11 12 48.7	
	comp=Z,5.3nm,0.7s							
SONM	**Songino Array**	**27.10**	**48**	P		**P**	**11 12 55.2**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=246,slow=9.5,SNR=13							
	comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**27.10**	**48**	P		**P**	**11 12 55.8**	**+1.9**
HHC	**Hu-ho-hao-te**	**29.14**	**64**	*eP*		**P**	**11 13 12.0**	**-0.1**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.5s							
BRTR	**Keskin Array B**	**34.70**	**294**	P		**P**	**11 14 01.3**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=101,slow=9.1,SNR=4.5							
	comp=Z,1.1nm,0.9s							
BRTR	**Keskin Array B**	**34.70**	**294**	P		**P**	**11 13 60.0**	**-1.0**
AKASG	**Malin Array Be**	**38.49**	**312**	P		**P**	**11 14 31.9**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=82,slow=7.1,SNR=6.5							
	comp=Z,1.8nm,0.6s							
AKBB	**Malin Array Si**	**38.49**	**312**	P		**P**	**11 14 32.3**	**-0.6**
KIEV	**Kiev**	**38.50**	**312**	P		**P**	**11 14 32.1**	**-0.8**
KIEV				IAmb		IAmb	11 14 46.0	
	comp=Z,11nm,1.4s							
FINES	**FINESS Array B**	**42.77**	**327**	P		**P**	**11 15 08.5**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=113,slow=8.9,SNR=13							
	comp=Z,2.2nm,0.5s							
FINES	**FINESS Array B**	**42.77**	**327**	P		**P**	**11 15 08.1**	**0.0**
ARCES	**ARCESS Array B**	**46.00**	**338**	P		**P**	**11 15 34.5**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=118,slow=8.5,SNR=7.9							
	comp=Z,1.2nm,0.4s							
ARCES	**ARCESS Array B**	**46.00**	**338**	P		**P**	**11 15 34.6**	**+0.7**
TIXI	**Tiksi**	**47.48**	**20**	P		**P**	**11 15 45.7**	**+0.4**
HFS	**Hagfors**	**48.45**	**324**	P		**P**	**11 15 52.9**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=103,slow=6.7,SNR=7.8							
	comp=Z,2.9nm,0.8s							
GERES	**GERESS Array B**	**48.47**	**308**	P		**P**	**11 15 53.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=55,slow=12,SNR=1.6							
	comp=Z,0.3nm,0.5s							
NB201	**NORSAR Array S**	**49.70**	**325**	P		**P**	**11 16 02.2**	**-0.4**
NB2	**NORSAR Subarra**	**49.74**	**325**	P		**P**	**11 16 02.8**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=94,slow=7.9							
NOA	**NORSAR Array B**	**49.74**	**325**	P		**P**	**11 16 02.9**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=94,slow=7.5,SNR=5.5							
	comp=Z,1.2nm,0.6s							
MJAR	**Matsushiro Arr**	**50.24**	**68**	P		**P**	**11 16 06.7**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=287,slow=8.8,SNR=6.4							
	comp=Z,2.1nm,0.7s							
MJAR	**Matsushiro Arr**	**50.24**	**68**	P		**P**	**11 16 06.3**	**-0.9**
MJAR				IAmb		IAmb	11 16 09.5	
	comp=Z,2.6nm,1.1s							
SPITS	**Spitsbergen Ar**	**51.86**	**347**	P		**P**	**11 16 19.9**	**+1.2**
	comp=Z,8.8nm,1.0s,baz=108,slow=8.1,SNR=6.7							
	comp=Z,8.8nm,1.0s							
ESDC	**Sonseca Array**	**62.93**	**301**	P		**P**	**11 17 36.9**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=78,slow=6.4,SNR=4.7							
	comp=Z,0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**70.09**	**273**	P		**P**	**11 18 21.2**	**-2.2**
	comp=Z,1.1nm,0.5s,baz=57,slow=3.5,SNR=8.9							
	comp=Z,1.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**70.09**	**273**	P		**P**	**11 18 21.5**	**-1.9**
TORD				IAmb		IAmb	11 18 22.2	
	comp=Z,1.0nm,0.7s							
WRA	**Warramunga Arr**	**76.47**	**125**	P		**P**	**11 19 00.2**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=327,slow=5.5,SNR=15							
	comp=Z,0.5nm,0.6s							
WRA	**Warramunga Arr**	**76.47**	**125**	IAmb		IAmb	11 19 02.5	
	comp=Z,0.3nm,1.2s							
ILAR	**Eielson Array**	**76.87**	**18**	P		**P**	**11 19 02.7**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=314,slow=5.2,SNR=9.1							
	comp=Z,0.6nm,0.8s							
ASAR	**Alice Springs**	**78.71**	**128**	P		**P**	**11 19 12.8**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=328,slow=5.1,SNR=5.4							
	comp=Z,0.2nm,0.5s							
YKA	**Yellowknife Ar**	**84.43**	**5**	P		**P**	**11 19 42.9**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=340,slow=5.9,SNR=4.1							
	comp=Z,0.2nm,0.6s							
PLCA	**Paso Flores**	**152.47**	**244**	PKPbc		**PKPbc**	**11 27 06.8**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=104,slow=4.2,SNR=1.1							

*KRNET **28** 11:21:10.4±0.1,43.°84N×69.°28E,mb3.1*
*SOME **28** 11:21:12.2,43.°65N×69.°73E*
*NNC **28** 11:21:13.1±2.3,43.°58N×69.°72E,h0km,mb3.6,mpv3.0, Error ellipse: s-maj=12.8km s-min=7.6km az=142.0, Suspected Mining explosion.*

ISC 28 11:21:10.7±2.4,43.°73N±0.°10×69.°88E±0.°09,h0km,n10, σ0s83/16,9C-1D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRLS	**Boroldaу**	**0.70**	**183**	P		**Pn**	**11 21 27.6**	**-0.4**
	1.4nm,0.2s							
BRLS				S		**Sn**	**11 21 39.5**	**0.0**
	29nm,0.4s							
KK31	**Karatay Array**	**0.78**	**144**	⇑P		**Pb**	**11 21 27.2**	**0.0**
	1.2nm,0.3s,baz=316,slow=14,SNR=96							
KK31				⇓S		**Sb**	**11 21 38.0**	**-0.4**
	34nm,0.6s,baz=304,slow=30,SNR=57							
IUG	**Iuzhnay**	**1.59**	**176**	P		**Pg**	**11 21 41.3**	**+0.1**
	29nm,0.4s

LOPP1 IAML 11 40 14.8
comp=Z,27nm,1.0s

*MDD **28** 11:41:29.3±0.5, 33°.63N×5°.02W, h1km±4km, Mb3.8/14, M_mb3.0/16, Error ellipse: s-maj=5.5km s-min=2.5km az=137.0*
*CNRM **28** 11:41:29.5, 33°.50N×4°.91W, h9km, ML3.2*
*SFS **28** 11:41:29.5, 33°.64N×5°.01W, h0km, ML3.7/13, ML3.5/13, MLv3.4/13*
*IGIL **28** 11:41:30.2, 33°.66N×5°.05W, h2km*
*INMG **28** 11:41:30.0±1.9, 33°.62N×5°.04W, h10km±12km, ML2.4, Error ellipse: s-maj=11.1km s-min=5.4km az=168.0, #DIST_RANGE: REGIONAL #IPMA_REGION: S Fez (Marr)*

ISC 28 11:41:28.7±0.8, **33°.59N**±0°.02×**4°.97W**±0°.03, **h13**km±5km, **n67**, σ1§**91**/122, **11C**, **Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LCRM	**LCR**	**0.13**	**45**	P		**Pg**	**11 41 32.4**	**+0.1**
LCRM				S		**Sg**	**11 41 34.6**	**-0.2**
IFR	**Ifrane**	**0.15**	**240**	Pg		**Pg**	**11 41 32.5**	**-0.1**
IFR				Sg		**Sg**	**11 41 34.6**	**-0.7**
SICH	**Sidi Chahed**	**0.59**	**330**	P		**Pb**	**11 41 42.1**	**+1.3**
SICH				S		**Sb**	**11 41 51.4**	**+2.3**
MD31	**MD31**	**0.74**	**166**	P		**Pg**	**11 41 42.0**	**-1.2**
MD31				S		**Sg**	**11 41 50.3**	**-2.7**
MDT	**Midelt**	**0.83**	**159**	P		**Pg**	**11 41 43.2**	**-1.7**
MDT				S		**Sg**	**11 41 53.6**	**-2.2**
AKLM	**AKL**	**1.30**	**45**	P		**Pg**	**11 41 53.8**	**+0.1**
AKLM				S		**Sn**	**11 42 12.4**	**+2.6**
RSA	**Sarsar**	**1.47**	**331**	P		**Pb**	**11 41 57.3**	**+1.4**
RSA				S		**Sn**	**11 42 19.2**	**+5.2**
CHEFC	**Chefchaouen**	**1.54**	**349**	P		**Pg**	**11 42 00.2**	**+1.8**
CHEFC				S		**Sn**	**11 42 20.3**	**+4.5**
RTC	**Rabat Centre**	**1.62**	**285**	Pn		**Pn**	**11 41 58.5**	**+1.6**
RTC				Sn		**Sb**	**11 42 19.7**	**+0.9**
PALE	**Palemas**	**1.83**	**27**	P		**Pb**	**11 42 03.1**	**+1.0**
PALE				S		**Sb**	**11 42 26.4**	**+1.6**
GOLM	**Goulmima**	**1.88**	**180**	Pn		**Pn**	**11 42 01.9**	**+1.2**
GOLM				S		**Sn**	**11 42 26.9**	**+2.5**
AVE	**Averroes**	**2.06**	**262**	Pn		**Pn**	**11 42 03.5**	**+0.5**
AVE				Sg		**Sb**	**11 42 33.6**	**+2.0**
SMIR	**Smir Dam**	**2.11**	**351**	P		**Pb**	**11 42 06.9**	**+0.1**
SMIR				S		**Sg**	**11 42 35.2**	**-1.5**
JBK	**JBK**	**2.13**	**69**	P		**Pn**	**11 42 03.7**	**-0.4**
JBK				S		**Sn**	**11 42 30.5**	**+0.1**
TISM	**Timmit**	**2.24**	**214**	P		**Pn**	**11 42 06.9**	**+1.4**
TISM				S		**Sn**	**11 42 35.6**	**+2.7**
ARF	**Arif**	**2.25**	**163**	P		**Pn**	**11 42 06.1**	**+0.4**
ARF				S		**Sn**	**11 42 33.7**	**+0.5**
CEU	**Ceuta**	**2.32**	**352**	Pn		**Pn**	**11 42 07.3**	**+0.7**
WMELI	**Melilla**	**2.40**	**44**	Pn		**Pn**	**11 42 09.5**	**+1.9**
SRHM	**Skhour des Reh**	**2.70**	**246**	P		**Pb**	**11 42 16.2**	**-0.7**
SRHM				S		**Sb**	**11 42 51.8**	**+1.8**
EALB	**Alboran**	**2.83**	**34**	⇑*i*VmB_VC			11 42 15.7	
	159nm,SNR=1.3							
EALB				Sn		**Sn**	**11 42 48.3**	**+0.8**
TZRR	**Tazzarine**	**2.85**	**190**	P		**Pn**	**11 42 14.8**	**+0.9**
TZRR				S		**Sn**	**11 42 48.5**	**+0.4**
EMAL	**Malaga-Limoner**	**3.19**	**8**	Sn		**Sn**	**11 42 55.2**	**-1.2**
TIO	**Tiouine**	**3.29**	**217**	Pn		**Pn**	**11 42 20.7**	**+0.6**
ESPR	**Espera**	**3.35**	**348**	Pn		**Pn**	**11 42 20.7**	**0.0**
ESPR				⇑*i*VmB_VC			11 42 26.6	
	116nm,SNR=1.4							
ESPR				Sn		**Sn**	**11 42 58.8**	**-1.4**
ELGU	**Los Guajares,**	**3.45**	**18**	Pn		**Pn**	**11 42 23.0**	**+0.8**
ELGU				⇑*i*VmB_VC			11 42 27.0	
	97nm,SNR=2.0							
ELGU				Sn		**Sn**	**11 43 02.0**	**-0.9**
E1302	**La Puebla de C**	**3.54**	**356**	⇑*i*VmB_VC			11 42 24.3	
	192nm,SNR=1.8							
E1302				Sn		**Sn**	**11 43 03.9**	**-1.2**
EGOR	**Sierra Gorda,**	**3.58**	**11**	Pn		**Pn**	**11 42 24.6**	**+0.6**
EGOR				⇑*i*VmB_VC			11 42 26.8	
	74nm,SNR=1.4							
EGOR				Sn		**Sn**	**11 43 05.2**	**-1.0**
EBER	**Berja**	**3.71**	**27**	⇑*i*VmB_VC			11 42 27.0	
	62nm,SNR=1.2							
EBER				Sn		**Sn**	**11 43 07.9**	**-1.6**
PBDV	**Barranco-do-Ve**	**4.37**	**327**	Pn		**Pn**	**11 42 35.1**	**+0.3**
PBDV				Sn		**Sn**	**11 42 23.3**	**-2.3**
PBDV	**Barranco-do-Ve**	**4.37**	**327**	*e*Pn		**Pn**	**11 42 35.4**	**+0.6**
PBDV				*e*Sn		**Sn**	**11 43 24.0**	**-1.6**
PBDV				*i* IAML			11 43 27.9	
PBDV				*i* IAML			11 43 29.1	
PBDV				*i* IAML			11 43 52.7	
EMIN	**Mina Concepcio**	**4.39**	**342**	Pn		**Pn**	**11 42 35.2**	**+0.2**
EMIN				⇑*i*VmB_VC			11 42 39.3	
	133nm,SNR=1.7							
EMIN				Sn		**Sn**	**11 43 23.9**	**-2.1**
PVAQ	**Vaqueiros**	**4.41**	**330**	*e*Pn		**Pn**	**11 42 34.8**	**-0.5**
PVAQ				*e*Sn		**Sn**	**11 43 24.2**	**-2.3**
PVAQ				*i* IAML			11 43 27.0	
PVAQ				*i* IAML			11 43 33.1	
PVAQ				*i* IAML			11 43 33.4	
EGRO	**El Granado**	**4.43**	**333**	Pn		**Pn**	**11 42 35.4**	**-0.2**
EGRO				Sn		**Sn**	**11 43 23.8**	**-3.3**
EGRO	**El Granado**	**4.43**	**333**	Pn		**Pn**	**11 42 36.2**	**+0.6**
EGRO				Sn		**Sn**	**11 43 25.1**	**-2.0**
EQES	**Quesada**	**4.47**	**20**	Pn		**Pn**	**11 42 36.8**	**+0.5**
EQES				⇑*i*VmB_VC			11 42 39.5	
	58nm,SNR=0.8							
EQES				Sn		**Sn**	**11 43 26.2**	**-2.0**
ECAB	**El Cabril**	**4.49**	**355**	Pn		**Pn**	**11 42 37.4**	**+1.0**
ECAB				Sn		**Sn**	**11 43 24.9**	**-3.6**
ECAB	**El Cabril**	**4.49**	**355**	Pn		**Pn**	**11 42 36.2**	**-0.1**
ECAB				⇑*i*VmB_VC			11 42 41.3	
	102nm,SNR=1.6							
ECAB				Sn		**Sn**	**11 43 26.4**	**-2.1**
EADA	**Adamuz**	**4.58**	**4**	Pn		**Pn**	**11 42 38.8**	**+1.2**
EADA				Sn		**Sn**	**11 42 28.2**	**-1.8**
EADA	**Adamuz**	**4.58**	**4**	Pn		**Pn**	**11 42 38.2**	**+0.6**
EADA				⇑*i*VmB_VC			11 42 43.6	
	143nm,SNR=2.5							
EADA				Sn		**Sn**	**11 43 28.2**	**-2.4**
PFVI	**Vila Bisbo**	**4.73**	**319**	Pn		**Pn**	**11 42 39.8**	**+0.1**
PFVI				Sn		**Sn**	**11 43 33.4**	**-1.1**
PFVI	**Vila Bisbo**	**4.73**	**319**	*e*Pn		**Pn**	**11 42 39.8**	**+0.1**
PFVI				*e*Sn		**Sn**	**11 43 32.8**	**-1.6**
PFVI				*i* IAML			11 43 37.9	
PFVI				*i* IAML			11 43 38.5	
PFVI				*i* IAML			11 43 39.5	
PCVE	**Castro Verde**	**4.74**	**329**	Pn		**Pn**	**11 42 39.9**	**0.0**
PCVE				Sn		**Sn**	**11 43 32.4**	**-2.3**
PCVE	**Castro Verde**	**4.74**	**329**	*e*Pn		**Pn**	**11 42 40.9**	**+1.0**
PCVE				*e*Sn		**Sn**	**11 43 31.7**	**-3.0**
PCVE				*i* IAML			11 43 35.9	
PCVE				*i* IAML			11 43 38.8	
PCVE				*i* IAML			11 43 40.1	
MORF	**Marmelete**	**4.77**	**322**	*e*P		**Pn**	**11 42 39.9**	**-0.4**
MORF	**Marmelete**	**4.77**	**322**	*e*Pn		**Pn**	**11 42 40.7**	**+0.4**
MORF				*e*Sn		**Sn**	**11 43 33.4**	**-2.1**
MORF				*i* IAML			11 43 38.2	
MORF				*i* IAML			11 43 40.7	
MORF				*i* IAML			11 43 45.5	
PBAR	**Barrancos**	**4.87**	**340**	Pn		**Pn**	**11 42 41.8**	**+0.2**
PBAR				Sn		**Sn**	**11 43 34.9**	**-3.0**
PBAR	**Barrancos**	**4.87**	**340**	*e*Pn		**Pn**	**11 42 42.2**	**+0.6**
PBAR				*e*Sn		**Sn**	**11 43 35.5**	**-2.4**
PBAR				*i* IAML			11 43 39.2	
PBAR				*i* IAML			11 43 40.5	
PBAR				*i* IAML			11 43 46.7	
PTEO	**Sao Teotonio**	**4.99**	**323**	*e*Pn		**Pn**	**11 42 44.1**	**+0.8**
PTEO				*e*Sn		**Sn**	**11 43 38.5**	**-2.3**
PTEO				*i* IAML			11 43 41.3	
PTEO				*i* IAML			11 43 52.0	
MESJ	**Messejana**	**5.00**	**329**	*e*P		**Pn**	**11 42 42.8**	**-0.6**
MESJ	**Messejana**	**5.00**	**329**	*e*Pn		**Pn**	**11 42 43.8**	**+0.5**
MESJ				*e*Sn		**Sn**	**11 43 37.8**	**-3.1**
MESJ				*i* IAML			11 43 41.7	
MESJ				*i* IAML			11 43 42.8	
MESJ				*i* IAML			11 43 56.7	
PSIM	**Granatula de C**	**5.31**	**10**	Pn		**Pn**	**11 42 48.4**	**+0.7**
PSIM				Sn		**Sn**	**11 43 45.9**	**-2.8**
EVO	**Evora**	**5.51**	**334**	Pn		**Pn**	**11 42 49.8**	**-0.6**
EVO				Sn		**Sn**	**11 43 50.4**	**-3.2**
EVO	**Evora**	**5.51**	**334**	*e*Pn		**Pn**	**11 42 50.5**	**+0.1**
EVO				*e*Sn		**Sn**	**11 43 50.0**	**-3.6**
EVO				*i* IAML			11 43 53.9	
EVO				*i* IAML			11 43 54.3	
EVO				*i* IAML			11 44 04.9	
MOE	**Montemor**	**5.63**	**332**	*e*Pn		**Pn**	**11 42 52.3**	**+0.2**
MOE				*e*Sn		**Sn**	**11 43 53.9**	**-2.6**
MOE				*i* IAML			11 43 59.6	
MOE				*i* IAML			11 44 02.5	
MOE				*i* IAML			11 44 07.2	
PESTR	**Estremoz**	**5.67**	**339**	Pn		**Pn**	**11 42 52.2**	**-0.5**
PESTR				Sn		**Sn**	**11 43 55.5**	**-2.2**
PESTR	**Estremoz**	**5.67**	**339**	*e*Pn		**Pn**	**11 42 52.2**	**-0.5**
PESTR				*e*Sn		**Sn**	**11 43 54.6**	**-3.0**
PARRA	**Arraiolos**	**5.77**	**335**	*e*Pn		**Pn**	**11 42 54.1**	**+0.1**
PARRA				*e*Sn		**Sn**	**11 43 55.8**	**-4.3**
PARRA				*i* IAML			11 44 08.8	
PARRA				*i* IAML			11 44 09.6	
PARRA				*i* IAML			11 44 11.1	
PAB	**San Pablo**	**5.96**	**5**	Pn		**Pn**	**11 42 57.2**	**+0.5**
PAB				⇑*i*VmB_VC			11 42 59.1	
	72nm,SNR=1.2							
PAB				Sn		**Sn**	**11 44 00.6**	**-4.3**
CIBOR	**Castaar de Ib**	**6.04**	**357**	Pn		**Pn**	**11 42 57.6**	**-0.2**
CIBOR				Sn		**Sn**	**11 44 02.5**	**-4.3**
PMTG	**Montargil**	**6.06**	**335**	*e*Pn		**Pn**	**11 42 58.3**	**+0.3**
PMTG				*e*Sn		**Sn**	**11 44 04.8**	**-2.5**
PMTG				*i* IAML			11 44 07.8	
PMTG				*i* IAML			11 44 12.1	
PMTG				*i* IAML			11 44 26.6	
PMRV	**Marv??o**	**6.14**	**342**	*e*Pn		**Pn**	**11 42 59.6**	**+0.5**
PMRV				*e*Sn		**Sn**	**11 44 06.1**	**-3.1**
PMRV				*i* IAML			11 44 07.0	
PMRV				*i* IAML			11 44 14.8	
PMRV				*i* IAML			11 44 30.3	
EPLA	**Plasencia**	**6.52**	**352**	Pn		**Pn**	**11 43 04.6**	**+0.3**
EPLA				Sn		**Sn**	**11 44 14.1**	**-4.5**
PSARD	**Sardoal**	**6.52**	**338**	*e*Pn		**Pn**	**11 43 04.6**	**+0.2**
PSARD				*e*Sn		**Sn**	**11 44 15.2**	**-3.4**
PSARD				*i* IAML			11 44 16.6	
PSARD				*i* IAML			11 44 28.6	
PSARD				*i* IAML			11 44 32.2	
PCBR	**Castelo Branco**	**6.55**	**343**	*e*Pn		**Pn**	**11 43 05.0**	**+0.3**
PCBR				*e*Sn		**Sn**	**11 44 15.8**	**-3.4**
MVO	**Moncorvo**	**7.73**	**348**	*e*Pn		**Pn**	**11 43 21.3**	**+0.3**
POLO	**Lamas de Olo**	**8.08**	**345**	*e*Pn		**Pn**	**11 43 27.3**	**+1.5**
PGAV	**Gavieira, Arco**	**8.76**	**344**	*e*Pn		**Pn**	**11 43 37.1**	**+2.0**

*ISK **28** 11:55:20.0, 38°.33N×44°.46E, h5km, ML2.6/4*
*AFAD **28** 11:55:21.0, 38°.38N×44°.44E, h7km±1km, ML2.4*
*TEH **28** 11:55:23.0, 38°.51N×44°.64E, h13km±4km, ML2.6, Presumed earthquake*

ISC 28 11:55:21.5±1.2, **38°.39N**±0°.03×**44°.49E**±0°.03, **h20**km±5km, **n16**, σ1§**07**/23, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**305**	P		**Pg**	**11 55 29.9**	**-1.5**
YOVA	**Hakkari_Yksek**	**0.82**	**191**	P		**Pb**	**11 55 36.8**	**-0.5**
YOVA				S		**Sn**	**11 55 50.5**	**+0.6**
YOVA				IAML			11 55 53.0	
	comp=E,116nm,0.4s							
YOVA				IAML			11 55 55.0	
	comp=N,175nm,0.4s							
TVAN	**Van**	**0.86**	**279**	P		**Pb**	**11 55 36.2**	**-1.8**
TVAN				S		**Sb**	**11 55 49.2**	**0.0**
ISHB	**Shabestar**	**0.89**	**97**	Pg		**Pg**	**11 55 38.6**	**-0.5**
VMUR	**Van-Muradiye**	**0.93**	**310**	P		**Pb**	**11 55 38.6**	**-0.6**
VMUR				S		**Sn**	**11 55 54.7**	**+2.0**
VMUR				IAML			11 55 58.0	
	comp=N,91nm,0.4s							
VMUR				IAML			11 56 01.0	
	comp=E,112nm,0.4s							
MAKU	**Maku**	**0.97**	**9**	Pg		**Pb**	**11 55 39.4**	**-0.5**
IMRD	**Marand**	**1.00**	**71**	Pg		**Pb**	**11 55 39.5**	**-0.9**
HAKT	**HAKKARI**	**1.04**	**217**	P		**Pb**	**11 55 40.2**	**-0.8**
HAKT				S		**Sn**	**11 55 55.1**	**-0.2**
HAKT				IAML			11 55 59.0	
	comp=E,170nm,0.5s							
HAKT				IAML			11 55 59.0	
	comp=N,208nm,0.4s							
AKDM	**Akdamar-Van**	**1.19**	**267**	Pn		**Pn**	**11 55 42.7**	**-0.5**
AKDM				Sn		**Sg**	**11 56 00.8**	**+0.6**
CUKT	**Cukurca**	**1.34**	**212**	Pn		**Pb**	**11 55 45.6**	**-0.5**
IAZR	**Azarshahr**	**1.38**	**121**	Pg		**Pg**	**11 55 48.4**	**+0.1**
PERV	**Siirt/Pervari-**	**1.60**	**254**	P		**Pg**	**11 55 52.8**	**+0.4**
PERV				S		**Sg**	**11 56 15.8**	**+2.6**
AGRB	**Hanur-Agry**	**1.66**	**316**	Pn		**Pb**	**11 55 51.9**	**+0.3**
AGRB				Sn		**Sg**	**11 56 15.3**	**+0.1**
GNI	**Garni**	**1.76**	**6**	Pn		**Pb**	**11 55 53.7**	**+0.4**
GURO	**Guroymak-BITLI**	**1.94**	**275**	Pn		**Pb**	**11 55 55.2**	**-1.0**
IHRS	**Heris**	**2.01**	**91**	Pn		**Pb**	**11 55 57.0**	**-0.6**

*IDC **28** 12:08:57.9±2.1, 22°.79N×11°.88W, h0km, mb3.9/6, mbtmp3.8/9, ML4.0/3, Error ellipse: s-maj=63.0km s-min=27.7km az=88.0*

ISC 28 12:08:58.0±1.6, **22.7N**±0°.1×**12°.1W**±0°.2, **h10**km, **n12**, σ1§**30**/12, **mb3.9**/6, **Mauritania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MDT	**Midelt**	**12.04**	**32**	Lg		Lg	12 15 13.5	
	0.2nm,0.3s,baz=156,slow=15,SNR=2.3							
TORD	**Torodi Ar. Bea**	**16.25**	**124**	Pn		**Pn**	**12 12 44.7**	**-1.7**
	0.4nm,0.3s,baz=317,slow=11,SNR=13							
TORD				Sn		**Sn**	**12 15 48.8**	**+1.9**
	0.1nm,0.3s,baz=293,slow=22,SNR=2.4							
	0.5nm,0.4s							
DBIC	**Dimbokro**	**17.45**	**155**	P		**Pn**	**12 13 00.3**	**-1.3**
	0.2nm,0.3s,baz=338,slow=14,SNR=1.4							
	2.8nm,0.7s							
ESDC	**Sonseca Array**	**18.25**	**21**	P		**Pn**	**12 13 10.0**	**-1.5**
	0.2nm,0.3s,baz=265,slow=24,SNR=1.8							
	0.3nm,0.5s							
KEST	**Kesra**	**22.72**	**50**	P		**P**	**12 13 59.5**	**-0.7**
	3.4nm,0.8s,baz=216,slow=14,SNR=1.9							
	3.4nm,0.8s							
HFS	**Hagfors**	**41.53**	**19**	P		**P**	**12 16 45.0**	**-0.3**
	3.6nm,0.8s,baz=254,slow=8.9,SNR=3.3							
	3.6nm,0.8s							
BRTR	**Keskin Array B**	**42.16**	**55**	P		**P**	**12 16 51.3**	**+0.3**
	0.3nm,0.4s,baz=266,slow=6.0,SNR=2.1							
	0.3nm,0.4s							
FINES	**FINESS Array B**	**46.72**	**24**	P		**P**	**12 17 26.6**	**-0.2**
	0.8nm,0.4s,baz=258,slow=7.0,SNR=7.3							
	0.8nm,0.4s							
MKAR	**Makanchi Array**	**76.69**	**45**	P		**P**	**12 20 49.9**	**+0.5**
	0.5nm,0.5s,baz=286,slow=4.6,SNR=7.1							
	0.5nm,0.5s							
SONM	**Songino Array**	**90.75**	**36**	P		**P**	**12 22 03.1**	**+1.6**
	0.3nm,0.6s,baz=259,slow=1.5,SNR=2.1							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**148.69**	**91**	PKPbc		**PKPbc**	**12 28 46.9**	**+0.6**
	0.5nm,0.7s,baz=291,slow=2.8,SNR=5.6							
ASAR	**Alice Springs**	**148.82**	**98**	PKPbc		**PKPbc**	**12 28 47.4**	**+0.9**
	0.7nm,0.7s,baz=293,slow=1.7,SNR=12							

*MOS **28** 12:12:26.9±1.1, 48°.93N×151°.91E, h279km, mb3.9/14, Error ellipse: s-maj=8.6km s-min=4.4km az=62.9*
*SKHL **28** 12:12:26.5±0.1, 48°.80N×152°.00E, h270km±9km, mb5.1/6, mbv4.9/3, msh4.8/4, msha5.4/6*
*KRSC **28** 12:12:27.7±2.0, 48°.77N×152°.99E, h316km±20km, Ml4.6*
*IDC **28** 12:12:27.7±0.6, 49°.06N×151°.65E, h259km±5km, mb3.6/25, mbtmp4.3/33, Error ellipse: s-maj=9.5km s-min=6.5km az=144.0*
*NEIC **28** 12:12:28.7±1.0, 49°.1N±0°.1×151°.7E±0°.2, h262km±7km, mb4.3/131, Error ellipse: s-maj=19.4km s-min=11.5km az=143.0*
*JMA **28** 12:12:31.4±0.8, 47°.N±5°.×15°.3E±°, h323km, MV3.9/15, KURILE ISLANDS REGION*

ISC 28 12:12:27.2±0.4, **48°.89N**±0°.05×**151°.90E**±0°.04, **h262**km, **n492**, σ1§**54**/488, **mb4.2**/103, **4C-8D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.27**	**55**	⇓*i*PN		**Pn**	**12 13 22.8**	**-0.3**
SKR				*i* S		**S**	**12 14 06.8**	**-0.9**
SKR				pmax		pmax		
	comp=Z,1μm,0.6s							
SKR				smax		smax		
	comp=E,108nm,0.5s							
SKR				smax		smax		
	comp=N,193nm,0.7s							
SKR				MLR		MLR		
	comp=Z,200nm,10.0s							
SKR	**Severo-Kuril's**	**3.27**	**55**	*e*P		**Pn**	**12 13 22.8**	**-0.3**
SKR				AMB		AMB	12 13 23.4	
	comp=Z,660nm,0.5s							
SKR				AMB		AMB	12 13 25.0	
	comp=Z,730nm,2.0s							
SKR				*e*S		**S**	**12 14 06.7**	**-0.9**
SKR				A		A	12 14 08.4	
	comp=Z,160nm,0.3s							
SKR				A		A	12 14 08.4	
	comp=Z,90nm,0.3s							
SKR				A		A	12 14 10.0	
	comp=Z,630nm,3.0s							
SKR				A		A	12 14 10.0	
	comp=Z,750nm,3.0s							
SKR	**Severo-Kuril's**	**3.27**	**55**	*e*P		**Pn**	**12 13 22.7**	**-0.5**
SKR				*e*S		**S**	**12 14 06.6**	**-1.1**
PAU	**Pauzhetka**	**4.07**	**49**	PN		**Pn**	**12 13 31.2**	**-1.0**
PAU				S		**S**	**12 14 22.7**	**-1.4**
PAU	**Pauzhetka**	**4.07**	**49**	*e*P		**Pn**	**12 13 31.8**	**-0.4**
PAU				AMB		AMB	12 13 32.1	
	comp=Z,210nm,0.5s							
PAU				*e*S		**S**	**12 14 22.8**	**-1.4**
PAU				A		A	12 14 27.6	
	comp=Z,170nm,0.3s							
PAU				A		A	12 14 27.6	
	comp=Z,220nm,0.3s							
PAU				A		A	12 14 29.5	
	comp=Z,460nm,2.0s							
PAU				A		A	12 14 29.5	
	comp=Z,350nm,2.0s							
PAU	**Pauzhetka**	**4.07**	**49**	*e*P		**Pn**	**12 13 31.2**	**-1.0**
PAU				*e*S		**S**	**12 14 22.7**	**-1.4**
KUR	**Kuril'sk**	**4.58**	**218**	*e*PN		**Pn**	**12 13 37.9**	**-0.4**
KUR				*e*S		**S**	**12 14 37.0**	**+1.9**
KUR				pmax		pmax		
	comp=E,38nm,0.7s							
KUR				pmax		pmax		
	comp=Z,106nm,0.7s							
KUR				pmax		pmax		
	comp=N,29nm,0.5s							
KUR				smax		smax		
	comp=N,132nm,0.5s							
KUR				smax		smax		
	comp=E,82nm,0.5s							
KUR	**Kuril'sk**	**4.58**	**218**	*e*P		**Pn**	**12 13 38.0**	**-0.4**
KUR				AMB		AMB	12 13 38.8	
	comp=E,170nm,0.4s							
KUR				AMB		AMB	12 13 40.0	
	comp=E,410nm,2.5s							
KUR				*e*S		**S**	**12 14 33.8**	**-1.3**
KUR				A		A	12 14 38.7	
	comp=E,650nm,3.0s							
KUR				A		A	12 14 38.7	
	comp=E,350nm,3.0s							
KUR				A		A	12 14 43.5	
	comp=E,130nm,0.5s							
KUR				A		A	12 14 43.5	
	comp=E,120nm,0.5s							
KDTR	**Khodutka, Kamc**	**4.91**	**51**	PN		**Pn**	**12 13 40.7**	**-1.5**
KDTR	**Khodutka, Kamc**	**4.91**	**51**	*e*P		**Pn**	**12 13 40.7**	**-1.5**
KDTR				*e*S		**S**	**12 14 36.1**	**-6.0**
ASAK	**Asacha**	**5.17**	**45**	PN		**Pn**	**12 13 45.4**	**0.0**
ASAK				S		**S**	**12 14 45.1**	**-2.9**
ASAK	**Asacha**	**5.17**	**45**	*e*P		**Pn**	**12 13 45.4**	**0.0**
ASAK				*e*S		**S**	**12 14 45.1**	**-2.9**
APC	**Apacha**	**5.23**	**37**	PN		**Pn**	**12 13 46.0**	**+0.1**
APC				S		**S**	**12 14 46.0**	**-3.0**
APC	**Apacha**	**5.23**	**37**	*e*P		**Pn**	**12 13 46.0**	**+0.1**
APC				*e*S		**S**	**12 14 46.0**	**-3.0**
GRL	**Gorelyy**	**5.37**	**45**	PN		**Pn**	**12 13 48.2**	**+0.5**
GRL				S		**S**	**12 14 47.7**	**-4.5**
GRL	**Gorelyy**	**5.37**	**45**	*e*P		**Pn**	**12 13 48.3**	**+0.5**
GRL				*e*S		**S**	**12 14 47.8**	**-4.5**
MTVR	**Mutnovka**	**5.37**	**46**	PN		**Pn**	**12 13 47.7**	**-0.2**
MTVR				S		**S**	**12 14 48.6**	**-3.8**
MTVR	**Mutnovka**	**5.37**	**46**	*e*P		**Pn**	**12 13 47.7**	**-0.2**
MTVR				*e*S		**S**	**12 14 48.6**	**-3.8**
RUS	**Russkaya**	**5.50**	**47**	PN		**Pn**	**12 13 48.1**	**-1.1**
RUS	**Russkaya**	**5.50**	**47**	*e*P		**Pn**	**12 13 48.2**	**-1.1**
RUS				*e*S		**S**	**12 14 48.3**	**-6.7**
KRMR	**Karymshinskiy**	**5.58**	**43**	PN		**Pn**	**12 13 50.1**	**-0.1**
KRMR				S		**S**	**12 14 53.1**	**-3.5**
KRMR	**Karymshinskiy**	**5.58**	**43**	*e*P		**Pn**	**12 13 50.1**	**-0.1**
KRMR				*e*S		**S**	**12 14 53.2**	**-3.5**
PEA0B	**Petropavlovsk-**	**5.59**	**39**	Pn		**Pn**	**12 13 50.9**	**+0.6**
PEA0B	**Petropavlovsk-**	**5.59**	**39**	PN		**Pn**	**12 13 50.6**	**+0.3**
PEA0B				S		**S**	**12 14 54.2**	**-2.7**
PETK	**Petropavlovsk-**	**5.59**	**39**	P		**Pn**	**12 13 50.7**	**+0.4**
	comp=E,8.9nm,0.6s,baz=216,slow=9.5,SNR=90							
PETK				S		**S**	**12 14 55.4**	**-1.5**
	comp=E,4.1nm,0.7s,baz=192,slow=26,SNR=3.7							
PETK	**Petropavlovsk-**	**5.59**	**39**	Pn		**Pn**	**12 13 51.0**	**+0.6**
PET	**Petropavlovsk**	**5.94**	**43**	Pn		**Pn**	**12 13 55.2**	**+0.6**
PET	**Petropavlovsk**	**5.94**	**43**	*e*PN		**Pn**	**12 13 55.8**	**+1.1**
PET				*e*S		**S**	**12 15

comp=E,160nm,0.5s
YSS Yuzhno-Sakhali 6.45 256 Pn 12 14 01.4 +0.4
YSS Yuzhno-Sakhali 6.45 256 *i* PN **Pn 12 14 01.9 +0.9**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS Yuzhno-Sakhali 6.45 256 *i* P **Pn 12 14 01.4 +0.4**
YSS eS S 12 15 14.5 -1.8
UGL Uglegorsk 6.48 275 *eP* **Pn 12 14 01.8 +0.4**
UGL AMB AMB 12 14 03.1
comp=Z,30nm,0.8s
SPN Mys Shipunski 6.63 48 PN **Pn 12 14 01.1 -2.1**
SPN Mys Shipunski 6.63 48 *eP* **Pn 12 14 01.1 -2.1**
SPN eS S 12 15 10.1 -10
RUSJ Misakicho 6.63 226 *ePN* **Pn 12 14 03.5 +0.1**
RUSJ eS **S 12 15 22.3 +1.6**
GLVR Golovnino 6.79 223 *ePN* **Pn 12 14 03.4 -1.9**
GLVR eS **S 12 15 18.6 -5.6**
GLVR Golovnino 6.79 223 *eP* **Pn 12 14 03.4 -1.9**
GLVR eS **S 12 15 18.6 -5.6**
JRA Rausu 6.82 226 P **Pn 12 14 05.1 -0.6**
NEM2 Nemuro 2 6.99 220 *eP* Pn 12 14 04.2 -3.6
NEM2 S S 12 15 17.1 -12
NMR Nemuro--Hokkai 6.99 220 *ePN* Pn 12 14 04.0 -3.9
NMR Nemuro--Hokkai 6.99 220 *eP* Pn 12 14 04.1 -3.8
JNK Nakash 7.28 226 *eP* **Pn 12 14 10.1 -1.3**
JTKR Abashiri--Toko 7.40 231 *eP* **Pn 12 14 13.7 +0.8**
AKK Akkeshi 7.66 223 *eP* Pn 12 14 13.0 -3.2
JAK Akkeshi 7.74 223 S S 12 15 35.2 -11
JAR Ashorobuto 7.95 228 P **Pn 12 14 19.3 -0.6**
JAR eS **S 12 15 44.0 -6.8**
JKA Kamikawa-asahi 8.00 237 Pn 12 14 21.6 +1.2
ASAJ Asahikawa 8.00 237 P **Pn 12 14 21.9 +1.4**
comp=Z,52nm,0.7s,baz=73,slow=8.0,SNR=69
ASAJ S **S 12 15 49.7 -2.2**
comp=Z,5.7nm,0.7s,baz=48,slow=15,SNR=1.5
JKK2 Kamakawa 2 8.07 235 *eP* **Pn 12 14 22.4 +0.9**
JOB Onbets 8.21 226 P **Pn 12 14 21.0 -2.2**
JOB eS S 12 15 47.0 -10
NKL Nikolayevsk 8.26 305 *eP* **Pn 12 14 23.9 +0.4**
MKZ Mys Kozlova 8.33 43 PN **Pn 12 14 21.6 -2.8**
MKZ Mys Kozlova 8.33 43 *eP* **Pn 12 14 21.6 -2.8**
MKZ eS S 12 15 48.6 -10
JAB Ashibetsu 8.60 235 *eP* **Pn 12 14 29.3 +1.2**
JCH Churui 8.66 227 P Pn 12 14 25.5 -3.2
JCH eS S 12 15 54.7 -12
JNBK Urakawa-nobuka 9.21 228 P Pn 12 14 31.1 -4.5
KBG Krutoberegovo 9.87 38 *eS* **S 12 16 26.8 -7.9**
KBTR Krutoberegovo 9.88 38 PN **Pn 12 14 42.7 -1.2**
KBTR Krutoberegovo 9.88 38 *eP* **Pn 12 14 42.7 -1.2**
KBTR eS S 12 16 25.3 -10
BKI Bering 10.71 49 PN **Pn 12 14 52.8 -1.5**
BKI Bering 10.71 49 *eP* **Pn 12 14 52.8 -1.5**
BKI eS S 12 16 39.8 -14
MA2 Magadan 10.73 357 P **Pn 12 14 53.4 -1.0**
comp=Z,6.9nm,0.8s,baz=162,slow=10,SNR=10
MA2 Magadan 10.73 357 Pn 12 14 53.2 -1.2
MA2 Magadan 10.73 357 ⇓ *i* PN **Pn 12 14 53.8 -0.6**
MA2 pmax pmax
comp=Z,10.0nm,1.0s
TEY Ternei 11.14 255 *ePN* **Pn 12 14 58.3 -1.5**
PALN Palana 11.25 22 PN **Pn 12 15 01.2 +0.3**
PALN Palana 11.25 22 *eP* **Pn 12 15 01.3 +0.3**
JANG Nango 11.27 225 P Pn 12 14 55.9 -5.5
JANG S S 12 16 51.7 -16
JTH Tanohata 11.46 222 *eP* **Pn 12 14 59.3 -4.5**
JTH S S 12 16 55.4 -17
KLR Kul'dur 13.22 279 P **Pn 12 15 24.8 -0.5**
comp=Z,15nm,0.5s,baz=84,slow=11,SNR=55
KLR Kul'dur 13.22 279 *d i* PN **P 12 15 27.1 +0.6**
KLR pmax pmax
comp=Z,21nm,0.9s
KLR Kul'dur 13.22 279 *eP* **P 12 15 26.2 -0.3**
SEY Seymchan 14.08 1 P **Pn 12 15 35.1 -0.4**
comp=Z,15nm,0.7s,baz=174,slow=10,SNR=74
SEY Seymchan 14.08 1 ⇓ *i* P **P 12 15 36.5 +0.8**
SEY pmax pmax
comp=Z,16nm,0.9s
SEY Seymchan 14.08 1 *eP* **P 12 15 36.6 +0.8**
USRK Ussuriysk Ar. 14.47 259 P **P 12 15 39.7 -0.7**
comp=Z,7.2nm,0.6s,baz=63,slow=15,SNR=13
MDJ Mudanjiang 15.86 263 P 12 15 55.3 -0.3
MDJ IAmb IAmb 12 16 00.3
comp=Z,16nm,0.8s
MDJ Mudanjiang 15.86 263 P **P 12 15 55.5 -0.1**
MDJ pmax pmax
comp=Z,19nm,1.0s
MJB9 Matsu-Tunnel 15.89 224 P 12 15 57.8 +1.8
MJAR Matsushiro Arr 15.89 224 P **P 12 15 56.7 +0.6**
comp=Z,13nm,0.5s,baz=18,slow=12,SNR=50
MJAR Matsushiro Arr 15.89 224 P **P 12 15 57.0 +0.9**
MJAR Matsushiro Arr 15.89 224 P **P 12 15 57.0 +0.9**
MJAR pmax pmax
comp=Z,13nm,0.6s
MAJO Matsushiro 15.89 224 P 12 15 57.2 +1.1
MAJO Matsushiro 15.89 224 P **P 12 15 57.2 +1.1**
MAJO pmax pmax
comp=Z,27nm,0.6s
HEH HeiHe 15.93 284 *eP* **Pn 12 15 56.8 -0.9**
HEH pmax pmax
comp=Z,23nm,0.6s
ZEA Zeya 16.12 297 *eP* **Pn 12 15 59.1 -0.8**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
BNX BinXian 16.89 268 ⇑ P **P 12 16 05.0 -1.8**
BNX pmax pmax
comp=Z,5.0nm,0.9s
JGF Kuroka 17.06 224 P 12 16 09.9 +1.1
JGF IAmb IAmb 12 16 16.0
comp=Z,14nm,0.8s
INU Inuyama 17.42 225 P 12 16 13.4 +0.7
YAK Yakutsk 18.09 325 P **P 12 16 18.4 -1.2**
comp=Z,14nm,0.4s,baz=164,slow=1.3,SNR=6.5
YAK S **S 12 19 29.9 -2.8**
comp=Z,7.0nm,0.5s,baz=51,slow=6.5,SNR=7.9
YAK Yakutsk 18.09 325 P **P 12 16 19.8 +0.2**
YAK Yakutsk 18.09 325 *eP* **P 12 16 19.5 -0.1**
YAK eS **S 12 19 32.0 -0.7**
YAK pmax pmax
comp=Z,27nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.6s
YAK smax smax
comp=N,86nm,3.1s
YAK smax smax
comp=E,48nm,2.8s
YAK Yakutsk 18.09 325 *eP* **Pn 12 16 20.6 -2.2**
CN2 Changchun 18.91 264 P **P 12 16 28.5 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
JMN Monobe 20.24 228 P **P 12 16 43.5 +0.6**
BILL Bilibino 20.51 15 P 12 16 43.5 -1.9
BILL IAmb IAmb 12 16 53.2
comp=Z,4.1nm,0.5s
KSRS Korea Array 20.80 246 P **P 12 16 48.9 +0.1**
comp=Z,8.3nm,0.6s,baz=49,slow=10,SNR=24
comp=Z,8.3nm,0.6s
KS19 Wonju Array Si 20.80 246 P **P 12 16 49.1 +0.3**
KS19 IAmb IAmb 12 17 07.8
comp=Z,20nm,1.2s
KSAR Wonju Array Be 20.83 246 P **P 12 16 49.8 +0.8**
KSAR Wonju Array Be 20.83 246 P **P 12 16 49.8 +0.8**
HILR Hailar Array B 20.93 284 P **P 12 16 48.0 -2.0**
comp=Z,4.8nm,0.3s,baz=76,slow=10,SNR=16
comp=Z,4.8nm,0.3s
JNU Nakatsue 22.25 233 P **P 12 17 03.2 +0.8**
comp=Z,10.0nm,0.7s,baz=30,slow=5.2,SNR=17
comp=Z,10.0nm,0.7s
JSU Suzuyama 23.74 231 P **P 12 17 17.0 +1.0**
SPIA Saint Paul Isl 23.95 55 P **P 12 17 18.7 +1.2**
baz=267
GAMB Gambell 24.62 39 P **P 12 17 23.4 -0.1**
GAMB Gambell 24.62 39 P **P 12 17 24.4 +0.8**
baz=250
XLT XiLinHaoTe 25.05 272 *eP* **P 12 17 27.3 -0.4**
XLT pmax pmax
comp=Z,16nm,0.6s
XLT pmax pmax
comp=Z,110nm,5.0s
TIXI Tiksi 25.18 343 P **P 12 17 27.5 -1.0**
TIXI Tiksi 25.18 343 P **P 12 17 27.5 -1.0**
TIXI pmax pmax
comp=Z,4.0nm,1.1s

UNV Unalaska Valle 26.15 63 P **P 12 17 38.2 +0.9**
baz=277
M11K Mekoryuk 26.36 48 P **P 12 17 40.4 +1.3**
M11K IAmb IAmb 12 17 52.7
comp=Z,9.5nm,1.4s
M11K Mekoryuk 26.36 48 P **P 12 17 40.0 +0.9**
baz=264
TNA Tin City 26.75 37 P 12 17 43.4 +0.8
TNA IAmb IAmb 12 17 44.0
comp=Z,4.3nm,0.6s
TNA Tin City 26.75 37 P **P 12 17 43.1 +0.6**
baz=252,SNR=6.3
K13K Kusilvak Mount 27.30 45 P **P 12 17 48.4 +0.9**
baz=262
F14K Arctic Creek 27.36 37 P **P 12 17 48.6 +0.7**
baz=254
ANM Nome 27.50 39 P 12 17 50.7 +1.5
ANM IAmb IAmb 12 17 51.2
comp=Z,3.9nm,0.6s
ANM Nome 27.50 39 P **P 12 17 50.7 +1.5**
ANM pmax pmax
comp=Z,4.0nm,0.6s
ANM Nome 27.50 39 P **P 12 17 49.9 +0.6**
baz=256,SNR=9.7
M13K Dall Lake 27.77 49 P **P 12 17 52.8 +1.2**
baz=266
FALS False Pass 27.84 61 P **P 12 17 53.7 +1.5**
baz=277
J14K Nanvaranak Lak 27.94 44 P **P 12 17 53.1 +0.1**
baz=262
F15K North Star Dit 28.09 37 P **P 12 17 54.9 +0.4**
baz=255
G15K Niukluk 28.16 39 P **P 12 17 55.8 +0.7**
baz=257,SNR=6.3
L14K Kuka Creek 28.17 47 P **P 12 17 55.8 +0.6**
baz=265
M14K Bethel 28.47 48 P **P 12 17 58.1 +0.3**
baz=267
N14K Kuskokwak Cree 28.57 50 P **P 12 17 59.3 +0.5**
baz=269
C16K Lisburne Hills 28.64 32 IAmb IAmb 12 18 00.5
comp=Z,7.7nm,0.9s
C16K Lisburne Hills 28.64 32 P **P 12 17 59.0 -0.2**
baz=250,SNR=8.8
L15K Ungalak Mounta 28.77 46 P **P 12 18 01.1 +0.6**
baz=266
O14K Tigyukauivet M 28.78 51 P **P 12 18 01.0 +0.4**
baz=270
K15K Wolf Creek Mou 28.81 45 P **P 12 18 01.4 +0.6**
baz=264
H16K Elim 28.84 40 P **P 12 18 01.6 +0.6**
baz=260
G16K Koyuk River 28.94 38 P **P 12 18 02.2 +0.2**
baz=258
M15K Kasigluk River 29.10 48 P **P 12 18 03.9 +0.6**
baz=268
HNS HongShan 29.18 261 ⇓ P **P 12 18 05.3 +0.9**
HNS pmax pmax
comp=Z,10.0nm,0.6s
D17K Noatak River 29.25 34 P **P 12 18 04.8 +0.2**
baz=253,SNR=10
J16K Anvik River 29.34 43 P **P 12 18 06.0 +0.5**
baz=264
N15K Kwethluk River 29.38 49 IAmb IAmb 12 18 08.0
comp=Z,12nm,0.9s
N15K Kwethluk River 29.38 49 P **P 12 18 06.3 +0.4**
baz=270
I17K Unalakleet 29.38 42 P 12 18 07.0 +1.2
I17K Unalakleet 29.38 42 P **P 12 18 06.0 +0.2**
baz=262
HHC Hu-ho-hao-te 29.41 269 *eP* **P 12 18 07.8 +1.3**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,44nm,4.7s
RDOG Red Dog Mine 29.42 33 P **P 12 18 06.1 -0.1**
baz=253
SDPT Sand Point 29.45 59 P **P 12 18 07.6 +1.0**
baz=278
C17K DeLong Mountai 29.46 32 P **P 12 18 07.1 +0.5**
baz=252
ULN Ulaanbaatar 29.48 285 P **P 12 18 06.2 -0.9**
ULN Ulaanbaatar 29.48 285 ⇑ *i* P **P 12 18 06.6 -0.6**
ULN pmax pmax
comp=Z,4.0nm,1.6s
ULN Ulaanbaatar 29.48 285 *eP* **P 12 18 06.6 -0.6**
O15K Ungalikthiuk R 29.52 51 P **P 12 18 07.7 +0.6**
baz=272
E17K Hotham Inlet 29.55 35 P **P 12 18 07.6 +0.3**
baz=256,SNR=16
F17K Baldwin Pennin 29.62 36 P **P 12 18 08.2 +0.4**
baz=257
G17K Kiwalik Mounta 29.66 38 P **P 12 18 08.6 +0.3**
baz=260
L16K Owhat River 29.73 46 P 12 18 09.6 +0.7
L16K Owhat River 29.73 46 P **P 12 18 09.3 +0.4**
baz=268
H17K Granite Mounta 29.87 40 IAmb IAmb 12 18 12.2
comp=Z,4.3nm,0.7s
H17K Granite Mounta 29.87 40 P **P 12 18 10.7 +0.5**
baz=261,SNR=6.1
SONM Songino Array 29.91 285 P **P 12 18 10.0 -0.9**
comp=Z,1.6nm,0.8s,baz=71,slow=9.1,SNR=10
comp=Z,1.6nm,0.8s
M16K Timber Creek 29.95 48 P **P 12 18 11.9 +0.9**
baz=269
CHNA Chernabura Isl 30.03 60 P **P 12 18 12.5 +0.9**
baz=279
N16K Nishlik Lake 30.04 49 P **P 12 18 12.4 +0.7**
baz=270,SNR=7.2
E18K Tukpahlearik C 30.09 35 P **P 12 18 12.4 +0.3**
baz=256
C18K Utukok River 30.21 32 IAmb IAmb 12 18 14.5
comp=Z,6.7nm,0.8s
C18K Utukok River 30.21 32 P **P 12 18 13.8 +0.7**
baz=254
F18K Selawik 30.28 36 P **P 12 18 14.6 +0.9**
baz=259
L17K Donlin 30.31 45 P **P 12 18 15.1 +1.1**
baz=268
K17K Iditarod 30.34 44 P **P 12 18 15.6 +1.3**
baz=267
O16K Kokwok River B 30.39 50 P **P 12 18 15.9 +1.1**
baz=272
P16K Nushagak River 30.47 51 P **P 12 18 16.9 +1.5**
baz=273
G18K Tagagawik 30.55 38 P **P 12 18 17.2 +1.1**
baz=261,SNR=20
H18K Honhosa River 30.55 39 P **P 12 18 17.3 +1.1**
baz=263
M17K Holitna River 30.70 47 IAmb IAmb 12 18 20.2
comp=Z,12nm,0.9s
M17K Holitna River 30.70 47 P **P 12 18 19.2 +1.8**
baz=270,SNR=5.8
A19K Wainwright 30.73 29 P **P 12 18 18.5 +0.9**
baz=251
R16K Pilot Point 30.80 54 P **P 12 18 19.8 +1.5**
baz=276
N17K Nushagak Hills 30.82 49 P **P 12 18 19.1 +0.6**
baz=272
O17K Koliganek Bris 30.89 50 P **P 12 18 20.2 +1.1**
C19K Lookout Ridge 30.89 32 P **P 12 18 20.1 +1.0**
C19K IAmb IAmb 12 18 22.6
comp=Z,6.7nm,0.8s
C19K Lookout Ridge 30.89 32 P **P 12 18 20.2 +1.0**
baz=255,SNR=10
F19K Shaleruckik Mo 31.05 36 IAmb IAmb 12 18 21.8
comp=Z,6.9nm,0.8s
F19K Shaleruckik Mo 31.05 36 P **P 12 18 21.1 +0.6**
baz=260
L18K Granite Mounta 31.06 45 P **P 12 18 21.6 +0.9**
baz=269
J18K Innoko River 31.10 43 IAmb IAmb 12 18 22.7
comp=Z,4.8nm,0.8s
J18K Innoko River 31.10 43 P **P 12 18 22.0 +1.0**
baz=267,SNR=5.2
GCSA Galena City Sc 31.13 40 P **P 12 18 21.7 +0.5**
baz=265
G19K Purcell Mounta 31.22 38 P **P 12 18 22.9 +0.9**
baz=262
P17K Kvichak River 31.26 51 P **P 12 18 22.3 0.0**
baz=274
D19K Kuna River 31.26 33 IAmb IAmb 12 18 24.0
comp=Z,10nm,0.8s
D19K Kuna River 31.26 33 P **P 12 18 23.2 +0.9**
baz=257,SNR=15
E19K Redstone River 31.37 35 P **P 12 18 24.1 +0.8**
baz=260
R17L Mt. Peulik Vol 31.44 54 P **P 12 18 24.8 +0.8**
baz=277
N18K Kilae Creek 31.46 48 P **P 12 18 25.1 +1.0**
baz=272
M18K Stony River 31.47 47 P **P 12 18 25.0 +0.8**
baz=271
J19K Poorman 31.62 42 IAmb IAmb 12 18 26.9
comp=Z,5.4nm,0.9s
J19K Poorman 31.62 42 P **P 12 18 26.1 +0.6**
baz=267,SNR=6.3
Q17K Contact Creek 31.62 53 P **P 12 18 26.6 +0.9**
baz=276
O18K Koktuh Hills 31.84 50 P **P 12 18 28.0 +0.5**
baz=274
D20K Etivluk River 31.84 33 P **P 12 18 28.2 +0.8**
baz=258,SNR=26
P18K Big Mountain, 31.86 51 P **P 12 18 28.7 +1.0**
baz=275
F20K Avaraart Lake 31.88 36 P **P 12 18 27.8 +0.1**
baz=262
E20K Nigu River 31.91 34 P **P 12 18 28.7 +0.6**
baz=260
L19K White Mountain 31.92 45 P **P 12 18 29.0 +0.8**
baz=271
ACHA Angle Creek He 31.92 53 P **P 12 18 28.9 +0.6**
ACHA IAmb IAmb 12 18 45.7
comp=Z,14nm,1.4s
Q18K Katmai Hardscr 32.04 52 P **P 12 18 29.8 +0.5**
baz=276
H20K Anotleneega Mo 32.04 39 P **P 12 18 29.9 +0.7**
baz=265,SNR=10
CHIR Chirikof Islan 32.10 57 P **P 12 18 30.3 +0.6**
baz=280
N19K Bonanza Creek 32.14 48 P **P 12 18 31.0 +0.8**
baz=273
M19K Big River Lodg 32.15 46 P **P 12 18 31.1 +1.0**
baz=272
O19K Port Alsworth 32.26 49 P **P 12 18 32.1 +1.0**
baz=274
K20K Telida 32.29 43 P **P 12 18 32.1 +0.8**
baz=270
A21K Barrow 32.47 28 P **P 12 18 33.2 +0.5**
baz=254
IMAR Indian Mountai 32.55 38 P 12 18 34.5 +1.0
C21K Kniteblade Rid 32.58 32 P **P 12 18 34.5 +0.7**
baz=260
G21K Allakaket 32.70 37 IAmb IAmb 12 18 36.8
comp=Z,6.8nm,0.8s
G21K Allakaket 32.70 37 P **P 12 18 35.4 +0.6**
baz=265
Q19K Cape Douglas, 32.72 51 P **P 12 18 35.8 +0.7**
Q19K Cape Douglas, 32.72 51 P **P 12 18 36.2 +1.1**
baz=277
B21K Ikpikpuk River 32.73 31 P **P 12 18 35.9 +0.9**
baz=259
M20K Styx River 32.74 46 P **P 12 18 36.8 +1.4**
baz=273
E21K Killik River 32.75 34 IAmb IAmb 12 18 36.8
comp=Z,5.0nm,0.9s
E21K Killik River 32.75 34 P **P 12 18 35.9 +0.6**
baz=262
SII Sitkinak Islan 32.77 56 P **P 12 18 37.1 +1.6**
baz=280
F21K Alatna River 32.78 36 P **P 12 18 36.5 +1.0**
baz=264
P19K Oil Pt 32.85 50 P **P 12 18 37.6 +1.4**
baz=276
H21K Melozitna Rive 32.92 39 IAmb IAmb 12 18 38.5
comp=Z,5.2nm,0.7s
H21K Melozitna Rive 32.92 39 P **P 12 18 37.3 +0.5**
baz=267,SNR=7.5
CHUM Lake Minchumin 33.08 42 P **P 12 18 39.5 +1.5**
baz=270
PPLA Purkeypile 33.15 44 P **P 12 18 39.6 +0.7**
baz=272
N20K Mount Spurr 33.22 47 P **P 12 18 41.0 +1.5**
baz=275
SPCR Spurr Chakacha 33.22 47 P **P 12 18 41.2 +1.7**
baz=275
B22K Teshekpuk Lake 33.27 30 P **P 12 18 40.1 +0.5**
baz=259
D22K Ayikyak River 33.28 33 IAmb IAmb 12 18 41.8
comp=Z,8.7nm,0.8s
D22K Ayikyak River 33.28 33 P **P 12 18 41.1 +1.3**
baz=262,SNR=14
STLK Strandline Lak 33.38 46 P 12 18 42.6 +1.7
STLK IAmb IAmb 12 18 43.2
comp=Z,6.1nm,0.8s
Q20K Shuyak Island 33.41 52 P **P 12 18 41.1 +0.1**
baz=278
KDAK Kodiak Island 33.43 53 P **P 12 18 42.5 +1.3**
baz=280
SKT Skwentna 33.49 46 P **P 12 18 42.4 +0.7**
baz=274
E22K Anaktuvuk Pass 33.51 34 P 12 18 42.9 +1.1
E22K Anaktuvuk Pass 33.51 34 P **P 12 18 43.0 +1.1**
baz=264,SNR=23
H22K Ishtalitna Cre 33.52 38 IAmb IAmb 12 18 44.1
comp=Z,7.3nm,1.0s
H22K Ishtalitna Cre 33.52 38 P **P 12 18 42.7 +0.8**
baz=268,SNR=5.7
BPAW Bear Paw Mtn. 33.66 42 P **P 12 18 44.3 +1.1**
baz=271
KTH Kantishna Hill 33.70 43 P 12 18 45.2 +1.6
KTH IAmb IAmb 12 18 45.9
comp=Z,8.5nm,0.8s
MLY Manley 33.76 40 P **P 12 18 45.1 +1.0**
baz=270
L22K Petersville 33.82 45 P **P 12 18 45.4 +0.9**
L22K IAmb IAmb 12 18 46.0
comp=Z,6.7nm,0.6s
SUA Susitna One 33.91 46 P **P 12 18 46.0 +0.6**
baz=275
TRF Thorofare Moun 33.99 43 P 12 18 47.5 +1.4
TRF IAmb IAmb 12 18 47.6
comp=Z,5.9nm,0.4s
TRF Thorofare Moun 33.99 43 P **P 12 18 46.9 +0.8**
baz=273
D23K Nanushuk River 34.01 33 IAmb IAmb 12 18 48.2
comp=Z,7.8nm,0.8s
D23K Nanushuk River 34.01 33 P **P 12 18 47.2 +1.2**
baz=264
COLD Coldfoot 34.05 36 P 12 18 47.5 +1.1
COLD IAmb IAmb 12 18 48.2
comp=Z,12nm,1.4s
COLD Coldfoot 34.05 36 P **P 12 18 47.1 +0.7**
baz=267,SNR=8.5
G23K Bananza Creek 34.09 37 IAmb IAmb 12 18 48.6
comp=Z,6.0nm,0.9s
G23K Bananza Creek 34.09 37 P **P 12 18 47.9 +1.0**
baz=268,SNR=8.7
BRSE Bradley Lake S 34.10 50 P **P 12 18 47.9 +1.0**
baz=278
C23K Itkillik River 34.14 31 P **P 12 18 47.8 +0.7**
baz=263
M22K Willow 34.18 46 P **P 12 18 48.2 +0.6**
baz=276
E23K Chandalar 34.32 35 P **P 12 18 50.1 +1.2**
baz=267
I23K Minto, Yukon-K 34.35 40 P **P 12 18 49.5 +0.6**
baz=271
TOLK Toolik Lake Re 34.38 34 P **P 12 18 50.4 +1.1**
baz=266,SNR=18
NEA2 Nenana 34.48 41 IAmb IAmb 12 18 52.8
comp=Z,7.4nm,0.7s
NEA2 Nenana 34.48 41 P **P 12 18 51.3 +1.2**
baz=272,SNR=12
O22K Cooper Landing 34.51 48 P **P 12 18 51.1 +0.8**
baz=278
MCK McKinley 34.58 42 P 12 18 52.0 +1.0
MCK IAmb IAmb 12 18 52.7
comp=Z,6.9nm,0.8s
MCK McKinley 34.58 42 P **P 12 18 52.0 +1.0**
MCK pmax pmax
comp=Z,7.0nm,0.8s
MCK McKinley 34.58 42 P **P 12 18 52.0 +1.0**
baz=274
RND Reindeer 34.64 43 P **P 12 18 52.1 +0.5**
RND IAmb IAmb 12 19 28.3
comp=Z,10nm,1.4s
RND Reindeer 34.64 43 P **P 12 18 52.1 +0.5**
RND pmax pmax
comp=Z,11nm,1.4s
PMR Palmer 34.66 46 P **P 12 18 51.8 +0.2**
baz=276
D24K Happy Valley 34.69 33 P **P 12 18 53.2 +1.3**
baz=266

E24K	**Your Creek**	**34.75**	**35**	P	**P**	**12 18 53.4 +1.0**
	baz=268					
C24K	**Franklin Bluff**	**34.79**	**32**	P	**P**	**12 18 53.7 +1.0**
	baz=265					
WAT1	**Susitna Watana**	**34.81**	**44**	P	**P**	**12 18 53.5 +0.5**
	baz=275					
WRH	**Wood River Hil**	**34.91**	**41**		**P**	**12 18 55.1 +1.3**
WRH				IAmb	IAmb	12 18 55.7
	comp=Z,8.6nm,1.0s					
H24K	**Noodor Dome**	**34.95**	**39**	P	**P**	**12 18 55.3 +1.1**
	baz=271					
COLA	**College**	**34.99**	**40**	P	**P**	**12 18 56.0 +1.5**
COLA				IAmb	IAmb	12 18 56.4
	comp=Z,16nm,1.0s					
COLA	**College**	**34.99**	**40**	P	**P**	**12 18 56.0 +1.5**
COLA				pmax	pmax	
	comp=Z,16nm,1.0s					
COLA	**College**	**34.99**	**40**	P	**P**	**12 18 55.4 +1.0**
	baz=273					
KNK	**Knik Glacier**	**35.00**	**46**	P	**P**	**12 18 55.8 +1.1**
	baz=277					
SML	**Sawmill**	**35.02**	**46**	P	**P**	**12 18 56.0 +1.2**
	baz=277,SNR=5.4					
CCB	**Clear Creek Bu**	**35.02**	**41**	IAmb	IAmb	12 18 56.0
	comp=Z,8.8nm,1.2s					
G24K	**Hadweenzic Riv**	**35.11**	**37**	P	**P**	**12 18 56.5 +1.0**
	baz=271,SNR=11					
POKR	**Poker Flat Res**	**35.16**	**40**	P	**P**	**12 18 56.9 +0.9**
	baz=273,SNR=6.9					
WAT6	**Susitna Watana**	**35.21**	**44**	P	**P**	**12 18 57.2 +0.6**
	baz=276					
M23K	**Glacier View**	**35.30**	**46**	P	**P**	**12 18 58.5 +1.3**
	baz=277					
DHY	**Denali Highway**	**35.33**	**43**	P	**P**	**12 18 58.0 +0.4**
	baz=276					
HDA	**Harding Lake**	**35.41**	**41**	IAmb	IAmb	12 18 59.4
	comp=Z,5.4nm,0.5s					
HDA	**Harding Lake**	**35.41**	**41**	P	**P**	**12 18 59.2 +1.2**
	baz=274,SNR=6.8					
ILAR	**Eielson Array**	**35.41**	**40**	P	**P**	**12 18 58.5 +0.4**
	comp=Z,3.0nm,0.7s,baz=261,slow=5.1,SNR=65					
	comp=Z,3.0nm,0.7s					
SCM	**Sheep Creek Mo**	**35.49**	**46**	P	**P**	**12 19 00.1 +1.2**
	baz=278					
P23K	**Montague Islan**	**35.72**	**49**	P	**P**	**12 19 01.9 +1.2**
	baz=280					
F25K	**Christian Rive**	**35.82**	**36**	IAmb	IAmb	12 19 04.2
	comp=Z,13nm,1.5s					
F25K	**Christian Rive**	**35.82**	**36**	P	**P**	**12 19 03.2 +1.6**
	baz=271,SNR=5.9					
E25K	**Arctic Village**	**35.84**	**35**	IAmb	IAmb	12 19 04.1
	comp=Z,8.3nm,0.9s					
E25K	**Arctic Village**	**35.84**	**35**	P	**P**	**12 19 03.4 +1.7**
	baz=270,SNR=12					
PRP	**Porcupine Dome**	**35.94**	**39**	IAmb	IAmb	12 19 04.8
	comp=Z,9.3nm,0.8s					
PRP	**Porcupine Dome**	**35.94**	**39**	P	**P**	**12 19 04.1 +1.4**
	baz=274,SNR=14					
K24K	**Donnelly Dome**	**35.97**	**42**	IAmb	IAmb	12 19 03.8
	comp=Z,9.5nm,0.8s					
K24K	**Donnelly Dome**	**35.97**	**42**	P	**P**	**12 19 03.3 +0.5**
	baz=276					
M24K	**Tolsona, Glenn**	**35.99**	**45**	P	**P**	**12 19 04.1 +1.0**
	baz=278					
J25K	**Salcha River,**	**36.07**	**41**	P	**P**	**12 19 04.3 +0.5**
	baz=275					
C26K	**Camden Bay**	**36.11**	**32**	P	**P**	**12 19 05.5 +1.7**
	baz=268					
KLU	**Klutina**	**36.20**	**46**	P	**P**	**12 19 05.8 +1.0**
	baz=279					
PAX	**Paxson**	**36.20**	**43**	P	**P**	**12 19 06.0 +1.1**
	baz=278					
BMAR	**Burnt Mountain**	**36.23**	**36**		**P**	**12 19 07.0 +2.0**
F26K	**Sheenjek River**	**36.39**	**35**	IAmb	IAmb	12 19 12.4
	comp=Z,5.6nm,0.6s					
F26K	**Sheenjek River**	**36.39**	**35**	P	**P**	**12 19 08.2 +1.9**
	baz=272,SNR=9.7					
RIDG	**Independent Ri**	**36.39**	**42**	P	**P**	**12 19 07.0 +0.5**
	baz=277					
HARP	**HAARP**	**36.42**	**44**	P	**P**	**12 19 07.9 +1.2**
	baz=278					
EYAK	**Cordova Ski Ar**	**36.44**	**47**	P	**P**	**12 19 07.4 +0.7**
	baz=281					
C27K	**Jago River**	**36.52**	**32**	IAmb	IAmb	12 19 09.5
	comp=Z,12nm,0.8s					
C27K	**Jago River**	**36.52**	**32**	P	**P**	**12 19 08.7 +1.3**
	baz=270					
G26K	**Porcupine Rive**	**36.56**	**37**	P	**P**	**12 19 08.8 +1.1**
	baz=274,SNR=8.3					
SCRK	**Sand Creek**	**36.74**	**42**	IAmb	IAmb	12 19 10.0
	comp=Z,4.7nm,0.5s					
SCRK	**Sand Creek**	**36.74**	**42**	P	**P**	**12 19 09.9 +0.5**
	baz=277,SNR=7.4					
N25K	**Chitina, Valde**	**36.81**	**46**	P	**P**	**12 19 11.0 +1.1**
	baz=280					
BMRM	**Bremner River**	**36.92**	**47**	P	**P**	**12 19 11.7 +0.9**
	baz=281					
MENT	**Mentasta**	**37.00**	**43**	IAmb	IAmb	12 19 13.4
	comp=Z,4.5nm,0.6s					
LZH	**Lanzhou**	**37.07**	**268**	*e*P	**P**	**12 19 12.8 +0.2**
LZH				pmax	pmax	
	comp=Z,22nm,1.6s					
L26K	**Log Cabin Wild**	**37.16**	**43**	P	**P**	**12 19 14.3 +1.5**
	baz=279					
KAIM	**Kayak Island**	**37.21**	**48**	P	**P**	**12 19 14.8 +1.6**
	baz=282					
LZDM	**Lanzhou Array**	**37.24**	**268**	P	**P**	**12 19 13.8 -0.4**
	comp=Z,1.7nm,0.4s,baz=67,slow=4.8,SNR=2.3					
	comp=Z,1.7nm,0.4s					
M26K	**Nabesna, AK**	**37.42**	**44**	IAmb	IAmb	12 19 17.8
	comp=Z,5.5nm,0.8s					
M26K	**Nabesna, AK**	**37.42**	**44**	P	**P**	**12 19 17.0 +1.9**
	baz=280,SNR=5.1					
D27M	**Malcolm River**	**37.50**	**33**	IAmb	IAmb	12 19 17.8
	comp=Z,7.6nm,0.9s					
D27M	**Malcolm River**	**37.50**	**33**	P	**P**	**12 19 16.6 +1.0**
	baz=273					
H27K	**Steamboat Moun**	**37.52**	**38**	P	**P**	**12 19 17.1 +1.3**
	baz=276,SNR=6.1					
I27K	**Kandik River**	**37.55**	**39**	P	**P**	**12 19 17.9 +1.8**
	baz=277					
MCARA	**McCarthy VSAT**	**37.59**	**46**	P	**P**	**12 19 18.5 +2.0**
	baz=282					
CRQE	**Cirque**	**37.68**	**47**	P	**P**	**12 19 19.2 +1.8**
	baz=282					
BGLC	**Bering Glacier**	**37.73**	**48**	P	**P**	**12 19 19.4 +1.9**
	baz=283					
L27K	**Beaver Creek,**	**37.83**	**43**	IAmb	IAmb	12 19 21.3
	comp=Z,11nm,0.9s					
L27K	**Beaver Creek,**	**37.83**	**43**	P	**P**	**12 19 20.6 +2.1**
	baz=280,SNR=9.1					
BCAR	**Beaver Creek A**	**37.85**	**43**		**P**	**12 19 20.2 +1.6**
GTA2	**Gaotai**	**37.88**	**276**	*e*P	**P**	**12 19 19.5 +0.2**
GTA2				pmax	pmax	
	comp=Z,4.0nm,1.0s					
M27K	**Edge Creek, AK**	**37.94**	**44**	IAmb	IAmb	12 19 22.4
	comp=Z,7.8nm,0.9s					
M27K	**Edge Creek, AK**	**37.94**	**44**	P	**P**	**12 19 21.2 +1.7**
	baz=281					
F28M	**Old Crow**	**38.02**	**35**	P	**P**	**12 19 21.8 +1.8**
	baz=276,SNR=7.7					
E28M	**Babbage River**	**38.06**	**34**	P	**P**	**12 19 21.4 +1.1**
	baz=275					
I28M	**Miner Creek**	**38.27**	**39**	IAmb	IAmb	12 19 24.4
	comp=Z,9.5nm,0.6s					
I28M	**Miner Creek**	**38.27**	**39**	P	**P**	**12 19 23.5 +1.4**
	baz=279,SNR=10.0					
D28M	**Stokes Point**	**38.29**	**32**	P	**P**	**12 19 23.3 +1.3**
	baz=275					
BVCY	**Beaver Creek**	**38.39**	**44**	P	**P**	**12 19 24.2 +1.1**
	baz=282,SNR=5.4					
CTG	**Chitna Glacier**	**38.48**	**46**	P	**P**	**12 19 25.1 +1.2**
	baz=283					
E29M	**Blow River**	**38.68**	**34**	IAmb	IAmb	12 19 28.0
	comp=Z,7.8nm,0.8s					
E29M	**Blow River**	**38.68**	**34**	P	**P**	**12 19 26.5 +1.1**
	baz=277,SNR=11					
YUK3	**Moose Creek**	**38.71**	**45**	P	**P**	**12 19 26.8 +0.8**
	baz=283					
DAWY	**Dawson**	**38.73**	**41**	P	**P**	**12 19 26.9 +1.0**
	baz=281					
I29M	**Ogilvie Camp,**	**38.95**	**39**	IAmb	IAmb	12 19 29.9
	comp=Z,9.4nm,0.8s					
I29M	**Ogilvie Camp,**	**38.95**	**39**	P	**P**	**12 19 29.2 +1.5**
	baz=280,SNR=9.2					
O28M	**Mount Upton**	**39.07**	**46**	P	**P**	**12 19 30.0 +1.0**
	baz=284					
YUK8	**Steele Glacier**	**39.15**	**45**	P	**P**	**12 19 30.1 +0.4**
	baz=284					
J29N	**Klondike Camp**	**39.16**	**40**	P	**P**	**12 19 30.8 +1.3**
	baz=281					
PINM	**Pinnacle**	**39.21**	**47**	P	**P**	**12 19 31.0 +1.0**
	baz=285					
EPYK	**Eagle Plains**	**39.42**	**37**	IAmb	IAmb	12 19 33.5
	comp=Z,7.9nm,0.8s					
EPYK	**Eagle Plains**	**39.42**	**37**	P	**P**	**12 19 33.2 +1.6**
	baz=280,SNR=8.9					
L29M	**L29M**	**39.47**	**42**	IAmb	IAmb	12 19 35.1
	comp=Z,9.0nm,0.8s					
L29M	**L29M**	**39.47**	**42**	P	**P**	**12 19 33.9 +1.8**
	baz=283,SNR=8.1					
M29M	**Somme Creek**	**39.48**	**43**	P	**P**	**12 19 33.5 +1.3**
	baz=284					
G30M	**tAoh Zraii Nji**	**39.51**	**36**	IAmb	IAmb	12 19 34.4
	comp=Z,7.4nm,0.9s					
G30M	**tAoh Zraii Nji**	**39.51**	**36**	P	**P**	**12 19 33.3 +1.0**
	baz=280,SNR=7.8					
F30M	**Barrier River**	**39.58**	**35**	P	**P**	**12 19 34.7 +1.9**
	baz=280,SNR=11					
K29M	**Barlow Dome**	**39.58**	**41**	P	**P**	**12 19 33.9 +0.9**
	baz=283					
YUK4	**Talbot Arm**	**39.66**	**45**	P	**P**	**12 19 35.2 +1.5**
	baz=285					
I30M	**Mount Dempster**	**39.78**	**39**	P	**P**	**12 19 35.9 +1.3**
	baz=282,SNR=22					
YUK6	**Outpost Mounta**	**39.89**	**46**	P	**P**	**12 19 36.7 +1.0**
	baz=286					
J30M	**Hart River**	**39.93**	**40**	P	**P**	**12 19 37.0 +1.1**
	baz=283					
O29M	**Mount Kennedy**	**39.96**	**47**	P	**P**	**12 19 37.7 +1.5**
	baz=286					
M30M	**Minto, Yukon**	**40.20**	**43**	P	**P**	**12 19 39.6 +1.6**
	baz=285					
G31M	**Satah River**	**40.28**	**36**	P	**P**	**12 19 39.2 +0.7**
	baz=282					
INK	**Inuvik**	**40.30**	**34**		**P**	**12 19 39.9 +1.3**
INK				IAmb	IAmb	12 19 40.3
	comp=Z,7.4nm,0.5s					
INK	**Inuvik**	**40.30**	**34**	P	**P**	**12 19 39.9 +1.3**
INK				pmax	pmax	
	comp=Z,7.0nm,0.5s					
INK	**Inuvik**	**40.30**	**34**	P	**P**	**12 19 39.4 +0.8**
	baz=281,SNR=8.0					
HYT	**Haines Junctio**	**40.33**	**46**	P	**P**	**12 19 40.8 +1.7**
	baz=286					
MAYO	**Mayo, Yukon**	**40.34**	**41**	P	**P**	**12 19 40.8 +1.7**
MAYO	**Mayo, Yukon**	**40.34**	**41**	P	**P**	**12 19 39.9 +0.8**
	baz=284					
F31M	**Tsiigehtchic**	**40.38**	**35**	IAmb	IAmb	12 19 41.3
	comp=Z,11nm,0.7s					
F31M	**Tsiigehtchic**	**40.38**	**35**	P	**P**	**12 19 40.4 +1.1**
	baz=282,SNR=12					
H31M	**Peel River**	**40.48**	**38**	IAmb	IAmb	12 19 42.4
	comp=Z,8.1nm,0.6s					
H31M	**Peel River**	**40.48**	**38**	P	**P**	**12 19 41.5 +1.3**
	baz=283,SNR=5.8					
ZALV	**Zalesovo Beam**	**40.72**	**303**	P	**P**	**12 19 40.7 -1.6**
	comp=Z,0.5nm,0.3s,baz=73,slow=7.1,SNR=2.6					
	comp=Z,0.5nm,0.3s					
P30M	**Million Dollar**	**40.79**	**46**	P	**P**	**12 19 44.2 +1.3**
	baz=287					
N31M	**Braeburn, Yuko**	**40.95**	**44**	P	**P**	**12 19 45.0 +1.0**
	baz=287					
O30N	**Mendenhall**	**41.01**	**45**	P	**P**	**12 19 46.1 +1.5**
	baz=287					
M31M	**Drury Creek, Y**	**41.37**	**43**	P	**P**	**12 19 49.1 +1.6**
	baz=287					
WHY	**Whitehorse**	**41.61**	**45**	P	**P**	**12 19 51.1 +1.5**
	baz=288					
SKAG	**Skagway**	**41.77**	**47**	P	**P**	**12 19 52.2 +1.4**
	baz=289					
S31K	**Pelican**	**41.83**	**49**	P	**P**	**12 19 52.8 +1.6**
	baz=290					
FARO	**Faro, Yukon**	**41.83**	**43**	P	**P**	**12 19 52.6 +1.3**
	baz=288					
A36M	**Sachs Harbour**	**42.31**	**27**	P	**P**	**12 19 56.1 +1.2**
	baz=284,SNR=43					
SIT	**Sitka**	**42.61**	**50**	P	**P**	**12 19 59.4 +2.0**
	baz=292					
P33M	**Teslin, Yukon**	**42.72**	**45**	P	**P**	**12 19 59.7 +1.2**
	baz=290					
GOMU	**GeErMu**	**42.96**	**275**	P	**P**	**12 20 00.0 -1.0**
GOMU				pmax	pmax	
	comp=Z,8.0nm,0.7s					
C36M	**Paulatuk**	**43.38**	**31**	P	**P**	**12 20 04.5 +1.0**
	baz=287,SNR=20					
WMQ	**Urumqi**	**43.43**	**289**	*e*P	**P**	**12 20 07.8 +3.5**
R33M	**Jennings River**	**43.89**	**46**	P	**P**	**12 20 09.6 +1.8**
	baz=292					
U33K	**Whale Pass**	**44.09**	**51**	P	**P**	**12 20 11.4 +2.1**
	baz=294					
CRAG	**Craig**	**44.36**	**52**	P	**P**	**12 20 13.1 +1.8**
	baz=295					
PZH	**PanZhiHua**	**44.57**	**259**	P	**P**	**12 20 14.0 +0.4**
WTLY	**Watson Lake, Y**	**44.63**	**44**	P	**P**	**12 20 15.3 +1.8**
	baz=293					
DLBC	**Dease Lake**	**44.71**	**47**	P	**P**	**12 20 16.2 +2.0**
	baz=294					
MK31	**Makanchi Array**	**45.26**	**295**	⇑*i*P	**P**	**12 20 17.9 -0.8**
MKAR	**Makanchi Array**	**45.26**	**295**	P	**P**	**12 20 18.0 -0.7**
	comp=Z,1.8nm,0.5s,baz=68,slow=8.2,SNR=32					
MKAR				PcP	**PcP**	**12 21 54.4 +0.8**
	comp=Z,0.4nm,0.6s,baz=67,slow=4.8,SNR=2.6					
MKAR				ScP	**ScP**	**12 25 20.8 +0.1**
	comp=Z,0.3nm,0.7s,baz=46,slow=5.2,SNR=3.6					
	comp=Z,1.8nm,0.5s					
MKAR	**Makanchi Array**	**45.26**	**295**	P	**P**	**12 20 18.3 -0.3**
MKAR	**Makanchi Array**	**45.26**	**295**	*e*P	**P**	**12 20 18.0 -0.7**
MAKZ	**Makanchi**	**45.44**	**295**	P	**P**	**12 20 19.7 -0.4**
MAKZ	**Makanchi**	**45.44**	**295**	P	**P**	**12 20 19.7 -0.4**
MAKZ				pmax	pmax	
	comp=Z,2.0nm,0.5s					
KURK	**Kurchatov**	**45.52**	**301**		**P**	**12 20 20.2 -0.3**
KURK	**Kurchatov**	**45.52**	**301**	P	**P**	**12 20 20.6 0.0**
KURK	**Kurchatov**	**45.52**	**301**	*e*P	**P**	**12 20 20.1 -0.5**
KURBB	**Kurchatov Arra**	**45.62**	**301**	P	**P**	**12 20 20.6 -0.7**
	comp=Z,2.9nm,0.8s,baz=70,slow=8.5,SNR=20					
WRGLY	**Wrigley**	**45.75**	**39**	P	**P**	**12 20 23.6 +1.4**
	baz=294					
U35K	**Hyder**	**45.76**	**50**	P	**P**	**12 20 23.2 +0.9**
	baz=296					
KOTAN	**Koeelee Air**	**46.79**	**43**	P	**P**	**12 20 30.9 +0.6**
	baz=296					
BVAR	**Borovoye Array**	**48.88**	**308**	P	**P**	**12 20 46.1 -0.3**
	comp=Z,2.7nm,0.5s,baz=56,slow=7.2,SNR=18					
BVAR				ScP	**ScP**	**12 25 33.5 -2.2**
	comp=Z,0.6nm,0.5s,baz=95,slow=5.7,SNR=4.8					
	comp=Z,2.7nm,0.5s					
BORK	**Borovoye**	**48.91**	**308**	P	**P**	**12 20 46.7 +0.1**
BORK	**Borovoye**	**48.91**	**308**	P	**P**	**12 20 46.7 +0.1**
BORK				pmax	pmax	
	comp=Z,2.0nm,0.6s					
YKA	**Yellowknife Ar**	**49.70**	**37**	P	**P**	**12 20 53.5 +1.1**
	comp=Z,4.5nm,0.7s,baz=304,slow=7.5,SNR=60					
YKA				PcP	**PcP**	**12 22 09.2 0.0**
	comp=Z,0.2nm,0.4s,baz=309,slow=4.5,SNR=1.3					
	comp=Z,4.5nm,0.7s					
YKA	**Yellowknife Ar**	**49.70**	**37**	P	**P**	**12 20 52.8 +0.4**
SPITS	**Spitsbergen Ar**	**50.36**	**349**	P	**P**	**12 20 55.7 -1.4**
	comp=Z,1.1nm,0.5s,baz=72,slow=8.0,SNR=4.8					
SPITS				ScP	**ScP**	**12 25 41.0 -0.6**
	comp=Z,2.8nm,0.9s,baz=116,slow=3.4,SNR=5.1					
	comp=Z,1.1nm,0.5s					
KDJ	**Kajisay**	**50.84**	**292**	P	**P**	**12 21 01.5 0.0**
KDJ	**Kajisay**	**50.84**	**292**	P	**P**	**12 21 01.5 0.0**
KDJ				pmax	pmax	
	comp=Z,2.0nm,0.5s					
BOOM	**Boomskoye usch**	**51.39**	**293**	P	**P**	**12 21 05.4 -0.1**
BOOM	**Boomskoye usch**	**51.39**	**293**	P	**P**	**12 21 05.4 -0.1**
BOOM				pmax	pmax	
	comp=Z,4.0nm,1.1s					
CMAR	**Chiang Mai Arr**	**52.14**	**254**	P	**P**	**12 21 10.8 -0.3**
	comp=Z,1.1nm,0.4s,baz=28,slow=6.8,SNR=7.6					
	comp=Z,1.1nm,0.4s					
CMAR	**Chiang Mai Arr**	**52.14**	**254**	*i* P	**P**	**12 21 11.6 +0.6**
CMAR				pmax	pmax	
	comp=Z,1.0nm,0.3s					
AAK	**Ala-Archa**	**52.18**	**294**	⇑*i*P	**P**	**12 21 11.2 0.0**
AAK				pmax	pmax	
	comp=Z,3.0nm,1.1s					
AAK	**Ala-Archa**	**52.18**	**294**	*e*P	**P**	**12 21 11.3 0.0**
LLLB	**Lillooet**	**52.64**	**53**	P	**P**	**12 21 16.1 +1.7**
ARTI	**Arti**	**53.00**	**316**	⇓*i*P	**P**	**12 21 16.1 -0.7**
ARTI				pmax	pmax	
	comp=Z,8.0nm,1.4s					
NLWA	**Neilton Lookou**	**53.39**	**57**	P	**P**	**12 21 22.1 +2.2**
NLWA				IAmb	IAmb	12 21 22.8
	comp=Z,18nm,1.3s					
KK31	**Karatay Array**	**54.27**	**297**	P	**P**	**12 21 26.0 -0.3**
KK31	**Karatay Array**	**54.27**	**297**	P	**P**	**12 21 26.0 -0.3**
KK31				pmax	pmax	
	comp=Z,2.0nm,1.0s					
KKAR	**Karatay Array**	**54.27**	**297**	P	**P**	**12 21 26.1 -0.2**
KKAR	**Karatay Array**	**54.27**	**297**	P	**P**	**12 21 26.1 -0.2**
BLKN	**Baker Lake**	**55.39**	**29**	IAmb	IAmb	12 21 34.3
	comp=Z,7.8nm,0.6s					
EDM	**Edmonton**	**55.43**	**47**	P	**P**	**12 21 35.9 +1.5**
EDM	**Edmonton**	**55.43**	**47**	P	**P**	**12 21 35.9 +1.5**
EDM				pmax	pmax	
	comp=Z,5.0nm,0.7s					
ARCES	**ARCESS Array B**	**55.56**	**340**	P	**P**	**12 21 33.6 -1.4**
	comp=Z,1.0nm,0.4s,baz=47,slow=8.0,SNR=11					
	comp=Z,1.0nm,0.4s					
ARCES	**ARCESS Array B**	**55.56**	**340**	P	**P**	**12 21 34.3 -0.7**
ARCES	**ARCESS Array B**	**55.56**	**340**	P	**P**	**12 21 34.3 -0.7**
ARCES				pmax	pmax	
	comp=Z,25nm,1.5s					
KIRV	**Kirov**	**55.58**	**322**	*e*P	**P**	**12 21 36.8 +1.5**
ILON	**Igloolik, Nuna**	**55.66**	**20**		**P**	**12 21 35.4 -0.3**
ILON				IAmb	IAmb	12 21 35.8
	comp=Z,8.9nm,0.6s					
AB31	**Akbulak array**	**56.44**	**308**	P	**P**	**12 21 41.8 +0.2**
ABKAR	**Akbulak array**	**56.44**	**308**	P	**P**	**12 21 41.5 0.0**
GAR	**Garm**	**56.90**	**293**	IAmb	IAmb	12 21 45.4
	comp=Z,8.1nm,1.0s					
CHGR	**Chuyangaron**	**57.82**	**293**		**P**	**12 21 50.9 -0.5**
CHGR				IAmb	IAmb	12 21 52.0
	comp=Z,12nm,1.0s					
CHGR	**Chuyangaron**	**57.82**	**293**	⇓*i*P	**P**	**12 21 51.4 0.0**
CHGR				pmax	pmax	
	comp=Z,8.0nm,0.7s					
PLID	**Pearl Lake**	**59.13**	**56**	IAmb	IAmb	12 22 02.9
	comp=Z,5.3nm,0.8s					
FFC	**Flin Flon**	**59.62**	**40**		**P**	**12 22 04.8 +1.4**
FFC				IAmb	IAmb	12 22 05.6
	comp=Z,4.5nm,0.8s					
FFC	**Flin Flon**	**59.62**	**40**	P	**P**	**12 22 04.8 +1.4**
FFC				pmax	pmax	
	comp=Z,4.0nm,0.8s					
MPK	**Martis Peak**	**60.58**	**63**		**P**	**12 22 12.4 +1.9**
MPK				IAmb	IAmb	12 22 13.2
	comp=Z,11nm,1.3s					
PAHR	**Pah Rah Range**	**60.69**	**62**	P	**P**	**12 22 13.1 +2.0**
FINES	**FINESS Array B**	**61.75**	**334**	P	**P**	**12 22 16.4 -1.2**
	comp=Z,1.3nm,0.4s,baz=30,slow=7.3,SNR=15					
	comp=Z,1.3nm,0.4s					
NVAR	**Mina Array Bea**	**62.17**	**63**	P	**P**	**12 22 22.9 +1.8**
	comp=Z,2.2nm,0.8s,baz=293,slow=7.3,SNR=17					
	comp=Z,2.2nm,0.8s					
PD31	**Pinedale Array**	**64.14**	**54**		**P**	**12 22 35.3 +1.4**
PD31				IAmb	IAmb	12 22 36.0
	comp=Z,4.8nm,1.1s					
PDAR	**Pinedale Array**	**64.14**	**54**	P	**P**	**12 22 35.2 +1.4**
	comp=Z,2.3nm,0.7s,baz=347,slow=0.7,SNR=27					
PDAR				pP	**pP**	**12 23 33.2 +1.1**
	comp=Z,0.2nm,0.6s,baz=294,slow=4.4,SNR=3.3					
	comp=Z,2.3nm,0.7s					
PDAR	**Pinedale Array**	**64.14**	**54**	P	**P**	**12 22 35.4 +1.4**
ULM	**Lac du Bonnet**	**65.43**	**41**	P	**P**	**12 22 42.2 +0.5**
	comp=Z,2.0nm,0.6s,baz=332,slow=7.2,SNR=3.4					
	comp=Z,2.0nm,0.6s					
NOA	**NORSAR Array B**	**65.93**	**340**	P	**P**	**12 22 44.0 -0.9**
	comp=Z,0.7nm,0.7s,baz=344,slow=16,SNR=4.0					
	comp=Z,0.7nm,0.7s					
NOA	**NORSAR Array B**	**65.93**	**340**	P	**P**	**12 22 44.0 -0.9**
HFS	**Hagfors**	**66.16**	**339**	P	**P**	**12 22 45.0 -1.2**
	comp=Z,1.3nm,0.3s,baz=57,slow=5.5,SNR=13					
	comp=Z,1.3nm,0.3s					
WRAB	**Tennant Creek**	**70.28**	**198**	⇓*i*P	**P**	**12 23 13.4 +1.3**
WRAB				pmax	pmax	
	comp=Z,5.0nm,1.1s					
WRA	**Warramunga Arr**	**70.29**	**198**	P	**P**	**12 23 13.1 +0.8**
	comp=Z,1.6nm,0.5s,baz=18,slow=5.9,SNR=20					
WRA				pP	**pP**	**12 24 14.1 +2.8**
	comp=Z,1.3nm,1.0s,baz=17,slow=6.7,SNR=3.5					
	comp=Z,1.6nm,0.5s					
SCHQ	**Schefferville**	**71.64**	**22**	P	**P**	**12 23 19.8 -0.2**
	comp=Z,2.2nm,0.5s,baz=339,slow=5.0,SNR=12					
	comp=Z,2.2nm,0.5s					
ASAR	**Alice Springs**	**74.00**	**197**	P	**P**	**12 23 35.6 +1.6**
	comp=Z,1.7nm,0.4s,baz=9.3,slow=5.9,SNR=58					
ASAR				pP	**pP**	**12 24 34.5 +0.8**
	comp=Z,1.0nm,0.8s,baz=17,slow=5.9,SNR=5.7					
	comp=Z,1.7nm,0.4s					
SRO	**Srobarova**	**75.62**	**330**	*e*P	**P**	**12 23 45.5 +2.4**
SRO	**Srobarova**	**75.62**	**330**	*e*P	**P**	**12 23 45.5 +2.4**
BRTR	**Keskin Array B**	**76.28**	**316**	P	**P**	**12 23 46.8 -0.3**
	comp=Z,0.5nm,0.7s,baz=58,slow=3.6,SNR=1.7					
	comp=Z,0.5nm,0.7s					
TXAR	**Lajitas Array**	**77.14**	**60**	P	**P**	**12 23 53.5 +1.4**
	comp=Z,1.4nm,0.7s,baz=292,slow=5.1,SNR=27					
TXAR				pP	**pP**	**12 24 53.6 +1.1**
	comp=Z,0.3nm,0.6s,baz=302,slow=3.8,SNR=3.6					
	comp=Z,1.4nm,0.7s					
ESDC	**Sonseca Array**	**89.26**	**342**	P	**P**	**12 24 52.4 -1.1**
	comp=Z,0.6nm,0.9s,baz=19,slow=3.1,SNR=2.4					
	comp=Z,0.6nm,0.9s					

NOU ***28*** *12:21:54.6,41˚11′S×172˚40′E,h8km,MLv3.5/10,South Island, New Zealand*
WEL ***28*** *12:21:54.4±0.5,41˚5′±3′×17˚3′E±˚,h5km,M2.8/7,ML2.7/8, MLv2.8/7,Error ellipse: s-maj=3.9km s-min=3.4km az=144.2*

ISC 28 12:21:54.7±1.1,41˚15′S±0′.02×172˚55′E±0′.03,h10km±11km, n46,σ1s01/53,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRNZ	**Matariki Terra**	**0.29**	**148**	P	**Pg**	**12 22 00.4**	**-0.2**
MRNZ				S	**Sg**	**12 22 04.5**	**-0.1**
MATW	**Matariki Wadsw**	**0.30**	**158**	P

HIZ	**Hauiti**	**3.17**	**35**	P		**Pn**	**12 22 45.0**	**+0.2**
BKZ	**Black Stump Fm**	**3.61**	**58**	P		**Pn**	**12 22 52.0**	**+1.2**
URZ	**Urewera**	**4.55**	**52**	P		**Pn**	**12 23 05.1**	**+1.4**

NOU 28 12:24:12.5, 22°19S × 170°09E, h0km, MLv4.5/13, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.04**	**290**	P	Pn	12 24 47.1	-1.0
INH	**Isangel**	**2.74**	**344**	P	Pn	12 24 58.0	+0.3
OUENC	**Ouen Island, N**	**3.02**	**265**	P	Pn	12 25 00.8	-0.8
ONTNC	**Ouen Toro**	**3.37**	**267**	P	Pn	12 25 06.5	+0.1
ONTNC	**Ouen Toro**	**3.37**	**267**	S	Sn	12 25 47.5	+0.3
DZM	**Mont Dzumac**	**3.38**	**271**	S	Pn	12 25 06.5	-0.2
DZM	**Mont Dzumac**	**3.38**	**271**	S	Sn	12 25 47.8	+0.2
RTV	**Rentapao**	**4.65**	**340**	P	Pn	12 25 24.7	+0.7
RTV	**Rentapao**	**4.65**	**340**	S	Sn	12 26 19.2	+0.6
DVP	**Devils Point**	**4.79**	**338**	P	Pn	12 25 25.9	0.0
DVP	**Devils Point**	**4.79**	**338**	S	Sn	12 26 22.7	+0.6
KOUNC	**Koumac, New Ca**	**5.65**	**286**	P	Pn	12 25 38.8	+1.0

*NOU **28** 12:38:01.6, 39°61S × 174°12E, h41km, MLv3.5/17, North Island, New Zealand*
*WEL **28** 12:38:01.6±0.3, 40°S±3°×17°4E±°, h40km±6km, M3.5/40, ML3.4/39, MLv3.5/40, Error ellipse: s-maj=5.9km s-min=2.8km az=130.2*

ISC 28 12:38:02.0±1.3, 39°63S±0°03×174°19E±0°03, h51km±8km, n87, σ0s70/103, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.23**	**45**	P	**Pn**	**12 38 09.7**	**-1.0**
LREZ				S	**Sn**	**12 38 16.6**	**-0.3**
PREZ	**Palmer Road**	**0.29**	**355**	P	**Pn**	**12 38 10.8**	**-0.3**
PREZ				S	**Sn**	**12 38 18.3**	**+0.6**
NMEZ	**Namu Road**	**0.32**	**311**	P	**Pn**	**12 38 11.3**	**-0.1**
NMEZ				S	**Sn**	**12 38 19.2**	**+1.1**
KHEZ	**Kahui Hut**	**0.36**	**338**	P	**Pn**	**12 38 11.2**	**-0.7**
KHEZ	**Kahui Hut**	**0.36**	**338**	S	**Pn**	**12 38 19.6**	**+0.7**
KHEZ	**Kahui Hut**	**0.36**	**338**	P	**Pn**	**12 38 11.7**	**-0.2**
KHEZ				S	**Sn**	**12 38 19.8**	**+0.9**
DREZ	**Durham Road**	**0.44**	**1**	P	**Pn**	**12 38 12.5**	**-0.1**
DREZ				S	**Sn**	**12 38 21.1**	**+0.9**
NBEZ	**Newall Road No**	**0.44**	**325**	P	**Pn**	**12 38 12.6**	**0.0**
MHEZ	**Mangahewa**	**0.56**	**11**	P	**Pn**	**12 38 14.3**	**+0.3**
MHEZ				S	**Sn**	**12 38 23.7**	**+1.0**
WAZ	**Wanganui**	**0.63**	**102**	P	**Pn**	**12 38 13.7**	**-1.2**
WAZ				S	**Sn**	**12 38 23.1**	**-1.0**
VRZ	**Vera Road**	**0.67**	**41**	P	**Pn**	**12 38 14.8**	**-0.6**
VRZ				S	**Sn**	**12 38 25.1**	**0.0**
PKVZ	**Pokaka**	**0.96**	**70**	P	**Pn**	**12 38 18.3**	**-0.9**
PKVZ				S	**Sn**	**12 38 30.9**	**-0.9**
MTVZ	**Mangateitei**	**1.02**	**77**	P	**Pn**	**12 38 19.3**	**-0.8**
MTVZ				S	**Sn**	**12 38 32.9**	**-0.5**
OHWZ	**Ohakea**	**1.04**	**124**	P	**Pn**	**12 38 20.0**	**-0.2**
OHWZ				S	**Sn**	**12 38 34.1**	**+0.3**
TRVZ	**Turoa**	**1.10**	**73**	P	**Pn**	**12 38 20.7**	**-0.6**
TRVZ				S	**Sn**	**12 38 34.5**	**-1.0**
TWVZ	**Taurewa**	**1.11**	**60**	P	**Pn**	**12 38 20.6**	**-0.8**
TWVZ				S	**Sn**	**12 38 34.8**	**-1.0**
FWVZ	**Far West T-bar**	**1.12**	**71**	P	**Pn**	**12 38 20.8**	**-0.7**
MAVZ	**Matarangi**	**1.12**	**72**	P	**Pn**	**12 38 20.9**	**-0.7**
COVZ	**Chateau Observ**	**1.13**	**68**	P	**Pn**	**12 38 20.9**	**-0.7**
COVZ				S	**Sn**	**12 38 35.4**	**-0.7**
WHVZ	**Whangaehu Hut**	**1.14**	**73**	P	**Pn**	**12 38 21.0**	**-0.7**
NGZ	**Ngauruhoe**	**1.18**	**68**	P	**Pn**	**12 38 21.6**	**-0.8**
NGZ				S	**Sn**	**12 38 37.0**	**-0.4**
TUVZ	**Tukino**	**1.19**	**73**	P	**Pn**	**12 38 22.0**	**-0.4**
DUWZ	**D'Urville Isla**	**1.19**	**190**	P	**Pn**	**12 38 21.6**	**-0.7**
DUWZ				S	**Sn**	**12 38 38.4**	**+0.9**
WTVZ	**West Tongariro**	**1.20**	**65**	P	**Pn**	**12 38 21.8**	**-0.7**
SNVZ	**South Ngauruho**	**1.21**	**69**	P	**Pn**	**12 38 22.1**	**-0.6**
HIZ	**Hauiti**	**1.23**	**25**	P	**Pn**	**12 38 22.4**	**-0.4**
HIZ	**Hauiti**	**1.23**	**25**	S	**Sn**	**12 38 37.9**	**-0.4**
HIZ	**Hauiti**	**1.23**	**25**	P	**Pn**	**12 38 22.2**	**-0.6**
MOVZ	**Moawhango**	**1.23**	**80**	P	**Pn**	**12 38 22.1**	**-0.8**
OTVZ	**Oturere**	**1.23**	**68**	P	**Pn**	**12 38 22.4**	**-0.6**
KRVZ	**Karewarewa**	**1.24**	**65**	P	**Pn**	**12 38 22.3**	**-0.8**
NTVZ	**North Tongarir**	**1.27**	**66**	P	**Pn**	**12 38 22.8**	**-0.7**
ETVZ	**East Tongariro**	**1.28**	**68**	P	**Pn**	**12 38 22.9**	**-0.7**
TMVZ	**Te Maari**	**1.28**	**67**	P	**Pn**	**12 38 23.0**	**-0.6**
KATZ	**Kakaramea**	**1.34**	**61**	P	**Pn**	**12 38 23.8**	**-0.6**
KIW	**Kapiti Island**	**1.35**	**156**	P	**Pn**	**12 38 23.7**	**-0.8**
OGWZ	**Otaki Gorge**	**1.41**	**148**	P	**Pn**	**12 38 24.6**	**-0.6**
TSZ	**Takapari Road**	**1.43**	**108**	P	**Pn**	**12 38 25.4**	**-0.2**
POWZ	**Post Office Ro**	**1.43**	**123**	P	**Pn**	**12 38 25.5**	**0.0**
RATZ	**Rangitukua**	**1.44**	**59**	P	**Pn**	**12 38 25.5**	**-0.3**
RITZ	**Rihia Road**	**1.45**	**64**	P	**Pn**	**12 38 25.8**	**0.0**
MRZ	**Mangatainoka R**	**1.48**	**135**	P	**Pn**	**12 38 26.2**	**-0.1**
WATZ	**Wairara**	**1.51**	**53**	P	**Pn**	**12 38 26.3**	**-0.3**
PNHZ	**Pukenui**	**1.57**	**101**	P	**Pn**	**12 38 27.1**	**-0.5**
TCW	**Tory Channel**	**1.58**	**178**	P	**Pn**	**12 38 27.1**	**-0.5**
CAW	**Cannon Point**	**1.62**	**156**	P	**Pn**	**12 38 27.8**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.62**	**142**	P	**Pn**	**12 38 28.4**	**+0.1**
PRWZ	**Pori Road**	**1.65**	**125**	P	**Pn**	**12 38 29.3**	**+0.7**
DVHZ	**Dannevirke**	**1.66**	**114**	P	**Pn**	**12 38 28.8**	**+0.1**
TLZ	**Tolley Road**	**1.67**	**39**	P	**Pn**	**12 38 28.5**	**-0.4**
WHTZ	**Whakaora**	**1.68**	**56**	P	**Pn**	**12 38 30.4**	**+1.5**
KRHZ	**Kereru**	**1.68**	**91**	P	**Pn**	**12 38 28.8**	**-0.3**
TKNZ	**Takaka Hill**	**1.69**	**213**	P	**Pn**	**12 38 28.4**	**-0.7**
NNZ	**Nelson**	**1.70**	**201**	P	**Pn**	**12 38 28.8**	**-0.4**
KUTZ	**Kaahu Road**	**1.71**	**49**	P	**Pn**	**12 38 29.4**	**+0.1**
WEL	**Wellington**	**1.71**	**165**	P	**Pn**	**12 38 29.4**	**0.0**
SNZO	**South Karori**	**1.73**	**167**	P	**Pn**	**12 38 29.6**	**0.0**
SNZO	**South Karori**	**1.73**	**167**	S	**Sn**	**12 38 51.0**	**+0.6**
TIWZ	**Tintock**	**1.73**	**132**	P	**Pn**	**12 38 30.5**	**+0.8**
KWHZ	**Kaweka Forest**	**1.74**	**84**	P	**Pn**	**12 38 29.9**	**+0.1**
QRZ	**Quartz Range**	**1.75**	**226**	P	**Pn**	**12 38 28.9**	**-1.0**
QRZ	**Quartz Range**	**1.75**	**226**	S	**Sn**	**12 38 49.1**	**-1.9**
QRZ	**Quartz Range**	**1.75**	**226**	P	**Pn**	**12 38 28.7**	**-1.1**
WPHZ	**Waipukurau**	**1.79**	**105**	P	**Pn**	**12 38 31.7**	**+1.3**
TUWZ	**Tuamarina**	**1.81**	**186**	P	**Pn**	**12 38 30.9**	**+0.2**
MTW	**Mount Morrison**	**1.83**	**147**	P	**Pn**	**12 38 31.6**	**+0.7**
BKZ	**Black Stump Fm**	**1.84**	**76**	P	**Pn**	**12 38 30.6**	**-0.6**
BKZ	**Black Stump Fm**	**1.84**	**76**	S	**Sn**	**12 38 54.3**	**+0.9**
BKZ	**Black Stump Fm**	**1.84**	**76**	P	**Pn**	**12 38 30.9**	**-0.3**
BHW	**Baring Head**	**1.85**	**164**	P	**Pn**	**12 38 31.5**	**+0.2**
BFZ	**Birch Farm**	**1.90**	**124**	P	**Pn**	**12 38 33.0**	**+1.1**
BFZ	**Birch Farm**	**1.90**	**124**	S	**Sn**	**12 38 55.6**	**+1.0**
BFZ	**Birch Farm**	**1.90**	**124**	P	**Pn**	**12 38 32.8**	**+1.0**
MRHZ	**Matea Rd**	**1.90**	**66**	P	**Pn**	**12 38 31.9**	**-0.2**
ANWZ	**Angora Road**	**1.94**	**116**	P	**Pn**	**12 38 32.8**	**+0.3**
MCHZ	**McNeill Hill**	**1.95**	**85**	P	**Pn**	**12 38 34.0**	**+1.4**
MSWZ	**Moikau Station**	**1.96**	**156**	P	**Pn**	**12 38 33.3**	**+0.5**
TMWZ	**Te Maipa**	**1.97**	**139**	P	**Pn**	**12 38 33.1**	**+0.2**
PRHZ	**Porangahau**	**1.98**	**110**	P	**Pn**	**12 38 33.3**	**+0.2**
MRNZ	**Matariki Terra**	**2.08**	**211**	P	**Pn**	**12 38 34.0**	**-0.5**
PLWZ	**Palliser**	**2.10**	**158**	P	**Pn**	**12 38 35.7**	**+0.9**
TOZ	**Tahuroa Road**	**2.15**	**29**	P	**Pn**	**12 38 34.9**	**-0.5**
URZ	**Urewera**	**2.66**	**60**	P	**Pn**	**12 38 42.2**	**-0.1**
URZ	**Urewera**	**2.66**	**60**	S	**Sn**	**12 39 14.2**	**+1.0**
KHZ	**Kahutara**	**2.83**	**190**	P	**Pn**	**12 38 45.2**	**+0.6**
OUZ	**Omahuta**	**4.42**	**354**	P	**Pn**	**12 39 06.9**	**+0.3**
ODZ	**Otahua Downs**	**6.02**	**205**	P	**Pn**	**12 39 27.8**	**-0.6**

*UPP **28** 12:49:14.2±0.1, 67°84N × 20°18E, h0km, ML2.7, Confirmed Induced event*
*HEL **28** 12:49:15.8±0.2, 67°84N × 20°31E, h0km, ML1.3, Suspected explosion*

ISC 28 12:49:14.2±0.8, 67°83N±0°03×20°21E±0°03, h0km, n21, σ0s94/34, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara** baz=220	**0.14**	**20**	P	**Pg**	**12 49 16.8**	**0.0**
KUA				S	**Sg**	**12 49 18.9**	**+0.3**
RATU	**Laukkuluspa**	**0.23**	**270**	P	**Pg**	**12 49 18.6**	**-0.1**
RATU				S	**Sg**	**12 49 22.1**	**+0.4**
KOVU	**Salmi**	**0.40**	**357**	P	**Pg**	**12 49 21.7**	**-0.1**
KOVU				S	**Sg**	**12 49 26.8**	**-0.1**
NIKU	**Nikkaluokta**	**0.45**	**276**	P	**Pg**	**12 49 22.6**	**-0.1**
NIKU				S	**Sg**	**12 49 29.1**	**+0.6**
LANU	**Lannavaara**	**0.71**	**71**	P	**Pg**	**12 49 27.9**	**+0.1**
LANU				S	**Sg**	**12 49 37.5**	**+0.5**
LANU	**Lannavaara**	**0.71**	**71**	PG	**Pg**	**12 49 27.8**	**+0.1**
LANU				SG	**Sg**	**12 49 36.4**	**-0.6**
SALU	**Saltoluokta**	**0.79**	**236**	P	**Pg**	**12 49 29.0**	**-0.3**
KIF	**Kilpisjarvi**	**1.20**	**10**	PG	**Pb**	**12 49 37.7**	**-0.1**
KIF				smax	smax	12 49 52.9	
	comp=Z,3.1nm,0.2s						
KIF				SG	**Sb**	**12 49 53.3**	**-0.5**
HEF	**Hetta**	**1.42**	**64**	PG	**Pn**	**12 49 40.4**	**-0.8**
HEF				smax	smax	12 49 57.3	
	comp=Z,1.3nm,0.2s						
HEF				SG	**Sn**	**12 50 00.9**	**+0.3**
ERTU	**Ertsjaerv**	**1.49**	**148**	P	**Pn**	**12 49 42.3**	**+0.1**
ERTU	**Ertsjaerv**	**1.49**	**148**	PG	**Pn**	**12 49 42.4**	**+0.2**
ERTU				SN	**Sn**	**12 50 03.3**	**+1.0**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**12 49 43.4**	**+0.3**
KLF				smax	smax	12 50 01.7	
	comp=Z,1.6nm,0.2s						
KLF				SG	**Sn**	**12 50 04.2**	**+0.1**
KTK1	**Kautokeino**	**1.63**	**42**	PG	**Pb**	**12 49 45.0**	**-0.2**
KTK1				SN	**Sg**	**12 50 07.7**	**+1.1**
TRO	**Tromso**	**1.87**	**346**	SG	**Sg**	**12 50 13.9**	**-0.4**
TOF	**Tornio**	**2.39**	**135**	PB	**Pb**	**12 49 56.9**	**-1.1**
TOF				smax	smax	12 50 26.0	
	comp=Z,1.8nm,0.2s						
TOF				SG	**Sb**	**12 50 29.0**	**+1.1**
RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pb**	**12 49 59.6**	**-1.4**
RNF				SG	**Sb**	**12 50 33.5**	**+0.4**
ARA0	**ARCESS Array S**	**2.59**	**46**	SB	**Sb**	**12 50 33.2**	**-0.4**
RAJF	**Raja-Jooseppi**	**3.10**	**74**	SG	**Sb**	**12 50 49.3**	**+1.0**
KEV	**Kevo**	**3.14**	**49**	SB	**Sb**	**12 50 46.5**	**-3.0**
RANF	**Ranua**	**3.17**	**122**	SG	**Sg**	**12 50 54.7**	**-1.1**
VRF	**Varrio**	**3.57**	**87**	PN	**Pn**	**12 50 13.4**	**+2.7**

*IDC **28** 13:24:08.2±0.8, 35°63N × 70°51E, h0km, mb3.9/17, mbtmp4.0/21, ML4.1/5, MS3.0/1, Error ellipse: s-maj=16.8km s-min=14.3km az=24.0*
*MOS **28** 13:24:22.5±1.0, 36°20N × 70°44E, h108km, mb4.2/6, Error ellipse: s-maj=10.6km s-min=4.9km az=79.0*
*BJI **28** 13:24:22.3, 36°33N × 70°43E, h105km, mB4.4/5, mb4.3/22*
*NEIC **28** 13:24:23.9±1.6, 36°21N±0°04×70°5E±0°1, h101km±10km, mb4.4/23, Error ellipse: s-maj=13.2km s-min=6.1km az=92.0*
*NNC **28** 13:24:24.9±5.8, 36°42N × 70°22E, h98km±52km, mb4.1, mpv4.6, Error ellipse: s-maj=44.8km s-min=28.2km az=21.0*

ISC 28 13:24:23.3±0.5, 36°16N±0°05×70°47E±0°04, h110km, n126, σ2s12/139, mb4.2/32, 16C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.99**	**216**		**Pn**	**13 24 57.0**	**+0.6**
KBL				Sn	**Sn**	**13 25 22.6**	**+1.0**
KBL	**Kabul**	**1.99**	**216**	PN	**Pn**	**13 24 57.0**	**+0.6**
KBL						13 25 22.6	
SHAA	**Shahritus**	**2.34**	**307**		**Pn**	**13 25 00.7**	**-0.1**
SHAA				Sn	**Sn**	**13 25 29.0**	**-0.5**
CHGR	**Chuyangaron**	**2.70**	**338**		**Pn**	**13 25 05.4**	**0.0**
CHGR				Sn	**Sn**	**13 25 36.3**	**-1.5**
CHGR	**Chuyangaron**	**2.70**	**338**	PN	**Pn**	**13 25 05.4**	**0.0**
CHGR						13 25 36.3	
GAR	**Garm**	**2.84**	**358**		**Pn**	**13 25 08.0**	**+0.7**
DRK	**Karamyk**	**3.48**	**17**		**Pn**	**13 25 17.2**	**+1.3**
DRK	**Karamyk**	**3.48**	**17**	PN	**Pn**	**13 25 17.2**	**+1.3**
BTK	**Batken**	**3.90**	**4**		**Pn**	**13 25 22.9**	**+1.5**
BTK	**Batken**	**3.90**	**4**	PN	**Pn**	**13 25 22.9**	**+1.5**
JMU	**Jammu**	**4.93**	**132**	*eP*	**Pn**	**13 25 35.6**	**+0.4**
JMU				*eS*	**Sn**	**13 26 28.2**	**-3.0**
JMU				IAML		13 33 04.2	
	comp=E,257nm,0.3s						
JMU				IAML		13 33 04.7	
	comp=N,390nm,0.7s						
KSH2	**Kashi**	**5.03**	**52**	P	**Pn**	**13 25 39.0**	**+2.5**
KSH2				S	**Sn**	**13 26 36.5**	**+3.0**
KSH2				smax	smax		
	comp=N,580nm,0.5s						
KSH2				smax	smax		
	comp=N,630nm,0.8s						
ARSB	**Arslanbob**	**5.52**	**20**		**Pn**	**13 25 42.8**	**-0.4**
ARSB	**Arslanbob**	**5.52**	**20**	PN	**Pn**	**13 25 42.8**	**-0.4**
TSSA	**Tissa**	**5.74**	**124**	*eP*	**Pn**	**13 25 45.6**	**-0.7**
TSSA				*eS*	**Sn**	**13 26 47.4**	**-3.7**
TSSA				IAML		13 32 25.7	
	comp=E,209nm,0.1s						
TSSA				IAML		13 32 26.5	
	comp=N,326nm,0.4s						
ALCI	**Alchi Leh**	**5.83**	**107**	*eP*	**Pn**	**13 25 47.7**	**0.0**
ALCI				*eS*	**Sn**	**13 26 48.7**	**-4.7**
ALCI				IAML		13 33 13.3	
	comp=E,225nm,0.6s						
ALCI				IAML		13 33 13.8	
	comp=N,374nm,0.3s						
DHRM	**DHARAMSHALA**	**6.21**	**127**	*eP*	**Pn**	**13 25 52.4**	**-0.3**
DHRM				*eS*	**Sn**	**13 26 57.3**	**-5.1**
DHRM				*eS*		13 26 57.9	
DHRM				IAML		13 27 00.4	
	comp=E,460nm,0.3s						
DHRM				IAML		13 27 00.8	
	comp=N,575nm,0.6s						
NRN	**Naryn**	**6.81**	**38**		**Pn**	**13 25 59.4**	**-1.5**
NRN	**Naryn**	**6.81**	**38**	PN	**Pn**	**13 25 59.4**	**-1.5**
UCH	**Uchtor** SNR=52	**6.83**	**26**	P	**Pn**	**13 26 00.8**	**-0.4**
BHK	**Bhakra**	**6.84**	**132**	*eP*	**Pn**	**13 26 05.8**	**+4.7**
BHK				*eS*	**Sn**	**13 27 19.1**	**+1.7**
BHK				IAML		13 33 14.2	
	comp=E,362nm,0.3s						
BHK				IAML		13 33 14.7	
	comp=N,428nm,0.4s						
KK31	**Karatay Array**	**6.94**	**0**		**Pn**	**13 26 01.9**	**-0.4**
KK31	**Karatay Array**	**6.94**	**0**	⇑P	**Pn**	**13 26 01.5**	**-0.7**
	comp=N,29nm,0.3s,baz=186,slow=13,SNR=728						
KK31				⇑S	**Sn**	**13 27 17.4**	**-2.2**
	comp=N,60nm,0.6s,baz=189,slow=25,SNR=6.4						
KK31	**Karatay Array**	**6.94**	**0**	PN	**Pn**	**13 26 01.9**	**-0.4**
KKAR	**Karatay Array**	**6.94**	**0**		**Pn**	**13 26 01.9**	**-0.4**
KKAR	**Karatay Array**	**6.94**	**0**	PN	**Pn**	**13 26 01.9**	**-0.4**
EKS2	**Erkin-Say** SNR=92	**6.98**	**21**	P	**Pn**	**13 26 02.9**	**0.0**
AAK	**Ala-Archa** SNR=50	**7.18**	**24**	P	**Pn**	**13 26 05.7**	**0.0**
AAK	**Ala-Archa**	**7.18**	**24**	Pn	**Pn**	**13 26 03.9**	**-1.8**
	comp=N,14nm,0.3s,baz=207,slow=9.2,SNR=98						
AAK				Sn	**Sn**	**13 27 24.0**	**-1.8**
	comp=N,7.0nm,0.3s,baz=328,slow=21,SNR=14 comp=N,24nm,0.3s						
AAK	**Ala-Archa**	**7.18**	**24**		**Pn**	**13 26 06.0**	**+0.3**
AAK	**Ala-Archa**	**7.18**	**24**	⇑P	**Pn**	**13 26 05.5**	**-0.2**
	comp=N,15nm,0.6s						
AAK				⇑S	**Sn**	**13 27 22.1**	**-3.7**
	comp=N,37nm,0.7s						
AAK	**Ala-Archa**	**7.18**	**24**	PN	**Pn**	**13 26 06.0**	**+0.3**
KBK	**Karagaybulak** SNR=46	**7.36**	**27**	P	**Pn**	**13 26 08.5**	**+0.4**
FRU1	**Bishkek**	**7.38**	**25**		**Pn**	**13 26 08.8**	**+0.5**
FRU1	**Bishkek**	**7.38**	**25**	PN	**Pn**	**13 26 08.8**	**+0.5**
SMLA	**Simla**	**7.51**	**130**	*eP*	**Pn**	**13 26 10.4**	**+0.4**
SMLA				*eS*	**Sn**	**13 27 28.8**	**-4.8**
SMLA				IAML		13 27 31.3	
	comp=N,564nm,0.4s						
SMLA				IAML		13 27 31.9	
	comp=E,600nm,0.3s						
ULHL	**Ulahol** SNR=28	**7.55**	**35**	P	**Pn**	**13 26 10.5**	**-0.3**
CHMS	**Chumysh** SNR=23	**7.59**	**25**	P	**Pn**	**13 26 11.1**	**-0.1**
USP	**Ospenovka** SNR=16	**7.75**	**22**	P	**Pn**	**13 26 13.6**	**+0.3**
TKM2	**Tokmak 2** SNR=41	**7.83**	**29**	P	**Pn**	**13 26 14.4**	**-0.1**
KDJ	**Kajisay**	**7.92**	**39**		**Pn**	**13 26 15.0**	**-0.8**
KDJ	**Kajisay**	**7.92**	**39**	PN	**Pn**	**13 26 15.0**	**-0.8**
KLP	**Kalpa**	**7.95**	**123**	*eP*	**Pn**	**13 26 15.8**	**-0.5**
KLP				*eS*	**Sn**	**13 27 38.7**	**-6.0**
KLP				IAML		13 33 33.5	
	comp=E,697nm,0.4s						
KLP				IAML		13 33 34.9	
	comp=N,743nm,0.3s						
TARG	**Taragay, Kyrgy**	**7.97**	**44**		**Pn**	**13 26 16.5**	**-0.2**
TARG	**Taragay, Kyrgy**	**7.97**	**44**	PN	**Pn**	**13 26 16.5**	**-0.2**
WUS	**Wushi**	**8.49**	**51**		**Pn**	**13 26 24.1**	**+0.7**
PRZ	**Przheval'sk**	**8.81**	**42**		**Pn**	**13 26 27.7**	**-0.1**
PRZ	**Przheval'sk**	**8.81**	**42**	PN	**Pn**	**13 26 27.7**	**-0.1**
PDGK	**Podgornoye** comp=N,6.9nm,0.8s	**9.97**	**41**	⇑P	**Pn**	**13 26 42.2**	**-1.3**
MAKZ	**Makanchi**	**13.68**	**35**		**Pn**	**13 27 32.6**	**0.0**
MAKZ	**Makanchi** comp=N,10nm,0.8s	**13.68**	**35**	⇓P	**Pn**	**13 27 32.4**	**-0.1**
MAKZ	**Makanchi**	**13.68**	**35**	P	**Pn**	**13 27 32.6**	**0.0**
MK31	**Makanchi Array** comp=N,11nm,0.8s,baz=149,slow=5.4,SNR=62	**13.82**	**36**	⇑P	**Pn**	**13 27 34.5**	**+0.1**
MK31	**Makanchi Array**	**13.82**	**36**	*ceP*	**Pn**	**13 27 35.3**	**+0.9**
MKAR	**Makanchi Array** comp=N,0.5nm,0.3s,baz=223,slow=15,SNR=30	**13.82**	**36**	Pn	**Pn**	**13 27 32.0**	**-2.3**
MKAR	baz=245,slow=36 comp=N,3.2nm,0.7s			Sn	**Sn**	**13 30 03.5**	**-3.0**
MKAR	**Makanchi Array**	**13.82**	**36**		**Pn**	**13 27 33.5**	**-0.9**
AB31	**Akbulak array**	**15.18**	**333**		**Pn**	**13 27 50.5**	**-1.2**
AB31	**Akbulak array** comp=N,21nm,0.4s,baz=145,slow=12,SNR=734	**15.18**	**333**	⇑P	**Pn**	**13 27 50.5**	**-1.2**
AB31				⇑S	**Sn**	**13 30 32.0**	**-7.3**
	comp=N,5.8nm,0.6s,baz=156,slow=21,SNR=7.2						
ABKAR	**Akbulak array**	**15.18**	**333**		**Pn**	**13 27 50.8**	**-0.9**
WMQ	**Urumqi**	**15.24**	**55**	*eP*	**Pn**	**13 27 53.8**	**+1.2**
KURBB	**Kurchatov Arra** comp=N,0.1nm,0.3s,baz=212,slow=12,SNR=21	**15.58**	**19**	Pn	**Pn**	**13 27 53.0**	**-3.7**
KURBB	baz=21,slow=30,SNR=1.6			Sn	**Sn**	**13 30 42.8**	**-6.2**
KURBB	**Kurchatov Arra** comp=N,9.2nm,0.6s	**15.58**	**19**	⇑P	**P**	**13 27 59.4**	**+0.8**
KURK	**Kurchatov**	**15.69**	**19**		**Pn**	**13 27 55.1**	**-2.9**
KURK	**Kurchatov** comp=N,3.1nm,0.9s	**15.69**	**19**	⇑P	**Pn**	**13 27 59.4**	**+1.4**
KURK	**Kurchatov**	**15.69**	**19**	P	**Pn**	**13 27 53.0**	**-5.0**
KURK						13 30 42.8	
BVA0	**Borovoye Array** comp=N,2.8nm,0.8s	**16.86**	**360**	⇑P	**Pn**	**13 28 12.3**	**-0.1**
BVAR	**Borovoye Array** comp=N,0.3nm,0.3s,baz=190,slow=9.7,SNR=13	**16.86**	**360**	P	**Pn**	**13 28 10.4**	**-2.1**
BVAR	comp=N,0.7nm,0.4s,baz=199,slow=35,SNR=1.9 comp=N,1.9nm,0.5s			S	**Sn**	**13 31 18.7**	**-1.1**
AKTO	**Aktyubinsk** comp=N,1.8nm,0.3s,baz=143,slow=12,SNR=56	**16.87**	**332**	P	**Pn**	**13 28 11.6**	**-0.9**
AKTO	comp=N,3.7nm,0.5s,baz=267,slow=13,SNR=4.1 comp=N,17nm,0.7s			S	**Sn**	**13 31 13.1**	**-6.8**
AKTO	**Aktyubinsk** comp=N,11nm,0.7s	**16.87**	**332**	⇑P	**Pn**	**13 28 13.3**	**+0.8**
AKTO	comp=N,7.6nm,0.9s			⇑S	**Sn**	**13 31 13.5**	**-6.4**
BORK	**Borovoye**	**16.89**	**360**	P	**Pn**	**13 28 12.6**	**-0.1**
BORK	comp=Z,7.2nm,0.5s			IAmb	IAmb	13 28 17.0	
BORK	**Borovoye**	**16.89**	**360**	*ceP*	**Pn**	**13 28 13.0**	**+0.3**
BORK	comp=Z,31nm,2.5s			pmax	pmax		
DGZ	**Jazzator, Alta**	**18.31**	**37**	*i* P	**P**	**13 28 29.5**	**+0.7**
DGZ	comp=Z,13nm,0.6s			pmax	pmax		
ZAA0	**Zalesovo Array**	**20.40**	**25**	P	**P**	**13 28 52.7**	**+1.4**
ZAA0	**Zalesovo Array** comp=Z,23nm,0.5s	**20.40**	**25**	⇓P	**P**	**13 28 51.7**	**+0.4**
ZALV	**Zalesovo Beam** comp=Z,55nm,0.5s,baz=218,slow=11,SNR=210	**20.40**	**25**	P	**P**	**13 28 52.5**	**+1.2**
GNI	**Garni** comp=Z,5.7nm,0.5s,baz=56,slow=7.3,SNR=7.1 comp=Z,5.7nm,0.5s	**20.59**	**289**	P	**P**	**13 28 52.0**	**-1.6**
SHL	**Shillong**	**21.16**	**114**	P	**P**	**13 29 00.5**	**+0.7**
SHL	comp=Z,12nm,0.9s			IAmb	IAmb	13 29 23.7	
SHL	**Shillong**	**21.16**	**114**	P	**P**	**13 29 00.5**	**+0.7**
SHL	comp=Z,12nm,0.9s			pmax	pmax		
ARTI	**Arti** comp=Z,3.6nm,0.6s,baz=153,slow=6.1,SNR=7.2	**21.83**	**342**	P	**P**	**13 29 07.9**	**+1.5**
ARTI	comp=Z,1.9nm,0.4s,baz=139,slow=20,SNR=3.1 comp=Z,3.6nm,0.6s			S	**S**	**13 33 07.5**	**+6.7**
KBZ	**Khabaz** comp=Z,2.6nm,1.1s,baz=76,slow=19,S

comp=Z,3.1nm,0.5s
IMAR Indian Mountai 72.63 17 P **P 13 35 39.0 +0.7**
BMAR Burnt Mountain 73.37 13 P **P 13 35 44.6 +1.8**
C36M Paulatuk 74.26 5 P **P 13 35 48.4 +0.6**
C36M IAmb IAmb 13 35 48.8
comp=Z,6.9nm,0.5s
INK Inuvik 74.31 9 P **P 13 35 49.5 +1.5**
INK Inuvik 74.31 9 P **P 13 35 49.6 +1.5**
INK pmax pmax
comp=Z,2.0nm,0.7s
ILAR Eielson Array 75.22 16 P **P 13 35 53.8 +0.3**
comp=Z,0.3nm,0.5s,baz=300,slow=5.1,SNR=14
comp=Z,0.3nm,0.5s
H31M Peel River 76.56 10 IAmb IAmb 13 36 01.9
comp=Z,10nm,1.4s
YKA Yellowknife Ar 81.60 2 P **P 13 36 29.4 +0.8**
comp=Z,0.3nm,0.5s,baz=351,slow=6.0,SNR=8.6
comp=Z,0.3nm,0.5s
WRA Warramunga Arr 82.18 122 P **P 13 36 29.7 -2.5**
comp=Z,0.1nm,0.4s,baz=325,slow=5.0,SNR=13
comp=Z,0.1nm,0.4s
WRA Warramunga Arr 82.18 122 *i* P **P 13 36 34.2 +2.0**
ASAR Alice Springs 84.41 125 P **P 13 36 41.7 -1.9**
comp=Z,0.2nm,0.5s,baz=307,slow=4.7,SNR=5.2
comp=Z,0.2nm,0.5s
PDAR Pinedale Array 101.45 0 P **Pdif 13 38 04.9 +2.2**
comp=Z,0.5nm,1.0s,baz=355,slow=4.7,SNR=3.9

UPP ***28*** *13:28:16.6±0.2, 67°.84N×20°.21E, h0km, ML2.5, Confirmed Induced event*
HEL ***28*** *13:28:17.6±0.3, 67°.78N×20°.25E, h0km, ML1.3, Suspected explosion*
ISC 28 13:28:15.8±0.8**, 67°.77N**±0°.03×**20°.32E**±0°.03**, h0**km**, n22,** σ1§**29**/35**, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.18**	**2**	P		**Pg**		**13 28 19.3**	**0.0**
	baz=197								
KUA				S		**Sg**		**13 28 21.2**	**-0.5**
RATU	**Laukkuluspa**	**0.28**	**281**	P		**Pg**		**13 28 21.2**	**+0.1**
RATU				S		**Sg**		**13 28 24.8**	**+0.1**
KOVU	**Salmi**	**0.46**	**353**	P		**Pg**		**13 28 24.0**	**-0.5**
KOVU				S		**Sg**		**13 28 29.5**	**-1.0**
NIKU	**Nikkaluokta**	**0.50**	**282**	P		**Pg**		**13 28 25.1**	**-0.2**
NIKU				S		**Sg**		**13 28 31.1**	**-0.6**
LANU	**Lannavaara**	**0.69**	**66**	S		**Sb**		**13 28 39.5**	**-1.3**
LANU	**Lannavaara**	**0.69**	**66**	SG		**Sb**		**13 28 40.4**	**-0.4**
SALU	**Saltoluokta**	**0.80**	**241**	*e*P		**Pg**		**13 28 31.0**	**0.0**
KIF	**Kilpisjarvi**	**1.25**	**8**	*e*P		**Pn**		**13 28 40.5**	**+0.1**
KIF	**Kilpisjarvi**	**1.25**	**8**	PG		**Pn**		**13 28 40.7**	**+0.2**
KIF				smax	smax			13 28 56.5	
	comp=Z,2.7nm,0.2s								
KIF				SG		**Sb**		**13 28 56.6**	**-0.2**
HEF	**Hetta**	**1.41**	**61**	PG		**Pb**		**13 28 43.0**	**+0.1**
HEF				smax	smax			13 29 00.6	
	comp=Z,2.1nm,0.2s								
HEF				SN		**Sn**		**13 29 03.0**	**+1.1**
ERTU	**Ertsjaerv**	**1.42**	**148**	PN		**Pb**		**13 28 44.9**	**+1.7**
	baz=325								
ERTU				SN		**Sn**		**13 29 04.8**	**+2.6**
KLF	**Kolari**	**1.50**	**109**	PG		**Pg**		**13 28 44.7**	**+0.1**
KLF				smax	smax			13 29 03.5	
	comp=Z,2.2nm,0.2s								
KLF				SN		**Sn**		**13 29 06.9**	**+2.7**
KTK1	**Kautokeino**	**1.65**	**40**	PN		**Pg**		**13 28 48.0**	**+0.6**
KTK1				SN		**Sg**		**13 29 10.7**	**+1.9**
TRO	**Tromso**	**1.94**	**345**	SG		**Sg**		**13 29 18.9**	**+0.9**
TOF	**Tornio**	**2.32**	**135**	PG		**Pg**		**13 28 59.4**	**-0.8**
TOF				smax	smax			13 29 27.1	
	comp=Z,1.1nm,0.2s								
TOF				SG		**Sg**		**13 29 30.6**	**+0.5**
RNF	**Rovaniemi**	**2.51**	**115**	PG		**Pb**		**13 29 02.2**	**+0.6**
RNF				SG		**Sg**		**13 29 35.4**	**-0.8**
ARA0	**ARCESS Array S**	**2.60**	**45**	PB		**Pb**		**13 29 02.0**	**-1.1**
	baz=227								
ARA0				SG		**Sb**		**13 29 36.6**	**+1.1**
RAJF	**Raja-Jooseppi**	**3.08**	**73**	PB		**Pb**		**13 29 10.9**	**-0.4**
RAJF				SG		**Sg**		**13 29 53.2**	**-1.3**
RANF	**Ranua**	**3.10**	**122**	SG		**Sg**		**13 29 54.8**	**-0.5**
KEV	**Kevo**	**3.15**	**48**	SN		**Sb**		**13 29 48.7**	**-2.6**
OBF4	**Vikkela, Lumij**	**3.54**	**145**	PB		**Pb**		**13 29 16.4**	**-2.8**
KU2	**Taivalkoski**	**3.76**	**120**	PB		**Pb**		**13 29 20.7**	**-2.2**

IDC ***28*** *13:34:45.9±0.6, 26°.87N×143°.65E, h0km, mb4.0/18, mbtmp3.9/22, ML3.4/4, MS2.7/7, Error ellipse: s-maj=15.3km s-min=14.3km az=64.0*
NIED ***28*** *13:34:48.7, 27°.34N×143°.61E, h1km, MW4.2, Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁵Nm; Mrr-0.83; Mθθ0.41; Mφφ0.42; Mrθ1.83; Mθφ-0.32; Mφr1.22; Fault plane solution: M₀2.26000×10¹⁵ NP1:φ₀91.00000°, δ7.00000°, λ-58.00000°. NP2:φ₀239.00000°, δ84.00000°, λ-94.00000°.*
NEIC ***28*** *13:34:48.9±1.2, 26°.91N±0°.10×143°.62E±0°.08, h10km±1km, mb4.5/31 Error ellipse: s-maj=16.3km s-min=12.0km az=189.0*
ISC 28 13:34:51.6±0.5**, 26°.93N**±0°.07×**143°.60E**±0°.07**, h35**km**, n83,** σ1§**15**/69**, mb4.3**/42**, MS2.8**/4**, 1C, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.28**	**278**	Pn		**Pn**		**13 35 12.1**	**-0.8**
	37nm,0.3s,baz=312,slow=15,SNR=8.3								
JCJ				Sn		**Sn**		**13 35 30.1**	**+1.2**
	100nm,0.3s,baz=290,slow=21,SNR=5.6								
JCJ	**Chichijima**	**1.28**	**278**			**Pn**		**13 35 13.2**	**+0.2**
JCJ				Sn		**Sn**		**13 35 30.2**	**+1.3**
JGF	**Kuroka**	**10.16**	**330**	Pn		**Pn**		**13 37 14.9**	**-0.1**
MJAR	**Matsushiro Ar**	**10.62**	**336**	Pn		**Pn**		**13 37 19.9**	**-1.4**
	0.2nm,0.3s,baz=152,slow=11,SNR=16								
MJAR				Sn		**Sn**		**13 39 15.4**	**-3.6**
	0.2nm,0.3s,baz=95,slow=9.1,SNR=11								
MJAR				LR		LR		13 42 01.4	
	comp=Z,20nm,19.4s,baz=242,slow=41 5.8nm,0.8s								
MJAR	**Matsushiro Arr**	**10.62**	**336**			**Pn**		**13 37 19.2**	**-2.2**
MAJO	**Matsushiro**	**10.62**	**336**			**Pn**		**13 37 20.1**	**-1.3**
MJB9	**Matsu-Tunnel**	**10.63**	**336**			**Pn**		**13 37 21.2**	**-0.2**
JOW	**Kunigami**	**13.68**	**273**	LR		LR		13 43 23.9	
	comp=Z,36nm,18.4s,baz=236,slow=38								
KSRS	**Korea Array**	**16.90**	**312**	Pn		**Pn**		**13 38 45.2**	**-0.1**
	0.1nm,0.3s,baz=126,slow=11,SNR=7.2								
KSRS				LR		LR		13 44 00.7	
	comp=Z,19nm,20.8s,baz=160,slow=33 3.3nm,0.9s								
JKA	**Kamikawa-asahi**	**17.17**	**358**	P		**Pn**		**13 38 49.8**	**+1.1**
ASAJ	**Asahikawa**	**17.17**	**358**	P		**Pn**		**13 38 46.5**	**-2.1**
	0.2nm,0.3s,baz=189,slow=12,SNR=4.2								
ASAJ				LR		LR		13 45 24.0	
	comp=Z,17nm,20.6s,baz=182,slow=37 2.7nm,0.8s								
USRK	**Ussuriysk Ar.**	**19.62**	**334**	P		**P**		**13 39 15.2**	**-1.7**
	0.3nm,0.3s,baz=141,slow=10,SNR=5.9 1.2nm,0.6s								
NJ2	**Nanjing**	**22.12**	**289**	*e*P		**P**		**13 39 43.5**	**-0.6**
NJ2				pmax	pmax				
	comp=Z,8.0nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**22.54**	**104**	T		T		14 02 38.4	
	baz=291								
H11N1	**WAKE ISLAND Hy**	**22.54**	**104**	T		T		14 02 39.2	
	baz=291								
H11N3	**WAKE ISLAND Hy**	**22.55**	**104**	T		T		14 02 44.8	
	baz=291								
BNX	**BinXian**	**22.78**	**330**	⇑P		**P**		**13 39 51.3**	**+0.3**
BNX				pmax	pmax				
	comp=Z,7.0nm,1.5s								
H11S3	**WAKE ISLAND Hy**	**22.86**	**107**	T		T		14 02 56.5	
	baz=295								
H11S1	**WAKE ISLAND Hy**	**22.87**	**107**	T		T		14 02 59.3	
	baz=295								
H11S2	**WAKE ISLAND Hy**	**22.88**	**107**	T		T		14 02 52.4	
	baz=295								
KLR	**Kul'dur**	**24.08**	**341**	LR		LR		13 51 18.4	
	comp=Z,20nm,19.1s,baz=130,slow=41								
HEH	**HeiHe**	**26.39**	**336**	*e*P		**P**		**13 40 28.0**	**+3.4**
HEH				pmax	pmax				
	comp=Z,5.0nm,0.9s								
PETK	**Petropavlovsk-**	**28.18**	**18**	P		**P**		**13 40 40.9**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=104,slow=18,SNR=3.2 comp=Z,3.3nm,0.9s								
HHC	**Hu-ho-hao-te**	**29.82**	**306**	*e*P		**P**		**13 40 56.0**	**+0.6**
HHC				pmax	pmax				
	comp=Z,8.0nm,0.7s								
HHC				pmax	pmax				
	comp=Z,130nm,4.8s								
HHC				LR	LR				
	comp=N,57nm,12.7s								
HHC				LR	LR				
	comp=E,76nm,12.4s								
HHC				LR	LR				
	comp=Z,54nm,12.5s								
SIJI	**Sorong**	**30.09**	**205**	LR		LR		13 50 54.1	
	comp=Z,16nm,19.4s,baz=240,slow=32								
XAN	**Xi'an**	**30.61**	**292**	*e*P		**P**		**13 41 02.3**	**-0.2**
LZDM	**Lanzhou Array**	**35.02**	**295**	P		**P**		**13 41 40.1**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=114,slow=7.1,SNR=4.2 comp=Z,0.9nm,0.3s								
SONM	**Songino Array**	**35.71**	**316**	P		**P**		**13 41 47.4**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=116,slow=6.9,SNR=5.8 comp=Z,0.5nm,0.5s								
SONM	**Songino Array**	**35.71**	**316**	P		**P**		**13 41 47.4**	**+0.5**
PZH	**PanZhiHua**	**37.27**	**279**	P		**P**		**13 42 01.5**	**+1.1**
GTA2	**Gaotai**	**38.41**	**300**	*e*P		**P**		**13 42 09.8**	**-0.1**
GTA2				pmax	pmax				
	comp=Z,3.0nm,0.9s								
COEN	**Coen**	**40.64**	**181**	P		**P**		**13 42 28.5**	**0.0**
COEN				IAmb	IAmb			13 42 28.9	
	comp=Z,8.3nm,1.2s								
SOEI	**Soe**	**41.01**	**210**	P		**P**		**13 42 31.6**	**-0.1**
MTN	**Manton Dam**	**41.35**	**199**	P		**P**		**13 42 32.9**	**-1.3**
CMAR	**Chiang Mai Arr**	**41.88**	**268**	P		**P**		**13 42 38.9**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=81,slow=5.9,SNR=5.7 comp=Z,0.6nm,0.6s								
GOMU	**GeErMu**	**42.21**	**295**	P		**P**		**13 42 40.0**	**-1.7**
GOMU				pmax	pmax				
	comp=Z,7.0nm,1.0s								
TIXI	**Tiksi**	**45.51**	**354**	LR		LR		14 10 48.0	
	comp=Z,14nm,18.1s,baz=208,slow=48								
CTAO	**Charters Tower**	**46.81**	**177**	P		**P**		**13 43 17.5**	**-0.5**
WR8	**Warramunga Arr**	**47.44**	**192**	P		**P**		**13 43 22.6**	**-0.3**
WR8				IAmb	IAmb			13 43 23.1	
	comp=Z,11nm,1.1s								
WRAB	**Tennant Creek**	**47.44**	**192**	P		**P**		**13 43 22.5**	**-0.4**
WRA	**Warramunga Arr**	**47.45**	**192**	P		**P**		**13 43 22.3**	**-0.7**
	comp=Z,8.7nm,0.9s,baz=11,slow=8.4,SNR=40 comp=Z,8.7nm,0.9s								
TNA	**Tin City**	**49.01**	**24**	P		**P**		**13 43 35.5**	**+0.9**
ANM	**Nome**	**49.55**	**26**	P		**P**		**13 43 40.5**	**+1.8**
ANM				IAmb	IAmb			13 43 59.2	
	comp=Z,6.3nm,1.5s								
EVN	**Everest**	**50.01**	**285**	P		**P**		**13 43 44.1**	**+0.6**
ZALV	**Zalesovo Beam**	**50.44**	**319**	P		**P**		**13 43 45.3**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=97,slow=8.0,SNR=4.9 comp=Z,1.1nm,0.6s								
ZALV	**Zalesovo Beam**	**50.44**	**319**	P		**P**		**13 43 45.7**	**+0.1**
AS31	**Alice Springs**	**51.16**	**191**	P		**P**		**13 43 51.0**	**-0.4**
ASAR	**Alice Springs**	**51.17**	**191**	P		**P**		**13 43 50.2**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=13,slow=6.1,SNR=25								
ASAR				PcP		**PcP**		**13 45 06.8**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=348,slow=3.1,SNR=5.2 comp=Z,0.9nm,0.7s								
ASAR	**Alice Springs**	**51.17**	**191**	P		**P**		**13 43 50.6**	**-0.8**
ASAR						**PcP**		**13 45 06.6**	**0.0**
MKAR	**Makanchi Array**	**51.55**	**310**	P		**P**		**13 43 54.9**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=92,slow=8.2,SNR=13								
MKAR				PcP		**PcP**		**13 45 08.5**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=70,slow=5.4,SNR=3.7 comp=Z,0.9nm,0.6s								
MKAR	**Makanchi Array**	**51.55**	**310**	P		**P**		**13 43 55.1**	**+0.9**
C19K	**Lookout Ridge**	**53.43**	**22**	IAmb	IAmb			13 44 10.8	
	comp=Z,5.6nm,0.8s								
D19K	**Kuna River**	**53.72**	**23**	IAmb	IAmb			13 44 13.2	
	comp=Z,3.7nm,1.0s								
KURK	**Kurchatov**	**54.00**	**315**			**P**		**13 44 13.1**	**+1.0**
KURK				IAmb	IAmb			13 44 16.4	
	comp=Z,5.1nm,0.9s								
KURBB	**Kurchatov Arra**	**54.06**	**314**	P		**P**		**13 44 13.0**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=91,slow=8.9,SNR=4.8								
D20K	**Etivluk River**	**54.31**	**23**	IAmb	IAmb			13 44 16.9	
	comp=Z,5.6nm,0.7s								
IMAR	**Indian Mountai**	**54.63**	**26**	P		**P**		**13 44 17.4**	**+1.0**
G23K	**Bananza Creek**	**56.25**	**26**	IAmb	IAmb			13 44 31.3	
	comp=Z,3.6nm,0.9s								
BOOM	**Boomskoye usch**	**56.35**	**305**	P		**P**		**13 44 31.0**	**+1.6**
BOOM				IAmb	IAmb			13 44 46.7	
	comp=Z,6.2nm,1.4s								
D23K	**Nanushuk River**	**56.45**	**23**	IAmb	IAmb			13 45 00.4	
	comp=Z,4.9nm,1.3s								
E23K	**Chandalar**	**56.65**	**24**	IAmb	IAmb			13 44 34.5	
	comp=Z,3.2nm,0.8s								
SCM	**Sheep Creek Mo**	**56.78**	**32**			**P**		**13 44 32.2**	**+0.2**
E24K	**Your Creek**	**57.07**	**24**	IAmb	IAmb			13 44 37.3	
	comp=Z,3.7nm,0.7s								
D24K	**Happy Valley**	**57.14**	**23**	IAmb	IAmb			13 44 44.9	
	comp=Z,7.7nm,1.4s								
ILAR	**Eielson Array**	**57.25**	**29**	P		**P**		**13 44 34.8**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=256,slow=6.0,SNR=14 comp=Z,1.2nm,0.8s								
F25K	**Christian Rive**	**58.07**	**25**	IAmb	IAmb			13 44 45.2	
	comp=Z,4.4nm,1.0s								
STKA	**Stephens Creek**	**58.51**	**182**	P		**P**		**13 44 42.6**	**-1.8**
	comp=Z,1.8nm,0.7s,baz=17,slow=11,SNR=3.6 comp=Z,1.8nm,0.7s								
F26K	**Sheenjek River**	**58.65**	**25**	IAmb	IAmb			13 44 48.7	
	comp=Z,3.5nm,0.8s								
BVAR	**Borovoye Array**	**59.02**	**318**	P		**P**		**13 44 48.0**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=96,slow=8.2,SNR=5.7 comp=Z,1.5nm,0.6s								
KK31	**Karatay Array**	**60.21**	**306**			**P**		**13 44 57.5**	**+1.3**
KK31				IAmb	IAmb			13 44 58.1	
	comp=Z,5.7nm,0.8s								
KKAR	**Karatay Array**	**60.21**	**306**			**P**		**13 44 57.6**	**+1.4**
DAWY	**Dawson**	**60.47**	**30**	P		**P**		**13 44 59.6**	**+2.0**
DAWY				IAmb	IAmb			13 45 07.7	
	comp=Z,6.1nm,1.3s								
GAR	**Garm**	**61.16**	**302**	P		**P**		**13 45 03.8**	**+0.9**
CHGR	**Chuyangaron**	**62.12**	**301**			**P**		**13 45 10.1**	**+0.8**
ARTI	**Arti**	**65.43**	**322**	P		**P**		**13 45 30.8**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=68,slow=5.4,SNR=4.6 comp=Z,1.9nm,0.5s								
AB31	**Akbulak array**	**66.11**	**315**			**P**		**13 45 36.0**	**+0.9**
ABKAR	**Akbulak array**	**66.11**	**315**	P		**P**		**13 45 35.9**	**+0.7**
YKA	**Yellowknife Ar**	**71.68**	**29**	P		**P**		**13 46 10.5**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=296,slow=6.4,SNR=6.7 comp=Z,0.5nm,0.8s								
FINES	**FINESS Array B**	**78.65**	**334**	P		**P**		**13 46 50.6**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=100,slow=5.8,SNR=3.6 comp=Z,1.5nm,0.8s								
NVAR	**Mina Array Bea**	**79.62**	**52**	P		**P**		**13 46 55.3**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=286,slow=6.3,SNR=11 comp=Z,1.4nm,0.9s								
PDAR	**Pinedale Array**	**83.44**	**45**	P		**P**		**13 47 15.2**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=53,slow=1.0,SNR=4.1 comp=Z,0.4nm,0.7s								
AKASG	**Malin Array Be**	**83.49**	**324**	P		**P**		**13 47 14.0**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=49,slow=5.3,SNR=4.1 comp=Z,0.4nm,0.3s								
TXAR	**Lajitas Array**	**94.68**	**54**	P		**P**		**13 48 10.0**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=348,slow=6.3,SNR=2.3 comp=Z,0.2nm,0.7s								

AFAD ***28*** *13:57:11.8, 38°.54N×44°.65E, h6km±4km, ML2.6*
TEH ***28*** *13:57:13.9, 38°.52N×44°.65E, h6km±97km, ML2.9, Presumed earthquake*
NSSP ***28*** *13:57:13.2, 38°.52N×44°.73E, h10km, Ms3.0*
ISK ***28*** *13:57:14.2, 38°.55N×44°.42E, h2km, ML2.8/6*
ISC 28 13:57:12.8±1.1**, 38°.48N**±0°.02×**44°.63E**±0°.02**, h7**km±10km**,**
n33, σ1§**26**/56**, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.53**	**290**	P		**Pg**		**13 57 21.7**	**-1.5**
OZAP				S		**Sg**		**13 57 30.6**	**+0.4**
ISHB	**Shabestar**	**0.80**	**104**	Pg		**Pn**		**13 57 29.0**	**-1.8**
YOVA	**Hakkari_Yksek**	**0.93**	**197**	P		**Pn**		**13 57 31.5**	**-1.1**
YOVA				S		**Sn**		**13 57 46.0**	**-0.3**
YOVA				IAML				13 57 51.0	
	comp=N,234nm,0.6s								
YOVA				IAML				13 57 52.0	
	comp=E,231nm,0.4s								
TVAN	**Van**	**0.96**	**273**	P		**Pg**		**13 57 29.5**	**-1.8**
TVAN				S		**Sg**		**13 57 45.0**	**+1.1**
TVAN				IAML				13 57 52.0	
	comp=E,208nm,0.5s								
TVAN				IAML				13 57 53.0	
	comp=N,402nm,0.5s								
VMUR	**Van-Muradiye**	**0.97**	**302**	P		**Pg**		**13 57 29.8**	**-1.8**
VMUR				S		**Sg**		**13 57 45.1**	**+0.9**
VMUR				IAML				13 57 48.0	
	comp=N,351nm,0.4s								
VMUR				IAML				13 57 50.0	
	comp=E,390nm,0.9s								
HAKT	**HAKKARI**	**1.18**	**219**	P		**Pg**		**13 57 34.2**	**-1.2**
HAKT				S		**Sn**		**13 57 53.3**	**+0.9**
HAKT				IAML				13 57 57.0	
	comp=N,118nm,0.9s								
HAKT				IAML				13 58 00.0	
	comp=E,174nm,0.5s								
ITBZ	**Tabriz**	**1.22**	**101**	Pg		**Pn**		**13 57 36.3**	**-0.1**
GEVA	**Gevas**	**1.25**	**263**	P		**Pn**		**13 57 33.9**	**-2.9**
GEVA				S		**Sb**		**13 57 53.4**	**+0.2**
DYDN	**Diyadin**	**1.29**	**326**	P		**Pn**		**13 57 35.8**	**-1.7**
DYDN				S		**Sg**		**13 57 56.0**	**+1.6**
DYDN				IAML				13 58 02.0	
	comp=E,208nm,0.9s								
DYDN				IAML				13 58 04.0	
	comp=N,185nm,1.0s								
AKDM	**Akdamar-Van**	**1.31**	**264**	Pn		**Pn**		**13 57 35.3**	**-2.4**
AKDM				Sn		**Sb**		**13 57 53.9**	**-1.0**
IAZR	**Azarshahr**	**1.33**	**127**	Pg		**Pg**		**13 57 39.1**	**+0.7**
VAYK	**Vayk**	**1.36**	**27**	⇓*e*P		**Pg**		**13 57 38.6**	**-0.4**
VAYK				⇓*e*S		**Sb**		**13 57 55.6**	**-0.8**
IGDI	**IGDIR**	**1.45**	**343**	P		**Pn**		**13 57 39.2**	**-0.4**
IGDI				S		**Sn**		**13 57 57.9**	**-1.1**
IGDI				IAML				13 58 03.0	
	comp=E,165nm,1.0s								
IGDI				IAML				13 58 03.0	
	comp=N,80nm,0.4s								
CUKT	**Cukurca**	**1.47**	**214**	Pn		**Pg**		**13 57 42.2**	**+1.1**
CUKT				Sn		**Sg**		**13 58 02.7**	**+2.5**
ADCV	**BITLIS_Adilcev**	**1.53**	**283**	P		**Pn**		**13 57 40.7**	**-0.1**
ADCV				S		**Sn**		**13 58 01.0**	**0.0**
ADCV				IAML				13 58 05.0	
	comp=N,63nm,0.6s								
ADCV				IAML				13 58 06.0	
	comp=E,86nm,0.6s								
EGVZ	**Egvard**	**1.67**	**63**	*e*P		**Pg**		**13 57 44.2**	**-0.6**
EGVZ				*e*S		**Sg**		**13 58 08.4**	**+2.0**
GNI	**Garni**	**1.67**	**3**	Pn		**Pg**		**13 57 44.6**	**-0.3**
GNI	**Garni**	**1.67**	**3**	*e*P		**Pg**		**13 57 45.0**	**+0.1**
GNI				*e*S		**Sg**		**13 58 07.2**	**+0.6**
GNI	**Garni**	**1.67**	**3**	Pg		**Pb**		**13 57 44.3**	**+0.3**
AGRB	**Hanur-Agry**	**1.68**	**311**	Pn		**Pn**		**13 57 42.9**	**0.0**
DORK	**Agr/Tutak/Do**	**1.71**	**303**	P		**Pn**		**13 57 42.6**	**-0.6**
DORK				S		**Sn**		**13 58 06.7**	**+1.4**
DORK				IAML				13 58 10.0	
	comp=E,92nm,0.8s								
DORK				IAML				13 58 13.0	
	comp=N,123nm,0.8s								
KOTA	**Agri, Merkez-K**	**1.72**	**320**	P		**Pn**		**13 57 42.6**	**-0.9**
KOTA				S		**Sb**		**13 58 08.4**	**+1.5**
KOTA				IAML				13 58 11.0	
	comp=N,29nm,0.6s								
KOTA				IAML				13 58 13.0	
	comp=E,34nm,0.4s								
PERV	**Siirt/Pervari-**	**1.73**	**253**	P		**Pb**		**13 57 45.6**	**+0.6**
PERV				S		**Sg**		**13 58 10.4**	**+1.9**
PERV				IAML				13 58 14.0	
	comp=N,168nm,0.4s								
PERV				IAML				13 58 22.0	
	comp=E,206nm,0.5s								
MLAZ	**Malazgirt-MUS**	**1.76**	**293**	Pn		**Pn**		**13 57 43.8**	**-0.1**
AYRK	**Ayrk**	**1.86**	**28**	*e*P		**Pb**		**13 57 47.2**	**-0.2**
AYRK				*e*S		**Sg**		**13 58 12.2**	**-0.5**
IHRS	**Heris**	**1.90**	**94**	Pn		**Pg**		**13 57 49.2**	**0.0**
AMBZ	**Amberd**	**1.93**	**351**	*e*P		**Pg**		**13 57 49.4**	**-0.4**
AMBZ				*e*S		**Sg**		**13 58 15.8**	**+1.0**
BLIS	**Bitlis-Merkez**	**1.98**	**269**	P		**Pb**		**13 57 49.5**	**+0.3**
BLIS				S		**Sg**		**13 58 17.9**	**+1.5**
BLIS				IAML				13 58 22.0	
	comp=E,41nm,0.8s								
BLIS				IAML				13 58 23.0	
	comp=N,55nm,0.9s								
GURO	**Guroymak-BITLI**	**2.04**	**273**	Pn		**Pn**		**13 57 48.1**	**+0.3**
EATA	**Eleskirt**	**2.16**	**310**	P		**Pn**		**13 57 51.1**	**+1.5**
EATA				S		**Sb**		**13 58 21.5**	**+1.9**
EATA				IAML				13 58 27.0	
	comp=N,23nm,0.6s								
EATA				IAML				13 58 30.0	
	comp=E,25nm,0.6s								
SRTM	**Siirt_Merkez**	**2.19**	**258**	P		**Pb**		**13 57 52.1**	**-0.8**
SRTM				S		**Sg**		**13 58 22.6**	**-0.6**
SRTM				IAML				13 58 29.0	
	comp=E,90nm,0.7s								
SRTM				IAML				13 58 30.0	
	comp=N,106nm,1.2s								
LSVT	**Lusahovit**	**2.47**	**10**	*e*P		**Pb**		**13 57 58.5**	**+0.9**
LSVT				*e*S		**Sg**		**13 58 32.2**	**-0.1**
ISRB	**Sarab**	**2.48**	**104**	Pn		**Pg**		**13 57 57.5**	**-2.9**

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h106km:pP-P,n1137,σ1s48/1244,mb5.3/239,73C-10D,
Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.24**	**197**	P	**Pn**	**14 03 08.3**	**-2.0**
MNAI	**Manna**	**0.24**	**197**	S	**Sn**	**14 03 19.2**	**-2.3**
MNAI	**Manna**	**0.24**	**197**		**Pn**	**14 03 09.9**	**-0.4**
MNAI				Sn	**Sn**	**14 03 20.2**	**-1.2**
MNAI	**Manna**	**0.24**	**197**	P	**Pn**	**14 03 09.6**	**-0.7**
MNAI				S	**Sn**	**14 03 20.7**	**-0.8**
KSI	**Kapahiang**	**0.64**	**317**	P	**Pn**	**14 03 13.4**	**+0.7**
KSI				S	**Sn**	**14 03 27.3**	**+1.5**
UBSI	**University, Be**	**0.84**	**296**	P	**Pn**	**14 03 14.5**	**+0.1**
MDSI	**Maura Dua**	**1.20**	**107**	P	**Pn**	**14 03 18.7**	**+0.4**
MASI	**Maura Aman, Be**	**1.26**	**321**	P	**Pn**	**14 03 20.5**	**+1.5**
LWLI	**Liwa**	**1.36**	**131**	P	**Pn**	**14 03 20.5**	**+0.3**
EGSI	**Enggano, Bengk**	**1.43**	**212**	P	**Pn**	**14 03 20.4**	**-0.6**
KLSI		**1.79**	**108**	P	**Pn**	**14 03 26.7**	**+1.4**
KLSI				S	**Sn**	**14 03 50.7**	**+2.4**
KLI	**Kotabumi**	**1.96**	**112**	P	**Pn**	**14 03 28.6**	**+1.0**
KASI	**Kota Agung**	**2.02**	**134**	P	**Pn**	**14 03 28.6**	**+0.4**
PMBI	**Palembang**	**2.11**	**56**	P	**Pn**	**14 03 29.9**	**+0.5**
PMBI	**Palembang**	**2.11**	**56**	S	**Sn**	**14 03 56.3**	**+0.7**
PMBI	**Palembang**	**2.11**	**56**		**Pn**	**14 03 30.7**	**+1.3**
PMBI				Sn	**Sn**	**14 03 54.4**	**-1.2**
PMBI	**Palembang**	**2.11**	**56**	P	**Pn**	**14 03 30.4**	**+1.0**
BLSI	**Bandar Lampung**	**2.53**	**119**	P	**Pn**	**14 03 35.8**	**+0.9**
JMBI	**JAMBI**	**2.55**	**14**	P	**Pn**	**14 03 37.3**	**+2.1**
KRJI	**Kerinci**	**2.56**	**322**	P	**Pn**	**14 03 37.4**	**+2.0**
PPSI	**Pulau Pagai**	**3.30**	**294**	P	**Pn**	**14 03 45.5**	**+0.3**
PPBI	**Pangkal Pinang**	**3.67**	**58**	P	**Pn**	**14 03 51.9**	**+1.9**
SBJI	**Serang**	**3.67**	**123**	P	**Pn**	**14 03 51.0**	**+0.9**
DSRI	**Dabo**	**3.94**	**23**	P	**Pn**	**14 03 55.7**	**+2.0**
PDSI	**Padang**	**4.09**	**321**	P	**Pn**	**14 03 56.2**	**+0.3**
TNG	**Tangerang**	**4.14**	**120**	P	**Pn**	**14 03 57.9**	**+1.5**
DBJI	**Dramaga**	**4.42**	**123**	P	**Pn**	**14 04 01.0**	**+0.8**
PPI	**Padang Panjang**	**4.49**	**324**	P	**Pn**	**14 04 01.6**	**+0.4**
TPI	**Tanjunggpandan**	**4.81**	**74**	P	**Pn**	**14 04 06.7**	**+1.2**
BKNI	**Bangkinang**	**4.85**	**336**	P	**Pn**	**14 04 07.4**	**+1.4**
BKNI	**Bangkinang**	**4.85**	**336**	S	**Sn**	**14 05 03.2**	**+2.1**
BKNI	**Bangkinang**	**4.85**	**336**		**Pn**	**14 04 07.1**	**+1.1**
BKNI	**Bangkinang**	**4.85**	**336**	P	**Pn**	**14 04 07.4**	**+1.4**
TPRI	**Tanjung Pinang** 4µm5µm515nm,0.6s	**5.23**	**17**	P	**Pn**	**14 04 13.4**	**+2.2**
LEM	**Lembang** 1µm,0.9s,baz=343,slow=7.8,SNR=138	**5.30**	**121**	P	**Pn**	**14 04 12.9**	**+0.6**
LEM	**Lembang** 7.1nm22µm2µm,0.9s	**5.30**	**121**	P	**Pn**	**14 04 13.7**	**+1.5**
BBJI	**Bungbulang**	**5.67**	**126**	P	**Pn**	**14 04 16.9**	**-0.3**
BBJI	**Bungbulang**	**5.67**	**126**	S	**Sn**	**14 05 18.2**	**-2.8**
BBJI	**Bungbulang**	**5.67**	**126**		**Pn**	**14 04 16.4**	**-0.8**
BBJI				Sn	**Sn**	**14 05 16.0**	**-5.0**
BBJI	**Bungbulang** 3.5nm4µm9µm872nm,0.9s	**5.67**	**126**	P	**Pn**	**14 04 16.2**	**-1.0**
MYKOM	**Kota Tinggi**	**5.93**	**8**	P	**Pn**	**14 04 23.1**	**+2.4**
MYKOM	**Kota Tinggi**	**5.93**	**8**		**Pn**	**14 04 22.1**	**+1.3**
MYKOM	**Kota Tinggi** 1.8nm4µm246nm,0.8s	**5.93**	**8**	P	**Pn**	**14 04 22.4**	**+1.7**
MNSI	**Mandailing Nat** 1.9nm7µm598nm,0.8s	**5.98**	**325**	P	**Pn**	**14 04 21.0**	**-0.4**
PBSI	**Pulau Batu**	**6.23**	**310**	P	**Pn**	**14 04 23.9**	**-0.9**
KPJI	**Karang Pucung** 2.6nm7µm776nm,0.9s	**6.68**	**119**	P	**Pn**	**14 04 32.2**	**+1.3**
CTJI	**Waduk Cacaban** 3.4nm9µm872nm,0.9s	**6.76**	**115**	P	**Pn**	**14 04 33.6**	**+1.6**
XMI	**Christmas Isla**	**6.81**	**157**	P	**Pn**	**14 04 28.9**	**-3.8**
GSI	**Gunungsitoli**	**7.67**	**315**	P	**Pn**	**14 04 42.5**	**-1.8**
GSI	**Gunungsitoli**	**7.67**	**315**		**Pn**	**14 04 42.6**	**-1.8**
GSI	**Gunungsitoli** 3.1nm4µm8µm947nm,0.6s	**7.67**	**315**	P	**Pn**	**14 04 42.2**	**-2.1**
RPSI	**Rantau Prapat**	**7.92**	**329**		**Pn**	**14 04 47.1**	**-0.6**
SMRI	**Semarang**	**7.93**	**112**	P	**Pn**	**14 04 48.0**	**+0.2**
SMRI	**Semarang**	**7.93**	**112**		**Pn**	**14 04 47.8**	**0.0**
SMRI	**Semarang** 10µm1µm,0.8s	**7.93**	**112**	P	**Pn**	**14 04 49.1**	**+1.3**
PSI	**Prapat**	**8.01**	**329**	P	**Pn**	**14 04 47.1**	**-2.0**
PSI	**Prapat** 0.6nm4µm184nm,1.2s	**8.01**	**329**	P	**Pn**	**14 04 46.7**	**-2.4**
YOGI	**Yogyakarta** 9µm1µm,1.0s	**8.10**	**117**	P	**Pn**	**14 04 49.9**	**-0.3**
UGM	**Wanagama**	**8.35**	**117**	P	**Pn**	**14 04 53.3**	**-0.3**
UGM	**Wanagama**	**8.35**	**117**	S	**Sn**	**14 06 25.5**	**-0.7**
UGM	**Wanagama**	**8.35**	**117**		**Pn**	**14 04 53.7**	**+0.1**
UGM	**Wanagama** 7µm489nm,1.0s	**8.35**	**117**	P	**Pn**	**14 04 53.6**	**+0.1**
IPM	**Ipoh**	**8.78**	**347**	P	**Pn**	**14 05 01.8**	**+2.4**
IPM	**Ipoh**	**8.78**	**347**		**Pn**	**14 05 01.1**	**+1.6**
IPM	**Ipoh** 3µm166nm,0.9s	**8.78**	**347**	P	**Pn**	**14 05 00.3**	**+0.9**
TSI	**Tuntungan** 4µm367nm,0.9s	**8.79**	**329**	P	**Pn**	**14 04 59.8**	**+0.2**
NGJI	**Ngawi** 7µm731nm,1.1s	**8.99**	**111**	P	**Pn**	**14 05 04.0**	**+1.8**
PCJI	**Pacitan** 8µm320nm,1.4s	**9.05**	**117**	P	**Pn**	**14 05 01.7**	**-1.4**
KCSI	**Kotacane, Aceh** 108nm,0.9s	**9.24**	**325**	P	**Pn**	**14 05 02.5**	**-3.1**
TPTI		**9.38**	**321**	P	**Pn**	**14 05 04.5**	**-3.1**
SJI	**Sawahan** 7µm865nm,0.9s	**9.40**	**113**	P	**Pn**	**14 05 08.8**	**+0.9**
SNJI	**Sawahan-Nganju**	**9.41**	**113**	P	**Pn**	**14 05 09.7**	**+1.6**
KULM	**Kulim**	**9.65**	**346**	P	**Pn**	**14 05 11.7**	**+0.5**
KULM	**Kulim**	**9.65**	**346**		**Pn**	**14 05 11.2**	**0.0**
KULM	**Kulim**	**9.65**	**346**	P	**Pn**	**14 05 11.8**	**+0.5**
COCO	**West Island**	**10.09**	**217**	P	**Pn**	**14 05 16.3**	**-0.8**
COCO	**West Island**	**10.09**	**217**	Pn	**Pn**	**14 05 15.1**	**-2.1**
COCO	**West Island**	**10.09**	**217**	P	**Pn**	**14 05 15.1**	**-2.1**
COCO	**West Island**	**10.09**	**217**	P	**Pn**	**14 05 15.0**	**-2.1**
COCO				S	Sn	14 06 55.3	-13
COCO	**West Island** 4µm520nm,0.8s	**10.09**	**217**	P	**Pn**	**14 05 14.6**	**-2.5**
MLSI	**Meulaboh, Aceh** 2µm6µm551nm,0.8s	**10.64**	**321**	P	**Pn**	**14 05 21.6**	**-3.2**
LHMI	**Lhok Sumawe**	**11.10**	**327**	P	**Pn**	**14 05 30.3**	**-0.6**
LHMI	**Lhok Sumawe**	**11.10**	**327**	Pn	**Pn**	**14 05 26.9**	**-4.1**
LHMI	**Lhok Sumawe** 3µm214nm,0.8s	**11.10**	**327**	P	**Pn**	**14 05 27.4**	**-3.5**
BLJI	**Banyuglugur**	**11.11**	**109**	P	**Pn**	**14 05 32.7**	**+1.7**
KMMI	**Kalianget** 4µm4µm371nm,0.9s	**11.27**	**105**	P	**Pn**	**14 05 34.4**	**+1.3**
SBUM	**Sibu**	**11.27**	**55**		**Pn**	**14 05 31.3**	**-1.9**
SBUM	**Sibu**	**11.27**	**55**	P	**Pn**	**14 05 35.5**	**+2.3**
ABJI	**Asem Bagus**	**11.72**	**109**	P	**Pn**	**14 05 41.1**	**+1.9**
BBKI	**Banjar Baru** 4µm89nm,1.0s	**11.80**	**87**	P	**Pn**	**14 05 43.1**	**+2.8**
JAGI	**Jajag, Banyuwa**	**11.87**	**112**	P	**Pn**	**14 05 40.8**	**-0.4**
JAGI	**Jajag, Banyuwa**	**11.87**	**112**		**Pn**	**14 05 39.6**	**-1.6**
JAGI	**Jajag, Banyuwa**	**11.87**	**112**	P	**Pn**	**14 05 39.8**	**-1.4**
RTBI	**Rangdo, Negare**	**12.60**	**111**	P	**Pn**	**14 05 50.3**	**-0.5**
IGBI	**Denpasar** 319nm,0.6s	**12.91**	**112**	P	**Pn**	**14 05 53.9**	**-1.0**
DNP	**Denpasar**	**12.92**	**111**	P	**Pn**	**14 05 53.5**	**-1.5**
KHKI	**Kahang-Kahang** 2µm3µm230nm,0.8s	**13.19**	**109**	P	**Pn**	**14 05 58.1**	**-0.5**
TWSI	**Taliwang, Sumb** 2µm4µm277nm,1.0s	**14.51**	**109**	P	**Pn**	**14 06 12.2**	**-3.4**
PLAI	**Plampang**	**15.38**	**108**	P	**Pn**	**14 06 24.5**	**-2.1**
PLAI	**Plampang** 2µm5µm340nm,0.6s	**15.38**	**108**	P	**Pn**	**14 06 23.7**	**-2.9**
DBNI	**Kabupaten Domp** 2µm1µm95nm,0.7s	**15.80**	**107**	P	**Pn**	**14 06 30.3**	**-1.6**
PMSI	**Majene** 2µm5µm522nm,1.0s	**15.86**	**88**	P	**P**	**14 06 35.2**	**+0.8**
MMSI	**Mamuju** 2µm258nm,0.9s	**15.92**	**85**	P	**P**	**14 06 35.3**	**+0.3**
TARAI	**Tarakan** 370nm,0.4s	**16.31**	**63**	P	**P**	**14 06 40.5**	**+1.2**
MKS	**Makassar** 3µm171nm,1.0s	**16.42**	**94**	P	**P**	**14 06 40.7**	**+0.2**
KKM	**Kota Kinabalu**	**16.60**	**53**	P	**Pn**	**14 06 41.8**	**-0.1**
KKM	**Kota Kinabalu**	**16.60**	**53**	P	**Pn**	**14 06 40.5**	**-1.4**
KKM	**Kota Kinabalu**	**16.60**	**53**	P	**P**	**14 06 44.3**	**+1.8**
KAPI	**Kappang** 138nm,1.0s,baz=262,slow=12,SNR=21	**16.69**	**94**	P	**P**	**14 06 43.4**	**-0.1**
KAPI	**Kappang**	**16.69**	**94**	P	**P**	**14 06 44.1**	**+0.6**
KAPI	**Kappang**	**16.69**	**94**	P	**Pn**	**14 06 42.1**	**-0.9**
KAPI	**Kappang**	**16.69**	**94**	*d*	*i*P **P**	**14 06 43.5**	**0.0**
KAPI	**Kappang**	**16.69**	**94**	P	**P**	**14 06 43.9**	**+0.4**
KAPI	**Kappang**	**16.69**	**94**	P	**P**	**14 06 44.4**	**+0.9**
SPSI	**Sidrap Palu** 2µm154nm,0.8s	**16.70**	**90**	P	**P**	**14 06 43.9**	**+0.3**
TTSI	**Tana Toraja**	**16.79**	**87**	P	**P**	**14 06 46.5**	**+1.9**
PCI	**Palu**	**17.09**	**80**	P	**P**	**14 06 49.9**	**+2.0**
	4µm197nm,1.5s						
WBSI	**Waikabubak, Su** 2µm5µm416nm,0.8s	**17.14**	**109**	P	**Pn**	**14 06 47.0**	**-1.4**
LBFI	**Labuhan Bajo,**	**17.30**	**105**	P	**Pn**	**14 06 50.5**	**+0.1**
MPSI	**Mapaga**	**17.43**	**76**	P	**Pn**	**14 06 54.4**	**+2.5**
BSSI	**Bau Bau, Buton**	**17.51**	**97**	P	**Pn**	**14 06 53.3**	**+0.4**
WSI	**Waingapu** 7µm492nm,0.9s	**18.00**	**109**	P	**P**	**14 06 56.3**	**-1.6**
MYLDM	**Lahad Datu**	**18.01**	**59**	P	**Pn**	**14 07 00.2**	**+1.3**
MYLDM	**Lahad Datu**	**18.01**	**59**	P	**P**	**14 06 55.0**	**-3.0**
MYLDM	**Lahad Datu** 106nm,0.8s	**18.01**	**59**	P	**Pn**	**14 07 03.0**	**+4.1**
BASI	**Baing, Sumba** 9µm621nm,1.3s	**18.43**	**110**	P	**P**	**14 07 03.2**	**+0.6**
TOLI2	**Tolitoli**	**18.49**	**74**	P	**Pn**	**14 07 05.4**	**+0.7**
TOLI2	**Tolitoli**	**18.49**	**74**	P	**P**	**14 07 02.4**	**-0.9**
KKSI	**Kolaka, Sulawe** 2µm1µm79nm,0.8s	**18.57**	**91**	P	**Pn**	**14 07 06.9**	**+1.2**
APSI	**Ampana** 2µm134nm,0.8s	**18.87**	**81**	P	**Pn**	**14 07 10.9**	**+1.7**
EDFI	**Ende, Flores** 2µm191nm,1.1s	**19.10**	**105**	P	**P**	**14 07 10.6**	**+0.5**
MRSI	**Marisa** 3µm409nm,0.6s	**19.44**	**77**	P	**Pn**	**14 07 15.6**	**-0.3**
MMRI	**Maumere**	**19.60**	**104**	P	**P**	**14 07 15.2**	**-0.2**
MMRI	**Maumere**	**19.60**	**104**	P	**P**	**14 07 14.2**	**-1.2**
MMRI	**Maumere** 4µm292nm,0.8s	**19.60**	**104**	P	**Pn**	**14 07 18.0**	**+0.2**
DGPR	**DIGLIPUR**	**19.90**	**330**	*e*P	**Pn**	**14 07 21.9**	**+0.6**
DGPR					IAmb IAmb	14 10 41.6	
	comp=Z,132nm,0.8s						
DGPR				*e*S	**S**	**14 11 00.6**	**+3.6**
LUWI	**Luwuk**	**19.96**	**82**	P	**P**	**14 07 17.7**	**-1.6**
LUWI	**Luwuk**	**19.96**	**82**	P	**Pn**	**14 07 23.6**	**+1.7**
	comp=Z,2µmcomp=Z,135nm,0.8s						
GTOI	**Gorontalo** comp=Z,84nm,0.9s	**20.52**	**77**	P	Pn	14 07 27.6	-0.9
BATI	**Baumata**	**21.34**	**108**	P	**P**	**14 07 34.1**	**0.0**
	comp=Z,157nm,0.4s,baz=1.7,slow=0.9,SNR=41						
BATI				S	**S**	**14 11 17.0**	**-8.4**
	comp=Z,259nm,0.7s,baz=284,slow=19,SNR=11						
BATI	**Baumata**	**21.34**	**108**	P	**P**	**14 07 35.6**	**+1.5**
	comp=Z,157nm,0.4s						
GIRL	**Giralia** comp=Z,3µmcomp=Z,251nm,0.7s	**21.37**	**150**	P	**P**	**14 07 34.5**	**+0.2**
GIRL	**Giralia** comp=Z,148nm,1.3s	**21.37**	**150**	P	**P**	**14 07 33.3**	**-1.0**
SOEI	**Soe**	**21.80**	**106**	P	**P**	**14 07 38.3**	**-0.9**
SOEI	**Soe**	**21.80**	**106**	P	**P**	**14 07 37.3**	**-1.9**
SOEI	**Soe**	**21.80**	**106**	P	**P**	**14 07 41.7**	**+2.5**
	comp=Z,3µmcomp=Z,323nm,0.8s						
CM31	**Chiang Mai Arr**	**22.80**	**350**	P	**P**	**14 07 48.6**	**-0.7**
CM31	**Chiang Mai Arr** SNR=16	**22.80**	**350**	P	**P**	**14 07 48.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**22.80**	**350**	P	**P**	**14 07 48.8**	**-0.5**
	comp=Z,16nm,0.9s,baz=180,slow=8.8,SNR=78						
CMAR				PcP	**PcP**	**14 11 38.1**	**+0.8**
	comp=Z,8.7nm,0.9s,baz=207,slow=3.2,SNR=10						
CMAR				ScP	**ScP**	**14 15 05.2**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=207,slow=3.1,SNR=12						
CMAR				LR	LR	14 17 08.7	
	comp=Z,163nm,18.1s,baz=170,slow=38						
	comp=Z,16nm,0.9s						
CMAR	**Chiang Mai Arr**	**22.80**	**350**	P	**P**	**14 07 48.3**	**-1.0**
CMAR				PcP	**PcP**	**14 11 38.5**	**+1.1**
SANI	**Sanana**	**23.02**	**86**	P	**P**	**14 07 53.3**	**+1.8**
SANI	**Sanana**	**23.02**	**86**	P	**P**	**14 07 53.0**	**+1.5**
	comp=Z,2µmcomp=Z,141nm,1.1s						
CHTO	**Chiang Mai**	**23.15**	**350**	P	**P**	**14 07 52.6**	**0.0**
CHTO	**Chiang Mai**	**23.15**	**350**	P	**P**	**14 07 51.2**	**-1.4**
CHTO	**Chiang Mai**	**23.15**	**350**	P	**P**	**14 07 51.2**	**-1.4**
CHTO	**Chiang Mai**	**23.15**	**350**	P	**P**	**14 07 52.4**	**-0.3**
CHTO	**Chiang Mai**	**23.15**	**350**	P	**P**	**14 07 52.3**	**-0.3**
MBWA	**Marble Bar** comp=Z,96nm,0.8s	**23.45**	**138**	P	**P**	**14 07 56.4**	**+0.9**
MBWA	**Marble Bar**	**23.45**	**138**	P	**P**	**14 07 56.4**	**+0.9**
MBWA	**Marble Bar**	**23.45**	**138**	P	**P**	**14 07 56.7**	**+1.2**
MBWA	**Marble Bar**	**23.45**	**138**	P	**P**	**14 07 56.1**	**+0.6**
MBWA				S	**S**	**14 12 09.0**	**+7.9**
PSAC1	**Pilbara Seismi** comp=Z,105nm,0.8s	**23.77**	**138**	P	**P**	**14 07 59.6**	**+1.4**
PSA00	**Pilbara Seismi** comp=Z,84nm,0.8s	**23.82**	**138**	P	**P**	**14 08 00.2**	**+1.4**
PSA00	**Pilbara Seismi**	**23.82**	**138**	P	**P**	**14 08 00.4**	**+1.7**
PSA00	**Pilbara Seismi**	**23.82**	**138**	P	**P**	**14 07 58.4**	**-0.4**
PSAB3	**Pilbara Seismi** comp=Z,96nm,0.8s	**23.84**	**138**	P	**P**	**14 07 59.8**	**+0.9**
PSAC2	**Pilbara Seismi** comp=Z,101nm,0.8s	**23.85**	**138**	P	**P**	**14 07 59.9**	**+0.9**
QIZ	**Qiongzhong**	**23.97**	**16**	P	**P**	**14 08 02.5**	**+2.4**
QIZ	**Qiongzhong**	**23.97**	**16**	P	**P**	**14 07 59.7**	**-0.3**
QIZ	**Qiongzhong**	**23.97**	**16**	P	**P**	**14 08 02.8**	**+2.7**
QIZ				pP	**pP**	**14 08 25.0**	**+2.6**
QIZ				sP	**sP**	**14 08 36.5**	**+1.2**
QIZ				S	**S**	**14 12 15.3**	**+5.9**
QIZ	comp=Z,73nm,1.0s			pmax	pmax		
QIZ	comp=Z,340nm,12.5s			LR	LR		
QIZ	comp=Z,520nm,15.1s			LR	LR		
QIZ	comp=Z,330nm,12.3s			LR	LR		
TNTI	**Ternate**	**24.80**	**79**	P	**P**	**14 08 04.9**	**-2.8**
PALK	**Pallekele** comp=Z,235nm,21.6s,baz=126,slow=34	**24.99**	**297**	LR	LR	14 16 54.6	
PALK	**Pallekele**	**24.99**	**297**	*e*P	**P**	**14 08 09.3**	**-0.2**
PALK	comp=Z,51nm,1.3s			pmax	pmax		
PALK	**Pallekele**	**24.99**	**297**	P	**P**	**14 08 10.1**	**+0.6**
DAV	**Davao City (W)** comp=Z,182nm,18.8s,baz=218,slow=36	**25.11**	**64**	LR	LR	14 17 55.3	
KRAI	**Karang Ratu**	**25.32**	**89**	P	**P**	**14 08 13.4**	**+0.9**
TGY	**Tagaytay City** comp=Z,206nm,18.9s,baz=135,slow=37	**25.37**	**44**	LR	LR	14 18 36.8	
FITZ	**Fitzroy Crossi** comp=Z,41nm,0.8s,baz=306,slow=6.1,SNR=11	**26.12**	**124**	P	**P**	**14 08 19.6**	**-0.1**
FITZ				PcP	**PcP**	**14 11 45.3**	**+0.6**
	comp=Z,16nm,0.8s,baz=42,slow=5.3,SNR=2.9						
FITZ	comp=Z,185nm,21.3s,baz=334,slow=35			LR	LR	14 18 18.9	
	comp=Z,41nm,0.8s						
MEEK	**Meekatharra** comp=Z,39nm,1.5s	**26.90**	**148**	P	**P**	**14 08 26.3**	**-0.3**
MEEK	**Meekatharra**	**26.90**	**148**	P	**P**	**14 08 26.5**	**-0.1**
MORW	**Morawa** comp=Z,11nm,1.5s	**27.71**	**155**	P	**P**	**14 08 35.4**	**+1.7**
MORW	**Morawa**	**27.71**	**155**	P	**P**	**14 08 33.6**	**-0.2**
KNRA	**Kununurra** comp=Z,73nm,0.7s	**27.79**	**116**	P	**P**	**14 08 34.2**	**-0.3**
KNRA	**Kununurra**	**27.79**	**116**	P	**P**	**14 08 34.4**	**-0.1**
KNRA	comp=Z,51nm,0.8s			IAmb	IAmb	14 09 13.9	
SAIH	**SAIHA**	**28.22**	**340**	*e*P	**P**	**14 08 40.9**	**+2.4**
SAIH	comp=Z,65nm,1.0s			IAmb	IAmb	14 09 29.2	
SAIH				*e*S	**S**	**14 13 21.4**	**+4.6**
SWI	**Sorong** comp=Z,62nm,1.0s	**28.39**	**84**	P	**P**	**14 08 39.9**	**-0.1**
SIJI	**Sorong** comp=Z,34nm,0.7s	**28.39**	**84**	P	**P**	**14 08 39.9**	**-0.1**
DRS	**Darwin Rock St**	**28.76**	**108**	P	**P**	**14 08 45.2**	**+1.9**
BRDH	**Bariadhala** comp=Z,239nm,19.6s,baz=173,slow=40	**28.87**	**338**	LR	LR	14 22 19.1	
MTN	**Manton Dam** comp=Z,43nm,1.4s	**29.09**	**109**	P	**P**	**14 08 45.3**	**-0.9**
MTN	**Manton Dam**	**29.09**	**109**	P	**P**	**14 08 44.5**	**-1.6**
KMI2	**Kunming**	**29.10**	**359**	P	**P**	**14 08 48.8**	**+2.4**
KMI2				sP	sP	14 09 24.0	+2.0
KMI2				PcP	**PcP**	**14 11 53.3**	**+1.3**
KMI2				S	S	14 13 39.8	+9.0
KMI2	comp=Z,9.0nm,1.1s			pmax	pmax		
KMI2	comp=Z,480nm,10.1s			LR	LR		
KMI2	comp=Z,340nm,11.3s			LR	LR		
KMI2	comp=Z,570nm,10.9s			LR	LR		
KOD	**Kodaikanal**	**29.18**	**299**	*e*P	P	14 08 52.1	+4.8
KOD				IAmb	IAmb	14 09 37.4	
	comp=Z,180nm,1.9s						
KOD				*e*S	**S**	**14 13 38.9**	**+6.3**
TNCH	**TengChong**	**29.31**	**352**	*e*P	**P**	**14 08 51.0**	**+2.8**
TNCH				pP	pP	14 09 12.0	+0.4
TNCH				PcP	**PcP**	**14 11 53.0**	**+0.5**
TNCH				S	**S**	**14 13 37.0**	**+3.0**
TNCH				sS	sS	14 14 17.5	+2.3
TNCH	comp=Z,15nm,0.8s			pmax	pmax		
TNCH	comp=Z,140nm,5.0s			pmax	pmax		
TNCH	comp=Z,490nm,11.6s			LR	LR		
TNCH	comp=Z,280nm,13.3s			LR	LR		
TNCH	comp=Z,650nm,16.6s			LR	LR		
BLDU	**Ballidu** comp=Z,32nm,1.1s	**29.34**	**155**	P	**P**	**14 08 46.4**	**-1.8**
BLDU	**Ballidu**	**29.34**	**155**	P	**P**	**14 08 49.1**	**+0.9**
IMP	**Imphal**	**30.11**	**343**	*e*P	**P**	**14 08 58.2**	**+3.0**
IMP	comp=Z,15nm,1.0s			IAmb	IAmb	14 09 19.8	
IMP				*e*S	**S**	**14 13 47.9**	**+1.6**
RAGD	**RAYAGADA**	**30.17**	**321**	*e*P	**P**	**14 08 58.5**	**+2.8**
RAGD	comp=Z,120nm,0.9s			IAmb	IAmb	14 09 21.2	
RAGD				*e*S	**S**	**14 13 51.7**	**+4.3**
KDU	**Kakadu** comp=Z,18nm,0.7s	**30.31**	**108**	P	**P**	**14 08 55.1**	**-1.9**
MUN	**Mundaring** comp=Z,32nm,0.8s	**30.34**	**157**	P	**P**	**14 08 54.4**	**-2.6**
MUN	**Mundaring**	**30.34**	**157**	P	**P**	**14 08 57.2**	**+0.1**
PZH	**PanZhiHua**	**30.47**	**358**	P	P	14 09 03.3	+4.9
PZH				S	**S**	**14 13 50.0**	**-2.1**
PZH	comp=Z,10.0nm,0.5s			pmax	pmax		
PZH	comp=Z,360nm,11.7s			LR	LR		
PZH	comp=Z,180nm,12.4s			LR	LR		
PZH	comp=Z,330nm,14.0s			LR	LR		
H08S2	**Diego Garcia H** baz=84,slow=76,SNR=52	**30.57**	**262**	T	T	14 39 28.3	
H08S3	**Diego Garcia H** baz=84,slow=76,SNR=83	**30.58**	**262**	T	T	14 39 25.6	
H08S1	**Diego Carcia H** baz=84,slow=76,SNR=39	**30.59**	**262**	T	T	14 39 28.8	
GYA	**Guiyang**	**30.61**	**6**	⇑P	**P**	**14 09 00.5**	**+0.9**
GYA				pP	pP	14 09 25.5	+2.5
GYA				PcP	**PcP**	**14 11 55.8**	**0.0**
GYA				S	**S**	**14 13 52.3**	**-1.9**
GYA				sS	sS	14 14 34.8	-0.6
GYA				ScP	**ScP**	**14 15 27.5**	**-1.4**
GYA	comp=Z,12nm,1.1s			pmax	pmax		
GYA	comp=Z,560nm,14.5s			LR	LR		
KLBR	**Kellerberrin** comp=Z,70nm,0.7s	**30.63**	**155**	P	**P**	**14 09 00.4**	**+0.8**
KLBR	**Kellerberrin**	**30.63**	**155**	P	**P**	**14 09 01.1**	**+1.5**
KOHI	**KOHIMA**	**30.91**	**344**	*e*P	**P**	**14 09 04.8**	**+2.6**
KOHI				IAML		14 09 27.4	
KOHI	comp=Z,31nm,0.8s			*e*S	**S**	**14 14 02.5**	**+3.6**
MOKO	**MOKOCHONG**	**31.37**	**345**	*e*P	**P**	**14 09 09.7**	**+3.4**
MOKO	comp=Z,74nm,1.0s			IAmb	IAmb	14 09 31.7	
MOKO				*e*S	**S**	**14 14 09.6**	**+3.4**
NWAO	**Narrogin (SRO)** comp=Z,53nm,0.7s	**31.58**	**157**	P	**P**	**14 09 10.0**	**+2.0**
NWAO	**Narrogin (SRO)**	**31.58**	**157**	LR	LR	14 20 25.3	
	comp=Z,234nm,21.5s,baz=284,slow=33						
NWAO	**Narrogin (SRO)**	**31.58**	**157**	P	**P**	**14 09 08.0**	**0.0**
NWAO	**Narrogin (SRO)**	**31.58**	**157**	P	**P**	**14 09 09.0**	**+1.0**
NWAO	**Narrogin (SRO)**	**31.58**	**157**	P	**P**	**14 09 09.0**	**+1.0**
NWAO	comp=Z,29nm,0.8s			pmax	pmax		
NWAO	**Narrogin (SRO)**	**31.58**	**157**	P	**P**	**14 09 07.4**	**-0.5**
WRKA	**Warakurna** comp=Z,8.9nm,0.6s	**31.97**	**133**	P	**P**	**14 09 12.1**	**+0.5**
TWG	**Pinlang**	**32.06**	**33**	P	**P**	**14 09 11.8**	**-0.5**
TWG	comp=Z,86nm,1.3s			IAmb	IAmb	14 09 45.2	
TWGBT	**Beinan**	**32.06**	**33**	P	**P**	**14 09 14.0**	**+1.7**
TPUB	**Ta-pu**	**32.22**	**31**	P	**P**	**14 09 15.1**	**+1.4**
HYB	**Hyderabad**	**32.28**	**312**	*e*P	**P**	**14 09 14.4**	**+0.1**
HYB				*e*pP	**pP**	**14 09 35.8**	**-2.2**
HYB				*e*sP	**sP**	**14 09 47.4**	**-2.9**
HYB				*e*S	**S**	**14 14 21.6**	**+1.2**
H01W3	**Cape Leeuwin H** baz=340,slow=76,SNR=30	**32.29**	**163**	T	T	14 42 54.8	
H01W1	**Cape Leeuwin H** baz=340,slow=76,SNR=31	**32.30**	**163**	T	T	14 42 53.9	
H01W2	**Cape Leeuwin H** baz=340,slow=76,SNR=29	**32.30**	**163**	T	T	14 42 53.8	
KMBL	**Kambalda** comp=Z,24nm,1.3s	**32.39**	**149**	P	**

	comp=Z,26nm,0.9s,baz=300,slow=14,SNR=28										
ASAR					ScP	**ScP**	**14 15 47.0 +0.8**				
	comp=Z,10nm,0.9s,baz=308,slow=4.1,SNR=4.5										
ASAR					ScS	**ScS**	**14 19 50.0 -1.3**				
	comp=Z,4.0nm,0.9s,baz=288,slow=5.1,SNR=9.1										
ASAR					P3KPbc		14 40 24.9				
	comp=Z,0.6nm,0.6s,baz=114,slow=4.1,SNR=14										
	comp=Z,31nm,0.3s										
JMJ	**Miyako jima 2**	**36.00**	**36**		P	**P**	**14 09 47.8 +1.5**				
WHN	**Wuhan**	**36.13**	**17**		P	**P**	**14 09 48.0 +0.7**				
WHN					pP	**pP**	**14 10 13.3 +2.1**				
WHN					PcP	**PcP**	**14 12 11.3 +0.2**				
WHN					ScP	**ScP**	**14 15 45.8 -2.2**				
WHN					pmax	pmax					
	comp=Z,36nm,0.9s										
XAN	**Xi'an**	**38.37**	**8**		P	**P**	**14 10 05.8 -0.4**				
XAN					pP	pP	14 10 30.3 0.0				
XAN					S	**S**	**14 15 51.3 -2.0**				
XAN					LR	LR					
	comp=Z,610nm,13.1s										
XAN					LR	LR					
	comp=Z,300nm,13.7s										
XAN					LR	LR					
	comp=Z,570nm,13.1s										
XAN	**Xi'an**	**38.37**	**8**		P	**P**	**14 10 05.6 -0.7**				
XAN					pP	**pP**	**14 10 29.4 -0.9**				
XAN					PcP	**PcP**	**14 12 17.5 -0.4**				
NJ2	**Nanjing**	**39.00**	**22**	*eP*		**P**	**14 10 13.3 +1.8**				
NJ2					pmax	pmax					
	comp=Z,11nm,1.1s										
NJ2					pmax	pmax					
	comp=Z,170nm,3.8s										
NJ2					LR	LR					
	comp=Z,250nm,14.7s										
NJ2					LR	LR					
	comp=Z,200nm,11.6s										
NJ2					LR	LR					
	comp=Z,620nm,19.9s										
QIS	**Mount Isa**	**39.14**	**118**		P	**P**	**14 10 13.6 +0.6**				
	comp=Z,45nm,0.8s										
QIS	**Mount Isa**	**39.14**	**118**		P	**P**	**14 10 13.1 +0.1**				
JOW	**Kunigami**	**39.28**	**37**		P	**P**	**14 10 15.6 +1.6**				
LYN	**LuoYang**	**39.49**	**12**	⇓*iP*		**P**	**14 10 16.5 +1.0**				
LYN					pP	pP	14 10 41.0 +1.4				
LYN					sP	sP	14 10 58.3 +6.6				
LYN					S	**S**	**14 16 12.0 +2.0**				
LYN					sS	sS	14 16 56.8 +4.7				
LYN					pmax	pmax					
	comp=Z,36nm,0.9s										
LYN					pmax	pmax					
	comp=Z,190nm,4.0s										
LZDM	**Lanzhou Array**	**39.88**	**1**		P	**P**	**14 10 18.2 -0.9**				
	comp=Z,6.1nm,0.6s,baz=183,slow=14,SNR=16										
LZDM					PcP	**PcP**	**14 12 23.6 +0.5**				
	comp=Z,32nm,0.8s,baz=199,slow=7.2,SNR=14										
LZDM					ScP	**ScP**	**14 16 00.5 -2.0**				
	comp=Z,1.1nm,0.3s,baz=199,slow=7.7,SNR=6.4										
LZDM					LR	LR	14 28 29.7				
	comp=Z,123nm,18.9s,baz=245,slow=39										
	comp=Z,6.1nm,0.6s										
LZH	**Lanzhou**	**40.01**	**1**	*eP*		**P**	**14 10 21.0 +1.0**				
LZH					pP	pP	14 10 40.5 -3.7				
LZH					PcP	**PcP**	**14 12 24.3 +1.1**				
LZH					ScP	**ScP**	**14 16 01.5 -1.3**				
LZH					PcS	**PcS**	**14 16 18.0 +4.2**				
LZH					ScS	**ScS**	**14 20 12.3 -4.2**				
LZH					pmax	pmax					
	comp=Z,21nm,1.5s										
LZH					LR	LR					
	comp=Z,420nm,12.7s										
LZH					LR	LR					
	comp=Z,200nm,12.0s										
LZH					LR	LR					
	comp=Z,460nm,11.3s										
COEN	**Coen**	**40.77**	**107**		P	**P**	**14 10 26.8 +0.3**				
GOMU	**GeErMu**	**40.84**	**350**		P	**P**	**14 10 27.0 -0.2**				
GOMU					PcP	**PcP**	**14 12 26.3 +0.1**				
GOMU					pmax	pmax					
	comp=Z,12nm,1.0s										
BBOO	**Buckleboo**	**42.03**	**137**		P	**P**	**14 10 37.3 +0.7**				
BBOO	**Buckleboo**	**42.03**	**137**		P	**P**	**14 10 36.7 +0.1**				
BBOO					IAmb	IAmb	14 11 03.5				
	comp=Z,52nm,1.3s										
MTSU	**Mount Surprise**	**42.71**	**112**		P	**P**	**14 10 41.0 -1.2**				
	comp=Z,33nm,0.8s										
MTSU	**Mount Surprise**	**42.71**	**112**		P	**P**	**14 10 42.8 +0.5**				
HNS	**HongShan**	**42.72**	**14**	⇓*iP*		**P**	**14 10 43.5 +1.5**				
HNS					PcP	**PcP**	**14 12 32.3 +0.5**				
HNS					ScP	**ScP**	**14 16 11.0 -2.3**				
HNS					pmax	pmax					
	comp=Z,19nm,0.8s										
HNS					LR	LR					
	comp=Z,450nm,15.9s										
HNS					LR	LR					
	comp=Z,280nm,17.5s										
GTA2	**Gaotai**	**43.50**	**356**		P	**P**	**14 10 48.5 +0.1**				
GTA2					PcP	**PcP**	**14 12 35.0 +0.4**				
GTA2					ScP	**ScP**	**14 16 14.5 -2.2**				
GTA2					sS	sS	14 17 51.5 -0.6				
GTA2					ScS	**ScS**	**14 20 33.8 -3.8**				
GTA2					pmax	pmax					
	comp=Z,8.0nm,1.3s										
GTA2					LR	LR					
	comp=Z,210nm,18.3s										
GTA2					LR	LR					
	comp=Z,230nm,18.3s										
GTA2					LR	LR					
	comp=Z,320nm,20.7s										
PMG	**Port Moresby**	**44.11**	**99**		P	**P**	**14 10 55.1 +1.6**				
PMG	**Port Moresby**	**44.11**	**99**		P	**P**	**14 10 55.2 +1.7**				
PMG	**Port Moresby**	**44.11**	**99**		P	**P**	**14 10 52.7 -0.8**				
PMG					IAmb	IAmb	14 11 21.7				
	comp=Z,37nm,0.8s										
PMG	**Port Moresby**	**44.11**	**99**	*ceP*		**P**	**14 10 54.2 +0.7**				
PMG					pmax	pmax					
	comp=Z,53nm,1.3s										
PMG	**Port Moresby**	**44.11**	**99**		P	**P**	**14 10 53.1 -0.4**				
	comp=Z,46nm,0.9s										
PMG	**Port Moresby**	**44.11**	**99**		P	**P**	**14 10 52.9 -0.6**				
PMG					PcP	**PP**	**14 12 38.0 -0.4**				
DHRM	**DHARAMSHALA**	**44.20**	**327**	*eP*		**P**	**14 10 55.9 +1.6**				
DHRM					IAmb	IAmb	14 11 10.4				
	comp=Z,59nm,0.4s										
DHRM				*eS*		**S**	**14 17 23.4 +3.3**				
MANU	**Manus Island**	**44.32**	**89**		P	**P**	**14 10 54.5 -0.7**				
HTT	**Hallett**	**44.36**	**135**		P	**P**	**14 10 56.7 +1.3**				
	comp=Z,13nm,0.9s										
HTT	**Hallett**	**44.36**	**135**		P	**P**	**14 10 57.6 +2.2**				
CTA	**Charters Tower**	**44.97**	**114**		LR	LR	14 32 15.2				
	comp=Z,69nm,18.3s,baz=288,slow=39										
CTA	**Charters Tower**	**44.97**	**114**		P	**P**	**14 11 01.4 +1.1**				
CTAO	**Charters Tower**	**44.97**	**114**		P	**P**	**14 11 01.2 +0.9**				
CTAO	**Charters Tower**	**44.97**	**114**		P	**P**	**14 11 00.6 +0.3**				
CTAO					IAmb	IAmb	14 11 02.3				
	comp=Z,55nm,0.9s										
CTAO	**Charters Tower**	**44.97**	**114**		P	**P**	**14 11 00.6 +0.3**				
CTAO					pmax	pmax					
	comp=Z,55nm,0.9s										
BTO2	**Baotou**	**45.09**	**7**	*eP*		**P**	**14 11 02.8 +1.7**				
BTO2					pP	**pP**	**14 11 26.0 +0.3**				
BTO2					sP	**sP**	**14 11 34.5 -3.1**				
BTO2					S	**S**	**14 17 35.3 +2.8**				
BTO2					pmax	pmax					
	comp=Z,25nm,1.1s										
BTO2					pmax	pmax					
	comp=Z,200nm,4.3s										
BTO2					LR	LR					
	comp=Z,370nm,11.2s										
BTO2					LR	LR					
	comp=Z,690nm,14.5s										
BTO2					LR	LR					
	comp=Z,1μm,13.3s										
GUMO	**Guam**	**45.10**	**66**		P	**P**	**14 11 02.0 +0.6**				
QLP	**Quilpie**	**45.27**	**124**		P	**P**	**14 11 04.0 +1.4**				
	comp=Z,111nm,1.0s										
QLP	**Quilpie**	**45.27**	**124**		P	**P**	**14 11 03.1 +0.5**				
HHC	**Hu-ho-hao-te**	**45.44**	**9**	*eP*		**P**	**14 11 03.8 0.0**				
HHC					pP	pP	14 11 28.0 -0.4				
HHC					S	**S**	**14 17 37.5 +0.1**				
HHC					sS	sS	14 18 21.5 +1.2				
HHC					ScS	**ScS**	**14 20 45.8 -4.0**				
HHC					pmax	pmax					
	comp=Z,8.0nm,0.6s										
HHC					pmax	pmax					
	comp=Z,73nm,4.0s										
HHC					LR	LR					
	comp=Z,360nm,15.7s										
HHC					LR	LR					
	comp=Z,140nm,15.2s										
HHC					LR	LR					
	comp=Z,330nm,15.7s										
JNU	**Nakatsue**	**45.48**	**33**		LR	LR	14 31 29.4				
	comp=Z,52nm,18.2s,baz=216,slow=38										
STKA	**Stephens Creek**	**45.49**	**132**		P	**P**	**14 11 05.2 +1.0**				
	comp=Z,339nm,0.8s										
STKA	**Stephens Creek**	**45.49**	**132**		P	**P**	**14 11 05.2 +1.0**				
	comp=Z,37nm,0.6s,baz=307,slow=7.9,SNR=116										
STKA					pP	**pP**	**14 11 30.4 +1.3**				
	comp=Z,46nm,0.7s,baz=295,slow=8.2,SNR=8.9										
STKA					PcP	**PcP**	**14 12 42.1 +0.6**				
	comp=Z,26nm,0.6s,baz=332,slow=4.4,SNR=5.6										
STKA					S	**S**	**14 17 37.7 -0.6**				
	comp=Z,17nm,1.1s,baz=191,slow=22,SNR=8.8										
	comp=Z,37nm,0.6s										
STKA	**Stephens Creek**	**45.49**	**132**		P	**P**	**14 11 05.3 +1.0**				
STKA	**Stephens Creek**	**45.49**	**132**		P	**P**	**14 11 04.7 +0.5**				
BJI2	**Beijing**	**45.56**	**14**		P	**P**	**14 11 06.0 +1.4**				
BJI2					pP	**pP**	**14 11 27.8 -1.5**				
BJI2					PcP	**PcP**	**14 12 42.0 +0.5**				
BJI2					ScP	**ScP**	**14 16 22.8 -2.1**				
BJI2					S	**S**	**14 17 45.0 +6.0**				
BJI2					sS	**sS**	**14 18 26.5 +4.6**				
BJI2					pmax	pmax					
	comp=Z,10.0nm,0.9s										
BJI2					LR	LR					
	comp=Z,130nm,13.0s										
BJI2					LR	LR					
	comp=Z,210nm,12.4s										
BJI2					LR	LR					
	comp=Z,150nm,15.3s										
NIL	**Nilore**	**46.94**	**325**		P	**P**	**14 11 15.1 -0.5**				
NIL	**Nilore**	**46.94**	**325**		P	**P**	**14 11 15.1 -0.5**				
NIL					pmax	pmax					
	comp=Z,103nm,0.8s										
KSAR	**Wonju Array Be**	**47.38**	**27**		P	**P**	**14 11 18.7 -0.2**				
KSAR					PcP	**PcP**	**14 12 47.7 -0.3**				
KSAR	**Wonju Array Be**	**47.38**	**27**		P	**P**	**14 11 18.7 -0.2**				
KSRS	**Korea Array**	**47.41**	**27**		P	**P**	**14 11 19.0 -0.1**				
	comp=Z,6.6nm,0.6s,baz=222,slow=7.2,SNR=22										
KSRS					pP	**pP**	**14 11 45.4 +1.5**				
	comp=Z,10nm,0.8s,baz=233,slow=6.3,SNR=9.4										
KSRS					PcP	**PcP**	**14 12 47.6 -0.5**				
	comp=Z,4.9nm,1.1s,baz=204,slow=3.4,SNR=5.9										
KSRS					ScP	**ScP**	**14 16 29.3 -3.4**				
	comp=Z,5.2nm,0.9s,baz=212,slow=4.5,SNR=10										
	comp=Z,6.6nm,0.6s										
JMN	**Monobe**	**47.61**	**35**		P	**P**	**14 11 22.5 +1.7**				
JMN	**Monobe**	**47.61**	**35**		IAmb	IAmb	14 11 48.4				
	comp=Z,61nm,1.0s										
CMSA	**Cobar Meteorol**	**48.43**	**129**		P	**P**	**14 11 28.4 +1.2**				
CMSA	**Cobar Meteorol**	**48.43**	**129**		P	**P**	**14 11 28.1 +0.9**				
JCJ	**Chichijima**	**48.92**	**48**		LR	LR	14 32 05.7				
	comp=Z,47nm,21.9s,baz=246,slow=36										
XLT	**XiLinHaoTe**	**49.23**	**12**	*eP*		**P**	**14 11 33.3 +0.2**				
XLT					pP	pP	14 11 56.5 -1.6				
XLT					ScP	**ScP**	**14 16 38.3 -2.1**				
XLT					S	**S**	**14 18 27.0 -4.1**				
XLT					pmax	pmax					
	comp=Z,31nm,0.9s										
XLT					pmax	pmax					
	comp=Z,92nm,4.7s										
XLT					LR	LR					
	comp=Z,210nm,18.1s										
XLT					LR	LR					
	comp=Z,250nm,14.3s										
WMQ	**Urumqi**	**49.69**	**345**	*eP*		**P**	**14 11 37.5 +0.9**				
WMQ					sP	sP	14 12 16.0 +2.3				
WMQ					PcP	**PcP**	**14 12 57.0 +0.7**				
WMQ					pmax	pmax					
	comp=Z,45nm,0.7s										
WMQ					pmax	pmax					
	comp=Z,140nm,3.9s										
KSH2	**Kashi**	**49.96**	**332**		P	**P**	**14 11 38.0 -0.8**				
KSH2					PcP	**PcP**	**14 12 58.0 +0.5**				
KSH2					PcS	**PcS**	**14 16 55.3 +0.6**				
KSH2					pmax	pmax					
	comp=Z,13nm,0.9s										
JLN	**Jalan Bani Buh**	**50.01**	**303**		P	**P**	**14 11 40.6 +1.3**				
KBL	**Kabul**	**50.03**	**323**		P	**P**	**14 11 38.6 -0.9**				
KBL					IAmb	IAmb	14 11 40.1				
	comp=Z,33nm,0.9s										
KBL	**Kabul**	**50.03**	**323**		P	**P**	**14 11 38.6 -0.9**				
KBL					pmax	pmax					
	comp=Z,33nm,1.0s										
KBL	**Kabul**	**50.03**	**323**		P	**P**	**14 11 39.1 -0.4**				
	SNR=24										
WUS	**Wushi**	**50.08**	**337**		P	**P**	**14 11 39.5 -0.2**				
WUS					pP	**pP**	**14 12 03.0 -1.9**				
WUS					PcP	**PcP**	**14 12 58.4 +0.5**				
NGJH	**Negor - Chabah**	**50.11**	**308**		P	**P**	**14 11 41.4 +1.4**				
WBK	**Wadi Bani Khal**	**50.58**	**304**		P	**P**	**14 11 45.3 +1.6**				
DQM	**DQM**	**50.68**	**300**		P	**P**	**14 11 45.7 +1.3**				
EIDS	**Eidsvold**	**50.68**	**120**		P	**P**	**14 11 45.3 +0.9**				
EIDS	**Eidsvold**	**50.68**	**120**		P	**P**	**14 11 45.4 +1.1**				
EIDS	**Eidsvold**	**50.68**	**120**		IAmb	IAmb	14 11 46.1				
	comp=Z,44nm,0.8s										
MHTO	**MHTO**	**50.73**	**301**		P	**P**	**14 11 45.6 +0.8**				
JGF	**Kuroka**	**50.96**	**36**		P	**P**	**14 11 47.2 +0.9**				
JGF	**Kuroka**	**50.96**	**36**		IAmb	IAmb	14 11 47.7				
	comp=Z,100nm,2.0s										
WSAR	**Wadi Sarin**	**51.13**	**304**		P	**P**	**14 11 48.8 +1.1**				
JMDO	**Jabal Madar**	**51.20**	**303**		P	**P**	**14 11 49.1 +0.9**				
PRZ	**Przheval'sk**	**51.49**	**337**		IAmb	IAmb	14 13 05.5				
	comp=Z,42nm,1.0s										
SMDO	**Samad**	**51.54**	**304**		P	**P**	**14 11 52.2 +1.3**				
NRN	**Naryn**	**51.61**	**334**		IAmb	IAmb	14 13 05.6				
	comp=Z,47nm,0.9s										
SHAO	**Shalim**	**51.65**	**297**		P	**P**	**14 11 53.2 +1.5**				
SHAO	**Shalim**	**51.65**	**297**		P	**P**	**14 11 53.1 +1.5**				
SHLS	**Shalkode**	**51.66**	**338**	*cP*		**P**	**14 11 50.2 -1.3**				
SHLS					*eS*	**S**	**14 19 01.8 -3.1**				
SHLS					pmax	pmax					
	comp=Z,15nm,0.5s										
SHLS	**Shalkode**	**51.66**	**338**	⇑*iP*		**P**	**14 11 50.2 -1.3**				
	comp=Z,16nm,0.5s										
SHLS					*eS*	**S**	**14 19 01.8 -3.1**				
YNG	**Young**	**51.67**	**131**		P	**P**	**14 11 52.8 +1.1**				
BIDO	**Bidbid**	**51.67**	**304**		P	**P**	**14 11 53.6 +1.8**				
PDGK	**Podgornoye**	**51.80**	**338**		P	**P**	**14 11 51.6 -0.9**				
CN2	**Changchun**	**51.81**	**21**		P	**P**	**14 11 51.3 -1.1**				
CN2					pmax	pmax					
	comp=Z,20nm,0.8s										
UZB	**Uzynbulak**	**51.82**	**338**	*eP*		**P**	**14 11 52.4 -0.2**				
UZB					pmax	pmax					
	comp=Z,9.0nm,0.5s										
UZB	**Uzynbulak**	**51.82**	**338**	*eP*		**P**	**14 11 52.5 -0.2**				
	comp=Z,8.6nm,0.5s										
SONM	**Songino Array**	**51.83**	**3**		P	**P**	**14 11 52.8 +0.2**				
	comp=Z,36nm,0.8s,baz=183,slow=9.0,SNR=99										
SONM					PcP	**PcP**	**14 13 04.2 0.0**				
	comp=Z,8.6nm,0.7s,baz=188,slow=4.2,SNR=13										
SONM					ScP	**ScP**	**14 16 48.3 -3.3**				
	comp=Z,6.2nm,1.0s,baz=181,slow=3.8,SNR=10										
SONM					LR	LR	14 37 25.2				
	comp=Z,191nm,18.2s,baz=172,slow=40										
	comp=Z,36nm,0.8s										
SONM	**Songino Array**	**51.83**	**3**		P	**P**	**14 11 52.6 0.0**				
SONM					IAmb	IAmb	14 11 56.7				
	comp=Z,33nm,0.8s										
ULN	**Ulaanbaatar**	**51.89**	**3**		P	**P**	**14 11 51.9 -1.2**				
ULN					IAmb	IAmb	14 11 57.1				
	comp=Z,27nm,1.0s										
ULN					PcP	**PcP**	**14 13 04.2 -0.3**				
ULN	**Ulaanbaatar**	**51.89**	**3**		P	**P**	**14 11 51.9 -1.2**				
ULN							14 13 04.2				
ULN					pmax	pmax					
	comp=Z,27nm,1.0s										
ULN	**Ulaanbaatar**	**51.89**	**3**		P	**P**	**14 11 53.5 +0.4**				
ULN	**Ulaanbaatar**	**51.89**	**3**		P	**P**	**14 11 53.7 +0.6**				
	comp=Z,116nm,1.0s										
SATY	**Saty**	**51.98**	**337**	*cP*		**P**	**14 11 53.6 -0.2**				
SATY				*eS*		**S**	**14 19 08.2 -1.0**				
SATY					pmax	pmax					
	comp=Z,18nm,1.0s										
SATY	**Saty**	**51.98**	**337**	⇑*iP*		**P**	**14 11 53.6 -0.2**				
	comp=Z,18nm,1.0s										
SATY				*eS*		**S**	**14 19 08.2 -1.0**				
MAJO	**Matsushiro**	**52.11**	**36**		P	**P**	**14 11 55.8 +1.0**				
MAJO	**Matsushiro**	**52.11**	**36**		P	**P**	**14 11 53.4 -1.4**				
MAJO					IAmb	IAmb	14 11 54.8				
	comp=Z,30nm,0.9s										
MAJO	**Matsushiro**	**52.11**	**36**		P	**P**	**14 11 53.5 -1.3**				
MJAR	**Matsushiro Arr**	**52.11**	**36**		P	**P**	**14 11 53.8 -1.0**				
	comp=Z,29nm,0.9s,baz=215,slow=7.2,SNR=68										
MJAR					pP	**pP**	**14 12 19.8 -0.2**				
	comp=Z,15nm,0.8s,baz=219,slow=7.6,SNR=6.5										
MJAR					PcP	**PcP**	**14 13 05.2 -0.2**				
	comp=Z,7.3nm,1.0s,baz=203,slow=4.4,SNR=4.2										
MJAR					ScP	**ScP**	**14 16 50.1 -2.8**				
	comp=Z,4.3nm,0.8s,baz=212,slow=4.5,SNR=9.1										
	comp=Z,29nm,0.9s										
MJAR	**Matsushiro Arr**	**52.11**	**36**		P	**P**	**14 11 53.8 -1.0**				
MJAR					IAmb	IAmb	14 11 54.9				
	comp=Z,26nm,0.8s										
MJAR	**Matsushiro Arr**	**52.11**	**36**		P	**P**	**14 11 53.8 -1.0**				
MJAR					pmax	pmax					
	comp=Z,27nm,0.8s										
MJB9	**Matsu-Tunnel**	**52.11**	**36**		IAmb	IAmb	14 11 55.8				
	comp=Z,29nm,0.9s										
BSY	**Bisya**	**52.11**	**303**		P	**P**	**14 11 56.8 +1.7**				
DMTO	**DMTO**	**52.15**	**296**		P	**P**	**14 11 57.0 +1.6**				
ULHL	**Ulahol**	**52.17**	**335**		P	**P**	**14 11 56.6 +1.2**				
	SNR=5.7										
KPKS	**Kokpek**	**52.22**	**338**	*eP*		**P**	**14 11 55.3 -0.2**				
KPKS	**Kokpek**	**52.22**	**338**	*eP*		**P**	**14 11 55.4 -0.2**				
HOQ	**Hoqain**	**52.38**	**304**		P	**P**	**14 11 58.7 +1.7**				
BOOM	**Boomskoye usch**	**52.50**	**335**		IAmb	IAmb	14 11 59.2				
	comp=Z,22nm,0.8s										
TNSS	**Tian-Shan**	**52.54**	**336**	*eP*		**P**	**14 11 57.8 -0.5**				
TNSS	**Tian-Shan**	**52.54**	**336**	*eP*		**P**	**14 11 57.8 -0.5**				
CAN	**Canberra**	**52.55**	**132**		P	**P**	**14 11 59.0 +0.8**				
MDOK	**Medeo**	**52.60**	**336**	*eP*		**P**	**14 11 58.3 -0.2**				
MDOK				*eS*		**S**	**14 19 16.8 -1.0**				
MDOK	**Medeo**	**52.60**	**336**	*eP*		**P**	**14 11 58.4 -0.2**				
MDOK				*eS*		**S**	**14 19 16.9 -0.9**				
SHAA	**Shahritus**	**52.65**	**325**		IAmb	IAmb	14 11 58.0				
	comp=Z,112nm,0.8s										
AAA	**Alma-Ata**	**52.69**	**336**	*eP*		**P**	**14 11 58.8 -0.2**				
AAA					pmax	pmax					
	comp=Z,19nm,0.6s										
AAA	**Alma-Ata**	**52.69**	**336**	*eP*		**P**	**14 11 58.9 -0.2**				
	comp=Z,19nm,0.6s										
ARMA	**Armidale**	**52.71**	**125**		P	**P**	**14 12 02.0 +2.5**				
ARMA	**Armidale**	**52.71**	**125**		P	**P**	**14 12 00.2 +0.7**				
ARMA	**Armidale**	**52.71**	**125**		P	**P**	**14 12 01.3 +1.8**				
ARMA					IAmb	IAmb	14 12 02.5				
	comp=Z,23nm,0.8s										
RBK	**Rabkut**	**52.75**	**296**		P	**P**	**14 12 01.6 +1.7**				
CNB	**Canberra Magne**	**52.82**	**132**		P	**P**	**14 12 01.2 +1.0**				
CHGR	**Chuyangaron**	**52.85**	**327**	*cP*		**P**	**14 11 58.2 -2.1**				
UCH	**Uchtor**	**52.91**	**334**		P	**P**	**14 12 01.0 -0.1**				
	SNR=15										
JASK	**Jask - Hormozg**	**52.94**	**307**		P	**P**	**14 12 02.8 +1.7**				
BTK	**Batken**	**52.99**	**329**		IAmb	IAmb	14 12 02.4				
	comp=Z,47nm,1.1s										
TKM2	**Tokmak 2**	**53.00**	**335**		P	**P**	**14 12 01.1 -0.3**				
	SNR=81										
KBK	**Karagaybulak**	**53.06**	**334**		P	**P**	**14 11 58.8 -3.1**				
	SNR=6.5										
ARXS	**Arharly**	**53.18**	**338**	*eP*		**P**	**14 12 01.6 -1.0**				
DOK	**Doka**	**53.19**	**297**		P	**P**	**14 12 04.3 +1.2**				
AAK	**Ala-Archa**	**53.25**	**334**		P	**P**	**14 12 02.7 -0.5**				
	SNR=18										
AAK	**Ala-Archa**	**53.25**	**334**		LR	LR	14 39 41.5				
	comp=Z,61nm,18.3s,baz=156,slow=42										
AAK	**Ala-Archa**	**53.25**	**334**		P	**P**	**14 12 02.1 -1.2**				
AAK					IAmb	IAmb	14 13 11.6				
	comp=Z,31nm,0.8s										
AAK	**Ala-Archa**	**53.25**	**334**	*i*	P	**P**	**14 12 03.2 -0.1**				
	SNR=20										
AAK	**Ala-Archa**	**53.25**	**334**	*ceP*		**P**	**14 12 03.2 -0.1**				
AAK					pmax	pmax					
	comp=Z,12nm,0.8s										
AAK	**Ala-Archa**	**53.25**	**334**		P	**P**	**14 12 03.1 -0.1**				
SOHO	**SOHO**	**53.25**	**304**	*i*	P	**P**	**14 12 04.4 +0.9**				
	SNR=10										
SOHO	**SOHO**	**53.25**	**

ASUD Al Ashush, Dub 54.46 304 P **P** **14 12 14.0 +1.8**
USRK Ussuriysk Ar. 54.69 25 P **P** **14 12 13.7 +0.3**
comp=Z,24nm,0.5s,baz=187,slow=4.8,SNR=96
USRK pP **pP** **14 12 39.4 +0.5**
comp=Z,16nm,0.7s,baz=213,slow=5.5,SNR=5.7
comp=Z,24nm,0.5s
KNGR Kungurtug, Tuv 54.72 356 *i* P **P** **14 12 13.8 +0.1**
KNGR pmax pmax
comp=Z,18nm,1.0s
DZA Taraz 54.88 332 *e*P **P** **14 12 14.5 -0.4**
DZA pmax pmax
comp=Z,14nm,0.8s
DZA Taraz 54.88 332 *e*P **P** **14 12 14.6 -0.4**
comp=Z,14nm,0.8s
IUG Iuzhnay 54.95 330*c i*P **P** **14 12 15.2 -0.3**
IUG pmax pmax
comp=Z,49nm,1.1s
IUG Iuzhnay 54.95 330⇑ *i*P **P** **14 12 15.2 -0.3**
comp=Z,49nm,1.1s
DGZ Jazzator, Alta 55.29 348*c i*P **P** **14 12 17.8 -0.1**
DGZ pmax pmax
comp=Z,62nm,0.6s
MZWR Madinat Zayed 55.31 303 P **P** **14 12 18.4 +0.1**
MZR Muzera 55.35 302 *i* P **P** **14 12 20.2 +1.5**
SNR=13
MZR Muzera 55.35 302 P **P** **14 12 19.8 +1.2**
HILR Hailar Array B 55.40 13 P **P** **14 12 18.4 -0.2**
comp=Z,21nm,0.5s,baz=189,slow=9.4,SNR=29
HILR ScP **ScP** **14 17 05.0 -2.0**
comp=Z,7.1nm,1.0s,baz=205,slow=6.4,SNR=5.7
comp=Z,21nm,0.5s
KK31 Karatay Array 55.44 331 *i* P **P** **14 12 17.1 -1.8**
KKAR Karatay Array 55.44 331 P **P** **14 12 17.6 -1.3**
KKAR PcP **PcP** **14 13 18.9 +0.9**
KKAR Karatay Array 55.44 331 P **P** **14 12 17.6 -1.3**
KKAR 14 13 18.9
TLY Talaya 55.59 0 LR LR 14 37 40.0
comp=Z,101nm,18.3s,baz=166,slow=38
TLY Talaya 55.59 0 P **P** **14 12 21.1 +1.1**
TLY IAmb IAmb 14 12 22.3
comp=Z,21nm,0.7s
TLY Talaya 55.59 0*ce*P **P** **14 12 20.5 +0.6**
TLY pmax pmax
comp=Z,30nm,1.0s
TLY Talaya 55.59 0 P **P** **14 12 21.0 +1.1**
TLY Talaya 55.59 0 P **P** **14 12 20.9 +1.0**
TLY pP **pP** **14 12 45.6 +0.1**
MOY Mondy 55.60 358 *e*P **P** **14 12 20.0 -0.1**
MOY pmax pmax
comp=Z,26nm,1.9s
IRK Irkutsk 56.16 1 *e*P **P** **14 12 24.0 +0.1**
IRK *e*S **S** **14 20 06.2 +1.2**
IRK pmax pmax
comp=Z,35nm,2.1s
ABPO Ambohimpanom 56.39 250 P **P** **14 12 28.2 +1.9**
ABPO IAmb IAmb 14 12 29.8
comp=Z,42nm,1.1s
ABPO Ambohimpanom 56.39 250 P **P** **14 12 28.2 +1.9**
ABPO pmax pmax
comp=Z,42nm,1.1s
TATA Tatamba Isabel 56.56 97 P **P** **14 12 28.3 +0.9**
SAVO Savo Central 56.58 98 P **P** **14 12 27.5 -0.1**
HNR Honiara 56.72 99 P **P** **14 12 29.1 +0.6**
HNR Honiara 56.72 99 P **P** **14 12 27.6 -0.9**
HNR Honiara 56.72 99 P **P** **14 12 27.6 -0.9**
HNR pmax pmax
comp=Z,94nm,1.1s
NGOA Tingoa Renbel 56.90 101 P **P** **14 12 30.8 +1.0**
VOI Vohitsoka 57.23 247 P **P** **14 12 34.1 +2.0**
VOI IAmb IAmb 14 12 34.9
comp=Z,31nm,0.8s
VOI Vohitsoka 57.23 247 P **P** **14 12 34.3 +2.2**
SNR=5.0
TRNA Turayna 57.93 302 P **P** **14 12 36.3 -0.5**
HEH HeiHe 58.10 18 *e*P **P** **14 12 37.5 -0.1**
HEH pP **pP** **14 13 03.5 +0.2**
HEH ScP **ScP** **14 17 17.5 -1.4**
HEH S **S** **14 20 31.0 +0.5**
HEH pmax pmax
comp=Z,100nm,0.9s
HEH pmax pmax
comp=Z,120nm,4.5s
SMRA Abu-Samra 58.26 302 P **P** **14 12 39.9 +0.7**
KURBB Kurchatov Arra 58.46 342 P **P** **14 12 39.4 -0.7**
comp=Z,22nm,0.7s,baz=159,slow=6.5,SNR=194
KURBB PcP **PcP** **14 13 29.7 +0.1**
comp=Z,15nm,0.6s,baz=153,slow=3.3,SNR=18
KURBB ScP **ScP** **14 17 18.4 -2.0**
comp=Z,3.2nm,1.0s,baz=158,slow=3.5,SNR=5.4
KURBB S S 14 20 23.4 -12
comp=Z,1.6nm,0.9s,baz=156,slow=14,SNR=8.0
KURBB LR LR 14 41 31.2
comp=Z,60nm,20.0s,baz=136,slow=40
comp=Z,22nm,0.7s
KURBB Kurchatov Arra 58.46 342 P **P** **14 12 38.4 -1.7**
KURK Kurchatov 58.52 342 P **P** **14 12 39.9 -0.6**
KURK IAmb IAmb 14 12 40.7
comp=Z,31nm,0.8s
KURK Kurchatov 58.52 342 P **P** **14 12 39.4 -1.1**
KURK 14 13 29.7
KURK Kurchatov 58.52 342 P **P** **14 12 39.8 -0.6**
KLR Kul'dur 58.70 22*ce*P **P** **14 12 41.8 0.0**
KLR pmax pmax
comp=Z,11nm,0.8s
ASAJ Asahikawa 59.72 32 LR LR 14 41 05.8
comp=Z,44nm,18.1s,baz=200,slow=38
ZALV Zalesovo Beam 59.84 348 P **P** **14 12 48.7 -0.8**
comp=Z,46nm,0.4s,baz=161,slow=5.0,SNR=272
ZALV ScP **ScP** **14 17 23.9 -2.6**
comp=Z,2.7nm,0.8s,baz=146,slow=4.9,SNR=3.5
ZALV S **S** **14 20 44.4 -8.4**
comp=Z,2.7nm,0.7s,baz=149,slow=12,SNR=9.9
ZALV LR LR 14 42 04.9
comp=Z,91nm,19.3s,baz=136,slow=39
ZALV PKPPKP P'P'bc 14 42 15.1 -9.4
comp=Z,3.2nm,0.8s,baz=304,slow=3.3,SNR=11
comp=Z,46nm,0.4s
ZALV Zalesovo Beam 59.84 348 P **P** **14 12 48.6 -1.0**
H04N2 CROZET ISLANDS 60.95 218 T T 15 18 04.6
baz=63,slow=75,SNR=490
H04N1 CROZET ISLANDS 60.97 218 T T 15 18 05.4
baz=63,slow=75,SNR=659
H04N3 CROZET ISLANDS 60.97 218 T T 15 18 04.0
baz=63,slow=75,SNR=652
CRZF Crozet Islands 61.04 218 P **P** **14 12 59.7 +1.8**
ZEA Zeya 61.13 16 *e*P **P** **14 12 58.5 +0.2**
ZEA pmax pmax
comp=E,20nm,0.7s
ZEA pmax pmax
comp=N,30nm,0.9s
ZEA pmax pmax
comp=Z,70nm,0.8s
ZEA MLR MLR
comp=N,100nm,13.0s
ZEA MLR MLR
comp=Z,100nm,15.0s
H04S1 CROZET ISLANDS 61.20 218 T T 15 18 23.0
baz=61,slow=75,SNR=10
H04S3 CROZET ISLANDS 61.21 218 T T 15 18 13.0
baz=61,slow=75,SNR=27
H04S2 CROZET ISLANDS 61.21 218 T T 15 18 31.2
baz=61,slow=75,SNR=14
KOUNC Koumac, New Ca 61.68 111 P **P** **14 13 03.4 +0.7**
GRNR Gornyy 61.73 23⇑ *i*P **P** **14 13 02.4 0.0**
GRNR pmax pmax
comp=N,9.0nm,1.2s
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR MLR MLR
comp=E,110nm,12.0s
GRNR MLR MLR
comp=N,100nm,16.0s
GRNR MLR MLR
comp=Z,140nm,16.0s
YSS Yuzhno-Sakhali 61.74 30 P **P** **14 13 03.2 +0.7**
YSS Yuzhno-Sakhali 61.74 30 P **P** **14 13 02.6 0.0**
YSS Yuzhno-Sakhali 61.74 30⇑ *i*P **P** **14 13 02.5 0.0**
YSS *e* 14 13 27.8
YSS pmax pmax
comp=Z,140nm,0.8s
YSS Yuzhno-Sakhali 61.74 30 P **P** **14 13 02.4 -0.1**
YSS PcP **PcP** **14 13 42.3 -0.5**
CASY Casey 62.26 177 P **P** **14 13 07.5 +1.8**
RAYN Ar Rayn 62.41 299 P **P** **14 13 08.1 +0.5**
RAYN IAmb IAmb 14 13 09.1
comp=Z,33nm,1.1s
RAYN Ar Rayn 62.41 299 *i* P **P** **14 13 08.2 +0.7**
SNR=27
RAYN Ar Rayn 62.41 299 P **P** **14 13 08.2 +0.7**
RAYN Ar Rayn 62.41 299 P **P** **14 13 08.2 +0.7**
UGL Uglegorsk 62.90 28 *e*P **P** **14 13 11.1 +0.9**
UGL *e*S **S** **14 21 40.2 +8.5**
UGL pmax pmax
comp=Z,100nm,0.9s
BVA0 Borovoye Array 63.23 339 P **P** **14 13 10.3 -2.1**
BVAR Borovoye Array 63.23 339 P **P** **14 13 11.3 -1.1**
comp=Z,39nm,0.7s,baz=146,slow=8.5,SNR=232
BVAR S **S** **14 21 30.5 -5.2**
comp=Z,0.8nm,0.6s,baz=128,slow=11,SNR=4.1
BVAR PKP2bc **P'P'bc** **14 42 17.4 +0.9**
comp=Z,0.3nm,0.4s,baz=336,slow=3.3,SNR=4.6
comp=Z,39nm,0.7s
BORK Borovoye 63.27 339 P **P** **14 13 11.6 -1.0**
BORK IAmb IAmb 14 13 13.2
comp=Z,36nm,0.9s
BORK Borovoye 63.27 339 P **P** **14 13 11.6 -1.0**
BORK pmax pmax
comp=Z,36nm,0.9s
DZM Mont Dzumac 63.85 112 *e*P **P** **14 13 16.0 -1.2**
comp=Z,107nm,1.2s
DZM *e*LR LR 14 32 24.2
comp=Z,258nm,29.8s
DZM Mont Dzumac 63.85 112 P **P** **14 13 18.3 +1.1**
DZM Mont Dzumac 63.85 112 P **P** **14 13 17.8 +0.6**
DZM IAmb IAmb 14 13 18.8
comp=Z,32nm,0.8s
OUENC Ouen Island, N 64.25 113 P **P** **14 13 21.2 +1.5**
TYV Tymovskoe 64.43 27 *e*P **P** **14 13 20.5 +0.2**
TYV *e*S **S** **14 21 54.3 +3.6**
TYV pmax pmax
comp=Z,10.0nm,1.4s
TYV pmax pmax
comp=Z,100nm,3.4s
TYV smax smax
comp=N,700nm,9.7s
TYV smax smax
comp=E,300nm,9.7s
KIBK Kibwezi 64.89 269 IAmb IAmb 14 13 27.1
comp=Z,28nm,0.9s
KIBK Kibwezi 64.89 269 P **P** **14 13 26.2 +2.1**
SNR=8.6
AB31 Akbulak array 64.96 330 *i* P **P** **14 13 22.5 -1.2**
ABKAR Akbulak array 64.96 330 P **P** **14 13 23.0 -0.7**
MARNC Mare, Loyalty 65.25 112 P **P** **14 13 28.1 +1.9**
FURI Furi 65.44 282 LR LR 14 38 28.4
comp=Z,71nm,20.2s,baz=144,slow=32
KMBO Kilima Mbogo 65.76 271 P **P** **14 13 31.8 +1.9**
baz=71,slow=7.3
INH Isangel 66.25 109 P **P** **14 13 33.2 +0.5**
AKTO Aktyubinsk 66.67 330 P **P** **14 13 33.1 -1.6**
LODK Lodwar 68.03 275 P **P** **14 13 46.8 +2.7**
SNR=14
MAW Mawson 69.01 195 P **P** **14 13 50.5 +1.4**
comp=Z,41nm,1.0s,baz=257,slow=8.4,SNR=2.4
MAW LR LR 14 37 53.2
comp=Z,119nm,19.7s,baz=61,slow=30
comp=Z,41nm,1.0s
YAK Yakutsk 69.07 13 LR LR 14 46 50.0
comp=Z,92nm,19.5s,baz=228,slow=38
YAK Yakutsk 69.07 13 P **P** **14 13 48.4 -1.0**
YAK Yakutsk 69.07 13*c i*P **P** **14 13 48.1 -1.3**
YAK *e* 14 14 11.0
YAK *e**PP **sP** **14 14 27.3 -0.2**
YAK *e* 14 16 22.7
YAK *e*PPP PPP 14 18 04.3
YAK *e*S **S** **14 22 40.5 -5.6**
YAK *e* 14 23 30.9
YAK *e*SS **SS** **14 27 06.5 -7.7**
YAK pmax pmax
comp=Z,172nm,0.9s
YAK pmax pmax
comp=N,44nm,1.1s
YAK pmax pmax
comp=E,22nm,1.3s
YAK pmax pmax
comp=Z,50nm,3.5s
YAK pmax pmax
comp=N,101nm,5.7s
YAK pmax pmax
comp=E,33nm,3.3s
YAK smax smax
comp=N,44nm,3.3s
YAK smax smax
comp=E,68nm,4.0s
YAK Yakutsk 69.07 13 P **P** **14 13 48.1 -1.3**
GNI Garni 69.15 316*ce*P **P** **14 13 52.0 +1.3**
GNI pmax pmax
comp=Z,49nm,1.7s
GNI Garni 69.15 316 P **P** **14 13 50.7 0.0**
comp=Z,591nmcomp=Z,23nm,0.8s
SVE Sverdlovsk 69.80 337*de*P **P** **14 13 54.1 0.0**
SVE *e*S **S** **14 22 50.3 -4.6**
SVE pmax pmax
comp=N,63nm,1.1s
JCZ Jackson Bay 69.83 136 P **P** **14 13 54.1 -0.7**
ARTI Arti 70.41 335 P **P** **14 13 57.4 -0.4**
ARTI Arti 70.41 335*c i*P **P** **14 13 57.1 -0.7**
ARTI 14 14 17.8
ARTI *PP **pP** **14 14 24.2 -0.3**
ARTI S **S** **14 23 01.4 -0.7**
ARTI pmax pmax
comp=Z,129nm,0.7s
GURO Guroymak-BITLI 70.44 313 IAmb IAmb 14 14 00.1
comp=Z,36nm,0.8s
KARS Kars 70.50 316 IAmb IAmb 14 14 00.2
comp=Z,34nm,0.7s
SKR Severo-Kuril's 70.98 33 *i* P **P** **14 13 58.7 -2.7**
RPZ Rata Peaks 71.34 135 P **P** **14 14 05.3 +1.4**
KBZ Khabaz 71.89 319 P **P** **14 14 06.9 -0.1**
comp=Z,37nm,0.9s,baz=129,slow=4.9,SNR=36
KBZ S **S** **14 23 17.1 -2.4**
comp=Z,2.4nm,1.1s,baz=43,slow=23,SNR=5.9
comp=Z,37nm,0.9s
SHA1 Shidzhatmaz 72.05 319*ce*P **P** **14 14 09.0 +0.7**
KIV Kislovodsk 72.12 319⇑ P **P** **14 14 09.2 +0.7**
KIV Kislovodsk 72.12 319 P **P** **14 14 08.6 0.0**
KIV IAmb IAmb 14 14 10.3
comp=Z,42nm,0.9s
KIV Kislovodsk 72.12 319 P **P** **14 14 08.9 +0.4**
KIV Kislovodsk 72.12 319 *e*P **P** **14 14 08.6 0.0**
KIV *e*S **S** **14 23 21.3 -1.2**
KIV pmax pmax
comp=Z,39nm,1.1s
KIV MLR MLR
comp=Z,32nm,18.0s
KIV Kislovodsk 72.12 319 P **P** **14 14 08.4 -0.2**
comp=Z,594nmcomp=Z,45nm,1.1s
ASF Jabal al Asfar 72.28 305 LR LR 14 46 48.7
comp=Z,62nm,19.6s,baz=26,slow=36
THZ Tophouse 72.29 132 P **P** **14 14 10.0 +0.4**
THZ IAmb IAmb 14 14 11.2
comp=Z,40nm,0.7s
THZ Tophouse 72.29 132 P **P** **14 14 09.6 0.0**
MBAR Mbarara 72.29 271 LR LR 14 44 57.5
comp=Z,67nm,18.0s,baz=82,slow=35
MBAR Mbarara 72.29 271 P **P** **14 14 10.3 0.0**
MBAR IAmb IAmb 14 14 13.6
comp=Z,53nm,0.8s
MBAR Mbarara 72.29 271*c i*P **P** **14 14 12.6 +2.3**
MBAR pmax pmax
comp=Z,60nm,0.9s
MBAR Mbarara 72.29 271 P **P** **14 14 11.7 +1.4**
MBAR Mbarara 72.29 271 P **P** **14 14 12.5 +2.2**
MBAR PcP **PcP** **14 14 27.5 -0.3**
MBAR pP **pP** **14 14 38.8 +1.8**
GVZ Greta Valley S 72.61 134 P **P** **14 14 11.9 +0.5**
KHZ Kahutara 72.87 133 P **P** **14 14 13.6 +0.7**
KHZ Kahutara 72.87 133 P **P** **14 14 13.0 +0.1**
MBAZ Motutapu North 73.03 127 P **P** **14 14 15.8 +1.8**
PEA0B Petropavlovsk- 73.10 31 IAmb IAmb 14 14 14.7
comp=Z,33nm,0.8s
PEA0B Petropavlovsk- 73.10 31*ce*P **P** **14 14 14.1 +0.1**
PETK Petropavlovsk- 73.10 31 P **P** **14 14 13.3 -0.8**
comp=Z,32nm,0.7s,baz=267,slow=2.4,SNR=46
comp=Z,32nm,0.7s
PETK LR LR 14 49 24.1
comp=Z,32nm,18.1s,baz=224,slow=38
comp=Z,32nm,0.7s
PETK Petropavlovsk- 73.10 31 P **P** **14 14 13.2 -0.9**
BELG Belogornoye 73.11 328*c i*P **P** **14 14 12.9 -1.1**
BELG pmax pmax
comp=Z,30nm,0.9s
GHAJ Ghor Haditha 73.12 304 IAmb IAmb 14 14 16.7
comp=Z,47nm,0.8s
EIL Elat 73.21 303 LR LR 14 45 18.3
comp=Z,70nm,21.0s,baz=63,slow=35
HIZ Hauiti 73.24 129 P **P** **14 14 16.8 +1.6**
VRZ Vera Road 73.25 130 P **P** **14 14 16.7 +1.4**
WAZ Wanganui 73.52 130 P **P** **14 14 18.2 +1.4**
GAZ Gaziantep 73.54 311 IAmb IAmb 14 14 18.7
comp=Z,51nm,0.9s
PET Petropavlovsk 73.55 31 P **P** **14 14 16.6 0.0**
PET Petropavlovsk 73.55 31 P **P** **14 14 16.2 -0.4**
PET Petropavlovsk 73.55 31*ce*P **P** **14 14 16.7 +0.1**
PET pmax pmax
comp=Z,41nm,0.7s
PET Petropavlovsk 73.55 31 P **P** **14 14 15.9 -0.7**
comp=Z,126nm,0.8s
MMAI Mount Meron Ar 73.72 306 P **P** **14 14 19.7 +1.5**
comp=Z,15nm,0.7s,baz=66,slow=10,SNR=41
MMAI LR LR 14 47 56.4
comp=Z,71nm,19.4s,baz=116,slow=37
comp=Z,15nm,0.7s
MA2 Magadan 73.75 23 P **P** **14 14 17.7 0.0**
MA2 IAmb IAmb 14 14 18.7
comp=Z,45nm,0.8s
MA2 Magadan 73.75 23*ce*P **P** **14 14 17.9 +0.2**
MA2 pmax pmax
comp=Z,76nm,1.3s
MA2 Magadan 73.75 23 P **P** **14 14 17.3 -0.4**
comp=Z,589nmcomp=Z,68nm,0.9s
TWVZ Taurewa 73.77 129 P **P** **14 14 19.6 +1.1**
FWVZ Far West T-bar 73.88 130 P **P** **14 14 20.1 +0.9**
WTVZ West Tongariro 73.89 129 P **P** **14 14 20.3 +1.1**
NGZ Ngauruhoe 73.91 129 P **P** **14 14 20.3 +1.0**
WNVZ Wahianoa 73.93 130 P **P** **14 14 20.3 +0.9**
MOVZ Moawhango 74.06 130 P **P** **14 14 20.3 +0.2**
TSZ Takapari Road 74.31 130 P **P** **14 14 20.6 -0.8**
LSZ Lusaka 74.31 255 LR LR 14 41 58.1
comp=Z,74nm,21.5s,baz=108,slow=31
LSZ Lusaka 74.31 255 P **P** **14 14 22.5 +0.5**
LSZ IAmb IAmb 14 14 24.7
comp=Z,68nm,1.2s
LSZ Lusaka 74.31 255 P **P** **14 14 22.5 +0.5**
LSZ pmax pmax
comp=Z,68nm,1.3s
LSZ Lusaka 74.31 255 P **P** **14 14 23.3 +1.2**
LSZ Lusaka 74.31 255 P **P** **14 14 23.5 +1.5**
PNHZ Pukenui 74.47 130 P **P** **14 14 22.8 +0.4**
MSVF Nonsavu 74.49 107 P **P** **14 14 24.5 +1.5**
MSVF Nonsavu 74.49 107 P **P** **14 14 23.5 +0.5**
MSVF Nonsavu 74.49 107 P **P** **14 14 23.5 +0.5**
MSVF pmax pmax
comp=Z,26nm,1.0s
DVHZ Dannevirke 74.50 131 P **P** **14 14 23.0 +0.5**
BKZ Black Stump Fm 74.59 129 P **P** **14 14 24.0 +0.8**
BKZ Black Stump Fm 74.59 129 P **P** **14 14 23.4 +0.2**
BKZ IAmb IAmb 14 14 24.1
comp=Z,56nm,0.7s
BKZ Black Stump Fm 74.59 129 P **P** **14 14 23.3 +0.2**
BFZ Birch Farm 74.61 131 P **P** **14 14 24.8 +1.7**
BFZ Birch Farm 74.61 131 IAmb IAmb 14 14 24.4
comp=Z,62nm,0.8s
BFZ Birch Farm 74.61 131 P **P** **14 14 23.7 +0.5**
WPHZ Waipukurau 74.67 130 P **P** **14 14 24.3 +0.8**
PRHZ Porangahau 74.84 130 P **P** **14 14 25.5 +1.0**
RTZ Ruatahuna 74.90 129 P **P** **14 14 25.0 0.0**
RTZ IAmb IAmb 14 14 25.6
comp=Z,62nm,0.9s
URZ Urewera 74.96 128 LR LR 14 51 39.4
comp=Z,68nm,18.3s,baz=256,slow=39
URZ Urewera 74.96 128 P **P** **14 14 26.3 +1.1**
KAHZ Kahuranaki 74.97 130 P **P** **14 14 26.2 +0.9**
PXZ Pawanui 74.99 130 P **P** **14 14 25.9 +0.6**
BROLN Tlhalogang 75.18 249 *i* P **P** **14 14 27.8 +0.9**
HAZ Te Kaha 75.44 128 P **P** **14 14 27.1 -0.9**
KIRV Kirov 75.58 334 LR LR 14 52 08.2
comp=Z,34nm,20.4s,baz=146,slow=39
KIRV Kirov 75.58 334*ce*P **P** **14 14 28.2 0.0**
VRH Novokhopyorsk 75.78 325 *e*P **P** **14 14 27.8 -1.7**
VRH *e*S **S** **14 23 56.0 -6.9**
VRH pmax pmax
comp=Z,151nm,0.7s
VRH pmax pmax
comp=Z,200nm,0.8s
VRH smax smax
comp=E,800nm,1.7s
CSS Mathiatis 75.91 307 IAmb IAmb 14 14 32.2
comp=Z,74nm,1.0s
CSS Mathiatis 75.91 307 P **P** **14 14 30.7 0.0**
comp=Z,698nmcomp=Z,78nm,1.0s
DGTI Dogotuki 76.10 106 P **P** **14 14 33.6 +1.4**
SOOWA Sowa 76.22 250 *i* P **P** **14 14 34.1 +1.2**
SEY Seymchan 76.49 21*ce*P **P** **14 14 33.2 -0.1**
SEY pmax pmax
comp=Z,30nm,0.7s
LPHEP Lephephe 76.60 247 *i* P **P** **14 14 36.2 +1.2**
KIRS Kirsehir-Merke 76.61 312⇑ P **P** **14 14 34.5 -0.1**
LBTB Lobatse 76.88 245 LR LR 14 44 21.8
comp=Z,81nm,18.1s,baz=96,slow=32
LBTB Lobatse 76.88 245 IAmb IAmb 14 14 39.1
comp=Z,50nm,0.9s
KHWEE KHWEE 76.96 249 *i* P **P** **14 14 37.9 +0.9**
BR104 Keskin Array S 76.97 312 P **P** **14 14 35.7 -1.1**
comp=Z,303nmcomp=Z,42nm,0.8s
BR131 Keskin Array S 76.98 312 IAmb IAmb 14 14 37.1
comp=Z,41nm,0.8s
BR131 Keskin Array S 76.98 312*c i*P **P** **14 14 35.9 -0.9**
BR131 Keskin Array S 76.98 312 P **P** **14 14 36.0 -0.8**
SNR=15
BRTR Keskin Array B 76.98 312 P **P** **14 14 36.1 -0.7**
comp=Z,30nm,0.8s,baz=134,slow=7.1,SNR=124
BRTR LR LR 14 51 51.0
comp=Z,44nm,18.8s,baz=85,slow=38
comp=Z,30nm,0.8s
BR105 Keskin Array S 76.99 312 P **P** **14 14 36.2 -0.7**
comp=Z,318nmcomp=Z,45nm,0.9s
BR106 Keskin Array S 77.00 312 P **P** **14 14 36.1 -0.8**
comp=Z,277nmcomp=Z,40nm,0.8s
VORD Divnogorie 77.07 324 *e*P **P** **14 14 35.7 -1.2**
VORD pmax pmax
comp=Z,60nm,0.9s
KSANE Kasane 77.21 253 *i* P **P** **14 14 39.6 +1.2**
VSR Storozhevoye 77.25 325 *e*P **P** **14 14 36.9 -0.9**
VSR pmax pmax
comp=Z,100nm,0.8s
BOSA Boshof 77.30 242 P **P** **14 14 40.2 +1.3**
comp=Z,61nm,0.8s,baz=96,slow=5.1,SNR=70
BOSA LR LR 14 44 38.0
comp=Z,84nm,18.5s,baz=95,slow=32
comp=Z,61nm,0.8s
BOSA Boshof 77.30 242 P **P** **14 14 40.2 +1.3**
BOSA IAmb IAmb 14 14 41.2
comp=Z,66nm,0.8s
BOSA Boshof 77.30 242 P **P** **14 14 40.3 +1.4**
BOSA pmax pmax
comp=Z,65nm,0.9s
ILGA Ilgaz 77.31 314 IAmb IAmb 14 14 39.8
comp=Z,54nm,1.3s
VORR Voronezh 77.40 325 *e*P **P** **14 14 36.9 -1.8**
VORR pmax pmax
comp=Z,90nm,0.6s
LKBA Tubou, Lakemba 77.48 108 P **P** **14 14 41.0 +1.2**
TIXI Tiksi 77.49 8 P **P** **14 14 37.1 -1.7**
TIXI IAmb IAmb 14 14 38.0
comp=Z,61nm,1.2s
TIXI Tiksi 77.49 8 P **P** **14 14 37.5 -1.3**
KDWAN Kaudwane 77.70 247 *i* P **P** **14 14 42.2 +1.0**
LPSR Galich'ya Gora 77.93 326 *e*P **P** **14 14 40.3 -1.3**
LPSR pmax pmax
comp=Z,154nm,0.8s
LPSR pmax pmax
comp=Z,200nm,0.9s
SIM Simferopol' 78.20 317 *e*P **P** **14 14 43.1 -0.2**
SIM pmax pmax
comp=Z,62nm,1.0s
VNDA Vanda 79.51 169 P **P** **14 14 51.4 +1.5**
comp=Z,19nm,0.9s,baz=304,slow=5.6,SNR=14
VNDA LR LR 14 50 29.2
comp=Z,87nm,18.3s,baz=306,slow=36
comp=Z,19nm,0.9s
VNDA Vanda 79.51 169 P **P** **14 14 51.8 +1.9**
VNDA IAmb IAmb 14 14 52.4
comp=Z,45nm,1.1s
VNDA Vanda 79.51 169 P **P** **14 14 51.8 +1.9**
VNDA pmax pmax
comp=Z,45nm,1.2s

MOS	**Moscow**	**79.87**	**329**	*e*P	**P**	**14 14 51.4**	**-0.7**
MOS				*e**PP	**pP**	**14 15 16.3**	**-3.0**
MOS				*e*S	**S**	**14 24 41.2**	**-5.6**
MOS				pmax	pmax		
	comp=Z,198nm,0.8s						
MOS				pmax	pmax		
	comp=Z,300nm,1.0s						
KGCAE	**Kacgae**	**79.96**	**248**	*i* P	**P**	**14 14 54.9**	**+1.3**
OBN	**Obninsk**	**80.19**	**328**	⇑P	**P**	**14 14 54.3**	**+0.5**
OBN	**Obninsk**	**80.19**	**328**	P	**P**	**14 14 53.7**	**-0.2**
OBN	**Obninsk**	**80.19**	**328**	⇑P	**P**	**14 14 54.2**	**+0.3**
OBN				*i*		14 15 19.1	
OBN				*e*		14 17 56.4	
OBN				*e*S	**S**	**14 24 46.2**	**-4.0**
OBN				*e*SS	**SS**	**14 30 03.1**	**-0.2**
OBN				pmax	pmax		
	comp=Z,284nm,1.7s						
OBN				MLR	MLR		
	comp=Z,66nm,24.0s						
OBN	**Obninsk**	**80.19**	**328**	P	**P**	**14 14 53.8**	**-0.1**
	comp=Z,190nm,0.9s						
ARG	**Arkhangelos**	**80.33**	**308**	IAmb	IAmb	14 14 56.4	
	comp=Z,69nm,1.0s						
GRTLG	**Ghanzi**	**80.89**	**249**	*i* P	**P**	**14 14 59.9**	**+1.3**
KARP	**Karpathos**	**80.95**	**307**	P	**P**	**14 14 58.3**	**-0.2**
	comp=Z,304nm,0.9s						
KLMR	**Klimovskoe**	**81.06**	**334**	*e*P	**P**	**14 14 56.8**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,180nm,1.3s						
SUR	**Sutherland**	**81.23**	**238**	LR	LR	14 48 23.5	
	comp=Z,48nm,18.5s,baz=168,slow=34						
SUR	**Sutherland**	**81.23**	**238**	P	**P**	**14 15 00.4**	**+0.1**
SUR				IAmb	IAmb	14 15 03.6	
	comp=Z,55nm,0.8s						
BAND	**Balkesir-Ban**	**81.25**	**312**	⇑P	**P**	**14 14 59.8**	**-0.1**
KOOLE	**Kule**	**81.81**	**247**	*i* P	**P**	**14 15 04.3**	**+0.8**
TIRR	**Tirgusor**	**81.97**	**316**	⇓P	**P**	**14 15 03.9**	**+0.3**
TIRR	**Tirgusor**	**81.97**	**316**	P	**P**	**14 15 03.9**	**+0.3**
TIRR				IAmb	IAmb	14 15 04.7	
	comp=Z,36nm,1.0s						
TIRR	**Tirgusor**	**81.97**	**316**	P	**P**	**14 15 03.9**	**+0.3**
TIRR				pmax	pmax		
	comp=Z,36nm,1.0s						
TPGR	**Topolog**	**82.07**	**316**	⇑P	**P**	**14 15 03.9**	**-0.2**
CFR	**Carcaliu**	**82.34**	**316**	⇑P	**P**	**14 15 05.6**	**+0.1**
CFR	**Carcaliu**	**82.34**	**316**	P	**P**	**14 15 05.5**	**+0.1**
IDI	**Anoyia**	**82.73**	**306**	IAmb	IAmb	14 15 09.6	
	comp=Z,58nm,0.8s						
CAVK	**Edirne/Enez-Ca**	**82.76**	**312**	⇓P	**P**	**14 15 08.1**	**+0.4**
ADZR	**Andozero**	**82.88**	**336**	*e*P	**P**	**14 15 06.4**	**-1.4**
ADZR				*e*S	**S**	**14 25 13.2**	**-4.4**
ADZR				pmax	pmax		
	comp=Z,89nm,0.9s						
ALN	**Alexandroupoli**	**82.89**	**312**	IAmb	IAmb	14 15 09.5	
	comp=Z,23nm,0.8s						
ELIB	**Princess Elisa**	**82.90**	**198**	*d*P	**P**	**14 15 10.7**	**+2.6**
	comp=Z,120nm,0.8s						
SORM	**Soroca**	**82.91**	**319**	⇑P	**P**	**14 15 08.2**	**-0.1**
SORM	**Soroca**	**82.91**	**319**	P	**P**	**14 15 08.2**	**-0.1**
SORM	**Soroca**	**82.91**	**319**	P	**P**	**14 15 07.9**	**-0.4**
	comp=Z,58nm,1.2s						
AK09	**Malin Array Si**	**82.95**	**322**	P	**P**	**14 15 07.9**	**-0.6**
AK10	**Malin Array Si**	**82.96**	**322**	P	**P**	**14 15 08.0**	**-0.6**
AK08	**Malin Array Si**	**82.97**	**322**	P	**P**	**14 15 07.9**	**-0.7**
AK07	**Malin Array Si**	**82.98**	**322**	P	**P**	**14 15 08.0**	**-0.7**
AK06	**Malin Array Si**	**82.99**	**322**	P	**P**	**14 15 08.0**	**-0.7**
AK05	**Malin Array Si**	**83.00**	**322**	P	**P**	**14 15 08.0**	**-0.8**
AKASG	**Malin Array Be**	**83.01**	**322**	P	**P**	**14 15 07.7**	**-1.1**
	comp=Z,70nm,1.2s,baz=88,slow=4.7,SNR=51						
AKASG				LR	LR	14 55 02.4	
	comp=Z,24nm,21.4s,baz=122,slow=38						
	comp=Z,70nm,1.2s						
AKASG	**Malin Array Be**	**83.01**	**322**	P	**P**	**14 15 08.6**	**-0.2**
AKASG	**Malin Array Be**	**83.01**	**322**	P	**P**	**14 15 08.6**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,28nm,1.2s						
AKBB	**Malin Array Si**	**83.01**	**322**	IAmb	IAmb	14 15 09.4	
	comp=Z,41nm,1.0s						
AKBB	**Malin Array Si**	**83.01**	**322**	*ce*P	**P**	**14 15 08.3**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,48nm,1.0s						
AKBB	**Malin Array Si**	**83.01**	**322**	P	**P**	**14 15 08.1**	**-0.7**
AK01	**Malin Array Si**	**83.01**	**322**	P	**P**	**14 15 08.1**	**-0.7**
LOZB	**Loznitsa**	**83.01**	**314**	⇑P	**P**	**14 15 09.5**	**+0.4**
KIEV	**Kiev**	**83.02**	**322**	⇑P	**P**	**14 15 08.2**	**-0.6**
KIEV	**Kiev**	**83.02**	**322**	P	**P**	**14 15 08.2**	**-0.6**
KIEV				IAmb	IAmb	14 15 09.4	
	comp=Z,40nm,1.1s						
KIEV	**Kiev**	**83.02**	**322**	*i* P	**P**	**14 15 08.4**	**-0.5**
	SNR=14						
KIEV	**Kiev**	**83.02**	**322**	P	**P**	**14 15 08.2**	**-0.6**
KIEV				pmax	pmax		
	comp=Z,40nm,1.1s						
KIEV	**Kiev**	**83.02**	**322**	P	**P**	**14 15 08.1**	**-0.7**
	comp=Z,147nm,1.0s						
KIEV	**Kiev**	**83.02**	**322**	P	**P**	**14 15 08.2**	**-0.6**
AK12	**Malin Array Si**	**83.03**	**322**	P	**P**	**14 15 08.4**	**-0.6**
AK11	**Malin Array Si**	**83.04**	**322**	P	**P**	**14 15 08.2**	**-0.8**
AK04	**Malin Array Si**	**83.05**	**322**	P	**P**	**14 15 08.3**	**-0.7**
RAZG	**Razgrad**	**83.11**	**315**	⇑P	**P**	**14 15 10.1**	**+0.5**
ISR	**Istrita**	**83.42**	**316**	⇑P	**P**	**14 15 12.3**	**+1.1**
ISR	**Istrita**	**83.42**	**316**	P	**P**	**14 15 12.2**	**+1.1**
ELND	**Elena**	**83.43**	**314**	⇑P	**P**	**14 15 11.4**	**+0.2**
VRI	**Vrincioaia**	**83.46**	**317**	⇑P	**P**	**14 15 12.3**	**+1.0**
VRI	**Vrincioaia**	**83.46**	**317**	P	**P**	**14 15 12.3**	**+1.0**
PLOR	**Plostina**	**83.51**	**317**	⇑P	**P**	**14 15 12.5**	**+0.9**
PLOR	**Plostina**	**83.51**	**317**	P	**P**	**14 15 12.4**	**+0.9**
TESR	**Tescani**	**83.65**	**318**	⇑P	**P**	**14 15 12.8**	**+0.6**
LUBAR	**Lubar, Ukraine**	**83.72**	**321**	P	**P**	**14 15 11.9**	**-0.6**
MI29	**MI29, Kamyanyy**	**83.78**	**322**	P	**P**	**14 15 12.0**	**-0.8**
ONER	**Baraj Valea Uz**	**83.79**	**317**	⇑P	**P**	**14 15 13.5**	**+0.5**
COVR	**Voineasa-Covas**	**83.81**	**317**	⇑P	**P**	**14 15 13.8**	**+0.6**
GIRR	**Girov**	**83.85**	**318**	⇑P	**P**	**14 15 13.8**	**+0.5**
MLR	**Muntele Rosu**	**83.91**	**316**	⇓P	**P**	**14 15 14.2**	**+0.4**
MLR	**Muntele Rosu**	**83.91**	**316**	IAmb	IAmb	14 15 15.6	
	comp=Z,66nm,1.1s						
MLR	**Muntele Rosu**	**83.91**	**316**	P	**P**	**14 15 14.1**	**+0.4**
MLR	**Muntele Rosu**	**83.91**	**316**	P	**P**	**14 15 13.9**	**+0.1**
	comp=Z,64nm,1.3s						
BILL	**Bilibino**	**84.11**	**20**	P	**P**	**14 15 13.1**	**-1.0**
BILL	**Bilibino**	**84.11**	**20**	*ce*P	**P**	**14 15 13.5**	**-0.6**
BILL				pmax	pmax		
	comp=Z,12nm,1.3s						
PRAR	**RASCA**	**84.12**	**318**	⇑P	**P**	**14 15 15.7**	**+1.1**
KMPD	**K-Podol'skiy**	**84.23**	**320**	P	**P**	**14 15 14.4**	**-0.7**
TSUM	**Tsumeb**	**84.36**	**251**	P	**P**	**14 15 18.4**	**+1.8**
TSUM				IAmb	IAmb	14 15 19.3	
	comp=Z,42nm,0.8s						
DOPR	**Dopca**	**84.39**	**317**	⇑P	**P**	**14 15 16.3**	**+0.3**
PLVB	**Pleven**	**84.42**	**314**	⇑P	**P**	**14 15 16.4**	**+0.2**
VOIR		**84.52**	**316**	⇑P	**P**	**14 15 16.5**	**-0.3**
VOIR		**84.52**	**316**	P	**P**	**14 15 16.5**	**-0.3**
WIN	**Windhoek**	**84.68**	**248**	IAmb	IAmb	14 15 21.2	
	comp=Z,27nm,0.7s						
MNK	**Minsk**	**84.77**	**326**	*i* P	**P**	**14 15 17.7**	**0.0**
	comp=E,12nm,0.8s						
MNK				*i* P	**P**	**14 15 17.7**	**0.0**
	comp=N,30nm,0.7s						
MNK				*i* P	**P**	**14 15 17.7**	**0.0**
	comp=Z,45nm,0.8s,baz=105						
MNK				*i* pP	**pP**	**14 15 43.8**	**-1.6**
MNK				*i* sP	**sP**	**14 15 54.8**	**-2.0**
MNK				*i* PP	**PP**	**14 18 34.6**	**-0.7**
MNK				*i* PPP	PPP	14 20 27.7	
MNK				*i* S	**SKSac**	**14 25 31.5**	**-0.8**
MNK				*i* sS	**sS**	**14 26 19.1**	**-5.4**
MNK				*i* SS	**SS**	**14 31 11.9**	**+0.6**
MNK				*i* SSS	SSS	14 34 29.6	
MNK	**Minsk**	**84.77**	**326**	*i* P	**P**	**14 15 17.6**	**0.0**
MNK				*i **PP	**pP**	**14 15 43.8**	**-1.6**
MNK				*i **SP	**sP**	**14 15 54.7**	**-2.0**
MNK				*i*		14 18 34.5	
MNK				*i* PPP	PPP	14 20 27.6	
MNK				*i* S	**SKSac**	**14 25 31.5**	**-0.8**
MNK				*i* SS	**SS**	**14 31 11.9**	**+0.6**
MNK				pmax	pmax		
	comp=N,30nm,0.7s						
MNK				pmax	pmax		
	comp=E,12nm,0.8s						
MNK				pmax	pmax		
	comp=Z,45nm,0.8s						
ARR	**Arges**	**84.79**	**316**	⇑P	**P**	**14 15 18.3**	**+0.2**
BURAR	**Bucovina Array**	**84.84**	**318**	⇑P	**P**	**14 15 19.8**	**+1.3**
BURAR	**Bucovina Array**	**84.84**	**318**	P	**P**	**14 15 19.3**	**+0.9**
BURAR				IAmb	IAmb	14 15 20.4	
	comp=Z,27nm,0.8s						
BURAR	**Bucovina Array**	**84.84**	**318**	P	**P**	**14 15 19.7**	**+1.3**
BUR08	**Bucovina Ar. S**	**84.86**	**318**	IAmb	IAmb	14 15 20.8	
	comp=Z,31nm,1.0s						
PUL	**Pulkovo**	**84.93**	**331**	*ce*P	**P**	**14 15 19.4**	**+1.0**
PUL				pmax	pmax		
	comp=Z,116nm,0.7s						
RNPP5	**Staryi Chortor**	**85.18**	**322**	P	**P**	**14 15 19.6**	**-0.2**
RNPP9	**Sopachiv**	**85.22**	**322**	P	**P**	**14 15 19.4**	**-0.6**
RNPP8	**Varash**	**85.22**	**322**	P	**P**	**14 15 19.6**	**-0.4**
LVZ	**Lovozero**	**85.82**	**339**	P	**P**	**14 15 21.9**	**-0.8**
LVZ	**Lovozero**	**85.82**	**339**	*ce*P	**P**	**14 15 22.6**	**-0.1**
LVZ				pmax	pmax		
	comp=Z,58nm,1.7s						
QSPA	**South Pole Qui**	**85.85**	**180**	P	**P**	**14 15 23.6**	**+0.5**
	comp=Z,68nm,1.3s,baz=295,slow=1.5,SNR=21						
QSPA				LR	LR	14 51 03.0	
	comp=Z,67nm,20.4s,baz=320,slow=34						
	comp=Z,68nm,1.3s						
QSPA	**South Pole Qui**	**85.85**	**180**	P	**P**	**14 15 23.9**	**+0.9**
QSPA				IAmb	IAmb	14 15 25.6	
	comp=Z,54nm,1.1s						
QSPA	**South Pole Qui**	**85.85**	**180**	P	**P**	**14 15 24.5**	**+1.5**
QSPA				pP	**pP**	**14 15 51.6**	**+1.1**
MARR	**Marisel-Cluj**	**86.07**	**317**	⇑P	**P**	**14 15 25.4**	**+0.9**
GZR	**Gura Zlata**	**86.08**	**316**	⇑P	**P**	**14 15 24.9**	**+0.3**
GZR	**Gura Zlata**	**86.08**	**316**	P	**P**	**14 15 24.9**	**+0.3**
APA	**Apatity**	**86.14**	**339**	⇓*e*P	**P**	**14 15 21.7**	**-2.5**
APA				*e**PP	**pP**	**14 15 47.7**	**-4.1**
APA				*e*		14 18 49.1	
APA				pmax	pmax		
	comp=Z,20nm,1.3s						
APA				MLR	MLR		
	comp=Z,1μm,5.1s						
HERR	**Herculane**	**86.25**	**315**	⇓P	**P**	**14 15 26.0**	**+0.7**
VSU	**Vasula**	**86.36**	**329**	*ce*P	**P**	**14 15 25.0**	**-0.5**
VSU				pmax	pmax		
	comp=Z,72nm,0.7s						
SHIU	**Shidnytsya**	**86.37**	**320**	P	**P**	**14 15 26.2**	**+0.4**
NVL	**N'lazarevskaya**	**86.53**	**199**	*e*P	**P**	**14 15 27.7**	**+1.6**
NVL				pmax	pmax		
	comp=Z,63nm,1.1s						
MDVR	**Moldovita**	**86.73**	**315**	⇑P	**P**	**14 15 28.0**	**+0.3**
KWP	**Kalwaria Pacla**	**86.86**	**320**	*e*P	**P**	**14 15 26.2**	**-2.0**
BZS	**Buzias**	**86.93**	**316**	⇑P	**P**	**14 15 29.1**	**+0.6**
BZS	**Buzias**	**86.93**	**316**	P	**P**	**14 15 29.1**	**+0.6**
SUW	**Suwalki**	**87.36**	**324**	*e*P	**P**	**14 15 30.5**	**0.0**
FINES	**FINESS Array B**	**87.39**	**332**	P	**P**	**14 15 30.5**	**+0.1**
	comp=Z,44nm,0.8s,baz=107,slow=5.3,SNR=135						
FINES				PKiKP	**PKiKP**	**14 20 37.8**	**+3.8**
	comp=Z,1.9nm,0.8s,baz=147,slow=4.5,SNR=3.6						
FINES				PKKP	**PKKPdf**	**14 33 16.9**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=270,slow=1.9,SNR=6.0						
FINES				LR	LR	14 59 45.9	
	comp=Z,28nm,20.0s,baz=106,slow=39						
	comp=Z,44nm,0.8s						
STHS	**Stebnicka Huta**	**87.77**	**320**	*e*P	**P**	**14 15 32.3**	**-0.3**
STHS				pmax	pmax		
	comp=Z,38nm,1.2s						
STHS	**Stebnicka Huta**	**87.77**	**320**	*e*P	**P**	**14 15 32.3**	**-0.3**
KECS	**Kecovo**	**88.12**	**319**	*e*P	**P**	**14 15 35.0**	**+0.8**
KECS				pmax	pmax		
	comp=Z,24nm,1.3s						
KECS	**Kecovo**	**88.12**	**319**	*e*P	**P**	**14 15 35.0**	**+0.8**
NIE	**Niedzica**	**88.38**	**320**	*e*P	**P**	**14 15 36.5**	**+1.0**
BEL	**Belsk**	**88.42**	**322**	*e*P	**P**	**14 15 36.7**	**+1.1**
PSZ	**Piszkesteto**	**88.44**	**318**	⇑P	**P**	**14 15 36.2**	**+0.4**
PSZ	**Piszkesteto**	**88.44**	**318**	IAmb	IAmb	14 15 37.5	
	comp=Z,39nm,1.3s						
PSZ	**Piszkesteto**	**88.44**	**318**	P	**P**	**14 15 36.2**	**+0.4**
LANS	**Liptovska Anna**	**88.88**	**319**	*e*P	**P**	**14 15 38.5**	**+0.7**
LANS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LANS	**Liptovska Anna**	**88.88**	**319**	*e*P	**P**	**14 15 38.5**	**+0.7**
LANS				*e*pP	**pP**	**14 16 05.5**	**-0.1**
MORH	**Mrgy, Hungar**	**89.06**	**316**	⇑P	**P**	**14 15 39.4**	**+0.7**
TROLL	**Troll, Antarti**	**89.34**	**198**	⇑P	**P**	**14 15 42.9**	**+3.1**
SRO	**Srobarova**	**89.48**	**318**	*e*P	**P**	**14 15 42.1**	**+1.5**
SRO				pmax	pmax		
	comp=Z,53nm,1.3s						
SRO	**Srobarova**	**89.48**	**318**	*e*P	**P**	**14 15 42.1**	**+1.5**
ARCES	**ARCESS Array B**	**89.49**	**340**	P	**P**	**14 15 39.9**	**-0.3**
	comp=Z,17nm,0.8s,baz=96,slow=4.4,SNR=20						
ARCES				LR	LR	14 59 40.3	
	comp=Z,77nm,21.7s,baz=110,slow=38						
	comp=Z,17nm,0.8s						
ARCES	**ARCESS Array B**	**89.49**	**340**	P	**P**	**14 15 40.3**	**+0.1**
ARCES	**ARCESS Array B**	**89.49**	**340**	P	**P**	**14 15 40.3**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,173nm,2.0s						
TIP	**Timpagrande**	**89.69**	**309**	⇑P	**P**	**14 15 42.6**	**+0.7**
BLY	**Banja Luka**	**89.92**	**315**	⇑P	**P**	**14 15 43.6**	**+0.9**
JAVC	**Velka Javorina**	**90.02**	**319**	*e*P	**P**	**14 15 44.0**	**+0.8**
JAVC				*e*		14 16 10.5	
STEB	**Steborice**	**90.07**	**320**	*e*P	**P**	**14 15 44.1**	**+0.8**
STEB				*e*pP	**pP**	**14 16 10.4**	**-0.7**
SMOL	**Smolenice**	**90.14**	**318**	*e*P	**P**	**14 15 44.9**	**+1.2**
SMOL				*e*		14 16 11.3	
MORC	**Moravsky Berou**	**90.20**	**320**	⇑P	**P**	**14 15 44.5**	**+0.5**
MORC	**Moravsky Berou**	**90.20**	**320**	IAmb	IAmb	14 15 46.0	
	comp=Z,45nm,1.3s						
MORC	**Moravsky Berou**	**90.20**	**320**	P	**P**	**14 15 44.5**	**+0.5**
MORC	**Moravsky Berou**	**90.20**	**320**	*e*P	**P**	**14 15 44.0**	**0.0**
MORC				*e*		14 16 10.6	
MODS	**Modra-Piesok**	**90.23**	**318**	*e*P	**P**	**14 15 44.6**	**+0.5**
MODS				pmax	pmax		
	comp=Z,58nm,1.3s						
MODS	**Modra-Piesok**	**90.23**	**318**	*e*P	**P**	**14 15 44.6**	**+0.5**
MODS				*e*pP	**pP**	**14 16 11.7**	**-0.2**
KRLC	**Kraliky**	**90.72**	**320**	*e*P	**P**	**14 15 47.5**	**+1.1**
KRLC				*e*pP	**pP**	**14 16 14.2**	**0.0**
KRLC	**Kraliky**	**90.72**	**320**	*e*P	**P**	**14 15 47.5**	**+1.1**
KRLC				*e**PP	**pP**	**14 16 14.2**	**0.0**
VRAC	**Vranov**	**90.77**	**319**	LR	LR	15 01 13.1	
	comp=Z,22nm,21.6s,baz=106,slow=38						
VRAC	**Vranov**	**90.77**	**319**	*e*P	**P**	**14 15 46.0**	**-0.6**
RONA	**Rosalia, Austr**	**90.82**	**318**	*e*P	**P**	**14 15 46.0**	**-1.0**
	comp=Z,8.8nm,1.1s						
RONA				*e*pP	**pP**	**14 16 14.4**	**-0.3**
	comp=Z,6.5nm,1.0s						
KRUC	**Moravsky**	**90.88**	**319**	*e*P	**P**	**14 15 46.8**	**-0.3**
DPC	**Dobruska-Polom**	**91.04**	**320**	*e*P	**P**	**14 15 49.0**	**+1.1**
DPC				*e*pP	**pP**	**14 16 15.1**	**-0.6**
DPC	**Dobruska-Polom**	**91.04**	**320**	*e*P	**P**	**14 15 49.0**	**+1.1**
DPC				*e**PP	**pP**	**14 16 15.1**	**-0.6**
SNAA	**Sanae**	**91.06**	**198**	*ce*P	**P**	**14 15 47.5**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,48nm,2.5s						
KSP	**Ksiaz**	**91.10**	**321**	*e*P	**P**	**14 15 49.0**	**+0.9**
OSTC	**Ostas**	**91.13**	**320**	*e*P	**P**	**14 15 49.2**	**+0.9**
OSTC	**Ostas**	**91.13**	**320**	*e*P	**P**	**14 15 49.2**	**+0.9**
CONA	**Conrad Observa**	**91.13**	**318**	*e*P	**P**	**14 15 47.9**	**-0.6**
	comp=Z,5.1nm,1.0s						
CONA				*e*pP	**pP**	**14 16 13.5**	**-2.7**
	comp=Z,2.7nm,1.0s						
GOLS	**Golise**	**91.13**	**316**	*i* P	**P**	**14 15 49.3**	**+0.9**
GOLS				*i* pP	**pP**	**14 16 15.7**	**-0.5**
GROS	**Grobnik**	**91.25**	**316**	*i* P	**P**	**14 15 49.5**	**+0.5**
GROS				*i* pP	**pP**	**14 16 16.3**	**-0.5**
ARSA	**Arzberg**	**91.30**	**317**	IAmb	IAmb	14 15 50.9	
	comp=Z,28nm,1.4s						
ARSA	**Arzberg**	**91.30**	**317**	*e*PcP	**PcP**	**14 15 50.6**	**+0.6**
	comp=Z,12nm,1.1s						
ARSA				*e*pP	**pP**	**14 16 14.5**	**-2.5**
	comp=Z,0.2nm,0.2s						
GAMB	**Gambell**	**91.58**	**26**	P	**P**	**14 15 50.1**	**+0.2**
	baz=264,SNR=5.1						
SOKA	**Soboth**	**91.59**	**316**	*i* PcP	**PcP**	**14 15 51.4**	**0.0**
	comp=Z,12nm,0.8s						
SOKA				*e*pP	**pP**	**14 16 17.7**	**-0.7**
	comp=Z,16nm,1.3s						
SPIA	**Saint Paul Isl**	**91.66**	**33**	P	**P**	**14 15 50.7**	**+0.2**
	baz=265						
LJU	**Ljubljana**	**91.90**	**316**	*i* P	**P**	**14 15 52.6**	**+0.7**
LJU				*e*pP	**pP**	**14 16 19.3**	**-0.4**
OBKA	**Obir**	**91.92**	**316**	*e*PcP	**PcP**	**14 15 53.3**	**+0.5**
	comp=Z,8.5nm,0.9s						
OBKA				*e*pP	**pP**	**14 16 19.3**	**-0.6**
	comp=Z,10nm,0.9s						
PRU	**Pruhonice**	**92.15**	**320**	*e*P	**P**	**14 15 53.4**	**+0.4**
PRU	**Pruhonice**	**92.15**	**320**	*e*P	**P**	**14 15 53.4**	**+0.4**
CKRC	**Cesky Krumlov**	**92.23**	**319**	*e*P	**P**	**14 15 54.3**	**+0.9**
CKRC	**Cesky Krumlov**	**92.23**	**319**	*e*P	**P**	**14 15 54.3**	**+0.9**
MYKA	**Terra Mystica**	**92.55**	**316**	*e*PcP	**PcP**	**14 15 56.1**	**+0.5**
	comp=Z,0.2nm,0.3s						
BRG	**Berggiesshubel**	**92.59**	**321**	*e*P	**P**	**14 15 55.4**	**+0.4**
BRG				Amp		14 15 56.8	
	comp=Z,4.0nm,0.7s						
BRG				pP	**pP**	**14 16 22.3**	**-0.5**
BRG				Amp		14 16 23.0	
	comp=Z,4.7nm,0.8s						
BRG				sP	**sP**	**14 16 36.6**	**+2.5**
BRG				Amp		14 16 38.8	
	comp=Z,3.4nm,0.9s						
BIOA	**Bad Ischl, Aus**	**92.61**	**317**	*e*P	**P**	**14 15 55.0**	**-0.2**
	comp=Z,0.6nm,0.2s						
BIOA				*e*pP	**pP**	**14 16 21.8**	**-1.2**
	comp=Z,1.1nm,0.3s						
GEC2	**GERESS Array S**	**92.63**	**319**	IAmb	IAmb	14 15 57.7	
	comp=Z,36nm,1.8s						
GERES	**GERESS Array B**	**92.63**	**319**	P	**P**	**14 15 55.7**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=111,slow=3.0,SNR=11						
GERES				LR	LR	15 04 33.6	
	comp=Z,20nm,18.3s,baz=120,slow=40						
	comp=Z,1.4nm,0.6s						
KHC	**Kasperske Hory**	**92.73**	**319**	*e*P	**P**	**14 15 56.2**	**+0.5**
KHC				*e*pP	**pP**	**14 16 22.7**	**-0.8**
KHC	**Kasperske Hory**	**92.73**	**319**	*e*P	**P**	**14 15 56.2**	**+0.5**
KHC				*e**PP	**pP**	**14 16 22.7**	**-0.8**
KBA	**Koelnbreinsper**	**92.78**	**317**	*e*P	**P**	**14 15 55.6**	**-0.6**
	comp=Z,2.8nm,0.7s						
STAL	**STALIGIAL**	**93.17**	**316**	IAmb	IAmb	14 16 25.9	
	comp=Z,18nm,1.0s						
CLL	**Collm**	**93.21**	**321**	*i* P	**P**	**14 15 58.2**	**+0.4**
CLL				*i **PP	**pP**	**14 16 24.0**	**-1.6**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	**Collm**	**93.21**	**321**	*i* P	**P**	**14 15 58.2**	**+0.4**
	comp=Z,10.0nm,1.0s						
CLL				*i* pP	**pP**	**14 16 24.0**	**-1.6**
CLL				*e*SP	SP	14 28 06.0	-2.8
CLL				*e*PPS	PPS	14 29 02.0	
HFS	**Hagfors**	**93.22**	**330**	P	**P**	**14 15 57.4**	**-0.2**
	comp=Z,24nm,0.8s,baz=116,slow=3.4,SNR=23						
HFS				LR	LR	15 02 21.2	
	comp=Z,48nm,18.6s,baz=86,slow=38						
	comp=Z,24nm,0.8s						
LESA	**Schwarzleotal**	**93.25**	**317**	*e*P	**P**	**14 15 57.3**	**-0.9**
	comp=Z,7.5nm,1.2s						
LESA				*e*pP	**pP**	**14 16 23.5**	**-2.5**
	comp=Z,8.7nm,1.2s						
SPITS	**Spitsbergen Ar**	**93.32**	**348**	P	**P**	**14 15 56.8**	**-1.1**
	comp=Z,15nm,0.9s,baz=117,slow=6.6,SNR=30						
SPITS				LR	LR	15 02 33.9	
	comp=Z,74nm,21.9s,baz=79,slow=38						
	comp=Z,15nm,0.9s						
SPITS	**Spitsbergen Ar**	**93.32**	**348**	P	**P**	**14 15 57.2**	**-0.6**
SPITS				pmax	pmax		
	comp=Z,33nm,1.2s						
ABTA	**Abfaltersbach**	**93.33**	**316**	*e*P	**P**	**14 15 58.2**	**-0.4**
	comp=Z,4.2nm,0.9s						
TNA	**Tin City**	**93.33**	**25**	P	**P**	**14 15 58.1**	**0.0**
	baz=268						
UNV	**Unalaska Valle**	**93.58**	**36**	P	**P**	**14 15 59.7**	**+0.2**
	baz=268						
M11K	**Mekoryuk**	**93.94**	**30**	P	**P**	**14 16 01.3**	**+0.4**
	baz=269						
WTTA	**Wattenberg**	**93.95**	**317**	*e*PcP	**P**	**14 16 01.5**	**-0.1**
	comp=Z,10nm,1.1s						
WTTA				*e*pP	**pP**	**14 16 28.3**	**-1.1**
	comp=Z,6.0nm,0.9s						
WATA	**Walderalm**	**93.99**	**317**	*e*P	**P**	**14 16 00.3**	**-1.4**
	comp=Z,3.7nm,0.7s						
WATA				*e*pP	**pP**	**14 16 28.0**	**-1.5**
	comp=Z,6.1nm,0.9s						
F14K	**Arctic Creek**	**93.99**	**25**	P	**P**	**14 16 01.3**	**+0.2**
	baz=269						
SQTA	**Sankt Quirin**	**94.24**	**317**	*e*PcP	**P**	**14 16 02.7**	**-0.2**
	comp=Z,4.8nm,0.6s						
SQTA				*e*pP	**pP**	**14 16 28.4**	**-2.2**
	comp=Z,5.4nm,0.9

	baz=276							
J16K	Anvik River	96.53	27	IAmb	IAmb	14 16 13.9		
	comp=Z,6.7nm,0.8s							
J16K	Anvik River	96.53	27	P	P	14 16 12.9	+0.2	
	baz=274							
M15K	Kasigluk River	96.66	29	P	P	14 16 13.3	0.0	
	baz=274							
F18K	Selawik	96.68	24	P	P	14 16 13.1	-0.2	
	baz=275,SNR=11							
H17K	Granite Mounta	96.71	25	P	P	14 16 13.6	+0.1	
	baz=275							
N15K	Kwethluk River	96.99	30	IAmb	IAmb	14 16 16.2		
	comp=Z,7.2nm,0.8s							
N15K	Kwethluk River	96.99	30	P	P	14 16 14.8	-0.1	
	baz=274							
D19K	Kuna River	97.07	22	IAmb	IAmb	14 16 15.5		
	comp=Z,7.3nm,0.8s							
D19K	Kuna River	97.07	22	P	P	14 16 15.0	-0.1	
	baz=277							
SDPT	Sand Point	97.07	35	P	P	14 16 15.1	-0.2	
	baz=273							
G18K	Tagagawik	97.15	24	P	P	14 16 15.3	-0.2	
	baz=276							
L16K	Owhat River	97.17	28	P	P	14 16 15.5	-0.1	
	baz=275							
O15K	Ungalikthiuk R	97.19	31	P	P	14 16 15.8	0.0	
	baz=274							
A21K	Barrow	97.20	19	P	P	14 16 15.5	-0.1	
	baz=279							
H18K	Honhosa River	97.35	25	P	P	14 16 16.3	-0.2	
	baz=276							
F19K	Shaleruckik Mo	97.40	23	P	P	14 16 16.5	0.0	
	baz=277							
M16K	Timber Creek	97.48	29	P	Pdif	14 16 17.1	0.0	
	baz=275							
E19K	Redstone River	97.53	23	P	P	14 16 16.9	-0.3	
	baz=278,SNR=10							
D20K	Etivluk River	97.59	21	IAmb	IAmb	14 16 18.3		
	comp=Z,12nm,0.8s							
D20K	Etivluk River	97.59	21	P	P	14 16 17.4	-0.1	
	baz=278							
N16K	Nishlik Lake	97.62	30	P	P	14 16 17.7	0.0	
	baz=275							
K17K	Iditarod	97.63	27	IAmb	IAmb	14 16 19.2		
	comp=Z,10.0nm,1.1s							
K17K	Iditarod	97.63	27	P	Pdif	14 16 17.8	0.0	
	baz=276							
L17K	Donlin	97.69	28	P	P	14 16 17.8	-0.2	
	baz=276							
G19K	Purcell Mounta	97.75	24	IAmb	IAmb	14 16 18.8		
	comp=Z,6.4nm,0.7s							
G19K	Purcell Mounta	97.75	24	P	P	14 16 18.2	0.0	
	baz=277,SNR=10							
E20K	Nigu River	97.81	22	P	P	14 16 18.3	-0.2	
	baz=279,SNR=10							
GCSA	Galena City Sc	98.02	25	P	Pdif	14 16 19.6	+0.2	
	baz=277							
O16K	Kokwok River B	98.04	31	P	Pdif	14 16 19.7	+0.1	
	baz=276							
P16K	Nushagak River	98.15	31	P	Pdif	14 16 20.3	+0.2	
	baz=276							
B21K	Ikpikpuk River	98.15	20	IAmb	IAmb	14 16 20.5		
	comp=Z,12nm,0.8s							
B21K	Ikpikpuk River	98.15	20	P	Pdif	14 16 20.0	+0.1	
	baz=280							
F20K	Avaraart Lake	98.17	23	P	P	14 16 20.0	0.0	
	baz=279							
C21K	Knifeblade Rid	98.17	21	P	P	14 16 20.0	-0.1	
	baz=280,SNR=8.3							
M17K	Holitna River	98.17	29	P	Pdif	14 16 20.2	0.0	
	baz=276							
J18K	Innoko River	98.26	27	P	Pdif	14 16 20.8	+0.3	
	baz=277							
N17K	Nushagak Hills	98.39	30	P	Pdif	14 16 21.4	+0.2	
	baz=277							
B22K	Teshekpuk Lake	98.42	19	IAmb	IAmb	14 16 21.6		
	comp=Z,15nm,1.1s							
B22K	Teshekpuk Lake	98.42	19	P	P	14 16 21.0	-0.1	
	baz=282							
L18K	Granite Mounta	98.43	28	P	Pdif	14 16 21.5	+0.2	
	baz=277							
R16K	Pilot Point	98.51	33	P	Pdif	14 16 21.8	0.0	
	baz=276							
O17K	Koliganek Bris	98.52	30	P	Pdif	14 16 21.9	+0.1	
	baz=276							
E21K	Killik River	98.59	21	IAmb	IAmb	14 16 22.3		
	comp=Z,10nm,0.8s							
E21K	Killik River	98.59	21	P	P	14 16 21.6	-0.3	
	baz=281							
J19K	Poorman	98.67	26	P	Pdif	14 16 22.6	+0.2	
	baz=278							
H20K	Anotleneega Mo	98.75	24	P	P	14 16 22.7	0.0	
	baz=279							
Q16K	King Salmon	98.87	31	P	Pdif	14 16 23.5	+0.2	
	baz=277							
P17K	Kvichak River	98.92	31	P	P	14 16 23.3	-0.2	
	baz=277							
M18K	Stony River	98.93	28	P	P	14 16 23.4	-0.2	
	baz=278							
D22K	Ayikyak River	98.97	21	P	Pdif	14 16 23.6	0.0	
	baz=282							
F21K	Alatna River	99.00	23	P	P	14 16 23.5	-0.3	
	baz=281							
G21K	Allakaket	99.12	23	IAmb	IAmb	14 16 25.4		
	comp=Z,7.9nm,1.0s							
G21K	Allakaket	99.12	23	P	Pdif	14 16 24.3	0.0	
	baz=281							
R17L	Mt. Peulik Vol	99.15	32	P	Pdif	14 16 24.7	0.0	
	baz=277							
L19K	White Mountain	99.28	28	P	Pdif	14 16 25.2	0.0	
	baz=279							
Q17K	Contact Creek	99.33	32	P	Pdif	14 16 25.5	-0.1	
	baz=277							
E22K	Anaktuvuk Pass	99.44	22	P	Pdif	14 16 25.6	-0.2	
	baz=283							
K20K	Telida	99.45	26	P	Pdif	14 16 25.8	-0.1	
	baz=280							
O18K	Koktuh Hills	99.46	30	P	Pdif	14 16 26.0	0.0	
	baz=278							
C23K	Itkillik River	99.47	20	IAmb	IAmb	14 16 26.3		
	comp=Z,11nm,1.1s							
C23K	Itkillik River	99.47	20	P	Pdif	14 16 25.8	0.0	
	baz=284							
P18K	Big Mountain,	99.51	31	P	Pdif	14 16 26.0	-0.3	
	baz=278							
H21K	Melozitna Rive	99.57	24	P	Pdif	14 16 26.4	+0.1	
	baz=281							
D23K	Nanushuk River	99.65	21	P	Pdif	14 16 26.8	+0.1	
	baz=284							
N19K	Bonanza Creek	99.67	29	P	Pdif	14 16 27.0	0.0	
	baz=279							
Q18K	Katmai Hardscr	99.73	31	P	Pdif	14 16 27.1	-0.3	
	baz=278							
CHIR	Chirikof Islan	99.78	34	P	Pdif	14 16 27.3	-0.1	
	baz=277							
O19K	Port Alsworth	99.85	30	P	Pdif	14 16 28.0	+0.4	
	baz=279							
I21K	Tanana	100.00	24	P	Pdif	14 16 28.3	+0.1	
	baz=282							
H22K	Ishtalitna Cre	100.10	24	P	Pdif	14 16 28.8	+0.1	
	baz=283							
TOLK	Toolik Lake Re	100.12	21	P	Pdif	14 16 28.9	+0.1	
	baz=285,SNR=6.6							
CHUM	Lake Minchumin	100.12	26	P	Pdif	14 16 28.9	+0.1	
	baz=282							
C24K	Franklin Bluff	100.14	20	P	Pdif	14 16 29.0	+0.3	
	baz=286							
COLD	Coldfoot	100.25	22	P	Pdif	14 16 29.5	+0.2	
	baz=284							
D24K	Happy Valley	100.25	20	P	Pdif	14 16 29.4	+0.1	
	baz=286							
E23K	Chandalar	100.26	21	P	Pdif	14 16 29.5	0.0	
	baz=285,SNR=5.8							
PPLA	Purkeypile	100.38	27	P	Pdif	14 16 30.0	-0.2	
	baz=281							
Q19K	Cape Douglas,	100.39	31	P	Pdif	14 16 30.0	-0.2	
	baz=279							
G23K	Bananza Creek	100.44	23	P	Pdif	14 16 30.3	0.0	
	baz=284							
P19K	Oil Pt	100.48	30	P	Pdif	14 16 30.4	-0.2	
	baz=280							
MLY	Manley	100.55	24	P	Pdif	14 16 30.8	0.0	
	baz=283							
E24K	Your Creek	100.66	21	P	Pdif	14 16 31.2	0.0	
	baz=286							
OHAK	Old Harbor	100.86	33	P	Pdif	14 16 32.2	0.0	
	baz=279							
SKT	Skwentna	100.86	28	P	Pdif	14 16 32.1	-0.1	
	baz=282							
D25K	Kavik River	101.04	20	P	Pdif	14 16 32.5	-0.3	
	baz=288							
Q20K	Shuyak Island	101.09	31	P	Pdif	14 16 32.8	-0.4	
	baz=280							
I23K	Minto, Yukon-K	101.09	24	P	Pdif	14 16 33.2	+0.2	
	baz=284							
TRF	Thorofare Moun	101.10	26	P	Pdif	14 16 33.0	-0.4	
	baz=283							
HOM	Homer	101.27	30	P	Pdif	14 16 33.8	-0.2	
	baz=281							
CAPN	Captain Cook N	101.29	29	P	Pdif	14 16 33.9	-0.1	
	baz=282							
C26K	Camden Bay	101.33	19	P	Pdif	14 16 34.2	+0.1	
	baz=290							
SUA	Susitna One	101.33	28	P	Pdif	14 16 34.0	-0.4	
	baz=282							
CUT	Chulitna	101.35	27	P	Pdif	14 16 34.0	-0.2	
	baz=283							
NEA2	Nenana	101.35	25	P	Pdif	14 16 34.5	+0.2	
	baz=285							
G24K	Hadweenzic Riv	101.42	22	P	Pdif	14 16 34.3	-0.2	
	baz=286							
H24K	Noodor Dome	101.50	23	P	Pdif	14 16 34.8	-0.2	
	baz=286							
M22K	Willow	101.56	28	P	Pdif	14 16 35.2	-0.1	
	baz=283							
MCK	McKinley	101.62	26	P	Pdif	14 16 35.3	-0.3	
	baz=285							
E25K	Arctic Village	101.69	21	P	Pdif	14 16 35.9	+0.1	
	baz=289							
BRSE	Bradley Lake S	101.70	30	P	Pdif	14 16 35.8	-0.2	
	baz=282							
C27K	Jago River	101.82	19	P	Pdif	14 16 36.3	0.0	
	baz=291							
F25K	Christian Rive	101.83	21	P	Pdif	14 16 36.3	-0.2	
	baz=288							
POKR	Poker Plat Res	101.88	24	P	Pdif	14 16 36.5	-0.1	
	baz=286							
RC01	Rabbit Creek A	101.89	28	P	Pdif	14 16 36.5	-0.3	
	baz=283							
TORD	Torodi Ar. Bea	101.95	283	P	Pdif	14 16 38.5	+0.5	
	comp=Z,1.2nm,0.9s,baz=124,slow=3.2,SNR=5.1							
TORD				PP	PP	14 20 52.1	+1.4	
	comp=Z,1.4nm,1.0s,baz=86,slow=4.1,SNR=4.8							
TORD				PKKPbc	PKKPbc	14 32 41.4	-1.0	
	comp=Z,1.0nm,0.7s,baz=265,slow=4.9,SNR=4.6							
WAT1	Susitna Watana	102.02	26	P	Pdif	14 16 37.2	-0.1	
	baz=285							
O22K	Cooper Landing	102.04	29	P	Pdif	14 16 37.4	0.0	
	baz=283							
PMR	Palmer	102.06	28	P	Pdif	14 16 37.2	-0.2	
	baz=284							
ILAR	Eielson Army	102.20	24	PP	PP	14 20 50.5	-0.6	
	comp=Z,0.5nm,0.8s,baz=295,slow=6.9,SNR=4.2							
ILAR				PKKPbc	PKKPbc	14 32 41.5	-1.9	
	comp=Z,4.2nm,0.8s,baz=129,slow=1.9,SNR=37							
SEW	Seward	102.25	29	P	Pdif	14 16 38.1	-0.3	
	baz=283							
HDA	Harding Lake	102.28	25	P	Pdif	14 16 38.4	-0.1	
	baz=286							
F26K	Sheenjek River	102.34	21	P	Pdif	14 16 38.9	+0.2	
	baz=290							
SML	Sawmill	102.38	27	P	Pdif	14 16 38.8	-0.1	
	baz=285							
KNK	Knik Glacier	102.42	28	P	Pdif	14 16 39.2	+0.1	
	baz=284							
WAT6	Susitna Watana	102.44	27	P	Pdif	14 16 39.2	-0.2	
	baz=285							
DHY	Denali Highway	102.47	26	P	Pdif	14 16 39.6	+0.1	
	baz=286							
PRP	Porcupine Dome	102.53	23	P	Pdif	14 16 39.7	0.0	
	baz=288							
M23K	Glacier View	102.66	27	P	Pdif	14 16 40.3	+0.1	
	baz=285							
G26K	Porcupine Rive	102.73	22	P	Pdif	14 16 40.6	+0.2	
	baz=290							
SCM	Sheep Creek Mo	102.83	27	P	Pdif	14 16 41.2	+0.1	
	baz=286							
D27M	Malcolm River	102.87	19	P	Pdif	14 16 41.5	+0.5	
	baz=293							
J25K	Salcha River,	102.87	24	P	Pdif	14 16 41.3	+0.2	
	baz=288							
K24K	Donnelly Dome	102.95	25	P	Pdif	14 16 41.8	+0.3	
	baz=288							
GLI	Glacier Island	103.19	28	P	Pdif	14 16 42.7	+0.2	
	baz=286							
M24K	Tolsona, Glenn	103.28	27	P	Pdif	14 16 43.1	+0.2	
	baz=287							
P23K	Montague Islan	103.28	29	P	Pdif	14 16 43.3	+0.3	
	baz=285							
PAX	Paxson	103.33	26	P	Pdif	14 16 43.2	-0.1	
	baz=288							
RIDG	Independent Ri	103.36	25	P	Pdif	14 16 43.4	+0.1	
	baz=288							
KLU	Klutina	103.57	27	P	Pdif	14 16 44.2	-0.1	
	baz=287							
HARP	HAARP	103.64	26	P	Pdif	14 16 44.4	-0.1	
	baz=288							
SCRK	Sand Creek	103.65	25	P	Pdif	14 16 44.4	-0.3	
	baz=286							
H27K	Steamboat Moun	103.83	22	P	Pdif	14 16 45.6	+0.2	
	baz=292							
F28M	Old Crow	103.89	21	P	Pdif	14 16 45.9	+0.3	
	baz=294							
EYAK	Cordova Ski Ar	103.92	28	P	Pdif	14 16 46.0	+0.3	
	baz=287							
Q23K	Middleton Isla	103.94	30	P	Pdif	14 16 45.9	+0.1	
	baz=286							
I27K	Kandik River	104.03	23	P	Pdif	14 16 46.3	0.0	
	baz=292							
N25K	Chitina, Valde	104.14	27	P	Pdif	14 16 46.8	0.0	
	baz=288							
BMRM	Bremner River	104.33	28	P	Pdif	14 16 47.8	+0.1	
	baz=288							
TBI	Tubuai	104.34	115	eLR	LR	14 51 17.4		
	comp=Z,1μm,35.0s							
M26K	Nabesna, AK	104.60	26	P	Pdif	14 16 48.9	0.0	
	baz=290							
I28M	Miner Creek	104.74	23	P	Pdif	14 16 49.3	-0.2	
	baz=293							
KAIM	Kayak Island	104.74	29	P	Pdif	14 16 49.4	-0.1	
	baz=288							
L27K	Beaver Creek,	104.87	25	P	Pdif	14 16 49.9	-0.1	
	baz=291							
MCARA	McCarthy VSAT	104.92	27	P	PKiKP	14 21 04.5	-0.2	
	baz=289							
M27K	Edge Creek, AK	105.10	26	P	PKiKP	14 21 05.0	-0.2	
	baz=291							
CRQE	Cirque	105.10	28	P	PKiKP	14 21 04.9	-0.3	
	baz=289							
PPT2	Papeete2	105.25	109	eLR	LR	14 51 38.6		
	comp=Z,102nm,28.5s							
PPT2				eLR	LR	14 51 41.7		
	comp=Z,128nm,35.2s							
F30M	Barrier River	105.30	20	P	PKiKP	14 21 05.2	0.0	
	baz=298							
G30M	O'Zraii Nji	105.44	21	P	PKiKP	14 21 05.5	0.0	
	baz=297							
DAWY	Dawson	105.50	24	P	PKiKP	14 21 05.6	-0.1	
	baz=294							
BVCY	Beaver Creek	105.52	26	P	PKiKP	14 21 05.5	-0.3	
	baz=292							
EPYK	Eagle Plains	105.54	21	P	PKiKP	14 21 05.6	-0.2	
	baz=297							
ESDC	Sonseca Array	105.69	310	PKiKP	PKiKP	14 21 06.7	-0.2	
	comp=Z,1.2nm,0.7s,baz=9.3,slow=2.4,SNR=7.8							
ESDC				PKKPbc	PKKPbc	14 32 31.1	-1.0	
	comp=Z,0.8nm,0.9s,baz=290,slow=3.5,SNR=4.5							
INK	Inuvik	105.71	19	P	PKiKP	14 21 05.5	-0.4	
	baz=300							
MESA	MESA	105.83	28	P	PKiKP	14 21 05.9	-0.7	
	baz=290							
CTG	Chitna Glacier	105.84	27	P	PKiKP	14 21 05.9	-0.7	
	baz=291							
A36M	Sachs Harbour	105.93	14	P	PKiKP	14 21 06.4	+0.2	
	baz=309							
YUK3	Moose Creek	105.94	26	P	PKiKP	14 21 06.3	-0.5	
	baz=292							
F31M	Tsiigehtchic	106.07	20	P	PKiKP	14 21 06.6	0.0	
	baz=300							
G31M	Satah River	106.15	20	P	PKiKP	14 21 06.1	-0.6	
	baz=299							
I30M	Mount Dempster	106.19	22	P	PKiKP	14 21 07.0	-0.1	
	baz=292							
K29M	Barlow Dome	106.35	24	P	PKiKP	14 21 07.0	-0.4	
	baz=295							
L29M	L29M	106.41	25	P	PKiKP	14 21 07.3	-0.1	
	baz=294							
YUK8	Steele Glacier	106.43	27	P	PKiKP	14 21 07.4	-0.4	
	baz=292							
O28M	Mount Upton	106.43	27	P	PKiKP	14 21 07.3	-0.5	
	baz=292							
J30M	Hart River	106.49	23	P	PKiKP	14 21 07.4	-0.3	
	baz=297							
M29M	Somme Creek	106.54	25	P	PKiKP	14 21 07.4	-0.4	
	baz=294							
PINM	Pinnacle	106.65	28	P	PKiKP	14 21 07.5	-0.5	
	baz=292							
H31M	Peel River	106.67	21	P	PKiKP	14 21 07.8	0.0	
	baz=299							
YUK4	Talbot Arm	106.90	26	P	PKiKP	14 21 08.0	-0.6	
	baz=294							
MAYO	Mayo, Yukon	107.11	24	P	PKiKP	14 21 08.2	-0.4	
	baz=297							
M30M	Minto, Yukon	107.19	25	P	PKiKP	14 21 08.7	-0.2	
	baz=296							
YUK6	Outpost Mounta	107.19	27	P	PKiKP	14 21 08.6	-0.6	
	baz=294							
O29M	Mount Kennedy	107.35	27	P	PKiKP	14 21 08.9	-0.5	
	baz=293							
HYT	Haines Junctio	107.62	27	P	PKiKP	14 21 09.4	-0.5	
	baz=294							
C36M	Paulatuk	107.92	16	P	PKiKP	14 21 09.7	-0.3	
	baz=310							
N31M	Braeburn, Yuko	108.09	26	P	PKiKP	14 21 10.2	-0.4	
	baz=296							
O30N	Mendenhall	108.27	26	P	PKiKP	14 21 10.4	-0.6	
	baz=296							
M31M	Drury Creek, Y	108.36	25	P	PKiKP	14 21 10.6	-0.5	
	baz=298							
RES	Resolute Bay	108.73	5	PKKPbc	PKKPbc	14 32 21.0	-2.6	
	comp=Z,1.5nm,0.8s,baz=186,slow=4.0,SNR=5.4							
RES				PKKP	PKKPab	14 32 34.5	+0.4	
	comp=Z,1.6nm,0.8s,baz=209,slow=5.7,SNR=4.9							
WHY	Whitehorse	108.86	26	P	PKiKP	14 21 11.6	-0.6	
	baz=297							
SKAG	Skagway	109.19	27	P	PKiKP	14 21 12.3	-0.4	
	baz=296							
S31K	Pelican	109.41	29	P	PKiKP	14 21 12.7	-0.4	
	baz=295							
P32M	Atlin	109.86	27	P	PKiKP	14 21 13.6	-0.4	
	baz=298							
P33M	Teslin, Yukon	109.97	26	P	PKiKP	14 21 13.8	-0.4	
	baz=299							
R32K	Eaglecrest	110.09	28	P	PKiKP	14 21 14.0	-0.4	
	baz=296							
SIT	Sitka	110.23	30	P	PKiKP	14 21 14.1	-0.5	
	baz=295							
S32K	Killisnoo	110.42	29	P	PKiKP	14 21 14.5	-0.5	
	baz=296							
R33M	Jennings River	111.19	26	P	PKiKP	14 21 15.9	-0.7	
	baz=300							
U33K	Whale Pass	111.74	30	P	PKiKP	14 21 17.1	-0.5	
	baz=297							
S34M	Telegraph Cree	111.85	28	P	PKiKP	14 21 17.3	-0.5	
	baz=300							
WRAK	Wrangell Islan	111.98	30	P	PKiKP	14 21 17.5	-0.5	
	baz=298							
CRAG	Craig	112.03	31	P	PKiKP	14 21 17.9	-0.3	
	baz=297							
DLBC	Dease Lake	112.09	27	P	PKiKP	14 21 17.6	-0.7	
	baz=301							
T35M	Bob Quinn	112.73	28	P	PKiKP	14 21 18.7	-0.8	
	baz=300							
U35K	Hyder	113.37	29	P	PKiKP	14 21 20.2	-0.4	
	baz=300							
KOTAN	Kotaneelee Air	113.69	24	P	PKiKP	14 21 20.9	-0.3	
	baz=307							
YKA	Yellowknife Ar	115.47	18	PKP	PKiKP	14 21 23.2	-1.3	
	comp=Z,2.4nm,0.9s,baz=310,slow=2.7,SNR=21							
YKA				SKP	SKPdf	14 24 48.8	-1.8	
	comp=Z,0.6nm,0.9s,baz=319,slow=2.7,SNR=4.2							
YKA				PKKPbc	PKKPbc	14 31 59.0	-2.0	
	comp=Z,1.6nm,0.8s,baz=140,slow=2.5,SNR=4.0							
YKA				SKKPbc	SKKPbc	14 35 37.0	-0.9	
	comp=Z,0.4nm,0.9s,baz=180,slow=1.2,SNR=4.0							
YKA				SKKP	SKKPdf	14 35 50.0	-0.6	
	comp=Z,0.6nm,0.9s,baz=155,slow=2.7,SNR=4.7							
YKAW1	Yellowknife Wh	115.52	18		PKiKP	14 21 24.1	-0.5	
TAOE	Nuku Hiva Isla	115.71	102	eLR	LR	14 56 28.6		
	comp=Z,70nm,24.8s							
BLKN	Baker Lake	118.37	9		PKPdf	14 21 29.0	-1.0	
FRB	Frobisher Bay	120.19	356	PKP	PKPdf	14 21 32.4	-1.1	
	comp=Z,2.3nm,0.4s,baz=16,slow=4.6,SNR=6.9							
WIFE	Three Sisters-	124.01	38		PKiKP	14 21 42.6	+0.5	
NEW	Newport	124.23	31	PKP	PKiKP	14 21 42.2	0.0	
	comp=Z,7.1nm,0.8s,baz=328,slow=2.1,SNR=14							
NEW				PKKPab	PKKPbc	14 31 27.4	-0.8	
	comp=Z,1.6nm,0.7s,baz=142,slow=7.3,SNR=3.8							
YBH	Yreka Blue Hor	124.64	41	PKP	PKPdf	14 21 42.6	-0.3	
	comp=Z,0.3nm,0.8s,baz=6.7,slow=3.4,SNR=7.9							
YBH	Yreka Blue Hor	124.64	41		PKPdf	14 21 42.0	-1.0	
O02D	Mt. Diablo Mer	125.35	42		PKiKP	14 21 45.0	+0.2	
FFC	Flin Flon	125.63	18		PKPdf	14 21 44.1	-0.2	
FFC	Flin Flon	125.63	18	PKIKP	PKPdf	14 21 44.1	-0.2	
KUQ	Kuujjuuaa	125.75	354		PKPdf	14 21 44.2	-0.1	
CVS	Carmenet Viney	126.44	44		PKiKP	14 21 47.4	+0.5	
ORV	Oroville	126.52	42		PKiKP	14 21 46.7	-0.2	
ORV	Oroville	126.52	42	PKIKP	PKiKP	14 21 46.7	-0.2	
AFDM	Forest Hills D	127.17	43		PKiKP	14 21 48.5	+0.2	
CMB	Columbia Colle	128.02	44		PKiKP	14 21 49.9	-0.1	
CMB	Columbia Colle	128.02	44	PKIKP	PKiKP	14 21 49.9	-0.1	
SCHQ	Schefferville	128.78	352	PKP	PKPdf	14 21 50.3	-0.1	
	comp=Z,9.6nm,0.9s,baz=333,slow=2.6,SNR=8.2							
NVAR	Mina Array Bea	129.23	42	PKP	PKiKP	14 21 53.0	+0.2	
	comp=Z,6.8nm,0.6s,baz=287,slow=2.0,SNR=64							
NVAR				SKPbc	SKPab	14 25 03.6	+0.5	
	comp=Z,1.8nm,0.7s,baz=277,slow=4.3,SNR=7.2							
NVAR				SKKPbc	SKKPbc	14 34 51.5	-0.5	
	comp=Z,0.5nm,0.8s,baz=72,slow=4.7,SNR=3.9							
ELK	Elko	129.90	38	PKP	PKiKP	14 21 54.2	+0.2	
	comp=Z,6.5nm,0.7s,baz=293,slow=2.3,SNR=35							
ELK				SKPbc	SKPab	14 25 05.7	-0.3	
	comp=Z,0.9nm,0.7s,baz=283,slow=0.8,SNR=3.9							
ULM	Lac du Bonnet	131.35	16	PKP	PKPdf	14 21 54.8	-0.5	
	comp=Z,12nm,0.7s,baz=339,slow=2.3,SNR=17							
ULM				SKPbc	SKPbc	14 25 07.6	-3.3	
	comp=Z,29nm,1.0s,baz=344,slow=4.8,SNR=21							
ULM				SKKPbc	SKKPbc	14 34 42.8	-1.9	
	comp=Z,0.7nm,0.3s,baz=115,slow=5.6,SNR=3.1							
PDAR	Pinedale Array	131.85	32	PKhKP	PKPpre	14 21 48.3		
	comp=Z,0.5nm,0.9s,baz=48,slow=2.2,SNR=3.8							
PDAR				PKP	PKPdf	14 21 56.7	-0.1	
	comp=Z,3.1nm,0.6s,baz=195,slow=0.4,SNR=29							
PDAR				SKPbc	S

comp=Z,15nm,0.6s,baz=294,slow=1.1,SNR=159

TXAR				SKPbc	**SKPbc**	**14 25 49.0**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=201,slow=1.2,SNR=7.6							
TXAR				SKKPbc	**SKKPbc**	**14 33 54.2**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=172,slow=3.2,SNR=3.6							
TXAR	**Lajitas Array**	**144.38**	**42**		PKPbc	14 22 18.6	-0.1
ITRB	**Iturama**	**144.71**	**227**	*eP*	**PKPdf**	**14 22 21.6**	**+0.9**
R49A	**Shelbyville**	**145.18**	**11**		**PKPbc**	**14 22 19.8**	**-1.0**
BDFB	**Brasilia**	**145.25**	**235**	PKPbc	**PKPab**	**14 22 23.2**	**+1.3**
	comp=Z,28nm,0.5s,baz=114,slow=3.5,SNR=39							
AMBA	**Amambai (Brazi**	**145.59**	**218**	*eP*	**PKPab**	**14 22 23.7**	**+0.8**
DRIO	**Del Rio**	**146.31**	**39**		**PKPdf**	**14 22 23.8**	**+0.6**
LCO	**Las Campanas**	**146.51**	**190**		**PKPbc**	**14 22 25.0**	**-0.4**
LCO	**Las Campanas**	**146.51**	**190**	PKP2	**PKPbc**	**14 22 25.0**	**-0.4**
C2SB	**Chapadao do Su**	**147.10**	**225**	*eP*	**PKPbc**	**14 22 26.3**	**-0.6**
AQDB	**Aquidauana**	**147.85**	**220**	*eP*	**PKPdf**	**14 22 26.6**	**+0.6**
SMTB	**Santa Maria do**	**147.99**	**246**	*eP*	**PKPdf**	**14 22 27.9**	**+1.5**
ARAG	**Araguaiana, MT**	**148.25**	**231**	*eP*	**PKPdf**	**14 22 27.9**	**+1.2**
AC02	**Maricunga**	**148.30**	**193**		**PKPdf**	**14 22 28.6**	**+1.4**
BDQN	**Bodoquena, MS**	**148.53**	**218**	*eP*	**PKPdf**	**14 22 27.4**	**+0.4**
HKT	**Hockley**	**148.73**	**33**		**PKPbc**	**14 22 29.7**	**-1.2**
HKT	**Hockley**	**148.73**	**33**	PKP2	**PKPbc**	**14 22 29.7**	**-1.2**
PP1B	**Ponte de Pedra**	**149.32**	**225**	*eP*	**PKPdf**	**14 22 29.7**	**+1.2**
SNDB	**Serra Nova Dou**	**149.87**	**238**	*eP*	**PKPdf**	**14 22 29.7**	**+0.3**
SALV	**Santo Antonio**	**151.03**	**226**	*eP*	**PKPdf**	**14 22 32.4**	**+1.2**
PTLB	**Pontes e Lacer**	**153.73**	**222**	*eP*	**PKPdf**	**14 22 35.9**	**+0.8**
CLDB	**Colider**	**154.19**	**235**	*eP*	**PKPdf**	**14 22 36.8**	**+1.0**
PDRB	**Porto dos Gac**	**154.51**	**232**	*eP*	**PKPdf**	**14 22 37.9**	**+1.6**
SIV	**San Ignacio**	**154.56**	**218**	PKP	**PKPdf**	**14 22 37.1**	**+0.7**
	comp=Z,8.6nm,0.7s,baz=120,slow=4.1,SNR=26							
SIV				PKPbc	**PKiKP**	**14 22 45.3**	**+0.5**
	comp=Z,12nm,0.7s,baz=98,slow=3.3,SNR=3.2							
SIV				PKPab	**PKPab**	**14 23 00.9**	**+1.3**
	comp=Z,21nm,0.8s,baz=116,slow=6.3,SNR=12							
SIV				PP	**PP**	**14 26 34.3**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=153,slow=8.5,SNR=4.0							
MDP	**Montagnes des**	**155.73**	**273**	PKP	**PKPdf**	**14 22 38.2**	**+0.2**
	comp=Z,19nm,0.8s,baz=50,slow=5.2,SNR=4.0							
MDP				PKPab	**PKPab**	**14 23 05.9**	**+1.1**
	comp=Z,8.1nm,0.7s,baz=68,slow=4.1,SNR=4.5							
NPGB	**Novo Progresso**	**155.74**	**243**	*eP*	**PKPdf**	**14 22 38.6**	**+0.6**
VILB	**Vilhena**	**156.22**	**224**	*eP*	**PKPdf**	**14 22 40.0**	**+1.3**
ITTB	**Itaituba**	**157.17**	**249**	*eP*	**PKPdf**	**14 22 40.6**	**+0.8**
LPAZ	**La Paz**	**157.91**	**203**	PKP	**PKPdf**	**14 22 42.2**	**+0.8**
	comp=Z,10nm,1.0s,baz=49,slow=3.4,SNR=20							
LPAZ				PKPab	**PKPab**	**14 23 15.6**	**+1.0**
	comp=Z,15nm,1.0s,baz=146,slow=4.2,SNR=10.0							
LPAZ				PP	**PP**	**14 26 59.1**	**+6.1**
	comp=Z,2.9nm,0.9s,baz=94,slow=4.7,SNR=5.4							
LPAZ	**La Paz**	**157.91**	**203**	*eP*	**PKPdf**	**14 22 42.2**	**+0.8**
BOAV	**Boa Vista**	**163.49**	**265**	*eP*	**PKPdf**	**14 22 47.5**	**+0.7**
NNA	**Nana**	**163.99**	**180**	PKP	**PKPdf**	**14 22 47.4**	**+0.1**
	comp=Z,6.4nm,0.5s,baz=358,slow=4.6,SNR=4.9							
NNA				PKPab	**PKPab**	**14 23 42.0**	**+1.6**
	comp=Z,3.2nm,0.3s,baz=285,slow=11,SNR=1.6							
TEFE	**Tefe**	**165.53**	**239**	*eP*	**PKPdf**	**14 22 48.6**	**0.0**
ATAH	**Atahualpa**	**168.72**	**173**	PKP	**PKPdf**	**14 22 53.0**	**+1.5**
	comp=Z,15nm,1.1s,baz=47,slow=1.6,SNR=10.0							
ATAH				PKPab	**PKPab**	**14 24 04.7**	**+2.9**
	comp=Z,7.4nm,0.8s,baz=355,slow=4.2,SNR=4.8							
SDV	**Santo Domingo**	**172.13**	**307**		**PKPdf**	**14 22 52.1**	**-1.0**
SDV				PKPab	**PKPab**	**14 24 15.2**	**-1.7**
OTAV	**Otavalo**	**175.86**	**159**	*eP*	**PKPdf**	**14 22 54.9**	**+0.2**
ROSC	**El Rosal**	**177.26**	**285**	PKP	**PKPdf**	**14 22 54.6**	**-0.3**
	comp=Z,9.2nm,0.4s,baz=84,slow=2.6,SNR=5.8							

*NEIC **28** 14:05:23.6±1.2,56.50N±0.09×148.47W±0.01,h10km±2km, mb4.1/5,ML3.8/88,ML3.5(AEIC),Error ellipse: s-maj=15.3km s-min=3.0km az=177.0*
*IDC **28** 14:05:24.1±1.7,56.50N×148.38W,h0km,mb3.4/3, mbtmp3.6/7,ML3.4/4,MS3.1/10,Error ellipse: s-maj=31.2km s-min=20.2km az=51.0*
*AEIC **28** 14:05:27.7±1.5,56.46N±0.10×148.4W±0.1,h12km±6km, Error ellipse: s-maj=13.9km s-min=9.0km az=178.0*

ISC 28 14:05:23.3±0.7,56.56N±0.08×148.51W±0.05,h10km, n110,σ1935/86,mb3.3/4,MS3.1/7,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.54**	**301**	Pn	**Pn**	**14 06 04.9**	**+0.4**
	13nm,0.3s,baz=111,slow=6.1,SNR=401						
KDAK				Sn	**Sn**	**14 06 33.8**	**-1.6**
	9.2nm,0.3s,baz=89,slow=13,SNR=6.1						
KDAK				LR	LR	14 07 20.7	
	comp=Z,479nm,18.9s,baz=110,slow=44 27nm,0.3s						
KDAK	**Kodiak Island**	**2.54**	**301**		**Pn**	**14 06 04.9**	**+0.4**
KDAK	**Kodiak Island**	**2.54**	**301**		**Sn**	**14 06 34.1**	**-1.3**
OHAK	**Old Harbor**	**2.71**	**286**	P	**Pn**	**14 06 06.6**	**-0.2**
OHAK	**Old Harbor**	**2.71**	**286**		**Pn**	**14 06 06.6**	**-0.2**
OHAK					**Sn**	**14 06 37.1**	**-2.5**
SYI	**Shuyak Island**	**2.93**	**316**		**Pn**	**14 06 11.1**	**+1.1**
SYI	**Shuyak Island**	**2.93**	**316**		**Sn**	**14 06 45.1**	**0.0**
SII	**Sitkinak Islan**	**3.14**	**272**	P	**Pn**	**14 06 13.5**	**+0.7**
SII	**Sitkinak Islan**	**3.14**	**272**		**Pn**	**14 06 13.2**	**+0.4**
SII				IAML		14 06 52.9	
	comp=N,261nm,0.7s						
SII				IAML		14 06 59.5	
	comp=E,270nm,0.8s						
SII	**Sitkinak Islan**	**3.14**	**272**		**Sn**	**14 06 47.3**	**-3.1**
CNPM	**China Poot**	**3.31**	**335**		**Pn**	**14 06 16.1**	**+0.9**
CNPM	**China Poot**	**3.31**	**335**		**Sn**	**14 06 54.9**	**+0.3**
BRSE	**Bradley Lake S**	**3.41**	**341**		**Pn**	**14 06 16.9**	**+0.5**
BRLK	**Bradley Lake**	**3.45**	**340**		**Pn**	**14 06 17.6**	**+0.5**
P23K	**Montague Islan**	**3.50**	**9**		**Pn**	**14 06 18.4**	**+0.7**
P23K				IAML		14 07 03.3	
	comp=E,247nm,0.8s						
P23K				IAML		14 07 05.4	
	comp=N,179nm,0.9s						
HOM	**Homer**	**3.53**	**333**	Pn	**Pn**	**14 06 19.6**	**+1.5**
SEW	**Seward**	**3.59**	**352**		**Pn**	**14 06 19.4**	**+0.4**
Q19K	**Cape Douglas,**	**3.64**	**313**		**Pn**	**14 06 21.6**	**+1.9**
KAHG	**Katmai Hook Gl**	**3.79**	**303**		**Pn**	**14 06 24.2**	**+2.4**
AU22	**Augustine Moun**	**3.82**	**320**		**Pn**	**14 06 23.8**	**+1.7**
AUI	**Augustine Isla**	**3.83**	**319**		**Pn**	**14 06 24.0**	**+1.8**
O22K	**Cooper Landing**	**3.99**	**351**		**Pn**	**14 06 25.0**	**+0.6**
P19K	**Oil Pt**	**3.99**	**323**		**Pn**	**14 06 26.1**	**+1.7**
HIN	**Hinchinbrook I**	**3.99**	**14**		**Pn**	**14 06 25.2**	**+0.7**
KAIM	**Kayak Island**	**4.01**	**31**		**Pn**	**14 06 25.4**	**+0.7**
KAIM				IAML		14 07 16.4	
	comp=N,157nm,1.3s						
KAIM				IAML		14 07 22.7	
	comp=E,137nm,1.2s						
CHIR	**Chirikof Islan**	**4.04**	**262**	P	**Pn**	**14 06 24.8**	**-0.4**
ACHA	**Angle Creek He**	**4.05**	**297**		**Pn**	**14 06 27.3**	**+2.0**
SLKM	**Skilak Lake**	**4.06**	**348**		**Pn**	**14 06 26.2**	**+0.7**
SLKM				IAML		14 07 13.9	
	comp=E,173nm,0.4s						
SLKM				IAML		14 07 16.6	
	comp=N,165nm,0.3s						
ILSW	**Iliamna Southw**	**4.22**	**326**		**Pn**	**14 06 28.4**	**+0.7**
ILSW				IAML		14 07 25.8	
	comp=E,113nm,0.5s						
ILSW				IAML		14 07 33.6	
	comp=N,84nm,0.7s						
EYAK	**Cordova Ski Ar**	**4.25**	**19**	P	**Pn**	**14 06 28.8**	**+0.7**
EYAK	**Cordova Ski Ar**	**4.25**	**19**		**Pn**	**14 06 29.0**	**+0.9**
EYAK				IAML		14 07 22.6	
	comp=N,146nm,0.7s						
EYAK				IAML		14 07 27.0	
	comp=E,116nm,0.8s						
SUCK	**Suckling Hills**	**4.32**	**33**		**Pn**	**14 06 29.8**	**+0.8**
SUCK				IAML		14 07 29.2	
	comp=E,92nm,0.9s						
SUCK				IAML		14 07 30.4	
	comp=N,133nm,1.4s						
GLI	**Glacier Island**	**4.40**	**9**	IAML		14 07 26.2	
	comp=E,119nm,0.5s						
GLI				IAML		14 07 27.4	
	comp=N,73nm,1.0s						
PLK4	**Peulik 4**	**4.42**	**287**	IAML		14 07 29.0	
	comp=N,114nm,0.6s						
RED	**Redoubt Volcan**	**4.47**	**332**	IAML		14 07 27.1	
	comp=N,106nm,0.3s						
RED				IAML		14 07 34.7	
	comp=E,124nm,0.6s						
RC01	**Rabbit Creek A**	**4.59**	**353**	IAML		14 07 32.9	
	comp=E,118nm,0.5s						
RC01				IAML		14 07 33.0	
	comp=N,82nm,0.5s						
BERG	**Berg Lake**	**4.60**	**31**	IAML		14 07 29.3	
	comp=N,122nm,0.5s						
SNH	**Sunshine Point**	**4.70**	**37**		**Pn**	**14 06 34.9**	**+0.7**
SNH				IAML		14 07 52.4	
	comp=N,73nm,1.1s						
SNH				IAML		14 07 56.2	
	comp=E,60nm,1.0s						
BMRM	**Bremner River**	**4.87**	**23**	IAML		14 07 34.4	
	comp=E,62nm,0.5s						
BMRM				IAML		14 07 41.9	
	comp=N,56nm,0.5s						
KNK	**Knik Glacier**	**4.87**	**0**	IAML		14 07 40.9	
	comp=N,56nm,0.6s						
KNK				IAML		14 07 47.8	
	comp=E,74nm,0.6s						
MESA	**MESA**	**5.01**	**41**	IAML		14 07 38.6	
	comp=N,63nm,1.1s						
MESA				IAML		14 07 51.9	
	comp=E,51nm,0.9s						
SUA	**Susitna One**	**5.05**	**348**	IAML		14 07 51.7	
	comp=E,42nm,0.8s						
SUA				IAML		14 07 56.0	
	comp=N,42nm,1.3s						
CRQM	**Cirque**	**5.06**	**31**	IAML		14 07 45.9	
	comp=E,61nm,0.6s						
CRQM				IAML		14 07 51.0	
	comp=N,72nm,0.7s						
PMR	**Palmer**	**5.06**	**357**	P	**Pn**	**14 06 40.0**	**+0.9**
PMR	**Palmer**	**5.06**	**357**	IAML		14 07 42.9	
	comp=N,69nm,0.7s						
PMR				IAML		14 07 45.5	
	comp=E,65nm,0.6s						
KLU	**Klutina**	**5.13**	**14**	IAML		14 07 44.0	
	comp=N,81nm,0.5s						
KLU				IAML		14 07 48.1	
	comp=E,64nm,0.8s						
TGL	**Tana Glacier**	**5.15**	**33**	IAML		14 07 47.9	
	comp=N,43nm,0.9s						
TGL				IAML		14 07 48.0	
	comp=E,55nm,0.5s						
STLK	**Strandline Lak**	**5.25**	**342**	IAML		14 07 44.5	
	comp=E,48nm,1.0s						
STLK				IAML		14 07 51.9	
	comp=N,74nm,0.8s						
SCM	**Sheep Creek Mo**	**5.33**	**6**	IAML		14 07 48.2	
	comp=E,78nm,0.6s						
SCM				IAML		14 07 49.7	
	comp=N,78nm,1.2s						
GRNC	**Granite Creek**	**5.47**	**37**	Pn	**Pn**	**14 06 45.5**	**+0.5**
PCA	**Pinnacle**	**5.61**	**47**		**Pn**	**14 06 47.4**	**+0.6**
BCPM	**Bancas Point**	**5.79**	**50**		**Pn**	**14 06 49.8**	**+0.7**
SDPT	**Sand Point**	**6.83**	**265**	P	**Pn**	**14 07 04.3**	**+0.9**
HYT	**Haines Junctio**	**7.15**	**49**		**Pn**	**14 07 09.0**	**+1.1**
SIT	**Sitka**	**7.26**	**81**	P	**Pn**	**14 07 09.6**	**+0.4**
SKAG	**Skagway**	**7.58**	**62**	P	**Pn**	**14 07 14.1**	**+0.4**
JIS	**Juneau Island**	**7.82**	**71**	P	**Pn**	**14 07 16.6**	**-0.3**
ILAR	**Eielson Array**	**8.28**	**5**	Pn	**Pn**	**14 07 24.4**	**+1.1**
	comp=N,0.4nm,0.3s,baz=188,slow=13,SNR=22						
ILAR				Sn	**Sn**	**14 08 53.8**	**-2.9**
	comp=N,0.8nm,0.3s,baz=187,slow=24,SNR=8.8						
	comp=N,1.0nm,0.4s						
ILAR	**Eilson Array**	**8.28**	**5**		**Pn**	**14 07 23.7**	**+0.4**
COLA	**College**	**8.35**	**2**	P	**Pn**	**14 07 26.7**	**+2.5**
COLA	**College**	**8.35**	**2**		**Pn**	**14 07 25.5**	**+1.2**
FALS	**False Pass**	**8.59**	**265**	P	**Pn**	**14 07 28.1**	**+0.5**
I23K	**Minto, Yukon-K**	**8.63**	**358**	Pn	**Pn**	**14 07 29.1**	**+1.1**
L14K	**Kuka Creek**	**8.75**	**309**	Pn	**Pn**	**14 07 30.9**	**+1.3**
I21K	**Tanana**	**8.81**	**350**	Pn	**Pn**	**14 07 31.0**	**+0.4**
PRP	**Porcupine Dome**	**9.11**	**8**	Pn	**Pn**	**14 07 35.9**	**+1.2**
K29M	**Barlow Dome**	**9.11**	**32**	Pn	**Pn**	**14 07 36.2**	**+1.4**
M31M	**Drury Creek, Y**	**9.15**	**46**	Pn	**Pn**	**14 07 36.5**	**+1.2**
H22K	**Ishtalitna Cre**	**9.47**	**353**	Pn	**Pn**	**14 07 40.4**	**+0.9**
FARO	**Faro, Yukon**	**9.58**	**47**		**Pn**	**14 07 41.8**	**+0.6**
R33M	**Jennings River**	**9.74**	**66**	Pn	**Pn**	**14 07 43.6**	**+0.2**
IMAR	**Indian Mountai**	**9.78**	**347**	Pn	**Pn**	**14 07 44.0**	**+0.1**
I28M	**Miner Creek**	**9.83**	**21**	Pn	**Pn**	**14 07 46.1**	**+1.5**
H18K	**Honhosa River**	**9.86**	**335**	Pn	**Pn**	**14 07 45.3**	**+0.5**
DLBC	**Dease Lake**	**10.12**	**72**	Pn	**Pn**	**14 07 48.5**	**-0.1**
	comp=N,0.3nm,0.3s,baz=263,slow=13,SNR=11						
DLBC				Sn	**Sn**	**14 09 36.8**	**-5.2**
	comp=N,0.2nm,0.3s,baz=160,slow=23,SNR=1.2						
DLBC				LR	LR	14 11 06.5	
	comp=N,66nm,18.8s,baz=277,slow=34						
	comp=N,0.9nm,0.3s						
G24K	**Hadweenzic Riv**	**10.19**	**2**	Pn	**Pn**	**14 07 51.1**	**+1.7**
G23K	**Bananza Creek**	**10.21**	**357**	Pn	**Pn**	**14 07 50.8**	**+1.0**
G21K	**Allakaket**	**10.27**	**349**	Pn	**Pn**	**14 07 51.5**	**+0.9**
COLD	**Coldfoot**	**10.74**	**356**	Pn	**Pn**	**14 07 58.1**	**+1.2**
F21K	**Alatna River**	**10.95**	**350**	Pn	**Pn**	**14 08 01.6**	**+1.7**
F20K	**Avaraart Lake**	**11.06**	**345**	Pn	**Pn**	**14 08 02.2**	**+0.9**
BMAR	**Burnt Mountain**	**11.06**	**8**	Pn	**Pn**	**14 08 02.8**	**+1.4**
F15K	**North Star Dit**	**12.00**	**326**	Pn	**Pn**	**14 08 14.8**	**+0.7**
D20K	**Etivluk River**	**12.74**	**346**	Pn	**Pn**	**14 08 25.6**	**+1.4**
C23K	**Itkillik River**	**13.36**	**357**	Pn	**Pn**	**14 08 32.3**	**-0.4**
B22K	**Teshekpuk Lake**	**14.00**	**353**	Pn	**Pn**	**14 08 42.4**	**+1.0**
C36M	**Paulatuk**	**16.78**	**31**	Pn	**Pn**	**14 09 17.5**	**-0.5**
YKA	**Yellowknife Ar**	**18.03**	**57**	P	**P**	**14 09 34.3**	**+0.3**
	comp=N,0.1nm,0.3s,baz=271,slow=12,SNR=21						
YKA				LR	LR	14 16 21.4	
	comp=N,70nm,20.4s,baz=69,slow=36						
	comp=N,4.2nm,1.0s						
YKA	**Yellowknife A**	**18.03**	**57**	P	**P**	**14 09 34.6**	**+0.6**
YKAW3	**Yellowknife Wh**	**18.03**	**57**	P	**P**	**14 09 34.5**	**+0.4**
YKAW3				IAmb	IAmb	14 09 45.9	
	comp=Z,20nm,1.4s						
A36M	**Sachs Harbour**	**18.26**	**23**	P	**Pn**	**14 09 36.9**	**+0.6**
A36M				IAmb	IAmb	14 09 48.5	
	comp=Z,22nm,0.9s						
NEW	**Newport**	**20.71**	**100**	LR	LR	14 16 28.1	
	comp=Z,41nm,18.4s,baz=284,slow=32						
YBH	**Yreka Blue Hor**	**22.28**	**121**	LR	LR	14 16 47.8	
	comp=Z,8.7nm,18.6s,baz=323,slow=31						
JTMT	**Jette**	**22.56**	**98**	P	**P**	**14 10 22.4**	**-1.1**
BILL	**Bilibino**	**23.33**	**318**	P	**P**	**14 10 29.4**	**-1.7**
BILL				IAmb	IAmb	14 10 34.8	
	comp=Z,4.4nm,0.8s						
JRSC	**Jasper Ridge**	**25.96**	**126**	P	**P**	**14 10 54.3**	**-1.4**
ELK	**Elko**	**26.73**	**112**	LR	LR	14 20 27.9	
	comp=Z,30nm,21.4s,baz=318,slow=34						
NVAR	**Mina Array Bea**	**26.97**	**119**	P	**P**	**14 11 06.6**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=297,slow=8.5,SNR=5.1						
	comp=Z,0.4nm,0.7s						
RES	**Resolute Bay**	**27.11**	**28**	LR	LR	14 22 08.4	
	comp=Z,53nm,20.6s,baz=14,slow=37						
MA2	**Magadan**	**31.28**	**301**	LR	LR	14 24 33.5	
	comp=Z,55nm,21.8s,baz=72,slow=37						
PFO	**Pinyon Flats O**	**31.74**	**123**	LR	LR	14 21 32.3	
	comp=Z,64nm,20.1s,baz=314,slow=31						
TXAR	**Lajitas Array**	**41.52**	**112**	P	**P**	**14 13 12.5**	**+1.7**
	comp=Z,0.4nm,1.0s,baz=317,slow=6.7,SNR=2.7						
	comp=Z,0.4nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**49.39**	**241**	T	T	15 07 28.7	
	baz=30,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**49.40**	**241**	T	T	15 07 27.4	
	baz=30,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**49.41**	**241**	T	T	15 07 30.8	
	baz=30,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**50.54**	**240**	T	T	15 08 55.0	
	baz=30,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**50.55**	**240**	T	T	15 08 57.1	
	baz=30,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**50.55**	**240**	T	T	15 08 56.3	
	baz=30,slow=76,SNR=23						
BVAR	**Borovoye Array**	**66.21**	**336**	LR	LR	14 47 50.7	
	comp=Z,52nm,18.5s,baz=142,slow=38						
ESDC	**Sonseca Array**	**79.55**	**27**	P	**P**	**14 17 33.1**	**+3.0**
	comp=Z,0.3nm,0.6s,baz=340,slow=5.4,SNR=5.5						
	comp=Z,0.3nm,0.6s						

IDC 28 14:09:54.2±7.1,0.79S×133.20E,h0km,mb4.1/2, mbtmp4.0/3,ML3.3/1,Error ellipse: s-maj=122.8km s-min=25.8km az=26.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**1.93**	**268**	Pn	Pn	14 10 28.2	-0.2
	29nm,0.3s,baz=66,slow=19,SNR=19						
SIJI				Sn	Sb	14 10 54.3	-0.8
	20nm,0.3s,baz=322,slow=23,SNR=4.1						
WRA	**Warramunga Arr**	**19.07**	**177**	P	P	14 14 18.5	+0.1
	0.1nm,0.3s,baz=357,slow=11,SNR=2.1						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**22.75**	**178**	P	P	14 14 58.7	+0.4
	1.6nm,0.3s,baz=359,slow=12,SNR=7.8						
	1.6nm,0.3s						
STKA	**Stephens Creek**	**31.93**	**166**	P	P	14 16 21.4	-0.3
	4.9nm,1.0s,baz=354,slow=10,SNR=2.4						
	4.9nm,1.0s						

H11N1	**WAKE ISLAND Hy**	**38.81**	**56**	T	T	14 58 48.4	
	baz=242						
H11N2	**WAKE ISLAND Hy**	**38.83**	**56**	T	T	14 58 44.8	
	baz=242						
H11N3	**WAKE ISLAND Hy**	**38.83**	**57**	T	T	14 59 12.2	
	baz=242,slow=74						

*RSNC **28** 14:10:09.4±0.4,2.2S±3.7×77.7W±.1,h0km,M3.5,ML3.2*
*IGQ **28** 14:10:09.5±0.5,2.2S±2.7×77.8W±.1,h7km±3km,M4.0/7, Mjma3.8/6,ML4.3/6,MLv3.8/7*

ISC 28 14:10:08.0±0.9,1.49S±0.02×77.50W±0.03,h16km±8km, n96,σ1909/114,6C-28D,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKYU	**Pakayacu**	**0.18**	**209**	⇑P	**Pg**	**14 10 12.7**	**+0.1**
PKYU				S	**Sg**	**14 10 15.7**	**+0.2**
APUY	**Puyo**	**0.49**	**273**	⇓P	**Pg**	**14 10 16.8**	**-1.1**
PUYO	**Puyo, Santa Ro**	**0.52**	**269**	⇓P	**Pg**	**14 10 18.7**	**+0.3**
PUYO				S	**Sg**	**14 10 26.1**	**+0.7**
ARDO	**Archidona, Ten**	**0.57**	**329**	⇓P	**Pb**	**14 10 20.6**	**+0.8**
ARDO				S	**Sb**	**14 10 29.1**	**+1.4**
TAIS	**Taisha**	**0.89**	**180**	P	**Pg**	**14 10 25.6**	**+0.3**
TAIS				S	**Sg**	**14 10 37.7**	**+0.7**
BPAT	**Tungurahua Vol**	**0.93**	**269**	⇓P	**Pg**	**14 10 25.6**	**-0.6**
BPAT				S	**Sg**	**14 10 37.6**	**-0.9**
JUI6	**Juive**	**0.97**	**274**	⇓P	**Pg**	**14 10 26.0**	**-0.9**
PIS1	**Pisayambo**	**0.98**	**296**	⇓P	**Pb**	**14 10 27.3**	**+0.4**
PIS1				S	**Sb**	**14 10 40.8**	**+0.9**
BBIL	**Ulba Tungurahu**	**0.98**	**272**	⇓P	**Pg**	**14 10 26.4**	**-0.8**
BBIL				S	**Sg**	**14 10 39.0**	**-1.1**
BIL2	**Estacion Bilba**	**1.00**	**272**	⇓P	**Pg**	**14 10 26.7**	**-0.7**
VCES	**Cotopaxi**	**1.12**	**307**	⇓P	**Pn**	**14 10 30.0**	**+0.4**
VCES				S	**Sn**	**14 10 45.5**	**+0.5**
AAM2	**Ambato 2 (Merc**	**1.13**	**281**	P	**Pb**	**14 10 29.6**	**+0.2**
AAM2				S	**Sg**	**14 10 44.9**	**+0.2**
IGUA	**Igualata**	**1.13**	**270**	⇓P	**Pb**	**14 10 29.7**	**0.0**
TAMB	**Tambo**	**1.17**	**312**	⇓P	**Pn**	**14 10 31.1**	**+0.8**
ASLC	**Ecuador-Salced**	**1.17**	**292**	P	**Pg**	**14 10 30.6**	**-0.1**
ANTM	**Antisana-La Mi**	**1.19**	**323**	⇓P	**Pg**	**14 10 31.3**	**+0.3**
ANTS	**Antisana-Sarah**	**1.19**	**326**	⇓P	**Pg**	**14 10 31.5**	**+0.4**
BRRN	**Barrancas-Volc**	**1.20**	**306**	⇓P	**Pg**	**14 10 31.3**	**+0.1**
BTAM	**Cotopaxi Volca**	**1.20**	**312**	⇓P	**Pg**	**14 10 31.7**	**+0.4**
BMOR	**Cotopaxi Volca**	**1.21**	**308**	⇓P	**Pg**	**14 10 31.8**	**+0.2**
ANTI	**Antisana**	**1.22**	**327**	⇓P	**Pg**	**14 10 32.0**	**+0.3**
BVC2	**Cotopaxi Volca**	**1.23**	**312**	⇓P	**Pg**	**14 10 32.2**	**+0.4**
VC1	**Cotopaxi 1**	**1.23**	**313**	⇓P	**Pg**	**14 10 32.3**	**+0.4**
ANTG	**Antisana-Guama**	**1.23**	**322**	⇓P	**Pg**	**14 10 32.1**	**+0.2**
BREF	**Cotopaxi Volca**	**1.24**	**311**	⇓P	**Pg**	**14 10 32.6**	**+0.5**
SLOR	**San Lorenzo -**	**1.24**	**307**	⇓P	**Pg**	**14 10 32.3**	**+0.2**
APS4	**Papallacta**	**1.26**	**331**	P	**Pg**	**14 10 32.7**	**+0.3**
PORT	**Chimborazo Vol**	**1.27**	**271**	⇓P	**Pn**	**14 10 31.9**	**+0.2**
TAMH	**Tambohuasha Ch**	**1.28**	**267**	⇓P	**Pn**	**14 10 31.8**	**+0.1**
AV05	**Acelerografo,**	**1.29**	**352**	P	**Pg**	**14 10 34.0**	**+1.1**
SRAM	**San Ramn-Vol**	**1.29**	**304**	P	**Pg**	**14 10 33.3**	**+0.4**
SUCR	**Mariscal Sucre**	**1.30**	**310**	P	**Pg**	**14 10 33.6**	**+0.5**
PITA	**Cotopaxi Volc**	**1.31**	**315**	P	**Pg**	**14 10 33.8**	**+0.1**
**TOMA

comp=N,411nm,0.4s
TVAN Van 0.88 274 P **Pg** 14 34 52.0 **-0.5**
TVAN S **Sb** 14 35 06.3 **+0.6**
TVAN IAML 14 35 12.0
comp=E,207nm,0.3s
ISHB Shabestar 0.88 102 Pg **Pb** 14 34 52.6 **-1.1**
VMUR Van-Muradiye 0.90 305 P **Pg** 14 34 52.9 **-0.2**
VMUR S **Sb** 14 35 06.0 **-0.5**
VMUR IAML 14 35 10.0
comp=E,160nm,0.3s
VMUR IAML 14 35 11.0
comp=N,242nm,0.3s
YOVA Hakkari_Yksek 0.91 192 P **Pb** 14 34 53.5 **-0.7**
YOVA S **Sn** 14 35 08.4 **-0.6**
YOVA IAML 14 35 12.0
comp=E,280nm,0.7s
YOVA IAML 14 35 13.0
comp=N,162nm,0.5s
IMRD Marand 0.96 75 Sg **Sb** 14 35 07.6 **-0.4**
HAKT HAKKARI 1.12 215 P **Pb** 14 34 57.2 **-0.6**
HAKT S **Sn** 14 35 15.1 **+0.8**
HAKT IAML 14 35 18.0
comp=E,140nm,0.3s
HAKT IAML 14 35 22.0
comp=N,140nm,0.4s
GEVA Gevas 1.16 262 P **Pg** 14 34 56.4 **-1.6**
GEVA S **Sb** 14 35 14.0 **+0.1**
DYDN Diyadin 1.25 329 P **Pn** 14 35 00.0 **-0.1**
DYDN S **Sb** 14 35 16.2 **-0.2**
DYDN IAML 14 35 21.0
comp=E,122nm,1.0s
DYDN IAML 14 35 30.0
comp=N,187nm,0.6s
ITBZ Tabriz 1.30 100 Pg **Pb** 14 35 00.1 **-0.7**
IAZR Azarshahr 1.40 124 Pg **Pg** 14 35 03.2 **+0.6**
VAYK Vayk 1.41 30 ||*eP* **Pg** 14 35 02.0 **-0.7**
VAYK ||*eS* **Sn** 14 35 22.9 **+1.8**
CUKT Cukurca 1.43 211 P **Pg** 14 35 03.3 **+0.3**
CUKT S **Sg** 14 35 23.3 **+1.8**
CUKT IAML 14 35 33.0
comp=N,225nm,0.8s
CUKT IAML 14 35 33.0
comp=E,181nm,0.7s
IGDI IGDIR 1.43 346 P **Pg** 14 35 03.3 **+0.2**
IGDI S **Sg** 14 35 21.6 **-0.2**
IGDI IAML 14 35 27.0
comp=N,46nm,0.4s
IGDI IAML 14 35 30.0
comp=E,113nm,1.0s
ADCV BITLIS_Adilcev 1.45 284 P **Pb** 14 35 02.7 **-0.6**
ADCV S **Sg** 14 35 22.9 **+0.7**
ADCV IAML 14 35 27.0
comp=N,44nm,0.5s
ADCV IAML 14 35 30.0
comp=E,48nm,0.4s
DORK Agr/Tutak/Do 1.63 304 P **Pb** 14 35 05.4 **-1.1**
DORK S **Sg** 14 35 27.8 **-0.4**
DORK IAML 14 35 37.0
comp=N,65nm,0.8s
DORK IAML 14 35 38.0
comp=E,51nm,0.7s
PERV Siirt/Pervari- 1.65 252 P **Pg** 14 35 06.9 **-0.3**
PERV S **Sg** 14 35 29.8 **+1.1**
PERV IAML 14 35 36.0
comp=N,89nm,0.8s
PERV IAML 14 35 40.0
comp=E,175nm,0.7s
KOTA Agri, Merkez-K 1.67 323 P **Pb** 14 35 07.1 **-0.1**
KOTA S **Sg** 14 35 29.1 **-0.3**
KOTA IAML 14 35 37.0
comp=N,35nm,1.1s
KOTA IAML 14 35 38.0
comp=E,48nm,1.2s
GNI Garni 1.68 6 *eP* **Pg** 14 35 07.6 **-0.3**
GNI *eS* **Sg** 14 35 32.0 **+2.3**
GNI Garni 1.68 6 Pg **Pg** 14 35 08.4 **+0.5**
IHRS Heris 1.99 94 Pn **Pg** 14 35 13.1 **-0.7**
SRTM Siirt_Merkez 2.10 257 P **Pb** 14 35 14.4 **0.0**
SRTM S **Sg** 14 35 43.2 **-0.1**
SRTM IAML 14 35 46.0
comp=N,66nm,0.9s
SRTM IAML 14 36 01.0
comp=E,70nm,0.7s
ISRB Sarab 2.56 104 Pn **Pb** 14 35 21.3 **-1.0**

*BGSI **28** 14:45:42.3±0.8,24°.36S×27°.79E, h40km±15km, ML2.3*
BUL 28 14:44:50.8±1.9**, 26°.31S×29°.21E, h29**km±47km**, MD3.2, Presumed earthquake, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.51**	**291**	*i* P	Pn	14 45 42.7	-0.8
LBTB				*i* S	Sn	14 46 22.6	-1.4
MUSN	**Musina, Limpop**	**4.05**	**9**	*i* P	Pn	14 45 51.1	+0.3
MUSN				*i* S	Sn	14 46 35.0	-2.3
BOSA	**Boshof**	**4.20**	**236**	*i* P	Pn	14 45 52.4	-0.5
LPHEP	**Lephephe**	**4.23**	**313**	*i* P	Pn	14 45 58.6	+5.2
LPHEP				*i* S	Sn	14 46 36.2	-5.7
LPHEP				IAML		14 47 05.4	
	comp=E,10nm,0.7s						
LPHEP	**Lephephe**	**4.23**	**313**	*i* P	Pb	14 46 13.0	+8.4
LPHEP				*i* S	Sn	14 46 36.1	-5.8
LPHEP				IAML		14 46 59.6	
	comp=N,12nm,0.6s						
KDWAN	**Kaudwane**	**5.06**	**304**	*i* P	Pn	14 46 08.1	+3.3
KDWAN				*i* S	Sn	14 46 50.9	-11
KDWAN				IAML		14 47 31.1	
	comp=E,25nm,0.7s						
KDWAN	**Kaudwane**	**5.06**	**304**	*i* P	Pb	14 46 26.8	+8.1
KDWAN				*i* S	Sn	14 46 59.9	-2.5
KDWAN				IAML		14 47 31.1	
	comp=E,25nm,0.6s						
BROLN	**Tlhalogang**	**5.46**	**341**	*i* P	Pb	14 46 25.4	-0.2
BROLN				IAML		14 47 36.3	
	comp=E,30nm,0.6s						
BROLN	**Tlhalogang**	**5.46**	**341**	*i* P	Pb	14 46 30.7	+5.1
BROLN				*i* S	Sn	14 47 05.5	-6.9
BROLN				IAML		14 47 36.3	
	comp=E,30nm,0.6s						
BLWY	**Bulawayo**	**6.17**	**355**	*i* P	Pn	14 46 20.4	+0.3
BLWY				*i* S	Sn	14 47 22.7	-7.0
SOOWA	**Sowa**	**6.35**	**334**	*i* P	Pb	14 46 34.5	-6.1
SOOWA	**Sowa**	**6.35**	**334**	*i* P	Pb	14 46 40.1	-0.5
LKGWB	**Lokgwabe**	**7.56**	**285**	IAML		14 48 31.0	
	comp=N,21nm,0.5s						

RSNC 28 14:44:57.3±0.0**, 10°.35N×74°.08W, h17**km±1km**, M3.0, mb4.1, ML2.9, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGC	**Ariguani, Magd**	**0.52**	**199**	P	Pg	14 45 06.4	-1.2
ARGC				S	Sg	14 45 12.1	-2.5
SMRC	**Santa Marta, M**	**0.82**	**350**	P	Pb	14 45 11.6	-1.5
SMRC				S	Sb	14 45 23.4	-0.5
SJCC	**San Jacinto, C**	**1.17**	**248**	P	Pn	14 45 18.0	-1.0
SJCC				S	Sb	14 45 34.0	-0.1
CRJC	**Cerrejon, Guaj**	**1.35**	**60**	P	Pn	14 45 19.9	-1.6
CRJC				S	Sn	14 45 38.3	-0.8
OCAC	**Ocana**	**2.23**	**160**	P	Pn	14 45 33.2	-0.4
OCAC				S	Sn	14 46 01.7	+0.9
URIC	**Uribia, Colomb**	**2.45**	**57**	P	Pn	14 45 35.2	-1.3
UREC	**San Jos de Ur**	**2.95**	**209**	P	Pn	14 45 42.5	-1.0
PAMC	**Pamplona, Colo**	**3.29**	**155**	P	Pn	14 45 50.6	+2.1
PAMC				S	Sn	14 46 31.1	+3.6
BRJC	**Barrancabermej**	**3.37**	**174**	P	Pn	14 45 50.8	+1.6
APAC	**Apartado, Choc**	**3.47**	**226**	P	Pn	14 45 49.3	-1.2
APAC				S	Sn	14 46 30.0	-1.2
SDV	**Santo Domingo**	**3.70**	**113**	P	Sn	14 45 53.6	-0.3
SDV				S	Sn	14 46 36.9	-0.3
PTBC	**PUERTO BERRIO,**	**3.80**	**186**	P	Pn	14 45 57.4	+2.2
PTBC				S	Sn	14 46 42.2	+2.6
BARC	**Barichara**	**3.84**	**167**	P	Pn	14 45 58.3	+2.4
DBBC	**Dabeiba**	**3.92**	**213**	P	Pn	14 45 59.0	+2.1
DBBC				S	Sn	14 46 44.2	+1.6
HELC	**Santa Helena**	**4.37**	**199**	P	Pn	14 46 03.1	-0.2
HELC				S	Sn	14 46 56.0	+1.9
RUSC	**La Rusia**	**4.54**	**167**	P	Pn	14 46 06.4	+0.7
NORC	**Norcasia**	**4.82**	**189**	P	Pn	14 46 13.0	+3.8
NORC				S	Sb	14 47 12.9	-6.3
CBOC	**Ciudad Bolivar**	**4.85**	**203**	P	Pn	14 46 11.0	+1.3
GUY2C	**Guyana, Caldas**	**5.25**	**194**	P	Pn	14 46 16.8	+1.3
	12nm,0.6s						
CHIC	**Chingaza**	**5.69**	**176**	P	Pn	14 46 23.8	+2.3
	8.0nm,0.5s						
BCIP	**Isla Barro Col**	**5.80**	**259**	P	Pn	14 46 22.9	+0.3
URMC	**La Uribe, Meta**	**7.06**	**182**	P	Pn	14 46 43.8	+3.7

*UPP **28** 14:47:38.1±0.2, 67°.82N×20°.26E, h0km, ML2.6, Confirmed Induced event*
*HEL **28** 14:47:40.0±0.4, 67°.83N×20°.24E, h0km, ML1.0, Suspected explosion*
ISC 28 14:47:38.8±0.9**, 67°.82N**±0°.04×**20°.20E**±0°.03**, h0**km**, n15, σ0°91/26, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**21**	P	**Pg**	**14 47 41.0**	**-0.5**
	baz=200						
KUA				S	**Sg**	**14 47 43.0**	**-0.3**
RATU	**Laukkuluspa**	**0.23**	**271**	P	**Pg**	**14 47 43.2**	**0.0**
RATU				S	**Sg**	**14 47 46.9**	**+0.7**
KOVU	**Salmi**	**0.40**	**358**	P	**Pg**	**14 47 46.0**	**-0.4**
KOVU				S	**Sg**	**14 47 51.4**	**-0.2**
NIKU	**Nikkaluokta**	**0.45**	**276**	P	**Pg**	**14 47 47.0**	**-0.2**
LANU	**Lannavaara**	**0.71**	**71**	S	**Sg**	**14 48 01.0**	**-0.7**
LANU	**Lannavaara**	**0.71**	**71**	PB	**Pn**	**14 47 56.6**	**+0.5**
LANU				SG	**Sg**	**14 48 01.9**	**+0.2**
KIF	**Kilpisjarvi**	**1.21**	**10**	PG	**Pg**	**14 48 02.3**	**+0.4**
	baz=195						
KIF				smax	smax	14 48 17.6	
	comp=Z,1.9nm,0.2s						
KIF				SG	**Sg**	**14 48 17.6**	**+0.1**
HEF	**Hetta**	**1.42**	**64**	PG	**Pn**	**14 48 05.2**	**-0.7**
	baz=243						
HEF				smax	smax	14 48 22.5	
	comp=Z,1.1nm,0.2s						
HEF				SN	**Sn**	**14 48 27.9**	**+2.6**
ERTU	**Ertsjaerv**	**1.49**	**148**	PG	**Pn**	**14 48 07.0**	**+0.2**
ERTU				SG	**Sn**	**14 48 27.4**	**+0.5**
KLF	**Kolari**	**1.56**	**110**	PG	**Pn**	**14 48 07.8**	**+0.1**
KLF				smax	smax	14 48 26.4	
	comp=Z,0.8nm,0.2s						
KLF				SN	**Sn**	**14 48 28.8**	**+0.2**
KTK1	**Kautokeino**	**1.64**	**42**	PG	**Pg**	**14 48 10.3**	**+0.2**
KTK1				SN	**Sg**	**14 48 32.6**	**+1.2**
TOF	**Tornio**	**2.39**	**135**	PB	**Pb**	**14 48 21.4**	**-1.1**
TOF				smax	smax	14 48 50.5	
	comp=Z,0.5nm,0.2s						
TOF				SG	**Sb**	**14 48 53.5**	**+1.0**
RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pb**	**14 48 24.1**	**-1.6**
RNF				SG	**Sb**	**14 48 58.2**	**+0.5**
ARA0	**ARCESS Array S**	**2.59**	**46**	SB	**Sb**	**14 48 57.2**	**-1.1**
KEV	**Kevo**	**3.14**	**49**	SG	**Sb**	**14 49 15.5**	**+1.3**

IDC 28 14:53:40.0±1.1**, 26°.36N×141°.54E, h0**km**, mb3.6**/4**, mbtmp3.5/5, ML2.9/1, MS3.6/2, Error ellipse: s-maj=30.1km s-min=17.1km az=115.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.94**	**38**	Pn	Pn	14 54 00.0	-0.5
	13nm,0.3s,baz=267,slow=24,SNR=6.2						
JCJ				Sn	Sn	14 54 17.2	+2.6
	28nm,0.3s,baz=273,slow=21,SNR=5.3						
MJAR	**Matsushiro Arr**	**10.54**	**345**	Pn	Pn	14 56 06.3	-6.1
	0.1nm,0.3s,baz=162,slow=12,SNR=7.3						
KSRS	**Korea Array**	**15.98**	**317**	Pn	Pn	14 57 24.8	-1.5
	baz=132,slow=12,SNR=2.5						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**46.55**	**189**	P	P	15 02 09.8	+0.2
	2.4nm,1.0s,baz=12,slow=8.6,SNR=9.3						
	2.4nm,1.0s						
ASAR	**Alice Springs**	**50.27**	**189**	P	P	15 02 38.0	-0.3
	0.2nm,0.5s,baz=13,slow=5.4,SNR=5.1						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**50.50**	**310**	P	P	15 02 41.1	+1.2
	0.2nm,0.5s,baz=89,slow=8.2,SNR=4.8						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**53.15**	**315**	P	P	15 02 59.0	-0.5
	0.5nm,0.5s,baz=93,slow=7.8,SNR=2.5						
KDAK	**Kodiak Island**	**55.30**	**36**	LR	LR	15 23 53.0	
	comp=Z,35nm,21.1s,baz=68,slow=33						
NOA	**NORSAR Array B**	**84.08**	**338**	P	P	15 06 11.7	-0.9
	0.4nm,0.7s,baz=39,slow=5.7,SNR=2.4						
	0.4nm,0.7s						
MMAI	**Mount Meron Ar**	**88.28**	**306**	LR	LR	15 47 46.6	
	comp=Z,62nm,21.4s,baz=270,slow=37						

*TAP **28** 15:30:49.0,23°.88N×122°.68E, h25km, ML2.5, D*
*JMA **28** 15:30:48.5±0.2,23°.9N±0°.8×122°.7E±0°.7, h29km, MV2.0/12, NW OFF ISHIGAKIJIMA IS*
ISC 28 15:30:46.5±1.2**, 23°.84N**±0°.04×**122°.70E**±0°.02**, h18**km±7km**, n48, σ0°70/72, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.45**	**309**	P	**Pn**	**15 30 57.6**	**-0.2**
EOS4				S	**Sn**	**15 31 03.7**	**-1.4**
EOS3	**EOS3**	**0.57**	**322**	P	**Pn**	**15 31 00.1**	**+0.6**
EOS3				*eS*	**Sn**	**15 31 08.3**	**-0.1**
JYNG	**Yonaguni jima**	**0.65**	**20**	P	**Pn**	**15 31 00.8**	**-0.2**
JYNG				S	**Sn**	**15 31 08.8**	**-2.0**
YOJ	**Yonaguni jima**	**0.69**	**25**	P	**Pn**	**15 31 01.3**	**-0.1**
YOJ				S	**Sn**	**15 31 09.6**	**-1.9**
YOJ	**Yonaguni jima**	**0.69**	**25**	P	**Pn**	**15 31 01.8**	**+0.4**
YOJ				*eS*	**Sg**	**15 31 09.4**	**+0.2**
EOS2	**EOS2**	**0.72**	**324**	P	**Pn**	**15 31 03.2**	**+1.5**
EOS2				S	**Sn**	**15 31 13.8**	**+1.6**
HATJ	**Hateruma jima**	**1.04**	**78**	P	**Pn**	**15 31 06.5**	**+0.3**
HATJ				S	**Sn**	**15 31 20.0**	**-0.3**
NACB	**Ninganchiao**	**1.06**	**289**	*eP*	**Pg**	**15 31 07.2**	**+0.1**
IRIF	**Iriomote-Funau**	**1.07**	**62**	P	**Pg**	**15 31 07.2**	**0.0**
IRIF				S	**Sn**	**15 31 20.9**	**-0.1**
ESL	**Shilin**	**1.16**	**269**	*eP*	**Pb**	**15 31 07.9**	**-0.1**
ESL				*eS*	**Sg**	**15 31 23.8**	**-0.2**
ETLH	**Xiulin Townshi**	**1.17**	**289**	*eP*	**Pg**	**15 31 09.1**	**0.0**
LXIB	**Xiulin Townshi**	**1.19**	**279**	*eP*	**Pg**	**15 31 09.1**	**-0.4**
NDS	**Dongshan**	**1.20**	**312**	*eP*	**Pg**	**15 31 09.8**	**+0.2**
WARBT	**Fenglin Townsh**	**1.21**	**265**	P	**Pn**	**15 31 08.5**	**0.0**
HGSD	**Ruisui**	**1.22**	**254**	P	**Pn**	**15 31 08.8**	**+0.1**
HGSD				*eS*	**Sn**	**15 31 24.6**	**0.0**
JKRS	**Kuro-shima**	**1.27**	**71**	P	**Pb**	**15 31 10.6**	**+0.7**
JKRS				*eS*	**Sb**	**15 31 26.8**	**+1.0**
LATG	**Datong**	**1.27**	**303**	*eP*	**Pg**	**15 31 11.7**	**+0.5**
EHYH	**Wanrong**	**1.28**	**255**	*i* P	**Pb**	**15 31 10.4**	**+0.3**
EHYH				*i* S	**Sg**	**15 31 27.9**	**-0.2**
EHY	**Hungye**	**1.30**	**256**	*eP*	**Pb**	**15 31 10.6**	**+0.2**
EHY				*eS*	**Sb**	**15 31 27.8**	**+0.9**
NNSB	**Datong**	**1.34**	**296**	*eP*	**Pg**	**15 31 12.3**	**-0.1**
NNS	**Nan Shan**	**1.35**	**297**	*eP*	**Pg**	**15 31 12.4**	**-0.2**
YULB	**Yu-li**	**1.36**	**251**	P	**Pb**	**15 31 11.2**	**+0.2**
YULB				*eS*	**Sb**	**15 31 29.2**	**+0.8**
FUSB	**Fushanzhiwuyua**	**1.37**	**313**	P	**Pg**	**15 31 13.2**	**+0.3**
TWF1	**Yuli**	**1.37**	**250**	*eP*	**Pb**	**15 31 11.4**	**-0.3**
TWF1				S	**Sb**	**15 31 30.0**	**+1.2**
TIPB	**Shuangxi**	**1.38**	**325**	*eP*	**Pg**	**15 31 14.2**	**+1.1**
TIPB				*eS*	**Sg**	**15 31 31.3**	**+0.1**
OWD	**Renai**	**1.40**	**275**	P	**Pb**	**15 31 12.3**	**+0.1**
JIJ	**Ishigaki jima**	**1.42**	**68**	P	**Pb**	**15 31 12.6**	**+0.1**
JIJ				S	**Sb**	**15 31 30.3**	**0.0**
VWDT	**VWDT**	**1.43**	**267**	*eP*	**Pb**	**15 31 12.5**	**0.0**
FULB	**Fuli**	**1.44**	**244**	*eP*	**Pn**	**15 31 11.6**	**0.0**
NWLT	**Wulai**	**1.44**	**311**	*eP*	**Pg**	**15 31 14.4**	**+0.2**
WUSB	**Renai**	**1.45**	**276**	*eP*	**Pb**	**15 31 12.5**	**-0.7**
SXI1	**Grass Mountain**	**1.46**	**329**	*eP*	**Pg**	**15 31 13.7**	**-1.0**
YHNB	**Yeheng**	**1.46**	**305**	*eP*	**Pg**	**15 31 14.1**	**-0.6**
NSK	**Sanguang**	**1.48**	**305**	*eP*	**Pg**	**15 31 14.2**	**-0.8**
NFF	**Wufeng Townshi**	**1.64**	**299**	*eP*	**Pg**	**15 31 17.6**	**-0.6**
WCS	**Beigang Elemen**	**1.65**	**278**	*eP*	**Pg**	**15 31 19.2**	**+1.0**
JISG	**Ishigakijimahi**	**1.65**	**63**	*eP*	**Pb**	**15 31 16.4**	**-0.1**
JISG				*eS*	**Sb**	**15 31 36.6**	**-0.4**
WHP	**Taichung City**	**1.66**	**286**	*eP*	**Pg**	**15 31 18.4**	**-0.1**
ELDTW	**Lidau**	**1.67**	**248**	*eP*	**Pn**	**15 31 15.1**	**+0.1**
ALS	**Alishan**	**1.76**	**260**	*eP*	**Pb**	**15 31 18.3**	**-0.2**
ALS				*eS*	**Sb**	**15 31 39.7**	**-0.8**
CHN5	**Tsauling**	**1.86**	**263**	*eP*	**Pb**	**15 31 20.0**	**-0.1**
STYH	**Taoyuan**	**1.88**	**250**	P	**Pb**	**15 31 19.5**	**-0.9**
STYH				S	**Sb**	**15 31 42.9**	**-0.7**
TPUB	**Ta-pu**	**1.97**	**255**	P	**Pb**	**15 31 21.3**	**-0.6**
TPUB				*eS*	**Sb**	**15 31 46.7**	**+0.6**
WTP	**Ta-pu**	**2.00**	**253**	P	**Pb**	**15 31 22.1**	**-0.3**
WTP				*eS*	**Sb**	**15 31 47.7**	**+0.7**
SGST	**Jiashian**	**2.08**	**249**	*eP*	**Pb**	**15 31 22.4**	**-1.3**
SGST				*eS*	**Sb**	**15 31 49.4**	**+0.1**
CHN1	**Nanshi**	**2.09**	**252**	*eP*	**Pb**	**15 31 24.3**	**+0.4**
CHN1				*eS*	**Sb**	**15 31 51.1**	**+1.5**
TWK	**Hsinying**	**2.10**	**255**	*eP*	**Pb**	**15 31 23.6**	**-0.6**
MASBT	**Mashibuluo**	**2.25**	**238**	*eP*	**Pb**	**15 31 26.4**	**-0.4**

*AFAD **28** 15:39:23.9, 36°.16N×36°.03E, h11km±2km, ML2.7*
*ISK **28** 15:39:24.3, 36°.20N×35°.97E, h10km, ML2.6/19*
ISC 28 15:39:23.9±0.9**, 36°.15N**±0°.03×**36°.01E**±0°.03**, h12**km±7km**, n38, σ0°80/56, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.14**	**144**	P	**Pg**	**15 39 27.6**	**+0.2**
YAYL				S	**Sg**	**15 39 30.0**	**+0.1**
YAYL				IAML		15 39 31.0	
	comp=N,2μm,0.2s						
YAYL				IAML		15 39 31.0	
	comp=E,2μm,0.1s						
ASUZ	**Hatay-Arsuz**	**0.23**	**308**	P	**Pg**	**15 39 28.5**	**-0.2**
ASUZ				S	**Sg**	**15 39 31.2**	**-0.8**
ASUZ				IAML		15 39 32.0	
	comp=E,945nm,0.3s						
ASUZ				IAML		15 39 34.0	
	comp=N,1μm,0.2s						
TAHT	**Tahtakopru-Hat**	**0.27**	**33**	Pg	**Pg**	**15 39 29.2**	**-0.3**
TAHT				Sg	**Sg**	**15 39 34.3**	**+1.1**
RHAN	**Hatay/Reyhanl**	**0.49**	**77**	P	**Pg**	**15 39 33.6**	**0.0**
RHAN				S	**Sg**	**15 39 40.6**	**+0.4**
RHAN				IAML		15 39 41.0	
	comp=N,1μm,0.2s						
RHAN				IAML		15 39 41.0	
	comp=E,587nm,0.3s						
HASA	**Hatay-Hassa-Ha**	**0.71**	**33**	P	**Pg**	**15 39 37.3**	**-0.5**
HASA				S	**Sg**	**15 39 46.9**	**-0.3**
HASA				IAML		15 39 49.0	
	comp=E,271nm,0.4s						
YURE	**YUREGIR**	**0.74**	**336**	P	**Pb**	**15 39 38.7**	**0.0**
YURE				S	**Sb**	**15 39 49.2**	**+0.4**
KUZU	**Kuzuini**	**1.06**	**54**	P	**Pg**	**15 39 43.9**	**-0.5**
KUZU				S	**Sb**	**15 39 58.3**	**+0.1**
KUZU				IAML		15 40 00.0	
	comp=N,313nm,0.4s						
KUZU				IAML		15 40 01.0	
	comp=E,339nm,0.2s						
CAYT	**Sariam**	**1.16**	**332**	P	**Pn**	**15 39 46.1**	**+0.2**
CAYT				S	**Sn**	**15 40 02.1**	**+0.3**
CAYT				IAML		15 40 04.0	
	comp=N,118nm,0.4s						
KAMA	**Osmaniye**	**1.16**	**27**	P	**Pb**	**15 39 45.5**	**-0.5**
KAMA				S	**Sg**	**15 40 00.3**	**-1.2**
KOZT	**Kozan**	**1.33**	**354**	Pn	**Pb**	**15 39 48.9**	**0.0**
KOZT				Sn	**Sg**	**15 40 07.2**	**+0.3**
KARA	**Karaisali**	**1.35**	**326**	Pn	**Pn**	**15 39 48.5**	**-0.1**
KARA				Sn	**Sg**	**15 40 06.6**	**-0.7**
GAZ	**Gaziantep**	**1.41**	**43**	Pn	**Pg**	**15 39 50.6**	**-0.4**
GAZ				Sn	**Sg**	**15 40 09.2**	**-0.1**
GULE	**Gulek**	**1.50**	**319**	P	**Pn**	**15 39 51.2**	**+0.4**
GULE				S	**Sb**	**15 40 10.7**	**-0.3**
KMRS	**Kahramanmaras**	**1.53**	**28**	Pn	**Pb**	**15 39 52.2**	**-0.1**
KIZK	**Mersin**	**1.54**	**283**	P	**Pn**	**15 39 51.0**	**-0.1**
KIZK				S	**Sb**	**15 40 11.7**	**-0.2**
KHMN	**Narli-Kahraman**	**1.55**	**36**	Pn	**Pg**	**15 39 53.2**	**-0.4**
EREN	**Erenkoy**	**1.61**	**248**	Pn	**Pn**	**15 39 53.3**	**+1.1**
SLFK	**Silifke-Mersin**	**1.68**	**279**	Pn	**Pn**	**15 39 54.1**	**+1.0**
SILI	**Silifke-Mersin**	**1.70**	**278**	Pn	**Pn**	**15 39 54.4**	**+1.1**
CMRD	**Camardi-Nigde**	**1.71**	**332**	Pn	**Pn**	**15 39 54.3**	**+0.6**
HWQ	**Hawqa**	**1.87**	**181**	*eP*	**Pn**	**15 39 55.5**	**-0.3**
KEBE	**Keben-Mersin**	**1.88**	**280**	Pn	**Pn**	**15 39 57.2**	**+1.3**
IKL	**Isikli**	**1.88**	**273**	Pn	**Pn**	**15 39 57.2**	**+1.3**
TISA	**Tisan-Mersin**	**1.88**	**271**	Pn	**Pn**	**15 39 57.1**	**+1.2**
YESI	**Yesilovacik-Me**	**1.91**	**272**	Pn	**Pn**	**15 39 57.4**	**+1.1**
FKH	**Fakeheh**	**1.93**	**170**	*eP*	**Pn**	**15 39 56.8**	**+0.1**
KERG	**Konya-Eregli**	**1.97**	**310**	P	**Pb**	**15 39 59.1**	**-0.6**
KERG				S	**Sb**	**15 40 23.2**	**-1.1**
BECE	**Buyukeceli-Mer**	**1.98**	**271**	Pn	**Pn**	**15 39 58.1**	**+0.9**
GULN	**MERSIN_Gulnar**	**1.99**	**272**	P	**Pn**	**15 39 56.5**	**-0.9**
GULN				S	**Sn**	**15 40 21.0**	**-1.3**
GULN				IAML		15 40 22.0	
	comp=N,80nm,0.4s						
GULN				IAML		15 40 22.0	
	comp=E,67nm,0.6s						
AKK1	**Akkuyu-Mersin**	**2.00**	**271**	Pn	**Pn**	**15 39 58.7**	**+1.3**
OREN	**Orenkoy-Mersin**	**2.06**	**272**	Pn	**Pn**	**15 39 59.6**	**+1.2**
TEVE	**Tevekalti-Mers**	**2.09**	**279**	Pn	**Pn**	**15 40 00.1**	**+1.3**
BHL	**Bhannes**	**2.26**	**187**	*eP*	**Pn**	**15 40 01.0**	**-0.2**
SARI	**SarD1z-Kayseri**	**2.28**	**8**	Pn	**Pn**	**15 40 02.5**	**+1.0**
ZAHL	**Zahle**	**2.29**	**182**	*eP*	**Pn**	**15 40 01.5**	**+0.3**
RCY	**Rachaya**	**2.65**	**183**	*eP*	**Pn**	**15 40 06.8**	**+0.1**
KKBE	**Karaman, Kazim**	**2.68**	**294**	P	**Pn**	**15 40 08.6**	**+1.5**
KKBE				S	**Sn**	**15 40 41.7**	**+2.1**
GAZI	**Gazipasa**	**2.98**	**273**	P	**Pn**	**15 40 11.8**	**+0.7**
GAZI				S	**Sn**	**15 40 46.6**	**-0.3**
GAZI				IAML		15 41 02.0	
	comp=N,30nm,1.0s						
GAZI				IAML		15 41 08.0	
	comp=E,33nm,1.8s						

*ROM **28** 15:40:55.5±0.2, 42°.152N±0°.008×15°.599E±0°.007, h5km, Md2.7/5, Error ellipse: s-maj=0.9km s-min=0.3km az=28.0*
ISC 28 15:40:55.8±1.4**, 42°.13N**±0°.03×**15°.57E**±0°.04**, h2**km±14km**, n12, σ0°96/21, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.40**	**161**	P	**Pb**	**15 41 04.9**	**-0.8**
SGRT				S	**Sb**	**15 41 11.5**	**-0.8**
MSAG	**Monte S. Angel**	**0.49**	**149**	P	**Pb**	**15 41 06.5**	**-0.7**
MSAG				S	**Sb**	**15 41 14.0**	**-0.9**
MSAG				END			
MELA	**Melanico ??? S**	**0.54**	**218**	P	**Pb**	**15 41 07.2**	**-0.9**
CIGN	**Sant'Elia a Pi**	**0.69**	**226**	P	**

GAZI				S	Sn	15 44 51.7	-2.6	
GAZI	**Gazipasa**	**1.08**	**77**	P	Pn	15 44 38.8	-1.3	
GAZI				S	Sn	15 44 52.0	-2.2	
KORT	**Korkueli**	**1.13**	**332**	P	Pn	15 44 41.6	+0.6	
KORT				S	Sn	15 44 59.6	+4.0	
KORT	**Korkueli**	**1.13**	**332**	P	Pn	15 44 41.2	+0.3	
ELL	**Elmali**	**1.16**	**310**	Pn	Pn	15 44 41.6	+0.2	
ELL				Sn	Sn	15 44 57.6	+1.2	
ELL	**Elmali**	**1.16**	**310**	P	Pn	15 44 41.9	+0.5	
ELL				S	Sn	15 44 57.5	+1.2	
KSL	**Kastellorizon**	**1.17**	**277**	P	Pn	15 44 41.4	0.0	
KSL	**Kastellorizon**	**1.17**	**277**	P	Pn	15 44 41.3	0.0	
KSL				S	Sn	15 44 56.5	+0.2	
BUCA	**Burdur, Bucak-**	**1.37**	**345**	P	Pn	15 44 43.8	-0.4	
BUCA				S	Sn	15 45 03.4	+2.1	
AKMS	**Akamas**	**1.46**	**132**	P	Pn	15 44 44.3	-1.0	
AKMS				S	Sn	15 45 07.4	+4.0	
AKMS				AML	AML	15 45 13.1		
	5.4nm,0.5s							
AKMS				AML	AML	15 45 15.4		
	4.3nm,0.5s							
BCK	**Bucak**	**1.49**	**347**	Pn	Pn	15 44 45.9	+0.1	
HDMB	**Hadim**	**1.52**	**51**	Pn	Pn	15 44 46.3	-0.1	
HDMB				Sn	Sn	15 45 06.7	+1.5	
SEYD	**Seydisehir-KON**	**1.54**	**25**	Pn	Pn	15 44 47.3	+0.7	
ALFC	**Alefka**	**1.55**	**123**	P	Pn	15 44 45.0	-1.5	
ALFC				S	Sn	15 45 08.0	+2.4	
ALFC				AML	AML	15 45 13.4		
	3.7nm,0.2s							
ALFC				AML	AML	15 45 19.3		
	3.7nm,0.4s							
SEDI	**Konya, Seydise**	**1.56**	**22**	P	Pn	15 44 47.0	+0.2	
SEDI				S	Sn	15 45 06.7	+0.7	
BOZY	**Bozyazi-Mersin**	**1.59**	**86**	Pn	Pn	15 44 47.7	+0.6	
CAME	**Cameli-Denizli**	**1.67**	**305**	Pn	Pn	15 44 49.3	+1.1	
FETY	**Fethiye**	**1.68**	**292**	P	Pn	15 44 39.2	-9.1	
FETY				S	Sn	15 44 59.8	-8.9	
TEKE	**Tekeli-Mersin**	**1.71**	**85**	Pn	Pn	15 44 48.5	-0.1	
NATA	**Nata**	**1.77**	**133**	P	Pn	15 44 51.8	+2.3	
NATA				S	Sn	15 45 15.9	+5.0	
NATA				AML	AML	15 45 27.2		
	6.9nm,0.8s							
NATA				AML	AML	15 45 29.0		
	9.4nm,0.7s							
TROD	**Troodos**	**1.84**	**124**	P	Pn	15 44 49.8	-0.9	
TROD				S	Sn	15 45 17.3	+4.2	
TROD				AML	AML	15 45 35.3		
	2.2nm,0.8s							
TROD				AML	AML	15 45 36.1		
	2.7nm,0.9s							
ISP	**Isparta**	**1.85**	**348**	Pn	Pn	15 44 51.9	+1.1	
ISP	**Isparta**	**1.85**	**348**	P	Pn	15 44 52.2	+1.4	
ISP				S	Sn	15 45 17.5	+4.4	
XYLS	**Xyliatos**	**1.93**	**120**	P	Pn	15 44 50.1	-1.6	
XYLS				S	Sn	15 45 12.4	-2.6	
XYLS				AML	AML	15 45 23.8		
	2.3nm,0.4s							
XYLS				AML	AML	15 45 30.4		
	1.8nm,0.4s							
YORU	**Yoruktepe-Mers**	**1.94**	**85**	Pn	Pn	15 44 52.2	+0.3	
KKBE	**Karaman, Kazim**	**1.97**	**51**	P	Pn	15 44 54.2	+1.9	
KKBE				S	Sn	15 45 19.0	+3.1	
OREN	**Orenkoy-Mersin**	**1.99**	**84**	Pn	Pn	15 44 53.3	+0.8	
APMY	**Acipayam-Deniz**	**2.01**	**317**	Pn	Pn	15 44 54.5	+1.7	
TEVE	**Tevekalti-Mers**	**2.01**	**77**	Pn	Pn	15 44 53.2	+0.4	
APOL	**The Sanctuary**	**2.02**	**131**	Pn	Pn	15 44 56.6	+3.8	
APOL				S	Sn	15 45 22.4	+5.5	
APOL				AML	AML	15 45 39.2		
	1.7nm,1.1s							
APOL				AML	AML	15 45 42.7		
	2.0nm,0.8s							
AKK1	**Akkuyu-Mersin**	**2.05**	**85**	Pn	Pn	15 44 54.8	+1.5	
GULN	**MERSIN_Gulnar**	**2.06**	**84**	P	Pn	15 44 52.7	-0.7	
GULN				S	Sn	15 45 17.9	0.0	
AKK2	**Akkuyu-Mersin**	**2.06**	**86**	Pn	Pn	15 44 54.2	+0.8	
BASM	**Basmaki-Afyon**	**2.06**	**338**	Pn	Pn	15 44 54.7	+1.2	
BECE	**Buyukeceli-Mer**	**2.07**	**85**	Pn	Pn	15 44 54.1	+0.5	
DALY	**Dalyan (Mula)**	**2.07**	**294**	Pn	Pn	15 44 54.1	+0.6	
ATHAL	**Athalassa**	**2.13**	**113**	P	Pn	15 44 53.4	-1.0	
ATHAL				S	Sn	15 45 20.8	+1.2	
ATHAL				AML	AML	15 45 42.0		
	4.2nm,0.9s							
ATHAL				AML	AML	15 45 43.1		
	4.2nm,1.0s							
YESI	**Yesilovacik-Me**	**2.14**	**84**	Pn	Pn	15 44 54.6	+0.1	
KRMN	**Karaman**	**2.15**	**57**	Pn	Pn	15 44 55.8	+1.0	
CSS	**Mathiatis**	**2.16**	**118**	P	Pn	15 44 53.3	-1.5	
CSS	**Mathiatis**	**2.16**	**118**	P	Pn	15 44 53.3	-1.5	
CSS				S	Sn	15 45 20.1	-0.3	
DOGA	**KONYA_Doganhis**	**2.16**	**14**	P	Pn	15 44 56.8	+1.8	
DOGA				S	Sn	15 45 21.4	+0.7	
TISA	**Tisan-Mersin**	**2.16**	**85**	Pn	Pn	15 44 55.3	+0.4	
IKL	**Isikli**	**2.17**	**83**	Pn	Pn	15 44 55.7	+0.7	
KARG	**Kargicak-Mersi**	**2.19**	**84**	Pn	Pn	15 44 55.1	+1.1	
ASGA	**Asgata**	**2.19**	**123**	P	Pn	15 44 55.9	+0.6	
ASGA				S	Sn	15 45 26.7	+5.4	
ASGA				AML	AML	15 45 37.6		
	1.7nm,0.6s							
ASGA				AML	AML	15 45 39.2		
	1.6nm,0.7s							
KONT	**Konya--Tatoy**	**2.21**	**29**	Pn	Pn	15 44 56.9	+1.3	
KONT	**Konya--Tatoy**	**2.21**	**29**	P	Pn	15 44 57.0	+1.4	
KEBE	**Keben-Mersin**	**2.23**	**78**	Pn	Pn	15 44 56.8	+1.0	
ARG	**Arkhangelos**	**2.35**	**276**	Pn	Pn	15 44 57.4	+0.1	
ARG	**Arkhangelos**	**2.35**	**276**	P	Pn	15 44 57.5	+0.1	
ARG				S	Sn	15 45 25.1	+0.1	
ARG	**Arkhangelos**	**2.35**	**276**	P	Pn	15 44 57.5	+0.1	
ARG				S	Sn	15 45 25.0	-0.1	
MVOU	**Mavrovouni**	**2.35**	**114**	P	Pn	15 44 55.7	-1.7	
MVOU				S	Sn	15 45 23.1	-2.1	
MVOU				AML	AML	15 45 37.9		
	2.1nm,0.8s							
MVOU				AML	AML	15 45 38.6		
	1.6nm,0.4s							
SILI	**Silifke-Mersin**	**2.38**	**80**	Pn	Pn	15 44 58.8	+1.0	
SLFK	**Silifke-Mersin**	**2.40**	**80**	Pn	Pn	15 44 59.0	+0.9	
SDAG	**Sultandagi-AFY**	**2.43**	**358**	Pn	Pn	15 45 00.0	+1.4	
LADK	**Ladik-KONYA**	**2.44**	**26**	Pn	Pn	15 44 59.9	+1.1	
YER	**Yerkesik**	**2.47**	**298**	Pn	Pn	15 45 00.2	+1.1	
YER	**Yerkesik**	**2.47**	**298**	P	Pn	15 44 59.9	+0.8	
YER				S	Sn	15 45 29.0	+0.9	
OSC1	**CSNet OBS 1**	**2.51**	**175**	P	Pn	15 45 01.9	+1.4	
OSC1				S	Sn	15 45 33.7	+4.7	
SHUT	**Suhut-Afyon**	**2.57**	**352**	Pn	Pn	15 45 01.9	+1.4	
KIZK	**Mersin**	**2.57**	**79**	P	Pn	15 45 02.6	+2.1	
KHL	**Karahalli**	**2.60**	**333**	Pn	Pn	15 45 02.1	+1.2	
EREN	**Erenkoy**	**2.61**	**100**	P	Pn	15 45 01.6	+0.7	
PARAL	**Paralimni**	**2.67**	**111**	P	Pn	15 45 04.4	+2.6	
PARAL				S	Sn	15 45 41.8	+8.9	
PARAL				AML	AML	15 45 51.6		
	2.0nm,1.0s							
PARAL				AML	AML	15 45 52.6		
	2.2nm,0.9s							
DATC	**Datca-Mugla**	**2.81**	**286**	Pn	Pn	15 45 04.5	+0.8	
YESY	**Yesilyurt**	**2.81**	**50**	Pn	Pn	15 45 05.2	+1.3	
DAT	**Datca**	**2.87**	**286**	Pn	Pn	15 45 05.6	+1.0	
KERG	**Konya-Eregli**	**2.87**	**60**	P	Pn	15 45 06.1	+1.5	
MLSB	**Milas**	**2.90**	**297**	Pn	Pn	15 45 06.3	+1.3	
NAZL	**Nazilli-Aydin**	**2.93**	**313**	Pn	Pn	15 45 05.9	+0.6	
KIZT	**Kizilcal**	**2.95**	**13**	Pn	Pn	15 45 06.7	+1.0	
CHBY	**Cihanbeyli**	**2.97**	**30**	Pn	Pn	15 45 07.8	+1.8	
OSC2	**CSNet OBS 4**	**3.10**	**160**	P	Pn	15 45 11.4	+3.7	
OSC2				S	Sn	15 45 47.2	+3.6	
ALT	**Altintas**	**3.13**	**347**	Pn	Pn	15 45 09.7	+1.6	
KULA	**Kula-Manisa**	**3.13**	**324**	Pn	Pn	15 45 08.7	+0.6	
AYDB	**Zeytinkoy-Aydi**	**3.16**	**309**	Pn	Pn	15 45 09.1	+0.5	
BODT	**Bodrum**	**3.16**	**291**	Pn	Pn	15 45 10.1	+1.6	
BODT	**Bodrum**	**3.16**	**291**	P	Pn	15 45 10.3	+1.7	
BODT				S	Sn	15 45 45.5	+0.5	
KARP	**Karpathos**	**3.17**	**263**	P	Pn	15 45 09.1	+0.4	
ODEM	**Odemis-Izmir**	**3.26**	**315**	Pn	Pn	15 45 11.5	+1.5	
GEDZ	**Gediz**	**3.29**	**338**	Pn	Pn	15 45 11.5	+1.2	
SHAP	**Saphane-Kutahy**	**3.33**	**335**	Pn	Pn	15 45 12.5	+1.6	
CIFT	**Ciftceler, Eski**	**3.35**	**1**	Pn	Pn	15 45 12.1	+1.0	
SVRH	**Sivrihisar-ESK**	**3.46**	**7**	Pn	Pn	15 45 13.5	+0.8	
SIMA	**Simav-Kutahya**	**3.47**	**333**	Pn	Pn	15 45 13.4	+0.6	
SMAA	**Simav-Kutahya**	**3.48**	**333**	Pn	Pn	15 45 14.7	+1.7	
SMG	**Samos**	**3.75**	**298**	P	Pn	15 45 16.5	-0.1	
BLCB	**Balcova**	**3.96**	**308**	P	Pn	15 45 19.6	+0.2	
BRTR	**Keskin Array B**	**4.25**	**28**	P	Pn	15 45 23.9	+0.3	
	11nm,0.4s,baz=204,slow=15,SNR=93							
BRTR				S	Sn	15 46 13.1	+1.1	
	2.9nm,0.5s,baz=202,slow=19,SNR=3.7							
BRTR				LR	LR	15 47 26.0		
	comp=Z,41nm,19.6s,baz=138,slow=43							
NPS	**Neapolis**	**4.46**	**262**	P	Pn	15 45 26.5	+0.2	
THERA	**Ancient Thera,**	**4.49**	**276**	P	Pn	15 45 27.0	+0.2	
HNTI	**Hanita**	**4.50**	**129**	P	Pn	15 45 27.1	+0.1	
HNTI				S	Sn	15 46 18.0	0.0	
THR9	**Santorini-Faro**	**4.59**	**276**	P	Pn	15 45 28.0	-0.1	
MMC7	**Mount Meron ar**	**4.68**	**128**	P	Pn	15 45 29.8	+0.3	
MMAI	**Mount Meron Ar**	**4.69**	**128**	P	Pn	15 45 29.8	+0.2	
	9.2nm,0.2s,baz=309,slow=14,SNR=74							
MMAI				S	Sn	15 46 18.0	-4.8	
	12nm,0.4s,baz=318,slow=28,SNR=4.6							
MMA0B	**Mount Meron ar**	**4.70**	**128**	P	Pn	15 45 29.8	+0.2	
MMA0B				S	Sn	15 46 22.7	-0.1	
OFRI	**`Ofer**	**4.71**	**135**	P	Pn	15 45 29.8	0.0	
OFRI				S	Sn	15 46 22.8	-0.4	
GEM	**Giv'at Ha'Em**	**4.74**	**125**	P	Pn	15 45 30.3	+0.1	
GEM				S	Sn	15 46 23.9	+0.1	
BLGI	**Bet Lehem HaGe**	**4.75**	**132**	P	Pn	15 45 30.3	-0.1	
BLGI				S	Sn	15 46 24.1	0.0	
NATI	**Neve Ativ**	**4.76**	**124**	P	Pn	15 45 30.9	+0.5	
NATI				S	Sn	15 46 24.9	+0.6	
KSHT	**Keshet**	**4.98**	**126**	P	Pn	15 45 33.7	+0.2	
KSHT				S	Sn	15 46 30.0	+0.2	
SLTI	**Sal'it**	**5.03**	**137**	P	Pn	15 45 34.1	0.0	
SLTI				S	Sn	15 46 30.6	-0.3	
IDI	**Anoyia**	**5.04**	**264**	P	Pn	15 45 33.8	-0.5	
MMLI	**Mount Malkishu**	**5.10**	**133**	P	Pn	15 45 35.2	+0.1	
MMLI				S	Sn	15 46 32.6	-0.1	
HMDT	**Nahal Hemdat**	**5.29**	**134**	P	Pn	15 45 37.8	0.0	
HMDT				S	Sn	15 46 37.3	-0.1	
UJAP	**Al Uja**	**5.48**	**136**	P	Pn	15 45 40.3	+0.1	
UJAP				S	Sn	15 46 40.6	-1.3	
AMAZ	**Amatzia**	**5.52**	**143**	P	Pn	15 45 40.8	-0.1	
AMAZ				S	Sn	15 46 42.1	-0.9	
DSI	**Dead Sea**	**5.73**	**139**	P	Pn	15 45 43.6	-0.1	
DSI				S	Sn	15 46 47.4	-0.7	
YTIR	**Yattir**	**5.76**	**142**	P	Pn	15 45 44.3	+0.2	
YTIR				S	Sn	15 46 48.5	-0.4	
KZIT	**Kziot**	**5.82**	**150**	P	Pn	15 45 44.9	-0.1	
KZIT				S	Sn	15 46 50.0	-0.4	
MSBI	**Mazada**	**5.92**	**141**	P	Pn	15 45 46.1	-0.2	
MSBI				S	Sn	15 46 52.5	-0.2	
GHAJ	**Ghor Haditha**	**6.03**	**140**	P	Pn	15 45 47.7	-0.2	
GHAJ				S	Sn	15 46 55.2	-0.4	
ASF	**Jabal al Asfar**	**6.20**	**126**	P	Pn	15 45 50.3	0.0	
	2.5nm,0.3s,baz=316,slow=23,SNR=8.8							
ASF				S	Sn	15 47 05.0	+5.2	
	4.4nm,0.3s,baz=154,slow=23,SNR=1.3							
RMNI	**Mount Ramon**	**6.24**	**149**	P	Pn	15 45 50.8	0.0	
RMNI				S	Sn	15 47 00.8	0.0	
IDAN	**Idan**	**6.27**	**144**	P	Pn	15 45 51.0	-0.1	
IDAN				S	Sn	15 47 01.1	-0.3	
ZFRI	**Zfri**	**6.46**	**146**	P	Pn	15 45 53.5	-0.2	
ZFRI				S	Sn	15 47 05.4	-0.7	
PRNI	**Paran**	**6.56**	**148**	P	Pn	15 45 55.1	0.0	
PRNI				S	Sn	15 47 08.1	-0.4	
KRMI	**Paran Flat**	**6.65**	**151**	P	Pn	15 45 55.8	-0.5	
KRMI				S	Sn	15 47 10.4	-0.3	
HRFI	**Mount Harif**	**6.84**	**149**	P	Pn	15 45 59.2	+0.1	
HRFI				S	Sn	15 47 15.5	-0.1	
RYAN	**Fayoum**	**6.93**	**185**	P	Pn	15 45 58.6	-1.6	
EIL	**Elat**	**7.13**	**151**	P	Pn	15 46 02.7	-0.3	
	75nm,0.6s,baz=342,slow=11,SNR=52							
EIL				S	Sn	15 47 17.6	-5.1	
	17nm,0.4s,baz=219,slow=14,SNR=5.9							
EIL	**Elat**	**7.13**	**151**	P	Pn	15 46 02.5	-0.5	
EIL				S	Sn	15 47 22.3	-0.4	
NBNS	**Bani Suef**	**7.37**	**178**	P	Pn	15 46 05.5	-0.7	
MLR	**Muntele Rosu**	**10.22**	**340**	P	Pn	15 46 45.8	+0.5	
	1.2nm,0.4s,baz=161,slow=5.3,SNR=1.9							
MLR				LR	LR	15 51 11.0		
	comp=Z,29nm,20.7s,baz=164,slow=40							
VAE	**Valguarnera**	**13.40**	**281**	P	Pn	15 47 29.2	+0.6	
	7.8nm,0.5s,baz=223,slow=23,SNR=1.8							
AKASG	**Malin Array Be**	**14.74**	**356**	P	Pn	15 47 47.0	+0.7	
	0.5nm,0.5s,baz=180,slow=9.1,SNR=5.4							
MODS	**Modra-Piesok**	**15.98**	**325**	*e*PN	Pn	15 48 03.0	+0.7	
VRAC	**Vranov**	**16.96**	**326**	LR	LR	15 55 21.1		
	comp=Z,20nm,19.0s,baz=133,slow=39							
GERES	**GERESS Array B**	**18.05**	**321**	P	Pn	15 48 28.2	+0.1	
	0.2nm,0.3s,baz=94,slow=11,SNR=5.0							
DAVOX	**Davos/Dischmat**	**19.10**	**311**	P	P	15 48 39.8	+0.2	
	2.4nm,0.5s,baz=102,slow=12,SNR=3.9							
DAVOX				LR	LR	15 57 08.3		
	comp=Z,57nm,18.8s,baz=74,slow=40							
BELG	**Belogornoye**	**20.17**	**31**	P	P	15 48 50.8	0.0	
	5.3nm,0.6s,baz=279,slow=3.3,SNR=4.6							
	5.3nm,0.6s							
FINES	**FINESS Array B**	**25.65**	**355**	P	P	15 49 44.3	-1.1	
	1.2nm,0.4s,baz=161,slow=11,SNR=22							
	1.2nm,0.4s							
HFS	**Hagfors**	**26.60**	**341**	P	P	15 49 53.4	-0.6	
	0.7nm,0.4s,baz=155,slow=11,SNR=9.4							
	0.7nm,0.4s							
ESDC	**Sonseca Array**	**27.76**	**288**	P	P	15 50 03.7	-1.0	
	0.5nm,0.7s,baz=87,slow=12,SNR=2.0							
	0.5nm,0.7s							
NOA	**NORSAR Array B**	**28.04**	**339**	P	P	15 50 06.3	-0.7	
	0.4nm,0.6s,baz=140,slow=9.8,SNR=1.4							
	0.4nm,0.6s							
BVAR	**Borovoye Array**	**32.32**	**46**	P	P	15 50 44.9	+0.1	
	0.6nm,0.7s,baz=250,slow=7.3,SNR=2.5							
	0.6nm,0.7s							
ARCES	**ARCESS Array B**	**33.72**	**357**	P	P	15 50 55.7	-1.1	
	1.3nm,0.5s,baz=168,slow=7.7,SNR=9.6							
	1.3nm,0.5s							
TORD	**Torodi Ar. Bea**	**34.82**	**237**	P	P	15 51 06.3	-0.5	
	0.8nm,0.8s,baz=30,slow=5.7,SNR=4.3							
	0.8nm,0.8s							
KURBB	**Kurchatov Arra**	**36.87**	**52**	P	P	15 51 24.6	+0.5	
	1.4nm,0.6s,baz=272,slow=6.9,SNR=18							
KURBB				PcP	PcP	15 53 44.9	+0.2	
	0.6nm,0.7s,baz=271,slow=3.4,SNR=4.5							
MKAR	**Makanchi Array**	**39.31**	**58**	P	P	15 51 45.2	+0.5	
	0.4nm,0.4s,baz=271,slow=8.7,SNR=14							
MKAR				PcP	PcP	15 53 52.8	+0.4	
	0.3nm,0.7s,baz=267,slow=2.5,SNR=2.7							
	0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**40.96**	**47**	P	P	15 51 57.9	-0.3	
	1.9nm,0.5s,baz=258,slow=9.2,SNR=9.4							
	1.9nm,0.5s							
SPITS	**Spitsbergen Ar**	**42.74**	**356**	P	P	15 52 12.1	-0.3	
	2.8nm,0.8s,baz=137,slow=11,SNR=7.0							
	2.8nm,0.8s							
SONM	**Songino Array**	**55.22**	**53**	P	P	15 53 48.7	+0.2	
	0.5nm,0.5s,baz=281,slow=8.3,SNR=3.5							
SONM				LR	LR	16 20 22.4		
	comp=Z,15nm,21.4s,baz=34,slow=39							
	0.5nm,0.5s							
LZDM	**Lanzhou Array**	**57.45**	**67**	P	P	15 54 05.2	+0.4	
	0.5nm,0.3s,baz=282,slow=8.7,SNR=1.7							
	0.5nm,0.3s							
CMAR	**Chiang Mai Arr**	**61.75**	**87**	P	P	15 54 34.1	0.0	
	0.6nm,0.8s,baz=294,slow=8.1,SNR=7.0							
	0.6nm,0.8s							
KSRS	**Korea Array**	**73.93**	**55**	P	P	15 55 49.8	-0.7	
	0.8nm,0.7s,baz=294,slow=6.3,SNR=2.3							
	0.8nm,0.7s							
ILAR	**Eielson Array**	**79.54**	**359**	P	P	15 56 21.6	0.0	
	0.2nm,0.6s,baz=337,slow=5.5,SNR=2.1							
	0.2nm,0.6s							
ULM	**Lac du Bonnet**	**82.17**	**329**	P	P	15 56 35.0	-0.9	
	1.0nm,0.6s,baz=225,slow=7.3,SNR=1.9							
	1.0nm,0.6s							

*IDC **28** 15:46:04.9±1.0,6°.23S×127°.62E,h392km±12km, mb3.0/7, mbtmp3.9/12, Error ellipse: s-maj=16.5km s-min=9.4km az=90.0*
*DJA **28** 15:46:05.0±0.4,6°.S±4°×12°.8E±°, h414km±7km, M4.2/19, mb4.2/11, MLv4.2/19*
ISC 28 15:46:05.4±0.7,6°.27S±0°.06×127°.57E±0°.08, h408km, n25, σ1§37/32, mb3.4/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**2.65**	**14**	P	P	15 47 07.5	+1.0
BNDI	**Bandanaira**	**2.91**	**53**	P	P	15 47 09.1	+0.6
KRAI	**Karang Ratu**	**3.05**	**16**	P	P	15 47 09.8	+0.1
NLAI	**Namlea**	**3.05**	**351**	P	P	15 47 11.0	+1.4
MSAI	**Masohi**	**3.21**	**25**	P	P	15 47 12.2	+1.3
SAUI	**Saumlaki**	**4.08**	**115**	P	P	15 47 17.8	-0.8

SANI	**Sanana**	**4.48**	**339**	P	P	15 47 21.8	-0.7	
SOEI	**Soe**	**4.76**	**223**	P	P	15 47 22.6	-2.7	
SOEI				S	S	15 48 30.0	-0.6	
BATI	**Baumata**	**5.49**	**224**	P	P	15 47 33.1	+0.4	
	33nm,0.4s,baz=287,slow=1.8,SNR=25							
BATI				S	S	15 48 42.9	-1.4	
	35nm,0.4s,baz=134,slow=5.4,SNR=13							
BATI	**Baumata**	**5.49**	**224**	P	P	15 47 32.0	-0.8	
	0.3nm87nm,0.9s							
BATI				S	S	15 48 43.1	-1.2	
	0.3nm87nm,0.9s							
EDFI	**Ende, Flores**	**6.32**	**247**	P	P	15 47 40.6	-1.1	
EDFI				S	S	15 48 59.1	-1.6	
SIJI	**Sorong**	**6.52**	**35**	P	P	15 47 43.4	-1.1	
	12nm,0.3s,baz=277,slow=23,SNR=25							
SIJI				S	S	15 49 00.6	-3.9	
	8.5nm,0.2s,baz=142,slow=22,SNR=11							
SIJI	**Sorong**	**6.52**	**35**	P	P	15 47 44.3	-0.2	
	0.1nm14nm,0.6s							
SWI	**Sorong**	**6.52**	**35**	P	P	15 47 44.6	+0.1	
	0.1nm32nm,0.7s							
KMPI	**Kaimana, Papua**	**6.64**	**67**	P	P	15 47 45.2	-0.7	
	94nm,0.9s							
FITZ	**Fitzroy Crossi**	**11.90**	**189**	P	P	15 48 44.5	+0.6	
	3.3nm,0.8s,baz=28,slow=7.7,SNR=6.6							
WRA	**Warramunga Arr**	**15.10**	**155**	P	P	15 49 19.7	+0.9	
	5.9nm,0.5s,baz=338,slow=12,SNR=183							
WRA				S	S	15 51 57.2	-1.6	
	2.1nm,0.7s,baz=330,slow=20,SNR=8.4							
ASAR	**Alice Springs**	**18.34**	**161**	P	P	15 49 54.3	+1.0	
	1.0nm,0.4s,baz=351,slow=11,SNR=69							
ASAR				S	S	15 53 03.2	+2.1	
	1.8nm,0.7s,baz=347,slow=21,SNR=8.8							
CMAR	**Chiang Mai Arr**	**37.43**	**312**	P	P	15 52 43.8	+1.7	
	0.5nm,0.6s,baz=141,slow=6.9,SNR=7.4							
	0.5nm,0.6s							
KSRS	**Korea Array**	**43.50**	**0**	P	P	15 53 31.3	+0.6	
	0.5nm,0.5s,baz=176,slow=6.2,SNR=2.1							
	0.5nm,0.5s							
MJAR	**Matsushiro Arr**	**43.74**	**12**	P	P	15 53 31.7	-1.0	
	1.1nm,0.5s,baz=193,slow=9.3,SNR=4.9							
	1.1nm,0.5s							
USRK	**Ussuriysk Ar.**	**50.40**	**4**	P	P	15 54 23.6	+0.4	
	1.1nm,0.5s,baz=182,slow=6.7,SNR=1.7							
	1.1nm,0.5s							
PETK	**Petropavlovsk-**	**64.42**	**20**	P	P	15 56 01.0	+1.3	
	1.1nm,0.5s,baz=148,slow=4.0,SNR=7.8							
	1.1nm,0.5s							
MKAR	**Makanchi Array**	**66.31**	**328**	P	P	15 56 11.9	+0.1	
	0.4nm,0.5s,baz=115,slow=8.4,SNR=8.0							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**70.64**	**329**	P	P	15 56 38.4	+0.3	
	0.3nm,0.4s,baz=134,slow=4.9,SNR=2.9							
	0.3nm,0.4s							

*IDC **28** 16:12:45.5±7.7,30°.64S×178°.91W,h0km, mb3.3/2, mbtmp3.3/2, MS3.1/1, Error ellipse: s-maj=316.8km s-min=61.3km az=156.0*
*WEL **28** 16:13:29.4±1.0,32°.S±20°×18°.0W±4°.6, h361km±27km, M3.9/14, mB4.4/13, ML4.2/8, MLv4.6/14, Mw(mB)3.5/13, Error ellipse: s-maj=64.6km s-min=12.9km az=110.8*
ISC 28 16:13:26.6±2.0,31°.6S±0°.1×179°.8W±0°.3, h350km, n42, σ1§34/52, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**6.40**	**193**	P	Pn	16 15 02.5	+0.6
WMGZ				S	S	16 16 21.4	+2.1
HAZ	**Te Kaha**	**6.48**	**197**	P	Pn	16 15 02.8	0.0

*TAP **28** 16:33:08.2,24.51N×122.84E,h94km,ML2.6,C*
*JMA **28** 16:33:08.3±0.2,24.2°N±0.2°×122.8°E±0.5,h92km±1km, MV1.8/11, NW OFF ISHIGAKIJIMA IS*
ISC 28 16:33:08.6±1.5,24.48N±0.05°×122.83E±0.03,h91km±9km, n54,σ0s93/99,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.11**	**104**	*eP*	**Pn**	**16 33 21.4**	**0.0**
JYNG				*eS*	**Sn**	**16 33 31.2**	**+0.3**
YOJ	**Yonaguni jima**	**0.17**	**95**	*eP*	**Pn**	**16 33 21.6**	**0.0**
YOJ				*eS*	**Sn**	**16 33 31.3**	**+0.1**
YOJ	**Yonaguni jima**	**0.17**	**95**	*i* P	**Pn**	**16 33 21.8**	**+0.2**
YOJ				*i* S	**Sn**	**16 33 31.5**	**+0.3**
EOS3	**EOS3**	**0.50**	**248**	P	**Pn**	**16 33 24.3**	**+1.0**
EOS3				*eS*	**Sn**	**16 33 35.8**	**+1.6**
EOS4	**EOS4**	**0.59**	**233**	*i* P	**Pn**	**16 33 24.2**	**+0.5**
EOS4				S	**Sn**	**16 33 35.8**	**+0.8**
IRIF	**Iriomote-Funau**	**0.83**	**100**	*eP*	**Pn**	**16 33 26.6**	**+0.1**
IRIF				*eS*	**Sn**	**16 33 39.8**	**-0.1**
TWC	**Suao**	**0.90**	**279**	*eP*	**Pn**	**16 33 26.6**	**-0.6**
ENA	**Nanau**	**0.99**	**267**	*eP*	**Pn**	**16 33 28.8**	**+0.6**
ENA				*eS*	**Sn**	**16 33 43.2**	**+0.2**
NDS	**Dongshan**	**1.03**	**279**	*eP*	**Pn**	**16 33 28.3**	**-0.3**
NDS				*eS*	**Sn**	**16 33 41.5**	**-2.2**
TIPB	**Shuangxi**	**1.04**	**299**	*eP*	**Pn**	**16 33 28.7**	**-0.1**
TIPB				*eS*	**Sn**	**16 33 42.9**	**-1.1**
SXI1	**Grass Mountain**	**1.06**	**306**	*eP*	**Pn**	**16 33 28.7**	**-0.5**
SXI1				*eS*	**Sn**	**16 33 45.6**	**+1.0**
TWE	**Neicheng**	**1.09**	**283**	*eP*	**Pn**	**16 33 29.2**	**-0.1**
TWE				*eS*	**Sn**	**16 33 44.4**	**-0.5**
JKRS	**Kuro-shima**	**1.10**	**102**	*eP*	**Pn**	**16 33 30.0**	**+0.5**
JKRS				*eS*	**Sn**	**16 33 45.4**	**+0.2**
ENTT	**Nioudou**	**1.16**	**278**	*eP*	**Pn**	**16 33 30.6**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.17**	**284**	*eP*	**Pn**	**16 33 30.4**	**+0.1**
FUSB				*eS*	**Sn**	**16 33 45.7**	**-1.0**
NACB	**Ninganchiao**	**1.17**	**255**	*eP*	**Pn**	**16 33 29.5**	**-0.8**
NACB				*eS*	**Sn**	**16 33 45.5**	**-1.1**
LATG	**Datong**	**1.19**	**273**	*eP*	**Pn**	**16 33 30.8**	**+0.1**
LATG				*eS*	**Sn**	**16 33 47.0**	**-0.3**
JIJ	**Ishigaki jima**	**1.20**	**95**	*eP*	**Pn**	**16 33 30.7**	**0.0**
JIJ				*eS*	**Sn**	**16 33 46.4**	**-1.0**
NWLT	**Wulai**	**1.25**	**284**	*eP*	**Pn**	**16 33 31.7**	**+0.4**
NWLT				*i* S	**Sn**	**16 33 47.7**	**-0.6**
ETLH	**Xiulin Townshi**	**1.26**	**258**	*eP*	**Pn**	**16 33 31.3**	**-0.2**
ETLH				S	**Sn**	**16 33 47.7**	**-1.1**
ETM	**Tongmen**	**1.32**	**248**	*eP*	**Pn**	**16 33 31.5**	**-0.7**
ETM				*eS*	**Sn**	**16 33 49.2**	**-0.8**
YM01	**YM01**	**1.32**	**300**	*eP*	**Pn**	**16 33 32.5**	**+0.2**
YHNB	**Yeheng**	**1.34**	**279**	*eP*	**Pn**	**16 33 32.8**	**+0.4**
YHNB				S	**Sn**	**16 33 50.4**	**-0.1**
SHUL	**Shoufeng**	**1.35**	**240**	*eP*	**Pn**	**16 33 32.1**	**-0.4**
SHUL				*eS*	**Sn**	**16 33 49.8**	**-0.7**
JISG	**Ishigakijimahi**	**1.35**	**85**	*eP*	**Pn**	**16 33 32.4**	**-0.1**
JISG				*eS*	**Sn**	**16 33 49.8**	**-0.9**
NSK	**Sanguang**	**1.35**	**279**	*eP*	**Pn**	**16 33 32.7**	**0.0**
NSK				*eS*	**Sn**	**16 33 50.5**	**-0.3**
LXIB	**Xiulin Townshi**	**1.37**	**251**	*eP*	**Pn**	**16 33 32.2**	**-0.7**
LXIB				*eS*	**Sn**	**16 33 50.1**	**-1.2**
ESL	**Shilin**	**1.44**	**243**	*eP*	**Pn**	**16 33 33.1**	**-0.5**
ESL				*eS*	**Sn**	**16 33 50.8**	**-1.7**
FUSS	**Fushou**	**1.46**	**261**	*eP*	**Pn**	**16 33 34.5**	**+0.3**
WHF	**Hehuan Shan**	**1.47**	**257**	*eP*	**Pn**	**16 33 34.0**	**-0.4**
WHF				*eS*	**Sn**	**16 33 53.1**	**-0.7**
WARBT	**Fenglin Townsh**	**1.52**	**240**	P	**Pn**	**16 33 34.0**	**-0.6**
WARBT				*eS*	**Sn**	**16 33 52.8**	**-1.7**
NFF	**Wufeng Townshi**	**1.57**	**276**	*eP*	**Pn**	**16 33 35.4**	**0.0**
NFF				*eS*	**Sn**	**16 33 55.6**	**0.0**
OWD	**Renai**	**1.60**	**251**	*eP*	**Pn**	**16 33 35.6**	**-0.2**
OWD				S	**Sn**	**16 33 55.1**	**-1.3**
HGSD	**Ruisui**	**1.62**	**233**	*eP*	**Pn**	**16 33 35.3**	**-0.6**
HGSD				*eS*	**Sn**	**16 33 55.1**	**-1.5**
WUSB	**Renai**	**1.64**	**253**	P	**Pn**	**16 33 36.4**	**+0.2**
WUSB				S	**Sn**	**16 33 56.5**	**-0.7**
LIOB	**Emei**	**1.66**	**276**	*eP*	**Pn**	**16 33 36.8**	**+0.3**
EHYH	**Wanrong**	**1.67**	**235**	*eP*	**Pn**	**16 33 36.7**	**0.0**
EHYH				*eS*	**Sn**	**16 33 57.2**	**-0.7**
EHY	**Hungye**	**1.68**	**235**	*eP*	**Pn**	**16 33 35.9**	**-0.9**
EHY				*eS*	**Sn**	**16 33 56.8**	**-1.3**
VWDT	**VWDT**	**1.70**	**245**	*eP*	**Pn**	**16 33 36.9**	**-0.1**
VWDT				*eS*	**Sn**	**16 33 57.4**	**-1.2**
WHP	**Taichung City**	**1.73**	**264**	*eP*	**Pn**	**16 33 38.5**	**+1.1**
YULB	**Yu-li**	**1.77**	**233**	*eP*	**Pn**	**16 33 37.4**	**-0.5**
YULB				*eS*	**Sn**	**16 33 58.5**	**-1.6**
TWF1	**Yuli**	**1.79**	**232**	*eP*	**Pn**	**16 33 37.6**	**-0.6**
WCS	**Beigang Elemen**	**1.80**	**257**	*eP*	**Pn**	**16 33 38.9**	**+0.6**
SSLB	**Suanglung**	**1.85**	**249**	*eP*	**Pn**	**16 33 38.5**	**-0.4**
SSLB				*eS*	**Sn**	**16 34 01.4**	**-0.6**
SMLT	**Sun Moon Lake**	**1.86**	**252**	*eP*	**Pn**	**16 33 39.6**	**+0.4**
FULB	**Fuli**	**1.90**	**228**	*eP*	**Pn**	**16 33 39.1**	**-0.5**
FULB				*eS*	**Sn**	**16 34 01.6**	**-1.4**
WHYT	**Xinyi Township**	**1.97**	**247**	*eP*	**Pn**	**16 33 41.2**	**+0.7**
WHYT				*eS*	**Sn**	**16 34 06.1**	**+1.4**
ALS	**Alishan**	**2.09**	**243**	*eP*	**Pn**	**16 33 43.3**	**+1.0**
ALS				*eS*	**Sn**	**16 34 09.4**	**+1.4**
ELDTW	**Lidau**	**2.10**	**233**	*eP*	**Pn**	**16 33 41.8**	**-0.4**
ELDTW				*eS*	**Sn**	**16 34 06.3**	**-1.6**
CHN5	**Tsauling**	**2.15**	**246**	*eP*	**Pn**	**16 33 44.2**	**+1.2**
CHN5				*eS*	**Sn**	**16 34 09.8**	**+0.5**
WCKO	**Fanlu**	**2.28**	**244**	*eP*	**Pn**	**16 33 46.1**	**+1.5**
WCKO				*eS*	**Sn**	**16 34 14.7**	**+2.6**
STYH	**Taoyuan**	**2.29**	**236**	*eP*	**Pn**	**16 33 45.7**	**+1.1**
STYH				*eS*	**Sn**	**16 34 13.2**	**+1.0**
TPUB	**Ta-pu**	**2.33**	**240**	*eP*	**Pn**	**16 33 46.7**	**+1.5**
TPUB				*eS*	**Sn**	**16 34 15.2**	**+1.9**
CHN4	**Tsaushan**	**2.33**	**242**	*eP*	**Pn**	**16 33 46.7**	**+1.5**
CHN4				*eS*	**Sn**	**16 34 15.3**	**+1.9**

*TAP **28** 16:33:33.3,24.77N×122.93E,h139km,ML2.8,D*
*JMA **28** 16:33:35.0±0.2,25.2°N±2.2°×123.0E±0.6,h117km,MV1.5/10, NW OFF ISHIGAKIJIMA IS*
ISC 28 16:33:35.0±2.5,24.8N±0.1°×122.89E±0.04,h127km±18km, n29,σ0s85/47,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.31**	**171**	*eP*	**Pn**	**16 33 53.2**	**+0.4**
YOJ	**Yonaguni jima**	**0.31**	**160**	*eP*	**Pn**	**16 33 53.2**	**+0.4**
YOJ	**Yonaguni jima**	**0.31**	**160**	*eP*	**Pn**	**16 33 53.0**	**+0.2**
IRIF	**Iriomote-Funau**	**0.87**	**119**	*eS*	**Sn**	**16 34 12.8**	**+0.2**
JKRS	**Kuro-shima**	**1.14**	**117**	*eP*	**Pn**	**16 33 59.7**	**+0.7**
JKRS				*eS*	**Sn**	**16 34 17.6**	**+0.4**
JIJ	**Ishigaki jima**	**1.20**	**109**	*eP*	**Pn**	**16 33 59.7**	**0.0**
JIJ				*eS*	**Sn**	**16 34 17.7**	**-0.7**
ENTT	**Nioudou**	**1.21**	**265**	P	**Pn**	**16 34 00.1**	**+0.3**
ENTT				S	**Sn**	**16 34 19.2**	**+0.7**
LATG	**Datong**	**1.26**	**260**	*eP*	**Pn**	**16 34 00.9**	**+0.6**
LATG				*eS*	**Sn**	**16 34 20.2**	**+0.6**
JISG	**Ishigakijimahi**	**1.30**	**97**	*eP*	**Pn**	**16 34 00.4**	**-0.2**
JISG				*eS*	**Sn**	**16 34 19.4**	**-0.7**
NACB	**Ninganchiao**	**1.32**	**244**	*eS*	**Sn**	**16 34 19.9**	**-0.6**
YHNB	**Yeheng**	**1.38**	**267**	*eP*	**Pn**	**16 34 01.7**	**+0.1**
YHNB				*eS*	**Sn**	**16 34 21.7**	**-0.2**
ETLH	**Xiulin Townshi**	**1.40**	**247**	*eP*	**Pn**	**16 34 01.2**	**-0.6**
ETLH				*eS*	**Sn**	**16 34 21.6**	**-0.6**
NSK	**Sanguang**	**1.40**	**267**	*eP*	**Pn**	**16 34 01.6**	**-0.2**
NSK				*eS*	**Sn**	**16 34 22.0**	**-0.1**
LXIB	**Xiulin Townshi**	**1.53**	**242**	*eP*	**Pn**	**16 34 02.2**	**-1.2**
LXIB				*eS*	**Sn**	**16 34 23.6**	**-1.4**
SHUL	**Shoufeng**	**1.55**	**232**	*eP*	**Pn**	**16 34 04.1**	**+0.7**
SHUL				*eS*	**Sn**	**16 34 26.0**	**+0.9**
NFF	**Wufeng Townshi**	**1.62**	**266**	*eP*	**Pn**	**16 34 04.5**	**+0.2**
NFF				*eS*	**Sn**	**16 34 25.4**	**-1.2**
ESL	**Shilin**	**1.63**	**235**	*eP*	**Pn**	**16 34 03.4**	**-0.9**
ESL				*eS*	**Sn**	**16 34 24.8**	**-1.9**
WARBT	**Fenglin Townsh**	**1.72**	**233**	*eP*	**Pn**	**16 34 04.8**	**-0.7**
WARBT				*eS*	**Sn**	**16 34 27.2**	**-1.4**
NSTT	**Nanjuang**	**1.72**	**266**	*eS*	**Sn**	**16 34 27.9**	**-0.8**
OWD	**Renai**	**1.76**	**243**	*eP*	**Pn**	**16 34 05.7**	**-0.3**
OWD				*eS*	**Sn**	**16 34 29.0**	**-0.6**
WUSB	**Renai**	**1.79**	**245**	*eP*	**Pn**	**16 34 06.6**	**+0.3**
WUSB				*eS*	**Sn**	**16 34 30.0**	**-0.2**
WHP	**Taichung City**	**1.83**	**255**	*eP*	**Pn**	**16 34 07.7**	**+0.8**
WHP				*eS*	**Sn**	**16 34 31.8**	**+0.6**
HGSD	**Ruisui**	**1.84**	**227**	*eP*	**Pn**	**16 34 07.8**	**+0.9**
HGSD				*eS*	**Sn**	**16 34 31.4**	**+0.3**
VWDT	**VWDT**	**1.88**	**238**	*eP*	**Pn**	**16 34 07.3**	**-0.1**
VWDT				*eS*	**Sn**	**16 34 32.1**	**+0.1**
EHY	**Hungye**	**1.90**	**229**	*eP*	**Pn**	**16 34 06.6**	**-1.0**
SSLB	**Suanglung**	**2.01**	**242**	*eS*	**Sn**	**16 34 36.3**	**+1.3**
WHYT	**Xinyi Township**	**2.14**	**241**	*eS*	**Sn**	**16 34 39.5**	**+1.7**
ALS	**Alishan**	**2.27**	**237**	*eS*	**Sn**	**16 34 43.3**	**+2.1**
ELDTW	**Lidau**	**2.32**	**228**	*eS*	**Sn**	**16 34 41.4**	**-0.6**

*IDC **28** 16:35:26.7±0.8,26.80N×143.78E,h0km,mb3.7/11, mbtmp3.7/14,ML3.4/3,MS2.7/3,Error ellipse: s-maj=20.7km s-min=17.7km az=69.0*
*NIED **28** 16:35:31.1,27.29N×143.62E,h28km,MW4.1,Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁵Nm; Mrr-0.57; Mθθ0.34; Mϕϕ0.23; Mrθ1.32; Mθϕ-0.24; Mϕr0.82; Fault plane solution: Mo1.60000×10¹⁵ NP1: φs108.00000°,δ9.00000°,λ-44.00000°. NP2:φs242.00000°, δ84.00000°,λ-97.00000°.*
*JMA **28** 16:35:31.1±0.1,27.3N±0.6×143.6E±0.3,h28km,MV3.7/12, NEAR CHICHIJIMA ISLAND*
ISC 28 16:35:32.4±0.8,26.9N±0.1×143.66E±0.08,h35km,n22, σ1s33/21,mb3.8/12,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.32**	**277**	*eP*	**Pn**	**16 35 53.7**	**-0.6**
CBIJ				*eS*	**Sn**	**16 36 10.2**	**-0.6**
JCJ	**Chichijima**	**1.32**	**277**	Pn	**Pn**	**16 35 53.5**	**-0.9**
	11nm,0.3s,baz=273,slow=24,SNR=7.3						
JCJ				Sn	**Sn**	**16 36 08.7**	**-2.1**
	77nm,0.3s,baz=270,slow=24,SNR=19						
JHH2	**Haha-jima-NKT2**	**1.36**	**257**	*eS*	**Sn**	**16 36 14.1**	**+2.4**
JHO	**Hitachi**	**9.99**	**346**	*eS*	Sn	16 39 34.4	-10
MJAR	**Matsushiro Arr**	**10.63**	**336**	Pn	**Pn**	**16 38 00.3**	**-1.9**
	0.2nm,0.3s,baz=162,slow=12,SNR=15 1.3nm,0.3s						
GUMO	**Guam**	**13.34**	**175**	LR	LR	16 42 17.7	
	comp=Z,38nm,18.8s,baz=81,slow=31						
JOW	**Kunigami**	**13.73**	**273**	LR	LR	16 42 58.4	
	comp=Z,28nm,21.8s,baz=91,slow=33						
KSRS	**Korea Array**	**16.92**	**312**	P	**P**	**16 39 28.1**	**+0.1**
	0.1nm,0.3s,baz=119,slow=12,SNR=6.0 1.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**19.62**	**334**	P	**Pn**	**16 39 58.9**	**-0.4**
	0.1nm,0.3s,baz=136,slow=9.8,SNR=4.2 0.8nm,0.5s						
SONM	**Songino Array**	**35.74**	**316**	P	**P**	**16 42 29.7**	**+1.9**
	0.3nm,0.7s,baz=109,slow=7.3,SNR=2.5 0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.93**	**268**	P	**P**	**16 43 20.2**	**+0.3**
	0.3nm,0.6s,baz=70,slow=8.4,SNR=2.1 0.3nm,0.6s						
CMAR				LR	LR	16 58 55.2	
	comp=Z,10nm,21.5s,baz=95,slow=34 0.3nm,0.6s						
WRA	**Warramunga Arr**	**47.48**	**192**	P	**P**	**16 44 02.5**	**-1.5**
	5.1nm,0.8s,baz=11,slow=8.1,SNR=24 5.1nm,0.8s						
ZALV	**Zalesovo Beam**	**50.46**	**319**	P	**P**	**16 44 27.4**	**+0.8**
	0.4nm,0.4s,baz=101,slow=6.0,SNR=2.2 0.4nm,0.4s						
ASAR	**Alice Springs**	**51.19**	**191**	P	**P**	**16 44 30.7**	**-1.6**
	0.5nm,0.7s,baz=16,slow=6.4,SNR=8.6 0.5nm,0.7s						
MKAR	**Makanchi Array**	**51.58**	**310**	P	**P**	**16 44 36.3**	**+1.2**
	0.7nm,0.8s,baz=91,slow=7.3,SNR=7.3 0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**54.08**	**314**	P	**P**	**16 44 54.0**	**+0.6**
	1.6nm,0.8s,baz=91,slow=7.8,SNR=15						
ILAR	**Eielson Array**	**57.22**	**29**	P	**P**	**16 45 15.7**	**0.0**
	1.1nm,1.0s,baz=256,slow=5.7,SNR=6.4 1.1nm,1.0s						
BVAR	**Borovoye Array**	**59.04**	**318**	P	**P**	**16 45 29.5**	**+0.8**
	0.4nm,0.5s,baz=100,slow=8.1,SNR=2.6 0.4nm,0.5s						
YKA	**Yellowknife Ar**	**71.65**	**29**	P	**P**	**16 46 50.1**	**0.0**
	0.4nm,0.8s,baz=297,slow=6.9,SNR=4.9 0.4nm,0.8s						
FINES	**FINESS Array B**	**78.66**	**334**	P	**P**	**16 47 32.6**	**+2.1**
	1.9nm,1.0s,baz=61,slow=8.6,SNR=1.1 1.9nm,1.0s						
NVAR	**Mina Array Bea**	**79.58**	**52**	P	**P**	**16 47 36.0**	**-0.3**
	0.8nm,0.7s,baz=282,slow=7.2,SNR=4.1 0.8nm,0.7s						
LPAZ	**La Paz**	**148.69**	**77**	PKPbc	**PKPbc**	**16 55 16.9**	**-0.4**
	0.5nm,0.5s,baz=5.6,slow=4.4,SNR=3.9						

*IPEC **28** 16:46:04.3±0.2,51.51N×16.25E,h1km,ML2.6/6,Error ellipse: s-maj=2.7km s-min=1.4km az=76.0*
*DNK **28** 16:46:05.5±1.5,51.51N×15.34E,h10km,ML3.1, Presumed earthquake*
*IDC **28** 16:46:05.6±1.0,51.46N×16.06E,h0km,mbtmp3.2/4, ML2.1/3,Error ellipse: s-maj=21.0km s-min=9.3km az=120.0*
*VIE **28** 16:46:06.0±0.7,51.41N×16.46E,h0km,mb2.6/4,ml2.9/6, Error ellipse: s-maj=6.5km s-min=4.1km az=114.0 53 km NW of Wroclaw Suspected Mining induced.*
*PRU **28** 16:46:07.0,51.40N×16.11E,h0km*
ISC 28 16:46:02.7±0.8,51.60N±0.03×16.23E±0.03,h0km,n44, σ1s20/85,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.76**	**177**	*ePg*	**Pg**	**16 46 17.5**	**+0.3**
KSP				*eSg*	**Sg**	**16 46 26.8**	**-0.2**
CHVC	**Chvalec**	**1.02**	**186**	*ePG*	**Pg**	**16 46 22.2**	**0.0**
CHVC				*eSG*	**Sg**	**16 46 34.1**	**-1.3**
OSTC	**Ostas**	**1.05**	**181**	*ePG*	**Pg**	**16 46 22.7**	**0.0**
OSTC				*eSG*	**Sg**	**16 46 35.0**	**-1.2**
UPC	**Upice**	**1.10**	**187**	*ePG*	**Pg**	**16 46 23.9**	**+0.1**
UPC				*eSG*	**Sg**	**16 46 36.4**	**-1.7**
DPC	**Dobruska-Polom**	**1.25**	**177**	*ePG*	**Pg**	**16 46 26.3**	**-0.4**
DPC				*eSG*	**Sg**	**16 46 41.0**	**-1.9**
	comp=Z,44nm,0.3s baz=352						
PIVO	**Bartosovice**	**1.43**	**172**	*ePg*	**Pn**	**16 46 29.4**	**-0.5**
PIVO				*eSg*	**Sg**	**16 46 46.0**	**-2.6**
	59nm,0.3s,baz=352						
PVCC	**Panska Ves**	**1.50**	**225**	*ePG*	**Pn**	**16 46 30.8**	**0.0**
PVCC				*eSG*	**Sg**	**16 46 49.2**	**-1.7**
	comp=Z,190nm,0.4s						
KRLC	**Kraliky**	**1.57**	**167**	*ePG*	**Pg**	**16 46 32.7**	**0.0**
KRLC				*eSG*	**Sn**	**16 46 50.9**	**-1.9**
	comp=Z,66nm,0.5s						
BRG	**Berggiesshubel**	**1.61**	**244**	Pg	**Pb**	**16 46 33.1**	**-0.2**
BRG				Sg	**Sn**	**16 46 53.3**	**-0.6**
BRG				Amp		16 46 55.0	
	comp=Z,61nm,0.4s						
RYBC	**Ceska Rybna** baz=3.8	**1.80**	**183**	*ePn*	**Pn**	**16 46 34.8**	**-0.1**
RYBC				*eSg*	**Sn**	**16 46 57.6**	**-0.9**
	comp=Z,33nm,0.2s,baz=3.8						
STEB	**Steborice**	**1.93**	**149**	*ePN*	**Pn**	**16 46 37.1**	**+0.3**
STEB				*ePg*	**Pg**	**16 46 39.2**	**-0.5**
STEB				*eSG*	**Sb**	**16 47 03.9**	**+0.5**
	comp=Z,54nm,0.3s						
PRU	**Pruhonice**	**1.94**	**214**	*ePG*	**Pb**	**16 46 38.0**	**-0.8**
PRU				*eSG*	**Sn**	**16 47 02.3**	**+0.4**
	comp=Z,28nm,0.5s						
MORC	**Moravsky Berou** baz=335	**2.01**	**155**	*ePn*	**Pn**	**16 46 37.9**	**+0.1**
MORC				*eSg*	**Sn**	**16 47 04.4**	**+0.7**
	comp=Z,42nm,0.7s,baz=335						
HSKC	**Hora Svate Kat**	**2.03**	**242**	*ePG*	**Pb**	**16 46 39.8**	**-0.6**
HSKC				*eSG*	**Sn**	**16 47 04.9**	**+0.8**
	comp=Z,51nm,0.6s						
CLL	**Collm**	**2.04**	**263**	*ePn*	**Pn**	**16 46 39.0**	**+0.7**
CLL				*ePg*	**Pb**	**16 46 41.0**	**+0.4**
CLL				*ex*	x	16 46 44.0	
CLL				*eSg*	**Sb**	**16 47 07.0**	**+0.5**
	comp=Z,25nm,0.7s						
OKC	**Ostrava-Krasne**	**2.15**	**145**	*eSG*	**Sb**	**16 47 09.7**	**+0.2**
VRAC	**Vranov** baz=354	**2.31**	**174**	*ePn*	**Pn**	**16 46 42.1**	**+0.2**
VRAC				*eSg*	**Sb**	**16 47 13.4**	**-0.8**
	comp=Z,34nm,0.7s,baz=354						
TREC	**Trest**	**2.36**	**192**	*ePG*	**Pb**	**16 46 46.4**	**+0.4**
TREC				*eSG*	**Sb**	**16 47 15.7**	**0.0**
KRUC	**Moravsky** baz=358	**2.54**	**178**	*ePn*	**Pn**	**16 46 45.3**	**+0.1**
KRUC				*eSg*	**Sb**	**16 47 20.9**	**0.0**
	comp=Z,27nm,0.6s,baz=358						
KRUC	**Moravsky**	**2.54**	**178**	*ePN*	**Pn**	**16 46 45.4**	**+0.2**
KRUC				*eSG*	**Sb**	**16 47 21.0**	**0.0**
NKC	**Novy Kostel**	**2.76**	**242**	*ePN*	**Pn**	**16 46 48.8**	**+0.6**
NKC				*ePG*	**Pg**	**16 46 55.0**	**-0.5**
NKC				*eSG*	**Sb**	**16 47 28.9**	**+1.7**
	comp=Z,37nm,0.4s						
JAVC	**Velka Javorina** baz=342	**2.90**	**161**	*ePn*	**Pn**	**16 46 50.0**	**0.0**
JAVC	**Velka Javorina**	**2.90**	**161**	*ePN*	**Pn**	**16 46 50.1**	**0.0**
KHC	**Kasperske Hory**	**3.00**	**216**	*ePN*	**Pn**	**16 46 51.9**	**+0.4**
KHC				*ePG*	**Pb**	**16 46 57.3**	**+0.3**
KHC				*eSN*	**Sn**	**16 47 25.5**	**-2.7**
KHC				*eSG*	**Sb**	**16 47 35.0**	**+0.8**
	comp=Z,19nm,0.6s						
CKRC	**Cesky Krumlov**	**3.05**	**205**	*ePN*	**Pn**	**16 46 52.7**	**+0.6**
CKRC				*ePG*	**Pb**	**16 46 58.1**	**+0.4**
CKRC				*eSG*	**Sb**	**16 47 36.2**	**+0.7**
	comp=Z,18nm,0.4s						
GERES	**GERESS Array B**	**3.20**	**211**	Pn	**Pn**	**16 46 54.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=29,slow=14,SNR=12						
GERES				Pg	**Pb**	**16 47 00.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=29,slow=18,SNR=24						
GERES				Lg	Lg	16 47 41.8	
	comp=Z,0.6nm,0.3s,baz=32,slow=28,SNR=10 comp=Z,1.1nm,0.4s						
LANS	**Liptovska Anna**	**3.21**	**139**	*ePG*	**Pg**	**16 47 04.0**	**-0.2**
MODS	**Modra-Piesok**	**3.30**	**168**	*ePG*	**Pg**	**16 47 05.2**	**-0.7**
MODS				*eSG*	**Sg**	**16 47 48.5**	**-0.1**
ZST	**Bratislava**	**3.46**	**170**	*eSG*	**Sg**	**16 47 52.9**	**-0.7**
BSD	**Bornholm Skovb**	**3.61**	**348**	*i* P	**Pn**	**16 47 02.1**	**+2.4**
BSD				*i* S	**Sn**	**16 47 43.4**	**+0.5**
BSD				IAML		16 47 52.6	
	comp=Z,20nm,0.9s						
CONA	**Conrad Observa**	**3.69**	**184**	*i* Pn	**Pn**	**16 47 01.7**	**+0.8**
	comp=Z,0.1nm,0.1s						
CONA				*eSg*	**Sg**	**16 47 58.5**	**-2.5**
	comp=Z,4.7nm,0.4s						
RONA	**Rosalia, Austr**	**3.91**	**179**	*i* Pn	**Pn**	**16 47 04.2**	**+0.3**
	comp=Z,0.1nm,0.1s						
RONA				*eSg*	**Sg**	**16 48 07.6**	**-0.5**
	comp=Z,2.7nm,0.2s						
MOA	**Molln**	**3.97**	**200**	*ePn*	**Pn**	**16 47 05.1**	**+0.3**
	comp=Z,0.1nm,0.1s						
MOA				*i* Sn	**Sn**	**16 47 54.3**	**+2.4**
	comp=Z,0.2nm,0.1s						
KECS	**Kecovo**	**4.15**	**137**	*ePG*	**Pg**	**16 47 20.7**	**-1.5**
KECS				*eSG*	**Sg**	**16 48 16.8**	**+0.8**
BIOA	**Bad Ischl, Aus**	**4.26**	**204**	*i* Sn	**Sn**	**16 47 59.3**	**+0.1**
	comp=Z,1.0nm,0.3s						
LUNU	**Lund**	**4.37**	**339**	*i* P	**Pn**	**16 47 11.4**	**+1.2**
LUNU				*eS*	**Sn**	**16 47 58.9**	**-2.8**
ARSA	**Arzberg**	**4.38**	**186**	*i* Pn	**Pn**	**16 47 11.4**	**+1.0**
	comp=Z,0.2nm,0.1s						
ARSA				*i* Sn	**Sn**	**16 48 02.7**	**+0.5**
	comp=Z,0.4nm,0.2s						
BLEU	**Blekinge**	**4.72**	**357**	*i* P	**Pn**	**16 47 17.9**	**+2.9**
BLEU				*i* S	**Sn**	**16 48 11.3**	**+1.0**
LESA	**Schwarzleotal**	**4.78**	**210**	*i* Pn	**Pn**	**16 47 16.8**	**+0.9**
	comp=Z,0.6nm,0.3s						
LESA				*eSn*	**Sn**	**16 48 14.5**	**+2.4**
	comp=Z,2.8nm,0.3s						
BJUU	**Bjuv**	**4.87**	**338**	*i* P	**Pn**	**16 47 18.6**	**+1.6**
BJUU				*eS*	**Sn**	**16 48 10.3**	**-3.7**
DEL	**Delary**	**5.07**	**345**	*i* P	**Pn**	**16 47 21.8**	**+2.0**
DEL				*eS*	**Sn**	**16 48 17.3**	**-1.8**
AKASG	**Malin Array Be**	**8.22**	**91**	Pn	**Pn**	**16 48 03.2**	**+0.1**
	comp=Z,0.2nm,0.2s,baz=280,slow=12,SNR=2.0						
HFS	**Hagfors**	**8.67**	**352**	Pn	**Pn**	**16 48 10.4**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=174,slow=14,SNR=1.9 comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**11.25**	**25**	Pn	**Pn**	**16 48 46.1**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=212,slow=13,SNR=4.6 comp=Z,0.9nm,0.6s						

*IDC **28** 16:54:58.6±2.2,10.60N×62.51W,h86km±17km,mb3.5/9, mbtmp3.8/11,Error ellipse: s-maj=20.0km s-min=17.0km az

	0.2nm,0.5s							
NOA	**NORSAR Array B**	**72.90**	**29**	P	**P**	**17 06 19.3**	**+1.0**	
	0.4nm,0.7s,baz=263,slow=6.2,SNR=2.5							
	0.4nm,0.7s							
HFS	**Hagfors**	**73.99**	**30**	P	**P**	**17 06 25.2**	**+0.6**	
	1.7nm,0.7s,baz=274,slow=4.3,SNR=5.8							
	1.7nm,0.7s							
ILAR	**Eielson Array**	**78.10**	**334**	P	**P**	**17 06 47.0**	**-0.8**	
	0.3nm,0.7s,baz=80,slow=4.7,SNR=5.3							
	0.3nm,0.7s							
FINES	**FINESS Array B**	**80.09**	**29**	P	**P**	**17 06 59.5**	**+0.8**	
	1.4nm,0.8s,baz=250,slow=3.9,SNR=5.5							
	1.4nm,0.8s							

IDC 28 16:55:19.6±3.0, 47°.57N×92°.28W, h0km, mb2.5/1, mbtmp2.8/4, ML1.7/2, Error ellipse: s-maj=37.6km s-min=15.9km az=74.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULM	**Lac du Bonnet**	**3.58**	**320**	Pn	Pn	16 56 16.3	-0.1
	0.2nm,0.3s,baz=105,slow=12,SNR=1.9						
ULM				Sn	Sn	16 56 57.2	-2.1
	0.6nm,0.3s,baz=354,slow=19,SNR=3.0						
ULM				Lg	Lg	16 57 09.8	
	0.8nm,0.3s,baz=102,slow=15,SNR=4.6						
	0.8nm,0.5s						
I10CA	**LAC DU BONNET**	**3.61**	**318**	I	I	17 16 20.0	
	0.1nm,0.9s,baz=136,slow=341,SNR=0.8						
PDAR	**Pinedale Array**	**13.10**	**255**	Pn	Pn	16 58 24.1	-2.9
	0.3nm,0.7s,baz=64,slow=14,SNR=2.3						
PDAR				Lg	Lg	17 02 05.8	
	0.1nm,0.3s,baz=54,slow=24,SNR=2.1						
YKA	**Yellowknife Ar**	**19.52**	**328**	P	P	16 59 46.4	-1.7
	baz=130,slow=11,SNR=5.0						
	0.3nm,0.8s						
TXAR	**Lajitas Array**	**20.23**	**210**	P	P	16 59 56.3	0.0
	0.2nm,0.7s,baz=31,slow=7.9,SNR=2.8						
	0.2nm,0.7s						

*VIE **28** 16:56:31.2±0.7, 51°.43N×16°.63E, h0km, mb2.6/1, ml2.9/3, Error ellipse: s-maj=4.6km s-min=3.9km az=129.0 46 km NNW of Wroclaw Suspected Mining induced.*
*IDC **28** 16:56:32.5±1.0, 51°.35N×16°.43E, h0km, mbtmp3.6/4, ML2.5, Error ellipse: s-maj=19.7km s-min=8.4km az=107.0*
*DNK **28** 16:56:32.3±1.0, 51°.48N×16°.10E, h7km±43km, ML3.0, Presumed earthquake*
*PRU **28** 16:56:34.3, 51°.36N×16°.25E, h0km*
ISC 28 16:56:30.7±0.7, 51°.53N±0°.03×16°.32E±0°.03, h0km, n36, σ1§12/69, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.69**	**181**	*e*Pg	**Pg**	**16 56 43.8**	**0.0**
KSP				*e*Sg	**Sg**	**16 56 51.6**	**-1.0**
CHVC	**Chvalec**	**0.95**	**190**	*e*PG	**Pg**	**16 56 49.0**	**0.0**
CHVC				*e*SG	**Sg**	**16 57 00.2**	**-1.1**
OSTC	**Ostas**	**0.97**	**184**	*e*PG	**Pg**	**16 56 49.3**	**0.0**
OSTC				*e*SG	**Sg**	**16 57 00.9**	**-1.0**
	comp=Z,39nm,0.5s						
UPC	**Upice**	**1.04**	**191**	*e*PG	**Pg**	**16 56 50.3**	**-0.3**
UPC				*e*SG	**Sg**	**16 57 03.1**	**-0.9**
	comp=Z,75nm,0.4s						
DPC	**Dobruska-Polom**	**1.18**	**180**	*e*PG	**Pg**	**16 56 52.6**	**-0.7**
DPC				*e*SG	**Sg**	**16 57 06.5**	**-2.0**
	comp=Z,32nm,0.4s						
KRLC	**Kraliky**	**1.48**	**168**	*e*PG	**Pn**	**16 56 58.6**	**-0.1**
KRLC				*e*SG	**Sg**	**16 57 17.6**	**-0.7**
	comp=Z,38nm,0.3s						
PVCC	**Panska Ves**	**1.49**	**229**	*e*PG	**Pn**	**16 56 59.2**	**+0.5**
PVCC				*e*SG	**Sg**	**16 57 17.5**	**-1.1**
	comp=Z,117nm,0.2s						
BRG	**Berggiesshubel**	**1.63**	**247**	Pg	**Pb**	**16 57 01.7**	**0.0**
BRG				Sg	**Sn**	**16 57 22.7**	**+0.3**
BRG				Amp		16 57 23.9	
	comp=Z,36nm,0.3s						
BRG				r		17 09 40.6	
BRG				Amp		17 10 12.1	
	comp=Z,4.1nm,0.9s						
STEB	**Steborice**	**1.84**	**149**	*e*PG	**Pb**	**16 57 05.1**	**-0.1**
STEB				*e*SG	**Sn**	**16 57 26.0**	**-1.6**
	comp=Z,26nm,0.3s						
PRU	**Pruhonice**	**1.91**	**217**	*e*PG	**Pb**	**16 57 05.9**	**-0.5**
PRU				*e*SG	**Sn**	**16 57 29.0**	**-0.2**
	comp=Z,34nm,0.8s						
MORC	**Moravsky Berou**	**1.92**	**156**	*e*PN	**Pn**	**16 57 04.6**	**0.0**
MORC				*e*SG	**Sn**	**16 57 29.3**	**-0.2**
HSKC	**Hora Svate Kat**	**2.04**	**244**	*e*SG	**Sn**	**16 57 34.1**	**+1.6**
	comp=Z,22nm,0.3s						
OKC	**Ostrava-Krasne**	**2.05**	**145**	*e*PG	**Pg**	**16 57 09.3**	**-0.7**
OKC				*e*SG	**Sb**	**16 57 34.9**	**+0.1**
CLL	**Collm**	**2.09**	**265**	*e*Pg	**Pb**	**16 57 10.0**	**+0.6**
CLL				*e*Sg	**Sb**	**16 57 36.0**	**+0.1**
	comp=Z,21nm,0.4s						
VRAC	**Vranov**	**2.23**	**175**	Pg	**Pb**	**16 57 10.4**	**-1.4**
	comp=Z,2.3nm,0.3s,baz=353,slow=17,SNR=3.9						
VRAC				Lg	Lg	16 57 38.5	
	comp=Z,3.7nm,0.3s,baz=85,slow=21,SNR=8.0						
VRAC	**Vranov**	**2.23**	**175**	*e*PN	**Pn**	**16 57 09.2**	**+0.3**
VRAC				*e*SG	**Sb**	**16 57 38.5**	**-1.4**
TREC	**Trest**	**2.30**	**194**	*e*SG	**Sb**	**16 57 42.3**	**+0.4**
KRUC	**Moravsky**	**2.47**	**179**	*e*PN	**Pn**	**16 57 13.0**	**+0.8**
KRUC				*e*SG	**Sb**	**16 57 46.8**	**0.0**
NKC	**Novy Kostel**	**2.77**	**244**	*e*SG	**Sg**	**16 57 58.5**	**-1.3**
	comp=Z,22nm,0.3s						
KHC	**Kasperske Hory**	**2.97**	**217**	*e*PN	**Pn**	**16 57 19.7**	**+0.5**
KHC				*e*PG	**Pb**	**16 57 25.2**	**+0.7**
KHC				*e*SN	**Sn**	**16 57 52.9**	**-2.6**
KHC				*e*SG	**Sb**	**16 58 02.8**	**+1.4**
	comp=Z,11nm,0.5s						
CKRC	**Cesky Krumlov**	**3.00**	**206**	*e*PN	**Pn**	**16 57 19.9**	**+0.4**
CKRC				*e*PG	**Pb**	**16 57 25.7**	**+0.7**
CKRC				*e*SG	**Sb**	**16 58 03.8**	**+1.6**
LANS	**Liptovska Anna**	**3.12**	**138**	*e*PN	**Pn**	**16 57 22.5**	**+1.3**
LANS				*e*PG	**Pg**	**16 57 33.8**	**+3.4**
LANS				*e*SG	**Sg**	**16 58 09.7**	**-1.1**
LANS				*e*		17 31 02.4	
GERES	**GERESS Array B**	**3.17**	**213**	Pn	**Pn**	**16 57 22.8**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=37,slow=17,SNR=18						
GERES				Pg	**Pb**	**16 57 28.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=36,slow=17,SNR=5.3						
GERES				Sn	**Sn**	**16 57 58.7**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=36,slow=19,SNR=5.2						
GERES				Lg	Lg	16 58 08.8	
	comp=Z,0.4nm,0.3s,baz=35,slow=28,SNR=10						
MODS	**Modra-Piesok**	**3.22**	**169**	*e*PG	**Pg**	**16 57 32.5**	**+0.2**
MODS				*e*SG	**Sg**	**16 58 15.3**	**+1.3**
CONA	**Conrad Observa**	**3.61**	**185**	*i* Pn	**Pn**	**16 57 27.2**	**-0.8**
	comp=Z,0.3nm,0.2s						
CONA				*i* Sn	**Sn**	**16 58 10.6**	**-0.8**
	comp=Z,2.9nm,0.6s						
BSD	**Bornholm Skovb**	**3.69**	**347**	*i* P	**Pn**	**16 57 30.4**	**+1.5**
BSD				*i* S	**Sn**	**16 58 12.1**	**-1.0**
BSD				IAML		16 58 20.3	
	comp=Z,15nm,1.0s						
MOA	**Molln**	**3.92**	**201**	*e*Pn	**Pn**	**16 57 31.1**	**-1.0**
	comp=Z,0.1nm,0.1s						
MOA				*e*Sn	**Sn**	**16 58 19.4**	**+0.7**
	comp=Z,0.6nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.22**	**205**	*i* Pn	**Pn**	**16 57 36.6**	**+0.4**
	comp=Z,0.1nm,0.2s						
BIOA				*i* Sn	**Sn**	**16 58 27.7**	**+1.6**
	comp=Z,0.3nm,0.1s						
LUNU	**Lund**	**4.46**	**339**	*i* P	**Pn**	**16 57 40.4**	**+1.0**
LUNU				*e*S	**Sn**	**16 58 30.2**	**-1.7**
BLEU	**Blekinge**	**4.80**	**357**	*i* P	**Pn**	**16 57 46.3**	**+2.1**
BLEU				*i* S	**Sn**	**16 58 39.3**	**-1.0**
BJUU	**Bjuv**	**4.96**	**338**	*i* P	**Pn**	**16 57 46.5**	**+0.1**
BJUU				*i* S	**Sn**	**16 58 42.9**	**-1.4**
DEL	**Delary**	**5.16**	**345**	*i* P	**Pn**	**16 57 50.4**	**+1.3**
DEL				*i* S	**Sn**	**16 58 47.4**	**-1.9**
DAVOX	**Davos/Dischmat**	**6.36**	**224**	Pn	**Pn**	**16 58 06.8**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=97,slow=8.1,SNR=1.9						
DAVOX				Lg	Lg	16 59 53.4	
	comp=Z,0.2nm,0.3s,baz=219,slow=16,SNR=2.2						
	comp=Z,1.4nm,0.7s						
HFS	**Hagfors**	**8.75**	**351**	Pn	**Pn**	**16 58 38.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=165,slow=11,SNR=2.7						
	comp=Z,2.7nm,0.9s						
FINES	**FINESS Array B**	**11.29**	**25**	Pn	**Pn**	**16 59 13.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=3.4						
	comp=Z,1.8nm,0.8s						

ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	**P**	**17 00 48.6**	**-0.4**	
	comp=Z,0.1nm,0.3s,baz=184,slow=11,SNR=1.4							
	comp=Z,2.1nm,0.8s							

*IDC **28** 17:05:20.9±1.2, 17°.83N×66°.61W, h0km, mb3.7/6, mbtmp3.7/7, ML2.8/1, MS2.8/1, Error ellipse: s-maj=39.0km s-min=21.8km az=86.0*
*OSPL **28** 17:05:24.9±0.3, 17°.89N×66°.80W, h10km±2km, ML3.7, Presumed earthquake*
*NEIC **28** 17:05:24.6±0.9, 17°.99N±0°.09×66°.80W±0°.01, h18km±1km, mb4.3/21, ML4.2/35, Mwr3.7/14, ML3.8/6(RSPR), Mwr3.6/11(SLM), Error ellipse: s-maj=12.5km s-min=1.5km az=184.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.06; $M_{\theta\theta}$3.56; $M_{\phi\phi}$0.50; $M_{r\theta}$-0.29; $M_{\theta\phi}$0.50; $M_{r\phi}$-0.78; Fault plane solution: $M_0$3.96000×10^{14} NP1:ϕ_s71.84000°, δ48.73000°, λ-101.83000°. NP2: ϕ_s269.46000°, δ42.64000°, λ-76.85000°. Principal axes: T 3.6624, Plg3.0000°, Azm170.0000°; N 0.5330, Plg9.0000°, Azm80.0000°; P -4.1954, Plg81.0000°, Azm279.0000°;*
*NEIC **28** 17:05:25, 18°.00N×66°.81W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.93; $M_{\theta\theta}$2.06; $M_{\phi\phi}$0.87; $M_{r\theta}$1.10; $M_{\theta\phi}$1.41; $M_{r\phi}$0.17; Fault plane solution: $M_0$3.16000×10^{14} NP1:ϕ_s245.00000°, δ55.00000°, λ-80.00000°. NP2:ϕ_s48.00000°, δ36.00000°, λ-104.00000°. Principal axes: T 3.1642, Plg9.0000°, Azm328.0000°; N 0.0011, Plg8.0000°, Azm59.0000°; P -3.1653, Plg77.0000°, Azm189.0000°;*
*NEIC **28** 17:05:25, 18°.03N×66°.80W, h17km*
*RSPR **28** 17:05:25.3, 18°.00N×66°.81W, h11km±1km, MD3.4/6*
*PTWC **28** 17:05:25, 18°.00N×66°.80W, h11km, Ml4.0/9*
*TRN **28** 17:06:00.0, 17°.71N×66°.73W, h121km, MD4.6, South of Puerto Rico.*
ISC 28 17:05:23.1±1.0, 17°.88N±0°.04×66°.78W±0°.02, h15km±6km, n98, σ1§44/132, mb4.2/12, 4C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.13**	**317**		**Pb**	**17 05 28.1**	**+0.7**
GBPR	**Guanica, Bosqu**	**0.13**	**317**	*i*P	**Pb**	**17 05 28.1**	**+0.7**
OBIP	**Obispado Ponce**	**0.24**	**45**		**Pb**	**17 05 29.2**	**0.0**
OBIP				Sg	**Sg**	**17 05 32.4**	**+0.5**
OBIP	**Obispado Ponce**	**0.24**	**45**	P	**Pb**	**17 05 29.5**	**+0.3**
OBIP	**Obispado Ponce**	**0.24**	**45**	*e*P	**Pb**	**17 05 29.5**	**+0.3**
OBIP				*e*S	**Sb**	**17 05 32.9**	**-0.3**
OBIP	**Obispado Ponce**	**0.24**	**45**	*i* P	**Pb**	**17 05 29.5**	**+0.3**
OBIP				*e*S	**Sb**	**17 05 32.9**	**-0.3**
OBIP				IAML		17 05 33.3	
	comp=Z,14μm,0.5s						
MLPR	**Magueyes Islan**	**0.27**	**291**		**Pb**	**17 05 29.9**	**+0.2**
MLPR				Sg	**Sb**	**17 05 33.6**	**-0.4**
MLPR				IAML		17 05 35.2	
	comp=Z,19μm,0.4s						
CELP	**Cerrillos**	**0.28**	**44**		**Pb**	**17 05 30.1**	**+0.2**
CELP				Sg	**Sb**	**17 05 33.8**	**-0.6**
CELP				IAML		17 05 34.3	
	comp=Z,91μm,0.3s						
CELP				IAML		17 05 34.4	
	comp=Z,88μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.34**	**293**		**Pb**	**17 05 30.9**	**0.0**
CRPR				Sg	**Sg**	**17 05 35.0**	**+0.2**
CRPR				IAML		17 05 35.5	
	comp=Z,14μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.34**	**293**	P	**Pb**	**17 05 30.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.34**	**293**	*i*P	**Pb**	**17 05 31.0**	**+0.1**
CRPR				*e*S	**Sg**	**17 05 35.4**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.34**	**293**	*i* P	**Pb**	**17 05 30.9**	**0.0**
CRPR				*e*S	**Sg**	**17 05 35.2**	**+0.5**
CRPR				IAML		17 05 37.0	
	comp=Z,9μm,0.5s						
UUPR	**Utuado, UPR, P**	**0.38**	**9**		**Pg**	**17 05 30.8**	**-0.1**
UUPR				Sg	**Sg**	**17 05 34.6**	**-1.6**
LSP	**Las Mesas**	**0.41**	**316**		**Pg**	**17 05 31.8**	**+0.3**
LSP	**Las Mesas**	**0.41**	**316**	*e*P	**Pg**	**17 05 31.8**	**+0.3**
PRSN	**Puerto Rico Se**	**0.48**	**315**		**Pg**	**17 05 32.7**	**-0.1**
PRSN				Sg	**Sg**	**17 05 38.2**	**-1.0**
PRSN				IAML		17 05 38.8	
	comp=Z,29μm,0.3s						
ECPR	**Experimental S**	**0.59**	**42**		**Pg**	**17 05 34.7**	**-0.1**
ECPR				IAML		17 05 44.6	
	comp=Z,14μm,0.2s						
ECPR				IAML		17 05 46.4	
	comp=Z,11μm,0.2s						
ECPR	**Experimental S**	**0.59**	**42**	*e*P	**Pg**	**17 05 34.9**	**0.0**
ECPR				*e*S	**Sg**	**17 05 42.7**	**-0.1**
EMPR	**Esperanza - Ma**	**0.65**	**22**		**Pg**	**17 05 35.9**	**+0.1**
EMPR					**Sg**	**17 05 43.0**	**-1.4**
EMPR	**Esperanza - Ma**	**0.65**	**22**	P	**Pg**	**17 05 35.4**	**-0.4**
EMPR	**Esperanza - Ma**	**0.65**	**22**	*i*P	**Pg**	**17 05 35.9**	**+0.1**
EMPR				*e*S	**Sg**	**17 05 43.0**	**-1.4**
AGPR	**Aguadilla, PR**	**0.67**	**332**		**Pg**	**17 05 35.6**	**-0.6**
AGPR				Sg	**Sg**	**17 05 43.4**	**-1.6**
AGPR				IAML		17 05 48.2	
	comp=Z,7μm,0.7s						
AGPR				IAML		17 05 50.2	
	comp=Z,6μm,0.4s						
GCPR	**Guaynabo City**	**0.79**	**57**		**Pb**	**17 05 38.2**	**-0.4**
GCPR				Sg	**Sb**	**17 05 48.3**	**-1.0**
GCPR	**Guaynabo City**	**0.79**	**57**	P	**Pb**	**17 05 38.4**	**-0.3**
GCPR				S	**Sb**	**17 05 48.9**	**-0.4**
GCPR	**Guaynabo City**	**0.79**	**57**	*e*P	**Pb**	**17 05 38.5**	**-0.3**
GCPR				*e*S	**Sb**	**17 05 48.5**	**-0.8**
IDE	**Isla Desecheo**	**0.83**	**308**		**Pb**	**17 05 38.7**	**-0.6**
IDE					**Sb**	**17 05 49.3**	**-1.0**
IDE	**Isla Desecheo**	**0.83**	**308**	*e*P	**Pb**	**17 05 38.7**	**-0.6**
IDE				*e*S	**Sb**	**17 05 49.3**	**-1.0**
HUMP	**Col San Antoni**	**0.93**	**73**		**Pb**	**17 05 40.7**	**-0.3**
HUMP				Sg	**Sg**	**17 05 53.3**	**0.0**
HUMP				IAML		17 05 58.8	
	comp=Z,3μm,0.2s						
HUMP	**Col San Antoni**	**0.93**	**73**	P	**Pb**	**17 05 41.1**	**+0.1**
HUMP	**Col San Antoni**	**0.93**	**73**	*e*P	**Pg**	**17 05 41.3**	**+0.2**
HUMP				*e*S	**Sg**	**17 05 53.6**	**+0.3**
CUPR	**Culebra, Puert**	**1.49**	**73**		**Pb**	**17 05 50.5**	**-0.1**
DR12	**Loma Pena Alta**	**2.63**	**291**		**Pn**	**17 06 08.8**	**+1.6**
SMDR	**Samana, DR**	**2.68**	**302**		**Pb**	**17 06 09.3**	**-1.5**
SDD	**Santo Domingo**	**3.03**	**281**	Pn	**Pn**	**17 06 09.7**	**-0.9**
SABA	**Saba**	**3.38**	**94**		**Pn**	**17 06 14.1**	**-1.4**
SABA	**Saba**	**3.38**	**94**	*e*P	**Pn**	**17 06 17.9**	**+2.3**
SABA				*e*S	**Sn**	**17 06 57.1**	**+1.6**
BANI	**BANI**	**3.44**	**279**		**Pn**	**17 06 14.8**	**-1.5**
SMRT	**St. Maarten**	**3.54**	**87**		**Pn**	**17 06 16.7**	**-0.9**
SMRT	**St. Maarten**	**3.54**	**87**		**Sn**	**17 06 59.7**	**+0.5**
SMRT	**St. Maarten**	**3.54**	**87**	P	**Pn**	**17 06 19.0**	**+1.4**
SMRT	**St. Maarten**	**3.54**	**87**	*e*P	**Pn**	**17 06 19.0**	**+1.4**
SMRT				*e*S	**Sn**	**17 06 59.7**	**+0.5**
SKI	**Saint Kitts**	**3.90**	**97**	*e*P	**Pn**	**17 06 24.7**	**+2.1**
SKI	**Saint Kitts**	**3.90**	**97**	*e*P	**Pn**	**17 06 25.1**	**+2.5**
SKI				*e*S	**Sn**	**17 07 07.8**	**-0.3**
SC01	**Santiago de lo**	**4.04**	**293**		**Pn**	**17 06 27.0**	**+2.4**
SDDR	**Presa de Saban**	**4.42**	**285**	Pn	**Pn**	**17 06 31.8**	**+2.1**
SDDR	**Presa de Saban**	**4.42**	**285**	*e*P	Pn	17 06 34.8	+5.1
SDDR				x	x	17 07 36.5	
MBFL	**Flemmings, Mon**	**4.51**	**104**	*e*P	**Pn**	**17 06 33.1**	**+2.2**
MBFL				*e*S	**Sn**	**17 07 21.8**	**-1.4**
MBWH	**Windy Hill**	**4.53**	**104**	*e*P	**Pn**	**17 06 32.8**	**+1.5**
MBWH				*e*S	**Sn**	**17 07 22.6**	**-1.2**
MLYT	**Lee's Yard**	**4.54**	**104**	*e*P	**Pn**	**17 06 31.9**	**+0.5**
MLYT				*e*S	**Sn**	**17 07 20.6**	**-3.3**
ANWB	**Willy Bob**	**4.77**	**92**	*e*P	**Pn**	**17 06 36.9**	**+2.3**
DHSZ	**Broadband at M**	**5.06**	**108**	*e*P	**Pn**	**17 06 39.8**	**+1.3**
DHSZ				*e*S	**Sn**	**17 07 35.4**	**-1.4**
GDHS	**Morne Mazeau,**	**5.06**	**108**	Pn	**Pn**	**17 06 38.8**	**+0.2**
MMLZ	**Guadeloupe Bro**	**5.22**	**110**	*e*P	**Pn**	**17 06 42.1**	**+1.3**
MMLZ				*e*S	**Sn**	**17 07 38.6**	**-2.2**
ABD	**La Joyeuse, An**	**5.25**	**105**	Pn	**Pn**	**17 06 40.5**	**-0.6**
CBE	**Ff, Capester**	**5.27**	**109**	Pn	**Pn**	**17 06 41.8**	**+0.3**
CBE	**Ff, Capester**	**5.27**	**109**		**Sn**	**17 07 40.2**	**-1.8**
TBG	**Guadaloupe-3**	**5.32**	**111**	*e*P	**Pn**	**17 06 42.6**	**+0.5**
TBG				*e*S	**Sn**	**17 07 40.1**	**-3.0**
TDBA	**Terre de Bas,**	**5.33**	**111**	Pn	**Pn**	**17 06 42.6**	**+0.4**
GRTK	**Grand Turk**	**5.46**	**312**	*i* P	**Pn**	**17 06 44.0**	**-0.1**
GRTK				IAML		17 07 52.7	
	comp=Z,48nm,0.8s						
MAGL	**Barre de l'ile**	**5.60**	**109**	Pn	**Pn**	**17 06 46.5**	**+0.4**
DSLB	**Salisbury**	**5.68**	**114**	*e*P	**Pn**	**17 06 48.4**	**+1.2**
DSLB				*e*S	**Sn**	**17 07 48.7**	**-3.5**

DSDZ	**La Diserade, G**	**5.69**	**105**	*e*P	**Pn**	**17 06 49.0**	**+1.9**	
DSDZ				*e*S	**Sn**	**17 07 48.8**	**-3.4**	
GDSD	**La Dsirade Is**	**5.69**	**105**	Pn	**Pn**	**17 06 46.4**	**-0.8**	
BIM	**Bigot**	**6.42**	**121**	Pn	**Pn**	**17 06 57.8**	**+0.4**	
BIM	**Bigot**	**6.42**	**121**	*e*P	**Pn**	**17 06 57.7**	**+0.3**	
BIM				*e*S	**Sn**	**17 08 04.6**	**-5.9**	
MPOM	**Morne Pois Mar**	**6.64**	**120**	Pn	**Pn**	**17 07 00.8**	**+0.5**	
SLBI	**Saint Lucia, B**	**6.78**	**124**	*e*P	**Pn**	**17 07 03.9**	**+1.8**	
SLBI				*e*S	**Sn**	**17 08 12.5**	**-6.6**	
SDV	**Santo Domingo**	**9.69**	**203**	Pn	**Pn**	**17 07 43.8**	**+1.5**	
	comp=Z,0.8nm,0.3s,baz=16,slow=22,SNR=6.4							
SDV				Sn	**Sn**	**17 09 33.4**	**+2.3**	
	comp=Z,0.6nm,0.3s,baz=319,slow=12,SNR=2.1							
SDV				LR	LR	17 12 04.2		
	comp=Z,46nm,18.4s,baz=264,slow=42							
	comp=Z,1.7nm,0.4s							
SDV	**Santo Domingo**	**9.69**	**203**	Pn	**Pn**	**17 07 43.4**	**+1.0**	
MTDJ	**Mount Denham**	**10.23**	**274**	Pn	**Pn**	**17 07 47.2**	**-2.5**	
061Z	**Ochoppi**	**15.32**	**304**	Pn	**Pn**	**17 08 56.2**	**-2.8**	
BIRD	**Birdtown, Kers**	**20.68**	**326**	P	**P**	**17 10 02.2**	**-0.5**	
BIRD				IAmb	IAmb	17 10 29.0		
	comp=Z,9.1nm,0.8s							
W57A	**Gilead**	**20.84**	**328**		**P**	**17 10 04.6**	**+0.3**	
W57A				IAmb	IAmb	17 10 20.3		
	comp=Z,8.5nm,0.7s							
R58B	**Mineral**	**22.25**	**336**	P	**P**	**17 10 19.6**	**+0.1**	
R58B				IAmb	IAmb	17 10 34.7		
	comp=Z,6.9nm,0.5s							
BG3	**Lake Jocassee**	**22.30**	**323**	P	**P**	**17 10 20.0**	**-0.2**	
BG3				IAmb	IAmb	17 10 37.3		
	comp=Z,20nm,1.5s							
V53A	**Saluda**	**22.72**	**324**	P	**P**	**17 10 25.2**	**+0.5**	
V53A				IAmb	IAmb	17 10 51.5		
	comp=Z,9.2nm,1.0s							
X51A	**Calhoun**	**23.16**	**319**	P	**P**	**17 10 27.0**	**-2.1**	
X51A				IAmb	IAmb	17 10 45.1		
	comp=Z,12nm,1.0s							
W50A	**Signal Mountai**	**23.86**	**320**	P	**P**	**17 10 36.1**	**0.0**	
SSPA	**Standing Stone**	**24.62**	**339**	P	**P**	**17 10 42.5**	**-0.5**	
SSPA				IAmb	IAmb	17 11 07.5		
	comp=Z,10nm,1.1s							
Q52A	**Bidwell**	**24.96**	**330**	P	**P**	**17 10 45.5**	**-0.6**	
L61B	**Northampton**	**25.00**	**350**	P	**P**	**17 10 47.0**	**+0.5**	
J59A	**Piesco**	**26.33**	**347**	P	**P**	**17 10 58.3**	**-0.2**	
WMOK	**Wichita Mounta**	**33.05**	**307**	P	**P**	**17 11 59.8**	**+1.5**	
TXAR	**Lajitas Array**	**35.53**	**296**	P	**P**	**17 12 21.2**	**+1.3**	
	comp=Z,0.3nm,0.5s,baz=114,slow=9.7,SNR=6.0							
	comp=Z,0.3nm,0.5s							
TXAR	**Lajitas Array**	**35.53**	**296**	P	**P**	**17 12 20.6**	**+0.7**	
TX31	**Lajitas Ar. Si**	**35.53**	**296**	P	**P**	**17 12 21.0**	**+1.1**	
TBO	**Thunder Bay**	**35.77**	**334**	P	**P**	**17 12 22.8**	**+1.1**	
SCHQ	**Schefferville**	**36.89**	**360**	P	**P**	**17 12 31.1**	**0.0**	
SCHQ				IAmb	IAmb	17 12 37.2		
	comp=Z,6.2nm,1.1s							
EPLO	**Experimental L**	**38.42**	**332**	P	**P**	**17 12 44.8**	**+0.7**	
SDCO	**Great Sand Dun**	**39.20**	**308**	P	**P**	**17 12 52.1**	**+1.0**	
PDAR	**Pinedale Array**	**43.85**	**314**	P	**P**	**17 13 30.3**	**+1.1**	
	comp=Z,0.3nm,0.7s,baz=96,slow=7.6,SNR=2.4							
	comp=Z,0.3nm,0.7s							
PDAR	**Pinedale Array**	**43.85**	**314**	P	**P**	**17 13 29.5**	**+0.3**	
CPUP	**Villa Florida**	**44.89**	**168**	P	**P**	**17 13 36.3**	**-1.0**	
	comp=Z,1.2nm,0.4s,baz=343,slow=9.4,SNR=4.6							
	comp=Z,1.2nm,0.4s							
YKA	**Yellowknife Ar**	**55.45**	**335**	P	**P**	**17 14 57.8**	**+0.8**	
	comp=Z,0.5nm,0.6s,baz=113,slow=6.0,SNR=9.9							
	comp=Z,0.5nm,0.6s							
YKA	**Yellowknife Ar**	**55.45**	**335**	P	**P**	**17 14 57.4**	**+0.4**	
ILAR	**Eielson Array**	**69.77**	**333**	P	**P**	**17 16 33.3**	**+0.7**	
	comp=Z,0.5nm,0.8s,baz=79,slow=6.5,SNR=4.7							
	comp=Z,0.5nm,0.8s					

H08S2	**Diego Garcia H**	**27.36**	**252**	T	T	17 41 01.5		
	baz=73,slow=76,SNR=18							
H08S3	**Diego Garcia H**	**27.37**	**252**	T	T	17 41 08.0		
	baz=73,slow=76,SNR=15							
H08S1	**Diego Garcia H**	**27.38**	**252**	T	T	17 41 09.4		
	baz=73,slow=76,SNR=15							
MTN	**Manton Dam**	**34.89**	**114**	P	**P**	**17 14 41.0**	**-0.5**	
LZDM	**Lanzhou Array**	**35.44**	**7**	P	**P**	**17 14 46.3**	**-0.1**	
	comp=Z,0.6nm,0.3s,baz=186,slow=12,SNR=2.0							
	comp=Z,0.6nm,0.3s							
WB0	**Warramunga Arr**	**40.48**	**122**	P	**P**	**17 15 27.1**	**-1.5**	
WB0				IAmb	IAmb	17 15 55.6		
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**40.51**	**122**	P	**P**	**17 15 27.1**	**-1.8**	
	comp=Z,0.5nm,0.7s,baz=306,slow=8.7,SNR=5.7							
	comp=Z,0.5nm,0.7s							
WR8	**Warramunga Arr**	**40.65**	**122**	P	**P**	**17 15 27.6**	**-2.5**	
WR8				IAmb	IAmb	17 15 57.0		
	comp=Z,5.5nm,1.4s							
ASAR	**Alice Springs**	**41.90**	**128**	P	**P**	**17 15 38.7**	**-1.6**	
	comp=Z,0.4nm,0.6s,baz=299,slow=7.5,SNR=9.8							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**41.90**	**128**	P	**P**	**17 15 38.1**	**-2.2**	
FORT	**Forrest**	**41.92**	**141**	P	**P**	**17 15 38.7**	**-1.6**	
BJT	**Baijiatuan**	**42.31**	**20**	P	**P**	**17 15 43.6**	**+0.4**	
BJT				IAmb	IAmb	17 15 45.5		
	comp=Z,4.8nm,0.6s							
KSAR	**Wonju Array Be**	**45.46**	**33**	P	**P**	**17 16 07.9**	**-0.7**	
NRN	**Naryn**	**45.47**	**336**	P	**P**	**17 16 09.0**	**-0.1**	
KDJ	**Kajisay**	**45.60**	**338**	P	**P**	**17 16 10.3**	**+0.4**	
KDJ				IAmb	IAmb	17 16 12.6		
	comp=Z,3.5nm,1.0s							
SONM	**Songino Array**	**47.48**	**7**	P	**P**	**17 16 25.6**	**+1.2**	
	comp=Z,0.7nm,0.4s,baz=190,slow=9.5,SNR=14							
	comp=Z,0.7nm,0.4s							
SONM	**Songino Array**	**47.48**	**7**	P	**P**	**17 16 25.0**	**+0.7**	
MKAR	**Makanchi Array**	**48.14**	**345**	P	**P**	**17 16 30.4**	**+1.0**	
	comp=Z,2.5nm,0.5s,baz=156,slow=8.9,SNR=79							
	comp=Z,2.5nm,0.5s							
MAKZ	**Makanchi**	**48.23**	**345**	P	**P**	**17 16 30.6**	**+0.4**	
MAKZ				IAmb	IAmb	17 16 31.7		
	comp=Z,2.1nm,0.6s							
BBOO	**Buckleboo**	**48.48**	**137**	P	**P**	**17 16 30.6**	**-1.6**	
INKA	**Innaminka**	**49.27**	**128**	P	**P**	**17 16 36.3**	**-2.0**	
INKA				IAmb	IAmb	17 17 08.9		
	comp=Z,3.5nm,1.4s							
JCJ	**Chichijima**	**49.35**	**54**	P	**P**	**17 16 37.5**	**-1.5**	
STKA	**Stephens Creek**	**51.91**	**133**	P	**P**	**17 16 57.6**	**-0.5**	
KURBB	**Kurchatov Arra**	**52.65**	**344**	P	**P**	**17 17 04.0**	**+0.7**	
	comp=Z,0.9nm,0.8s,baz=163,slow=6.3,SNR=9.0							
KURK	**Kurchatov**	**52.71**	**344**	P	**P**	**17 17 04.0**	**+0.3**	
KURK	**Kurchatov**	**52.71**	**344**	IAmb	IAmb	17 17 05.4		
	comp=Z,1.9nm,0.9s							
JMM	**Marumori**	**53.58**	**41**	P	**P**	**17 17 10.8**	**+0.5**	
ZAA0	**Zalesovo Array**	**54.34**	**350**	P	**P**	**17 17 15.3**	**-0.3**	
ZAA0				IAmb	IAmb	17 17 17.0		
	comp=Z,5.3nm,1.2s							
ZALV	**Zalesovo Beam**	**54.34**	**350**	P	**P**	**17 17 16.2**	**+0.6**	
	comp=Z,1.7nm,0.4s,baz=165,slow=6.9,SNR=15							
	comp=Z,1.7nm,0.4s							
ZALV	**Zalesovo Beam**	**54.34**	**350**	P	**P**	**17 17 15.8**	**+0.2**	
BVAR	**Borovoye Array**	**57.26**	**340**	P	**P**	**17 17 36.6**	**+0.1**	
	comp=Z,0.8nm,0.4s,baz=131,slow=9.3,SNR=6.2							
	comp=Z,0.8nm,0.4s							
BORK	**Borovoye**	**57.30**	**340**	P	**P**	**17 17 36.2**	**-0.6**	
BORK				IAmb	IAmb	17 17 41.8		
	comp=Z,1.1nm,0.6s							
ABKAR	**Akbulak array**	**58.69**	**331**	P	**P**	**17 17 46.5**	**-0.1**	
H04N2	**CROZET ISLANDS**	**62.15**	**215**	T	T	18 24 46.0		
	baz=55,slow=75,SNR=24							
H04N1	**CROZET ISLANDS**	**62.16**	**215**	T	T	18 24 48.2		
	baz=55,slow=75,SNR=24							
H04N3	**CROZET ISLANDS**	**62.17**	**215**	T	T	18 24 45.1		
	baz=55,slow=75,SNR=28							
ARTI	**Arti**	**64.30**	**336**	P	**P**	**17 18 22.8**	**-1.5**	
	comp=Z,1.4nm,0.5s,baz=164,slow=7.3,SNR=3.0							
	comp=Z,1.4nm,0.5s							
ARTI	**Arti**	**64.30**	**336**	P	**P**	**17 18 22.3**	**-2.0**	
FINES	**FINESS Array B**	**81.16**	**332**	P	**P**	**17 20 04.1**	**+0.1**	
	comp=Z,2.6nm,1.1s,baz=111,slow=8.4,SNR=3.9							
	comp=Z,2.6nm,1.1s							
IMAR	**Indian Mountai**	**96.52**	**23**	P	**P**	**17 21 19.3**	**+1.5**	

*ASRS **28** 17:18:31.1±0.1,52.7N±0.6×87.9E±0.9, h1km, MLh3.4/22, Error ellipse: s-maj=1.9km s-min=1.3km az=75.5, confirmed*

*NNC **28** 17:18:37.2±1.0,52.77N×87.72E, h2km±6km, mb3.9, mpv3.5, Error ellipse: s-maj=8.4km s-min=3.1km az=85.0, Suspected Mining explosion.*

ISC 28 17:18:32.9±0.7, 52.77N±0.02×88.05E±0.02, h0km, n45, σ1s36/91, 7C-10D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALT1	**Kaltan 1**	**0.75**	**330**	Pg	**Pg**	**17 18 47.2**	**0.0**
KALT1				Sg	**Sg**	**17 18 56.7**	**-0.2**
KALT2	**Kaltan 2**	**0.77**	**326**	⇓Pg	**Pb**	**17 18 48.4**	**-0.7**
KALT2				Sg	**Sg**	**17 18 58.3**	**+0.7**
MALIN	**Malinovka, Kuz**	**0.80**	**325**	Pg	**Pg**	**17 18 48.0**	**-0.2**
MALIN				Sg	**Sg**	**17 18 58.1**	**-0.5**
KIYZ	**Kiyzas, Kuzbas**	**0.81**	**348**	⇓Pg	**Pg**	**17 18 48.4**	**0.0**
KIYZ				Sg	**Sg**	**17 18 59.5**	**+0.6**
KALT3	**Kaltan 3**	**0.83**	**334**	Pg	**Pg**	**17 18 48.6**	**-0.2**
KALT3				Sg	**Sg**	**17 18 59.6**	**+0.1**
TAIL	**Tailep, Kuzbas**	**0.85**	**323**	Sg	**Sg**	**17 18 59.7**	**-0.5**
LUZB	**Luzhba, Kemero**	**1.03**	**30**	Sg	**Pb**	**17 18 53.4**	**-0.2**
LUZB				Sg	**Sb**	**17 19 07.4**	**-0.2**
YALR	**Yailyu, Altay**	**1.04**	**195**	Pg	**Pg**	**17 18 51.8**	**-0.9**
YALR				Sg	**Sg**	**17 19 04.8**	**-1.4**
ARTR	**Artybash**	**1.08**	**206**	Pg	**Pg**	**17 18 52.9**	**-0.6**
ARTR				Sg	**Sg**	**17 19 07.4**	**-0.2**
ELT	**Eltsovka**	**1.20**	**295**	⇓Pg	**Pg**	**17 18 54.0**	**-1.9**
ELT				Sg	**Sg**	**17 19 09.1**	**-2.3**
ERU	**Erunakovo, Kuz**	**1.43**	**344**	⇓Pg	**Pn**	**17 18 59.8**	**-0.3**
ERU				Sg	**Sn**	**17 19 19.3**	**-0.3**
VEH	**Verkhnyaya Baz**	**1.45**	**70**	Pg	**Pg**	**17 19 00.4**	**-0.3**
VEH				Sg	**Sn**	**17 19 22.3**	**+1.9**
GALT	**Gorno-Altaysk,**	**1.52**	**239**	Pg	**Pn**	**17 19 00.4**	**-1.0**
GALT				Sg	**Sn**	**17 19 18.7**	**-3.2**
VCHU	**Verkh-Chumysh,**	**1.53**	**322**	Pg	**Pb**	**17 19 02.0**	**-0.1**
VCHU				Sg	**Sn**	**17 19 22.9**	**+0.9**
KOTO	**Kotino, Kuzbas**	**1.57**	**335**	Pg	**Pg**	**17 19 02.8**	**-0.2**
KOTO				Sg	**Sg**	**17 19 24.6**	**+1.2**
BJR3	**Bachatsky-3 (S**	**1.84**	**323**	Pg	**Pn**	**17 19 06.3**	**+0.6**
BJR3				Sg	**Sb**	**17 19 31.4**	**+0.3**
BJR4	**Bachatsky-4, K**	**1.86**	**326**	Pg	**Pb**	**17 19 07.4**	**-0.4**
BJR4				Sg	**Sg**	**17 19 32.8**	**+0.1**
BJR1	**Bachatsky 1, K**	**1.90**	**322**	Pg	**Pn**	**17 19 07.1**	**+0.5**
BJR1				Sg	**Sb**	**17 19 32.0**	**-0.7**
BJR2	**Bachatsky-2, K**	**1.90**	**324**	Pg	**Pb**	**17 19 07.4**	**-1.0**
BJR2				Sg	**Sg**	**17 19 33.6**	**-0.3**
DJO	**Djoy, Khakassi**	**1.93**	**88**	Pg	**Pg**	**17 19 09.8**	**0.0**
DJO				Sg	**Sg**	**17 19 35.2**	**+0.5**
CERR	**Cheremushki**	**2.04**	**86**	Pg	**Pg**	**17 19 11.4**	**-0.7**
CERR				Sg	**Sg**	**17 19 39.3**	**+0.7**
ULGR	**Ulagan, Altay**	**2.15**	**181**	Pg	**Pb**	**17 19 12.7**	**-0.1**
ULGR				Sg	**Sb**	**17 19 39.8**	**-0.1**
SALR	**Pechorkino, Sa**	**2.16**	**321**	Pg	**Pb**	**17 19 11.8**	**-1.1**
SALR				Sg	**Sb**	**17 19 39.9**	**-0.3**
TEL	**Teeli**	**2.20**	**142**	Pg	**Pb**	**17 19 12.4**	**-1.2**
TEL				Sg	**Sg**	**17 19 42.6**	**-1.0**
ZAA0	**Zalesovo Array**	**2.27**	**303**	⇓Pn	**Pb**	**17 19 13.4**	**-1.3**
	9.0nm,0.3s						
ZAA0				⇓Sn	**Sn**	**17 19 40.8**	**+0.6**
	32nm,0.4s						
AKAR	**Aktash**	**2.47**	**186**	Pg	**Pb**	**17 19 18.2**	**0.0**
AKAR				Sg	**Sb**	**17 19 48.5**	**-0.6**
CHBI	**Chibit, Altay**	**2.48**	**188**	Pg	**Pb**	**17 19 18.3**	**-0.1**
CHBI				Sg	**Sb**	**17 19 50.2**	**+0.7**
CUR	**Chagan-Uzun**	**2.68**	**176**	Pg	**Pb**	**17 19 22.6**	**+0.8**
CUR				Sg	**Sg**	**17 19 57.8**	**-1.2**
UKR	**Ust'-Kan**	**2.74**	**229**	Pg	**Pb**	**17 19 22.4**	**-0.4**
UKR				Sg	**Sb**	**17 19 58.2**	**+1.3**
TUNR	**Tungur**	**2.83**	**203**	Pg	**Pb**	**17 19 24.4**	**+0.1**
TUNR				Sg	**Sb**	**17 20 00.5**	**+1.1**
BRCR	**Berchikul'**	**2.88**	**3**	Pg	**Pb**	**17 19 24.1**	**-1.1**
BRCR				Sg	**Sg**	**17 20 02.8**	**-2.6**
BALAH	**Balakhonka, Ku**	**3.09**	**338**	Pg	**Pb**	**17 19 26.2**	**-2.4**
BALAH				Sg	**Sb**	**17 20 07.4**	**+0.6**
DGZ	**Jazzator, Alta**	**3.10**	**187**	Pg	**Pb**	**17 19 29.3**	**+0.4**
DGZ				Sg	**Sb**	**17 20 08.0**	**+0.7**
KHAR	**Kharino, NSO,**	**3.23**	**307**	Pg	**Pb**	**17 19 31.2**	**+0.2**
KHAR				Sg	**Sb**	**17 20 11.0**	**0.0**
ARDR	**Aradan**	**3.28**	**91**	Pn	**Pb**	**17 19 29.3**	**-2.7**
ARDR				Pg	**Pg**	**17 19 33.8**	**-1.9**
ARDR				Sg	**Sg**	**17 20 17.3**	**-1.0**
NVSII	**Novosibirsk**	**3.53**	**308**	Pg	**Pb**	**17 19 35.1**	**-1.0**
NVSII				Sg	**Sb**	**17 20 19.5**	**+0.1**
NVS	**Novosibirsk**	**3.53**	**308**	Pg	**Pb**	**17 19 35.1**	**-1.0**
NVS				Sg	**Sb**	**17 20 18.7**	**-0.8**
NHES	**Novosibirsk, N**	**3.66**	**307**	Pg	**Pb**	**17 19 40.2**	**+1.9**
NHES				Sg	**Sb**	**17 20 26.7**	**+3.5**
BSTK	**Bystrovka, Nov**	**3.68**	**301**	Pg	**Pb**	**17 19 39.0**	**+0.3**
BSTK				Sg	**Sg**	**17 20 27.7**	**-3.4**
MINR	**Mina**	**4.22**	**57**	Pn	**Pn**	**17 19 40.5**	**+2.1**
MINR				Pg	**Pg**	**17 19 52.5**	**-1.3**
MINR				Sg	**Sg**	**17 20 47.5**	**-1.0**
GZLN	**Zheleznogorsk**	**4.92**	**40**	Pg	**Pg**	**17 20 05.2**	**-1.8**
GZLN				Sg	**Sg**	**17 21 15.1**	**+4.4**
KURK	**Kurchatov**	**6.21**	**254**	⇑Pn	**Pn**	**17 20 06.7**	**+1.0**
	0.8nm,0.7s						
KURK				⇑Sn	**Sn**	**17 21 17.7**	**+0.4**
	1.2nm,0.5s						
KURK				⇓Lg	Lg	17 21 49.3	
	6.1nm,0.8s						
KURBB	**Kurchatov Arra**	**6.30**	**254**	⇓Pn	**Pn**	**17 20 08.3**	**+1.4**
	3.5nm,0.7s						
KURBB				⇑Sn	**Sn**	**17 21 20.2**	**+0.8**
	6.4nm,0.5s						
KURBB				⇓Lg	Lg	17 21 52.2	
	22nm,0.7s						
MK31	**Makanchi Array**	**7.05**	**214**	⇑Pn	**Pn**	**17 20 20.0**	**+2.7**
	2.6nm,0.5s,baz=29,slow=12,SNR=220						
MK31				Sn	**Sn**	**17 21 41.1**	**+3.0**
	1.8nm,0.7s,baz=34,slow=28,SNR=5.4						
MK31				⇑Lg	Lg	17 22 17.2	
	3.3nm,0.6s						
MAKZ	**Makanchi**	**7.14**	**216**	⇑Pn	**Pn**	**17 20 21.4**	**+2.8**
	3.3nm,0.6s						
MAKZ				⇑Sn	**Sn**	**17 21 42.0**	**+1.6**
	2.0nm,0.4s						
MAKZ				⇓Lg	Lg	17 22 17.2	
	2.7nm,0.6s						

*DNK **28** 17:30:02.9±1.3,51.36N×16.23E, h30km, ML3.0, Presumed earthquake*

*VIE **28** 17:30:05.1±0.7,51.36N×15.93E, h0km, mb2.5/2, ml2.5/2, Error ellipse: s-maj=7.2km s-min=3.1km az=42.0 81 km WNW of Wroclaw Suspected Mining induced.*

*PRU **28** 17:30:05.8,51.38N×16.11E, h0km*

ISC 28 17:30:01.8±0.8, 51.54N±0.03×16.16E±0.03, h0km, n27, σ1s06/53, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**173**	*e*Pg	**Pb**	**17 30 16.3**	**-0.5**
KSP				*e*Sg	**Sg**	**17 30 24.6**	**+0.5**
CHVC	**Chvalec**	**0.95**	**184**	*e*PG	**Pb**	**17 30 20.6**	**-0.5**
CHVC				*e*SG	**Sg**	**17 30 31.8**	**-0.4**
	comp=Z,8.4nm,0.3s						
OSTC	**Ostas**	**0.98**	**178**	*e*PG	**Pb**	**17 30 21.8**	**+0.2**
OSTC				*e*SG	**Sg**	**17 30 33.2**	**0.0**
UPC	**Upice**	**1.03**	**185**	*e*PG	**Pb**	**17 30 22.5**	**0.0**
UPC				*e*SG	**Sg**	**17 30 34.7**	**-0.2**
	comp=Z,25nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**175**	*e*PG	**Pb**	**17 30 25.0**	**-0.2**
DPC				*e*SG	**Sg**	**17 30 39.1**	**-0.8**
	comp=Z,8.8nm,0.3s						
PVCC	**Panska Ves**	**1.42**	**226**	*e*PG	**Pb**	**17 30 29.2**	**+0.1**
PVCC				*e*SG	**Sg**	**17 30 46.7**	**-0.7**
	comp=Z,30nm,0.2s						
KRLC	**Kraliky**	**1.51**	**165**	*e*PG	**Pg**	**17 30 31.4**	**+0.7**
KRLC				*e*SG	**Sg**	**17 30 48.9**	**-1.4**
BRG	**Berggiesshubel**	**1.54**	**245**	Pg	**Pg**	**17 30 32.0**	**+0.7**
BRG				Sg	**Sg**	**17 30 52.0**	**+0.7**
BRG				Amp		17 30 53.6	
	comp=Z,22nm,0.4s						
PRU	**Pruhonice**	**1.86**	**214**	*e*SG	**Sb**	**17 31 00.3**	**0.0**
	comp=Z,19nm,0.4s						
STEB	**Steborice**	**1.90**	**147**	*e*PG	**Pb**	**17 30 37.3**	**0.0**
STEB				*e*SG	**Sn**	**17 31 00.6**	**+0.5**
HSKC	**Hora Svate Kat**	**1.96**	**243**	*e*PG	**Pb**	**17 30 38.4**	**+0.1**
HSKC				*e*SG	**Sb**	**17 31 03.0**	**-0.2**
	comp=Z,13nm,0.3s						
MORC	**Moravsky Berou**	**1.97**	**153**	*e*PN	**Pn**	**17 30 37.1**	**+0.7**
MORC				*e*SG	**Sn**	**17 31 00.6**	**-1.2**
CLL	**Collm**	**1.99**	**265**	*e*Pn	**Pn**	**17 30 37.0**	**+0.4**
CLL				*e*Pg	**Pb**	**17 30 39.0**	**+0.2**
CLL				*e*x	x	17 30 45.0	
CLL				*e*Sg	**Sg**	**17 31 06.0**	**+0.3**
	comp=Z,11nm,0.5s						
VRAC	**Vranov**	**2.25**	**173**	*e*PN	**Pn**	**17 30 41.5**	**+1.3**
VRAC				*e*SG	**Sb**	**17 31 10.5**	**-1.0**
TREC	**Trest**	**2.28**	**191**	*e*SG	**Sb**	**17 31 13.1**	**+0.5**
KRUC	**Moravsky**	**2.48**	**176**	*e*PN	**Pn**	**17 30 44.7**	**+1.3**
KRUC				*e*SG	**Sb**	**17 31 18.5**	**+0.3**
NKC	**Novy Kostel**	**2.69**	**242**	*e*PG	**Pg**	**17 30 53.7**	**+0.5**
NKC				*e*SG	**Sg**	**17 31 28.1**	**0.0**
	comp=Z,13nm,0.3s						
KHC	**Kasperske Hory**	**2.92**	**216**	*e*PN	**Pn**	**17 30 50.0**	**+0.5**
KHC				*e*PG	**Pb**	**17 30 56.1**	**+1.4**
KHC				*e*SN	**Sn**	**17 31 23.5**	**-1.8**
KHC				*e*SG	**Sg**	**17 31 33.3**	**-2.2**
	comp=Z,3.9nm,0.4s						
LANS	**Liptovska Anna**	**3.19**	**137**	*e*SG	**Sg**	**17 31 44.1**	**-0.1**
MODS	**Modra-Piesok**	**3.25**	**167**	*e*SG	**Sg**	**17 31 46.4**	**+0.4**
CONA	**Conrad Observa**	**3.62**	**183**	*i* Pn	**Pn**	**17 30 59.6**	**+0.5**
	comp=Z,0.8nm,0.4s						
CONA				*e*Sg	**Sg**	**17 31 55.3**	**-2.5**
	comp=Z,2.1nm,0.3s						
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	**Pn**	**17 31 00.8**	**+1.2**
BSD				*i* S	**Sn**	**17 31 42.1**	**-1.3**
BSD				IAML		17 31 47.1	
	comp=Z,16nm,0.9s						
MOA	**Molln**	**3.89**	**199**	*i* Pn	**Pn**	**17 31 03.5**	**+0.8**
	comp=Z,0.2nm,0.1s						
MOA				Sg	**Sg**	**17 32 06.6**	**0.0**
	comp=Z,0.4nm,0.2s						
LUNU	**Lund**	**4.41**	**340**	*i* P	**Pn**	**17 31 10.8**	**+0.9**
LUNU				*i* S	**Sn**	**17 32 01.9**	**0.0**
BLEU	**Blekinge**	**4.78**	**358**	*i* P	**Pn**	**17 31 16.7**	**+1.8**
BLEU				*i* S	**Sn**	**17 32 08.9**	**-2.1**
BJUU	**Bjuv**	**4.91**	**339**	*i* P	**Pn**	**17 31 17.4**	**+0.6**
BJUU				*i* S	**Sn**	**17 32 11.5**	**-2.8**
DEL	**Delary**	**5.13**	**346**	*i* P	**Pn**	**17 31 20.4**	**+0.7**
DEL				*i* S	**Sn**	**17 32 17.4**	**-2.1**

*PRU **28** 17:53:34.2, 43.28N×17.41E, h10km*

*PDG **28** 17:53:34.6±0.5, 43.42N×17.16E, h0km±11km, ML3.3/11, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*

*BEO **28** 17:53:35.0±0.4, 43.44N×17.01E, h0km, ML2.9/11*

ISC 28 17:53:34.2±1.0, 43.42N±0.02×17.12E±0.02, h2km±9km, n89, σ1s51/163, 17C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RICI	**Ricice**	**0.07**	**9**	*i* Pg	**Pg**	**17 53 35.9**	**+0.1**
RICI				Sg	**Sg**	**17 53 36.9**	**+0.1**
MAKA	**Makarska**	**0.15**	**208**	*i* Pg	**Pg**	**17 53 37.8**	**+0.7**
MAKA				Sg	**Sg**	**17 53 40.5**	**+1.5**
HVAR	**Hvar**	**0.54**	**244**	*e*Pg	**Pg**	**17 53 44.1**	**-0.5**
HVAR				Sg	**Sg**	**17 53 52.2**	**+0.6**
LSTV	**Lastovo**	**0.67**	**194**	*i* Pg	**Pg**	**17 53 46.8**	**-0.3**
LSTV				Sg	**Sb**	**17 53 57.9**	**-0.4**
STON	**Ston**	**0.69**	**142**	*i* Pg	**Pg**	**17 53 47.4**	**-0.1**
STON				Sg	**Sb**	**17 53 58.5**	**-0.5**
STON	**Ston**	**0.69**	**142**	*e*Pg	**Pg**	**17 53 47.5**	**0.0**
STON				*e*Sg	**Sb**	**17 53 59.0**	**0.0**
KIJV	**Kijevo**	**0.78**	**319**	*e*Pg	**Pg**	**17 53 48.3**	**-0.9**
KIJV				Sg	**Sg**	**17 54 00.2**	**+0.9**
DBRK	**Dubrovnik**	**1.06**	**134**	*e*Pg	**Pg**	**17 53 53.8**	**-0.8**
DBRK				Sg	**Sn**	**17 54 11.2**	**-0.3**
ZIRJ	**Zirje**	**1.10**	**283**	*e*Pg	**Pb**	**17 53 53.5**	**-2.3**
ZIRJ				Sg	**Sn**	**17 54 11.0**	**-1.2**
MORI	**Morici**	**1.12**	**294**	*e*Pg	**Pb**	**17 53 54.1**	**-2.1**
MORI				Sg	**Sn**	**17 54 11.8**	**-0.9**
TREB	**Trebinje**	**1.15**	**127**	*e*Pg	**Pb**	**17 53 55.4**	**-1.3**
TREB				*e*Sg	**Sn**	**17 54 13.7**	**+0.3**
BRY	**Bratogost**	**1.16**	**116**	⇑*i*Pg	**Pb**	**17 53 55.4**	**-1.7**
BRY				*i* Sg	**Sn**	**17 54 13.6**	**-0.5**
BLY	**Banja Luka**	**1.33**	**2**	⇑P	**Pg**	**17 53 59.8**	**+0.1**
BLY				⇑S	**Sg**	**17 54 19.0**	**+2.1**
BLY	**Banja Luka**	**1.33**	**2**	*e*Pg	**Pb**	**17 53 59.6**	**-0.2**
BLY				*e*Sg	**Sg**	**17 54 17.9**	**+1.0**
HCY	**Herceg Novi**	**1.40**	**133**	⇓*i*Pg	**Pn**	**17 53 59.9**	**-0.9**
HCY				*i* Sg	**Sg**	**17 54 22.0**	**+2.7**
UDBI	**Udbina**	**1.48**	**319**	*e*Pn	**Pn**	**17 54 01.1**	**-0.8**
UDBI				Sn	**Sg**	**17 54 23.2**	**+1.6**
NKME	**Niksic**	**1.50**	**115**	⇑*i*Pg	**Pb**	**17 54 01.8**	**-0.9**
NKME				*i* Sg	**Sg**	**17 54 24.6**	**+2.4**
CEME	**Cevo**	**1.58**	**123**	⇑*i*Pg	**Pn**	**17 54 02.8**	**-0.5**
CEME				*i* Sg	**Sg**	**17 54 27.5**	**+2.4**
DUGI	**Dugi Otok**	**1.60**	**292**	*e*Pn	**Pn**	**17 54 03.4**	**0.0**
DUGI				Sn	**Sg**	**17 54 27.3**	**+1.8**
RUDO	**Rudo**	**1.65**	**82**	*e*Pn	**Pb**	**17 54 04.4**	**-0.9**
RUDO				*e*Sn	**Sg**	**17 54 29.4**	**+2.2**
PLE	**Pljevlja**	**1.66**	**92**	⇑*i*Pn	**Pg**	**17 54 06.3**	**+0.3**
PLE				*i* Sn	**Sg**	**17 54 30.3**	**+2.8**
PLE	**Pljevlja**	**1.66**	**92**	*e*Pn	**Pg**	**17 54 06.1**	**+0.1**
PLE				*e*Sn	**Sg**	**17 54 30.0**	**+2.5**
BBLS	**Lazi&#263i**	**1.72**	**74**	*e*Pn	**Pb**	**17 54 06.3**	**-0.2**
BBLS				*e*Sn	**Sg**	**17 54 30.4**	**+0.9**
BUM	**Brajici-Budva**	**1.72**	**130**	⇑*i*Pn	**Pb**	**17 54 05.4**	**-1.1**
BUM				*i* Sn	**Sg**	**17 54 31.5**	**+2.1**
VIRC	**Vir**	**1.73**	**301**	*e*Pn	**Pn**	**17 54 05.5**	**+0.3**
VIRC				Sn	**Sg**	**17 54 30.3**	**+0.6**
PLIT	**Plitvice**	**1.81**	**324**	*e*Pn	**Pb**	**17 54 07.4**	**-0.7**
PLIT				Sn	**Sg**	**17 54 33.4**	**+1.0**
KOME	**Kolasin**	**1.85**	**107**	⇑*i*Pn	**Pg**	**17 54 09.1**	**-0.5**
KOME				*i* Sn	**Sg**	**17 54 34.5**	**+1.0**
KOME	**Kolasin**	**1.85**	**107**	*e*Pn	**Pg**	**17 54 09.3**	**-0.3**
KOME				*e*Sn	**Sg**	**17 54 35.0**	**+1.5**
PDG	**Podgorica**	**1.86**	**121**	⇑P	**Pb**	**17 54 08.9**	**+0.1**
PDG				⇑S	**Sg**	**17 54 36.2**	**+2.4**
PDG	**Podgorica**	**1.86**	**121**	⇓*i*Pn	**Pg**	**17 54 07.9**	**-0.9**
PDG				*i* Sn	**Sg**	**17 54 34.7**	**+0.9**
PDG	**Podgorica**	**1.86**	**121**	*e*Pn	**Pb**	**17 54 08.5**	**-0.3**
PDG				*e*Sn	**Sg**	**17 54 34.7**	**+0.9**
DRME	**Dracevica, Mon**	**1.96**	**128**	*e*Pn	**Pb**	**17 54 09.9**	**-0.7**
DRME				*i* Sn	**Sg**	**17 54 37.5**	**+0.4**
NVLJ	**Novalja**	**1.98**	**306**	*e*Pn	**Pn**	**17 54 09.3**	**+0.6**
NVLJ				Sn	**Sg**	**17 54 37.1**	**-0.8**
TEKS	**Tekeris**	**2.08**	**56**	*e*Pn	**Pn**	**17 54 10.3**	**+0.3**
TEKS				*e*Sn	**Sg**	**17 54 39.6**	**-1.3**
SJES	**Sjenica**	**2.09**	**93**	*e*Pn	**Pb**	**17 54 13.0**	**+0.1**
SJES				*e*Sn	**Sb**	**17 54 39.6**	**+0.3**
BEY	**Berane**	**2.10**	**104**	*e*Pn	**Pb**	**17 54 13.4**	**+0.3**
BEY				*e*Sn	**Sg**	**17 54 40.4**	**-1.4**
IVA	**Berane**	**2.10**	**104**	⇑*i*Pn	**Pb**	**17 54 12.1**	**-1.0**
IVA				*i* Sn	**Sg**	**17 54 41.0**	**-0.8**
ULC	**Ulcinj**	**2.14**	**132**	⇓*i*Pn	**Pg**	**17 54 12.1**	**-1.6**
ULC				*i* Sn	**Sg**	**17 54 42.1**	**-0.8**
RABC	**Rab**	**2.14**	**309**	*i* Pn	**Pb**	**17 54 12.8**	**-0.9**
RABC				Sn	**Sb**	**17 54 41.6**	**+0.9**
DIVS	**Divibare**	**2.19**	**71**	*e*Pn	**Pb**	**17 54 13.0**	**-1.6**
DIVS				*e*Sn	**Sb**	**17 54 41.9**	**-0.3**
MOSL	**Moslavina**	**2.21**	**353**	*e*Pn	**Pn**	**17 54 12.0**	**+0.1**

RETA				*i* Sn	**Sn**	**17 56 16.5**	**+2.3**
	comp=Z,0.3nm,0.4s						
KHC	**Kasperske Hory**	**6.21**	**338**	*e*PN	**Pn**	**17 55 07.3**	**+0.4**
KHC				*e*SN	**Sn**	**17 56 18.2**	**-0.3**
ZVC	**Zvikov**	**6.35**	**342**	*e*PN	**Pn**	**17 55 10.1**	**+1.4**
MORC	**Moravsky Berou**	**6.37**	**2**	⇑P	**Pn**	**17 55 10.3**	**+1.4**
DAVA	**Damuels**	**6.40**	**310**	*i* Pn	**Pn**	**17 55 11.8**	**+2.2**
	comp=Z,1.6nm,0.6s						
DAVA				*i* Sn	**Sn**	**17 56 25.2**	**+2.0**
	comp=Z,0.2nm,0.3s						

*NEIC **28** 18:12:56.6±1.3,21°.13N±0°.08×101°.89E±0°.05,h18km±4km, mb4.0/8,Error ellipse: s-maj=11.4km s-min=6.4km az=177.0*
*IDC **28** 18:13:01.0±0.9,20°.88N×101°.50E,h0km,mb3.8/9, mbtmp3.7/11,ML3.7/2,MS3.1/12,Error ellipse: s-maj=21.8km s-min=14.7km az=110.0*
*BKK **28** 18:13:03.6±2.5,21°.N±6°×10°1E±1°0,h17km±23km,M4.5/8, MLv4.5/8*

ISC 28 18:12:56.1±0.6,20°.99N±0°.05×101°.86E±0°.05,h10km,n51, σ2s14/41,mb3.9/14,MS3.1/12,Laos

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAI	**Chiengmai2**	**2.84**	**249**	P	**Pn**	**18 13 41.7**	**0.0**
LAMP	**Lampang**	**3.23**	**221**	P	**Pn**	**18 13 49.2**	**+2.3**
UTTA	**Uttaradit**	**3.46**	**201**	P	**Pn**	**18 13 53.2**	**+3.2**
CHTO	**Chiang Mai**	**3.49**	**232**		**Pn**	**18 13 51.8**	**+1.2**
CHTO				Sn	**Sn**	**18 14 31.2**	**-0.8**
CHTO	**Chiang Mai**	**3.49**	**232**	P	**Pn**	**18 13 52.1**	**+1.5**
CM31	**Chiang Mai Arr**	**3.73**	**228**		**Pn**	**18 13 55.3**	**+1.5**
CM31				Sn	**Sn**	**18 14 37.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**3.73**	**228**	Pn	**Pn**	**18 13 55.4**	**+1.6**
	1.0nm,0.3s,baz=38,slow=12,SNR=19						
CMAR				Pg	**Pb**	**18 14 04.8**	**+2.7**
	9.9nm,0.3s,baz=45,slow=16,SNR=93						
CMAR				Lg	Lg	18 14 48.9	
	4.5nm,0.3s,baz=57,slow=31,SNR=8.2						
CMAR				LR	LR	18 15 20.6	
	comp=Z,201nm,20.6s,baz=60,slow=41						
	1.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**3.73**	**228**		**Pn**	**18 13 54.9**	**+1.1**
CM04	**Chiang Mai Arr**	**3.74**	**227**	P	**Pn**	**18 13 55.5**	**+1.5**
TNCH	**TengChong**	**5.06**	**323**	Pn	Pn	18 14 17.5	+5.3
TNCH				Pg	**Pg**	**18 14 33.5**	**+0.4**
TNCH				Sg	**Sg**	**18 15 39.3**	**+0.7**
TNCH				smax	smax		
	comp=N,2μm,1.0s						
TNCH				smax	smax		
	comp=E,720nm,1.1s						
PZH	**PanZhiHua**	**5.49**	**359**	Pg	Pg	18 14 44.0	+2.7
PZH				Sg	**Sg**	**18 15 56.0**	**+3.6**
PZH				smax	smax		
	comp=N,50nm,1.2s						
PZH				smax	smax		
	comp=E,90nm,1.4s						
MORE	**Moreh**	**7.69**	**296**		**Pn**	**18 14 46.3**	**-1.9**
QIZ	**Qiongzhong**	**7.76**	**103**	Pn	**Pn**	**18 14 48.5**	**-0.7**
QIZ	**Qiongzhong**	**7.76**	**103**	Pn	**Pn**	**18 14 48.8**	**-0.4**
QIZ				Sn	**Sn**	**18 16 18.5**	**+1.3**
QIZ				LR	LR		
	comp=E,420nm,10.3s						
QIZ				LR	LR		
	comp=E,280nm,8.1s						
CD2	**Chengdu**	**10.02**	**9**	*e*P	**Pn**	**18 15 17.5**	**-2.8**
SHL	**Shillong**	**10.23**	**298**	Pn	**Pn**	**18 15 23.3**	**0.0**
LSA	**Lhasa**	**12.99**	**314**	Pn	**Pn**	**18 15 59.8**	**-1.5**
XAN	**Xi'an**	**14.42**	**24**	*e*P	**Pn**	**18 16 22.3**	**+1.9**
XAN				S	**Sn**	**18 19 04.3**	**+3.8**
XAN				LR	LR		
	comp=E,520nm,11.7s						
XAN				LR	LR		
	comp=E,800nm,10.5s						
XAN				LR	LR		
	comp=E,240nm,7.7s						
LZDM	**Lanzhou Array**	**15.00**	**6**	Pn	**P**	**18 16 35.8**	**+1.8**
	baz=200,slow=12						
	comp=E,0.5nm,0.4s						
EVN	**Everest**	**15.34**	**300**		**Pn**	**18 16 33.6**	**+0.2**
EVN				IAmb	IAmb	18 16 49.3	
	comp=Z,6.1nm,0.9s						
HHC	**Hu-ho-hao-te**	**21.45**	**20**	*e*P	**P**	**18 17 44.0**	**-0.7**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,30nm,3.5s						
HHC				LR	LR		
	comp=Z,170nm,10.0s						
HHC				LR	LR		
	comp=Z,350nm,10.9s						
HHC				LR	LR		
	comp=Z,160nm,10.6s						
PALK	**Pallekele**	**24.59**	**239**	LR	LR	18 27 51.4	
	comp=Z,41nm,18.9s,baz=81,slow=37						
JOW	**Kunigami**	**24.82**	**71**	LR	LR	18 28 21.4	
	comp=Z,29nm,18.8s,baz=288,slow=37						
WMQ	**Urumqi**	**25.64**	**336**	*e*P	**P**	**18 18 25.0**	**-1.0**
SONM	**Songino Array**	**27.03**	**7**	P	P	18 18 47.6	+9.0
	comp=Z,0.6nm,0.7s,baz=190,slow=9.0,SNR=5.1						
SONM				LR	LR	18 30 41.3	
	comp=Z,39nm,21.5s,baz=101,slow=39						
	comp=Z,0.6nm,0.7s						
KSRS	**Korea Array**	**27.91**	**48**	P	P	18 18 56.0	+10
	comp=Z,0.8nm,1.0s,baz=224,slow=6.7,SNR=1.9						
KSRS				LR	LR	18 30 57.6	
	comp=Z,65nm,18.9s,baz=215,slow=38						
	comp=Z,0.8nm,1.0s						
JNU	**Nakatsue**	**28.43**	**59**	LR	LR	18 31 28.4	
	comp=Z,58nm,18.5s,baz=208,slow=38						
TARG	**Taragay, Kyrgy**	**28.97**	**321**	P	**P**	**18 18 54.9**	**-1.5**
TARG				IAmb	IAmb	18 19 30.6	
	comp=Z,2.7nm,1.1s						
MKAR	**Makanchi Array**	**30.26**	**333**	P	P	18 19 13.2	+5.9
	comp=Z,0.8nm,0.6s,baz=156,slow=10,SNR=13						
MKAR				LR	LR	18 31 19.3	
	comp=Z,19nm,21.0s,baz=118,slow=36						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**30.26**	**333**	P	**P**	**18 19 09.7**	**+2.5**
MAKZ	**Makanchi**	**30.41**	**333**	P	**P**	**18 19 11.0**	**+2.4**
TLY	**Talaya**	**30.66**	**2**	LR	LR	18 34 02.0	
	comp=Z,30nm,18.7s,baz=169,slow=41						
KKAR	**Karatay Array**	**34.21**	**317**	P	**P**	**18 19 39.5**	**-2.5**
KURBB	**Kurchatov Arra**	**34.80**	**334**	P	P	18 19 53.5	+6.6
	comp=Z,0.6nm,0.4s,baz=148,slow=9.3,SNR=1.7						
MAJO	**Matsushiro**	**35.19**	**56**	P	**P**	**18 19 47.9**	**-2.7**
MJAR	**Matsushiro Arr**	**35.19**	**56**	LR	LR	18 36 16.5	
	comp=Z,54nm,19.4s,baz=229,slow=39						
ZAA0	**Zalesovo Array**	**35.38**	**343**	P	**P**	**18 19 49.9**	**-1.9**
ZAA0				IAmb	IAmb	18 20 00.8	
	comp=Z,3.4nm,0.9s						
ZALV	**Zalesovo Beam**	**35.38**	**343**	P	P	18 19 58.3	+6.5
	comp=Z,2.0nm,0.7s,baz=151,slow=9.6,SNR=7.9						
ZALV				LR	LR	18 35 29.5	
	comp=Z,25nm,19.0s,baz=104,slow=38						
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**35.38**	**343**	P	**P**	**18 19 49.1**	**-2.7**
JYT	**Yasato**	**36.66**	**57**	P	**P**	**18 20 00.5**	**-2.5**
KLR	**Kul'dur**	**36.87**	**33**	LR	LR	18 37 13.8	
	comp=Z,48nm,19.8s,baz=226,slow=39						
BVAR	**Borovoye Array**	**40.07**	**331**	LR	LR	18 39 06.8	
	comp=Z,40nm,18.5s,baz=100,slow=39						
AB31	**Akbulak array**	**43.56**	**321**	P	**P**	**18 20 57.2**	**-3.0**
AB31				IAmb	IAmb	18 21 08.6	
	comp=Z,1.4nm,0.7s						
ABKAR	**Akbulak array**	**43.56**	**321**	P	**P**	**18 20 57.3**	**-2.8**
WRA	**Warramunga Arr**	**51.63**	**140**	P	P	18 22 10.2	+7.0
	comp=Z,0.4nm,0.8s,baz=320,slow=7.6,SNR=2.4						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**54.27**	**143**	P	P	18 22 29.8	+7.2
	comp=Z,0.3nm,0.8s,baz=324,slow=6.8,SNR=5.3						
	comp=Z,0.3nm,0.8s						
INKA	**Innaminka**	**61.33**	**141**	P	**P**	**18 23 10.8**	**-1.4**
FINES	**FINESS Array B**	**65.00**	**329**	P	P	18 23 43.0	+6.9
	comp=Z,1.3nm,0.8s,baz=90,slow=6.0,SNR=4.3						
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**65.00**	**329**	P	**P**	**18 23 33.9**	**-2.2**
HFS	**Hagfors**	**71.14**	**328**	P	P	18 24 19.4	+4.7
	comp=Z,2.2nm,0.8s,baz=119,slow=1.8,SNR=2.0						
	comp=Z,2.2nm,0.8s						
NOA	**NORSAR Array B**	**72.18**	**329**	P	**P**	**18 24 25.4**	**+4.3**
	comp=Z,0.5nm,0.7s,baz=78,slow=6.2,SNR=1.5						
	comp=Z,0.5nm,0.7s						

*IDC **28** 18:25:11.0±3.0,47°.64N×92°.35W,h0km,mb2.5/1, mbtmp2.7/3,ML1.9/2,Error ellipse: s-maj=55.8km s-min=18.3km az=65.0*
*NEIC **28** 18:25:12.7±1.3,47°.56N±0°.06×92°.67W±0°.06,h0km±2km, ML3.2/20,Error ellipse: s-maj=10.4km s-min=5.3km az=204.0*

ISC 28 18:25:11.8±0.9,47°.54N±0°.04×92°.70W±0°.05,h0km,n27, σ0s54/27,Minnesota

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.91**	**63**		**Pg**	**18 25 28.8**	**-0.3**
E38A	**The Farm, Brul**	**1.22**	**140**		**Pg**	**18 25 34.7**	**-0.5**
E38A				IAML		18 25 55.5	
	283nm,0.5s						
E38A				IAML		18 25 55.6	
	351nm,0.6s						
EPLO	**Experimental L**	**2.24**	**343**		**Pn**	**18 25 50.4**	**+0.3**
AGMN	**Agassiz Nation**	**2.26**	**291**		**Pn**	**18 25 50.5**	**+0.1**
AGMN				IAML		18 26 24.7	
	236nm,0.5s						
AGMN				IAML		18 26 35.0	
	168nm,0.6s						
SPMN	**Marine on St.**	**2.32**	**182**		**Pn**	**18 25 51.0**	**-0.2**
TBO	**Thunder Bay**	**2.46**	**62**		**Pn**	**18 25 52.9**	**-0.3**
TBO				IAML		18 26 32.9	
	comp=N,73nm,0.9s						
G40A	**Rib Lake**	**2.86**	**142**		**Pn**	**18 25 58.7**	**+0.1**
G40A				IAML		18 26 40.0	
	comp=N,95nm,0.5s						
G40A				IAML		18 26 42.6	
	comp=N,100nm,0.3s						
F33A	**5 Mile Ranch,**	**3.00**	**237**		**Pn**	**18 26 00.5**	**-0.1**
ULM	**Lac du Bonnet**	**3.42**	**323**	Pn	**Pn**	**18 26 05.9**	**-0.5**
	comp=N,0.3nm,0.3s,baz=146,slow=3.6,SNR=1.9						
ULM				Pg	**Pb**	**18 26 13.6**	**+0.3**
	comp=N,0.8nm,0.3s,baz=142,slow=17,SNR=12						
ULM				Lg	Lg	18 26 57.9	
	comp=N,1.5nm,0.3s,baz=26,slow=21,SNR=5.3						
	comp=N,0.9nm,0.3s						
ULM	**Lac du Bonnet**	**3.42**	**323**		**Pn**	**18 26 06.7**	**+0.4**
ULM				IAML		18 27 03.3	
	comp=E,32nm,0.6s						
ULM				IAML		18 27 03.4	
	comp=N,30nm,0.8s						
I10CA	**LAC DU BONNET**	**3.45**	**322**	I	I	18 47 20.0	
	comp=N,0.1nm,1.0s,baz=131,slow=346,SNR=4.7						
I37A	**Lemond, Waseca**	**3.56**	**188**		**Pn**	**18 26 08.6**	**+0.3**
I37A				IAML		18 27 15.5	
	comp=N,73nm,0.6s						
F42A	**Maple Grove Fa**	**3.61**	**118**	Pn	**Pn**	**18 26 09.6**	**+0.6**
I40A	**Norwalk**	**3.93**	**158**		**Pn**	**18 26 12.8**	**-0.5**
I42A	**Draeger Farm,**	**4.51**	**143**	Pn	**Pn**	**18 26 22.6**	**+1.2**
H43A	**Windswept, Lux**	**4.61**	**130**		**Pn**	**18 26 23.0**	**+0.4**
MDND	**Maddock**	**4.67**	**276**	Pn	**Pn**	**18 26 24.0**	**+0.5**
ECSD	**EROS Data Cent**	**4.70**	**217**		**Pn**	**18 26 23.8**	**-0.1**
JFWS	**Jewell Farm**	**4.94**	**159**		**Pn**	**18 26 26.8**	**-0.4**
SUSD	**Miller**	**5.35**	**237**		**Pn**	**18 26 33.1**	**+0.2**
L40A	**Anamosa**	**5.58**	**169**	Pn	**Pn**	**18 26 35.6**	**-0.4**
K43A	**Burlington**	**5.74**	**146**	Pn	**Pn**	**18 26 38.6**	**+0.4**
E46A	**Sault Ste Mari**	**5.86**	**99**	Pn	**Pn**	**18 26 39.9**	**+0.1**
L42A	**Oliver, Polo**	**5.94**	**158**	Pn	**Pn**	**18 26 41.1**	**+0.1**
L34A	**Svendsen Farm,**	**6.16**	**206**	Pn	**Pn**	**18 26 45.4**	**+1.5**
YKA	**Yellowknife Ar**	**19.39**	**329**	P	**P**	**18 29 38.2**	**-0.7**
	baz=129,slow=11,SNR=1.5						
	comp=N,0.1nm,0.4s						
TXAR	**Lajitas Array**	**20.07**	**209**	P	**P**	**18 29 47.2**	**+0.5**
	comp=N,0.1nm,0.6s,baz=40,slow=13,SNR=2.1						
	comp=N,0.1nm,0.6s						

*ISK **28** 18:29:12.7,38°.36N×44°.48E,h5km,ML2.7/7*
*AFAD **28** 18:29:12.5,38°.41N×44°.49E,h5km±2km,ML2.6*
*TEH **28** 18:29:13.6,38°.44N×44°.50E,h9km±7.3km,ML2.7, Presumed earthquake*

ISC 28 18:29:13.0±1.3,38°.40N±0°.03×44°.47E±0°.03,h2km±12km, n21,σ0s84/27,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**305**	P	**Pg**	**18 29 21.8**	**-0.1**
OZAP				S	**Sg**	**18 29 28.9**	**+1.0**
TVAN	**Van**	**0.85**	**279**	P	**Pg**	**18 29 28.8**	**-0.5**
TVAN				IAML		18 29 57.0	
	comp=N,187nm,0.6s						
TVAN				IAML		18 29 59.0	
	comp=E,196nm,1.2s						
ISHB	**Shabestar**	**0.91**	**97**	Pg	**Pg**	**18 29 30.0**	**-0.4**
VMUR	**Van-Muradiye**	**0.92**	**310**	P	**Pg**	**18 29 30.5**	**-0.2**
VMUR				S	**Sb**	**18 29 44.0**	**-0.6**
MAKU	**Maku**	**0.97**	**10**	Pg	**Pg**	**18 29 31.1**	**-0.6**
IMRD	**Marand**	**1.01**	**71**	Pg	**Pb**	**18 29 32.9**	**-0.6**
HAKT	**HAKKARI**	**1.03**	**216**	P	**Pb**	**18 29 33.4**	**-0.4**
HAKT				S	**Sb**	**18 29 48.2**	**+0.3**
HAKT				IAML		18 29 51.0	
	comp=E,178nm,0.6s						
HAKT				IAML		18 29 55.0	
	comp=N,168nm,0.5s						
GEVA	**Gevas**	**1.11**	**266**	P	**Pg**	**18 29 33.3**	**-1.2**
GEVA				S	**Sn**	**18 29 50.7**	**-1.2**
GEVA				IAML		18 29 54.0	
	comp=N,118nm,0.5s						
GEVA				IAML		18 29 57.0	
	comp=E,132nm,1.0s						
AKDM	**Akdamar-Van**	**1.18**	**267**	Pn	**Pg**	**18 29 34.9**	**-0.7**
AKDM				Sn	**Sn**	**18 29 53.8**	**+0.4**
DYDN	**Diyadin**	**1.30**	**332**	P	**Pb**	**18 29 38.6**	**+0.3**
ITBZ	**Tabriz**	**1.33**	**97**	Pg	**Pb**	**18 29 38.0**	**-0.8**
CUKT	**Cukurca**	**1.34**	**211**	Pn	**Pg**	**18 29 38.8**	**+0.2**
CUKT				Sn	**Sn**	**18 29 57.9**	**+0.6**
IAZR	**Azarshahr**	**1.39**	**121**	Pg	**Pg**	**18 29 40.3**	**+0.6**
ADCV	**BITLIS_Adilcev**	**1.43**	**287**	P	**Pn**	**18 29 39.7**	**-0.5**
IGDI	**IGDIR**	**1.50**	**348**	P	**Pg**	**18 29 43.7**	**+1.9**
AGRB	**Hanur-Agry**	**1.65**	**316**	Pn	**Pg**	**18 29 44.7**	**+0.1**
MLAZ	**Malazgirt-MUS**	**1.68**	**297**	Pn	**Pg**	**18 29 44.7**	**-0.5**
GNI	**Garni**	**1.76**	**7**	Pn	**Pg**	**18 29 45.9**	**-0.9**
GURO	**Guroymak-BITLI**	**1.92**	**275**	Pn	**Pb**	**18 29 48.1**	**-0.8**
IHRS	**Heris**	**2.02**	**91**	Pn	**Pb**	**18 29 49.8**	**-0.8**
SVAN	**Silvan-Diyarba**	**2.59**	**266**	Pn	**Pn**	**18 29 57.6**	**+1.6**

*SOME **28** 18:45:47.6,41°.72N×81°.30E,h20km*
*NNC **28** 18:45:49.7±2.8,41°.59N×81°.15E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=19.5km s-min=13.8km az=163.0*

ISC 28 18:45:46.2±2.7,41°.9N±0°.1×81°.53E±0°.08,h16km,n27, σ2s28/40,7C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.96**	**309**	P	**Pb**	**18 46 20.9**	**-0.7**
	18nm,0.2s						
SHLS				S	**Sb**	**18 46 44.8**	**-1.0**
	73nm,0.2s						
SHLS	**Shalkode**	**1.96**	**309**	*e*P	**Pb**	**18 46 20.9**	**-0.7**
	18nm,0.2s						
SHLS				*e*S	**Sb**	**18 46 44.8**	**-1.0**
	73nm,0.2s						
PDGK	**Podgornoye**	**2.05**	**314**	⇑Pn	**Pg**	**18 46 26.2**	**+0.6**
	7.5nm,0.5s						
PDGK				⇓Sn	**Sg**	**18 46 57.0**	**+4.7**
	67nm,0.8s						
UZB	**Uzynbulak**	**2.22**	**304**	Pg	**Pg**	**18 46 29.4**	**+0.7**
	16nm,0.4s						
UZB				Lg	Lg	18 46 59.3	
	67nm,0.5s						
UZB	**Uzynbulak**	**2.22**	**304**	*e*P	**Pg**	**18 46 29.4**	**+0.7**
	16nm,0.4s						
UZB				*e*S	**Sg**	**18 46 59.3**	**+1.8**
	67nm,0.5s						
SATY	**Saty**	**2.57**	**297**	Pg	**Pg**	**18 46 35.2**	**-0.2**
	32nm,0.5s						
SATY				Lg	Lg	18 47 10.0	
	72nm,0.8s						
KPKS	**Kokpek**	**2.60**	**307**	Pg	**Pb**	**18 46 33.9**	**+1.4**
	0.2nm,0.1s						
KPKS				Lg	Lg	18 47 07.1	
	42nm,0.3s						
KPKS	**Kokpek**	**2.60**	**307**	*e*P	**Pb**	**18 46 33.9**	**+1.4**
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	**18 47 07.2**	**-2.6**
	42nm,0.3s						
KURS	**Kuram**	**2.92**	**303**	Pg	**Pb**	**18 46 39.3**	**+1.3**
	5.3nm,0.4s						
KURS				Lg	Lg	18 47 16.5	
	12nm,0.6s						
KNOS	**Konyrlen**	**2.98**	**325**	Pg	**Pg**	**18 46 41.9**	**-1.3**
	1.0nm,0.1s						
KNOS				Lg	Lg	18 47 21.0	
	14nm,0.6s						
BLB	**Baldybastay**	**3.11**	**315**	Pg	**Pg**	**18 46 44.2**	**-1.6**
	1.7nm,0.2s						
BLB				Lg	Lg	18 47 25.0	
	21nm,0.6s						
KOTS	**Kotyrbulak**	**3.51**	**293**	Pg	**Pb**	**18 46 49.0**	**+1.0**
	4.3nm,0.4s						
KOTS				Lg	Lg	18 47 33.8	
	22nm,0.7s						
KOTS	**Kotyrbulak**	**3.51**	**293**	*e*P	**Pb**	**18 46 49.0**	**+1.0**
	2.5nm,0.2s						
KOTS				*e*S	**Sb**	**18 47 32.6**	**+2.1**
	16nm,0.5s						
MDOK	**Medeo**	**3.53**	**292**	Pg	**Pb**	**18 46 49.9**	**+1.5**
	6.0nm,0.4s						
MDOK				Lg	Lg	18 47 34.3	
	7.7nm,0.4s						
TNSS	**Tian-Shan**	**3.56**	**290**	Pg	**Pb**	**18 46 49.8**	**+0.7**
	0.9nm,0.2s						
TNSS				Lg	Lg	18 47 34.4	
	0.9nm,0.2s						
TNSS	**Tian-Shan**	**3.56**	**290**	*e*P	**Pb**	**18 46 49.9**	**+0.7**
	0.9nm,0.2s						
TNSS				*e*S	**Sb**	**18 47 34.4**	**+2.1**
	0.9nm,0.2s						
MTBS	**Maitube**	**3.96**	**289**	Pg	**Pb**	**18 46 55.9**	**+0.3**
	1.1nm,0.1s						
MTBS				Lg	Lg	18 47 45.4	
	0.9nm,0.1s						
MTBS	**Maitube**	**3.96**	**289**	*e*P	**Pb**	**18 46 55.9**	**+0.3**
	1.0nm,0.3s						
MTBS				*e*S	**Sb**	**18 47 45.3**	**+2.1**
	0.8nm,0.1s						
KTBS	**Karatobe**	**3.98**	**298**	Pg	**Pg**	**18 47 01.2**	**-1.3**
	1.5nm,0.3s						
KTBS				Lg	Lg	18 47 53.6	
	0.4nm,0.3s						
KTBS	**Karatobe**	**3.98**	**298**	*e*P	**Pb**	**18 46 58.7**	**+2.6**
	1.5nm,0.3s						
KTBS				*e*S	**Sg**	**18 47 49.4**	**-4.7**
	0.4nm,0.3s						
KST	**Kastek**	**4.26**	**287**	Pg	**Pb**	**18 47 04.3**	**+3.4**
	3.3nm,0.3s						
KST				Lg	Lg	18 47 59.5	
	10nm,0.8s						
KST	**Kastek**	**4.26**	**287**	*e*P	**Pb**	**18 47 04.2**	**+3.4**
	3.3nm,0.3s						
KST				*e*S	**Sg**	**18 47 59.5**	**-3.6**
	10nm,0.8s						
KRBS	**Karabastau**	**4.65**	**294**	Pg	**Pb**	**18 47 11.0**	**+3.5**
	2.6nm,0.4s						
KRBS				Lg	Lg	18 48 10.8	
	2.6nm,0.3s						
KRBS	**Karabastau**	**4.65**	**294**	*e*P	**Pb**	**18 47 11.0**	**+3.5**
	2.6nm,0.4s						
KRBS				*e*S	**Sg**	**18 48 10.8**	**-4.8**
	2.6nm,0.3s						
MAKZ	**Makanchi**	**4.89**	**4**	⇑Pn	**Pb**	**18 47 11.3**	**-0.2**
	0.4nm,0.6s						
MAKZ				⇑Sn	**Sb**	**18 48 10.6**	**+0.7**
	1.0nm,0.6s						
MAKZ				⇑Lg	Lg	18 48 34.7	
	1.8nm,0.8s						
MK31	**Makanchi Array**	**4.89**	**6**	⇓Pn	**Pb**	**18 47 11.4**	**-0.1**
	0.1nm,0.3s,baz=189,slow=12,SNR=12						
MK31				⇓Sn	**Sb**	**18 48 12.4**	**+2.3**
	0.6nm,0.6s,baz=184,slow=23,SNR=4.3						
MK31				⇑Lg	Lg	18 48 35.2	
	1.4nm,0.6s						
AAK	**Ala-Archa**	**5.27**	**280**	⇑Pg	**Pg**	**18 47 24.3**	**-2.7**
	1.2nm,0.7s						
AAK				⇑Lg	Lg	18 48 35.8	
	3.2nm,1.1s						

*IDC **28** 18:46:34.1±0.6,0°.81S×120°.39E,h0km,mb4.0/15, mbtmp4.0/19,ML3.8/4,MS3.4/13,Error ellipse: s-maj=23.1km s-min=11.8km az=63.0*
*DJA **28** 18:46:36.2±0.2,1°.S±1°×12°.0E±°,h10km,M4.5/39,mB5.0/7, mb4.6/17,MLv4.8/39,Mw(mB)4.3/7*
*NEIC **28** 18:46:40.4±2.4,0°.81S±0°.05×120°.45E±0°.06,h48km±8km, mb4.4/34,Error ellipse: s-maj=8.5km s-min=7.0km az=81.0*

ISC 28 18:46:40.1±0.4,0°.81S±0°.04×120°.38E±0°.04,h49km,n103, σ1s37/106,mb4.3/33,MS3.4/10,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.55**	**260**	P	Pn	18 46 45.4	-6.6
MPSI	**Mapaga**	**1.24**	**337**	P	**Pn**	**18 46 57.5**	**-3.5**
APSI	**Ampana**	**1.27**	**95**	P	**Pn**	**18 47 00.1**	**-1.4**
TOLI2	**Tolitoli**	**1.95**	**12**		**Pn**	**18 47 09.7**	**-1.1**
TOLI2				Sn	**Sn**	**18 47 34.5**	**+0.5**
MRSI	**Marisa**	**2.02**	**51**	P	**Pn**	**18 47 07.7**	**-4.0**
TTSI	**Tana Toraja**	**2.29**	**194**	P	**Pn**	**18 47 15.0**	**-0.5**
MMSI	**Mamuju**	**2.38**	**218**	P	**Pn**	**18 47 14.4**	**-2.3**
LUWI	**Luwuk**	**2.40**	**96**		**Pn**	**18 47 15.6**	**-1.4**
LUWI				Sn	**Sn**	**18 47 45.0**	**-0.2**
LUWI	**Luwuk**	**2.40**	**96**	P	**Pn**	**18 47 16.4**	**-0.6**
GTOI	**Gorontalo**	**3.00**	**61**	P	**Pn**	**18 47 24.3**	**-0.8**
PMSI	**Majene**	**3.05**	**209**	P	**Pn**	**18 47 27.1**	**+1.2**
SPSI	**Sidrap Palu**	**3.19**	**191**	P	**Pn**	**18 47 27.1**	**-0.8**
SPSI				S	**Sn**	**18 48 06.5**	**+1.8**
BKB	**Balikpapan**	**3.51**	**263**	Pn	**Pn**	**18 47 33.0**	**+0.7**
BKB	**Balikpapan**	**3.51**	**263**	P	**Pn**	**18 47 29.3**	**-2.9**
BKB				S	**Sn**	**18 48 11.3**	**-1.3**
KKSI	**Kolaka, Sulawe**	**3.57**	**159**	P	**Pn**	**18 47 30.7**	**-2.4**
KAPI	**Kappang**	**4.22**	**189**	Pn	**Pn**	**18 47 41.2**	**-0.7**
	15nm,0.3s,baz=331,slow=8.7,SNR=13						
KAPI				Sn	**Sn**	**18 48 30.5**	**+0.4**
	5.4nm,0.3s,baz=30,slow=20,SNR=5.2

comp=Z,32nm,1.3s
KNRA Kununurra 16.93 151 Pn 18 50 33.2 -0.5
KNRA IAmb IAmb 18 51 03.4
comp=Z,61nm,1.5s
FITZ Fitzroy Crossi 17.94 164 P **P 18 50 47.0 +0.8**
comp=Z,0.1nm,0.3s,baz=327,slow=17,SNR=1.0
comp=Z,2.7nm,0.9s
JAY Jayapura 20.39 95 P **P 18 51 12.8 -0.2**
comp=Z,10nm,0.6s,baz=60,slow=7.0,SNR=4.7
comp=Z,10nm,0.6s
QIZ Qiongzhong 22.27 333 P **P 18 51 32.6 -0.6**
QIZ IAmb IAmb 18 51 34.8
comp=Z,27nm,1.3s
GSI Gunungsitoli 22.90 275 P **P 18 51 40.0 0.0**
GSI IAmb IAmb 18 51 57.4
comp=Z,13nm,1.1s
WB0 Warramunga Arr 23.31 145 P 18 51 42.3 -1.7
WB0 IAmb IAmb 18 51 50.3
comp=Z,11nm,0.9s
WRA Warramunga Arr 23.41 145 P **P 18 51 43.6 -1.4**
comp=Z,7.7nm,1.0s,baz=325,slow=9.9,SNR=19
comp=Z,7.7nm,1.0s
WRA Warramunga Arr 23.41 145 P 18 51 43.8 -1.2
WR8 Warramunga Arr 23.52 145 P **P 18 51 44.7 -1.3**
WR8 IAmb IAmb 18 51 47.3
comp=Z,21nm,1.2s
KNMB Chin-men Tao 25.20 356 P **P 18 51 59.7 -1.5**
COEN Coen 26.06 121 P 18 52 07.2 -2.1
AS31 Alice Springs 26.24 151 P **P 18 52 09.4 -1.4**
ASAR Alice Springs 26.24 151 P **P 18 52 11.2 +0.4**
comp=Z,1.7nm,0.7s,baz=329,slow=9.1,SNR=21
ASAR PcP **PcP 18 55 38.2 +1.5**
comp=Z,0.8nm,0.6s,baz=334,slow=2.2,SNR=11
ASAR LR LR 19 02 36.8
comp=Z,100nm,18.7s,baz=317,slow=37
comp=Z,1.7nm,0.7s
ASAR Alice Springs 26.24 151 P 18 52 09.3 -1.5
CMAR Chiang Mai Arr 28.48 313 P **P 18 52 32.1 +1.2**
comp=Z,0.7nm,0.9s,baz=131,slow=6.1,SNR=6.6
CMAR LR LR 19 05 46.5
comp=Z,43nm,19.1s,baz=130,slow=40
comp=Z,0.7nm,0.9s
CMAR Chiang Mai Arr 28.48 313 P P 18 52 30.6 -0.3
JOW Kunigami 28.51 15 LR LR 19 03 35.7
comp=Z,56nm,20.8s,baz=112,slow=36
INKA Innaminka 33.14 146 P P 18 53 11.0 -0.9
BBOO Buckleboo 35.09 157 P P 18 53 26.9 -1.8
JNU Nakatsue 35.17 15 LR LR 19 09 24.9
comp=Z,52nm,18.1s,baz=205,slow=39
STKA Stephens Creek 36.83 149 P P 18 53 43.4 -0.3
comp=Z,4.1nm,0.8s,baz=326,slow=8.9,SNR=6.6
STKA LR LR 19 11 29.2
comp=Z,102nm,19.0s,baz=198,slow=41
comp=Z,4.1nm,0.8s
STKA Stephens Creek 36.83 149 P 18 53 42.9 -0.8
JHJ2 Mitsune 38.39 27 P **P 18 53 55.2 -1.6**
KSRS Korea Array 38.71 10 P **P 18 53 59.9 +0.5**
comp=Z,0.8nm,0.6s,baz=189,slow=9.5,SNR=4.6
KSRS LR LR 19 09 33.1
comp=Z,21nm,21.7s,baz=175,slow=36
comp=Z,0.8nm,0.6s
PALK Pallekele 40.39 282 LR LR 19 10 44.9
comp=Z,47nm,21.0s,baz=88,slow=36
MJAR Matsushiro Arr 40.69 22 P **P 18 54 18.3 +2.4**
comp=Z,0.6nm,0.8s,baz=188,slow=7.6,SNR=2.2
comp=Z,0.6nm,0.8s
BJT Baijiatuau 40.81 355 P 18 54 18.1 +1.2
BJT IAmb IAmb 18 54 19.2
comp=Z,6.6nm,0.7s
LSA Lhasa 41.21 320 P **P 18 54 22.5 +1.6**
LSA IAmb IAmb 18 54 27.1
comp=Z,5.5nm,1.0s
EVN Everest 43.07 314 P 18 54 36.9 +0.6
EVN IAmb IAmb 18 54 42.1
comp=Z,4.7nm,0.8s
CAN Canberra 43.46 145 P **P 18 54 39.0 +0.4**
GTA2 Gaotai 44.33 337 *eP* **P 18 54 48.5 +2.9**
GTA2 sP sP 18 55 04.8 +1.1
GTA2 pmax pmax
comp=Z,3.0nm,0.9s
ULN Ulaanbaatar 49.85 348 P 18 55 29.4 +0.8
ULN IAmb IAmb 18 55 31.0
comp=Z,5.2nm,1.1s
SONM Songino Array 49.96 348 P **P 18 55 30.6 +1.3**
comp=Z,1.1nm,0.8s,baz=164,slow=9.8,SNR=5.9
comp=Z,1.1nm,0.8s
SONM Songino Array 49.96 348 P P 18 55 29.6 +0.2
HEH HeiHe 51.22 6 *eP* **P 18 55 38.5 -0.1**
HEH pmax pmax
comp=Z,13nm,0.7s
WUS Wushi 56.02 323 P P 18 56 15.4 +1.2
WUS IAmb IAmb 18 56 17.1
comp=Z,6.0nm,1.2s
KSH2 Kashi 57.13 319 P P 18 56 23.8 +1.7
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
PRZ Przheval'sk 57.29 324 P P 18 56 24.5 +1.3
PRZ IAmb IAmb 18 56 43.3
comp=Z,6.2nm,1.2s
KDJ Kajisay 57.80 323 P P 18 56 27.8 +1.0
KDJ IAmb IAmb 18 56 29.8
comp=Z,2.1nm,0.8s
MKAR Makanchi Array 57.96 330 P P 18 56 29.2 +1.6
comp=Z,1.4nm,0.7s,baz=132,slow=8.3,SNR=15
MKAR LR LR 19 22 47.3
comp=Z,33nm,18.7s,baz=152,slow=38
comp=Z,1.4nm,0.7s
MKAR Makanchi Array 57.96 330 P P 18 56 28.1 +0.5
BOOM Boomskoye usch 58.76 323 P P 18 56 34.4 +0.9
BOOM IAmb IAmb 18 56 36.0
comp=Z,3.7nm,1.1s
KBL Kabul 59.49 312 P P 18 56 39.0 +0.3
AAK Ala-Archa 59.73 322 P P 18 56 41.2 +1.1
AAK IAmb IAmb 18 56 42.9
comp=Z,2.0nm,0.8s
DRK Karamyk 59.80 318 P P 18 56 41.7 +0.9
ARSB Arslanbob 59.96 320 P P 18 56 42.6 +0.8
ZALV Zalesovo Beam 62.00 337 P P 18 56 55.3 +0.2
comp=Z,0.5nm,0.5s,baz=132,slow=6.2,SNR=3.9
comp=Z,0.5nm,0.5s
KURBB Kurchatov Arra 62.38 331 P P 18 56 57.9 +0.2
comp=Z,0.5nm,0.4s,baz=140,slow=6.5,SNR=3.8
KURK Kurchatov 62.40 331 P P 18 56 57.3 -0.6
KURK IAmb IAmb 18 56 59.6
comp=Z,2.8nm,0.9s
KKAR Karatay Array 62.45 321 P P 18 56 57.9 -0.6
YAK Yakutsk 63.07 5 P P 18 57 02.0 -0.1
comp=Z,8.4nm,0.7s,baz=148,slow=3.9,SNR=5.6
comp=Z,8.4nm,0.7s
YAK Yakutsk 63.07 5 P P 18 57 01.6 -0.5
BVAR Borovoye Array 67.84 330 P P 18 57 33.7 +0.5
comp=Z,0.3nm,0.4s,baz=152,slow=9.4,SNR=4.0
comp=Z,0.3nm,0.4s
AB31 Akbulak array 71.78 323 P P 18 57 56.8 -0.7
ABKAR Akbulak array 71.78 323 P P 18 57 56.8 -0.7
TIXI Tiksi 72.55 3 P 18 57 59.8 -1.8
TIXI IAmb IAmb 18 58 01.6
comp=Z,6.0nm,1.1s
AKTO Aktyubinsk 73.39 324 P P 18 58 07.4 +0.4
comp=Z,0.8nm,0.5s,baz=31,slow=2.8,SNR=2.4
comp=Z,0.8nm,0.5s
GEVA Gevas 80.56 309 P P 18 58 47.0 -0.8
MMAI Mount Meron Ar 86.22 303 P P 18 59 18.7 +1.8
comp=Z,0.7nm,0.6s,baz=99,slow=8.9,SNR=5.3
comp=Z,0.7nm,0.6s
BRTR Keskin Array B 88.00 310 P P 18 59 25.7 +0.2
comp=Z,0.5nm,0.7s,baz=138,slow=7.4,SNR=3.6
comp=Z,0.5nm,0.7s
MLR Muntele Rosu 93.69 315 LR LR 19 50 31.4
comp=Z,86nm,18.3s,baz=194,slow=41
VRAC Vranov 99.59 320 LR LR 19 52 08.1
comp=Z,218nm,18.2s,baz=212,slow=40

*MOS **28** 18:47:57.5±1.3,55°.21S×29°.35W,h10km,mb5.2/14,Error ellipse: s-maj=17.9km s-min=11.8km az=112.4*
*IDC **28** 18:47:57.7±0.4,55°.20S×29°.13W,h0km,mb4.7/14, mbtmp4.7/16,ML4.8/2,MS4.5/35,Error ellipse: s-maj=18.0km s-min=14.0km az=49.0*
*NEIC **28** 18:47:58.7,55°.13S×29°.02W,h18km,Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^16Nm; Mrr=0.38; Mθθ=5.00; Mϕϕ5.38; Mrθ=-4.37; Mϕr5.75; Mθr3.24; Fault plane solution: Mo9.47000×10^16 NP1:ϕs64.79000°, δ62.90000°, λ-13.69000°. NP2:ϕs161.12000°, δ77.84000°, λ-152.23000°. Principal axes: T 8.1474, Plg10.0000°, Azm291.0000°; N 2.2409, Plg60.0000°, Azm183.0000°; P -10.3883, Plg28.0000°, Azm26.0000°;*
*NEIC **28** 18:47:58.7±1.4,55°.4S×0°.1×29°.4W±0°.1,h10km±1km, mb5.3/93,Mww5.3/12 Error ellipse: s-maj=19.0km s-min=10.0km az=202.0*
*NEIC **28** 18:47:58.7,55°.3S×29°.37W,h18km*
*GCMT **28** 18:48:02.6±0.1,55°.30S±0°.01×29°.13W±0°.02,h23km, MW5.3/138,Moment Tensor Solution. s76,c110; s138,c230; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=0.26±.02; Mθθ-0.82±.02; Mϕϕ=0.56±.02; Mrθ-0.17±.03; Mθϕ=0.70±.02; Mϕr=0.49±.04; Best double couple: Mo1.12800×10^17 NP1:ϕs70.00000°,δ61.00000°, λ10.00000°. NP2:ϕs334.00000°,δ81.00000°,λ150.00000°. Principal axes: T 1.0580, Plg27.0000°, Azm288.0000°; N 0.1410, Plg59.0000°, Azm139.0000°; P -1.1990, Plg14.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 18:48:01.2±0.2,55°.31S±0°.06×29°.38W±0°.05,h28km,n507, σ1s20/483,mb5.2/62,MS4.5/39,1C-7D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**4.24**	**281**				**Pn**	**18 49 03.7**	**-0.1**
HOPE						Sn	**Sn**	**18 49 47.5**	**-4.9**
EFI	**East Falkland**	**17.39**	**270**				**P**	**18 52 01.7**	**-0.9**
EFI	**East Falkland**	**17.39**	**270**	P			**P**	**18 52 01.7**	**-0.9**
EFI				pmax		pmax			
comp=Z,196nm,1.7s									
VNA1	**Neumayer--Stat**	**17.95**	**157**	⇓P			**P**	**18 52 13.3**	**+4.7**
comp=Z,116nm,1.1s									
VNA3	**Neumayer Olymp**	**18.11**	**159**	⇓P			**P**	**18 52 11.8**	**+1.4**
comp=Z,700nm,0.7s									
VNA2	**Neumayer--Watz**	**18.35**	**157**	⇓P			**Pn**	**18 52 13.9**	**+0.7**
comp=Z,23nm,0.5s,baz=320,slow=11									
PMSA	**Palmer Station**	**19.47**	**227**	P			**Pn**	**18 52 27.2**	**+0.5**
comp=Z,1.7nm,0.3s,baz=52,slow=7.1,SNR=7.1									
PMSA				LR		LR	LR	18 58 34.8	
comp=Z,1μm,19.1s,baz=74,slow=32									
comp=Z,14nm,0.6s									
PMSA	**Palmer Station**	**19.47**	**227**	P			**P**	**18 52 23.9**	**-1.5**
SNAA	**Sanae**	**19.93**	**155**	⇓P			**P**	**18 52 30.3**	**-0.1**
comp=Z,2μm,0.9s									
SNAA	**Sanae**	**19.93**	**155**	P			**Pn**	**18 52 31.0**	**-1.2**
comp=Z,5.5nm,0.3s,baz=313,slow=7.8,SNR=9.5									
SNAA				LR		LR	LR	18 59 38.4	
comp=Z,795nm,19.0s,baz=336,slow=35									
comp=Z,34nm,0.6s									
SNAA	**Sanae**	**19.93**	**155**				**P**	**18 52 28.7**	**-1.7**
SNAA	**Sanae**	**19.93**	**155**	*ceP*			**Pn**	**18 52 31.5**	**-0.6**
SNAA				pmax		pmax			
comp=Z,88nm,1.3s									
TROLL	**Troll, Antarti**	**21.46**	**153**	⇓P			**P**	**18 52 47.2**	**+0.2**
MG01	**Puerto William**	**21.70**	**255**				**P**	**18 52 47.8**	**-1.7**
BELA	**Belgrano 2**	**22.74**	**183**	P			**P**	**18 53 00.8**	**+0.4**
BELA				IAmb		IAmb	IAmb	18 53 12.7	
comp=Z,87nm,1.2s									
MG02	**Cerro Sombrero**	**23.31**	**260**	P			**P**	**18 53 05.7**	**-0.8**
NVL	**N'lazarevskaya**	**23.56**	**147**	*eP*			**P**	**18 53 09.9**	**+1.1**
NVL				*e*				18 56 53.1	
NVL				*eS*			**S**	**18 57 16.0**	**-4.8**
NVL				pmax		pmax			
comp=Z,165nm,2.3s									
NVL				MLR		MLR			
comp=Z,971nm,17.0s									
MG03	**Isla Dawson**	**23.62**	**256**				**P**	**18 53 08.5**	**-1.0**
MG04	**Isla Riesco**	**24.60**	**258**	P			**P**	**18 53 17.9**	**-0.6**
MG05	**Puerto Natales**	**25.60**	**260**				**P**	**18 53 26.9**	**-0.7**
GO09	**Cerro Castillo**	**25.68**	**261**	P			**P**	**18 53 28.2**	**-0.2**
GO08	**Villa O'Higgin**	**27.15**	**266**				**P**	**18 53 41.2**	**-0.5**
AY03	**Cochrane**	**27.81**	**269**	P			**P**	**18 53 47.5**	**-0.1**
AY03				IAmb		IAmb	IAmb	18 54 08.6	
comp=Z,35nm,0.9s									
TRQA	**Tornquist**	**27.89**	**295**				**P**	**18 53 48.4**	**-0.1**
TRQA	**Tornquist**	**27.89**	**295**	P			**P**	**18 53 48.4**	**-0.1**
TRQA				pmax		pmax			
comp=Z,40nm,1.5s									
COYC	**Coyhaique**	**28.47**	**272**	P			**P**	**18 53 52.9**	**-0.6**
PLTB	**Pedras Altas**	**29.09**	**314**				**P**	**18 53 59.0**	**-0.1**
PLTB	**Pedras Altas**	**29.09**	**314**	*eP*			**P**	**18 54 00.5**	**+1.4**
AY01	**Puyuhuapi**	**29.48**	**273**	P			**P**	**18 54 01.7**	**-0.7**
AY01				IAmb		IAmb	IAmb	18 54 05.2	
comp=Z,62nm,1.6s									
LL02	**Futaleuf**	**29.78**	**276**				**P**	**18 54 04.5**	**-0.7**
CNLB	**Canela**	**30.20**	**321**	*eP*			**P**	**18 54 11.3**	**+2.3**
CPSB	**Cacapava Do Su**	**30.21**	**316**	*eP*			**P**	**18 54 10.7**	**+1.6**
PLCA	**Paso Flores**	**30.65**	**281**	P			**P**	**18 54 12.8**	**-0.1**
comp=Z,8.0nm,1.1s,baz=152,slow=9.2,SNR=6.4									
PLCA				PcP			**PcP**	**18 57 12.8**	**+2.3**
comp=Z,4.6nm,1.1s,baz=84,slow=2.2,SNR=3.4									
PLCA				LR		LR	LR	19 06 19.4	
comp=Z,799nm,20.1s,baz=128,slow=36									
comp=Z,8.0nm,1.1s									
PLCA	**Paso Flores**	**30.65**	**281**				**P**	**18 54 11.4**	**-1.6**
PLCA	**Paso Flores**	**30.65**	**281**	*eP*			**P**	**18 54 13.1**	**+0.2**
MAJ01	**Sao Joao Batis**	**31.32**	**325**	*eP*			**P**	**18 54 22.7**	**+3.8**
PSAL	**Palomas, Salto**	**31.39**	**309**	*eP*			**P**	**18 54 21.1**	**+1.6**
ITAB	**Concordia**	**32.55**	**320**	P			**P**	**18 54 29.1**	**-0.6**
ITAB				IAmb		IAmb	IAmb	18 54 32.5	
comp=Z,49nm,1.3s									
ITAB	**Concordia**	**32.55**	**320**	*eP*			**P**	**18 54 30.8**	**+1.1**
LR04	**Corral**	**32.84**	**279**	P			**P**	**18 54 31.9**	**-0.2**
BI02	**San Fabin de**	**33.91**	**286**	P			**P**	**18 54 41.0**	**-0.5**
PTGB	**Pitanga**	**34.83**	**322**	*eP*			**P**	**18 54 50.3**	**+0.7**
QSPA	**South Pole Qui**	**34.94**	**180**	P			**P**	**18 54 52.3**	**+2.0**
comp=Z,7.4nm,0.6s,baz=184,slow=2.8,SNR=11									
QSPA				LR		LR	LR	19 08 04.2	
comp=Z,957nm,20.9s,baz=188,slow=34									
comp=Z,7.4nm,0.6s									
QSPA	**South Pole Qui**	**34.94**	**180**	P			**P**	**18 54 51.7**	**+1.4**
QSPA				IAmb		IAmb	IAmb	18 55 09.1	
comp=Z,124nm,1.9s									
BO02	**Sierra Bellavi**	**35.02**	**288**	P			**P**	**18 54 50.5**	**-0.7**
CPUP	**Villa Florida**	**35.40**	**313**	P			**P**	**18 54 54.4**	**0.0**
comp=Z,8.9nm,0.8s,baz=144,slow=9.6,SNR=20									
CPUP				LR		LR	LR	19 08 07.1	
comp=Z,693nm,21.0s,baz=154,slow=34									
comp=Z,8.9nm,0.8s									
CPUP	**Villa Florida**	**35.40**	**313**				**P**	**18 54 54.6**	**+0.2**
CPUP	**Villa Florida**	**35.40**	**313**	P			**P**	**18 54 54.6**	**+0.2**
CPUP				pmax		pmax			
comp=Z,20nm,1.1s									
CPUP	**Villa Florida**	**35.40**	**313**	*eP*			**P**	**18 54 54.2**	**-0.2**
GO05	**Hualane**	**35.48**	**287**	P			**P**	**18 54 54.8**	**-0.3**
GO05				IAmb		IAmb	IAmb	18 55 00.0	
comp=Z,19nm,0.7s									
BO01	**Tunca**	**35.49**	**289**				**P**	**18 54 54.8**	**-0.3**
BO01				IAmb		IAmb	IAmb	18 55 07.7	
comp=Z,78nm,1.9s									
BO04	**La Punta**	**35.53**	**290**	P			**P**	**18 54 54.4**	**-1.2**
BO04				IAmb		IAmb	IAmb	18 55 22.5	
comp=Z,69nm,1.6s									
MT13	**San Alfonso**	**35.55**	**290**				**P**	**18 54 55.3**	**-0.5**
MT13				IAmb		IAmb	IAmb	18 55 02.0	
comp=Z,70nm,1.8s									
MT08	**Bocatoma Ro**	**35.63**	**291**	P			**P**	**18 54 57.1**	**+0.5**
MT08				IAmb		IAmb	IAmb	18 55 02.2	
comp=Z,46nm,1.2s									
LDASE	**Londrina, Braz**	**35.73**	**324**	*eP*			**P**	**18 54 58.8**	**+1.5**
MT03	**Universidad Ad**	**35.86**	**290**	P			**P**	**18 54 58.5**	**0.0**
MT03				IAmb		IAmb	IAmb	18 55 02.2	
comp=Z,77nm,1.4s									
MT09	**Talagante**	**35.90**	**289**	P			**P**	**18 54 58.8**	**0.0**
MT16	**CCHEN**	**35.91**	**290**	P			**P**	**18 54 58.5**	**-0.4**
MT16				IAmb		IAmb	IAmb	18 55 33.3	
comp=Z,34nm,0.6s									
MT01	**Popeta**	**35.97**	**289**	P			**P**	**18 54 58.7**	**-0.6**
MT01				IAmb		IAmb	IAmb	18 55 02.4	
comp=Z,42nm,1.1s									
MT05	**Renca**	**36.06**	**290**	P			**P**	**18 55 00.2**	**+0.1**
CFA	**Coronel Fontan**	**36.13**	**295**	LR		LR	LR	19 10 08.8	
comp=Z,596nm,20.7s,baz=171,slow=37									
PEL	**Peldehue**	**36.22**	**290**				**P**	**18 55 00.8**	**-0.7**
PEL	**Peldehue**	**36.22**	**290**	P			**P**	**18 55 00.8**	**-0.7**
PEL				pmax		pmax			
comp=Z,262nm,1.6s									
ZON	**Zonda**	**36.40**	**294**	P			**P**	**18 55 02.8**	**-0.3**
ZON	**Zonda**	**36.40**	**294**	P			**P**	**18 55 02.8**	**-0.3**
ZON				pmax		pmax			
comp=Z,25nm,0.8s									
VA03	**San Esteban**	**36.44**	**291**	P			**P**	**18 55 03.1**	**-0.3**
TRCB	**Terra Rica**	**36.80**	**323**	P			**P**	**18 55 07.0**	**+0.6**
TRCB				IAmb		IAmb	IAmb	18 55 12.3	
comp=Z,26nm,0.6s									
TRCB	**Terra Rica**	**36.80**	**323**	*eP*			**P**	**18 55 07.5**	**+1.0**
VA01	**Torpederas**	**36.83**	**289**	P			**P**	**18 55 06.0**	**-0.6**
VA01				IAmb		IAmb	IAmb	18 55 09.4	
comp=Z,93nm,1.2s									
VA06	**Catapilco**	**37.00**	**290**	P			**P**	**18 55 08.1**	**+0.1**
AMBA	**Amambai (Brazi**	**37.53**	**319**	*eP*			**P**	**18 55 12.8**	**+0.2**
SJMB	**Sao Joao De Ma**	**37.63**	**341**	*eP*			**P**	**18 55 13.0**	**-0.5**
CO02	**Combarbal**	**37.89**	**292**				**P**	**18 55 15.9**	**+0.2**
CO02				IAmb		IAmb	IAmb	18 55 18.6	
comp=Z,133nm,1.4s									
CO03	**El Pedregal**	**38.01**	**293**				**P**	**18 55 17.0**	**+0.2**
CO03				IAmb		IAmb	IAmb	18 55 24.2	
comp=Z,26nm,0.7s									
CO01	**Juntas del Tor**	**38.38**	**294**	P			**P**	**18 55 20.7**	**+0.6**
CO01				IAmb		IAmb	IAmb	18 55 24.0	
comp=Z,122nm,1.7s									
DIAM	**Diamantina, MG**	**38.52**	**338**	*eP*			**P**	**18 55 21.1**	**-0.1**
GO04	**Tololo Observa**	**38.60**	**293**	P			**P**	**18 55 21.2**	**-0.7**
GO04				IAmb		IAmb	IAmb	18 55 33.9	
comp=Z,33nm,0.7s									
CO06	**Fray Jorge**	**38.64**	**292**	P			**P**	**18 55 21.4**	**-0.5**
CO06				IAmb		IAmb	IAmb	18 55 24.4	
comp=Z,92nm,1.4s									
PMNB	**Patos De Minas**	**38.94**	**334**	*eP*			**P**	**18 55 26.4**	**+1.8**
CO05	**La Serena**	**39.03**	**293**	P			**P**	**18 55 25.3**	**+0.1**
CO05				IAmb		IAmb	IAmb	18 55 32.8	
comp=Z,70nm,0.8s									
LCO	**Las Campanas**	**39.47**	**295**	P			**P**	**18 55 29.0**	**-0.2**
LCO				IAmb		IAmb	IAmb	18 55 31.7	
comp=Z,69nm,1.5s									
LCO	**Las Campanas**	**39.47**	**295**	P			**P**	**18 55 29.0**	**-0.2**
LCO				pmax		pmax			
comp=Z,69nm,1.5s									
GUA01	**Guaratinga, BA**	**39.48**	**344**	*eP*			**P**	**18 55 30.1**	**+1.1**
IPMB	**Ipameri, GO**	**39.94**	**331**	*eP*			**P**	**18 55 32.0**	**-0.9**
AQDB	**Aquidauana**	**40.03**	**320**	P			**P**	**18 55 34.2**	**+0.7**
AQDB	**Aquidauana**	**40.03**	**320**	*eP*			**P**	**18 55 33.5**	**0.0**
AC04	**Llanos de Chal**	**40.31**	**295**	P			**P**	**18 55 35.9**	**0.0**
GO03	**Copiapo**	**40.38**	**296**	P			**P**	**18 55 36.7**	**+0.2**
GO03				IAmb		IAmb	IAmb	18 55 37.9	
comp=Z,79nm,1.6s									
AC02	**Maricunga**	**40.44**	**298**	P			**P**	**18 55 37.5**	**+0.1**
AC02				IAmb		IAmb	IAmb	18 55 41.0	
comp=Z,110nm,1.4s									
BDQN	**Bodoquena, MS**	**40.44**	**318**	*eP*			**P**	**18 55 36.9**	**-0.1**
C2SB	**Chapadao do Su**	**40.60**	**325**	*eP*			**P**	**18 55 40.1**	**+1.8**
AC06	**Mina Casimiro**	**40.63**	**296**	P			**P**	**18 55 38.8**	**+0.2**
AC06				IAmb		IAmb	IAmb	18 55 40.8	
comp=Z,113nm,1.6s									
CMC01	**Camacan, BA**	**40.63**	**345**	*eP*			**P**	**18 55 39.0**	**+0.4**
MAW	**Mawson**	**41.48**	**145**	LR		LR	LR	19 11 00.0	
comp=Z,586nm,19.2s,baz=250,slow=33									
SUR	**Sutherland**	**41.67**	**78**	LR		LR	LR	19 09 01.7	
comp=Z,436nm,19.8s,baz=211,slow=30									
AC01	**Pan de Azucar**	**41.74**	**297**	P			**P**	**18 55 47.7**	**0.0**
AC01				IAmb		IAmb	IAmb	18 55 50.2	
comp=Z,135nm,1.5s									
JANB	**Januaria**	**41.80**	**338**	*eP*			**P**	**18 55 49.5**	**+1.3**
GO02	**Mina Guanaco**	**42.05**	**299**	P			**P**	**18 55 50.6**	**+0.1**
GO02				IAmb		IAmb	IAmb	18 55 53.5	
comp=Z,74nm,0.7s									
BDFB	**Brasilia**	**42.12**	**333**	P			**P**	**18 55 52.1**	**+1.2**
comp=Z,8.9nm,0.6s,baz=149,slow=6.4,SNR=15									
BDFB				LR			LR	19 12 22.3	
comp=Z,632nm,18.8s,baz=158,slow=35									
comp=Z,8.9nm,0.6s									
BDFB	**Brasilia**	**42.12**	**333**	P			**P**	**18 55 51.5**	**+0.6**
PP1B	**Ponte de Pedra**	**42.38**	**322**	*eP*			**P**	**18 55 53.3**	**+0.4**
PB14	**IPOC Station P**	**42.90**	**299**	P			**P**	**18 55 57.4**	**-0.1**
PB14				IAmb		IAmb	IAmb	18 55 58.7	
comp=Z,72nm,1.7s									
ARAG	**Araguaiana, MT**	**43.14**	**327**	*eP*			**P**	**18 55 58.9**	**-0.2**
AF01	**San Pedro de A**	**43.21**	**302**	P			**P**	**18 56 00.5**	**+0.5**
SHEL	**Horse Pasture**	**43.28**	**34**	P			**P**	**18 56 01.3**	**+1.0**
SHEL				IAmb		IAmb	IAmb	18 56 01.6	
comp=Z,126nm,1.2s									
SHEL	**Horse Pasture**	**43.28**	**34**	P			**P**	**18 56 01.3**	**+1.0**
SHEL				pmax		pmax			
comp=Z,126nm,1.3s									
PB10	**IPOC Station P**	**43.91**	**299**	P			**P**	**18 56 05.9**	**+0.7**
PB10				IAmb		IAmb	IAmb	18 56 07.1	
comp=Z,112nm,1.7s									
PB06	**IPOC Station P**	**44.10**	**301**	P			**P**	**18 56 07.5**	**+0.5**
PB06				IAmb		IAmb	IAmb	18 56 10.1	
comp=Z,88nm,1.9s									
SALV	**Santo Antonio**	**44.24**	**322**	*eP*			**P**	**18 56 09.0**	**+1.1**
PB05	**IPOC Station P**	**44.28**	**300**	P			**P**	**18 56 08.8**	**+0.4**
SDBA	**SAO DESIDERIO**	**44.50**	**338**	*eP*			**P**	**18 56 10.7**	**+0.7**
PB09	**IPOC Station P**	**44.71**	**302**	P			**P**	**18 56 12.3**	**+0.5**
PB03	**IPOC Station P**	**44.74**	**301**	P			**P**	**18 56 12.8**	**+0.7**
PB07	**IPOC Station P**	**45.08**	**301**	P			**P**	**18 56 15.6**	**+0.7**
PB02	**IPOC Station P**	**45.43**	**302**	P			**P**	**18 56 18.4**	**+0.9**
PB02				IAmb		IAmb	IAmb	18 56 23.6	
comp=Z,28nm,0.9s									
PB01	**IPOC Station P**	**45.47**	**302**	P			**P**	**18 56 18.2**	**+0.4**
PB01				IAmb		IAmb	IAmb	18 56 24.4	
comp=Z,32nm,0.6s									
PTLB	**Pontes e Lacer**	**45.91**	**318**	P			**P**	**18 56 21.2**	**0.0**
PTLB	**Pontes e Lacer**	**45.91**	**318**	*eP*			**P**	**18 56 21.9**	**+0.8**
PB08	**IPOC Station P**	**46.08**	**303**				**P**	**18 56 23.7**	**+0.8**
PB08				IAmb		IAmb	IAmb	18 56 31.9	
comp=Z,19nm,0.6s									
SIV	**San Ignacio**	**46.17**	**316**	LR		LR	LR	19 14 25.0	
comp=Z,389nm,20.0s,baz=162,slow=34									
HMBC	**Humberstone**	**46.31**	**303**	P			**P**	**18 56 24.4**	**-0.1**
GO01	**Chusmiza**	**46.50**	**304**	P			**P**	**18 56 26.8**	**+0.4**
GO01				IAmb		IAmb	IAmb	18 56 32.8	
comp=Z,37nm,0.9s									
SNDB	**Serra Nova Dou**	**46.52**	**330**	*eP*			**P**	**18 56 27.4**	**+1.4**
PB11	**IPOC Station P**	**46.64**	**303**	P			**P**	**18 56 27.2**	**0.0**

KGCAE Kacgae 49.87 71 P **P** 18 56 50.6 -1.4
KGCAE IAmb IAmb 18 57 22.4
comp=Z,36nm,0.9s
LBTB Lobatse 50.01 76 LR LR 19 16 12.0
comp=Z,332nm,18.1s,baz=214,slow=34
LBTB Lobatse 50.01 76 **P** 18 56 52.4 -0.5
LBTB Lobatse 50.01 76 P **P** 18 56 52.4 -0.5
LBTB pmax pmax
comp=Z,22nm,1.2s
TSUM Tsumeb 50.43 64 LR LR 19 15 49.6
comp=Z,279nm,18.0s,baz=225,slow=33
TSUM Tsumeb 50.43 64 **P** 18 56 55.1 -1.2
TSUM IAmb IAmb 18 57 13.6
comp=Z,46nm,1.9s
GRTLG Ghanzi 50.55 69 *i* P **P** 18 56 53.8 -3.4
KDWAN Kaudwane 50.78 74 *i* P **P** 18 56 59.4 +0.6
LPHEP Lephephe 51.46 75 *i* P **P** 18 57 04.0 0.0
NBPS Pedro II - PI 51.69 345 *eP* **P** 18 57 06.6 +0.9
NPGB Novo Progresso 52.41 327 *eP* **P** 18 57 11.6 +0.7
BROLN Tlhalogang 54.08 75 *i* P **P** 18 57 22.2 -1.1
ITTB Itaituba 55.05 327 *eP* **P** 18 57 30.9 +0.7
KSANE Kasane 55.58 70 *i* P **P** 18 57 29.7 -4.5
KSANE Kasane 55.58 70 P **P** 18 57 33.4 -0.8
KSANE IAmb IAmb 18 57 51.9
comp=Z,22nm,1.1s
NNA Nana 56.81 301 P **P** 18 57 43.6 +0.7
comp=Z,4.0nm,0.3s,baz=162,slow=6.4,SNR=5.4
NNA LR LR 19 24 20.4
comp=Z,290nm,18.5s,baz=142,slow=38
comp=Z,4.0nm,0.3s
NNA Nana 56.81 301 **P** 18 57 41.4 -1.5
NNA IAmb IAmb 18 57 45.7
comp=Z,82nm,1.6s
TEFE Tefe 58.95 318 *eP* **P** 18 57 57.9 0.0
LSZ Lusaka 59.29 71 LR LR 19 19 33.8
comp=Z,487nm,19.8s,baz=216,slow=32
LSZ Lusaka 59.29 71 **P** 18 57 59.3 -1.0
LSZ Lusaka 59.29 71 P **P** 18 57 59.3 -1.0
LSZ pmax pmax
comp=Z,8.0nm,0.9s
ATAH Atahualpa 61.75 302 P **P** 18 58 20.3 +2.8
comp=Z,8.3nm,0.7s,baz=162,slow=6.0,SNR=13
ATAH LR LR 19 26 42.5
comp=Z,237nm,20.5s,baz=146,slow=38
comp=Z,8.3nm,0.7s
BOAV Boa Vista 62.95 325 **P** 18 58 23.9 -1.1
BOAV Boa Vista 62.95 325 *eP* **P** 18 58 24.9 -0.1
VOI Vohitsoka 64.45 92 **P** 18 58 35.1 0.0
DBIC Dimbokro 65.04 27 P **P** 18 58 38.0 -0.7
comp=Z,9.2nm,0.9s,baz=239,slow=9.2,SNR=4.4
DBIC LR LR 19 22 23.3
comp=Z,405nm,18.3s,baz=220,slow=32
comp=Z,9.2nm,0.9s
DBIC Dimbokro 65.04 27 IAmb IAmb 18 59 36.8
comp=Z,47nm,1.6s
ABPO Ambohimpanom 66.98 90 **P** 18 58 51.6 +0.1
ABPO Ambohimpanom 66.98 90 P **P** 18 58 51.6 +0.1
ABPO pmax pmax
comp=Z,10.0nm,1.0s
EDA Edea 67.28 44 **P** 18 58 53.2 +0.1
EDA IAmb IAmb 18 58 58.2
comp=Z,20nm,1.0s
OPO Ambohidratompo 67.31 90 LR LR 19 24 05.8
comp=Z,330nm,18.5s,baz=340,slow=32
OTAV Otavalo 68.22 306 **P** 18 58 58.4 -1.2
OTAV IAmb IAmb 18 59 13.7
comp=Z,28nm,1.4s
OTAV Otavalo 68.22 306 P **P** 18 58 58.4 -1.2
OTAV pmax pmax
comp=Z,28nm,1.4s
OTAV Otavalo 68.22 306 *eP* **P** 18 59 02.0 +2.4
ROSC El Rosal 70.46 312 LR LR 19 30 41.2
comp=Z,521nm,20.9s,baz=194,slow=36
SDV Santo Domingo 72.62 317 P **P** 18 59 26.7 +0.6
comp=Z,12nm,0.7s,baz=176,slow=6.8,SNR=7.6
SDV LR LR 19 32 46.8
comp=Z,1µm,19.4s,baz=146,slow=37
comp=Z,12nm,0.7s
SDV Santo Domingo 72.62 317 **P** 18 59 26.2 +0.1
SDV IAmb IAmb 18 59 46.7
comp=Z,20nm,1.0s
SDV Santo Domingo 72.62 317 *eP* **P** 18 59 26.7 +0.6
MBAR Mbarara 72.94 65 LR LR 19 27 25.7
comp=Z,413nm,21.5s,baz=209,slow=32
MBAR Mbarara 72.94 65 *i* P **P** 18 59 27.4 -0.7
MBAR pmax pmax
comp=Z,8.0nm,1.1s
TORD Torodi Ar. Bea 73.05 32 P **P** 18 59 28.6 +0.2
comp=Z,11nm,0.8s,baz=207,slow=8.7,SNR=30
TORD LR LR 19 26 32.9
comp=Z,720nm,18.1s,baz=162,slow=32
comp=Z,11nm,0.8s
KIBK Kibwezi 75.37 72 P **P** 18 59 41.9 -0.2
RPZ Rata Peaks 79.83 195 LR LR 19 32 30.0
comp=Z,293nm,19.9s,baz=164,slow=33
JTS Las Juntas de 80.07 305 *i* P **P** 19 00 07.6 -0.6
JTS pmax pmax
comp=Z,27nm,1.2s
TAM Tamanrasset 83.30 32 P **P** 19 00 25.9 +0.8
TAM Tamanrasset 83.30 32 P **P** 19 00 25.9 +0.8
TAM pmax pmax
comp=Z,49nm,0.2s
URZ Urewera 84.08 201 LR LR 19 34 07.6
comp=Z,232nm,19.6s,baz=164,slow=33
TBI Tubuai 86.56 233 *e*LR LR 19 27 59.7
comp=Z,1µm,26.0s
ATD Arta Tunnel 89.53 69 LR LR 19 37 17.1
comp=Z,26nm,21.8s,baz=196,slow=33
TEIG Tepich 90.27 306 P **P** 19 00 58.7 -0.3
MDT Midelt 90.31 21 LR LR 19 36 30.3
comp=Z,155nm,18.8s,baz=219,slow=32
MD01 Midelt array s 90.33 21 P **P** 19 01 00.0 +0.8
CMIG Matias Romero 90.74 292 LR LR 19 37 52.4
comp=Z,152nm,20.7s,baz=158,slow=33
RAO Raoul Island 91.56 207 LR LR 19 33 52.6
comp=Z,115nm,20.1s,baz=156,slow=30
PPT2 Papeete2 91.60 236 *e*LR LR 19 30 20.7
comp=Z,290nm,25.0s
PPT2 *e*LR LR 19 30 27.7
comp=Z,320nm,23.8s
STKA Stephens Creek 92.82 172 P **P** 19 01 13.2 +2.3
comp=Z,1.5nm,0.7s,baz=198,slow=3.2,SNR=3.1
STKA LR LR 19 40 50.1
comp=Z,388nm,20.2s,baz=191,slow=34
comp=Z,1.5nm,0.7s
STKA Stephens Creek 92.82 172 P **P** 19 01 12.3 +1.3
RAR Rarotonga 92.90 225 LR LR 19 37 08.7
comp=Z,99nm,18.6s,baz=178,slow=32
TAOE Nuku Hiva Isla 94.30 248 *e*LR LR 19 31 35.2
comp=Z,242nm,26.4s
KEST Kesra 96.55 31 LR LR 19 41 52.1
comp=Z,670nm,18.1s,baz=212,slow=34
ESDC Sonseca Array 97.08 19 P Pdif 19 01 29.9 -0.2
comp=Z,0.3nm,0.5s,baz=186,slow=4.6,SNR=8.4
ESDC LR LR 19 39 44.8
comp=Z,177nm,21.6s,baz=188,slow=32
comp=Z,0.3nm,0.5s
VAE Valguarnera 99.72 34 LR LR 19 44 08.6
comp=Z,261nm,18.4s,baz=174,slow=34
ASAR Alice Springs 100.05 164 P **Pdif** 19 01 43.9 0.0
comp=Z,0.8nm,0.8s,baz=185,slow=3.4,SNR=8.0
ASAR PKKP **PKKPdf** 19 18 03.0 +0.3
comp=Z,0.5nm,0.7s,baz=14,slow=2.4,SNR=8.7
DZM Mont Dzumac 101.75 195 *e*LR LR 19 35 05.4
comp=Z,349nm,21.7s
WRA Warramunga Arr 103.77 164 Pdiff **Pdif** 19 02 02.9 +2.4
comp=Z,0.6nm,0.9s,baz=194,slow=4.5,SNR=4.8
WRA PKKP **PKKPdf** 19 17 54.3 -1.8
comp=Z,0.4nm,0.7s,baz=0.4,slow=3.3,SNR=5.7
KIV Kislovodsk 116.13 50 *i* PKIKP **PKPdf** 19 06 40.0 -0.7
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,87nm,22.0s
PDAR Pinedale Array 118.90 304 PKP **PKiKP** 19 06 46.1 -0.3
comp=Z,0.4nm,0.7s,baz=126,slow=8.4,SNR=3.7
NVAR Mina Array Bea 119.96 295 PKP **PKiKP** 19 06 50.2 +1.6
comp=Z,0.9nm,0.6s,baz=124,slow=3.9,SNR=5.6
NVAR PP **PP** 19 08 18.1 +4.4
comp=Z,0.6nm,0.3s,baz=136,slow=5.3,SNR=6.1
HFS Hagfors 120.09 23 PKP **PKiKP** 19 06 48.0 +0.2
comp=Z,1.1nm,0.7s,baz=235,slow=5.1,SNR=1.4
ELK Elko 120.14 299 PKP **PKiKP** 19 06 50.2 +1.3
comp=Z,1.4nm,0.8s,baz=110,slow=2.1,SNR=6.0
NOA NORSAR Array B 120.36 22 PKP **PKiKP** 19 06 49.7 +1.3
comp=Z,1.2nm,1.0s,baz=201,slow=1.5,SNR=1.2
NIL Nilore 123.83 78 **PKPdf** 19 06 54.8 -1.1

NIL Nilore 123.83 78 PKIKP **PKPdf** 19 06 54.8 -1.1
FINES FINESS Array B 124.32 29 PKP **PKiKP** 19 06 56.0 0.0
comp=Z,2.2nm,0.6s,baz=270,slow=1.9,SNR=6.1
YBH Yreka Blue Hor 124.68 295 PKP **PKiKP** 19 06 59.2 +1.6
comp=Z,0.1nm,0.8s,baz=99,slow=1.4,SNR=4.3
G08A Pilot Rock 125.33 300 **PKPdf** 19 06 57.5 -1.0
CMAR Chiang Mai Arr 126.49 112 PKP **PKiKP** 19 07 01.7 -0.1
comp=Z,1.8nm,0.8s,baz=230,slow=3.6,SNR=13
CMAR Chiang Mai Arr 126.49 112 **PKPdf** 19 06 59.5 -1.8
EVN Evenstad 127.29 94 **PKPdf** 19 07 01.7 -1.7
B08A Colville Reser 127.67 303 **PKPdf** 19 07 02.0 -0.6
ABKAR Akbulak array 127.98 56 **PKPdf** 19 07 02.6 -0.6
KSH2 Kashi 129.09 75 PKP **PKiKP** 19 07 07.3 +0.7
KKAR Karatay Array 129.09 68 **PKPdf** 19 07 04.9 -0.6
KKAR Karatay Array 129.09 68 PKIKP **PKPdf** 19 07 04.9 -0.6
ILON Igloolik, Nuna 130.07 338 **PKiKP** 19 07 06.4 -0.9
ARCES ARCESS Array B 130.72 22 PKP **PKiKP** 19 07 08.7 0.0
comp=Z,2.0nm,0.6s,baz=194,slow=1.9,SNR=8.2
AAK Ala-Archa 130.91 71 **PKPdf** 19 07 08.0 -1.2
AAK Ala-Archa 130.91 71 *i* PKIKP **PKPdf** 19 07 08.6 -0.6
ARTI Arti 132.03 48 *i* PKIKP **PKiKP** 19 07 11.9 +0.2
ARTI 19 09 29.6
QIZ Qiongzhong 132.49 123 PKP **PKiKP** 19 07 12.8 -1.0
QIZ PP **PP** 19 09 36.0 -0.2
QIZ SS SS 19 27 16.5 +2.9
QIZ LR LR
comp=Z,190nm,13.2s
QIZ LR LR
comp=Z,200nm,11.7s
QIZ LR LR
comp=Z,220nm,14.8s
YKA Yellowknife Ar 134.80 319 PKP **PKiKP** 19 07 16.4 -0.7
comp=Z,2.0nm,0.7s,baz=122,slow=1.7,SNR=18
YKA PP PP 19 10 01.2 +10
comp=Z,0.8nm,1.0s,baz=129,slow=6.2,SNR=6.5
YKA SKPbc **SKPab** 19 10 47.1 -0.3
comp=Z,1.3nm,1.1s,baz=110,slow=2.1,SNR=6.2
YKA Yellowknife Ar 134.80 319 **PKPdf** 19 07 14.1 -1.6
BORK Borovoye 135.41 58 *i* PKIKP **PKiKP** 19 07 17.4 -1.2
BVAR Borovoye Array 135.43 58 PKP **PKiKP** 19 07 18.3 -0.4
comp=Z,2.3nm,0.6s,baz=207,slow=1.6,SNR=10
SPITS Spitsbergen Ar 136.10 12 PKP **PKiKP** 19 07 18.4 -1.0
comp=Z,2.9nm,0.9s,baz=208,slow=4.9,SNR=5.2
MK31 Makanchi Array 137.83 72 *i* PKIKP **PKPdf** 19 07 22.1 +0.2
MKAR Makanchi Array 137.83 72 PKiKP PKPpre 19 07 11.6
comp=Z,0.4nm,0.9s,baz=255,slow=2.8,SNR=3.8
MKAR PKP **PKiKP** 19 07 22.4 -1.4
comp=Z,0.9nm,0.8s,baz=216,slow=2.4,SNR=6.5
MKAR PP **PP** 19 10 14.1 +3.8
comp=Z,0.8nm,1.0s,baz=276,slow=5.9,SNR=3.9
KURBB Kurchatov Arra 138.11 65 PKP **PKiKP** 19 07 22.6 -1.6
comp=Z,0.2nm,0.3s,baz=238,slow=2.8,SNR=2.6
KURBB SKPbc **SKiKP** 19 10 56.5 -1.6
comp=Z,0.3nm,0.7s,baz=217,slow=2.3,SNR=2.3
KURK Kurchatov 138.21 65 **SKiKP** 19 10 56.5 -1.8
KURK Kurchatov 138.21 65 **PKPdf** 19 07 21.0 -1.4
KURK Kurchatov 138.21 65 PKIKP **PKPdf** 19 07 21.0 -1.4
WMQ Urumqi 138.98 79 *e*PKP **PKiKP** 19 07 25.0 -1.3
DGZ Jazzator, Alta 142.32 71 *i* PKIKP **PKPdf** 19 07 28.6 -1.5
M31M Drury Creek, Y 142.57 312 P **PKiKP** 19 07 31.6 -1.4
baz=115
O30N Mendenhall 142.71 309 P **PKiKP** 19 07 31.8 -1.6
baz=115
LZDM Lanzhou Array 142.79 101 PKP **PKPdf** 19 07 32.1 +0.5
comp=Z,0.6nm,0.3s,baz=208,slow=5.0,SNR=4.1
N31M Braeburn, Yuko 142.87 310 P **PKiKP** 19 07 31.8 -1.9
baz=115
A36M Sachs Harbour 142.93 329 P **PKiKP** 19 07 31.4 -2.1
baz=109,SNR=13
GTA2 Gaotai 143.02 94 *e*PKP **PKPdf** 19 07 31.5 -0.1
GTA2 LR LR
comp=Z,100nm,19.9s
GTA2 LR LR
comp=Z,130nm,21.1s
GTA2 LR LR
comp=Z,180nm,23.9s
ZAA0 Zalesovo Array 143.16 64 PKPab 19 07 26.2 -0.6
ZALV Zalesovo Beam 143.16 64 PKP **PKPdf** 19 07 29.2 -1.9
comp=Z,1.7nm,0.5s,baz=248,slow=4.0,SNR=9.4
ZALV Zalesovo Beam 143.16 64 PKPab 19 07 26.2 -0.6
HYT Haines Junctio 143.36 309 P **PKPdf** 19 07 31.8 +0.3
baz=114,SNR=5.2
O29M Mount Kennedy 143.62 308 P **PKPdf** 19 07 31.8 -0.2
baz=114
M30M Minto, Yukon 143.75 312 P **PKPdf** 19 07 32.5 +0.5
baz=113,SNR=11
YUK6 Outpost Mounta 143.79 309 P **PKPdf** 19 07 32.6 +0.2
baz=114
H31M Peel River 143.94 317 P **PKPdf** 19 07 33.2 +0.9
baz=110
YUK4 Talbot Arm 144.08 309 P **PKPdf** 19 07 33.5 +0.6
baz=113,SNR=38
XAN Xi'an 144.25 109 PKP **PKPdf** 19 07 33.0 -0.9
F31M Tsiigehtchic 144.26 320 P **PKPdf** 19 07 33.2 +0.5
baz=109,SNR=8.4
G31M Satah River 144.29 319 P **PKPdf** 19 07 33.2 +0.5
baz=109
J30M Hart River 144.30 315 P **PKPdf** 19 07 33.8 +0.7
baz=110
PINM Pinnacle 144.30 307 P **PKPdf** 19 07 33.3 +0.2
baz=114
PCA Pinnacle 144.31 307 **PKPdf** 19 07 32.5 -0.7
M29M Somme Creek 144.42 311 P **PKPdf** 19 07 32.6 -0.7
baz=112,SNR=14
INK Inuvik 144.45 322 PKP **PKPdf** 19 07 32.3 -0.7
comp=Z,15nm,0.7s,baz=90,slow=3.6,SNR=25
INK Inuvik 144.45 322 P **PKPdf** 19 07 32.1 -0.8
baz=108,SNR=24
L29M L29M 144.52 312 P **PKPdf** 19 07 33.1 -0.2
baz=111
K29M Barlow Dome 144.53 313 P **PKPdf** 19 07 33.3 -0.2
baz=111
I30M Mount Dempster 144.54 316 P **PKPdf** 19 07 33.0 -0.5
baz=110
O28M Mount Upton 144.54 308 P **PKPdf** 19 07 33.5 -0.3
baz=113,SNR=13
YUK8 Steele Glacier 144.55 309 P **PKPdf** 19 07 32.9 -0.9
baz=113,SNR=16
J29N Klondike Camp 145.02 314 P **PKPdf** 19 07 34.4 +0.2
baz=109
G30M tAoh Zraii Nji 145.04 319 P **PKPdf** 19 07 34.6 +0.5
baz=107
EPYK Eagle Plains 145.04 318 **PKPbc** 19 07 33.0 -0.7
EPYK Eagle Plains 145.04 318 P **PKPdf** 19 07 34.4 +0.2
baz=108,SNR=9.6
YUK3 Moose Creek 145.04 309 P **PKPdf** 19 07 34.9 +0.4
baz=112,SNR=9.4
F30M Barrier River 145.06 320 P **PKPdf** 19 07 34.5 +0.3
baz=107
MESA MESA 145.12 306 P **PKPdf** 19 07 35.1 +0.4
baz=113
CTGM Chitina Glacie 145.13 308 **PKPdf** 19 07 34.3 -0.3
CTG Chitina Glacier 145.14 308 P **PKPdf** 19 07 35.5 +0.8
baz=112,SNR=5.4
I29M Ogilvie Camp, 145.35 316 P **PKPab** 19 07 34.9 0.0
baz=108,SNR=12
DAWY Dawson 145.38 313 P **PKPab** 19 07 35.4 +0.3
baz=109,SNR=23
BVCY Beaver Creek 145.45 310 P **PKPab** 19 07 35.6 +0.3
baz=110,SNR=8.8
H29M Whitestone 145.63 317 P **PKPab** 19 07 36.3 +0.4
baz=107
BGLC Bering Glacier 145.71 306 P **PKPab** 19 07 36.5 +0.2
baz=112
CRQE Cirque 145.86 307 P **PKPab** 19 07 37.0 -0.1
baz=111
M27K Edge Creek, AK 145.87 310 P **PKPab** 19 07 37.5 +0.4
baz=110
I28M Miner Creek 146.03 316 P **PKPab** 19 07 37.4 -0.1
baz=107
E29M Blow River 146.03 321 P **PKPab** 19 07 37.2 -0.1
baz=104,SNR=41
MCARA McCarthy VSAT 146.05 308 P **PKPab** 19 07 37.6 +0.1
baz=110
BCAR Beaver Creek A 146.07 311 **PKPbc** 19 07 36.4 -0.7
L27K Beaver Creek, 146.09 311 P **PKPab** 19 07 37.7 0.0
baz=109
KAIM Kayak Island 146.17 305 P **PKPab** 19 07 38.1 0.0
baz=112
VRDI Verde Repeater 146.19 307 **PKPdf** 19 07 36.2 -0.3
M26K Nabesna, AK 146.38 310 P **PKPab** 19 07 38.3 -0.6
baz=109
LYN LuoYang 146.54 112 ⇓PKPbc **PKPab** 19 07 39.5 -0.8
LYN PKPab **pPKPdf** 19 07 45.0 -0.1
D28M Stokes Point 146.54 323 P **PKPab** 19 07 39.2 0.0
baz=102

F28M Old Crow 146.57 319 P **PKPab** 19 07 39.2 -0.2
baz=104,SNR=31
BMRM Bremner River 146.63 307 P **PKPab** 19 07 39.3 -0.6
baz=110
E28M Babbage River 146.67 321 P **PKPab** 19 07 39.4 -0.4
baz=102
L26K Log Cabin Wild 146.73 311 P **PKPab** 19 07 39.5 -0.8
baz=108,SNR=9.8
I27K Kandik River 146.74 315 P **PKPab** 19 07 39.8 -0.4
baz=105
N25K Chitina, Valde 146.84 308 P **PKPab** 19 07 40.3 -0.4
baz=109
H27K Steamboat Moun 146.87 317 P **PKPab** 19 07 40.0 -0.7
baz=104
Q23K Middleton Isla 146.90 303 P **PKPab** 19 07 40.3 -0.6
baz=111
EYAK Cordova Ski Ar 147.01 306 P **PKPab** 19 07 40.7 -0.6
baz=110
G27K Doyon Strip 147.06 318 P **PKPab** 19 07 40.7 -0.7
baz=104
SCRK Sand Creek 147.28 312 P **PKPab** 19 07 41.7 -0.8
baz=106,SNR=26
I26K Coal Creek Min 147.29 315 P **PKPab** 19 07 41.2 -1.1
baz=105,SNR=38
D27M Malcolm River 147.30 322 P **PKPab** 19 07 41.7 -0.7
baz=100
E27K Colleen River 147.33 320 P **PKPab** 19 07 41.5 -0.9
baz=101,SNR=27
HARP HAARP 147.34 309 P **PKPab** 19 07 41.4 -1.2
baz=108
KLU Klutina 147.40 307 P **PKPab** 19 07 41.8 -1.2
baz=108
RIDG Independent Ri 147.58 311 P **PKiKP** 19 07 42.6 -0.8
baz=106,SNR=27
P23K Montague Islan 147.60 304 P **PKiKP** 19 07 41.9 -1.5
baz=110
PAX Paxson 147.64 310 P **PKiKP** 19 07 42.2 -1.3
baz=106,SNR=25
M24K Tolsona, Glenn 147.70 308 **PKPdf** 19 07 39.0 +0.1
M24K Tolsona, Glenn 147.70 308 P **PKiKP** 19 07 42.8 -0.9
baz=107,SNR=7.8
GLI Glacier Island 147.75 306 P **PKiKP** 19 07 42.8 -0.9
baz=109
NJ2 Nanjing 147.78 123 *e*PKPbc **PKPdf** 19 07 40.5 +0.7
G26K Porcupine Rive 147.91 318 P **PKiKP** 19 07 42.9 -0.9
baz=102,SNR=18
K24K Donnelly Dome 148.00 311 P **PKiKP** 19 07 43.2 -0.9
baz=105
J25K Salcha River, 148.03 313 P **PKiKP** 19 07 43.3 -1.0
baz=104,SNR=12
SCM Sheep Creek Mo 148.14 307 P **PKiKP** 19 07 44.4 -0.2
baz=107
F26K Sheenjek River 148.19 319 P **PKiKP** 19 07 44.1 -0.3
baz=100
PRP Porcupine Dome 148.30 315 P **PKiKP** 19 07 44.3 -0.6
baz=102,SNR=30
BMAR Burnt Mountain 148.30 318 **PKiKP** 19 07 43.5 -1.3
M23K Glacier View 148.31 307 P **PKiKP** 19 07 44.0 -0.9
baz=107
C27K Jago River 148.32 323 P **PKiKP** 19 07 44.1 -0.5
baz=97
KNGR Kungurtug, Tuv 148.32 76 *i* PKIKP **PKPbc** 19 07 41.7 -2.1
DHY Denali Highway 148.51 310 P **PKiKP** 19 07 44.7 -0.7
baz=105
KNK Knik Glacier 148.54 306 P **PKiKP** 19 07 44.7 -0.7
baz=107
WAT6 Susitna Watana 148.54 309 P **PKiKP** 19 07 44.7 -0.8
baz=106,SNR=9.8
SML Sawmill 148.59 307 P **PKiKP** 19 07 44.8 -0.7
baz=106,SNR=6.1
SEW Seward 148.61 304 P **PKiKP** 19 07 44.5 -0.9
baz=108
HDA Harding Lake 148.65 312 P **PKiKP** 19 07 44.8 -0.6
baz=103
ILAR Eielson Array 148.70 313 PKP **PKPbc** 19 07 41.5 -2.6
comp=Z,0.6nm,1.0s,baz=127,slow=1.4,SNR=4.2
ILAR PKPbc **PKiKP** 19 07 44.7 -0.9
comp=Z,23nm,0.7s,baz=117,slow=1.8,SNR=58
ILAR Eielson Array 148.70 313 **PKPdf** 19 07 38.2 -2.1
ILAR PKPbc **PKiKP** 19 07 44.6 -1.0
ILAR Eielson Array 148.70 313 PKP2 **PKiKP** 19 07 44.6 -1.0
F25K Christian Rive 148.74 319 P **PKiKP** 19 07 45.8 +0.2
baz=99
C26K Camden Bay 148.77 323 P **PKiKP** 19 07 45.4 -0.1
baz=96
E25K Arctic Village 148.79 320 P **PKiKP** 19 07 45.3 -0.4
baz=98,SNR=76
O22K Cooper Landing 148.85 304 P **PKiKP** 19 07 45.6 -0.3
baz=108
PMR Palmer 148.90 307 P **PKiKP** 19 07 45.6 -0.4
baz=106
WAT1 Susitna Watana 148.96 309 P **PKiKP** 19 07 45.9 -0.3
baz=105
POKR Poker Flat Res 149.00 314 P **PKiKP** 19 07 45.3 -0.9
baz=102
RC01 Rabbit Creek A 149.04 305 P **PKiKP** 19 07 45.5 -0.9
baz=107
BRSE Bradley Lake S 149.11 303 P **PKiKP** 19 07 45.3 -1.2
baz=108
COLA College 149.13 313 P **PKiKP** 19 07 45.7 -0.6
baz=102
WRH Wood River Hil 149.14 312 **PKPdf** 19 07 40.3 -0.7
WRH PKPbc **PKiKP** 19 07 45.5 -0.9
D25K Kavik River 149.22 322 P **PKiKP** 19 07 45.9 -0.7
baz=96
G24K Hadweenzic Riv 149.30 317 P **PKiKP** 19 07 46.3 -0.4
baz=99
H24K Noodor Dome 149.32 315 P **PKiKP** 19 07 46.5 -0.4
baz=100,SNR=10
MCK McKinley 149.35 311 P **PKiKP** 19 07 46.4 -0.5
baz=103,SNR=9.7
KDAK Kodiak Island 149.38 298 **PKPab** 19 07 49.1 -1.8
KDAK Kodiak Island 149.38 298 PKP2 **PKPab** 19 07 49.1 -1.8
KDAK Kodiak Island 149.38 298 P **PKiKP** 19 07 46.7 -0.4
baz=110
M22K Willow 149.40 307 P **PKiKP** 19 07 46.7 -0.3
baz=105
HOM Homer 149.52 302 P **PKiKP** 19 07 47.0 -0.3
baz=108
OHAK Old Harbor 149.54 297 P **PKiKP** 19 07 46.9 -0.5
baz=111
Q20K Shuyak Island 149.56 300 P **PKiKP** 19 07 47.1 -0.4
baz=109
NEA2 Nenana 149.58 312 P **PKiKP** 19 07 46.8 -0.6
baz=101,SNR=8.1
SUA Susitna One 149.61 306 P **PKiKP** 19 07 47.1 -0.5
baz=105
CAPN Captain Cook N 149.61 304 P **PKiKP** 19 07 46.7 -0.8
baz=106
CUT Chulitna 149.63 308 P **PKiKP** 19 07 47.2 -0.3
baz=104
SII Sitkinak Islan 149.76 295 P **PKiKP** 19 07 47.4 -0.6
baz=111
I23K Minto, Yukon-K 149.81 313 P **PKiKP** 19 07 47.4 -0.4
baz=100
E24K Your Creek 149.87 319 P **PKiKP** 19 07 48.3 +0.3
baz=96
HNS HongShan 149.88 111 ⇓PKPbc **PKiKP** 19 07 49.0 +0.2
HNS HongShan 149.88 111 LR LR
comp=Z,120nm,18.1s
HNS HongShan 149.88 111 LR LR
comp=E,170nm,19.1s
TRF Thorofare Moun 149.88 310 P **PKiKP** 19 07 47.9 -0.3
baz=102
C24K Franklin Bluff 150.07 322 P **PKiKP** 19 07 48.2 0.0
baz=93
D24K Happy Valley 150.08 321 P **PKiKP** 19 07 48.4 +0.1
baz=94
SKT Skwentna 150.10 307 **PKPdf** 19 07 41.5 -1.2
SKT Skwentna 150.10 307 P **PKiKP** 19 07 48.5 -0.1
baz=104,SNR=11
STLK Strandline Lak 150.12 306 PKPdf **PKPdf** 19 07 41.1 -1.6
STLK **PKPbc** 19 07 47.4 -0.4
N20K Mount Spurr 150.22 305 P **PKiKP** 19 07 48.3 -0.6
baz=105
SPCR Spurr Chakacha 150.22 305 P **PKiKP** 19 07 49.0 +0.1
baz=105
CHIR Chirikof Islan 150.24 294 P **PKiKP** 19 07 49.1 +0.2
baz=112
Q19K Cape Douglas, 150.28 300 P **PKiKP** 19 07 49.0 0.0
baz=108
E23K Chandalar 150.29 319 P **PKiKP** 19 07 48.9 +0.1
baz=95
P19K Oil Pt 150.29 302 P **PKiKP** 19 07 48.8 -0.2
baz=107
G23K Bananza Creek 150.31 316 P **PKiKP** 19 07 49.4 +0.5
baz=97,SNR=30
BPAW Bear Paw Mtn. 150.31 311 **PKPdf** 19 07 41.7 -1.2

BPAW			PKPbc	**PKiKP**	**19 07 48.4**	**-0.5**
BPAW	**Bear Paw Mtn.** baz=101,SNR=30	**150.31 311**	P	**PKiKP**	**19 07 48.7**	**-0.2**
TOLK	**Toolik Lake Re** baz=94,SNR=44	**150.32 320**	P	**PKiKP**	**19 07 49.2**	**+0.4**
MLY	**Manley** baz=99	**150.36 313**	P	**PKiKP**	**19 07 48.7**	**-0.4**
COLD	**Coldfoot** baz=96,SNR=20	**150.43 317**	P	**PKiKP**	**19 07 49.7**	**+0.6**
PPLA	**Purkeypile** baz=102	**150.60 308**	P	**PKiKP**	**19 07 49.9**	**+0.2**
HHC	**Hu-ho-hao-te** comp=N,90nm,15.5s	**150.61 103**	*e*P LR	**PKPdf** LR	**19 07 40.0**	**-4.3**
HHC	comp=E,83nm,15.1s		LR	LR		
HHC	comp=Z,110nm,15.7s		LR	LR		
C23K	**Itkillik River** baz=91	**150.73 323**	P	**PKiKP**	**19 07 50.2**	**+0.6**
D23K	**Nanushuk River**	**150.74 321**		**PKPdf**	**19 07 42.9**	**-0.6**
D23K	**Nanushuk River** baz=92,SNR=10.0	**150.74 321**	P	**PKiKP**	**19 07 50.4**	**+0.8**
H22K	**Ishtalitna Cre** baz=97	**150.75 315**	P	**PKiKP**	**19 07 50.3**	**+0.5**
M20K	**Styx River** baz=103	**150.81 306**	P	**PKiKP**	**19 07 50.3**	**+0.2**
CHUM	**Lake Minchumin** baz=100	**150.85 310**	P	**PKiKP**	**19 07 50.4**	**+0.5**
Q18K	**Katmai Hardscr** baz=107	**150.87 299**	P	**PKiKP**	**19 07 50.7**	**+0.3**
I21K	**Tanana** baz=98	**150.91 313**	P	**PKiKP**	**19 07 50.6**	**+0.6**
O19K	**Port Alsworth** baz=105	**150.97 302**	P	**PKiKP**	**19 07 50.6**	**+0.3**
E22K	**Anaktuvuk Pass** baz=93,SNR=19	**151.12 319**	P	**PKiKP**	**19 07 51.1**	**+0.6**
P18K	**Big Mountain,** baz=106	**151.19 301**	P	**PKiKP**	**19 07 51.3**	**+0.4**
Q17K	**Contact Creek** baz=108	**151.20 298**	P	**PKiKP**	**19 07 51.5**	**+0.5**
N19K	**Bonanza Creek** baz=104	**151.20 304**	P	**PKiKP**	**19 07 51.2**	**+0.2**
R17L	**Mt. Peulik Vol** baz=108	**151.24 297**	P	**PKiKP**	**19 07 51.5**	**+0.4**
H21K	**Melozitna Rive** baz=96	**151.31 314**	P	**PKiKP**	**19 07 51.7**	**+0.8**
O18K	**Koktuh Hills** baz=105	**151.31 302**	P	**PKiKP**	**19 07 51.9**	**+0.8**
ZAK	**Zakamensk** comp=Z,20nm,1.8s	**151.44 80**	*e*PKIKP pmax	**PKPbc** pmax	**19 07 50.6**	**-0.7**
ZAK						
D22K	**Ayikyak River** baz=91	**151.46 321**	P	**PKiKP**	**19 07 52.2**	**+1.0**
K20K	**Telida** baz=100	**151.53 309**	P	**PKiKP**	**19 07 52.4**	**+0.9**
L19K	**White Mountain** baz=101	**151.67 306**	P	**PKiKP**	**19 07 52.4**	**+0.6**
G21K	**Allakaket** baz=94	**151.67 316**	P	**PKiKP**	**19 07 52.5**	**+0.8**
B22K	**Teshekpuk Lake** baz=87	**151.69 324**	P	**PKiKP**	**19 07 52.3**	**+0.8**
Q16K	**King Salmon** baz=106	**151.70 299**	P	**PKiKP**	**19 07 52.5**	**+0.6**
F21K	**Alatna River** baz=93	**151.71 317**	P	**PKiKP**	**19 07 52.9**	**+1.1**
P17K	**Kvichak River** baz=106	**151.74 300**	P	**PKiKP**	**19 07 53.1**	**+1.2**
N18K	**Kilae Creek** baz=103	**151.84 303**	P	**PKiKP**	**19 07 53.4**	**+1.2**
R16K	**Pilot Point** baz=108	**151.84 296**	P	**PKiKP**	**19 07 53.5**	**+1.3**
SONM	**Songino Array** comp=Z,7.8nm,0.6s,baz=221,slow=3.2,SNR=25	**151.92 87**	PKPbc	**PKiKP**	**19 07 52.4**	**-0.5**
SONM	**Songino Array**	**151.92 87**	PKPdf	**PKPdf**	**19 07 43.7**	**-2.3**
SONM				**PKPbc**	**19 07 50.0**	**-2.6**
SONM	**Songino Array**	**151.92 87**	PKIKP	**PKPdf**	**19 07 43.7**	**-2.3**
SONM					19 07 50.0	
E21K	**Killik River** baz=90	**151.93 320**	P	**PKiKP**	**19 07 52.9**	**+0.7**
CHNA	**Chernabura Isl** baz=112	**151.98 290**	P	**PKiKP**	**19 07 52.9**	**+0.3**
M18K	**Stony River** baz=102	**151.98 305**	P	**PKiKP**	**19 07 53.2**	**+0.8**
B21K	**Ikpikpuk River**	**152.13 322**		**PKPdf**	**19 07 44.5**	**-1.0**
B21K	**Ikpikpuk River** baz=87,SNR=16	**152.13 322**	P	**PKiKP**	**19 07 53.5**	**+1.1**
H20K	**Anotleneega Mo** baz=95	**152.15 313**	P	**PKiKP**	**19 07 53.5**	**+0.9**
O17K	**Koliganek Bris** baz=104	**152.21 301**	P	**PKiKP**	**19 07 53.8**	**+0.9**
C21K	**Knifeblade Rid** baz=88	**152.21 321**	P	**PKiKP**	**19 07 53.8**	**+1.2**
J19K	**Poorman** baz=97	**152.31 310**	P	**PKiKP**	**19 07 54.1**	**+1.1**
N17K	**Nushagak Hills** baz=103	**152.43 302**	P	**PKiKP**	**19 07 54.0**	**+0.7**
P16K	**Nushagak River** baz=105	**152.47 299**	P	**PKiKP**	**19 07 54.5**	**+1.1**
L18K	**Granite Mounta** baz=100	**152.52 306**	P	**PKiKP**	**19 07 54.6**	**+1.1**
BJI2	**Beijing**	**152.56 109**	PKPbc	**PKiKP**	**19 07 55.8**	**+1.5**
F20K	**Avaraart Lake** baz=91	**152.58 317**	P	**PKiKP**	**19 07 55.5**	**+1.8**
SDPT	**Sand Point** baz=110	**152.64 291**	P	**PKiKP**	**19 07 55.5**	**+1.6**
A21K	**Barrow** baz=82	**152.65 326**	P	**PKiKP**	**19 07 55.4**	**+1.9**
O16K	**Kokwok River B** baz=104	**152.66 300**	P	**PKiKP**	**19 07 55.4**	**+1.6**
J18K	**Innoko River** baz=97	**152.72 309**	P	**PKiKP**	**19 07 55.5**	**+1.6**
M17K	**Holitna River** baz=101	**152.73 304**	P	**PKiKP**	**19 07 55.7**	**+1.8**
E20K	**Nigu River** baz=88	**152.75 319**	P	**PKiKP**	**19 07 55.7**	**+1.8**
D20K	**Etivluk River** baz=87	**152.89 320**	P	**PKiKP**	**19 07 55.5**	**+1.4**
GCSA	**Galena City Sc** baz=95	**152.93 312**	P	**PKiKP**	**19 07 55.8**	**+1.6**
B20K	**Meade River** baz=84	**152.98 323**	P	**PKiKP**	**19 07 56.3**	**+2.1**
G19K	**Purcell Mounta** baz=92	**153.10 315**	P	**PKiKP**	**19 07 55.8**	**+1.2**
E19K	**Redstone River** baz=89	**153.16 318**	P	**PKiKP**	**19 07 56.4**	**+1.7**
N16K	**Nishlik Lake** baz=102	**153.18 302**	P	**PKiKP**	**19 07 56.4**	**+1.4**
L17K	**Donlin** baz=99	**153.25 306**	P	**PKiKP**	**19 07 56.6**	**+1.6**
K17K	**Iditarod** baz=98	**153.34 307**	P	**PKiKP**	**19 07 56.4**	**+1.2**
F19K	**Shaleruckik Mo** baz=90	**153.38 316**	P	**PKiKP**	**19 07 55.9**	**+0.8**
M16K	**Timber Creek** baz=100	**153.38 303**	P	**PKiKP**	**19 07 56.9**	**+1.6**
O15K	**Ungalikthiuk R** baz=104	**153.42 299**	P	**PKiKP**	**19 07 56.8**	**+1.4**
D19K	**Kuna River** baz=86	**153.45 320**	P	**PKiKP**	**19 07 56.6**	**+1.2**
H18K	**Honhosa River** baz=93	**153.59 312**	P	**PKiKP**	**19 07 57.1**	**+1.4**
G18K	**Tagagawik** baz=91	**153.73 314**	P	**PKiKP**	**19 07 57.2**	**+1.3**
L16K	**Owhat River** baz=99	**153.74 305**	P	**PKiKP**	**19 07 57.4**	**+1.4**
N15K	**Kwethluk River** baz=102	**153.77 301**	P	**PKiKP**	**19 07 57.2**	**+1.1**
C19K	**Lookout Ridge** baz=84	**153.93 321**	P	**PKiKP**	**19 07 57.7**	**+1.4**
FALS	**False Pass** baz=110	**154.05 288**	P	**PKiKP**	**19 07 58.0**	**+1.2**
F18K	**Selawik** baz=89	**154.13 316**	P	**PKiKP**	**19 07 58.5**	**+1.9**
M15K	**Kasigluk River** baz=100	**154.16 302**	P	**PKiKP**	**19 07 57.9**	**+1.0**
O14K	**Tigyukauivet M** baz=103	**154.16 299**	P	**PKiKP**	**19 07 58.2**	**+1.3**
H17K	**Granite Mounta** baz=92	**154.24 312**	P	**PKiKP**	**19 07 57.9**	**+0.9**
A19K	**Wainwright** baz=80	**154.28 324**	P	**PKiKP**	**19 07 58.3**	**+1.4**
J16K	**Anvik River** baz=95	**154.44 308**	P	**PKiKP**	**19 07 58.5**	**+1.1**
E18K	**Tukpahlearik C** baz=86	**154.46 318**	P	**PKiKP**	**19 07 58.4**	**+1.1**
N14K	**Kuskokwak Cree** baz=101	**154.50 300**	P	**PKiKP**	**19 07 59.1**	**+1.5**
I17K	**Unalakleet** baz=93	**154.53 309**	P	**PKiKP**	**19 07 59.3**	**+1.8**
G17K	**Kiwalik Mounta** baz=90	**154.55 313**	P	**PKiKP**	**19 07 59.0**	**+1.4**
C18K	**Utukok River** baz=83	**154.56 321**	P	**PKiKP**	**19 07 59.1**	**+1.5**
L15K	**Ungalak Mounta** baz=97	**154.69 304**	P	**PKiKP**	**19 07 59.4**	**+1.4**
F17K	**Baldwin Pennin** baz=87	**154.78 315**	P	**PKiKP**	**19 08 00.7**	**+2.7**
K15K	**Wolf Creek Mou** baz=96	**154.78 306**	P	**PKiKP**	**19 07 59.4**	**+1.3**
M14K	**Bethel** baz=99	**154.78 302**	P	**PKiKP**	**19 08 00.6**	**+2.4**
E17K	**Hotham Inlet** baz=86	**154.97 317**	P	**PKiKP**	**19 08 01.0**	**+2.7**
L14K	**Kuka Creek** baz=97	**155.21 303**	P	PKPdf	19 08 01.5	+11
H16K	**Elim** baz=90	**155.22 311**	P	PKPdf	19 08 01.4	+11
G16K	**Koyuk River** baz=89	**155.27 313**	P	PKPdf	19 08 01.8	+12
RDOG	**Red Dog Mine** baz=82	**155.27 319**	P	PKPdf	19 08 01.9	+12
C17K	**DeLong Mountai** baz=81	**155.31 320**	P	**PKPab**	**19 08 16.2**	**+0.6**
D17K	**Noatak River** baz=83,SNR=5.3	**155.38 319**	P	**PKPab**	**19 08 16.6**	**+0.7**
UNV	**Unalaska Valle** baz=111	**155.39 284**	P	**PKPab**	**19 08 16.0**	**-0.3**
M13K	**Dall Lake** baz=99	**155.41 301**	P	**PKPab**	**19 08 17.4**	**+1.3**
J14K	**Nanvaranak Lak** baz=93	**155.75 307**	P	**PKPab**	**19 08 18.1**	**+0.6**
G15K	**Niukluk** baz=88	**155.99 312**	P	**PKPab**	**19 08 19.5**	**+0.9**
C16K	**Lisburne Hills** baz=79	**156.14 320**	P	**PKPab**	**19 08 19.6**	**+0.5**
F15K	**North Star Dit** baz=86	**156.21 314**	P	**PKPab**	**19 08 20.7**	**+1.2**
K13K	**Kusilvak Mount** baz=94	**156.21 304**	P	**PKPab**	**19 08 20.2**	**+0.6**
KSRS	**Korea Array** comp=Z,1.4nm,0.8s,baz=231,slow=3.5,SNR=5.2	**156.43 130**	PKPab	**PKPab**	**19 08 22.1**	**+0.9**
ANM	**Nome** baz=88	**156.58 311**	P	**PKPab**	**19 08 22.7**	**+1.6**
M11K	**Mekoryuk**	**156.81 300**	PKPdf	**PKPdf**	**19 07 50.9**	**-1.3**
M11K				**PKPab**	**19 08 24.2**	**+2.0**
M11K	**Mekoryuk** baz=97	**156.81 300**	P	**PKPab**	**19 08 24.2**	**+2.0**
F14K	**Arctic Creek** baz=85	**156.92 313**	P	**PKPab**	**19 08 25.0**	**+2.4**
TNA	**Tin City** baz=83	**157.57 314**	P	**PKPab**	**19 08 26.9**	**+1.5**
CIT	**Chita**	**157.96 83**	*e*PKP2	**PKPab**	**19 08 29.4**	**+1.8**
GAMB	**Gambell** baz=83	**159.40 309**	P	**PKPab**	**19 08 34.6**	**+1.3**
HILR	**Hailar Array B** comp=Z,2.5nm,0.6s,baz=190,slow=2.7,SNR=4.5	**160.42 94**	PKPab	**PKPab**	**19 08 39.2**	**+0.9**
SEY	**Seymchan** comp=Z,4.0nm,1.3s	**172.30 354**	*i* PKIKP pmax	**PKPdf** pmax	**19 08 02.6**	**-3.1**
SEY						
PET	**Petropavlovsk**	**174.75 247**	*e*PKP2	**PKPab**	**19 09 47.7**	**+6.3**
PET			*e*		19 13 39.0	
PET			*e*SS	SS	19 34 59.0	+4.2
PET	comp=Z,200nm,17.0s		MLR	MLR		

*JMA **28** 18:49:43.8±0.1,24°.4N±0°.3×121°.4E±0°.8,h5km,MV3.2/12, TAIWAN REGION*
*TAP **28** 18:49:43.2,24°.38N×121°.40E,h5km,ML3.8,C*
ISC 28 18:49:43.8±0.8,24°.39N±0°.01×121°.38E±0°.02,h6km±6km, n146,σ0°68/205,31C-5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNS	**Nan Shan**	**0.05**	**348**	⇓*i*P	**Pg**	**18 49 45.2**	**-0.2**
NNS				*i*S	**Sg**	**18 49 46.3**	**-0.2**
FUSS	**Fushou**	**0.19**	**222**	⇑*i*P	**Pg**	**18 49 47.9**	**+0.2**
LATG	**Datong**	**0.19**	**42**	⇑*i*P	**Pg**	**18 49 47.4**	**-0.3**
ETLH	**Xiulin Townshi**	**0.20**	**154**	P	**Pg**	**18 49 48.4**	**+0.5**
TWT	**Tachien**	**0.23**	**234**	⇑*i*P	**Pg**	**18 49 48.7**	**+0.2**
NDT	**Datong Townshi**	**0.24**	**29**	⇑*i*P	**Pg**	**18 49 48.3**	**-0.2**
NDT				S	**Sg**	**18 49 52.9**	**+1.1**
TDCB	**Techi**	**0.25**	**236**	⇑P	**Pg**	**18 49 48.7**	**0.0**
WHF	**Hehuan Shan**	**0.27**	**204**	⇓*i*P	**Pg**	**18 49 49.4**	**+0.1**
YHNB	**Yeheng**	**0.28**	**358**	P	**Pg**	**18 49 49.5**	**+0.2**
YHNB	**Yeheng**	**0.28**	**358**	S	**Sg**	**18 49 53.9**	**+0.9**
YHNB	**Yeheng**	**0.28**	**358**	⇑*i*P	**Pg**	**18 49 49.3**	**0.0**
YHNB				S	**Sg**	**18 49 53.8**	**+0.8**
NSK	**Sanguang**	**0.28**	**355**	⇑*i*P	**Pg**	**18 49 49.4**	**0.0**
NSK				S	**Sg**	**18 49 54.0**	**+0.8**
NACB	**Ninganchiao**	**0.29**	**138**	P	**Pg**	**18 49 49.9**	**+0.4**
NACB	**Ninganchiao**	**0.29**	**138**	⇓*i*P	**Pg**	**18 49 49.9**	**+0.4**
ENTT	**Nioudou**	**0.30**	**34**	⇑*i*P	**Pg**	**18 49 55.5**	**-0.2**
ENTT				S	**Sg**	**18 49 54.4**	**+0.8**
ETL	**Fush Village**	**0.32**	**137**	*e*P	**Pg**	**18 49 50.5**	**+0.4**
EAHA	**Aohua**	**0.33**	**101**	P	**Pg**	**18 49 50.4**	**+0.2**
EAHA				S	**Sg**	**18 49 54.5**	**-0.1**
NFF	**Wufeng Townshi**	**0.34**	**315**	*e*P	**Pg**	**18 49 50.8**	**+0.3**
NFF				*e*S	**Sg**	**18 49 56.1**	**+1.1**
EWUT	**Wuta**	**0.36**	**81**	*e*P	**Pg**	**18 49 50.7**	**-0.2**
TWD	**Chiawan**	**0.37**	**148**	⇓P	**Pg**	**18 49 51.3**	**+0.3**
TWD				*e*S	**Sg**	**18 49 56.3**	**+0.5**
LXIB	**Xiulin Townshi**	**0.37**	**176**	⇑*i*P	**Pg**	**18 49 51.3**	**+0.2**
LXIB				*e*S	**Sg**	**18 49 56.3**	**+0.3**
NDS	**Dongshan**	**0.39**	**51**	⇑P	**Pg**	**18 49 50.9**	**-0.4**
NDS				*e*S	**Sg**	**18 49 56.7**	**+0.3**
NWLT	**Wulai**	**0.40**	**16**	⇑P	**Pg**	**18 49 51.3**	**-0.2**
NWLT				S	**Sg**	**18 49 56.7**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.41**	**27**	⇑*i*P	**Pg**	**18 49 51.5**	**-0.3**
FUSB				S	**Sg**	**18 49 57.4**	**+0.2**
WHP	**Taichung City**	**0.42**	**254**	⇑P	**Pg**	**18 49 52.3**	**+0.4**
TWE	**Neicheng**	**0.42**	**38**	⇑*i*P	**Pg**	**18 49 51.9**	**0.0**
TWE				S	**Sg**	**18 49 58.4**	**+1.0**
LIOB	**Emei**	**0.42**	**307**	P	**Pb**	**18 49 52.7**	**-1.0**
LIOB				S	**Sb**	**18 49 59.6**	**-0.7**
NSTT	**Nanjuang**	**0.42**	**304**	⇑P	**Pg**	**18 49 52.5**	**+0.5**
NSTT				S	**Sb**	**18 49 59.4**	**-1.0**
KSHI	**Guanxi Townshi**	**0.43**	**334**	P	**Pb**	**18 49 53.1**	**-0.7**
KSHI				S	**Sb**	**18 50 00.2**	**-0.3**
ETM	**Tongmen**	**0.44**	**167**	P	**Pg**	**18 49 52.5**	**+0.2**
ETM				S	**Sg**	**18 49 57.9**	**-0.1**
HWA	**Hwalien**	**0.46**	**154**	*e*P	**Pb**	**18 49 54.2**	**-0.1**
WUSB	**Renai**	**0.47**	**212**	⇑*i*P	**Pg**	**18 49 52.5**	**-0.3**
OWD	**Renai**	**0.47**	**204**	⇑*i*P	**Pg**	**18 49 52.4**	**-0.6**
TWC	**Suao**	**0.47**	**63**	⇑P	**Pg**	**18 49 52.6**	**-0.4**
TWC				*e*S	**Sg**	**18 49 59.4**	**+0.2**
SBCB	**Hsinchu**	**0.54**	**318**	P	**Pb**	**18 49 56.3**	**+0.6**
WCS	**Beigang Elemen**	**0.55**	**232**	P	**Pg**	**18 49 54.3**	**0.0**
HSN	**Hsinchu**	**0.56**	**317**	*e*P	**Pn**	**18 49 57.4**	**-0.9**
HSN				*e*S	**Sb**	**18 50 04.7**	**+0.5**
TEYL	**Yanliau Villag**	**0.56**	**159**	*e*P	**Pg**	**18 49 54.1**	**-0.5**
TWQ1	**Liyutan**	**0.56**	**266**	⇑P	**Pb**	**18 49 55.5**	**-0.5**
NMLH	**Miaoli**	**0.56**	**285**	*e*P	**Pb**	**18 49 56.1**	**+0.1**
NMLH				*e*S	**Sb**	**18 50 04.6**	**+0.3**
NSY	**Sanyi**	**0.57**	**273**	⇑*i*P	**Pb**	**18 49 56.0**	**-0.2**
NSY				*e*S	**Sb**	**18 50 04.9**	**+0.4**
ESL	**Shilin**	**0.58**	**176**	⇑P	**Pg**	**18 49 54.9**	**-0.1**
ESL				*e*S	**Sb**	**18 50 03.6**	**-1.2**
NHDH	**Xindian Distri**	**0.58**	**13**	P	**Pg**	**18 49 55.4**	**+0.3**
NHDH				S	**Sb**	**18 50 03.6**	**-1.3**
TATO	**Taipei**	**0.59**	**9**	P	**Pb**	**18 49 55.6**	**-0.9**
TATO	**Taipei**	**0.59**	**9**	S	**Sb**	**18 50 04.0**	**-1.1**
NCUH	**Zhongli**	**0.60**	**342**	*e*P	**Pb**	**18 49 57.2**	**+0.4**
NCUH				*e*S	**Sb**	**18 50 06.6**	**+1.1**
NCU	**National Centr**	**0.60**	**343**	*e*P	**Pb**	**18 49 56.1**	**-0.7**
NCU				*e*S	**Sb**	**18 50 04.3**	**-1.3**
NTC	**Toucheng**	**0.61**	**41**	*e*S	**Sg**	**18 50 04.3**	**+0.7**
TWA	**Mucha**	**0.61**	**17**	P	**Pg**	**18 49 55.7**	**0.0**
TWA				*e*S	**Sg**	**18 50 04.3**	**+0.7**
SHUL	**Shoufeng**	**0.62**	**165**	P	**Pb**	**18 49 56.8**	**-0.3**
SHUL				S	**Sb**	**18 50 05.5**	**-0.5**
TAP	**Taipei**	**0.65**	**10**	*e*P	**Pb**	**18 49 58.1**	**+0.5**
TAP				*e*S	**Sb**	**18 50 06.1**	**-0.9**
NHY	**Taipei**	**0.67**	**15**	*e*P	**Pb**	**18 49 58.1**	**+0.2**
NHY				*e*S	**Sb**	**18 50 06.3**	**-1.1**
WARBT	**Fenglin Townsh**	**0.67**	**180**	⇑P	**Pg**	**18 49 56.5**	**-0.2**
WARBT				*e*S	**Sg**	**18 50 05.3**	**-0.1**
EGS		**0.67**	**48**	*e*P	**Pg**	**18 49 56.6**	**-0.1**
SMLT	**Sun Moon Lake**	**0.67**	**221**	⇑*i*P	**Pg**	**18 49 56.5**	**-0.3**
VWDT	**VWDT**	**0.67**	**199**	⇑P	**Pg**	**18 49 56.1**	**-0.7**
WDJ	**Dajia District**	**0.68**	**266**	*e*P	**Pb**	**18 49 58.6**	**+0.5**
TYC	**Yuchr**	**0.68**	**225**	⇑*i*P	**Pg**	**18 49 56.7**	**-0.3**
TCU	**Taichung**	**0.69**	**250**	*e*P	**Pn**	**18 49 59.0**	**-1.1**
TIPB	**Shuangxi**	**0.70**	**35**	⇑P	**Pg**	**18 49 57.0**	**-0.4**
TIPB				S	**Sg**	**18 50 06.4**	**-0.2**
TWS1	**Kuangyinshan**	**0.71**	**2**	⇑P	**Pb**	**18 49 58.7**	**+0.1**
TWS1				S	**Sb**	**18 50 09.0**	**+0.5**
SSLB	**Suanglung**	**0.72**	**213**	P	**Pg**	**18 49 56.7**	**-0.9**
SSLB	**Suanglung**	**0.72**	**213**	⇑*i*P	**Pg**	**18 49 56.7**	**-0.9**
SSLB				*e*S	**Sb**	**18 50 09.6**	**+0.7**
EGFH	**Guangfu**	**0.72**	**177**	⇓P	**Pg**	**18 49 57.5**	**-0.2**
EGFH				*e*S	**Sg**	**18 50 07.0**	**0.0**
NWF	**Wu-fen Shan**	**0.77**	**28**	*e*P	**Pg**	**18 49 58.6**	**0.0**
NWF				*e*S	**Sg**	**18 50 08.4**	**-0.1**
WFSB	**Wu-fen Shan**	**0.77**	**28**	*e*P	**Pg**	**18 49 58.6**	**0.0**
WFSB				*e*S	**Sg**	**18 50 08.4**	**-0.2**
YM01	**YM01**	**0.77**	**13**	⇑*i*P	**Pb**	**18 49 59.2**	**-0.4**
YM01				*e*S	**Sb**	**18 50 09.4**	**-1.0**
NTST	**Danshui**	**0.77**	**4**	*e*P	**Pb**	**18 49 59.9**	**+0.2**
NTST				*e*S	**Sb**	**18 50 11.0**	**+0.6**
EOS2	**EOS2**	**0.77**	**88**	*e*P	**Pb**	**18 49 59.2**	**-0.4**
ZUZH	**Zhuzihu**	**0.78**	**11**	*e*P	**Pb**	**18 49 59.5**	**-0.3**
ANP	**Anpu**	**0.80**	**9**	⇑*i*P	**Pb**	**18 49 59.8**	**-0.4**
ANP				*e*S	**Sb**	**18 50 11.2**	**-0.1**
YM08	**YM08**	**0.81**	**13**	*e*P	**Pb**	**18 49 59.7**	**-0.7**
YM08				*e*S	**Sg**	**18 50 10.1**	**0.0**
WCHH	**Zhanghua**	**0.82**	**248**	*e*P	**Pb**	**18 50 00.8**	**+0.4**
WNT	**Mingjian**	**0.82**	**232**	*e*P	**Pb**	**18 50 00.6**	**+0.1**
TWB1	**Santiao Chiao**	**0.82**	**42**	*e*P	**Pg**	**18 49 59.2**	**-0.4**
TWB1				*e*S	**Sg**	**18 50 10.2**	**-0.2**
WJS	**Zhushan**	**0.83**	**227**	*e*P	**Pb**	**18 50 00.3**	**-0.3**
WCH1	**Changhua City**	**0.83**	**248**	*e*P	**Pn**	**18 50 01.2**	**-0.8**
WCH1				*e*S	**Sn**	**18 50 13.2**	**-1.4**
SXI1	**Grass Mountain**	**0.83**	**32**	⇑*i*P	**Pg**	**18 49 59.6**	**-0.2**
TNOU	**National Taiwa**	**0.83**	**25**	*e*S	**Sb**	**18 50 11.2**	**-1.0**
WHYT	**Xinyi Township**	**0.85**	**215**	*e*P	**Pg**	**18 49 59.5**	**-0.6**
EOS3	**EOS3**	**0.86**	**97**	*e*P	**Pb**	**18 50 00.9**	**-0.1**
EHY	**Hungye**	**0.88**	**184**	*e*P	**Pg**	**18 50 00.3**	**-0.5**
EHY				*e*S	**Sb**	**18 50 13.8**	**+0.1**
EHYH	**Wanrong**	**0.90**	**182**	*e*P	**Pg**	**18 50 00.7**	**-0.4**
EHYH				*e*S	**Sg**	**18 50 12.1**	**-0.6**
HGSD	**Ruisui**	**0.90**	**178**	*e*P	**Pb**	**18 50 01.1**	**-0.7**
TWY	**Chenhua**	**0.90**	**12**	*e*P	**Pn**	**18 50 02.6**	**-0.4**
YULB	**Yu-li**	**1.00**	**185**	P	**Pg**	**18 50 02.5**	**-0.5**
YULB	**Yu-li**	**1.00**	**185**	*e*P	**Pg**	**18 50 02.5**	**-0.5**
YULB				*e*S	**Sg**	**18 50 15.5**	**-0.4**
CHN5	**Tsauling**	**1.02**	**219**	*e*P	**Pb**	**18 50 03.9**	**-0.1**
ALS	**Alishan**	**1.02**	**211**	*e*P	**Pg**	**18 50 02.9**	**-0.6**
WDL	**Douliou City**	**1.02**	**229**	*e*P	**Pn**	**18 50 04.3**	**-0.4**
WGK	**Gukeng**	**1.03**	**227**	*e*P	**Pn**	**18 50 04.3**	**-0.5**
WGK				*e*S	**Sn**	**18 50 21.9**	**+2.4**
TWF1	**Yuli**	**1.04**	**184**	*e*P	**Pg**	**18 50 03.2**	**-0.5**
EYUL	**Yuli**	**1.04**	**183**	*e*P	**Pb**	**18 50 03.7**	**-0.6**
WRL	**Guolierlin Hig**	**1.04**	**242**	*e*P	**Pb**	**18 50 04.2**	**-0.1**
WRL				*e*S	**Sn**	**18 50 18.9**	**-1.0**
WDLH	**Douliu**	**1.04**	**228**	*e*P	**Pn**	**18 50 04.6**	**-0.4**
RLNB	**Erlin**	**1.06**	**242**	*e*P	**Pb**	**18 50 04.6**	**+0.1**
RLNB				*e*S	**Sn**	**18 50 20.2**	**0.0**
WTCT	**Ta-ch'eng**	**1.14**	**243**	*e*S	**Sn**	**18 50 22.6**	**+0.4**
WTK	**Tuku**	**1.15**	**233**	*e*P	**Pn**	**18 50 06.2**	**-0.3**
WTK				*e*S	**Sn**	**18 50 23.8**	**+1.3**
WCKO	**Fanlu**	**1.19**	**217**	*e*P	**Pn**	**18 50 06.8**	**-0.2**
FULB	**Fuli**	**1.19**	**184**	*e*P	**Pn**	**18 50 07.0**	**0.0**
CHN2	**Minshiung**	**1.19**	**224**	*e*P	**Pn**	**18 50 07.5**	**+0.5**
CHN2				*e*S	**Sn**	**18 50 25.4**	**+1.9**
ELDTW	**Lidau**	**1.24**	**196**	*e*P	**Pg**	**18 50 06.2**	**-1.5**
CHY	**Chiayi**	**1.25**	**225**	*e*P	**Pn**	**18 50 08.2**	**+0.2**
CHY				*e*S	**Sn**	**18 50 26.5**	**+1.5**
TPUB	**Ta-pu**	**1.29**	**213**	P	**Pb**	**18 50 08.2**	**-0.3**
TPUB	**Ta-pu**	**1.29**	**213**	*e*P	**Pb**	**18 50 08.2**	**-0.3**
WSF	**Szhu**	**1.30**	**235**	*e*P	**Pn**	**18 50 08.2**	**-0.3**
WSF				*e*S	**Sn**	**18 50 27.4**	**+1.2**
STYH	**Taoyuan**	**1.34**	**205**	*e*P	**Pb**	**18 50 09.1**	**-0.2**
STYH				*e*S	**Sn**	**18 50 29.1**	**+2.0**
WTP	**Ta-pu**	**1.34**	**212**	*e*P	**Pb**	**18 50 09.1**	**-0.3**
WSL	**Shuilin Townsh**	**1.37**	**231**	*e*P	**Pb**	**18 50 09.4**	**-0.4**
PCYT	**Pengchaiyu**	**1.38**	**27**	*e*P	**Pg**	**18 50 09.9**	**-0.4**
TWK	**Hsinying**	**1.39**	**216**	*e*P	**Pg**	**18 50 10.3**	**-0.2**
JYNG	**Yonaguni jima**	**1.42**	**87**	*e*P	**Pb**	**18 50 10.5**	**-0.2**
JYNG				*e*S	**Sg**	**18 50 30.7**	**+1.1**
CHN1	**Nanshi**	**1.44**	**213**	*e*P	**Pg**	**18 50 11.1**	**-0.3**
YOJ	**Yonaguni jima**	**1.48**	**87**	P	**Pg**	**18 50 11.9**	**-0.4**
YOJ	**Yonaguni jima**	**1.48**	**87**	*e*P	**Pb**	**18 50 11.2**	**-0.6**
YOJ	**Yonaguni jima**	**1.48**	**87**	*e*P	**Pn**	**18 50 10.7**	**-0.4**
CHNB	**Yiju**	**1.50**	**226**	*e*P	**Pn**	**18 50 11.6**	**-0.4**
SGST	**Jiashian**	**1.50**	**210**	*e*P	**Pn**	**18 50 11.3**	**+0.1**
SGST				*e*S	**Sg**	**18 50 33.2**	**+1.3**
SLGT	**Liugui**	**1.55**	**206**	*e*P	**Pg**	**18 50 13.8**	**+0.3**
TWG	**Pinlang**	**1.59**	**190**	*e*P	**Pn**	**18 50 12.1**

az=136.0
*JMA **28** 18:53:14.9±0.8,46˚N±3˚×15˚0E±˚,h189km,MV3.9/15,*
KURILE ISLANDS REGION
ISC 28 18:53:10.3±0.7,**46˚14N**±0˚07×**150˚54E**±0˚08,**h150**km,**n47**,
σ**2821**/55,**mb3.3/8,3C,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.08**	**245**	*i*PN	**Pn**	**18 53 49.9**	**+3.1**
KUR				eS	**Sn**	**18 54 21.4**	**+7.4**
KUR				pmax	pmax		
	comp=Z,165nm,0.4s						
KUR				smax	smax		
	comp=N,311nm,0.7s						
KUR				smax	smax		
	comp=E,112nm,0.2s						
KUR	**Kuril'sk**	**2.08**	**245**	*e*P	**Pn**	**18 53 49.5**	**+3.1**
KUR				AMB	AMB	18 53 50.5	
	comp=E,180nm,0.4s						
KUR				eS	**Sn**	**18 54 19.3**	**+5.3**
KUR				A	A	18 54 22.9	
	comp=E,360nm,0.5s						
KUR				A	A	18 54 22.9	
	comp=E,220nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.93**	**239**	*c i*PN	**Pn**	**18 54 11.8**	**+2.2**
YUK				eS	**Sn**	**18 54 54.6**	**-0.9**
YUK				pmax	pmax		
	comp=N,71nm,0.3s						
YUK				pmax	pmax		
	comp=Z,445nm,0.3s						
YUK				pmax	pmax		
	comp=E,41nm,0.2s						
YUK				smax	smax		
	comp=N,124nm,0.2s						
YUK				smax	smax		
	comp=E,202nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.93**	**239**	*i*P	**Pn**	**18 54 11.7**	**+2.2**
YUK				AMB	AMB	18 54 12.2	
	comp=E,250nm,0.4s						
YUK				eS	**Sn**	**18 54 58.0**	**+2.5**
YUK				A	A	18 54 59.2	
	comp=E,120nm,0.4s						
YUK				A	A	18 54 59.2	
	comp=E,160nm,0.4s						
RUSJ	**Misakicho**	**4.26**	**243**	*e*PN	**Pn**	**18 54 16.0**	**+2.0**
GLVR	**Golovnino**	**4.30**	**238**	*e*PN	**Pn**	**18 54 16.3**	**+1.9**
GLVR				eS	**Sn**	**18 55 04.7**	**+0.4**
GLVR				pmax	pmax		
	comp=Z,152nm,0.1s						
GLVR				pmax	pmax		
	comp=N,58nm,0.3s						
GLVR				pmax	pmax		
	comp=E,82nm,0.3s						
GLVR				smax	smax		
	comp=E,242nm,0.4s						
GLVR				smax	smax		
	comp=N,65nm,0.3s						
GLVR	**Golovnino**	**4.30**	**238**	*e*P	**Pn**	**18 54 16.3**	**+1.9**
GLVR				AMB	AMB	18 54 18.1	
	comp=N,150nm,0.4s						
GLVR				eS	**Sn**	**18 55 04.7**	**+0.4**
GLVR				A	A	18 55 07.3	
	comp=N,70nm,0.4s						
GLVR				A	A	18 55 07.3	
	comp=N,240nm,0.4s						
NEM2	**Nemuro 2**	**4.40**	**233**	*e*P	**Pn**	**18 54 16.2**	**+0.4**
NEM2				eS	**Sn**	**18 55 03.2**	**-3.6**
NMR	**Nemuro--Hokkai**	**4.41**	**233**	*e*PN	**Pn**	**18 54 16.0**	**+0.1**
NMR	**Nemuro--Hokkai**	**4.41**	**233**	*e*P	**Pn**	**18 54 16.2**	**+0.3**
JRA	**Rausu**	**4.43**	**242**	*e*P	**Pn**	**18 54 17.9**	**+1.8**
JNK	**Nakash**	**4.86**	**240**	*e*P	**Pn**	**18 54 23.4**	**+1.5**
AKK	**Akkeshi**	**5.13**	**235**	*e*P	**Pn**	**18 54 25.1**	**-0.3**
JTKR	**Abashiri--Toko**	**5.18**	**248**	*e*P	**Pn**	**18 54 27.3**	**+1.3**
JAK	**Akkeshi**	**5.23**	**235**	*e*P	**Pn**	**18 54 26.6**	**0.0**
YSS	**Yuzhno-Sakhali**	**5.43**	**281**	*e*PN	**Pn**	**18 54 29.1**	**-0.2**
YSS				eS	**Sn**	**18 55 31.5**	**+0.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzhno-Sakhali**	**5.43**	**281**	*e*P	**Pn**	**18 54 29.1**	**-0.2**
YSS				eS	**Sn**	**18 55 31.5**	**+0.4**
JAR	**Ashorobuto**	**5.60**	**242**	*e*P	**Pn**	**18 54 33.3**	**+1.7**
JAR				S	**Sn**	**18 55 34.4**	**-0.7**
JOB	**Onbets**	**5.79**	**238**	*e*P	**Pn**	**18 54 34.6**	**+0.6**
JOB				eS	**Sn**	**18 55 35.8**	**-3.8**
JKA	**Kamikawa-asahi**	**5.97**	**253**	*e*P	**Pn**	**18 54 38.9**	**+2.3**
JKK2	**Kamakawa 2**	**5.97**	**250**	*e*P	**Pn**	**18 54 38.3**	**+1.7**
ASAJ	**Asahikawa**	**5.97**	**253**	P	**Pn**	**18 54 38.9**	**+2.3**
	comp=Z,66nm,0.6s,baz=66,slow=12,SNR=170						
ASAJ				S	**Sn**	**18 55 45.1**	**+1.1**
	comp=Z,4.4nm,0.7s,baz=198,slow=24,SNR=1.3						
JWK2	**Keihoku**	**6.11**	**265**	*e*P	**Pn**	**18 54 40.7**	**+2.4**
JCH	**Churui**	**6.24**	**238**	P	**Pn**	**18 54 40.0**	**-0.1**
JCH				eS	**Sn**	**18 55 44.8**	**-5.6**
JNBK	**Urakawa-nobuka**	**6.80**	**238**	*e*P	**Pn**	**18 54 46.2**	**-1.4**
TYV	**Tymovskoe**	**7.05**	**315**	*e*P	**Pn**	**18 54 49.5**	**-1.4**
PETK	**Petropavlovsk-**	**8.38**	**31**	P	**Pn**	**18 55 08.9**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=217,slow=12,SNR=23						
PETK	**Petropavlovsk-**	**8.38**	**31**	PN	**Pn**	**18 55 09.0**	**+0.4**
JANG	**Nango**	**8.75**	**232**	P	**Pn**	**18 55 11.0**	**-2.7**
USRK	**Uusuriysk Ar.**	**13.23**	**268**	P	**Pn**	**18 56 11.4**	**-1.0**
	comp=Z,3.2nm,0.8s,baz=68,slow=10.0,SNR=6.3						
MJAR	**Matsushiro Arr**	**13.32**	**228**	P	**Pn**	**18 56 15.4**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=28,slow=13,SNR=3.1						
KSRS	**Korea Array**	**18.92**	**251**	P	**Pn**	**18 57 21.2**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=52,slow=11,SNR=10						
H11N2	**WAKE ISLAND Hy**	**29.58**	**147**	T	T	19 30 18.2	
	baz=336,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**29.59**	**148**	T	T	19 30 28.5	
	baz=336,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**29.60**	**147**	T	T	19 30 32.1	
	baz=336,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**30.63**	**149**	T	T	19 31 46.2	
	baz=336,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**30.64**	**149**	T	T	19 31 45.9	
	baz=336,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**30.65**	**149**	T	T	19 31 43.3	
	baz=336,slow=76,SNR=17						
MKAR	**Makanchi Array**	**45.63**	**297**	P	**P**	**19 01 13.8**	**-1.7**
	comp=Z,0.3nm,0.9s,baz=57,slow=8.2,SNR=2.0						
MKAR				PcP	**PcP**	**19 02 48.7**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=69,slow=3.1,SNR=4.5						
	comp=Z,0.3nm,0.9s						
BVAR	**Borovoye Array**	**49.86**	**309**	P	**P**	**19 01 48.4**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=31,slow=12,SNR=14						
	comp=Z,2.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.50**	**255**	P	**P**	**19 01 53.0**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=47,slow=7.7,SNR=4.8						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.50**	**255**	P	**P**	**19 01 53.0**	**-0.1**
PDAR	**Pinedale Array**	**66.53**	**52**	P	**P**	**19 03 44.6**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=351,slow=1.5,SNR=5.4						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**67.39**	**197**	P	**P**	**19 03 49.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=17,slow=7.0,SNR=7.9						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**71.10**	**196**	P	**P**	**19 04 13.8**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=11,slow=6.2,SNR=19						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**77.59**	**315**	P	**P**	**19 04 48.2**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=41,slow=4.6,SNR=2.1						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**79.33**	**59**	P	**P**	**19 04 59.8**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=273,slow=3.2,SNR=3.5						
	comp=Z,0.3nm,0.8s						

*JMA **28** 19:04:24.2±0.1,24˚2N±0˚4×122˚0E±0˚3,h58km±1km,*
MV3.2/18,TAIWAN REGION
*TAP **28** 19:04:24.8,24˚31N×121˚95E,h55km,ML3.7,B*
ISC 28 19:04:24.7±1.2,**24˚30N**±0˚02×**122˚00E**±0˚02,**h56**km±4km,
n159,σ**1821**/292,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.23**	**274**	P	**Pn**	**19 04 33.7**	**-0.3**
EHP				S	**Sn**	**19 04 40.9**	**+0.2**
EAHA	**Aohua**	**0.24**	**278**	*i*P	**Pn**	**19 04 33.7**	**-0.3**
EAHA				S	**Sn**	**19 04 40.7**	**0.0**
EOS2	**EOS2**	**0.25**	**60**	*e*P	**Pn**	**19 04 34.6**	**+0.7**
EOS2				eS	**Sn**	**19 04 41.7**	**+1.2**
EWUT	**Wuta**	**0.25**	**307**	*i*P	**Pn**	**19 04 34.0**	**-0.1**
EWUT				*i*S	**Sn**	**19 04 40.9**	**+0.1**
EOS3	**EOS3**	**0.29**	**92**	*i*P	**Pn**	**19 04 34.9**	**+0.7**
EOS3				eS	**Sn**	**19 04 42.6**	**+1.6**
EOS4	**EOS4**	**0.34**	**121**	*e*P	**Pn**	**19 04 34.6**	**+0.2**
EOS4				eS	**Sn**	**19 04 42.0**	**+0.7**
TWC	**Suao**	**0.34**	**337**	*i*P	**Pn**	**19 04 35.0**	**+0.1**
TWC				S	**Sn**	**19 04 42.2**	**+0.1**
ETL	**Fush Village**	**0.37**	**248**	*i*P	**Pn**	**19 04 34.7**	**-0.4**
ETL				S	**Sn**	**19 04 42.4**	**-0.2**
NACB	**Ninganchiao**	**0.39**	**252**	*i*P	**Pn**	**19 04 34.7**	**-0.5**
NACB				*i*S	**Sn**	**19 04 42.4**	**-0.5**
NDS	**Dongshan**	**0.42**	**323**	*i*P	**Pn**	**19 04 35.7**	**+0.1**
NDS				eS	**Sn**	**19 04 43.5**	**0.0**
TWD	**Chiawan**	**0.42**	**240**	*i*P	**Pn**	**19 04 35.3**	**-0.3**
TWD				S	**Sn**	**19 04 43.5**	**+0.1**
ETLH	**Xiulin Townshi**	**0.48**	**260**	*i*P	**Pn**	**19 04 36.1**	**-0.2**
ETLH				*i*S	**Sn**	**19 04 44.3**	**-0.3**
HWA	**Hwalien**	**0.48**	**229**	*i*P	**Pn**	**19 04 36.3**	**+0.1**
HWA				eS	**Sn**	**19 04 45.6**	**+1.1**
LATG	**Datong**	**0.49**	**299**	*i*P	**Pn**	**19 04 36.2**	**-0.2**
LATG				S	**Sn**	**19 04 44.9**	**-0.1**
TWE	**Neicheng**	**0.52**	**325**	*i*P	**Pn**	**19 04 36.9**	**+0.2**
TWE				S	**Sn**	**19 04 45.4**	**+0.1**
ILA	**Ilan**	**0.52**	**334**	*i*P	**Pn**	**19 04 37.1**	**+0.5**
ILA				S	**Sn**	**19 04 46.4**	**+1.1**
ENTT	**Nioudou**	**0.52**	**311**	P	**Pn**	**19 04 36.8**	**+0.1**
ENTT				S	**Sn**	**19 04 45.8**	**+0.4**
NDT	**Datong Townshi**	**0.54**	**305**	*i*P	**Pn**	**19 04 36.9**	**0.0**
NDT				eS	**Sn**	**19 04 46.2**	**+0.6**
EGS		**0.55**	**354**	P	**Pn**	**19 04 37.6**	**+0.6**
TEYL	**Yanliau Villag**	**0.56**	**221**	*e*P	**Pn**	**19 04 37.0**	**0.0**
TEYL				eS	**Sn**	**19 04 46.4**	**+0.3**
ETM	**Tongmen**	**0.57**	**235**	*i*P	**Pn**	**19 04 37.0**	**-0.2**
ETM				S	**Sn**	**19 04 45.9**	**-0.3**
NTC	**Toucheng**	**0.58**	**345**	P	**Pn**	**19 04 37.9**	**+0.6**
NNS	**Nan Shan**	**0.59**	**284**	*i*P	**Pn**	**19 04 37.3**	**-0.3**
NNS				eS	**Sn**	**19 04 46.1**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.59**	**321**	*i*P	**Pn**	**19 04 37.8**	**+0.2**
FUSB				eS	**Sn**	**19 04 47.2**	**+0.2**
LXIB	**Xiulin Townshi**	**0.60**	**243**	*i*P	**Pn**	**19 04 37.3**	**-0.4**
LXIB				eS	**Sn**	**19 04 46.9**	**-0.3**
SHUL	**Shoufeng**	**0.64**	**218**	*i*P	**Pn**	**19 04 38.1**	**0.0**
SHUL				eS	**Sn**	**19 04 48.8**	**+1.0**
NWLT	**Wulai**	**0.66**	**317**	*i*P	**Pn**	**19 04 38.5**	**+0.1**
NWLT				S	**Sn**	**19 04 48.1**	**-0.1**
YHNB	**Yeheng**	**0.68**	**303**	*i*P	**Pn**	**19 04 38.7**	**+0.1**
YHNB				S	**Sn**	**19 04 48.1**	**-0.6**
WHF	**Hehuan Shan**	**0.69**	**258**	*i*P	**Pn**	**19 04 38.9**	**-0.1**
WHF				eS	**Sn**	**19 04 48.9**	**-0.5**
FUSS	**Fushou**	**0.69**	**266**	*i*P	**Pn**	**19 04 39.0**	**+0.1**
FUSS				S	**Sn**	**19 04 49.1**	**-0.1**
TIPB	**Shuangxi**	**0.69**	**347**	*i*P	**Pn**	**19 04 39.1**	**+0.4**
TIPB				S	**Sn**	**19 04 48.5**	**-0.4**
NSK	**Sanguang**	**0.70**	**303**	*i*P	**Pn**	**19 04 38.9**	**+0.1**
NSK				eS	**Sn**	**19 04 48.6**	**-0.5**
ESL	**Shilin**	**0.70**	**227**	*i*P	**Pn**	**19 04 38.3**	**-0.5**
ESL				S	**Sn**	**19 04 48.1**	**-1.0**
TWB1	**Santiao Chiao**	**0.71**	**359**	*i*P	**Pn**	**19 04 38.7**	**-0.2**
TWB1				S	**Sn**	**19 04 48.6**	**-0.7**
TEGC	**Jichi Village**	**0.72**	**216**	P	**Pn**	**19 04 39.1**	**+0.1**
TEGC				S	**Sn**	**19 04 50.0**	**+0.7**
TWT	**Tachien**	**0.75**	**267**	*i*P	**Pn**	**19 04 40.2**	**+0.7**
TWT				S	**Sn**	**19 04 51.1**	**+0.7**
TDCB	**Techi**	**0.77**	**267**	*i*P	**Pn**	**19 04 40.3**	**+0.5**
TDCB				S	**Sn**	**19 04 50.9**	**+0.1**
TWA	**Mucha**	**0.78**	**331**	*i*P	**Pn**	**19 04 40.3**	**+0.5**
TWA				*i*S	**Sn**	**19 04 51.7**	**+0.9**
NHDH	**Xindian Distri**	**0.79**	**327**	*i*P	**Pn**	**19 04 40.4**	**+0.5**
NHDH				S	**Sn**	**19 04 51.8**	**+0.7**
NWF	**Wu-fen Shan**	**0.80**	**346**	*i*P	**Pn**	**19 04 40.4**	**+0.3**
NWF				S	**Sn**	**19 04 51.3**	**0.0**
WFSB	**Wu-fen Shan**	**0.80**	**346**	*i*P	**Pn**	**19 04 40.4**	**+0.4**
WFSB				S	**Sn**	**19 04 51.3**	**+0.1**
WARBT	**Fenglin Townsh**	**0.80**	**224**	*i*P	**Pn**	**19 04 39.4**	**-0.7**
WARBT				S	**Sn**	**19 04 50.1**	**-1.2**
SXI1	**Grass Mountain**	**0.80**	**352**	P	**Pn**	**19 04 40.1**	**0.0**
SXI1				S	**Sn**	**19 04 51.5**	**+0.1**
OWD	**Renai**	**0.82**	**246**	*i*P	**Pn**	**19 04 40.4**	**-0.1**
OWD				S	**Sn**	**19 04 51.2**	**-0.8**
NHY	**Taipei**	**0.84**	**332**	*i*P	**Pn**	**19 04 41.1**	**+0.6**
NHY				*i*S	**Sn**	**19 04 53.2**	**+1.1**
WUSB	**Renai**	**0.86**	**250**	*i*P	**Pn**	**19 04 41.2**	**+0.3**
WUSB				S	**Sn**	**19 04 52.7**	**-0.1**
TAP	**Taipei**	**0.87**	**329**	*i*P	**Pn**	**19 04 41.1**	**+0.3**
TAP				S	**Sn**	**19 04 53.1**	**+0.4**
NFF	**Wufeng Townshi**	**0.87**	**293**	*i*P	**Pn**	**19 04 41.4**	**+0.4**
NFF				S	**Sn**	**19 04 53.1**	**+0.2**
TNOU	**National Taiwa**	**0.88**	**347**	*i*P	**Pn**	**19 04 41.0**	**-0.1**
TNOU				eS	**Sn**	**19 04 52.4**	**-0.5**
JYNG	**Yonagunijimaku**	**0.88**	**80**	P	**Pn**	**19 04 41.3**	**+0.3**
JYNG				eS	**Sn**	**19 04 53.1**	**+0.1**
KSHI	**Guanxi Townshi**	**0.89**	**303**	*i*P	**Pn**	**19 04 42.0**	**+0.8**
KSHI				eS	**Sn**	**19 04 54.9**	**+1.6**
YM01	**YM01**	**0.93**	**335**	*i*P	**Pn**	**19 04 41.9**	**+0.1**
YM01				S	**Sn**	**19 04 54.5**	**+0.2**
YOJ	**Yonaguni jima**	**0.94**	**80**	*e*P	**Pn**	**19 04 42.0**	**+0.2**
YOJ				eS	**Sn**	**19 04 54.7**	**+0.3**
YOJ	**Yonaguni jima**	**0.94**	**80**	*i*P	**Pn**	**19 04 42.1**	**+0.3**
YOJ				*i*S	**Sn**	**19 04 54.8**	**+0.3**
VWDT	**VWDT**	**0.95**	**236**	*i*P	**Pn**	**19 04 42.3**	**+0.4**
VWDT				S	**Sn**	**19 04 55.0**	**+0.3**
HGSD	**Ruisui**	**0.96**	**213**	P	**Pn**	**19 04 41.9**	**-0.1**
HGSD				S	**Sn**	**19 04 55.8**	**+0.9**
ZUZH	**Zhuzihu**	**0.96**	**335**	*i*P	**Pn**	**19 04 42.2**	**+0.1**
ZUZH				S	**Sn**	**19 04 54.9**	**-0.1**
TWS1	**Kuangyinshan**	**0.96**	**327**	P	**Pn**	**19 04 42.5**	**+0.4**
TWS1				S	**Sn**	**19 04 55.2**	**+0.9**
WHP	**Taichung City**	**0.96**	**269**	*i*P	**Pn**	**19 04 43.1**	**+1.0**
WHP				S	**Sn**	**19 04 55.9**	**+0.8**
LIOB	**Emei**	**0.96**	**291**	*i*P	**Pn**	**19 04 43.0**	**+0.8**
LIOB				eS	**Sn**	**19 04 55.5**	**+0.5**
YM08	**YM08**	**0.96**	**337**	P	**Pn**	**19 04 42.1**	**-0.1**
YM08				S	**Sn**	**19 04 54.6**	**-0.5**
NSTT	**Nanjuang**	**0.97**	**290**	P	**Pn**	**19 04 43.0**	**+0.8**
NSTT				S	**Sn**	**19 04 56.1**	**+1.0**
ANP	**Anpu**	**0.99**	**334**	*i*P	**Pn**	**19 04 42.5**	**0.0**
ANP				S	**Sn**	**19 04 55.9**	**+0.1**
EHYH	**Wanrong**	**1.00**	**217**	P	**Pn**	**19 04 41.8**	**-0.8**
EHYH				eS	**Sn**	**19 04 54.9**	**-0.9**
NCU	**National Centr**	**1.00**	**312**	P	**Pn**	**19 04 40.7**	**-1.9**
NCU				S	**Sn**	**19 04 54.4**	**-1.4**
NCUH	**Zhongli**	**1.00**	**312**	*i*P	**Pn**	**19 04 42.7**	**+0.1**
NCUH				S	**Sn**	**19 04 56.1**	**+0.2**
NTST	**Danshui**	**1.00**	**330**	P	**Pn**	**19 04 42.9**	**+0.3**
NTST				S	**Sn**	**19 04 55.3**	**+0.6**
EHY	**Hungye**	**1.00**	**218**	P	**Pn**	**19 04 41.8**	**-0.9**
EHY				eS	**Sn**	**19 04 54.4**	**-1.5**
WCS	**Beigang Elemen**	**1.02**	**257**	*i*P	**Pn**	**19 04 43.7**	**+0.8**
WCS				S	**Sn**	**19 04 56.8**	**+0.5**
TWY	**Chenhua**	**1.04**	**340**	P	**Pn**	**19 04 43.5**	**+0.4**
TWY				eS	**Sn**	**19 04 55.6**	**-1.2**
SBCB	**Hsinchu**	**1.05**	**298**	*i*P	**Pn**	**19 04 43.7**	**+0.5**
SBCB				eS	**Sn**	**19 04 57.8**	**+0.8**
HSN	**Hsinchu**	**1.06**	**299**	*i*P	**Pn**	**19 04 43.6**	**+0.2**
HSN				S	**Sn**	**19 04 57.0**	**-0.3**
SSLB	**Suanglung**	**1.08**	**242**	P	**Pn**	**19 04 43.9**	**+0.1**
SSLB				S	**Sn**	**19 04 57.4**	**-0.5**
SMLT	**Sun Moon Lake**	**1.08**	**248**	P	**Pn**	**19 04 44.5**	**+0.6**
SMLT				S	**Sn**	**19 04 58.1**	**+0.1**
ECBN	**Changbin**	**1.10**	**207**	P	**Pn**	**19 04 43.5**	**-0.4**
ECBN				S	**Sn**	**19 04 57.7**	**-0.4**
YULB	**Yu-li**	**1.10**	**216**	P	**Pn**	**19 04 43.2**	**-0.9**
YULB				eS	**Sn**	**19 04 56.9**	**-1.5**
TYC	**Yuchr**	**1.11**	**250**	P	**Pn**	**19 04 44.8**	**+0.7**
TYC				eS	**Sn**	**19 04 59.6**	**+1.1**
TWQ1	**Liyutan**	**1.12**	**273**	*i*P	**Pn**	**19 04 45.1**	**+0.9**
TWQ1				eS	**Sn**	**19 04 59.5**	**+0.8**
NMLH	**Miaoli**	**1.13**	**283**	*i*P	**Pn**	**19 04 45.0**	**+0.6**
NMLH				eS	**Sn**	**19 04 59.7**	**+0.8**
EYUL	**Yuli**	**1.13**	**214**	*e*P	**Pn**	**19 04 45.4**	**+1.0**
NSY	**Sanyi**	**1.14**	**276**	P	**Pn**	**19 04 45.4**	**+0.9**
NSY				eS	**Sn**	**19 04 60.0**	**+0.9**
TWF1	**Yuli**	**1.14**	**215**	P	**Pn**	**19 04 43.7**	**-0.8**
WHYT	**Xinyi Township**	**1.21**	**241**	*e*P	**Pn**	**19 04 46.3**	**+0.9**
WHYT				eS	**Sn**	**19 05 03.0**	**+2.2**
TCU	**Taichung**	**1.22**	**263**	*i*P	**Pn**	**19 04 46.6**	**+1.1**
TCU				eS	**Sn**	**19 05 02.3**	**+1.3**
WDJ	**Dajia District**	**1.24**	**273**	P	**Pn**	**19 04 46.7**	**+0.9**
WDJ				eS	**Sn**	**19 05 02.9**	**+1.3**
WJS	**Zhushan**	**1.25**	**248**	P	**Pn**	**19 04 47.7**	**+1.7**
WJS				S	**Sn**	**19 05 04.5**	**+2.6**
FULB	**Fuli**	**1.27**	**211**	*e*P	**Pn**	**19 04 46.1**	**-0.1**
FULB				eS	**Sn**	**19 05 01.9**	**-0.3**
WNT	**Mingjian**	**1.27**	**251**	P	**Pn**	**19 04 47.9**	**+1.6**
WNT				eS	**Sn**	**19 05 04.7**	**+2.4**
CHKT	**Chengkung**	**1.32**	**206**	*e*P	**Pn**	**19 04 46.2**	**-0.8**
CHKT				eS	**Sn**	**19 05 01.7**	**-1.9**
PCYT	**Pengchaiyu**	**1.33**	**3**	*i*P	**Pn**	**19 04 46.9**	**-0.2**
WCHH	**Zhanghua**	**1.33**	**261**	P	**Pn**	**19 04 47.8**	**+0.8**
WCHH				S	**Sn**	**19 05 05.0**	**+1.2**
ALS	**Alishan**	**1.34**	**235**	P	**Pn**	**19 04 48.8**	**+1.3**
ALS				eS	**Sn**	**19 05 05.1**	**+0.6**
WCH1	**Changhua City**	**1.34**	**261**	P	**Pn**	**19 04 48.2**	**+1.0**
WCH1				S	**Sn**	**19 05 05.5**	**+1.4**
EHD	**Haiduan**	**1.35**	**213**	*e*P	**Pn**	**19 04 47.4**	**0.0**
ECS	**Chishang**	**1.39**	**211**	*e*P	**Pn**	**19 04 47.2**	**-0.7**
ECS				eS	**Sn**	**19 05 04.3**	**-0.9**
CHN5	**Tsauling**	**1.39**	**240**	P	**Pn**	**19 04 49.3**	**+1.3**
CHN5				eS	**Sn**	**19 05 08.1**	**+2.6**
ELDTW	**Lidau**	**1.42**	**219**	*e*P	**Pn**	**19 04 48.3**	**-0.1**
ELDTW				eS	**Sn**	**19 05 04.8**	**-1.3**
WGK	**Gukeng**	**1.45**	**246**	P	**Pn**	**19 04 50.4**	**+1.8**
WGK				eS	**Sn**	**19 05 08.7**	**+2.2**
WDL	**Douliou City**	**1.45**	**247**	*e*P	**Pn**	**19 04 50.2**	**+1.5**
WDL				eS	**Sn**	**19 05 09.5**	**+2.8**
WDLH	**Douliu**	**1.47**	**246**	P	**Pn**	**19 04 50.7**	**+1.8**
WDLH				S	**Sn**	**19 05 09.9**	**+2.9**
WRL	**Guolierlin Hig**	**1.53**	**256**	*i*P	**Pn**	**19 04 50.5**	**+0.7**
WRL				S	**Sn**	**19 05 09.7**	**+1.1**
WCKO	**Fanlu**	**1.53**	**237**	P	**Pn**	**19 04 51.5**	**+1.7**
WCKO				eS	**Sn**	**19 05 11.4**	**+2.6**
RLNB	**Erlin**	**1.55**	**255**	P	**Pn**	**19 04 50.9**	**+0.9**
RLNB				S	**Sn**	**19 05 10.6**	**+1.5**
IRIF	**Iriomote-Funau**	**1.58**	**88**	*e*P	**Pn**	**19 04 50.4**	**0.0**
IRIF				eS	**Sn**	**19 05 09.7**	**-0.1**
STYH	**Taoyuan**	**1.58**	**225**	P	**Pn**	**19 04 51.6**	**+1.1**
STYH				S	**Sn**	**19 05 11.7**	**+1.8**
CHN2	**Minshiung**	**1.59**	**242**	eS	**Sn**	**19 05 13.4**	**+3.4**
WTK	**Tuku**	**1.59**	**248**	P	**Pn**	**19 04 51.9**	**+1.3**
WTK				S	**Sn**	**19 05 12.7**	**+2.6**
LONT	**Longtian**	**1.59**	**210**	*e*P	**Pn**	**19 04 51.1**	**+0.4**
LONT				eS	**Sn**	**19 05 09.2**	**-1.0**
TPUB	**Ta-pu**	**1.60**	**232**	P	**Pn**	**19 04 52.4**	**+1.7**
TPUB				eS	**Sn**	**19 05 12.3**	**+2.0**
WTCT	**Ta-ch'eng**	**1.63**	**255**	S	**Sn**	**19 05 12.1**	**+1.1**
WTP	**Ta-pu**	**1.64**	**231**	P	**Pn**	**19 04 52.9**	**+1.5**
WTP				eS	**Sn**	**19 05 13.7**	**+2.3**
CHY	**Chiayi**	**1.65**	**241**	P	**Pn**	**19 04 53.2**	**+1.9**
CHY				eS	**Sn**	**19 05 14.2**	**+2.9**
HATJ	**Hateruma jima**	**1.67**	**98**	*e*P	**Pn**	**19 04 52.4**	**+0.8**
HATJ				eS	**Sn**	**19 05 12.7**	**+0.8**
LDUT	**Ludao**	**1.69**	**197**	P	**Pn**	**19 04 50.7**	**-1.2**
LDUT				S	**Sn**	**19 05 10.5**	**-1.9**
TWGBT	**Beinan**	**1.69**	**210**	*e*P	**Pn**	**19 04 51.9**	**-0.1**
TWGBT				eS	**Sn**	**19 05 11.6**	**-1.1**
TWG	**Pinlang**	**1.70**	**210**	*e*P	**Pn**	**19 04 52.0**	**0.0**
TWG				eS	**Sn**	**19 05 11.7**	**-0.9**
TWK	**Hsinying**	**1.72**	**234**	P	**Pn**	**19 04 54.2**	**+1.9**
TWK				S	**Sn**	**19 05 15.9**	**+2.5**
TTN	**Taitung**	**1.72**	**207**	*e*P	**Pn**	**19 04 51.1**	**-1.3**
TTN				eS	**Sn**	**19 05 11.7**	**-1.5**
CHN1	**Nanshi**	**1.74**	**231**	*e*P	**Pn**	**19 04 54.4**	**+1.7**
CHN1				eS	**Sn**	**19 05 15.6**	**+1.8**
WSF	**Szhu**	**

*MOS **28** 19:15:13.8,42˚.47N×43˚.50E,h2km,MPVA4.1*
*AFAD **28** 19:15:13.1,42˚.51N×43˚.48E,h14km,MW3.6*
*ISK **28** 19:15:13.1,42˚.49N×43˚.58E,h4km,ML3.2/8*

ISC 28 19:15:13.5±1.0,42˚.48N±0˚.01×43˚.57E±0˚.01,h6km±8km, n108,σ1§12/198,3D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GARIG	**Gari**	**0.14**	**330**	P	**Pg**	**19 15 16.5**	**0.0**
GARIG				S	**Sg**	**19 15 19.0**	**+0.5**
ALIG	**Mtskhetisjvari**	**0.38**	**171**	P	**Pg**	**19 15 21.0**	**+0.1**
ALIG				S	**Sb**	**19 15 27.6**	**-1.3**
ALIG	**Mtskhetisjvari**	**0.38**	**171**	PG	**Pg**	**19 15 21.0**	**+0.1**
ALIG				S	**Sb**	**19 15 27.6**	**-1.3**
DIGR	**Digorskoe uzhe**	**0.42**	**1**	*i* Pg	**Pg**	**19 15 21.4**	**-0.3**
DIGR				*e*Sg	**Sg**	**19 15 27.8**	**+0.6**
DIGR	**Digorskoe uzhe**	**0.42**	**1**	⇓*i*PG	**Pg**	**19 15 21.4**	**-0.3**
LACR	**Lac**	**0.64**	**57**	*i* Pg	**Pg**	**19 15 25.4**	**-0.5**
LACR				*e*Sg	**Sg**	**19 15 34.5**	**+0.3**
LACR	**Lac**	**0.64**	**57**	⇓*i*PG	**Pg**	**19 15 25.5**	**-0.3**
LACR				*e*S	**Sg**	**19 15 34.7**	**+0.5**
GUDG	**Gudauri**	**0.67**	**91**	P	**Pg**	**19 15 26.3**	**-0.2**
GUDG	**Gudauri**	**0.67**	**91**	*e*Pg	**Pg**	**19 15 26.3**	**-0.2**
GUDG				*e*Sg	**Sb**	**19 15 36.5**	**-1.0**
GUDG	**Gudauri**	**0.67**	**91**	*e*PG	**Pg**	**19 15 26.4**	**-0.1**
GUDG				*e*S	**Sb**	**19 15 36.7**	**-0.8**
KORR	**Kora**	**0.71**	**31**	*i* Pg	**Pg**	**19 15 27.1**	**0.0**
KORR				*e*Sg	**Sb**	**19 15 38.1**	**-0.3**
KORR	**Kora**	**0.71**	**31**	*e*PG	**Pb**	**19 15 27.3**	**-1.0**
KORR				*e*S	**Sb**	**19 15 39.0**	**+0.6**
LSNR	**Lesken**	**0.82**	**13**	*e*Pg	**Pg**	**19 15 29.2**	**-0.1**
LSNR				*e*Sg	**Sb**	**19 15 41.4**	**-0.2**
LSNR	**Lesken**	**0.82**	**13**	*e*PG	**Pb**	**19 15 29.5**	**-0.7**
LSNR				*e*S	**Sb**	**19 15 41.7**	**+0.1**
ARNR	**Ardon**	**0.88**	**37**	*e*Pg	**Pb**	**19 15 31.1**	**0.0**
ARNR				*e*Sg	**Sn**	**19 15 44.9**	**-0.7**
ARNR	**Ardon**	**0.88**	**37**	*e*PG	**Pb**	**19 15 31.3**	**+0.1**
ARNR				*e*S	**Sn**	**19 15 45.5**	**0.0**
STDR	**Stavd-Durt**	**0.96**	**22**	*e*Pg	**Pn**	**19 15 33.2**	**-0.4**
STDR				*e*Sg	**Sn**	**19 15 48.0**	**+0.5**
STDR	**Stavd-Durt**	**0.96**	**22**	*e*PG	**Pn**	**19 15 33.3**	**-0.3**
STDR				*e*S	**Sn**	**19 15 47.4**	**-0.2**
VLKR	**Vladikavkaz**	**0.99**	**55**	*e*Pg	**Pn**	**19 15 33.1**	**+0.1**
VLKR				*e*Sg	**Sn**	**19 15 48.7**	**+0.2**
VLKR	**Vladikavkaz**	**0.99**	**55**	*e*PG	**Pn**	**19 15 33.6**	**-0.5**
VLKR				*e*S	**Sn**	**19 15 49.1**	**+0.6**
NEUR	**Neytrino**	**1.01**	**321**	*i* Pg	**Pb**	**19 15 32.8**	**-0.7**
NEUR				*e*Sg	**Sb**	**19 15 46.8**	**-0.3**
NEUR	**Neytrino**	**1.01**	**321**	*i* PG	**Pb**	**19 15 32.8**	**-0.7**
NEUR				*e*S	**Sb**	**19 15 46.8**	**-0.3**
NCK	**Nalchik**	**1.01**	**1**	*e*Pg	**Pb**	**19 15 33.3**	**-0.2**
NCK				*e*Sg	**Sn**	**19 15 48.0**	**-1.0**
NCK	**Nalchik**	**1.01**	**1**	*i* PG	**Pn**	**19 15 33.6**	**-0.8**
NCK				*i* S	**Sn**	**19 15 48.3**	**-0.7**
CHRG	**Chargali**	**1.02**	**98**	P	**Pg**	**19 15 32.5**	**-0.5**
TRLG	**Trialeti**	**1.02**	**157**	P	**Pg**	**19 15 33.3**	**+0.2**
TRLG				S	**Sb**	**19 15 47.8**	**+0.3**
TRLG	**Trialeti**	**1.02**	**157**	PG	**Pg**	**19 15 33.2**	**+0.2**
TRLG				S	**Sb**	**19 15 47.7**	**+0.3**
AKH	**Akhalkalaki**	**1.07**	**183**	P	**Pg**	**19 15 33.7**	**-0.3**
AKH				S	**Sb**	**19 15 49.8**	**+0.9**
AKH	**Akhalkalaki**	**1.07**	**183**	PG	**Pg**	**19 15 33.7**	**-0.3**
AKH				S	**Sb**	**19 15 49.8**	**+0.9**
KMGR	**Komgaron**	**1.12**	**58**	*e*Pg	**Pn**	**19 15 35.8**	**0.0**
KMGR				*e*Sg	**Sn**	**19 15 53.6**	**+2.1**
KMGR	**Komgaron**	**1.12**	**58**	*e*PG	**Pn**	**19 15 36.1**	**+0.3**
KMGR				*e*S	**Sn**	**19 15 53.6**	**+2.1**
BTKR	**Batakoyurt**	**1.14**	**38**	*e*Pg	**Pn**	**19 15 36.8**	**+0.7**
BTKR				*e*Sg	**Sn**	**19 15 53.4**	**+1.2**
BTKR	**Batakoyurt**	**1.14**	**38**	*e*PG	**Pn**	**19 15 36.8**	**+0.7**
BTKR				*e*S	**Sn**	**19 15 53.4**	**+1.2**
TBLG	**Delisi**	**1.15**	**130**	Pn	**Pb**	**19 15 35.6**	**-0.2**
TBLG				Sn	**Sn**	**19 15 52.1**	**-0.2**
TBLG	**Delisi**	**1.15**	**130**	P	**Pb**	**19 15 35.6**	**-0.2**
TBLG				S	**Sn**	**19 15 51.9**	**-0.4**
EPOS	**Posof**	**1.16**	**213**	P	**Pg**	**19 15 35.3**	**-0.4**
EPOS				S	**Sg**	**19 15 50.8**	**0.0**
SEAG	**Tbilisi Sea**	**1.17**	**127**	P	**Pg**	**19 15 35.7**	**-0.1**
SEAG				S	**Sn**	**19 15 53.7**	**+1.0**
SEAG	**Tbilisi Sea**	**1.17**	**127**	PG	**Pg**	**19 15 35.7**	**-0.1**
SEAG				S	**Sn**	**19 15 53.6**	**+1.0**
SHTL	**Shatili**	**1.19**	**81**	P	**Pg**	**19 15 35.4**	**-0.8**
SHTL	**Shatili**	**1.19**	**81**	PG	**Pg**	**19 15 35.4**	**-0.8**
BGD	**Bogdanovka**	**1.22**	**179**	P	**Pg**	**19 15 36.5**	**-0.3**
BGD				S	**Sn**	**19 15 53.9**	**-0.3**
BGD	**Bogdanovka**	**1.22**	**179**	PG	**Pg**	**19 15 36.5**	**-0.3**
BGD				S	**Sn**	**19 15 53.8**	**-0.3**
BTNK	**Botanikuri**	**1.22**	**131**	PG	**Pg**	**19 15 36.5**	**-0.3**
KZRT	**Kazreti**	**1.26**	**150**	P	**Pg**	**19 15 33.7**	**-3.9**
KZRT				S	**Sg**	**19 15 51.4**	**-2.5**
KZRT	**Kazreti**	**1.26**	**150**	PG	**Pg**	**19 15 33.7**	**-3.9**
KZRT				S	**Sg**	**19 15 51.3**	**-2.5**
KBZ	**Khabaz** 3.1nm,0.3s,baz=153,slow=9.0,SNR=42	**1.34**	**339**	Pg	**Pn**	**19 15 38.5**	**-0.3**
KBZ				Lg	Lg	19 15 56.2	
	9.3nm,0.3s,baz=162,slow=20,SNR=10						
KBZ	**Khabaz**	**1.34**	**339**	*e*Pg	**Pn**	**19 15 38.4**	**-0.3**
KBZ				*e*Sg	**Sn**	**19 15 56.6**	**-0.3**
KBZ	**Khabaz**	**1.34**	**339**	*e*PG	**Pn**	**19 15 38.4**	**-0.3**
KBZ				*e*S	**Sn**	**19 15 56.6**	**-0.3**
PRTR	**Priterechnaya**	**1.38**	**22**	*e*Pg	**Pg**	**19 15 41.3**	**+1.4**
PRTR				*e*Sg	**Sn**	**19 16 00.9**	**+3.1**
PRTR	**Priterechnaya**	**1.38**	**22**	*e*PG	**Pg**	**19 15 41.6**	**+1.8**
PRTR				*e*S	**Sn**	**19 15 59.9**	**+2.1**
SHA1	**Shidzhatmaz**	**1.42**	**332**	*e*Pg	**Pg**	**19 15 40.3**	**-0.5**
SHA1				*e*Sg	**Sn**	**19 16 00.0**	**+0.7**
SHA1	**Shidzhatmaz**	**1.42**	**332**	*e*PG	**Pg**	**19 15 40.3**	**-0.5**
SHA1				*e*S	**Sn**	**19 16 00.0**	**+0.7**
AHAN	**Ardahan-Merkez**	**1.49**	**208**	P	**Pg**	**19 15 41.7**	**-0.3**
AHAN				S	**Sg**	**19 16 02.9**	**+1.4**
TRKR	**Terskaya**	**1.51**	**34**	*e*PG	**Sg**	**19 15 42.5**	**+0.1**
TRKR				*e*S	**Sg**	**19 16 05.3**	**+3.4**
KIV	**Kislovodsk**	**1.61**	**337**	Pn	**Pb**	**19 15 43.2**	**-0.5**
KIV				Sn	**Sg**	**19 16 04.6**	**-0.6**
KIV	**Kislovodsk**	**1.61**	**337**	*e*Pg	**Pb**	**19 15 42.9**	**-0.8**
KIV				*e*Sg	**Sg**	**19 16 04.9**	**-0.3**
KIV	**Kislovodsk**	**1.61**	**337**	*i* PN	**Pg**	**19 15 43.5**	**-0.8**
KIV				*i* S	**Sg**	**19 16 05.1**	**-0.1**
PYA1	**Pyatigorsk**	**1.62**	**348**	*e*Pg	**Pg**	**19 15 43.9**	**-0.6**
PYA1				*e*Sg	**Sg**	**19 16 05.6**	**+0.1**
PYA1	**Pyatigorsk**	**1.62**	**348**	*e*PN	**Pg**	**19 15 43.9**	**-0.6**
PYA1				*e*S	**Sg**	**19 16 05.6**	**+0.1**
BEYR	**Belyy Ugol+**	**1.63**	**341**	*e*Pg	**Pb**	**19 15 43.6**	**-0.3**
BEYR				*e*Sg	**Sg**	**19 16 06.1**	**+0.3**
BEYR	**Belyy Ugol+**	**1.63**	**341**	*e*PN	**Pb**	**19 15 43.6**	**-0.3**
BEYR				*e*S	**Sg**	**19 16 06.1**	**+0.3**
DOMR	**Dombai**	**1.64**	**300**	*e*Pg	**Pg**	**19 15 44.3**	**-0.7**
DOMR				*e*Sg	**Sg**	**19 16 08.1**	**+1.9**
DOMR	**Dombai**	**1.64**	**300**	*e*PN	**Pg**	**19 15 44.3**	**-0.7**
DOMR				*e*S	**Sg**	**19 16 08.1**	**+1.9**
DGRG	**David-gareji**	**1.69**	**127**	P	**Pg**	**19 15 45.9**	**-0.1**
DGRG				S	**Sg**	**19 16 11.6**	**+3.6**
DGRG	**David-gareji**	**1.69**	**127**	PN	**Pg**	**19 15 45.9**	**-0.1**
DGRG				S	**Sg**	**19 16 11.5**	**+3.6**
GROC	**Groznyy**	**1.79**	**65**	*e*Pg	**Pg**	**19 15 47.0**	**-0.8**
GROC				*e*Sg	**Sg**	**19 16 13.7**	**+2.6**
GROC	**Groznyy**	**1.79**	**65**	*e*PN	**Pg**	**19 15 47.6**	**-0.2**
GROC				*e*S	**Sg**	**19 16 13.8**	**+2.7**
EAK	**Akyaka**	**1.79**	**179**	P	**Pb**	**19 15 46.0**	**-0.9**
EAK				S	**Sg**	**19 16 11.0**	**-0.1**
GOLE	**Ardahan-G¶le**	**1.80**	**204**	P	**Pb**	**19 15 46.8**	**-0.1**
GOLE				S	**Sg**	**19 16 12.0**	**+0.8**
DBOC	**Borcka**	**1.81**	**232**	P	**Pb**	**19 15 46.2**	**-0.9**
DBOC				S	**Sb**	**19 16 09.7**	**-0.5**
KARS	**Kars**	**1.89**	**191**	Pn	**Pb**	**19 15 47.4**	**-1.0**
KARS				Sn	**Sb**	**19 16 12.5**	**+0.2**
BOZK	**Kars-Merkez-Bo**	**1.94**	**193**	P	**Pb**	**19 15 49.2**	**-0.2**
BOZK				S	**Sg**	**19 16 16.2**	**+0.4**
DVE	**Vedeno**	**1.95**	**75**	⇓*i*PN	**Pb**	**19 15 49.3**	**-0.1**
DVE				*e*S	**Sg**	**19 16 16.4**	**+0.4**
ARXR	**Arkhyz**	**2.00**	**304**	*e*Pg	**Pb**	**19 15 50.5**	**+0.2**
ARXR				*e*Sg	**Sg**	**19 16 16.2**	**-1.5**
ARXR	**Arkhyz**	**2.00**	**304**	*e*PN	**Pb**	**19 15 50.5**	**+0.2**
ARXR				*e*S	**Sg**	**19 16 16.2**	**-1.5**
DBAD	**Bademkaya**	**2.02**	**224**	P	**Pb**	**19 15 50.1**	**-0.6**
DBAD				S	**Sb**	**19 16 16.7**	**+0.5**
DDEM	**Demirkent**	**2.09**	**221**	P	**Pb**	**19 15 50.5**	**-1.4**
DDEM				S	**Sb**	**19 16 18.8**	**+0.6**
LGD	**Lagodekhi**	**2.09**	**107**	P	**Pb**	**19 15 51.9**	**0.0**
LGD				S	**Sg**	**19 16 21.9**	**+1.2**
LGD	**Lagodekhi**	**2.09**	**107**	PN	**Pb**	**19 15 51.8**	**0.0**
LGD				S	**Sg**	**19 16 21.8**	**+1.2**
TLTR	**Tlyarata**	**2.10**	**99**	*e*Pg	**Pb**	**19 15 51.4**	**-0.8**
TLTR				*e*Sg	**Sg**	**19 16 20.1**	**-0.9**
TLTR	**Tlyarata**	**2.10**	**99**	*e*PN	**Pb**	**19 15 51.3**	**-0.8**
TLTR				*e*S	**Sg**	**19 16 20.1**	**-0.9**
SENK	**Senkaya-Erzuru**	**2.12**	**206**	Pn	**Pn**	**19 15 50.7**	**+1.0**
EOLT	**Oltu**	**2.27**	**212**	P	**Pb**	**19 15 55.2**	**+0.2**
XNZR	**Khunzakh**	**2.32**	**87**	*e*Pn	**Pb**	**19 15 56.5**	**+0.6**
XNZR				*e*Sn	**Sg**	**19 16 27.4**	**-0.7**
HNZR	**Khunzah**	**2.33**	**87**	*e*PN	**Pb**	**19 15 56.5**	**+0.5**
HNZR				*e*S	**Sg**	**19 16 27.4**	**-0.9**
ALER	**Alexandrovskoy**	**2.33**	**348**	*e*Pn	**Pb**	**19 15 56.5**	**+0.5**
ALER				*e*Sn	**Sb**	**19 16 23.4**	**-1.6**
ALER	**Alexandrovskoy**	**2.33**	**348**	*e*PN	**Pb**	**19 15 56.5**	**+0.5**
ALER				*e*S	**Sb**	**19 16 23.4**	**-1.6**
UNCR	**Uncukul**	**2.40**	**83**	*e*Pn	**Pb**	**19 15 57.7**	**+0.6**
UNCR				*e*Sn	**Sg**	**19 16 28.7**	**-1.7**
UNCR	**Uncukul**	**2.40**	**83**	*e*PN	**Pb**	**19 15 57.7**	**+0.6**
UNCR				*e*S	**Sg**	**19 16 28.7**	**-1.7**
VSHL	**Vashlovani**	**2.46**	**120**	P	**Pb**	**19 15 56.6**	**-1.5**
VSHL				S	**Sg**	**19 16 33.7**	**+1.2**
KRNR	**Karanay**	**2.49**	**81**	*e*Pn	**Pb**	**19 15 57.5**	**-1.2**
KRNR				*e*Sn	**Sb**	**19 16 29.3**	**-0.4**
KRNR	**Karanay**	**2.49**	**81**	*e*PN	**Pb**	**19 15 57.5**	**-1.2**
KRNR				*e*S	**Sb**	**19 16 29.3**	**-0.4**
GNI	**Garni**	**2.49**	**159**	Pn	**Pn**	**19 15 56.6**	**+1.8**
GNI	**Garni**	**2.49**	**159**	*e*Pn	**Pb**	**19 15 58.9**	**+0.1**
GNI				*e*Sn	**Sg**	**19 16 32.6**	**-0.9**
GNI	**Garni**	**2.49**	**159**	*e*PN	**Pb**	**19 15 58.9**	**+0.1**
GNI				*e*S	**Sg**	**19 16 32.6**	**-0.9**
CHOM	**Cayeli-Rize**	**2.51**	**238**	Pn	**Pn**	**19 15 55.1**	**+0.2**
GOF	**Gofitskoye**	**2.60**	**352**	*e*Pn	**Pb**	**19 15 59.7**	**-0.9**
GOF				*e*Sn	**Sb**	**19 16 30.9**	**-2.0**
GOF	**Gofitskoye**	**2.60**	**352**	*e*PN	**Pb**	**19 15 59.7**	**-0.9**
GOF				*e*S	**Sb**	**19 16 30.9**	**-2.0**
RPOR	**Krasnaya Polya**	**2.71**	**298**	*e*Pn	**Pn**	**19 15 59.3**	**+1.7**
RPOR				*e*Sn	**Sn**	**19 16 31.8**	**+1.1**
RPOR	**Krasnaya Polya**	**2.71**	**298**	*e*PN	**Pn**	**19 15 59.3**	**+1.7**
RPOR				*e*S	**Sn**	**19 16 31.8**	**+1.1**
VSLR	**Vesyoloye**	**2.77**	**292**	*i* Pn	**Pn**	**19 15 59.3**	**+0.8**
VSLR				*e*Sn	**Sn**	**19 16 34.4**	**+2.1**
VSLR	**Vesyoloye**	**2.77**	**292**	*i* PN	**Pn**	**19 15 59.3**	**+0.8**
VSLR				*e*S	**Sn**	**19 16 34.4**	**+2.1**
AGRB	**Hanur-Agry**	**2.93**	**189**	Pn	**Pn**	**19 16 02.2**	**+1.3**
BAYT	**Aydıntepe-Bayb**	**3.31**	**232**	Pn	**Pn**	**19 16 07.5**	**+1.4**
BRTR	**Keskin Array B** 0.1nm,0.3s,baz=63,slow=12,SNR=2.2 0.4nm,0.6s	**7.99**	**253**	Pn	**Pn**	**19 17 12.1**	**+1.8**
BVAR	**Borovoye Array** 0.4nm,0.7s,baz=249,slow=12,SNR=4.2 0.4nm,0.7s	**20.77**	**50**	P	**P**	**19 19 53.1**	**-1.9**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=266,slow=8.5,SNR=2.3 0.2nm,0.6s	**27.70**	**68**	P	**P**	**19 21 02.7**	**+0.4**
CMAR	**Chiang Mai Arr** comp=Z,20nm,19.9s,baz=225,slow=43	**52.36**	**99**	LR	LR	19 53 06.4	

IDC 28 19:17:13.6±338.0,43˚.21N×119˚.24W,h0km,Error ellipse: s-maj=149.4km s-min=112.5km az=20.0, Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I56US	**NEWPORT INFRAS** baz=197,slow=314,SNR=1.4	**5.27**	**16**	I	I	19 52 00.0	
I57US	**PINON FLAT INF** baz=346,slow=324,SNR=0.8	**9.83**	**166**	I	I	20 16 00.0	
I18DK	**QAANAAQ INFRAS** baz=236,slow=339,SNR=0.7	**39.78**	**15**	I	I	23 17 40.0	

IDC 28 19:17:22.9±1.7,4˚.49S×145˚.18E,h0km,mb3.3/3, mbtmp3.5/5,ML3.5/2,MS4.1/2,Error ellipse: s-maj=71.1km s-min=26.5km az=105.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 0.2nm,0.3s,baz=355,slow=14,SNR=3.6 2.2nm,0.7s	**15.54**	**176**	Pn	Pn	19 21 04.5	+0.9
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=29,slow=11,SNR=16 0.7nm,0.6s	**18.64**	**214**	P	Pn	19 21 42.5	-0.1
ASAR	**Alice Springs** 0.5nm,0.7s,baz=26,slow=10,SNR=7.1 0.5nm,0.7s	**21.95**	**209**	P	P	19 22 17.6	-0.8
LEM	**Lembang** comp=Z,149nm,21.4s,baz=174,slow=40	**37.45**	**265**	LR	LR	19 42 07.8	
BRDH	**Bariadhala** comp=Z,238nm,18.3s,baz=184,slow=40	**58.84**	**300**	LR	LR	19 56 52.7	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=115,slow=7.2,SNR=4.6 0.1nm,0.3s	**75.19**	**321**	P	P	19 29 08.3	+0.9
ILAR	**Eielson Array** 0.4nm,0.7s,baz=262,slow=5.1,SNR=4.4 0.4nm,0.7s	**84.82**	**24**	P	P	19 29 58.2	-0.8

*BUL **28** 20:22:00.4±2.6, 14˚.87S×26˚.49E, h10km, MD3.4, Presumed earthquake*
*BGSI **28** 20:22:11.5±1.1, 15˚.25S×26˚.54E, h190km±15km, ML3.2*

ISC 28 20:22:07.7±3.2,15˚.5S±0˚.2×26˚.40E±0˚.08,h10km,n12, σ2§86/20,Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSANE	**Kasane**	**2.56**	**207**	*i* P	**Pg**	**20 22 57.6**	**+0.7**
KSANE				*i* S	**Sg**	**20 23 31.2**	**+1.1**
KSANE				IAML		20 23 50.1	
	comp=N,223nm,0.2s						
SOOWA	**Sowa**	**5.02**	**182**	*i* P	**Pn**	**20 23 27.1**	**+3.8**
SOOWA				*i* S	**Sn**	**20 24 23.5**	**+2.1**
SOOWA				IAML		20 25 15.1	
	comp=E,101nm,0.6s						
BLWY	**Bulawayo**	**5.06**	**156**	*i* P	**Pn**	**20 23 22.6**	**-1.2**
BROLN	**Tlhalogang**	**5.62**	**171**	*i* P	**Pn**	**20 23 34.9**	**+3.4**
BROLN				*i* S	**Sn**	**20 24 35.4**	**-0.9**
KHWEE	**KHWEE**	**6.46**	**188**	*i* P	**Pn**	**20 23 46.1**	**+3.0**
KHWEE				*i* S	**Sn**	**20 24 55.9**	**-1.0**
KHWEE				IAML		20 25 55.8	
	comp=E,108nm,0.3s						
MUSN	**Musina, Limpop**	**7.49**	**155**	*i* P	**Pn**	**20 23 56.0**	**-1.0**
MUSN				*i* S	**Sn**	**20 25 20.8**	**-1.3**
GRTLG	**Ghanzi**	**7.62**	**219**	*i* P	**Pn**	**20 24 00.4**	**+1.5**
GRTLG				*i* S	**Sn**	**20 25 22.0**	**-3.4**
LPHEP	**Lephephe**	**7.82**	**184**	*i* P	**Pn**	**20 24 02.9**	**+1.2**
LPHEP				*i* S	**Sn**	**20 25 26.5**	**-4.0**
LPHEP				IAML		20 26 33.9	
	comp=E,12nm,0.5s						
KDWAN	**Kaudwane**	**7.99**	**192**	*i* P	**Pn**	**20 24 06.3**	**+2.2**
KDWAN				*i* S	**Sn**	**20 25 29.2**	**-5.4**
KDWAN				IAML		20 25 48.1	
	comp=N,11nm,0.6s						
KGCAE	**Kacgae**	**8.30**	**208**	*i* P	**Pn**	**20 24 09.6**	**+1.2**
KGCAE				*i* S	**Sn**	**20 25 37.5**	**-4.9**
TSUM	**Tsumeb**	**9.18**	**245**	*i* P	Pn	20 24 16.2	-4.2
TSUM				*i* S	Sn	20 25 54.9	-9.0
KOOLE	**Kule**	**9.47**	**217**	*i* P	**Pn**	**20 24 24.4**	**+0.1**

*IDC **28** 20:29:04.8±0.8, 27˚.29N×140˚.17E, h466km±8km, mb3.6/23, mbtmp4.5/29, Error ellipse: s-maj=11.8km s-min=9.0km az=77.0*
*NEIC **28** 20:29:04.6±1.7, 27˚.34N±0˚.08×140˚.19E±0˚.10, h459km±6km, mb4.1/112, Error ellipse: s-maj=14.4km s-min=9.2km az=127.0*
*JMA **28** 20:29:04.8±0.2, 27˚N±2˚×14˚1E±˚, h480km, MV4.0/37, W OFF OGASAWARA*

ISC 28 20:29:04.8±0.6,27˚.35N±0˚.05×140˚.21E±0˚.06,h466km±5km, n208,σ1§23/229,mb4.1/89,1C-1D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.78**	**98**	*e*P	**P**	**20 30 05.4**	**-0.2**
CBIJ				*e*S	**S**	**20 30 53.4**	**-1.5**
JCJ	**Chichijima** 327nm,0.3s,baz=348,slow=20,SNR=111	**1.78**	**98**	P	**P**	**20 30 04.7**	**-0.9**
JCJ				S	**S**	**20 30 51.6**	**-3.3**
	543nm,0.3s,baz=321,slow=22,SNR=14						
JCJ	**Chichijima**	**1.78**	**98**	P	**P**	**20 30 05.2**	**-0.4**
JCJ	**Chichijima**	**1.78**	**98**		**P**	**20 30 05.1**	**-0.5**
JCJ				S	**S**	**20 30 51.3**	**-3.7**
JHCJ	**Hachijojimakas**	**5.72**	**357**	*e*P	**P**	**20 30 37.4**	**+0.6**
JHCJ				*e*S	**S**	**20 31 49.5**	**-2.5**
JHJ2	**Mitsune**	**5.75**	**357**	P	**P**	**20 30 38.4**	**+1.3**
JHJ2	**Mitsune**	**5.75**	**357**	P	**P**	**20 30 35.5**	**-1.6**
JHJ2	**Mitsune**	**5.75**	**357**	*e*P	**P**	**20 30 37.9**	**+0.7**
JHJ2				*e*S	**S**	**20 31 52.9**	**+0.3**
JHJ	**Hachijo jima 2** 54nm,0.3s,baz=101,slow=19,SNR=7.0	**5.76**	**356**	P	**P**	**20 30 37.9**	**+0.7**
JHJ				S	**S**	**20 31 50.8**	**-2.0**
	110nm,0.3s,baz=248,slow=21,SNR=4.7						
JMKN	**Mikurajimanish**	**6.54**	**355**	*e*S	**S**	**20 32 06.8**	**-0.5**
BSO1	**Boso 1**	**7.31**	**5**	*e*P	**P**	**20 30 54.1**	**+1.7**
BSO1				*e*S	**S**	**20 32 21.3**	**+0.5**
BSO3	**Boso 3**	**7.43**	**2**	*e*P	**P**	**20 30 55.5**	**+1.6**
BSO3				*e*S	**S**	**20 32 22.2**	**-1.5**
JTNC	**Tanabenakahech**	**7.57**	**330**	*e*P	**P**	**20 30 59.6**	**+3.8**
BSO4	**Boso 4**	**7.62**	**1**	*e*S	**S**	**20 32 27.9**	**+0.4**
JIE	**Ise**	**7.64**	**338**	*e*P	**P**	**20 30 59.0**	**+2.5**
JKN2	**Miekihoku**	**7.66**	**335**	*e*P	**P**	**20 30 59.3**	**+2.7**
JOD2	**Odawara 2**	**7.95**	**353**	*e*P	**P**	**20 31 01.0**	**+1.2**
JOD2				*e*S	**S**	**20 32 32.2**	**-1.9**
JMZ	**Minamidaito 2**	**8.19**	**261**	P	**P**	**20 31 03.4**	**+1.0**
JMZ	**Minamidaito 2**	**8.19**	**261**	P	**P**	**20 31 02.4**	**0.0**
JMN	**Monobe**	**8.38**	**321**	P	**P**	**20 31 07.1**	**+2.7**
JMN	**Monobe**	**8.38**	**321**	P	**P**	**20 31 06.1**	**+1.7**
INU	**Inuyama**	**8.43**	**342**	P	**P**	**20 31 06.8**	**+2.0**
INU	**Inuyama**	**8.43**	**342**	P	**P**	**20 31 06.4**	**+1.6**
JGF	**Kuroka**	**8.58**	**344**	P	**P**	**20 31 08.5**	**+2.0**
JGF	**Kuroka**	**8.58**	**344**		**P**	**20 31 07.0**	**+0.5**
MJAR	**Matsushiro Arr** 5.2nm,0.5s,baz=176,slow=11,SNR=26	**9.32**	**350**	P	**P**	**20 31 14.4**	**0.0**
MJAR				S	**S**	**20 32 52.6**	**-8.6**
	3.9nm,0.7s,baz=148,slow=8.3,SNR=5.4						
MJAR	**Matsushiro Arr**	**9.32**	**350**		**P**	**20 31 13.8**	**-0.7**
MAJO	**Matsushiro**	**9.32**	**350**	P	**P**	**20 31 15.4**	**+0.9**
MAJO	**Matsushiro**	**9.32**	**350**		**P**	**20 31 14.5**	**0.0**
MJB9	**Matsu-Tunnel**	**9.33**	**350**		**P**	**20 31 15.2**	**+0.7**
JSU	**Suzuyama**	**9.46**	**298**	P	**P**	**20 31 18.6**	**+2.6**
JSU	**Suzuyama**	**9.46**	**298**	P	**P**	**20 31 18.3**	**+2.3**
JNU	**Nakatsue** 19nm,0.5s,baz=160,slow=4.5,SNR=28	**9.91**	**308**	P	**P**	**20 31 22.9**	**+2.0**
JNU				S	**S**	**20 33 13.8**	**+0.8**
	8.2nm,1.0s,baz=108,slow=16,SNR=1.6						
JOW	**Kunigami** 178nm,0.5s,baz=111,slow=8.9,SNR=102	**10.65**	**270**	P	**P**	**20 31 30.4**	**+1.5**
JOW	**Kunigami**	**10.65**	**270**		**P**	**20 31 30.2**	**+1.3**
JOW	**Kunigami**	**10.65**	**270**	*e*P	**P**	**20 31 30.5**	**+1.5**
JKE	**Kume jima 2**	**12.03**	**268**	*e*P	**P**	**20 31 44.8**	**+0.9**
KSRS	**Korea Array** 1.5nm,0.8s,baz=138,slow=11,SNR=5.8	**14.45**	**317**	P	**P**	**20 32 09.5**	**-0.1**
YOJ	**Yonaguni jima**	**15.74**	**263**	P	**P**	**20 32 22.1**	**-1.3**
JKA	**Kamikawa-asahi**	**16.84**	**6**	P	**P**	**20 32 35.9**	**+1.1**
ASAJ	**Asahikawa** 3.6nm,0.4s,baz=202,slow=7.6,SNR=12	**16.84**	**6**	P	**P**	**20 32 36.6**	**+1.8**
NACB	**Ninganchiao**	**17.06**	**263**	P	**P**	**20 32 36.7**	**-0.7**
YHNB	**Yeheng**	**17.14**	**265**	P	**P**	**20 32 37.3**	**-1.0**
SSLB	**Suanglung**	**17.73**	**263**

ZAA0	**Zalesovo Array**	**48.15**	**319**			**P**	**20 37 00.5**	**-0.5**
ZAA0				PcP		**PcP**	**20 38 19.3**	**-0.6**
ZALV	**Zalesovo Beam**	**48.15**	**319**		P	**P**	**20 37 00.9**	**-0.2**
	comp=Z,9.0nm,0.3s,baz=106,slow=7.9,SNR=61							
ZALV				PcP		**PcP**	**20 38 19.3**	**-0.5**
	comp=Z,2.5nm,0.4s,baz=112,slow=2.7,SNR=7.9							
ZALV				ScP		**ScP**	**20 41 28.0**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=99,slow=6.6,SNR=4.3							
	comp=Z,9.0nm,0.3s							
ZALV	**Zalesovo Beam**	**48.15**	**319**			**P**	**20 37 00.7**	**-0.4**
ZALV				PcP		**PcP**	**20 38 19.2**	**-0.7**
GSI	**Gunungsitoli**	**48.35**	**245**			**P**	**20 37 02.4**	**-0.9**
GSI				IAmb		IAmb	20 37 34.1	
	comp=Z,6.3nm,0.9s							
MKAR	**Makanchi Array**	**48.96**	**309**	P		**P**	**20 37 07.5**	**+0.2**
	comp=Z,3.7nm,0.4s,baz=87,slow=10,SNR=148							
MKAR				PcP		**PcP**	**20 38 22.8**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=67,slow=3.7,SNR=5.8							
MKAR				ScP		**ScP**	**20 41 32.5**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=82,slow=6.1,SNR=7.8							
	comp=Z,3.7nm,0.4s							
MKAR	**Makanchi Array**	**48.96**	**309**			**P**	**20 37 07.3**	**0.0**
MAKZ	**Makanchi**	**49.17**	**309**			**P**	**20 37 09.0**	**+0.1**
MAKZ				IAmb		IAmb	20 37 10.7	
	comp=Z,6.7nm,0.9s							
AS31	**Alice Springs**	**51.08**	**187**	P		**P**	**20 37 22.5**	**-0.7**
ASAR	**Alice Springs**	**51.08**	**187**	P		**P**	**20 37 22.2**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=360,slow=4.9,SNR=17							
ASAR				PcP		**PcP**	**20 38 30.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=6.7,slow=5.0,SNR=2.7							
ASAR				pP		**pP**	**20 38 52.5**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=14,slow=12,SNR=1.8							
	comp=Z,0.3nm,0.4s							
ASAR	**Alice Springs**	**51.08**	**187**	P		**P**	**20 37 21.9**	**-1.3**
F15K	**North Star Dit**	**51.22**	**26**	P		**P**	**20 37 24.4**	**+0.8**
WUS	**Wushi**	**51.29**	**302**	P		**P**	**20 37 23.9**	**-0.8**
K15K	**Wolf Creek Mou**	**51.49**	**31**	P		**P**	**20 37 27.2**	**+1.5**
K15K				IAmb		IAmb	20 37 37.5	
	comp=Z,11nm,1.5s							
KURK	**Kurchatov**	**51.55**	**314**			**P**	**20 37 26.1**	**-0.2**
KURBB	**Kurchatov Arra**	**51.61**	**314**	P		**P**	**20 37 26.4**	**-0.3**
	comp=Z,37nm,0.5s,baz=91,slow=7.9,SNR=79							
O15K	**Ungalikthiuk R**	**51.61**	**35**	P		**P**	**20 37 27.5**	**+0.9**
O15K				IAmb		IAmb	20 38 08.4	
	comp=Z,8.0nm,1.3s							
N15K	**Kwethluk River**	**51.67**	**33**	P		**P**	**20 37 28.0**	**+1.0**
N15K				IAmb		IAmb	20 38 08.7	
	comp=Z,8.5nm,1.4s							
PRZ	**Przheval'sk**	**51.81**	**304**			**P**	**20 37 28.9**	**+0.3**
C16K	**Lisburne Hills**	**51.93**	**23**			**P**	**20 37 29.4**	**+0.7**
J16K	**Anvik River**	**52.15**	**29**	P		**P**	**20 37 32.2**	**+1.8**
I17K	**Unalakleet**	**52.27**	**29**	P		**P**	**20 37 31.0**	**-0.2**
TARG	**Taragay, Kyrgy**	**52.31**	**303**			**P**	**20 37 32.0**	**-0.4**
O16K	**Kokwok River B**	**52.56**	**34**	P		**P**	**20 37 34.1**	**+0.7**
O16K				IAmb		IAmb	20 37 54.2	
	comp=Z,10nm,1.4s							
KDJ	**Kajisay**	**52.74**	**304**			**P**	**20 37 35.5**	**+0.3**
K17K	**Iditarod**	**53.04**	**30**	P		**P**	**20 37 38.7**	**+1.9**
K17K				IAmb		IAmb	20 37 39.9	
	comp=Z,4.3nm,0.7s							
ULHL	**Ulahol**	**53.42**	**304**	P		**P**	**20 37 41.0**	**+0.8**
	SNR=5.1							
C18K	**Utukok River**	**53.49**	**23**	P		**P**	**20 37 41.0**	**+1.0**
BOOM	**Boomskoye usch**	**53.62**	**304**			**P**	**20 37 42.1**	**+0.6**
BOOM				IAmb		IAmb	20 37 43.0	
	comp=Z,6.9nm,0.6s							
BOOM				PcP		**PcP**	**20 38 40.8**	**-0.1**
NRN	**Naryn**	**53.68**	**303**			**P**	**20 37 42.5**	**+0.3**
C19K	**Lookout Ridge**	**54.19**	**23**	P		**P**	**20 37 46.5**	**+1.5**
KSH2	**Kashi**	**54.30**	**300**	P		**P**	**20 37 47.5**	**+1.1**
KSH2				pmax		pmax		
	comp=Z,8.0nm,0.7s							
KBK	**Karagaybulak**	**54.33**	**304**	P		**P**	**20 37 47.4**	**+0.8**
	SNR=7.2							
AAK	**Ala-Archa**	**54.67**	**304**	P		**P**	**20 37 49.3**	**+0.4**
	SNR=5.4							
AAK	**Ala-Archa**	**54.67**	**304**			**P**	**20 37 49.3**	**+0.4**
AAK				IAmb		IAmb	20 37 49.7	
	comp=Z,4.2nm,0.5s							
AAK				PcP		**PcP**	**20 38 44.5**	**-0.4**
UCH	**Uchtor**	**54.70**	**304**	P		**P**	**20 37 50.9**	**+1.3**
	SNR=7.5							
EKS2	**Erkin-Say**	**55.19**	**305**	P		**P**	**20 37 53.2**	**+0.6**
	SNR=5.5							
B20K	**Meade River**	**55.27**	**22**	P		**P**	**20 37 53.8**	**+1.3**
B20K				IAmb		IAmb	20 37 54.5	
	comp=Z,3.7nm,0.4s							
IMAR	**Indian Mountai**	**55.61**	**27**	P		**P**	**20 37 56.3**	**+1.3**
IMAR				PcP		**PcP**	**20 38 49.5**	**+1.6**
ARSB	**Arslanbob**	**55.95**	**303**	P		**P**	**20 37 58.8**	**+0.8**
ARSB				IAmb		IAmb	20 37 59.5	
	comp=Z,12nm,1.1s							
ARSB				PcP		**PcP**	**20 38 49.6**	**-0.3**
B21K	**Ikpikpuk River**	**56.03**	**23**	P		**P**	**20 37 58.8**	**+1.1**
D22K	**Ayikyak River**	**56.54**	**24**	IAmb		IAmb	20 38 04.0	
	comp=Z,19nm,1.5s							
B22K	**Teshekpuk Lake**	**56.59**	**22**	IAmb		IAmb	20 38 01.6	
	comp=Z,10nm,1.3s							
BVAR	**Borovoye Array**	**56.67**	**317**	P		**P**	**20 38 02.8**	**+0.3**
	comp=Z,34nm,0.4s,baz=85,slow=6.6,SNR=297							
BORK	**Borovoye**	**56.71**	**317**			**P**	**20 38 03.1**	**+0.3**
DRK	**Karamyk**	**57.13**	**301**	P		**P**	**20 38 06.2**	**-0.1**
DRK				IAmb		IAmb	20 38 07.4	
	comp=Z,4.3nm,0.6s							
NIL	**Nilore**	**57.15**	**294**			**P**	**20 38 05.8**	**-0.4**
NIL				IAmb		IAmb	20 38 08.4	
	comp=Z,8.5nm,0.7s							
D23K	**Nanushuk River**	**57.27**	**24**			**P**	**20 38 08.0**	**+1.6**
D23K				IAmb		IAmb	20 38 09.3	
	comp=Z,10.0nm,1.1s							
C23K	**Itkillik River**	**57.44**	**23**	IAmb		IAmb	20 38 10.2	
	comp=Z,6.0nm,0.9s							
KK31	**Karatay Array**	**57.51**	**305**			**P**	**20 38 08.8**	**+0.2**
KK31				IAmb		IAmb	20 38 09.7	
	comp=Z,10nm,0.8s							
KK31				PcP		**PcP**	**20 38 55.2**	**-0.6**
KKAR	**Karatay Array**	**57.51**	**305**			**P**	**20 38 08.7**	**+0.2**
KKAR				PcP		**PcP**	**20 38 55.2**	**-0.7**
BTK	**Batken**	**57.78**	**302**			**P**	**20 38 10.5**	**0.0**
BTK				IAmb		IAmb	20 38 11.5	
	comp=Z,9.6nm,1.4s							
E24K	**Your Creek**	**57.95**	**25**	IAmb		IAmb	20 38 13.8	
	comp=Z,3.7nm,0.6s							
H24K	**Noodor Dome**	**57.98**	**27**	P		**P**	**20 38 13.0**	**+1.6**
G24K	**Hadweenzic Riv**	**58.21**	**26**	IAmb		IAmb	20 38 16.0	
	comp=Z,9.5nm,1.3s							
IL31		**58.34**	**29**	P		**P**	**20 38 13.6**	**0.0**
ILAR	**Eielson Array**	**58.34**	**29**	P		**P**	**20 38 13.8**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=251,slow=5.6,SNR=15							
ILAR				PcP		**PcP**	**20 38 58.1**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=251,slow=5.9,SNR=2.3							
	comp=Z,0.6nm,0.4s							
GAR	**Garm**	**58.35**	**301**	P		**P**	**20 38 14.6**	**+0.1**
D25K	**Kavik River**	**58.84**	**23**	IAmb		IAmb	20 38 19.5	
	comp=Z,6.5nm,0.6s							
E25K	**Arctic Village**	**59.05**	**25**	IAmb		IAmb	20 38 21.2	
	comp=Z,4.2nm,0.5s							
CHGR	**Chuyangaron**	**59.31**	**301**			**P**	**20 38 21.0**	**+0.1**
BMAR	**Burnt Mountain**	**59.39**	**26**	P		**P**	**20 38 23.1**	**+2.3**
SCRK	**Sand Creek**	**59.58**	**30**	IAmb		IAmb	20 38 23.9	
	comp=Z,8.9nm,1.2s							
C27K	**Jago River**	**59.80**	**23**	IAmb		IAmb	20 38 26.1	
	comp=Z,4.5nm,0.6s							
KBL	**Kabul**	**60.33**	**296**			**P**	**20 38 27.1**	**-0.9**
KBL				IAmb		IAmb	20 38 29.4	
	comp=Z,9.1nm,0.8s							
SHAA	**Shahritus**	**60.34**	**300**			**P**	**20 38 27.5**	**-0.3**
SHAA				IAmb		IAmb	20 38 28.9	
	comp=Z,14nm,0.8s							
D27M	**Malcolm River**	**60.76**	**24**	IAmb		IAmb	20 38 32.6	
	comp=Z,3.5nm,0.8s							
F28M	**Old Crow**	**61.20**	**25**			**P**	**20 38 34.6**	**+1.7**
F28M				IAmb		IAmb	20 38 35.5	
	comp=Z,4.5nm,0.7s							
G30M	**tAoh Zraii Nji**	**62.66**	**26**	IAmb		IAmb	20 38 44.2	
	comp=Z,12nm,1.3s							
ARTI	**Arti**	**63.25**	**322**			**P**	**20 38 46.1**	**-0.3**
AB31	**Akbulak array**	**63.66**	**314**			**P**	**20 38 48.9**	**-0.2**
ABKAR	**Akbulak array**	**63.66**	**314**			**P**	**20 38 49.0**	**-0.1**
A36M	**Sachs Harbour**	**65.65**	**20**			**P**	**20 39 01.6**	**+0.3**
HRA	**Herat**	**65.78**	**298**			**P**	**20 39 03.2**	**0.0**
HRA				IAmb		IAmb	20 39 04.5	
	comp=Z,5.9nm,0.8s							
C36M	**Paulatuk**	**66.68**	**23**	P		**P**	**20 39 08.4**	**+0.6**
SPB2	**Spitsbergen Ar**	**69.82**	**349**	P		**P**	**20 39 27.6**	**+0.8**
SPITS	**Spitsbergen Ar**	**69.82**	**349**	P		**P**	**20 39 27.5**	**+0.6**
	comp=Z,2.4nm,0.4s,baz=88,slow=10,SNR=45							
	comp=Z,2.4nm,0.4s							
KEV	**Kevo**	**72.16**	**340**	P		**P**	**20 39 41.2**	**+0.4**
RES	**Resolute Bay**	**72.22**	**13**	IAmb		IAmb	20 39 43.0	
	comp=Z,2.3nm,0.8s							
ARCES	**ARCESS Array B**	**72.72**	**340**	P		**P**	**20 39 44.8**	**+0.7**
	comp=Z,5.8nm,0.6s,baz=71,slow=8.5,SNR=44							
	comp=Z,5.8nm,0.6s							
ARCES	**ARCESS Array B**	**72.72**	**340**	P		**P**	**20 39 44.3**	**+0.2**
YKA	**Yellowknife Ar**	**72.75**	**28**	P		**P**	**20 39 45.0**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=300,slow=6.4,SNR=25							
	comp=Z,2.2nm,0.7s							
YKA	**Yellowknife Ar**	**72.75**	**28**	P		**P**	**20 39 44.7**	**+0.3**
KBZ	**Khabaz**	**76.54**	**312**	P		**P**	**20 40 06.6**	**+0.5**
	comp=Z,7.9nm,0.7s,baz=123,slow=3.3,SNR=22							
	comp=Z,7.9nm,0.7s							
POIN	**Pond Inlet**	**76.89**	**11**	P		**P**	**20 40 08.1**	**+0.6**
FIA1	**FINESS Array S**	**76.94**	**333**	P		**P**	**20 40 07.9**	**-0.1**
FINES	**FINESS Array B**	**76.94**	**333**	P		**P**	**20 40 07.8**	**-0.1**
	comp=Z,16nm,0.4s,baz=70,slow=5.0,SNR=234							
	comp=Z,16nm,0.4s							
GEVA	**Gevas**	**78.75**	**307**	P		**P**	**20 40 18.8**	**+0.3**
GEVA				IAmb		IAmb	20 40 20.3	
	comp=Z,2.7nm,0.6s							
ILON	**Igloolik, Nuna**	**78.86**	**14**	P		**P**	**20 40 18.4**	**+0.2**
ILON				IAmb		IAmb	20 40 20.1	
	comp=Z,1.9nm,0.5s							
KOPT	**Kop Dagi**	**79.78**	**310**	P		**P**	**20 40 25.3**	**+1.2**
SUMG	**Summit**	**80.34**	**360**	P		**P**	**20 40 27.4**	**+0.9**
SUMG	**Summit**	**80.34**	**360**	*i* P		**P**	**20 40 27.6**	**+1.1**
SUMG				*i* S		**PcP**	**20 40 32.9**	**+0.9**
AKASG	**Malin Array Be**	**81.37**	**323**	P		**P**	**20 40 31.2**	**-0.5**
	comp=Z,2.4nm,0.4s,baz=53,slow=5.4,SNR=21							
	comp=Z,2.4nm,0.4s							
AKASG	**Malin Array Be**	**81.37**	**323**	IAmb		IAmb	20 40 32.2	
	comp=Z,4.8nm,1.1s							
KIEV	**Kiev**	**81.38**	**323**			**P**	**20 40 31.2**	**-0.6**
ARPR	**Arapgir-MALATY**	**81.69**	**310**			**P**	**20 40 34.7**	**+0.8**
NVAR	**Mina Array Bea**	**81.73**	**51**	P		**P**	**20 40 35.6**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=306,slow=6.1,SNR=3.5							
	comp=Z,0.5nm,0.5s							
MI28	**Mi28,Pidlybu**	**82.06**	**324**	P		**P**	**20 40 34.1**	**-1.2**
HFS	**Hagfors**	**82.49**	**336**	P		**P**	**20 40 36.5**	**-0.8**
	comp=Z,4.2nm,0.3s,baz=85,slow=4.9,SNR=64							
	comp=Z,4.2nm,0.3s							
LUBAR	**Lubar, Ukraine**	**82.58**	**323**	P		**P**	**20 40 37.4**	**-0.6**
NB201	**NORSAR Array S**	**82.68**	**338**	P		**P**	**20 40 37.6**	**-0.7**
NB2	**NORSAR Subarra**	**82.72**	**338**	P		**P**	**20 40 37.8**	**-0.7**
	comp=Z,3.4nm,0.5s,baz=48,slow=4.6							
NB2	**NORSAR Subarra**	**82.72**	**338**	P		**P**	**20 40 37.8**	**-0.7**
NB2				AMP			20 40 37.8	
	comp=Z,3.4nm,0.5s							
NOA	**NORSAR Array B**	**82.72**	**338**	P		**P**	**20 40 37.5**	**-1.0**
	comp=Z,10nm,0.8s,baz=56,slow=5.9,SNR=29							
	comp=Z,10nm,0.8s							
RAYN	**Ar Rayn**	**83.43**	**293**			**P**	**20 40 42.8**	**-0.1**
BR131	**Keskin Array S**	**84.53**	**312**	P		**P**	**20 40 47.3**	**-0.8**
BR131				IAmb		IAmb	20 40 49.4	
	comp=Z,9.4nm,1.5s							
BRTR	**Keskin Array B**	**84.53**	**312**	P		**P**	**20 40 47.5**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=78,slow=3.1,SNR=9.2							
	comp=Z,1.8nm,0.7s							
BRTR	**Keskin Array B**	**84.53**	**312**	P		**P**	**20 40 47.1**	**-1.1**
BUR08	**Bucovina Ar. S**	**85.28**	**322**			**P**	**20 40 50.7**	**-0.9**
BUR08				IAmb		IAmb	20 40 52.0	
	comp=Z,2.2nm,0.8s							
BURAR	**Bucovina Array**	**85.28**	**322**	P		**P**	**20 40 51.1**	**-0.5**
BURAR				IAmb		IAmb	20 40 52.4	
	comp=Z,2.4nm,0.8s							
MMAI	**Mount Meron Ar**	**86.74**	**306**	P		**P**	**20 40 58.3**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=38,slow=12,SNR=9.6							
	comp=Z,1.5nm,0.6s							
RONA	**Rosalia, Austr**	**89.90**	**326**	*e*PcP		**P**	**20 41 13.2**	**-0.1**
	comp=Z,0.7nm,0.3s							
CONA	**Conrad Observa**	**89.96**	**326**	*e*PcP		**P**	**20 41 13.5**	**-0.1**
	comp=Z,0.5nm,0.4s							
GERES	**GERESS Array B**	**90.37**	**328**	P		**P**	**20 41 14.6**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=53,slow=5.2,SNR=7.1							
	comp=Z,1.4nm,0.7s							
SOKA	**Soboth**	**91.23**	**326**	*e*PcP		**P**	**20 41 18.8**	**-0.7**
	comp=Z,1.0nm,0.4s							
OBKA	**Obir**	**91.59**	**326**	*e*PcP		**P**	**20 41 20.7**	**-0.4**
	comp=Z,0.1nm,0.3s							
KBA	**Koelnbreinsper**	**91.78**	**327**	*e*PcP		**P**	**20 41 21.9**	**-0.2**
	comp=Z,0.8nm,0.4s							
LESA	**Schwarzleotal**	**91.86**	**327**	*e*PcP		**P**	**20 41 21.6**	**-0.8**
	comp=Z,1.0nm,0.4s							
EKA	**Eskdalemuir Ar**	**91.88**	**340**	P		**P**	**20 41 24.2**	**+2.0**
	comp=Z,0.6nm,0.5s,baz=50,slow=4.7,SNR=1.6							
	comp=Z,0.6nm,0.5s							
ABTA	**Abfaltersbach**	**92.42**	**327**	*e*P		**P**	**20 41 23.5**	**-1.4**
	comp=Z,0.1nm,0.1s							
WTTA	**Wattenberg**	**92.47**	**328**	*e*PcP		**P**	**20 41 24.4**	**-0.9**
	comp=Z,1.7nm,0.5s							
FETA	**Feichten**	**93.08**	**328**	*e*P		**P**	**20 41 26.9**	**-1.2**
	comp=Z,0.2nm,0.2s							
TXAR	**Lajitas Array**	**96.85**	**52**	P		**P**	**20 41 46.5**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=104,slow=0.5,SNR=2.6							
	comp=Z,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**123.08**	**310**	PKP		**PKPdf**	**20 47 07.7**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=44,slow=3.1,SNR=8.1							
PLCA	**Paso Flores**		**151.39**	**126**	PKPbc	**PKiKP**	**20 48 06.0**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=286,slow=3.7,SNR=5.0							
LPAZ	**La Paz**		**151.55**	**73**	PKPbc	**PKiKP**	**20 48 08.1**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=341,slow=2.2,SNR=4.8							

*IDC **28** 20:41:46.5±1.6,37.3°N×144.3°E,h0km,mb3.3/2, mbtmp3.4/4,ML3.3/2,Error ellipse: s-maj=39.2km s-min=28.9km az=112.0*
*JMA **28** 20:41:51.1±0.2,37°N±1°×14°E±°,h55km,MV3.8/25,FAR E OFF NORTH HONSHU*
ISC 28 20:41:50.7±1.2,37°50N±0°06×144°22E±0°08,h35km,n20, σ1s78/29,mb3.5/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.33**	**291**	P		**Pn**	**20 42 26.4**	**-0.2**
JIKH				S		**Sn**	**20 42 52.6**	**-1.3**
JIO	**Ouri**	**2.47**	**294**	P		**Pn**	**20 42 28.2**	**-0.2**
JIO				S		**Sn**	**20 42 56.0**	**-1.3**
JKMT	**Kesennumamotoy**	**2.54**	**302**	P		**Pn**	**20 42 29.3**	**-0.1**
JKMT				S		**Sn**	**20 42 57.8**	**-1.2**
OFUJ	**Ofunato**	**2.56**	**309**	P		**Pn**	**20 42 29.7**	**0.0**
OFUJ				S		**Sn**	**20 42 58.3**	**-1.3**
JMK	**Ichinoseki**	**2.78**	**302**	P		**Pn**	**20 42 33.0**	**+0.3**
JMK				*e*S		**Sn**	**20 43 04.0**	**-1.0**
JOM	**Ohasama**	**3.03**	**312**	*e*S		**Sn**	**20 43 10.5**	**-0.8**
JOTO	**OTAMA OYAMA**	**3.09**	**272**	*e*P		**Pn**	**20 42 37.4**	**+0.4**
JOTO				*e*S		**Sn**	**20 43 12.0**	**-0.8**
JYK	**Kaneyama**	**3.36**	**296**	*e*P		**Pn**	**20 42 41.5**	**+0.8**
JYK				*e*S		**Sn**	**20 43 19.1**	**-0.3**
BSO1	**Boso 1**	**3.87**	**224**	*e*S		**Sn**	**20 43 28.0**	**-3.1**
JRY	**Ryogami san**	**4.52**	**253**	*e*P		**Pn**	**20 42 55.8**	**-0.9**
JRY				*e*S		**Sn**	**20 43 44.1**	**-4.0**
MJAR	**Matsushiro Arr**	**4.91**	**261**	Pn		**Pn**	**20 43 02.8**	**+0.8**
	0.3nm,0.3s,baz=75,slow=14,SNR=22							
MJAR				Sn		**Sn**	**20 43 56.3**	**-1.3**
	0.1nm,0.3s,baz=110,slow=17,SNR=4.3							
	1.7nm,0.3s							
JCH	**Churui**	**5.16**	**353**	*e*P		**Pn**	**20 43 04.8**	**-0.6**
JCH				*e*S		**Sn**	**20 43 59.6**	**-4.0**
JTKR	**Abashiri--Toko**	**6.47**	**358**	P		**Pn**	**20 43 22.8**	**-0.6**
JTKR				S		**Sn**	**20 44 31.4**	**-4.6**
ASAJ	**Asahikawa**	**6.73**	**350**	Pn		**Pn**	**20 43 27.9**	**+0.9**
	1.0nm,0.3s,baz=198,slow=10,SNR=20							
ASAJ				Sn		**Sn**	**20 44 42.0**	**-0.4**
	0.5nm,0.3s,baz=186,slow=32,SNR=1.8							
	2.5nm,0.3s							
H11N2	**WAKE ISLAND Hy**	**26.52**	**126**	T		T	21 14 49.9	
	baz=324							
H11N1	**WAKE ISLAND Hy**	**26.53**	**126**	T		T	21 14 42.2	
	baz=324							
H11N3	**WAKE ISLAND Hy**	**26.54**	**126**	T		T	21 14 53.4	
	baz=324							
KURBB	**Kurchatov Arra**	**47.48**	**308**	P		**P**	**20 50 23.6**	**+1.6**
	0.3nm,0.4s,baz=81,slow=8.5,SNR=2.0							
ILAR	**Eielson Array**	**47.90**	**33**	P		**P**	**20 50 26.9**	**+1.8**
	0.3nm,0.8s,baz=278,slow=8.2,SNR=4.3							
	0.3nm,0.8s							
WRA	**Warramunga Arr**	**57.88**	**191**	P		**P**	**20 51 38.9**	**-0.2**
	0.3nm,0.7s,baz=9.1,slow=6.9,SNR=2.0							
	0.3nm,0.7s							

*IDC **28** 20:42:38.2±8.7,37.03N×71.36E,h177km±61km,mb3.3/3, mbtmp3.7/8,MS4.2/1,Error ellipse: s-maj=80.8km s-min=46.3km az=174.0*
ISC 28 20:42:40.0±2.5,37.1N±0.2×71.4E±0.2,h200km,n13, σ1s00/15,mb3.6/3,2C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**6.00**	**22**	P		**Pn**	**20 44 07.5**	**+0.2**
	10.0nm,0.5s,baz=212,slow=13,SNR=56							
AAK				S		**Sn**	**20 45 15.7**	**-0.7**
	2.9nm,0.5s,baz=189,slow=19,SNR=10.0							
AAK	**Ala-Archa**	**6.00**	**22**	⇑P		**Pn**	**20 44 06.9**	**-0.4**
	1.7nm,0.4s							
AAK				⇓S		**Sn**	**20 45 17.9**	**+1.4**
	3.1nm,0.7s							
KK31	**Karatay Array**	**6.03**	**354**	⇓P		**Pn**	**20 44 07.2**	**-0.3**
	2.1nm,0.2s,baz=175,slow=12,SNR=187							
KK31				⇑S		**Sn**	**20 45 16.2**	**-0.7**
	4.1nm,0.3s,baz=185,slow=23,SNR=20							
MKAR	**Makanchi Array**	**12.59**	**36**	P		**Pn**	**20 45 31.6**	**-0.7**
	0.7nm,0.9s,baz=224,slow=13,SNR=7.0							
KURBB	**Kurchatov Arra**	**14.43**	**18**	P		**Pn**	**20 45 53.8**	**-1.2**
	0.6nm,0.5s,baz=207,slow=11,SNR=3.4							
BVAR	**Borovoye Array**	**15.93**	**358**	P		**Pn**	**20 46 15.2**	**+2.0**
	0.4nm,0.4s,baz=165,slow=13,SNR=1.9							
AKTO	**Aktyubinsk**	**16.43**	**328**	P		**Pn**	**20 46 19.5**	**+0.2**
	1.7nm,0.9s,baz=135,slow=10.0,SNR=3.7							
ZALV	**Zalesovo Beam**	**19.22**	**25**	P		**Pn**	**20 46 50.6**	**-1.4**
	0.8nm,0.4s,baz=207,slow=9.0,SNR=5.3							
FINES	**FINESS Array B**	**37.17**	**326**	P		**P**	**20 49 32.1**	**+0.7**
	2.3nm,0.9s,baz=126,slow=9.8,SNR=4.0							
	2.3nm,0.9s							
HFS	**Hagfors**	**42.80**	**321**	P		**P**	**20 50 17.9**	**+0.2**
	0.8nm,0.4s,baz=108,slow=9.5,SNR=8.2							
	0.8nm,0.4s							
NB2	**NORSAR Subarra**	**44.10**	**323**	P		**P**	**20 50 27.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=94,slow=7.9							
NOA	**NORSAR Array B**	**44.10**	**323**	P		**P**	**20 50 28.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=101,slow=7.3,SNR=1.1							
	comp=Z,0.2nm,0.4s							
TGY	**Tagaytay City**	**49.52**	**104**	LR		LR	21 11 46.6	
	comp=Z,295nm,21.4s,baz=134,slow=35							

*IDC **28** 20:45:49.5±2.3,27.72N×52.89E,h0km,mb3.5/7, mbtmp3.6/9,ML3.5/2,Error ellipse: s-maj=49.4km s-min=21.2km az=165.0*
*TEH **28** 20:45:53.3,28.16N×52.66E,h9km±24km,ML3.5, Presumed earthquake*
*DSN **28** 20:45:57.2±1.7,27.82N×52.70E,h10km,ML3.2/13,Error ellipse: s-maj=22.4km s-min=7.5km az=176.0*
ISC 28 20:45:54.5±0.7,28.10N±0.04×52.68E±0.05,h15km,n38, σ1s13/38,mb3.6/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KHL1	**Khalili_Fars**	**0.72**	**130**	Pg		**Pg**	**20 46 08.0**	**-0.5**
LMD1	**Lamerd**	**0.87**	**150**	Pg		**Pb**	**20 46 11.7**	**+0.3**
JHRM	**Jahrom**	**0.89**	**63**	Pg		**Pb**	**20 46 10.1**	**-1.5**
DSBU	**Dashti - Bushe**	**1.28**	**282**	Pg		**Pn**	**20 46 17.3**	**-0.6**
SHI	**

ULHL			⇓*e*S		**Sg**	**20 47 49.2**	**+0.5**
MTBS	**Maitube**	**1.35**	**299**	P	**Pg**	**20 47 31.4**	**+0.3**
	2.6nm,0.3s						
MTBS				S	**Sg**	**20 47 48.3**	**-0.4**
	5.8nm,0.2s						
KST	**Kastek**	**1.62**	**291**	P	**Pg**	**20 47 35.7**	**-0.7**
	2.1nm,0.3s						
KST				S	**Sb**	**20 47 55.6**	**+0.3**
	2.5nm,0.1s						
ARXS	**Arharly**	**1.74**	**355**	P	**Pg**	**20 47 38.9**	**+0.3**
	1.6nm,0.2s						
ARXS				S	**Sg**	**20 48 01.4**	**+0.2**
	8.6nm,0.2s						
NRN	**Naryn**	**1.84**	**236**	⇑*e*P	**Pg**	**20 47 40.1**	**-0.4**
NRN				⇑*e*S	**Sg**	**20 48 03.9**	**-0.5**

*ISK **28** 20:47:43.8, 38.°97N×27.°87E, h14km, ML3.8/22*
*IDC **28** 20:47:43.5±1.0, 38.°81N×27.°94E, h0km, mb3.5/8, mbtmp3.6/16, ML3.7/7, MS2.9/8, Error ellipse: s-maj=15.5km s-min=12.7km az=39.0*
*THE **28** 20:47:44.6, 39.°N±2.°×2.°8E±.°, h7km±10km, M3.6/20, MLh3.6/20*
*AFAD **28** 20:47:44.1, 38.°96N×27.°88E, h7km±2km, MW3.9*
*SOF **28** 20:47:49.6, 39.°5N±0.°3×27.°7E±0.°2, h2km±3km, MD3.8/6*
*CFUSG **28** 20:47:50.0, 39.°25N×28.°20E, h10km, Mb2.9/3, MD3.5/4, MSH3.4/6*

ISC 28 20:47:44.8±0.8, 38.°96N±0.°02×27.°90E±0.°02, h10km±5km, n119, σ1.°32/145, mb3.6/9, 20C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKHS	**Akhisar**	**0.11**	**218**	P		**Pg**	**20 47 47.1**	**-0.5**
AKHS				S		**Sg**	**20 47 49.1**	**-0.5**
GORD	**Gordes-Manisa**	**0.22**	**104**	Pg		**Pg**	**20 47 49.4**	**-0.1**
GORD				Sg		**Sg**	**20 47 53.9**	**+1.2**
GOMA	**Golmarmara-Man**	**0.26**	**177**	Pg		**Pg**	**20 47 49.9**	**-0.2**
KTTT	**Salihli**	**0.31**	**151**	P		**Pg**	**20 47 51.1**	**0.0**
KTTT				S		**Sg**	**20 47 55.2**	**-0.2**
SOMA	**Soma-Manisa**	**0.34**	**304**	Pg		**Pg**	**20 47 50.8**	**-0.9**
SOMA				Sg		**Sg**	**20 47 56.4**	**+0.1**
STEP	**BALIKESIR_Sava**	**0.44**	**341**	P		**Pg**	**20 47 52.5**	**-1.0**
STEP				S		**Sg**	**20 47 59.1**	**-0.1**
CAMT	**Merkez**	**0.51**	**245**	P		**Pg**	**20 47 54.3**	**-0.4**
CAMT				S		**Sg**	**20 48 01.9**	**+0.5**
DEMI	**Demirci**	**0.64**	**83**	P		**Pg**	**20 47 57.3**	**0.0**
DEMI				S		**Sg**	**20 48 05.8**	**+0.1**
ZEDA	**zmir-Bergama**	**0.64**	**271**	P		**Pg**	**20 47 56.7**	**-0.5**
ZEDA				S		**Sg**	**20 48 05.2**	**-0.5**
MANT	**Manisa**	**0.70**	**132**	P		**Pg**	**20 47 58.4**	**0.0**
MANT				S		**Sg**	**20 48 07.4**	**-0.2**
ODEM	**Odemis-Izmir**	**0.70**	**169**	Pg		**Pg**	**20 47 58.1**	**-0.3**
KULA	**Kula-Manisa**	**0.74**	**127**	Pg		**Pg**	**20 47 59.1**	**-0.1**
IZMD	**zmir-Dikili-**	**0.76**	**272**	P		**Pg**	**20 47 58.9**	**-0.6**
IZMD				S		**Sg**	**20 48 08.1**	**-1.3**
DKL	**Dikili**	**0.78**	**278**	Pg		**Pg**	**20 47 59.9**	**0.0**
DUVT	**Torbali**	**0.82**	**206**	P		**Pg**	**20 47 60.0**	**-0.7**
DUVT				S		**Sg**	**20 48 10.6**	**-0.8**
IZMR	**zmir-demi**	**0.83**	**177**	P		**Pg**	**20 48 00.4**	**-0.3**
IZMR				S		**Sg**	**20 48 11.2**	**-0.3**
DST	**Dursunbey**	**0.85**	**41**	Pg		**Pg**	**20 48 00.6**	**-0.6**
SIMA	**Simav-Kutahya**	**0.85**	**82**	Pg		**Pg**	**20 48 01.2**	**-0.1**
SMAA	**Simav-Kutahya**	**0.85**	**80**	Pg		**Pg**	**20 48 01.5**	**+0.2**
BAGT	**Foa**	**0.88**	**250**	P		**Pg**	**20 48 01.2**	**-0.4**
BAGT				S		**Sg**	**20 48 12.6**	**-0.5**
BLCB	**Balcova**	**0.89**	**230**	Pg		**Pg**	**20 48 00.7**	**-1.2**
BLCB	**Balcova**	**0.89**	**230**	P		**Pg**	**20 48 00.8**	**-1.1**
BLCB				S		**Sb**	**20 48 14.3**	**+0.2**
FOCM	**Foa**	**0.95**	**255**	Pg		**Pg**	**20 48 02.2**	**-0.9**
SUSR	**Susurluk-Balik**	**1.01**	**8**	Pg		**Pg**	**20 48 02.8**	**-1.4**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**180**	Pg		**Pg**	**20 48 03.7**	**-0.7**
SHAP	**Saphane-Kutahy**	**1.03**	**86**	Pg		**Pg**	**20 48 04.8**	**+0.1**
NAZL	**Nazilli-Aydin**	**1.04**	**163**	Pg		**Pg**	**20 48 04.1**	**-0.8**
GONE	**Gonen-Balikesi**	**1.09**	**351**	Pn		**Pg**	**20 48 04.8**	**-1.1**
YENI	**Yenice-Canakka**	**1.10**	**333**	Pn		**Pg**	**20 48 05.0**	**-0.9**
KRBN	**Karaburun**	**1.11**	**251**	Pn		**Pg**	**20 48 05.4**	**-0.9**
GMLD	**Gumuldur**	**1.18**	**221**	Pn		**Pg**	**20 48 06.7**	**-0.7**
GEDZ	**Gediz**	**1.18**	**86**	Pn		**Pg**	**20 48 06.9**	**-0.6**
KUSD	**Kusadasi-Aydin**	**1.20**	**204**	Pn		**Pg**	**20 48 06.9**	**-1.0**
CANM	**Can-anakkale**	**1.23**	**328**	Pn		**Pb**	**20 48 07.2**	**-1.0**
PRK	**Paraskevi**	**1.30**	**283**	P		**Pn**	**20 48 08.3**	**-0.7**
PRK				S		**Sb**	**20 48 25.9**	**-0.1**
GCAM	**G?zelcaml?**	**1.37**	**203**	Pn		**Pn**	**20 48 08.5**	**-1.4**
EZN	**Ezine**	**1.49**	**306**	P		**Pn**	**20 48 11.1**	**-0.6**
EZN				S		**Sb**	**20 48 31.8**	**+0.2**
SMG	**Samos**	**1.51**	**214**	P		**Pn**	**20 48 10.3**	**-1.5**
SIGR	**SIGRI**	**1.61**	**279**	P		**Pn**	**20 48 12.5**	**-0.8**
SIGR				S		**Sb**	**20 48 35.1**	**+0.1**
YER	**Yerkesik**	**1.85**	**170**	P		**Pn**	**20 48 16.0**	**-0.7**
YER				S		**Sn**	**20 48 41.0**	**+0.9**
BODT	**Bodrum**	**1.96**	**194**	P		**Pn**	**20 48 18.3**	**+0.3**
GADA	**Gvkgeada**	**1.97**	**309**	P		**Pn**	**20 48 17.9**	**-0.4**
CAVK	**Edirne/Enez-Ca**	**2.18**	**323**	⇑P		**Pn**	**20 48 21.2**	**+0.1**
ENEZ	**Enez**	**2.22**	**323**	P		**Pn**	**20 48 21.9**	**+0.2**
ENEZ				S		**Sb**	**20 48 52.1**	**-0.6**
LIA	**Limnos Island**	**2.30**	**295**	P		**Pn**	**20 48 22.4**	**-0.4**
SMTH	**Samothraki Isl**	**2.37**	**310**	P		**Pn**	**20 48 23.3**	**-0.4**
ALN	**Alexandroupoli**	**2.40**	**324**	P		**Pn**	**20 48 23.8**	**-0.4**
SILT	**Sile**	**2.56**	**31**	⇑P		**Pn**	**20 48 27.7**	**+1.3**
ARG	**Arkhangelos**	**2.75**	**176**	P		**Pn**	**20 48 28.2**	**-0.7**
ARG				S		**Sn**	**20 49 03.8**	**+1.7**
RDO	**Rodhopi**	**2.83**	**321**	P		**Pn**	**20 48 30.1**	**0.0**
KARY	**Karystos**	**2.87**	**252**	P		**Pn**	**20 48 29.6**	**-1.0**
SAHE	**Sakarya_HENDEK**	**2.95**	**49**	⇑P		**Pn**	**20 48 32.0**	**+0.2**
THERA	**Ancient Thera,**	**3.23**	**217**	P		**Pn**	**20 48 34.5**	**-1.0**
DION	**Dionisos Attik**	**3.23**	**255**	P		**Pn**	**20 48 35.0**	**-0.7**
KAVA	**Kavala**	**3.30**	**309**	P		**Pn**	**20 48 36.1**	**-0.4**
KDZ	**Kurdzhali**	**3.31**	**324**	P		**Pn**	**20 48 34.5**	**-2.2**
VLY	**Voula,Athens**	**3.41**	**252**	P		**Pn**	**20 48 37.8**	**-0.3**
DIM	**Dimitrovgrad**	**3.55**	**331**	*i* P		**Pn**	**20 48 40.6**	**+0.6**
RZN	**Rozhen**	**3.64**	**319**	P		**Pn**	**20 48 41.7**	**+0.3**
RZN	**Rozhen**	**3.64**	**319**	*i* P		**Pn**	**20 48 41.5**	**+0.1**
NVR	**Nevrokopi**	**3.91**	**309**	P		**Pn**	**20 48 44.8**	**-0.1**
SRS	**Serrai**	**3.94**	**304**	P		**Pn**	**20 48 45.0**	**-0.4**
PLD	**Plovdiv**	**3.98**	**324**	P		**Pn**	**20 48 46.1**	**+0.2**
PLD	**Plovdiv**	**3.98**	**324**	*i* P		**Pn**	**20 48 45.8**	**-0.1**
MMB	**Musomishta**	**4.09**	**310**	*i* P		**Pn**	**20 48 49.1**	**+1.7**
ELND	**Elena**	**4.25**	**339**	⇑P		**Pn**	**20 48 49.7**	**+0.2**
NEF	**NEVSHA**	**4.32**	**354**	*i* P		**Pn**	**20 48 50.2**	**-0.4**
GUR	**Goura**	**4.48**	**259**	P		**Pn**	**20 48 53.1**	**+0.3**
BRTR	**Keskin Array B**	**4.51**	**78**	Pn		**Pn**	**20 48 54.1**	**+0.8**
	3.3nm,0.3s,baz=250,slow=14,SNR=89							
BRTR				Pg		**Pg**	**20 49 08.1**	**-3.2**
	0.8nm,0.3s,baz=263,slow=12,SNR=5.2							
BRTR				Sn		**Sn**	**20 49 44.5**	**-1.4**
	1.7nm,0.3s,baz=260,slow=22,SNR=3.6							
BRTR				Lg		Lg	20 50 10.1	
	1.1nm,0.3s,baz=260,slow=24,SNR=11							
BRTR				LR		LR	20 51 02.4	
	comp=Z,160nm,19.0s,baz=274,slow=44 10.0nm,0.4s							
VLI	**Veliai**	**4.52**	**242**	P		**Pn**	**20 48 52.3**	**-1.1**
ANX	**Ano Chora**	**4.69**	**267**	P		**Pn**	**20 48 56.5**	**+0.8**
KIRS	**Kirsehir-Merke**	**4.69**	**86**	⇑P		**Pn**	**20 48 57.0**	**+1.3**
PLNA	**Plana**	**4.88**	**317**	*i* P		**Pn**	**20 49 00.0**	**+1.6**
PLVB	**Pleven**	**5.06**	**332**	⇑P		**Pn**	**20 49 01.5**	**+0.8**
VTS	**Vitosha**	**5.08**	**317**	*i* P		**Pn**	**20 49 01.5**	**+0.3**
ICOR	**Ion Corvin**	**5.15**	**359**	⇑P		**Pn**	**20 49 02.0**	**+0.1**
CFR	**Carcaliu**	**6.21**	**2**	⇑P		**Pn**	**20 49 16.3**	**-0.2**
NEGRR	**Negrea**	**6.57**	**360**	⇑P		**Pn**	**20 49 21.7**	**+0.3**
MLR	**Muntele Rosu**	**6.68**	**348**	Pn		**Pn**	**20 49 24.9**	**+1.8**
	0.8nm,0.3s,baz=169,slow=5.2,SNR=8.5							
MLR				Sn		**Sn**	**20 50 39.8**	**+0.5**
	0.5nm,0.3s,baz=199,slow=12,SNR=3.3							
MLR				Lg		Lg	20 51 21.4	
	0.6nm,0.3s,baz=254,slow=19,SNR=3.2							
MLR				LR		LR	20 52 24.2	
	comp=Z,71nm,20.8s,baz=100,slow=41 3.7nm,0.4s							
MLR	**Muntele Rosu**	**6.68**	**348**	⇑P		**Pn**	**20 49 24.3**	**+1.2**
SCTR	**Scanteiesti**	**6.71**	**1**	⇑P		**Pn**	**20 49 24.0**	**+0.7**
VOIR		**6.81**	**343**	⇑P		**Pn**	**20 49 26.1**	**+1.4**
ODBI	**Odobesti**	**6.82**	**355**	⇑P		**Pn**	**20 49 26.5**	**+1.6**
VLDR	**Vladesti**	**6.88**	**1**	⇓P		**Pn**	**20 49 26.1**	**+0.5**
VARL	**Varlezi**	**6.93**	**360**	⇑P		**Pn**	**20 49 26.8**	**+0.5**
PLOR	**Plostina**	**6.95**	**353**	⇓P		**Pn**	**20 49 28.5**	**+1.9**
VRI	**Vrincioaia**	**6.95**	**353**	⇑P		**Pn**	**20 49 27.5**	**+0.8**
COVR	**Voineasa-Covas**	**6.99**	**350**	⇑P		**Pn**	**20 49 28.2**	**+1.0**
SEV	**Sevastopol'**	**7.05**	**36**	pmax		pmax	20 47 31.5	
	comp=Z,2.0nm,0.3s							
SEV				*e*P		**Pn**	**20 49 27.5**	**-0.5**
SEV				*e*x		x	20 50 43.0	
SEV				*e*S		**Sn**	**20 50 44.0**	**-4.1**
SEV				smax		smax	20 50 48.0	
	comp=N,6.0nm,0.3s							
SEV				smax		smax	20 50 48.0	
	comp=E,4.0nm,0.4s							
YAL	**Yalta**	**7.23**	**38**	pmax		pmax	20 47 34.2	
	comp=Z,4.0nm,0.3s							
YAL				*e*P		**Pn**	**20 49 30.2**	**-0.3**
YAL				*e*x		x	20 50 48.0	
YAL				smax		smax	20 50 49.9	
	comp=N,15nm,0.4s							
YAL				smax		smax	20 50 49.9	
	comp=E,35nm,0.4s							
DOPR	**Dopca**	**7.24**	**346**	⇓P		**Pn**	**20 49 31.7**	**+1.1**
TARU	**Tarkhankut**	**7.27**	**27**	*e*P		**Pn**	**20 49 31.1**	**+0.1**
TARU				pmax		pmax	20 49 37.5	
	comp=Z,7.0nm,0.3s							
TARU				*e*S		**Sn**	**20 50 49.5**	**-4.1**
TARU				smax		smax	20 50 55.4	
	comp=N,10.0nm,0.4s							
TARU				smax		smax	20 50 55.4	
	comp=E,5.0nm,0.4s							
OZUR		**7.30**	**348**	⇑P		**Pn**	**20 49 32.9**	**+1.5**
ONER	**Baraj Valea Uz**	**7.45**	**352**	⇑P		**Pn**	**20 49 34.6**	**+1.0**
GZR	**Gura Zlata**	**7.46**	**331**	⇑P		**Pn**	**20 49 34.3**	**+0.5**
ALU	**Alushta**	**7.50**	**38**	*e*S		**Sn**	**20 50 55.9**	**-3.2**
ALU				smax		smax	20 51 01.3	
	comp=N,49nm,0.3s							
ALU				smax		smax	20 51 01.3	
	comp=E,40nm,0.4s							
DNZ2	**Donuzlav2**	**7.52**	**30**	*ex*		x	20 50 57.5	
DNZ2				smax		smax	20 51 00.5	
	comp=N,7.0nm,0.3s							
DNZ2				smax		smax	20 51 00.5	
	comp=E,7.0nm,0.3s							
TESR	**Tescani**	**7.60**	**353**	⇑P		**Pn**	**20 49 35.8**	**+0.2**
SUDU	**Sudak**	**7.94**	**39**	*e*P		**Pn**	**20 49 39.6**	**-0.6**
SUDU				pmax		pmax	20 49 42.5	
	comp=Z,4.0nm,0.2s							
SUDU				smax		smax	20 50 11.5	
	comp=N,61nm,0.6s							
SUDU				smax		smax	20 50 11.5	
	comp=E,17nm,0.4s							
SUDU				*ex*		x	20 51 04.7	
SUDU				*e*S		**Sn**	**20 51 06.7**	**-3.3**
BZS	**Buzias**	**8.12**	**327**	⇓P		**Pn**	**20 49 42.6**	**0.0**
MMAI	**Mount Meron Ar**	**8.49**	**132**	Pn		**Pn**	**20 49 46.2**	**-1.7**
	comp=E,1.8nm,0.3s,baz=327,slow=14,SNR=15							
MMAI				Sn		**Sn**	**20 51 19.4**	**-4.5**
	comp=E,2.5nm,0.3s,baz=305,slow=28,SNR=7.7 comp=E,1.5nm,0.4s							
BURAR	**Bucovina Array**	**8.87**	**348**	⇓P		**Pn**	**20 49 54.4**	**+1.4**
ASF	**Jabal al Asfar**	**9.98**	**130**	Pn		**Pn**	**20 50 06.5**	**-1.8**
	comp=E,0.5nm,0.3s,baz=324,slow=19,SNR=1.5							
ASF				Sn		**Sn**	**20 51 56.1**	**-4.2**
	comp=E,0.3nm,0.3s,baz=300,slow=20,SNR=1.8							
ASF				LR		LR	20 55 32.3	
	comp=E,41nm,20.3s,baz=26,slow=48							
EIL	**Elat**	**10.95**	**146**	Pn		**Pn**	**20 50 18.9**	**-2.6**
	comp=E,0.4nm,0.3s,baz=338,slow=16,SNR=1.6							
EIL				Sn		Sn	20 52 15.1	-8.9
	comp=E,1.1nm,0.3s,baz=23,slow=15,SNR=5.4							
EIL				LR		LR	20 56 43.3	
	comp=E,79nm,19.8s,baz=56,slow=50 comp=E,1.2nm,0.4s							
AKASG	**Malin Array Be**	**11.77**	**4**	Pn		**Pn**	**20 50 35.7**	**+3.0**
	comp=E,0.5nm,0.3s,baz=174,slow=16,SNR=1.8							
AKASG				Sn		**Sn**	**20 52 44.5**	**+0.4**
	comp=E,0.8nm,0.3s,baz=185,slow=26,SNR=1.9 comp=E,0.2nm,0.3s							
KBZ	**Khabaz**	**12.23**	**62**	LR		LR	20 56 02.6	
	comp=E,57nm,21.6s,baz=354,slow=41							
GNI	**Garni**	**13.05**	**79**	LR		LR	20 56 05.4	
	comp=E,58nm,18.6s,baz=358,slow=38							
KEST	**Kesra**	**15.11**	**263**	Pn		**Pn**	**20 51 19.1**	**+0.8**
	comp=E,0.1nm,0.3s,baz=27,slow=5.9,SNR=3.9 comp=E,3.1nm,1.0s							
DAVOX	**Davos/Dischmat**	**15.33**	**306**	Pn		**Pn**	**20 51 23.0**	**+1.7**
	comp=E,0.2nm,0.3s,baz=135,slow=20,SNR=3.9 comp=E,1.1nm,0.6s							
FINES	**FINESS Array B**	**22.53**	**358**	P		**P**	**20 52 46.6**	**+2.1**
	comp=E,2.1nm,0.9s,baz=185,slow=13,SNR=2.3 comp=E,2.1nm,0.9s							
HFS	**Hagfors**	**23.01**	**342**	P		**P**	**20 52 51.6**	**+2.1**
	comp=E,1.6nm,0.9s,baz=158,slow=9.2,SNR=1.6 comp=E,1.6nm,0.9s							
AKTO	**Aktyubinsk**	**24.11**	**52**	P		**P**	**20 53 05.6**	**+5.0**
	comp=E,1.7nm,0.7s,baz=260,slow=9.2,SNR=5.9							
NOA	**NORSAR Array B**	**24.42**	**340**	P		**P**	**20 53 04.7**	**+1.5**
	comp=E,0.9nm,0.8s,baz=155,slow=8.7,SNR=2.5							
NOA				LR		LR	21 03 17.1	
	comp=E,11nm,19.6s,baz=15,slow=38 comp=E,0.9nm,0.8s							
ESDC	**Sonseca Array**	**24.60**	**282**	P		**P**	**20 53 06.4**	**+1.2**
	comp=E,0.5nm,0.8s,baz=62,slow=10,SNR=2.5 comp=E,0.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**34.62**	**229**	P		**P**	**20 54 34.3**	**+0.1**
	comp=E,0.2nm,0.5s,baz=37,slow=8.5,SNR=2.5 comp=E,0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**37.08**	**55**	P		**P**	**20 54 55.5**	**+0.5**
	comp=E,0.6nm,0.3s,baz=284,slow=8.3,SNR=2.6							
MKAR	**Makanchi Array**	**39.92**	**61**	P		**P**	**20 55 19.0**	**0.0**
	comp=E,0.5nm,0.4s,baz=268,slow=8.8,SNR=16							
MKAR				LR		LR	21 13 41.3	
	comp=E,28nm,19.3s,baz=332,slow=39 comp=E,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**40.83**	**49**	P		**P**	**20 55 26.2**	**-0.1**
	comp=E,0.3nm,0.4s,baz=274,slow=8.1,SNR=2.0 comp=E,0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**64.06**	**87**	P		**P**	**20 58 19.5**	**+0.4**
	comp=E,0.3nm,0.3s,baz=291,slow=8.9,SNR=1.2 comp=E,0.3nm,0.3s							

*MEX **28** 21:12:10.9±0.7, 13.°77N×93.°16W, h10km, MD4.1*
*IDC **28** 21:12:12.5±2.9, 14.°02N×92.°80W, h0km, mb3.7/2, mbtmp3.4/4, ML2.9/3, MS3.2/3, Error ellipse: s-maj=58.4km s-min=26.2km az=11.0*
*GCG **28** 21:12:15.4±1.9, 13.°91N×92.°64W, h15km±14km, MD4.3, ML4.1, Presumed earthquake*

ISC 28 21:12:12.4±2.8, 13.°92N±0.°08×92.°83W±0.°05, h11km±15km, n30, σ1.°94/37, MS3.1/3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SMCA	**Catarina**	**1.18**	**38**	*i* P		**Pb**	**21 12 34.8**	**-0.1**
RTAL	**Retalhuleu**	**1.25**	**61**	*e*P		**Pn**	**21 12 35.7**	**-0.2**
RTAL				*e*S		**Sn**	**21 12 55.5**	**+2.8**
PATR	**El Naranjo**	**1.32**	**26**	*e*P		**Pn**	**21 12 36.2**	**-0.9**
PATR				*e*S		**Sg**	**21 12 55.5**	**+0.4**
CHUJ	**Union Juarez**	**1.36**	**31**	*e*P		**Pn**	**21 12 36.6**	**-0.9**
CHUJ				*e*S		**Sg**	**21 12 57.7**	**+1.4**
PAVE	**Pavencul**	**1.41**	**27**	*e*P		**Pn**	**21 12 37.1**	**-1.2**
PAVE				*e*S		**Sn**	**21 12 57.1**	**+0.1**
STG2	**El Palmar, Qui**	**1.50**	**70**	*i* P		**Pn**	**21 12 38.0**	**-1.4**
STG2				IAML			21 13 06.6	
	comp=E,4μm,0.3s							
STG5	**El Palmar, Qui**	**1.52**	**71**	*i* P		**Pn**	**21 12 37.8**	**-1.8**
STG8	**El Palmar, Qui**	**1.53**	**70**	*i* P		**Pn**	**21 12 38.4**	**-1.5**
SOKI	**Kika Raxquin**	**1.65**	**57**	*i* P		**Pn**	**21 12 41.7**	**+0.1**
PCIG		**1.81**	**348**	*e*P		**Pn**	**21 12 39.3**	**-4.3**
PCIG				*e*S		**Sn**	**21 13 02.7**	**-3.8**
HUEH	**Huehuetenango**	**1.89**	**43**	IAML			21 13 24.5	
	comp=E,1μm,0.4s							
QUIS	**Sacapulas**	**2.16**	**51**	*i* P		**Pb**	**21 12 50.6**	**-1.1**
FG8	**Yepocapa, Chim**	**2.23**	**81**	*i* P		**Pn**	**21 12 44.8**	**-4.6**
FG16	**Alotenango, Sa**	**2.28**	**81**	*i* P		**Pn**	**21 12 46.3**	**-3.9**
CCIG	**Comitan**	**2.44**	**16**	*e*P		**Pn**	**21 12 53.4**	**+1.1**
CCIG				*e*S		**Sb**	**21 13 25.3**	**-1.3**
CCIG	**Comitan**	**2.44**	**16**	*i* P		**Pb**	**21 12 55.7**	**-0.7**
CCIG				*i* S		**Sb**	**21 13 24.9**	**-1.7**
APG	**El Apazote**	**2.53**	**65**	Pn		**Pn**	**21 12 54.9**	**+1.2**
	comp=E,0.5nm,0.3s,baz=219,slow=18,SNR=32							
APG				Sn		**Sn**	**21 13 25.0**	**+0.3**
	comp=E,0.4nm,0.3s,baz=165,slow=10,SNR=3.7							
TGIG		**2.85**	**354**	*e*P		**Pn**	**21 12 57.0**	**-1.0**
TGIG				*e*S		**Sn**	**21 13 31.7**	**-0.7**
TGIG		**2.85**	**354**	*i* P		**Pn**	**21 13 00.1**	**+2.1**
NUBE	**Las Nubes**	**2.96**	**90**	*i* P		**Pn**	**21 13 00.0**	**+0.5**
UXUV	**UXUV**	**3.61**	**340**	*e*P		**Pn**	**21 13 08.9**	**+0.6**
UXUV				*e*S		**Sn**	**21 13 50.1**	**-0.8**
CMIG	**Matias Romero**	**3.72**	**328**	Pn		**Pn**	**21 13 10.3**	**+0.5**
	comp=E,1.0nm,0.3s,baz=142,slow=12,SNR=2.9							
CMIG				Sn		**Sn**	**21 13 55.9**	**+2.2**
	comp=E,5.3nm,0.3s,baz=109,slow=12,SNR=4.1							
	comp=E,3.4nm,0.3s							
CMIG	**Matias Romero**	**3.72**	**328**	*e*P		Pn	21 13 03.2	-6.7
CMIG				*e*S		**Sn**	**21 13 51.3**	**-2.4**
TXAR	**Lajitas Array**	**18.33**	**329**	P		**P**	**21 16 29.0**	**+2.1**
	baz=135,slow=12,SNR=3.9 comp=E,0.2nm,0.7s							
TKL	**Tuckaleechee C**	**23.13**	**19**	LR		LR	21 27 08.0	
	comp=E,37nm,18.4s,baz=306,slow=39							
SADO	**Sadowa**	**32.88**	**18**	LR		LR	21 32 39.8	
	comp=E,39nm,18.1s,baz=325,slow=37							
SCHQ	**Schefferville**	**45.58**	**21**	LR		LR	21 40 14.6	
	comp=E,42nm,18.1s,baz=152,slow=37							
YKA	**Yellowknife Ar**	**50.92**	**347**	P		**P**	**21 21 14.6**	**+1.1**
	comp=E,1.1nm,0.8s,baz=155,slow=6.7,SNR=18 comp=E,1.1nm,0.8s							
ILAR	**Eielson Array**	**62.59**	**337**	P		**P**	**21 22 36.0**	**-0.4**
	comp=E,0.3nm,0.6s,baz=123,slow=6.5,SNR=2.8 comp=E,0.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**145.79**	**340**	PKPbc		**PKPab**	**21 31 54.1**	**+1.2**
	comp=E,0.5nm,0.4s,baz=18,slow=1.9,SNR=5.6							

TRN 28 21:15:03.6, 15.°78N×61.°44W, h19km, MD3.7, 2C-1D, North of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TBG	**Guadaloupe-3**	**0.21**	**290**	*e*P		**Pg**	**21 15 09.7**	**+0.8**
DWS	**Wesley**	**0.24**	**150**	⇑*i*P		**Pg**	**21 15 11.7**	**+2.4**
DWS				*e*S		**Sg**	**21 15 16.1**	**+3.0**
DSLB	**Salisbury**	**0.34**	**177**	⇓*i*P		**Pn**	**21 15 12.8**	**-0.6**
DSLB				*e*S		**Sn**	**21 15 18.1**	**-1.7**
MMLZ	**Guadeloupe Bro**	**0.35**	**320**	*e*P		**Pn**	**21 15 12.8**	**-0.7**
MMLZ				*e*S		**Sn**	**21 15 19.0**	**-1.0**
DLPL	**La Plaine**	**0.48**	**157**	*e*P		**Pn**	**21 15 15.6**	**+0.2**
DLPL				*e*S		**Sn**	**21 15 22.8**	**-0.5**
DHSZ	**Broadband at M**	**0.58**	**327**	*e*P		**Pn**	**21 15 17.3**	**+0.4**
DHSZ				*e*S		**Sn**	**21 15 26.3**	**+0.7**
DSDZ	**La Diserade, G**	**0.64**	**34**	⇑*i*P		**Pn**	**21 15 18.5**	**+0.9**
DSDZ				*e*S		**Sn**	**21 15 28.4**	**+1.2**
SVN	**Savane Anatole**	**0.97**	**164**	*e*P		**Pg**	**21 15 24.2**	**+1.7**
SVN				*e*S		**Sn**	**21 15 37.2**	**+1.8**
MLYT	**Lee's Yard**	**1.19**	**322**	*e*P		**Pg**	**21 15 28.0**	**+1.4**
MLYT				*e*S		**Sg**	**21 15 44.4**	**+2.3**
MBWH	**Windy Hill**	**1.20**	**323**	*e*S		**Sg**	**21 15 44.1**	**+1.4**
MBFL	**Flemmings, Mon**	**1.22**	**322**	*e*P		**Pg**	**21 15 27.5**	**+0.2**
MBFL				*e*S		**Sg**	**21 15 44.7**	**+1.4**
BIM	**Bigot**	**1.30**	**164**	*e*P		**Pg**	**21 15 28.3**	**-0.5**
BIM				*e*S		**Sg**	**21 15 47.6**	**+1.7**
SLBI	**Saint Lucia, B**	**1.80**	**166**	*e*P		**Pb**	**21 15 35.8**	**-0.1**
SLBI				*e*S		**S

MW4.6/75,Moment Tensor Solution. s4,c4; s75,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_rr0.17±.07; $M_{\theta\theta}$-0.91±.06; $M_{\phi\phi}$0.73±.05; $M_{r\theta}$-0.29±.15; $M_{\theta\phi}$0.72±.05; $M_{\phi r}$0.05±.13; Best double couple: $M_0$1.12400×10^{16} NP1:ϕ_s156.00000°,δ79.00000°,λ-175.00000°. NP2: ϕ_s65.00000°,δ85.00000°,λ-11.00000°. Principal axes: T 1.0080, Plg4.0000°, Azm111.0000°; N 0.2310, Plg78.0000°, Azm221.0000°; P -1.2390, Plg12.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 28 21:36:25.4±0.6, **41.71N**±0.03×**81.05E**±0.02, **h9**km±3km, **n885,**σ1§**59**/916, **mb4.9**/210, **MS4.0**/86, **53C-28D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WUS	**Wushi**	**1.47**	**250**				**Pn**	**21 36 52.3**	**+0.2**
KTMS	**Ketmen**	**1.81**	**344**	P			**Pn**	**21 36 53.1**	**-3.8**
	728nm,0.3s								
KTMS				S			**Sn**	**21 37 16.2**	**-3.9**
	2μm,0.5s								
KTMS	**Ketmen**	**1.81**	**344**	*e*P			**Pn**	**21 36 53.1**	**-3.8**
	728nm,0.3s								
KTMS				*e*S			**Sn**	**21 37 16.2**	**-3.9**
	2μm,0.5s								
SHLS	**Shalkode**	**1.86**	**322**	P			**Pn**	**21 36 55.3**	**-2.3**
	3μm,0.4s								
SHLS				S			**Sn**	**21 37 18.3**	**-3.1**
	7μm,0.3s								
SHLS	**Shalkode**	**1.86**	**322**	*e*PN			**Pn**	**21 36 55.2**	**-2.4**
SHLS				*e*S			**Sn**	**21 37 19.4**	**-1.9**
SHLS	**Shalkode**	**1.86**	**322**	*e*P			**Pn**	**21 36 55.3**	**-2.3**
SHLS				*e*S			**Sn**	**21 37 19.4**	**-1.9**
SHLS	**Shalkode**	**1.86**	**322**	*e*P			Pn	21 36 52.6	-5.0
	3μm,0.4s								
SHLS				*e*S			**Sn**	**21 37 15.2**	**-6.1**
	7μm,0.3s								
PDGK	**Podgornoye**	**1.99**	**325**	⇓Pg			**Pn**	**21 36 59.9**	**+0.6**
	2μm,0.7s								
PDGK				⇑Lg			Lg	21 37 30.0	
	12μm,0.8s								
UZB	**Uzynbulak**	**2.08**	**315**	Pg			**Pb**	**21 37 02.3**	**-1.0**
	3μm,0.4s								
UZB				Lg			Lg	21 37 32.0	
	12μm,0.4s								
UZB	**Uzynbulak**	**2.08**	**315**	*e*PN			**Pn**	**21 37 02.1**	**+1.6**
UZB				*e*S			**Sb**	**21 37 30.9**	**+1.6**
UZB	**Uzynbulak**	**2.08**	**315**	*e*P			**Pn**	**21 37 02.2**	**+1.6**
UZB				*e*S			**Sb**	**21 37 30.9**	**+1.6**
UZB	**Uzynbulak**	**2.08**	**315**	*e*P			**Pb**	**21 37 02.3**	**-1.0**
	3μm,0.4s								
UZB				*e*S			**Sg**	**21 37 32.0**	**-0.1**
	12μm,0.4s								
PRZ	**Przheval'sk**	**2.12**	**292**				**Pb**	**21 37 03.8**	**-0.2**
PRZ	**Przheval'sk**	**2.12**	**292**	PN			**Pb**	**21 37 03.8**	**-0.2**
SATY	**Saty**	**2.38**	**306**	Pg			**Pb**	**21 37 07.9**	**-0.6**
	7μm,0.5s								
SATY				Lg			Lg	21 37 42.6	
	15μm,0.5s								
SATY	**Saty**	**2.38**	**306**	*e*PN			**Pb**	**21 37 07.6**	**-0.8**
SATY				*e*S			**Sb**	**21 37 39.8**	**+1.9**
SATY	**Saty**	**2.38**	**306**	*e*P			**Pb**	**21 37 07.7**	**-0.7**
SATY				*e*S			**Sb**	**21 37 39.8**	**+1.9**
TARG	**Taragay, Kyrgy**	**2.43**	**272**				**Pb**	**21 37 08.0**	**-1.4**
TARG	**Taragay, Kyrgy**	**2.43**	**272**	PN			**Pb**	**21 37 08.0**	**-1.4**
KPKS	**Kokpek**	**2.48**	**316**	Pg			**Pn**	**21 37 08.1**	**+2.1**
	2.0nm,0.4s								
KPKS				Lg			Lg	21 37 41.9	
	4μm,0.5s								
KPKS	**Kokpek**	**2.48**	**316**	*e*PN			**Pb**	**21 37 08.7**	**-1.4**
KPKS				*e*S			**Sb**	**21 37 41.7**	**+1.0**
KPKS	**Kokpek**	**2.48**	**316**	*e*P			**Pb**	**21 37 08.8**	**-1.4**
KPKS				*e*S			**Sb**	**21 37 41.8**	**+1.0**
KPKS	**Kokpek**	**2.48**	**316**	*e*P			**Pn**	**21 37 08.1**	**+2.1**
	2.0nm,0.4s								
KPKS				*e*S			**Sb**	**21 37 41.9**	**+1.2**
	4μm,0.5s								
KURS	**Kuram**	**2.77**	**311**	Pg			**Pb**	**21 37 13.2**	**-1.9**
	1μm,1.0s								
KURS				Lg			Lg	21 37 51.6	
	3μm,0.8s								
DJR	**Jarkent**	**2.78**	**341**	Pg			**Pn**	**21 37 12.0**	**+1.9**
	488nm,0.6s								
DJR				Lg			Lg	21 37 49.6	
	3μm,0.4s								
DJR	**Jarkent**	**2.78**	**341**	*e*P			**Pn**	**21 37 12.1**	**+1.9**
	488nm,0.6s								
DJR				*e*S			**Sb**	**21 37 49.6**	**+0.2**
	3μm,0.4s								
KDJ	**Kajisay**	**2.92**	**280**				**Pb**	**21 37 15.3**	**-2.4**
KDJ	**Kajisay**	**2.92**	**280**	PN			**Pb**	**21 37 15.3**	**-2.4**
KNOS	**Konyrlen**	**2.98**	**333**	Pg			**Pn**	**21 37 15.4**	**+2.4**
	503nm,0.4s								
KNOS				Lg			Lg	21 37 54.6	
	3μm,0.5s								
BLB	**Baldybastay**	**3.04**	**323**	Pg			**Pb**	**21 37 17.7**	**-2.1**
	1.6nm,0.7s								
BLB				Lg			Lg	21 37 58.5	
	6μm,0.6s								
KOTS	**Kotyrbulak**	**3.29**	**299**	Pg			**Pb**	**21 37 21.4**	**-2.5**
	801nm,0.5s								
KOTS				Lg			Lg	21 38 05.1	
	3μm,0.7s								
KOTS	**Kotyrbulak**	**3.29**	**299**	*e*P			**Pb**	**21 37 21.4**	**-2.5**
	801nm,0.5s								
KOTS				*e*S			**Sb**	**21 38 05.1**	**+1.0**
	3μm,0.7s								
MDOK	**Medeo**	**3.30**	**298**	Pg			**Pn**	**21 37 20.8**	**+3.5**
	1μm,0.4s								
MDOK				Lg			Lg	21 38 04.5	
	3μm,0.5s								
MDOK	**Medeo**	**3.30**	**298**	*e*PN			**Pn**	**21 37 20.7**	**+3.4**
MDOK				*e*S			**Sb**	**21 38 02.8**	**-1.6**
MDOK	**Medeo**	**3.30**	**298**	*e*P			**Pn**	**21 37 20.8**	**+3.4**
MDOK				*e*S			**Sb**	**21 38 02.9**	**-1.6**
TNSS	**Tian-Shan**	**3.31**	**295**	Pg			**Pn**	**21 37 21.1**	**+3.3**
	204nm,0.5s								
TNSS				Lg			Lg	21 38 04.8	
	576nm,0.8s								
TNSS	**Tian-Shan**	**3.31**	**295**	*e*PN			**Pn**	**21 37 20.6**	**+2.9**
TNSS	**Tian-Shan**	**3.31**	**295**	*e*P			**Pn**	**21 37 20.7**	**+2.9**
TNSS	**Tian-Shan**	**3.31**	**295**	*e*P			**Pn**	**21 37 21.1**	**+3.3**
	204nm,0.5s								
TNSS				*e*S			**Sb**	**21 38 04.8**	**-0.4**
	576nm,0.8s								
KNDC	**Almaty**	**3.38**	**298**	⇑Pg			**Pb**	**21 37 26.6**	**+1.2**
	843nm,0.4s								
KNDC				⇓Lg			Lg	21 38 09.7	
	4μm,0.7s								
AAA	**Alma-Ata**	**3.41**	**298**	Pg			**Pb**	**21 37 23.2**	**-2.7**
	929nm,0.4s								
AAA				Lg			Lg	21 38 08.1	
	130nm,0.6s								
AAA	**Alma-Ata**	**3.41**	**298**	*e*PN			**Pn**	**21 37 22.3**	**+3.6**
AAA	**Alma-Ata**	**3.41**	**298**	*e*P			**Pn**	**21 37 22.3**	**+3.6**
AAA	**Alma-Ata**	**3.41**	**298**	*e*P			**Pb**	**21 37 23.2**	**-2.7**
	929nm,0.4s								
AAA				*e*S			**Sb**	**21 38 08.1**	**+0.7**
	130nm,0.6s								
ARXS	**Arharly**	**3.44**	**318**	Pg			**Pn**	**21 37 21.8**	**+2.5**
	483nm,0.4s								
ARXS				Lg			Lg	21 38 05.6	
	2μm,0.5s								
ARXS	**Arharly**	**3.44**	**318**	*e*P			**Pn**	**21 37 21.8**	**+2.5**
	483nm,0.4s								
ARXS				*e*S			**Sb**	**21 38 05.6**	**-2.9**
	2μm,0.5s								
ULHL	**Ulahol**	**3.62**	**280**	P			**Pn**	**21 37 24.7**	**+2.9**
	SNR=63								
MTBS	**Maitube**	**3.70**	**294**	Pg			**Pn**	**21 37 26.5**	**+3.7**
	473nm,0.4s								
MTBS				Lg			Lg	21 38 14.3	
	1μm,0.6s								
MTBS	**Maitube**	**3.70**	**294**	*e*P			**Pn**	**21 37 26.5**	**+3.7**
	473nm,0.4s								
MTBS				*e*S			**Sb**	**21 38 14.3**	**-1.7**
	1μm,0.6s								
KAPS	**Kapalarasan**	**3.78**	**342**	Pg			**Pn**	**21 37 26.7**	**+2.8**
	367nm,0.6s								
KAPS				Lg			Lg	21 38 14.3	
	3μm,0.7s								
KTBS	**Karatobe**	**3.79**	**303**	Pg			**Pb**	**21 37 32.0**	**-0.4**
	694nm,0.8s								
KTBS				Lg			Lg	21 38 23.0	
	0.8nm,0.3s								
KTBS	**Karatobe**	**3.79**	**303**	*e*P			**Pb**	**21 37 32.0**	**-0.4**
	694nm,0.8s								
KTBS				*e*S			**Sb**	**21 38 23.0**	**+4.5**
	0.8nm,0.3s								
NRN	**Naryn**	**3.79**	**268**				**Pn**	**21 37 26.4**	**+2.1**
NRN	**Naryn**	**3.79**	**268**	PN			**Pn**	**21 37 26.4**	**+2.1**
TDK	**Taldyqorghan**	**3.81**	**331**	Pg			**Pn**	**21 37 26.8**	**+2.5**
	2μm,0.7s								
TDK				Lg			Lg	21 38 14.4	
	13nm,0.7s								
TDK	**Taldyqorghan**	**3.81**	**331**	*e*PN			**Pn**	**21 37 26.7**	**+2.4**
TDK				*e*S			**Sn**	**21 38 14.3**	**+5.0**
TDK	**Taldyqorghan**	**3.81**	**331**	*e*P			**Pn**	**21 37 26.8**	**+2.4**
TDK				*e*S			**Sn**	**21 38 14.3**	**+5.0**
TDK				*e*LQ			LQ	21 38 32.1	
TDK	**Taldyqorghan**	**3.81**	**331**	*e*P			**Pb**	**21 37 30.8**	**-2.1**
	2μm,0.7s								
TDK				*e*S			**Sb**	**21 38 20.7**	**+1.5**
	13nm,0.7s								
BOOM	**Boomskoye usch**	**3.88**	**283**				**Pn**	**21 37 27.3**	**+2.0**
BOOM	**Boomskoye usch**	**3.88**	**283**	PN			**Pn**	**21 37 27.3**	**+2.0**
KST	**Kastek**	**4.00**	**291**	Pg			**Pb**	**21 37 34.2**	**-1.8**
	663nm,0.3s								
KST				Lg			Lg	21 38 27.8	
	3μm,0.5s								
KST	**Kastek**	**4.00**	**291**	*e*P			**Pb**	**21 37 34.2**	**-1.8**
	663nm,0.3s								
KST				*e*S			**Sb**	**21 38 27.8**	**+3.4**
	3μm,0.5s								
KUU	**Kurty**	**4.09**	**304**	Pg			**Pb**	**21 37 37.3**	**-0.4**
	546nm,0.7s								
KUU				Lg			Lg	21 38 32.6	
	993nm,0.5s								
KUU	**Kurty**	**4.09**	**304**	*e*P			**Pb**	**21 37 37.3**	**-0.4**
	546nm,0.7s								
KUU				*e*S			**Sg**	**21 38 32.6**	**-4.2**
	993nm,0.5s								
TKM2	**Tokmak 2**	**4.22**	**289**	P			**Pn**	**21 37 33.5**	**+3.5**
	SNR=26								
KRBS	**Karabastau**	**4.43**	**298**	Pg			**Pb**	**21 37 43.1**	**-0.3**
	445nm,0.5s								
KRBS				Lg			Lg	21 38 42.0	
	263nm,0.4s								
KRBS	**Karabastau**	**4.43**	**298**	*e*P			**Pb**	**21 37 43.1**	**-0.3**
	445nm,0.5s								
KRBS				*e*S			**Sb**	**21 38 42.0**	**+5.1**
	263nm,0.4s								
KBK	**Karagaybulak**	**4.63**	**284**	P			**Pn**	**21 37 39.1**	**+3.5**
	SNR=45								
CHMS	**Chumysh**	**4.84**	**288**	P			**Pn**	**21 37 42.3**	**+3.9**
	SNR=56								
FRU1	**Bishkek**	**4.89**	**285**				**Pn**	**21 37 42.4**	**+3.3**
FRU1	**Bishkek**	**4.89**	**285**	PN			**Pn**	**21 37 42.4**	**+3.3**
UCH	**Uchtor**	**4.90**	**278**	P			**Pn**	**21 37 43.1**	**+3.5**
	SNR=26								
KSH2	**Kashi**	**4.90**	**240**	Pn			**Pn**	**21 37 42.5**	**+3.1**
KSH2				Sn			**Sb**	**21 38 44.5**	**-6.1**
KSH2				smax			smax		
	comp=N,710nm,1.3s								
KSH2				smax			smax		
	comp=E,820nm,1.0s								
AAK	**Ala-Archa**	**4.96**	**283**	P			**Pn**	**21 37 43.2**	**+3.1**
	SNR=28								
AAK	**Ala-Archa**	**4.96**	**283**	Pn			**Pn**	**21 37 43.1**	**+3.0**
	8.7nm,0.3s,baz=120,slow=9.6,SNR=30								
AAK				Sn			**Sn**	**21 38 36.7**	**-0.9**
	22nm,0.3s,baz=38,slow=10.0,SNR=3.8								
AAK				Lg			Lg	21 39 02.9	
	44nm,0.3s,baz=285,slow=18,SNR=6.7								
AAK				LR			LR	21 39 30.7	
	comp=Z,455nm,19.0s,baz=92,slow=38								
	33nm,0.5s								
AAK	**Ala-Archa**	**4.96**	**283**				**Pn**	**21 37 42.6**	**+2.5**
AAK	**Ala-Archa**	**4.96**	**283**	⇑Pn			**Pn**	**21 37 42.9**	**+2.8**
	321nm,0.7s								
AAK				⇑Pg			**Pg**	**21 37 57.6**	**-2.7**
	2μm,0.7s								
AAK				⇑Lg			Lg	21 39 03.6	
	7μm,0.7s								
AAK	**Ala-Archa**	**4.96**	**283**	*ce*PN			**Pn**	**21 37 43.6**	**+3.5**
AAK				pmax			pmax		
	comp=Z,42nm,0.8s								
SGDS	**Sogindy**	**5.05**	**292**	Pg			**Pb**	**21 37 54.2**	**+0.3**
SGDS				Lg			Lg	21 39 01.0	
SGDS	**Sogindy**	**5.05**	**292**	*e*P			**Pn**	**21 37 44.2**	**+2.9**
USP	**Ospenovka**	**5.08**	**290**	P			**Pn**	**21 37 44.6**	**+2.8**
	SNR=53								
MAKZ	**Makanchi**	**5.14**	**7**				**Pn**	**21 37 43.9**	**+1.3**
MAKZ	**Makanchi**	**5.14**	**7**	⇓Pn			**Pn**	**21 37 43.1**	**+0.5**
	comp=Z,148nm,0.6s								
MAKZ				⇓Sn			**Sn**	**21 38 43.0**	**+0.9**
	comp=Z,629nm,0.8s								
MAKZ				⇑Lg			Lg	21 39 06.7	
	comp=Z,1μm,1.2s								
MAKZ	**Makanchi**	**5.14**	**7**	PN			**Pn**	**21 37 43.9**	**+1.3**
MK31	**Makanchi Array**	**5.16**	**10**	⇓Pn			**Pn**	**21 37 44.1**	**+1.2**
	comp=Z,176nm,0.8s								
MK31				⇓Sn			**Sn**	**21 38 45.0**	**+2.5**
	comp=Z,331nm,0.6s								
MK31				⇑Lg			Lg	21 39 09.4	
	comp=Z,493nm,0.7s								
MK31	**Makanchi Array**	**5.16**	**10**	*ce*PN			**Pn**	**21 37 44.0**	**+1.2**
MKAR	**Makanchi Array**	**5.16**	**10**	Pn			**Pn**	**21 37 43.9**	**+1.1**
	comp=Z,24nm,0.3s,baz=186,slow=12,SNR=431								
MKAR				Sn			**Sn**	**21 38 45.5**	**+2.9**
	comp=Z,34nm,0.3s,baz=198,slow=30,SNR=6.9								
MKAR				Lg			Lg	21 39 03.9	
	comp=Z,43nm,0.3s,baz=179,slow=24,SNR=2.9								
	comp=Z,52nm,0.4s								
MKAR	**Makanchi Array**	**5.16**	**10**				**Pn**	**21 37 43.4**	**+0.6**
WMQ	**Urumqi**	**5.33**	**64**	*e*Pn			**Pn**	**21 37 46.8**	**+1.6**
WMQ				Sn			**Sn**	**21 38 48.0**	**+1.3**
WMQ				smax			smax		
	comp=Z,2μm,1.3s								
WMQ				smax			smax		
	comp=Z,1μm,0.9s								
EKS2	**Erkin-Say**	**5.48**	**282**	P			**Pn**	**21 37 51.2**	**+3.9**
	SNR=39								
MRKS	**Merke**	**5.90**	**283**	Pg			**Pb**	**21 38 11.2**	**+2.8**
	comp=Z,352nm,0.7s								
MRKS				Lg			Lg	21 39 31.2	
	comp=Z,656nm,0.4s								
MRKS	**Merke**	**5.90**	**283**	*e*P			**Pb**	**21 38 11.2**	**+2.8**
	comp=Z,352nm,0.7s								
MRKS				*e*S			**Sg**	**21 39 31.2**	**-3.4**
	comp=Z,656nm,0.4s								
ARSB	**Arslanbob**	**6.07**	**269**				**Pn**	**21 37 57.7**	**+2.4**
ARSB	**Arslanbob**	**6.07**	**269**	PN			**Pn**	**21 37 57.7**	**+2.4**
ZSN	**Zaisan**	**6.36**	**24**	Pg			**Pb**	**21 38 20.4**	**+4.3**
	comp=Z,150nm,0.8s								
ZSN				Lg			Lg	21 39 46.6	
	comp=Z,542nm,0.8s								
ZSN	**Zaisan**	**6.36**	**24**	*e*PN			**Pn**	**21 38 00.2**	**+1.0**
ZSN	**Zaisan**	**6.36**	**24**	*e*P			**Pn**	**21 38 00.2**	**+1.0**
ZSN	**Zaisan**	**6.36**	**24**	*e*P			**Pb**	**21 38 20.4**	**+4.3**
	comp=Z,150nm,0.8s								
ZSN				*e*S			**Sg**	**21 39 46.6**	**-2.7**
	comp=Z,542nm,0.8s								
DZA	**Taraz**	**7.30**	**283**	Pg			Pg	21 38 39.3	-5.8
	comp=Z,149nm,0.7s								
DZA				Lg			Lg	21 40 18.7	
	comp=Z,657nm,0.7s								
DZA	**Taraz**	**7.30**	**283**	*e*P			**Pn**	**21 38 15.0**	**+2.9**
DZA	**Taraz**	**7.30**	**283**	*e*P			**Pn**	**21 38 15.1**	**+2.9**
DZA	**Taraz**	**7.30**	**283**	*e*P			Pg	21 38 39.3	-5.8
	comp=Z,149nm,0.7s								
DZA				*e*S			**Sg**	**21 40 18.6**	**-0.9**
	comp=Z,657nm,0.7s								
DRK	**Karamyk**	**7.38**	**256**				**Pn**	**21 38 17.6**	**+4.1**
DRK	**Karamyk**	**7.38**	**256**	P			**Pn**	**21 38 17.6**	**+4.1**
KK31	**Karatay Array**	**7.92**	**284**				**Pn**	**21 38 22.8**	**+2.1**
KK31	**Karatay Array**	**7.92**	**284**	⇓Pn			**Pn**	**21 38 22.2**	**+1.5**
	comp=Z,8.7nm,0.8s,baz=95,slow=14,SNR=63								
KK31				⇑Pg			Pg	21 38 51.2	-5.7
	comp=Z,106nm,0.8s,baz=91,slow=16,SNR=27								
KK31				⇓Lg			Lg	21 40 35.1	
	comp=Z,106nm,0.6s,baz=98,slow=26,SNR=4.4								
KK31	**Karatay Array**	**7.92**	**284**	P			**Pn**	**21 38 22.8**	**+2.1**
KKAR	**Karatay Array**	**7.92**	**284**				**Pn**	**21 38 22.7**	**+2.0**
KKAR	**Karatay Array**	**7.92**	**284**	P			**Pn**	**21 38 22.7**	**+2.0**
BTK	**Batken**	**7.92**	**261**				**Pn**	**21 38 22.3**	**+1.5**
BTK	**Batken**	**7.92**	**261**	P			**Pn**	**21 38 22.3**	**+1.5**
IUG	**luzhnay**	**8.23**	**277**	Pg			Pg	21 38 56.4	-6.4
	comp=Z,311nm,0.8s								
IUG				Lg			Lg	21 40 47.9	
	comp=Z,836nm,1.0s								
IUG	**luzhnay**	**8.23**	**277**	*e*P			**Pn**	**21 38 27.6**	**+2.7**
IUG	**luzhnay**	**8.23**	**277**	*e*P			**Pn**	**21 38 27.7**	**+2.7**
IUG	**luzhnay**	**8.23**	**277**	*e*P			Pg	21 38 56.4	-6.4
	comp=Z,311nm,0.8s								
IUG				*e*S			**Sg**	**21 40 47.9**	**-1.4**
	comp=Z,836nm,1.0s								
BRLS	**Borolday**	**8.40**	**283**	Pg			Pg	21 39 00.6	-5.7
BRLS				Lg			Lg	21 40 54.9	
	comp=Z,108nm,0.8s								
BRLS	**Borolday**	**8.40**	**283**	*e*P			**Pn**	**21 38 31.2**	**+3.9**
BRLS	**Borolday**	**8.40**	**283**	*e*P			**Pn**	**21 38 31.2**	**+3.9**
BRLS	**Borolday**	**8.40**	**283**	*e*P			Pg	21 39 00.6	-5.7
BRLS				*e*S			**Sg**	**21 40 54.9**	**-0.1**
	comp=Z,108nm,0.8s								
CHM	**Chimkent**	**8.54**	**278**	*e*P			**Pn**	**21 38 32.0**	**+2.8**
CHM	**Chimkent**	**8.54**	**278**	*e*P			**Pn**	**21 38 32.0**	**+2.8**
CHM	**Chimkent**	**8.54**	**278**	*e*P			Pg	21 39 02.7	-6.2
	comp=Z,138nm,0.9s								
CHM				*e*S			**Sg**	**21 40 58.7**	**-0.7**
	comp=Z,386nm,1.2s								
GAR	**Garm**	**8.63**	**255**				**Pn**	**21 38 32.1**	**+1.6**
SEM	**Semipalatinsk**	**8.72**	**357**	Pg			Pg	21 39 00.1	-12
SEM				Lg			Lg	21 40 53.6	
SEM	**Semipalatinsk**	**8.72**	**357**	*e*P			Pg	21 39 00.1	-12
SEM				*e*S			Sg	21 40 53.6	-11
KURBB	**Kurchatov Arra**	**9.09**	**350**	Pn			**Pn**	**21 38 35.9**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=168,slow=14,SNR=23								
KURBB				Sn			**Sn**	**21 40 16.0**	**-2.9**
	comp=Z,1.1nm,0.3s,baz=168,slow=28,SNR=1.8								
KURBB				Lg			Lg	21 41 11.9	
	comp=Z,3.9nm,0.3s,baz=173,slow=26,SNR=4.2								
	comp=Z,38nm,0.6s								
KURBB	**Kurchatov Arra**	**9.09**	**350**	⇓Pn			**Pn**	**21 38 37.7**	**+1.1**
	comp=Z,21nm,0.8s								
KURBB				⇑Sn			**Sn**	**21 40 17.7**	**-1.3**
	comp=Z,724nm,1.0s								
KURBB				⇑Lg			Lg	21 41 13.4	
	comp=Z,1μm,0.9s								
DGZ	**Jazzator, Alta**	**9.15**	**27**	*i* P			**Pn**	**21 38 37.5**	**-0.2**
KURK	**Kurchatov**	**9.16**	**350**				**Pn**	**21 38 35.9**	**-1.8**
KURK							**Sn**	**21 40 16.0**	**-4.9**
KURK	**Kurchatov**	**9.16**	**350**	⇓Pn			**Pn**	**21 38 37.3**	**-0.4**
	comp=Z,14nm,0.7s								
KURK				⇓Sn			**Sn**	**21 40 20.4**	**-0.5**
	comp=Z,124nm,0.8s								
KURK				⇓Lg			Lg	21 41 15.7	
	comp=Z,446nm,1.2s								
KURK	**Kurchatov**	**9.16**	**350**	P			**Pn**	**21 38 35.9**	**-1.8**
KURK								21 40 16.0	
CHGR	**Chuyangaron**	**9.59**	**255**				**Pn**	**21 38 44.8**	**+1.1**
CHGR	**Chuyangaron**	**9.59**	**255**	P			**Pn**	**21 38 44.8**	**+1.1**
NIL	**Nilore**	**10.14**	**220**				**Pn**	**21 38 52.9**	**+1.8**
NIL	**Nilore**	**10.14**	**220**	P			**Pn**	**21 38 52.9**	**+1.8**
SHAA	**Shahritus**	**10.79**	**252**				**Pn**	**21 38 60.0**	**-0.1**
KBL	**Kabul**	**11.85**	**237**				**Pn**	**21 39 16.0**	**+1.3**
KBL	**Kabul**	**11.85**	**237**	P			**Pn**	**21 39 16.0**	**+1.3**
GOMU	**GeErMu**	**12.04**	**113**	P			**Pn**	**21 39 14.3**	**-3.2**
GOMU					pmax		pmax		
	comp=Z,69nm,0.6s								
GOMU					LR		LR		
	comp=N,440nm,9.3s								
GOMU					LR		LR		
	comp=E,560nm,7.7s								
GOMU					LR		LR		
	comp=Z,550nm,8.2s								
ZAA0	**Zalesovo Array**	**12.51**	**10**				**Pn**	**21 39 21.5**	**-1.9**
ZAA0	**Zalesovo Array**	**12.51**	**10**	⇓Pn			**Pn**	**21 39 21.2**	**-2.2**
	comp=Z,15nm,0.8s								
ZAA0				⇑Sn			**Sn**	**21 41 43.5**	**+0.9**
	comp=Z,41nm,0.8s								
ZAA0				⇑Lg			Lg	21 43 03.0	
	comp=Z,55nm,0.8s								
ZALV	**Zalesovo Beam**	**12.51**	**10**	Pn			**Pn**	**21 39 22.4**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=192,slow=13,SNR=46								
ZALV				Sn			**Sn**	**21 41 36.3**	**-6.4**
	comp=Z,2.2nm,0.3s,baz=187,slow=24,SNR=5.1								
ZALV				LR			LR	21 44 18.0	
	comp=Z,753nm,19.4s,baz=189,slow=38								
	comp=Z,10nm,0.6s								
ZALV	**Zalesovo Beam**	**12.51**	**10**				**Pn**	**21 39 22.0**	**-1.3**
BVA0	**Borovoye Array**	**13.41**	**331**	⇑Pn			**Pn**	**21 39 38.3**	**+2.5**
	comp=Z,15nm,0.7s								
BVA0				⇑Sn			**Sn**	**21 42 09.5**	**+4.6**
	comp=Z,21n

LZH Lanzhou 18.59 100 *e*P **P** **21 40 41.5 -1.4**
LZH P P 21 40 47.0 +1.1
LZH pmax pmax
comp=Z,10.0nm,1.5s
LZH LR LR
comp=Z,2μm,14.8s
LZH LR LR
comp=Z,1μm,13.4s
LZH LR LR
comp=Z,710nm,15.8s
IRK Irkutsk 18.95 48 *e*P **P** **21 40 46.7 +0.1**
IRK pmax pmax
comp=Z,47nm,1.3s
SONM Songino Array 18.97 63 P **P** **21 40 46.1 -0.9**
comp=Z,4.0nm,0.3s,baz=259,slow=11,SNR=145
SONM LR LR 21 47 44.6
comp=Z,214nm,21.3s,baz=232,slow=36
comp=Z,48nm,0.7s
SONM Songino Array 18.97 63 **P** **21 40 45.8 -1.1**
SONM IAmb IAmb 21 40 48.4
comp=Z,51nm,0.8s
ULN Ulaanbaatar 19.41 63 **P** **21 40 50.5 -1.4**
ULN Ulaanbaatar 19.41 63*ce*P **P** **21 40 51.5 -0.3**
ULN pmax pmax
comp=Z,47nm,1.0s
ULN Ulaanbaatar 19.41 63 P **P** **21 40 50.6 -1.2**
comp=Z,2μmcomp=Z,176nm,0.7s
SVE Sverdlovsk 20.04 326 *e*P **P** **21 40 59.3 +0.9**
SVE pmax pmax
comp=N,29nm,0.9s
ARTI Arti 20.75 323 P **P** **21 41 06.0 -0.2**
comp=N,50nm,0.8s,baz=128,slow=5.2,SNR=50
ARTI S **S** **21 44 51.2 -6.5**
comp=N,4.5nm,0.8s,baz=115,slow=19,SNR=1.5
ARTI Lg Lg 21 47 23.1
comp=N,0.1nm,0.3s,baz=40,slow=23,SNR=4.4
comp=N,50nm,0.8s
ARTI Arti 20.75 323 **P** **21 41 05.7 -0.4**
ARTI IAmb IAmb 21 41 11.7
comp=Z,69nm,0.9s
ARTI Arti 20.75 323*c i*P **P** **21 41 05.9 -0.2**
ARTI 21 41 23.3
ARTI S **S** **21 44 58.7 +1.0**
ARTI SS **SnSn** **21 45 19.0 +1.8**
ARTI pmax pmax
comp=Z,63nm,0.9s
ARTI MLR MLR
comp=Z,455nm,13.0s
BRDH Bariadhala 20.95 152 P **P** **21 41 09.2 +0.6**
comp=Z,103nm,0.3s,baz=242,slow=20,SNR=3.5
BRDH LR LR 21 50 38.1
comp=Z,166nm,18.2s,baz=118,slow=41
CD2 Chengdu 21.18 113 P **P** **21 41 11.8 +0.8**
CD2 pP pP 21 41 14.0 0.0
CD2 S S 21 44 55.0 -12
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 pmax pmax
comp=Z,170nm,4.9s
CD2 LR LR
comp=Z,520nm,8.2s
CD2 LR LR
comp=Z,830nm,11.2s
CD2 LR LR
comp=Z,680nm,8.4s
BTO2 Baotou 21.67 83 *e*P **P** **21 41 15.8 -0.5**
BTO2 pP **sP** **21 41 26.3 +5.6**
BTO2 S **S** **21 45 13.3 -3.0**
BTO2 pmax pmax
comp=Z,89nm,1.0s
BTO2 pmax pmax
comp=Z,170nm,3.6s
BTO2 LR LR
comp=Z,1μm,4.7s
BTO2 LR LR
comp=Z,790nm,8.9s
BTO2 LR LR
comp=Z,1μm,9.3s
TNCH TengChong 22.06 134 P **P** **21 41 21.5 +0.8**
TNCH PP sP 21 41 48.5 +23
TNCH S **S** **21 45 18.0 -6.1**
TNCH pmax pmax
comp=Z,78nm,1.1s
TNCH pmax pmax
comp=Z,110nm,3.5s
TNCH LR LR
comp=Z,520nm,7.5s
TNCH LR LR
comp=Z,600nm,7.9s
TNCH LR LR
comp=Z,460nm,13.3s
PZH PanZhiHua 22.80 125 P **P** **21 41 29.0 +0.5**
PZH S **S** **21 45 38.5 +0.7**
PZH pmax pmax
comp=Z,30nm,1.5s
PZH LR LR
comp=Z,460nm,19.6s
PZH LR LR
comp=Z,400nm,19.7s
PZH LR LR
comp=Z,390nm,18.6s
HHC Hu-ho-hao-te 22.90 82 *e*P **P** **21 41 29.0 -0.5**
HHC pP pP 21 41 33.8 +1.3
HHC PP **PnPn** **21 41 58.3 +4.6**
HHC S **S** **21 45 34.0 -5.4**
HHC sS pS 21 45 41.5 -1.3
HHC pmax pmax
comp=Z,18nm,1.2s
HHC pmax pmax
comp=Z,120nm,4.3s
HHC LR LR
comp=Z,670nm,9.3s
HHC LR LR
comp=Z,200nm,9.8s
HHC LR LR
comp=Z,290nm,9.4s
XAN Xi'an 23.23 100 P **P** **21 41 32.3 -0.5**
XAN S **S** **21 45 43.5 -1.5**
XAN pmax pmax
comp=Z,18nm,0.9s
XAN LR LR
comp=Z,2μm,15.1s
XAN LR LR
comp=Z,1μm,14.3s
XAN LR LR
comp=Z,820nm,13.1s
CIT Chita 24.31 54 *e*P **P** **21 41 42.8 -0.3**
CIT *e* 21 41 48.0
CIT *e* 21 42 19.4
CIT *e* 21 45 24.8
CIT *e* 21 46 56.0
CIT pmax pmax
comp=Z,61nm,2.9s
TIY Taiyuan 24.40 89 P **P** **21 41 44.8 +0.7**
TIY S **S** **21 46 09.8 +6.0**
TIY pmax pmax
comp=Z,29nm,0.7s
TIY pmax pmax
comp=Z,85nm,6.7s
TIY LR LR
comp=Z,990nm,13.8s
TIY LR LR
comp=Z,480nm,10.7s
TIY LR LR
comp=Z,570nm,18.8s
KMI2 Kunming 24.41 126 P **P** **21 41 44.3 -0.1**
KMI2 SS S 21 46 51.8 +47
KMI2 pmax pmax
comp=Z,31nm,0.9s
KMI2 LR LR
comp=Z,490nm,15.8s
KMI2 LR LR
comp=Z,560nm,16.2s
KMI2 LR LR
comp=Z,410nm,25.3s
MAK Makhachkala 24.74 284 *e*P **P** **21 41 48.7 +1.7**
MAK *e*S **S** **21 46 12.3 +3.3**
MAK pmax pmax
comp=Z,197nm,1.2s
MAK MLR MLR
comp=Z,1μm,12.0s
BELG Belogornoye 24.94 307 *i* P **P** **21 41 49.1 +0.4**
BELG pmax pmax
comp=Z,11nm,1.0s
ENH Enshi 25.57 107 P **P** **21 41 53.6 -1.1**
LYN LuoYang 25.63 96 P **P** **21 41 56.8 +1.6**
LYN pP sP 21 42 07.8 +8.1
LYN S **S** **21 46 29.8 +6.4**
LYN pmax pmax
comp=Z,53nm,0.7s
LYN pmax pmax
comp=Z,200nm,4.6s
LYN LR LR
comp=Z,1μm,16.2s
LYN LR LR
comp=Z,840nm,14.1s
LYN LR LR
comp=Z,670nm,16.2s
XLT XiLinHaoTe 25.68 73 *e*P **P** **21 41 56.5 +0.8**
XLT pmax pmax
comp=Z,11nm,1.4s
XLT pmax pmax
comp=Z,55nm,4.5s
XLT LR LR
comp=Z,72nm,14.4s
XLT LR LR
comp=Z,410nm,12.8s
XLT LR LR
comp=Z,530nm,14.5s
GYA Guiyang 25.98 118 ⇑P **P** **21 41 59.8 +1.3**
GYA S **S** **21 46 22.8 -6.4**
GYA pmax pmax
comp=Z,22nm,1.0s
GYA LR LR
comp=Z,340nm,13.7s
GYA LR LR
comp=Z,450nm,13.1s
GYA LR LR
comp=Z,410nm,17.2s
KIRV Kirov 26.03 321 LR LR 21 52 47.1
comp=Z,391nm,19.6s,baz=119,slow=38
KIRV Kirov 26.03 321*ce*P **P** **21 41 59.2 +0.7**
HNS HongShan 26.21 88 ⇑P **P** **21 42 01.5 +1.1**
HNS pmax pmax
comp=Z,49nm,0.8s
HNS LR LR
comp=Z,310nm,11.6s
HNS LR LR
comp=Z,500nm,14.7s
HNS LR LR
comp=Z,440nm,14.9s
BJT Baijiatuau 26.51 82 P **P** **21 42 02.6 -0.5**
BJT Baijiatuau 26.51 82 P **P** **21 42 02.6 -0.5**
BJT pmax pmax
comp=Z,5.0nm,0.5s
BJI2 Beijing 26.51 82 P **P** **21 42 03.5 +0.4**
BJI2 pmax pmax
comp=Z,3.0nm,0.6s
BJI2 LR LR
comp=Z,220nm,13.2s
BJI2 LR LR
comp=Z,160nm,10.3s
BJI2 LR LR
comp=Z,230nm,9.6s
GNI Garni 27.35 279 LR LR 21 54 42.0
comp=Z,292nm,20.1s,baz=98,slow=40
CHTO Chiang Mai 27.45 141 P **P** **21 42 12.2 +0.5**
CHTO Chiang Mai 27.45 141 P **P** **21 42 12.2 +0.5**
CHTO pmax pmax
comp=Z,12nm,0.9s
CHTO Chiang Mai 27.45 141 P **P** **21 42 11.9 +0.2**
comp=Z,15nm,1.0s
CM31 Chiang Mai Arr 27.76 141 P **P** **21 42 15.8 +1.3**
CMAR Chiang Mai Arr 27.76 141 P **P** **21 42 15.6 +1.2**
comp=Z,6.4nm,0.9s,baz=322,slow=9.4,SNR=27
CMAR LR LR 21 55 28.0
comp=Z,56nm,19.6s,baz=325,slow=41
comp=Z,6.4nm,0.9s
CMAR Chiang Mai Arr 27.76 141 P **P** **21 42 15.7 +1.3**
CMAR Chiang Mai Arr 27.76 141 P **P** **21 42 15.7 +1.3**
HILR Hailar Array B 27.93 60 P **P** **21 42 16.4 +0.6**
comp=Z,2.0nm,0.6s,baz=284,slow=12,SNR=2.7
comp=Z,2.0nm,0.6s
KBZ Khabaz 27.94 287 P **P** **21 42 16.7 +0.9**
comp=Z,1.7nm,0.9s,baz=90,slow=13,SNR=2.2
KBZ LR LR 21 55 07.5
comp=Z,173nm,18.4s,baz=90,slow=40
comp=Z,1.7nm,0.9s
KIV Kislovodsk 28.05 288 P **P** **21 42 18.4 +1.4**
KIV Kislovodsk 28.05 288 *e*P **P** **21 42 18.6 +1.6**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,143nm,15.0s
VRH Novokhopyorsk 28.40 303 *e*P **P** **21 42 20.8 +0.9**
VRH pmax pmax
comp=Z,20nm,1.0s
TIA Tai'an 28.44 89 P **P** **21 42 20.5 0.0**
TIA pmax pmax
comp=Z,8.0nm,1.5s
TIA LR LR
comp=Z,870nm,13.6s
TIA LR LR
comp=Z,310nm,14.7s
TIA LR LR
comp=Z,630nm,16.9s
WHN Wuhan 28.95 102 P **P** **21 42 26.3 +1.3**
WHN pmax pmax
comp=Z,28nm,0.7s
GURO Guroymak-BITLI 29.82 277 P **P** **21 42 32.2 -0.6**
VORD Divnogorie 29.92 302 *e*P **P** **21 42 34.6 +1.2**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 30.00 304 *e*P **P** **21 42 35.3 +1.2**
VORR pmax pmax
comp=Z,20nm,0.7s
VSR Storozhevoye 30.01 303 *e*P **P** **21 42 34.7 +0.5**
VSR pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 30.23 306 *e*P **P** **21 42 36.8 +0.7**
LPSR pmax pmax
comp=Z,9.0nm,0.4s
SOC Sochi 30.24 288 *e*P **P** **21 42 35.4 -0.9**
SOC *e* 21 43 33.0
SOC *e*S **S** **21 47 35.6 -0.2**
SOC pmax pmax
comp=Z,32nm,1.0s
SOC MLR MLR
comp=Z,249nm,16.0s
KOPT Kop Dagi 30.52 281 P **P** **21 42 39.6 +0.5**
KOPT IAmb IAmb 21 42 50.8
comp=Z,16nm,1.2s
MARD Mardin 31.17 275 P **P** **21 42 45.8 +1.0**
MARD IAmb IAmb 21 42 57.0
comp=Z,10nm,0.6s
MOS Moscow 31.33 312 *e*P **P** **21 42 47.3 +1.6**
MOS pmax pmax
comp=Z,32nm,0.8s
MOS MLR MLR
comp=Z,700nm,13.0s
NJ2 Nanjing 31.53 95 *e*P **P** **21 42 47.0 -0.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.8s
NJ2 pmax pmax
comp=Z,190nm,4.7s
NJ2 LR LR
comp=Z,850nm,16.6s
NJ2 LR LR
comp=Z,560nm,14.2s
NJ2 LR LR
comp=Z,400nm,13.3s
KLMR Klimovskoe 31.53 322 *e*P **P** **21 42 47.1 -0.4**
KLMR *e* 21 43 51.5
KLMR pmax pmax
comp=Z,32nm,1.3s
OBN Obninsk 31.85 310 LR LR 21 56 08.3
comp=Z,197nm,18.8s,baz=153,slow=37
OBN Obninsk 31.85 310⇑ *e*P **P** **21 42 50.5 +0.2**
OBN *e* 21 43 57.6
OBN pmax pmax
comp=Z,13nm,1.3s
OBN MLR MLR
comp=Z,173nm,15.0s
ARPR Arapgir-MALATY 32.39 280 P **P** **21 42 55.5 0.0**
ARPR IAmb IAmb 21 43 07.9
comp=Z,17nm,0.9s
ZEA Zeya 32.75 52 *e*P **P** **21 42 59.2 +0.9**
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,300nm,13.0s
ZEA MLR MLR
comp=Z,300nm,12.0s
HEH HeiHe 32.87 59 *e*P **P** **21 42 59.8 +0.4**
HEH pmax pmax
comp=Z,19nm,0.8s
HEH LR LR
comp=Z,230nm,12.1s
HEH LR LR
comp=Z,410nm,11.4s
HEH LR LR
comp=Z,600nm,10.1s
QIZ Qiongzhong 33.32 124 P **P** **21 43 04.0 +0.4**
QIZ S **S** **21 48 26.0 +1.6**
QIZ LR LR
comp=Z,250nm,18.5s
QIZ LR LR
comp=Z,410nm,15.2s
QIZ LR LR
comp=Z,320nm,17.2s
BNX BinXian 33.38 67 ⇑P **P** **21 43 03.5 -0.4**
BNX pmax pmax
comp=Z,6.0nm,0.8s
GAZ Gaziantep 33.88 277 P **P** **21 43 09.0 +0.6**
PALK Pallekele 34.29 181 LR LR 21 58 43.4
comp=Z,606nm,19.0s,baz=358,slow=39
BNN Bunyan 34.30 281 P **P** **21 43 12.5 +0.3**
RAYN Ar Rayn 34.69 250 P **P** **21 43 15.4 -0.1**
RAYN Ar Rayn 34.69 250 ⇓P **P** **21 43 15.6 +0.1**
YAK Yakutsk 35.13 38 LR LR 21 57 39.6
comp=Z,184nm,18.4s,baz=266,slow=36
YAK Yakutsk 35.13 38 P **P** **21 43 17.7 -1.1**
YAK IAmb IAmb 21 43 18.9
comp=Z,12nm,0.7s
YAK Yakutsk 35.13 38 *e*P **P** **21 43 17.6 -1.2**
YAK *e**PP **pP** **21 43 20.6 -1.5**
YAK *e* 21 44 34.2
YAK *e* 21 45 46.7
YAK *e*S **S** **21 48 51.0 -0.5**
YAK *e**SS **pS** **21 48 56.3 +1.4**
YAK *e*SS **SnSn** **21 51 08.2 +0.6**
YAK *e*SSS SSS 21 51 25.7
YAK *e* 21 53 37.0
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=Z,146nm,4.8s
YAK pmax pmax
comp=N,80nm,4.9s
YAK pmax pmax
comp=E,101nm,5.5s
YAK smax smax
comp=E,17nm,2.0s
YAK smax smax
comp=N,21nm,2.2s
YAK MLR MLR
comp=N,171nm,24.0s
YAK MLR MLR
comp=Z,108nm,14.0s
YAK MLR MLR
comp=E,110nm,25.0s
ILGA Ilgaz 35.17 285 P **P** **21 43 20.5 +0.8**
ILGA IAmb IAmb 21 43 28.0
comp=Z,12nm,0.9s
KIRS Kirsehir-Merke 35.62 282 ⇑P **P** **21 43 24.8 +1.3**
BR131 Keskin Array S 35.63 283 P **P** **21 43 23.9 +0.3**
BR131 IAmb IAmb 21 43 25.7
comp=Z,9.0nm,0.7s
BR131 Keskin Array S 35.63 283 *i* P **P** **21 43 24.1 +0.5**
BRTR Keskin Array B 35.63 283 P **P** **21 43 24.8 +1.2**
comp=Z,6.2nm,0.6s,baz=100,slow=8.2,SNR=40
BRTR LR LR 22 00 18.2
comp=Z,75nm,19.0s,baz=86,slow=40
comp=Z,6.2nm,0.6s
BRTR Keskin Array B 35.63 283 P **P** **21 43 24.2 +0.6**
KLR Kul'dur 35.77 60 LR LR 21 59 40.0
comp=Z,269nm,18.2s,baz=278,slow=39
KLR Kul'dur 35.77 60*ce*P **P** **21 43 25.0 +0.5**
KLR pmax pmax
comp=Z,3.0nm,1.0s
JOF Joensuu 35.82 323 *e*P **P** **21 43 25.1 +0.3**
KSAR Wonju Array Be 36.01 81 P **P** **21 43 26.7 0.0**
KSAR Wonju Array Be 36.01 81 P **P** **21 43 26.7 0.0**
KSRS Korea Array 36.03 81 P **P** **21 43 26.6 -0.2**
comp=Z,1.9nm,0.7s,baz=273,slow=7.6,SNR=6.9
KSRS LR LR 21 59 20.6
comp=Z,185nm,21.8s,baz=275,slow=38
comp=Z,1.9nm,0.7s
ASF Jabal al Asfar 36.21 269 LR LR 22 01 10.9
comp=Z,165nm,18.4s,baz=26,slow=41
AKASG Malin Array Be 36.31 302 P **P** **21 43 28.6 -0.4**
comp=Z,1.1nm,0.4s,baz=71,slow=8.6,SNR=7.2
AKASG LR LR 22 01 18.0
comp=Z,269nm,18.5s,baz=78,slow=41
comp=Z,1.1nm,0.4s
AKASG Malin Array Be 36.31 302 P **P** **21 43 28.4 -0.6**
AKASG Malin Array Be 36.31 302 *i* P **P** **21 43 29.3 +0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 36.31 302 P **P** **21 43 29.1 0.0**
AKBB IAmb IAmb 21 43 32.3
comp=Z,18nm,1.1s
AKBB Malin Array Si 36.31 302*ce*P **P** **21 43 29.7 +0.6**
AKBB pmax pmax
comp=Z,19nm,1.1s
KIEV Kiev 36.32 302 ⇑P **P** **21 43 28.9 -0.3**
KIEV Kiev 36.32 302 P **P** **21 43 29.1 -0.1**
KIEV IAmb IAmb 21 43 32.3
comp=Z,15nm,1.1s
KIEV Kiev 36.32 302 P **P** **21 43 29.1 -0.1**
KIEV pmax pmax
comp=Z,15nm,1.1s
APA Apatity 36.32 331 *e*P **P** **21 43 26.8 -2.2**
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,1μm,6.2s
MNK Minsk 36.85 309 *i* P **P** **21 43 35.4 +1.7**
comp=E,8.0nm,0.8s
MNK *i* P **P** **21 43 35.4 +1.7**
comp=N,8.0nm,0.7s
MNK *i* P **P** **21 43 35.4 +1.7**
comp=Z,13nm,0.7s,baz=87
MNK *i* PP **PP** **21 44 59.7 +2.3**
MNK *i* S **S** **21 49 21.6 +3.6**
MNK *i* SS **SS** **21 51 55.8 -2.9**
MNK *i* LQ LQ 21 56 00.8
MNK *i* LR LR 21 58 33.9
MNK *i* LRM MLR 21 59 05.5
comp=N,133nm,13.3s
MNK *i* LRM MLR 21 59 11.9
comp=Z,147nm,16.3s
MNK *i* LRM MLR 22 00 47.2
comp=E,92nm,15.9s
MNK Minsk 36.85 309 *i* P **P** **21 43 35.3 +1.7**
MNK *i* 21 44 59.6
MNK *i* 21 45 56.1
MNK *i* S **S** **21 49 21.5 +3.6**
MNK *i* 21 53 50.5
MNK pmax pmax
comp=E,8.0nm,0.8s
MNK pmax pmax
comp=Z,13nm,0.7s
MNK pmax pmax
comp=N,8.0nm,0.7s
MNK MLR MLR
comp=N,133nm,13.0s
MNK MLR MLR
comp=Z,147nm,16.0s
MNK MLR MLR
comp=E,92nm,16.0s
USRK Ussuriysk Ar. 36.88 69 P **P** **21 43 34.6 +0.5**
comp=E,4.7nm,0.8s,baz=290,slow=7.7,SNR=9.4
comp=E,4.7nm,0.8s
MMAI Mount Meron Ar 36.94 272 P **P** **21 43 35.5 +0.8**
comp=E,0.7nm,0.5s,baz=62,slow=12,SNR=7.5
MMAI LR LR 22 01 44.9
comp=E,94nm,18.3s,baz=54,slow=41
comp=E,0.7nm,0.5s
MDUB Mudurnu 37.17 285 P **P** **21 43 36.7 0.0**
NACGM Naroch 37.47 310 *e*P P 21 43 46.6 +7.7
comp=Z,19nm,0.8s,baz=87

VSU **Vasula** 37.49 315 *ce* P **P** **21 43 38.6 -0.4**
VSU pmax pmax
comp=Z,18nm,0.7s
VSU Vasula 37.49 315 *e* P **P** **21 43 39.5 +0.5**
SSLB Suanglung 37.63 106 P **P** **21 43 40.8 +0.1**
SSLB IAmb IAmb 21 43 43.6
comp=Z,18nm,1.0s
NACB Ninganchiao 37.86 105 P **P** **21 43 42.9 +0.3**
NACB IAmb IAmb 21 43 48.1
comp=Z,20nm,1.1s
TPGR Topolog 37.89 293 ⇑P **P** **21 43 42.6 0.0**
BORA Eskisehir 37.90 285 P **P** **21 43 42.3 -0.5**
ARBE Arbavere 37.92 317 *e* P **P** **21 43 43.1 +0.5**
SCTR Scanteiesti 37.98 294 ⇑P **P** **21 43 44.3 +0.9**
CFR Carcaliu 38.01 294 ⇓P **P** **21 43 44.1 +0.6**
CFR Carcaliu 38.01 294 ⇓P **P** **21 43 44.1 +0.6**
TIXI Tiksi 38.01 22 LR LR 21 59 57.0
comp=Z,293nm,18.1s,baz=286,slow=37
TIXI Tiksi 38.01 22 P **P** **21 43 41.5 -1.7**
TIXI IAmb IAmb 21 43 44.1
comp=Z,22nm,0.7s
TIXI Tiksi 38.01 22 ⇓P **P** **21 43 42.3 -0.9**
FINES FINESS Array B 38.02 320 P **P** **21 43 43.1 -0.3**
comp=Z,5.0nm,0.7s,baz=97,slow=7.5,SNR=18
FINES LR LR 22 00 08.8
comp=Z,299nm,21.2s,baz=94,slow=38
comp=Z,5.0nm,0.7s
FINES FINESS Array B 38.02 320 P **P** **21 43 43.0 -0.5**
FINES FINESS Array B 38.02 320 *i* P **P** **21 43 43.7 +0.2**
FINES pmax pmax
comp=Z,5.0nm,0.7s
SUF Sumiainen 38.12 322 *e* P **P** **21 43 44.8 +0.5**
TWG Pinlang 38.31 107 P **P** **21 43 46.4 0.0**
TWG IAmb IAmb 21 43 50.0
comp=Z,38nm,1.1s
ISP Isparta 38.58 281 P **P** **21 43 49.1 +0.5**
ISP IAmb IAmb 21 43 53.9
comp=Z,20nm,0.8s
ISP Isparta 38.58 281 P **P** **21 43 49.1 +0.5**
ISP pmax pmax
comp=Z,20nm,0.8s
KEF Keuruu 38.66 321 *e* P **P** **21 43 48.9 +0.1**
TESR Tescani 38.70 296 ⇑P **P** **21 43 49.8 +0.4**
MEF Metsahovi 38.76 318 *e* P **P** **21 43 49.6 0.0**
VRI Vrincioaia 38.80 295 ⇑P **P** **21 43 53.6 +3.3**
VRI Vrincioaia 38.80 295 ⇑P **P** **21 43 53.6 +3.3**
PLOR Plostina 38.86 295 ⇓P **P** **21 43 53.3 +2.5**
PLOR Plostina 38.86 295 ⇓P **P** **21 43 53.3 +2.5**
EIL Elat 38.89 267 LR LR 22 02 42.8
comp=Z,177nm,18.8s,baz=81,slow=41
ONER Baraj Valea Uz 38.91 296 ⇓P **P** **21 43 53.3 +2.1**
MTSE Matsula 39.02 316 *e* P **P** **21 43 52.4 +0.5**
PABE Paberze 39.05 311 P **P** **21 43 51.7 -0.4**
PABE IAmb IAmb 21 43 55.2
comp=Z,16nm,0.6s
COVR Voineasa-Covas 39.16 295 ⇓P **P** **21 43 54.8 +1.5**
NEHR Nehoiu 39.20 295 ⇑P **P** **21 43 55.3 +1.6**
BURAR Bucovina Array 39.41 298 ⇑P **P** **21 43 56.3 +0.8**
BURAR Bucovina Array 39.41 298 P **P** **21 43 56.4 -0.1**
BURAR Bucovina Array 39.41 298 ⇑P **P** **21 43 56.3 +0.8**
BUR08 Bucovina Ar. S 39.41 298 P **P** **21 43 55.4 -0.1**
MLR Muntele Rosu 39.42 295 LR LR 22 02 49.1
comp=Z,239nm,20.4s,baz=66,slow=40
MLR Muntele Rosu 39.42 295 ⇑P **P** **21 43 57.6 +1.9**
MLR Muntele Rosu 39.42 295 P **P** **21 43 56.4 +0.8**
MLR Muntele Rosu 39.42 295 ⇑P **P** **21 43 57.6 +1.9**
SUW Suwalki 39.63 308 *e* P **P** **21 43 58.4 +1.3**
SUW Suwalki 39.63 308 P **P** **21 43 57.5 +0.4**
SUW Suwalki 39.63 308 P **P** **21 43 57.5 +0.4**
ARA0 ARCESS Array S 39.69 333 *e* P **P** **21 43 58.0 +0.5**
ARCES ARCESS Array B 39.69 333 P **P** **21 43 57.5 +0.1**
comp=Z,13nm,0.6s,baz=91,slow=6.0,SNR=29
comp=Z,13nm,0.6s
ARCES ARCESS Array B 39.69 333 P **P** **21 43 58.2 +0.8**
ARCES ARCESS Array B 39.69 333 P **P** **21 43 58.2 +0.8**
ARCES pmax pmax
comp=Z,6.0nm,1.0s
VAF Ylistaro 39.74 323 *e* P **P** **21 43 58.1 +0.3**
JNU Nakatsue 40.02 86 LR LR 22 00 14.8
comp=Z,188nm,19.7s,baz=288,slow=36
VOIR 40.05 295 ⇓P **P** **21 44 00.6 -0.2**
VOIR 40.05 295 ⇓P **P** **21 44 00.6 -0.2**
PBUR Paburge 40.16 312 *e* P **P** **21 44 01.6 +0.2**
ELND Elena 40.19 291 ⇑P **P** **21 44 02.2 +0.3**
KTK1 Kautokeino 40.36 332 *e* P **P** **21 44 02.8 -0.1**
HAMF Hammerfest 40.58 334 *e* P **P** **21 44 06.0 +1.3**
KWP Kalwaria Pacla 40.61 302 *e* P **P** **21 44 06.5 +1.2**
LOT Lotru 40.91 295 ⇑P **P** **21 44 09.1 +1.2**
JOW Kunigami 41.24 96 LR LR 22 02 09.8
comp=Z,169nm,20.1s,baz=310,slow=38
JETT Jettan, Norway 41.45 332 *e* P **P** **21 44 11.2 -0.8**
STHS Stebnicka Huta 41.59 302 *e* P **P** **21 44 14.4 +1.0**
STHS pmax pmax
comp=Z,6.0nm,0.7s
STHS Stebnicka Huta 41.59 302 *e* P **P** **21 44 14.4 +1.0**
KARP Karpathos 41.97 280 P **P** **21 44 17.1 +0.4**
NIE Niedzica 42.19 302 *e* P **P** **21 44 19.6 +1.3**
BZS Buzias 42.32 296 ⇓P **P** **21 44 20.1 +0.8**
BZS Buzias 42.32 296 ⇓P **P** **21 44 20.6 +0.8**
MDVR Moldovita 42.50 295 ⇓P **P** **21 44 22.5 +1.6**
LANS Liptovska Anna 42.78 302 *e* P **P** **21 44 24.9 +1.8**
LANS pmax pmax
comp=Z,2.0nm,0.7s
LANS Liptovska Anna 42.78 302 *e* P **P** **21 44 24.9 +1.8**
PSZ Piszkesteto 42.82 300 P **P** **21 44 22.3 -1.2**
PSZ Piszkesteto 42.82 300 P **P** **21 44 22.3 -1.2**
PSZ pmax pmax
comp=Z,7.0nm,1.0s
BJO1 Bjornoya 42.88 340 *e* P **P** **21 44 23.7 +0.2**
GSI Gunungsitoli 42.89 155 P **P** **21 44 23.0 -1.3**
FAUS Fauske 43.10 329 *e* P **P** **21 44 24.9 -0.5**
STEI Steigen 43.14 330 *e* P **P** **21 44 25.7 0.0**
GKP Gorka Klasztor 43.24 308 *e* P **P** **21 44 27.9 +1.2**
MOR8 Moi Rana 43.41 327 *e* P **P** **21 44 27.0 +1.0**
YSS Yuzhno-Sakhali 43.45 61 *e* P **P** **21 44 28.1 -0.4**
YSS pmax pmax
comp=Z,10.0nm,0.8s
YSS MLR MLR
comp=Z,300nm,17.0s
STEB Steborice 43.66 303 *e* P **P** **21 44 30.4 +0.2**
MAUC Maruska 43.77 302 *e* P **P** **21 44 32.9 +1.8**
LOF Lofoten 43.79 330 *e* P **P** **21 44 30.8 -0.1**
MORC Moravsky Berou 43.84 303 ⇑P **P** **21 44 32.7 +1.0**
MORC Moravsky Berou 43.84 303 P **P** **21 44 31.6 -0.1**
MORC Moravsky Berou 43.84 303 ⇑P **P** **21 44 32.7 +1.0**
MORC Moravsky Berou 43.84 303 *e* P **P** **21 44 32.5 +0.8**
SRO Srobarova 43.87 300 *e* P **P** **21 44 34.7 +2.8**
SRO pmax pmax
comp=Z,9.0nm,0.9s
SRO Srobarova 43.87 300 *e* P **P** **21 44 34.7 +2.8**
VAGH Vaagaholmen 43.88 328 *e* P **P** **21 44 34.2 +2.5**
KONS Konsvik 43.94 328 *e* P **P** **21 44 33.8 +1.7**
MJAR Matsushiro Arr 43.95 77 P **P** **21 44 32.1 -0.6**
comp=Z,1.5nm,0.6s,baz=291,slow=7.5,SNR=6.5
MJAR LR LR 22 02 12.9
comp=Z,110nm,18.4s,baz=307,slow=35
comp=Z,1.5nm,0.6s
MJAR Matsushiro Arr 43.95 77 P **P** **21 44 31.4 -1.3**
STOK Stokkvaagen 43.98 327 *e* P **P** **21 44 32.7 +0.2**
JAVC Velka Javorina 44.00 302 *e* P **P** **21 44 35.7 +2.7**
MNSI Mandailing Nat 44.03 153 P **P** **21 44 32.6 -0.8**
comp=Z,1µmcomp=Z,37nm,0.8s
HFS Hagfors 44.10 318 P **P** **21 44 34.3 +0.8**
comp=Z,9.3nm,0.7s,baz=96,slow=8.9,SNR=15
HFS LR LR 22 03 30.5
comp=Z,207nm,21.2s,baz=78,slow=37
comp=Z,9.3nm,0.7s
MORH Mrgy, Hungar 44.12 298 ⇑P **P** **21 44 34.8 +0.9**
ASAJ Asahikawa 44.22 65 LR LR 22 04 01.4
comp=Z,129nm,19.5s,baz=232,slow=38
KRLC Kraliky 44.24 304 *e* P **P** **21 44 35.9 +1.0**
KRLC Kraliky 44.24 304 *e* P **P** **21 44 35.9 +1.0**
SMOL Smolenice 44.25 301 *e* P **P** **21 44 37.7 +2.8**
SMOL pmax pmax
comp=Z,4.0nm,0.8s
KSP Ksiaz 44.35 305 *e* P **P** **21 44 36.8 +1.1**
MODS Modra-Piesok 44.38 301 *e* P **P** **21 44 39.1 +3.1**
MODS Modra-Piesok 44.38 301 *e* P **P** **21 44 39.1 +3.1**
SPITS Spitsbergen Ar 44.39 345 P **P** **21 44 35.7 0.0**
comp=Z,2.3nm,0.6s,baz=111,slow=12,SNR=6.9
SPITS LR LR 22 05 14.1
comp=Z,142nm,18.2s,baz=149,slow=39
comp=Z,2.3nm,0.6s

DPC Dobruska-Polom 44.46 304 *e* P **P** **21 44 37.9 +1.3**
DPC Dobruska-Polom 44.46 304 *e* P **P** **21 44 37.9 +1.3**
OSTC Ostas 44.47 305 *e* P **P** **21 44 36.6 -0.1**
OSTC Ostas 44.47 305 *e* P **P** **21 44 36.6 -0.1**
DEL Delary 44.55 313 *i* P **P** **21 44 38.5 +1.3**
CHVC Chvalec 44.56 305 *e* P **P** **21 44 38.3 +0.9**
CHVC Chvalec 44.56 305 *e* P **P** **21 44 38.3 +0.9**
VRAC Vranov 44.56 303 LR LR 22 06 53.0
comp=Z,213nm,18.8s,baz=100,slow=41
VRAC Vranov 44.56 303 *e* P **P** **21 44 39.6 +2.2**
UPC Upice 44.61 304 *e* P **P** **21 44 38.9 +1.1**
UPC Upice 44.61 304 *e* P **P** **21 44 38.9 +1.1**
KRUC Moravsky 44.76 302 *e* P **P** **21 44 40.0 +1.1**
ATD Arta Tunnel 44.90 239 LR LR 22 05 33.7
comp=Z,6.4nm,21.8s,baz=38,slow=39
NC405 NORSAR Array S 44.95 320 P **P** **21 44 40.2 -0.1**
LUNU Lund 44.95 312 *i* P **P** **21 44 42.6 +2.2**
NC602 NORSAR Array S 45.08 319 P **P** **21 44 40.9 -0.5**
NC602 IAmb IAmb 21 44 42.9
comp=Z,22nm,1.1s
NC602 NORSAR Array S 45.08 319 *e* P **P** **21 44 43.0 +1.6**
FABU Falkenberg 45.08 314 *i* P **P** **21 44 43.0 +1.6**
NC303 NORSAR Array S 45.10 320 P **P** **21 44 41.4 -0.1**
NC303 IAmb IAmb 21 44 43.8
comp=Z,14nm,0.8s
NB201 NORSAR Array S 45.16 320 P **P** **21 44 42.5 +0.5**
NB201 IAmb IAmb 21 44 51.3
comp=Z,15nm,1.0s
NB2 NORSAR Subarra 45.20 320 P **P** **21 44 42.2 -0.2**
comp=Z,13nm,0.7s,baz=82,slow=7.9
NB2 NORSAR Subarra 45.20 320 AMP **P** **21 44 42.2 -0.2**
comp=Z,13nm,0.7s
NB2 P **P** **21 44 42.2 -0.2**
NOA NORSAR Array B 45.20 320 P **P** **21 44 42.2 -0.2**
comp=Z,9.6nm,0.6s,baz=82,slow=7.9,SNR=48
NOA LR LR 22 04 20.9
comp=Z,282nm,19.2s,baz=80,slow=37
comp=Z,9.6nm,0.6s
RONA Rosalia, Austr 45.21 301 *e* P **P** **21 44 43.1 +0.5**
comp=Z,4.2nm,0.8s,SNR=4.6
MA2 Magadan 45.36 42 P **P** **21 44 42.8 -0.8**
MA2 Magadan 45.36 42 *ce* P **P** **21 44 44.3 +0.7**
MA2 pmax pmax
comp=Z,6.0nm,1.3s
NC204 NORSAR Array S 45.38 320 P **P** **21 44 42.8 -1.0**
NC204 IAmb IAmb 21 44 45.8
comp=Z,16nm,0.7s
NAO01 NORSAR Array S 45.38 320 P **P** **21 44 43.4 -0.4**
NAO01 IAmb IAmb 21 44 46.4
comp=Z,15nm,0.7s
KBS Kingsbay 45.42 345 *e* P **P** **21 44 45.1 +1.3**
CONA Conrad Observa 45.42 301 *i* pP **P** **21 44 45.9 +1.5**
comp=Z,0.3nm,0.4s,SNR=5.5
PVCC Panska Ves 45.49 305 *e* P **P** **21 44 45.9 +1.1**
PVCC Panska Ves 45.49 305 *e* P **P** **21 44 45.9 +1.1**
SEY Seymchan 45.65 37 *ce* P **P** **21 44 46.5 +0.6**
SEY pmax pmax
comp=Z,4.0nm,0.8s
PRU Pruhonice 45.66 304 *e* P **P** **21 44 46.8 +0.7**
PRU Pruhonice 45.66 304 *e* P **P** **21 44 46.8 +0.7**
BRG Berggiesshubel 45.78 305 *e* P **P** **21 44 48.1 +1.0**
BRG Amp 21 44 49.7
comp=Z,6.7nm,0.7s
ARSA Arzberg 45.85 300 P **P** **21 44 48.4 +0.7**
ARSA Arzberg 45.85 300 *e* pP **P** **21 44 48.9 +1.2**
comp=Z,2.6nm,0.7s
PDSI Padang 45.92 152 P **P** **21 44 46.6 -1.9**
comp=Z,26nm,0.8s
DOMB Domas 46.07 322 *e* P **P** **21 44 49.8 +0.5**
CKRC Cesky Krumlov 46.14 303 *e* P **P** **21 44 50.3 +0.3**
CKRC Cesky Krumlov 46.14 303 *e* P **P** **21 44 50.3 +0.3**
HSKC Hora Svate Kat 46.17 305 *e* P **P** **21 44 52.0 +1.8**
KONO Kongsberg 46.21 318 P **P** **21 44 50.4 +0.1**
KONO IAmb IAmb 21 44 53.0
comp=Z,15nm,0.8s
KONO Kongsberg 46.21 318 *e* P **P** **21 44 51.1 +0.8**
KONO Kongsberg 46.21 318 P **P** **21 44 50.4 +0.1**
KONO pmax pmax
comp=Z,15nm,0.8s
CLL Collm 46.23 306 P **P** **21 44 50.9 +0.3**
CLL IAmb IAmb 21 44 53.2
comp=Z,15nm,0.7s
CLL Collm 46.23 306 *i* P **P** **21 44 51.0 +0.4**
CLL *i* 21 44 54.1
CLL pmax pmax
comp=Z,17nm,0.8s
CLL Collm 46.23 306 *i* P **P** **21 44 51.0 +0.4**
comp=Z,17nm,0.8s
CLL *i* x x 21 44 54.1
comp=Z,11nm,1.0s
ePP **PP** **21 46 38.0 -0.8**
CLL *e* S **S** **21 51 42.0 +5.0**
CLL *e* SS **SS** **21 55 06.0 +4.0**
CLL AMS AMS 22 07 00.0
comp=Z,200nm,20.5s
SOKA Soboth 46.35 300 *e* P **P** **21 44 52.4 +0.7**
comp=Z,7.7nm,1.7s
MOA Molln 46.47 301 *e* P **P** **21 44 52.2 -0.3**
comp=Z,4.0nm,1.4s
KHC Kasperske Hory 46.51 303 P **P** **21 44 53.2 +0.4**
KHC Kasperske Hory 46.51 303 *e* P **P** **21 44 53.6 +0.7**
KHC Kasperske Hory 46.51 303 *ce* P **P** **21 44 55.9 +3.0**
KHC pmax pmax
comp=Z,12nm,2.5s
GEC2 GERESS Array S 46.52 303 P **P** **21 44 54.2 +1.2**
GERES GERESS Array B 46.52 303 P **P** **21 44 53.5 +0.5**
comp=Z,2.5nm,0.6s,baz=67,slow=8.0,SNR=14
GERES LR LR 22 08 20.1
comp=Z,244nm,18.3s,baz=78,slow=41
comp=Z,2.5nm,0.6s
JHJ Hachijo jima 2 46.64 81 LR LR 22 05 14.5
comp=Z,127nm,18.9s,baz=322,slow=37
SKAR Skarsila 46.66 320 *e* P **P** **21 44 55.1 +1.2**
MOL Molde 46.69 322 *e* P **P** **21 44 53.2 -0.8**
BIOA Bad Ischl, Aus 46.92 301 *e* P **P** **21 44 56.8 +0.7**
comp=Z,0.8nm,0.4s
AKN Aaknes 47.01 322 *e* P **P** **21 44 58.2 +1.7**
MUD Monsted U'grnd 47.11 314 *i* P **P** **21 44 59.7 +2.3**
KBA Koelnbreinsper 47.31 301 *i* P **P** **21 44 59.8 +0.5**
comp=Z,0.8nm,0.4s,SNR=4.4
SABO M.te Sabotino 47.52 299 P **P** **21 45 01.0 +0.2**
SABO IAmb IAmb 21 45 02.4
comp=Z,13nm,1.0s
LESA Schwarzleotal 47.62 301 P **P** **21 45 02.4 +0.7**
comp=Z,4.8nm,0.7s,SNR=4.6
SNART Snartemo 47.70 317 *i* P **P** **21 45 02.8 +0.9**
GRA1 Grafenberg Arr 47.80 305 P **P** **21 45 04.0 +1.1**
GRF Grafenberg Arr 47.80 305 P **P** **21 45 04.0 +1.1**
GRF pmax pmax
comp=Z,21nm,0.7s
GRF Grafenberg Arr 47.80 305 *e* P **P** **21 45 04.0 +1.1**
comp=Z,8.0nm,0.9s,baz=72,slow=7.2
ABTA Abfaltersbach 47.96 300 *e* P **P** **21 45 04.8 +0.5**
comp=Z,0.2nm,0.3s
SBUM Sibu 48.07 136 P **P** **21 45 06.2 +0.9**
SBUM Sibu 48.07 136 P **P** **21 45 06.0 +0.7**
comp=Z,9.6nm,0.9s
WTTA Wattenberg 48.34 301 *i* P **P** **21 45 07.7 +0.4**
comp=Z,2.5nm,0.5s,SNR=7.8
WATA Walderalm 48.36 302 *i* P **P** **21 45 07.8 +0.4**
comp=Z,6.8nm,0.8s,SNR=5.2
SQTA Sankt Quirin 48.63 302 *i* P **P** **21 45 09.7 +0.2**
comp=Z,1.9nm,0.4s,SNR=8.6
MOTA Moosalm 48.65 302 *e* P **P** **21 45 09.9 +0.2**
comp=Z,0.6nm,0.3s
RETA Reutte 48.82 302 *e* pP **P** **21 45 11.7 +0.8**
comp=Z,3.2nm,0.7s
FETA Feichten 49.01 301 *i* P **P** **21 45 12.6 +0.1**
comp=Z,10nm,1.2s,SNR=5.5
DAVA Damuels 49.45 302 *e* pP **P** **21 45 17.1 +1.2**
comp=Z,5.5nm,0.6s
FURI Furi 49.57 241 LR LR 22 09 10.7
comp=Z,138nm,18.0s,baz=46,slow=40
DAVOX Davos/Dischmat 49.64 301 LR LR 22 09 07.1
comp=Z,216nm,21.4s,baz=69,slow=40
TUE Stuetta 50.09 301 P **P** **21 45 20.7 -0.1**
TUE IAmb IAmb 21 45 33.1
comp=Z,8.4nm,0.8s
NOR Nord 50.15 349 *i* P **P** **21 45 21.5 +1.0**
NOR IAmb IAmb 21 45 23.7
comp=Z,5.8nm,0.7s
BILL Bilibino 50.39 29 P **P** **21 45 22.4 0.0**
BILL Bilibino 50.39 29 *ce* P **P** **21 45 23.5 +1.1**
BILL pmax pmax
comp=Z,6.0nm,1.0s

PETK Petropavlovsk- 50.73 49 P **P** **21 45 25.6 +0.4**
comp=Z,5.0nm,0.9s,baz=289,slow=3.1,SNR=4.0
PETK LR LR 22 06 26.6
comp=Z,156nm,21.0s,baz=285,slow=36
comp=Z,5.0nm,0.9s
ECH Echery 50.82 304 P **P** **21 45 26.1 0.0**
ECH Echery 50.82 304 P **P** **21 45 26.1 0.0**
ECH pmax pmax
comp=Z,9.0nm,1.0s
WLF Walferdange 50.90 306 P **P** **21 45 26.8 +0.2**
WLF IAmb IAmb 21 45 29.9
comp=Z,24nm,1.1s
WLF Walferdange 50.90 306 P **P** **21 45 26.8 +0.2**
WLF pmax pmax
comp=Z,24nm,1.1s
WLF Walferdange 50.90 306 *d* P **P** **21 45 25.8 -0.8**
comp=Z,13nm,1.0s
LWLI Liwa 51.02 150 P **P** **21 45 25.4 -2.5**
comp=Z,1µmcomp=Z,45nm,0.8s
JCJ Chichijima 51.50 86 LR LR 22 07 19.9
comp=Z,65nm,19.7s,baz=128,slow=36
DAG Danmarks Havn 51.98 343 *i* P **P** **21 45 34.0 -0.2**
DAG *i* P **P** **21 45 34.0 -0.2**
DAG IAmb IAmb 21 45 35.6
comp=Z,12nm,0.7s
DAV Davao City (W) 52.35 118 LR LR 22 11 25.9
comp=Z,155nm,19.1s,baz=332,slow=40
BNI Bardonecchia 52.37 300 P **P** **21 45 37.1 -0.6**
BNI IAmb IAmb 21 45 52.4
comp=Z,16nm,1.1s
BNI Bardonecchia 52.37 300 P **P** **21 45 37.2 -0.6**
BNI pmax pmax
comp=Z,16nm,1.1s
DBG Daneborg 53.27 341 *i* P **P** **21 45 45.0 +1.1**
DBG IAmb IAmb 21 45 46.8
comp=Z,4.8nm,1.0s
CLF Chambon-Foret 53.91 305 P **P** **21 45 49.9 +1.0**
CLF IAmb IAmb 21 45 51.4
comp=Z,17nm,0.9s
TOLI2 Tolitoli 53.95 128 P **P** **21 45 50.5 +0.9**
EKA Eskdalemuir Ar 54.04 315 P **P** **21 45 49.6 -0.2**
comp=Z,5.8nm,0.7s,baz=78,slow=7.9,SNR=14
comp=Z,5.8nm,0.7s
LEM Lembang 54.08 147 LR LR 22 12 33.8
comp=Z,79nm,20.7s,baz=318,slow=40
LODK Lodwar 55.84 240 P **P** **21 46 03.8 +0.4**
NEEM North Greenlan 57.52 349 *i* P **P** **21 46 15.0 +0.2**
NEEM IAmb IAmb 21 46 16.6
comp=Z,20nm,0.7s
KAPI Kappang 58.36 133 LR LR 22 14 56.7
comp=Z,56nm,20.0s,baz=304,slow=40
SUMG Summit 58.60 342 P **P** **21 46 23.0 +0.4**
SUMG Summit 58.60 342 P **P** **21 46 23.0 +0.4**
SUMG pmax pmax
comp=Z,7.0nm,1.0s
SUMG Summit 58.60 342 *i* P **P** **21 46 23.4 +0.8**
KIBK Kibwezi 58.65 233 P **P** **21 46 24.4 +1.2**
A19K Wainwright 59.74 20 P **P** **21 46 30.5 +0.6**
baz=310
C16K Lisburne Hills 59.77 23 **P** **21 46 29.5 -0.6**
C16K Lisburne Hills 59.77 23 P **P** **21 46 30.8 +0.7**
baz=307,SNR=16
C17K DeLong Mountai 60.27 22 P **P** **21 46 34.3 +0.7**
baz=309,SNR=16
GAMB Gambell 60.32 29 P **P** **21 46 33.7 -0.3**
GAMB Gambell 60.32 29 P **P** **21 46 34.9 +0.9**
baz=305
TULEG Thule 60.48 352 P **P** **21 46 34.5 -0.4**
TULEG IAmb IAmb 21 46 45.5
comp=Z,7.1nm,1.0s
TULEG Thule 60.48 352 *i* P **P** **21 46 35.4 +0.4**
TULEG IAmb IAmb 21 46 38.4
comp=Z,5.5nm,0.7s
TNA Tin City 60.60 26 P **P** **21 46 35.4 -0.4**
TNA IAmb IAmb 21 46 37.9
comp=Z,11nm,1.0s
TNA Tin City 60.60 26 P **P** **21 46 36.6 +0.8**
baz=307,SNR=6.7
RDOG Red Dog Mine 60.62 23 P **P** **21 46 36.0 0.0**
RDOG Red Dog Mine 60.62 23 P **P** **21 46 36.4 +0.4**
baz=310
C18K Utukok River 60.72 22 P **P** **21 46 37.3 +0.5**
baz=311
D17K Noatak River 60.79 23 P **P** **21 46 37.9 +0.7**
baz=310,SNR=29
C19K Lookout Ridge 60.86 21 P **P** **21 46 38.5 +0.8**
baz=312
B20K Meade River 60.88 20 P **P** **21 46 38.4 +0.8**
baz=313
F14K Arctic Creek 61.18 26 P **P** **21 46 41.0 +1.2**
baz=308,SNR=18
B22K Teshekpuk Lake 61.55 18 P **P** **21 46 41.6 -0.6**
B22K Teshekpuk Lake 61.55 18 P **P** **21 46 42.9 +0.7**
baz=316,SNR=20
E17K Hotham Inlet 61.56 23 P **P** **21 46 43.0 +0.6**
baz=311,SNR=19
F15K North Star Dit 61.58 25 P **P** **21 46 42.2 -0.3**
F15K IAmb IAmb 21 46 44.2
comp=Z,8.7nm,0.8s
F15K North Star Dit 61.58 25 P **P** **21 46 43.2 +0.7**
baz=309,SNR=20
D19K Kuna River 61.67 21 P **P** **21 46 43.6 +0.4**
baz=313
E18K Tukpahlearik C 61.70 23 P **P** **21 46 43.9 +0.6**
baz=312
B21K Ikpikpuk River 61.78 19 P **P** **21 46 44.8 +1.0**
baz=315
ESBB Sonseca Array 61.85 299 P **P** **21 46 44.3 -0.6**
ESBB IAmb IAmb 21 46 47.3
comp=Z,7.3nm,1.1s
ESDC Sonseca Array 61.85 299 P **P** **21 46 44.5 -0.4**
comp=Z,2.7nm,1.0s,baz=56,slow=6.4,SNR=13
ESDC LR LR 22 16 59.7
comp=Z,96nm,19.4s,baz=33,slow=39
comp=Z,2.7nm,1.0s
ESDC Sonseca Array 61.85 299 P **P** **21 46 44.7 -0.2**
MBAR Mbarara 61.88 241 LR LR 22 16 41.8
comp=Z,70nm,18.7s,baz=38,slow=39
MBAR Mbarara 61.88 241 P **P** **21 46 45.5 0.0**
MBAR IAmb IAmb 21 46 51.6
comp=Z,9.0nm,1.0s
MBAR Mbarara 61.88 241 P **P** **21 46 45.5 0.0**
MBAR pmax pmax
comp=Z,9.0nm,1.0s
D20K Etivluk River 61.91 20 P **P** **21 46 45.5 +0.7**
baz=314
UPNV Upernavik 62.02 347 *i* P **P** **21 46 46.0 +0.6**
UPNV IAmb IAmb 21 46 47.0
comp=Z,12nm,0.8s
SIJI Sorong 62.03 120 P **P** **21 46 46.3 0.0**
comp=Z,3.9nm,0.6s,baz=333,slow=11,SNR=3.8
SIJI LR LR 22 15 16.0
comp=Z,36nm,19.6s,baz=296,slow=38
comp=Z,3.9nm,0.6s
ANM Nome 62.06 27 P **P** **21 46 45.7 -0.2**
ANM IAmb IAmb 21 46 48.2
comp=Z,10.0nm,0.8s
ANM Nome 62.06 27 P **P** **21 46 45.7 -0.2**
ANM pmax pmax
comp=Z,10.0nm,0.8s
ANM Nome 62.06 27 P **P** **21 46 46.7 +0.9**
baz=309,SNR=11
C21K Knifeblade Rid 62.07 20 P **P** **21 46 46.7 +0.9**
baz=316,SNR=12
F17K Baldwin Pennin 62.16 24 P **P** **21 46 47.4 +1.0**
baz=311
PAB San Pablo 62.17 299 P **P** **21 46 47.1 0.0**
PAB San Pablo 62.17 299 P **P** **21 46 47.1 0.0**
PAB pmax pmax
comp=Z,6.0nm,1.2s
G15K Niukluk 62.23 26 P **P** **21 46 47.9 +1.0**
baz=310
E20K Nigu River 62.35 21 P **P** **21 46 48.4 +0.7**
baz=315
G16K Koyuk River 62.51 25 P **P** **21 46 49.4 +0.6**
G16K IAmb IAmb 21 46 50.9
comp=Z,11nm,0.8s
G16K Koyuk River 62.51 25 P **P** **21 46 50.0 +1.2**
baz=311
F18K Selawik 62.53 23 P **P** **21 46 49.6 +0.7**
baz=313,SNR=8.9
C23K Itkillik River 62.57 18 P **P** **21 46 50.0 +0.9**
C23K IAmb IAmb 21 46 51.0
comp=Z,10.0nm,0.8s
C23K Itkillik River 62.57 18 P **P** **21 46 50.1 +0.9**
baz=319,SNR=9.1
E19K Redstone River 62.63 22 P **P** **21 46 49.7 +0.1**

E19K IAmb IAmb 21 46 50.9
comp=Z,6.5nm,0.8s
E19K Redstone River 62.63 22 P **P** **21 46 50.0 +0.5**
baz=314
E21K Killik River 62.79 20 P **P** **21 46 51.3 +0.6**
baz=316
D22K Ayikyak River 62.79 19 **P** **21 46 51.0 +0.3**
D22K Ayikyak River 62.79 19 P **P** **21 46 51.4 +0.7**
baz=317,SNR=12
F19K Shaleruckik Mo 62.91 22 **P** **21 46 51.1 -0.4**
F19K Shaleruckik Mo 62.91 22 P **P** **21 46 51.3 -0.1**
baz=314
G17K Kiwalik Mounta 62.97 24 P **P** **21 46 52.7 +0.8**
baz=312
H16K Elim 63.05 26 P **P** **21 46 53.0 +0.7**
baz=311,SNR=20
C24K Franklin Bluff 63.09 17 P **P** **21 46 52.9 +0.2**
C24K IAmb IAmb 21 46 53.9
comp=Z,8.4nm,0.8s
C24K Franklin Bluff 63.09 17 P **P** **21 46 53.3 +0.7**
baz=320
D23K Nanushuk River 63.21 19 **P** **21 46 54.1 +0.6**
D23K IAmb IAmb 21 46 55.1
comp=Z,8.8nm,0.8s
D23K Nanushuk River 63.21 19 P **P** **21 46 54.0 +0.6**
baz=319
G18K Tagagawik 63.31 23 P **P** **21 46 54.5 +0.4**
baz=314
F20K Avaraart Lake 63.33 22 P **P** **21 46 54.6 +0.3**
baz=316
SAQQ Saqqaq 63.46 344 *i* P **P** **21 46 55.9 +0.9**
SAQQ IAmb IAmb 21 46 56.5
comp=Z,7.2nm,0.8s
D24K Happy Valley 63.50 18 P **P** **21 46 55.8 +0.5**
baz=320
E22K Anaktuvuk Pass 63.56 19 P **P** **21 46 54.6 -1.2**
E22K Anaktuvuk Pass 63.56 19 P **P** **21 46 56.3 +0.5**
baz=318,SNR=15
H17K Granite Mounta 63.59 25 P **P** **21 46 55.4 -0.6**
H17K Granite Mounta 63.59 25 P **P** **21 46 56.7 +0.7**
baz=313
G19K Purcell Mounta 63.59 23 P **P** **21 46 54.8 -1.2**
G19K IAmb IAmb 21 46 57.4
comp=Z,4.8nm,0.8s
G19K Purcell Mounta 63.59 23 P **P** **21 46 56.5 +0.5**
baz=315,SNR=6.7
TOLK Toolik Lake Re 63.72 18 P **P** **21 46 57.3 +0.5**
baz=320,SNR=11
C26K Camden Bay 63.75 16 P **P** **21 46 58.1 +1.1**
baz=323
F21K Alatna River 63.81 21 P **P** **21 46 57.2 -0.2**
F21K IAmb IAmb 21 46 58.9
comp=Z,7.7nm,0.8s
F21K Alatna River 63.81 21 P **P** **21 46 57.9 +0.5**
baz=317
J14K Nanvaranak Lak 63.86 28 P **P** **21 46 58.6 +0.9**
baz=311
RES Resolute Bay 63.86 359 LR LR 22 16 43.9
comp=Z,76nm,18.1s,baz=19,slow=38
RES Resolute Bay 63.86 359 P **P** **21 46 57.9 +0.3**
RES Resolute Bay 63.86 359 P **P** **21 46 57.9 +0.3**
RES pmax pmax
comp=Z,3.0nm,0.9s
ILULI Ilulissat 63.91 343 P **P** **21 46 56.9 -1.1**
ILULI Ilulissat 63.91 343 P **P** **21 46 56.9 -1.1**
ILULI pmax pmax
comp=Z,17nm,0.7s
ILULI Ilulissat 63.91 343 *i* P **P** **21 46 58.8 +0.8**
ILULI IAmb IAmb 21 46 59.5
comp=Z,16nm,0.7s
H18K Honhosa River 63.91 24 P **P** **21 46 58.8 +0.7**
baz=314
D25K Kavik River 63.92 17 P **P** **21 46 58.9 +0.7**
baz=322
K13K Kusilvak Mount 64.01 29 P **P** **21 46 58.7 0.0**
K13K IAmb IAmb 21 47 00.6
comp=Z,6.7nm,0.9s
K13K Kusilvak Mount 64.01 29 P **P** **21 46 59.6 +0.9**
baz=311
I17K Unalakleet 64.06 26 P **P** **21 46 59.2 +0.2**
I17K IAmb IAmb 21 47 01.3
comp=Z,11nm,0.8s
I17K Unalakleet 64.06 26 P **P** **21 47 00.3 +1.2**
baz=313,SNR=7.9
E23K Chandalar 64.16 19 P **P** **21 47 00.3 +0.5**
baz=320
C27K Jago River 64.24 16 P **P** **21 47 01.3 +1.1**
baz=324
G21K Allakaket 64.33 21 P **P** **21 47 01.6 +0.8**
baz=317
GDH Godhavn 64.40 344 *i* P **P** **21 47 01.3 +0.1**
GDH IAmb IAmb 21 47 02.0
comp=Z,15nm,1.0s
E24K Your Creek 64.42 18 P **P** **21 47 02.1 +0.7**
baz=321
M11K Mekoryuk 64.44 31 P **P** **21 47 01.6 0.0**
M11K IAmb IAmb 21 47 04.2
comp=Z,8.1nm,0.9s
M11K Mekoryuk 64.44 31 P **P** **21 47 02.9 +1.3**
baz=316
J16K Anvik River 64.50 26 P **P** **21 47 03.2 +1.2**
baz=313
IMAR Indian Mountai 64.65 22 P **P** **21 47 01.9 -1.0**
COLD Coldfoot 64.65 20 **P** **21 47 03.4 +0.5**
COLD Coldfoot 64.65 20 P **P** **21 47 03.5 +0.5**
baz=320,SNR=18
H20K Anotleneega Mo 64.69 22 P **P** **21 47 03.7 +0.5**
baz=317
K15K Wolf Creek Mou 64.86 27 P **P** **21 47 04.2 -0.2**
K15K Wolf Creek Mou 64.86 27 P **P** **21 47 04.9 +0.5**
baz=313,SNR=8.7
POIN Pond Inlet 64.95 353 P **P** **21 47 04.5 -0.3**
POIN IAmb IAmb 21 47 06.6
comp=Z,12nm,0.9s
E25K Arctic Village 65.06 17 P **P** **21 47 05.2 -0.4**
E25K Arctic Village 65.06 17 P **P** **21 47 06.0 +0.4**
baz=323,SNR=6.1
G23K Bananza Creek 65.10 20 P **P** **21 47 06.4 +0.5**
baz=320
A36M Sachs Harbour 65.10 9 P **P** **21 47 05.6 -0.1**
A36M Sachs Harbour 65.10 9 P **P** **21 47 06.3 +0.6**
baz=338,SNR=9.1
D27M Malcolm River 65.11 15 **P** **21 47 06.5 +0.6**
D27M IAmb IAmb 21 47 07.8
comp=Z,6.3nm,0.8s
D27M Malcolm River 65.11 15 P **P** **21 47 06.9 +1.0**
baz=326
L14K Kuka Creek 65.11 28 P **P** **21 47 07.1 +1.2**
baz=312
H21K Melozitna Rive 65.16 22 P **P** **21 47 06.1 -0.1**
H21K IAmb IAmb 21 47 07.7
comp=Z,5.7nm,0.8s
H21K Melozitna Rive 65.16 22 P **P** **21 47 06.9 +0.6**
baz=318
L15K Ungalak Mounta 65.30 28 P **P** **21 47 08.2 +1.0**
baz=313
H22K Ishtalitna Cre 65.37 21 P **P** **21 47 08.8 +1.2**
baz=319
D28M Stokes Point 65.46 14 P **P** **21 47 09.4 +1.3**
baz=328
F25K Christian Rive 65.46 18 **P** **21 47 08.2 -0.1**
F25K Christian Rive 65.46 18 P **P** **21 47 09.4 +1.1**
baz=323,SNR=33
M13K Dall Lake 65.49 29 P **P** **21 47 10.0 +1.6**
baz=312
SFJD Kangerlussuaq 65.55 341 LR LR 22 20 26.9
comp=Z,81nm,19.5s,baz=16,slow=40
SFJD Kangerlussuaq 65.55 341 P **P** **21 47 07.8 -1.0**
SFJD IAmb IAmb 21 47 10.3
comp=Z,11nm,0.8s
SFJD Kangerlussuaq 65.55 341 P **P** **21 47 07.8 -1.0**
SFJD pmax pmax
comp=Z,11nm,0.8s
SFJD Kangerlussuaq 65.55 341 *i* P **P** **21 47 09.2 +0.5**
SFJD IAmb IAmb 21 47 10.0
comp=Z,9.5nm,0.7s
J19K Poorman 65.57 24 P **P** **21 47 09.9 +0.9**
J19K IAmb IAmb 21 47 11.0
comp=Z,9.2nm,0.8s
J19K Poorman 65.57 24 P **P** **21 47 10.0 +1.1**
baz=317
J18K Innoko River 65.62 25 P **P** **21 47 09.7 +0.4**
J18K Innoko River 65.62 25 P **P** **21 47 10.2 +0.9**
baz=316
K17K Iditarod 65.65 26 P **P** **21 47 10.2 +0.7**
K17K Iditarod 65.65 26 P **P** **21 47 10.7 +1.2**
baz=315
F26K Sheenjek River 65.72 17 P **P** **21 47 10.5 +0.6**
F26K IAmb IAmb 21 47 11.7
comp=Z,7.6nm,0.8s
F26K Sheenjek River 65.72 17 P **P** **21 47 10.6 +0.7**
baz=324,SNR=16
G24K Hadweenzic Riv 65.74 19 P **P** **21 47 10.0 0.0**
G24K Hadweenzic Riv 65.74 19 P **P** **21 47 11.0 +1.0**
baz=322,SNR=14
M14K Bethel 65.77 29 P **P** **21 47 10.6 +0.4**
M14K Bethel 65.77 29 P **P** **21 47 11.5 +1.3**
baz=313,SNR=9.9
BMAR Burnt Mountain 65.84 18 **P** **21 47 11.2 +0.6**
E27K Coleen River 65.86 16 P **P** **21 47 11.4 +0.6**
baz=326
L16K Owhat River 65.97 27 P **P** **21 47 12.2 +0.7**
L16K Owhat River 65.97 27 P **P** **21 47 13.0 +1.5**
baz=314,SNR=11
L17K Donlin 66.06 26 P **P** **21 47 13.5 +1.4**
baz=315,SNR=17
MDT Midelt 66.09 293 LR LR 22 17 56.0
comp=Z,58nm,21.0s,baz=44,slow=38
MLY Manley 66.20 21 P **P** **21 47 13.3 +0.2**
MLY IAmb IAmb 21 47 14.6
comp=Z,7.9nm,0.8s
MLY Manley 66.20 21 P **P** **21 47 13.7 +0.7**
baz=320,SNR=10.0
M15K Kasigluk River 66.26 28 P **P** **21 47 14.5 +1.1**
baz=314
H24K Noodor Dome 66.32 20 **P** **21 47 13.3 -0.6**
H24K IAmb IAmb 21 47 15.5
comp=Z,5.8nm,0.7s
H24K Noodor Dome 66.32 20 P **P** **21 47 14.7 +0.8**
baz=322
FYU Fort Yukon 66.39 18 P **P** **21 47 15.1 +1.0**
FYU IAmb IAmb 21 47 16.0
comp=Z,11nm,1.0s
G26K Porcupine Rive 66.41 18 P **P** **21 47 12.9 -1.4**
G26K Porcupine Rive 66.41 18 P **P** **21 47 15.5 +1.2**
baz=325
E29M Blow River 66.43 15 P **P** **21 47 14.2 -0.2**
E29M Blow River 66.43 15 P **P** **21 47 15.5 +1.1**
baz=329
N14K Kuskokwak Cree 66.43 29 P **P** **21 47 13.3 -1.2**
N14K Kuskokwak Cree 66.43 29 P **P** **21 47 15.6 +1.1**
baz=314
I23K Minto, Yukon-K 66.48 21 P **P** **21 47 15.2 +0.5**
I23K IAmb IAmb 21 47 16.4
comp=Z,8.2nm,0.8s
I23K Minto, Yukon-K 66.48 21 P **P** **21 47 15.8 +1.0**
baz=321
K20K Telida 66.51 24 P **P** **21 47 16.1 +1.1**
baz=318
L18K Granite Mounta 66.53 26 P **P** **21 47 16.0 +0.8**
L18K IAmb IAmb 21 47 17.1
comp=Z,7.8nm,0.7s
L18K Granite Mounta 66.53 26 P **P** **21 47 16.2 +1.1**
baz=316
M16K Timber Creek 66.63 27 P **P** **21 47 16.1 +0.2**
M16K Timber Creek 66.63 27 P **P** **21 47 17.3 +1.5**
baz=315
CHUM Lake Minchumin 66.63 23 P **P** **21 47 17.2 +1.4**
baz=319
F28M Old Crow 66.70 16 P **P** **21 47 16.1 -0.1**
F28M IAmb IAmb 21 47 17.8
comp=Z,8.4nm,0.8s
F28M Old Crow 66.70 16 P **P** **21 47 17.1 +0.9**
baz=328,SNR=13
N15K Kwethluk River 66.84 28 P **P** **21 47 16.9 -0.2**
N15K IAmb IAmb 21 47 19.9
comp=Z,9.8nm,0.8s
N15K Kwethluk River 66.84 28 P **P** **21 47 18.6 +1.5**
baz=314
BPAW Bear Paw Mtn. 66.85 22 P **P** **21 47 17.6 +0.4**
BPAW Bear Paw Mtn. 66.85 22 P **P** **21 47 17.6 +0.4**
baz=320,SNR=10
M17K Holitna River 66.88 26 P **P** **21 47 18.4 +1.0**
baz=316
NEA2 Nenana 66.99 21 P **P** **21 47 17.2 -0.9**
NEA2 IAmb IAmb 21 47 19.3
comp=Z,15nm,1.2s
NEA2 Nenana 66.99 21 P **P** **21 47 18.8 +0.7**
baz=321
POKR Poker Plat Res 67.01 20 P **P** **21 47 19.0 +0.8**
baz=322,SNR=7.2
O14K Tigyukauivet M 67.05 30 P **P** **21 47 19.6 +1.1**
baz=314
N16K Nishlik Lake 67.09 28 P **P** **21 47 19.9 +1.1**
baz=315,SNR=14
COLA College 67.09 20 P **P** **21 47 18.4 -0.2**
COLA College 67.09 20 P **P** **21 47 18.4 -0.2**
COLA pmax pmax
comp=Z,17nm,0.7s
COLA College 67.09 20 P **P** **21 47 19.3 +0.6**
baz=322
L19K White Mountain 67.14 25 **P** **21 47 19.6 +0.5**
L19K IAmb IAmb 21 47 21.2
comp=Z,8.9nm,0.8s
L19K White Mountain 67.14 25 P **P** **21 47 20.2 +1.1**
baz=318
PRP Porcupine Dome 67.17 19 P **P** **21 47 19.5 +0.1**
PRP IAmb IAmb 21 47 21.1
comp=Z,9.0nm,0.7s
PRP Porcupine Dome 67.17 19 P **P** **21 47 20.3 +0.9**
baz=324,SNR=10
CCB Clear Creek Bu 67.29 21 P **P** **21 47 19.4 -0.5**
KTH Kantishna Hill 67.29 22 P **P** **21 47 18.9 -1.1**
INK Inuvik 67.29 13 LR LR 22 22 04.3
comp=Z,47nm,18.1s,baz=285,slow=41
INK Inuvik 67.29 13 P **P** **21 47 20.0 +0.2**
INK IAmb IAmb 21 47 21.3
comp=Z,7.0nm,0.9s
INK Inuvik 67.29 13 P **P** **21 47 20.0 +0.2**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 67.29 13 P **P** **21 47 20.5 +0.7**
baz=333,SNR=6.2
M18K Stony River 67.34 26 P **P** **21 47 21.6 +1.2**
baz=317
WRH Wood River Hil 67.35 21 P **P** **21 47 19.9 -0.4**
WRH IAmb IAmb 21 47 22.7
comp=Z,5.1nm,0.8s
PPLA Purkeypile 67.42 23 P **P** **21 47 20.8 -0.2**
PPLA Purkeypile 67.42 23 P **P** **21 47 21.8 +0.8**
baz=320,SNR=10
IL31 67.43 20 P **P** **21 47 19.9 -0.8**
ILAR Eielson Array 67.43 20 P **P** **21 47 19.6 -1.3**
comp=Z,12nm,0.7s,baz=318,slow=4.5,SNR=130
ILAR LR LR 22 18 17.4
comp=Z,132nm,18.2s,baz=306,slow=37
comp=Z,12nm,0.7s
ILAR Eielson Array 67.43 20 **P** **21 47 19.3 -1.5**
M19K Big River Lodg 67.50 25 P **P** **21 47 22.1 +0.8**
baz=318
F30M Barrier River 67.50 14 P **P** **21 47 22.3 +1.0**
baz=331
H27K Steamboat Moun 67.52 17 P **P** **21 47 21.4 0.0**
H27K IAmb IAmb 21 47 23.1
comp=Z,6.2nm,1.0s
H27K Steamboat Moun 67.52 17 P **P** **21 47 22.5 +1.1**
baz=327
TRF Thorofare Moun 67.55 22 P **P** **21 47 22.3 +0.5**
TRF IAmb IAmb 21 47 24.3
comp=Z,5.8nm,0.7s
TRF Thorofare Moun 67.55 22 P **P** **21 47 22.5 +0.7**
baz=321
N17K Nushagak Hills 67.59 27 P **P** **21 47 23.3 +1.4**
baz=316
O15K Ungalikthiuk R 67.64 29 P **P** **21 47 23.5 +1.3**
baz=315
HDA Harding Lake 67.70 20 P **P** **21 47 21.7 -0.8**
baz=323
MCK McKinley 67.71 22 P **P** **21 47 22.7 +0.1**
baz=322
C36M Paulatuk 67.72 9 **P** **21 47 21.1 -1.4**
C36M Paulatuk 67.72 9 P **P** **21 47 22.3 -0.2**
baz=340,SNR=26
M20K Styx River 67.91 24 P **P** **21 47 25.5 +1.6**
baz=319
I26K Coal Creek Min 67.91 18 P **P** **21 47 24.7 +0.8**
baz=326
N18K Kilae Creek 67.92 26 P **P** **21 47 25.3 +1.3**
baz=317
J25K Salcha River, 67.94 20 P **P** **21 47 24.0 -0.2**
baz=324
O16K Kokwok River B 67.96 28 P **P** **21 47 25.8 +1.6**
baz=316
G30M tAoh Zraii Nji 67.97 15 P **P** **21 47 24.4 +0.1**
baz=331
RND Reindeer 67.99 22 P **P** **21 47 23.6 -0.8**
RND IAmb IAmb 21 47 25.2
comp=Z,5.3nm,0.6s
RND Reindeer 67.99 22 P **P** **21 47 23.6 -0.8**
RND pmax pmax
comp=Z,5.0nm,0.6s
I27K Kandik River 68.02 18 P **P** **21 47 25.0 +0.4**
baz=327
F31M Tsiigehtchic 68.02 14 P **P** **21 47 24.2 -0.3**
F31M IAmb IAmb 21 47 25.6
comp=Z,10nm,0.8s
F31M Tsiigehtchic 68.02 14 P **P** **21 47 24.7 +0.2**
baz=333,SNR=7.1
O17K Koliganek Bris 68.17 28 P **P** **21 47 26.5 +0.9**
baz=317
H29M Whitestone 68.20 16 P **P** **21 47 26.4 +0.7**
baz=329
SKT Skwentna 68.32 24 P **P** **21 47 26.3 -0.2**
SKT IAmb IAmb 21 47 27.5
comp=Z,11nm,0.9s
SKT Skwentna 68.32 24 P **P** **21 47 26.7 +0.2**
baz=320
CUT Chulitna 68.37 23 P **P** **21 47 27.0 +0.3**
baz=321
G31M Satah River 68.39 14 P **P** **21 47 25.9 -0.8**
G31M Satah River 68.39 14 P **P** **21 47 27.1 +0.3**
baz=332,SNR=16
P16K Nushagak River 68.40 28 P **P** **21 47 27.2 +0.3**
P16K Nushagak River 68.40 28 P **P** **21 47 28.6 +1.6**
baz=316
EPYK Eagle Plains 68.41 15 P **P** **21 47 26.6 -0.4**
EPYK IAmb IAmb 21 47 27.8
comp=Z,9.4nm,0.8s
EPYK Eagle Plains 68.41 15 P **P** **21 47 27.2 +0.1**
baz=330,SNR=5.1
K24K Donnelly Dome 68.50 20 P **P** **21 47 27.0 -0.6**
K24K Donnelly Dome 68.50 20 P **P** **21 47 27.6 0.0**
baz=328,SNR=7.5
ILON Igloolik, Nuna 68.52 354 P **P** **21 47 27.4 -0.2**
WAT1 Susitna Watana 68.53 22 P **P** **21 47 27.4 -0.4**
baz=322
I28M Miner Creek 68.53 17 P **P** **21 47 27.9 0.0**
baz=328
STLK Strandline Lak 68.60 24 P **P** **21 47 28.2 -0.1**
STLK IAmb IAmb 21 47 29.5
comp=Z,6.7nm,0.9s
DHY Denali Highway 68.66 21 P **P** **21 47 27.8 -0.9**
DHY Denali Highway 68.66 21 P **P** **21 47 28.9 +0.1**
baz=323,SNR=18
SPCR Spurr Chakacha 68.71 25 P **P** **21 47 29.8 +0.7**
baz=320
O18K Koktuh Hills 68.76 27 P **P** **21 47 29.5 +0.2**
O18K Koktuh Hills 68.76 27 P **P** **21 47 30.3 +1.1**
baz=318
RIDG Independent Ri 68.79 20 **P** **21 47 28.3 -1.2**
RIDG Independent Ri 68.79 20 P **P** **21 47 29.2 -0.3**
baz=325,SNR=22
O19K Port Alsworth 68.80 26 P **P** **21 47 29.6 +0.1**
O19K Port Alsworth 68.80 26 P **P** **21 47 30.6 +1.1**
baz=319
SCRK Sand Creek 68.81 20 P **P** **21 47 28.8 -0.9**
SCRK Sand Creek 68.81 20 P **P** **21 47 30.0 +0.3**
baz=325,SNR=17
P17K Kvichak River 68.83 28 P **P** **21 47 30.5 +0.8**
baz=317
M22K Willow 68.92 23 P **P** **21 47 30.8 +0.7**
baz=321
WAT6 Susitna Watana 68.95 22 P **P** **21 47 30.6 0.0**
baz=323,SNR=8.1
I29M Ogilvie Camp, 68.96 17 P **P** **21 47 30.0 -0.4**
I29M IAmb IAmb 21 47 31.1
comp=Z,8.4nm,0.8s
I29M Ogilvie Camp, 68.96 17 P **P** **21 47 30.6 +0.2**
baz=329,SNR=6.1
SUA Susitna One 68.96 24 P **P** **21 47 30.3 -0.3**
SUA IAmb IAmb 21 47 31.6
comp=Z,9.7nm,0.9s
SUA Susitna One 68.96 24 P **P** **21 47 31.1 +0.5**
baz=321
DOT Dot Lake 69.06 20 P **P** **21 47 30.6 -0.5**
DOT IAmb IAmb 21 47 32.5
comp=Z,5.1nm,0.6s
P18K Big Mountain, 69.10 27 P **P** **21 47 31.9 +0.5**
P18K IAmb IAmb 21 47 35.7
comp=Z,12nm,0.9s
P18K Big Mountain, 69.10 27 P **P** **21 47 32.5 +1.1**
baz=318
Q16K King Salmon 69.13 28 P **P** **21 47 32.7 +1.2**
baz=317
PAX Paxson 69.26 21 P **P** **21 47 32.0 -0.4**
PAX IAmb IAmb 21 47 35.1
comp=Z,7.0nm,0.8s
PAX Paxson 69.26 21 P **P** **21 47 32.0 -0.4**
PAX pmax pmax
comp=Z,7.0nm,0.8s
PAX Paxson 69.26 21 P **P** **21 47 32.7 +0.3**
baz=324
GHO Glory Hole Cre 69.26 23 P **P** **21 47 32.4 0.0**
GHO IAmb IAmb 21 47 33.6
comp=Z,11nm,0.8s
PMR Palmer 69.34 23 P **P** **21 47 33.2 +0.4**
baz=322
H31M Peel River 69.37 15 P **P** **21 47 33.2 +0.3**
baz=332
SML Sawmill 69.40 23 P **P** **21 47 32.9 -0.4**
SML Sawmill 69.40 23 P **P** **21 47 33.6 +0.3**
baz=323,SNR=6.8
I30M Mount Dempster 69.48 16 **P** **21 47 32.9 -0.9**
I30M Mount Dempster 69.48 16 P **P** **21 47 34.2 +0.4**
baz=331,SNR=21
RC01 Rabbit Creek A 69.56 24 P **P** **21 47 34.3 +0.1**
RC01 Rabbit Creek A 69.56 24 P **P** **21 47 34.7 +0.6**
baz=322
M23K Glacier View 69.59 22 P **P** **21 47 34.9 +0.5**
baz=323,SNR=10.0
R16K Pilot Point 69.62 29 P **P** **21 47 35.7 +1.1**
baz=317
SCM Sheep Creek Mo 69.67 22 P **P** **21 47 34.7 -0.3**
SCM Sheep Creek Mo 69.67 22 P **P** **21 47 34.7 -0.3**
SCM pmax pmax
comp=Z,34nm,0.7s
SCM Sheep Creek Mo 69.67 22 P **P** **21 47 35.3 +0.3**
baz=323,SNR=8.2
KNK Knik Glacier 69.68 23 P **P** **21 47 35.3 +0.4**
KNK Knik Glacier 69.68 23 P **P** **21 47 35.5 +0.6**
baz=323
Q17K Contact Creek 69.71 28 P **P** **21 47 35.9 +0.6**
baz=318
Q18K Katmai Hardscr 69.73 28 P **P** **21 47 35.9 +0.5**
baz=319
L26K Log Cabin Wild 69.76 20 P **P** **21 47 35.4 0.0**
L26K IAmb IAmb 21 47 37.0
comp=Z,5.4nm,0.7s
L26K Log Cabin Wild 69.76 20 P **P** **21 47 36.2 +0.7**
baz=326
J29N Klondike Camp 69.76 17 P **P** **21 47 35.7 +0.2**
J29N IAmb IAmb 21 47 36.8
comp=Z,9.6nm,0.8s
J29N Klondike Camp 69.76 17 P **P** **21 47 36.1 +0.6**
baz=330
M24K Tolsona, Glenn 69.77 22 P **P** **21 47 35.9 +0.3**
M24K Tolsona, Glenn 69.77 22 P **P** **21 47 36.3 +0.8**
baz=324
HARP HAARP 69.81 21 P **P** **21 47 36.4 +0.7**
baz=325
DAWY Dawson 69.84 18 P **P** **21 47 34.9 -1.1**
DAWY IAmb IAmb 21 47 36.9
comp=Z,6.2nm,0.8s
DAWY Dawson 69.84 18 P **P** **21 47 36.3 +0.3**
baz=329
SLKM Skilak Lake 69.87 24 P **P** **21 47 35.3 -0.8**
R17L Mt. Peulik Vol 70.01 29 P **P** **21 47 37.4 +0.4**
baz=318
O22K Cooper Landing 70.04 24 P **P** **21 47 37.6 +0.4**
baz=322
J30M Hart River 70.06 16 P **P** **21 47 37.6 +0.2**
baz=331
L27K Beaver Creek, 70.11 19 P **P** **21 47 38.2 +0.6**
baz=327
BCAR Beaver Creek A 70.12 19 P **P** **21 47 37.5 -0.2**
KLU Klutina 70.34 22 P **P** **21 47 39.8 +0.7**
baz=324
M26K Nabesna, AK 70.37 20 P **P** **21 47 40.1 +0.8**
baz=326
K29M Barlow Dome 70.45 17 **P** **21 47 39.4 -0.3**

K29M					IAmb	IAmb	21 47 41.5	
	comp=Z,8.6nm,0.8s							
K29M	**Barlow Dome**	**70.45**	**17**	P	**P**		**21 47 40.3**	**+0.6**
	baz=330,SNR=13							
N25K	**Chitina, Valde**	**70.61**	**21**		**P**		**21 47 41.1**	**+0.3**
N25K					IAmb	IAmb	21 47 48.5	
	comp=Z,10nm,0.7s							
N25K	**Chitina, Valde**	**70.61**	**21**	P	**P**		**21 47 41.6**	**+0.9**
	baz=325							
M27K	**Edge Creek, AK**	**70.69**	**20**	P	**P**		**21 47 42.3**	**+1.0**
	baz=327							
CHNA	**Chernabura Isl**	**70.84**	**32**	P	**P**		**21 47 43.3**	**+1.2**
	baz=316							
BVCY	**Beaver Creek**	**70.90**	**19**	P	**P**		**21 47 43.4**	**+1.0**
	baz=328							
L29M	**L29M**	**70.95**	**18**	P	**P**		**21 47 43.6**	**+0.9**
	baz=330							
BMRM	**Bremner River**	**71.14**	**22**	P	**P**		**21 47 44.7**	**+0.8**
	baz=326							
MCARA	**McCarthy VSAT**	**71.22**	**21**	P	**P**		**21 47 44.5**	**+0.1**
MCARA					IAmb	IAmb	21 47 48.6	
	comp=Z,12nm,0.8s							
MCARA	**McCarthy VSAT**	**71.22**	**21**	P	**P**		**21 47 45.3**	**+1.0**
	baz=327							
KDAK	**Kodiak Island**	**71.23**	**27**	LR	LR		22 21 44.5	
	comp=Z,166nm,18.4s,baz=340,slow=38							
KDAK	**Kodiak Island**	**71.23**	**27**	P	**P**		**21 47 44.3**	**-0.1**
KDAK					IAmb	IAmb	21 47 59.7	
	comp=Z,15nm,1.1s							
KDAK	**Kodiak Island**	**71.23**	**27**	P	**P**		**21 47 44.3**	**-0.1**
KDAK					pmax	pmax		
	comp=Z,15nm,1.1s							
KDAK	**Kodiak Island**	**71.23**	**27**	P	**P**		**21 47 45.3**	**+0.9**
	baz=320							
VRDI	**Verde Repeater**	**71.23**	**21**	P	**P**		**21 47 44.7**	**0.0**
OHAK	**Old Harbor**	**71.42**	**28**	P	**P**		**21 47 46.4**	**+0.8**
OHAK					IAmb	IAmb	21 47 52.8	
	comp=Z,15nm,0.9s							
OHAK	**Old Harbor**	**71.42**	**28**	P	**P**		**21 47 46.8**	**+1.2**
	baz=320							
M29M	**Somme Creek**	**71.45**	**18**	P	**P**		**21 47 46.8**	**+1.0**
	baz=330							
YUK3	**Moose Creek**	**71.55**	**19**	P	**P**		**21 47 47.4**	**+0.8**
	baz=328							
RAGM	**Ragged Mountai**	**71.60**	**22**	P	**P**		**21 47 47.3**	**+0.6**
CHIR	**Chirikof Islan**	**71.64**	**30**	P	**P**		**21 47 48.0**	**+1.0**
	baz=319							
M30M	**Minto, Yukon**	**71.72**	**17**	P	**P**		**21 47 48.2**	**+0.8**
	baz=331							
CRQE	**Cirque**	**71.73**	**21**	P	**P**		**21 47 48.4**	**+0.8**
	baz=327							
TGL	**Tana Glacier**	**71.80**	**21**	P	**P**		**21 47 48.8**	**+0.9**
BARN	**Barnard Glacie**	**71.85**	**20**	P	**P**		**21 47 48.4**	**0.0**
BARN					IAmb	IAmb	21 47 52.1	
	comp=Z,7.7nm,0.8s							
CTG	**Chitna Glacier**	**72.01**	**20**	P	**P**		**21 47 50.3**	**+1.0**
	baz=328							
CTGM	**Chitina Glacie**	**72.02**	**20**	P	**P**		**21 47 50.0**	**+0.6**
CTGM					IAmb	IAmb	21 47 52.0	
	comp=Z,11nm,0.8s							
GRNC	**Granite Creek**	**72.10**	**21**	P	**P**		**21 47 51.2**	**+1.3**
GRNC					IAmb	IAmb	21 47 51.6	
	comp=Z,12nm,0.8s							
KNRA	**Kununurra**	**72.11**	**132**	P	**P**		**21 47 50.4**	**+0.2**
YUK8	**Steele Glacier**	**72.14**	**19**	P	**P**		**21 47 51.1**	**+0.8**
	baz=329							
FRB	**Frobisher Bay**	**72.15**	**346**	LR	LR		22 24 16.3	
	comp=Z,92nm,18.3s,baz=43,slow=40							
YUK4	**Talbot Arm**	**72.36**	**19**	P	**P**		**21 47 51.9**	**+0.5**
	baz=330,SNR=7.4							
FITZ	**Fitzroy Crossi**	**72.39**	**136**	P	**P**		**21 47 51.6**	**-0.2**
	comp=Z,4.5nm,0.6s,baz=310,slow=7.9,SNR=2.7							
	comp=Z,4.5nm,0.6s							
O28M	**Mount Upton**	**72.47**	**20**	P	**P**		**21 47 53.1**	**+0.9**
	baz=329							
PSA00	**Pilbara Seismi**	**72.49**	**142**	P	**P**		**21 47 52.4**	**0.0**
MESA	**MESA**	**72.52**	**21**	P	**P**		**21 47 53.4**	**+1.0**
MESA	**MESA**	**72.52**	**21**	P	**P**		**21 47 53.7**	**+1.3**
	baz=328							
M31M	**Drury Creek, Y**	**72.57**	**17**	P	**P**		**21 47 52.5**	**0.0**
M31M					IAmb	IAmb	21 47 54.0	
	comp=Z,7.9nm,0.8s							
M31M	**Drury Creek, Y**	**72.57**	**17**	P	**P**		**21 47 53.4**	**+0.9**
	baz=333,SNR=7.1							
N30M	**Aishikik Lake**	**72.63**	**18**	P	**P**		**21 47 53.4**	**+0.5**
N30M	**Aishikik Lake**	**72.63**	**18**	P	**P**		**21 47 54.2**	**+1.3**
	baz=331							
FARO	**Faro, Yukon**	**72.77**	**16**	P	**P**		**21 47 55.0**	**+1.4**
	baz=334							
YUK6	**Outpost Mounta**	**72.78**	**19**	P	**P**		**21 47 54.7**	**+0.7**
	baz=330							
MMPY	**Sheldon Lake,**	**72.83**	**15**	P	**P**		**21 47 54.9**	**+0.8**
MMPY	**Sheldon Lake,**	**72.83**	**15**	P	**P**		**21 47 55.2**	**+1.1**
	baz=335							
N31M	**Braeburn, Yuko**	**72.91**	**18**	P	**P**		**21 47 54.7**	**+0.2**
N31M					IAmb	IAmb	21 47 56.9	
	comp=Z,13nm,0.8s							
N31M	**Braeburn, Yuko**	**72.91**	**18**	P	**P**		**21 47 55.3**	**+0.8**
	baz=332,SNR=5.3							
PCA	**Pinnacle**	**73.03**	**20**	P	**P**		**21 47 55.5**	**+0.2**
PINM	**Pinnacle**	**73.04**	**20**	P	**P**		**21 47 56.4**	**+1.1**
	baz=329							
HYT	**Haines Junctio**	**73.09**	**19**	P	**P**		**21 47 55.8**	**+0.1**
HYT					IAmb	IAmb	21 47 57.9	
	comp=Z,14nm,0.9s							
HYT	**Haines Junctio**	**73.09**	**19**	P	**P**		**21 47 56.8**	**+1.1**
	baz=331,SNR=6.0							
TORD	**Torodi Ar. Bea**	**73.47**	**273**	P	**P**		**21 47 57.5**	**-1.0**
	comp=Z,3.1nm,0.5s,baz=45,slow=6.2,SNR=66							
	comp=Z,3.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**73.47**	**273**	P	**P**		**21 47 57.5**	**-1.0**
O30N	**Mendenhall**	**73.47**	**18**	P	**P**		**21 47 59.2**	**+1.3**
	baz=332							
WRGLY	**Wrigley**	**73.59**	**11**	P	**P**		**21 47 58.5**	**+0.1**
WRGLY					IAmb	IAmb	21 48 00.7	
	comp=Z,12nm,0.8s							
WRGLY	**Wrigley**	**73.59**	**11**	P	**P**		**21 47 59.9**	**+1.5**
	baz=341							
N32M	**Quiet Lake**	**73.80**	**16**	P	**P**		**21 48 01.0**	**+1.2**
	baz=334							
P30M	**Million Dollar**	**73.84**	**19**	P	**P**		**21 48 00.9**	**+0.9**
	baz=331							
WHY	**Whitehorse**	**73.84**	**18**	P	**P**		**21 48 00.7**	**+0.6**
	baz=333							
BLKN	**Baker Lake**	**74.29**	**359**	P	**P**		**21 48 02.4**	**-0.1**
BLKN					IAmb	IAmb	21 48 04.1	
	comp=Z,11nm,0.8s							
TGTN	**Hyland Airport**	**74.40**	**14**	P	**P**		**21 48 04.4**	**+1.1**
	baz=338							
P33M	**Teslin, Yukon**	**74.70**	**17**	P	**P**		**21 48 04.7**	**-0.4**
P33M	**Teslin, Yukon**	**74.70**	**17**	P	**P**		**21 48 05.7**	**+0.6**
	baz=334							
LSZ	**Lusaka**	**74.77**	**233**	LR	LR		22 22 20.5	
	comp=Z,57nm,18.2s,baz=36,slow=37							
LSZ	**Lusaka**	**74.77**	**233**	P	**P**		**21 48 07.0**	**+0.9**
LSZ					IAmb	IAmb	21 48 12.2	
	comp=Z,10nm,1.1s							
LSZ	**Lusaka**	**74.77**	**233**	P	**P**		**21 48 07.0**	**+0.9**
LSZ					pmax	pmax		
	comp=Z,10.0nm,1.2s							
YKAW3	**Yellowknife Wh**	**75.32**	**7**	P	**P**		**21 48 07.9**	**-0.6**
YKAW3					IAmb	IAmb	21 48 09.6	
	comp=Z,7.2nm,0.8s							
YKA	**Yellowknife Ar**	**75.39**	**7**	P	**P**		**21 48 07.1**	**-1.8**
	comp=Z,4.2nm,0.8s,baz=341,slow=6.1,SNR=48							
YKA					LR	LR	22 25 45.3	
	comp=Z,64nm,18.1s,baz=323,slow=39							
	comp=Z,4.2nm,0.8s							
YKA	**Yellowknife Ar**	**75.39**	**7**	P	**P**		**21 48 07.6**	**-1.3**
YKA	**Yellowknife Ar**	**75.39**	**7**	P	**P**		**21 48 07.6**	**-1.3**
YKAW1	**Yellowknife Wh**	**75.41**	**7**		**P**		**21 48 08.6**	**-0.4**
YKAW1					IAmb	IAmb	21 48 10.2	
	comp=Z,9.0nm,0.8s							
R33M	**Jennings River**	**75.84**	**16**		**P**		**21 48 11.7**	**0.0**
R33M					IAmb	IAmb	21 48 13.6	
	comp=Z,9.4nm,0.9s							
R33M	**Jennings River**	**75.84**	**16**	P	**P**		**21 48 12.8**	**+1.1**
	baz=336							
DLBC	**Dease Lake**	**76.92**	**16**	LR	LR		22 25 15.5	
	comp=Z,56nm,19.5s,baz=248,slow=38							
S34M	**Telegraph Cree**	**77.16**	**17**	P	**P**		**21 48 20.3**	**+1.2**
	baz=336							
KUQ	**Kuujjuuaa**	**77.33**	**344**	P	**P**		**21 48 20.0**	**+0.1**
T35M	**Bob Quinn**	**78.21**	**17**	P	**P**		**21 48 26.4**	**+1.4**
	baz=337							
WRA	**Warramunga Arr**	**78.68**	**130**	P	**P**		**21 48 27.0**	**-0.9**
	comp=Z,7.6nm,0.9s,baz=326,slow=5.1,SNR=8.5							
	comp=Z,7.6nm,0.9s							
FCC	**Fort Churchill**	**79.81**	**357**		**P**		**21 48 33.5**	**-0.1**
FCC	**Fort Churchill**	**79.81**	**357**	P	**P**		**21 48 33.5**	**-0.1**
FCC				pmax	pmax			
	comp=Z,6.0nm,0.8s							
SCHQ	**Schefferville**	**80.00**	**342**	P	**P**		**21 48 34.5**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=45,slow=7.1,SNR=5.8							
SCHQ				LR	LR		22 28 45.4	
	comp=Z,52nm,18.3s,baz=2.5,slow=39							
	comp=Z,3.5nm,0.8s							
SCHQ	**Schefferville**	**80.00**	**342**	P	**P**		**21 48 34.1**	**-0.6**
ASAR	**Alice Springs**	**81.38**	**132**	P	**P**		**21 48 41.7**	**-0.8**
	comp=Z,3.7nm,0.7s,baz=327,slow=5.2,SNR=9.8							
ASAR				LR	LR		22 28 29.0	
	comp=Z,29nm,19.7s,baz=258,slow=38							
	comp=Z,3.7nm,0.7s							
ASAR	**Alice Springs**	**81.38**	**132**	P	**P**		**21 48 42.4**	**-0.1**
ASAR	**Alice Springs**	**81.38**	**132**	P	**P**		**21 48 42.4**	**-0.1**
DBIC	**Dimbokro**	**82.55**	**272**	P	**P**		**21 48 48.4**	**-0.5**
	comp=Z,3.9nm,0.5s,baz=62,slow=7.0,SNR=7.0							
DBIC				LR	LR		22 30 14.3	
	comp=Z,65nm,19.0s,baz=70,slow=39							
	comp=Z,3.9nm,0.5s							
DBIC	**Dimbokro**	**82.55**	**272**	P	**P**		**21 48 48.1**	**-0.9**
DBIC					IAmb	IAmb	21 48 57.0	
	comp=Z,12nm,0.9s							
BBB	**Bella Bella**	**83.12**	**18**	LR	LR		22 32 24.3	
	comp=Z,100nm,19.1s,baz=337,slow=40							
FFC	**Flin Flon**	**83.91**	**2**	P	**P**		**21 48 54.8**	**-0.5**
FFC					IAmb	IAmb	21 48 56.2	
	comp=Z,8.8nm,0.8s							
FFC	**Flin Flon**	**83.91**	**2**	P	**P**		**21 48 54.8**	**-0.5**
FFC					pmax	pmax		
	comp=Z,9.0nm,0.8s							
TSUM	**Tsumeb**	**84.29**	**238**	LR	LR		22 28 13.4	
	comp=Z,71nm,18.4s,baz=80,slow=37							
EDM	**Edmonton**	**84.63**	**9**	P	**P**		**21 48 58.2**	**-0.9**
EDM	**Edmonton**	**84.63**	**9**	P	**P**		**21 48 58.2**	**-0.9**
EDM					pmax	pmax		
	comp=Z,10.0nm,0.8s							
BOSA	**Boshof**	**86.89**	**227**	P	**P**		**21 49 10.2**	**-0.3**
	comp=Z,7.6nm,1.0s,baz=9.5,slow=6.1,SNR=4.4							
BOSA				LR	LR		22 30 35.9	
	comp=Z,34nm,18.2s,baz=21,slow=37							
	comp=Z,7.6nm,1.0s							
BOSA	**Boshof**	**86.89**	**227**	P	**P**		**21 49 10.1**	**-0.5**
BOSA					IAmb	IAmb	21 49 14.8	
	comp=Z,12nm,1.1s							
ULM	**Lac du Bonnet**	**88.38**	**358**	P	**P**		**21 49 16.9**	**-0.6**
	comp=Z,3.6nm,0.8s,baz=350,slow=4.0,SNR=6.6							
ULM				LR	LR		22 33 38.7	
	comp=Z,52nm,18.2s,baz=11,slow=39							
	comp=Z,3.6nm,0.8s							
ULM	**Lac du Bonnet**	**88.38**	**358**	P	**P**		**21 49 15.9**	**-1.5**
ULM					IAmb	IAmb	21 49 21.9	
	comp=Z,5.2nm,1.1s							
JTMT	**Jette**	**89.90**	**10**	P	**P**		**21 49 24.3**	**-0.5**
F10A	**Beach Ranch, E**	**91.19**	**13**	P	**P**		**21 49 30.7**	**-0.1**
F10A					IAmb	IAmb	21 49 33.7	
	comp=Z,5.1nm,0.8s							
STKA	**Stephens Creek**	**92.01**	**132**	LR	LR		22 36 31.4	
	comp=Z,50nm,18.2s,baz=235,slow=39							
SADO	**Sadowa**	**92.09**	**346**	LR	LR		22 34 07.5	
	comp=Z,44nm,18.1s,baz=331,slow=38							
PLID	**Pearl Lake**	**92.25**	**12**	P	**P**		**21 49 35.2**	**-0.7**
PLID					IAmb	IAmb	21 49 37.4	
	comp=Z,4.7nm,1.1s							
I07A	**Izee**	**92.62**	**15**	P	**P**		**21 49 37.5**	**0.0**
I07A					IAmb	IAmb	21 49 39.8	
	comp=Z,5.2nm,1.0s							
J08A	**Circle Bar Ran**	**93.51**	**14**	P	**P**		**21 49 41.3**	**-0.3**
J08A					IAmb	IAmb	21 49 44.8	
	comp=Z,7.5nm,1.1s							
HLID	**Hailey**	**93.98**	**11**	P	**P**		**21 49 44.3**	**+0.4**
PDAR	**Pinedale Array**	**95.37**	**8**	LR	LR		22 37 00.9	
	comp=Z,33nm,18.6s,baz=340,slow=38							
HWUT	**Hardware Ranch**	**96.29**	**9**	P	**P**		**21 49 53.8**	**-0.6**
HWUT					IAmb	IAmb	21 49 56.6	
	comp=Z,5.4nm,0.9s							
ELK	**Elko**	**96.61**	**12**	LR	LR		22 38 52.8	
	comp=Z,48nm,19.3s,baz=350,slow=39							
NVAR	**Mina Array Bea**	**98.31**	**15**	P	Pdif		21 50 05.1	**+1.4**
	comp=Z,0.7nm,0.5s,baz=328,slow=8.3,SNR=3.5							
NVAR				LR	LR		22 37 57.2	
	comp=Z,37nm,20.6s,baz=38,slow=38							
	comp=Z,0.7nm,0.5s							
X48A	**Hartselle**	**103.43**	**350**		PKKPdf		22 06 23.2	-2.3
NVL	**N'lazarevskaya**	**122.50**	**202**	*e*PKIKP	PKPdf		21 55 08.1	-12
NVL				*e*			22 02 16.6	
NVL				pmax	pmax			
	comp=Z,195nm,2.3s							
NVL				MLR	MLR			
	comp=Z,405nm,19.0s							

IDC 28 21:40:52.8±3.0, 21°.90S×122°.37E, h0km, mbtmp3.9/5, ML3.9/4, Error ellipse: s-maj=37.7km s-min=21.7km az=117.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**4.87**	**40**	Pn	Pn	21 42 07.0	-0.3
	3.3nm,0.3s,baz=221,slow=12,SNR=99						
FITZ				Pg	Pb	21 42 22.5	+3.5
	3.0nm,0.3s,baz=219,slow=14,SNR=7.7						
FITZ				Sn	Sn	21 43 00.3	-4.2
	5.0nm,0.3s,baz=329,slow=18,SNR=14						
FITZ				Lg	Lg	21 43 26.9	
	2.8nm,0.3s,baz=319,slow=23,SNR=3.8						
	7.9nm,0.3s						
ASAR	**Alice Springs**	**10.79**	**102**	Pn	Pn	21 43 29.7	+1.0
	1.2nm,0.3s,baz=281,slow=12,SNR=56						
ASAR				Sn	Sn	21 45 30.4	+0.1
	0.6nm,0.3s,baz=275,slow=24,SNR=6.3						
ASAR				Lg	Lg	21 46 35.7	
	0.3nm,0.3s,baz=274,slow=26,SNR=4.5						
	2.5nm,0.3s						
WRA	**Warramunga Arr**	**11.36**	**82**	Pn	Pn	21 43 35.2	-1.2
	0.5nm,0.3s,baz=260,slow=12,SNR=19						
WRA				Sn	Sn	21 45 37.7	-6.5
	0.9nm,0.3s,baz=256,slow=21,SNR=7.1						
WRA				Lg	Lg	21 46 56.6	
	baz=249,slow=30						
	0.7nm,0.4s						
NWAO	**Narrogin (SRO)**	**11.89**	**201**	Pn	Pn	21 43 43.3	-0.4
	5.6nm,0.6s,baz=25,slow=11,SNR=13						
NWAO				Sn	Sn	21 45 49.2	-8.0
	2.1nm,0.3s,baz=133,slow=23,SNR=6.2						
NWAO				Lg	Lg	21 47 00.5	
	1.0nm,0.3s,baz=111,slow=15,SNR=4.2						
STKA	**Stephens Creek**	**19.80**	**124**	P	P	21 45 25.3	+0.5
	0.2nm,0.3s,baz=312,slow=12,SNR=4.0						
STKA				S	S	21 49 01.7	-7.0
	0.7nm,0.4s,baz=268,slow=17,SNR=3.0						
	0.8nm,0.3s						

*AFAD **28** 21:42:10.8, 39°.00N×27°.89E, h7km±4km, ML2.1*
ISK 28 21:42:09.8, 38°.96N×27°.87E, h11km, ML1.7/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GORD	**Gordes-Manisa**	**0.24**	**102**	Pg	Pg	21 42 15.2	+0.3
GORD				Sg	Sg	21 42 19.1	+0.8
GOMA	**Golmarmara-Man**	**0.25**	**172**	Pg	Pg	21 42 15.4	+0.4
GOMA				Sg	Sg	21 42 19.5	+1.0
SOMA	**Soma-Manisa**	**0.33**	**307**	Pg	Pg	21 42 16.7	+0.3
SOMA				Sg	Sg	21 42 21.9	+1.0
STEP	**BALIKESIR_Sava**	**0.43**	**344**	P	Pg	21 42 18.4	+0.1
STEP				IAML		21 42 25.0	
	comp=N,302nm,0.5s						
STEP				IAML		21 42 25.0	
	comp=E,263nm,0.2s						
STEP				S	Sg	21 42 25.0	+0.9
BALB	**Balikesir**	**0.68**	**0**	Pg	Pb	21 42 23.8	+0.1
ODEM	**Odemis-Izmir**	**0.70**	**167**	Pg	Pb	21 42 24.4	+0.4
ODEM				Sg	Sb	21 42 33.9	+0.2
KULA	**Kula-Manisa**	**0.76**	**126**	Pg	Pg	21 42 24.6	+0.1
DKL	**Dikili**	**0.76**	**279**	Pg	Pb	21 42 25.5	+0.5
BKES	**Balkesir-Mer**	**0.77**	**3**	P	Pb	21 42 25.6	+0.3
BKES				S	Sg	21 42 35.3	+0.4
BALY	**Balya**	**0.80**	**346**	P	Pg	21 42 24.9	-0.4
BALY				S	Sb	21 42 36.5	-0.3
BALY				IAML		21 42 37.0	
	comp=E,82nm,0.4s						
BALY				IAML		21 42 38.0	
	comp=N,64nm,0.4s						

DST	**Dursunbey**	**0.87**	**42**	Pg	Pb		21 42 26.9	0.0
BLCB	**Balcova**	**0.87**	**229**	Pg	Pb		21 42 26.9	+0.1
SIMA	**Simav-Kutahya**	**0.87**	**82**	Pg	Pb		21 42 27.1	+0.1
SMAA	**Simav-Kutahya**	**0.87**	**80**	Pg	Pb		21 42 27.4	+0.4
BLKS	**Balkesir-Sus**	**0.92**	**5**	P	Pb		21 42 27.8	+0.1
BLKS				S	Sg		21 42 38.8	-0.6
AYDB	**Zeytinkoy-Aydi**	**1.01**	**179**	Pg	Pn		21 42 29.7	-0.3
SUSR	**Susurluk-Balik**	**1.01**	**9**	Pg	Pb		21 42 29.6	+0.2
NAZL	**Nazilli-Aydin**	**1.05**	**162**	Pg	Pn		21 42 30.3	-0.1
CMHT	**Manyas**	**1.05**	**4**	P	Pb		21 42 29.7	-0.3
CMHT				S	Sg		21 42 42.0	-1.8
CMHT				IAML			21 42 43.0	
	comp=N,60nm,0.9s							
CMHT				IAML			21 42 47.0	
	comp=E,43nm,0.4s							
SHAP	**Saphane-Kutahy**	**1.05**	**86**	Pg	Pn		21 42 30.4	-0.2
YENI	**Yenice-Canakka**	**1.09**	**334**	Pn	Pn		21 42 31.1	+0.1
GONE	**Gonen-Balikesi**	**1.09**	**352**	Pn	Pn		21 42 31.2	+0.1
GEDZ	**Gediz**	**1.20**	**85**	Pn	Pg		21 42 33.2	+0.3
CANM	**Can-anakkale**	**1.23**	**329**	Pn	Pg		21 42 33.2	-0.2

*IDC **28** 21:50:33.3±1.4, 24°.11S×64°.97W, h0km, mb3.8/2, mbtmp3.6/5, ML3.6/3, MS3.5/2, Error ellipse: s-maj=33.0km s-min=25.2km az=94.0*
*SJA **28** 21:50:36.0±0.6, 23°.71S×64°.58W, h16km±4km, ML3.7, MW3.9*
ISC 28 21:50:37.2±0.8, 23°.71S±0°.05×64°.58W±0°.05, h10km, n14, σ1°.78/17, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.31**	**220**	*e*P	**Pn**	**21 51 01.2**	**-0.6**
SLA				*e*S	**Sb**	**21 51 20.0**	**+0.9**
SALTA		**1.69**	**252**	*e*P	**Pn**	**21 51 07.8**	**+0.5**
SALTA				*e*S	**Sn**	**21 51 30.2**	**+1.1**
SALTA				IAML		21 51 31.3	
	comp=Z,716nm,1.1s						
YJA	**Yavi**	**1.75**	**330**	*e*P	**Pn**	**21 51 08.7**	**+0.7**
YJA				*e*S	**Sn**	**21 51 34.0**	**+3.5**
FSA	**Cafayete**	**2.71**	**208**	*e*P	Pn	21 51 16.5	-4.5
FSA				*e*P	Pb	21 51 22.0	-3.9
FSA				*e*S	**Sn**	**21 51 57.1**	**+3.2**
AHML	**Horco Molle**	**3.14**	**192**	*e*P	Pn	21 51 22.0	-4.8
AHML				*e*S	**Sn**	**21 52 06.0**	**+1.6**
AHML				IAML		21 52 22.8	
	comp=Z,220nm,0.7s						
TINO	**Tinogasta**	**5.10**	**211**	*e*P	**Pb**	**21 52 04.6**	**-2.1**
CPUP	**Villa Florida**	**7.08**	**113**	Pn	**Pn**	**21 52 21.5**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=291,slow=13,SNR=15						
CPUP				Pg	**Pg**	**21 52 53.0**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=289,slow=18,SNR=6.3						
CPUP				Lg	Lg	21 54 20.9	
	comp=Z,2.4nm,0.3s,baz=200,slow=15,SNR=3.1						
	comp=Z,4.9nm,0.6s						
LPAZ	**La Paz**	**8.10**	**335**	Pn	**Pn**	**21 52 35.3**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=166,slow=9.9,SNR=4.3						
LPAZ				Sn	**Sn**	**21 54 04.9**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=212,slow=6.7,SNR=1.7						
	comp=Z,0.5nm,0.4s						
SIV	**San Ignacio**	**8.36**	**24**	Pn	**Pn**	**21 52 39.7**	**+1.2**
SIV				Sn	**Sn**	**21 54 11.1**	**-1.9**
SIV				Lg	Lg	21 55 00.5	
CFA	**Coronel Fontan**	**8.51**	**202**	Pn	Pn	21 52 29.7	-11
	comp=Z,0.3nm,0.3s,baz=24,slow=15,SNR=2.4						
CFA				Lg	Lg	21 54 48.5	
	comp=Z,0.3nm,0.3s,baz=0.1,slow=20,SNR=1.8						
	comp=Z,0.6nm,0.3s						
ATAH	**Atahualpa**	**21.15**	**319**	LR	LR	22 04 29.6	
	comp=Z,37nm,21.8s,baz=88,slow=39						
TORD	**Torodi Ar. Bea**	**74.40**	**68**	P	**P**	**22 02 16.1**	**+0.2**
	comp=Z,1.7nm,1.0s,baz=244,slow=7.8,SNR=6.5						
	comp=Z,1.7nm,1.0s						
PDAR	**Pinedale Array**	**78.05**	**328**	P	**P**	**22 02 35.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=141,slow=7.0,SNR=3.6						
	comp=Z,0.3nm,0.5s						
MAW	**Mawson**	**81.04**	**162**	LR	LR	22 39 35.0	
	comp=Z,88nm,18.1s,baz=255,slow=36						

*SOME **28** 21:52:25.6, 41°.92N×81°.40E, h5km*
NNC 28 21:52:26.8±3.6, 41°.89N×81°.39E, h0km, mb3.8, mpv3.1, Error ellipse: s-maj=32.5km s-min=23.3km az=44.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.90**	**312**	P	Pn	21 52 58.2	-2.5
	22nm,0.2s						
SHLS				S	Sn	21 53 21.8	-3.6
	46nm,0.4s						
SHLS	**Shalkode**	**1.90**	**312**	*e*P	Pn	21 52 58.2	-2.5
	22nm,0.2s						
SHLS				*e*S	Sn	21 53 21.8	-3.6
	46nm,0.4s						
UZB	**Uzynbulak**	**2.15**	**306**	Pg	Pb	21 53 06.5	-0.3
	8.7nm

JNS	**Sasagawa**	**1.72**	**324**	P		**Pn**	**21 59 10.4**	**+0.7**
JNS				S		**Sn**	**21 59 31.9**	**+0.3**
MJAR	**Matsushiro Arr**	**1.94**	**274**	P		**Pn**	**21 59 12.5**	**0.0**
	58nm,0.7s,baz=90,slow=15,SNR=167							
MJAR				S		**Sn**	**21 59 40.1**	**+3.5**
	14nm,0.7s,baz=302,slow=25,SNR=5.0							
JHJ	**Hachijo jima 2**	**3.38**	**192**	P		**Pn**	**21 59 31.4**	**-0.2**
	53nm,0.4s,baz=56,slow=24,SNR=1.9							
JHJ				S		**Sn**	**22 00 09.8**	**-0.9**
	127nm,0.3s,baz=114,slow=22,SNR=12							
ASAJ	**Asahikawa**	**7.82**	**11**	P		**Pn**	**22 00 30.0**	**-1.7**
	1.3nm,0.4s,baz=256,slow=8.9,SNR=5.5							
ASAJ				S		**Sn**	**22 01 52.4**	**-6.1**
	4.0nm,0.9s,baz=266,slow=17,SNR=2.1							
USRK	**Ussuriysk Ar.**	**10.17**	**322**	P		**Pn**	**22 01 03.7**	**0.0**
	2.2nm,0.7s,baz=138,slow=12,SNR=4.5							
SONM	**Songino Array**	**27.59**	**305**	P		**P**	**22 04 18.3**	**-0.7**
	0.4nm,0.5s,baz=110,slow=9.4,SNR=4.3							
	0.4nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.41**	**119**	T		T	22 34 45.3	
	baz=312,slow=75,SNR=5.8							
H11N1	**WAKE ISLAND Hy**	**28.42**	**119**	T		T	22 34 46.0	
	baz=312,slow=75,SNR=9.6							
H11N3	**WAKE ISLAND Hy**	**28.43**	**119**	T		T	22 34 46.7	
	baz=312,slow=75,SNR=4.7							
H11S1	**WAKE ISLAND Hy**	**29.09**	**121**	T		T	22 35 27.4	
	baz=314,slow=76,SNR=24							
H11S3	**WAKE ISLAND Hy**	**29.09**	**121**	T		T	22 35 27.5	
	baz=314,slow=76,SNR=8.5							
H11S2	**WAKE ISLAND Hy**	**29.11**	**121**	T		T	22 35 28.5	
	baz=314,slow=76,SNR=15							
ZALV	**Zalesovo Beam**	**41.84**	**313**	P		**P**	**22 06 21.4**	**+0.4**
	0.8nm,0.5s,baz=100,slow=6.8,SNR=4.6							
	0.8nm,0.5s							
MKAR	**Makanchi Array**	**43.89**	**303**	P		**P**	**22 06 38.4**	**+0.7**
	0.3nm,0.6s,baz=88,slow=8.1,SNR=5.9							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**45.86**	**308**	P		**P**	**22 06 53.1**	**-0.1**
	1.1nm,0.5s,baz=84,slow=7.8,SNR=5.1							
BVAR	**Borovoye Array**	**50.50**	**313**	P		**P**	**22 07 28.8**	**-0.1**
	0.3nm,0.4s,baz=94,slow=6.4,SNR=6.5							
	0.3nm,0.4s							
WRA	**Warramunga Arr**	**56.39**	**187**	P		**P**	**22 08 11.6**	**-0.6**
	0.6nm,0.5s,baz=1.8,slow=7.5,SNR=14							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**60.11**	**187**	P		**P**	**22 08 38.3**	**+0.2**
	0.2nm,0.6s,baz=8.9,slow=8.9,SNR=4.7							
	0.2nm,0.6s							

IDC ***28*** *22:04:10.2±0.8, 19°.62N×109°.22W, h0km, mb4.0/11, mbtmp4.0/14, ML3.6/3, MS3.5/15, Error ellipse: s-maj=21.7km s-min=15.9km az=103.0*

NEIC ***28*** *22:04:11.9±1.9, 19°.6N±0°.1×109°.3W±0°.1, h10km±2km, mb4.1/136, Error ellipse: s-maj=23.9km s-min=17.1km az=265.0*

MEX ***28*** *22:04:11.8±0.5, 19°.60N×109°.08W, h10km, MD4.2*

ISC 28 22:04:11.2±0.6, 19°.57N±0°.07×109°.32W±0°.07, h10km, n383, σ0.85/369, mb4.2/23, MS3.6/11, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H06N1	**SOCORRO T-PHAS**	**1.73**	**246**	Pn	**Pb**	**22 04 43.5**	**+0.4**
H06N1				Sn	**Sn**	**22 05 02.7**	**-0.8**
H06N1				T	T	22 06 46.6	
	SNR=29						
H06N	**Isla Socorro**	**1.73**	**246**	*e*P	**Pn**	**22 04 40.9**	**-0.5**
H06S1	**SOCORRO T**	**1.76**	**242**	Pn	**Pn**	**22 04 42.5**	**+0.6**
H06S1				Sn	**Sn**	**22 05 02.6**	**-1.6**
H06S1				T	T	22 06 46.1	
	SNR=8.8						
H06S		**1.77**	**242**	*e*P	**Pn**	**22 04 42.1**	**+0.3**
CJM	**Chamela**	**4.03**	**90**	*e*P	Pn	22 05 08.7	-4.4
CJM				*e*S	Sn	22 05 49.8	-11
SLBS	**Sierra La Lagu**	**4.13**	**352**		**Pn**	**22 05 13.0**	**-1.6**
SLBS					**Sn**	**22 06 04.9**	**+1.9**
SLBS	**Sierra La Lagu**	**4.13**	**352**	*e*P	**Pn**	**22 05 12.7**	**-1.8**
LPIG	**La Paz**	**4.60**	**349**	LR	LR	22 05 57.8	
	comp=Z,31nm,21.7s,baz=112,slow=24						
TX31	**Lajitas Ar. Si**	**10.99**	**27**		**Pn**	**22 06 48.7**	**0.0**
TXAR	**Lajitas Array**	**10.99**	**27**	Pn	**Pn**	**22 06 48.2**	**-0.5**
	0.1nm,0.3s,baz=205,slow=11,SNR=18						
TXAR				LR	LR	22 10 41.0	
	comp=Z,224nm,19.4s,baz=200,slow=36						
	2.2nm,0.9s						
TXAR	**Lajitas Array**	**10.99**	**27**	Pn	**Pn**	**22 06 49.7**	**+1.0**
319A	**Douglas**	**11.75**	**0**	Pn	**Pn**	**22 07 00.4**	**+1.3**
VHRN	**Van Horn**	**11.83**	**18**		**Pn**	**22 07 01.0**	**+0.8**
ALPN	**Alpine**	**11.92**	**24**		**Pn**	**22 07 01.2**	**-0.2**
SAND	**Sanderson**	**12.22**	**31**	Pn	**Pn**	**22 07 07.3**	**+1.8**
TPB01	**Permian Basin**	**12.38**	**23**		**Pn**	**22 07 08.5**	**+0.9**
PIX	**Pinacate**	**12.51**	**343**	Pn	**Pn**	**22 07 11.9**	**+2.6**
TPB05	**Hovey Rd**	**12.53**	**24**	Pn	**Pn**	**22 07 12.1**	**+2.4**
MNTX	**Cornudas Mount**	**12.58**	**16**		**Pn**	**22 07 12.5**	**+2.1**
DRIO	**Del Rio**	**12.60**	**37**	Pn	**Pn**	**22 07 12.8**	**+2.2**
TUC	**Tucson**	**12.75**	**354**		**Pn**	**22 07 14.4**	**+1.6**
121A	**Cookes Peak, D**	**12.98**	**6**		**Pn**	**22 07 18.0**	**+2.1**
MNHN	**Monahans**	**13.12**	**25**	Pn	**Pn**	**22 07 18.7**	**+0.9**
HNDO	**Hondo**	**13.47**	**41**	Pn	**Pn**	**22 07 23.1**	**+0.6**
OZNA	**Ozona**	**13.51**	**32**	Pn	**Pn**	**22 07 24.1**	**+1.0**
113A	**Mohawk Valley,**	**13.73**	**344**		**Pn**	**22 07 27.7**	**+1.7**
ESJX	**Sierra Juarez**	**13.74**	**336**		**Pn**	**22 07 28.3**	**+2.0**
JCT	**Junction City**	**13.86**	**37**	Pn	**Pn**	**22 07 29.4**	**+1.6**
CMIG	**Matias Romero**	**13.93**	**98**	LR	LR	22 12 20.3	
	comp=Z,107nm,19.0s,baz=344,slow=35						
229A	**Bryant Ranch,**	**14.06**	**27**	Pn	**Pn**	**22 07 31.3**	**+0.6**
CBX	**Cerro Bola**	**14.30**	**334**	Pn	**Pn**	**22 07 34.2**	**+0.3**
GLA	**Glamis**	**14.30**	**341**		**Pn**	**22 07 35.5**	**+1.6**
YUH	**Yuha Desert**	**14.30**	**337**	Pn	**Pn**	**22 07 34.9**	**+1.0**
SGCY	**Sterling City**	**14.33**	**29**		**Pn**	**22 07 34.2**	**0.0**
128A	**Castleberry Fa**	**14.36**	**24**		**Pn**	**22 07 35.4**	**+0.5**
Y22A	**Socorro**	**14.46**	**8**		**Pn**	**22 07 37.4**	**+1.2**
SBM	**South Baldy**	**14.47**	**7**	Pn	**Pn**	**22 07 38.6**	**+2.0**
CRNM	**Carthage**	**14.51**	**9**	Pn	**Pn**	**22 07 39.4**	**+2.5**
129A	**Stewart Farms,**	**14.62**	**26**	Pn	**Pn**	**22 07 38.2**	**-0.1**
BAR	**Barrett**	**14.62**	**335**	Pn	**Pn**	**22 07 39.1**	**+0.8**
Y14A	**Wickenburg**	**14.68**	**348**	Pn	**Pn**	**22 07 41.8**	**+2.7**
LENM	**Lemitar**	**14.68**	**8**		**Pn**	**22 07 40.8**	**+1.5**
BLYC	**Blythe**	**14.86**	**343**		**Pn**	**22 07 43.1**	**+1.5**
X16A	**Lo Mia Camp, P**	**14.91**	**353**	Pn	**Pn**	**22 07 44.1**	**+1.9**
X18A	**Snowflake**	**14.91**	**358**	Pn	**Pn**	**22 07 43.7**	**+1.4**
BRDY	**Brady**	**14.92**	**37**		**Pn**	**22 07 42.2**	**-0.1**
DPP	**Dos Picos Cty**	**15.01**	**334**		**Pn**	**22 07 43.6**	**+0.1**
DPP				IAmb	IAmb	22 07 52.4	
	comp=Z,10nm,1.1s						
BORC	**Borrego Spring**	**15.04**	**336**		**Pn**	**22 07 43.6**	**-0.3**
BORC				IAmb	IAmb	22 07 52.4	
	comp=Z,7.9nm,1.2s						
BC3	**Big Chuckawall**	**15.05**	**340**		**Pn**	**22 07 45.3**	**+1.1**
POST	**Post**	**15.14**	**26**	Pn	**Pn**	**22 07 44.8**	**-0.5**
PFO	**Pinyon Flats O**	**15.36**	**337**	Pn	**Pn**	**22 07 50.1**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=163,slow=9.2,SNR=5.3						
PFO				LR	LR	22 13 32.3	
	comp=Z,52nm,18.8s,baz=92,slow=37						
	comp=Z,1.9nm,0.7s						
PFO	**Pinyon Flats O**	**15.36**	**337**	Pn	**Pn**	**22 07 47.8**	**-0.5**
PMD	**Palm Desert**	**15.37**	**337**	Pn	**Pn**	**22 07 48.1**	**-0.1**
PMD				IAmb	IAmb	22 07 56.5	
	comp=Z,11nm,1.1s						
DNR	**Dunn Ranch,Anz**	**15.39**	**336**	Pn	**Pn**	**22 07 49.1**	**+0.5**
IRM	**Iron Mountain**	**15.42**	**342**		**Pn**	**22 07 49.9**	**+0.9**
IRM				IAmb	IAmb	22 07 56.8	
	comp=Z,13nm,1.2s						
SN07	**Snyder 07**	**15.43**	**28**		**Pn**	**22 07 50.1**	**+1.0**
MSTX	**Muleshoe**	**15.48**	**21**		**Pn**	**22 07 50.6**	**+0.8**
MSTX				IAmb	IAmb	22 07 54.9	
	comp=Z,7.7nm,0.8s						
ANMO	**Albuquerque**	**15.52**	**9**	Pn	**Pn**	**22 07 51.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=200,slow=15,SNR=3.5						
ANMO				LR	LR	22 13 25.5	
	comp=Z,150nm,19.6s,baz=184,slow=36						
	comp=Z,1.3nm,0.9s						
ANMO	**Albuquerque**	**15.52**	**9**		**Pn**	**22 07 50.2**	**-0.2**
ANMO	**Albuquerque**	**15.52**	**9**		**Pn**	**22 07 49.7**	**-0.8**
ANMO				IAmb	IAmb	22 07 57.3	
	comp=Z,5.4nm,1.1s						
ABTX	**Abilene, Hawle**	**15.62**	**32**		**Pn**	**22 07 51.6**	**0.0**
ELS	**Elsinore Mount**	**15.77**	**334**	Pn	**Pn**	**22 07 54.1**	**+0.5**
NEE2	**Needles Airpor**	**15.85**	**344**	Pn	**Pn**	**22 07 56.1**	**+1.6**
NEE2				IAmb	IAmb	22 08 01.4	
	comp=Z,11nm,0.9s						
DKNS	**Dickens**	**15.90**	**26**	Pn	**Pn**	**22 07 55.2**	**-0.1**
DKNS				IAmb	IAmb	22 08 00.1	
	comp=Z,18nm,1.3s						
DANC	**Danby, Needles**	**15.94**	**342**	Pn	**Pn**	**22 07 56.1**	**+0.4**
DANC				IAmb	IAmb	22 08 02.7	
	comp=Z,19nm,1.0s						
APMT	**Aspermont**	**15.97**	**29**	Pn	**Pn**	**22 07 55.5**	**-0.5**
W13A	**Hualapai Mount**	**15.98**	**346**		**Pn**	**22 07 56.9**	**+0.4**
WUAZ	**Wupatki**	**15.99**	**354**		**Pn**	**22 07 57.2**	**+0.8**
WUAZ				IAmb	IAmb	22 08 03.1	
	comp=Z,13nm,1.0s						
HKT	**Hockley**	**16.01**	**47**	P	**Pn**	**22 07 57.9**	**+1.4**
HKT				IAmb	IAmb	22 08 05.9	
	comp=Z,8.3nm,0.8s						
PLPT	**Palo Pinto**	**16.45**	**35**	Pn	**Pn**	**22 08 01.9**	**-0.4**
MWC	**Mount Wilson**	**16.53**	**334**	Pn	**Pn**	**22 08 03.4**	**0.0**
MWC				IAmb	IAmb	22 08 24.7	
	comp=Z,16nm,1.4s						
FW13	**Cleburne**	**16.60**	**38**	Pn	**Pn**	**22 08 03.7**	**-0.5**
FW13				IAmb	IAmb	22 08 10.9	
	comp=Z,10nm,0.8s						
V12A	**Nelson**	**16.82**	**344**		**Pn**	**22 08 06.6**	**-0.3**
FW06	**Azle**	**16.99**	**36**	P	**Pn**	**22 08 09.2**	**+0.2**
FW06				IAmb	IAmb	22 08 12.5	
	comp=Z,15nm,0.9s						
U15A	**North Rim**	**16.99**	**352**	P	**Pn**	**22 08 09.2**	**-0.2**
U15A				IAmb	IAmb	22 08 14.1	
	comp=Z,14nm,1.3s						
GSC	**Goldstone, Bar**	**17.01**	**339**	P	**Pn**	**22 08 09.7**	**+0.3**
PH02	**Texas Public H**	**17.05**	**21**	P	**Pn**	**22 08 08.1**	**-1.8**
PH02				IAmb	IAmb	22 08 34.7	
	comp=Z,7.6nm,0.4s						
WTFS	**Witchita Falls**	**17.12**	**32**		**Pn**	**22 08 09.9**	**-0.8**
WTFS				IAmb	IAmb	22 08 13.4	
	comp=Z,20nm,1.0s						
TPO	**Tropico Hills**	**17.17**	**334**		**Pn**	**22 08 10.8**	**-0.6**
SHOC	**Shoshone, Teco**	**17.38**	**341**	Pn	**Pn**	**22 08 13.9**	**0.0**
Z35A	**Perchaven, San**	**17.43**	**36**		**Pn**	**22 08 15.4**	**+0.9**
Z35A				IAmb	IAmb	22 08 55.7	
	comp=Z,14nm,0.6s						
SMWD	**Samnorwood**	**17.43**	**26**	Pn	**Pn**	**22 08 14.2**	**-0.4**
SMWD				IAmb	IAmb	22 08 19.2	
	comp=Z,13nm,1.2s						
LRMC	**Laurel Mtn Rad**	**17.48**	**337**	P	**Pn**	**22 08 14.8**	**-0.5**
MVCO	**Mesa Verde**	**17.59**	**2**	P	**Pn**	**22 08 17.2**	**+0.4**
MVCO				IAmb	IAmb	22 08 21.0	
	comp=Z,9.2nm,0.9s						
QSM	**Queen of Sheba**	**17.63**	**339**	P	**Pn**	**22 08 17.5**	**+0.4**
QSM				IAmb	IAmb	22 08 20.8	
	comp=Z,15nm,1.3s						
SHPR	**Sheep Range**	**17.63**	**344**	P	**Pn**	**22 08 17.2**	**0.0**
KNB	**Kanab**	**17.65**	**351**	P	**Pn**	**22 08 17.9**	**+0.4**
KNB				IAmb	IAmb	22 08 21.5	
	comp=Z,29nm,1.2s						
LCMT	**Little Creek M**	**17.71**	**350**	P	**P**	**22 08 19.3**	**+0.3**
LCMT				IAmb	IAmb	22 08 22.2	
	comp=Z,21nm,1.4s						
CLC	**China Lake**	**17.75**	**337**	P	**P**	**22 08 19.7**	**+0.3**
GWY	**Greenwater Val**	**17.77**	**340**	P	**Pn**	**22 08 19.2**	**+0.3**
NATX	**Nacogdoches**	**17.91**	**44**	P	**Pn**	**22 08 21.3**	**+0.7**
MPMC	**Manual Prospec**	**17.93**	**338**	P	**Pn**	**22 08 21.1**	**+0.1**
PKCU	**Pink Cliffs**	**18.00**	**352**	P	**Pn**	**22 08 22.6**	**+0.7**
PKCU				IAmb	IAmb	22 08 25.8	
	comp=Z,17nm,1.2s						
T25A	**Trinidad**	**18.02**	**13**	P	**Pn**	**22 08 20.9**	**-1.2**
T25A				IAmb	IAmb	22 08 26.2	
	comp=Z,19nm,1.5s						
FURC	**Furnace Creek,**	**18.09**	**340**	P	**Pn**	**22 08 22.5**	**-0.2**
FURC				IAmb	IAmb	22 08 29.8	
	comp=Z,7.0nm,0.5s						
SZCU	**Shurtz Canyon**	**18.26**	**350**	P	**Pn**	**22 08 24.9**	**-0.1**
CCUT	**Cedar City**	**18.26**	**350**	P	**Pn**	**22 08 25.6**	**+0.6**
WCT	**Wildcat Mounta**	**18.31**	**341**	P	**Pn**	**22 08 25.3**	**-0.3**
HMU	**Henry Mountain**	**18.34**	**356**	P	**Pn**	**22 08 26.1**	**0.0**
TPNV	**Topopah Spring**	**18.34**	**342**	P	**Pn**	**22 08 26.0**	**0.0**
TPNV				IAmb	IAmb	22 08 31.4	
	comp=Z,16nm,1.2s						
VES	**Vestal, Richgr**	**18.35**	**334**	P	**Pn**	**22 08 26.1**	**+0.2**
SDCO	**Great Sand Dun**	**18.41**	**10**		**Pn**	**22 08 25.7**	**-1.2**
SDCO				IAmb	IAmb	22 08 31.3	
	comp=Z,11nm,1.2s						
PRN	**Pahroc Range**	**18.46**	**345**	P	**P**	**22 08 27.0**	**-0.3**
CWC	**Cottonwood Cre**	**18.48**	**337**	P	**P**	**22 08 27.3**	**-0.3**
MTPU	**Mount Pierson**	**18.57**	**353**		**P**	**22 08 28.6**	**-0.1**
S11A	**Rachel**	**18.86**	**344**	P	**P**	**22 08 31.5**	**-0.2**
S11A				IAmb	IAmb	22 08 52.9	
	comp=Z,16nm,1.3s						
PSUT	**Pine Spring**	**19.30**	**349**	P	**P**	**22 08 36.1**	**-0.5**
PSUT				IAmb	IAmb	22 08 41.8	
	comp=Z,18nm,1.1s						
Q16A	**Castle Valley**	**19.34**	**356**		**P**	**22 08 36.0**	**-1.1**
Q24A	**Divide**	**19.66**	**10**	P	**P**	**22 08 41.0**	**+0.4**
Q24A				IAmb	IAmb	22 08 45.4	
	comp=Z,9.4nm,1.3s						
OK052	**Battle Ridge R**	**19.72**	**31**	P	**P**	**22 08 39.8**	**-1.2**
OK052				IAmb	IAmb	22 08 44.9	
	comp=Z,20nm,1.2s						
TMUT	**Trail Mountain**	**19.72**	**356**	P	**P**	**22 08 41.9**	**+0.6**
TMUT				IAmb	IAmb	22 08 48.4	
	comp=Z,8.8nm,1.3s						
P17A	**Butcher Ranch,**	**19.87**	**357**	P	**Pn**	**22 08 44.3**	**-0.1**
P17A				IAmb	IAmb	22 08 47.5	
	comp=Z,14nm,1.1s						
MDPB	**Devils Postpil**	**19.91**	**337**	P	**P**	**22 08 43.8**	**+0.5**
MDPB				IAmb	IAmb	22 08 50.0	
	comp=Z,9.0nm,1.3s						
QUOK	**Quay**	**19.91**	**31**	P	**P**	**22 08 42.6**	**-0.5**
OK048	**Pawnee Station**	**19.99**	**30**	P	**P**	**22 08 42.4**	**-1.6**
OK048				IAmb	IAmb	22 08 47.4	
	comp=Z,14nm,1.1s						
P18A	**Preston Nutter**	**20.00**	**358**	P	**P**	**22 08 44.9**	**+0.5**
P18A				IAmb	IAmb	22 08 47.6	
	comp=Z,10nm,1.0s						
NVAR	**Mina Array Bea**	**20.34**	**339**	P	Pn	22 08 50.2	+0.2
	comp=Z,4.1nm,0.8s,baz=164,slow=12,SNR=16						
	comp=Z,4.1nm,0.8s						
ISCO	**Idaho Springs**	**20.41**	**8**		**P**	**22 08 49.0**	**+0.2**
ISCO				IAmb	IAmb	22 08 51.2	
	comp=Z,8.1nm,1.2s						
O20A	**White River Ci**	**20.51**	**2**		**P**	**22 08 50.0**	**+0.2**
O20A				IAmb	IAmb	22 08 52.2	
	comp=Z,17nm,1.1s						
T35A	**Sooner Cattle**	**20.60**	**30**		**P**	**22 08 50.1**	**-0.4**
T35A				IAmb	IAmb	22 08 52.9	
	comp=Z,12nm,1.0s						
CMB	**Columbia Colle**	**20.76**	**335**		**P**	**22 08 52.9**	**+0.5**
DUG	**Dugway, Tooele**	**20.77**	**352**		**P**	**22 08 53.3**	**+0.7**
X40A	**Basin Creek Fa**	**20.84**	**41**	P	**P**	**22 08 51.9**	**-1.3**
RDMU	**Red Mountain**	**20.93**	**359**	P	**P**	**22 08 53.9**	**-0.5**
RDMU				IAmb	IAmb	22 08 59.5	
	comp=Z,8.4nm,0.8s						
BSUT	**Blindstream Ca**	**20.93**	**357**		**P**	**22 08 53.8**	**-0.7**
BSUT				IAmb	IAmb	22 08 56.7	
	comp=Z,7.3nm,1.0s						
HAYD	**Hayden**	**20.95**	**4**	P	**P**	**22 08 55.5**	**+0.9**
HAYD				IAmb	IAmb	22 09 10.4	
	comp=Z,11nm,1.4s						
U38A	**Gravette**	**21.31**	**35**	P	**P**	**22 08 56.7**	**-1.6**
U38A				IAmb	IAmb	22 08 58.1	
	comp=Z,14nm,1.1s						
HHAR	**Hobbs**	**21.44**	**36**	P	**P**	**22 08 59.0**	**-0.7**
HHAR				IAmb	IAmb	22 09 02.2	
	comp=Z,10nm,1.0s						
BGU	**Big Grassy Mou**	**21.52**	**352**	P	**P**	**22 08 59.8**	**-0.8**
BGU				IAmb	IAmb	22 09 07.7	
	comp=Z,10nm,1.3s						
TCUT	**Toone Canyon**	**21.55**	**356**	P	**P**	**22 09 00.9**	**-0.1**
ELK	**Elko**	**21.70**	**348**	P	**P**	**22 09 03.5**	**+0.9**
	comp=Z,3.0nm,1.0s,baz=161,slow=8.7,SNR=3.3						
	comp=Z,3.0nm,1.0s						
ELK	**Elko**	**21.70**	**348**		**P**	**22 09 02.9**	**+0.3**
ELK				IAmb	IAmb	22 09 05.0	
	comp=Z,6.8nm,1.2s						
WHAR	**Wooly Hollow**	**21.71**	**40**		**P**	**22 09 01.6**	**-0.9**
WHAR				IAmb	IAmb	22 09 05.3	
	comp=Z,9.0nm,0.9s						
MPK	**Martis Peak**	**21.72**	**337**	P	**P**	**22 09 02.9**	**-0.1**
MPK				IAmb	IAmb	22 09 08.3	
	comp=Z,12nm,1.0s						
SPUT	**South Promonto**	**21.83**	**354**	P	**P**	**22 09 03.6**	**-0.3**
SPUT				IAmb	IAmb	22 09 08.3	
	comp=Z,7.4nm,0.9s						
PAHR	**Pah Rah Range**	**21.86**	**339**		**P**	**22 09 04.7**	**+0.4**
HWUT	**Hardware Ranch**	**22.05**	**356**		**P**	**22 09 06.9**	**+0.6**
HWUT				IAmb	IAmb	22 09 10.1	
	comp=Z,7.4nm,0.9s						
HVU	**Hansel Valley**	**22.33**	**353**	P	**P**	**22 09 08.9**	**-0.4**
HVU				IAmb	IAmb	22 09 12.8	
	comp=Z,7.9nm,1.0s						
ORV	**Oroville**	**22.51**	**335**	P	**P**	**22 09 10.8**	**-0.3**
ORV				IAmb	IAmb	22 09 15.2	
	comp=Z,4.9nm,0.9s						
MGMO	**Mountain Grove**	**23.00**	**37**	P	**P**	**22 09 15.1**	**-1.2**
MGMO				IAmb	IAmb	22 09 18.2	
	comp=Z,9.3nm,1.1s						
PD31	**Pinedale Array**	**23.12**	**360**	P	**P**	**22 09 17.0**	**-0.7**
PDAR	**Pinedale Array**	**23.12**	**360**	P	**P**	**22 09 18.4**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=155,slow=9.8,SNR=13						
	comp=Z,1.1nm,0.7s						
K22A	**Casper**	**23.13**	**5**		**P**	**22 09 17.1**	**-0.6**
T42A	**Van Buren**	**23.59**	**39**	P	**P**	**22 09 20.8**	**-1.4**
R40A	**Maddies Statio**	**23.81**	**35**		**P**	**22 09 22.4**	**-2.0**
LOHW	**Long Hollow**	**23.99**	**358**		**P**	**22 09 26.4**	**+0.1**
WVOR	**Wild Horse Val**	**24.12**	**343**	P	**P**	**22 09 27.8**	**+0.4**
MOOW	**Moose Ponds**	**24.13**	**357**		**P**	**22 09 27.7**	**+0.1**
MOOW				IAmb	IAmb	22 10 11.0	
	comp=Z,6.4nm,1.1s						
HLID	**Hailey**	**24.30**	**351**		**P**	**22 09 29.6**	**+0.5**
HLID				IAmb	IAmb	22 09 31.0	
	comp=Z,5.3nm,0.9s						
MFID	**Camas Ranch**	**24.39**	**348**	P	**P**	**22 09 29.8**	**-0.1**
J08A	**Circle Bar Ran**	**24.93**	**344**	P	**P**	**22 09 35.2**	**+0.4**
TKL	**Tuckaleechee C**	**27.61**	**49**	LR	LR	22 20 25.8	
	comp=Z,42nm,20.5s,baz=324,slow=36						
HODGE	**Hodges**	**28.09**	**53**	P	**P**	**22 10 03.7**	**+0.4**
ULM	**Lac du Bonnet**	**32.42**	**16**	P	**P**	**22 10 39.9**	**-1.4**
	comp=Z,3.4nm,0.8s,baz=191,slow=11,SNR=5.5						
	comp=Z,3.4nm,0.8s						
SADO	**Sadowa**	**35.48**	**38**	LR	LR	22 25 07.1	
	comp=Z,54nm,21.0s,baz=330,slow=36						
FFC	**Flin Flon**	**35.53**	**7**		**P**	**22 11 07.7**	**-0.6**
FFC				IAmb	IAmb	22 11 44.1	
	comp=Z,2.0nm,0.9s						
V35K	**Ketchikan**	**39.48**	**340**	P	**P**	**22 11 42.5**	**+0.9**
	baz=146						
U35K	**Hyder**	**39.48**	**342**	P	**P**	**22 11 42.8**	**+1.1**
	baz=148						
CRAG	**Craig**	**40.09**	**339**	P	**P**	**22 11 48.4**	**+1.6**
	baz=144						
T35M	**Bob Quinn**	**40.46**	**342**	P	**P**	**22 11 51.2**	**+1.4**
	baz=149						
U33K	**Whale Pass**	**40.62**	**340**	P	**P**	**22 11 52.7**	**+1.6**
	baz=144						
FCC	**Fort Churchill**	**40.68**	**12**	P	**P**	**22 11 49.6**	**-1.9**
S34M	**Telegraph Cree**	**41.51**	**343**	P	**P**	**22 11 59.6**	**+1.2**
	baz=148						
DLBC	**Dease Lake**	**41.66**	**344**	P	**P**	**22 12 00.5**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=180,slow=10,SNR=5.3						
	comp=Z,2.5nm,0.7s						
DLBC	**Dease Lake**	**41.66**	**344**	P	**P**	**22 12 00.9**	**+1.2**
	baz=150						
KOTAN	**Kotaneelee Air**	**41.86**	**349**	P	**P**	**22 12 02.9**	**+1.5**
	baz=159						
SIT	**Sitka**	**42.10**	**339**	P	**P**	**22 12 05.0**	**+1.7**
	baz=142						
S32K	**Killisnoo**	**42.18**	**340**	P	**P**	**22 12 05.3**	**+1.4**
	baz=143						
R33M	**Jennings River**	**42.73**	**344**	P	**P**	**22 12 09.5**	**+1.0**
	baz=149						
YKA	**Yellowknife Ar**	**43.04**	**356**	P	**P**	**22 12 10.3**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=178,slow=7.4,SNR=17						
	comp=Z,1.1nm,0.9s						
P32M	**Atlin**	**43.65**	**342**	P	**P**	**22 12 17.1**	**+1.1**
	baz=146						
P33M	**Teslin, Yukon**	**43.92**	**343**	P	**P**	**22 12 18.9**	**+0.8**
	baz=147						
TGTN	**Hyland Airport**	**43.97**	**347**	P	**P**	**22 12 19.4**	**+0.9**
	baz=154			

PAX	Paxson	49.90 339	P	P	22 13 05.6	+0.7
	baz=133					
G31M	Satah River	49.98 347	P	P	22 13 05.3	0.0
	baz=149,SNR=6.1					
EPYK	Eagle Plains	50.04 346	P	P	22 13 06.8	+0.9
	baz=146					
I28M	Miner Creek	50.09 344	P	P	22 13 06.6	+0.4
	baz=141,SNR=6.8					
SML	Sawmill	50.13 337	P	P	22 13 06.6	0.0
	baz=129					
SCRK	Sand Creek	50.14 341	P	P	22 13 06.9	+0.2
	baz=136					
RC01	Rabbit Creek A	50.22 336	P	P	22 13 07.9	+0.8
	baz=127					
RIDG	Independent Ri	50.24 340	P	P	22 13 07.4	+0.1
	baz=135,SNR=5.9					
PMR	Palmer	50.29 337	P	P	22 13 08.2	+0.5
	baz=128					
H29M	Whitestone	50.31 345	P	P	22 13 08.2	+0.4
	baz=144					
F31M	Tsiigehtchic	50.32 348	P	P	22 13 08.6	+0.8
	baz=150					
WAT6	Susitna Watana	50.42 338	P	P	22 13 08.9	0.0
	baz=130					
G30M	tAoh Zraii Nji	50.44 347	P	P	22 13 09.4	+0.6
	baz=146					
K24K	Donnelly Dome	50.58 340	P	P	22 13 09.1	-0.8
	baz=134					
CAPN	Captain Cook N	50.58 335	P	P	22 13 10.9	+1.0
	baz=126					
Q19K	Cape Douglas,	50.61 332	P	P	22 13 10.5	+0.3
	baz=122					
DHY	Denali Highway	50.62 339	P	P	22 13 10.6	+0.2
	baz=131					
I27K	Kandik River	50.66 343	P	P	22 13 11.4	+0.9
	baz=139					
SUA	Susitna One	50.83 336	P	P	22 13 12.5	+0.6
	baz=126					
I26K	Coal Creek Min	50.86 342	P	P	22 13 12.8	+0.8
	baz=137					
WAT1	Susitna Watana	50.87 338	P	P	22 13 12.7	+0.6
	baz=130					
F30M	Barrier River	50.88 347	P	P	22 13 12.8	+0.8
	baz=147					
J25K	Salcha River,	51.01 341	P	P	22 13 13.1	-0.1
	baz=134					
INK	Inuvik	51.03 349	P	P	22 13 13.4	+0.3
	baz=150,SNR=6.5					
H27K	Steamboat Moun	51.11 344	P	P	22 13 14.3	+0.4
	baz=140					
R17L	Mt. Peulik Vol	51.22 330	P	P	22 13 14.4	-0.4
	baz=118					
CUT	Chulitna	51.22 337	P	P	22 13 15.2	+0.5
	baz=128					
SPCR	Spurr Chakacha	51.25 335	P	P	22 13 15.3	+0.3
	baz=125					
Q17K	Contact Creek	51.29 331	P	P	22 13 15.2	-0.3
	baz=119					
HDA	Harding Lake	51.37 340	P	P	22 13 16.1	+0.3
	baz=132					
SKT	Skwentna	51.44 336	P	P	22 13 16.7	+0.4
	baz=126					
MCK	McKinley	51.58 339	P	P	22 13 17.7	+0.3
	baz=130					
ILAR	Eielson Array	51.60 341	P	P	22 13 18.2	+0.7
	comp=Z,3.3nm,0.8s,baz=143,slow=6.9,SNR=39					
	comp=Z,3.3nm,0.8s					
PRP	Porcupine Dome	51.70 342	P	P	22 13 18.3	-0.2
	baz=135					
F28M	Old Crow	51.78 346	P	P	22 13 19.1	+0.2
	baz=142,SNR=10					
TRF	Thorofare Moun	51.87 338	P	P	22 13 19.9	+0.1
	baz=128					
N19K	Bonanza Creek	51.97 334	P	P	22 13 20.4	0.0
	baz=122					
E29M	Blow River	51.97 347	P	P	22 13 21.2	+1.0
	baz=145,SNR=9.2					
P17K	Kvichak River	51.99 331	P	P	22 13 21.4	+0.9
	baz=119					
POKR	Poker Plat Res	52.00 341	P	P	22 13 21.3	+0.8
	baz=132					
M20K	Styx River	52.00 335	P	P	22 13 21.4	+0.7
	baz=124,SNR=6.0					
NEA2	Nenana	52.18 340	P	P	22 13 22.5	+0.6
	baz=130,SNR=7.5					
PPLA	Purkeypile	52.23 337	P	P	22 13 22.8	+0.4
	baz=126					
G26K	Porcupine Rive	52.25 344	P	P	22 13 23.1	+0.8
	baz=138					
SDPT	Sand Point	52.33 326	P	P	22 13 22.7	-0.3
	baz=112					
N18K	Kilae Creek	52.49 333	P	P	22 13 24.3	+0.1
	baz=120					
E28M	Babbage River	52.50 347	P	P	22 13 24.4	+0.3
	baz=143					
M19K	Big River Lodg	52.51 335	P	P	22 13 24.5	+0.1
	baz=123					
BPAW	Bear Paw Mtn.	52.52 338	P	P	22 13 24.8	+0.4
	baz=128					
O17K	Koliganek Bris	52.56 332	P	P	22 13 25.0	+0.2
	baz=118					
P16K	Nushagak River	52.62 331	P	P	22 13 25.6	+0.4
	baz=117					
H24K	Noodor Dome	52.63 341	P	P	22 13 25.8	+0.6
	baz=132					
I23K	Minto, Yukon-K	52.63 340	P	P	22 13 25.6	+0.5
	baz=130,SNR=6.0					
E27K	Coleen River	52.64 345	P	P	22 13 26.0	+0.8
	baz=141,SNR=6.6					
L19K	White Mountain	52.85 335	P	P	22 13 27.2	+0.3
	baz=122					
CHUM	Lake Minchumin	52.85 338	P	P	22 13 27.0	+0.2
	baz=126					
M18K	Stony River	52.87 334	P	P	22 13 26.1	-0.9
	baz=121					
F26K	Sheenjek River	52.90 344	P	P	22 13 26.3	-0.8
	baz=138					
D28M	Stokes Point	52.92 347	P	P	22 13 27.5	+0.3
	baz=144					
O16K	Kokwok River B	52.93 331	P	P	22 13 27.3	-0.2
	baz=117					
N17K	Nushagak Hills	52.97 333	P	P	22 13 27.3	-0.5
	baz=119					
MLY	Manley	53.01 339	P	P	22 13 28.0	-0.1
	baz=129					
G24K	Hadweenzic Riv	53.10 342	P	P	22 13 28.5	-0.2
	baz=133					
K20K	Telida	53.19 337	P	P	22 13 29.4	0.0
	baz=124					
F25K	Christian Rive	53.21 344	P	P	22 13 29.8	+0.3
	baz=136					
A36M	Sachs Harbour	53.23 354	P	P	22 13 29.7	+0.2
	baz=161					
D27M	Malcolm River	53.32 347	P	P	22 13 30.5	+0.2
	baz=142					
M17K	Holitna River	53.50 334	P	P	22 13 31.2	-0.5
	baz=119					
O15K	Ungalikthiuk R	53.54 330	P	P	22 13 31.0	-1.0
	baz=115					
E25K	Arctic Village	53.58 344	P	P	22 13 32.8	+0.6
	baz=136					
L18K	Granite Mounta	53.60 335	P	P	22 13 32.5	+0.1
	baz=120					
N16K	Nishlik Lake	53.63 332	P	P	22 13 32.6	-0.1
	baz=117					
H22K	Ishtalitna Cre	53.76 340	P	P	22 13 34.3	+0.8
	baz=128					
G23K	Bananza Creek	53.86 341	P	P	22 13 34.7	+0.5
	baz=130					
LPAZ	La Paz	53.94 129	P	P	22 13 37.2	+1.0
	comp=Z,0.8nm,0.5s,baz=296,slow=4.0,SNR=4.1					
	comp=Z,0.8nm,0.5s					
M16K	Timber Creek	53.97 333	P	P	22 13 34.8	-0.3
	baz=117					
H21K	Melozitna Rive	54.08 339	P	P	22 13 36.2	+0.4
	baz=127,SNR=8.1					
J19K	Poorman	54.12 337	P	P	22 13 36.5	+0.3
	baz=123					
L17K	Donlin	54.21 334	P	P	22 13 36.9	+0.1
	baz=119					
C27K	Jago River	54.24 346	P	P	22 13 37.0	+0.1
	baz=139					
O14K	Tigyukauivet M	54.24 330	P	P	22 13 37.1	0.0
	baz=114					
COLD	Coldfoot	54.25 342	P	P	22 13 37.6	+0.5
	baz=130					
J18K	Innoko River	54.25 336	P	P	22 13 37.3	+0.2
	baz=121					
E24K	Your Creek	54.32 343	P	P	22 13 37.8	+0.1
	baz=133					
K17K	Iditarod	54.50 335	P	P	22 13 39.0	+0.1
	baz=119					
L16K	Owhat River	54.51 333	P	P	22 13 39.2	+0.2
	baz=117,SNR=5.1					
M15K	Kasigluk River	54.58 332	P	P	22 13 39.7	+0.2
	baz=115					
E23K	Chandalar	54.63 343	P	P	22 13 40.1	+0.2
	baz=132					
D25K	Kavik River	54.65 345	P	P	22 13 40.4	+0.4
	baz=136,SNR=6.1					
H20K	Anotleneega Mo	54.69 339	P	P	22 13 40.3	0.0
	baz=124,SNR=5.7					
N14K	Kuskokwak Cree	54.71 331	P	P	22 13 41.0	+0.5
	baz=114					
C26K	Camden Bay	54.73 346	P	P	22 13 41.1	+0.6
	baz=138					
G21K	Allakaket	54.83 340	P	P	22 13 41.4	+0.1
	baz=126					
TOLK	Toolik Lake Re	55.01 343	P	P	22 13 42.7	+0.1
	baz=132					
D24K	Happy Valley	55.15 344	P	P	22 13 43.5	0.0
	baz=133					
M14K	Bethel	55.17 332	P	P	22 13 44.0	+0.2
	baz=114					
UNV	Unalaska Valle	55.18 323	P	P	22 13 43.7	-0.2
	baz=105					
F21K	Alatna River	55.24 341	P	P	22 13 45.2	+0.9
	baz=127					
E22K	Anaktuvuk Pass	55.30 342	P	P	22 13 45.5	+0.8
	baz=129					
L15K	Ungalak Mounta	55.35 333	P	P	22 13 45.8	+0.7
	baz=115					
C24K	Franklin Bluff	55.51 344	P	P	22 13 47.1	+1.0
	baz=134					
D23K	Nanushuk River	55.52 343	P	P	22 13 46.6	+0.4
	baz=131,SNR=5.7					
K15K	Wolf Creek Mou	55.64 333	P	P	22 13 47.6	+0.5
	baz=116					
RES	Resolute Bay	55.69 5	LR	LR	22 37 51.5	
	comp=Z,82nm,18.8s,baz=6.0,slow=36					
J16K	Anvik River	55.69 335	P	P	22 13 47.6	+0.1
	baz=117					
L14K	Kuka Creek	55.73 332	P	P	22 13 47.9	+0.1
	baz=114					
H18K	Honhosa River	55.74 337	P	P	22 13 47.9	+0.1
	baz=120					
G19K	Purcell Mounta	55.81 339	P	P	22 13 47.9	-0.5
	baz=122					
F20K	Avaraart Lake	55.85 340	P	P	22 13 48.9	+0.3
	baz=124					
I17K	Unalakleet	56.01 335	P	P	22 13 50.1	+0.3
	baz=117					
D22K	Alikyak River	56.02 343	P	P	22 13 49.9	0.0
	baz=129					
C23K	Itkillik River	56.08 344	P	P	22 13 50.0	-0.3
	baz=131					
E21K	Killik River	56.13 342	P	P	22 13 50.8	+0.2
	baz=127					
H17K	Granite Mounta	56.20 337	P	P	22 13 50.7	-0.5
	baz=119					
G18K	Tagagawik	56.22 338	P	P	22 13 51.0	-0.3
	baz=121					
F19K	Shaleruckik Mo	56.41 339	P	P	22 13 52.0	-0.6
	baz=122					
E19K	Redstone River	56.57 340	P	P	22 13 53.2	-0.6
	baz=123					
J14K	Nanvaranak Lak	56.68 333	P	P	22 13 53.9	-0.6
	baz=114					
E20K	Nigu River	56.69 341	P	P	22 13 54.2	-0.4
	baz=125					
G17K	Kiwalik Mounta	56.75 337	P	P	22 13 54.7	-0.4
	baz=118					
C21K	Knifeblade Rid	56.79 342	P	P	22 13 54.8	-0.6
	baz=127					
K13K	Kusilvak Mount	56.83 332	P	P	22 13 55.0	-0.7
	baz=112					
F18K	Selawik	56.93 338	P	P	22 13 56.2	-0.1
	baz=120					
H16K	Elim	56.95 336	P	P	22 13 56.1	-0.4
	baz=116					
MDP	Montagnes des	56.95 97	LR	LR	22 40 39.6	
	comp=Z,49nm,18.4s,baz=122,slow=38					
M11K	Mekoryuk	56.98 330	P	P	22 13 56.7	0.0
	baz=110					
B21K	Ikpikpuk River	57.02 343	P	P	22 13 57.3	+0.4
	baz=127					
D20K	Etivluk River	57.07 341	P	P	22 13 57.4	+0.1
	baz=124					
B22K	Teshekpuk Lake	57.14 344	P	P	22 13 57.7	0.0
	baz=129					
G16K	Koyuk River	57.33 337	P	P	22 13 59.0	-0.2
	baz=116					
F17K	Baldwin Pennin	57.41 338	P	P	22 13 59.7	0.0
	baz=118					
D19K	Kuna River	57.41 341	P	P	22 13 59.4	-0.4
	baz=123					
E18K	Tukpahlearik C	57.66 339	P	P	22 14 00.9	-0.6
	baz=120					
G15K	Niukluk	57.80 336	P	P	22 14 02.0	-0.4
	baz=114					
E17K	Hotham Inlet	57.91 338	P	P	22 14 03.3	+0.1
	baz=118,SNR=6.9					
B20K	Meade River	57.97 342	P	P	22 14 03.7	+0.2
	baz=124					
SPIA	Saint Paul Isl	58.07 326	P	P	22 14 04.4	-0.1
	baz=104					
ANM	Nome	58.15 335	P	P	22 14 04.5	-0.4
	baz=113					
C19K	Lookout Ridge	58.19 341	P	P	22 14 04.7	-0.5
	baz=121					
F15K	North Star Dit	58.33 336	P	P	22 14 06.1	-0.1
	baz=114					
C18K	Utukok River	58.46 340	P	P	22 14 06.8	-0.3
	baz=120					
D17K	Noatak River	58.63 339	P	P	22 14 08.3	+0.1
	baz=117					
RDOG	Red Dog Mine	58.74 339	P	P	22 14 08.7	-0.3
	baz=117					
F14K	Arctic Creek	58.87 336	P	P	22 14 09.1	-0.9
	baz=112					
C17K	DeLong Mountai	59.02 340	P	P	22 14 10.4	-0.5
	baz=117					
A19K	Wainwright	59.20 342	P	P	22 14 11.7	-0.4
	baz=120					
TNA	Tin City	59.52 336	P	P	22 14 14.4	-0.1
	baz=111					
C16K	Lisburne Hills	59.65 339	P	P	22 14 14.7	-0.6
	baz=115					
SFJD	Kangerlussuaq	60.08 23	LR	LR	22 40 13.7	
	comp=Z,91nm,18.7s,baz=302,slow=36					
H03N2	Juan Fernandez	60.17 151	T	T	23 19 46.5	
	baz=329,slow=77,SNR=19					
H03N1	Juan Fernandez	60.18 151	T	T	23 19 47.6	
	baz=329,slow=77,SNR=27					
H03N3	Juan Fernandez	60.18 151	T	T	23 19 54.9	
	baz=329,slow=77,SNR=27					
GAMB	Gambell	60.49 333	P	P	22 14 20.4	-0.7
	baz=106					
CPUP	Villa Florida	68.03 130	P	P	22 15 12.3	+1.3
	comp=Z,0.6nm,0.3s,baz=318,slow=9.7,SNR=3.0					
	comp=Z,0.6nm,0.3s					
BORG	Borgarnes	71.64 27	LR	LR	22 45 49.4	
	comp=Z,39nm,18.6s,baz=342,slow=35					
ARCES	ARCESS Array B	85.53 14	P	P	22 16 49.0	-0.3
	comp=Z,6.0nm,1.1s,baz=330,slow=5.2,SNR=4.4					
ARCES			LR	LR	22 55 10.2	
	comp=Z,31nm,19.2s,baz=248,slow=36					
	comp=Z,6.0nm,1.1s					
NOA	NORSAR Array B	86.69 25	LR	LR	22 54 33.8	
	comp=Z,19nm,21.1s,baz=325,slow=35					
HFS	Hagfors	88.21 25	LR	LR	22 56 17.1	
	comp=Z,20nm,18.6s,baz=252,slow=36					
DAVOX	Davos/Dischmat	94.25 37	LR	LR	22 58 53.4	
	comp=Z,39nm,18.6s,baz=264,slow=35					
GERES	GERESS Array B	95.13 34	LR	LR	22 58 46.3	
	comp=Z,20nm,20.1s,baz=289,slow=34					
WRA	Warramunga Arr	120.43 258	PKP	PKPdf	22 23 04.0	+0.2
	comp=Z,1.1nm,0.6s,baz=79,slow=2.3,SNR=21					
ASAR	Alice Springs	121.50 254	PKP	PKPdf	22 23 05.7	-0.1
	comp=Z,1.0nm,0.6s,baz=82,slow=2.3,SNR=16					

*NEIC **28** 22:08:52.7±1.2, 43.77N±0.04×105.32W±0.07, h0km±1km, ML3.4/74, Error ellipse: s-maj=10.2km s-min=6.2km az=303.0*
*IDC **28** 22:08:54.5±1.1, 43.91N×105.73W, h0km, mbtmp3.2/6, ML3.4/5, Error ellipse: s-maj=22.6km s-min=7.1km az=147.0*
ISC 28 22:08:53.3±1.2, **43.78N**±0.05×**105.27W**±0.06, **h0km, n44, σ0s90/41, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.96	69		Pn	22 09 13.6	-0.6
K22A	Casper	1.45	219		Pn	22 09 19.1	-1.9
K22A				IAML		22 09 42.6	
	464nm,0.3s						
K22A				IAML		22 09 46.4	
	469nm,0.3s						
LAO	LASA Array	2.99	347		Pn	22 09 42.6	+0.7
LAO				IAML		22 10 40.5	
	186nm,0.7s						
RLMT	Red Lodge	3.16	297		Pn	22 09 44.4	-0.1
RLMT				IAML		22 10 42.7	
	104nm,0.4s						
RLMT				IAML		22 10 43.5	
	88nm,0.7s						
BW06	Boulder Array	3.29	254		Pn	22 09 46.7	+0.4
BW06				IAML		22 10 39.4	
	62nm,0.9s						
PD31	Pinedale Array	3.29	254		Pn	22 09 46.8	+0.5
PDAR	Pinedale Array	3.29	254	Pn	Pn	22 09 47.1	+0.8
	3.7nm,0.3s,baz=61,slow=14,SNR=77						
PDAR				Lg	Lg	22 10 29.8	
	18nm,0.3s,baz=68,slow=32,SNR=15						
	3.5nm,0.3s						
PDAR	Pinedale Array	3.29	254		Pn	22 09 46.6	+0.4
HAYD	Hayden	3.58	205		Pn	22 09 51.2	+1.0
HAYD				IAML		22 11 18.4	
	comp=N,65nm,1.1s						
HAYD				IAML		22 11 29.9	
	comp=E,55nm,1.3s						
YNE	Yellowstone No	3.61	292		Pn	22 09 51.8	+1.1
YNE				IAML		22 10 53.7	
	comp=N,96nm,0.8s						
YNE				IAML		22 10 53.9	
	comp=E,66nm,0.7s						
YMP	Mirror Lake Pl	3.64	287		Pn	22 09 51.5	+0.3
YMP				IAML		22 10 55.8	
	comp=N,102nm,0.9s						
OGNE	Ogallala	3.71	139		Pn	22 09 53.3	+1.3
LOHW	Long Hollow	3.87	269		Pn	22 09 56.0	+1.8
H17A	Grant Village	3.87	281		Pn	22 09 54.5	+0.2
H17A				IAML		22 10 59.7	
	comp=N,62nm,1.2s						
H17A				IAML		22 11 06.3	
	comp=E,41nm,1.2s						
FLWY	Flagg Ranch	3.93	276		Pn	22 09 56.4	+1.3
FLWY				IAML		22 11 04.6	
	comp=E,72nm,2.1s						
FLWY				IAML		22 11 06.6	
	comp=E,66nm,1.1s						
MOOW	Moose Ponds	3.96	271		Pn	22 09 56.6	+1.0
ISCO	Idaho Springs	3.98	184		Pn	22 09 57.1	+1.3
SNOW	Snow King Moun	3.99	267		Pn	22 09 54.8	-1.2
SNOW				IAML		22 11 12.7	
	comp=E,74nm,1.3s						
SNOW				IAML		22 11 12.9	
	comp=E,73nm,1.1s						
YPP	Pitchstone Pla	4.02	279	Pn	Pn	22 09 56.4	+0.1
YPP				IAML		22 11 14.8	
	comp=E,36nm,1.1s						
YFT	Old Faithful	4.06	281	Pn	Pn	22 09 56.7	-0.2
YHH	Holmes Hill	4.13	286		Pn	22 09 58.2	+0.3
FXWY	Fox Creek	4.17	270		Pn	22 09 59.7	+1.3
YMR	Madison River	4.19	284	Pn	Pn	22 09 58.9	+0.3
O20A	White River Ci	4.26	212		Pn	22 09 59.9	+0.3
O20A				IAML		22 11 30.9	
	comp=E,69nm,2.4s						
K30B	Basset	4.28	103		Pn	22 10 00.6	+0.8
YHB	Horse Butte	4.36	285	Pn	Pn	22 10 01.2	+0.1
YHB				IAML		22 11 20.9	
	comp=N,27nm,1.0s						
AHID	Auburn Hatcher	4.37	259	Pn	Pn	22 10 02.1	+0.9
AHID				IAML		22 11 15.5	
	comp=N,60nm,1.2s						
AHID				IAML		22 11 17.0	
	comp=N,63nm,1.0s						
YHL	Hebgen Lake	4.37	286		Pn	22 10 02.3	+1.1
YHL				IAML		22 11 23.8	
	comp=N,54nm,1.2s						
YHL				IAML		22 11 23.9	
	comp=E,62nm,1.3s						
RDMU	Red Mountain	4.52	226		Pn	22 10 03.2	0.0
RDMU				IAML		22 11 20.9	
	comp=N,45nm,1.1s						
RDMU				IAML		22 11 25.0	
	comp=E,35nm,1.5s						
QLMT	Earthquake Lak	4.54	286	Pn	Pn	22 10 02.7	-0.8
SUSD	Miller	4.60	80		Pn	22 10 05.2	+1.1
Q24A	Divide	4.81	179		Pn	22 10 07.3	0.0
Q24A				IAML		22 11 27.1	
	comp=E,29nm,0.8s						
BOZ	Bozeman (W)	4.88	294	IAML		22 11 28.2	
	comp=E,29nm,2.0s						
BOZ				IAML		22 11 31.7	
	comp=E,28nm,1.0s						
HWUT	Hardware Ranch	5.12	247		Pn	22 10 12.3	+0.9
HWUT				IAML		22 11 41.4	
	comp=E,41nm,1.2s						
KSCO	Kaye Shedlock'	5.16	156		Pn	22 10 12.7	+0.8
BSUT	Blindstream Ca	5.21	233		Pn	22 10 12.9	+0.1
BSUT				IAML		22 11 43.6	
	comp=N,23nm,2.1s						
BSUT				IAML		22 11 58.4	
	comp=E,21nm,2.6s						
TCUT	Toone Canyon	5.26	242		Pn	22 10 13.4	0.0
ELK	Elko	7.99	251	Pn	Pn	22 10 50.7	-0.1
	comp=E,0.1nm,0.3s,baz=60,slow=16,SNR=1.6						
ELK				Lg	Lg	22 12 56.4	
	baz=332,slow=11,SNR=1.5						
	comp=E,0.2nm,0.2s						
I10CA	LAC DU BONNET	9.01	41	I	I	23 06 50.0	
	baz=222,slow=247,SNR=4.0						
ULM	Lac du Bonnet	9.11	41	Pn	Pn	22 11 06.9	+1.0
	comp=E,3.4nm,0.3s,baz=226,slow=11,SNR=22						
ULM				Sn	Sn	22 12 47.6	-1.6
	comp=E,0.3nm,0.3s,baz=328,slow=15,SNR=3.4						
ULM				Lg	Lg	22 13 38.6	
	comp=E,0.4nm,0.3s,baz=121,slow=18,SNR=3.6						
	comp=E,5.4nm,0.3s						
NEW	Newport	9.38	303	Pn	Pn	22 11 05.0	-4.7
	comp=E,0.1nm,0.3s,baz=150,slow=20,SNR=1.6						
NEW				Lg	Lg	22 13 33.8	
	baz=21,slow=21						
	comp=E,0.6nm,0.5s						
NVAR	Mina Array Bea	11.19	246	Pn	Pn	22 11 34.0	-0.6
	comp=E,0.1nm,0.3s,baz=56,slow=14,SNR=1.3						
	comp=E,0.2nm,0.3s						
TXAR	Lajitas Array	14.47	174	Pg	P	22 13 22.7	+56
	baz=356,slow=16,SNR=6.3						
YKA	Yellowknife Ar	19.53	347	P	P	22 13 21.6	-0.4
	comp=E,0.1nm,0.3s,baz=164,slow=18,SNR=1.0						

*IDC **28** 22:27:46.9±0.8, 20.91N×122.23E, h0km, mb3.7/10, mbtmp3.8/12, ML3.5/2, MS3.0/5, Error ellipse: s-maj=28.5km s-min=15.1km az=66.0*
*JMA **28** 22:27:52.5±0.4, 21°N×12°×12°2E±°, h97km, MV3.2/15, TAIWAN REGION*
*TAP **28** 22:27:53.1, 21.21N×122.01E, h65km, ML4.2, D*
ISC 28 22:27:51.6±1.8, **21.05N**±0.09×**122.04E**±0.04, **h44km**±23km, **n152, σ1s54/229, mb3.6/11, MS3.0/3, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LYUB	Lan-yu	1.04	336	eP	Pn	22 28 10.2	+0.5
LYUB				eS	Sn	22 28 23.0	-0.1
LAY	Lan-yu	1.08	335	eP	Pn	22 28 09.0	-1.4
LAY				eS	Sn	22 28 23.6	-0.7
TSEB	Hengchuen, Pin	1.36	309	eP	Pn	22 28 16.1	+2.0
TSEB				eS	Sn	22 28 33.0	+2.0
TWKBT	Hengchun	1.45	308	P	Pn	22 28 16.1	+0.7
TWKBT				eS	Sn	22 28 31.9	-1.2
TWK1	Hengchun	1.46	308	P	Pn	22 28 16.5	+1.1
TWK1				eS	Sn	22 28 33.7	+0.4
SMST	Manzhou Townsh	1.48	311	eP	Pn	22 28 15.7	-0.1
SMST				eS	Sn	22 28 32.9	-1.0
HEN	Hengchun	1.54	308	eP	Pn	22 28 18.3	+1.7
HEN				S	Sn	22 28 34.2	-1.3
SLIU	Shizi	1.64	315	eP	Pn	22 28 18.1	+0.1

SLIU				eS	Sn	22 28 36.4	-1.5	
TAW	**Tawu**	**1.68**	**321**	eP	Pn	22 28 19.9	+1.4	
TAW				eS	Sn	22 28 36.9	-2.0	
LDUT	**Ludao**	**1.70**	**342**	P	Pn	22 28 16.9	-1.9	
LDUT				S	Sn	22 28 37.6	-1.7	
EAST	**Anshuo**	**1.73**	**320**	eP	Pn	22 28 20.4	+1.2	
EAST				eS	Sn	22 28 36.9	-3.2	
ECL	**Taimali**	**1.84**	**327**	eP	Pn	22 28 19.8	-1.0	
ECL				eS	Sn	22 28 42.2	-0.6	
SCZT	**Fangliau**	**1.87**	**315**	P	Pn	22 28 22.1	+1.0	
SCZT				eS	Sn	22 28 40.7	-2.8	
TTN	**Taitung**	**1.89**	**334**	eS	Sn	22 28 44.1	+0.1	
TWGBT	**Beinan**	**1.97**	**333**	P	Pn	22 28 22.6	+0.1	
TWGBT	**Beinan**	**1.97**	**333**	P	Pn	22 28 22.3	-0.3	
TWGBT	**Beinan**	**1.97**	**333**	P	Pn	22 28 22.3	-0.3	
TWGBT				eS	Sn	22 28 45.6	-0.5	
SSPT	**Xinbi**	**1.98**	**316**	eP	Pn	22 28 25.4	+2.8	
SSPT				eS	Sn	22 28 45.3	-0.9	
TWG	**Pinlang**	**1.98**	**333**	P	Pn	22 28 22.4	-0.3	
TWG				eS	Sn	22 28 46.1	-0.1	
LONT	**Longtian**	**2.03**	**336**	P	Pn	22 28 23.7	+0.3	
LONT				eS	Sn	22 28 49.1	+1.6	
MASBT	**Mashibuluo**	**2.03**	**320**	eP	Pn	22 28 24.1	+0.7	
CHKT	**Chengkung**	**2.13**	**343**	S	Sn	22 28 47.6	-2.4	
SSD	**Sandimen**	**2.14**	**322**	eP	Pn	22 28 27.1	+2.3	
SSD				eS	Sn	22 28 50.0	-0.1	
ECS	**Chishang**	**2.17**	**340**	eP	Pn	22 28 25.6	+0.3	
ECS				S	Sn	22 28 51.7	+0.7	
CHKH	**Chenggong**	**2.21**	**344**	P	Pn	22 28 24.1	-1.7	
CHKH				eS	Sn	22 28 50.0	-2.0	
EHD	**Haiduan**	**2.23**	**340**	eP	Pn	22 28 26.0	0.0	
EHD				eS	Sn	22 28 52.4	0.0	
FULB	**Fuli**	**2.25**	**342**	eP	Pn	22 28 26.2	-0.2	
FULB				eS	Sn	22 28 51.6	-1.3	
ECBN	**Changbin**	**2.32**	**346**	eP	Pn	22 28 25.7	-1.6	
ECBN				eS	Sn	22 28 50.7	-3.9	
SLGT	**Liugui**	**2.33**	**326**	eP	Pn	22 28 30.0	+2.5	
EYUL	**Yuli**	**2.38**	**344**	eP	Pn	22 28 28.1	0.0	
EYUL				eS	Sn	22 28 56.7	+0.6	
TWF1	**Yuli**	**2.39**	**343**	eP	Pn	22 28 28.0	-0.3	
TWF1				S	Sn	22 28 56.1	-0.4	
STYH	**Taoyuan**	**2.42**	**331**	eP	Pn	22 28 31.9	+3.3	
STYH				S	Sn	22 28 56.7	-0.3	
YULB	**Yu-li**	**2.43**	**344**	P	Pn	22 28 28.0	-0.8	
YULB	**Yu-li**	**2.43**	**344**	P	Pn	22 28 28.1	-0.8	
YULB				eS	Sn	22 28 56.5	-0.8	
SGST	**Jiashian**	**2.43**	**326**	eP	Pn	22 28 31.2	+2.3	
HGSD	**Ruisui**	**2.50**	**347**	eP	Pn	22 28 28.1	-1.6	
HGSD				eS	Sn	22 28 57.9	-1.1	
EHYH	**Wanrong**	**2.52**	**345**	P	Pn	22 28 29.4	-0.6	
EHYH				eS	Sn	22 28 58.5	-1.0	
EHY	**Hungye**	**2.53**	**345**	eP	Pn	22 28 29.8	-0.5	
EHY				eS	Sn	22 28 58.9	-1.0	
CHN1	**Nanshi**	**2.55**	**327**	P	Pn	22 28 33.6	+3.1	
CHN1				eS	Sn	22 29 01.0	+0.8	
WTP	**Ta-pu**	**2.56**	**329**	P	Pn	22 28 33.5	+2.9	
WTP				eS	Sn	22 29 01.2	+0.8	
TPUB	**Ta-pu**	**2.59**	**330**	P	Pn	22 28 33.2	+2.1	
TPUB	**Ta-pu**	**2.59**	**330**	P	Pn	22 28 33.3	+2.1	
TPUB	**Ta-pu**	**2.59**	**330**	P	Pn	22 28 33.5	+2.3	
TPUB				S	Sn	22 29 01.4	0.0	
TWK	**Hsinying**	**2.63**	**327**	eP	Pn	22 28 34.9	+3.2	
TWK				eS	Sn	22 29 02.8	+0.3	
ALS	**Alishan**	**2.70**	**335**	eP	Pn	22 28 34.8	+2.0	
ALS				S	Sn	22 29 05.4	+0.9	
WARBT	**Fenglin Townsh**	**2.72**	**347**	P	Pn	22 28 31.8	-1.1	
WARBT				eS	Sn	22 29 02.3	-2.3	
WCKO	**Fanlu**	**2.72**	**331**	eP	Pn	22 28 36.2	+3.3	
WCKO				eS	Sn	22 29 04.5	-0.1	
SHUL	**Shoufeng**	**2.76**	**351**	eP	Pn	22 28 32.3	-1.0	
SHUL				eS	Sn	22 29 04.1	-1.4	
TSCK	**Chigu Township**	**2.77**	**319**	P	Pn	22 28 34.5	+1.1	
TSCK				eS	Sn	22 29 06.2	+0.6	
ESL	**Shilin**	**2.81**	**349**	eS	Sn	22 29 05.4	-1.2	
VWDT	**VWDT**	**2.82**	**343**	eP	Pn	22 28 35.3	+1.2	
VWDT				eS	Sn	22 29 08.1	+1.3	
CHN5	**Tsauling**	**2.83**	**334**	eP	Pn	22 28 36.9	+2.5	
CHN5				eS	Sn	22 29 10.0	+2.6	
TEYL	**Yanliau Villag**	**2.83**	**352**	eP	Pn	22 28 34.2	-0.2	
TEYL				S	Sn	22 29 07.7	+0.5	
CHY	**Chiayi**	**2.86**	**329**	eP	Pn	22 28 36.1	+1.4	
CHY				eS	Sn	22 29 06.8	-1.1	
SSLB	**Suanglung**	**2.90**	**340**	P	Pn	22 28 37.7	+2.3	
SSLB	**Suanglung**	**2.90**	**340**	P	Pn	22 28 37.3	+1.9	
SSLB	**Suanglung**	**2.90**	**340**	P	Pn	22 28 38.2	+2.6	
SSLB				eS	Sn	22 29 09.8	+0.8	
ETM	**Tongmen**	**2.94**	**350**	eP	Pn	22 28 33.7	-2.2	
ETM				eS	Sn	22 29 07.5	-2.5	
WDLH	**Douliu**	**2.97**	**332**	eP	Pn	22 28 37.9	+1.6	
WDLH				eS	Sn	22 29 10.8	+0.1	
WSL	**Shuilin Townsh**	**2.98**	**326**	eS	Sn	22 29 11.7	+0.9	
SMLT	**Sun Moon Lake**	**3.01**	**340**	eP	Pn	22 28 38.3	+1.4	
SMLT				eS	Sn	22 29 14.9	+3.1	
LXIB	**Xiulin Townshi**	**3.01**	**349**	P	Pn	22 28 36.0	-1.0	
LXIB				S	Sn	22 29 10.1	-1.8	
TWD	**Chiawan**	**3.04**	**352**	eP	Pn	22 28 37.2	0.0	
TWD				eS	Sn	22 29 09.8	-2.6	
WUSB	**Renai**	**3.05**	**344**	P	Pn	22 28 38.0	+0.6	
WUSB				S	Sn	22 29 12.5	-0.3	
EOS4	**EOS4**	**3.07**	**5**	eP	Pn	22 28 37.7	+0.4	
EOS4				eS	Sn	22 29 11.1	-1.4	
WSF	**Szhu**	**3.08**	**327**	eS	Sn	22 29 11.7	-1.6	
WNT	**Mingjian**	**3.08**	**336**	eP	Pn	22 28 39.3	+1.5	
WNT				eS	Sn	22 29 12.9	-0.5	
WDGT	**Dungji**	**3.12**	**315**	eP	Pn	22 28 37.7	-0.5	
WDGT				eS	Sn	22 29 11.5	-2.7	
ETL	**Fush Village**	**3.12**	**353**	eS	Sn	22 29 12.8	-1.5	
NACB	**Ninganchiao**	**3.14**	**352**	P	Pn	22 28 38.0	-0.5	
NACB	**Ninganchiao**	**3.14**	**352**	P	Pn	22 28 37.1	-1.4	
NACB	**Ninganchiao**	**3.14**	**352**	P	Pn	22 28 38.1	-0.5	
NACB				S	Sn	22 29 12.9	-1.8	
WHF	**Hehuan Shan**	**3.16**	**347**	eP	Pn	22 28 39.3	0.0	
WHF				eS	Sn	22 29 15.2	-0.8	
ETLH	**Xiulin Townshi**	**3.18**	**351**	eP	Pn	22 28 41.1	+1.8	
ETLH				eS	Sn	22 29 14.1	-1.9	
EOS3	**EOS3**	**3.23**	**4**	eP	Pn	22 28 40.2	+0.5	
EOS3				eS	Sn	22 29 16.3	-0.5	
VCHM	**Qimei**	**3.24**	**312**	P	Pn	22 28 38.4	-1.5	
VCHM				S	Sn	22 29 14.5	-2.7	
FUSS	**Fushou**	**3.27**	**347**	S	Sn	22 28 41.1	+0.6	
FUSS				eS	Sn	22 29 17.4	-0.9	
WCH1	**Changhua City**	**3.31**	**336**	eS	Sn	22 29 15.4	-3.6	
PHUB	**P'eng-hu**	**3.35**	**317**	eP	Pn	22 28 41.2	-0.3	
PHUB				eS	Sn	22 29 18.0	-2.1	
EOS2	**EOS2**	**3.36**	**3**	eP	Pn	22 28 42.5	+1.1	
EOS2				eS	Sn	22 29 17.2	-2.8	
WHP	**Taichung City**	**3.37**	**343**	P	Pn	22 28 44.2	+2.5	
WHP				eS	Sn	22 29 21.8	+1.2	
EWUT	**Wuta**	**3.39**	**356**	eP	Pn	22 28 41.7	-0.2	
EWUT				eS	Sn	22 29 18.6	-2.3	
PNG	**Penghu**	**3.40**	**318**	P	Pn	22 28 42.8	+0.6	
PNG				S	Sn	22 29 21.1	-0.2	
HATJ	**Hateruma jima**	**3.41**	**28**	S	Sn	22 29 20.6	-0.8	
NNS	**Nan Shan**	**3.43**	**350**	eS	Sn	22 29 21.6	-0.5	
JYNG	**Yonagunijimaku**	**3.48**	**14**	eP	Pn	22 28 43.7	+0.4	
JYNG				S	Sn	22 29 22.3	-1.0	
TWQ1	**Liyutan**	**3.48**	**341**	P	Pn	22 28 46.0	+2.6	
TWQ1				eS	Sn	22 29 23.9	+0.6	
LATG	**Datong**	**3.50**	**352**	eP	Pn	22 28 43.5	-0.1	
LATG				eS	Sn	22 29 23.7	-0.1	
YOJ	**Yonaguni jima**	**3.51**	**15**	eP	Pn	22 28 45.5	+1.9	
YOJ				eS	Sn	22 29 23.4	-0.5	
YOJ	**Yonaguni jima**	**3.51**	**15**	eP	Pn	22 28 44.0	+0.3	
YOJ				eS	Sn	22 29 21.4	-2.5	
TWC	**Suao**	**3.55**	**357**	eP	Pn	22 28 44.8	+0.7	
TWC				eS	Sn	22 29 23.9	-0.9	
NSY	**Sanyi**	**3.55**	**341**	eP	Pn	22 28 47.1	+2.8	
NDS	**Dongshan**	**3.58**	**355**	eP	Pn	22 28 44.7	+0.1	
NDS				eS	Sn	22 29 24.4	-1.2	
ENTT	**Nioudou**	**3.60**	**353**	eP	Pn	22 28 46.8	+1.9	
ENTT				eS	Sn	22 29 24.8	-1.4	
IRIF	**Iriomote-Funau**	**3.62**	**25**	P	Pn	22 28 45.8	+0.6	
IRIF				eS	Sn	22 29 26.4	-0.3	
YHNB	**Yeheng**	**3.65**	**350**	P	Pn	22 28 46.9	+1.2	
YHNB	**Yeheng**	**3.65**	**350**	P	Pn	22 28 46.4	+0.7	
YHNB	**Yeheng**	**3.65**	**350**	P	Pn	22 28 46.6	+0.9	
YHNB				eS	Sn	22 29 25.1	-2.5	
JKRS	**Kuro-shima**	**3.66**	**29**	P	Pn	22 28 46.5	+0.9	
JKRS				eS	Sn	22 29 27.8	+0.3	

NSK	**Sanguang**	**3.66**	**350**	eP	Pn	22 28 47.0	+1.2	
NSK				eS	Sn	22 29 26.9	-0.9	
NFF	**Wufeng Townshi**	**3.67**	**347**	P	Pn	22 28 48.4	+2.6	
NFF				eS	Sn	22 29 30.9	+3.0	
TWE	**Neicheng**	**3.67**	**355**	eP	Pn	22 28 46.8	+1.0	
TWE				eS	Sn	22 29 27.6	-0.3	
NSTT	**Nanjuang**	**3.69**	**345**	eP	Pn	22 28 48.1	+1.9	
NSTT				eS	Sn	22 29 28.8	+0.4	
LIOB	**Emei**	**3.70**	**345**	eP	Pn	22 28 48.9	+2.6	
LIOB				S	Sn	22 29 27.8	-0.9	
FUSB	**Fushanzhiwuyua**	**3.71**	**354**	eP	Pn	22 28 47.8	+1.2	
FUSB				eS	Sn	22 29 28.9	-0.2	
NWLT	**Wulai**	**3.74**	**352**	eP	Pn	22 28 48.7	+1.9	
NWLT				eS	Sn	22 29 29.6	-0.1	
EGS		**3.78**	**358**	eP	Pn	22 28 46.9	-0.4	
KSHI	**Guanxi Townshi**	**3.79**	**348**	eP	Pn	22 28 50.5	+2.9	
JIJ	**Ishigaki jima**	**3.83**	**30**	eP	Pn	22 28 49.0	+1.0	
JIJ				eS	Sn	22 29 30.5	-1.2	
TIPB	**Shuangxi**	**3.91**	**357**	eP	Pn	22 28 50.3	+1.2	
TIPB				eS	Sn	22 29 33.4	-0.4	
TWA	**Mucha**	**3.93**	**354**	eP	Pn	22 28 53.9	+4.4	
TWA				eS	Sn	22 29 35.4	+1.0	
WFSB	**Wu-fen Shan**	**4.01**	**357**	eS	Sn	22 29 37.6	+1.4	
SXI1	**Grass Mountain**	**4.03**	**358**	P	Pn	22 28 53.2	+2.3	
SXI1				eS	Sn	22 29 36.4	-0.4	
JISG	**Ishigakijimahi**	**4.09**	**30**	eP	Pn	22 28 52.3	+0.7	
JISG				eS	Sn	22 29 37.2	-1.1	
YM01	**YM01**	**4.10**	**354**	eP	Pn	22 28 55.9	+4.1	
YM01				eS	Sn	22 29 36.6	-1.9	
ZUZH	**Zhuzihu**	**4.12**	**354**	P	Pn	22 28 55.2	+3.2	
ZUZH				eS	Sn	22 29 39.1	+0.1	
YM08	**YM08**	**4.14**	**354**	eS	Sn	22 29 39.7	+0.2	
JTJ	**Tarama**	**4.33**	**34**	eS	Sn	22 29 43.9	-0.4	
VWUC	**VWUC**	**4.59**	**329**	eP	Pn	22 28 59.3	+0.8	
VWUC				eS	Sn	22 29 49.3	-1.3	
KNMB	**Chin-men Tao**	**4.79**	**316**	P	Pn	22 29 00.7	-0.5	
KNMB				eS	Sn	22 29 52.9	-2.5	
PTMZ	**Houxiangcun**	**4.80**	**326**	eP	Pn	22 29 01.4	0.0	
PTMZ				eS	Sn	22 29 54.1	-1.5	
ZPLA	**Ao Xicun**	**4.90**	**307**	eP	Pn	22 29 02.0	-0.7	
ZPLA				eS	Sn	22 29 55.6	-2.5	
DSXP	**Dongshan**	**5.03**	**303**	eS	Sn	22 29 58.0	-3.2	
AXDP	**Jialang**	**5.36**	**316**	eP	Pn	22 29 08.9	-0.2	
AXDP				eS	Sn	22 30 09.8	+0.2	
MATB	**Ma-tsu**	**5.43**	**340**	eP	Pn	22 29 10.6	+0.6	
MATB				eS	Sn	22 30 10.2	-1.0	
MHZQ	**Yeshan**	**5.74**	**332**	eP	Pn	22 29 14.3	+0.1	
MHZQ				eS	Sn	22 30 18.5	-0.2	
LYJJ	**Jianjiangzhen**	**5.86**	**340**	eP	Pn	22 29 17.5	+1.6	
LYJJ				S	Sn	22 30 17.9	-3.9	
XPSS	**Dashiqiu**	**6.09**	**344**	eP	Pn	22 29 19.1	0.0	
XPSS				eS	Sn	22 30 26.6	-0.9	
SXFK	**Yanhouchang**	**6.68**	**324**	eP	Pn	22 29 26.2	-1.0	
JOW	**Kunigami**	**8.10**	**44**	Pn	Pn	22 29 46.6	-0.1	
	1.6nm,0.3s,baz=124,slow=25,SNR=7.3 7.1nm,0.6s							
JNU	**Nakatsue**	**14.36**	**31**	LR	LR	22 36 46.0		
	comp=Z,46nm,18.0s,baz=222,slow=38							
KSRS	**Korea Array**	**17.12**	**16**	P	**P**	**22 31 50.5**	**+1.7**	
	0.1nm,0.3s,baz=196,slow=11,SNR=4.7							
KSRS				LR	LR	22 39 34.1		
	comp=Z,21nm,18.9s,baz=205,slow=41 1.4nm,0.7s							
MJAR	**Matsushiro Arr**	**20.90**	**39**	P	Pn	22 32 37.1	+3.9	
	0.4nm,0.3s,baz=228,slow=9.3,SNR=1.5							
LZDM	**Lanzhou Array**	**21.86**	**317**	P	P	22 32 44.3	+3.3	
	0.7nm,0.3s,baz=110,slow=12,SNR=1.7 0.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**21.89**	**267**	P	P	22 32 45.1	+4.0	
	0.9nm,0.8s,baz=75,slow=8.1,SNR=5.6							
CMAR				LR	LR	22 41 07.5		
	comp=Z,27nm,18.8s,baz=85,slow=36 0.9nm,0.8s							
KLR	**Kul'dur**	**29.16**	**13**	LR	LR	22 45 41.5		
	comp=Z,40nm,19.6s,baz=147,slow=37							
SONM	**Songino Array**	**29.55**	**338**	P	P	22 33 53.9	+1.7	
	0.7nm,0.7s,baz=164,slow=9.4,SNR=5.7 0.7nm,0.7s							
MKAR	**Makanchi Array**	**41.16**	**318**	P	P	22 35 34.5	+2.8	
	1.0nm,0.8s,baz=111,slow=8.9,SNR=18 1.0nm,0.8s							
H11N1	**WAKE ISLAND Hy**	**41.96**	**84**	T	T	23 20 30.4		
	baz=281,slow=75,SNR=233							
H11N2	**WAKE ISLAND Hy**	**41.96**	**84**	T	T	23 20 32.7		
	baz=281,slow=75,SNR=207							
H11N3	**WAKE ISLAND Hy**	**41.97**	**84**	T	T	23 20 31.4		
	baz=281,slow=75,SNR=200							
H11S3	**WAKE ISLAND Hy**	**41.99**	**85**	T	T	23 20 33.1		
	baz=281,slow=75,SNR=519							
H11S1	**WAKE ISLAND Hy**	**42.00**	**85**	T	T	23 20 32.9		
	baz=281,slow=75,SNR=688							
H11S2	**WAKE ISLAND Hy**	**42.01**	**85**	T	T	23 20 33.7		
	baz=281,slow=75,SNR=568							
WRA	**Warramunga Arr**	**42.48**	**163**	P	**P**	**22 35 41.8**	**-0.9**	
	0.8nm,0.8s,baz=343,slow=9.0,SNR=11 0.8nm,0.8s							
ZALV	**Zalesovo Beam**	**43.31**	**329**	P	P	22 35 51.1	+2.1	
	2.1nm,0.8s,baz=108,slow=8.5,SNR=8.2 2.1nm,0.8s							
KURBB	**Kurchatov Arra**	**45.03**	**322**	P	P	22 36 06.3	+3.5	
	1.7nm,0.4s,baz=142,slow=6.0,SNR=1.7							
ASAR	**Alice Springs**	**45.92**	**165**	P	**P**	**22 36 10.4**	**+0.3**	
	0.4nm,0.4s,baz=347,slow=7.9,SNR=11 0.4nm,0.4s							
BVAR	**Borovoye Array**	**50.61**	**322**	P	P	22 36 49.2	+3.2	
	0.7nm,0.5s,baz=116,slow=8.4,SNR=5.7 0.7nm,0.5s							
STKA	**Stephens Creek**	**55.86**	**160**	P	**P**	**22 37 24.6**	**-0.1**	
	1.2nm,0.5s,baz=343,slow=11,SNR=3.9 1.2nm,0.5s							
GNI	**Garni**	**67.25**	**306**	LR	LR	23 10 08.6		
	comp=Z,36nm,21.8s,baz=336,slow=38							
YKA	**Yellowknife Ar**	**85.53**	**23**	P	P	22 40 27.6	+2.8	
	0.3nm,0.6s,baz=316,slow=5.4,SNR=5.7 0.3nm,0.6s							

*IDC **28** 22:33:45.0±1.4, 3.°47S×131.°18E, h0km, mb3.6/4, mbtmp3.7/6, ML3.2/2, MS2.4/1, Error ellipse: s-maj=66.2km s-min=24.2km az=85.0*

ISC 28 22:33:47.8±1.1, 3.°92S±0.°09×131.°0E±0.°2, h29km, n8, σ2ş26/10, mb3.7/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.04**	**4**	Pn	Pn	22 34 27.9	-6.0
	1.6nm,0.3s,baz=187,slow=15,SNR=15						
SIJI				Sn	Sn	22 34 58.3	-11
	4.6nm,0.3s,baz=184,slow=9.3,SNR=4.0						
SIJI				LR	LR	22 35 34.6	
	comp=Z,65nm,18.9s,baz=324,slow=42 6.0nm,0.2s						
FITZ	**Fitzroy Crossi**	**15.05**	**200**	Pn	**P**	**22 37 23.5**	**-0.1**
	0.2nm,0.3s,baz=27,slow=14,SNR=1.3						
FITZ				Sn	**Sn**	**22 40 02.9**	**-1.5**
	0.1nm,0.3s,baz=302,slow=21,SNR=2.8 2.5nm,0.8s						
WRA	**Warramunga Arr**	**16.25**	**169**	Pn	**P**	**22 37 35.6**	**-1.3**
	0.1nm,0.3s,baz=336,slow=14,SNR=5.2						
WRA				Sn	**Sn**	**22 40 30.7**	**-2.9**
	0.2nm,0.3s,baz=348,slow=25,SNR=5.5						
ASAR	**Alice Springs**	**19.83**	**172**	P	**Pn**	**22 38 22.7**	**+4.7**
	1.7nm,0.7s,baz=351,slow=11,SNR=18						
ASAR				S	**S**	**22 41 58.5**	**+0.2**
	0.3nm,0.9s,baz=0.8,slow=27,SNR=1.8 1.7nm,0.7s						
MKAR	**Makanchi Array**	**66.25**	**326**	P	**P**	**22 44 33.5**	**+0.2**
	0.4nm,0.7s,baz=122,slow=7.8,SNR=6.9 0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**70.46**	**328**	P	**P**	**22 45 00.2**	**+0.7**
	2.1nm,0.3s,baz=129,slow=5.4,SNR=1.7						
BVAR	**Borovoye Array**	**76.04**	**327**	P	**P**	**22 45 31.7**	**-0.7**
	0.5nm,0.6s,baz=99,slow=4.5,SNR=3.1 0.5nm,0.6s						
ILAR	**Eielson Array**	**90.14**	**25**	P	**P**	**22 46 44.2**	**-0.7**
	0.4nm,0.9s,baz=230,slow=5.6,SNR=2.9 0.4nm,0.9s						

IDC 28 22:36:33.0±10.0, 48.°81S×123.°54E, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=823.3km s-min=72.9km az=100.0, Western Indian-Antarctic Ridge

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

H01W1	**Cape Leeuwin H**	**15.54**	**330**	T	T	22 57 55.8		
	baz=151,slow=75,SNR=7.4							
H01W2	**Cape Leeuwin H**	**15.55**	**330**	T	T	22 57 56.6		
	baz=151,slow=75,SNR=7.2							
H01W3	**Cape Leeuwin H**	**15.56**	**330**	T	T	22 57 56.2		
	baz=151,slow=75,SNR=7.0							
ASAR	**Alice Springs**	**26.40**	**22**	P	P	22 42 11.2	+0.1	
	1.4nm,0.4s,baz=196,slow=8.7,SNR=28 1.4nm,0.4s							
WRA	**Warramunga Arr**	**30.08**	**21**	P	P	22 42 43.8	-0.1	
	0.6nm,0.8s,baz=193,slow=8.2,SNR=3.3 0.6nm,0.8s							
YKA	**Yellowknife Ar**	**145.74**	**44**	PKPbc	PKPdf	22 56 11.7	-0.4	
	0.4nm,0.8s,baz=270,slow=3.1,SNR=5.9							

UPP 28 23:07:44.9±0.0, 67.°17N×20.°64E, h0km, ML2.4, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.06**	**209**	P	Pg	23 07 46.4	+0.3
	baz=27						
DUNU				S	Sg	23 07 47.3	+0.6
MASU	**Masugnsbyn**	**0.60**	**61**	P	Pg	23 07 56.4	0.0
MASU				S	Sg	23 08 04.5	+0.4
RATU	**Laukkuluspa**	**0.77**	**329**	P	Pg	23 07 59.3	-0.3
RATU				S	Sg	23 08 09.9	+0.4
KUA	**Kurravaara**	**0.79**	**352**	P	Pg	23 07 60.0	-0.1
KUA				S	Sg	23 08 10.6	+0.3
SALU	**Saltoluokta**	**0.85**	**285**	P	Pg	23 08 01.1	-0.1
ERTU	**Ertsjaerv**	**0.87**	**135**	P	Pg	23 08 00.8	-0.7
NIKU	**Nikkaluokta**	**0.93**	**319**	P	Pg	23 08 02.0	-0.7
NIKU				S	Sg	23 08 15.0	+0.2
LANU	**Lannavaara**	**1.02**	**30**	P	Pg	23 08 04.2	-0.3
HARU	**Harads**	**1.02**	**172**	P	Pg	23 08 04.0	-0.5
HARU				S	Sg	23 08 17.7	0.0
KALU	**Kalix**	**1.71**	**139**	P	Pn	23 08 16.1	+0.2
SJUU	**Sjulsmark**	**1.72**	**166**	P	Pn	23 08 15.8	-0.1

UPP 28 23:07:56.7±0.0, 67.°19N×20.°63E, h0km, ML1.9, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.59**	**63**	P	Pg	23 08 08.1	0.0
MASU				S	Sg	23 08 16.3	+0.6
RATU	**Laukkuluspa**	**0.75**	**328**	P	Pg	23 08 10.7	-0.4
RATU				S	Sg	23 08 20.9	+0.1
KUA	**Kurravaara**	**0.78**	**352**	P	Pg	23 08 11.4	-0.1
SALU	**Saltoluokta**	**0.85**	**284**	P	Pg	23 08 12.7	-0.2
SALU				S	Sg	23 08 24.6	+0.8
ERTU	**Ertsjaerv**	**0.89**	**135**	P	Pg	23 08 12.9	-0.8
NIKU	**Nikkaluokta**	**0.92**	**319**	P	Pg	23 08 13.9	-0.3
LANU	**Lannavaara**	**1.01**	**31**	P	Pg	23 08 15.5	-0.5
HARU	**Harads**	**1.04**	**172**	P	Pg	23 08 16.1	-0.6
HEF	**Hetta**	**1.68**	**42**	eP	Pn	23 08 27.0	-0.3
KALU	**Kalix**	**1.73**	**140**	P	Pn	23 08 28.1	+0.2
SJUU	**Sjulsmark**	**1.74**	**166**	P	Pn	23 08 27.9	-0.1
FAUS	**Fauske**	**2.08**	**278**	eP	Pb	23 08 34.6	-0.7

*MOS **28** 23:09:07.3±0.9, 55.°68N×130.°18E, h11km, mb4.8/42, MS4.2/9, Error ellipse: s-maj=7.1km s-min=5.3km az=103.1*

*IDC **28** 23:09:07.2±0.4, 55.°64N×130.°28E, h0km, mb4.1/21, mbtmp4.2/32, ML4.2/11, MS3.9/71, Error ellipse: s-maj=10.6km s-min=8.6km az=135.0*

*SKHL **28** 23:09:08.1±0.3, 55.°60N×130.°30E, h12km±2km, mb5.5/6, ms4.5/3*

*GCMT **28** 23:09:09.6±0.4, 55.°64N±0.°02×130.°33E±0.°04, h21km±2km, MW4.7/78, Moment Tensor Solution. s7,c7; s78,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.29±.10; $M_{\theta\theta}$0.28±.07; $M_{\phi\phi}$-0.57±.08; $M_{r\theta}$0.12±.12; $M_{r\phi}$1.25±.06; $M_{\theta\phi}$0.31±.12; Best double couple: $M_0$1.37100×10^{16} NP1:ϕ_s100.00000°,δ74.00000°,λ8.00000°. NP2

EKMR				*e*Pg	**Pb**	**23 10 00.9 -2.5**		
EKMR				AMB	AMB	23 10 03.6		
comp=Z,850nm,0.7s								
EKMR				*e*Sg	**Sb**	**23 10 39.6 -1.5**		
EKMR				A	A	23 10 44.5		
comp=Z,4µm,0.8s								
EKMR				A	A	23 10 44.5		
comp=Z,5µm,0.8s								
EKMR				AMS	AMS	23 11 22.0		
comp=Z,2µm,3.4s								
EKMR				AMS	AMS	23 11 22.0		
comp=Z,1µm,3.4s								
EKMR				AMS	AMS	23 11 22.0		
comp=Z,3µm,3.4s								
HEH	**HeiHe**	**5.75 199**		Pn	**Pn**	**23 10 32.3 -1.4**		
HEH				Pg	**Pb**	**23 10 50.0 +1.3**		
HEH				Sg	**Sb**	**23 12 02.5 +5.0**		
HEH				smax	smax			
comp=Z,3µm,0.7s								
HEH				smax	smax			
comp=Z,4µm,1.0s								
TUP	**Tupik**	**6.07 262**		*e*Pg	**Pb**	**23 10 57.4 +3.2**		
TUP				AMB	AMB	23 10 58.2		
comp=Z,500nm,0.9s								
TUP				*e*Sg	**Sg**	**23 12 14.5 -8.6**		
TUP				A	A	23 12 22.5		
comp=Z,10µm,1.4s								
GRNR	**Gornyy**	**6.18 141**	⇓	*i*P	**Pn**	**23 10 39.2 -0.5**		
GRNR				pmax	pmax			
comp=E,10.0nm,1.0s								
GRNR				pmax	pmax			
comp=N,10.0nm,0.9s								
GRNR				pmax	pmax			
comp=Z,20nm,1.0s								
GRNR	**Gornyy**	**6.18 141**		*e*P	**Pn**	**23 10 39.1 -0.6**		
GRNR				*e*Pg	**Pb**	**23 10 58.0 +1.8**		
GRNR				AMB	AMB	23 11 01.4		
comp=Z,180nm,0.8s								
GRNR				*e*Sg	**Sg**	**23 12 18.0 -8.8**		
GRNR				A	A	23 12 26.8		
comp=Z,630nm,1.0s								
GRNR				AMS	AMS	23 13 38.3		
comp=Z,590nm,4.8s								
YAK	**Yakutsk**	**6.33 357**		Pn	**Pn**	**23 10 43.0 +1.3**		
comp=Z,6.7nm,0.3s,baz=178,slow=3.1,SNR=15								
YAK				Pg	**Pb**	**23 10 56.9 -1.8**		
comp=Z,62nm,0.3s,baz=188,slow=9.6,SNR=39								
YAK				Lg	Lg	23 12 20.0		
comp=Z,161nm,0.3s,baz=52,slow=23,SNR=30								
YAK				LR	LR	23 13 08.3		
comp=Z,948nm,18.5s,baz=172,slow=38								
comp=Z,49nm,0.7s								
YAK	**Yakutsk**	**6.33 357**			**Pn**	**23 10 42.0 +0.2**		
YAK	**Yakutsk**	**6.33 357**		*e*P	**Pn**	**23 10 39.3 -2.4**		
YAK				*e*		23 11 49.2		
YAK				pmax	pmax			
comp=Z,46nm,0.7s								
YAK				smax	smax			
comp=N,72nm,0.5s								
YAK				smax	smax			
comp=E,112nm,0.9s								
KLR	**Kul'dur**	**6.57 171**		Pn	**Pn**	**23 10 44.9 -0.1**		
comp=E,12nm,0.3s,baz=352,slow=14,SNR=74								
KLR				Lg	Lg	23 12 28.9		
comp=E,52nm,0.3s,baz=36,slow=12,SNR=16								
KLR				LR	LR	23 13 30.2		
comp=E,343nm,19.9s,baz=356,slow=41								
comp=E,25nm,0.3s								
KLR	**Kul'dur**	**6.57 171**	*i*	P	**Pn**	**23 10 44.4 -0.6**		
KLR				*e*rx	rx	23 12 20.5		
KLR				*e*Sg	Sg	23 12 29.2 -10		
NKL	**Nikolayevsk**	**6.60 109**		*e*P	**Pn**	**23 10 44.5 -0.8**		
NKL				*e*rx	rx	23 12 28.7		
NKL				*e*Sg	**Sg**	**23 12 32.6 -7.4**		
NKL				AMS	AMS	23 13 50.0		
comp=E,1µm,6.0s								
NKL				AMS	AMS	23 13 50.0		
comp=E,2µm,6.0s								
CRS	**Chara**	**6.78 285**		*e*Sg	**Sg**	**23 12 42.3 -3.6**		
OKH	**Okha**	**7.66 101**		*de*P	Pn	23 10 53.1 -6.9		
OKH				MLR	MLR			
comp=N,2µm,7.0s								
OKH				MLR	MLR			
comp=E,2µm,6.0s								
OKH				MLR	MLR			
comp=Z,600nm,7.0s								
TYV	**Tymovskoe**	**8.87 118**		*e*P	Pn	23 11 24.5 +8.0		
TYV				pmax	pmax			
comp=Z,5.0nm,1.0s								
TYV				pmax	pmax			
comp=Z,100nm,4.3s								
HILR	**Hailar Array B**	**8.89 230**		Pn	**Pn**	**23 11 15.9 -0.9**		
baz=46,slow=15								
HILR				Pg	Pg	23 11 47.4 -11		
baz=28,slow=18								
HILR				Sn	**Sn**	**23 13 01.1 +4.2**		
baz=43,slow=26								
HILR				Lg	Lg	23 13 45.5		
baz=54,slow=31								
HILR				LR	LR	23 14 49.2		
comp=Z,846nm,19.8s,baz=75,slow=39								
comp=Z,3.4nm,0.3s								
HIA	**Hailar**	**9.11 229**			**Pn**	**23 11 20.0 +0.2**		
HIA	**Hailar**	**9.11 229**		P	**Pn**	**23 11 20.0 +0.2**		
UGL	**Uglegorsk**	**9.80 128**		*e*P	**Pn**	**23 11 30.6 +1.3**		
UGL				S	**Sn**	**23 13 18.9 -0.4**		
UGL				pmax	pmax			
comp=Z,53nm,1.3s								
UGL				MLR	MLR			
comp=Z,2µm,7.3s								
UGL				MLR	MLR			
comp=N,2µm,6.4s								
UGL				MLR	MLR			
comp=E,2µm,8.1s								
BNX	**BinXian**	**10.16 191**	⇑	P	**Pn**	**23 11 33.0 -1.2**		
CIT	**Chita**	**10.54 256**		*e*P	Pn	23 11 33.3 -6.2		
CIT				pmax	pmax			
comp=Z,66nm,1.5s								
MDJ	**Mudanjiang**	**11.13 183**			**Pn**	**23 11 48.2 +0.7**		
MDJ	**Mudanjiang**	**11.13 183**		P	**Pn**	**23 11 48.8 +1.3**		
MDJ				S	**Sn**	**23 13 55.8 +3.9**		
MDJ				pmax	pmax			
comp=Z,27nm,1.1s								
MDJ				LR	LR			
comp=Z,1µm,10.3s								
MDJ				LR	LR			
comp=Z,10µm,10.9s								
MDJ				LR	LR			
comp=Z,2µm,9.6s								
TEY	**Ternei**	**11.43 157**		*e*Sg		23 15 05.7		
USRK	**Ussuriysk Ar.**	**11.59 174**		Pn	**Pn**	**23 11 53.3 -0.5**		
comp=Z,2.4nm,0.3s,baz=4.6,slow=15,SNR=40								
USRK				Lg	Lg	23 15 07.6		
comp=Z,0.6nm,0.3s,baz=354,slow=29,SNR=8.2								
comp=Z,5.4nm,0.3s								
MA2	**Magadan**	**11.62 62**		Pn	**Pn**	**23 11 56.8 +2.6**		
comp=Z,1.0nm,0.3s,baz=265,slow=13,SNR=18								
MA2				Sn	**Sn**	**23 14 04.3 +0.5**		
comp=Z,0.5nm,0.3s,baz=258,slow=22,SNR=1.1								
MA2				Lg	Lg	23 15 08.5		
comp=Z,0.5nm,0.3s,baz=163,slow=19,SNR=4.7								
MA2				LR	LR	23 16 30.0		
comp=Z,534nm,18.7s,baz=264,slow=38								
comp=Z,27nm,1.1s								
MA2	**Magadan**	**11.62 62**			**Pn**	**23 11 55.7 +1.5**		
YSS	**Yuzhno-Sakhali**	**11.73 133**		Pn	**Pn**	**23 11 57.3 +1.6**		
YSS	**Yuzhno-Sakhali**	**11.73 133**		*e*P	Pn	23 11 59.0 +3.3		
YSS				*e*S	**Sn**	**23 14 13.0 +6.4**		
YSS				pmax	pmax			
comp=Z,10.0nm,0.5s								
YSS				MLR	MLR			
comp=Z,900nm,14.0s								
YSS				MLR	MLR			
comp=N,700nm,15.0s								
YSS				MLR	MLR			
comp=E,1µm,12.0s								
CN2	**Changchun**	**12.33 197**		P	**Pn**	**23 12 07.0 +3.1**		
CN2				S	**Sn**	**23 14 24.5 +3.2**		
CN2				pmax	pmax			
comp=E,10.0nm,0.6s								
CN2				LR	LR			
comp=E,2µm,7.0s								
CN2				LR	LR			
comp=E,5µm,7.0s								
CN2				LR	LR			
comp=E,2µm,7.0s								

VLA	**Vladivostok**	**12.66 175**		*i* P	**Pn**	**23 12 11.1 +2.7**		
SEY	**Seymchan**	**13.34 48**		Pn	**Pn**	**23 12 18.4 +0.8**		
comp=E,0.3nm,0.3s,baz=259,slow=13,SNR=11								
SEY				Lg	Lg	23 16 08.6		
comp=E,0.4nm,0.3s,baz=9.7,slow=23,SNR=10								
SEY				LR	LR	23 17 40.0		
comp=E,615nm,19.0s,baz=261,slow=38								
comp=E,1.0nm,0.2s								
SEY	**Seymchan**	**13.34 48**		*ce*P	**Pn**	**23 12 19.6 +2.0**		
SEY				pmax	pmax			
comp=Z,39nm,2.5s								
SEY	**Seymchan**	**13.34 48**		*e*P	**Pn**	**23 12 19.7 +2.1**		
ASAJ	**Asahikawa**	**14.04 141**		Pn	**Pn**	**23 12 27.4 +0.1**		
comp=Z,0.3nm,0.3s,baz=320,slow=17,SNR=1.6								
ASAJ				LR	LR	23 18 04.6		
comp=Z,455nm,21.1s,baz=352,slow=38								
comp=Z,1.2nm,0.3s								
ASAJ	**Asahikawa**	**14.04 141**		P	**Pn**	**23 12 28.9 +1.6**		
JKA	**Kamikawa-asahi**	**14.04 141**			**Pn**	**23 12 28.9 +1.6**		
XLT	**XiLinHaoTe**	**14.93 223**		*e*P	**P**	**23 12 47.5 +2.4**		
XLT				PP	PnPn	23 13 02.3 +15		
XLT				pmax	pmax			
comp=Z,26nm,0.9s								
XLT				LR	LR			
comp=N,81nm,4.3s								
XLT				LR	LR			
comp=E,2µm,5.2s								
XLT				LR	LR			
comp=Z,550nm,6.3s								
IRK	**Irkutsk**	**15.65 268**		*e*P	**Pn**	**23 12 47.6 -1.2**		
TIXI	**Tiksi**	**16.00 358**		Pn	**Pn**	**23 12 51.8 -1.4**		
comp=Z,0.3nm,0.3s,baz=198,slow=10,SNR=16								
TIXI				LR	LR	23 19 36.7		
comp=Z,451nm,18.7s,baz=194,slow=39								
TIXI	**Tiksi**	**16.00 358**			**Pn**	**23 12 51.2 -2.0**		
TIXI	**Tiksi**	**16.00 358**		*i* P	**Pn**	**23 12 51.6 -1.6**		
PEA0B	**Petropavlovsk-**	**16.13 88**			**P**	**23 12 56.8 -1.5**		
PEA0B	**Petropavlovsk-**	**16.13 88**		P	**P**	**23 12 56.8 -1.5**		
PEA0B				pmax	pmax			
comp=Z,80nm,1.1s								
PETK	**Petropavlovsk-**	**16.13 88**		Pn	**P**	**23 12 55.5 -2.9**		
comp=Z,0.6nm,0.3s,baz=286,slow=9.0,SNR=23								
PETK				LR	LR	23 19 15.2		
comp=Z,364nm,18.3s,baz=287,slow=38								
comp=Z,3.6nm,0.8s								
PETK	**Petropavlovsk-**	**16.13 88**			**P**	**23 12 57.5 -0.8**		
PETK	**Petropavlovsk-**	**16.13 88**		P	**P**	**23 12 57.5 -0.8**		
TLY	**Talaya**	**16.23 267**		Pn	**P**	**23 12 57.0 -2.5**		
baz=45,slow=5.7								
TLY				Lg	Lg	23 17 34.2		
TLY				LR	LR	23 19 28.1		
comp=Z,449nm,21.1s,baz=53,slow=38								
TLY	**Talaya**	**16.23 267**			**Pn**	**23 12 56.2 -0.1**		
TLY				IAmb	IAmb	23 13 04.5		
comp=Z,42nm,1.2s								
TLY	**Talaya**	**16.23 267**	*i*	P	**P**	**23 12 57.2 -2.2**		
TLY				pmax	pmax			
comp=Z,57nm,1.4s								
TLY	**Talaya**	**16.23 267**		*e*P	**P**	**23 12 57.3 -2.2**		
ULN	**Ulaanbaatar**	**16.32 251**			**Pn**	**23 12 57.3 -0.3**		
ULN				IAmb	IAmb	23 13 05.2		
comp=Z,45nm,1.2s								
ULN	**Ulaanbaatar**	**16.32 251**		*ce*P	**Pn**	**23 12 57.5 0.0**		
ULN				pmax	pmax			
comp=Z,17nm,1.7s								
ULN	**Ulaanbaatar**	**16.32 251**		*e*P	**Pn**	**23 12 57.6 0.0**		
SONM	**Songino Array**	**16.69 252**		Pn	**Pn**	**23 13 02.1 -0.2**		
comp=Z,2.4nm,0.3s,baz=55,slow=12,SNR=36								
SONM				Lg	Lg	23 17 48.4		
comp=Z,1.8nm,0.3s,baz=52,slow=24,SNR=9.9								
SONM				LR	LR	23 19 49.6		
comp=Z,516nm,19.0s,baz=59,slow=39								
comp=Z,4.7nm,0.4s								
SONM	**Songino Array**	**16.69 252**			**Pn**	**23 13 01.4 -0.9**		
SONM				IAmb	IAmb	23 13 09.2		
comp=Z,39nm,1.2s								
PET	**Petropavlovsk**	**16.70 87**		*e*P	P	23 13 11.7 +7.1		
PET				*e*S	**Sn**	**23 16 08.2 +0.6**		
PET				MLR	MLR			
comp=Z,400nm,16.0s								
PET				MLR	MLR			
comp=Z,200nm,17.0s								
ZAK	**Zakamensk**	**17.02 263**		*e*P	**P**	**23 13 06.8 -1.5**		
ZAK				pmax	pmax			
comp=Z,40nm,1.8s								
MOY	**Mondy**	**17.74 269**		*e*P	**P**	**23 13 18.2 +2.0**		
MOY				pmax	pmax			
comp=Z,97nm,1.9s								
KSRS	**Korea Array**	**18.34 186**		P	**P**	**23 13 22.4 -0.5**		
comp=Z,0.2nm,0.3s,baz=3.6,slow=11,SNR=17								
KSRS				LR	LR	23 21 06.1		
comp=Z,83nm,19.2s,baz=5.0,slow=39								
comp=Z,5.8nm,0.8s								
KSAR	**Wonju Array Be**	**18.36 186**		P	**P**	**23 13 24.3 +1.3**		
KSAR	**Wonju Array Be**	**18.36 186**		P	**P**	**23 13 24.3 +1.3**		
HHC	**Hu-ho-hao-te**	**19.31 227**		*e*P	**Pn**	**23 13 35.8 +1.3**		
HHC				S	**Sn**	**23 17 07.0 -3.9**		
HHC				sS	sS	23 17 14.0 -3.1		
HHC				pmax	pmax			
comp=Z,8.0nm,0.7s								
HHC				pmax	pmax			
comp=Z,170nm,4.8s								
HHC				LR	LR			
comp=Z,620nm,7.6s								
HHC				LR	LR			
comp=Z,540nm,7.7s								
HHC				LR	LR			
comp=Z,600nm,7.6s								
MJB9	**Matsu-Tunnel**	**19.93 161**		P	**Pn**	**23 13 41.9 0.0**		
MAJO	**Matsushiro**	**19.93 161**		P	**Pn**	**23 13 41.3 -0.6**		
MAJO	**Matsushiro**	**19.93 161**		P	**Pn**	**23 13 41.3 -0.6**		
MAJO				pmax	pmax			
comp=Z,13nm,0.8s								
MJAR	**Matsushiro Arr**	**19.93 161**		P	**Pn**	**23 13 40.6 -1.4**		
comp=Z,0.1nm,0.3s,baz=352,slow=9.1,SNR=32								
comp=Z,10nm,0.8s								
MJAR	**Matsushiro Arr**	**19.93 161**		P	**P**	**23 13 39.7 -0.6**		
KNGR	**Kungurtug, Tuv**	**20.17 269**		*i* P	**P**	**23 13 40.0 -2.9**		
BILL	**Bilibino**	**20.58 39**			Pn	23 13 48.6 -0.7		
BILL	**Bilibino**	**20.58 39**		*ce*P	Pn	23 13 49.5 +0.2		
BILL				pmax	pmax			
comp=Z,16nm,1.0s								
BILL	**Bilibino**	**20.58 39**		*e*P	Pn	23 13 49.1 -0.2		
JGF	**Kuroka**	**20.70 163**		P	Pn	23 13 49.0 -2.0		
JGF				IAmb	IAmb	23 13 58.5		
comp=Z,40nm,1.5s								
INU	**Inuyama**	**20.90 164**		P	Pn	23 13 51.0 -2.2		
INU				IAmb	IAmb	23 13 56.2		
comp=Z,35nm,0.9s								
HNS	**HongShan**	**21.14 216**	⇓	P	**P**	**23 13 54.0 +0.8**		
HNS				S	**S**	**23 17 49.0 +0.8**		
HNS				pmax	pmax			
comp=Z,110nm,1.0s								
HNS				LR	LR			
comp=Z,640nm,12.9s								
HNS				LR	LR			
comp=Z,1µm,11.0s								
HNS				LR	LR			
comp=Z,700nm,9.9s								
TIA	**Tai'an**	**21.48 210**		P	**P**	**23 13 58.3 +1.3**		
TIA				S	**S**	**23 17 44.5 -11**		
TIA				pmax	pmax			
comp=Z,13nm,1.2s								
TIA				pmax	pmax			
comp=Z,170nm,3.5s								
TIA				LR	LR			
comp=Z,580nm,11.5s								
TIA				LR	LR			
comp=Z,390nm,9.8s								
TIA				LR	LR			
comp=Z,510nm,15.8s								
TIY	**Taiyuan**	**21.66 221**		P	**P**	**23 14 01.3 +2.3**		
TIY				PcP	**PcP**	**23 18 05.5 +5.5**		
TIY				pmax	pmax			
comp=Z,23nm,0.9s								
TIY				pmax	pmax			
comp=Z,98nm,5.3s								
TIY				LR	LR			
comp=Z,2µm,7.8s								
TIY				LR	LR			
comp=Z,2µm,7.7s								
TIY				LR	LR			
comp=Z,840nm,9.1s								
JNU	**Nakatsue**	**22.60 179**		LR	LR	23 23 21.4		
comp=Z,68nm,21.2s,baz=20,slow=38								
LYN	**LuoYang**	**24.48 218**	⇓	P	**P**	**23 14 29.8 +2.3**		

LYN				pP	sP	23 14 35.5 +3.1		
LYN				S	**S**	**23 18 50.3 +2.8**		
LYN				pmax	pmax			
comp=Z,56nm,0.9s								
LYN				LR	LR			
comp=Z,660nm,13.9s								
LYN				LR	LR			
comp=Z,840nm,10.6s								
LYN				LR	LR			
comp=Z,540nm,14.1s								
NJ2	**Nanjing**	**24.99 203**		*e*P	**P**	**23 14 34.3 +2.2**		
NJ2				pmax	pmax			
comp=Z,9.0nm,0.6s								
NJ2				pmax	pmax			
comp=Z,220nm,4.3s								
NJ2				LR	LR			
comp=Z,330nm,12.3s								
NJ2				LR	LR			
comp=Z,1µm,15.2s								
NJ2				LR	LR			
comp=Z,450nm,14.2s								
SHEM	**Shemya Is, Ala**	**25.47 78**		LR	LR	23 24 23.9		
comp=Z,190nm,20.0s,baz=282,slow=36								
ZAA0	**Zalesovo Array**	**25.88 285**		P	**P**	**23 14 39.7 -0.3**		
ZALV	**Zalesovo Beam**	**25.88 285**		P	**P**	**23 14 40.5 +0.5**		
comp=Z,4.3nm,0.9s,baz=66,slow=7.3,SNR=20								
ZALV				PP	**PnPn**	**23 15 19.0 +2.0**		
comp=Z,2.8nm,0.8s,baz=66,slow=12,SNR=4.6								
ZALV				LR	LR	23 25 18.2		
comp=Z,321nm,19.6s,baz=58,slow=38								
comp=Z,4.3nm,0.9s								
ZALV	**Zalesovo Beam**	**25.88 285**		P	**P**	**23 14 39.9 -0.2**		
ZALV	**Zalesovo Beam**	**25.88 285**	*i*	P	**P**	**23 14 43.2 +3.2**		
ZALV				pmax	pmax			
comp=Z,4.0nm,0.9s								
GTA2	**Gaotai**	**25.92 244**		P	**P**	**23 14 40.5 -0.1**		
GTA2				pP	sP	23 14 44.5 -1.1		
GTA2				S	**S**	**23 19 10.3 -0.4**		
GTA2				pmax	pmax			
comp=Z,6.0nm,1.2s								
GTA2				LR	LR			
comp=Z,1µm,11.1s								
GTA2				LR	LR			
comp=Z,640nm,11.9s								
GTA2				LR	LR			
comp=Z,1µm,11.1s								
XAN	**Xi'an**	**26.23 223**		P	**P**	**23 14 47.0 +3.5**		
XAN				pmax	pmax			
comp=Z,44nm,1.0s								
XAN				LR	LR			
comp=Z,1µm,13.4s								
XAN				LR	LR			
comp=Z,2µm,15.3s								
XAN				LR	LR			
comp=Z,740nm,12.4s								
DGZ	**Jazzator, Alta**	**26.30 275**	*i*	P	**P**	**23 14 44.7 +0.6**		
DGZ				pmax	pmax			
comp=Z,21nm,1.4s								
LZH	**Lanzhou**	**26.63 234**		*e*P	**P**	**23 14 49.5 +2.4**		
LZH				sP	sP	23 14 58.5 +6.4		
LZH				pmax	pmax			
comp=Z,7.0nm,1.5s								
LZH				LR	LR			
comp=Z,750nm,12.0s								
LZH				LR	LR			
comp=Z,670nm,15.1s								
LZH				LR	LR			
comp=Z,830nm,14.1s								
LZDM	**Lanzhou Array**	**26.80 234**		P	**P**	**23 14 50.0 +1.1**		
comp=Z,0.8nm,0.3s,baz=33,slow=9.3,SNR=4.2								
LZDM				LR	LR	23 26 17.7		
comp=Z,344nm,19.4s,baz=15,slow=38								
comp=Z,0.8nm,0.3s								
JOW	**Kunigami**	**28.90 184**		LR	LR	23 26 58.7		
comp=Z,175nm,18.6s,baz=338,slow=37								
ZSN	**Zaisan**	**28.93 273**		*e*P	**P**	**23 15 08.2 +0.7**		
ZSN	**Zaisan**	**28.93 273**		*e*P	**P**	**23 15 08.3 +0.7**		
GAMB	**Gambell**	**29.33 50**		P	**P**	**23 15 11.2 +0.4**		
GAMB	**Gambell**	**29.33 50**		P	**P**	**23 15 11.6 +0.8**		
baz=282								
WMQ	**Urumqi**	**29.48 264**		*e*P	**P**	**23 15 15.5 +3.0**		
WMQ				LR	LR			
comp=Z,3µm,11.7s								
WMQ				LR	LR			
comp=Z,1µm,14.1s								
WMQ				LR	LR			
comp=Z,510nm,18.7s								
TNA	**Tin City**	**30.57 46**		P	**P**	**23 15 22.6 +0.9**		
TNA				IAmb	IAmb	23 15 26.8		
comp=Z,6.2nm,1.0s								
TNA	**Tin City**	**30.57 46**		P	**P**	**23 15 21.7 0.0**		
baz=282,SNR=7.7								
KIWB	**Kanaga Island**	**30.68 75**		P	**P**	**23 15 24.8 +1.9**		
KURK	**Kurchatov**	**30.72 283**		P	**P**	**23 15 23.5 +0.3**		
KURK	**Kurchatov**	**30.72 283**		P	**P**	**23 15 24.8 +1.6**		
KURK	**Kurchatov**	**30.72 283**		*e*P	**P**	**23 15 24.0 +0.8**		
MK31	**Makanchi Array**	**30.76 274**		*ce*P	**P**	**23 15 24.4 +0.7**		
MKAR	**Makanchi Array**	**30.76 274**		P	**P**	**23 15 24.2 +0.5**		
comp=Z,4.4nm,0.9s,baz=61,slow=8.9,SNR=21								
MKAR				PcP	**PcP**	**23 18 21.3 +0.5**		
comp=Z,1.6nm,0.9s,baz=46,slow=6.2,SNR=2.9								
MKAR				LR	LR	23 28 21.4		
comp=Z,824nm,18.2s,baz=36,slow=38								
comp=Z,4.4nm,0.9s								
MKAR	**Makanchi Array**	**30.76 274**		P	**P**	**23 15 23.5 -0.1**		
KURBB	**Kurchatov Arra**	**30.82 283**		P	**P**	**23 15 24.8 +0.7**		
comp=Z,10nm,0.9s,baz=65,slow=8.7,SNR=11								
KURBB				LR	LR	23 28 17.1		
comp=Z,335nm,19.1s,baz=164,slow=37								
MAKZ	**Makanchi**	**30.93 274**		P	**P**	**23 15 24.7 -0.5**		
MAKZ				IAmb	IAmb	23 15 29.1		
comp=Z,14nm,1.4s								
MAKZ	**Makanchi**	**30.93 274**		P	**P**	**23 15 24.7 -0.5**		
MAKZ				pmax	pmax			
comp=Z,14nm,1.5s								
GOMU	**GeErMu**	**30.95 246**		P	**P**	**23 15 24.3 -1.6**		
GOMU				pmax	pmax			
comp=Z,10.0nm,0.8s								
CD2	**Chengdu**	**31.06 228**		*e*P	**P**	**23 15 26.5 0.0**		
C16K	**Lisburne Hills**	**31.09 41**		P	**P**	**23 15 27.1 +0.8**		
C16K				IAmb	IAmb	23 15 31.1		
comp=Z,8.7nm,0.9s								
C16K	**Lisburne Hills**	**31.09 41**		P	**P**	**23 15 26.6 +0.3**		
baz=279,SNR=12								
F14K	**Arctic Creek**	**31.24 46**		P	**P**	**23 15 28.3 +0.6**		
baz=283								
ANM	**Nome**	**31.85 48**		P	**P**	**23 15 34.1 +1.0**		
ANM				IAmb	IAmb	23 15 35.7		
comp=Z,8.3nm,0.8s								
ANM	**Nome**	**31.85 48**		P	**P**	**23 15 34.1 +1.0**		
ANM				pmax	pmax			
comp=Z,8.0nm,0.8s								
ANM	**Nome**	**31.85 48**		P	**P**	**23 15 32.9 -0.2**		
baz=285,SNR=9.2								
C17K	**DeLong Mountai**	**31.85 40**		P	**P**	**23 15 34.0 +1.0**		
baz=280								
F15K	**North Star Dit**	**31.86 45**		P	**P**	**23 15 34.3 +1.1**		
F15K	**North Star Dit**	**31.86 45**		P	**P**	**23 15 33.2 0.0**		
baz=284,SNR=6.1								
SPIA	**Saint Paul Isl**	**32.00 62**		P	**P**	**23 15 35.4 +0.9**		
baz=293								
D17K	**Noatak River**	**32.03 41**		P	**P**	**23 15 34.9 +0.3**		
baz=282,SNR=13								
A19K	**Wainwright**	**32.29 36**		P	**P**	**23 15 37.4 +0.6**		
baz=280								
G15K	**Niukluk**	**32.29 46**		P	**P**	**23 15 37.5 +0.6**		
baz=285								
C18K	**Utukok River**	**32.53 39**		P	**P**

baz=284
F17K Baldwin Pennin 33.02 43 P 23 15 44.5 +1.3
F17K IAmb IAmb 23 15 45.8
comp=Z,7.7nm,0.8s
F17K Baldwin Pennin 33.02 43 P P 23 15 44.4 +1.1
baz=285
H16K Elim 33.13 47 P P 23 15 44.6 +0.3
baz=287,SNR=11
J14K Nanvaranak Lak 33.15 50 P P 23 15 45.2 +0.7
baz=289
G17K Kiwalik Mounta 33.52 45 P P 23 15 48.6 +0.9
baz=287
F18K Selawik 33.60 43 P P 23 15 48.7 +0.4
baz=286,SNR=6.9
B20K Meade River 33.64 36 P P 23 15 48.8 +0.2
baz=283
D19K Kuna River 33.67 39 P P 23 15 49.1 +0.1
baz=285
GYA Guiyang 33.89 220 P P 23 15 53.5 +2.2
GYA pmax pmax
comp=Z,8.0nm,0.8s
GYA LR LR
comp=Z,440nm,13.9s
H17K Granite Mounta 33.99 46 P P 23 15 53.1 +1.4
H17K IAmb IAmb 23 15 56.9
comp=Z,7.4nm,1.0s
H17K Granite Mounta 33.99 46 P P 23 15 52.3 +0.6
baz=288
TDK Taldyqorghan 34.01 274 eP P 23 15 52.8 +0.7
TDK pmax pmax
comp=Z,16nm,1.0s
TDK Taldyqorghan 34.01 274 eP P 23 15 52.9 +0.7
comp=Z,16nm,1.0s
L14K Kuka Creek 34.02 52 P P 23 15 53.2 +1.2
baz=292
BVAR Borovoye Array 34.04 291 P P 23 15 53.2 +0.9
comp=Z,4.0nm,0.6s,baz=58,slow=9.1,SNR=18
BVAR LR LR 23 29 35.6
comp=Z,241nm,18.5s,baz=58,slow=36
comp=Z,4.0nm,0.6s
M13K Dall Lake 34.07 54 P P 23 15 53.3 +0.9
M13K Dall Lake 34.07 54 P P 23 15 53.3 +0.9
baz=292
BORK Borovoye 34.07 291 P P 23 15 53.1 +0.6
BORK Borovoye 34.07 291 ceP P 23 15 53.8 +1.2
BORK pmax pmax
comp=Z,17nm,1.3s
D20K Etivluk River 34.14 39 P P 23 15 53.2 +0.1
baz=286
G18K Tagagawik 34.19 44 P P 23 15 53.9 +0.4
baz=288
K15K Wolf Creek Mou 34.19 51 P P 23 15 54.9 +1.4
K15K IAmb IAmb 23 15 59.0
comp=Z,12nm,1.1s
K15K Wolf Creek Mou 34.19 51 P P 23 15 53.9 +0.4
baz=291
J16K Anvik River 34.24 49 P P 23 15 54.5 +0.5
baz=290
F19K Shaleruckik Mo 34.25 42 P P 23 15 54.6 +0.7
baz=287
E19K Redstone River 34.27 41 P P 23 15 54.1 -0.1
baz=287
E20K Nigu River 34.42 39 P P 23 15 55.7 +0.2
baz=286
L15K Ungalak Mounta 34.43 52 P P 23 15 55.7 +0.1
baz=292
H18K Honhosa River 34.54 45 P P 23 15 56.3 -0.3
baz=289
SHLS Shalkode 34.55 270 eP P 23 15 55.4 -1.6
SHLS pmax pmax
comp=Z,4.0nm,0.6s
SHLS Shalkode 34.55 270 eP P 23 15 55.4 -1.6
comp=Z,4.0nm,0.6s
M14K Bethel 34.57 53 P P 23 15 57.8 +1.0
M14K Bethel 34.57 53 P P 23 15 57.2 +0.4
baz=293
B21K Ikpikpuk River 34.59 37 P P 23 15 56.9 0.0
baz=286
C21K Knifeblade Rid 34.66 37 P P 23 15 57.5 0.0
baz=286,SNR=8.9
G19K Purcell Mounta 34.72 43 P P 23 15 58.9 +0.8
G19K IAmb IAmb 23 16 02.7
comp=Z,9.6nm,1.1s
G19K Purcell Mounta 34.72 43 P P 23 15 58.6 +0.5
baz=289
B22K Teshekpuk Lake 34.79 35 P P 23 15 58.4 -0.2
baz=286
KPKS Kokpek 34.80 271 eP P 23 15 59.8 +0.7
KPKS Kokpek 34.80 271 eP P 23 15 59.8 +0.7
UZB Uzynbulak 34.81 271 eP P 23 15 59.6 +0.4
UZB pmax pmax
comp=Z,12nm,0.9s
UZB Uzynbulak 34.81 271 eP P 23 15 59.6 +0.4
comp=Z,12nm,0.9s
F20K Avaraart Lake 34.95 41 P P 23 16 00.3 +0.3
baz=288
N14K Kuskokwak Cree 35.03 54 P P 23 16 01.8 +1.0
N14K Kuskokwak Cree 35.03 54 P P 23 16 01.4 +0.7
baz=294
E21K Killik River 35.15 38 P P 23 16 01.9 +0.1
baz=288
M15K Kasigluk River 35.17 53 P P 23 16 02.3 +0.3
baz=294
SATY Saty 35.21 271 eP P 23 16 03.4 +0.7
SATY Saty 35.21 271 eP P 23 16 03.4 +0.7
GCSA Galena City Sc 35.27 45 P P 23 16 02.9 +0.1
baz=291
L16K Owhat River 35.31 51 P P 23 16 03.9 +0.7
baz=293
UNV Unalaska Valle 35.39 66 P P 23 16 04.4 +0.5
baz=299
K17K Iditarod 35.43 49 P P 23 16 04.3 +0.1
baz=292
D22K Ayikyak River 35.47 38 P P 23 16 06.0 +1.5
D22K IAmb IAmb 23 16 11.9
comp=Z,14nm,1.2s
D22K Ayikyak River 35.47 38 P P 23 16 04.5 +0.1
baz=288
O14K Tigyukauivet M 35.50 55 P P 23 16 05.5 +0.7
O14K IAmb IAmb 23 16 12.8
comp=Z,12nm,1.1s
O14K Tigyukauivet M 35.50 55 P P 23 16 05.0 +0.2
baz=295
PRZ Przheval'sk 35.58 270 P P 23 16 06.6 +0.6
PRZ Przheval'sk 35.58 270 P P 23 16 06.6 +0.6
PRZ pmax pmax
comp=Z,6.0nm,1.0s
N15K Kwethluk River 35.66 54 P P 23 16 07.7 +1.6
N15K IAmb IAmb 23 16 13.8
comp=Z,14nm,1.1s
N15K Kwethluk River 35.66 54 P P 23 16 06.6 +0.4
baz=295
L17K Donlin 35.66 50 P P 23 16 06.0 -0.1
baz=293
F21K Alatna River 35.72 40 P P 23 16 07.9 +1.2
F21K Alatna River 35.72 40 P P 23 16 06.2 -0.5
baz=290
PZH PanZhiHua 35.77 227 P P 23 16 07.5 -0.1
PZH pmax pmax
comp=Z,10.0nm,1.3s
H20K Anotleneega Mo 35.80 43 P P 23 16 06.8 -0.6
baz=291
J18K Innoko River 35.81 47 P P 23 16 08.7 +1.2
J18K Innoko River 35.81 47 P P 23 16 06.8 -0.6
baz=292
M16K Timber Creek 35.81 52 P P 23 16 09.2 +1.7
M16K IAmb IAmb 23 16 12.7
comp=Z,8.6nm,1.1s
M16K Timber Creek 35.81 52 P P 23 16 07.0 -0.6
baz=294
C23K Itkillik River 35.86 36 P P 23 16 09.5 +1.7
C23K IAmb IAmb 23 16 15.2
comp=Z,8.3nm,1.0s
C23K Itkillik River 35.86 36 P P 23 16 07.4 -0.4
baz=289
MDOK Medeo 35.91 272 eP P 23 16 09.3 +0.5
MDOK Medeo 35.91 272 eP P 23 16 09.3 +0.5
G21K Aliakaket 35.96 42 P P 23 16 08.2 -0.5
baz=291
AAA Alma-Ata 35.96 273 eP P 23 16 09.7 +0.7
AAA pmax pmax
comp=Z,8.0nm,0.6s
AAA Alma-Ata 35.96 273 eP P 23 16 09.8 +0.7
comp=Z,7.7nm,0.6s
E22K Anaktuvuk Pass 36.01 39 P P 23 16 10.5 +1.3
E22K IAmb IAmb 23 16 14.3
comp=Z,9.3nm,1.1s
E22K Anaktuvuk Pass 36.01 39 P P 23 16 08.9 -0.3
baz=290,SNR=11
TNSS Tian-Shan 36.05 272 eP P 23 16 10.5 +0.3
TNSS Tian-Shan 36.05 272 eP P 23 16 10.5 +0.3
IMAR Indian Mountai 36.06 42 P P 23 16 10.8 +1.2
J19K Poorman 36.06 46 P P 23 16 09.9 +0.3
baz=293
D23K Nanushuk River 36.12 37 P P 23 16 10.0 -0.1
baz=290
N16K Nishlik Lake 36.12 53 P P 23 16 10.0 -0.2
baz=295
O15K Ungalikthiuk R 36.20 55 P P 23 16 10.7 -0.2
baz=296
L18K Granite Mounta 36.31 49 P P 23 16 11.4 -0.4
baz=294
M17K Holitna River 36.33 51 P P 23 16 11.2 -0.7
baz=295
TARG Taragay, Kyrgy 36.41 270 P P 23 16 14.0 +0.7
TARG Taragay, Kyrgy 36.41 270 P P 23 16 14.0 +0.7
TARG pmax pmax
comp=Z,6.0nm,1.1s
KDJ Kajisay 36.50 271 P P 23 16 14.8 +0.9
KDJ IAmb IAmb 23 16 18.4
comp=Z,8.1nm,1.1s
KDJ Kajisay 36.50 271 P P 23 16 14.8 +0.9
KDJ pmax pmax
comp=Z,8.0nm,1.1s
C24K Franklin Bluff 36.53 35 P P 23 16 13.0 -0.5
baz=290
H21K Melozitna Rive 36.54 43 P P 23 16 14.5 +0.8
H21K IAmb IAmb 23 16 19.1
comp=Z,5.9nm,0.9s
H21K Melozitna Rive 36.54 43 P P 23 16 13.6 0.0
baz=292,SNR=7.4
TOLK Toolik Lake Re 36.61 37 P P 23 16 13.5 -0.8
baz=291
D24K Happy Valley 36.68 36 P P 23 16 14.3 -0.5
baz=291
E23K Chandalar 36.81 38 P P 23 16 18.0 +1.9
E23K IAmb IAmb 23 16 23.1
comp=Z,12nm,0.9s
E23K Chandalar 36.81 38 P P 23 16 15.5 -0.5
baz=292
N17K Nushagak Hills 36.81 52 P P 23 16 16.5 +0.4
baz=296
O16K Kokwok River B 36.81 54 P P 23 16 17.8 +1.7
O16K IAmb IAmb 23 16 17.9
comp=Z,11nm,1.4s
O16K Kokwok River B 36.81 54 P P 23 16 16.5 +0.5
baz=296
COLD Coldfoot 36.91 40 P P 23 16 18.2 +1.3
COLD IAmb IAmb 23 16 23.9
comp=Z,9.2nm,1.0s
COLD Coldfoot 36.91 40 P P 23 16 17.1 +0.3
baz=292,SNR=7.6
K20K Telida 36.95 47 P P 23 16 17.6 +0.4
baz=294
BOOM Boomskoye usch 36.97 272 P P 23 16 18.1 +0.3
BOOM IAmb IAmb 23 16 23.0
comp=Z,18nm,1.3s
BOOM Boomskoye usch 36.97 272 P P 23 16 18.1 +0.3
BOOM pmax pmax
comp=Z,18nm,1.3s
H22K Ishtalitna Cre 36.99 42 P P 23 16 19.4 +1.8
H22K Ishtalitna Cre 36.99 42 P P 23 16 17.7 +0.2
baz=293
M18K Stony River 36.99 50 P P 23 16 17.7 +0.2
baz=296
SGDS Sogindy 37.10 275 eP P 23 16 19.4 +0.7
L19K White Mountain 37.11 49 P P 23 16 20.0 +1.4
L19K IAmb IAmb 23 16 21.3
comp=Z,14nm,1.5s
L19K White Mountain 37.11 49 P P 23 16 18.5 -0.1
baz=295
P16K Nushagak River 37.11 54 P P 23 16 20.1 +1.5
P16K Nushagak River 37.11 54 P P 23 16 18.7 +0.1
baz=297
G23K Bananza Creek 37.18 40 P P 23 16 19.0 -0.1
baz=293
O17K Koliganek Bris 37.19 53 P P 23 16 20.1 +0.9
baz=297
E24K Your Creek 37.20 38 P P 23 16 21.0 +1.6
E24K Your Creek 37.20 38 P P 23 16 19.8 +0.5
baz=292
N18K Kilae Creek 37.32 51 P P 23 16 21.2 +0.8
baz=296
M19K Big River Lodg 37.43 49 P P 23 16 22.9 +1.7
M19K IAmb IAmb 23 16 32.9
comp=Z,11nm,1.3s
M19K Big River Lodg 37.43 49 P P 23 16 21.5 +0.2
baz=296
D25K Kavik River 37.43 35 P P 23 16 22.9 +1.6
D25K Kavik River 37.43 35 P P 23 16 21.7 +0.4
baz=293
FRU1 Bishkek 37.51 274 P P 23 16 22.3 +0.1
FRU1 IAmb IAmb 23 16 27.3
comp=Z,14nm,1.2s
FRU1 Bishkek 37.51 274 P P 23 16 22.3 +0.1
FRU1 pmax pmax
comp=Z,14nm,1.2s
MLY Manley 37.58 43 P P 23 16 24.1 +1.4
MLY IAmb IAmb 23 16 27.8
comp=Z,8.9nm,1.1s
MLY Manley 37.58 43 P P 23 16 22.7 +0.1
baz=295
NRN Naryn 37.63 271 P P 23 16 24.3 +0.7
NRN Naryn 37.63 271 P P 23 16 24.3 +0.7
NRN pmax pmax
comp=Z,6.0nm,1.2s
C26K Camden Bay 37.68 34 P P 23 16 23.5 +0.2
baz=293
SDPT Sand Point 37.69 61 P P 23 16 24.3 +0.8
baz=300
AAK Ala-Archa 37.69 274 LR LR 23 32 31.7
comp=Z,522nm,18.0s,baz=40,slow=37
AAK Ala-Archa 37.69 274 P P 23 16 24.2 +0.3
AAK IAmb IAmb 23 16 28.7
comp=Z,8.8nm,1.1s
AAK Ala-Archa 37.69 274 P P 23 16 24.2 +0.3
AAK pmax pmax
comp=Z,9.0nm,1.1s
P17K Kvichak River 37.75 54 P P 23 16 24.7 +0.7
baz=298
N19K Bonanza Creek 37.88 51 P P 23 16 25.3 +0.1
baz=297
BPAW Bear Paw Mtn. 37.88 45 P P 23 16 25.5 +0.4
baz=296
Q16K King Salmon 37.89 54 P P 23 16 26.0 +0.8
baz=298
PPLA Purkeypile 37.92 47 P P 23 16 25.2 -0.3
baz=296
LSA Lhasa 37.97 243 P P 23 16 26.8 +0.1
M20K Styx River 37.97 49 P P 23 16 26.3 +0.3
baz=297
O18K Koktuh Hills 38.00 52 P P 23 16 26.2 +0.1
baz=298
R16K Pilot Point 38.00 56 P P 23 16 26.9 +0.8
baz=299
I23K Minto, Yukon-K 38.06 43 P P 23 16 28.7 +2.1
I23K IAmb IAmb 23 16 32.6
comp=Z,8.6nm,1.0s
I23K Minto, Yukon-K 38.06 43 P P 23 16 26.9 +0.3
baz=295,SNR=5.2
G24K Hadweenzic Riv 38.11 40 P P 23 16 28.5 +1.5
G24K IAmb IAmb 23 16 32.9
comp=Z,14nm,0.9s
G24K Hadweenzic Riv 38.11 40 P P 23 16 27.4 +0.4
baz=295,SNR=14
C27K Jago River 38.18 34 P P 23 16 27.3 -0.2
baz=294
E25K Arctic Village 38.18 37 P P 23 16 28.5 +0.9
E25K Arctic Village 38.18 37 P P 23 16 27.6 -0.1
baz=295
P18K Big Mountain, 38.20 53 P P 23 16 29.4 +1.5
P18K IAmb IAmb 23 16 41.0
comp=Z,18nm,1.1s
P18K Big Mountain, 38.20 53 P P 23 16 28.6 +0.7
baz=298
O19K Port Alsworth 38.23 51 P P 23 16 29.0 +1.0
baz=298
H24K Noodor Dome 38.33 41 P 23 16 30.6 +1.8
H24K IAmb IAmb 23 16 35.0
comp=Z,11nm,1.0s
H24K Noodor Dome 38.33 41 P P 23 16 28.8 -0.1
baz=296,SNR=7.7
F25K Christian Rive 38.38 38 P P 23 16 31.5 +2.2
baz=295
F25K Christian Rive 38.38 38 P P 23 16 30.0 +0.7
baz=295
CHNA Chernabura Isl 38.40 61 P P 23 16 30.4 +0.9
baz=301
NEA2 Nenana 38.42 43 P P 23 16 31.0 +1.4
NEA2 IAmb IAmb 23 16 35.0
comp=Z,8.9nm,1.0s
NEA2 Nenana 38.42 43 P P 23 16 29.8 +0.2
baz=296
TRF Thorofare Moun 38.44 45 P P 23 16 31.4 +1.3
TRF IAmb IAmb 23 16 35.6
comp=Z,8.0nm,0.9s
TRF Thorofare Moun 38.44 45 P P 23 16 30.2 +0.2
baz=297
Q17K Contact Creek 38.45 55 P P 23 16 30.0 0.0
baz=299
ARTI Arti 38.45 302 LR LR 23 32 56.6
comp=Z,144nm,18.4s,baz=56,slow=37
ARTI Arti 38.45 302 P P 23 16 30.4 +0.4
ARTI IAmb IAmb 23 16 31.6
comp=Z,9.9nm,1.1s
ARTI Arti 38.45 302 *d i* P P 23 16 31.0 +1.0
ARTI S S **23 22 26.4 +1.6**
ARTI SS SnSn **23 25 06.4 -4.1**
ARTI pmax pmax
comp=Z,20nm,1.9s
ARTI MLR MLR
comp=Z,399nm,15.0s
R17L Mt. Peulik Vol 38.54 56 P P 23 16 30.8 +0.1
baz=300
SKT Skwentna 38.60 48 P P 23 16 31.0 -0.2
baz=298
Q18K Katmai Hardscr 38.66 54 P P 23 16 31.2 -0.7
baz=299
L22K Petersville 38.67 47 P P 23 16 34.4 +2.6
SPCR Spurr Chakacha 38.68 49 P P 23 16 30.5 -1.4
baz=298
STLK Strandline Lak 38.70 49 P P 23 16 34.3 +2.3
ACHA Angle Creek He 38.73 55 P P 23 16 33.1 +0.7
ACHA IAmb IAmb 23 16 40.0
comp=Z,12nm,1.0s
SPU Mount Spurr 38.76 49 P P 23 16 33.2 +0.7
SPU IAmb IAmb 23 16 40.0
comp=Z,13nm,1.2s
COLA College 38.76 42 *i* P P 23 16 34.5 +2.1
COLA pmax pmax
comp=Z,29nm,2.5s
COLA College 38.76 42 P P 23 16 32.3 -0.1
baz=297
RED Redoubt Volcan 38.81 50 P P 23 16 34.1 +1.1
RED IAmb IAmb 23 16 39.9
comp=Z,13nm,1.0s
POKR Poker Plat Res 38.81 42 P P 23 16 32.9 0.0
baz=297
BMAR Burnt Mountain 38.82 38 P P 23 16 34.3 +1.3
WRH Wood River Hil 38.85 43 P P 23 16 34.9 +1.7
WRH IAmb IAmb 23 16 38.7
comp=Z,14nm,1.0s
F26K Sheenjek River 38.85 37 P P 23 16 34.6 +1.3
F26K Sheenjek River 38.85 37 P P 23 16 33.5 +0.2
baz=296,SNR=9.1
MCK McKinley 38.86 44 P P 23 16 32.8 -0.5
baz=297
CCB Clear Creek Bu 38.88 43 P P 23 16 34.9 +1.4
CUL Chulitna 38.93 47 P P 23 16 32.8 -1.0
baz=298
FYU Fort Yukon 38.97 39 P P 23 16 37.6 +3.4
FYU IAmb IAmb 23 16 40.6
comp=Z,15nm,0.9s
P19K Oil Pt 38.97 52 P P 23 16 34.0 -0.4
baz=299
Q19K Cape Douglas, 39.14 53 P P 23 16 35.3 -0.5
baz=300
IL31 39.18 42 P P 23 16 37.0 +1.1
IL31 IAmb IAmb 23 16 41.5
comp=Z,18nm,0.9s
ILAR Eielson Array 39.18 42 P P 23 16 37.0 +1.1
comp=Z,13nm,0.9s,baz=292,slow=7.7,SNR=49
ILAR LR LR 23 33 28.8
comp=Z,104nm,18.7s,baz=309,slow=37
comp=Z,13nm,0.9s
SUA Susitna One 39.18 48 P P 23 16 35.9 -0.2
baz=299
D27M Malcolm River 39.22 34 P P 23 16 35.6 -0.7
baz=297
M22K Willow 39.30 48 P P 23 16 36.6 -0.3
baz=299
DZA Taraz 39.31 276 eP P 23 16 38.1 +0.8
DZA Taraz 39.31 276 eP P 23 16 38.2 +0.8
G26K Porcupine Rive 39.31 38 P 23 16 39.1 +2.0
G26K Porcupine Rive 39.31 38 P P 23 16 36.6 -0.4
baz=297
HDA Harding Lake 39.32 43 P P 23 16 37.7 +0.6
HDA IAmb IAmb 23 16 44.3
comp=Z,8.3nm,0.9s
HDA Harding Lake 39.32 43 P P 23 16 36.9 -0.2
baz=298
PRP Porcupine Dome 39.34 41 P P 23 16 38.8 +1.3
PRP Porcupine Dome 39.34 41 P P 23 16 37.4 -0.1
baz=298
ARSB Arslanbob 39.40 273 P P 23 16 38.6 +0.3
ARSB IAmb IAmb 23 17 06.4
comp=Z,14nm,1.3s
ARSB Arslanbob 39.40 273 P P 23 16 38.6 +0.3
ARSB pmax pmax
comp=Z,14nm,1.3s
WAT1 Susitna Watana 39.43 46 P P 23 16 38.0 -0.1
baz=298
E27K Coleen River 39.49 36 P P 23 16 38.8 +0.2
baz=297
HOM Homer 39.67 51 P P 23 16 39.9 -0.2
baz=300
QIZ Qiongzhong 39.75 211 P P 23 16 42.0 +0.8
QIZ S S **23 22 47.5 +2.5**
QIZ LR LR
comp=Z,240nm,14.4s
QIZ LR LR
comp=Z,550nm,13.9s
QIZ LR LR
comp=Z,150nm,14.3s
DHY Denali Highway 39.79 45 P P 23 16 43.4 +2.1
DHY IAmb IAmb 23 16 46.0
comp=Z,15nm,1.4s
DHY Denali Highway 39.79 45 P P 23 16 41.0 -0.2
baz=299
GHO Glory Hole Cre 39.79 47 P P 23 16 42.0 +0.8
PMR Palmer 39.79 47 P P 23 16 43.1 +2.1
PMR IAmb IAmb 23 16 57.8
comp=Z,12nm,1.1s
PMR Palmer 39.79 47 P P 23 16 43.2 +2.1
PMR pmax pmax
comp=Z,12nm,1.1s
PMR Palmer 39.79 47 P P 23 16 41.0 0.0
baz=300
CHIR Chirikof Islan 39.81 58 P P 23 16 41.6 +0.3
baz=302
J25K Salcha River, 39.83 42 P P 23 16 42.8 +1.4
J25K Salcha River, 39.83 42 P P 23 16 41.2 -0.2
baz=299
Q20K Shuyak Island 39.87 53 P P 23 16 41.7 -0.1
baz=301
WAT6 Susitna Watana 39.88 46 P P 23 16 41.6 -0.4
baz=299
D28M Stokes Point 39.88 34 P P 23 16 41.1 -0.6
baz=298
E28M Babbage River 39.97 35 P P 23 16 42.2 -0.4
baz=298
SML Sawmill 40.02 47 P P 23 16 44.0 +1.0
SML Sawmill 40.02 47 P P 23 16 42.9 -0.2
baz=300
BRSE Bradley Lake S 40.03 51 P P 23 16 42.8 -0.3
baz=300
K24K Donnelly Dome 40.06 43 P P 23 16 42.9 -0.4
baz=299
BRLS Borolday 40.06 278 eP P 23 16 46.3 +2.7
BRLS Borolday 40.06 278 eP P 23 16 46.3 +2.7
O22K Cooper Landing 40.09 49 P P 23 16 43.3 -0.2
baz=300
SII Sitkinak Islan 40.11 56 P P 23 16 43.1 -0.7
baz=302
KNK Knik Glacier 40.16 47 P P 23 16 44.2 0.0
baz=300
OHAK Old Harbor 40.18 55 P P 23 16 44.3 0.0
baz=302
KDAK Kodiak Island 40.21 54 LR LR 23 34 42.3
comp=Z,176nm,18.4s,baz=294,slow=38

M23K	**Glacier View**	40.27	47	P		**P**		23 16 45.1	0.0	
	baz=300									
I26K	**Coal Creek Min**	40.32	40	P		**P**		23 16 47.0	+1.6	
I26K				IAmb		IAmb		23 16 50.6		
	comp=Z,12nm,1.0s									
I26K	**Coal Creek Min**	40.32	40	P		**P**		23 16 46.1	+0.7	
	baz=299,SNR=9.3									
F28M	**Old Crow**	40.34	36	P		**P**		23 16 47.0	+1.4	
F28M	**Old Crow**	40.34	36	P		**P**		23 16 45.7	+0.1	
	baz=299									
SEW	**Seward**	40.40	50	P		**P**		23 16 45.8	-0.4	
	baz=301									
SCM	**Sheep Creek Mo**	40.42	47	P		**P**		23 16 46.2	-0.2	
	baz=300									
H27K	**Steamboat Moun**	40.45	39	P		**P**		23 16 48.5	+2.0	
H27K				IAmb		IAmb		23 16 54.3		
	comp=Z,14nm,1.4s									
H27K	**Steamboat Moun**	40.45	39	P		**P**		23 16 46.7	+0.2	
	baz=300									
RIDG	**Independent Ri**	40.45	43	P		**P**		23 16 46.6	0.0	
	baz=300									
IUG	**Iuzhnay**	40.53	277	*e*P		**P**		23 16 48.6	+1.0	
IUG				pmax		pmax				
	comp=Z,15nm,1.2s									
IUG	**Iuzhnay**	40.53	277	*e*P		**P**		23 16 48.6	+1.0	
	comp=Z,15nm,1.2s									
SPITS	**Spitsbergen Ar**	40.57	343	LR		LR		23 33 27.9		
	comp=Z,229nm,21.9s,baz=32,slow=36									
PAX	**Paxson**	40.59	44	P		**P**		23 16 47.6	-0.3	
	baz=300									
E29M	**Blow River**	40.61	35	P		**P**		23 16 48.0	+0.2	
	baz=300									
CHM	**Chimkent**	40.65	277	*e*P		**P**		23 16 49.0	+0.5	
CHM	**Chimkent**	40.65	277	*e*P		**P**		23 16 49.0	+0.5	
SCRK	**Sand Creek**	40.66	42	P		**P**		23 16 48.5	0.0	
	baz=300									
I27K	**Kandik River**	40.73	40	P		**P**		23 16 49.2	+0.3	
	baz=300									
M24K	**Tolsona, Glenn**	40.75	46	P		**P**		23 16 48.3	-0.8	
	baz=301									
DOT	**Dot Lake**	40.80	43	P		**P**		23 16 49.7	+0.2	
SHL	**Shillong**	41.02	239	P		**P**		23 16 51.5	-0.4	
SHL				IAmb		IAmb		23 16 55.1		
	comp=Z,19nm,1.1s									
SHL	**Shillong**	41.02	239	P		**P**		23 16 51.5	-0.4	
SHL				pmax		pmax				
	comp=Z,19nm,1.1s									
DRK	**Karamyk**	41.31	272	P		**P**		23 16 55.0	+0.7	
DRK	**Karamyk**	41.31	272	P		**P**		23 16 55.0	+0.7	
DRK				pmax		pmax				
	comp=Z,26nm,1.4s									
I28M	**Miner Creek**	41.41	39	P		**P**		23 16 54.5	0.0	
	baz=301									
KIRV	**Kirov**	41.45	309	LR		LR		23 35 43.2		
	comp=Z,221nm,19.3s,baz=42,slow=38									
BTK	**Batken**	41.47	274	P		**P**		23 16 55.2	-0.1	
BTK				IAmb		IAmb		23 16 59.9		
	comp=Z,8.4nm,0.8s									
BTK	**Batken**	41.47	274	P		**P**		23 16 55.3	-0.1	
BTK				pmax		pmax				
	comp=Z,8.0nm,0.8s									
H29M	**Whitestone**	41.56	38	P		**P**		23 16 58.7	+3.0	
H29M	**Whitestone**	41.56	38	P		**P**		23 16 55.7	+0.1	
	baz=302									
EVN	**Everest**	41.60	246	P		**P**		23 16 58.0	+0.9	
EVN				IAmb		IAmb		23 17 00.8		
	comp=Z,6.6nm,0.8s									
AB31	**Akbulak array**	41.61	292			**P**		23 16 56.8	+0.6	
ABKAR	**Akbulak array**	41.61	292	P		**P**		23 16 56.5	+0.2	
N25K	**Chitina, Valde**	41.65	46	P		**P**		23 16 56.7	+0.2	
	baz=302									
F30M	**Barrier River**	41.69	35	P		**P**		23 16 57.4	+0.7	
	baz=302									
EYAK	**Cordova Ski Ar**	41.74	48	P		**P**		23 16 57.4	+0.2	
	baz=302									
M26K	**Nabesna, AK**	41.87	44	P		**P**		23 17 01.1	+2.8	
M26K				IAmb		IAmb		23 17 05.7		
	comp=Z,8.0nm,0.9s									
M26K	**Nabesna, AK**	41.87	44	P		**P**		23 16 59.0	+0.8	
	baz=302									
G30M	**tAoh Zraii Nji**	41.88	36	P		**P**		23 16 58.9	+0.6	
	baz=302									
AKTO	**Aktyubinsk**	41.91	294	LR		LR		23 35 03.9		
	comp=Z,237nm,18.7s,baz=12,slow=37									
L27K	**Beaver Creek,**	41.97	43	P		**P**		23 17 01.5	+2.4	
L27K	**Beaver Creek,**	41.97	43	P		**P**		23 16 59.6	+0.5	
	baz=302									
BCAR	**Beaver Creek A**	41.98	43			**P**		23 17 00.6	+1.4	
BMRM	**Bremner River**	41.99	47	P		**P**		23 16 59.6	+0.3	
	baz=303									
I29M	**Ogilvie Camp,**	42.04	39	P		**P**		23 17 00.1	+0.5	
I29M				IAmb		IAmb		23 17 05.3		
	comp=Z,9.4nm,1.1s									
I29M	**Ogilvie Camp,**	42.04	39	P		**P**		23 17 00.3	+0.7	
	baz=302									
INK	**Inuvik**	42.04	34	LR		LR		23 36 48.9		
	comp=Z,101nm,18.1s,baz=273,slow=40									
INK	**Inuvik**	42.04	34	P		**P**		23 17 02.4	+2.9	
INK	**Inuvik**	42.04	34	P		**P**		23 17 02.4	+2.9	
INK				pmax		pmax				
	comp=Z,5.0nm,1.3s									
INK	**Inuvik**	42.04	34	P		**P**		23 16 59.4	0.0	
	baz=303									
EPYK	**Eagle Plains**	42.04	37	P		**P**		23 17 01.5	+1.8	
EPYK				IAmb		IAmb		23 17 07.1		
	comp=Z,9.4nm,1.1s									
EPYK	**Eagle Plains**	42.04	37	P		**P**		23 16 60.0	+0.3	
	baz=303									
GLB	**Gilahina Butte**	42.06	46	P		**P**		23 17 02.2	+2.4	
GLB				IAmb		IAmb		23 17 33.2		
	comp=Z,12nm,1.3s									
Q23K	**Middleton Isla**	42.09	49	P		**P**		23 17 00.9	+0.9	
	baz=303									
A36M	**Sachs Harbour**	42.30	27	P		**P**		23 17 01.5	-0.1	
	baz=306									
DAWY	**Dawson**	42.34	41	P		**P**		23 17 02.2	0.0	
	baz=303									
MCARA	**McCarthy VSAT**	42.41	45	P		**P**		23 17 02.9	+0.3	
	baz=303									
F31M	**Tsiigehtchic**	42.44	35	P		**P**		23 17 04.6	+1.8	
F31M				IAmb		IAmb		23 17 10.7		
	comp=Z,7.4nm,0.8s									
F31M	**Tsiigehtchic**	42.44	35	P		**P**		23 17 02.9	+0.1	
	baz=304,SNR=7.5									
GAR	**Garm**	42.48	273	P		**P**		23 17 04.3	+0.7	
G31M	**Satah River**	42.56	35	P		**P**		23 17 04.8	+1.1	
G31M	**Satah River**	42.56	35	P		**P**		23 17 04.1	+0.4	
	baz=304									
J29N	**Klondike Camp**	42.56	40	P		**P**		23 17 04.6	+0.7	
	baz=303									
KAIM	**Kayak Island**	42.64	48	P		**P**		23 17 05.3	+0.8	
	baz=304									
APA	**Apatity**	42.65	326	*e*P		**P**		23 17 03.4	-1.1	
APA				pmax		pmax				
	comp=Z,6.0nm,1.1s									
BVCY	**Beaver Creek**	42.70	43	P		**P**		23 17 05.2	+0.2	
	baz=304									
CRQM	**Cirque**	42.71	46	P		**P**		23 17 05.5	+0.2	
CRQM				IAmb		IAmb		23 17 14.7		
	comp=Z,14nm,1.0s									
CRQE	**Cirque**	42.73	46	P		**P**		23 17 06.0	+0.6	
	baz=304									
I30M	**Mount Dempster**	42.79	38	P		**P**		23 17 06.3	+0.5	
	baz=304									
K29M	**Barlow Dome**	43.16	40	P		**P**		23 17 10.5	+1.7	
K29M	**Barlow Dome**	43.16	40	P		**P**		23 17 09.1	+0.3	
	baz=304									
H31M	**Peel River**	43.16	37	P		**P**		23 17 09.0	+0.2	
	baz=305									
J30M	**Hart River**	43.17	39	P		**P**		23 17 09.5	+0.6	
	baz=304									
YUK3	**Moose Creek**	43.21	44	P		**P**		23 17 09.5	+0.1	
	baz=304									
CTG	**Chitna Glacier**	43.32	45	P		**P**		23 17 09.4	-0.7	
	baz=305									
CTGM	**Chitina Glacie**	43.32	45	P		**P**		23 17 12.3	+2.1	
CTGM				IAmb		IAmb		23 17 14.9		
	comp=Z,16nm,1.1s									
L29M	**L29M**	43.35	41	P		**P**		23 17 09.8	-0.4	
	baz=305									
CHGR	**Chuyangaron**	43.37	273	P		**P**		23 17 11.4	+0.6	
CHGR	**Chuyangaron**	43.37	273	P		**P**		23 17 11.4	+0.6	
CHGR				pmax		pmax				
	comp=Z,23nm,1.0s									
MESA	**MESA**	43.52	46	P		**P**		23 17 12.1	+0.3	
	baz=305									

BRDH	**Bariadhala**	43.59	237	LR		LR		23 38 14.5		
	comp=Z,200nm,20.4s,baz=328,slow=40									
M29M	**Somme Creek**	43.60	42	P		**P**		23 17 12.5	+0.1	
	baz=305									
YUK8	**Steele Glacier**	43.76	44	P		**P**		23 17 13.5	-0.4	
	baz=305									
CHTO	**Chiang Mai**	43.77	225	P		**P**		23 17 14.9	+0.8	
CHTO				IAmb		IAmb		23 17 17.0		
	comp=Z,7.1nm,1.0s									
CHTO	**Chiang Mai**	43.77	225	P		**P**		23 17 14.9	+0.8	
CHTO				pmax		pmax				
	comp=Z,7.0nm,1.0s									
ARCES	**ARCESS Array B**	43.85	331	LR		LR		23 38 09.1		
	comp=Z,125nm,19.3s,baz=5.5,slow=40									
O28M	**Mount Upton**	43.89	45	P		**P**		23 17 14.4	-0.6	
	baz=306									
CMAR	**Chiang Mai Arr**	44.09	225	P		**P**		23 17 17.1	+0.4	
	comp=Z,0.8nm,0.3s,baz=15,slow=7.7,SNR=13									
CMAR				PcP		**PcP**		23 19 02.8	+1.0	
	comp=Z,0.9nm,0.3s,baz=26,slow=4.1,SNR=9.8									
CMAR				LR		LR		23 37 37.0		
	comp=Z,212nm,18.7s,baz=25,slow=39									
	comp=Z,0.8nm,0.3s									
M30M	**Minto, Yukon**	44.16	42	P		**P**		23 17 18.9	+2.1	
M30M	**Minto, Yukon**	44.16	42	P		**P**		23 17 17.0	+0.2	
	baz=306									
YUK4	**Talbot Arm**	44.17	44	P		**P**		23 17 16.9	-0.2	
	baz=306									
C36M	**Paulatuk**	44.21	29	P		**P**		23 17 16.9	-0.1	
	baz=309									
PINM	**Pinnacle**	44.26	46	P		**P**		23 17 17.5	-0.2	
	baz=306									
KLMR	**Klimovskoe**	44.33	316	*e*P		**P**		23 17 17.0	-1.1	
KLMR				pmax		pmax				
	comp=Z,36nm,1.3s									
YUK6	**Outpost Mounta**	44.52	44	P		**P**		23 17 19.6	-0.3	
	baz=306									
N30M	**Aishikik Lake**	44.71	43	P		**P**		23 17 20.8	-0.4	
	baz=307									
O29M	**Mount Kennedy**	44.81	45	P		**P**		23 17 22.2	0.0	
	baz=307									
HYT	**Haines Junctio**	44.92	44	P		**P**		23 17 22.7	-0.3	
	baz=307									
N31M	**Braeburn, Yuko**	45.19	42	P		**P**		23 17 24.0	-1.0	
	baz=307									
M31M	**Drury Creek, Y**	45.28	41	P		**P**		23 17 25.9	+0.2	
	baz=308									
O30N	**Mendenhall**	45.51	43	P		**P**		23 17 26.9	-0.7	
	baz=308									
P30M	**Million Dollar**	45.57	44	P		**P**		23 17 27.8	-0.2	
	baz=308									
FARO	**Faro, Yukon**	45.65	41	P		**P**		23 17 28.8	+0.2	
	baz=308									
BELG	**Belogornoye**	45.90	302	*i* P		**P**		23 17 27.7	-2.9	
BELG				pmax		pmax				
	comp=Z,4.0nm,1.2s									
WHY	**Whitehorse**	46.05	43	P		**P**		23 17 30.5	-1.4	
	baz=309									
MMPY	**Sheldon Lake,**	46.16	39	P		**P**		23 17 35.1	+2.4	
MMPY	**Sheldon Lake,**	46.16	39	P		**P**		23 17 32.5	-0.2	
	baz=309									
KBL	**Kabul**	46.35	269			**P**		23 17 34.1	-0.6	
KBL				IAmb		IAmb		23 17 38.0		
	comp=Z,5.8nm,1.0s									
KBL	**Kabul**	46.35	269	P		**P**		23 17 34.1	-0.6	
KBL				pmax		pmax				
	comp=Z,6.0nm,1.0s									
N32M	**Quiet Lake**	46.42	42	P		**P**		23 17 34.1	-0.6	
	baz=309									
RES	**Resolute Bay**	46.45	15	LR		LR		23 39 31.7		
	comp=Z,76nm,18.1s,baz=14,slow=39									
RES	**Resolute Bay**	46.45	15			**P**		23 17 35.7	+0.9	
RES				IAmb		IAmb		23 17 39.5		
	comp=Z,6.7nm,0.9s									
RES	**Resolute Bay**	46.45	15	P		**P**		23 17 35.7	+0.9	
RES				pmax		pmax				
	comp=Z,7.0nm,0.9s									
SKAG	**Skagway**	46.62	44	P		**P**		23 17 36.0	-0.3	
	baz=309									
P33M	**Teslin, Yukon**	47.12	43	P		**P**		23 17 41.6	+1.3	
P33M	**Teslin, Yukon**	47.12	43	P		**P**		23 17 40.7	+0.4	
	baz=310									
P32M	**Atlin**	47.18	44	P		**P**		23 17 42.8	+2.1	
P32M	**Atlin**	47.18	44	P		**P**		23 17 40.8	+0.1	
	baz=310									
S31K	**Pelican**	47.21	46	P		**P**		23 17 40.1	-0.8	
	baz=310									
SIT	**Sitka**	48.17	47	P		**P**		23 17 48.0	-0.3	
	baz=311									
S32K	**Killisnoo**	48.21	46	P		**P**		23 17 48.2	-0.5	
	baz=311									
R33M	**Jennings River**	48.37	43			**P**		23 17 51.0	+1.0	
R33M	**Jennings River**	48.37	43	P		**P**		23 17 50.1	+0.1	
	baz=312									
FINES	**FINESS Array B**	48.97	322	P		**P**		23 17 53.8	-0.6	
	comp=Z,4.6nm,0.9s,baz=42,slow=5.9,SNR=7.6									
FINES				LR		LR		23 40 36.6		
	comp=Z,347nm,19.4s,baz=33,slow=38									
	comp=Z,4.6nm,0.9s									
FINES	**FINESS Array B**	48.97	322	*i* P		**P**		23 17 55.0	+0.6	
FINES				pmax		pmax				
	comp=Z,4.0nm,0.8s									
OBN	**Obninsk**	49.16	311	*e*P		**P**		23 17 55.3	-0.7	
OBN				pmax		pmax				
	comp=Z,7.0nm,1.1s									
DLBC	**Dease Lake**	49.37	43	LR		LR		23 41 16.1		
	comp=Z,144nm,20.5s,baz=280,slow=39									
DLBC	**Dease Lake**	49.37	43	P		**P**		23 17 57.6	-0.1	
	baz=313									
VRH	**Novokhopyorsk**	49.46	304	*e*P		**P**		23 17 58.3	0.0	
VRH				pmax		pmax				
	comp=Z,10.0nm,0.8s									
U33K	**Whale Pass**	49.71	47	P		**P**		23 18 00.5	+0.3	
	baz=313									
LPSR	**Galich'ya Gora**	49.81	307	*e*P		**P**		23 18 01.2	+0.3	
LPSR				pmax		pmax				
	comp=Z,10.0nm,1.0s									
HRA	**Herat**	50.31	275	P		**P**		23 18 05.2	-0.1	
HRA				IAmb		IAmb		23 18 09.8		
	comp=Z,5.2nm,1.1s									
VORR	**Voronezh**	50.31	306	*e*P		**P**		23 18 04.3	-0.5	
VORR				pmax		pmax				
	comp=Z,10.0nm,0.4s									
VSR	**Storozhevoye**	50.64	306	*e*P		**P**		23 18 06.9	-0.4	
VSR				pmax		pmax				
	comp=Z,10.0nm,1.1s									
VORD	**Divnogorie**	50.75	305	*e*P		**P**		23 18 07.5	-0.6	
VORD				pmax		pmax				
	comp=Z,20nm,0.4s									
V35K	**Ketchikan**	50.87	47	P		**P**		23 18 09.0	+0.1	
	baz=314									
YKAW3	**Yellowknife Wh**	51.72	32	P		**P**		23 18 16.4	+1.2	
YKA	**Yellowknife Ar**	51.77	32	P		**P**		23 18 16.4	+0.8	
	comp=Z,1.6nm,0.9s,baz=319,slow=7.9,SNR=18									
YKA				LR		LR		23 42 37.8		
	comp=Z,64nm,20.2s,baz=324,slow=39									
	comp=Z,1.6nm,0.9s									
YKA	**Yellowknife Ar**	51.77	32	*i* P		**P**		23 18 17.0	+1.4	
YKA				pmax		pmax				
	comp=Z,2.0nm,0.9s									
YKAW1	**Yellowknife Wh**	51.82	32	P		**P**		23 18 17.1	+1.2	
YKAW1				IAmb		IAmb		23 18 20.6		
	comp=Z,6.9nm,1.1s									
MAK	**Makhachkala**	52.25	293	*e*P		P		23 18 12.1	-7.3	
MAK				MLR		MLR				
	comp=Z,476nm,11.0s									
MNK	**Minsk**	53.20	315	*i* P		**P**		23 18 25.7	-0.7	
	comp=E,5.0nm,0.8s									
MNK				*i* P		**P**		23 18 25.7	-0.7	
	comp=N,3.0nm,0.7s									
MNK				*i* P		**P**		23 18 25.7	-0.7	
	comp=Z,5.0nm,0.8s,baz=44									
MNK				*i* PcP		**PcP**		23 19 33.5	-0.6	
MNK				*i* PP		**PP**		23 20 25.8	-0.2	
MNK				*i* PPP		PPP		23 21 31.0		
MNK				*i* ScP		**ScP**		23 23 28.5	-3.0	
MNK				*i* PcS		PcS		23 23 41.1	+8.4	
MNK				*i* S		**S**		23 25 55.8	-1.1	
MNK				*i* ScS		**ScS**		23 28 15.4	0.0	
MNK				*i* SS		**SKiKP**		23 29 38.3	-5.0	
MNK				*i* SSS		SSS		23 31 28.1		
MNK				*i* LQ		LQ		23 35 44.0		
MNK				*i* LR		LR		23 40 20.1		
MNK				*i* LRM		MLR		23 43 12.3		
	comp=E,244nm,16.9s									
MNK				*i* LRM		MLR		23 43 15.5		
	comp=Z,228nm,14.6s									

MNK				*i* LRM		MLR		23 45 21.1		
	comp=N,134nm,16.9s									
MNK	**Minsk**	53.20	315	*i* P		**P**		23 18 25.6	-0.7	
MNK				*i*				23 19 33.4		
MNK				*i*				23 20 25.7		
MNK				*i* PPP		PPP		23 21 30.9		
MNK				*i* S		**S**		23 25 55.7	-1.1	
MNK				*i*				23 28 15.3		
MNK				*i* SS		**SKiKP**		23 29 38.2	-5.0	
MNK				*i* SSS		SSS		23 31 28.1		
MNK				pmax		pmax				
	comp=E,5.0nm,0.8s									
MNK				pmax		pmax				
	comp=Z,5.0nm,0.8s									
MNK				pmax		pmax				
	comp=N,3.0nm,0.7s									
MNK				MLR		MLR				
	comp=E,244nm,17.0s									
MNK				MLR		MLR				
	comp=Z,228nm,15.0s									
MNK				MLR		MLR				
	comp=N,134nm,17.0s									
NACGM	**Naroch**	53.35	316	*e*P		**P**		23 18 28.5	+1.1	
	comp=Z,19nm,1.0s,baz=43									
ERBR	**Yeremizino-Bor**	53.86	300	*e*P		**P**		23 18 31.6	+0.3	
ERBR				pmax		pmax				
	comp=Z,36nm,1.1s									
ERBR				MLR		MLR				
	comp=Z,185nm,13.0s									
KIV	**Kislovodsk**	54.02	297	⇓P		**P**		23 18 34.2	+1.6	
KIV	**Kislovodsk**	54.02	297	P		**P**		23 18 33.5	+1.0	
KIV	**Kislovodsk**	54.02	297	*e*P		**P**		23 18 33.9	+1.3	
KIV				pmax		pmax				
	comp=Z,30nm,1.1s									
KIV				MLR		MLR				
	comp=Z,142nm,17.0s									
KIV	**Kislovodsk**	54.02	297	*e*P		**P**		23 18 34.7	+2.1	
HFS	**Hagfors**	54.04	326	P		**P**		23 18 32.6	+0.1	
	comp=Z,4.0nm,0.9s,baz=55,slow=7.8,SNR=4.5									
HFS				LR		LR		23 45 15.8		
	comp=Z,136nm,18.2s,baz=50,slow=40									
	comp=Z,4.0nm,0.9s									
KBZ	**Khabaz**	54.07	297	P		**P**		23 18 33.7	+0.9	
	comp=Z,3.0nm,1.0s,baz=45,slow=5.7,SNR=3.1									
KBZ				LR		LR		23 45 25.1		
	comp=Z,362nm,18.1s,baz=42,slow=40									
	comp=Z,3.0nm,1.0s									
NB2	**NORSAR Subarra**	54.09	328	P		**P**		23 18 32.6	-0.2	
	comp=Z,2.0nm,0.6s,baz=36,slow=6.9									
NOA	**NORSAR Array B**	54.09	328	P		**P**		23 18 32.7	0.0	
	comp=Z,4.9nm,0.9s,baz=40,slow=6.9,SNR=13									
NOA				LR		LR		23 44 28.1		
	comp=Z,107nm,18.6s,baz=35,slow=39									
	comp=Z,4.9nm,0.9s									
SHA1	**Shidzhatmaz**	54.19	297	*c*e P		**P**		23 18 36.1	+2.1	
LABN	**Labinsk**	54.51	299	*e*P		**P**		23 18 37.2	+1.2	
LABN				pmax		pmax				
	comp=Z,41nm,1.6s									
AKASG	**Malin Array Be**	55.43	311	P		**P**		23 18 42.2	-0.3	
	comp=Z,2.6nm,0.8s,baz=40,slow=7.5,SNR=13									
AKASG				LR		LR		23 45 11.8		
	comp=Z,99nm,19.6s,baz=32,slow=39									
	comp=Z,2.6nm,0.8s									
AKASG	**Malin Array Be**	55.43	311	*i* P		**P**		23 18 42.7	+0.1	
AKASG				pmax		pmax				
	comp=Z,1.0nm,0.4s									
AKBB	**Malin Array Si**	55.43	311	*c*e P		**P**		23 18 41.8	-0.8	
AKBB				pmax		pmax				
	comp=Z,18nm,1.8s									
GNI	**Garni**	55.71	292	LR		LR		23 44 38.9		
	comp=Z,130nm,18.0s,baz=46,slow=38									
SOC	**Sochi**	55.77	298	*e*P		**P**		23 18 45.3	+0.1	
SOC				*e*				23 20 49.0		
SOC				*e*S		**S**		23 26 29.4	-2.3	
SOC				*e*SS		**SS**		23 30 21.1	+4.6	
SOC				pmax		pmax				
	comp=Z,34nm,0.8s									
SOC				MLR		MLR				
	comp=Z,235nm,14.0s									
ANN	**Anapa**	56.01	301	*e*P		**P**		23 18 47.0	+0.2	
SFJD	**Kangerlussuaq**	57.60	0	LR		LR		23 44 15.2		
	comp=Z,90nm,18.4s,baz=354,slow=36									
GEVA	**Gevas**	57.95	292	P		**P**		23 19 01.4	+0.5	
GEVA				IAmb		IAmb		23 19 13.7		
	comp=Z,7.4nm,1.3s									
GURO	**Guroymak-BITLI**	58.30	293	P		**P**		23 19 04.2	+0.9	
BUR08	**Bucovina Ar. S**	59.47	311			**P**		23 19 11.2	-0.1	
BURAR	**Bucovina Array**	59.48	311	⇓P		**P**		23 19 12.2	+0.8	
BURAR	**Bucovina Array**	59.48	311	P		**P**		23 19 11.6	+0.2	
BURAR				IAmb		IAmb		23 19 13.1		
	comp=Z,6.0nm,0.9s									
MARD	**Mardin**	59.89	293			**P**		23 19 15.1	+0.8	
ONER	**Baraj Valea Uz**	59.96	309	⇑P		**P**		23 19 15.8	+1.2	
FRB	**Frobisher Bay**	59.98	10	LR		LR		23 44 58.9		
	comp=Z,109nm,20.5s,baz=290,slow=36									
VRI	**Vrincioaia**	60.18	308	⇓P		**P**		23 19 17.3	+1.2	
LANS	**Liptovska Anna**	60.66	315	*e*P		**P**		23 19 21.4	+2.1	
LANS	**Liptovska Anna

	comp=Z,2.2nm,0.9s,baz=46,slow=7.6,SNR=10								
GERES					LR		LR	23 49 19.8	
	comp=Z,216nm,19.0s,baz=62,slow=38								
	comp=Z,2.2nm,0.9s								
MOA	**Molln**	**63.74**	**318**	*ep*P		pP		23 19 41.7	-1.9
	comp=Z,10nm,1.7s								
BTNL	**Ternell**	**64.35**	**324**	*d*P		**P**		**23 19 42.1**	**-1.8**
LESA	**Schwarzleotal**	**64.70**	**318**	*e*P		**P**		**23 19 46.8**	**+0.4**
	comp=Z,13nm,1.2s								
KBA	**Koelnbreinsper**	**64.73**	**318**	*ep*P		pP		23 19 47.8	-2.6
	comp=Z,8.9nm,1.0s								
OBKA	**Obir**	**64.74**	**317**	*e*P		**P**		**23 19 46.8**	**+0.2**
	comp=Z,8.5nm,1.0s								
YBH	**Yreka Blue Hor**	**64.98**	**52**	LR		LR		23 46 15.4	
	comp=Z,5.3nm,18.3s,baz=322,slow=34								
MYKA	**Terra Mystica**	**64.99**	**317**	*e*P		**P**		**23 19 48.8**	**+0.5**
	comp=Z,9.2nm,1.0s								
LEM	**Lembang**	**65.10**	**205**	LR		LR		23 53 16.6	
	comp=Z,22nm,18.8s,baz=351,slow=41								
PRED	**Cave del Predi**	**65.18**	**317**	P		**P**		**23 19 49.4**	**0.0**
WATA	**Walderalm**	**65.19**	**319**	*ep*P		pP		23 19 50.3	-2.9
	comp=Z,11nm,1.3s								
WTTA	**Wattenberg**	**65.22**	**319**	*ep*P		**P**		**23 19 50.4**	**+0.5**
	comp=Z,10nm,1.0s								
ABTA	**Abfaltersbach**	**65.33**	**318**	*e*P		**P**		**23 19 49.1**	**-1.3**
	comp=Z,4.9nm,1.1s								
MOTA	**Moosalm**	**65.35**	**319**	*e*P		**P**		**23 19 51.1**	**+0.5**
	comp=Z,7.2nm,1.2s								
SQTA	**Sankt Quirin**	**65.42**	**319**	*ep*P		**P**		**23 19 51.6**	**+0.6**
	comp=Z,5.1nm,0.9s								
BFO	**Black Forest**	**65.52**	**322**	P		**P**		**23 19 51.8**	**+0.2**
BFO	**Black Forest**	**65.52**	**322**	P		**P**		**23 19 51.8**	**+0.2**
BFO					pmax	pmax			
	comp=Z,23nm,1.3s								
FETA	**Feichten**	**65.76**	**319**	*ep*P		pP		23 19 54.5	-2.6
	comp=Z,8.9nm,1.9s								
MMAI	**Mount Meron Ar**	**66.00**	**294**	P		**P**		**23 19 55.8**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=57,slow=6.1,SNR=11								
MMAI					LR	LR		23 52 47.2	
	comp=Z,136nm,18.1s,baz=24,slow=40								
	comp=Z,2.6nm,0.8s								
WVOR	**Wild Horse Val**	**66.20**	**49**	P		**P**		**23 19 58.7**	**+2.5**
WVOR	**Wild Horse Val**	**66.20**	**49**	P		**P**		**23 19 58.7**	**+2.5**
WVOR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
FUORN	**Ofenpass-Fuorn**	**66.27**	**319**	P		**P**		**23 19 56.9**	**+0.2**
DAVOX	**Davos/Dischmat**	**66.28**	**320**	LR		LR		23 51 16.2	
	comp=Z,156nm,18.5s,baz=26,slow=38								
TUE	**Stuetta**	**66.73**	**320**	P		**P**		**23 19 59.7**	**0.0**
GHAJ	**Ghor Haditha**	**67.26**	**292**	P		**P**		**23 20 02.9**	**0.0**
ULM	**Lac du Bonnet**	**67.63**	**30**	LR		LR		23 54 38.1	
	comp=Z,68nm,18.1s,baz=14,slow=40								
RAYN	**Ar Rayn**	**68.00**	**280**			**P**		**23 20 07.2**	**-0.6**
RAYN	**Ar Rayn**	**68.00**	**280**	P		**P**		**23 20 07.2**	**-0.6**
RAYN					pmax	pmax			
	comp=Z,11nm,1.2s								
LOHW	**Long Hollow**	**68.48**	**43**	P		**P**		**23 20 11.8**	**+1.1**
QSSC	**Osservatorio P**	**68.52**	**317**	P		**P**		**23 20 10.9**	**+0.2**
EIL	**Elat**	**68.87**	**292**	LR		LR		23 54 53.8	
	comp=Z,92nm,18.1s,baz=60,slow=40								
SCHQ	**Schefferville**	**68.92**	**11**	LR		LR		23 50 59.3	
	comp=Z,54nm,19.5s,baz=348,slow=36								
PDAR	**Pinedale Array**	**69.61**	**43**	P		**P**		**23 20 18.1**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=322,slow=7.0,SNR=2.1								
PDAR					LR	LR		23 50 54.2	
	comp=Z,42nm,19.6s,baz=324,slow=36								
	comp=Z,0.4nm,0.7s								
NVAR	**Mina Agency Bea**	**69.63**	**51**	P		**P**		**23 20 19.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=316,slow=3.5,SNR=4.6								
NVAR					LR	LR		23 49 14.5	
	comp=Z,63nm,18.7s,baz=270,slow=34								
	comp=Z,0.2nm,0.3s								
QSM	**Queen of Sheba**	**72.31**	**52**	P		**P**		**23 20 35.8**	**+1.8**
QSM					IAmb	IAmb		23 20 45.0	
	comp=Z,7.9nm,1.5s								
VAE	**Valguarnera**	**72.34**	**311**	LR		LR		23 55 07.5	
	comp=Z,142nm,18.3s,baz=82,slow=38								
PFO	**Pinyon Flats O**	**74.47**	**53**	LR		LR		23 51 07.1	
	comp=Z,58nm,18.5s,baz=3.5,slow=34								
WRA	**Warramunga Arr**	**75.44**	**176**	P		**P**		**23 20 51.0**	**-1.3**
	comp=Z,2.3nm,0.9s,baz=352,slow=6.1,SNR=10								
	comp=Z,2.3nm,0.9s								
WRA	**Warramunga Arr**	**75.44**	**176**	*i* P		**P**		**23 20 53.5**	**+1.2**
WRA					pmax	pmax			
	comp=Z,2.0nm,0.9s								
KEST	**Kesra**	**75.94**	**314**	LR		LR		23 58 32.5	
	comp=Z,209nm,18.1s,baz=31,slow=39								
CTA	**Charters Tower**	**76.72**	**165**	LR		LR		23 54 41.1	
	comp=Z,32nm,18.1s,baz=245,slow=36								
SADO	**Sadowa**	**76.84**	**21**	LR		LR		23 55 22.7	
	comp=Z,47nm,21.0s,baz=343,slow=36								
ESDC	**Sonseca Array**	**77.31**	**325**	P		**P**		**23 21 03.3**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=15,slow=6.0,SNR=12								
ESDC					LR	LR		23 59 57.2	
	comp=Z,74nm,18.3s,baz=2.0,slow=39								
	comp=Z,2.0nm,0.8s								
ANMO	**Albuquerque**	**77.57**	**45**	LR		LR		23 58 13.4	
	comp=Z,68nm,21.4s,baz=352,slow=38								
ATD	**Arta Tunnel**	**79.12**	**274**	LR		LR		00 00 32.3	
	comp=Z,7.7nm,18.3s,baz=37,slow=39								
ASAR	**Alice Springs**	**79.13**	**177**	P		**P**		**23 21 12.2**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=6.4,slow=6.1,SNR=22								
	comp=Z,1.3nm,0.6s								
DKNS	**Dickens**	**80.83**	**41**	P		**P**		**23 21 24.1**	**+1.7**
DKNS					IAmb	IAmb		23 21 25.6	
	comp=Z,3.7nm,0.8s								
LCAR	**Lake Charles**	**81.97**	**33**	P		**P**		**23 21 28.6**	**+0.4**
LCAR					IAmb	IAmb		23 21 30.8	
	comp=Z,4.7nm,0.8s								
FURI	**Furi**	**83.62**	**276**	LR		LR		00 04 05.6	
	comp=Z,70nm,18.3s,baz=30,slow=39								
TXAR	**Lajitas Array**	**83.62**	**45**	P		**P**		**23 21 36.1**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=327,slow=6.8,SNR=1.9								
TXAR					LR	LR		00 02 30.0	
	comp=Z,69nm,18.7s,baz=330,slow=38								
	comp=Z,0.2nm,0.7s								
MDT	**Midelt**	**83.77**	**323**	LR		LR		00 01 54.6	
	comp=Z,45nm,18.3s,baz=28,slow=38								
TKL	**Tuckaleechee C**	**84.45**	**27**	LR		LR		00 04 30.5	
	comp=Z,34nm,18.1s,baz=317,slow=39								
MBAR	**Mbarara**	**95.87**	**278**	LR		LR		00 08 56.5	
	comp=Z,50nm,18.1s,baz=45,slow=37								
TEIG	**Tepich**	**97.59**	**36**			**P**		**23 22 39.3**	**-3.7**
CMIG	**Matias Romero**	**98.09**	**43**	LR		LR		00 09 10.4	
	comp=Z,22nm,18.3s,baz=348,slow=37								
QSPA	**South Pole Qui**	**145.47**	**180**	PKPbc		**PKPab**		**23 28 45.0**	**-0.5**
	comp=Z,17nm,1.0s,baz=329,slow=3.3,SNR=11								
CPUP	**Villa Florida**	**150.12**	**14**	PKPbc		**PKiKP**		**23 28 58.6**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=315,slow=2.9,SNR=4.7								

*MEX **28** 23:50:45.8±0.6, 14.°04N×93.°46W, h10km, MD4.1*
*GCG **28** 23:50:50.3±2.3, 14.°15N×93.°07W, h38km±999km, MD4.1, ML3.9, Presumed earthquake*

ISC 28 23:50:41.9±2.4, 13.°92N±0.°08×93.°32W±0.°03, h18km±6km, n29, σ1°84/45, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.42**	**46**	*e*P	**Pb**	**23 51 08.7**	**+0.9**
THIG				*e*S	**Sg**	**23 51 27.6**	**-0.1**
SMCA	**Catarina**	**1.52**	**52**	*i* P	**Pb**	**23 51 10.6**	**+1.0**
PATR	**El Naranjo**	**1.59**	**41**	*i* P	**Pb**	23 51 10.5	-0.3
PATR				*e*S	**Sn**	**23 51 30.1**	**+0.7**
CHUJ	**Union Juarez**	**1.65**	**45**	*e*P	**Pb**	**23 51 11.6**	**-0.4**
CHUJ				*e*S	**Sn**	**23 51 30.7**	**-0.4**
PAVE	**Pavencul**	**1.68**	**41**	*i* P	**Pb**	**23 51 12.1**	**-0.4**
PAVE				*e*S	**Sn**	**23 51 31.1**	**-0.7**
RTAL	**Retalhuleu**	**1.69**	**69**	*e*P	**Pb**	**23 51 13.1**	**+0.7**
RTAL				*e*S	**Sb**	**23 51 34.5**	**+1.2**
PCIG		**1.77**	**3**	*e*P	**Pb**	**23 51 13.0**	**-0.9**
PCIG				*e*S	**Sn**	**23 51 33.4**	**-0.3**
STG2	**El Palmar, Qui**	**1.96**	**75**	*i* P	**Pn**	**23 51 14.9**	**+0.6**
STG2				*i* S	**Sn**	**23 51 35.0**	**-3.4**
STG2				IAML		23 51 40.5	
	comp=E,2μm,0.4s						
STG5	**El Palmar, Qui**	**1.97**	**76**	*i* P	**Pn**	**23 51 14.8**	**+0.3**
STG5				*i* S	**Sn**	**23 51 35.8**	**-3.0**
STG8	**El Palmar, Qui**	**1.98**	**74**	*i* P	**Pn**	**23 51 15.2**	**+0.5**
STG8				IAML		23 51 50.6	
	comp=N,899nm,0.3s						
QUEO	**Labor Ovalle**	**1.99**	**61**	*i* P	**Pb**	**23 51 19.1**	**+1.4**
SOKI	**Kika Raxquin**	**2.06**	**64**	*i* P	**Pb**	**23 51 19.2**	**+0.1**
HUEH	**Huehuetenango**	**2.24**	**52**	*e*P	**Pb**	**23 51 21.3**	**-0.7**
HUEH				*e*S	**Sb**	**23 51 48.9**	**-0.6**
CARR	**Arriaga**	**2.38**	**346**	*e*P	**Pb**	**23 51 22.4**	**-1.8**
CARR				*e*S	**Sn**	**23 51 49.9**	**+1.1**
CCIG	**Comitan**	**2.61**	**26**	*e*P	**Pb**	**23 51 27.7**	**-0.6**
CCIG				*e*S	**Sn**	**23 51 55.9**	**+1.2**
CCIG	**Comitan**	**2.61**	**26**	*i* P	**Pb**	**23 51 28.3**	**0.0**
TGIG		**2.85**	**4**	*e*P	**Pn**	**23 51 26.2**	**-0.2**
TGIG				*e*S	**Sn**	**23 51 56.4**	**-3.9**
TGIG		**2.85**	**4**	*i* P	**Pb**	**23 51 30.6**	**-1.6**
TGIG				*i* S	**Sn**	**23 52 00.0**	**-0.3**
HUIG	**Huatulco**	**3.26**	**305**	*e*S	**Sn**	**23 52 07.2**	**-3.3**
UXUV	**UXUV**	**3.47**	**347**	*e*P	**Pb**	**23 51 40.4**	**-2.4**
UXUV				*e*S	**Sn**	**23 52 17.2**	**+1.6**
CMIG	**Matias Romero**	**3.49**	**335**	*e*P	**Pn**	**23 51 39.0**	**+3.7**
CMIG				*e*S	**Sn**	**23 52 15.8**	**-0.4**
PEIG	**Puerto Escondi**	**4.24**	**300**	*e*S	**Sn**	**23 52 34.4**	**-0.2**
NEUV	**Arroyo Zacate**	**4.46**	**328**	*e*P	**Pn**	**23 51 50.5**	**+1.9**
NEUV				*e*S	**Sn**	**23 52 43.1**	**+2.9**
YOIG	**Yosondua**	**5.01**	**306**	*e*P	Pb	23 52 04.7	-4.6
YOIG				*e*S	**Sn**	**23 52 58.2**	**+4.1**
PNIG	**Pinotepa**	**5.25**	**298**	*e*S	**Sn**	**23 52 59.6**	**0.0**
TXIG	**Tlaxiaco**	**5.42**	**308**	*e*P	Pn	23 52 07.7	+5.6
TXIG				*e*S	**Sn**	**23 53 01.2**	**-2.9**
TOIG	**Toxpalan**	**5.49**	**320**	*e*S	Sn	23 52 55.3	-10
HLIG	**Huajuapan de L**	**5.80**	**313**	*e*P	Pn	23 52 13.8	+6.5
HLIG				*e*S	**Sn**	**23 53 16.1**	**+2.5**
FTIG	**Fresnillo de T**	**6.09**	**311**	*e*P	**Pn**	**23 52 09.1**	**-2.1**
FTIG				*e*S	**Sn**	**23 53 22.4**	**+1.9**

*NIED **28** 23:52:48.2, 37.°31N×141.°93E, h30km, MW3.3, Moment Tensor Solution. s2 Moment tensor: Scale 10¹³Nm; Mrr8.42; Mθθ-5.40; Mφφ-3.02; Mrθ5.39; Mθφ0.18; Mrφ3.52; Fault plane solution: M₀9.30000×10¹³ NP1: φs269.00000°, δ25.00000°, λ109.00000°. NP2: φs68.00000°, δ66.00000°, λ81.00000°.*

JMA 28 23:52:48.2±0.2, 37.°3N±0.°5×141.°9E±0.°9, h30km±3km, MV3.5/31, 5D, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.84**	**274**	P	Pn	23 53 03.9	-0.1
JFK				*e*S	Sb	23 53 14.2	-1.0
JMST	**Minamisoumatoc**	**0.92**	**297**	P	Pn	23 53 05.1	0.0
JMST				S	Sn	23 53 16.5	-0.8
ONAJ	**Iwakimizuishiy**	**0.92**	**257**	P	Pn	23 53 05.0	-0.2
ONAJ				S	Sn	23 53 16.4	-1.0
JMM	**Marumori**	**1.05**	**302**	⇓P	Pn	23 53 07.2	+0.3
JMM				⇓*e*S	Sn	23 53 20.1	-0.5
JIKH	**Ishinomakikobu**	**1.06**	**340**	⇓P	Pn	23 53 06.8	-0.1
JIO	**Ouri**	**1.23**	**338**	⇓P	Pn	23 53 09.5	+0.2
JIO				⇓*e*S	Sn	23 53 24.0	-0.9
JOTO	**OTAMA OYAMA**	**1.29**	**281**	P	Pb	23 53 11.5	-0.4
JOTO				*e*S	Sb	23 53 27.5	-0.6
JHO	**Hitachi**	**1.29**	**238**	P	Pn	23 53 10.0	-0.2
JOU	**Okura**	**1.45**	**317**	P	Pb	23 53 13.7	-0.8
JOU				*e*S	Sb	23 53 31.7	-0.9
JMK	**Ichinoseki**	**1.73**	**341**	P	Pn	23 53 17.2	+1.0

*NSSP **29** 00:05:43.9, 38.°33N×44.°52E, h10km, Ms3.8*
*TIF **29** 00:05:45.7, 38.°47N×44.°48E, h2km±1km*
*ISK **29** 00:05:46.6, 38.°43N×44.°47E, h5km, ML3.7/12*
*AFAD **29** 00:05:46.7, 38.°43N×44.°44E, h7km±4km, MW3.7*
*TEH **29** 00:05:46.8, 38.°47N×44.°49E, h6km±30km, ML3.5, Presumed earthquake*
*IDC **29** 00:05:48.1±1.6, 38.°36N×44.°57E, h0km, mb3.5/4, mbtmp3.4/8, ML3.3/3, MS2.9/2, Error ellipse: s-maj=24.1km s-min=16.7km az=161.0*

ISC 29 00:05:48.6±0.7, 38.°43N±0.°02×44.°45E±0.°02, h10km, n69, σ1°34/88, mb3.5/4, 2C, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**302**	P	**Pg**	**00 05 55.7**	**-1.4**
OZAP				S	**Sg**	**00 06 01.8**	**-0.9**
OZAP	**Van, Ozalp-Mer**	**0.42**	**302**	Pg	**Pg**	**00 05 55.7**	**-1.4**
TVAN	**Van**	**0.83**	**277**	P	**Pg**	**00 06 02.7**	**-2.0**
TVAN				S	**Sn**	**00 06 17.1**	**-1.8**
TVAN	**Van**	**0.83**	**277**	Pg	**Pg**	**00 06 02.6**	**-2.0**
VMUR	**Van-Muradiye**	**0.88**	**309**	P	**Pg**	**00 06 03.1**	**-2.6**
VMUR				S	**Sb**	**00 06 17.5**	**-0.7**
VMUR	**Van-Muradiye**	**0.88**	**309**	Pg	**Pg**	**00 06 03.1**	**-2.6**
ISHB	**Shabestar**	**0.93**	**99**	Pg	**Pg**	**00 06 03.7**	**-2.9**
MAKU	**Maku**	**0.94**	**11**	Pg	**Pg**	**00 06 03.5**	**-3.3**
IMRD	**Marand**	**1.02**	**74**	Pg	**Pg**	**00 06 06.0**	**-2.3**
ERCV	**ERCIS-VAN**	**1.05**	**304**	Pg	**Pg**	**00 06 07.1**	**-1.7**
ERCV				Sg	**Sn**	**00 06 23.8**	**-0.6**
HAKT	**HAKKARI**	**1.05**	**214**	P	**Pg**	**00 06 07.2**	**-1.7**
HAKT				S	**Sn**	**00 06 25.6**	**+1.0**
HAKT	**HAKKARI**	**1.05**	**214**	Pg	**Pg**	**00 06 07.2**	**-1.7**
GEVA	**Gevas**	**1.10**	**264**	P	**Pg**	**00 06 07.4**	**-2.5**
GEVA				S	**Sb**	**00 06 23.5**	**-0.8**
AKDM	**Akdamar-Van**	**1.16**	**265**	P	**Pg**	**00 06 09.6**	**-1.4**
AKDM				Sn	**Sn**	**00 06 27.6**	**+0.5**
AKDM	**Akdamar-Van**	**1.16**	**265**	Pg	**Pg**	**00 06 09.6**	**-1.4**
ITBZ	**Tabriz**	**1.35**	**98**	Pg	**Pg**	**00 06 11.1**	**-2.6**
CUKT	**Cukurca**	**1.36**	**210**	Pn	**Pg**	**00 06 13.5**	**-0.4**
CUKT				Sn	**Sg**	**00 06 33.5**	**+1.1**
CUKT	**Cukurca**	**1.36**	**210**	Pg	**Pn**	**00 06 13.4**	**-0.4**
IAZR	**Azarshahr**	**1.42**	**122**	Pg	**Pn**	**00 06 13.4**	**-1.4**
IGDI	**IGDIR**	**1.46**	**349**	P	**Pn**	**00 06 13.5**	**-1.7**
IGDI				S	**Sb**	**00 06 34.6**	**-0.1**
IGDI	**IGDIR**	**1.46**	**349**	Pg	**Pn**	**00 06 13.5**	**-1.7**
VAYK	**Vayk**	**1.47**	**31**	*i* P	**Pn**	**00 06 13.6**	**-1.7**
VAYK				*i* S	**Sn**	**00 06 33.8**	**-0.9**
AGRB	**Hanur-Agry**	**1.61**	**316**	Pn	**Pn**	**00 06 16.5**	**-0.8**
AGRB	**Hanur-Agry**	**1.61**	**316**	Pg	**Pn**	**00 06 17.4**	**+0.1**
DORK	**Agr/Tutak/Do**	**1.61**	**307**	P	**Pn**	**00 06 16.5**	**-0.8**
DORK				S	**Sb**	**00 06 38.5**	**-0.7**
MLAZ	**Malazgirt-MUS**	**1.65**	**296**	Pn	**Pb**	**00 06 18.2**	**-1.0**
GNI	**Garni**	**1.73**	**7**	Pn	**Pn**	**00 06 19.2**	**+0.3**
GNI	**Garni**	**1.73**	**7**	⇑*i*P	**Pn**	**00 06 19.7**	**+0.8**
GNI				⇑*i*S	**Sb**	**00 06 43.2**	**+0.8**
GNI	**Garni**	**1.73**	**7**	Pg	**Pn**	**00 06 19.4**	**-0.5**
VNNZ	**Vanand**	**1.74**	**344**	*e*P	**Pn**	**00 06 18.9**	**-0.1**
VNNZ				*e*S	**Sg**	**00 06 44.1**	**-0.4**
METS	**Metsamor**	**1.74**	**351**	*e*P	**Pn**	**00 06 19.2**	**+0.3**
METS				*e*S	**Sg**	**00 06 44.8**	**+0.3**
EGVZ	**Egvard**	**1.81**	**63**	*e*P	**Pn**	**00 06 19.4**	**-0.7**
EGVZ				*e*S	**Sn**	**00 06 44.8**	**+1.6**
ARUZ	**Aruch**	**1.87**	**352**	*e*P	**Pn**	**00 06 20.7**	**-0.1**
ARUZ				*e*S	**Sg**	**00 06 48.5**	**-0.2**
KAPZ	**Kaputan**	**1.90**	**6**	*e*P	**Pn**	**00 06 21.1**	**-0.1**
KAPZ				*e*S	**Sb**	**00 06 48.3**	**+1.0**
GURO	**Guroymak-BITLI**	**1.90**	**274**	Pn	**Pb**	**00 06 21.9**	**-1.6**
MAHB	**Mahabad**	**1.94**	**149**	Pn	**Pn**	**00 06 22.8**	**+1.0**
AMBZ	**Amberd**	**1.96**	**356**	*e*P	**Pb**	**00 06 23.4**	**-1.2**
AMBZ				*e*S	**Sg**	**00 06 52.5**	**+0.9**
AYRK	**Ayrk**	**1.97**	**31**	*e*P	**Pn**	**00 06 22.7**	**+0.3**
AYRK				*e*S	**Sb**	**00 06 49.6**	**+0.1**
IHRS	**Heris**	**2.04**	**92**	Pn	**Pn**	**00 06 23.0**	**-0.6**
KARS	**Kars**	**2.43**	**335**	Pn	**Pn**	**00 06 29.2**	**+0.6**
VRTB	**Varto-Mus**	**2.45**	**288**	Pn	**Pn**	**00 06 29.7**	**+0.9**
IHSH	**Hashtrud**	**2.49**	**116**	Pn	**Pn**	**00 06 30.1**	**+0.6**
LSVT	**Lusahovit**	**2.54**	**13**	*e*P	**Pn**	**00 06 30.7**	**+0.6**
LSVT				*e*S	**Sb**	**00 07 07.7**	**+1.9**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn	**Pn**	**00 06 31.3**	**+0.8**
SVAN	**Silvan-Diyarba**	**2.58**	**265**	Pn	**Pn**	**00 06 31.0**	**+0.6**
ISRB	**Sarab**	**2.61**	**102**	Pn	**Pn**	**00 06 31.6**	**+0.5**
SRTK	**Saratovka**	**2.63**	**358**	*e*P	**Pn**	**00 06 31.9**	**+0.6**
SRTK				*e*S	**Sb**	**00 07 10.4**	**+2.0**
GRMI	**Germi**	**2.72**	**81**	Pn	**Pn**	**00 06 32.6**	**+0.1**
KARO	**Karliova-Bingo**	**2.80**	**289**	Pn	**Pn**	**00 06 34.6**	**+1.0**
BGD	**Bogdanovka**	**2.90**	**347**	P	**Pb**	**00 06 40.0**	**-0.6**
BNGB	**Bingl**	**3.00**	**282**	Pn	**Pn**	**00 06 37.5**	**+1.1**
AKH	**Akhalkalaki**	**3.06**	**346**	P	**Pb**	**00 06 43.6**	**+0.2**
DGRG	**David-gareji**	**3.10**	**13**	P	**Pb**	**00 06 44.4**	**+0.5**
DGRG				S	**Sb**	**00 07 22.0**	**+0.4**
VSHL	**Vashlovani**	**3.17**	**28**	P	**Pn**	**00 06 40.6**	**+1.9**
VSHL				S	**Sg**	**00 07 29.8**	**-0.7**
DDFL	**Dedoflistskaro**	**3.27**	**23**	P	**Pn**	**00 06 43.3**	**+3.3**
LGD	**Lagodekhi**	**3.66**	**21**	P	**Pn**	**00 06 46.9**	**+1.5**
ALIG	**Mtskhetisjvari**	**3.72**	**351**	P	**Pb**	**00 06 54.4**	**0.0**
CHRG	**Chargali**	**3.91**	**5**	P	**Pn**	**00 06 50.3**	**+1.4**
SHTL	**Shatili**	**4.25**	**7**	P	**Pb**	**00 07 03.1**	**-0.5**
KBZ	**Khabaz**	**5.42**	**348**	Pn	Pn	00 07 15.3	+5.8
	0.8nm,0.7s,baz=32,slow=17,SNR=2.2						
KBZ				Lg	Lg	00 08 42.2	
	baz=124,slow=15						
BRTR	**Keskin Array B**	**8.51**	**282**	Pn	Pn	00 07 56.5	+4.5
	0.1nm,0.3s,baz=94,slow=13,SNR=1.5						
	0.2nm,0.3s						
MMAI	**Mount Meron Ar**	**9.13**	**236**	Pn	**Pn**	**00 08 02.4**	**+1.9**
	0.5nm,0.3s,baz=56,slow=16,SNR=2.5						
MMAI				Lg	Lg	00 10 39.5	
	0.3nm,0.3s,baz=11,slow=16,SNR=1.7						
	0.5nm,0.5s						
AKASG	**Malin Array Be**	**16.33**	**324**	Pn	**Pn**	**00 09 38.0**	**+0.1**
	0.4nm,0.3s,baz=137,slow=11,SNR=2.2						
	0.6nm,0.5s						
ARTI	**Arti**	**20.21**	**23**	LR	LR	00 20 13.1	
	comp=Z,45nm,18.5s,baz=146,slow=43						
VRAC	**Vranov**	**22.71**	**308**	LR	LR	00 21 27.0	
	comp=Z,17nm,19.5s,baz=301,slow=41						
BVAR	**Borovoye Array**	**23.08**	**42**	P	**P**	**00 10 54.9**	**+0.7**
	0.6nm,0.5s,baz=233,slow=12,SNR=4.7						
	0.6nm,0.5s						
GERES	**GERESS Array B**	**24.41**	**305**	P	**P**	**00 11 09.5**	**+2.3**
	0.4nm,0.6s,baz=97,slow=9.2,SNR=2.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**28.84**	**61**	P	**P**	**00 11 47.6**	**+0.5**
	0.6nm,0.7s,baz=257,slow=10,SNR=5.3						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**31.46**	**47**	P	**P**	**00 12 10.6**	**+0.5**
	0.6nm,0.4s,baz=266,slow=11,SNR=3.9						
	0.6nm,0.4s						

JMA 29 00:06:24.5±0.3, 29.°N±2.°×14.°0E±.°, h445km, MV3.6/13, NEAR TORISHIMA IS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.87**	**137**	P	P	00 07 30.5	+0.3
CBIJ				S	S	00 08 23.1	-0.4
BSO1	**Boso 1**	**5.47**	**8**	*e*P	P	00 07 54.8	+2.4
BSO3	**Boso 3**	**5.57**	**4**	*e*P	P	00 07 55.5	+1.8
JIE	**Ise**	**5.86**	**332**	*e*P	P	00 07 58.2	+1.2
JKN2	**Miekihoku**	**5.92**	**328**	*e*P	P	00 07 58.8	+1.2
JRY	**Ryogami san**	**6.83**	**352**	*e*P	P	00 08 08.1	+0.9
JAG	**Ashikaga**	**7.19**	**356**	P	P	00 08 10.9	0.0

*IDC **29** 00:13:08.5±2.3, 28.°99N×143.°68E, h0km, mb3.6/8, mbtmp3.6/11, ML3.3/3, Error ellipse: s-maj=74.5km s-min=18.6km az=78.0*

ISC 29 00:13:14.1±1.9, 29.°0N±0.°1×143.°5E±0.°3, h35km, n12, σ0°49/12, mb3.7/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.20**	**212**	Pn	**Pn**	**00 13 48.0**	**-0.3**
	10nm,0.3s,baz=308,slow=22,SNR=1.8						
JCJ				Sn	Sn	00 14 03.9	-10
	28nm,0.3s,baz=260,slow=23,SNR=7.8						
	70nm,0.7s						
MJAR	**Matsushiro Arr**	**8.77**	**331**	Pn	**Pn**	**00 15 17.9**	**-0.6**
	0.1nm,0.3s,baz=153,slow=11,SNR

0.3nm,0.8s,baz=224,slow=6.1,SNR=7.6
0.3nm,0.8s
BRTR Keskin Array B 148.84 317 PKPbc **PKiKP 00 40 27.3 -0.4**
0.7nm,0.7s,baz=58,slow=2.6,SNR=4.6

*MOS **29** 00:27:23.7±1.5,45°.41N×148°.49E,h118km,mb4.1/5,Error ellipse: s-maj=12.3km s-min=8.5km az=64.3*
*SKHL **29** 00:27:23.6±0.7,45°.10N×148°.70E,h118km±7km,mb4.8/4, msha5.6/4*
*IDC **29** 00:27:26.2±2.0,45°.31N×148°.58E,h140km±18km, mb3.4/15,mbtmp3.8/20,MS2.8/2,Error ellipse: s-maj=19.3km s-min=13.3km az=141.0*
*JMA **29** 00:27:26.1±0.7,45°N±3°×14°9E±°,h116km,MV3.7/13,SE OFF ETOROFU*
*NEIC **29** 00:27:27.2±1.1,45°.6N±0°.2×148°.4E±0°.1,h124km±10km, mb4.1/60,Error ellipse: s-maj=23.1km s-min=12.3km az=160.0*
ISC 29 00:27:22.7±0.8,44°.84N±0°.07×148°.98E±0°.07,h126km±6km, n151,σ1s73/154,mb4.1/52,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**0.89**	**297**	*d*	iPN	Pn	00 27 41.8	-2.3
KUR					eS	**Sn**	**00 27 56.3**	**-4.1**
KUR					pmax	pmax		
	comp=Z,758nm,0.5s							
KUR					smax	smax		
	comp=E,2μm,1.5s							
KUR					smax	smax		
	comp=N,1μm,1.9s							
KUR					smax	smax		
	comp=N,2μm,0.3s							
KUR					smax	smax		
	comp=E,944nm,0.3s							
KUR	**Kuril'sk**	**0.89**	**297**		eP	**Pn**	**00 27 43.5**	**-0.6**
KUR					AMB	AMB	00 27 44.0	
	comp=E,470nm,0.3s							
KUR					eS	**Sn**	**00 27 58.0**	**-2.4**
KUR					A	A	00 28 02.4	
	comp=E,2μm,0.3s							
KUR					A	A	00 28 02.4	
	comp=E,810nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.38**	**251**		ePN	**Pn**	**00 28 03.4**	**+2.3**
YUK					eS	**Sn**	**00 28 32.4**	**+1.8**
YUK					pmax	pmax		
	comp=Z,197nm,0.2s							
YUK					pmax	pmax		
	comp=E,17nm,0.1s							
YUK					pmax	pmax		
	comp=N,28nm,0.2s							
YUK					smax	smax		
	comp=N,454nm,0.2s							
YUK					smax	smax		
	comp=E,563nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**2.38**	**251**		eP	**Pn**	**00 28 02.6**	**+1.5**
YUK					AMB	AMB	00 28 03.6	
	comp=E,70nm,0.2s							
YUK					eS	**Sn**	**00 28 32.4**	**+1.8**
YUK					A	A	00 28 35.3	
	comp=E,540nm,0.6s							
YUK					A	A	00 28 35.3	
	comp=E,560nm,0.6s							
GLVR	**Golovnino**	**2.72**	**247**		ePN	**Pn**	**00 28 07.5**	**+2.0**
GLVR					eS	**Sn**	**00 28 39.5**	**+1.1**
GLVR					pmax	pmax		
	comp=E,23nm,0.1s							
GLVR					pmax	pmax		
	comp=Z,95nm,0.1s							
GLVR					smax	smax		
	comp=N,592nm,0.2s							
GLVR					smax	smax		
	comp=E,382nm,0.2s							
GLVR	**Golovnino**	**2.72**	**247**		eP	**Pn**	**00 28 07.5**	**+2.0**
GLVR					AMB	AMB	00 28 08.6	
	comp=E,100nm,0.4s							
GLVR					eS	**Sn**	**00 28 39.5**	**+1.1**
GLVR					A	A	00 28 41.0	
	comp=E,590nm,0.3s							
GLVR					A	A	00 28 41.0	
	comp=E,380nm,0.3s							
NEM2	**Nemuro 2**	**2.76**	**239**		P	**Pn**	**00 28 07.4**	**+1.3**
NEM2					S	**Sn**	**00 28 38.4**	**-1.0**
NMR	**Nemuro--Hokkai**	**2.77**	**239**		ePN	**Pn**	**00 28 07.4**	**+1.3**
NMR					eS	**Sn**	**00 28 38.3**	**-1.2**
NMR	**Nemuro--Hokkai**	**2.77**	**239**		eP	**Pn**	**00 28 07.4**	**+1.3**
RUSJ	**Misakicho**	**2.77**	**256**		ePN	**Pn**	**00 28 10.8**	**+4.6**
RUSJ					eS	**Sn**	**00 28 43.6**	**+3.9**
JRA	**Rausu**	**2.91**	**253**		eP	**Pn**	**00 28 09.9**	**+1.9**
JNK	**Nakash**	**3.31**	**249**		P	**Pn**	**00 28 15.2**	**+2.0**
JNK					eS	**Sn**	**00 28 54.1**	**+1.8**
AKK	**Akkeshi**	**3.50**	**240**		eP	**Pn**	**00 28 16.6**	**+0.9**
JAK	**Akkeshi**	**3.60**	**241**		P	**Pn**	**00 28 18.3**	**+1.3**
JAK					S	**Sn**	**00 28 58.2**	**-0.9**
JTKR	**Abashiri--Toko**	**3.74**	**258**		eP	**Pn**	**00 28 20.2**	**+1.3**
JAR	**Ashorobuto**	**4.06**	**250**		P	**Pn**	**00 28 25.6**	**+2.4**
JAR					S	**Sn**	**00 29 11.8**	**+1.8**
JOB	**Onbets**	**4.19**	**244**		P	**Pn**	**00 28 26.7**	**+1.8**
JOB					eS	**Sn**	**00 29 13.2**	**+0.1**
JKK2	**Kamakawa 2**	**4.57**	**260**		P	**Pn**	**00 28 31.9**	**+1.9**
JKA	**Kamikawa-asahi**	**4.62**	**263**			**Pn**	**00 28 32.0**	**+1.4**
JKA	**Kamikawa-asahi**	**4.62**	**263**		eP	**Pn**	**00 28 32.1**	**+1.4**
ASAJ	**Asahikawa**	**4.63**	**263**		P	**Pn**	**00 28 32.1**	**+1.4**
	comp=E,5.8nm,0.4s,baz=103,slow=11,SNR=7.7							
ASAJ					S	**Sn**	**00 29 24.1**	**+0.6**
	comp=E,2.9nm,0.3s,baz=343,slow=11,SNR=1.5							
JCH	**Churui**	**4.64**	**243**		eP	**Pn**	**00 28 32.0**	**+1.1**
JCH					S	**Sn**	**00 29 22.6**	**-1.3**
YSS	**Yuzhno-Sakhali**	**4.84**	**298**		Pn	Pn	00 28 28.4	-5.0
YSS	**Yuzhno-Sakhali**	**4.84**	**298**		ePN	**Pn**	**00 28 37.6**	**+4.1**
YSS					pmax	pmax		
	comp=Z,20nm,0.5s							
YSS	**Yuzhno-Sakhali**	**4.84**	**298**		eP	**Pn**	**00 28 33.5**	**0.0**
JNBK	**Urakawa-nobuka**	**5.20**	**243**		eP	**Pn**	**00 28 38.7**	**+0.3**
JANG	**Nango**	**7.09**	**234**		eP	**Pn**	**00 29 03.5**	**-0.4**
JANG					eS	**Sn**	**00 30 17.4**	**-5.5**
JTH	**Tanohata**	**7.19**	**230**		eP	Pn	00 29 00.7	-4.5
JTH					eS	**Sn**	**00 30 20.2**	**-5.2**
TYV	**Tymovskoe**	**7.38**	**327**		ePN	**Pn**	**00 29 06.5**	**-1.2**
TYV					pmax	pmax		
	comp=Z,100nm,4.3s							
TYV					pmax	pmax		
	comp=Z,5.0nm,1.1s							
TYV	**Tymovskoe**	**7.38**	**327**		eP	**Pn**	**00 29 06.5**	**-1.2**
PAU	**Pauzhetka**	**8.45**	**35**		eP	**Pn**	**00 29 20.5**	**-1.5**
OKH	**Okha**	**9.57**	**338**		eP	**Pn**	**00 29 38.6**	**+1.4**
PEA0B	**Petropavlovsk-**	**10.06**	**32**		Pn	**Pn**	**00 29 42.9**	**-0.9**
PEA0B	**Petropavlovsk-**	**10.06**	**32**		PN	**Pn**	**00 29 42.9**	**-0.9**
PETK	**Petropavlovsk-**	**10.06**	**32**		P	**Pn**	**00 29 42.1**	**-1.7**
	comp=Z,1.9nm,0.4s,baz=191,slow=9.1,SNR=13							
PETK	**Petropavlovsk-**	**10.06**	**32**			**Pn**	**00 29 42.2**	**-1.6**
PETK	**Petropavlovsk-**	**10.06**	**32**		PN	**Pn**	**00 29 42.2**	**-1.6**
PET	**Petropavlovsk**	**10.37**	**34**		Pn	Pn	00 29 44.5	-3.3
USRK	**Ussuriysk Ar.**	**12.15**	**273**		P	**Pn**	**00 30 11.0**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=76,slow=14,SNR=1.9							
KSRS	**Korea Array**	**17.46**	**252**		P	**Pn**	**00 31 18.8**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=61,slow=11,SNR=1.9							
SEY	**Seymchan**	**18.24**	**5**		P	**P**	**00 31 23.5**	**-2.5**
	comp=Z,4.2nm,0.5s,baz=187,slow=8.5,SNR=22							
JNU	**Nakatsue**	**18.25**	**236**		LR	LR	00 38 24.7	
	comp=Z,56nm,18.5s,baz=94,slow=36							
H11N2	**WAKE ISLAND Hy**	**29.12**	**143**		T	T	01 04 25.6	
	baz=334,slow=76,SNR=297							
H11N1	**WAKE ISLAND Hy**	**29.14**	**143**		T	T	01 04 26.3	
	baz=334,slow=76,SNR=280							
H11N3	**WAKE ISLAND Hy**	**29.14**	**143**		T	T	01 04 26.9	
	baz=334,slow=76,SNR=283							
SONM	**Songino Array**	**29.29**	**291**		P	**P**	**00 33 12.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=82,slow=10,SNR=2.1							
	comp=Z,0.2nm,0.4s							
SONM	**Songino Array**	**29.29**	**291**		P	**P**	**00 33 12.0**	**-1.1**
H11S1	**WAKE ISLAND Hy**	**30.13**	**145**		T	T	01 05 38.6	
	baz=335,slow=76,SNR=283							
H11S3	**WAKE ISLAND Hy**	**30.14**	**145**		T	T	01 05 40.0	
	baz=335,slow=76,SNR=204							
H11S2	**WAKE ISLAND Hy**	**30.15**	**145**		T	T	01 05 40.1	
	baz=335,slow=76,SNR=223							
TNA	**Tin City**	**31.22**	**33**		P	**P**	**00 33 29.4**	**-0.3**
GUMO	**Guam**	**31.34**	**188**		LR	LR	00 47 13.4	
	comp=Z,8.3nm,19.2s,baz=80,slow=37							
F15K	**North Star Dit**	**32.56**	**34**		P	**P**	**00 33 42.2**	**+0.7**
C16K	**Lisburne Hills**	**33.15**	**29**		P	**P**	**00 33 46.5**	**-0.1**
G16K	**Koyuk River**	**33.40**	**35**		P	**P**	**00 33 49.6**	**+0.9**
O15K	**Ungalikthiuk R**	**33.70**	**46**		P	**P**	**00 33 54.5**	**+3.1**
F17K	**Baldwin Pennin**	**34.09**	**33**		P	**P**	**00 33 56.2**	**+1.5**
M16K	**Timber Creek**	**34.23**	**43**		P	**P**	**00 33 57.7**	**+1.6**
H17K	**Granite Mounta**	**34.30**	**36**		P	**P**	**00 33 57.8**	**+1.1**
H17K					IAmb	IAmb	00 34 13.4	
	comp=Z,4.1nm,1.4s							
E18K	**Tukpahlearik C**	**34.59**	**32**		P	**P**	**00 34 00.1**	**+1.1**
C18K	**Utukok River**	**34.72**	**29**		P	**P**	**00 34 00.2**	**-0.1**
C18K					IAmb	IAmb	00 34 01.7	
	comp=Z,4.0nm,1.2s							
H18K	**Honhosa River**	**34.99**	**36**		P	**P**	**00 34 03.7**	**+1.1**
H18K					IAmb	IAmb	00 34 26.9	
	comp=Z,3.5nm,1.3s							
M17K	**Holitna River**	**34.99**	**42**		P	**P**	**00 34 04.0**	**+1.4**
G18K	**Tagagawik**	**35.00**	**35**			**P**	**00 34 03.8**	**+1.1**
G18K					IAmb	IAmb	00 34 05.5	
	comp=Z,2.0nm,0.6s							
L18K	**Granite Mounta**	**35.40**	**41**		P	**P**	**00 34 06.8**	**+0.8**
C19K	**Lookout Ridge**	**35.41**	**29**		P	**P**	**00 34 06.8**	**+0.7**
C19K					IAmb	IAmb	00 34 07.3	
	comp=Z,6.6nm,1.4s							
J18K	**Innoko River**	**35.48**	**39**		P	**P**	**00 34 08.5**	**+1.8**
J18K					IAmb	IAmb	00 34 17.3	
	comp=Z,3.7nm,1.3s							
F19K	**Shaleruckik Mo**	**35.53**	**33**		P	**P**	**00 34 07.9**	**+0.8**
F19K					IAmb	IAmb	00 34 22.4	
	comp=Z,4.1nm,1.4s							
D19K	**Kuna River**	**35.77**	**30**		P	**P**	**00 34 10.0**	**+0.8**
D19K					IAmb	IAmb	00 34 14.6	
	comp=Z,4.3nm,1.2s							
E19K	**Redstone River**	**35.86**	**32**		P	**P**	**00 34 11.3**	**+1.3**
E19K					IAmb	IAmb	00 34 12.6	
	comp=Z,3.0nm,0.7s							
J19K	**Poorman**	**36.02**	**38**		P	**P**	**00 34 12.1**	**+0.8**
J19K					IAmb	IAmb	00 34 16.5	
	comp=Z,6.6nm,1.4s							
D20K	**Etivluk River**	**36.35**	**30**		P	**P**	**00 34 14.8**	**+0.7**
D20K					IAmb	IAmb	00 34 16.1	
	comp=Z,6.5nm,1.1s							
B20K	**Meade River**	**36.47**	**28**		P	**P**	**00 34 15.5**	**+0.4**
G21K	**Allakaket**	**37.16**	**34**		P	**P**	**00 34 22.2**	**+1.2**
G21K					IAmb	IAmb	00 34 24.6	
	comp=Z,3.4nm,0.9s							
B21K	**Ikpikpuk River**	**37.24**	**29**		P	**P**	**00 34 22.7**	**+1.1**
D22K	**Ayikyak River**	**37.79**	**30**			**P**	**00 34 26.7**	**+0.5**
D22K					IAmb	IAmb	00 34 30.6	
	comp=Z,2.9nm,0.7s							
H22K	**Ishtalitna Cre**	**37.97**	**35**			**P**	**00 34 29.4**	**+1.7**
H22K					IAmb	IAmb	00 34 36.6	
	comp=Z,5.0nm,1.4s							
E22K	**Anaktuvuk Pass**	**38.00**	**32**		P	**P**	**00 34 29.2**	**+1.1**
E22K					IAmb	IAmb	00 34 33.1	
	comp=Z,4.2nm,1.1s							
C23K	**Itkillik River**	**38.65**	**29**		P	**P**	**00 34 34.4**	**+1.0**
C23K					IAmb	IAmb	00 34 35.0	
	comp=Z,3.6nm,0.8s							
E23K	**Chandalar**	**38.81**	**32**		P	**P**	**00 34 37.0**	**+2.1**
D24K	**Happy Valley**	**39.20**	**30**		P	**P**	**00 34 39.5**	**+1.4**
E24K	**Your Creek**	**39.24**	**32**		P	**P**	**00 34 39.1**	**+0.7**
E24K					IAmb	IAmb	00 34 43.7	
	comp=Z,2.3nm,0.6s							
C24K	**Franklin Bluff**	**39.30**	**29**		P	**P**	**00 34 39.3**	**+0.5**
WRH	**Wood River Hil**	**39.32**	**38**		P	**P**	**00 34 41.0**	**+1.9**
WRH					IAmb	IAmb	00 34 57.7	
	comp=Z,6.2nm,1.4s							
SML	**Sawmill**	**39.34**	**42**		P	**P**	**00 34 42.6**	**+3.3**
H24K	**Noodor Dome**	**39.40**	**35**		P	**P**	**00 34 41.2**	**+1.4**
H24K					IAmb	IAmb	00 35 23.2	
	comp=Z,4.6nm,1.4s							
CCB	**Clear Creek Bu**	**39.44**	**37**		P	**P**	**00 34 40.7**	**+0.7**
G24K	**Hadweenzic Riv**	**39.57**	**34**		P	**P**	**00 34 41.8**	**+0.6**
G24K					IAmb	IAmb	00 35 16.4	
	comp=Z,3.8nm,1.2s							
SCM	**Sheep Creek Mo**	**39.81**	**42**		P	**P**	**00 34 45.5**	**+2.3**
SCM	**Sheep Creek Mo**	**39.81**	**42**		P	**P**	**00 34 45.6**	**+2.3**
SCM					pmax	pmax		
	comp=Z,12nm,1.2s							
IL31		**39.83**	**37**		P	**P**	**00 34 44.4**	**+1.1**
IL31					IAmb	IAmb	00 34 51.3	
	comp=Z,3.5nm,1.1s							
ILAR	**Eielson Array**	**39.83**	**37**		P	**P**	**00 34 44.2**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=274,slow=7.5,SNR=7.9							
	comp=Z,0.5nm,0.8s							
ILAR	**Eielson Array**	**39.83**	**37**		P	**P**	**00 34 44.6**	**+1.3**
ILAR	**Eielson Array**	**39.83**	**37**		eP	**P**	**00 34 47.4**	**+4.1**
ILAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
D25K	**Kavik River**	**40.08**	**30**		P	**P**	**00 34 46.2**	**+0.8**
D25K					IAmb	IAmb	00 34 49.9	
	comp=Z,2.2nm,0.7s							
F25K	**Christian River**	**40.30**	**33**		P	**P**	**00 34 48.9**	**+1.7**
F25K					IAmb	IAmb	00 35 13.6	
	comp=Z,4.0nm,1.4s							
PRP	**Porcupine Dome**	**40.38**	**36**		P	**P**	**00 34 49.1**	**+1.1**
PRP					IAmb	IAmb	00 35 18.6	
	comp=Z,4.1nm,1.4s							
F30M	**Barrier River**	**44.06**	**32**			**P**	**00 35 19.9**	**+2.3**
I30M	**Mount Dempster**	**44.22**	**36**		P	**P**	**00 35 20.5**	**+1.4**
J30M	**Hart River**	**44.36**	**37**		P	**P**	**00 35 22.1**	**+2.0**
G31M	**Satah River**	**44.76**	**33**		P	**P**	**00 35 24.4**	**+1.3**
G31M					IAmb	IAmb	00 35 29.5	
	comp=Z,2.8nm,0.6s							
INK	**Inuvik**	**44.80**	**31**		P	**P**	**00 35 24.5**	**+1.1**
INK	**Inuvik**	**44.80**	**31**		P	**P**	**00 35 24.5**	**+1.1**
INK					pmax	pmax		
	comp=Z,1.0nm,0.5s							
F31M	**Tsiigehtchic**	**44.87**	**32**		P	**P**	**00 35 24.9**	**+1.0**
H31M	**Peel River**	**44.94**	**35**		P	**P**	**00 35 26.4**	**+1.8**
H31M					IAmb	IAmb	00 35 31.8	
	comp=Z,5.1nm,1.2s							
MK31	**Makanchi Array**	**45.25**	**297**		P	**P**	**00 35 25.9**	**-1.5**
MK31	**Makanchi Array**	**45.25**	**297**		P	**P**	**00 35 25.9**	**-1.5**
MK31					pmax	pmax		
	comp=Z,1.0nm,0.9s							
MKAR	**Makanchi Array**	**45.25**	**297**		P	**P**	**00 35 25.8**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=74,slow=8.1,SNR=13							
	comp=Z,0.8nm,0.6s							
MKAR	**Makanchi Array**	**45.25**	**297**		P	**P**	**00 35 26.1**	**-1.3**
MKAR	**Makanchi Array**	**45.25**	**297**		eP	**P**	**00 35 27.2**	**-0.2**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**45.25**	**297**		eP	**P**	**00 35 27.2**	**-0.2**
KURK	**Kurchatov**	**46.02**	**304**		P	**P**	**00 35 31.1**	**-2.1**
KURK	**Kurchatov**	**46.02**	**304**		P	**P**	**00 35 31.6**	**-1.7**
KURK	**Kurchatov**	**46.02**	**304**		eP	**P**	**00 35 31.6**	**-1.7**
KURBB	**Kurchatov Arra**	**46.11**	**304**		P	**P**	**00 35 31.6**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=76,slow=8.5,SNR=4.7							
C36M	**Paulatuk**	**47.90**	**29**		P	**P**	**00 35 48.1**	**+0.6**
C36M					IAmb	IAmb	00 35 49.6	
	comp=Z,2.9nm,0.6s							
WUS	**Wushi**	**49.70**	**292**		P	**P**	**00 36 01.6**	**-0.3**
BOOM	**Boomskoye usch**	**51.22**	**295**		P	**P**	**00 36 13.6**	**+0.2**
BOOM					IAmb	IAmb	00 36 15.9	
	comp=Z,3.6nm,1.4s							
BOOM	**Boomskoye usch**	**51.22**	**295**		P	**P**	**00 36 13.6**	**+0.2**
BOOM					pmax	pmax		
	comp=Z,4.0nm,1.4s							
EVN	**Everest**	**51.57**	**273**		P	**P**	**00 36 17.7**	**+1.0**
EVN					IAmb	IAmb	00 36 19.1	
	comp=Z,2.6nm,0.9s							
AAK	**Ala-Archa**	**52.08**	**296**		P	**P**	**00 36 18.3**	**-1.4**
AAK	**Ala-Archa**	**52.08**	**296**		P	**P**	**00 36 18.3**	**-1.4**
AAK					pmax	pmax		
	comp=Z,1.0nm,1.0s							
AAK	**Ala-Archa**	**52.08**	**296**		eP	**P**	**00 36 18.3**	**-1.4**
RES	**Resolute Bay**	**53.55**	**17**		P	**P**	**00 36 29.4**	**-0.4**
RES	**Resolute Bay**	**53.55**	**17**		P	**P**	**00 36 29.4**	**-0.4**
RES					pmax	pmax		
	comp=Z,5.0nm,1.1s							
YKA	**Yellowknife Ar**	**54.16**	**35**		P	**P**	**00 36 35.4**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=304,slow=8.0,SNR=4.3							
	comp=Z,0.4nm,0.9s							
YKA	**Yellowknife Ar**	**54.16**	**35**		eP	P	00 36 39.2	+4.7
KKAR	**Karatay Array**	**54.37**	**298**		P	**P**	**00 36 36.0**	**-0.3**
KKAR	**Karatay Array**	**54.37**	**298**		P	**P**	**00 36 36.0**	**-0.3**
GAR	**Garm**	**56.68**	**294**		P	**P**	**00 36 51.5**	**-1.5**
AB31	**Akbulak array**	**57.41**	**309**		P	**P**	**00 36 57.0**	**-0.8**
AB31					IAmb	IAmb	00 36 59.1	
	comp=Z,3.0nm,1.4s							
ABKAR	**Akbulak array**	**57.41**	**309**		P	**P**	**00 36 56.9**	**-0.9**
CHGR	**Chuyangaron**	**57.62**	**294**		P	**P**	**00 36 59.2**	**-0.4**
CHGR	**Chuyangaron**	**57.62**	**294**		P	**P**	**00 36 59.2**	**-0.4**
CHGR					pmax	pmax		
	comp=Z,6.0nm,0.5s							
ARCES	**ARCESS Array B**	**58.68**	**340**		P	**P**	**00 37 04.1**	**-2.4**
	comp=Z,3.4nm,0.9s,baz=61,slow=6.3,SNR=4.0							
	comp=Z,3.4nm,0.9s							
FINES	**FINESS Array B**	**64.50**	**333**		P	**P**	**00 37 43.4**	**-2.1**
	comp=Z,2.5nm,0.7s,baz=54,slow=9.7,SNR=7.5							
	comp=Z,2.5nm,0.7s							
FINES	**FINESS Array B**	**64.50**	**333**		P	**P**	**00 37 43.5**	**-2.0**
FINES	**FINESS Array B**	**64.50**	**333**		P	**P**	**00 37 43.5**	**-2.0**
WRA	**Warramunga Arr**	**65.83**	**195**		P	**P**	**00 37 57.8**	**+3.2**
	comp=Z,0.5nm,0.6s,baz=7.4,slow=6.1,SNR=4.0							
	comp=Z,0.5nm,0.6s							
NB2	**NORSAR Subarra**	**69.06**	**339**		P	**P**	**00 38 13.0**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=31,slow=6.5							
NOA	**NORSAR Array B**	**69.06**	**339**		P	**P**	**00 38 12.6**	**-1.9**
	comp=Z,0.3nm,0.4s,baz=31,slow=6.6,SNR=12							
	comp=Z,0.3nm,0.4s							
HFS	**Hagfors**	**69.19**	**338**		P	**P**	**00 38 13.2**	**-2.1**
	comp=Z,0.8nm,0.4s,baz=20,slow=4.7,SNR=11							
	comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**69.55**	**195**		P	P	00 38 22.1	+4.3
	comp=Z,0.4nm,0.5s,baz=11,slow=6.2,SNR=5.2							
	comp=Z,0.4nm,0.5s							
KIV	**Kislovodsk**	**70.01**	**312**		eP	**P**	**00 38 21.4**	**+0.7**
KIV					pmax	pmax		
	comp=Z,5.0nm,1.0s							
KIV	**Kislovodsk**	**70.01**	**312**		eP	**P**	**00 38 21.4**	**+0.7**
AKASG	**Malin Array Be**	**71.47**	**324**		P	**P**	**00 38 26.7**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=40,slow=6.4,SNR=2.1							
	comp=Z,0.3nm,0.3s							
SCHQ	**Schefferville**	**76.15**	**20**		P	**P**	**00 38 57.5**	**+1.0**
	comp=Z,2.0nm,1.0s,baz=22,slow=2.7,SNR=1.7							
	comp=Z,2.0nm,1.0s							
BRTR	**Keskin Array B**	**77.74**	**314**		P	**P**	**00 39 06.7**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=100,slow=5.1,SNR=4.6							
	comp=Z,0.6nm,0.5s							
GERES	**GERESS Array B**	**78.84**	**332**		P	**P**	**00 39 11.7**	**0.0**
	comp=Z,0.3nm,0.5s,baz=67,slow=8.1,SNR=2.3							
	comp=Z,0.3nm,0.5s							
TXAR	**Lajitas Array**	**80.95**	**58**		P	**P**	**00 39 26.1**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=302,slow=3.8,SNR=6.1							
	comp=Z,0.3nm,0.6s							
TXAR	**Lajitas Array**	**80.95**	**58**		P	**P**	**00 39 25.8**	**+2.4**

*IDC **29** 00:34:14.2±1.9,23°.92S×177°.08W,h94km±15km,mb4.1/16, mbtmp4.5/19,MS3.4/2,Error ellipse: s-maj=17.8km s-min=12.7km az=106.0*
*NEIC **29** 00:34:17.3±2.7,24°.15S±0°.07×177°.1W±0°.1,h115km±5km, mb4.7/29,Error ellipse: s-maj=14.1km s-min=10.6km az=104.0*
*NOU **29** 00:34:18.5,24°.13S×176°.32W,h179km,mb4.7/43,South of Fiji Islands*
ISC 29 00:34:17.8±0.9,24°.17S±0°.05×176°.98W±0°.06, h130km±8km,n262,σ1s67/251,mb4.7/36,26C-4D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RIZ	**Raoul Island**	**5.13**	**189**		P	**Pn**	**00 35 28.9**	**-3.6**
RIZ					S	**Sn**	**00 36 27.6**	**-3.2**
RAO	**Raoul Island**	**5.13**	**189**		P	**Pn**	**00 35 30.0**	**-2.6**
	230nm,0.3s,baz=230,slow=23,SNR=6.4							
RAO					S	**Sn**	**00 36 34.4**	**+3.4**
	808nm,0.3s,baz=268,slow=23,SNR=7.7							
RAO	**Raoul Island**	**5.13**	**189**		P	**Pn**	**00 35 35.6**	**+3.0**
RAO	**Raoul Island**	**5.13**	**189**		S	**Sn**	**00 36 36.1**	**+5.2**
RAO	**Raoul Island**	**5.13**	**189**		Pn	**Pn**	**00 35 31.0**	**-1.6**
RAO					Sn	**Sn**	**00 36 33.5**	**+2.5**
GLKZ	**Green Lake**	**5.14**	**189**		P	**Pn**	**00 35 33.2**	**+0.5**
LKBA	**Tubou, Lakemba**	**6.15**	**343**		P	**Pn**	**00 35 49.1**	**+2.8**
MSVF	**Nonsavu**	**7.91**	**323**			**Pn**	**00 36 08.0**	**-2.1**
NIUE	**Niue**	**8.29**	**54**		P	**Pn**	**00 36 11.5**	**-3.6**
NIUE	**Niue**	**8.29**	**54**		S	Sn	00 37 35.5	-12
NIUE	**Niue**	**8.29**	**54**			**Pn**	**00 36 12.1**	**-3.0**
NIUE	**Niue**	**8.29**	**54**		P	Pn	00 36 07.4	-7.7
NIUE					S	Sn	00 37 32.0	-15
DGTI	**Dogotuki**	**8.41**	**338**		P	**Pn**	**00 36 19.9**	**+3.1**
AFI	**Afiamalu**	**11.32**	**27**		P	Pn	00 36 50.0	-6.0
	178nm,0.5s,baz=321,slow=1.5,SNR=37							
AFI					S	Sn	00 38 41.0	-20
	17nm,0.3s,baz=233,slow=23,SNR=2.0							
MARNC	**Mare, Loyalty**	**14.08**	**278**		P	**P**	**00 37 38.4**	**+3.2**
MARNC	**Mare, Loyalty**	**14.08**	**278**			**P**	**00 37 37.1**	**+1.9**
WMGZ	**Waiomatatini S**	**14.17**	**195**		P	Pn	00 37 27.3	-5.

WHZ	Wether Hill Ro	24.86	206	P	P	00 39 27.4	-0.7
SYZ	Scrubby Hill	24.95	203	P	P	00 39 28.5	-0.4
SYZ	Scrubby Hill	24.95	203	P	P	00 39 27.7	-1.2
PPT2	Papeete2	26.40	81	*e*LR	LR	00 46 10.0	
	comp=Z,104nm,21.8s						
PPT2				*e*LR	LR	00 46 21.2	
	comp=Z,109nm,24.5s						
PPT	Papeete	26.40	81	LR	LR	00 48 00.4	
	comp=Z,94nm,19.1s,baz=244,slow=31						
TATA	Tatamba Isabel	27.18	301	P	P	00 39 47.9	-1.4
ARMA	Armidale	28.52	250	P	P	00 40 02.9	+1.6
ARMA	Armidale	28.52	250	P	P	00 40 03.5	+2.2
ARMA				IAmb	IAmb	00 40 04.6	
	comp=Z,18nm,0.9s						
EIDS	Eidsvold	28.99	261	P	P	00 40 06.3	+1.0
EIDS				IAmb	IAmb	00 40 07.0	
	comp=Z,8.8nm,0.8s						
MGCD	Mangrove Creek	29.32	245	P	P	00 40 10.4	+2.3
CAN	Canberra	31.42	241	P	P	00 40 28.0	+1.3
CMSA	Cobar Meteorol	33.69	249	P	P	00 40 47.1	+0.6
CTA	Charters Tower	34.24	269	P	P	00 40 51.9	+0.5
CTAO	Charters Tower	34.24	269	P	P	00 40 51.9	+0.5
CTAO	Charters Tower	34.24	269		P	00 40 52.1	+0.7
TOO	Toolangi	34.64	238	P	P	00 40 55.5	+0.8
QLP	Quilpie	35.04	258	P	P	00 40 59.7	+1.5
MTSU	Mount Surprise	36.51	272	P	P	00 41 11.9	+1.1
STKA	Stephens Creek	37.19	249	P	P	00 41 16.4	-0.1
	comp=Z,7.3nm,0.5s,baz=98,slow=11,SNR=26						
STKA				PcP	PcP	00 43 34.5	+0.8
	comp=Z,2.5nm,0.5s,baz=117,slow=6.4,SNR=4.5						
	comp=Z,7.3nm,0.5s						
STKA	Stephens Creek	37.19	249	P	P	00 41 17.2	+0.7
STKA	Stephens Creek	37.19	249		P	00 41 16.7	+0.3
PMG	Port Moresby	37.20	287		P	00 41 16.5	-0.2
PMG	Port Moresby	37.20	287	P	P	00 41 15.7	-1.0
	comp=Z,40nm,1.0s						
INKA	Innaminka	38.05	255		P	00 41 24.8	+1.1
COEN	Coen	38.89	278	P	P	00 41 31.9	+1.1
COEN	Coen	38.89	278		P	00 41 30.8	0.0
COEN				IAmb	IAmb	00 41 32.7	
	comp=Z,9.2nm,0.9s						
HTT	Hallett	39.49	246	P	P	00 41 36.1	+0.4
QIS	Mount Isa	40.20	266	P	P	00 41 42.0	+0.3
BBOO	Buckleboo	41.88	247	P	P	00 41 54.9	-0.4
BBOO	Buckleboo	41.88	247	P	P	00 41 54.0	-1.3
BBOO				IAmb	IAmb	00 41 55.7	
	comp=Z,23nm,1.1s						
AS31	Alice Springs	44.71	260		P	00 42 17.6	-0.6
ASAR	Alice Springs	44.71	260	P	P	00 42 17.4	-0.8
	comp=Z,3.8nm,0.5s,baz=92,slow=7.5,SNR=62						
ASAR				PcP	PcP	00 43 58.6	+0.1
	comp=Z,4.1nm,0.8s,baz=114,slow=4.0,SNR=10.0						
ASAR				ScP	ScP	00 47 42.1	+3.4
	comp=Z,0.4nm,0.7s,baz=97,slow=3.6,SNR=2.5						
	comp=Z,3.8nm,0.5s						
ASAR	Alice Springs	44.71	260	P	P	00 42 16.9	-1.3
ASAR					PcP	00 43 57.0	-1.4
WR8	Warramunga Arr	44.99	265	P	P	00 42 19.2	-1.2
WR8				IAmb	IAmb	00 42 19.5	
	comp=Z,5.4nm,0.6s						
WRAB	Tennant Creek	45.13	265	P	P	00 42 20.3	-1.2
WRAB	Tennant Creek	45.13	265	P	P	00 42 21.3	-0.3
WRAB				IAmb	IAmb	00 42 23.1	
	comp=Z,19nm,0.6s						
WB0	Warramunga Arr	45.14	266	P	P	00 42 20.5	-1.1
WB0				IAmb	IAmb	00 42 21.6	
	comp=Z,10.0nm,0.6s						
WRA	Warramunga Arr	45.14	265	P	P	00 42 20.3	-1.3
	comp=Z,6.5nm,0.4s,baz=99,slow=8.5,SNR=89						
WRA				PcP	PcP	00 44 00.3	+0.3
	comp=Z,4.1nm,0.9s,baz=100,slow=3.5,SNR=8.5						
WRA				ScP	ScP	00 47 44.2	+3.8
	comp=Z,0.4nm,0.9s,baz=97,slow=3.7,SNR=1.7						
	comp=Z,6.5nm,0.4s						
WRA	Warramunga Arr	45.14	265	P	P	00 42 20.0	-1.6
WRA					PcP	00 43 59.8	-0.2
FORT	Forrest	48.81	249	P	P	00 42 48.8	-1.2
FORT				IAmb	IAmb	00 42 51.6	
	comp=Z,9.8nm,0.7s						
MTN	Manton Dam	50.23	273	P	P	00 42 59.8	-1.1
MTN				IAmb	IAmb	00 43 12.7	
	comp=Z,21nm,1.1s						
KNRA	Kununurra	51.45	269	P	P	00 43 09.3	-0.7
VNDA	Vanda	54.36	186	P	P	00 43 32.5	+2.0
	comp=Z,5.4nm,0.9s,baz=11,slow=8.2,SNR=5.5						
	comp=Z,5.4nm,0.9s						
VNDA	Vanda	54.36	186	P	P	00 43 31.4	+0.9
SIJI	Sorong	55.15	287	P	P	00 43 35.3	-1.8
	comp=Z,4μmcomp=Z,3μmcomp=Z,52nm,0.8s						
SWI	Sorong	55.16	287	P	P	00 43 36.2	-0.9
KLBR	Kellerberrin	57.43	247	P	P	00 43 51.9	-1.2
NWAO	Narrogin (SRO)	57.64	245	P	P	00 43 53.8	-0.8
NWAO				IAmb	IAmb	00 43 55.8	
	comp=Z,5.9nm,0.8s						
MEEK	Meekatharra	57.68	253	P	P	00 43 54.4	-0.5
PSA00	Pilbara Seismi	57.83	259	P	P	00 43 54.5	-1.5
PSA00				IAmb	IAmb	00 43 56.5	
	comp=Z,9.3nm,0.7s						
MBWA	Marble Bar	58.04	259	P	P	00 43 56.7	-0.8
MBWA	Marble Bar	58.04	259	P	P	00 43 55.7	-1.8
MBWA				IAmb	IAmb	00 44 07.7	
	comp=Z,10nm,1.1s						
BLDU	Ballidu	58.49	248	P	P	00 43 59.3	-1.2
MORW	Morawa	59.37	249	P	P	00 44 05.8	-0.8
CASY	Casey	61.08	206	P	P	00 44 17.2	-0.4
GIRL	Giralia	62.54	256	P	P	00 44 27.1	-1.0
PLAI	Plampang	63.89	272	P	P	00 44 36.0	-1.1
QSPA	South Pole Qui	65.92	180	P	P	00 44 51.4	+1.9
	comp=Z,17nm,0.6s,baz=48,slow=1.6,SNR=23						
	comp=Z,17nm,0.6s						
QSPA	South Pole Qui	65.92	180	P	P	00 44 50.0	+0.4
MJAR	Matsushiro Arr	73.71	324	P	P	00 45 36.7	-0.7
	comp=Z,0.5nm,0.4s,baz=148,slow=9.3,SNR=2.1						
	comp=Z,0.5nm,0.4s						
MAW	Mawson	78.45	200	P	P	00 46 05.8	+2.0
	comp=Z,14nm,0.5s,baz=129,slow=6.8,SNR=6.4						
	comp=Z,14nm,0.5s						
USRK	Ussuriysk Ar.	82.51	326	P	P	00 46 26.5	+0.7
	comp=Z,2.2nm,0.7s,baz=116,slow=9.8,SNR=2.6						
	comp=Z,2.2nm,0.7s						
NJ2	Nanjing	82.94	310	*e*P	P	00 46 29.5	+1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NVAR	Mina Array Bea	83.05	43	P	P	00 46 30.1	+1.1
	comp=Z,0.4nm,0.5s,baz=239,slow=3.7,SNR=2.1						
	comp=Z,0.4nm,0.5s						
H03S2	Juan Fernandez	83.16	124	T	T	02 18 04.9	
	baz=244,slow=74,SNR=27						
H03S1	Juan Fernandez	83.17	124	T	T	02 18 06.0	
	baz=244,slow=74,SNR=30						
H03S3	Juan Fernandez	83.17	124	T	T	02 17 58.8	
	baz=244,slow=74,SNR=23						
H03N2	Juan Fernandez	83.31	124	T	T	02 18 01.2	
	baz=249,slow=72,SNR=32						
H03N3	Juan Fernandez	83.31	124	T	T	02 18 04.6	
	baz=249,slow=72,SNR=43						
H03N1	Juan Fernandez	83.33	124	T	T	02 18 11.1	
	baz=249,slow=72,SNR=29						
TROLL	Troll, Antarti	84.08	180	P	P	00 46 34.5	+0.8
VNA3	Neumayer Olymp	84.44	176	⇑P	P	00 46 35.5	+0.1
	comp=Z,11nm,0.4s						
VNA2	Neumayer--Watz	84.89	177	⇑P	P	00 46 38.2	+0.6
	comp=Z,18nm,0.6s,baz=142,slow=5.0						
WHN	Wuhan	85.37	306	P	P	00 46 41.5	+0.9
WHN				pmax	pmax		
	comp=Z,100nm,1.8s						
BNX	BinXian	85.95	325	⇑P	P	00 46 43.5	+0.4
BNX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PLCA	Paso Flores	86.08	133	P	P	00 46 45.7	+1.5
	comp=Z,2.0nm,0.9s,baz=235,slow=11,SNR=3.9						
	comp=Z,2.0nm,0.9s						
TXAR	Lajitas Array	88.25	57	P	P	00 46 56.1	+1.4
	comp=Z,0.4nm,0.8s,baz=224,slow=5.2,SNR=5.0						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	88.25	57	P	P	00 46 55.5	+0.8
PDAR	Pinedale Array	90.98	43	P	P	00 47 07.8	+0.5
	comp=Z,0.5nm,0.9s,baz=194,slow=3.1,SNR=3.6						
	comp=Z,0.5nm,0.9s						
XAN	Xi'an	91.09	307	*e*P	P	00 47 08.5	+0.7
ILAR	Eielson Array	91.67	12	P	P	00 47 08.6	-1.1
	comp=Z,0.7nm,0.9s,baz=217,slow=5.1,SNR=5.1						
	comp=Z,0.7nm,0.9s						
CMAR	Chiang Mai Arr	92.22	289	P	P	00 47 13.7	+0.4
	comp=Z,1.2nm,0.4s,baz=129,slow=3.4,SNR=11						
	comp=Z,1.2nm,0.4s						

HHC	Hu-ho-hao-te	92.58	314	*e*P	P	00 47 16.0	+1.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,70nm,4.5s						
PZH	PanZhiHua	93.25	297	P	P	00 47 16.5	-1.5
LZDM	Lanzhou Array	95.78	307	P	P	00 47 29.2	-0.5
	comp=Z,0.8nm,0.3s,baz=100,slow=12,SNR=3.6						
	comp=Z,0.8nm,0.3s						
WMQ	Urumqi	110.02	310	*e*PKP	PKiKP	00 52 31.0	-2.9
WMQ				LR	LR		
	comp=E,680nm,24.0s						
WMQ				LR	LR		
	comp=Z,180nm,23.9s						
ZALV	Zalesovo Beam	113.92	320	PKiKP	PKiKP	00 52 39.8	-1.0
	comp=Z,0.8nm,0.6s,baz=108,slow=4.7,SNR=6.0						
MKAR	Makanchi Array	114.37	312	PKiKP	PKPdf	00 52 40.7	-1.3
	comp=Z,0.6nm,0.7s,baz=94,slow=1.2,SNR=7.7						
KURK	Kurchatov	117.30	316		PKPdf	00 52 46.5	-0.9
KURBB	Kurchatov Arra	117.35	316	PKP	PKPdf	00 52 46.5	-1.0
	comp=Z,1.3nm,0.7s,baz=106,slow=1.6,SNR=10						
KK31	Karatay Array	122.23	307	PKPdf	PKPdf	00 52 55.6	-1.6
KKAR	Karatay Array	122.23	307		PKPdf	00 52 54.7	-2.6
KBL	Kabul	122.42	297		PKPdf	00 52 56.0	-2.1
BVAR	Borovoye Array	122.46	319	PKP	PKPdf	00 52 56.7	-0.7
	comp=Z,1.4nm,0.5s,baz=117,slow=0.3,SNR=8.1						
SHAA	Shahritus	123.55	300		PKPdf	00 52 58.0	-2.0
SPITS	Spitsbergen Ar	125.56	357	PKP	PKPdf	00 53 02.1	-0.5
	comp=Z,3.7nm,0.7s,baz=50,slow=2.3,SNR=4.9						
ARCES	ARCESS Array B	132.68	349	PKhKP	PKPpre	00 53 10.8	
	comp=Z,1.1nm,0.4s,baz=357,slow=2.7,SNR=1.8						
ARCES				PKP	PKPdf	00 53 16.3	-0.1
	comp=Z,1.1nm,0.4s,baz=5.7,slow=1.2,SNR=12						
FINES	FINESS Array B	139.54	343	PKhKP	PKPpre	00 53 24.1	
	comp=Z,1.3nm,0.9s,baz=29,slow=4.4,SNR=1.4						
FINES				PKP	PKiKP	00 53 30.7	-1.0
	comp=Z,1.1nm,0.6s,baz=32,slow=3.4,SNR=4.5						
RAYN	Ar Rayn	141.25	278		PKPpre	00 53 28.9	
RAYN				PKPdf	PKPdf	00 53 35.0	+1.4
LODK	Lodwar	142.61	242		PKPpre	00 53 29.8	
NB2	NORSAR Subarra	142.72	353	PKPa	PKPdf	00 53 30.9	-4.2
	comp=Z,0.7nm,0.6s,baz=13,slow=3.6						
NOA	NORSAR Array B	142.72	353	PKhKP	PKPpre	00 53 31.0	
	comp=Z,0.5nm,0.9s,baz=26,slow=1.4,SNR=5.1						
NOA				PKP	PKPdf	00 53 33.8	-1.3
	comp=Z,0.2nm,0.5s,baz=21,slow=20,SNR=1.4						
GEVA	Gevas	143.27	302		PKPab	00 53 33.4	+0.3
HFS	Hagfors	143.29	351	PKhKP	PKPpre	00 53 32.7	
	comp=Z,3.1nm,0.7s,baz=72,slow=5.3,SNR=11						
GURO	Guroymak-BITLI	144.01	303		PKPbc	00 53 36.5	0.0
NACGM	Naroch	144.60	336	*e*PKiKP	PKPdf	00 53 38.4	-0.1
	comp=Z,30nm,0.9s,baz=39						
STRU	Stroemstad	144.68	353	*i* P	PKPab	00 53 36.8	-0.8
KOPT	Kop Dagi	144.83	306		PKPab	00 53 37.7	-1.4
PABE	Paberze	145.10	339	PKPbc	PKPbc	00 53 37.5	-1.5
MARD	Mardin	145.23	301		PKPbc	00 53 39.7	-0.6
TJOU	Tjoern	145.61	352	*i* P	PKPdf	00 53 33.9	-6.2
BORU	Boraas	145.83	351	*i* P	PKPdf	00 53 39.9	-0.7
SUW	Suwalki	146.58	338	*e*PKP	PKPdf	00 53 42.2	+0.3
SUW	Suwalki	146.58	338		PKPbc	00 53 43.0	-0.6
AKASG	Malin Array Be	146.65	329	PKPbc	PKPbc	00 53 43.3	-0.7
	comp=Z,8.6nm,0.6s,baz=44,slow=3.9,SNR=26						
AKASG	Malin Array Be	146.65	329		PKPbc	00 53 43.7	-0.3
AKBB	Malin Array Si	146.65	329		PKPdf	00 53 42.8	+0.7
KIEV	Kiev	146.66	329	⇑P	PKPbc	00 53 43.2	-0.8
KIEV	Kiev	146.66	329		PKPdf	00 53 42.4	+0.2
ARPR	Arapgir-MALATY	146.69	305		PKPab	00 53 45.5	-0.6
DEL	Delary	146.77	349	*i* P	PKPdf	00 53 42.5	+0.3
GAZ	Gaziantep	148.04	302		PKPbc	00 53 49.2	+0.8
EKA	Eskdalemuir Ar	148.54	7	PKPbc	PKPbc	00 53 48.3	-0.6
	comp=Z,2.2nm,0.6s,baz=340,slow=2.8,SNR=7.6						
BNN	Bunyan	148.61	306		PKPbc	00 53 50.1	+0.3
SORM	Soroca	148.79	326	⇑P	PKPbc	00 53 49.5	-0.2
BR131	Keskin Array S	149.93	308		PKPbc	00 53 52.3	-0.8
BRTR	Keskin Array B	149.93	308	PKPbc	PKPbc	00 53 52.7	-0.4
	comp=Z,3.6nm,0.8s,baz=61,slow=3.7,SNR=17						
BRTR				PKPab	PKPab	00 53 59.6	+0.5
	comp=Z,2.8nm,0.9s,baz=64,slow=3.4,SNR=7.0						
BRTR	Keskin Array B	149.93	308		PKPbc	00 53 51.9	-1.2
KIRS	Kirsehir-Merke	149.94	307	⇓P	PKPbc	00 53 53.0	0.0
MMAI	Mount Meron Ar	150.33	295	PKPbc	PKiKP	00 53 54.9	0.0
	comp=Z,9.3nm,0.6s,baz=54,slow=5.7,SNR=40						
VLDR	Vladesti	150.40	323	⇓P	PKPbc	00 53 53.9	+0.2
GHAJ	Ghor Haditha	150.41	291		PKPbc	00 53 54.5	+0.3
BUR08	Bucovina Ar. S	150.68	329		PKPbc	00 53 54.7	+0.2
BURAR	Bucovina Array	150.69	329	⇓P	PKPbc	00 53 54.2	-0.3
BURAR	Bucovina Array	150.69	329		PKiKP	00 53 55.1	-0.1
TESR	Tescani	150.73	326	⇑P	PKPbc	00 53 54.1	-0.5
CFR	Carcaliu	150.78	322	⇑P	PKPbc	00 53 54.9	+0.2
ONER	Baraj Valea Uz	150.98	325	⇑P	PKiKP	00 53 55.5	-0.2
STHS	Stebnicka Huta	151.03	335	*e*	PKPab	00 54 06.7	+3.5
STHS	Stebnicka Huta	151.03	335	*e*PKP	PKPbc	00 53 54.8	-0.4
KSP	Ksiaz	151.46	342	*e*PKP	PKiKP	00 53 56.7	+0.2
OZUR		151.46	326	⇓P	PKPbc	00 53 56.4	+0.1
BOSR	Bodos	151.53	326	⇑P	PKiKP	00 53 57.1	+0.2
CSS	Mathiatis	151.63	299	PKPbc	PKPbc	00 53 56.8	-0.2
OSTC	Ostas	151.74	342	⇑*e*PKPB	PKiKP	00 53 57.0	-0.1
DOPR	Dopca	151.75	326	⇑P	PKPbc	00 53 57.0	0.0
MLR	Muntele Rosu	151.78	325	⇑P	PKPbc	00 53 57.3	+0.1
STEB	Steborice	151.82	340	⇑*e*PKPB	PKiKP	00 53 57.4	+0.1
STEB				*e*PKPAB	PKPab	00 54 07.2	+0.8
CLL	Collm	151.83	347		PKiKP	00 53 57.1	-0.1
CLL	Collm	151.83	347	*e*PP	PP	00 57 38.0	+0.2
CLL	Collm	151.83	347	⇑*i*PKPbc	PKPbc	00 53 57.0	+0.1
	comp=Z,14nm,0.9s						
CLL	Collm	151.83	347	*i* PKPab	PKPab	00 54 04.3	-2.1
	comp=Z,5.0nm,0.7s						
CLL	Collm	151.83	347	*e*pPKPbc	pPKPbc	00 54 35.0	+4.0
CLL	Collm	151.83	347	*e*pPKPab	pPKPab	00 54 44.0	+4.6
UPC	Upice	151.84	342	⇑*e*PKPB	PKiKP	00 53 57.6	+0.3
DPC	Dobruska-Polom	151.89	342	⇑*e*PKPB	PKPbc	00 53 57.1	-0.1
LANS	Liptovska Anna	151.91	337	*e*PKP	PKiKP	00 53 58.8	+1.2
KRLC	Kraliky	152.00	341	⇑*e*PKPB	PKPbc	00 53 57.6	+0.2
MORC	Moravsky Berou	152.03	340	⇑P	PKPbc	00 53 56.8	-0.7
BRG	Berggiesshubel	152.03	345	Amp		00 54 39.6	
	comp=Z,5.2nm,0.7s						
BRG	Berggiesshubel	152.03	345	*i* PKP	PKiKP	00 53 58.1	+0.4
BRG	Berggiesshubel	152.03	345	Amp		00 53 58.7	
	comp=Z,7.7nm,0.8s						
BRG	Berggiesshubel	152.03	345	pPKP	pPKiKP	00 54 37.6	+5.7
BORA	Eskisehir	152.11	311		PKPbc	00 53 57.1	-0.9
PVCC	Panska Ves	152.20	344	⇑*e*PKPB	PKiKP	00 53 58.5	+0.4
VOIR		152.28	325	⇑P	PKPbc	00 53 58.0	-0.3
MAUC	Maruska	152.30	339	⇑*e*PKPB	PKiKP	00 53 58.5	+0.1
MAUC				*e*PKPAB	PKPab	00 54 09.2	+0.7
MARR	Marisel-Cluj	152.36	329	⇑P	PKPbc	00 53 58.4	0.0
DRGR		152.46	330	⇑P	PKPbc	00 53 58.6	0.0
ARR	Arges	152.54	326	⇑P	PKiKP	00 53 59.8	+0.7
VRAC	Vranov	152.74	340	*e*PKP	PKPab	00 54 11.5	+1.2
JAVC	Velka Javorina	152.79	339	*e*PKP	PKPab	00 54 12.8	+2.2
KRUC	Moravsky	153.02	340	*e*PKP	PKPab	00 54 12.6	+1.2
MODS	Modra-Piesok	153.34	339	*e*	PKPab	00 54 14.4	+1.6
MODS	Modra-Piesok	153.34	339	*e*PKP	PKiKP	00 54 01.5	+1.0
GZR	Gura Zlata	153.46	328	⇑P	PKPbc	00 53 59.0	-1.8
KHC	Kasperske Hory	153.74	344	⇑*e*PKPB	PKiKP	00 54 01.5	+0.2
CONA	Conrad Observa	154.19	340	*e*PKiKP	PKPbc	00 53 60.0	-2.3
	comp=Z,1.0nm,0.5s						
CONA				*e*PKP	PKPab	00 54 15.6	-0.9
	comp=Z,2.0nm,0.6s						
RONA	Rosalia, Austr	154.25	339	*e*PKiKP	PKPbc	00 53 59.5	-2.9
	comp=Z,0.8nm,0.4s						
RONA				*e*PKP	PKPab	00 54 15.8	-0.9
	comp=Z,3.7nm,0.7s						
LESA	Schwarzleotal	155.55	344	*i* PKP	PKPab	00 54 22.1	-0.2
	comp=Z,5.4nm,1.2s						
SOKA	Soboth	155.56	340	*e*PKP	PKPab	00 54 22.1	-0.4
	comp=Z,1.8nm,0.7s						
OBKA	Obir	155.86	340	*e*PKP	PKPab	00 54 23.9	+0.2
	comp=Z,1.0nm,0.6s						
ABTA	Abfaltersbach	156.22	344	*e*PKP	PKPab	00 54 25.2	-0.1
	comp=Z,0.5nm,0.4s						
DBIC	Dimbokro	161.03	155	PKP	PKPdf	00 54 04.8	+1.4
	comp=Z,6.2nm,1.0s,baz=164,slow=6.9,SNR=3.2						
TORD	Torodi Ar. Bea	168.97	173	PKP	PKPdf	00 54 09.2	-0.9
	comp=Z,1.5nm,0.8s,baz=199,slow=2.6,SNR=8.4						
TORD				PKPab	PKPab	00 55 21.9	+0.3
	comp=Z,3.1nm,0.9s,baz=195,slow=3.5,SNR=12						

DJA 29 00:35:41.6±0.2,1°S±2°×12°0E±°,h10km,M4.0/21,mb4.2/1,MLv3.9/21,Minahassa Peninsula, Sulawesi

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

PCI	Palu	0.47	261	P	Pg	00 35 51.0	+0.2
PCI				S	Sb	00 35 58.7	-0.3
MPSI	Mapaga	1.23	341	P	Pn	00 36 02.9	-1.9
APSI	Ampana	1.35	93	P	Pn	00 36 05.9	-0.6
MRSI	Marisa	2.09	52	P	Pn	00 36 16.5	-0.2
TTSI	Tana Toraja	2.25	192	P	Pb	00 36 20.7	-1.7
TTSI				S	Sn	00 36 48.0	+1.2
MMSI	Mamuju	2.31	217	P	Pn	00 36 20.2	+0.4
MMSI				S	Sn	00 36 49.2	+0.9
LUWI	Luwuk	2.48	95	P	Pn	00 36 22.0	-0.1
PMSI	Majene	2.99	208	P	Pn	00 36 29.7	+0.5
GTOI	Gorontalo	3.08	62	P	Pn	00 36 30.3	0.0
SPSI	Sidrap Palu	3.16	190	P	Pn	00 36 32.1	+0.7
KAPI	Kappang	4.19	187	P	Pn	00 36 46.8	+1.1
MYLDM	Lahad Datu	6.24	343	P	Pn	00 37 14.1	+0.4

*ISK **29** 00:57:24.9,38°.40N×44°.43E,h5km,ML2.4/7*
*AFAD **29** 00:57:24.2,38°.45N×44°.51E,h7km±5km,ML2.5*
*TEH **29** 00:57:25.8,38°.44N×44°.53E,h6km±109km,ML2.6, Presumed earthquake*

ISC 29 00:57:24.9±1.3,38°.41N±0°.03×44°.49E±0°.03,h1km±12km, n20,σ0°88/28,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.47	303	P	Pg	00 57 33.9	+0.1
OZAP				S	Sg	00 57 40.8	+0.9
OZAP				IAML		00 57 46.0	
	comp=N,387nm,0.6s						
TVAN	Van	0.86	278	P	Pg	00 57 39.9	-1.5
TVAN				IAML		00 58 00.0	
	comp=N,143nm,0.6s						
TVAN				IAML		00 58 09.0	
	comp=E,148nm,0.8s						
ISHB	Shabestar	0.89	98	Pg	Pg	00 57 41.8	-0.3
VMUR	Van-Muradiye	0.92	309	P	Pg	00 57 42.4	-0.2
VMUR				S	Sb	00 57 56.8	+0.2
MAKU	Maku	0.95	9	Pg	Pg	00 57 42.6	-0.6
IMRD	Marand	1.00	72	Pg	Pb	00 57 44.6	-0.5
HAKT	HAKKARI	1.05	216	P	Pg	00 57 44.6	-0.4
HAKT				S	Sn	00 58 01.9	-0.4
HAKT				IAML		00 58 02.0	
	comp=N,109nm,0.3s						
HAKT				IAML		00 58 04.0	
	comp=E,97nm,0.7s						
GEVA	Gevas	1.13	265	P	Pg	00 57 44.7	-1.9
GEVA				S	Sb	00 58 03.1	+0.5
AKDM	Akdamar-Van	1.19	267	Pn	Pg	00 57 46.6	-1.1
AKDM				Sn	Sn	00 58 04.8	-0.9
ITBZ	Tabriz	1.31	97	Pg	Pn	00 57 49.5	-1.0
CUKT	Cukurca	1.36	211	Pn	Pb	00 57 51.3	+0.2
CUKT				Sn	Sn	00 58 10.7	+1.0
IAZR	Azarshahr	1.38	121	Pg	Pg	00 57 52.0	+0.6
ADCV	BITLIS_Adilcev	1.44	287	P	Pb	00 57 52.2	-0.4
ADCV				S	Sg	00 58 12.9	+1.7
AGRB	Hanur-Agry	1.65	315	Pn	Pb	00 57 55.7	-0.5
AGRB				Sn	Sg	00 58 18.2	+0.3
MLAZ	Malazgirt-MUS	1.68	296	Pn	Pb	00 57 56.2	-0.6
GNI	Garni	1.75	6	Pn	Pg	00 57 57.8	-0.6
GNI	Garni	1.75	6	Pg	Pg	00 57 58.3	-0.1
GURO	Guroymak-BITLI	1.94	275	Pn	Pn	00 57 59.6	+0.6
IHRS	Heris	2.01	92	Pn	Pg	00 58 02.5	-0.8
SENK	Senkaya-Erzuru	2.71	323	Pn	Pn	00 58 10.9	+

HMBC				*e*S		**Sn**	**01 12 30.0**	**-0.4**
HMBC				IAML			01 12 31.8	
	comp=E,3μm,0.7s							
TA02	**Huaiquique**	**2.23**	**318**	*e*P		**Pn**	**01 12 05.6**	**-0.4**
TA02				IAML			01 12 36.2	
	comp=N,3μm,0.1s							
TA02	**Huaiquique**	**2.23**	**318**	*e*P		**Pn**	**01 12 05.6**	**-0.4**
TA02				*e*S		**Sn**	**01 12 36.8**	**+3.1**
TA02				IAML			01 12 40.4	
	comp=Z,1μm,0.1s							
GO01	**Chusmiza**	**2.35**	**345**			**Pn**	**01 12 09.3**	**+1.3**
GO01	**Chusmiza**	**2.35**	**345**	*e*P		**Pn**	**01 12 09.1**	**+1.0**
GO01				IAML			01 12 45.0	
	comp=N,2μm,0.1s							
GO01	**Chusmiza**	**2.35**	**345**	*e*P		**Pn**	**01 12 08.5**	**+0.4**
GO01				IAML			01 12 45.2	
	comp=Z,367nm,0.3s							
PB10	**IPOC Station P**	**2.41**	**230**			**Pn**	**01 12 09.1**	**+0.7**
PB10	**IPOC Station P**	**2.41**	**230**	*e*P		**Pn**	**01 12 09.4**	**+1.0**
PB10				IAML			01 12 47.9	
	comp=E,947nm,0.4s							
PB10	**IPOC Station P**	**2.41**	**230**	*e*P		**Pn**	**01 12 08.7**	**+0.3**
PB10				*e*S		**Sn**	**01 12 37.2**	**-0.7**
PB10				IAML			01 12 47.5	
	comp=Z,656nm,0.4s							
PB11	**IPOC Station P**	**2.41**	**334**			**Pn**	**01 12 08.5**	**0.0**
PB11	**IPOC Station P**	**2.41**	**334**	*e*P		**Pn**	**01 12 08.6**	**0.0**
PB11				*e*S		**Sn**	**01 12 37.1**	**-1.0**
PB11				IAML			01 12 41.2	
	comp=N,1μm,0.6s							
PB11	**IPOC Station P**	**2.41**	**334**	*e*P		**Pn**	**01 12 08.5**	**0.0**
PB11				*e*S		**Sn**	**01 12 38.4**	**+0.3**
PB11				IAML			01 12 40.6	
	comp=Z,741nm,1.0s							
YJA	**Yavi**	**2.83**	**95**	*e*P		**Pn**	**01 12 17.6**	**+3.4**
YJA	**Yavi**	**2.83**	**95**	*e*P		**Pn**	**01 12 17.9**	**+3.7**
SALTA		**3.04**	**138**‖	*e*P		**Pn**	**01 12 20.3**	**+3.2**
SALTA		**3.04**	**138**	*e*P		**Pn**	**01 12 15.9**	**-1.2**
SALTA				*e*P			01 12 16.6	
SALTA				*e*P			01 12 20.5	
PB14	**IPOC Station P**	**3.16**	**212**			**Pn**	**01 12 18.5**	**0.0**
PB14	**IPOC Station P**	**3.16**	**212**	*e*P		**Pn**	**01 12 18.3**	**-0.1**
PB14				*e*S		**Sn**	**01 12 56.1**	**+0.3**
PB14				IAML			01 13 06.2	
	comp=Z,1μm,0.7s							
HJA	**Humahuaca**	**3.16**	**114**	*e*P		**Pn**	**01 12 15.9**	**-2.6**
HJA				*e*P			01 12 21.7	
GO02	**Mina Guanaco**	**3.33**	**196**			**Pn**	**01 12 21.2**	**+0.4**
GO02	**Mina Guanaco**	**3.33**	**196**	*e*P		**Pn**	**01 12 21.3**	**+0.5**
GO02				*e*S		**Sn**	**01 12 55.2**	**-4.7**
GO02				IAML			01 13 23.6	
	comp=Z,582nm,0.6s							
PB16	**IPOC Station P**	**3.71**	**346**			**Pn**	**01 12 26.7**	**+0.7**
PB16	**IPOC Station P**	**3.71**	**346**	*e*P		**Pn**	**01 12 26.9**	**+0.8**
PB16	**IPOC Station P**	**3.71**	**346**	*e*P		**Pn**	**01 12 26.6**	**+0.6**
PB16				*e*S		Sn	01 12 53.0	-16
PB16				IAML			01 13 37.4	
	comp=Z,152nm,0.7s							
PB12	**IPOC Station P**	**3.72**	**333**			**Pn**	**01 12 24.1**	**-1.6**
PB12	**IPOC Station P**	**3.72**	**333**‖	*e*P		**Pn**	**01 12 23.9**	**-1.9**
PB12	**IPOC Station P**	**3.72**	**333**	*e*P		**Pn**	**01 12 23.5**	**-2.2**
PB12				*e*S		Sn	01 12 50.7	-18
PB12				IAML			01 13 32.7	
	comp=Z,290nm,0.5s							
SLA	**San Lorenzo**	**3.93**	**135**‖	*e*P		**Pn**	**01 12 32.4**	**+3.8**
SLA	**San Lorenzo**	**3.93**	**135**	*e*P		**Pn**	**01 12 32.4**	**+3.8**
AC01	**Pan de Azucar**	**4.58**	**204**			**Pn**	**01 12 36.4**	**-0.7**
AC01	**Pan de Azucar**	**4.58**	**204**	*e*P		**Pn**	**01 12 35.7**	**-1.4**
AC01				*e*S		**Sn**	**01 13 33.8**	**+4.5**
AC01				IAML			01 13 47.4	
	comp=Z,512nm,0.7s							
FSA	**Cafayete**	**4.76**	**151**	*e*P		**Pn**	**01 12 42.7**	**+2.9**
AC02	**Maricunga**	**4.89**	**186**	Pn		**Pn**	**01 12 41.5**	**-0.3**
AC02	**Maricunga**	**4.89**	**186**	IAML			01 14 33.4	
	comp=Z,101nm,0.7s							
AC06	**Mina Casimiro**	**5.62**	**197**			**Pn**	**01 12 49.5**	**-1.8**
LPAZ	**La Paz**	**5.65**	**4**	P		**Pn**	**01 12 53.6**	**+1.3**
	comp=Z,6.3nm,0.5s,baz=187,slow=7.6,SNR=32							
LPAZ				S		Sn	01 13 42.6	-14
	comp=Z,16nm,0.8s,baz=196,slow=9.7,SNR=6.7							
LPAZ	**La Paz**	**5.65**	**4**	*e*P		**Pn**	**01 12 52.9**	**+0.6**
GO03	**Copiapo**	**5.82**	**195**			**Pn**	**01 12 52.1**	**-1.9**
AC04	**Llanos de Chal**	**6.63**	**200**	Pn		**Pn**	**01 13 01.4**	**-3.5**
AC05	**El Transito**	**7.03**	**192**			**Pn**	**01 13 08.5**	**-1.9**
LCO	**Las Campanas**	**7.29**	**195**			**Pn**	**01 13 10.9**	**-3.2**
CO01	**Juntas del Tor**	**8.11**	**190**			**Pn**	**01 13 23.9**	**-1.3**
CO03	**El Pedregal**	**9.05**	**192**			**Pn**	**01 13 34.3**	**-3.5**
CO06	**Fray Jorge**	**9.11**	**197**	Pn		Pn	01 13 33.5	-5.0
SIV	**San Ignacio**	**9.23**	**51**	P		**Pn**	**01 13 37.8**	**-2.5**
	comp=Z,53nm,0.7s							
CO02	**Combarbal**	**9.47**	**193**	Pn		**Pn**	**01 13 39.2**	**-4.2**
CFA	**Coronel Fontan**	**9.62**	**178**	P		**Pn**	**01 13 43.6**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=7.5,slow=12,SNR=10.0							
CFA				S		**Sn**	**01 15 24.1**	**-7.4**
	comp=Z,1.9nm,0.5s,baz=332,slow=12,SNR=1.6							
CO04	**Los Peladeros**	**10.28**	**192**	Pn		**Pn**	**01 13 50.0**	**-4.6**
VA03	**San Esteban**	**10.91**	**189**	Pn		**Pn**	**01 14 03.0**	**+0.1**
PTLB	**Pontes e Lacer**	**11.02**	**56**			**Pn**	**01 14 02.1**	**-2.3**
PTLB	**Pontes e Lacer**	**11.02**	**56**	*e*P		**Pn**	**01 14 01.3**	**-3.1**
BDQN	**Bodoquena, MS**	**11.11**	**84**	*e*P		**Pn**	**01 14 02.7**	**-2.9**
CPUP	**Villa Florida**	**11.13**	**115**	P		**Pn**	**01 14 06.3**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=292,slow=14,SNR=6.9							
CPUP	**Villa Florida**	**11.13**	**115**	Pn		**Pn**	**01 14 06.0**	**+0.1**
MT02	**Curacav**	**11.49**	**191**	Pn		**Pn**	**01 14 10.7**	**+0.1**
VILB	**Vilhena**	**11.98**	**43**			**Pn**	**01 14 16.3**	**-0.9**
VILB	**Vilhena**	**11.98**	**43**	*e*P		**Pn**	**01 14 15.0**	**-2.2**
VILB				*e*S		**Sn**	**01 16 27.6**	**-1.5**
AQDB	**Aquidauana**	**12.08**	**85**	Pn		**Pn**	**01 14 17.9**	**-0.6**
AQDB	**Aquidauana**	**12.08**	**85**	*e*P		**Pn**	**01 14 15.6**	**-2.8**
AQDB				*e*S		**Sn**	**01 16 30.7**	**-0.6**
MT01	**Popeta**	**12.10**	**191**	Pn		**Pn**	**01 14 18.0**	**-0.6**
BO04	**La Punta**	**12.13**	**188**	Pn		**Pn**	**01 14 19.5**	**+0.5**
AMBA	**Amambai (Brazi**	**12.58**	**97**	*e*P		**Pn**	**01 14 23.5**	**-1.5**
BO02	**Sierra Bellavi**	**12.94**	**188**	Pn		**Pn**	**01 14 30.2**	**+0.5**
SALV	**Santo Antonio**	**13.57**	**66**	*e*P		**Pn**	**01 14 35.6**	**-2.3**
PP1B	**Ponte de Pedra**	**13.58**	**74**	*e*P		**Pn**	**01 14 36.9**	**-1.2**
TRCB	**Terra Rica**	**14.75**	**96**	Pn		**Pn**	**01 14 54.0**	**+0.9**
TRCB	**Terra Rica**	**14.75**	**96**	*e*P		**Pn**	**01 14 52.1**	**-0.9**
BI02	**San Fabin de**	**14.85**	**189**	Pn		**Pn**	**01 14 53.3**	**-0.9**
PDRB	**Porto dos Gac**	**15.28**	**50**	*e*P		**Pn**	**01 14 58.2**	**-1.5**
PTGB	**Pitanga**	**15.39**	**103**	*e*P		**Pn**	**01 15 00.6**	**-0.5**
ITAB	**Concordia**	**15.83**	**113**			**P**	**01 15 07.5**	**-0.5**
ITAB				IAmb		IAmb	01 15 09.9	
	comp=Z,24nm,1.0s							
ITAB	**Concordia**	**15.83**	**113**	*e*P		**Pn**	**01 15 04.6**	**-1.9**
CPSB	**Cacapava Do Su**	**15.95**	**125**	*e*P		**Pn**	**01 15 07.2**	**-0.8**
LDASE	**Londrina, Braz**	**16.16**	**98**	*e*P		**Pn**	**01 15 09.9**	**-0.8**
CLDB	**Colider**	**16.45**	**50**	*e*P		**Pn**	**01 15 12.8**	**-1.5**
PLTB	**Pedras Altas**	**16.52**	**129**			**Pn**	**01 15 14.3**	**-0.7**
PLTB	**Pedras Altas**	**16.52**	**129**	*e*P		**Pn**	**01 15 14.4**	**-0.5**
ARAG	**Araguaiana, MT**	**17.01**	**71**	*e*P		**Pn**	**01 15 19.7**	**-1.5**
TRQA	**Tornquist**	**17.02**	**162**	P		**Pn**	**01 15 20.8**	**-0.3**
TRQA				IAmb		IAmb	01 15 49.5	
	comp=Z,19nm,1.2s							
ITRB	**Iturama**	**17.15**	**86**	*e*P		**P**	**01 15 21.5**	**-1.2**
CNLB	**Canela**	**17.55**	**118**	*e*P		**P**	**01 15 26.4**	**-0.6**
FRTB	**Fartura**	**17.58**	**98**	*e*P		**P**	**01 15 27.4**	**-0.1**
GO06	**Curarrehue**	**17.75**	**187**	P		**P**	**01 15 29.6**	**+0.4**
LR05	**Currie**	**18.45**	**188**			**P**	**01 15 37.5**	**+0.7**
LR05				IAmb		IAmb	01 15 40.2	
	comp=Z,21nm,1.1s							
MAJ01	**Sao Joao Batis**	**18.56**	**111**	*e*P		**P**	**01 15 38.0**	**-0.1**
BB19B	**Bebedouro**	**18.65**	**91**	*e*P		**P**	**01 15 39.1**	**-0.1**
TEFE	**Tefe**	**18.73**	**12**	*e*P		**P**	**01 15 38.4**	**-1.6**
PLCA	**Paso Flores**	**18.80**	**185**	P		**Pn**	**01 15 42.5**	**+0.1**
	comp=Z,6.3nm,0.6s,baz=4.7,slow=11,SNR=8.8							
PLCA	**Paso Flores**	**18.80**	**185**	P		**Pn**	**01 15 41.9**	**-0.6**
PLCA				IAmb		IAmb	01 15 47.8	
	comp=Z,7.1nm,0.7s							
PLCA	**Paso Flores**	**18.80**	**185**	*e*P		**P**	**01 15 39.4**	**-1.3**
SNDB	**Serra Nova Dou**	**19.24**	**62**	*e*P		**P**	**01 15 44.5**	**-1.1**
RCLB	**Rio Claro- Sao**	**19.47**	**95**	*e*P		**P**	**01 15 47.0**	**-1.1**
IPMB	**Ipameri, GO**	**19.52**	**82**	*e*P		**P**	**01 15 48.1**	**-0.5**
NPGB	**Novo Progresso**	**19.54**	**43**	*e*P		**P**	**01 15 46.6**	**-2.3**
PET01	**Itanhaem-SP**	**19.71**	**101**	*e*P		**P**	**01 15 50.3**	**-0.3**
MACA	**Manacapuru-AM**	**20.18**	**23**			**P**	**01 15 54.0**	**-1.7**
MACA	**Manacapuru-AM**	**20.18**	**23**	*e*P		**P**	**01 15 52.8**	**-3.0**
BDFB	**Brasilia**	**20.42**	**76**	P		**P**	**01 15 57.3**	**-1.2**
	comp=Z,4.2nm,0.4s,baz=196,slow=9.9,SNR=11							
	comp=Z,4.2nm,0.4s							
BDFB	**Brasilia**	**20.42**	**76**			**P**	**01 15 57.7**	**-0.8**
PMNB	**Patos De Minas**	**21.02**	**85**	*e*P		**P**	**01 16 04.3**	**-0.5**
LL02	**Futaleuf**	**21.36**	**187**			**P**	**01 16 08.7**	**+0.6**
ITTB	**Itaituba**	**21.45**	**37**	*e*P		**P**	**01 16 07.5**	**-1.9**
BSCB	**Bom Sucesso**	**22.15**	**92**	*e*P		**P**	**01 16 15.9**	**-0.9**
DIAM	**Diamantina, MG**	**23.63**	**86**	*e*P		**P**	**01 16 30.6**	**-0.7**
JANB	**Januaria**	**23.97**	**78**	*e*P		**P**	**01 16 32.8**	**-1.4**
SMTB	**Santa Maria do**	**24.00**	**60**	*e*P		**P**	**01 16 33.6**	**-0.8**
SDBA	**SAO DESIDERIO**	**24.48**	**71**	*e*P		**P**	**01 16 38.1**	**-0.6**
BOAV	**Boa Vista**	**25.44**	**19**			**P**	**01 16 47.7**	**+0.2**
BOAV				IAmb		IAmb	01 16 48.5	
	comp=Z,10.0nm,0.6s							
BOAV	**Boa Vista**	**25.44**	**19**	*e*P		**P**	**01 16 46.2**	**-1.2**
GO08	**Villa O'Higgin**	**26.65**	**186**	P		**P**	**01 16 59.2**	**+1.2**
GO08				IAmb		IAmb	01 17 02.7	
	comp=Z,12nm,0.9s							
MDP	**Montagnes des**	**31.08**	**32**	P		**P**	**01 17 36.4**	**-1.2**
	comp=Z,6.2nm,0.6s,baz=198,slow=13,SNR=8.0							
	comp=Z,6.2nm,0.6s							
MG03	**Isla Dawson**	**31.88**	**182**	P		**P**	**01 17 45.5**	**+1.3**
RCBR	**Riachuelo**	**35.40**	**68**	P		**P**	**01 18 13.7**	**-1.6**
	comp=Z,4.5nm,1.0s,baz=249,slow=18,SNR=6.7							
	comp=Z,4.5nm,1.0s							
RCBR	**Riachuelo**	**35.40**	**68**	P		**P**	**01 18 14.7**	**-0.6**
BELA	**Belgrano 2**	**58.26**	**172**	P		**P**	**01 21 13.8**	**+1.6**
BELA				IAmb		IAmb	01 21 33.3	
	comp=Z,8.8nm,1.4s							
V55A	**Taylorsville**	**58.73**	**348**	P		**P**	**01 21 17.0**	**+1.0**
BRDY	**Brady**	**60.45**	**330**	P		**P**	**01 21 28.9**	**+0.9**
BRDY				IAmb		IAmb	01 21 43.7	
	comp=Z,3.0nm,1.3s							
TXAR	**Lajitas Array**	**61.19**	**325**	P		**P**	**01 21 33.7**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=155,slow=8.2,SNR=2.9							
TXAR	**Lajitas Array**	**61.19**	**325**	P		**P**	**01 21 33.8**	**+0.8**
QSPA	**South Pole Qui**	**68.24**	**180**	P		**P**	**01 22 20.8**	**+2.4**
	comp=Z,2.2nm,0.5s,baz=198,slow=3.1,SNR=9.4							
	comp=Z,6.2nm,0.5s							
QSPA	**South Pole Qui**	**68.24**	**180**	P		**P**	**01 22 20.4**	**+2.0**
QSPA				IAmb		IAmb	01 22 20.9	
	comp=Z,7.3nm,0.6s							
DBIC	**Dimbokro**	**68.55**	**73**	P		**P**	**01 22 21.2**	**+0.3**
	comp=Z,6.2nm,0.5s,baz=269,slow=7.4,SNR=10							
	comp=Z,6.2nm,0.5s							
DBIC	**Dimbokro**	**68.55**	**73**	P		**P**	**01 22 20.5**	**-0.4**
DBIC				IAmb		IAmb	01 22 21.8	
	comp=Z,8.8nm,0.7s							
SDCO	**Great Sand Dun**	**68.81**	**329**	P		**P**	**01 22 24.3**	**+1.9**
PDAR	**Pinedale Array**	**74.67**	**330**	P		**P**	**01 22 58.5**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=138,slow=8.3,SNR=6.7							
	comp=Z,0.3nm,0.5s							
PDAR	**Pinedale Array**	**74.67**	**330**	P		**P**	**01 22 58.9**	**+1.6**
NVAR	**Mina Array Bea**	**76.05**	**322**	P		**P**	**01 23 07.0**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=113,slow=5.0,SNR=1.0							
	comp=Z,0.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**77.19**	**70**	P		**P**	**01 23 12.1**	**+0.1**
	comp=Z,3.5nm,0.4s,baz=261,slow=5.2,SNR=32							
	comp=Z,3.5nm,0.4s							
BOSA	**Boshof**	**82.94**	**118**	P		**P**	**01 23 44.0**	**+1.1**
	comp=Z,3.6nm,1.0s,baz=270,slow=6.1,SNR=1.5							
	comp=Z,3.6nm,1.0s							
BOSA	**Boshof**	**82.94**	**118**	P		**P**	**01 23 43.8**	**+0.9**
BOSA				IAmb		IAmb	01 24 01.3	
	comp=Z,17nm,1.3s							
YKA	**Yellowknife Ar**	**91.72**	**340**	P		**P**	**01 24 25.2**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=136,slow=3.8,SNR=20							
	comp=Z,1.1nm,0.7s							
YKA	**Yellowknife Ar**	**91.72**	**340**	P		**P**	**01 24 24.9**	**+0.6**
ASAR	**Alice Springs**	**129.66**	**207**	PKP		**PKiKP**	**01 30 27.7**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=146,slow=2.0,SNR=6.3							
ASAR	**Alice Springs**	**129.66**	**207**			**PKPdf**	**01 30 26.7**	**+0.1**
WRA	**Warramunga Ar**	**132.73**	**210**	PKP		**PKiKP**	**01 30 33.4**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=161,slow=1.9,SNR=12							
BVAR	**Boavoye Array**	**135.98**	**35**	PKhKP	PKPpre		01 30 38.8	
	comp=Z,0.4nm,0.8s,baz=254,slow=35,SNR=2.0							
KURBB	**Kurchatov Arra**	**141.53**	**34**	PKP		**PKiKP**	**01 30 49.6**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=298,slow=2.0,SNR=2.1							
ZALV	**Zalesovo Beam**	**142.22**	**26**	PKP		**PKiKP**	**01 30 50.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=316,slow=4.0,SNR=4.1							
ZALV	**Zalesovo Beam**	**142.22**	**26**	PKPdf		**PKPdf**	**01 30 50.0**	**+1.2**
KSH2	**Kashi**	**144.95**	**53**	PKP		**PKPdf**	**01 30 56.0**	**+1.7**
KSH2				sPKP		sPKPdf	01 31 31.8	-6.5
MKAR	**Makanchi Array**	**145.80**	**37**	PKPbc		**PKPab**	**01 30 56.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=313,slow=2.4,SNR=9.6							
MKAR	**Makanchi Array**	**145.80**	**37**	PKPdf		**PKPab**	**01 30 56.5**	**-0.1**
HHC	**Hu-ho-hao-te**	**161.16**	**360**	*e*P		**PKPdf**	**01 31 18.0**	**+0.6**
PZH	**PanZhiHua**	**170.05**	**61**	PKP		**PKPdf**	**01 31 23.0**	**-2.1**

KRSC 29 01:18:37.3±1.2, 50.12N×157.33E, h26km±20km, Ml3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.96**	**307**	*e*P	Pn	01 18 55.1	0.0
SKR				*e*S	Sn	01 19 07.9	-0.1
PAU	**Pauzhetka**	**1.39**	**346**	*e*P	Pb	01 19 02.7	+0.1
PAU				*e*S	Sb	01 19 21.2	+1.2
KDTR	**Khodutka, Kamc**	**1.76**	**15**	*e*P	Pn	01 19 07.0	+0.9
KDTR				*e*S	Sb	01 19 29.8	-0.8
ASAK	**Asacha**	**2.30**	**9**	*e*P	Pn	01 19 15.5	+1.9
MTVR	**Mutnovka**	**2.43**	**12**	*e*P	Pn	01 19 17.5	+2.0
MTVR				*e*S	Sb	01 19 48.1	-1.9
RUS	**Russkaya**	**2.44**	**17**	*e*P	Pb	01 19 18.2	-2.2
RUS				*e*S	Sn	01 19 46.4	+2.1
GRL	**Gorelyy**	**2.48**	**10**	*e*P	Pn	01 19 18.5	+2.3
KRMR	**Karymshinskiy**	**2.76**	**10**	*e*P	Pn	01 19 22.8	+2.8
APC	**Apacha**	**2.82**	**358**	*e*P	Pn	01 19 23.4	+2.7
DALK	**Dalny**	**3.05**	**16**	*e*P	Pn	01 19 25.9	+2.1
UGLR	**Uglovaya**	**3.23**	**16**	*e*P	Pb	01 19 30.9	-3.1
AVH	**Avacha**	**3.27**	**15**	*e*P	Pb	01 19 30.9	-3.8
SMAR	**Somma**	**3.28**	**16**	*e*P	Pb	01 19 31.5	-3.5
KOK	**Koryaka**	**3.28**	**14**	*e*P	Pn	01 19 31.0	+3.8
SDLR	**Sedlovina**	**3.31**	**16**	*e*P	Pn	01 19 30.6	+3.1
KRER	**Koryakskii**	**3.31**	**15**	*e*P	Pn	01 19 31.4	+3.8
KRX	**Arik**	**3.35**	**14**	*e*P	Pn	01 19 31.3	+3.2
SPN	**Mys Shipunski**	**3.43**	**28**	*e*P	Pn	01 19 32.4	+3.4
GNL	**Ganaly**	**3.60**	**6**	*e*P	Pn	01 19 35.5	+3.9

AFAD ***29*** *01:39:51.1, 38.37N×44.47E, h7km±3km, ML2.6*
ISK ***29*** *01:39:52.3, 38.34N×44.58E, h9km, ML2.8/8*
TEH ***29*** *01:39:52.5, 38.46N×44.49E, h12km±63km, ML2.7, Presumed earthquake*

ISC 29 01:39:51.6±1.2, 38.40N±0.03×44.48E±0.03, h4km±11km, n21, σ1°53/30, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**304**	P	**Pg**	**01 40 00.6**	**+0.1**
OZAP				S	**Sg**	**01 40 05.9**	**-0.7**
OZAP				IAML		01 40 10.0	
	comp=N,854nm,0.6s						
TVAN	**Van**	**0.85**	**279**	P	**Pg**	**01 40 07.2**	**-0.8**
TVAN				S	**Sb**	**01 40 19.8**	**-1.0**
TVAN				IAML		01 40 26.0	
	comp=N,233nm,0.5s						
TVAN				IAML		01 40 33.0	
	comp=E,226nm,0.8s						
ISHB	**Shabestar**	**0.90**	**97**	Pg	**Pb**	**01 40 09.2**	**-0.7**
VMUR	**Van-Muradiye**	**0.92**	**310**	P	**Pb**	**01 40 09.5**	**-0.7**
VMUR				S	**Sb**	**01 40 22.8**	**0.0**
VMUR				IAML		01 40 31.0	
	comp=N,137nm,0.5s						
VMUR				IAML		01 40 36.0	
	comp=E,163nm,0.6s						
MAKU	**Maku**	**0.96**	**9**	Pg	**Pg**	**01 40 09.7**	**-0.4**
IMRD	**Marand**	**1.01**	**72**	Pg	**Pn**	**01 40 11.7**	**-1.0**
HAKT	**HAKKARI**	**1.04**	**216**	P	**Pb**	**01 40 11.3**	**-0.9**
HAKT				S	**Sn**	**01 40 25.7**	**-2.5**
HAKT				IAML		01 40 30.0	
	comp=N,206nm,0.7s						
HAKT				IAML		01 40 35.0	
	comp=E,143nm,0.5s						
ERCV	**ERCIS-VAN**	**1.08**	**305**	Pn	**Pn**	**01 40 15.3**	**+1.6**
ERCV				Sn	**Sn**	**01 40 32.5**	**+3.3**
GEVA	**Gevas**	**1.12**	**266**	P	**Pg**	**01 40 11.8**	**-1.3**
GEVA				S	**Sg**	**01 40 26.8**	**-0.8**
GEVA				IAML		01 40 30.0	
	comp=N,174nm,0.6s						
GEVA				IAML		01 40 33.0	
	comp=E,130nm,0.7s						
ITBZ	**Tabriz**	**1.32**	**97**	Pg	**Pg**	**01 40 16.5**	**-0.5**
CUKT	**Cukurca**	**1.34**	**211**	Pn	**Pg**	**01 40 17.4**	**+0.1**
CUKT				Sn	**Sn**	**01 40 36.4**	**+0.9**
IAZR	**Azarshahr**	**1.39**	**121**	Pg	**Pg**	**01 40 19.3**	**+1.1**
PERV	**Siirt/Pervari-**	**1.59**	**254**	P	**Pg**	**01 40 21.8**	**-0.3**
PERV				S	**Sg**	**01 40 47.2**	**+4.4**
PERV				IAML		01 40 48.0	
	comp=E,155nm,0.8s						
PERV				IAML		01 40 49.0	
	comp=N,197nm,0.5s						
AGRB	**Hanur-Agry**	**1.65**	**316**	Pn	**Pg**	**01 40 23.4**	**+0.2**
AGRB				Sn	**Sg**	**01 40 46.3**	**+1.8**
MLAZ	**Malazgirt-MUS**	**1.68**	**297**	Pn	**Pg**	**01 40 23.8**	**0.0**
GNI	**Garni**	**1.76**	**7**	Pn	**Pg**	**01 40 25.0**	**-0.3**
GURO	**Guroymak-BITLI**	**1.93**	**275**	Pn	**Pb**	**01 40 26.8**	**-0.5**
IHRS	**Heris**	**2.02**	**92**	Pn	**Pb**	**01 40 28.7**	**-0.2**
KARS	**Kars**	**2.47**	**334**	Pn	**Pb**	**01 40 35.1**	**-1.5**
SVAN	**Silvan-Diyarba**	**2.59**	**265**	Pn	**Pb**	**01 40 36.9**	**-1.7**
SENK	**Senkaya-Erzuru**	**2.71**	**323**	Pn	**Pb**	**01 40 38.9**	**-1.9**

IDC ***29*** *01:42:25.0±4.3, 14.05N×93.19W, h0km, mb3.4/2, mbtmp3.3/4, ML3.1/3, MS3.2/1, Error ellipse: s-maj=75.9km s-min=26.0km az=13.0*
CATAC ***29*** *01:42:24.4±0.7, 14.N±5.×9.3W±.°, h1km, M3.9/8, MLv3.9/8, Error ellipse: s-maj=10.6km s-min=6.7km az=14.8, confirmed*
MEX ***29*** *01:42:26.0±0.7, 13.98N×93.35W, h10km, MD4.3*
GCG ***29*** *01:42:27.5±1.4, 14.05N×93.08W, h16km±10km, MD4.1, ML4.0, Presumed earthquake*

ISC 29 01:42:23.1±1.7, 13.99N±0.06×93.20W±0.03, h5km±12km, n44, σ2°15/68, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.28**	**45**	*e*P	**Pn**	**01 42 47.4**	**-0.3**
THIG				*e*S	**Sb**	**01 43 03.8**	**-0.8**
THIG		**1.28**	**45**	*i* P	**Pn**	**01 42 47.0**	**-0.7**
THIG				IAML		01 43 08.9	
	comp=E,1μm,0.6s						
SMCA	**Catarina**	**1.39**	**52**	*i* P	**Pg**	**01 42 49.6**	**-0.2**
PATR	**El Naranjo**	**1.46**	**40**	*e*P	**Pn**	**01 42 50.1**	**-0.3**
PATR				*e*S	**Sb**	**01 43 09.0**	**-0.9**
CHUJ	**Union Juarez**	**1.52**	**44**	*e*P	**Pn**	**01 42 51.4**	**+0.1**
CHUJ				*e*S	**Sn**	**01 43 10.5**	**-1.1**
RTAL	**Retalhuleu**	**1.55**	**70**	*e*P	**Pg**	**01 42 52.8**	**-0.1**
RTAL				*e*S	**Sg**	**01 43 13.0**	**0.0**
RTAL	**Retalhuleu**	**1.55**	**70**	P	**Pg**	**01 42 53.7**	**+0.8**
PAVE	**Pavencul**	**1.55**	**39**	*e*P	**Pn**	**01 42 51.9**	**+0.2**
PAVE				*e*S	**Sb**	**01 43 12.0**	**-0.6**
PCIG		**1.70

ISC 29 01:57:10.5±1.1, 19°67'S±0'05×173°01'W±0'04, h10km±6km, n806, σ1°51/766, mb5.3/146, MS4.8/75, 56C-38D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
NIUE	**Niue**	**2.97**	**79**	P		**Pn**	**01 57 54.4**	**-3.3**
NIUE				S		**Sn**	**01 58 26.4**	**-7.0**
NIUE	**Niue**	**2.97**	**79**	P		**Pn**	**01 57 54.4**	**-3.3**
NIUE	**Niue**	**2.97**	**79**			Pn	01 57 53.5	-4.2
LKBA	**Tubou, Lakemba**	**5.67**	**284**	P		**Pn**	**01 58 36.5**	**+1.7**
AFI	**Afiamalu**	**5.85**	**12**	Pn		Pn	01 58 28.8	-8.5
	9.4nm,0.3s,baz=3.5,slow=4.0,SNR=8.5							
AFI				Sn		Sn	01 59 26.6	-18
	24nm,0.3s,baz=354,slow=18,SNR=5.3							
TAVE	**Taveuni**	**7.18**	**293**	P		**Pn**	**01 58 57.4**	**+1.8**
DGTI	**Dogotuki**	**7.67**	**295**	P		**Pn**	**01 59 04.2**	**+1.9**
MSVF	**Nonsavu**	**8.69**	**281**	P		**Pn**	**01 59 19.1**	**+2.8**
MSVF	**Nonsavu**	**8.69**	**281**			**Pn**	**01 59 19.4**	**+3.1**
GLKZ	**Green Lake**	**10.54**	**204**	S		**Sn**	**02 01 33.7**	**-6.2**
RAR	**Rarotonga**	**12.51**	**99**	Pn		**Pn**	**02 00 05.9**	**-2.6**
	9.5nm,0.3s,baz=254,slow=8.9,SNR=16							
RAR				Sn		Sn	02 02 18.9	-9.2
	1.0nm,0.3s,baz=126,slow=19,SNR=1.2							
RAR				LR		LR	02 04 39.3	
	comp=Z,3μm,19.7s,baz=257,slow=35							
RAR	**Rarotonga**	**12.51**	**99**	P		**Pn**	**02 00 06.6**	**-2.0**
RAR	**Rarotonga**	**12.51**	**99**			**Pn**	**02 00 05.7**	**-2.9**
FUNA	**Funafuti**	**13.40**	**325**	P		**Pn**	**02 00 19.6**	**-1.2**
FUNA	**Funafuti**	**13.40**	**325**			Pn	02 00 16.1	-4.8
RTV	**Rentapao**	**17.68**	**273**	P		**Pn**	**02 01 17.8**	**+0.8**
MARNC	**Mare, Loyalty**	**17.84**	**261**	P		**Pn**	**02 01 19.0**	**0.0**
MARNC	**Mare, Loyalty**	**17.84**	**261**			**Pn**	**02 01 17.3**	**-1.6**
MARNC				IAmb		IAmb	02 01 19.3	
	comp=Z,421nm,1.2s							
DVP	**Devils Point**	**17.91**	**273**	P		**Pn**	**02 01 20.9**	**+1.0**
OUENC	**Ouen Island, N**	**19.00**	**258**	P		**P**	**02 01 30.7**	**-1.7**
OUENC				IAmb		IAmb	02 01 35.4	
	comp=Z,543nm,2.0s							
DZM	**Mont Dzumac**	**19.34**	**259**	P		**P**	**02 01 36.3**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=80,slow=15,SNR=36							
	comp=Z,122nm,0.9s							
DZM	**Mont Dzumac**	**19.34**	**259**	P		**P**	**02 01 36.4**	**+0.1**
DZM	**Mont Dzumac**	**19.34**	**259**			**P**	**02 01 34.9**	**-1.5**
DZM				IAmb		IAmb	02 01 38.4	
	comp=Z,184nm,1.0s							
ONTNC	**Ouen Toro**	**19.35**	**259**	P		**P**	**02 01 37.9**	**+1.6**
ONTNC	**Ouen Toro**	**19.35**	**259**	P		**P**	**02 01 35.6**	**-0.6**
OUZ	**Omahuta**	**19.49**	**215**	P		**Pn**	**02 01 41.0**	**+2.1**
WCZ	**Waipu Caves**	**19.66**	**212**	P		**Pn**	**02 01 45.7**	**+4.8**
HAZ	**Te Kaha**	**19.73**	**202**	P		**Pn**	**02 01 43.6**	**+1.9**
HAZ				S		**S**	**02 05 18.3**	**-4.3**
PUZ	**Puketiti**	**19.85**	**201**	P		**Pn**	**02 01 47.7**	**+4.6**
RUGZ	**Raukumara Rang**	**19.95**	**202**	P		**Pn**	**02 01 49.2**	**+4.6**
MKAZ	**Moumakai**	**20.22**	**208**	P		Pn	02 01 50.7	+3.1
MWZ	**Matawai**	**20.33**	**202**	P		Pn	02 01 53.7	+4.7
MWZ				S		S	02 05 22.5	-12
URZ	**Urewera**	**20.42**	**203**	P		**P**	**02 01 49.8**	**+2.1**
	comp=Z,6.5nm,0.3s,baz=305,slow=2.0,SNR=20							
URZ				S		**S**	**02 05 28.4**	**-8.0**
	comp=Z,4.4nm,0.6s,baz=171,slow=5.2,SNR=1.8							
	comp=Z,6.5nm,0.3s							
URZ	**Urewera**	**20.42**	**203**	P		Pn	02 01 51.5	+1.7
URZ				S		**S**	**02 05 30.1**	**-6.3**
RAGZ	**Rawiri**	**20.52**	**202**	P		Pn	02 01 55.4	+4.3
RIGZ	**Rimuhau**	**20.59**	**201**	P		Pn	02 01 55.9	+4.1
TOZ	**Tahuroa Road**	**20.59**	**207**	P		Pn	02 01 55.5	+3.6
KNZ	**Kokohu**	**20.90**	**201**	P		Pn	02 01 57.2	+1.7
MTHZ	**Maungataniwha**	**21.04**	**203**	P		**P**	**02 01 58.2**	**+3.6**
TLZ	**Tolley Road**	**21.09**	**206**	P		**P**	**02 02 00.7**	**+5.6**
KOUNC	**Koumac, New Ca**	**21.34**	**264**	P		**P**	**02 02 00.3**	**+2.5**
BKZ	**Black Stump Fm**	**21.44**	**203**	P		**P**	**02 02 04.3**	**+5.4**
TMVZ	**Te Maari**	**21.70**	**204**	P		**P**	**02 02 04.9**	**+3.2**
PKVZ	**Pokaka**	**21.99**	**205**	P		**P**	**02 02 08.8**	**+4.1**
PNHZ	**Pukenui**	**22.21**	**202**	P		**P**	**02 02 07.4**	**+0.3**
PPT	**Papeete**	**22.31**	**88**	P		**P**	**02 02 11.5**	**+3.2**
	comp=Z,44nm,1.0s,baz=5.3,slow=3.0,SNR=4.1							
PPT				LR		LR	02 09 17.9	
	comp=Z,3μm,18.5s,baz=260,slow=32							
	comp=Z,44nm,1.0s							
NNZ	**Nelson**	**24.41**	**205**	P		**P**	**02 02 32.5**	**+3.4**
QRZ	**Quartz Range**	**24.44**	**207**	P		**P**	**02 02 34.7**	**+5.3**
THZ	**Tophouse**	**25.07**	**205**	P		P	02 02 43.1	+8.1
KHZ	**Kahutara**	**25.37**	**204**	P		**P**	**02 02 44.3**	**+6.5**
GVZ	**Greta Valley S**	**26.04**	**204**	P		**P**	**02 02 48.7**	**+4.9**
LTZ	**Lake Taylor**	**26.18**	**205**	P		P	02 02 53.5	+8.3
NGOA	**Tingoa Renbel**	**27.13**	**283**	P		**P**	**02 02 51.7**	**-2.2**
RPZ	**Rata Peaks**	**27.45**	**206**	P		P	02 03 04.7	+8.1
	comp=Z,20nm,0.6s,baz=187,slow=0.8,SNR=11							
ALEG	**Aligegeo Malai**	**27.66**	**289**	P		**P**	**02 02 59.0**	**+0.3**
HNR	**Honiara**	**28.04**	**287**	LR		LR	02 12 20.8	
	comp=Z,39nm,19.6s,baz=196,slow=33							
SAVO	**Savo Central**	**28.27**	**288**	P		**P**	**02 03 04.1**	**-0.2**
TATA	**Tatamba Isabel**	**28.61**	**289**	P		**P**	**02 03 05.3**	**-1.9**
JCZ	**Jackson Bay**	**28.70**	**208**	P		**P**	**02 03 07.0**	**-0.8**
TW1H	**Toowoomba 1 Ha**	**32.94**	**250**	P		**P**	**02 03 45.4**	**-0.1**
EIDS	**Eidsvold**	**33.58**	**254**	P		**P**	**02 03 49.2**	**-1.8**
	comp=Z,25nm,1.2s							
EIDS	**Eidsvold**	**33.58**	**254**	P		**P**	**02 03 48.6**	**-2.4**
EIDS	**Eidsvold**	**33.58**	**254**			**P**	**02 03 49.0**	**-2.0**
ARMA	**Armidale**	**33.65**	**244**	P		**P**	**02 03 51.5**	**-0.1**
	comp=Z,26nm,1.8s							
ARMA	**Armidale**	**33.65**	**244**	P		**P**	**02 03 51.0**	**-0.7**
AUPHS	**Peel High Scho**	**34.40**	**243**	P		**P**	**02 03 57.6**	**-0.5**
AUKHS	**Kincumber High**	**34.50**	**239**	P		**P**	**02 03 59.0**	**+0.1**
MGCD	**Mangrove Creek**	**34.66**	**240**	P		**P**	**02 04 00.6**	**+0.3**
	comp=Z,68nm,1.0s							
MGCD	**Mangrove Creek**	**34.66**	**240**	P		**P**	**02 04 00.6**	**+0.3**
SYDH	**Sydney Hard Ro**	**35.09**	**239**	P		**P**	**02 04 04.1**	**+0.1**
AUUHS	**Ulladulla High**	**35.73**	**236**	P		**P**	**02 04 09.3**	**-0.1**
AUDCS	**Dubbo College**	**36.50**	**242**	P		**P**	**02 04 15.9**	**-0.2**
CNB	**Canberra Magne**	**36.59**	**237**	P		**P**	**02 04 16.9**	**0.0**
	comp=Z,72nm,1.2s							
CNB	**Canberra Magne**	**36.59**	**237**	P		**P**	**02 04 16.9**	**0.0**
AULRC	**Lightning Ridg**	**36.64**	**247**	P		**P**	**02 04 17.1**	**-0.2**
AUDAR	**Daramalan Coll**	**36.75**	**237**	P		**P**	**02 04 18.8**	**+0.6**
AUMHS	**Melrose High S**	**36.81**	**237**	P		**P**	**02 04 19.0**	**+0.2**
AUMTS	**Mt Stromlo**	**36.88**	**237**	P		**P**	**02 04 19.4**	**+0.1**
CAN	**Canberra**	**36.88**	**237**	P		**P**	**02 04 19.7**	**+0.4**
	comp=Z,72nm,1.3s							
CAN	**Canberra**	**36.88**	**237**	P		**P**	**02 04 19.3**	**0.0**
CAN	**Canberra**	**36.88**	**237**	P		**P**	**02 04 19.4**	**+0.1**
CAN				IAmb		IAmb	02 04 20.4	
	comp=Z,63nm,1.0s							
CAN	**Canberra**	**36.88**	**237**	P		**P**	**02 04 19.4**	**+0.1**
CAN				pmax		pmax		
	comp=Z,63nm,1.0s							
YNG	**Young**	**37.11**	**239**	P		**P**	**02 04 21.4**	**+0.1**
	comp=Z,22nm,1.0s							
CTA	**Charters Tower**	**38.24**	**262**	P		**P**	**02 04 28.7**	**-2.3**
	comp=Z,3.2nm,0.9s							
CTA	**Charters Tower**	**38.24**	**262**	P		**P**	**02 04 28.7**	**-2.3**
CTAO	**Charters Tower**	**38.24**	**262**	P		**P**	**02 04 28.6**	**-2.4**
CTAO	**Charters Tower**	**38.24**	**262**			**P**	**02 04 29.1**	**-1.9**
CTAO				IAmb		IAmb	02 04 30.9	
	comp=Z,83nm,0.9s							
CTAO	**Charters Tower**	**38.24**	**262**	P		**P**	**02 04 29.1**	**-1.9**
CTAO				pmax		pmax		
	comp=Z,83nm,1.0s							
CMSA	**Cobar Meteorol**	**38.86**	**244**	P		**P**	**02 04 35.3**	**-0.8**
	comp=Z,43nm,1.3s							
CMSA	**Cobar Meteorol**	**38.86**	**244**	P		**P**	**02 04 34.9**	**-1.2**
QLP	**Quilpie**	**39.77**	**252**	P		**P**	**02 04 42.3**	**-1.5**
	comp=Z,24nm,0.5s							
QLP	**Quilpie**	**39.77**	**252**	P		**P**	**02 04 42.0**	**-1.8**
PMG	**Port Moresby**	**39.79**	**279**	LR		LR	02 20 18.4	
	comp=Z,2μm,18.1s,baz=116,slow=35							
PMG	**Port Moresby**	**39.79**	**279**	P		**P**	**02 04 42.0**	**-2.0**
PMG	**Port Moresby**	**39.79**	**279**	P		P	02 04 40.5	-3.5
PMG				IAmb		IAmb	02 04 43.4	
	comp=Z,69nm,0.9s							
PMG	**Port Moresby**	**39.79**	**279**	*ce*P		**P**	**02 04 42.0**	**-2.0**
PMG				pmax		pmax		
	comp=Z,76nm,1.0s							
PMG	**Port Moresby**	**39.79**	**279**	P		**P**	**02 04 41.3**	**-2.7**
	comp=Z,76nm,0.9s							
TOO	**Toolangi**	**40.18**	**235**	P		**P**	**02 04 47.8**	**+0.6**
TOO	**Toolangi**	**40.18**	**235**	P		**P**	**02 04 47.5**	**+0.4**
TOO	**Toolangi**	**40.18**	**235**	P		**P**	**02 04 47.5**	**+0.4**
TOO				pmax		pmax		
	comp=Z,12nm,0.8s							
MTSU	**Mount Surprise**	**40.32**	**265**	P		**P**	**02 04 46.2**	**-2.3**
	comp=Z,43nm,0.9s							
MTSU	**Mount Surprise**	**40.32**	**265**	P		**P**	**02 04 46.0**	**-2.5**
TAU	**Tasmania Unive**	**40.54**	**226**	P		**P**	**02 04 51.4**	**+1.5**
TAU				IAmb		IAmb	02 04 53.0	
	comp=Z,142nm,1.4s							
TAU	**Tasmania Unive**	**40.54**	**226**	P		**P**	**02 04 51.4**	**+1.5**
TAU				pmax		pmax		
	comp=Z,142nm,1.5s							
BRAT	**Ballarat**	**41.38**	**235**	P		**P**	**02 04 58.1**	**+1.2**
AUMTC	**Mt Clear Colle**	**41.44**	**235**	P		**P**	**02 04 58.3**	**+1.0**
COEN	**Coen**	**42.23**	**271**	P		**P**	**02 05 02.0**	**-2.2**
	comp=Z,52nm,1.0s							
COEN	**Coen**	**42.23**	**271**	P		**P**	**02 05 01.9**	**-2.3**
COEN	**Coen**	**42.23**	**271**	P		**P**	**02 05 01.6**	**-2.6**
COEN				IAmb		IAmb	02 05 04.2	
	comp=Z,47nm,0.9s							
STKA	**Stephens Creek**	**42.37**	**244**	P		**P**	**02 05 04.6**	**-0.5**
	comp=Z,110nm,1.0s							
STKA	**Stephens Creek**	**42.37**	**244**	P		**P**	**02 05 03.6**	**-1.4**
	comp=Z,13nm,0.8s,baz=88,slow=9.8,SNR=21							
STKA				LR		LR	02 21 18.8	
	comp=Z,1μm,19.2s,baz=75,slow=34							
	comp=Z,13nm,0.8s							
STKA	**Stephens Creek**	**42.37**	**244**	P		**P**	**02 05 04.3**	**-0.9**
STKA	**Stephens Creek**	**42.37**	**244**	P		**P**	**02 05 04.2**	**-0.9**
STKA				IAmb		IAmb	02 05 07.8	
	comp=Z,100nm,1.0s							
STKA	**Stephens Creek**	**42.37**	**244**	P		**P**	**02 05 04.2**	**-0.9**
STKA				pmax		pmax		
	comp=Z,99nm,1.0s							
ARPS	**Mount Arapiles**	**42.85**	**237**	P		**P**	**02 05 08.9**	**0.0**
	comp=Z,19nm,1.8s							
INKA	**Innaminka**	**42.90**	**250**	P		**P**	**02 05 08.3**	**-1.1**
QIS	**Mount Isa**	**44.38**	**260**	P		**P**	**02 05 18.7**	**-2.8**
	comp=Z,15nm,1.0s							
QIS	**Mount Isa**	**44.38**	**260**	P		**P**	**02 05 19.3**	**-2.2**
AUMBR	**Murray Bridge**	**44.64**	**240**	P		**P**	**02 05 23.0**	**-0.4**
HTT	**Hallett**	**44.76**	**242**	P		**P**	**02 05 23.8**	**-0.6**
	comp=Z,39nm,1.1s							
HTT	**Hallett**	**44.76**	**242**	P		**P**	**02 05 23.9**	**-0.6**
HTT	**Hallett**	**44.76**	**242**	P		**P**	**02 05 23.7**	**-0.6**
BBOO	**Buckleboo**	**47.11**	**243**	P		**P**	**02 05 41.6**	**-1.3**
	comp=Z,35nm,1.0s							
BBOO	**Buckleboo**	**47.11**	**243**	P		**P**	**02 05 41.8**	**-1.1**
BBOO	**Buckleboo**	**47.11**	**243**	P		**P**	**02 05 41.5**	**-1.3**
BBOO				IAmb		IAmb	02 05 45.9	
	comp=Z,29nm,0.9s							
JAY	**Jayapura**	**48.30**	**285**	LR		LR	02 24 13.3	
	comp=Z,342nm,21.5s,baz=151,slow=34							
JAY	**Jayapura**	**48.30**	**285**	P		**P**	**02 05 49.8**	**-2.6**
	comp=Z,1μmcomp=Z,47nm,1.6s							
GENI	**Genyem**	**48.76**	**284**	P		**P**	**02 05 54.5**	**-1.4**
GENI	**Genyem**	**48.76**	**284**	P		**P**	**02 05 53.4**	**-2.5**
	comp=Z,107nm,1.7s							
WR8	**Warramunga Arr**	**49.21**	**260**	P		**P**	**02 05 56.7**	**-2.6**
WR8				IAmb		IAmb	02 05 58.9	
	comp=Z,27nm,1.1s							
AS31	**Alice Springs**	**49.27**	**255**	IAmb		IAmb	02 05 59.3	
	comp=Z,28nm,1.0s							
ASAR	**Alice Springs**	**49.27**	**255**	P		**P**	**02 05 57.5**	**-2.2**
	comp=Z,83nm,0.9s,baz=86,slow=8.4,SNR=485							
ASAR				PcP		**PcP**	**02 07 22.4**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=97,slow=3.4,SNR=1.3							
ASAR				S		S	02 12 58.0	-8.1
	comp=Z,3.6nm,1.1s,baz=97,slow=14,SNR=10							
ASAR				LR		LR	02 26 54.8	
	comp=Z,1μm,19.7s,baz=97,slow=36							
	comp=Z,83nm,0.9s							
ASAR	**Alice Springs**	**49.27**	**255**	P		**P**	**02 05 57.8**	**-1.9**
WB9	**Warramunga Arr**	**49.34**	**260**	P		**P**	**02 05 58.1**	**-2.3**
	comp=Z,45nm,2.6s							
WB2	**Warramunga Arr**	**49.35**	**260**	P		**P**	**02 05 58.2**	**-2.2**
	comp=Z,38nm,1.0s							
WB2	**Warramunga Arr**	**49.35**	**260**	P		**P**	**02 05 57.5**	**-2.9**
WB2				IAmb		IAmb	02 06 02.6	
	comp=Z,28nm,0.9s							
WB1	**Warramunga Ar.**	**49.35**	**260**	P		**P**	**02 05 57.9**	**-2.5**
WRAB	**Tennant Creek**	**49.35**	**260**	P		**P**	**02 05 57.5**	**-2.9**
WRAB	**Tennant Creek**	**49.35**	**260**	*ce*P		**P**	**02 05 58.4**	**-2.0**
WRAB				pmax		pmax		
	comp=Z,86nm,2.5s							
WR1	**Warramunga Arr**	**49.36**	**260**	P		**P**	**02 05 57.6**	**-2.8**
	comp=Z,36nm,0.9s							
WRA	**Warramunga Arr**	**49.36**	**260**	P		**P**	**02 05 57.6**	**-2.9**
	comp=Z,16nm,0.8s,baz=98,slow=8.2,SNR=65							
WRA				PcP		**PcP**	**02 07 22.5**	**-0.5**
	comp=Z,6.0nm,0.9s,baz=98,slow=3.9,SNR=3.0							
WRA				S		S	02 12 59.3	-8.2
	comp=Z,2.7nm,1.0s,baz=95,slow=14,SNR=7.5							
	comp=Z,16nm,0.8s							
WRA	**Warramunga Arr**	**49.36**	**260**	P		**P**	**02 05 57.6**	**-2.9**
KDU	**Kakadu**	**52.64**	**269**	P		**P**	**02 06 23.1**	**-2.0**
	comp=Z,44nm,1.5s							
GUMO	**Gumo**	**53.02**	**305**	LR		LR	02 27 42.7	
	comp=Z,219nm,19.7s,baz=108,slow=35							
MTN	**Manton Dam**	**53.86**	**268**	P		**P**	**02 06 31.9**	**-2.3**
	comp=Z,97nm,0.9s							
FORT	**Forrest**	**53.92**	**246**	P		**P**	**02 06 33.6**	**-0.8**
	comp=Z,36nm,0.9s							
FORT	**Forrest**	**53.92**	**246**	IAmb		IAmb	02 06 34.8	
	comp=Z,33nm,1.1s							
DRS	**Darwin Rock St**	**54.19**	**269**	P		**P**	**02 06 35.2**	**-1.4**
WRKA	**Warakurna**	**54.20**	**253**	P		**P**	**02 06 35.4**	**-1.2**
	comp=Z,52nm,1.1s							
AUDHS	**Darwin High Sc**	**54.25**	**269**	P		**P**	**02 06 36.0**	**-1.0**
KNRA	**Kununurra**	**55.40**	**264**	P		**P**	**02 06 43.0**	**-2.3**
	comp=Z,56nm,0.9s							
KNRA	**Kununurra**	**55.40**	**264**	IAmb		IAmb	02 06 46.0	
	comp=Z,49nm,0.9s							
SIJI	**Sorong**	**57.60**	**282**	LR		LR	02 33 10.3	
	comp=Z,381nm,18.2s,baz=347,slow=38							
SIJI	**Sorong**	**57.60**	**282**	P		**P**	**02 06 59.0**	**-2.1**
	comp=Z,151nm,1.1s							
SWI	**Sorong**	**57.61**	**282**	P		**P**	**02 06 59.1**	**-2.1**
FITZ	**Fitzroy Crossi**	**57.78**	**261**	LR		LR	02 31 43.0	
	comp=Z,781nm,18.8s,baz=99,slow=36							
RPN	**Rapa Nui**	**58.39**	**110**	LR		LR	02 28 07.5	
	comp=Z,1μm,18.1s,baz=248,slow=32							
VNDA	**Vanda**	**59.19**	**186**	LR		LR	02 31 45.2	
	comp=Z,263nm,18.1s,baz=13,slow=35							
KRAI	**Karang Ratu**	**59.37**	**278**	P		**P**	**02 07 11.8**	**-1.6**
	comp=Z,15μmcomp=Z,37nm,1.5s							
SOEI	**Soe**	**61.18**	**270**	P		**P**	**02 07 26.7**	**+0.7**
SOEI	**Soe**	**61.18**	**270**	P		**P**	**02 07 25.5**	**-0.5**
SOEI	**Soe**	**61.18**	**270**	P		**P**	**02 07 24.7**	**-1.3**
BATI	**Baumata**	**61.62**	**269**	LR		LR	02 34 54.8	
	comp=Z,463nm,19.6s,baz=126,slow=37							
TNTI	**Ternate**	**61.83**	**282**	P		**P**	**02 07 29.4**	**-0.8**
TNTI	**Ternate**	**61.83**	**282**	P		**P**	**02 07 28.0**	**-2.2**
TNTI	**Ternate**	**61.83**	**282**	P		**P**	**02 07 28.4**	**-1.8**
	comp=Z,97nm,1.1s							
SANI	**Sanana**	**62.06**	**278**	P		**P**	**02 07 30.2**	**-1.6**
SANI	**Sanana**	**62.06**	**278**	P		**P**	**02 07 29.8**	**-2.0**
	comp=Z,71nm,1.0s							
AUKUL	**Kulin High Sch**	**62.18**	**243**	P		**P**	**02 07 33.2**	**+0.8**
PSAC2	**Pilbara Seismi**	**62.37**	**255**	P		**P**	**02 07 32.9**	**-0.9**
	comp=Z,66nm,1.0s							
PSAB3	**Pilbara Seismi**	**62.40**	**255**	P		**P**	**02 07 33.2**	**-0.9**
	comp=Z,62nm,1.0s							
PSA00	**Pilbara Seismi**	**62.42**	**255**	P		**P**	**02 07 33.2**	**-0.9**
	comp=Z,64nm,1.0s							
PSA00	**Pilbara Seismi**	**62.42**	**255**	P		**P**	**02 07 33.4**	**-0.7**
PSA00	**Pilbara Seismi**	**62.42**	**255**	P		**P**	**02 07 32.5**	**-1.6**
PSAC1	**Pilbara Seismi**	**62.46**	**255**	P		**P**	**02 07 33.5**	**-0.9**
	comp=Z,57nm,1.0s							
MBWA	**Marble Bar**	**62.60**	**256**	P		**P**	**02 07 34.2**	**-1.2**
	comp=Z,40nm,1.0s							
MBWA	**Marble Bar**	**62.60**	**256**	P		**P**	**02 07 34.6**	**-0.8**
MBWA	**Marble Bar**	**62.60**	**256**	P		**P**	**02 07 33.2**	**-2.1**
MEEK	**Meekatharra**	**62.61**	**250**	P		**P**	**02 07 34.6**	**-0.8**
	comp=Z,24nm,1.2s							
MEEK	**Meekatharra**	**62.61**	**250**	P		**P**	**02 07 35.2**	**-0.2**
KLBR	**Kellerberrin**	**62.64**	**244**	P		**P**	**02 07 35.8**	**+0.3**
	comp=Z,180nm,1.0s							
KLBR	**Kellerberrin**	**62.64**	**244**	P		**P**	**02 07 36.1**	**+0.6**
NWAO	**Narrogin (SRO)**	**62.92**	**242**	P		**P**	**02 07 38.2**	**+0.9**
	comp=Z,49nm,1.0s							
NWAO	**Narrogin (SRO)**	**62.92**	**242**	LR		LR	02 33 48.1	
	comp=Z,762nm,19.7s,baz=80,slow=35							
NWAO	**Narrogin (SRO)**	**62.92**	**242**	P		**P**	**02 07 38.8**	**+1.5**
NWAO	**Narrogin (SRO)**	**62.92**	**242**	P		**P**	**02 07 37.6**	**+0.3**
NWAO	**Narrogin (SRO)**	**62.92**	**242**	P		**P**	**02 07 37.6**	**+0.3**
NWAO				pmax		pmax		
	comp=Z,64nm,1.2s							
RKGY	**Rocky Gully**	**62.94**	**241**	P		**P**	**02 07 38.9**	**+1.5**
	comp=Z,121nm,1.6s							
JCJ	**Chichijima**	**63.61**	**315**	LR		LR	02 31 02.3	
	comp=Z,1μm,21.1s,baz=118,slow=32							
BLDU	**Ballidu**	**63.66**	**245**	P		**P**	**02 07 42.5**	**+0.2**
	comp=Z,33nm,1.4s							
BLDU	**Ballidu**	**63.66**	**245**	P		**P**	**02 07 42.2**	**-0.1**
MUN	**Mundaring**	**63.90**	**243**	P		**P**	**02 07 44.7**	**+0.9**
	comp=Z,78nm,1.5s							
MUN	**Mundaring**	**63.90**	**243**	P		**P**	**02 07 44.8**	**+1.0**
EDFI	**Ende, Flores**	**63.90**	**270**	P		**P**	**02 07 41.8**	**-2.4**
	comp=Z,755nmcomp=Z,42nm,1.0s							
MORW	**Morawa**	**64.47**	**246**	P		**P**	**02 07 48.6**	**+1.1**
	comp=Z,56nm,2.0s							
MORW	**Morawa**	**64.47**	**246**	P		**P**	**02 07 48.7**	**+1.1**
LUWI	**Luwuk**	**65.42**	**278**	P		**P**	**02 07 53.9**	**-0.1**
LUWI	**Luwuk**	**65.42**	**278**	P		**P**	**02 07 52.3**	**-1.7**
LUWI	**Luwuk**	**65.42**	**278**	P		**P**	**02 07 52.3**	**-1.7**
	comp=Z,6μmcomp=Z,69nm,1.0s							
DAV	**Davao City (W)**	**66.00**	**287**	LR		LR	02 35 15.7	
	comp=Z,146nm,19.7s,baz=79,slow=35							
APSI	**Ampana**	**66.52**	**278**	P		**P**	**02 07 59.4**	**-1.6**
	comp=Z,2μmcomp=Z,86nm,1.0s							
KAPI	**Kappang**	**66.90**	**273**	LR		LR	02 37 21.6	
	comp=Z,130nm,19.2s,baz=131,slow=36							
DBNI	**Kabupaten Domp**	**67.16**	**269**	P		**P**	**02 08 03.2**	**-2.0**
	comp=Z,52nm,1.1s							
PLAI	**Plampang**	**67.57**	**268**	P		**P**	**02 08 07.0**	**-0.7**
PLAI	**Plampang**	**67.57**	**268**	P		**P**	**02 08 06.4**	**-1.3**
	comp=Z,86nm,0.9s							
TOLI2	**Tolitoli**	**68.06**	**280**	P		**P**	**02 08 09.6**	**-1.2**
TOLI2	**Tolitoli**	**68.06**	**280**	IAmb		IAmb	02 08 12.9	
	comp=Z,41nm,1.1s							
PCI	**Palu**	**68.21**	**277**	P		**P**	**02 08 10.2**	**-1.6**
TWSI	**Taliwang, Sumb**	**68.44**	**268**	P		**P**	**02 08 11.9**	**-1.3**
	comp=Z,785nmcomp=Z,57nm,1.1s							
MPSI	**Mapaga**	**68.60**	**278**	P		**P**	**02 08 12.6**	**-1.6**
	comp=Z,888nmcomp=Z,36nm,1.1s							
QSPA	**South Pole Qui**	**70.40**	**180**	P		**P**	**02 08 27.0**	**+2.4**
	comp=Z,8.5nm,0.8s,baz=41,slow=5.4,SNR=7.6							
QSPA				LR		LR	02 35 34.4	
	comp=Z,368nm,19.8s,baz=43,slow=33							
	comp=Z,8.5nm,0.8s							
QSPA	**South Pole Qui**	**70.40**	**180**	P		**P**	**02 08 26.8**	**+2.1**
QSPA				IAmb		IAmb	02 08 40.3	
	comp=Z,26nm,1.1s							
MYLDM	**Lahad Datu**	**71.69**	**283**	P		**P**	**02 08 34.7**	**+1.6**
MYLDM	**Lahad Datu**	**71.69**	**283**	P		**P**	**02 08 31.8**	**-1.3**
MYLDM	**Lahad Datu**	**71.69**	**283**	P		**P**	**02 08 31.9**	**-1.3**
	comp=Z,52nm,1.8s							
BBKI	**Banjar Baru**	**72.03**	**273**	P		**P**	**02 08 33.8**	**-1

KDAK **Kodiak Island** 79.01 11 P P 02 09 13.7 -0.6
baz=200
Q16K **King Salmon** 79.22 9 P P 02 09 14.8 -0.5
baz=196
O14K **Tigyukauivet M** 79.22 6 P P 02 09 14.4 -0.9
baz=192
O15K **Ungalikthiuk R** 79.30 7 P P 02 09 15.6 -0.3
baz=193
P16K **Nushagak River** 79.38 8 P P 02 09 15.1 -1.1
baz=195,SNR=12
Q18K **Katmai Hardscr** 79.43 9 P P 02 09 16.1 -0.6
baz=198
KSRS **Korea Array** 79.46 316 P P 02 09 17.2 +0.1
comp=Z,12nm,1.1s,baz=134,slow=5.8,SNR=24
KSRS LR LR 02 39 51.2
comp=Z,228nm,20.6s,baz=120,slow=32
comp=Z,12nm,1.1s
KSAR **Wonju Array Be** 79.48 316 P P 02 09 15.7 -1.6
KSAR **Wonju Array Be** 79.48 316 P P 02 09 15.7 -1.6
P17K **Kvichak River** 79.75 9 P P 02 09 17.5 -0.7
baz=196,SNR=5.1
Q20K **Shuyak Island** 79.83 11 P P 02 09 18.1 -0.6
baz=200
N14K **Kuskokwak Cree** 79.84 6 P P 02 09 17.8 -0.9
baz=191
O16K **Kokwok River B** 79.91 8 P P 02 09 19.0 -0.1
baz=195
Q19K **Cape Douglas,** 79.92 10 P P 02 09 19.1 -0.1
baz=199
QZH2 **Quanzhou** 79.94 301⇑*iP* P 02 09 20.0 -0.1
QZH2 S S 02 19 25.5 +1.4
M11K **Mekoryuk** 79.96 3 P P 02 09 19.7 +0.4
baz=187,SNR=5.7
P18K **Big Mountain,** 80.11 9 P P 02 09 19.7 -0.6
baz=197,SNR=5.8
PMSA **Palmer Station** 80.15 156 LR LR 02 37 55.3
comp=Z,328nm,18.9s,baz=308,slow=30
M13K **Dall Lake** 80.18 5 P P 02 09 20.0 -0.5
baz=190,SNR=5.0
O17K **Koliganek Bris** 80.22 8 P P 02 09 20.0 -0.8
baz=196,SNR=7.2
N15K **Kwethluk River** 80.24 7 P P 02 09 20.0 -1.0
baz=193
TYV **Tymovskoe** 80.31 333 *eP* P 02 09 20.8 -0.6
TYV *eS* S 02 19 25.2 -1.7
TYV pmax pmax
comp=Z,23nm,1.3s
TYV pmax pmax
comp=Z,300nm,2.6s
TYV smax smax
comp=N,200nm,5.8s
TYV smax smax
comp=E,300nm,5.8s
ELK **Elko** 80.54 41 P P 02 09 20.2 -3.1
O18K **Koktuh Hills** 80.56 9 P P 02 09 21.8 -0.8
baz=197
M14K **Bethel** 80.63 5 P P 02 09 22.7 -0.2
baz=191,SNR=6.7
P19K **Oil Pt** 80.67 10 P P 02 09 22.8 -0.5
baz=199
N16K **Nishlik Lake** 80.69 7 P P 02 09 22.6 -0.8
baz=194
M15K **Kasigluk River** 80.70 6 P P 02 09 23.2 -0.2
baz=192,SNR=14
N17K **Nushagak Hills** 80.93 8 P P 02 09 24.3 -0.4
baz=195
HOM **Homer** 80.95 11 P P 02 09 24.5 -0.2
baz=201
ILSW **Iliamna Southw** 81.00 10 P P 02 09 22.7 -2.5
ILSW IAmb IAmb 02 09 45.7
comp=Z,40nm,1.0s
USRK **Ussuriysk Ar.** 81.00 323 P P 02 09 25.8 +0.4
comp=Z,4.5nm,0.8s,baz=116,slow=5.3,SNR=5.1
comp=Z,4.5nm,0.8s
O19K **Port Alsworth** 81.02 9 P P 02 09 24.4 -0.6
baz=198,SNR=5.7
KASI **Kota Agung** 81.11 267 P P 02 09 24.4 -2.3
comp=Z,1µmcomp=Z,107nm,1.1s
L14K **Kuka Creek** 81.15 5 P P 02 09 25.2 -0.5
baz=190
KLSI 81.16 268 P P 02 09 24.7 -2.2
BRSE **Bradley Lake S** 81.19 11 P P 02 09 26.0 0.0
baz=202
M16K **Timber Creek** 81.20 7 P P 02 09 26.3 +0.3
baz=194,SNR=9.9
N18K **Kilae Creek** 81.25 8 P P 02 09 26.1 -0.3
baz=197
BBB **Bella Bella** 81.53 26 LR LR 02 42 05.5
comp=Z,418nm,18.0s,baz=226,slow=33
N19K **Bonanza Creek** 81.58 9 P P 02 09 27.3 -0.9
baz=198
L15K **Ungalak Mounta** 81.59 6 P P 02 09 28.0 -0.1
baz=191,SNR=11
K13K **Kusilvak Mount** 81.59 4 P P 02 09 28.0 -0.1
baz=188
MDSI **Maura Dua** 81.74 268 P P 02 09 27.8 -2.2
comp=Z,836nmcomp=Z,52nm,1.3s
M17K **Holitna River** 81.75 8 P P 02 09 28.8 -0.2
baz=195
SEW **Seward** 81.77 12 P P 02 09 28.2 -0.8
baz=203
MFID **Camas Ranch** 81.78 38 P P 02 09 27.1 -2.5
Q23K **Middleton Isla** 81.78 13 P P 02 09 28.6 -0.5
baz=206
BMO **Blue Mountains** 81.81 36 P P 02 09 25.9 -3.9
L16K **Owhat River** 81.82 6 P P 02 09 29.2 0.0
baz=193,SNR=8.6
M18K **Stony River** 82.04 8 P P 02 09 30.2 -0.2
baz=197
O22K **Cooper Landing** 82.07 11 P P 02 09 30.7 +0.1
baz=202
P23K **Montague Islan** 82.08 13 P P 02 09 30.5 -0.1
baz=205
CAPN **Captain Cook N** 82.08 11 P P 02 09 30.5 -0.1
baz=201
CRAG **Craig** 82.14 22 P P 02 09 31.3 +0.3
baz=218
K15K **Wolf Creek Mou** 82.19 5 P P 02 09 31.0 -0.2
baz=191,SNR=23
SPCR **Spurr Chakacha** 82.31 10 P P 02 09 31.8 -0.2
baz=200
D08A **Wollman Farm,** 82.31 34 P P 02 09 31.3 -0.9
D08A IAmb IAmb 02 09 44.3
comp=Z,57nm,2.0s
L17K **Donlin** 82.36 7 P P 02 09 32.1 -0.1
baz=194,SNR=10
J14K **Nanvaranak Lak** 82.48 4 P P 02 09 32.5 -0.2
baz=189
V35K **Ketchikan** 82.56 22 P P 02 09 33.3 0.0
baz=219
MDJ **Mudanjiang** 82.62 323 P P 02 09 33.7 -0.2
MDJ **Mudanjiang** 82.62 323 IAmb IAmb 02 09 36.9
comp=Z,34nm,1.1s
MDJ **Mudanjiang** 82.62 323 P P 02 09 34.3 +0.4
MDJ S S 02 19 55.8 +4.6
MDJ pmax pmax
comp=Z,36nm,2.1s
MDJ LR LR
comp=Z,540nm,19.9s
MDJ LR LR
comp=Z,600nm,21.3s
MDJ LR LR
comp=Z,930nm,17.9s
RC01 **Rabbit Creek A** 82.63 11 P P 02 09 31.4 -2.1
RC01 IAmb IAmb 02 09 45.5
comp=Z,54nm,1.4s
RC01 **Rabbit Creek A** 82.63 11 P P 02 09 33.0 -0.5
baz=202
L18K **Granite Mounta** 82.64 8 P P 02 09 33.4 -0.2
baz=196,SNR=6.5
U33K **Whale Pass** 82.66 21 P P 02 09 33.5 -0.2
baz=218
KAIM **Kayak Island** 82.66 14 P P 02 09 33.7 0.0
baz=207
SIT **Sitka** 82.69 20 P P 02 09 34.1 +0.2
baz=216
TX31 **Lajitas Ar. Si** 82.69 55 IAmb IAmb 02 09 48.4
comp=Z,30nm,1.3s
TXAR **Lajitas Array** 82.69 55 P P 02 09 37.3 +2.5
comp=Z,4.9nm,1.1s,baz=207,slow=5.2,SNR=25
TXAR LR LR 02 40 22.5
comp=Z,511nm,18.5s,baz=239,slow=31
comp=Z,4.9nm,1.1s
TXAR **Lajitas Array** 82.69 55 P P 02 09 37.1 +2.3
SUA **Susitna One** 82.80 11 P P 02 09 34.4 -0.1
baz=201
M20K **Styx River** 82.81 9 P P 02 09 34.4 -0.1
baz=199

L19K **White Mountain** 82.84 8 P P 02 09 34.1 -0.5
baz=198
EYAK **Cordova Ski Ar** 82.93 13 P P 02 09 34.8 -0.2
baz=206
K17K **Iditarod** 82.93 7 P P 02 09 34.4 -0.6
baz=194
GLI **Glacier Island** 82.95 12 P P 02 09 34.6 -0.6
baz=205
GRNR **Gornyy** 83.01 330⇑*iP* P 02 09 35.7 -0.1
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR MLR MLR
comp=N,130nm,17.0s
GRNR MLR MLR
comp=E,230nm,17.0s
GRNR MLR MLR
comp=Z,210nm,15.0s
NJ2 **Nanjing** 83.03 307 *eP* P 02 09 36.5 +0.2
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
S31K **Pelican** 83.15 19 P P 02 09 36.0 -0.2
baz=215
SKT **Skwentna** 83.15 10 P P 02 09 35.1 -1.2
baz=201
WRAK **Wrangell Islan** 83.16 21 P P 02 09 36.0 -0.3
baz=219
KNK **Knik Glacier** 83.17 12 P P 02 09 35.5 -0.9
baz=204
GAMB **Gambell** 83.17 1 P P 02 09 34.6 -1.6
baz=182
M22K **Willow** 83.18 11 P P 02 09 36.1 -0.3
baz=202
PMR **Palmer** 83.21 11 P P 02 09 36.4 -0.1
PMR **Palmer** 83.21 11 P P 02 09 35.9 -0.6
baz=203
J16K **Anvik River** 83.25 6 P P 02 09 36.8 +0.1
baz=195
S32K **Killisnoo** 83.26 20 P P 02 09 36.8 0.0
baz=216
ANMO **Albuquerque** 83.27 49 P P 02 09 39.4 +1.6
comp=Z,1.8nm,0.9s,baz=218,slow=4.3,SNR=12
ANMO LR LR 02 41 10.1
comp=Z,351nm,18.4s,baz=248,slow=32
comp=Z,1.8nm,0.9s
ANMO **Albuquerque** 83.27 49 P P 02 09 39.0 +1.2
ANMO **Albuquerque** 83.27 49 *ceP* P 02 09 40.9 +3.1
ANMO pmax pmax
comp=Z,12nm,1.3s
COYC **Coyhaique** 83.53 136 P P 02 09 44.1 +5.3
COYC IAmb IAmb 02 09 54.7
comp=Z,38nm,1.2s
BMRM **Bremner River** 83.55 14 P P 02 09 37.6 -0.8
baz=207
SML **Sawmill** 83.56 12 P P 02 09 36.9 -1.5
baz=204
U35K **Hyder** 83.59 23 P P 02 09 37.8 -0.8
baz=221
M23K **Glacier View** 83.66 12 P P 02 09 37.6 -1.3
baz=204
CRQE **Cirque** 83.70 14 P P 02 09 38.5 -0.8
baz=209
KLU **Klutina** 83.74 13 P P 02 09 37.8 -1.7
baz=206
CUT **Chulitna** 83.76 10 P P 02 09 38.1 -1.2
baz=202
SCM **Sheep Creek Mo** 83.77 12 P P 02 09 38.7 -0.9
baz=205
PINM **Pinnacle** 83.83 16 P P 02 09 39.6 -0.2
baz=211
I17K **Unalakleet** 83.83 5 P P 02 09 39.0 -0.6
baz=192
J18K **Innoko River** 83.84 7 P P 02 09 39.7 -0.1
baz=196
MAW **Mawson** 83.89 199 LR LR 02 45 47.3
comp=Z,544nm,19.4s,baz=107,slow=35
PPLA **Purkeypile** 83.91 9 P P 02 09 39.2 -1.1
baz=200
R32K **Eaglecrest** 83.93 19 P P 02 09 39.9 -0.4
baz=216
MASI **Maura Aman, Be** 84.01 269 P P 02 09 39.5 -2.4
comp=Z,4µmcomp=Z,65nm,0.9s
NEW **Newport** 84.02 34 LR LR 02 42 37.6
comp=Z,2µm,18.4s,baz=224,slow=32
K20K **Telida** 84.08 8 P P 02 09 40.2 -0.8
baz=198
N25K **Chitina, Valde** 84.13 13 P P 02 09 40.5 -0.9
baz=207
MYKOM **Kota Tinggi** 84.14 274 P P 02 09 43.4 +1.0
ANM **Nome** 84.17 3 P P 02 09 40.3 -1.1
baz=188
AHID **Auburn Hatcher** 84.24 41 IAmb IAmb 02 10 07.3
comp=Z,29nm,1.6s
M24K **Tolsona, Glenn** 84.25 12 P P 02 09 41.4 -0.5
baz=206
MCARA **McCarthy VSAT** 84.28 14 P P 02 09 41.3 -0.8
baz=209
KLR **Kul'dur** 84.28 327 LR LR 02 43 01.7
comp=Z,328nm,20.1s,baz=140,slow=33
KLR **Kul'dur** 84.28 327 *ceP* P 02 09 42.8 +0.5
KLR pmax pmax
comp=Z,6.0nm,2.5s
CTG **Chitna Glacier** 84.31 15 P P 02 09 42.0 -0.3
baz=210
MA2 **Magadan** 84.32 342 LR LR 02 45 06.9
comp=Z,271nm,19.5s,baz=124,slow=34
MA2 **Magadan** 84.32 342 P P 02 09 40.8 -1.5
MA2 **Magadan** 84.32 342 *ceP* P 02 09 42.3 0.0
MA2 pmax pmax
comp=Z,20nm,1.3s
MA2 **Magadan** 84.32 342 P P 02 09 41.8 -0.5
comp=Z,552nmcomp=Z,24nm,1.9s
T35M **Bob Quinn** 84.33 22 P P 02 09 42.8 +0.4
baz=220
WAT6 **Susitna Watana** 84.38 11 P P 02 09 42.3 -0.4
baz=204,SNR=6.4
O28M **Mount Upton** 84.42 16 P P 02 09 42.9 -0.3
baz=211
O29M **Mount Kennedy** 84.44 16 P P 02 09 43.1 0.0
baz=213
H16K **Elim** 84.45 5 P P 02 09 42.8 0.0
baz=190,SNR=17
WAT1 **Susitna Watana** 84.46 11 P P 02 09 42.0 -1.0
baz=203
J19K **Poorman** 84.48 8 P P 02 09 42.8 -0.2
baz=197,SNR=8.8
BNX **BinXian** 84.53 323 ⇑P P 02 09 43.0 -0.7
BNX S S 02 20 12.8 +2.4
BNX pmax pmax
comp=Z,24nm,1.0s
BNX pmax pmax
comp=Z,200nm,3.8s
BNX LR LR
comp=Z,410nm,18.9s
BNX LR LR
comp=Z,480nm,19.6s
BNX LR LR
comp=Z,730nm,19.8s
LL02 **Futaleuf** 84.57 134 P P 02 09 47.7 +3.6
LL02 IAmb IAmb 02 10 00.2
comp=Z,20nm,1.0s
CN2 **Changchun** 84.58 320 P P 02 09 43.8 -0.2
CN2 S S 02 20 09.5 -1.5
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,300nm,3.0s
CN2 LR LR
comp=Z,200nm,19.0s
CN2 LR LR
comp=Z,300nm,19.0s
CN2 LR LR
comp=Z,300nm,19.0s
SKAG **Skagway** 84.65 18 P P 02 09 44.4 +0.5
baz=216
G15K **Niukluk** 84.67 4 P P 02 09 43.7 -0.3
baz=189
HARP **HAARP** 84.72 13 P P 02 09 44.4 +0.1
baz=207
P30M **Million Dollar** 84.73 17 P P 02 09 44.1 -0.3
baz=214
TRF **Thorofare Moun** 84.74 10 P P 02 09 43.5 -1.0
baz=202,SNR=7.2
S34M **Telegraph Cree** 84.74 21 P P 02 09 44.6 +0.2
baz=220
FXWY **Fox Creek** 84.76 40 IAmb IAmb 02 09 58.6
comp=Z,33nm,1.7s
DLMT **Dillon** 84.79 38 IAmb IAmb 02 09 57.7
comp=Z,31nm,1.4s

CHUM **Lake Minchumin** 84.83 9 P P 02 09 43.7 -1.0
baz=200
QIZ **Qiongzhong** 84.84 292 S S 02 20 13.0 -1.6
QIZ LR LR
comp=N,130nm,15.4s
QIZ LR LR
comp=E,230nm,17.6s
QIZ LR LR
comp=Z,190nm,25.5s
MSO **Missoula** 84.88 36 IAmb IAmb 02 10 22.4
comp=Z,41nm,1.9s
DHY **Denali Highway** 84.90 11 P P 02 09 44.5 -0.9
baz=204,SNR=5.7
H17K **Granite Mounta** 84.94 6 P P 02 09 44.6 -0.7
H17K IAmb IAmb 02 09 57.7
comp=Z,22nm,1.4s
H17K **Granite Mounta** 84.94 6 P P 02 09 45.3 0.0
baz=193
CMIG **Matias Romero** 84.97 70 LR LR 02 39 46.9
comp=Z,646nm,19.6s,baz=193,slow=30
YUK8 **Steele Glacier** 84.97 15 P P 02 09 45.6 -0.3
baz=212
LOHW **Long Hollow** 85.00 40 IAmb IAmb 02 09 59.7
comp=Z,31nm,1.8s
F14K **Arctic Creek** 85.03 3 P P 02 09 45.5 -0.2
baz=187
YUK6 **Outpost Mounta** 85.04 16 P P 02 09 46.3 +0.1
baz=213
TNA **Tin City** 85.05 2 P P 02 09 45.6 -0.2
baz=185
GCSA **Galena City Sc** 85.06 7 P P 02 09 46.1 +0.3
baz=196
DRIO **Del Rio** 85.11 57 IAmb IAmb 02 10 00.1
comp=Z,25nm,1.3s
HYT **Haines Junctio** 85.17 17 P P 02 09 46.4 -0.3
baz=214
PAX **Paxson** 85.17 12 P P 02 09 46.3 -0.3
baz=206
M26K **Nabesna, AK** 85.18 14 P P 02 09 46.6 -0.1
baz=209
G16K **Koyuk River** 85.18 4 P P 02 09 46.4 -0.1
baz=190
PDAR **Pinedale Array** 85.19 41 P P 02 09 47.6 +0.2
comp=Z,1.5nm,1.0s,baz=204,slow=3.3,SNR=9.5
PDAR LR LR 02 43 53.0
comp=Z,324nm,18.1s,baz=244,slow=33
comp=Z,1.5nm,1.0s
PDAR **Pinedale Array** 85.19 41 P P 02 09 45.2 -2.2
YUK3 **Moose Creek** 85.22 15 P P 02 09 46.7 -0.3
baz=211,SNR=7.1
MCK **McKinley** 85.23 10 P P 02 09 45.7 -1.1
baz=203,SNR=16
BPAW **Bear Paw Mtn.** 85.23 10 P P 02 09 45.3 -1.6
baz=201
P32M **Atlin** 85.24 19 P P 02 09 47.2 +0.2
baz=217
YHB **Horse Butte** 85.27 39 IAmb IAmb 02 10 12.9
comp=Z,35nm,1.6s
H18K **Honhosa River** 85.30 6 P P 02 09 46.7 -0.4
baz=194
YUK4 **Talbot Arm** 85.31 16 P P 02 09 47.8 +0.3
baz=213
YHL **Hebgen Lake** 85.34 39 P P 02 09 49.0 +0.8
YHL IAmb IAmb 02 10 01.9
comp=Z,34nm,1.4s
F15K **North Star Dit** 85.35 3 P P 02 09 47.3 -0.1
baz=188
M27K **Edge Creek, AK** 85.40 14 P P 02 09 48.1 +0.3
baz=210,SNR=9.8
G17K **Kiwalik Mounta** 85.42 5 P P 02 09 47.7 0.0
baz=192
MSTX **Muleshoe** 85.49 52 P P 02 09 50.1 +1.2
MENT **Mentasta** 85.50 13 P P 02 09 48.6 +0.4
O30N **Mendenhall** 85.51 17 P P 02 09 48.4 +0.1
baz=215
DLBC **Dease Lake** 85.52 21 P P 02 09 49.0 +0.6
comp=Z,1.9nm,1.0s,baz=176,slow=14,SNR=2.5
DLBC LR LR 02 43 30.4
comp=Z,309nm,18.1s,baz=264,slow=32
comp=Z,1.9nm,1.0s
DLBC **Dease Lake** 85.52 21 P P 02 09 48.4 -0.1
baz=220
LR05 **Currie** 85.56 131 P P 02 09 52.6 +3.5
HBVL **Hebbronville** 85.68 59 IAmb IAmb 02 10 04.7
comp=Z,58nm,1.6s
BVCY **Beaver Creek** 85.68 14 P P 02 09 49.1 0.0
baz=211
WHY **Whitehorse** 85.76 18 P P 02 09 49.6 -0.1
baz=216
WHN **Wuhan** 85.79 304 P P 02 09 50.8 +0.5
WHN S S 02 20 30.0 +6.5
WHN pmax pmax
comp=Z,360nm,2.3s
WHN LR LR
comp=Z,940nm,19.9s
K24K **Donnelly Dome** 85.86 12 P P 02 09 49.6 -0.4
baz=206
R33M **Jennings River** 85.95 20 P P 02 09 50.0 -0.6
baz=220
RIDG **Independent Ri** 85.99 12 P P 02 09 50.3 -0.3
baz=207
G18K **Tagagawik** 85.99 6 P P 02 09 49.8 -0.7
baz=194
NEA2 **Nenana** 86.00 10 P P 02 09 49.6 -1.0
baz=203,SNR=9.3
P33M **Teslin, Yukon** 86.01 19 P P 02 09 49.9 -0.9
baz=218
H20K **Anotleneega Mo** 86.01 7 P P 02 09 50.7 0.0
baz=197
L27K **Beaver Creek,** 86.02 14 P P 02 09 50.4 -0.4
baz=210,SNR=5.2
BCAR **Beaver Creek A** 86.04 14 P P 02 09 50.7 -0.2
MLY **Manley** 86.14 9 P P 02 09 50.3 -1.0
baz=201,SNR=7.2
N31M **Braeburn, Yuko** 86.19 17 P P 02 09 51.3 -0.3
baz=215
HDA **Harding Lake** 86.20 11 P P 02 09 50.9 -0.7
baz=205,SNR=9.3
HNDO **Hondo** 86.22 57 IAmb IAmb 02 10 06.5
comp=Z,28nm,1.1s
TIA **Tai'an** 86.24 310 P P 02 09 53.0 +0.5
TIA S S 02 20 23.3 -4.5
TIA pmax pmax
comp=Z,18nm,1.0s
TIA LR LR
comp=Z,280nm,21.6s
TIA LR LR
comp=Z,360nm,17.9s
TIA LR LR
comp=Z,440nm,20.4s
M29M **Somme Creek** 86.28 15 P P 02 09 52.0 -0.2
baz=213
F17K **Baldwin Pennin** 86.30 5 P P 02 09 51.4 -0.6
baz=191,SNR=8.4
SCRK **Sand Creek** 86.37 12 P P 02 09 52.0 -0.6
baz=208,SNR=6.5
G19K **Purcell Mounta** 86.39 6 P P 02 09 52.5 0.0
baz=195
PLCA **Paso Flores** 86.39 132 P P 02 09 55.7 +2.3
comp=Z,9.3nm,1.1s,baz=251,slow=5.8,SNR=9.4
PLCA LR LR 02 43 43.0
comp=Z,378nm,18.0s,baz=232,slow=32
comp=Z,9.3nm,1.1s
PLCA **Paso Flores** 86.39 132 P P 02 09 57.6 +4.2
PLCA IAmb IAmb 02 10 09.4
comp=Z,26nm,1.3s
H21K **Melozitna Rive** 86.44 8 P P 02 09 52.2 -0.6
baz=199,SNR=10
COLA **College** 86.47 10 P P 02 09 52.1 -0.7
COLA **College** 86.47 10 P P 02 09 52.6 -0.2
COLA **College** 86.47 10 ⇑P P 02 09 53.2 +0.4
COLA **College** 86.47 10 P P 02 09 52.4 -0.5
baz=204
I23K **Minto, Yukon-K** 86.47 10 P P 02 09 52.0 -0.8
baz=203
ILAR **Eielson Array** 86.54 11 P P 02 09 52.5 -0.8
comp=Z,3.1nm,0.8s,baz=232,slow=5.4,SNR=27
ILAR LR LR 02 43 13.2
comp=Z,329nm,20.4s,baz=184,slow=32
comp=Z,3.1nm,0.8s
ILAR **Eielson Array** 86.54 11 P P 02 09 51.8 -1.5
F18K **Selawik** 86.59 5 P P 02 09 52.9 -0.6
baz=193
IMAR **Indian Mountai** 86.63 8 P P 02 09 53.7 +0.1
PPI **Padang Panjang** 86.63 271 P P 02 09 53.7 -1.2
J25K **Salcha River,** 86.67 12 P P 02 09 53.8 -0.2
baz=206
N32M **Quiet Lake** 86.68 18 P P 02 09 54.4 +0.3

baz=218
AMTX Amarillo 86.70 51 IAmb IAmb 02 10 07.7
comp=Z,51nm,1.4s
SEY Seymchan 86.71 345 *ce*P **P** **02 09 54.1 0.0**
SEY pmax pmax
comp=Z,52nm,1.7s
POKR Poker Plat Res 86.76 11 P **P** **02 09 53.6 -0.8**
baz=204,SNR=5.3
M30M Minto, Yukon 86.82 16 P **P** **02 09 54.1 -0.6**
baz=214
H22K Ishtalitna Cre 86.86 9 P **P** **02 09 54.6 -0.2**
baz=201
E17K Hotham Inlet 86.89 4 P **P** **02 09 54.6 -0.3**
baz=191,SNR=12
L29M L29M 86.93 15 P **P** **02 09 54.8 -0.5**
baz=213
F19K Shaleruckik Mo 86.99 6 P **P** **02 09 55.3 -0.1**
baz=195
HEH HeiHe 87.14 326 *e*P **P** **02 09 56.3 -0.2**
HEH pP **PcP** **02 09 59.5 +0.9**
HEH S **S** **02 20 36.5 +0.6**
HEH pmax pmax
comp=Z,17nm,1.7s
HEH LR LR
comp=Z,300nm,18.4s
HEH LR LR
comp=Z,300nm,17.3s
HEH LR LR
comp=Z,540nm,17.8s
M31M Drury Creek, Y 87.15 17 P **P** **02 09 56.1 -0.2**
baz=216
G21K Allakaket 87.16 8 P **P** **02 09 55.9 -0.3**
baz=199
BRDY Brady 87.17 55 IAmb IAmb 02 10 09.7
comp=Z,23nm,1.4s
WTLY Watson Lake, Y 87.21 20 P **P** **02 09 56.5 -0.2**
baz=222
E18K Tukpahlearik C 87.32 5 P **P** **02 09 56.8 -0.2**
baz=192,SNR=19
H24K Noodor Dome 87.35 10 P **P** **02 09 57.3 +0.1**
baz=204
F20K Avaraart Lake 87.41 7 P **P** **02 09 57.4 0.0**
baz=197
D17K Noatak River 87.42 4 P **P** **02 09 57.2 -0.3**
baz=190,SNR=8.1
DAWY Dawson 87.44 14 P **P** **02 09 57.7 -0.1**
baz=212,SNR=8.2
PRP Porcupine Dome 87.46 11 P **P** **02 09 57.3 -0.6**
baz=206,SNR=11
FARO Faro, Yukon 87.47 17 P **P** **02 09 58.0 +0.1**
baz=217
E19K Redstone River 87.65 6 P **P** **02 09 58.4 -0.2**
baz=195
IPM Ipoh 87.69 276 P **P** **02 10 01.0 +0.9**
IPM Ipoh 87.69 276 P **P** **02 09 57.6 -2.5**
comp=Z,38nm,1.2s
K29M Barlow Dome 87.70 15 P **P** **02 09 59.0 0.0**
baz=214,SNR=7.4
I26K Coal Creek Min 87.72 12 P **P** **02 09 58.4 -0.6**
I26K IAmb IAmb 02 10 21.0
comp=Z,45nm,1.6s
I26K Coal Creek Min 87.72 12 P **P** **02 09 59.2 +0.2**
baz=208
RDOG Red Dog Mine 87.78 4 P **P** **02 09 59.2 0.0**
baz=190
G23K Bananza Creek 87.82 9 P **P** **02 09 59.6 +0.1**
baz=202
F21K Alatna River 87.84 7 P **P** **02 09 59.6 +0.1**
baz=199
C16K Lisburne Hills 87.87 3 P **P** **02 09 59.2 -0.4**
baz=188
MAYO Mayo, Yukon 87.90 16 P **P** **02 09 59.9 0.0**
baz=215
ELIB Princess Elisa 87.94 185 *d*P **P** **02 10 02.7 +2.3**
comp=Z,8.0nm,1.2s
J29N Klondike Camp 88.05 14 P **P** **02 10 00.9 +0.2**
baz=213,SNR=7.0
C17K DeLong Mountai 88.18 4 P **P** **02 10 01.1 0.0**
baz=190
G24K Hadweenzic Riv 88.21 10 P **P** **02 10 01.4 +0.1**
baz=204
COLD Coldfoot 88.28 9 P **P** **02 10 01.7 +0.1**
baz=202
I27K Kandik River 88.29 13 P **P** **02 10 01.9 +0.1**
baz=210
MMPY Sheldon Lake, 88.37 18 P **P** **02 10 02.2 -0.1**
baz=219
TGTN Hyland Airport 88.44 20 P **P** **02 10 02.2 -0.4**
baz=222
C18K Utukok River 88.48 4 P **P** **02 10 02.0 -0.6**
baz=192
HNS HongShan 88.50 311 ⇑P **P** **02 10 04.0 +0.7**
HNS SKS **SKSac** **02 20 28.0 -4.6**
HNS pmax pmax
comp=Z,28nm,1.3s
HNS LR LR
comp=Z,250nm,18.8s
HNS LR LR
comp=Z,380nm,20.8s
HNS LR LR
comp=Z,480nm,20.4s
I28M Miner Creek 88.51 13 P **P** **02 10 02.8 -0.1**
baz=211
E20K Nigu River 88.53 6 P **P** **02 10 02.6 -0.3**
baz=196
D19K Kuna River 88.58 5 P **P** **02 10 02.6 -0.5**
baz=194
J30M Hart River 88.60 15 P **P** **02 10 03.4 0.0**
baz=215
SNAA Sanae 88.65 177 LR LR 02 46 35.8
comp=Z,407nm,19.6s,baz=186,slow=33
BJI2 Beijing 88.65 313 P **P** **02 10 04.3 +0.3**
BJI2 SKS **SKSac** **02 20 33.5 +0.1**
BJI2 S **SKKSac** **02 20 48.5 +4.0**
BJI2 pmax pmax
comp=Z,10.0nm,2.3s
BJI2 pmax pmax
comp=Z,97nm,5.9s
BJT Baijiatuau 88.65 313 P **P** **02 10 04.5 +0.5**
BILL Bilibino 88.76 352 P **P** **02 10 03.7 -0.1**
BILL IAmb IAmb 02 10 16.1
comp=Z,20nm,1.2s
BILL Bilibino 88.76 352 *ce*P **P** **02 10 03.9 0.0**
BILL pmax pmax
comp=Z,33nm,2.5s
WMOK Wichita Mounta 88.79 52 P **P** **02 10 05.7 +0.9**
WMOK IAmb IAmb 02 10 18.2
comp=Z,23nm,1.7s
WMOK Wichita Mounta 88.79 52 P **P** **02 10 05.7 +0.9**
WMOK pmax pmax
comp=Z,23nm,1.7s
I29M Ogilvie Camp, 88.79 14 P **P** **02 10 03.8 -0.3**
baz=213
KOTAN Kotaneelee Air 88.85 22 P **P** **02 10 04.4 0.0**
baz=226
H27K Steamboat Moun 88.86 12 P **P** **02 10 04.2 -0.2**
baz=210
E22K Anaktuvuk Pass 88.92 8 P **P** **02 10 04.4 -0.2**
baz=200
LYN LuoYang 88.92 307 P **P** **02 10 06.5 +1.1**
LYN pmax pmax
comp=Z,29nm,0.9s
LYN pmax pmax
comp=Z,540nm,4.1s
LYN LR LR
comp=Z,210nm,16.5s
LYN LR LR
comp=Z,220nm,18.5s
LYN LR LR
comp=Z,450nm,16.8s
D20K Etivluk River 88.93 6 P **P** **02 10 04.3 -0.3**
baz=196
E21K Killik River 88.95 7 P **P** **02 10 04.4 -0.3**
baz=198
C19K Lookout Ridge 89.05 5 P **P** **02 10 05.2 0.0**
baz=193
G26K Porcupine Rive 89.06 11 P **P** **02 10 05.3 +0.1**
baz=208
RPSI Rantau Prapat 89.07 273 IAmb IAmb 02 10 08.9
comp=Z,34nm,1.3s
PSI Prapat 89.11 273 P **P** **02 10 06.5 -0.4**
HKT Hockley 89.12 58 P **P** **02 10 09.7 +3.3**
HKT IAmb IAmb 02 10 35.8
comp=Z,41nm,1.8s
HKT Hockley 89.12 58 P **P** **02 10 09.7 +3.3**
HKT pmax pmax
comp=Z,41nm,1.8s

I30M Mount Dempster 89.12 15 P **P** **02 10 06.0 +0.3**
baz=215
E23K Chandalar 89.14 9 P **P** **02 10 05.7 0.0**
baz=202
ZEA Zeya 89.25 329 *e*P **P** **02 10 06.9 +0.4**
ZEA pmax pmax
comp=N,10.0nm,1.4s
ZEA pmax pmax
comp=Z,40nm,1.1s
E24K Your Creek 89.32 9 P **P** **02 10 06.8 +0.2**
baz=203
F25K Christian Rive 89.32 10 P **P** **02 10 06.8 +0.3**
baz=206
BMAR Burnt Mountain 89.35 11 P **P** **02 10 07.2 +0.5**
ENH Enshi 89.50 302 P **P** **02 10 08.9 +0.6**
H29M Whitestone 89.51 13 P **P** **02 10 07.3 -0.1**
baz=213
D22K Ayikyak River 89.52 7 P **P** **02 10 07.2 -0.2**
baz=199
C21K Knifeblade Rid 89.54 6 P **P** **02 10 07.4 -0.1**
baz=198
F26K Sheenjek River 89.67 11 P **P** **02 10 08.4 +0.2**
baz=207
TOLK Toolik Lake Re 89.69 8 P **P** **02 10 08.3 0.0**
baz=202
E25K Arctic Village 89.81 10 P **P** **02 10 08.9 +0.1**
baz=206
D23K Nanushuk River 89.84 8 P **P** **02 10 09.3 +0.4**
baz=201
EPYK Eagle Plains 90.00 14 P **P** **02 10 09.3 -0.5**
baz=214
B21K Ikpikpuk River 90.01 6 P **P** **02 10 09.5 -0.1**
baz=198
A19K Wainwright 90.02 4 P **P** **02 10 09.0 -0.6**
baz=192
H31M Peel River 90.09 15 P **P** **02 10 09.8 -0.4**
baz=216
B20K Meade River 90.14 5 P **P** **02 10 10.2 0.0**
baz=195,SNR=7.7
D24K Happy Valley 90.27 8 P **P** **02 10 10.6 -0.3**
baz=203
TIY Taiyuan 90.27 310 P **P** **02 10 13.3 +1.6**
TIY S **S** **02 21 03.8 -2.4**
TIY pmax pmax
comp=Z,230nm,8.7s
TIY LR LR
comp=Z,120nm,15.5s
TIY LR LR
comp=Z,310nm,19.6s
TIY LR LR
comp=Z,330nm,19.9s
GYA Guiyang 90.36 298 P **P** **02 10 11.3 -1.2**
GYA S **S** **02 21 09.0 +1.5**
GYA pmax pmax
comp=Z,13nm,1.2s
GYA LR LR
comp=Z,180nm,21.6s
F28M Old Crow 90.39 12 P **P** **02 10 11.5 0.0**
baz=211
KCSI Kotacane, Aceh 90.43 274 P **P** **02 10 10.5 -2.5**
XLT XiLinHaoTe 90.48 317 *e*P **P** **02 10 13.0 +0.4**
XLT sP pwP 02 10 21.0 -3.5
XLT SKS **SKSac** **02 20 45.0 +0.9**
XLT S **S** **02 21 09.0 +1.2**
XLT pmax pmax
comp=Z,7.0nm,1.3s
XLT LR LR
comp=Z,180nm,17.5s
XLT LR LR
comp=Z,240nm,21.4s
E27K Coleen River 90.56 11 P **P** **02 10 12.5 +0.2**
baz=210
G30M tAoh Zraii Nji 90.62 14 P **P** **02 10 12.5 -0.1**
baz=215
C23K Itkillik River 90.67 8 P **P** **02 10 11.9 -0.8**
C23K Itkillik River 90.67 8 P **P** **02 10 12.7 0.0**
baz=201
D25K Kavik River 90.78 9 P **P** **02 10 13.1 -0.2**
baz=205
C24K Franklin Bluff 90.81 8 P **P** **02 10 13.6 +0.2**
baz=203
B22K Teshekpuk Lake 90.82 7 P **P** **02 10 13.0 -0.4**
baz=199
TPTI 90.90 273 P **P** **02 10 12.7 -2.4**
HILR Hailar Array B 90.94 323 P **P** **02 10 14.4 -0.1**
comp=Z,7.5nm,0.9s,baz=132,slow=8.9,SNR=7.7
comp=Z,7.5nm,0.9s
G31M Satah River 91.02 14 P **P** **02 10 14.1 -0.2**
baz=216,SNR=7.2
F30M Barrier River 91.24 13 P **P** **02 10 15.3 -0.1**
baz=215
E28M Babbage River 91.31 12 P **P** **02 10 15.8 +0.1**
baz=212
XAN Xi'an 91.41 306 P **P** **02 10 18.0 +0.9**
XAN SKS **SKSac** **02 20 51.5 +1.6**
XAN S **ScS** **02 21 20.3 +0.7**
XAN pmax pmax
comp=Z,20nm,1.9s
XAN LR LR
comp=Z,220nm,17.1s
XAN LR LR
comp=Z,240nm,18.4s
XAN LR LR
comp=Z,220nm,17.9s
E29M Blow River 91.44 12 P **P** **02 10 16.2 -0.2**
baz=213
C27K Jago River 91.47 10 P **P** **02 10 16.4 0.0**
baz=208
C26K Camden Bay 91.54 9 P **P** **02 10 16.7 0.0**
baz=207
F31M Tsiigehtchic 91.56 14 P **P** **02 10 16.8 0.0**
baz=217,SNR=14
D27M Malcolm River 91.59 11 P **P** **02 10 17.5 +0.3**
baz=210
JTS Las Juntas de 91.60 80 LR LR 02 42 16.6
comp=Z,438nm,19.8s,baz=16,slow=30
NNA Nana 91.72 103 LR LR 02 42 49.2
comp=Z,324nm,19.2s,baz=262,slow=30
ATAH Atahualpa 91.95 98 LR LR 02 43 44.0
comp=Z,692nm,18.1s,baz=277,slow=30
D28M Stokes Point 92.08 12 P **P** **02 10 19.2 -0.1**
baz=212
HHC Hu-ho-hao-te 92.18 313 *e*P **P** **02 10 20.3 -0.3**
HHC sP pwP 02 10 30.3 -2.2
HHC SKS **SKSac** **02 20 51.0 -3.0**
HHC S **SKKSac** **02 21 17.5 +6.4**
HHC sS ScS 02 21 29.5 +3.7
HHC SS **SS** **02 27 31.0 -2.8**
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,200nm,4.6s
HHC LR LR
comp=Z,170nm,16.4s
HHC LR LR
comp=Z,120nm,16.1s
HHC LR LR
comp=Z,150nm,16.9s
INK Inuvik 92.30 14 P **P** **02 10 19.7 -0.6**
comp=Z,3.7nm,1.0s,baz=195,slow=5.4,SNR=8.0
INK LR LR 02 49 09.6
comp=Z,383nm,18.4s,baz=218,slow=34
comp=Z,3.7nm,1.0s
INK Inuvik 92.30 14 P **P** **02 10 19.3 -1.0**
INK Inuvik 92.30 14 P **P** **02 10 19.9 -0.4**
baz=217,SNR=6.4
AC02 Maricunga 92.97 120 P **P** **02 10 28.6 +3.4**
AC02 IAmb IAmb 02 10 41.7
comp=Z,15nm,1.4s
YAK Yakutsk 93.16 337 LR LR 02 49 03.4
comp=Z,177nm,20.0s,baz=107,slow=34
YAK Yakutsk 93.16 337 *e*P **P** **02 10 24.2 -0.2**
YAK *e* 02 16 04.6
YAK *e*S **SKSac** **02 20 57.4 -0.8**
YAK *e* 02 21 32.1
YAK *e*SS **SS** **02 27 48.1 +1.6**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=Z,104nm,4.3s
YAK pmax pmax
comp=N,82nm,4.1s
YAK pmax pmax
comp=E,44nm,3.8s
YAK smax smax
comp=E,39nm,3.2s
YAK smax smax
comp=N,28nm,3.1s
KMI2 Kunming 93.19 295 P **P** **02 10 26.0 +0.2**
KMI2 S **S** **02 21 38.0 +4.6**
KMI2 pmax pmax
comp=N,13nm,1.0s
KMI2 pmax pmax
comp=N,270nm,4.2s
KMI2 LR LR
comp=N,160nm,17.2s
KMI2 LR LR
comp=N,180nm,25.3s
KMI2 LR LR
comp=N,320nm,20.2s
BTO2 Baotou 93.31 312 *e*P **P** **02 10 26.5 +0.7**
BTO2 SKS **SKSac** **02 20 59.3 -1.1**
BTO2 S **S** **02 21 34.8 +1.2**
BTO2 pmax pmax
comp=N,32nm,1.0s
BTO2 pmax pmax
comp=N,250nm,4.4s
BTO2 LR LR
comp=N,470nm,14.7s
BTO2 LR LR
comp=N,340nm,16.0s
BTO2 LR LR
comp=N,470nm,18.2s
YKA Yellowknife Ar 93.85 23 P **P** **02 10 27.1 -0.4**
comp=N,0.8nm,0.9s,baz=252,slow=4.8,SNR=8.0
YKA LR LR 02 47 38.4
comp=N,266nm,18.5s,baz=290,slow=32
comp=N,0.8nm,0.9s
YKA Yellowknife Ar 93.85 23 P **P** **02 10 28.4 +0.9**
YKA Yellowknife Ar 93.85 23 P **P** **02 10 28.5 +0.9**
CMAR Chiang Mai Arr 94.29 288 P **P** **02 10 31.8 +1.1**
comp=N,9.2nm,0.9s,baz=108,slow=3.1,SNR=38
CMAR LR LR 02 50 06.1
comp=N,136nm,20.7s,baz=95,slow=34
comp=N,9.2nm,0.9s
CMAR Chiang Mai Arr 94.29 288 P **P** **02 10 31.9 +1.2**
CHTO Chiang Mai 94.40 288 P **P** **02 10 32.5 +1.3**
CHTO Chiang Mai 94.40 288 P **P** **02 10 31.3 +0.1**
CHTO IAmb IAmb 02 10 33.2
comp=Z,13nm,1.1s
CHTO Chiang Mai 94.40 288 P **P** **02 10 31.3 +0.1**
CHTO pmax pmax
comp=Z,13nm,1.2s
CHTO Chiang Mai 94.40 288 P **P** **02 10 29.2 -2.0**
PZH PanZhiHua 94.50 296 P **P** **02 10 32.5 +0.9**
PZH SKS **SKSac** **02 21 07.8 +0.3**
PZH S **S** **02 21 42.8 -1.8**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH LR LR
comp=Z,90nm,21.0s
PZH LR LR
comp=Z,110nm,18.8s
PZH LR LR
comp=Z,220nm,24.5s
R40A Maddies Statio 95.00 51 IAmb IAmb 02 10 46.3
comp=Z,19nm,1.2s
C36M Paulatuk 95.35 16 P **P** **02 10 33.6 -0.7**
baz=226
LZH Lanzhou 96.03 306 *e*P **P** **02 10 38.5 0.0**
LZH sP pwP 02 10 47.8 -2.6
LZH pmax pmax
comp=Z,13nm,1.5s
LZDM Lanzhou Array 96.10 306 P **P** **02 10 39.0 0.0**
comp=Z,0.7nm,0.3s,baz=118,slow=5.9,SNR=3.7
LZDM LR LR 02 51 14.3
comp=Z,72nm,21.8s,baz=195,slow=34
comp=Z,0.7nm,0.3s
A36M Sachs Harbour 96.94 13 P **P** **02 10 41.3 -0.2**
baz=225
ULM Lac du Bonnet 97.00 39 LR LR 02 50 44.3
comp=Z,700nm,18.2s,baz=197,slow=33
ULN Ulaanbaatar 97.84 318 *ce*P **P** **02 10 42.9 -3.5**
ULN pmax pmax
comp=Z,8.0nm,2.6s
LPAZ La Paz 98.00 110 LR LR 02 48 04.5
comp=Z,434nm,18.2s,baz=250,slow=31
SONM Songino Array 98.25 318 P **P** **02 10 48.5 +0.3**
comp=Z,0.4nm,0.8s,baz=94,slow=5.9,SNR=6.2
SONM LR LR 02 51 05.1
comp=Z,168nm,20.4s,baz=110,slow=33
comp=Z,0.4nm,0.8s
TIXI Tiksi 99.19 344 ⇓P **Pdif** **02 10 51.5 -0.1**
WMQ Urumqi 109.94 311 Pdif **Pdif** **02 11 40.8 +0.6**
WMQ LR LR
comp=Z,200nm,18.7s
M65A Busby, Falmout 111.87 52 P **PKiKP** **02 15 45.8 0.0**
baz=263
MK31 Makanchi Array 114.04 313 *c i*PKIKP PKPdf 02 15 50.6 +0.7
MKAR Makanchi Array 114.04 313 PKIKP PKPdf 02 15 49.2 -0.7
comp=Z,0.9nm,0.8s,baz=101,slow=2.9,SNR=7.8
MKAR Makanchi Array 114.04 313 *c i*PKIKP PKPdf 02 15 51.2 +1.3
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 116.55 318 *c i*PKIKP **PKPdf** **02 15 55.3 +0.8**
KURK pmax pmax
comp=Z,3.0nm,1.3s
KURBB Kurchatov Arra 116.61 317 PKP **PKPdf** **02 15 53.4 -1.3**
comp=Z,0.2nm,0.5s,baz=87,slow=2.0,SNR=6.0
NRN Naryn 118.32 307 **PKPdf** **02 15 58.6 -0.1**
NRN Naryn 118.32 307 PKIKP **PKPdf** **02 15 58.6 -0.1**
BOOM Boomskoye usch 118.39 308 PKPdf **PKPdf** **02 15 58.2 -0.4**
BOOM Boomskoye usch 118.39 308 PKIKP **PKPdf** **02 15 58.2 -0.4**
KSH2 Kashi 118.55 304 PKP **PKPdf** **02 15 58.5 -0.5**
AAK Ala-Archa 119.46 308 *c i*PKIKP **PKPdf** **02 16 01.5 +0.8**
AAK pmax pmax
comp=Z,4.0nm,1.7s
SPITS Spitsbergen Ar 121.27 358 PKP **PKPdf** **02 16 03.3 +0.3**
comp=Z,7.5nm,0.9s,baz=202,slow=6.3,SNR=2.5
BVAR Borovoye Array 121.43 321 PKP **PKPdf** **02 16 03.6 -0.3**
comp=Z,1.3nm,0.7s,baz=73,slow=5.3,SNR=7.2
BORK Borovoye 121.47 321 *ce*PKIKP **PKPdf** **02 16 04.7 +0.7**
BORK pmax pmax
comp=Z,9.0nm,2.5s
KKAR Karatay Array 122.38 309 PKPdf **PKPdf** **02 16 05.2 -0.8**
KKAR Karatay Array 122.38 309 PKIKP **PKPdf** **02 16 05.2 -0.8**
KBL Kabul 123.60 299 PKPdf **PKPdf** **02 16 09.4 +0.5**
KBL Kabul 123.60 299 PKIKP **PKPdf** **02 16 09.4 +0.5**
ARTI Arti 127.23 327 PKPdf **PKPdf** **02 16 14.9 0.0**
ARTI Arti 127.23 327 *ce*PKIKP **PKPdf** **02 16 16.2 +1.3**
ARTI pmax pmax
comp=Z,19nm,2.5s
KIRV Kirov 130.49 332 *ce*PKIKP **PKiKP** **02 16 23.1 +1.3**
KLMR Klimovskoe 132.90 339 *e*PKIKP **PKPdf** **02 16 25.9 +0.4**
KLMR pmax pmax
comp=Z,12nm,1.5s
FINES FINESS Array B 136.16 347 PKP **PKPdf** **02 16 32.5 +0.9**
comp=Z,6.5nm,1.1s,baz=336,slow=3.0,SNR=4.7
FINES FINESS Array B 136.16 347 *ce*PKIKP **PKiKP** **02 16 34.9 +1.6**
FINES pmax pmax
comp=Z,7.0nm,1.1s
KIV Kislovodsk 141.64 317 *i* PKIKP **PKiKP** **02 16 46.1 +0.9**
KIV pmax pmax
comp=Z,4.0nm,1.0s
SHA1 Shidzhatmaz 141.76 317 *ce*PKIKP **PKPdf** **02 16 44.3 +1.6**
KIBK Kibwezi 142.47 238 PKPdf **PKPdf** **02 16 42.9 -1.8**
SUW Suwalki 143.53 344 *e*PKP PKPab 02 16 36.9 -4.7
RAYN Ar Rayn 144.05 283 ⇑PKIKP **PKPdf** **02 16 47.7 +0.5**
AKASG Malin Array Be 144.38 336 PKP **PKPab** **02 16 44.9 0.0**
comp=Z,1.7nm,0.7s,baz=40,slow=4.1,SNR=17
RNPP9 Sopachiv 145.00 339 PKP **PKPab** **02 16 47.0 -0.1**
RNPP5 Staryi Chortor 145.16 339 PKP **PKPbc** **02 16 47.9 +0.2**
GKP Gorka Klasztor 145.53 349 *e*PKP **PKPdf** **02 16 49.1 +0.4**
LUBAR Lubar, Ukraine 145.57 336 PKP **PKPdf** **02 16 49.3 +0.4**
R9F13 Warsaw-Wawer 145.68 345 *e*PKP **PKPdf** **02 16 50.3 +1.3**
BSEG Bad Segeberg 145.70 357 *e*PKPbc **PKPdf** **02 16 50.0 +1.0**
baz=7.5,slow=2.6
BEL Belsk 146.12 345 *e*PKP **PKPdf** **02 16 50.9 +1.2**
SIM Simferopol' 146.21 324 *e*PKIKP **PKPdf** **02 16 52.0 +1.8**
SIM pmax pmax
comp=Z,180nm,1.8s
GORT1 Trebel 146.57 355 *e*PKPbc **PKPdf** **02 16 52.4 +2.0**
baz=7.5,slow=2.6
SORM Soroca 146.75 334 ⇑P **PKPbc** **02 16 53.5 +0.8**
SORM Soroca 146.75 334 ⇑PKP2 **PKPbc** **02 16 53.5 +0.8**
RUE Ruedersdorf 146.82 352 *e*PKPbc **PKPdf** **02 16 52.8 +1.9**
baz=7.5,slow=2.6
RETH Rethem/Aller, 146.94 357 *e*PKPbc **PKPbc** **02 16 53.6 +0.6**
baz=7.5,slow=2.6

baz=7.5,slow=2.6
FLTG Flechtingen 147.23 355 *e*PKPbc **PKPdf** 02 16 54.0 +2.4
baz=7.5,slow=2.6
PURM Purcari 147.29 330 ⇓P **PKPbc** 02 16 55.2 +1.0
ASSE Asse, Remlinge 147.47 356 *e*PKPbc **PKPbc** 02 16 54.9 +0.4
baz=7.5,slow=2.6
CLZ Clausthal 147.78 356 *e*PKPbc **PKPbc** 02 16 56.1 +0.6
baz=7.5,slow=2.6
KSP Ksiaz 148.03 349 *e*PKP **PKPbc** 02 16 57.2 +1.1
CLL Collm 148.07 353 *i* PKHKP **PKPbc** 02 16 56.0 -0.2
CLL *i* 02 17 02.3
CLL pmax pmax
comp=Z,91nm,1.7s
CLL Collm 148.07 353 *i* PKPbc **PKPbc** 02 16 56.0 -0.2
comp=Z,91nm,1.7s
CLL *i* x x 02 17 02.3
comp=Z,26nm,0.9s
CLL *i* x x 02 17 07.4
comp=Z,50nm,1.1s
CLL *e*PSKS 02 30 42.0
CLL *ex* x 02 40 18.0
CLL Collm 148.07 353 *e*PKPbc **PKPbc** 02 16 56.4 +0.2
baz=7.5,slow=2.6
GTTG Gottingen 148.10 356 *e*PKPbc **PKPbc** 02 16 56.8 +0.5
baz=7.5,slow=2.6
BUG Bochum--Univer 148.29 360 *e*PKPbc **PKPbc** 02 16 57.1 +0.3
baz=7.5,slow=2.6
NEUB Neuenburg 148.30 354 *e*PKPbc **PKPbc** 02 16 57.3 +0.5
baz=7.5,slow=2.6
OSTC Ostas 148.32 349⇑ *e*PKPB **PKPbc** 02 16 58.1 +1.2
OSTC Ostas 148.32 349 *e*PKIKP **PKPbc** 02 16 58.1 +1.2
BRG Berggiesshubel 148.38 352 *e*PKPbc **PKPbc** 02 16 57.6 +0.5
baz=7.5,slow=2.6
BRG Berggiesshubel 148.38 352 *e*PKP **PKPbc** 02 16 58.1 +1.1
BRG Amp 02 17 01.1
comp=Z,20nm,1.0s
BURAR Bucovina Array 148.42 336 ⇓P **PKPbc** 02 16 58.7 +1.3
BURAR Bucovina Array 148.42 336 ⇓PKIKP **PKPbc** 02 16 58.7 +1.3
DPC Dobruska-Polom 148.50 349⇑ *e*PKPB **PKPbc** 02 16 58.7 +1.3
DPC Dobruska-Polom 148.50 349 *e*PKIKP **PKPbc** 02 16 58.7 +1.3
KASTN Kahler Asten 148.51 358 *e*PKPbc **PKPbc** 02 16 57.9 +0.5
baz=7.5,slow=2.6
BIR Birlad 148.51 332 ⇑P **PKPbc** 02 16 59.6 +2.1
BIR Birlad 148.51 332 PKP2 **PKPbc** 02 16 59.6 +2.1
STEB Steborice 148.60 347⇑ *e*PKPB **PKPbc** 02 16 58.3 +0.7
PVCC Panska Ves 148.62 351⇑ *e*PKPB **PKPab** 02 17 03.6 +2.4
PVCC Panska Ves 148.62 351 *e*PKP2 **PKPab** 02 17 03.6 +2.4
VLDR Vladesti 148.63 331 ⇓P **PKPbc** 02 16 57.8 0.0
KRLC Kraliky 148.67 348⇑ *e*PKPB **PKPab** 02 17 01.8 +0.4
KRLC Kraliky 148.67 348 *e*PKP2 **PKPab** 02 17 01.8 +0.4
GHRR 148.77 332 ⇓P **PKPbc** 02 16 58.3 +0.1
TLCR 148.78 330 ⇓P **PKPbc** 02 16 59.2 +1.0
TLCR 148.78 330 ⇓PKIKP **PKPbc** 02 16 59.2 +1.0
MORC Moravsky Berou 148.79 347 ⇑P **PKPbc** 02 16 59.8 +1.6
MORC Moravsky Berou 148.79 347 ⇑PKIKP **PKPbc** 02 16 59.8 +1.6
MORC Moravsky Berou 148.79 347 *e*PKIKP **PKPbc** 02 16 58.7 +0.5
UBBA Unterbreizbach 148.82 356 *e*PKPbc **PKPbc** 02 16 58.7 +0.6
baz=7.5,slow=2.6
UCC Uccle 148.87 3 *d*PKP **PKPbc** 02 16 59.0 +0.7
MOX Moxa 148.87 354 *e*PKPbc **PKPbc** 02 16 58.9 +0.5
baz=7.5,slow=2.6
MOX *e*L L 03 19 59.5
comp=Z,281nm,19.0s
PLN Plauen 148.97 354 *e*PKPbc **PKPbc** 02 16 59.2 +0.6
baz=7.5,slow=2.6
ONER Baraj Valea Uz 148.99 333 ⇑P **PKPbc** 02 17 00.3 +1.5
BMR Baia Mare 149.00 338 ⇓P **PKPbc** 02 16 59.9 +1.1
BMR Baia Mare 149.00 338 ⇓PKIKP **PKPbc** 02 16 59.9 +1.1
TANN Tannenbergstha 149.01 353 *e*PKPbc **PKPbc** 02 16 59.4 +0.6
baz=7.5,slow=2.6
CFR Carcaliu 149.11 330 ⇓P **PKPbc** 02 17 00.0 +1.0
MEM Membach 149.12 1 *d*PKP **PKPdf** 02 16 57.2 +2.4
MAUC Maruska 149.12 346⇑ *e*PKPB **PKPbc** 02 17 00.4 +1.4
BTNL Ternell 149.14 1 *d*PKP **PKPbc** 02 16 59.9 +0.8
PRU Pruhonice 149.15 350⇑ *e*PKPB **PKPbc** 02 16 59.7 +0.7
PRU *ex* x 02 17 06.1
PRU Pruhonice 149.15 350 *e*PKIKP **PKPbc** 02 16 59.7 +0.7
PRU *e* 02 17 06.1
TPGR Topolog 149.21 329 ⇓P **PKPbc** 02 17 00.8 +1.4
VRI Vrincioaia 149.22 333 ⇑P **PKPbc** 02 17 00.0 +0.6
VRI Vrincioaia 149.22 333 ⇑PKIKP **PKPbc** 02 17 00.0 +0.6
PLOR Plostina 149.26 333 ⇑P **PKPbc** 02 17 00.6 +1.1
PLOR Plostina 149.26 333 ⇑PKIKP **PKPbc** 02 17 00.6 +1.1
BGES Gesves 149.31 2 *d*PKP **PKPbc** 02 17 00.5 +1.0
BHOU Houvegnez 149.37 1 *d*PKP **PKiKP** 02 17 01.8 +1.0
BMRD Maredsous 149.38 3 *d*PKP **PKPdf** 02 16 56.5 +1.3
VRAC Vranov 149.44 348 ⇑P **PKPbc** 02 17 01.6 +1.8
VRAC Vranov 149.44 348 ⇑PKIKP **PKPbc** 02 17 01.6 +1.8
VRAC Vranov 149.44 348 *e*PKIKP **PKPbc** 02 17 00.4 +0.6
MANZ Manzenberg 149.47 353 *e*PKPbc **PKPbc** 02 17 00.6 +0.7
baz=7.5,slow=2.6
TNS Taunus Mts 149.49 358 *e*PKPbc **PKPbc** 02 17 00.6 +0.7
baz=7.5,slow=2.6
BOSR Bodos 149.50 334 ⇑P **PKPbc** 02 17 00.1 0.0
DOU Dourbes 149.58 3 *d*PKP **PKPbc** 02 17 00.8 +0.7
BRTR Keskin Array B 149.60 317 PKPbc **PKPbc** 02 17 01.2 +0.5
comp=Z,9.5nm,0.8s,baz=87,slow=2.3,SNR=47
JAVC Velka Javorina 149.63 346 *e*PKIKP **PKPbc** 02 17 02.2 +1.8
ROTZ Rotzenmuhle 149.68 353 *e*PKPbc **PKPbc** 02 17 01.1 +0.7
baz=7.5,slow=2.6
DOPR Dopca 149.70 334 ⇓P **PKPbc** 02 17 02.3 +1.7
KRUC Moravsky 149.71 348 *e*PKIKP **PKPbc** 02 17 01.2 +0.7
KIRS Kirsehir-Merke 149.74 316 ⇓P **PKPbc** 02 17 02.2 +1.2
CJR Cluj-Napoca 149.78 337 ⇓P **PKPbc** 02 17 00.6 -0.2
CJR Cluj-Napoca 149.78 337 ⇓PKIKP **PKPbc** 02 17 00.6 -0.2
MLR Muntele Rosu 149.85 333 ⇓P **PKPbc** 02 17 01.7 +0.6
MLR Muntele Rosu 149.85 333 ⇓PKIKP **PKPbc** 02 17 01.7 +0.6
GRF Grafenberg Arr 149.85 355 *e*PKPbc **PKPbc** 02 17 01.8 +1.0
baz=7.5,slow=2.6
GRF *e*L L 03 24 48.0
comp=Z,414nm,18.2s
PSZ Piszkesteto 149.93 343 ⇓P **PKPbc** 02 17 00.9 -0.3
PSZ Piszkesteto 149.93 343 ⇓PKIKP **PKPbc** 02 17 00.9 -0.3
MDB Medias 149.96 335 ⇑P **PKiKP** 02 17 03.0 +0.9
MDB Medias 149.96 335 ⇑PKIKP **PKiKP** 02 17 03.0 +0.9
MARR Marisel-Cluj 149.99 338 ⇓P **PKPbc** 02 17 02.4 +1.1
SMOL Smolenice 150.01 346 *e*PKIKP **PKPbc** 02 17 02.5 +1.3
DRGR 150.04 338 ⇑P **PKPbc** 02 17 02.3 +0.9
DRGR 150.04 338 ⇑PKIKP **PKPbc** 02 17 02.3 +0.9
WLF Walferdange 150.06 1 *d*PKP **PKPbc** 02 17 02.8 +1.5
WLF Walferdange 150.06 1 *e*PKPbc **PKPbc** 02 17 02.4 +1.1
baz=7.5,slow=2.6
KHC Kasperske Hory 150.13 351⇑ *e*PKPB **PKPbc** 02 17 01.8 +0.3
KHC Kasperske Hory 150.13 351 *e*PKIKP **PKPbc** 02 17 01.8 +0.3
MODS Modra-Piesok 150.18 346 *e*PKIKP **PKPbc** 02 17 03.2 +1.6
MODS Modra-Piesok 150.18 346 *e* **PKPbc** 02 17 03.2 +1.6
WET Wettzell 150.21 352 *e*PKPbc **PKPbc** 02 17 02.4 +0.6
baz=7.5,slow=2.6
VOIR 150.27 334 ⇑P **PKiKP** 02 17 03.8 +0.9
VOIR 150.27 334 ⇑PKIKP **PKiKP** 02 17 03.8 +0.9
CKRC Cesky Krumlov 150.32 350⇑ *e*PKPB **PKPbc** 02 17 02.8 +0.8
CKRC Cesky Krumlov 150.32 350 *e*PKIKP **PKPbc** 02 17 02.8 +0.8
GEC2 GERESS Array S 150.39 351 *e*PKPbc **PKPbc** 02 17 02.6 +0.4
baz=7.5,slow=2.6
GERES GERESS Array B 150.39 351 PKPbc **PKPbc** 02 17 03.1 +0.9
comp=Z,5.9nm,1.0s,baz=48,slow=2.0,SNR=13
SRO Srobarova 150.45 344 *e*PKIKP **PKPbc** 02 17 03.5 +1.2
SRO Srobarova 150.45 344 *e* **PKPbc** 02 17 03.5 +1.2
ARR Arges 150.50 334 ⇑P **PKPbc** 02 17 04.0 +1.5
DEV Deva 150.74 337 ⇑P **PKPbc** 02 17 04.6 +1.6
DEV Deva 150.74 337 PKHKP **PKPbc** 02 17 04.6 +1.6
LOT Lotru 150.78 335 ⇓P **PKPbc** 02 17 03.4 +0.1
CONA Conrad Observa 150.90 348 *i* PKP **PKPbc** 02 17 03.8 +0.4
comp=Z,44nm,1.9s,SNR=11
STU Stuttgart 150.91 357 *e*PKPbc **PKPbc** 02 17 04.0 +0.7
baz=7.5,slow=2.6
RONA Rosalia, Austr 151.03 347 *i* PKiKP **PKPbc** 02 17 05.1 +1.4
comp=Z,25nm,1.4s,SNR=6.4
LOZB Loznitsa 151.20 329 ⇑P **PKPbc** 02 17 05.6 +1.4
GZR Gura Zlata 151.21 337 ⇓P **PKPbc** 02 17 04.9 +0.7
GZR Gura Zlata 151.21 337 ⇓PKHKP **PKPbc** 02 17 04.9 +0.7
MOA Molln 151.27 350 *e*pPKP **PKPdf** 02 17 02.2 +3.9
comp=Z,8.5nm,0.9s
FUR Furstenfeldbru 151.36 354 *e*PKPbc **PKPbc** 02 17 04.9 +0.4
baz=7.5,slow=2.6
MMAI Mount Meron Ar 151.38 303 PKPbc **PKPbc** 02 17 05.4 +0.3
comp=Z,12nm,0.8s,baz=39,slow=7.4,SNR=29
BFO Black Forest 151.38 358 *e*PKPbc **PKPbc** 02 17 04.9 +0.4
baz=7.5,slow=2.6
BZS Buzias 151.43 338 ⇓P **PKPbc** 02 17 05.1 +0.4
BZS Buzias 151.43 338 ⇓PKIKP **PKPbc** 02 17 05.1 +0.4
BIOA Bad Ischl, Aus 151.53 351 *e*PKP **PKPbc** 02 17 04.4 -0.4
comp=Z,12nm,1.2s
RJOB Jochberg 151.60 352 *e*PKPbc **PKPbc** 02 17 05.8 +0.7
baz=7.5,slow=2.6
ARSA Arzberg 151.62 348 *e*PKP **PKPbc** 02 17 05.5 +0.4
comp=Z,5.9nm,1.3s
HERR Herculane 151.78 336 ⇓P **PKPbc** 02 17 06.3 +0.8
MORH Mrgy, Hungar 151.84 343 ⇓P **PKPbc** 02 17 06.0 +0.5
LESA Schwarzleotal 151.93 352 *e*PKP **PKPbc** 02 17 05.5 -0.4
comp=Z,20nm,1.5s
UBR Ueberruh 151.94 356 *e*PKPbc **PKPbc** 02 17 06.1 +0.2
baz=7.5,slow=2.6
RETA Reutte 152.08 355 *e*PKiKP **PKPbc** 02 17 07.3 +1.1
comp=Z,20nm,1.6s
PLVB Pleven 152.10 332 ⇓P **PKPbc** 02 17 07.3 +1.0
MDVR Moldovita 152.12 337 ⇑P **PKPbc** 02 17 06.7 +0.3
WATA Walderalm 152.15 353 *e*PKP **PKPbc** 02 17 07.1 +0.7
comp=Z,3.7nm,0.6s
KBA Koelnbreinsper 152.17 351 *e*pPKP **PKPdf** 02 17 02.2 +2.3
comp=Z,5.7nm,0.8s
MOTA Moosalm 152.19 354 *e*PKiKP **PKPbc** 02 17 07.3 +0.7
comp=Z,23nm,1.4s
WTTA Wattenberg 152.21 353 *e*PKP **PKPbc** 02 17 06.8 +0.2
comp=Z,15nm,0.9s
SOKA Soboth 152.26 348 *i* PKP **PKPbc** 02 17 07.1 +0.4
comp=Z,8.3nm,1.0s,SNR=6.0
SQTA Sankt Quirin 152.30 354 *e*PKP **PKPbc** 02 17 06.8 +0.1
comp=Z,21nm,1.7s
DAVA Damuels 152.35 356 *e*PKiKP **PKPbc** 02 17 07.9 +1.0
comp=Z,11nm,1.1s
OBKA Obir 152.52 349 *e*PKP **PKPbc** 02 17 07.1 -0.1
comp=Z,10nm,1.2s
FETA Feichten 152.54 354 *e*PKP **PKPbc** 02 17 07.7 +0.4
comp=Z,7.6nm,1.0s
MYKA Terra Mystica 152.56 350 *e*PKP **PKPbc** 02 17 07.3 0.0
comp=Z,0.5nm,0.3s
ABTA Abfaltersbach 152.61 352 *e*pPKP **PKPdf** 02 17 02.5 +2.1
comp=Z,27nm,2.0s
ESDC Sonseca Array 157.94 23 PKPab **PKPab** 02 17 40.0 -0.8
comp=Z,1.3nm,1.0s,baz=338,slow=4.4,SNR=4.3
TORD Torodi Ar. Bea 171.77 141 PKP **PKPdf** 02 17 20.1 -0.3
comp=Z,2.4nm,1.2s,baz=264,slow=1.4,SNR=4.1
TORD PKPab **PKPab** 02 18 44.3 +2.2
comp=Z,1.6nm,1.0s,baz=247,slow=4.5,SNR=3.8

SJA ***29*** *02:13:10.0±0.8, 31°.46S×68°.70W, h104km±3km, ML4.0, MW4.0*
IDC ***29*** *02:13:10.2±0.8, 31°.55S×68°.63W, h102km±7km, mb3.8/6, mbtmp4.0/10, Error ellipse: s-maj=26.8km s-min=26.1km az=117.0*
NEIC ***29*** *02:13:11.2±2.5, 31°.48S±0°.06×68°.8W±0°.1, h104km±5km, mb4.5/30, Error ellipse: s-maj=12.8km s-min=8.5km az=99.0*

ISC 29 02:13:10.5±0.6, 31°.44S±0°.03×68°.71W±0°.03, h106km±5km, n153, σ1§62/165, mb4.4/17, 8C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
ZON	**Zonda**	**0.11**	**167**			**Pn**	**02 13 25.1**	**-0.3**
ZON						**Sn**	**02 13 35.7**	**-0.7**
ZON	**Zonda**	**0.11**	**167**	*e*P		**Pn**	**02 13 24.3**	**-1.0**
ZON				IAML			02 13 36.6	
comp=Z,3μm,0.5s								
SJA	**San Juan**	**0.15**	**125**	*e*P		Pn	02 13 19.9	-5.5
SJA				*e*S		**Sn**	**02 13 39.0**	**+2.5**
SJA				IAML			02 13 39.6	
comp=Z,4μm,0.2s								
RTLL	**Cerro Villicun**	**0.23**	**61**	*e*P		**Pn**	**02 13 24.8**	**-0.8**
RTLL				IAML			02 13 37.1	
comp=Z,12μm,0.3s								
CFA	**Coronel Fontan**	**0.43**	**112**	P		**Pn**	**02 13 26.2**	**-0.4**
comp=Z,1μm,0.3s,baz=257,slow=6.8								
CFA				S		**Sn**	**02 13 38.3**	**-0.3**
comp=Z,867nm,0.4s,baz=191,slow=23,SNR=88								
CFA	**Coronel Fontan**	**0.43**	**112**	*e*P		**Pn**	**02 13 26.5**	**-0.1**
CFA				*e*S		**Sn**	**02 13 39.0**	**+0.3**
CFA				IAML			02 13 40.3	
comp=Z,2μm,0.2s								
RTLS	**Leoncito**	**0.62**	**235**	*e*P		**Pn**	**02 13 28.1**	**0.0**
RTLS				IAML			02 13 48.6	
comp=Z,5μm,0.6s								
ACCO	**Cerro Coronel**	**0.90**	**340**	*e*P		**Pn**	**02 13 31.5**	**+0.7**
ASAL	**Salagasta**	**1.15**	**185**	*e*P		**Pn**	**02 13 33.3**	**+0.2**
ACDV	**Cuesta del Vie**	**1.31**	**344**	*e*P		**Pn**	**02 13 36.2**	**+1.1**
ACDV				IAML			02 13 56.6	
comp=Z,648nm,0.4s								
AVFE	**Valle Fertil**	**1.33**	**54**	*e*P		Pn	02 13 30.1	-5.0
AVFE				IAML			02 13 55.8	
comp=Z,1μm,0.5s								
ARCO	**CERRO ARCO**	**1.41**	**188**	*e*P		**Pn**	**02 13 36.5**	**+0.3**
ARCO				IAML			02 13 58.2	
comp=Z,3μm,0.3s								
AROD	**Rodeo**	**1.43**	**332**	*e*P		**Pn**	**02 13 37.7**	**+1.1**
AROD				*e*S		**Sn**	**02 13 58.2**	**+1.9**
ACAN	**Cantantal**	**1.54**	**123**	*e*P		**Pn**	**02 13 37.6**	**0.0**
ACAN				IAML			02 14 00.7	
comp=Z,6μm,0.3s								
AAGR	**Agrelo**	**1.64**	**184**	*e*P		**Pn**	**02 13 39.3**	**+0.3**
AAGR				IAML			02 14 04.8	
comp=Z,1μm,2.1s								
ACHE	**Chepes**	**1.77**	**81**	*e*P		**Pn**	**02 13 41.6**	**+1.0**
CO03	**El Pedregal**	**1.80**	**289**			**Pn**	**02 13 41.8**	**+0.8**
CO03	**El Pedregal**	**1.80**	**289**	⇑*i*P		**Pn**	**02 13 41.7**	**+0.8**
CO03				*i* S		**Sn**	**02 14 05.1**	**+1.0**
CO03				IAML			02 14 06.9	
comp=E,7μm,0.4s								
CO03	**El Pedregal**	**1.80**	**289**	*e*P		**Pn**	**02 13 41.7**	**+0.8**
CO03				*e*S		**Sn**	**02 14 05.4**	**+1.3**
CO03				IAML			02 14 06.5	
comp=Z,3μm,0.5s								
CO01	**Juntas del Tor**	**1.89**	**320**			**Pn**	**02 13 43.9**	**+1.7**
CO01	**Juntas del Tor**	**1.89**	**320**	⇑*i*P		**Pn**	**02 13 43.9**	**+1.7**
CO01	**Juntas del Tor**	**1.89**	**320**	*e*P		**Pn**	**02 13 43.9**	**+1.7**
CO01				*e*P			02 13 44.0	
CO01				*e*S		**Sn**	**02 14 09.0**	**+2.8**
CO01				IAML			02 14 10.1	
comp=Z,388nm,0.9s								
CO02	**Combarbal**	**1.98**	**276**			**Pn**	**02 13 43.5**	**+0.3**
CO02	**Combarbal**	**1.98**	**276**	⇑*i*P		**Pn**	**02 13 43.4**	**+0.3**
CO02	**Combarbal**	**1.98**	**276**	*e*P		**Pn**	**02 13 43.5**	**+0.3**
CO02				*e*S		**Sn**	**02 14 09.8**	**+1.7**
CO02				IAML			02 14 12.4	
comp=Z,1μm,0.5s								
CO04	**Los Peladeros**	**2.02**	**252**			**Pn**	**02 13 43.5**	**-0.4**
CO04	**Los Peladeros**	**2.02**	**252**	*e*P		**Pn**	**02 13 43.5**	**-0.4**
AVIZ	**Vizcacheras**	**2.03**	**176**	*e*P		**Pn**	**02 13 44.3**	**+0.5**
VA03	**San Esteban**	**2.05**	**229**			**Pn**	**02 13 44.6**	**+0.6**
VA03	**San Esteban**	**2.05**	**229**	*e*P		**Pn**	**02 13 44.5**	**+0.5**
VA03	**San Esteban**	**2.05**	**229**	*e*P		**Pn**	**02 13 44.7**	**+0.6**
VA03				*e*S		**Sn**	**02 14 11.8**	**+2.2**
VA03				IAML			02 14 15.1	
comp=Z,772nm,0.3s								
GO04	**Tololo Observa**	**2.20**	**305**			**Pn**	**02 13 46.4**	**+0.2**
GO04	**Tololo Observa**	**2.20**	**305**	*e*P		**Pn**	**02 13 46.4**	**+0.2**
GO04	**Tololo Observa**	**2.20**	**305**	*e*P		**Pn**	**02 13 46.6**	**+0.5**
GO04				*e*S		**Sn**	**02 14 06.1**	**-7.2**
GO04				IAML			02 14 17.0	
comp=Z,2μm,0.4s								
MT08	**Bocatoma Ro**	**2.29**	**209**			**Pn**	**02 13 48.0**	**+0.8**
MT08	**Bocatoma Ro**	**2.29**	**209**	*e*P		**Pn**	**02 13 48.0**	**+0.8**
MT08	**Bocatoma Ro**	**2.29**	**209**	*e*P		**Pn**	**02 13 48.4**	**+1.1**
MT08				*e*S		**Sn**	**02 14 13.0**	**-2.3**
MT08				IAML			02 14 19.3	
comp=Z,343nm,0.4s								
MT04	**Ro Olivares**	**2.30**	**211**	*e*P		**Pn**	**02 13 48.4**	**+1.0**
MT04	**Ro Olivares**	**2.30**	**211**	*e*P		**Pn**	**02 13 44.0**	**-3.5**
PEL	**Peldehue**	**2.38**	**224**			**Pn**	**02 13 48.3**	**0.0**
PEL	**Peldehue**	**2.38**	**224**	*e*P		**Pn**	**02 13 48.4**	**0.0**
PEL	**Peldehue**	**2.38**	**224**	*e*P		**Pn**	**02 13 48.6**	**+0.3**
PEL				*e*S		**Sn**	**02 14 18.4**	**+1.0**
PEL				IAML			02 14 18.9	
comp=Z,392nm,0.9s								
MT10	**Hacienda Santa**	**2.40**	**220**	*e*P		**Pn**	**02 13 49.1**	**+0.6**
VA06	**Catapilco**	**2.47**	**242**			**Pn**	**02 13 48.1**	**-1.2**
VA06	**Catapilco**	**2.47**	**242**	*e*P		**Pn**	**02 13 48.1**	**-1.2**
MT14	**Cerro Cal¡n**	**2.49**	**218**	*e*P		**Pn**	**02 13 50.1**	**+0.4**
MT16	**CCHEN**	**2.51**	**217**			**Pn**	**02 13 50.6**	**+0.7**
MT16	**CCHEN**	**2.51**	**217**	*e*P		**Pn**	**02 13 50.4**	**+0.5**
ACLC	**CERRO LA CRUZ**	**2.52**	**37**	*e*P		**Pn**	**02 13 51.3**	**+1.1**
ACLC				IAML			02 14 52.3	
comp=Z,347nm,0.4s								
MT03	**Universidad Ad**	**2.55**	**216**			**Pn**	**02 13 51.0**	**+0.4**
MT03	**Universidad Ad**	**2.55**	**216**	*e*P		**Pn**	**02 13 51.0**	**+0.4**
MT03	**Universidad Ad**	**2.55**	**216**	*e*P		**Pn**	**02 13 52.0**	**+1.4**
MT03				*e*S		**Sn**	**02 14 17.2**	**-4.1**
MT03				IAML			02 14 24.2	
comp=Z,541nm,0.4s								
MT05	**Renca**	**2.59**	**221**			**Pn**	**02 13 51.4**	**+0.3**
MT05	**Renca**	**2.59**	**221**	*e*P		**Pn**	**02 13 51.1**	**0.0**
MT05	**Renca**	**2.59**	**221**	*e*P		**Pn**	**02 13 51.3**	**+0.2**
MT05				*e*S		**Sn**	**02 14 23.4**	**+1.1**
MT05				IAML			02 14 25.3	
comp=Z,368nm,0.5s								
CO06	**Fray Jorge**	**2.63**	**286**			**Pn**	**02 13 49.9**	**-1.5**
CO06	**Fray Jorge**	**2.63**	**286**	⇑*i*P		**Pn**	**02 13 50.0**	**-1.5**
MT15	**Las Vizcachas**	**2.63**	**215**	*e*P		**Pn**	**02 13 51.9**	**+0.3**
MT13	**San Alfonso**	**2.66**	**210**	Pn		**Pn**	**02 13 52.6**	**+0.7**
MT13	**San Alfonso**	**2.66**	**210**	*e*P		**Pn**	**02 13 52.7**	**+0.7**
MT13	**San Alfonso**	**2.66**	**210**	*e*P		**Pn**	**02 13 53.3**	**+1.4**
MT13				*e*S		Sn	02 14 09.7	-14
MT13				IAML			02 14 32.6	
comp=Z,241nm,0.7s								
CO05	**La Serena**	**2.66**	**304**			**Pn**	**02 13 51.5**	**-0.4**
CO05	**La Serena**	**2.66**	**304**	⇑*i*P		**Pn**	**02 13 51.4**	**-0.5**
LMEL	**Las Melosas**	**2.71**	**207**	*e*P		**Pn**	**02 13 53.4**	**+0.7**
MRA	**San Martin**	**2.72**	**112**	*e*P		**Pn**	**02 13 53.4**	**+0.6**
MRA				IAML			02 14 27.1	
comp=Z,502nm,0.6s								
VCA	**Vinchina**	**2.73**	**9**	*e*P		**Pn**	**02 13 53.9**	**+0.8**
VCA				IAML			02 14 32.3	
comp=Z,749nm,0.3s								
MT12	**Pirque**	**2.76**	**214**	*e*P		**Pn**	**02 13 53.4**	**0.0**
AC05	**El Transito**	**2.93**	**332**	⇑*i*P		**Pn**	**02 13 57.1**	**+1.6**
AC05	**El Transito**	**2.93**	**332**	*e*P		**Pn**	**02 13 57.2**	**+1.6**
AC05				*e*S		**Sn**	**02 14 32.8**	**+2.5**
AC05				IAML			02 14 34.9	
comp=Z,492nm,0.3s								
VA01	**Torpederas**	**2.95**	**237**			**Pn**	**02 13 54.2**	**-1.5**
VA01	**Torpederas**	**2.95**	**237**	*e*P		**Pn**	**02 13 54.2**	**-1.5**
VA01	**Torpederas**	**2.95**	**237**	*e*S		Sn	02 14 18.4	-12
LCO	**Las Campanas**	**2.97**	**324**			**Pn**	**02 13 56.7**	**+0.4**
LCO	**Las Campanas**	**2.97**	**324**	*e*P		**Pn**	**02 13 56.5**	**+0.2**
LCO	**Las Campanas**	**2.97**	**324**	*e*P		**Pn**	**02 13 56.6**	**+0.2**
LCO				*e*S		**Sn**	**02 14 32.4**	**+0.9**
LCO				IAML			02 14 36.4	
comp=Z,1μm,0.5s								
BO04	**La Punta**	**3.00**	**212**			**Pn**	**02 13 56.9**	**+0.4**
BO04	**La Punta**	**3.00**	**212**	⇑*i*P		**Pn**	**02 13 56.5**	**+0.1**
MT09	**Talagante**	**3.02**	**219**			**Pn**	**02 13 56.2**	**-0.6**
MT09	**Talagante**	**3.02**	**219**	*e*P		**Pn**	**02 13 55.9**	**-0.9**
MT01	**Popeta**	**3.23**	**221**			**Pn**	**02 13 57.7**	**-1.8**
MT01	**Popeta**	**3.23**	**221**	*e*P		**Pn**	**02 13 57.9**	**-1.6**
MT01	**Popeta**	**3.23**	**221**	*e*P		**Pn**	**02 13 58.0**	**-1.5**
MT01				*e*S		Sn	02 14 26.8	-10
MT01				IAML			02 14 41.0	
comp=Z,145nm,0.2s								
RFA	**San Rafael**	**3.33**	**177**	*e*P		**Pn**	**02 13 59.9**	**-0.9**
RFA				*e*S		Sn	02 14 21.2	-18
RFA				IAML			02 14 39.0	
comp=Z,515nm,0.5s								
TINO	**Tinogasta**	**3.51**	**17**	*e*P		**Pn**	**02 14 05.2**	**+1.9**
TINO				*e*S		**Sn**	**02 14 37.7**	**-6.5**
TCA	**Tanti**	**3.52**	**89**	*e*P		**Pn**	**02 14 03.7**	**+0.3**
TCA				*e*S		Sn	02 14 33.2	-11
TCA				IAML			02 15 00.8	
comp=Z,429nm,0.8s								
BO01	**Tunca**	**3.56**	**214**			**Pn**	**02 14 02.5**	**-1.3**
BO01	**Tunca**	**3.56**	**214**	*e*P		**Pn**	**02 14 02.4**	**-1.4**
BO01	**Tunca**	**3.56**	**214**	*e*P		**Pn**	**02 14 02.7**	**-1.1**
BO01				*e*S		Sn	02 14 29.5	-16
BO02	**Sierra Bellavi**	**3.77**	**207**			**Pn**	**02 14 06.8**	**0.0**
BO02	**Sierra Bellavi**	**3.77**	**207**	*e*P		**Pn**	**02 14 06.4**	**-0.4**
BO02	**Sierra Bellavi**	**3.77**	**207**	*e*P		**Pn**	**02 14 06.7**	**0.0**
BO02				*e*S		**Sn**	**02 14 52.5**	**+2.3**
BO02				IAML			02 14 56.5	
comp=Z,158nm,0.1s								
AC04	**Llanos de Chal**	**3.83**	**327**			**Pn**	**02 14 07.1**	**-0.4**
AC04	**Llanos de Chal**	**3.83**	**327**	⇑*i*P		**Pn**	**02 14 06.6**	**-0.9**
AC04	**Llanos de Chal**	**3.83**	**327**	*e*S		**Sn**	**02 14 44.0**	**-7.6**
AC04				IAML			02 15 00.6	
comp=Z,284nm,0.7s								
GO03	**Copiapo**	**4.06**	**340**	*e*S		**Sn**	**02 14 51.5**	**-5.7**
GO03				IAML			02 14 59.9	
comp=Z,325nm,0.6s								
AC06	**Mina Casimiro**	**4.32**	**340**	*e*P		**Pn**	**02 14 14.2**	**+0.1**
EDS3	**Malargue**	**4.36**	**187**	*e*P		Pn	02 14 01.4	-13
EDS3				*e*S		Sn	02 14 49.8	-15
AC02	**Maricunga**	**4.60**	**355**			**Pn**	**02 14 20.0**	**+1.6**
AC02	**Maricunga**	**

comp=Z,7.4nm,1.2s
SCHQ Schefferville 85.94 1 P **P 02 25 37.9 -0.3**
comp=Z,1.1nm,0.4s,baz=180,slow=5.6,SNR=4.3
comp=Z,1.1nm,0.4s
SCHQ Schefferville 85.94 1 P **P 02 25 39.0 +0.9**
SCHQ IAmb IAmb 02 25 46.6
comp=Z,5.5nm,1.1s
KURBB Kurchatov Arra 149.09 42 PKPbc **PKPbc 02 32 45.8 -0.1**
comp=Z,0.6nm,0.7s,baz=302,slow=3.4,SNR=4.5
KSH2 Kashi 149.99 65 PKPbc **PKiKP 02 32 49.5 -0.1**
ZALV Zalesovo Beam 150.57 32 PKPbc **PKiKP 02 32 50.0 -0.1**
comp=Z,2.0nm,0.6s,baz=317,slow=3.3,SNR=11
ZALV Zalesovo Beam 150.57 32 **PKiKP 02 32 49.8 -0.3**
MKAR Makanchi Array 152.97 47 PKPbc **PKiKP 02 32 55.7 +0.4**
comp=Z,0.6nm,0.7s,baz=289,slow=3.7,SNR=6.1
MKAR PKPab **PKPab 02 33 06.2 -0.6**
comp=Z,0.5nm,0.7s,baz=297,slow=2.7,SNR=5.1
MKAR Makanchi Array 152.97 47 PKPbc **PKPbc 02 32 55.1 -0.1**
WMQ Urumqi 157.68 50 *e*PKP **PKPdf 02 32 54.8 +0.5**
WMQ LR LR
comp=N,490nm,19.7s
SONM Songino Array 163.21 11 PKPab **PKPab 02 33 51.9 +0.9**
comp=N,0.3nm,0.5s,baz=318,slow=3.6,SNR=2.0
PZH PanZhiHua 170.30 118 PKP **PKPdf 02 33 06.3 0.0**
HHC Hu-ho-hao-te 170.61 359 *e*P **PKPdf 02 33 06.8 +0.8**
NJ2 Nanjing 173.53 277 *e*P **PKPdf 02 33 08.0 +0.5**
NJ2 pmax pmax
comp=Z,4.0nm,0.6s

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*IDC **29** 02:25:15.8±3.8, 10.°86N×62.°63W, h46km±38km, mb4.0/22, mbtmp4.2/23, ML4.5/1, MS4.1/1, Error ellipse: s-maj=16.1km s-min=13.5km az=59.0*
*NEIC **29** 02:25:21.4±2.1, 10.°60N±0.°06×62.°48W±0.°06, h94km±6km, mb4.6/77, Error ellipse: s-maj=9.7km s-min=8.1km az=45.0*
*TRN **29** 02:25:22.5, 10.°66N×62.°46W, h94km, MD4.8, Paria peninsula. Felt in Trinidad MMI IV, V and VI.*
*FUNV **29** 02:25:23.2, 10.°66N×62.°44W, h96km, MW4.5, Presumed earthquake*
*VAO **29** 02:25:26.7±0.7, 9.°69N×62.°63W, h87km±3km, mb4.3, Presumed earthquake*
ISC 29 02:25:20.7±0.6, **10.°60N**±0.°04×**62.°52W**±0.°04, **h102**km±6km, **n182**, σ1**°87**/209, **mb4.5**/55, **6C-5D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.96**	**84**	↑*i*P	**Pn**	**02 25 42.2**	**+1.4**
DMDM				*e*S	**Sn**	**02 25 55.1**	**-0.9**
PSMG	**Mucurapo Girls**	**0.98**	**86**	↑*i*P	**Pn**	**02 25 42.3**	**+1.3**
PSMG				*e*S	**Sn**	**02 25 55.3**	**-1.0**
PSKH	**Kent House, Po**	**0.98**	**85**	↓*i*P	**Pn**	**02 25 42.5**	**+1.4**
PSKH				*e*S	**Sn**	**02 25 55.6**	**-0.8**
PSWS	**West Secondary**	**0.99**	**86**	*i* P	**Pn**	**02 25 42.4**	**+1.3**
PSWS				*e*S	**Sn**	**02 25 55.6**	**-0.9**
PSQC	**Port of Spain**	**0.99**	**86**	↑*i*P	**Pn**	**02 25 42.4**	**+1.3**
PSQC				*e*S	**Sn**	**02 25 55.2**	**-1.3**
TRN	**Trinidad (W)**	**1.10**	**87**	*e*P	**Pn**	**02 25 43.4**	**+1.0**
TRN				*e*S	**Sn**	**02 25 57.5**	**-1.3**
TRN	**Trinidad (W)**	**1.10**	**87**	↑*i*P	**Pn**	**02 25 43.6**	**+1.2**
TRN				*e*S	**Sn**	**02 25 57.5**	**-1.3**
GRFF	**Grenada Fort F**	**1.64**	**28**	↑*i*P	**Pn**	**02 25 48.9**	**+1.1**
GRFF				*e*S	**Sn**	**02 26 08.5**	**-1.6**
GRGR	**Grenville**	**1.75**	**29**		**Pn**	**02 25 50.4**	**+0.3**
GRGR	**Grenville**	**1.75**	**29**	*e*P	**Pn**	**02 25 50.5**	**+0.3**
GRGR				*e*S	**Sn**	**02 26 10.9**	**-1.7**
GRGR	**Grenville**	**1.75**	**29**	↓*i*P	**Pn**	**02 25 50.5**	**+0.3**
GRGR				*e*S	**Sn**	**02 26 11.3**	**-1.2**
GRW	**Mount Saint Ca**	**1.77**	**28**	↓*i*P	**Pn**	**02 25 51.9**	**+1.4**
GRW				*e*S	**Sn**	**02 26 12.8**	**-0.4**
GRSS	**Sisters**	**1.91**	**28**	↑*i*P	**Pn**	**02 25 52.3**	**0.0**
GRSS				*e*S	**Sn**	**02 26 15.2**	**-1.1**
PCRV	**Puerto La Cruz**	**2.12**	**259**	*e*P	**Pn**	**02 25 57.7**	**+2.7**
PCRV				*e*S	**Sn**	**02 26 22.9**	**+1.6**
PCRV	**Puerto La Cruz**	**2.12**	**259**	*e*P	**Pn**	**02 25 57.5**	**+2.5**
PCRV				*e*S	**Sn**	**02 26 23.1**	**+1.9**
SVB	**Belmont**	**2.94**	**25**	*e*P	**Pn**	**02 26 06.0**	**+0.4**
SVB				*e*S	**Sn**	**02 26 37.8**	**-2.5**
SVB	**Belmont**	**2.94**	**25**	*e*P	**Pn**	**02 26 06.2**	**+0.5**
SVB				*e*S	**Sn**	**02 26 39.6**	**-0.7**
MCLT	**Moule a Chique**	**3.46**	**26**	*e*P	**Pn**	**02 26 12.8**	**+0.1**
MCLT				*e*S	**Sn**	**02 26 51.4**	**-1.4**
SLAC	**Saint Lucia, A**	**3.65**	**26**	↓*i*P	**Pn**	**02 26 15.2**	**0.0**
SLAC				*e*S	**Sn**	**02 26 55.7**	**-1.6**
SLCP	**Castries, St.**	**3.71**	**24**	*e*S	**Sn**	**02 26 57.5**	**-1.3**
SLBI	**Saint Lucia, B**	**3.73**	**24**	*i* P	**Pn**	**02 26 16.2**	**0.0**
SLBI				*e*S	**Sn**	**02 26 57.3**	**-2.0**
BBGH	**Gun Hill**	**3.85**	**49**	Pn	**Pn**	**02 26 18.9**	**+1.0**
BBGH	**Gun Hill**	**3.85**	**49**	*e*P	**Pn**	**02 26 19.0**	**+1.1**
BBGH				*e*S	**Sn**	**02 26 57.7**	**-4.5**
H05S1	**Guadeloupe/Mar** SNR=786	**4.14**	**23**	P	**Pn**	**02 26 22.4**	**+0.5**
H05S1				S	**Sn**	**02 27 05.8**	**-3.6**
BIM	**Bigot**	**4.15**	**20**		**Pn**	**02 26 22.2**	**+0.3**
BIM	**Bigot**	**4.15**	**20**	*e*P	**Sn**	**02 26 22.1**	**+0.2**
BIM				*e*S	**Sn**	**02 27 05.6**	**-3.8**
BIM	**Bigot**	**4.15**	**20**	↓*i*P	**Pn**	**02 26 22.2**	**+0.3**
BIM				*e*S	**Sn**	**02 27 07.5**	**-1.9**
MPOM	**Morne Pois Mar**	**4.16**	**23**		**Pn**	**02 26 22.2**	**+0.2**
FUNV	**FUNVISIS**	**4.22**	**269**	*e*P	**Pn**	**02 26 25.6**	**+2.6**
FUNV				*e*S	**Sn**	**02 27 10.9**	**-0.5**
CXM	**Morne La Croix**	**4.39**	**17**		**Pn**	**02 26 25.7**	**+0.3**
SVN	**Savane Anatole**	**4.42**	**17**	Pn	**Pn**	**02 26 26.0**	**+0.3**
SVN	**Savane Anatole**	**4.42**	**17**	*e*P	**Pn**	**02 26 25.9**	**+0.3**
SVN				*e*S	**Sn**	**02 27 12.5**	**-3.6**
TACV	**Tcata**	**4.46**	**265**	*e*P	**Pn**	**02 26 28.0**	**+1.9**
TACV				*e*S	**Sn**	**02 27 17.4**	**+0.4**
DSLB	**Salisbury**	**4.93**	**12**	*e*P	**Pn**	**02 26 33.2**	**+0.6**
CACV	**CAICARA DEL OR**	**4.98**	**233**	*e*P	Pn	02 26 30.2	-3.1
BENV	**Beln**	**5.04**	**263**	*e*P	**Pn**	**02 26 36.5**	**+2.4**
BENV				*e*S	**Sn**	**02 27 29.9**	**-1.2**
DWS	**Wesley**	**5.08**	**13**	*e*P	**Pn**	**02 26 35.2**	**+0.6**
TURV	**Turiamo**	**5.23**	**269**	*e*P	**Pn**	**02 26 38.0**	**+1.3**
TURV				*e*S	**Sn**	**02 27 34.2**	**-1.5**
TDBA	**Terre de Bas,**	**5.29**	**9**	Pn	**Pn**	**02 26 38.2**	**+0.8**
TBG	**Guadaloupe-3**	**5.29**	**9**	*e*P	**Pn**	**02 26 38.5**	**+1.1**
MAGL	**Barre de l'Ile**	**5.46**	**13**		**Pn**	**02 26 41.0**	**+1.4**
MMLZ	**Guadeloupe Bro**	**5.48**	**9**	*e*P	**Pn**	**02 26 40.8**	**+0.8**
MMLZ				*e*S	**Sn**	**02 27 38.3**	**-3.4**
CBE	**Ff, Capester**	**5.51**	**9**		**Pn**	**02 26 41.5**	**+1.0**
DHSZ	**Broadband at M**	**5.69**	**7**	*e*P	**Pn**	**02 26 44.2**	**+1.4**
DHSZ				*e*S	**Sn**	**02 27 43.6**	**-3.3**
GDHS	**Morne Mazeau,**	**5.69**	**7**		**Pn**	**02 26 43.3**	**+0.4**
DSDZ	**La Diserade, G**	**5.86**	**14**	*e*P	**Pn**	**02 26 46.0**	**+0.9**
GDSD	**La Dsirade Is**	**5.86**	**14**		**Pn**	**02 26 45.4**	**+0.3**
H05N1	**Guadeloupe/Mar** SNR=110	**5.86**	**14**	P	**Pn**	**02 26 45.8**	**+0.6**
H05N1				S	**Sn**	**02 27 47.6**	**-3.4**
MAPV	**Macapo**	**5.89**	**263**	*e*P	**Pn**	**02 26 47.0**	**+1.4**
MAPV				*e*S	**Sn**	**02 27 49.4**	**-2.4**
MLYT	**Lee's Yard**	**6.10**	**3**	*e*P	**Pn**	**02 26 49.5**	**+1.1**
MBWH	**Windy Hill**	**6.12**	**3**	*e*P	**Pn**	**02 26 50.1**	**+1.4**
MBFL	**Flemmings, Mon**	**6.12**	**3**	*e*P	**Pn**	**02 26 49.5**	**+0.8**
JACV	**Jacura**	**6.22**	**275**	*e*P	**Pn**	**02 26 51.6**	**+1.6**
TEPV	**Terepaima**	**6.59**	**265**	*e*P	**Pn**	**02 26 56.3**	**+1.1**
TEPV				*e*S	**Sn**	**02 28 06.3**	**-2.6**
SKI	**Saint Kitts**	**6.70**	**358**	*e*P	**Pn**	**02 26 58.2**	**+1.7**
ANWB	**Willy Bob**	**7.07**	**6**	*e*P	**Pn**	**02 27 03.1**	**+1.6**
ANWB				*e*S	**Sn**	**02 28 14.3**	**-6.0**
SMRT	**St. Maarten**	**7.43**	**356**		**Pn**	**02 27 08.3**	**+1.8**
SMRT	**St. Maarten**	**7.43**	**356**	*e*P	**Pn**	**02 27 08.4**	**+1.9**
SDV	**Santo Domingo** 5.3nm,0.4s,baz=126,slow=6.3,SNR=16	**8.18**	**259**	P	**Pn**	**02 27 15.5**	**-1.3**
SDV	18nm,0.3s,baz=40,slow=18,SNR=13			S	**Sn**	**02 28 43.7**	**-4.0**
SDV	**Santo Domingo**	**8.18**	**259**		**Pn**	**02 27 17.4**	**+0.6**
SDV	**Santo Domingo**	**8.18**	**259**	*e*P	**Pn**	**02 27 16.8**	**0.0**
SDV	**Santo Domingo** 403nm13nm,0.8s	**8.18**	**259**	P	**Pn**	**02 27 17.0**	**+0.2**
SDV	403nm13nm,0.8s			S	**Sn**	**02 28 44.6**	**-3.1**
SDV	**Santo Domingo**	**8.18**	**259**	*e*P	**Pn**	**02 27 17.3**	**+0.5**
SDV				*e*S	**Sn**	**02 28 42.4**	**-5.3**
BOAV	**Boa Vista**	**8.39**	**166**		**Pn**	**02 27 19.1**	**-0.4**
BOAV	**Boa Vista**	**8.39**	**166**	*e*P	Pn	02 27 14.4	-5.1
BOAV				*e*S	Sn	02 28 38.2	-14
SOCV	**Socops**	**8.54**	**255**	*e*P	**Pn**	**02 27 22.5**	**+0.9**
SOCV				*e*S	Sn	02 28 50.4	-5.9
URIC	**Uribia, Colomb**	**9.36**	**278**	P	**Pn**	**02 27 34.9**	**+2.2**
	12nm,1.2s						
CAPV	**Capacho**	**10.04**	**255**	*e*P	**Pn**	**02 27 42.7**	**+0.4**
CAPV				*e*S	Sn	02 29 23.7	-9.5
CRJC	**Cerrejon, Guaj** 16nm,1.1s	**10.19**	**273**	P	**Pn**	**02 27 44.7**	**+0.6**
DR12	**Loma Pena Alta**	**10.50**	**322**		**Pn**	**02 27 51.1**	**+2.8**
PAMC	**Pamplona, Colo** 310nm6.5nm,0.5s	**10.56**	**253**	P	**Pn**	**02 27 50.0**	**+0.5**
PAMC				S	**Sn**	**02 29 43.6**	**-2.6**
OCAC	**Ocana** 310nm6.5nm,0.5s	**10.91**	**259**	P	**Pn**	**02 27 55.4**	**+1.4**
MDP	**Montagnes des** 779nm19nm,0.5s	**11.21**	**118**	P	**Pn**	**02 27 54.8**	**-3.1**
MDP	3.0nm,0.3s,baz=311,slow=14,SNR=32			S	Sn	02 29 51.6	-10
BARC	**Barichara** 60nm,0.2s,baz=18,slow=20,SNR=29	**11.27**	**250**	P	**Pn**	**02 27 57.9**	**-1.0**
RUSC	**La Rusia** 411nm13nm,0.7s	**11.45**	**247**	P	**Pn**	**02 28 02.2**	**+0.7**
RUSC	9.7nm,0.8s			S	Sn	02 30 00.6	-7.1
RUSC	**La Rusia**	**11.45**	**247**	*e*P	**Pn**	**02 28 00.8**	**-0.7**
RUSC				*e*S	Sn	02 29 55.9	-12
PTBC	**PUERTO BERRIO,** 4.7nm,1.5s	**12.47**	**252**	P	**Pn**	**02 28 14.3**	**-0.4**
SJCC	**San Jacinto, C** 11nm,1.0s	**12.48**	**268**	P	**Pn**	**02 28 16.1**	**+1.3**
CHIC	**Chingaza** 9.5nm,0.7s	**12.59**	**243**	P	**Pn**	**02 28 18.6**	**+2.0**
VILC	**Villavicencio,** 590nm22nm,0.7s	**12.81**	**241**	P	**Pn**	**02 28 22.0**	**+2.7**
VILC	590nm22nm,0.7s			S	**Sn**	**02 30 37.7**	**-2.7**
URES	**San Jos de Ur** 3.3nm,0.9s	**13.15**	**259**	P	**Pn**	**02 28 25.1**	**+1.4**
NORC	**Norcasia** 332nm5.7nm,0.6s	**13.21**	**249**	P	**Pn**	**02 28 25.3**	**+0.9**
MACA	**Manacapuru-AM**	**13.79**	**172**	Pn	**Pn**	**02 28 31.8**	**-0.2**
GUY2C	**Guyana, Caldas** 13nm,0.7s	**13.79**	**248**	P	**Pn**	**02 28 34.6**	**+2.2**
GUY2C	13nm,0.7s			S	**Sn**	**02 31 00.9**	**-3.7**
URMC	**La Uribe, Meta**	**13.85**	**239**	P	**Pn**	**02 28 35.8**	**+3.0**
URMC				S	**Sn**	**02 31 01.6**	**-3.8**
TEFE	**Tefe**	**14.17**	**189**	*e*P	Pn	02 28 32.1	-4.8
TEFE				*e*S	Sn	02 30 58.0	-15
ITTB	**Itaituba**	**16.33**	**155**	*e*P	**Pn**	**02 29 01.5**	**-2.6**
ITTB				*e*S	Sn	02 31 52.6	-13
NPGB	**Novo Progresso**	**18.92**	**158**	*e*P	**P**	**02 29 32.5**	**-1.2**
CLDB	**Colider**	**22.35**	**162**	*e*P	**P**	**02 30 10.9**	**+0.4**
CLDB				*e*S	**S**	**02 34 02.9**	**-6.6**
PDRB	**Porto dos Gac**	**22.80**	**165**	*e*P	**P**	**02 30 13.5**	**-1.6**
PDRB				*e*S	**S**	**02 34 10.2**	**-6.4**
SOR	**Soroa**	**23.03**	**304**	P	**P**	**02 30 18.9**	**+1.7**
SOR	comp=Z,24nm,1.3s			IAmb	IAmb	02 30 45.8	
VILB	**Vilhena**	**23.51**	**174**		**P**	**02 30 24.5**	**+2.7**
VILB	comp=Z,27nm,0.8s			IAmb	IAmb	02 30 28.1	
VILB	**Vilhena**	**23.51**	**174**	*e*P	**P**	**02 30 21.0**	**-0.8**
VILB				*e*S	**S**	**02 34 22.6**	**-5.3**
SMTB	**Santa Maria do**	**24.38**	**142**	*e*P	**P**	**02 30 31.4**	**+1.8**
SMTB				*e*S	**S**	**02 34 41.0**	**-1.1**
DWPF	**Disney Wildern**	**24.87**	**317**	P	**P**	**02 30 36.8**	**+2.9**
DWPF	comp=Z,33nm,0.8s			IAmb	IAmb	02 30 38.0	
LPAZ	**La Paz** comp=Z,2.8nm,0.8s,baz=360,slow=8.4,SNR=13	**27.28**	**192**	P	**P**	**02 31 00.2**	**+3.8**
LPAZ	**La Paz** comp=Z,2.8nm,0.8s	**27.28**	**192**	*e*P	**P**	**02 30 55.7**	**-0.7**
LPAZ				*e*S	**S**	**02 35 24.0**	**-5.0**
BDFB	**Brasilia** comp=Z,1.0nm,0.4s,baz=281,slow=8.8,SNR=3.5	**29.77**	**151**	P	**P**	**02 31 20.9**	**+3.0**
	comp=Z,1.0nm,0.4s						
BDFB	**Brasilia**	**29.77**	**151**	P	**P**	**02 31 17.7**	**-0.3**
152A	**Waverly Hall** comp=Z,7.6nm,0.6s	**30.01**	**320**	IAmb	IAmb	02 31 22.2	
PB11	**IPOC Station P**	**30.97**	**193**	P	**P**	**02 31 29.5**	**+0.9**
PB11	comp=Z,20nm,1.2s			IAmb	IAmb	02 31 31.3	
LRAL	**Lakeview Retre**	**31.70**	**319**		**P**	**02 31 36.3**	**+1.6**
LRAL	comp=Z,7.7nm,0.8s			IAmb	IAmb	02 31 37.1	
CPCT	**Cooper Cave**	**31.82**	**325**	P	**P**	**02 31 37.2**	**+1.4**
CPCT	comp=Z,10nm,1.4s			IAmb	IAmb	02 31 38.3	
Y49A	**Blount Mountai**	**31.86**	**320**	P	**P**	**02 31 37.4**	**+1.2**
Y49A	comp=Z,7.4nm,0.6s			IAmb	IAmb	02 31 38.3	
PB01	**IPOC Station P** comp=Z,17nm,1.3s	**32.18**	**192**	IAmb	IAmb	02 31 43.1	
Z47A	**Carrollton**	**32.51**	**318**	P	**P**	**02 31 43.3**	**+1.5**
Z47A	comp=Z,16nm,0.9s			IAmb	IAmb	02 31 44.5	
X48A	**Hartselle**	**32.64**	**321**	P	**P**	**02 31 44.7**	**+1.7**
X48A	comp=Z,6.4nm,0.6s			IAmb	IAmb	02 31 45.2	
Q54A	**Coxs Mills**	**32.66**	**333**	P	**P**	**02 31 45.0**	**+2.0**
V48A	**Smith Brothers** comp=Z,7.9nm,0.7s	**33.36**	**322**	IAmb	IAmb	02 31 51.6	
OXF	**Oxford**	**34.19**	**318**	P	**P**	**02 31 57.5**	**+1.1**
WVT	**Waverly**	**34.23**	**322**	P	**P**	**02 31 57.6**	**+0.8**
WVT	comp=Z,7.8nm,0.9s			IAmb	IAmb	02 31 58.6	
PAOC	**Oil Creek Stat**	**34.30**	**337**	P	**P**	**02 31 58.8**	**+1.5**
T47A	**Sharon Grove**	**34.38**	**324**		**P**	**02 31 59.2**	**+1.1**
T47A	comp=Z,12nm,0.7s			IAmb	IAmb	02 32 00.5	
F64A	**Sherman**	**35.49**	**353**	P	**P**	**02 32 08.2**	**+0.7**
CPUP	**Villa Florida** comp=Z,2.6nm,0.6s,baz=353,slow=11,SNR=11	**37.05**	**172**	P	**P**	**02 32 23.0**	**+2.1**
	comp=Z,2.6nm,0.6s						
CPUP	**Villa Florida**	**37.05**	**172**		**P**	**02 32 23.2**	**+2.3**
S39A	**Bolivar** comp=Z,13nm,1.3s	**38.63**	**319**	IAmb	IAmb	02 32 35.0	
BRDY	**Brady**	**39.54**	**307**		**P**	**02 32 42.1**	**+0.3**
BRDY	comp=Z,5.9nm,0.6s			IAmb	IAmb	02 32 42.6	
JCT	**Junction City** comp=Z,4.9nm,0.6s	**39.87**	**305**	IAmb	IAmb	02 32 45.9	
X34A	**Smith Ranch, M**	**40.09**	**312**		**P**	**02 32 46.9**	**+0.5**
APMT	**Aspermont**	**41.23**	**309**		**P**	**02 32 55.8**	**0.0**
APMT	comp=Z,5.9nm,0.5s			IAmb	IAmb	02 32 57.2	
DKNS	**Dickens**	**41.98**	**309**		**P**	**02 33 02.0**	**+0.1**
DKNS	comp=Z,4.1nm,0.6s			IAmb	IAmb	02 33 03.0	
SMWD	**Samnorwood** comp=Z,4.6nm,0.5s	**42.08**	**312**	IAmb	IAmb	02 33 02.7	
TX31	**Lajitas Ar. Si**	**42.65**	**302**	P	**P**	**02 33 07.9**	**+0.4**
TXAR	**Lajitas Array** comp=Z,0.6nm,0.4s,baz=118,slow=9.6,SNR=34	**42.65**	**302**	P	**P**	**02 33 06.8**	**-0.7**
TXAR	comp=Z,1.1nm,0.6s,baz=98,slow=4.1,SNR=9.7			PcP	**PcP**	**02 34 58.4**	**+0.6**
	comp=Z,0.6nm,0.4s						
TXAR	**Lajitas Array**	**42.65**	**302**	P	**P**	**02 33 06.9**	**-0.5**
I37A	**Lemond, Waseca**	**42.67**	**327**		**P**	**02 33 07.6**	**+0.3**
MSTX	**Muleshoe** comp=Z,3.3nm,0.6s	**43.51**	**309**	IAmb	IAmb	02 33 15.7	
SCHQ	**Schefferville** comp=Z,5.1nm,0.5s,baz=178,slow=6.7,SNR=26	**44.26**	**356**	P	**P**	**02 33 18.2**	**-1.7**
	comp=Z,5.1nm,0.5s						
SCHQ	**Schefferville** comp=Z,5.8nm,0.6s	**44.26**	**356**	IAmb	IAmb	02 33 21.2	
RTBA	**Rita Blanca** comp=Z,11nm,0.9s	**44.48**	**312**	IAmb	IAmb	02 33 23.4	
F33A	**5 Mile Ranch,**	**45.41**	**327**		**P**	**02 33 29.0**	**-0.2**
F33A	comp=Z,5.5nm,0.5s			IAmb	IAmb	02 33 29.1	
ANMO	**Albuquerque**	**46.70**	**308**	P	**P**	**02 33 40.8**	**+1.0**
AGMN	**Agassiz Nation** comp=Z,4.6nm,0.7s	**46.81**	**330**	IAmb	IAmb	02 33 40.0	
ULM	**Lac du Bonnet** comp=Z,6.1nm,0.4s,baz=128,slow=8.0,SNR=21	**48.14**	**332**	P	**P**	**02 33 49.2**	**-1.1**
	comp=Z,6.1nm,0.4s						
ULM	**Lac du Bonnet**	**48.14**	**332**		**P**	**02 33 49.2**	**-1.1**
ULM	comp=Z,6.7nm,0.5s			IAmb	IAmb	02 33 50.3	
PLCA	**Paso Flores** comp=Z,2.5nm,0.8s,baz=347,slow=8.2,SNR=5.9	**51.61**	**188**	P	**P**	**02 34 19.5**	**+2.7**
	comp=Z,2.5nm,0.8s						
BW06	**Boulder Array** comp=Z,7.7nm,0.6s	**51.90**	**317**	IAmb	IAmb	02 34 20.3	
PD31	**Pinedale Array**	**51.90**	**317**	IAmb	IAmb	02 34 20.3	
	comp=Z,6.6nm,0.6s						
PDAR	**Pinedale Array** comp=Z,2.5nm,0.5s,baz=114,slow=10.0,SNR=38	**51.90**	**317**	P	**P**	**02 34 18.6**	**-0.7**
PDAR				PcP	**PcP**	**02 35 30.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=124,slow=3.7,SNR=2.1						
	comp=Z,2.5nm,0.5s						
PDAR	**Pinedale Array**	**51.90**	**317**	P	**P**	**02 34 18.3**	**-0.9**
FRB	**Frobisher Bay** comp=Z,192nm,19.2s,baz=274,slow=38	**53.24**	**357**	LR	LR	02 59 15.6	
YHL	**Hebgen Lake** comp=Z,7.3nm,0.7s	**53.82**	**319**	IAmb	IAmb	02 34 36.0	
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.5s,baz=204,slow=26,SNR=2.6	**56.82**	**309**	P	**P**	**02 34 54.8**	**-0.1**
	comp=Z,0.3nm,0.5s						
DBIC	**Dimbokro** comp=Z,3.9nm,0.8s,baz=281,slow=11,SNR=3.1	**57.08**	**89**	P	**P**	**02 34 58.5**	**+1.6**
	comp=Z,3.9nm,0.8s						
DBIC	**Dimbokro**	**57.08**	**89**	P	**P**	**02 34 57.5**	**+0.6**
ESDC	**Sonseca Array** comp=Z,1.6nm,0.9s,baz=258,slow=6.1,SNR=7.1	**59.20**	**50**	P	**P**	**02 35 12.5**	**+1.2**
	comp=Z,1.6nm,0.9s						
TORD	**Torodi Ar. Bea** comp=Z,2.0nm,0.7s,baz=299,slow=6.7,SNR=23	**62.75**	**81**	P	**P**	**02 35 37.1**	**+1.4**
	comp=Z,2.0nm,0.7s						
POIN	**Pond Inlet**	**62.75**	**355**		**P**	**02 35 33.6**	**-1.1**
POIN	comp=Z,4.0nm,0.6s			IAmb	IAmb	02 35 34.0	
YKA	**Yellowknife Ar** comp=Z,1.2nm,0.7s,baz=110,slow=6.7,SNR=25	**63.75**	**336**	P	**P**	**02 35 39.8**	**-1.6**
	comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**63.75**	**336**	P	**P**	**02 35 39.7**	**-1.7**
EKA	**Eskdalemuir Ar** comp=Z,0.4nm,0.3s,baz=297,slow=5.5,SNR=4.6	**64.14**	**33**	P	**P**	**02 35 45.1**	**+1.0**
	comp=Z,0.4nm,0.3s						
NB2	**NORSAR Subarra** comp=Z,1.0nm,0.6s,baz=262,slow=6.2	**72.92**	**29**	P	**P**	**02 36 40.1**	**+1.4**
NOA	**NORSAR Array B** comp=Z,1.6nm,0.7s,baz=267,slow=6.1,SNR=6.0	**72.92**	**29**	P	**P**	**02 36 39.8**	**+1.0**
	comp=Z,1.6nm,0.7s						
GERES	**GERESS Array B** comp=Z,0.9nm,0.7s,baz=227,slow=7.1,SNR=5.0	**73.03**	**42**	P	**P**	**02 36 40.6**	**+0.9**
	comp=Z,0.9nm,0.7s						
NC602	**NORSAR Array S**	**73.04**	**30**	P	**P**	**02 36 39.9**	**+0.6**
HFS	**Hagfors** comp=Z,3.8nm,0.6s,baz=223,slow=3.7,SNR=20	**74.01**	**30**	P	**P**	**02 36 46.1**	**+1.0**
	comp=Z,3.8nm,0.6s						
J29N	**Klondike Camp**	**74.34**	**334**	IAmb	IAmb	02 36 48.6	
DAWY	**Dawson**	**74.79**	**334**	P	**P**	**02 36 49.5**	**-0.2**
SPITS	**Spitsbergen Ar** comp=Z,8.0nm,1.1s,baz=202,slow=1.8,SNR=6.4	**77.42**	**12**	P	**P**	**02 37 04.5**	**+0.2**
	comp=Z,8.0nm,1.1s						
ILAR	**Eielson Array** comp=Z,1.6nm,0.7s,baz=94,slow=4.4,SNR=22	**78.09**	**334**	P	**P**	**02 37 07.3**	**-0.8**
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**78.09**	**334**	P	**P**	**02 37 06.7**	**-1.5**
NEA2	**Nenana** comp=Z,6.4nm,0.8s	**79.03**	**334**	IAmb	IAmb	02 37 13.4	
FINES	**FINESS Array B** comp=Z,1.6nm,0.4s,baz=272,slow=4.4,SNR=19	**80.11**	**29**	P	**P**	**02 37 20.1**	**+0.9**
	comp=Z,1.6nm,0.4s						
FINES	**FINESS Array B**	**80.11**	**29**	P	**P**	**02 37 19.7**	**+0.5**
BRLK	**Bradley Lake**	**80.11**	**329**	P	**P**	**02 37 19.3**	**0.0**
BUR08	**Bucovina Ar. S**	**80.73**	**43**	P	**P**	**02 37 25.2**	**+2.2**
BUR08	comp=Z,6.7nm,1.0s			IAmb	IAmb	02 37 26.2	
BURAR	**Bucovina Array**	**80.75**	**43**	P	**P**	**02 37 25.3**	**+2.2**
IMAR	**Indian Mountai**	**80.90**	**336**	P	**P**	**02 37 23.1**	**-0.3**
B20K	**Meade River** comp=Z,3.7nm,0.7s	**81.71**	**340**	IAmb	IAmb	02 37 28.6	
AKASG	**Malin Array Be** comp=Z,0.9nm,0.6s,baz=281,slow=4.1,SNR=3.1	**83.00**	**40**	P	**P**	**02 37 35.3**	**+0.7**
	comp=Z,0.9nm,0.6s						
K17K	**Iditarod** comp=Z,8.4nm,0.8s	**83.31**	**333**	IAmb	IAmb	02 37 37.5	
E18K	**Tukpahlearik C**	**83.39**	**337**	P	**P**	**02 37 36.7**	**+0.4**
E18K	comp=Z,5.5nm,0.5s			IAmb	IAmb	02 38 20.7	
TNA	**Tin City** comp=Z,2.9nm,0.7s	**86.70**	**336**	IAmb	IAmb	02 37 54.3	
BRTR	**Keskin Array B** comp=Z,0.8nm,0.7s,baz=357,slow=2.5,SNR=5.3	**88.00**	**50**	P	**P**	**02 38 00.7**	**+0.8**
	comp=Z,0.8nm,0.7s						
BRTR	**Keskin Array B**	**88.00**	**50**	P	**P**	**02 38 00.8**	**+1.0**
WMQ	**Urumqi**	**119.44**	**24**	*e*PKP	**PKPdf**	**02 43 58.8**	**+0.1**
WMQ				PKS	**PKSdf**	**02 47 31.8**	**-3.6**
HHC	**Hu-ho-hao-te**	**128.52**	**6**	*e*P	**PKPdf**	**02

LOPP1				IAML			02 45 49.2	
	comp=Z,49nm,0.7s							
LONE3	**El Aguacate, B**	**2.63**	**266**	*i* P	**Pb**		**02 44 59.0**	**-1.1**
LONE3				*e*S	**Sb**		**02 45 36.0**	**+3.9**
LONE3				IAML			02 45 38.5	
	comp=Z,20nm,0.6s							
PDPR	**Patillas Dam,**	**2.65**	**107**	Pn	**Pn**		**02 44 54.4**	**+0.2**
PDPR				Sn	**Sn**		**02 45 27.0**	**+1.7**
LODU1	**El Espartillar**	**2.68**	**260**	*i* P	**Pb**		**02 44 59.9**	**-0.9**
LODU1				IAML			02 45 39.9	
	comp=Z,34nm,1.5s							
HUMP	**Col San Antoni**	**2.78**	**104**		**Pn**		**02 44 56.3**	**+0.4**
HUMP				IAML			02 45 37.4	
	comp=Z,26nm,0.3s							
HUMP				IAML			02 45 38.0	
	comp=Z,39nm,0.2s							
LOBH	**Bahia de las A**	**2.96**	**252**	*i* P	**Pb**		**02 45 02.8**	**-2.8**
LOBH				IAML			02 45 57.0	
	comp=Z,30nm,2.8s							
GRTK	**Grand Turk**	**3.53**	**320**	*i* P	**Pn**		**02 45 03.1**	**-3.1**

*SOME **29** 02:44:15.0, 41°.45N × 81°.03E, h20km*
*NNC **29** 02:44:17.5 ± 2.1, 41°.52N × 80°.85E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=14.3km s-min=12.1km az=155.0*
ISC 29 02:44:18.9 ± 2.6, 41°.63N ± 0°.09 × 80°.84E ± 0°.07, h13km ± 13km, n41, σ1s 21/54, 8C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.83**	**327**	P		**Pn**	**02 44 49.7**	**-0.5**
	106nm,0.2s							
SHLS				S		**Sb**	**02 45 14.6**	**-0.6**
	463nm,0.6s							
SHLS	**Shalkode**	**1.83**	**327**	*e*P		**Pn**	**02 44 49.7**	**-0.5**
	106nm,0.2s							
SHLS				*e*S		**Sb**	**02 45 14.6**	**-0.6**
	463nm,0.6s							
KTMS	**Ketmen**	**1.85**	**349**	Pg		**Pn**	**02 44 52.1**	**+1.7**
	33nm,0.2s							
KTMS				Lg		Lg	02 45 19.2	
	109nm,0.3s							
KTMS	**Ketmen**	**1.85**	**349**	*e*P		**Pn**	**02 44 52.1**	**+1.7**
	33nm,0.2s							
KTMS				*e*S		**Sg**	**02 45 19.2**	**+0.9**
	109nm,0.3s							
PDGK	**Podgornoye**	**1.97**	**330**	⇑Pn		**Pn**	**02 44 53.2**	**+1.1**
	41nm,0.6s							
PDGK				⇑Sn		**Sg**	**02 45 24.0**	**+1.8**
	130nm,0.5s							
UZB	**Uzynbulak**	**2.02**	**319**	Pg		**Pb**	**02 44 56.1**	**+0.5**
	46nm,0.3s							
UZB				Lg		Lg	02 45 26.2	
	324nm,0.6s							
UZB	**Uzynbulak**	**2.02**	**319**	*e*P		**Pb**	**02 44 56.1**	**+0.5**
	46nm,0.3s							
UZB				*e*S		**Sg**	**02 45 26.2**	**+2.2**
	324nm,0.6s							
SATY	**Saty**	**2.30**	**309**	Pg		**Pb**	**02 45 01.2**	**+0.9**
	122nm,0.7s							
SATY				Lg		Lg	02 45 35.1	
	185nm,0.4s							
KPKS	**Kokpek**	**2.43**	**320**	Pg		**Pb**	**02 45 02.3**	**-0.2**
	0.3nm,0.1s							
KPKS				Lg		Lg	02 45 36.6	
	64nm,0.7s							
KPKS	**Kokpek**	**2.43**	**320**	*e*P		**Pb**	**02 45 02.3**	**-0.2**
	0.3nm,0.1s							
KPKS				*e*S		**Sg**	**02 45 36.6**	**-0.2**
	64nm,0.7s							
KURS	**Kuram**	**2.71**	**314**	Pg		**Pb**	**02 45 07.3**	**+0.1**
	16nm,0.3s							
KURS				Lg		Lg	02 45 45.4	
	31nm,0.7s							
DJR	**Jarkent**	**2.81**	**344**	Pg		**Pb**	**02 45 08.9**	**0.0**
	9.4nm,0.4s							
DJR				Lg		Lg	02 45 48.1	
	14nm,0.6s							
DJR	**Jarkent**	**2.81**	**344**	*e*P		**Pb**	**02 45 08.9**	**0.0**
	9.4nm,0.4s							
DJR				*e*S		**Sg**	**02 45 48.0**	**-0.9**
	14nm,0.6s							
KNOS	**Konyrlen**	**2.98**	**336**	Pg		**Pb**	**02 45 12.5**	**+0.5**
	11nm,0.3s							
KNOS				Lg		Lg	02 45 53.8	
	44nm,0.5s							
BLB	**Baldybastay**	**3.01**	**326**	Pg		**Pb**	**02 45 13.2**	**+0.7**
	26nm,0.4s							
BLB				Lg		Lg	02 45 55.5	
	53nm,0.5s							
KOTS	**Kotyrbulak**	**3.19**	**301**	Pg		**Pb**	**02 45 15.8**	**+0.3**
	14nm,0.7s							
KOTS				Lg		Lg	02 45 59.6	
	109nm,0.7s							
KOTS	**Kotyrbulak**	**3.19**	**301**	*e*P		**Pb**	**02 45 15.8**	**+0.3**
	14nm,0.7s							
KOTS				*e*S		**Sg**	**02 45 59.6**	**-1.7**
	109nm,0.7s							
MDOK	**Medeo**	**3.20**	**300**	Pg		**Pb**	**02 45 16.0**	**+0.4**
	17nm,0.6s							
MDOK				Lg		Lg	02 46 00.5	
	53nm,0.6s							
TNSS	**Tian-Shan**	**3.21**	**297**	Pg		**Pb**	**02 45 16.4**	**+0.4**
	3.4nm,0.5s							
TNSS				Lg		Lg	02 46 01.1	
	8.2nm,0.5s							
TNSS	**Tian-Shan**	**3.21**	**297**	*e*P		**Pb**	**02 45 16.4**	**+0.4**
	3.4nm,0.5s							
TNSS				*e*S		**Sg**	**02 46 01.1**	**-0.9**
	8.2nm,0.5s							
ARXS	**Arharly**	**3.40**	**320**	Pg		**Pb**	**02 45 20.6**	**+1.6**
	7.5nm,0.5s							
ARXS				Lg		Lg	02 46 07.9	
	27nm,0.5s							
ARXS	**Arharly**	**3.40**	**320**	*e*P		**Pb**	**02 45 20.6**	**+1.6**
	7.5nm,0.5s							
ARXS				*e*S		**Sg**	**02 46 07.9**	**0.0**
	27nm,0.5s							
KTBS	**Karatobe**	**3.70**	**306**	Pg		**Pb**	**02 45 25.7**	**+1.5**
	10nm,0.6s							
KTBS				Lg		Lg	02 46 17.0	
	0.3nm,0.5s							
KTBS	**Karatobe**	**3.70**	**306**	*e*P		**Pb**	**02 45 25.7**	**+1.5**
	10nm,0.6s							
KTBS				*e*S		**Sg**	**02 46 17.0**	**-0.8**
	0.3nm,0.5s							
TDK	**Taldyqorghan**	**3.81**	**333**	Pg		**Pb**	**02 45 27.9**	**+2.0**
	32nm,0.1s							
TDK				Lg		Lg	02 46 20.6	
	61nm,0.8s							
TDK	**Taldyqorghan**	**3.81**	**333**	*e*P		**Pb**	**02 45 27.9**	**+2.0**
	32nm,0.1s							
TDK				*e*S		**Sg**	**02 46 20.6**	**-0.5**
	61nm,0.8s							
KST	**Kastek**	**3.88**	**293**	Pg		**Pb**	**02 45 28.2**	**+1.0**
	17nm,0.5s							
KST				Lg		Lg	02 46 21.2	
	52nm,0.8s							
KST	**Kastek**	**3.88**	**293**	*e*P		**Pb**	**02 45 28.2**	**+1.0**
	17nm,0.5s							
KST				*e*S		**Sg**	**02 46 21.2**	**-2.2**
	52nm,0.8s							
DGS	**Degeres**	**4.08**	**295**	Pg		**Pb**	**02 45 32.3**	**+1.6**
	18nm,0.8s							
DGS				Lg		Lg	02 46 28.1	
	18nm,0.7s							
DGS	**Degeres**	**4.08**	**295**	*e*P		**Pb**	**02 45 32.2**	**+1.6**
	18nm,0.8s							
DGS				*e*S		**Sg**	**02 46 28.1**	**-1.8**
	18nm,0.7s							
KRBS	**Karabastau**	**4.33**	**300**	Pg		**Pb**	**02 45 36.7**	**+1.8**
	8.5nm,0.6s							
KRBS				Lg		Lg	02 46 36.1	
	3.9nm,0.6s							
KRBS	**Karabastau**	**4.33**	**300**	*e*P		**Pb**	**02 45 36.7**	**+1.8**
	8.5nm,0.6s							
KRBS				*e*S		**Sg**	**02 46 36.1**	**-1.7**
	3.9nm,0.6s							
AAK	**Ala-Archa**	**4.82**	**284**	⇑Pg		**Pg**	**02 45 52.2**	**+0.9**
	1.7nm,0.5s							
AAK				⇑Lg		Lg	02 46 57.2	
	6.5nm,0.8s							
MK31	**Makanchi Array**	**5.26**	**11**	Pn		**Pn**	**02 45 37.0**	**-0.3**
	0.5nm,0.3s,baz=192,slow=13,SNR=31							
MK31				⇓Pg		**Pb**	**02 45 51.1**	**+0.3**
	0.8nm,0.4s,baz=188,slow=17,SNR=3.8							
MK31				⇓Sn		**Sn**	**02 46 37.2**	**-0.6**
	1.3nm,0.4s,baz=161,slow=40,SNR=5.0							
MK31				⇓Lg		Lg	02 46 55.2	
	3.0nm,0.5s,baz=186,slow=24,SNR=3.7							
MRKS	**Merke**	**5.76**	**284**	Pg		Pb	02 46 04.6	+5.2
	5.6nm,0.8s							
MRKS	**Merke**	**5.76**	**284**	*e*P		Pb	02 46 04.6	+5.2
	5.6nm,0.8s							
MRKS				*e*S		**Sg**	**02 47 23.5**	**-0.3**
	7.5nm,0.4s							
ZSN	**Zaisan**	**6.49**	**25**	Pg		Pb	02 46 17.6	+6.0
	4.7nm,0.3s							
ZSN	**Zaisan**	**6.49**	**25**	*e*P		Pb	02 46 17.6	+6.0
	4.7nm,0.3s							
ZSN				*e*S		**Sg**	**02 47 45.2**	**-1.8**
	7.2nm,0.7s							
KK31	**Karatay Array**	**7.79**	**284**	Pg		**Pg**	**02 46 46.9**	**-1.0**
	0.8nm,0.6s,baz=92,slow=17,SNR=7.1							
KK31				⇑Lg		Lg	02 48 30.5	
	3.4nm,0.8s,baz=99,slow=25,SNR=4.1							
KURBB	**Kurchatov Arra**	**9.13**	**351**	⇓Pn		Pn	02 46 37.8	+7.5
	0.4nm,0.5s							
KURBB				⇑Sn		Sn	02 48 23.6	+11
	7.6nm,0.8s							
KURK	**Kurchatov**	**9.21**	**351**	⇑Pn		Pn	02 46 41.2	+10
KURK				⇑Sn		Sn	02 48 25.2	+10
	1.8nm,0.8s							
KURK				⇓Lg		Lg	02 49 10.0	
	2.7nm,0.9s							

*IDC **29** 02:56:05.7 ± 1.3, 13°.13S × 75°.07W, h98km ± 13km, mb3.3/6, mbtmp3.7/11, Error ellipse: s-maj=27.2km s-min=11.9km az=42.0*
ISC 29 02:56:05.5 ± 0.7, 13°.2S ± 0°.1 × 75°.1W ± 0°.1, h96km, n15, σ0s 85/17, mb3.4/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.08**	**304**	P		**Pn**	**02 56 39.3**	**+0.3**
	157nm,0.3s,baz=158,slow=13,SNR=59							
NNA				S		**Sn**	**02 57 05.1**	**+0.6**
	740nm,0.4s,baz=175,slow=14,SNR=24							
ATAH	**Atahualpa**	**6.81**	**331**	P		**Pn**	**02 57 45.1**	**+1.8**
	9.7nm,0.5s,baz=144,slow=4.6,SNR=9.2							
ATAH				S		**Sn**	**02 58 58.0**	**-1.6**
	25nm,0.9s,baz=120,slow=22,SNR=5.6							
LPAZ	**La Paz**	**7.41**	**116**	P		**Pn**	**02 57 52.5**	**+0.9**
	2.4nm,0.4s,baz=14,slow=14,SNR=1.7							
SIV	**San Ignacio**	**13.85**	**103**	P		**Pn**	**02 59 18.2**	**+0.4**
	0.6nm,0.7s,baz=274,slow=15							
CFA	**Coronel Fontan**	**19.41**	**162**	P		**P**	**03 00 24.3**	**+0.1**
	0.7nm,0.4s,baz=333,slow=8.9,SNR=4.0							
CPUP	**Villa Florida**	**21.20**	**131**	P		**P**	**03 00 42.8**	**-0.7**
	2.3nm,0.7s,baz=308,slow=11,SNR=8.9							
	2.3nm,0.7s							
SDV	**Santo Domingo**	**22.34**	**12**	P		**P**	**03 00 56.4**	**+0.6**
	8.3nm,0.8s,baz=205,slow=12,SNR=6.6							
	8.3nm,0.8s							
TXAR	**Lajitas Array**	**50.46**	**327**	P		**P**	**03 04 53.9**	**0.0**
	0.1nm,0.5s,baz=152,slow=7.9,SNR=4.1							
	0.1nm,0.5s							
NVAR	**Mina Array Bea**	**65.32**	**324**	P		**P**	**03 06 37.6**	**-0.2**
	0.2nm,0.5s,baz=72,slow=22,SNR=2.0							
	0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**80.44**	**74**	P		**P**	**03 08 06.3**	**-1.0**
	1.8nm,0.8s,baz=260,slow=7.1,SNR=8.9							
	1.8nm,0.8s							
YKA	**Yellowknife Ar**	**81.46**	**343**	P		**P**	**03 08 10.6**	**-1.0**
	0.4nm,0.7s,baz=144,slow=5.0,SNR=8.2							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**133.71**	**218**	PKP		**PKPdf**	**03 15 12.0**	**0.0**
	0.3nm,0.8s,baz=144,slow=1.9,SNR=4.6							
WRA	**Warramunga Arr**	**136.18**	**222**	PKP		**PKPdf**	**03 15 16.7**	**+0.1**
	0.5nm,0.5s,baz=136,slow=1.9,SNR=8.1							
ZALV	**Zalesovo Beam**	**136.31**	**17**	PKP		**PKPdf**	**03 15 16.0**	**+0.2**
	1.0nm,0.7s,baz=262,slow=4.5,SNR=4.1							
SONM	**Songino Array**	**145.41**	**358**	PKPbc		**PKPab**	**03 15 32.9**	**0.0**
	1.6nm,0.8s,baz=346,slow=1.9,SNR=9.6							

*IDC **29** 03:05:25.2 ± 0.5, 35°.09N × 14°.66W, h0km, mb4.2/27, mbtmp4.3/28, ML4.5/1, MS4.0/72, Error ellipse: s-maj=13.4km s-min=12.1km az=142.0*
*NEIC **29** 03:05:27.7 ± 1.6, 35°.22N ± 0°.09 × 14°.6W ± 0°.1, h10km ± 1km, mb4.8/153, Error ellipse: s-maj=15.0km s-min=13.9km az=224.0*
*MDD **29** 03:05:27.9 ± 0.3, 35°.19N × 14°.71W, h32km ± 8km, Mb5.3/129, M_mb4.9/130, Error ellipse: s-maj=3.2km s-min=2.7km az=5.0*
*INMG **29** 03:05:29.8 ± 3.4, 35°.18N × 14°.83W, h30km ± 15km, ML4.9, Ms3.7, Error ellipse: s-maj=5.4km s-min=4.6km az=118.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Horseshoe-Ampere #FELT: III (MM56) at Ilha de Porto Santo:P. Santo (Porto Santo)*
*IGIL **29** 03:05:29.5, 35°.19N × 14°.71W, h31km, ML5.0*
*GCMT **29** 03:05:30.7 ± 0.2, 35°.08N ± 0°.01 × 14°.53W ± 0°.02, h27km, MW5.0/111, Moment Tensor Solution. s36,c43; s111,c178; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.86±.16; $M_{\theta\theta}$3.41±.12; $M_{\phi\phi}$-1.56±.09; $M_{r\theta}$0.08±.17; $M_{\theta\phi}$-2.79±.08; $M_{r\phi}$0.75±.16; Best double couple: M_o3.93400×10^{16} NP1:ϕ_s252.00000°, δ69.00000°, λ-161.00000°. NP2:ϕ_s155.00000°, δ72.00000°, λ-22.00000°. Principal axes: T 4.6700, Plg2.0000°, Azm204.0000°; N -1.4820, Plg62.0000°, Azm298.0000°; P -3.1980, Plg28.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **29** 03:05:31.4, 35°.54N × 15°.05W, h33km, mb4.3*
ISC 29 03:05:29.8 ± 0.3, 35°.02N ± 0°.04 × 14°.65W ± 0°.03, h35km, n521, σ2s 36/389, mb4.6/127, MS4.1/83, 107C-15D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**2.39**	**216**	⇑*i*P		**Pn**	**03 06 04.5**	**-1.9**
PMPST				*e*S		**Sn**	**03 06 29.4**	**-5.1**
PMPST				*i* IAML			03 06 32.6	
PMPST				*i* IAML			03 06 32.6	
PMPST				*i* IAML			03 06 32.9	
PMPST				T		T	03 08 23.2	
PMPS	**Porto Santo**	**2.41**	**216**	⇑*i*P		**Pn**	**03 06 04.8**	**-1.9**
PMPS				*i* IAML			03 06 32.9	
PMPS				*i* IAML			03 06 33.0	
PMPS				*i* IAML			03 06 34.0	
PMPS				T		T	03 08 17.9	
PMAR	**Madeira**	**2.97**	**220**	⇑*i*P		**Pn**	**03 06 12.5**	**-2.0**
PMAR				*e*S		**Sn**	**03 06 45.2**	**-3.8**
PMAR				*i* IAML			03 06 52.3	
PMAR				*i* IAML			03 06 55.9	
PMAR				*i* IAML			03 06 57.0	
PMAR				T		T	03 09 09.5	
FUL	**Funchal**	**3.02**	**219**	⇑*e*P		**Pn**	**03 06 13.0**	**-2.0**
FUL				*e*S		**Sn**	**03 06 46.2**	**-3.7**
FUL				*i* IAML			03 06 48.6	
FUL				*i* IAML			03 06 48.9	
FUL				*i* IAML			03 06 51.8	
PMOZ	**Porto Moniz, M**	**3.05**	**225**	P		**Pn**	**03 06 13.8**	**-1.8**
PMOZ	**Porto Moniz, M**	**3.05**	**225**			**Pn**	**03 06 13.8**	**-1.8**
PMOZ	**Porto Moniz, M**	**3.05**	**225**	⇑*e*P		**Pn**	**03 06 13.8**	**-1.8**
PMOZ				*e*S		**Sn**	**03 06 47.4**	**-3.5**
PMOZ				*i* IAML			03 06 53.1	
PMOZ				*i* IAML			03 06 54.1	
PMOZ				*i* IAML			03 06 54.6	
PMOZ				T		T	03 09 10.3	
PSVI	**Cabo S. Vicent**	**5.00**	**65**	*e*P		**Pn**	**03 06 40.8**	**-1.5**
PSVI				*e*S		Sn	03 07 30.6	-8.2
PSVI				*i* IAML			03 07 32.6	
PSVI				*i* IAML			03 07 33.9	
PFVI	**Vila Bisbo**	**5.16**	**64**	P		**Pn**	**03 06 42.1**	**-2.5**
PFVI				S		Sn	03 07 32.5	-10
PFVI	**Vila Bisbo**	**5.16**	**64**			**Pn**	**03 06 42.1**	**-2.5**
PFVI	**Vila Bisbo**	**5.16**	**64**	⇑*e*P		**Pn**	**03 06 42.1**	**-2.5**
PFVI				*e*S		Sn	03 07 33.1	-10
PFVI				*i* IAML			03 07 36.4	
PFVI				*i* IAML			03 07 37.5	
PFVI				*i* IAML			03 07 37.7	
PFVI				T		T	03 11 43.5	
PLAGO	**Lagos**	**5.25**	**65**	*e*P		**Pn**	**03 06 43.8**	**-2.0**
PLAGO				*e*S		Sn	03 07 36.0	-9.0
PLAGO				*i* IAML			03 07 39.5	
PLAGO				*i* IAML			03 07 41.2	
PLAGO				*i* IAML			03 07 42.6	
PALJ	**Aljezur**	**5.26**	**62**	*e*P		**Pn**	**03 06 43.6**	**-2.2**
PALJ				*e*S		Sn	03 07 35.9	-9.3
PALJ				*i* IAML			03 07 39.0	
PALJ				*i* IAML			03 07 39.0	
PALJ				*i* IAML			03 07 40.2	
PALJ				T		T	03 11 45.9	
MORF	**Marmelete**	**5.36**	**63**	*e*P		**Pn**	**03 06 44.8**	**-2.5**
MORF				*e*S		Sn	03 07 39.0	-8.8
MORF				IAML			03 07 43.5	
	comp=E,2μm,0.3s							
MORF	**Marmelete**	**5.36**	**63**			**Pn**	**03 06 44.8**	**-2.5**
MORF	**Marmelete**	**5.36**	**63**	⇑*e*P		**Pn**	**03 06 44.8**	**-2.5**
MORF				*e*S		Sn	03 07 37.9	-10
MORF				*i* IAML			03 07 42.3	
MORF				*i* IAML			03 07 48.7	
MORF				*i* IAML			03 07 48.7	
PPOR	**Portimao**	**5.38**	**65**	*e*P		**Pn**	**03 06 45.4**	**-2.1**
PPOR				*e*S		Sn	03 07 38.8	-9.4
PPOR				*i* IAML			03 07 42.0	
PPOR				*i* IAML			03 07 42.6	
PPOR				*i* IAML			03 07 42.9	
PTEO	**Sao Teotonio**	**5.41**	**61**	⇑*e*P		**Pn**	**03 06 45.4**	**-2.5**
PTEO				*e*S		Sn	03 07 39.6	-9.3
PTEO				*i* IAML			03 07 42.3	
PTEO				*i* IAML			03 07 43.7	
PTEO				*i* IAML			03 07 44.3	
PSINE	**Sines**	**5.51**	**56**	*e*P		**Pn**	**03 06 48.2**	**-1.0**
PSINE				*e*S		Sn	03 07 40.5	-11
PSINE				*i* IAML			03 07 44.0	
PSINE				*i* IAML			03 07 45.6	
PSINE				*i* IAML			03 07 49.9	
PALBU	**Albufeira**	**5.58**	**66**	*e*P		**Pn**	**03 06 48.5**	**-1.8**
PALBU				*e*S		Sn	03 07 45.2	-8.0
PALBU				*i* IAML			03 07 52.1	
PALBU				*i* IAML			03 07 53.2	
PALBU				*i* IAML			03 07 55.0	
AML01	**Serafina, Lisb**	**5.74**	**48**	*e*P		**Pn**	**03 06 49.1**	**-3.4**
AML01				*e*S		Sn	03 07 46.4	-11
AML01				*i* IAML			03 07 50.1	
AML01				*i* IAML			03 07 50.5	
AML01				*i* IAML			03 07 50.8	
AML01				T		T	03 12 23.2	
LIS	**Lisbon**	**5.75**	**48**	*e*P		**Pn**	**03 06 49.2**	**-3.4**
LIS				*e*S		Sn	03 07 46.8	-10
LIS				IAML			03 07 49.8	
	comp=N,5μm,0.4s							
LIS	**Lisbon**	**5.75**	**48**	*e*P		**Pn**	**03 06 49.1**	**-3.4**
LIS				*e*S		Sn	03 07 46.7	-11
LIS				*i* IAML			03 07 48.8	
LIS				*i* IAML			03 07 49.9	
LIS				*i* IAML			03 07 51.7	
LIS				T		T	03 12 12.5	
AML02	**Lavradio**	**5.77**	**49**	*e*P		**Pn**	**03 06 50.3**	**-2.6**
AML02				*e*S		Sn	03 07 48.0	-10
AML02				*i* IAML			03 07 54.4	
AML02				*i* IAML			03 07 59.8	
AML02				*i* IAML			03 08 00.9	
INMG	**Instituto de M**	**5.80**	**48**	*e*P		**Pn**	**03 06 50.0**	**-3.2**
INMG				*e*S		Sn	03 07 48.3	-10
INMG				*i* IAML			03 07 50.6	
INMG				*i* IAML			03 07 50.6	
INMG				*i* IAML			03 07 54.9	
PFARO	**Faro**	**5.81**	**68**	*e*P		**Pn**	**03 06 51.6**	**-1.8**
PFARO				*e*S		**Sn**	**03 07 52.0**	**-6.7**
PFARO				*i* IAML			03 07 57.6	
PFARO				*i* IAML			03 08 06.2	
PFARO				*i* IAML			03 08 07.1	
PMAFR	**Mafra**	**5.82**	**46**	P		**Pn**	**03 06 49.7**	**-3.8**
PMAFR				S		Sn	03 07 47.6	-11
PMAFR	**Mafra**	**5.82**	**46**	⇑*e*P		**Pn**	**03 06 49.7**	**-3.8**
PMAFR				*e*S		Sn	03 07 48.2	-11
PMAFR				*i* IAML			03 07 51.0	
PMAFR				*i* IAML			03 07 51.1	
PMAFR				*i* IAML			03 07 51.9	
PMAFR				T		T	03 12 26.3	
AML03	**Fanhoes/Loures**	**5.85**	**47**	*e*P		**Pn**	**03 06 50.4**	**-3.6**
AML03				*e*S		Sn	03 07 49.1	-11
AML03				*i* IAML			03 07 52.5	
AML03				*i* IAML			03 07 52.6	
AML03				*i* IAML			03 07 53.8	
PBDV	**Barranco-do-Ve**	**5.87**	**66**	P		**Pn**	**03 06 52.1**	**-2.2**
PBDV				S		Sn	03 07 49.9	-10
PBDV	**Barranco-do-Ve**	**5.87**	**66**	⇑*e*P		**Pn**	**03 06 52.3**	**-2.0**
PBDV				*e*S		Sn	03 07 51.6	-8.8
PBDV				*i* IAML			03 07 57.4	
PBDV				*i* IAML			03 07 58.3	
PBDV				*i* IAML			03 08 04.9	
PBDV				T		T	03 11 53.1	
MESJ	**Messejana**	**5.90**	**60**	*e*P		**Pn**	**03 06 52.1**	**-2.5**
MESJ				*e*S		Sn	03 07 51.2	-10
MESJ				IAML			03 07 57.8	
	comp=N,682nm,0.5s							
MESJ	**Messejana**	**5.90**	**60**			**Pn**	**03 06 52.2**	**-2.4**
MESJ	**Messejana**	**5.90**	**60**	*e*P		**Pn**	**03 06 52.2**	**-2.4**
MESJ				*e*S		**Sn**	**03 07 53.5**	**-7.5**
MESJ				*i* IAML			03 07 58.0	
MESJ				*i* IAML			03 07 58.5	
MESJ				*i* IAML			03 08 04.8	
MESJ				T		T	03 12 00.6	
CDLV	**Cueva Verdes**	**5.93**	**170**	P		Pn	03 06 52.3	-2.8
CDLV				⇑*i*Vmb_VC			03 06 56.1	
	comp=N,5μm,SNR=9.4							
CDLV				S		Sn	03 07 56.5	-5.2
PCVE	**Castro Verde**	**5.94**	**62**	P		**Pn**	**03 06 52.8**	**-2.4**
PCVE				S		Sn	03 07 51.4	-11
PCVE	**Castro Verde**	**5.94**	**62**	⇑*e*P		**Pn**	**03 06 52.8**	**-2.4**
PCVE				*e*S		Sn	03 07 52.4	-10
PCVE				*i* IAML			03 07 56.1	
PCVE				*i* IAML			03 07 58.2	
PCVE				*i* IAML			03 08 05.1	
PCVE				T		T	03 12 02.1	
EFAM	**Famara**	**5.95**	**171**	P		Pn	03 06 52.9	-2.6
EFAM				⇑*i*Vmb_VC			03 06 57.3	
	comp=N,5μm,SNR=13							
EFAM				S		Sn	03 07 56.0	-6.4
AML04	**Campo deTiro d**	**5.95**	**49**	*e*P		**Pn**	**03 06 52.4**	**-2.9**
AML04				*e*S		Sn	03 07 52.6	-10
AML04				*i* IAML			03 07 58.0	
AML04				*i* IAML			03 08 02.8	
AML04				*i* IAML			03 08 04.1	
AML04				T		T	03 12 14.0	
CBLAA	**Tinajo**	**6.02**	**

AVE	**Averroes**	**6.24**	**104**		P		**Pn**	**03 06 59.0**	**-0.3**
AVE					S		Sn	03 08 04.8	-4.6
AVE	**Averroes**	**6.24**	**104**				**Pn**	**03 06 59.6**	**+0.3**
EGRO	**El Granado**	**6.31**	**64**		P		**Pn**	**03 06 57.8**	**-2.4**
EGRO					S		Sn	03 08 01.1	-10
EGRO	**El Granado**	**6.31**	**64**		P		**Pn**	**03 06 57.8**	**-2.4**
EGRO				⇑*i*VmbVC				03 06 59.8	
	comp=N,5µm,SNR=52								
EGRO					S		Sn	03 08 02.6	-8.4
EVO	**Evora**	**6.37**	**55**		P		**Pn**	**03 06 57.3**	**-3.9**
EVO					S		Sn	03 08 01.1	-12
EVO	**Evora**	**6.37**	**55**	*eP*			**Pn**	**03 06 57.8**	**-3.4**
EVO					*eS*		Sn	03 08 02.0	-11
EVO					*i* IAML			03 08 06.2	
EVO					*i* IAML			03 08 07.0	
EVO					*i* IAML			03 08 08.1	
EVO					T		T	03 12 33.5	
CFUE	**Fuerteventura**	**6.38**	**174**		P		Pn	03 06 58.5	-2.9
CFUE				⇑*i*VmbVC				03 07 00.8	
	comp=N,6µm,SNR=47								
CFUE					S		Sn	03 08 05.8	-7.2
PSBE	**So Bento**	**6.47**	**44**	*eP*			**Pn**	**03 06 59.1**	**-3.5**
PSBE					*eS*		Sn	03 08 04.4	-11
PSBE					*i* IAML			03 08 11.2	
PSBE					*i* IAML			03 08 11.4	
PSBE					*i* IAML			03 08 11.5	
PSBE					T		T	03 12 26.8	
PARRA	**Arraiolos**	**6.51**	**52**	*eP*			**Pn**	**03 06 59.0**	**-4.1**
PARRA					*eS*		Sn	03 08 04.6	-11
PARRA					*i* IAML			03 08 06.6	
PARRA					*i* IAML			03 08 07.1	
PARRA					*i* IAML			03 08 08.4	
PARRA					T		T	03 12 36.8	
RTC	**Rabat Centre**	**6.51**	**97**		P		**Pn**	**03 07 01.7**	**-1.4**
RTC					S		Sn	03 08 09.4	-6.7
PMTG	**Montargil**	**6.53**	**50**	⇑*eP*			**Pn**	**03 06 59.3**	**-4.1**
PMTG					*eS*		Sn	03 08 05.9	-11
PMTG					*i* IAML			03 08 09.2	
PMTG					*i* IAML			03 08 10.1	
PMTG					*i* IAML			03 08 10.2	
PMTG					T		T	03 12 28.5	
CFTV	**Fuerteventura**	**6.60**	**176**		P		Pn	03 07 01.7	-2.7
CFTV				⇑*i*VmbVC				03 07 05.1	
	comp=N,3µm,SNR=18								
CFTV					S		Sn	03 08 09.2	-9.3
EBAJ	**Bajamar**	**6.62**	**193**		P		Pn	03 07 00.3	-4.3
EBAJ				⇑*i*VmbVC				03 07 03.0	
	comp=N,1µm,SNR=4.9								
EBAJ					S		Sn	03 08 12.2	-6.7
CGIN	**Giniginamar, F**	**6.81**	**176**		P		Pn	03 07 03.7	-3.5
CGIN				⇑*i*VmbVC				03 07 08.0	
	comp=N,3µm,SNR=11								
CGIN					S		Sn	03 08 15.0	-8.5
CROM	**Garafia, La Pa**	**6.82**	**205**		P		Pn	03 07 02.9	-4.7
CROM					S		Sn	03 08 13.7	-10
PESTR	**Estremoz**	**6.83**	**54**		P		**Pn**	**03 07 04.2**	**-3.3**
PESTR					S		Sn	03 08 11.9	-12
PESTR	**Estremoz**	**6.83**	**54**				**Pn**	**03 07 04.3**	**-3.2**
PESTR	**Estremoz**	**6.83**	**54**	*eP*			**Pn**	**03 07 04.4**	**-3.2**
PESTR					*eS*		Sn	03 08 13.3	-11
PESTR					*i* IAML			03 08 15.4	
PESTR					*i* IAML			03 08 29.7	
PESTR					*i* IAML			03 08 30.6	
PESTR					T		T	03 12 46.1	
CGOR	**Puntagorda, La**	**6.84**	**205**		P		**Pn**	**03 07 04.8**	**-2.8**
CGOR					S		Sn	03 08 16.5	-7.8
CGUI	**Guimar, Teneri**	**6.85**	**193**		P		Pn	03 07 03.0	-4.8
CGUI				⇑*i*VmbVC				03 07 09.0	
	comp=N,3µm,SNR=8.6								
CGUI					S		Sn	03 08 17.2	-7.4
CMIR	**El Paso, La Pa**	**6.87**	**204**		P		Pn	03 07 03.8	-4.3
CMIR					S		Sn	03 08 14.3	-11
PBAR	**Barrancos**	**6.88**	**61**		P		**Pn**	**03 07 05.3**	**-2.9**
PBAR					S		Sn	03 08 14.2	-11
PBAR	**Barrancos**	**6.88**	**61**	*eP*			**Pn**	**03 07 05.4**	**-2.7**
PBAR					*eS*		Sn	03 08 15.2	-10
PBAR					*i* IAML			03 08 18.8	
PBAR					*i* IAML			03 08 19.0	
PBAR					*i* IAML			03 08 19.2	
CFOR	**Fortaleza, Los**	**6.89**	**194**		P		Pn	03 07 04.5	-4.0
CFOR				⇑*i*VmbVC				03 07 11.1	
	comp=N,4µm,SNR=15								
CFOR					S		Sn	03 08 19.6	-6.2
PSARD	**Sardoal**	**6.90**	**47**	⇑*eP*			**Pn**	**03 07 04.5**	**-3.9**
PSARD					*eS*		Sn	03 08 14.4	-11
PSARD					*i* IAML			03 08 18.6	
PSARD					*i* IAML			03 08 20.2	
PSARD					*i* IAML			03 08 21.7	
PSARD					T		T	03 12 39.2	
CNOR	**Icod de los Vi**	**6.90**	**195**		P		Pn	03 07 04.0	-4.7
CNOR					S		**Sn**	**03 08 20.3**	**-5.7**
TBT	**Taburiente**	**6.91**	**205**		P		Pn	03 07 04.0	-4.5
TBT				⇑*i*VmbVC				03 07 07.2	
	comp=N,6µm,SNR=37								
TBT					S		Sn	03 08 14.8	-11
CDIE	**La Orotava (Te**	**6.91**	**194**		P		Pn	03 07 04.8	-4.0
CDIE					S		Sn	03 08 18.8	-7.5
CBRE	**Brena Baja,La**	**6.91**	**204**		P		Pn	03 07 04.0	-4.7
CBRE					S		Sn	03 08 16.5	-10
CENR	**El Paso, La Pa**	**6.93**	**204**		P		Pn	03 07 05.0	-4.0
CENR					S		Sn	03 08 17.4	-9.3
MACI	**Morro de la Ar**	**6.93**	**194**				Pn	03 07 04.7	-4.4
MACI	**Morro de la Ar**	**6.93**	**194**		P		Pn	03 07 05.4	-3.7
MACI				⇑*i*VmbVC				03 07 10.4	
	comp=N,762nm,SNR=2.1								
MACI					S		**Sn**	**03 08 21.0**	**-5.8**
CRAJ	**Montana Rajada**	**6.94**	**194**		P		Pn	03 07 05.7	-3.5
CRAJ				⇑*i*VmbVC				03 07 11.4	
	comp=N,2µm,SNR=4.3								
CRAJ					S		Sn	03 08 20.9	-6.2
CDOS	**Garachico, Isl**	**6.94**	**195**		P		Pn	03 07 04.8	-4.3
CDOS				⇑*i*VmbVC				03 07 08.5	
	comp=N,4µm,SNR=5.4								
CDOS					S		Sn	03 08 20.6	-6.3
CBOL	**Buenavista del**	**6.94**	**196**		P		Pn	03 07 04.1	-5.0
CBOL				⇑*i*VmbVC				03 07 08.1	
	comp=N,964nm,SNR=3.2								
CBOL					S		Sn	03 08 19.2	-7.7
CPVI	**La Orotava (Te**	**6.95**	**195**		P		Pn	03 07 04.7	-4.8
CPVI					S		Sn	03 08 19.6	-7.9
CVIE	**Villa de Mazo,**	**6.95**	**204**		P		Pn	03 07 05.4	-4.0
CVIE					S		Sn	03 08 18.6	-8.7
CCAN	**Las Canadas**	**6.98**	**194**		P		Pn	03 07 05.2	-4.5
CCAN				⇑*i*VmbVC				03 07 09.0	
	comp=N,942nm,SNR=4.5								
CCAN					S		Sn	03 08 19.6	-8.4
GUIA	**Guia de Isora,**	**6.98**	**195**		P		Pn	03 07 04.8	-4.9
GUIA				⇑*i*VmbVC				03 07 08.3	
	comp=N,2µm,SNR=5.1								
GUIA					S		Sn	03 08 21.3	-6.7
CJED	**Jedey, El Paso**	**6.98**	**204**		P		Pn	03 07 05.5	-4.1
CJED					S		Sn	03 08 19.5	-8.4
EHIG	**Higuera**	**6.98**	**204**		P		Pn	03 07 05.8	-3.8
EHIG				⇑*i*VmbVC				03 07 09.8	
	comp=N,6µm,SNR=8.6								
EHIG					S		Sn	03 08 19.1	-8.8
CCHO	**La Orotava (Te**	**6.99**	**195**		P		Pn	03 07 05.7	-4.2
CCHO				⇑*i*VmbVC				03 07 08.9	
	comp=N,2µm,SNR=12								
CCHO					S		Sn	03 08 20.9	-7.4
EMIN	**Mina Concepcio**	**6.99**	**65**		P		**Pn**	**03 07 06.9**	**-2.8**
EMIN					S		Sn	03 08 16.7	-11
EMIN	**Mina Concepcio**	**6.99**	**65**		P		**Pn**	**03 07 07.2**	**-2.4**
EMIN				⇑*i*VmbVC				03 07 09.0	
	comp=N,4µm,SNR=40								
EMIN					S		Sn	03 08 17.1	-11
PCAS	**Casmilo, Conde**	**7.01**	**42**	*eP*			**Pn**	**03 07 06.0**	**-3.9**
PCAS					*eS*		Sn	03 08 16.2	-12
PCAS					*i* IAML			03 08 24.7	
PCAS					*i* IAML			03 08 25.2	
PCAS					*i* IAML			03 08 26.0	
SFS	**San Fernando**	**7.01**	**76**		P		**Pn**	**03 07 09.5**	**-0.4**
SFS					S		**Sn**	**03 08 23.5**	**-5.0**
SFS	**San Fernando**	**7.01**	**76**				**Pn**	**03 07 08.9**	**-1.0**
CVIL	**Vilaflor**	**7.05**	**195**		P		Pn	03 07 05.4	-5.2
CVIL				⇑*i*VmbVC				03 07 08.0	
	comp=N,2µm,SNR=5.5								
CVIL					S		Sn	03 08 22.4	-7.2
CLAJ	**Vilaflor (Tene**	**7.06**	**195**		P		Pn	03 07 06.1	-4.7
CLAJ				⇑*i*VmbVC				03 07 09.5	
	comp=N,1µm,SNR=3.2								
CLAJ					S		Sn	03 08 22.0	-7.8
CTEN	**Fuencaliente,**	**7.06**	**203**		P		Pn	03 07 06.8	-3.9
CTEN				⇑*i*VmbVC				03 07 10.9	
	comp=N,5µm,SNR=7.9								
CTEN					S		Sn	03 08 22.0	-7.7
CADE	**Adeje, Tenerif**	**7.07**	**195**		P		Pn	03 07 05.7	-5.1
CADE				⇑*i*VmbVC				03 07 08.8	
	comp=N,1µm,SNR=4.4								
CADE					S		Sn	03 08 22.7	-7.2
CGRA	**Granadilla de**	**7.08**	**194**		P		Pn	03 07 07.1	-3.8
CGRA				⇑*i*VmbVC				03 07 11.1	
	comp=N,3µm,SNR=7.8								
CGRA					S		Sn	03 08 23.2	-7.0
CTFS	**San Miguel de**	**7.12**	**194**		P		Pn	03 07 06.9	-4.5
CTFS				⇑*i*VmbVC				03 07 10.2	
	comp=N,3µm,SNR=11								
CTFS					S		Sn	03 08 22.4	-8.7
CNIL	**Conil**	**7.12**	**77**		P		**Pn**	**03 07 10.0**	**-1.4**
CLUM	**San Bartolome**	**7.23**	**187**		P		Pn	03 07 08.6	-4.4
CLUM				⇑*i*VmbVC				03 07 11.7	
	comp=N,2µm,SNR=5.3								
CLUM					S		Sn	03 08 26.5	-7.4
PMRV	**Marv??o**	**7.27**	**51**	*eP*			**Pn**	**03 07 09.7**	**-3.8**
PMRV					*eS*		Sn	03 08 22.4	-12
PMRV					*i* IAML			03 08 25.1	
PMRV					*i* IAML			03 08 25.3	
PMRV					*i* IAML			03 08 27.7	
PMRV					T		T	03 12 52.0	
ESPR	**Espera**	**7.37**	**73**		P		**Pn**	**03 07 12.5**	**-2.3**
ESPR					S		Sn	03 08 28.2	-8.9
ESPR	**Espera**	**7.37**	**73**		P		**Pn**	**03 07 13.0**	**-1.8**
ESPR				⇑*i*VmbVC				03 07 14.1	
	comp=N,7µm,SNR=80								
ESPR					S		Sn	03 08 28.7	-8.4
TIO	**Tiouine**	**7.43**	**121**		P		**Pn**	**03 07 16.2**	**+0.5**
TIO					S		Sn	03 08 34.6	-4.3
PCBR	**Castelo Branco**	**7.46**	**48**	*eP*			**Pn**	**03 07 12.3**	**-3.8**
PCBR					*eS*		Sn	03 08 27.0	-12
PCBR					*i* IAML			03 08 31.2	
PCBR					*i* IAML			03 08 33.7	
PCBR					*i* IAML			03 08 34.8	
EJIF	**Jimena Fronter**	**7.60**	**77**		P		**Pn**	**03 07 16.7**	**-1.4**
EJIF					S		Sn	03 08 34.7	-8.2
ECEU	**Ceuta**	**7.62**	**81**		P		**Pn**	**03 07 17.3**	**-1.0**
ECEU					S		Sn	03 08 32.6	-11
ECEU	**Ceuta**	**7.62**	**81**		P		**Pn**	**03 07 17.2**	**-1.0**
ECEU				⇑*i*VmbVC				03 07 20.4	
	comp=N,3µm,SNR=10								
ECEU					S		Sn	03 08 35.6	-7.8
CEU	**Ceuta**	**7.62**	**81**		P		**Pn**	**03 07 17.5**	**-0.8**
CEU					S		**Sn**	**03 08 37.6**	**-5.7**
CTIG	**El Hierro**	**7.73**	**202**		P		Pn	03 07 14.8	-5.0
CTIG				⇑*i*VmbVC				03 07 17.3	
	comp=N,3µm,SNR=5.7								
CTIG					S		Sn	03 08 36.7	-10
PTO	**Porto**	**7.75**	**36**	*eP*			**Pn**	**03 07 15.7**	**-4.3**
PTO					*eS*		Sn	03 08 34.4	-12
PTO					*i* IAML			03 08 36.2	
PTO					*i* IAML			03 08 37.4	
PTO					*i* IAML			03 08 41.8	
MTE	**Manteigas**	**7.78**	**44**				**Pn**	**03 07 16.8**	**-3.8**
MTE	**Manteigas**	**7.78**	**44**	*eP*			**Pn**	**03 07 16.7**	**-3.8**
MTE					*eS*		Sn	03 08 33.8	-14
MTE					*i* IAML			03 08 38.3	
MTE					*i* IAML			03 08 39.2	
MTE					*i* IAML			03 08 40.0	
PVIS	**Viseu**	**7.80**	**41**	*eP*			**Pn**	**03 07 16.7**	**-4.1**
PVIS					*eS*		Sn	03 08 34.4	-13
CCUM	**Cumbre, El Hie**	**7.81**	**203**		P		Pn	03 07 17.4	-3.5
CCUM				⇑*i*VmbVC				03 07 20.6	
	comp=N,3µm,SNR=11								
CCUM					S		Sn	03 08 38.7	-9.4
CTAD	**Las Tabladas,**	**7.82**	**203**		P		**Pn**	**03 07 17.8**	**-3.3**
CTAD				⇑*i*VmbVC				03 07 20.2	
	comp=N,7µm,SNR=9.9								
CTAD					S		Sn	03 08 39.4	-9.0
CMCL	**Mercadel, El H**	**7.83**	**203**		P		Pn	03 07 17.8	-3.6
CMCL					S		Sn	03 08 41.3	-7.5
CJUL	**El Julan, El H**	**7.84**	**203**		P		**Pn**	**03 07 18.5**	**-3.0**
CJUL				⇑*i*VmbVC				03 07 21.2	
	comp=N,7µm,SNR=8.0								
CJUL					S		Sn	03 08 40.9	-8.1
CTAC	**Tacoron (Front**	**7.87**	**202**		P		Pn	03 07 17.9	-3.8
CTAC				⇑*i*VmbVC				03 07 22.4	
	comp=N,3µm,SNR=6.5								
CTAC					S		Sn	03 08 40.8	-8.8
CCAL	**Punta Orchilla**	**7.87**	**203**		P		Pn	03 07 17.6	-4.2
CCAL					S		Sn	03 08 40.3	-9.4
CNAO	**La Restinga, E**	**7.88**	**202**		P		**Pn**	**03 07 18.6**	**-3.3**
CNAO				⇑*i*VmbVC				03 07 22.7	
	comp=N,2µm,SNR=2.3								
CNAO					S		Sn	03 08 42.0	-7.9
E1302	**La Puebla de C**	**7.90**	**72**		P		**Pn**	**03 07 20.6**	**-1.5**
E1302				⇑*i*VmbVC				03 07 24.5	
	comp=N,4µm,SNR=38								
E1302					S		Sn	03 08 40.9	-9.4
IFR	**Ifrane**	**8.02**	**98**		P		**Pn**	**03 07 21.8**	**-2.2**
IFR					S		Sn	03 08 42.9	-11
ECAB	**El Cabril**	**8.03**	**65**		P		**Pn**	**03 07 20.9**	**-3.0**
ECAB					S		Sn	03 08 40.8	-13
ECAB	**El Cabril**	**8.03**	**65**		P		**Pn**	**03 07 21.3**	**-2.6**
ECAB				⇑*i*VmbVC				03 07 22.8	
	comp=N,3µm,SNR=55								
ECAB					S		Sn	03 08 41.8	-12
PVRL	**Vila Real**	**8.29**	**39**	*eP*			**Pn**	**03 07 23.2**	**-4.3**
PVRL					*eS*		Sn	03 08 46.3	-14
PVRL					*i* IAML			03 08 53.8	
PVRL					*i* IAML			03 08 55.0	
PVRL					*i* IAML			03 08 57.4	
POLO	**Lamas de Olo**	**8.32**	**38**	*eP*			**Pn**	**03 07 23.9**	**-4.1**
POLO					*eS*		Sn	03 08 47.4	-13
POLO					*i* IAML			03 08 55.0	
POLO					*i* IAML			03 09 04.4	
POLO					*i* IAML			03 09 04.7	
EPLA	**Plasencia**	**8.46**	**51**		P		**Pn**	**03 07 25.8**	**-4.1**
EPLA				⇑*i*VmbVC				03 07 27.6	
	comp=N,1µm,SNR=13								
EPLA					S		Sn	03 08 50.8	-13
PCAB	**Cabril**	**8.46**	**36**	*eP*			**Pn**	**03 07 26.3**	**-3.5**
PCAB					*eS*		Sn	03 08 51.5	-13
PCAB					*i* IAML			03 09 04.8	
PCAB					*i* IAML			03 09 05.5	
PCAB					*i* IAML			03 09 06.0	
EMAL	**Malaga-Limoner**	**8.47**	**75**		P		**Pn**	**03 07 28.1**	**-1.8**
EMAL					S		Sn	03 08 53.4	-11
MD01	**Midelt array s**	**8.49**	**102**		P		**Pn**	**03 07 29.8**	**-0.6**
MD31	**MD31**	**8.49**	**102**		Pn		**Pn**	**03 07 29.8**	**-0.5**
EZAM	**Zamans**	**8.51**	**31**		P		**Pn**	**03 07 26.4**	**-4.1**
EZAM				⇑*i*VmbVC				03 07 28.6	
	comp=N,2µm,SNR=2.9								
EZAM					S		Sn	03 08 49.5	-16
PGAV	**Gavieira, Arco**	**8.55**	**34**	*eP*			**Pn**	**03 07 27.0**	**-4.1**
PGAV					*eS*		Sn	03 08 52.3	-14
PGAV					*i* IAML			03 08 57.5	
PGAV					*i* IAML			03 08 59.8	
PGAV					*i* IAML			03 09 03.4	
ELOB	**Lobios**	**8.57**	**35**		P		**Pn**	**03 07 27.5**	**-3.8**
ELOB				⇑*i*VmbVC				03 07 30.7	
	comp=N,2µm,SNR=7.9								
ELOB					S		Sn	03 08 53.1	-14
MVO	**Moncorvo**	**8.58**	**42**	*eP*			**Pn**	**03 07 27.6**	**-4.0**
MVO					*eS*		Sn	03 08 54.2	-13
MVO					*i* IAML			03 08 58.5	
MVO					*i* IAML			03 09 01.8	
MVO					*i* IAML			03 09 02.5	
MDT	**Midelt**	**8.63**	**102**		Pn		**Pn**	**03 07 31.6**	**-0.6**
	comp=N,928nm,0.3s,baz=293,slow=10,SNR=7031								
MDT					Sn		Sn	03 09 00.1	-8.3
	comp=N,213nm,0.3s,baz=203,slow=8.6,SNR=12								
MDT					LR		LR	03 10 55.5	
	comp=N,1µm,19.4s,baz=298,slow=38								
CIBOR	**Castaar de Ib**	**8.67**	**55**		P		**Pn**	**03 07 29.3**	**-3.4**
CIBOR					S		Sn	03 08 56.8	-12
PSMN	**Pico do Norte,**	**8.67**	**286**	*eP*			Pn	03 07 26.9	-5.8
EADA	**Adamuz**	**8.69**	**66**		P		**Pn**	**03 07 29.9**	**-3.0**
EADA					S		Sn	03 08 59.3	-10
EADA	**Adamuz**	**8.69**	**66**		P		**Pn**	**03 07 30.5**	**-2.5**
EADA				⇑*i*VmbVC				03 07 32.1	
	comp=N,3µm,SNR=33								
EADA					S		Sn	03 08 58.8	-11
VPORT	**Vila do Porto,**	**8.72**	**286**		P		Pn	03 07 27.5	-5.8
VPORT				⇑*i*VmbVC				03 07 28.5	
	comp=N,6µm,SNR=8.8								
VPORT					S		Sn	03 08 56.8	-14
EGOR	**Sierra Gorda,**	**8.78**	**73**		P		**Pn**	**03 07 32.6**	**-1.8**
EGOR				⇑*i*VmbVC				03 07 36.2	
	comp=N,712nm,SNR=13								
EGOR					S		Sn	03 09 03.6	-8.6
BART	**Pico Bartolome**	**8.92**	**291**	*eP*			**Pn**	**03 07 32.3**	**-3.9**
BART					*eP*			03 07 32.5	
EMAZ	**Mazaricos**	**9.06**	**27**		P		Pn	03 07 33.1	-4.9
EMAZ				⇑*i*VmbVC				03 07 36.3	
	comp=N,4µm,SNR=7.2								
EMAZ					S		Sn	03 09 01.9	-17
PGRON	**Lagoa das Cont**	**9.07**	**291**	*eP*			**Pn**	**03 07 36.4**	**-1.9**
ELGU	**Los Guajares,**	**9.12**	**75**		P		**Pn**	**03 07 36.7**	**-2.3**
ELGU					S		Sn	03 09 12.2	-8.3
ELGU	**Los Guajares,**	**9.12**	**75**		P		**Pn**	**03 07 37.1**	**-1.9**
ELGU				⇑*i*VmbVC				03 07 41.6	
	comp=N,672nm,SNR=14								
ELGU					S		Sn	03 09 10.2	-10
STS	**Santiago**	**9.18**	**29**		P		**Pn**	**03 07 35.1**	**-4.5**
STS					S		Sn	03 09 05.7	-16
PBRG	**Braganca**	**9.18**	**40**	*eP*			**Pn**	**03 07 35.4**	**-4.4**
PBRG					*eS*		Sn	03 09 07.4	-14
PBRG					*i* IAML			03 09 14.3	
PBRG					*i* IAML			03 09 15.9	
PBRG					*i* IAML			03 09 16.1	
EJUZ	**Juzbado, Salam**	**9.18**	**46**		P		**Pn**	**03 07 35.5**	**-4.2**
EJUZ					S		Sn	03 09 08.5	-13
CMLA	**Cha da Macela**	**9.19**	**290**				**Pn**	**03 07 36.1**	**-3.7**
CMLA	**Cha da Macela**	**9.19**	**290**		P		**Pn**	**03 07 35.7**	**-4.1**
CMLA					S		Sn	03 09 10.8	-11
CMLA	**Cha da Macela**	**9.19**	**290**	*eP*			**Pn**	**03 07 35.7**	**-4.1**
PDA	**Ponta Delgada**	**9.29**	**290**	*eP*			**Pn**	**03 07 38.0**	**-3.2**
EAGO	**Agolada(Pontev**	**9.30**	**31**		P		Pn	03 07 36.5	-4.8
EAGO				⇑*i*VmbVC				03 07 39.5	
	comp=N,2µm,SNR=5.1								
EAGO					S		Sn	03 09 08.5	-16
EQTA	**Presa de Quent**	**9.32**	**73**		P		**Pn**	**03 07 40.1**	**-1.7**
EQTA					S		Sn	03 09 14.6	-11
EQUE	**Quentar**	**9.33**	**73**		P		**Pn**	**03 07 39.8**	**-2.0**
EQUE				⇑*i*VmbVC				03 07 44.4	
	comp=N,742nm,SNR=10								
EQUE					S		Sn	03 09 15.8	-10
PSET	**Sete Cidades**	**9.35**	**291**	*eP*			**Pn**	**03 07 39.9**	**-2.2**
PAB	**San Pablo**	**9.37**	**58**				**Pn**	**03 07 38.7**	**-3.6**
PAB	**San Pablo**	**9.37**	**58**		P		**Pn**	**03 07 38.8**	**-3.6**
PAB				⇑*i*VmbVC				03 07 40.7	
	comp=N,1µm,SNR=14								
PAB					S		Sn	03 09 15.9	-11
PSIM	**Granatula de C**	**9.51**	**63**		P		**Pn**	**03 07 41.3**	**-2.9**
PSIM					S		Sn	03 09 18.0	-12
EALB	**Alboran**	**9.52**	**81**		P		**Pn**	**03 07 41.4**	**-2.9**
EALB					S		Sn	03 09 17.8	-12
EALB	**Alboran**	**9.52**	**81**		P		**Pn**	**03 07 41.6**	**-2.7**
EALB				⇑*i*VmbVC				03 07 44.8	
	comp=N,424nm,SNR=4.6								
EALB					S		Sn	03 09 19.3	-11
E0802	**Ubeda,Jaen**	**9.55**	**68**		P		**Pn**	**03 07 42.6**	**-2.3**
E0802					S		Sn	03 09 20.1	-11
EMEL	**Melilla**	**9.58**	**85**		P		**Pn**	**03 07 42.4**	**-2.7**
EMEL				⇑*i*VmbVC				03 07 44.4	
	comp=N,4µm,SNR=7.7								
EMEL					S		Sn	03 09 21.6	-10
WMELI	**Melilla**	**9.58**	**85**		P		**Pn**	**03 07 42.5**	**-2.7**
WMELI					S		Sn	03 09 20.0	-12
EMLI	**Melilla**	**9.58**	**85**		P		Pn	03 07 42.2	-3.0
EMLI					S		Sn	03 09 21.5	-10
ESDC	**Sonseca Array**	**9.69**	**58**		Pn		**Pn**	**03 07 43.0**	**-3.7**
	comp=N,15nm,0.3s,baz=248,slow=13,SNR=267								
ESDC					Sn		Sn	03 09 21.7	-13
	comp=N,34nm,0.3s,baz=245,slow=23,SNR=24								
ESDC					LR		LR	03 10 44.6	
	comp=N,358nm,20.1s,baz=274,slow=33								
ESDC	**Sonseca Array**	**9.69**	**58**		Pn		**Pn**	**03 07 44.3**	**-2.4**
ESDC	**Sonseca Array**	**9.69**	**58**		P		**Pn**	**03 07 42.7**	**-4.0**
ESDC				⇑*i*VmbVC				03 07 45.0	
	comp=N,2µm,SNR=27								
ESDC					S		Sn	03 09 22.2	-12
ESBB	**Sonseca Array**	**9.69**	**58**				**Pn**	**03 07 43.5**	**-3.3**
ESBB	**Sonseca Array**	**9.69**	**58**

ALT04 S Sn 03 10 09.6 -13
ALT01 Santillana del 11.67 41 P **Pn 03 08 10.6 -3.1**
ALT01 ⇑*i*IVmb_VC 03 08 13.7
comp=N,489nm,SNR=1.1

ALT01 S Sn 03 10 08.7 -14
ALT02 Santillana del 11.67 41 P **Pn 03 08 11.2 -2.5**
ALT02 ⇑*i*IVmb_VC 03 08 13.1
comp=N,532nm,SNR=1.1

ALT02 S Sn 03 10 07.8 -15
ECHE Chera 11.81 63 P **Pn 03 08 13.2 -2.5**
ECHE ⇑*i*IVmb_VC 03 08 14.6
comp=N,468nm,SNR=4.1

ECHE S Sn 03 10 14.5 -12
CALA Caldeira 11.81 292 *e*P **Pn 03 08 13.8 -2.0**
AFON Font Roja 11.87 68 P **Pn 03 08 14.6 -2.1**
AFON ⇑*i*IVmb_VC 03 08 15.3
comp=N,460nm,SNR=5.4

AFON S Sn 03 10 16.0 -12
ELAN Lanestosa 11.95 43 P **Pn 03 08 13.4 -4.2**
ELAN ⇑*i*IVmb_VC 03 08 16.4
comp=N,378nm,SNR=1.5

ELAN S Sn 03 10 15.4 -14
E0901 Celadas (Terue 12.01 59 P **Pn 03 08 16.3 -2.2**
E0901 ⇑*i*IVmb_VC 03 08 22.6
comp=N,2µm,SNR=18

E0901 S Sn 03 10 19.8 -11
EBEN2 Beniarda presa 12.14 68 P **Pn 03 08 17.7 -2.6**
EBEN2 ⇑*i*IVmb_VC 03 08 23.2
comp=N,337nm,SNR=2.4

EBEN2 S Sn 03 10 22.9 -11
EMOS Mosqueruela 12.43 60 P **Pn 03 08 22.0 -2.2**
EMOS ⇑*i*IVmb_VC 03 08 24.4
comp=N,798nm,SNR=7.4

EMOS S Sn 03 10 29.0 -13
EARA Aranguren 12.78 49 P **Pn 03 08 25.8 -3.1**
EARA ⇑*i*IVmb_VC 03 08 28.9
comp=N,623nm,SNR=3.3

EARA S Sn 03 10 34.9 -15
ESAC San Caprasio 12.97 55 P **Pn 03 08 28.4 -3.3**
ESAC ⇑*i*IVmb_VC 03 08 30.3
comp=N,762nm,SNR=3.2

ESAC S Sn 03 10 40.8 -14
EORO Oroz-Betelu 13.01 49 P **Pn 03 08 28.1 -4.0**
EORO S Sn 03 10 41.1 -15
EALK Alkurruntz 13.07 47 P **Pn 03 08 29.5 -3.5**
EALK ⇑*i*IVmb_VC 03 08 34.5
comp=N,1µm,SNR=2.6

EALK S Sn 03 10 43.6 -13
ECOL Islas Columbre 13.12 64 P Pn 03 08 29.5 -4.0
ECOL S Sn 03 10 45.9 -12
ERTA Horta de San J 13.21 59 P **Pn 03 08 31.2 -3.7**
ERTA ⇑*i*IVmb_VC 03 08 35.7
comp=N,193nm,SNR=1.7

ERTA S Sn 03 10 47.4 -13
EIBI Ibiza 13.39 68 P **Pn 03 08 34.0 -3.2**
EIBI ⇑*i*IVmb_VC 03 08 37.9
comp=N,289nm,SNR=1.9

EIBI S Sn 03 10 51.2 -14
ECHI Chisagues Biel 13.85 52 P **Pn 03 08 40.2 -3.4**
ECHI ⇑*i*IVmb_VC 03 08 43.3
comp=N,350nm,SNR=3.6

ECHI S Sn 03 11 02.2 -14
EPOB Poblet 13.88 58 P **Pn 03 08 39.9 -4.1**
EPOB ⇑*i*IVmb_VC 03 08 42.2
comp=N,226nm,SNR=2.3

EPOB S Sn 03 11 01.9 -15
EMIR Miracle 14.41 57 P **Pn 03 08 48.1 -3.1**
EMIR ⇑*i*IVmb_VC 03 08 48.5
comp=N,344nm,SNR=2.2

EMIR S Sn 03 11 15.0 -15
CEST Esterri de Car 14.51 54 Pn 03 08 49.2 -3.4
ETOS Mallorca 14.66 66 P **Pn 03 08 52.0 -2.6**
ETOS S Sn 03 11 24.6 -11
ETOS Mallorca 14.66 66 P **Pn 03 08 51.2 -3.4**
ETOS ⇑*i*IVmb_VC 03 08 56.9
comp=N,176nm,SNR=0.9

ETOS S Sn 03 11 22.8 -13
CORI Orista 14.79 57 Pn **Pn 03 08 52.2 -4.2**
EJON La Jonquera 15.55 56 P **Pn 03 09 03.0 -3.3**
EJON La Jonquera 15.55 56 P **Pn 03 09 02.5 -3.9**
EJON ⇑*i*IVmb_VC 03 09 03.9
comp=N,174nm,SNR=1.0

EJON S Sn 03 11 42.8 -15
VAL Valentia 17.21 9 P **Pn 03 09 26.0 -1.2**
VAL Valentia 17.21 9 P **P 03 09 26.7 -1.8**
SSB Saint Sauveur 17.85 49 Pn 03 09 33.4 -2.0
CLF Chambon-Foret 18.09 39 P **Pn 03 09 37.4 -0.7**
CLF IAmb IAmb 03 09 41.9
comp=Z,64nm,1.1s

IWEX Carrickbyrne, 18.24 16 P **P 03 09 39.3 -0.6**
IWEX S Sn 03 12 43.6 -19
IWEX Carrickbyrne, 18.24 16 *e*P **P 03 09 40.2 +0.4**
IWEX IAmb IAmb 03 09 41.6
comp=Z,282nm,1.7s

IGLA Glengowla, Co 18.77 10 P **Pn 03 09 46.6 +0.3**
DSB Dublin 19.14 15 P **Pn 03 09 51.2 +0.4**
DSB S Sn 03 13 09.5 -15
DSB Dublin 19.14 15 P **Pn 03 09 51.7 +0.9**
DSB S Sn 03 13 03.7 -20
DSB Dublin 19.14 15 *e*P **Pn 03 09 51.3 +0.5**
DSB IAmb IAmb 03 09 53.1
comp=Z,24nm,0.9s

HLM1 Long Mynd 19.40 22 *e*P **Pn 03 09 54.8 +0.8**
HLM1 IAmb IAmb 03 09 56.0
comp=Z,12nm,0.9s

KEST Kesra 19.57 81 P **P 03 09 54.6 -0.2**
comp=Z,1.6nm,0.3s,baz=304,slow=2.1,SNR=16
KEST LR LR 03 18 23.9
comp=Z,296nm,19.6s,baz=190,slow=40
comp=Z,37nm,0.9s

KEST Kesra 19.57 81 P 03 09 55.1 +0.4
KEST IAmb IAmb 03 09 59.3
comp=Z,67nm,1.1s

WLF1 Llynfaes 19.65 19 *e*P **Pn 03 09 57.1 +0.1**
WLF1 IAmb IAmb 03 10 00.6
comp=Z,103nm,0.8s

ILTH Belurgan, Co L 19.88 15 P **Pn 03 10 00.8 +1.2**
LBWR Ladybower, Pea 20.52 22 *e*P Pn 03 10 07.8 +0.7
LBWR IAmb IAmb 03 10 11.1
comp=Z,32nm,0.9s

DOU Dourbes 20.59 37 *d*P **P 03 10 05.5 -0.1**
comp=Z,39nm,1.1s

DOU *d*S S 03 13 39.3 -15
IDGL Inch Island, C 20.66 12 P Pn 03 10 07.1 -1.6
WACR West Acre 20.77 27 *e*P Pn 03 10 10.5 +0.5
WACR IAmb IAmb 03 10 12.6
comp=Z,116nm,0.9s

BMRD Maredsous 20.81 37 *d*P **P 03 10 08.4 +0.4**
comp=Z,37nm,1.0s

ECH Echery 20.88 44 P **P 03 10 09.7 +1.0**
ECH IAmb IAmb 03 10 24.4
comp=Z,63nm,1.3s

UCC Uccle 20.94 35 P **P 03 10 09.0 -0.3**
UCC IAmb IAmb 03 10 24.6
comp=Z,47nm,1.1s

UCC Uccle 20.94 35 *d*P **P 03 10 09.5 +0.2**
comp=Z,22nm,1.1s

RCHB Rochefort 20.95 38 *d*P **P 03 10 09.4 0.0**
comp=Z,23nm,1.1s

BGES Gesves 21.02 37 *d*P **P 03 10 10.7 +0.5**
comp=Z,30nm,1.1s

WLF Walferdange 21.12 40 P **P 03 10 11.7 +0.4**
WLF Walferdange 21.12 40 P **P 03 10 11.3 0.0**
WLF Walferdange 21.12 40 *d*P **P 03 10 11.1 -0.3**
comp=Z,45nm,1.1s

BSTI Sart Tilman 21.39 37 *d*P **P 03 10 12.4 -1.7**
TAM Tamanrasset 21.41 119 P **P 03 10 16.0 +1.3**
BHOU Houvegnez 21.46 38 *d*P **P 03 10 14.2 -0.8**
comp=Z,23nm,1.1s

BFO Black Forest 21.61 45 P 03 10 16.2 -0.3
BFO IAmb IAmb 03 10 22.9
comp=Z,43nm,1.1s

MEM Membach 21.62 38 *d*P **P 03 10 16.4 -0.3**
comp=Z,14nm,1.0s

BTNL Ternell 21.67 38 *d*P **P 03 10 17.1 -0.1**
comp=Z,18nm,1.1s

ZCCA Zocca 21.74 57 P **P 03 10 20.8 +2.8**
ZCCA IAmb IAmb 03 10 31.8
comp=Z,62nm,1.3s

ESK Eskdalemuir 21.79 18 *e*P **P 03 10 20.4 +2.0**
ESK IAmb IAmb 03 10 21.5
comp=Z,12nm,0.8s

ESK Eskdalemuir 21.79 18 P **P 03 10 19.1 +0.7**

ESK IAmb IAmb 03 10 28.0
comp=Z,86nm,1.4s

EKA Eskdalemuir Ar 21.81 18 P **P 03 10 18.6 0.0**
comp=Z,17nm,1.0s,baz=204,slow=9.4,SNR=13
EKA LR LR 03 17 52.2
comp=Z,251nm,19.7s,baz=219,slow=34
comp=Z,17nm,1.0s

DAVOX Davos/Dischmat 21.85 50 P **P 03 10 19.1 -0.3**
comp=Z,2.6nm,0.6s,baz=112,slow=20,SNR=6.5
DAVOX LR LR 03 18 12.4
comp=Z,1µm,19.1s,baz=250,slow=35
comp=Z,2.6nm,0.6s

DAVA Damuels 22.06 49 *i* P **P 03 10 23.4 +1.8**
comp=Z,20nm,1.0s,SNR=4.7

EDI Edinburgh 22.34 17 *e*P **P 03 10 27.9 +3.6**
EDI IAmb IAmb 03 10 32.7
comp=Z,357nm,2.1s

FETA Feichten 22.48 50 *i* P **P 03 10 26.4 +0.2**
comp=Z,17nm,1.3s,SNR=11

MURB Monte Urbino 22.55 60 P **P 03 10 25.7 -1.2**
MURB IAmb IAmb 03 10 36.0
comp=Z,36nm,1.1s

RETA Reutte 22.69 49 *e*P **P 03 10 27.3 -0.9**
comp=Z,31nm,1.2s

MOTA Moosalm 22.84 50 *e*P **P 03 10 29.9 -0.1**
comp=Z,3.4nm,0.5s

SQTA Sankt Quirin 22.86 50 *e*P **P 03 10 30.1 0.0**
comp=Z,0.1nm,0.3s

WATA Walderalm 23.14 50 *e*P **P 03 10 32.5 -0.5**
comp=Z,20nm,1.0s

WTTA Wattenberg 23.15 50 *e*P **P 03 10 32.5 -0.6**
comp=Z,9.1nm,0.7s

ABTA Abfaltersbach 23.52 52 *e*P **P 03 10 36.6 0.0**
comp=Z,5.5nm,0.7s

VAE Valguarnera 23.52 75 LR LR 03 19 57.0
comp=Z,596nm,18.1s,baz=314,slow=37

LESA Schwarzleotal 23.86 50 *e*P **P 03 10 38.9 -1.0**
comp=Z,0.1nm,0.2s

GRF Grafenberg Arr 23.93 44 *e*P **P 03 10 41.3 +0.9**
comp=Z,8.2nm,0.9s,baz=243,slow=9.6

KBA Koelnbreinsper 24.17 52 *e*P **P 03 10 42.7 -0.1**
comp=Z,2.0nm,0.4s

MYKA Terra Mystica 24.21 53 *e*P **P 03 10 44.4 +1.3**
comp=Z,2.2nm,0.5s

BIOA Bad Ischl, Aus 24.57 50 *e*P **P 03 10 47.0 +0.8**
comp=Z,4.2nm,1.0s

OBKA Obir 24.77 54 *e*P **P 03 10 48.5 +0.3**
comp=Z,1.4nm,0.4s

MOA Molln 25.02 50 *e*P **P 03 10 48.1 -2.2**
comp=Z,0.2nm,0.4s

GERES GERESS Array B 25.04 48 P **P 03 10 50.0 -0.6**
comp=Z,0.8nm,0.5s,baz=235,slow=9.4,SNR=6.4
GERES PcP **PcP 03 14 24.3 -0.3**
comp=Z,0.7nm,0.5s,baz=242,slow=2.1,SNR=3.5
GERES LR LR 03 20 11.3
comp=Z,436nm,19.8s,baz=338,slow=36
comp=Z,0.8nm,0.5s

KHC Kasperske Hory 25.07 47 P **P 03 10 50.5 -0.4**
KHC IAmb IAmb 03 11 09.4
comp=Z,47nm,1.8s

KHC Kasperske Hory 25.07 47 *e*P **P 03 10 49.8 -1.1**
KHC *ex* x 03 11 04.5
KHC AMS AMS 03 22 30.0
comp=Z,700nm,16.5s

SOKA Soboth 25.14 53 *e*P **P 03 10 50.9 -0.6**
comp=Z,6.7nm,0.9s

CKRC Cesky Krumlov 25.40 48 *e*P **P 03 10 53.0 -0.8**
CKRC AMS AMS 03 22 30.0
comp=Z,700nm,15.2s

ZVC Zvikov 25.57 47 *e*P **P 03 10 56.8 +1.5**
ARSA Arzberg 25.63 52 *e*P **P 03 10 53.1 -2.8**
comp=Z,4.4nm,0.9s

CLL Collm 25.70 42 *e*P **P 03 10 53.0 -3.5**
CLL *ex* x 03 11 12.0
CLL *e*PPP PPP 03 11 39.0
CLL *e*PPPP 03 11 49.0
CLL *e*S S 03 15 10.0 -13

PRU Pruhonice 26.00 46 AMS AMS 03 21 00.0
comp=Z,400nm,15.5s

CONA Conrad Observa 26.06 51 *e*P **P 03 10 59.4 -0.4**
comp=Z,4.7nm,0.7s

BLY Banja Luka 26.14 59 ⇓P **P 03 11 00.1 -0.4**
PVCC Panska Ves 26.23 45 AMS AMS 03 23 00.0
comp=Z,700nm,16.4s

RONA Rosalia, Austr 26.27 52 *e*P **P 03 11 00.7 -1.0**
comp=Z,19nm,1.3s

TORD Torodi Ar. Bea 26.32 142 P **P 03 11 02.9 +0.5**
TORD comp=Z,40nm,1.2s,baz=311,slow=9.8,SNR=63
LR LR 03 21 45.5
comp=Z,2µm,19.2s,baz=329,slow=37
comp=Z,40nm,1.2s

TORD Torodi Ar. Bea 26.32 142 P **P 03 11 02.6 +0.3**
TORD IAmb IAmb 03 11 06.8
comp=Z,31nm,1.3s

KRUC Moravsky 26.77 49 *e*P **P 03 11 10.1 +3.9**
VRAC Vranov 26.97 48 LR LR 03 22 30.2
comp=Z,488nm,19.2s,baz=202,slow=38

VRAC Vranov 26.97 48 ⇑P **P 03 11 07.8 -0.2**
VRAC Vranov 26.97 48 *e*P **P 03 11 11.6 +3.6**
UPC Upice 27.07 46 *e*P **P 03 11 10.4 +1.6**
MODS Modra-Piesok 27.10 51 *e*P **P 03 11 10.0 +0.8**
CHVC Chvalec 27.12 46 AMS AMS 03 22 30.0
comp=Z,600nm,18.6s

DPC Dobruska-Polom 27.19 46 AMS AMS 03 22 40.0
comp=Z,400nm,16.3s

OSTC Ostas 27.21 46 AMS AMS 03 22 30.0
comp=Z,600nm,21.4s

KRLC Kraliky 27.36 47 AMS AMS 03 22 50.0
comp=Z,500nm,15.9s

MORH Mrgy, Hungar 27.44 56 ⇑P **P 03 11 10.9 -1.3**
MAUC Maruska 27.75 49 *e*P **P 03 11 17.2 +2.1**
OKC Ostrava-Krasne 28.11 48 AMS AMS 03 21 40.0
comp=Z,800nm,18.8s

MDVR Moldovita 29.34 60 ⇑P **P 03 11 28.7 -0.5**
BZS Buzias 29.38 58 ⇑P **P 03 11 29.5 +0.1**
DBIC Dimbokro 29.62 160 P **P 03 11 32.9 +1.0**
comp=Z,8.3nm,0.7s,baz=2.3,slow=9.5,SNR=8.0
DBIC LR LR 03 23 26.2
comp=Z,695nm,18.2s,baz=1.0,slow=36
comp=Z,8.3nm,0.7s

DBIC Dimbokro 29.62 160 P 03 11 32.8 +1.0
DBIC IAmb IAmb 03 12 22.8
comp=Z,27nm,1.0s

BORG Borgarnes 30.03 354 LR LR 03 21 35.0
comp=Z,232nm,18.2s,baz=143,slow=32

DRGR 30.31 56 ⇓P **P 03 11 37.3 -0.5**
MARR Marisel-Cluj 30.57 56 ⇑P **P 03 11 39.8 -0.4**
NOA NOISAR Array B 30.85 24 LR LR 03 23 48.1
comp=Z,100nm,19.5s,baz=230,slow=36

HFS Hagfors 31.12 27 P **P 03 11 45.0 +0.3**
comp=Z,1.5nm,0.7s,baz=224,slow=8.3,SNR=5.1
HFS PcP **PcP 03 14 38.4 -0.8**
comp=Z,2.4nm,0.8s,baz=203,slow=5.6,SNR=5.4
HFS LR LR 03 23 42.3
comp=Z,156nm,19.6s,baz=287,slow=35
comp=Z,1.5nm,0.7s

ARR Arges 31.46 59 ⇓P **P 03 11 48.2 +0.3**
BURAR Bucovina Array 32.12 55 ⇑P **P 03 11 54.6 +0.8**
BURAR Bucovina Array 32.12 55 P **P 03 11 53.8 0.0**
IDI Anoyia 32.18 78 P **P 03 11 55.8 +1.4**
MLR Muntele Rosu 32.39 59 LR LR 03 25 44.5
comp=Z,491nm,19.5s,baz=344,slow=38

MLR Muntele Rosu 32.39 59 ⇑P **P 03 11 56.4 +0.2**
PLOR Plostina 32.91 58 ⇑P **P 03 12 00.2 -0.4**
VRI Vrincioaia 32.96 58 ⇓P **P 03 11 59.4 -1.7**
SORM Soroca 34.28 54 ⇑P **P 03 12 10.9 -1.6**
ARG Arkhangelos 34.59 75 P **P 03 12 15.2 -0.1**
NACGM Naroch 34.74 42 *e*P **P 03 12 17.5 +1.1**
comp=Z,16nm,0.8s,baz=252

KIEV Kiev 35.19 50 P **P 03 12 19.4 -0.8**
KIEV IAmb IAmb 03 12 30.5
comp=Z,15nm,1.2s

AKASG Malin Array Be 35.20 50 P **P 03 12 19.6 -0.8**
comp=Z,0.3nm,0.3s,baz=264,slow=7.6,SNR=4.5
AKASG LR LR 03 25 55.0
comp=Z,310nm,20.8s,baz=352,slow=35
comp=Z,0.3nm,0.3s

MNK Minsk 35.23 43 *i* P **P 03 12 18.5 -2.1**
comp=E,18nm,1.1s
MNK *i* P **P 03 12 18.5 -2.1**
comp=N,15nm,1.0s
MNK *i* P **P 03 12 18.5 -2.1**
comp=Z,9.0nm,1.0s,baz=254

MNK *i* PP **PnPn 03 13 36.3 -2.7**
MNK *i* PPP PPP 03 13 47.7
MNK *i* S **S 03 17 51.2 -0.5**
MNK *i* SS **SnSn 03 20 07.5 -3.1**

MNK *i* SSS SSS 03 20 28.6
MNK *i* LQ LQ 03 24 21.9
MNK *i* LR LR 03 27 09.8
MNK *i* LRM MLR 03 27 55.2
comp=N,338nm,17.1s
MNK *i* LRM MLR 03 28 43.5
comp=E,176nm,16.1s
MNK *i* LRM MLR 03 29 31.7
comp=Z,243nm,14.9s

BORA Eskisehir 35.84 69 IAmb IAmb 03 12 28.2
comp=Z,17nm,0.8s

ELL Elmali 35.90 74 P **P 03 12 27.6 +0.9**
FINES FINESS Array B 36.88 31 P **P 03 12 33.9 -0.7**
comp=Z,1.7nm,0.5s,baz=247,slow=5.6,SNR=11
FINES LR LR 03 28 43.1
comp=Z,187nm,18.6s,baz=264,slow=38
comp=Z,1.7nm,0.5s

FINES FINESS Array B 36.88 31 P P 03 12 33.6 -1.0
SFJD Kangerlussuaq 38.15 338 LR LR 03 24 17.6
comp=Z,294nm,18.3s,baz=140,slow=30

BRTR Keskin Array B 38.29 68 P **P 03 12 48.1 +1.1**
comp=Z,3.2nm,0.8s,baz=266,slow=6.7,SNR=18
BRTR PcP **PcP 03 15 01.1 +0.5**
comp=Z,1.5nm,0.8s,baz=273,slow=2.5,SNR=4.7
comp=Z,3.2nm,0.8s

BRTR Keskin Array B 38.29 68 P P 03 12 48.7 +1.6
EDA Edea 38.66 138 P **P 03 12 52.0 +1.8**
EDA IAmb IAmb 03 12 53.9
comp=Z,18nm,1.1s

BNN Bunyan 40.13 69 P 03 13 03.5 +1.2
SCHQ Schefferville 40.79 316 P **P 03 13 08.1 +0.6**
comp=Z,4.2nm,0.9s,baz=111,slow=5.0,SNR=5.5
SCHQ LR LR 03 26 45.4
comp=Z,386nm,18.1s,baz=82,slow=31
comp=Z,4.2nm,0.9s

SCHQ Schefferville 40.79 316 P **P 03 13 09.1 +1.6**
SCHQ IAmb IAmb 03 13 45.2
comp=Z,33nm,1.6s

ARCES ARCESS Array B 40.94 20 P **P 03 13 08.1 -0.4**
comp=Z,3.0nm,0.5s,baz=232,slow=8.6,SNR=33
ARCES LR LR 03 30 14.1
comp=Z,84nm,19.0s,baz=242,slow=36
comp=Z,3.0nm,0.5s

ARCES ARCESS Array B 40.94 20 P P 03 13 08.0 -0.5
MMAI Mount Meron Ar 41.18 78 P **P 03 13 12.4 +1.3**
comp=Z,16nm,0.8s,baz=313,slow=9.8,SNR=31
comp=Z,16nm,0.8s

GHAJ Ghor Haditha 41.85 80 P **P 03 13 18.1 +1.8**
GHAJ IAmb IAmb 03 13 19.6
comp=Z,23nm,0.8s

ARPR Arapgir-MALATY 41.99 68 P **P 03 13 17.3 -0.4**
ARPR IAmb IAmb 03 13 30.7
comp=Z,27nm,1.1s

KUQ Kuujjuuaa 42.12 320 P **P 03 13 19.3 +1.0**
FRB Frobisher Bay 43.39 328 LR LR 03 27 31.9
comp=Z,272nm,18.9s,baz=76,slow=31

KBZ Khabaz 44.54 61 P **P 03 13 39.7 +1.7**
comp=Z,8.0nm,0.9s,baz=36,slow=3.3,SNR=12
KBZ LR LR 03 32 18.8
comp=Z,141nm,19.3s,baz=300,slow=36
comp=Z,8.0nm,0.9s

GURO Guroymak-BITLI 44.92 68 P **P 03 13 41.9 +0.5**
KARS Kars 45.24 65 IAmb IAmb 03 13 45.7
comp=Z,20nm,1.0s

SPITS Spitsbergen Ar 45.25 9 P **P 03 13 44.4 +1.2**
comp=Z,6.2nm,1.0s,baz=149,slow=5.9,SNR=1.8
SPITS LR LR 03 29 02.4
comp=Z,110nm,20.3s,baz=213,slow=31
comp=Z,6.2nm,1.0s

RCBR Riachuelo 45.30 210 LR LR 03 29 19.7
comp=Z,54nm,18.8s,baz=77,slow=32

GEVA Gevas 45.76 68 P **P 03 13 48.6 +0.5**
MDP Montagnes des 45.99 238 LR LR 03 28 23.2
comp=Z,144nm,20.5s,baz=46,slow=30

GNI Garni 46.59 65 LR LR 03 33 53.1
comp=Z,123nm,20.3s,baz=300,slow=37

KIRV Kirov 47.57 40 LR LR 03 34 46.3
comp=Z,164nm,18.1s,baz=271,slow=37

POIN Pond Inlet 49.05 339 P **P 03 14 12.1 -0.8**
POIN IAmb IAmb 03 14 27.3
comp=Z,18nm,1.8s

SADO Sadowa 49.26 302 LR LR 03 32 29.8
comp=Z,249nm,19.0s,baz=98,slow=33

ARTI Arti 52.56 42 LR LR 03 36 52.5
comp=Z,146nm,18.2s,baz=280,slow=36

ARTI Arti 52.56 42 P **P 03 14 39.4 -0.1**
ARTI IAmb IAmb 03 14 52.7
comp=Z,31nm,1.6s

RAYN Ar Rayn 53.01 85 P **P 03 14 43.9 +0.5**
AKTO Aktyubinsk 53.45 49 LR LR 03 37 06.8
comp=Z,122nm,18.6s,baz=242,slow=36

RES Resolute Bay 54.01 341 LR LR 03 35 05.8
comp=Z,104nm,18.9s,baz=6.5,slow=33

RES Resolute Bay 54.01 341 P **P 03 14 50.1 +0.2**
ABKAR Abkulak array 54.94 51 P **P 03 14 57.4 +0.4**
FURI Furi 55.10 105 LR LR 03 40 45.1
comp=Z,693nm,18.5s,baz=292,slow=38

MBAR Mbarara 55.22 120 LR LR 03 38 19.2
comp=Z,216nm,18.4s,baz=258,slow=36

MBAR Mbarara 55.22 120 P **P 03 15 01.2 +1.5**
TKL Tuckaleechee C 55.27 292 LR LR 03 34 54.1
comp=Z,119nm,19.9s,baz=80,slow=32

FCC Fort Churchill 55.53 322 P **P 03 15 01.5 +0.4**
LODK Lodwar 55.91 113 IAmb IAmb 03 15 07.8
comp=Z,13nm,1.2s

ATD Arta Tunnel 56.92 99 LR LR 03 40 36.1
comp=Z,9.1nm,18.2s,baz=332,slow=37

ULM Lac du Bonnet 58.78 312 LR LR 03 38 01.7
comp=Z,227nm,19.2s,baz=18,slow=33

BDFB Brasilia 59.51 218 P **P 03 15 32.4 +2.6**
comp=Z,2.0nm,0.8s,baz=36,slow=10.0,SNR=3.4
BDFB LR LR 03 38 01.0
comp=Z,66nm,20.0s,baz=43,slow=33
comp=Z,2.0nm,0.8s

BORK Borovoye 60.07 44 P **P 03 15 33.9 +0.8**
BVAR Borovoye Array 60.12 44 P **P 03 15 34.1 +0.7**
comp=Z,3.2nm,0.8s,baz=285,slow=2.9,SNR=13
BVAR LR LR 03 43 11.2
comp=Z,88nm,18.0s,baz=285,slow=38
comp=Z,3.2nm,0.8s

R40A Maddies Statio 60.59 298 IAmb IAmb 03 15 44.2
comp=Z,7.8nm,1.0s

UOSS Minazif 61.05 79 P **P 03 15 39.5 -0.7**
S39A Bolivar 61.60 298 P **P 03 15 44.2 +0.5**
S39A IAmb IAmb 03 15 50.2
comp=Z,12nm,1.3s

KIBK Kibwezi 61.71 116 P 03 15 47.6 +2.8
KIBK IAmb IAmb 03 15 49.2
comp=Z,12nm,1.1s

YKA Yellowknife Ar 63.89 329 P **P 03 15 58.4 -0.2**
comp=Z,0.9nm,0.9s,baz=64,slow=6.5,SNR=11
YKA LR LR 03 39 21.5
comp=Z,106nm,20.3s,baz=34,slow=32
comp=Z,0.9nm,0.9s

YKA Yellowknife Ar 63.89 329 P P 03 15 58.0 -0.6
KK31 Karatay Array 63.92 54 IAmb IAmb 03 16 12.0
comp=Z,4.8nm,0.9s

KKAR Karatay Array 63.92 54 P 03 15 59.1 0.0
T35A Sooner Cattle 64.23 298 IAmb IAmb 03 16 08.4
comp=Z,11nm,0.9s

LSZ Lusaka 64.45 133 LR LR 03 44 34.9
comp=Z,406nm,18.2s,baz=322,slow=36

LSZ Lusaka 64.45 133 P **P 03 16 04.2 +1.2**
KSANE Kasane 64.72 138 *i* P **P 03 16 05.6 +1.0**
CHGR Chuyangaron 64.87 59 P **P 03 16 05.9 +0.4**
R32A Long Quarter, 65.15 301 P **P 03 16 08.4 +1.1**
GRTLG Ghanzi 65.60 143 *i* P **P 03 16 11.9 +1.5**
KURBB Kurchatov Arra 65.71 44 P **P 03 16 10.8 +0.2**
comp=Z,2.0nm,0.3s,baz=297,slow=7.9,SNR=2.0
KURBB LR LR 03 45 13.6
comp=Z,93nm,19.1s,baz=174,slow=36

KURK Kurchatov 65.72 44 P **P 03 16 10.6 -0.1**
KURK IAmb IAmb 03 16 13.2
comp=Z,4.3nm,0.8s

OGNE Ogallala 66.34 304 P **P 03 16 15.3 +0.3**
KOOLE Kule 66.49 145 *i* P **P 03 16 17.4 +1.4**
AAK Ala-Archa 66.76 53 LR LR 03 47 53.0
comp=Z,120nm,18.1s,baz=310,slow=38

AAK Ala-Archa 66.76 53 P **P 03 16 18.8 +1.1**
SIV San Ignacio 67.19 229 LR LR 03 42 35.0
comp=Z,66nm,19.8s,baz=96,slow=33

KGCAE Kacgae 67.34 143 *i* P **P 03 16 22.8 +1.3**
PLPT Palo Pinto 67.40 295 IAmb IAmb 03 16 29.1
comp=Z,9.6nm,1.1s

SOOWA Sowa 67.53 138 *i* P **P 03 16 23.4 +0.8**
EDM Edmonton 67.56 320 P 03 16 23.6 +1.2
ZALV Zalesovo Beam 67.60 39 P **P 03 16 22.9 +0.3**

comp=Z,3.4nm,0.8s,baz=300,slow=6.7,SNR=12
ZALV LR LR 03 47 30.9
comp=Z,130nm,18.0s,baz=303,slow=37
comp=Z,3.4nm,0.8s
ZALV Zalesovo Beam 67.60 39 P P 03 16 22.5 -0.1
SMWD Samnorwood 67.75 298 IAmb IAmb 03 16 31.5
comp=Z,8.7nm,1.0s
KHWEE KHWEE 68.25 140 *i* P **P 03 16 28.1 +0.9**
NRN Naryn 68.31 54 IAmb IAmb 03 16 42.0
comp=Z,10nm,1.2s
ABTX Abilene, Hawle 68.47 295 IAmb IAmb 03 16 35.4
comp=Z,6.2nm,0.9s
APMT Aspermont 68.49 296 IAmb IAmb 03 16 35.6
comp=Z,7.5nm,1.0s
K22A Casper 68.54 308 IAmb IAmb 03 16 35.3
comp=Z,13nm,1.2s
BROLN Thalogang 68.58 138 *i* P **P 03 16 30.0 +0.8**
F30M Barrier River 68.59 339 P **P 03 16 29.3 +0.7**
E29M Blow River 68.66 341 IAmb IAmb 03 16 56.3
comp=Z,8.2nm,1.2s
D27M Malcolm River 68.87 342 IAmb IAmb 03 16 44.0
comp=Z,7.0nm,1.2s
E28M Babbage River 68.95 341 IAmb IAmb 03 16 48.5
comp=Z,21nm,1.9s
KDWAN Kaudwane 69.02 141 *i* P **P 03 16 33.2 +1.3**
KSH2 Kashi 69.10 56 P **P 03 16 33.8 +1.3**
KSH2 pP **pP 03 16 40.0 -2.1**
KSH2 sP **sP 03 16 43.5 -2.2**
KSH2 pmax pmax
comp=Z,24nm,1.0s
C27K Jago River 69.27 343 IAmb IAmb 03 17 16.8
comp=Z,10nm,1.2s
LPHEP Lephephe 69.62 140 *i* P **P 03 16 37.0 +1.3**
JCT Junction City 69.62 293 IAmb IAmb 03 16 42.8
comp=Z,6.5nm,0.8s
EPYK Eagle Plains 69.69 339 IAmb IAmb 03 16 48.9
comp=Z,12nm,1.1s
MKAR Makanchi Array 69.70 47 P **P 03 16 36.3 +0.4**
comp=Z,1.6nm,0.7s,baz=300,slow=5.0,SNR=21
MKAR LR LR 03 47 50.3
comp=Z,179nm,19.5s,baz=294,slow=36
comp=Z,1.6nm,0.7s
F28M Old Crow 69.73 341 IAmb IAmb 03 16 48.3
comp=Z,6.7nm,1.2s
T25A Trinidad 69.75 302 IAmb IAmb 03 16 45.0
comp=Z,9.4nm,1.1s
NIL Nilore 70.11 62 P **P 03 16 39.3 +0.6**
MSTX Muleshoe 70.12 298 IAmb IAmb 03 16 46.4
comp=Z,12nm,1.1s
SDCO Great Sand Dun 70.21 303 IAmb IAmb 03 17 13.7
comp=Z,16nm,2.0s
C24K Franklin Bluff 70.34 345 IAmb IAmb 03 17 07.0
comp=Z,10nm,1.1s
PDAR Pinedale Array 70.44 309 P **P 03 16 40.8 0.0**
comp=Z,0.9nm,0.9s,baz=69,slow=6.7,SNR=7.2
PDAR LR LR 03 45 23.9
comp=Z,189nm,19.6s,baz=51,slow=34
comp=Z,0.9nm,0.9s
TIXI Tiksi 70.56 12 LR LR 03 47 44.5
comp=Z,59nm,18.1s,baz=318,slow=36
J30M Hart River 70.78 337 IAmb IAmb 03 17 55.1
comp=Z,17nm,1.6s
LBTB Lobatse 70.84 142 LR LR 03 49 15.6
comp=Z,152nm,18.3s,baz=322,slow=37
LBTB Lobatse 70.84 142 P **P 03 16 44.5 +1.4**
E25K Arctic Village 70.84 343 **P 03 16 42.0 -0.5**
E25K IAmb IAmb 03 17 10.0
comp=Z,8.6nm,1.2s
DLMT Dillon 71.03 312 IAmb IAmb 03 16 48.9
comp=Z,8.6nm,1.1s
BMAR Burnt Mountain 71.12 342 P **P 03 16 45.1 +0.9**
I28M Miner Creek 71.28 339 IAmb IAmb 03 17 03.0
comp=Z,8.0nm,1.1s
D23K Nanushuk River 71.37 345 IAmb IAmb 03 16 59.8
comp=Z,7.9nm,1.2s
MNHN Monahans 71.41 296 IAmb IAmb 03 16 54.1
comp=Z,11nm,0.9s
RDMU Red Mountain 71.55 307 IAmb IAmb 03 16 54.5
comp=Z,20nm,1.4s
SAND Sanderson 71.63 294 IAmb IAmb 03 16 54.9
comp=Z,8.9nm,1.4s
B21K Ikpikpuk River 71.64 346 IAmb IAmb 03 17 09.5
comp=Z,18nm,1.6s
LPAZ La Paz 71.95 234 P **P 03 16 51.1 +0.5**
comp=Z,1.6nm,0.9s,baz=57,slow=3.6,SNR=5.2
LPAZ LR LR 03 44 14.1
comp=Z,44nm,21.5s,baz=46,slow=32
comp=Z,1.6nm,0.9s
NEW Newport 72.15 317 LR LR 03 45 10.0
comp=Z,72nm,19.3s,baz=53,slow=33
ANMO Albuquerque 72.28 300 LR LR 03 47 24.9
comp=Z,176nm,18.1s,baz=49,slow=35
HWUT Hardware Ranch 72.32 309 IAmb IAmb 03 16 59.2
comp=Z,6.6nm,0.9s
BSUT Blindstream Ca 72.35 307 P **P 03 16 52.9 +0.4**
BSUT IAmb IAmb 03 16 59.1
comp=Z,9.4nm,1.3s
L29M L29M 72.37 337 IAmb IAmb 03 17 09.9
comp=Z,8.3nm,1.1s
P18A Preston Nutter 72.48 306 IAmb IAmb 03 17 01.2
comp=Z,11nm,1.1s
DLBC Dease Lake 72.49 330 LR LR 03 45 02.6
comp=Z,71nm,18.4s,baz=62,slow=33
CMIG Matias Romero 72.54 279 LR LR 03 44 52.5
comp=Z,56nm,19.4s,baz=11,slow=33
ALPN Alpine 72.55 295 IAmb IAmb 03 17 01.4
comp=Z,8.4nm,1.1s
D20K Etivluk River 72.80 346 IAmb IAmb 03 17 29.9
comp=Z,11nm,1.6s
PRP Porcupine Dome 72.81 341 **P 03 16 55.6 +1.0**
PRP IAmb IAmb 03 17 08.3
comp=Z,9.8nm,1.3s
P17A Butcher Ranch, 72.89 306 IAmb IAmb 03 17 22.9
comp=Z,7.1nm,1.1s
HVU Hansel Valley 73.00 309 IAmb IAmb 03 17 02.4
comp=Z,9.4nm,1.4s
G23K Bananza Creek 73.03 343 IAmb IAmb 03 17 09.4
comp=Z,12nm,1.4s
TXAR Lajitas Array 73.10 294 P **P 03 16 58.5 +1.6**
comp=Z,2.7nm,1.0s,baz=74,slow=5.8,SNR=18
TXAR LR LR 03 46 15.5
comp=Z,106nm,20.1s,baz=43,slow=34
comp=Z,2.7nm,1.0s
TX31 Lajitas Ar. Si 73.10 294 IAmb IAmb 03 17 04.5
comp=Z,13nm,1.3s
ATAH Atahualpa 73.16 248 LR LR 03 46 30.2
comp=Z,59nm,20.4s,baz=41,slow=34
CPUP Villa Florida 73.17 219 P **P 03 16 58.3 +1.3**
comp=Z,0.9nm,0.8s,baz=51,slow=7.2,SNR=5.4
CPUP LR LR 03 47 55.5
comp=Z,67nm,18.1s,baz=67,slow=35
comp=Z,0.9nm,0.8s
VHRN Van Horn 73.33 296 IAmb IAmb 03 17 05.6
comp=Z,7.0nm,1.1s
F21K Alatna River 73.41 344 P **P 03 16 57.6 -0.2**
F21K IAmb IAmb 03 17 04.5
comp=Z,16nm,1.7s
BGU Big Grassy Mou 73.61 309 IAmb IAmb 03 17 05.4
comp=Z,9.3nm,1.4s
BOSA Boshof 73.66 144 P **P 03 17 01.1 +1.2**
comp=Z,17nm,0.7s,baz=332,slow=5.9,SNR=29
comp=Z,17nm,0.7s
BOSA Boshof 73.66 144 P **P 03 17 01.3 +1.4**
ILAR Eielson Array 73.76 341 P **P 03 17 00.6 +0.6**
comp=Z,0.5nm,0.5s,baz=34,slow=5.1,SNR=12
ILAR LR LR 03 49 28.7
comp=Z,107nm,18.2s,baz=319,slow=36
comp=Z,0.5nm,0.5s
ILAR Eielson Array 73.76 341 P **P 03 17 00.3 +0.3**
DUG Dugway, Tooele 73.86 308 IAmb IAmb 03 17 18.3
comp=Z,10nm,1.4s
CCB Clear Creek Bu 74.10 341 IAmb IAmb 03 17 15.0
comp=Z,11nm,1.3s
WMQ Urumqi 74.50 47 *e*P **P 03 17 06.3 +1.5**
WMQ sP **pP 03 17 16.5 +2.1**
WMQ pmax pmax
comp=Z,8.0nm,1.3s
WMQ LR LR
comp=N,490nm,16.1s
WMQ LR LR
comp=E,590nm,24.2s
F19K Shaleruckik Mo 74.64 346 IAmb IAmb 03 17 17.6
comp=Z,13nm,1.4s
C16K Lisburne Hills 74.71 349 IAmb IAmb 03 17 18.1
comp=Z,17nm,1.8s
SUR Sutherland 74.86 149 LR LR 03 48 40.2
comp=Z,149nm,19.1s,baz=324,slow=35
GO01 Chusmiza 75.08 233 P **P 03 17 10.9 +2.1**
GO01 IAmb IAmb 03 17 17.6
comp=Z,16nm,1.2s
ELK Elko 75.12 309 LR LR 03 49 51.2
comp=Z,116nm,18.0s,baz=84,slow=36
PB11 IPOC Station P 75.45 233 P **P 03 17 12.1 +1.6**
BBB Bella Bella 75.58 324 LR LR 03 46 45.8
comp=Z,144nm,18.6s,baz=38,slow=33
J08A Circle Bar Ran 75.66 313 IAmb IAmb 03 17 17.8
comp=Z,7.7nm,1.1s
H17K Granite Mounta 76.73 346 IAmb IAmb 03 17 37.9
comp=Z,13nm,1.3s
F15K North Star Dit 76.94 348 IAmb IAmb 03 17 24.9
comp=Z,14nm,1.7s
TLY Talaya 78.18 34 LR LR 03 54 41.3
comp=Z,72nm,18.6s,baz=306,slow=38
NVAR Mina Array Bea 78.38 309 P **P 03 17 26.6 -0.4**
comp=Z,0.2nm,0.4s,baz=46,slow=5.2,SNR=2.2
NVAR LR LR 03 50 38.0
comp=Z,183nm,20.0s,baz=79,slow=35
comp=Z,0.2nm,0.4s
YAK Yakutsk 79.08 16 LR LR 03 57 24.4
comp=Z,38nm,19.1s,baz=286,slow=40
YBH Yreka Blue Hor 79.14 314 LR LR 03 50 12.1
comp=Z,8.6nm,18.5s,baz=58,slow=34
OPO Ambohidratompo 79.24 122 LR LR 03 54 58.5
comp=Z,117nm,18.2s,baz=180,slow=38
PFO Pinyon Flats O 79.95 304 LR LR 03 51 58.3
comp=Z,132nm,18.1s,baz=50,slow=35
LPIG La Paz 80.91 293 LR LR 03 53 20.8
comp=Z,70nm,18.6s,baz=45,slow=36
KDAK Kodiak Island 81.03 339 LR LR 03 49 49.4
comp=Z,100nm,20.5s,baz=35,slow=33
SONM Songino Array 82.13 36 P **P 03 17 47.5 +0.6**
comp=Z,1.8nm,0.9s,baz=306,slow=6.7,SNR=8.8
SONM LR LR 03 57 06.4
comp=Z,127nm,18.1s,baz=268,slow=38
comp=Z,1.8nm,0.9s
SONM Songino Array 82.13 36 P **P 03 17 46.3 -0.6**
ULN Ulaanbaatar 82.42 35 P **P 03 17 48.7 +0.2**
ULN Ulaanbaatar 82.42 35 P **P 03 17 49.5 +1.0**
GTA2 Gaotai 84.30 45 *e*P **P 03 17 58.8 +0.5**
GTA2 pP **PcP 03 18 04.3 +2.3**
GTA2 pmax pmax
comp=Z,5.0nm,1.4s
GTA2 LR LR
comp=N,200nm,19.1s
GTA2 LR LR
comp=E,230nm,17.1s
GTA2 LR LR
comp=Z,120nm,17.9s
BO02 Sierra Bellavi 87.02 223 P **P 03 18 14.2 +2.6**
HHC Hu-ho-hao-te 89.75 38 *e*P **P 03 18 24.5 -0.2**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,72nm,7.3s
HHC LR LR
comp=N,150nm,16.1s
HHC LR LR
comp=E,140nm,16.1s
HHC LR LR
comp=Z,90nm,16.5s
PALK Pallekele 90.23 81 LR LR 04 01 35.6
comp=Z,36nm,18.7s,baz=292,slow=37
KLR Kul'dur 90.96 21 LR LR 04 05 12.6
comp=Z,64nm,18.2s,baz=344,slow=40
PLCA Paso Flores 91.24 219 LR LR 03 58 32.4
comp=Z,108nm,18.2s,baz=26,slow=35
PZH PanZhiHua 94.21 54 P **P 03 18 46.5 +0.9**
ASAJ Asahikawa 98.56 16 LR LR 04 09 34.5
comp=Z,38nm,18.9s,baz=158,slow=39
KSRS Korea Array 99.95 29 LR LR 04 10 30.3
comp=Z,59nm,18.0s,baz=315,slow=39
NJ2 Nanjing 100.26 39 *e*P **Pdif 03 19 12.3 -0.3**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
PPT2 Papeete2 136.43 282 *e*LR LR 04 08 41.6
comp=Z,70nm,22.5s
WRA Warramunga Arr 148.81 69 PKPbc **PKPbc 03 25 14.3 +0.3**
comp=Z,14nm,0.8s,baz=315,slow=2.1,SNR=82
WRA Warramunga Arr 148.81 69 PKPbc **PKPbc 03 25 13.7 -0.4**
ASAR Alice Springs 150.46 76 PKPbc **PKPbc 03 25 18.6 +0.5**
comp=Z,26nm,0.8s,baz=309,slow=1.8,SNR=268
ASAR Alice Springs 150.46 76 PKPbc **PKPbc 03 25 18.4 +0.4**
COEN Coen 151.02 49 PKPbc **PKiKP 03 25 20.5 +0.4**
DZM Mont Dzumac 167.06 355 *e*LR LR 04 22 48.5
comp=Z,70nm,24.8s

*NEIC **29** 03:18:20.5±1.0, 17°.723N×0°.008×66°.89W±0°.01, h10km±2km, ML3.0/33, Md3.0/6(RSPR), Error ellipse: s-maj=3.1km s-min=2.2km az=3.0*
*RSPR **29** 03:18:21.6, 17°.78N×66°.89W, h7km±1km, MD3.0/6*
*OSPL **29** 03:18:23.8±2.0, 17°.87N×66°.89W, h7km±21km, ML2.5, Presumed earthquake*
ISC 29 03:18:21.7±1.2, 17°.81N±0°.07×66°.88W±0°.02, h17km±7km, n29, σ0°73/46, 5C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.17**	**1**		**Pb**	**03 18 26.0**	**-0.3**
GBPR					**Sb**	**03 18 29.5**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.17**	**1**	⇓*e*P	**Pb**	**03 18 26.0**	**-0.3**
GBPR				*e*S	**Sb**	**03 18 29.5**	**+0.1**
MLPR	**Magueyes Islan**	**0.22**	**316**		**Pg**	**03 18 26.7**	**-0.2**
MLPR				Sg	**Sg**	**03 18 30.2**	**-0.2**
MLPR				IAML		03 18 31.6	
	2μm,0.2s						
MLPR				IAML		03 18 31.9	
	3μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**312**		**Pg**	**03 18 27.8**	**-0.3**
CRPR					**Sg**	**03 18 32.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**312**	IAML		03 18 32.8	
	2μm,0.2s						
CRPR				IAML		03 18 33.6	
	1μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.29**	**312**	⇓*e*P	**Pg**	**03 18 27.8**	**-0.3**
CRPR				*e*S	**Sg**	**03 18 32.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.29**	**312**	*i* P	**Pg**	**03 18 27.8**	**-0.3**
CRPR				*e*S	**Sg**	**03 18 32.2**	**-0.1**
CRPR				IAML		03 18 32.8	
	comp=Z,2μm,0.2s						
OBIP	**Obispado Ponce**	**0.35**	**48**		**Pg**	**03 18 28.6**	**-0.4**
OBIP					**Sg**	**03 18 34.1**	**0.0**
OBIP	**Obispado Ponce**	**0.35**	**48**	⇓*e*P	**Pg**	**03 18 28.9**	**-0.1**
OBIP				*e*S	**Sg**	**03 18 34.5**	**+0.4**
OBIP	**Obispado Ponce**	**0.35**	**48**	*i* P	**Pg**	**03 18 28.9**	**-0.1**
OBIP				*e*S	**Sg**	**03 18 34.5**	**+0.4**
OBIP				IAML		03 18 37.6	
	comp=Z,234nm,0.5s						
CELP	**Cerrillos**	**0.39**	**47**		**Pg**	**03 18 29.6**	**-0.1**
CELP				IAML		03 18 36.5	
	comp=Z,1μm,0.6s						
CELP				Sg	**Sg**	**03 18 36.0**	**+0.7**
CELP				IAML		03 18 38.1	
	comp=Z,994nm,0.2s						
LSP	**Las Mesas**	**0.41**	**332**		**Pg**	**03 18 30.0**	**-0.2**
LSP					**Sg**	**03 18 37.0**	**+1.0**
LSP	**Las Mesas**	**0.41**	**332**	⇑*e*P	**Pg**	**03 18 30.0**	**-0.2**
LSP				*e*S	**Sg**	**03 18 37.0**	**+1.0**
UUPR	**Utuado, UPR, P**	**0.47**	**19**		**Pg**	**03 18 30.8**	**-0.4**
PRSN	**Puerto Rico Se**	**0.48**	**328**		**Pg**	**03 18 31.0**	**-0.3**
AGPR	**Aguadilla, PR**	**0.69**	**342**		**Pb**	**03 18 34.6**	**-0.6**
ECPR	**Experimental S**	**0.71**	**44**		**Pb**	**03 18 34.7**	**-0.8**
ECPR				IAML		03 18 46.4	
	comp=Z,833nm,0.2s						
ECPR	**Experimental S**	**0.71**	**44**	⇑*e*P	**Pb**	**03 18 34.8**	**-0.8**
ECPR				*e*S	**Sb**	**03 18 44.9**	**-0.2**
IDE	**Isla Desecheo**	**0.81**	**316**		**Pb**	**03 18 36.4**	**-0.8**
IDE					**Sb**	**03 18 47.8**	**0.0**
IDE	**Isla Desecheo**	**0.81**	**316**	⇑*e*P	**Pb**	**03 18 36.4**	**-0.8**
IDE				*e*S	**Sb**	**03 18 47.8**	**0.0**
PDPR	**Patillas Dam,**	**0.84**	**76**	Pg	**Pb**	**03 18 37.3**	**-0.6**
PDPR				IAML		03 18 51.1	
	comp=Z,343nm,0.2s						
GCPR	**Guaynabo City**	**0.91**	**57**		**Sb**	**03 18 50.7**	**0.0**
GCPR	**Guaynabo City**	**0.91**	**57**		**Pb**	**03 18 38.1**	**-0.9**
GCPR	**Guaynabo City**	**0.91**	**57**	⇓*e*P	**Pb**	**03 18 38.2**	**-0.8**
GCPR				*e*S	**Sb**	**03 18 50.7**	**0.0**
HUMP	**Col San Antoni**	**1.04**	**71**		**Pb**	**03 18 40.5**	**-0.7**
HUMP					**Sb**	**03 18 54.9**	**+0.5**
HUMP	**Col San Antoni**	**1.04**	**71**	IAML		03 18 59.2	
	comp=Z,226nm,0.2s						
HUMP	**Col San Antoni**	**1.04**	**71**	⇑*e*P	**Pb**	**03 18 40.5**	**-0.7**
HUMP				*e*S	**Sb**	**03 18 54.9**	**+0.5**
CUPR	**Culebra, Puert**	**1.60**	**72**		**Pn**	**03 18 49.8**	**+0.6**
LOBH	**Bahia de las A**	**4.53**	**271**	*i* P	**Pn**	**03 19 32.1**	**+2.6**
LOBH				*e*S	**Sn**	**03 20 19.5**	**-2.3**

TRN 29 03:23:11.2, 16°.77N×62°.04W, h122km, MD3.5, 2C-2D, East of Montserrat., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
MBWH	**Windy Hill**	**0.15**	**260**	*e*S		Sn	03 23 41.5	+0.8
MLYT	**Lee's Yard**	**0.15**	**253**	*e*P		Pn	03 23 29.6	+1.6
MLYT				*e*S		Sn	03 23 43.1	+2.4
MBFL	**Flemmings, Mon**	**0.17**	**264**	*e*P		Pn	03 23 29.4	+1.3
MBFL				*e*S		Sn	03 23 42.1	+1.4
DHSZ	**Broadband at M**	**0.56**	**152**	⇑*i*P		Pn	03 23 31.0	+1.2
DHSZ				*e*S		Sn	03 23 45.2	+1.4
MMLZ	**Guadeloupe Bro**	**0.80**	**154**	⇑*i*P		Pn	03 23 33.2	+1.6
SKI	**Saint Kitts**	**0.88**	**310**	*e*P		Pn	03 23 33.4	+1.1
SKI				*e*S		Sn	03 23 49.2	+1.0
ANWB	**Willy Bob**	**0.93**	**15**	*e*P		Pn	03 23 34.4	+1.7
ANWB				*e*S		Sn	03 23 50.4	+1.3
TBG	**Guadaloupe-3**	**0.98**	**157**	⇓*i*P		Pn	03 23 34.5	+1.2
DSDZ	**La Diserade, G**	**1.04**	**116**	*e*P		Pn	03 23 34.8	+1.1
DSDZ				*e*S		Sn	03 23 52.3	+1.5
DWS	**Wesley**	**1.38**	**150**	*e*P		Pn	03 23 38.3	+0.8
DSLB	**Salisbury**	**1.45**	**156**	⇓*i*P		Pn	03 23 39.5	+1.2
BIM	**Bigot**	**2.42**	**157**	*e*P		Pn	03 23 50.9	+0.7
BIM				*e*S		Sn	03 24 21.3	+1.2

IDC 29 03:25:25.5±1.7, 4°.27S×129°.28E, h0km, mb3.3/1, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=47.6km s-min=25.2km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SIJI	**Sorong**	**3.92**	**31**	Pn	Pn	03 26 27.8	+0.7
	0.5nm,0.3s,baz=209,slow=22,SNR=1.1						
SIJI				Sn	Sn	03 27 13.3	-0.5
	2.0nm,0.3s,baz=225,slow=19,SNR=2.1						
	4.8nm,0.3s						
WRA	**Warramunga Arr**	**16.34**	**163**	Pn	P	03 29 18.4	-1.2
	0.1nm,0.3s,baz=342,slow=11,SNR=6.8						
WRA				Sn	Sn	03 32 14.6	-4.1
	baz=20,slow=28,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**19.79**	**167**	P	P	03 29 56.9	-0.8
	0.3nm,0.3s,baz=343,slow=11,SNR=14						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**65.56**	**327**	P	P	03 36 11.1	0.0
	0.2nm,0.4s,baz=110,slow=5.2,SNR=4.2						
	0.2nm,0.4s						

*NOU **29** 03:29:25.1, 40°.41S×175°.62E, h66km, ML3.7/14, North Island, New Zealand*
*WEL **29** 03:29:25.5±0.7, 40°.5±4°.4×17°.5E±°, h35km±5km, M3.3/55, ML3.3/7, MLv3.3/55, Error ellipse: s-maj=5.1km s-min=4.2km az=165.2*
ISC 29 03:29:27.3±0.9, 40°.35S±0°.02×175°.51E±0°.02, h33km±3km, n114, σ1°25/123, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
PNMS	**Monrad Interme**	**0.07**	**105**	P	**Pb**	**03 29 32.7**	**-0.1**
PNMS				S	**Sb**	**03 29 38.4**	**+1.8**
PNBS	**Palmerston Nor**	**0.08**	**93**	P	**Pb**	**03 29 32.7**	**-0.1**
PNBS				S	**Sb**	**03 29 38.2**	**+1.5**
FAHS	**Feilding Agric**	**0.14**	**21**	P	**Pb**	**03 29 33.0**	**-0.3**
FAHS				S	**Sb**	**03 29 38.9**	**+1.5**
OHWZ	**Ohakea**	**0.20**	**313**	P	**Pn**	**03 29 33.3**	**-0.3**
OHWZ				S	**Sb**	**03 29 39.1**	**+0.8**
POWZ	**Post Office Ro**	**0.20**	**103**	P	**Pn**	**03 29 33.5**	**-0.2**
POWZ				S	**Sb**	**03 29 39.0**	**+0.6**
FXBS	**Foxton Beach S**	**0.24**	**242**	P	**Pb**	**03 29 34.0**	**-0.3**
FXBS				S	**Sb**	**03 29 40.5**	**+1.4**
MRZ	**Mangatainoka R**	**0.32**	**170**	P	**Pb**	**03 29 35.0**	**-0.2**
MRZ				S	**Sn**	**03 29 41.7**	**+0.7**
HOCS	**Levin Horowhen**	**0.33**	**212**	P	**Pb**	**03 29 35.0**	**-0.4**
HOCS				S	**Sn**	**03 29 42.0**	**+0.9**
EKTS	**Eketahuna Scho**	**0.34**	**153**	P	**Pb**	**03 29 35.4**	**-0.1**
PRWZ	**Pori Road**	**0.41**	**121**	P	**Pb**	**03 29 36.5**	**-0.1**
PRWZ				S	**Sn**	**03 29 44.7**	**+1.3**
TSZ	**Takapari Road**	**0.45**	**51**	P	**Pb**	**03 29 35.9**	**-1.2**
DVHS	**Dannevirke Hig**	**0.48**	**73**	P	**Pb**	**03 29 37.5**	**+0.1**
TRMS	**Tiraumea**	**0.49**	**132**	P	**Pb**	**03 29 37.8**	**+0.1**
OTKS	**Otaki School**	**0.49**	**214**	P	**Pb**	**03 29 37.8**	**+0.1**
DVHZ	**Dannevirke**	**0.51**	**85**	P	**Pb**	**03 29 37.5**	**-0.5**
TIWZ	**Tintock**	**0.52**	**146**	P	**Pb**	**03 29 38.1**	**0.0**
OGWZ	**Otaki Gorge**	**0.54**	**209**	P	**Pb**	**03 29 38.0**	**-0.5**
HOWZ	**Holdsworth Sta**	**0.55**	**179**	P	**Pb**	**03 29 38.2**	**-0.5**
BFZ	**Birch Farm**	**0.66**	**121**	P	**Pn**	**03 29 39.5**	**-0.7**
BFZ	**Birch Farm**	**0.66**	**121**	S	**Sn**	**03 29 50.0**	**+0.5**
BFZ	**Birch Farm**	**0.66**	**121**	P	**Pn**	**03 29 39.5**	**-0.7**
PNHZ	**Pukenui**	**0.68**	**51**	P	**Pn**	**03 29 39.4**	**-1.2**
KIW	**Kapiti Island**	**0.69**	**221**	P	**Pn**	**03 29 39.9**	**-0.8**
WAZ	**Wanganui**	**0.71**	**326**	P	**Pn**	**03 29 39.9**	**-1.1**
ANWZ	**Angora Road**	**0.75**	**99**	P	**Pn**	**03 29 40.9**	**-0.7**
WPHZ	**Waipukurau**	**0.77**	**69**	P	**Pn**	**03 29 41.2**	**-0.6**
CPWZ	**Castlepoint**	**0.77**	**137**	P	**Pb**	**03 29 42.4**	**+0.1**
MTW	**Mount Morrison**	**0.81**	**180**	P	**Pn**	**03 29 41.6**	**-0.8**
TMWZ	**Te Maipa**	**0.81**	**159**	P	**Pn**	**03 29 41.8**	**-0.7**
CAW	**Cannon Point**	**0.83**	**204**	P	**Pn**	**03 29 42.3**	**-0.4**
PRHZ	**Porangahau**	**0.87**	**85**	P	**Pn**	**03 29 42.4**	**-0.7**
MOVZ	**Moawhango**	**0.96**	**11**	P	**Pn**	**03 29 42.6**	**-1.9**
MTVZ	**Mangateitei**	**0.96**	**358**	P	**Pn**	**03 29 43.1**	**-1.4**
KRHZ	**Kereru**	**0.96**	**44**	P	**Pn**	**03 29 43.4**	**-1.2**
WNVZ	**Wahianoa**	**1.02**	**4**	P	**Pn**	**03 29 44.1**	**-1.4**
PAWZ	**Paruwai Farm**	**1.04**	**183**	P	**Pn**	**03 29 44.6**	**-1.0**
TRVZ	**Turoa**	**1.05**	**2**	P	**Pn**	**03 29 44.6**	**-1.3**
TRWZ	**Traveller**	**1.06**	**173**	P	**Pn**	**03 29 45.8**	**-0.1**
PKVZ	**Pokaka**	**1.06**	**353**	P	**Pn**	**03 29 44.5**	**-1.4**
WHVZ	**Whangaehu Hut**	**1.06**	**3**	P	**Pn**	**03 29 44.7**	**-1.3**
MAVZ	**Matarangi**	**1.08**	**2**	P	**Pn**	**03 29 45.2**	**-1.1**
TUVZ	**Tukino**	**1.08**	**6**	P	**Pn**	**03 29 45.1**	**-1.1**
PXZ	**Pawanui**	**1.08**	**74**	P	**Pn**	**03 29 45.0**	**-1.1**
MSWZ	**Moikau Station**	**1.09**	**190**	P	**Pn**	**03 29 45.2**	**-1.0**
FWVZ	**Far West T-bar**	**1.09**	**2**	P	**Pn**	**03 29 45.1**	**-1.4**
WEL	**Wellington**	**1.09**	**211**	P	**Pn**	**03 29 45.6**	**-0.7**
SNZO	**South Karori**	**1.14**	**212**	P	**Pn**	**03 29 45.9**	**-1.0**
SNZO	**South Karori**	**1.14**	**212**	P	**Sn**	**03 30 00.8**	**-0.6**
COVZ	**Chateau Observ**	**1.14**	**1**	P	**Pn**	**03 29 45.8**	**-1.3**
KWHZ	**Kaweka Forest**	**1.16**	**38**	P	**Pn**	**03 29 46.1**	**-1.2**
SNVZ	**South Ngauruho**	**1.16**	**5**	P	**Pn**	**03 29 46.2**	**-1.2**
BHW	**Baring Head**	**1.17**	**204**	P	**Pn**	**03 29 46.2**	**-1.1**
NGZ	**Ngauruhoe**	**1.17**	**4**	P	**Pn**	**03 29 46.3**	**-1.2**
KAHZ	**Kahuranaki**	**1.19**	**63**	P	**Pn**	**03 29 46.6**	**-1.0**
OTVZ	**Oturere**	**1.19**	**6**	P	**Pn**	**03 29 46.5**	**-1.2**
ETVZ	**East Tongariro**	**1.22**	**7**	P	**Pn**	**03 29 46.9**	**-1.2**
LREZ	**Lake Rotokare**	**1.23**	**316**	P	**Pn**	**03 29 47.6**	**-0.5**
WTVZ	**West Tongariro**	**1.23**	**3**	P	**Pn**	**03 29 47.3**	**-1.0**
TMVZ	**Te Maari**	**1.24**	**7**	P	**Pn**	**03 29 47.2**	**-1.2**
PLWZ	**Palliser**	**1.24**	**189**	P	**Pn**	**03 29 47.0**	**-1.3**
NTVZ	**North Tongarir**	**1.25**	**6**	P	**Pn**	**03 29 47.6**	**-1.0**
KRVZ	**Karewarewa**	**1.25**	**5**	P	**Pn**	**03 29 47.7**	**-0.9**
TCW	**Tory Channel**	**1.27**	**227**	P	**Pn**	**03 29 47.8**	**-1.0**
TWVZ	**Taurewa**	**1.27**	**358**	P	**Pn**	**03 29 47.6**	**-1.3**
MCHZ	**McNeill Hill**	**1.28**	**46**	P	**Pn**	**03 29 48.1**	**-0.8**
DUWZ	**D'Urville Isla**	**1.29**	**249**	P	**Pn**	**03 29 47.8**	**-1.2**
VRZ	**Vera Road**	**1.35**	**334**	P	**Pn**	**03 29 48.7**	**-1.1**
KATZ	**Kakaramea**	**1.38**	**6**	P	**Pn**	**03 29 50.3**	**0.0**
RITZ	**Rihia Road**	**1.39**	**11**	P	**Pn**	**03 29 49.9**	**-0.5**
BKZ	**Black Stump Fm**	**1.40**	**33**	P	**Pn**	**03 29 48.7**	**-1.9**
BKZ	**Black Stump Fm**	**1.40**	**33**	S	**Sn**	**03 30 07.5**	**-0.4**

KUTZ	Kaahu Road	1.87	8	P	Pb	03 30 00.8	0.0
RAHZ	Arahi	1.88	41	P	Pb	03 30 01.2	+0.3
ALRZ	Allen Road	1.90	20	P	Pn	03 29 55.9	-1.4
HIZ	Hauiti	1.90	344	P	Pn	03 29 56.3	-1.1
HIZ	Hauiti	1.90	344	S	Sn	03 30 20.7	+0.6
HIZ	Hauiti	1.90	344	P	Pn	03 29 56.5	-0.9
TLZ	Tolley Road	2.01	1	P	Pn	03 29 58.4	-0.5
TKNZ	Takaka Hill	2.06	250	P	Pn	03 29 58.4	-1.1
RTZ	Ruatahuna	2.07	34	P	Pn	03 30 01.6	+1.8
MHGZ	Mahia Peninsul	2.20	58	P	Pn	03 29 59.1	-2.4
QRZ	Quartz Range	2.32	257	P	Pn	03 30 01.2	-1.9
QRZ	Quartz Range	2.32	257	P	Pn	03 30 01.3	-1.9
MRNZ	Matariki Terra	2.34	242	P	Pn	03 30 02.1	-1.2
RAGZ	Rawiri	2.37	35	P	Pn	03 30 01.0	-2.9
THZ	Tophouse	2.42	233	P	Pn	03 30 03.4	-1.3
URZ	Urewera	2.43	31	P	Pn	03 30 02.3	-2.3
URZ	Urewera	2.43	31	P	Pn	03 30 01.8	-2.8
KHZ	Kahutara	2.54	215	P	Pn	03 30 03.5	-2.7
KHZ	Kahutara	2.54	215	P	Pb	03 30 10.5	-1.7
MWZ	Matawai	2.55	39	P	Pn	03 30 03.4	-2.9
TOZ	Tahuroa Road	2.61	360	P	Pn	03 30 06.9	-0.2
RUGZ	Raukumara Rang	2.91	36	P	Pn	03 30 03.4	-1.3
MKAZ	Moumakai	3.25	355	P	Pn	03 30 15.5	-0.4
AWAZ	Awhitu Peninsu	3.35	348	P	Pn	03 30 17.5	+0.2
LTZ	Lake Taylor	3.44	224	P	Pn	03 30 21.1	+2.6
WCZ	Waipu Caves	4.49	348	P	Pn	03 30 32.6	-0.4
CTZ	Chatham Island	6.77	123	P	Pn	03 31 00.5	-3.7
CTZ	Chatham Island	6.77	123	P	Pn	03 31 02.3	-2.0

IDC 29 04:16:34.0±7.0, 2°30.5′S×134°02.6′E, h74km±59km, mb3.0/2, mbtmp3.4/4, ML3.2/2, MS3.1/1, Error ellipse: s-maj=89.2km s-min=20.6km az=63.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.09**	**297**	P	Pn	04 17 19.3	-1.2
	8.1nm,0.3s,baz=45,slow=19,SNR=19						
SIJI				S	Sn	04 17 57.0	+0.5
	10nm,0.3s,baz=278,slow=22,SNR=1.9						
	26nm,0.2s						
KAPI	**Kappang**	**14.49**	**259**	LR	LR	04 27 23.0	
	comp=Z,76nm,20.2s,baz=28,slow=45						
WRA	**Warramunga Arr**	**17.54**	**179**	P	Pn	04 20 32.7	-1.0
	0.1nm,0.3s,baz=1.1,slow=12,SNR=5.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**21.24**	**180**	P	P	04 21 14.1	-0.1
	0.4nm,0.4s,baz=7.7,slow=11,SNR=8.3						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**66.65**	**324**	P	P	04 27 17.6	+0.7
	0.3nm,0.5s,baz=132,slow=5.7,SNR=4.6						
	0.3nm,0.5s						

*IDC **29** 04:18:41.4±0.7, 0.°38N×126.°26E, h0km, mb4.0/12, mbtmp4.0/13, ML3.7/1, MS2.8/2, Error ellipse: s-maj=37.2km s-min=14.0km az=76.0*
*NEIC **29** 04:18:43.4±0.7, 0.°3N±0.°1×126.°19E±0.°06, h10km±1km, mb4.5/15, Error ellipse: s-maj=19.3km s-min=6.4km az=152.0*
*DJA **29** 04:18:44.2±0.2, 0.°1N±2.°1×126.°6E±.°, h10km, M4.1/19, mB5.2/2, mb4.3/7, MLv4.0/19, Mw(mB)4.6/2*

ISC 29 04:18:42.9±0.5, 0°35N±0.°05×126°20E±0.°04, h10km, n54, σ0s95/56, mb4.3/21, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.24**	**70**		**Pn**	**04 19 05.7**	**-0.7**
TNTI	**Ternate**	**1.24**	**70**	P	**Pb**	**04 19 06.5**	**0.0**
TNTI				S	**Sn**	**04 19 24.2**	**+1.0**
MNI	**Manado**	**1.74**	**309**	P	**Pb**	**04 19 14.8**	**-0.2**
GAMI	**Galela, Maluku**	**2.17**	**47**	P	**Pb**	**04 19 22.1**	**-0.3**
SANI	**Sanana**	**2.39**	**185**	P	**Pn**	**04 19 21.9**	**-0.3**
SANI				S	**Sn**	**04 19 50.9**	**-0.6**
GTOI	**Gorontalo**	**3.20**	**275**	P	**Pb**	**04 19 40.5**	**+0.6**
SGSI	**Sangihe**	**3.38**	**349**	P	**Pn**	**04 19 36.3**	**+0.5**
NLAI	**Namlea**	**3.67**	**166**	P	**Pn**	**04 19 41.1**	**+1.3**
NLAI				S	**Sn**	**04 20 21.6**	**-1.7**
LUWI	**Luwuk**	**3.69**	**248**		**Pn**	**04 19 37.9**	**-2.1**
LUWI	**Luwuk**	**3.69**	**248**	P	**Pn**	**04 19 37.8**	**-2.3**
MSAI	**Masohi**	**4.57**	**143**	P	**Pn**	**04 19 53.6**	**+1.4**
APSI	**Ampana**	**4.72**	**265**	P	**Pn**	**04 19 55.8**	**+1.6**
SIJI	**Sorong**	**5.21**	**103**	LR	LR	04 21 55.3	
	comp=Z,84nm,18.1s,baz=63,slow=38						
TOLI2	**Tolitoli**	**5.47**	**278**		Pn	04 20 11.1	+6.6
MPSI	**Mapaga**	**6.30**	**270**	P	**Pn**	**04 20 18.7**	**+2.8**
TTSI	**Tana Toraja**	**7.21**	**242**	P	**Pn**	**04 20 29.1**	**+0.6**
	0.1nm20nm,0.9s						
SPSI	**Sidrap Palu**	**7.72**	**236**	P	**Pn**	**04 20 38.2**	**+2.7**
	2μm26nm,0.8s						
SBUM	**Sibu**	**14.13**	**279**		**P**	**04 22 10.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**18.34**	**182**	P	**P**	**04 22 58.2**	**+0.6**
	0.2nm,0.3s,baz=5.9,slow=17,SNR=1.9						
	5.0nm,0.8s						
BBJI	**Bungbulang**	**20.06**	**247**	P	**P**	**04 23 16.9**	**+0.3**
WB0	**Warramunga Arr**	**21.55**	**159**		**P**	**04 23 31.6**	**-1.0**
WB0				IAmb	IAmb	04 23 40.5	
	comp=Z,9.6nm,0.8s						
WRA	**Warramunga Arr**	**21.69**	**159**	P	**P**	**04 23 33.0**	**-1.1**
	comp=Z,4.4nm,0.5s,baz=338,slow=11,SNR=54						
	comp=Z,4.4nm,0.5s						
WR8	**Warramunga Arr**	**21.76**	**158**	P	**P**	**04 23 33.7**	**-1.2**
AS31	**Alice Springs**	**25.02**	**163**		**P**	**04 24 07.1**	**-0.2**
ASAR	**Alice Springs**	**25.02**	**163**	P	**P**	**04 24 07.8**	**+0.6**
	comp=Z,5.7nm,0.8s,baz=351,slow=15,SNR=48						
	comp=Z,5.7nm,0.8s						
ASAR	**Alice Springs**	**25.02**	**163**		**P**	**04 24 08.0**	**+0.7**
JOW	**Kunigami**	**26.41**	**4**	LR	LR	04 35 08.0	
	comp=Z,22nm,19.8s,baz=72,slow=37						
BBOO	**Buckleboo**	**34.27**	**165**	P	**P**	**04 25 28.7**	**-0.6**
BBOO				IAmb	IAmb	04 25 48.3	
	comp=Z,11nm,1.2s						
STKA	**Stephens Creek**	**35.21**	**157**	P	**P**	**04 25 37.4**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=315,slow=13,SNR=5.4						
	comp=Z,1.1nm,0.7s						
JGF	**Kuroka**	**36.58**	**15**	P	**P**	**04 25 50.2**	**+1.0**
JGF				IAmb	IAmb	04 26 19.8	
	comp=Z,14nm,1.5s						
KSRS	**Korea Array**	**36.96**	**2**	P	**P**	**04 25 52.1**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=178,slow=9.7,SNR=4.7						
	comp=Z,1.2nm,0.6s						
MJAR	**Matsushiro Arr**	**37.70**	**16**	P	**P**	**04 25 57.9**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=189,slow=9.2,SNR=2.1						
	comp=Z,0.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**43.97**	**6**	P	**P**	**04 26 49.8**	**-0.5**
	comp=Z,1.7nm,0.5s,baz=139,slow=6.7,SNR=4.6						
	comp=Z,1.7nm,0.5s						
EVN	**Everest**	**46.64**	**309**	P	**P**	**04 27 12.2**	**-0.3**
EVN				IAmb	IAmb	04 27 21.0	
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**50.33**	**343**	P	**P**	**04 27 39.7**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=159,slow=7.5,SNR=7.5						
	comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**50.33**	**343**	P	**P**	**04 27 40.0**	**-0.1**
SONM				IAmb	IAmb	04 27 43.9	
	comp=Z,3.8nm,1.3s						
PEA0B	**Petropavlovsk-**	**58.75**	**22**	P	**P**	**04 28 41.3**	**+0.3**
PETK	**Petropavlovsk-**	**58.75**	**22**	P	**P**	**04 28 40.9**	**0.0**
	comp=Z,3.1nm,0.6s,baz=183,slow=4.5,SNR=13						
	comp=Z,3.1nm,0.6s						
PETK	**Petropavlovsk-**	**58.75**	**22**	P	**P**	**04 28 42.0**	**+1.0**
MKAR	**Makanchi Array**	**60.04**	**327**	P	**P**	**04 28 50.1**	**0.0**
	comp=Z,1.6nm,0.6s,baz=120,slow=7.6,SNR=21						
MKAR				PcP	**PcP**	**04 29 35.5**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=119,slow=4.5,SNR=3.8						
	comp=Z,1.6nm,0.6s						
MKAR	**Makanchi Array**	**60.04**	**327**	P	**P**	**04 28 49.9**	**-0.2**
ZALV	**Zalesovo Beam**	**63.36**	**334**	P	**P**	**04 29 12.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=119,slow=5.2,SNR=6.4						
ZALV				PcP	**PcP**	**04 29 50.0**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=132,slow=8.6,SNR=1.7						
	comp=Z,1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**63.36**	**334**	P	**P**	**04 29 12.1**	**-0.2**
KURBB	**Kurchatov Array**	**64.30**	**328**	P	**P**	**04 29 18.6**	**0.0**
	comp=Z,1.9nm,0.6s,baz=126,slow=6.3,SNR=11						
KURK	**Kurchatov**	**64.31**	**329**	P	**P**	**04 29 18.4**	**-0.2**
KURK				IAmb	IAmb	04 29 22.1	
	comp=Z,4.2nm,0.6s						
BVAR	**Borovoye Array**	**69.86**	**328**	P	**P**	**04 29 53.9**	**0.0**
	comp=Z,0.5nm,0.4s,baz=142,slow=5.1,SNR=4.9						
	comp=Z,0.5nm,0.4s						
AB31	**Akbulak array**	**74.43**	**321**	P	**P**	**04 30 21.2**	**-0.1**
AB31				IAmb	IAmb	04 30 23.2	
	comp=Z,4.2nm,1.4s						
ABKAR	**Akbulak array**	**74.43**	**321**	P	**P**	**04 30 21.2**	**-0.1**

SDPT	**Sand Point**	**80.28**	**34**	P	**P**	**04 30 54.3**	**+0.4**
N14K	**Kuskokwak Cree**	**80.80**	**29**	P	**P**	**04 30 56.9**	**+0.3**
N14K				IAmb	IAmb	04 31 01.9	
	comp=Z,20nm,1.2s						
ACHA	**Angle Creek He**	**83.64**	**31**	P	**P**	**04 31 12.0**	**+0.4**
ACHA				IAmb	IAmb	04 31 46.7	
	comp=Z,12nm,1.5s						
CNPM	**China Poot**	**85.92**	**30**	P	**P**	**04 31 22.9**	**-0.2**
ILAR	**Eielson Array**	**88.37**	**25**	P	**P**	**04 31 34.7**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=245,slow=5.2,SNR=4.7						
	comp=Z,0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**123.39**	**286**	PKP	**PKiKP**	**04 37 41.6**	**-0.1**
	comp=Z,0.9nm,1.1s,baz=92,slow=1.5,SNR=3.2						

*TAP **29** 04:20:03.8, 24.°52N×122.°57E, h13km, ML3.7, C*
*JMA **29** 04:20:04.4±0.1, 25.°N±2.°×122.°6E±0.°5, h24km±1km, MV3.2/14, NW OFF ISHIGAKIJIMA IS*

ISC 29 04:20:03.9±1.0, 24.°52N±0.°02×122.°59E±0.°02, h18km±5km, n113, σ0s69/152, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.33**	**102**	*i* P	**Pg**	**04 20 11.5**	**+0.5**
JYNG				*e*S	**Sb**	**04 20 16.8**	**+0.4**
EOS2	**EOS2**	**0.34**	**252**	P	**Pb**	**04 20 11.6**	**+0.1**
EOS2				S	**Sb**	**04 20 17.2**	**+0.7**
EOS3	**EOS3**	**0.34**	**226**	*i* P	**Pb**	**04 20 11.6**	**+0.1**
EOS3				*e*S	**Sb**	**04 20 17.6**	**+1.1**
YOJ	**Yonaguni jima**	**0.39**	**99**	P	**Pg**	**04 20 12.0**	**0.0**
YOJ	**Yonaguni jima**	**0.39**	**99**	P	**Pg**	**04 20 12.4**	**+0.4**
YOJ				*e*S	**Sb**	**04 20 18.4**	**+0.3**
YOJ	**Yonaguni jima**	**0.39**	**99**	*i* P	**Pg**	**04 20 12.4**	**+0.4**
YOJ				*i* S	**Sb**	**04 20 18.5**	**+0.5**
EOS4	**EOS4**	**0.47**	**212**	P	**Pb**	**04 20 14.0**	**+0.5**
EOS4				*e*S	**Sb**	**04 20 20.4**	**+0.4**
EGS		**0.68**	**298**	*e*P	**Pb**	**04 20 16.9**	**-0.4**
EGS				*e*S	**Sg**	**04 20 27.0**	**+0.7**
TWC	**Suao**	**0.68**	**277**	*i* P	**Pb**	**04 20 16.3**	**-0.9**
TWC				*i* S	**Sb**	**04 20 25.4**	**-0.9**
TWB1	**Santiao Chiao**	**0.73**	**312**	P	**Pb**	**04 20 17.8**	**-0.3**
TWB1				S	**Sb**	**04 20 26.6**	**-1.2**
EWUT	**Wuta**	**0.74**	**264**	*e*P	**Pb**	**04 20 18.0**	**-0.4**
EWUT				S	**Sb**	**04 20 27.7**	**-0.4**
EAHA	**Aohua**	**0.80**	**256**	P	**Pb**	**04 20 19.2**	**0.0**
EAHA				S	**Sb**	**04 20 29.2**	**-0.5**
ILA	**Ilan**	**0.80**	**288**	*e*P	**Pb**	**04 20 19.2**	**-0.1**
ILA				S	**Sg**	**04 20 30.8**	**+0.5**
NDS	**Dongshan**	**0.80**	**278**	*e*P	**Pb**	**04 20 18.4**	**-1.0**
NDS				*e*S	**Sb**	**04 20 29.2**	**-0.7**
TIPB	**Shuangxi**	**0.82**	**303**	*i* P	**Pb**	**04 20 19.9**	**+0.1**
TIPB				*e*S	**Sg**	**04 20 31.3**	**+0.3**
TWE	**Neicheng**	**0.86**	**283**	*i* P	**Pb**	**04 20 19.9**	**-0.4**
TWE				*i* S	**Sb**	**04 20 31.8**	**+0.2**
SXI1	**Grass Mountain**	**0.86**	**311**	*e*P	**Pb**	**04 20 20.6**	**+0.1**
WFSB	**Wu-fen Shan**	**0.92**	**307**	P	**Pg**	**04 20 21.7**	**-0.1**
WFSB				*e*S	**Sg**	**04 20 33.8**	**0.0**
ENTT	**Nioudou**	**0.94**	**277**	*e*P	**Pb**	**04 20 21.6**	**-0.1**
ENTT				S	**Sg**	**04 20 34.2**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.94**	**285**	*e*P	**Pb**	**04 20 21.7**	**-0.1**
FUSB				*e*S	**Sb**	**04 20 34.3**	**+0.3**
ETL	**Fush Village**	**0.95**	**248**	*e*P	**Pn**	**04 20 22.4**	**-0.1**
LATG	**Datong**	**0.97**	**271**	*e*P	**Pb**	**04 20 22.1**	**-0.2**
LATG				*e*S	**Sb**	**04 20 34.7**	**-0.1**
TNOU	**National Taiwa**	**0.97**	**310**	*e*P	**Pb**	**04 20 21.8**	**-0.4**
NACB	**Ninganchiao**	**0.97**	**249**	P	**Pb**	**04 20 22.0**	**-0.2**
NACB	**Ninganchiao**	**0.97**	**249**	S	**Sb**	**04 20 35.0**	**+0.3**
NACB	**Ninganchiao**	**0.97**	**249**	P	**Pb**	**04 20 22.4**	**+0.2**
NACB				S	**Sn**	**04 20 36.0**	**0.0**
NDT	**Datong Townshi**	**0.98**	**275**	*e*P	**Pb**	**04 20 22.5**	**0.0**
NDT				*e*S	**Sg**	**04 20 35.6**	**-0.4**
TWD	**Chiawan**	**1.01**	**244**	*e*P	**Pn**	**04 20 23.4**	**+0.2**
TWD				*e*S	**Sg**	**04 20 36.8**	**0.0**
NWLT	**Wulai**	**1.02**	**285**	*e*P	**Pb**	**04 20 23.1**	**0.0**
NWLT				S	**Sb**	**04 20 36.3**	**+0.1**
TWA	**Mucha**	**1.02**	**297**	*e*P	**Pb**	**04 20 23.3**	**+0.2**
TWA				*i* S	**Sb**	**04 20 36.3**	**+0.1**
ETLH	**Xiulin Townshi**	**1.06**	**253**	*i* P	**Pb**	**04 20 23.8**	**+0.1**
ETLH				*i* S	**Sb**	**04 20 37.4**	**+0.1**
IRIF	**Iriomote-Funau**	**1.06**	**100**	*e*P	**Pb**	**04 20 23.6**	**-0.2**
TATO	**Taipei**	**1.10**	**294**	P	**Pg**	**04 20 25.0**	**-0.2**
TATO	**Taipei**	**1.10**	**294**	S	**Sg**	**04 20 39.6**	**0.0**
NNS	**Nan Shan**	**1.11**	**266**	P	**Pn**	**04 20 24.8**	**+0.1**
NNS				*i* S	**Sn**	**04 20 39.3**	**-0.4**
YHNB	**Yeheng**	**1.11**	**278**	P	**Pb**	**04 20 24.8**	**+0.1**
YHNB	**Yeheng**	**1.11**	**278**	*e*P	**Pb**	**04 20 25.0**	**+0.3**
YHNB				*e*S	**Sb**	**04 20 39.0**	**+0.1**
YM01	**YM01**	**1.11**	**304**	*e*P	**Pb**	**04 20 24.9**	**+0.2**
YM08	**YM08**	**1.12**	**306**	*e*P	**Pb**	**04 20 25.1**	**+0.2**
NSK	**Sanguang**	**1.13**	**278**	P	**Pb**	**04 20 25.1**	**+0.1**
NSK				S	**Sb**	**04 20 39.6**	**+0.2**
ZUZH	**Zhuzihu**	**1.14**	**304**	*e*P	**Pg**	**04 20 25.8**	**-0.2**
ETM	**Tongmen**	**1.14**	**241**	*e*P	**Pg**	**04 20 25.9**	**-0.1**
TWY	**Chenhua**	**1.17**	**310**	P	**Pb**	**04 20 25.9**	**+0.3**
TWY				S	**Sb**	**04 20 40.6**	**+0.1**
ANP	**Anpu**	**1.17**	**304**	*e*P	**Pg**	**04 20 26.9**	**+0.2**
LXIB	**Xiulin Townshi**	**1.18**	**245**	*e*P	**Pg**	**04 20 26.6**	**-0.3**
LXIB				*e*S	**Sg**	**04 20 43.6**	**+1.2**
SHUL	**Shoufeng**	**1.19**	**232**	*e*P	**Pn**	**04 20 25.8**	**+0.2**
PCYT	**Pengchaiyu**	**1.20**	**337**	*e*P	**Pn**	**04 20 25.4**	**-0.4**
HATJ	**Hateruma jima**	**1.20**	**112**	*e*P	**Pn**	**04 20 26.1**	**+0.2**
TWS1	**Kuangyinshan**	**1.21**	**299**	*e*P	**Pg**	**04 20 28.1**	**+0.8**
TWS1				*e*S	**Sn**	**04 20 42.0**	**+0.1**
NTST	**Danshui**	**1.22**	**302**	*e*P	**Pg**	**04 20 27.9**	**+0.4**
FUSS	**Fushou**	**1.26**	**258**	*e*P	**Pg**	**04 20 28.2**	**-0.1**
FUSS				*e*S	**Sb**	**04 20 43.1**	**-0.1**
WHF	**Hehuan Shan**	**1.26**	**253**	P	**Pg**	**04 20 27.7**	**-0.3**
ESL	**Shilin**	**1.27**	**236**	*e*P	**Pn**	**04 20 27.0**	**+0.2**
KSHI	**Guanxi Townshi**	**1.31**	**281**	*e*P	**Pg**	**04 20 29.6**	**+0.3**
KSHI				*e*S	**Sg**	**04 20 46.2**	**-0.2**
TWT	**Tachien**	**1.31**	**259**	*e*P	**Pg**	**04 20 29.7**	**+0.4**
JKRS	**Kuro-shima**	**1.33**	**102**	P	**Pn**	**04 20 27.9**	**+0.4**
TDCB	**Techi**	**1.33**	**259**	*e*P	**Pb**	**04 20 29.1**	**+0.7**
NFF	**Wufeng Townshi**	**1.34**	**275**	*e*P	**Pg**	**04 20 29.7**	**-0.2**
NFF				*e*S	**Sg**	**04 20 46.9**	**-0.5**
NCUH	**Zhongli**	**1.35**	**289**	*e*P	**Pg**	**04 20 30.9**	**+0.8**
NCUH				*e*S	**Sg**	**04 20 49.5**	**+1.8**
WARBT	**Fenglin Townsh**	**1.36**	**234**	P	**Pn**	**04 20 28.4**	**+0.3**
WARBT				*e*S	**Sb**	**04 20 46.8**	**+0.8**
OWD	**Renai**	**1.41**	**247**	*e*P	**Pb**	**04 20 29.8**	**0.0**
OWD				*e*S	**Sg**	**04 20 49.5**	**-0.1**
JIJ	**Ishigaki jima**	**1.43**	**96**	*i* P	**Pn**	**04 20 28.6**	**-0.4**
JIJ				*e*S	**Sn**	**04 20 46.8**	**-0.5**
LIOB	**Emei**	**1.44**	**275**	*e*P	**Pg**	**04 20 31.8**	**+0.1**
WUSB	**Renai**	**1.44**	**249**	*e*P	**Pb**	**04 20 32.7**	**+0.4**
NSTT	**Nanjuang**	**1.45**	**275**	*e*P	**Pg**	**04 20 31.9**	**0.0**
HGSD	**Ruisui**	**1.48**	**226**	*e*P	**Pn**	**04 20 29.7**	**0.0**
WHP	**Taichung City**	**1.52**	**261**	*e*P	**Pg**	**04 20 32.7**	**-0.5**
VWDT	**VWDT**	**1.53**	**240**	*e*P	**Pb**	**04 20 31.8**	**0.0**
EHYH	**Wanrong**	**1.53**	**228**	*e*P	**Pn**	**04 20 30.6**	**+0.2**
EHY	**Hungye**	**1.54**	**229**	*e*P	**Pn**	**04 20 30.9**	**+0.3**
JISG	**Ishigakijimahi**	**1.57**	**87**	*e*P	**Pn**	**04 20 30.5**	**-0.4**
ECBN	**Changbin**	**1.59**	**221**	*e*P	**Pn**	**04 20 31.4**	**+0.2**
YULB	**Yu-li**	**1.63**	**227**	P	**Pn**	**04 20 32.6**	**+0.8**
YULB	**Yu-li**	**1.63**	**227**	*e*P	**Pn**	**04 20 31.7**	**-0.1**
NMLH	**Miaoli**	**1.64**	**271**	*e*P	**Pg**	**04 20 34.9**	**-0.6**
SSLB	**Suanglung**	**1.66**	**244**	P	**Pb**	**04 20 33.9**	**-0.2**
SSLB	**Suanglung**	**1.66**	**244**	S	**Sg**	**04 20 56.3**	**-1.3**
SSLB	**Suanglung**	**1.66**	**244**	*e*P	**Pb**	**04 20 33.3**	**-0.8**
TWQ1	**Liyutan**	**1.66**	**264**	*e*P	**Pg**	**04 20 36.7**	**+0.7**
NSY	**Sanyi**	**1.67**	**267**	*e*P	**Pb**	**04 20 34.4**	**+0.2**
SMLT	**Sun Moon Lake**	**1.67**	**248**	*e*P	**Pb**	**04 20 34.2**	**0.0**
TYC	**Yuchr**	**1.70**	**249**	*e*P	**Pn**	**04 20 34.6**	**+0.1**
CHKH	**Chenggong**	**1.72**	**220**	*e*P	**Pn**	**04 20 32.4**	**-0.5**
FULB	**Fuli**	**1.77**	**222**	*e*P	**Pn**	**04 20 33.7**	**0.0**
WHYT	**Xinyi Township**	**1.79**	**243**	*e*P	**Pb**	**04 20 35.7**	**-0.5**
WNT	**Mingjian**	**1.85**	**250**	*e*P	**Pb**	**04 20 37.9**	**+0.6**
ALS	**Alishan**	**1.92**	**239**	*e*P	**Pb**	**04 20 38.1**	**-0.5**
JTJ	**Tarama**	**1.93**	**86**	*e*P	**Pn**	**04 20 36.5**	**+0.7**
CHN5	**Tsauling**	**1.97**	**243**	*e*P	**Pb**	**04 20 39.4**	**-0.1**
CHN5				*e*S	**Sb**	**04 21 05.0**	**+1.3**
WDLH	**Douliu**	**2.05**	**247**	*e*P	**Pb**	**04 20 39.4**	**-1.3**
LDUT	**Ludao**	**2.11**	**209**	*e*P	**Pn**	**04 20 38.2**	**-0.2**
WCKO	**Fanlu**	**2.11**	**240**	*e*P	**Pb**	**04 20 40.9**	**-0.9**
WRL	**Guolierlin Hig**	**2.11**	**253**	*e*P	**Pb**	**04 20 41.6**	**-0.1**
STYH	**Taoyuan**	**2.14**	**231**	*e*P	**Pn**	**04 20 40.1**	**+1.4**
TPUB	**Ta-pu**	**2.17**	**236**	P	**Pb**	**04 20 41.8**	**-0.9**
TPUB	**Ta-pu**	**2.17**	**236**	*e*P	**Pb**	**04 20 41.8**	**-0.9**
TWGBT	**Beinan**	**2.19**	**219**	P	**Pn**	**04 20 39.8**	**+0.3**
TWGBT	**Beinan**	**2.19**	**219**	*e*P	**Pn**	**04 20 39.7**	**+0.2**
TWG	**Pinlang**	**2.19**	**220**	*e*P	**Pn**	**04 20 39.7**	**+0.2**
WTP	**Ta-pu**	**2.21**	**235**	*e*P	**Pb**	**04 20 42.4**	**-1.0**
TWK	**Hsinying**	**2.29**	**237**	*e*P	**Pb**	**04 20 43.5**	**-1.3**
CHN1	**Nanshi**	**2.31**	**235**	*e*P	**Pb**	**04 20 44.4**	**-0.7**
SGST	**Jiashian**	**2.33**	**232**	*e*P	**Pn**	**04 20 43.1**	**+1.7**
SLGT	**Liugui**	**2.34**	**230**	*e*P	**Pb**	**04 20 44.6**	**-1.1**
WSL	**Shuilin Townsh**	**2.38**	**246**	*e*P	**Pb**	**04 20 45.0**	**-1.2**
SSD	**Sandimen**	**2.52**	**226**	*e*P	**Pb**	**04 20 46.8**	**-1.9**
MASBT	**Mashibuluo**	**2.61**	**224**	*e*P	**Pn**	**04 20 47.6**	**+2.3**
EAST	**Anshuo**	**2.66**	**217**	*e*P	**Pn**	**04 20 47.9**	**+1.8**
SCZT	**Fangliau**	**2.80**	**221**	*e*P	**Pb**	**04 20 50.7**	**-2.7**
MATB	**Ma-tsu**	**2.89**	**305**	*e*P	**Pn**	**04 20 48.8**	**-0.3**
VWUC	**VWUC**	**2.89**	**280**	*e*P	**Pn**	**04 20 50.0**	**+0.9**
PHUB	**P eng-hu**	**2.94**	**251**	*e*P	**Pn**	**04 20 50.9**	**+1.1**
WDGT	**Dungji**	**2.96**	**245**	*e*P	**Pn**	**04 20 52.4**	**+2.4**

*ISK **29** 04:24:05.1, 39.°12N×27.°79E, h8km, ML3.5/17*
*AFAD **29** 04:24:05.3, 39.°12N×27.°80E, h7km±2km, MW3.3*
*THE **29** 04:24:06.4, 39.°N±3.°×2.°8E±.°, h11km±16km, M3.1/12, MLh3.1/12*
*ATH **29** 04:24:10.0, 39.°14N×27.°59E, h35km±13km, ML3.2/7, Manual Solution by I.Dede First location: 2020/02/29 04:25:43, This location: 2020/02/29 06:32:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*

ISC 29 04:24:05.7±0.9, 39.°12N±0.°02×27.°79E±0.°02, h12km±7km, n57, σ0s92/82, 9C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOMA	**Soma-Manisa**	**0.20**	**282**	Pg	**Pg**	**04 24 09.9**	**-0.2**
SOMA				Sg	**Sg**	**04 24 13.4**	**+0.3**
AKHS	**Akhisar**	**0.24**	**175**	P	**Pg**	**04 24 10.8**	**+0.1**
AKHS				S	**Sg**	**04 24 14.8**	**+0.8**
STEP	**BALIKESIR_Sava**	**0.27**	**348**	P	**Pg**	**04 24 10.9**	**-0.4**
STEP				S	**Sg**	**04 24 14.8**	**-0.3**
GORD	**Gordes-Manisa**	**0.36**	**124**	Pg	**Pg**	**04 24 12.8**	**-0.2**
GORD				Sg	**Sb**	**04 24 18.9**	**-1.0**
GOMA	**Golmarmara-Man**	**0.42**	**166**	Pg	**Pg**	**04 24 13.5**	**-0.5**
G

KOK	**Koryaka**	**3.38**	**231**	*eP*	Pn	05 28 06.4 +3.5
GNL	**Ganaly**	**3.46**	**241**	*eP*	Pn	05 28 07.4 +3.4
OSSR	**Ossora**	**3.76**	**0**	*eP*	Pn	05 28 10.0 +2.0
MTVR	**Mutnovka**	**4.15**	**225**	*eP*	Pn	05 28 17.6 +4.1
MTVR				*eS*	Sn	05 29 03.0 +2.1

IDC 29 05:32:07.2±1.3, 4°.92N×125°.28E, h0km, mb3.7/5, mbtmp3.7/5, MS2.9/2, Error ellipse: s-maj=82.3km s-min=23.3km az=74.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.26**	**160**	P	P	05 37 44.5	+0.1
	1.7nm,0.6s,baz=340,slow=9.9,SNR=26						
	1.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**29.03**	**300**	LR	LR	05 48 50.2	
	comp=Z,6.9nm,21.9s,baz=300,slow=34						
ASAR	**Alice Springs**	**29.63**	**164**	P	P	05 38 14.4	-0.2
	0.5nm,0.7s,baz=352,slow=7.6,SNR=10						
	0.5nm,0.7s						
STKA	**Stephens Creek**	**39.75**	**158**	P	P	05 39 41.8	0.0
	0.9nm,0.4s,baz=332,slow=13,SNR=2.8						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**55.76**	**325**	P	P	05 41 45.8	-0.2
	0.2nm,0.6s,baz=120,slow=8.2,SNR=2.4						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**84.66**	**25**	P	P	05 44 42.7	0.0
	0.7nm,1.1s,baz=246,slow=4.3,SNR=6.1						
	0.7nm,1.1s						
BRTR	**Keskin Array B**	**88.16**	**310**	LR	LR	06 28 26.2	
	comp=Z,20nm,21.5s,baz=102,slow=38						

ISK 29 05:34:48.2, 39°.13N×27°.79E, h8km, ML1.6/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOMA	**Soma-Manisa**	**0.20**	**277**	Pg	Pg	05 34 52.9	+0.6
SOMA				Sg	Sg	05 34 56.1	+1.1
GORD	**Gordes-Manisa**	**0.38**	**126**	Pg	Pg	05 34 55.9	+0.3
GORD				Sg	Sg	05 35 01.8	+1.3
GOMA	**Golmarmara-Man**	**0.43**	**167**	Pg	Pg	05 34 57.3	+0.7
GOMA				Sg	Sb	05 35 03.9	-0.9
BALB	**Balikesir**	**0.51**	**8**	Pg	Pb	05 34 58.7	+0.6
DST	**Dursunbey**	**0.80**	**53**	Pg	Pb	05 35 04.3	-0.1
SUSR	**Susurluk-Balik**	**0.86**	**15**	Pg	Pb	05 35 05.1	-0.3
ODEM	**Odemis-Izmir**	**0.88**	**165**	Pg	Pb	05 35 05.5	-0.3
GONE	**Gonen-Balikesi**	**0.92**	**355**	Pg	Pb	05 35 06.3	-0.1
KULA	**Kula-Manisa**	**0.92**	**132**	Pg	Pb	05 35 06.5	+0.1
SIMA	**Simav-Kutahya**	**0.93**	**93**	Pg	Pb	05 35 06.5	-0.1
BLCB	**Balcova**	**0.95**	**218**	Pg	Pb	05 35 06.8	-0.1
SHAP	**Saphane-Kutahy**	**1.12**	**95**	Pn	Pb	05 35 10.0	+0.1
AYDB	**Zeytinkoy-Aydi**	**1.19**	**176**	Pn	Pn	05 35 11.2	0.0
NAZL	**Nazilli-Aydin**	**1.23**	**161**	Pn	Pg	05 35 12.1	+0.3
TVSB	**Tavsanli**	**1.34**	**76**	Pn	Pb	05 35 13.6	0.0

AFAD 29 05:34:59.7, 40°.57N×29°.09E, h11km, ML1.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURT	**Yalova, Merkez**	**0.09**	**78**	P	Pg	05 35 02.5	+0.2
KURT				S	Sg	05 35 04.5	+0.2
IGD	**Bursa**	**0.32**	**165**	P	Pb	05 35 07.3	0.0
IGD				S	Sb	05 35 11.6	-1.0
IGD				IAML		05 35 13.0	
	comp=N,23nm,0.4s						
IGD				IAML		05 35 13.0	
	comp=E,20nm,0.4s						
ULDT	**Uludag**	**0.43**	**175**	P	Pg	05 35 08.8	+0.6
ULDT				IAML		05 35 15.0	
	comp=N,12nm,0.2s						
ULDT				S	Sb	05 35 15.1	-0.9
ULDT				IAML		05 35 16.0	
	comp=E,17nm,0.4s						
SEMS	**Kocaeli-K¶rfe**	**0.58**	**58**	P	Pg	05 35 10.9	-0.1
SEMS				S	Sg	05 35 19.2	+0.7
SEMS				IAML		05 35 20.0	
	comp=N,15nm,0.3s						
SEMS				IAML		05 35 25.0	
	comp=E,18nm,1.3s						
HISA	**Bilecik-Osmane**	**0.64**	**99**	P	Pn	05 35 14.1	-0.7
HISA				S	Sb	05 35 21.8	-0.1
HISA				IAML		05 35 27.0	
	comp=N,18nm,0.3s						
HISA				IAML		05 35 38.0	
	comp=E,13nm,2.2s						

*IDC **29** 05:41:08.5±1.4, 36°.27N×71°.09E, h0km, mb3.8/8, mbtmp3.9/12, ML3.5/5, MS3.3/2, Error ellipse: s-maj=25.8km s-min=23.3km az=134.0*
*NNC **29** 05:41:22.5±5.8, 36°.83N×70°.76E, h98km±90km, mb3.2, mpv3.8, Error ellipse: s-maj=48.0km s-min=38.9km az=174.0*

ISC 29 05:41:22.2±1.2, 36°.8N±0°.1×71°.0E±0°.1, h100km, n21, σ2s21/23, mb3.6/7, 2C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.30**	**357**	⇓P	**Pn**	**05 42 52.7**	**+0.1**
	4.0nm,0.3s,baz=174,slow=11,SNR=132						
KK31				⇑S	**Sn**	**05 44 01.7**	**-1.3**
	4.2nm,0.3s,baz=187,slow=22,SNR=5.8						
AAK	**Ala-Archa**	**6.43**	**24**	Pn	**Pn**	**05 42 54.9**	**+0.5**
	3.7nm,0.3s,baz=192,slow=5.9,SNR=32						
AAK				Sn	**Sn**	**05 44 09.3**	**+2.9**
	0.8nm,0.3s,baz=334,slow=22,SNR=8.6						
AAK				Lg	Lg	05 44 46.5	
	0.4nm,0.3s,baz=15,slow=20,SNR=1.8						
	8.4nm,0.4s						
AAK	**Ala-Archa**	**6.43**	**24**	⇓P	**Pn**	**05 42 55.2**	**+0.7**
	1.8nm,0.4s						
AAK				⇑S	**Sn**	**05 44 09.5**	**+3.1**
	5.2nm,0.5s						
MK31	**Makanchi Array**	**13.06**	**37**	P	**Pn**	**05 44 22.6**	**-1.2**
	0.6nm,0.5s,baz=219,slow=14,SNR=11						
MKAR	**Makanchi Array**	**13.06**	**37**	Pn	**Pn**	**05 44 20.8**	**-3.1**
	0.1nm,0.3s,baz=219,slow=14,SNR=11						
	1.8nm,1.0s						
AB31	**Akbulak array**	**14.80**	**331**	P	**Pn**	**05 44 45.0**	**-1.3**
	0.6nm,0.4s,baz=165,slow=12,SNR=16						
AB31				S	**Sn**	**05 47 25.2**	**-4.2**
	0.2nm,0.2s,baz=152,slow=26,SNR=3.3						
KURBB	**Kurchatov Arra**	**14.84**	**19**	Pn	**Pn**	**05 44 44.0**	**-2.8**
	0.1nm,0.3s,baz=206,slow=11,SNR=6.4						
BVAR	**Borovoye Array**	**16.22**	**359**	Pn	**Pn**	**05 45 00.8**	**-3.2**
	0.1nm,0.3s,baz=171,slow=10,SNR=7.2						
	0.4nm,0.4s						
AKTO	**Aktyubinsk**	**16.50**	**330**	P	**Pn**	**05 45 07.5**	**0.0**
	0.3nm,0.3s,baz=138,slow=7.3,SNR=8.0						
	2.2nm,0.6s						
AKTO	**Aktyubinsk**	**16.50**	**330**	⇓P	**P**	**05 45 09.7**	**+1.3**
	1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**19.65**	**25**	P	**P**	**05 45 42.8**	**-0.1**
	5.6nm,0.7s,baz=215,slow=11,SNR=19						
	5.6nm,0.7s						
SONM	**Songino Array**	**28.19**	**56**	P	**P**	**05 47 05.2**	**-0.2**
	0.4nm,0.4s,baz=271,slow=7.7,SNR=4.3						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**37.21**	**326**	P	**P**	**05 48 25.6**	**+2.1**
	2.7nm,1.0s,baz=101,slow=7.2,SNR=1.3						
	2.7nm,1.0s						
ARCES	**ARCESS Array B**	**40.85**	**337**	P	**P**	**05 48 56.2**	**+2.4**
	3.8nm,1.0s,baz=109,slow=8.1,SNR=4.2						
	3.8nm,1.0s						
HFS	**Hagfors**	**42.80**	**322**	P	**P**	**05 49 11.4**	**+1.7**
	0.8nm,0.4s,baz=101,slow=14,SNR=4.3						
	0.8nm,0.4s						
NB2	**NORSAR Subarra**	**44.12**	**323**	P	**P**	**05 49 21.8**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.12**	**323**	P	**P**	**05 49 21.6**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=96,slow=7.7,SNR=3.9						
	comp=Z,0.8nm,0.7s						
MA2	**Magadan**	**54.14**	**38**	LR	LR	06 16 38.4	
	comp=Z,21nm,19.3s,baz=134,slow=39						
SIJI	**Sorong**	**67.14**	**109**	LR	LR	06 26 21.1	
	comp=Z,30nm,18.5s,baz=182,slow=41						
YKA	**Yellowknife Ar**	**80.94**	**3**	P	**P**	**05 53 26.9**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=351,slow=6.0,SNR=17						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**82.18**	**122**	P	**P**	**05 53 29.6**	**-2.7**
	comp=Z,0.2nm,0.7s,baz=333,slow=5.3,SNR=1.8						
	comp=Z,0.2nm,0.7s						

*IDC **29** 05:46:44.0±0.9, 16°.11N×93°.20W, h0km, mb3.9/7, mbtmp3.9/8, ML3.2/2, MS3.2/6, Error ellipse: s-maj=36.4km s-min=13.7km az=45.0*
*CATAC **29** 05:46:46.5±0.3, 16°N±2°×9°3W±°, h2km±2km, M4.6/12, MLv4.6/12, Error ellipse: s-maj=6.3km s-min=3.5km az=73.7, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}4.70; $M_{\theta\theta}$-3.08; $M_{\phi\phi}$-1.63; $M_{r\theta}$-0.37; $M_{\theta\phi}$-1.52; M_{rr}-3.23; Fault plane solution: $M_0$5.47883×10^{14} NP1:ϕ_s71.04050°,δ33.89434°,λ122.46230°. NP2: ϕ_s213.57472°,δ61.93160°,λ70.17067°. Principal axes: T 6.0707, Plg66.8761°, Azm85.9291°; N -1.4934, Plg17.4169°, Azm223.2045°; P -4.5773, Plg14.7282°, Azm317.9347°; confirmed*
*NEIC **29** 05:46:47.3±2.2, 16°.29N±0°.04×93°.00W±0°.04, h10km±2km, mb4.0/11, Md4.4/88(MEX) Error ellipse: s-maj=7.8km s-min=6.0km az=22.0*
*MEX **29** 05:46:47.3±1.4, 16°.30N×93°.06W, h30km±49km, MD4.4*
*GCG **29** 05:46:47.6±2.9, 16°.29N×93°.05W, h14km±27km, MD4.6, ML4.6, Presumed earthquake*

ISC 29 05:46:46.0±1.0, 16°.28N±0°.02×93°.05W±0°.02, h9km±7km, n129, σ2s14/171, mb4.1/8, MS3.3/5, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGBT	**Tuxtla Gutierr**	**0.49**	**356**		**Pg**	**05 46 55.9**	**+0.3**
TGBT	**Tuxtla Gutierr**	**0.49**	**356**	*eP*	**Pg**	**05 46 55.9**	**+0.3**
TGBT				*eS*	**Sg**	**05 47 02.8**	**+0.7**
TGIG		**0.50**	**352**		**Pg**	**05 46 55.8**	**0.0**
TGIG		**0.50**	**352**	*eP*	**Pg**	**05 46 55.8**	**0.0**
TGIG				*eS*	**Sg**	**05 47 02.3**	**0.0**
TGIG		**0.50**	**352**	*i P*	**Pg**	**05 46 55.6**	**-0.1**
PCIG		**0.60**	**196**	*eP*	**Pg**	**05 46 57.4**	**-0.2**
PCIG				*eS*	**Sg**	**05 47 05.4**	**0.0**
CARR	**Arriaga**	**0.83**	**268**	*eP*	**Pg**	**05 47 01.6**	**-0.3**
CARR				*eS*	**Sg**	**05 47 13.0**	**+0.3**
CCIG	**Comitan**	**0.88**	**90**		**Pg**	**05 47 02.1**	**-0.8**
CCIG				*eS*	**Sg**	**05 47 13.3**	**-1.2**
CCIG	**Comitan**	**0.88**	**90**	*eP*	**Pg**	**05 47 02.2**	**-0.8**
CCIG				*eS*	**Sg**	**05 47 12.5**	**-2.0**
CCIG	**Comitan**	**0.88**	**90**	*i P*	**Pg**	**05 47 02.2**	**-0.8**
CCIG				*i S*	**Sg**	**05 47 13.3**	**-1.2**
CCIG				IAML		05 47 24.8	
	comp=N,6μm,0.6s						
UXUV	**UXUV**	**1.47**	**315**	*eP*	**Pn**	**05 47 12.4**	**-0.3**
UXUV				*eS*	**Sn**	**05 47 31.5**	**-0.5**
THIG		**1.56**	**151**		**Pn**	**05 47 14.4**	**+0.4**
THIG		**1.56**	**151**	*eP*	**Pn**	**05 47 14.4**	**+0.4**
THIG				*eS*	**Sb**	**05 47 35.9**	**+0.9**
THIG		**1.56**	**151**	*i P*	**Pn**	**05 47 14.6**	**+0.6**
THIG				*i S*	**Sn**	**05 47 34.8**	**+0.5**
THIG				IAML		05 47 50.2	
	comp=N,5μm,0.6s						
SMCA	**Catarina**	**1.70**	**146**	*i P*	**Pn**	**05 47 16.1**	**+0.2**
SMCA				*i S*	**Sn**	**05 47 37.6**	**-0.3**
SMCA				IAML		05 47 40.5	
	comp=N,4μm,0.5s						
HUEH	**Huehuetenango**	**1.77**	**122**		**Pn**	**05 47 17.3**	**+0.2**
HUEH				Sn	**Sn**	**05 47 39.4**	**-0.5**
HUEH	**Huehuetenango**	**1.77**	**122**	*eP*	**Pn**	**05 47 17.1**	**0.0**
HUEH				*eS*	**Sn**	**05 47 40.5**	**+0.6**
HUEH	**Huehuetenango**	**1.77**	**122**	P	**Pn**	**05 47 17.8**	**+0.7**
HUEH				S	**Sb**	**05 47 42.4**	**+1.1**
HUEH	**Huehuetenango**	**1.77**	**122**	*i P*	**Pn**	**05 47 17.4**	**+0.2**
HUEH				*i S*	**Sn**	**05 47 41.0**	**+1.1**
HUEH				IAML		05 47 53.7	
	comp=E,8μm,0.5s						
CMIG	**Matias Romero**	**1.93**	**295**	Pn	**Pn**	**05 47 19.1**	**0.0**
	comp=E,165nm,0.3s,baz=116,slow=15,SNR=610						
CMIG				Sn	**Sn**	**05 47 44.1**	**+0.6**
	comp=E,92nm,0.3s,baz=43,slow=19,SNR=5.3						
CMIG				LR	LR	05 48 00.9	
	comp=E,165nm,18.9s,baz=160,slow=41						
CMIG	**Matias Romero**	**1.93**	**295**		**Pn**	**05 47 20.5**	**+1.5**
CMIG	**Matias Romero**	**1.93**	**295**	*eP*	**Pn**	**05 47 20.5**	**+1.5**
CMIG				*eS*	**Sb**	**05 47 45.8**	**+0.2**
QUEO	**Labor Ovalle**	**2.04**	**133**	*i P*	**Pn**	**05 47 22.6**	**+1.8**
QUEO				*i S*	**Sn**	**05 47 47.6**	**+1.0**
QUEO				IAML		05 48 06.4	
	comp=N,6μm,0.6s						
SOKI	**Kika Raxquin**	**2.15**	**132**	*i P*	**Pn**	**05 47 23.8**	**+1.3**
SOKI				IAML		05 48 09.8	
	comp=N,3μm,0.7s						
TUIG	**Tuzandepetl**	**2.18**	**323**		**Pn**	**05 47 22.6**	**+0.1**
TUIG	**Tuzandepetl**	**2.18**	**323**	*eP*	**Pn**	**05 47 22.6**	**+0.1**
RTAL	**Retalhuleu**	**2.18**	**143**		**Pn**	**05 47 24.9**	**+2.4**
RTAL	**Retalhuleu**	**2.18**	**143**	*eP*	**Pb**	**05 47 25.1**	**-0.6**
RTAL				*eS*	**Sn**	**05 47 50.4**	**+0.7**
RTAL	**Retalhuleu**	**2.18**	**143**	P	**Pb**	**05 47 25.6**	**-0.1**
STG2	**El Palmar, Qui**	**2.45**	**138**	*i P*	**Pn**	**05 47 23.0**	**-3.3**
STG2				IAML		05 47 56.8	
	comp=E,16μm,0.5s						
STG8	**El Palmar, Qui**	**2.45**	**138**	*i P*	**Pn**	**05 47 23.4**	**-3.0**
STG5	**El Palmar, Qui**	**2.49**	**138**	*i P*	**Pn**	**05 47 23.9**	**-2.9**
STG5				*eS*	**Sn**	**05 47 49.8**	**-7.6**
AVCB	**Coban**	**2.67**	**107**	*i P*	**Pn**	**05 47 31.7**	**+2.3**
AVCB				IAML		05 48 19.0	
	comp=N,10μm,0.4s						
APG	**El Apazote**	**2.80**	**117**	Pn	**Pn**	**05 47 32.5**	**+1.3**
	comp=N,0.7nm,0.3s,baz=78,slow=18,SNR=32						
APG				Sn	**Sn**	**05 48 08.3**	**+3.1**
	comp=N,5.1nm,0.3s,baz=87,slow=17,SNR=5.8						
HUIG	**Huatulco**	**2.98**	**261**	*eP*	**Pn**	**05 47 33.7**	**+0.1**
HUIG				*eS*	**Sn**	**05 48 11.2**	**+1.8**
HUIG	**Huatulco**	**2.98**	**261**	*i P*	**Pn**	**05 47 33.6**	**+0.1**
NEUV	**Arroyo Zacate**	**2.99**	**299**		**Pn**	**05 47 35.4**	**+1.8**
NEUV	**Arroyo Zacate**	**2.99**	**299**	*eP*	**Pn**	**05 47 35.4**	**+1.8**
NEUV				*eS*	**Sn**	**05 48 08.1**	**-1.5**
PMUV	**Sontecomapan**	**2.99**	**319**		**Pn**	**05 47 33.5**	**-0.3**
PMUV	**Sontecomapan**	**2.99**	**319**	*eP*	**Pn**	**05 47 33.5**	**-0.3**
PMUV				*eS*	**Sn**	**05 48 09.3**	**-0.5**
PETF	**Flores**	**3.12**	**78**		**Pn**	**05 47 36.9**	**+1.5**
PETF	**Flores**	**3.12**	**78**	*eP*	**Pn**	**05 47 36.5**	**+1.0**
PETF				*eS*	**Sn**	**05 48 13.5**	**+0.7**
PETF	**Flores**	**3.12**	**78**	P	**Pn**	**05 47 37.0**	**+1.5**
PETF	**Flores**	**3.12**	**78**	*i P*	**Pn**	**05 47 36.6**	**+1.2**
PETF				IAML		05 48 33.8	
	comp=E,2μm,0.6s						
FG8	**Yepocapa, Chim**	**3.13**	**130**	*i P*	**Pn**	**05 47 32.4**	**-3.4**
FG8				*i S*	**Sn**	**05 48 09.2**	**-4.2**
SCIG	**Sabancuy**	**3.21**	**33**		**Pn**	**05 47 37.1**	**+0.5**
SCIG	**Sabancuy**	**3.21**	**33**	*eP*	**Pn**	**05 47 37.1**	**+0.5**
SCIG				*eS*	**Sn**	**05 48 15.0**	**0.0**
SCIG	**Sabancuy**	**3.21**	**33**	P	**Pn**	**05 47 38.5**	**+1.9**
SCIG	**Sabancuy**	**3.21**	**33**	*i P*	**Pn**	**05 47 38.4**	**+1.7**
OXBJ	**Oaxaca**	**3.60**	**283**	*eS*	**Sn**	**05 48 23.7**	**-1.3**
VHO	**Vista Hermosa**	**3.61**	**283**	*eP*	**Pb**	**05 47 47.3**	**-3.0**
VHO				*eS*	**Sn**	**05 48 30.0**	**+4.7**
SLOZ	**Alcaldia de Sa**	**3.87**	**125**	P	**Pn**	**05 47 48.6**	**+2.8**
PEIG	**Puerto Escondi**	**3.94**	**266**		**Pn**	**05 47 47.1**	**+0.4**
PEIG	**Puerto Escondi**	**3.94**	**266**	*eP*	**Pn**	**05 47 47.1**	**+0.4**
PEIG				*eS*	**Sn**	**05 48 33.3**	**+0.1**
NUBE	**Las Nubes**	**3.95**	**126**	P	**Pn**	**05 47 49.5**	**+2.5**
ZAFR2	**Estanzuela, Za**	**3.95**	**115**	*i P*	Pn	05 47 40.2	-6.7
ESQI	**Esquipulas**	**3.97**	**115**		**Pn**	**05 47 49.3**	**+0.9**
ESQI	**Esquipulas**	**3.97**	**115**	P	**Pn**	**05 47 49.8**	**+2.6**
MTO3	**Montecristo**	**4.03**	**117**		**Pn**	**05 47 48.4**	**+0.3**
MTO3	**Montecristo**	**4.03**	**117**	P	**Pn**	**05 47 51.6**	**+3.5**
TOIG	**Toxpalan**	**4.24**	**296**		**Pn**	**05 47 52.1**	**+1.2**
TOIG	**Toxpalan**	**4.24**	**296**	*eP*	**Pn**	**05 47 52.1**	**+1.2**
TOIG				*eS*	**Sn**	**05 48 39.3**	**-1.3**
YOIG	**Yosondua**	**4.35**	**278**	*eP*	**Pn**	**05 47 55.2**	**+2.7**
YOIG				*eS*	**Sn**	**05 48 35.8**	**-7.7**
SARH	**Santa Rosa de**	**4.40**	**109**	P	**Pn**	**05 47 54.3**	**+1.2**
TXIG	**Tlaxiaco**	**4.62**	**283**	*eP*	**Pn**	**05 47 59.7**	**+3.4**
TXIG				*eS*	**Sn**	**05 48 52.4**	**+2.2**
TPIG	**Tehuac#an**	**4.63**	**298**		**Pn**	**05 47 58.2**	**+1.8**
TPIG	**Tehuac#an**	**4.63**	**298**	*eP*	**Pn**	**05 47 58.2**	**+1.8**
TPIG				*eS*	**Sn**	**05 48 54.7**	**+4.3**
LVIG	**Laguna Verde**	**4.69**	**317**	*eP*	**Pn**	**05 47 56.0**	**-0.9**
LVIG				*eS*	**Sn**	**05 48 43.6**	**-7.9**
JAIV	**Jalcomulco**	**4.71**	**311**	*eP*	**Pn**	**05 47 56.7**	**-0.6**
JAIV				*eS*	**Sn**	**05 48 48.3**	**-3.8**
P5NO	**Presa 5 de nov**	**4.73**	**118**	P	**Pn**	**05 48 00.2**	**+2.6**
HLIG	**Huajuapan de L**	**4.80**	**289**	*eP*	**Pn**	**05 47 57.1**	**-1.6**
HLIG				*eS*	**Sn**	**05 48 54.4**	**-0.2**
PNIG	**Pinotepa**	**4.87**	**272**		**Pn**	**05 48 00.9**	**+1.3**
PNIG	**Pinotepa**	**4.87**	**272**	*eP*	**Pn**	**05 48 00.9**	**+1.3**
PNIG				*eS*	**Sn**	**05 48 57.9**	**+1.7**
SCLA	**Alcaldia de Sa**	**4.90**	**121**	P	**Pn**	**05 48 02.8**	**+2.8**
FTIG	**Fresnillo de T**	**5.12**	**289**	*eP*	**Pn**	**05 48 06.0**	**+3.0**
FTIG				*eS*	**Sn**	**05 48 57.4**	**-5.0**
MGIG	**Malinaltepec**	**5.43**	**281**		**Pn**	**05 48 09.3**	**+1.9**
MGIG	**Malinaltepec**	**5.43**	**281**	*eP*	**Pn**	**05 48 09.3**	**+1.9**
MGIG				*eS*	**Sn**	**05 49 10.7**	**+0.6**
TLIG	**Tlapa**	**5.43**	**284**		**Pn**	**05 48 10.5**	**+3.2**
TLIG	**Tlapa**	**5.43**	**284**	*eP*	**Pn**	**05 48 09.1**	**+1.8**
TLIG				*eS*	**Sn**	**05 49 03.3**	**-6.7**
CXUV	**Coxquihui**	**5.79**	**313**	*eP*	**Pn**	**05 48 11.6**	**-0.6**
CXUV				*eS*	**Sn**	**05 49 19.5**	**+0.7**
CRIG	**Cruz Grande**	**5.85**	**275**		**Pn**	**05 48 15.0**	**+2.1**
CRIG	**Cruz Grande**	**5.85**	**275**	*eP*	**Pn**	**05 48 15.0**	**+2.1**
CRIG				*eS*	**Sn**	**05 49 18.5**	**-1.6**
PPM	**Popocatepetl**	**5.99**	**298**	*eP*	**Pn**	**05 48 18.2**	**+2.9**
PPM				*eS*	**Sn**	**05 49 26.1**	**+1.7**
TEIG	**Tepich**	**6.00**	**48**		**Pn**	**05 48 14.8**	**-0.2**
YAIG	**Yautepec**	**6.28**	**295**	*eP*	**Pn**	**05 48 21.0**	**+2.0**
YAIG				*eS*	Sn	05 49 22.3	-8.8
DAIG	**Los Arroyos**	**6.37**	**278**		**Pn**	**05 48 21.5**	**+1.4**
DAIG	**Los Arroyos**	**6.37**	**278**	*eP*	**Pn**	**05 48 21.5**	**+1.4**
DAIG				*eS*	**Sn**	**05 49 28.3**	**-4.7**
MEIG	**Mezcala**	**6.49**	**286**	*eP*	**Pn**	**05 48 24.9**	**+3.1**
MEIG				*eS*	**Sn**	**05 49 38.3**	**+2.2**
PLIG	**Platanillo**	**6.51**	**290**	*eP*	**Pn**	**05 48 25.0**	**+2.9**
PLIG				*eS*	**Sn**	**05 49 33.4**	**-3.2**
AOVM	**Tlapan**	**6.67**	**297**	*eP*	Pn	05 48 31.2	+6.5
AOVM				*eS*	**Sn**	**05 49 39.5**	**-1.5**
MAVM	**Malinalco, Edo**	**6.69**	**294**		**Pn**	**05 48 26.1**	**+1.3**
MAVM	**Malinalco, Edo**	**6.69**	**294**	*eP*	**Pn**	**05 48 26.1**	**+1.3**
MAVM				*eS*	**Sn**	**05 49 40.5**	**-0.8**
CAIG	**El Cayaco**	**6.96**	**277**		**Pn**	**05 48 28.7**	**+0.6**
CAIG	**El Cayaco**	**6.96**	**277**	*eP*	**Pn**	**05 48 28.7**	**+0.6**
CAIG				*eS*	**Sn**	**05 49 50.1**	**+2.7**
CTUV	**Llano Grande**	**7.20**	**317**		**Pn**	**05 48 32.1**	**+0.6**
CTUV	**Llano Grande**	**7.20**	**317**	*eP*	**Pn**	**05 48 32.1**	**+0.6**
CTUV				*eS*	**Sn**	**05 49 50.2**	**-3.2**
ARIG	**Puente Sto Nin**	**7.25**	**287**		**Pn**	**05 48 34.5**	**+2.3**
ARIG	**Puente Sto Nin**	**7.25**	**287**	*eP*	**Pn**	**05 48 34.5**	**+2.3**
ARIG				*eS*	Sn	05 49 45.1	-10
INCO	**Volcan de Coli**	**10.55**	**289**	*eP*	**Pn**	**05 49 22.3**	**+4.5**
CEGR	**Campo Tres**	**10.74**	**288**	*eP*	**Pn**	**05 49 22.3**	**+2.0**
833A	**Chaparral WMA,**	**13.34**	**335**		**Pn**	**05 49 56.0**	**+0.4**
HNDO	**Hondo**	**14.37**	**338**		**Pn**	**05 50 09.9**	**+0.1**
BRDY	**Brady**	**15.89**	**341**		**Pn**	**05 50 31.7**	**+1.7**
BRDY				IAmb	IAmb	05 50 47.0	
	comp=Z,4.0nm,0.6s						
SAND	**Sanderson**	**15.95**	**330**	Pn	**Pn**	**05 50 32.4**	**+1.5**
SAND				IAmb	IAmb	05 50 38.6	
	comp=Z,10nm,1.4s						
TXAR	**Lajitas Array**	**16.25**	**325**	Pn	**Pn**	**05 50 34.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=15						
	comp=Z,1.7nm,0.9s						
TXAR	**Lajitas Array**	**16.25**	**325**	Pn	**Pn**	**05 50 36.6**	**+1.9**
LPIG	**La Paz**	**17.95**	**298**	LR	LR	05 58 29.5	
	comp=Z,38nm,19.4s,baz=122,slow=39						
VHRN	**Van Horn**	**18.09**	**325**		**P**	**05 51 00.0**	**+1.8**
GDL2	**Guadalupe Moun**	**18.88**	**329**		**Pn**	**05 51 08.6**	**+1.1**
AMTX	**Amarillo**	**20.07**	**339**		**P**	**05 51 21.4**	**+1.5**
AMTX				IAmb	IAmb	05 51 27.0	
	comp=Z,14nm,0.9s						
CRNM	**Carthage**	**21.48**	**328**	P	**P**	**05 51 37.2**	**+2.1**
Y22A	**Socorro**	**21.59**	**327**		**P**	**05 51 37.5**	**+1.2**
Y22A				IAmb	IAmb	05 51 44.1	
	comp=Z,10.0nm,1.0s						
ANMO	**Albuquerque**	**22.13**	**330**	LR	LR	06 01 22.0	
	comp=Z,19nm,20.3s,baz=172,slow=40						
KSU1	**Kansas State U**	**22.95**	**353**	P	**P**	**05 51 51

PODR				IAML		05 53 14.2	
	comp=N,32nm,1.0s						
PODR	**Polo**	**0.24**	**111**	*i* P	**Pn**	**05 53 05.4**	**-0.2**
PODR				*e*S	**Sn**	**05 53 09.9**	**-0.9**
NEDR	**Neiba UASD**	**0.25**	**22**⇑	*e*Pg	**Pn**	**05 53 05.0**	**-0.5**
NEDR			⇑	*e*Sg	**Sn**	**05 53 12.5**	**+2.0**
NEDR				IAML		05 53 12.7	
	comp=N,37nm,0.5s						
LONE3	**El Aguacate, B**	**0.35**	**9**	*i* P	**Pn**	**05 53 08.0**	**+1.0**
LONE3				*e*S	**Sn**	**05 53 13.8**	**+0.8**
LONE3				IAML		05 53 15.2	
	comp=Z,13nm,1.1s						
JIDR	**Jimani**	**0.40**	**307**⇑	*e*Pg	**Pn**	**05 53 05.9**	**-1.5**
JIDR			⇑	*e*Sg	**Sn**	**05 53 16.3**	**+2.6**
LOBH	**Bahia de las A**	**0.41**	**197**	*i* P	**Pn**	**05 53 07.2**	**-0.3**
LOBH				*e*S	**Sn**	**05 53 13.7**	**-0.3**
LOBH				IAML		05 53 17.6	
	comp=Z,33nm,4.0s						
LOVI	**El Cajuil, Ovi**	**0.47**	**163**	*i* P	**Pn**	**05 53 10.1**	**+1.5**
LOVI				IAML		05 53 28.4	
	comp=Z,46nm,1.2s						

IDC ***29*** *06:01:36.0±1.1,36˚.41N×141˚.67E,h0km,mb3.7/7, mbtmp3.7/10,ML3.2/3,MS2.9/6,Error ellipse: s-maj=24.5km s-min=18.5km az=87.0*
JMA ***29*** *06:01:38.9±0.2,36˚.5N±0˚.4×14˚.2E±˚,h49km±4km, MV3.4/31,FAR E OFF IBARAKI PREF*

ISC 29 06:01:39.7±0.9,36˚48N±0˚.06×141˚.61E±0˚.07,h26km,n31, σ0§96/25,mb3.8/8,MS2.7/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.84**	**261**	P			**Pb**	**06 01 54.9**	**-0.7**
JHYU				*e*S			**Sn**	**06 02 06.5**	**-0.8**
JHO	**Hitachi**	**0.85**	**279**	*e*P			**Pb**	**06 01 54.5**	**-1.3**
JHO				*e*S			**Sb**	**06 02 06.1**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.90**	**314**	*e*P			**Pn**	**06 01 55.0**	**-1.8**
JFK	**Kawauchi**	**1.07**	**327**	*e*P			**Pn**	**06 01 57.7**	**-1.3**
JOTO	**OTAMA OYAMA**	**1.49**	**317**	*e*P			**Pn**	**06 02 04.4**	**-0.4**
JMM	**Marumori**	**1.53**	**335**	P			**Pn**	**06 02 04.4**	**-1.0**
JAG	**Ashikaga**	**1.74**	**269**	*i* P			**Pn**	**06 02 07.7**	**-0.5**
JFY	**Yanaizu**	**1.79**	**302**	*e*P			**Pn**	**06 02 08.7**	**-0.2**
JIO	**Ouri**	**1.98**	**354**	*e*P			**Pn**	**06 02 10.2**	**-1.3**
MJAR	**Matsushiro Arr**	**2.74**	**272**	Pn			**Pn**	**06 02 22.3**	**+0.3**
	0.8nm,0.3s,baz=98,slow=7.9,SNR=60								
MJAR				Sn			**Sn**	**06 02 56.5**	**+2.1**
	0.6nm,0.3s,baz=86,slow=18,SNR=6.8								
MJAR				LR			LR	06 03 46.9	
	comp=Z,265nm,19.1s,baz=12,slow=47 31nm,0.8s								
JHJ	**Hachijo jima 2**	**3.67**	**205**	Pn			**Pn**	**06 02 34.2**	**-0.5**
	11nm,0.3s,baz=81,slow=19,SNR=1.6								
JHJ				Sn			**Sn**	**06 03 17.0**	**-0.2**
	12nm,0.3s,baz=74,slow=22,SNR=1.2 38nm,0.3s								
ASAJ	**Asahikawa**	**7.67**	**5**	Pn			**Pn**	**06 03 30.5**	**+0.9**
	0.6nm,0.3s,baz=179,slow=10,SNR=4.4								
ASAJ				Sn			**Sn**	**06 04 56.0**	**+0.5**
	0.7nm,0.3s,baz=265,slow=19,SNR=4.6 2.9nm,0.6s								
JNU	**Nakatsue**	**9.44**	**252**	LR			LR	06 07 59.2	
	comp=Z,98nm,19.1s,baz=76,slow=40								
KSRS	**Korea Array**	**11.00**	**279**	LR			LR	06 08 35.6	
	comp=Z,40nm,18.9s,baz=85,slow=38								
PETK	**Petropavlovsk-**	**20.09**	**29**	LR			LR	06 13 35.2	
	comp=Z,35nm,20.5s,baz=256,slow=36								
H11N2	**WAKE ISLAND Hy**	**27.73**	**120**	T			T	06 36 33.0	
	baz=313,slow=75								
H11N1	**WAKE ISLAND Hy**	**27.74**	**120**	T			T	06 36 36.9	
	baz=313,slow=75								
H11N3	**WAKE ISLAND Hy**	**27.75**	**120**	T			T	06 36 23.9	
	baz=313,slow=75								
SONM	**Songino Array**	**28.23**	**305**	P			**P**	**06 07 30.9**	**+0.4**
	3.2nm,0.7s,baz=103,slow=8.3,SNR=26 3.2nm,0.7s								
H11S1	**WAKE ISLAND Hy**	**28.43**	**122**	T			T	06 37 31.2	
	baz=315,slow=76								
H11S3	**WAKE ISLAND Hy**	**28.43**	**122**	T			T	06 37 30.1	
	baz=315,slow=76								
H11S2	**WAKE ISLAND Hy**	**28.44**	**122**	T			T	06 37 31.6	
	baz=315,slow=76								
TLY	**Talaya**	**30.82**	**312**	LR			LR	06 20 50.4	
	comp=Z,16nm,19.9s,baz=168,slow=37								
CMAR	**Chiang Mai Arr**	**41.51**	**256**	LR			LR	06 29 09.1	
	comp=Z,18nm,19.1s,baz=210,slow=40								
ZALV	**Zalesovo Beam**	**42.41**	**313**	P			**P**	**06 09 32.7**	**+0.9**
	2.6nm,0.6s,baz=88,slow=7.0,SNR=12 2.6nm,0.6s								
MKAR	**Makanchi Array**	**44.55**	**303**	P			**P**	**06 09 49.8**	**+0.5**
	1.1nm,0.7s,baz=88,slow=10,SNR=17 1.1nm,0.7s								
KURBB	**Kurchatov Arra**	**46.47**	**308**	P			**P**	**06 10 05.1**	**+0.8**
	1.7nm,0.3s,baz=82,slow=7.6,SNR=2.3								
BVAR	**Borovoye Array**	**51.06**	**313**	P			**P**	**06 10 40.3**	**+0.7**
	0.4nm,0.5s,baz=60,slow=8.8,SNR=2.6 0.4nm,0.5s								
WRA	**Warramunga Arr**	**56.53**	**188**	P			**P**	**06 11 19.9**	**0.0**
	0.6nm,0.7s,baz=5.7,slow=7.0,SNR=4.6 0.6nm,0.7s								
ASAR	**Alice Springs**	**60.26**	**188**	P			**P**	**06 11 45.4**	**-0.5**
	0.3nm,0.8s,baz=15,slow=6.8,SNR=2.9 0.3nm,0.8s								
YKA	**Yellowknife Arr**	**64.21**	**30**	P			**P**	**06 12 12.5**	**+0.7**
	0.2nm,0.7s,baz=297,slow=7.3,SNR=5.9 0.2nm,0.7s								

FUNV ***29*** *06:08:56.4, 10˚.66N×62˚.47W,h22km,MW3.6,Presumed earthquake*
TRN ***29*** *06:08:56.7, 10˚.65N×62˚.43W,h96km,MD3.9,Paria peninsula.*

ISC 29 06:08:54.3±2.0,10˚63N±0˚.08×62˚45W±0˚.08, h109km,22km,n22,σ1§28/41,1C-4D,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.89**	**85**	*e*P			**Pn**	**06 09 15.6**	**+1.3**
DMDM				*e*S			**Sn**	**06 09 28.5**	**-0.9**
TRN	**Trinidad (W)**	**1.03**	**89**	*e*P			**Pn**	**06 09 16.4**	**+0.7**
TRN				*e*S			**Sn**	**06 09 30.2**	**-1.8**
TRN	**Trinidad (W)**	**1.03**	**89**	*i* P			**Pn**	**06 09 17.0**	**+1.2**
TRN				*e*S			**Sn**	**06 09 30.8**	**-1.2**
GRFF	**Grenada Fort F**	**1.58**	**26**	*e*P			**Pn**	**06 09 22.5**	**+0.4**
GRFF				*e*S			**Sn**	**06 09 42.0**	**-1.1**
GRGR	**Grenville**	**1.69**	**28**⇓	*e*P			**Pn**	**06 09 23.9**	**+0.6**
GRGR				*e*S			**Sn**	**06 09 44.1**	**-1.5**
GRGR	**Grenville**	**1.69**	**28**	*e*P			**Pn**	**06 09 24.0**	**+0.6**
GRGR				*e*S			**Sn**	**06 09 44.7**	**-0.9**
GRW	**Mount Saint Ca**	**1.71**	**27**	*e*P			**Pn**	**06 09 25.6**	**+1.9**
GRW				*e*S			**Sn**	**06 09 46.2**	**0.0**
GRSS	**Sisters**	**1.85**	**26**	*e*P			**Pn**	**06 09 26.6**	**+1.1**
GRSS				*e*S			**Sn**	**06 09 48.8**	**-0.4**
GCMP	**Grenada, Carri**	**2.10**	**28**	*e*P			**Pn**	**06 09 28.9**	**+0.2**
GCMP				*e*S			**Sn**	**06 09 53.9**	**-1.0**
GCMP	**Grenada, Carri**	**2.10**	**28**	*e*P			**Pn**	**06 09 29.3**	**+0.7**
GCMP				*e*S			**Sn**	**06 09 53.7**	**-1.1**
PCRV	**Puerto La Cruz**	**2.19**	**258**⇓	*e*P			**Pn**	**06 09 31.3**	**+1.5**
PCRV				*e*S			**Sn**	**06 09 55.1**	**-1.9**
PCRV	**Puerto La Cruz**	**2.19**	**258**	*e*P			**Pn**	**06 09 31.5**	**+1.7**
PCRV				*e*S			**Sn**	**06 09 57.6**	**+0.6**
SVB	**Belmont**	**2.88**	**24**	*e*P			**Pn**	**06 09 40.4**	**+1.6**
SVB				*e*S			**Sn**	**06 10 12.9**	**0.0**
MCLT	**Moule a Chique**	**3.40**	**26**	*e*P			**Pn**	**06 09 46.4**	**+0.7**
MCLT				*e*S			**Sn**	**06 10 24.5**	**-0.9**
SLBI	**Saint Lucia, B**	**3.67**	**23**	*e*P			**Pn**	**06 09 50.4**	**+1.1**
SLBI				*e*S			**Sn**	**06 10 30.8**	**-1.0**
BIM	**Bigot**	**4.09**	**19**	*e*P			**Pn**	**06 09 55.9**	**+0.9**
BIM				*e*S			**Sn**	**06 10 40.6**	**-1.5**
TACV	**Tcata**	**4.53**	**264**⇓	*e*P			**Pn**	**06 10 02.0**	**+1.2**
TACV				*e*S			**Sn**	**06 10 51.1**	**-1.3**
CACV	**CAICARA DEL OR**	**5.05**	**233**	*e*P			Pn	06 10 03.7	-4.2
CACV				*e*S			Sn	06 10 54.2	-11
BENV	**Beln**	**5.11**	**263**⇓	*e*P			**Pn**	**06 10 10.2**	**+1.5**
BENV				*e*S			**Sn**	**06 11 05.1**	**-1.5**
TURV	**Turiamo**	**5.30**	**269**	*e*P			**Pn**	**06 10 12.8**	**+1.6**
TURV				*e*S			**Sn**	**06 11 09.3**	**-1.8**
MAPV	**Macapo**	**5.96**	**263**⇓	*e*P			**Pn**	**06 10 20.8**	**+0.6**
MAPV				*e*S			**Sn**	**06 11 24.6**	**-2.6**
TEPV	**Terepaima**	**6.66**	**265**	*e*P			**Pn**	**06 10 30.2**	**+0.4**

IDC ***29*** *06:43:39.5±0.5,22˚.07S×169˚.23E,h0km,mb4.8/16, mbtmp4.8/18,ML4.2/3,MS4.2/45,Error ellipse: s-maj=15.4km s-min=13.0km az=162.0*
BJI ***29*** *06:43:39.9,21˚.69S×169˚.62E,h13km,mB5.3/15,mb4.9/50, Ms5.0/7,Ms7 4.6/9*
NEIC ***29*** *06:43:42.7,22˚.06S×169˚.07E,h12km*
NEIC ***29*** *06:43:42.7±2.2,22˚.06S±0˚.10×169˚.06E±0˚.07,h10km±1km, mb5.2/54,Mww4.9/18,Error ellipse: s-maj=16.8km s-min=10.8km az=176.0*
NEIC ***29*** *06:43:42.7,22˚.06S×169˚.18E,h12km,Moment Tensor Solution. Duration: 1§6 Moment tensor: Scale 1016Nm; Mrr=2.79; Mθθ1.00; Mϕϕ 1.80; Mrθ0.32; Mθϕ-1.03; Mϕr-1.65; Fault plane solution: M0 3.15000×1016 NP1: ϕs136.89000°,δ30.47000°,λ-107.47000°. NP2: ϕs336.95000°,δ61.08000°,λ-79.99000°. Principal axes: T 2.9339, Plg16.0000°, Azm60.0000°; N 0.3951, Plg9.0000°, Azm152.0000°; P -3.3290, Plg72.0000°, Azm270.0000°;*
GCMT ***29*** *06:43:45.7±0.2,21˚.99S±0˚.02×169˚.14E±0˚.01,h19km, MW5.0/120,Moment Tensor Solution. s70,c101; s120,c172; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=4.65±.14; Mθθ1.70±.10; Mϕϕ2.95±.10; Mrθ1.23±.21; Mθϕ-1.84±.06; Mϕr-0.88±.19; Best double couple: M0 4.70600×1016 NP1:ϕs149.00000°,δ36.00000°, λ-82.00000°. NP2:ϕs319.00000°,δ54.00000°, λ-96.00000°. Principal axes: T 4.4950, Plg9.0000°, Azm53.0000°; N 0.4240, Plg5.0000°, Azm323.0000°; P -4.9180, Plg80.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NOU ***29*** *06:43:50.8,21˚.74S×168˚.79E,h61km,mb4.9/72,Loyalty Islands*

ISC 29 06:43:44.5±0.3,22˚00S±0˚.04×169˚19E±0˚.04,h31km,n327, σ1§30/292,mb5.1/85,MS4.4/48,9C-13D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.19**	**295**	P			**Pn**	**06 44 04.6**	**-0.4**
MARNC	**Mare, Loyalty**	**1.19**	**295**	P			**Sn**	**06 44 19.8**	**-0.3**
MARNC	**Mare, Loyalty**	**1.19**	**295**				**Pn**	**06 44 03.4**	**-1.6**
OUENC	**Ouen Island, N**	**2.21**	**259**	P			**Pn**	**06 44 19.2**	**+0.1**
OUENC	**Ouen Island, N**	**2.21**	**259**	S			**Sn**	**06 44 46.4**	**+1.0**
DZM	**Mont Dzumac**	**2.55**	**268**	*e*Pn			**Pn**	**06 44 23.5**	**-0.3**
	1μm,0.7s								
DZM				*e*Sn			**Sn**	**06 44 53.2**	**-0.6**
	10μm,1.6s								
DZM	**Mont Dzumac**	**2.55**	**268**	Pn			**Pn**	**06 44 23.3**	**-0.5**
	65nm,0.3s,baz=113,slow=8.4,SNR=192								
DZM				Sn			**Sn**	**06 44 50.7**	**-3.1**
	399nm,0.3s,baz=306,slow=23,SNR=7.6								
DZM				LR			LR	06 44 52.9	
	comp=Z,3μm,18.6s,baz=12,slow=28 30nm,0.5s								
DZM	**Mont Dzumac**	**2.55**	**268**	P			**Pn**	**06 44 23.4**	**-0.3**
ONTNC	**Ouen Toro**	**2.55**	**263**	P			**Pn**	**06 44 23.9**	**+0.2**
ONTNC	**Ouen Toro**	**2.55**	**263**				**Pn**	**06 44 23.2**	**-0.5**
RTV	**Rentapao**	**4.24**	**350**	P			**Pn**	**06 44 46.9**	**-0.1**
RTV	**Rentapao**	**4.24**	**350**	S			**Sn**	**06 45 34.1**	**-1.4**
DVP	**Devils Point**	**4.35**	**347**	P			**Pn**	**06 44 49.8**	**+1.3**
DVP	**Devils Point**	**4.35**	**347**	S			**Sn**	**06 45 36.2**	**-2.0**
KOUNC	**Koumac, New Ca**	**4.79**	**287**	P			**Pn**	**06 44 54.4**	**-0.1**
MSVF	**Nonsavu**	**9.36**	**65**				**Pn**	**06 46 00.5**	**+3.2**
YSA	**Yasawairara**	**9.51**	**58**	P			Pn	06 46 09.5	+10
LKBA	**Tubou, Lakemba**	**11.88**	**74**	P			Pn	06 46 44.2	+12
NGOA	**Tingoa Renbel**	**13.56**	**318**	P			**Pn**	**06 46 53.5**	**-1.3**
RAO	**Raoul Island**	**13.69**	**124**	Pn			**Pn**	**06 46 57.1**	**+0.7**
HNR	**Honiara**	**15.33**	**323**	Pn			**Pn**	**06 47 18.9**	**+0.3**
	0.7nm,0.3s,baz=162,slow=2.3,SNR=2.8								
HNR				LR			LR	06 51 46.1	
	comp=Z,42nm,21.4s,baz=238,slow=32								
HNR	**Honiara**	**15.33**	**323**	Pn			**Pn**	**06 47 19.2**	**+0.5**
HNR				IAmb			IAmb	06 47 20.6	
	comp=Z,82nm,0.8s								
AUBSH	**Beerwah State**	**15.56**	**249**	P			**P**	**06 47 23.7**	**-1.9**
SAVO	**Savo Central**	**15.63**	**323**	P			**Pn**	**06 47 21.4**	**-1.3**
TATA	**Tatamba Isabel**	**16.27**	**325**	P			**Pn**	**06 47 29.6**	**-1.2**
TW1H	**Toowoomba 1 Ha**	**16.58**	**247**	P			**P**	**06 47 36.1**	**-0.9**
EIDS	**Eidsvold**	**16.92**	**255**	P			**P**	**06 47 41.7**	**+0.9**
	comp=Z,43nm,1.3s								
EIDS	**Eidsvold**	**16.92**	**255**	P			**P**	**06 47 39.9**	**-0.8**
EIDS	**Eidsvold**	**16.92**	**255**	Pn			**Pn**	**06 47 36.8**	**-2.2**
AUNRC	**North Rockhamp**	**17.27**	**262**	P			**Pn**	**06 47 43.8**	**+0.4**
URZ	**Urewera**	**17.58**	**159**	P			**Pn**	**06 47 46.4**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=338,slow=3.9,SNR=29								
URZ				LR			LR	06 53 14.2	
	comp=Z,1μm,19.8s,baz=338,slow=33 comp=Z,70nm,0.9s								
ARMA	**Armidale**	**17.83**	**238**	P			**P**	**06 47 52.3**	**+1.3**
	comp=Z,63nm,1.6s								
ARMA	**Armidale**	**17.83**	**238**	P			**P**	**06 47 52.6**	**+1.7**
RTZ	**Ruatahuna**	**17.86**	**160**				**P**	**06 47 51.3**	**+0.1**
RTZ				IAmb			IAmb	06 47 54.2	
	comp=Z,135nm,1.1s								
BKZ	**Black Stump Fm**	**18.22**	**162**				**P**	**06 47 56.1**	**+1.1**
BKZ				IAmb			IAmb	06 47 59.5	
	comp=Z,110nm,1.0s								
AUPHS	**Peel High Scho**	**18.69**	**237**	P			**Pn**	**06 48 02.9**	**+2.1**
MRZ	**Mangatainoka R**	**19.38**	**165**				**Pn**	**06 48 08.3**	**-0.6**
MRZ				IAmb			IAmb	06 48 11.6	
	comp=Z,126nm,1.1s								
BFZ	**Birch Farm**	**19.56**	**164**	P			**P**	**06 48 09.2**	**-0.6**
BFZ				IAmb			IAmb	06 48 12.9	
	comp=Z,116nm,1.0s								
MRNZ	**Matariki Terra**	**19.58**	**172**	P			**Pn**	**06 48 10.7**	**-0.6**
TCW	**Tory Channel**	**19.63**	**169**	P			**Pn**	**06 48 11.2**	**-0.7**
RIV	**Riverview**	**19.78**	**230**	P			**Pn**	**06 48 16.3**	**+2.5**
RIV	**Riverview**	**19.78**	**230**	P			**Pn**	**06 48 16.0**	**+2.2**
AFI	**Afiamalu**	**19.80**	**69**	LR			LR	06 53 56.6	
	comp=Z,309nm,21.2s,baz=238,slow=31								
SNZO	**South Karori**	**19.81**	**168**	P			**Pn**	**06 48 14.2**	**+0.1**
SNZO				IAmb			IAmb	06 48 17.6	
	comp=Z,202nm,1.2s								
THZ	**Tophouse**	**19.95**	**172**				**Pn**	**06 48 15.2**	**-0.6**
THZ				IAmb			IAmb	06 48 19.8	
	comp=Z,154nm,1.1s								
SYDH	**Sydney Hard Ro**	**20.04**	**230**	P			Pn	06 48 18.1	+1.2
AULRC	**Lightning Ridg**	**20.47**	**244**	P			Pn	06 48 21.4	-0.6
LTZ	**Lake Taylor**	**20.89**	**174**	P			**P**	**06 48 24.0**	**-0.1**
AUDCS	**Dubbo College**	**20.91**	**236**	P			Pn	06 48 26.9	-0.2
OXZ	**Oxford**	**21.40**	**174**	P			**P**	**06 48 29.9**	**+0.3**
CTA	**Charters Tower**	**21.49**	**271**	P			**P**	**06 48 31.7**	**+1.0**
	comp=Z,18nm,1.1s								
CTA	**Charters Tower**	**21.49**	**271**	P			**P**	**06 48 30.9**	**+0.1**
	comp=Z,20nm,0.7s,baz=97,slow=11,SNR=28								
CTA				LR			LR	06 56 53.2	
	comp=Z,1μm,18.1s,baz=88,slow=37 comp=Z,20nm,0.7s								
CTA	**Charters Tower**	**21.49**	**271**	P			**P**	**06 48 30.5**	**-0.2**
CTAO	**Charters Tower**	**21.49**	**271**	P			**P**	**06 48 30.8**	**+0.1**
CTAO	**Charters Tower**	**21.49**	**271**				**P**	**06 48 30.5**	**-0.2**
RPZ	**Rata Peaks**	**21.71**	**176**	P			**P**	**06 48 32.0**	**-1.0**
	comp=Z,24nm,0.9s,baz=6.2,slow=6.9,SNR=4.8								
RPZ				LR			LR	06 56 01.2	
	comp=Z,1μm,19.4s,baz=6.5,slow=34 comp=Z,24nm,0.9s								
CNB	**Canberra Magne**	**21.83**	**228**	P			**P**	**06 48 37.5**	**+3.2**
	comp=Z,86nm,1.4s								
CNB	**Canberra Magne**	**21.83**	**228**	P			**P**	**06 48 36.9**	**+2.6**
AUDAR	**Daramalan Coll**	**21.95**	**229**	P			**P**	**06 48 38.4**	**+2.8**
YNG	**Young**	**22.00**	**232**	P			**P**	**06 48 37.9**	**+1.8**
	comp=Z,34nm,1.6s								
AUMHS	**Melrose High S**	**22.04**	**228**	P			**P**	**06 48 39.4**	**+2.8**
AUMTS	**Mt Stromlo**	**22.08**	**229**	P			**P**	**06 48 39.7**	**+2.7**
CAN	**Canberra**	**22.08**	**229**	P			**P**	**06 48 39.8**	**+2.7**
	comp=Z,48nm,1.3s								
CAN	**Canberra**	**22.08**	**229**	P			**P**	**06 48 39.7**	**+2.7**
CAN	**Canberra**	**22.08**	**229**	P			**P**	**06 48 38.4**	**+1.4**
CAN				IAmb			IAmb	06 48 42.0	
	comp=Z,155nm,1.7s								
AUSMG	**Snowy Mountain**	**22.94**	**227**	P			**P**	**06 48 48.6**	**+2.4**
CMSA	**Cobar Meteorol**	**22.99**	**241**	P			**P**	**06 48 48.3**	**+1.6**
	comp=Z,123nm,1.1s								
CMSA	**Cobar Meteorol**	**22.99**	**241**	P			**P**	**06 48 48.2**	**+1.6**
QLP	**Quilpie**	**23.18**	**254**	P			**P**	**06 48 49.2**	**+0.6**
	comp=Z,282nm,1.6s								
QLP	**Quilpie**	**23.18**	**254**	P			**P**	**06 48 49.5**	**+0.8**
MTSU	**Mount Surprise**	**23.67**	**275**	P			**P**	**06 48 54.7**	**+1.2**
	comp=Z,55nm,1.1s								
MTSU	**Mount Surprise**	**23.67**	**275**	P			**P**	**06 48 54.3**	**+0.8**
WHZ	**Wether Hill Ro**	**23.86**	**182**	P			**P**	**06 48 54.8**	**-0.2**
WHZ				IAmb			IAmb	06 48 58.1	
	comp=Z,152nm,1.9s								
PMG	**Port Moresby**	**24.58**	**297**	LR			LR	06 58 06.8	
	comp=Z,921nm,18.2s,baz=132,slow=35								
PMG	**Port Moresby**	**24.58**	**297**	P			**P**	**06 49 02.2**	**+0.3**
PMG	**Port Moresby**	**24.58**	**297**	P			**P**	**06 49 02.3**	**+0.3**
PMG	**Port Moresby**	**24.58**	**297**	P			**P**	**06 49 01.8**	**-0.1**
PMG				IAmb			IAmb	06 49 03.9	
	comp=Z,37nm,0.8s								
PMG	**Port Moresby**	**24.58**	**297**	P			**P**	**06 49 01.0**	**-0.9**
	comp=Z,542nmcomp=Z,50nm,1.0s								
TOO	**Toolangi**	**25.66**	**228**	P			**P**	**06 49 13.8**	**+2.2**
	comp=Z,14nm,1.5s								
TOO	**Toolangi**	**25.66**	**228**	P			**P**	**06 49 12.6**	**+1.0**
COEN	**Coen**	**25.97**	**284**	P			**P**	**06 49 16.5**	**+1.9**
	comp=Z,21nm,1.5s								
COEN	**Coen**	**25.97**	**284**	P			**P**	**06 49 15.0**	**+0.4**
COEN	**Coen**	**25.97**	**284**	P			**P**	**06 49 15.1**	**+0.5**
COEN				IAmb			IAmb	06 49 17.1	
	comp=Z,100nm,1.9s								
STKA	**Stephens Creek**	**26.43**	**242**	P			**P**	**06 49 19.7**	**+1.1**
	comp=Z,151nm,1.8s								
STKA	**Stephens Creek**	**26.43**	**242**	P			**P**	**06 49 19.6**	**+1.0**
	comp=Z,8.7nm,0.7s,baz=85,slow=11,SNR=18								
STKA				LR			LR	06 59 32.2	
	comp=Z,2μm,18.1s,baz=79,slow=36 comp=Z,8.7nm,0.7s								
STKA	**Stephens Creek**	**26.43**	**242**	P			**P**	**06 49 19.6**	**+1.0**
BRAT	**Ballarat**	**26.73**	**229**	P			**P**	**06 49 23.8**	**+2.6**
AUMTC	**Mt Clear Colle**	**26.80**	**229**	P			**P**	**06 49 24.3**	**+2.5**
QIS	**Mount Isa**	**27.59**	**267**	P			**P**	**06 49 29.1**	**0.0**
	comp=Z,13nm,1.3s								
QIS	**Mount Isa**	**27.59**	**267**	P			**P**	**06 49 29.0**	**-0.1**
ARPS	**Mount Arapiles**	**27.89**	**232**	P			**P**	**06 49 31.3**	**-0.3**
RAR	**Rarotonga**	**28.85**	**94**	LR			LR	07 01 06.9	
	comp=Z,179nm,18.1s,baz=264,slow=36								
HTT	**Hallett**	**29.01**	**240**	P			**P**	**06 49 42.8**	**+1.0**
	comp=Z,27nm,1.8s								
HTT	**Hallett**	**29.01**	**240**	P			**P**	**06 49 42.8**	**+1.0**
	comp=Z,11nm,1.8s								
HTT	**Hallett**	**29.01**	**240**	P			**P**	**06 49 42.7**	**+1.0**
BBOO	**Buckleboo**	**31.20**	**243**	P			**P**	**06 50 00.1**	**-1.0**
BBOO	**Buckleboo**	**31.20**	**243**	P			**P**	**06 50 02.0**	**+0.9**
BBOO	**Buckleboo**	**31.20**	**243**	P			**P**	**06 50 01.6**	**+0.5**
BBOO				IAmb			IAmb	06 50 02.7	
	comp=Z,56nm,1.4s								
WR8	**Warramunga Arr**	**32.41**	**267**	P			**P**	**06 50 10.3**	**-1.5**
AS31	**Alice Springs**	**32.51**	**260**	P			**P**	**06 50 12.4**	**-0.3**
ASAR	**Alice Springs**	**32.51**	**260**	P			**P**	**06 50 12.4**	**-0.3**
	comp=Z,13nm,0.7s,baz=88,slow=9.0,SNR=198								
ASAR				PcP			**PcP**	**06 52 58.6**	**-0.6**
	comp=Z,4.1nm,1.0s,baz=87,slow=3.4,SNR=6.4								
ASAR				S			**S**	**06 55 30.0**	**+3.9**
	comp=Z,2.2nm,0.7s,baz=87,slow=8.3,SNR=11								
ASAR				LR			LR	07 02 44.5	
	comp=Z,333nm,21.9s,baz=92,slow=35 comp=Z,13nm,0.7s								
ASAR	**Alice Springs**	**32.51**	**260**	P			**P**	**06 50 12.2**	**-0.6**
WRAB	**Tennant Creek**	**32.56**	**267**	P			**P**	**06 50 12.3**	**-0.8**
WRA	**Warramunga Arr**	**32.56**	**267**	P			**P**	**06 50 12.0**	**-1.2**
	comp=Z,7.4nm,0.8s,baz=96,slow=8.0,SNR=65								
WRA				PcP			**PcP**	**06 52 57.8**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=99,slow=2.4,SNR=4.2								
WRA				S			**S**	**06 55 29.7**	**+2.8**
	comp=Z,0.5nm,0.8s,baz=93,slow=6.2,SNR=4.9 comp=Z,7.4nm,0.8s								
WRA

TAOE eLR LR 07 07 10.7
comp=Z,224nm,29.2s
KAPI Kappang 50.69 282 LR LR 07 13 35.4
comp=Z,146nm,21.2s,baz=122,slow=35
KAPI Kappang 50.69 282 P P 06 52 42.5 +1.0
KAPI Kappang 50.69 282 P P 06 52 41.8 +0.3
KAPI IAmb IAmb 06 52 42.7
comp=Z,34nm,0.8s
APSI Ampana 50.78 288 P P 06 52 42.2 +0.1
comp=Z,37nm,1.0s
TOLI2 Tolitoli 52.50 290 P P 06 52 54.5 -0.5
TOLI2 Tolitoli 52.50 290 P P 06 52 54.6 -0.3
MPSI Mapaga 52.91 288 P P 06 52 56.4 -1.6
comp=Z,912nmcomp=Z,45nm,1.2s
VNDA Vanda 55.69 182 LR LR 07 14 01.0
comp=Z,100nm,18.5s,baz=14,slow=33
UGM Wanagama 58.06 274 P P 06 53 35.2 +0.1
BBJI Bungbulang 60.88 274 P P 06 53 54.3 -0.4
BBJI IAmb IAmb 06 54 23.4
comp=Z,24nm,1.3s
LEM Lembang 61.14 274 LR LR 07 18 11.4
comp=Z,139nm,21.9s,baz=145,slow=34
JHJ Hachijo jima 2 61.58 332 LR LR 07 20 32.6
comp=Z,61nm,18.8s,baz=86,slow=36
KASI Kota Agung 64.50 274 P P 06 54 16.7 -2.0
comp=Z,32nm,1.2s
JMN Monobe 64.83 328 P P 06 54 21.3 +0.8
MJAR Matsushiro Arr 65.16 333 P P 06 54 22.7 +0.1
comp=Z,9.0nm,1.0s,baz=170,slow=7.7,SNR=20
comp=Z,9.0nm,1.0s
MJAR Matsushiro Arr 65.16 333 P P 06 54 22.4 -0.1
MAJO Matsushiro 65.17 333 P P 06 54 23.2 +0.6
MAJO Matsushiro 65.17 333 P P 06 54 22.6 0.0
MAJO IAmb IAmb 06 54 23.5
comp=Z,20nm,1.4s
MJB9 Matsu-Tunnel 65.17 333 P P 06 54 23.0 +0.4
MJB9 IAmb IAmb 06 54 24.5
comp=Z,21nm,1.4s
MDSI Maura Dua 65.18 275 P P 06 54 20.6 -2.6
comp=Z,25nm,1.3s
TPUB Ta-pu 65.27 311 P P 06 54 23.4 -0.2
JNU Nakatsue 65.88 325 LR LR 07 21 09.4
comp=Z,33nm,19.2s,baz=123,slow=34
QSPA South Pole Qui 68.07 180 P P 06 54 40.9 -0.1
comp=Z,50nm,1.0s,baz=28,slow=2.2,SNR=35
QSPA LR LR 07 22 16.7
comp=Z,308nm,18.1s,baz=31,slow=34
comp=Z,50nm,1.0s
QSPA South Pole Qui 68.07 180 P P 06 54 41.4 +0.4
ASAJ Asahikawa 70.16 340 LR LR 07 21 39.2
comp=Z,328nm,21.3s,baz=169,slow=32
KSRS Korea Array 70.75 326 P P 06 54 58.7 +1.0
comp=Z,9.0nm,1.1s,baz=143,slow=6.2,SNR=17
comp=Z,9.0nm,1.1s
KSAR Wonju Array Be 70.76 326 P 06 54 58.0 +0.3
INCN Inchon 71.45 325 P P 06 55 02.6 +0.6
NJ2 Nanjing 72.16 317 eP P 06 55 08.5 +2.2
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
RPN Rapa Nui 73.05 113 LR LR 07 22 15.5
comp=Z,54nm,18.5s,baz=255,slow=32
USRK Ussuriysk Ar. 74.16 333 P P 06 55 19.0 +1.2
comp=Z,10nm,0.9s,baz=132,slow=2.8,SNR=6.2
comp=Z,10nm,0.9s
SHEM Shemya Is, Ala 74.53 3 LR LR 07 22 44.9
comp=Z,177nm,21.0s,baz=126,slow=31
DL2 Dalian 75.18 323 P P 06 55 24.0 +0.1
DL2 pmax pmax
comp=Z,46nm,1.2s
PETK Petropavlovsk- 75.45 353 P P 06 55 26.0 +0.9
comp=Z,4.6nm,0.7s,baz=127,slow=5.7,SNR=11
PETK LR LR 07 23 31.6
comp=Z,224nm,20.9s,baz=157,slow=32
comp=Z,4.6nm,0.7s
MDJ Mudanjiang 75.52 332 P P 06 55 26.6 +0.9
MDJ Mudanjiang 75.52 332 P P 06 55 26.8 +1.1
MDJ S S 07 05 09.0 +4.9
MDJ pmax pmax
comp=Z,23nm,1.5s
MDJ LR LR
comp=Z,350nm,22.7s
MAW Mawson 75.87 202 LR LR 07 25 57.8
comp=Z,207nm,18.2s,baz=106,slow=34
TIA Tai'an 75.97 319 P P 06 55 29.0 +0.5
TIA sP pP 06 55 34.5 -3.0
TIA pmax pmax
comp=Z,18nm,1.3s
CN2 Changchun 76.78 329 P P 06 55 33.5 +0.6
CN2 S S 07 05 17.3 -0.7
CN2 pmax pmax
comp=Z,20nm,1.1s
BNX BinXian 77.36 331 ⇑P P 06 55 36.3 +0.2
BNX pmax pmax
comp=Z,21nm,1.0s
ENH Enshi 77.39 310 P P 06 55 36.3 -0.4
HNS HongShan 78.22 319 ⇓P P 06 55 42.0 +0.9
HNS S S 07 05 38.8 +5.0
HNS pmax pmax
comp=Z,11nm,1.4s
HNS LR LR
comp=Z,120nm,15.3s
KLR Kul'dur 78.36 336 LR LR 07 26 17.4
comp=Z,147nm,21.3s,baz=157,slow=33
BJT Baijiatuau 79.03 321 P P 06 55 46.6 +1.1
BELA Belgrano 2 79.37 175 P P 06 55 45.8 -1.1
CMAR Chiang Mai Arr 79.60 295 P P 06 55 50.5 +1.4
comp=Z,5.0nm,0.9s,baz=135,slow=4.2,SNR=12
comp=Z,5.0nm,0.9s
KMI2 Kunming 79.70 302 P P 06 55 51.0 +1.2
KMI2 sP PcP 06 55 57.0 -0.5
KMI2 pmax pmax
comp=Z,17nm,1.4s
CHTO Chiang Mai 79.76 295 P P 06 55 51.6 +1.6
CHTO Chiang Mai 79.76 295 P P 06 55 49.7 -0.3
comp=Z,17nm,1.3s
XAN Xi'an 79.94 313 P P 06 55 51.5 +0.8
XAN pmax pmax
comp=Z,14nm,0.8s
HEH HeiHe 80.87 334 eP P 06 55 55.0 -0.2
HEH pmax pmax
comp=Z,16nm,1.2s
HEH LR LR
comp=Z,180nm,16.2s
HEH LR LR
comp=Z,170nm,15.5s
HEH LR LR
comp=Z,250nm,17.4s
PZH PanZhiHua 81.16 303 P P 06 55 59.8 +2.3
XLT XiLinHaoTe 81.64 324 eP P 06 56 00.3 +0.7
XLT pmax pmax
comp=Z,11nm,1.3s
XLT pmax pmax
comp=Z,110nm,5.2s
XLT LR LR
comp=Z,120nm,19.2s
HHC Hu-ho-hao-te 82.28 320 eP P 06 56 04.5 +1.5
HHC pP PcP 06 56 09.0 +0.7
HHC S S 07 06 18.8 +2.1
HHC sS pS 07 06 27.0 -1.1
HHC pmax pmax
comp=Z,13nm,1.0s
HHC pmax pmax
comp=Z,130nm,6.0s
HHC LR LR
comp=Z,63nm,12.2s
HHC LR LR
comp=Z,78nm,12.6s
HHC LR LR
comp=Z,95nm,13.1s
MA2 Magadan 82.67 351 LR LR 07 29 09.3
comp=Z,119nm,20.2s,baz=146,slow=33
BTO2 Baotou 83.24 319 eP P 06 56 03.0 -5.0
BTO2 S S 07 06 18.3 -8.2
BTO2 pmax pmax
comp=Z,16nm,0.7s
BTO2 pmax pmax
comp=Z,230nm,4.7s
BTO2 LR LR
comp=Z,230nm,6.5s
BTO2 LR LR
comp=Z,190nm,5.0s
BTO2 LR LR
comp=Z,170nm,9.4s
ELIB Princess Elisa 83.43 190 dP P 06 56 07.2 -1.4
comp=Z,22nm,1.1s
LZH Lanzhou 84.54 312 eP P 06 56 16.8 +2.0
LZH sP pP 06 56 22.5 -1.5
LZH pmax pmax
comp=Z,28nm,1.5s
LZDM Lanzhou Array 84.57 312 P P 06 56 17.1 +1.9
comp=Z,1.3nm,0.3s,baz=106,slow=11,SNR=6.1
comp=Z,1.3nm,0.3s
KDAK Kodiak Island 85.64 19 LR LR 07 29 24.6
comp=Z,147nm,19.2s,baz=206,slow=32
TROLL Troll, Antarti 85.79 184 P P 06 56 20.3 -0.3
P18K Big Mountain, 86.20 17 P 06 56 22.7 +0.3
P18K IAmb IAmb 06 56 30.7
comp=Z,12nm,1.0s
SNAA Sanae 86.42 183 P P 06 56 22.7 -0.9
comp=Z,38nm,1.1s,baz=129,slow=3.6,SNR=5.9
SNAA LR LR 07 33 10.1
comp=Z,163nm,18.5s,baz=184,slow=34
comp=Z,38nm,1.1s
GAMB Gambell 86.79 8 P 06 56 25.8 +0.7
VNA3 Neumayer Olymp 87.01 180 ⇓P P 06 56 25.5 -1.0
comp=Z,55nm,0.7s
VNA2 Neumayer--Watz 87.30 181 ⇓P P 06 56 27.2 -0.6
comp=Z,47nm,0.6s,baz=195,slow=4.9
M02C Callahan 89.04 44 P 06 56 37.8 +1.2
M02C IAmb IAmb 06 56 39.3
comp=Z,18nm,1.1s
ULN Ulaanbaatar 89.04 323 P 06 56 37.2 +0.7
ULN Ulaanbaatar 89.04 323 P P 06 56 37.0 +0.5
GTA2 Gaotai 89.06 314 eP P 06 56 38.0 +1.3
GTA2 pP pP 06 56 43.8 -2.1
GTA2 pmax pmax
comp=Z,5.0nm,1.0s
YBH Yreka Blue Hor 89.31 44 LR LR 07 28 05.7
comp=Z,11nm,21.8s,baz=272,slow=30
SONM Songino Array 89.39 323 P P 06 56 38.7 +0.6
comp=Z,8.1nm,1.0s,baz=136,slow=4.6,SNR=44
SONM LR LR 07 38 31.0
comp=Z,50nm,18.1s,baz=152,slow=37
comp=Z,8.1nm,1.0s
SONM Songino Array 89.39 323 P 06 56 38.6 +0.5
SONM IAmb IAmb 06 56 40.0
comp=Z,25nm,1.3s
BORC Borrego Spring 89.67 54 P P 06 56 39.8 +0.3
PFO Pinyon Flats O 89.79 53 LR LR 07 31 20.6
comp=Z,140nm,18.0s,baz=229,slow=32
LPIG La Paz 90.65 64 LR LR 07 28 52.8
comp=Z,207nm,19.3s,baz=252,slow=30
NVAR Mina Array Bea 90.66 49 P P 06 56 44.6 +0.3
comp=Z,3.1nm,0.7s,baz=256,slow=6.1,SNR=23
NVAR LR LR 07 31 03.7
comp=Z,150nm,19.4s,baz=268,slow=31
comp=Z,3.1nm,0.7s
PALK Pallekele 91.29 277 LR LR 07 40 33.3
comp=Z,233nm,18.7s,baz=112,slow=37
BBB Bella Bella 91.80 33 LR LR 07 35 53.1
comp=Z,82nm,18.0s,baz=236,slow=34
V12A Nelson 91.91 52 P 06 56 51.1 +1.0
WVOR Wild Horse Val 92.30 45 P P 06 56 52.4 +0.6
WVOR IAmb IAmb 06 57 06.7
comp=Z,13nm,1.5s
ILAR Eielson Array 92.87 17 P P 06 56 52.6 -1.1
comp=Z,0.6nm,0.6s,baz=237,slow=5.3,SNR=14
ILAR LR LR 07 35 31.2
comp=Z,131nm,18.5s,baz=212,slow=34
comp=Z,0.6nm,0.6s
TLY Talaya 92.99 325 LR LR 07 36 24.0
comp=Z,27nm,20.4s,baz=128,slow=34
COLD Coldfoot 93.94 15 P P 06 57 01.2 +2.7
COLD IAmb IAmb 06 57 35.9
comp=Z,12nm,1.6s
U15A North Rim 94.08 52 P 06 57 00.7 +0.3
U15A IAmb IAmb 06 57 02.7
comp=Z,14nm,1.5s
I26K Coal Creek Min 94.32 18 P P 06 57 00.3 -0.1
I26K IAmb IAmb 06 57 06.6
comp=Z,19nm,1.7s
L29M L29M 94.35 21 P P 06 57 00.6 0.0
M30M Minto, Yukon 94.45 22 P 06 57 00.5 -0.6
M30M IAmb IAmb 06 57 13.1
comp=Z,8.3nm,1.2s
DLBC Dease Lake 94.50 27 LR LR 07 34 54.8
comp=Z,99nm,18.4s,baz=276,slow=32
D22K Ayikyak River 94.73 13 P P 06 57 02.3 +0.1
D22K IAmb IAmb 06 57 20.0
comp=Z,12nm,1.4s
NEW Newport 95.91 40 LR LR 07 34 12.4
comp=Z,105nm,19.2s,baz=228,slow=32
TIXI Tiksi 97.42 348 LR LR 07 41 03.3
comp=Z,107nm,18.8s,baz=165,slow=35
ANMO Albuquerque 97.89 56 LR LR 07 35 28.2
comp=Z,113nm,18.4s,baz=268,slow=32
TXAR Lajitas Array 98.11 62 LR LR 07 35 21.6
comp=Z,280nm,18.0s,baz=243,slow=32
PDAR Pinedale Array 98.51 47 LR LR 07 34 35.5
comp=Z,47nm,20.1s,baz=263,slow=31
WMQ Urumqi 99.07 314 eP Pdif 06 57 23.8 +1.3
WMQ pP pP 06 57 30.3 -1.4
INK Inuvik 99.16 18 LR LR 07 38 19.9
comp=Z,108nm,19.1s,baz=340,slow=33
YKA Yellowknife Ar 103.13 28 Pdiff Pdif 06 57 38.5 -1.5
comp=Z,0.5nm,0.8s,baz=259,slow=5.5,SNR=4.3
MKAR Makanchi Array 103.66 315 Pdiff Pdif 06 57 43.1 +0.3
comp=Z,0.2nm,0.6s,baz=103,slow=4.6,SNR=3.6
MKAR PKiKP PKiKP 07 02 00.6 -0.4
comp=Z,0.4nm,0.8s,baz=180,slow=1.4,SNR=3.8
MKAR PKKPbc PKKPbc 07 13 33.6 -2.5
comp=Z,0.7nm,0.9s,baz=303,slow=3.1,SNR=5.4
MKAR PKKP PKKPdf 07 13 44.5 -0.6
comp=Z,0.6nm,0.8s,baz=306,slow=2.7,SNR=4.7
ZALV Zalesovo Beam 104.27 323 PKKPbc PKKPbc 07 13 32.8 -1.6
comp=Z,0.2nm,0.3s,baz=328,slow=5.3,SNR=1.8
KURBB Kurchatov Arra 107.09 318 PKiKP PKiKP 07 02 06.6 -0.6
comp=Z,1.0nm,0.8s,baz=116,slow=1.8,SNR=7.2
BVAR Borovoye Array 112.49 320 PKiKP PKiKP 07 02 17.0 -0.3
comp=Z,1.8nm,0.6s,baz=96,slow=1.5,SNR=9.8
ARCES ARCESS Array B 127.71 345 PKP PKPdf 07 02 45.3 -0.7
comp=Z,3.5nm,0.7s,baz=84,slow=2.4,SNR=8.5
BDFB Brasilia 127.76 133 PKP PKPdf 07 02 46.9 -0.9
comp=Z,6.2nm,1.1s,baz=180,slow=4.0,SNR=6.1
FINES FINESS Array B 133.10 337 PKP PKPdf 07 02 56.7 +0.3
comp=Z,1.1nm,0.5s,baz=18,slow=2.4,SNR=9.1
AKASG Malin Array Be 137.67 323 PKP PKPdf 07 03 04.8 -0.4
comp=Z,0.6nm,0.4s,baz=60,slow=1.4,SNR=7.0
NOA NORSAR Array B 138.08 344 PKP PKPdf 07 03 05.8 0.0
comp=Z,0.6nm,0.7s,baz=37,slow=2.0,SNR=2.1
HFS Hagfors 138.16 342 PKhKP PKPpre 07 03 00.4
comp=Z,3.1nm,1.1s,baz=179,slow=28,SNR=1.3
BRTR Keskin Array B 138.42 306 PKP PKPdf 07 03 07.4 +0.1
comp=Z,2.3nm,1.1s,baz=114,slow=1.7,SNR=4.8
VOIR 142.56 317 ⇑P PKPdf 07 03 13.1 -1.4
ARR Arges 142.86 317 ⇑P PKPdf 07 03 13.7 -1.3
TNR Turnu Rosu 142.95 318 ⇓P PKPdf 07 03 13.3 -1.8
MARR Marisel-Cluj 143.16 320 ⇓P PKPbc 07 03 12.6 +0.2
DRGR 143.34 321 ⇓P PKPbc 07 03 13.3 +0.4
LOT Lotru 143.36 318 ⇓P PKPbc 07 03 13.3 +0.2
GZR Gura Zlata 144.00 318 ⇑P PKPbc 07 03 15.3 +0.4
STEB Steborice 144.18 328 ePKP PKPbc 07 03 15.7 +0.5
KSP Ksiaz 144.27 330 PKP PKPdf 07 03 18.8 +1.6
PSZ Piszkesteto 144.32 324 ⇓P PKPbc 07 03 16.5 +0.7
MORC Moravsky Berou 144.39 328 ePKP PKPbc 07 03 16.4 +0.5
HERR Herculane 144.47 318 ⇑P PKPbc 07 03 16.2 -0.1
OSTC Ostas 144.50 330 ePKP PKPdf 07 03 17.0 -0.6
BZS Buzias 144.59 319 ⇑P PKPbc 07 03 16.7 +0.1
DPC Dobruska-Polom 144.59 330 ePKP PKPdf 07 03 17.3 -0.5
DPC Dobruska-Polom 144.59 330 PKP PKPdf 07 03 19.3 +1.5
JAVC Velka Javorina 144.92 327 ePKP PKPdf 07 03 19.3 +0.8
MDVR Moldovita 144.96 318 ⇓P PKPbc 07 03 18.2 +0.3
VRAC Vranov 145.17 328 ⇑P PKPab 07 03 18.6 +0.1
VRAC Vranov 145.17 328 ePKP PKPbc 07 03 18.0 -0.4
SRO Srobarova 145.24 325 ePKP PKPdf 07 03 19.6 +0.7
BRG Berggiesshubel 145.29 332 i PKP PKPdf 07 03 19.2 +0.3
BRG Amp 07 03 20.5
comp=Z,23nm,0.9s
BRG Berggiesshubel 145.29 332 P PKiKP 07 03 24.1 +1.2
BRG Amp 07 03 28.0
comp=Z,11nm,0.8s
CLL Collm 145.37 334 PKP PKPab 07 03 19.9 +0.8
CLL Collm 145.37 334 ⇓i PKPbc PKPab 07 03 19.1 0.0
comp=Z,74nm,1.7s
CLL ex x 07 03 24.0
KRUC Moravsky 145.43 328 ePKP PKPab 07 03 19.8 +0.4
MODS Modra-Piesok 145.43 326 ePKP PKPab 07 03 20.5 +1.0
HSKC Hora Svate Kat 145.71 332 ePKP PKPbc 07 03 20.1 0.0
MORH Mrgy, Hungar 146.01 322 ⇑P PKPab 07 03 21.4 +0.3
MORH Mrgy, Hungar 146.01 322 PKP PKPab 07 03 21.9 +0.2
MPLH Magyarpolny 146.05 325 PKP PKPab 07 03 21.9 +0.1
ZVC Zvikov 146.22 330 ePKP PKPbc 07 03 21.8 +0.1
EKA Eskdalemuir Ar 146.22 352 PKPbc PKPdf 07 03 20.5 +0.2
comp=Z,9.7nm,0.8s,baz=354,slow=2.5,SNR=18
RONA Rosalia, Austr 146.37 326 i PKP PKPab 07 03 23.0 -0.1
comp=Z,6.7nm,0.6s,SNR=8.6
CONA Conrad Observa 146.44 327 ePKP PKPab 07 03 23.4 0.0
comp=Z,9.3nm,0.8s
CKRC Cesky Krumlov 146.60 329 ePKP PKPab 07 03 23.4 -0.5
KHC Kasperske Hory 146.72 330 ePKP PKPab 07 03 23.9 -0.5
KHC ex x 07 03 36.2
KHC Kasperske Hory 146.72 330 PKP PKPbc 07 03 23.0 -0.2
GERES GERESS Array B 146.87 330 PKPbc PKPdf 07 03 22.4 +0.6
comp=Z,6.2nm,0.6s,baz=67,slow=1.7,SNR=33
KOGS Kog 147.19 325 i PKPbc PKPbc 07 03 24.6 +0.1
MOA Molln 147.29 328 i PKP PKPbc 07 03 25.4 +0.5
comp=Z,2.4nm,0.4s,SNR=7.2
GRF Grafenberg Arr 147.34 333 ePKP PKPbc 07 03 25.2 +0.3
baz=40,slow=2.1
PDG Podgorica 147.67 316 ⇑P PKPbc 07 03 26.1 +0.2
PERS Pernice 147.67 326 i PKPbc PKPbc 07 03 25.8 -0.2
SOKA Soboth 147.69 326 i PKP PKPbc 07 03 26.2 +0.2
comp=Z,9.9nm,1.1s,SNR=7.6
BLY Banja Luka 147.69 321 ⇓P PKPbc 07 03 26.7 +0.7
OBKA Obir 148.05 326 ePKP PKPbc 07 03 26.9 -0.2
comp=Z,5.1nm,0.9s
KBA Koelnbreinsper 148.28 328 i PKP PKPbc 07 03 27.4 -0.3
comp=Z,9.2nm,1.0s,SNR=7.3
LESA Schwarzleotal 148.36 329 i PKP PKPbc 07 03 27.5 -0.3
comp=Z,6.8nm,0.5s,SNR=6.1
LJU Ljubljana 148.37 325 i PKPbc PKPbc 07 03 28.2 +0.4
MYKA Terra Mystica 148.44 327 i pPKP PKPbc 07 03 27.3 -0.7
comp=Z,8.7nm,0.7s,SNR=6.5
ABTA Abfaltersbach 148.92 328 i pPKP PKPbc 07 03 28.6 -0.7
comp=Z,11nm,0.7s,SNR=5.3
WATA Walderalm 148.94 330 i pPKP PKPbc 07 03 29.1 -0.2
comp=Z,0.7nm,0.2s,SNR=6.0
WTTA Wattenberg 148.97 330 i pPKP PKPbc 07 03 29.3 -0.2
comp=Z,13nm,1.1s,SNR=9.7
MOTA Moosalm 149.16 330 i pPKP PKPbc 07 03 29.4 -0.5
comp=Z,9.8nm,0.7s,SNR=8.3
SQTA Sankt Quirin 149.20 330 i pPKP PKPbc 07 03 29.2 -0.8
comp=Z,0.8nm,0.3s,SNR=7.8
FETA Feichten 149.57 330 i PKP PKPdf 07 03 27.4 +1.0
comp=Z,15nm,1.1s,SNR=7.6
DAVA Damuels 149.75 331 ePKP PKPbc 07 03 31.5 +0.1
comp=Z,1.9nm,0.4s
TUE Stuetta 150.61 331 PKP PKPdf 07 03 29.3 +1.2
TIP Timpagrande 150.90 312 ⇓P PKiKP 07 03 34.8 -0.1
TIP Timpagrande 150.90 312 PKP PKPdf 07 03 30.0 +1.4
AQU L'Aquila 151.33 321 PKP PKPdf 07 03 30.0 +0.9
DBIC Dimbokro 163.71 202 PKPab PKPab 07 04 36.9 -0.1
comp=Z,12nm,1.0s,baz=202,slow=4.1,SNR=7.1
TORD Torodi Ar. Bea 165.19 236 PKP PKPdf 07 03 45.5 -1.1
comp=Z,2.2nm,0.9s,baz=204,slow=1.5,SNR=10.0
TORD PKPab PKPab 07 04 42.5 -1.3
comp=Z,3.6nm,1.1s,baz=175,slow=4.3,SNR=7.1

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*GII **29** 07:08:58.7±0.0, 27.°808N±0.°002×34.°473E±0.°001, h0km, Mws2.9, confirmed*
*SGS **29** 07:09:04.5, 28.°13N×34.°31E, h11km, Ml2.2*
ISC 29 07:09:03.2±1.9, **28.°05N**±0.°05×**34.°45E**±0.°08, **h5**km±12km, **n25**, σ**1.s36**/44, **Egypt**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RSHS 0.40 51 P Pn 07 09 13.6 -2.1
RSHS S Sb 07 09 20.7 +1.6
TAYS Tayyib Ism 0.62 37 S Sb 07 09 25.9 +0.3
TAYS P Pb 07 09 16.5 -0.1
BDAS Al Bad` 0.69 57 S Sn 07 09 30.0 -0.9
BDAS P Pn 07 09 19.2 -0.5
KRABS KRABS 0.72 86 S Sn 07 09 31.5 +0.1
KRABS P Pn 07 09 20.2 +0.2
AYUS `Aynunah 0.74 79 P Pn 07 09 20.3 0.0
AYUS S Sn 07 09 31.7 -0.2
MWLHS Almuwaylih 0.99 107 P Pn 07 09 24.6 +0.8
JLOS 1.15 53 P Pg 07 09 26.0 +0.7
JLOS S Sn 07 09 41.9 -0.4
JMOS Jabal al Moall 1.26 27 P Pn 07 09 26.3 -1.1
JMOS S Sb 07 09 43.1 -0.8
HQLS 1.36 23 S Sn 07 09 45.1 -2.2
HQLS P Pn 07 09 27.4 -1.5
DESA DESA 1.62 109 S Sg 07 09 55.4 +0.2
DESA P Pg 07 09 34.6 +0.4
EIL Elat 1.67 15 P Pn 07 09 31.8 -1.4
EIL S Sg 07 09 57.5 +0.4
HRFI Mount Harif 2.05 15 P Pn 07 09 37.7 -0.6
HRFI S Sb 07 10 06.5 -0.2
KRMI Paran Flat 2.07 7 P Pn 07 09 37.8 -0.9
KRMI S Sb 07 10 07.5 0.0
WJHS 2.17 127 P Pb 07 09 42.5 -0.6
PRNI Paran 2.34 12 P Pn 07 09 42.0 -0.4
PRNI S Sb 07 10 14.6 -0.7
BIDS Bi'r al Bayda' 2.52 117 P Pb 07 09 47.9 -1.1
ZFRI Zfri 2.58 14 P Pn 07 09 45.1 -0.4
ZFRI S Sb 07 10 20.2 -1.7
KZIT Kziot 2.85 359 P Pn 07 09 48.7 -0.6
KZIT S Sb 07 10 27.1 -2.6
MSBI Mazada 3.35 14 P Pn 07 09 55.5 -0.6
MSBI S Sn 07 10 39.0 +2.7
YTIR Yattir 3.35 10 P Pn 07 09 56.0 -0.3
YTIR S Sn 07 10 39.6 +3.0
AMAZ Amatzia 3.49 7 P Pn 07 09 57.9 -0.4
AMAZ S Sn 07 10 43.2 +3.2
DSI Dead Sea 3.60 13 P Pn 07 09 59.3 -0.4
DSI S Sn 07 10 46.1 +3.5
HMDT Nahal Hemdat 4.29 12 P Pn 07 10 09.0 -0.2
MMA0B Mount Meron ar 5.02 9 P Pn 07 10 19.1 -0.1
MMC7 Mount Meron ar 5.02 9 P Pn 07 10 19.1 -0.2

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*IDC **29** 07:14:22.7±0.9, 40.°13N×21.°66E, h0km, mb3.7/13, mbtmp3.6/20, ML2.9/5, MS3.3/8, Error ellipse: s-maj=15.2km s-min=12.3km az=148.0*
*SKO **29** 07:14:25.8, 40.°10N×21.°57E, h29km, ML3.9*
*NAO **29** 07:14:25.9, 40.°20N×20.°85E, h10km, MB4.2*
*PDG **29** 07:14:26.2±0.4, 40.°26N×21.°65E, h15km, ML3.6/12, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*ATH **29** 07:14:26.5, 40.°27N×21.°62E, h14km±1km, ML3.6/26, Manual Solution by I.Dede First location: 2020/02/29 07:15:30, This location: 2020/02/29 07:24:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*BEO **29** 07:14:27.4±0.8, 40.°28N×21.°65E, h11km±1km, ML3.3/10*
*THE **29** 07:14:27.0, 40.°2N±0.°9×21.°6E±0.°8, h10km±1km, M3.5/34, MLh3.5/34*
*SOF **29** 07:14:29.4, 40.°5N±0.°5×22.°0E±0.°4, h0km±67km, MD3.5/5*
ISC 29 07:14:26.6±0.8, **40.°25N**±0.°01×**21.°63E**±0.°01, **h19**km±2km, **n202**, σ**1.s37**/280, **mb3.6**/11, **MS4.1**/3, **24C-17D**, **Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KZN Kozani 0.12 62 P Pg 07 14 31.1 +0.4
KZN S Sg 07 14 34.1 +0.5
KZN Kozani 0.12 62 P Pg 07 14 31.1 +0.4
KZN S Sg 07 14 33.9 +0.3
KPRO Kipourio 0.36 215 P Pg 07 14 34.1 -0.1
KPRO S Sg 07 14 39.6 +0.2
KPRO Kipourio 0.36 215 P Pg 07 14 33.9 -0.3
KPRO S Sg 07 14 39.4 0.0
PENT Pentalofos 0.38 262 P Pg 07 14 34.3 -0.3
PENT Pentalofos 0.38 262 P Pg 07 14 34.5 -0.1
PENT S Sb 07 14 40.3 -0.1
NEST Nestorio 0.47 291 P Pg 07 14 35.8 -0.5
NEST S Sb 07 14 43.4 +0.3
NEST Nestorio 0.47 291 P Pg 07 14 35.8 -0.5
NEST S Sg 07 14 42.9 0.0
NASA Naoussa 0.51 41 P Pb 07 14 37.1 +0.3
NASA S Sg 07 14 43.4 -0.3
MSVA Metsovo 0.59 216 P Pg 07 14 37.9 -0.5
MSVA S Sb 07 14 48.0 +1.8
LIT Litokhoron 0.68 102 P Pb 07 14 39.8 +0.2
LIT S Sn 07 14 50.8 -0.3
LIT Litokhoron 0.68 102 P Pb 07 14 39.9 +0.2
LIT S Sn 07 14 51.0 -0.1
LMS2 Laimos Florina 0.69 328 P Pg 07 14 39.5 -0.5
LMS2 S Sb 07 14 48.9 -0.3
TRKA Trikala 0.70 171 P Pb 07 14 40.2 +0.1
TRKA S Sg 07 14 50.2 +0.4

TYRN	**Tyrnavos**	**0.71**	**139**	P	**Pg**	07 14 40.6	+0.1
TYRN				S	**Sn**	07 14 51.7	-0.2
TYRN	**Tyrnavos**	**0.71**	**139**	P	**Pg**	07 14 40.6	+0.1
TYRN				S	**Sg**	07 14 50.9	+0.9
THL	**Klokotos Trika**	**0.74**	**157**	P	**Pb**	07 14 40.5	-0.3
THL				S	**Sg**	07 14 51.5	+0.4
THL	**Klokotos Trika**	**0.74**	**157**	P	**Pb**	07 14 40.6	-0.3
THL				S	**Sg**	07 14 52.0	+0.9
KBN	**Korca**	**0.74**	**300**	P	**Pb**	07 14 40.5	-0.4
KBN				S	**Sn**	07 14 52.6	-0.3
GINA	**Giannouli**	**0.82**	**135**	P	**Pg**	07 14 42.7	+0.1
GINA				S	**Sn**	07 14 55.8	+1.2
PRMD	**Pramanda**	**0.83**	**210**	P	**Pb**	07 14 41.9	-0.5
PRMD				S	**Sg**	07 14 54.0	+0.2
PRMD	**Pramanda**	**0.83**	**210**	P	**Pb**	07 14 42.1	-0.3
PRMD				S	**Sn**	07 14 54.7	-0.2
JAN	**Janina**	**0.84**	**226**	P	**Pb**	07 14 41.8	-0.7
JAN				S	**Sg**	07 14 54.1	-0.1
JAN	**Janina**	**0.84**	**226**	P	**Pb**	07 14 41.9	-0.7
JAN				S	**Sg**	07 14 54.7	+0.5
GRG	**Griva**	**0.92**	**39**	P	**Pg**	07 14 44.6	0.0
GRG	**Griva**	**0.92**	**39**	P	**Pg**	07 14 44.5	0.0
TETR	**Tetrakomo, Epi**	**0.94**	**197**	P	**Pb**	07 14 43.8	-0.6
TETR				S	**Sg**	07 14 57.8	+0.3
TETR	**Tetrakomo, Epi**	**0.94**	**197**	P	**Pb**	07 14 44.0	-0.4
TETR				S	**Sn**	07 14 58.4	+0.5
OHR	**Ohrid**	**1.07**	**324**	*i* Pg	**Pg**	07 14 47.1	-0.3
OHR				*i* Sg	**Sg**	07 15 03.7	+2.3
OHR				*e*Lg	Lg	07 15 05.4	
	comp=E,3µm,0.5s						
OHR				*e*Lg	Lg	07 15 05.9	
	comp=N,2µm,0.5s						
THE	**Thessaloniki**	**1.09**	**69**	P	**Pn**	07 14 47.3	+0.6
THE				S	**Sg**	07 15 02.9	+0.9
THE	**Thessaloniki**	**1.09**	**69**	P	**Pn**	07 14 47.4	+0.6
HORT	**Hortiatis**	**1.17**	**72**	P	**Pg**	07 14 49.1	-0.2
HORT				S	**Sg**	07 15 07.1	+2.3
HORT	**Hortiatis**	**1.17**	**72**	P	**Pg**	07 14 49.0	-0.3
ART2	**Arta**	**1.21**	**204**	P	**Pn**	07 14 48.3	0.0
IGT	**Igoumenitsa**	**1.23**	**235**	P	**Pn**	07 14 49.1	+0.5
IGT				S	**Sg**	07 15 06.3	-0.1
IGT	**Igoumenitsa**	**1.23**	**235**	P	**Pb**	07 14 49.4	+0.2
IGT				S	**Sg**	07 15 07.0	+0.6
IGT	**Igoumenitsa**	**1.23**	**235**	*e*Pg	**Pn**	07 14 49.2	+0.5
IGT				*e*Sg	**Sg**	07 15 08.0	+1.6
VAY	**Valandovo**	**1.29**	**33**	*e*Pg	**Pb**	07 14 50.2	+0.3
VAY				*e*Sg	**Sg**	07 15 10.2	+1.9
VAY				*e*Lg	Lg	07 15 12.5	
	comp=E,697nm,0.6s						
VAY				*e*Lg	Lg	07 15 15.6	
	comp=N,1µm,0.7s						
MAKR	**Makrakomi, Fth**	**1.29**	**162**	P	**Pb**	07 14 50.7	+0.5
MAKR				S	**Sg**	07 15 08.9	+0.4
MAKR	**Makrakomi, Fth**	**1.29**	**162**	P	**Pb**	07 14 50.7	+0.5
MAKR				S	**Sg**	07 15 08.1	-0.4
KNT	**Kendrikon**	**1.33**	**46**	P	**Pb**	07 14 50.8	-0.1
KNT				S	**Sg**	07 15 10.1	+0.6
KNT	**Kendrikon**	**1.33**	**46**	P	**Pb**	07 14 50.7	-0.1
EVR	**Evrytania**	**1.34**	**174**	P	**Pn**	07 14 50.9	+0.6
EVR				S	**Sg**	07 15 10.5	+0.5
EVR	**Evrytania**	**1.34**	**174**	P	**Pb**	07 14 51.2	+0.2
EVR				S	**Sb**	07 15 09.1	+1.3
AGG	**Agios Georgios**	**1.34**	**156**	P	**Pb**	07 14 51.1	+0.1
AGG				S	**Sg**	07 15 10.1	+0.2
AGG	**Agios Georgios**	**1.34**	**156**	P	**Pb**	07 14 51.0	0.0
AMPL	**Ampelaki**	**1.36**	**194**	P	**Pn**	07 14 51.0	+0.5
AMPL				S	**Sg**	07 15 10.2	-0.5
AMPL	**Ampelaki**	**1.36**	**194**	P	**Pn**	07 14 51.2	+0.7
PLG	**Polygyros**	**1.39**	**84**	P	**Pn**	07 14 51.7	+0.7
LFKM	**Lefkimmi**	**1.45**	**237**	S	**Sb**	07 15 12.2	+1.3
KRK1	**kERKIRA**	**1.46**	**245**	P	**Pg**	07 14 55.0	+0.3
KEK	**Kerkira**	**1.51**	**250**	P	**Pb**	07 14 54.8	+1.0
KEK				S	**Sb**	07 15 13.2	+0.7
KEK	**Kerkira**	**1.51**	**250**	P	**Pg**	07 14 55.0	-0.6
NEO	**Neokhori**	**1.55**	**127**	P	**Pb**	07 14 54.3	-0.3
NEO				S	**Sb**	07 15 14.6	+0.9
NEO	**Neokhori**	**1.55**	**127**	P	**Pb**	07 14 54.1	-0.4
PVO	**Paravola**	**1.63**	**183**	P	**Pb**	07 14 56.0	0.0
PVO	**Paravola**	**1.63**	**183**	P	**Pb**	07 14 56.6	+0.6
LKD2	**Lefkada island**	**1.64**	**208**	P	**Pb**	07 14 57.4	+1.2
ANX	**Ano Chora**	**1.67**	**172**	P	**Pb**	07 14 56.5	-0.2
ANX	**Ano Chora**	**1.67**	**172**	P	**Pb**	07 14 56.2	-0.5
AXAR	**Agios Charalam**	**1.68**	**151**	P	**Pb**	07 14 56.2	-0.6
AXAR	**Agios Charalam**	**1.68**	**151**	P	**Pn**	07 14 56.1	+1.2
PHP	**Peshkopia**	**1.69**	**328**	P	**Pb**	07 14 56.4	-0.7
NYDR	**Nydri-Lefkada**	**1.69**	**206**	P	**Pb**	07 14 58.0	+0.9
SRS	**Serrai**	**1.73**	**59**	P	**Pn**	07 14 56.2	+0.7
SRS	**Serrai**	**1.73**	**59**	P	**Pn**	07 14 56.2	+0.7
SRS	**Serrai**	**1.73**	**59**	*e*Pn	**Pn**	07 14 56.2	+0.7
SRS				*e*Sn	**Sb**	07 15 18.9	0.0
SKO	**Skopje**	**1.73**	**355**	*i* Pn	**Pb**	07 14 57.5	-0.2
SKO				*e*Sn	**Sg**	07 15 24.2	+1.8
DRAG	**Dragano-Lefkad**	**1.76**	**208**	P	**Pb**	07 14 58.4	+0.1
EVGI	**Lefkada island**	**1.79**	**205**	P	**Pn**	07 14 57.8	+1.3
OUR	**Ouranopolis**	**1.80**	**87**	P	**Pn**	07 14 57.7	+1.2
OUR	**Ouranopolis**	**1.80**	**87**	P	**Pn**	07 14 57.3	+0.8
EFP	**Efpalio**	**1.83**	**173**	P	**Pb**	07 14 59.1	-0.3
EFP	**Efpalio**	**1.83**	**173**	P	**Pb**	07 14 58.8	-0.6
MG00	**Magoula, Dorid**	**1.85**	**172**	P	**Pb**	07 14 58.9	-0.8
AGRP	**Agrapidokambos**	**1.85**	**178**	P	**Pb**	07 14 59.1	-0.6
MALA	**Malamata, Dori**	**1.86**	**174**	P	**Pb**	07 14 59.9	0.0
SERG	**Sergoula**	**1.86**	**170**	P	**Pn**	07 14 58.8	+1.4
SERG	**Sergoula**	**1.86**	**170**	P	**Pn**	07 14 58.6	+1.2
ATAL	**Atalanti**	**1.89**	**145**	P	**Pn**	07 14 58.9	+1.1
ATAL	**Atalanti**	**1.89**	**145**	P	**Pn**	07 14 58.8	+1.0
KALE	**Kalithea**	**1.90**	**168**	P	**Pn**	07 14 59.1	+1.2
KALE	**Kalithea**	**1.90**	**168**	P	**Pn**	07 14 59.0	+1.1
TRIZ	**Trizonia**	**1.91**	**170**	P	**Pn**	07 14 59.1	+1.0
LKR	**Lokris**	**1.92**	**146**	P	**Pn**	07 14 59.4	+1.2
LKR	**Lokris**	**1.92**	**146**	P	**Pn**	07 14 59.3	+1.2
KKB	**Krupnik**	**1.95**	**35**	P	**Pn**	07 14 59.7	+1.1
KKB	**Krupnik**	**1.95**	**35**	*i* P	**Pn**	07 14 59.7	+1.1
ZIRI	**Ziria, Aigiali**	**1.96**	**173**	P	**Pb**	07 15 00.5	-1.1
FSK	**Fiskardo**	**1.97**	**205**	P	**Pb**	07 15 00.9	-0.8
AGEO	**AgiosGiorgios,**	**2.01**	**170**	P	**Pb**	07 15 01.2	-1.2
NVR	**Nevrokopi**	**2.02**	**56**	P	**Pn**	07 15 00.6	+1.0
NVR	**Nevrokopi**	**2.02**	**56**	P	**Pn**	07 15 00.4	+0.8
AXS	**Araxos**	**2.06**	**186**	P	**Pb**	07 15 02.9	-0.4
MMB	**Musomishta**	**2.06**	**50**	P	**Pn**	07 15 01.5	+1.3
MMB	**Musomishta**	**2.06**	**50**	*i* P	**Pn**	07 15 01.4	+1.2
AIOA	**Agios Ioannis,**	**2.08**	**171**	P	**Pn**	07 15 01.9	+1.6
RLS	**Riolos of Patr**	**2.19**	**183**	P	**Pn**	07 15 03.1	+1.2
VLS	**Valsamata**	**2.22**	**202**	P	**Pn**	07 15 04.3	+1.9
KLV	**Kalavryta, Ach**	**2.24**	**169**	P	**Pn**	07 15 04.0	+1.4
RTZL	**Ratzakli, Kefa**	**2.27**	**197**	P	**Pn**	07 15 03.8	+0.8
BOSS	**Bosilegrad**	**2.33**	**16**	*e*Pn	**Pn**	07 15 05.5	+1.6
BOSS				*e*Sn	**Sn**	07 15 33.3	+1.2
GUR	**Goura**	**2.38**	**166**	P	**Pn**	07 15 05.8	+1.3
LTK	**Loutraki**	**2.45**	**155**	P	**Pn**	07 15 06.4	+0.9
ULC	**Ulcinj**	**2.49**	**314**	⇑*i* Pn	**Pn**	07 15 07.9	+1.9
ULC				*i* Sn	**Sb**	07 15 38.7	-2.1
BARS	**Barje**	**2.57**	**3**	*e*Pn	**Pn**	07 15 08.8	+1.7
BARS				*e*Sn	**Sn**	07 15 39.0	+1.2
PLNA	**Plana**	**2.60**	**31**	*i* P	**Pn**	07 15 09.4	+1.7
MAGU	**Magoula**	**2.62**	**145**	P	**Pn**	07 15 08.9	+1.2
VTS	**Vitosha**	**2.66**	**26**	*i* P	**Pn**	07 15 09.7	+1.2
VTS	**Vitosha**	**2.66**	**26**	*e*Pn	**Pn**	07 15 09.7	+1.2
VTS				*e*Sn	**Sn**	07 15 40.3	+0.1
PVY	**Plav**	**2.66**	**332**	⇑*i*Pn	**Pn**	07 15 10.4	+1.9
PVY				*i* Sn	**Sn**	07 15 43.0	+2.8
DRME	**Dracevica, Mon**	**2.67**	**317**	⇑*i*Pn	**Pn**	07 15 10.3	+1.7
DRME				*i* Sn	**Sn**	07 15 43.5	+3.1
RZN	**Rozhen**	**2.76**	**57**	*i* P	**Pn**	07 15 11.4	+1.5
DION	**Dionisos Attik**	**2.81**	**140**	P	**Pn**	07 15 11.6	+1.1
PDG	**Podgorica**	**2.82**	**321**	⇑S	**Sn**	07 15 39.3	-4.6
PDG	**Podgorica**	**2.82**	**321**	⇑*i*Pn	**Pn**	07 15 12.4	+1.9
PDG				*i* Sn	**Sb**	07 15 47.4	-2.9
BUM	**Brajici-Budva**	**2.91**	**316**	⇑*i*Pn	**Pn**	07 15 11.9	+2.1
BUM				*i* Sn	**Sn**	07 15 49.3	+3.0
IVA	**Berane**	**2.93**	**334**	⇑*i*Pn	**Pn**	07 15 13.9	+1.8
IVA				*i* Sn	**Sn**	07 15 49.3	+2.5
SELS	**Selova**	**2.99**	**353**	*e*Pn	**Pn**	07 15 14.7	+1.7
PLD	**Plovdiv**	**3.02**	**50**	*e*Pn	**Pn**	07 15 14.3	+1.0
KOME	**Kolasin**	**3.05**	**329**	⇓*i*Pn	**Pn**	07 15 16.1	+2.3
KOME				*i* Sn	**Sn**	07 15 52.8	+3.1
CEME	**Cevo**	**3.07**	**319**	⇑*i*Pn	**Pn**	07 15 15.7	+1.6
CEME				*i* Sn	**Sn**	07 15 52.8	+2.5
ZAPS	**Zavoj**	**3.11**	**14**	*e*Pn	**Pn**	07 15 16.4	+1.8
ZAPS				*e*Sn	**Sn**	07 15 53.0	+1.7
NKME	**Niksic**	**3.22**	**322**	⇑*i*Pn	**Pn**	07 15 18.7	+2.6
NKME				*i* Sn	**Sn**	07 15 56.6	+2.6
HCY	**Herceg Novi**	**3.23**	**314**	⇓*i*Pn	**Pn**	07 15 17.2	+1.1
HCY				*i* Sn	**Sn**	07 15 56.8	+2.8
SJES	**Sjenica**	**3.25**	**338**	*e*Pn	**Pn**	07 15 18.5	+1.8
GOCS	**Kraljevo Serbi**	**3.36**	**351**	*e*Pn	**Pn**	07 15 19.8	+1.7
BLKB	**Belogradchik**	**3.46**	**13**	*e*Pn	**Pn**	07 15 21.4	+2.0
BLKB				*e*Sn	**Sn**	07 16 00.2	+0.3
MPEP	**Malo Peshtene**	**3.48**	**26**	*i* P	**Pn**	07 15 21.7	+2.0
IVAS	**Ivanjica**	**3.50**	**342**	*e*Pn	**Pn**	07 15 20.6	+0.6
IVAS				*e*Sn	**Sn**	07 16 02.2	+1.2
PLE	**Pljevlja**	**3.50**	**332**	⇑*i*Pn	**Pn**	07 15 21.2	+1.1
PLE				*i* Sn	**Sn**	07 16 03.8	+2.7
BRY	**Bratogost**	**3.52**	**320**	⇓*i*Pn	**Pn**	07 15 22.5	+2.2
BRY				*i* Sn	**Sn**	07 16 03.5	+2.0
ZAGS	**Zajecar**	**3.59**	**7**	*e*Pn	**Pn**	07 15 22.6	+1.5
ZAGS				*e*Sn	**Sn**	07 16 03.1	+0.1
GRUS	**Gruza**	**3.70**	**350**	*e*Pn	**Pn**	07 15 24.2	+1.5
GRUS				*e*Sn	**Sn**	07 16 06.1	+0.4
MATE	**Matera**	**3.78**	**278**	⇑P	**Pn**	07 15 24.6	+0.9
MATE				⇑S	**Sn**	07 16 08.1	+0.4
PLVB	**Pleven**	**3.85**	**34**	⇓P	**Pn**	07 15 26.9	+2.2
TIP	**Timpagrande**	**3.91**	**256**	⇑P	**Pn**	07 15 28.4	+2.8
TIP				⇑S	**Sn**	07 16 13.2	+2.3
BBLS	**Lazi&#263i**	**3.98**	**336**	*e*Pn	**Pn**	07 15 28.5	+2.0
DIVS	**Divibare**	**4.04**	**343**	*e*Pn	**Pn**	07 15 28.6	+1.3
TRUS	**Trudelj**	**4.08**	**348**	*e*Pn	**Pn**	07 15 29.2	+1.4
ELND	**Elena**	**4.16**	**49**	⇑P	**Pn**	07 15 30.7	+1.7
KUBS	**Kucevo**	**4.16**	**0**	*e*Pn	**Pn**	07 15 28.7	-0.3
AVAS	**Avala Beograd**	**4.52**	**350**	*e*Pn	**Pn**	07 15 34.8	+0.9
MDVR	**Moldovita**	**4.53**	**1**	⇓P	**Pn**	07 15 32.6	-1.5
TEKS	**Tekeris**	**4.57**	**341**	*e*Pn	**Pn**	07 15 35.6	+1.0
HERR	**Herculane**	**4.67**	**7**	⇓P	**Pn**	07 15 35.5	-0.4
HERR				⇓S	**Sn**	07 16 26.1	-3.4
HUMR	**Humele**	**4.94**	**29**	⇑P	**Pn**	07 15 40.4	+0.6
HUMR				⇓S	**Sn**	07 16 35.3	-1.0
FRGS	**Fruska Gora**	**5.09**	**345**	*e*Pn	**Pn**	07 15 43.3	+1.6
GZR	**Gura Zlata**	**5.21**	**9**	⇑P	**Pn**	07 15 43.8	+0.3
GZR				⇑S	**Sn**	07 16 38.9	-4.1
BZS	**Buzias**	**5.37**	**360**	⇑P	**Pn**	07 15 44.1	-1.4
BZS				⇓S	**Sn**	07 16 43.9	-2.8
LOT	**Lotru**	**5.43**	**16**	⇑P	**Pn**	07 15 45.8	-0.7
LOT				⇓S	**Sn**	07 16 46.9	-1.6
BLY	**Banja Luka**	**5.57**	**325**	⇓P	**Pn**	07 15 46.6	-1.7
VOIR		**5.76**	**25**	⇑P	**Pn**	07 15 52.1	+1.1
ISR	**Istrita**	**6.06**	**35**	⇓P	**Pn**	07 15 56.6	+1.4
MLR	**Muntele Rosu**	**6.12**	**30**	Pn	**Pn**	07 15 58.2	+2.2
	comp=N,5.6nm,0.5s,baz=250,slow=10,SNR=13						
MLR				Sn	**Sn**	07 17 06.3	+0.7
	comp=N,0.7nm,0.3s,baz=282,slow=21,SNR=1.4						
MLR	**Muntele Rosu**	**6.12**	**30**	⇓P	**Pn**	07 15 57.3	+1.3
VAE	**Valguarnera**	**6.28**	**246**	Pn	**Pn**	07 15 58.1	0.0
	comp=N,4.6nm,0.6s,baz=4.9,slow=7.8,SNR=1.2						
VAE				Sn	**Sn**	07 17 09.5	+0.2
	comp=N,0.8nm,0.3s,baz=9.0,slow=19,SNR=1.3						
MARR	**Marisel-Cluj**	**6.51**	**9**	⇓S	**Sn**	07 17 13.3	-1.9
COVR	**Voineasa-Covas**	**6.52**	**29**	⇑P	**Pn**	07 16 01.9	+0.5
DRGR		**6.59**	**6**	⇓P	**Pn**	07 16 02.6	+0.2
PLOR	**Plostina**	**6.70**	**32**	⇓P	**Pn**	07 16 05.5	+1.6
VRI	**Vrincioaia**	**6.74**	**32**	⇑P	**Pn**	07 16 06.0	+1.6
PSZ	**Piszkesteto**	**7.77**	**351**	⇑P	**Pn**	07 16 17.9	-0.7
PSZ				⇓S	**Sn**	07 17 42.2	-3.7
SOKA	**Soboth**	**8.02**	**325**	*e*Pn	**Pn**	07 16 22.8	+0.8
	comp=N,0.6nm,0.3s						
SOKA				*i* Sn	**Sn**	07 17 52.9	+0.8
	comp=N,0.9nm,0.5s						
OBKA	**Obir**	**8.11**	**323**	*e*Pn	**Pn**	07 16 24.4	+1.1
	comp=N,0.1nm,0.1s						
OBKA				*e*Sn	**Sn**	07 17 55.3	+1.0
	comp=N,2.1nm,0.5s						
KECS	**Kecovo**	**8.27**	**355**	*e*PN	**Pn**	07 16 29.3	+3.9
ARSA	**Arzberg**	**8.28**	**330**	*i* Pn	**Pn**	07 16 26.9	+1.4
	comp=N,1.9nm,0.4s						
MYKA	**Terra Mystica**	**8.62**	**320**	*e*Pn	**Pn**	07 16 31.4	+1.1
	comp=N,1.8nm,0.5s						
MODS	**Modra-Piesok**	**8.70**	**340**	*e*PN	**Pn**	07 16 34.3	+3.0
MODS				*e*SN	**Sn**	07 18 04.5	-4.3
BRTR	**Keskin Array B**	**9.23**	**89**	Pn	**Pn**	07 16 37.6	-1.2
	comp=N,0.1nm,0.3s,baz=300,slow=12,SNR=1.7						
BRTR				LR	LR	07 20 31.3	
	comp=N,57nm,18.4s,baz=264,slow=40						
	comp=N,0.2nm,0.4s						
MOA	**Molln**	**9.26**	**328**	*e*Pn	**Pn**	07 16 40.9	+1.9
	comp=N,0.6nm,0.4s						
LESA	**Schwarzleotal**	**9.65**	**321**	*i* Pn	**Pn**	07 16 44.7	+0.2
	comp=N,0.6nm,0.3s						
LESA				*e*Sn	**Sn**	07 18 33.9	+1.6
	comp=N,0.2nm,0.3s						
VRAC	**Vranov**	**9.74**	**340**	Pn	**Pn**	07 16 47.2	+1.7
	comp=N,0.1nm,0.3s,baz=160,slow=12,SNR=5.2						
VRAC				Lg		07 19 32.3	
	comp=N,0.3nm,0.3s,baz=252,slow=21,SNR=1.8						
VRAC				LR	LR	07 20 59.0	
	comp=N,48nm,21.0s,baz=170,slow=40						
	comp=N,2.3nm,0.8s						
WTTA	**Wattenberg**	**10.07**	**317**	*i* Pn	**Pn**	07 16 51.4	+1.2
	comp=N,0.2nm,0.2s						
WTTA				*e*Sn	**Sn**	07 18 40.9	-1.7
	comp=N,3.6nm,0.7s						
WATA	**Walderalm**	**10.14**	**318**	*e*Pn	**Pn**	07 16 52.9	+1.7
	comp=N,0.6nm,0.3s						
WATA				*e*Sn	**Sn**	07 18 43.4	-1.1
	comp=N,1.4nm,0.3s						
SQTA	**Sankt Quirin**	**10.26**	**316**	*e*Pn	**Pn**	07 16 53.5	+0.7
	comp=N,1.3nm,0.3s						
SQTA				*i* Sn	**Sn**	07 18 46.9	-0.4
	comp=N,0.2nm,0.2s						
GERES	**GERESS Array B**	**10.28**	**329**	Pn	**Pn**	07 16 54.1	+1.1
	baz=127,slow=20,SNR=2.9						
GERES				LR	LR	07 21 57.8	
	comp=N,54nm,19.4s,baz=260,slow=44						
	comp=N,0.6nm,0.7s						
MOTA	**Moosalm**	**10.40**	**316**	*i* Pn	**Pn**	07 16 55.0	+0.4
	comp=N,2.4nm,0.5s						
MOTA				*i* Sn	**Sn**	07 18 49.8	-0.8
	comp=N,1.1nm,0.5s						
FETA	**Feichten**	**10.40**	**314**	*i* Pn	**Pn**	07 16 57.1	+2.4
	comp=N,0.1nm,0.1s						
FETA				*e*Sn	**Sn**	07 18 52.0	+1.3
	comp=N,0.3nm,0.2s						
DAVOX	**Davos/Dischmat**	**10.74**	**311**	Pn	**Pn**	07 16 59.8	+0.4
	comp=N,0.1nm,0.3s,baz=128,slow=19,SNR=1.9						
DAVOX				Sn	**Sn**	07 18 55.3	-3.8
	comp=N,0.4nm,0.3s,baz=291,slow=13,SNR=4.3						
	comp=N,1.3nm,0.6s						
AKASG	**Malin Array Be**	**11.72**	**24**	LR	LR	07 22 25.2	
	comp=N,81nm,18.6s,baz=217,slow=41						
MMAI	**Mount Meron Ar**	**13.20**	**119**	LR	LR	07 23 35.7	
	comp=N,37nm,18.6s,baz=304,slow=42						
ESDC	**Sonseca Array**	**19.61**	**277**	P	**P**	07 18 52.1	-1.7
	baz=96,slow=13,SNR=1.8						
	comp=N,0.4nm,0.7s						
HFS	**Hagfors**	**20.52**	**349**	P	**P**	07 19 02.6	-0.8
	comp=N,2.7nm,0.5s,baz=162,slow=12,SNR=18						
	comp=E,2.7nm,0.5s						
FINES	**FINESS Array B**	**21.40**	**6**	P	**P**	07 19 12.1	-0.7
	comp=N,1.9nm,0.7s,baz=159,slow=8.1,SNR=3.6						
	comp=N,1.9nm,0.7s						
BELG	**Belogornoye**	**21.54**	**47**	P	**P**	07 19 13.5	-0.9
	comp=N,5.9nm,0.8s,baz=200,slow=2.6,SNR=6.4						
	comp=N,5.9nm,0.8s						
NB2	**NORSAR Subarra**	**21.79**	**346**	P	**P**	07 19 16.3	-0.7
	comp=Z,15nm,1.1s,baz=160,slow=11						
NOA	**NORSAR Array B**	**21.79**	**346**	P	**P**	07 19 16.8	-0.2
	comp=Z,1.0nm,0.4s,baz=66,slow=9.3,SNR=9.7						
	comp=Z,1.0nm,0.4s						
EKA	**Eskdalemuir Ar**	**22.30**	**321**	P	**P**	07 19 21.8	-0.8
	comp=Z,2.9nm,0.8s,baz=116,slow=9.0,SNR=4.5						
	comp=Z,2.9nm,0.8s						
ARCES	**ARCESS Array B**	**29.42**	**3**	P	**P**	07 20 28.2	-0.2
	comp=Z,2.0nm,0.9s,baz=187,slow=9.7,SNR=4.0						
	comp=Z,2.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**32.18**	**219**	P	**P**	07 20 53.1	-0.2
	comp=Z,0.9nm,0.7s,baz=37,slow=5.6,SNR=4.8						
	comp=Z,0.9nm,0.7s						
BVAR	**Borovoye Array**	**35.15**	**52**	P	**P**	07 21 17.3	-1.4
	comp=Z,0.4nm,0.7s,baz=261,slow=5.7,SNR=2.2						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**43.51**	**60**	P	**P**	07 22 28.6	0.0
	comp=Z,0.5nm,0.5s,baz=279,slow=6.7,SNR=7.5						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**43.68**	**50**	P	**P**	07 22 30.0	+0.2
	comp=Z,0.4nm,0.4s,baz=337,slow=9.4,SNR=1.7						
	comp=Z,0.4nm,0.4s						
FRB	**Frobisher Bay**	**54.87**	**327**	LR	LR	07 49 18.9	
	comp=Z,82nm,18.4s,baz=280,slow=38						
LSZ	**Lusaka**	**55.58**	**172**	LR	LR	07 51 01.2	
	comp=Z,145nm,18.0s,baz=158,slow=40						
SCHQ	**Schefferville**	**57.53**	**317**	P	**P**	07 24 13.9	-0.5
	comp=Z,2.1nm,0.7s,baz=71,slow=3.6,SNR=4.8						
	comp=Z,2.1nm,0.7s						
TSUM	**Tsumeb**	**59.26**	**184**	LR	LR	07 53 44.3	
	comp=Z,121nm,18.1s,baz=155,slow=40						
YKA	**Yellowknife Ar**	**71.74**	**340**	P	**P**	07 25 46.0	-1.0
	comp=Z,0.2nm,0.7s,baz=104,slow=7.1,SNR=4.2						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**74.93**	**355**	P	**P**	07 26 05.7	0.0
	comp=Z,0.1nm,0.6s,baz=318,slow=41,SNR=2.0						
	comp=Z,0.1nm,0.6s						
WRA	**Warramunga Arr**	**119.75**	**92**	PKP	**PKPdf**	07 33 14.0	-1.6
	comp=Z,0.3nm,0.9s,baz=313,slow=1.5,SNR=1.3						
ASAR	**Alice Springs**	**121.53**	**96**	PKP	**PKPdf**	07 33 17.6	-1.4
	comp=Z,0.3nm,0.5s,baz=297,slow=1.7,SNR=6.0						

IDC ***29*** *07:21:14.1±3.0, 35°.14S×179°.10E, h0km, mb3.4/2, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=66.1km s-min=44.1km az=102.0*
WEL ***29*** *07:21:22.9±1.7, 36°.5S±9°×17°.9E±1°.9, h12km, M3.3/5, ML3.2/6, MLv3.3/5, Error ellipse: s-maj=24.9km s-min=10.6km az=98.2*

ISC 29 07:21:19.3±3.8, 35°.8S±0°.1×179°.6E±0°.2, h12km±25km, n26, σ1°.21/35, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.05**	**210**	P	**Pn**	**07 21 55.4**	**+1.8**
MXZ				S	**Sn**	**07 22 19.4**	**+0.3**
WMGZ	**Waiomatatini S**	**2.24**	**205**	P	**Pb**	**07 21 58.8**	**-0.9**
WMGZ				S	**Sb**	**07 22 26.3**	**-1.0**
HAZ	**Te Kaha**	**2.44**	**216**	P	**Pn**	**07 22 01.4**	**+2.4**
HAZ				S	**Sn**	**07 22 30.8**	**+2.0**
PUZ	**Puketiti**	**2.52**	**205**	P	**Pn**	**07 22 01.8**

NNC ***29*** *07:22:46.6±4.7,36.94N×71.09E,h110km±74km,mb3.4, mpv4.0,Error ellipse: s-maj=50.0km s-min=34.2km az=135.0*

ISC 29 07:22:39.3±0.6, 36°44N±0.05×71°29E±0.06, h100km, n60, σ2s10/67, mb4.1/13, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
KBL	**Kabul**	**2.64**	**225**			**Pn**	**07 23 25.2**	**+4.8**
GAR	**Garm**	**2.67**	**343**			**Pn**	**07 23 22.4**	**+1.6**
SHAA	**Shahritus**	**2.77**	**295**			**Pn**	**07 23 23.7**	**+1.7**
CHGR	**Chuyangaron**	**2.79**	**323**			**Pn**	**07 23 23.2**	**+1.0**
DRK	**Karamyk**	**3.06**	**7**			**Pn**	**07 23 28.4**	**+2.3**
NIL	**Nilore**	**3.21**	**149**			Pn	07 23 33.0	+5.1
BTK	**Batken**	**3.63**	**354**			**Pn**	**07 23 36.2**	**+2.7**
KSH2	**Kashi**	**4.33**	**50**	Pn		**Pn**	**07 23 47.5**	**+4.5**
KSH2				Sn		**Sn**	**07 24 35.3**	**+2.8**
	comp=N,190nm,0.6s			smax		smax		
KSH2				smax		smax		
	comp=E,93nm,0.4s							
JMU	**Jammu**	**4.67**	**140**	*eP*		**Pn**	**07 23 50.7**	**+3.1**
JMU				*eS*		**Sn**	**07 24 40.8**	**+0.2**
JMU				IAML			07 24 47.4	
	comp=E,2μm,0.8s							
JMU				IAML			07 24 47.8	
	comp=N,3μm,0.3s							
ARSB	**Arslanbob**	**5.05**	**15**			**Pn**	**07 23 53.7**	**+1.0**
ALCI	**Alchi Leh**	**5.30**	**113**	*eP*		**Pn**	**07 23 58.3**	**+1.9**
ALCI				*eS*		**Sn**	**07 24 55.4**	**-1.1**
ALCI				IAML			07 24 59.0	
	comp=E,357nm,0.1s							
ALCI				IAML			07 24 59.4	
	comp=N,437nm,0.3s							
TSSA	**Tissa**	**5.38**	**131**	*eP*		**Pn**	**07 23 58.7**	**+1.4**
TSSA				*eS*		**Sn**	**07 24 56.7**	**-1.4**
TSSA				IAML			07 25 01.7	
	comp=E,128nm,0.2s							
TSSA				IAML			07 25 21.2	
	comp=N,145nm,0.6s							
NRN	**Naryn**	**6.19**	**35**			**Pn**	**07 24 08.5**	**+0.1**
UCH	**Uchtor**	**6.29**	**22**	P		**Pn**	**07 24 11.5**	**+1.6**
	SNR=18							
EKS2	**Erkin-Say**	**6.50**	**16**	P		**Pn**	**07 24 14.3**	**+1.8**
	SNR=14							
BHK	**Bhakra**	**6.57**	**139**	*eP*		Pn	07 24 18.3	+5.0
BHK				IAML			07 25 29.6	
	comp=N,82nm,0.3s							
BHK				IAML			07 25 30.0	
	comp=E,48nm,0.1s							
BHK				*eS*		**Sn**	**07 25 30.4**	**+3.5**
AAK	**Ala-Archa**	**6.66**	**21**	P		**Pn**	**07 24 16.4**	**+1.7**
	SNR=33							
AAK	**Ala-Archa**	**6.66**	**21**	Pn		**Pn**	**07 24 16.0**	**+1.4**
	comp=E,8.3nm,0.3s,baz=189,slow=6.9,SNR=98							
AAK				Sn		**Sn**	**07 25 28.3**	**-0.9**
	comp=E,1.7nm,0.3s,baz=358,slow=15,SNR=12							
	comp=E,17nm,0.4s							
AAK	**Ala-Archa**	**6.66**	**21**			**Pn**	**07 24 16.4**	**+1.7**
AAK	**Ala-Archa**	**6.66**	**21**	⇓P		**Pn**	**07 24 16.4**	**+1.7**
	comp=E,3.4nm,0.4s							
AAK				⇑S		**Sn**	**07 25 27.4**	**-1.8**
	comp=E,3.2nm,0.5s							
KK31	**Karatay Array**	**6.68**	**355**			**Pn**	**07 24 15.7**	**+0.9**
KK31	**Karatay Array**	**6.68**	**355**	⇑P		**Pn**	**07 24 15.6**	**+0.9**
	comp=E,6.3nm,0.2s,baz=179,slow=12,SNR=198							
KK31				⇑S		**Sn**	**07 25 25.2**	**-4.2**
	comp=E,3.3nm,0.3s,baz=178,slow=23,SNR=4.5							
KKAR	**Karatay Array**	**6.68**	**355**			**Pn**	**07 24 15.6**	**+0.8**
BOOM	**Boomskoye usch**	**7.03**	**29**			**Pn**	**07 24 20.8**	**+1.2**
CHMS	**Chumysh**	**7.07**	**21**	P		**Pn**	**07 24 22.1**	**+2.0**
	SNR=5.7							
SMLA	**Simla**	**7.21**	**136**	*eP*		**Pn**	**07 24 23.2**	**+1.2**
SMLA				*eS*		**Sn**	**07 25 39.9**	**-2.4**
SMLA				IAML			07 25 46.1	
	comp=N,44nm,0.3s							
SMLA				IAML			07 25 47.5	
	comp=E,54nm,0.3s							
TKM2	**Tokmak 2**	**7.27**	**26**	P		**Pn**	**07 24 25.2**	**+2.2**
	SNR=6.4							
KDJ	**Kajisay**	**7.29**	**37**	Pn		**Pn**	**07 24 24.6**	**+1.5**
KLP	**Kalpa**	**7.57**	**128**	*eP*		**Pn**	**07 24 27.8**	**+0.6**
KLP				*eS*		**Sn**	**07 25 46.6**	**-5.0**
KLP				IAML			07 25 50.6	
	comp=E,153nm,0.7s							
KLP				IAML			07 25 54.7	
	comp=N,244nm,0.0s							
KUDL	**Kundal**	**9.37**	**151**	*eP*		**Pn**	**07 24 52.5**	**+1.1**
KUDL				*eS*		**Sn**	**07 26 28.5**	**-6.3**
KUDL				IAML			07 26 31.1	
	comp=E,49nm,0.7s							
KUDL				IAML			07 26 36.2	
	comp=N,58nm,0.0s							
MKAR	**Makanchi Array**	**13.20**	**35**	Pn		**Pn**	**07 25 42.6**	**0.0**
	comp=N,0.2nm,0.3s,baz=214,slow=10,SNR=7.5							
	comp=N,0.2nm,0.4s							
MKAR	**Makanchi Array**	**13.20**	**35**	Pn		**Pn**	**07 25 42.4**	**-0.3**
WMQ	**Urumqi**	**14.54**	**55**	*eP*		**P**	**07 26 02.3**	**-1.5**
KURBB	**Kurchatov Arra**	**15.10**	**18**	Pn		**Pn**	**07 26 04.3**	**-2.8**
	comp=N,0.1nm,0.3s,baz=207,slow=11,SNR=3.2							
AB31	**Akbulak array**	**15.25**	**331**	Pn		**Pn**	**07 26 07.1**	**-1.9**
AB31	**Akbulak array**	**15.25**	**331**	⇓P		**Pn**	**07 26 07.6**	**-1.3**
	comp=N,0.9nm,0.3s,baz=136,slow=13,SNR=64							
ABKAR	**Akbulak array**	**15.25**	**331**	Pn		**Pn**	**07 26 06.9**	**-2.0**
BVAR	**Borovoye Array**	**16.59**	**358**	P		**P**	**07 26 27.2**	**+0.7**
	comp=N,0.1nm,0.3s,baz=171,slow=12,SNR=6.1							
	comp=N,1.3nm,0.4s							
AKTO	**Aktyubinsk**	**16.95**	**330**	P		**P**	**07 26 31.8**	**+1.4**
	comp=N,0.6nm,0.3s,baz=152,slow=7.9,SNR=5.0							
	comp=N,1.7nm,0.4s							
AKTO	**Aktyubinsk**	**16.95**	**330**	⇑P		**P**	**07 26 32.2**	**+1.8**
	comp=N,0.9nm,0.5s							
ZALV	**Zalesovo Beam**	**19.87**	**24**	P		**P**	**07 27 02.6**	**+0.3**
	comp=N,3.0nm,0.3s,baz=207,slow=10,SNR=18							
	comp=N,3.0nm,0.3s							
HHC	**Hu-ho-hao-te**	**31.56**	**70**	*eP*		**P**	**07 28 52.0**	**-0.2**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,75nm,3.7s							
FINES	**FINESS Array B**	**37.66**	**326**	P		**P**	**07 29 46.1**	**+1.8**
	comp=Z,0.6nm,0.5s,baz=104,slow=8.0,SNR=3.3							
	comp=Z,0.6nm,0.5s							
ARCES	**ARCESS Array B**	**41.29**	**338**	P		**P**	**07 30 15.4**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=108,slow=6.7,SNR=3.6							
	comp=Z,2.3nm,0.8s							
HFS	**Hagfors**	**43.26**	**322**	P		**P**	**07 30 31.5**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=93,slow=12,SNR=6.9							
	comp=Z,2.1nm,0.7s							
NB2	**NORSAR Subarra**	**44.57**	**323**	P		**P**	**07 30 42.2**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=98,slow=7.9							
NOA	**NORSAR Array B**	**44.57**	**323**	P		**P**	**07 30 41.4**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=102,slow=7.3,SNR=3.3							
	comp=Z,0.5nm,0.6s							
TIXI	**Tiksi**	**45.74**	**22**	P		**P**	**07 30 50.1**	**+0.1**
TIXI				IAmb		IAmb	07 30 59.6	
	comp=Z,3.5nm,1.1s							
SPITS	**Spitsbergen Ar**	**47.60**	**347**	P		**P**	**07 31 07.1**	**+2.6**
	comp=Z,5.6nm,1.0s,baz=119,slow=6.8,SNR=1.6							
	comp=Z,5.6nm,1.0s							
EKA	**Eskdalemuir Ar**	**52.49**	**316**	P		**P**	**07 31 42.6**	**+1.0**
	comp=Z,5.2nm,1.0s,baz=78,slow=7.9,SNR=2.7							
	comp=Z,5.2nm,1.0s							
MBAR	**Mbarara**	**52.66**	**235**	LR		LR	07 56 36.5	
	comp=Z,146nm,19.1s,baz=104,slow=39							
ASAJ	**Asahikawa**	**53.38**	**58**	P		**P**	**07 31 45.4**	**-3.1**
	comp=Z,2.2nm,0.3s,baz=229,slow=12,SNR=7.9							
	comp=Z,2.2nm,0.3s							
C19K	**Lookout Ridge**	**68.31**	**17**	P		**P**	**07 33 29.6**	**+0.4**
C19K				IAmb		IAmb	07 33 38.9	
	comp=Z,4.5nm,1.5s							
D19K	**Kuna River**	**69.13**	**17**	P		**P**	**07 33 33.4**	**-0.8**
D25K	**Kavik River**	**70.97**	**13**	P		**P**	**07 33 43.8**	**-1.7**
D25K				IAmb		IAmb	07 34 16.7	
	comp=Z,2.7nm,1.2s							
IMAR	**Indian Mountai**	**72.16**	**18**	P		**P**	**07 33 52.0**	**-0.6**
BMAR	**Burnt Mountain**	**72.94**	**14**	P		**P**	**07 33 58.1**	**+0.8**
YKA	**Yellowknife Ar**	**81.29**	**3**	P		**P**	**07 34 44.9**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=350,slow=6.0,SNR=5.7							
	comp=Z,0.2nm,0.5s							
WRA	**Warramunga Arr**	**81.76**	**122**	P		P	07 34 36.7	-10
	comp=Z,0.3nm,0.9s,baz=314,slow=10,SNR=1.8							
	comp=Z,0.3nm,0.9s							
WRA	**Warramunga Arr**	**81.76**	**122**	P		**P**	**07 34 46.3**	**-0.8**

FUNV ***29*** *07:27:22.2,6.75N×73.15W,h171km, MW3.6, Presumed earthquake*

RSNC ***29*** *07:27:23.5±0.0,7.1N×7.3W, h150km±2km, M2.9, mb2.9, ML2.6*

ISC 29 07:27:22.3±1.3, 6.87N±0.03×73.13W±0.04, h157km±8km, n39, σ1s13/69, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
BARC	**Barichara**	**0.28**	**191**	P		**Pn**	**07 27 43.8**	**-0.2**
BARC				S		**Sn**	**07 27 59.7**	**-0.8**
BRJC	**Barrancabermej**	**0.62**	**280**	P		**Pn**	**07 27 45.6**	**+0.5**
BRJC				S		**Sn**	**07 28 03.0**	**+0.5**
PAMC	**Pamplona, Colo**	**0.64**	**42**	P		**Pn**	**07 27 46.6**	**+0.8**
PAMC				S		**Sn**	**07 28 03.9**	**+0.2**
RUSC	**La Rusia**	**0.97**	**177**	P		**Pn**	**07 27 47.6**	**-0.5**
RUSC				S		**Sn**	**07 28 06.4**	**-1.4**
RUSC	**La Rusia**	**0.97**	**177**	*eP*		**Pn**	**07 27 47.6**	**-0.5**
CAPV	**Capacho**	**1.28**	**39**	⇓*eP*		**Pn**	**07 27 51.7**	**+1.2**
CAPV				*eS*		**Sn**	**07 28 13.3**	**+1.1**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P		**Pn**	**07 27 50.3**	**-0.7**
PTBC				S		**Sn**	**07 28 11.8**	**-1.2**
OCAC	**Ocana**	**1.38**	**352**	P		**Pn**	**07 27 51.9**	**+0.5**
OCAC				S		**Sn**	**07 28 14.7**	**+0.9**
SPBC	**San Pablo de B**	**1.53**	**218**	P		**Pn**	**07 27 52.7**	**-0.1**
SPBC				S		**Sn**	**07 28 15.1**	**-1.1**
CHIC	**Chingaza**	**2.30**	**195**	P		**Pn**	**07 28 01.7**	**-0.1**
CHIC				S		**Sn**	**07 28 31.3**	**-1.0**
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**07 28 03.7**	**+1.5**
ROSC				S		**Sn**	**07 28 33.8**	**+0.9**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P		**Pn**	**07 28 04.9**	**+0.5**
CVER				S		**Sn**	**07 28 39.0**	**+2.1**
UREC	**San Jos de Ur**	**2.54**	**290**	P		**Pn**	**07 28 03.8**	**-0.5**
UREC				S		**Sn**	**07 28 35.4**	**-1.3**
SOCV	**Socops**	**2.66**	**58**	*eP*		**Pn**	**07 28 06.5**	**+0.7**
SOCV				*eS*		**Sn**	**07 28 39.0**	**-0.3**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P		**Pn**	**07 28 08.2**	**+0.8**
GUY2C				S		**Sn**	**07 28 44.7**	**+2.5**
VILC	**Villavicencio,**	**2.79**	**192**	P		**Pn**	**07 28 06.8**	**-0.7**
VILC				S		**Sn**	**07 28 42.4**	**-0.1**
RECRC	**Villamaria, Ca**	**2.91**	**230**	P		**Pn**	**07 28 12.2**	**+2.9**
RECRC				S		**Sn**	**07 28 47.4**	**+1.7**
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P		**Pn**	**07 28 11.4**	**+0.9**
CBOC				S		**Sn**	**07 28 47.5**	**-0.3**
DBBC	**Dabeiba**	**3.06**	**273**	P		**Pn**	**07 28 11.3**	**+0.5**
DBBC				S		**Sn**	**07 28 47.1**	**-1.2**
ARGC	**Ariguani, Magd**	**3.17**	**340**	P		**Pn**	**07 28 13.8**	**+1.7**
ARGC				S		**Sn**	**07 28 52.9**	**+2.1**
SDV	**Santo Domingo**	**3.19**	**51**	P		**Pn**	**07 28 13.2**	**+0.7**
SDV				S		**Sn**	**07 28 51.0**	**-0.4**
SDV	**Santo Domingo**	**3.19**	**51**	*eP*		**Pn**	**07 28 13.2**	**+0.7**
SDV				*eS*		**Sn**	**07 28 50.5**	**-0.9**
MCQV	**Machiques**	**3.22**	**11**	*eP*		**Pn**	**07 28 14.4**	**+1.7**
MCQV				*eS*		**Sn**	**07 28 51.4**	**-0.5**
ANIL	**Santa Ana**	**3.27**	**224**	P		**Pn**	**07 28 14.8**	**+1.2**
ANIL				S		**Sn**	**07 28 54.8**	**+1.4**
APAC	**Apartado, Choc**	**3.57**	**287**	P		**Pn**	**07 28 17.5**	**+0.3**
APAC				S		**Sn**	**07 28 59.4**	**-0.5**
PRAC	**Prado**	**3.58**	**209**	P		**Pn**	**07 28 17.0**	**-0.5**
PRAC				S		**Sn**	**07 28 59.7**	**-0.6**
SJCC	**San Jacinto, C**	**3.63**	**326**	P		**Pn**	**07 28 17.6**	**-0.4**
SJCC				S		**Sn**	**07 28 59.9**	**-1.5**
SJCC	**San Jacinto, C**	**3.63**	**326**	*eP*		**Pn**	**07 28 18.1**	**+0.1**
SJCC				*eS*		**Sn**	**07 28 59.1**	**-2.2**
PLMC	**San Jos del P**	**3.69**	**238**	P		**Pn**	**07 28 19.3**	**+0.5**
PLMC				S		**Sn**	**07 29 02.2**	**-0.6**
URMC	**La Uribe, Meta**	**3.80**	**199**	P		**Pn**	**07 28 20.4**	**+0.1**
URMC				S		**Sn**	**07 29 04.9**	**-0.5**
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	P		**Pn**	**07 28 24.2**	**-0.4**
CRJC				S		**Sn**	**07 29 11.9**	**-1.3**
YOTC	**Yotoco, Valle**	**4.29**	**228**	P		**Pn**	**07 28 26.8**	**+0.1**
URIC	**Uribia, Colomb**	**4.94**	**13**	P		**Pn**	**07 28 34.1**	**-0.9**
URIC				S		**Sn**	**07 29 30.9**	**-0.9**
MAPV	**Macapo**	**5.48**	**57**	*eP*		**Pn**	**07 28 41.1**	**-1.1**
POPC	**Popayan, Colom**	**5.56**	**220**	P		**Pn**	**07 28 45.7**	**+2.2**
	2.1nm,1.6s							
FLOC	**Florencia**	**5.82**	**206**	P		**Pn**	**07 28 46.2**	**-0.5**
BENV	**Beln**	**6.28**	**60**	*eP*		**Pn**	**07 28 52.3**	**-0.5**
CACV	**CAICARA DEL OR**	**6.58**	**84**	*eP*		**Pn**	07 29 01.8	+5.1
TACV	**Tcata**	**6.86**	**61**	*eP*		**Pn**	**07 28 58.5**	**-2.1**

IDC ***29*** *07:29:28.4±1.9,33.37N×138.84E,h0km,mb3.6/2, mbtmp3.6/3,ML2.8/2,Error ellipse: s-maj=58.6km s-min=29.1km az=78.0*

JMA ***29*** *07:29:41.5±0.3,36.2N×13.7E, h283km±2km, MV2.7/20, NORTHERN GIFU PREF*

ISC 29 07:29:39.5±1.8, 36.3N±0.3×136.9E±0.2, h300km, n8, σ1s46/11, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
JYTA	**Yamagatataniai**	**0.73**	**193**	P		**Pn**	**07 30 18.5**	**-0.4**
JYTA				*eS*		**S**	**07 30 46.8**	**-3.4**
MJAR	**Matsushiro Arr**	**1.05**	**77**	Pn		**Pn**	**07 30 19.8**	**-0.4**
	0.2nm,0.3s,baz=255,slow=6.5,SNR=12							
MJAR				Sn		**S**	**07 30 52.6**	**+0.2**
	baz=118,slow=37,SNR=4.1							
JWT	**Wachi**	**1.61**	**231**	P		**Pn**	**07 30 23.3**	**-0.2**
JKY	**Yasaka**	**1.63**	**246**	P		**Pn**	**07 30 23.5**	**0.0**
JAG	**Ashikaga**	**2.04**	**86**	P		**Pn**	**07 30 26.7**	**+0.1**
JAG				*eS*		**S**	**07 31 02.6**	**-1.4**
JNU	**Nakatsue**	**5.91**	**239**	Pn		**Pn**	**07 31 08.0**	**+0.1**
	0.4nm,0.3s,baz=87,slow=15,SNR=1.9							
	5.5nm,0.8s							
WRA	**Warramunga Arr**	**56.00**	**183**	P		**P**	**07 38 48.8**	**+1.3**
	0.8nm,0.6s,baz=359,slow=7.6,SNR=20							
	0.8nm,0.6s							
ASAR	**Alice Springs**	**59.72**	**183**	P		**P**	**07 39 14.4**	**+1.3**
	0.2nm,0.6s,baz=18,slow=12,SNR=4.3							
	0.2nm,0.6s							

ASRS ***29*** *07:30:28.0±1.4,49.00N×82.16E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

NNC ***29*** *07:30:31.6±2.3,49.12N×82.26E,h0km, mb2.5,mpv2.2, Error ellipse: s-maj=33.8km s-min=5.5km az=60.0, Suspected Mining explosion.*

IDC ***29*** *07:30:32.3±1.7,49.01N×82.00E,h0km, mbtmp2.9/3, ML2.0/3,Error ellipse: s-maj=32.8km s-min=10.9km az=65.0*

ISC 29 07:30:25.4±1.4, 49.18N±0.07×83.0E±0.1, h0km, n7, σ0s49/7, 4C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
MK31	**Makanchi Array**	**2.44**	**192**	⇑Pn		**Pg**	**07 31 11.7**	**-0.5**
	0.3nm,0.3s,baz=3.0,slow=15,SNR=46							
MK31				⇓Sn		**Sb**	**07 31 41.2**	**+0.4**
	2.7nm,0.4s,baz=4.4,slow=1.6,SNR=12							
MKAR	**Makanchi Array**	**2.44**	**192**	Pn		**Pg**	**07 31 12.1**	**-0.1**
	1.2nm,0.3s,baz=2.3,slow=14,SNR=53							
MKAR				Lg		Lg	07 31 41.6	
	2.9nm,0.3s,baz=5.1,slow=26,SNR=39							
	2.3nm,0.4s							
KURK	**Kurchatov**	**3.22**	**300**	⇑Pg		**Pb**	**07 31 22.9**	**-0.5**
	0.4nm,0.5s							
KURK				⇓Lg		Lg	07 32 01.3	
	0.8nm,0.3s							
KURBB	**Kurchatov Arra**	**3.23**	**298**	Pn		**Pn**	**07 31 17.8**	**+0.5**
	0.1nm,0.3s,baz=124,slow=9.9,SNR=5.1							
KURBB				Lg		Lg	07 32 00.2	
	0.1nm,0.3s,baz=126,slow=31,SNR=4.5							
	35nm,0.7s							
KURBB	**Kurchatov Arra**	**3.23**	**298**	⇑Pg		**Pb**	**07 31 23.6**	**0.0**
	0.8nm,0.3s							
KURB				⇑Lg		Lg	07 32 02.5	
	8.6nm,0.7s							
ZALV	**Zalesovo Beam**	**4.90**	**13**	Pn		**Pb**	**07 31 52.0**	**-0.1**
	0.3nm,0.3s,baz=206,slow=6.3,SNR=1.8							
	0.5nm,0.4s							
I46RU	**ZALESOVO INFRA**	**4.90**	**13**	I		I	08 04 15.0	
	baz=191,slow=320,SNR=4.1							

IDC 29 07:33:50.7±2.3, 31.87S×178.04W, h0km, mb3.6/2, mbtmp3.7/3, ML2.6/1, MS3.8/3, Error ellipse: s-maj=67.0km s-min=40.0km az=137.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
URZ	**Urewera**	**7.51**	**211**	Pn		Pn	07 35 40.0	-1.5
	0.1nm,0.3s,baz=20,slow=15,SNR=2.0							
URZ				Sn		Sn	07 37 02.5	-4.9
	1.5nm,0.3s,baz=183,slow=18,SNR=7.1							
	5.1nm,0.7s							
CTA	**Charters Tower**	**34.03**	**281**	LR		LR	07 51 43.8	
	comp=Z,39nm,18.5s,baz=176,slow=32							
ASAR	**Alice Springs**	**43.02**	**269**	P		P	07 41 52.5	+0.2
	0.6nm,0.6s,baz=105,slow=7.3,SNR=5.6							
	0.6nm,0.6s							
WRA	**Warramunga Arr**	**44.14**	**274**	P		P	07 42 01.1	-0.2
	0.4nm,0.4s,baz=113,slow=8.1,SNR=14							
	0.4nm,0.4s							
NNA	**Nana**	**93.05**	**106**	LR		LR	08 18 36.8	
	comp=Z,132nm,21.8s,baz=353,slow=29							
CMIG	**Matias Romero**	**93.24**	**72**	LR		LR	08 18 50.0	
	comp=Z,73nm,21.9s,baz=174,slow=29							
FINES	**FINESS Array B**	**146.50**	**339**	PKPbc		PKPdf	07 53 32.2	+0.5
	0.9nm,0.5s,baz=64,slow=4.8,SNR=7.8							
HFS	**Hagfors**	**150.67**	**348**	PKPbc		PKPbc	07 53 43.9	-0.1
	4.0nm,1.0s,baz=8.1,slow=2.0,SNR=2.5							

AEIC ***29*** *08:03:08.2±0.8,51.57N±0.09×178.89E±0.09, h59km±7km, Error ellipse: s-maj=12.9km s-min=8.1km az=193.0*

NEIC 29 08:03:09.3±0.9, 51.6N±0.1×178.93E±0.09, h54km±11km, mb3.7/8, ML3.6/12, ML3.5(AEIC), Error ellipse: s-maj=19.0km s-min=8.2km az=183.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
AMKA	**Amchitka**	**0.32**	**132**			**Pn**	**08 03 18.6**	**-0.4**
LSSE	**Little Sitkin**	**0.41**	**327**			**Pn**	**08 03 19.7**	**-0.1**
LSPA	**Little Sitkin**	**0.42**	**329**			**Pn**	**08 03 19.8**	**-0.2**
LSPA						**Sn**	**08 03 29.1**	**+1.3**
LSNW	**Little Sitkin**	**0.45**	**326**			**Pn**	**08 03 19.9**	**-0.4**
CESW	**Semis' Southwe**	**0.50**	**52**			**Pn**	**08 03 20.9**	**0.0**
CESW						**Sn**	**08 03 29.9**	**+0.8**
CERB	**Semis' Cerberu**	**0.55**	**52**			**Pn**	**08 03 21.9**	**+0.5**
CERB						**Sn**	**08 03 31.1**	**+0.8**
GASW	**Gareloi Southw**	**1.39**	**82**			**Pn**	**08 03 32.3**	**-0.1**
GASW						**Sn**	**08 03 50.7**	**+1.0**
GAKI	**Gareloi-Kavalg**	**1.41**	**91**			**Pn**	**08 03 32.4**	**-0.2**
GAKI						**Sn**	**08 03 51.0**	**+0.9**
GANO	**Gareloi North**	**1.43**	**80**			**Pn**	**08 03 32.7**	**-0.2**
GANO						**Sn**	**08 03 51.6**	**+1.0**
GALAA	**Gareloi Lava P**	**1.44**	**82**			**Pn**	**08 03 33.3**	**+0.2**
GANE	**Gareloi Northe**	**1.45**	**80**			**Pn**	**08 03 33.0**	**-0.1**
GANE						**Sn**	**08 03 51.7**	**+0.7**
GAEA	**Gareloi East**	**1.46**	**82**			**Pn**	**08 03 33.4**	**0.0**
TANO	**Tanaga North**	**1.86**	**79**			**Pn**	**08 03 38.8**	**0.0**
TANO						**Sn**	**08 04 02.5**	**+1.3**
TASE	**Tanaga Southea**	**1.91**	**82**			**Pn**	**08 03 39.3**	**-0.1**
TAFL	**Tanaga Flats**	**1.98**	**84**			**Pn**	**08 03 40.4**	**0.0**
TAPA	**Tanaga Point A**	**2.04**	**82**			**Pn**	**08 03 41.2**	**0.0**
TAPA						**Sn**	**08 04 07.2**	**+1.6**
KIMD	**Kanaga Island**	**2.40**	**84**			**Pn**	**08 03 46.0**	**-0.1**
KIMD						**Sn**	**08 04 14.9**	**+0.7**
KIKV	**Kanaga Island**	**2.44**	**82**			**Pn**	**08 03 46.8**	**+0.1**
KIWB	**Kanaga Island**	**2.45**	**82**			**Pn**	**08 03 46.1**	**-0.7**
KIWB				IAML			08 04 31.9	
	comp=N,236nm,0.8s							
KIWB	**Kanaga Island**	**2.45**	**82**			**Sn**	**08 04 16.9**	**+1.3**
ADK	**Adak**	**2.75**	**82**			**Pn**	**08 03 50.4**	**-0.4**
ADK	**Adak**	**2.75**	**82**	IAML			08 04 26.8	
	comp=N,201nm,0.5s							
ADK				IAML			08 04 31.4	
	comp=N,251nm,0.2s							
ADAG	**Mount Adagdak**	**2.80**	**80**			**Pn**	**08 03 51.3**	**-0.3**
ETKA	**Kagalaska Isla**	**2.92**	**83**			**Pn**	**08 03 53.0**	**-0.1**
GSTD	**Great Sitkin T**	**3.09**	**79**			**Pn**	**08 03 55.5**	**-0.2**
GSMY	**Great Sitkin M**	**3.15**	**80**			**Pn**	**08 03 56.3**	**-0.1**
GSTR	**Great Sitkin T**	**3.15**	**79**	Pn		**Pn**	**08 03 56.5**	**+0.1**
SHEM	**Shemya Is, Ala**	**3.18**	**293**	Pn		Pn	08 03 57.2	+0.5
SHEM				IAML			08 04 44.4	
	comp=N,134nm,0.7s							
SHEM				IAML			08 04 45.1	
	comp=E,171nm,0.8s							
SMY	**Shemya**	**3.18**	**293**	Pn		Pn	08 03 57.1	+0.3
SMY				IAML			08 04 44.5	
	comp=N,293nm,0.7s							
KOWE	**Korovin West**	**4.29**	**77**			**Pn**

CAP2 S Sn 08 07 26.7 -1.3
GR1C Gorgona, Isla 2.84 191 P Pn 08 06 57.0 +2.9
UREC San Jos de Ur 2.84 47 P Pn 08 06 54.0 -0.1
UREC San Jos de Ur 2.84 47 *eP* Pn 08 06 54.2 +0.1
ACHO3 Achotines, Los 2.99 302 *eP* Pn 08 06 54.9 -1.3
PCRI3 Pocri, Los San 3.08 307 *eP* Pn 08 06 56.4 -1.1
TOTI Torti 3.18 348 *eP* Pn 08 06 59.0 +0.3
TOSI3 Tonosi 3.22 300 *eP* Pn 08 06 58.3 -1.0
PTBC PUERTO BERRIO, 3.23 77 P Pn 08 07 00.1 +0.5
PTBC S Sn 08 07 39.7 +1.8
LCBC Los crdobas, 3.28 22 P Pn 08 07 01.1 +1.0
AZU Azuero 3.29 307 ⇓*iP* Pn 08 06 59.0 -1.3
AZU *iS* Sn 08 07 37.6 -1.5
POPC Popayan, Colom 3.38 164 P Pn 08 07 02.8 +1.0
ROSC El Rosal 3.43 106 Pn Pn 08 07 04.3 +1.8
26nm,0.3s,baz=286,slow=8.9,SNR=44
ROSC Lg Lg 08 07 52.5
baz=0.7,slow=24
ROSC El Rosal 3.43 106 Pn 08 07 04.8 +2.2
ROSC El Rosal 3.43 106 P Pn 08 07 05.2 +2.6
PRAC Prado 3.43 127 P Pn 08 07 03.3 +1.0
PRAC S Sn 08 07 43.3 +0.4
PRAC Prado 3.43 127 P Pn 08 07 03.6 +1.3
CHIT3 Chitre 3.50 308 *eP* Pn 08 07 02.3 -0.9
SPBC San Pablo de B 3.54 92 P Pn 08 07 04.5 +0.7
CACAO El Cacao, Vera 3.56 296 *eP* Pn 08 06 59.0 -5.0
PESE3 Pese, Herrera 3.63 305 *eP* Pn 08 07 04.6 -0.4
CHPO Chepo, Panama 3.65 336 *eP* Pn 08 07 04.3 -1.0
ARRA3 Arraijan, Pana 3.73 327 *eP* Pn 08 07 04.7 -1.7
CHOR3 La Chorrera 3.73 325 *eP* Pn 08 07 05.1 -1.4
CVER Cruz Verde, Cu 3.76 110 P Pn 08 07 10.1 +2.9
PNME Penonome 3.78 315 *eP* Pn 08 07 06.3 -0.7
BBAC Balboa, Cauca 3.78 174 P Pn 08 07 10.6 +3.3
MARI3 Mariato, Verag 3.81 299 *eP* Pn 08 07 07.0 -0.4
CRIS3 El Cristo, Coc 3.84 309 *eP* Pn 08 07 07.4 -0.5
ZANG Zanguenga, Cho 3.84 325 *eP* Pn 08 07 06.5 -1.3
FRIJ El Hiral 3.98 329 *eP* Pn 08 07 08.0 -1.8
BCIP Isla Barro Col 3.99 327 Pn Pn 08 07 08.1 -1.9
BCIP Sn Sn 08 07 54.3 -2.3
BCIP Isla Barro Col 3.99 327 P Pn 08 07 08.5 -1.5
BCIP S Sn 08 07 54.6 -2.1
BCIP Isla Barro Col 3.99 327 P Pn 08 07 08.3 -1.7
BCIP S Sn 08 07 54.5 -2.1
STIA3 Santiago, Vera 4.03 305 *eP* Pn 08 07 10.4 0.0
BRJC Barrancabermej 4.03 73 P Pn 08 07 11.0 +0.5
CHIN Chingaza 4.05 107 P Pn 08 07 13.5 +2.3
CALO3 Calobre, Verag 4.05 308 *eP* Pn 08 07 10.8 0.0
GMAL Guarumal, Vera 4.08 299 *eP* Pn 08 07 11.2 +0.1
URMC La Uribe, Meta 4.12 128 P Pn 08 07 12.8 +1.0
RSUS3 Rio de Jesus, 4.12 302 *eP* Pn 08 07 11.8 0.0
GARC Garzon, Huila 4.18 149 P Pn 08 07 15.1 +2.3
MESA3 La Mesa, Verag 4.23 304 *eP* Pn 08 07 13.6 +0.4
CRUC La Cruz 4.26 171 P Pn 08 07 15.9 +1.8
VILC Villavicencio, 4.26 113 P Pn 08 07 17.9 +4.0
SAFE3 Santa Fe, Vera 4.36 308 *eP* Pn 08 07 15.0 0.0
BARC Barichara 4.49 80 P Pn 08 07 18.3 +1.3
RUSC La Rusia 4.52 89 P Pn 08 07 19.6 +1.9
RUSC S Sn 08 08 12.0 +1.7
RUSC La Rusia 4.52 89 P Pn 08 07 19.0 +1.3
GCUF Volcan Galeras 4.56 176 P Pn 08 07 20.1 +1.9
FLOC Florencia 4.64 155 P Pn 08 07 21.0 +2.1
FLOC S Sn 08 08 13.1 +0.6
FLOC Florencia 4.64 155 P Pn 08 07 21.2 +2.3
SJCC San Jacinto, C 4.73 31 P Pn 08 07 20.1 -0.1
SJCC San Jacinto, C 4.73 31 P Pn 08 07 19.0 -1.2
CMBC Cumbal 4.84 182 P Pn 08 07 27.3 +5.3
OCAC Ocana 4.91 60 P Pn 08 07 23.3 +0.5
PAMC Pamplona, Colo 5.13 72 P Pn 08 07 27.1 +1.1
2µm164nm,0.5s
MACC Macarena, Meta 5.24 134 P Pn 08 07 27.9 +0.7
976nm221nm,0.8s
CUSE Cuicocha Este 5.52 188 P Pn 08 07 34.9 +3.5
2µm107nm,0.5s
OTAV Otavalo 5.59 188 Pn 08 07 33.3 +0.9
OTAV Otavalo 5.59 188 P Pn 08 07 31.1 -1.4
OTAV S Sn 08 08 34.3 -3.4
OTAV Otavalo 5.59 188 *eP* Pn 08 07 28.0 -4.4
OTAV Otavalo 5.59 188 P Pn 08 07 32.9 +0.5
538nm43nm,0.8s
PAC1 Pacto, Paraso 5.63 192 P Pn 08 07 33.4 +0.8
2µm77nm,0.4s
CASC Dorado de Casc 5.64 177 P Pn 08 07 37.1 +4.3
43nm,0.9s
BRU2 Volcan 5.83 301 Pn 08 07 36.6 +1.1
BRU2 Volcan 5.83 301 P Pn 08 07 34.7 -0.8
BRU2 S Sn 08 08 39.9 -2.4
CDITO Canoas 5.89 298 P Pn 08 07 35.0 -1.1
CDITO S Sn 08 08 40.6 -2.7
PIRO Carate, Puerto 6.23 295 Pn 08 07 40.9 +0.2
PIRO Carate, Puerto 6.23 295 P Pn 08 07 41.7 +1.0
PIRO S Sn 08 08 48.9 -2.8
PTJ1 Puerto Jimnez 6.25 296 P Pn 08 07 40.9 -0.1
PTJ1 S Sn 08 08 49.2 -3.1
PTLC Puerto Leguiza 6.27 153 P Pn 08 07 46.9 +5.5
DRK0 Durika 6.54 302 P Pn 08 07 43.6 -1.6
DRK0 S Sn 08 08 56.8 -3.0
OCHAL Ojochal 6.80 299 P Pn 08 07 49.3 +0.6
OCHAL S Sn 08 09 03.1 -2.9
CRJC Cerrejon, Guaj 6.99 42 P Pn 08 07 49.8 -1.5
960nm82nm,0.5s
RAFA San Farael, Vo 7.38 304 Pn 08 07 57.9 +1.0
SDV Santo Domingo 7.58 66 Pn Pn 08 07 59.7 +0.2
9.0nm,0.3s,baz=249,slow=11,SNR=151
SDV Sn Sn 08 09 26.4 +1.0
1.7nm,0.3s,baz=124,slow=18,SNR=3.3
SDV LR LR 08 11 05.8
comp=Z,2µm,18.6s,baz=216,slow=40
129nm,0.8s
SDV Santo Domingo 7.58 66 Pn 08 08 00.5 +1.0
SDV Santo Domingo 7.58 66 *eP* Pn 08 07 59.5 0.0
SDV Santo Domingo 7.58 66 P Pn 08 08 00.2 +0.7
2µm224nm,0.7s
HDC Heredia 7.66 303 Pn 08 08 01.6 +1.1
HDC Heredia 7.66 303 *eP* Pn 08 08 02.8 +2.3
URI Uribia 8.08 43 P Pn 08 08 05.5 -0.7
URIC Uribia, Colomb 8.08 43 P Pn 08 08 04.2 -2.0
578nm51nm,1.4s
JTS Las Juntas de 8.51 302 Pn Pn 08 08 14.0 +1.9
4.0nm,0.3s,baz=233,slow=15,SNR=12
JTS LR LR 08 11 32.5
comp=Z,827nm,20.2s,baz=78,slow=38
12nm,0.4s
JTS Las Juntas de 8.51 302 Pn 08 08 13.7 +1.5
JTS Las Juntas de 8.51 302 P Pn 08 08 13.2 +1.1
BOAB BOACO BROADBAN 10.32 310 Pn Pn 08 08 37.8 +0.9
CRIN San Cristobal 11.55 307 Pn 08 08 55.0 +1.2
ATAH Atahualpa 12.88 183 Pn Pn 08 09 12.2 -0.1
0.7nm,0.3s,baz=170,slow=1.8,SNR=6.2
ATAH LR LR 08 15 40.9
comp=Z,410nm,18.3s,baz=11,slow=45
1.7nm,0.6s
CHIV Chivirico 14.13 5 Pn Pn 08 09 29.6 +0.6
SDDR Presa de Saban 14.48 25 Pn 08 09 34.8 +0.9
SC01 Santiago de Io 15.11 26 Pn Pn 08 09 45.1 +2.7
DR12 Loma Pena Alta 15.20 31 Pn 08 09 44.8 +1.2
CRPR Cabo Rojo, PR 15.89 39 Pn Pn 08 09 54.0 +1.5
CRPR IAmb IAmb 08 10 07.1
comp=Z,43nm,1.0s
MLPR Magueyes Islan 15.90 40 Pn 08 09 54.7 +2.0
MLPR IAmb IAmb 08 09 58.3
comp=Z,32nm,0.8s
TEFE Tefe 15.94 125 *eP* Pn 08 09 50.0 -3.2
PRSN Puerto Rico Se 16.03 39 P P 08 09 58.6 +0.9
PRSN IAmb IAmb 08 10 00.5
comp=Z,48nm,0.9s
PETF Flores 16.29 314 P P 08 10 01.9 +1.2
ECPR Experimental S 16.60 41 P P 08 10 05.3 +1.2
ECPR IAmb IAmb 08 10 16.0
comp=Z,39nm,1.0s
GCPR Guaynabo City 16.77 41 P P 08 10 07.1 +1.1
BOAV Boa Vista 17.39 101 *eP* Pn 08 10 08.2 -3.5
NNA Nana 17.70 177 P Pn 08 10 15.7 +0.3
comp=Z,1.1nm,0.3s,baz=351,slow=12,SNR=3.8
comp=Z,2.4nm,0.4s
MACA Manacapuru-AM 19.12 117 *eP* P 08 10 30.2 -1.7
LPAZ La Paz 23.88 157 P P 08 11 21.9 -1.3
comp=Z,6.5nm,0.6s,baz=317,slow=6.4,SNR=28
comp=Z,6.5nm,0.6s
LPAZ La Paz 23.88 157 P 08 11 23.2 0.0
LPAZ La Paz 23.88 157 *eP* P 08 11 19.9 -3.3
ITTB Itaituba 24.09 114 *eP* P 08 11 21.8 -2.7
MDP Montagnes des 24.88 90 LR LR 08 22 31.0
comp=Z,227nm,19.8s,baz=282,slow=40
PB16 IPOC Station P 25.29 162 P 08 11 36.7 +0.7
PB16 IAmb IAmb 08 11 55.6
comp=Z,7.4nm,0.8s
VILB Vilhena 25.44 137 P 08 11 37.0 +0.2
VILB Vilhena 25.44 137 *eP* P 08 11 34.6 -2.2
PB11 IPOC Station P 26.59 163 P P 08 11 48.6 +1.3
GO01 Chusmiza 26.64 162 P P 08 11 50.0 +1.9
GO01 IAmb IAmb 08 12 00.3
comp=Z,7.3nm,0.8s
PDRB Porto dos Gac 27.05 130 *eP* P 08 11 49.3 -2.1
PTLB Pontes e Lacer 27.96 139 *eP* P 08 11 57.5 -2.0
PB02 IPOC Station P 28.00 165 P P 08 12 01.5 +1.6
146A Union 28.75 340 P P 08 12 08.3 +2.0
Z47A Carrollton 28.94 342 P P 08 12 09.5 +1.4
Z47A IAmb IAmb 08 12 28.5
comp=Z,20nm,1.1s
Y49A Blount Mountai 29.08 345 P P 08 12 11.4 +2.1
Y49A IAmb IAmb 08 12 11.9
comp=Z,14nm,0.9s
V53A Saluda 30.10 352 P P 08 12 20.3 +1.9
V53A IAmb IAmb 08 12 38.6
comp=Z,14nm,1.4s
TKL Tuckaleechee C 30.24 350 LR LR 08 24 38.0
comp=Z,51nm,19.1s,baz=105,slow=37
U54A Nelsons Funny 30.81 353 P P 08 12 26.3 +1.6
U54A IAmb IAmb 08 12 28.4
comp=Z,12nm,0.8s
V48A Smith Brothers 30.97 345 P 08 12 28.0 +2.0
V48A IAmb IAmb 08 12 28.8
comp=Z,12nm,0.8s
237A Washetta, Mont 31.12 329 P P 08 12 28.9 +1.6
237A IAmb IAmb 08 12 30.4
comp=Z,15nm,1.1s
SNDB Serra Nova Dou 31.59 124 *eP* P 08 12 29.6 -2.2
GO02 Mina Guanaco 31.76 166 P P 08 12 35.3 +1.9
GO02 IAmb IAmb 08 12 50.0
comp=Z,5.3nm,0.8s
BRDY Brady 32.31 324 P 08 12 38.8 +0.8
USIN University of 33.29 345 P P 08 12 47.2 +0.9
SMTB Santa Maria do 33.30 116 *eP* P 08 12 45.2 -1.6
T42A Van Buren 33.43 340 P P 08 12 47.9 +0.3
T42A IAmb IAmb 08 12 58.0
comp=Z,5.6nm,0.8s
SIUC Southern Illin 33.47 343 P P 08 12 49.0 +1.0
AC02 Maricunga 33.48 166 P P 08 12 48.9 +0.2
TXAR Lajitas Array 33.95 317 P P 08 12 53.2 +0.8
comp=Z,0.7nm,0.8s,baz=142,slow=8.9,SNR=8.7
TXAR PcP PcP 08 15 32.2 +1.5
comp=Z,1.0nm,0.7s,baz=138,slow=6.4,SNR=9.7
TXAR LR LR 08 28 31.7
comp=Z,27nm,20.7s,baz=84,slow=39
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 33.95 317 P P 08 12 53.4 +1.1
AMBA Amambai (Brazi 36.13 143 *eP* P 08 13 08.9 -2.3
BDFB Brasilia 36.25 126 P P 08 13 10.2 -2.2
comp=Z,3.7nm,0.7s,baz=302,slow=7.8,SNR=6.5
BDFB LR LR 08 28 23.3
comp=Z,154nm,20.9s,baz=291,slow=37
comp=Z,3.7nm,0.7s
LPIG La Paz 36.28 304 LR LR 08 27 07.6
comp=Z,55nm,19.5s,baz=119,slow=35
MSTX Muleshoe 36.45 324 P 08 13 14.7 +0.8
MSTX IAmb IAmb 08 13 22.7
comp=Z,16nm,1.1s
SDBA SAO DESIDERIO 37.23 119 *eP* P 08 13 18.1 -2.5
CPUP Villa Florida 37.52 149 P P 08 13 20.2 -2.7
comp=Z,2.3nm,0.6s,baz=329,slow=8.8,SNR=9.8
comp=Z,2.3nm,0.6s
NBPS Pedro II - PI 37.52 105 *eP* P 08 13 21.5 -1.8
CFA Coronel Fontan 38.27 167 P P 08 13 27.4 -1.8
comp=Z,1.1nm,0.7s,baz=2.0,slow=7.4,SNR=5.9
comp=Z,1.1nm,0.7s
SADO Sadowa 38.83 358 LR LR 08 30 26.1
comp=Z,39nm,18.9s,baz=181,slow=38
LDASE Londrina, Braz 38.89 139 *eP* P 08 13 31.6 -3.0
ANMO Albuquerque 39.35 321 LR LR 08 33 37.7
comp=Z,36nm,18.1s,baz=134,slow=42
MNTQ Montreal, Queb 39.69 4 P P 08 13 42.7 +1.8
K30B Basset 41.56 335 P 08 13 57.3 +0.8
X16A Lo Mia Camp, P 42.27 317 P 08 14 05.2 +2.6
NBIT Itapeh - BA 43.10 119 *eP* P 08 14 07.6 -1.7
CMC01 Camacan, BA 43.21 120 *eP* P 08 14 08.7 -1.6
RCBR Riachuelo 43.23 105 LR LR 08 32 36.8
comp=Z,44nm,18.8s,baz=272,slow=37
O20A Pointe River Ci 43.86 326 P 08 14 17.2 +1.8
RPN Rapa Nui 44.86 222 LR LR 08 28 35.1
comp=Z,89nm,18.6s,baz=34,slow=30
PFO Pinyon Flats O 45.40 313 LR LR 08 37 36.8
comp=Z,54nm,18.8s,baz=48,slow=42
PDAR Pinedale Array 46.39 327 P P 08 14 37.0 +1.6
comp=Z,2.4nm,1.1s,baz=131,slow=6.8,SNR=9.5
PDAR LR LR 08 38 46.8
comp=Z,19nm,18.5s,baz=142,slow=42
comp=Z,2.4nm,1.1s
PLCA Paso Flores 46.77 173 P P 08 14 39.0 +0.8
comp=Z,6.7nm,0.9s,baz=340,slow=8.4,SNR=18
comp=Z,6.7nm,0.9s
PLCA Paso Flores 46.77 173 *eP* P 08 14 35.8 -2.4
ULM Lac du Bonnet 46.87 344 P P 08 14 39.1 +0.3
comp=Z,3.2nm,0.8s,baz=146,slow=4.9,SNR=6.5
comp=Z,3.2nm,0.8s
SPUT South Promonto 47.05 324 P 08 14 40.9 +0.3
SPUT IAmb IAmb 08 14 46.4
comp=Z,7.4nm,1.0s
SNOW Snow King Moun 47.50 327 P P 08 14 45.1 +0.9
SNOW IAmb IAmb 08 15 21.2
comp=Z,5.3nm,0.8s
LL02 Futaleuf 49.05 174 P P 08 14 57.4 +1.6
LL02 IAmb IAmb 08 14 58.3
comp=Z,8.4nm,0.8s
NVAR Mina Array Bea 49.09 317 P P 08 14 58.5 +2.0
comp=Z,1.8nm,0.9s,baz=128,slow=6.3,SNR=10.0
comp=Z,1.8nm,0.9s
SCHQ Schefferville 49.65 8 P P 08 15 00.1 -0.1
comp=Z,6.0nm,0.8s,baz=212,slow=8.1,SNR=10
comp=Z,6.0nm,0.8s
WVOR Wild Horse Val 51.44 322 P P 08 15 15.3 +1.2
WVOR IAmb IAmb 08 15 24.2
comp=Z,14nm,1.3s
NEW Newport 54.00 328 LR LR 08 40 53.4
comp=Z,44nm,19.1s,baz=56,slow=38
YKA Yellowknife Ar 62.74 342 P P 08 16 33.6 0.0
comp=Z,2.2nm,1.0s,baz=134,slow=6.1,SNR=23
comp=Z,2.2nm,1.0s
SUMG Summit 70.84 12 P P 08 17 26.1 +0.5
SUMG Summit 70.84 12 *i* P P 08 17 25.0 -0.6
SUMG IAmb IAmb 08 17 27.3
comp=Z,18nm,0.9s
BORG Borgarnes 70.88 22 LR LR 08 45 16.4
comp=Z,46nm,20.6s,baz=217,slow=33
DBIC Dimbokro 72.28 85 P P 08 17 34.2 -0.7
comp=Z,12nm,0.8s,baz=307,slow=6.2,SNR=12
comp=Z,12nm,0.8s
DBIC Dimbokro 72.28 85 P P 08 17 34.8 -0.1
NEEM North Greenlan 72.98 6 *i* P P 08 17 38.4 +0.2
NEEM IAmb IAmb 08 17 40.0
comp=Z,17nm,0.6s
ESDC Sonseca Array 73.75 50 P P 08 17 43.4 +0.2
comp=Z,2.4nm,0.8s,baz=262,slow=5.5,SNR=9.9
comp=Z,2.4nm,0.8s
PPT Papeete 74.70 250 LR LR 08 42 26.5
comp=Z,51nm,20.7s,baz=36,slow=29
PRP Porcupine Dome 75.68 337 P 08 17 55.2 +1.2
HDA Harding Lake 75.93 335 P P 08 17 55.8 +0.5
HDA IAmb IAmb 08 18 06.2
comp=Z,6.9nm,0.8s
ILAR Eielson Array 76.01 336 P P 08 17 56.5 +0.8
comp=Z,1.6nm,0.7s,baz=117,slow=3.9,SNR=37
comp=Z,1.6nm,0.7s
EKA Eskdalemuir Ar 76.42 34 P P 08 17 58.5 +0.3
comp=Z,6.1nm,1.0s,baz=270,slow=4.1,SNR=3.7
comp=Z,6.1nm,1.0s
DAG Danmarks Havn 77.53 12 *i* P P 08 18 03.8 -0.3
DAG IAmb IAmb 08 18 04.8
comp=Z,4.1nm,0.9s
TORD Torodi Ar. Bea 78.33 78 P P 08 18 09.6 -0.1
comp=Z,3.3nm,0.6s,baz=268,slow=7.0,SNR=20
comp=Z,3.3nm,0.6s
BCLA Clavier 81.05 40 *dP* P 08 18 24.8 +1.0
BCLA *dx* x 08 18 32.3
TUE Stuetta 83.75 44 P P 08 18 38.8 +0.5
TUE IAmb IAmb 08 18 43.7
comp=Z,6.4nm,1.0s
KEST Kesra 84.19 55 P P 08 18 41.2 +0.6
comp=Z,4.8nm,0.8s,baz=221,slow=9.3,SNR=3.1
comp=Z,4.8nm,0.8s
NB2 NORSAR Subarra 84.40 29 P P 08 18 42.1 +1.1
comp=Z,8.8nm,1.1s,baz=273,slow=5.1
NOA NORSAR Array B 84.40 29 P P 08 18 42.0 +0.9
comp=Z,1.4nm,0.8s,baz=274,slow=6.3,SNR=4.0
comp=Z,1.4nm,0.8s
SPITS Spitsbergen Ar 85.18 12 P P 08 18 45.0 +0.4
comp=Z,2.4nm,0.7s,baz=204,slow=3.2,SNR=3.9
SPITS LR LR 08 58 55.6
comp=Z,14nm,18.1s,baz=196,slow=37
comp=Z,2.4nm,0.7s
CLL Collm 85.91 39 *eP* P 08 18 50.0 +1.3
GERES GERESS Array B 86.55 41 P P 08 18 52.8 +0.7
comp=Z,2.3nm,0.9s,baz=262,slow=4.0,SNR=8.5
comp=Z,2.3nm,0.9s
ARCES ARCESS Array B 89.16 20 P P 08 19 04.0 -0.1
comp=Z,6.0nm,1.0s,baz=306,slow=4.2,SNR=7.7
comp=Z,6.0nm,1.0s
FINES FINESS Array B 91.44 28 P P 08 19 14.7 -0.1
comp=Z,2.4nm,1.0s,baz=232,slow=6.7,SNR=2.0
comp=Z,2.4nm,1.0s
TSUM Tsumeb 96.79 109 LR LR 09 01 44.5
comp=Z,50nm,18.6s,baz=324,slow=34
MKAR Makanchi Array 124.68 17 PKP **PKPdf** 08 25 08.4 -0.3
comp=Z,0.4nm,0.7s,baz=4.3,slow=2.1,SNR=3.0
SONM Songino Array 126.47 357 PKP **PKPdf** 08 25 12.1 -0.1
comp=Z,0.4nm,0.6s,baz=321,slow=1.1,SNR=4.0
HHC Hu-ho-hao-te 132.81 350 *eP* **PKPdf** 08 25 21.5 -2.9
NJ2 Nanjing 139.21 338 *eP* **PKPdf** 08 25 37.5 +1.1
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
ASAR Alice Springs 144.85 236 PKP **PKPab** 08 25 46.2 +0.4
comp=Z,3.1nm,0.8s,baz=116,slow=3.6,SNR=22
WRA Warramunga Arr 145.91 243 PKPbc **PKPdf** 08 25 48.8 +0.2
comp=Z,4.1nm,1.0s,baz=108,slow=2.9,SNR=11
PZH PanZhiHua 147.88 1 PKPbc **PKPbc** 08 25 54.0 -0.8

*SOME **29** 08:07:56.0,39˚.93N×71˚.50E, h0km*
*NNC **29** 08:08:07.0±5.9, 40˚.03N×72˚.23E, h0km, mb2.9, mpv2.6,*
Error ellipse: s-maj=43.9km s-min=24.6km az=12.0
KRNET 29 08:07:55.4±0.1,39˚.59N×72˚.12E, h12km, mb2.9,37C-18D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.27**	**245**	⇑*iP*		Pg	08 08 00.6	-0.5
DRK				⇑*iS*		Sg	08 08 04.6	-0.4
OHH	**Osh**	**1.06**	**29**	⇑*iP*		Pb	08 08 15.5	-0.1
OHH				⇑*iS*		Sn	08 08 30.4	-0.5
BTK	**Batken**	**1.10**	**295**	⇑*iP*		Pg	08 08 16.5	-0.1
BTK				⇑*iS*		Sn	08 08 32.0	+0.1
SFK	**Sufi-Kurgan**	**1.15**	**68**	⇑*iP*		Pb	08 08 17.3	0.0
SFK				⇑*iS*		Sn	08 08 33.4	+0.2
GAR	**Garm**	**1.52**	**248**	⇑*iP*		Pb	08 08 23.9	+0.4
GAR				⇑*iS*		Sg	08 08 44.8	+0.6
SALK	**Salom-Alik**	**1.83**	**45**	⇓*iP*		Pb	08 08 29.6	+0.7
SALK				⇓*iS*		Sg	08 08 54.6	+0.3
ARSB	**Arslanbob**	**1.85**	**21**	⇓*iP*		Pb	08 08 29.8	+0.6
ARSB				⇓*iS*		Sg	08 08 55.1	+0.2
TRKS	**Terek-Say**	**2.07**	**339**	⇑*iP*		Pb	08 08 32.5	-0.5
TRKS				⇑*iS*		Sb	08 08 59.6	+0.8
ARK	**Arkit**	**2.20**	**357**	⇓*iP*		Pb	08 08 35.3	+0.1
ARK				⇓*iS*		Sg	08 09 04.5	-1.7
CHGR	**Chuyangaron**	**2.48**	**249**	⇑*iP*		Pb	08 08 39.1	-0.9
CHGR				⇑*iS*		Sb	08 09 11.0	+0.5
ARLS	**Aral**	**2.82**	**36**	⇑*iP*		Pb	08 08 43.7	-2.0
ARLS				⇑*iS*		Sb	08 09 19.1	-1.1
MNAS	**Manas**	**2.91**	**6**	⇓*iP*		Pb	08 08 45.0	-2.2
MNAS				⇓*iS*		Sb	08 09 21.4	-1.3
JNKS	**Jany-Kuch**	**3.05**	**60**	⇑*iP*		Pb	08 08 47.4	-2.4
JNKS				⇑*iS*		Sb	08 09 25.4	-1.7
UCH	**Uchtor**	**3.20**	**34**	⇑*iP*		Pb	08 08 49.3	-3.0
UCH				⇑*iS*		Sb	08 09 28.6	-2.8
MRKS	**Merke** 2.2nm,0.4s	**3.26**	**15**	Pg		Pb	08 08 53.7	+0.5
MRKS	11nm,0.6s			Lg		Lg	08 09 35.6	
MRKS	**Merke** 2.2nm,0.4s	**3.26**	**15**	*eP*		Pb	08 08 53.7	+0.5
MRKS	11nm,0.6s			*eS*		Sb	08 09 35.0	+2.2
EKS2	**Erkin-Say**	**3.31**	**22**	⇓*iP*		Pb	08 08 50.7	-3.4
EKS2				⇓*iS*		Sb	08 09 31.1	-3.3
NRN	**Naryn**	**3.48**	**57**	⇓*iP*		Pn	08 08 52.8	+3.1
NRN				⇓*iS*		Sn	08 09 34.6	+3.6
AAK	**Ala-Archa** 0.1nm,0.3s	**3.53**	**30**	⇓Pn		Pb	08 08 58.6	+0.8
AAK	0.6nm,0.5s			⇑Pg		Pg	08 09 06.7	+3.7
AAK	1.8nm,0.5s			⇑Lg		Lg	08 09 43.5	
AAK	**Ala-Archa**	**3.53**	**30**	⇑*iP*		Pn	08 08 53.7	+3.5
AAK				⇑*iS*		Sb	08 09 36.4	-4.4
KK31	**Karatay Array** 0.2nm,0.1s,baz=148,slow=12,SNR=8.6	**3.71**	**342**	⇓Pn		Pb	08 08 58.7	-2.1
KK31	1.8nm,0.4s,baz=161,slow=15,SNR=16			⇑Pg		Pg	08 09 10.1	+3.7
KK31	0.3nm,0.2s			⇓Sn		Sb	08 09 41.2	-4.5
KK31	0.4nm,0.2s			⇓Lg		Lg	08 09 57.5	
KBK	**Karagaybulak**	**3.73**	**34**	⇑*iP*		Pn	08 08 56.6	+3.6
KBK				⇑*iS*		Sn	08 09 41.3	+4.4
BRLS	**Borolday** 0.7nm,0.3s	**3.84**	**334**	Pg		Pn	08 08 55.2	+1.0
BRLS	1.7nm,0.3s			Lg		Lg	08 09 38.0	
BRLS	**Borolday** 0.7nm,0.3s	**3.84**	**334**	*eP*		Pn	08 08 55.2	+1.0
BRLS	1.7nm,0.3s			*eS*		Sn	08 09 38.0	-1.3
CHMS	**Chumysh**	**3.94**	**29**	⇑*iP*		Pn	08 08 59.3	+3.6
CHMS				⇑*iS*		Sn	08 09 46.0	+4.2
USP	**Ospenovka**	**4.08**	**25**	⇑*iP*		Pn	08 09 01.3	+3.6
USP				⇑*iS*		Sn	08 09 49.5	+4.1
BOOM	**Boomskoye usch**	**4.09**	**44**	⇑*iP*		Pn	08 09 01.5	+3.6
BOOM				⇑*iS*		Sn	08 09 49.8	+4.1
TKM2	**Tokmak 2**	**4.23**	**37**	⇑*iP*		Pn	08 09 03.6	+3.7
TKM2				⇑*iS*		Sn	08 09 53.4	+4.1
KST	**Kastek** 0.9nm,0.3s	**4.50**	**39**	Pg		Pg	08 09 21.4	-0.1
KST	4.9nm,0.6s			Lg		Lg	08 10 23.1	
KST	**Kastek** 0.9nm,0.3s	**4.50**	**39**	*eP*		Pg	08 09 21.4	-0.1
KST	4.9nm,0.6s			*eS*		Sg	08 10 23.1	+3.2
DGS	**Degeres** 1.1nm,0.6s	**4.56**	**36**	Pg		Pg	08 09 21.6	-1.2
DGS	2.7nm,0.6s			Lg		Lg	08 10 23.0	
DGS	**Degeres** 1.1nm,0.6s	**4.56**	**36**	*eP*		Pg	08 09 21.6	-1.2
DGS	2.7nm,0.6s			*eS*		Sg	08 10 23.0	+1.1
KDJ	**Kajisay**	**4.60**	**55**	⇓*iP*		Pn	08 09 08.7	+3.8
KDJ				⇓*iS*		Sn	08 10 02.2	+3.9
TARG	**Taragay, Kyrgy**	**4.82**	**62**	⇑*iP*		Pn	08 09 11.7	+3.5
TARG				⇑*iS*		Sn	08 10 07.6	+3.4

*IDC **29** 08:14:37.0±0.8, 31˚.97N×141˚.79E, h0km, mb3.7/9,*
mbtmp3.7/13, ML3.5/4, MS3.2/2, Error ellipse:
s-maj=24.5km s-min=14.8km az=70.0
*JMA **29** 08:14:41.9±0.7, 32˚N×142˚×14˚2E×˚, h12km, MV3.4/13, E*
OFF HACHIJOJIMA ISLAND
ISC 29 08:14:40.8±0.7, 32˚.01N±0˚.06×141˚.71E±0˚.09, h26km, n23, σ1§11/24, mb3.9/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.71**	**286**	*eP*		**Pn**	**08 15 10.2**	**+1.3**
JHCJ	**Hachijojimakas**	**1.93**	**304**	*eP*		**Pn**	**08 15 12.2**	**+0.2**
JHJ2	**Mitsune**	**1.94**	**305**	*eP*		**Pn**	**08 15 12.5**	**+0.4**
JHJ	**Hachijo jima 2** 35nm,0.3s,baz=85,slow=22,SNR=9.0	**1.97**	**305**	Pn		**Pn**	**08 15 12.6**	**+0.1**
JHJ	36nm,0.3s,baz=82,slow=23,SNR=5.6			Sn		**Sb**	**08 15 38.5**	**-1.6**
	61nm,0.3s							
BSO1	**Boso 1**	**2.71**	**347**	*eP*		**Pn**	**08 15 22.3**	**+0.1**
JOD2	**Odawara 2**	**3.91**	**327**	*eP*		**Pn**	**08 15 40.7**	**+1.4**
JRY	**Ryogami san**	**4.63**	**331**	*eP*		**Pn**	**08 15 49.6**	**+0.5**
JAG	**Ashikaga**	**4.79**	**338**	*eP*		**Pn**	**08 15 52.0**	**+0.8**
JCJ	**Chichijima**	**4.91**	**175**	Pn		**Pn**	**08 15 51.8**	**-1.3**

10nm,0.3s,baz=275,slow=21,SNR=7.1
JCJ Sn **Sn** **08 16 46.9 -2.2**
13nm,0.3s,baz=298,slow=21,SNR=2.1
23nm,0.3s
MJAR Matsushiro Arr 5.37 328 Pn **Pn** **08 15 59.4 +0.1**
0.2nm,0.3s,baz=150,slow=11,SNR=11
1.2nm,0.3s
JOTO OTAMA OYAMA 5.65 349 *eP* **Pn** **08 16 03.4 +0.2**
JOTO *eS* **Sn** **08 17 04.4 -2.8**
KSRS Korea Array 12.57 299 LR LR 08 22 46.9
comp=Z,36nm,18.1s,baz=110,slow=39
KLR Kul'dur 18.76 339 P **Pn** **08 18 57.6 -0.8**
0.1nm,0.3s,baz=163,slow=9.2,SNR=4.4
1.1nm,0.6s
SONM Songino Array 31.03 311 P **P** **08 20 57.7 +1.2**
0.4nm,0.6s,baz=113,slow=8.7,SNR=4.2
0.4nm,0.6s
MKAR Makanchi Array 47.14 306 P **P** **08 23 11.8 +1.0**
1.2nm,0.6s,baz=88,slow=9.8,SNR=17
1.2nm,0.6s
KURBB Kurchatov Arra 49.40 312 P **P** **08 23 28.7 +0.5**
1.8nm,0.8s,baz=89,slow=7.1,SNR=4.3
1.8nm,0.8s
WRA Warramunga Arr 52.14 189 P **P** **08 23 48.6 -0.4**
0.9nm,0.4s,baz=4.2,slow=7.6,SNR=30
0.9nm,0.4s
ILAR Eielson Array 53.65 30 P **P** **08 23 59.9 +0.1**
0.5nm,0.7s,baz=264,slow=6.5,SNR=7.8
0.5nm,0.7s
BVAR Borovoye Array 54.22 315 P **P** **08 24 04.6 +0.5**
0.4nm,0.4s,baz=54,slow=7.3,SNR=2.8
0.4nm,0.4s
ASAR Alice Springs 55.86 189 P **P** **08 24 16.5 +0.2**
0.5nm,0.5s,baz=357,slow=5.7,SNR=12
0.5nm,0.5s
YKA Yellowknife Ar 68.05 29 P **P** **08 25 37.6 -0.1**
0.2nm,0.8s,baz=301,slow=6.8,SNR=3.7
0.2nm,0.8s
EIL Elat 87.33 303 LR LR 09 11 12.3
comp=Z,33nm,18.6s,baz=236,slow=39
TXAR Lajitas Array 92.98 53 P **P** **08 27 53.1 +0.8**
0.4nm,0.7s,baz=304,slow=2.6,SNR=5.5
0.4nm,0.7s

*NNC **29** 08:34:27.5±0.3,42.91N×76.99E,h0km,mb2.4,mpv2.8,*
Error ellipse: s-maj=2.8km s-min=1.4km az=178.0
*KRNET **29** 08:34:27.6±0.1,42.91N×76.99E,h13km,mb2.7*
*SOME **29** 08:34:28.1,42.95N×77.00E,h15km*
ISC 29 08:34:27.4±0.9, 42.91N±0.02×76.99E±0.02, h10km±7km,
n32,σ0s34/60, 11C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.13**	**346**	P		**Pg**	**08 34 30.8**	**+0.1**
	27nm,0.1s							
TNSS				S		**Sg**	**08 34 32.7**	**-0.4**
	117nm,0.1s							
TNSS	**Tian-Shan**	**0.13**	**346**	*eP*		**Pg**	**08 34 30.8**	**+0.1**
	27nm,0.1s							
TNSS				*eS*		**Sg**	**08 34 32.7**	**-0.4**
	117nm,0.1s							
MDOK	**Medeo**	**0.26**	**10**	Pg		**Pg**	**08 34 32.8**	**+0.1**
	56nm,0.1s							
MDOK				Lg		Lg	08 34 36.1	
	122nm,0.4s							
KOTS	**Kotyrbulak**	**0.34**	**16**	P		**Pg**	**08 34 34.4**	**+0.3**
	21nm,0.1s							
KOTS				S		**Sg**	**08 34 38.9**	**+0.2**
	64nm,0.2s							
KOTS	**Kotyrbulak**	**0.34**	**16**	*eP*		**Pg**	**08 34 34.4**	**+0.3**
KOTS				*eS*		**Sg**	**08 34 38.8**	**+0.2**
KOTS	**Kotyrbulak**	**0.34**	**16**	*eP*		**Pg**	**08 34 34.4**	**+0.3**
	21nm,0.1s							
KOTS				*eS*		**Sg**	**08 34 38.9**	**+0.2**
	64nm,0.2s							
MTBS	**Maitube**	**0.47**	**298**	P		**Pg**	**08 34 37.1**	**+0.6**
	8.7nm,0.1s							
MTBS				S		**Sg**	**08 34 43.5**	**+0.8**
	21nm,0.2s							
MTBS	**Maitube**	**0.47**	**298**	*eP*		**Pg**	**08 34 37.1**	**+0.6**
	8.7nm,0.1s							
MTBS				*eS*		**Sg**	**08 34 43.5**	**+0.8**
	21nm,0.2s							
ANVS	**Anan'yevo**	**0.52**	**104**	⇑*iP*		**Pg**	**08 34 38.0**	**+0.5**
ANVS				⇑*iS*		**Sg**	**08 34 44.8**	**+0.5**
KST	**Kastek**	**0.76**	**280**	P		**Pb**	**08 34 42.8**	**-0.1**
	1.3nm,0.2s							
KST				S		**Sb**	**08 34 53.2**	**-0.2**
	6.2nm,0.2s							
KST	**Kastek**	**0.76**	**280**	*eP*		**Pb**	**08 34 42.8**	**-0.1**
	1.3nm,0.2s							
KST				*eS*		**Sb**	**08 34 53.2**	**-0.2**
	6.2nm,0.2s							
ULHL	**Ulahol**	**0.86**	**220**	⇓*iP*		**Pg**	**08 34 44.1**	**0.0**
ULHL				⇓*iS*		**Sg**	**08 34 55.3**	**-0.1**
BOOM	**Boomskoye usch**	**0.88**	**242**	⇓*iP*		**Pg**	**08 34 44.5**	**+0.1**
BOOM				⇓*iS*		**Sb**	**08 34 56.6**	**-0.2**
DGS	**Degeres**	**0.95**	**291**	P		**Pg**	**08 34 45.7**	**0.0**
	0.7nm,0.1s							
DGS				S		**Sg**	**08 34 58.3**	**+0.2**
	5.1nm,0.2s							
DGS	**Degeres**	**0.95**	**291**	*eP*		**Pg**	**08 34 45.7**	**0.0**
	0.7nm,0.1s							
DGS				*eS*		**Sg**	**08 34 58.3**	**+0.2**
	5.1nm,0.2s							
TKM2	**Tokmak 2**	**1.02**	**271**	⇓*iP*		**Pg**	**08 34 47.6**	**+0.5**
TKM2				⇓*iS*		**Sn**	**08 35 01.9**	**-0.7**
SATY	**Saty**	**1.05**	**81**	P		**Pg**	**08 34 47.8**	**+0.2**
	0.8nm,0.1s							
SATY				S		**Sg**	**08 35 01.7**	**+0.4**
	7.7nm,0.1s							
KRBS	**Karabastau**	**1.24**	**310**	P		**Pn**	**08 34 50.9**	**-0.1**
	1.4nm,0.2s							
KRBS				S		**Sb**	**08 35 07.0**	**0.0**
	4.2nm,0.2s							
KRBS	**Karabastau**	**1.24**	**310**	*eP*		**Pn**	**08 34 50.9**	**-0.1**
	1.4nm,0.2s							
KRBS				*eS*		**Sb**	**08 35 07.0**	**0.0**
	4.2nm,0.2s							
TARG	**Taragay, Kyrgy**	**1.33**	**153**	⇑*iP*		**Pb**	**08 34 52.4**	**-0.3**
TARG				⇑*iS*		**Sn**	**08 35 09.9**	**-0.5**
KPKS	**Kokpek**	**1.36**	**65**	P		**Pb**	**08 34 53.3**	**+0.2**
	0.5nm,0.2s							
KPKS				S		**Sg**	**08 35 11.3**	**+0.2**
	15nm,0.3s							
KPKS	**Kokpek**	**1.36**	**65**	*eP*		**Pb**	**08 34 53.3**	**+0.2**
	0.5nm,0.2s							
KPKS				*eS*		**Sg**	**08 35 11.3**	**+0.2**
	15nm,0.3s							
ARXS	**Arharly**	**1.44**	**25**	P		**Pb**	**08 34 54.2**	**-0.2**
	2.2nm,0.1s							
ARXS				S		**Sb**	**08 35 12.8**	**0.0**
	16nm,0.3s							
ARXS	**Arharly**	**1.44**	**25**	*eP*		**Pb**	**08 34 54.2**	**-0.2**
	2.2nm,0.1s							
ARXS				*eS*		**Sb**	**08 35 12.8**	**0.0**
	16nm,0.3s							
UZB	**Uzynbulak**	**1.51**	**80**	P		**Pb**	**08 34 55.6**	**-0.1**
	4.8nm,0.3s							
UZB				S		**Sb**	**08 35 15.1**	**+0.1**
	3.1nm,0.1s							
UZB	**Uzynbulak**	**1.51**	**80**	*eP*		**Pb**	**08 34 55.5**	**-0.1**
	4.8nm,0.3s							
UZB				*eS*		**Sb**	**08 35 15.1**	**+0.1**
	3.1nm,0.1s							
BLB	**Baldybastay**	**1.61**	**42**	P		**Pb**	**08 34 57.1**	**-0.2**
	4.4nm,0.1s							
BLB				S		**Sb**	**08 35 17.8**	**+0.1**
	4.7nm,0.1s							
NRN	**Naryn**	**1.65**	**207**	⇑*iP*		**Pb**	**08 34 58.5**	**+0.4**
NRN				⇑*iS*		**Sg**	**08 35 20.5**	**0.0**
AAK	**Ala-Archa**	**1.86**	**262**	⇓Pg		**Pb**	**08 35 01.6**	**0.0**
	0.3nm,0.5s							
AAK				⇑Lg		Lg	08 35 27.2	
	0.5nm,0.5s							
PDGK	**Podgornoye**	**1.88**	**76**	⇑Pg		**Pb**	**08 35 01.2**	**-0.8**
	1.1nm,0.5s							
PDGK				⇑Lg		Lg	08 35 26.7	
	1.3nm,0.5s							
UCH	**Uchtor**	**1.95**	**250**	⇑*iP*		**Pb**	**08 35 04.0**	**+0.6**
UCH				⇑*iS*		**Sg**	**08 35 30.2**	**0.0**
KNOS	**Konyrlen**	**2.15**	**47**	Pg		**Pb**	**08 35 06.9**	**+0.3**
	0.7nm,0.3s							
KNOS				Lg		Lg	08 35 34.4	
	2.0nm,0.3s							

*IDC **29** 08:54:37.1±0.7,11.82N×139.91E,h0km,mb4.1/13,*
mbtmp4.1/13,MS2.9/5,Error ellipse: s-maj=29.9km
s-min=15.3km az=82.0
*NEIC **29** 08:54:39.4±1.2,11.8N±0.1×139.83E±0.10,h10km±1km,*
mb4.5/33,Error ellipse: s-maj=18.4km s-min=16.2km
az=173.0
ISC 29 08:54:38.9±0.5, 11.76N±0.08×139.81E±0.09, h10km,**n56,**
σ0s64/50, mb4.4/30, MS2.9/3, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**5.26**	**69**	Pn		**Pn**	**08 55 57.1**	**-0.5**
JCJ	**Chichijima**	**15.41**	**8**	LR		LR	09 02 37.8	
	comp=Z,39nm,20.3s,baz=161,slow=31							
JOW	**Kunigami**	**18.51**	**326**	LR		LR	09 04 11.5	
	comp=Z,33nm,21.7s,baz=158,slow=31							
JHJ	**Hachijo jima 2**	**21.26**	**360**	LR		LR	09 05 39.8	
	comp=Z,55nm,21.5s,baz=56,slow=31							
SSLB	**Suanglung**	**21.54**	**306**	P		**P**	**08 59 28.8**	**+0.2**
SSLB				IAmb		IAmb	08 59 33.5	
	comp=Z,18nm,0.6s							
TPUB	**Ta-pu**	**21.56**	**305**	P		**P**	**08 59 28.3**	**-0.4**
TPUB				IAmb		IAmb	08 59 32.0	
	comp=Z,22nm,0.9s							
TOLI2	**Tolitoli**	**21.64**	**242**	P		**P**	**08 59 29.5**	**-0.2**
TOLI2				IAmb		IAmb	08 59 37.6	
	comp=Z,13nm,0.9s							
YHNB	**Yeheng**	**21.68**	**309**	P		**P**	**08 59 29.3**	**-0.7**
YHNB				IAmb		IAmb	08 59 34.6	
	comp=Z,18nm,1.0s							
MYLDM	**Lahad Datu**	**22.06**	**255**	P		**P**	**08 59 34.5**	**+0.4**
MYLDM				IAmb		IAmb	08 59 42.8	
	comp=Z,20nm,0.9s							
JNU	**Nakatsue**	**22.78**	**340**	LR		LR	09 07 02.2	
	comp=Z,36nm,20.9s,baz=160,slow=33							
COEN	**Coen**	**25.77**	**172**	P		**P**	**09 00 09.7**	**-0.4**
MTN	**Manton Dam**	**25.92**	**200**	P		**P**	**09 00 10.5**	**-0.9**
MTN				IAmb		IAmb	09 00 28.6	
	comp=Z,14nm,1.1s							
KSRS	**Korea Array**	**27.72**	**339**	LR		LR	09 10 22.5	
	comp=Z,28nm,18.7s,baz=150,slow=34							
WR8	**Warramunga Arr**	**31.95**	**189**	P		**P**	**09 01 05.2**	**0.0**
WRA	**Warramunga Arr**	**31.96**	**190**	P		**P**	**09 01 04.5**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=7.2,slow=9.7,SNR=10.0							
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**31.96**	**190**	IAmb		IAmb	09 01 11.8	
	comp=Z,0.3nm,1.1s							
CTAO	**Charters Tower**	**32.28**	**169**	P		**P**	**09 01 08.9**	**+0.9**
CTAO				IAmb		IAmb	09 01 36.2	
	comp=Z,5.3nm,1.0s							
AS31	**Alice Springs**	**35.68**	**189**	P		**P**	**09 01 37.5**	**-0.1**
ASAR	**Alice Springs**	**35.68**	**189**	P		**P**	**09 01 38.2**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=18,slow=12,SNR=27							
ASAR				PcP		**PcP**	**09 04 06.2**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=14,slow=3.5,SNR=4.8							
	comp=Z,0.6nm,0.5s							
ASAR	**Alice Springs**	**35.68**	**189**	P		**P**	**09 01 36.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**39.95**	**285**	P		**P**	**09 02 14.9**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=94,slow=6.9,SNR=11							
	comp=Z,2.0nm,0.7s							
MIDW	**Midway**	**43.18**	**61**	P		**P**	**09 02 39.7**	**-0.4**
STKA	**Stephens Creek**	**43.42**	**178**	P		**P**	**09 02 42.4**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=337,slow=10,SNR=7.4							
	comp=Z,2.7nm,0.8s							
STKA	**Stephens Creek**	**43.42**	**178**	P		**P**	**09 02 42.3**	**+0.3**
FORT	**Forrest**	**43.78**	**195**	P		**P**	**09 02 44.9**	**0.0**
FORT				IAmb		IAmb	09 02 52.1	
	comp=Z,7.5nm,0.7s							
BBOO	**Buckleboo**	**44.47**	**185**	P		**P**	**09 02 49.7**	**-0.6**
BBOO				IAmb		IAmb	09 02 55.4	
	comp=Z,8.1nm,1.1s							
SONM	**Songino Array**	**45.54**	**329**	P		**P**	**09 02 58.4**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=146,slow=8.8,SNR=8.2							
SONM				PcP		**PcP**	**09 04 37.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=131,slow=2.1,SNR=3.5							
	comp=Z,0.9nm,0.6s							
SONM	**Songino Array**	**45.54**	**329**	P		**P**	**09 02 58.9**	**-0.1**
MKAR	**Makanchi Array**	**59.44**	**318**	P		**P**	**09 04 42.1**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=102,slow=9.3,SNR=30							
	comp=Z,2.9nm,0.8s							
ZALV	**Zalesovo Beam**	**60.30**	**326**	P		**P**	**09 04 47.1**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=122,slow=5.6,SNR=4.8							
	comp=Z,0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**62.88**	**321**	P		**P**	**09 05 04.8**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=115,slow=6.0,SNR=24							
M14K	**Bethel**	**64.55**	**28**	P		**P**	**09 05 16.9**	**+0.9**
ANM	**Nome**	**64.76**	**23**	P		**P**	**09 05 17.2**	**-0.1**
ANM				IAmb		IAmb	09 05 19.1	
	comp=Z,2.1nm,0.8s							
K15K	**Wolf Creek Mou**	**65.35**	**26**	P		**P**	**09 05 21.7**	**+0.5**
F15K	**North Star Dit**	**65.57**	**22**	P		**P**	**09 05 23.5**	**+1.0**
F15K				IAmb		IAmb	09 05 24.2	
	comp=Z,1.9nm,0.7s							
J16K	**Anvik River**	**66.12**	**25**	P		**P**	**09 05 27.0**	**+0.8**
J16K				IAmb		IAmb	09 05 28.4	
	comp=Z,4.7nm,1.0s							
NRIK	**Noril'sk**	**66.29**	**342**	P		**P**	**09 05 27.3**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=111,slow=8.3,SNR=5.1							
	comp=Z,1.0nm,0.3s							
C16K	**Lisburne Hills**	**66.55**	**19**	P		**P**	**09 05 29.4**	**+0.6**
C16K				IAmb		IAmb	09 05 30.3	
	comp=Z,2.6nm,0.9s							
KKAR	**Katay Array**	**66.96**	**312**	P		**P**	**09 05 31.2**	**-0.7**
H17K	**Granite Mounta**	**67.04**	**24**	P		**P**	**09 05 32.3**	**+0.3**
BVAR	**Borovoye Array**	**68.33**	**323**	P		**P**	**09 05 40.2**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=101,slow=7.7,SNR=9.7							
	comp=Z,2.7nm,0.8s							
G19K	**Purcell Mounta**	**68.58**	**23**	P		**P**	**09 05 42.2**	**+0.6**
G19K				IAmb		IAmb	09 05 43.7	
	comp=Z,4.3nm,0.9s							
D20K	**Etivluk River**	**69.65**	**20**			**P**	**09 05 49.0**	**+0.6**
ILAR	**Eielson Array**	**72.33**	**26**	P		**P**	**09 06 03.6**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=248,slow=6.0,SNR=18							
	comp=Z,1.2nm,0.7s							
D24K	**Happy Valley**	**72.47**	**21**	P		**P**	**09 06 06.8**	**+1.5**
AB31	**Akbulak array**	**74.58**	**318**	P		**P**	**09 06 17.9**	**-0.3**
ABKAR	**Akbulak array**	**74.58**	**318**	P		**P**	**09 06 17.6**	**-0.5**
H27K	**Steamboat Moun**	**74.74**	**24**	P		**P**	**09 06 20.1**	**+1.2**
H27K				IAmb		IAmb	09 06 21.5	
	comp=Z,3.3nm,1.0s							
A36M	**Sachs Harbour**	**80.43**	**18**			**P**	**09 06 51.0**	**+0.6**
A36M				IAmb		IAmb	09 06 52.2	
	comp=Z,4.3nm,0.8s							
YKAW3	**Yellowknife Wh**	**86.69**	**27**	P		**P**	**09 07 23.0**	**+0.2**
YKA	**Yellowknife Ar**	**86.72**	**27**	P		**P**	**09 07 23.5**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=296,slow=5.9,SNR=14							
	comp=Z,0.8nm,0.8s							
ARCES	**ARCESS Array B**	**87.26**	**341**	P		**P**	**09 07 24.9**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=68,slow=8.0,SNR=8.7							
	comp=Z,2.4nm,0.8s							
ARCES	**ARCESS Array B**	**87.26**	**341**	P		**P**	**09 07 24.6**	**-0.8**
RES	**Resolute Bay**	**87.42**	**13**	P		P	**09 07 26.4**	**+0.3**
FIA1	**FINESS Array S**	**90.67**	**334**	P		P	09 07 40.2	-1.4
FINES	**FINESS Array B**	**90.67**	**334**	P		P	09 07 40.0	-1.6
	comp=Z,2.4nm,0.7s,baz=85,slow=4.4,SNR=6.2							
	comp=Z,2.4nm,0.7s							

IDC 29 09:23:20.6±6.3, 7.09S×154.78E, h0km, mb3.2/3,
mbtmp3.2/3, MS3.9/2, Error ellipse: s-maj=191.1km
s-min=44.7km az=113.0, Bougainville-Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.59**	**235**	P		P	09 28 34.5	+1.3
	0.5nm,0.9s,baz=59,slow=9.6,SNR=1.9							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**25.95**	**228**	P		P	09 28 53.8	-1.2
	0.2nm,0.8s,baz=56,slow=9.5,SNR=4.5							
	0.2nm,0.8s							
JCJ	**Chichijima**	**36.10**	**341**	LR		LR	09 45 03.5	
	comp=Z,125nm,18.7s,baz=158,slow=36							
MJAR	**Matsushiro Arr**	**46.10**	**341**	LR		LR	09 47 47.2	
	comp=Z,164nm,20.6s,baz=210,slow=32							
MKAR	**Makanchi Array**	**83.33**	**319**	P		P	09 35 49.8	+0.3
	0.2nm,0.6s,baz=98,slow=6.0,SNR=2.5							
	0.2nm,0.6s							

*MEX **29** 09:26:13.0±0.9,14.23N×92.30W,h27km±37km,MD4.0*
*GCG **29** 09:26:13.4±1.4,14.31N×92.02W,h45km±22km,MD3.7,*
ML3.5,Presumed earthquake
ISC 29 09:26:04.7±2.2, 13.99N±0.08×92.22W±0.05, h10km±11km,

*BJI **29** 09:28:19.5,2.63N×128.66E,h146km,mB5.4/54,mb5.4/87*
*NEIC **29** 09:28:25.9±1.8,3.14N±0.06×128.19E±0.09,h137km±4km,*
mb5.2/293,Mww5.3/28,Error ellipse: s-maj=12.9km
s-min=7.8km az=76.0
*MOS **29** 09:28:25.0±0.9,3.17N×128.16E,h150km,mb5.1/50,Error*
ellipse: s-maj=8.2km s-min=4.3km az=111.9
*NEIC **29** 09:28:26.4,3.13N×128.18E,h140km,Moment Tensor*
Solution. Duration: 2s2 Moment tensor: Scale 10^{17}Nm;
M_{rr}0.55; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-0.97; $M_{r\theta}$0.36; $M_{\theta\phi}$-0.35; $M_{\phi r}$-0.26;
Fault plane solution: $M_0$1.01000×10^{17} NP1:φs48.37000°,
δ53.37000°, λ147.17000°. NP2:φs159.43000°, δ64.21000°,
λ41.51000°. Principal axes: T 0.9473, Plg47.0000°,
Azm19.0000°; N 0.1233, Plg42.0000°, Azm186.0000°; P
-1.0706, Plg7.0000°, Azm282.0000°;
*NEIC **29** 09:28:26.4,3.13N×128.18E,h140km*
*DJA **29** 09:28:26.3±0.2,3°N±2°×12°BE±°,h140km±2km,M5.3/144,*
mb5.5/144,mB5.8/109,MLv6.0/29,Mw(mB)5.3/109,
MwMwp5.0/29,Mwp5.2/29
*IDC **29** 09:28:26.7±0.6,3.15N×128.23E,h150km±5km,mb4.9/35,*
mbtmp5.3/41,MS3.9/36,Error ellipse: s-maj=12.1km
s-min=6.3km az=76.0
*GCMT **29** 09:28:27.4±0.1,3.19N±0.01×128.09E±0.01,h148km,*
MW5.3/150,Moment Tensor Solution. s105,c163;
s150,c266; Duration: 1s1 Moment tensor: Scale 10^{17}
Nm; M_{rr}0.70±.01; $M_{\theta\theta}$0.53±.01; $M_{\phi\phi}$-1.23±.02;
$M_{r\theta}$0.50±.01; $M_{\theta\phi}$-0.27±.02; $M_{\phi r}$-0.29±.01; Best double
couple: $M_0$1.24300×10^{17} NP1:φs43.00000°, δ52.00000°,
λ145.00000°. NP2:φs156.00000°, δ63.00000°, λ43.00000°.
Principal axes: T 1.1880, Plg49.0000°, Azm14.0000°; N
0.1080, Plg41.0000°, Azm181.0000°; P -1.2970,
Plg7.0000°, Azm277.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
*GFZ **29** 09:28:27.2,3.18N×128.19E,h150km,MW5.2,Moment*
Tensor Solution. s133 Moment tensor: M_{rr}4.74;
$M_{\theta\theta}$2.52; $M_{\phi\phi}$-7.26; $M_{r\theta}$3.96; $M_{\theta\phi}$-1.00; $M_{\phi r}$-1.06; Fault
plane solution: NP1:φs154.00000°, δ58.00000°,
λ44.00000°. NP2:φs36.00000°, δ52.00000°, λ139.00000°.
Principal axes: T 7.8800, Plg52.0000°, Azm8.0000°; N
-0.4800, Plg37.0000°, Azm181.0000°; P -7.4000,
Plg3.0000°, Azm274.0000°;
ISC 29 09:28:26.2±0.3, 3.15N±0.03×128.10E±0.04, h142km±2km,
h143km:**pP-P,n993,σ1s33**/1008,**mb5.2**/280,**29C-8D,**
North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.73**	**43**	*eP*		**Pn**	**09 26 23.7**	**+2.6**
RTAL				⇑*eS*		**Sn**	**09 26 32.6**	**+0.3**
SMCA	**Catarina**	**0.87**	**9**	*i* P		**Pn**	**09 26 24.1**	**+1.0**
THIG		**0.91**	**357**	*eP*		**Pn**	**09 26 24.8**	**+1.2**
THIG				*eS*		**Sg**	**09 26 33.2**	**-1.0**
STG2	**El Palmar, Qui**	**0.93**	**61**	*i* P		**Pn**	**09 26 25.5**	**+1.5**
STG2				*i* S		**Sg**	**09 26 34.7**	**0.0**
STG2				IAML			09 26 37.0	
	comp=E,3μm,0.1s							
STG5	**El Palmar, Qui**	**0.94**	**64**	*i* P		**Pn**	**09 26 25.3**	**+1.3**
STG8	**El Palmar, Qui**	**0.95**	**61**	*i* P		**Pn**	**09 26 26.2**	**+1.8**
CHUJ	**Union Juarez**	**1.10**	**5**	*eP*		**Pb**	**09 26 26.4**	**+0.4**
CHUJ				*eS*		**Sg**	**09 26 37.8**	**-2.5**
QUEO	**Labor Ovalle**	**1.11**	**38**	*i* S		**Sg**	**09 26 41.0**	**+0.5**
QUEO				IAML			09 26 41.8	
	comp=E,1μm,0.1s							
PATR	**El Naranjo**	**1.12**	**359**	*eP*		**Pb**	**09 26 26.7**	**+0.4**
PATR				*eS*		**Sg**	**09 26 38.1**	**-2.8**
SOKI	**Kika Raxquin**	**1.14**	**43**	*i* P		**Pn**	**09 26 29.1**	**+2.0**
PAVE	**Pavencul**	**1.20**	**2**	*eP*		**Pn**	**09 26 28.3**	**+0.6**
PAVE				*eS*		**Sb**	**09 26 40.1**	**-3.1**
HUEH	**Huehuetenango**	**1.49**	**27**	*eP*		**Pg**	**09 26 34.0**	**+0.7**
HUEH				*eS*		**Sn**	**09 26 49.9**	**-1.5**
HUEH	**Huehuetenango**	**1.49**	**27**	*i* P		**Pg**	**09 26 34.0**	**+0.7**
FG8	**Yepocapa, Chim**	**1.63**	**80**	*i* P		**Pn**	**09 26 32.4**	**-1.1**
FG8				*i* S		Sn	09 26 47.0	-7.6
FG16	**Alotenango, Sa**	**1.68**	**80**	*i* P		**Pn**	**09 26 33.9**	**-0.4**
PCIG		**1.96**	**330**	*eP*		**Pb**	**09 26 40.3**	**-0.2**
PCIG				*eS*		**Sn**	**09 26 59.8**	**-2.9**
CCIG	**Comitan**	**2.28**	**2**	*eP*		**Pn**	**09 26 43.0**	**+0.4**
CCIG				*eS*		**Sn**	**09 27 11.8**	**+0.9**
TGIG		**2.91**	**343**	*eP*		**Pn**	**09 26 53.9**	**+2.8**
TGIG				*eS*		**Sn**	**09 27 26.4**	**+0.2**
UXUV	**UXUV**	**3.80**	**331**	*eP*		**Pn**	**09 27 06.3**	**+3.0**
UXUV				*eS*		**Sn**	**09 27 50.8**	**+2.8**
CMIG	**Matias Romero**	**4.02**	**321**	*eP*		**Pn**	**09 27 09.6**	**+3.3**
CMIG				*eS*		**Sn**	**09 27 54.6**	**+1.1**
HUIG	**Huatulco**	**4.16**	**296**	*eP*		Pn	09 27 06.3	-2.0
HUIG				*eS*		**Sn**	**09 27 52.7**	**-4.3**
NEUV	**Arroyo Zacate**	**5.06**	**317**	*eP*		Pn	09 27 26.9	+6.2
NEUV				*eS*		**Sn**	**09 28 18.0**	**-1.2**

n22,σ1s98/34, 1C, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**2.47**	**197**	P		**Pn**	**09 29 08.0**	**+1.3**
TNTI	**Ternate**	**2.47**	**197**	S		**Sn**	**09 29 43.3**	**+5.5**
TNTI	**Ternate**	**2.47**	**197**			**Pn**	**09 29 07.6**	**+1.0**
TNTI				Sn		**Sn**	**09 29 38.6**	**+0.8**
TNTI	**Ternate**	**2.47**	**197**	P		**Pn**	**09 29 07.4**	**+0.7**
TNTI				S		**Sn**	**09 29 40.4**	**+3.0**
SGSI

MMSI	**Mamuju**	**10.87**	**238**	P		**Pn**	**09 30 57.4 -0.5**
	3µm221nm,1.3s						
SPSI	**Sidrap Palu**	**10.92**	**230**	P		**Pn**	**09 30 58.4 -0.2**
	5µm389nm,0.6s						
PMSI	**Majene**	**11.31**	**234**	P		**Pn**	**09 31 03.9 +0.1**
	5µm271nm,1.6s						
BKSI	**Bulukumba**	**11.59**	**223**	P		**Pn**	**09 31 10.8 +3.3**
	360nm,0.5s						
KAPI	**Kappang**	**11.64**	**226**	P		**Pn**	**09 31 09.5 +1.5**
	105nm,0.5s,baz=50,slow=5.2,SNR=28						
KAPI				S		**Sn**	**09 33 15.4 -1.2**
	404nm,0.6s,baz=204,slow=23,SNR=18						
KAPI				LR		LR	09 35 22.8
	comp=Z,574nm,20.5s,baz=40,slow=36						
KAPI	**Kappang**	**11.64**	**226**	P		**Pn**	**09 31 10.2 +2.2**
KAPI	**Kappang**	**11.64**	**226**			**Pn**	**09 31 07.8 -0.2**
KAPI	**Kappang**	**11.64**	**226**	P		**Pn**	**09 31 08.5 +0.4**
KAPI				S		**Sn**	**09 33 10.5 -6.1**
KAPI	**Kappang**	**11.64**	**226**	P		**Pn**	**09 31 09.4 +1.4**
	96nm,0.6s						
BSSI	**Bau Bau, Buton**	**11.96**	**219**	P		**Pn**	**09 31 14.3 +2.0**
MKS	**Makassar**	**11.98**	**226**	P		**Pn**	**09 31 13.9 +1.4**
	4µm301nm,1.2s						
BKB	**Balikpapan**	**12.03**	**249**	P		**Pn**	**09 31 15.2 +2.0**
BKB	**Balikpapan**	**12.03**	**249**			**Pn**	**09 31 12.8 -0.4**
BKB	**Balikpapan**	**12.03**	**249**	P		**Pn**	**09 31 13.7 +0.5**
	3µm6µm582nm,1.9s						
KKM	**Kota Kinabalu**	**12.19**	**284**	P		**Pn**	**09 31 18.4 +3.0**
KKM	**Kota Kinabalu**	**12.19**	**284**			**Pn**	**09 31 15.7 +0.2**
KKM	**Kota Kinabalu**	**12.19**	**284**	P		**Pn**	**09 31 16.2 +0.8**
	2µm110nm,0.8s						
TGY	**Tagaytay City**	**12.98**	**327**	P		**Pn**	**09 31 27.2 +1.7**
	116nm,0.4s,baz=291,slow=8.2,SNR=6.0						
TGY				LR		LR	09 37 39.7
	comp=Z,538nm,18.1s,baz=162,slow=42						
MMRI	**Maumere**	**13.09**	**207**	P		**P**	**09 31 29.8 -2.0**
MMRI	**Maumere**	**13.09**	**207**	P		P	09 31 37.2 +5.4
GENI	**Genyem**	**13.34**	**115**	P		**Pn**	**09 31 31.0 +0.9**
GENI	**Genyem**	**13.34**	**115**	P		**Pn**	**09 31 31.4 +1.3**
SOEI	**Soe**	**13.38**	**197**	P		**Pn**	**09 31 33.0 +2.3**
SOEI	**Soe**	**13.38**	**197**			**Pn**	**09 31 32.1 +1.4**
SOEI	**Soe**	**13.38**	**197**	P		**Pn**	**09 31 32.5 +1.8**
	4µm349nm,0.7s						
EDFI	**Ende, Flores**	**13.44**	**208**	P		**Pn**	**09 31 33.4 +1.9**
	5µm604nm,0.7s						
JAY	**Jayapura**	**13.79**	**114**	P		**Pn**	**09 31 35.9 -0.1**
	28nm,0.9s,baz=297,slow=3.9,SNR=16						
JAY	**Jayapura**	**13.79**	**114**	P		**Pn**	**09 31 37.2 +1.2**
	208nm,0.9s						
MTKI	**Muara Teweh, K**	**13.81**	**253**	P		**Pn**	**09 31 36.6 +0.4**
	3µm12µm346nm,0.9s						
BATI	**Baumata**	**13.99**	**198**	P		**Pn**	**09 31 40.2 +1.8**
	197nm,0.5s,baz=29,slow=1.5,SNR=17						
BATI	**Baumata**	**13.99**	**198**	P		**Pn**	**09 31 39.6 +1.2**
	3µm245nm,0.7s						
LBFI	**Labuhan Bajo,**	**14.16**	**215**	P		**Pn**	**09 31 42.1 +1.5**
BBKI	**Banjar Baru**	**14.79**	**244**	P		**Pn**	**09 31 48.8 +0.3**
	5µm309nm,1.5s						
WSI	**Waingapu**	**14.92**	**211**	P		**P**	**09 31 51.9 -0.2**
	7µm472nm,0.5s						
DBNI	**Kabupaten Domp**	**15.14**	**220**	P		**Pn**	**09 31 53.9 +1.0**
BASI	**Baing, Sumba**	**15.25**	**209**	P		**P**	**09 31 56.7 +0.9**
	6µm452nm,1.3s						
WBSI	**Waikabubak, Su**	**15.39**	**214**	P		**P**	**09 31 56.9 -0.5**
	3µm288nm,0.7s						
AUDHS	**Darwin High Sc**	**15.72**	**170**	P		**Pn**	**09 31 59.1 -0.9**
DRS	**Darwin Rock St**	**15.73**	**170**	P		**P**	**09 32 01.7 +0.6**
PLAI	**Plampang**	**15.73**	**221**	P		**P**	**09 32 02.6 +1.4**
PLAI	**Plampang**	**15.73**	**221**	P		**P**	**09 32 01.9 +0.7**
	1µm6µm824nm,0.9s						
SBUM	**Sibu**	**15.88**	**268**	P		**P**	**09 32 04.8 +2.0**
SBUM	**Sibu**	**15.88**	**268**	P		**P**	**09 32 03.1 +0.3**
SBUM	**Sibu**	**15.88**	**268**	P		**P**	**09 32 02.9 +0.1**
SZP	**Santa**	**16.16**	**333**	P		**P**	**09 32 08.0 +2.2**
MTN	**Manton Dam**	**16.17**	**169**	P		**Pn**	**09 32 03.6 -1.9**
	comp=Z,209nm,0.7s						
MTN	**Manton Dam**	**16.17**	**169**			**Pn**	**09 32 03.8 -1.7**
TWSI	**Taliwang, Sumb**	**16.27**	**223**	P		**P**	**09 32 07.9 +0.8**
	comp=Z,239nm,1.0s						
KDU	**Kakadu**	**16.32**	**165**	P		**Pn**	**09 32 05.9 -1.5**
	comp=Z,103nm,0.9s						
KLNI	**Mataram**	**16.60**	**226**	P		**Pn**	**09 32 12.3 +1.5**
MMPI	**Merauke**	**16.83**	**133**	P		**P**	**09 32 13.1 -0.1**
	comp=Z,333nm,0.7s						
KHKI	**Kahang-Kahang**	**16.91**	**227**	P		**Pn**	**09 32 17.4 +2.8**
	comp=Z,3µmcomp=Z,362nm,1.0s						
SRBI	**Singaraja**	**17.03**	**229**	P		**Pn**	**09 32 17.3 +1.4**
	comp=Z,3µmcomp=Z,3µmcomp=Z,200nm,1.0s						
KMMI	**Kalianget**	**17.37**	**234**	P		**Pn**	**09 32 21.6 +1.5**
	comp=Z,5µmcomp=Z,281nm,1.1s						
DNP	**Denpasar**	**17.42**	**227**	P		**Pn**	**09 32 21.9 +1.3**
	comp=Z,675nm,0.9s						
RTBI	**Rangdo, Negare**	**17.47**	**229**	P		**P**	**09 32 20.9 +0.5**
	comp=Z,6µmcomp=Z,416nm,1.1s						
IGBI	**Denpasar**	**17.56**	**227**	P		**Pn**	**09 32 24.4 +2.1**
	comp=Z,7µmcomp=Z,405nm,0.9s						
ABJI	**Asem Bagus**	**17.60**	**232**	P		**Pn**	**09 32 25.1 +2.3**
BLJI	**Banyuglugur**	**18.07**	**233**	P		**Pn**	**09 32 28.9 +0.5**
	comp=Z,4µmcomp=Z,212nm,0.8s						
JAGI	**Jajag, Banyuwa**	**18.08**	**230**	P		**Pn**	**09 32 29.7 +1.2**
JAGI	**Jajag, Banyuwa**	**18.08**	**230**	P		**Pn**	**09 32 29.1 +0.6**
JAGI	**Jajag, Banyuwa**	**18.08**	**230**	P		**Pn**	**09 32 29.3 +0.8**
	comp=Z,2µmcomp=Z,5µmcomp=Z,249nm,1.1s						
KNRA	**Kununurra**	**18.72**	**178**	P		**P**	**09 32 34.4 +0.5**
	comp=Z,153nm,1.1s						
KNRA	**Kununurra**	**18.72**	**178**	P		**P**	**09 32 34.1 +0.2**
TBJI	**Tambak Boyo**	**19.01**	**239**	P		**P**	**09 32 37.9 +0.8**
	comp=Z,358nm,1.3s						
SJI	**Sawahan**	**19.56**	**236**	P		**P**	**09 32 44.3 +1.1**
	comp=Z,5µmcomp=Z,465nm,0.7s						
SNJI	**Sawahan-Nganju**	**19.59**	**236**	P		**P**	**09 32 44.8 +1.2**
	comp=Z,3µmcomp=Z,294nm,1.5s						
NGJI	**Ngawi**	**19.62**	**238**	P		**Pn**	**09 32 46.0 -0.6**
	comp=Z,4µmcomp=Z,462nm,1.0s						
MANU	**Manus Island**	**19.93**	**105**	P		**P**	**09 32 46.9 -0.3**
PCJI	**Pacitan**	**20.30**	**236**	P		**P**	**09 32 52.2 +1.1**
	comp=Z,5µmcomp=Z,420nm,1.4s						
UGM	**Wanagama**	**20.70**	**238**	P		**P**	**09 32 57.3 +1.9**
UGM	**Wanagama**	**20.70**	**238**	P		**P**	**09 32 54.1 -1.3**
UGM	**Wanagama**	**20.70**	**238**	P		**P**	**09 32 55.2 -0.2**
	comp=Z,227nm,0.7s						
TWGBT	**Beinan**	**20.70**	**341**	P		**P**	**09 32 53.7 -1.6**
YOGI	**Yogyakarta**	**20.84**	**238**	P		**P**	**09 32 57.9 +1.0**
YULB	**Yu-li**	**21.17**	**342**	P		**P**	**09 33 01.1 +0.7**
FITZ	**Fitzroy Crossi**	**21.25**	**186**	P		**P**	**09 33 00.3 -0.9**
	comp=Z,19nm,0.5s,baz=22,slow=8.2,SNR=28						
	comp=Z,19nm,0.5s						
TPI	**Tanjungpandan**	**21.27**	**254**	P		**P**	**09 33 01.6 +0.1**
TPUB	**Ta-pu**	**21.30**	**341**	P		**P**	**09 33 00.7 -1.0**
CTJI	**Waduk Cacaban**	**21.41**	**242**	P		**P**	**09 33 03.5 +0.5**
	comp=Z,5µmcomp=Z,325nm,1.4s						
SSLB	**Suanglung**	**21.65**	**342**	P		**P**	**09 33 05.0 -0.5**
SSLB	**Suanglung**	**21.65**	**342**	P		**P**	**09 33 03.7 -1.8**
JMJ	**Miyako jima 2**	**21.71**	**353**	P		**P**	**09 33 06.8 +0.8**
YOJ	**Yonaguni jima**	**21.75**	**347**	P		**P**	**09 33 06.8 +0.3**
YOJ	**Yonaguni jima**	**21.75**	**347**	P		**P**	**09 33 06.1 -0.4**
YOJ	**Yonaguni jima**	**21.75**	**347**	P		**P**	**09 33 06.1 -0.4**
KPJI	**Karang Pucung**	**21.78**	**241**	P		**P**	**09 33 07.2 +0.2**
	comp=Z,4µmcomp=Z,345nm,0.7s						
NACB	**Ninganchiao**	**21.83**	**344**	P		**P**	**09 33 08.3 +1.0**
NACB	**Ninganchiao**	**21.83**	**344**	P		**P**	**09 33 07.3 +0.1**
NACB				IAmb		IAmb	09 33 11.1
	comp=Z,60nm,0.8s						
YHNB	**Yeheng**	**22.36**	**344**	P		**P**	**09 33 12.2 -0.5**
YHNB	**Yeheng**	**22.36**	**344**	P		**P**	**09 33 12.4 -0.3**
PPBI	**Pangkal Pinang**	**22.58**	**257**	P		**P**	**09 33 15.5 +0.6**
TATO	**Taipei**	**22.62**	**344**	P		**P**	**09 33 15.0 -0.1**
TATO	**Taipei**	**22.62**	**344**	P		**P**	**09 33 14.2 -0.9**
TATO				IAmb		IAmb	09 33 16.8
	comp=Z,78nm,0.8s						
TATO	**Taipei**	**22.62**	**344**	P		**P**	**09 33 13.3 -1.8**
COEN	**Coen**	**22.63**	**139**	P		**P**	**09 33 17.2 +1.8**
COEN	**Coen**	**22.63**	**139**	P		**P**	**09 33 13.7 -1.7**
PMG	**Port Moresby**	**22.72**	**123**	P		**P**	**09 33 13.3 -2.9**
	comp=Z,3.2nm,0.6s,baz=311,slow=15,SNR=4.1						
PMG	**Port Moresby**	**22.72**	**123**	P		**P**	**09 33 17.7 +1.6**
PMG	**Port Moresby**	**22.72**	**123**	P		**P**	**09 33 17.8 +1.6**
PMG	**Port Moresby**	**22.72**	**123**	P		**P**	**09 33 14.6 -1.6**
PMG	**Port Moresby**	**22.72**	**123**	P		**P**	**09 33 14.6 -1.6**
PMG				pmax		pmax	
	comp=Z,21nm,1.0s						
PMG	**Port Moresby**	**22.72**	**123**	P		P	09 33 27.3 +11
LEM	**Lembang**	**22.73**	**244**	P		**P**	**09 33 17.1 +0.7**
	comp=Z,138nm,0.7s,baz=49,slow=8.4,SNR=12						
LEM				LR		LR	09 44 36.8
	comp=Z,626nm,18.4s,baz=62,slow=42						
	comp=Z,138nm,0.7s						
JMZ	**Minamidaito 2**	**22.74**	**7**	P		**P**	**09 33 16.6 +0.4**
JMZ	**Minamidaito 2**	**22.74**	**7**	P		**P**	**09 33 16.4 +0.2**
BBJI	**Bungbulang**	**22.97**	**243**	P		**P**	**09 33 19.2 +0.5**
BBJI	**Bungbulang**	**22.97**	**243**	P		**P**	**09 33 19.1 +0.4**
	comp=Z,2µmcomp=Z,184nm,0.7s						
HKPS	**Hong Kong Po S**	**23.35**	**326**	P		**P**	**09 33 23.3 +1.4**
HKPS	**Hong Kong Po S**	**23.35**	**326**	P		**P**	**09 33 22.8 +0.8**
HKPS				IAmb		IAmb	09 33 25.0
	comp=Z,112nm,1.1s						
DBJI	**Dramaga**	**23.40**	**246**	P		**P**	**09 33 23.2 +0.7**
	comp=Z,188nm,1.6s						
QZH2	**Quanzhou**	**23.53**	**338**	⇑*i*P		**P**	**09 33 24.5 +1.0**
QZH2				sP		**sP**	**09 34 07.8 -0.6**
QZH2				S		**S**	**09 37 27.0 +0.1**
QZH2				pmax		pmax	
	comp=Z,280nm,1.3s						
QZH2				pmax		pmax	
	comp=Z,840nm,4.1s						
JOW	**Kunigami**	**23.55**	**0**	P		**P**	**09 33 22.6 -1.2**
	comp=Z,232nm,1.0s,baz=203,slow=7.8,SNR=21						
JOW				LR		LR	09 41 56.2
	comp=Z,185nm,20.4s,baz=166,slow=34						
	comp=Z,232nm,1.0s						
JOW	**Kunigami**	**23.55**	**0**	P		**P**	**09 33 24.6 +0.9**
JOW	**Kunigami**	**23.55**	**0**	P		**P**	**09 33 24.0 +0.3**
TPRI	**Tanjung Pinang**	**23.66**	**265**	P		**P**	**09 33 26.5 +1.6**
	comp=Z,242nm,0.9s						
WRAB	**Tennant Creek**	**23.75**	**165**	P		**P**	**09 33 24.2 -1.4**
WRAB	**Tennant Creek**	**23.75**	**165**	P		**P**	**09 33 24.2 -1.4**
WRAB	**Tennant Creek**	**23.75**	**165**	P		**P**	**09 33 24.2 -1.4**
WRAB				pmax		pmax	
	comp=Z,148nm,0.9s						
WRA	**Warramunga Arr**	**23.75**	**165**	P		**P**	**09 33 24.1 -1.5**
	comp=Z,148nm,0.9s,baz=343,slow=10,SNR=251						
WRA				pP		**pP**	**09 33 54.6 +0.9**
	comp=Z,32nm,0.6s,baz=343,slow=10,SNR=2.3						
WRA				S		**S**	**09 37 28.9 -1.8**
	comp=Z,5.9nm,0.8s,baz=342,slow=16,SNR=4.6						
WRA				PKiKP		**PKiKP**	**09 44 46.9 -2.3**
	comp=Z,0.2nm,0.7s,baz=304,slow=1.4,SNR=4.7						
WRA				P3KPbc			10 06 36.0
	comp=Z,0.5nm,0.8s,baz=163,slow=3.5,SNR=5.4						
	comp=Z,148nm,0.9s						
WRA	**Warramunga Arr**	**23.75**	**165**	P		**P**	**09 33 23.1 -2.5**
SBJI	**Serang**	**23.80**	**247**	P		**P**	**09 33 33.1 +7.0**
WR8	**Warramunga Arr**	**23.80**	**165**	P		**P**	**09 33 24.6 -1.5**
QIZ	**Qiongzhong**	**23.83**	**313**	P		**P**	**09 33 28.1 +1.7**
QIZ	**Qiongzhong**	**23.83**	**313**	P		**P**	**09 33 27.1 +0.7**
QIZ	**Qiongzhong**	**23.83**	**313**	P		**P**	**09 33 27.5 +1.1**
QIZ				pP		**pP**	**09 33 55.5 +1.2**
QIZ				S		**S**	**09 37 33.0 +1.0**
QIZ				pmax		pmax	
	comp=Z,26nm,1.0s						
MYKOM	**Kota Tinggi**	**24.27**	**267**	P		**P**	**09 33 33.4 +3.0**
MYKOM	**Kota Tinggi**	**24.27**	**267**	P		**P**	**09 33 31.1 +0.7**
MYKOM	**Kota Tinggi**	**24.27**	**267**	P		**P**	**09 33 32.3 +1.9**
	comp=Z,2µmcomp=Z,155nm,1.0s						
BLSI	**Bandar Lampung**	**24.35**	**250**	P		**P**	**09 33 38.3 +7.1**
KLI	**Kotabumi**	**24.55**	**251**	P		**P**	**09 33 39.3 +6.3**
KLSI		**24.62**	**252**	P		**P**	**09 33 34.3 +0.7**
GZH2	**Guangzhou**	**24.71**	**327**	P		**P**	**09 33 35.3 +1.0**
GZH2				pP		**pP**	**09 34 03.0 0.0**
GZH2				sP		**sP**	**09 34 19.8 +0.4**
GZH2				S		**S**	**09 37 47.3 +1.4**
GZH2				pmax		pmax	
	comp=Z,150nm,0.8s						
JMBI	**JAMBI**	**24.91**	**259**	P		P	09 33 44.7 +8.5
MDSI	**Maura Dua**	**25.08**	**253**	P		**P**	**09 33 39.0 +1.2**
	comp=Z,2µmcomp=Z,269nm,1.1s						
KASI	**Kota Agung**	**25.10**	**250**	P		**P**	**09 33 39.8 +1.8**
	comp=Z,2µmcomp=Z,173nm,1.0s						
LWLI	**Liwa**	**25.36**	**251**	P		**P**	**09 33 40.9 +0.5**
	comp=Z,1µmcomp=Z,180nm,0.5s						
MBWA	**Marble Bar**	**25.51**	**198**	P		**P**	**09 33 43.7 +2.1**
MBWA	**Marble Bar**	**25.51**	**198**	P		**P**	**09 33 41.4 -0.2**
MBWA				IAmb		IAmb	09 33 45.7
	comp=Z,40nm,0.8s						
MBWA	**Marble Bar**	**25.51**	**198**	P		**P**	**09 33 41.2 -0.4**
PSA00	**Pilbara Seismi**	**25.87**	**198**	P		**P**	**09 33 47.3 +2.5**
PSA00	**Pilbara Seismi**	**25.87**	**198**	P		**P**	**09 33 44.7 -0.1**
PSA00				IAmb		IAmb	09 33 48.6
	comp=Z,58nm,0.8s						
PSA00	**Pilbara Seismi**	**25.87**	**198**	P		**P**	**09 33 44.4 -0.4**
PSA00				IAmb		IAmb	09 33 48.6
	comp=Z,35nm,0.9s						
XMI	**Christmas Isla**	**26.09**	**239**	P		**P**	**09 33 48.9 +2.0**
QIS	**Mount Isa**	**26.12**	**155**	P		**P**	**09 33 47.4 +0.3**
MNAI	**Manna**	**26.21**	**254**	P		**P**	**09 33 47.9 -0.2**
MTSU	**Mount Surprise**	**26.51**	**143**	P		**P**	**09 33 51.9 +1.3**
IPM	**Ipoh**	**27.05**	**274**	P		**P**	**09 33 57.6 +2.0**
IPM	**Ipoh**	**27.05**	**274**	P		**P**	**09 33 56.0 +0.4**
IPM				IAmb		IAmb	09 34 37.8
	comp=Z,84nm,1.3s						
IPM	**Ipoh**	**27.05**	**274**	P		**P**	**09 33 56.9 +1.3**
EGSI	**Enggano, Bengk**	**27.15**	**252**	P		**P**	**09 33 56.3 -0.1**
	comp=Z,63nm,0.8s						
BKNI	**Bangkinang**	**27.19**	**265**	P		**P**	**09 33 57.2 +0.4**
AS31	**Alice Springs**	**27.25**	**168**	P		**P**	**09 33 55.7 -1.5**
ASAR	**Alice Springs**	**27.25**	**168**	P		**P**	**09 33 56.1 -1.0**
	comp=Z,6.8nm,0.5s,baz=353,slow=7.4,SNR=111						
ASAR				PP		**PP**	**09 35 04.3 +2.7**
	comp=Z,14nm,0.9s,baz=307,slow=5.4,SNR=4.8						
ASAR				PcP		**PcP**	**09 37 13.3 -0.4**
	comp=Z,7.1nm,0.4s,baz=356,slow=2.3,SNR=5.9						
ASAR				ScP		**ScP**	**09 40 38.5 -2.4**
	comp=Z,2.6nm,0.7s,baz=346,slow=3.0,SNR=4.6						
ASAR				PKiKP		**PKiKP**	**09 44 48.7 -2.4**
	comp=Z,0.3nm,0.6s,baz=1.1,slow=1.2,SNR=4.9						
ASAR				LR		LR	09 46 47.4
	comp=Z,304nm,19.2s,baz=350,slow=40						
ASAR				P3KPbc			10 06 26.4
	comp=Z,0.7nm,0.8s,baz=168,slow=4.3,SNR=11						
	comp=Z,6.8nm,0.5s						
ASAR	**Alice Springs**	**27.25**	**168**	P		**P**	**09 33 56.4 -0.8**
JCJ	**Chichijima**	**27.36**	**28**	P		**P**	**09 33 55.9 -2.2**
	comp=Z,123nm,0.6s,baz=282,slow=14,SNR=7.5						
	comp=Z,123nm,0.6s						
JCJ	**Chichijima**	**27.36**	**28**	P		**P**	**09 33 57.2 -0.9**
PDSI	**Padang**	**27.92**	**262**	P		**P**	**09 34 07.3 +3.9**
PPI	**Padang Panjang**	**27.93**	**263**	P		**P**	**09 34 08.3 +5.0**
JSU	**Suzuyama**	**28.29**	**4**	P		**P**	**09 34 05.9 -0.5**
JSU				IAmb		IAmb	09 34 09.9
	comp=Z,32nm,0.9s						
CNSH	**ChangSha**	**28.79**	**331**	P		**P**	**09 34 12.3 +1.5**
CNSH				S		**S**	**09 38 53.0 +2.9**
CNSH				pmax		pmax	
	comp=Z,15nm,0.9s						
CNSH				LR		LR	
	comp=Z,550nm,19.1s						
CNSH				LR		LR	
	comp=Z,590nm,23.5s						
GIRL	**Giralia**	**28.99**	**207**	P		**P**	**09 34 13.0 +0.4**
PSI	**Prapat**	**29.14**	**270**	P		**P**	**09 34 17.0 +2.7**
PSI	**Prapat**	**29.14**	**270**	P		**P**	**09 34 14.8 +0.5**
PSI				pmax		pmax	
	comp=Z,18nm,1.0s						
PSI	**Prapat**	**29.14**	**270**	P		**P**	**09 34 13.8 -0.5**
RPSI	**Rantau Prapat**	**29.14**	**270**	P		**P**	**09 34 14.8 +0.7**
CTA	**Charters Tower**	**29.17**	**143**	P		**P**	**09 34 12.6 -1.7**
	comp=Z,5.3nm,0.6s,baz=301,slow=3.7,SNR=5.5						
CTA				pP		**pP**	**09 34 46.4 +2.0**
	comp=Z,11nm,0.9s,baz=317,slow=8.1,SNR=3.9						
CTA				LR		LR	09 47 08.1
	comp=Z,543nm,19.3s,baz=322,slow=38						
CTAO	**Charters Tower**	**29.17**	**143**	P		**P**	**09 34 12.1 -2.2**
CTAO	**Charters Tower**	**29.17**	**143**	P		**P**	**09 34 12.1 -2.2**
CTAO				pmax		pmax	
	comp=Z,11nm,0.9s						
SISI	**Saibi**	**29.34**	**262**	P		**P**	**09 34 15.3 -0.6**
	comp=Z,55nm,0.8s						
JNU	**Nakatsue**	**29.93**	**5**	P		**P**	**09 34 20.1 -0.8**
	comp=Z,81nm,0.9s,baz=167,slow=4.9,SNR=25						
JNU				LR		LR	09 44 20.2
	comp=Z,122nm,21.3s,baz=200,slow=32						
	comp=Z,81nm,0.9s						
NJ2	**Nanjing**	**30.04**	**344**	⇑P		**P**	**09 34 22.8 +1.0**
NJ2				S		**S**	**09 39 10.8 +1.2**
NJ2				pmax		pmax	
	comp=Z,44nm,0.8s						
NJ2				pmax		pmax	
	comp=Z,160nm,4.1s						
WHN	**Wuhan**	**30.19**	**336**	⇑*i*P		**P**	**09 34 25.0 +1.8**
WHN				sP		**sP**	**09 35 11.5 +1.9**
WHN				S		**S**	**09 39 13.5 +1.5**
WHN				pmax		pmax	
	comp=Z,230nm,1.3s						
KCSI	**Kotacane, Aceh**	**30.28**	**272**	P		**P**	**09 34 23.5 -0.7**
GSI	**Gunungsitoli**	**30.56**	**267**	P		**P**	**09 34 28.3 +1.6**
GSI	**Gunungsitoli**	**30.56**	**267**	P		**P**	**09 34 25.6 -1.0**
GSI				IAmb		IAmb	09 34 27.4
	comp=Z,41nm,0.7s						
GSI	**Gunungsitoli**	**30.56**	**267**	P		**P**	**09 34 27.0 +0.3**
	comp=Z,59nm,0.7s						
GYA	**Guiyang**	**30.98**	**320**	P		**P**	**09 34 32.0 +1.7**
GYA				pP		pwP	09 35 07.0 +3.2
GYA				sP		sP	09 35 25.8 +10
GYA				PcP		**PcP**	**09 37 24.0 +0.8**
GYA				S		**S**	**09 39 26.5 +1.8**
GYA				pmax		pmax	
	comp=Z,15nm,0.8s						
GYA				LR		LR	
	comp=Z,440nm,14.8s						
MEEK	**Meekatharra**	**31.00**	**197**	P		**P**	**09 34 31.4 +1.0**
ENH	**Enshi**	**32.22**	**329**	P		**P**	**09 34 42.5 +1.4**
ENH	**Enshi**	**32.22**	**329**	P		**P**	**09 34 41.4 +0.4**
ENH	**Enshi**	**32.22**	**329**	P		**P**	**09 34 42.2 +1.1**
ENH				pP		**pP**	**09 35 07.7 -3.1**
ENH				PcP		**PcP**	**09 37 25.9 -0.5**
CM31	**Chiang Mai Arr**	**32.35**	**300**	P		**P**	**09 34 44.4 +2.1**
CMAR	**Chiang Mai Arr**	**32.35**	**300**	P		**P**	**09 34 43.7 +1.4**
	comp=Z,2.9nm,0.3s,baz=119,slow=7.3,SNR=21						
CMAR				pP		**pwP**	**09 35 16.1 +1.1**
	comp=Z,2.7nm,0.6s,baz=123,slow=6.8,SNR=2.0						
CMAR				PcP		**PcP**	**09 37 27.9 +1.0**
	comp=Z,2.7nm,0.7s,baz=160,slow=0.9,SNR=5.2						
CMAR				ScP		**ScP**	**09 40 57.4 -0.2**
	comp=Z,7.9nm,0.9s,baz=147,slow=2.3,SNR=19						
CMAR				LR		LR	09 48 27.6
	comp=Z,173nm,20.3s,baz=110,slow=37						
	comp=Z,2.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**32.35**	**300**	P		**P**	**09 34 43.0 +0.7**
CHTO	**Chiang Mai**	**32.49**	**301**	P		**P**	**09 34 45.6 +2.0**
CHTO	**Chiang Mai**	**32.49**	**301**	P		**P**	**09 34 44.4 +0.8**
CHTO	**Chiang Mai**	**32.49**	**301**	P		**P**	**09 34 44.4 +0.8**
CHTO				pmax		pmax	
	comp=Z,14nm,0.7s						
CHTO	**Chiang Mai**	**32.49**	**301**	P		**P**	**09 34 43.6 0.0**
CHTO	**Chiang Mai**	**32.49**	**301**	P		**P**	**09 34 44.3 +0.7**
KMI2	**Kunming**	**32.77**	**314**	⇑P		**P**	**09 34 48.0 +1.8**
KMI2				pP		pwP	09 35 20.0 +0.1
KMI2				PcP		**PcP**	**09 37 29.3 +1.0**
KMI2				S		**S**	**09 39 54.0 +1.1**
KMI2				pmax		pmax	
	comp=Z,15nm,1.4s						
KMI2				pmax		pmax	
	comp=Z,190nm,3.8s						
KMI2				LR		LR	
	comp=Z,200nm,16.9s						
KMI2				LR		LR	
	comp=Z,380nm,13.3s						
KMI2				LR		LR	
	comp=Z,470nm,23.4s						
INKA	**Innaminka**	**33.04**	**159**	P		**P**	**09 34 47.6 -0.6**
TJN	**Taejon**	**33.07**	**359**	P		**P**	**09 34 48.3 0.0**
INU	**Inuyama**	**33.09**	**13**	P		**P**	**09 34 48.7 +0.2**
INU	**Inuyama**	**33.09**	**13**	P		**P**	**09 34 47.7 -0.8**
INU				IAmb		IAmb	09 34 49.4
	comp=Z,34nm,0.7s						
JGF	**Kuroka**	**33.41**	**14**	P		**P**	**09 34 51.8 +0.5**
JGF	**Kuroka**	**33.41**	**14**	IAmb		IAmb	09 34 53.8
	comp=Z,49nm,1.5s						
QLP	**Quilpie**	**33.42**	**153**	P		**P**	**09 34 51.7 +0.2**
FORT	**Forrest**	**33.74**	**180**	IAmb		IAmb	09 34 57.1
	comp=Z,30nm,0.7s						
SAVO	**Savo Central**	**33.88**	**111**	P		**P**	**09 34 56.0 +0.3**
MORW	**Morawa**	**34.06**	**199**	P		**P**	**09 34 58.2 +1.2**
MORW	**Morawa**	**34.06**	**199**	IAmb		IAmb	09 34 59.6
	comp=Z,34nm,0.8s						
KSAR	**Wonju Array Be**	**34.13**	**360**	P		**P**	**09 34 56.3 -1.2**
KSAR	**Wonju Array Be**	**34.13**	**360**	P		**P**	**09 34 56.3 -1.2**
KSRS	**Korea Array**	**34.14**	**360**	P		**P**	**09 34 57.5 0.0**
	comp=Z,23nm,0.7s,baz=176,slow=9.

CD2 LR LR
comp=Z,660nm,15.3s
CD2 LR LR
comp=Z,520nm,9.6s
KLBR Kellerberrin 35.92 195 P **P** **09 35 14.5 +1.5**
DL2 Dalian 36.08 351 P **P** **09 35 14.5 +0.4**
DL2 pP **pP** **09 35 50.0 +5.4**
DL2 PcP **PcP** **09 37 37.5 +0.3**
DL2 S **S** **09 40 42.3 -0.5**
DL2 pmax pmax
comp=Z,170nm,0.9s
DL2 pmax pmax
comp=Z,280nm,5.1s
HNS HongShan 36.24 342 ⇑P **P** **09 35 16.0 +0.5**
HNS PcP **PcP** **09 37 38.5 +0.8**
HNS S **S** **09 40 45.5 +0.2**
HNS ScP **ScP** **09 41 11.3 +0.3**
HNS SS **SnSn** **09 43 22.3 -6.4**
HNS pmax pmax
comp=Z,100nm,1.0s
HNS LR LR
comp=Z,250nm,14.5s
HNS LR LR
comp=Z,250nm,18.8s
BBOO Buckleboo 36.55 169 P **P** **09 35 17.8 -0.4**
BBOO Buckleboo 36.55 169 P **P** **09 35 17.5 -0.7**
BBOO IAmb IAmb 09 36 17.8
comp=Z,46nm,1.2s
MUN Mundaring 36.72 197 P **P** **09 35 22.4 +2.7**
AUKUL Kulin High Sch 36.85 194 P **P** **09 35 22.7 +1.9**
STKA Stephens Creek 37.12 161 P **P** **09 35 22.2 -0.8**
comp=Z,27nm,0.5s,baz=344,slow=8.3,SNR=44
STKA pP **pP** **09 35 54.3 0.0**
comp=Z,25nm,0.8s,baz=336,slow=9.7,SNR=2.7
STKA LR LR 09 52 50.8
comp=Z,194nm,19.5s,baz=340,slow=40
comp=Z,27nm,0.5s
STKA Stephens Creek 37.12 161 P **P** **09 35 23.9 +0.8**
TIY Taiyuan 37.28 339 P **P** **09 35 25.0 +0.6**
TIY S **S** **09 41 00.8 -0.5**
TIY pmax pmax
comp=Z,40nm,0.6s
TIY pmax pmax
comp=Z,300nm,4.3s
NWAO Narrogin (SRO) 37.33 195 P **P** **09 35 25.4 +0.5**
comp=Z,38nm,0.8s,baz=24,slow=9.0,SNR=16
comp=Z,38nm,0.8s
NWAO Narrogin (SRO) 37.33 195 P **P** **09 35 26.7 +1.9**
NWAO Narrogin (SRO) 37.33 195 P **P** **09 35 24.7 -0.1**
NWAO IAmb IAmb 09 35 27.8
comp=Z,82nm,1.1s
NWAO Narrogin (SRO) 37.33 195 P **P** **09 35 24.7 -0.1**
AULRC Lightning Ridg 37.58 151 P **P** **09 35 28.3 +1.3**
HTL Hallett 37.79 165 P **P** **09 35 30.6 +1.8**
BJI2 Beijing 38.26 345 P **P** **09 35 32.8 +0.2**
BJI2 pP **pP** **09 36 05.0 +1.6**
BJI2 sP **sP** **09 36 20.5 +1.0**
BJI2 PcP **PcP** **09 37 45.0 +1.1**
BJI2 ScP **ScP** **09 41 18.5 -0.1**
BJI2 S **S** **09 41 20.0 +4.1**
BJI2 pmax pmax
comp=Z,59nm,1.0s
BJT Baijiatuau 38.26 345 P **P** **09 35 32.9 +0.3**
BJT Baijiatuau 38.26 345 P **P** **09 35 32.8 +0.3**
BJT Baijiatuau 38.26 345 P **P** **09 35 32.8 +0.3**
BJT pmax pmax
comp=Z,105nm,1.0s
BJT Baijiatuau 38.26 345 P **P** **09 35 32.8 +0.3**
BJT PcP **PcP** **09 37 44.7 +0.9**
CMSA Cobar Meteorol 38.34 155 P **P** **09 35 33.9 +0.6**
SAIH SAIHA 39.09 302 *e*P **P** **09 35 40.7 +0.8**
SAIH IAmb IAmb 09 35 45.5
comp=Z,38nm,1.8s
SAIH *e*S **S** **09 41 30.0 +0.8**
AUMAR Marden Senior 39.11 166 P **P** **09 35 43.0 +3.3**
IMP Imphal 39.33 306 *e*P **P** **09 35 41.7 -0.1**
IMP IAmb IAmb 09 35 43.8
comp=Z,30nm,0.6s
IMP *e*S **S** **09 41 33.0 +0.4**
PSTR Posyet 39.41 3 *i*P **P** **09 35 42.0 0.0**
AUMBR Murray Bridge 39.50 166 P **P** **09 35 45.8 +2.9**
KOHI KOHIMA 39.62 308 *e*P **P** **09 35 43.7 -0.6**
KOHI IAmb IAmb 09 35 52.4
comp=Z,35nm,0.6s
KOHI *e*S **S** **09 41 35.1 -1.8**
LZDM Lanzhou Array 39.68 328 P **P** **09 35 46.1 +1.3**
comp=Z,79nm,0.8s,baz=163,slow=11,SNR=96
LZDM PcP **PcP** **09 37 49.4 +0.6**
comp=Z,5.3nm,0.5s,baz=179,slow=5.8,SNR=3.5
LZDM ScP **ScP** **09 41 24.4 -0.2**
comp=Z,0.9nm,0.3s,baz=171,slow=3.8,SNR=5.3
LZDM LR LR 09 52 56.2
comp=Z,145nm,21.9s,baz=100,slow=37
comp=Z,79nm,0.8s
LZH Lanzhou 39.70 329 *e*P **P** **09 35 46.8 +2.0**
LZH pP pP 09 36 16.5 +0.6
LZH sP sP 09 36 36.0 +4.0
LZH ScP **ScP** **09 41 25.0 +0.5**
LZH S **S** **09 41 38.0 0.0**
LZH sS sS 09 42 38.0 +7.2
LZH SS **SS** **09 44 36.3 -3.2**
LZH pmax pmax
comp=Z,250nm,1.4s
LZH pmax pmax
comp=Z,650nm,4.3s
LZH LR LR
comp=Z,750nm,14.9s
LZH LR LR
comp=Z,680nm,14.3s
LZH LR LR
comp=Z,620nm,18.7s
VLA Vladivostok 39.94 4 *i*P **P** **09 35 46.9 +0.5**
VLA pmax pmax
comp=Z,57nm,1.0s
AUDCS Dubbo College 40.22 153 P **P** **09 35 50.2 +1.3**
ARMA Armidale 40.24 148 P **P** **09 35 50.7 +1.4**
ARMA Armidale 40.24 148 P **P** **09 35 48.7 -0.6**
ARMA IAmb IAmb 09 36 48.6
comp=Z,62nm,1.5s
HHC Hu-ho-hao-te 40.39 341 *e*P **P** **09 35 51.0 +0.7**
HHC sP sP 09 36 36.0 -1.6
HHC PP **PnPn** **09 37 29.8 -1.7**
HHC S **S** **09 41 49.5 +1.6**
HHC sS sS 09 42 45.5 +4.7
HHC ScS **ScS** **09 45 37.8 -3.6**
HHC pmax pmax
comp=Z,44nm,0.7s
HHC pmax pmax
comp=Z,310nm,5.1s
HHC LR LR
comp=Z,170nm,17.3s
HHC LR LR
comp=Z,180nm,17.6s
HHC LR LR
comp=Z,200nm,17.3s
CN2 Changchun 40.55 357 P **P** **09 35 51.0 -0.5**
CN2 PcP **PcP** **09 37 51.0 -0.1**
CN2 pmax pmax
comp=Z,20nm,0.5s
ZIRO ZIRO 40.71 310 *e*P **P** **09 35 52.1 -1.2**
ZIRO IAmb IAmb 09 35 57.4
comp=Z,38nm,0.5s
ZIRO *e*S **S** **09 41 51.5 -1.7**
H11S3 WAKE ISLAND Hy 40.72 65 T T 10 19 44.1
baz=252,slow=75,SNR=49
H11S2 WAKE ISLAND Hy 40.73 65 T T 10 19 48.9
baz=252,slow=75,SNR=30
H11S1 WAKE ISLAND Hy 40.73 65 T T 10 19 33.7
baz=252,slow=75,SNR=12
BTO2 Baotou 40.88 339 *e*P **P** **09 35 54.3 -0.1**
BTO2 S **S** **09 41 54.5 -0.8**
BTO2 pmax pmax
comp=Z,34nm,0.7s
BTO2 pmax pmax
comp=Z,650nm,4.9s
BTO2 LR LR
comp=Z,550nm,19.2s
BTO2 LR LR
comp=Z,430nm,12.9s
BTO2 LR LR
comp=Z,370nm,16.7s
USRK Ussuriysk Ar. 41.02 4 P **P** **09 35 55.5 +0.2**
comp=Z,91nm,0.9s,baz=187,slow=7.6,SNR=78
comp=Z,91nm,0.9s
H11N1 WAKE ISLAND Hy 41.27 63 T T 10 20 32.7
baz=253,slow=75,SNR=47
H11N2 WAKE ISLAND Hy 41.28 63 T T 10 21 23.2
SNR=25
H11N3 WAKE ISLAND Hy 41.29 63 T T 10 20 30.8
baz=259,slow=75,SNR=54
MDJ Mudanjiang 41.32 2 P **P** **09 35 58.2 +0.5**
MDJ Mudanjiang 41.32 2 P **P** **09 35 58.0 +0.3**
MDJ pmax pmax
comp=Z,140nm,1.1s
MDJ Mudanjiang 41.32 2 P **P** **09 35 57.7 0.0**
MDJ PcP **PcP** **09 37 53.5 0.0**
SHL Shillong 41.32 306 P **P** **09 35 59.0 +0.7**
SHL Shillong 41.32 306 *e*P **P** **09 35 57.6 -0.7**
SHL IAmb IAmb 09 36 02.8
comp=Z,20nm,0.6s
SHL *e*S **S** **09 42 02.7 +0.3**
SHL Shillong 41.32 306 P **P** **09 35 59.0 +0.7**
SHL pmax pmax
comp=Z,145nm,0.7s
SHL Shillong 41.32 306 P P 09 35 53.0 -5.3
XLT XiLinHaoTe 41.95 347 *e*P **P** **09 36 03.0 -0.1**
XLT sP sP 09 36 50.8 +0.5
XLT PcP **PcP** **09 37 56.5 +0.7**
XLT S **S** **09 42 11.0 0.0**
XLT pmax pmax
comp=Z,46nm,0.9s
XLT pmax pmax
comp=Z,280nm,4.0s
XLT LR LR
comp=Z,330nm,16.8s
TAWA Tawang 42.27 309 *e*P **P** **09 36 04.7 -1.6**
TAWA IAmb IAmb 09 36 13.1
comp=Z,20nm,0.5s
TAWA *e*S **S** **09 42 17.2 +0.5**
TEY Ternei 42.38 9⇑*e*P **P** **09 36 06.6 +0.3**
TEY pmax pmax
comp=N,30nm,1.1s
TEY pmax pmax
comp=Z,50nm,1.1s
TEY pmax pmax
comp=E,10.0nm,0.7s
BNX BinXian 42.42 359 ⇓P **P** **09 36 06.0 -0.7**
BNX pmax pmax
comp=E,35nm,0.9s
ASAJ Asahikawa 42.76 15 LR LR 09 54 08.7
comp=E,146nm,19.4s,baz=172,slow=36
ASAJ Asahikawa 42.76 15 P **P** **09 36 09.9 +0.4**
ASAJ pmax pmax
comp=Z,39nm,0.9s
JKA Kamikawa-asahi 42.76 15 P **P** **09 36 09.9 +0.4**
JKA IAmb IAmb 09 36 11.4
comp=Z,38nm,0.9s
CAN Canberra 42.99 155 P **P** **09 36 11.4 -0.1**
CAN Canberra 42.99 155 P **P** **09 36 11.4 -0.1**
CAN pmax pmax
comp=Z,51nm,1.5s
BRAT Ballarat 43.08 161 P **P** **09 36 14.7 +2.6**
CAL Calcutta 43.09 300 *e*P **P** **09 36 10.9 -1.5**
CAL IAmb IAmb 09 36 15.1
comp=Z,16nm,0.6s
CAL *e*S **S** **09 42 27.2 -0.8**
COBR COOCHBEHAR 43.60 306 *e*P **P** **09 36 16.7 +0.2**
COBR IAmb IAmb 09 36 30.2
comp=Z,26nm,0.8s
COBR *e*S **S** **09 42 35.4 0.0**
TOO Toolangi 43.62 160 P **P** **09 36 16.4 -0.1**
TOO Toolangi 43.62 160 P **P** **09 36 16.4 -0.1**
TOO pmax pmax
comp=Z,7.0nm,1.1s
LSA Lhasa 43.85 311 IAmb IAmb 09 36 26.0
comp=Z,33nm,0.7s
LSA Lhasa 43.85 311 P **P** **09 36 17.5 -1.5**
LSA Lhasa 43.85 311 P **P** **09 36 21.1 +2.0**
LSA Lhasa 43.85 311 P **P** **09 36 21.0 +2.0**
LSA sP **sP** **09 37 01.5 -4.2**
GTA2 Gaotai 44.39 328 P **P** **09 36 24.0 +1.3**
GTA2 PcP **PcP** **09 38 05.0 +0.8**
GTA2 ScP **ScP** **09 41 43.3 +0.2**
GTA2 S **S** **09 42 47.0 +0.3**
GTA2 ScS **ScS** **09 46 06.3 0.0**
GTA2 pmax pmax
comp=Z,79nm,0.8s
GTA2 pmax pmax
comp=Z,340nm,3.6s
GTA2 LR LR
comp=Z,420nm,19.1s
GTA2 LR LR
comp=Z,380nm,15.5s
GTA2 LR LR
comp=Z,350nm,17.9s
BWNR Bhubaneshwar 44.57 296 *e*P **P** **09 36 23.1 -1.2**
BWNR IAmb IAmb 09 37 07.2
comp=Z,48nm,1.7s
BWNR *e*S **S** **09 42 51.0 +1.4**
SHBG Sahibganj 44.68 303 *e*P **P** **09 36 23.8 -1.3**
SHBG IAmb IAmb 09 36 28.8
comp=Z,48nm,1.1s
SHBG *e*S **S** **09 42 53.0 +2.0**
GOMU GeErMu 44.99 321 P **P** **09 36 29.3 +1.4**
GOMU S **S** **09 42 59.3 +3.3**
GOMU SS **SS** **09 46 24.0 +3.1**
GOMU pmax pmax
comp=Z,20nm,0.9s
GOMU LR LR
comp=Z,96nm,10.9s
GOMU LR LR
comp=Z,83nm,10.8s
GOMU LR LR
comp=Z,190nm,10.5s
YSS Yuzhno-Sakhali 45.45 14 P **P** **09 36 30.8 0.0**
YSS Yuzhno-Sakhali 45.45 14 P **P** **09 36 30.2 -0.5**
YSS Yuzhno-Sakhali 45.45 14 *e*P **P** **09 36 30.3 -0.5**
YSS *e**PP **pP** **09 36 59.7 -2.4**
YSS *e* 09 38 07.4
YSS *e* 09 38 18.0
YSS *e*S **S** **09 42 59.8 -1.7**
YSS pmax pmax
comp=Z,30nm,1.2s
YSS pmax pmax
comp=Z,100nm,4.3s
YSS pmax pmax
comp=N,100nm,5.0s
YSS pmax pmax
comp=E,100nm,4.4s
YSS MLR MLR
comp=Z,200nm,15.0s
KLR Kul'dur 46.02 3*ce*P **P** **09 36 34.9 -0.4**
KLR pmax pmax
comp=Z,47nm,0.8s
EVN Everest 46.44 306 P **P** **09 36 40.5 +0.9**
EVN IAmb IAmb 09 36 52.3
comp=Z,50nm,0.9s
RAGD RAYAGADA 46.44 294 *e*P **P** **09 36 40.1 +1.0**
RAGD IAmb IAmb 09 37 22.0
comp=Z,76nm,1.9s
RAGD *e*S **S** **09 43 17.5 +1.0**
HIA Hailar 46.50 352 P **P** **09 36 39.5 +0.4**
HIA Hailar 46.50 352 IAmb IAmb 09 36 41.1
comp=Z,65nm,1.3s
HILR Hailar Array B 46.78 353 P **P** **09 36 41.5 +0.2**
comp=Z,33nm,0.6s,baz=168,slow=9.7,SNR=34
HILR PcP **PcP** **09 38 12.4 +0.2**
comp=Z,10nm,0.5s,baz=153,slow=4.2,SNR=9.9
comp=Z,33nm,0.6s
HEH HeiHe 46.94 359 *e*P **P** **09 36 41.8 -0.6**
HEH pmax pmax
comp=Z,79nm,1.0s
UGL Uglegorsk 47.29 12 *e*P **P** **09 36 45.6 +0.5**
UGL *e*S S 09 43 44.4 +17
UGL pmax pmax
comp=N,70nm,1.0s
UGL pmax pmax
comp=E,200nm,1.0s
UGL pmax pmax
comp=Z,200nm,1.1s
PALK Pallekele 47.36 277 LR LR 09 58 37.6
comp=Z,118nm,20.6s,baz=106,slow=38
PALK Pallekele 47.36 277 P **P** **09 36 43.1 -3.3**
GRNR Gornyy 47.97 7⇑*i*P **P** **09 36 50.7 +0.3**
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,50nm,0.8s
ULN Ulaanbaatar 48.10 341 P **P** **09 36 51.8 +0.1**
ULN Ulaanbaatar 48.10 341*ce*P **P** **09 36 52.1 +0.5**
ULN pmax pmax
comp=Z,89nm,0.9s
ULN Ulaanbaatar 48.10 341 P **P** **09 36 52.1 +0.5**
ULN Ulaanbaatar 48.10 341 P **P** **09 36 51.6 -0.1**
ULN Ulaanbaatar 48.10 341 P **P** **09 36 52.2 +0.5**
ULN pP **pP** **09 37 18.7 -5.3**
ULN PcP **PcP** **09 38 17.7 +0.6**
SONM Songino Array 48.29 340 P **P** **09 36 53.4 +0.3**
comp=Z,31nm,0.8s,baz=152,slow=8.4,SNR=167
SONM PcP **PcP** **09 38 17.9 +0.1**
comp=Z,11nm,0.6s,baz=156,slow=4.9,SNR=7.2
SONM LR LR 09 58 35.6
comp=Z,129nm,22.0s,baz=162,slow=37
comp=Z,31nm,0.8s
SONM Songino Array 48.29 340 P **P** **09 36 53.2 +0.2**
SONM IAmb IAmb 09 36 54.4
comp=Z,35nm,1.0s
TYV Tymovskoe 49.10 12 *e*P **P** **09 36 59.5 +0.5**
TYV *e*S **S** **09 43 53.0 -0.1**
TYV pmax pmax
comp=Z,24nm,0.9s
TYV pmax pmax
comp=Z,300nm,5.1s
TYV smax smax
comp=N,500nm,6.0s
TYV smax smax
comp=E,300nm,6.0s
CIT Chita 50.20 348 *e*P **P** **09 37 08.0 +0.6**
CIT *e* 09 37 54.6
CIT *e* 09 38 22.2
CIT *e* 09 39 08.8
CIT pmax pmax
comp=Z,110nm,1.8s
ZEA Zeya 50.43 359 *e*P **P** **09 37 08.2 -0.8**
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,40nm,1.0s
HYB Hyderabad 50.60 290 *e*P **P** **09 37 12.2 +1.2**
HYB *e*PcP **PcP** **09 38 26.4 -0.3**
ZAK Zakamensk 51.53 340 *e*P **P** **09 37 16.7 -0.7**
ZAK *e* 09 38 29.6
ZAK pmax pmax
comp=Z,18nm,1.1s
ZAK pmax pmax
comp=Z,17nm,0.9s
TLY Talaya 52.51 341 LR LR 10 01 14.5
comp=Z,124nm,20.9s,baz=138,slow=37
TLY Talaya 52.51 341 P **P** **09 37 24.7 +0.1**
TLY Talaya 52.51 341*ce*P **P** **09 37 25.0 +0.4**
TLY pmax pmax
comp=Z,17nm,1.3s
TLY Talaya 52.51 341 P **P** **09 37 22.5 -2.1**
IRK Irkutsk 52.80 342 *e*P **P** **09 37 26.2 -0.5**
IRK pmax pmax
comp=Z,64nm,3.0s
MOY Mondy 53.40 339 *e*P **P** **09 37 31.9 +0.7**
MOY pmax pmax
comp=Z,59nm,2.5s
MSVF Nonsavu 53.42 115 P **P** **09 37 33.1 +1.2**
MSVF Nonsavu 53.42 115 P **P** **09 37 32.5 +0.6**
MSVF Nonsavu 53.42 115 P **P** **09 37 32.5 +0.6**
MSVF pmax pmax
comp=Z,16nm,0.9s
KNGR Kungurtug, Tuv 53.86 336 *i*P **P** **09 37 34.0 -0.6**
KNGR pmax pmax
comp=Z,33nm,1.0s
WMQ Urumqi 53.99 325 ⇑P **P** **09 37 37.0 +1.4**
WMQ pmax pmax
comp=Z,100nm,0.9s
WMQ pmax pmax
comp=Z,360nm,3.7s
WMQ LR LR
comp=Z,740nm,24.3s
WMQ LR LR
comp=Z,270nm,22.9s
WMQ Urumqi 53.99 325 P **P** **09 37 36.4 +0.8**
WMQ pP **pP** **09 38 04.0 -4.1**
DGTI Dogotuki 54.55 112 P **P** **09 37 40.7 +0.7**
PEA0B Petropavlovsk- 55.46 21*ce*P **P** **09 37 45.6 -0.3**
PETK Petropavlovsk- 55.46 21 P **P** **09 37 46.1 +0.2**
comp=Z,138nm,1.0s,baz=181,slow=3.3,SNR=152
PETK LR LR 10 03 53.3
comp=Z,53nm,19.1s,baz=206,slow=38
comp=Z,138nm,1.0s
PETK Petropavlovsk- 55.46 21 P **P** **09 37 45.8 -0.1**
PET Petropavlovsk 55.74 22 P **P** **09 37 48.4 +0.5**
PET Petropavlovsk 55.74 22 P **P** **09 37 47.7 -0.2**
PET Petropavlovsk 55.74 22 *e*P **P** **09 37 48.2 +0.3**
PET *e**PP **pP** **09 38 21.7 +1.5**
PET *e*S **S** **09 45 24.8 +1.4**
PET pmax pmax
comp=Z,38nm,0.9s
PET pmax pmax
comp=Z,100nm,13.7s
PET MLR MLR
comp=Z,100nm,18.0s
ZSN Zaisan 57.74 327*c i*P **P** **09 38 02.5 +0.4**
ZSN pmax pmax
comp=Z,20nm,1.3s
ZSN Zaisan 57.74 327⇑*i*P **P** **09 38 02.6 +0.4**
comp=Z,20nm,1.3s
DGZ Jazzator, Alta 57.77 330 *i*P **P** **09 38 03.0 +0.4**
DGZ pmax pmax
comp=Z,24nm,0.8s
WUS Wushi 57.91 318 IAmb IAmb 09 38 05.5
comp=Z,19nm,0.8s
WUS Wushi 57.91 318 P **P** **09 38 04.5 +0.9**
WUS x x 09 38 47.0
SHLS Shalkode 58.67 320*c i*P **P** **09 38 07.4 -1.4**
SHLS pmax pmax
comp=Z,28nm,0.8s
SHLS Shalkode 58.67 320⇑*i*P **P** **09 38 07.5 -1.4**
comp=Z,28nm,0.8s
YAK Yakutsk 58.76 1 P **P** **09 38 08.8 -0.1**
YAK Yakutsk 58.76 1*d i*P **P** **09 38 08.9 0.0**
YAK *e**PP **pP** **09 38 44.1 +2.0**
YAK *e* 09 38 57.2
YAK *e* 09 40 19.3
YAK *e*S **S** **09 46 03.2 +0.7**
YAK *e* 09 47 43.0
YAK *e*SS **SS** **09 50 04.7 +6.6**
YAK pmax pmax
comp=Z,319nm,1.0s
YAK pmax pmax
comp=N,63nm,1.1s
YAK pmax pmax
comp=E,18nm,1.1s
YAK pmax pmax
comp=Z,116nm,2.6s
YAK smax smax
comp=E,62nm,3.5s
YAK smax smax
comp=N,37nm,3.0s
MK31 Makanchi Array 58.81 325*ce*P **P** **09 38 10.0 +0.3**
MKAR Makanchi Array 58.81 325 P **P** **09 38 10.2 +0.5**
comp=N,64nm,0.7s,baz=113,slow=8.1,SNR=594
MKAR ScP **ScP** **09 42 44.0 -1.0**
comp=N,4.9nm,0.8s,baz=120,slow=4.9,SNR=5.7
MKAR PKPPKP **P'P'df** **10 07 46.6 +2.6**
comp=N,0.5nm,0.8s,baz=228,slow=1.5,SNR=4.7
comp=N,64nm,0.7s
MKAR Makanchi Array 58.81 325 P **P** **09 38 09.7 +0.1**
MA2 Magadan 58.94 13 LR LR 10 02 53.5
comp=N,46nm,21.5s,baz=206,slow=35
MA2 Magadan 58.94 13 P **P** **09 38 10.5 +0.2**
MA2 Magadan 58.94 13 P **P** **09 38 10.2 -0.1**
MA2 Magadan 58.94 13*ce*P **P** **09 38 10.8 +0.5**
MA2 pmax pmax
comp=Z,110nm,1.0s
UZB Uzynbulak 58.95 320*c i*P **P** **09 38 11.3 +0.5**
UZB pmax pmax
comp=Z,20nm,0.7s
UZB Uzynbulak 58.95 320⇑*i*P **P** **09 38 11.4 +0.5**
comp=Z,20nm,0.7s
MAKZ Makanchi 59.00 325 P **P** **09 38 11.0 +0.1**
MAKZ Makanchi 59.00 325 P **P** **09 38 11.3 +0.3**
TARG Taragay, Kyrgy 59.09 318 P **P** **09 38 12.3 +0.1**
TARG IAmb IAmb 09 38 17.3
comp=Z,22nm,0.8s
TARG Taragay, Kyrgy 59.09 318 P **P** **09 38 12.3 +0.1**
TARG pmax pmax
comp=Z,22nm,0.8s
SATY Saty 59.30 319 *e*P **P** **09 38 13.8 +0.6**
SATY pmax pmax

comp=Z,57nm,1.1s
SATY Saty 59.30 319 *e*P P **09 38 13.8 +0.6**
comp=Z,57nm,1.1s
KPKS Kokpek 59.31 320 *e*P P **09 38 13.8 +0.5**
KPKS Kokpek 59.31 320 *e*P P **09 38 13.8 +0.5**
NIL Nilore 59.36 308 P P **09 38 12.7 -1.0**
NIL IAmb IAmb 09 38 58.1
comp=Z,56nm,1.2s
NIL Nilore 59.36 308 P P **09 38 12.7 -1.0**
NIL pmax pmax
comp=Z,56nm,1.3s
NIL Nilore 59.36 308 P P **09 38 13.2 -0.6**
MSZ Milford Sound 59.41 148 P P **09 38 14.4 +0.8**
JCZ Jackson Bay 59.47 147 P P **09 38 14.6 +0.3**
KSH2 Kashi 59.56 314 P P **09 38 16.0 +0.9**
KSH2 S S **09 46 14.3 +0.1**
KSH2 pmax pmax
comp=Z,21nm,0.9s
KSH2 LR LR
comp=Z,430nm,16.5s
KSH2 LR LR
comp=Z,310nm,14.1s
KSH2 LR LR
comp=Z,270nm,15.8s
DSZ Denniston Nort 59.73 143 P P **09 38 17.6 +1.5**
NRN Naryn 60.19 317 IAmb IAmb 09 38 21.4
comp=Z,16nm,0.8s
TDK Taldyqorghan 60.22 321 *e*P P **09 38 19.7 +0.4**
TDK pmax pmax
comp=Z,23nm,0.7s
TDK Taldyqorghan 60.22 321 *e*P P **09 38 19.8 +0.4**
comp=Z,23nm,0.7s
MDOK Medeo 60.24 319 *e*P P **09 38 20.1 +0.5**
MDOK *e*S S **09 46 23.6 +1.0**
MDOK Medeo 60.24 319 *e*P P **09 38 20.2 +0.5**
MDOK *e*S S **09 46 23.6 +1.0**
TNSS Tian-Shan 60.25 319 *e*P P **09 38 20.2 +0.2**
TNSS Tian-Shan 60.25 319 *e*P P **09 38 20.2 +0.2**
AAA Alma-Ata 60.34 319 *e*P P **09 38 20.8 +0.5**
AAA pmax pmax
comp=Z,48nm,0.9s
AAA Alma-Ata 60.34 319 *e*P P **09 38 20.8 +0.5**
comp=Z,48nm,0.9s
ULHL Ulahol 60.37 318 P P **09 38 21.5 +0.8**
SNR=12
NNZ Nelson 60.38 142 P P **09 38 20.3 -0.1**
THZ Tophouse 60.41 143 P P **09 38 20.0 -0.7**
LBZ Lake Benmore 60.44 146 P P **09 38 22.1 +1.3**
LBZ Lake Benmore 60.44 146 P P **09 38 20.8 0.0**
RPZ Rata Peaks 60.50 145 LR LR 10 04 08.0
comp=Z,244nm,21.6s,baz=252,slow=35
LTZ Lake Taylor 60.63 144 P P **09 38 22.3 +0.1**
NGZ Ngauruhoe 60.66 139 P P **09 38 24.4 +1.8**
OTVZ Oturere 60.69 139 P P **09 38 24.6 +1.8**
TMVZ Te Maari 60.69 139 P P **09 38 23.7 +0.9**
ETVZ East Tongariro 60.71 139 P P **09 38 23.3 +0.4**
OXZ Oxford 60.83 145 P P **09 38 23.3 -0.1**
TMZ Timaru 60.90 146 P P 09 38 28.8 +4.9
KUU Kurty 61.02 320 *e*P P **09 38 25.2 +0.4**
KUU pmax pmax
comp=Z,15nm,0.7s
KUU Kurty 61.02 320 *e*P P **09 38 25.3 +0.4**
comp=Z,15nm,0.7s
TKM2 Tokmak 2 61.09 318 P P **09 38 26.2 +0.7**
SNR=25
ODZ Otahua Downs 61.11 147 P P **09 38 27.0 +1.7**
URZ Urewera 61.19 137 P P **09 38 24.8 -1.1**
BKZ Black Stump Fm 61.24 138 P P **09 38 26.4 +0.1**
BKZ Black Stump Fm 61.24 138 P P **09 38 25.6 -0.8**
RTZ Ruatahuna 61.28 138 P P **09 38 26.2 -0.5**
RTZ IAmb IAmb 09 38 28.6
comp=Z,29nm,0.6s
RTZ Ruatahuna 61.28 138 P P **09 38 26.4 -0.3**
HAZ Te Kaha 61.39 136 P P **09 38 26.9 -0.4**
KRHZ Kereru 61.41 139 P P **09 38 26.7 -0.7**
NMHZ Naumai 61.41 138 P P **09 38 28.0 +0.4**
RUGZ Raukumara Rang 61.42 137 P P **09 38 27.4 -0.3**
MRZ Mangatainoka R 61.45 140 P P **09 38 27.0 -0.7**
MWZ Matawai 61.51 137 P P **09 38 27.5 -0.6**
MCHZ McNeill Hill 61.52 139 P P **09 38 28.3 +0.1**
UCH Uchtor 61.53 317 P P **09 38 29.8 +1.0**
SNR=37
CHMS Chumysh 61.68 318 P P **09 38 29.6 +0.4**
SNR=6.3
AAK Ala-Archa 61.71 318 P P **09 38 30.4 +0.8**
SNR=10
AAK Ala-Archa 61.71 318 P P **09 38 29.7 +0.1**
AAK Ala-Archa 61.71 318*ce*P P **09 38 30.6 +1.0**
AAK pmax pmax
comp=Z,16nm,1.0s
AAK Ala-Archa 61.71 318 P P **09 38 27.8 -1.8**
AAK Ala-Archa 61.71 318 P P **09 38 30.4 +0.8**
AAK x x 09 39 03.2
ZAA0 Zalesovo Array 61.73 333 P P **09 38 28.3 -0.9**
ZAA0 IAmb IAmb 09 38 29.9
comp=Z,28nm,0.9s
ZALV Zalesovo Beam 61.73 333 P P **09 38 28.4 -0.8**
comp=Z,22nm,0.7s,baz=116,slow=6.4,SNR=86
ZALV PKPPKP **P'P'df 10 07 42.7 +3.7**
comp=Z,0.8nm,0.6s,baz=320,slow=3.9,SNR=4.9
ZALV LR LR 10 08 10.5
comp=Z,60nm,19.0s,baz=140,slow=39
comp=Z,22nm,0.7s
ZALV Zalesovo Beam 61.73 333 P P **09 38 28.3 -0.9**
KAHZ Kahuranaki 61.82 139 P P **09 38 29.8 -0.4**
PUZ Puketiti 61.87 137 P P **09 38 30.0 -0.6**
USP Ospenovka 61.96 318 P P **09 38 31.8 +0.6**
SNR=13
EKS2 Erkin-Say 62.20 317 P P **09 38 33.8 +0.9**
SNR=33
ARSB Arslanbob 62.23 316 IAmb IAmb 09 38 34.2
comp=Z,17nm,0.7s
SHEM Shemya Is, Ala 62.28 30 LR LR 10 00 15.6
comp=Z,53nm,21.4s,baz=113,slow=31
SEY Seymchan 62.30 12*ce*P P **09 38 33.7 +0.8**
SEY pmax pmax
comp=Z,102nm,1.0s
KBL Kabul 62.96 307 P P **09 38 38.1 -0.1**
KBL IAmb IAmb 09 38 43.2
comp=Z,24nm,0.8s
KBL Kabul 62.96 307 P P **09 38 38.1 -0.1**
KBL pmax pmax
comp=Z,24nm,0.8s
KBL Kabul 62.96 307 P P **09 38 35.8 -2.4**
KURBB Kurchatov Arra 62.97 327 P P **09 38 37.4 -0.2**
comp=Z,56nm,0.4s,baz=126,slow=6.3,SNR=248
comp=Z,56nm,0.4s
KURK Kurchatov 62.97 327 P P **09 38 37.2 -0.3**
KURK Kurchatov 62.97 327 P P **09 38 37.4 -0.2**
KURK Kurchatov 62.97 327 P P **09 38 37.3 -0.3**
BTK Batken 63.31 314 IAmb IAmb 09 40 43.8
comp=Z,51nm,1.3s
DZA Taraz 63.95 317 *e*P P **09 38 44.4 +0.1**
DZA Taraz 63.95 317 *e*P P **09 38 44.5 +0.1**
CHGR Chuyangaron 64.07 312 IAmb IAmb 09 39 31.7
comp=Z,20nm,0.7s
SHAA Shahritus 64.53 310 IAmb IAmb 09 40 13.1
comp=Z,22nm,0.8s
KK31 Karatay Array 64.59 317 P P **09 38 48.5 +0.1**
KK31 IAmb IAmb 09 38 50.4
comp=Z,26nm,0.9s
KK31 Karatay Array 64.59 317 P P **09 38 48.5 +0.1**
KK31 pmax pmax
comp=Z,26nm,1.0s
KKAR Karatay Array 64.59 317 P P **09 38 48.6 +0.1**
KKAR Karatay Array 64.59 317 P P **09 38 48.6 +0.1**
CHM Chimkent 64.94 316 *e*P P **09 38 51.0 +0.3**
CHM pmax pmax
comp=Z,15nm,0.7s
CHM Chimkent 64.94 316 *e*P P **09 38 51.1 +0.3**
comp=Z,15nm,0.7s
BRLS Boroldav 65.03 317 *e*P P **09 38 51.4 +0.2**
BRLS Boroldav 65.03 317 *e*P P **09 38 51.5 +0.2**
TIXI Tiksi 68.41 0 LR LR 10 10 26.4
comp=Z,54nm,20.0s,baz=190,slow=37
TIXI Tiksi 68.41 0 P P **09 39 10.9 -1.2**
TIXI IAmb IAmb 09 39 13.2
comp=Z,58nm,1.1s
TIXI Tiksi 68.41 0*ce*P P **09 39 11.0 -1.1**
TIXI pmax pmax
comp=Z,71nm,1.3s
TIXI Tiksi 68.41 0 P P **09 39 11.1 -1.0**
BVAR Borovoye Array 68.55 327 P P **09 39 13.2 -0.2**
comp=Z,28nm,0.6s,baz=116,slow=6.8,SNR=86
comp=Z,28nm,0.6s

BORK Borovoye 68.60 327 P P **09 39 13.2 -0.4**
BORK IAmb IAmb 09 39 15.2
comp=Z,52nm,0.8s
BORK Borovoye 68.60 327*ce*P P **09 39 13.4 -0.3**
BORK pmax pmax
comp=Z,69nm,1.0s
JLN Jalan Bani Buh 69.09 292 P P **09 39 16.0 -1.3**
BILL Bilibino 69.77 14 P P **09 39 20.2 -0.3**
BILL IAmb IAmb 09 39 22.2
comp=Z,58nm,1.5s
BILL Bilibino 69.77 14*ce*P P **09 39 20.3 -0.3**
BILL pmax pmax
comp=Z,23nm,1.0s
WSAR Wadi Sarin 69.91 293 P P **09 39 21.6 -0.7**
JMDO Jabal Madar 70.32 293 P P **09 39 23.9 -1.0**
MHTO MHTO 70.34 291 P P **09 39 23.9 -1.1**
SNR=5.5
BIDO Bidbid 70.40 294 P P **09 39 24.3 -1.0**
SMDO Samad 70.43 293 P P **09 39 24.5 -1.1**
JASK Jask - Hormozg 70.86 296 P P **09 39 27.3 -0.8**
HOQ Hoqain 71.15 294 P P **09 39 29.3 -0.6**
BSY Bisya 71.18 293 P P **09 39 29.7 -0.5**
NRIK Noril'sk 71.32 346 P P **09 39 29.6 -0.3**
comp=Z,42nm,0.6s,baz=127,slow=6.4,SNR=105
NRIK LR LR 10 13 38.5
comp=Z,106nm,21.1s,baz=149,slow=38
comp=Z,42nm,0.6s
NRIK Noril'sk 71.32 346 IAmb IAmb 09 39 31.4
comp=Z,43nm,0.8s
SOHO SOHO 71.91 294 P P **09 39 33.9 -0.5**
BANOM Banah 72.27 296 P P **09 39 36.1 -0.4**
UOSS Minazif 72.27 295 P P **09 39 36.1 -0.4**
SPIA Saint Paul Isl 72.30 30 P P **09 39 36.3 +0.3**
baz=247
HATD Hatta, Dubai 72.33 295 P P **09 39 36.7 -0.2**
MASF Masafi 72.35 295 P P **09 39 37.2 +0.1**
SHAO Shalim 72.37 288 P P **09 39 37.3 +0.1**
ASHO Ashiyiah 72.38 295 P P **09 39 35.8 -1.5**
SHME Shamm 72.42 296 P P **09 39 37.7 +0.3**
ALNE Al Ain 72.61 294 P P **09 39 38.8 +0.2**
ASUD Al Ashush, Dub 73.04 295 P P **09 39 41.2 +0.1**
UNV Unalaska Valle 73.12 34 P P **09 39 41.1 +0.2**
baz=251
AJN Ajban 73.34 295 P P **09 39 42.5 -0.3**
ABKAR Akbulak array 73.47 321 P P **09 39 42.4 -0.7**
DOK Doka 73.82 288 P P **09 39 45.0 -0.7**
SNR=6
WHFO Wadi Hawf 74.13 288 P P **09 39 46.4 -1.2**
SNR=8.0
MZWR Madinat Zayed 74.30 294 P P **09 39 48.1 -0.3**
GAMB Gambell 74.37 24 IAmb IAmb 09 39 50.1
comp=Z,73nm,1.0s
GAMB Gambell 74.37 24 P P **09 39 48.5 +0.6**
baz=244
MZR Muzera 74.62 293 P P **09 39 49.8 -0.5**
FALS False Pass 75.15 34 P P **09 39 52.3 -0.4**
baz=254
GHWR Ruwais 75.23 294 P P **09 39 53.6 -0.2**
M11K Mekoryuk 75.43 28 IAmb IAmb 09 39 57.3
comp=Z,46nm,1.2s
M11K Mekoryuk 75.43 28 P P **09 39 54.7 +0.6**
baz=250
ARTI Arti 76.24 328 P P **09 39 57.8 -1.1**
ARTI IAmb IAmb 09 40 46.1
comp=Z,23nm,0.7s
ARTI Arti 76.24 328*d iP* P **09 39 58.0 -0.9**
ARTI 09 42 47.3
ARTI S S **09 49 32.5 +1.0**
ARTI SS SS **09 54 24.3 -4.0**
ARTI pmax pmax
comp=Z,15nm,0.7s
ARTI Arti 76.24 328 P P **09 39 57.4 -1.4**
TNA Tin City 76.59 23 P P **09 40 00.9 +0.3**
baz=247,SNR=18
K13K Kusilvak Mount 76.66 27 IAmb IAmb 09 40 03.6
comp=Z,77nm,0.9s
K13K Kusilvak Mount 76.66 27 P P **09 40 02.0 +1.0**
baz=251,SNR=49
M13K Dall Lake 76.78 28 IAmb IAmb 09 40 04.4
comp=Z,80nm,1.0s
M13K Dall Lake 76.78 28 P P **09 40 02.8 +1.0**
baz=253,SNR=14
SDPT Sand Point 76.91 34 P P **09 40 02.5 -0.1**
baz=256
SMRA Abu-Samra 77.14 295 P P **09 40 04.2 -0.4**
F14K Arctic Creek 77.17 23 P P **09 40 04.8 +0.9**
baz=249
ANM Nome 77.23 24 IAmb IAmb 09 40 07.0
comp=Z,44nm,1.1s
ANM Nome 77.23 24 P P **09 40 05.0 +0.7**
baz=250,SNR=44
CHNA Chernabura Isl 77.28 34 P P **09 40 04.9 +0.2**
baz=257
L14K Kuka Creek 77.37 28 P P **09 40 06.1 +1.0**
baz=253,SNR=59
J14K Nanvaranak Lak 77.40 26 IAmb IAmb 09 40 08.2
comp=Z,47nm,1.1s
J14K Nanvaranak Lak 77.40 26 P P **09 40 06.2 +0.9**
baz=252
N14K Kuskokwak Cree 77.44 29 IAmb IAmb 09 40 07.1
comp=Z,47nm,0.7s
N14K Kuskokwak Cree 77.44 29 P P **09 40 06.0 +0.5**
baz=254,SNR=12
O14K Tigyukauivet M 77.47 30 IAmb IAmb 09 40 07.7
comp=Z,62nm,1.0s
O14K Tigyukauivet M 77.47 30 P P **09 40 06.2 +0.6**
baz=255
M14K Bethel 77.54 28 P P **09 40 06.8 +0.8**
baz=254,SNR=34
F15K North Star Dit 77.91 23 IAmb IAmb 09 40 10.9
comp=Z,36nm,1.1s
F15K North Star Dit 77.91 23 P P **09 40 08.8 +0.8**
baz=250,SNR=31
G15K Niukluk 77.92 24 P P **09 40 08.2 +0.2**
baz=251
L15K Ungalak Mounta 78.02 27 P P **09 40 09.3 +0.6**
baz=254,SNR=28
M15K Kasigluk River 78.13 28 P P **09 40 09.8 +0.5**
baz=255,SNR=27
K15K Wolf Creek Mou 78.17 27 P P **09 40 10.6 +1.1**
baz=254,SNR=45
O15K Ungalikthiuk R 78.17 30 IAmb IAmb 09 40 12.0
comp=Z,34nm,1.0s
O15K Ungalikthiuk R 78.17 30 P P **09 40 09.9 +0.4**
baz=256,SNR=14
N15K Kwethluk River 78.28 29 IAmb IAmb 09 40 13.0
comp=Z,53nm,1.0s
N15K Kwethluk River 78.28 29 P P **09 40 10.7 +0.6**
baz=256,SNR=12
H16K Elim 78.54 24 P P **09 40 11.8 +0.4**
baz=253,SNR=110
C16K Lisburne Hills 78.55 20 IAmb IAmb 09 40 14.1
comp=Z,77nm,1.1s
C16K Lisburne Hills 78.55 20 P P **09 40 11.8 +0.4**
baz=249
G16K Koyuk River 78.72 24 P P **09 40 13.0 +0.6**
baz=252
J16K Anvik River 78.85 26 IAmb IAmb 09 40 16.5
comp=Z,90nm,1.1s
J16K Anvik River 78.85 26 P P **09 40 14.5 +1.2**
baz=254
L16K Owhat River 78.95 28 IAmb IAmb 09 40 16.6
comp=Z,79nm,1.1s
L16K Owhat River 78.95 28 P P **09 40 14.4 +0.6**
baz=256,SNR=40
R16K Pilot Point 78.97 32 P P **09 40 14.5 +0.6**
baz=258
I17K Unalakleet 78.97 25 P P **09 40 15.2 +1.4**
baz=254,SNR=64
N16K Nishlik Lake 78.99 29 P P **09 40 15.1 +1.0**
baz=257
M16K Umber Creek 79.03 28 IAmb IAmb 09 40 17.1
comp=Z,65nm,1.1s
M16K Timber Creek 79.03 28 P P **09 40 15.1 +0.9**
baz=256,SNR=25
P16K Nushagak River 79.06 30 P P **09 40 15.0 +0.6**
baz=258,SNR=9.5
O16K Kokwok River B 79.12 30 IAmb IAmb 09 40 16.9
comp=Z,47nm,1.1s
O16K Kokwok River B 79.12 30 P P **09 40 15.4 +0.6**
baz=257,SNR=17
D17K Noatak River 79.15 21 P P **09 40 15.9 +1.1**
baz=251,SNR=166
RDOG Red Dog Mine 79.33 21 IAmb IAmb 09 40 18.6
comp=Z,65nm,1.1s
RDOG Red Dog Mine 79.33 21 P P **09 40 16.5 +0.8**
baz=251,SNR=60

C17K DeLong Mountai 79.37 20 P P **09 40 16.6 +0.6**
baz=251,SNR=61
E17K Hotham Inlet 79.42 22 P P **09 40 17.3 +1.0**
baz=253,SNR=72
G17K Kiwalik Mounta 79.43 24 P P **09 40 17.0 +0.7**
baz=254
F17K Baldwin Pennin 79.46 23 IAmb IAmb 09 40 18.4
comp=Z,29nm,0.9s
F17K Baldwin Pennin 79.46 23 P P **09 40 17.3 +0.9**
baz=253,SNR=21
H17K Granite Mounta 79.58 24 IAmb IAmb 09 40 19.2
comp=Z,32nm,1.0s
H17K Granite Mounta 79.58 24 P P **09 40 18.1 +0.9**
baz=255,SNR=41
L17K Donlin 79.59 27 P P **09 40 18.6 +1.3**
baz=257,SNR=28
R17L Mt. Peulik Vol 79.62 32 P P **09 40 17.4 -0.2**
baz=259
PLK4 Peulik 4 79.62 32 IAmb IAmb 09 40 19.3
comp=Z,71nm,1.1s
O17K Koliganek Bris 79.66 30 P P **09 40 18.2 +0.5**
baz=258
Q16K King Salmon 79.66 31 P P **09 40 17.8 +0.1**
baz=259
CHIR Chirikof Islan 79.70 34 P P **09 40 18.6 +0.6**
baz=260
K17K Iditarod 79.72 27 IAmb IAmb 09 40 20.8
comp=Z,60nm,0.9s
K17K Iditarod 79.72 27 P P **09 40 19.3 +1.3**
baz=257,SNR=36
N17K Nushagak Hills 79.77 29 IAmb IAmb 09 40 21.6
comp=Z,33nm,1.1s
N17K Nushagak Hills 79.77 29 P P **09 40 19.4 +1.2**
baz=258,SNR=12
M17K Holitna River 79.83 28 IAmb IAmb 09 40 22.0
comp=Z,44nm,1.1s
M17K Holitna River 79.83 28 P P **09 40 19.8 +1.2**
baz=258
P17K Kvichak River 79.87 30 IAmb IAmb 09 40 34.9
comp=Z,32nm,0.9s
P17K Kvichak River 79.87 30 P P **09 40 18.2 -0.6**
baz=259
E18K Tukpahlearik C 79.98 22 IAmb IAmb 09 40 21.8
comp=Z,72nm,0.9s
E18K Tukpahlearik C 79.98 22 P P **09 40 20.4 +1.2**
baz=254,SNR=83
Q17K Contact Creek 79.98 31 P P **09 40 18.9 -0.7**
baz=260
F18K Selawik 80.12 23 P P **09 40 20.7 +0.7**
baz=255,SNR=22
C18K Utukok River 80.12 21 IAmb IAmb 09 40 21.7
comp=Z,31nm,0.9s
C18K Utukok River 80.12 21 P P **09 40 20.6 +0.5**
baz=253
H18K Honhosa River 80.27 24 P P **09 40 21.5 +0.6**
baz=256,SNR=21
G18K Tagagawik 80.33 24 IAmb IAmb 09 40 23.7
comp=Z,42nm,1.1s
G18K Tagagawik 80.33 24 P P **09 40 21.7 +0.5**
baz=256
L18K Granite Mounta 80.35 27 IAmb IAmb 09 40 24.6
comp=Z,32nm,0.9s
L18K Granite Mounta 80.35 27 P P **09 40 22.4 +1.1**
baz=258
N18K Kilae Creek 80.42 29 P P **09 40 22.6 +0.8**
baz=259,SNR=9.9
Q18K Katmai Hardscr 80.50 31 P P **09 40 21.6 -0.8**
baz=260
P18K Big Mountain, 80.52 30 P P **09 40 22.0 -0.3**
baz=260,SNR=8.8
J18K Innoko River 80.59 26 IAmb IAmb 09 40 25.3
comp=Z,58nm,1.3s
J18K Innoko River 80.59 26 P P **09 40 23.0 +0.4**
baz=258
M18K Stony River 80.61 28 P P **09 40 23.7 +0.9**
baz=259
O18K Koktuh Hills 80.61 30 IAmb IAmb 09 40 26.2
comp=Z,39nm,1.0s
O18K Koktuh Hills 80.61 30 P P **09 40 23.3 +0.5**
baz=260,SNR=9.6
SII Sitkinak Islan 80.61 33 P P **09 40 23.5 +0.6**
baz=261
A19K Wainwright 80.62 19 P P **09 40 23.9 +1.3**
baz=253
AKT Akhty 80.71 311 *e*P P **09 40 23.5 -0.4**
AKT *e**PP pP **09 40 59.2 +0.5**
AKT pmax pmax
comp=Z,22nm,0.9s
GCSA Galena City Sc 80.79 25 P P **09 40 24.3 +0.7**
baz=258,SNR=31
C19K Lookout Ridge 80.81 20 P P **09 40 25.1 +1.4**
baz=254,SNR=157
F19K Shaleruckik Mo 80.90 23 P P **09 40 24.4 +0.2**
baz=256,SNR=34
G19K Purcell Mounta 81.01 23 P P **09 40 25.7 +0.9**
baz=257,SNR=140
O19K Port Alsworth 81.11 30 P P **09 40 25.4 0.0**
baz=261
N19K Bonanza Creek 81.13 29 IAmb IAmb 09 40 28.6
comp=Z,57nm,0.9s
N19K Bonanza Creek 81.13 29 P P **09 40 26.4 +0.7**
baz=260
D19K Kuna River 81.17 21 P P **09 40 26.5 +0.9**
baz=256
J19K Poorman 81.17 26 IAmb IAmb 09 40 28.7
comp=Z,76nm,1.0s
J19K Poorman 81.17 26 P P **09 40 26.6 +0.9**
baz=259,SNR=67
L19K White Mountain 81.19 28 IAmb IAmb 09 40 28.8
comp=Z,39nm,1.0s
L19K White Mountain 81.19 28 P P **09 40 26.7 +0.8**
baz=260
OHAK Old Harbor 81.19 33 P P **09 40 26.5 +0.6**
OHAK Old Harbor 81.19 33 P P **09 40 27.0 +1.1**
baz=262
E19K Redstone River 81.25 22 P P **09 40 27.0 +1.0**
baz=257
Q19K Cape Douglas, 81.25 31 IAmb IAmb 09 40 26.5
comp=Z,62nm,1.0s
Q19K Cape Douglas, 81.25 31 P P **09 40 25.7 -0.6**
baz=261
M19K Big River Lodg 81.35 28 IAmb IAmb 09 40 33.2
comp=Z,25nm,0.8s
M19K Big River Lodg 81.35 28 P P **09 40 27.7 +1.0**
baz=260
P19K Oil Pt 81.57 30 P P **09 40 27.6 -0.3**
baz=262
KDAK Kodiak Island 81.65 32 P P **09 40 28.7 +0.4**
baz=262
KDAK Kodiak Island 81.65 32 P P **09 40 28.7 +0.4**
BELG Belogornoye 81.70 322 *i* P P **09 40 27.6 -1.1**
BELG pmax pmax
comp=Z,10.0nm,0.9s
F20K Avaraart Lake 81.73 23 IAmb IAmb 09 40 31.2
comp=Z,32nm,0.9s
F20K Avaraart Lake 81.73 23 P P **09 40 29.7 +1.1**
baz=258
K20K Telida 81.74 26 P P **09 40 29.8 +1.1**
baz=260
D20K Etivluk River 81.75 21 P P **09 40 29.4 +0.7**
baz=257,SNR=65
H20K Anotleneega Mo 81.77 24 P P **09 40 29.9 +1.1**
baz=259,SNR=53
E20K Nigu River 81.81 21 P P **09 40 30.1 +1.1**
baz=258
Q20K Shuyak Island 81.85 31 P P **09 40 29.4 0.0**
baz=263
B20K Meade River 81.86 20 IAmb IAmb 09 40 31.6
comp=Z,48nm,0.9s
B20K Meade River 81.86 20 P P **09 40 30.0 +0.9**
baz=257
RED Redoubt Volcan 81.90 29 IAmb IAmb 09 40 30.8
comp=Z,40nm,0.9s
M20K Styx River 81.94 28 IAmb IAmb 09 40 33.9
comp=Z,100nm,1.6s
M20K Styx River 81.94 28 P P **09 40 30.7 +0.9**
baz=261,SNR=24
RAYN Ar Rayn 81.97 293 P P **09 40 30.1 -0.7**
RAYN Ar Rayn 81.97 293 P P **09 40 30.1 -0.7**
RAYN pmax pmax
comp=Z,8.0nm,0.7s
RAYN Ar Rayn 81.97 293 P P **09 40 30.2 -0.7**
N20K Mount Spurr 82.28 29 P P **09 40 31.4 -0.3**
baz=262
SPCR Spurr Chakacha 82.28 29 P P **09 40 31.3 -0.4**
baz=262
IMAR Indian Mountai 82.31 24 P P **09 40 32.4 +0.8**
A21K Barrow 82.33 18 P P **09 40 32.5 +0.9**

baz=257
HOM Homer 82.37 30 P P 09 40 32.5 +0.5
baz=263
ABPO Ambohimpanom 82.41 250 P P 09 40 32.7 -0.6
ABPO Ambohimpanom 82.41 250 P P 09 40 32.7 -0.6
ABPO pmax pmax
comp=Z,19nm,0.9s
C21K Knifeblade Rid 82.49 21 P P 09 40 33.6 +1.1
baz=259
G21K Allakaket 82.50 23 IAmb IAmb 09 40 35.6
comp=Z,74nm,1.1s
G21K Allakaket 82.50 23 P P 09 40 33.6 +1.0
baz=260,SNR=74
PPLA Purkeypile 82.52 27 IAmb IAmb 09 40 34.3
comp=Z,26nm,0.8s
PPLA Purkeypile 82.52 27 P P 09 40 33.3 +0.3
baz=262,SNR=10
CNPM China Poot 82.56 30 IAmb IAmb 09 40 34.5
comp=Z,34nm,0.9s
CHUM Lake Minchumin 82.60 26 P P 09 40 34.0 +0.8
baz=262,SNR=24
F21K Alatna River 82.62 23 P P 09 40 33.8 +0.5
baz=260
B21K Ikpikpuk River 82.64 20 P P 09 40 34.3 +1.1
baz=259
H21K Melozitna Rive 82.65 24 P P 09 40 34.3 +0.9
baz=261,SNR=93
E21K Killik River 82.65 21 IAmb IAmb 09 40 36.3
comp=Z,69nm,1.1s
E21K Killik River 82.65 21 P P 09 40 34.2 +0.9
baz=260
VNDA Vanda 82.68 173 P P 09 40 32.6 -0.7
comp=Z,5.2nm,0.7s,baz=314,slow=8.6,SNR=7.1
VNDA LR LR 10 18 29.9
comp=Z,116nm,18.1s,baz=331,slow=36
comp=Z,5.2nm,0.7s
VNDA Vanda 82.68 173 IAmb IAmb 09 43 08.0
comp=Z,104nm,1.9s
SKT Skwentna 82.70 28 IAmb IAmb 09 40 34.7
comp=Z,46nm,0.9s
SKT Skwentna 82.70 28 P P 09 40 33.2 -0.6
baz=263,SNR=31
CAPN Captain Cook N 82.74 29 P P 09 40 34.4 +0.6
baz=263
BRLK Bradley Lake 82.76 30 IAmb IAmb 09 40 36.7
comp=Z,40nm,1.0s
BRSE Bradley Lake S 82.83 30 P P 09 40 34.1 -0.3
baz=264,SNR=6.2
GNI Garni 82.91 310 *i* P P 09 40 34.6 -0.9
GNI pmax pmax
comp=Z,18nm,0.8s
SUA Susitna One 83.01 29 P P 09 40 35.0 -0.5
baz=264,SNR=40
VOI Vohitsoka 83.12 248 P P 09 40 36.3 -0.5
VOI Vohitsoka 83.12 248 P P 09 40 35.7 -1.2
KTH Kantishna Hill 83.17 26 IAmb IAmb 09 40 38.3
comp=Z,60nm,1.1s
B22K Teshekpuk Lake 83.17 20 P P 09 40 36.8 +0.8
baz=260
D22K Ayikyak River 83.19 21 IAmb IAmb 09 40 42.1
comp=Z,25nm,0.9s
D22K Ayikyak River 83.19 21 P P 09 40 37.2 +1.1
baz=261,SNR=25
BPAW Bear Paw Mtn. 83.20 26 IAmb IAmb 09 40 38.7
comp=Z,37nm,1.0s
BPAW Bear Paw Mtn. 83.20 26 P P 09 40 36.6 +0.3
baz=263,SNR=28
H22K Ishtalitna Cre 83.26 24 IAmb IAmb 09 40 39.9
comp=Z,61nm,1.1s
H22K Ishtalitna Cre 83.26 24 P P 09 40 37.7 +1.1
baz=262,SNR=57
CUT Chulitna 83.34 28 IAmb IAmb 09 40 38.6
comp=Z,70nm,1.1s
CUT Chulitna 83.34 28 P P 09 40 36.3 -0.7
baz=264,SNR=12
M22K Willow 83.34 28 P P 09 40 36.4 -0.5
baz=264,SNR=38
E22K Anaktuvuk Pass 83.39 22 P P 09 40 38.3 +1.1
baz=262,SNR=153
O22K Cooper Landing 83.41 30 P P 09 40 37.2 -0.2
baz=265,SNR=14
MLY Manley 83.42 25 IAmb IAmb 09 40 39.5
comp=Z,45nm,0.9s
MLY Manley 83.42 25 P P 09 40 38.0 +0.5
baz=263,SNR=71
TRF Thorofare Moun 83.44 27 P P 09 40 37.0 -0.7
TRF IAmb IAmb 09 40 39.4
comp=Z,59nm,1.0s
TRF Thorofare Moun 83.44 27 P P 09 40 37.3 -0.4
baz=264,SNR=28
RC01 Rabbit Creek A 83.46 29 P P 09 40 37.0 -0.6
RC01 IAmb IAmb 09 40 39.3
comp=Z,60nm,0.9s
RC01 Rabbit Creek A 83.46 29 P P 09 40 37.3 -0.4
baz=265,SNR=22
SEW Seward 83.51 30 IAmb IAmb 09 40 39.9
comp=Z,56nm,1.1s
SEW Seward 83.51 30 P P 09 40 37.9 0.0
baz=265,SNR=10.0
PPT Papeete 83.63 108 LR LR 10 14 06.3
comp=Z,47nm,21.4s,baz=266,slow=33
MAW Mawson 83.69 200 P P 09 40 38.1 -0.5
comp=Z,13nm,0.9s,baz=198,slow=6.4,SNR=3.6
comp=Z,13nm,0.9s
PMR Palmer 83.80 29 P P 09 40 39.7 +0.4
PMR Palmer 83.80 29 P P 09 40 39.1 -0.2
PMR Palmer 83.80 29 P P 09 40 39.1 -0.2
PMR pmax pmax
comp=Z,68nm,0.9s
PMR Palmer 83.80 29 P P 09 40 39.1 -0.2
baz=265,SNR=29
COLD Coldfoot 83.89 23 P P 09 40 39.9 +0.2
COLD Coldfoot 83.89 23 P P 09 40 40.8 +1.1
baz=263,SNR=138
G23K Bananza Creek 83.90 23 P P 09 40 40.4 +0.6
G23K Bananza Creek 83.90 23 P P 09 40 40.9 +1.0
baz=264,SNR=112
GHO Glory Hole Cre 83.91 28 P P 09 40 39.3 -0.7
GHO IAmb IAmb 09 40 41.9
comp=Z,47nm,1.0s
D23K Nanushuk River 83.92 21 P P 09 40 41.1 +1.3
baz=263
I23K Minto, Yukon-K 84.01 25 P P 09 40 40.8 +0.5
I23K Minto, Yukon-K 84.01 25 P P 09 40 40.8 +0.5
baz=264,SNR=32
C23K Itkillik River 84.05 20 P P 09 40 41.2 +0.8
baz=263
MCK McKinley 84.07 26 IAmb IAmb 09 40 42.0
comp=Z,48nm,1.0s
MCK McKinley 84.07 26 P P 09 40 40.3 -0.4
baz=265,SNR=30
RND Reindeer 84.08 27 IAmb IAmb 09 40 42.2
comp=Z,62nm,1.1s
NEA2 Nenana 84.09 25 IAmb IAmb 09 40 43.8
comp=Z,43nm,1.0s
NEA2 Nenana 84.09 25 P P 09 40 40.3 -0.5
baz=265,SNR=37
KNK Knik Glacier 84.10 29 P P 09 40 41.1 +0.2
baz=266,SNR=30
WAT1 Susitna Watana 84.17 27 P P 09 40 40.8 -0.4
baz=265
GEVA Gevas 84.17 308 IAmb IAmb 09 40 44.0
comp=Z,27nm,0.8s
KARS Kars 84.19 310 IAmb IAmb 09 40 44.6
comp=Z,39nm,0.9s
SML Sawmill 84.19 28 P P 09 40 41.4 -0.1
baz=266,SNR=31
E23K Chandalar 84.20 22 P P 09 40 42.3 +0.9
baz=264
TOLK Toolik Lake Re 84.28 21 P P 09 40 42.5 +0.8
baz=264,SNR=55
KBZ Khabaz 84.37 313 P P 09 40 42.4 -0.2
comp=Z,4.6nm,0.9s,baz=109,slow=4.0,SNR=8.3
comp=Z,4.6nm,0.9s
M23K Glacier View 84.48 28 P P 09 40 42.8 0.0
baz=266,SNR=25
WRH Wood River Hil 84.50 26 IAmb IAmb 09 40 45.0
comp=Z,42nm,1.2s
WAT6 Susitna Watana 84.52 28 P P 09 40 43.1 -0.1
baz=266,SNR=52
KIV Kislovodsk 84.53 314 *e*P P 09 40 41.8 -1.8
KIV pmax pmax
comp=Z,9.0nm,1.0s
P23K Montague Islan 84.53 30 P P 09 40 43.4 +0.4
baz=267,SNR=6.4
SHA1 Shidzhatmaz 84.55 313 *i* P P 09 40 42.8 -1.0
D24K Happy Valley 84.60 21 P P 09 40 43.9 +0.6
baz=264

E24K Your Creek 84.63 22 IAmb IAmb 09 40 47.4
comp=Z,68nm,1.6s
E24K Your Creek 84.63 22 P P 09 40 43.8 +0.3
baz=265
COLA College 84.63 25 P P 09 40 43.9 +0.5
COLA College 84.63 25 P P 09 40 43.4 0.0
CCB Clear Creek Bu 84.63 25 IAmb IAmb 09 40 45.5
comp=Z,29nm,1.2s
SCM Sheep Creek Mo 84.67 28 P P 09 40 44.2 +0.3
baz=267,SNR=27
H24K Noodor Dome 84.69 24 IAmb IAmb 09 40 47.5
comp=Z,48nm,1.6s
H24K Noodor Dome 84.69 24 P P 09 40 44.4 +0.6
baz=266
C24K Franklin Bluff 84.70 20 IAmb IAmb 09 40 46.4
comp=Z,52nm,1.0s
C24K Franklin Bluff 84.70 20 P P 09 40 44.1 +0.4
baz=265
DHY Denali Highway 84.72 27 IAmb IAmb 09 40 48.0
comp=Z,27nm,1.1s
DHY Denali Highway 84.72 27 P P 09 40 44.1 -0.1
baz=266,SNR=12
GLI Glacier Island 84.73 29 P P 09 40 44.2 +0.1
baz=267
POKR Poker Plat Res 84.82 25 P P 09 40 44.9 +0.4
baz=266
G24K Hadweenzic Riv 84.91 23 IAmb IAmb 09 40 48.7
comp=Z,37nm,1.1s
G24K Hadweenzic Riv 84.91 23 P P 09 40 45.5 +0.6
baz=266,SNR=27
GURO Guroymak-BITLI 84.98 308 IAmb IAmb 09 41 34.0
comp=Z,44nm,1.0s
HDA Harding Lake 84.99 26 P P 09 40 45.1 -0.2
baz=267,SNR=9.9
Q23K Middleton Isla 85.03 31 P P 09 40 46.2 +0.6
baz=268
ILAR Eielson Array 85.04 25 P P 09 40 43.8 -1.8
comp=Z,3.0nm,0.5s,baz=245,slow=5.4,SNR=64
ILAR LR LR 10 15 57.0
comp=Z,46nm,21.5s,baz=227,slow=34
comp=Z,3.0nm,0.5s
ILAR Eielson Array 85.04 25 P P 09 40 44.4 -1.1
ILAR Eielson Array 85.04 25 P P 09 40 44.4 -1.1
M24K Tolsona, Glenn 85.23 28 P P 09 40 47.3 +0.7
baz=268,SNR=20
VRH Novokhopyorsk 85.29 321 *e*P P 09 40 44.2 -2.9
VRH *e**SP sP 09 41 34.0 -3.1
VRH pmax pmax
comp=Z,38nm,0.8s
KLU Klutina 85.32 29 IAmb IAmb 09 40 49.1
comp=Z,29nm,0.8s
KLU Klutina 85.32 29 P P 09 40 47.8 +0.6
baz=268,SNR=16
EYAK Cordova Ski Ar 85.38 30 P P 09 40 47.7 +0.5
baz=268
K24K Donnelly Dome 85.47 26 P P 09 40 47.6 -0.2
baz=268
D25K Kavik River 85.48 21 P P 09 40 47.7 0.0
baz=267
PAX Paxson 85.58 27 IAmb IAmb 09 40 51.5
comp=Z,54nm,1.4s
PAX Paxson 85.58 27 P P 09 40 48.1 -0.3
baz=268,SNR=18
PRP Porcupine Dome 85.64 25 P P 09 40 47.5 -1.2
baz=269
F25K Christian Rive 85.67 23 P P 09 40 49.2 +0.5
baz=268,SNR=23
J25K Salcha River, 85.68 26 P P 09 40 47.9 -0.9
baz=268
HARP HAARP 85.71 28 P P 09 40 49.3 +0.3
baz=268,SNR=9.4
E25K Arctic Village 85.72 22 IAmb IAmb 09 40 51.4
comp=Z,27nm,0.9s
E25K Arctic Village 85.72 22 P P 09 40 49.6 +0.7
baz=268,SNR=38
FYU Fort Yukon 85.80 24 IAmb IAmb 09 40 54.0
comp=Z,26nm,1.1s
RIDG Independent Ri 85.89 26 P P 09 40 49.6 -0.3
baz=269,SNR=11
BMRM Bremner River 85.95 29 IAmb IAmb 09 40 52.7
comp=Z,53nm,1.0s
BMRM Bremner River 85.95 29 P P 09 40 50.5 +0.3
baz=269,SNR=8.5
N25K Chitina, Valde 85.96 29 IAmb IAmb 09 40 53.8
comp=Z,50nm,1.2s
N25K Chitina, Valde 85.96 29 P P 09 40 50.6 +0.3
baz=269,SNR=13
MARD Mardin 85.98 307 IAmb IAmb 09 40 55.3
comp=Z,17nm,0.6s
C26K Camden Bay 86.02 20 P P 09 40 50.9 +0.6
baz=268
KAIM Kayak Island 86.03 30 P P 09 40 50.8 +0.3
baz=269
BMAR Burnt Mountain 86.08 23 P P 09 40 51.2 +0.5
KOPT Kop Dagi 86.16 310 IAmb IAmb 09 41 01.9
comp=Z,31nm,0.9s
F26K Sheenjek River 86.25 22 P P 09 40 51.9 +0.4
baz=269,SNR=21
SCRK Sand Creek 86.27 26 P P 09 40 51.9 +0.1
baz=269
GLB Gilahina Butte 86.34 29 IAmb IAmb 09 40 55.5
comp=Z,58nm,1.2s
G26K Porcupine Rive 86.38 23 P P 09 40 52.5 +0.4
baz=269
MENT Mentasta 86.38 27 P P 09 40 52.8 +0.5
BERG Berg Lake 86.39 30 IAmb IAmb 09 40 55.1
comp=Z,32nm,0.8s
C27K Jago River 86.43 21 IAmb IAmb 09 40 54.7
comp=Z,30nm,0.9s
C27K Jago River 86.43 21 P P 09 40 52.8 +0.5
baz=269
VRDI Verde Repeater 86.51 29 IAmb IAmb 09 40 56.2
comp=Z,28nm,1.1s
L26K Log Cabin Wild 86.55 27 P P 09 40 53.2 +0.1
baz=270
KLMR Klimovskoe 86.58 331 *e*P P 09 40 51.3 -1.9
KLMR *e**PP pwP 09 41 33.9 +2.5
KLMR pmax pmax
comp=Z,26nm,0.9s
I26K Coal Creek Min 86.63 25 P P 09 40 53.7 +0.3
baz=270
CRQM Cirque 86.67 29 IAmb IAmb 09 40 57.2
comp=Z,52nm,1.2s
CRQE Cirque 86.69 29 P P 09 40 53.9 -0.1
baz=270,SNR=9.9
MCARA McCarthy VSAT 86.72 29 IAmb IAmb 09 40 58.5
comp=Z,33nm,1.2s
MCARA McCarthy VSAT 86.72 29 P P 09 40 54.0 +0.2
baz=270
M26K Nabesna, AK 86.72 28 P P 09 40 54.1 +0.2
baz=270
TGL Tanada Glacier 86.82 29 IAmb IAmb 09 40 58.0
comp=Z,34nm,1.2s
VORD Divnogorie 86.83 321 *e*P P 09 40 52.7 -1.9
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 86.86 321 *e*P P 09 40 53.1 -1.7
VORR *e**SP sP 09 41 42.5 -2.4
VORR pmax pmax
comp=Z,34nm,0.6s
VSR Storozhevoye 86.90 321 *e*P P 09 40 53.5 -1.5
VSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 87.02 322 *e*P P 09 40 53.6 -1.9
LPSR pmax pmax
comp=Z,49nm,0.9s
E27K Coleen River 87.21 22 IAmb IAmb 09 40 57.8
comp=Z,15nm,0.8s
E27K Coleen River 87.21 22 P P 09 40 56.4 +0.2
baz=271
M27K Edge Creek, AK 87.24 28 P P 09 40 56.5 -0.1
baz=271
L27K Beaver Creek, 87.25 27 P P 09 40 56.6 +0.1
baz=271
MESA MESA 87.26 30 P P 09 40 56.4 -0.4
baz=271
BCAR Beaver Creek A 87.27 27 P P 09 40 56.1 -0.5
I27K Kandik River 87.27 25 IAmb IAmb 09 40 58.7
comp=Z,37nm,1.0s
I27K Kandik River 87.27 25 P P 09 40 56.8 +0.2
baz=272
H27K Steamboat Moun 87.29 24 P P 09 40 56.8 +0.2
baz=272,SNR=10
GRNC Granite Creek 87.34 29 IAmb IAmb 09 41 04.9
comp=Z,18nm,1.0s
BARN Barnard Glacie 87.38 29 IAmb IAmb 09 41 00.7
comp=Z,22nm,1.1s
D27M Malcolm River 87.41 21 P P 09 40 57.2 +0.1
baz=272,SNR=12
CTG Chitna Glacier 87.54 29 P P 09 40 58.0 -0.1
baz=272,SNR=5.4
CTGM Chitina Glacie 87.54 29 IAmb IAmb 09 41 00.5
comp=Z,30nm,1.2s
MOS Moscow 87.69 326 *e*P P 09 40 58.4 -0.2
MOS pmax pmax
comp=Z,38nm,0.7s
BVCY Beaver Creek 87.71 28 P P 09 40 58.7 0.0
baz=272
F28M Old Crow 87.89 23 P P 09 40 59.1 -0.3
baz=273,SNR=17
YUK3 Moose Creek 87.93 28 P P 09 40 59.8 -0.1
baz=273
E28M Babbage River 87.96 22 IAmb IAmb 09 41 01.6
comp=Z,19nm,1.1s
E28M Babbage River 87.96 22 P P 09 40 59.6 0.0
baz=273
I28M Miner Creek 87.98 25 IAmb IAmb 09 41 01.9
comp=Z,16nm,0.7s
I28M Miner Creek 87.98 25 P P 09 41 00.3 +0.3
baz=273
O28M Mount Upton 88.11 29 P P 09 41 00.5 -0.5
baz=273
PINM Pinnacle 88.12 30 P P 09 41 00.5 -0.2
baz=273
D28M Stokes Point 88.20 21 P P 09 41 00.7 0.0
baz=274
YUK8 Steele Glacier 88.29 29 P P 09 41 01.6 -0.1
baz=273
DAWY Dawson 88.29 26 IAmb IAmb 09 41 03.2
comp=Z,32nm,1.2s
DAWY Dawson 88.29 26 P P 09 41 01.5 +0.1
baz=274,SNR=19
H29M Whitestone 88.57 24 IAmb IAmb 09 42 24.6
comp=Z,46nm,1.9s
H29M Whitestone 88.57 24 P P 09 41 02.2 -0.5
baz=274
E29M Blow River 88.57 22 P P 09 41 02.0 -0.6
baz=275
I29M Ogilvie Camp, 88.66 25 IAmb IAmb 09 41 04.7
comp=Z,18nm,0.9s
I29M Ogilvie Camp, 88.66 25 P P 09 41 02.5 -0.6
baz=274,SNR=20
J29N Klondike Camp 88.77 26 P P 09 41 03.7 0.0
baz=275,SNR=12
YUK4 Talbot Arm 88.82 29 P P 09 41 03.6 -0.6
baz=274
M29M Somme Creek 88.83 28 P P 09 41 03.3 -0.7
baz=274
APA Apatity 88.91 338 *e*P P 09 41 01.0 -3.1
APA *e**PP pwP 09 41 43.3 +0.5
APA pmax pmax
comp=Z,12nm,1.0s
APA MLR MLR
comp=Z,1µm,4.4s
L29M L29M 88.92 27 IAmb IAmb 09 41 07.1
comp=Z,34nm,1.1s
L29M L29M 88.92 27 P P 09 41 03.1 -1.3
baz=275,SNR=20
O29M Mount Kennedy 88.94 30 P P 09 41 03.9 -0.7
baz=274
FURI Furi 88.95 279 LR LR 10 22 44.9
comp=Z,41nm,18.6s,baz=82,slow=37
YUK6 Outpost Mounta 88.99 29 P P 09 41 04.1 -0.9
baz=274
K29M Barlow Dome 89.13 26 P P 09 41 05.3 -0.1
baz=275
EPYK Eagle Plains 89.22 24 IAmb IAmb 09 41 07.1
comp=Z,18nm,1.0s
EPYK Eagle Plains 89.22 24 P P 09 41 05.0 -0.7
baz=276,SNR=12
G30M tAoh Zraii Nji 89.35 23 P P 09 41 05.1 -1.2
baz=276
HYT Haines Junctio 89.42 29 P P 09 41 05.4 -1.5
baz=275
F30M Barrier River 89.44 22 P P 09 41 05.5 -1.2
baz=277
I30M Mount Dempster 89.48 25 P P 09 41 06.6 -0.5
baz=276
J30M Hart River 89.58 25 P P 09 41 06.7 -0.8
baz=276
M30M Minto, Yukon 89.58 27 P P 09 41 06.9 -0.6
baz=276,SNR=5.9
P30M Million Dollar 89.76 30 P P 09 41 07.1 -1.3
baz=276
MAYO Mayo, Yukon 89.88 26 P P 09 41 08.0 -0.8
baz=277,SNR=13
O30N Mendenhall 90.12 29 P P 09 41 08.7 -1.3
baz=276
G31M Satah River 90.12 23 P P 09 41 09.0 -0.8
baz=278
N31M Braeburn, Yuko 90.18 28 IAmb IAmb 09 41 12.8
comp=Z,20nm,1.2s
N31M Braeburn, Yuko 90.18 28 P P 09 41 08.9 -1.4
baz=277
INK Inuvik 90.19 22 P P 09 41 09.1 -1.0
baz=279
F31M Tsiigehtchic 90.25 22 P P 09 41 09.3 -1.1
baz=279
H31M Peel River 90.25 24 P P 09 41 09.4 -1.1
baz=278
S31K Pelican 90.36 32 P P 09 41 09.8 -1.2
baz=276
R31K City Hall, Gus 90.57 32 P P 09 41 11.4 -0.6
baz=277
SKAG Skagway 90.65 30 P P 09 41 11.2 -1.2
baz=277
WHY Whitehorse 90.72 29 IAmb IAmb 09 41 14.7
comp=Z,16nm,1.0s
WHY Whitehorse 90.72 29 P P 09 41 12.0 -0.9
baz=278
M31M Drury Creek, Y 90.74 28 P P 09 41 12.2 -0.6
baz=278
SIT Sitka 90.96 33 P P 09 41 13.1 -0.8
baz=277
EIL Elat 91.20 300 LR LR 10 30 25.6
comp=Z,66nm,18.1s,baz=60,slow=41
R32K Eaglecrest 91.23 32 P P 09 41 14.1 -1.1
baz=276
S32K Killisnoo 91.31 32 P P 09 41 14.6 -0.9
baz=278
SPITS Spitsbergen Ar 91.31 349 P P 09 41 14.1 -1.1
comp=Z,15nm,0.8s,baz=79,slow=8.6,SNR=22
SPITS LR LR 10 33 29.5
comp=Z,43nm,18.1s,baz=34,slow=43
comp=Z,15nm,0.8s
BRTR Keskin Array B 91.44 310 P P 09 41 15.2 -1.5
comp=Z,1.5nm,0.8s,baz=116,slow=3.9,SNR=7.8
BRTR pP pwP 09 41 54.5 -0.8
comp=Z,1.2nm,0.9s,baz=122,slow=5.3,SNR=2.2
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 91.44 310 P P 09 41 15.7 -1.1
P32M Atlin 91.45 30 P P 09 41 15.0 -1.2
baz=279
ARCES ARCESS Array B 91.46 340 P P 09 41 14.4 -1.6
comp=Z,8.8nm,0.7s,baz=83,slow=6.2,SNR=30
ARCES LR LR 10 25 53.1
comp=Z,62nm,21.9s,baz=92,slow=38
comp=Z,8.8nm,0.7s
ARCES ARCESS Array B 91.46 340 P P 09 41 14.7 -1.3
ARCES ARCESS Array B 91.46 340 P P 09 41 14.7 -1.3
ARCES pmax pmax
comp=Z,97nm,1.9s
N32M Quiet Lake 91.52 29 IAmb IAmb 09 41 19.2
comp=Z,20nm,1.0s
N32M Quiet Lake 91.52 29 P P 09 41 14.9 -1.6
baz=279
P33M Teslin, Yukon 91.80 30 P P 09 41 16.7 -1.2
baz=279
KBS Kingsbay 91.81 350 *i* P P 09 41 15.4 -2.0
A36M Sachs Harbour 92.13 17 P P 09 41 18.4 -0.6
baz=287
CRAG Craig 92.40 34 P P 09 41 19.7 -0.9
baz=279
WRAK Wrangell Islan 92.67 33 IAmb IAmb 09 41 27.8
comp=Z,18nm,0.8s
WRAK Wrangell Islan 92.67 33 P P 09 41 20.8 -1.0
baz=280
R33M Jennings River 92.86 30 IAmb IAmb 09 41 24.4
comp=Z,16nm,1.2s
R33M Jennings River 92.86 30 P P 09 41 21.6 -1.3
baz=281
FINES FINESS Array B 92.99 332 P P 09 41 21.5 -1.7
comp=Z,2.3nm,0.6s,baz=69,slow=5.5,SNR=14
FINES PKiKP **PKiKP** 09 46 09.7 -0.1
comp=Z,0.7nm,0.4s,baz=2.7,slow=2.9,SNR=3.6
FINES LR LR 10 27 04.5

comp=Z,149nm,19.1s,baz=79,slow=38
comp=Z,2.3nm,0.6s
FINES FINESS Array B 92.99 332 P **P** **09 41 21.6 -1.6**
QSPA South Pole Qui 93.06 180 P **P** **09 41 22.4 -1.2**
comp=Z,14nm,0.9s,baz=335,slow=2.2,SNR=12
QSPA LR LR 10 23 24.4
comp=Z,102nm,20.6s,baz=354,slow=35
comp=Z,14nm,0.9s
QSPA South Pole Qui 93.06 180 P **P** **09 41 23.6 0.0**
QSPA IAmb IAmb 09 41 25.2
comp=Z,12nm,0.8s
S34M Telegraph Cree 93.06 32 IAmb IAmb 09 41 25.5
comp=Z,8.7nm,0.9s
S34M Telegraph Cree 93.06 32 P **P** **09 41 22.3 -1.3**
baz=281
AKASG Malin Array Be 93.20 321 P **P** **09 41 22.6 -1.8**
comp=Z,3.7nm,0.8s,baz=73,slow=4.4,SNR=9.6
AKASG LR LR 10 27 46.8
comp=Z,115nm,18.2s,baz=62,slow=38
comp=Z,3.7nm,0.8s
AKASG Malin Array Be 93.20 321 P **P** **09 41 22.8 -1.6**
AKASG Malin Array Be 93.20 321 P **P** **09 41 22.8 -1.6**
AKASG pmax pmax
comp=Z,5.0nm,1.1s
V35K Ketchikan 93.27 34 P **P** **09 41 23.4 -1.2**
baz=280
C36M Paulatuk 93.29 20 IAmb IAmb 09 41 25.1
comp=Z,14nm,0.8s
C36M Paulatuk 93.29 20 P **P** **09 41 23.2 -1.3**
baz=288
MNK Minsk 93.38 325 *i* P **P** **09 41 23.4 -1.8**
comp=E,17nm,0.8s
MNK *i* P **P** **09 41 23.4 -1.8**
comp=N,22nm,0.9s
MNK *i* P **P** **09 41 23.4 -1.8**
comp=Z,17nm,0.8s,baz=80
MNK *i* pP **pP** **09 42 01.4 +0.6**
MNK *i* sP **sP** **09 42 17.0 +1.4**
MNK *i* PP **PP** **09 45 10.1 -0.8**
MNK *i* PPP PPP 09 47 14.3
MNK *i* SKS SKSac 09 51 30.8 -15
MNK *i* S **SKSac** **09 51 43.1 -3.1**
MNK *i* sS pS 09 52 52.6 -14
MNK *i* SS **SS** **09 58 38.3 -1.7**
MNK *i* SSS SSS 10 02 20.2
MNK Minsk 93.38 325 *i* P **P** **09 41 23.3 -1.8**
MNK *i* *PP **pP** **09 42 01.4 +0.6**
MNK *i* *SP **sP** **09 42 16.9 +1.4**
MNK *i* 09 45 10.0
MNK *i* PPP PPP 09 47 14.2
MNK *i* S **SKSac** **09 51 43.0 -3.1**
MNK *i* SS **SS** **09 58 38.3 -1.7**
MNK *i* SSS SSS 10 02 20.2
MNK pmax pmax
comp=N,22nm,0.9s
MNK pmax pmax
comp=Z,17nm,0.8s
MNK pmax pmax
comp=E,17nm,0.8s
DLBC Dease Lake 93.53 31 P **P** **09 41 24.9 -1.0**
baz=282
T35M Bob Quinn 93.71 33 P **P** **09 41 25.7 -1.0**
baz=281
NOR Nord 93.78 355 *i* P **P** **09 41 25.3 -1.2**
NOR IAmb IAmb 09 41 25.9
comp=Z,3.5nm,0.5s
WTLY Watson Lake, Y 93.79 29 IAmb IAmb 09 41 28.4
comp=Z,15nm,1.0s
WTLY Watson Lake, Y 93.79 29 P **P** **09 41 25.8 -1.2**
baz=283
U35K Hyder 94.04 34 P **P** **09 41 27.6 -0.6**
baz=282
WRGLY Wrigley 95.41 26 IAmb IAmb 09 41 35.4
comp=Z,13nm,0.9s
WRGLY Wrigley 95.41 26 P **P** **09 41 33.9 -0.3**
baz=288
PLOR Plostina 95.71 316 ⇑P **P** **09 41 34.9 -1.3**
PLOR Plostina 95.71 316 P **P** **09 41 34.8 -1.3**
BBB Bella Bella 95.94 37 LR LR 10 18 40.7
comp=Z,50nm,18.9s,baz=246,slow=31
KOTAN Kotaneelee Air 96.08 29 P **P** **09 41 36.4 -1.0**
baz=287
MLR Muntele Rosu 96.27 316 ⇑P **P** **09 41 37.7 -1.1**
MLR Muntele Rosu 96.27 316 P **P** **09 41 37.7 -1.1**
BURAR Bucovina Array 96.34 318 ⇑P **P** **09 41 38.1 -1.0**
BURAR Bucovina Array 96.34 318 P **P** **09 41 38.0 -1.0**
ELIB Princess Elisa 97.54 198 *d*P Pdif 09 41 46.0 +2.0
LOT Lotru 97.77 316 ⇓P **P** **09 41 44.9 -0.6**
MARR Marisel-Cluj 97.94 318 ⇓P **P** **09 41 45.1 -1.2**
DAG Danmarks Havn 98.00 353 *i* P **P** **09 41 44.0 -1.7**
DAG IAmb IAmb 09 41 44.7
comp=Z,11nm,0.6s
RES Resolute Bay 98.13 11 LR LR 10 30 57.4
comp=Z,10nm,18.0s,baz=22,slow=38
DRGR 98.19 318 ⇓P **P** **09 41 46.6 -0.8**
DRGR 98.19 318 P **P** **09 41 46.5 -0.8**
HFS Hagfors 99.17 333 P **Pdif** **09 41 49.4 -1.8**
comp=Z,7.9nm,0.8s,baz=93,slow=5.8,SNR=8.2
HFS LR LR 10 33 54.5
comp=Z,88nm,18.8s,baz=60,slow=40
comp=Z,7.9nm,0.8s
YKA Yellowknife Ar 99.45 25 P **Pdif** **09 41 51.3 -1.2**
comp=Z,2.0nm,0.7s,baz=302,slow=5.2,SNR=34
YKA PP **PP** **09 45 59.2 +1.9**
comp=Z,1.1nm,1.0s,baz=299,slow=8.3,SNR=4.7
YKA PKiKP **PKiKP** **09 46 20.6 -0.5**
comp=Z,0.2nm,0.4s,baz=284,slow=2.8,SNR=10
YKA PKKPbc **PKKPbc** **09 58 15.8 -1.7**
comp=Z,0.2nm,0.7s,baz=109,slow=1.5,SNR=4.1
comp=Z,2.0nm,0.7s
NEEM North Greenlan 99.51 360 *i* P **Pdif** **09 41 52.1 -0.8**
NEEM IAmb IAmb 09 41 53.8
comp=Z,9.9nm,0.8s
NB2 NORSAR Subarra 99.91 334 P **Pdif** **09 41 52.6 -2.0**
comp=Z,9.0nm,1.1s,baz=68,slow=4.3
NB2 NORSAR Subarra 99.91 334 P **Pdif** **09 41 52.6 -2.0**
NB2 AMP 09 41 52.6
comp=Z,9.0nm,1.1s
NOA NORSAR Array B 99.91 334 P **Pdif** **09 41 52.9 -1.7**
comp=Z,3.4nm,0.9s,baz=66,slow=4.5,SNR=7.2
NOA LR LR 10 32 32.8
comp=Z,79nm,18.3s,baz=255,slow=38
comp=Z,3.4nm,0.9s
DBG Daneborg 100.30 352 *i* P **Pdif** **09 41 54.7 -1.3**
DBG IAmb IAmb 09 41 56.5
comp=Z,12nm,0.8s
NVL N'lazarevskaya 101.42 198 *e*P **Pdif** **09 42 01.1 +0.1**
NVL *e* 09 46 12.4
NVL *e*PPP PPP 09 48 22.0
NVL *e*S **SKSac** **09 52 26.8 +0.3**
NVL *e*SS **SS** **10 00 34.7 +2.6**
NVL *e*SSS SSS 10 04 28.0
GERES GERESS Array B 103.39 322 Pdiff **Pdif** **09 42 09.7 -0.7**
comp=Z,0.3nm,0.6s,baz=96,slow=8.2,SNR=3.7
GERES PKiKP **PKiKP** **09 46 28.9 +0.2**
comp=Z,1.5nm,1.0s,baz=83,slow=3.2,SNR=4.2
NVAR Mina Array Bea 106.27 49 Pdiff **Pdif** **09 42 22.7 -0.9**
comp=Z,1.0nm,0.9s,baz=244,slow=4.2,SNR=4.6
NVAR PKiKP **PKiKP** **09 46 34.9 +0.3**
comp=Z,0.8nm,0.8s,baz=274,slow=3.7,SNR=4.4
NVAR PP **PP** **09 46 50.1 +0.8**
comp=Z,1.7nm,1.0s,baz=286,slow=11,SNR=5.4
PDAR Pinedale Array 110.88 42 PKiKP **PKiKP** **09 46 42.8 -0.3**
comp=Z,0.3nm,0.6s,baz=121,slow=3.2,SNR=4.9
PDAR PP **PP** **09 47 24.4 +1.9**
comp=Z,0.7nm,0.9s,baz=262,slow=5.5,SNR=4.1
PDAR PKKPbc **PKKPbc** **09 57 41.5 -1.1**
comp=Z,0.3nm,0.7s,baz=100,slow=5.3,SNR=3.9
ANMO Albuquerque 116.39 48 **PKPdf** **09 46 53.8 0.0**
ANMO Albuquerque 116.39 48 PKiKP **PKPdf** **09 46 53.8 0.0**
ESDC Sonseca Array 118.79 319 PKP **PKPdf** **09 46 57.5 -0.7**
comp=Z,1.0nm,0.6s,baz=33,slow=1.4,SNR=7.2
POLO Lamas de Olo 120.25 323 *e*PKPdf **PKiKP** **09 47 01.3 +0.3**
MTE Manteigas 120.67 322 *e*PKPdf **PKiKP** **09 47 02.1 +0.3**
PVIS Viseu 120.70 322 *e*PKPdf **PKPdf** **09 47 01.8 +0.1**
TXAR Lajitas Array 120.86 53 PKP **PKPdf** **09 47 02.5 0.0**
comp=Z,1.3nm,0.6s,baz=264,slow=0.5,SNR=25
SCHQ Schefferville 120.91 10 PKP **PKPdf** **09 47 01.2 -0.4**
comp=Z,2.3nm,0.4s,baz=325,slow=1.7,SNR=24
SCHQ PP **PP** **09 48 33.0 +1.7**
comp=Z,4.0nm,1.0s,baz=331,slow=7.2,SNR=4.2
PCBR Castelo Branco 120.95 321 *e*PKPdf **PKiKP** **09 47 02.5 +0.2**
PCAS Casmilo, Conde 121.46 322 *e*PKPdf **PKPdf** **09 47 02.3 -0.9**
PESTR Estremoz 121.58 320 *e*PKPdf **PKiKP** **09 47 03.8 +0.2**
EVO Evora 122.05 320 *e*PKPdf **PKiKP** **09 47 04.5 0.0**
MOE Montemor 122.27 320 *e*PKPdf **PKiKP** **09 47 05.1 +0.2**
PVAQ Vaqueiros 122.50 319 *e*PKPdf **PKPdf** **09 47 04.7 -0.5**
MESJ Messejana 122.58 320 *e*PKPdf **PKiKP** **09 47 05.6 0.0**
MESJ Messejana 122.58 320 *e*PKPdf **PKiKP** **09 47 05.7 +0.2**
PCVE Castro Verde 122.58 319 *e*PKPdf **PKiKP** **09 47 06.5 +1.0**
E46A Sault Ste Mari 122.98 26 **PKPdf** **09 47 05.9 0.0**
MORF Marmelete 123.17 319 *e*PKPdf **PKiKP** **09 47 08.4 +1.6**
TORD Torodi Ar. Bea 124.40 288 PKP **PKPdf** **09 47 09.0 -0.4**
comp=Z,8.4nm,0.7s,baz=211,slow=1.1,SNR=40
CCM Cathedral Cave 125.17 38 **PKPdf** **09 47 10.2 -0.1**
CCM Cathedral Cave 125.17 38 PKiKP **PKPdf** **09 47 10.2 -0.1**
DBIC Dimbokro 132.04 282 PKP **PKPdf** **09 47 23.5 -0.5**
comp=Z,9.8nm,0.8s,baz=130,slow=3.3,SNR=7.9
DBIC SKPbc **SKPbc** **09 50 35.8 -1.5**
comp=Z,6.2nm,0.8s,baz=93,slow=6.0,SNR=4.8
PLCA Paso Flores 138.97 158 PKhKP PKPpre 09 47 28.1
comp=Z,1.6nm,0.8s,baz=211,slow=4.1,SNR=4.5
PLCA PKP **PKPdf** **09 47 36.9 +0.5**
comp=Z,3.5nm,0.7s,baz=170,slow=6.0,SNR=7.4
PLCA PKKP **PKKPdf** **09 57 08.0 +2.2**
comp=Z,1.3nm,0.9s,baz=229,slow=6.9,SNR=2.9
TRQA Tornquist 144.05 166 PKPbc 09 47 43.5 -0.2
TRQA Tornquist 144.05 166 PKIKP **PKPab** **09 47 43.5 +0.3**
JTS Las Juntas de 144.48 68 PKPbc 09 47 46.1 +0.4
JTS Las Juntas de 144.48 68 PKIKP PKPbc 09 47 46.1 +0.4
CFA Coronel Fontan 147.78 153 PKP **PKPdf** **09 47 51.6 -0.3**
comp=Z,13nm,0.4s,baz=229,slow=1.9,SNR=46
CFA PKPbc **PKPbc** **09 47 54.6 -0.4**
comp=Z,13nm,0.4s,baz=155,slow=1.3,SNR=49
LCO Las Campanas 148.68 147 **PKPbc** **09 47 58.2 +0.5**
LCO Las Campanas 148.68 147 PKP2 **PKPbc** **09 47 58.2 +0.5**
SDDR Presa de Saban 150.88 40 **PKPbc** **09 48 02.8 -0.2**
ROSC El Rosal 156.23 71 PKPab **PKPab** **09 48 34.9 +0.8**
comp=Z,23nm,0.8s,baz=94,slow=13,SNR=7.9
CPUP Villa Florida 156.37 168 PKP **PKPdf** **09 48 04.5 -0.3**
comp=Z,1.9nm,0.8s,baz=216,slow=5.4,SNR=6.4
CPUP PKPab **PKPab** **09 48 34.0 +0.5**
comp=Z,6.6nm,0.9s,baz=195,slow=6.7,SNR=12
LPAZ La Paz 159.38 130 PKP **PKPdf** **09 48 09.2 -0.3**
comp=Z,2.4nm,0.9s,baz=8.9,slow=1.8,SNR=7.3
LPAZ PKPab **PKPab** **09 48 48.6 +0.9**
comp=Z,3.3nm,0.9s,baz=212,slow=4.9,SNR=4.0
BDFB Brasilia 167.01 197 PKP **PKPdf** **09 48 15.4 -0.7**
comp=Z,2.6nm,0.8s,baz=162,slow=6.4,SNR=4.0

IDC 29 09:51:09.1±2.3, 5°38N×126°74E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=166.0km s-min=28.0km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.25**	**164**	P	P	09 56 45.9	-0.3
	0.5nm,0.8s,baz=344,slow=10.0,SNR=8.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**29.71**	**167**	P	P	09 57 17.4	+0.4
	0.1nm,0.5s,baz=351,slow=8.7,SNR=4.0						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**56.22**	**325**	P	P	10 00 51.0	-0.1
	0.2nm,0.4s,baz=114,slow=8.1,SNR=4.3						
	0.2nm,0.4s						

*SKHL **29** 09:51:37.6±0.4, 47°50N×148°20E, h376km±6km, mb4.7/5, msh4.4/2, msha4.9/5*
*IDC **29** 09:51:40.6±1.5, 47°72N×147°93E, h376km±16km, mb3.2/9, mbtmp4.0/16, Error ellipse: s-maj=17.9km s-min=11.6km az=108.0*
ISC 29 09:51:38.2±0.6, 47°57N±0°06×148°22E±0°07, h350km, n27, σ1s82/33, mb3.7/10, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.35**	**186**	*e*P	**Pn**	**09 52 33.7**	**+1.6**
KUR				AMB	AMB	09 52 37.7	
	40nm,0.5s						
KUR				*e*S	**S**	**09 53 19.0**	**+3.6**
KUR				A	A	09 53 27.6	
	30nm,0.5s						
KUR				A	A	09 53 27.6	
	40nm,0.5s						
YSS	**Yuzhno-Sakhali**	**3.77**	**263**	*e*P	**Pn**	**09 52 46.6**	**+1.8**
YSS				AMB	AMB	09 52 47.6	
	50nm,0.3s						
YSS				*e*S	**S**	**09 53 41.6**	**+3.1**
YSS				A	A	09 53 42.8	
	110nm,2.0s						
YSS				A	A	09 53 42.8	
	130nm,2.0s						
YSS				A	A	09 53 42.9	
	20nm,0.6s						
YSS				A	A	09 53 42.9	
	20nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.90**	**206**	*e*P	**Pn**	**09 52 47.4**	**+1.2**
YUK				AMB	AMB	09 52 50.4	
	50nm,0.2s						
YUK				*e*S	**S**	**09 53 42.6**	**+1.6**
YUK				A	A	09 53 45.7	
	190nm,1.2s						
YUK				A	A	09 53 45.7	
	270nm,1.2s						
YUK				A	A	09 53 47.7	
	40nm,0.3s						
YUK				A	A	09 53 47.7	
	180nm,0.3s						
GLVR	**Golovnino**	**4.28**	**207**	*e*P	**Pn**	**09 52 51.5**	**+1.5**
GLVR				AMB	AMB	09 52 56.4	
	40nm,0.2s						
GLVR				*e*S	**S**	**09 53 48.8**	**+0.8**
GLVR				A	A	09 53 56.5	
	120nm,0.5s						
GLVR				A	A	09 53 56.5	
	220nm,0.5s						
NMR	**Nemuro--Hokkai**	**4.55**	**204**	*e*P	**Pn**	**09 52 52.0**	**-1.0**
TYV	**Tymovskoe**	**4.91**	**314**	*e*P	**Pn**	**09 52 58.1**	**+1.5**
TYV				*e*S	**S**	**09 54 04.3**	**+4.2**
AKK	**Akkeshi**	**5.14**	**209**	*e*P	**Pn**	**09 52 59.1**	**-0.2**
ASAJ	**Asahikawa**	**5.23**	**231**	P	**Pn**	**09 53 03.1**	**+2.7**
	49nm,0.4s,baz=73,slow=6.4,SNR=198						
SKR	**Severo-Kuril's**	**6.04**	**56**	*e*P	**Pn**	**09 53 11.1**	**+1.8**
SKR				AMB	AMB	09 53 13.4	
	120nm,0.6s						
SKR				*e*S	**S**	**09 54 25.0**	**+1.8**
SKR				A	A	09 54 35.5	
	30nm,0.5s						
SKR				A	A	09 54 35.5	
	40nm,0.5s						
NKL	**Nikolayevsk**	**7.37**	**322**	*e*P	**Pn**	**09 53 25.1**	**+0.4**
PETK	**Petropavlovsk-**	**8.21**	**44**	P	**P**	**09 53 37.6**	**+0.1**
	8.6nm,0.8s,baz=212,slow=8.1,SNR=7.4						
KLR	**Kul'dur**	**11.08**	**285**	P	**Pn**	**09 54 07.9**	**-0.9**
	8.7nm,0.6s,baz=91,slow=11,SNR=21						
USRK	**Ussuriysk Ar.**	**11.80**	**259**	P	**Pn**	**09 54 15.6**	**-1.8**
	2.1nm,0.5s,baz=60,slow=14,SNR=2.8						
MA2	**Magadan**	**12.12**	**6**	P	**P**	**09 54 20.6**	**-0.1**
	3.2nm,0.9s,baz=148,slow=12,SNR=3.8						
MJAR	**Matsushiro Arr**	**13.28**	**218**	P	**Pn**	**09 54 36.3**	**+1.3**
	3.0nm,0.4s,baz=12,slow=13,SNR=23						
KSRS	**Korea Array**	**18.01**	**243**	P	**P**	**09 55 25.9**	**+0.7**
	1.8nm,0.5s,baz=50,slow=11,SNR=9.5						
ILAR	**Eielson Array**	**38.00**	**39**	P	**P**	**09 58 24.1**	**+0.8**
	0.4nm,0.6s,baz=258,slow=6.3,SNR=9.6						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**43.58**	**294**	P	**P**	**09 59 06.8**	**-1.8**
	0.3nm,0.5s,baz=61,slow=5.8,SNR=5.5						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**44.19**	**301**	P	**P**	**09 59 13.4**	**+0.1**
	2.0nm,0.2s,baz=70,slow=8.4,SNR=1.4						
FINES	**FINESS Array B**	**61.82**	**333**	P	**P**	**10 01 18.6**	**-1.8**
	1.2nm,0.5s,baz=24,slow=6.9,SNR=8.8						
	1.2nm,0.5s						
NB2	**NORSAR Subarra**	**66.31**	**339**	P	**P**	**10 01 47.7**	**-1.8**
	comp=Z,0.6nm,0.4s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**66.31**	**339**	P	**P**	**10 01 47.9**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=30,slow=6.7,SNR=6.1						
	comp=Z,0.8nm,0.4s						
HFS	**Hagfors**	**66.46**	**337**	P	**P**	**10 01 48.6**	**-1.8**
	comp=Z,1.3nm,0.4s,baz=11,slow=3.0,SNR=8.2						
	comp=Z,1.3nm,0.4s						
WRA	**Warramunga Arr**	**68.35**	**194**	P	**P**	**10 02 02.5**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=8.8,slow=6.5,SNR=23						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	**68.95**	**323**	P	**P**	**10 02 03.9**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=40,slow=7.4,SNR=2.7						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**72.07**	**194**	P	**P**	**10 02 25.9**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=10.0,slow=5.8,SNR=17						
	comp=Z,0.6nm,0.4s						
GERES	**GERESS Array B**	**76.18**	**331**	P	**P**	**10 02 46.7**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=44,slow=8.6,SNR=2.3						
	comp=Z,0.4nm,0.4s						

IDC 29 10:06:06.2±2.9, 8°44S×147°74E, h113km±19km, mb2.7/2, mbtmp3.2/3, Error ellipse: s-maj=90.4km s-min=34.6km az=118.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**1.12**	**211**	P	Pn	10 06 29.4	+0.5
	90nm,0.3s,baz=18,slow=6.4,SNR=78						
PMG				S	Sn	10 06 46.1	+0.1
	67nm,0.5s,baz=17,slow=10,SNR=7.8						
WRA	**Warramunga Arr**	**17.29**	**227**	P	P	10 10 00.5	+0.1
	0.7nm,0.7s,baz=53,slow=11,SNR=11						
ASAR	**Alice Springs**	**20.12**	**220**	P	P	10 10 31.5	+0.2
	0.4nm,0.6s,baz=54,slow=9.6,SNR=7.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**79.83**	**321**	P	P	10 18 01.9	-0.3
	0.1nm,0.5s,baz=116,slow=5.7,SNR=2.4						
	0.1nm,0.5s						

*HEL **29** 10:21:59.0±0.4, 67°68N×34°41E, h0km, ML2.3, Suspected explosion*
*KOLA **29** 10:22:00.6, 67°67N×34°23E, h0km, ML2.7, Error ellipse: s-maj=3.0km s-min=1.4km az=120.0, Khibiny Massif*
*UPP **29** 10:22:01.9±2.7, 67°69N×33°83E, h0km, ML2.4, Presumed earthquake*
*IDC **29** 10:22:02.2±1.7, 67°74N×33°89E, h0km, mbtmp3.5/5, ML2.6/5, Error ellipse: s-maj=18.4km s-min=9.3km az=83.0*
ISC 29 10:21:58.5±0.9, 67°61N±0°03×34°15E±0°05, h0km, n34, σ1s30/58, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.29**	**262**	P	**Pb**	**10 22 06.2**	**-0.3**
APA				S	**Sb**	**10 22 11.0**	**-0.8**
LVZ	**Lovozero**	**0.35**	**34**	P	**Pg**	**10 22 05.5**	**+0.3**
LVZ				S	**Sg**	**10 22 09.4**	**-0.1**
APA0	**Apatity Array**	**0.44**	**270**	P	**Pb**	**10 22 08.5**	**-0.6**
APA0				S	**Sb**	**10 22 15.2**	**-1.0**
KVDA	**Kovda**	**1.05**	**209**	P	**Pn**	**10 22 20.6**	**+0.2**
KVDA				S	**Sn**	**10 22 35.2**	**-0.5**
VRF	**Varrio**	**1.74**	**277**	*e*P	**Pb**	**10 22 31.6**	**+0.4**
VRF				*e*S	**Sb**	**10 22 53.9**	**+0.3**
VRF				MSG		10 22 56.4	
	comp=Z,66nm,0.2s						
OLKF	**Oulanka, Finla**	**2.27**	**237**	*e*P	**Pb**	**10 22 40.2**	**-0.1**
OLKF				*e*SB	**Sg**	**10 23 11.5**	**+0.1**
OLKF				MSG		10 23 12.4	
	comp=Z,13nm,0.2s						
KU6	**Riekki**	**2.32**	**229**	*e*PB	**Pb**	**10 22 40.9**	**-0.2**
KU6				*e*SB	**Sg**	**10 23 12.8**	**-0.1**
KU6				MSG		10 23 14.8	
	comp=Z,11nm,0.1s						
MSF	**Maaselka**	**2.65**	**232**	*e*PB	**Pb**	**10 22 45.9**	**-0.9**
MSF				*e*SB	**Sb**	**10 23 21.4**	**+1.6**
SGF	**Sodankyl**	**2.93**	**270**	*e*P	**Pn**	**10 22 48.0**	**+1.7**
SGF				*e*S	**Sn**	**10 23 24.2**	**+2.0**
KU2	**Taivalkoski**	**3.03**	**234**	*e*P	**Pb**	**10 22 51.2**	**-2.1**
KU2				*e*S	**Sb**	**10 23 29.2**	**-1.5**
KU2				MSG		10 23 34.3	
	comp=Z,6.9nm,0.2s						
VADS	**Vadso**	**3.06**	**328**	*e*P	**Pn**	**10 22 48.7**	**+0.7**
VADS	**Vadso**	**3.06**	**328**	P	**Pn**	**10 22 48.8**	**+0.8**
VADS				S	**Sn**	**10 23 25.3**	**0.0**
RNF	**Rovaniemi**	**3.33**	**256**	*e*P	**Pn**	**10 22 54.0**	**+2.2**
RNF				*e*S	**Sn**	**10 23 34.9**	**+2.9**
KEV	**Kevo**	**3.38**	**313**	*e*P	**Pn**	**10 22 53.9**	**+1.5**
KEV				*e*S	**Sn**	**10 23 33.1**	**0.0**
ARA0	**ARCESS Array S**	**3.71**	**305**	*e*P	**Pn**	**10 22 58.2**	**+1.2**
ARCES	**ARCESS Array B**	**3.71**	**305**	Pn	**Pn**	**10 22 58.4**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=119,slow=14,SNR=119						
ARCES				Pg	**Pb**	**10 23 06.2**	**+1.3**
	comp=Z,1.8nm,0.3s,baz=114,slow=16,SNR=6.6						
ARCES				Sn	**Sn**	**10 23 40.9**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=121,slow=27,SNR=9.6						
ARCES				Lg	Lg	10 23 51.3	
	comp=Z,5.7nm,0.3s,baz=112,slow=33,SNR=15						
	comp=Z,3.4nm,0.2s						
ARCES	**ARCESS Array B**	**3.71**	**305**	P	**Pn**	**10 22 58.2**	**+1.2**
ARCES				S	**Sn**	**10 23 40.6**	**-0.8**
RMF	**Romuvaara**	**3.82**	**209**	*e*P	**Pn**	**10 23 00.8**	**+2.4**
RMF				*e*S	**Sn**	**10 23 46.1**	**+2.0**
RMF				MSG		10 23 47.0	
	comp=Z,3.0nm,0.1s						
LANU	**Lannavaara**	**4.62**	**281**	P	**Pn**	**10 23 10.1**	**+0.5**
LANU				S	**Sn**	**10 24 02.8**	**-1.0**
MASU	**Masugnsbyn**	**4.66**	**274**	P	**Pn**	**10 23 10.8**	**+0.7**
ERTU	**Ertsjaerv**	**4.79**	**263**	P	**Pn**	**10 23 12.9**	**+1.0**
ERTU				S	**Sn**	**10 24 07.4**	**-0.6**
HAMF	**Hammerfest**	**4.82**	**314**	*e*P	**Pn**	**10 23 13.2**	**+1.1**
HAMF				*e*S	**Sn**	**10 24 06.6**	**-2.0**
JOF	**Joensuu**	**4.86**	**195**	*e*P	**Pn**	**10 23 13.5**	**+0.8**
JOF				*e*S	**Sn**	**10 24 09.1**	**-0.6**
KUA	**Kurravaara**	**5.25**	**280**	P	**Pn**	**10 23 18.8**	**+0.6**
KUA				S	**Sn**	**10 24 16.1**	**-3.2**
DUNU	**Dundret**	**5.27**	**271**	P	**Pn**	**10 23 20.1**	**+1.7**
KOVU	**Salmi**	**5.31**	**283**	P	**Pn**	**10 23 19.8**	**+0.8**
KOVU				S	**Sn**	**10 24 19.9**	**-0.9**
RATU	**Laukkuluspa**	**5.54**	**279**	P	**Pn**	**10 23 22.8**	**+0.6**
NIKU	**Nikkaluokta**	**5.75**	**280**	P	**Pn**	**10 23 25.5**	**+0.6**
SALU	**Saltoluokta**	**6.01**	**275**	P	**Pn**	**10 23 28.7**	**+0.2**
FINES	**FINESS Array B**	**7.10**	**213**	Pn	**Pn**	**10 23 45.8**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=27,slow=12,SNR=7.0						
FINES				Sn	**Sn**	**10 25 03.1**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=29,slow=24,SNR=6.5						
FINES				Lg	Lg	10 25 40.1	
	comp=Z,0.8nm,0.3s,baz=33,slow=28,SNR=6.3						
	comp=Z,0.5nm,0.3s						
FAUS	**Fauske**	**7.24**	**277**	S	**Sn**	**10 25 08.2**	**+0.2**
HFS	**Hagfors**	**11.67**	**240**	Pn	**Pn**	**10 24 45.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=4.1						
HFS				Lg	Lg	10 28 09.3	
	comp=Z,0.4nm,0.3s,baz=55,slow=25,SNR=6.0						
	comp=Z,6.1nm,1.2s						
SPITS	**Spitsbergen Ar**	**11.74**	**342**	Pn	**Pn**	**10 24 44.6**	**-2.3**
	baz=138,slow=17						
	comp=Z,1.8nm,0.6s						
NOA	**NORSAR Array B**	**11.86**	**247**	Pn	**Pn**	**10 24 48.3**	**-0.4**
	baz=46,slow=11,SNR=1.4						
	comp=Z,0.7nm,1.0s						

*FUNV **29** 10:44:44.6, 10°69N×62°37W, h30km, MW3.7, Presumed earthquake*
*TRN **29** 10:44:44.6, 10°72N×62°36W, h70km, MD3.8, North of the Paria peninsula.*
ISC 29 10:44:41.9±1.7, 10°63N±0°07×62°36W±0°07, h100km±20km, n42, σ1s73/71, 2C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.80**	**85**	*e*P	**Pn**	**10 45 01.3**	**+1.2**
DMDM				*e*S	**Sn**	**10 45 12.3**	**-1.6**
PSMG	**Mucurapo Girls**	**0.81**	**87**	*i* P	**Pn**	**10 45 01.4**	**+1.1**
PSMG				*e*S	**Sn**	**10 45 13.0**	**-1.2**
PSKH	**Kent House, Po**	**0.82**	**87**	*i* P	**Pn**	**10 45 01.6**	**+1.2**
PSKH				*e*S	**Sn**	**10 45 13.3**	**-1.0**
PSWS	**West Secondary**

GRSS				eS		Sn	10 45 34.6	-0.3
GCMP	**Grenada, Carri**	**2.06**	**26**	*e*P		**Pn**	**10 45 15.8**	**+0.7**
GCMP				eS		Sn	10 45 39.0	-1.6
GCMP	**Grenada, Carri**	**2.06**	**26**	*e*P		**Pn**	**10 45 15.8**	**+0.7**
GCMP				eS		Sn	10 45 39.6	-1.0
PCRV	**Puerto La Cruz**	**2.29**	**259**	⇓*i*P		**Pn**	**10 45 20.1**	**+2.0**
PCRV				eS		Sn	10 45 45.2	-0.8
PCRV	**Puerto La Cruz**	**2.29**	**259**	*e*P		**Pn**	**10 45 20.2**	**+2.0**
PCRV				eS		Sn	10 45 47.0	+1.0
SVB	**Belmont**	**2.84**	**22**	*e*P		**Pn**	**10 45 25.8**	**+0.3**
SVB				eS		Sn	10 45 57.5	-1.6
SVB	**Belmont**	**2.84**	**22**	*e*P		**Pn**	**10 45 26.4**	**+0.9**
SVB				eS		Sn	10 45 58.0	-1.1
MCLT	**Moule a Chique**	**3.36**	**24**	*e*P		**Pn**	**10 45 33.1**	**+0.7**
MCLT				eS		Sn	10 46 10.0	-1.4
SLAC	**Saint Lucia, A**	**3.55**	**24**	*e*P		**Pn**	**10 46 14.3**	**-1.7**
SLAC				eS		Sn	10 46 14.3	-1.7
SLBI	**Saint Lucia, B**	**3.63**	**22**	*e*P		**Pn**	**10 45 37.1**	**+1.0**
SLBI				eS		Sn	10 46 17.9	-0.1
BBGH	**Gun Hill**	**3.71**	**47**	*e*P		**Pn**	**10 45 38.0**	**+0.9**
BBGH				eS		Sn	10 46 17.2	-2.6
BIM	**Bigot**	**4.06**	**18**	*e*P		**Pn**	**10 45 42.7**	**+0.7**
BIM				eS		Sn	10 46 25.9	-2.6
BIM	**Bigot**	**4.06**	**18**	*e*P		**Pn**	**10 45 43.5**	**+1.6**
BIM				eS		Sn	10 46 26.2	-2.2
FUNV	**FUNVISIS**	**4.38**	**268**	*e*P		**Pn**	**10 45 48.2**	**+1.9**
TACV	**Tcata**	**4.62**	**264**	*e*P		**Pn**	**10 45 51.0**	**+1.5**
TACV				eS		Sn	10 46 39.9	-2.2
DSLB	**Salisbury**	**4.86**	**11**	*e*P		**Pn**	**10 45 54.4**	**+1.6**
CACV	**CAICARA DEL OR**	**5.13**	**234**	*e*P		Pn	10 45 52.3	-4.1
CACV				eS		Sn	10 46 43.5	-11
BENV	**Beln**	**5.20**	**263**	*e*P		**Pn**	**10 45 59.5**	**+2.1**
BENV				eS		Sn	10 46 53.3	-2.9
TBG	**Guadaloupe-3**	**5.23**	**8**	*e*P		**Pn**	**10 45 59.1**	**+1.3**
MAGL	**Barre de l'ile**	**5.39**	**11**	*e*P		**Pn**	**10 46 02.7**	**+2.8**
TURV	**Turiamo**	**5.39**	**269**	*e*P		**Pn**	**10 46 01.9**	**+1.9**
TURV				eS		Sn	10 46 57.9	-2.9
MMLZ	**Guadeloupe Bro**	**5.42**	**7**	*e*P		**Pn**	**10 46 02.2**	**+1.9**
MLYT	**Lee's Yard**	**6.05**	**2**	*e*P		**Pn**	**10 46 12.3**	**+3.4**
MLYT				eS		Sn	10 47 15.5	-1.4
MAPV	**Macapo**	**6.06**	**263**	*e*P		**Pn**	**10 46 10.1**	**+1.1**
MAPV				eS		Sn	10 47 14.1	-2.9
MBWH	**Windy Hill**	**6.08**	**2**	*e*P		**Pn**	**10 46 13.1**	**+3.8**
MBFL	**Flemmings, Mon**	**6.08**	**1**	*e*P		**Pn**	**10 46 12.1**	**+2.8**
TEPV	**Terepaima**	**6.76**	**265**	*e*P		**Pn**	**10 46 19.1**	**+0.6**
TEPV				eS		Sn	10 47 29.9	-4.2
ANWB	**Willy Bob**	**7.02**	**4**	*e*P		**Pn**	**10 46 22.6**	**+0.6**
SDV	**Santo Domingo**	**8.34**	**259**	*e*P		**Pn**	**10 46 40.4**	**+0.2**
SOCV	**Socops**	**8.70**	**255**	*e*P		**Pn**	**10 46 45.2**	**+0.2**

*IDC **29** 10:48:04.2±2.3, 17°.72S×175°.08W, h220km±23km, mb3.4/11, mbtmp4.0/12, Error ellipse: s-maj=27.7km s-min=12.8km az=134.0*

ISC 29 10:48:06.8±0.8, 17°.6S±0°.2×174°.9W±0°.2, h250km, n15, σ2§07/16, mb3.6/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.73**	**40**	P	**Pn**	**10 49 18.4**	**-1.1**
	27nm,0.4s,baz=201,slow=3.1,SNR=8.9						
AFI				S	**S**	**10 50 12.5**	**-4.9**
	85nm,0.3s,baz=233,slow=20,SNR=14						
URZ	**Urewera**	**21.76**	**197**	P	**P**	**10 52 36.7**	**-1.8**
	2.7nm,0.3s,baz=318,slow=2.7,SNR=7.0						
	2.7nm,0.3s						
STKA	**Stephens Creek**	**41.72**	**242**	P	**P**	**10 55 30.9**	**-0.8**
	2.2nm,0.8s,baz=93,slow=12,SNR=6.6						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**47.97**	**259**	P	**P**	**10 56 19.1**	**-1.9**
	1.7nm,0.5s,baz=94,slow=6.8,SNR=84						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**48.09**	**254**	P	**P**	**10 56 20.2**	**-1.7**
	16nm,0.6s,baz=88,slow=9.1,SNR=299						
MJAR	**Matsushiro Arr**	**69.69**	**321**	P	**P**	**10 58 50.3**	**+0.6**
	1.2nm,0.9s,baz=160,slow=4.0,SNR=4.6						
	1.2nm,0.9s						
PETK	**Petropavlovsk-**	**74.27**	**343**	P	**P**	**10 59 18.2**	**+1.8**
	1.7nm,0.7s,baz=160,slow=5.8,SNR=9.3						
	1.7nm,0.7s						
NVAR	**Mina Array Bea**	**76.91**	**42**	P	**P**	**10 59 34.0**	**+2.0**
	0.6nm,0.7s,baz=231,slow=10,SNR=5.2						
	0.6nm,0.7s						
TXAR	**Lajitas Array**	**83.02**	**56**	P	**P**	**11 00 07.1**	**+2.5**
	0.3nm,0.9s,baz=242,slow=5.9,SNR=2.5						
	0.3nm,0.9s						
PDAR	**Pinedale Array**	**84.84**	**42**	P	**P**	**11 00 15.0**	**+1.3**
	0.5nm,0.8s,baz=211,slow=5.2,SNR=3.9						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**84.86**	**12**	P	**P**	**11 00 14.0**	**+1.0**
	0.8nm,0.5s,baz=221,slow=5.5,SNR=35						
	0.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**91.93**	**289**	P	**P**	**11 00 47.8**	**+0.3**
	0.5nm,0.4s,baz=100,slow=4.2,SNR=2.4						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**92.66**	**24**	P	**P**	**11 00 51.0**	**+1.1**
	0.1nm,0.5s,baz=255,slow=5.1,SNR=3.6						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**111.31**	**314**	PKiKP	**PKiKP**	**11 06 10.3**	**-0.7**
	0.2nm,0.4s,baz=137,slow=1.7,SNR=4.2						
BRTR	**Keskin Array B**	**146.86**	**318**	PKPbc	**PKPab**	**11 07 20.7**	**-1.3**
	1.3nm,0.7s,baz=176,slow=1.8,SNR=5.2						

*IDC **29** 10:53:10.6±4.2, 36°.28N×76°.36E, h98km±35km, mb3.4/6, mbtmp3.6/12, Error ellipse: s-maj=38.4km s-min=17.8km az=42.0*

ISC 29 10:53:11.7±1.1, 36°.46N±0°.10×76°.5E±0°.1, h100km, n14, σ1§90/16, mb3.5/6, 1D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH2	**Kashi**	**2.78**	**345**	Pg	**Pn**	**10 53 59.0**	**+4.3**
KSH2				Sg	**Sn**	**10 54 23.8**	**-4.0**
KSH2				smax	smax		
	comp=N,62nm,0.7s						
KSH2				smax	smax		
	comp=E,21nm,0.7s						
AAK	**Ala-Archa**	**6.36**	**347**	P	**Pn**	**10 54 43.8**	**+0.8**
	comp=E,0.6nm,0.4s,baz=180,slow=14,SNR=2.6						
MKAR	**Makanchi Array**	**11.19**	**21**	P	**Pn**	**10 55 49.5**	**+0.9**
	comp=E,0.3nm,0.3s,baz=201,slow=13,SNR=16						
MKAR				S	**Sn**	**10 57 51.1**	**-0.5**
	comp=E,1.0nm,0.8s,baz=191,slow=22,SNR=5.1						
KURBB	**Kurchatov Arra**	**14.23**	**5**	P	**Pn**	**10 56 27.9**	**-0.6**
	comp=E,0.1nm,0.4s,baz=196,slow=10.0,SNR=7.2						
BVAR	**Borovoye Array**	**17.11**	**347**	P	**Pn**	**10 57 03.9**	**-0.6**
	comp=E,1.0nm,0.5s,baz=157,slow=8.0,SNR=4.1						
ZALV	**Zalesovo Beam**	**18.42**	**16**	P	**Pn**	**10 57 20.1**	**-0.1**
	comp=E,0.5nm,0.2s,baz=211,slow=9.7,SNR=5.4						
AKTO	**Aktyubinsk**	**19.30**	**322**	P	**P**	**10 57 28.6**	**0.0**
	comp=E,0.9nm,0.3s,baz=102,slow=4.2,SNR=4.6						
AKTO	**Aktyubinsk**	**19.30**	**322**	⇓S	**Sn**	**11 01 06.9**	**-0.1**
	comp=E,0.4nm,0.6s						
SONM	**Songino Array**	**24.75**	**53**	P	**P**	**10 58 25.8**	**+1.9**
	comp=E,1.0nm,0.7s,baz=255,slow=7.9,SNR=10						
	comp=E,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**26.69**	**126**	P	**P**	**10 58 42.1**	**+0.6**
	comp=E,0.5nm,0.3s,baz=305,slow=11,SNR=5.3						
	comp=E,0.5nm,0.3s						
FINES	**FINESS Array B**	**40.03**	**325**	P	**P**	**11 00 37.0**	**+0.4**
	comp=E,1.5nm,0.4s,baz=110,slow=9.6,SNR=23						
	comp=E,1.5nm,0.4s						
ARCES	**ARCESS Array B**	**42.92**	**336**	P	**P**	**11 01 00.4**	**+0.3**
	comp=E,2.6nm,0.8s,baz=103,slow=5.4,SNR=6.8						
	comp=E,2.6nm,0.8s						
WRA	**Warramunga Arr**	**78.28**	**126**	P	**P**	**11 04 58.4**	**-2.5**
	comp=E,0.4nm,0.9s,baz=328,slow=5.8,SNR=6.8						
	comp=E,0.4nm,0.9s						
YKA	**Yellowknife Ar**	**80.98**	**5**	P	**P**	**11 05 14.2**	**-0.7**
	comp=E,0.2nm,0.7s,baz=344,slow=5.9,SNR=5.1						
	comp=E,0.2nm,0.7s						

*IDC **29** 11:05:40.0±1.2, 33°.10S×179°.04W, h0km, mb4.0/2, mbtmp4.1/3, ML4.0/1, MS3.2/3, Error ellipse: s-maj=42.4km s-min=32.8km az=147.0*

*WEL **29** 11:05:46.4±0.7, 33°.S±6°.×17°.9W±1°.4, h33km, M4.4/12, mB4.9/6, ML4.3/19, MLv4.6/12, Mw(mB)4.2/6, Error ellipse: s-maj=19.5km s-min=4.2km az=109.7*

ISC 29 11:05:45.0±0.9, 33°.44S±0°.07×178°.6W±0°.1, h41km, n78, σ1§67/77, MS3.1/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.20**	**8**	P	**Pn**	**11 06 47.7**	**+1.1**
GLKZ				S	**Sn**	**11 07 36.2**	**+1.8**
MXZ	**Matakaoa Point**	**4.83**	**211**	P	**Pn**	**11 06 58.0**	**+2.8**
MXZ				S	**Sn**	**11 07 53.1**	**+3.2**
WMGZ	**Waiomatatini S**	**5.01**	**208**	P	**Pn**	**11 06 59.8**	**+2.2**
WMGZ				S	**Sn**	**11 07 55.6**	**+1.4**
HAZ	**Te Kaha**	**5.23**	**214**	P	**Pn**	**11 07 01.9**	**+1.3**
HAZ				S	**Sn**	**11 08 01.2**	**+1.6**
PUZ	**Puketiti**	**5.29**	**208**	P	**Pn**	**11 07 02.3**	**+0.8**
PUZ				S	**Sn**	**11 08 01.9**	**+0.7**
RUGZ	**Raukumara Rang**	**5.45**	**213**	P	**Pn**	**11 07 05.0**	**+1.3**
RUGZ				S	**Sn**	**11 08 06.5**	**+1.4**
TWGZ	**Tauwhareparae**	**5.49**	**210**	P	**Pn**	**11 07 06.0**	**+1.7**
TWGZ				S	**Sn**	**11 08 07.1**	**+1.0**
TKGZ	**Te Karaka**	**5.77**	**209**	P	**Pn**	**11 07 08.9**	**+0.9**
TKGZ				S	**Sn**	**11 08 13.9**	**+1.0**
MWZ	**Matawai**	**5.82**	**212**	P	**Pn**	**11 07 09.2**	**+0.5**
MWZ				S	**Sn**	**11 08 15.4**	**+1.3**
OPRZ	**Ohinepanea**	**5.92**	**221**	P	**Pn**	**11 07 12.8**	**+2.7**
URZ	**Urewera**	**5.95**	**215**	Pn	**Pn**	**11 07 10.8**	**+0.3**
	3.7nm,0.3s,baz=293,slow=2.1,SNR=36						
URZ				Sn	**Sn**	**11 08 15.7**	**-1.6**
	9.4nm,0.3s,baz=187,slow=20,SNR=11						
	7.4nm,0.3s						
URZ	**Urewera**	**5.95**	**215**	P	**Pn**	**11 07 10.2**	**-0.3**
URZ				S	**Sn**	**11 08 16.6**	**-0.7**
RAGZ	**Rawiri**	**6.00**	**212**	P	**Pn**	**11 07 12.6**	**+1.3**
RIGZ	**Rimuhau**	**6.03**	**208**	P	**Pn**	**11 07 13.1**	**+1.4**
PRGZ	**Paritu Road**	**6.17**	**207**	P	**Pn**	**11 07 15.3**	**+1.7**
SNGZ	**Shannon Statio**	**6.27**	**211**	P	**Pn**	**11 07 16.0**	**+1.1**
MKAZ	**Moumakai**	**6.29**	**233**	P	**Pn**	**11 07 18.5**	**+3.3**
RTZ	**Ruatahuna**	**6.29**	**214**	P	**Pn**	**11 07 16.0**	**+0.7**
WCZ	**Waipu Caves**	**6.34**	**245**	P	**Pn**	**11 07 16.5**	**+0.6**
MHGZ	**Mahia Peninsul**	**6.37**	**205**	P	**Pn**	**11 07 17.2**	**+0.9**
TOZ	**Tahuroa Road**	**6.45**	**227**	P	**Pn**	**11 07 19.4**	**+2.0**
RAHZ	**Arahi**	**6.49**	**211**	P	**Pn**	**11 07 19.3**	**+1.4**
MTHZ	**Maungataniwha**	**6.55**	**213**	P	**Pn**	**11 07 21.1**	**+2.3**
ALRZ	**Allen Road**	**6.56**	**217**	P	**Pn**	**11 07 20.6**	**+1.6**
OUZ	**Omahuta**	**6.71**	**253**	P	**Pn**	**11 07 20.4**	**-0.6**
MRHZ	**Matea Rd**	**6.73**	**216**	P	**Pn**	**11 07 22.8**	**+1.5**
NMHZ	**Naumai**	**6.76**	**212**	P	**Pn**	**11 07 23.5**	**+1.7**
ARHZ	**Aropaoanui**	**6.82**	**210**	P	**Pn**	**11 07 24.9**	**+2.4**
TLZ	**Tolley Road**	**6.83**	**223**	P	**Pn**	**11 07 24.9**	**+2.3**
BKZ	**Black Stump Fm**	**6.96**	**213**	P	**Pn**	**11 07 24.5**	**+0.1**
MCHZ	**McNeill Hill**	**7.10**	**211**	P	**Pn**	**11 07 27.1**	**+0.8**
KWHZ	**Kaweka Forest**	**7.20**	**213**	P	**Pn**	**11 07 27.4**	**-0.4**
TMVZ	**Te Maari**	**7.30**	**218**	P	**Pn**	**11 07 29.6**	**+0.4**
NTVZ	**North Tongarir**	**7.31**	**218**	P	**Pn**	**11 07 29.9**	**+0.6**
ETVZ	**East Tongariro**	**7.32**	**217**	P	**Pn**	**11 07 29.7**	**+0.3**
KAHZ	**Kahuranaki**	**7.32**	**209**	P	**Pn**	**11 07 28.5**	**-0.9**
OTVZ	**Oturere**	**7.36**	**217**	P	**Pn**	**11 07 30.3**	**+0.3**
WTVZ	**West Tongariro**	**7.36**	**218**	P	**Pn**	**11 07 30.9**	**+0.8**
SNVZ	**South Ngauruho**	**7.39**	**217**	P	**Pn**	**11 07 31.5**	**+1.0**
KRHZ	**Kereru**	**7.40**	**212**	P	**Pn**	**11 07 29.9**	**-0.6**
MTVZ	**Mangateitei**	**7.63**	**217**	P	**Pn**	**11 07 33.8**	**+0.2**
PNHZ	**Pukenui**	**7.70**	**211**	P	**Pn**	**11 07 33.0**	**-1.6**
WPHZ	**Waipukurau**	**7.72**	**210**	P	**Pn**	**11 07 35.4**	**+0.5**
PRHZ	**Porangahau**	**7.82**	**208**	P	**Pn**	**11 07 36.0**	**-0.2**
DVHZ	**Dannevirke**	**8.03**	**210**	P	**Pn**	**11 07 38.3**	**-0.9**
BFZ	**Birch Farm**	**8.32**	**208**	P	**Pn**	**11 07 42.2**	**-0.9**
PRWZ	**Pori Road**	**8.33**	**210**	P	**Pn**	**11 07 43.6**	**+0.4**
TIWZ	**Tintock**	**8.55**	**210**	P	**Pn**	**11 07 44.7**	**-1.5**
MRZ	**Manganatainoka R**	**8.59**	**211**	P	**Pn**	**11 07 44.0**	**-2.7**
TMWZ	**Te Maipa**	**8.83**	**208**	P	**Pn**	**11 07 48.2**	**-1.8**
OGWZ	**Otaki Gorge**	**8.89**	**212**	P	**Pn**	**11 07 48.0**	**-2.8**
MTW	**Mount Morrison**	**9.03**	**210**	P	**Pn**	**11 07 50.1**	**-2.6**
KIW	**Kapiti Island**	**9.04**	**213**	P	**Pn**	**11 07 49.9**	**-3.1**
CAW	**Cannon Point**	**9.17**	**212**	P	**Pn**	**11 07 51.9**	**-2.9**
PAWZ	**Paruwai Farm**	**9.25**	**209**	P	**Pn**	**11 07 53.1**	**-2.7**
TCW	**Tory Channel**	**9.62**	**214**	P	**Pn**	**11 07 57.5**	**-3.2**
TUWZ	**Tuamarina**	**9.94**	**215**	P	**Pn**	**11 08 02.7**	**-2.5**
STKA	**Stephens Creek**	**33.43**	**262**	LR	LR	11 23 36.4	
	comp=Z,28nm,21.1s,baz=176,slow=32						
ASAR	**Alice Springs**	**42.55**	**270**	P	**P**	**11 13 34.4**	**-2.5**
	1.3nm,0.5s,baz=110,slow=7.6,SNR=35						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**43.81**	**276**	P	**P**	**11 13 44.4**	**-2.7**
	1.5nm,0.6s,baz=115,slow=8.0,SNR=27						
	1.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.93**	**273**	LR	LR	11 35 32.5	
	comp=Z,54nm,18.7s,baz=208,slow=35						
H03S2	**Juan Fernandez**	**79.20**	**123**	T	T	12 46 08.7	
	baz=235,slow=74,SNR=7.4						
H03S1	**Juan Fernandez**	**79.21**	**123**	T	T	12 46 07.4	
	baz=235,slow=74,SNR=7.0						
H03S3	**Juan Fernandez**	**79.22**	**123**	T	T	12 46 07.7	
	baz=235,slow=74,SNR=7.4						
H03N3	**Juan Fernandez**	**79.41**	**123**	T	T	12 46 24.7	
	baz=239,slow=72,SNR=36						
H03N2	**Juan Fernandez**	**79.42**	**123**	T	T	12 46 21.6	
	baz=239,slow=72,SNR=24						
H03N1	**Juan Fernandez**	**79.43**	**123**	T	T	12 46 23.9	
	baz=239,slow=72,SNR=37						
CMAR	**Chiang Mai Arr**	**93.94**	**289**	LR	LR	12 03 59.0	
	comp=Z,5.9nm,18.6s,baz=170,slow=37						
MKAR	**Makanchi Array**	**119.32**	**309**	PKP	**PKPdf**	**11 24 29.2**	**-0.3**
	0.1nm,0.5s,baz=234,slow=3.1,SNR=1.5						
SPITS	**Spitsbergen Ar**	**134.69**	**356**	PKP	**PKiKP**	**11 24 60.0**	**+0.6**
	2.7nm,0.9s,baz=72,slow=1.8,SNR=4.9						
H10N3	**ASCENSION HYDR**	**136.25**	**157**	T	T	13 58 28.5	
	baz=203,slow=75,SNR=8.3						
H10N1	**ASCENSION HYDR**	**136.25**	**157**	T	T	13 58 17.3	
	baz=203,slow=75,SNR=8.8						
H10N2	**ASCENSION HYDR**	**136.26**	**157**	T	T	13 58 29.2	
	baz=203,slow=75,SNR=7.9						
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc	**PKPbc**	**11 25 23.7**	**-0.9**
	2.7nm,0.7s,baz=53,slow=2.6,SNR=13						
NB2	**NORSAR Subarra**	**151.66**	**350**	PKPa	**PKiKP**	**11 25 34.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**151.66**	**350**	PKPbc	**PKiKP**	**11 25 34.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=13,slow=4.1,SNR=5.2						
HFS	**Hagfos**	**152.10**	**347**	PKPbc	**PKiKP**	**11 25 35.6**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=90,slow=4.4,SNR=5.5						
TORD	**Torodi Ar. Bea**	**159.80**	**181**	PKPab	**PKPab**	**11 26 20.9**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=204,slow=5.9,SNR=6.1						

*IDC **29** 11:18:57.1±0.8, 5°.84N×77°.59W, h0km, mb3.7/8, mbtmp3.8/10, ML2.7/2, MS3.3/5, Error ellipse: s-maj=25.4km s-min=17.9km az=55.0*

*NEIC **29** 11:18:59.3±2.5, 5°.80N±0°.09×77°.62W±0°.05, h10km±1km, mb4.3/8, Error ellipse: s-maj=16.3km s-min=3.8km az=204.0*

*CATAC **29** 11:18:59.7±0.8, 6°.N±2°.×7°.8W±°., h21km±5km, M4.2/13, mb4.4/3, mB4.4/1, MLv4.1/13, Mw(mB)3.6/1, Error ellipse: s-maj=4.2km s-min=2.8km az=47.6, confirmed*

*RSNC **29** 11:19:00.8±0.0, 6°.N±2°.×7°.8W±°., h28km±3km, M3.4, mB4.6, mb4.4, ML3.1, Mw(mB)3.8*

ISC 29 11:18:59.1±1.3, 5°.80N±0°.03×77°.64W±0°.04, h13km±8km, n88, σ1§66/104, mb4.1/11, MS3.2/3, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOLC	**Bahia Solano**	**0.48**	**28**	P	**Pg**	**11 19 08.5**	**-0.1**
SOLC				S	**Sg**	**11 19 14.7**	**-0.3**
PIZC	**Pizarro, Choco**	**0.88**	**162**	P	**Pg**	**11 19 17.1**	**+0.9**
PIZC				S	**Sn**	**11 19 29.5**	**-0.3**
PTAC	**Punta Ardita,**	**1.34**	**353**	P	**Pn**	**11 19 21.6**	**-2.0**
PTAC				S	**Sn**	**11 19 36.3**	**-5.0**
CBOC	**Ciudad Bolivar**	**1.62**	**88**	P	**Pn**	**11 19 24.8**	**-2.7**
CBOC				S	**Sn**	**11 19 44.1**	**-4.2**
PLMC	**San Jos del P**	**1.62**	**123**	P	**Pn**	**11 19 25.3**	**-2.1**
PLMC				S	**Sn**	**11 19 45.2**	**-2.9**
DBBC	**Dabeiba**	**1.86**	**50**	P	**Pn**	**11 19 29.3**	**-1.5**
YOTC	**Yotoco, Valle**	**2.22**	**145**	P	**Pn**	**11 19 34.7**	**-1.1**
YOTC				S	**Sb**	**11 20 06.3**	**-0.3**
CMAN1	**Manizales, Cal**	**2.22**	**109**	P	**Pn**	**11 19 35.6**	**-0.4**
CMAN1				S	**Sn**	**11 20 04.5**	**+1.0**
NIZA	**Niza - Manizal**	**2.28**	**109**	P	**Pn**	**11 19 34.9**	**-1.8**
NIZA				S	**Sn**	**11 20 02.8**	**-2.0**
APAC	**Apartado, Choc**	**2.33**	**27**	P	**Pn**	**11 19 37.8**	**+0.6**
GUY2C	**Guyana, Caldas**	**2.33**	**104**	P	**Pn**	**11 19 36.5**	**-1.1**
GUY2C				S	**Sn**	**11 20 06.2**	**-0.2**
RECRC	**Villamaria, Ca**	**2.42**	**110**	P	**Pn**	**11 19 39.5**	**+0.6**
RECRC				S	**Sn**	**11 20 08.2**	**-0.5**
ANIL	**Santa Ana**	**2.58**	**120**	P	**Pn**	**11 19 41.1**	**+0.3**
JAMC	**Jamundi, Valle**	**2.75**	**160**	P	**Pn**	**11 19 43.5**	**+0.4**
CAPC	**Capurgana**	**2.83**	**6**	P	**Pb**	**11 19 49.6**	**+0.1**
CAP2	**Capurgana**	**2.84**	**6**	P	**Pn**	**11 19 46.8**	**+2.6**
CAP2				S	**Sn**	**11 20 19.1**	**+0.8**
UREC	**San Jos de Ur**	**2.85**	**47**	P	**Pn**	**11 19 44.0**	**-0.3**
PTBC	**PUERTO BERRIO,**	**3.24**	**77**	P	**Pn**	**11 19 49.9**	**+0.1**
PTBC				S	**Sn**	**11 20 27.4**	**-0.9**
POPC	**Popayan, Colom**	**3.38**	**164**	P	**Pn**	**11 19 52.5**	**+0.7**
PRAC	**Prado**	**3.44**	**127**	P	**Pn**	**11 19 53.5**	**+1.0**
PRAC				S	**Sn**	**11 20 34.8**	**+1.7**
PRAC	**Prado**	**3.44**	**127**	P	**Pn**	**11 19 54.7**	**+2.2**
ROSC	**El Rosal**	**3.44**	**106**	Pn	**Pn**	**11 19 52.4**	**-0.4**
	11nm,0.3s,baz=289,slow=14,SNR=14						
	16nm,0.5s						
ROSC	**El Rosal**	**3.44**	**106**		**Pn**	**11 19 54.0**	**+1.3**
ROSC	**El Rosal**	**3.44**	**106**	P	**Pb**	**11 19 58.5**	**-1.6**
ROSC	**El Rosal**	**3.44**	**106**	P	**Pn**	**11 19 56.4**	**+3.6**
SPBC	**San Pablo de B**	**3.55**	**92**	P	**Pn**	**11 19 54.1**	**+0.1**
BBAC	**Balboa, Cauca**	**3.78**	**174**	P	**Pn**	**11 19 58.8**	**+1.5**
BCIP	**Isla Barro Col**	**3.99**	**327**	P	**Pn**	**11 19 57.7**	**-2.4**
BCIP				S	**Sn**	**11 20 46.0**	**-0.6**
BCIP	**Isla Barro Col**	**3.99**	**327**	P	**Pn**	**11 19 58.7**	**-1.3**
BRJC	**Barrancabermej**	**4.04**	**73**	P	**Pn**	**11 20 01.5**	**+0.8**
CHIC	**Chingaza**	**4.06**	**107**	P	**Pn**	**11 20 03.7**	**+2.4**
URMC	**La Uribe, Meta**	**4.12**	**128**	P	**Pn**	**11 20 04.5**	**+2.6**
GARC	**Garzon, Huila**	**4.18**	**149**	P	**Pn**	**11 20 05.0**	**+2.1**
VILC	**Villavicencio,**	**4.27**	**113**	P	**Pn**	**11 20 07.0**	**+3.0**
BARC	**Barichara**	**4.50**	**80**	P	**Pn**	**11 20 07.8**	**+0.6**
RUSC	**La Rusia**	**4.53**	**89**	P	**Pn**	**11 20 10.2**	**+2.3**
RUSC				S	**Sn**	**11 21 03.1**	**+2.5**
RUSC	**La Rusia**	**4.53**	**89**	P	**Pn**	**11 20 08.7**	**+0.8**
GCUF	**Volcan Galeras**	**4.56**	**176**	P	**Pb**	**11 20 14.9**	**-4.4**
FLOC	**Florencia**	**4.64**	**155**	P	**Pn**	**11 20 12.1**	**+3.2**
FLOC				S	**Sn**	**11 21 03.1**	**+0.4**
FLOC	**Florencia**	**4.64**	**155**	P	**Pn**	**11 20 11.0**	**+2.0**
SJCC	**San Jacinto, C**	**4.74**	**31**	P	**Pn**	**11 20 11.0**	**+0.6**
SJCC				S	**Sn**	**11 21 08.5**	**+3.3**
SJCC	**San Jacinto, C**	**4.74**	**31**	P	**Pn**	**11 20 13.0**	**+2.6**
OCAC	**Ocana**	**4.92**	**60**	P	**Pn**	**11 20 14.2**	**+1.3**
PAMC	**Pamplona, Colo**	**5.13**	**72**	P	**Pn**	**11 20 16.8**	**+0.6**
	629nm48nm,0.6s						
MACC	**Macarena, Meta**	**5.24**	**134**	P	Pn	11 20 22.8	+5.5
OTAV	**Otavalo**	**5.59**	**188**	Pn	**Pn**	**11 20 23.5**	**+1.1**
OTAV	**Otavalo**	**5.59**	**188**	P	**Pn**	**11 20 22.3**	**-0.2**
OTAV				S	**Sn**	**11 21 24.4**	**-2.4**
OTAV	**Otavalo**	**5.59**	**188**	P	**Pn**	**11 20 24.0**	**+1.6**
	11nm,0.9s						
PAC1	**Pacto, Paraso**	**5.62**	**192**	P	**Pn**	**11 20 26.1**	**+3.5**
BRU2	**Volcan**	**5.83**	**301**

VAYK	**Vayk**	**1.53**	**29**	⇓*e*P		**Pb**	**11 20 13.3**	**-1.1**
VAYK				⇓*e*S		**Sg**	**11 20 34.4**	**-0.8**
IGDI	**IGDIR**	**1.54**	**349**	P		**Pn**	**11 20 12.7**	**-0.8**
IGDI				S		**Sb**	**11 20 33.6**	**-0.5**
IGDI				IAML			11 20 40.0	
	comp=E,402nm,0.6s							
IGDI	**IGDIR**	**1.54**	**349**	Pg		**Pb**	**11 20 13.8**	**-0.7**
PERV	**Siirt/Pervari-**	**1.57**	**255**	P		**Pn**	**11 20 13.5**	**-0.4**
DORK	**Agr/Tutak/Do**	**1.67**	**309**	P		**Pn**	**11 20 13.8**	**-1.6**
DORK				S		**Sg**	**11 20 39.3**	**-0.2**
DORK				IAML			11 20 45.0	
	comp=N,290nm,0.8s							
AGRB	**Hanur-Agry**	**1.67**	**317**	Pn		**Pb**	**11 20 16.1**	**-0.8**
AGRB				Sn		**Sg**	**11 20 39.4**	**-0.3**
AGRB	**Hanur-Agry**	**1.67**	**317**	Pg		**Pb**	**11 20 16.3**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.69**	**298**	Pn		**Pb**	**11 20 16.5**	**-0.7**
MLAZ				Sn		**Sg**	**11 20 39.3**	**-0.9**
MLAZ	**Malazgirt-MUS**	**1.69**	**298**	Pg		**Pb**	**11 20 16.4**	**-0.7**
KOTA	**Agri, Merkez-K**	**1.74**	**326**	P		**Pn**	**11 20 16.5**	**+0.1**
GNI	**Garni**	**1.80**	**7**	Pn		**Pb**	**11 20 19.0**	**-0.1**
GNI				Sn		**Sg**	**11 20 43.8**	**-0.1**
GNI	**Garni**	**1.80**	**7**	*e*P		**Pb**	**11 20 18.9**	**-0.2**
GNI				*e*S		**Sg**	**11 20 43.9**	**+0.1**
EGVZ	**Egvard**	**1.84**	**61**	*e*P		**Pb**	**11 20 18.0**	**-1.7**
EGVZ				*e*S		**Sg**	**11 20 44.0**	**-1.1**
BLIS	**Bitlis-Merkez**	**1.85**	**272**	P		**Pn**	**11 20 17.9**	**+0.1**
BLIS				S		**Sg**	**11 20 43.9**	**-1.3**
BLIS				IAML			11 20 49.0	
	comp=N,243nm,0.8s							
MAHB	**Mahabad**	**1.87**	**148**	Pn		**Pg**	**11 20 20.4**	**-1.3**
GURO	**Guroymak-BITLI**	**1.92**	**277**	Pn		**Pb**	**11 20 19.4**	**-1.6**
GURO	**Guroymak-BITLI**	**1.92**	**277**	Pn		**Pb**	**11 20 19.3**	**-1.7**
IHRS	**Heris**	**2.03**	**90**	Pn		**Pb**	**11 20 21.6**	**-1.3**
AYRK	**Ayrk**	**2.04**	**30**	*e*P		**Pb**	**11 20 22.1**	**-1.0**
AYRK				*e*S		**Sg**	**11 20 49.5**	**-1.8**
SRTM	**Siirt_Merkez**	**2.04**	**260**	P		**Pb**	**11 20 22.2**	**-0.8**
SRTM				S		**Sg**	**11 20 49.9**	**-1.4**
SRTM				IAML			11 20 59.0	
	comp=E,353nm,0.7s							
SRTM	**Siirt_Merkez**	**2.04**	**260**	Pn		**Pb**	**11 20 22.2**	**-0.8**
EATA	**Eleskirt**	**2.15**	**315**	P		**Pb**	**11 20 23.8**	**-1.2**
DIGO	**Kars**	**2.22**	**338**	P		**Pb**	**11 20 24.6**	**-1.6**
MUSM	**Mu-Merkez**	**2.34**	**280**	P		**Pb**	**11 20 26.0**	**-2.3**
EAK	**Akyaka**	**2.42**	**344**	P		**Pb**	**11 20 29.0**	**-0.6**
IHSH	**Hashtrud**	**2.45**	**114**	Pn		**Pb**	**11 20 28.0**	**-2.3**
VRTB	**Varto-Mus**	**2.48**	**290**	Pn		**Pn**	**11 20 27.8**	**+1.3**
KARS	**Kars**	**2.51**	**335**	Pn		**Pn**	**11 20 28.4**	**+1.5**
BOZK	**Kars-Merkez-Bo**	**2.51**	**333**	P		**Pb**	**11 20 30.6**	**-0.5**
BTMN	**Batman**	**2.56**	**261**	P		**Pb**	**11 20 31.7**	**-0.3**
SVAN	**Silvan-Diyarba**	**2.58**	**266**	Pn		**Pn**	**11 20 28.8**	**+1.0**
SVAN	**Silvan-Diyarba**	**2.58**	**266**	Pn		**Pn**	**11 20 28.7**	**+1.0**
ISRB	**Sarab**	**2.58**	**101**	Pn		**Pb**	**11 20 29.3**	**-3.2**
HOMI	**Horasan**	**2.61**	**311**	P		**Pb**	**11 20 33.6**	**+0.8**
LSVT	**Lusahovit**	**2.62**	**12**	*e*P		**Pb**	**11 20 33.8**	**+0.9**
LSVT				*e*S		**Sg**	**11 21 09.8**	**-0.1**
GRMI	**Germi**	**2.73**	**79**	Pn		**Pn**	**11 20 31.2**	**+1.3**
SENK	**Senkaya-Erzuru**	**2.74**	**324**	Pn		**Pn**	**11 20 31.5**	**+1.4**
KARO	**Karliova-Bingo**	**2.83**	**291**	Pn		**Pn**	**11 20 32.5**	**+1.2**
ERZM	**Erzurum**	**2.86**	**304**	P		**Pb**	**11 20 36.6**	**-0.6**
BNGB	**Bingl**	**3.03**	**285**	Pn		**Pn**	**11 20 35.4**	**+1.4**
YEDI	**Yedisu-Bingol**	**3.24**	**291**	Pn		**Pn**	**11 20 38.3**	**+1.3**
DYBB	**Diyarbakir**	**3.43**	**265**	Pn		**Pn**	**11 20 40.9**	**+1.4**
SVRC	**Sivrice-ELAZID**	**4.05**	**272**	Pn		**Pn**	**11 20 49.6**	**+1.5**
BVAR	**Borovoye Array**	**23.13**	**42**	P		**P**	**11 24 56.3**	**+4.3**
	1.2nm,0.9s,baz=220,slow=14,SNR=4.5 1.2nm,0.9s							
KURBB	**Kurchatov Arra**	**26.97**	**52**	P		**P**	**11 25 31.3**	**+3.8**
	0.4nm,0.3s,baz=260,slow=9.3,SNR=3.1 0.4nm,0.3s							
MKAR	**Makanchi Array**	**28.87**	**61**	P		**P**	**11 25 45.0**	**+0.4**
	0.5nm,0.7s,baz=251,slow=9.0,SNR=5.1 0.5nm,0.7s							
HFS	**Hagfors**	**29.18**	**328**	LR		LR	11 39 18.2	
	comp=Z,66nm,19.5s,baz=255,slow=38							
NOA	**NORSAR Array B**	**30.70**	**328**	LR		LR	11 39 49.0	
	comp=Z,48nm,18.6s,baz=250,slow=37							
ZALV	**Zalesovo Beam**	**31.50**	**47**	P		**P**	**11 26 10.7**	**+3.0**
	0.4nm,0.4s,baz=268,slow=9.5,SNR=2.0 0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**51.09**	**97**	P		**P**	**11 28 50.0**	**+1.1**
	0.7nm,0.3s,baz=292,slow=8.2,SNR=4.7 0.7nm,0.3s							

*IDC **29** 11:27:50.9±1.6, 1°.86S×124°.38E, h0km, mb3.3/3, mbtmp3.5/5, ML3.9/2, MS2.4/1, Error ellipse: s-maj=28.5km s-min=24.8km az=179.0*

*DJA **29** 11:27:51.9±0.2, 2°.S±2°×12°.4E±°, h10km, M4.4/34, mB5.1/5, mb4.4/11, MLv4.3/34, Mw(mB)4.5/5*

ISC 29 11:27:52.0±1.0, 1°.59S±0°.07×124°.25E±0°.05, h10km, n21, σ1s47/22, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LUWI	**Luwuk**	**1.57**	**290**	P		**Pn**	**11 28 18.6**	**-1.3**
SANI	**Sanana**	**1.80**	**105**	P		**Pn**	**11 28 22.5**	**-0.5**
APSI	**Ampana**	**2.69**	**285**	P		**Pn**	**11 28 34.5**	**-0.8**
MNI	**Manado**	**3.07**	**11**	P		**Pn**	**11 28 42.4**	**+1.8**
MRSI	**Marisa**	**3.09**	**312**	P		**Pn**	**11 28 39.7**	**-1.1**
NLAI	**Namlea**	**3.29**	**120**	P		**Pn**	**11 28 45.0**	**+1.5**
KKSI	**Kolaka, Sulawe**	**3.65**	**225**	P		**Pn**	**11 28 48.5**	**0.0**
PCI	**Palu**	**4.46**	**279**	P		Pn	11 28 57.9	-1.8
TTSI	**Tana Toraja**	**4.66**	**252**	P		**Pn**	**11 29 00.9**	**-1.5**
MPSI	**Mapaga**	**4.75**	**294**	P		**Pn**	**11 29 04.8**	**+1.1**
SPSI	**Sidrap Palu**	**5.06**	**242**	P		**Pn**	**11 29 06.9**	**-1.0**
KAPI	**Kappang**	**5.63**	**233**	Pn		**Pn**	**11 29 16.1**	**+0.3**
	4.5nm,0.3s,baz=35,slow=8.7,SNR=9.9							
KAPI				Sn		**Sn**	**11 30 22.4**	**+1.8**
	2.3nm,0.3s,baz=352,slow=21,SNR=3.6							
KAPI				LR		LR	11 31 40.3	
	comp=Z,36nm,19.0s,baz=46,slow=41 4.4nm,0.3s							
KAPI	**Kappang**	**5.63**	**233**	P		**Pn**	**11 29 15.8**	**0.0**
PMSI	**Majene**	**5.66**	**250**	P		**Pn**	**11 29 16.5**	**+0.3**
	0.3nm72nm,0.7s							
BSSI	**Bau Bau, Buton**	**5.87**	**220**	P		**Pn**	**11 29 19.2**	**+0.1**
	0.5nm96nm,1.2s							
MKS	**Makassar**	**5.98**	**233**	P		**Pn**	**11 29 21.9**	**+1.3**
SIJI	**Sorong**	**7.05**	**84**	Pn		**Pn**	**11 29 34.4**	**-1.0**
	2.1nm,0.3s,baz=181,slow=23,SNR=5.4							
SIJI				Sn		**Sn**	**11 30 55.1**	**-0.5**
	0.5nm,0.3s,baz=258,slow=23,SNR=1.6 4.2nm,0.3s							
EDFI	**Ende, Flores**	**7.55**	**200**	P		**Pn**	**11 29 41.4**	**-0.9**
WRA	**Warramunga Arr**	**20.74**	**152**	P		**P**	**11 32 30.1**	**-2.9**
	0.7nm,0.6s,baz=325,slow=12,SNR=6.1 0.7nm,0.6s							
ASAR	**Alice Springs**	**23.86**	**158**	P		**P**	**11 33 03.1**	**-2.6**
	1.4nm,0.9s,baz=329,slow=9.3,SNR=15 1.4nm,0.9s							
MKAR	**Makanchi Array**	**60.61**	**328**	P		**P**	**11 38 05.4**	**+2.4**
	0.1nm,0.4s,baz=124,slow=7.8,SNR=2.3 0.1nm,0.4s							

*TIR **29** 11:42:42.4, 41°.37N×19°.60E, h2km, Md2.5/2, Ml1.8/3*

*BEO **29** 11:42:45.2±0.5, 41°.45N×19°.62E, h7km±2km, ML1.7/5*

ISC 29 11:42:43.1±1.3, 41°.42N±0°.03×19°.58E±0°.04, h1km±11km, n20, σ0s92/38, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.23**	**109**	Pg		**Pg**	**11 42 47.1**	**-0.3**
TIR				Sg		**Sg**	**11 42 50.0**	**-0.4**
TIR				AMI			11 42 50.5	
	2.5nm,0.1s							
TIR				AMI			11 42 50.6	
	1.5nm,0.2s							
SDA	**Shkodra**	**0.63**	**355**	Pg		**Pg**	**11 42 54.5**	**-0.7**
SDA				Sg		**Sb**	**11 43 06.6**	**+0.4**
SDA				AMI			11 43 07.9	
	0.1nm,0.2s							
SDA				AMI			11 43 11.1	
	0.1nm,0.2s							
SDA				AMd			11 43 34.0	
PHP	**Peshkopia**	**0.70**	**68**	Pg		**Pg**	**11 42 56.2**	**-0.2**
PHP				Sg		**Sb**	**11 43 06.8**	**-1.4**
PHP				AMI			11 43 09.5	
	0.3nm,0.3s							
PHP				AMI			11 43 09.9	
	0.1nm,0.3s							
PHP				AMd			11 43 33.9	
PDG	**Podgorica**	**1.03**	**347**	Sg		**Sn**	**11 43 20.1**	**+0.3**
PDG	**Podgorica**	**1.03**	**347**	*e*Pg		**Pg**	**11 43 03.2**	**+0.3**
PDG				*e*Sg		**Sb**	**11 43 18.3**	**+0.5**
PVY	**Plav**	**1.20**	**13**	*e*Pg		**Pg**	**11 43 05.5**	**-0.6**
PVY				*e*Sg		**Sb**	**11 43 23.3**	**+0.4**
KOME	**Kolasin**	**1.43**	**358**	*e*Pg		**Pn**	**11 43 10.9**	**+0.7**
KOME				*e*Sg		**Sb**	**11 43 29.8**	**+0.5**
BEY	**Berane**	**1.47**	**9**	*e*Pg		**Pn**	**11 43 09.4**	**-1.3**
BEY				*e*Sg		**Sb**	**11 43 30.9**	**+0.5**
SRN	**Sarande**	**1.57**	**168**	Sn		**Sg**	**11 43 34.6**	**+1.0**
TREB	**Trebinje**	**1.58**	**325**	*e*Pn		**Pn**	**11 43 11.8**	**-0.5**
TREB				*e*Sn		**Sn**	**11 43 33.7**	**+0.3**
DBRK	**Dubrovnik**	**1.64**	**320**	*e*Pn		**Pn**	**11 43 13.1**	**0.0**
DBRK				Sg		**Sn**	**11 43 34.1**	**-0.7**
SJES	**Sjenica**	**1.86**	**9**	*e*Pn		**Pb**	**11 43 17.7**	**-0.2**
SJES				*e*Sn		**Sn**	**11 43 41.4**	**+1.0**
IGT	**Igoumenitsa**	**1.97**	**163**	*e*Pn		**Pb**	**11 43 20.3**	**+0.5**
IGT				*e*Sn		**Sb**	**11 43 45.0**	**+0.1**
STON	**Ston**	**2.01**	**317**	*e*Pg		**Pn**	**11 43 17.7**	**-0.4**
STON				Sg		**Sn**	**11 43 40.8**	**-3.1**
SELS	**Selova**	**2.13**	**32**	*e*Pn		**Pn**	**11 43 21.3**	**+1.5**
SELS				*e*Sn		**Sn**	**11 43 46.3**	**-0.6**
BARS	**Barje**	**2.17**	**49**	*e*Pn		**Pn**	**11 43 20.5**	**+0.2**
BARS				*e*Sn		**Sn**	**11 43 48.3**	**+0.4**
IVAS	**Ivanjica**	**2.19**	**11**	*e*Pn		**Pn**	**11 43 21.9**	**+1.2**
IVAS				*e*Sn		**Sn**	**11 43 47.9**	**-0.6**
GOCS	**Kraljevo Serbi**	**2.34**	**24**	*e*Pn		**Pn**	**11 43 23.2**	**+0.4**
GOCS				*e*Sn		**Sn**	**11 43 51.9**	**-0.4**
BOSS	**Bosilegrad**	**2.42**	**63**	*e*Pn		**Pn**	**11 43 23.5**	**-0.2**
BOSS				*e*Sn		**Sn**	**11 43 52.7**	**-1.2**
BBLS	**Lazi&#263i**	**2.44**	**357**	*e*Pn		**Pn**	**11 43 25.5**	**+1.3**
BBLS				*e*Sn		**Sn**	**11 43 55.6**	**+0.9**

*IDC **29** 11:53:17.9±0.9, 52°.27N×62°.30E, h0km, mb3.5/1, mbtmp3.1/6, ML2.5/5, MS3.3/1, Error ellipse: s-maj=17.9km s-min=8.9km az=163.0*

*NNC **29** 11:53:18.0±1.1, 51°.97N×62°.47E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=25.7km s-min=4.7km az=151.0, Suspected Mining explosion.*

ISC 29 11:53:16.1±0.8, 52°.12N±0°.06×62°.23E±0°.05, h0km, n12, σ0s90/15, 6C-3D, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKTO	**Aktyubinsk**	**3.14**	**239**	Pn		**Pb**	**11 54 11.5**	**-1.1**
	0.5nm,0.3s,baz=76,slow=14,SNR=6.1							
AKTO				Sn		**Sb**	**11 54 52.1**	**+0.8**
	0.5nm,0.3s,baz=358,slow=24,SNR=4.6							
AKTO				Lg		Lg	11 55 00.2	
	1.8nm,0.3s,baz=228,slow=2.3,SNR=14 1.4nm,0.5s							
AKTO	**Aktyubinsk**	**3.14**	**239**	⇓Pg		**Pg**	**11 54 16.4**	**+0.3**
	1.1nm,0.6s							
AKTO				⇑Lg		Lg	11 54 58.4	
	2.5nm,0.5s							
AB31	**Akbulak array**	**3.21**	**208**	Pn		**Pn**	**11 54 09.0**	**+1.2**
	0.6nm,0.7s,baz=36,slow=14,SNR=38							
AB31				⇑Pg		**Pg**	**11 54 17.1**	**-0.5**
	1.5nm,0.5s,baz=36,slow=13,SNR=16							
AB31				Lg		Lg	11 54 56.3	
	2.9nm,0.4s,baz=19,slow=23,SNR=11							
ARTI	**Arti**	**4.83**	**334**	Pn		**Pn**	**11 54 29.8**	**-0.2**
	0.1nm,0.3s,baz=151,slow=19,SNR=1.4							
ARTI				Sn		**Sn**	**11 55 27.6**	**+0.9**
	0.6nm,0.3s,baz=230,slow=22,SNR=4.0							
ARTI				Lg		Lg	11 55 49.6	
	0.2nm,0.3s,baz=242,slow=20,SNR=3.7 0.7nm,0.3s							
BRVK	**Borovoye**	**5.00**	**76**	⇑Pn		**Pn**	**11 54 33.0**	**+0.6**
	0.8nm,0.6s							
BRVK				⇓Sn		**Sn**	**11 55 31.9**	**+1.2**
	1.2nm,0.7s							
BRVK				⇑Lg		Lg	11 55 52.1	
	2.2nm,0.7s							
BVA0	**Borovoye Array**	**5.06**	**76**	⇓Pn		**Pn**	**11 54 32.8**	**-0.4**
	1.0nm,0.4s							
BVA0				⇑Sn		**Sn**	**11 55 32.8**	**+0.6**
	0.7nm,0.6s							
BVA0				⇑Lg		Lg	11 55 52.5	
	3.2nm,0.7s							
BVAR	**Borovoye Array**	**5.06**	**76**	Pn		**Pn**	**11 54 34.0**	**+0.8**
	0.2nm,0.3s,baz=262,slow=13,SNR=14							
BVAR				Lg		Lg	11 55 55.2	
	0.1nm,0.3s,baz=261,slow=27,SNR=5.9 2.3nm,0.3s							
KURBB	**Kurchatov Arra**	**10.31**	**92**	Pn		**Pn**	**11 55 44.9**	**-0.1**
	baz=276,slow=14,SNR=2.2 0.2nm,0.3s							
I46RU	**ZALESOVO INFRA**	**13.71**	**73**	I		I	13 11 50.0	
	baz=274,slow=317,SNR=3.5							
MKAR	**Makanchi Array**	**14.08**	**104**	Pn		**Pn**	**11 56 35.3**	**-1.3**
	baz=294,slow=11,SNR=1.9 0.1nm,0.5s							
FINES	**FINESS Array B**	**21.62**	**310**	P		**P**	**11 58 07.8**	**+0.5**
	2.7nm,1.0s,baz=111,slow=10,SNR=1.8 2.7nm,1.0s							
JNU	**Nakatsue**	**51.94**	**83**	LR		LR	12 27 04.8	
	comp=Z,32nm,19.2s,baz=148,slow=39							

*MEX **29** 11:54:21.6±0.4, 14°.72N×93°.88W, h12km±10km, MD4.6*

*GCG **29** 11:54:21.1±1.9, 14°.71N×93°.85W, h35km±999km, MD4.5, ML5.1, MW4.2, Presumed earthquake*

*IDC **29** 11:54:22.3±2.5, 14°.82N×93°.59W, h41km±22km, mb4.1/14, mbtmp4.4/17, ML4.7/2, MS3.7/26, Error ellipse: s-maj=30.3km s-min=13.0km az=54.0*

*NEIC **29** 11:54:22.8±1.4, 14°.84N±0°.07×93°.77W±0°.06, h35km±2km, mb4.6/268, Md4.6/119(MEX), Error ellipse: s-maj=12.6km s-min=8.1km az=209.0*

*CATAC **29** 11:54:23.3±0.7, 15°.N±3°×9°.4W±°, h12km±3km, M4.7/12, MLv4.7/12, Error ellipse: s-maj=9.6km s-min=4.4km az=64.1, confirmed*

ISC 29 11:54:20.3±1.2, 14°.78N±0°.03×93°.84W±0°.02, h28km±8km, n362, σ2s37/340, mb4.6/97, MS3.6/25, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCIG		**1.09**	**33**			**Pn**	**11 54 40.0**	**+0.2**
PCIG						**Sb**	**11 54 54.0**	**-0.5**
PCIG		**1.09**	**33**	*e*P		**Pn**	**11 54 40.0**	**+0.2**
PCIG				*e*S		**Sb**	**11 54 54.0**	**-0.5**
CARR	**Arriaga**	**1.46**	**357**	*e*P		**Pn**	**11 54 45.0**	**+0.3**
CARR				*e*S		**Sn**	**11 55 03.0**	**+0.1**
THIG		**1.53**	**85**			**Pn**	**11 54 45.8**	**+0.1**
THIG						**Sn**	**11 55 04.3**	**-0.3**
THIG		**1.53**	**85**	*e*P		**Pn**	**11 54 45.8**	**+0.1**
THIG				*e*S		**Sn**	**11 55 04.3**	**-0.3**
THIG		**1.53**	**85**	*i* P		**Pn**	**11 54 46.0**	**+0.3**
PATR	**El Naranjo**	**1.59**	**78**			**Pn**	**11 54 46.7**	**0.0**
PATR						**Sb**	**11 55 07.3**	**-1.5**
PATR	**El Naranjo**	**1.59**	**78**	*e*P		**Pn**	**11 54 46.7**	**0.0**
PATR				*e*S		**Sb**	**11 55 07.3**	**-1.5**
PAVE	**Pavencul**	**1.66**	**75**			**Pn**	**11 54 47.7**	**0.0**
PAVE						**Sn**	**11 55 06.7**	**-1.4**
PAVE	**Pavencul**	**1.66**	**75**	*e*P		**Pn**	**11 54 47.7**	**0.0**
PAVE				*e*S		**Sn**	**11 55 06.7**	**-1.4**
CHUJ	**Union Juarez**	**1.70**	**79**	*e*P		**Pn**	**11 54 48.5**	**+0.2**
CHUJ				*e*S		**Sn**	**11 55 08.9**	**-0.4**
SMCA	**Catarina**	**1.71**	**87**	*i* P		**Pn**	**11 54 48.9**	**+0.7**
SMCA				*i* S		**Sn**	**11 55 08.7**	**-0.4**
RTAL	**Retalhuleu**	**2.09**	**97**			**Pn**	**11 54 54.5**	**+1.0**
RTAL	**Retalhuleu**	**2.09**	**97**	*e*P		**Pn**	**11 54 53.9**	**+0.4**
RTAL				*e*S		**Sn**	**11 55 15.9**	**-2.7**
RTAL	**Retalhuleu**	**2.09**	**97**	P		**Pn**	**11 54 53.9**	**+0.4**
RTAL				S		**Sn**	**11 55 17.7**	**-0.8**
TGIG		**2.10**	**19**			**Pn**	**11 54 55.5**	**+1.9**
TGIG						**Sb**	**11 55 22.9**	**-0.6**
TGIG		**2.10**	**19**	*e*P		**Pn**	**11 54 55.5**	**+1.9**
TGIG				*e*S		**Sb**	**11 55 22.9**	**-0.6**
TGIG		**2.10**	**19**	*i* P		**Pn**	**11 54 55.5**	**+1.9**
TGIG				*i* S		**Sb**	**11 55 20.6**	**-2.9**
TGIG				IAML			11 55 24.5	
	comp=E,14µm,0.7s							
TGBT	**Tuxtla Gutierr**	**2.11**	**20**			**Pn**	**11 54 55.7**	**+2.0**
TGBT						**Sb**	**11 55 21.8**	**-1.9**
TGBT	**Tuxtla Gutierr**	**2.11**	**20**	*e*P		**Pn**	**11 54 55.7**	**+2.0**
TGBT				*e*S		**Sb**	**11 55 21.8**	**-1.9**
CCIG	**Comitan**	**2.22**	**47**			**Pn**	**11 54 56.3**	**+0.9**
CCIG	**Comitan**	**2.22**	**47**	*e*P		**Pn**	**11 54 57.6**	**+2.2**
CCIG				*e*S		**Sn**	**11 55 22.9**	**+1.0**
CCIG	**Comitan**	**2.22**	**47**	P		**Pb**	**11 54 58.1**	**-1.7**
CCIG				S		**Sn**	**11 55 21.7**	**-0.3**
CCIG	**Comitan**	**2.22**	**47**	*i* P		**Pb**	**11 54 58.2**	**-1.6**
CCIG				IAML			11 55 30.8	
	comp=N,8µm,0.4s							
QUEO	**Labor Ovalle**	**2.25**	**87**	*i* P		**Pn**	**11 54 57.5**	**+1.6**
QUEO				*i* S		**Sn**	**11 55 23.7**	**+0.8**
QUEO				IAML			11 55 30.7	
	comp=E,8µm,0.6s							
HUEH	**Huehuetenango**	**2.32**	**76**			**Pn**	**11 54 57.7**	**+0.9**
HUEH	**Huehuetenango**	**2.32**	**76**	*e*P		**Pn**	**11 54 58.1**	**+1.3**
HUEH				*e*S		**Sn**	**11 55 26.4**	**+1.9**
HUEH	**Huehuetenango**	**2.32**	**76**	P		**Pn**	**11 54 59.0**	**+2.2**
HUEH				S		**Sn**	**11 55 25.5**	**+1.0**
HUEH	**Huehuetenango**	**2.32**	**76**	*e*S		**Sb**	**11 55 27.0**	**-2.9**
HUEH				IAML			11 55 44.6	
	comp=E,12µm,0.9s							
SOKI	**Kika Raxquin**	**2.35**	**89**	*i* P		**Pn**	**11 54 58.9**	**+1.5**
SOKI				IAML			11 55 56.4	
	comp=N,4µm,0.8s							
HUIG	**Huatulco**	**2.40**	**294**			**Pn**	**11 54 57.3**	**-0.5**
HUIG						**Sn**	**11 55 22.3**	**-3.9**
HUIG	**Huatulco**	**2.40**	**294**	*e*P		**Pn**	**11 54 57.3**	**-0.5**
HUIG				*e*S		**Sn**	**11 55 22.3**	**-3.9**
HUIG	**Huatulco**	**2.40**	**294**	*i* P		**Pn**	**11 54 57.2**	**-0.5**
STG2	**El Palmar, Qui**	**2.41**	**98**	*i* P		**Pn**	**11 54 54.7**	**-3.3**
STG2				IAML			11 55 28.2	
	comp=E,14µm,0.3s							
STG8	**El Palmar, Qui**	**2.43**	**97**	*i* P		**Pn**	**11 54 55.2**	**-3.1**
STG5	**El Palmar, Qui**	**2.44**	**99**	*i* P		**Pn**	**11 54 55.7**	**-2.6**
CMIG	**Matias Romero**	**2.51**	**336**	P		**Pn**	**11 54 60.0**	**+0.8**
	comp=E,177nm,0.3s,baz=164,slow=8.7,SNR=1278							
CMIG				S		**Sn**	**11 55 28.0**	**-0.8**
	comp=E,706nm,0.4s,baz=130,slow=17,SNR=7.0							
CMIG				LR		LR	11 56 19.0	
	comp=E,1µm,18.7s,baz=120,slow=45 comp=E,797nm,0.5s							
CMIG	**Matias Romero**	**2.51**	**336**	*e*P		**Pn**	**11 54 60.0**	**+0.8**
CMIG				*e*S		**Sn**	**11 55 28.2**	**-0.7**
UXUV	**UXUV**	**2.54**	**353**			**Pn**	**11 55 01.6**	**+1.9**
UXUV						**Sb**	**11 55 33.0**	**-2.9**
UXUV	**UXUV**	**2.54**	**353**	*e*P		**Pn**	**11 55 01.6**	**+1.9**
UXUV				*e*S		**Sb**	**11 55 33.0**	**-2.9**
APG	**El Apazote**	**3.27**	**86**	P		**Pn**	**11 55 09.4**	**-0.5**
	comp=E,5.7nm,0.4s,baz=104,slow=13,SNR=47							
APG				S		**Sn**	**11 55 49.9**	**+1.9**
	comp=E,36nm,0.7s,baz=222,slow=18,SNR=8.5							
TUIG	**Tuzandepetl**	**3.28**	**350**			**Pn**	**11 55 11.2**	**+1.4**
TUIG						**Sn**	**11 55 50.4**	**+2.4**
TUIG	**Tuzandepetl**	**3.28**	**350**	*e*P		**Pn**	**11 55 11.2**	**+1.4**
TUIG				*e*S		**Sn**	**11 55 50.4**	**+2.4**
VHSA	**Villahermosa**	**3.30**	**15**			**Pn**	**11 55 13.0**	**+3.0**
VHSA						**Sb**	**11 55 55.9**	**-1.9**
VHSA	**Villahermosa**	**3.30**	**15**	*e*P		**Pn**	**11 55 13.0**	**+3.0**
VHSA				*e*S		**Sb**	**11 55 55.9**	**-1.9**
AVCB	**Coban**	**3.38**	**78**	IAML			11 56 09.0	
	comp=N,7µm,0.5s							
PEIG	**Puerto Escondi**	**3.41**	**291**			**Pn**	**11 55 11.4**	**-0.2**
PEIG						**Sn**	**11 55 45.4**	**-5.9**
PEIG	**Puerto Escondi**	**3.41**	**291**	*e*P		**Pn**	**11 55 11.4**	**-0.2**
PEIG				*e*S		**Sn**	**11 55 45.4**	**-5.9**
NEUV	**Arroyo Zacate**	**3.47**	**327**			**Pn**	**11 55 12.3**	**-0.2**
NEUV						**Sn**	**11 55 52.2**	**-0.4**
NEUV	**Arroyo Zacate**	**3.47**	**327**	*e*P		**Pn**	**11 55 12.3**	**-0.2**
NEUV				*e*S		**Sn**	**11 55 52.2**	**-0.4**
OXLC	**Oaxaca**	**3.57**	**310**			**Pn**	**11 55 16.3**	**+2.3**
OXLC						**Sn**	**11 55 53.5**	**-1.9**
OXLC	**Oaxaca**	**3.57**	**310**	*e*P		**Pn**	**11 55 16.3

MEIG eS Sn 11 57 04.2 -0.1
YAIG Yautepec 6.44 310 Pn 11 55 57.4 +4.0
YAIG Sn 11 57 01.8 -4.4
YAIG Yautepec 6.44 310 eP Pn 11 55 57.4 +4.0
YAIG eS Sn 11 57 01.8 -4.4
CXUV Coxquihui 6.45 327 Pn 11 55 53.0 -0.4
CXUV Sn 11 57 02.8 -3.3
CXUV Coxquihui 6.45 327 eP Pn 11 55 53.0 -0.4
CXUV eS Sn 11 57 02.8 -3.3
PLIG Platanillo 6.51 304 Pn 11 55 58.4 +4.1
PLIG Sn 11 57 05.4 -2.3
PLIG Platanillo 6.51 304 eP Pn 11 55 58.4 +4.1
PLIG eS Sn 11 57 05.4 -2.3
CAIG El Cayaco 6.58 291 Pn 11 55 57.0 +1.8
CAIG Sn 11 57 02.0 -7.4
CAIG El Cayaco 6.58 291 eP Pn 11 55 57.0 +1.8
CAIG eS Sn 11 57 02.0 -7.4
MPVM San Francisco 6.62 312 Pn 11 55 59.5 +3.6
MPVM Sn 11 57 17.7 +7.1
MPVM San Francisco 6.62 312 eP Pn 11 55 59.5 +3.6
MPVM eS Sn 11 57 17.7 +7.1
TLVM San Miguel Top 6.73 312 Pn 11 56 01.9 +4.3
TLVM Sn 11 57 07.4 -6.0
TLVM San Miguel Top 6.73 312 eP Pn 11 56 01.9 +4.3
TLVM eS Sn 11 57 07.4 -6.0
MAVM Malinalco, Edo 6.82 308 Pn 11 56 02.3 +3.6
MAVM Sn 11 57 08.4 -7.3
MAVM Malinalco, Edo 6.82 308 eP Pn 11 56 02.3 +3.6
MAVM eS Sn 11 57 08.4 -7.3
VTVM Tizayuca 6.84 317 Pn 11 56 04.2 +5.1
VTVM Tizayuca 6.84 317 eP Pn 11 56 04.2 +5.1
AOVM Tlapan 6.88 311 Pn 11 56 04.7 +4.8
AOVM Sn 11 57 16.3 -1.2
AOVM Tlapan 6.88 311 eP Pn 11 56 04.7 +4.8
AOVM eS Sn 11 57 16.3 -1.2
INVM La Marquesa 6.94 311 Pn 11 56 05.1 +4.6
INVM Sn 11 57 20.9 +2.1
INVM La Marquesa 6.94 311 eP Pn 11 56 05.1 +4.6
INVM eS Sn 11 57 20.9 +2.1
PTVM Pico Tres Padr 6.95 314 Pn 11 56 03.7 +3.2
PTVM Pico Tres Padr 6.95 314 eP Pn 11 56 03.7 +3.2
ARIG Puente Sto Nin 7.15 300 Pn 11 56 07.1 +4.1
ARIG Sn 11 57 19.7 -3.6
ARIG Puente Sto Nin 7.15 300 eP Pn 11 56 07.1 +4.1
ARIG eS Sn 11 57 19.7 -3.6
DEIG Demacu 7.39 319 eP Pn 11 56 11.4 +4.7
DHIG Demacu 7.39 319 Pn 11 56 11.4 +4.8
TEIG Tepich 7.58 44 Pn 11 56 09.1 +0.2
ZIIG Zihuatanejo 7.85 292 Pn 11 56 15.6 +3.0
ZIIG Zihuatanejo 7.85 292 eP Pn 11 56 15.6 +3.0
CTUV Llano Grande 7.92 328 Pn 11 56 13.5 -0.1
CTUV eS Sn 11 57 45.6 +3.3
CTUV Llano Grande 7.92 328 eP Pn 11 56 13.5 -0.1
CTUV eS Sn 11 57 45.6 +3.3
MOIG Morelia 8.54 306 Pn Pn 11 56 27.1 +4.8
MOIG Morelia 8.54 306 eP Pn 11 56 27.2 +4.8
MOIG eS Sn 11 58 03.4 +5.3
SIUN Universidad Ur 8.85 96 Pn Pn 11 56 28.2 +1.8
JTS Las Juntas de 9.76 116 LR LR 12 00 13.9
comp=E,243nm,19.8s,baz=10,slow=37
MMIG Aquila 9.76 292 Pn 11 56 41.5 +2.7
MMIG Sn 11 58 32.5 +5.0
MMIG Aquila 9.76 292 eP Pn 11 56 41.5 +2.7
MMIG eS Sn 11 58 32.5 +5.0
INCO Volcan de Coli 10.46 298 eP Pn 11 56 54.0 +5.2
SOMAC Volcano de Col 10.48 298 eP Pn 11 56 54.9 +5.8
CDAR Ciudad de Arme 10.58 294 eP Pn 11 56 54.0 +3.9
CEGR Campo Tres 10.62 297 eP Pn 11 56 55.8 +5.0
ZAIG Zacatecas 11.46 315 Pn 11 57 03.4 +1.0
CJM Chamela 11.69 295 eP Pn 11 57 09.1 +3.7
SOR Soroa 12.98 51 Pn Pn 11 57 22.7 -0.3
HBVL Hebbronville 13.03 341 Pn 11 57 24.5 +1.0
833A Chaparral WMA, 14.43 340 Pn 11 57 44.3 +1.7
EF04 Eagle Ford 04 14.82 346 Pn Pn 11 57 49.0 +1.1
HKT Hockley 15.21 353 Pn 11 57 53.9 +0.8
MLDN Muldoon 15.22 349 Pn 11 57 54.9 +1.6
MLDN IAmb IAmb 11 58 02.8
comp=Z,69nm,1.3s
HNDO Hondo 15.51 342 Pn 11 57 58.1 +0.9
HNDO IAmb IAmb 11 58 04.8
comp=Z,76nm,1.1s
DRIO Del Rio 15.86 338 Pn 11 58 02.0 +0.3
441A DeRidder 15.90 2 Pn 11 58 02.6 +0.5
441A IAmb IAmb 11 58 05.6
comp=Z,41nm,0.8s
HNVL Huntsville, TX 15.97 355 Pn 11 58 03.7 +0.7
HNVL IAmb IAmb 11 58 07.1
comp=Z,88nm,1.4s
435B Jarrell 16.29 348 Pn 11 58 08.0 +0.9
HPIG 16.37 320 Pn 11 58 09.7 +1.4
JCT Junction City 16.56 342 Pn 11 58 11.9 +1.3
JCT IAmb IAmb 11 58 17.5
comp=Z,55nm,0.8s
NATX Nacogdoches 16.92 358 P 11 58 17.6 +0.8
SAND Sanderson 16.92 335 P 11 58 16.9 0.0
346A Big Creek Wild 17.01 13 IAmb IAmb 11 58 18.6
comp=Z,34nm,0.8s
TXAR Lajitas Array 17.09 330 P P 11 58 19.7 +0.8
comp=Z,0.6nm,0.3s,baz=151,slow=10,SNR=71
comp=Z,17nm,1.1s
TXAR Lajitas Array 17.09 330 P P 11 58 19.5 +0.6
TX31 Lajitas Ar. Si 17.09 330 P P 11 58 19.3 +0.4
BRDY Brady 17.09 345 Pn 11 58 18.1 +0.8
237A Washetta, Mont 17.24 354 P P 11 58 20.9 +0.6
237A IAmb IAmb 11 58 25.1
comp=Z,61nm,1.1s
OZNA Ozona 17.40 339 P 11 58 23.5 +1.2
WHTX Lake Whitney, 17.45 350 Pn 11 58 22.4 +0.7
WHTX IAmb IAmb 11 58 35.2
comp=Z,43nm,0.7s
553A Crawfordville 17.61 28 P Pn 11 58 23.5 -0.2
VBMS Vicksburg 17.62 9 P P 11 58 24.4 -0.1
VBMS IAmb IAmb 11 58 26.4
comp=Z,33nm,0.9s
FW13 Cleburne 17.80 350 P P 11 58 27.1 +0.6
FW13 IAmb IAmb 11 58 40.5
comp=Z,35nm,0.8s
ALPN Alpine 17.95 331 P P 11 58 29.9 +1.5
143A Socs Landing, 17.98 7 P P 11 58 28.6 +0.1
143A IAmb IAmb 11 58 34.3
comp=Z,44nm,1.0s
LPIG La Paz 18.07 303 P P 11 58 33.4 +3.8
comp=Z,8.2nm,0.3s,baz=171,slow=11,SNR=3.7
LPIG LR LR 12 05 22.2
comp=Z,102nm,18.8s,baz=116,slow=36
TPB05 Hovey Rd 18.27 333 IAmb IAmb 11 58 47.8
comp=Z,18nm,0.8s
MNHN Monahans 18.40 335 IAmb IAmb 11 58 40.7
comp=Z,64nm,1.1s
PLPT Palo Pinto 18.41 348 P Pn 11 58 34.3 +0.9
Z41A Richland Creek 18.42 3 P Pn 11 58 33.9 +0.4
Z41A IAmb IAmb 11 58 56.9
comp=Z,99nm,1.4s
FW06 Azle 18.42 350 P P 11 58 33.5 +0.1
FW06 IAmb IAmb 11 58 57.5
comp=Z,32nm,0.7s
TMB01 Midkiff 18.42 337 IAmb IAmb 11 58 37.6
comp=Z,24nm,0.7s
Z38A Mt. Pleasant 18.43 357 P Pn 11 58 34.5 +0.9
Z38A IAmb IAmb 11 58 44.1
comp=Z,29nm,0.9s
TPB01 Permian Basin 18.49 332 IAmb IAmb 11 58 43.8
comp=Z,17nm,0.8s
ABTX Abilene, Hawle 18.53 344 IAmb IAmb 11 58 38.6
comp=Z,37nm,0.8s
229A Bryant Ranch, 18.59 338 IAmb IAmb 11 58 39.5
comp=Z,66nm,0.9s
Z35A Perchaven, San 18.73 351 IAmb IAmb 11 58 49.7
comp=Z,26nm,0.6s
WLAR White Oak Lake 18.83 2 IAmb IAmb 11 58 46.4
comp=Z,40nm,0.6s
TPB06 Permian Basin 18.85 335 IAmb IAmb 11 58 55.2
comp=Z,18nm,0.8s
PECS Pecos 18.89 333 IAmb IAmb 11 58 42.5
comp=Z,20nm,0.8s
VHRN Van Horn 18.93 329 IAmb IAmb 11 58 44.2
comp=Z,28nm,1.1s
Z47A Carrollton 19.07 15 IAmb IAmb 11 58 54.2
comp=Z,25nm,0.8s
CCAR Cane Creek 19.14 5 IAmb IAmb 11 58 46.0
comp=Z,45nm,1.1s
LRAL Lakeview Retre 19.21 18 P P 11 58 41.8 -0.3
129A Stewart Farms, 19.21 339 IAmb IAmb 11 58 46.2
comp=Z,31nm,0.6s
APMT Aspermont 19.32 344 IAmb IAmb 11 58 48.4
comp=Z,41nm,0.9s
SN07 Snyder 07 19.32 342 P Pn 11 58 44.6 +0.1
SN07 IAmb IAmb 11 58 48.6
comp=Z,40nm,0.7s
LOOK Love County 19.36 352 P Pn 11 58 44.7 -0.3
Y45A Yeager Farm, C 19.39 11 P P 11 58 44.0 0.0
Y45A IAmb IAmb 11 58 47.8
comp=Z,41nm,1.0s
128A Castleberry Fa 19.43 338 IAmb IAmb 11 58 50.1
comp=Z,39nm,0.7s
POST Post 19.49 340 P P 11 58 45.7 +0.5
POST IAmb IAmb 11 58 48.6
comp=Z,47nm,0.8s
CLNB Carlsbad 19.67 334 P Pn 11 58 49.0 +0.3
DKNS Dickens 19.87 342 P P 11 58 50.6 +1.2
UALR University of 19.95 4 P P 11 58 50.1 -0.1
UALR IAmb IAmb 11 59 13.6
comp=Z,19nm,0.9s
X34A Smith Ranch, M 20.06 350 P P 11 58 51.9 +0.5
CPRX Cap Rock 20.33 335 P P 11 58 55.4 +1.0
W35A Tecumseh 20.47 353 P P 11 58 56.2 +0.4
WHAR Wooly Hollow 20.47 4 IAmb IAmb 11 59 18.0
comp=Z,27nm,1.3s
X48A Hartselle 20.52 16 P P 11 58 56.5 +0.2
MSTX Muleshoe 20.74 339 P P 11 58 59.9 +1.0
OKCSW OKLAHOMA CITY 20.79 352 P P 11 58 59.4 +0.1
Y52A Lilburn 20.96 23 IAmb IAmb 11 59 24.7
comp=Z,14nm,0.7s
FCAR Ozark Folk Cen 21.08 4 IAmb IAmb 11 59 06.4
comp=Z,18nm,0.8s
DEOK Depew 21.11 354 IAmb IAmb 11 59 07.0
comp=Z,17nm,0.6s
TUL3 Leonard 21.11 356 IAmb IAmb 11 59 26.9
comp=Z,28nm,0.9s
HSIG 21.24 315 P P 11 59 04.4 +0.2
RLO Rose Lookout 21.32 357 P P 11 59 05.3 +0.4
RLO IAmb IAmb 11 59 08.4
comp=Z,18nm,1.0s
LCAR Lake Charles 21.34 6 P P 11 59 04.4 -0.7
HHAR Hobbs 21.41 360 P P 11 59 08.1 +2.2
QUOK Quay 21.45 354 IAmb IAmb 11 59 10.3
comp=Z,32nm,0.7s
U38A Gravette 21.57 359 IAmb IAmb 11 59 10.4
comp=Z,14nm,0.6s
OK048 Pawnee Station 21.72 353 IAmb IAmb 11 59 22.5
comp=Z,20nm,1.0s
319A Douglas 21.74 322 IAmb IAmb 11 59 14.1
comp=Z,22nm,1.0s
PH02 Texas Public H 21.78 342 IAmb IAmb 11 59 17.2
comp=Z,36nm,0.8s
V48A Smith Brothers 21.80 16 IAmb IAmb 11 59 20.1
comp=Z,26nm,1.1s
OK051 E0350 and S346 21.80 353 IAmb IAmb 11 59 13.7
comp=Z,46nm,1.2s
WVT Waverly 21.93 13 P P 11 59 11.3 -0.2
CROK Carrier 21.95 351 P P 11 59 11.7 -0.1
CROK IAmb IAmb 11 59 14.0
comp=Z,37nm,1.1s
OK038 West end E0370 22.05 349 IAmb IAmb 11 59 48.1
comp=Z,18nm,0.7s
MGMO Mountain Grove 22.32 3 IAmb IAmb 11 59 18.0
comp=Z,21nm,1.1s
Y22A Socorro 22.47 330 IAmb IAmb 11 59 28.8
comp=Z,32nm,0.8s
DUN6 Lazy B Ranch 22.49 324 IAmb IAmb 11 59 24.6
comp=Z,33nm,1.0s
TKL Tuckaleechee C 22.66 22 LR LR 12 09 52.4
comp=Z,129nm,19.8s,baz=186,slow=41
T47A Sharon Grove 22.91 14 IAmb IAmb 11 59 22.9
comp=Z,19nm,0.8s
ANMO Albuquerque 23.07 333 P P 11 59 24.4 +0.6
S44A Carbondale 23.18 9 IAmb IAmb 11 59 38.0
comp=Z,24nm,0.7s
SIUC Southern Illin 23.21 9 IAmb IAmb 11 59 36.8
comp=Z,36nm,1.0s
CCM Cathedral Cave 23.30 5 P P 11 59 24.7 -1.2
TUC Tucson 23.30 321 P P 11 59 27.1 +1.0
TUC IAmb IAmb 11 59 30.3
comp=Z,16nm,0.9s
SDV Santo Domingo 23.44 102 LR LR 12 10 37.0
comp=Z,131nm,18.7s,baz=268,slow=42
R40A Maddies Statio 23.46 3 P P 11 59 26.9 -0.6
R40A IAmb IAmb 11 59 30.7
comp=Z,11nm,0.7s
T25A Trinidad 24.17 339 IAmb IAmb 11 59 38.2
comp=Z,28nm,1.0s
WCI Wyandotte Cave 24.29 15 P P 11 59 34.7 -0.6
WCI IAmb IAmb 11 59 36.5
comp=Z,19nm,0.7s
214A Organ Pipe Nat 24.34 318 P P 11 59 36.8 +0.9
KSU1 Kansas State U 24.35 355 IAmb IAmb 11 59 36.4
comp=Z,18nm,0.8s
X18A Snowflake 24.45 326 IAmb IAmb 11 59 41.9
comp=Z,14nm,0.8s
CBKS Cedar Bluff 24.50 349 IAmb IAmb 11 59 41.0
comp=Z,24nm,0.8s
P40A Paris 24.70 3 IAmb IAmb 12 00 00.1
comp=Z,17nm,0.9s
P38A Dawn 24.75 1 IAmb IAmb 11 59 39.7
comp=Z,27nm,1.0s
SDCO Great Sand Dun 25.10 338 P P 11 59 43.5 +0.5
BLO Bloomington 25.14 13 IAmb IAmb 11 59 43.0
comp=Z,12nm,0.7s
KSCO Kaye Shedlock' 25.35 344 IAmb IAmb 11 59 51.3
comp=Z,25nm,1.0s
113A Mohawk Valley, 25.48 318 P P 11 59 47.6 +1.5
P48A Milroy 25.67 15 IAmb IAmb 12 00 16.4
comp=Z,28nm,1.3s
MVCO Mesa Verde 25.87 332 IAmb IAmb 12 00 09.7
comp=Z,9.4nm,0.8s
WUAZ Wupatki 25.96 326 P P 11 59 51.6 +0.9
WUAZ IAmb IAmb 11 59 57.1
comp=Z,13nm,0.8s
ATAH Atahualpa 26.62 144 LR LR 12 08 52.6
comp=Z,118nm,20.2s,baz=318,slow=33
ISCO Idaho Springs 26.98 340 IAmb IAmb 12 00 02.8
comp=Z,8.0nm,0.8s
BC3 Big Chuckawall 27.13 318 P 12 00 04.3 +3.1
IRM Iron Mountain 27.25 319 P P 12 00 05.7 +3.5
PFO Pinyon Flats O 27.77 316 LR LR 12 11 30.8
comp=Z,127nm,20.2s,baz=136,slow=37
S11A Rachel 29.93 324 IAmb IAmb 12 00 32.5
comp=Z,13nm,1.2s
TCUT Toone Canyon 30.36 333 IAmb IAmb 12 00 35.0
comp=Z,9.7nm,0.9s
RSSD Black Hills 30.51 345 P P 12 00 31.4 +0.1
PDAR Pinedale Array 30.99 337 P P 12 00 37.0 +1.5
comp=Z,2.3nm,0.8s,baz=141,slow=8.6,SNR=18
PDAR LR LR 12 16 23.5
comp=Z,39nm,18.2s,baz=126,slow=42
comp=Z,2.3nm,0.8s
PDAR Pinedale Array 30.99 337 P P 12 00 35.6 0.0
F33A 5 Mile Ranch, 31.03 357 IAmb IAmb 12 00 34.6
comp=Z,7.9nm,0.9s
AHID Auburn Hatcher 31.59 335 IAmb IAmb 12 00 49.8
comp=Z,6.5nm,1.0s
ELK Elko 31.88 328 LR LR 12 15 46.2
comp=Z,125nm,18.8s,baz=159,slow=40
NVAR Mina Array Bea 31.95 322 P P 12 00 46.9 +2.8
comp=Z,5.7nm,0.8s,baz=135,slow=8.3,SNR=38
NVAR LR LR 12 14 54.7
comp=Z,113nm,21.0s,baz=140,slow=38
comp=Z,5.7nm,0.8s
LHV Little Huntoon 31.96 322 IAmb IAmb 12 01 00.7
comp=Z,6.2nm,1.1s
LOHW Long Hollow 32.11 337 IAmb IAmb 12 00 48.4
comp=Z,9.7nm,0.9s
MOOW Moose Ponds 32.28 337 IAmb IAmb 12 00 49.8
comp=Z,6.8nm,0.9s
SADO Sadowa 32.39 20 LR LR 12 15 56.3
comp=Z,138nm,19.6s,baz=226,slow=40
FLWY Flagg Ranch 32.55 337 IAmb IAmb 12 00 52.3
comp=Z,6.2nm,0.8s
RLMT Red Lodge 32.94 340 P P 12 00 53.5 +0.9
RLMT IAmb IAmb 12 00 55.8
comp=Z,13nm,1.5s
YNE Yellowstone No 33.09 339 IAmb IAmb 12 01 01.1
comp=Z,10nm,0.9s
YMR Madison River 33.15 337 IAmb IAmb 12 00 58.0
comp=Z,14nm,1.1s
YHL Hebgen Lake 33.38 337 IAmb IAmb 12 01 01.0
comp=Z,7.2nm,1.0s
BOZ Bozeman (W) 34.19 338 IAmb IAmb 12 01 09.4
comp=Z,7.0nm,1.1s
WVOR Wild Horse Val 34.86 327 IAmb IAmb 12 01 12.6
comp=Z,6.3nm,1.1s
ULM Lac du Bonnet 35.41 358 P P 12 01 11.9 -1.8
comp=Z,7.4nm,0.6s,baz=169,slow=9.6,SNR=14
ULM LR LR 12 17 16.1
comp=Z,71nm,18.1s,baz=192,slow=39
comp=Z,7.4nm,0.6s
ULM Lac du Bonnet 35.41 358 IAmb IAmb 12 01 12.7
comp=Z,6.8nm,0.7s
J08A Circle Bar Ran 35.44 328 IAmb IAmb 12 01 16.9
comp=Z,6.9nm,0.7s
PLID Pearl Lake 35.55 333 IAmb IAmb 12 01 17.9
comp=Z,6.6nm,0.8s
EGMT Eagleton 35.67 342 IAmb IAmb 12 01 18.6
comp=Z,12nm,1.0s
MSO Missoula 36.09 336 IAmb IAmb 12 01 22.3
comp=Z,6.3nm,1.0s
YBH Yreka Blue Hor 36.66 323 LR LR 12 17 49.3
comp=Z,9.8nm,18.5s,baz=138,slow=38
F10A Beach Ranch, E 36.78 332 IAmb IAmb 12 01 29.9
comp=Z,11nm,0.7s
NEW Newport 38.52 335 LR LR 12 20 18.6
comp=Z,114nm,21.1s,baz=106,slow=40
LPAZ La Paz 39.97 140 P P 12 01 52.5 -0.8
comp=Z,0.6nm,0.4s,baz=333,slow=4.5,SNR=2.1
LPAZ LR LR 12 17 00.7
comp=Z,107nm,21.9s,baz=306,slow=34
comp=Z,0.6nm,0.4s
LPAZ La Paz 39.97 140 P P 12 01 52.6 -0.8
FFC Flin Flon 40.36 353 P 12 01 55.5 +0.1
EDM Edmonton 41.34 342 P 12 02 04.4 +0.9
MDP Montagnes des 41.63 99 LR LR 12 19 45.3
comp=Z,78nm,20.8s,baz=296,slow=37
FCC Fort Churchill 43.90 360 P 12 02 23.6 -0.6
FCC IAmb IAmb 12 02 24.1
comp=Z,8.0nm,0.7s
RPN Rapa Nui 44.29 200 LR LR 12 15 59.8
comp=Z,92nm,20.9s,baz=22,slow=29
SIV San Ignacio 44.53 132 LR LR 12 20 22.0
comp=Z,86nm,19.2s,baz=332,slow=35
SCHQ Schefferville 45.13 22 LR LR 12 22 18.8
comp=Z,127nm,19.6s,baz=212,slow=37
AC02 Maricunga 47.83 150 P P 12 02 57.0 +0.8
YKA Yellowknife Ar 49.87 348 P P 12 03 11.2 +0.4
comp=Z,8.3nm,0.9s,baz=156,slow=6.7,SNR=128
comp=Z,8.3nm,0.9s
DLBC Dease Lake 51.22 337 LR LR 12 27 41.7
comp=Z,60nm,18.5s,baz=118,slow=39
WTLY Watson Lake, Y 51.94 339 IAmb IAmb 12 03 29.3
comp=Z,11nm,1.2s
FRB Frobisher Bay 51.97 14 LR LR 12 28 21.9
comp=Z,78nm,18.7s,baz=126,slow=39
CPUP Villa Florida 54.13 139 P P 12 03 41.9 -1.1
comp=Z,2.0nm,0.7s,baz=331,slow=8.8,SNR=7.5
CPUP LR LR 12 26 23.6
comp=Z,69nm,18.1s,baz=106,slow=36
comp=Z,2.0nm,0.7s
BDFB Brasilia 54.44 122 P P 12 03 44.5 -1.1
comp=Z,1.7nm,0.3s,baz=269,slow=7.0,SNR=4.7
comp=Z,1.7nm,0.3s
ILON Igloolik, Nuna 55.08 5 P 12 03 49.1 -0.2
POIN Pond Inlet 58.65 5 P 12 04 14.5 0.0
POIN IAmb IAmb 12 04 15.6
comp=Z,4.0nm,0.9s
I29M Ogilvie Camp, 58.70 340 IAmb IAmb 12 04 19.0
comp=Z,4.3nm,1.0s
INK Inuvik 59.19 344 LR LR 12 32 45.8
comp=Z,80nm,18.5s,baz=287,slow=39
INK Inuvik 59.19 344 P 12 04 19.4 +1.0
INK IAmb IAmb 12 04 19.6
comp=Z,4.7nm,0.8s
PLCA Paso Flores 59.31 160 P P 12 04 19.3 -0.4
comp=Z,1.8nm,0.9s,baz=323,slow=6.7,SNR=4.2
comp=Z,1.8nm,0.8s
SFJD Kangerlussuaq 59.32 18 LR LR 12 33 23.5
comp=Z,93nm,18.3s,baz=176,slow=40
RES Resolute Bay 59.90 360 LR LR 12 31 03.2
comp=Z,40nm,22.0s,baz=8.0,slow=37
H27K Steamboat Moun 60.28 340 IAmb IAmb 12 04 32.3
comp=Z,8.5nm,1.4s
F28M Old Crow 60.56 342 P 12 04 29.1 +1.1
PRP Porcupine Dome 61.29 338 IAmb IAmb 12 04 37.5
comp=Z,5.2nm,0.8s
IL31 61.43 337 IAmb IAmb 12 04 35.6
comp=Z,6.9nm,0.9s
ILAR Eielson Array 61.43 337 P P 12 04 34.4 +0.6
comp=Z,2.6nm,0.8s,baz=131,slow=6.0,SNR=34
comp=Z,2.6nm,0.8s
ILAR Eielson Array 61.43 337 P 12 04 34.6 +0.8
SAATT Saattut 61.56 15 *i* P P 12 04 34.2 -0.3
SAATT IAmb IAmb 12 04 35.4
comp=Z,7.9nm,0.8s
RND Reindeer 61.57 335 P 12 04 36.6 +1.7
SUA Susitna One 61.58 333 IAmb IAmb 12 04 38.9
comp=Z,4.7nm,0.8s
BMAR Burnt Mountain 61.95 340 P 12 04 38.1 +0.8
F26K Sheenjek River 61.95 341 IAmb IAmb 12 04 39.7
comp=Z,3.7nm,1.1s
F25K Christian Rive 62.39 340 IAmb IAmb 12 04 45.3
comp=Z,4.0nm,1.1s
I23K Minto, Yukon-K 62.53 337 IAmb IAmb 12 04 43.3
comp=Z,8.4nm,1.1s
G24K Hadweenzic Riv 62.56 339 IAmb IAmb 12 04 43.7
comp=Z,8.2nm,1.1s
BPAW Bear Paw Mtn. 62.73 335 IAmb IAmb 12 04 46.1
comp=Z,6.0nm,0.9s
MLY Manley 63.01 336 IAmb IAmb 12 04 46.2
comp=Z,4.8nm,0.8s
KULLO Kullorsuaq 63.13 10 *i* P P 12 04 44.6 -0.3
KULLO IAmb IAmb 12 04 45.5
comp=Z,7.5nm,0.8s
TULEG Thule 63.14 6 P P 12 04 43.5 -1.6
TULEG IAmb IAmb 12 04 46.0
comp=Z,7.4nm,1.0s
TULEG Thule 63.14 6 *i* P P 12 04 44.8 -0.2
TULEG IAmb IAmb 12 04 45.8
comp=Z,5.4nm,0.8s
K20K Telida 63.72 334 IAmb IAmb 12 04 52.7
comp=Z,5.5nm,0.8s
COLD Coldfoot 63.76 339 IAmb IAmb 12 04 53.6
comp=Z,4.0nm,1.0s
E23K Chandalar 63.93 340 IAmb IAmb 12 04 57.3
comp=Z,5.1nm,0.9s
J19K Poorman 64.58 335 IAmb IAmb 12 04 58.1
comp=Z,5.7nm,0.8s
G21K Allakaket 64.66 337 IAmb IAmb 12 04 57.3
comp=Z,3.3nm,0.9s
E22K Anaktuvuk Pass 64.71 339 IAmb IAmb 12 04 58.3
comp=Z,10nm,1.4s
G19K Purcell Mounta 65.88 337 IAmb IAmb 12 05 07.4
comp=Z,5.7nm,1.1s
SUMG Summit 65.96 16 *i* P P 12 05 04.3 +0.2
SUMG IAmb IAmb 12 05 05.2
comp=Z,6.1nm,0.8s
NEEM North Greenlan 66.25 9 *i* P P 12 05 05.7 0.0
NEEM IAmb IAmb 12 05 07.0
comp=Z,15nm,0.8s
H17K Granite Mounta 66.64 335 IAmb IAmb 12 05 13.1
comp=Z,3.6nm,0.9s
F15K North Star Dit 68.75 335 IAmb IAmb 12 05 34.9
comp=Z,3.8nm,0.9s
BORG Borgarnes 69.28 26 LR LR 12 37 10.9
comp=Z,31nm,18.1s,baz=160,slow=37
DAG Danmarks Havn 72.32 14 *i* P P 12 05 42.6 -0.3
DAG IAmb IAmb 12 05 43.6
comp=Z,6.8nm,0.8s
NOR Nord 73.60 9 *i* P P 12 05 50.5 +0.1
NOR IAmb IAmb 12 05 52.5
comp=Z,3.8nm,0.7s
SPITS Spitsbergen Ar 79.68 11 P P 12 06 25.6 +0.8
comp=Z,1.2nm,0.5s,baz=225,slow=0.8,SNR=10
comp=Z,1.2nm,0.5s
NB2 NORSAR Subarra 84.31 28 P P 12 06 50.2 +0.7
comp=Z,1.6nm,0.6s,baz=291,slow=5.1
NOA NORSAR Array B 84.31 28 P P 12 06 49.2 -0.3
comp=Z,2.8nm,0.8s,baz=290,slow=5.2,SNR=6.2
comp=Z,2.8nm,0.8s
HFS Hagfors 85.78 29 P P 12 06 56.0 -0.8
comp=Z,2.5nm,0.9s,baz=339,slow=3.6,SNR=2.6
comp=Z,2.5nm,0.8s
ARCES ARCESS Array B 85.95 18 P P 12 06 57.2 -0.3
comp=Z,1.7nm,0.6s,baz=317,slow=5.1,SNR=11
comp=Z,1.7nm,0.6s
FINES FINESS Array B 90.54 25 P P 12 07 18.9 -0.6
comp=Z,1.4nm,0.7s,baz=339,slow=4.3,SNR=6.8
FINES LR LR 12 47 03.7
comp=Z,164nm,21.0s,baz=166,slow=35
comp=Z,1.4nm,0.7s
FINES FINESS Array B 90.54 25 P P 12 07 19.8 +0.2

ELIB	**Princess Elisa**	**112.25**	**163**	*d*PKiKP		**PKiKP**		**12**	**12**	**55.3 +2.4**
HHC	**Hu-ho-hao-te**	**119.85**	**338**	*e*P		**PKPdf**		**12**	**13**	**09.0 +0.5**
HHC				LR		LR				
	comp=N,120nm,15.1s									
HHC				LR		LR				
	comp=E,230nm,16.5s									
HHC				LR		LR				
	comp=Z,88nm,16.9s									
NJ2	**Nanjing**	**123.88**	**326**	*e*P		**PKiKP**		**12**	**13**	**18.0 +1.5**
NJ2				pmax		pmax				
	comp=Z,5.0nm,0.5s									
WRA	**Warramunga Arr**	**133.85**	**256**	PKP		**PKPdf**		**12**	**13**	**35.5 -0.1**
	comp=Z,0.6nm,0.6s,baz=84,slow=2.4,SNR=11									
ASAR	**Alice Springs**	**134.24**	**251**	PKP		**PKPdf**		**12**	**13**	**36.0 -0.2**
	comp=Z,0.1nm,0.4s,baz=137,slow=1.7,SNR=6.1									
PZH	**PanZhiHua**	**136.25**	**340**	PKP		**PKPdf**		**12**	**13**	**40.8 +0.7**
CMAR	**Chiang Mai Arr**	**144.65**	**339**	PKP		PKPbc		12	13	54.9 +0.9
	comp=Z,1.3nm,0.3s,baz=346,slow=3.4,SNR=9.7									
CMAR	**Chiang Mai Arr**	**144.65**	**339**	PKPdf		**PKPab**		**12**	**13**	**54.4 +0.6**
PSA00	**Pilbara Seismi**	**147.34**	**253**	PKPbc		**PKPdf**		**12**	**14**	**01.7 +2.0**
PSA00	**Pilbara Seismi**	**147.34**	**253**	PKPbc		**PKPdf**		**12**	**14**	**01.8 +2.0**

KRNET ***29*** *12:09:02.4±0.1,39°.89N×77°.16E,h18km,mb3.5*
SOME ***29*** *12:09:03.5,39°.93N×77°.17E,h10km*
NNC ***29*** *12:09:05.2±1.1,40°.01N×77°.14E,h0km,mb3.8,mpv3.5,*
Error ellipse: s-maj=7.3km s-min=5.3km az=161.0

ISC 29 12:09:07.8±1.2,40°.06N±0°.05×76°.91E±0°.03,h10km,n70,
σ1§86/110,45C-13D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.39**	**316**	⇑*i*P	**Pn**	**12 09 33.1**	**-0.4**
JNKS				⇑*i*S	**Sg**	**12 09 55.6**	**+3.0**
NRN	**Naryn**	**1.54**	**334**	⇑*i*P	**Pn**	**12 09 35.6**	**+0.1**
NRN				⇑*i*S	**Sg**	**12 09 59.7**	**+2.5**
TARG	**Taragay, Kyrgy**	**1.80**	**22**	⇓*i*P	**Pn**	**12 09 37.8**	**-1.5**
TARG				⇓*i*S	**Sb**	**12 10 03.7**	**-0.2**
KDJ	**Kajisay**	**2.08**	**6**	⇑*i*P	**Pn**	**12 09 42.7**	**-0.2**
KDJ				⇑*i*S	**Sb**	**12 10 12.2**	**+0.6**
ULHL	**Ulahol**	**2.24**	**347**	P	**Pb**	**12 09 47.8**	**-0.7**
	SNR=12						
ULHL	**Ulahol**	**2.24**	**347**	⇑*i*P	**Pn**	**12 09 45.8**	**+0.7**
ULHL				⇑*i*S	**Sb**	**12 10 17.5**	**+1.2**
SALK	**Salom-Alik**	**2.50**	**290**	⇑*i*P	**Pn**	**12 09 49.8**	**+1.2**
SALK				⇑*i*S	**Sb**	**12 10 24.2**	**+0.6**
BOOM	**Boomskoye usch**	**2.53**	**344**	⇑*i*P	**Pn**	**12 09 50.0**	**+0.9**
BOOM				⇑*i*S	**Sb**	**12 10 24.7**	**-0.1**
SFK	**Sufi-Kurgan**	**2.62**	**270**	⇑*i*P	**Pn**	**12 09 50.9**	**+0.6**
SFK				⇑*i*S	**Sb**	**12 10 26.4**	**-0.7**
ARLS	**Aral**	**2.66**	**313**	⇑*i*P	**Pn**	**12 09 52.0**	**+1.2**
ARLS				⇑*i*S	**Sb**	**12 10 28.4**	**+0.1**
PRZ	**Przheval'sk**	**2.67**	**24**	⇑*i*P	**Pn**	**12 09 50.3**	**-0.7**
PRZ				⇑*i*S	**Sn**	**12 10 25.0**	**+1.5**
ANVS	**Anan'yevo**	**2.78**	**12**	⇑*i*P	**Pn**	**12 09 52.2**	**-0.3**
ANVS				⇑*i*S	**Sn**	**12 10 28.6**	**+2.4**
UCH	**Uchtor**	**2.82**	**321**	P	**Pb**	**12 09 57.0**	**-1.5**
	SNR=8.4						
UCH	**Uchtor**	**2.82**	**321**	⇑*i*P	**Pn**	**12 09 54.5**	**+1.2**
UCH				⇑*i*S	**Sb**	**12 10 32.7**	**-0.6**
TNSS	**Tian-Shan**	**2.97**	**1**	Pg	**Pb**	**12 10 00.7**	**-0.3**
	2.8nm,0.4s						
TNSS				Lg	Lg	12 10 42.6	
	13nm,0.5s						
TNSS	**Tian-Shan**	**2.97**	**1**	*e*P	**Pb**	**12 10 00.7**	**-0.3**
	2.8nm,0.4s						
TNSS				*e*S	**Sg**	**12 10 42.2**	**-1.1**
	13nm,0.5s						
KBK	**Karagaybulak**	**2.98**	**331**	P	**Pg**	**12 10 03.2**	**-1.8**
	SNR=7.2						
KBK	**Karagaybulak**	**2.98**	**331**	⇓*i*P	**Pn**	**12 09 56.6**	**+1.3**
KBK				⇓*i*S	**Sb**	**12 10 36.1**	**-1.6**
TKM2	**Tokmak 2**	**3.02**	**341**	P	**Pb**	**12 09 58.8**	**-3.0**
	SNR=11						
TKM2	**Tokmak 2**	**3.02**	**341**	⇓*i*P	**Pn**	**12 09 56.8**	**+0.9**
TKM2				⇓*i*S	**Sb**	**12 10 36.6**	**-2.2**
KST	**Kastek**	**3.06**	**347**	Pg	**Pb**	**12 10 03.0**	**+0.6**
	8.3nm,0.4s						
KST				Lg	Lg	12 10 45.9	
	61nm,0.6s						
KST	**Kastek**	**3.06**	**347**	*e*P	**Pb**	**12 10 03.0**	**+0.6**
	8.3nm,0.4s						
KST				*e*S	**Sg**	**12 10 45.9**	**-0.3**
	61nm,0.6s						
MTBS	**Maitube**	**3.09**	**353**	Pg	**Pb**	**12 10 03.0**	**+0.2**
	4.9nm,0.3s						
MTBS				Lg	Lg	12 10 46.1	
	40nm,0.4s						
MTBS	**Maitube**	**3.09**	**353**	*e*P	**Pb**	**12 10 03.0**	**+0.2**
	4.9nm,0.3s						
MTBS				*e*S	**Sg**	**12 10 46.1**	**-0.8**
	40nm,0.4s						
MDOK	**Medeo**	**3.10**	**2**	Pg	**Pb**	**12 10 02.8**	**-0.3**
	4.9nm,0.5s						
MDOK				Lg	Lg	12 10 45.8	
	53nm,0.7s						
AAK	**Ala-Archa**	**3.15**	**326**	P	**Pb**	**12 10 01.0**	**-3.0**
	SNR=5.8						
AAK	**Ala-Archa**	**3.15**	**326**	⇑Pg	**Pb**	**12 10 03.8**	**-0.1**
	5.0nm,0.7s						
AAK				⇓Lg	Lg	12 10 49.7	
	14nm,0.6s						
AAK	**Ala-Archa**	**3.15**	**326**	⇓*i*P	**Pn**	**12 09 59.0**	**+1.4**
AAK				⇓*i*S	**Sb**	**12 10 40.2**	**-2.3**
KNDC	**Almaty**	**3.15**	**1**	⇑Pg	**Pg**	**12 10 06.5**	**-1.7**
	29nm,0.6s						
KNDC				⇑Lg	Lg	12 10 48.6	
	95nm,0.6s						
KOTS	**Kotyrbulak**	**3.17**	**3**	Pg	**Pb**	**12 10 04.9**	**+0.6**
	7.6nm,0.3s						
KOTS				Lg	Lg	12 10 49.2	
	116nm,0.8s						
KOTS	**Kotyrbulak**	**3.17**	**3**	*e*P	**Pb**	**12 10 04.9**	**+0.6**
	7.6nm,0.3s						
KOTS				*e*S	**Sg**	**12 10 49.2**	**-0.5**
	116nm,0.8s						
SATY	**Saty**	**3.20**	**20**	Pg	**Pb**	**12 10 03.2**	**-1.5**
	12nm,0.7s						
SATY				Lg	Lg	12 10 46.3	
	63nm,0.4s						
FRU1	**Bishkek**	**3.24**	**329**	⇓*i*P	**Pn**	**12 10 00.3**	**+1.6**
FRU1				⇓*i*S	**Sb**	**12 10 42.6**	**-2.3**
DGS	**Degeres**	**3.29**	**345**	Pg	**Pb**	**12 10 07.3**	**+1.0**
	20nm,0.6s						
DGS				Lg	Lg	12 10 53.3	
	50nm,0.6s						
DGS	**Degeres**	**3.29**	**345**	*e*P	**Pb**	**12 10 07.3**	**+1.0**
	20nm,0.6s						
DGS				*e*S	**Sg**	**12 10 53.3**	**-0.1**
	50nm,0.6s						
CHMS	**Chumysh**	**3.35**	**332**	P	**Sg**	**12 10 56.2**	**+0.8**
	SNR=5.1						
CHMS	**Chumysh**	**3.35**	**332**	⇑*i*P	**Pn**	**12 10 01.5**	**+1.3**
CHMS				⇑*i*S	**Sb**	**12 10 44.5**	**-3.6**
UZB	**Uzynbulak**	**3.47**	**27**	Pg	**Pb**	**12 10 07.9**	**-1.5**
	3.4nm,0.2s						
UZB				Lg	Lg	12 10 54.2	
	15nm,0.7s						
UZB	**Uzynbulak**	**3.47**	**27**	*e*P	**Pb**	**12 10 07.9**	**-1.5**
	3.4nm,0.2s						
UZB				*e*S	**Sb**	**12 10 54.2**	**+2.7**
	15nm,0.7s						
EKS2	**Erkin-Say**	**3.51**	**319**	P	**Pb**	**12 10 06.3**	**-3.7**
	SNR=9.0						
EKS2	**Erkin-Say**	**3.51**	**319**	⇑*i*P	**Pn**	**12 10 04.0**	**+1.5**
EKS2				⇑*i*S	**Sb**	**12 10 48.8**	**-3.9**
KURS	**Kuram**	**3.55**	**15**	Pg	**Pb**	**12 10 10.1**	**-0.7**
	6.4nm,0.8s						
KURS				Lg	Lg	12 10 58.0	
	35nm,0.6s						
SHLS	**Shalkode**	**3.64**	**31**	Pg	**Pb**	**12 10 13.9**	**+1.6**
	10nm,0.5s						
SHLS				Lg	Lg	12 11 04.5	
	18nm,0.4s						
SHLS	**Shalkode**	**3.64**	**31**	*e*P	**Pb**	**12 10 13.9**	**+1.6**
	10nm,0.5s						
SHLS				*e*S	**Sg**	**12 11 04.5**	**0.0**
	18nm,0.4s						
KPKS	**Kokpek**	**3.65**	**21**	Pg	**Pb**	**12 10 11.6**	**-0.8**
	0.3nm,0.1s						
KPKS				Lg	Lg	12 11 00.6	
	31nm,0.4s						
KPKS	**Kokpek**	**3.65**	**21**	*e*P	**Pb**	**12 10 11.6**	**-0.8**
	0.3nm,0.1s						
KPKS				*e*S	**Sb**	**12 11 00.7**	**+3.8**
	31nm,0.4s						
USP	**Ospenovka**	**3.68**	**331**	P	**Sg**	**12 11 05.9**	**+0.1**
	SNR=7.7						
USP	**Ospenovka**	**3.68**	**331**	⇓*i*P	**Pn**	**12 10 05.9**	**+1.2**
USP				⇓*i*S	**Sn**	**12 10 52.4**	**+4.3**
KRBS	**Karabastau**	**3.75**	**346**	Pg	**Pb**	**12 10 14.9**	**+0.8**
	5.5nm,0.7s						
KRBS				Lg	Lg	12 11 06.3	
	6.4nm,0.7s						
KRBS	**Karabastau**	**3.75**	**346**	*e*P	**Pb**	**12 10 14.9**	**+0.8**
	5.5nm,0.7s						
KRBS				*e*S	**Sg**	**12 11 06.3**	**-1.8**
	6.4nm,0.7s						
KUU	**Kurty**	**3.85**	**354**	Pg	**Pb**	**12 10 15.7**	**-0.1**
	4.3nm,0.0s						
KUU				Lg	Lg	12 11 07.6	
	8.7nm,0.0s						
KUU	**Kurty**	**3.85**	**354**	*e*P	**Pb**	**12 10 15.7**	**-0.1**
	4.3nm,0.0s						
KUU				*e*S	**Sg**	**12 11 07.6**	**-3.8**
	8.7nm,0.0s						
MRKS	**Merke**	**3.85**	**315**	Pg	**Pb**	**12 10 18.5**	**+2.6**
	4.5nm,0.3s						
MRKS				Lg	Lg	12 11 12.5	
	11nm,0.3s						
MRKS	**Merke**	**3.85**	**315**	*e*P	**Pb**	**12 10 18.5**	**+2.6**
	4.5nm,0.3s						
MRKS				*e*S	**Sg**	**12 11 12.5**	**+1.0**
	11nm,0.3s						
DRK	**Karamyk**	**3.98**	**263**	⇑*i*P	**Pn**	**12 10 09.5**	**+0.4**
DRK				⇑*i*S	**Sn**	**12 10 58.5**	**+2.5**
MNAS	**Manas**	**4.11**	**308**	⇑*i*P	**Pn**	**12 10 12.3**	**+1.5**
MNAS				⇑*i*S	**Sn**	**12 11 03.4**	**+4.4**
ARK	**Arkit**	**4.13**	**296**	⇑*i*P	**Pn**	**12 10 12.4**	**+1.4**
ARK				⇑*i*S	**Sn**	**12 11 03.6**	**+4.2**
BLB	**Baldybastay**	**4.20**	**16**	Pg	**Pb**	**12 10 21.4**	**-0.4**
	8.7nm,0.5s						
BLB				Lg	Lg	12 11 17.5	
	30nm,0.6s						
ARXS	**Arharly**	**4.21**	**9**	Pg	**Pb**	**12 10 22.6**	**+0.8**
	4.0nm,0.5s						
ARXS				Lg	Lg	12 11 19.6	
	23nm,0.8s						
ARXS	**Arharly**	**4.21**	**9**	*e*P	**Pb**	**12 10 22.6**	**+0.8**
	4.0nm,0.5s						
ARXS				*e*S	**Sg**	**12 11 19.6**	**-3.2**
	23nm,0.8s						
KNOS	**Konyrlen**	**4.61**	**21**	Pg	**Pb**	**12 10 28.2**	**-0.7**
	2.3nm,0.4s						
KNOS				Lg	Lg	12 11 29.1	
	4.6nm,0.5s						
TRKS	**Terek-Say**	**4.62**	**290**	⇑*i*P	**Pn**	**12 10 18.7**	**+0.9**
TRKS				⇑*i*S	**Sn**	**12 11 14.2**	**+2.7**
BTK	**Batken**	**4.67**	**272**	⇑*i*P	**Pn**	**12 10 19.4**	**+0.9**
BTK				⇑*i*S	**Sn**	**12 11 15.5**	**+2.7**
DJR	**Jarkent**	**4.78**	**26**	Pg	**Pb**	**12 10 30.8**	**-0.8**
	2.0nm,0.3s						
DJR				Lg	Lg	12 11 33.5	
	6.4nm,0.5s						
DJR	**Jarkent**	**4.78**	**26**	*e*P	**Pb**	**12 10 30.8**	**-0.8**
	2.0nm,0.3s						
DJR				*e*S	**Sb**	**12 11 33.5**	**+4.4**
	6.4nm,0.5s						
GAR	**Garm**	**5.21**	**260**	⇑*i*P	**Pn**	**12 10 26.1**	**+0.3**
GAR				⇑*i*S	**Sn**	**12 11 27.3**	**+1.3**
KK31	**Karatay Array**	**5.68**	**304**	⇑Pg	**Pg**	**12 10 52.8**	**-3.7**
	0.8nm,0.5s,baz=122,slow=16,SNR=14						
KK31				⇑Lg	Lg	12 12 08.8	
	1.7nm,0.5s,baz=131,slow=28,SNR=5.8						
BRLS	**Borolday**	**6.08**	**302**	Pg	**Pg**	**12 11 00.4**	**-3.7**
	1.0nm,0.2s						
BRLS				Lg	Lg	12 12 24.3	
	2.7nm,0.6s						
BRLS	**Borolday**	**6.08**	**302**	*e*P	**Pg**	**12 11 00.4**	**-3.7**
	1.0nm,0.2s						
BRLS				*e*S	**Sg**	**12 12 24.3**	**+1.5**
	2.7nm,0.6s						
CHGR	**Chuyangaron**	**6.17**	**259**	⇑*i*P	**Pn**	**12 10 39.3**	**+0.3**
CHGR				⇑*i*S	**Sn**	**12 11 50.1**	**+0.5**

NEIC ***29*** *12:19:00.3±1.7,17°.75N±0°.05×67°.92W±0°.01,h10km±2km,*
ML2.7/35,Md2.9/9(RSPR),Error ellipse: s-maj=9.4km
s-min=3.0km az=189.0
SDD ***29*** *12:19:03.7±1.9,17°.97N×67°.98W,h0km±10km,MD3.0,*
ML2.7,MW2.7, Presumed earthquake
RSPR ***29*** *12:19:05.0,18°.13N×67°.83W,h64km±1km,MD2.9/9*
OSPL ***29*** *12:19:05.1±1.2,18°.22N×67°.87W,h58km±28km,ML2.8,*
Presumed earthquake

ISC 29 12:19:03.0±1.3,18°.04N±0°.06×67°.89W±0°.03,h26km±13km,
n40,σ0§96/67,13C-4D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.53**	**49**		**Pn**	**12 19 15.7**	**+0.8**
IDE					**Sn**	**12 19 24.6**	**+1.6**
IDE	**Isla Desecheo**	**0.53**	**49**	⇓*i*P	**Pn**	**12 19 15.7**	**+0.8**
IDE				*e*S	**Sn**	**12 19 24.6**	**+1.6**
PRSN	**Puerto Rico Se**	**0.73**	**76**		**Pn**	**12 19 17.8**	**+0.1**
PRSN				Sg	**Sn**	**12 19 28.2**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.74**	**92**		**Pn**	**12 19 18.5**	**+0.7**
CRPR				Sg	**Sb**	**12 19 25.9**	**-1.2**
CRPR	**Cabo Rojo, PR**	**0.74**	**92**	⇓*i*P	**Pn**	**12 19 18.8**	**+0.9**
CRPR				⇑*i*S	**Sn**	**12 19 29.9**	**+1.5**
CRPR				IAML		12 19 31.4	
	comp=N,190nm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.74**	**92**	⇑*i*P	**Pn**	**12 19 18.7**	**+0.8**
CRPR				*e*S	**Sn**	**12 19 30.1**	**+1.7**
CRPR	**Cabo Rojo, PR**	**0.74**	**92**	*i* P	**Pn**	**12 19 18.8**	**+0.9**
CRPR				*e*S	**Sn**	**12 19 29.8**	**+1.4**
CRPR				IAML		12 19 30.2	
	comp=Z,191nm,0.4s						
LSP	**Las Mesas**	**0.78**	**80**		**Pn**	**12 19 18.8**	**+0.4**
LSP					**Sn**	**12 19 30.1**	**+0.9**
LSP	**Las Mesas**	**0.78**	**80**	⇓*i*P	**Pn**	**12 19 18.8**	**+0.4**
LSP				*e*S	**Sn**	**12 19 30.1**	**+0.9**
MLPR	**Magueyes Islan**	**0.81**	**95**		**Pn**	**12 19 19.3**	**+0.5**
AGPR	**Aguadilla, PR**	**0.85**	**60**		**Pn**	**12 19 19.7**	**+0.3**
AGPR				IAML		12 19 33.9	
	comp=Z,228nm,0.2s						
AGPR				IAML		12 19 34.5	
	comp=Z,220nm,0.3s						
HIDR	**Higuey Centro**	**0.96**	**305**	⇑*i*P	**Pb**	**12 19 21.5**	**+0.5**
HIDR				*i* S	**Sb**	**12 19 31.8**	**-1.5**
HIDR				IAML		12 19 37.6	
	comp=N,352nm,0.2s						
HIDR	**Higuey Centro**	**0.96**	**305**	*e*P	**Pb**	**12 19 22.5**	**+1.5**
HIDR				*e*S	**Sn**	**12 19 34.2**	**+0.6**
GBPR	**Guanica, Bosqu**	**0.97**	**94**		**Pb**	**12 19 21.9**	**+0.8**
GBPR					**Sn**	**12 19 34.9**	**+1.1**
GBPR	**Guanica, Bosqu**	**0.97**	**94**	*e*P	**Pb**	**12 19 21.9**	**+0.8**
GBPR				*e*S	**Sn**	**12 19 34.9**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.13**	**79**		**Pn**	**12 19 23.4**	**+0.1**
OBIP	**Obispado Ponce**	**1.22**	**90**		**Pn**	**12 19 24.7**	**+0.3**
OBIP					**Sn**	**12 19 40.1**	**0.0**
OBIP	**Obispado Ponce**	**1.22**	**90**	*e*P	**Pn**	**12 19 24.5**	**0.0**
OBIP				*e*S	**Sn**	**12 19 39.9**	**-0.3**
OBIP	**Obispado Ponce**	**1.22**	**90**	*i* P	**Pn**	**12 19 24.6**	**+0.1**
OBIP				*e*S	**Sn**	**12 19 39.8**	**-0.4**
OBIP				IAML		12 19 41.0	
	comp=Z,67nm,0.2s						
CELP	**Cerrillos**	**1.25**	**88**		**Pn**	**12 19 24.9**	**0.0**
CELP				IAML		12 19 41.2	
	comp=Z,139nm,0.5s						
CELP				IAML		12 19 41.3	
	comp=Z,106nm,0.2s						
EMPR	**Esperanza - Ma**	**1.36**	**71**		**Pn**	**12 19 26.2**	**-0.2**
EMPR					**Sn**	**12 19 43.0**	**-0.7**
EMPR	**Esperanza - Ma**	**1.36**	**71**	*e*P	**Pn**	**12 19 26.2**	**-0.2**
EMPR				*e*S	**Sn**	**12 19 43.0**	**-0.7**
ECPR	**Experimental S**	**1.48**	**79**		**Pn**	**12 19 28.0**	**0.0**
ECPR	**Experimental S**	**1.48**	**79**	*e*P	**Pn**	**12 19 27.9**	**-0.2**
ECPR				*e*S	**Sn**	**12 19 45.7**	**-0.9**
DR12	**Loma Pena Alta**	**1.60**	**298**		**Pn**	**12 19 30.5**	**+0.8**
HATOM	**Hato Mayor del**	**1.60**	**298**	⇑*i*P	**Pn**	**12 19 30.5**	**+0.8**
HATOM				⇑*i*S	**Sn**	**12 19 49.7**	**+0.2**
HATOM				IAML		12 19 58.7	
	comp=N,68nm,0.6s						
GCPR	**Guanabo City**	**1.74**	**81**		**Pn**	**12 19 31.4**	**-0.2**
GCPR				IAML		12 19 51.6	
	comp=E,78nm,0.5s						
GCPR				IAML		12 19 51.7	
	comp=N,59nm,0.5s						
GCPR	**Guanabo City**	**1.74**	**81**		**Sn**	**12 19 51.4**	**-1.6**
GCPR	**Guanabo City**	**1.74**	**81**	⇑*e*P	**Pn**	**12 19 31.3**	**-0.2**
GCPR				*e*S	**Sn**	**12 19 51.4**	**-1.6**
SMDR	**Samana, DR**	**1.75**	**316**		**Pn**	**12 19 32.5**	**+0.8**
SMDR					**Sn**	**12 19 54.0**	**+0.9**
SMDR	**Samana, DR**	**1.75**	**316**	⇑*i*P	**Pb**	**12 19 33.9**	**-0.6**
SMDR				⇑*i*S	**Sb**	**12 19 55.9**	**-0.1**
SMDR				IAML		12 20 01.2	
	comp=N,66nm,0.2s						
SMDR	**Samana, DR**	**1.75**	**316**	⇑*e*P	**Pn**	**12 19 32.5**	**+0.8**
SMDR				*e*S	**Sn**	**12 19 54.0**	**+0.9**
PDPR	**Patillas Dam,**	**1.78**	**90**	Pn	**Pn**	**12 19 31.7**	**-0.4**
PDPR				IAML		12 19 57.1	
	comp=N,67nm,0.3s						
PDPR				IAML		12 19 59.4	
	comp=N,59nm,0.2s						
HUMP	**Col San Antoni**	**1.94**	**87**		**Pn**	**12 19 33.8**	**-0.6**
HUMP				Sn	**Sn**	**12 19 57.2**	**-0.8**
HUMP				IAML		12 19 59.5	
	comp=N,82nm,0.2s						
HUMP	**Col San Antoni**	**1.94**	**87**	⇑*e*P	**Pn**	**12 19 34.4**	**0.0**
HUMP				*e*S	**Sn**	**12 19 57.1**	**-0.8**
BANI	**BANI**	**2.37**	**279**	*i* P	**Pn**	**12 19 41.1**	**+0.7**
BANI				IAML		12 20 25.1	
	comp=N,82nm,0.2s						
CUPR	**Culebra, Puert**	**2.50**	**83**	Pn	**Pn**	**12 19 40.9**	**-1.1**
LOVI	**El Cajuil, Ovi**	**3.32**	**266**	*i* P	**Pn**	**12 19 54.2**	**+0.9**
LOVI				*e*S	**Sn**	**12 20 29.0**	**-2.9**
LOVI				IAML		12 20 35.2	
	comp=Z,38nm,1.0s						
LOBH	**Bahia de las A**	**3.57**	**268**	*i* P	**Pn**	**12 19 57.7**	**+0.9**
LOBH				IAML		12 20 40.6	
	comp=Z,28nm,1.4s						
GRTK	**Grand Turk**	**4.61**	**319**	*i* P	**Pn**	**12 20 08.9**	**-2.1**

IDC ***29*** *12:24:43.5±0.9,33°.04N×105°.07E,h0km,mb3.7/8,*
mbtmp3.6/10,ML3.6/2, Error ellipse: s-maj=33.5km
s-min=13.9km az=59.0

ISC 29 12:24:48.6±1.2,33°.0N±0°.1×105°.1E±0°.2,h35km,n10,
σ0§69/10,mb3.6/8,Gansu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**3.12**	**339**	Pn	**Pn**	**12 25 35.6**	**+0.1**
	baz=163,slow=16						
LZDM				Lg	Lg	12 26 22.7	
	baz=193,slow=32						
	13nm,0.3s						
SONM	**Songino Array**	**14.81**	**4**	Pn	**Pn**	**12 28 16.1**	**+0.6**
	0.1nm,0.3s,baz=169,slow=8.2,SNR=3.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**22.11**	**315**	P	**P**	**12 29 39.6**	**-1.3**
	0.3nm,0.5s,baz=113,slow=13,SNR=4.9						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**25.37**	**332**	P	**P**	**12 30 11.5**	**-0.7**
	1.2nm,0.9s,baz=121,slow=11,SNR=4.6						
	1.2nm,0.9s						
KURBB	**Kurchatov Arra**	**26.23**	**320**	P	**P**	**12 30 20.3**	**+0.3**
	0.2nm,0.5s,baz=128,slow=9.8,SNR=4.3						
	0.2nm,0.5s						
MJAR	**Matsushiro Arr**	**27.38**	**73**	P	**P**	**12 30 30.5**	**-0.1**
	0.6nm,0.6s,baz=274,slow=8.0,SNR=4.1						
	0.6nm,0.6s						
PETK	**Petropavlovsk-**	**42.25**	**45**	P	**P**	**12 32 37.7**	**-0.6**
	5.4nm,1.0s,baz=263,slow=10.0,SNR=2.6						
	5.4nm,1.0s						
FINES	**FINESS Array B**	**56.42**	**326**	P	**P**	**12 34 26.8**	**+0.5**
	2.4nm,0.9s,baz=93,slow=5.6,SNR=4.0						
	2.4nm,0.9s						
WRA	**Warramunga Arr**	**59.66**	**148**	P	**P**	**12 34 49.6**	**+0.1**
	0.5nm,0.6s,baz=340,slow=7.6,SNR=11						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**62.75**	**150**	P	**P**	**12 35 10.6**	**+0.3**
	0.5nm,0.7s,baz=334,slow=6.7,SNR=14						
	0.5nm,0.7s						

ISK ***29*** *12:29:46.8,38°.43N×39°.25E,h4km,ML4.5/19*
AFAD ***29*** *12:29:46.8,38°.44N×39°.24E,h8km±2km,MW4.6*
MOS ***29*** *12:29:46.9±1.1,38°.18N×39°.22E,h11km,mb4.6/17,Error*
ellipse: s-maj=6.7km s-min=4.4km az=82.6
IDC ***29*** *12:29:47.3±0.6,38°.28N×39°.26E,h0km,mb4.2/24,*
mbtmp4.1/34,ML4.1/9,MS3.8/49,Error ellipse:
s-maj=13.7km s-min=8.7km az=169.0
GII ***29*** *12:29:47.5±0.0,38°.568N±0°.002×39°.385E±0°.001,h0km,*
Mws4.7, confirmed
MED_RC ***29*** *12:29:47.0±1.2,38°.47N×39°.57E,h10km,MW4.5/26,*
Moment Tensor Solution.Mantle waves: s26,c28;
Duration: 1§0 Moment tensor: Scale 10¹⁵Nm;
Mrr-0.28±.33; Mθθ-4.97±.46; Mϕϕ5.25±.39; Mrθ-3.27±1.58;
Mθϕ4.76±.39; Mϕr1.67±2.94; Best double couple:
M₀7.81000×10¹⁵ NP1:φs64.00000°,δ71.00000°,
λ-15.00000°. NP2:φs159.00000°,δ76.00000°,
λ-160.00000°. Principal axes: T 7.1400, Plg3.0000°,
Azm291.0000°; N 1.3300, Plg66.0000°, Azm194.0000°; P
-8.4800, Plg24.0000°, Azm22.0000°; nsta1 refers to body
waves. nsta2 refers to surface waves, cutoff=35s.
NEIC ***29*** *12:29:48.6±0.7,38°.35N±0°

MIMR IAML 12 30 46.0
comp=N,1µm,1.3s
SANL SANLIURFA_Merk 1.29 190 P **Pn** **12 30 11.9 -1.4**
SANL S **Sg** **12 30 28.8 -1.0**
SANL IAML 12 30 32.0
comp=N,2µm,0.8s
SANL IAML 12 30 36.0
comp=E,1µm,0.8s
EUZM Uzumlu 1.30 15 P **Pg** **12 30 11.7 -1.6**
AKCA Adyaman/G¶l 1.40 243 P **Pn** **12 30 13.6 -1.2**
YEDI Yedisu-Bingol 1.41 45 Pn **Pb** **12 30 14.3 -1.0**
SLHN Bingol, Solhan 1.47 69 P **Pn** **12 30 15.5 -0.3**
SVAN Silvan-Diyarba 1.55 100 Pn **Pn** **12 30 15.4 -1.4**
SVAN Silvan-Diyarba 1.55 100 P **Pn** **12 30 15.4 -1.4**
KARO Karliova-Bingo 1.64 58 Pn **Pn** **12 30 17.4 -0.8**
SURC SANLIURFA_SURC 1.65 198 P **Pn** **12 30 16.9 -1.2**
SURC S **Sn** **12 30 38.8 -1.0**
SURC IAML 12 30 45.0
comp=N,7µm,0.8s
MARD Mardin 1.65 133 **Pn** **12 30 16.3 -2.0**
MARD Sn **Sn** **12 30 36.9 -3.1**
MARD Mardin 1.65 133 P **Pn** **12 30 16.8 -1.5**
MBOZ 1.67 344 P **Pn** **12 30 18.5 -0.1**
ELBS KAHRAMANMARAS1.68 266 P **Pn** **12 30 18.5 -0.1**
BTMN Batman 1.68 109 P **Pn** **12 30 17.4 -1.2**
GZT Gaziantep 1.73 231 P **Pn** **12 30 17.9 -1.4**
GZT S **Sn** **12 30 42.6 +0.7**
GZT IAML 12 30 46.0
comp=N,2µm,1.0s
ECAT Cat-ERZURUM 1.77 49 P **Pg** **12 30 21.4 -0.8**
MUSM Mu-Merkez 1.79 80 P **Pn** **12 30 19.4 -0.7**
KOPT Kop Dagi 1.84 31 **Pn** **12 30 20.5 -0.5**
KOPT Kop Dagi 1.84 31 P **Pg** **12 30 22.0 -1.6**
VRTB Varto-Mus 1.86 67 Pn **Pn** **12 30 20.6 -0.5**
VRTB Varto-Mus 1.86 67 P **Pn** **12 30 21.4 +0.2**
NZIP Nizip/Gaziante 1.88 222 P **Pn** **12 30 20.5 -0.9**
ALUC Giresun/Alucra 1.93 349 P **Pg** **12 30 23.9 -1.5**
SUSE Susehri 1.94 335 P **Pb** **12 30 23.6 -0.8**
KHMN Narli-Kahraman 1.97 238 Pn **Pn** **12 30 21.7 -0.9**
KHMN Narli-Kahraman 1.97 238 P **Pn** **12 30 21.5 -1.1**
KHMN P **Pn** **12 30 21.5 -1.1**
MIDY Mardin/Midyat- 1.98 121 P **Pn** **12 30 22.1 -0.7**
MIDY S **Sn** **12 30 48.2 0.0**
MIDY IAML 12 30 53.0
comp=E,4µm,0.7s
GUMT Gumushane 2.02 5 Pn **Pn** **12 30 23.1 -0.2**
KAHM Kahramanmaras, 2.02 243 P **Pn** **12 30 22.4 -0.9**
BAYT Aydıntepe-Bayb 2.06 19 Pn **Pn** **12 30 23.5 -0.4**
GAZ Gaziantep 2.06 233 **Pn** **12 30 22.6 -1.2**
GAZ Gaziantep 2.06 233 Pn **Pn** **12 30 22.7 -1.2**
KMRS Kahramanmaras 2.09 244 Pn **Pn** **12 30 23.3 -0.9**
CUAYA Sivas-Altinyay 2.13 293 P **Pn** **12 30 25.2 +0.4**
EDAM Erzurum-Paland 2.13 47 Pn **Pn** **12 30 24.4 -0.5**
SRTM Siirt_Merkez 2.15 101 P **Pn** **12 30 23.6 -1.4**
KHMR Kahramanmara 2.16 240 P **Pn** **12 30 23.8 -1.4**
KHMR P **Pn** **12 30 23.9 -1.4**
GURO Guroymak-BITLI 2.18 86 **Pn** **12 30 24.7 -0.8**
GURO Guroymak-BITLI 2.18 86 Pn **Pn** **12 30 24.9 -0.6**
ERZM Erzurum 2.19 48 P **Pb** **12 30 27.4 -1.3**
SARI SarD1z-Kayseri 2.23 270 Pn **Pn** **12 30 25.4 -0.9**
BLIS Bitlis-Merkez 2.24 90 P **Pn** **12 30 24.5 -1.9**
SVSK Karacayir 2.29 311 Pn **Pn** **12 30 26.6 -0.3**
KAMA Osmaniye 2.41 239 P **Pn** **12 30 27.0 -1.7**
MLAZ Malazgirt-MUS 2.66 74 Pn **Pn** **12 30 32.2 0.0**
BNN Bunyan 2.70 280 **Pn** **12 30 32.8 +0.1**
TOKA Tokat 2.86 312 **Pn** **12 30 35.5 +0.8**
GEVA Gevas 2.99 91 **Pn** **12 30 36.6 -0.1**
KARS Kars 3.67 52 **Pn** **12 30 47.5 +1.5**
KARS Kars 3.67 52 P **Pn** **12 30 47.5 +1.5**
BR131 Keskin Array S 4.56 288 **Pn** **12 30 58.4 +0.2**
BR131 Keskin Array S 4.56 288 P **Pn** **12 30 58.4 +0.2**
BR131 Keskin Array S 4.56 288 P **Pn** **12 30 59.1 +0.9**
BRTR Keskin Array B 4.56 288 Pn **Pn** **12 30 59.0 +0.7**
9.3nm,0.3s,baz=113,slow=15,SNR=120
BRTR Lg Lg 12 32 18.3
2.7nm,0.3s,baz=118,slow=23,SNR=4.4
BRTR LR LR 12 33 11.4
comp=Z,1µm,20.9s,baz=122,slow=44
38nm,0.5s
BRTR Keskin Array B 4.56 288 **Pn** **12 30 58.7 +0.5**
BRTR Keskin Array B 4.56 288 P **Pn** **12 30 59.0 +0.7**
GNI Garni 4.58 67 Pn **Pn** **12 31 00.4 +1.8**
4.3nm,0.3s,baz=273,slow=5.1,SNR=6.4
14nm,0.4s
GNI Garni 4.58 67 **Pn** **12 30 58.4 -0.2**
GNI Garni 4.58 67 P **Pn** **12 30 59.3 +0.7**
BEIL Beino 4.62 213 *e*P **Pn** **12 30 58.3 -0.7**
FKH Fakeheh 4.78 210 *e*P **Pn** **12 30 58.5 -2.8**
HWQ Hawqa 4.95 214 *e*P **Pn** **12 31 02.8 -0.8**
ILGA Ilgaz 5.00 303 **Pn** **12 31 04.9 +0.4**
VSLR Vesyoloye 5.04 6 *i* P Pn 12 31 09.5 +4.7
SOC Sochi 5.14 4 *e*P Pn 12 31 11.2 +5.1
SOC *e* 12 32 11.5
SOC pmax pmax
comp=Z,119nm,1.1s
SOC MLR MLR
comp=Z,630nm,12.0s
ZAHL Zahle 5.33 212 *e*P **Pn** **12 31 08.6 -0.3**
BZK Bozkurt 5.34 313 ⇓P Pb 12 31 16.4 -5.7
BZK Bozkurt 5.34 313 Pn **Pn** **12 31 09.5 +0.7**
BHL Bhannes 5.39 214 *e*P **Pn** **12 31 09.1 -0.6**
NEUR Neytrino 5.47 27 *i* P **Pn** **12 31 13.6 +2.8**
DQRL Deir Qamar 5.60 213 *e*P **Pn** **12 31 12.7 +0.2**
RCY Rachaya 5.67 210 *e*P **Pn** **12 31 13.5 0.0**
QRWL Qaraoun 5.69 212 *e*P **Pn** **12 31 13.2 -0.5**
SHA1 Shidzhatmaz 5.87 25 *i* P **Pn** **12 31 19.4 +3.0**
CSS Mathiatis 5.90 236 **Pn** **12 31 16.1 -0.4**
CSS Mathiatis 5.90 236 P **Pn** **12 31 17.2 +0.7**
CSS S **Sn** **12 32 27.1 +2.5**
NATI Neve Ativ 5.91 210 P **Pn** **12 31 17.2 +0.5**
NATI S **Sn** **12 32 27.6 +2.7**
CIDE Kastamonu/Cide 5.93 307 ⇑P Pn 12 31 24.3 +7.4
KBZ Khabaz 5.95 26 Pn **Pn** **12 31 21.1 +3.9**
comp=Z,2.5nm,0.7s,baz=194,slow=11,SNR=4.2
KBZ LR LR 12 34 01.5
comp=Z,1µm,19.8s,baz=218,slow=42
GEM Giv'at Ha'Em 5.99 210 P **Pn** **12 31 19.0 +1.3**
GEM S **Sn** **12 32 29.5 +2.7**
KIV Kislovodsk 6.08 24 **Pn** **12 31 20.1 +1.0**
KIV Kislovodsk 6.08 24 *e*P **Pn** **12 31 22.2 +3.1**
KIV *e*S **Sn** **12 32 35.2 +6.1**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,327nm,11.0s
KIV Kislovodsk 6.08 24 P **Pn** **12 31 16.4 -2.6**
KSHT Keshet 6.13 208 P **Pn** **12 31 20.7 +0.8**
KSHT S **Sn** **12 32 33.1 +2.6**
MMC7 Mount Meron ar 6.26 211 P **Pn** **12 31 22.9 +1.3**
MMA0B Mount Meron ar 6.26 211 P **Pn** **12 31 23.0 +1.4**
MMA0B S **Sn** **12 32 36.6 +2.9**
MMAI Mount Meron Ar 6.26 211 Pn **Pn** **12 31 20.1 -1.5**
comp=Z,15nm,0.3s,baz=46,slow=17,SNR=44
MMAI Lg Lg 12 33 06.8
comp=Z,18nm,0.3s,baz=23,slow=27,SNR=2.3
MMAI LR LR 12 33 50.0
comp=Z,1µm,21.2s,baz=17,slow=40
comp=Z,9.9nm,0.4s
HNTI Hanita 6.30 213 P **Pn** **12 31 22.8 +0.8**
HNTI S **Sn** **12 32 37.1 +2.6**
ASF Jabal al Asfar 6.55 198 Pn **Pn** **12 31 24.2 -1.4**
comp=Z,4.2nm,0.3s,baz=21,slow=8.3,SNR=34
ASF Lg Lg 12 33 16.1
comp=Z,14nm,0.3s,baz=181,slow=20,SNR=4.5
comp=Z,31nm,0.6s
MDUB Mudurnu 6.56 290 Pn **Pn** **12 31 25.5 -0.2**
BLGI Bet Lehem HaGe 6.59 211 P **Pn** **12 31 27.5 +1.4**
BLGI S **Sn** **12 32 44.1 +2.4**
MMLI Mount Malkishu 6.76 209 P **Pn** **12 31 29.7 +1.2**
MMLI S **Sn** **12 32 48.7 +2.7**
OFRI `Ofer 6.78 212 P **Pn** **12 31 30.0 +1.3**
OFRI S **Sn** **12 32 48.7 +2.4**
HMDT Nahal Hemdat 6.89 207 P **Pn** **12 31 30.4 +0.2**
HMDT S **Sn** **12 32 51.5 +2.4**
ISP Isparta 6.92 268 *i* P **Pn** **12 31 28.9 -1.7**
SLTI Sal'it 7.09 210 P **Pn** **12 31 34.1 +1.2**
SLTI S **Sn** **12 32 56.3 +2.4**
SALP Salfit 7.18 209 P **Pn** **12 31 35.6 +1.4**
SALP S **Sn** **12 32 58.9 +2.7**
UJAP Al Uja 7.19 207 P **Pn** **12 31 35.3 +1.2**
UJAP S **Sn** **12 32 58.9 +2.7**
DSI Dead Sea 7.56 206 P **Pn** **12 31 40.4 +1.0**

DSI S **Sn** **12 33 07.3 +1.7**
MAK Makhachkala 7.71 52 *e*P **Pn** **12 31 39.4 -2.0**
MAK *e*S **Sn** **12 33 07.5 -1.7**
MAK pmax pmax
comp=Z,25nm,0.3s
MAK MLR MLR
comp=Z,1µm,9.0s
AMAZ Amatzia 7.76 209 P **Pn** **12 31 43.4 +1.2**
AMAZ S **Sn** **12 33 13.0 +2.4**
MSBI Mazada 7.81 205 P **Pn** **12 31 43.8 +1.1**
MSBI S **Sn** **12 33 13.7 +2.2**
YTIR Yattir 7.84 207 P **Pn** **12 31 44.6 +1.3**
YTIR S **Sn** **12 33 15.6 +2.9**
IDAN Idan 8.28 205 P **Pn** **12 31 50.2 +1.0**
IDAN S **Sn** **12 33 25.5 +2.4**
KZIT Kziot 8.52 209 P **Pn** **12 31 53.7 +1.2**
KZIT S **Sn** **12 33 31.9 +2.8**
ZFRI Zfri 8.56 204 P **Pn** **12 31 54.1 +1.0**
ZFRI S **Sn** **12 33 32.3 +2.1**
RMNI Mount Ramon 8.67 207 P **Pn** **12 31 56.0 +1.4**
RMNI S **Sn** **12 33 35.6 +2.8**
PRNI Paran 8.81 205 P **Pn** **12 31 56.4 -0.1**
PRNI S **Sn** **12 33 38.9 +2.7**
HRFI Mount Harif 9.09 204 P **Pn** **12 32 01.1 +0.8**
HRFI S **Sn** **12 33 45.6 +2.4**
KRMI Paran Flat 9.12 206 P **Pn** **12 32 01.6 +0.8**
KRMI S **Sn** **12 33 46.6 +2.8**
EIL Elat 9.46 203 Pn **Pn** **12 32 03.9 -1.5**
comp=Z,0.8nm,0.3s,baz=351,slow=12,SNR=8.1
EIL LR LR 12 36 12.0
comp=Z,1µm,18.5s,baz=38,slow=41
comp=Z,7.7nm,0.7s
EIL Elat 9.46 203 P **Pn** **12 32 06.0 +0.7**
EIL S **Sn** **12 33 54.4 +2.3**
TIRR Tirgusor 10.11 310 Pn **Pn** **12 32 14.1 -0.2**
TIRR Tirgusor 10.11 310 P **Pn** **12 32 14.1 -0.2**
TPGR Topolog 10.33 312 ⇓P Pn 12 32 09.3 -8.0
CFR Carcaliu 10.68 313 ⇑P **Pn** **12 32 21.2 -0.8**
RDO Rodhopi 10.90 289 Pn **Pn** **12 32 24.8 -0.3**
KBD Kabd 11.60 140 P **Pn** **12 32 32.3 -2.5**
KBD S **Sn** **12 34 44.0 -0.6**
IDI Anoyia 11.94 259 Pn **Pn** **12 32 38.2 -1.2**
MLR Muntele Rosu 12.15 310 Pn **Pn** **12 32 45.5 +3.3**
comp=Z,0.2nm,0.3s,baz=185,slow=9.9,SNR=4.1
MLR LR LR 12 38 34.8
comp=Z,483nm,19.8s,baz=118,slow=43
comp=Z,0.8nm,0.4s
MLR Muntele Rosu 12.15 310 ⇓P **Pn** **12 32 41.4 -0.9**
MLR Muntele Rosu 12.15 310 Pn **Pn** **12 32 42.3 +0.1**
VORD Divnogorie 12.52 0 *e*P Pn 12 32 52.1 +5.0
VORD pmax pmax
comp=Z,9.0nm,0.5s
VOIR 12.67 308 ⇑P **Pn** **12 32 53.9 +4.6**
DOPR Dopca 12.72 311 ⇑P **Pn** **12 32 50.8 +0.8**
VSR Storozhevoye 12.77 360 *e*P Pn 12 32 57.2 +6.6
VSR pmax pmax
comp=Z,10.0nm,1.0s
VRH Novokhopyorsk 12.87 7 *e*P Pn 12 32 57.6 +5.6
VRH pmax pmax
comp=Z,19nm,1.1s
VORR Voronezh 13.22 360 *e*P **Pn** **12 32 57.5 +0.7**
VORR pmax pmax
comp=Z,30nm,0.4s
LOT Lotru 13.47 306 ⇓P **P** **12 33 10.1 +0.3**
BURAR Bucovina Array 13.75 316 ⇑P **Pn** **12 33 05.8 +1.8**
GZR Gura Zlata 14.09 305 ⇓P **P** **12 33 13.8 -2.8**
HERR Herculane 14.13 302 ⇓P **P** **12 33 16.9 -0.1**
LPSR Galich'ya Gora 14.16 359 *e*P **P** **12 33 16.8 -0.5**
LPSR pmax pmax
comp=Z,20nm,0.9s
AKASG Malin Array Be 14.17 333 Pn **Pn** **12 33 10.8 +1.1**
comp=Z,0.6nm,0.3s,baz=145,slow=12,SNR=5.1
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 14.17 333 *i* P **P** **12 33 13.5 -3.9**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 14.17 333 *i* P **Pn** **12 33 12.8 +3.1**
MARR Marisel-Cluj 14.44 310 ⇑P **P** **12 33 22.4 +1.8**
DRGR 14.74 310 ⇓P **P** **12 33 24.8 +0.9**
BELG Belogornoye 15.12 20 *i* P **Pn** **12 33 23.9 +1.4**
SHMA Al-Shehemyia 15.97 138 P **Pn** **12 33 33.9 -0.1**
SHMA S **Sn** **12 36 26.8 -4.7**
OBN Obninsk 16.77 355 LR LR 12 40 41.7
comp=Z,228nm,19.6s,baz=166,slow=39
PSZ Piszkesteto 16.96 310 P **Pn** **12 33 45.3 -1.2**
PSZ Piszkesteto 16.96 310 P **Pn** **12 33 45.3 -1.2**
PSZ pmax pmax
comp=Z,14nm,1.1s
TRNA Turayna 17.02 140 P **Pn** **12 33 45.5 -1.8**
TRNA S **Sn** **12 36 56.1 -0.8**
MOS Moscow 17.33 357 *e*P **P** **12 33 52.5 +0.1**
TIP Timpagrande 17.55 279 ⇑P **Pn** **12 33 54.1 +0.2**
TIP Timpagrande 17.55 279 P **Pn** **12 33 52.1 -1.8**
TIP IAmb IAmb 12 33 59.1
comp=Z,30nm,0.9s
AKTO Aktyubinsk 17.91 42 P **P** **12 34 00.0 +1.1**
comp=Z,0.4nm,0.3s,baz=233,slow=9.2,SNR=9.7
AKTO LR LR 12 42 21.6
comp=Z,201nm,19.5s,baz=222,slow=42
comp=Z,5.0nm,0.8s
AB31 Akbulak array 18.36 47 P **Pn** **12 34 02.1 -1.6**
ABKAR Akbulak array 18.36 47 P **Pn** **12 34 02.3 -1.4**
MODS Modra-Piesok 18.74 309 *e*P **Pn** **12 34 11.9 +3.5**
MODS Modra-Piesok 18.74 309 *e*P **Pn** **12 34 11.9 +3.5**
ZST Bratislava 18.78 308 *e*P **Pn** **12 34 10.9 +2.0**
ZST Bratislava 18.78 308 *e*P **Pn** **12 34 10.9 +2.0**
SHME Shamm 18.85 126 P **P** **12 34 05.9 -3.5**
HRA Herat 18.92 95 P **P** **12 34 09.2 -1.1**
BANOM Banah 19.04 126 P **P** **12 34 09.4 -2.1**
RONA Rosalia, Austr 19.10 306 *i* pP pP 12 34 14.2 +0.7
comp=Z,12nm,1.2s
MZWR Madinat Zayed 19.22 135 P **P** **12 34 14.7 +1.3**
AJN Ajban 19.23 131 P **P** **12 34 13.0 -0.6**
AJN P **P** **12 34 13.0 -0.6**
NAZ Nazwa, Dubai 19.32 129 P **P** **12 34 13.7 -0.8**
MASF Masafi 19.34 127 P **P** **12 34 14.1 -0.8**
ASUD Al Ashush, Dub 19.39 131 P **P** **12 34 14.9 -0.4**
ARSA Arzberg 19.44 305 *i* pP **Pn** **12 34 17.6 +0.6**
comp=Z,7.7nm,1.2s
CONA Conrad Observa 19.45 307 *e*pP **Pn** **12 34 18.0 +0.9**
comp=Z,14nm,1.0s,SNR=5.7
MDH Madha 19.48 127 P **P** **12 34 12.5 -3.8**
VRAC Vranov 19.54 311 P **Pn** **12 34 19.3 +1.2**
comp=Z,0.3nm,0.3s,baz=119,slow=13,SNR=4.4
comp=Z,1.7nm,0.5s
MZR Muzera 19.62 138 P **P** **12 34 17.1 -0.7**
SNR=6.3
INTR Introdacqua 19.66 288 P **P** **12 34 17.6 -0.7**
INTR IAmb IAmb 12 34 20.2
comp=Z,23nm,1.1s
UOSS Minazif 19.68 128 P **P** **12 34 16.9 -1.6**
UOSS IAmb IAmb 12 34 25.5
comp=Z,13nm,0.7s
UOSS Minazif 19.68 128 P **P** **12 34 17.5 -1.0**
HATD Hatta, Dubai 19.72 129 P **P** **12 34 18.3 -0.7**
ASHO Ashiyiah 19.78 129 P **P** **12 34 19.1 -0.5**
OBKA Obir 19.87 302 *i* pP **Pn** **12 34 22.8 +0.7**
comp=Z,16nm,1.8s
ALNE Al Ain 20.07 131 P **P** **12 34 23.1 +0.4**
TREC Trest 20.20 310 *e*P **P** **12 34 25.2 +1.2**
TREC Trest 20.20 310 *e*P **P** **12 34 25.2 +1.2**
NRCA Norcia 20.29 291 P **P** **12 34 24.6 -0.5**
NRCA IAmb IAmb 12 34 30.7
comp=Z,16nm,1.0s
MOA Molln 20.44 305 *i* Pn Pn 12 34 28.7 0.0
comp=Z,16nm,1.0s
SOHO SOHO 20.48 129 P **P** **12 34 25.8 -1.4**
SOHO P **P** **12 34 25.8 -1.4**
MYKA Terra Mystica 20.51 302 *i* Pn **P** **12 34 28.3 +0.9**
comp=Z,9.4nm,1.0s
CESX Cesi 20.67 290 IAmb IAmb 12 34 58.0
comp=Z,15nm,1.0s
CKRC Cesky Krumlov 20.73 308 *e*P **P** **12 34 30.6 +0.8**
CKRC Cesky Krumlov 20.73 308 *e*P **P** **12 34 30.6 +0.8**
BIOA Bad Ischl, Aus 20.80 305 *i* Pn Pn 12 34 32.3 -0.6
comp=Z,12nm,0.9s
KBA Koelnbreinsper 20.82 303 *e*Pn Pn 12 34 32.8 -0.6
comp=Z,11nm,0.6s
ZVC Zvikov 21.03 310 *e*P **P** **12 34 34.2 +1.2**
PRU Pruhonice 21.04 311 *e*P **P** **12 34 33.9 +0.8**
PRU *ep*P **sP** **12 34 37.8 +2.6**
PRU Pruhonice 21.04 311 *e*P **P** **12 34 33.9 +0.8**
PRU *e* 12 34 37.8

GERES GERESS Array B 21.12 308 P **P** **12 34 35.0 +1.0**
comp=Z,6.5nm,0.9s,baz=123,slow=9.7,SNR=18
comp=Z,6.5nm,0.9s
KIRV Kirov 21.20 15 P **P** **12 34 36.8 +2.2**
comp=Z,21nm,0.5s,baz=204,slow=9.4,SNR=8.0
KIRV LR LR 12 42 57.1
comp=Z,176nm,19.2s,baz=204,slow=37
comp=Z,21nm,0.5s
ABTA Abfaltersbach 21.29 302 *i* Pn **P** **12 34 37.5 +1.6**
comp=Z,9.2nm,1.3s
KHC Kasperske Hory 21.30 308 P **P** **12 34 36.4 +0.5**
KHC Kasperske Hory 21.30 308 *e*P **P** **12 34 36.6 +0.7**
KHC Kasperske Hory 21.30 308 *ce*P **P** **12 34 37.1 +1.2**
KHC pmax pmax
comp=Z,6.0nm,0.8s
LESA Schwarzleotal 21.35 303 *ep*P pP 12 34 37.8 -0.2
comp=Z,10nm,1.0s
HOQ Hoqain 21.36 129 P **P** **12 34 34.6 -2.2**
BIDO Bidbid 21.91 127 P **P** **12 34 40.7 -1.9**
BSY Bisya 21.92 130 P **P** **12 34 42.0 -0.8**
SNR=12
ARTI Arti 21.99 29 LR LR 12 45 05.9
comp=Z,156nm,18.9s,baz=215,slow=42
ARTI Arti 21.99 29 P **P** **12 34 42.8 -0.5**
ARTI IAmb IAmb 12 34 45.8
comp=Z,20nm,0.9s
ARTI Arti 21.99 29 P **P** **12 34 42.8 -0.5**
ARTI pmax pmax
comp=Z,19nm,0.9s
WTTA Wattenberg 21.99 303 *i* P **P** **12 34 44.6 +1.1**
comp=Z,11nm,0.8s
WATA Walderalm 22.05 303 *i* pP pP 12 34 46.3 +0.7
comp=Z,26nm,1.5s
SMDO Samad 22.20 128 P **P** **12 34 44.9 -1.1**
SMDO P **P** **12 34 44.9 -1.1**
SQTA Sankt Quirin 22.27 302 *e*P **P** **12 34 47.8 +1.4**
comp=Z,20nm,1.5s
MOTA Moosalm 22.36 302 *i* P **P** **12 34 47.9 +0.4**
comp=Z,16nm,0.9s
KLMR Klimovskoe 22.43 0 *e*P **P** **12 34 49.3 +1.4**
KLMR pmax pmax
comp=Z,42nm,1.4s
WSAR Wadi Sarin 22.43 127 P **P** **12 34 50.3 +2.0**
CLL Collm 22.47 313 *e*P **P** **12 34 52.0 +3.5**
CLL *i* 12 34 57.2
CLL Collm 22.47 313 *e*P **P** **12 34 52.0 +3.5**
CLL *i* x x 12 34 57.2
FETA Feichten 22.54 302 *e*P **P** **12 34 50.1 +0.7**
comp=Z,9.9nm,0.8s
RETA Reutte 22.62 303 *i* P **P** **12 34 51.0 +0.8**
comp=Z,9.5nm,1.0s
SHAA Shahritus 22.73 83 **P** **12 34 50.0 -1.4**
SHAA IAmb IAmb 12 35 15.8
comp=Z,38nm,1.2s
JMDO Jabal Madar 22.75 129 P **P** **12 34 51.9 +0.3**
FUORN Ofenpass-Fuorn 22.78 300 IAmb IAmb 12 34 58.1
comp=Z,13nm,1.1s
DAVOX Davos/Dischmat 23.07 301 LR LR 12 46 03.4
comp=Z,272nm,19.0s,baz=76,slow=42
WBK Wadi Bani Khal 23.11 127 P **P** **12 34 55.9 +0.5**
DAVA Damuels 23.16 302 *i* P **P** **12 34 56.2 +0.3**
comp=Z,17nm,0.9s
SVE Sverdlovsk 23.18 31 *e*P **P** **12 34 58.0 +2.1**
CHGR Chuyangaron 23.34 80 *i* P **P** **12 34 58.2 +0.5**
CHGR pmax pmax
comp=Z,11nm,0.9s
TUE Stuetta 23.38 300 P **P** **12 34 56.8 -1.3**
TUE IAmb IAmb 12 35 18.1
comp=Z,9.4nm,0.9s
DOK Doka 23.62 143 P **P** **12 34 57.9 -2.6**
JLN Jalan Bani Buh 23.72 127 P **P** **12 34 58.2 -3.2**
JLN P **P** **12 34 58.2 -3.2**
MHTO MHTO 23.73 132 P **P** **12 34 59.8 -1.7**
KEST Kesra 23.97 273 P **P** **12 35 04.2 +0.3**
comp=Z,22nm,0.8s,baz=42,slow=5.9,SNR=14
KEST LR LR 12 45 57.7
comp=Z,173nm,20.8s,baz=2.7,slow=40
comp=Z,22nm,0.8s
KEST Kesra 23.97 273 P **P** **12 35 02.6 -1.3**
KEST Kesra 23.97 273 P **P** **12 35 04.7 +0.8**
KK31 Karatay Array 24.04 69 P **P** **12 35 03.7 -0.8**
KK31 IAmb IAmb 12 35 12.0
comp=Z,15nm,0.9s
KK31 Karatay Array 24.04 69 P **P** **12 35 03.7 -0.8**
KK31 pmax pmax
comp=Z,15nm,0.9s
KKAR Karatay Array 24.04 69 P **P** **12 35 03.9 -0.6**
KKAR Karatay Array 24.04 69 P **P** **12 35 03.9 -0.6**
GAR Garm 24.18 79 P **P** **12 35 04.9 -1.1**
FINES FINESS Array B 24.44 345 P **P** **12 35 08.9 +1.1**
comp=Z,2.3nm,0.5s,baz=151,slow=9.6,SNR=11
comp=Z,2.3nm,0.5s
FINES FINESS Array B 24.44 345 P **P** **12 35 07.1 -0.8**
FINES FINESS Array B 24.44 345 *i* P **P** **12 35 10.5 +2.6**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FIA1 FINESS Array S 24.44 345 P **P** **12 35 07.6 -0.3**
DMTO DMTO 24.79 142 P **P** **12 35 09.4 -2.0**
BNI Bardonecchia 25.07 296 **P** **12 35 13.7 -0.2**
BNI Bardonecchia 25.07 296 P **P** **12 35 13.7 -0.2**
BNI pmax pmax
comp=Z,32nm,1.4s
ECH Echery 25.15 303 IAmb IAmb 12 35 16.4
comp=Z,19nm,1.0s
BORK Borovoye 25.88 46 P **P** **12 35 20.4 -0.5**
BORK IAmb IAmb 12 35 37.3
comp=Z,6.3nm,1.0s
BORK Borovoye 25.88 46 *ce*P **P** **12 35 23.0 +2.0**
BORK pmax pmax
comp=Z,9.0nm,1.7s
BVAR Borovoye Array 25.91 46 P **P** **12 35 22.5 +1.2**
comp=Z,3.3nm,0.8s,baz=230,slow=6.9,SNR=14
BVAR LR LR 12 46 15.6
comp=Z,129nm,20.8s,baz=251,slow=38
comp=Z,3.3nm,0.8s
AAK Ala-Archa 26.98 70 LR LR 12 48 04.0
comp=Z,102nm,18.0s,baz=284,slow=41
AAK Ala-Archa 26.98 70 P **P** **12 35 30.4 -0.9**
AAK Ala-Archa 26.98 70 *ce*P **P** **12 35 33.3 +2.0**
AAK pmax pmax
comp=Z,8.0nm,1.3s
AAK Ala-Archa 26.98 70 P **P** **12 35 31.6 +0.4**
ATD Arta Tunnel 27.00 172 LR LR 12 46 19.0
comp=Z,12nm,18.4s,baz=9.5,slow=37
HFS Hagfors 27.05 332 P **P** **12 35 32.9 +1.4**
comp=Z,2.0nm,0.7s,baz=151,slow=16,SNR=4.5
HFS LR LR 12 47 43.0
comp=Z,222nm,18.0s,baz=138,slow=40
comp=Z,2.0nm,0.7s
BOOM Boomskoye usch 28.05 70 IAmb IAmb 12 35 44.9
comp=Z,5.3nm,1.0s
KSH2 Kashi 28.19 77 P **P** **12 35 46.0 +3.8**
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
NRN Naryn 28.19 72 IAmb IAmb 12 35 46.6
comp=Z,12nm,1.4s
NOA NORSAR Array B 28.57 331 LR LR 12 49 59.7
comp=Z,178nm,19.2s,baz=135,slow=42
FURI Furi 29.43 181 LR LR 12 46 22.1
comp=Z,136nm,18.2s,baz=9.0,slow=34
KURBB Kurchatov Arra 30.17 53 P **P** **12 36 00.3 +0.9**
comp=Z,8.0nm,0.9s,baz=264,slow=9.0,SNR=25
comp=Z,8.0nm,0.9s
KURK Kurchatov 30.24 53 P **P** **12 35 59.5 -0.5**
KURK IAmb IAmb 12 36 03.5
comp=Z,12nm,0.9s
KURK Kurchatov 30.24 53 *ce*P **P** **12 36 01.5 +1.5**
KURK pmax pmax
comp=Z,21nm,1.3s
KURK Kurchatov 30.24 53 P **P** **12 36 01.2 +1.2**
WUS Wushi 30.63 72 IAmb IAmb 12 36 14.3
comp=Z,10nm,1.3s
ARCES ARCESS Array B 32.02 351 P **P** **12 36 16.6 +1.1**
comp=Z,2.1nm,0.8s,baz=161,slow=7.7,SNR=4.2
ARCES LR LR 12 51 28.8
comp=Z,114nm,18.0s,baz=158,slow=40
comp=Z,2.1nm,0.8s
ARCES ARCESS Array B 32.02 351 P **P** **12 36 16.9 +1.4**
ARCES ARCESS Array B 32.02 351 P **P** **12 36 16.9 +1.4**
ARCES pmax pmax
comp=Z,34nm,1.5s
KEV Kevo 32.05 352 P **P** **12 36 15.5 -0.2**
KEV Kevo 32.05 352 P **P** **12 36 15.5 -0.2**
KEV pmax pmax
comp=Z,59nm,1.5s
MAKZ Makanchi 32.19 61 P **P** **12 36 16.4 -0.9**

MAKZ	**Makanchi**	**32.19**	**61**	P	**P**	**12 36 16.4**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	**Makanchi Array**	**32.40**	**61**	*ce*P	**P**	**12 36 20.4**	**+1.2**
MKAR	**Makanchi Array**	**32.40**	**61**	P	**P**	**12 36 20.0**	**+0.8**
	comp=Z,3.5nm,0.9s,baz=270,slow=6.1,SNR=17						
	comp=Z,3.5nm,0.9s						
MKAR	**Makanchi Array**	**32.40**	**61**	P	**P**	**12 36 18.4**	**-0.7**
EKA	**Eskdalemuir Ar**	**32.92**	**315**	LR	LR	12 50 45.0	
	comp=Z,208nm,18.7s,baz=142,slow=38						
ESDC	**Sonseca Array**	**33.35**	**286**	P	**P**	**12 36 26.6**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=69,slow=8.3,SNR=19						
ESDC				LR	LR	12 51 18.7	
	comp=Z,111nm,19.3s,baz=5.0,slow=39						
	comp=Z,2.4nm,0.6s						
ZAA0	**Zalesovo Array**	**34.47**	**48**	P	**P**	**12 36 35.6**	**-1.4**
ZAA0				IAmb	IAmb	12 36 39.2	
	comp=Z,4.4nm,1.1s						
ZALV	**Zalesovo Beam**	**34.47**	**48**	P	**P**	**12 36 36.5**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=262,slow=7.6,SNR=12						
ZALV				LR	LR	12 51 39.5	
	comp=Z,135nm,19.4s,baz=260,slow=38						
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**34.47**	**48**	P	**P**	**12 36 36.2**	**-0.8**
ZALV	**Zalesovo Beam**	**34.47**	**48**	*i* P	**P**	**12 36 37.7**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DGZ	**Jazzator, Alta**	**35.81**	**56**	*i* P	**P**	**12 36 50.1**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,19nm,1.2s						
MDT	**Midelt**	**35.84**	**275**	LR	LR	12 51 47.2	
	comp=Z,41nm,21.6s,baz=52,slow=37						
MD01	**Midelt array s**	**35.94**	**275**		**P**	**12 36 48.7**	**-1.5**
WMQ	**Urumqi**	**36.45**	**66**	*e*P	**P**	**12 36 58.5**	**+4.2**
WMQ				PcS	**PcS**	**12 43 08.0**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,11nm,1.9s						
WMQ				LR	LR		
	comp=Z,130nm,24.1s						
MBAR	**Mbarara**	**39.64**	**193**	LR	LR	12 53 57.2	
	comp=Z,120nm,18.6s,baz=17,slow=37						
NRIK	**Noril'sk**	**40.15**	**24**	P	**P**	**12 37 26.3**	**+1.3**
	comp=Z,3.7nm,0.8s,baz=260,slow=9.5,SNR=7.5						
NRIK				LR	LR	12 56 19.5	
	comp=Z,124nm,18.2s,baz=250,slow=40						
	comp=Z,3.7nm,0.8s						
EVN	**Everest**	**40.75**	**90**	P	**P**	**12 37 29.7**	**-1.6**
SPITS	**Spitsbergen Ar**	**40.97**	**353**	P	**P**	**12 37 33.6**	**+1.9**
	comp=Z,5.1nm,0.9s,baz=139,slow=6.5,SNR=6.1						
	comp=Z,5.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**41.73**	**243**	P	**P**	**12 37 38.1**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=39,slow=5.0,SNR=15						
	comp=Z,2.8nm,0.9s						
KNGR	**Kungurtug, Tuv**	**42.23**	**54**	*i* P	**P**	**12 37 43.7**	**+1.2**
KNGR				pmax	pmax		
	comp=Z,14nm,1.3s						
BORG	**Borgarnes**	**43.55**	**327**	LR	LR	12 58 49.2	
	comp=Z,125nm,18.5s,baz=112,slow=40						
MOY	**Mondy**	**44.27**	**52**	*e*P	**P**	**12 38 00.6**	**+1.6**
TLY	**Talaya**	**45.90**	**51**	LR	LR	12 57 41.8	
	comp=Z,83nm,18.3s,baz=283,slow=36						
TLY	**Talaya**	**45.90**	**51**	*i* P	**P**	**12 38 13.2**	**+1.4**
TLY				pmax	pmax		
	comp=Z,11nm,2.0s						
ZAK	**Zakamensk**	**45.90**	**53**	*e*P	**P**	**12 38 12.7**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA2	**Gaotai**	**46.26**	**69**	*e*P	**P**	**12 38 15.8**	**+0.8**
GTA2				sP	sP	12 38 22.0	+4.7
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRDH	**Bariadhala**	**47.15**	**94**	LR	LR	13 02 00.4	
	comp=Z,74nm,18.2s,baz=336,slow=41						
SONM	**Songino Array**	**48.46**	**56**	P	**P**	**12 38 31.2**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=286,slow=8.3,SNR=10						
SONM				PcP	**PcP**	**12 39 59.2**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=256,slow=3.2,SNR=4.4						
SONM				LR	LR	13 01 28.2	
	comp=Z,213nm,18.5s,baz=262,slow=39						
	comp=Z,1.1nm,0.7s						
PALK	**Pallekele**	**48.56**	**119**	LR	LR	13 00 38.3	
	comp=Z,74nm,18.6s,baz=322,slow=38						
ULN	**Ulaanbaatar**	**48.88**	**56**	P	**P**	**12 38 34.2**	**-1.0**
ULN	**Ulaanbaatar**	**48.88**	**56**	*i* P	**P**	**12 38 35.6**	**+0.3**
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
ULN	**Ulaanbaatar**	**48.88**	**56**	P	**P**	**12 38 34.5**	**-0.8**
LZDM	**Lanzhou Array**	**50.44**	**72**	P	**P**	**12 38 48.2**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=228,slow=5.8,SNR=3.6						
	comp=Z,0.8nm,0.3s						
LZH	**Lanzhou**	**50.50**	**71**	*e*P	**P**	**12 38 50.5**	**+2.7**
LZH				pP	sP	12 38 55.5	+5.4
LZH				sP	pP	12 38 59.5	+10
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
DBIC	**Dimbokro**	**50.85**	**243**	P	**P**	**12 38 48.2**	**-2.2**
	comp=Z,4.8nm,0.9s,baz=87,slow=7.1,SNR=4.3						
DBIC				LR	LR	13 05 19.8	
	comp=Z,70nm,18.4s,baz=18,slow=42						
	comp=Z,4.8nm,0.9s						
PZH	**PanZhiHua**	**53.13**	**83**	P	**P**	**12 39 06.8**	**-0.7**
TIXI	**Tiksi**	**53.91**	**23**	LR	LR	13 05 39.9	
	comp=Z,58nm,18.6s,baz=344,slow=40						
TIXI	**Tiksi**	**53.91**	**23**	P	**P**	**12 39 12.3**	**-0.1**
TIXI				IAmb	IAmb	12 39 15.6	
	comp=Z,7.8nm,1.1s						
TIXI	**Tiksi**	**53.91**	**23**	P	**P**	**12 39 12.3**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**54.23**	**63**	*e*P	**P**	**12 39 15.3**	**-0.1**
HHC				pP	sP	12 39 19.0	+1.3
HHC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,84nm,6.1s						
LSZ	**Lusaka**	**54.44**	**193**	LR	LR	13 03 05.0	
	comp=Z,130nm,20.2s,baz=216,slow=37						
XAN	**Xi'an**	**55.13**	**72**	P	**P**	**12 39 24.0**	**+2.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**55.17**	**93**	P	**P**	**12 39 21.2**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=297,slow=8.3,SNR=6.1						
CMAR				LR	LR	13 07 13.1	
	comp=Z,30nm,21.3s,baz=295,slow=41						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**55.17**	**93**	*i* P	**P**	**12 39 21.6**	**-0.7**
HILR	**Hailar Array B**	**56.33**	**51**	P	**P**	**12 39 29.8**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=251,slow=4.5,SNR=4.0						
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	**57.09**	**34**	LR	LR	13 08 28.8	
	comp=Z,139nm,18.7s,baz=281,slow=41						
ENH	**Enshi**	**57.29**	**75**	P	**P**	**12 39 36.1**	**-1.3**
ENH				IAmb	IAmb	12 39 43.9	
	comp=Z,6.7nm,1.1s						
LYN	**LuoYang**	**57.53**	**69**	*e*P	**P**	**12 39 41.0**	**+2.0**
LYN				pmax	pmax		
	comp=Z,15nm,0.5s						
HEH	**HeiHe**	**60.59**	**47**	*e*P	**P**	**12 40 00.8**	**+0.9**
TSUM	**Tsumeb**	**60.85**	**204**	LR	LR	13 07 17.6	
	comp=Z,162nm,19.2s,baz=334,slow=37						
KLR	**Kul'dur**	**63.56**	**47**	LR	LR	13 10 41.3	
	comp=Z,100nm,19.1s,baz=298,slow=38						
LBTB	**Lobatse**	**64.42**	**194**	LR	LR	13 09 38.2	
	comp=Z,85nm,18.7s,baz=10,slow=37						
SEY	**Seymchan**	**65.82**	**27**	*e*P	**P**	**12 40 32.9**	**-1.5**
SEY				pmax	pmax		
	comp=Z,19nm,1.3s						
KUQ	**Kuujjuuaq**	**66.53**	**327**	P	**P**	**12 40 39.0**	**0.0**
KSAR	**Wonju Array Be**	**67.05**	**60**		**P**	**12 40 41.5**	**-1.2**
KSAR	**Wonju Array Be**	**67.05**	**60**	P	**P**	**12 40 41.5**	**-1.2**
KSRS	**Korea Array**	**67.07**	**60**	P	**P**	**12 40 42.6**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=291,slow=5.3,SNR=10						
KSRS				LR	LR	13 13 16.5	
	comp=Z,107nm,18.4s,baz=300,slow=39						
	comp=Z,3.4nm,0.9s						
MA2	**Magadan**	**67.26**	**31**	LR	LR	13 13 36.2	
	comp=Z,192nm,20.6s,baz=294,slow=39						
SCHQ	**Schefferville**	**67.72**	**323**	P	**P**	**12 40 45.5**	**-1.2**
	comp=Z,2.0nm,0.8s,baz=36,slow=1.0,SNR=5.3						
	comp=Z,2.0nm,0.8s						
BOSA	**Boshof**	**67.99**	**193**	LR	LR	13 11 28.4	
	comp=Z,81nm,19.5s,baz=14,slow=37						
SUR	**Sutherland**	**72.53**	**196**	LR	LR	13 13 46.1	
	comp=Z,75nm,18.6s,baz=0.0,slow=36						
ASAJ	**Asahikawa**	**72.59**	**47**	LR	LR	13 15 07.2	
	comp=Z,71nm,21.0s,baz=326,slow=37						
INK	**Inuvik**	**73.43**	**357**	LR	LR	13 18 55.9	
	comp=Z,45nm,18.0s,baz=316,slow=40						
MJAR	**Matsushiro Arr**	**74.41**	**56**	LR	LR	13 16 10.4	
	comp=Z,61nm,19.2s,baz=309,slow=37						
PETK	**Petropavlovsk-**	**74.42**	**33**	LR	LR	13 17 59.8	
	comp=Z,67nm,19.6s,baz=314,slow=39						
ILAR	**Eielson Array**	**77.00**	**3**	P	**P**	**12 41 43.8**	**+1.9**
	comp=Z,0.5nm,0.9s,baz=300,slow=3.1,SNR=5.0						
ILAR				LR	LR	13 22 35.9	
	comp=Z,21nm,18.3s,baz=55,slow=41						
	comp=Z,0.5nm,0.9s						
YKA	**Yellowknife Ar**	**77.22**	**348**	P	**P**	**12 41 43.7**	**+0.5**
	comp=Z,0.8nm,1.0s,baz=16,slow=6.2,SNR=9.9						
	comp=Z,0.8nm,1.0s						
LEM	**Lembang**	**77.62**	**109**	LR	LR	13 19 46.9	
	comp=Z,51nm,18.2s,baz=322,slow=39						
RCBR	**Riachuelo**	**82.09**	**256**	LR	LR	13 17 23.0	
	comp=Z,14nm,21.8s,baz=65,slow=35						
ULM	**Lac du Bonnet**	**83.25**	**333**	P	**P**	**12 42 15.8**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=288,slow=2.7,SNR=3.8						
	comp=Z,2.2nm,0.8s						
TKL	**Tuckaleechee C**	**89.38**	**317**	LR	LR	13 22 24.8	
	comp=Z,42nm,19.6s,baz=47,slow=35						
NEW	**Newport**	**91.15**	**344**	LR	LR	13 27 03.1	
	comp=Z,42nm,19.0s,baz=32,slow=38						
NVL	**N'lazarevskaya**	**110.69**	**189**	*i* PKIKP	PKiKP	12 48 14.1	-7.0
NVL				*e*		12 55 26.3	
NVL				*e*SSS	SSS	13 08 29.4	
NVL				pmax	pmax		
	comp=Z,108nm,2.0s						
NVL				MLR	MLR		
	comp=Z,493nm,21.0s						

IDC 29 12:46:03.0±2.4, 5.94S×129.38E, h342km±40km, mb2.6/1, mbtmp3.8/5, Error ellipse: s-maj=74.2km s-min=17.9km az=84.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.38**	**21**	P	Pn	12 47 27.6	+1.0
	2.4nm,0.3s,baz=70,slow=8.5,SNR=16						
SIJI				S	S	12 48 33.9	-0.3
	6.2nm,0.2s,baz=252,slow=24,SNR=8.3						
FITZ	**Fitzroy Crossi**	**12.62**	**196**	P	P	12 48 51.4	-0.5
	6.0nm,1.1s,baz=356,slow=13,SNR=1.7						
WRA	**Warramunga Arr**	**14.73**	**161**	P	P	12 49 15.2	+0.1
	1.2nm,0.3s,baz=340,slow=12,SNR=44						
ASAR	**Alice Springs**	**18.15**	**167**	P	P	12 49 52.0	-0.1
	2.3nm,0.3s,baz=346,slow=12,SNR=87						
MKAR	**Makanchi Array**	**67.01**	**327**	P	P	12 56 19.9	0.0
	0.1nm,0.4s,baz=120,slow=8.5,SNR=1.6						
	0.1nm,0.4s						

TAP 29 12:49:05.8, 24.38N×121.43E, h7km, ML2.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSH	**Datong**	**0.06**	**323**	*i* P	Pg	12 49 07.9	+0.3
NNSH				*i* S	Sg	12 49 09.0	+0.1
NNS	**Nan Shan**	**0.08**	**323**	*i* P	Pg	12 49 08.1	+0.3
NNS				*i* S	Sg	12 49 09.5	+0.3
ETLH	**Xiulin Townshi**	**0.18**	**163**	*i* P	Pg	12 49 10.5	+1.1
ETLH				*i* S	Sg	12 49 13.0	+1.2
LATG	**Datong**	**0.18**	**30**	*i* P	Pg	12 49 09.8	+0.3
LATG				*i* S	Sg	12 49 13.0	+0.9
FUSS	**Fushou**	**0.21**	**232**	*i* P	Pg	12 49 10.7	+0.7
FUSS				S	Sg	12 49 13.8	+1.0
NDT	**Datong Townshi**	**0.24**	**20**	*i* P	Pg	12 49 11.0	+0.5
NDT				S	Sg	12 49 14.1	+0.4
NACB	**Ninganchiao**	**0.26**	**143**	P	Pb	12 49 11.8	-0.9
NACB	**Ninganchiao**	**0.26**	**143**	*i* P	Pb	12 49 11.8	-1.0
NACB				S	Sg	12 49 15.4	+1.2
TWT	**Tachien**	**0.26**	**242**	*i* P	Pg	12 49 11.7	+0.8
TDCB	**Techi**	**0.27**	**243**	*i* P	Pg	12 49 11.8	+0.6
TDCB				S	Sg	12 49 15.1	+0.3
WHF	**Hehuan Shan**	**0.27**	**212**	*i* P	Pg	12 49 11.9	+0.6
ETL	**Fush Village**	**0.28**	**140**	*i* P	Pg	12 49 12.2	+0.8
ETL				S	Sg	12 49 16.1	+1.0
EAHA	**Aohua**	**0.29**	**99**	*e*P	Pg	12 49 12.2	+0.7
EAHA				S	Sg	12 49 15.9	+0.6
ENTT	**Nioudou**	**0.29**	**26**	*i* P	Pg	12 49 12.0	+0.5
ENTT				*e*S	Sg	12 49 15.4	0.0
ENA	**Nanau**	**0.29**	**80**	*i* P	Pb	12 49 12.5	-0.9
ENA				S	Sg	12 49 16.4	+1.0
YHNB	**Yeheng**	**0.29**	**351**	P	Pg	12 49 12.0	+0.4
YHNB	**Yeheng**	**0.29**	**351**	*i* P	Pg	12 49 12.3	+0.7
YHNB				*i* S	Sg	12 49 15.9	+0.3
NSK	**Sanguang**	**0.30**	**348**	*i* P	Pg	12 49 12.4	+0.7
NSK				*i* S	Sg	12 49 16.1	+0.3
EWUT	**Wuta**	**0.33**	**78**	S	Sg	12 49 16.7	+0.1
TWD	**Chiawan**	**0.33**	**152**	*i* P	Pb	12 49 13.4	-0.7
TWD				S	Sg	12 49 17.9	+1.2
LXIB	**Xiulin Townshi**	**0.35**	**182**	*i* P	Pg	12 49 13.5	+0.8
LXIB				S	Sg	12 49 17.6	+0.2
NDS	**Dongshan**	**0.37**	**46**	*i* P	Pg	12 49 13.2	+0.3
NDS				S	Sb	12 49 19.9	-0.8
NFF	**Wufeng Townshi**	**0.38**	**312**	*i* P	Pb	12 49 14.1	-0.8
NFF				S	Sg	12 49 19.0	+0.9
NWLT	**Wulai**	**0.41**	**10**	*i* P	Pg	12 49 14.2	+0.6
NWLT				S	Sg	12 49 18.9	-0.1
TWE	**Neicheng**	**0.41**	**33**	*i* P	Pg	12 49 14.3	+0.6
FUSB	**Fushanzhiwuyua**	**0.41**	**21**	*i* P	Pg	12 49 14.2	+0.5
FUSB				S	Sg	12 49 19.2	0.0
ETM	**Tongmen**	**0.41**	**171**	P	Pb	12 49 14.7	-0.8
ETM				S	Sg	12 49 19.9	+0.7
HWA	**Hwalien**	**0.43**	**158**	*e*P	Pb	12 49 15.4	-0.3
HWA				S	Sb	12 49 21.5	-1.0
WHP	**Taichung City**	**0.45**	**257**	*i* P	Pb	12 49 15.5	-0.6
WHP				S	Sg	12 49 21.1	+0.7
TWC	**Suao**	**0.45**	**59**	*i* P	Pg	12 49 14.8	+0.3
TWC				S	Sg	12 49 21.3	+0.9
KSHI	**Guanxi Townshi**	**0.46**	**330**	P	Pb	12 49 16.2	0.0
KSHI				S	Sb	12 49 22.5	-0.8
LIOB	**Emei**	**0.46**	**306**	*i* P	Pb	12 49 16.1	-0.1
LIOB				S	Sb	12 49 22.4	-0.9
NSTT	**Nanjuang**	**0.46**	**303**	*i* P	Pb	12 49 16.0	-0.3
NSTT				*i* S	Sb	12 49 22.1	-1.3
WUSB	**Renai**	**0.47**	**216**	*i* P	Pg	12 49 15.3	+0.3
OWD	**Renai**	**0.48**	**208**	*i* P	Pg	12 49 15.1	0.0
OWD				S	Sg	12 49 22.4	+1.1
ILA	**Ilan**	**0.49**	**37**	*e*P	Pb	12 49 16.0	-0.7
ILA				*e*S	Sg	12 49 22.4	+0.9
TEYL	**Yanliau Villag**	**0.53**	**163**	*e*P	Pg	12 49 16.5	+0.5
TEYL				*e*S	Sg	12 49 22.4	-0.5
ESL	**Shilin**	**0.56**	**179**	*e*P	Pg	12 49 17.2	+0.7
WCS	**Beigang Elemen**	**0.57**	**236**	*i* P	Pg	12 49 17.3	+0.6
WCS				*e*S	Sg	12 49 25.0	+0.9
NHDH	**Xindian Distri**	**0.59**	**9**	P	Pb	12 49 18.2	-0.3
NHDH				*e*S	Sg	12 49 25.0	+0.1
NMLH	**Miaoli**	**0.60**	**286**	P	Pb	12 49 19.1	+0.5
NMLH				S	Sb	12 49 27.2	-0.1
TATO	**Taipei**	**0.60**	**5**	P	Pb	12 49 18.3	-0.3
SHUL	**Shoufeng**	**0.60**	**168**	P	Pb	12 49 18.9	+0.3
SHUL				*e*S	Sb	12 49 26.9	-0.5
NSY	**Sanyi**	**0.61**	**274**	P	Pn	12 49 20.2	-0.6
NSY				S	Sb	12 49 28.7	+1.2
TWA	**Mucha**	**0.62**	**13**	*e*P	Pb	12 49 18.6	-0.4
WARBT	**Fenglin Townsh**	**0.66**	**183**	P	Pg	12 49 18.8	+0.4
WARBT				S	Sg	12 49 27.7	+0.7
TEGC	**Jichi Village**	**0.67**	**171**	P	Pb	12 49 20.0	+0.1
TEGC				*e*S	Sb	12 49 29.7	+0.3
VWDT	**VWDT**	**0.67**	**203**	*i* P	Pg	12 49 18.7	0.0
SMLT	**Sun Moon Lake**	**0.69**	**224**	P	Pg	12 49 19.5	+0.5
TIPB	**Shuangxi**	**0.69**	**32**	*i* P	Pg	12 49 19.4	+0.3
TIPB				S	Sg	12 49 27.7	-0.5
TYC	**Yuchr**	**0.70**	**228**	P	Pg	12 49 19.7	+0.5
TCU	**Taichung**	**0.72**	**252**	*i* P	Pn	12 49 21.8	-0.6
TWS1	**Kuangyinshan**	**0.72**	**359**	P	Pn	12 49 21.6	-0.9
SSLB	**Suanglung**	**0.73**	**216**	P	Pg	12 49 19.3	-0.5
SSLB	**Suanglung**	**0.73**	**216**	*i* P	Pg	12 49 19.6	-0.2
EOS2	**EOS2**	**0.74**	**87**	*e*P	Pb	12 49 21.3	+0.4
YM01	**YM01**	**0.78**	**10**	*i* P	Pb	12 49 22.0	+0.3
ZUZH	**Zhuzihu**	**0.79**	**8**	*i* P	Pb	12 49 22.2	+0.3
ANP	**Anpu**	**0.81**	**6**	*i* P	Pb	12 49 22.6	+0.3
TWB1	**Santiao Chiao**	**0.81**	**39**	*e*P	Pg	12 49 21.7	+0.3
TWB1				*e*S	Sg	12 49 32.4	+0.5
EOS3	**EOS3**	**0.82**	**96**	*e*P	Pn	12 49 23.1	-0.6
YM08	**YM08**	**0.82**	**10**	*i* P	Pb	12 49 22.5	+0.1
SXI1	**Grass Mountain**	**0.82**	**30**	P	Pb	12 49 22.1	-0.4
WNT	**Mingjian**	**0.84**	**234**	*e*P	Pn	12 49 23.4	-0.6
WJS	**Zhushan**	**0.84**	**229**	*i* P	Pb	12 49 23.2	+0.5
WJS				*e*S	Sn	12 49 35.8	-1.0
WHYT	**Xinyi Township**	**0.86**	**218**	*i* P	Pg	12 49 22.2	0.0
EHY	**Hungye**	**0.87**	**186**	P	Pg	12 49 22.8	+0.3
EHY				*e*S	Sb	12 49 34.7	-0.5
HGSD	**Ruisui**	**0.88**	**180**	P	Pb	12 49 23.8	+0.3
EHYH	**Wanrong**	**0.88**	**185**	*e*P	Pb	12 49 23.7	+0.2
EHYH				*e*S	Sg	12 49 34.2	0.0
YULB	**Yu-li**	**0.99**	**187**	P	Pg	12 49 24.8	+0.1
YULB	**Yu-li**	**0.99**	**187**	P	Pb	12 49 25.1	-0.2
TWF1	**Yuli**	**1.03**	**187**	P	Pb	12 49 26.1	+0.2
ALS	**Alishan**	**1.03**	**213**	*e*P	Pg	12 49 25.7	+0.1
WGK	**Gukeng**	**1.05**	**229**	P	Pn	12 49 27.9	+1.0
WDLH	**Douliu**	**1.06**	**230**	*e*P	Pn	12 49 27.8	+0.7
WRL	**Guolierlin Hig**	**1.07**	**244**	*e*P	Pn	12 49 27.1	-0.1
WRL				*e*S	Sn	12 49 43.0	+0.7
FULB	**Fuli**	**1.18**	**186**	*e*P	Pn	12 49 29.5	+0.7
FULB				*e*S	Sn	12 49 45.7	+0.5
WCKO	**Fanlu**	**1.20**	**219**	*e*P	Pn	12 49 29.6	+0.6
WCKO				*e*S	Sn	12 49 47.1	+1.5
EHD	**Haiduan**	**1.24**	**189**	P	Pn	12 49 30.2	+0.7
ELDTW	**Lidau**	**1.24**	**198**	*e*P	Pg	12 49 29.1	-0.4
CHN4	**Tsaushan**	**1.27**	**217**	P	Pg	12 49 31.1	+0.9
TPUB	**Ta-pu**	**1.30**	**214**	P	Pg	12 49 31.0	+0.4
TPUB	**Ta-pu**	**1.30**	**214**	*e*P	Pg	12 49 30.9	+0.3
STYH	**Taoyuan**	**1.34**	**206**	P	Pg	12 49 32.3	+0.8
WTP	**Ta-pu**	**1.35**	**214**	*e*P	Pg	12 49 32.6	+0.9
WTP				*e*S	Sn	12 49 50.1	+0.8
PCYT	**Pengchaiyu**	**1.38**	**25**	*e*P	Pn	12 49 31.5	0.0
PCYT				*e*S	Sn	12 49 50.0	0.0
WSL	**Shuilin Townsh**	**1.39**	**232**	*e*P	Pg	12 49 33.0	+0.6
TWK	**Hsinying**	**1.40**	**218**	*e*P	Pg	12 49 33.0	+0.4
CHN1	**Nanshi**	**1.44**	**215**	*e*P	Pg	12 49 34.6	+1.2
YOJ	**Yonaguni jima**	**1.45**	**86**	P	Pg	12 49 34.6	+1.1
YOJ	**Yonaguni jima**	**1.45**	**86**	*e*P	Pg	12 49 33.1	+0.1
SGST	**Jiashian**	**1.50**	**211**	P	Pg	12 49 34.8	+0.2
SGST				*e*S	Sg	12 49 55.0	+0.9
TWGBT	**Beinan**	**1.58**	**192**	P	Pg	12 49 36.2	0.0
TWGBT	**Beinan**	**1.58**	**192**	*e*P	Pb	12 49 35.5	+0.1
SSD	**Sandimen**	**1.78**	**204**	*e*P	Pg	12 49 40.5	+0.6
ECL	**Taimali**	**1.82**	**194**	*e*P	Pg	12 49 40.2	-0.5
PNG	**Penghu**	**1.89**	**245**	*e*P	Pb	12 49 39.9	-0.7
PHUB	**P'eng-hu**	**1.90**	**243**	*e*P	Pb	12 49 40.2	-0.6
MASBT	**Mashibuluo**	**1.90**	**203**	*e*P	Pg	12 49 41.9	-0.4
EAST	**Anshuo**	**2.05**	**195**	*e*P	Pg	12 49 44.5	-0.7
SCZT	**Fangliau**	**2.13**	**200**	*e*P	Pb	12 49 44.6	-0.1
VCHM	**Qimei**	**2.17**	**238**	*e*P	Pb	12 49 44.8	-0.5
SMST	**Manzhou Townsh**	**2.41**	**193**	*e*P	Pb	12 49 49.0	-0.4

*TEH **29** 12:49:50.6, 38.42N×44.34E, h10km±990km, ML2.6, Presumed earthquake*
*ISK **29** 12:49:51.7, 38.46N×44.32E, h5km, ML2.4/6*
*AFAD **29** 12:49:53.2, 38.46N×44.24E, h7km±3km, ML2.5*

ISC 29 12:49:51.9±0.9, 38.48N±0.03×44.35E±0.03, h7km, n21, σ0s75/25, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.33**	**303**	P	**Pb**	**12 49 59.7**	**-0.6**
TVAN	**Van**	**0.74**	**274**	P	**Pb**	**12 50 06.2**	**-1.1**
VMUR	**Van-Muradiye**	**0.79**	**310**	P	**Pg**	**12 50 07.4**	**+0.2**
MAKU	**Maku**	**0.91**	**16**	Pg	**Pg**	**12 50 09.3**	**-0.2**
ISHB	**Shabestar**	**1.01**	**101**	Pg	**Pg**	**12 50 10.2**	**-1.1**
ISHB				Sg	**Sg**	**12 50 25.2**	**+0.6**
GEVA	**Gevas**	**1.03**	**261**	P	**Pg**	**12 50 11.0**	**-0.6**
GEVA				S	**Sb**	**12 50 25.3**	**-0.5**
GEVA				IAML		12 50 32.0	
	comp=N,84nm,0.3s						
HAKT	**HAKKARI**	**1.05**	**209**	P	**Pn**	**12 50 12.6**	**-0.6**
AKDM	**Akdamar-Van**	**1.09**	**263**	Pg	**Pb**	**12 50 12.3**	**-0.8**

mbtmp3.6/9,ML3.3/7,MS2.7/4,Error ellipse: s-maj=11.6km s-min=6.8km az=56.0

BUT ***29*** *13:06:31.3±1.0,44°.79N±0°.02×111°.55W±0°.02,h12km±4km, Error ellipse: s-maj=2.5km s-min=1.7km az=204.0*

NEIC ***29*** *13:06:32.3±1.0,44°.80N±0°.01×111°.55W±0°.01,h12km±4km, mb4.0/16,ML3.9/56,Mwr3.9/50,ML4.2/34(BUT),Error ellipse: s-maj=2.3km s-min=0.4km az=203.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.99; $M_{\theta\theta}$8.16; $M_{\phi\phi}$-7.17; $M_{r\theta}$-1.62; $M_{\theta\phi}$-0.98; $M_{\phi r}$0.67; Fault plane solution: $M_0$7.97000×10^{14} NP1: ϕ_s318.85000°,δ86.77000°,λ10.82000°. NP2: ϕ_s228.24000°,δ79.19000°,λ176.71000°. Principal axes: T 8.5127, Plg10.0000°, Azm184.0000°; N -1.2300, Plg79.0000°, Azm335.0000°; P -7.2826, Plg5.0000°, Azm93.0000°;*

NEIC ***29*** *13:06:32,44°.80N×111°.55W,h15km*

ISC 29 13:06:31.4±0.8,44°.89N±0°.02×111°.53W±0°.02,h16km±6km, n197,σ1§97/205,mb4.0/7,Hebgen Lake region, Montana

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
QLMT	**Earthquake Lak**	**0.09**	**129**			**Pg**	**13 06 35.0**	**+0.1**
TPMT	**Tepee Creek**	**0.19**	**211**			**Pg**	**13 06 35.7**	**-0.4**
YHL	**Hebgen Lake**	**0.25**	**99**			**Pb**	**13 06 38.0**	**+0.3**
YHL					Sg	**Sb**	**13 06 42.0**	**+0.1**
YPDC	**Denny Creek**	**0.27**	**131**			**Pg**	**13 06 37.5**	**+0.1**
YHB	**Horse Butte**	**0.28**	**120**	Pg		**Pg**	**13 06 37.8**	**+0.4**
YHB				Sg		**Sg**	**13 06 41.5**	**-0.1**
YHB				IAML			13 06 42.0	
	comp=N,29μm,0.5s							
YHB				IAML			13 06 42.2	
	comp=E,26μm,0.4s							
GCR	**Grayling Creek**	**0.32**	**107**			**Pb**	**13 06 39.1**	**+0.4**
CMI	**Centennial Mou**	**0.37**	**190**			**Pg**	**13 06 38.3**	**-0.7**
YMC	**Maple Creek**	**0.40**	**109**			**Pb**	**13 06 40.3**	**+0.2**
YPWB	**West Boundary**	**0.42**	**133**			**Pg**	**13 06 40.4**	**+0.5**
YMR	**Madison River**	**0.46**	**118**			**Pg**	**13 06 41.2**	**+0.5**
YMR					Sg	**Sg**	**13 06 46.7**	**-0.2**
YMR				IAML			13 06 52.1	
	comp=N,14μm,0.7s							
YMR				IAML			13 06 53.0	
	comp=E,14μm,0.6s							
YHH	**Holmes Hill**	**0.49**	**102**			**Pb**	**13 06 42.2**	**+0.4**
YHH	**Holmes Hill**	**0.49**	**102**			**Sg**	**13 06 48.9**	**+0.8**
BGMT	**Barton Gulch**	**0.50**	**314**			**Pb**	**13 06 43.4**	**+1.5**
YPM	**Purple Mountai**	**0.53**	**116**			**Pb**	**13 06 42.9**	**+0.5**
YMV	**Mammoth Vault**	**0.60**	**82**			**Pb**	**13 06 44.8**	**+1.1**
YNM	**Yellowstone No**	**0.61**	**105**			**Pb**	**13 06 44.3**	**+0.5**
YNM					Sg	**Sg**	**13 06 52.0**	**+0.4**
YNM				IAML			13 06 52.6	
	comp=N,3μm,0.5s							
YNM				IAML			13 06 53.1	
	comp=E,4μm,0.2s							
YNR	**Norris Junctio**	**0.63**	**106**			**Pb**	**13 06 44.7**	**+0.6**
YNR					Sg	**Sg**	**13 06 52.4**	**+0.1**
YNR				IAML			13 06 53.6	
	comp=E,9μm,0.4s							
YNR				IAML			13 06 56.1	
	comp=N,5μm,0.5s							
YFT	**Old Faithful**	**0.66**	**131**			**Pg**	**13 06 44.5**	**+0.1**
YFT					Sg	**Sg**	**13 06 52.2**	**-1.0**
YFT				IAML			13 06 52.9	
	comp=N,4μm,0.5s							
MOMT	**Monida**	**0.68**	**245**			**Pg**	**13 06 45.1**	**+0.3**
YML	**Mary Lake**	**0.69**	**114**			**Pb**	**13 06 45.7**	**+0.5**
BOZ	**Bozeman (W)**	**0.71**	**354**			**Pn**	**13 06 47.2**	**+0.3**
BOZ					Sg	**Sn**	**13 06 57.2**	**-0.4**
BOZ				IAML			13 06 59.1	
	comp=N,6μm,0.3s							
BOZ				IAML			13 07 03.1	
	comp=N,3μm,0.2s							
MCID	**Moose Creek**	**0.74**	**160**			**Pg**	**13 06 45.6**	**-0.3**
YUF	**Upper Falls**	**0.75**	**103**			**Pb**	**13 06 47.0**	**+0.9**
YPP	**Pitchstone Pla**	**0.81**	**140**			**Pg**	**13 06 46.9**	**-0.2**
YPP					Sg	**Sg**	**13 06 56.9**	**-0.9**
YLT	**Little Thumb C**	**0.81**	**124**			**Pg**	**13 06 47.7**	**+0.5**
H17A	**Grant Village**	**0.84**	**126**			**Pg**	**13 06 48.2**	**+0.5**
YJC	**Joseph's Coat**	**0.85**	**99**			**Pb**	**13 06 49.3**	**+1.3**
DLMT	**Dillon**	**0.89**	**302**			**Pn**	**13 06 50.3**	**+0.9**
DLMT					Sg	**Sb**	**13 07 01.6**	**+1.4**
DLMT				IAML			13 07 03.8	
	comp=N,5μm,0.7s							
DLMT				IAML			13 07 03.8	
	comp=N,6μm,0.5s							
BZMT	**Bozeman Pass**	**0.92**	**34**			**Pn**	**13 06 51.3**	**+1.4**
MCMT	**McKenzie Canyo**	**0.94**	**267**			**Pb**	**13 06 50.2**	**+0.8**
YMS	**Mount Sheridan**	**0.95**	**131**			**Pg**	**13 06 50.2**	**+0.3**
YPLA	**Lake Butte**	**0.97**	**112**			**Pb**	**13 06 51.0**	**+0.9**
LCCM	**Lewis and Clar**	**0.98**	**346**			**Pn**	**13 06 52.6**	**+1.9**
YPSB	**Soda Butte**	**0.98**	**90**			**Pn**	**13 06 51.4**	**+0.7**
YPPC	**Pelican Cone**	**0.98**	**104**			**Pn**	**13 06 51.9**	**+1.1**
YMP	**Mirror Lake Pl**	**0.99**	**98**			**Pn**	**13 06 51.8**	**+0.9**
FLWY	**Flagg Ranch**	**1.00**	**143**			**Pg**	**13 06 50.2**	**-0.6**
FLWY					Sg	**Sg**	**13 07 02.4**	**-1.5**
FLWY				IAML			13 07 03.3	
	comp=N,2μm,1.0s							
YTP	**The Promontory**	**1.02**	**119**			**Pg**	**13 06 51.0**	**-0.1**
YNE	**Yellowstone No**	**1.09**	**83**			**Pn**	**13 06 53.2**	**+1.1**
YNE					Sg	**Sb**	**13 07 07.0**	**+0.9**
YNE				IAML			13 07 12.6	
	comp=E,2μm,0.5s							
MSMT	**Mission Creek**	**1.11**	**48**			**Pn**	**13 06 54.1**	**+1.6**
LRM	**Limekiln Ridge**	**1.14**	**325**			**Pn**	**13 06 55.2**	**+2.4**
ICI	**Italian Canyon**	**1.15**	**241**			**Pg**	**13 06 52.9**	**-0.7**
YPK	**Parker Peak, Y**	**1.16**	**97**			**Pn**	**13 06 54.3**	**+1.1**
HBMT	**Mount Humbug**	**1.18**	**320**			**Pn**	**13 06 55.8**	**+2.2**
MOOW	**Moose Ponds**	**1.27**	**153**			**Pn**	**13 06 54.2**	**-0.5**
MOOW					Sg	**Sb**	**13 07 09.2**	**-2.0**
MOOW				IAML			13 07 11.2	
	comp=E,1μm,0.5s							
SXM	**Sixmile**	**1.28**	**10**			**Pn**	**13 06 57.9**	**+3.1**
FXWY	**Fox Creek**	**1.30**	**164**			**Pn**	**13 06 54.5**	**-0.6**
FXWY					Sg	**Sb**	**13 07 10.3**	**-1.9**
FXWY				IAML			13 07 11.4	
	comp=E,1μm,0.4s							
BUT	**Butte**	**1.34**	**327**			**Pg**	**13 06 58.7**	**+1.6**
LOHW	**Long Hollow**	**1.44**	**152**			**Pn**	**13 06 57.4**	**+0.4**
LOHW					Sg	**Sn**	**13 07 14.8**	**-0.9**
LOHW				IAML			13 07 16.5	
	comp=E,2μm,0.6s							
SNOW	**Snow King Moun**	**1.53**	**158**			**Pn**	**13 06 59.1**	**+0.8**
SNOW				IAML			13 07 20.6	
	comp=E,1μm,0.4s							
SNOW				IAML			13 07 21.5	
	comp=E,1μm,1.1s							
RLMT	**Red Lodge**	**1.62**	**81**			**Pg**	**13 07 02.7**	**+0.1**
RLMT				IAML			13 07 25.0	
	comp=E,2μm,0.3s							
RLMT				IAML			13 07 30.1	
	comp=E,2μm,0.2s							
ELMT	**Elliston**	**1.77**	**338**			**Pg**	**13 07 04.8**	**-0.5**
BEMT	**Mount Belmont**	**1.94**	**344**			**Pg**	**13 07 07.3**	**-1.3**
BPMT	**Black Pine Rid**	**2.05**	**320**			**Pb**	**13 07 08.6**	**+0.2**
AHID	**Auburn Hatcher**	**2.15**	**172**			**Pn**	**13 07 08.1**	**+1.4**
AHID				IAML			13 07 37.0	
	comp=E,773nm,0.7s							
AHID				IAML			13 07 39.1	
	comp=E,938nm,1.2s							
LYMT	**Lyon Mountain**	**2.15**	**346**	Pn		**Pb**	**13 07 10.0**	**-0.1**
CHMT	**Chamberlain Mo**	**2.36**	**330**			**Pb**	**13 07 12.9**	**-0.7**
OVMT	**Ovando**	**2.40**	**335**			**Pb**	**13 07 13.6**	**-0.7**
VCMT	**Victor**	**2.43**	**311**			**Pb**	**13 07 13.3**	**-1.3**
HLID	**Hailey**	**2.46**	**238**			**Pn**	**13 07 13.0**	**+2.0**
HLID				IAML			13 07 49.7	
	comp=E,1μm,0.6s							
BW06	**Boulder Array**	**2.56**	**145**			**Pn**	**13 07 14.9**	**+2.6**
PD31	**Pinedale Array**	**2.56**	**145**			**Pn**	**13 07 14.8**	**+2.4**
PDAR	**Pinedale Array**	**2.56**	**145**	Pn		**Pn**	**13 07 15.5**	**+3.1**
	comp=E,47nm,0.4s,baz=342,slow=15,SNR=369							
PDAR					Lg	Lg	13 07 49.1	
	comp=E,25nm,0.3s,baz=339,slow=29,SNR=25							
PDAR					LR	LR	13 07 57.9	
	comp=E,45nm,21.4s,baz=138,slow=35							
PDAR	**Pinedale Array**	**2.56**	**145**	Pn		**Pn**	**13 07 14.8**	**+2.4**
MSO	**Missoula**	**2.57**	**320**			**Pb**	**13 07 15.5**	**-1.6**
SLMT	**Seeley Lake**	**2.72**	**331**			**Pb**	**13 07 17.7**	**-2.0**
PCMT	**Pistol Creek**	**2.91**	**324**			**Pb**	**13 07 20.4**	**-2.5**
SWMT	**Swartz Lake**	**3.13**	**328**			**Pn**	**13 07 23.4**	**+3.2**
PLID	**Pearl Lake**	**3.18**	**275**			**Pn**	**13 07 23.6**	**+2.7**
PLID	**Pearl Lake**	**3.18**	**275**	IAML			13 08 15.4	
	comp=E,363nm,0.5s							
FBMT	**Ferry Basin**	**3.22**	**322**			**Pn**	**13 07 24.8**	**+3.4**
HVU	**Hansel Valley**	**3.24**	**197**			**Pn**	**13 07 23.4**	**+1.7**
HWUT	**Hardware Ranch**	**3.28**	**180**			**Pn**	**13 07 24.7**	**+2.5**
NDMT	**Ninemile Divid**	**3.29**	**317**			**Pn**	**13 07 26.1**	**+3.6**
EGMT	**Eagleton**	**3.37**	**21**			**Pb**	**13 07 27.4**	**-3.3**
MFID	**Camas Ranch**	**3.43**	**246**			**Pn**	**13 07 26.8**	**+2.6**
YBMT	**Yellow Bay**	**3.44**	**331**			**Pb**	**13 07 28.5**	**-3.4**
JTMT	**Jette**	**3.44**	**327**			**Pn**	**13 07 27.8**	**+3.5**
BHMT	**Big Hole Peak**	**3.63**	**319**			**Pn**	**13 07 30.7**	**+3.7**
SPUT	**South Promonto**	**3.64**	**191**			**Pn**	**13 07 29.4**	**+2.2**
BSMT	**Bassoo Peak**	**3.72**	**324**			**Pn**	**13 07 32.3**	**+3.9**
TCUT	**Toone Canyon**	**3.77**	**179**			**Pn**	**13 07 30.2**	**+1.1**
BMO	**Blue Mountains**	**4.11**	**272**			**Pn**	**13 07 35.8**	**+2.3**
BMO	**Blue Mountains**	**4.11**	**272**	IAML			13 08 46.9	
	comp=E,128nm,0.6s							
BMO				IAML			13 08 49.3	
	comp=E,124nm,0.6s							
BGU	**Big Grassy Mou**	**4.11**	**196**			**Pn**	**13 07 35.2**	**+1.6**
LAO	**LASA Array**	**4.12**	**62**			**Pn**	**13 07 37.3**	**+3.5**
F10A	**Beach Ranch, E**	**4.16**	**287**			**Pn**	**13 07 37.5**	**+3.3**
CTU	**Camp Tracy**	**4.20**	**182**			**Pn**	**13 07 36.1**	**+1.3**
K22A	**Casper**	**4.26**	**120**			**Pn**	**13 07 39.0**	**+3.3**
BSUT	**Blindstream Ca**	**4.39**	**172**			**Pn**	**13 07 40.1**	**+2.5**
LDM	**Libby Dam**	**4.42**	**325**			**Pn**	**13 07 41.4**	**+3.6**
RDMU	**Red Mountain**	**4.55**	**161**			**Pn**	**13 07 41.3**	**+1.6**
DUG	**Dugway, Tooele**	**4.79**	**192**			**Pn**	**13 07 44.6**	**+1.7**
LNOR	**Lincton Mounta**	**4.86**	**284**			**Pn**	**13 07 47.6**	**+3.8**
LNOR	**Lincton Mounta**	**4.86**	**284**	Pn		**Pn**	**13 07 47.4**	**+3.6**
MPU	**Maple Canyon**	**4.87**	**181**			**Pn**	**13 07 46.3**	**+2.1**
E09A	**Wood Farm, Sta**	**4.91**	**292**			**Pn**	**13 07 47.1**	**+2.6**
ELK	**Elko**	**4.96**	**215**	Pn		Pn	13 07 51.6	+6.3
	comp=E,3.8nm,0.3s,baz=31,slow=11,SNR=53							
ELK					Lg	Lg	13 08 59.0	
	comp=E,5.1nm,0.3s,baz=310,slow=19,SNR=8.3							
ELK					LR	LR	13 10 04.1	
	comp=E,62nm,21.0s,baz=38,slow=42							
	comp=E,14nm,0.4s							
ELK	**Elko**	**4.96**	**215**			**Pn**	**13 07 47.7**	**+2.3**
NEW	**Newport**	**5.12**	**313**	Pn		**Pn**	**13 07 50.9**	**+3.4**
	comp=E,2.7nm,0.3s,baz=133,slow=12,SNR=26							
NEW					Lg	Lg	13 09 12.8	
	comp=E,47nm,0.3s,baz=228,slow=21,SNR=25							
	comp=E,8.8nm,0.3s							
NEW	**Newport**	**5.12**	**313**			**Pn**	**13 07 50.4**	**+2.9**
J08A	**Circle Bar Ran**	**5.23**	**255**			**Pn**	**13 07 51.1**	**+2.1**
G08A	**Pilot Rock**	**5.28**	**277**			**Pn**	**13 07 52.4**	**+2.7**
O20A	**White River Ci**	**5.34**	**152**			**Pn**	**13 07 51.5**	**+1.0**
P18A	**Preston Nutter**	**5.34**	**169**			**Pn**	**13 07 52.0**	**+1.3**
HAYD	**Hayden**	**5.38**	**143**			**Pn**	**13 07 53.5**	**+2.4**
RSSD	**Black Hills**	**5.42**	**96**			**Pn**	**13 07 53.9**	**+2.3**
P17A	**Butcher Ranch,**	**5.44**	**174**			**Pn**	**13 07 54.2**	**+2.2**
C09A	**Chrisman Ranch**	**5.50**	**304**			**Pn**	**13 07 55.9**	**+3.3**
E08A	**Dider Farm, El**	**5.51**	**290**			**Pn**	**13 07 55.2**	**+2.5**
OD2	**Odessa Site #2**	**5.58**	**299**			**Pn**	**13 07 56.8**	**+3.0**
D08A	**Wollman Farm,**	**5.59**	**295**			**Pn**	**13 07 56.6**	**+2.8**
WVOR	**Wild Horse Val**	**5.71**	**247**			**Pn**	**13 07 58.0**	**+2.4**
I07A	**Izee**	**5.76**	**265**			**Pn**	**13 07 59.6**	**+3.3**
HAWA	**Hanford**	**5.81**	**288**			**Pn**	**13 07 59.9**	**+3.1**
SRU	**San Rafael Swe**	**5.82**	**172**			**Pn**	**13 07 58.9**	**+1.7**
WAH2	**Wahluke Slope**	**5.92**	**291**			**Pn**	**13 08 01.4**	**+3.1**
Q16A	**Castle Valley**	**5.97**	**177**			**Pn**	**13 08 01.5**	**+2.2**
F07A	**Phinny Hill Vi**	**6.00**	**283**			**Pn**	**13 08 00.6**	**+1.1**
E07A	**Sunnyside**	**6.06**	**289**			**Pn**	**13 08 03.7**	**+3.4**
EPH	**Ephrata**	**6.12**	**297**			**Pn**	**13 08 03.8**	**+2.6**
TCRU	**Three Creeks R**	**6.31**	**187**	Pn		**Pn**	**13 08 06.0**	**+2.0**
MXC	**Moxie City**	**6.36**	**288**			**Pn**	**13 08 07.1**	**+2.7**
B08A	**Colville Reser**	**6.40**	**306**			**Pn**	**13 08 07.1**	**+2.2**
G06A	**Carlson Farm,**	**6.40**	**276**			**Pn**	**13 08 07.8**	**+2.1**
PSUT	**Pine Spring**	**6.58**	**196**			**Pn**	**13 08 08.1**	**+0.5**
ISCO	**Idaho Springs**	**6.71**	**137**			**Pn**	**13 08 10.2**	**+0.7**
LTY	**Liberty**	**6.79**	**294**			**Pn**	**13 08 12.6**	**+2.3**
PINE	**Pine Mountain**	**6.84**	**264**			**Pn**	**13 08 13.6**	**+2.4**
MTPU	**Mount Pierson**	**6.86**	**184**			**Pn**	**13 08 11.6**	**0.0**
G05A	**Wamic**	**6.94**	**276**			**Pn**	**13 08 15.6**	**+3.2**
HMU	**Henry Mountain**	**6.97**	**175**			**Pn**	**13 08 13.4**	**+0.3**
I05D	**Terrebonne, OR**	**7.02**	**269**	Pn		**Pn**	**13 08 14.9**	**+1.3**
PNT	**Penticton**	**7.07**	**312**			**Pn**	**13 08 18.9**	**+4.7**
K05A	**Summer Lake**	**7.11**	**256**	Pn		**Pn**	**13 08 14.5**	**-0.4**
J05D	**Fort Rock, OR**	**7.17**	**260**			**Pn**	**13 08 17.8**	**+2.1**
SZCU	**Shurtz Canyon**	**7.38**	**190**			**Pn**	**13 08 21.8**	**+3.1**
WIFE	**Three Sisters-**	**7.41**	**267**			**Pn**	**13 08 22.2**	**+3.3**
LON	**Longmire**	**7.42**	**288**			**Pn**	**13 08 20.6**	**+1.6**
CCUT	**Cedar City**	**7.46**	**191**			**Pn**	**13 08 22.2**	**+2.5**
H04A	**Detroit Lake**	**7.59**	**272**	Pn		**Pn**	**13 08 24.4**	**+3.2**
Q24A	**Divide**	**7.59**	**139**			**Pn**	**13 08 22.2**	**+0.6**
D05A	**Enumclaw**	**7.63**	**291**			**Pn**	**13 08 24.6**	**+2.8**
G04A	**Mulino**	**7.76**	**276**	Pn		**Pn**	**13 08 26.0**	**+2.4**
PAHR	**Pah Rah Range**	**7.79**	**231**			**Pn**	**13 08 25.4**	**+1.3**
S11A	**Rachel**	**7.90**	**205**	Pn		**Pn**	**13 08 25.8**	**+0.1**
KNB	**Kanab**	**7.92**	**188**			**Pn**	**13 08 28.4**	**+2.3**
PRN	**Pahroc Range**	**7.93**	**201**			**Pn**	**13 08 28.0**	**+1.9**
LCMT	**Little Creek M**	**7.97**	**190**			**Pn**	**13 08 29.3**	**+2.6**
MVCO	**Mesa Verde**	**8.01**	**162**			**Pn**	**13 08 29.4**	**+2.2**
OGNE	**Ogallala**	**8.01**	**116**			**Pn**	**13 08 29.5**	**+2.4**
NVAR	**Mina Array Bea**	**8.20**	**220**	Pn		Pn	13 08 35.6	+5.7
	comp=E,0.2nm,0.3s,baz=39,slow=11,SNR=7.9							
NVAR					Lg	Lg	13 10 43.8	
	comp=E,0.5nm,0.3s,baz=32,slow=36,SNR=6.3							
	comp=E,0.8nm,0.6s							
BUCK	**Buck Mountain**	**8.21**	**269**	Pn		**Pn**	**13 08 31.2**	**+1.3**
L04D	**Klamath Falls**	**8.27**	**255**	Pn		**Pn**	**13 08 31.7**	**+1.0**
GNW	**Green Mountain**	**8.28**	**293**			**Pn**	**13 08 32.9**	**+2.2**
G03D	**McMinnville, O**	**8.32**	**276**	Pn		**Pn**	**13 08 32.8**	**+1.5**
EDM	**Edmonton**	**8.43**	**353**			**Pn**	**13 08 35.1**	**+2.3**
MPK	**Martis Peak**	**8.43**	**231**	Pn		**Pn**	**13 08 33.0**	**-0.2**
SDCO	**Great Sand Dun**	**8.45**	**146**			**Pn**	**13 08 33.4**	**-0.1**
U15A	**North Rim**	**8.47**	**184**			**Pn**	**13 08 33.1**	**-0.5**
I03D	**Drain, OR**	**8.56**	**266**	Pn		Pn	13 08 39.8	+5.2
TPNV	**Topopah Spring**	**8.70**	**206**			**Pn**	**13 08 37.6**	**+0.9**
I02E	**Swisshome, OR**	**8.84**	**269**	Pn		**Pn**	**13 08 41.0**	**+2.6**
PGC	**Sidney**	**9.00**	**299**	Pn		**Pn**	**13 08 42.4**	**+1.8**
WUAZ	**Wupatki**	**9.36**	**179**	Pn		**Pn**	**13 08 46.4**	**+0.7**
CLRS	**Cowichan Lake**	**9.48**	**299**	Pn		**Pn**	**13 08 51.0**	**+3.8**
GWY	**Greenwater Val**	**9.53**	**206**	Pn		**Pn**	**13 08 48.5**	**+0.5**
ANMO	**Albuquerque**	**10.66**	**157**	Pn		**Pn**	**13 09 06.0**	**+2.4**
	comp=E,0.1nm,0.3s,baz=343,slow=10.0,SNR=4.6							
ANMO					LR	LR	13 13 27.2	
	comp=E,54nm,20.6s,baz=340,slow=39							
	comp=E,0.7nm,0.6s							
TASM	**ASL Pad, Albuq**	**10.66**	**157**	Pn		**Pn**	**13 09 02.9**	**-0.7**
ECSD	**EROS Data Cent**	**10.76**	**91**			**Pn**	**13 09 06.0**	**+1.3**
F33A	**5 Mile Ranch,**	**10.77**	**80**	Pn		**Pn**	**13 09 05.1**	**+0.3**
AGMN	**Agassiz Nation**	**11.31**	**67**			**Pn**	**13 09 11.7**	**-0.5**
FFC	**Flin Flon**	**11.61**	**29**			**Pn**	**13 09 18.1**	**+1.9**
ULM	**Lac du Bonnet**	**11.85**	**58**	Pn		**Pn**	**13 09 17.6**	**-2.0**
	comp=E,0.6nm,0.3s,baz=236,slow=11,SNR=5.8							
ULM					Lg	Lg	13 12 32.4	
	comp=E,0.9nm,0.3s,baz=165,slow=21,SNR=5.3							
	comp=E,1.6nm,0.4s							
PFO	**Pinyon Flats O**	**11.89**	**200**	LR		LR	13 13 54.2	
	comp=E,86nm,19.3s,baz=44,slow=37							
EPLO	**Experimental L**	**12.99**	**62**	Pn		**Pn**	**13 09 33.6**	**-1.6**
VHRN	**Van Horn**	**14.99**	**158**	Pn		**Pn**	**13 10 00.9**	**-1.7**
TBO	**Thunder Bay**	**15.60**	**68**	Pn		**Pn**	**13 10 07.8**	**-2.7**
TBO					IAmb	IAmb	13 10 10.9	
	comp=Z,16nm,1.3s							
TXAR	**Lajitas Array**	**16.73**	**155**	Pn		**P**	**13 10 28.2**	**+0.9**
	baz=345,slow=8.5,SNR=5.1							
	comp=Z,0.4nm,0.8s							
FCAR	**Ozark Folk Cen**	**17.27**	**115**	Pn		**Pn**	**13 10 31.6**	**-0.1**
T42A	**Van Buren**	**17.29**	**110**	Pn		**Pn**	**13 10 33.0**	**+1.0**
FCC	**Fort Churchill**	**17.50**	**31**			**Pn**	**13 10 34.1**	**-0.3**
FCC					IAmb	IAmb	13 10 49.8	
	comp=Z,8.3nm,1.3s							
YKAW1	**Yellowknife Wh**	**17.71**	**355**			**Pn**	**13 10 37.1**	**+0.1**
YKA	**Yellowknife Ar**	**17.73**	**355**	P		**Pn**	**13 10 37.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=180,slow=12,SNR=19							
YKA					Lg	Lg	13 15 42.3	
	comp=Z,0.1nm,0.3s,baz=176,slow=26,SNR=5.5							
	comp=Z,0.8nm,0.6s							
YKA	**Yellowknife Ar**	**17.73**	**355**	P		**Pn**	**13 10 37.7**	**+0.5**
YKAW3	**Yellowknife Wh**	**17.80**	**355**			**Pn**	**13 10 37.9**	**-0.2**
HICK	**Hickman**	**18.81**	**109**	P		**P**	**13 10 45.2**	**-4.9**
O30N	**Mendenhall**	**21.55**	**326**	P		**P**	**13 11 18.9**	**-0.8**
O30N					IAmb	IAmb	13 11 38.1	
	comp=Z,8.1nm,1.1s							
Q51A	**Peebles**	**21.70**	**96**	P		**P**	**13 11 21.3**	**-0.2**
Q51A					IAmb	IAmb	13 11 25.9	
	comp=Z,8.6nm,0.8s							
N31M	**Braeburn, Yuko**	**21.86**	**328**	P		**P**	**13 11 23.8**	**+0.7**
N31M					IAmb	IAmb	13 12 00.8	
	comp=Z,10nm,1.0s							
SSFO	**Shawnee State**	**21.95**	**96**	P		**P**	**13 11 23.9**	**-0.3**
DAWY	**Dawson**	**24.76**	**331**	P		**P**	**13 11 51.0**	**-1.1**
DAWY				IAmb		IAmb	13 12 30.9	
	comp=Z,3.1nm,1.0s							
I28M	**Miner Creek**	**25.81**	**333**	P		**P**	**13 12 01.9**	**+0.4**
I28M				IAmb		IAmb	13 12 40.1	
	comp=Z,4.6nm,1.3s							
F28M	**Old Crow**	**27.21**	**337**	P		**P**	**13 12 13.1**	**-0.9**
F28M				IAmb		IAmb	13 12 25.2	
	comp=Z,3.1nm,1.4s							
SML	**Sawmill**	**27.22**	**322**	P		**P**	**13 12 13.3**	**-0.9**
ILAR	**Eielson Array**	**27.88**	**328**	P		**P**	**13 12 24.8**	**+4.8**
	comp=Z,0.7nm,0.7s,baz=135,slow=8.3,SNR=9.9							
	comp=Z,0.7nm,0.7s							
SUA	**Susitna One**	**28.19**	**320**	P		**P**	**13 12 21.8**	**-1.1**

SJA ***29*** *13:28:56.7±0.7,21°.51S×68°.79W,h116km±3km, ML3.3, MW3.5*

GUC ***29*** *13:28:57.3±0.6,21°.53S×68°.73W,h116km±4km, ML3.4*

ISC 29 13:28:57.4±1.4,21°.53S±0°.03×68°.76W±0°.06,h115km±9km, n32,σ1§12/54,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB09	**IPOC Station P**	**0.53**	**239**	*i* P		**Pn**	**13 29 15.2**	**-0.1**
PB09				*e*S		**Sn**	**13 29 28.2**	**-0.5**
PB09				IAML			13 29 28.9	
	comp=N,2μm,0.2s							
PB09	**IPOC Station P**	**0.53**	**239**	*e*P		**Pn**	**13 29 15.2**	**-0.1**
PB09				*e*S		**Sn**	**13 29 28.7**	**0.0**
PB09				IAML			13 29 28.9	
	comp=Z,2μm,0.3s							
PB01	**IPOC Station P**	**0.83**	**305**	*i* P		**Pn**	**13 29 17.1**	**-0.5**
PB01				*e*S		**Sn**	**13 29 32.1**	**-0.6**
PB01				IAML			13 29 33.1	
	comp=E,2μm,0.2s							
PB01	**IPOC Station P**	**0.83**	**305**	*e*P		**Pn**	**13 29 17.1**	**-0.5**
PB01				*e*S		**Sn**	**13 29 32.3**	**-0.5**
PB01				IAML			13 29 37.1	
	comp=Z,526nm,0.4s							
PB03	**IPOC Station P**	**1.06**	**241**	*i* P		**Pn**	**13 29 19.9**	**0.0**
PB03				*e*S		**Sn**	**13 29 37.0**	**+0.1**
PB03	**IPOC Station P**	**1.06**	**241**	*e*P		**Pn**	**13 29 19.8**	**0.0**
PB03				*e*S		**Sn**	**13 29 37.1**	**+0.2**
PB03				IAML			13 29 37.6	
	comp=Z,793nm,0.6s

TBI	**Tubuai**	**32.78**	**259**	*e*LR	LR	13 49 47.1	
	3µm,26.5s						
PPT2	**Papeete2**	**33.57**	**269**	*e*S	S	13 46 37.5	-16
	53nm,24.8s						
PPT2				*e*LR	LR	13 50 02.2	
	642nm,26.8s						
PPT2				*e*LR	LR	13 50 09.4	
	438nm,28.8s						
PPT	**Papeete**	**33.57**	**269**	LR	LR	13 50 43.8	
	comp=Z,341nm,18.1s,baz=81,slow=29						
H03N2	**Juan Fernandez**	**33.63**	**119**	T	T	14 16 58.5	
	baz=287,slow=75,SNR=54						
H03N3	**Juan Fernandez**	**33.65**	**120**	T	T	14 16 59.6	
	baz=287,slow=75,SNR=86						
H03N1	**Juan Fernandez**	**33.65**	**119**	T	T	14 16 56.7	
	baz=287,slow=75,SNR=64						
NNA	**Nana**	**36.77**	**82**	LR	LR	13 52 44.6	
	comp=Z,124nm,19.2s,baz=248,slow=29						
ATAH	**Atahualpa**	**37.14**	**74**	P	**P**	**13 42 04.3**	**+2.6**
	5.4nm,0.9s,baz=251,slow=12,SNR=3.6						
ATAH				LR	LR	13 53 27.8	
	comp=Z,276nm,18.2s,baz=245,slow=30						
	5.4nm,0.9s						
MT02	**Curacav**	**40.03**	**117**	P	**P**	**13 42 25.0**	**-0.3**
MT02				IAmb	IAmb	13 42 28.0	
	comp=Z,16nm,1.1s						
CO04	**Los Pelederos**	**40.03**	**115**		**P**	**13 42 25.4**	**-0.3**
CO03	**El Pedregal**	**40.18**	**114**	P	**P**	**13 42 25.6**	**-1.1**
BO01	**Tunca**	**40.22**	**119**	P	**P**	**13 42 27.2**	**+0.4**
BO01				IAmb	IAmb	13 42 30.5	
	comp=Z,11nm,0.8s						
AC05	**El Transito**	**40.45**	**110**		**P**	**13 42 29.6**	**+0.6**
AC05				IAmb	IAmb	13 42 32.8	
	comp=Z,9.3nm,0.8s						
BI02	**San Fabin de**	**40.45**	**123**		**P**	**13 42 27.9**	**-1.0**
BI02				IAmb	IAmb	13 42 32.0	
	comp=Z,18nm,1.1s						
VA03	**San Esteban**	**40.46**	**116**	P	**P**	**13 42 26.9**	**-2.1**
GO03	**Copiapo**	**40.47**	**108**	P	**P**	**13 42 26.5**	**-2.7**
GO03				IAmb	IAmb	13 42 32.3	
	comp=Z,27nm,1.4s						
BO02	**Sierra Bellavi**	**40.53**	**120**	P	**P**	**13 42 29.1**	**-0.4**
BO02				IAmb	IAmb	13 42 32.8	
	comp=Z,7.7nm,0.9s						
MT13	**San Alfonso**	**40.79**	**118**		**P**	**13 42 30.9**	**-0.8**
MT13				IAmb	IAmb	13 42 33.6	
	comp=Z,12nm,1.1s						
PB03	**IPOC Station P**	**41.25**	**100**	P	**P**	**13 42 33.7**	**-1.9**
PLCA	**Paso Flores**	**41.92**	**128**	P	**P**	**13 42 42.0**	**+1.2**
	comp=Z,5.9nm,1.2s,baz=291,slow=9.0,SNR=3.9						
	comp=Z,5.9nm,1.2s						
PLCA	**Paso Flores**	**41.92**	**128**	P	**P**	**13 42 39.1**	**-1.7**
PLCA				IAmb	IAmb	13 42 45.3	
	comp=Z,11nm,1.3s						
ZON	**Zonda**	**41.94**	**114**	P	**P**	**13 42 40.5**	**-0.6**
CMIG	**Matias Romero**	**42.10**	**28**	LR	LR	13 56 15.2	
	comp=Z,267nm,21.9s,baz=185,slow=30						
CFA	**Coronel Fontan**	**42.32**	**114**	P	**P**	**13 42 45.4**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=257,slow=11,SNR=6.1						
CFA				LR	LR	13 56 17.2	
	comp=Z,219nm,19.1s,baz=338,slow=30						
	comp=Z,2.1nm,0.7s						
RAR	**Rarotonga**	**42.48**	**261**	LR	LR	13 56 09.0	
	comp=Z,260nm,18.3s,baz=99,slow=30						
LPAZ	**La Paz**	**43.75**	**92**	P	**P**	**13 42 58.0**	**+1.3**
	comp=Z,2.8nm,0.8s,baz=278,slow=5.6,SNR=8.1						
LPAZ				LR	LR	13 56 51.0	
	comp=Z,474nm,21.0s,baz=254,slow=30						
	comp=Z,2.8nm,0.8s						
LPAZ	**La Paz**	**43.75**	**92**	P	**P**	**13 42 55.7**	**-0.9**
LPIG	**La Paz**	**44.75**	**5**	LR	LR	13 57 18.7	
	comp=Z,108nm,21.2s,baz=191,slow=30						
SIV	**San Ignacio**	**50.42**	**94**	P	**P**	**13 43 48.7**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=274,slow=9.5						
SIV				LR	LR	14 01 47.8	
	comp=Z,82nm,18.7s,baz=277,slow=32						
	comp=Z,2.8nm,0.8s						
TXAR	**Lajitas Array**	**50.82**	**12**	P	**P**	**13 43 52.3**	**+1.4**
	comp=Z,0.7nm,1.0s,baz=193,slow=9.0,SNR=3.9						
TXAR				LR	LR	14 01 29.0	
	comp=Z,114nm,18.1s,baz=182,slow=31						
	comp=Z,0.7nm,1.0s						
SDV	**Santo Domingo**	**51.94**	**60**	LR	LR	14 01 47.8	
	comp=Z,56nm,20.2s,baz=255,slow=31						
SDV	**Santo Domingo**	**51.94**	**60**	P	**P**	**13 43 57.9**	**-1.7**
CPUP	**Villa Florida**	**52.04**	**108**	LR	LR	14 01 55.3	
	comp=Z,204nm,19.7s,baz=260,slow=31						
JCT	**Junction City**	**52.78**	**16**	P	**P**	**13 44 04.4**	**-1.0**
JCT				IAmb	IAmb	13 44 18.3	
	comp=Z,7.1nm,0.8s						
PMSA	**Palmer Station**	**54.85**	**156**	LR	LR	14 02 16.3	
	comp=Z,240nm,18.4s,baz=310,slow=30						
AFI	**Afiamalu**	**55.20**	**267**	LR	LR	14 01 29.7	
	comp=Z,193nm,21.5s,baz=130,slow=29						
ANMO	**Albuquerque**	**55.88**	**8**	LR	LR	14 03 54.3	
	comp=Z,151nm,20.6s,baz=199,slow=31						
SHPR	**Sheep Range**	**56.96**	**359**		**P**	**13 44 35.3**	**-0.4**
NVAR	**Mina Array Bea**	**59.01**	**356**	P	**P**	**13 44 52.9**	**+2.8**
	comp=Z,2.6nm,0.8s,baz=180,slow=9.0,SNR=15						
	comp=Z,2.6nm,0.8s						
URZ	**Urewera**	**61.02**	**237**	LR	LR	14 06 30.2	
	comp=Z,108nm,18.6s,baz=154,slow=31						
BDFB	**Brasilia**	**62.66**	**97**	LR	LR	14 09 08.2	
	comp=Z,188nm,20.7s,baz=261,slow=33						
TKL	**Tuckaleechee C**	**63.06**	**28**	LR	LR	14 11 47.5	
	comp=Z,94nm,18.3s,baz=239,slow=35						
PDAR	**Pinedale Array**	**63.35**	**4**	P	**P**	**13 45 19.1**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=161,slow=6.0,SNR=9.8						
PDAR				LR	LR	14 08 21.0	
	comp=Z,48nm,18.3s,baz=236,slow=32						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**63.35**	**4**	P	**P**	**13 45 18.1**	**-1.4**
RPZ	**Rata Peaks**	**65.13**	**230**	LR	LR	14 10 39.7	
	comp=Z,142nm,18.2s,baz=98,slow=33						
MDP	**Montagnes des**	**65.57**	**74**	LR	LR	14 11 09.6	
	comp=Z,159nm,18.5s,baz=302,slow=33						
LRM	**Limekiln Ridge**	**66.28**	**1**	P	**P**	**13 45 38.2**	**-0.4**
VNDA	**Vanda**	**68.58**	**193**	LR	LR	14 08 00.6	
	comp=Z,241nm,19.7s,baz=104,slow=29						
QSPA	**South Pole Qui**	**69.38**	**180**	LR	LR	14 12 12.8	
	comp=Z,44nm,18.8s,baz=104,slow=32						
QSPA	**South Pole Qui**	**69.38**	**180**	P	**P**	**13 45 59.5**	**+1.7**
SADO	**Sadowa**	**72.62**	**25**	LR	LR	14 15 59.8	
	comp=Z,57nm,21.6s,baz=327,slow=34						
DZM	**Mont Dzumac**	**73.07**	**252**	*e*LR	LR	14 08 27.1	
	comp=Z,150nm,26.6s						
RCBR	**Riachuelo**	**76.99**	**91**	LR	LR	14 18 10.5	
	comp=Z,53nm,18.4s,baz=264,slow=34						
YKA	**Yellowknife Ar**	**82.97**	**360**	P	**P**	**13 47 15.3**	**+0.6**
	comp=Z,0.7nm,1.0s,baz=185,slow=4.6,SNR=6.8						
	comp=Z,0.7nm,1.0s						
SCHQ	**Schefferville**	**85.43**	**25**	LR	LR	14 24 18.7	
	comp=Z,19nm,18.2s,baz=216,slow=35						
H11S2	**WAKE ISLAND Hy**	**86.78**	**291**	T	T	15 23 36.2	
	baz=114,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**86.79**	**291**	T	T	15 23 38.8	
	baz=114,slow=75,SNR=21						
H11S3	**WAKE ISLAND Hy**	**86.80**	**291**	T	T	15 23 37.5	
	baz=114,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**87.08**	**292**	T	T	15 24 00.9	
	baz=116,slow=75,SNR=8.6						
H11N1	**WAKE ISLAND Hy**	**87.09**	**292**	T	T	15 24 02.0	
	baz=116,slow=75,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**87.10**	**292**	T	T	15 24 02.3	
	baz=116,slow=75,SNR=14						
STKA	**Stephens Creek**	**90.62**	**236**	LR	LR	14 25 55.7	
	comp=Z,76nm,18.4s,baz=194,slow=34						
FRB	**Frobisher Bay**	**91.40**	**19**	LR	LR	14 25 06.8	
	comp=Z,108nm,21.6s,baz=244,slow=33						
CTA	**Charters Tower**	**91.51**	**248**	LR	LR	14 20 51.0	
	comp=Z,78nm,21.0s,baz=267,slow=30						
MAW	**Mawson**	**91.87**	**179**	LR	LR	14 24 11.4	
	comp=Z,137nm,19.8s,baz=127,slow=32						
PMG	**Port Moresby**	**94.72**	**258**	LR	LR	14 23 40.3	
	comp=Z,91nm,18.3s,baz=208,slow=31						
SHEM	**Shemya Is, Ala**	**95.83**	**325**	LR	LR	14 21 00.6	
	comp=Z,85nm,20.6s,baz=297,slow=29						
SFJD	**Kangerlussuaq**	**99.21**	**21**	LR	LR	14 29 55.8	
	comp=Z,78nm,21.5s,baz=180,slow=33						
SONM	**Songino Array**	**137.69**	**319**	PKP	**PKPdf**	**13 54 13.6**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=48,slow=3.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**143.84**	**341**	PKP	**PKPdf**	**13 54 23.9**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=72,slow=1.9,SNR=4.8						
BRTR	**Keskin Array B**	**146.61**	**48**	PKPbc	**PKPbc**	**13 54 32.2**	**0.0**
	comp=Z,0.8nm,0.8s,baz=251,slow=3.8,SNR=3.7						
KURBB	**Kurchatov Arra**	**148.56**	**344**	PKPbc	**PKPbc**	**13 54 34.9**	**-2.1**
	comp=Z,1.5nm,0.9s,baz=38,slow=1.7,SNR=8.0						
CMAR	**Chiang Mai Arr**	**148.77**	**272**	PKPbc	**PKPbc**	**13 54 37.5**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=89,slow=1.2,SNR=21						
CMAR	**Chiang Mai Arr**	**148.77**	**272**		**PKiKP**	**13 54 40.4**	**+0.5**
KBZ	**Khabaz**	**150.16**	**35**	PKPbc	**PKiKP**	**13 54 42.3**	**+0.3**
	comp=Z,4.6nm,1.0s,baz=356,slow=1.4,SNR=6.3						
MKAR	**Makanchi Array**	**150.78**	**337**	PKPbc	**PKiKP**	**13 54 42.8**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=35,slow=1.7,SNR=21						
MKAR	**Makanchi Array**	**150.78**	**337**		**PKPbc**	**13 54 42.6**	**0.0**

*IDC **29** 13:46:41.7±0.7,5°54.5S×151°33.3E,h72km±5km,mb3.9/14, mbtmp4.2/15,MS3.4/13,Error ellipse: s-maj=23.3km s-min=10.9km az=119.0*

*NEIC **29** 13:46:42.8±1.9,5°54.5S±0°04×151°22.2E±0°03,h77km±7km, mb4.8/55,Error ellipse: s-maj=7.5km s-min=2.3km az=213.0*

ISC 29 13:46:42.3±0.5,5°52.5S±0°04×151°18.1E±0°05,h72km±4km, h72km:pP-P,n145,σ1°51/149,mb4.7/39,3D,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BULU	**Kimbe**	**0.86**	**269**	P	**Sn**	**13 47 09.7**	**-2.1**
RABL	**Rabaul**	**1.65**	**37**		**Pn**	**13 47 10.4**	**+1.0**
RABL				Sn	**Sn**	**13 47 29.1**	**-0.6**
MANU	**Manus Island**	**5.14**	**312**	Pn	**Pn**	**13 47 57.6**	**+0.7**
PMG	**Port Moresby**	**5.55**	**226**	P	**Pn**	**13 48 03.8**	**+1.4**
	1µm,0.7s,baz=59,slow=6.7,SNR=224						
PMG				S	**Sn**	**13 49 07.1**	**+2.2**
	779nm,0.6s,baz=143,slow=20,SNR=18						
PMG	**Port Moresby**	**5.55**	**226**	S	**Sn**	**13 49 07.5**	**+2.6**
PMG	**Port Moresby**	**5.55**	**226**	P	**Pn**	**13 48 04.7**	**+2.3**
PMG	**Port Moresby**	**5.55**	**226**	S	**Sn**	**13 49 07.8**	**+2.9**
PMG	**Port Moresby**	**5.55**	**226**		**Pn**	**13 48 03.1**	**+0.7**
PMG				Sn	**Sn**	**13 49 03.8**	**-1.1**
TATA	**Tatamba Isabel**	**9.02**	**109**	P	**Pn**	**13 48 54.2**	**+4.3**
HNR	**Honiara**	**9.52**	**115**	Pn	**Pn**	**13 48 58.1**	**+1.4**
NGOA	**Tingoa Renbel**	**10.63**	**125**	P	Pn	13 49 16.4	+4.5
NGOA	**Tingoa Renbel**	**10.63**	**125**	S	**Sn**	**13 51 14.1**	**+4.8**
COEN	**Coen**	**11.51**	**223**	P	**Pn**	**13 49 24.4**	**+0.5**
COEN	**Coen**	**11.51**	**223**	S	**Sn**	**13 51 30.7**	**0.0**
COEN	**Coen**	**11.51**	**223**		**Pn**	**13 49 23.7**	**-0.2**
PATS	**Pohnpei**	**14.19**	**30**	Pn	**Pn**	**13 49 59.4**	**-0.6**
MTSU	**Mount Surprise**	**14.22**	**208**	P	**Pn**	**13 50 02.3**	**+2.0**
CTA	**Charters Tower**	**15.25**	**198**	P	**Pn**	**13 50 14.8**	**+1.1**
	16nm,1.0s,baz=9.7,slow=13,SNR=13						
CTA				LR	LR	13 55 24.0	
	comp=Z,89nm,21.4s,baz=26,slow=34						
CTAO	**Charters Tower**	**15.25**	**198**	P	**P**	**13 50 15.7**	**-1.3**
CTAO	**Charters Tower**	**15.25**	**198**		**P**	**13 50 16.0**	**-1.0**
QIS	**Mount Isa**	**18.70**	**216**	P	**Pn**	**13 50 56.1**	**-0.2**
EIDS	**Eidsvold**	**19.74**	**180**	P	**P**	**13 51 07.2**	**+0.8**
EIDS	**Eidsvold**	**19.74**	**180**	S	**S**	**13 54 42.3**	**-2.8**
EIDS	**Eidsvold**	**19.74**	**180**		**P**	**13 51 05.4**	**-1.0**
EIDS				IAmb	IAmb	13 51 08.1	
	comp=Z,24nm,0.8s						
SAUI	**Saumlaki**	**19.89**	**262**	P	**P**	**13 51 08.9**	**+0.7**
SAUI				IAmb	IAmb	13 51 24.8	
	comp=Z,69nm,0.9s						
GUMO	**Guam**	**19.99**	**342**	LR	LR	13 58 20.9	
	comp=Z,26nm,19.8s,baz=100,slow=35						
GUMO	**Guam**	**19.99**	**342**	P	**P**	**13 51 09.3**	**0.0**
MTN	**Manton Dam**	**21.07**	**248**		**P**	**13 51 20.2**	**-0.8**
MTN				IAmb	IAmb	13 51 23.2	
	comp=Z,21nm,0.6s						
DRS	**Darwin Rock St**	**21.16**	**250**	P	**P**	**13 51 23.4**	**+1.5**
AUDHS	**Darwin High Sc**	**21.23**	**250**	P	**P**	**13 51 24.8**	**+2.2**
WR0	**Warramunga Arr**	**21.63**	**227**	P	**P**	**13 51 26.4**	**-0.4**
WRAB	**Tennant Creek**	**21.75**	**227**	P	**P**	**13 51 28.0**	**-0.1**
WRAB	**Tennant Creek**	**21.75**	**227**	S	**S**	**13 55 22.9**	**-2.2**
WRAB	**Tennant Creek**	**21.75**	**227**	P	**P**	**13 51 28.1**	**-0.1**
WRAB				IAmb	IAmb	13 51 46.4	
	comp=Z,38nm,0.7s						
WRA	**Warramunga Arr**	**21.77**	**227**	P	**P**	**13 51 27.7**	**-0.6**
	comp=Z,19nm,0.5s,baz=52,slow=9.8,SNR=97						
WRA				pP	**pP**	**13 51 42.5**	**-1.0**
	comp=Z,46nm,0.8s,baz=48,slow=11,SNR=18						
WRA				S	**S**	**13 55 22.8**	**-2.6**
	comp=Z,15nm,1.2s,baz=54,slow=19,SNR=14						
WRA				ScP	**ScP**	**13 58 56.5**	**-1.2**
	comp=Z,3.9nm,1.1s,baz=48,slow=2.9,SNR=5.8						
	comp=Z,19nm,0.5s						
WRA	**Warramunga Arr**	**21.77**	**227**	P	**P**	**13 51 27.0**	**-1.3**
TW1H	**Toowoomba 1 Ha**	**21.91**	**178**	P	**P**	**13 51 30.4**	**+0.5**
QLP	**Quilpie**	**21.97**	**197**	P	**P**	**13 51 31.4**	**+1.0**
DZM	**Mont Dzumac**	**22.11**	**140**	P	**P**	**13 51 33.0**	**+1.0**
DZM	**Mont Dzumac**	**22.11**	**140**		**P**	**13 51 30.9**	**-1.1**
DZM				IAmb	IAmb	13 51 33.7	
	comp=Z,20nm,0.7s						
ONTNC	**Ouen Toro**	**22.28**	**140**	P	**P**	**13 51 31.1**	**-2.7**
ONTNC				IAmb	IAmb	13 51 34.4	
	comp=Z,28nm,0.9s						
GC1S	**Gold Coast 1 S**	**22.62**	**175**	P	**P**	**13 51 38.5**	**+1.1**
AULRC	**Lightning Ridg**	**23.97**	**187**	P	**P**	**13 51 50.6**	**+0.4**
KNRA	**Kununurra**	**24.21**	**244**	P	**P**	**13 51 52.6**	**+0.1**
KNRA				IAmb	IAmb	13 52 03.5	
	comp=Z,37nm,0.7s						
INKA	**Innaminka**	**24.22**	**203**		**P**	**13 51 52.8**	**+0.3**
INKA				IAmb	IAmb	13 51 54.2	
	comp=Z,23nm,0.8s						
AS31	**Alice Springs**	**24.54**	**221**		**P**	**13 51 56.0**	**+0.5**
ASAR	**Alice Springs**	**24.54**	**221**	P	**P**	**13 51 55.6**	**+0.1**
	comp=Z,29nm,0.8s,baz=50,slow=8.8,SNR=197						
ASAR				ScP	**ScP**	**13 59 04.8**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=58,slow=3.1,SNR=9.0						
ASAR				LR	LR	14 01 27.3	
	comp=Z,30nm,18.9s,baz=66,slow=36						
	comp=Z,29nm,0.8s						
ASAR	**Alice Springs**	**24.54**	**221**		**P**	**13 51 55.9**	**+0.4**
ARMA	**Armidale**	**24.77**	**179**	P	**P**	**13 51 58.5**	**+0.9**
ARMA	**Armidale**	**24.77**	**179**		**P**	**13 51 56.7**	**-0.9**
ARMA				IAmb	IAmb	13 51 59.8	
	comp=Z,16nm,0.9s						
AUPHS	**Peel High Scho**	**25.45**	**181**	P	**P**	**13 52 04.7**	**+1.1**
CMSA	**Cobar Meteorol**	**26.39**	**191**	P	**P**	**13 52 12.6**	**+0.5**
AUDCS	**Dubbo College**	**26.68**	**185**	P	**P**	**13 52 15.8**	**+1.1**
SOEI	**Soe**	**27.00**	**259**	P	**P**	**13 52 18.1**	**+0.1**
BATI	**Baumata**	**27.64**	**259**	LR	LR	14 04 59.1	
	comp=Z,94nm,18.7s,baz=78,slow=40						
STKA	**Stephens Creek**	**27.71**	**198**	P	**P**	**13 52 23.1**	**-0.9**
	comp=Z,5.3nm,0.7s,baz=7.4,slow=9.3,SNR=13						
STKA				LR	LR	14 02 54.7	
	comp=Z,110nm,19.1s,baz=24,slow=35						
	comp=Z,5.3nm,0.7s						
STKA	**Stephens Creek**	**27.71**	**198**	P	**P**	**13 52 23.8**	**-0.2**
STKA	**Stephens Creek**	**27.71**	**198**		**P**	**13 52 23.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**27.90**	**241**	LR	LR	14 03 49.3	
	comp=Z,101nm,21.3s,baz=48,slow=37						
FUNA	**Funafuti**	**27.96**	**98**	P	**P**	**13 52 24.8**	**-1.6**
CAN	**Canberra**	**29.72**	**184**	P	**P**	**13 52 42.5**	**+0.6**
CAN				IAmb	IAmb	13 52 47.4	
	comp=Z,29nm,1.5s						
HTT	**Hallett**	**30.02**	**201**	P	**P**	**13 52 44.5**	**0.0**
BBOO	**Buckleboo**	**30.59**	**206**	P	**P**	**13 52 49.0**	**-0.6**
BBOO	**Buckleboo**	**30.59**	**206**	P	**P**	**13 52 48.8**	**-0.8**
BBOO				IAmb	IAmb	13 52 49.8	
	comp=Z,13nm,0.9s						
AUMAR	**Marden Senior**	**31.44**	**200**	P	**P**	**13 52 57.7**	**+0.7**
AUMBR	**Murray Bridge**	**31.45**	**199**	P	**P**	**13 52 57.3**	**+0.3**
TOO	**Toolangi**	**32.32**	**188**	P	**P**	**13 53 04.3**	**-0.4**
FORT	**Forrest**	**33.22**	**218**	P	**P**	**13 53 12.1**	**-0.6**
FORT				IAmb	IAmb	13 53 12.9	
	comp=Z,15nm,0.8s						
MGBR	**Mount Gambier**	**33.48**	**195**	P	**P**	**13 53 14.4**	**-0.4**
JCJ	**Chichijima**	**33.57**	**345**	LR	LR	14 05 49.8	
	comp=Z,24nm,21.0s,baz=138,slow=34						
MBWA	**Marble Bar**	**34.22**	**240**	P	**P**	**13 53 20.9**	**-0.5**
MBWA	**Marble Bar**	**34.22**	**240**	P	**P**	**13 53 21.2**	**-0.2**
MBWA				pP	**pP**	**13 53 37.4**	**-1.4**
PSA00	**Pilbara Seismi**	**34.28**	**239**	P	**P**	**13 53 21.0**	**-0.9**
PSA00				IAmb	IAmb	13 53 25.0	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**34.28**	**239**	P	**P**	**13 53 21.4**	**-0.5**
PSA00				IAmb	IAmb	13 53 45.5	
	comp=Z,17nm,1.0s						
TAU	**Tasmania Unive**	**37.39**	**185**	P	**P**	**13 53 48.7**	**+0.5**
MEEK	**Meekatharra**	**37.49**	**232**	P	**P**	**13 53 49.5**	**+0.1**
GIRL	**Giralia**	**39.51**	**241**	P	**P**	**13 54 06.5**	**+0.2**
SBUM	**Sibu**	**39.71**	**281**	P	**P**	**13 54 09.4**	**+1.2**
QRZ	**Quartz Range**	**40.02**	**155**	P	**P**	**13 54 08.4**	**-1.9**
RTZ	**Ruatahuna**	**40.41**	**148**	P	**P**	**13 54 13.1**	**-0.5**
RTZ				IAmb	IAmb	13 54 15.2	
	comp=Z,15nm,0.8s						
BKZ	**Black Stump Fm**	**40.56**	**149**	P	**P**	**13 54 13.0**	**-1.9**
BKZ				IAmb	IAmb	13 54 39.2	
	comp=Z,10nm,1.3s						
MRNZ	**Matariki Terra**	**40.59**	**155**	P	**P**	**13 54 15.1**	**0.0**
MORW	**Morawa**	**40.64**	**231**	P	**P**	**13 54 13.9**	**-1.8**
MORW				IAmb	IAmb	13 54 36.1	
	comp=Z,27nm,1.3s						
THZ	**Tophouse**	**40.95**	**155**	P	**P**	**13 54 16.5**	**-1.6**
YULB	**Yu-li**	**40.95**	**316**	P	**P**	**13 54 17.8**	**-0.4**
YULB				IAmb	IAmb	13 54 40.2	
	comp=Z,20nm,1.3s						
TCW	**Tory Channel**	**41.10**	**153**	P	**P**	**13 54 17.3**	**-1.9**
TUWZ	**Tuamarina**	**41.13**	**154**	P	**P**	**13 54 18.4**	**-1.0**
INZ	**Inchbonnie**	**41.17**	**157**	P	**P**	**13 54 17.9**	**-1.8**
BSWZ	**Blackbirch Sta**	**41.33**	**154**	P	**P**	**13 54 19.3**	**-1.8**
TPUB	**Ta-pu**	**41.36**	**315**	P	**P**	**13 54 21.9**	**+0.3**
CMWZ	**Cape Campbell**	**41.51**	**154**	P	**P**	**13 54 21.6**	**-0.9**
LTZ	**Lake Taylor**	**41.54**	**156**	P	**P**	**13 54 21.5**	**-1.4**
NWAO	**Narrogin (SRO)**	**41.74**	**225**	LR	LR	14 11 50.4	
	comp=Z,51nm,20.9s,baz=310,slow=36						
OXZ	**Oxford**	**41.91**	**157**	P	**P**	**13 54 24.8**	**-1.0**
OXZ				IAmb	IAmb	13 54 25.7	
	comp=Z,18nm,0.7s						
MLZ	**Mavora Lakes**	**42.35**	**162**	P	**P**	**13 54 29.1**	**-0.3**
MLZ				IAmb	IAmb	13 54 30.6	
	comp=Z,21nm,0.9s						
JNU	**Nakatsue**	**42.99**	**335**	LR	LR	14 11 47.4	
	comp=Z,60nm,18.1s,baz=152,slow=35						
BBJI	**Bungbulang**	**43.28**	**265**	P	**P**	**13 54 36.5**	**-1.0**
BBJI				IAmb	IAmb	13 54 59.9	
	comp=Z,11nm,0.9s						
MJAR	**Matsushiro Arr**	**43.57**	**345**	P	**P**	**13 54 38.0**	**-1.4**
NJ2	**Nanjing**	**48.41**	**323**	*e*P	**P**	**13 55 20.3**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BKNI	**Bangkinang**	**50.40**	**275**	P	**P**	**13 55 34.7**	**+1.7**
XAN	**Xi'an**	**56.05**	**318**	*e*P	**P**	**13 56 15.5**	**+1.4**
XAN				pP	pP	13 56 35.5	+3.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**56.73**	**296**	P	**P**	**13 56 19.5**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=115,slow=8.0,SNR=2.1						
	comp=Z,0.3nm,0.3s						
PZH	**PanZhiHua**	**57.48**	**306**	P	**P**	**13 56 28.0**	**+3.5**
PEA0B	**Petropavlovsk-**	**58.67**	**5**	P	**P**	**13 56 30.9**	**-1.3**
PETK	**Petropavlovsk-**	**58.67**	**5**	P	**P**	**13 56 30.8**	**-1.3**
	comp=Z,3.4nm,0.9s,baz=147,slow=6.7,SNR=5.4						
	comp=Z,3.4nm,0.9s						
PETK	**Petropavlovsk-**	**58.67**	**5**	P	**P**	**13 56 30.5**	**-1.6**
HHC	**Hu-ho-hao-te**	**58.71**	**326**	*e*P	**P**	**13 56 37.0**	**+4.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,71nm,5.1s						
DRV	**Dumont d'Urvil**	**61.53**	**185**	P	**P**	**13 56 51.8**	**+0.3**
DRV				pP	**pP**	**13 57 09.2**	**-1.1**
KIWB	**Kanaga Island**	**63.23**	**21**	P	**P**	**13 57 01.9**	**-1.1**
SONM	**Songino Array**	**66.09**	**329**	P	**P**	**13 57 22.6**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=131,slow=4.5,SNR=4.7						
SONM				pP	**pP**	**13 57 42.4**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=137,slow=4.1,SNR=5.3						
	comp=Z,0.8nm,0.9s						
SONM	**Songino Array**	**66.09**	**329**	P	**P**	**13 57 22.8**	**+0.9**
EVN	**Everest**	**70.34**	**302**	P	**P**	**13 57 49.7**	**0.0**
FALS	**False Pass**	**70.97**	**26**	P	**P**	**13 57 53.0**	**+0.9**
CCD

KIF				SB	Sb	14 04 14.4	-0.1		
HEF	**Hetta**	**1.41**	**64**	PG	Pn	14 04 01.4	-0.5		
	baz=248								
HEF				MSG		14 04 19.5			
	comp=Z,1.5nm,0.2s								
HEF				SG	Sb	14 04 20.8	0.0		
ERTU	**Ertsjaerv**	**1.50**	**148**	PN	Pn	14 04 03.1	0.0		
ERTU				SN	Sn	14 04 23.5	+0.2		
KLF	**Kolari**	**1.56**	**111**	PN	Pb	14 04 04.5	-0.2		
KLF				MSG		14 04 23.4			
	comp=Z,1.1nm,0.2s								
KLF				SN	Sg	14 04 25.8	+0.7		
KTK1	**Kautokeino**	**1.63**	**42**	PG	Pb	14 04 05.7	-0.1		
KTK1				SN	Sg	14 04 29.1	+2.0		
HARU	**Harads**	**1.71**	**170**	P	Pn	14 04 06.0	+0.1		
TRO	**Tromso**	**1.87**	**346**	SG	Sb	14 04 33.8	+0.1		
TOF	**Tornio**	**2.39**	**136**	PG	Pb	14 04 18.2	-0.6		
TOF				MSG		14 04 46.7			
	comp=Z,0.6nm,0.2s								
TOF				SG	Sb	14 04 50.4	+1.6		
RNF	**Rovaniemi**	**2.57**	**116**	PG	Pb	14 04 20.6	-1.3		
RNF				SG	Sb	14 04 54.2	+0.2		
ARA0	**ARCESS Array S**	**2.58**	**46**	SB	Sb	14 04 54.8	+0.5		
RAJF	**Raja-Jooseppi**	**3.10**	**74**	SG	Sb	14 05 09.8	+0.8		
KEV	**Kevo**	**3.13**	**49**	SB	Sb	14 05 08.8	-1.3		

*ISK **29** 14:14:52.3, 38˚.39N×44˚.53E, h5km, ML2.4/5*
*TEH **29** 14:14:52.4, 38˚.41N×44˚.52E, h10km±224km, ML2.5, Presumed earthquake*
*AFAD **29** 14:14:53.7, 38˚.44N×44˚.39E, h7km±6km, ML2.2*

ISC 29 14:14:52.6±1.3, 38˚.43N±0˚.03×44˚.53E±0˚.03, h4km±12km, n21, σ0°83/28, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**299**	P	**Pg**		**Pg**	**14 15 02.4**	**+0.5**
OZAP				IAML				14 15 12.0	
	comp=N,201nm,0.8s								
YOVA	**Hakkari_Yksek**	**0.86**	**193**	P	**Pb**		**Pb**	**14 15 10.0**	**-0.2**
YOVA				IAML				14 15 29.0	
	comp=N,88nm,0.4s								
YOVA				IAML				14 15 29.0	
	comp=E,68nm,0.7s								
ISHB	**Shabestar**	**0.86**	**99**	Pg	**Pg**		**Pg**	**14 15 08.8**	**-0.3**
ISHB				Sg	**Sb**		**Sb**	**14 15 22.7**	**+0.5**
TVAN	**Van**	**0.89**	**277**	P	**Pg**		**Pg**	**14 15 09.7**	**+0.1**
TVAN				IAML				14 15 36.0	
	comp=E,96nm,0.5s								
TVAN				IAML				14 15 39.0	
	comp=N,83nm,1.2s								
MAKU	**Maku**	**0.93**	**7**	Pg	**Pg**		**Pg**	**14 15 10.9**	**+0.5**
VMUR	**Van-Muradiye**	**0.94**	**307**	P	**Pn**		**Pg**	**14 15 11.8**	**-0.8**
VMUR				S	**Sn**		**Pg**	**14 15 25.8**	**-0.8**
IMRD	**Marand**	**0.96**	**72**	Pg	**Pb**		**Pb**	**14 15 11.9**	**+0.1**
HAKT	**HAKKARI**	**1.09**	**217**	P	**Pn**		**Pg**	**14 15 13.9**	**-0.8**
HAKT				IAML				14 15 33.0	
	comp=N,64nm,0.7s								
HAKT				IAML				14 15 34.0	
	comp=E,61nm,0.4s								
GEVA	**Gevas**	**1.16**	**265**	P	**Pg**		**Pg**	**14 15 13.6**	**-1.3**
GEVA				S	**Sg**		**Pg**	**14 15 28.8**	**-1.2**
GEVA				IAML				14 15 36.0	
	comp=N,63nm,0.4s								
GEVA				IAML				14 15 39.0	
	comp=E,50nm,0.3s								
AKDM	**Akdamar-Van**	**1.22**	**266**	Pn	**Pg**		**Pg**	**14 15 15.6**	**-0.4**
AKDM				Sn	**Sn**		**Sn**	**14 15 34.8**	**+1.1**
IAZR	**Azarshahr**	**1.37**	**123**	Pg	**Pg**		**Pg**	**14 15 19.3**	**+0.6**
CUKT	**Cukurca**	**1.39**	**212**	Pn	**Pg**		**Pg**	**14 15 19.4**	**+0.2**
CUKT				Sn	**Sn**		**Sn**	**14 15 38.9**	**+1.3**
IGDI	**IGDIR**	**1.48**	**346**	P	**Pb**		**Pb**	**14 15 20.5**	**-0.1**
PERV	**Siirt/Pervari-**	**1.64**	**254**	P	**Pg**		**Pg**	**14 15 25.8**	**+1.8**
AGRB	**Hanur-Agry**	**1.66**	**314**	Pn	**Pg**		**Pg**	**14 15 24.3**	**-0.1**
AGRB				Sn	**Sg**		**Sg**	**14 15 47.5**	**+1.6**
DORK	**Agr/Tutak/Do**	**1.67**	**306**	P	**Pn**		**Pg**	**14 15 22.2**	**-0.5**
KOTA	**Agri, Merkez-K**	**1.72**	**323**	P	**Pg**		**Pg**	**14 15 25.2**	**-0.3**
KOTA				S	**Sb**		**Pg**	**14 15 47.0**	**+0.2**
GNI	**Garni**	**1.73**	**5**	Pn	**Pb**		**Pb**	**14 15 25.2**	**+0.3**
GURO	**Guroymak-BITLI**	**1.97**	**274**	Pn	**Pb**		**Pb**	**14 15 28.3**	**-0.7**
IHRS	**Heris**	**1.98**	**92**	Pn	**Pg**		**Pg**	**14 15 29.8**	**-0.6**
SRTM	**Siirt_Merkez**	**2.10**	**259**	P	**Pb**		**Pb**	**14 15 31.5**	**+0.2**
SRTM				IAML				14 16 05.0	
	comp=E,18nm,0.7s								
SRTM				IAML				14 16 12.0	
	comp=N,29nm,0.6s								

*IDC **29** 14:19:28.9±7.0, 7˚.62S×154˚.62E, h67km±58km, mb3.2/5, mbtmp3.6/6, ML2.0/1, Error ellipse: s-maj=59.1km s-min=33.1km az=124.0*

ISC 29 14:19:24.3±1.8, 7˚.7S±0˚.3×154˚.9E±0˚.2, h31km, n6, σ0°93/7, mb3.4/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.80**	**257**	P	**Pn**		**Pn**	**14 21 17.0**	**+1.1**
	1.3nm,0.3s,baz=80,slow=11,SNR=6.8								
PMG				S	**Sn**		**Sn**	**14 22 42.6**	**-0.6**
	5.7nm,0.9s,baz=95,slow=18,SNR=1.6								
	6.3nm,0.5s								
WRA	**Warramunga Arr**	**23.33**	**236**	P	**P**		**P**	**14 24 29.2**	**-0.9**
	0.8nm,0.8s,baz=58,slow=9.4,SNR=8.5								
	0.8nm,0.8s								
ASAR	**Alice Springs**	**25.63**	**229**	P	**P**		**P**	**14 24 51.2**	**-0.1**
	0.5nm,0.7s,baz=61,slow=9.3,SNR=6.2								
	0.5nm,0.7s								
MKAR	**Makanchi Array**	**83.82**	**319**	P	**P**		**P**	**14 31 50.8**	**-0.1**
	0.2nm,0.7s,baz=99,slow=6.4,SNR=3.6								
	0.2nm,0.7s								
ILAR	**Eielson Array**	**84.05**	**21**	P	**P**		**P**	**14 31 52.0**	**+0.4**
	0.4nm,0.8s,baz=250,slow=5.8,SNR=6.1								
	0.4nm,0.8s								
ZALV	**Zalesovo Beam**	**84.66**	**326**	P	**P**		**P**	**14 31 54.0**	**-0.9**
	0.5nm,0.5s,baz=131,slow=6.6,SNR=2.9								
	0.5nm,0.5s								

NOU 29 14:38:16.6, 22˚.78S×170˚.21E, h0km, MLv4.3/7, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.40**	**302**	P	Pn			14 38 56.4	-0.7
OUENC	**Ouen Island, N**	**3.13**	**276**	P	Pn			14 39 06.9	-0.4
ONTNC	**Ouen Toro**	**3.50**	**277**	P	Pn			14 39 12.3	-0.1
DZM	**Mont Dzumac**	**3.56**	**281**	P	Pn			14 39 12.8	-0.4
DVP	**Devils Point**	**5.38**	**339**	P	Pn			14 39 38.6	+0.5
KOUNC	**Koumac, New Ca**	**5.94**	**291**	P	Pn			14 39 46.6	+0.7

*IDC **29** 14:39:52.3±1.5, 20˚.02S×173˚.92W, h0km, mb4.0/8, mbtmp4.0/10, ML3.9/2, MS3.1/2, Error ellipse: s-maj=47.1km s-min=23.2km az=134.0*

ISC 29 14:39:56.7±1.2, 19˚.9S±0˚.2×173˚.9W±0˚.2, h31km, n12, σ1°65/12, mb3.8/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.24**	**19**	Pn	**Pn**		**Pn**	**14 41 27.4**	**+0.6**
	2.6nm,0.3s,baz=197,slow=11,SNR=1.7								
AFI				Sn	**Sn**		**Sn**	**14 42 34.0**	**-3.2**
	3.3nm,0.3s,baz=249,slow=23,SNR=1.6								
	7.3nm,0.3s								
RAR	**Rarotonga**	**13.29**	**98**	Pn	Pn			14 42 52.1	-11
	1.2nm,0.3s,baz=260,slow=6.1,SNR=2.1								
RAR				LR	LR			14 47 25.9	
	comp=Z,67nm,18.8s,baz=238,slow=34								
URZ	**Urewera**	**19.94**	**201**	P	**P**			**14 44 24.5**	**-1.5**
	0.3nm,0.3s,baz=49,slow=20,SNR=1.9								
	6.1nm,0.9s								
PPT	**Papeete**	**23.13**	**88**	LR	LR			14 53 11.0	
	comp=Z,45nm,18.5s,baz=306,slow=34								
CTA	**Charters Tower**	**37.41**	**263**	P	**P**			**14 47 07.5**	**+0.4**
	2.6nm,0.9s,baz=96,slow=10,SNR=1.7								
	2.6nm,0.9s								
STKA	**Stephens Creek**	**41.55**	**244**	P	**P**			**14 47 40.1**	**-1.4**
	1.2nm,0.9s,baz=78,slow=8.8,SNR=3.1								
	1.2nm,0.9s								
ASAR	**Alice Springs**	**48.43**	**256**	P	**P**			**14 48 35.5**	**-0.9**
	0.7nm,0.8s,baz=92,slow=8.2,SNR=14								
ASAR				PcP	**PcP**			**14 50 03.9**	**+1.3**
	0.3nm,0.7s,baz=104,slow=3.7,SNR=2.1								
	0.7nm,0.8s								

WRA	**Warramunga Arr**	**48.52**	**261**	P	**P**			**14 48 35.9**	**-1.3**
	0.3nm,0.4s,baz=96,slow=7.8,SNR=26								
	0.3nm,0.4s								
SIJI	**Sorong**	**56.84**	**282**	P	**P**			**14 49 39.5**	**+0.7**
	8.4nm,0.8s,baz=108,slow=9.9,SNR=3.9								
	8.4nm,0.8s								
MJAR	**Matsushiro Arr**	**72.06**	**321**	P	**P**			**14 51 19.9**	**+2.0**
	0.5nm,0.5s,baz=162,slow=6.7,SNR=2.2								
	0.5nm,0.5s								
NVAR	**Mina Array Bea**	**77.94**	**41**	P	**P**			**14 51 53.1**	**+1.1**
	0.6nm,0.7s,baz=240,slow=4.2,SNR=3.9								
	0.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**93.56**	**288**	P	**P**			**14 53 10.4**	**+0.1**
	0.3nm,0.3s,baz=113,slow=3.7,SNR=4.3								
	0.3nm,0.3s								

*IDC **29** 14:51:26.7±0.8, 53˚.65N×166˚.13W, h0km, mb3.6/20, mbtmp3.7/21, ML3.4/1, MS3.1/9, Error ellipse: s-maj=26.1km s-min=13.9km az=175.0*
*NEIC **29** 14:51:31.9±2.0, 53˚.38N±0˚.05×165˚.91W±0˚.05, h35km±1km, mb3.6/23, ML4.0/8, ML3.8(AEIC), Error ellipse: s-maj=9.1km s-min=4.9km az=356.0*
*AEIC **29** 14:51:31.8±1.9, 53˚.39N±0˚.05×165˚.89W±0˚.05, h25km±6km, Error ellipse: s-maj=7.5km s-min=4.0km az=186.0*

ISC 29 14:51:32.8±1.1, 53˚.52N±0˚.08×165˚.96W±0˚.04, h49km±9km, n203, σ1°43/206, mb3.8/19, MS3.1/9, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.46**	**315**	P	**Pn**			**14 51 43.7**	**+0.2**
UNV	**Unalaska Valle**	**0.46**	**315**	S	**Sn**			**14 51 52.3**	**+1.1**
UNV	**Unalaska Valle**	**0.46**	**315**		**Pn**			**14 51 43.7**	**+0.2**
UNV					**Sn**			**14 51 51.1**	**-0.1**
UNV				IAML				14 51 52.9	
	comp=N,9µm,0.2s								
MREP	**Makushin Rep't**	**0.55**	**302**		**Pn**			**14 51 44.9**	**+0.1**
MNAT	**Makushin Natee**	**0.57**	**310**		**Pn**			**14 51 45.2**	**+0.3**
MNAT					**Sn**			**14 51 54.9**	**+1.4**
AKMO	**Akutan Morgan**	**0.57**	**357**		**Pn**			**14 51 45.3**	**+0.4**
AKMO					**Sn**			**14 51 55.3**	**+1.6**
ZRO	**Akutan Zero**	**0.57**	**359**		**Pn**			**14 51 45.3**	**+0.4**
ZRO					**Sn**			**14 51 55.0**	**+1.4**
AKBBA	**Akutan Broad B**	**0.58**	**1**		**Pn**			**14 51 45.3**	**+0.3**
AKBBA					**Sn**			**14 51 55.3**	**+1.5**
AHB	**Akutan Harbor**	**0.60**	**8**		**Pn**			**14 51 45.6**	**+0.2**
AKV	**Akutan Volcano**	**0.61**	**360**		**Pn**			**14 51 45.8**	**+0.3**
AKV					**Sn**			**14 51 56.8**	**+2.3**
MGOD	**Makushin Gods**	**0.61**	**297**		**Pn**			**14 51 45.5**	**+0.1**
AKRB	**Akutan Reef Bi**	**0.62**	**354**		**Pn**			**14 51 46.1**	**+0.6**
AKRB					**Sn**			**14 51 57.0**	**+2.4**
AKUT	**Akutan**	**0.63**	**10**	P	**Pn**			**14 51 45.7**	**+0.1**
AKUT	**Akutan**	**0.63**	**10**	S	**Sn**			**14 51 56.1**	**+1.3**
AKUT	**Akutan**	**0.63**	**10**		**Pn**			**14 51 45.6**	**+0.1**
AKUT				Sn	**Sn**			**14 51 56.1**	**+1.3**
AKUT				IAML				14 52 01.0	
	comp=N,2µm,0.5s								
AKSA	**Akutan Strait**	**0.64**	**14**		**Pn**			**14 51 45.4**	**-0.3**
LVA	**Lava Point**	**0.65**	**356**		**Pn**			**14 51 46.3**	**+0.4**
LVA					**Sn**			**14 51 55.9**	**+0.7**
LVA				IAML				14 52 00.1	
	comp=E,5µm,0.5s								
LVA				IAML				14 52 03.8	
	comp=N,9µm,0.6s								
MAPS	**Pakushin South**	**0.65**	**297**		**Pn**			**14 51 46.1**	**+0.2**
OKFG	**Magazine Ridge**	**1.17**	**265**		**Pn**			**14 51 52.5**	**-0.3**
OKTU	**Okmok Mt. Tuli**	**1.25**	**265**		**Pn**			**14 51 53.9**	**-0.1**
OKSP	**Okmok Steeple**	**1.42**	**260**		**Pn**			**14 51 55.8**	**-0.5**
SSBA	**Shishaldin**	**1.66**	**40**		**Pn**			**14 52 00.6**	**+1.1**
SSBA					**Sn**			**14 52 23.2**	**+3.6**
SSLN	**Shishaldin Nor**	**1.73**	**41**		**Pn**			**14 52 01.8**	**+1.3**
SSLN					**Sn**			**14 52 25.6**	**+4.1**
ISNN	**Isanotski Nort**	**1.84**	**43**		**Pn**			**14 52 03.4**	**+1.5**
ISNN					**Sn**			**14 52 28.9**	**+5.0**
FALS	**False Pass**	**2.00**	**47**	P	**Pn**			**14 52 05.3**	**+1.2**
FALS	**False Pass**	**2.00**	**47**	S	**Sn**			**14 52 31.8**	**+3.8**
FALS	**False Pass**	**2.00**	**47**		**Pn**			**14 52 04.7**	**+0.6**
FALS				Sn	**Sn**			**14 52 27.3**	**-0.7**
DT1	**Dutton Round H**	**2.68**	**52**		**Pn**			**14 52 14.1**	**+0.7**
DTNA	**Dutton South F**	**2.71**	**52**		**Pn**			**14 52 14.7**	**+0.8**
HAG	**Hague Volcano**	**2.98**	**51**		**Pn**			**14 52 18.9**	**+1.4**
SDPT	**Sand Point**	**3.69**	**58**	P	**Pn**			**14 52 27.9**	**+0.7**
SDPT	**Sand Point**	**3.69**	**58**	S	**Sn**			**14 53 12.2**	**+2.9**
SDPT	**Sand Point**	**3.69**	**58**	Pn	**Pn**			**14 52 27.8**	**+0.7**
SDPT				Sn	**Sn**			**14 53 09.3**	**0.0**
CNBA	**Chernabura Isl**	**3.96**	**68**	Pn	**Pn**			**14 52 28.5**	**-2.5**
CHNA	**Chernabura Isl**	**3.96**	**68**	P	**Pn**			**14 52 30.3**	**-0.7**
CHNA	**Chernabura Isl**	**3.96**	**68**	S	**Sn**			**14 53 17.8**	**+1.6**
SPIA	**Saint Paul Isl**	**4.41**	**328**	Pn	**Pn**			**14 52 38.9**	**+1.8**
GSTR	**Great Sitkin T**	**6.29**	**261**	Pn	**Pn**			**14 53 02.8**	**-0.2**
O14K	**Tigyukauivet M**	**6.31**	**22**	Pn	**Pn**			**14 53 03.6**	**+0.5**
GSCK	**Great Sitkin C**	**6.38**	**260**		**Pn**			**14 53 05.6**	**+1.5**
CHIR	**Chirikof Islan**	**6.42**	**65**	P	**Pn**			**14 53 04.0**	**-0.7**
CHIR	**Chirikof Islan**	**6.42**	**65**	Pn	**Pn**			**14 53 02.8**	**-1.9**
ETKA	**Kagalaska Isla**	**6.57**	**260**		**Pn**			**14 53 07.9**	**+1.2**
O15K	**Ungalikthiuk R**	**6.61**	**29**	Pn	**Pn**			**14 53 08.4**	**+1.1**
ADK	**Adak**	**6.72**	**260**	Pn	**Pn**			**14 53 09.1**	**+0.3**
PLK4	**Peulik 4**	**6.82**	**49**	Pn	**Pn**			**14 53 11.9**	**+1.6**
N14K	**Kuskokwak Cree**	**6.84**	**18**	Pn	**Pn**			**14 53 11.8**	**+1.5**
M11K	**Mekoryuk**	**6.88**	**359**		**Pn**			**14 53 13.4**	**+2.5**
KIWB	**Kanaga Island**	**7.01**	**261**	Pn	**Pn**			**14 53 13.6**	**+0.9**
M13K	**Dall Lake**	**7.06**	**11**		**Pn**			**14 53 14.9**	**+1.6**
P16K	**Nushagak River**	**7.08**	**36**	Pn	**Pn**			**14 53 15.4**	**+1.7**
KIMD	**Kanaga Island**	**7.09**	**260**		**Pn**			**14 53 15.2**	**+1.4**
N15K	**Kwethluk River**	**7.40**	**23**		**Pn**			**14 53 19.7**	**+1.6**
SII	**Sitkinak Islan**	**7.42**	**61**	Pn	**Pn**			**14 53 19.2**	**+0.8**
O16K	**Kokwok River B**	**7.48**	**32**		**Pn**			**14 53 20.0**	**+0.9**
M14K	**Bethel**	**7.57**	**15**		**Pn**			**14 53 20.9**	**+0.6**
P17K	**Kvichak River**	**7.76**	**39**	Pn	**Pn**			**14 53 24.3**	**+1.3**
L14K	**Kuka Creek**	**8.04**	**11**		**Pn**			**14 53 27.7**	**+0.9**
OHAK	**Old Harbor**	**8.11**	**58**	P	**Pn**			**14 53 27.3**	**-0.5**
OHAK	**Old Harbor**	**8.11**	**58**	Pn	**Pn**			**14 53 27.2**	**-0.5**
P18K	**Big Mountain,**	**8.36**	**41**		**Pn**			**14 53 31.8**	**+0.6**
M16K	**Timber Creek**	**8.42**	**24**	Pn	**Pn**			**14 53 32.8**	**+0.8**
K13K	**Kusilvak Mount**	**8.47**	**4**	Pn	**Pn**			**14 53 33.1**	**+0.5**
N17K	**Nushagak Hills**	**8.49**	**31**	Pn	**Pn**			**14 53 33.4**	**+0.4**
O18K	**Kokfuh Hills**	**8.67**	**39**		**Pn**			**14 53 37.6**	**+2.1**
KDAK	**Kodiak Island**	**8.68**	**55**	Pn	**Pn**			**14 53 34.2**	**-1.4**
KDAK	comp=N,0.5nm,0.3s,baz=255,slow=12,SNR=33			Sn	**Sn**			**14 55 08.0**	**-3.9**
	comp=N,0.3nm,0.3s,baz=275,slow=19,SNR=1.0								
	comp=N,6.5nm,1.0s								
KDAK	**Kodiak Island**	**8.68**	**55**	Pn	**Pn**			**14 53 34.7**	**-0.9**
Q19K	**Cape Douglas,**	**8.73**	**47**	Pn	**Pn**			**14 53 36.6**	**+0.2**
L16K	**Owhat River**	**8.91**	**20**	Pn	**Pn**			**14 53 40.3**	**+1.5**
N18K	**Kilae Creek**	**9.02**	**33**	Pn	**Pn**			**14 53 39.8**	**-0.5**
K15K	**Wolf Creek Mou**	**9.11**	**13**		**Pn**			**14 53 43.4**	**+1.9**
M17K	**Holitna River**	**9.13**	**27**	Pn	**Pn**			**14 53 42.8**	**+1.0**
SYI	**Shuyak Island**	**9.13**	**51**	Pn	**Pn**			**14 53 41.3**	**-0.5**
AMKA	**Amchitka**	**9.26**	**263**	Pn	**Pn**			**14 53 43.9**	**+0.4**
P19K	**Oil Pt**	**9.32**	**44**	Pn	**Pn**			**14 53 42.8**	**-1.6**
J14K	**Nanvaranak Lak**	**9.34**	**7**	Pn	**Pn**			**14 53 45.7**	**+1.1**
ILSW	**Iliamna Southw**	**9.55**	**42**	Pn	**Pn**			**14 53 48.4**	**+0.8**
N19K	**Bonanza Creek**	**9.59**	**36**		**Pn**			**14 53 49.0**	**+0.8**
RED	**Redoubt Volcan**	**9.97**	**41**	Pn	**Pn**			**14 53 54.9**	**+1.7**
L18K	**Granite Mounta**	**10.01**	**26**	Pn	**Pn**			**14 53 54.0**	**+0.3**
K17K	**Iditarod**	**10.06**	**21**	Pn	**Pn**			**14 53 55.0**	**+0.6**
CNPM	**China Poot**	**10.10**	**48**	Pn	**Pn**			**14 53 54.7**	**-0.3**
J16K	**Anvik River**	**10.18**	**14**	Pn	**Pn**			**14 53 56.8**	**+0.7**
BRLK	**Bradley Lake**	**10.38**	**47**	Pn	**Pn**			**14 53 58.4**	**-0.4**
M19K	**Big River Lodg**	**10.42**	**32**	Pn	**Pn**			**14 54 00.3**	**+1.0**
L19K	**White Mountain**	**10.49**	**30**	Pn	**Pn**			**14 54 01.1**	**+0.8**
GAMB	**Gambell**	**10.71**	**346**		**Pn**			**14 54 06.3**	**+3.1**
SPU	**Mount Spurr**	**10.72**	**39**	Pn	**Pn**			**14 54 04.3**	**+0.8**
I17K	**Unalakleet**	**10.75**	**13**	Pn	**Pn**			**14 54 05.5**	**+1.7**
M20K	**Styx River**	**10.81**	**34**	Pn	**Pn**			**14 54 05.6**	**+0.8**
STLK	**Strandline Lak**	**11.01**	**38**	Pn	**Pn**			**14 54 08.4**	**+1.0**
SLKM	**Skilak Lake**	**11.05**	**44**	Pn	**Pn**			**14 54 08.7**	**+0.7**
J18K	**Innoko River**	**11.07**	**22**	Pn	**Pn**			**14 54 08.0**	**-0.2**
ANM	**Nome**	**11.08**	**1**	Pn	**Pn**			**14 54 10.1**	**+1.6**
SEW	**Seward**	**11.17**	**47**	Pn	**Pn**			**14 54 08.7**	**-1.0**
SUA	**Susitna One**	**11.39**	**40**	Pn	**Pn**			**14 54 11.9**	**-0.8**
SKT	**Skwentna**	**11.43**	**36**	Pn	**Pn**			**14 54 14.1**	**+0.9**
RC01	**Rabbit Creek A**	**11.57**	**43**	Pn	**Pn**			**14 54 14.5**	**-0.5**
K20K	**Telida**	**11.64**	**27**	Pn	**Pn**			**14 54 15.0**	**-1.0**
J19K	**Poorman**	**11.77**	**23**	Pn	**Pn**			**14 54 17.1**	**-0.7**
PPLA	**Purkeypile**	**11.85**	**32**	Pn	**Pn**			**14 54 19.6**	**+0.6**
H17K	**Granite Mounta**	**11.86**	**13**	Pn	**Pn**			**14 54 18.7**	**-0.2**
P23K	**Montague Islan**	**12.04**	**50**	Pn	**Pn**			**14 54 21.6**	**0.0**
G16K	**Koyuk River**	**12.05**	**7**		**Pn**			**14 54 23.5**	**+2.0**
L22K	**Petersville**	**12.06**	**36**	Pn	**Pn**			**14 54 23.6**	**+1.8**

TNA	**Tin City**	**12.12**	**356**				**Pn**	**14 54 25.1**	**+2.6**
F15K	**North Star Dit**	**12.24**	**3**				**Pn**	**14 54 26.0**	**+1.8**
KNK	**Knik Glacier**	**12.26**	**43**	Pn			**Pn**	**14 54 21.9**	**-2.7**
GHO	**Glory Hole Cre**	**12.28**	**41**	Pn			**Pn**	**14 54 22.8**	**-2.0**
H18K	**Honhosa River**	**12.28**	**15**	Pn			**Pn**	**14 54 26.3**	**+1.5**
MID	**Middleton Isla**	**12.33**	**53**	Pn			**Pn**	**14 54 25.7**	**+0.4**
SML	**Sawmill**	**12.53**	**42**	Pn			**Pn**	**14 54 26.9**	**-1.3**
GLI	**Glacier Island**	**12.57**	**47**	Pn			**Pn**	**14 54 27.0**	**-1.7**
HIN	**Hinchinbrook I**	**12.62**	**49**	Pn			**Pn**	**14 54 27.8**	**-1.6**
KTH	**Kantishna Hill**	**12.72**	**32**	Pn			**Pn**	**14 54 30.2**	**-0.5**
TRF	**Thorofare Moun**	**12.85**	**33**	Pn			**Pn**	**14 54 33.1**	**+0.4**
G18K	**Tagagawik**	**12.94**	**13**	Pn			**Pn**	**14 54 32.2**	**-1.4**
SCM	**Sheep Creek Mo**	**12.95**	**43**	Pn			**Pn**	**14 54 31.7**	**-2.2**
EYAK	**Cordova Ski Ar**	**13.02**	**49**	P			**Pn**	**14 54 34.8**	**0.0**
EYAK	**Cordova Ski Ar**	**13.02**	**49**	Pn			**Pn**	**14 54 32.7**	**-2.2**
BPAW	**Bear Paw Mtn.**	**13.10**	**30**	Pn			**Pn**	**14 54 36.4**	**+0.5**
DIV	**Divide**	**13.26**	**47**	Pn			**Pn**	**14 54 36.5**	**-1.6**
RND	**Reindeer**	**13.30**	**35**	Pn			**Pn**	**14 54 38.0**	**-0.7**
KLU	**Klutina**	**13.36**	**45**				**Pn**	**14 54 38.3**	**-1.3**
RAGM	**Ragged Mountai**	**13.45**	**51**	Pn			**Pn**	**14 54 38.7**	**-2.0**
M24K	**Tolsona, Glenn**	**13.55**	**43**	Pn			**Pn**	**14 54 40.4**	**-1.8**
DHY	**Denali Highway**	**13.62**	**38**	Pn			**Pn**	**14 54 41.4**	**-1.8**
I21K	**Tanana**	**13.65**	**26**	Pn			**Pn**	**14 54 41.3**	**-2.1**
BMRM	**Bremner River**	**13.71**	**49**	Pn			**Pn**	**14 54 41.8**	**-2.5**
H21K	**Melozitna Rive**	**13.83**	**23**	Pn			**Pn**	**14 54 43.8**	**-2.0**
BERG	**Berg Lake**	**13.91**	**51**	Pn			**Pn**	**14 54 43.9**	**-3.0**
N25K	**Chitina, Valde**	**13.98**	**46**	Pn			**Pn**	**14 54 45.1**	**-2.8**
GLB	**Gilahina Butte**	**14.25**	**47**	Pn			**Pn**	**14 54 49.1**	**-2.5**
CRQM	**Cirque**	**14.29**	**50**	Pn			**Pn**	**14 54 49.1**	**-3.1**
VRDI	**Verde Repeater**	**14.32**	**48**				**Pn**	**14 54 50.7**	**-1.9**
H22K	**Ishtalitna Cre**	**14.37**	**25**	Pn			**Pn**	**14 54 51.2**	**-1.8**
TGL	**Tana Glacier**	**14.44**	**51**	Pn			**Pn**	**14 54 51.9**	**-2

comp=Z,0.2nm,0.4s,baz=48,slow=5.3,SNR=6.9
comp=Z,0.2nm,0.4s
FINES FINESS Array B 64.98 354 P **P** **15 02 06.2 -0.7**
comp=Z,1.1nm,0.7s,baz=353,slow=7.7,SNR=5.3
comp=Z,1.1nm,0.7s
HFS Hagfors 66.70 0 P **P** **15 02 17.1 -0.9**
comp=Z,2.2nm,0.8s,baz=12,slow=3.1,SNR=7.3
comp=Z,2.2nm,0.8s
CMAR Chiang Mai Arr 78.34 285 P **P** **15 03 28.5 +0.7**
comp=Z,3.3nm,1.1s,baz=18,slow=5.4,SNR=17
comp=Z,3.3nm,1.1s
BRTR Keskin Array B 85.60 345 P **P** **15 04 06.4 +0.6**
comp=Z,1.1nm,0.8s,baz=22,slow=4.0,SNR=3.7
comp=Z,1.1nm,0.8s
WRA Warramunga Arr 89.35 234 P **P** **15 04 23.9 +0.1**
comp=Z,1.0nm,1.2s,baz=24,slow=5.3,SNR=2.1
comp=Z,1.0nm,1.2s
ASAR Alice Springs 92.73 233 P **P** **15 04 39.9 +0.5**
comp=Z,0.3nm,0.8s,baz=22,slow=6.0,SNR=2.2
comp=Z,0.3nm,0.8s
H03N2 Juan Fernandez 114.46 113 T T 17 14 53.5
baz=321,slow=77,SNR=60
H03N1 Juan Fernandez 114.47 113 T T 17 15 03.3
baz=321,slow=77,SNR=133
H03N3 Juan Fernandez 114.47 113 T T 17 15 02.2
baz=321,slow=77,SNR=127

PDG ***29*** *14:52:22.7±0.4, 41°.55N×19°.69E, h15km, ML2.6/11, Error ellipse: s-maj=1.4km s-min=1.8km az=0.0*
TIR ***29*** *14:52:23.3, 41°.53N×19°.65E, h2km±4km, Md2.4/2, Ml2.3/5*
SKO ***29*** *14:52:23.0, 41°.40N×19°.56E, h10km, ML2.3*
BEO ***29*** *14:52:23.3±0.3, 41°.49N×19°.72E, h0km, ML2.2/12*

ISC 29 14:52:22.8±1.1, 41°.52N±0°.03×19°.65E±0°.02, h8km±9km, n43, σ1s05/82, 5C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**136**	Pg		**Pg**		**14 52 27.1**	**-0.3**
TIR				Sg		**Sg**		**14 52 30.2**	**-0.4**
TIR				AMl				14 52 31.4	
	5.8nm,0.5s								
TIR				AMl				14 52 31.6	
	2.8nm,0.4s								
ULC	**Ulcinj**	**0.54**	**326**	⇓*i*Pg		**Pg**		**14 52 32.3**	**-0.9**
ULC				*i* Sg		**Sg**		**14 52 42.0**	**+1.7**
SDA	**Shkodra**	**0.55**	**348**	Pg		**Pg**		**14 52 32.7**	**-0.7**
SDA				Sg		**Sb**		**14 52 42.5**	**-0.2**
SDA				AMl				14 52 46.6	
	0.6nm,0.2s								
SDA				AMd				14 53 11.7	
PHP	**Peshkopia**	**0.62**	**74**	Pg		**Pb**		**14 52 35.6**	**-0.3**
PHP				Sg		**Sb**		**14 52 44.7**	**0.0**
PHP				AMl				14 52 49.9	
	0.4nm,0.3s								
PHP				AMd				14 53 09.0	
DRME	**Dracevica, Mon**	**0.76**	**333**	⇓*i*Pg		**Pg**		**14 52 36.4**	**-0.9**
DRME				*e*Sg		**Sg**		**14 52 48.3**	**+1.2**
OHR	**Ohrid**	**0.96**	**115**	*i* Pg		**Pg**		**14 52 40.6**	**-0.5**
OHR				*i* Sg		**Sn**		**14 52 55.9**	**-0.5**
OHR				*e*Lg		Lg		14 52 56.5	
	comp=N,53nm,0.4s								
OHR				*e*Lg		Lg		14 52 57.6	
	comp=E,58nm,0.5s								
PDG	**Podgorica**	**0.96**	**342**	Sn		**Sn**		**14 52 56.5**	**+0.1**
PDG				AMl				14 53 01.7	
	comp=E,2μm,0.2s								
PDG	**Podgorica**	**0.96**	**342**	⇑*i*Pg		**Pg**		**14 52 39.6**	**-1.6**
PDG				*i* Sg		**Sb**		**14 52 55.4**	**+0.9**
PDG	**Podgorica**	**0.96**	**342**	*e*Pg		**Pb**		**14 52 42.0**	**+0.3**
PDG				*e*Sg		**Sb**		**14 52 55.1**	**+0.6**
BUM	**Brajici-Budva**	**0.97**	**325**	⇓*i*Pg		**Pg**		**14 52 41.3**	**0.0**
BUM				*i* Sg		**Sn**		**14 52 56.4**	**-0.3**
PVY	**Plav**	**1.10**	**12**	⇑*i*Pg		**Pg**		**14 52 41.7**	**-2.3**
PVY				*i* Sg		**Sn**		**14 52 59.6**	**-0.6**
PVY	**Plav**	**1.10**	**12**	*e*Pg		**Pg**		**14 52 42.9**	**-1.1**
PVY				*e*Sg		**Sn**		**14 52 59.3**	**-0.9**
CEME	**Cevo**	**1.17**	**332**	⇑*i*Pg		**Pb**		**14 52 44.0**	**-1.2**
CEME				*e*Sg		**Sn**		**14 53 02.5**	**+0.9**
HCY	**Herceg Novi**	**1.27**	**318**	⇓*i*Pg		**Pn**		**14 52 46.2**	**-0.6**
HCY				*i* Sg		**Sg**		**14 53 06.1**	**+2.5**
KOME	**Kolasin**	**1.34**	**356**	⇑*i*Pg		**Pn**		**14 52 47.7**	**-0.2**
KOME				*e*Sg		**Sg**		**14 53 07.3**	**+1.4**
KOME	**Kolasin**	**1.34**	**356**	*e*Pg		**Pg**		**14 52 48.8**	**+0.4**
KOME				*e*Sg		**Sg**		**14 53 07.2**	**+1.4**
NKME	**Niksic**	**1.35**	**338**	⇓*i*Pg		**Pn**		**14 52 48.1**	**+0.1**
NKME				*e*Sg		**Sg**		**14 53 07.5**	**+1.2**
BEY	**Berane**	**1.37**	**8**	*e*Pg		**Pn**		**14 52 47.5**	**-0.8**
BEY				*e*Sg		**Sg**		**14 53 07.3**	**+0.5**
IVA	**Berane**	**1.37**	**8**	⇓*i*Pg		**Pn**		**14 52 47.2**	**-1.1**
IVA				*i* Sg		**Sg**		**14 53 07.4**	**+0.6**
SKO	**Skopje**	**1.42**	**71**	*e*Pn		**Pb**		**14 52 49.5**	**0.0**
SKO				*e*Sn		**Sg**		**14 53 08.8**	**+0.5**
TREB	**Trebinje**	**1.54**	**322**	*e*Pg		**Pb**		**14 52 51.7**	**+0.1**
TREB				*e*Sg		**Sb**		**14 53 11.9**	**+0.6**
DBRK	**Dubrovnik**	**1.61**	**316**	*e*Pn		**Pn**		**14 52 51.8**	**+0.4**
DBRK				Sg		**Sn**		**14 53 12.5**	**+0.1**
BRY	**Bratogost**	**1.61**	**330**	⇑*i*Pn		**Pn**		**14 52 52.1**	**+0.4**
BRY				*i* Sn		**Sb**		**14 53 14.1**	**+0.7**
SJES	**Sjenica**	**1.76**	**8**	*e*Pn		**Pb**		**14 52 55.4**	**0.0**
SJES				*e*Sn		**Sg**		**14 53 19.8**	**+0.4**
STON	**Ston**	**1.98**	**314**	*e*Pn		**Pn**		**14 52 57.3**	**+0.7**
STON				Sn		**Sn**		**14 53 20.4**	**-1.2**
SELS	**Selova**	**2.02**	**32**	*e*Pn		**Pn**		**14 52 58.0**	**+0.8**
SELS				*e*Sn		**Sb**		**14 53 24.2**	**-0.9**
IGT	**Igoumenitsa**	**2.05**	**165**	*e*Pn		**Pn**		**14 52 58.1**	**+0.6**
IGT				*e*Sn		**Sn**		**14 53 24.7**	**+1.4**
BARS	**Barje**	**2.07**	**50**	*e*Pn		**Pn**		**14 52 59.0**	**+1.2**
BARS				*e*Sn		**Sb**		**14 53 24.8**	**-1.7**
IVAS	**Ivanjica**	**2.09**	**10**	*e*Pn		**Pn**		**14 52 58.9**	**+0.7**
IVAS				*e*Sn		**Sb**		**14 52 27.6**	**+0.4**
RUDO	**Rudo**	**2.11**	**355**	*e*Pn		**Pb**		**14 53 00.5**	**-0.8**
RUDO				*e*Sn		**Sb**		**14 53 28.3**	**+0.6**
VAY	**Valandovo**	**2.21**	**94**	*e*Pn		**Pn**		**14 53 00.3**	**+0.6**
VAY				*e*Sn		**Sb**		**14 53 29.4**	**-1.0**
VAY				*e*Lg		Lg		14 53 37.2	
	comp=E,10nm,0.6s								
GOCS	**Kraljevo Serbi**	**2.24**	**23**	*e*Pn		**Pn**		**14 53 01.0**	**+0.8**
GOCS				*e*Sn		**Sb**		**14 53 29.9**	**-1.5**
BOSS	**Bosilegrad**	**2.33**	**64**	*e*Pn		**Pn**		**14 53 01.9**	**+0.5**
BOSS				*e*Sn		**Sn**		**14 53 30.6**	**+0.4**
BBLS	**Lazi&#263i**	**2.36**	**356**	*e*Pn		**Pb**		**14 53 04.3**	**-1.2**
BBLS				*e*Sn		**Sb**		**14 53 33.7**	**-1.1**
LSTV	**Lastovo**	**2.40**	**302**	*e*Pn		**Pn**		**14 53 00.3**	**-2.1**
LSTV				Sn		**Sn**		**14 53 29.8**	**-2.2**
GRUS	**Gruza**	**2.50**	**18**	*e*Pn		**Pn**		**14 53 05.5**	**+1.8**
GRUS				*e*Sn		**Sb**		**14 53 37.8**	**-1.0**
DIVS	**Divibare**	**2.59**	**5**	*e*Pn		**Pn**		**14 53 07.0**	**+1.9**
RICI	**Ricice**	**2.71**	**318**	*i* Pn		**Pn**		**14 53 06.8**	**+0.1**
RICI				Sn		**Sn**		**14 53 39.8**	**+0.1**
TRUS	**Trudelj**	**2.76**	**11**	*e*Pn		**Pn**		**14 53 09.5**	**+2.1**
ZAPS	**Zavoj**	**2.83**	**51**	*e*Pn		**Pn**		**14 53 09.3**	**+1.1**
ZAPS				*e*Sn		**Sn**		**14 53 43.2**	**+0.7**
ZAGS	**Zajecar**	**2.98**	**39**	*e*Pn		**Pn**		**14 53 11.6**	**+1.2**
ZAGS				*e*Sn		**Sn**		**14 53 47.6**	**+1.3**
TEKS	**Tekeris**	**3.03**	**358**	*e*Pn		**Pn**		**14 53 12.8**	**+1.7**
KUBS	**Kucevo**	**3.26**	**27**	*e*Pn		**Pn**		**14 53 13.8**	**-0.3**
KUBS				*e*Sn		**Sn**		**14 53 52.9**	**-0.2**

IDC ***29*** *15:43:24.7±2.2, 1°.77S×135°.55E, h0km, mb3.2/2, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=49.2km s-min=25.9km az=64.0*
DJA ***29*** *15:43:24.3±0.3, 2°.5S×13°.6E±°, h10km, M3.9/12, mb3.7/2, MLv4.0/12*

ISC 29 15:43:24.8±0.8, 1°.69S±0°.06×135°.70E±0°.04, h21km, n11, σ2s87/17, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.57**	**109**	P		**Pn**		**15 43 37.3**	**-0.4**
SRPI				S		**Sn**		**15 43 47.4**	**+1.0**
BAKI	**Biak**	**0.64**	**40**	P		**Pb**		**15 43 36.4**	**-0.9**
BAKI				S		**Sb**		**15 43 45.1**	**-0.8**
RKPI	**Ransiki, Papua**	**1.53**	**277**	P		**Pn**		**15 43 50.2**	**-0.8**
RKPI				S		**Sn**		**15 44 10.2**	**-0.1**
MWPI	**Manokwari, Pap**	**1.82**	**294**	P		**Pn**		**15 43 53.6**	**-1.3**
KMPI	**Kaimana, Papua**	**2.80**	**225**	P		**Pn**		**15 44 11.1**	**+2.7**
SIJI	**Sorong**	**4.51**	**280**	Pn		**Pn**		**15 44 31.6**	**-0.3**
	1.3nm,0.3s,baz=107,slow=19,SNR=13								
SIJI				Sn		**Sn**		**15 45 23.6**	**-0.1**
	0.9nm,0.3s,baz=30,slow=20,SNR=1.3								
	3.1nm,0.3s								
SIJI	**Sorong**	**4.51**	**280**	P		**Pn**		**15 44 31.1**	**-0.8**
SWI	**Sorong**	**4.51**	**280**	P		**Pn**		**15 44 31.8**	**-0.2**
WRA	**Warramunga Arr**	**18.19**	**184**	P		**Pn**		**15 47 35.9**	**-0.3**
	0.1nm,0.3s,baz=7.5,slow=12,SNR=6.6								
WRA				S		**Sn**		**15 50 49.9**	**-9.0**
	0.4nm,0.8s,baz=8.8,slow=23,SNR=4.5								
	0.5nm,0.7s								
ASAR	**Alice Springs**	**21.92**	**184**	P		**P**		**15 48 19.8**	**+2.8**
	0.5nm,0.6s,baz=10,slow=11,SNR=23								
ASAR				S		**S**		**15 52 17.3**	**-0.9**
	0.1nm,0.7s,baz=2.2,slow=26,SNR=0.8								
	0.5nm,0.6s								
MKAR	**Makanchi Array**	**67.16**	**323**	P		**P**		**15 54 20.8**	**+3.5**
	0.1nm,0.4s,baz=124,slow=7.7,SNR=4.3								
	0.1nm,0.4s								

VAO ***29*** *15:45:17.9±0.9, 25°.95S×69°.49W, h10km, mb4.3, Presumed earthquake*
SJA ***29*** *15:45:26.3±0.6, 25°.85S×69°.37W, h118km±7km, ML4.3, MW4.1*
NEIC ***29*** *15:45:27.8±2.0, 25°.826S±0°.009×69°.38W±0°.06, h108km±5km, mb4.3/30, ML4.4(GUC), Error ellipse: s-maj=8.5km s-min=1.0km az=94.0*
GUC ***29*** *15:45:28.2±0.9, 25°.84S×69°.35W, h107km±6km, ML4.4*
IDC ***29*** *15:45:29.0±0.6, 25°.80S×69°.10W, h105km±4km, mb3.9/9, mbtmp4.2/13, MS3.2/3, Error ellipse: s-maj=20.0km s-min=15.6km az=59.0*

ISC 29 15:45:27.0±0.5, 25°.87S±0°.03×69°.34W±0°.04, h103km±4km, n175, σ1s62/186, mb4.3/20, 9C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.74**	**342**			**Pn**		**15 45 46.3**	**+0.9**
GO02				Sn		**Sn**		**15 46 00.1**	**+0.9**
GO02	**Mina Guanaco**	**0.74**	**342**	*i* P		**Pn**		**15 45 46.2**	**+0.9**
GO02				*e*S		**Sn**		**15 46 00.0**	**+0.9**
GO02				IAML				15 46 01.4	
	comp=E,21μm,0.2s								
GO02	**Mina Guanaco**	**0.74**	**342**	*e*P		Pn		15 45 31.6	-14
GO02				IAML				15 46 01.8	
	comp=Z,10μm,0.5s								
AC02	**Maricunga**	**0.98**	**169**			**Pn**		**15 45 50.1**	**+2.0**
AC02				Sn		**Sn**		**15 46 05.8**	**+2.1**
AC02	**Maricunga**	**0.98**	**169**	⇓*i*P		**Pn**		**15 45 50.0**	**+2.0**
AC02				*e*S		**Sn**		**15 46 05.6**	**+1.9**
AC02				IAML				15 46 07.9	
	comp=N,6μm,0.2s								
AC02	**Maricunga**	**0.98**	**169**	*e*P		**Pn**		**15 45 49.2**	**+1.2**
AC02				IAML				15 46 10.0	
	comp=Z,2μm,0.8s								
AC01	**Pan de Azucar**	**1.16**	**256**			**Pn**		**15 45 51.0**	**+1.5**
AC01				Sn		**Sn**		**15 46 08.0**	**+1.6**
AC01	**Pan de Azucar**	**1.16**	**256**	*i* P		**Pn**		**15 45 50.9**	**+1.5**
AC01				*e*S		**Sn**		**15 46 08.2**	**+1.8**
AC01				IAML				15 46 09.2	
	comp=E,5μm,0.2s								
AC01	**Pan de Azucar**	**1.16**	**256**	*e*P		**Pn**		**15 45 51.0**	**+1.5**
AC01				*e*S		**Sn**		**15 46 09.1**	**+2.7**
AC01				IAML				15 46 09.8	
	comp=Z,2μm,0.4s								
PB14	**IPOC Station P**	**1.56**	**322**			**Pn**		**15 45 55.9**	**+1.4**
PB14	**IPOC Station P**	**1.56**	**322**	*i* P		**Pn**		**15 45 56.0**	**+1.5**
PB14				*e*S		**Sn**		**15 46 16.9**	**+1.6**
PB14	**IPOC Station P**	**1.56**	**322**	*e*P		**Pn**		**15 45 55.5**	**+1.0**
PB14				*e*S		**Sn**		**15 46 17.4**	**+2.0**
PB14				IAML				15 46 18.2	
	comp=Z,2μm,0.9s								
AC06	**Mina Casimiro**	**1.74**	**211**			**Pn**		**15 45 57.8**	**+1.4**
AC06				Sn		**Sn**		**15 46 20.0**	**+1.3**
AC06	**Mina Casimiro**	**1.74**	**211**	⇑*i*P		**Pn**		**15 45 57.8**	**+1.4**
GO03	**Copiapo**	**1.90**	**205**			**Pn**		**15 45 59.9**	**+1.5**
GO03	**Copiapo**	**1.90**	**205**	⇑*i*P		**Pn**		**15 45 59.9**	**+1.5**
GO03				*e*S		**Sn**		**15 46 21.9**	**-0.5**
GO03				IAML				15 46 30.6	
	comp=E,3μm,0.1s								
GO03	**Copiapo**	**1.90**	**205**	*e*P		**Pn**		**15 45 59.5**	**+1.0**
GO03				*e*S		**Sn**		**15 46 25.4**	**+3.1**
GO03				IAML				15 46 27.1	
	comp=Z,881nm,0.6s								
TINO	**Tinogasta**	**2.70**	**144**	*e*P		**Pn**		**15 46 10.5**	**+1.5**
AC04	**Llanos de Chal**	**2.79**	**213**			**Pn**		**15 46 10.5**	**+0.4**
AC04	**Llanos de Chal**	**2.79**	**213**	*e*P		**Pn**		**15 46 10.5**	**+0.4**
AC04				IAML				15 47 08.0	
	comp=N,865nm,0.6s								
AC04	**Llanos de Chal**	**2.79**	**213**	*e*P		**Pn**		**15 46 09.9**	**-0.2**
AC04				*e*S		**Sn**		**15 46 38.5**	**-4.8**
AC04				IAML				15 46 55.5	
	comp=Z,535nm,0.8s								
VCA	**Vinchina**	**3.03**	**161**	⇑*e*P		**Pn**		**15 46 16.7**	**+3.3**
VCA	**Vinchina**	**3.03**	**161**	*e*P		**Pn**		**15 46 11.4**	**-1.9**
VCA				*e*S		**Sn**		**15 46 48.9**	**-0.3**
VCA				IAML				15 46 52.9	
	comp=Z,260nm,1.0s								
FSA	**Cafayete**	**3.04**	**95**	*e*P		**Pn**		**15 46 15.5**	**+2.0**
FSA				*e*S		Sn		15 46 34.8	-14
AC05	**El Transito**	**3.07**	**195**			**Pn**		**15 46 15.2**	**+1.3**
AC05	**El Transito**	**3.07**	**195**	⇑*i*P		**Pn**		**15 46 15.3**	**+1.5**
AC05				IAML				15 47 00.0	
	comp=E,1μm,0.3s								
AC05	**El Transito**	**3.07**	**195**	*e*P		**Pn**		**15 46 15.4**	**+1.5**
AC05				*e*S		Sn		15 46 39.5	-11
AC05				IAML				15 46 57.0	
	comp=Z,623nm,0.6s								
AF01	**San Pedro de A**	**3.09**	**20**			**Pn**		**15 46 15.9**	**+1.6**
AF01	**San Pedro de A**	**3.09**	**20**	*e*P		**Pn**		**15 46 16.0**	**+1.6**
AF01	**San Pedro de A**	**3.09**	**20**	*e*P		**Pn**		**15 46 14.8**	**+0.5**
AF01				*e*S		Sn		15 46 39.1	-12
AF01				IAML				15 47 13.7	
	comp=Z,978nm,0.4s								
PB05	**IPOC Station P**	**3.10**	**345**			**Pn**		**15 46 14.0**	**-0.4**
PB05	**IPOC Station P**	**3.10**	**345**	⇑*i*P		**Pn**		**15 46 14.2**	**-0.1**
PB05				IAML				15 47 01.7	
	comp=E,847nm,0.5s								
PB05	**IPOC Station P**	**3.10**	**345**	*e*P		**Pn**		**15 46 14.3**	**-0.1**
PB05				*e*S		Sn		15 46 37.3	-13
PB05				IAML				15 47 02.3	
	comp=Z,607nm,0.4s								
PB06	**IPOC Station P**	**3.15**	**356**			**Pn**		**15 46 15.5**	**+0.5**
PB06	**IPOC Station P**	**3.15**	**356**	⇑*i*P		**Pn**		**15 46 15.5**	**+0.5**
PB06				IAML				15 47 01.6	
	comp=N,809nm,0.2s								
PB06	**IPOC Station P**	**3.15**	**356**	*e*P		**Pn**		**15 46 15.6**	**+0.5**
PB06				*e*S		**Sn**		**15 46 52.3**	**+0.2**
PB06				IAML				15 47 04.7	
	comp=Z,590nm,0.3s								
SALTA		**3.18**	**60**	*e*P		**Pn**		**15 46 17.4**	**+1.8**
LCO	**Las Campanas**	**3.36**	**201**			**Pn**		**15 46 18.4**	**+0.6**
LCO	**Las Campanas**	**3.36**	**201**	*i* P		**Pn**		**15 46 18.2**	**+0.4**
LCO	**Las Campanas**	**3.36**	**201**	*e*P		**Pn**		**15 46 18.7**	**+0.9**
LCO				*e*S		Sn		15 46 42.2	-15
LCO				IAML				15 46 48.0	
	comp=Z,1μm,0.5s								
PB03	**IPOC Station P**	**3.82**	**354**			**Pn**		**15 46 23.6**	**-0.4**
PB03	**IPOC Station P**	**3.82**	**354**	⇑*i*P		**Pn**		**15 46 23.6**	**-0.4**
PB03	**IPOC Station P**	**3.82**	**354**	*e*P		**Pn**		**15 46 23.6**	**-0.4**
PB03				*e*S		**Sn**		**15 47 08.0**	**-0.1**
PB03				IAML				15 47 17.6	
	comp=Z,496nm,0.3s								
PB09	**IPOC Station P**	**4.05**	**1**			**Pn**		**15 46 27.3**	**+0.2**
PB09	**IPOC Station P**	**4.05**	**1**	*i* P		**Pn**		**15 46 27.6**	**+0.4**
PB09	**IPOC Station P**	**4.05**	**1**	*e*P		**Pn**		**15 46 27.9**	**+0.7**
PB09				*e*S		Sn		15 46 57.9	-16
PB09				IAML				15 47 39.1	
	comp=Z,467nm,0.9s								
ACLC	**CERRO LA CRUZ**	**4.13**	**150**	*e*P		**Pn**		**15 46 30.2**	**+2.1**
CO01	**Juntas del Tor**	**4.15**	**189**			**Pn**		**15 46 30.0**	**+1.6**
CO01	**Juntas del Tor**	**4.15**	**189**	*e*P		**Pn**		**15 46 30.4**	**+2.0**
CO01	**Juntas del Tor**	**4.15**	**189**	*e*P		**Pn**		**15 46 30.4**	**+2.0**
CO01				*e*S		Sn		15 46 58.6	-17
CO01				IAML				15 47 39.0	
	comp=Z,111nm,0.4s								
PB07	**IPOC Station P**	**4.15**	**353**			**Pn**		**15 46 27.5**	**-1.0**
PB07	**IPOC Station P**	**4.15**	**353**	⇑*i*P		**Pn**		**15 46 27.5**	**-1.0**
PB07	**IPOC Station P**	**4.15**	**353**	*e*P		**Pn**		**15 46 27.8**	**-0.7**
PB07				*e*S		**Sn**		**15 47 13.8**	**-2.3**
PB07				IAML				15 47 47.6	
	comp=Z,396nm,0.4s								
AROD	**Rodeo**	**4.29**	**182**	*e*P		**Pn**		**15 46 33.2**	**+2.9**
CO05	**La Serena**	**4.37**	**202**			**Pn**		**15 46 30.3**	**-0.9**
CO05	**La Serena**	**4.37**	**202**	*e*P		**Pn**		**15 46 30.3**	**-0.9**
GO04	**Tololo Observa**	**4.48**	**196**			**Pn**		**15 46 32.6**	**-0.2**
GO04	**Tololo Observa**	**4.48**	**196**	*e*P		**Pn**		**15 46 32.7**	**-0.2**
GO04	**Tololo Observa**	**4.48**	**196**	*e*P		**Pn**		**15 46 33.0**	**+0.1**
GO04				*e*S		Sn		15 47 35.7	+12
GO04				IAML				15 47 55.8	
	comp=Z,556nm,0.5s								
PB02	**IPOC Station P**	**4.55**	**353**			**Pn**		**15 46 32.6**	**-1.3**
PB02	**IPOC Station P**	**4.55**	**353**	*e*P		**Pn**		**15 46 32.8**	**-1.1**
PB02	**IPOC Station P**	**4.55**	**353**	*e*P		**Pn**		**15 46 32.9**	**-0.9**
PB02				*e*S		**Sn**		**15 47 24.5**	**-1.3**
PB02				IAML				15 47 46.6	
	comp=Z,631nm,0.4s								
ACCO	**Cerro Coronel**	**4.71**	**177**	*e*P		**Pn**		**15 46 38.2**	**+2.1**
ACCO				*e*S		Sn		15 47 12.3	-17
PB01	**IPOC Station P**	**4.80**	**358**			**Pn**		**15 46 36.0**	**-1.3**
PB01	**IPOC Station P**	**4.80**	**358**	⇑*i*P		**Pn**		**15 46 36.3**	**-0.8**
PB01	**IPOC Station P**	**4.80**	**358**	*e*P		**Pn**		**15 46 36.4**	**-0.8**
PB01				*e*S		**Sn**		**15 47 30.6**	**-1.1**
PB01				IAML				15 47 31.9	
	comp=Z,258nm,0.2s								
AVFE	**Valle Fertil**	**5.06**	**161**	*e*P		**Pn**		**15 46 41.8**	**+1.3**
AVFE				IAML				15 48 12.9	
	comp=Z,68nm,0.4s								
YJA	**Yavi**	**5.08**	**44**	*e*P		**Pn**		**15 46 43.2**	**+2.0**
YJA	**Yavi**	**5.08**	**44**	*e*P		**Pn**		**15 46 43.6**	**+2.4**
CO03	**El Pedregal**	**5.09**	**193**			**Pn**		**15 46 40.7**	**-0.4**
CO03	**El Pedregal**	**5.09**	**193**	*e*P		**Pn**		**15 46 41.2**	**+0.1**
CO03				IAML				15 48 05.7	
	comp=Z,145nm,1.2s								
CO06	**Fray Jorge**	**5.20**	**202**			**Pn**		**15 46 40.6**	**-1.8**
CO06	**Fray Jorge**	**5.20**	**202**	*e*P		**Pn**		**15 46 40.5**	**-1.9**
CO02	**Combarbal**	**5.51**	**195**			**Pn**		**15 46 45.6**	**-1.1**
HMBC	**Humberstone**	**5.58**	**355**			**Pn**		**15 46 45.4**	**-2.5**
ZON	**Zonda**	**5.69**	**174**			**Pn**		**15 46 49.0**	**-0.1**
PB08	**IPOC Station P**	**5.70**	**2**			**Pn**		**15 46 48.2**	**-1.5**
CFA	**Coronel Fontan**	**5.80**	**171**	P		**Pn**		**15 46 51.2**	**+0.6**
	comp=Z,16nm,0.3s,baz=353,slow=13,SNR=77								
CFA				S		**Sn**		**15 47 53.0**	**-2.8**
	comp=Z,22nm,0.5s,baz=68,slow=19,SNR=6.9								
PB11	**IPOC Station P**	**6.08**	**357**			**Pn**		**15 46 52.4**	**-2.2**
CO04	**Los Peladeros**	**6.32**	**193**			**Pn**		**15 46 56.0**	**-1.8**
VA06	**Catapilco**	**6.88**	**194**			**Pn**		**15 47 03.1**	**-2.2**
VA03	**San Esteban**	**6.95**	**188**			**Pn**		**15 47 04.9**	**-1.4**
PB12	**IPOC Station P**	**7.28**	**353**			**Pn**		**15 47 07.2**	**-3.6**
PEL	**Peldehue**	**7.34**	**189**			**Pn**		**15 47 10.1**	**-1.5**
VA01	**Torpederas**	**7.41**	**195**	Pn		**Pn**		**15 47 10.9**	**-1.5**
PB16	**IPOC Station P**	**7.50**	**359**			**Pn**		**15 47 11.9**	**-2.4**
MT02	**Curacav**	**7.53**	**192**			**Pn**		**15 47 11.2**	**-2.9**
MT08	**Bocatoma Ro**	**7.58**	**184**			**Pn**		**15 47 12.6**	**-2.3**
MT03	**Universidad Ad**	**7.67**	**187**			**Pn**		**15 47 13.2**	**-2.8**
MT13	**San Alfonso**	**7.89**	**186**			**Pn**		**15 47 17.5**	**-1.6**
MT09	**Talagante**	**8.01**	**190**			**Pn**		**15 47 17.9**	**-2.9**
MT01	**Popeta**	**8.14**	**191**			**Pn**		**15 47 19.4**	**-3.0**
BO04	**La Punta**	**8.17**	**187**			**Pn**		**15 47 21.0**	**-1.8**
PB18	**Visviri**	**8.24**	**359**			**Pn**		**15 47 22.8**	**-1.5**
BO01	**Tunca**	**8.63**	**190**			**Pn**		**15 47 25.8**	**-3.2**
BO02	**Sierra Bellavi**	**8.98**	**188**			**Pn**		**15 47 31.1**	**-2.8**
GO05	**Hualane**	**9.38**	**193**	Pn		Pn		15 47 35.0	-4.3
LPAZ	**La Paz**	**9.60**	**7**

ULM	**Lac du Bonnet**	**79.35**	**343**	P	**P**	**15 57 22.7**	**+1.6**
YHL	**Hebgen Lake**	**80.07**	**331**	IAmb	IAmb	15 57 30.7	
	comp=Z,8.1nm,1.4s						
HLID	**Hailey**	**80.53**	**329**	IAmb	IAmb	15 57 32.6	
	comp=Z,4.7nm,0.9s						
RAR	**Rarotonga**	**81.39**	**251**	LR	LR	16 24 27.9	
	comp=Z,80nm,21.8s,baz=214,slow=29						
PLID	**Pearl Lake**	**82.43**	**329**		**P**	**15 57 37.0**	**-0.9**
PLID				IAmb	IAmb	15 57 41.4	
	comp=Z,4.7nm,0.8s						
YKA	**Yellowknife Ar**	**95.16**	**341**	P	**P**	**15 58 39.3**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=143,slow=3.4,SNR=7.9						
	comp=Z,0.3nm,0.6s						
F31M	**Tsiigehtchic**	**104.48**	**339**		**Pdif**	**15 59 15.4**	**-4.4**
ASAR	**Alice Springs**	**125.86**	**207**	PKP	**PKiKP**	**16 04 18.4**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=132,slow=1.8,SNR=7.8						
ASAR				pPKP	**pPKPdf**	**16 04 46.8**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=141,slow=1.6,SNR=2.8						
H11S2	**WAKE ISLAND Hy**	**27.90**	**274**	T	T	18 24 40.1	
	baz=108,slow=75,SNR=6.4						
H11S1	**WAKE ISLAND Hy**	**27.91**	**274**	T	T	18 24 42.7	
	baz=108,slow=75,SNR=5.6						
H11S3	**WAKE ISLAND Hy**	**27.92**	**274**	T	T	18 24 38.6	
	baz=108,slow=75,SNR=5.5						
KURK	**Kurchatov**	**145.13**	**36**		**PKPdf**	**16 04 53.2**	**+1.1**
KURBB	**Kurchatov Arra**	**145.13**	**36**	PKP	**PKPdf**	**16 04 53.8**	**+1.7**
	comp=Z,4.3nm,0.7s,baz=300,slow=3.6,SNR=15						
ZAA0	**Zalesovo Array**	**146.03**	**27**		**PKPab**	**16 04 55.4**	**+0.2**
ZALV	**Zalesovo Beam**	**146.03**	**27**	PKPbc	**PKPab**	**16 04 55.8**	**+0.5**
	comp=Z,9.4nm,0.7s,baz=304,slow=3.7,SNR=51						
ZALV				pPKPbc	**pPKPdf**	**16 05 23.9**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=300,slow=3.3,SNR=4.9						
ZALV	**Zalesovo Beam**	**146.03**	**27**		**PKPab**	**16 04 55.5**	**+0.3**
LEM	**Lembang**	**147.37**	**174**	PKPbc	**PKPab**	**16 05 02.2**	**+0.5**
	comp=Z,17nm,0.7s,baz=142,slow=20,SNR=5.3						
LEM				pPKPbc	**pPKPbc**	**16 05 29.6**	**+0.7**
	comp=Z,14nm,0.6s,baz=143,slow=20,SNR=1.7						
MAKZ	**Makanchi**	**149.12**	**40**		**PKiKP**	**16 05 04.3**	**-0.2**
MKAR	**Makanchi Array**	**149.31**	**40**	PKPbc	**PKiKP**	**16 05 05.4**	**+0.6**
	comp=Z,5.5nm,0.7s,baz=307,slow=2.9,SNR=38						
MKAR				pPKPbc	**pPKPbc**	**16 05 33.7**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=308,slow=2.7,SNR=7.1						
MKAR	**Makanchi Array**	**149.31**	**40**	PKPdf	**PKPdf**	**16 04 56.2**	**-3.1**
MKAR					**PKiKP**	**16 05 05.1**	**+0.2**
SONM	**Songino Array**	**157.82**	**8**	PKPab	**PKPab**	**16 05 46.1**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=336,slow=3.2,SNR=2.4						
HHC	**Hu-ho-hao-te**	**165.04**	**357**	*eP*	**PKPdf**	**16 05 19.0**	**-0.2**

*IDC **29** 15:54:26.5±1.0,2˚.00N×128˚.23E, h0km, mb3.9/6, mbtmp4.0/7, ML4.0/1, MS2.7/1, Error ellipse: s-maj=62.0km s-min=16.1km az=67.0*
*DJA **29** 15:54:34.6±0.3,2˚.N±2˚×12˚.8E±˚, h29km±3km, M4.2/19, mB4.9/3, mb4.4/9, MLv4.1/19, Mw(mB)4.2/3*
ISC 29 15:54:36.9±0.9,**1˚.9N**±0.1˚×**128˚.43E**±0.09˚,**h92**km,**n25,** σ**1s41**/21,**mb3.8**/6,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.51**	**225**	P	**Pn**	**15 55 00.9**	**-2.0**
MNI	**Manado**	**3.62**	**264**	P	**Pn**	**15 55 28.6**	**-2.2**
SWI	**Sorong**	**3.90**	**134**	P	**Pn**	**15 55 33.2**	**-1.4**
SIJI	**Sorong**	**3.91**	**134**	Pn	**Pn**	**15 55 33.1**	**-1.6**
	8.8nm,0.3s,baz=317,slow=9.1,SNR=36						
SIJI				Sn	**Sn**	**15 56 17.3**	**-2.3**
	3.8nm,0.3s,baz=331,slow=18,SNR=12						
SIJI				LR	LR	15 57 28.2	
	comp=Z,103nm,21.8s,baz=304,slow=44						
	21nm,0.2s						
SIJI	**Sorong**	**3.91**	**134**	P	**Pn**	**15 55 33.0**	**-1.8**
SANI	**Sanana**	**4.58**	**212**	P	**Pn**	**15 55 42.3**	**-1.5**
GTOI	**Gorontalo**	**5.55**	**258**	P	**Pn**	**15 55 57.4**	**+0.3**
	0.2nm36nm,0.5s						
LUWI	**Luwuk**	**6.35**	**243**	P	**Pn**	**15 56 07.5**	**-0.4**
	0.2nm1µm42nm,1.2s						
MRSI	**Marisa**	**6.63**	**258**	P	**Pn**	**15 56 10.9**	**-0.9**
APSI	**Ampana**	**7.32**	**248**	P	**Pn**	**15 56 20.5**	**-0.6**
	723nm18nm,0.4s						
BAKI	**Biak**	**8.24**	**111**	P	**Pn**	**15 56 34.5**	**+0.7**
	24nm,1.1s						
MPSI	**Mapaga**	**8.66**	**260**	P	**Pn**	**15 56 38.1**	**-1.4**
FITZ	**Fitzroy Crossi**	**20.01**	**188**	P	**P**	**15 59 03.7**	**+1.3**
	5.4nm,1.0s,baz=18,slow=9.6,SNR=1.6						
	5.4nm,1.0s						
WRA	**Warramunga Arr**	**22.42**	**165**	P	**P**	**15 59 29.0**	**+0.8**
	2.1nm,0.6s,baz=345,slow=10.0,SNR=25						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**25.91**	**168**	P	**P**	**16 00 01.9**	**+1.4**
	1.6nm,0.7s,baz=352,slow=7.8,SNR=38						
ASAR				PcP	**PcP**	**16 03 27.9**	**+0.5**
	0.3nm,0.6s,baz=354,slow=2.1,SNR=5.5						
	1.6nm,0.7s						
STKA	**Stephens Creek**	**35.79**	**161**	P	**P**	**16 01 28.9**	**+1.5**
	1.6nm,0.4s,baz=348,slow=8.8,SNR=8.8						
	1.6nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**40.98**	**64**	T	T	16 45 38.2	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**40.99**	**64**	T	T	16 45 44.2	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**41.00**	**64**	T	T	16 45 39.0	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**41.57**	**62**	T	T	16 46 19.7	
	baz=249,slow=75						
H11N2	**WAKE ISLAND Hy**	**41.59**	**62**	T	T	16 46 16.5	
	baz=249						
H11N3	**WAKE ISLAND Hy**	**41.59**	**62**	T	T	16 46 27.0	
	baz=249,slow=75						
SONM	**Songino Array**	**49.62**	**341**	P	**P**	**16 03 18.5**	**-0.6**
	0.3nm,0.5s,baz=142,slow=8.2,SNR=2.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**60.06**	**325**	P	**P**	**16 04 34.0**	**-0.3**
	0.9nm,0.4s,baz=118,slow=8.4,SNR=30						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**64.23**	**327**	P	**P**	**16 05 02.2**	**+0.1**
	0.7nm,0.5s,baz=123,slow=5.8,SNR=3.3						

*IDC **29** 15:58:01.3±2.3,5˚.28S×129˚.90E, h214km±30km, mb3.1/1, mbtmp3.6/5, MS2.9/1, Error ellipse: s-maj=53.9km s-min=13.4km az=79.0*
ISC 29 15:58:00.8±1.0,**5˚.38S**±0.07˚×**129˚.9E**±0.2˚,**h200**km,**n6,** σ**2s74**/8,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.68**	**17**	P	**Pn**	**15 59 12.7**	**+1.5**
	3.5nm,0.3s,baz=204,slow=20,SNR=23						
SIJI				S	**Sn**	**16 00 05.3**	**-1.4**
	15nm,0.3s,baz=254,slow=23,SNR=18						
FITZ	**Fitzroy Crossi**	**13.31**	**198**	P	**Pn**	**16 01 03.0**	**+0.9**
	3.2nm,0.8s,baz=15,slow=12,SNR=1.1						
FITZ				S	S	16 03 21.5	-9.2
	2.1nm,0.5s,baz=304,slow=18,SNR=1.1						
WRA	**Warramunga Arr**	**15.10**	**164**	P	**Pn**	**16 01 26.2**	**+1.9**
	0.2nm,0.4s,baz=343,slow=12,SNR=1.3						
WRA				S	**S**	**16 04 07.2**	**-4.9**
	0.6nm,0.5s,baz=342,slow=22,SNR=6.9						
ASAR	**Alice Springs**	**18.58**	**168**	P	**P**	**16 02 04.0**	**+0.9**
	0.7nm,0.5s,baz=346,slow=11,SNR=8.7						
ASAR				S	**S**	**16 05 25.5**	**+1.1**
	0.1nm,0.4s,baz=359,slow=25,SNR=4.4						
MJAR	**Matsushiro Arr**	**42.42**	**10**	LR	LR	16 24 49.7	
	comp=Z,16nm,18.5s,baz=200,slow=38						
MKAR	**Makanchi Array**	**66.83**	**326**	P	**P**	**16 08 29.5**	**-1.6**
	0.3nm,0.4s,baz=131,slow=6.3,SNR=7.1						
	0.3nm,0.4s						

*NEIC **29** 16:03:28.4±1.2,6˚.57S±0.08×127˚.48E±0.08, h399km±8km, mb4.0/20, Error ellipse: s-maj=13.3km s-min=8.7km az=219.0*
*IDC **29** 16:03:29.1±1.2,6˚.72S×127˚.52E, h413km±15km, mb3.1/8, mbtmp4.2/14, Error ellipse: s-maj=17.7km s-min=9.8km az=66.0*
*DJA **29** 16:03:29.9±0.2,7˚.S±2˚×12˚.8E±˚, h394km±4km, M4.3/31, mB4.9/6, mb4.2/24, MLv4.5/31, Mw(mB)4.2/6*
ISC 29 16:03:28.8±0.4,**6˚.63S**±0.05˚×**127˚.53E**±0.05,**h408**km,**n91,** σ**1s25**/100,**mb3.8**/18,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.00**	**13**	P	**P**	**16 04 34.0**	**+1.4**
BNDI	**Bandanaira**	**3.16**	**49**	P	**P**	**16 04 35.1**	**+1.2**
BNDI	**Bandanaira**	**3.16**	**49**	P	**P**	**16 04 34.2**	**+0.3**
BNDI				S	**S**	**16 05 27.9**	**+1.2**
NLAI	**Namlea**	**3.39**	**353**	P	**P**	**16 04 37.8**	**+1.9**
NLAI				S	**S**	**16 05 30.1**	**-0.3**
KRAI	**Karang Ratu**	**3.40**	**15**	P	**P**	**16 04 36.4**	**+0.4**
KRAI				S	**S**	**16 05 29.1**	**-1.4**
MSAI	**Masohi**	**3.55**	**23**	P	**P**	**16 04 37.5**	**+0.3**
MSAI				S	**S**	**16 05 29.4**	**-3.4**
SAUI	**Saumlaki**	**3.97**	**110**		**P**	**16 04 40.9**	**-0.1**
SAUI				Sn	**S**	**16 05 37.8**	**-2.0**
SAUI	**Saumlaki**	**3.97**	**110**	P	**P**	**16 04 41.6**	**+0.6**
SOEI	**Soe**	**4.48**	**226**	P	**P**	**16 04 46.5**	**+0.5**
SOEI	**Soe**	**4.48**	**226**	S	**S**	**16 05 47.8**	**-1.2**
SOEI	**Soe**	**4.48**	**226**		**P**	**16 04 46.1**	**+0.1**
SOEI				Sn	**S**	**16 05 46.5**	**-2.5**
SOEI	**Soe**	**4.48**	**226**	P	**P**	**16 04 46.7**	**+0.5**
SANI	**Sanana**	**4.80**	**341**	P	**P**	**16 04 48.7**	**-0.4**
SANI	**Sanana**	**4.80**	**341**	P	**P**	**16 04 49.1**	**0.0**
BATI	**Baumata**	**5.22**	**227**	P	**P**	**16 04 54.3**	**+0.9**
	102nm,0.4s,baz=49,slow=2.4,SNR=32						
BATI				S	**S**	**16 06 01.2**	**-1.3**
	154nm,0.6s,baz=30,slow=18,SNR=11						
BATI	**Baumata**	**5.22**	**227**	P	**P**	**16 04 53.8**	**+0.4**
	0.6nm2µm113nm,0.7s						
MMRI	**Maumere**	**5.61**	**249**	Pn	**P**	**16 04 55.8**	**-1.6**
EDFI	**Ende, Flores**	**6.16**	**250**	P	**P**	**16 05 03.9**	**+0.6**
DRS	**Darwin Rock St**	**6.65**	**150**	P	**P**	**16 05 09.7**	**+0.4**
KMPI	**Kaimana, Papua**	**6.82**	**65**	P	**P**	**16 05 11.0**	**-0.2**
	2µm122nm,0.7s						
SIJI	**Sorong**	**6.83**	**33**	P	**P**	**16 05 10.2**	**-1.1**
	14nm,0.4s,baz=292,slow=9.2,SNR=19						
SIJI				S	**S**	**16 06 28.2**	**-6.0**
	6.7nm,0.3s,baz=252,slow=20,SNR=12						
SIJI	**Sorong**	**6.83**	**33**	P	**P**	**16 05 09.8**	**-1.5**
	0.1nm17nm,0.6s						
SWI	**Sorong**	**6.83**	**33**	P	**P**	**16 05 10.5**	**-0.8**
	0.2nm22nm,0.7s						
MTN	**Manton Dam**	**7.12**	**150**		**P**	**16 05 14.5**	**-0.1**
LUWI	**Luwuk**	**7.30**	**319**	Pn	**P**	**16 05 14.6**	**-2.0**
LUWI	**Luwuk**	**7.30**	**319**	P	**P**	**16 05 18.4**	**+1.8**
	0.1nm33nm,0.8s						
BASI	**Baing, Sumba**	**7.75**	**242**	P	**P**	**16 05 20.8**	**-0.6**
	113nm,1.6s						
WSI	**Waingapu**	**7.77**	**247**	P	**P**	**16 05 22.0**	**+0.3**
	117nm,0.9s						
LBFI	**Labuhan Bajo,**	**7.79**	**256**	P	**P**	**16 05 23.6**	**+1.6**
RKPI	**Ransiki, Papua**	**8.35**	**53**	P	**P**	**16 05 29.8**	**+1.7**
KNRA	**Kununurra**	**9.07**	**172**	P	**P**	**16 05 36.4**	**+0.4**
DBNI	**Kabupaten Domp**	**9.33**	**258**	P	**P**	**16 05 39.0**	**+0.1**
PLAI	**Plampang**	**9.91**	**257**	P	**P**	**16 05 44.1**	**-1.3**
PLAI	**Plampang**	**9.91**	**257**	P	**P**	**16 05 44.0**	**-1.3**
	24nm,0.7s						
TOLI2	**Tolitoli**	**10.22**	**319**	P	**P**	**16 05 48.5**	**-0.3**
TWSI	**Taliwang, Sumb**	**10.76**	**258**	P	**P**	**16 05 56.8**	**+2.1**
FITZ	**Fitzroy Crossi**	**11.55**	**189**	P	**P**	**16 06 03.5**	**+0.1**
	3.5nm,0.5s,baz=18,slow=10,SNR=8.2						
JAGI	**Jajag, Banyuwa**	**13.39**	**261**	P	**P**	**16 06 20.9**	**-2.8**
WB0	**Warramunga Arr**	**14.66**	**154**		**P**	**16 06 37.3**	**-0.2**
WRAB	**Tennant Creek**	**14.79**	**154**	P	**P**	**16 06 38.7**	**-0.2**
WRA	**Warramunga Arr**	**14.79**	**154**	P	**P**	**16 06 38.6**	**-0.3**
	26nm,0.6s,baz=338,slow=11,SNR=96						
WRA				S	**S**	**16 09 14.3**	**-1.8**
	3.1nm,0.9s,baz=322,slow=20,SNR=6.8						
WR8	**Warramunga Arr**	**14.88**	**154**	P	**P**	**16 06 39.9**	**+0.1**
MBWA	**Marble Bar**	**16.30**	**207**	P	**P**	**16 06 54.3**	**-0.8**
PSA00	**Pilbara Seismi**	**16.61**	**206**	P	**P**	**16 06 56.4**	**-2.0**
PSA00				IAmb	IAmb	16 07 02.2	
	comp=Z,6.8nm,1.1s						
COEN	**Coen**	**17.02**	**117**	P	**P**	**16 07 02.9**	**+0.1**
COEN	**Coen**	**17.02**	**117**		**P**	**16 07 02.4**	**-0.4**
SBUM	**Sibu**	**17.75**	**300**		**P**	**16 07 09.9**	**-0.6**
AS31	**Alice Springs**	**18.01**	**161**		**P**	**16 07 13.4**	**+0.1**
ASAR	**Alice Springs**	**18.02**	**161**	P	**P**	**16 07 13.2**	**-0.1**
	comp=Z,14nm,0.5s,baz=349,slow=13,SNR=172						
ASAR				S	**S**	**16 10 15.5**	**-3.3**
	comp=Z,1.5nm,0.8s,baz=337,slow=18,SNR=5.8						
ASAR	**Alice Springs**	**18.02**	**161**	P	**P**	**16 07 13.3**	**0.0**
QIS	**Mount Isa**	**18.13**	**141**	P	**P**	**16 07 14.5**	**-0.1**
PMG	**Port Moresby**	**19.63**	**99**	P	**P**	**16 07 29.8**	**+0.3**
	comp=Z,3.0nm,0.5s,baz=255,slow=19,SNR=1.8						
PMG	**Port Moresby**	**19.63**	**99**	P	**P**	**16 07 29.6**	**+0.1**
PMG				IAmb	IAmb	16 07 36.5	
	comp=Z,14nm,1.2s						
BBJI	**Bungbulang**	**19.75**	**266**	P	**P**	**16 07 30.2**	**-0.5**
BBJI				IAmb	IAmb	16 07 30.9	
	comp=Z,14nm,1.1s						
CTAO	**Charters Tower**	**22.57**	**128**	P	**P**	**16 07 56.9**	**+0.6**
CTAO				IAmb	IAmb	16 08 30.0	
	comp=Z,12nm,1.2s						
FORT	**Forrest**	**24.03**	**179**	P	**P**	**16 08 09.5**	**+0.2**
FORT				IAmb	IAmb	16 08 23.4	
	comp=Z,6.7nm,1.1s						
INKA	**Innaminka**	**24.46**	**151**	P	**P**	**16 08 13.6**	**+0.5**
INKA				IAmb	IAmb	16 08 25.7	
	comp=Z,5.1nm,1.3s						
BBOO	**Buckleboo**	**27.23**	**164**	P	**P**	**16 08 37.9**	**+0.2**
BBOO	**Buckleboo**	**27.23**	**164**	P	**P**	**16 08 37.5**	**-0.3**
BBOO				IAmb	IAmb	16 08 52.8	
	comp=Z,9.8nm,1.3s						
STKA	**Stephens Creek**	**28.35**	**154**	P	**P**	**16 08 47.6**	**0.0**
	comp=Z,5.7nm,0.5s,baz=333,slow=9.1,SNR=30						
	comp=Z,5.7nm,0.5s						
STKA	**Stephens Creek**	**28.35**	**154**	P	**P**	**16 08 48.1**	**+0.5**
STKA	**Stephens Creek**	**28.35**	**154**		**P**	**16 08 47.9**	**+0.3**
HTT	**Hallett**	**28.69**	**160**	P	**P**	**16 08 51.4**	**+0.8**
CMSA	**Cobar Meteorol**	**30.04**	**148**	P	**P**	**16 09 03.5**	**+1.1**
TATA	**Tatamba Isabel**	**32.04**	**95**	P	**P**	**16 09 21.1**	**+1.1**
CAN	**Canberra**	**34.72**	**148**	P	**P**	**16 09 44.1**	**+1.5**
CAN	**Canberra**	**34.72**	**148**	P	**P**	**16 09 43.6**	**+1.0**
TOO	**Toolangi**	**34.87**	**155**	P	**P**	**16 09 45.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**37.64**	**312**	P	**P**	**16 10 07.3**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=141,slow=6.5,SNR=5.1						
	comp=Z,0.7nm,0.7s						
PZH	**PanZhiHua**	**41.35**	**324**	P	**P**	**16 10 38.8**	**+1.4**
KSRS	**Korea Array**	**43.85**	**0**	P	**P**	**16 10 57.7**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=181,slow=9.7,SNR=2.8						
	comp=Z,0.7nm,0.9s						
HHC	**Hu-ho-hao-te**	**49.47**	**344**	*eP*	**P**	**16 11 41.5**	**+1.6**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,60nm,3.9s						
DGTI	**Dogotuki**	**51.93**	**105**	P	**P**	**16 12 00.0**	**+1.6**
EVN	**Everest**	**52.22**	**313**		**P**	**16 11 60.0**	**-1.1**
EVN				IAmb	IAmb	16 12 02.3	
	comp=Z,5.8nm,1.3s						
QRZ	**Quartz Range**	**52.57**	**137**	P	**P**	**16 12 02.6**	**-0.1**
RPZ	**Rata Peaks**	**53.04**	**141**	P	**P**	**16 12 06.7**	**+0.7**
TCW	**Tory Channel**	**53.92**	**137**	P	**P**	**16 12 12.0**	**-0.3**
SONM	**Songino Array**	**57.35**	**343**	P	**P**	**16 12 36.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=149,slow=7.9,SNR=2.4						
	comp=Z,0.2nm,0.4s						
WMQ	**Urumqi**	**61.77**	**328**	*eP*	P	16 13 14.0	+7.9
WMQ				pmax	pmax		
	comp=Z,13nm,1.5s						
PETK	**Petropavlovsk-**	**64.77**	**20**	P	**P**	**16 13 25.5**	**+0.3**
	comp=Z,3.8nm,1.1s,baz=104,slow=11,SNR=4.7						
	comp=Z,3.8nm,1.1s						
MK31	**Makanchi Array**	**66.59**	**328**	P	**P**	**16 13 37.6**	**+0.7**
MK31				IAmb	IAmb	16 13 38.0	
	comp=Z,2.8nm,1.4s						
MKAR	**Makanchi Array**	**66.59**	**328**	P	**P**	**16 13 37.2**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=119,slow=8.0,SNR=30						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**66.59**	**328**	P	**P**	**16 13 37.3**	**+0.3**
ZAA0	**Zalesovo Array**	**70.19**	**335**	P	**P**	**16 13 58.2**	**-0.5**
ZALV	**Zalesovo Beam**	**70.19**	**335**	P	**P**	**16 13 58.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=148,slow=5.8,SNR=4.7						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**70.19**	**335**	P	**P**	**16 13 58.6**	**-0.1**
KURBB	**Kurchatov Arra**	**70.93**	**329**	P	**P**	**16 14 03.6**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=131,slow=5.1,SNR=18						
KURK	**Kurchatov**	**70.94**	**330**	P	**P**	**16 14 03.0**	**-0.3**
KURK				IAmb	IAmb	16 14 04.4	
	comp=Z,2.4nm,0.8s						
BVAR	**Borovoye Array**	**76.46**	**329**	P	**P**	**16 14 35.1**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=125,slow=10,SNR=4.6						
	comp=Z,0.3nm,0.4s						
AB31	**Akbulak array**	**80.70**	**322**	P	**P**	**16 14 57.6**	**-0.3**
ABKAR	**Akbulak array**	**80.70**	**322**	P	**P**	**16 14 57.6**	**-0.3**

*JMA **29** 16:11:57.2±0.2,26˚N±1˚×126˚.9E±0.7, h42km±2km, MV3.0/11, NEAR OKINAWAJIMA ISLAND*
*IDC **29** 16:12:04.5±1.9,27˚.07N×127˚.00E, h68km±20km, mb3.6/12, mbtmp3.8/14, MS3.0/6, Error ellipse: s-maj=28.7km s-min=15.4km az=54.0*
ISC 29 16:11:57.5±0.9,**26˚.07N**±0.07˚×**126˚.81E**±0.05,**h53**km,7km, **n29,** σ**1s20**/32,**mb3.9**/13,**MS3.0**/5,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.26**	**355**	*i* P	**Pn**	**16 12 06.4**	**-0.1**
JKE				S	**Sn**	**16 12 13.6**	**+0.5**
JAGN	**Aguni-jima**	**0.65**	**37**	*i* P	**Pn**	**16 12 10.6**	**-0.1**
JAGN				S	**Sn**	**16 12 20.7**	**+0.4**
JJT3	**Tamagusuku3**	**0.88**	**85**	P	**Pn**	**16 12 13.2**	**-0.6**
JJT3				*e*S	**Sn**	**16 12 25.9**	**+0.3**
JNTH	**Nagotoyohara**	**1.18**	**67**	P	**Pn**	**16 12 17.5**	**-0.2**
JNTH				*e*S	**Sn**	**16 12 33.7**	**+1.0**
JIH	**Iheya**	**1.41**	**47**	P	**Pn**	**16 12 20.7**	**-0.2**
JOW	**Kunigami**	**1.52**	**60**	P	**Pn**	**16 12 23.3**	**+1.0**
	76nm,0.2s,baz=216,slow=10,SNR=56						
JOW				LR	LR	16 12 28.0	
	comp=Z,28nm,19.7s,baz=140,slow=20						
JOW				S	**Sn**	**16 12 40.5**	**-0.4**
	126nm,0.3s,baz=309,slow=28,SNR=26						
JOW	**Kunigami**	**1.52**	**60**	P	**Pn**	**16 12 22.7**	**+0.4**
JOW				*e*S	**Sn**	**16 12 41.8**	**+0.9**
JYRO	**Yoronjima**	**1.75**	**57**	P	**Pn**	**16 12 25.8**	**+0.3**
JYRO				*e*S	**Sn**	**16 12 47.6**	**+1.0**
JIKM	**Ikemajima**	**1.82**	**231**	*e*P	**Pn**	**16 12 25.6**	**-0.8**
JIKM				*e*S	**Sn**	**16 12 47.8**	**-0.4**
JOGS	**Gusukube**	**1.82**	**224**	P	**Pn**	**16 12 26.4**	**-0.1**
JOGS				*e*S	**Sn**	**16 12 49.9**	**+1.5**
KSRS	**Korea Array**	**11.39**	**4**	P	Pn	16 14 29.1	-8.3
	0.3nm,0.6s,baz=199,slow=11,SNR=2.0						
KSRS				LR	LR	16 19 13.1	
	comp=Z,37nm,18.8s,baz=175,slow=41						
USRK	**Ussuriysk Ar.**	**18.57**	**12**	P	**P**	**16 16 05.1**	**-5.0**
	0.3nm,0.4s,baz=144,slow=12,SNR=1.4						
LZDM	**Lanzhou Array**	**22.08**	**302**	P	**P**	**16 16 50.9**	**+2.4**
	1.0nm,0.3s,baz=111,slow=8.1,SNR=5.1						
	1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**26.84**	**259**	LR	LR	16 29 03.5	
	comp=Z,17nm,18.3s,baz=265,slow=38						
SONM	**Songino Array**	**27.01**	**329**	P	**P**	**16 17 34.9**	**+0.2**
	0.2nm,0.6s,baz=139,slow=9.4,SNR=1.8						
SONM				LR	LR	16 28 23.1	
	comp=Z,30nm,20.0s,baz=36,slow=37						
	0.2nm,0.6s						
TLY	**Talaya**	**31.03**	**332**	LR	LR	16 30 28.5	
	comp=Z,41nm,18.5s,baz=59,slow=36						
YAK	**Yakutsk**	**36.00**	**2**	LR	LR	16 33 54.7	
	comp=Z,24nm,18.6s,baz=226,slow=37						
MKAR	**Makanchi Array**	**40.69**	**312**	P	**P**	**16 19 33.7**	**+0.8**
	1.1nm,0.4s,baz=98,slow=10.0,SNR=33						
	1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**41.61**	**323**	P	**P**	**16 19 40.3**	**+0.1**
	0.9nm,0.4s,baz=107,slow=9.3,SNR=7.7						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**44.09**	**317**	P	**P**	**16 20 01.0**	**+0.6**
	0.8nm,0.4s,baz=106,slow=9.3,SNR=10						
TIXI	**Tiksi**	**45.63**	**1**	LR	LR	16 40 34.4	
	comp=Z,37nm,19.2s,baz=192,slow=38						
WRA	**Warramunga Arr**	**46.32**	**170**	P	P	16 20 30.8	+12
	0.6nm,0.9s,baz=356,slow=7.7,SNR=3.0						
	0.6nm,0.9s						
BVAR	**Borovoye Array**	**49.55**	**319**	P	**P**	**16 20 43.4**	**+0.4**
	0.8nm,0.3s,baz=90,slow=8.6,SNR=10						
BVAR				PcP	**PcP**	**16 22 04.7**	**+0.6**
	0.3nm,0.6s,baz=108,slow=4.7,SNR=2.3						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**49.92**	**171**	P	P	16 20 59.3	+13
	0.4nm,0.9s,baz=349,slow=8.7,SNR=4.1						
	0.4nm,0.

	comp=Z,80nm,21.9s,baz=266,slow=30						
ASAJ	**Asahikawa**	**71.27**	**328**	LR	LR	16 52 30.2	
	comp=Z,29nm,22.0s,baz=186,slow=30						
PETK	**Petropavlovsk-**	**72.36**	**342**	P	**P**	**16 28 32.3**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=147,slow=5.3,SNR=2.0						
	comp=Z,2.2nm,0.8s						
PFO	**Pinyon Flats O**	**72.85**	**47**	LR	LR	16 53 09.7	
	comp=Z,114nm,20.2s,baz=228,slow=30						
LPIG	**La Paz**	**73.02**	**59**	LR	LR	16 51 31.1	
	comp=Z,44nm,19.1s,baz=238,slow=28						
YBH	**Yreka Blue Hor**	**73.48**	**37**	LR	LR	16 53 02.0	
	comp=Z,7.0nm,20.6s,baz=266,slow=29						
NVAR	**Mina Array Bea**	**74.24**	**42**	P	**P**	**16 28 44.7**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=227,slow=9.9,SNR=11						
NVAR				LR	LR	16 56 07.3	
	comp=Z,66nm,19.4s,baz=256,slow=32						
	comp=Z,1.7nm,0.7s						
KDAK	**Kodiak Island**	**74.71**	**11**	LR	LR	16 53 20.2	
	comp=Z,78nm,20.6s,baz=166,slow=29						
QSPA	**South Pole Qui**	**74.88**	**180**	P	**P**	**16 28 47.8**	**+1.4**
	comp=Z,5.2nm,0.7s,baz=58,slow=3.8,SNR=5.8						
	comp=Z,5.2nm,0.7s						
KSRS	**Korea Array**	**75.90**	**316**	LR	LR	16 57 28.1	
	comp=Z,12nm,21.0s,baz=115,slow=32						
MA2	**Magadan**	**79.90**	**342**	LR	LR	16 57 14.1	
	comp=Z,28nm,21.1s,baz=118,slow=30						
KLR	**Kul'dur**	**80.25**	**327**	LR	LR	16 59 06.1	
	comp=Z,22nm,21.4s,baz=178,slow=32						
TXAR	**Lajitas Array**	**80.58**	**56**	P	**P**	**16 29 20.7**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=204,slow=8.2,SNR=5.8						
	comp=Z,0.4nm,0.6s						
ANMO	**Albuquerque**	**80.75**	**50**	LR	LR	17 00 52.4	
	comp=Z,74nm,19.4s,baz=288,slow=32						
DLBC	**Dease Lake**	**81.53**	**21**	LR	LR	17 00 53.5	
	comp=Z,43nm,18.6s,baz=222,slow=32						
CCB	**Clear Creek Bu**	**81.95**	**11**	P	**P**	**16 29 25.7**	**+0.7**
CCB				IAmb	IAmb	16 29 46.9	
	comp=Z,4.0nm,1.0s						
PDAR	**Pinedale Array**	**82.17**	**42**	P	**P**	**16 29 27.7**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=209,slow=3.6,SNR=9.3						
PDAR				LR	LR	16 59 03.4	
	comp=Z,34nm,19.9s,baz=283,slow=31						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**82.17**	**42**	P	**P**	**16 29 26.6**	**-0.4**
ILAR	**Eielson Array**	**82.24**	**11**	P	**P**	**16 29 26.6**	**0.0**
	comp=Z,0.6nm,0.7s,baz=230,slow=6.1,SNR=18						
ILAR				LR	LR	16 56 46.4	
	comp=Z,45nm,21.6s,baz=194,slow=29						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**82.24**	**11**	P	**P**	**16 29 24.2**	**-2.3**
CMIG	**Matias Romero**	**83.92**	**71**	LR	LR	17 01 44.4	
	comp=Z,49nm,18.9s,baz=342,slow=32						
YAK	**Yakutsk**	**88.84**	**337**	LR	LR	17 02 19.9	
	comp=Z,24nm,21.9s,baz=96,slow=31						
YKA	**Yellowknife Ar**	**89.93**	**23**	P	**P**	**16 30 04.9**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=251,slow=5.1,SNR=4.8						
	comp=Z,0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**92.42**	**288**	LR	LR	17 12 20.6	
	comp=Z,7.0nm,18.1s,baz=315,slow=36						
ULM	**Lac du Bonnet**	**93.83**	**39**	LR	LR	17 06 28.7	
	comp=Z,49nm,19.1s,baz=193,slow=32						
TIXI	**Tiksi**	**94.74**	**344**	LR	LR	17 08 31.8	
	comp=Z,26nm,20.3s,baz=158,slow=33						
TLY	**Talaya**	**97.37**	**321**	LR	LR	17 10 05.4	
	comp=Z,25nm,18.8s,baz=92,slow=33						
TKL	**Tuckaleechee C**	**98.48**	**55**	LR	LR	17 08 33.8	
	comp=Z,40nm,19.3s,baz=5.0,slow=31						
BRTR	**Keskin Array B**	**145.89**	**321**	PKPbc	**PKPab**	**16 36 46.7**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=76,slow=3.3,SNR=8.5						

*ISK **29** 16:28:11.7, 35°.15N×27°.91E, h12km, ML2.6/14*
*AFAD **29** 16:28:15.7, 35°.36N×28°.05E, h6km±3km, ML2.3*
*ATH **29** 16:28:17.3±1.1, 35°.53N×27°.71E, h10km±4km, ML2.3/2, Manual Solution by N.Liadopoulou First location: 2020/02/29 16:29:32, This location: 2020/02/29 16:33:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 9 km; Longitude uncertainty: 6 km*

ISC 29 16:28:14.7±1.7, **35°.31N**±0°.07×**27°.90E**±0°.04, **h11**km±10km, **n31**, σ1s**16**/41, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.65**	**292**	Pg	**Pg**	**16 28 26.2**	**-1.1**
KARP				Sg	**Sg**	**16 28 37.0**	**+1.2**
KARP	**Karpathos**	**0.65**	**292**	P	**Pg**	**16 28 26.2**	**-1.1**
KARP				S	**Sg**	**16 28 34.4**	**-1.4**
ARG	**Arkhangelos**	**0.92**	**12**	Pg	**Pg**	**16 28 32.3**	**-0.2**
ARG				Sg	**Sn**	**16 28 48.9**	**+2.0**
ARG	**Arkhangelos**	**0.92**	**12**	P	**Pg**	**16 28 32.6**	**+0.1**
ZKR	**Zakros**	**1.39**	**262**	P	**Pn**	**16 28 40.1**	**+0.1**
YAZI	**Mula-Dat§a-**	**1.42**	**345**	P	**Pb**	**16 28 41.7**	**+0.6**
YAZI				S	**Sb**	**16 28 58.9**	**-0.3**
YAZI				IAML		16 29 04.0	
	comp=N,51nm,0.4s						
YAZI				IAML		16 29 11.0	
	comp=E,67nm,1.4s						
DAT	**Datca**	**1.44**	**350**	Pn	**Pn**	**16 28 40.8**	**0.0**
DAT	**Datca**	**1.44**	**350**	P	**Pn**	**16 28 40.0**	**-0.8**
DAT				IAML		16 29 09.0	
	comp=E,45nm,1.0s						
DAT				IAML		16 29 10.0	
	comp=N,45nm,0.3s						
TURN	**Turunc**	**1.49**	**11**	Pn	**Pn**	**16 28 41.3**	**-0.1**
TURN				Sn	**Sg**	**16 29 02.4**	**-0.2**
TURN	**Turunc**	**1.49**	**11**	P	**Pb**	**16 28 42.8**	**+0.4**
TURN				IAML		16 29 25.0	
	comp=E,59nm,2.2s						
IZZE	**Mula-Seydike**	**1.56**	**43**	P	**Pn**	**16 28 40.6**	**-1.8**
IZZE				S	**Sn**	**16 29 00.2**	**-2.4**
DALY	**Dalyan (Mula)**	**1.62**	**22**	Pn	**Pn**	**16 28 42.8**	**-0.4**
AKAS	**Kas**	**1.67**	**56**	Pn	**Pn**	**16 28 42.8**	**-1.2**
SABU	**Mula-Dalaman**	**1.74**	**30**	P	**Pn**	**16 28 45.5**	**+0.6**
SABU				S	**Sg**	**16 29 14.1**	**+3.4**
SABU				IAML		16 29 23.0	
	comp=N,28nm,0.6s						
SABU				IAML		16 29 30.0	
	comp=E,36nm,1.4s						
BDRM	**Kayabasi**	**1.79**	**348**	P	**Pn**	**16 28 43.7**	**-1.9**
BDRM				S	**Sn**	**16 29 07.5**	**-0.7**
BODT	**Bodrum**	**1.81**	**345**	Pn	**Pn**	**16 28 45.9**	**0.0**
YER	**Yerkesik**	**1.85**	**10**	Pn	**Pn**	**16 28 46.0**	**-0.4**
NPS	**Neapolis**	**1.87**	**269**	P	**Pn**	**16 28 47.8**	**+1.1**
MLSB	**Milas**	**1.98**	**357**	Pn	**Pn**	**16 28 48.3**	**+0.1**
CAME	**Cameli-Denizli**	**1.99**	**34**	Pn	**Pn**	**16 28 47.8**	**-0.6**
DNZT	**Denizli-Tavas-**	**2.17**	**25**	P	**Pn**	**16 28 50.5**	**-0.3**
DNZT				IAML		16 29 47.0	
	comp=N,26nm,2.3s						
ELL	**Elmali**	**2.17**	**48**	Pn	**Pn**	**16 28 50.5**	**-0.4**
THERA	**Ancient Thera,**	**2.23**	**299**	P	**Pn**	**16 28 50.0**	**-1.7**
TAVA	**DENIZLI_Tavas**	**2.30**	**21**	P	**Pn**	**16 28 50.8**	**-1.9**
TAVA				S	**Sn**	**16 29 21.5**	**+0.4**
APMY	**Acipayam-Deniz**	**2.44**	**27**	Pn	**Pn**	**16 28 54.4**	**-0.1**
IDI	**Anoyia**	**2.46**	**270**	P	**Pn**	**16 28 56.0**	**+1.2**
ESEN	**Aydn-Nazilli**	**2.51**	**8**	P	**Pn**	**16 28 55.8**	**+0.4**
ESEN				S	**Sn**	**16 29 25.9**	**-0.1**
ESEN				IAML		16 30 21.0	
	comp=E,26nm,2.4s						
ESEN				IAML		16 30 22.0	
	comp=N,26nm,2.6s						
SMG	**Samos**	**2.54**	**341**	P	**Pn**	**16 28 55.1**	**-0.8**
KORT	**Korkueli**	**2.60**	**49**	Pn	**Pn**	**16 28 56.4**	**-0.5**
ODEM	**Odemis-Izmir**	**2.96**	**3**	Pn	**Pn**	**16 29 02.1**	**+0.4**
IMMV	**Iera Moni Meta**	**3.20**	**274**	P	**Pn**	**16 29 06.0**	**+1.1**

*UPP **29** 16:36:04.5±2.9, 67°.69N×34°.87E, h0km, ML1.9, Presumed earthquake*
*HEL **29** 16:36:04.0±0.6, 67°.64N×35°.19E, h0km, ML2.7, Explosion*
*IDC **29** 16:36:10.5±1.7, 67°.85N×34°.23E, h0km, mbtmp3.7/5, ML2.7/5, Error ellipse: s-maj=20.2km s-min=9.8km az=82.0*
*KOLA **29** 16:36:13.1, 67°.70N×34°.09E, h0km, ML2.6, Error ellipse: s-maj=3.2km s-min=1.8km az=130.0, Khibiny Massif*

ISC 29 16:36:07.4±1.1, **67°.66N**±0°.03×**34°.18E**±0°.05, **h0km**, **n31**, σ2s**08**/55, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.29**	**37**	S	**Sb**	**16 36 22.7**	**+1.6**
APA	**Apatity**	**0.31**	**253**	P	**Pn**	**16 36 18.1**	**-1.2**
APA				S	**Sb**	**16 36 22.7**	**+1.2**
APA0	**Apatity Array**	**0.46**	**263**	P	**Pn**	**16 36 20.8**	**-0.4**
APA0				S	**Sb**	**16 36 26.9**	**+1.2**
KVDA	**Kovda**	**1.10**	**208**	P	**Pn**	**16 36 32.8**	**+2.8**
KVDA				S	**Sn**	**16 36 47.6**	**+1.6**
VRF	**Varrio**	**1.75**	**275**	*e*P	**Pn**	**16 36 39.0**	**0.0**
VRF				*e*S	**Sg**	**16 37 06.1**	**+2.6**
VRF				MSG		16 37 09.2	
	comp=Z,52nm,0.3s						
OLKF	**Oulanka, Finla**	**2.31**	**237**	*e*P	**Pb**	**16 36 48.6**	**-1.3**
OLKF				*e*SB	**Sg**	**16 37 22.4**	**+0.8**
RAJF	**Raja-Jooseppi**	**2.35**	**293**	*e*P	**Pn**	**16 36 47.4**	**+0.2**
RAJF				*e*S	**Sb**	**16 37 21.5**	**+1.4**
KUI6	**Riekki**	**2.36**	**228**	*e*P	**Pn**	**16 36 47.3**	**-0.1**
KUI6				*e*SG	**Sg**	**16 37 24.8**	**+1.5**
KU1	**Kurvinen**	**2.80**	**223**	*e*PG	**Pb**	**16 36 58.9**	**+0.6**
KU1				*e*SB	**Sg**	**16 37 36.0**	**-1.3**
SGF	**Sodankyl**	**2.95**	**269**	*e*P	**Pb**	**16 37 00.3**	**-0.4**
SGF				*e*S	**Sb**	**16 37 37.4**	**+0.2**
SGF				MSG		16 37 42.8	
	comp=Z,12nm,0.3s						
VADS	**Vadso**	**3.02**	**327**	*e*P	**Pb**	**16 37 01.5**	**-0.6**
VADS	**Vadso**	**3.02**	**327**	P	**Pb**	**16 37 00.8**	**-1.2**
VADS				S	**Sn**	**16 37 35.9**	**+2.6**
KEV	**Kevo**	**3.36**	**312**	*e*P	**Pn**	**16 37 01.5**	**+0.4**
KEV				*e*S	**Sb**	**16 37 46.0**	**-3.0**
KEV				MSG		16 37 56.7	
	comp=Z,40nm,0.2s						
ARA0	**ARCESS Array S**	**3.69**	**305**	*e*P	**Pn**	**16 37 07.6**	**+1.9**
ARA0				*e*S	**Sn**	**16 37 53.6**	**+3.7**
ARCES	**ARCESS Array B**	**3.69**	**305**	Pn	**Pn**	**16 37 06.0**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=115,slow=15,SNR=48						
ARCES				Sn	**Sn**	**16 37 49.9**	**0.0**
	comp=Z,1.9nm,0.3s,baz=116,slow=18,SNR=4.7						
ARCES				Lg	Lg	16 38 04.2	
	comp=Z,1.5nm,0.3s,baz=113,slow=36,SNR=5.1						
	comp=Z,3.8nm,0.2s						
ARCES	**ARCESS Array B**	**3.69**	**305**	P	**Pb**	**16 37 10.8**	**-2.6**
ARCES				S	**Sn**	**16 37 53.6**	**+3.7**
RMF	**Romuvaara**	**3.87**	**209**	*e*P	**Pn**	**16 37 07.4**	**-0.7**
RMF				*e*SG	**Sg**	**16 38 08.9**	**-2.8**
HEF	**Hetta**	**4.02**	**286**	*e*P	**Pn**	**16 37 14.7**	**+4.5**
HEF	**Hetta**	**4.02**	**286**	*e*P	**Pb**	**16 37 14.9**	**-4.2**
HEF				*e*S	**Sn**	**16 38 00.9**	**+2.9**
HEF				MSG		16 38 17.6	
	comp=Z,21nm,0.3s						
TOF	**Tornio**	**4.20**	**252**	*e*P	**Pn**	**16 37 16.7**	**+4.1**
TOF				*e*SB	**Sg**	**16 38 20.2**	**-2.0**
KALU	**Kalix**	**4.66**	**252**	P	**Pn**	**16 37 19.4**	**+0.5**
KALU				S	**Sn**	**16 38 15.4**	**+1.9**
ERTU	**Ertsjaerv**	**4.81**	**262**	P	**Pn**	**16 37 20.3**	**-0.8**
	baz=8.9						
ERTU				S	**Sn**	**16 38 20.4**	**+3.0**
JOF	**Joensuu**	**4.92**	**196**	*e*P	**Pn**	**16 37 20.3**	**-2.1**
JOF				*e*S	**Sn**	**16 38 17.0**	**-2.9**
KUA	**Kurravaara**	**5.26**	**280**	P	**Pn**	**16 37 26.6**	**-0.6**
KUA				S	**Sn**	**16 38 27.9**	**-0.5**
KOVU	**Salmi**	**5.31**	**283**	P	**Pn**	**16 37 27.6**	**-0.3**
KOVU				S	**Sn**	**16 38 31.0**	**+1.2**
HARU	**Harads**	**5.41**	**260**	P	**Pn**	**16 37 28.0**	**-1.2**
FINES	**FINESS Array B**	**7.15**	**213**	Pn	**Pn**	**16 37 56.8**	**+3.7**
	comp=Z,0.3nm,0.3s,baz=31,slow=13,SNR=22						
FINES				Sn	**Sn**	**16 39 15.8**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=31,slow=23,SNR=5.0						
FINES				Lg	Lg	16 39 53.9	
	comp=Z,0.7nm,0.3s,baz=20,slow=28,SNR=5.9						
	comp=Z,0.7nm,0.2s						
FAUS	**Fauske**	**7.24**	**277**	P	**Pn**	**16 37 56.7**	**+2.3**
FAUS				S	**Sn**	**16 39 15.8**	**-1.4**
SPITS	**Spitsbergen Ar**	**11.69**	**342**	Pn	**Pn**	**16 38 52.9**	**-2.3**
	baz=140,slow=17						
	comp=Z,4.0nm,0.9s						
HFS	**Hagfors**	**11.71**	**240**	Pn	**Pn**	**16 38 57.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=44,slow=15,SNR=2.5						
	comp=Z,5.7nm,1.0s						
NOA	**NORSAR Array B**	**11.90**	**247**	Pn	**Pn**	**16 38 59.5**	**+1.4**
	baz=45,slow=11,SNR=1.9						
	comp=Z,0.9nm,0.9s						

*BER **29** 16:49:51.3±3.0, 79°.11N×2°.78E, h10km, Mw3.7, ML2.8(NAO), Confirmed Earthquake*
*NAO **29** 16:49:51.6±0.9, 79°.25N×3°.61E, h10km, ML2.5*
*FCIAR **29** 16:49:52.0, 78°.09N×9°.00E, h10km, station OMEGA has station magnitude of 3.50 station ZFI2 has station magnitude of 3.60*
*DNK **29** 16:49:52.3±1.6, 79°.06N×3°.24E, h29km±13km, ML2.9, Presumed earthquake*
*KOLA **29** 16:49:58.4, 78°.80N×5°.78E, h0km, ML2.3, Error ellipse: s-maj=20.6km s-min=15.4km az=110.0, Greenland sea, Knipovich ridge, north*

ISC 29 16:49:47.0±1.5, **78°.97N**±0°.06×**3°.26E**±0°.04, **h16**km±10km, **n30**, σ2s**00**/52, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.67**	**87**	Pb	**Pg**	**16 50 20.5**	**+1.4**
KBS				Sb	**Sg**	**16 50 39.3**	**-1.5**
KBS	**Kingsbay**	**1.67**	**87**	*e*P	**Pg**	**16 50 20.4**	**+1.4**
KBS				*e*S	**Sg**	**16 50 39.4**	**-1.3**
KBS				IAML		16 50 43.4	
	comp=Z,72nm,0.2s						
KBS	**Kingsbay**	**1.67**	**87**	P	**Pg**	**16 50 20.1**	**+1.0**
KBS				S	**Sb**	**16 50 38.1**	**0.0**
KBS	**Kingsbay**	**1.67**	**87**	*i* P	**Pg**	**16 50 20.4**	**+1.3**
KBS				*i* S	**Sg**	**16 50 39.0**	**-1.8**
BRBB	**Barentsburg B**	**2.36**	**107**	Pn	**Pg**	**16 50 30.4**	**-1.6**
BRBB				Sn	**Sb**	**16 50 57.6**	**-0.1**
BRBB	**Barentsburg B**	**2.36**	**107**	*e*P	**Pg**	**16 50 30.5**	**-1.6**
BRBB				*e*S	**Sb**	**16 50 57.0**	**-0.7**
BRBB	**Barentsburg B**	**2.36**	**107**	P	**Pg**	**16 50 30.7**	**-1.4**
BRBB				S	**Sb**	**16 50 55.4**	**-2.4**
BRBA	**Barentsburg A**	**2.38**	**107**	Pn	**Pg**	**16 50 32.2**	**-0.3**
BRBA				Sn	**Sb**	**16 50 57.7**	**-0.6**
BRBA	**Barentsburg A**	**2.38**	**107**	*e*P	**Pg**	**16 50 32.1**	**-0.3**
BRBA				*e*S	**Sb**	**16 50 57.5**	**-0.7**
SPA0	**Spitsbergen Ar**	**2.73**	**101**	Pn	**Pb**	**16 50 36.4**	**+1.2**
	baz=287,slow=14						
SPA0				Sn	**Sb**	**16 51 07.9**	**-0.5**
	baz=292,slow=22						
SPA0	**Spitsbergen Ar**	**2.73**	**101**	Pn	**Pb**	**16 50 36.4**	**+1.2**
SPA0				*e*		16 50 44.9	
SPA0				Sn	**Sb**	**16 51 07.9**	**-0.5**
SPA0				IAML		16 51 13.9	
	comp=Z,33nm,0.8s						
SPA0	**Spitsbergen Ar**	**2.73**	**101**	*e*P	Pg	16 50 45.8	+6.7
SPA0				*e*S	**Sb**	**16 51 06.1**	**-2.3**
SPITS	**Spitsbergen Ar**	**2.73**	**101**	P	**Pb**	**16 50 36.1**	**+0.9**
SPITS				S	**Sb**	**16 51 07.8**	**-0.5**
HSPB	**Hornsund (broa**	**3.24**	**122**	Pn	**Pb**	**16 50 42.9**	**-1.0**
HSPB				Sn	**Sb**	**16 51 19.9**	**-3.0**
HSPB	**Hornsund (broa**	**3.24**	**122**	*e*P	**Pb**	**16 50 42.9**	**-1.0**
HSPB				Sn	**Sb**	**16 51 19.9**	**-3.0**
HSPB				IAML		16 51 23.8	
	comp=Z,7.5nm,0.3s						
HSPB	**Hornsund (broa**	**3.24**	**122**	*e*P	Pg	16 50 55.1	+6.2
HSPB				*e*S	**Sn**	**16 51 18.5**	**+3.5**
HSPB	**Hornsund (broa**	**3.24**	**122**	P	**Pb**	**16 50 43.5**	**-0.4**
HSPB				S	**Sn**	**16 51 15.2**	**+0.2**
NOR	**Nord**	**4.26**	**318**	Pn	**Pn**	**16 50 52.8**	**+1.8**
NOR	**Nord**	**4.26**	**318**	*e*P	**Pn**	**16 50 52.7**	**+1.7**
NOR	**Nord**	**4.26**	**318**	*i* P	**Pn**	**16 50 52.8**	**+1.8**
DAG	**Danmarks Havn**	**5.09**	**255**	*e*P	**Pn**	**16 51 05.8**	**+3.4**
DAG				*e*S	**Sn**	**16 51 57.7**	**-3.1**
DAG	**Danmarks Havn**	**5.09**	**255**	*i* P	**Pn**	**16 51 06.0**	**+3.5**
DAG				*i* P	**Pn**	**16 51 06.0**	**+3.5**
DAG				*i* S	**Sn**	**16 51 59.9**	**-0.9**
DAG				IAML		16 53 43.9	
	comp=Z,12nm,5.2s						
HOPEN	**Hopen**	**5.22**	**107**	Pn	Pn	16 51 09.8	+5.6
HOPEN				Sn	**Sn**	**16 52 06.5**	**+2.5**
HOPEN	**Hopen**	**5.22**	**107**	*e*P	Pn	16 51 09.7	+5.5
HOPEN				*e*S	**Sn**	**16 52 06.3**	**+2.4**
HOPEN				IAML		16 52 09.5	
	comp=Z,9.3nm,0.3s						
DBG	**Daneborg**	**7.11**	**241**	*e*P	**Pn**	**16 51 33.8**	**+3.6**
DBG				*e*S	**Sn**	**16 52 46.8**	**-3.6**
DBG	**Daneborg**	**7.11**	**241**	*i* P	**Pn**	**16 51 33.3**	**+3.2**
DBG				*i* S	**Sn**	**16 52 47.9**	**-2.5**
DBG				IAML		16 54 37.0	
	comp=Z,37nm,4.9s						
ZFI2	**Zemlya Franca-**	**7.84**	**56**	*e*P	**Pn**	**16 51 41.3**	**+1.2**
ZFI2				*e*S	**Sn**	**16 53 06.7**	**-1.7**
	comp=Z,19nm,3.3s						
OMEGA	**Omega**	**7.86**	**56**	*e*P	**Pn**	**16 51 41.3**	**+1.0**
OMEGA				*e*S	**Sn**	**16 53 06.7**	**-2.1**
	comp=Z,13nm,2.8s						
NEEM	**North Greenlan**	**10.86**	**289**	*i* P	**Pn**	**16 52 21.3**	**-0.4**
NEEM				*i* S	Sn	16 54 12.9	-10
NEEM	**North Greenlan**	**10.86**	**289**	*i* P	**Pn**	**16 52 21.3**	**-0.4**
NEEM				*i* S	Sn	16 54 12.9	-10
NEEM				IAML		16 55 39.9	
	comp=Z,20nm,4.7s						

*IDC **29** 17:07:54.9±1.5, 36°.48N×141°.80E, h0km, mb3.4/5, mbtmp3.5/8, ML3.1/3, MS3.2/1, Error ellipse: s-maj=33.2km s-min=19.3km az=78.0*
*JMA **29** 17:07:58.7±0.2, 36°.5N±0°.6×14°.2E±°, h55km±3km, MV3.0/30, E OFF IBARAKI PREF*

ISC 29 17:07:59.0±1.1, **36°.49N**±0°.06×**141°.61E**±0°.07, **h26**km, **n25**, σ0s**85**/24, **mb3.4/6**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.84**	**260**	P	**Pb**	**17 08 14.5**	**-0.5**
JHYU				*e*S	**Sb**	**17 08 26.1**	**+0.2**
JHO	**Hitachi**	**0.85**	**278**	P	**Pb**	**17 08 14.1**	**-1.0**
JHO				S	**Sb**	**17 08 25.4**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.90**	**313**	P	**Pb**	**17 08 14.5**	**-1.4**
JFFD	**Fukushimafurud**	**1.04**	**306**	P	**Pn**	**17 08 16.6**	**-1.3**
JOTO	**OTAMA OYAMA**	**1.48**	**317**	P	**Pn**	**17 08 23.9**	**0.0**
JMM	**Marumori**	**1.52**	**335**	P	**Pn**	**17 08 24.0**	**-0.5**
JAG	**Ashikaga**	**1.74**	**269**	P	**Pn**	**17 08 27.2**	**-0.3**
JFY	**Yanaizu**	**1.78**	**301**	P	**Pn**	**17 08 28.6**	**+0.5**
JFY				S	**Sn**	**17 08 51.1**	**+1.1**
JIO	**Ouri**	**1.97**	**354**	P	**Pn**	**17 08 29.9**	**-0.8**
MJAR	**Matsushiro Arr**	**2.74**	**272**	Pn	**Pn**	**17 08 41.7**	**+0.4**
	1.2nm,0.3s,baz=82,slow=9.4,SNR=146						
MJAR				Sn	**Sb**	**17 09 19.6**	**-0.9**
	0.4nm,0.3s,baz=78,slow=30,SNR=4.3						
	6.7nm,0.6s						
JHJ	**Hachijo jima 2**	**3.69**	**205**	Pn	**Pn**	**17 08 55.3**	**+1.1**
	10nm,0.3s,baz=88,slow=24,SNR=1.5						
JHJ				Sn	**Sn**	**17 09 36.0**	**-0.8**
	16nm,0.3s,baz=90,slow=20,SNR=1.5						
	36nm,0.2s						
ASAJ	**Asahikawa**	**7.66**	**5**	Pn	**Pn**	**17 09 49.3**	**+0.6**
	0.3nm,0.3s,baz=211,slow=17,SNR=9.3						
ASAJ				Sn	**Sn**	**17 11 15.9**	**+1.3**
	0.1nm,0.3s,baz=192,slow=29,SNR=1.5						
	4.3nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**27.73**	**120**	T	T	17 42 34.7	
	baz=313,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**27.74**	**120**	T	T	17 42 50.0	
	baz=313,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**27.75**	**120**	T	T	17 42 41.9	
	baz=313,slow=75,SNR=10						
SONM	**Songino Array**	**28.23**	**305**	P	**P**	**17 13 50.1**	**+0.4**
	0.7nm,0.6s,baz=108,slow=8.9,SNR=8.4						
	0.7nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**28.43**	**122**	T	T	17 43 38.7	
	baz=315,slow=76,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**28.43**	**122**	T	T	17 43 35.8	
	baz=315,slow=76,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	**28.45**	**122**	T	T	17 43 53.8	
	baz=315,slow=76,SNR=6.7						
ZALV	**Zalesovo Beam**	**42.40**	**313**	P	**P**	**17 15 52.1**	**+1.1**
	0.6nm,0.5s,baz=103,slow=6.1,SNR=3.8						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**44.55**	**303**	P	**P**	**17 16 09.1**	**+0.6**
	0.3nm,0.7s,baz=82,slow=8.7,SNR=5.1						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**46.46**	**308**	P	**P**	**17 16 24.3**	**+0.7**
	0.6nm,0.5s,baz=83,slow=7.7,SNR=7.5						
KDAK	**Kodiak Island**	**47.40**	**42**	LR	LR	17 37 50.6	
	comp=Z,27nm,18.6s,baz=62,slow=38						
WRA	**Warramunga Arr**	**56.55**	**188**	P	**P**	**17 17 39.2**	**0.0**
	0.2nm,0.7s,baz=1.0,slow=7.8,SNR=6.0						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**60.27**	**188**	P	**P**	**17 18 04.8**	**-0.4**
	0.1nm,0.8s,baz=16,slow=10,SNR=1.4						
	0.1nm,0.8s						

IDC 29 17:13:36.8±6.3, **21°.81S**×**178°.31W**, **h0**km, **mb3.7**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=271.5km s-min=40.9km az=147.0**, **Fiji Islands region**

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

mbtmp3.5/7, Error ellipse: s-maj=125.4km s-min=16.4km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.68**	**341**	P	P	17 31 24.0	-0.7
	0.7nm,0.4s,baz=159,slow=11,SNR=7.0						
SONM	**Songino Array**	**39.99**	**320**	P	P	17 35 07.3	+0.7
	0.2nm,0.6s,baz=99,slow=8.9,SNR=2.0						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**42.58**	**194**	P	P	17 35 27.7	+0.1
	0.4nm,0.6s,baz=18,slow=9.2,SNR=14						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**46.28**	**193**	P	P	17 35 56.2	-0.5
	0.1nm,0.4s,baz=13,slow=8.5,SNR=5.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**55.46**	**313**	P	P	17 37 03.8	-0.7
	0.1nm,0.6s,baz=94,slow=8.7,SNR=1.8						
	0.1nm,0.6s						
KURBB	**Kurchatov Arra**	**58.22**	**317**	P	P	17 37 23.4	-0.3
	0.2nm,0.4s,baz=91,slow=7.6,SNR=2.1						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**83.59**	**335**	P	P	17 39 55.2	+0.2
	2.4nm,1.0s,baz=35,slow=5.1,SNR=1.8						
	2.4nm,1.0s						

*IDC **29** 17:39:42.6±1.8, 18°.04N×66°.43W, h0km, mb3.5/4, mbtmp3.6/5, ML2.7/1, Error ellipse: s-maj=63.6km s-min=26.5km az=75.0*

*SDD **29** 17:39:45.3±2.3, 17°.84N×66°.85W, h13km±75km, MD4.0, ML3.6, MW3.6, Presumed earthquake*

*NEIC **29** 17:39:45.9, 17°.93N×66°.80W, h10km*

*NEIC **29** 17:39:45.9±1.1, 17°.93N±0°.02×66°.800W±0°.009, h10km±1km, mb4.1/6, ML3.8/43, Mwr3.5/17, Md3.5/5(RSPR), Error ellipse: s-maj=3.6km s-min=2.0km az=176.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=0.95; Mθθ0.06; Mφφ0.89; Mrθ0.64; Mrφ 1.52; Mθφ=0.67; Fault plane solution: M0 2.01000×10^14^ NP1:φs1.12000°, δ63.74000°, λ,-144.87000°. NP2:φs253.83000°, δ58.93000°, λ,-31.09000°. Principal axes: T 2.0605, Plg3.0000°, Azm127.0000°; N -0.1088, Plg47.0000°, Azm33.0000°; P -1.9516, Plg43.0000°, Azm219.0000°;*

*OSPL **29** 17:39:46.3±0.9, 18°.05N×66°.85W, h12km±111km, ML3.3, Presumed earthquake*

*RSPR **29** 17:39:46.0, 17°.91N×66°.81W, h8km, MD3.5/5*

ISC 29 17:39:44.5±0.9, 17°.83N±0°.04×66°.82W±0°.02, h16km±5km, n69, σ1°.36/95, mb3.9/7, 8C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.16**	**338**		**Pg**	**17 39 48.6**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.16**	**338**	⇓*i*P	**Pg**	**17 39 48.6**	**-0.1**
MLPR	**Magueyes Islan**	**0.26**	**303**		**Pg**	**17 39 50.6**	**+0.4**
MLPR				Sg	**Sg**	**17 39 53.9**	**-0.2**
MLPR				IAML		17 39 56.1	
	13μm,0.2s						
MLPR				IAML		17 39 56.3	
	12μm,0.3s						
OBIP	**Obispado Ponce**	**0.29**	**43**		**Pg**	**17 39 50.7**	**-0.1**
OBIP				Sg	**Sg**	**17 39 54.5**	**-0.6**
OBIP	**Obispado Ponce**	**0.29**	**43**	⇓*i*P	**Pg**	**17 39 50.8**	**0.0**
OBIP				*e*S	**Sg**	**17 39 54.9**	**-0.2**
OBIP	**Obispado Ponce**	**0.29**	**43**	*i* P	**Pg**	**17 39 50.8**	**0.0**
OBIP				*e*S	**Sg**	**17 39 54.4**	**-0.7**
OBIP				IAML		17 39 55.3	
	comp=Z,5μm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.33**	**302**		**Pg**	**17 39 51.8**	**+0.4**
CRPR				Sg	**Sg**	**17 39 56.2**	**0.0**
CRPR				IAML		17 39 59.2	
	comp=Z,7μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.33**	**302**	⇑*e*Pg	**Pg**	**17 39 51.9**	**+0.4**
CRPR				*e*Sg	**Sg**	**17 39 54.0**	**-2.2**
CRPR				IAML		17 39 59.1	
	comp=N,6μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.33**	**302**	⇑*i*P	**Pg**	**17 39 51.9**	**+0.5**
CRPR				*e*S	**Sg**	**17 39 56.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.33**	**302**	*i* P	**Pg**	**17 39 51.9**	**+0.4**
CRPR				*e*S	**Sg**	**17 39 54.4**	**-1.8**
CRPR				IAML		17 40 01.2	
	comp=Z,8μm,0.3s						
CELP	**Cerrillos**	**0.33**	**43**		**Pg**	**17 39 51.5**	**-0.1**
CELP				Sg	**Sg**	**17 39 55.6**	**-0.7**
CELP				IAML		17 39 56.7	
	comp=Z,8μm,0.2s						
LSP	**Las Mesas**	**0.43**	**323**		**Pg**	**17 39 53.1**	**-0.1**
LSP	**Las Mesas**	**0.43**	**323**	⇓*i*P	**Pg**	**17 39 53.1**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.43**	**12**		**Pg**	**17 39 52.5**	**-0.8**
UUPR				Sg	**Sg**	**17 39 57.2**	**-2.0**
PRSN	**Puerto Rico Se**	**0.50**	**321**		**Pg**	**17 39 54.1**	**-0.4**
PRSN				Sg	**Sg**	**17 40 00.7**	**-0.5**
PRSN				IAML		17 40 01.3	
	comp=Z,13μm,0.3s						
PRSN				IAML		17 40 05.2	
	comp=Z,12μm,0.3s						
AOPR	**Arecibo Observ**	**0.52**	**7**	Pg	**Pg**	**17 39 54.0**	**-0.9**
AOPR				Sg	**Sg**	**17 39 59.2**	**-2.7**
AOPR				IAML		17 40 01.9	
	comp=Z,9μm,0.3s						
ECPR	**Experimental S**	**0.65**	**41**		**Pg**	**17 39 56.7**	**-0.6**
ECPR				Sg	**Sg**	**17 40 03.4**	**-2.6**
ECPR				IAML		17 40 07.8	
	comp=Z,6μm,0.3s						
ECPR				IAML		17 40 11.3	
	comp=Z,4μm,0.2s						
ECPR	**Experimental S**	**0.65**	**41**	⇑*i*P	**Pg**	**17 39 56.8**	**-0.6**
ECPR				*e*S	**Sg**	**17 40 04.9**	**-1.1**
AGPR	**Aguadilla, PR**	**0.69**	**336**		**Pg**	**17 39 57.2**	**-0.9**
AGPR				IAML		17 40 12.8	
	comp=Z,5μm,0.6s						
AGPR				IAML		17 40 14.2	
	comp=Z,3μm,0.5s						
SJG	**San Juan**	**0.69**	**66**		**Pb**	**17 39 58.1**	**-0.2**
SJG				Sg	**Sg**	**17 40 06.6**	**-0.7**
SJG	**San Juan**	**0.69**	**66**	⇑*e*Pg	**Pb**	**17 39 58.1**	**-0.2**
SJG				⇑*e*Sg	**Sb**	**17 40 07.2**	**-0.5**
SJG	**San Juan**	**0.69**	**66**	*i* P	**Pb**	**17 39 58.1**	**-0.2**
SJG				*e*S	**Sb**	**17 40 07.1**	**-0.5**
SJG				IAML		17 40 10.3	
	comp=Z,1μm,0.2s						
EMPR	**Esperanza - Ma**	**0.70**	**23**		**Pg**	**17 39 57.8**	**-0.4**
EMPR					**Sg**	**17 40 06.7**	**-0.9**
EMPR	**Esperanza - Ma**	**0.70**	**23**	⇑*i*P	**Pg**	**17 39 57.8**	**-0.4**
EMPR				*e*S	**Sg**	**17 40 06.7**	**-0.9**
PDPR	**Patillas Dam,**	**0.78**	**76**		**Pg**	**17 39 59.7**	**-0.1**
IDE	**Isla Desecheo**	**0.84**	**312**		**Pb**	**17 40 00.1**	**-0.6**
IDE					**Sb**	**17 40 11.4**	**-0.3**
IDE	**Isla Desecheo**	**0.84**	**312**	⇓*i*P	**Pb**	**17 40 00.1**	**-0.6**
IDE				*e*S	**Sb**	**17 40 11.4**	**-0.3**
GCPR	**Guaynabo City**	**0.84**	**55**		**Pb**	**17 40 00.3**	**-0.5**
GCPR	**Guaynabo City**	**0.84**	**55**		**Pb**	**17 40 11.0**	**-0.9**
GCPR	**Guaynabo City**	**0.84**	**55**	⇓*e*P	**Pb**	**17 40 00.3**	**-0.5**
GCPR				*e*S	**Sb**	**17 40 11.0**	**-0.9**
HUMP	**Col San Antoni**	**0.97**	**71**		**Pb**	**17 40 02.9**	**-0.1**
HUMP				IAML		17 40 21.4	
	comp=Z,2μm,0.2s						
HUMP	**Col San Antoni**	**0.97**	**71**		**Sb**	**17 40 15.4**	**-0.2**
HUMP	**Col San Antoni**	**0.97**	**71**	⇑*e*P	**Pb**	**17 40 02.8**	**-0.2**
HUMP				*e*S	**Sb**	**17 40 15.4**	**-0.2**
CUPR	**Culebra, Puert**	**1.54**	**72**		**Pb**	**17 40 12.3**	**-0.3**
HIDR	**Higuey Centro**	**1.96**	**293**	⇑*e*Pg	**Pb**	**17 40 19.3**	**-0.6**
HIDR				IAML		17 40 56.0	
	comp=N,375nm,0.3s						
DR12	**Loma Pena Alta**	**2.62**	**292**	Pn	**Pn**	**17 40 28.3**	**+2.1**
HATOM	**Hato Mayor del**	**2.62**	**292**	⇓*e*Pg	**Pb**	**17 40 28.9**	**-2.2**
HATOM				IAML		17 41 16.8	
	comp=N,169nm,0.7s						
SMDR	**Samana, DR**	**2.68**	**303**	⇑*e*Pg	**Pb**	**17 40 31.9**	**-0.2**
SMDR				⇑*e*Sg	**Sb**	**17 41 04.0**	**-0.8**
SMDR				IAML		17 41 22.8	
	comp=N,243nm,0.5s						
SDD	**Santo Domingo**	**3.01**	**282**	Pn	**Pn**	**17 40 32.4**	**+0.8**
SABA	**Saba**	**3.41**	**93**		**Pn**	**17 40 37.4**	**+0.3**
BANI	**BANI**	**3.42**	**280**		**Pn**	**17 40 37.2**	**-0.1**
BANI	**BANI**	**3.42**	**280**	⇑*e*Pg	**Pb**	**17 40 41.8**	**-3.0**
BANI				IAML		17 41 37.6	
	comp=N,247nm,0.4s						
SMRT	**St. Maarten**	**3.57**	**86**		**Pn**	**17 40 40.4**	**+1.1**
SC01	**Santiago de lo**	**4.04**	**294**		**Pn**	**17 40 45.8**	**+0.1**
SDDR	**Presa de Saban**	**4.40**	**286**		**Pn**	**17 40 50.6**	**-0.1**
GDHS	**Morne Mazeau,**	**5.07**	**107**	Pn	**Pn**	**17 41 00.3**	**+0.3**
ABD	**La Joyeuse, An**	**5.27**	**104**	Pn	**Pn**	**17 41 03.8**	**+1.1**
ABD				IAML		17 42 11.8	
	comp=N,111nm,1.8s						
CBE	**Ff, Capester**	**5.28**	**109**	Pn	**Pn**	**17 41 02.5**	**-0.4**
TDBA	**Terre de Bas,**	**5.34**	**111**	Pn	**Pn**	**17 41 03.6**	**0.0**
MAGL	**Barre de l'île**	**5.62**	**109**	Pn	**Pn**	**17 41 07.5**	**0.0**
GDSD	**La Dsirade Is**	**5.70**	**104**	Pn	**Pn**	**17 41 09.2**	**+0.5**
H05N1	**Guadeloupe/Mar**	**5.71**	**104**	Pn	**Pn**	**17 41 10.2**	**+1.5**
H05N1				Sn	**Sn**	**17 42 11.3**	**-2.7**
BIM	**Bigot**	**6.43**	**120**	Pn	**Pn**	**17 41 19.9**	**+1.3**
MPOM	**Morne Pois Mar**	**6.64**	**120**	Pn	**Pn**	**17 41 24.4**	**+2.9**
H05S1	**Guadeloupe/Mar**	**6.67**	**120**	Pn	**Pn**	**17 41 25.3**	**+3.4**
H05S1				Sn	**Sn**	**17 42 33.1**	**-4.5**
SDV	**Santo Domingo**	**9.63**	**203**	Pn	Pn	17 42 08.6	+5.8
	comp=N,0.6nm,0.3s,baz=34,slow=7.3,SNR=3.8						
SDV				Sn	**Sn**	**17 43 45.1**	**-5.7**
	comp=N,0.6nm,0.3s,baz=335,slow=15,SNR=1.6						
	comp=N,1.9nm,0.3s						
SDV	**Santo Domingo**	**9.63**	**203**	Pn	**Pn**	**17 42 04.0**	**+1.2**
BLA	**Blacksburg**	**22.72**	**331**	P	**P**	**17 44 47.0**	**+1.2**
BLA				IAmb	IAmb	17 44 52.2	
	comp=Z,8.6nm,1.0s						
V53A	**Saluda**	**22.74**	**325**	P	**P**	**17 44 45.6**	**-0.4**
V53A				IAmb	IAmb	17 44 48.1	
	comp=Z,9.2nm,1.4s						
R55A	**Marlinton**	**23.47**	**333**	P	**P**	**17 44 54.7**	**+1.3**
CPCT	**Cooper Cave**	**23.57**	**322**	P	**P**	**17 44 55.8**	**+1.4**
CPCT				IAmb	IAmb	17 45 08.8	
	comp=Z,7.7nm,1.2s						
HICK	**Hickman**	**27.18**	**318**	P	**P**	**17 45 26.0**	**-1.3**
CBKS	**Cedar Bluff**	**35.45**	**313**	P	**P**	**17 46 41.0**	**+0.7**
TXAR	**Lajitas Array**	**35.52**	**296**	P	**P**	**17 46 43.1**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=111,slow=10,SNR=4.8						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**35.52**	**296**	P	**P**	**17 46 42.4**	**+1.4**
TX31	**Lajitas Ar. Si**	**35.52**	**296**	P	**P**	**17 46 42.8**	**+1.8**
CPUP	**Villa Florida**	**44.85**	**168**	P	**P**	**17 47 59.4**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=324,slow=8.7,SNR=4.1						
	comp=Z,0.9nm,0.5s						
YKA	**Yellowknife Ar**	**55.48**	**335**	P	**P**	**17 49 19.8**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=118,slow=5.9,SNR=4.0						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**69.80**	**333**	P	**P**	**17 50 53.7**	**-0.2**
	comp=Z,0.5nm,1.0s,baz=92,slow=5.9,SNR=2.8						
	comp=Z,0.5nm,1.0s						

IDC 29 17:53:43.6±1.7, 1°.08N×128°.43E, h0km, mb3.0/3, mbtmp3.1/4, ML3.1/1, Error ellipse: s-maj=62.0km s-min=24.1km az=53.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.44**	**124**	Pn	Pn	17 54 38.4	-0.1
	1.9nm,0.3s,baz=255,slow=23,SNR=11						
SIJI				Sn	Sn	17 55 20.1	+0.1
	0.1nm,0.3s,baz=325,slow=19,SNR=1.0						
	4.0nm,0.3s						
WRA	**Warramunga Arr**	**21.68**	**165**	P	P	17 58 35.0	-1.2
	0.3nm,0.8s,baz=342,slow=11,SNR=2.5						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**25.17**	**168**	P	P	17 59 11.8	+0.9
	0.2nm,0.5s,baz=347,slow=10,SNR=6.1						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**60.68**	**325**	P	P	18 03 56.6	-0.2
	0.1nm,0.4s,baz=117,slow=8.2,SNR=4.2						
	0.1nm,0.4s						

IDC 29 17:59:04.5±2.5, 6°.99S×129°.90E, h149km±38km, mb2.8/1, mbtmp3.4/5, Error ellipse: s-maj=67.5km s-min=17.1km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.23**	**13**	P	Pn	18 00 36.1	+1.8
	3.9nm,0.9s,baz=177,slow=16,SNR=2.1						
SIJI				S	Sn	18 01 44.2	-0.4
	2.1nm,0.2s,baz=247,slow=23,SNR=7.2						
FITZ	**Fitzroy Crossi**	**11.80**	**200**	P	Pn	18 01 47.2	-1.0
	4.3nm,0.9s,baz=23,slow=13,SNR=3.4						
FITZ				S	Sn	18 03 45.5	-13
	5.9nm,1.1s,baz=306,slow=14,SNR=1.7						
WRA	**Warramunga Arr**	**13.57**	**162**	P	Pn	18 02 09.8	-1.4
	0.2nm,0.4s,baz=346,slow=13,SNR=11						
WRA				S	Sn	18 04 32.4	-9.2
	0.5nm,0.5s,baz=334,slow=21,SNR=7.5						
ASAR	**Alice Springs**	**17.02**	**167**	P	Pn	18 02 55.1	+1.4
	0.3nm,0.6s,baz=356,slow=11,SNR=10.0						
ASAR				S	S	18 05 54.0	-9.1
	0.3nm,0.8s,baz=320,slow=17,SNR=1.5						
MKAR	**Makanchi Array**	**68.17**	**327**	P	P	18 09 48.5	-0.2
	0.1nm,0.4s,baz=119,slow=5.1,SNR=1.6						
	0.1nm,0.4s						

IDC 29 18:04:46.6±3.6, 7°.48S×116°.17E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=280.5km s-min=28.4km az=50.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.53**	**127**	P	P	18 09 37.7	0.0
	0.3nm,0.4s,baz=303,slow=11,SNR=7.2						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**23.42**	**135**	P	P	18 09 57.6	0.0
	0.3nm,0.3s,baz=310,slow=9.4,SNR=7.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**61.86**	**334**	P	P	18 15 07.7	-0.1
	0.2nm,0.9s,baz=161,slow=6.1,SNR=1.7						
	0.2nm,0.9s						

*NEIC **29** 18:10:58.9±1.5, 18°.05±0°.1×178°.6W±0°.1, h606km±10km, mb4.3/26, Error ellipse: s-maj=19.6km s-min=14.2km az=117.0*

*IDC **29** 18:10:58.9±6.8, 17°.75S×178°.62W, h608km±73km, mb3.1/6, mbtmp4.1/6, Error ellipse: s-maj=53.4km s-min=36.7km az=132.0*

ISC 29 18:10:57.0±0.6, 17°.9S±0°.1×178°.66W±0°.09, h579km, n37, σ0°.94/39, mb4.3/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**8.38**	**100**	P	**P**	**18 13 00.3**	**+1.1**
XMAS	**Kiritimati**	**28.79**	**49**	P	**P**	**18 16 09.8**	**+0.2**
EIDS	**Eidsvold**	**29.05**	**250**	P	**P**	**18 16 12.2**	**+0.5**
ARMA	**Armidale**	**29.74**	**240**	P	**P**	**18 16 17.9**	**+0.1**
CTAO	**Charters Tower**	**33.21**	**260**	P	**P**	**18 16 47.9**	**+0.6**
CTAO				IAmb	IAmb	18 16 50.3	
	comp=Z,16nm,1.4s						
PMG	**Port Moresby**	**34.22**	**280**	P	**P**	**18 16 56.3**	**+0.6**
PMG				IAmb	IAmb	18 17 36.9	
	comp=Z,12nm,1.1s						
COEN	**Coen**	**36.86**	**270**	P	**P**	**18 17 19.2**	**+1.5**
COEN				IAmb	IAmb	18 17 20.4	
	comp=Z,9.2nm,0.8s						
STKA	**Stephens Creek**	**38.43**	**241**	P	**P**	**18 17 30.8**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=33,slow=7.6,SNR=5.0						
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**38.43**	**241**	IAmb	IAmb	18 17 37.9	
	comp=Z,26nm,1.4s						
INKA	**Innaminka**	**38.53**	**248**	P	**P**	**18 17 32.6**	**+1.5**
BBOO	**Buckleboo**	**43.21**	**241**	P	**P**	**18 18 08.4**	**+0.4**
BBOO				IAmb	IAmb	18 18 37.4	
	comp=Z,15nm,1.4s						
WR8	**Warramunga Arr**	**44.25**	**260**	P	**P**	**18 18 16.1**	**-0.1**
WR8				IAmb	IAmb	18 18 31.5	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**44.40**	**260**	P	**P**	**18 18 17.8**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=96,slow=7.2,SNR=96						
WRA				PcP	**PcP**	**18 19 47.8**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=92,slow=3.2,SNR=2.1						
	comp=Z,2.1nm,0.5s						
WRA	**Warramunga Arr**	**44.40**	**260**	P	**P**	**18 18 17.3**	**-0.1**
AS31	**Alice Springs**	**44.56**	**254**		**P**	**18 18 18.9**	**+0.3**
AS31				IAmb	IAmb	18 18 20.3	
	comp=Z,3.8nm,0.5s						
ASAR	**Alice Springs**	**44.56**	**254**	P	**P**	**18 18 19.4**	**+0.7**
	comp=Z,11nm,0.6s,baz=86,slow=8.6,SNR=109						
ASAR				PcP	**PcP**	**18 19 48.4**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=87,slow=3.5,SNR=3.5						
	comp=Z,11nm,0.6s						
ASAR	**Alice Springs**	**44.56**	**254**	P	**P**	**18 18 18.9**	**+0.2**
ASAR					**PcP**	**18 19 47.5**	**-1.5**
FORT	**Forrest**	**49.80**	**245**	P	**P**	**18 18 57.4**	**-0.3**
FORT				IAmb	IAmb	18 18 59.7	
	comp=Z,8.5nm,1.1s						
KNRA	**Kununurra**	**50.25**	**264**	P	**P**	**18 19 00.6**	**-0.6**
PSA00	**Pilbara Seismi**	**57.68**	**255**	P	**P**	**18 19 52.5**	**-0.9**
PSA00	**Pilbara Seismi**	**57.68**	**255**	P	**P**	**18 19 52.7**	**-0.7**
PSA00				IAmb	IAmb	18 20 16.4	
	comp=Z,24nm,1.3s						
MBWA	**Marble Bar**	**57.84**	**256**	P	**P**	**18 19 54.0**	**-0.5**
MBWA				IAmb	IAmb	18 20 20.9	
	comp=Z,30nm,1.3s						
VNDA	**Vanda**	**60.45**	**185**	P	**P**	**18 20 11.6**	**+0.7**
VNDA				IAmb	IAmb	18 20 19.2	
	comp=Z,24nm,1.4s						
TOLI2	**Tolitoli**	**62.47**	**281**	P	**P**	**18 20 26.0**	**+0.9**
TOLI2				IAmb	IAmb	18 20 47.0	
	comp=Z,9.3nm,1.1s						
GIRL	**Giralia**	**62.67**	**253**	P	**P**	**18 20 26.8**	**+0.5**
MJAR	**Matsushiro Arr**	**67.74**	**323**	P	**P**	**18 20 56.5**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=151,slow=5.9,SNR=4.5						
	comp=Z,0.6nm,0.6s						
MJAR	**Matsushiro Arr**	**67.74**	**323**	P	**P**	**18 20 57.0**	**-0.7**
UGM	**Wanagama**	**69.41**	**268**	P	**P**	**18 21 08.1**	**-0.2**
SSLB	**Suanglung**	**72.02**	**303**	P	**P**	**18 21 22.7**	**-0.6**
SSLB				IAmb	IAmb	18 21 30.2	
	comp=Z,16nm,1.5s						
TPUB	**Ta-pu**	**72.04**	**303**	P	**P**	**18 21 22.8**	**-0.7**
O15K	**Ungalikthiuk R**	**78.32**	**10**	P	**P**	**18 21 58.9**	**+1.4**
O15K				IAmb	IAmb	18 22 17.8	
	comp=Z,26nm,1.5s						
BELA	**Belgrano 2**	**82.22**	**173**	P	**P**	**18 22 16.1**	**-1.7**
TXAR	**Lajitas Array**	**86.19**	**58**	P	**P**	**18 22 37.7**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=236,slow=2.7,SNR=2.6						
	comp=Z,0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**88.65**	**290**	P	**P**	**18 22 50.7**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=108,slow=2.6,SNR=4.1						
	comp=Z,0.3nm,0.3s						
BVAR	**Borovoye Array**	**116.67**	**321**	PKP	**PKPdf**	**18 28 33.8**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=48,slow=2.1,SNR=4.2						
BRTR	**Keskin Array B**	**144.59**	**315**	PKP	**PKPdf**	**18 29 26.8**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=80,slow=4.0,SNR=2.5						
GERES	**GERESS Array B**	**147.52**	**345**	PKPbc	**PKPdf**	**18 29 34.3**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=8.3,slow=5.8,SNR=2.5						

*IDC **29** 18:16:24.3±0.7, 16°.43N×61°.79W, h96km±6km, mb3.7/11, mbtmp4.1/13, MS3.0/1, Error ellipse: s-maj=14.4km s-min=9.3km az=74.0*

*TRN **29** 18:16:24.1, 16°.48N×61°.64W, h103km, MD4.1, Near North of Guadeloupe.*

*NEIC **29** 18:16:25.3±1.8, 16°.41N±0°.05×61°.76W±0°.06, h103km±4km, mb4.5/73, Error ellipse: s-maj=9.7km s-min=5.4km az=52.0*

ISC 29 18:16:25.1±0.5, 16°.44N±0°.03×61°.76W±0°.04, h107km±4km, n148, σ1°.14/192, mb4.4/40, 6C-3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHSZ	**Broadband at M**	**0.16**	**182**	⇑*i*P	**Pn**	**18 16 40.4**	**+0.3**
DHSZ				*e*S	**Sn**	**18 16 51.8**	**+0.6**
GDHS	**Morne Mazeau,**	**0.16**	**182**		**Pn**	**18 16 40.0**	**-0.2**
GDHS				Sn	**Sn**	**18 16 51.4**	**+0.1**
ABD	**La Joyeuse, An**	**0.26**	**82**		**Pn**	**18 16 40.2**	**-0.1**
ABD				Sn	**Sn**	**18 16 51.3**	**-0.4**
CBE	**Ff, Capester**	**0.39**	**158**		**Pn**	**18 16 41.4**	**+0.3**
CBE				Sn	**Sn**	**18 16 53.3**	**+0.4**
MMLZ	**Guadeloupe Bro**	**0.40**	**168**	*e*P	**Pn**	**18 16 41.6**	**+0.6**
MMLZ				*e*S	**Sn**	**18 16 54.1**	**+1.2**
MLYT	**Lee's Yard**	**0.50**	**304**	⇑*i*P	**Pn**	**18 16 42.5**	**+0.8**
MLYT				*e*S	**Sn**	**18 16 55.4**	**+1.3**
MBWH	**Windy Hill**	**0.51**	**306**	*i* P	**Pn**	**18 16 42.3**	**+0.6**
MBWH				*e*S	**Sn**	**18 16 54.7**	**+0.5**
MBFL	**Flemmings, Mon**	**0.53**	**305**	⇑*i*P	**Pn**	**18 16 42.4**	**+0.5**
MBFL				*e*S	**Sn**	**18 16 54.8**	**+0.3**
TBG	**Guadalupe-3**	**0.59**	**169**	*e*P	**Pn**	**18 16 42.7**	**+0.4**
TBG				*e*S	**Sn**	**18 16 55.6**	**+0.4**
TDBA	**Terre de Bas,**	**0.60**	**169**		**Pn**	**18 16 42.6**	**+0.3**
TDBA				Sn	**Sn**	**18 16 55.1**	**-0.2**
MAGL	**Barre de l'île**	**0.67**	**137**		**Pn**	**18 16 42.9**	**0.0**
MAGL				Sn	**Sn**	**18 16 55.8**	**-0.5**
DSDZ	**La Diserade, G**	**0.68**	**100**	⇓*i*P	**Pn**	**18 16 42.6**	**-0.3**
DSDZ				*e*S	**Sn**	**18 16 55.3**	**-1.0**
GDSD	**La Dsirade Is**	**0.68**	**100**		**Pn**	**18 16 42.0**	**-0.9**
GDSD				Sn	**Sn**	**18 16 54.7**	**-1.8**
H05N1	**Guadeloupe/Mar**	**0.69**	**100**	P	**Pn**	**18 16 42.7**	**-0.4**
H05N1				S	**Sn**	**18 16 55.4**	**-1.1**
DWS	**Wesley**	**0.96**	**153**	⇑*i*P	**Pn**	**18 16 45.6**	**-0.1**
DWS				*e*S	**Sn**	**18 17 00.6**	**-0.6**
DSLB	**Salisbury**	**1.05**	**162**	*e*P	**Pn**	**18 16 46.8**	**+0.2**
DSLB				*e*S	**Sn**	**18 17 02.8**	**0.0**
DLPL	**La Plaine**	**1.20**	**156**	⇓*i*P	**Pn**	**18 16 48.4**	**0.0**
DLPL				*e*S	**Sn**	**18 17 05.7**	**-0.2**
**

PRSN				Sn	Sn	18 18 44.2	-1.0	
AGPR	**Aguadilla, PR**	**5.49**	**292**	Pn	Pn	18 17 45.0	+0.4	
AGPR				Sn	Sn	18 18 45.0	-1.5	
DR12	**Loma Pena Alta**	**7.63**	**289**	Pn	Pn	18 18 11.6	-2.2	
DR12				Sn	Sn	18 19 36.0	-2.7	
BANI	**BANI**	**8.44**	**285**	Pn	Pn	18 18 22.9	-1.8	
SC01	**Santiago de lo**	**9.04**	**291**	Pn	Pn	18 18 32.7	-0.1	
SDDR	**Presa de Saban**	**9.43**	**287**		Pn	18 18 37.6	-0.5	
SDDR				Sn	Sn	18 20 18.7	-3.6	
SDV	**Santo Domingo**	**11.46**	**230**	P	Pn	18 19 05.5	-0.2	
	4.3nm,0.7s,baz=54,slow=11,SNR=5.4							
SDV	**Santo Domingo**	**11.46**	**230**		Pn	18 19 05.3	-0.4	
BOAV	**Boa Vista**	**14.01**	**175**	Pn	Pn	18 19 37.1	-2.0	
CHIV	**Chiviricо**	**14.36**	**286**	Pn	Pn	18 19 42.8	-0.7	
MDP	**Montagnes des**	**14.38**	**141**	P	Pn	18 19 42.5	-1.3	
	8.3nm,0.9s,baz=281,slow=22,SNR=1.5							
MDP				S	Sn	18 22 06.7	-16	
	7.0nm,0.5s,baz=48,slow=22,SNR=9.7							
BBSR	**BB Station**	**16.09**	**351**	Pn	Pn	18 20 04.0	-1.1	
SOR	**Soroa**	**20.98**	**291**	P	P	18 20 57.8	-2.2	
SOR				IAmb	IAmb	18 21 25.9		
	comp=Z,29nm,1.2s							
W57A	**Gilead**	**24.76**	**322**	P	P	18 21 35.6	-1.2	
W57A				IAmb	IAmb	18 21 49.5		
	comp=Z,15nm,1.1s							
TEIG	**Tepich**	**25.44**	**283**	P	P	18 21 42.3	-0.9	
V55A	**Taylorsville**	**25.96**	**322**	P	P	18 21 47.2	-0.6	
V55A				IAmb	IAmb	18 21 59.7		
	comp=Z,24nm,1.5s							
TKL	**Tuckaleechee C**	**27.41**	**318**	LR	LR	18 32 31.1		
	comp=Z,34nm,21.2s,baz=126,slow=35							
SWET	**Sewanee**	**28.56**	**315**	P	P	18 22 11.3	+0.3	
SWET				IAmb	IAmb	18 22 51.3		
	comp=Z,18nm,1.4s							
S51A	**Beattyville**	**28.58**	**322**		P	18 22 11.6	+0.4	
S51A				IAmb	IAmb	18 22 21.3		
	comp=Z,9.1nm,1.1s							
T50A	**Nancy**	**28.93**	**320**	P	P	18 22 15.4	+1.1	
WVT	**Waverly**	**30.35**	**315**		P	18 22 26.5	-0.4	
WVT				IAmb	IAmb	18 23 09.5		
	comp=Z,18nm,1.5s							
OXF	**Oxford**	**30.62**	**311**	P	P	18 22 29.1	-0.1	
S44A	**Carbondale**	**32.17**	**317**	P	P	18 22 43.6	+0.9	
Q44A	**Meyer Farm, Va**	**32.70**	**319**	P	P	18 22 48.0	+0.6	
WHAR	**Wooly Hollow**	**33.08**	**310**	P	P	18 22 52.0	+1.3	
WHAR				IAmb	IAmb	18 22 52.2		
	comp=Z,8.8nm,1.2s							
X40A	**Basin Creek Fa**	**33.13**	**309**	P	P	18 22 51.7	+0.5	
X40A				IAmb	IAmb	18 22 52.6		
	comp=Z,5.1nm,0.7s							
P43A	**Skaggs, Pawnee**	**33.45**	**319**	P	P	18 22 54.9	+1.0	
CCM	**Cathedral Cave**	**33.69**	**316**	P	P	18 22 56.1	0.0	
RCBR	**Riachuelo**	**33.82**	**129**	P	P	18 22 58.2	+0.7	
RCBR				IAmb	IAmb	18 23 02.1		
	comp=Z,13nm,1.2s							
HHAR	**Hobbs**	**34.72**	**311**	P	P	18 23 05.4	+0.4	
P40A	**Paris**	**35.00**	**317**	P	P	18 23 07.5	+0.2	
P40A				IAmb	IAmb	18 23 08.1		
	comp=Z,5.5nm,0.8s							
W35A	**Tecumseh**	**36.45**	**307**	P	P	18 23 19.4	-0.4	
W35A				IAmb	IAmb	18 23 20.5		
	comp=Z,7.2nm,1.0s							
OK052	**Battle Ridge R**	**36.71**	**309**	P	P	18 23 22.0	0.0	
BRDY	**Brady**	**36.93**	**300**		P	18 23 22.8	-1.1	
JCT	**Junction City**	**37.40**	**299**	P	P	18 23 27.8	-0.2	
WMOK	**Wichita Mounta**	**37.77**	**306**	P	P	18 23 30.4	-0.6	
POST	**Post**	**39.44**	**302**		P	18 23 44.1	-0.9	
POST				IAmb	IAmb	18 23 45.4		
	comp=Z,7.0nm,0.7s							
ECSD	**EROS Data Cent**	**40.13**	**320**		P	18 23 50.6	0.0	
ECSD				IAmb	IAmb	18 23 51.9		
	comp=Z,5.4nm,0.8s							
TXAR	**Lajitas Array**	**40.48**	**296**	P	P	18 23 53.1	-0.6	
	comp=Z,0.4nm,0.4s,baz=121,slow=7.4,SNR=18							
TXAR				PcP	PcP	18 25 55.6	+1.1	
	comp=Z,0.2nm,0.7s,baz=69,slow=3.4,SNR=2.2							
	comp=Z,0.4nm,0.4s							
TXAR	**Lajitas Array**	**40.48**	**296**	P	P	18 23 53.6	-0.1	
TX31	**Lajitas Ar. Si**	**40.48**	**296**		P	18 23 53.2	-0.5	
VHRN	**Van Horn**	**41.84**	**298**		P	18 24 05.3	+0.3	
VHRN				IAmb	IAmb	18 24 06.2		
	comp=Z,6.1nm,1.0s							
EPLO	**Experimental L**	**42.04**	**329**	P	P	18 24 06.3	+0.2	
EPLO				IAmb	IAmb	18 24 07.0		
	comp=Z,3.3nm,0.5s							
AGMN	**Agassiz Nation**	**42.27**	**326**	P	P	18 24 07.8	-0.2	
AGMN				IAmb	IAmb	18 24 08.5		
	comp=Z,2.7nm,0.5s							
MNTX	**Cornudas Mount**	**42.34**	**299**		P	18 24 08.9	+0.1	
MNTX				IAmb	IAmb	18 24 09.7		
	comp=Z,4.5nm,0.5s							
ULM	**Lac du Bonnet**	**43.48**	**328**	P	P	18 24 17.2	-0.4	
	comp=Z,2.8nm,0.5s,baz=139,slow=7.6,SNR=7.7							
	comp=Z,2.8nm,0.5s							
ULM	**Lac du Bonnet**	**43.48**	**328**	IAmb	IAmb	18 24 17.7		
	comp=Z,2.4nm,0.6s							
SDCO	**Great Sand Dun**	**43.86**	**308**	P	P	18 24 21.3	0.0	
CRNM	**Carthage**	**43.89**	**302**	P	P	18 24 22.2	+0.7	
SBM	**South Baldy**	**44.26**	**302**	P	P	18 24 24.9	+0.2	
121A	**Cookes Peak, D**	**44.49**	**300**		P	18 24 27.2	+0.9	
121A				IAmb	IAmb	18 24 28.4		
	comp=Z,5.2nm,0.8s							
DUN6	**Lazy B Ranch**	**45.58**	**300**	P	P	18 24 35.4	+0.5	
W18A	**Petrified Fore**	**46.55**	**303**	P	P	18 24 43.1	+0.6	
W18A				IAmb	IAmb	18 24 44.0		
	comp=Z,5.5nm,0.8s							
X18A	**Snowflake**	**46.62**	**302**	P	P	18 24 43.7	+0.6	
X18A				IAmb	IAmb	18 24 44.9		
	comp=Z,5.0nm,0.6s							
TUC	**Tucson**	**46.97**	**299**	P	P	18 24 45.4	-0.2	
X16A	**Lo Mia Camp, P**	**47.81**	**302**		P	18 24 52.2	-0.1	
WUAZ	**Wupatki**	**47.94**	**303**	IAmb	IAmb	18 24 55.2		
	comp=Z,6.3nm,0.8s							
BW06	**Boulder Array**	**48.32**	**313**	IAmb	IAmb	18 24 57.3		
	comp=Z,4.1nm,0.7s							
PD31	**Pinedale Array**	**48.32**	**313**	IAmb	IAmb	18 24 57.3		
	comp=Z,3.9nm,0.7s							
PDAR	**Pinedale Array**	**48.32**	**313**	P	P	18 24 56.5	+0.4	
	comp=Z,3.4nm,0.5s,baz=120,slow=9.7,SNR=48							
	comp=Z,3.4nm,0.5s							
PDAR	**Pinedale Array**	**48.32**	**313**	P	P	18 24 55.8	-0.4	
MOOW	**Moose Ponds**	**49.45**	**314**	P	P	18 25 04.7	-0.1	
YHB	**Horse Butte**	**50.06**	**315**	P	P	18 25 09.9	+0.5	
YHL	**Hebgen Lake**	**50.08**	**315**		P	18 25 09.8	+0.2	
YHL				IAmb	IAmb	18 25 12.2		
	comp=Z,4.6nm,0.9s							
QLMT	**Earthquake Lak**	**50.24**	**315**	P	P	18 25 11.7	+0.9	
BGU	**Big Grassy Mou**	**50.32**	**310**	P	P	18 25 11.3	0.0	
BGU				IAmb	IAmb	18 25 12.7		
	comp=Z,4.8nm,0.8s							
PSUT	**Pine Spring**	**50.44**	**307**	P	P	18 25 12.7	+0.4	
PSUT				IAmb	IAmb	18 25 14.5		
	comp=Z,3.3nm,0.8s							
IRM	**Iron Mountain**	**50.82**	**301**	P	P	18 25 15.7	+0.7	
IRM				IAmb	IAmb	18 25 17.5		
	comp=Z,7.8nm,1.5s							
TPNV	**Topopah Spring**	**52.06**	**304**	P	P	18 25 24.5	+0.1	
TPNV				IAmb	IAmb	18 25 26.4		
	comp=Z,3.5nm,0.8s							
H10N3	**ASCENSION HYDR**	**52.61**	**114**	T	T	19 21 41.7		
	baz=298,slow=75,SNR=3.9							
H10N2	**ASCENSION HYDR**	**52.62**	**114**	T	T	19 21 41.7		
	baz=298,slow=75,SNR=3.5							
H10N1	**ASCENSION HYDR**	**52.63**	**114**	T	T	19 21 42.3		
	baz=298,slow=75,SNR=3.7							
JTMT	**Jette**	**53.02**	**318**	P	P	18 25 30.8	-0.4	
PLID	**Pearl Lake**	**53.43**	**314**	P	P	18 25 33.6	-0.9	
NVAR	**Mina Array Bea**	**53.87**	**306**	P	P	18 25 37.2	-0.6	
	comp=Z,1.3nm,0.7s,baz=102,slow=6.2,SNR=7.8							
	comp=Z,1.3nm,0.7s							
ESDC	**Sonseca Array**	**55.00**	**53**	P	P	18 25 46.1	+0.4	
	comp=Z,0.6nm,0.6s,baz=268,slow=7.5,SNR=4.5							
	comp=Z,0.6nm,0.6s							
DBIC	**Dimbokro**	**56.43**	**93**	P	P	18 25 56.6	+0.4	
	comp=Z,2.9nm,0.4s,baz=305,slow=5.4,SNR=9.9							
	comp=Z,2.9nm,0.4s							
ORV	**Oroville**	**56.48**	**307**	P	P	18 25 56.6	+0.4	
M02C	**Callahan**	**57.71**	**309**	P	P	18 26 04.2	-0.7	
M02C				IAmb	IAmb	18 26 22.7		
	comp=Z,8.9nm,1.4s							
YKA	**Yellowknife Ar**	**58.79**	**334**	P	P	18 26 11.9	-0.1	
	comp=Z,0.4nm,0.5s,baz=104,slow=7.1,SNR=8.0							
	comp=Z,0.4nm,0.5s							
RADR	**Rader Ridge**	**59.05**	**315**	P	P	18 26 14.4	+0.3	
TORD	**Torodi Ar. Bea**	**61.23**	**84**	P	P	18 26 29.0	-0.4	
	comp=Z,1.5nm,0.7s,baz=272,slow=7.6,SNR=7.8							
	comp=Z,1.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**61.23**	**84**	IAmb	IAmb	18 26 49.3		
	comp=Z,3.7nm,0.8s							
KEST	**Kesra**	**65.40**	**58**	P	P	18 26 57.9	+1.2	
	comp=Z,2.9nm,0.6s,baz=292,slow=5.4,SNR=6.3							
	comp=Z,2.9nm,0.6s							
KEST	**Kesra**	**65.40**	**58**	IAmb	IAmb	18 27 01.7		
	comp=Z,11nm,1.3s							
NOA	**NORSAR Array B**	**67.52**	**30**	P	P	18 27 10.9	+1.2	
	comp=Z,2.1nm,1.0s,baz=258,slow=6.4,SNR=1.2							
	comp=Z,2.1nm,1.0s							
F31M	**Tsiigehtchic**	**68.04**	**337**	P	P	18 27 14.3	+1.5	
F31M				IAmb	IAmb	18 27 15.2		
	comp=Z,5.4nm,1.3s							
INK	**Inuvik**	**68.12**	**338**	P	P	18 27 13.1	-0.1	
INK				IAmb	IAmb	18 27 40.5		
	comp=Z,5.3nm,1.4s							
G31M	**Satah River**	**68.15**	**336**	P	P	18 27 13.2	-0.3	
E28M	**Babbage River**	**70.36**	**338**	P	P	18 27 26.8	-0.3	
ILAR	**Eielson Array**	**73.20**	**334**	P	P	18 27 44.2	+0.1	
	comp=Z,0.3nm,0.5s,baz=104,slow=5.4,SNR=6.6							
	comp=Z,0.3nm,0.5s							
E24K	**Your Creek**	**73.67**	**337**	P	P	18 27 47.5	+0.6	
BURAR	**Bucovina Array**	**76.03**	**44**	P	P	18 28 02.7	+1.7	

*JSN **29** 18:19:42.9±1.1, 18°.01N×75°.64W, h0km±9km, MD3.2, Presumed earthquake*
*SDD **29** 18:19:44.0±1.3, 17°.99N×75°.57W, h15km±29km, MD3.1, ML2.7, MW2.7, Presumed earthquake*
*SSNC **29** 18:19:48.2±1.6, 18°.52N×75°.97W, h2km±14km, MD3.0, ML2.1, Presumed earthquake*

ISC 29 18:19:40.6±3.2, 18°.1N±0°.1×75°.61W±0°.08, h2km±24km, n16, σ1s19/27, 7C-2D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJ	**Hope**	**1.09**	**264**	*i* P	**Pb**	**18 20 02.2**	**0.0**
STH	**Stony Hill**	**1.14**	**268**	⇑*i*P	**Pb**	**18 20 02.8**	**-0.3**
MTDJ	**Mount Denham**	**1.83**	**274**	*e*P	**Pb**	**18 20 13.9**	**-1.0**
MTDJ				*e*S	**Sn**	**18 20 36.7**	**-0.5**
MTDJ				IAML		18 20 41.9	
	comp=Z,21nm,0.2s						
MTDJ				IAML		18 20 42.5	
	32nm,0.1s						
MTDJ	**Mount Denham**	**1.83**	**274**	*i*P	**Pb**	**18 20 14.4**	**-0.6**
MTDJ				⇓*i*S	**Sb**	**18 20 38.2**	**-0.2**
MTDJ	**Mount Denham**	**1.83**	**274**	⇑*i*P	**Pn**	**18 20 13.6**	**+0.4**
MTDJ				⇑*i*S	**Sn**	**18 20 36.8**	**-0.3**
MTDJ				IAML		18 20 44.0	
	comp=N,128nm,2.4s						
GTBY	**Guantanamo Bay**	**1.86**	**15**	*e*P	**Pb**	**18 20 14.7**	**-0.7**
GTBY				*e*S	**Sn**	**18 20 37.1**	**-0.6**
GTBY				IAML		18 20 39.7	
	comp=N,17nm,0.1s						
GTBY				IAML		18 20 40.2	
	comp=N,22nm,0.1s						
MARVS	**Santiago de Cu**	**1.90**	**352**	*e*P	**Pb**	**18 20 16.6**	**+0.7**
MARVS				*e*S	**Sn**	**18 20 35.7**	**-2.8**
MARVS				IAML		18 20 42.3	
	comp=N,8.1nm,0.1s						
MARVS				IAML		18 20 42.3	
	comp=E,3.1nm,0.1s						
QMBU	**Quimbuelo**	**2.21**	**20**	*e*P	**Pn**	**18 20 19.6**	**+1.3**
QMBU				*e*S	**Sn**	**18 20 45.2**	**-0.9**
QMBU				IAML		18 20 48.3	
	comp=N,43nm,0.1s						
QMBU				IAML		18 20 50.0	
	comp=E,44nm,0.2s						
QMBU	**Quimbuelo**	**2.21**	**20**	⇑*i*P	**Pb**	**18 20 19.9**	**-1.4**
QMBU				⇑*i*S	**Sn**	**18 20 45.5**	**-0.6**
	comp=N,45nm,0.1s						
QMBU				IAML		18 20 48.3	
	comp=N,45nm,0.1s						
LMGC	**Las Mercedes**	**2.35**	**326**	*e*P	Pn	18 20 15.2	-5.0
LMGC				*e*S	Sn	18 20 39.7	-10
LMGC				IAML		18 20 44.2	
	comp=E,10nm,0.1s						
LMGC				IAML		18 20 44.4	
	comp=N,18nm,0.1s						
PINC	**Pinares de May**	**2.37**	**356**	*e*P	**Pn**	**18 20 22.1**	**+1.6**
MASC	**Masc**	**2.43**	**32**	*e*P	**Pb**	**18 20 23.4**	**-1.5**
MASC				*e*S	**Sn**	**18 20 51.9**	**+0.3**
MASC				IAML		18 20 55.6	
	comp=E,48nm,0.1s						
MASC				IAML		18 20 55.7	
	comp=N,26nm,0.1s						
MASC	**Masc**	**2.43**	**32**	*i* P	**Pn**	**18 20 22.3**	**+1.0**
MASC				⇑*i*S	**Sn**	**18 20 51.5**	**-0.1**
	comp=N,38nm,0.4s						
MASC				IAML		18 20 55.5	
	comp=N,38nm,0.4s						
NMDO	**Nuevo Mundo**	**2.50**	**14**	*e*P	**Pn**	**18 20 24.2**	**+1.8**
NMDO				*e*S	**Sn**	**18 20 53.2**	**-0.2**
NMDO				IAML		18 20 57.3	
	comp=E,20nm,0.1s						
NMDO				IAML		18 20 57.6	
	comp=N,11nm,0.1s						
NMDO	**Nuevo Mundo**	**2.50**	**14**	⇑*i*P	**Pb**	**18 20 24.9**	**-1.4**
NMDO				*i* S	**Sn**	**18 20 53.7**	**+0.2**
	comp=N,20nm,0.7s						
NMDO				IAML		18 20 59.8	
	comp=N,20nm,0.7s						
MOAC	**Moa**	**2.60**	**13**	*e*P	**Pn**	**18 20 25.9**	**+2.2**
MOAC				*e*S	**Sn**	**18 20 56.2**	**+0.2**
MOAC				IAML		18 21 00.0	
	comp=N,10.0nm,0.1s						
MOAC				IAML		18 21 00.1	
	comp=E,4.9nm,0.1s						

*IDC **29** 18:22:34.0±2.7, 52°.91N×160°.84E, h0km, mb3.5/3, mbtmp3.6/4, ML3.3/1, MS2.5/2, Error ellipse: s-maj=46.0km s-min=30.4km az=128.0*
*KRSC **29** 18:22:36.9±1.5, 52°.71N×160°.73E, h16km±9km, Ml3.8*

ISC 29 18:22:36.9±1.7, 52°.82N±0°.05×160°.73E±0°.08, h18km±5km, n36, σ0s99/36, mb3.5/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.52**	**304**	*e*P	**Pn**	**18 22 48.9**	**-0.5**
SPN				*e*S	**Sb**	**18 22 55.1**	**+0.6**
NLC	**Nalytchevo**	**0.91**	**294**	*e*P	**Pn**	**18 22 54.6**	**-0.2**
SDLR	**Sedlovina**	**1.21**	**293**	*e*P	**Pg**	**18 22 59.6**	**-0.7**
DALK	**Dalny**	**1.22**	**281**	*e*P	**Pb**	**18 22 59.3**	**-0.1**
UGLR	**Uglovaya**	**1.22**	**290**	*e*P	**Pg**	**18 22 59.7**	**-0.8**
SMAR	**Somma**	**1.25**	**292**	*e*P	**Pg**	**18 23 00.1**	**-1.0**
PET	**Petropavlovsk**	**1.28**	**280**	*e*P	**Pn**	**18 23 00.1**	**+0.3**
AVH	**Avacha**	**1.29**	**291**	*e*P	**Pg**	**18 23 00.9**	**-0.9**
KRER	**Koryakskii**	**1.29**	**293**	*e*P	**Pg**	**18 23 01.2**	**-0.7**
INSR	**Institute**	**1.31**	**282**	*e*P	**Pg**	**18 23 01.2**	**-1.1**
KOK	**Koryaka**	**1.35**	**292**	*e*P	**Pg**	**18 23 02.1**	**-1.0**
KRX	**Arik**	**1.37**	**294**	*e*P	**Pb**	**18 23 02.1**	**0.0**
RUS	**Russkaya**	**1.41**	**255**	*e*P	**Pn**	**18 23 01.6**	**0.0**
RUS				*e*S	**Sn**	**18 23 18.3**	**-1.3**
KII	**Karymskiy**	**1.45**	**328**	*e*P	**Pg**	**18 23 04.2**	**-0.6**
KII				*e*S	**Sg**	**18 23 26.1**	**+2.5**
KRMR	**Karymshinskiy**	**1.58**	**272**	*e*P	**Pn**	**18 23 04.1**	**+0.1**
MTVR	**Mutnovka**	**1.59**	**259**	*e*P	**Pn**	**18 23 04.8**	**+0.5**
MTVR				*e*S	**Sn**	**18 23 24.6**	**+0.2**
GRL	**Gorelyy**	**1.64**	**262**	*e*P	**Pb**	**18 23 05.9**	**-0.7**
GRL				*e*S	**Sb**	**18 23 27.3**	**+0.3**
ASAK	**Asacha**	**1.78**	**257**	*e*P	**Pb**	**18 23 08.0**	**-1.1**
ASAK				*e*S	**Sb**	**18 23 32.4**	**+1.3**
PETK	**Petropavlovsk-**	**1.86**	**280**	Pn	**Pb**	**18 23 09.1**	**-1.2**
	40nm,0.3s,baz=92,slow=19,SNR=329						
PETK				Sn	**Sb**	**18 23 33.3**	**+0.1**
	18nm,0.3s,baz=98,slow=26,SNR=8.4						
PETK				LR	LR	18 24 04.3	
	comp=Z,66nm,19.0s,baz=118,slow=47						
GNL	**Ganaly**	**1.90**	**299**	*e*P	**Pb**	**18 23 10.8**	**-0.2**
GNL				*e*S	**Sb**	**18 23 35.3**	**+0.9**
KDTR	**Khodutka, Kamc**	**1.92**	**239**	*e*P	**Pn**	**18 23 09.0**	**+0.4**
APC	**Apacha**	**2.17**	**274**	*e*P	**Pb**	**18 23 14.2**	**-1.4**
TUMD	**Tumrok D**	**2.40**	**355**	*e*S	**Sb**	**18 23 49.0**	**+0.2**
PAU	**Pauzhetka**	**2.77**	**242**	*e*P	**Pn**	**18 23 22.3**	**+2.0**
SHEM	**Shemya Is, Ala**	**8.11**	**85**	LR	LR	18 27 28.0	
	comp=Z,53nm,21.8s,baz=146,slow=37						
MA2	**Magadan**	**8.75**	**325**	LR	LR	18 28 38.7	
	comp=Z,20nm,18.9s,baz=108,slow=42						
ASAJ	**Asahikawa**	**14.81**	**241**	Pn	**Pn**	**18 26 06.2**	**+0.9**
	0.2nm,0.3s,baz=40,slow=17,SNR=1.5						
	3.5nm,1.0s						
MJAR	**Matsushiro Arr**	**22.68**	**233**	P	**P**	**18 27 38.1**	**+0.8**
	0.9nm,0.9s,baz=18,slow=12,SNR=5.0						
	0.9nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**33.37**	**169**	T	T	19 04 30.6	
	baz=353,slow=76,SNR=52						
H11N3	**WAKE ISLAND Hy**	**33.38**	**169**	T	T	19 04 33.0	
	baz=353,slow=76,SNR=41						
H11N1	**WAKE ISLAND Hy**	**33.38**	**169**	T	T	19 04 32.4	
	baz=353,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**34.55**	**170**	T	T	19 06 02.6	
	baz=352,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**34.56**	**170**	T	T	19 06 02.6	
	baz=352,slow=76,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**34.57**	**170**	T	T	19 06 02.6	
	baz=352,slow=76,SNR=5.8						
MKAR	**Makanchi Array**	**48.62**	**296**	P	**P**	**18 31 17.6**	**-1.7**
	0.2nm,0.4s,baz=57,slow=7.7,SNR=6.5						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**60.53**	**337**	P	**P**	**18 32 45.7**	**+0.3**
	1.3nm,0.8s,baz=38,slow=6.6,SNR=5.4						
	1.3nm,0.8s						

IDC 29 18:23:40.9±5.9, 5°.85S×148°.67E, h0km, mb3.3/2, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=95.4km s-min=74.0km az=103.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.84**	**203**	Pn	Pn	18 24 42.3	+1.0
	7.7nm,0.3s,baz=324,slow=9.0,SNR=16						
PMG				Sn	Sn	18 25 26.5	-0.7
	4.6nm,0.3s,baz=164,slow=14,SNR=8.2						
WRA	**Warramunga Arr**	**19.76**	**224**	P	P	18 28 13.3	+0.7
	0.2nm,0.3s,baz=47,slow=11,SNR=15						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**22.71**	**217**	P	P	18 28 44.1	-0.4
	0.3nm,0.6s,baz=49,slow=10.0,SNR=7.3						
	0.3nm,0.6s						
STKA	**Stephens Creek**	**26.73**	**193**	P	P	18 29 21.8	-0.4
	0.5nm,0.3s,baz=356,slow=14,SNR=2.1						
	0.5nm,0.3s						

*SDD **29** 18:27:04.6±1.5, 18°.08N×71°.56W, h12km±43km, MD2.5, ML2.0, MW2.6, Presumed earthquake*
*OSPL **29** 18:27:06.3±1.8, 18°.24N×71°.53W, h11km±26km, ML1.7, Presumed earthquake*

ISC 29 18:27:05.2±1.3, 18°.17N±0°.04×71°.56W±0°.04, h1km±14km, n9, σ0s85/18, 9C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LODU1	**El Espartillar**	**0.20**	**24**	*i* P	**Pg**	**18 27 08.2**	**-0.9**
LODU1				*e*S	**Sg**	**18 27 11.1**	**-0.6**
LODU1				IAML		18 27 13.6	
	comp=Z,811nm,0.3s						
PODR	**Polo**	**0.27**	**91**	⇑*e*Pg	**Pg**	**18 27 11.2**	**+0.8**
PODR				⇑*e*Sg	**Sg**	**18 27 13.5**	**-0.3**
PODR				IAML		18 27 20.5	
	comp=N,227nm,0.2s						
PODR	**Polo**	**0.27**	**91**	*i* P	**Pg**	**18 27 10.3**	**-0.1**
PODR				*e*S	**Sg**	**18 27 14.4**	**+0.6**
LOBH	**Bahia de las A**	**0.32**	**194**	*i* P	**Pb**	**18 27 12.9**	**-0.8**
LOBH				*e*S	**Sb**	**18 27 19.7**	**+0.4**
LOBH				IAML		18 27 26.2	
	comp=Z,83nm,0.3s						
NEDR	**Neiba UASD**	**0.34**	**23**	⇑*e*Pg	**Pg**	**18 27 11.9**	**+0.1**
NEDR				⇑*e*Sg	**Sg**	**18 27 17.9**	**+1.6**
NEDR				IAML		18 27 18.1	
	comp=N,323nm,0.4s						
JIDR	**Jimani**	**0.42**	**319**	⇑*e*Pg	**Pg**	**18 27 13.0**	**-0.3**
JIDR				⇑*e*Sg	**Sg**	**18 27 20.7**	**+1.8**
JIDR				IAML		18 27 25.4	
	comp=N,92nm,0.2s						
LONE3	**El Aguacate, B**	**0.44**	**13**	*i* P	**Pg**	**18 27 13.4**	**-0.4**
LONE3				*e*S	**Sg**	**18 27 19.3**	**-0.2**
LONE3				IAML		18 27 22.0	
	comp=Z,89nm,0.3s						
SDDR	**Presa de Saban**	**0.85**	**18**	⇑*e*Pg	**Pg**	**18 27 21.7**	**+0.2**
SDDR				⇑*e*Sg	**Sg**	**18 27 33.1**	**+0.5**
SDDR				IAML		18 27 39.0	
	comp=N,27nm,1.7s						
REDR	**Restauracion**	**1.00**	**9**	⇑*e*Pg	**Pb**	**18 27 24.9**	**-0.5**
REDR				*e*Sg	**Sn**	**18 27 41.5**	**+0.3**
REDR				IAML		18 27 44.0	
	comp=N,30nm,0.2s						

*NEIC **29** 18:30:15.7±1.7, 2°.12N±0°.09×125°.01E±0°.07, h159km±7km, mb4.3/38, Error ellipse: s-maj=12.7km s-min=10.1km az=201.0*
*IDC **29** 18:30:16.3±2.3, 2°.09N×124°.87E, h169km±21km, mb3.5/

AS31	**Alice Springs**	**27.01**	**162**	P	**P**	**18 35 42.8 +0.2**
AS31				IAmb	IAmb	18 35 44.8
	comp=Z,1.7nm,0.3s					
ASAR	**Alice Springs**	**27.01**	**162**	P	**P**	**18 35 43.1 +0.6**
ASAR				PcP	**PcP**	**18 39 00.4 +0.6**
	comp=Z,0.2nm,0.6s,baz=347,slow=2.3,SNR=1.7					
ASAR				ScP	**ScP**	**18 42 24.2 -0.3**
	comp=Z,0.5nm,1.0s,baz=337,slow=2.5,SNR=1.8					
	comp=Z,1.0nm,0.4s					
ASAR	**Alice Springs**	**27.01**	**162**	P	**P**	**18 35 42.7 +0.1**
ASAR					**PcP**	**18 38 57.7 -2.1**
RABL	**Rabaul**	**27.80**	**103**	P	**P**	**18 35 52.2 +2.5**
ENH	**Enshi**	**31.68**	**334**	P	**P**	**18 36 23.2 -0.5**
FORT	**Forrest**	**32.81**	**175**		**P**	**18 36 33.8 +0.2**
FORT				IAmb	IAmb	18 36 34.5
	comp=Z,7.9nm,1.1s					
INKA	**Innaminka**	**33.28**	**154**	P	**P**	**18 36 38.8 +1.1**
KSRS	**Korea Array**	**35.29**	**4**	P	**P**	**18 36 55.0 +0.3**
	comp=Z,0.6nm,0.7s,baz=183,slow=9.4,SNR=1.7					
	comp=Z,0.6nm,0.7s					
BBOO	**Buckleboo**	**36.24**	**164**	P	**P**	**18 37 03.1 +0.1**
BBOO				IAmb	IAmb	18 37 35.4
	comp=Z,19nm,1.5s					
MAJO	**Matsushiro**	**36.37**	**18**	P	**P**	**18 37 04.1 0.0**
MJAR	**Matsushiro Arr**	**36.37**	**18**	P	**P**	**18 37 04.1 0.0**
	comp=Z,1.3nm,1.0s,baz=185,slow=9.9,SNR=2.5					
	comp=Z,1.3nm,1.0s					
MJAR	**Matsushiro Arr**	**36.37**	**18**	IAmb	IAmb	18 37 16.8
	comp=Z,6.0nm,1.5s					
STKA	**Stephens Creek**	**37.25**	**156**	P	**P**	**18 37 12.7 +1.2**
	comp=Z,1.5nm,0.5s,baz=314,slow=12,SNR=7.8					
	comp=Z,1.5nm,0.5s					
STKA	**Stephens Creek**	**37.25**	**156**	P	**P**	**18 37 12.2 +0.6**
STKA				IAmb	IAmb	18 37 28.1
	comp=Z,19nm,1.4s					
CAN	**Canberra**	**43.45**	**151**	P	**P**	**18 38 03.6 +1.1**
CAN				IAmb	IAmb	18 38 29.3
	comp=Z,12nm,1.2s					
TOO	**Toolangi**	**43.78**	**156**	P	**P**	**18 38 06.0 +0.9**
TOO				IAmb	IAmb	18 38 22.2
	comp=Z,7.1nm,1.4s					
JKA	**Kamikawa-asahi**	**44.64**	**18**	P	**P**	**18 38 13.2 +1.4**
KLR	**Kul'dur**	**47.31**	**6**	P	**P**	**18 38 33.2 +0.6**
	comp=Z,2.3nm,0.5s,baz=202,slow=8.2,SNR=13					
	comp=Z,2.3nm,0.5s					
SONM	**Songino Array**	**48.34**	**343**	P	**P**	**18 38 41.5 +0.8**
	comp=Z,0.6nm,0.8s,baz=155,slow=8.5,SNR=5.3					
SONM				PcP	**PcP**	**18 40 05.2 +0.5**
	comp=Z,0.2nm,0.7s,baz=134,slow=6.2,SNR=2.0					
	comp=Z,0.6nm,0.8s					
PEA0B	**Petropavlovsk-**	**57.57**	**23**	P	**P**	**18 39 48.3 +0.3**
PETK	**Petropavlovsk-**	**57.57**	**23**	P	**P**	**18 39 48.4 +0.5**
MKAR	**Makanchi Array**	**57.97**	**327**	P	**P**	**18 39 50.6 -0.3**
	comp=Z,0.4nm,0.3s,baz=122,slow=8.2,SNR=19					
MKAR				PcP	**PcP**	**18 40 40.9 -0.2**
	comp=Z,1.0nm,0.6s,baz=131,slow=3.3,SNR=8.0					
	comp=Z,0.4nm,0.3s					
MKAR	**Makanchi Array**	**57.97**	**327**	P	**P**	**18 39 50.4 -0.5**
MAKZ	**Makanchi**	**58.15**	**326**	P	**P**	**18 39 51.9 -0.3**
MAKZ				IAmb	IAmb	18 40 30.9
	comp=Z,3.9nm,1.4s					
KDJ	**Kajisay**	**58.48**	**320**	P	**P**	**18 39 54.2 -0.6**
YAK	**Yakutsk**	**59.89**	**3**	P	**P**	**18 40 04.4 +0.6**
LBZ	**Lake Benmore**	**61.30**	**145**	P	**P**	**18 40 15.1 +1.4**
ZALV	**Zalesovo Beam**	**61.30**	**334**	P	**P**	**18 40 12.1 -1.4**
	comp=Z,0.3nm,0.3s,baz=119,slow=5.8,SNR=2.3					
	comp=Z,0.3nm,0.3s					
KURBB	**Kurchatov Arra**	**62.23**	**329**	P	**P**	**18 40 18.6 -1.2**
	comp=Z,0.6nm,0.3s,baz=122,slow=5.9,SNR=5.1					
	comp=Z,0.6nm,0.3s					
BHW	**Baring Head**	**62.54**	**140**	P	**P**	**18 40 21.7 -0.3**
RTZ	**Ruatahuna**	**62.60**	**136**	P	**P**	**18 40 22.3 -0.2**
KKAR	**Karatay Array**	**63.30**	**318**	P	**P**	**18 40 26.0 -1.1**
BVAR	**Borovoye Array**	**67.79**	**328**	P	**P**	**18 40 55.7 +0.1**
	comp=Z,0.3nm,0.4s,baz=108,slow=4.7,SNR=3.1					
	comp=Z,0.3nm,0.4s					
CASY	**Casey**	**69.01**	**186**	P	**P**	**18 41 03.3 +0.4**
TIXI	**Tiksi**	**69.50**	**1**	P	**P**	**18 41 05.8 0.0**
AB31	**Akbulak array**	**72.37**	**321**	P	**P**	**18 41 22.0 -1.5**
ABKAR	**Akbulak array**	**72.37**	**321**	P	**P**	**18 41 22.6 -1.0**
B22K	**Teshekpuk Lake**	**85.18**	**20**	P	**P**	**18 42 34.3 +1.3**
PPTF	**Pamatai, Papee**	**86.22**	**108**	P	**P**	**18 42 40.5 +1.2**
ILAR	**Eielson Array**	**87.29**	**25**	P	**P**	**18 42 42.7 -0.7**
BMAR	**Burnt Mountain**	**88.22**	**23**	P	**P**	**18 42 49.1 +1.2**
CRQM	**Cirque**	**89.07**	**29**	P	**P**	**18 42 52.7 +0.5**
FINES	**FINESS Array B**	**92.47**	**332**	P	**P**	**18 43 06.3 -1.4**
	comp=Z,1.8nm,0.9s,baz=82,slow=4.0,SNR=5.3					
	comp=Z,1.8nm,0.9s					

IDC 29 18:38:55.9±3.0, 23°12S×174°71W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=247.7km s-min=34.2km az=163.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.35**	**267**	P	P	18 46 01.8	-0.1
	1.3nm,0.3s,baz=86,slow=10,SNR=7.2						
	1.3nm,0.3s						
ASAR	**Alice Springs**	**46.95**	**259**	P	P	18 47 28.9	+0.1
	0.5nm,0.9s,baz=97,slow=8.6,SNR=12						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**47.31**	**264**	P	P	18 47 31.3	-0.3
	0.4nm,0.4s,baz=104,slow=7.8,SNR=50						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**85.94**	**56**	P	P	18 51 38.2	0.0
	0.2nm,0.8s,baz=250,slow=4.9,SNR=2.0						
	0.2nm,0.8s						

IDC 29 18:51:07.7±1.6, 8°16S×129°66E, h0km, mb3.4/2, mbtmp3.4/5, ML3.4/3, Error ellipse: s-maj=67.0km s-min=28.5km az=76.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**7.42**	**13**	Pn	Pn	18 52 56.2	-1.1
	0.5nm,0.3s,baz=222,slow=22,SNR=1.8						
SIJI				Sn	Sn	18 54 14.1	-8.2
	0.3nm,0.3s,baz=250,slow=23,SNR=1.4						
	2.2nm,0.4s						
WRA	**Warramunga Arr**	**12.56**	**159**	Pn	Pn	18 54 07.6	-0.3
	0.3nm,0.3s,baz=337,slow=13,SNR=10.0						
WRA				Sn	Sn	18 56 21.6	-7.1
	0.6nm,0.3s,baz=331,slow=22,SNR=7.4						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**15.95**	**166**	Pn	Pn	18 54 53.7	0.0
	0.1nm,0.3s,baz=348,slow=14,SNR=12						
ASAR				Sn	Sn	18 57 44.1	-7.3
	0.2nm,0.3s,baz=349,slow=26,SNR=6.4						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**69.00**	**327**	P	P	19 02 15.5	+0.4
	0.2nm,0.3s,baz=112,slow=7.3,SNR=7.3						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**73.31**	**329**	P	P	19 02 41.0	-0.1
	0.1nm,0.4s,baz=127,slow=4.5,SNR=2.2						
	0.1nm,0.4s						

IDC 29 18:56:00.6±6.5, 6°20S×129°96E, h138km±85km, mb3.3/2, mbtmp3.8/5, Error ellipse: s-maj=181.0km s-min=22.9km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.46**	**14**	P	Pn	18 57 20.0	0.0
	3.1nm,0.2s,baz=187,slow=19,SNR=18						
SIJI				S	Sn	18 58 16.8	-5.1
	10.0nm,0.2s,baz=66,slow=24,SNR=19						
WRA	**Warramunga Arr**	**14.31**	**163**	P	Pn	18 59 16.6	-0.4
	0.5nm,0.2s,baz=345,slow=12,SNR=5.5						
WRA				S	Sn	19 01 45.9	-9.5
	0.6nm,0.5s,baz=349,slow=19,SNR=6.7						
ASAR	**Alice Springs**	**17.77**	**168**	P	P	18 59 58.6	+0.3
	1.5nm,0.6s,baz=352,slow=9.5,SNR=9.9						
ASAR				S	S	19 03 10.6	-5.3
	0.3nm,0.8s,baz=352,slow=27,SNR=2.3						
MKAR	**Makanchi Array**	**67.54**	**327**	P	P	19 06 42.4	+0.4
	0.7nm,0.4s,baz=110,slow=7.1,SNR=20						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**71.81**	**328**	P	P	19 07 07.4	-0.7
	0.3nm,0.5s,baz=123,slow=5.2,SNR=4.6						
	0.3nm,0.5s						

*IDC **29** 18:55:50.1±1.7, 0°42N×123°88E, h0km, mb3.4/4, mbtmp3.6/5, ML4.2/1, Error ellipse: s-maj=54.1km s-min=27.2km az=64.0*

*NEIC **29** 18:56:03.7±1.3, 0°04S±0°07×123°34E±0°08, h109km±9km, mb4.3/10, Error ellipse: s-maj=11.1km s-min=9.5km az=87.0*

*DJA **29** 18:56:06.5±0.2, 0°S±2°×12°3E±°, h104km±3km, M4.2/41, mB5.1/3, mb4.2/12, MLv4.1/41, Mw(mB)4.5/3*

ISC 29 18:56:03.0±0.8, 0°03S±0°06×123°33E±0°06, h100km, n43, σ1°38/43, mb4.0/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.74**	**334**	P	Pn	18 56 27.5	+6.7
LUWI	**Luwuk**	**1.15**	**209**		**Pn**	**18 56 26.5**	**+1.4**
LUWI				Sn	**Sn**	**18 56 42.6**	**+0.8**
LUWI	**Luwuk**	**1.15**	**209**	P	**Pn**	**18 56 27.0**	**+1.9**
LUWI				S	**Sn**	**18 56 42.8**	**+1.0**
MRSI	**Marisa**	**1.48**	**290**	P	**Pn**	**18 56 31.2**	**+2.2**
MRSI				S	**Sn**	**18 56 50.2**	**+1.4**
APSI	**Ampana**	**1.90**	**243**	P	**Pn**	**18 56 35.0**	**+0.7**
MNI	**Manado**	**2.10**	**46**	P	Pn	18 56 44.3	+7.3
TOLI2	**Tolitoli**	**2.79**	**294**		**Pn**	**18 56 47.3**	**+1.2**
TOLI2				Sn	**Sn**	**18 57 17.4**	**-1.7**
SANI	**Sanana**	**3.33**	**127**	P	**Pn**	**18 56 55.2**	**+2.0**
MPSI	**Mapaga**	**3.45**	**276**	P	**Pn**	**18 56 57.4**	**+2.5**
PCI	**Palu**	**3.60**	**256**	P	**Pn**	**18 56 57.0**	**+0.1**
KDI	**Kendari**	**3.96**	**190**	P	**Pn**	**18 57 03.5**	**+1.7**
TNTI	**Ternate**	**4.11**	**79**	Pn	**Pn**	**18 57 03.8**	**0.0**
TNTI	**Ternate**	**4.11**	**79**	P	Pn	18 57 09.8	+6.0
SGSI	**Sangihe**	**4.30**	**31**	P	Pn	18 57 13.1	+6.8
KKSI	**Kolaka, Sulawe**	**4.44**	**202**	P	**Pn**	**18 57 07.7**	**-0.5**
TTSI	**Tana Toraja**	**4.61**	**230**	P	**Pn**	**18 57 10.7**	**+0.2**
NLAI	**Namlea**	**4.93**	**130**	P	Pn	18 57 19.0	+4.1
MMSI	**Mamuju**	**5.15**	**239**	P	**Pn**	**18 57 18.6**	**+0.8**
SPSI	**Sidrap Palu**	**5.29**	**222**	P	**Pn**	**18 57 21.0**	**+1.4**
	0.1nm1µm20nm,0.5s						
PMSI	**Majene**	**5.60**	**232**	P	**Pn**	**18 57 24.7**	**+0.7**
	0.3nm64nm,1.2s						
KAPI	**Kappang**	**6.11**	**216**	Pn	**Pn**	**18 57 31.1**	**+0.3**
	4.4nm,0.3s,baz=11,slow=5.0,SNR=17						
KAPI				Sn	**Sn**	**18 58 40.4**	**+1.1**
	baz=149,slow=16						
	18nm,0.5s						
KAPI	**Kappang**	**6.11**	**216**		**Pn**	**18 57 30.9**	**+0.1**
KAPI				Sn	**Sn**	**18 58 37.0**	**-2.3**
KAPI	**Kappang**	**6.11**	**216**	P	**Pn**	**18 57 30.3**	**-0.5**
	0.1nm11nm,0.5s						
MKS	**Makassar**	**6.43**	**217**	P	**Pn**	**18 57 36.6**	**+1.3**
	95nm,1.3s						
BSSI	**Bau Bau, Buton**	**6.70**	**205**	P	**Pn**	**18 57 40.0**	**+1.1**
	41nm,2.4s						
MYLDM	**Lahad Datu**	**7.08**	**317**	Pn	**Pn**	**18 57 44.1**	**0.0**
MYLDM	**Lahad Datu**	**7.08**	**317**	P	**Pn**	**18 57 48.5**	**+4.5**
	0.1nm24nm,1.4s						
SWI	**Sorong**	**7.97**	**96**	P	Pn	18 58 20.4	+24
EDFI	**Ende, Flores**	**8.81**	**191**	P	**Pn**	**18 58 09.1**	**+1.4**
CTJI	**Waduk Cacaban**	**15.72**	**244**	P	**P**	**18 59 42.7**	**+1.8**
KNRA	**Kununurra**	**16.44**	**161**		**Pn**	**18 59 47.4**	**-0.5**
KNRA				IAmb	IAmb	19 00 30.8	
	comp=Z,42nm,1.3s						
WB0	**Warramunga Arr**	**22.41**	**152**	P	**P**	**19 00 52.8**	**-0.7**
WB0				IAmb	IAmb	19 01 21.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**22.53**	**152**	P	**P**	**19 00 54.0**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=332,slow=10,SNR=7.5						
	comp=Z,1.1nm,0.5s						
WRA	**Warramunga Arr**	**22.53**	**152**	P	**P**	**19 00 54.0**	**-0.9**
WR8	**Warramunga Arr**	**22.62**	**152**	P	**P**	**19 00 55.0**	**-0.7**
ASAR	**Alice Springs**	**25.64**	**157**	P	**P**	**19 01 22.9**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=336,slow=9.2,SNR=2.0						
	comp=Z,0.3nm,0.5s						
FORT	**Forrest**	**30.91**	**172**	P	**P**	**19 02 09.2**	**-1.0**
FORT				IAmb	IAmb	19 02 43.6	
	comp=Z,6.5nm,1.0s						
BBOO	**Buckleboo**	**34.74**	**161**	P	**P**	**19 02 42.9**	**-0.8**
STKA	**Stephens Creek**	**36.08**	**153**	P	**P**	**19 02 54.9**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=330,slow=13,SNR=2.9						
	comp=Z,0.8nm,0.5s						
MAJO	**Matsushiro**	**38.92**	**19**	P	**P**	**19 03 19.2**	**+0.1**
MAJO				IAmb	IAmb	19 03 35.8	
	comp=Z,16nm,1.4s						
CAN	**Canberra**	**42.49**	**148**	P	**P**	**19 03 48.7**	**+0.2**
TOO	**Toolangi**	**42.59**	**154**	P	**P**	**19 03 49.0**	**-0.3**
TOO				IAmb	IAmb	19 04 11.0	
	comp=Z,2.3nm,1.1s						
MKAR	**Makanchi Array**	**58.82**	**328**	P	**P**	**19 05 50.0**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=123,slow=8.8,SNR=1.5						
	comp=Z,0.1nm,0.3s						

*IDC **29** 19:09:00.6±2.4, 10°39S×113°31E, h0km, mb3.5/5, mbtmp3.6/5, Error ellipse: s-maj=146.3km s-min=19.4km az=48.0*

*DJA **29** 19:09:09.0±0.3, 10°S±2°×11°4E±°, h10km, M4.2/33, mB5.5/3, mb4.1/13, MLv4.2/33, Mw(mB)5.0/3*

ISC 29 19:09:10.4±1.8, 9°8S±0°1×114°21E±0°07, h58km±19km, n29, σ1°10/35, mb3.5/5, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.32**	**358**	P	Pn	19 09 30.5	-2.2
JAGI				S	**Sn**	**19 09 47.4**	**-1.9**
IGBI	**Denpasar**	**1.34**	**44**	P	**Pn**	**19 09 31.8**	**-1.1**
IGBI				S	**Sn**	**19 09 48.2**	**-1.6**
DNP	**Denpasar**	**1.49**	**42**	P	**Pn**	**19 09 34.6**	**-0.3**
DNP				S	**Sn**	**19 09 53.9**	**+0.5**
RTBI	**Rangdo, Negare**	**1.52**	**29**	P	**Pn**	**19 09 34.7**	**-0.6**
RTBI				S	**Sn**	**19 09 53.2**	**-0.8**
KHKI	**Kahang-Kahang**	**1.99**	**44**	P	**Pn**	**19 09 43.3**	**+1.6**
KHKI				S	**Sn**	**19 10 07.3**	**+1.9**
ABJI	**Asem Bagus**	**1.99**	**1**	P	**Pn**	**19 09 42.1**	**+0.4**
ABJI				S	**Sn**	**19 10 05.8**	**+0.2**
BLJI	**Banyuglugur**	**2.13**	**343**	P	**Pn**	**19 09 44.1**	**+0.5**
BLJI				S	**Sn**	**19 10 11.4**	**+2.5**
KMMI	**Kalianget**	**2.74**	**355**	P	**Pn**	**19 09 52.8**	**+0.8**
TWSI	**Taliwang, Sumb**	**2.84**	**68**	P	**Pn**	**19 09 53.9**	**+0.5**
SNJI	**Sawahan-Nganju**	**3.14**	**309**	P	**Pn**	**19 09 57.8**	**+0.2**
SJI	**Sawahan**	**3.17**	**310**	P	**Pn**	**19 09 57.6**	**-0.3**
PCJI	**Pacitan**	**3.39**	**298**	P	**Pn**	**19 10 00.6**	**-0.3**
PLAI	**Plampang**	**3.65**	**75**	P	**Pn**	**19 10 05.4**	**+1.0**
UGM	**Wanagama**	**4.10**	**297**	P	**Pn**	**19 10 11.1**	**+0.5**
DBNI	**Kabupaten Domp**	**4.25**	**73**	P	**Pn**	**19 10 14.9**	**+2.2**
WBSI	**Waikabubak, Su**	**5.11**	**89**	P	**Pn**	**19 10 25.0**	**+0.5**
	0.3nm53nm,1.3s						
LBFI	**Labuhan Bajo,**	**5.76**	**77**	P	**Pn**	**19 10 33.0**	**-0.4**
KPJI	**Karang Pucung**	**5.76**	**295**	P	**Pn**	**19 10 34.6**	**+1.2**
	0.1nm24nm,1.0s						
BBKI	**Banjar Baru**	**6.33**	**6**	P	**Pn**	**19 10 42.1**	**+1.0**
	0.3nm2µm33nm,1.2s						
BBJI	**Bungbulang**	**6.89**	**289**	P	**Pn**	**19 10 49.2**	**+0.3**
	0.1nm11nm,1.6s						
BSSI	**Bau Bau, Buton**	**7.21**	**60**	P	**Pn**	**19 10 53.8**	**+0.6**
KAPI	**Kappang**	**7.27**	**50**	P	**Pn**	**19 10 53.1**	**-0.9**
	0.0nm5.7nm,0.7s						
EDFI	**Ende, Flores**	**7.46**	**83**	P	**Pn**	**19 10 58.0**	**+1.3**
	0.1nm13nm,1.0s						
PMSI	**Majene**	**7.81**	**37**	P	**Pn**	**19 11 02.0**	**+0.5**
WRA	**Warramunga Arr**	**21.89**	**120**	P	**P**	**19 13 59.8**	**+1.0**
	0.7nm,0.4s,baz=294,slow=12,SNR=13						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**23.32**	**129**	P	**P**	**19 14 13.8**	**+0.1**
	0.5nm,0.5s,baz=304,slow=8.3,SNR=20						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.86**	**332**	P	**P**	**19 15 29.0**	**-1.2**
	0.4nm,0.5s,baz=157,slow=8.4,SNR=5.9						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**33.55**	**135**	P	**P**	**19 15 44.7**	**-0.2**
	0.8nm,0.4s,baz=320,slow=8.7,SNR=6.2						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**63.13**	**336**	P	**P**	**19 19 31.7**	**-0.4**
	0.2nm,0.5s,baz=144,slow=7.4,SNR=5.5						
	0.2nm,0.5s						

*IDC **29** 19:10:42.0±3.5, 7°01N×127°15E, h104km±32km, mb3.1/4, mbtmp3.5/5, Error ellipse: s-maj=55.0km s-min=16.3km az=51.0*

ISC 29 19:10:41.5±1.4, 7°0N±0°2×127°2E±0°1, h100km, n6, σ0°67/7, mb3.4/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.63**	**271**	P	**Pn**	**19 11 10.0**	**+0.7**
	164nm,0.4s,baz=358,slow=2.0,SNR=7.7						
DAV				S	**Sn**	**19 11 29.9**	**-0.6**
	492nm,0.3s,baz=132,slow=23,SNR=32						
SIJI	**Sorong**	**8.83**	**153**	P	**Pn**	**19 12 46.4**	**0.0**
	4.2nm,0.4s,baz=214,slow=23,SNR=12						
SIJI				S	Sn	19 14 13.8	-10
	2.7nm,0.5s,baz=144,slow=23,SNR=6.1						
WRA	**Warramunga Arr**	**27.71**	**165**	P	**P**	**19 16 21.1**	**+0.6**
	0.1nm,0.4s,baz=348,slow=9.9,SNR=1.6						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**31.21**	**168**	P	**P**	**19 16 51.0**	**-0.5**
	0.3nm,0.6s,baz=341,slow=8.7,SNR=2.4						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**55.16**	**324**	P	**P**	**19 20 03.2**	**-0.5**
	0.4nm,0.5s,baz=103,slow=8.7,SNR=5.9						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**59.25**	**326**	P	**P**	**19 20 32.6**	**+0.2**
	0.5nm,0.7s,baz=124,slow=6.3,SNR=5.8						
	0.5nm,0.7s						

*JMA **29** 19:12:55.1±0.2, 25°N±2°×123°7E±0°7, h173km±3km, MV3.7/18, NW OFF ISHIGAKIJIMA IS*

ISC 29 19:12:54.5±1.9, 25°3N±0°1×123°70E±0°06, h178km±15km, n26, σ0°56/37, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JISG	**Ishigakijimahi**	**0.91**	**142**	*i* P	**Pn**	**19 13 21.2**	**-0.2**
JISG				S	**Sn**	**19 13 41.5**	**-0.5**
IRIF	**Iriomote-Funau**	**0.97**	**178**	*i* P	**Pn**	**19 13 21.6**	**-0.2**
IRIF				*e*S	**Sn**	**19 13 42.5**	**-0.3**
JIJ	**Ishigaki jima**	**1.03**	**157**	*i* P	**Pn**	**19 13 22.1**	**-0.2**
JIJ				S	**Sn**	**19 13 42.4**	**-1.2**
YOJ	**Yonaguni jima**	**1.05**	**217**	P	**Pn**	**19 13 22.5**	**+0.1**
YOJ	**Yonaguni jima**	**1.05**	**217**	*e*P	**Pn**	**19 13 22.6**	**+0.1**
YOJ				*e*S	**Sn**	**19 13 43.4**	**-0.4**
JYNG	**Yonagunijimaku**	**1.09**	**219**	P	**Pn**	**19 13 22.9**	**+0.1**
JYNG				S	**Sn**	**19 13 44.2**	**-0.3**
JKRS	**Kuro-shima**	**1.11**	**165**	*i* P	**Pn**	**19 13 23.2**	**+0.4**
JKRS				S	**Sn**	**19 13 44.6**	**-0.1**
JTJ	**Tarama**	**1.13**	**126**	P	**Pn**	**19 13 23.2**	**+0.2**
JTJ				*e*S	**Sn**	**19 13 44.8**	**-0.2**
HATJ	**Hateruma jima**	**1.25**	**175**	*e*P	**Pn**	**19 13 24.4**	**+0.4**
HATJ				S	**Sn**	**19 13 46.8**	**-0.1**
JIKM	**Ikemajima**	**1.46**	**105**	*e*P	**Pn**	**19 13 26.1**	**+0.3**
JIKM				S	**Sn**	**19 13 50.1**	**+0.1**
JMJ	**Miyako jima 2**	**1.53**	**109**	P	**Pn**	**19 13 27.6**	**+1.0**
JMJ	**Miyako jima 2**	**1.53**	**109**	S	**Sn**	**19 13 52.4**	**+1.1**
JMJ2	**Miyako jima3**	**1.58**	**111**	P	**Pn**	**19 13 27.6**	**+0.5**
JMJ2				S	**Sn**	**19 13 52.4**	**+0.1**
JOGS	**Gusukube**	**1.64**	**109**	*e*P	**Pn**	**19 13 28.2**	**+0.5**
JOGS				S	**Sn**	**19 13 53.6**	**+0.3**
TATO	**Taipei**	**2.03**	**261**	P	**Pn**	**19 13 32.2**	**+0.5**
YHNB	**Yeheng**	**2.20**	**254**	P	**Pn**	**19 13 34.6**	**+0.9**
NACB	**Ninganchiao**	**2.22**	**240**	P	**Pn**	**19 13 33.6**	**-0.3**
YULB	**Yu-li**	**2.91**	**229**	P	**Pn**	**19 13 41.3**	**-0.7**
YULB	**Yu-li**	**2.91**	**229**	S	**Sn**	**19 14 18.1**	**-0.8**
SSLB	**Suanglung**	**2.92**	**239**	P	**Pn**	**19 13 42.2**	**0.0**
SSLB	**Suanglung**	**2.92**	**239**	S	**Sn**	**19 14 19.7**	**+0.5**
JKE	**Kume jima 2**	**2.96**	**69**	*e*P	**Pn**	**19 13 41.4**	**-1.2**
TPUB	**Ta-pu**	**3.44**	**235**	P	**Pn**	**19 13 49.5**	**+0.9**
TPUB	**Ta-pu**	**3.44**	**235**	S	**Sn**	**19 14 30.9**	**+0.2**
TWGBT	**Beinan**	**3.45**	**224**	P	**Pn**	**19 13 48.4**	**-0.2**
TWGBT	**Beinan**	**3.45**	**224**	S	**Sn**	**19 14 30.6**	**-0.2**

*IDC **29** 19:13:26.8±1.4, 28°.56N×142°.91E, h0km, mb3.6/6, mbtmp3.6/8, ML2.5/2, Error ellipse: s-maj=45.1km s-min=24.5km az=74.0*

ISC 29 19:13:31.9±1.3, 28°.6N±0°.2×142°.9E±0°.2, h34km, n8, σ1°03/8, mb3.7/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**8.81**	**335**	Pn	**Pn**	**19 15 35.2**	**-1.6**
	baz=157,slow=11,SNR=4.1						
	2.6nm,1.0s						
KSRS	**Korea Array**	**15.31**	**309**	Pn	**Pn**	**19 17 05.0**	**-0.3**
	baz=122,slow=12,SNR=1.2						
	0.9nm,0.8s						
SONM	**Songino Array**	**34.06**	**314**	P	**P**	**19 20 13.9**	**+0.9**
	0.6nm,0.9s,baz=126,slow=7.4,SNR=3.6						
	0.6nm,0.9s						
WRA	**Warramunga Arr**	**49.00**	**191**	P	**P**	**19 22 14.5**	**-0.8**
	0.8nm,0.5s,baz=11,slow=7.9,SNR=15						
	0.8nm,0.5s						
MKAR

*DRS **29** 19:53:09.6, 42˚.22N×48˚.78E, h15km*
ISC 29 19:53:09.4±1.9, **42˚.23N**±0˚.03×**48˚.60E**±0˚.07, **h2**km±10km, **n60**, σ1§**28**/115, **1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DRN	**Derbent**	**0.28**	**225**	*i* Pg		**Pb**	**19 53 17.0**	**-0.1**
DRN				*e*Sg		**Sb**	**19 53 23.4**	**+1.0**
DRN	**Derbent**	**0.28**	**225**	ǁ *i* PG		**Pb**	**19 53 17.1**	**-0.1**
DRN				*e*S		**Sb**	**19 53 23.6**	**+1.2**
KSMR	**Kasumkent**	**0.72**	**209**	*e*Pg		**Pb**	**19 53 24.1**	**-0.6**
KSMR				*e*Sg		**Sb**	**19 53 35.1**	**+0.1**
KSMR	**Kasumkent**	**0.72**	**209**	*e*PG		**Pb**	**19 53 24.1**	**-0.6**
KSMR				*e*S		**Sb**	**19 53 35.1**	**+0.1**
URKR	**Urkarakh**	**0.72**	**265**	*e*Pg		**Pb**	**19 53 24.6**	**-0.2**
URKR				*e*Sg		**Sn**	**19 53 36.4**	**-2.0**
URKR	**Urkarakh**	**0.72**	**265**	*e*PG		**Pb**	**19 53 24.6**	**-0.2**
URKR				*e*S		**Sn**	**19 53 36.4**	**-2.0**
SGKR	**Sergokala**	**0.73**	**288**	*i* Pg		**Pb**	**19 53 24.8**	**-0.2**
SGKR				*e*Sg		**Sn**	**19 53 36.7**	**-1.9**
SGKR	**Sergokala**	**0.73**	**288**	*i* PG		**Pb**	**19 53 24.8**	**-0.2**
SGKR				*e*S		**Sn**	**19 53 36.7**	**-1.9**
AKT	**Akhty**	**0.99**	**221**	*i* Pg		**Pb**	**19 53 28.8**	**-0.6**
AKT				*e*Sg		**Sn**	**19 53 43.4**	**-1.7**
AKT	**Akhty**	**0.99**	**221**	*i* PG		**Pb**	**19 53 28.8**	**-0.6**
AKT				*e*S		**Sn**	**19 53 43.4**	**-1.7**
MAK	**Makhachkala**	**1.09**	**312**	*e*Pg		**Pn**	**19 53 31.7**	**0.0**
MAK				*e*Sg		**Sn**	**19 53 48.1**	**+0.8**
MAK	**Makhachkala**	**1.09**	**312**	*e*PG		**Pn**	**19 53 31.7**	**0.0**
MAK				*e*S		**Sn**	**19 53 48.1**	**+0.8**
KMKR	**Kumukh**	**1.12**	**265**	*i* Pg		**Pn**	**19 53 31.7**	**-0.6**
KMKR				*e*Sg		**Sn**	**19 53 48.5**	**+0.1**
KMKR	**Kumukh**	**1.12**	**265**	*i* PG		**Pn**	**19 53 31.7**	**-0.6**
KMKR				*e*S		**Sn**	**19 53 48.5**	**+0.1**
GNBR	**Gunib**	**1.22**	**278**	*e*Pg		**Pb**	**19 53 33.1**	**-0.2**
GNBR				*e*Sg		**Sn**	**19 53 51.7**	**+1.0**
GNBR	**Gunib**	**1.22**	**278**	*e*PG		**Pb**	**19 53 33.1**	**-0.2**
GNBR				*e*S		**Sn**	**19 53 51.7**	**+1.0**
ARKR	**Arakani**	**1.25**	**288**	*e*Pg		**Pg**	**19 53 33.8**	**+0.5**
ARKR				*e*Sg		**Sn**	**19 53 52.5**	**+1.2**
ARKR	**Arakani**	**1.25**	**288**	*e*PG		**Pg**	**19 53 33.8**	**+0.5**
ARKR				*e*S		**Sn**	**19 53 52.5**	**+1.2**
BUJR	**Buynaksk**	**1.25**	**299**	*e*Pg		**Pg**	**19 53 33.7**	**+0.3**
BUJR				*e*Sg		**Sn**	**19 53 51.9**	**+0.5**
BUJR	**Buynaksk**	**1.25**	**299**	*e*PG		**Pg**	**19 53 33.7**	**+0.3**
BUJR				*e*S		**Sn**	**19 53 51.9**	**+0.5**
KANR	**Karaman**	**1.27**	**320**	*e*Pg		**Pg**	**19 53 33.0**	**-0.7**
KANR				*e*Sg		**Sn**	**19 53 53.7**	**+2.1**
KANR	**Karaman**	**1.27**	**320**	*e*PG		**Pg**	**19 53 33.0**	**-0.7**
KANR				*e*S		**Sn**	**19 53 53.7**	**+2.1**
KRNR	**Karanay**	**1.39**	**296**	*i* Pg		**Pb**	**19 53 35.3**	**-0.8**
KRNR				*e*Sg		**Sg**	**19 53 55.4**	**+1.4**
KRNR	**Karanay**	**1.39**	**296**	*i* PG		**Pb**	**19 53 35.3**	**-0.8**
KRNR				*e*S		**Sg**	**19 53 55.4**	**+1.4**
UNCR	**Uncukul**	**1.42**	**290**	*e*PG		**Pg**	**19 53 36.2**	**-0.4**
UNCR				*e*S		**Sg**	**19 53 56.5**	**+1.4**
HNZR	**Khunzah**	**1.43**	**284**	*i* PG		**Pg**	**19 53 36.8**	**-0.1**
HNZR				*e*S		**Sg**	**19 53 57.8**	**+2.3**
XNZR	**Khunzakh**	**1.44**	**283**	*i* Pg		**Pg**	**19 53 36.8**	**-0.2**
XNZR				*e*Sg		**Sg**	**19 53 57.8**	**+2.2**
DBC	**Dubki**	**1.53**	**302**	*e*PN		**Pb**	**19 53 37.5**	**-1.0**
DBC				*e*S		**Sg**	**19 53 59.8**	**+1.4**
TLTR	**Tlyarata**	**1.67**	**266**	*i* PN		**Pb**	**19 53 40.1**	**-0.9**
TLTR				*e*S		**Sg**	**19 54 04.0**	**+0.8**
DLMR	**Dylym**	**1.68**	**301**	*e*Pg		**Pg**	**19 53 40.9**	**-0.7**
DLMR				*e*Sg		**Sg**	**19 54 05.0**	**+1.7**
DLMR	**Dylym**	**1.68**	**301**	*e*PN		**Pg**	**19 53 40.8**	**-0.7**
DLMR				*e*S		**Sg**	**19 54 05.0**	**+1.7**
DLMR				pmax		pmax		
	comp=Z,112nm,0.2s							
LGD	**Lagodekhi**	**1.80**	**258**	P		**Pb**	**19 53 42.5**	**-0.6**
LGD	**Lagodekhi**	**1.80**	**258**	PN		**Pb**	**19 53 42.5**	**-0.6**
BTLR	**Botlikh**	**1.81**	**285**	*e*Pg		**Pb**	**19 53 41.9**	**-1.4**
BTLR				*e*Sg		**Sg**	**19 54 07.7**	**+0.1**
BTLR	**Botlikh**	**1.81**	**285**	*e*PN		**Pb**	**19 53 41.9**	**-1.4**
DVE	**Vedeno**	**1.96**	**292**	*e*Pg		**Pb**	**19 53 45.4**	**-0.6**
DVE				*e*Sg		**Sg**	**19 54 13.0**	**+0.4**
DVE	**Vedeno**	**1.96**	**292**	*e*PN		**Pg**	**19 53 45.9**	**-1.2**
DVE				*e*S		**Sg**	**19 54 13.0**	**+0.4**
GROC	**Groznyy**	**2.28**	**296**	*e*Pn		**Pg**	**19 53 52.5**	**-0.7**
GROC				*i* Sn		**Sb**	**19 54 20.2**	**+0.2**
GROC	**Groznyy**	**2.28**	**296**	*e*PN		**Pg**	**19 53 52.5**	**-0.7**
GROC				*i* S		**Sb**	**19 54 20.2**	**+0.2**
DGRG	**David-gareji**	**2.53**	**253**	P		**Pb**	**19 53 54.3**	**-1.3**
DGRG				S		**Sg**	**19 54 29.8**	**-1.1**
DGRG	**David-gareji**	**2.53**	**253**	PN		**Pb**	**19 53 54.3**	**-1.3**
DGRG				S		**Sg**	**19 54 29.7**	**-1.1**
CHRG	**Chargali**	**2.73**	**273**	P		**Pb**	**19 53 57.1**	**-1.8**
GUDG	**Gudauri**	**3.06**	**276**	*e*PN		**Pb**	**19 54 02.2**	**-2.6**
GUDG				*e*S		**Sb**	**19 54 39.1**	**-3.5**
LACR	**Lac**	**3.23**	**282**	*e*Pn		**Pn**	**19 54 03.1**	**+1.8**
LACR				*e*Sn		**Sn**	**19 54 42.8**	**+2.4**
LACR	**Lac**	**3.23**	**282**	*e*PN		**Pb**	**19 54 04.8**	**-2.8**
LACR				*e*S		**Sn**	**19 54 42.9**	**+2.4**
TRLG	**Trialeti**	**3.43**	**260**	P		**Pn**	**19 54 05.5**	**+1.5**
TRLG				S		**Sn**	**19 54 48.0**	**+2.7**
TRLG	**Trialeti**	**3.43**	**260**	PN		**Pn**	**19 54 05.5**	**+1.5**
TRLG				S		**Sn**	**19 54 48.0**	**+2.7**
KORR	**Kora**	**3.45**	**286**	*e*Pn		**Pn**	**19 54 05.3**	**+1.1**
KORR				*e*Sn		**Sn**	**19 54 46.6**	**+1.0**
KORR	**Kora**	**3.45**	**286**	*e*PN		**Pn**	**19 54 05.3**	**+1.1**
KORR				*e*S		**Sn**	**19 54 46.6**	**+1.0**
GNI	**Garni**	**3.58**	**236**	*i* PN		**Pn**	**19 54 08.1**	**+2.1**
DIGR	**Digorskoe uzhe**	**3.77**	**282**	*e*Pn		**Pn**	**19 54 10.2**	**+1.5**
DIGR				*e*Sn		**Sn**	**19 54 55.0**	**+1.3**
DIGR	**Digorskoe uzhe**	**3.77**	**282**	*e*PN		**Pn**	**19 54 10.2**	**+1.5**
DIGR				*e*S		**Sn**	**19 54 55.2**	**+1.3**
KBZ	**Khabaz**	**4.44**	**292**	*e*Pn		**Pn**	**19 54 17.8**	**0.0**
KBZ				*e*Sn		**Sn**	**19 55 09.0**	**-1.0**
KBZ	**Khabaz**	**4.44**	**292**	*e*PN		**Pn**	**19 54 17.8**	**0.0**
KBZ				*e*S		**Sn**	**19 55 09.0**	**-1.0**
BEYR	**Belyy Ugol+**	**4.59**	**295**	*e*Pn		**Pn**	**19 54 19.2**	**-0.7**
BEYR				*e*Sn		**Sn**	**19 55 11.7**	**-2.1**
BEYR	**Belyy Ugol+**	**4.59**	**295**	*e*PN		**Pn**	**19 54 19.2**	**-0.7**
BEYR				*e*S		**Sn**	**19 55 11.7**	**-2.1**
SHA1	**Shidzhatmaz**	**4.61**	**291**	*e*Pn		**Pn**	**19 54 20.7**	**+0.4**
SHA1				*e*Sn		**Sn**	**19 55 15.1**	**+0.6**
SHA1	**Shidzhatmaz**	**4.61**	**291**	*e*PN		**Pn**	**19 54 20.7**	**+0.4**
SHA1				*e*S		**Sn**	**19 55 15.1**	**+0.6**
KIV	**Kislovodsk**	**4.66**	**294**	*e*Pn		**Pn**	**19 54 19.9**	**-1.0**
KIV				*e*Sn		**Sn**	**19 55 15.4**	**-0.2**
KIV	**Kislovodsk**	**4.66**	**294**	*e*PN		**Pn**	**19 54 19.9**	**-1.0**
KIV				*e*S		**Sn**	**19 55 15.4**	**-0.2**

*AEIC **29** 19:53:44.4±1.8, 66˚.51N±0˚.04×170˚.9W±0˚.1, h10km±5km, Error ellipse: s-maj=6.7km s-min=5.9km az=193.0*
*NERS **29** 19:53:45.8, 66˚.16N×170˚.84W, h0km*
*NEIC **29** 19:53:47.7±1.4, 66˚.48N±0˚.05×171˚.0W±0˚.2, h14km±5km, mb3.5/4, mb_Lg3.3/13, ML3.5(AEIC), Error ellipse: s-maj=10.2km s-min=6.1km az=122.0*
*ANF **29** 19:53:47.4±0.4, 66˚.47N×171˚.09W, h15km, ML3.9/28, Error ellipse: s-maj=5.0km s-min=2.1km az=108.0*
*IDC **29** 19:53:50.9±5.3, 66˚.82N×171˚.20W, h0km, mb3.1/3, mbtmp3.1/4, ML3.2/1, Error ellipse: s-maj=209.8km s-min=23.9km az=10.0*
ISC 29 19:53:46.7±1.4, **66˚.48N**±0˚.04×**171˚.09W**±0˚.03, **h3**km±11km, **n149**, σ1§**46**/171, **mb3.2**/3, **Near north coast of eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TNA	**Tin City**	**1.59**	**124**			**Pn**	**19 54 14.0**	**-1.7**
TNA						**Sn**	**19 54 33.5**	**-3.2**
TNA	**Tin City**	**1.59**	**124**	P		**Pn**	**19 54 14.0**	**-1.7**
	baz=307,SNR=504							
TNA				S		**Sn**	**19 54 34.8**	**-1.9**
	baz=307							
F14K	**Arctic Creek**	**2.19**	**115**			**Pn**	**19 54 22.3**	**-1.7**
F14K						**Sn**	**19 54 51.0**	**-0.7**
F14K	**Arctic Creek**	**2.19**	**115**	P		**Pn**	**19 54 22.4**	**-1.6**
	baz=299,SNR=208							
F14K				S		**Sn**	**19 54 50.3**	**-1.4**
	baz=299							
PVDR	**Provideniya**	**2.24**	**204**	*e*Pg		**Pn**	**19 54 20.1**	**-4.6**
PVDR				Pgmax			19 54 26.2	
	100nm,0.4s							
PVDR				*e*Sg		**Sn**	**19 54 49.6**	**-3.2**
PVDR				Sgmax			19 54 53.7	
	900nm,0.6s							
GAMB	**Gambell**	**2.72**	**186**		Pn	**Pn**	**19 54 31.2**	**-0.1**
GAMB						**Sn**	**19 55 02.6**	**-2.1**
GAMB					lAmb_Lg		19 55 15.9	
	comp=Z,148nm,0.7s							
GAMB	**Gambell**	**2.72**	**186**	P		**Pn**	**19 54 29.6**	**-1.8**
	baz=6.0							
GAMB					Sb	**Sb**	**19 55 11.0**	**+1.2**
	baz=6.0							
F15K	**North Star Dit**	**2.73**	**103**			**Pn**	**19 54 29.7**	**-1.8**
F15K	**North Star Dit**	**2.73**	**103**	P		**Pn**	**19 54 29.7**	**-1.8**
	baz=289,SNR=42							
F15K					Sb	**Sb**	**19 55 09.9**	**-0.2**
	baz=289							
C16K	**Lisburne Hills**	**2.86**	**48**	Pn		**Pn**	**19 54 31.4**	**-1.9**
C16K	**Lisburne Hills**	**2.86**	**48**	P		**Pn**	**19 54 31.3**	**-1.9**
	baz=233							
C16K					Sg	**Sg**	**19 55 21.4**	**+2.8**
	baz=233							
ANM	**Nome**	**3.06**	**126**			**Pn**	**19 54 34.5**	**-1.4**
ANM					Sn	**Sn**	**19 55 10.0**	**-3.0**
ANM					lAmb_Lg		19 55 24.8	
	comp=Z,191nm,0.7s							
ANM	**Nome**	**3.06**	**126**	P		**Pn**	**19 54 34.4**	**-1.5**
	baz=312,SNR=27							
ANM					S	**Sn**	**19 55 11.6**	**-1.3**
	baz=312							
G15K	**Niukluk**	**3.27**	**114**			**Pn**	**19 54 37.2**	**-1.7**
G15K						**Sn**	**19 55 17.3**	**-0.9**
G15K	**Niukluk**	**3.27**	**114**	P		**Pn**	**19 54 37.3**	**-1.5**
	baz=300,SNR=14							
G15K					Sb	**Sb**	**19 55 26.0**	**+0.5**
	baz=300							
D17K	**Noatak River**	**3.36**	**65**			**Pn**	**19 54 36.9**	**-3.2**
D17K	**Noatak River**	**3.36**	**65**	P		**Pn**	**19 54 38.5**	**-1.6**
	baz=252,SNR=16							
D17K					Sb	**Sb**	**19 55 28.9**	**+0.7**
	baz=252							
RDOG	**Red Dog Mine**	**3.55**	**60**	Pn		**Pn**	**19 54 42.8**	**+0.1**
RDOG	**Red Dog Mine**	**3.55**	**60**	P		**Pn**	**19 54 40.8**	**-1.9**
	baz=247							
RDOG					S	**Sn**	**19 55 22.9**	**-2.2**
	baz=247							
C17K	**DeLong Mountai**	**3.65**	**53**			**Pn**	**19 54 42.8**	**-1.3**
C17K	**DeLong Mountai**	**3.65**	**53**	P		**Pn**	**19 54 42.3**	**-1.8**
	baz=240,SNR=6.4							
C17K					Sg	**Sg**	**19 55 45.7**	**+2.0**
	baz=240							
E17K	**Hotham Inlet**	**3.72**	**76**	P		**Pn**	**19 54 43.3**	**-1.7**
	baz=264,SNR=8.7							
G16K	**Koyuk River**	**3.74**	**103**			**Pn**	**19 54 43.1**	**-2.2**
G16K	**Koyuk River**	**3.74**	**103**	P		**Pn**	**19 54 43.5**	**-1.8**
	baz=291							
F17K	**Baldwin Pennin**	**3.95**	**86**			**Pn**	**19 54 47.0**	**-1.1**
F17K	**Baldwin Pennin**	**3.95**	**86**	P		**Pn**	**19 54 46.5**	**-1.6**
	baz=275,SNR=5.9							
H16K	**Elim**	**4.11**	**113**			**Pn**	**19 54 49.6**	**-0.8**
H16K	**Elim**	**4.11**	**113**	P		**Pn**	**19 54 49.1**	**-1.4**
	baz=301							
E18K	**Tukpahlearik C**	**4.23**	**72**			**Pn**	**19 54 50.9**	**-1.1**
E18K	**Tukpahlearik C**	**4.23**	**72**	Pb		**Pb**	**19 55 00.9**	**-0.8**
	baz=262							
E18K					Sb	**Sb**	**19 55 54.5**	**+1.3**
	baz=262							
C18K	**Utukok River**	**4.37**	**56**			**Pn**	**19 54 52.7**	**-1.3**
C18K					lAmb_Lg		19 56 13.5	
	comp=Z,44nm,1.1s							
C18K	**Utukok River**	**4.37**	**56**	P		**Pn**	**19 54 52.5**	**-1.6**
	baz=244							
G17K	**Kiwalik Mounta**	**4.38**	**98**			**Pn**	**19 54 52.5**	**-1.6**
G17K	**Kiwalik Mounta**	**4.38**	**98**	P		**Pn**	**19 54 52.6**	**-1.4**
	baz=288							
F18K	**Selawik**	**4.57**	**83**			**Pn**	**19 54 55.1**	**-1.6**
F18K	**Selawik**	**4.57**	**83**	P		**Pn**	**19 54 54.8**	**-1.9**
	baz=273							
H17K	**Granite Mounta**	**4.87**	**103**			**Pn**	**19 54 59.4**	**-1.4**
H17K	**Granite Mounta**	**4.87**	**103**	P		**Pn**	**19 54 59.3**	**-1.4**
	baz=293							
J14K	**Nanvaranak Lak**	**4.95**	**136**			**Pn**	**19 55 01.3**	**-0.6**
J14K					lAmb_Lg		19 56 30.7	
	comp=Z,48nm,0.9s							
J14K	**Nanvaranak Lak**	**4.95**	**136**	P		**Pn**	**19 55 00.9**	**-0.9**
	baz=323							
ANDR	**Anadyr'**	**5.05**	**255**	*e*Pg		**Pg**	**19 55 22.3**	**-1.0**
ANDR				Pgmax			19 55 23.4	
	comp=Z,60nm,0.7s							
ANDR				*e*Sg		**Sg**	**19 56 29.7**	**+1.1**
ANDR				Sgmax			19 56 41.2	
	comp=Z,170nm,0.7s							
G18K	**Tagagawik**	**5.07**	**91**			**Pn**	**19 55 02.8**	**-0.9**
G18K	**Tagagawik**	**5.07**	**91**	P		**Pn**	**19 55 02.4**	**-1.2**
	baz=282,SNR=17							
I17K	**Unalakleet**	**5.09**	**116**	Pn		**Pn**	**19 55 01.1**	**-2.7**
I17K	**Unalakleet**	**5.09**	**116**	P		**Pn**	**19 55 01.7**	**-2.1**
	baz=305							
C19K	**Lookout Ridge**	**5.10**	**54**			**Pn**	**19 55 02.7**	**-1.3**
C19K	**Lookout Ridge**	**5.10**	**54**	P		**Pn**	**19 55 03.2**	**-0.8**
	baz=244							
C19K					S	**Sn**	**19 55 59.9**	**-3.4**
	baz=244							
A19K	**Wainwright**	**5.27**	**40**	P		**Pn**	**19 55 05.7**	**-0.5**
	baz=229							
A19K					S	**Sn**	**19 56 05.8**	**-1.5**
	baz=229							
F19K	**Shaleruckik Mo**	**5.31**	**80**			**Pn**	**19 55 05.8**	**-1.0**
F19K	**Shaleruckik Mo**	**5.31**	**80**	P		**Pn**	**19 55 06.0**	**-0.8**
	baz=272							
K13K	**Kusilvak Mount**	**5.35**	**145**			**Pn**	**19 55 05.7**	**-1.8**
K13K					lAmb_Lg		19 56 44.6	
	comp=Z,45nm,0.9s							
K13K	**Kusilvak Mount**	**5.35**	**145**	P		**Pn**	**19 55 07.1**	**-0.3**
	baz=331							
D19K	**Kuna River**	**5.38**	**62**	P		**Pn**	**19 55 07.2**	**-0.6**
	baz=254							
D19K					S	**Sn**	**19 56 06.6**	**-3.7**
	baz=254							
H18K	**Honhosa River**	**5.40**	**98**			**Pn**	**19 55 06.9**	**-1.2**
H18K	**Honhosa River**	**5.40**	**98**	P		**Pn**	**19 55 07.1**	**-0.9**
	baz=290							
J16K	**Anvik River**	**5.49**	**121**			**Pn**	**19 55 08.4**	**-1.0**
J16K	**Anvik River**	**5.49**	**121**	P		**Pn**	**19 55 08.9**	**-0.5**
	baz=310							
E19K	**Redstone River**	**5.53**	**73**			**Pn**	**19 55 09.4**	**-0.5**
E19K	**Redstone River**	**5.53**	**73**	P		**Pn**	**19 55 09.1**	**-0.7**
	baz=290							
G19K	**Purcell Mounta**	**5.66**	**87**			**Pn**	**19 55 11.1**	**-0.5**
G19K	**Purcell Mounta**	**5.66**	**87**	P		**Pn**	**19 55 11.0**	**-0.6**
	baz=280							
K15K	**Wolf Creek Mou**	**5.89**	**131**			**Pn**	**19 55 14.3**	**-0.6**
K15K					lAmb_Lg		19 57 06.9	
	comp=Z,62nm,1.3s							
K15K	**Wolf Creek Mou**	**5.89**	**131**	P		**Pn**	**19 55 14.3**	**-0.6**
	baz=320							
D20K	**Etivluk River**	**5.97**	**61**			**Pn**	**19 55 15.2**	**-0.7**
D20K	**Etivluk River**	**5.97**	**61**	P		**Pn**	**19 55 15.6**	**-0.4**
	baz=254							
E20K	**Nigu River**	**6.02**	**66**	P		**Pn**	**19 55 16.2**	**-0.5**
	baz=259							
F20K	**Avaraart Lake**	**6.11**	**78**			**Pn**	**19 55 16.2**	**-1.5**
L14K	**Kuka Creek**	**6.34**	**140**			**Pn**	**19 55 20.3**	**-0.7**
L14K	**Kuka Creek**	**6.34**	**140**	P		**Pn**	**19 55 20.9**	**-0.1**
	baz=328							
L15K	**Ungalak Mounta**	**6.39**	**134**			**Pn**	**19 55 21.7**	**0.0**
L15K	**Ungalak Mounta**	**6.39**	**134**	P		**Pn**	**19 55 21.3**	**-0.4**
	baz=323							
M11K	**Mekoryuk**	**6.49**	**158**			**Pn**	**19 55 22.8**	**-0.3**
M11K	**Mekoryuk**	**6.49**	**158**	P		**Pn**	**19 55 22.8**	**-0.3**
	baz=343							
K17K	**Iditarod**	**6.67**	**119**	Pn		**Pn**	**19 55 24.8**	**-0.6**
K17K	**Iditarod**	**6.67**	**119**	P		**Pn**	**19 55 24.9**	**-0.5**
	baz=310							
H20K	**Anotleneega Mo**	**6.69**	**91**	P		**Pn**	**19 55 25.1**	**-0.6**
	baz=286							
C21K	**Knifeblade Rid**	**6.73**	**59**			**Pn**	**19 55 24.7**	**-1.6**
C21K	**Knifeblade Rid**	**6.73**	**59**	P		**Pn**	**19 55 25.7**	**-0.5**
	baz=254							
J18K	**Innoko River**	**6.80**	**110**	Pn		**Pn**	**19 55 26.1**	**-1.2**
J18K	**Innoko River**	**6.80**	**110**	Pb		**Pb**	**19 55 45.6**	**+0.1**
	baz=303							
B21K	**Ikpikpuk River**	**6.92**	**55**			**Pn**	**19 55 27.6**	**-1.3**
B21K	**Ikpikpuk River**	**6.92**	**55**	P		**Pn**	**19 55 28.8**	**-0.2**
	baz=250							
J19K	**Poorman**	**6.95**	**104**			**Pn**	**19 55 29.3**	**-0.1**
J19K	**Poorman**	**6.95**	**104**	P		**Pn**	**19 55 28.7**	**-0.6**
	baz=298							
L16K	**Owhat River**	**6.97**	**128**	Pn		**Pn**	**19 55 29.7**	**0.0**
L16K	**Owhat River**	**6.97**	**128**	P		**Pn**	**19 55 28.9**	**-0.7**
	baz=318							
F21K	**Alatna River**	**6.98**	**76**			**Pn**	**19 55 30.0**	**+0.3**
F21K	**Alatna River**	**6.98**	**76**	P		**Pn**	**19 55 27.7**	**-2.1**
	baz=272							
M13K	**Dall Lake**	**7.00**	**147**	P		**Pn**	**19 55 29.0**	**-1.0**
	baz=334							
IMAR	**Indian Mountai**	**7.02**	**86**	Pn		**Pn**	**19 55 30.6**	**+0.2**
G21K	**Allakaket**	**7.03**	**82**	P		**Pn**	**19 55 29.2**	**-1.2**
	baz=278							
M14K	**Bethel**	**7.03**	**140**			**Pn**	**19 55 28.5**	**-2.0**
M14K					lAmb_Lg		19 57 48.0	
	comp=Z,27nm,1.0s							
M14K	**Bethel**	**7.03**	**140**	P		**Pn**	**19 55 29.4**	**-1.0**
	baz=329							
A21K	**Barrow**	**7.12**	**41**	P		**Pn**	**19 55 30.8**	**-0.8**
	baz=234							
D22K	**Ayikyak River**	**7.40**	**63**			**Pn**	**19 55 35.0**	**-0.6**
D22K	**Ayikyak River**	**7.40**	**63**	P		**Pn**	**19 55 34.9**	**-0.6**
	baz=259,SNR=17							
M15K	**Kasigluk River**	**7.42**	**137**			**Pn**	**19 55 35.4**	**-0.4**
M15K	**Kasigluk River**	**7.42**	**137**	P		**Pn**	**19 55 35.1**	**-0.7**
	baz=326							
B22K	**Teshekpuk Lake**	**7.56**	**51**			**Pn**	**19 55 36.4**	**-1.2**
B22K	**Teshekpuk Lake**	**7.56**	**51**	P		**Pn**	**19 55 36.5**	**-1.2**
	baz=247							
E22K	**Anaktuvuk Pass**	**7.63**	**69**			**Pn**	**19 55 37.8**	**-0.9**
E22K	**Anaktuvuk Pass**	**7.63**	**69**	P		**Pn**	**19 55 38.4**	**-0.3**
	baz=266							
M16K	**Timber Creek**	**7.66**	**130**	Pn		**Pn**	**19 55 38.8**	**-0.3**
M16K	**Timber Creek**	**7.66**	**130**	P		**Pn**	**19 55 38.5**	**-0.6**
	baz=321							
N14K	**Kuskokwak Cree**	**7.82**	**143**	P		**Pn**	**19 55 40.1**	**-1.2**
	baz=331							
M17K	**Holitna River**	**7.87**	**124**	Pn		**Pn**	**19 55 40.5**	**-1.4**
D23K	**Nanushuk River**	**8.13**	**63**			**Pn**	**19 55 44.3**	**-1.2**
D23K	**Nanushuk River**	**8.13**	**63**	P		**Pn**	**19 55 44.7**	**-0.8**
	baz=262							
N16K	**Nishlik Lake**	**8.15**	**132**	P		**Pn**	**19 55 45.7**	**-0.2**
	baz=323							
L19K	**White Mountain**	**8.25**	**114**	Pn		**Pn**	**19 55 46.2**	**-1.0**
L19K	**White Mountain**	**8.25**	**114**	P		**Pn**	**19 55 46.6**	**-0.6**
	baz=308							
C23K	**Itkillik River**	**8.32**	**57**			**Pn**	**19 55 47.1**	**-1.0**
C23K	**Itkillik River**	**8.32**	**57**	P		**Pn**	**19 55 48.1**	**0.0**
	baz=256							
E23K	**Chandalar**	**8.45**	**69**			**Pn**	**19 55 49.0**	**-0.9**
E23K	**Chandalar**	**8.45**	**69**	P		**Pn**	**19 55 48.8**	**-1.1**
	baz=269							
PPLA	**Purkeypile**	**8.84**	**105**	Pn		**Pn**	**19 55 54.8**	**-0.5**
PPLA	**Purkeypile**	**8.84**	**105**	P		**Pn**	**19 55 55.5**	**+0.2**
	baz=302							
E24K	**Your Creek**	**8.87**	**69**			**Pn**	**19 55 55.1**	**-0.7**
E24K	**Your Creek**	**8.87**	**69**	P		**Pn**	**19 55 55.8**	**+0.1**
	baz=270							
BILL	**Bilibino**	**8.89**	**290**	*e*P		**Pn**	**19 55 58.8**	**+2.9**
BILL				Pmax			19 55 59.3	
	comp=Z,1.0nm,0.5s							
BILL					*e*		19 57 29.1	
BILL					*e*Sg	**Sg**	**19 58 28.1**	**-3.6**
BILL					Sgmax		19 58 47.1	
	comp=Z,30nm,0.9s							
BILL					Sgmax		19 58 47.1	
	comp=Z,20nm,0.9s							
N18K	**Kilae Creek**	**8.91**	**124**	P		**Pn**	**19 55 57.0**	**+0.8**
	baz=317							
O15K	**Ungalikthiuk R**	**8.94**	**140**	P		**Pn**	**19 55 57.7**	**+1.1**
	baz=330							
C24K	**Franklin Bluff**	**8.95**	**59**	P		**Pn**	**19 55 56.3**	**-0.3**
	baz=259							
M20K	**Styx River**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUWA	**GUWAHATI**	**0.51**	**234**	*eP*	**Pn**	**20 05 38.0**	**+2.0**
GUWA				IAML		20 05 42.8	
	comp=E,4μm,0.2s						
GUWA				IAML		20 05 43.0	
	comp=N,4μm,0.2s						
GUWA				*eS*	**Sn**	**20 05 45.8**	**+2.0**
TEZP	**TEZPUR**	**0.60**	**78**	*eP*	**Pn**	**20 05 38.8**	**+1.5**
TEZP				IAML		20 05 43.0	
	comp=E,7μm,0.2s						
TEZP				IAML		20 05 43.2	
	comp=N,7μm,0.1s						
TEZP				*eS*	**Sn**	**20 05 48.5**	**+2.6**
SHL	**Shillong**	**0.95**	**195**		**Pn**	**20 05 42.9**	**+0.6**
SHL				Sn	**Sn**	**20 05 56.0**	**+0.9**
SHL	**Shillong**	**0.95**	**195**	*eP*	**Pn**	**20 05 43.0**	**+0.6**
SHL				*eS*	**Sb**	**20 05 55.5**	**+0.3**
TAWA	**Tawang**	**1.12**	**347**	*eP*	**Pb**	**20 05 46.9**	**+1.1**
TAWA				*eS*	**Sb**	**20 06 01.7**	**+1.4**
TAWA				IAML		20 06 03.2	
	comp=N,10μm,0.0s						
TAWA				IAML		20 06 03.7	
	comp=E,12μm,0.1s						
ITAN	**ITANAGAR**	**1.55**	**65**	*eP*	**Pb**	**20 05 52.0**	**-0.8**
ITAN				*eS*	**Sb**	**20 06 12.2**	**+0.3**
ITAN				IAML		20 06 13.9	
	comp=E,15μm,0.4s						
ITAN				IAML		20 06 14.2	
	comp=N,14μm,0.2s						
ZIRO	**ZIRO**	**1.83**	**56**	*eP*	**Pb**	**20 05 56.8**	**-0.9**
ZIRO				*eS*	**Sb**	**20 06 19.3**	**-1.0**
ZIRO				IAML		20 06 22.0	
	comp=N,12μm,0.3s						
ZIRO				IAML		20 06 25.6	
	comp=E,9μm,0.2s						
JORH	**JORHAT**	**1.90**	**82**	*eP*	**Pb**	**20 05 58.3**	**-0.4**
JORH				*eS*	**Sn**	**20 06 19.6**	**+1.5**
JORH				IAML		20 06 25.5	
	comp=E,7μm,0.3s						
JORH				IAML		20 06 25.6	
	comp=N,9μm,0.4s						
KOHI	**KOHIMA**	**1.92**	**113**	*eP*	**Pn**	**20 05 57.4**	**+1.7**
KOHI				*eS*	**Sb**	**20 06 20.9**	**-2.0**
KOHI				IAML		20 06 31.8	
	comp=E,2μm,0.5s						
KOHI				IAML		20 06 33.6	
	comp=N,2μm,0.3s						
DHUB	**DHUBRI**	**1.99**	**257**	*eP*	**Pn**	**20 05 57.4**	**+1.0**
DHUB				*eS*	**Sn**	**20 06 20.7**	**+0.3**
DHUB				IAML		20 06 29.1	
	comp=E,4μm,0.2s						
DHUB				IAML		20 06 29.5	
	comp=N,3μm,0.3s						
MOKO	**MOKOCHONG**	**2.13**	**94**	*eP*	**Pb**	**20 06 01.6**	**-1.2**
MOKO				*eS*	**Sn**	**20 06 25.3**	**+1.3**
MOKO				IAML		20 06 36.7	
	comp=N,3μm,0.6s						
MOKO				IAML		20 06 38.5	
	comp=E,3μm,0.6s						
IMP	**Imphal**	**2.32**	**135**	*eP*	**Pn**	**20 06 03.1**	**+2.0**
IMP				*eS*	**Sn**	**20 06 29.1**	**+0.5**
IMP				IAML		20 06 34.3	
	comp=N,130nm,0.3s						
IMP				IAML		20 06 37.3	
	comp=E,93nm,0.4s						
AGT	**Agartala**	**2.72**	**198**	*eP*	**Pn**	**20 06 07.5**	**+1.0**
AGT				*eS*	**Sn**	**20 06 38.5**	**+0.1**
AGT				IAML		20 06 57.2	
	comp=E,2μm,0.4s						
AGT				IAML		20 06 57.3	
	comp=N,2μm,0.4s						
MORE	**Moreh**	**2.98**	**139**		**Pn**	**20 06 12.0**	**+2.0**
MORE				Sn	**Sn**	**20 06 46.2**	**+1.5**
LSA	**Lhasa**	**3.31**	**345**		**Pn**	**20 06 17.0**	**+1.9**
LSA	**Lhasa**	**3.31**	**345**	P	**Pn**	**20 06 14.5**	**-0.6**
LSA				S	**Sn**	**20 06 51.3**	**-2.4**
LSA				smax	smax		
	comp=N,120nm,0.7s						
LSA				smax	smax		
	comp=N,210nm,0.6s						
BRDH	**Bariadhala**	**3.83**	**187**	Lg	Lg	20 07 06.7	
	comp=N,69nm,0.3s,baz=156,slow=20,SNR=9.5						
ODAN	**Odare**	**4.27**	**276**	Pn	**Pn**	**20 06 30.2**	**+2.2**
	baz=272,slow=0.0						
ODAN				Sn	**Sn**	**20 07 20.1**	**+3.0**
	comp=N,2μm,0.5s,baz=272,slow=0.0						
EVN	**Everest**	**4.96**	**288**		**Pn**	**20 06 39.6**	**+1.7**
RAMN	**Ramite**	**4.98**	**276**	Pn	**Pn**	**20 06 39.6**	**+1.8**
	baz=273,slow=0.0						
RAMN				Sn	**Sn**	**20 07 36.6**	**+2.0**
	baz=273,slow=0.0						
GUN	**Gumba**	**5.76**	**286**	Pn	**Pn**	**20 06 50.2**	**+1.6**
	baz=282,slow=0.0						
GUN				Sn	**Sn**	**20 07 54.3**	**+0.5**
	comp=N,147nm,0.3s,baz=282,slow=0.0						
TNCH	**TengChong**	**5.93**	**103**	P	Pn	20 06 55.8	+5.0
TNCH				S	**Sn**	**20 08 02.5**	**+4.7**
TNCH				smax	smax		
	comp=N,42nm,1.5s						
TNCH				smax	smax		
	comp=N,46nm,1.3s						
TNCH				LR	LR		
	comp=N,110nm,7.1s						
PKI	**Pulchoki**	**6.11**	**282**	Pn	**Pn**	**20 06 54.4**	**+1.1**
	baz=279,slow=0.0						
PKI				Sn	**Sn**	**20 08 03.2**	**+0.8**
	comp=N,50nm,0.3s,baz=279,slow=0.0						
PKIN	**Phulchoki**	**6.12**	**282**	Pn	**Pn**	**20 06 54.5**	**+1.1**
	baz=279,slow=0.0						
PKIN				Sn	**Sn**	**20 08 03.3**	**+0.7**
	comp=N,111nm,0.3s,baz=279,slow=0.0						
KKN	**Kakani**	**6.25**	**283**	Pn	**Pn**	**20 06 56.7**	**+1.4**
	baz=281,slow=0.0						
KKN				Sn	**Sn**	**20 08 06.9**	**+1.0**
	comp=N,80nm,0.2s,baz=281,slow=0.0						
DMN	**Daman**	**6.38**	**282**	Pn	**Pn**	**20 06 57.9**	**+0.9**
	baz=279,slow=0.0						
DMN				Sn	**Sn**	**20 08 09.1**	**+0.1**
	comp=N,104nm,0.5s,baz=279,slow=0.0						
GKN	**Gorkha**	**6.85**	**284**	Pn	**Pn**	**20 07 04.8**	**+1.4**
	baz=282,slow=0.0						
GKN				Sn	**Sn**	**20 08 20.8**	**+0.2**
	comp=N,89nm,0.3s,baz=282,slow=0.0						
DANN	**Dangsing**	**7.68**	**286**	Pn	**Pn**	**20 07 15.1**	**+0.2**
	baz=283,slow=0.0						
DANN				Sn	**Sn**	**20 08 40.2**	**-0.9**
	comp=N,46nm,0.3s,baz=283,slow=0.0						
KOLN	**Koldanda**	**7.72**	**281**	Pn	**Pn**	**20 07 15.4**	**0.0**
	baz=279,slow=0.0						
KOLN				Sn	**Sn**	**20 08 40.7**	**-1.3**
	comp=N,59nm,0.3s,baz=279,slow=0.0						
PYUN	**Piuthan**	**8.30**	**283**	Pn	**Pn**	**20 07 23.2**	**-0.2**
	baz=281,slow=0.0						
PYUN				Sn	**Sn**	**20 08 55.8**	**-0.5**
	baz=281,slow=0.0						
PZH	**PanZhiHua**	**8.60**	**88**	P	Pn	20 07 34.5	+7.2
PZH				pmax	pmax		
	comp=N,10.0nm,0.7s						
CHTO	**Chiang Mai**	**9.89**	**139**	Pn	**Pn**	**20 07 45.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**10.17**	**140**	Pn	**Pn**	**20 07 47.2**	**-1.6**
	comp=N,0.2nm,0.3s,baz=326,slow=12,SNR=5.3						
CMAR				LR	LR	20 12 23.9	
	comp=N,22nm,20.3s,baz=340,slow=42						
LZDM	**Lanzhou Array**	**13.65**	**43**	Pn	**Pn**	**20 08 35.1**	**-1.5**
	baz=243,slow=6.5						
	comp=N,0.8nm,0.3s						
LZH	**Lanzhou**	**13.82**	**43**	*eP*	**Pn**	**20 08 35.0**	**-3.9**
LZH				pP	P	20 08 47.3	+0.4
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
GTA2	**Gaotai**	**14.44**	**24**	P	**Pn**	**20 08 48.5**	**+1.3**
GTA2				sP	P	20 09 02.3	+8.6
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ENH	**Enshi**	**15.72**	**72**		**Pn**	**20 09 04.8**	**+0.7**
ENH				IAmb	IAmb	20 09 13.5	
	comp=Z,11nm,0.7s						
WMQ	**Urumqi**	**17.66**	**349**	*eP*	**P**	**20 09 31.5**	**+2.1**
NIL	**Nilore**	**17.83**	**298**		**Pn**	**20 09 27.3**	**-3.4**
WUS	**Wushi**	**18.15**	**327**		**Pn**	**20 09 32.7**	**-2.0**
KSH2	**Kashi**	**18.76**	**316**	P	**Pn**	**20 09 44.3**	**+2.1**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TARG	**Taragay, Kyrgy**	**19.24**	**326**		**P**	**20 09 46.4**	**-0.8**
TARG				IAmb	IAmb	20 09 56.3	
	comp=Z,11nm,1.4s						
PRZ	**Przheval'sk**	**19.52**	**328**	P	**P**	**20 09 49.3**	**-0.6**
PRZ				IAmb	IAmb	20 09 52.7	
	comp=Z,9.0nm,0.6s						
KDJ	**Kajisay**	**19.86**	**326**	P	**P**	**20 09 53.5**	**-0.1**
BOOM	**Boomskoye usch**	**20.75**	**324**		**P**	**20 10 03.5**	**+0.2**
DRK	**Karamyk**	**21.36**	**312**	P	**P**	**20 10 09.0**	**-1.0**
DRK				IAmb	IAmb	20 10 20.8	
	comp=Z,7.7nm,0.5s						
KBL	**Kabul**	**21.43**	**298**		**P**	**20 10 11.4**	**+0.7**
HHC	**Hu-ho-hao-te**	**21.52**	**43**	*eP*	**P**	**20 10 13.8**	**+2.3**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,53nm,5.2s						
HHC				LR	LR		
	comp=Z,80nm,10.6s						
HHC				LR	LR		
	comp=Z,87nm,11.8s						
HHC				LR	LR		
	comp=Z,150nm,10.0s						
AAK	**Ala-Archa**	**21.62**	**323**	P	**P**	**20 10 13.8**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=129,slow=7.9,SNR=17						
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**21.62**	**323**		**P**	**20 10 13.6**	**+0.9**
MKAR	**Makanchi Array**	**21.71**	**341**	P	**P**	**20 10 13.3**	**-0.1**
	comp=Z,5.8nm,0.5s,baz=148,slow=12,SNR=46						
	comp=Z,5.8nm,0.5s						
MKAR	**Makanchi Array**	**21.71**	**341**		**P**	**20 10 12.6**	**-0.8**
MAKZ	**Makanchi**	**21.82**	**341**		**P**	**20 10 14.8**	**+0.3**
MAKZ				IAmb	IAmb	20 10 18.1	
	comp=Z,4.9nm,0.7s						
GAR	**Garm**	**22.13**	**310**	P	**P**	**20 10 17.7**	**-0.4**
GAR				IAmb	IAmb	20 10 21.3	
	comp=Z,20nm,1.2s						
BTK	**Batken**	**22.31**	**313**		**P**	**20 10 20.3**	**+0.3**
CHGR	**Chuyangaron**	**22.79**	**308**		**P**	**20 10 24.4**	**-0.7**
CHGR				IAmb	IAmb	20 10 27.6	
	comp=Z,20nm,1.2s						
SHAA	**Shahritus**	**23.10**	**304**		**P**	**20 10 27.9**	**-0.4**
SHAA				IAmb	IAmb	20 10 30.5	
	comp=Z,18nm,0.7s						
SONM	**Songino Array**	**24.06**	**24**	P	**P**	**20 10 37.9**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=212,slow=11,SNR=9.4						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**24.06**	**24**	P	**P**	**20 10 38.2**	**+0.6**
KK31	**Karatay Array**	**24.19**	**319**	P	**P**	**20 10 38.1**	**-0.5**
KKAR	**Karatay Array**	**24.19**	**319**	P	**P**	**20 10 38.5**	**-0.1**
ULN	**Ulaanbaatar**	**24.33**	**25**		**P**	**20 10 39.6**	**-0.5**
KURBB	**Kurchatov Arra**	**26.25**	**340**	P	**P**	**20 10 57.0**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=151,slow=10,SNR=18						
	comp=Z,1.7nm,0.8s						
KURK	**Kurchatov**	**26.31**	**340**		**P**	**20 10 57.4**	**-0.4**
ZAA0	**Zalesovo Array**	**27.96**	**351**		**P**	**20 11 12.5**	**0.0**
ZAA0				IAmb	IAmb	20 11 14.4	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**27.96**	**351**	P	**P**	**20 11 12.9**	**+0.4**
	comp=Z,3.1nm,0.4s,baz=169,slow=8.5,SNR=24						
	comp=Z,3.1nm,0.4s						
ZALV	**Zalesovo Beam**	**27.96**	**351**		**P**	**20 11 12.7**	**+0.2**
BVAR	**Borovoye Array**	**31.09**	**334**	P	**P**	**20 11 40.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=124,slow=10,SNR=6.0						
	comp=Z,0.4nm,0.3s						
BORK	**Borovoye**	**31.13**	**334**	P	**P**	**20 11 40.0**	**-0.7**
BORK				IAmb	IAmb	20 12 16.8	
	comp=Z,1.8nm,0.8s						
AB31	**Akbulak array**	**33.69**	**321**		**P**	**20 12 03.4**	**+0.3**
AB31				IAmb	IAmb	20 12 04.9	
	comp=Z,1.9nm,0.5s						
ABKAR	**Akbulak array**	**33.69**	**321**	P	**P**	**20 12 03.6**	**+0.5**
ARTI	**Arti**	**38.45**	**330**	P	**P**	**20 12 43.2**	**-0.6**
NRIK	**Noril'sk**	**42.96**	**358**	P	**P**	**20 13 20.8**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=161,slow=6.2,SNR=6.2						
	comp=Z,1.6nm,0.3s						
KBZ	**Khabaz**	**43.14**	**307**	P	**P**	**20 13 22.8**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=42,slow=9.4,SNR=1.5						
	comp=Z,1.0nm,0.8s						
TIXI	**Tiksi**	**49.58**	**14**	P	**P**	**20 14 12.7**	**0.0**
TIXI				IAmb	IAmb	20 14 18.7	
	comp=Z,3.1nm,1.1s						
BRTR	**Keskin Array B**	**49.95**	**301**	P	**P**	**20 14 15.7**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=108,slow=7.9,SNR=4.1						
	comp=Z,0.6nm,0.7s						
BRTR	**Keskin Array B**	**49.95**	**301**	P	**P**	**20 14 15.4**	**-0.9**
AKASG	**Malin Array Be**	**53.00**	**315**	P	**P**	**20 14 38.1**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=82,slow=6.9,SNR=5.1						
	comp=Z,0.7nm,0.4s						
AKBB	**Malin Array Si**	**53.00**	**315**	P	**P**	**20 14 37.6**	**-1.1**
AKBB				IAmb	IAmb	20 15 16.0	
	comp=Z,2.1nm,1.2s						
KIEV	**Kiev**	**53.01**	**315**	P	**P**	**20 14 37.7**	**-1.0**
KIEV				IAmb	IAmb	20 15 16.0	
	comp=Z,1.9nm,1.2s						
ELL	**Elmali**	**53.16**	**297**	P	**P**	**20 14 40.3**	**0.0**
PETK	**Petropavlovsk-**	**54.72**	**42**	P	**P**	**20 14 51.6**	**+0.4**
BURAR	**Bucovina Array**	**55.65**	**311**	P	**P**	**20 14 57.8**	**-0.3**
BURAR				IAmb	IAmb	20 15 38.0	
	comp=Z,2.3nm,1.4s						
FINES	**FINESS Array B**	**55.68**	**328**	P	**P**	**20 14 57.4**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=108,slow=6.2,SNR=4.0						
	comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**57.29**	**337**	P	**P**	**20 15 08.2**	**-1.3**
	comp=Z,5.3nm,1.1s,baz=99,slow=7.5,SNR=4.5						
	comp=Z,5.3nm,1.1s						
ITM	**Ithomi**	**59.39**	**299**	P	**P**	**20 15 23.4**	**-1.2**
BILL	**Bilibino**	**59.78**	**25**	P	**P**	**20 15 26.7**	**0.0**
BILL				IAmb	IAmb	20 15 36.2	
	comp=Z,4.9nm,1.3s						
SPITS	**Spitsbergen Ar**	**61.34**	**347**	P	**P**	**20 15 37.6**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=122,slow=7.9,SNR=7.3						
	comp=Z,0.8nm,0.4s						
WB0	**Warramunga Arr**	**61.60**	**134**	P	**P**	**20 15 39.8**	**0.0**
WRA	**Warramunga Arr**	**61.69**	**134**	P	**P**	**20 15 40.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=323,slow=7.3,SNR=22						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**61.69**	**134**	P	**P**	**20 15 40.0**	**-0.4**
HFS	**Hagfors**	**61.71**	**326**	P	**P**	**20 15 39.7**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=90,slow=3.0,SNR=5.5						
	comp=Z,1.5nm,0.7s						
NOA	**NORSAR Array B**	**62.85**	**327**	P	**P**	**20 15 46.9**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=93,slow=5.2,SNR=1.6						
	comp=Z,0.4nm,0.6s						
GEC2	**GERESS Array S**	**63.15**	**313**	P	**P**	**20 15 49.1**	**-0.8**
GEC2				IAmb	IAmb	20 16 18.2	
	comp=Z,5.0nm,1.3s						
GERES	**GERESS Array B**	**63.15**	**313**	P	**P**	**20 15 50.0**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=105,slow=4.6,SNR=6.5						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**64.16**	**137**	P	**P**	**20 15 57.2**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=319,slow=6.5,SNR=10						
	comp=Z,0.4nm,0.6s						
SENIN	**Lac Senin/Sane**	**67.92**	**312**	P	**P**	**20 16 20.6**	**-0.5**
KEST	**Kesra**	**69.55**	**301**	P	**P**	**20 16 32.0**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=185,slow=16,SNR=1.9						
	comp=Z,1.8nm,0.7s						
KEST	**Kesra**	**69.55**	**301**	P	**P**	**20 16 29.6**	**-1.6**
EKA	**Eskdalemuir Ar**	**71.53**	**323**	P	**P**	**20 16 42.3**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=66,slow=7.1,SNR=1.8						
	comp=Z,1.3nm,0.7s						
C19K	**Lookout Ridge**	**71.73**	**21**	P	**P**	**20 16 45.1**	**+1.2**
C19K				IAmb	IAmb	20 16 46.5	
	comp=Z,5.4nm,1.4s						
B22K	**Teshekpuk Lake**	**73.02**	**19**	P	**P**	**20 16 51.7**	**+0.4**
B22K				IAmb	IAmb	20 17 34.2	
	comp=Z,8.1nm,1.4s						
C23K	**Itkillik River**	**74.10**	**19**	P	**P**	**20 16 58.2**	**+0.4**
C23K				IAmb	IAmb	20 17 13.3	
	comp=Z,7.3nm,1.4s						
D23K	**Nanushuk River**	**74.57**	**19**	P	**P**	**20 17 01.5**	**+0.9**
D23K				IAmb	IAmb	20 17 16.5	
	comp=Z,7.2nm,1.5s						
SUMG	**Summit**	**75.68**	**346**	P	**P**	**20 17 07.8**	**+0.5**
E24K	**Your Creek**	**75.75**	**20**	P	**P**	**20 17 08.0**	**+0.6**
E24K				IAmb	IAmb	20 17 21.3	
	comp=Z,3.4nm,1.2s						
BMAR	**Burnt Mountain**	**77.32**	**19**	P	**P**	**20 17 18.0**	**+1.7**
ILAR	**Eielson Array**	**78.27**	**22**	P	**P**	**20 17 21.1**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=304,slow=4.9,SNR=4.2						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**84.64**	**282**	P	**P**	**20 17 57.1**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=145,slow=2.0,SNR=3.7						
	comp=Z,0.7nm,0.8s						
CPUP	**Villa Florida**	**152.69**	**263**	PKPbc	**PKPbc**	**20 25 17.6**	**-1.5**
	comp=Z,1.7nm,0.5s,baz=73,slow=3.4,SNR=5.9						

*NNC **29** 20:07:02.9±2.3, 42°.66N×78°.01E, h0km, mb1.2, mpv2.4,*

Error ellipse: s-maj=25.1km s-min=11.1km az=152.0
*KRNET **29** 20:07:05.5±0.1, 42°.84N×77°.94E, h21km, mb2.6*
*SOME **29** 20:07:05.7, 42°.80N×77°.93E, h10km*

ISC 29 20:07:04.7±0.8, 42°.84N±0'.06×77°.97E±0'.03, h11km, n12,
σ1s 21/23, 8C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANVS	**Anan'yevo**	**0.23**	**257**	*i*P	**Pg**	**20 07 10.6**	**+1.0**
ANVS				*i*S	**Sg**	**20 07 14.0**	**+1.1**
SATY	**Saty**	**0.39**	**55**	P	**Pg**	**20 07 13.8**	**+1.3**
	2.3nm,0.1s						
SATY				S	**Sg**	**20 07 19.9**	**+2.1**
	37nm,0.1s						
KPKS	**Kokpek**	**0.82**	**39**	P	**Pg**	**20 07 21.2**	**+0.7**
	0.7nm,0.1s						
KPKS				S	**Sg**	**20 07 32.5**	**+1.2**
	14nm,0.2s						
KPKS	**Kokpek**	**0.82**	**39**	*e*P	**Pg**	**20 07 21.2**	**+0.7**
	0.7nm,0.1s						
KPKS				*e*S	**Sg**	**20 07 32.5**	**+1.2**
	14nm,0.2s						
UZB	**Uzynbulak**	**0.83**	**68**	P	**Pg**	**20 07 21.5**	**+0.7**
	2.5nm,0.1s						
UZB				S	**Sg**	**20 07 32.9**	**+1.2**
	5.2nm,0.1s						
UZB	**Uzynbulak**	**0.83**	**68**	*e*P	**Pg**	**20 07 21.5**	**+0.7**
UZB				*e*S	**Sg**	**20 07 32.9**	**+1.2**
UZB	**Uzynbulak**	**0.83**	**68**	*e*P	**Pg**	**20 07 21.5**	**+0.7**
	2.5nm,0.1s						
UZB				*e*S	**Sg**	**20 07 32.9**	**+1.2**
	5.2nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.11**	**186**	⇑*i*P	**Pb**	**20 07 26.4**	**+0.2**
TARG				⇑*i*S	**Sb**	**20 07 41.1**	**+0.2**
PDGK	**Podgornoye**	**1.22**	**66**	⇑P	**Pn**	**20 07 24.6**	**-3.2**
	0.3nm,0.6s						
PDGK				⇓S	**Sb**	**20 07 43.7**	**0.0**
	1.6nm,0.6s						
ULHL	**Ulahol**	**1.41**	**246**	⇓*i*P	**Pb**	**20 07 31.2**	**+0.1**
ULHL				⇓*i*S	**Sn**	**20 07 49.4**	**+0.3**
BOOM	**Boomskoye usch**	**1.54**	**258**	⇑*i*P	**Pb**	**20 07 33.4**	**+0.1**
BOOM				⇑*i*S	**Sb**	**20 07 53.4**	**+0.5**
AAK	**Ala-Archa**	**2.57**	**267**	⇑⇑Pg	**Pb**	**20 07 50.1**	**-0.8**
AAK				⇓⇓Lg	Lg	20 08 24.5	
	0.3nm,0.6s						

*GII **29** 20:16:50.3±0.0, 36°.258N±0'.001×25°.562E±0'.001, h0km, Mws3.5, confirmed*
*ISK **29** 20:16:57.8, 37°.04N×25°.73E, h1km, ML3.2/8*
*ATH **29** 20:16:58.0, 36°.91N×25°.82E, h176km±3km, ML3.4/10, Manual Solution by G.Panopoulou First location: 2020/02/29 20:18:18, This location: 2020/02/29 20:29:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **29** 20:17:00.4, 37°.N±3°×2°.6E±°, h138km±18km, M3.1/8, MLh3.1/8*
*AFAD **29** 20:17:04.0, 36°.76N×26°.46E, h163km±20km, ML2.8*

ISC 29 20:16:54.8±1.3, 36°.86N±0'.04×25°.91E±0'.05, h197km±9km, n120, σ1s 94/154, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THERA	**Ancient Thera,**	**0.61**	**215**	P	**Pn**	**20 17 23.2**	**+1.2**
THERA				S	**Sn**	**20 17 42.5**	**-0.5**
THE3	**Thira Island,**	**0.61**	**222**	P	**Pn**	**20 17 23.7**	**+1.7**
SNT5	**Nea Kammeni, S**	**0.62**	**222**	P	**Pn**	**20 17 23.4**	**+1.4**
THR5	**Thira Island,**	**0.64**	**226**	P	**Pn**	**20 17 22.7**	**+0.6**
THR9	**Santorini-Faro**	**0.67**	**222**	P	**Pn**	**20 17 23.6**	**+1.4**
SMG	**Samos**	**1.12**	**41**	P	**Pn**	**20 17 26.3**	**+1.2**
SMG				S	**Sn**	**20 17 47.8**	**-0.9**
MHLO	**Agia Marina, M**	**1.22**	**262**	P	**Pn**	**20 17 26.4**	**+0.6**
MHLO				S	**Sn**	**20 17 48.1**	**-1.8**
NPS	**Neapolis**	**1.62**	**189**	P	**Pn**	**20 17 30.7**	**+1.4**
NPS				S	**Sn**	**20 17 55.6**	**-0.5**
NPS	**Neapolis**	**1.62**	**189**	P	**Pn**	**20 17 30.6**	**+1.3**
KARY	**Karystos**	**1.65**	**315**	P	**Pn**	**20 17 29.6**	**0.0**
KARP	**Karpathos**	**1.66**	**142**	Pn	**Pn**	**20 17 32.2**	**+2.5**
KARP				Sn	**Sn**	**20 17 57.3**	**+0.5**
KARP	**Karpathos**	**1.66**	**142**	P	**Pn**	**20 17 32.1**	**+2.5**
KARP				S	**Sn**	**20 17 56.1**	**-0.7**
KARP	**Karpathos**	**1.66**	**142**	P	**Pn**	**20 17 32.2**	**+2.5**
IACM	**Heraklion**	**1.70**	**204**	P	**Pn**	**20 17 31.9**	**+1.9**
IACM				S	**Sn**	**20 17 55.5**	**-1.9**
IACM	**Heraklion**	**1.70**	**204**	P	**Pn**	**20 17 32.1**	**+2.0**
ZKR	**Zakros**	**1.76**	**172**	Pn	**Pn**	**20 17 33.5**	**+2.8**
ZKR				Sn	**Sn**	**20 17 59.5**	**+0.9**
ZKR	**Zakros**	**1.76**	**172**	P	**Pn**	**20 17 33.5**	**+2.8**
ZKR	**Zakros**	**1.76**	**172**	P	**Pn**	**20 17 33.3**	**+2.6**
IDI	**Anoyia**	**1.78**	**208**	Pn	**Pn**	**20 17 32.1**	**+1.2**
IDI				Sn	**Sn**	**20 17 57.1**	**-1.8**
IDI	**Anoyia**	**1.78**	**208**	P	**Pn**	**20 17 31.9**	**+0.9**
IDI				S	**Sn**	**20 17 57.3**	**-1.6**
IDI	**Anoyia**	**1.78**	**208**	P	**Pn**	**20 17 31.8**	**+0.9**
TURN	**Turunc**	**1.88**	**92**	Pn	**Pn**	**20 17 34.2**	**+2.5**
TURN				Sn	**Sn**	**20 18 01.2**	**+0.8**
TURN	**Turunc**	**1.88**	**92**	P	**Pn**	**20 17 33.9**	**+2.2**
TURN				S	**Sn**	**20 17 58.5**

ATAL	Atalanti	2.93	309	P	Pn	20 17 44.5 +1.2
KNIK	Mula-Seydike	2.94	89	P	Pn	20 17 47.0 +3.4
KNIK				S	Sn	20 18 16.0 -5.7
KNIK				IAML		20 18 41.0
	comp=N,27nm,2.6s					
KNIK				IAML		20 18 48.0
	comp=E,33nm,3.0s					
GOLH	Golhisar	2.94	82	P	Pn	20 17 47.5 +3.8
GOLH				S	Sn	20 18 18.9 -2.9
GOLH				IAML		20 18 22.0
	comp=E,54nm,3.6s					
GOLH				IAML		20 18 27.0
	comp=N,47nm,2.3s					
GUR	Goura	3.04	292	P	Pn	20 17 46.1 +1.4
AKAS	Kas	3.04	101	P	Pn	20 17 48.1 +3.3
AKAS				S	Sn	20 18 20.0 -4.0
AXAR	Agios Charalam	3.20	307	P	Pn	20 17 48.0 +1.4
ITM	Ithomi	3.20	277	P	Pn	20 17 48.1 +1.5
KLV	Kalavryta, Ach	3.21	293	P	Pn	20 17 47.8 +1.0
AIOA	Agios Ioannis,	3.34	295	P	Pn	20 17 49.5 +1.3
PYL	PYLOS	3.34	272	P	Pn	20 17 48.6 +0.3
KALE	Kalithea	3.36	298	P	Pn	20 17 50.2 +1.6
TRIZ	Trizonia	3.40	297	P	Pn	20 17 50.5 +1.6
AMT	Artemida-Makis	3.42	283	P	Pn	20 17 51.0 +1.8
SERG	Sergoula	3.43	298	P	Pn	20 17 51.0 +1.7
ZIRI	Ziria, Aigiali	3.46	296	P	Pn	20 17 51.2 +1.4
MG00	Magoula, Dorid	3.51	297	P	Pn	20 17 52.0 +1.8
EFP	Efpalio	3.54	297	P	Pn	20 17 52.4 +1.7
AGG	Agios Georgios	3.56	308	P	Pn	20 17 52.5 +1.6
ANX	Ano Chora	3.60	300	P	Pn	20 17 53.3 +1.8
AGRP	Agrapidokambos	3.66	296	P	Pn	20 17 54.5 +2.3
MAKR	Makrakomi, Fth	3.68	307	P	Pn	20 17 54.5 +2.1
RLS	Riolos of Patr	3.73	290	P	Pn	20 17 55.5 +2.5
EVR	Evrytania	3.84	304	P	Pn	20 17 55.8 +1.4
AXS	Araxos	3.84	292	P	Pn	20 17 56.4 +2.0
PVO	Paravola	3.89	298	P	Pn	20 17 57.9 +2.9
RTZL	Ratzakli, Kefa	4.26	288	P	Pn	20 18 00.4 +0.8
RDO	Rodhopi	4.29	356	P	Pn	20 18 01.5 +1.6
TETR	Tetrakomo, Epi	4.42	306	P	Pn	20 18 04.0 +2.3
VLS	Valsamata	4.43	289	P	Pn	20 18 02.1 +0.4
EVGI	Lefkada island	4.52	294	P	Pn	20 18 03.5 +0.6
FSK	Fiskardo	4.53	292	P	Pn	20 18 02.9 -0.2
LKD2	Lefkada island	4.58	296	P	Pn	20 18 04.9 +1.1
TSLK	Tsoukalades, L	4.60	297	P	Pn	20 18 05.2 +1.3
DRAG	Dragano-Lefkad	4.60	295	P	Pn	20 18 04.5 +0.6
PRMD	Pramanda	4.63	307	P	Pn	20 18 07.0 +2.5
IGT	Igoumenitsa	5.14	303	P	Pn	20 18 11.6 +0.8
NEST	Nestorio	5.20	314	P	Pn	20 18 14.3 +2.6
KEK	Kerkira	5.58	302	P	Pn	20 18 16.9 +0.3
ALFC	Alefka	5.68	105	P	Pn	20 18 20.3 +2.4
NATA	Nata	5.80	109	P	Pn	20 18 21.5 +2.2
CSS	Mathiatis	6.31	105	P	Pn	20 18 26.1 0.0
CSS				S	Sn	20 19 39.8 +1.5
MMC7	Mount Meron ar	8.68	113	P	Pn	20 18 56.9 0.0
GEM	Giv'at Ha'Em	8.79	112	P	Pn	20 18 58.8 +0.5
GEM				S	Sn	20 20 38.2 +1.3
KZIT	Kziot	9.22	128	P	Pn	20 19 01.8 -2.1
YTIR	Yattir	9.40	123	P	Pn	20 19 05.2 -1.1
YTIR				S	Sn	20 20 50.2 -1.3
DSI	Dead Sea	9.45	121	P	Pn	20 19 06.1 -0.9
DSI				S	Sn	20 20 51.7 -1.0
MSBI	Mazada	9.59	123	P	Pn	20 19 07.7 -1.0
MSBI				S	Sn	20 20 54.9 -1.1
RMNI	Mount Ramon	9.66	128	P	Pn	20 19 08.0 -1.7
RMNI				S	Sn	20 20 55.7 -2.1
KRMI	Paran Flat	9.97	130	P	Pn	20 19 11.9 -1.8
KRMI				S	Sn	20 21 02.6 -2.5
PRNI	Paran	9.98	128	P	Pn	20 19 12.1 -1.7
PRNI				S	Sn	20 21 03.1 -2.2
HRFI	Mount Harif	10.22	129	P	Pn	20 19 15.4 -1.6
HRFI				S	Sn	20 21 08.7 -2.3
EIL2	Elat	10.42	131	P	Pn	20 19 17.6 -1.9
EIL2				S	Sn	20 21 12.9 -3.0

*NORS **29** 20:24:15.9, 42.52N×48.42E, h2km, MPVA3.7*
*DRS **29** 20:24:17.4, 42.39N×48.31E, h6km*
MOS 29 20:24:15.6, 42.38N×48.40E, h34km, MPVA3.8, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRN	Derbent	0.35	188	*i* Pg	Pn	20 24 25.6	+1.4
DRN				*e*Sg	Sb	20 24 32.7	+2.8
SGKR	Sergokala	0.55	279	*e*Pg	Pb	20 24 28.9	+1.7
SGKR				*e*Sg	Sn	20 24 37.5	+2.5
URKR	Urkarakh	0.60	250	*i* Pg	Pb	20 24 29.2	+1.2
URKR				*e*Sg	Sb	20 24 38.7	+2.2
KSMR	Kasumkent	0.80	195	*i* Pg	Pb	20 24 32.1	+1.0
KSMR				*e*Sg	Sb	20 24 44.4	+2.7
MAK	Makhachkala	0.88	312	*e*Pg	Pb	20 24 30.9	+1.4
MAK				*e*Sg	Sb	20 24 46.3	+2.4
KMKR	Kumukh	0.99	256	*i* Pg	Pb	20 24 35.5	+1.0
KMKR				*e*Sg	Sb	20 24 50.3	+2.9
AKT	Akhty	1.02	209	*i* Pg	Pb	20 24 35.6	+0.6
AKT				*e*Sg	Sb	20 24 49.8	+1.6
BUJR	Buynaksk	1.05	296	*e*Pg	Pb	20 24 36.6	+1.2
BUJR				*e*Sg	Sb	20 24 51.1	+2.2
KANR	Karaman	1.06	321	*e*Pg	Pb	20 24 36.4	+1.0
KANR				*e*Sg	Sb	20 24 51.4	+2.4
ARKR	Arakani	1.06	283	*e*Pg	Pb	20 24 36.8	+1.2
ARKR				*e*Sg	Sb	20 24 52.1	+2.9
GNBR	Gunib	1.06	271	*e*Pg	Pb	20 24 36.5	+1.0
GNBR				*e*Sg	Sb	20 24 52.3	+3.1
KRNR	Karanay	1.19	293	*e*Pg	Pb	20 24 38.0	+0.3
KRNR				*e*Sg	Sb	20 24 54.7	+1.9
UNCR	Uncukul	1.23	287	*e*Pg	Pb	20 24 39.1	+0.7
UNCR				*e*Sg	Sb	20 24 56.5	+2.4
XNZR	Khunzakh	1.26	278	*e*Pg	Pb	20 24 39.7	+0.7
XNZR				*e*Sg	Sb	20 24 57.5	+2.5
DBC	Dubki	1.32	300	*e*Pg	Pb	20 24 40.3	+0.4
DBC				*e*Sg	Sb	20 24 58.4	+1.8
DLMR	Dylym	1.48	299	*e*Pg	Pb	20 24 43.0	+0.5
DLMR				*e*Sg	Sb	20 25 03.3	+2.4
TLTR	Tlyarata	1.54	261	*e*Pg	Pb	20 24 44.0	+0.3
TLTR				*e*Sg	Sb	20 25 05.2	+2.3
BTLR	Botlikh	1.63	281	*e*Pg	Pb	20 24 45.6	+0.4
BTLR				*e*Sg	Sb	20 25 07.9	+2.4
DVE	Vedeno	1.77	290	*e*Pg	Pb	20 24 46.9	-0.6
DVE				*e*Sg	Sb	20 25 11.1	+1.7
LACR	Lac	3.06	280	*e*Pn	Pb	20 25 06.2	-3.2
LACR				*e*Sn	Sb	20 25 44.6	-1.8
GNI	Garni	3.54	232	*e*Pn	Pb	20 25 13.6	-4.1
GNI				*e*Sn	Sb	20 25 55.7	-4.5
DIGR	Digorskoe uzhe	3.59	280	*e*Pn	Pb	20 25 11.8	+2.7
DIGR				*e*Sn	Sb	20 25 56.4	-5.3
PYA1	Pyatigorsk	4.22	295	*e*Pn	Pn	20 25 20.8	+3.3
PYA1				*e*Sn	Sn	20 26 07.9	+2.2
KBZ	Khabaz	4.25	290	*i* Pn	Pn	20 25 20.3	+2.4
KBZ				*e*Sn	Sn	20 26 10.0	+3.8
BEYR	Belyy Ugol+	4.39	294	*e*Pn	Pn	20 25 22.6	+2.7
BEYR				*e*Sn	Sn	20 26 13.3	+3.4
SHA1	Shidzhatmaz	4.42	290	*e*Pn	Pn	20 25 23.8	+3.4
SHA1				*e*Sn	Sn	20 26 13.7	+2.9
KIV	Kislovodsk	4.47	293	*e*Pn	Pn	20 25 24.3	+3.4
KIV				*e*Sn	Sn	20 26 15.4	+3.7

*OTT **29** 20:29:43.3±0.2, 72.30N×75.75W, h18km, MN3.8/7, 88km southeast from Pond Inlet, Nu Eastern Arctic Background Seismic Zone.*
*DNK **29** 20:29:44.3±3.3, 72.21N×76.11W, h29km±52km, ML2.5, Presumed earthquake*
ISC 29 20:29:39.5±0.8, 72.27N±0.05×75.56W±0.04, h10km, n18, σ3°03/32, 1D, Baffin Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POIN	Pond Inlet	0.85	302	PG	Pn	20 29 58.2	+0.7
POIN				SG	Sb	20 30 09.0	+1.4
POIN				Trac		20 30 15.6	
	comp=Z,470nm,0.2s						
CLRN	Clyde River	2.87	125	PN	Pb	20 30 28.8	-1.9
CLRN				SN	Sn	20 31 03.3	+3.6
CLRN				LG	Lg	20 31 11.1	
CLRN				Trac		20 31 13.2	
	comp=Z,162nm,0.1s						
ILON	Igloolik, Nuna	3.57	218	PN	Pn	20 30 37.4	+2.7
ILON				SN	Sn	20 31 17.2	+0.4
ILON				LG	Lg	20 31 32.7	
				Trac		20 31 43.5	
	comp=Z,242nm,0.4s						
TULEG	Thule	4.66	20	*i* P	Pn	20 30 53.1	+3.4
TULEG				*i* S	Sn	20 31 43.1	-0.7
TULEG				IAML		20 31 47.1	
	comp=Z,36nm,1.1s						
KULLO	Kullorsuaq	5.73	58	*i* P	Pn	20 31 07.5	+3.1
KULLO				*i* S	Sn	20 32 09.9	-0.1
KULLO				IAML		20 32 15.7	
	comp=Z,20nm,0.6s						
KULLO	Kullorsuaq	5.73	58	PN	Pn	20 31 07.5	+3.1
KULLO				SN	Sn	20 32 09.1	-1.0
KULLO				Trac		20 32 13.6	
	comp=Z,18nm,0.3s						
UPNV	Upernavik	5.87	76	*i* P	Pn	20 31 09.7	+3.4
UPNV				*i* S	Sn	20 32 14.0	+0.5
UPNV				IAML		20 33 08.9	
	comp=Z,13nm,1.5s						
RES	Resolute Bay	6.01	303	PN	Pn	20 31 10.3	+2.0
RES				SN	Sn	20 32 13.2	-3.8
RES				LG	Lg	20 32 57.0	
RES				Trac		20 33 18.2	
	comp=Z,55nm,0.7s						
NUUG	Nuugaatsiaq	6.99	85	*i* P	Pn	20 31 25.2	+3.5
NUUG				*i* S	Sn	20 32 42.2	+1.2
NUUG				IAML		20 32 46.6	
	comp=Z,32nm,5.0s						
NIAQ	Niaqornat	7.09	91	*i* P	Pn	20 31 26.8	+3.7
NIAQ				*e*S	Sn	20 32 43.8	+0.1
NIAQ				IAML		20 33 03.4	
	comp=Z,5.5nm,0.6s						
SAATT	Saattut	7.71	89	*i* P	Pn	20 31 35.1	+3.5
SAATT				*e*S	Sn	20 32 57.0	-1.7
SAATT				IAML		20 33 22.3	
	comp=Z,5.1nm,0.3s						
GDH	Godhavn	7.85	102	*i* P	Pn	20 31 36.7	+3.2
GDH				*e*S	Sn	20 32 58.5	-3.8
GDH				IAML		20 33 03.7	
	comp=Z,9.2nm,0.4s						
SAQQ	Saqqaq	7.95	95	*i* P	Pn	20 31 37.9	+3.1
SAQQ				*e*S	Sn	20 32 59.7	-5.0
SAQQ				IAML		20 33 07.9	
	comp=Z,5.5nm,0.5s						
NEEM	North Greenlan	8.18	40	*i* P	Pn	20 31 43.8	+5.6
NEEM				*e*S	Sn	20 33 08.4	-2.2
NEEM				IAML		20 33 14.3	
	comp=Z,7.2nm,0.6s						
FRB	Frobisher Bay	8.94	160	PN	Pn	20 31 50.9	+2.4
FRB				SN	Sn	20 33 25.6	-3.4
FRB				LG	Lg	20 34 22.9	
FRB				Trac		20 34 32.0	
	comp=Z,40nm,0.4s						
BLKN	Baker Lake	10.92	233	SN	Sn	20 34 07.3	-10
BLKN				SN		20 34 10.8	
BLKN				LG	Lg	20 35 22.8	
BLKN				Trac		20 35 27.2	
	comp=Z,56nm,0.5s						
SUMG	Summit	11.10	71	*i* P	Pn	20 32 19.1	+0.8
SUMG				⇓*i* S	Sn	20 34 15.3	-7.2
SUMG				IAML		20 34 31.7	
	comp=Z,41nm,5.0s						
KUKN	Kugluktuk,NWT	13.98	271	PN	Pn	20 32 56.8	-0.5
KUKN				SN	Sn	20 35 22.2	-10
KUKN				LG	Lg	20 36 52.1	
KUKN				Trac		20 37 02.1	
	comp=Z,16nm,0.6s						

IDC 29 20:53:28.9±6.3, 19.28S×176.41W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=263.0km s-min=39.9km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	35.12	262	P	P	21 00 25.3	+0.9
	4.1nm,0.8s,baz=114,slow=10.0,SNR=3.5						
	4.1nm,0.8s						
ASAR	Alice Springs	46.27	255	P	P	21 01 56.2	-0.3
	2.0nm,0.8s,baz=92,slow=7.8,SNR=22						
	2.0nm,0.8s						
WRA	Warramunga Arr	46.27	261	P	P	21 01 55.9	-0.6
	0.7nm,0.6s,baz=97,slow=7.6,SNR=20						
	0.7nm,0.6s						
ILAR	Eielson Array	86.80	12	P	P	21 06 14.6	0.0
	0.4nm,1.0s,baz=211,slow=5.5,SNR=1.3						
	0.4nm,1.0s						

*IDC **29** 20:59:06.9±1.6, 37.93N×139.12E, h160km±11km, mb3.0/3, mbtmp3.5/4, Error ellipse: s-maj=28.9km s-min=17.4km az=86.0*
*JMA **29** 20:59:06.8±0.2, 37.96N±0.06×139.24E±0.07, h163km±6km, n20, σ0°84/31, mb3.3/3, Eastern Honshu*
ISC 29 20:59:06.4±0.9, 37.96N±0.06×139.24E±0.07, h163km±6km, n20, σ0°84/31, mb3.3/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNS	Sasagawa	0.16	158	*i* P	Pn	20 59 27.6	-0.6
JNS				*e*S	Sn	20 59 44.4	-0.5
JAW	Awa shima	0.49	0	P	Pn	20 59 29.2	0.0
JIZZ	Izumozaki	0.60	225	*e*P	Pn	20 59 30.1	+0.2
JIZZ				*e*S	Sn	20 59 48.3	+0.7
JFY	Yanaizu	0.67	147	P	Pn	20 59 29.8	-0.4
JYS	Shirataka	0.70	68	*i* P	Pn	20 59 30.5	+0.2
JYS				S	Sn	20 59 48.5	-0.2
JYA	Atsumi	0.73	30	*i* P	Pn	20 59 30.8	+0.3
JYA				*e*S	Sn	20 59 49.4	+0.3
JUON	Uonuma	0.77	191	P	Pn	20 59 30.4	-0.4
JUON				S	Sn	20 59 48.7	-0.8
JOTO	OTAMA OYAMA	0.95	115	P	Pn	20 59 32.0	-0.2
JYK	Kaneyama	1.29	42	P	Pn	20 59 35.3	+0.4
JYK				*e*S	Sn	20 59 57.5	+0.4
JAG	Ashikaga	1.54	174	*i* P	Pn	20 59 37.2	-0.3
JSZ	Suzu	1.58	252	P	Pn	20 59 38.0	+0.2
JSZ				*e*S	Sn	21 00 01.4	-0.5
MAT	Matsushiro	1.64	211	P	Pn	20 59 38.4	-0.1
MAT				S	Sn	21 00 02.6	-0.6
MJAR	Matsushiro Arr	1.64	211	P	Pn	20 59 38.5	0.0
	5.8nm,0.3s,baz=19,slow=11,SNR=68						
MJAR				S	Sn	21 00 01.9	-1.3
	7.3nm,0.8s,baz=20,slow=18,SNR=9.8						
JMK	Ichinoseki	1.84	57	*e*P	Pn	20 59 41.1	+0.6
JRY	Ryogami san	1.96	188	P	Pn	20 59 42.1	+0.1
JRY				*e*S	Sn	21 00 09.7	+0.2
JOM	Ohasama	2.20	46	*e*P	Pn	20 59 45.3	+0.7
ASAJ	Asahikawa	6.65	21	P	Pn	21 00 41.8	+0.1
	3.8nm,0.7s,baz=203,slow=14,SNR=2.2						
ASAJ				S	Sn	21 01 53.1	-3.5
	1.6nm,0.3s,baz=215,slow=27,SNR=1.8						
MKAR	Makanchi Array	42.16	301	P	P	21 06 43.0	+0.3
	0.2nm,0.6s,baz=80,slow=8.6,SNR=2.5						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	44.07	307	P	P	21 06 58.6	+0.7
	0.4nm,0.5s,baz=82,slow=7.8,SNR=6.8						
	0.4nm,0.5s						
WRA	Warramunga Arr	57.78	185	P	P	21 08 40.7	+0.2
	0.4nm,0.5s,baz=2.3,slow=7.6,SNR=17						
	0.4nm,0.5s						

*OSPL **29** 21:17:13.6±1.6, 20.06N×70.66W, h0km±9km, ML1.7, Presumed earthquake*
SDD 29 21:17:09.4±2.1, 20.19N×70.58W, h10km±59km, MD2.9, ML2.2, MW2.6, 9C-1D, Presumed earthquake, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUDR	Luperon	0.45	230	⇑*e*Pg	Pg	21 17 16.6	-1.7
LUDR				⇓*e*Sg	Sg	21 17 25.1	+0.8
LOPP1	Punta Rusia, P	0.67	240	*i* P	Pg	21 17 22.6	+0.3
LOPP1				*e*S	Sg	21 17 31.1	0.0
REDR	Restauracion	1.27	217	⇑*e*Pg	Pg	21 17 35.1	+1.3
REDR				⇑*e*Sg	Sn	21 17 52.2	+1.8
REDR				IAML		21 17 55.0	
	comp=N,53nm,0.1s						
SDDR	Presa de Saban	1.37	209	⇑*e*Pg	Pn	21 17 34.2	-0.5
SDDR				⇑*e*Sg	Sb	21 17 51.1	-1.7
SDDR				⇑*e*Sg	Sb	21 17 51.1	-1.7
SDDR				IAML		21 17 51.5	
	comp=N,20nm,0.3s						
SDDR	Presa de Saban	1.37	209	*i* P	Pg	21 17 35.9	+0.2
SDDR				*e*S	Sb	21 17 50.5	-2.3
SDDR				IAML		21 17 51.6	
	comp=Z,16nm,0.2s						
GRTK	Grand Turk	1.42	339	*i* P	Pg	21 17 39.7	+3.0
GRTK				*e*S	Sg	21 17 59.5	+4.5
LONE3	El Aguacate, B	1.78	208	*i* P	Pb	21 17 42.2	0.0
LONE3				*e*S	Sn	21 18 03.0	-0.1
HATOM	Hato Mayor del	1.79	141	⇑*e*Pg	Pb	21 17 41.9	-0.5
HATOM				⇑*e*Sg	Sb	21 18 05.2	+0.3
HATOM				IAML		21 18 16.0	
	comp=N,15nm,3.9s						
PODR	Polo	2.11	198	⇑*e*Pg	Pb	21 17 47.5	-0.4
PODR				*e*Sg	Sg	21 18 16.4	-1.0
PODR				IAML		21 18 20.6	
	comp=N,30nm,1.1s						

*NEIC **29** 22:02:24.6±1.1, 43.81N±0.04×105.23W±0.07, h0km±1km, ML3.4/56, Error ellipse: s-maj=10.1km s-min=3.9km az=299.0*
*IDC **29** 22:02:27.1±0.9, 43.93N×105.67W, h0km, mb3.6/3, mbtmp3.5/8, ML3.5/5, MS3.4/2, Error ellipse: s-maj=23.9km s-min=8.2km az=147.0*
ISC 29 22:02:25.6±0.8, 43.77N±0.06×105.24W±0.07, h0km, n55, σ0°94/52, mb3.7/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.94	68	Pg	Pg	22 02 43.1	-0.5
K22A	Casper	1.46	220	Pg	Pn	22 02 50.1	-3.3
K22A				IAML		22 03 17.6	
	465nm,0.3s						
K22A				IAML		22 03 18.0	
	568nm,0.3s						
LAO	LASA Array	3.00	347		Pn	22 03 13.8	-0.6
RLMT	Red Lodge	3.18	296		Pn	22 03 17.6	+0.5
RLMT				IAML		22 04 12.2	
	112nm,0.3s						
RLMT				IAML		22 04 14.6	
	129nm,0.3s						
BW06	Boulder Array	3.31	254		Pn	22 03 19.8	+1.0
BW06				IAML		22 04 09.2	
	60nm,0.3s						
BW06				IAML		22 04 09.6	
	96nm,0.3s						
PD31	Pinedale Array	3.31	254		Pn	22 03 19.4	+0.6
PDAR	Pinedale Array	3.31	254	Pn	Pn	22 03 19.7	+0.9
	6.2nm,0.3s,baz=73,slow=15,SNR=152						
PDAR				Lg	Lg	22 04 03.0	
	30nm,0.3s,baz=71,slow=33,SNR=7.7						
	13nm,0.3s						
HAYD	Hayden	3.58	205		Pn	22 03 24.3	+1.7
HAYD				IAML		22 04 23.6	
	comp=N,49nm,0.7s						
HAYD				IAML		22 04 33.3	
	comp=E,64nm,0.9s						
YNE	Yellowstone No	3.63	292		Pn	22 03 24.0	+0.7
YNE				IAML		22 04 24.7	
	comp=N,99nm,0.7s						
OGNE	Ogallala	3.69	139		Pn	22 03 25.8	+1.8
LOHW	Long Hollow	3.89	269		Pn	22 03 27.5	+0.7
FLWY	Flagg Ranch	3.95	276		Pn	22 03 27.9	+0.2
ISCO	Idaho Springs	3.98	184		Pn	22 03 29.8	+1.6
ISCO				IAML		22 04 35.4	
	comp=N,28nm,1.2s						
MOOW	Moose Ponds	3.98	272		Pn	22 03 29.0	+0.9
SNOW	Snow King Moun	4.01	267		Pn	22 03 29.9	+1.4
SNOW				IAML		22 04 46.6	
	comp=N,62nm,1.4s						
SNOW				IAML		22 04 51.2	
	comp=N,58nm,1.3s						
YHH	Holmes Hill	4.15	286		Pn	22 03 31.5	+1.0
FXWY	Fox Creek	4.20	270		Pn	22 03 31.6	+0.6
K30B	Basset	4.26	103		Pn	22 03 31.5	-0.2
E28A	Huff	4.26	47	Pn	Pn	22 03 32.9	+1.0
O20A	White River Ci	4.27	213		Pn	22 03 32.8	+0.8
O20A				IAML		22 04 44.2	
	comp=N,50nm,1.0s						
AHID	Auburn Hatcher	4.39	259		Pn	22 03 34.1	+0.4
AHID				IAML		22 05 02.6	
	comp=N,42nm,1.2s						
RDMU	Red Mountain	4.54	227		Pn	22 03 36.1	+0.4
RDMU				IAML		22 04 51.1	
	comp=N,39nm,1.0s						
Q24A	Divide	4.81	179		Pn	22 03 39.8	+0.3
Q24A				IAML		22 05 03.0	
	comp=N,21nm,0.3s						
Q24A				IAML		22 05 06.6	
	comp=E,41nm,0.7s						
BOZ	Bozeman (W)	4.91	294		Pn	22 03 40.7	0.0
BOZ				IAML		22 05 03.9	
	comp=E,19nm,0.9s						
BOZ				IAML		22 05 10.1	
	comp=E,28nm,1.0s						
HWUT	Hardware Ranch	5.14	247		Pn	22 03 43.6	-0.4
BSUT	Blindstream Ca	5.22	234		Pn	22 03 45.5	+0.3
BSUT				IAML		22 05 22.8	
	comp=E,19nm,1.9s						
BSUT				IAML		22 05 27.3	
	comp=N,23nm,1.3s						
TCUT	Toone Canyon	5.28	242		Pn	22 03 45.8	-0.1
LRM	Limekiln Ridge	5.52	294		Pn	22 03 49.2	-0.1
P18A	Preston Nutter	5.58	224		Pn	22 03 50.3	+0.1
LYMT	Lyon Mountain	5.90	305		Pn	22 03 53.0	-1.5
SDCO	Great Sand Dun	6.03	182		Pn	22 03 57.6	+1.4
S22A	4UR Ranch, Cre	6.14	192	Pn	Pn	22 03 58.7	+0.9
ECSD	EROS Data Cent	6.25	87		Pn	22 03 58.7	-0.3
TMUT	Trail Mountain	6.33	227		Pn	22 04 00.5	+0.1
NLU	North Lily Min	6.37	236		Pn	22 04 01.2	+0.3
HLID	Hailey	6.65	271	Pn	Pn	22 04 04.2	-0.6
T25A	Trinidad	6.66	174	Pn	Pn	22 04 05.5	+0.7
DUG	Dugway, Tooele	6.68	240		Pn	22 04 05.2	+0.2
F33A	5 Mile Ranch,	6.69	69	Pn	Pn	22 04 04.6	-0.5
MSO	Missoula	6.85	300	Pn	Pn	22 04 07.2	-0.2
MVCO	Mesa Verde	7.01	202		Pn	22 04 09.1	-0.6
HMU	Henry Mountain	7.16	217		Pn	22 04 12.0	+0.1
RTBA	Rita Blanca	7.57	164	Pn	Pn	22 04 18.2	+0.8
ELK	Elko	8.01	251	Pn	Pn	22 04 24.6	+1.3
	comp=N,0.8nm,0.3s,baz=64,slow=7.2,SNR=14						
	comp=N,1.2nm,0.3s						
ELK	Elko	8.01	251		Pn	22 04 24.5	+1.1
I10CA	LAC DU BONNET	9.00	41	I	I	22 59 00.0	
	baz=220,slow=258,SNR=2.7						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	22 04 38.9	+0.7
	comp=N,1.2nm,0.3s,baz=233,slow=12,SNR=8.2						
ULM				Lg	Lg	22 07 08.4	
	comp=N,0.4nm,0.3s,baz=127,slow=21,SNR=

TORD	**Torodi Ar. Bea**	**148.65**	**288**	PKPbc	PKPbc	22 51 29.4	-0.4
	0.3nm,0.4s,baz=86,slow=3.1,SNR=6.3						

WEL 29 22:38:26.9±1.2, 36°S±16°×17°9E±2°2, h251km±12km, M3.7/4, mB4.3/1, MLv3.7/4, Mw(mB)3.4/1, Error ellipse: s-maj=33.8km s-min=12.5km az=122.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.19**	**201**	P	Pn	22 39 11.1	0.0
MXZ				S	S	22 39 45.9	-0.2
WMGZ	**Waiomatatini S**	**2.41**	**197**	P	Pn	22 39 13.6	+0.4
WMGZ				S	S	22 39 51.4	+1.5
PKGZ	**Pakihiroa**	**2.54**	**202**	P	Pn	22 39 14.9	+0.3
HAZ	**Te Kaha**	**2.54**	**208**	P	Pn	22 39 14.5	-0.1
HAZ				S	S	22 39 51.4	-1.0
PUZ	**Puketiti**	**2.68**	**198**	P	Pn	22 39 15.3	-0.7
PUZ				S	S	22 39 56.6	+1.6
RUGZ	**Raukumara Rang**	**2.77**	**208**	P	Pn	22 39 17.1	+0.1
RUGZ				S	S	22 39 56.6	-0.2
TWGZ	**Tauwhareparae**	**2.86**	**201**	P	Pn	22 39 18.5	+0.6
TWGZ				S	S	22 40 01.6	+3.3
MWZ	**Matawai**	**3.15**	**206**	P	Pn	22 39 21.3	+0.3
MWZ				S	S	22 40 04.5	+0.5
URZ	**Urewera**	**3.25**	**212**	P	Pn	22 39 21.9	-0.2
URZ				S	S	22 40 06.2	+0.3
RTZ	**Ruatahuna**	**3.60**	**210**	S	S	22 40 13.7	+0.5
HIZ	**Hauiti**	**4.64**	**229**	P	Pn	22 39 39.8	+1.4
PNHZ	**Pukenui**	**5.03**	**208**	P	Pn	22 39 42.5	-0.6
PNHZ				S	S	22 40 44.0	+0.2
BFZ	**Birch Farm**	**5.69**	**204**	P	Pn	22 39 49.7	-1.4
BFZ				S	S	22 40 58.9	+0.4
TIWZ	**Tintock**	**5.90**	**206**	P	Pn	22 39 54.1	+0.3
TIWZ				S	S	22 41 02.7	-0.5
MRZ	**Mangatainoka R**	**5.91**	**209**	P	Pn	22 39 52.4	-1.4
MRZ				S	S	22 41 00.7	-2.7
OGWZ	**Otaki Gorge**	**6.21**	**210**	P	Pn	22 39 56.3	-1.2
OGWZ				S	S	22 41 06.9	-3.2
KIW	**Kapiti Island**	**6.36**	**212**	P	Pn	22 39 57.7	-1.8
KIW				S	S	22 41 10.5	-3.1
CAW	**Cannon Point**	**6.50**	**210**	P	Pn	22 39 59.5	-1.7
MSWZ	**Moikau Station**	**6.69**	**207**	P	Pn	22 40 02.2	-1.4
MSWZ				S	S	22 41 19.2	-2.0

*JMA **29** 22:41:46.2±0.3, 36°5N±0°6×14°2E±°, h52km±4km, MV2.7/31, E OFF IBARAKI PREF*
*IDC **29** 22:41:47.6±6.0, 36°47N×141°72E, h67km±46km, mb3.1/3, mbtmp3.5/5, ML3.0/2, Error ellipse: s-maj=56.5km s-min=23.3km az=54.0*
ISC 29 22:41:46.3±1.4, 36°52N±0°07×141°65E±0°09, h50km, n20, σ1s22/17, mb3.8/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.88**	**276**	*i* P	**Pn**	**22 42 01.4**	**-1.1**
JHO				*e*S	**Sn**	**22 42 12.9**	**-1.3**
JHYU	**Hitachinakayam**	**0.88**	**258**	P	**Pn**	**22 42 01.7**	**-0.7**
JHYU				*e*S	**Sn**	**22 42 13.3**	**-0.9**
JFFD	**Fukushimafurud**	**1.04**	**303**	P	**Pn**	**22 42 03.8**	**-0.9**
JOTO	**OTAMA OYAMA**	**1.48**	**315**	*e*P	**Pn**	**22 42 11.5**	**+0.9**
JMM	**Marumori**	**1.51**	**333**	*e*P	**Pn**	**22 42 11.2**	**+0.3**
JAG	**Ashikaga**	**1.78**	**267**	P	**Pn**	**22 42 14.6**	**0.0**
JFY	**Yanaizu**	**1.79**	**300**	*e*P	**Pn**	**22 42 15.9**	**+1.0**
JIO	**Ouri**	**1.94**	**353**	P	**Pn**	**22 42 17.1**	**+0.2**
JKT	**Katashina**	**1.95**	**278**	*e*P	**Pn**	**22 42 17.7**	**+0.6**
MJAR	**Matsushiro Arr**	**2.77**	**271**	P	**Pn**	**22 42 29.6**	**+1.3**
	0.6nm,0.3s,baz=81,slow=9.2,SNR=49						
MJAR				S	**Sn**	**22 43 03.5**	**+2.9**
	1.8nm,0.4s,baz=94,slow=23,SNR=4.5						
	1.8nm,0.3s						
JHJ	**Hachijo jima 2**	**3.73**	**205**	P	**Pn**	**22 42 42.6**	**+1.2**
	12nm,0.3s,baz=67,slow=12,SNR=1.8						
	109nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.72**	**120**	T	T	23 16 24.2	
	baz=313,slow=75,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**27.73**	**120**	T	T	23 16 30.5	
	baz=313,slow=75,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**27.74**	**120**	T	T	23 16 22.5	
	baz=313,slow=75,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**28.42**	**122**	T	T	23 17 23.7	
	baz=315						
H11S3	**WAKE ISLAND Hy**	**28.42**	**122**	T	T	23 17 18.4	
	baz=315						
H11S2	**WAKE ISLAND Hy**	**28.44**	**122**	T	T	23 17 19.9	
	baz=315						
MKAR	**Makanchi Array**	**44.55**	**303**	P	**P**	**22 49 52.4**	**-0.8**
	0.1nm,0.4s,baz=72,slow=9.4,SNR=1.2						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**46.47**	**308**	P	**P**	**22 50 08.9**	**+0.7**
	0.3nm,0.3s,baz=79,slow=8.1,SNR=2.0						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**56.58**	**188**	P	**P**	**22 51 23.1**	**-0.9**
	1.3nm,1.2s,baz=6.8,slow=6.7,SNR=2.7						
	1.3nm,1.2s						

IDC 29 22:44:49.1±3.2, 30°25S×177°79W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=69.2km s-min=23.1km az=108.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.00**	**353**	Pn	Pn	22 45 11.4	+1.0
	159nm,0.3s,baz=102,slow=22,SNR=6.6						
RAO				Sn	Sn	22 45 24.2	-1.0
	424nm,0.3s,baz=157,slow=23,SNR=10						
ASAR	**Alice Springs**	**43.30**	**267**	P	P	22 52 52.7	-0.3
	0.2nm,0.5s,baz=106,slow=7.7,SNR=4.5						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**44.27**	**272**	P	P	22 53 00.8	0.0
	0.6nm,0.4s,baz=110,slow=8.1,SNR=20						
	0.6nm,0.4s						
H10N3	**ASCENSION HYDR**	**138.87**	**154**	T	T	01 39 58.3	
	baz=204						
H10N1	**ASCENSION HYDR**	**138.87**	**154**	T	T	01 39 50.2	
	baz=204						
H10N2	**ASCENSION HYDR**	**138.88**	**154**	T	T	01 39 57.2	
	baz=204						
FINES	**FINESS Array B**	**145.07**	**340**	PKPbc	PKPbc	23 04 25.8	-1.3
	1.7nm,0.9s,baz=64,slow=3.1,SNR=7.4						

IDC 29 23:20:20.7±49.0, 23°76S×176°02W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=911.6km s-min=166.9km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.15**	**248**	P	P	23 27 40.2	-1.6
	0.6nm,0.4s,baz=107,slow=14,SNR=3.1						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**45.65**	**260**	P	P	23 28 43.7	+0.4
	0.3nm,0.4s,baz=102,slow=8.3,SNR=9.9						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**46.05**	**265**	P	P	23 28 46.9	+0.4
	0.5nm,0.5s,baz=101,slow=8.1,SNR=14						
	0.5nm,0.5s						

ISC Computed Locations for February 2020

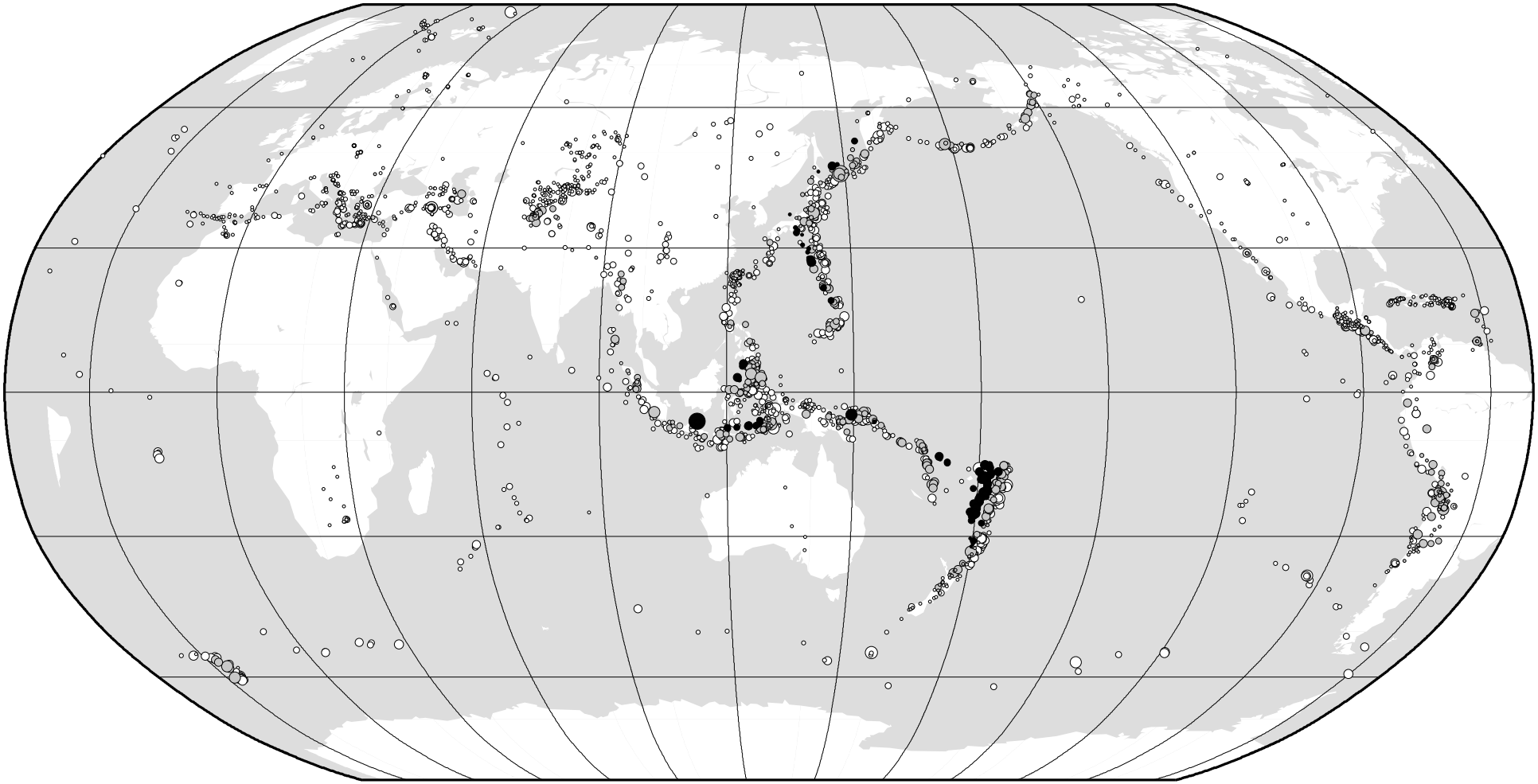

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3324 Events